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

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Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

*NNC **01** 00:12:23.4±1.8, 42°.34N×76°.38E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=12.1km s-min=4.4km az=175.0*
*KNET **01** 00:12:24.8±0.6, 42°.35N×76°.26E, h0km, ml2.1, Error ellipse: s-maj=4.1km s-min=2.3km az=69.0*
ISC 01 00:12:24.3±1.4, 42°.34N±0°.05×76°.36E±0°.05, h2km±12km, n12, σ1s.12/20, 13C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol	0.13	223	⇓P	Pg	00 12 26.6	-0.2
	76nm,0.1s,SNR=372						
ULHL				⇑S	Sg	00 12 28.7	+0.2
	2μm,0.2s						
TKM2	Tokmak 2	0.81	316	⇓P	Pg	00 12 39.5	-0.4
	8.9nm,0.2s						
TKM2				⇓S	Sg	00 12 50.8	+0.4
	21nm,0.3s						
TKM2	Tokmak 2	0.81	316	P	Pg	00 12 39.7	-0.2
	28nm,0.1s,SNR=211						
TKM2				⇑S	Sg	00 12 51.2	+0.8
	82nm,0.1s						
KZA	Kyzart	0.86	253	⇓P	Pg	00 12 40.5	-0.4
	12nm,0.2s,SNR=57						
KZA				⇑S	Sg	00 12 52.6	+0.5
	33nm,0.2s						
KNDC	Almaty	0.99	27	⇓P	Pg	00 12 42.3	-0.9
	9.0nm,0.4s						
KNDC				⇑S	Sg	00 12 56.2	+0.2
	12nm,0.3s						
KBK	Karagaybulak	1.09	287	⇑P	Pb	00 12 44.8	-1.2
	21nm,0.1s,SNR=10						
CHMS	Chumysh	1.36	300	⇑P	Pn	00 12 49.2	-1.2
	18nm,0.1s,SNR=5.3						
CHMS				⇑S	Sb	00 13 07.7	-0.7
	39nm,0.2s						
AAK	Ala-Archa	1.41	283	⇑P	Pn	00 12 50.3	-1.0
	8.4nm,0.2s,SNR=27						
AAK				⇑S	Sn	00 13 09.8	-0.7
	15nm,0.2s						
USP	Ospenovka	1.65	305	⇑P	Pn	00 12 54.5	0.0
	29nm,0.3s,SNR=14						
EKS2	Erkin-Say	1.94	280	⇑P	Pb	00 13 00.5	0.0
	14nm,0.2s,SNR=72						
EKS2				⇓S	Sg	00 13 28.4	+1.9
	16nm,0.2s						
KK31	Karatay Array	4.38	282	Pg	Pb	00 13 44.0	+2.1
	1.8nm,0.6s,baz=99,slow=17,SNR=34						
KK31				⇑Lg	Lg	00 14 39.9	
	2.3nm,0.6s,baz=92,slow=27,SNR=12						
MK31	Makanchi Array	6.15	42	⇓Pn	Pn	00 13 59.6	+3.5
	0.3nm,0.5s,baz=211,slow=13,SNR=5.1						
MK31				⇓Sn	Sn	00 15 09.3	+2.3
	0.3nm,0.5s,baz=221,slow=23,SNR=3.7						
MK31				⇑Lg	Lg	00 15 32.7	
	0.5nm,0.6s						

IDC 01 00:37:45.1±1.9, 2°.36N×125°.32E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/23, mbtmp3.5/4, Error ellipse: s-maj=116.2km s-min=24.9km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.33	179	P	P	00 42 23.2	+0.1
	1.1nm,0.6s,baz=354,slow=9.5,SNR=4.0						
WRA	Warramunga Arr	23.87	159	P	P	00 43 00.4	0.0
	1.4nm,0.5s,baz=337,slow=10,SNR=19						
ASAR	Alice Springs	27.18	163	P	P	00 43 30.6	0.0
	0.2nm,0.4s,baz=340,slow=7.6,SNR=4.5						
MKAR	Makanchi Array	57.89	326	P	P	00 47 38.8	-0.1
	0.1nm,0.3s,baz=119,slow=8.2,SNR=4.6						

IDC 01 00:47:46.4±2.0, 0°.12N×97°.74E, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.7/24, mbtmp3.9/6, ML4.6/1, Error ellipse: s-maj=67.2km s-min=20.1km az=62.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	2.91	24	Pn	Pn	00 48 33.0	-1.2
	baz=180,slow=20,SNR=3.5						
CMAR	Chiang Mai Arr	18.26	4	P	Pn	00 52 01.0	-0.5
	0.7nm,0.3s,baz=186,slow=12,SNR=5.8						
WRA	Warramunga Arr	41.01	121	P	P	00 55 31.1	-0.6
	0.5nm,0.6s,baz=300,slow=8.9,SNR=11						
ASAR	Alice Springs	42.32	127	P	P	00 55 42.8	+0.4
	0.3nm,0.4s,baz=298,slow=7.5,SNR=6.3						
SONM	Songino Array	48.12	8	P	P	00 56 28.4	+0.2
	0.3nm,0.6s,baz=191,slow=3.1,SNR=4.3						
MKAR	Makanchi Array	48.41	346	P	P	00 56 30.4	-0.1
	0.8nm,0.5s,baz=156,slow=8.1,SNR=16						
ZALV	Zalesovo Beam	54.70	351	P	P	00 57 17.0	-0.3
	1.4nm,0.6s,baz=168,slow=7.2,SNR=9.2						

IDC 01 00:57:55.7±2.4, 21°.87S×176°.71W, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.8/19, mbtmp3.8/5, MS3.8/1, Ms1 3.8/1, ms1mx2.8/35, Error ellipse: s-maj=135.5km s-min=26.1km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	34.58	266	P	P	01 04 46.3	-0.2
	0.9nm,0.4s,baz=80,slow=11,SNR=2.5						
ASAR	Alice Springs	45.40	258	P	P	01 06 16.6	+0.2
	1.0nm,0.8s,baz=95,slow=7.6,SNR=7.9						
WRA	Warramunga Arr	45.62	263	P	P	01 06 17.8	-0.4
	1.1nm,0.8s,baz=95,slow=8.5,SNR=14						
NWAO	Narrogin (SRO)	58.84	244	LR	LR	01 31 44.7	
	comp=Z,74nm,20.1s,baz=62,slow=34						
TXAR	Lajitas Array	86.78	57	P	P	01 10 41.4	-0.9
	0.4nm,0.7s,baz=204,slow=8.2,SNR=5.8						
ILAR	Eielson Array	89.38	12	P	P	01 10 54.7	+1.0
	0.3nm,0.8s,baz=205,slow=6.0,SNR=2.9						
BRTR	Keskin Array B	148.64	312	PKPbc	PKPbc	01 17 44.5	-0.7
	0.2nm,0.6s,baz=131,slow=2.3,SNR=3.0						

IDC 01 01:15:10.6±1.8, 3°.87N×126°.68E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/23, mbtmp3.6/5, Error ellipse: s-maj=98.3km s-min=25.3km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.86	183	P	P	01 20 05.1	0.0
	2.1nm,0.8s,baz=17,slow=11,SNR=3.1						
WRA	Warramunga Arr	24.84	163	P	P	01 20 34.0	-1.0
	2.0nm,0.6s,baz=342,slow=11,SNR=35						
ASAR	Alice Springs	28.27	166	P	P	01 21 07.1	+1.3
	0.3nm,0.4s,baz=341,slow=11,SNR=4.1						
STKA	Stephens Creek	38.28	159	P	P	01 22 32.4	-0.5
	1.4nm,0.6s,baz=326,slow=11,SNR=2.9						
MKAR	Makanchi Array	57.41	325	P	P	01 25 01.1	-0.1
	0.1nm,0.3s,baz=139,slow=7.0,SNR=4.3						

IDC 01 01:27:21.7±1.1, 6°.75S×155°.50E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/19, mbtmp3.5/6, Error ellipse: s-maj=53.2km s-min=25.4km az=123.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.37	235	P	P	01 32 41.5	-0.3
	0.5nm,0.6s,baz=60,slow=9.6,SNR=8.8						
WRA				PcP	PcP	01 36 21.8	+0.3
	0.2nm,0.5s,baz=54,slow=2.5,SNR=8.2						
ASAR	Alice Springs	26.71	229	P	P	01 33 02.9	-0.2
	0.2nm,0.6s,baz=66,slow=8.8,SNR=3.1						
ILAR	Eielson Array	82.96	21	P	P	01 39 48.8	+0.4
	0.1nm,0.4s,baz=251,slow=5.6,SNR=5.5						
QSPA	South Pole Qui	83.23	180	P	P	01 39 50.6	+0.7
	0.8nm,0.8s,baz=281,slow=8.5,SNR=7.6						
MKAR	Makanchi Array	83.55	319	P	P	01 39 53.0	+1.1
	0.1nm,0.4s,baz=101,slow=7.5,SNR=2.4						
YKA	Yellowknife Ar	95.88	28	P	P	01 40 48.8	-1.3
	0.4nm,0.9s,baz=268,slow=4.3,SNR=5.1						
TORD	Torodi Ar. Bea	153.44	286	PKPbc	PKPbc	01 47 21.5	-1.8
	0.4nm,0.6s,baz=76,slow=2.0,SNR=6.4						

*IDC **01** 01:36:28.9±0.8, 35°.53N×143°.10E, h0km, mb3.5/9, mb1 3.8/12, mb1mx3.7/28, mbtmp3.7/12, ML3.4/2, MS2.6/2, Ms1 2.6/2, ms1mx2.3/38, Error ellipse: s-maj=21.5km s-min=18.6km az=96.0*
*JMA **01** 01:36:32.3±0.3, 35°.70N×142°.91E, h99km, M3.3*
*ISCJB **01** 01:36:33.4±0.7, 35°.76N±0°.04×142°.94E±0°.06, h59km, mb3.5/9, Error ellipse: s-maj=6.6km s-min=5.2km az=25.0*
ISC 01 01:36:35.9±0.8, 35°.70N±0°.05×142°.84E±0°.07, h59km, n26, σ1s.85/31, mb3.5/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.61	271	P	Pn	01 37 01.1	-0.9
BSO1	Boso 1	1.85	236	P	Pn	01 37 03.2	-1.5
BSO1				eS	Sn	01 37 27.7	+1.0
BSO2	Boso 2	1.95	242	eS	Sn	01 37 32.3	+2.7
JHO	Hitachi	2.05	297	P	Pn	01 37 06.3	-1.7
JHO				S	Sn	01 37 32.0	-0.5
JFT	Otama	2.71	313	P	Pn	01 37 16.0	-1.1
JFT				S	Sn	01 37 48.6	-0.1
JAG	Ashikaga	2.84	286	P	Pn	01 37 17.8	-1.0
JAG				eS	Sn	01 37 51.6	-0.2
JOD2	Odawara 2	3.09	263	P	Pn	01 37 21.0	-1.2
JOD2				S	Sn	01 37 57.8	-0.2
JRY	Ryogami san	3.21	277	P	Pn	01 37 23.7	-0.2
JMK	Ichinoseki	3.50	339	eS	Sn	01 38 05.6	-2.3
JHJ	Hachijo jima 2	3.60	225	Pn	Pn	01 37 26.8	-2.4
	8.9nm,0.3s,baz=32,slow=12,SNR=4.8						
JHJ				Sn	Sn	01 38 07.8	-2.8
	23nm,0.3s,baz=83,slow=17,SNR=3.9						
JYK	Kaneyama	3.78	329	P	Pn	01 37 29.5	-2.1
MJAR	Matsushiro Arr	3.84	284	Pn	Pn	01 37 33.1	+0.6
	2.7nm,0.3s,baz=102,slow=9.3,SNR=18						
MJAR				Sn	Sn	01 38 19.6	+3.2
	1.0nm,0.3s,baz=97,slow=10,SNR=4.4						
MAT	Matsushiro	3.84	284	P	Pn	01 37 32.7	+0.2
MAT				S	Sn	01 38 20.0	+3.5
JOM	Ohasama	3.97	342	P	Pn	01 37 32.2	-2.0
JOM				S	Sn	01 38 16.8	-2.6
ASAJ	Asahikawa	8.41	359	Pn	Pn	01 38 31.4	-3.6
	1.0nm,0.3s,baz=318,slow=3.0,SNR=5.0						
ASAJ				Sn	Sn	01 40 05.7	-2.7
	0.6nm,0.3s,baz=131,slow=20,SNR=3.1						
ASAJ				LR	LR	01 42 13.5	
	comp=Z,30nm,18.1s,baz=78,slow=40						
CBIJ	Chichi jima	8.59	184	Pn	Pn	01 38 31.8	-5.7
	22nm,0.3s,baz=272,slow=23,SNR=7.6						
KSRS	Korea Array	12.12	283	LR	LR	01 43 41.4	
	comp=Z,37nm,21.7s,baz=95,slow=35						
SONM	Songino Array	29.49	306	P	P	01 42 37.9	+3.5
	0.8nm,0.7s,baz=100,slow=8.7,SNR=7.9						
ZALV	Zalesovo Beam	43.67	313	P	P	01 44 37.0	+2.4
	0.7nm,0.6s,baz=111,slow=8.1,SNR=4.2						
MKAR	Makanchi Array	45.81	303	P	P	01 44 53.7	+1.9
	0.5nm,0.7s,baz=90,slow=8.6,SNR=4.1						
ILAR	Eielson Array	50.02	32	P	P	01 45 25.0	+1.0
	0.4nm,0.8s,baz=259,slow=5.2,SNR=4.1						
WRA	Warramunga Arr	55.92	190	P	P	01 46 07.5	-0.4
	0.4nm,0.7s,baz=9.8,slow=7.4,SNR=5.6						
ASAR	Alice Springs	59.64	190	P	P	01 46 34.1	+0.2
	0.1nm,0.3s,baz=16,slow=14,SNR=3.2						
YKA	Yellowknife Ar	64.39	30	P	P	01 47 06.0	+0.7
	0.6nm,1.0s,baz=301,slow=6.8,SNR=6.7						
BRTR	Keskin Array B	80.60	312	P	P	01 48 44.5	+2.2
	0.4nm,0.6s,baz=101,slow=3.5,SNR=4.2						
TXAR	Lajitas Array	90.01	53	P	P	01 49 31.1	+1.7
	0.3nm,0.9s,baz=338,slow=4.3,SNR=2.3						

*NIED **01** 01:50:00, 35°.70N×142°.90E, h5km, Mw4.0 Best double couple: Mo1.18000×10^15 NP1:φs179.00000°, δ67.00000°, λ-96.00000°. NP2:φs14.00000°, δ24.00000°, λ-77.00000°.*
*IDC **01** 01:50:39.8±0.7, 35°.54N×143°.06E, h0km, mb4.0/17, mb1 4.2/22, mb1mx4.1/33, mbtmp4.0/22, ML3.9/3, MS3.1/5, Ms1 3.1/5, ms1mx2.4/44, Error ellipse: s-maj=16.9km s-min=15.3km az=141.0*
*JMA **01** 01:50:43.2±0.2, 35°.71N×142°.91E, h96km, M3.7*
*NEIC **01** 01:50:44.1±3.2, 35°.50N×143°.08E, h29km±21km, mb4.5/16, MW4.0(NIED), Error ellipse: s-maj=9.8km s-min=8.6km az=129.0*
ISC 01 01:50:40.1±3.3, 35°.61N±0°.05×142°.98E±0°.06, h2km±20km, n79, σ1s.26/86, mb4.2/32, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.73	274	P	Pb	01 51 12.0	-0.6
CHOJ				S	Sn	01 51 33.3	-0.5
BSO1	Boso 1	1.90	240	P	Pb	01 51 14.3	-0.8
BSO1				S	Sb	01 51 38.3	-0.7
JHO	Hitachi	2.19	298	P	Pn	01 51 17.3	-0.3
JHO				eS	Sn	01 51 42.6	-2.7
ONAJ	Iwakimizuishiy	2.31	311	P	Pn	01 51 18.4	-0.8
ONAJ				eS	Sn	01 51 44.8	-3.4
JFT	Otama	2.86	313	P	Pn	01 51 27.0	+0.3
JFT				S	Sn	01 51 59.5	-2.2
JAG	Ashikaga	2.97	287	P	Pn	01 51 28.4	+0.1
JOD2	Odawara 2	3.20	265	P	Pn	01 51 31.8	+0.4
JOD2				S	Sn	01 52 08.8	-1.3
JRY	Ryogami san	3.34	278	P	Pn	01 51 34.5	+1.1
JHJ2	Mitsune	3.61	227	P	Pn	01 51 38.0	+0.9
JHJ2				eS	Sn	01 52 18.3	-2.0
JMK	Ichinoseki	3.62	338	P	Pn	01 51 36.0	-1.2
JMK				S	Sn	01 52 16.1	-4.4
JHJ	Hachijo jima 2	3.63	228	Pn	Pn	01 51 36.8	-0.5
	13nm,0.3s,baz=59,slow=18,SNR=4.4						
JHJ				Sn	Sn	01 52 18.3	-2.4
	58nm,0.3s,baz=55,slow=22,SNR=7.9						
JYK	Kaneyama	3.91	328	P	Pn	01 51 40.4	-0.8
MJAR	Matsushiro Arr	3.98	285	Pn	Pn	01 51 44.1	+2.0
MJAR				Sn	Sn	01 52 31.2	+1.9
MJAR	Matsushiro Arr	3.98	285	Pn	Pn	01 51 44.1	+2.0
	5.6nm,0.3s,baz=100,slow=9.6,SNR=44						
MJAR				Sn	Sn	01 52 31.2	+1.9
	2.7nm,0.3s,baz=88,slow=10,SNR=4.9						
MJAR				LR	LR	01 53 29.1	
	comp=Z,240nm,20.9s,baz=95,slow=42						
MAJO	Matsushiro	3.98	285	ePn	Pn	01 51 44.2	+2.1
MAT	Matsushiro	3.98	285	P	Pn	01 51 44.2	+2.1
MAT				S	Sn	01 52 28.0	-1.4
ASAJ	Asahikawa	8.50	358	ePn	Pn	01 52 42.7	-1.5
ASAJ				Sn	Sn	01 54 21.7	+0.9
ASAJ	Asahikawa	8.50	358	Pn	Pn	01 52 43.1	-1.1
	3.0nm,0.3s,baz=195,slow=6.3,SNR=6.9						
ASAJ				Sn	Sn	01 54 21.7	+0.9
	0.7nm,0.3s,baz=28,slow=25,SNR=4.6						
USRK	Ussuriysk Arra	12.02	319	Pn	Pn	01 53 34.1	+1.8
	0.3nm,0.3s,baz=132,slow=13,SNR=5.9						
USRK				LR	LR	01 57 58.3	
	comp=Z,84nm,18.1s,baz=334,slow=36						
KSRS	Korea Array	12.25	283	Pn	Pn	01 53 38.8	+3.2
	baz=100,slow=15,SNR=5.4						
KSRS				LR	LR	01 58 26.4	
	comp=Z,32nm,21.5s,baz=174,slow=38						
KSAR	Wonju Array Be	12.28	283	Pn	Pn	01 53 38.8	+2.8
ENH	Enshi	28.52	269	eP	P	01 56 40.7	+3.5
	8.2nm,0.7s						
ULN	Ulaanbaatar	29.21	306	eP	P	01 56 45.1	+1.9
	2.0nm,0.7s						
SONM	Songino Array	29.64	306	P	P	01 56 48.1	+1.1
SONM	Songino Array	29.64	306	P	P	01 56 48.1	+1.1
	2.1nm,0.8s,baz=108,slow=8.4,SNR=18						
KKM	Kota Kinabalu	38.35	226	eP	P	01 58 00.4	-2.4
	117nm,1.7s						
ZALV	Zalesovo Beam	43.81	313	P	P	01 58 48.0	+0.8
ZALV				PcP	PcP	02 00 34.0	+0.3
ZALV	Zalesovo Beam	43.81	313	P	P	01 58 48.0	+0.8
	2.7nm,0.6s,baz=92,slow=7.0,SNR=10						
ZALV				PcP	PcP	02 00 34.0	+0.3
	0.3nm,0.4s,baz=96,slow=4.5,SNR=4.4						
MK31	Makanchi Array	45.95	304	eP	P	01 59 05.0	+0.6
MKAR	Makanchi Array	45.95	304	eP	P	01 59 05.3	+0.9
MKAR	Makanchi Array	45.95	304	P	P	01 59 04.6	+0.1
	1.5nm,0.7s,baz=91,slow=9.7,SNR=21						
MKAR				LR	LR	02 18 23.9	
	comp=Z,30nm,19.4s,baz=354,slow=36						
KDAK	Kodiak Island	47.33	41	P	P	01 59 15.1	+0.1
KDAK	Kodiak Island	47.33	41	P	P	01 59 15.1	+0.1
	12nm,1.1s,baz=286,slow=7.4,SNR=3.0						
KURK	Kurchatov	47.81	309	eP	P	01 59 19.4	+0.6
	5.2nm,0.8s						
KULM	Kulim	49.23	242	eP	P	01 59 31.4	+1.2
	5.8nm,0.7s						
ILAR	Eielson Array	50.03	32	P	P	01 59 35.8	0.0
ILAR	Eielson Array	50.03	32	P	P	01 59 35.8	0.0
	1.0nm,0.8s,baz=266,slow=6.5,SNR=11						
TKM2	Tokmak 2	51.43	300	eP	P	01 59 48.7	+1.9
	3.2nm,0.8s						
AAK	Ala-Archa	52.29	300	eP	P	01 59 54.0	+0.8
	4.1nm,0.4s						
BVAR	Borovoye Array	52.47	313	LR	LR	02 23 15.6	
	comp=Z,28nm,18.3s,baz=310,slow=37						
EKS2	Erkin-Say	52.78	300	eP	P	01 59 57.6	+0.7
	2.9nm,0.8s						
KKAR	Karatay Array	54.94	301	eP	P	02 00 13.4	+0.9
INK	Inuvik	55.08	27	P	P	02 00 14.0	+0.9
INK	Inuvik	55.08	27	P	P	02 00 14.0	+0.9
	0.4nm,0.5s,baz=269,slow=8.0,SNR=6.2						
WRAB	Tennant Creek	55.84	190	eP	P	02 00 18.1	-0.9
	3.7nm,0.9s						
WRA	Warramunga Arr	55.85	190	P	P	02 00 18.4	-0.8
WRA	Warramunga Arr	55.85	190	P	P	02 00 18.4	-0.8
	2.4nm,1.0s,baz=9.1,slow=7.5,SNR=16						
KBL	Kabul	59.12	292	eP	P	02 00 42.8	+0.3
	6.5nm,0.9s						
ASAR	Alice Springs	59.58	190	P	P	02 00 44.8	-0.6
ASAR	Alice Springs	59.58	190	P	P	02 00 44.8	-0.6
	0.7nm,0.8s,baz=7.6,slow=3.8,SNR=7.2						
ABKAR	Akbulak array	59.83	311	eP	P	02 00 47.1	+0.3
RES	Resolute Bay	63.66	15	eP	P	02 01 12.9	+0.6
	3.9nm,0.8s						
YKA	Yellowknife Ar	64.40	30	P	P	02 01 17.6	+0.2
YKA	Yellowknife Ar	64.40	30	P	P	02 01 17.6	+0.2
	1.5nm,1.0s,baz=296,slow=6.6,SNR=8.6						
FINES	FINESS Array B	70.66	333	P	P	02 01 57.1	+0.3
FINES	FINESS Array B	70.66	333	P	P	02 01 57.1	+0.3
	1.0nm,0.5s,baz=46,slow=6.6,SNR=4.8						
KBZ	Khabaz	72.79	312	P	P	02 02 11.3	+1.3
KBZ	Khabaz	72.79	312	P	P	02 02 11.3	+1.3
	0.9nm,0.7s,baz=51,slow=4.2,SNR=8.2						
FFC	Flin Flon	74.21	33	eP	P	02 02 18.1	-0.1
	2.0nm,0.8s						
AKASG	Malin Array Be	76.19	323	P	P	02 02 29.3	-0.4
AKASG	Malin Array Be	76.19	323	P	P	02 02 29.3	-0.4
	1.7nm,0.7s,baz=56,slow=5.1,SNR=5.3						
KIEV	Kiev	76.21	323	eP	P	02 02 29.7	-0.1
	2.5nm,0.7s						
BW06	Boulder Array	77.75	46	eP	P	02 02 39.0	0.0
	1.3nm,0.9s						
PDAR	Pinedale Array	77.75	46	P	P	02 02 39.4	+0.4
PDAR	Pinedale Array	77.75	46	P	P	02 02 39.4	+0.4
	0.6nm,0.6s,baz=298,slow=1.9,SNR=3.7						
BUR08	Bucovina Ar. S	80.20	323	eP	P	02 02 52.5	+0.3
BR131	Keskin Array S	80.74	312	eP	P	02 02 55.2	0.0
	0.7nm,0.8s						
BRTR	Keskin Array B	80.74	312	P	P	02 02 55.6	+0.3
BRTR	Keskin Array B	80.74	312	P	P	02 02 55.6	+0.3
	1.0nm,0.6s,baz=119,slow=3.5,SNR=11						
PSZ	Piszkesteto	82.55	325	eP	P	02 03 01.9	-2.7
	4.5nm,0.9s						
CLL	Collm	82.96	331	eP	P	02 03 06.0	-0.5
MMAI	Mount Meron Ar	83.82	306	P	P	02 03 12.7	+1.3
MMAI	Mount Meron Ar	83.82	306	P	P	02 03 12.7	+1.3
	0.2nm,0.3s,baz=39,slow=11,SNR=4.1						
GERES	GERESS Array B	84.58	329	P	P	02 03 13.7	-1.3
GERES	GERESS Array B	84.58	329	P	P	02 03 13.7	-1.3
	0.6nm,0.7s,baz=17,slow=5.6,SNR=4.2						
TXAR	Lajitas Array	89.97	53	P	P	02 03 41.6	+0.1
TXAR	Lajitas Array	89.97	53	P	P	02 03 41.6	+0.1
	0.3nm,0.8s,baz=316,slow=5.0,SNR=5.0						
TORD	Torodi Ar. Bea	119.23	316	PKP	PKPdf	02 09 31.2	-0.3
TORD	Torodi Ar. Bea	119.23	316	PKP	PKPdf	02 09 31.2	-0.3
	0.8nm,1.2s,baz=318,slow=4.1,SNR=3.3						

*IDC **01** 02:03:18.2±0.5, 10°.53N×61°.44W, h0km, mb4.1/20, mb1 4.2/20, mb1mx4.2/27, mbtmp4.1/20, MS3.4/3, Ms1 3.4/3, ms1mx3.0/32, Error ellipse: s-maj=16.8km s-min=12.8km az=56.0*
*BJI **01** 02:03:24.2, 10°.40N×61°.20W, h67km*
*ISCJB **01** 02:03:24.1±0.3, 10°.46N±0°.02×61°.35W±0°.02, h65km±2km, mb4.3/54, Error ellipse: s-maj=4.4km s-min=3.0km az=42.4*
*FUNV **01** 02:03:24.9, 10°.41N×61°.14W, h34km, MW4.4*
*NEIC **01** 02:03:25.2, 10°.51N×61°.10W, h28km, mb4.6/29, MD4.3(TRN), After TRN.*
NEIC Felt at Arima, Chaguanas, Cross Crossing, Diego Martin, Marabella, Maraval, Penal, Rio Claro, San Fernando and Tunapuna. Also felt at Scarborough, Tobago.
*TRN **01** 02:03:25.1, 10°.51N×61°.09W, h29km, MD4.3*
ISC 01 02:03:24.6±0.6, 10°.46N±0°.03×61°.24W±0°.03, h50km±5km, n403, σ1s.40/437, mb4.4/54, MS3.5/3, 117C-122D, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBH	Brigand Hill	0.17	82	⇓iP	Pn	02 03 30.4	-2.3
TBH	Brigand Hill	0.17	82	⇓iP	Pn	02 03 30.4	-2.3
TBH	Brigand Hill	0.17	82	⇓iP	Pn	02 03 30.4	-2.3
TRN	Trinidad (W)	0.25	319	⇑iP	Pn	02 03 32.6	-0.6
TRN				iS	Sn	02 03 38.9	-0.6
TRN	Trinidad (W)	0.25	319	⇑iP	Pn	02 03 32.6	-0.6
TRN				iS	Sn	02 03 38.9	-0.6
TRN	Trinidad (W)	0.25	319	⇑iP	Pn	02 03 32.6	-0.6
TPP	Pointe-a-Pierr	0.26	236	⇓iP	Pn	02 03 33.5	+0.2
TPP	Pointe-a-Pierr	0.26	236	⇓iP	Pn	02 03 33.5	+0.2
TPP	Pointe-a-Pierr	0.26	236	⇓iP	Pn	02 03 33.5	+0.2
SIPA	Siparia	0.41	220	⇓eP	Pn	02 03 36.9	+2.1
SIPA	Siparia	0.41	220	⇓eP	Pn	02 03 36.9	+2.1
ALNG	Atlantic LNG	0.52	238	eP	Pn	02 03 38.7	+2.6
ALNG				eS	Sn	02 03 48.1	+3.7
ALNG	Atlantic LNG	0.52	238	eP	Pn	02 03 38.7	+2.6
ALNG				eS	Sn	02 03 48.1	+3.7
BUAY	Buenos Aires	0.56	232	⇓eP	Pn	02 03 39.5	+2.9
BUAY	Buenos Aires	0.56	232	⇓eP	Pn	02 03 39.5	+2.9
TPR	Prospect	0.85	32	⇑iP	Pn	02 03 39.8	-0.6
TPR	Prospect	0.85	32	⇑iP	Pn	02 03 39.8	-0.6
TPR				eS	Sn	02 03 50.1	-1.8
TPR	Prospect	0.85	32	⇑iP	Pn	02 03 39.8	-0.6
BOT	Bacolet	0.87	36	⇑iP	Pn	02 03 40.0	-0.6
BOT				iS	Sn	02 03 51.4	-0.8
BOT	Bacolet	0.87	36	⇑iP	Pn	02 03 40.0	-0.6
BOT				iS	Sn	02 03 51.4	-0.8
BOT	Bacolet	0.87	36	⇑iP	Pn	02 03 40.0	-0.6
GUIV	Guiria	0.99	281	⇓eP	Pn	02 03 42.9	+0.8
GUIV				eS	Sn	02 03 55.7	+0.6
TOSP	Speyside	1.08	40	eP	Pn	02 03 42.8	-0.6
TOSP				eS	Sn	02 03 56.3	-1.0
GUNV	Guanoco	1.71	260	⇓iP	Pn	02 03 53.7	+1.9
GUNV				eS	Sn	02 04 12.9	+0.3
GRGR	Grenville	1.71	346	ePn	Pn	02 03 52.1	+0.1
GRGR				eSn	Sn	02 04 18.1	+5.4
GRW	Mount Saint Ca	1.74	346	eP	Pn	02 03 52.8	+0.4
GRW	Mount Saint Ca	1.74	346	eP	Pn	02 03 52.8	+0.4
GRHS	Sauteurs	1.80	347	⇑eP	Pn	02 03 54.8	+1.6
GRHS				eS	Sn	02 04 16.4	+1.6
GRHS	Sauteurs	1.80	347	⇑eP	Pn	02 03 54.8	+1.6
GRHS				eS	Sn	02 04 16.4	+1.6
GRHS	Sauteurs	1.80	347	⇑eP	Pn	02 03 54.8	+1.6
GRIC	Isle de Caille	1.85	349	eP	Pn	02 03 55.1	+1.3
GRIC				eS	Sn	02 04 17.7	+1.7
GRSS	Sisters	1.86	349	eP	Pn	02 03 55.8	+1.7
GRSS				eS	Sn	02 04 17.8	+1.4
GRSS	Sisters	1.86	349	eP	Pn	02 03 55.8	+1.7
GRSS				eS	Sn	02 04 17.8	+1.4
CRUV	Carupano	1.98	276	⇓eP	Pn	02 03 55.5	-0.1
CRUV				eS	Sn	02 04 19.8	+0.6
RIOV	Rio Grande	2.44	194	⇑iP	Pn	02 04 01.5	-0.6
RIOV				eS	Sn	02 04 28.1	-2.6
ORIV	Oritupano	2.55	237	⇓iP	Pn	02 04 04.7	+1.2
ORIV				eS	Sn	02 04 32.0	-1.3
FCV	Fort Charlotte	2.68	360	eP	Pn	02 04 10.7	+5.5
SVB	Belmont	2.79	360	eP	Pn	02 04 07.6	+0.8
SVB				eS	Sn	02 04 39.4	0.0
SVB	Belmont	2.79	360	eP	Pn	02 04 07.6	+0.8
SVB				eS	Sn	02 04 39.4	0.0
BHS	Barnard House	2.82	2	eP	Pn	02 04 12.8	+5.6
SVV	Soufriere Volc	2.84	0	eP	Pn	02 04 12.9	+5.5
BBGH	Gun Hill	3.13	31	ePn	Pn	02 04 10.4	-1.1
MCLT	Moule a Chique	3.24	5	eP	Pn	02 04 13.8	+0.9
MCLT				eS	Sn	02 04 49.7	-0.7
MCLT	Moule a Chique	3.24	5	eP	Pn	02 04 13.8	+0.9
MCLT				eS	Sn	02 04 49.7	-0.7
GURV	El Guri	3.25	214	⇑eP	Pn	02 04 12.5	-0.6
PCRV	Puerto La Cruz	3.36	265	⇓eP	Pn	02 04 14.7	+0.1
PRGV	PARIAGUAN	3.76	244	⇓iP	Pn	02 04 20.3	+0.1
FDF	Fort de France	4.25	1	ePn	Pn	02 04 26.7	-0.1
FDF	Fort de France	4.25	1	eP	Pn	02 04 27.1	+0.3
CUPV	Cœpira	4.50	265	⇓eP	Pn	02 04 30.5	+0.2
CUPV				eS	Sn	02 05 19.5	-1.9
LUEV	Luepa	4.59	183	eS	Sn	02 05 18.2	-5.6
BIRV	Birongo	4.95	271	eP	Pn	02 04 37.0	+0.6

BIRV				eS	Sn	02 05 29.8	-2.6
ORCV	**Isla La Orchil**	**5.05**	**286**	eP	**Pn**	**02 04 38.0**	**+0.2**
MERV	**Las Mercedes**	**5.13**	**257**	⇓eP	**Pn**	**02 04 38.5**	**-0.4**
MERV				eS	**Sn**	**02 05 32.9**	**-4.0**
FUNV	**FUNVISIS**	**5.48**	**271**	eP	**Pn**	**02 04 44.3**	**+0.4**
HMG	**Houelmont**	**5.51**	**355**	eP	**Pn**	**02 04 45.1**	**+1.0**
PHG	**Guadaloupe-2**	**5.54**	**356**	eP	**Pn**	**02 04 45.8**	**+1.2**
DOG	**Dongo Capester**	**5.55**	**356**	eP	**Pn**	**02 04 45.9**	**+1.2**
BCG	**Bois Riant Cap**	**5.60**	**356**	eP	**Pn**	**02 04 46.5**	**+1.1**
LZG	**Guadaloupe-1**	**5.67**	**355**	eP	**Pn**	**02 04 47.2**	**+0.9**
SEG	**Port Louis**	**5.91**	**357**	eP	**Pn**	**02 04 51.7**	**+2.0**
TURV	**Turiamo**	**6.50**	**271**	eP	**Pn**	**02 04 57.2**	**-0.4**
BAUV	**El Baul**	**6.88**	**258**	⇓eP	**Pn**	**02 05 01.5**	**-1.4**
BAUV				eS	**Sn**	**02 06 14.3**	**-5.5**
SKI	**Saint Kitts**	**6.99**	**348**	eP	**Pn**	**02 05 06.3**	**+1.9**
SKI				eS	**Sn**	**02 06 20.7**	**-1.8**
SKI	**Saint Kitts**	**6.99**	**348**	eP	**Pn**	**02 05 06.3**	**+1.9**
SKI				eS	**Sn**	**02 06 20.7**	**-1.8**
MAPV	**Macapo**	**7.14**	**266**	eP	**Pn**	**02 05 05.2**	**-1.2**
TEPV	**Terepaima**	**7.85**	**267**	eP	**Pn**	**02 05 14.7**	**-1.5**
SANV	**Sanarito**	**8.23**	**264**	eP	**Pn**	**02 05 20.8**	**-0.7**
SIQV	**Siquisique**	**8.43**	**272**	eP	**Pn**	**02 05 23.7**	**-0.5**
CURV	**Curarigua**	**8.60**	**268**	eP	**Pn**	**02 05 25.4**	**-1.1**
STVI	**Saint Thomas**	**8.63**	**336**	ePn	**Pn**	**02 05 28.1**	**+1.2**
MONV	**Montecano**	**8.70**	**281**	eP	**Pn**	**02 05 27.6**	**-0.2**
ELOV	**Elorza**	**8.85**	**248**	eP	**Pn**	**02 05 28.7**	**-1.2**
HUMP	**Col San Antoni**	**8.85**	**330**	ePn	**Pn**	**02 05 30.9**	**+1.1**
SJG	**San Juan**	**8.97**	**329**	Pn	**Pn**	**02 05 32.5**	**+0.9**
SJG				Sn	Sn	02 07 02.4	-8.9
SJG	**San Juan**	**8.97**	**329**	Pn	**Pn**	**02 05 32.4**	**+0.9**
	1.6nm,0.3s,baz=141,slow=14,SNR=3.2						
SJG				Sn	Sn	02 07 02.4	-8.9
	0.7nm,0.3s,baz=188,slow=15,SNR=2.4						
CELP	**Cerrillos**	**9.17**	**326**	ePn	**Pn**	**02 05 36.4**	**+2.1**
SDV	**Santo Domingo**	**9.40**	**261**	ePn	**Pn**	**02 05 37.5**	**0.0**
AOPR	**Arecibo Observ**	**9.49**	**326**	ePn	**Pn**	**02 05 40.0**	**+1.3**
LRS	**Lares**	**9.49**	**326**	ePn	**Pn**	**02 05 41.5**	**+2.8**
SOCV	**Socops**	**9.73**	**258**	⇓eP	**Pn**	**02 05 40.1**	**-1.9**
AGPR	**Aguadilla, PR**	**9.78**	**325**	ePn	**Pn**	**02 05 44.9**	**+2.3**
VIGV	**El Vigia**	**10.12**	**262**	eP	**Pn**	**02 05 46.4**	**-0.9**
VIRV	**Villa del Rosa**	**10.98**	**271**	eP	**Pn**	**02 05 57.7**	**-1.4**
CAPV	**Capacho**	**11.24**	**258**	eP	**Pn**	**02 06 00.6**	**-2.2**
SDDR	**Presa de Saban**	**12.89**	**312**	ePn	**Pn**	**02 06 28.1**	**+2.9**
SDDR				eSn	**Sn**	**02 08 42.9**	**-4.4**
ROSC	**El Rosal**	**14.12**	**248**	ePn	**Pn**	**02 06 44.0**	**+1.8**
ROSC				Sn	**Sn**	**02 09 16.4**	**-1.3**
ROSC	**El Rosal**	**14.12**	**248**	Pn	**Pn**	**02 06 42.1**	**-0.2**
	1.6nm,0.3s,baz=82,slow=13,SNR=4.5						
ROSC				Sn	**Sn**	**02 09 16.4**	**-1.3**
	0.8nm,0.3s,baz=74,slow=20,SNR=2.3						
SAML	**Samuel**	**19.38**	**186**	eP	**P**	**02 07 46.4**	**0.0**
ATAH	**Atahualpa**	**24.44**	**225**	P	**P**	**02 08 41.8**	**+2.5**
ATAH	**Atahualpa**	**24.44**	**225**	P	**P**	**02 08 41.8**	**+2.5**
	7.2nm,0.6s,baz=41,slow=3.7,SNR=6.2						
ATAH				LR	LR	02 19 17.2	
	comp=Z,28nm,19.3s,baz=229,slow=39						
SIV	**San Ignacio**	**26.28**	**180**	P	**P**	**02 08 57.0**	**+1.5**
SIV	**San Ignacio**	**26.28**	**180**	P	**P**	**02 08 57.0**	**+1.5**
	3.4nm,0.6s,baz=23,slow=8.7,SNR=12						
SIV				LR	LR	02 20 01.0	
	comp=Z,135nm,21.3s,slow=38						
LPAZ	**La Paz**	**27.44**	**194**	eP	**P**	**02 09 03.6**	**-2.9**
	2.6nm,0.9s						
LPAZ	**La Paz**	**27.44**	**194**	P	**P**	**02 09 07.3**	**+0.7**
	1.0nm,0.8s,baz=354,slow=9.6,SNR=3.9						
BDFB	**Brasilia**	**29.05**	**153**	P	**P**	**02 09 21.9**	**+1.5**
BDFB	**Brasilia**	**29.05**	**153**	P	**P**	**02 09 21.9**	**+1.5**
	1.6nm,0.8s,baz=278,slow=18,SNR=2.2						
RCBR	**Riachuelo**	**29.97**	**122**	P	**P**	**02 09 31.1**	**+2.5**
RCBR	**Riachuelo**	**29.97**	**122**	P	**P**	**02 09 31.1**	**+2.5**
	3.5nm,0.9s,baz=309,slow=6.5,SNR=2.2						
KMSC	**Kings Mountain**	**30.64**	**326**	⇑P	**P**	**02 09 33.9**	**-0.3**
	baz=31						
TKL	**Tuckaleechee C**	**32.38**	**324**	P	**P**	**02 09 48.5**	**-1.0**
TKL	**Tuckaleechee C**	**32.38**	**324**	P	**P**	**02 09 48.5**	**-1.0**
	4.1nm,0.8s,baz=179,slow=9.9,SNR=6.2						
WVT	**Waverly**	**35.12**	**321**	eP	**P**	**02 10 12.2**	**-1.1**
	12nm,0.8s						
WCI	**Wyandotte Cave**	**35.62**	**325**	eP	**P**	**02 10 17.3**	**-0.3**
	9.4nm,0.8s						
OLIL	**Olney**	**37.00**	**324**	eP	**P**	**02 10 29.1**	**-0.2**
	31nm,0.9s						
HKT	**Hockley**	**37.60**	**306**	eP	**P**	**02 10 34.5**	**+0.1**
	4.0nm,0.9s						
TUL1	**Tulsa**	**40.28**	**315**	⇑P	**P**	**02 10 55.0**	**-1.8**
	baz=40						
632A	**Uvalde**	**40.63**	**303**	⇑P	**P**	**02 10 59.4**	**-0.5**
	baz=41						
532A	**Rocksprings**	**40.94**	**304**	⇓P	**P**	**02 11 01.6**	**-0.9**
	baz=41						
JCT	**Junction City**	**40.98**	**305**	eP	**P**	**02 11 01.8**	**-1.0**
	5.5nm,0.9s						
JCT	**Junction City**	**40.98**	**305**	⇑P	**P**	**02 11 01.8**	**-1.0**
	baz=41						
432A	**Menard**	**41.11**	**305**	⇑P	**P**	**02 11 02.6**	**-1.3**
	baz=41						
631A	**Perdido Creek**	**41.25**	**303**	⇑P	**P**	**02 11 03.6**	**-1.4**
	baz=41						
332A	**Millersview**	**41.26**	**306**	⇓P	**P**	**02 11 03.6**	**-1.5**
	baz=41,SNR=7.5						
232A	**Coleman**	**41.37**	**307**	⇑P	**P**	**02 11 04.5**	**-1.5**
	baz=42						
531A	**Rocksprings**	**41.47**	**304**	⇑P	**P**	**02 11 05.8**	**-1.1**
	baz=42						
ABTX	**Abilene, Hawle**	**41.65**	**308**	⇑P	**P**	**02 11 07.0**	**-1.3**
	baz=42						
431A	**Sonora**	**41.70**	**305**	⇓P	**P**	**02 11 07.7**	**-1.1**
	baz=42						
331A	**San Angelo**	**41.77**	**306**	⇑P	**P**	**02 11 08.3**	**-1.0**
	baz=42						
WMOK	**Wichita Mounta**	**41.88**	**311**	eP	**P**	**02 11 07.7**	**-2.4**
	1.6nm,0.7s						
231A	**Bronte**	**41.91**	**307**	⇓P	**P**	**02 11 08.8**	**-1.6**
	baz=42						
SCIA	**State Center**	**42.03**	**324**	eP	**P**	**02 11 11.1**	**-0.1**
	55nm,0.9s						
Y32A	**R-V Farms, Ver**	**42.06**	**310**	⇑P	**P**	**02 11 09.8**	**-1.8**
	baz=42						
530A	**J-C Ranch, Com**	**42.11**	**304**	⇓P	**P**	**02 11 11.3**	**-0.9**
	baz=42						
430A	**Baggett Ranch,**	**42.24**	**305**	⇑P	**P**	**02 11 12.0**	**-1.2**
	baz=42						
Z31A	**Sharp Cattle R**	**42.31**	**309**	⇓P	**P**	**02 11 12.5**	**-1.2**
	baz=42						
CFAA	**Coronel Fontan**	**42.36**	**189**	P	**P**	**02 11 14.1**	**+0.1**
CFAA	**Coronel Fontan**	**42.36**	**189**	P	**P**	**02 11 14.1**	**+0.1**
	0.1nm,0.5s,baz=348,slow=9.3,SNR=4.0						
330A	**Mertzon**	**42.41**	**306**	⇑P	**P**	**02 11 13.1**	**-1.5**
	baz=42						
230A	**Sterling City**	**42.53**	**306**	⇓P	**P**	**02 11 14.3**	**-1.2**
	baz=43						
Y31A	**Rekieta Farm,**	**42.66**	**309**	⇓P	**P**	**02 11 15.2**	**-1.3**
	baz=43						
429A	**Davenport Ranc**	**42.72**	**304**	⇑P	**P**	**02 11 15.8**	**-1.3**
	baz=43						
529A	**Stev Forest Ra**	**42.83**	**303**	⇓P	**P**	**02 11 16.9**	**-1.0**
	baz=43						
Z30A	**Sanderson Ranc**	**43.06**	**308**	⇓P	**P**	**02 11 17.9**	**-1.9**
	baz=43,SNR=5.4						
329A	**Wagon Wheel Ra**	**43.08**	**305**	⇑P	**P**	**02 11 18.6**	**-1.4**
	baz=43						
229A	**Bryant Ranch,**	**43.11**	**306**	⇑P	**P**	**02 11 18.8**	**-1.5**
	baz=43						
628A	**Black Gap, Mar**	**43.19**	**302**	⇑P	**P**	**02 11 19.8**	**-1.0**
	baz=43,SNR=5.5						
528A	**Cox Ranch, San**	**43.31**	**303**	⇓P	**P**	**02 11 20.9**	**-1.0**
	baz=43,SNR=6.3						
129A	**Stewart Farms,**	**43.39**	**307**	⇓P	**P**	**02 11 21.0**	**-1.5**
	baz=44,SNR=6.4						
428A	**Kincaid Ranch,**	**43.40**	**304**	⇑P	**P**	**02 11 21.9**	**-0.7**
	baz=44,SNR=5.2						
Z29A	**Hungry Hill Ra**	**43.50**	**308**	⇓P	**P**	**02 11 22.1**	**-1.2**
	baz=44						
627A	**Terlingua Ranc**	**43.59**	**302**	⇓P	**P**	**02 11 23.3**	**-0.9**
	baz=44						
Y29A	**Porterfield Fa**	**43.70**	**309**	⇑P	**P**	**02 11 23.6**	**-1.3**
	baz=44						
328A	**Wristen Ranch,**	**43.71**	**305**	⇑P	**P**	**02 11 23.9**	**-1.1**
	baz=44						
228A	**UT Block 9, Go**	**43.78**	**306**	⇑P	**P**	**02 11 24.7**	**-1.0**
	baz=44						
TXAR	**Lajitas Array**	**43.79**	**302**	P	**P**	**02 11 24.9**	**-0.9**
TXAR				PcP	**PcP**	**02 13 13.0**	**+1.2**
TXAR	**Lajitas Array**	**43.79**	**302**	P	**P**	**02 11 24.9**	**-0.9**
	0.7nm,0.8s,baz=117,slow=7.6,SNR=9.2						

TXAR				PcP	**PcP**	**02 13 13.0**	**+1.2**
	0.8nm,0.8s,baz=113,slow=6.3,SNR=3.6						
128A	**Castleberry Fa**	**43.88**	**307**	⇓P	**P**	**02 11 25.5**	**-0.9**
	baz=44						
427A	**Hayter Ranch,**	**44.02**	**304**	⇓P	**P**	**02 11 26.3**	**-1.3**
	baz=44,SNR=6.3						
626A	**Big Bend Ranch**	**44.25**	**302**	⇓P	**P**	**02 11 28.9**	**-0.5**
	baz=44						
526A	**Mary Lane Ranc**	**44.35**	**302**	⇓P	**P**	**02 11 30.0**	**-0.3**
	baz=44						
SCHQ	**Schefferville**	**44.48**	**355**	P	**P**	**02 11 32.3**	**+1.6**
SCHQ	**Schefferville**	**44.48**	**355**	P	**P**	**02 11 32.3**	**+1.6**
	22nm,0.8s,baz=173,slow=6.2,SNR=38						
426A	**McDonald Obser**	**44.48**	**303**	⇑P	**P**	**02 11 30.3**	**-1.1**
	baz=45,SNR=6.4						
127A	**Arkansas Junct**	**44.58**	**306**	⇑P	**P**	**02 11 30.9**	**-1.2**
	baz=45,SNR=6.6						
MSTX	**Muleshoe**	**44.59**	**308**	⇓P	**P**	**02 11 30.3**	**-1.8**
	baz=45,SNR=6.6						
Z27A	**Tatum**	**44.69**	**307**	⇑P	**P**	**02 11 31.1**	**-1.9**
	baz=45,SNR=7.4						
Y27A	**Causey**	**44.86**	**308**	⇓P	**P**	**02 11 33.4**	**-0.9**
	baz=45						
X27A	**F and S Farms,**	**45.09**	**309**	⇑P	**P**	**02 11 35.1**	**-1.0**
	baz=45						
126A	**Clayton Basin,**	**45.10**	**306**	⇓P	**P**	**02 11 34.8**	**-1.4**
	baz=45,SNR=5.1						
ECSD	**EROS Data Cent**	**45.12**	**324**	eP	**P**	**02 11 35.0**	**-1.1**
	8.2nm,0.8s						
W27A	**Bowe Ranch, En**	**45.22**	**310**	⇑P	**P**	**02 11 35.6**	**-1.5**
	baz=45,SNR=6.1						
Z26A	**Caprock**	**45.28**	**307**	⇓P	**P**	**02 11 35.9**	**-1.7**
	baz=45,SNR=7.1						
425A	**Indio Mountain**	**45.30**	**303**	⇑P	**P**	**02 11 36.5**	**-1.4**
	baz=45						
325A	**Bean Ranch, Si**	**45.47**	**304**	⇓P	**P**	**02 11 38.1**	**-1.1**
	baz=46,SNR=11						
225A	**Deer Hill, Car**	**45.57**	**305**	⇓P	**P**	**02 11 39.3**	**-0.7**
	baz=46,SNR=9.2						
125A	**Gardner Draw,**	**45.61**	**306**	⇓P	**P**	**02 11 39.0**	**-1.2**
	baz=46,SNR=7.1						
Z25A	**Roswell**	**45.86**	**307**	⇑P	**P**	**02 11 41.4**	**-0.8**
	baz=46,SNR=11						
324A	**Moseley Ranch,**	**45.90**	**304**	⇓P	**P**	**02 11 42.1**	**-0.6**
	baz=46						
V26A	**Tequesquite Ra**	**46.04**	**310**	⇑P	**P**	**02 11 42.1**	**-1.5**
	baz=46,SNR=5.1						
Y25A	**Mesa, Roswell**	**46.06**	**307**	⇑P	**P**	**02 11 43.2**	**-0.6**
	baz=46						
224A	**Cornudas Mount**	**46.12**	**305**	⇑P	**P**	**02 11 43.4**	**-0.9**
	baz=46						
U26A	**Atchley Ranch,**	**46.24**	**311**	⇑P	**P**	**02 11 44.2**	**-1.1**
	baz=46						
W25A	**X Bar L Ranch,**	**46.34**	**309**	⇑P	**P**	**02 11 45.3**	**-0.7**
	baz=46						
Z24A	**Sheeppen Canyo**	**46.39**	**306**	⇑P	**P**	**02 11 46.0**	**-0.5**
	baz=46,SNR=12						
S26A	**Kim**	**46.53**	**313**	⇓P	**P**	**02 11 46.4**	**-1.1**
	baz=47						
Y24A	**Capitan**	**46.64**	**307**	⇓P	**P**	**02 11 48.1**	**-0.3**
	baz=47,SNR=9.5						
V25A	**Rancho No Teng**	**46.68**	**310**	⇓P	**P**	**02 11 48.0**	**-0.8**
	baz=47,SNR=8.7						
U25A	**Circle Dot Ran**	**46.74**	**311**	⇓P	**P**	**02 11 48.2**	**-1.0**
	baz=47						
X24A	**Lazy VL Ranch,**	**46.86**	**308**	⇓P	**P**	**02 11 49.4**	**-0.7**
	baz=47						
BRSD	**Miller**	**46.91**	**323**	⇓P	**P**	**02 11 48.9**	**-1.2**
	baz=47						
T25A	**Trinidad**	**47.03**	**312**	⇓P	**P**	**02 11 50.3**	**-1.1**
	baz=47						
Z23A	**Rita Site, Whi**	**47.06**	**306**	⇑P	**P**	**02 11 50.9**	**-0.8**
	baz=47						
W24A	**Lazy 6 Ranch,**	**47.06**	**309**	⇓P	**P**	**02 11 51.2**	**-0.6**
	baz=47						
Y23A	**Lovelace Mesa,**	**47.13**	**307**	⇑P	**P**	**02 11 51.9**	**-0.3**
	baz=47,SNR=8.7						
V24A	**Rampart Ranch,**	**47.14**	**310**	⇑P	**P**	**02 11 51.8**	**-0.6**
	baz=47						
S25A	**Robets Cordova**	**47.25**	**312**	⇓P	**P**	**02 11 51.7**	**-1.4**
	baz=47						
BNM	**Barren Site**	**47.65**	**307**	eP	**P**	**02 11 55.8**	**-0.6**
	2.4nm,0.9s						
ANMO	**Albuquerque**	**47.78**	**308**	eP	**P**	**02 11 56.8**	**-0.5**
	1.9nm,0.9s						
S24A	**Houchin Ranch,**	**47.81**	**312**	⇑P	**P**	**02 11 56.8**	**-0.9**
	baz=48						
V23A	**Ortiz Mt. (NFS**	**47.84**	**309**	⇓P	**P**	**02 11 57.7**	**-0.1**
	baz=48,SNR=5.5						
121A	**Cookes Peak, D**	**48.09**	**305**	⇑P	**P**	**02 11 59.3**	**-0.4**
	baz=48						
LAZ	**Ladron**	**48.13**	**307**	eP	**P**	**02 11 59.4**	**-0.6**
	2.6nm,1.1s						
Z21A	**St. Cloud Mine**	**48.22**	**306**	⇓P	**P**	**02 12 00.7**	**0.0**
	baz=48,SNR=6.8						
Y21A	**Point of Rocks**	**48.43**	**306**	⇓P	**P**	**02 12 02.3**	**-0.1**
	baz=48,SNR=12						
U22A	**Llaves**	**48.57**	**310**	⇓P	**P**	**02 12 03.1**	**-0.3**
	baz=49						
W21A	**San Fidel**	**48.76**	**308**	⇓P	**P**	**02 12 04.7**	**-0.1**
	baz=49						
T22A	**Edith**	**48.83**	**310**	⇑P	**P**	**02 12 04.7**	**-0.7**
	baz=49						
ULM	**Lac du Bonnet**	**48.87**	**331**	P	**P**	**02 12 02.8**	**-2.4**
ULM	**Lac du Bonnet**	**48.87**	**331**	P	**P**	**02 12 02.8**	**-2.4**
	1.7nm,0.3s,baz=127,slow=8.5,SNR=6.7						
ISCO	**Idaho Springs**	**48.96**	**314**	⇑P	**P**	**02 12 05.1**	**-1.3**
	baz=49						
K25A	**Mack Ranch, Ha**	**49.01**	**319**	⇓P	**P**	**02 12 06.0**	**-0.6**
	baz=49						
U21A	**Nageezi**	**49.20**	**309**	⇑P	**P**	**02 12 08.0**	**-0.2**
	baz=49,SNR=5.4						
O23A	**Lake Granby, G**	**49.34**	**315**	⇓P	**P**	**02 12 08.5**	**-0.8**
	baz=49						
Q22A	**Crested Butte,**	**49.51**	**313**	⇑P	**P**	**02 12 09.8**	**-0.9**
	baz=50						
V20A	**Brimhall**	**49.61**	**308**	⇑P	**P**	**02 12 10.6**	**-0.7**
	baz=50						
O22A	**Kremmling**	**49.76**	**314**	⇓P	**P**	**02 12 11.0**	**-1.6**
	baz=50						
R21A	**Cimarron**	**49.79**	**312**	⇑P	**P**	**02 12 11.7**	**-1.1**
	baz=50						
Q21A	**Lamborn Mesa,**	**49.98**	**312**	⇓P	**P**	**02 12 13.4**	**-0.8**
	baz=50						
L23A	**Garrett**	**50.00**	**317**	⇓P	**P**	**02 12 13.2**	**-1.1**
	baz=50						
P21A	**Newcastle**	**50.15**	**313**	⇑P	**P**	**02 12 14.9**	**-0.5**
	baz=50						
R20A	**Redvale**	**50.34**	**311**	⇑P	**P**	**02 12 16.4**	**-0.4**
	baz=50						
X18A	**Snowflake**	**50.39**	**306**	⇓P	**P**	**02 12 16.8**	**-0.4**
	baz=50						
PV01	**Paradox Valley**	**50.46**	**311**	eP	**P**	**02 12 17.3**	**-0.5**
	231nm,0.8s						
H24A	**Dirks Ranch, A**	**50.47**	**321**	⇑P	**P**	**02 12 16.5**	**-1.1**
	baz=51						
TUC	**Tucson**	**50.48**	**303**	eP	**P**	**02 12 16.9**	**-1.0**
G24A	**Alzada**	**50.67**	**321**	⇓P	**P**	**02 12 18.4**	**-0.7**
	baz=51						
K22A	**Casper**	**50.78**	**317**	⇓P	**P**	**02 12 19.2**	**-0.9**
	baz=51						
F24A	**Ekalaka**	**50.94**	**322**	⇓P	**P**	**02 12 20.3**	**-0.8**
	baz=51						
G23A	**Biddle**	**51.21**	**321**	⇓P	**P**	**02 12 22.5**	**-0.6**
	baz=51						
Q19A	**Hogan Spring (**	**51.26**	**312**	⇑P	**P**	**02 12 22.8**	**-0.8**
	baz=51						
K21A	**Alcova**	**51.26**	**317**	⇓P	**P**	**02 12 22.9**	**-0.8**
	baz=51						
J21A	**Lysite**	**51.69**	**318**	⇓P	**P**	**02 12 26.2**	**-0.7**
	baz=52						
L20A	**Wamsutter**	**51.74**	**316**	⇓P	**P**	**02 12 27.2**	**-0.1**
	baz=52						
WUAZ	**Wupatki**	**51.78**	**307**	eP	**P**	**02 12 27.5**	**-0.2**
	4.9nm,0.9s						
WUAZ	**Wupatki**	**51.78**	**307**	⇓P	**P**	**02 12 27.5**	**-0.2**
	baz=52						
N19A	**John Jarvie Ra**	**51.89**	**314**	⇓P	**P**	**02 12 26.8**	**-1.6**
	baz=52						
H21A	**Big Horn, Sher**	**51.98**	**319**	⇑P	**P**	**02 12 28.3**	**-0.7**
	baz=52						
K20A	**Yellowstone Ra**	**52.00**	**317**	⇓P	**P**	**02 12 27.6**	**-1.5**
	baz=52,SNR=5.6						
F22A	**Rosebud**	**52.02**	**321**	⇑P	**P**	**02 12 27.8**	**-1.3**
	baz=52,SNR=5.3						
D23A	**Lindsay**	**52.06**	**323**	⇑P	**P**	**02 12 29.2**	**-0.3**
	baz=52						
J20A	**Shoshoni**	**52.11**	**318**	⇑P	**P**	**02 12 29.4**	**-0.6**

	baz=52						
E22A	**Miles City**	**52.14**	**322**	⇓P	**P**	**02 12 29.4**	**-0.6**
	baz=52						
SRU	**San Rafael**	**52.23**	**312**	⇑P	**P**	**02 12 30.0**	**-0.9**
	baz=52						
G21A	**Lodge Grass**	**52.36**	**320**	⇑P	**P**	**02 12 30.9**	**-0.8**
	baz=52						
C23A	**Lambert**	**52.36**	**324**	⇓P	**P**	**02 12 31.5**	**-0.1**
	baz=52						
I20A	**Worland**	**52.39**	**318**	⇓P	**P**	**02 12 31.1**	**-1.0**
	baz=52						
L19A	**Farson**	**52.47**	**316**	⇓P	**P**	**02 12 31.7**	**-1.0**
	baz=53						
H20A	**Greybull**	**52.54**	**319**	⇓P	**P**	**02 12 31.1**	**-1.9**
	baz=53,SNR=5.9						
B23A	**Brockton**	**52.59**	**325**	⇓P	**P**	**02 12 33.2**	**-0.1**
	baz=53						
D22A	**Cohagen**	**52.63**	**323**	⇓P	**P**	**02 12 33.3**	**-0.3**
	baz=53,SNR=11						
J19A	**Crowheart**	**52.72**	**317**	⇑P	**P**	**02 12 33.6**	**-0.9**
	baz=53						
U15A	**North Rim**	**52.75**	**308**	⇓P	**P**	**02 12 34.5**	**-0.5**
	baz=53						
O17A	**Robinson Place**	**52.75**	**313**	⇑P	**P**	**02 12 34.4**	**-0.5**
	baz=53						
BW06	**Boulder Array**	**52.87**	**316**	eP	**P**	**02 12 34.2**	**-1.5**
	3.6nm,0.9s						
BW06	**Boulder Array**	**52.87**	**316**	⇓P	**P**	**02 12 34.0**	**-1.7**
	baz=53,SNR=5.6						
PDAR	**Pinedale Array**	**52.87**	**316**	P	**P**	**02 12 34.2**	**-1.5**
PDAR				ScP	**ScP**	**02 17 38.6**	**+0.8**
PDAR	**Pinedale Array**	**52.87**	**316**	P	**P**	**02 12 34.2**	**-1.5**
	3.1nm,0.8s,baz=119,slow=9.2,SNR=20						
PDAR				ScP	**ScP**	**02 17 38.6**	**+0.8**
	1.0nm,0.8s,baz=120,slow=5.3,SNR=4.3						
PDAR				LR	LR	02 35 45.0	
	comp=Z,63nm,20.5s,baz=266,slow=37						
G20A	**Bridger**	**52.99**	**320**	⇓P	**P**	**02 12 35.2**	**-1.2**
	baz=53						
I19A	**Meeteetse**	**53.00**	**318**	⇓P	**P**	**02 12 35.6**	**-1.0**
	baz=53						
D21A	**La Casta Ranch**	**53.07**	**322**	⇑P	**P**	**02 12 36.6**	**-0.3**
	baz=53,SNR=12						
N17A	**Moffit Pass**	**53.08**	**314**	⇑P	**P**	**02 12 36.6**	**-0.8**
	baz=53						
K18A	**Toltan Ranch,**	**53.15**	**316**	⇑P	**P**	**02 12 37.0**	**-0.8**
	baz=53						
F20A	**Billings**	**53.21**	**320**	⇓P	**P**	**02 12 37.4**	**-0.5**
	baz=53						
J18A	**Kendall Valley**	**53.35**	**317**	⇑P	**P**	**02 12 38.8**	**-0.4**
	baz=53						
I18A	**Diamond G Ranc**	**53.41**	**317**	⇓P	**P**	**02 12 38.6**	**-1.0**
	baz=54,SNR=6.6						
C21A	**Desert Coulee**	**53.50**	**323**	⇑P	**P**	**02 12 39.7**	**-0.3**
	baz=54						
E20A	**Meyer Farm, Mu**	**53.51**	**321**	⇑P	**P**	**02 12 39.4**	**-0.7**
	baz=54,SNR=17						
RLMT	**Red Lodge**	**53.62**	**319**	eP	**P**	**02 12 40.4**	**-0.8**
	3.5nm,0.8s						
RLMT	**Red Lodge**	**53.62**	**319**	⇑P	**P**	**02 12 40.6**	**-0.6**
	baz=54						
W13A	**Hualapai Mount**	**53.66**	**306**	⇓P	**P**	**02 12 41.5**	**-0.2**
	baz=54						
H18A	**Shoshone NF, C**	**53.70**	**319**	⇑P	**P**	**02 12 41.1**	**-0.6**
	baz=54						
F19A	**Roth Farm, Mol**	**53.73**	**320**	⇓P	**P**	**02 12 41.0**	**-0.8**
	baz=54						
D20A	**Manuel Ranch,**	**53.78**	**322**	⇑P	**P**	**02 12 41.4**	**-0.7**
	baz=54,SNR=10.0						
K17A	**Gardner Place,**	**53.79**	**316**	⇑P	**P**	**02 12 41.3**	**-1.1**
	baz=54						
HWUT	**Hardware Ranch**	**53.83**	**314**	eP	**P**	**02 12 40.9**	**-1.8**
	3.6nm,0.9s						
E19A	**Rath Farm, Rou**	**53.90**	**321**	⇓P	**P**	**02 12 42.2**	**-0.8**
	baz=54,SNR=7.2						
G18A	**Lazy EL Ranch,**	**53.90**	**319**	⇓P	**P**	**02 12 42.5**	**-0.7**
	baz=54						
LOHW	**Long Hollow**	**53.90**	**317**	eP	**P**	**02 12 41.8**	**-1.4**
	1.9nm,0.8s						
C20A	**Veseth Ranch,**	**53.98**	**323**	⇑P	**P**	**02 12 42.9**	**-0.7**
	baz=54,SNR=9.3						
F18A	**Big Timber**	**54.24**	**320**	⇑P	**P**	**02 12 44.7**	**-0.8**
	baz=54,SNR=5.2						
DUG	**Dugway**	**54.26**	**312**	eP	**P**	**02 12 45.1**	**-0.6**
	3.3nm,0.8s						
DUG	**Dugway**	**54.26**	**312**	⇑P	**P**	**02 12 44.7**	**-1.1**
	baz=54						
D19A	**Cripps Ranch,**	**54.26**	**322**	⇓P	**P**	**02 12 44.8**	**-0.9**
	baz=54,SNR=8.6						
IRM	**Iron Mountain**	**54.46**	**305**	⇑P	**P**	**02 12 46.9**	**-0.4**
	baz=54						
A20A	**Cobblestone Ra**	**54.49**	**324**	⇓P	**P**	**02 12 47.2**	**-0.1**
	baz=55						
L15A	**Malad City**	**54.54**	**315**	⇓P	**P**	**02 12 46.3**	**-1.5**
	baz=55,SNR=6.5						
I16A	**Newdale**	**54.59**	**317**	⇑P	**P**	**02 12 47.2**	**-1.0**
	baz=55,SNR=6.3						
FFC	**Flin Flon**	**54.60**	**332**	eP	**P**	**02 12 46.3**	**-1.6**
	2.3nm,0.7s						
BC3	**Big Chuckawall**	**54.60**	**304**	⇓P	**P**	**02 12 47.8**	**-0.6**
	baz=55						
C19A	**Slack Wire Ran**	**54.62**	**322**	⇑P	**P**	**02 12 47.2**	**-1.0**
	baz=55,SNR=6.3						
E18A	**Harlowton**	**54.64**	**321**	⇓P	**P**	**02 12 47.9**	**-0.6**
	baz=55						
H16A	**Russell Place,**	**54.75**	**318**	⇑P	**P**	**02 12 48.7**	**-0.6**
	baz=55						
F17A	**Fitzpatrick Pl**	**54.84**	**320**	⇓P	**P**	**02 12 49.3**	**-0.6**
	baz=55,SNR=6.5						
K15A	**Arbon**	**54.88**	**315**	⇑P	**P**	**02 12 49.5**	**-0.8**
	baz=55						
B19A	**Brinkman Farms**	**54.89**	**323**	⇑P	**P**	**02 12 49.7**	**-0.4**
	baz=55						
A19A	**Klindworth Far**	**54.99**	**324**	⇓P	**P**	**02 12 50.6**	**-0.2**
	baz=55						
J15A	**Blackfoot**	**55.06**	**316**	⇑P	**P**	**02 12 50.8**	**-0.7**
	baz=55						
L14A	**Malta**	**55.15**	**314**	⇑P	**P**	**02 12 51.1**	**-1.2**
	baz=55						
EGMT	**Eagleton**	**55.18**	**322**	eP	**P**	**02 12 51.5**	**-0.7**
EGMT				epP	pP	02 13 01.2	-4.8
EGMT	**Eagleton**	**55.18**	**322**	⇓P	**P**	**02 12 51.6**	**-0.6**
	baz=55,SNR=6.3						
K14A	**Jones Ranch, D**	**55.27**	**315**	⇑P	**P**	**02 12 52.2**	**-0.9**
	baz=55						
I15A	**Monteview**	**55.31**	**317**	⇑P	**P**	**02 12 53.1**	**-0.2**
	baz=55						
G16A	**Moss Hill, Enn**	**55.31**	**318**	⇓P	**P**	**02 12 52.7**	**-0.7**
	baz=55						
B18A	**Beardsley Farm**	**55.35**	**323**	⇑P	**P**	**02 12 53.0**	**-0.5**
	baz=55,SNR=5.7						
BOZ	**Bozeman (W)**	**55.36**	**319**	eP	**P**	**02 12 52.9**	**-0.7**
	27nm,2.3s						
BOZ	**Bozeman (W)**	**55.36**	**319**	⇑P	**P**	**02 12 53.0**	**-0.7**
	baz=55						
D17A	**Six Diamond Ra**	**55.37**	**321**	⇓P	**P**	**02 12 52.9**	**-0.9**
	baz=55						
F16A	**Kennard Place,**	**55.41**	**319**	⇑P	**P**	**02 12 53.5**	**-0.5**
	baz=56						
C17A	**Wharram Farm,**	**55.62**	**321**	⇓P	**P**	**02 12 54.4**	**-1.0**
	baz=56,SNR=11						
A18A	**Metzger Ranch,**	**55.63**	**323**	⇑P	**P**	**02 12 54.6**	**-0.8**
	baz=56						
G15A	**Dillon**	**55.74**	**318**	⇑P	**P**	**02 12 56.0**	**-0.5**
	baz=56						
E16A	**East Helena**	**55.74**	**320**	⇓P	**P**	**02 12 55.4**	**-1.0**
	baz=56,SNR=5.5						
J14A	**Carey**	**55.77**	**316**	⇓P	**P**	**02 12 56.3**	**-0.4**
	baz=56						
R11A	**Troy Canyon, C**	**55.79**	**309**	⇓P	**P**	**02 12 56.3**	**-0.7**
	baz=56						
DBIC	**Dimbokro**	**55.82**	**89**	eP	**P**	**02 12 57.1**	**-0.2**
DBIC	**Dimbokro**	**55.82**	**89**	P	**P**	**02 12 57.4**	**+0.1**
	1.8nm,0.6s,baz=273,slow=8.9,SNR=5.3						
D16A	**Dana Ranch, Ca**	**55.86**	**321**	⇑P	**P**	**02 12 56.2**	**-1.0**
	baz=56,SNR=7.6						
B17A	**L&G Farms, Che**	**55.92**	**322**	⇓P	**P**	**02 12 56.9**	**-0.6**
	baz=56						
I14A	**Mackay**	**55.94**	**316**	⇑P	**P**	**02 12 57.4**	**-0.6**
	baz=56						
F15A	**Butte**	**55.99**	**319**	⇓P	**P**	**02 12 57.7**	**-0.6**
	baz=56						
H14A	**Leadore**	**56.12**	**317**	⇑P	**P**	**02 12 58.3**	**-0.9**
	baz=56						
A17A	**Triple J Farms**	**56.15**	**323**	⇑P	**P**	**02 12 58.8**	**-0.4**
	baz=56						
ELK	**Elko**	**56.19**	**312**	eP	**P**	**02 12 58.5**	**-1.3**
J13A	**Cove Ranch, Pi**	**56.25**	**316**	⇓P	**P**	**02 12 59.1**	**-1.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=56						
C16A	Fuhringer Ranc	56.29	321	⇑P	P	02 12 59.2	-1.1
	baz=56,SNR=11						
E15A	Deer Lodge	56.31	319	⇑P	P	02 12 59.2	-1.3
	baz=56						
I13A	Wildhorse Cree	56.38	316	⇑P	P	02 13 00.3	-0.9
	baz=56,SNR=8.7						
HLID	Hailey	56.47	316	*e*P	P	02 13 01.1	-0.6
	3.2nm,0.8s						
HLID	Hailey	56.47	316	⇓P	P	02 13 00.9	-0.8
	baz=56,SNR=6.4						
D15A	Lincoln	56.47	320	⇑P	P	02 13 00.8	-0.8
	baz=56,SNR=11						
B16A	M & M Farms, S	56.52	322	⇑P	P	02 13 00.8	-1.0
	baz=57						
A16A	West Butte Ran	56.68	323	⇓P	P	02 13 02.7	-0.3
	baz=57						
C15A	Salmond Ranch,	56.81	321	⇓P	P	02 13 03.1	-0.9
	baz=57,SNR=8.0						
E14A	Clinton	56.85	319	⇓P	P	02 13 03.5	-0.8
	baz=57						
B15A	Bradely Ranch,	57.00	322	⇓P	P	02 13 04.1	-1.2
	baz=57						
D14A	Greenough	57.11	320	⇑P	P	02 13 05.0	-1.2
	baz=57						
SLMT	Seeley Lake	57.16	320	*e*P	P	02 13 05.9	-0.6
F13A	Darby	57.17	318	⇑P	P	02 13 05.5	-1.1
	baz=57						
A15A	Johnson Ranch,	57.37	322	⇑P	P	02 13 07.2	-0.7
	baz=57,SNR=7.4						
B14A	Marquette Ranc	57.46	321	⇑P	P	02 13 07.8	-0.8
	baz=58						
C14A	Swan Lake	57.52	321	⇓P	P	02 13 08.5	-0.5
	baz=58						
D13A	Huson	57.72	320	⇑P	P	02 13 09.4	-1.0
	baz=58,SNR=5.7						
A14A	Double T Ranch	57.79	322	⇓P	P	02 13 09.6	-1.3
	baz=58						
NVAR	Mina Array Bea	57.88	309	P	P	02 13 11.3	-0.5
NVAR	Mina Array Bea	57.88	309	P	P	02 13 11.3	-0.5
	0.3nm,0.4s,baz=90,slow=6.3,SNR=2.7						
C13A	Hot Springs	58.01	320	⇑P	P	02 13 11.6	-0.7
	baz=58						
B13A	Whitefish	58.20	321	⇑P	P	02 13 12.8	-0.8
	baz=58						
D12A	Red Ives Fores	58.27	319	⇑P	P	02 13 13.5	-0.8
	baz=58						
ESDC	Sonseca Array	58.32	50	P	P	02 13 16.6	+1.9
ESDC	Sonseca Array	58.32	50	P	P	02 13 16.6	+1.9
	0.7nm,0.5s,baz=262,slow=8.0,SNR=7.5						
A13A	Flathead Natio	58.38	322	⇓P	P	02 13 14.6	-0.4
	baz=58						
C12B	Naegeli Ranch,	58.58	320	⇓P	P	02 13 16.0	-0.3
	baz=59						
B12A	Libby	58.93	321	⇓P	P	02 13 18.5	-0.2
	baz=59						
C11A	Tepee Creek (N	59.12	320	⇑P	P	02 13 19.4	-0.8
	baz=59						
A12A	Yaak River Ran	59.13	321	⇓P	P	02 13 19.9	-0.2
	baz=59						
NEW	Newport	59.81	320	*e*P	P	02 13 23.5	-1.3
	6.7nm,0.7s						
NEW	Newport	59.81	320	⇓P	P	02 13 23.6	-1.3
	baz=60,SNR=8.0						
ROSF	Rostrenen	61.15	40	*e*P	P	02 13 36.0	+2.1
	6.1nm,0.6s						
ROSF	Rostrenen	61.15	40	*e*P	P	02 13 36.0	+2.1
	6.1nm,0.6s						
TOA0	Torodi Ar. Sit	61.52	81	*e*P	P	02 13 36.8	-0.2
TORD	Torodi Ar. Bea	61.52	81	P	P	02 13 37.3	+0.3
TORD	Torodi Ar. Bea	61.52	81	P	P	02 13 37.3	+0.3
	1.5nm,0.4s,baz=289,slow=6.3,SNR=101						
EPF	Esparros	62.23	47	*e*P	P	02 13 43.5	+2.2
	3.3nm,0.5s						
EPF	Esparros	62.23	47	*e*P	P	02 13 43.5	+2.2
	3.3nm,0.5s						
LFF	La Frestale	62.92	45	*e*P	P	02 13 47.5	+1.7
	11nm,0.8s						
LFF	La Frestale	62.92	45	*e*P	P	02 13 47.5	+1.7
	11nm,0.8s						
FLN	La Foliniere	63.05	40	*e*P	P	02 13 48.6	+2.0
FLN	La Foliniere	63.05	40	*e*P	P	02 13 48.6	+2.0
EKA	Eskdalemuir Ar	63.56	33	P	P	02 13 51.4	+1.5
EKA	Eskdalemuir Ar	63.56	33	P	P	02 13 51.4	+1.5
	0.3nm,0.4s,baz=241,slow=6.6,SNR=4.7						
MTLF	Montolieu	63.64	47	*e*P	P	02 13 52.1	+1.5
MTLF	Montolieu	63.64	47	*e*P	P	02 13 52.1	+1.5
CAF	Calviac	63.84	45	*e*P	P	02 13 53.4	+1.4
	5.1nm,0.6s						
CAF	Calviac	63.84	45	*e*P	P	02 13 53.4	+1.4
	5.1nm,0.6s						
TCF	Toulx Ste Croi	64.22	44	*e*P	P	02 13 56.3	+1.9
TCF	Toulx Ste Croi	64.22	44	*e*P	P	02 13 56.3	+1.9
YKA	Yellowknife Ar	64.39	336	P	P	02 13 53.7	-1.5
YKA	Yellowknife Ar	64.39	336	P	P	02 13 53.7	-1.5
	0.9nm,0.3s,baz=103,slow=7.3,SNR=30						
TAM	Tamanrasset	64.68	70	*e*P	P	02 13 59.8	+1.8
	3.2nm,0.8s						
BGF	Bois d'Agland	64.71	43	*e*P	P	02 13 58.9	+1.3
	8.8nm,0.8s						
BGF	Bois d'Agland	64.71	43	*e*P	P	02 13 58.9	+1.3
	8.8nm,0.8s						
SMF	Signal de Mont	65.40	43	*e*P	P	02 14 04.1	+2.0
SMF	Signal de Mont	65.40	43	*e*P	P	02 14 04.1	+2.0
BAIF	Baives	66.34	40	*e*P	P	02 14 09.8	+1.8
BAIF	Baives	66.34	40	*e*P	P	02 14 09.8	+1.8
MEZF	Maizieres J'vi	66.56	42	*e*P	P	02 14 11.4	+1.9
	6.4nm,0.5s						
MEZF	Maizieres J'vi	66.56	42	*e*P	P	02 14 11.4	+1.9
	6.4nm,0.5s						
CABF	La Chapelle	66.92	44	*e*P	P	02 14 13.1	+1.2
CABF	La Chapelle	66.92	44	*e*P	P	02 14 13.1	+1.2
RES	Resolute Bay	66.95	351	*e*P	P	02 14 11.3	-0.1
	1.6nm,0.8s						
PAGF	Fort de Pagny	67.01	42	*e*P	P	02 14 13.5	+1.2
PAGF	Fort de Pagny	67.01	42	*e*P	P	02 14 13.5	+1.2
KEST	Kesra	68.23	56	P	P	02 14 22.3	+1.9
KEST	Kesra	68.23	56	P	P	02 14 22.3	+1.9
	1.6nm,1.0s,baz=264,slow=10,SNR=2.8						
DAVOX	Davos/Dischmat	69.52	44	P	P	02 14 30.2	+1.8
DAVOX	Davos/Dischmat	69.52	44	P	P	02 14 30.2	+1.8
	2.7nm,0.7s,baz=260,slow=17						
GERES	GERESS Array B	72.29	42	P	P	02 14 46.2	+1.3
GERES	GERESS Array B	72.29	42	P	P	02 14 46.2	+1.3
	0.6nm,0.7s,baz=288,slow=5.5,SNR=4.5						
ILAR	Eielson Array	78.76	334	P	P	02 15 21.1	-0.5
ILAR	Eielson Array	78.76	334	P	P	02 15 21.1	-0.5
	0.9nm,0.8s,baz=96,slow=4.1,SNR=13						
ARCES	ARCESS Array B	79.13	21	P	P	02 15 25.3	+1.7
ARCES	ARCESS Array B	79.13	21	P	P	02 15 25.3	+1.7
	5.2nm,1.0s,baz=261,slow=6.0,SNR=3.6						
BUR08	Bucovina Ar. S	79.97	43	*e*P	P	02 15 24.5	-4.2
TRF	Thorofare Moun	80.30	333	*e*P	P	02 15 29.8	-0.5
	5.3nm,0.8s						
BRTR	Keskin Array B	87.11	50	P	P	02 16 08.9	+3.3
BRTR	Keskin Array B	87.11	50	P	P	02 16 08.9	+3.3
	0.4nm,0.8s,baz=274,slow=3.8,SNR=3.1						
WMQ	Urumqi	119.04	25	*e*PKP	PKPdf	02 22 06.0	-2.2
CN2	Changchun	125.66	354	*e*PKP	PKPdf	02 22 17.0	-3.8
HHC	Hu-ho-hao-te	128.52	7	*e*PKP	PKPdf	02 22 24.4	-2.1
HHC				sPKP		02 22 50.1	
HHC				PP	PP	02 24 33.6	+3.0
HHC				SKS	SKSdf	02 29 30.9	-3.5
HHC				SKKS	SKKSac	02 31 20.4	-4.8
HHC				SS	SS	02 41 43.4	+0.8
LZH	Lanzhou	131.61	16	*e*PKP	PKPdf	02 22 32.0	-0.6
CMAR	Chiang Mai Arr	145.24	34	PKPbc	PKPbc	02 22 55.8	-1.5
CMAR	Chiang Mai Arr	145.24	34	PKPbc	PKPbc	02 22 55.8	-1.5
	1.2nm,0.3s,baz=320,slow=3.8,SNR=6.3						

*DDA **01** 02:05:59.8, 39.°11N×29.°03E, h7km, MD2.7*
*ISCJB **01** 02:06:00.2±0.4, 39.°09N±0.°03×28.°99E±0.°03, h3km±5km, Error ellipse: s-maj=4.8km s-min=3.2km az=10.0*
*CSEM **01** 02:06:00.6±0.1, 39.°09N×28.°98E, h5km, MD2.9, Error ellipse: s-maj=2.4km s-min=2.0km az=21.0*
*ISK **01** 02:06:00.1, 39.°07N×28.°98E, h7km, MD2.9*
ISC 01 02:06:00.4±1.0, **39.°09N**±0.°02×**29.°00E**±0.°02, **h8**km±11km, **n44, σ0.s58**/62, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DEMI	Demirci	0.23	259	*i* Pg	Pg	02 06 05.5	+0.6
DEMI				*i* Sg	Sg	02 06 08.9	+0.9
GDZ	Gediz	0.38	90	*i* Pg	Pg	02 06 07.4	-0.4
GDZ				*i* Sg	Sg	02 06 12.1	-0.6
DST	Dursunbey	0.59	330	*e*PG	Pg	02 06 11.3	-0.6
DST	Dursunbey	0.59	330	*e*Pg	Pg	02 06 11.3	-0.6
KULA	Kula-Manisa	0.63	205	*e*PG	Pg	02 06 12.3	-0.3
KULA				*e*SG	Sg	02 06 21.0	+0.2
KULA	Kula-Manisa	0.63	205	*e*Pg	Pg	02 06 12.3	-0.3
KULA				*e*Sg	Sg	02 06 21.0	+0.2
DURS	Dursunbey	0.66	322	*i* P	Pg	02 06 12.6	-0.4
DURS				*i* S	Sg	02 06 21.8	+0.2
DURS	Dursunbey	0.66	322	*i* P	Pg	02 06 12.6	-0.4
DURS				*i* S	Sg	02 06 21.8	+0.2
KHAL	Karahalli	0.81	152	*e*P	Pb	02 06 16.3	-0.5
KHAL				*e*S	Sb	02 06 27.2	-0.8
KHAL	Karahalli	0.81	152	*e*P	Pb	02 06 16.3	-0.5
KHAL				*e*S	Sb	02 06 27.2	-0.8
ALT	Altintas	0.86	92	*e*PG	Pb	02 06 17.6	-0.1
ALT				*e*SG	Sb	02 06 30.2	+0.7
ALT	Altintas	0.86	92	*e*Pg	Pb	02 06 17.6	-0.1
ALT				*e*Sg	Sb	02 06 30.2	+0.7
AKHS	Akhisar	0.95	258	*e*P	Pb	02 06 19.2	+0.1
AKHS				*e*S	Sg	02 06 30.6	-0.3
AKHS	Akhisar	0.95	258	*e*P	Pb	02 06 19.2	+0.1
AKHS				*e*S	Sg	02 06 30.6	-0.3
AKS	Akhisar	0.95	258	*e*PG	Pg	02 06 18.3	-0.3
AKS				*e*SG	Sb	02 06 31.6	-0.2
AKS	Akhisar	0.95	258	*e*Pg	Pg	02 06 18.3	-0.3
AKS				*e*Sg	Sb	02 06 31.6	-0.2
BALB	Balikesir	1.03	303	*e*PG	Pb	02 06 20.3	-0.1
BALB				*e*SG	Sb	02 06 34.7	+0.6
BALB	Balikesir	1.03	303	*e*Pg	Pb	02 06 20.3	-0.1
BALB				*e*Sg	Sb	02 06 34.7	+0.6
BALY	Balya	1.25	302	*e*P	Pg	02 06 23.7	-0.7
BALY				*e*S	Sg	02 06 39.6	-1.1
BALY	Balya	1.25	302	*e*P	Pg	02 06 23.7	-0.7
BALY				*e*S	Sg	02 06 39.6	-1.1
MDNY	Mudanya-Bursa	1.28	356	*e*PN	Pn	02 06 24.6	0.0
MDNY	Mudanya-Bursa	1.28	356	*e*Pn	Pn	02 06 24.6	0.0
CAVI	Cavuskoy	1.29	30	*e*PN	Pg	02 06 25.3	+0.2
CAVI	Cavuskoy	1.29	30	*e*Pn	Pg	02 06 25.3	+0.2
SHUT	Suhut-Afyon	1.32	113	*e*PN	Pn	02 06 25.3	0.0
SHUT	Suhut-Afyon	1.32	113	*e*Pn	Pn	02 06 25.3	0.0
GEMT	Gemlik	1.35	6	*e*PN	Pg	02 06 26.2	-0.1
GEMT	Gemlik	1.35	6	*e*Pn	Pg	02 06 26.2	-0.1
GONE	Gonen-Balikesi	1.40	314	*e*PN	Pb	02 06 26.5	-0.2
GONE	Gonen-Balikesi	1.40	314	*e*Pn	Pb	02 06 26.5	-0.2
ARMT	Armutlu	1.48	356	*e*PN	Pb	02 06 28.1	0.0
ARMT	Armutlu	1.48	356	*e*Pn	Pb	02 06 28.2	0.0
YLV	Yalova	1.50	11	*e*PN	Pg	02 06 28.9	-0.4
YLV	Yalova	1.50	11	*e*Pn	Pg	02 06 28.9	-0.4
EDC	Edincik	1.53	325	*e*PN	Pb	02 06 28.5	-0.6
EDC	Edincik	1.53	325	*e*Pn	Pb	02 06 28.5	-0.6
GULT	Gulveren	1.78	41	*e*PN	Pb	02 06 32.6	-0.7
GULT	Gulveren	1.78	41	*e*Pn	Pb	02 06 32.6	-0.7
HRT	Hereke	1.81	16	*e*PN	Pn	02 06 32.8	+0.9
HRT	Hereke	1.81	16	*e*Pn	Pn	02 06 32.8	+0.9
MDUB	Mudurnu	2.19	50	*e*PN	Pn	02 06 38.3	+1.1
MDUB	Mudurnu	2.19	50	*e*Pn	Pn	02 06 38.3	+1.1
KIZT	Kizilcal	2.25	94	*e*PN	Pn	02 06 39.4	+1.3
KIZT	Kizilcal	2.25	94	*e*Pn	Pn	02 06 39.4	+1.3

KRSC 01 02:07:32.8±1.7, **49.°80N**×**157.°27E, h10**km±10km, **ML3.6, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	2.50	353	*e*P	Pn	02 08 13.8	+0.3
MIPR				*e*S	Sn	02 08 43.7	-0.4
MTVR	Mutnovka	2.75	12	P	Pn	02 08 19.4	+2.3
MTVR				*i* S	Sb	02 08 53.5	-2.6
RUS	Russkaya	2.75	16	P	Pn	02 08 19.1	+2.2
RUS				*i* S	Sb	02 08 53.0	-2.8
UGLR	Uglovaya	3.55	15	P	Pn	02 08 30.4	+2.3
AVH	Avacha	3.59	14	P	Pn	02 08 30.5	+1.9
SDLR	Sedlovina	3.63	16	P	Pn	02 08 31.0	+1.9
GNL	Ganaly	3.92	6	P	Pn	02 08 35.9	+2.7
MKZ	Mys Kozlova	5.50	28	P	Pn	02 08 56.6	+2.0
KBTR	Krutoberegovo	7.24	25	P	Pn	02 09 20.9	+2.4

*ISCJB **01** 02:07:32.9±0.5, 39.°09N±0.°03×29.°01E±0.°03, h4km±6km, Error ellipse: s-maj=5.8km s-min=3.6km az=9.6*
*DDA **01** 02:07:32.3, 39.°12N×29.°03E, h13km, MD2.8*
*CSEM **01** 02:07:33.2±0.1, 39.°10N×29.°02E, h5km, MD2.8, Error ellipse: s-maj=2.4km s-min=1.8km az=25.0*
*ISK **01** 02:07:33.2, 39.°06N×29.°01E, h14km, MD2.7*
ISC 01 02:07:33.1±1.0, **39.°10N**±0.°02×**29.°01E**±0.°02, **h8**km±11km, **n39, σ0.s35**/52, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DEMI	Demirci	0.24	256	*i* Pg	Pg	02 07 38.2	+0.3
DEMI				*i* Sg	Sg	02 07 41.6	+0.6
GDZ	Gediz	0.37	91	*i* P	Pg	02 07 40.0	-0.3
GDZ				*i* S	Sg	02 07 44.9	-0.2
GDZ	Gediz	0.37	91	*i* P	Pg	02 07 40.0	-0.3
GDZ				*i* S	Sg	02 07 44.9	-0.2
KULA	Kula-Manisa	0.65	205	*e*PG	Pg	02 07 45.5	0.0
KULA	Kula-Manisa	0.65	205	*e*Pg	Pg	02 07 45.5	0.0
DURS	Dursunbey	0.65	320	*e*P	Pg	02 07 45.4	-0.4
DURS				*e*S	Sg	02 07 54.3	+0.1
DURS	Dursunbey	0.65	320	*e*P	Pg	02 07 45.3	-0.4
DURS				*e*S	Sg	02 07 54.3	+0.1
KHAL	Karahalli	0.82	153	*e*P	Pb	02 07 49.0	-0.6
KHAL				*e*S	Sg	02 07 59.5	0.0
KHAL	Karahalli	0.82	153	*e*P	Pb	02 07 49.0	-0.6
KHAL				*e*S	Sg	02 07 59.5	0.0
ALT	Altintas	0.86	93	*e*PG	Pb	02 07 50.2	-0.1
ALT				*e*SG	Sb	02 08 02.6	+0.7
ALT	Altintas	0.86	93	*e*Pg	Pb	02 07 50.2	-0.1
ALT				*e*Sg	Sb	02 08 02.6	+0.7
KHL	Karahalli	0.87	152	*e*PG	Pb	02 07 50.0	-0.5
KHL	Karahalli	0.87	152	*e*Pg	Pb	02 07 50.0	-0.5
AKHS	Akhisar	0.96	257	*e*P	Pb	02 07 51.9	-0.1
AKHS				*e*S	Sb	02 08 04.7	-0.1
AKHS	Akhisar	0.96	257	*e*P	Pb	02 07 51.9	-0.1
AKHS				*e*S	Sb	02 08 04.7	-0.1
AKS	Akhisar	0.96	257	*e*PG	Pb	02 07 52.0	0.0
AKS	Akhisar	0.96	257	*e*Pg	Pb	02 07 52.0	0.0
BALB	Balikesir	1.03	302	*e*PG	Pn	02 07 53.8	0.0
BALB	Balikesir	1.03	302	*e*Pg	Pn	02 07 53.8	0.0
BALY	Balya	1.25	301	*e*P	Pb	02 07 56.8	-0.2
BALY				*e*S	Sb	02 08 12.8	-0.5
BALY	Balya	1.25	301	*e*P	Pb	02 07 56.8	-0.2
BALY				*e*S	Sb	02 08 12.8	-0.5
MDNY	Mudanya-Bursa	1.27	356	*e*PN	Pg	02 07 57.6	+0.1
MDNY	Mudanya-Bursa	1.27	356	*e*Pn	Pg	02 07 57.6	+0.1
CAVI	Cavuskoy	1.27	30	*e*PN	Pg	02 07 57.4	-0.1
CAVI	Cavuskoy	1.27	30	*e*Pn	Pg	02 07 57.4	-0.1
SHUT	Suhut-Afyon	1.32	114	*e*PN	Pb	02 07 57.8	-0.4
SHUT	Suhut-Afyon	1.32	114	*e*Pn	Pb	02 07 57.8	-0.4
GEMT	Gemlik	1.34	6	*e*PN	Pg	02 07 58.6	-0.2
GEMT	Gemlik	1.34	6	*e*Pn	Pg	02 07 58.6	-0.2
GONE	Gonen-Balikesi	1.40	313	*e*PN	Pb	02 07 59.2	-0.2
GONE	Gonen-Balikesi	1.40	313	*e*Pn	Pb	02 07 59.2	-0.2
ARMT	Armutlu	1.47	356	*e*PN	Pb	02 08 00.5	-0.2
ARMT	Armutlu	1.47	356	*e*Pn	Pb	02 08 00.5	-0.2
YLV	Yalova	1.49	11	*e*PN	Pg	02 08 01.4	-0.3
YLV	Yalova	1.49	11	*e*Pn	Pg	02 08 01.4	-0.3
GULT	Gulveren	1.77	41	*e*PN	Pn	02 08 04.5	+0.6
GULT	Gulveren	1.77	41	*e*Pn	Pn	02 08 04.6	+0.6
MDUB	Mudurnu	2.17	50	*e*PN	Pn	02 08 10.2	+0.6
MDUB	Mudurnu	2.17	50	*e*Pn	Pn	02 08 10.2	+0.6

IDC 01 02:13:19.8±1.7, **3.°90N**×**126.°87E, h0**km, **mb3.6**/5, **mb1 3.8**/5, **mb1mx3.5**/23, **mbtmp3.6**/5, **Error ellipse: s-maj=96.9km s-min=23.1km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.90	183	P	P	02 18 14.6	-0.1
	2.4nm,1.1s,baz=0.0,slow=10,SNR=4.0						
WRA	Warramunga Arr	24.81	163	P	P	02 18 43.0	-0.8
	2.4nm,0.6s,baz=343,slow=11,SNR=36						
ASAR	Alice Springs	28.25	166	P	P	02 19 16.3	+1.5
	0.2nm,0.4s,baz=342,slow=10,SNR=5.7						
STKA	Stephens Creek	38.24	160	P	P	02 20 41.1	-0.7
	1.5nm,0.8s,baz=336,slow=10.0,SNR=4.5						
MKAR	Makanchi Array	57.49	325	P	P	02 23 10.8	-0.1
	0.1nm,0.4s,baz=113,slow=7.4,SNR=3.6						

MEX 01 02:19:44.5±0.9, **17.°14N**×**100.°38W, h34**km±10km, **MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.14	130	*i* P	Pn	02 19 48.8	+0.6
CAIG				*i* S	Sb	02 19 53.6	-1.5
ACX	Acapulco	0.57	118	*i* P	Pn	02 19 54.0	-2.2
ACX				*e*S	Sn	02 20 01.4	-3.0
MEIG	Mezcala	1.07	43	*i* P	Pn	02 20 00.8	-2.3
MEIG				*i* S	Sn	02 20 14.5	-2.4
ZIIG	Zihuatanejo	1.13	294	*i* P	Pn	02 20 02.0	-1.9
ZIIG				*i* S	Sn	02 20 16.6	-1.7
ARIG	Puente Sto Nin	1.13	2	*i* P	Pn	02 20 01.6	-2.5
ARIG				*i* S	Sn	02 20 15.8	-2.7
YAIG	Yautepec	2.12	36	*i* P	Pn	02 20 16.2	-1.6
YAIG				*i* S	Sn	02 20 41.6	-1.5

*ISCJB **01** 02:29:41.5±0.6, 39.°42N±0.°02×20.°61E±0.°03, h10km±5km, Error ellipse: s-maj=4.3km s-min=3.4km az=143.3*
*CSEM **01** 02:29:41.2±0.2, 39.°38N×20.°62E, h2km, ML2.6/2, Error ellipse: s-maj=5.0km s-min=3.4km az=60.0*
*ATH **01** 02:29:41.6, 39.°36N×20.°65E, h11km±1km, MD3.5/27*
*THE **01** 02:29:41.1, 39.°37N×20.°64E, h2km±2km, ML2.6/2, Error ellipse: s-maj=2.8km s-min=0.7km az=346.0*
ISC 01 02:29:41.4±1.0, **39.°37N**±0.°02×**20.°63E**±0.°02, **h9**km±8km, **n79, σ1.s31**/110, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.28	305	P	Pg	02 29 46.3	-0.6
IGT				S	Sg	02 29 51.2	+0.5
IGT	Igoumenitsa	0.28	305	P	Pg	02 29 46.3	-0.6
IGT				S	Sg	02 29 51.2	+0.5
JAN	Janina	0.33	32	P	Pg	02 29 47.1	-0.9
JAN				S	Sg	02 29 52.8	+0.4
JAN	Janina	0.33	32	*e*PG	Pg	02 29 47.3	-0.7
JAN				*e*SB	Sg	02 29 53.3	+0.9
JAN	Janina	0.33	32	*e*Pg	Pg	02 29 47.3	-0.7
JAN				S	Sg	02 29 52.8	+0.4
JAN				*e*Sb	Sg	02 29 53.3	+0.9
KEK	Kerkira	0.72	298	P	Pg	02 29 54.7	-0.6
KEK	Kerkira	0.72	298	*e*PG	Pb	02 29 55.6	-0.6
KEK				*e*SB	Sb	02 30 06.6	+0.3
KEK	Kerkira	0.72	298	P	Pg	02 29 54.7	-0.6
KEK	Kerkira	0.72	298	*e*Pg	Pb	02 29 55.6	-0.6
KEK				*e*Sb	Sb	02 30 06.6	+0.3
EVR	Evrytania	1.03	116	P	Pg	02 29 59.8	-1.3
EVR				S	Sb	02 30 15.2	+0.1
EVR	Evrytania	1.03	116	*e*PB	Pg	02 29 59.7	-1.3
EVR	Evrytania	1.03	116	P	Pg	02 29 59.8	-1.3
EVR				S	Sb	02 30 15.2	+0.1
NEST	Nestorio	1.09	17	P	Pg	02 30 01.8	-0.5
NEST	Nestorio	1.09	17	P	Pg	02 30 01.8	-0.5
THL	Klokotos Trika	1.09	79	*e*PB	Pg	02 29 59.2	-3.1
THL				*e*SB	Sg	02 30 16.8	+0.3
THL	Klokotos Trika	1.09	79	*e*Pb	Pg	02 29 59.2	-3.1
THL				*e*Sb	Sg	02 30 16.8	+0.3
VLS	Valsamata	1.20	181	P	Pg	02 30 03.8	-0.5
VLS	Valsamata	1.20	181	*e*PB	Pn	02 30 04.2	-0.1
VLS				*e*SB	Sn	02 30 20.8	+0.1
VLS	Valsamata	1.20	181	P	Pg	02 30 03.8	-0.5
VLS	Valsamata	1.20	181	*e*Pb	Pn	02 30 04.2	-0.1
VLS				*e*Sb	Sn	02 30 20.8	+0.1
MAKR	Makrakomi, Fth	1.22	107	P	Pg	02 30 03.5	-1.4
MAKR	Makrakomi, Fth	1.22	107	P	Pg	02 30 03.5	-1.4
KZN	Kozani	1.28	43	*e*PB	Pb	02 30 05.8	0.0
KZN				*e*SB	Sn	02 30 24.4	+1.4
KZN	Kozani	1.28	43	*e*Pb	Pb	02 30 05.8	0.0
KZN				*e*Sb	Sn	02 30 24.4	+1.4
AGG	Agios Georgios	1.37	104	P	Pn	02 30 06.0	-0.8
AGG	Agios Georgios	1.37	104	*e*PN	Pn	02 30 06.2	-0.6
AGG				*e*SB	Sb	02 30 25.2	+0.3
AGG	Agios Georgios	1.37	104	*e*Pn	Pn	02 30 06.2	-0.6
AGG				*e*Sb	Sb	02 30 25.2	+0.3
EFP	Efpalio	1.38	133	P	Pn	02 30 06.7	-0.1
EFP	Efpalio	1.38	133	*e*PG	Pn	02 30 06.7	-0.1
EFP				*e*SB	Sn	02 30 26.1	+1.0
EFP	Efpalio	1.38	133	P	Pn	02 30 06.7	-0.1
EFP				*e*Sb	Sn	02 30 26.1	+1.0
RLS	Riolos of Patr	1.47	153	*e*PN	Pn	02 30 07.5	-0.6
RLS				*e*SB	Sg	02 30 29.8	+1.2
RLS	Riolos of Patr	1.47	153	*e*Pn	Pn	02 30 07.5	-0.6
RLS				*e*Sb	Sg	02 30 29.8	+1.2
TRIZ	Trizonia	1.51	131	*e*PB	Pb	02 30 09.8	+0.2
TRIZ				*e*SB	Sg	02 30 30.5	+0.5
TRIZ	Trizonia	1.51	131	*e*Pb	Pb	02 30 09.8	+0.2
TRIZ				*e*Sb	Sg	02 30 30.5	+0.5
KALE	Kalithea	1.54	129	*e*PB	Pg	02 30 10.7	-0.1
KALE				*e*SB	Sg	02 30 31.2	+0.4
KALE	Kalithea	1.54	129	*e*Pb	Pg	02 30 10.7	-0.1
KALE				*e*Sb	Sg	02 30 31.2	+0.4
LAKA	Lakka	1.55	137	*e*PB	Pg	02 30 10.6	-0.5
LAKA	Lakka	1.55	137	*e*Pb	Pg	02 30 10.6	-0.5
LIT	Litokhoron	1.61	63	*e*PG	Pb	02 30 10.9	-0.4
LIT	Litokhoron	1.61	63	*e*Pg	Pb	02 30 10.9	-0.4
BIA	Bitola	1.73	18	*e*Pn	Pb	02 30 13.6	+0.2
BIA				*e*Sg	Sg	02 30 39.9	+2.9
BIA	Bitola	1.73	18	*e*Pn	Pb	02 30 13.6	+0.2
GUR	Goura	1.97	136	*e*PG	Pb	02 30 17.4	0.0
GUR	Goura	1.97	136	*e*Pg	Pb	02 30 17.4	0.0
LKR	Lokris	1.98	111	*e*PN	Pn	02 30 16.4	+1.2
LKR	Lokris	1.98	111	*e*Pn	Pn	02 30 16.4	+1.2
NEO	Neokhori	2.02	91	*e*PN	Pn	02 30 16.8	+1.2
NEO	Neokhori	2.02	91	*e*Pn	Pn	02 30 16.8	+1.2
AMT	Artemida-Makis	2.02	155	*e*PN	Pb	02 30 17.5	-0.9
AMT	Artemida-Makis	2.02	155	*e*Pn	Pb	02 30 17.5	-0.9
LTK	Loutraki	2.27	126	*e*PN	Pb	02 30 21.2	-1.4
LTK	Loutraki	2.27	126	*e*Pn	Pb	02 30 21.2	-1.4
PLG	Polygyros	2.39	64	*e*PB	Pn	02 30 21.0	+0.2
PLG	Polygyros	2.39	64	*e*Pb	Pn	02 30 21.0	+0.2
ITM	Ithomi	2.42	155	*e*PN	Pb	02 30 23.7	-1.4
ITM	Ithomi	2.42	155	*e*Pn	Pb	02 30 23.7	-1.4
VLX	Vlachokerasia	2.43	145	*e*PN	Pb	02 30 23.5	-1.8
VLX	Vlachokerasia	2.43	145	*e*Pn	Pb	02 30 23.5	-1.8
VAY	Valandovo	2.45	37	*e*Pn	Pn	02 30 19.2	-2.4
VAY				*e*Sg	Sn	02 30 47.7	-4.0
VAY	Valandovo	2.45	37	*e*Pn	Pn	02 30 19.6	-2.0
AOS	Alonnisos	2.53	94	*e*PN	Pn	02 30 24.6	+1.9
AOS	Alonnisos	2.53	94	*e*Pn	Pn	02 30 24.6	+1.9
SOH	Sokhos	2.54	54	*e*PN	Pn	02 30 25.1	+2.2
SOH	Sokhos	2.54	54	*e*Pn	Pn	02 30 25.1	+2.2
PYL	PYLOS	2.63	160	*e*PB	Pn	02 30 25.5	+1.5
PYL	PYLOS	2.63	160	*e*Pb	Pn	02 30 25.5	+1.5
DID	Didima	2.77	131	*e*PB	Pn	02 30 27.9	+1.9
DID	Didima	2.77	131	*e*Pb	Pn	02 30 27.9	+1.9
DYR	Agios Nikonas	2.94	152	*e*PN	Pn	02 30 30.4	+2.1
DYR	Agios Nikonas	2.94	152	*e*Pn	Pn	02 30 30.4	+2.1
NVR	Nevrokopi	3.16	50	*e*PB	Pn	02 30 34.5	+3.1
NVR	Nevrokopi	3.16	50	*e*Pb	Pn	02 30 34.5	+3.1
BARS	Barje	3.56	14	*e*Pn	Pn	02 30 38.6	+1.8
STON	Ston	4.13	329	*e*Pn	Pn	02 30 44.3	-0.5
STON				Sn	Sn	02 31 32.5	-0.7
STON	Ston	4.13	329	*e*Pn	Pn	02 30 44.2	-0.5
STON				Sn	Sn	02 31 32.5	-0.7
GRUS	Gruza	4.51	1	*e*Pn	Pn	02 30 46.4	-3.5
DIVS	Divibare	4.75	354	*e*Pn	Pn	02 30 53.9	+0.7
NVLJ	Novalja	6.73	322	*e*Pn	Pn	02 31 20.0	-0.3
NVLJ				Sn	Sn	02 32 34.2	-2.9
NVLJ	Novalja	6.73	322	*e*Pn	Pn	02 31 20.0	-0.3
NVLJ				Sn	Sn	02 32 34.2	-2.9

*NDI **01** 02:34:31.8±6.1, 34.°02N×82.°67E, h10km, mb5.2, mb5.1(NEIC)*
*LDG **01** 02:34:34.1±0.1, 33.°71N×82.°33E, h10km, Mb5.0/29, Ms4.0/8, Error ellipse: s-maj=7.8km s-min=3.2km az=71.0*
*ISCJB **01** 02:34:35.5±0.8, 33.°68N±0.°02×82.°42E±0.°02, h13km±4km, mb4.8/145, MS4.2/45, Error ellipse: s-maj=3.4km s-min=2.2km az=143.3*
*BJI **01** 02:34:35.7, 33.°77N×82.°46E, h11km, mB4.9/35, mb4.7/52, ML4.7/2, Ms4.7/55, Ms7 4.4/47*
*IDC **01** 02:34:35.2±0.4, 33.°66N×82.°50E, h0km, mb4.7/29, mb1 4.9/31, mb1mx4.8/33, mbtmp4.7/31, ML3.9/2, MS4.0/20, Ms1 4.0/20, ms1mx3.9/32, Error ellipse: s-maj=14.4km s-min=9.9km az=26.0*

NEIC **01** *02:34:36.6±0.2, 33.°66N×82.°44E, h10km, mb5.1/78, Error ellipse: s-maj=6.0km s-min=3.8km az=38.0*

MOS **01** *02:34:38.5±1.4, 33.°74N×82.°46E, h33km, mb5.1/83, MS4.1/25, Error ellipse: s-maj=7.2km s-min=3.5km az=123.9*

GCMT **01** *02:34:42.3±0.3, 33.°73N×82.°47E, h21km±1km, MW5.0, Moment Tensor Solution. s18,c22; s67,c108; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.32±.26; $M_{\theta\theta}$-0.53±.15; $M_{\phi\phi}$3.85±.16; $M_{r\theta}$1.26±.34; $M_{\theta\phi}$0.14±.10; $M_{\phi r}$0.24±.22; Best double couple: $M_0$3.80000×10^{16} NP1:ϕ_s342.00000°, δ46.00000°, λ-119.00000°. NP2:ϕ_s201.00000°, δ51.00000°, λ-63.00000°. Principal axes: T 3.8700, Plg2.0000°, Azm273.0000°; N -0.0500, Plg21.0000°, Azm3.0000°; P -3.8100, Plg69.0000°, Azm176.0000°; Data Used: II IC IU G CN.*

DJA **01** *02:34:46.0±1.5, 34°N±8°×8°2E±°, h140km±23km, M4.7/8, mB5.2/6, mb4.9/8, Mw(mB)4.6/6*

ISC 01 02:34:37.2±0.4, **33.°69N**±0.°03×**82.°46E**±0.°03, **h12**km±2km, **h12km:pP-P, n481**, σ1**ˢ71**/550, **mb5.0**/145, **MS4.1**/45, **49C-25D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**4.54**	**205**	*e*x	Pb	02 35 53.1	-3.9
LGTI	**Lohaghat**	**4.62**	**205**	*e*x	**Pb**	**02 36 00.0**	**+1.8**
DDI	**Dehra Dun**	**5.02**	**229**	*e*P	**Pn**	**02 35 50.0**	**-2.4**
DDI				AMB	AMB	02 36 00.2	
	comp=Z,250nm,1.2s						
SDNR	**Sundarnagar**	**5.12**	**246**	*e*x	Pn	02 35 57.0	+3.3
SMLA	**Simla**	**5.15**	**242**	*i* P	**Pn**	**02 35 53.2**	**-0.8**
SMLA				AMB	AMB	02 36 16.9	
	comp=Z,448nm,0.4s						
SMLA				*i* x	**Sn**	**02 36 57.3**	**+3.9**
DHRM	**DHARAMSHALA**	**5.37**	**256**	*e*P	**Pn**	**02 35 54.6**	**-2.7**
DHRM				AMB	AMB	02 36 20.9	
	comp=Z,476nm,1.5s						
DANN	**Dangsing**	**5.43**	**168**	*e*Pn	**Pn**	**02 35 59.6**	**+1.3**
DANN				*e*Sn	**Sn**	**02 37 03.5**	**+2.6**
	comp=Z,171nm,0.5s						
BHK	**Bhakra**	**5.58**	**248**	*e*x	**Pn**	**02 36 02.0**	**+2.0**
PYUN	**Piuthan**	**5.59**	**175**	*e*Pn	**Pn**	**02 36 01.4**	**+1.1**
PYUN				*e*Sn	**Sn**	**02 37 05.7**	**+1.2**
	comp=Z,497nm,0.8s						
THN	**Thein Dam**	**5.80**	**259**	*e*P	**Pn**	**02 36 02.0**	**-0.9**
KOLN	**Koldanda**	**5.98**	**170**	*e*Pn	**Pn**	**02 36 06.7**	**+1.0**
KOLN				*e*Sn	**Sn**	**02 37 15.3**	**+1.2**
	comp=Z,225nm,0.6s						
KKN	**Kakani**	**6.36**	**157**	*e*Pn	**Pn**	**02 36 12.6**	**+1.7**
KKN				*e*Sn	**Sn**	**02 37 24.9**	**+1.4**
	comp=Z,373nm,1.0s						
GUN	**Gumba**	**6.46**	**152**	*e*Pn	**Pn**	**02 36 14.5**	**+2.0**
GUN				*e*Sn	**Sn**	**02 37 28.6**	**+2.3**
	comp=Z,408nm,0.9s						
DMN	**Daman**	**6.47**	**159**	*e*Pn	**Pn**	**02 36 14.6**	**+2.1**
DMN				*e*Sn	**Sn**	**02 37 28.6**	**+2.2**
	comp=Z,465nm,0.9s						
PKIN	**Phulchoki**	**6.59**	**157**	*e*Pn	**Pn**	**02 36 16.7**	**+2.5**
PKIN				*e*Sn	**Sn**	**02 37 31.8**	**+2.4**
	comp=Z,160nm,0.7s						
PKI	**Pulchoki**	**6.60**	**157**	*e*Pn	**Pn**	**02 36 16.3**	**+1.9**
NDI	**New Delhi**	**6.71**	**223**	*e*x	**Pn**	**02 36 18.0**	**+2.5**
RAMN	**Ramite**	**7.61**	**151**	*e*Pn	**Pn**	**02 36 29.0**	**+0.9**
RAMN				*e*Sn	**Sn**	**02 37 55.2**	**+0.9**
	comp=Z,411nm,0.7s						
TAPN	**Taplejung**	**7.77**	**143**	*e*Pn	**Pn**	**02 36 32.3**	**+2.0**
TAPN				*e*Sn	**Sn**	**02 37 59.6**	**+1.2**
	comp=Z,459nm,1.1s						
KSH	**Kashi**	**7.81**	**320**	Pn	**Pn**	**02 36 31.9**	**+1.1**
KSH				Sn	**Sn**	**02 38 00.0**	**+0.8**
KSH				LR	LR		
	comp=N,7μm,10.1s						
KSH				LR	LR		
	comp=E,11μm,8.3s						
KSH				LR	LR		
	comp=Z,5μm,8.6s						
ODAN	**Odare**	**8.03**	**147**	*e*Pn	**Pn**	**02 36 35.4**	**+1.6**
ODAN				*e*Sn	**Sn**	**02 38 05.1**	**+0.5**
	comp=Z,652nm,1.0s						
LSA	**Lhasa**	**8.40**	**116**	P	Pn	02 36 44.4	+5.2
LSA				LR	LR		
	comp=N,4μm,14.5s						
LSA				LR	LR		
	comp=E,4μm,14.5s						
LSA	**Lhasa**	**8.40**	**116**	*e*P	Pn	02 36 43.3	+4.1
LSA				pmax	pmax		
	comp=Z,42nm,0.8s						
LSA	**Lhasa**	**8.40**	**116**	*e*Pn	Pn	02 36 43.3	+4.1
	comp=Z,42nm,0.8s						
CEP	**Cherat**	**8.79**	**274**	P	**Pn**	**02 36 42.1**	**-2.0**
CEP				S	**Sn**	**02 38 25.0**	**+1.8**
THW	**Thamme Wali**	**9.02**	**267**	P	**Pn**	**02 36 45.8**	**-1.5**
ULHL	**Ulahol**	**9.85**	**332**	P	Pn	02 37 02.2	+3.5
	SNR=54						
AJM	**Ajmer**	**9.87**	**225**	*e*P	**Pn**	**02 37 00.0**	**+1.1**
AJM				*e*x	**Sn**	**02 38 49.0**	**-0.6**
KZA	**Kyzart**	**10.13**	**328**	P	**Pn**	**02 37 05.1**	**+2.4**
	SNR=18						
BOK	**Bokaro**	**10.30**	**162**	*e*P	**Pn**	**02 37 04.4**	**-0.4**
BOK				AMB	AMB	02 37 07.0	
	comp=Z,30nm,0.7s						
BOK				*e*x	**Sn**	**02 38 58.5**	**-1.7**
UCH	**Uchtor**	**10.58**	**326**	P	**Pn**	**02 37 11.2**	**+2.2**
	SNR=10						
TKM2	**Tokmak 2**	**10.68**	**332**	*i* P	**Pn**	**02 37 12.6**	**+2.5**
TKM2	**Tokmak 2**	**10.68**	**332**	*e*Pn	**Pn**	**02 37 12.6**	**+2.5**
TKM2	**Tokmak 2**	**10.68**	**332**	P	**Pn**	**02 37 12.7**	**+2.5**
	SNR=53						
JBP	**Jabalpur**	**10.70**	**192**⇑	*i*P	**Pn**	**02 37 10.6**	**+0.3**
KBK	**Karagaybulak**	**10.73**	**329**	P	**Pn**	**02 37 13.7**	**+3.0**
	SNR=24						
AML	**Almayashu**	**10.90**	**323**	P	**Pn**	**02 37 14.2**	**+0.8**
	SNR=18						
AAK	**Ala-Archa**	**10.91**	**327**⇑	*e*P	**Pn**	**02 37 14.4**	**+1.2**
AAK				pmax	pmax		
	comp=Z,109nm,1.7s						
AAK	**Ala-Archa**	**10.91**	**327**	*e*Pn	**Pn**	**02 37 14.3**	**+1.1**
	comp=Z,129nm,0.9s						
AAK	**Ala-Archa**	**10.91**	**327**	P	Pn	02 37 18.6	+5.4
	SNR=22						
AAK	**Ala-Archa**	**10.91**	**327**	P	Pn	02 37 19.8	+6.6
	SNR=15						
AAK	**Ala-Archa**	**10.91**	**327**	Pn	**Pn**	**02 37 15.7**	**+2.5**
	comp=Z,133nm,1.3s,SNR=8.8						
AAK	**Ala-Archa**	**10.91**	**327**	Pn	**Pn**	**02 37 15.2**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=138,slow=14,SNR=34						
AAK				LR	LR	02 41 41.6	
	comp=Z,1μm,20.6s,baz=127,slow=39						
WMQ	**Urumqi**	**10.91**	**20**	P	**Pn**	**02 37 13.7**	**+0.6**
WMQ				sP		02 37 19.7	
WMQ				PP	**PnPn**	**02 37 22.7**	**+1.8**
WMQ				S	**Sn**	**02 39 17.7**	**+2.6**
WMQ				sS		02 39 23.7	
WMQ				SS	**SnSn**	**02 39 31.7**	**+4.5**
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,150nm,5.0s						
WMQ				LR	LR		
	comp=N,2μm,5.0s						
WMQ				LR	LR		
	comp=E,1μm,5.0s						
WMQ				LR	LR		
	comp=Z,1μm,5.0s						
FRU	**Bishkek**	**11.01**	**328**	*e*P	**Pn**	**02 37 17.5**	**+3.0**
FRU				pmax	pmax		
	comp=Z,280nm,1.9s						
CHMS	**Chumysh**	**11.09**	**329**	P	Pn	02 37 18.8	+3.2
	SNR=23						
KBL	**Kabul**	**11.16**	**278**	*e*P	**Pn**	**02 37 14.3**	**-2.4**
KBL	**Kabul**	**11.16**	**278**	*e*Pn	**Pn**	**02 37 14.2**	**-2.4**
EKS2	**Erkin-Say**	**11.26**	**325**	*e*P	**Pn**	**02 37 20.9**	**+2.9**
EKS2	**Erkin-Say**	**11.26**	**325**	*e*Pn	**Pn**	**02 37 20.9**	**+2.9**
BHPL	**Bhopal**	**11.31**	**204**	*e*P	**Pn**	**02 37 18.1**	**-0.6**
BHPL				AMB	AMB	02 37 23.2	
	comp=Z,36nm,1.1s						
BHPL				*e*x	x	02 39 18.4	
USP	**Ospenovka**	**11.41**	**329**	P	Pn	02 37 25.0	+5.0
	SNR=7.2						
SHL	**Shillong**	**11.51**	**132**	*e*x	**Pn**	**02 37 20.0**	**-1.5**
SHL				*e*x	**Sn**	**02 39 25.0**	**-5.2**
NGP	**Nagpur**	**12.85**	**194**	*e*P	**Pn**	**02 37 37.4**	**-2.3**
NGP				*e*x	x	02 39 54.8	
MK31	**Makanchi Array**	**13.09**	**359**	*i* P	**Pn**	**02 37 41.2**	**-1.7**
MK31				pmax	pmax		
	comp=Z,69nm,0.9s						
MK31	**Makanchi Array**	**13.09**	**359**	*e*Pn	**Pn**	**02 37 42.0**	**-0.9**
MKAR	**Makanchi Array**	**13.09**	**359**	*i* P	**Pn**	**02 37 42.0**	**-0.9**
MKAR				pmax	pmax		
	comp=Z,60nm,1.0s						
MKAR	**Makanchi Array**	**13.09**	**359**	*e*Pn	**Pn**	**02 37 42.1**	**-0.8**
MKAR				Sn	**Sn**	**02 40 06.7**	**-1.8**
MKAR	**Makanchi Array**	**13.09**	**359**	Pn	**Pn**	**02 37 42.1**	**-0.8**
	comp=Z,1.0nm,0.3s,baz=182,slow=12,SNR=68						
MKAR				Sn	**Sn**	**02 40 06.7**	**-1.8**
	baz=169,slow=23,SNR=1.9						
KK31	**Karatay Array**	**13.26**	**319**	*e*P	**Pn**	**02 37 43.9**	**-1.3**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KKAR	**Karatay Array**	**13.26**	**319**	*e*P	**Pn**	**02 37 45.5**	**+0.3**
KKAR	**Karatay Array**	**13.26**	**319**	*e*Pn	**Pn**	**02 37 45.5**	**+0.3**
IMP	**Imphal**	**13.37**	**129**	*e*x	**Pn**	**02 37 45.0**	**-1.9**
IMP				*e*x	x	02 40 07.0	
GTA	**Gaotai**	**15.07**	**63**	*e*P	**Pn**	**02 38 10.7**	**+0.7**
GTA				pP	**P**	**02 38 15.3**	**0.0**
GTA				sP	**sP**	**02 38 17.3**	**-3.1**
GTA				PP	**pP**	**02 38 23.5**	**+4.7**
GTA				S	**Sn**	**02 40 58.7**	**+1.9**
GTA				sS	S	02 41 04.0	-10
GTA				SS	**SnSn**	**02 41 16.4**	**+7.0**
GTA				pmax	pmax		
	comp=Z,15nm,1.5s						
GTA				pmax	pmax		
	comp=Z,190nm,4.3s						
GTA				LR	LR		
	comp=N,5μm,12.9s						
GTA				LR	LR		
	comp=E,2μm,15.7s						
GTA				LR	LR		
	comp=Z,2μm,15.2s						
HYB	**Hyderabad**	**16.58**	**193**	*i* P	Pn	02 38 23.5	-6.0
HYB				*e*S	**S**	**02 41 46.0**	**+0.8**
HYB				*e*		02 43 36.0	
HYB	**Hyderabad**	**16.58**	**193**	*e*P	**Pn**	**02 38 26.6**	**-3.0**
HYB				AMB	AMB	02 38 27.4	
	comp=Z,33nm,1.2s						
POO	**Poona**	**16.95**	**209**	*e*P	**Pn**	**02 38 34.4**	**+0.2**
POO				AMB	AMB	02 38 36.9	
	comp=Z,24nm,0.8s						
POO				*i* PP	**PnPn**	**02 38 43.5**	**-0.4**
POO				*i* SSS	SSS	02 42 04.0	
POO				*i* PCP	**PcP**	**02 43 24.0**	**+3.3**
KURBB	**Kurchatov Arra**	**17.17**	**351**	LR	LR	02 45 33.2	
	comp=Z,114nm,20.6s,baz=175,slow=38						
KURK	**Kurchatov**	**17.25**	**352***c*	*i*P	**Pn**	**02 38 37.2**	**-0.6**
KURK	**Kurchatov**	**17.25**	**352**	*e*Pn	**Pn**	**02 38 34.2**	**-3.5**
	comp=Z,63nm,1.3s						
KURK	**Kurchatov**	**17.25**	**352**	P	**Pn**	**02 38 38.3**	**+0.5**
	SNR=27						
KURK	**Kurchatov**	**17.25**	**352**	Pn	**Pn**	**02 38 35.5**	**-2.3**
	comp=Z,204nm,1.0s,SNR=6.9						
LZH	**Lanzhou**	**17.71**	**76**	*e*P	**Pn**	**02 38 44.0**	**+0.3**
LZH				pP	**pP**	**02 38 46.5**	**-1.6**
LZH				sP	**sP**	**02 38 48.3**	**-1.4**
LZH				*e*S	**Sn**	**02 42 00.0**	**-1.0**
LZH				sS	**S**	**02 42 04.0**	**-4.3**
LZH				SS	**SnSn**	**02 42 15.0**	**+0.6**
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,170nm,5.8s						
LZH				LR	LR		
	comp=N,1μm,9.6s						
LZH				LR	LR		
	comp=E,860nm,9.0s						
LZH				LR	LR		
	comp=Z,1μm,10.2s						
KAD	**Karad**	**17.92**	**207**	*e*P	**Pn**	**02 38 45.9**	**-0.5**
CD2	**Chengdu**	**18.22**	**93**	P	**Pn**	**02 38 48.6**	**-1.3**
CD2				pP	**pP**	**02 38 52.2**	**-1.4**
CD2				sP	**sP**	**02 38 55.6**	**+0.4**
CD2				PP	**PnPn**	**02 39 03.6**	**+2.5**
CD2				S	**Sn**	**02 42 07.4**	**-5.8**
CD2				SS	**SnSn**	**02 42 30.4**	**+3.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.3s						
CD2				LR	LR		
	comp=N,1μm,6.5s						
CD2				LR	LR		
	comp=E,2μm,7.5s						
CD2				LR	LR		
	comp=Z,1μm,7.1s						
KMI	**Kunming**	**19.60**	**110**	P	**Pn**	**02 39 06.6**	**-0.2**
KMI				pP	pP	02 39 15.2	+6.2
KMI				sP	sP	02 39 19.6	+9.0
KMI				S	**S**	**02 42 41.2**	**-5.5**
KMI				SS	**SnSn**	**02 43 07.6**	**+6.5**
KMI				pmax	pmax		
	comp=Z,52nm,1.0s						
KMI				pmax	pmax		
	comp=Z,240nm,3.8s						
KMI				LR	LR		
	comp=N,740nm,13.8s						
KMI				LR	LR		
	comp=E,580nm,9.9s						
KMI				LR	LR		
	comp=Z,860nm,13.4s						
ABKT	**Ailbek**	**20.17**	**289**	P	**P**	**02 39 11.0**	**-0.5**
	comp=Z,352nm,1.0s,SNR=10						
ZAA0	**Zalesovo Array**	**20.33**	**4**	*e*P	**P**	**02 39 12.9**	**0.0**
ZALV	**Zalesovo Beam**	**20.33**	**4**	P	**P**	**02 39 13.5**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,28nm,0.8s						
ZALV	**Zalesovo Beam**	**20.33**	**4**	P	**P**	**02 39 13.5**	**+0.6**
ZALV	**Zalesovo Beam**	**20.33**	**4**	P	**P**	**02 39 13.5**	**+0.6**
	comp=Z,28nm,0.8s,baz=194,slow=9.9,SNR=62						
ZALV				LR	LR	02 47 58.0	
	comp=Z,186nm,19.7s,baz=248,slow=39						
CHTO	**Chiang Mai**	**20.88**	**131**	*e*P	**P**	**02 39 19.1**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,111nm,1.1s						
CHTO	**Chiang Mai**	**20.88**	**131**	*e*P	**P**	**02 39 19.1**	**-0.2**
	comp=Z,111nm,1.1s						
CHTO	**Chiang Mai**	**20.88**	**131**	P	**P**	**02 39 19.3**	**+0.1**
	SNR=34						
CHTO	**Chiang Mai**	**20.88**	**131**	P	**P**	**02 39 17.4**	**-1.9**
	comp=Z,124nm,1.3s,comp=Z,1μm						
CMMT	**Chiang Mai**	**20.89**	**131**	P	**P**	**02 39 17.0**	**-2.3**
	comp=Z,109nm,1.2s,comp=Z,1μm						
CM31	**Chiang Mai Arr**	**21.15**	**132**	*e*P	**P**	**02 39 23.1**	**+0.9**
	comp=Z,123nm,1.0s						
CMAR	**Chiang Mai Arr**	**21.15**	**132**	P	**P**	**02 39 22.7**	**+0.5**
CMAR				PcP	**PcP**	**02 43 28.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**21.15**	**132**	P	**P**	**02 39 22.7**	**+0.5**
	comp=Z,54nm,0.9s,baz=310,slow=10,SNR=142						
CMAR				PcP	**PcP**	**02 43 28.2**	**+0.3**
	comp=Z,1.6nm,0.4s,baz=304,slow=3.3,SNR=5.8						
CMAR				LR	LR	02 47 26.6	
	comp=Z,244nm,21.5s,baz=317,slow=37						
NVS	**Novosibirsk**	**21.16**	**1**⇑	*i*P	**P**	**02 39 21.5**	**-0.4**
NVS				*e*		02 39 59.2	
NVS				*e*S	**S**	**02 43 12.8**	**-4.1**
NVS				pmax	pmax		
	comp=N,26nm,1.0s						
NVS				pmax	pmax		
	comp=Z,52nm,1.0s						
NVS				pmax	pmax		
	comp=E,7.0nm,0.8s						
NVS				smax	smax		
	comp=N,10.0nm,1.8s						
NVS				smax	smax		
	comp=E,24nm,1.8s						
BVA0	**Borovoye Array**	**21.18**	**340**	*i* P	**P**	**02 39 22.3**	**+0.1**
BVA0				pmax	pmax		
	comp=Z,11nm,1.1s						
BVAR	**Borovoye Array**	**21.18**	**340**	P	**P**	**02 39 22.4**	**+0.2**
BVAR				pmax	pmax		
	comp=Z,30nm,0.9s						
BVAR	**Borovoye Array**	**21.18**	**340**	P	**P**	**02 39 22.4**	**+0.2**
BVAR	**Borovoye Array**	**21.18**	**340**	P	**P**	**02 39 22.4**	**+0.2**
	comp=Z,30nm,0.9s,baz=141,slow=9.6,SNR=49						
BRVK	**Borovoye**	**21.23**	**339***d*	*i*P	**P**	**02 39 22.8**	**0.0**
BRVK				pmax	pmax		
	comp=Z,41nm,0.8s						
BRVK				MLR	MLR		
	comp=Z,344nm,15.0s						
BRVK	**Borovoye**	**21.23**	**339**	*e*P	**P**	**02 39 23.0**	**+0.2**
	comp=Z,122nm,1.1s						
BRVK	**Borovoye**	**21.23**	**339**	P	**P**	**02 39 23.1**	**+0.2**
	SNR=49						
BRVK	**Borovoye**	**21.23**	**339**	P	**P**	**02 39 23.6**	**+0.8**
	comp=Z,567nm,1.1s,SNR=29						
XAN	**Xi'an**	**21.96**	**82**	P	**P**	**02 39 30.4**	**-0.4**
XAN				pP	pP	02 39 40.3	+5.9
XAN				S	**S**	**02 43 34.5**	**+1.4**
XAN				pmax	pmax		
	comp=Z,16nm,1.3s						
XAN				pmax	pmax		
	comp=Z,42nm,5.2s						
XAN				LR	LR		
	comp=N,380nm,10.4s						
XAN				LR	LR		
	comp=E,280nm,12.2s						
XAN				LR	LR		
	comp=Z,200nm,13.1s						
GYA	**Guiyang**	**22.12**	**103**⇑	*i*P	**P**	**02 39 33.0**	**+0.3**
GYA				PP	**PnPn**	**02 39 59.3**	**+4.6**
GYA				S	**S**	**02 43 31.2**	**-5.2**
GYA				SS	**SnSn**	**02 44 08.8**	**+6.0**
GYA				ScP	**ScP**	**02 47 07.3**	**+0.2**
GYA				pmax	pmax		
	comp=Z,60nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,4.8s						
GYA				LR	LR		
	comp=N,590nm,15.4s						
GYA				LR	LR		
	comp=E,510nm,16.2s						
GYA				LR	LR		
	comp=Z,640nm,15.0s						
MOY	**Mondy**	**22.44**	**31**	*e*P	**P**	**02 39 36.7**	**+0.8**
DGPR	**DIGLIPUR**	**22.53**	**152**	*e*P	**P**	**02 39 32.9**	**-4.1**
DGPR				AMB	AMB	02 39 40.2	
	comp=Z,39nm,1.1s						
ZAK	**Zakamensk**	**22.63**	**36**	*e*P	**P**	**02 39 37.9**	**0.0**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
AB31	**Akbulak array**	**22.82**	**320**	*i* P	**P**	**02 39 38.9**	**-0.9**
AB31				pmax	pmax		
	comp=Z,61nm,1.0s						
ABKAR	**Akbulak array**	**22.82**	**320**	*e*P	**P**	**02 39 39.0**	**-0.8**
	comp=Z,48nm,0.9s						
SONM	**Songino Array**	**22.87**	**45**	P	**P**	**02 39 41.7**	**+1.3**
SONM				PcP	**PcP**	**02 43 30.9**	**-0.2**
SONM	**Songino Array**	**22.87**	**45**	P	**P**	**02 39 41.7**	**+1.3**
	comp=Z,21nm,0.9s,baz=233,slow=9.1,SNR=34						
SONM				PcP	**PcP**	**02 43 30.9**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=206,slow=6.3,SNR=4.8						
BTO	**Baotou**	**22.97**	**65**	*e*P	**P**	**02 39 41.4**	**-0.2**
ENH	**Enshi**	**23.15**	**91**	*e*P	**P**	**02 39 44.1**	**+0.7**
	comp=Z,52nm,0.9s						
ULN	**Ulaanbaatar**	**23.27**	**45**	*e*P	**P**	**02 39 45.8**	**+1.1**
	comp=Z,58nm,1.6s						
ULN	**Ulaanbaatar**	**23.27**	**45**	P	**P**	**02 39 45.3**	**+0.7**
	SNR=26						
ULN	**Ulaanbaatar**	**23.27**	**45**	P	**P**	**02 39 43.3**	**-1.3**
	comp=Z,22nm,1.9s,comp=Z,627nm						
TLY	**Talaya**	**23.64**	**34**	*e*P	**P**	**02 39 47.4**	**-0.8**
TLY				*e*		02 40 18.6	
TLY				*e*S	S	02 43 47.7	-15
TLY				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,374nm,15.0s						
TLY	**Talaya**	**23.64**	**34**	*e*P	**P**	**02 39 49.1**	**+0.9**
	comp=Z,103nm,2.6s						
TLY	**Talaya**	**23.64**	**34**	P	**P**	**02 39 49.5**	**+1.3**
	SNR=5.8						
PBA	**Port Blair**	**23.86**	**154**	*e*x	P	02 39 43.0	-7.5
HHC	**Hu-ho-hao-te**	**24.17**	**64**	*e*P	**P**	**02 39 54.4**	**+1.1**
HHC				sP	**sP**	**02 39 59.6**	**+0.9**
HHC				PP	**PnPn**	**02 40 29.3**	**+6.7**
HHC				PcP	**PcP**	**02 43 37.2**	**+3.3**
HHC				S	**S**	**02 44 09.4**	**-1.8**
HHC				sS	**sS**	**02 44 14.1**	**-3.3**
HHC				SS	**SnSn**	**02 45 01.7**	**+9.0**
HHC				pmax	pmax		
	comp=Z,47nm,1.1s						
HHC				pmax	pmax		
	comp=Z,910nm,5.6s						
HHC				LR	LR		
	comp=N,1μm,11.5s						
HHC				LR	LR		
	comp=E,850nm,10.7s						
HHC				LR	LR		
	comp=Z,1μm,11.5s						
IRK	**Irkutsk**	**24.31**	**34**	*e*P	**P**	**02 39 55.8**	**+1.4**
IRK				pmax	pmax		
	comp=Z,54nm,1.6s						
SRDT	**SRDT**	**24.47**	**138**	P	P	02 39 50.7	-5.5
	comp=Z,41nm,1.0s,comp=Z,2μm						
AKTO	**Aktyubinsk**	**24.52**	**320**	P	**P**	**02 39 55.5**	**-0.8**
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKTO	**Aktyubinsk**	**24.52**	**320**	P	**P**	**02 39 56.6**	**+0.3**
AKTO				PcP	**PcP**	**02 43 35.8**	**+1.4**
AKTO	**Aktyubinsk**	**24.52**	**320**	P	**P**	**02 39 56.6**	**+0.3**
	comp=Z,28nm,0.8s,baz=120,slow=8.4,SNR=62						
AKTO				PcP	**PcP**	**02 43 35.8**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=124,slow=3.6,SNR=3.4						
AKTO				LR	LR	02 50 22.0	
	comp=Z,481nm,18.5s,baz=300,slow=38						
ARQ	**Araqi**	**24.95**	**252**	P	P	02 40 05.8	+5.3
	SNR=7.6						
PHET	**Kaeng Krachan**	**25.93**	**139**	P	**P**	**02 40 07.3**	**-2.1**
	comp=Z,81nm,1.0s						
PALK	**Pallekele**	**26.33**	**184**	*e*P	**P**	**02 40 13.0**	**-0.1**
	comp=Z,24nm,1.3s						
PALK	**Pallekele**	**26.33**	**184**	P	**P**	**02 40 09.8**	**-3.3**
WHN	**Wuhan**	**27.14**	**88**	P	**P**	**02 40 21.6**	**+1.4**
WHN				S	**S**	**02 44 59.7**	**+1.4**
WHN				LR	LR		
	comp=N,1μm,7.8s						
WHN				LR	LR		
	comp=E,640nm,5.7s						
WHN				LR	LR		
	comp=Z,2μm,11.5s						
SVE	**Sverdlovsk**	**27.54**	**334**	*e*P	**P**	**02 40 24.2**	**+0.7**
SVE				*e*S	S	02 44 54.1	-10
SVE				pmax	pmax		
	comp=Z,24nm,1.2s						
BJI	**Beijing**	**27.60**	**67**	P	**P**	**02 40 23.8**	**-0.4**
BJI				pmax	pmax		
	comp=Z,22nm,1.4s						
BJI				LR	LR		
	comp=N,2μm,19.0s						
BJI				LR	LR		
	comp=E,670nm,14.8s						
BJI				LR	LR		
	comp=Z,550nm,22.3s						
ARU	**Arti**	**28.05**	**331***d*	*i*P	**P**	**02 40 27.7**	**-0.4**
ARU						02 41 13.5	
ARU				S	**S**	**02 45 12.8**	**+0.5**
ARU				SS	**SnSn**	**02 46 25.4**	**-1.7**
ARU				pmax	pmax		
	comp=Z,17nm,1.2s						
ARU				MLR	MLR		
	comp=Z,299nm,18.0s						
ARU	**Arti**	**28.05**	**331**	*e*P	**P**	**02 40 28.4**	**+0.3**
	comp=Z,14nm,1.0s						
QIZ	**Qiongzhong**	**28.44**	**114**	P	**P**	**02 40 31.3**	**-0.6**
QIZ				S	**S**	**02 45 18.6**	**-0.4**
QIZ				pmax	pmax		
	comp=Z,22nm,1.7s						
MAK	**Makhachkala**	**28.77**	**299**	*e*P	P	02 40 30.6	-4.0
MAK				*i* PPP	PPP	02 41 31.1	
MAK				*e*S	**S**	**02 45 19.2**	**-4.7**
MAK				*e*SS	**SnSn**	**02 46 46.8**	**+1.9**
MAK				*e*SSS	SSS	02 47 08.2	
MAK				pmax	pmax		
	comp=Z,103nm,1.3s						
MAK				MLR	MLR		
	comp=Z,592nm,13.0s						
DGRG	**David-gareji**	**30.22**	**296**	P	**P**	**02 40 50.3**	**+2.7**
NJ2	**Nanjing**	**30.52**	**83**	*e*P	**P**	**02 40 49.5**	**-0.7**
NJ2				pP	**pP**	**02 40 52.5**	**-1.5**
NJ2				S	S	02 45 58.5	+7.0
NJ2				sS	sS	02 46 04.0	+6.3
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,140nm,5.3s						

NJ2 LR LR
comp=N,590nm,22.8s
NJ2 LR LR
comp=E,740nm,27.4s
NJ2 LR LR
comp=E,630nm,19.0s
TBLG Delisi 30.71 296 P **P** **02 40 50.6 -1.3**
GOR Gori 31.19 297 P **P** **02 40 55.4 -0.8**
ZEI Tsey 31.39 298 *eP* **P** **02 41 00.8 +2.6**
ZEI pmax pmax
comp=Z,17nm,1.3s
AKH Akhalkalaki 31.63 296 P **P** **02 41 02.9 +2.7**
ONI Oni 31.71 298 P **P** **02 41 03.3 +2.5**
KBZ Khabaz 32.19 300 P **P** **02 41 05.8 +0.9**
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KBZ MLR MLR
comp=Z,264nm,18.0s
KBZ Khabaz 32.19 300 P **P** **02 41 05.8 +0.9**
KBZ Khabaz 32.19 300 P **P** **02 41 05.8 +0.9**
comp=Z,6.9nm,0.9s,baz=150,slow=5.7,SNR=17
KBZ LR LR 02 56 21.2
comp=Z,264nm,18.0s,baz=92,slow=40
KIV Kislovodsk 32.36 300 *eP* **P** **02 41 09.5 +3.0**
KIV *eS* **S** **02 46 24.4 +4.0**
KIV pmax pmax
comp=Z,11nm,1.0s
KIV MLR MLR
comp=Z,247nm,16.0s
KIV Kislovodsk 32.36 300 *eP* **P** **02 41 06.7 +0.2**
comp=Z,8.8nm,0.8s
SSE Sheshan 32.68 84 P **P** **02 41 10.1 +0.8**
SSE S **S** **02 46 27.5 +2.2**
SSE pmax pmax
comp=Z,33nm,0.7s
SSE LR LR
comp=N,240nm,24.8s
SSE LR LR
comp=E,320nm,24.4s
SSE LR LR
comp=Z,460nm,24.8s
KULM Kulim 32.93 145 *eP* **P** **02 41 11.5 0.0**
comp=Z,45nm,1.1s
IPM Ipoh 33.81 145 *eP* **P** **02 41 18.6 -0.6**
comp=Z,23nm,0.8s
VRHR Novokhopersk 34.28 313 *eP* **P** **02 41 23.4 +0.4**
VRHR pmax pmax
comp=Z,10.0nm,0.4s
VRHR pmax pmax
comp=N,1.0nm,0.2s
VRHR pmax pmax
comp=E,1.0nm,0.2s
SOC Sochi 34.49 299 *eP* **P** **02 41 24.2 -0.7**
SOC *eS* **S** **02 46 51.7 -1.4**
SOC *eSS* **SnSn** **02 48 55.2 -8.7**
SOC pmax pmax
comp=Z,24nm,0.9s
SOC MLR MLR
comp=Z,307nm,13.0s
CN2 Changchun 34.67 60 *eP* **P** **02 41 26.3 -0.2**
CN2 *epP* **pP** **02 41 30.8 +0.5**
CN2 *esP* **sP** **02 41 33.3 +1.4**
CN2 *eS* **S** **02 46 54.7 -1.3**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,500nm,12.0s
CN2 LR LR
comp=E,800nm,12.0s
CN2 LR LR
comp=Z,500nm,14.0s
MALT Malatya 35.67 290 *eP* **P** **02 41 37.6 +2.3**
MALT pmax pmax
comp=Z,12nm,1.1s
MALT Malatya 35.67 290 *eP* **P** **02 41 37.6 +2.3**
comp=Z,12nm,1.1s
VORD Divnogorie 35.69 312 *eP* **P** **02 41 33.8 -1.3**
VORD pmax pmax
comp=N,10.0nm,0.4s
VORD pmax pmax
comp=E,10.0nm,0.4s
VORD pmax pmax
comp=Z,10.0nm,0.4s
VSR Storozhevoye 35.82 313 *eP* **P** **02 41 36.7 +0.5**
VSR pmax pmax
comp=N,6.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR pmax pmax
comp=Z,10.0nm,1.0s
ANN Anapa 36.17 301 *eP* **P** **02 41 39.5 +0.1**
ANN pmax pmax
comp=Z,82nm,1.4s
ANN MLR MLR
comp=Z,215nm,13.0s
KSAR Wonju Array Be 36.87 71 P **P** **02 41 46.5 +1.0**
KSRS Korea Array 36.90 71 P **P** **02 41 46.5 +0.8**
comp=Z,7.5nm,0.9s,baz=276,slow=9.3,SNR=11
KSRS LR LR 02 58 29.9
comp=Z,378nm,18.7s,baz=288,slow=39
MDJ Mudanjiang 37.67 59 P **P** **02 41 51.1 -1.0**
MDJ *pP* **pP** **02 41 54.2 -1.8**
MDJ PP **PP** **02 43 16.9 -1.2**
MDJ S **S** **02 47 41.0 -0.8**
MDJ ScP **ScP** **02 47 56.2 -0.3**
MDJ PcS **PcS** **02 47 57.5 -0.4**
MDJ pmax pmax
comp=Z,2.0nm,1.0s
MDJ pmax pmax
comp=Z,50nm,3.9s
MDJ LR LR
comp=N,180nm,15.5s
MDJ LR LR
comp=E,350nm,17.2s
MDJ LR LR
comp=Z,510nm,14.2s
ASF Jabal al Asfar 38.04 281 P **P** **02 41 57.0 +1.5**
ASF Jabal al Asfar 38.04 281 P **P** **02 41 57.0 +1.5**
comp=Z,4.2nm,0.9s,baz=343,slow=11,SNR=11
OBN Obninsk 38.25 318 *eP* **P** **02 41 59.0 +2.1**
OBN *i* 02 43 24.8
OBN *i* 02 44 12.8
OBN pmax pmax
comp=Z,35nm,1.2s
OBN MLR MLR
comp=Z,200nm,16.0s
OBN Obninsk 38.25 318 *eP* **P** **02 41 58.9 +2.1**
comp=Z,16nm,0.9s
SIM Simferopol' 38.53 302 *d iP* **P** **02 42 02.4 +3.0**
SIM *e* 02 43 28.0
SIM pmax pmax
comp=Z,45nm,1.0s
SIM pmax pmax
comp=Z,20nm,5.8s
SIM MLR MLR
comp=Z,190nm,20.0s
KLMR Klimovskoe 38.72 328 *eP* **P** **02 41 59.4 -1.4**
KLMR pmax pmax
comp=Z,49nm,1.4s
MMAI Mount Meron Ar 39.05 282 P **P** **02 42 05.7 +1.7**
MMAI Mount Meron Ar 39.05 282 P **P** **02 42 05.7 +1.7**
comp=Z,12nm,0.9s,baz=76,slow=10,SNR=18
BR131 Keskin Array S 39.21 293 *eP* **P** **02 42 05.3 0.0**
comp=Z,7.6nm,0.8s
BRTR Keskin Array B 39.21 293 P **P** **02 42 05.9 +0.6**
BRTR Keskin Array B 39.21 293 P **P** **02 42 05.9 +0.6**
comp=Z,6.5nm,0.8s,baz=114,slow=8.5,SNR=53
BRTR LR LR 03 01 17.1
comp=Z,146nm,20.7s,baz=260,slow=41
KLR Kul'dur 39.34 52 *eP* **P** **02 42 03.0 -3.1**
KLR MLR MLR
comp=E,500nm,12.0s
KLR MLR MLR
comp=Z,3µm,12.0s
USRK Ussuriysk Arra 39.40 60 P **P** **02 42 07.8 +1.1**
comp=Z,1.3nm,0.7s,baz=269,slow=9.5,SNR=5.0
USRK LR LR 02 58 57.9
comp=Z,171nm,18.2s,baz=82,slow=37
EIL Elat 40.35 278 P **P** **02 42 16.7 +1.9**
EIL Elat 40.35 278 P **P** **02 42 16.7 +1.9**
comp=Z,27nm,1.0s,baz=58,slow=5.1,SNR=19
TMCR Tamitsa 40.79 332 *eP* **P** **02 42 16.8 -1.1**
TMCR pmax pmax
comp=Z,69nm,1.0s

YAK Yakutsk 41.08 32 *eP* **P** **02 42 20.0 -0.3**
YAK *e*PP* **pP** **02 42 27.9 +3.8**
YAK *e* 02 43 56.1
YAK *e* 02 44 16.3
YAK *ePPP* PPP 02 44 24.7
YAK *eS* **S** **02 48 33.7 +1.2**
YAK *eSSS* SSS 02 52 09.9
YAK *e* 02 52 21.3
YAK pmax pmax
comp=Z,21nm,1.0s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,12nm,1.2s
YAK pmax pmax
comp=Z,10.0nm,0.9s
YAK smax smax
comp=E,33nm,2.2s
YAK smax smax
comp=N,29nm,2.1s
YAK MLR MLR
comp=Z,234nm,14.0s
YAK MLR MLR
comp=N,149nm,15.0s
YAK MLR MLR
comp=E,137nm,15.0s
KKM Kota Kinabalu 41.65 124 *eP* **P** **02 42 26.5 +0.8**
comp=E,50nm,1.1s
AKASG Malin Array Be 41.98 310 P **P** **02 42 27.0 -0.9**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG MLR MLR
comp=Z,353nm,18.4s
AKASG Malin Array Be 41.98 310 P **P** **02 42 26.9 -0.9**
AKASG Malin Array Be 41.98 310 P **P** **02 42 26.9 -0.9**
comp=Z,2.9nm,0.5s,baz=78,slow=8.1,SNR=9.8
AKASG LR LR 03 02 38.0
comp=Z,353nm,18.4s,baz=70,slow=40
AK01 Malin Array Si 41.98 310 *eP* **P** **02 42 28.0 +0.1**
AK02 Malin Array Si 41.99 310 *eP* **P** **02 42 27.6 -0.4**
KIEV Kiev 41.99 310 *eP* **P** **02 42 29.5 +1.6**
KIEV pmax pmax
comp=Z,8.0nm,1.0s
KIEV Kiev 41.99 310 *eP* **P** **02 42 29.5 +1.6**
comp=Z,8.0nm,1.0s
ATD Arta Tunnel 42.34 248 P P 02 42 35.0 +3.7
ATD Arta Tunnel 42.34 248 P P 02 42 35.0 +3.7
comp=Z,3.7nm,0.3s,baz=49,slow=11,SNR=5.6
TIRR Tirgusor 42.62 301 ⇑*P* **P** **02 42 35.2 +2.1**
TIRR Tirgusor 42.62 301 ⇑*iP* **P** **02 42 35.2 +2.1**
CFR Carcaliu 42.76 302 ⇓*P* **P** **02 42 34.9 +0.6**
CFR Carcaliu 42.76 302 ⇓*iP* **P** **02 42 34.9 +0.6**
JOF Joensuu 43.09 329 *eP* **P** **02 42 35.0 -1.8**
JOF pmax pmax
comp=Z,39nm,0.9s
JOF Joensuu 43.09 329 *ep* **P** **02 42 35.0 -1.8**
comp=Z,39nm,0.9s
VRI Vrincioaia 43.70 303 ⇑*P* **P** **02 42 43.1 +1.2**
VRI Vrincioaia 43.70 303 ⇑*iP* **P** **02 42 43.1 +1.2**
LVZ Lovozero 43.70 336 ⇑*eP* **P** **02 42 42.9 +1.2**
LVZ pmax pmax
comp=Z,34nm,1.7s
LVZ MLR MLR
comp=Z,196nm,21.0s
TESR 43.71 304 ⇑*iP* **P** **02 42 42.4 +0.4**
PLOR Plostina 43.76 303 ⇑*P* **P** **02 42 43.3 +0.9**
PLOR Plostina 43.76 303 ⇑*iP* **P** **02 42 43.3 +0.9**
VSU Vasula 44.24 321 *i P* **P** **02 42 48.2 +2.2**
VSU pmax pmax
comp=Z,37nm,1.2s
VSU MLR MLR
comp=Z,251nm,21.0s
MLR Muntele Rosu 44.28 303 ⇑*iP* **P** **02 42 48.2 +1.5**
BUR08 Bucovina Array 44.62 306 ⇑*iP* **P** **02 42 50.4 +1.0**
BUR08 Bucovina Ar. S 44.63 306 *eP* **P** **02 42 50.0 +0.5**
VOIR 44.91 303 ⇑*P* **P** **02 42 53.5 +1.8**
VOIR 44.91 303 ⇑*iP* **P** **02 42 53.5 +1.8**
FINES FINESS Array B 45.09 326 P **P** **02 42 52.6 -0.2**
FINES PcP **PcP** **02 44 33.8 +0.6**
FINES FINESS Array B 45.09 326 P **P** **02 42 52.6 -0.2**
comp=Z,19nm,0.8s,baz=104,slow=8.9,SNR=52
FINES PcP **PcP** **02 44 33.8 +0.6**
comp=Z,3.7nm,0.8s,baz=106,slow=4.5,SNR=3.8
FINES LR LR 03 02 38.0
comp=Z,374nm,19.9s,baz=120,slow=37
TIXI Tiksi 45.11 19 *eP* **P** **02 42 51.9 -0.9**
TIXI pmax pmax
comp=Z,16nm,0.6s
TIXI Tiksi 45.11 19 *eP* **P** **02 42 51.9 -0.9**
comp=Z,16nm,0.6s
KAF Kangasniemi 45.12 327 *eP* **P** **02 42 52.0 -1.0**
KAF pmax pmax
comp=Z,6.0nm,0.8s
KAF Kangasniemi 45.12 327 *ep* **P** **02 42 52.0 -1.0**
comp=Z,6.4nm,0.8s
MAJO Matsushiro 45.15 70 *eP* **P** **02 42 53.1 -0.6**
MAJO pmax pmax
comp=Z,18nm,1.0s
MAJO Matsushiro 45.15 70 *eP* **P** **02 42 53.1 -0.6**
comp=Z,18nm,1.0s
MAT Matsushiro 45.15 70 P **P** **02 42 53.4 -0.3**
MAT *eS* **S** **02 49 37.0 +4.0**
MJAR Matsushiro Arr 45.16 70 P **P** **02 42 53.8 +0.1**
MJAR Matsushiro Arr 45.16 70 P **P** **02 42 53.8 +0.1**
comp=Z,9.7nm,0.9s,baz=282,slow=9.9,SNR=19
MJAR LR LR 03 02 59.6
comp=Z,178nm,19.9s,baz=315,slow=38
ARR Arges 45.21 303 ⇓*iP* **P** **02 42 54.8 +0.7**
LVV L'vov 45.30 309 *eP* P 02 42 58.4 +3.7
SUW Suwalki 45.81 315 *eP* **P** **02 43 00.5 +1.9**
SUW pmax pmax
comp=Z,18nm,0.9s
SUW Suwalki 45.81 315 *eP* **P** **02 43 00.5 +1.9**
comp=Z,18nm,0.9s
KWP Kalwaria Pacla 46.17 309 *eP* **P** **02 43 02.8 +1.2**
KWP Kalwaria Pacla 46.17 309 *eP* **P** **02 43 02.8 +1.2**
TRPA Tarpa 46.38 307 ⇓*iP* **P** **02 43 04.8 +1.6**
DRGR 46.39 305 ⇑*P* **P** **02 43 05.1 +1.7**
DRGR 46.39 305 ⇑*iP* **P** **02 43 05.1 +1.7**
KOLS Kolonicke sedl 46.50 308 *eP* **P** **02 43 06.2 +2.1**
KOLS Kolonicke sedl 46.50 308 *eP* **P** **02 43 06.2 +2.1**
VTS Vitosha 46.60 299 ⇑*P* **P** **02 43 07.8 +2.6**
VTS Vitosha 46.60 299 ⇑*iP* **P** **02 43 07.8 +2.6**
YSS Yuzh-Sakhalins 46.75 55 ⇑*eP* P 02 43 10.1 +4.0
YSS MLR MLR
comp=Z,400nm,13.0s
YSS MLR MLR
comp=E,400nm,14.0s
IDI Anoyia 46.90 289 *eP* **P** **02 43 09.7 +2.2**
comp=E,8.6nm,0.8s
KEV Kevo 46.99 337 *eP* **P** **02 43 05.6 -2.0**
KEV pmax pmax
comp=Z,7.0nm,0.6s
KEV Kevo 46.99 337 *ep* **P** **02 43 05.6 -2.0**
comp=Z,6.8nm,0.6s
BZS Buzias 47.28 303 ⇓*P* **P** **02 43 08.6 -1.7**
BZS Buzias 47.28 303 ⇓*iP* **P** **02 43 08.6 -1.7**
ARCES ARCESS Array B 47.41 336 P **P** **02 43 11.1 +0.1**
ARCES PcP **PcP** **02 44 40.9 -0.5**
ARCES ARCESS Array B 47.41 336 P **P** **02 43 11.1 +0.1**
comp=Z,19nm,0.8s,baz=100,slow=7.5,SNR=23
ARCES PcP **PcP** **02 44 40.9 -0.5**
comp=Z,2.8nm,0.8s,baz=116,slow=2.1,SNR=3.7
ARCES LR LR 03 04 42.6
comp=Z,185nm,18.1s,baz=108,slow=38
NIE Niedzica 47.74 309 *eP* **P** **02 43 14.3 +0.4**
NIE Niedzica 47.74 309 *eP* **P** **02 43 14.3 +0.4**
OJC Ojcow 48.01 310 *eP* **P** **02 43 15.5 -0.4**
OJC Ojcow 48.01 310 *eP* **P** **02 43 15.5 -0.4**
VYHS Vyhne 48.81 308 *eP* **P** **02 43 23.4 +1.3**
VYHS Vyhne 48.81 308 *eP* **P** **02 43 23.3 +1.2**
MORC Moravsky Berou 49.50 309 *eP* **P** **02 43 27.8 +0.4**
MORC pmax pmax
comp=Z,71nm,2.6s
MORC Moravsky Berou 49.50 309 *eP* **P** **02 43 27.8 +0.4**
comp=Z,71nm,2.6s
MORC Moravsky Berou 49.50 309 ⇑*iP* **P** **02 43 27.7 +0.4**
KRLC Kraliky 49.95 310 *eP* **P** **02 43 32.0 +1.2**
VRAC Vranov 50.17 309 ⇓*iP* **P** **02 43 33.4 +0.9**
DPC Dobruska-Polom 50.21 310 *eP* **P** **02 43 34.0 +1.2**
DPC pmax pmax
comp=Z,8.0nm,0.8s
DPC Dobruska-Polom 50.21 310 *eP* **P** **02 43 34.0 +1.2**
comp=Z,8.1nm,0.8s

DPC Dobruska-Polom 50.21 310 *eP* **P** **02 43 34.4 +1.6**
DPC *ex* x 02 43 47.1
UPC Upice 50.39 311 *eP* **P** **02 43 35.5 +1.4**
UPC *e* 02 43 48.3
UPC Upice 50.39 311 *eP* **P** **02 43 35.5 +1.4**
UPC *ex* x 02 43 48.3
CONA Conrad Observa 50.85 307 ⇓*ipP* **P** **02 43 38.2 +0.5**
comp=Z,11nm,1.0s
CONA Conrad Observa 50.85 307 ⇓*iP* **P** **02 43 38.2 +0.5**
comp=Z,11nm,1.0s
TREC Trest 50.89 309 *eP* **P** **02 43 35.6 -2.3**
TREC *e* 02 43 43.2
TREC MLR MLR
comp=Z,300nm,15.6s
TREC Trest 50.89 309 *eP* **P** **02 43 35.6 -2.3**
TREC *epP* **pP** **02 43 43.2 +1.4**
TREC AMS AMS 03 06 40.0
comp=Z,300nm,15.6s
PRU Pruhonice 51.39 310 *eP* **P** **02 43 44.3 +2.7**
PRU *e* 02 43 59.6
PRU Pruhonice 51.39 310 *eP* **P** **02 43 44.3 +2.7**
PRU *ex* x 02 43 59.6
SEY Seymchan 51.55 33 ⇓*eP* **P** **02 43 43.0 +0.4**
SOKA Soboth 51.63 306 ⇓*ipP* **P** **02 43 43.9 +0.3**
comp=Z,10nm,0.9s
SOKA Soboth 51.63 306 ⇓*iP* **P** **02 43 43.9 +0.3**
comp=Z,10nm,0.9s
BRG Berggiesshubel 51.64 311 *eP* **P** **02 43 44.0 +0.5**
comp=Z,6.0nm,1.0s
BRG *e* 02 44 58.9
comp=Z,9.3nm,1.3s
BRG
comp=N,180nm,14.3s
BRG
comp=E,266nm,16.5s
BRG
comp=Z,388nm,15.3s
BRG Berggiesshubel 51.64 311 *eP* **P** **02 43 44.0 +0.5**
BRG pmax pmax
comp=Z,6.0nm,1.0s
BRG MLR MLR
comp=N,180nm,14.3s
BRG MLR MLR
comp=E,266nm,16.5s
BRG MLR MLR
comp=Z,388nm,15.3s
MOA Molln 51.93 307 ⇓*ipP* **P** **02 43 46.8 +1.1**
comp=Z,6.3nm,1.1s
MOA Molln 51.93 307 ⇓*iP* **P** **02 43 46.8 +1.1**
comp=Z,6.3nm,1.0s
GERES GERESS Array B 52.12 309 P **P** **02 43 48.2 +1.0**
GERES PcP **PcP** **02 44 58.4 -0.6**
GERES GERESS Array B 52.12 309 P **P** **02 43 48.2 +1.0**
comp=Z,2.8nm,0.8s,baz=76,slow=6.1,SNR=17
GERES PcP **PcP** **02 44 58.4 -0.6**
comp=Z,1.6nm,0.9s,baz=62,slow=3.2,SNR=4.5
GERES LR LR 03 08 15.5
comp=Z,228nm,19.4s,baz=252,slow=39
KHC Kasperske Hory 52.15 309 *eP* **P** **02 43 49.3 +1.9**
KHC pmax pmax
comp=Z,3.0nm,0.8s
KHC Kasperske Hory 52.15 309 *eP* **P** **02 43 49.3 +1.9**
comp=Z,3.2nm,0.8s
KHC Kasperske Hory 52.15 309 *eP* **P** **02 43 49.5 +2.1**
KHC *ex* x 02 44 01.3
CLL Collm 52.16 312 *eP* **P** **02 43 50.0 +2.6**
CLL *eS* **S** **02 51 12.0 +0.6**
CLL MLR MLR
comp=Z,300nm,20.9s
CLL Collm 52.16 312 *epP* **P** **02 43 50.0 +2.6**
CLL *eS* **S** **02 51 12.0 +0.6**
CLL *eSS* SS 02 55 00.0 +12
CLL LmV 03 07 00.0
comp=Z,300nm,20.9s
KAPI Kappang 52.20 130 P **P** **02 43 46.1 -2.0**
KAPI Kappang 52.20 130 P **P** **02 43 46.1 -2.0**
comp=Z,4.4nm,0.4s,baz=160,slow=15,SNR=6.6
NB2 NORSAR Subarra 52.21 324 P **P** **02 43 46.4 -1.3**
comp=Z,15nm,0.8s,baz=88,slow=7.4
NOA NORSAR Array B 52.21 324 P **P** **02 43 46.6 -1.1**
NOA NORSAR Array B 52.21 324 P **P** **02 43 46.6 -1.1**
comp=Z,20nm,0.9s,baz=87,slow=7.4,SNR=27
NOA LR LR 03 06 47.7
comp=Z,202nm,21.2s,baz=100,slow=37
MOTA Moosalm 54.12 307 ⇓*iP* **P** **02 44 01.3 -0.8**
MOTA pmax pmax
comp=Z,7.0nm,0.8s
MOTA Moosalm 54.12 307 ⇓*iP* **P** **02 44 01.2 -0.8**
comp=Z,6.9nm,0.8s
MOTA Moosalm 54.12 307 ⇓*iP* **P** **02 44 01.2 -0.8**
comp=Z,6.9nm,0.8s
FETA Feichten 54.45 307 ⇓*iP* **P** **02 44 03.9 -0.5**
comp=Z,5.3nm,0.7s
FETA Feichten 54.45 307 ⇓*iP* **P** **02 44 03.9 -0.5**
comp=Z,5.3nm,0.7s
KMBO Kilima Mbogo 54.79 240 *eP* **P** **02 44 10.3 +2.8**
comp=Z,7.6nm,1.1s
DAVA Damuels 54.95 307 ⇓*iP* **P** **02 44 07.7 -0.3**
comp=Z,13nm,0.9s
DAVA Damuels 54.95 307 ⇓*iP* **P** **02 44 07.7 -0.3**
comp=Z,13nm,0.9s
PETK Petropavlovsk- 55.35 45 LR LR 03 09 15.5
comp=Z,219nm,18.3s,baz=282,slow=38
CDF Champ du Feu 56.38 309 *eP* **P** **02 44 17.6 -0.6**
CDF Champ du Feu 56.38 309 *eP* **P** **02 44 17.6 -0.6**
CDF Champ du Feu 56.38 309 *eP* **P** **02 44 17.6 -0.6**
HINF Hinteralfeld 56.80 309 ⇑*iP* **P** **02 44 20.6 -0.6**
comp=Z,26nm,1.0s
HINF Hinteralfeld 56.80 309 ⇑*iP* **P** **02 44 20.6 -0.6**
HINF pmax pmax
comp=Z,26nm,1.0s
HINF Hinteralfeld 56.80 309 ⇑*iP* **P** **02 44 20.6 -0.6**
comp=Z,26nm,1.0s
PGF Pioggiola 56.81 302 *eP* **P** **02 44 20.1 -1.4**
PGF Pioggiola 56.81 302 *eP* **P** **02 44 20.1 -1.4**
PGF Pioggiola 56.81 302 *eP* **P** **02 44 20.1 -1.4**
SENIN Lac Senin/Sane 56.90 307 *eP* **P** **02 44 21.9 -0.2**
BILL Bilibino 56.95 26 *d iP* **P** **02 44 22.5 +0.6**
BILL *i* 02 45 16.9
BILL *i* 02 46 28.2
BILL pmax pmax
comp=Z,25nm,1.7s
BILL MLR MLR
comp=Z,100nm,16.0s
BILL Bilibino 56.95 26 *eP* **P** **02 44 22.7 +0.8**
comp=Z,20nm,1.1s
HAU Haudompre 57.08 309 *eP* **P** **02 44 22.8 -0.4**
comp=Z,14nm,0.9s
HAU *eR*
comp=Z,198nm,21.2s
HAU Haudompre 57.08 309 *eP* **P** **02 44 22.8 -0.4**
HAU pmax pmax
comp=Z,14nm,0.9s
HAU Haudompre 57.08 309 *eP* **P** **02 44 22.8 -0.4**
comp=Z,14nm,0.9s
PAGF Fort de Pagny 57.34 310 *eP* **P** **02 44 23.8 -1.1**
PAGF Fort de Pagny 57.34 310 *eP* **P** **02 44 23.8 -1.1**
GIVF Givet 57.50 312 *eP* **P** **02 44 25.0 -1.0**
GIVF Givet 57.50 312 *eP* **P** **02 44 25.0 -1.0**
GIVF Givet 57.50 312 *eP* **P** **02 44 25.0 -1.0**
LPG La Plagne 57.51 306 ⇑*iP* **P** **02 44 26.4 -0.1**
comp=Z,44nm,0.8s
LPG La Plagne 57.51 306 ⇑*iP* **P** **02 44 26.4 -0.1**
LPG pmax pmax
comp=Z,44nm,0.8s
LPG La Plagne 57.51 306 ⇑*iP* **P** **02 44 26.4 -0.1**
comp=Z,44nm,0.8s
LPL La Plagne 57.51 306 ⇑*iP* **P** **02 44 26.4 -0.1**
comp=Z,56nm,0.9s
LPL La Plagne 57.51 306 ⇑*iP* **P** **02 44 26.4 -0.1**
LPL pmax pmax
comp=Z,56nm,0.9s
LPL La Plagne 57.51 306 ⇑*iP* **P** **02 44 26.4 -0.1**
comp=Z,56nm,0.9s
SBF Sospel 57.52 304 *eP* **P** **02 44 25.1 -1.3**
comp=Z,67nm,0.8s
SBF Sospel 57.52 304 *eP* **P** **02 44 25.1 -1.3**
SBF pmax pmax
comp=Z,67nm,0.8s
SBF Sospel 57.52 304 *eP* **P** **02 44 25.1 -1.3**
comp=Z,67nm,0.8s
CABF La Chapelle 57.63 308 *eP* **P** **02 44 26.6 -0.6**
CABF La Chapelle 57.63 308 *eP* **P** **02 44 26.6 -0.6**
CABF La Chapelle 57.63 308 *eP* **P** **02 44 26.6 -0.6**
BNI Bardonecchia 57.69 306 *eP* **P** **02 44 29.2 +1.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BNI				pmax	pmax		
	comp=Z,17nm,1.1s						
BNI	**Bardonecchia**	**57.69**	**306**	*e*P	**P**	**02 44 29.1**	**+1.6**
	comp=Z,17nm,1.1s						
MBDF	**Montbardon**	**57.72**	**305**	*e*P	**P**	**02 44 26.7**	**-1.2**
	comp=Z,24nm,1.0s						
MBDF	**Montbardon**	**57.72**	**305**	*e*P	**P**	**02 44 26.7**	**-1.2**
MBDF				pmax	pmax		
	comp=Z,24nm,1.0s						
MBDF	**Montbardon**	**57.72**	**305**	*e*P	**P**	**02 44 26.7**	**-1.2**
	comp=Z,24nm,1.0s						
MEZF	**Maizieres J'vi**	**57.78**	**310**	*e*P	**P**	**02 44 26.9**	**-1.1**
	comp=Z,15nm,0.7s						
MEZF	**Maizieres J'vi**	**57.78**	**310**	*e*P	**P**	**02 44 26.9**	**-1.1**
	comp=Z,15nm,0.7s						
SFTF	**Sexfontaines**	**57.87**	**310**	*e*P	**P**	**02 44 27.5**	**-1.2**
SFTF	**Sexfontaines**	**57.87**	**310**	*e*P	**P**	**02 44 27.5**	**-1.2**
BAIF	**Baives**	**57.89**	**312**	*e*P	**P**	**02 44 27.6**	**-1.2**
BAIF	**Baives**	**57.89**	**312**	*e*P	**P**	**02 44 27.6**	**-1.2**
BAIF	**Baives**	**57.89**	**312**	*e*P	**P**	**02 44 27.6**	**-1.2**
FRF	**La Foret Royal**	**58.15**	**304**	*e*P	**P**	**02 44 29.8**	**-1.0**
FRF	**La Foret Royal**	**58.15**	**304**	*e*P	**P**	**02 44 29.8**	**-1.0**
FRF	**La Foret Royal**	**58.15**	**304**	*e*P	**P**	**02 44 29.8**	**-1.0**
ORIF	**Oris-en-Rattie**	**58.27**	**306**	*e*P	**P**	**02 44 30.5**	**-1.1**
	comp=Z,46nm,1.2s						
ORIF				*e*R			
	comp=Z,317nm,22.0s						
ORIF	**Oris-en-Rattie**	**58.27**	**306**	*e*P	**P**	**02 44 30.5**	**-1.1**
ORIF				pmax	pmax		
	comp=Z,46nm,1.3s						
ORIF	**Oris-en-Rattie**	**58.27**	**306**	*e*P	**P**	**02 44 30.5**	**-1.1**
	comp=Z,46nm,1.3s						
LMR	**La Mourre**	**58.32**	**304**	*e*P	**P**	**02 44 31.2**	**-0.7**
LMR	**La Mourre**	**58.32**	**304**	*e*P	**P**	**02 44 31.2**	**-0.7**
LMR	**La Mourre**	**58.32**	**304**	*e*P	**P**	**02 44 31.2**	**-0.7**
SMRF	**Simiane la Rot**	**58.76**	**305**	*e*P	**P**	**02 44 33.7**	**-1.4**
SMRF	**Simiane la Rot**	**58.76**	**305**	*e*P	**P**	**02 44 33.7**	**-1.4**
KEST	**Kesra**	**58.80**	**294**	P	**P**	**02 44 37.7**	**+2.2**
KEST	**Kesra**	**58.80**	**294**	P	**P**	**02 44 37.7**	**+2.2**
	comp=Z,2.4nm,0.9s,baz=273,slow=6.7,SNR=6.9						
LOR	**Lormes**	**58.90**	**309**	⇑*i*P	**P**	**02 44 34.9**	**-1.1**
	comp=Z,11nm,0.9s						
LOR				*e*R			
	comp=Z,211nm,22.5s						
LOR	**Lormes**	**58.90**	**309**	⇑*i*P	**P**	**02 44 34.9**	**-1.1**
	comp=Z,11nm,0.9s						
VIVF	**Saint-Julien-l**	**59.10**	**306**	*e*P	**P**	**02 44 36.7**	**-0.7**
	comp=Z,16nm,0.9s						
VIVF	**Saint-Julien-l**	**59.10**	**306**	*e*P	**P**	**02 44 36.7**	**-0.7**
VIVF				pmax	pmax		
	comp=Z,16nm,0.9s						
VIVF	**Saint-Julien-l**	**59.10**	**306**	*e*P	**P**	**02 44 36.7**	**-0.7**
	comp=Z,16nm,0.9s						
SMF	**Signal de Mont**	**59.10**	**308**	⇑*i*P	**P**	**02 44 36.5**	**-0.8**
	comp=Z,25nm,0.9s						
SMF	**Signal de Mont**	**59.10**	**308**	⇑*i*P	**P**	**02 44 36.5**	**-0.8**
SMF				pmax	pmax		
	comp=Z,25nm,0.9s						
SMF	**Signal de Mont**	**59.10**	**308**	⇑*i*P	**P**	**02 44 36.5**	**-0.8**
	comp=Z,25nm,0.9s						
SSF	**Saint Saulge**	**59.20**	**309**	⇑*i*P	**P**	**02 44 37.2**	**-0.8**
	comp=Z,17nm,0.8s						
SSF	**Saint Saulge**	**59.20**	**309**	⇑*i*P	**P**	**02 44 37.2**	**-0.8**
SSF				pmax	pmax		
	comp=Z,17nm,0.8s						
SSF	**Saint Saulge**	**59.20**	**309**	⇑*i*P	**P**	**02 44 37.2**	**-0.8**
	comp=Z,17nm,0.8s						
AVF	**Avril sur Loir**	**59.38**	**308**	*e*P	**P**	**02 44 38.4**	**-0.8**
	comp=Z,15nm,0.8s						
AVF	**Avril sur Loir**	**59.38**	**308**	*e*P	**P**	**02 44 38.4**	**-0.8**
AVF				pmax	pmax		
	comp=Z,15nm,0.8s						
AVF	**Avril sur Loir**	**59.38**	**308**	*e*P	**P**	**02 44 38.4**	**-0.8**
	comp=Z,15nm,0.8s						
BGF	**Bois d'Agland**	**59.78**	**308**	*e*P	**P**	**02 44 41.2**	**-0.8**
	comp=Z,7.2nm,0.7s						
BGF	**Bois d'Agland**	**59.78**	**308**	*e*P	**P**	**02 44 41.2**	**-0.8**
BGF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BGF	**Bois d'Agland**	**59.78**	**308**	*e*P	**P**	**02 44 41.2**	**-0.8**
	comp=Z,7.2nm,0.7s						
LASF	**Ste Croix**	**59.91**	**305**	*e*P	**P**	**02 44 41.8**	**-1.1**
	comp=Z,48nm,1.2s						
LASF	**Ste Croix**	**59.91**	**305**	*e*P	**P**	**02 44 41.8**	**-1.1**
	comp=Z,48nm,1.2s						
DAG	**Danmarks Havn**	**59.99**	**345**	*i* P	**P**	**02 44 42.0**	**-0.9**
	comp=Z,4.3nm,1.0s						
TCF	**Toulx Ste Croi**	**60.28**	**308**	⇑*i*P	**P**	**02 44 44.1**	**-1.4**
	comp=Z,38nm,1.1s						
TCF	**Toulx Ste Croi**	**60.28**	**308**	⇑*i*P	**P**	**02 44 44.1**	**-1.4**
TCF				pmax	pmax		
	comp=Z,38nm,1.1s						
TCF	**Toulx Ste Croi**	**60.28**	**308**	⇑*i*P	**P**	**02 44 44.1**	**-1.4**
	comp=Z,38nm,1.1s						
CAF	**Calviac**	**60.83**	**307**	*e*P	**P**	**02 44 48.2**	**-1.1**
	comp=Z,15nm,1.0s						
CAF	**Calviac**	**60.83**	**307**	*e*P	**P**	**02 44 48.2**	**-1.1**
CAF				pmax	pmax		
	comp=Z,15nm,1.0s						
CAF	**Calviac**	**60.83**	**307**	*e*P	**P**	**02 44 48.2**	**-1.1**
	comp=Z,15nm,1.0s						
LDF	**La Druitiere**	**61.03**	**311**	⇑*i*P	**P**	**02 44 49.7**	**-0.8**
	comp=Z,20nm,0.7s						
LDF	**La Druitiere**	**61.03**	**311**	⇑*i*P	**P**	**02 44 49.7**	**-0.8**
LDF				pmax	pmax		
	comp=Z,20nm,0.7s						
LDF	**La Druitiere**	**61.03**	**311**	⇑*i*P	**P**	**02 44 49.7**	**-0.8**
	comp=Z,20nm,0.7s						
RJF	**Les Rejaudoux**	**61.07**	**307**	*e*P	**P**	**02 44 49.9**	**-0.9**
RJF				*e*R			
	comp=Z,104nm,20.5s						
RJF	**Les Rejaudoux**	**61.07**	**307**	*e*P	**P**	**02 44 49.9**	**-0.9**
RJF	**Les Rejaudoux**	**61.07**	**307**	*e*P	**P**	**02 44 49.9**	**-0.9**
FLN	**La Foliniere**	**61.20**	**311**	*e*P	**P**	**02 44 51.0**	**-0.7**
FLN				*e*R			
	comp=Z,297nm,23.0s						
FLN	**La Foliniere**	**61.20**	**311**	*e*P	**P**	**02 44 51.0**	**-0.7**
FLN	**La Foliniere**	**61.20**	**311**	*e*P	**P**	**02 44 51.0**	**-0.7**
MTLF	**Montolieu**	**61.27**	**305**	*e*P	**P**	**02 44 51.8**	**-0.5**
MTLF	**Montolieu**	**61.27**	**305**	*e*P	**P**	**02 44 51.8**	**-0.5**
MTLF	**Montolieu**	**61.27**	**305**	*e*P	**P**	**02 44 51.8**	**-0.5**
GRR	**Gorron**	**61.56**	**311**	⇑*i*P	**P**	**02 44 52.4**	**-1.7**
	comp=Z,17nm,0.7s						
GRR	**Gorron**	**61.56**	**311**	⇑*i*P	**P**	**02 44 52.4**	**-1.7**
GRR				pmax	pmax		
	comp=Z,17nm,0.7s						
GRR	**Gorron**	**61.56**	**311**	⇑*i*P	**P**	**02 44 52.4**	**-1.7**
	comp=Z,17nm,0.7s						
LFF	**La Frestale**	**61.71**	**307**	*e*P	**P**	**02 44 54.0**	**-1.2**
	comp=Z,48nm,1.2s						
LFF	**La Frestale**	**61.71**	**307**	*e*P	**P**	**02 44 54.0**	**-1.2**
LFF				pmax	pmax		
	comp=Z,48nm,1.2s						
LFF	**La Frestale**	**61.71**	**307**	*e*P	**P**	**02 44 54.0**	**-1.2**
	comp=Z,48nm,1.2s						
MFF	**Saint Martin d**	**61.72**	**309**	*e*P	**P**	**02 44 54.5**	**-0.7**
	comp=Z,8.6nm,0.8s						
MFF	**Saint Martin d**	**61.72**	**309**	*e*P	**P**	**02 44 54.5**	**-0.7**
MFF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MFF	**Saint Martin d**	**61.72**	**309**	*e*P	**P**	**02 44 54.5**	**-0.7**
	comp=Z,8.6nm,0.8s						
EPF	**Esparros**	**62.66**	**305**	*e*P	**P**	**02 45 00.6**	**-1.1**
EPF	**Esparros**	**62.66**	**305**	*e*P	**P**	**02 45 00.6**	**-1.1**
EPF	**Esparros**	**62.66**	**305**	*e*P	**P**	**02 45 00.6**	**-1.1**
SGMF	**Saint Gilles**	**62.67**	**311**	*e*P	**P**	**02 45 00.9**	**-0.7**
	comp=Z,39nm,1.1s						
SGMF	**Saint Gilles**	**62.67**	**311**	*e*P	**P**	**02 45 00.9**	**-0.7**
SGMF				pmax	pmax		
	comp=Z,39nm,1.1s						
SGMF	**Saint Gilles**	**62.67**	**311**	*e*P	**P**	**02 45 00.9**	**-0.7**
	comp=Z,39nm,1.1s						
ROSF	**Rostrenen**	**63.09**	**312**	*e*P	**P**	**02 45 03.7**	**-0.6**
	comp=Z,59nm,1.2s						
ROSF	**Rostrenen**	**63.09**	**312**	*e*P	**P**	**02 45 03.7**	**-0.6**
ROSF				pmax	pmax		
	comp=Z,59nm,1.2s						
ROSF	**Rostrenen**	**63.09**	**312**	*e*P	**P**	**02 45 03.7**	**-0.6**
	comp=Z,59nm,1.2s						
QUIF	**Quistinic**	**63.17**	**311**	*e*P	**P**	**02 45 03.7**	**-1.2**
	comp=Z,48nm,1.2s						
QUIF	**Quistinic**	**63.17**	**311**	*e*P	**P**	**02 45 03.7**	**-1.2**
QUIF				pmax	pmax		
	comp=Z,48nm,1.2s						
QUIF	**Quistinic**	**63.17**	**311**	*e*P	**P**	**02 45 03.7**	**-1.2**
	comp=Z,48nm,1.2s						
ETSF	**Etsaut**	**63.33**	**305**	*e*P	**P**	**02 45 05.5**	**-0.6**
	comp=Z,41nm,1.3s						
ETSF	**Etsaut**	**63.33**	**305**	*e*P	**P**	**02 45 05.5**	**-0.6**
ETSF				pmax	pmax		
	comp=Z,41nm,1.3s						
ETSF	**Etsaut**	**63.33**	**305**	*e*P	**P**	**02 45 05.5**	**-0.6**
	comp=Z,41nm,1.3s						
SJPF	**Ste Jean**	**63.70**	**306**	*e*P	**P**	**02 45 07.2**	**-1.3**
SJPF	**Ste Jean**	**63.70**	**306**	*e*P	**P**	**02 45 07.2**	**-1.3**
SJPF	**Ste Jean**	**63.70**	**306**	*e*P	**P**	**02 45 07.2**	**-1.3**
MBWA	**Marble Bar**	**65.09**	**141**	*e*P	**P**	**02 45 17.4**	**-0.3**
	comp=Z,37nm,1.0s						
FITZ	**Fitzroy Crossi**	**65.93**	**135**	*e*P	**P**	**02 45 23.0**	**-0.2**
	comp=Z,9.0nm,1.0s						
SUMG	**Summit**	**66.59**	**344**	*e*P	**P**	**02 45 26.3**	**-0.9**
SUMG				pmax	pmax		
	comp=Z,20nm,1.0s						
SUMG	**Summit**	**66.59**	**344**	*e*P	**P**	**02 45 26.3**	**-0.9**
	comp=Z,20nm,1.0s						
SUMG	**Summit**	**66.59**	**344**	*i* P	**P**	**02 45 26.7**	**-0.5**
	comp=Z,16nm,1.0s						
ESDC	**Sonseca Array**	**66.97**	**303**	P	**P**	**02 45 28.7**	**-1.1**
ESDC	**Sonseca Array**	**66.97**	**303**	P	**P**	**02 45 28.7**	**-1.1**
	comp=Z,3.7nm,0.9s,baz=61,slow=6.8,SNR=14						
ESDC				LR	LR	03 14 36.0	
	comp=Z,84nm,21.7s,baz=325,slow=36						
TAM	**Tamanrasset**	**67.26**	**283**	*e*P	**P**	**02 45 31.1**	**-0.9**
TAM				pmax	pmax		
	comp=Z,12nm,1.4s						
TAM	**Tamanrasset**	**67.26**	**283**	*e*P	**P**	**02 45 31.1**	**-0.9**
	comp=Z,12nm,1.4s						
TNA	**Tin City**	**67.32**	**25**	*e*P	**P**	**02 45 33.0**	**+1.6**
	comp=Z,44nm,1.9s						
PBRG	**Braganca**	**67.96**	**306**	*e*P	**P**	**02 45 37.7**	**+1.7**
MVO	**Moncorvo**	**68.43**	**306**	*e*P	**P**	**02 45 37.6**	**-1.4**
	comp=Z,24nm,1.1s						
MTE	**Manteigas**	**69.12**	**305**	*e*P	**P**	**02 45 43.3**	**0.0**
PVIS	**Viseu**	**69.22**	**306**	*e*P	**P**	**02 45 45.9**	**+2.0**
PCBR	**Castelo Branco**	**69.33**	**305**	*e*P	**P**	**02 45 44.0**	**-0.5**
PMRV	**Marv??o**	**69.46**	**304**	*e*P	**P**	**02 45 47.8**	**+2.4**
PBAR	**Barrancos**	**69.78**	**303**	*e*P	**P**	**02 45 46.7**	**-0.7**
	comp=Z,30nm,1.2s						
PTOM	**Tomar**	**70.07**	**305**	*e*P	**P**	**02 45 49.2**	**+0.1**
	comp=Z,38nm,1.2s						
PMTG	**Montargil**	**70.20**	**304**	*e*P	**P**	**02 45 47.3**	**-2.6**
EVO	**Evora**	**70.30**	**304**	*e*P	**P**	**02 45 52.3**	**+1.8**
PVAQ	**Vaqueiros**	**70.62**	**302**	*e*P	**P**	**02 45 54.1**	**+1.6**
PBDV	**Barranco-do-Ve**	**70.84**	**302**	*e*P	**P**	**02 45 53.6**	**-0.3**
	comp=Z,65nm,1.5s						
LSZ	**Lusaka**	**71.01**	**236**	*e*P	**P**	**02 45 54.5**	**-0.7**
	comp=Z,7.3nm,0.9s						
COLD	**Coldfoot**	**71.84**	**19**	*e*P	**P**	**02 45 59.5**	**+0.1**
	comp=Z,15nm,1.0s						
WRA	**Warramunga Arr**	**72.72**	**129**	P	**P**	**02 46 05.1**	**-0.2**
WRA	**Warramunga Arr**	**72.72**	**129**	P	**P**	**02 46 05.1**	**-0.2**
	comp=Z,18nm,0.9s,baz=328,slow=5.8,SNR=126						
WRA				LR	LR	03 20 44.0	
	comp=Z,57nm,20.4s,baz=185,slow=38						
WRAB	**Tennant Creek**	**72.72**	**129**	*e*P	**P**	**02 46 04.9**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,30nm,1.1s						
WRAB	**Tennant Creek**	**72.72**	**129**	*e*P	**P**	**02 46 04.9**	**-0.3**
	comp=Z,30nm,1.1s						
WRAB	**Tennant Creek**	**72.72**	**129**	P	**P**	**02 46 05.0**	**-0.3**
	comp=Z,146nm,1.1s,SNR=15						
NWAO	**Narrogin (SRO)**	**73.90**	**150**	*e*P	**P**	**02 46 10.7**	**-1.2**
	comp=Z,35nm,1.1s						
COLA	**College**	**74.22**	**20**	*e*P	**P**	**02 46 13.7**	**+0.2**
COLA				pmax	pmax		
	comp=Z,19nm,1.0s						
COLA	**College**	**74.22**	**20**	*e*P	**P**	**02 46 13.7**	**+0.2**
	comp=Z,19nm,1.0s						
ILAR	**Eielson Array**	**74.58**	**20**	P	**P**	**02 46 14.8**	**-0.8**
ILAR	**Eielson Array**	**74.58**	**20**	P	**P**	**02 46 14.8**	**-0.8**
	comp=Z,6.4nm,0.9s,baz=307,slow=4.7,SNR=31						
PMG	**Port Moresby**	**74.81**	**112**	*e*P	**P**	**02 46 17.9**	**+0.3**
	comp=Z,26nm,1.2s						
AS31	**Alice Springs**	**75.16**	**132**	*e*P	**P**	**02 46 19.1**	**-0.5**
ASAR	**Alice Springs**	**75.16**	**132**	P	**P**	**02 46 19.4**	**-0.1**
ASAR	**Alice Springs**	**75.16**	**132**	P	**P**	**02 46 19.4**	**-0.1**
	comp=Z,12nm,1.0s,baz=319,slow=5.6,SNR=68						
TORD	**Torodi Ar. Bea**	**75.22**	**276**	P	**P**	**02 46 18.8**	**-1.3**
TORD	**Torodi Ar. Bea**	**75.22**	**276**	P	**P**	**02 46 18.8**	**-1.3**
	comp=Z,13nm,0.7s,baz=47,slow=5.1,SNR=166						
EGAK	**Eagle**	**76.10**	**18**	*e*P	**P**	**02 46 23.7**	**-0.6**
	comp=Z,11nm,1.1s						
DOT	**Dot Lake**	**76.23**	**19**	*e*P	**P**	**02 46 24.4**	**-0.8**
	comp=Z,4.9nm,1.1s						
SML	**Sawmill**	**76.38**	**22**	*e*P	**P**	**02 46 25.9**	**-0.1**
SML				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SML	**Sawmill**	**76.38**	**22**	*e*P	**P**	**02 46 25.9**	**-0.1**
	comp=Z,5.2nm,1.1s						
LBTB	**Lobatse**	**79.55**	**231**	*e*P	**P**	**02 46 43.4**	**-0.7**
	comp=Z,13nm,0.8s						
CTAO	**Charters Tower**	**80.93**	**121**	*e*P	**P**	**02 46 51.7**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,30nm,1.1s						
CTAO	**Charters Tower**	**80.93**	**121**	*e*P	**P**	**02 46 51.7**	**+0.1**
	comp=Z,30nm,1.1s						
TSUM	**Tsumeb**	**81.14**	**240**	*e*P	**P**	**02 46 54.8**	**+1.9**
	comp=Z,13nm,1.1s						
BOSA	**Boshof**	**82.30**	**228**	*e*P	**P**	**02 46 57.7**	**-1.1**
	comp=Z,20nm,0.8s						
BOSA	**Boshof**	**82.30**	**228**	P	**P**	**02 46 57.7**	**-1.1**
	comp=Z,15nm,0.7s,baz=41,slow=4.6,SNR=28						
BOSA				LR	LR	03 22 01.6	
	comp=Z,97nm,18.1s,baz=269,slow=35						
YKW3	**Yellowknife Ar**	**83.11**	**8**	*e*P	**P**	**02 47 01.0**	**-1.4**
	comp=Z,0.2nm,0.9s						
BBOO	**Buckleboo**	**83.17**	**137**	*e*P	**P**	**02 47 01.9**	**-1.2**
YKA	**Yellowknife Ar**	**83.17**	**8**	P	**P**	**02 47 01.4**	**-1.4**
YKA				PKKPbc	**PKKPbc**	**03 05 21.4**	**-2.5**
YKA	**Yellowknife Ar**	**83.17**	**8**	P	**P**	**02 47 01.4**	**-1.4**
	comp=Z,4.5nm,0.5s,baz=336,slow=5.6,SNR=116						
YKA				PKKPbc	**PKKPbc**	**03 05 21.4**	**-2.5**
	comp=Z,0.1nm,0.7s,baz=158,slow=2.3,SNR=4.3						
DBIC	**Dimbokro**	**84.12**	**274**	P	**P**	**02 47 08.6**	**+0.2**
DBIC	**Dimbokro**	**84.12**	**274**	P	**P**	**02 47 08.6**	**+0.2**
	comp=Z,10.0nm,0.9s,baz=35,slow=7.3,SNR=8.0						
LIC	**Lamto**	**84.50**	**274**	*e*P	**P**	**02 47 08.2**	**-2.2**
	comp=Z,18nm,0.9s						
LIC	**Lamto**	**84.50**	**274**	*e*P	**P**	**02 47 08.2**	**-2.2**
	comp=Z,18nm,0.9s						
STKA	**Stephens Creek**	**85.77**	**133**	P	**P**	**02 47 14.9**	**-1.3**
STKA	**Stephens Creek**	**85.77**	**133**	P	**P**	**02 47 14.9**	**-1.3**
	comp=Z,6.4nm,1.0s,baz=339,slow=3.9,SNR=7.0						
STKA				LR	LR	03 30 53.2	
	comp=Z,94nm,18.8s,baz=25,slow=39						
SCHQ	**Schefferville**	**87.97**	**343**	P	**P**	**02 47 25.8**	**-1.0**
SCHQ	**Schefferville**	**87.97**	**343**	P	**P**	**02 47 25.8**	**-1.0**
	comp=Z,1.7nm,0.8s,baz=79,slow=5.2,SNR=4.3						
FFC	**Flin Flon**	**91.87**	**3**	*i* P	**P**	**02 47 44.5**	**-0.5**
TXAR	**Lajitas Array**	**117.06**	**6**	PKKPbc	PKKPbc	03 03 47.7	+0.7
TXAR	**Lajitas Array**	**117.06**	**6**	PKKPbc	PKKPbc	03 03 47.7	+0.7
	comp=Z,0.5nm,0.9s,baz=191,slow=5.1,SNR=4.6						
QSPA	**South Pole Qui**	**123.47**	**180**	*e*PKPdf	**PKPdf**	**02 53 31.9**	**-1.5**
ATAH	**Atahualpa**	**148.19**	**322**	PKPbc	**PKPbc**	**02 54 24.4**	**+0.3**
ATAH	**Atahualpa**	**148.19**	**322**	PKPbc	**PKPbc**	**02 54 24.4**	**+0.3**
	comp=Z,16nm,1.0s,baz=306,slow=3.6,SNR=6.5						
LPAZ	**La Paz**	**148.37**	**296**	PKPbc	**PKPbc**	**02 54 25.0**	**+0.3**
LPAZ	**La Paz**	**148.37**	**296**	PKPbc	**PKPbc**	**02 54 25.0**	**+0.3**
	comp=Z,3.8nm,1.0s,baz=169,slow=5.2,SNR=6.5						
USHA	**Ushuaia**	**150.66**	**215**	PKPbc	**PKPbc**	**02 54 29.3**	**+0.9**
USHA	**Ushuaia**	**150.66**	**215**	PKPbc	**PKPbc**	**02 54 29.3**	**+0.9**
	comp=Z,29nm,1.2s,baz=97,slow=2.4,SNR=3.9						
TRQA	**Tornquist**	**150.97**	**251**	*e*PKPbc	**PKPbc**	**02 54 29.1**	**-0.8**

IDC 01 02:37:06.7±1.1**, 33°.75N×82°.34E, h0km, mb3.6**/7**, mb1 3.9**/7**, mb1mx3.6**/26**, mbtmp3.7**/7**, MS4.4**/1**, Ms1 4.4**/1**, ms1mx2.9**/31**, Error ellipse: s-maj=42.8km s-min=22.5km az=62.0, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**20.27**	**4**	P	Pn	02 41 45.4	-0.1
	1.3nm,0.6s,baz=196,slow=9.9,SNR=2.2						
CMAR	**Chiang Mai Arr**	**21.27**	**132**	P	P	02 41 54.1	-0.5
	3.2nm,0.8s,baz=310,slow=10,SNR=5.0						
JOW	**Kunigami**	**40.00**	**87**	LR	LR	03 02 20.7	
	comp=Z,552nm,21.9s,baz=318,slow=38						
WRA	**Warramunga Arr**	**72.84**	**129**	P	P	02 48 37.7	+0.3
	0.6nm,0.8s,baz=325,slow=6.3,SNR=4.8						
ILAR	**Eielson Array**	**74.55**	**20**	P	P	02 48 46.3	-0.6
	0.5nm,1.1s,baz=324,slow=5.6,SNR=3.1						
TORD	**Torodi Ar. Bea**	**75.11**	**276**	P	P	02 48 51.0	+0.1
	0.6nm,0.5s,baz=44,slow=4.7,SNR=4.1						
ASAR	**Alice Springs**	**75.28**	**132**	P	P	02 48 52.2	+0.5
	0.5nm,0.5s,baz=329,slow=6.6,SNR=3.2						
YKA	**Yellowknife Ar**	**83.12**	**8**	P	P	02 49 33.5	-0.6
	0.3nm,0.5s,baz=336,slow=5.5,SNR=5.9						

BJI 01 02:39:00.4, 36°.55N×106°.21E, h6km, ML3.5/6**, 1C, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**1.97**	**257**	⇑Pg	Pn	02 39 34.7	+0.2
LZH				Sn	Sn	02 40 00.0	+0.4
LZH				Sg	Sb	02 40 02.2	+0.4
LZH				smax	smax		
	comp=N,1μm,0.5s						
LZH				smax	smax		
	comp=E,2μm,0.5s						
GTA	**Gaotai**	**5.80**	**301**	Pn	Pn	02 40 29.0	+1.8
GTA				Pg	Pb	02 40 46.3	+4.1
GTA				Sn	Sn	02 41 33.2	-1.0
GTA				Sg	Sg	02 42 00.2	-6.9
GTA				smax	smax		
	comp=N,25nm,0.8s						
GTA				smax	smax		
	comp=E,26nm,1.0s						
HHC	**Hu-ho-hao-te**	**6.00**	**43**	*e*Pg	Pg	02 40 51.7	-3.7
HHC				Sg	Sg	02 42 09.8	-3.4
HHC				smax	smax		
	comp=N,120nm,0.3s						
HHC				smax	smax		
	comp=E,42nm,0.3s						

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*ISCJB **01** 02:41:24.6±0.6, 16°.59S±0°.05×71°.16W±0°.04, h80km±5km, mb4.7/112, Error ellipse: s-maj=9.3km s-min=5.2km az=37.6*

*IDC **01** 02:41:28.0±0.4, 16°.65S×71°.15W, h97km±2km, mb4.4/17, mb1 4.6/19, mb1mx4.5/23, mbtmp4.4/19, MS3.5/5, Ms1 3.6/5, ms1mx3.3/22, Error ellipse: s-maj=14.5km s-min=10.6km az=52.0*

*BJI **01** 02:41:27.8, 16°.70S×71°.10W, h99km, mB5.4/13*

*NEIC **01** 02:41:28.0±0.1, 16°.67S×71°.11W, mb4.8/90, Error ellipse: s-maj=5.8km s-min=3.8km az=46.0*

NEIC Felt [III] at Arequipa, Mollendo and Punta de Bombon; [II] at Ilo and Moquegua.

*LDG **01** 02:41:34.9±0.9, 16°.64S×70°.05W, h141km, Mb4.6/16, Ms3.8/7, Error ellipse: s-maj=60.9km s-min=13.4km az=67.0*

ISC 01 02:41:27.7±0.3**, 16°.74S**±0°.05×**71°.18W**±0°.07**, h98**km±1km**, h97km:pP-P, n618,** σ**0s.81**/820**, mb4.8**/111**, 178C-177D, Southern Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**0.40**	**312**	⇓*i*P	**Pn**	**02 41 41.6**	**-1.4**
ARE				S	Sn	02 41 47.0	-7.3
LPAZ	**La Paz**	**2.96**	**82**	*e*Pn	Pn	02 42 18.4	+5.0
LPAZ	**La Paz**	**2.96**	**82**	P	Pn	02 42 18.4	+5.0
	695nm,0.3s,baz=268,slow=9.1						
LPAZ				LR	LR	02 43 22.1	
	comp=Z,889nm,20.0s,baz=333,slow=39						
NNA	**Nana**	**7.24**	**310**	*e*Pn	**Pn**	**02 43 08.5**	**-2.4**
NNA	**Nana**	**7.24**	**310**	P	**Pn**	**02 43 09.4**	**-1.5**
	3.7nm,0.3s,baz=110,slow=14,SNR=5.2						
NNA				LR	LR	02 46 21.9	
	comp=Z,366nm,18.3s,baz=335,slow=41						
SIV	**San Ignacio**	**9.73**	**87**	P	**Pn**	**02 43 43.9**	**-0.9**
SIV	**San Ignacio**	**9.73**	**87**	P	**Pn**	**02 43 43.9**	**-0.9**
	8.3nm,0.3s,baz=279,slow=10,SNR=122						
SAML	**Samuel**	**10.98**	**46**	*e*Pn	**Pn**	**02 44 00.0**	**-1.8**
	59nm,0.7s						
ATAH	**Atahualpa**	**11.86**	**323**	P	Pn	02 44 19.4	+5.4
ATAH	**Atahualpa**	**11.86**	**323**	P	Pn	02 44 19.4	+5.4
	0.4nm,0.3s,baz=154,slow=21,SNR=3.7						
CFAA	**Coronel Fontan**	**15.04**	**170**	P	**Pn**	**02 44 52.1**	**-3.0**
CFAA	**Coronel Fontan**	**15.04**	**170**	P	**Pn**	**02 44 52.1**	**-3.0**
	0.2nm,0.3s,baz=347,slow=12,SNR=25						
ROSC	**El Rosal**	**21.68**	**351**	*e*P	**P**	**02 46 11.3**	**+0.2**
ROSC	**El Rosal**	**21.68**	**351**	P	**P**	**02 46 11.0**	**-0.1**
	8.2nm,0.5s,baz=97,slow=20,SNR=5.2						
BDFB	**Brasilia**	**22.27**	**90**	P	**P**	**02 46 16.4**	**-0.7**
BDFB	**Brasilia**	**22.27**	**90**	P	**P**	**02 46 16.4**	**-0.7**
	33nm,0.5s,baz=261,slow=12,SNR=75						
TRQA	**Tornquist**	**22.73**	**161**	*e*P	**P**	**02 46 20.9**	**-0.6**
	74nm,1.8s						
SPB	**Sao Paulo**	**23.30**	**111**	*e*P	**P**	**02 46 25.6**	**-1.5**
	47nm,0.9s						
PLCA	**Paso Flores**	**23.92**	**179**	*e*P	**P**	**02 46 33.2**	**+0.6**
	54nm,1.2s						
PLCA				*e*pP	**pP**	**02 46 58.4**	**+4.8**
PLCA				*e*sP	**sP**	**02 47 04.7**	**-1.0**
PLCA	**Paso Flores**	**23.92**	**179**	P	**P**	**02 46 33.2**	**+0.6**
	19nm,0.7s,baz=352,slow=12,SNR=16						
SDV	**Santo Domingo**	**25.46**	**1**	*e*P	**P**	**02 46 49.0**	**+2.0**
	0.6nm,1.0s						
CRPR	**Cabo Rojo, PR**	**34.76**	**7**	*e*P	**P**	**02 48 08.7**	**0.0**
CELP	**Cerrillos**	**34.89**	**8**	*e*P	**P**	**02 48 09.5**	**-0.4**
SJG	**San Juan**	**34.98**	**8**	LR	LR	03 03 09.6	
	comp=Z,38nm,21.9s,baz=267,slow=37						
RCBR	**Riachuelo**	**36.19**	**77**	*e*P	**P**	**02 48 22.0**	**+0.7**
	21nm,0.7s						
USHA	**Ushuaia**	**38.08**	**177**	P	**P**	**02 48 37.7**	**+1.0**
USHA	**Ushuaia**	**38.08**	**177**	P	**P**	**02 48 37.7**	**+1.0**
	15nm,0.6s,baz=24,slow=2.3,SNR=11						
CMIG	**Matias Romero**	**40.93**	**324**	P	**P**	**02 49 01.5**	**+0.7**
CMIG	**Matias Romero**	**40.93**	**324**	P	**P**	**02 49 01.5**	**+0.7**
	7.6nm,0.8s,baz=116,slow=3.2,SNR=11						
LRAL	**Lakeview Retre**	**51.75**	**343**	*e*P	**P**	**02 50 24.4**	**-0.8**
	15nm,1.3s						
LRAL				*e*pP	**pP**	**02 50 48.7**	**-0.2**
LRAL				*e*sP	**sP**	**02 50 59.1**	**-0.6**
HKT	**Hockley**	**52.15**	**333**	*e*P	**P**	**02 50 27.9**	**-0.2**
	6.2nm,1.0s						
KMSC	**Kings Mountain**	**52.48**	**350**	⇑P	**P**	**02 50 30.4**	**-0.2**
	baz=53						
732A	**Laxson Ranch,**	**53.08**	**328**	⇑P	**P**	**02 50 34.5**	**-0.6**
	baz=53,SNR=6.0						
CPCT	**Cooper Cave**	**53.42**	**346**	*e*P	**P**	**02 50 36.5**	**-0.9**
CPCT				*e*pP	**pP**	**02 51 03.5**	**+2.2**
CPCT				*e*sP	**sP**	**02 51 12.0**	**-0.2**
TKL	**Tuckaleechee C**	**53.46**	**347**	*e*P	**P**	**02 50 36.5**	**-1.2**
TKL				*e*pP	**pP**	**02 51 01.4**	**-0.1**
TKL				*e*sP	**sP**	**02 51 12.2**	**-0.2**
632A	**Uvalde**	**53.62**	**329**	⇑P	**P**	**02 50 39.0**	**-0.1**
	baz=54,SNR=9.4						
631A	**Perdido Creek**	**53.95**	**328**	⇑P	**P**	**02 50 41.3**	**-0.1**
	baz=54,SNR=12						
532A	**Rocksprings**	**54.19**	**329**	⇑P	**P**	**02 50 43.3**	**0.0**
	baz=54						
TZTN	**Tazewell**	**54.26**	**348**	*e*P	**P**	**02 50 44.8**	**+1.2**
	4.1nm,0.7s						
VWCC	**Virginia Weste**	**54.33**	**351**	*e*P	**P**	**02 50 44.1**	**0.0**
VWCC				*e*pP	**pP**	**02 51 09.5**	**+1.6**
VWCC				*e*sP	**sP**	**02 51 18.9**	**+0.1**
BLA	**Blacksburg**	**54.36**	**351**	*e*P	**P**	**02 50 44.5**	**+0.2**
BLA				*e*pP	**pP**	**02 51 09.3**	**+1.1**
BLA				*e*sP	**sP**	**02 51 19.6**	**+0.5**
JCT	**Junction City**	**54.43**	**329**	*e*P	**P**	**02 50 44.8**	**-0.3**
	9.3nm,0.9s						
JCT				*e*pP	**pP**	**02 51 09.4**	**+0.6**
JCT				*e*sP	**sP**	**02 51 19.7**	**0.0**
JCT	**Junction City**	**54.43**	**329**	⇓P	**P**	**02 50 44.8**	**-0.3**
	baz=55						
531A	**Rocksprings**	**54.54**	**329**	⇓P	**P**	**02 50 45.9**	**+0.1**
	baz=55,SNR=10						
WHTX	**Lake Whitney**	**54.61**	**333**	⇓P	**P**	**02 50 45.7**	**-0.5**
	baz=55						
432A	**Menard**	**54.75**	**330**	⇑P	**P**	**02 50 46.9**	**-0.5**
	baz=55,SNR=11						
WVT	**Waverly**	**54.89**	**344**	*e*P	**P**	**02 50 45.6**	**-2.5**
	3.2nm,0.6s						
WVT				*e*pP	**pP**	**02 51 13.7**	**+1.7**
WVT				*e*sP	**sP**	**02 51 21.6**	**-1.3**
530A	**J-C Ranch, Com**	**54.93**	**328**	⇑P	**P**	**02 50 48.6**	**0.0**
	baz=55,SNR=8.6						
431A	**Sonora**	**54.99**	**329**	⇓P	**P**	**02 50 48.9**	**-0.2**
	baz=55,SNR=12						
UALR	**University of**	**55.03**	**339**	*e*P	**P**	**02 50 47.5**	**-1.7**
UALR				*e*pP	**pP**	**02 51 13.8**	**+0.7**
UALR				*e*sP	**sP**	**02 51 23.5**	**-0.5**

332A	Millersview baz=55,SNR=15	55.15	330	⇑P		P	02 50 50.0	-0.2
628A	Black Gap, Mar baz=55,SNR=16	55.21	326	⇑P		P	02 50 50.9	+0.3
MIAR	Mount Ida 27nm,0.8s	55.27	338	eP		P	02 50 50.0	-0.9
MIAR					eP	pP	02 51 13.7	-1.1
MIAR					eS	sP	02 51 25.6	-0.1
529A	Stev Forest Ra baz=56,SNR=15	55.36	327	⇑P		P	02 50 51.7	-0.1
430A	Baggett Ranch, baz=56,SNR=8.0	55.39	328	⇑P		P	02 50 51.4	-0.5
331A	San Angelo baz=56,SNR=8.8	55.42	329	⇓P		P	02 50 51.5	-0.6
627A	Terlingua Ranc baz=56	55.45	326	⇓P		P	02 50 52.2	-0.3
TXAR	Lajitas Array	55.51	325	P		P	02 50 52.3	-0.6
TXAR					pP	pP	02 51 17.1	+0.3
TXAR					sP	sP	02 51 27.2	-0.4
TXAR	Lajitas Array 5.3nm,0.8s,baz=150,slow=9.2,SNR=48	55.51	325	P		P	02 50 52.3	-0.6
TXAR	5.7nm,1.2s,baz=156,slow=6.9,SNR=4.4				pP	pP	02 51 17.1	+0.3
TXAR	2.5nm,0.8s,baz=137,slow=11,SNR=6.2				sP	sP	02 51 27.2	-0.4
232A	Coleman baz=56,SNR=13	55.52	331	⇓P		P	02 50 52.5	-0.3
429A	Davenport Ranc baz=56,SNR=13	55.59	328	⇑P		P	02 50 53.0	-0.4
330A	Mertzon baz=56	55.86	329	⇓P		P	02 50 54.3	-1.0
231A	Bronte baz=56	55.88	330	⇑P		P	02 50 54.9	-0.5
626A	Big Bend Ranch baz=56,SNR=19	55.94	325	⇓P		P	02 50 55.9	0.0
428A	Kincaid Ranch, baz=56	56.08	327	⇑P		P	02 50 56.8	-0.1
527A	Woodward Ranch baz=56,SNR=12	56.11	326	⇓P		P	02 50 56.9	-0.3
ABTX	Abilene, Hawle baz=56,SNR=12	56.13	331	⇑P		P	02 50 57.1	0.0
230A	Sterling City baz=56	56.23	329	⇑P		P	02 50 57.8	-0.1
526A	Mary Lane Ranc baz=56,SNR=12	56.31	326	⇑P		P	02 50 58.4	-0.2
329A	Wagon Wheel Ra baz=56,SNR=7.5	56.33	328	⇑P		P	02 50 58.4	-0.3
WCI	Wyandotte Cave 15nm,0.7s	56.48	346	eP		P	02 50 58.3	-1.2
WCI					epP	pP	02 51 23.1	-0.4
WCI					esP	sP	02 51 33.0	-1.3
131A	Roby baz=57,SNR=5.6	56.52	330	⇓P		P	02 50 59.6	-0.3
427A	Hayter Ranch, baz=57,SNR=6.2	56.56	327	⇑P		P	02 50 59.9	-0.4
USIN	University of 31nm,0.6s	56.57	344	eP		P	02 50 58.5	-1.6
USIN					epP	pP	02 51 23.9	-0.2
USIN					esP	sP	02 51 33.9	-1.1
Z32A	Haskell baz=57	56.62	332	⇑P		P	02 51 00.3	-0.4
229A	Bryant Ranch, baz=57,SNR=5.7	56.63	329	⇑P		P	02 51 00.0	-0.8
328A	Wristen Ranch, baz=57,SNR=8.4	56.67	328	⇑P		P	02 51 00.6	-0.4
130A	Snyder baz=57	56.73	330	⇓P		P	02 51 00.9	-0.6
426A	McDonald Obser baz=57,SNR=11	56.75	326	⇓P		P	02 51 01.6	-0.2
SIUC	Southern Illin 119nm,1.3s	56.76	343	eP		P	02 51 00.4	-1.0
SIUC					epP	pP	02 51 25.1	-0.4
SIUC					esP	sP	02 51 35.2	-1.0
Z31A	Sharp Cattle R baz=57,SNR=12	56.94	331	⇑P		P	02 51 02.6	-0.3
Y32A	R-V Farms, Ver baz=57,SNR=7.9	57.19	332	⇓P		P	02 51 04.2	-0.5
129A	Stewart Farms, baz=57,SNR=9.4	57.20	329	⇓P		P	02 51 04.3	-0.5
326A	Caldwell Ranch baz=57,SNR=11	57.23	327	⇑P		P	02 51 04.4	-0.6
TUL1	Tulsa baz=58,SNR=5.1	57.31	336	⇓P		P	02 51 05.2	-0.2
425A	Indio Mountain baz=58,SNR=16	57.35	325	⇓P		P	02 51 05.3	-0.7
Z30A	Sanderson Ranc baz=58,SNR=24	57.38	330	⇓P		P	02 51 05.5	-0.5
227A	Bennet, Jal baz=58	57.42	328	⇑P		P	02 51 05.9	-0.4
BLO	Bloomington	57.44	346	eP		P	02 51 05.2	-1.0
BLO					epP	pP	02 51 30.0	-0.2
BLO					esP	sP	02 51 40.1	-0.9
128A	Castleberry Fa baz=58	57.50	329	⇓P		P	02 51 06.1	-0.8
WMOK	Wichita Mounta 1.8nm,0.4s	57.52	333	eP		P	02 51 06.6	-0.3
Y31A	Rekieta Farm, baz=58,SNR=12	57.53	331	⇓P		P	02 51 06.9	-0.1
Z29A	Hungry Hill Ra baz=58,SNR=7.5	57.63	330	⇓P		P	02 51 07.2	-0.6
ACSO	Alum Creek Sta 7.9nm,0.7s	57.73	349	eP		P	02 51 07.3	-0.9
ACSO					epP	pP	02 51 32.3	0.0
ACSO					esP	sP	02 51 42.8	-0.4
Y30A	Stafford Cattl baz=58	57.75	331	⇑P		P	02 51 08.2	-0.5
325A	Bean Ranch, Si baz=58,SNR=20	57.80	326	⇓P		P	02 51 08.5	-0.6
226B	Tecolote Peak, baz=58,SNR=14	57.92	327	⇓P		P	02 51 09.9	0.0
X31A	McDonald Ranch baz=58,SNR=13	57.96	332	⇓P		P	02 51 09.7	-0.4
127A	Arkansas Junct baz=58	57.98	328	⇑P		P	02 51 09.5	-0.8
Z28A	Tucker Farm, M baz=58,SNR=6.6	57.99	329	⇓P		P	02 51 09.3	-1.0
Y29A	Porterfield Fa baz=58,SNR=13	58.11	330	⇑P		P	02 51 10.6	-0.5
GDL2	Guadalupe Moun	58.12	327	eP		P	02 51 11.6	+0.3
GDL2					epP	pP	02 51 36.0	+0.5
GDL2					esP	sP	02 51 46.2	-0.1
324A	Moseley Ranch, baz=58,SNR=22	58.13	325	⇑P		P	02 51 10.2	-1.2
X30A	Coker Ranch, T baz=58	58.21	331	⇓P		P	02 51 10.8	-1.0
MNTX	Cornudas Mount 7.7nm,1.0s	58.27	326	eP		P	02 51 10.9	-1.4
MNTX					epP	pP	02 51 35.7	-0.7
MNTX					esP	sP	02 51 45.9	-1.3
MNTX	Cornudas Mount baz=58,SNR=13	58.27	326	P		P	02 51 11.5	-0.8
225A	Deer Hill, Car baz=58,SNR=10	58.29	326	⇓P		P	02 51 12.1	-0.5
126A	Clayton Basin, baz=58,SNR=5.5	58.30	327	⇓P		P	02 51 12.0	-0.5
W31A	Holland Ranch, baz=59	58.41	332	⇑P		P	02 51 12.2	-1.0
Z27A	Tatum baz=59,SNR=15	58.42	329	⇑P		P	02 51 12.4	-0.9
Y28A	McKinney Farm, baz=59,SNR=6.9	58.42	330	⇑P		P	02 51 12.3	-1.0
CPRX	Cap Rock	58.52	328	eP		P	02 51 13.8	-0.3
CPRX					epP	pP	02 51 39.0	+0.8
CPRX					esP	sP	02 51 49.8	+0.8
CPRX					ePcP	PcP	02 52 03.0	-0.6
X29A	Tulia baz=59	58.60	331	⇓P		P	02 51 13.7	-0.9
125A	Gardner Draw, baz=59	58.63	327	⇑P		P	02 51 13.9	-1.0
224A	Cornudas Mount baz=59,SNR=12	58.64	326	⇓P		P	02 51 13.9	-1.1
ALLY	Alegheny Colle 18nm,0.7s	58.68	352	eP		P	02 51 14.8	0.0
ALLY					epP	pP	02 51 40.3	+1.3
ALLY					esP	sP	02 51 49.9	+0.2
MSTX	Muleshoe baz=59,SNR=15	58.73	329	⇓P		P	02 51 14.8	-0.7
Z26A	Caprock baz=59,SNR=6.0	58.77	328	⇑P		P	02 51 15.1	-0.7
BINY	Binghamton 6.5nm,0.6s	58.80	356	eP		P	02 51 16.2	+0.5
BINY					epP	pP	02 51 40.9	+1.0
BINY					esP	sP	02 51 50.5	-0.2
Y27A	Causey baz=59	58.85	329	⇓P		P	02 51 15.8	-0.6
X28A	Dimmitt baz=59	58.89	330	⇑P		P	02 51 15.7	-0.9
AMTX	Amarillo baz=59	58.95	331	⇓P		P	02 51 16.5	-0.5
124A	Stringfield Ra baz=59,SNR=8.2	59.09	326	⇑P		P	02 51 17.3	-0.9
ERPA	Erie 29nm,0.7s	59.12	352	eP		P	02 51 18.3	+0.4
ERPA					epP	pP	02 51 43.1	+1.1
ERPA					esP	sP	02 51 53.0	+0.1
Z25A	Roswell baz=59,SNR=11	59.15	327	⇑P		P	02 51 17.2	-1.2
TRY	Troy	59.21	358	eP		sP	02 51 53.1	-0.4
X27A	F and S Farms, baz=60	59.43	330	⇓P		P	02 51 19.8	-0.6
HDIL	Hopedale	59.43	344	eP		sP	02 51 53.4	-1.7
222A	Williams Famil baz=60	59.52	325	⇑P		P	02 51 21.0	-0.1
Z24A	Sheeppen Canyo baz=60,SNR=17	59.53	327	⇓P		P	02 51 20.7	-0.5
Y25A	Mesa, Roswell baz=60	59.65	328	⇑P		P	02 51 21.0	-0.9
X26A	CR and CF Fran baz=60,SNR=6.4	59.70	329	⇓P		P	02 51 21.3	-1.0
W27A	Bowe Ranch, En baz=60,SNR=5.8	59.75	330	⇓P		P	02 51 21.5	-1.0
320A	Kipp Ranch, An baz=60,SNR=6.1	59.76	323	⇑P		P	02 51 22.3	-0.4
221A	Mesquite Ranch baz=60	59.83	324	⇑P		P	02 51 23.9	+0.8
V28A	Channing baz=60,SNR=10	59.91	331	⇑P		P	02 51 23.4	-0.2
Z23A	Rita Site, Whi baz=60	59.93	326	⇑P		P	02 51 23.7	-0.1
220A	Playas Peak, P baz=60,SNR=12	60.17	324	⇑P		P	02 51 25.7	+0.1
319A	Douglas baz=60,SNR=10	60.22	323	⇑P		P	02 51 26.2	+0.4
121A	Cookes Peak, D baz=60,SNR=8.1	60.23	325	⇓P		P	02 51 26.3	+0.4
Z22A	Elephant Butte baz=60	60.32	326	⇓P		P	02 51 26.8	+0.3
Y23A	Lovelace Mesa, baz=61	60.36	327	⇑P		P	02 51 27.2	+0.4
KSU1	Kansas State U 23nm,0.9s	60.42	337	eP		P	02 51 26.2	-0.7
KSU1					epP	pP	02 51 51.3	+0.1
KSU1					esP	sP	02 52 01.1	-0.8
W25A	X Bar L Ranch, baz=61,SNR=6.7	60.55	329	⇓P		P	02 51 27.2	-0.8
V26A	Tequesquite Ra baz=61,SNR=11	60.69	330	⇓P		P	02 51 28.7	-0.3
120A	U Bar Ranch, L baz=61	60.71	324	⇑P		P	02 51 29.2	0.0
Z21A	St. Cloud Mine baz=61,SNR=7.1	60.75	325	⇑P		P	02 51 29.7	+0.2
BNM	Barren Site 6.4nm,1.2s	60.83	327	eP		P	02 51 30.1	0.0
BNM					epP	pP	02 51 55.5	+1.2
BNM					esP	sP	02 52 05.2	+0.1
Y22A	Socorro baz=61	60.84	326	⇓P		P	02 51 30.1	0.0
X23A	Hourglass Bar baz=61	60.93	327	⇑P		P	02 51 30.6	-0.1
LPM	Los Pinos Moun 5.9nm,0.9s	60.95	327	eP		P	02 51 31.1	+0.2
LPM					epP	pP	02 51 55.7	+0.5
LPM					esP	sP	02 52 05.9	0.0
T28A	Walsh baz=61	60.99	332	⇑P		P	02 51 30.3	-0.6
W24A	Lazy 6 Ranch, baz=61	61.02	328	⇓P		P	02 51 30.5	-0.8
Z20A	Nine Sixteen R baz=61,SNR=9.8	61.11	324	⇑P		P	02 51 32.0	+0.1
V25A	Rancho No Teng baz=61,SNR=7.2	61.13	329	⇓P		P	02 51 31.6	-0.4
U26A	Atchley Ranch, baz=61,SNR=10.0	61.15	330	⇑P		P	02 51 31.7	-0.5
Y21A	Point of Rocks baz=62,SNR=10	61.28	326	⇑P		P	02 51 33.4	+0.3
LAZ	Ladron 8.3nm,1.2s	61.29	326	eP		P	02 51 33.0	-0.1
LAZ					epP	pP	02 51 57.7	+0.3
LAZ					esP	sP	02 52 08.4	+0.2
X22A	Bernardo baz=62	61.30	327	⇑P		P	02 51 33.6	+0.4
ANMO	Albuquerque 3.8nm,0.6s	61.35	327	eP		P	02 51 32.7	-0.8
ANMO					epP	pP	02 51 57.8	0.0
ANMO					esP	sP	02 52 08.2	-0.4
V24A	Rampart Ranch, baz=62	61.36	329	⇓P		P	02 51 32.9	-0.7
W23A	Werner Place, baz=62	61.36	328	⇓P		P	02 51 33.4	-0.2
U25A	Circle Dot Ran baz=62,SNR=7.4	61.47	330	⇑P		P	02 51 34.3	0.0
Y20A	Horse Springs, baz=62	61.59	325	⇑P		P	02 51 35.0	-0.2
W22A	Albuquerque baz=62	61.66	327	⇓P		P	02 51 35.6	-0.1
T26A	Comanche Natio baz=62,SNR=5.1	61.71	331	⇑P		P	02 51 35.8	-0.1
TUC	Tucson 5.4nm,1.0s	61.78	322	eP		P	02 51 35.9	-0.4
V23A	Ortiz Mt. (NFS baz=62	61.83	328	⇑P		P	02 51 37.2	+0.4
U24A	Moreno Valley baz=62	61.90	329	⇑P		P	02 51 37.8	+0.5
S26A	Kim baz=62,SNR=14	62.02	331	⇑P		P	02 51 37.9	0.0
T25A	Trinidad baz=62,SNR=5.6	62.07	330	⇑P		P	02 51 38.4	+0.1
X20A	Quemado baz=62,SNR=6.5	62.13	326	⇑P		P	02 51 39.5	+0.7
R27A	Eads baz=62	62.26	332	⇓P		P	02 51 40.5	+1.1
U23A	El Rito baz=62,SNR=5.8	62.29	328	⇑P		P	02 51 40.2	+0.3
T24A	Torres, Weston baz=62	62.32	330	⇑P		P	02 51 40.4	+0.3
S25A	Robets Cordova baz=63	62.50	331	⇑P		P	02 51 41.1	-0.1
R26A	Arlington baz=63,SNR=6.8	62.56	332	⇓P		P	02 51 41.1	-0.3
W20A	Ramah baz=63,SNR=7.3	62.57	326	⇑P		P	02 51 42.2	+0.5
U22A	Llaves baz=63,SNR=6.6	62.67	328	⇑P		P	02 51 42.8	+0.4
214A	Organ Pipe Nat baz=63,SNR=7.0	62.74	321	⇓P		P	02 51 43.2	+0.6
T23A	Casias Ranch, baz=63	62.77	329	⇑P		P	02 51 43.2	+0.2
KSCO	Kaye Shedlock' baz=63	62.78	333	⇓P		P	02 51 43.0	+0.1
S24A	Houchin Ranch, baz=63	62.85	330	⇓P		P	02 51 43.8	+0.1
X18A	Snowflake baz=63,SNR=6.2	62.91	325	⇓P		P	02 51 44.6	+0.6
BGNE	Belgrade baz=63,SNR=12	63.01	337	⇓P		P	02 51 43.9	-0.3
V20A	Brimhall baz=63	63.06	326	⇓P		P	02 51 45.1	+0.2
Q26A	Hugo baz=63	63.10	332	⇑P		P	02 51 45.2	+0.1
U21A	Nageezi baz=63,SNR=11	63.12	327	⇓P		P	02 51 45.5	+0.2
T22A	Edith baz=63,SNR=5.7	63.19	328	⇓P		P	02 51 45.8	0.0
P27A	Ficken Ranch, baz=63	63.21	333	⇑P		P	02 51 45.9	+0.2
R24A	Sanders Place, baz=64	63.27	331	⇓P		P	02 51 46.4	+0.1
T21A	Navajo Lake baz=64	63.49	328	⇑P		P	02 51 47.9	+0.2
U20A	Newcomb baz=64,SNR=6.1	63.52	327	⇓P		P	02 51 47.9	0.0
P26A	Davis Ranch, A baz=64	63.55	333	⇑P		P	02 51 48.0	0.0
R23A	Moffat baz=64	63.58	330	⇓P		P	02 51 48.2	-0.2
X16A	Lo Mia Camp, P baz=64,SNR=22	63.67	323	⇓P		P	02 51 50.0	+1.0
O27A	Beecher Island baz=64,SNR=8.4	63.69	334	⇓P		P	02 51 49.2	+0.4
S22A	4UR Ranch, Cre baz=64,SNR=5.4	63.72	329	⇑P		P	02 51 49.5	+0.1
Z14A	Wintersburg baz=64	63.80	322	⇓P		P	02 51 49.9	+0.3
P25A	Willow Gulch B baz=64	63.87	332	⇑P		P	02 51 50.8	+0.6
Q24A	Divide baz=64	63.88	331	⇓P		P	02 51 50.9	+0.5
113A	Mohawk Valley, baz=64,SNR=9.1	63.88	321	⇓P		P	02 51 50.5	+0.4
R22A	Saguache, Gunn baz=64	64.06	329	⇓P		P	02 51 52.2	+0.6
O26A	Horse Wrangler baz=64	64.09	333	⇑P		P	02 51 52.5	+0.9
OGNE	Ogallala baz=64	64.13	334	⇑P		P	02 51 52.3	+0.5
S21A	Coal Bank Pass baz=64,SNR=5.2	64.13	328	⇓P		P	02 51 52.2	+0.1
MVCO	Mesa Verde 14nm,1.1s	64.15	327	eP		P	02 51 52.2	+0.1
MVCO					epP	pP	02 52 18.0	+1.4
MVCO					esP	sP	02 52 27.0	-0.3
MVCO	Mesa Verde baz=64	64.15	327	⇑P		P	02 51 52.8	+0.7
Q23A	Hartsel baz=64	64.15	330	⇑P		P	02 51 52.0	-0.2
Y14A	Wickenburg baz=64	64.24	322	⇓P		P	02 51 52.9	+0.3
O25A	Wiggins baz=65	64.34	332	⇑P		P	02 51 53.8	+0.7
WUAZ	Wupatki 16nm,1.1s	64.43	324	eP		P	02 51 54.0	+0.1
WUAZ					epP	pP	02 52 19.6	+1.2
WUAZ					esP	sP	02 52 29.5	+0.4
WUAZ	Wupatki baz=65,SNR=5.4	64.43	324	⇑P		P	02 51 54.8	+0.9
ECSD	EROS Data Cent 57nm,1.3s	64.53	340	eP		P	02 51 53.4	-0.7
ECSD					epP	pP	02 52 19.4	+0.7
ECSD					esP	sP	02 52 28.8	-0.6
P23A	Jefferson baz=65	64.53	331	⇑P		P	02 51 54.9	+0.2
N26A	Koester Ranch, baz=65	64.54	334	⇓P		P	02 51 54.9	+0.5
S20A	Disappointment baz=65,SNR=8.5	64.55	328	⇑P		P	02 51 55.3	+0.5
R21A	Cimarron baz=65	64.56	329	⇑P		P	02 51 55.1	+0.3
Q22A	Crested Butte, baz=65	64.63	330	⇑P		P	02 51 55.8	+0.5
SPMN	St. Paul baz=65	64.72	343	⇓P		P	02 51 54.7	-0.7
ISCO	Idaho Springs 9.4nm,0.9s	64.76	331	eP		P	02 51 56.1	0.0
ISCO					epP	pP	02 52 21.1	+0.4
ISCO					esP	sP	02 52 31.1	-0.3
ISCO	Idaho Springs baz=65,SNR=7.7	64.76	331	⇑P		P	02 51 56.2	0.0
M27A	Reverse DX Ran baz=65	64.77	335	⇓P		P	02 51 55.5	-0.4
O24A	Longmont baz=65	64.77	332	⇓P		P	02 51 56.5	+0.5
R20A	Redvale baz=65,SNR=8.0	64.83	328	⇑P		P	02 51 57.2	+0.7
PV01	Paradox Valley 996nm,1.0s	64.89	328	eP		P	02 51 57.1	+0.2
PV01					epP	pP	02 52 22.1	+0.6
PV01					esP	sP	02 52 31.7	-0.5
SMCO	Snowmass 11nm,0.8s	64.91	330	eP		P	02 51 57.9	+0.7
SMCO					epP	pP	02 52 22.7	+0.9
SMCO					esP	sP	02 52 32.6	+0.2
M26A	McRoberts Ranc baz=65	65.03	334	⇓P		P	02 51 57.7	+0.1
P22A	Eagle baz=65,SNR=6.2	65.14	330	⇑P		P	02 51 58.6	+0.1
PDMCI	Parker Dam,Lak baz=65	65.17	322	⇓P		P	02 51 58.3	-0.2
O23A	Lake Granby, G baz=66,SNR=9.1	65.23	331	⇓P		P	02 51 59.3	+0.2
VNA3	Neumayer Olymp	65.25	162	eP		P	02 51 59.5	+1.0
N24A	Carr baz=66	65.26	332	⇓P		P	02 51 59.7	+0.5
S18A	Hurst Farm, Bl baz=66,SNR=12	65.29	327	⇓P		P	02 51 59.9	+0.4
Q20A	Ridgley Place, baz=66	65.38	329	⇓P		P	02 52 00.0	0.0
M25A	Palm-Egli Farm baz=66	65.39	333	⇓P		P	02 52 00.5	+0.5
P21A	Newcastle baz=66,SNR=13	65.41	330	⇑P		P	02 52 01.0	+0.7
VNA1	Neumayer--Stat	65.47	161	eP		P	02 52 01.6	+1.7
O22A	Kremmling baz=66,SNR=9.1	65.48	331	⇑P		P	02 52 00.6	-0.2
BC3	Big Chuckawall baz=66	65.52	320	⇓P		P	02 52 01.6	+0.7
W13A	Hualapai Mount baz=66,SNR=7.7	65.57	322	⇑P		P	02 52 02.1	+0.8
U15A	North Rim baz=66,SNR=11	65.60	324	⇓P		P	02 52 02.6	+1.0
MONP	Monument Peak baz=66	65.61	319	⇓P		P	02 52 02.6	+0.9
BAR	Barrett 12nm,0.9s	65.63	319	eP		P	02 52 02.6	+1.0
IRM	Iron Mountain baz=66,SNR=7.2	65.68	321	⇓P		P	02 52 02.5	+0.7
K27A	Flueckinger Fa baz=66	65.69	335	⇓P		P	02 52 02.5	+0.7
M24A	Cheyenne baz=66	65.75	333	⇓P		P	02 52 02.7	+0.4
VNA2	Neumayer--Watz baz=282,slow=7.8	65.83	161	eP		P	02 52 02.9	+0.6
Q19A	Hogan Spring (baz=66,SNR=11	65.87	328	⇓P		P	02 52 03.9	+0.8
PHWY	Pilot Hill 4.8nm,0.6s	65.90	332	eP		P	02 52 03.6	+0.2
PHWY					epP	pP	02 52 28.4	+0.4
PHWY					ePcP	PcP	02 52 33.6	0.0
PHWY					esP	sP	02 52 38.6	-0.1
BRSD	Miller baz=66	65.95	339	⇑P		P	02 52 04.2	+0.8
N22A	Wattenberg Ran baz=66	65.95	331	⇑P		P	02 52 04.6	+0.8
K26A	Motz Farm, Whi baz=66	66.07	335	⇑P		P	02 52 04.8	+0.5
BELC	Belle Mtn. Jos baz=66	66.08	320	⇑P		P	02 52 05.1	+0.5
PFO	Pinyon Flat Ob 10nm,1.2s	66.11	320	eP		P	02 52 04.6	-0.1
PFO	Pinyon Flat Ob baz=66	66.11	320	⇑P		P	02 52 05.2	+0.4
M23A	Laramie baz=66,SNR=7.3	66.15	332	⇑P		P	02 52 05.0	0.0
P19A	Cripple Cowboy baz=66,SNR=9.6	66.24	329	⇑P		P	02 52 06.1	+0.5
O20A	White River Ci baz=66	66.27	330	⇑P		P	02 52 06.2	+0.5
LDFC	Landfair 13nm,1.0s	66.28	322	eP		P	02 52 07.3	+1.5
GMRC	Granite Mounta baz=67,SNR=6.9	66.41	321	⇑P		P	02 52 07.7	+1.1
M22A	Cedar Creek Ra baz=67	66.49	332	⇓P		P	02 52 07.5	+0.4
SRU	San Rafael 300nm,0.8s	66.63	328	eP		P	02 52 08.5	+0.5
SRU					epP	pP	02 52 33.7	+1.0
SRU	San Rafael baz=67	66.63	328	⇑P		P	02 52 08.3	+0.3
L23A	Garrett baz=67	66.66	333	⇓P		P	02 52 08.5	+0.3
DRLN	Deer Lake	66.81	10	epP		pP	02 52 33.3	0.0
Q16A	Castle Valley baz=67	66.82	327	⇓P		P	02 52 09.6	+0.3
N20A	Spence Gulch, baz=67,SNR=7.6	66.82	330	⇑P		P	02 52 09.4	+0.1
O19A	Miners Draw (B baz=67,SNR=7.7	66.82	329	⇓P		P	02 52 09.5	+0.3
HEC	Hector,Ludlow baz=67	66.85	321	⇓P		P	02 52 09.3	-0.1
M21A	Separation Pea baz=67,SNR=6.2	67.00	331	⇑P		P	02 52 10.5	+0.1
CCUT	Cedar City 16nm,0.9s	67.00	325	eP		P	02 52 11.8	+1.3
CCUT					epP	pP	02 52 36.3	+1.2
CCUT					esP	sP	02 52 46.6	+0.8
P17A	Butcher Ranch, baz=67	67.01	328	⇑P		P	02 52 10.9	+0.5
TUQ	Turquoise Moun baz=67,SNR=5.2	67.01	321	⇓P		P	02 52 11.3	+0.8
MSU	Marysvale	67.05	326	eP		P	02 52 11.4	+0.6
MSU					epP	pP	02 52 36.2	+0.8
MSU					esP	sP	02 52 46.2	+0.1
MVU	Marysvale	67.07	326	eP		P	02 52 12.0	+1.1

21nm,1.0s
MVU ep P pP 02 52 36.8 +1.3
MVU es P sP 02 52 46.7 +0.5
K23A Bowen Ranch, D 67.14 333 ⇑P P 02 52 11.6 +0.4
baz=67
ARUT Antelope Range 67.22 325 eP P 02 52 12.8 +1.0
20nm,1.0s
ARUT ep P pP 02 52 37.5 +1.1
ARUT es P sP 02 52 47.8 +0.7
O18A Roosevelt 67.24 329 ⇓P P 02 52 12.6 +0.8
baz=68
BFSC Mount Baldy Ra 67.27 319 ⇑P P 02 52 12.9 +0.8
baz=68
L21A Rawlins 67.29 331 ⇓P P 02 52 12.3 +0.2
baz=68,SNR=6.8
M20A Sweetwater, Wa 67.30 331 ⇓P P 02 52 12.5 +0.3
baz=68
N19A John Jarvie Ra 67.31 330 ⇑P P 02 52 12.3 0.0
baz=68,SNR=9.8
GSC Goldstone 67.45 321 eP P 02 52 14.2 +1.0
GSC ep P PcP 02 52 39.3 -0.6
GSC Goldstone 67.45 321 ⇑P P 02 52 14.1 +0.9
baz=68,SNR=6.3
K22A Casper 67.45 332 ⇓P P 02 52 13.4 +0.3
baz=68,SNR=5.8
SNAA Sanae 67.46 161 eP P 02 52 13.4 +0.7
SNAA Sanae 67.46 161 eP P 02 52 13.2 +0.5
39nm,0.7s
MWC Mount Wilson 67.51 319 eP P 02 52 14.1 +0.4
12nm,1.0s
SHOC Shoshone 67.54 322 ⇓P P 02 52 14.7 +1.1
baz=68,SNR=5.7
O17A Robinson Place 67.55 328 ⇓P P 02 52 14.4 +0.6
baz=68,SNR=6.5
N18A Larsen Ranch, 67.61 329 ⇓P P 02 52 14.6 +0.4
baz=68
K21A Alcova 67.76 332 ⇑P P 02 52 15.5 +0.3
baz=68,SNR=10
L20A Wamsutter 67.77 331 ⇑P P 02 52 15.7 +0.5
baz=68
MPU Maple Canyon 67.87 327 ep P 02 52 42.4 +1.8
P15A Leamington 67.88 327 ⇓P P 02 52 16.2 +0.4
baz=68
EDW2 Edwards Air Fo 67.90 320 ⇑P P 02 52 16.5 +0.5
baz=68
DAU Daniels Canyon 67.97 328 ep P 02 52 45.6 +4.2
J22A Midwest 68.04 333 ⇑P P 02 52 16.7 -0.1
baz=68,SNR=5.8
M18A Lyman 68.15 329 ⇑P P 02 52 17.4 -0.1
baz=68
N17A Moffit Pass 68.16 329 ⇑P P 02 52 18.5 +0.8
baz=68,SNR=10
JLU Jordanelle 68.21 328 eP P 02 52 18.8 +0.8
12nm,0.8s
JLU ep P PcP 02 52 43.8 +0.5
JLU es P sP 02 52 53.6 +0.1
FURC Furnace Creek, 68.27 322 ⇓P P 02 52 19.3 +1.2
baz=68,SNR=11
K20A Yellowstone Ra 68.28 331 ⇑P P 02 52 18.4 +0.1
baz=68,SNR=9.8
H24A Dirks Ranch, A 68.32 335 ⇑P P 02 52 18.5 0.0
baz=68
L19A Farson 68.32 330 ⇓P P 02 52 19.0 +0.4
baz=68,SNR=10
MPMC Manual Prospec 68.37 321 ⇓P P 02 52 19.7 +0.6
baz=69,SNR=9.4
AGMN Agassiz Nation 68.39 343 eP P 02 52 17.1 -1.5
15nm,0.7s
AGMN ep P pP 02 52 43.0 -0.3
AGMN es P sP 02 52 53.4 -0.7
J21A Lysite 68.42 332 ⇑P P 02 52 19.3 +0.1
baz=69,SNR=8.0
N16A Rees Ranch, Co 68.42 328 ⇓P P 02 52 20.0 +0.7
baz=69
I22A 9 Mile Ranch, 68.43 333 ⇑P P 02 52 19.0 -0.2
baz=69,SNR=7.8
L18A Fontenelle, Gr 68.51 330 ⇑P P 02 52 20.2 +0.4
baz=69
DAC Darwin (Calif) 68.58 321 eP P 02 52 21.1 +0.7
7.7nm,0.9s
DAC ep P pP 02 52 46.1 +1.0
DAC es P sP 02 52 56.3 +0.5
DUG Dugway 68.62 327 eP P 02 52 21.2 +0.8
16nm,0.9s
DUG ep P pP 02 52 45.5 +0.3
DUG es P sP 02 52 56.3 +0.4
DUG Dugway 68.62 327 ⇓P P 02 52 21.2 +0.8
baz=69,SNR=5.4
K19A Absolon Red Bu 68.64 331 ⇓P P 02 52 19.9 -0.7
baz=69,SNR=5.3
ISA Isabella 68.71 320 eP P 02 52 21.9 +0.8
11nm,0.9s
ISA Isabella 68.71 320 ⇓P P 02 52 21.8 +0.8
baz=69,SNR=7.4
I21A Big Trails, Te 68.72 333 ⇑P P 02 52 20.8 -0.2
baz=69,SNR=16
G24A Alzada 68.75 335 ⇓P P 02 52 20.9 -0.2
baz=69,SNR=5.2
R11A Troy Canyon, C 68.81 324 ⇓P P 02 52 22.7 +1.0
baz=69,SNR=11
GRAC Grapevine Rang 68.93 322 ⇓P P 02 52 23.1 +0.8
baz=69
BW06 Boulder Array 68.93 331 eP P 02 52 22.1 -0.3
BW06 Boulder Array 68.93 331 ⇓P P 02 52 22.7 +0.2
baz=69
PDAR Pinedale Array 68.93 331 P P 02 52 21.2 -1.2
PDAR sP sP 02 52 56.9 -1.0
PDAR Pinedale Array 68.93 331 P P 02 52 21.2 -1.2
1.2nm,0.7s,baz=154,slow=8.2,SNR=9.1
PDAR sP sP 02 52 56.9 -1.0
3.1nm,0.8s,baz=159,slow=4.5,SNR=7.7
CWC Cottonwood Cre 68.98 321 ⇑P P 02 52 23.7 +0.9
baz=69,SNR=7.7
HWUT Hardware Ranch 69.02 329 eP P 02 52 22.8 -0.2
14nm,0.9s
HWUT ep P pP 02 52 48.5 +0.8
HWUT es P sP 02 52 58.0 -0.4
G23A Biddle 69.03 335 ⇑P P 02 52 22.4 -0.5
baz=69,SNR=6.9
L17A Cokeville 69.05 329 ⇓P P 02 52 23.0 -0.1
baz=69
PKM Peak Mountain 69.05 319 ⇓P P 02 52 24.5 +1.1
baz=69
K18A Toltan Ranch, 69.06 330 ⇑P P 02 52 23.5 +0.2
baz=69,SNR=6.6
J19A Crowheart 69.08 331 ⇑P P 02 52 23.2 0.0
baz=69,SNR=6.4
MDND Maddock 69.14 340 ⇓P P 02 52 23.7 +0.4
baz=69
F24A Ekalaka 69.18 336 ⇓P P 02 52 23.8 +0.1
baz=69
I20A Worland 69.20 332 ⇓P P 02 52 23.9 -0.1
baz=69
VES Vestal, Richgr 69.20 320 ⇓P P 02 52 25.1 +1.1
baz=69
LIC Lamto 69.25 77 ⇑*iP* P 02 52 24.6 -0.1
14nm,0.4s,baz=250
LIC eR
145nm,20.2s
LIC Lamto 69.25 77 ⇑*iP* P 02 52 24.6 -0.1
14nm,0.4s
H21A Big Horn, Sher 69.26 333 ⇓P P 02 52 24.3 -0.1
baz=70
L16A Fish Haven 69.26 329 ⇓P P 02 52 25.2 +0.7
baz=70
G22A Birney 69.42 334 ⇓P P 02 52 24.9 -0.4
baz=70
J18A Kendall Valley 69.49 331 ⇓P P 02 52 25.5 -0.4
baz=70,SNR=15
H20A Greybull 69.56 333 ⇑P P 02 52 25.9 -0.3
baz=70
DBIC Dimbokro 69.56 76 eP P 02 52 26.3 -0.4
14nm,0.7s
DBIC ep P pP 02 52 51.1 -0.4
DBIC pP pP 02 52 51.5 +0.1
DBIC es P sP 03 52 01.1 -1.1
DBIC Dimbokro 69.56 76 P P 02 52 26.3 -0.4
7.9nm,0.4s,baz=230,slow=7.0,SNR=22
DBIC pP pP 02 52 51.5 +0.1
6.5nm,0.9s,baz=235,slow=7.3,SNR=2.2
DBIC LR LR 03 22 03.0
comp=Z,55nm,18.7s,baz=17,slow=35
K17A Gardner Place, 69.56 330 ⇓P P 02 52 26.2 -0.1
baz=70
I19A Meeteetse 69.65 332 ⇓P P 02 52 27.1 +0.3
baz=70,SNR=5.0
E24A Baker 69.72 336 ⇓P P 02 52 27.4 +0.3
baz=70
L15A Malad City 69.73 328 ⇑P P 02 52 27.3 0.0
baz=70,SNR=9.0
I18A Diamond G Ranc 69.77 331 ⇓P P 02 52 28.0 +0.4
baz=70,SNR=15
G21A Lodge Grass 69.81 334 ⇑P P 02 52 27.6 0.0
baz=70
F22A Rosebud 69.86 335 ⇓P P 02 52 27.7 -0.2
baz=70
MTUM Tungsten Hills 69.87 321 eP P 02 52 29.4 +1.1
J17A Brown Place, J 69.93 330 ⇑P P 02 52 29.2 +0.6
baz=70,SNR=8.7
K16A Soda Springs 69.95 329 ⇓P P 02 52 29.4 +0.8
baz=70
SNOW Snow King Moun 70.03 330 eP P 02 52 29.7 +0.5
7.5nm,0.8s
E23A Ismay 70.06 336 ⇑P P 02 52 28.8 -0.3
baz=70,SNR=5.3
LOHW Long Hollow 70.07 331 eP P 02 52 29.6 +0.2
6.5nm,0.9s
LOHW ePcP PcP 02 52 50.5 -0.4
LOHW epP pP 02 52 55.7 +1.4
LOHW esP sP 02 53 04.6 -0.3
TPAW Teton Pass 70.14 330 eP P 02 52 29.9 0.0
6.9nm,0.8s
TPAW epP pP 02 52 55.8 +1.1
TPAW esP sP 02 53 05.3 -0.1
H19A Powell 70.14 332 ⇑P P 02 52 29.9 +0.1
baz=70
ULM Lac du Bonnet 70.16 343 P P 02 52 28.4 -1.1
ULM pP pP 02 52 53.6 -0.7
ULM Lac du Bonnet 70.16 343 P P 02 52 28.4 -1.1
7.4nm,0.4s,baz=155,slow=5.8,SNR=22
ULM pP pP 02 52 53.6 -0.7
9.1nm,0.5s,baz=172,slow=6.2,SNR=7.4
L14A Malta 70.18 328 ⇑P P 02 52 30.1 0.0
baz=70
D24A Glendive 70.19 337 ⇑P P 02 52 30.4 +0.5
baz=70,SNR=6.1
RRI2 Red Ridge 70.21 330 eP P 02 52 31.0 +0.6
27nm,0.9s
RRI2 epP pP 02 52 57.3 +2.1
G20A Bridger 70.24 333 ⇑P P 02 52 29.7 -0.6
baz=70
MOOW Moose Ponds 70.24 331 eP P 02 52 30.6 +0.2
6.2nm,1.0s
MOOW epP pP 02 52 56.6 +1.3
MOOW esP sP 02 53 05.3 -0.7
I17A Pilgrim Ck. 70.29 331 ⇑P P 02 52 31.4 +0.6
baz=70,SNR=6.5
ELK Elko 70.30 326 eP P 02 52 31.2 +0.3
5.7nm,0.8s
K15A Arbon 70.30 329 ⇑P P 02 52 31.1 +0.3
baz=70
NVAR Mina Array Bea 70.43 322 P P 02 52 32.4 +0.6
NVAR pP pP 02 52 57.3 +0.7
NVAR sP sP 02 53 07.7 +0.4
NVAR Mina Array Bea 70.43 322 P P 02 52 32.4 +0.6
4.6nm,0.8s,baz=154,slow=7.1,SNR=16
NVAR pP pP 02 52 57.3 +0.7
1.6nm,0.6s,baz=147,slow=7.3,SNR=2.8
NVAR sP sP 02 53 07.7 +0.4
7.6nm,0.8s,baz=146,slow=6.7,SNR=8.8
IMW Indian Meadow 70.44 331 eP P 02 52 31.0 -0.8
5.2nm,0.8s
IMW esP sP 02 53 07.2 -0.1
H18A Shoshone NF, C 70.45 332 ⇑P P 02 52 31.5 -0.2
baz=71,SNR=15
K14A Jones Ranch, D 70.52 328 ⇓P P 02 52 31.8 -0.3
baz=71
C24A Savage 70.57 337 ⇓P P 02 52 32.8 +0.6
baz=71
D23A Lindsay 70.58 336 ⇑P P 02 52 32.9 +0.7
baz=71,SNR=7.7
RLMT Red Lodge 70.62 332 eP P 02 52 33.0 +0.2
13nm,1.0s
RLMT epP pP 02 52 59.2 +1.6
RLMT esP sP 02 53 08.1 -0.2
RLMT Red Lodge 70.62 332 ⇓P P 02 52 32.9 +0.2
baz=71,SNR=8.2
F20A Billings 70.67 334 ⇑P P 02 52 32.8 0.0
baz=71
I16A Newdale 70.69 330 ⇑P P 02 52 33.4 +0.3
baz=71
LKWY Lake 70.70 331 eP P 02 52 35.0 +1.7
15nm,0.9s
LKWY epP pP 02 52 58.3 +0.1
LKWY esP sP 02 53 10.1 +1.3
J15A Blackfoot 70.78 329 ⇓P P 02 52 33.9 +0.2
baz=71,SNR=5.2
E21A Keefer Ranch, 70.81 335 ⇑P P 02 52 33.7 +0.1
baz=71
G18A Lazy EL Ranch, 70.90 332 ⇓P P 02 52 34.6 +0.2
baz=71,SNR=16
D22A Cohagen 70.94 336 ⇓P P 02 52 35.0 +0.6
baz=71,SNR=16
F19A Roth Farm, Mol 71.05 333 ⇓P P 02 52 35.2 0.0
baz=71,SNR=7.0
C23A Lambert 71.09 337 ⇓P P 02 52 35.5 +0.2
baz=71
D21A La Casta Ranch 71.20 335 ⇑P P 02 52 36.5 +0.5
baz=71,SNR=10
H16A Russell Place, 71.20 331 ⇓P P 02 52 37.1 +0.9
baz=71,SNR=8.1
E20A Meyer Farm, Mu 71.22 334 ⇓P P 02 52 36.7 +0.5
baz=71,SNR=10
I15A Monteview 71.25 330 ⇑P P 02 52 37.1 +0.6
baz=72
J14A Carey 71.26 329 ⇓P P 02 52 37.5 +0.9
baz=72,SNR=8.3
DGMT Dagmar 71.27 337 eP P 02 52 37.2 +0.8
24nm,0.8s
DGMT epP pP 02 53 02.3 +1.0
DGMT esP sP 02 53 12.1 +0.2
DGMT Dagmar 71.27 337 ⇑P P 02 52 36.8 +0.4
baz=72
C22A Vida 71.31 336 ⇓P P 02 52 36.9 +0.2
baz=72,SNR=8.9
GCMT Greycliff 71.32 333 eP P 02 52 37.1 +0.3
8.7nm,0.9s
GCMT epP pP 02 53 02.2 +0.4
GCMT esP sP 02 53 12.7 +0.3
SCHQ Schefferville 71.38 3 eP P 02 52 36.2 -0.6
3.9nm,0.8s
SCHQ epP pP 02 53 01.0 -0.7
SCHQ pP pP 02 53 01.9 +0.2
SCHQ esP sP 02 53 11.7 -0.7
SCHQ sP sP 02 53 12.2 -0.2
SCHQ Schefferville 71.38 3 P P 02 52 36.5 -0.4
2.9nm,0.8s,baz=181,slow=6.5,SNR=6.3
SCHQ pP pP 02 53 01.9 +0.2
8.7nm,0.9s,baz=218,slow=3.9,SNR=6.8
SCHQ sP sP 02 53 12.2 -0.2
9.4nm,0.8s,baz=183,slow=5.4,SNR=6.8
QLMT Earthquake Lak 71.38 331 eP P 02 52 38.3 +1.0
0.2nm,0.3s
QLMT esP sP 02 53 13.8 +1.0
F18A Big Timber 71.43 333 ⇓P P 02 52 37.7 +0.2
baz=72,SNR=14
E19A Rath Farm, Rou 71.46 334 ⇓P P 02 52 38.0 +0.4
baz=72,SNR=18
B23A Brockton 71.56 337 ⇓P P 02 52 38.6 +0.5
baz=72,SNR=7.9
A24A Westby 71.58 338 ⇓P P 02 52 39.0 +0.8
baz=72
J13A Cove Ranch, Pi 71.64 328 ⇑P P 02 52 39.1 +0.3
baz=72
I14A Mackay 71.67 329 ⇓P P 02 52 39.8 +0.7
baz=72,SNR=8.8
D20A Manuel Ranch, 71.69 334 ⇑P P 02 52 38.8 -0.1
baz=72,SNR=8.6
B22A Reddig Ranch S 71.81 336 ⇓P P 02 52 39.8 +0.2
baz=72
F17A Fitzpatrick Pl 71.85 332 ⇑P P 02 52 40.7 +0.6
baz=72,SNR=6.5
C21A Desert Coulee 71.85 335 ⇑P P 02 52 40.1 +0.2
baz=72,SNR=8.9
G16A Moss Hill, Enn 71.85 331 ⇓P P 02 52 40.4 +0.3
baz=72
HLID Hailey 71.88 328 eP P 02 52 41.1 +0.7
11nm,1.0s
HLID esP sP 02 53 16.1 +0.1
HLID Hailey 71.88 328 ⇓P P 02 52 40.8 +0.5
baz=72,SNR=9.4
A23A Redstone 71.93 337 ⇓P P 02 52 40.7 +0.4
baz=72
I13A Wildhorse Cree 71.99 329 ⇓P P 02 52 41.7 +0.7
baz=72,SNR=8.8
MAIT Maitri 71.99 160 eP P 02 52 31.3 -9.1
E18A Harlowton 72.03 333 ⇑P P 02 52 41.4 +0.3
baz=72,SNR=6.3
MCMT McKenzie Canyo 72.05 330 eP P 02 52 41.7 +0.4
0.7nm,0.7s
MCMT epP pP 02 53 07.4 +1.1
MCMT esP sP 02 53 17.3 +0.4
D19A Cripps Ranch, 72.06 334 ⇑P P 02 52 41.4 +0.2
baz=72,SNR=9.8
BOZ Bozeman (W) 72.09 331 eP P 02 52 41.4 -0.1
18nm,1.7s
BOZ epP pP 02 53 07.0 +0.6
BOZ esP sP 02 53 16.8 -0.3
BOZ Bozeman (W) 72.09 331 ⇑P P 02 52 41.5 -0.1
baz=72,SNR=6.3
C20A Veseth Ranch, 72.13 335 ⇓P P 02 52 41.2 -0.3
baz=72,SNR=6.0
G15A Dillon 72.13 331 ⇑P P 02 52 42.8 +1.0
baz=72
H14A Leadore 72.14 330 ⇓P P 02 52 42.2 +0.4
baz=72
F16A Kennard Place, 72.19 332 ⇓P P 02 52 42.5 +0.4
baz=72
A22A Carney Farms, 72.34 337 ⇑P P 02 52 43.1 +0.3
baz=73,SNR=5.6
E17A Martinsdale 72.36 332 ⇑P P 02 52 43.2 +0.1
baz=73,SNR=6.1
D18A Linhart Farms, 72.47 333 ⇓P P 02 52 44.1 +0.5
baz=73
MFID Camas Ranch 72.50 328 eP P 02 52 44.8 +0.9
27nm,0.9s
MFID epP pP 02 53 09.7 +0.7
MFID esP sP 02 53 20.1 +0.6
MFID Camas Ranch 72.50 328 ⇓P P 02 52 44.8 +0.9
baz=73,SNR=8.1
H13A Challis 72.53 329 ⇑P P 02 52 44.8 +0.7
baz=73,SNR=6.9
C19A Slack Wire Ran 72.57 334 ⇓P P 02 52 44.2 0.0
baz=73,SNR=9.5
F15A Butte 72.63 331 ⇑P P 02 52 44.9 +0.1
baz=73
G14A Jackson 72.64 330 ⇑P P 02 52 45.4 +0.5
baz=73
B20A Solberg Farm, 72.71 335 ⇑P P 02 52 45.1 +0.1
baz=73,SNR=10
A21A Bergtoll Ranch 72.73 336 ⇑P P 02 52 45.2 +0.1
baz=73,SNR=8.3
E16A East Helena 72.78 332 ⇓P P 02 52 46.0 +0.4
baz=73
H12A Diamond D Ranc 72.82 329 ⇑P P 02 52 46.6 +0.7
baz=73
D17A Six Diamond Ra 72.82 333 ⇓P P 02 52 46.2 +0.4
baz=73,SNR=13
G13A Cobalt 72.91 330 ⇓P P 02 52 47.1 +0.8
baz=73,SNR=9.3
F14A Wisdom 73.02 331 ⇑P P 02 52 48.0 +0.9
baz=73
A20A Cobblestone Ra 73.03 336 ⇓P P 02 52 46.9 +0.1
baz=73,SNR=5.8
EGMT Eagleton 73.10 334 eP P 02 52 47.3 -0.1
10nm,0.8s
EGMT epP pP 02 53 13.0 +0.6
EGMT esP sP 02 53 22.8 -0.2
EGMT Eagleton 73.10 334 ⇓P P 02 52 47.6 +0.2
baz=73,SNR=6.7
B19A Brinkman Farms 73.10 335 ⇓P P 02 52 47.3 +0.1
baz=73,SNR=12
D16A Dana Ranch, Ca 73.10 332 ⇑P P 02 52 48.2 +0.8
baz=73,SNR=11
E15A Deer Lodge 73.14 331 ⇓P P 02 52 48.3 +0.6
baz=73
C17A Wharram Farm, 73.22 333 ⇓P P 02 52 48.0 0.0
baz=73,SNR=6.9
A19A Klindworth Far 73.39 335 ⇑P P 02 52 49.1 0.0
baz=74,SNR=8.7
B18A Beardsley Farm 73.39 334 ⇑P P 02 52 49.2 +0.1
baz=74,SNR=5.2
QSPA South Pole Qui 73.43 180 eP P 02 52 49.8 +0.6
18nm,1.0s
QSPA epP pP 02 53 13.4 -0.8
F13A Darby 73.46 330 ⇓P P 02 52 50.5 +0.9
baz=74,SNR=8.4
G12A Big Creek, Yel 73.47 329 ⇓P P 02 52 49.9 +0.2
baz=74
E14A Clinton 73.53 331 ⇑P P 02 52 51.2 +1.2
baz=74,SNR=8.8
D15A Lincoln 73.55 332 ⇑P P 02 52 50.8 +0.7
baz=74,SNR=5.1
B17A L&G Farms, Che 73.75 334 ⇑P P 02 52 50.9 -0.2
baz=74
C16A Fuhringer Ranc 73.78 333 ⇓P P 02 52 51.8 +0.4
baz=74
CHMT Chamberlain Mo 73.78 331 eP P 02 52 51.6 +0.1
CHMT epP pP 02 53 17.2 +0.6
CHMT esP sP 02 53 27.3 +0.1
A18A Metzger Ranch, 73.83 335 ⇑P P 02 52 51.8 +0.2
baz=74,SNR=6.8
E13A Victor 73.87 331 ⇓P P 02 52 52.8 +0.9
baz=74,SNR=6.9
MOD Modoc 73.88 324 eP P 02 52 53.2 +1.1
15nm,0.9s
MOD epP pP 02 53 17.0 -0.2
MOD esP sP 02 53 27.9 +0.1
D14A Greenough 74.03 331 ⇓P P 02 52 53.2 +0.4
baz=74
MSO Missoula 74.04 331 eP P 02 52 54.4 +1.5
18nm,1.6s
MSO Missoula 74.04 331 ⇓P P 02 52 54.0 +1.1
baz=74
C15A Salmond Ranch, 74.14 332 ⇓P P 02 52 54.4 +0.9
baz=74,SNR=12
SLMT Seeley Lake 74.14 332 eP P 02 52 53.9 +0.3
SLMT epP pP 02 53 19.6 +1.0
SLMT esP sP 02 53 29.5 +0.3
A17A Triple J Farms 74.21 334 ⇑P P 02 52 53.7 -0.1
baz=74,SNR=9.0
B16A M & M Farms, S 74.23 333 ⇑P P 02 52 54.0 +0.1
baz=74
BMO Blue Mountains 74.26 328 eP P 02 52 54.8 +0.5
7.8nm,0.8s
D13A Huson 74.47 331 ⇑P P 02 52 55.8 +0.4
baz=75,SNR=7.1
B15A Bradely Ranch, 74.52 333 ⇑P P 02 52 55.5 -0.2
baz=75,SNR=9.6
SWMT Swartz Lake 74.57 331 eP P 02 52 56.1 +0.2
1.8nm,0.8s
SWMT epP pP 02 53 22.3 +1.2
SWMT esP sP 02 53 32.1 +0.4
A16A West Butte Ran 74.59 334 ⇓P P 02 52 56.5 +0.4
baz=75,SNR=14
C14A Swan Lake 74.64 332 ⇓P P 02 52 56.9 +0.5
baz=75
YBMT Yellow Bay 74.83 332 eP P 02 52 58.0 +0.5
2.6nm,0.6s
YBMT epP pP 02 53 23.6 +1.0
YBMT esP sP 02 53 33.7 +0.5
D12A Red Ives Fores 74.86 330 ⇓P P 02 52 58.0 +0.4
baz=75
B14A Marquette Ranc 74.87 332 ⇑P P 02 52 58.1 +0.4
baz=75
C13A Hot Springs 74.96 331 ⇓P P 02 52 58.7 +0.5
baz=75,SNR=5.6
A15A Johnson Ranch, 75.10 333 ⇓P P 02 52 58.8 -0.2
baz=75
YBH Yreka Blue Hor 75.14 323 eP P 02 52 58.4 -1.0
7.1nm,0.8s
YBH epP pP 02 53 24.3 -0.2
YBH esP sP 02 53 33.9 -1.2
BSMT Bassoo Peak 75.18 331 eP P 02 53 00.3 +0.7
BSMT epP pP 02 53 25.6 +0.9
BSMT esP sP 02 53 36.1 +0.8
A14A Double T Ranch 75.39 333 ⇑P P 02 53 00.7 0.0
baz=76
B13A Whitefish 75.42 332 ⇓P P 02 53 01.2 +0.4
baz=76
WALA Waterton Lakes 75.67 333 eP P 02 53 01.8 -0.5
0.2nm,0.8s
WALA epP pP 02 53 27.6 +0.2
WALA esP sP 02 53 38.2 +0.2
A13A Flathead Natio 75.81 332 ⇑P P 02 53 03.5 +0.5
baz=76
HUMO Hull Mountain 75.84 323 eP P 02 53 02.6 -0.7
C11A Tepee Creek (N 75.86 331 ⇑P P 02 53 03.9 +0.6
baz=76
FFC Flin Flon 75.86 342 eP P 02 53 02.2 -0.8
1.9nm,0.8s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
B12A	**Libby**	**76.00**	**331**	⇑P	**P**	**02 53 04.9**	**+0.8**
	baz=76						
A12A	**Yaak River Ran**	**76.36**	**332**	⇑P	**P**	**02 53 07.1**	**+0.9**
	baz=77,SNR=5.7						
HAWA	**Hanford**	**76.46**	**328**	*e*P	**P**	**02 53 07.0**	**+0.4**
	17nm,0.8s						
HAWA				*e*pP	**pP**	**02 53 33.2**	**+1.3**
HAWA				*e*sP	**sP**	**02 53 42.9**	**+0.5**
TOA0	**Torodi Ar. Sit**	**77.87**	**72**	*e*P	**P**	**02 53 14.2**	**-1.0**
TORD	**Torodi Ar. Bea**	**77.87**	**72**	P	**P**	**02 53 14.7**	**-0.5**
TORD				pP	**pP**	**02 53 40.7**	**+0.2**
TORD				sP	**sP**	**02 53 50.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**77.87**	**72**	P	**P**	**02 53 14.7**	**-0.5**
	14nm,0.6s,baz=243,slow=5.2,SNR=148						
TORD				pP	**pP**	**02 53 40.7**	**+0.2**
	11nm,0.6s,baz=252,slow=5.2,SNR=5.8						
TORD				sP	**sP**	**02 53 50.9**	**-0.2**
	15nm,0.7s,baz=253,slow=6.2,SNR=5.1						
PNCL	**Nicolau / Gran**	**80.14**	**45**	*e*P	**P**	**02 53 26.8**	**-0.3**
PCVE	**Castro Verde**	**80.23**	**46**	*e*P	**P**	**02 53 28.3**	**+0.7**
EVOP	**Sao Brissos**	**80.62**	**45**	*e*P	**P**	**02 53 29.4**	**-0.3**
	26nm,1.2s						
EVO	**Evora**	**80.70**	**45**	*e*P	**P**	**02 53 29.4**	**-0.7**
	26nm,1.2s						
VNDA	**Vanda**	**81.14**	**190**	*e*P	**P**	**02 53 33.1**	**+1.2**
	3.5nm,0.8s						
VNDA	**Vanda**	**81.14**	**190**	P	**P**	**02 53 33.3**	**+1.4**
	4.7nm,0.7s,baz=129,slow=5.6,SNR=20						
PESTR	**Estremoz**	**81.15**	**45**	*e*P	**P**	**02 53 33.0**	**+0.5**
TSUM	**Tsumeb**	**83.51**	**108**	*e*P	**P**	**02 53 46.8**	**+1.3**
	4.6nm,0.7s						
ESDC	**Sonseca Array**	**84.01**	**46**	P	**P**	**02 53 48.0**	**+0.6**
ESDC				pP	**pP**	**02 54 14.2**	**+1.2**
ESDC				sP	**sP**	**02 54 25.3**	**+1.9**
ESDC	**Sonseca Array**	**84.01**	**46**	P	**P**	**02 53 48.0**	**+0.6**
	4.5nm,0.7s,baz=253,slow=5.1,SNR=17						
ESDC				pP	**pP**	**02 54 14.2**	**+1.2**
	2.8nm,0.7s,baz=253,slow=4.9,SNR=4.4						
ESDC				sP	**sP**	**02 54 25.3**	**+1.9**
	4.0nm,0.7s,baz=257,slow=4.8,SNR=5.1						
TAM	**Tamanrasset**	**84.66**	**64**	*e*P	**P**	**02 53 52.5**	**+1.3**
	2.6nm,0.7s						
YKA	**Yellowknife Ar**	**86.01**	**341**	P	**P**	**02 53 56.4**	**-0.4**
YKA				pP	**pP**	**02 54 22.1**	**-0.4**
YKA				sP	**sP**	**02 54 32.6**	**-0.3**
YKA	**Yellowknife Ar**	**86.01**	**341**	P	**P**	**02 53 56.4**	**-0.4**
	5.1nm,0.4s,baz=136,slow=4.7,SNR=325						
YKA				pP	**pP**	**02 54 22.1**	**-0.4**
	6.0nm,0.5s,baz=135,slow=5.2,SNR=10						
YKA				sP	**sP**	**02 54 32.6**	**-0.3**
	5.0nm,0.6s,baz=136,slow=5.1,SNR=5.4						
YKW3	**Yellowknife Ar**	**86.06**	**341**	*e*P	**P**	**02 53 56.6**	**-0.4**
	0.2nm,0.8s						
YKW3				*e*pP	**pP**	**02 54 22.4**	**-0.3**
YKW3				*e*sP	**sP**	**02 54 33.2**	**0.0**
ETSF	**Etsaut**	**87.73**	**44**	*e*P	**P**	**02 54 04.6**	**-1.1**
	9.6nm,0.8s						
ETSF				*e*pP	pP	02 54 41.8	+10
ETSF	**Etsaut**	**87.73**	**44**	*e*P	**P**	**02 54 04.6**	**-1.1**
	9.6nm,0.8s						
ETSF				*e*pP	pP	02 54 41.8	+10
EPF	**Esparros**	**88.39**	**44**	*e*P	**P**	**02 54 07.7**	**-1.1**
	17nm,1.0s						
EPF	**Esparros**	**88.39**	**44**	*e*P	**P**	**02 54 07.7**	**-1.1**
	17nm,1.0s						
ROSF	**Rostrenen**	**88.44**	**38**	*e*P	**P**	**02 54 08.2**	**-0.6**
	70nm,1.4s						
ROSF	**Rostrenen**	**88.44**	**38**	*e*P	**P**	**02 54 08.2**	**-0.6**
	70nm,1.4s						
SGMF	**Saint Gilles**	**88.83**	**38**	*e*P	**P**	**02 54 09.9**	**-0.7**
SGMF	**Saint Gilles**	**88.83**	**38**	*e*P	**P**	**02 54 09.9**	**-0.7**
LBTB	**Lobatse**	**88.98**	**116**	*e*P	**P**	**02 54 12.7**	**+0.5**
	6.0nm,1.0s						
LFF	**La Frestale**	**89.44**	**42**	*e*P	**P**	**02 54 13.9**	**+0.3**
	21nm,0.9s						
LFF				*e*pP	pP	02 54 49.1	+10
LFF	**La Frestale**	**89.44**	**42**	*e*P	**P**	**02 54 13.9**	**+0.3**
	21nm,0.9s						
LFF				*e*pP	pP	02 54 49.1	+10
MAW	**Mawson**	**89.48**	**164**	P	**P**	**02 54 14.5**	**+1.0**
MAW	**Mawson**	**89.48**	**164**	P	**P**	**02 54 14.5**	**+1.0**
	10nm,0.5s,baz=236,slow=4.3,SNR=11						
MFF	**Saint Martin d**	**89.58**	**41**	*e*P	**P**	**02 54 13.5**	**-0.7**
	8.1nm,0.9s						
MFF				*e*pP	pP	02 54 49.5	+9.4
MFF	**Saint Martin d**	**89.58**	**41**	*e*P	**P**	**02 54 13.5**	**-0.7**
	8.1nm,0.9s						
MFF				*e*pP	pP	02 54 49.5	+9.4
GRR	**Gorron**	**89.90**	**39**	*e*P	**P**	**02 54 14.3**	**-1.4**
	8.9nm,0.7s						
GRR				*e*pP	pP	02 54 50.6	+9.1
GRR	**Gorron**	**89.90**	**39**	*e*P	**P**	**02 54 14.3**	**-1.4**
	8.9nm,0.7s						
GRR				*e*pP	pP	02 54 50.6	+9.1
FLN	**La Foliniere**	**90.29**	**39**	*e*P	**P**	**02 54 17.5**	**0.0**
	18nm,1.0s						
FLN				*e*pP	pP	02 54 52.6	+9.3
FLN				*e*R			
	61nm,17.5s						
FLN	**La Foliniere**	**90.29**	**39**	*e*P	**P**	**02 54 17.5**	**0.0**
	18nm,1.0s						
FLN				*e*pP	pP	02 54 52.6	+9.3
CAF	**Calviac**	**90.30**	**43**	*e*P	**P**	**02 54 16.9**	**-0.8**
	8.4nm,0.9s						
CAF	**Calviac**	**90.30**	**43**	*e*P	**P**	**02 54 16.9**	**-0.8**
	8.4nm,0.9s						
LDF	**La Druitiere**	**90.43**	**39**	*e*P	**P**	**02 54 17.3**	**-0.8**
	11nm,0.9s						
LDF				*e*pP	pP	02 54 53.2	+9.2
LDF	**La Druitiere**	**90.43**	**39**	*e*P	**P**	**02 54 17.3**	**-0.8**
	11nm,0.9s						
LDF				*e*pP	pP	02 54 53.2	+9.2
TCF	**Toulx Ste Croi**	**90.93**	**42**	*e*P	**P**	**02 54 20.3**	**-0.3**
	4.2nm,0.8s						
TCF	**Toulx Ste Croi**	**90.93**	**42**	*e*P	**P**	**02 54 20.3**	**-0.3**
	4.2nm,0.8s						
BGF	**Bois d'Agland**	**91.44**	**42**	*e*P	**P**	**02 54 21.9**	**-1.0**
	8.7nm,0.7s						
BGF				*e*pP	pP	02 54 58.9	+10
BGF	**Bois d'Agland**	**91.44**	**42**	*e*P	**P**	**02 54 21.9**	**-1.0**
	8.7nm,0.7s						
BGF				*e*pP	pP	02 54 58.9	+10
SUMG	**Summit**	**91.72**	**9**	*e*P	**P**	**02 54 24.8**	**+0.7**
	6.5nm,0.9s						
SUMG				*e*pP	**pP**	**02 54 50.7**	**+0.7**
SUMG				*e*sP	**sP**	**02 55 01.5**	**+1.1**
SUMG	**Summit**	**91.72**	**9**	*i* P	pP	02 54 51.1	+1.1
	34nm,1.0s						
AVF	**Avril sur Loir**	**91.86**	**41**	*e*P	**P**	**02 54 24.3**	**-0.5**
AVF				*e*pP	pP	02 54 59.7	+9.0
AVF	**Avril sur Loir**	**91.86**	**41**	*e*P	**P**	**02 54 24.3**	**-0.5**
AVF				*e*pP	pP	02 54 59.7	+9.0
SMF	**Signal de Mont**	**92.11**	**42**	*e*P	**P**	**02 54 25.0**	**-1.0**
	8.8nm,0.8s						
SMF	**Signal de Mont**	**92.11**	**42**	*e*P	**P**	**02 54 25.0**	**-1.0**
	8.8nm,0.8s						
KEST	**Kesra**	**92.18**	**53**	LR	LR	03 36 56.6	
	comp=Z,31nm,20.5s,baz=337,slow=36						
LOR	**Lormes**	**92.36**	**41**	*e*P	**P**	**02 54 26.1**	**-1.0**
LOR				*e*R			
	62nm,17.0s						
LOR	**Lormes**	**92.36**	**41**	*e*P	**P**	**02 54 26.1**	**-1.0**
SCO	**Scoresbysund**	**93.40**	**15**	*i* P	pP	02 54 58.4	+1.2
	3.7nm,0.8s						
SFTF	**Sexfontaines**	**93.44**	**41**	*e*P	**P**	**02 54 31.4**	**-0.7**
	6.9nm,0.6s						
SFTF	**Sexfontaines**	**93.44**	**41**	*e*P	**P**	**02 54 31.4**	**-0.7**
	6.9nm,0.6s						
CABF	**La Chapelle**	**93.54**	**42**	*e*P	**P**	**02 54 32.2**	**-0.5**
CABF				*e*pP	pP	02 55 08.1	+9.5
CABF	**La Chapelle**	**93.54**	**42**	*e*P	**P**	**02 54 32.2**	**-0.5**
CABF				*e*pP	pP	02 55 08.1	+9.5
BAIF	**Baives**	**93.61**	**39**	*e*P	**P**	**02 54 32.5**	**-0.3**
BAIF	**Baives**	**93.61**	**39**	*e*P	**P**	**02 54 32.5**	**-0.3**
HAU	**Haudompre**	**94.19**	**41**	*e*P	**P**	**02 54 34.6**	**-1.0**
HAU				*e*R			
	69nm,17.5s						
HAU	**Haudompre**	**94.19**	**41**	*e*P	**P**	**02 54 34.6**	**-1.0**
CDF	**Champ du Feu**	**94.92**	**41**	*e*P	**P**	**02 54 38.7**	**-0.3**
CDF	**Champ du Feu**	**94.92**	**41**	*e*P	**P**	**02 54 38.7**	**-0.3**
ILAR	**Eielson Array**	**99.04**	**335**	P	**Pdif**	**02 54 56.4**	**-0.8**
ILAR				pP	**pP**	**02 55 22.2**	**-0.9**
ILAR				PP	**PP**	**02 59 03.8**	**+3.2**
ILAR	**Eielson Array**	**99.04**	**335**	P	**Pdif**	**02 54 56.4**	**-0.8**
	0.5nm,0.8s,baz=149,slow=2.5,SNR=5.7						
ILAR				pP	**pP**	**02 55 22.2**	**-0.9**
	0.7nm,0.9s,baz=170,slow=3.2,SNR=4.9						
ILAR				PP	**PP**	**02 59 03.8**	**+3.2**
	0.6nm,0.8s,baz=108,slow=5.1,SNR=5.5						
ARCES	**ARCESS Array B**	**107.89**	**22**	PKKPbc	PKKPbc	03 10 55.7	-3.5
ARCES	**ARCESS Array B**	**107.89**	**22**	PKKPbc	PKKPbc	03 10 55.7	-3.5
	5.6nm,1.0s,baz=74,slow=3.4,SNR=11						
KIS	**Kishinev**	**108.81**	**45**	LRM	MLR	03 00 02.0	
	200nm,22.0s						
BR131	**Keskin Array S**	**111.79**	**53**	*e*PKP	**PKiKP**	**02 59 51.5**	**-0.1**
BRTR	**Keskin Array B**	**111.79**	**53**	PKKPab	PKKPab	03 10 53.9	+0.6
BRTR	**Keskin Array B**	**111.79**	**53**	PKKPab	PKKPab	03 10 53.9	+0.6
	0.5nm,0.9s,baz=135,slow=2.8,SNR=4.7						
KBZ	**Khabaz**	**118.72**	**49**	PKP	**PKPdf**	**03 00 04.5**	**+0.1**
KBZ	**Khabaz**	**118.72**	**49**	PKP	**PKPdf**	**03 00 04.5**	**+0.1**
	2.8nm,0.9s,baz=307,slow=1.4,SNR=7.9						
STKA	**Stephens Creek**	**122.34**	**213**	PKP	**PKPdf**	**03 00 12.0**	**0.0**
STKA	**Stephens Creek**	**122.34**	**213**	PKP	**PKPdf**	**03 00 12.0**	**0.0**
	1.4nm,0.5s,baz=129,slow=6.5,SNR=7.0						
AKTO	**Aktyubinsk**	**127.39**	**39**	PKP	**PKPdf**	**03 00 22.2**	**+1.3**
AKTO	**Aktyubinsk**	**127.39**	**39**	PKP	**PKPdf**	**03 00 22.2**	**+1.3**
	1.5nm,0.8s,baz=299,slow=3.8,SNR=6.3						
PETK	**Petropavlovsk-**	**127.46**	**325**	PKP	**PKPdf**	**03 00 22.0**	**+1.0**
PETK	**Petropavlovsk-**	**127.46**	**325**	PKP	**PKPdf**	**03 00 22.0**	**+1.0**
	0.6nm,0.4s,baz=56,slow=2.2,SNR=2.9						
CTAO	**Charters Tower**	**128.13**	**227**	*e*PKPdf	**PKPdf**	**03 00 23.4**	**+0.1**
ABKAR	**Akbulak array**	**128.98**	**39**	*e*PKPdf	**PKPdf**	**03 00 24.9**	**+0.9**
ABKAR				*e*pPKPdf	**pPKPdf**	**03 00 51.0**	**+0.1**
FORT	**Forrest**	**129.26**	**201**	*e*PKPdf	**PKPdf**	**03 00 25.4**	**+0.2**
BRVK	**Borovoye**	**132.89**	**31**	*e*PKPdf	**PKPdf**	**03 00 32.1**	**+0.8**
ASAR	**Alice Springs**	**132.96**	**212**	PKP	**PKPdf**	**03 00 31.6**	**-0.9**
ASAR				pPKP	**pPKPdf**	**03 00 57.5**	**-1.9**
ASAR				sPKP		03 01 07.7	
ASAR	**Alice Springs**	**132.96**	**212**	PKP	**PKPdf**	**03 00 31.6**	**-0.9**
	1.4nm,0.6s,baz=136,slow=1.9,SNR=16						
ASAR				pPKP	**pPKPdf**	**03 00 57.5**	**-1.9**
	1.1nm,0.7s,baz=133,slow=2.3,SNR=3.4						
ASAR				sPKP		03 01 07.7	
	1.1nm,0.8s,baz=166,slow=2.8,SNR=4.6						
AS31	**Alice Springs**	**132.96**	**212**	*e*PKPdf	**PKPdf**	**03 00 31.8**	**-0.6**
BVAR	**Borovoye Array**	**132.96**	**31**	PKP	**PKPdf**	**03 00 32.3**	**+0.9**
BVAR	**Borovoye Array**	**132.96**	**31**	PKP	**PKPdf**	**03 00 32.3**	**+0.9**
	0.6nm,0.5s,baz=318,slow=1.9,SNR=5.9						
COEN	**Coen**	**134.38**	**230**	*e*PKPdf	**PKPdf**	**03 00 35.5**	**+0.2**
WRA	**Warramunga Arr**	**135.76**	**216**	PKP	**PKPdf**	**03 00 37.4**	**-0.3**
WRA				pPKP	**pPKPdf**	**03 01 03.1**	**-1.6**
WRA				sPKP		03 01 13.8	
WRA				SKPbc	**SKPbc**	**03 03 59.9**	**-0.7**
WRA	**Warramunga Arr**	**135.76**	**216**	PKP	**PKPdf**	**03 00 37.4**	**-0.3**
	2.2nm,0.4s,baz=135,slow=1.7,SNR=52						
WRA				pPKP	**pPKPdf**	**03 01 03.1**	**-1.6**
	1.7nm,0.7s,baz=139,slow=1.7,SNR=4.5						
WRA				sPKP		03 01 13.8	
	2.1nm,0.7s,baz=146,slow=1.6,SNR=6.0						
WRA				SKPbc	**SKPbc**	**03 03 59.9**	**-0.7**
	0.7nm,0.9s,baz=151,slow=1.9,SNR=4.1						
WRAB	**Tennant Creek**	**135.76**	**216**	*e*PKPdf	**PKPdf**	**03 00 37.4**	**-0.4**
KURK	**Kurchatov**	**138.36**	**29**	*e*PKPdf	**PKPdf**	**03 00 42.2**	**+0.7**
KURK				PKP	**PKiKP**	**03 00 42.4**	**-1.3**
KURK				pPKP	**pPKPdf**	**03 01 08.8**	**+0.3**
KURK				SKPbc	**SKPbc**	**03 04 07.5**	**+0.2**
KURK				SKPab	**SKPab**	**03 04 16.4**	**+0.6**
KURBB	**Kurchatov Arra**	**138.39**	**29**	PKP	**PKPdf**	**03 00 42.4**	**+0.8**
	1.0nm,0.4s,baz=309,slow=2.8,SNR=14						
KURBB				pPKP	**pPKPdf**	**03 01 08.8**	**+0.3**
	0.8nm,0.6s,baz=326,slow=2.1,SNR=3.9						
KURBB				SKPbc	**SKPbc**	**03 04 07.5**	**+0.2**
	0.3nm,0.6s,baz=309,slow=3.7,SNR=4.1						
KURBB				SKPab	**SKPab**	**03 04 16.5**	**+0.5**
	0.3nm,0.4s,baz=319,slow=4.1,SNR=5.4						
ZAA0	**Zalesovo Array**	**138.44**	**21**	*e*PKPdf	**PKPdf**	**03 00 41.0**	**-0.5**
ZAA0				*e*pPKPdf	**pPKPdf**	**03 01 07.2**	**-1.4**
ZAA0				*e*		03 01 18.5	
ZALV	**Zalesovo Beam**	**138.44**	**21**	PKP	**PKPdf**	**03 00 41.9**	**+0.4**
ZALV				pPKP	**pPKPdf**	**03 01 07.5**	**-1.0**
ZALV				sPKP		03 01 18.9	
ZALV				SKPbc	**SKPbc**	**03 04 05.9**	**-1.4**
ZALV				SKPab	**SKPab**	**03 04 18.0**	**+1.9**
ZALV	**Zalesovo Beam**	**138.44**	**21**	PKP	**PKPdf**	**03 00 41.9**	**+0.4**
	7.7nm,0.7s,baz=299,slow=2.8,SNR=31						
ZALV				pPKP	**pPKPdf**	**03 01 07.5**	**-1.0**
	5.2nm,0.7s,baz=298,slow=2.2,SNR=5.0						
ZALV				sPKP		03 01 18.9	
	5.0nm,0.7s,baz=301,slow=2.6,SNR=6.1						
ZALV				SKPbc	**SKPbc**	**03 04 05.9**	**-1.4**
	0.3nm,0.4s,baz=355,slow=1.6,SNR=2.1						
ZALV				SKPab	**SKPab**	**03 04 18.0**	**+1.9**
	0.6nm,0.6s,baz=306,slow=3.4,SNR=4.0						
EKS2	**Erkin-Say**	**140.53**	**42**	*e*PKPdf	**PKPdf**	**03 00 47.0**	**+1.1**
MBWA	**Marble Bar**	**140.85**	**196**	*e*PKPdf	**PKPdf**	**03 00 46.6**	**-0.4**
AAK	**Ala-Archa**	**141.00**	**41**	*e*PKPdf	**PKPdf**	**03 00 48.0**	**+1.1**
TKM2	**Tokmak 2**	**141.53**	**40**	*e*PKPdf	**PKPdf**	**03 00 47.0**	**-0.8**
MK31	**Makanchi Array**	**142.84**	**31**	*e*PKPpre	PKPpre	03 00 46.2	
MKAR	**Makanchi Array**	**142.84**	**31**	PKPpre	PKPpre	03 00 46.6	
MKAR	**Makanchi Array**	**142.84**	**31**	PKhKP	PKPpre	03 00 46.6	
	0.9nm,0.6s,baz=320,slow=3.9,SNR=17						
KSH	**Kashi**	**143.52**	**45**	PKP	**PKPdf**	**03 00 51.8**	**+0.4**
KSH				pPKP	**pPKPdf**	**03 01 17.4**	**-1.0**
KSH				sPKP		03 01 28.0	
KSH				PP	**PP**	**03 04 07.1**	**+3.2**
KSH				PKS	**PKSdf**	**03 04 24.6**	**-2.6**
KSH				SKS	**SKSdf**	**03 07 49.2**	**-3.2**
KSH				SKKS	**SKKSac**	**03 10 46.5**	**-1.4**
KSH				SS	**SS**	**03 22 38.1**	**+0.2**
KSH				AMB	AMB		
	comp=Z,250nm,4.8s						
KSH				LR	LR		
	comp=N,150nm,5.6s						
KSH				LR	LR		
	comp=E,170nm,6.3s						
KSH				LR	LR		
	comp=Z,290nm,6.8s						
TLY	**Talaya**	**144.89**	**6**	*e*PKPdf	**PKPdf**	**03 00 53.5**	**+0.3**
TLY				*e*pPKPdf	**pPKPdf**	**03 01 20.4**	**+0.2**
TLY				*e*		03 01 30.8	
USRK	**Ussuriysk Arra**	**146.34**	**329**	PKPbc	**PKPbc**	**03 00 57.6**	**+0.4**
	comp=Z,16nm,0.8s,baz=42,slow=1.0,SNR=33						
USRK				pPKPbc	pPKPbc	03 01 23.4	-0.5
	comp=Z,18nm,0.8s,baz=36,slow=1.7,SNR=12						
USRK				sPKPbc	sPKPbc	03 01 35.0	+0.9
	comp=Z,12nm,1.0s,baz=65,slow=3.7,SNR=8.4						
HIA	**Hailar**	**146.36**	**347**	*e*PKPbc	**PKPbc**	**03 00 57.0**	**-0.2**
HIA				*e*pPKPdf	**pPKPdf**	**03 01 23.3**	**+0.4**
MDJ	**Mudanjiang**	**147.16**	**332**	PKPbc	**PKPdf**	**03 00 56.6**	**-0.7**
MDJ				AMB	AMB		
	comp=Z,50nm,5.4s						
MJAR	**Matsushiro Arr**	**147.35**	**313**	PKPbc	**PKPbc**	**03 01 00.5**	**+0.1**
MJAR				pPKPbc	**pPKPbc**	**03 01 26.2**	**-0.9**
MJAR	**Matsushiro Arr**	**147.35**	**313**	PKPbc	**PKPbc**	**03 01 00.5**	**+0.1**
	comp=Z,37nm,0.7s,baz=118,slow=1.5,SNR=80						
MJAR				pPKPbc	**pPKPbc**	**03 01 26.2**	**-0.9**
	comp=Z,38nm,0.8s,baz=140,slow=1.1,SNR=16						
MAJO	**Matsushiro**	**147.35**	**313**	*e*PKPbc	**PKPbc**	**03 01 00.5**	**+0.1**
MAJO				*e*pPKPdf	**pPKPdf**	**03 01 25.9**	**+1.0**
WMQ	**Urumqi**	**147.61**	**29**	PKPbc	**PKPbc**	**03 01 00.0**	**-1.0**
SONM	**Songino Array**	**148.92**	**3**	PKP	**PKPdf**	**03 01 01.2**	**+0.9**
SONM				PKPbc	**PKPbc**	**03 01 04.8**	**+0.5**
SONM				pPKPbc	**pPKPbc**	**03 01 30.9**	**-0.2**
SONM	**Songino Array**	**148.92**	**3**	PKP	**PKPdf**	**03 01 01.2**	**+0.9**
	comp=Z,9.6nm,0.7s,baz=345,slow=1.5,SNR=34						
SONM				PKPbc	**PKPbc**	**03 01 04.8**	**+0.5**
	comp=Z,9.6nm,0.7s,baz=334,slow=1.7,SNR=36						
SONM				pPKPbc	**pPKPbc**	**03 01 30.9**	**-0.2**
	comp=Z,3.0nm,0.5s,baz=311,slow=1.5,SNR=3.8						
ULN	**Ulaanbaatar**	**148.92**	**2**	*e*PKPdf	**PKPdf**	**03 00 59.4**	**-0.9**
ULN				*e*PKPbc	**PKPbc**	**03 01 04.7**	**+0.4**
ULN				*e*PKPab	**PKPab**	**03 01 09.5**	**+1.0**
CN2	**Changchun**	**149.56**	**336**	*e*PKPbc	**PKPdf**	**03 01 00.7**	**-0.5**
PALK	**Pallekele**	**150.97**	**106**	*e*PKPbc	**PKPbc**	**03 01 10.2**	**+0.1**
HYB	**Hyderabad**	**151.07**	**84**	*i* PKP	**PKPdf**	**03 01 03.0**	**-1.4**
KSRS	**Korea Array**	**153.36**	**324**	PKPbc	**PKPbc**	**03 01 15.3**	**+0.6**
	comp=Z,3.0nm,0.7s,baz=50,slow=1.2,SNR=6.2						
KSRS				PKPab	**PKPab**	**03 01 26.4**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=60,slow=4.9,SNR=3.8						
KSRS				pPKPbc	**pPKPbc**	**03 01 41.5**	**-0.1**
	comp=Z,4.5nm,0.9s,baz=101,slow=0.4,SNR=5.1						
KSAR	**Wonju Array Be**	**153.39**	**325**	PKPbc	**PKPbc**	**03 01 15.3**	**+0.5**
KSAR				PKPab	**PKPab**	**03 01 26.4**	**-0.8**
KSAR				pPKPbc	**pPKPbc**	**03 01 41.5**	**-0.2**
HHC	**Hu-ho-hao-te**	**155.85**	**355**	*e*PKP	**PKPdf**	**03 01 10.0**	**-0.7**
HHC				pPKP	**pPKPdf**	**03 01 37.5**	**-0.3**
HHC				sPKP		03 01 48.2	
HHC				PP	**PP**	**03 05 17.5**	**+3.5**
HHC				SKS	**SKSdf**	**03 08 04.0**	**-4.4**
HHC				SKKS	**SKKSac**	**03 11 54.7**	**-0.9**
HHC				SS	**SS**	**03 24 54.6**	**+1.5**
HHC				AMB	AMB		
	comp=Z,94nm,9.5s						
HHC				LR	LR		
	comp=N,180nm,20.2s						
HHC				LR	LR		
	comp=E,280nm,21.0s						
HHC				LR	LR		
	comp=Z,280nm,21.4s						
LZH	**Lanzhou**	**160.22**	**12**	*e*PKP	PKPdf	03 01 10.0	-6.2
LZH				pPKP	pPKPdf	03 01 37.2	-6.1
CD2	**Chengdu**	**165.15**	**17**	PKP	**PKPdf**	**03 01 19.9**	**-1.2**
GYA	**Guiyang**	**170.12**	**11**	*e*PKP	**PKPdf**	**03 01 23.0**	**-1.8**
GYA				sPKP		03 02 01.4	
GYA				PKPab	**PKPab**	**03 02 41.2**	**+0.7**
GYA				PKS	**PKSdf**	**03 04 53.8**	**-3.7**
GYA				AMB	AMB		
	comp=Z,110nm,8.0s						

*ISK **01** 02:43:35.6, 38.°90N×26.°97E, h6km, MD2.8*
*ISCJB **01** 02:43:36.4±0.5, 38.°89N±0.°03×26.°99E±0.°05, h6km±7km, Error ellipse: s-maj=6.1km s-min=4.4km az=6.2*
*DDA **01** 02:43:36.3, 38.°93N×27.°00E, h7km, MD3.0*
*CSEM **01** 02:43:36.6±0.1, 38.°88N×26.°98E, h12km, MD3.0, Error ellipse: s-maj=3.0km s-min=2.0km az=97.0*
ISC 01 02:43:36.3±1.3**, 38.°89N**±0.°02×**26.°98E**±0.°03**, h14**km±11km**, n22, σ0.s33**/35**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.48**	**332**	*e*P	**Pg**	**02 43 46.0**	**+0.2**
AYVA				*e*S	**Sb**	**02 43 52.9**	**-0.5**
AYVA	**Ayvalik**	**0.48**	**332**	*e*P	**Pg**	**02 43 46.0**	**+0.2**
AYVA				*e*S	**Sb**	**02 43 52.9**	**-0.5**
BLCB	**Balcova**	**0.50**	**174**	*e*PG	**Pg**	**02 43 46.3**	**0.0**
BLCB				*e*SG	**Sb**	**02 43 53.8**	**-0.3**
BLCB	**Balcova**	**0.50**	**174**	*e*Pg	**Pg**	**02 43 46.3**	**0.0**
BLCB				*e*Sg	**Sb**	**02 43 53.8**	**-0.3**
IZM	**Izmir**	**0.54**	**156**	*e*PG	**Pg**	**02 43 46.9**	**0.0**
IZM				*e*SG	**Sb**	**02 43 54.8**	**-0.4**
IZM	**Izmir**	**0.54**	**156**	*e*Pg	**Pg**	**02 43 46.9**	**0.0**
IZM				*e*Sg	**Sb**	**02 43 54.8**	**-0.4**
URLA	**Izmir**	**0.61**	**210**	*e*P	**Pg**	**02 43 48.1**	**-0.1**
URLA				*e*S	**Sb**	**02 43 57.8**	**+0.7**
URLA	**Izmir**	**0.61**	**210**	*e*P	**Pg**	**02 43 48.1**	**-0.1**
URLA				*e*S	**Sb**	**02 43 57.8**	**+0.7**
AKS	**Akhisar**	**0.65**	**90**	*e*PG	**Pg**	**02 43 48.9**	**-0.1**
AKS	**Akhisar**	**0.65**	**90**	*e*Pg	**Pg**	**02 43 48.9**	**-0.1**
AKHS	**Akhisar**	**0.65**	**91**	*e*P	**Pb**	**02 43 49.5**	**0.0**
AKHS				*e*S	**Sb**	**02 43 58.6**	**+0.2**
AKHS	**Akhisar**	**0.65**	**91**	*e*P	**Pb**	**02 43 49.5**	**0.0**
AKHS				*e*S	**Sb**	**02 43 58.6**	**+0.2**
BALY	**Balya**	**0.99**	**30**	*e*P	**Pg**	**02 43 55.7**	**+0.3**
BALY				*e*S	**Sn**	**02 44 09.7**	**+0.1**
BALY	**Balya**	**0.99**	**30**	*e*P	**Pg**	**02 43 55.7**	**+0.3**
BALY				*e*S	**Sn**	**02 44 09.7**	**+0.1**
BALB	**Balikesir**	**1.03**	**43**	*e*PG	**Pb**	**02 43 55.6**	**-0.3**
BALB				*e*SG	**Sn**	**02 44 10.3**	**-0.2**
GONE	**Gonen-Balikesi**	**1.28**	**25**	*e*PN	**Pb**	**02 44 00.1**	**-0.1**
GONE	**Gonen-Balikesi**	**1.28**	**25**	*e*Pn	**Pb**	**02 44 00.1**	**-0.1**
KULA	**Kula-Manisa**	**1.37**	**105**	*e*PN	**Pn**	**02 44 01.4**	**+0.4**
DST	**Dursunbey**	**1.46**	**60**	*e*PN	**Pb**	**02 44 03.0**	**-0.3**
DST	**Dursunbey**	**1.46**	**60**	*e*Pn	**Pb**	**02 44 03.0**	**-0.3**
KRBG	**Karabiga-Canak**	**1.52**	**9**	*e*PN	**Pb**	**02 44 03.9**	**-0.5**
KRBG	**Karabiga-Canak**	**1.52**	**9**	*e*Pn	**Pb**	**02 44 03.9**	**-0.5**

MEX 01 02:52:03.6±0.5**, 16.°97N**×**100.°47W, h4**km±6km**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.21**	**67**	*i* P	Pg	02 52 07.5	-0.1
CAIG				*e*S	Sg	02 52 10.0	-0.4
ACX	**Acapulco**	**0.59**	**99**	*i* P	Pg	02 52 13.2	-1.8
ACX				*e*S	Sg	02 52 21.4	-1.4
ZIIG	**Zihuatanejo**	**1.15**	**304**	*i* P	Pg	02 52 22.1	-3.5
ZIIG				*e*S	Sg	02 52 37.5	-3.0
MEIG	**Mezcala**	**1.25**	**40**	*i* P	Pg	02 52 24.3	-3.5
MEIG				*e*S	Sg	02 52 40.3	-3.8
ARIG	**Puente Sto Nin**	**1.31**	**5**	*i* P	Pn	02 52 25.5	-3.4
ARIG				*e*S	Sg	02 52 41.3	-4.6

*SZGRF **01** 02:57:22.9, 18.°48S×177.°58W, h33km, Fiji Islands region*
*PRU **01** 02:57:40.7, 12.°73S×177.°93E, h30km*
*ISCJB **01** 02:58:28.7±0.8, 17.°9S±0.°2×178.°3W±0.°1, h579km, mb4.0/14, Error ellipse: s-maj=29.5km s-min=8.9km az=155.0*
*IDC **01** 02:58:33.2±2.3, 17.°95S×178.°51W, h617km±26km, mb3.6/14, mb1 3.9/15, mb1mx3.7/20, mbtmp3.6/15, Error ellipse: s-maj=26.3km s-min=10.6km az=150.0*
ISC 01 02:58:29.1±0.8**, 18.°0S**±0.°2×**178.°3W**±0.°1**, h579**km**, n77, σ1.s00**/77**, mb4.0**/14**, 11C-19D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.46**	**58**	P	**P**	**03 00 21.2**	**-1.5**
	15nm,0.3s,baz=243,slow=2.3,SNR=10						
AFI				S	**S**	**03 01 52.0**	**-3.6**
	5.0nm,0.3s,baz=253,slow=20,SNR=3.2						
DZM	**Mont Dzumac**	**14.91**	**252**	P	**P**	**03 01 36.8**	**-0.4**
	1.9nm,0.3s,baz=80,slow=18,SNR=16						
STKA	**Stephens Creek**	**38.70**	**241**	P	**P**	**03 05 05.5**	**+1.0**
	13nm,0.7s,baz=92,slow=8.7,SNR=30						
WRA	**Warramunga Arr**	**44.72**	**260**	P	**P**	**03 05 51.4**	**-0.6**
	3.5nm,0.5s,baz=93,slow=7.3,SNR=97						
WRA				PcP	**PcP**	**03 07 21.6**	**-0.1**
	0.8nm,0.6s,baz=92,slow=3.4,SNR=4.3						
WRA				S	**S**	**03 11 44.1**	**-3.4**
	0.3nm,0.8s,baz=98,slow=13,SNR=3.1						
ASAR	**Alice Springs**	**44.87**	**254**	P	**P**	**03 05 53.5**	**+0.3**
	24nm,0.6s,baz=88,slow=8.6,SNR=283						
ASAR				PcP	**PcP**	**03 07 22.4**	**+0.1**
	0.9nm,0.5s,baz=95,slow=4.2,SNR=5.1						
ASAR				S	**S**	**03 11 47.1**	**-2.5**
	0.5nm,0.8s,baz=85,slow=15,SNR=5.1						
MJAR	**Matsushiro Arr**	**68.00**	**323**	P	**P**	**03 08 31.7**	**+0.3**
	3.5nm,0.4s,baz=154,slow=5.8,SNR=15						
MAT	**Matsushiro**	**68.00**	**323**	P	**P**	**03 08 31.6**	**+0.2**
PETK	**Petropavlovsk-**	**73.75**	**345**	P	**P**	**03 09 05.5**	**+0.8**
	6.5nm,0.6s,baz=141,slow=9.6,SNR=6.9						
KSRS	**Korea Array**	**74.80**	**318**	P	**P**	**03 09 12.8**	**+1.8**
	1.4nm,0.6s,baz=125,slow=5.8,SNR=3.6						
USRK	**Ussuriysk Arra**	**76.70**	**326**	P	**P**	**03 09 21.4**	**+0.1**
	2.0nm,0.8s,baz=148,slow=1.8,SNR=5.1						
NVAR	**Mina Array Bea**	**79.39**	**44**	P	**P**	**03 09 37.8**	**+1.6**
	3.0nm,0.8s,baz=223,slow=8.4,SNR=11						
ILAR	**Eielson Array**	**85.91**	**13**	P	**P**	**03 10 07.6**	**-0.4**
	1.7nm,0.4s,baz=222,slow=5.1,SNR=63						
TXAR	**Lajitas Array**	**85.94**	**58**	P	**P**	**03 10 11.2**	**+2.1**
	2.9nm,0.8s,baz=222,slow=6.1,SNR=33						
PDAR	**Pinedale Array**	**87.32**	**43**	P	**P**	**03 10 16.3**	**+0.9**
	2.1nm,0.7s,baz=217,slow=3.0,SNR=14						
CMAR	**Chiang Mai Arr**	**88.99**	**290**	P	**P**	**03 10 23.8**	**+0.3**
	1.3nm,0.7s,baz=118,slow=3.1,SNR=5.8						
SONM	**Songino Array**	**93.65**	**319**	P	**P**	**03 10 44.8**	**+0.3**
	0.3nm,0.6s,baz=121,slow=5.0,SNR=3.6						
YKA	**Yellowknife Ar**	**94.33**	**25**	P	**P**	**03 10 47.1**	**+0.1**
	0.7nm,0.6s,baz=238,slow=4.6,SNR=19						
ZALV	**Zalesovo Beam**	**108.33**	**322**	PKiKP	**PKiKP**	**03 15 51.4**	**-0.6**
	0.6nm,0.6s,baz=48,slow=2.1,SNR=3.9						
MKAR	**Makanchi Array**	**109.23**	**314**	PKiKP	**PKiKP**	**03 15 53.4**	**-0.5**
	0.6nm,0.5s,baz=102,slow=0.7,SNR=14						
BVAR	**Borovoye Array**	**116.94**	**321**	PKP	**PKPdf**	**03 16 08.3**	**-0.1**
	1.3nm,0.5s,baz=85,slow=1.8,SNR=7.0						
ARCES	**ARCESS Array B**	**126.37**	**350**	PKP	**PKPdf**	**03 16 26.1**	**0.0**
	3.8nm,0.9s,baz=35,slow=4.4,SNR=5.2						
FINES	**FINESS Array B**	**133.26**	**344**	PKP	**PKPdf**	**03 16 38.2**	**-1.1**
	1.2nm,0.8s,baz=67,slow=5.0,SNR=4.3						
NOA	**NORSAR Array B**	**136.43**	**353**	PKP	**PKPdf**	**03 16 44.4**	**-1.0**
	0.9nm,0.8s,baz=20,slow=3.9,SNR=2.9						
BSEG	**Bad Segeberg**	**143.47**	**351**	*e*PKPbc	PKPbc	03 16 57.3	+0.4
KWP	**Kalwaria Pacla**	**144.15**	**337**	*e*P	**PKPab**	**03 16 59.7**	**+0.1**
TLCR		**144.66**	**326**	⇑*i*P	**PKPab**	**03 17 02.0**	**+0.4**
OJC	**Ojcow**	**144.69**	**340**	*e*PX	**PKPdf**	**03 17 01.0**	**+0.6**
BURAR	**Bucovina Array**	**144.70**	**332**	⇓*i*P	**PKPab**	**03 17 02.4**	**+0.6**
TESR		**144.84**	**330**	⇓*i*P	PKPbc	03 17 01.8	+0.3
BRTR	**Keskin Array B**	**144.88**	**315**	PKP	PKPbc	03 17 02.4	+0.4
	4.6nm,0.9s,baz=118,slow=3.5,SNR=29						
NRDL	**Niedersach Rie**	**144.90**	**351**	*e*PKPbc	PKPbc	03 17 01.9	+0.6

CFR	Carcaliu	145.03	327	⇓iP	PKPbc	03 17 02.3	+0.3
KSP	Ksiaz	145.18	344	eP	PKPab	03 17 03.2	-0.3
NIE	Niedzica	145.20	339	ePX	PKPab	03 17 03.6	0.0
VRI	Vrincioaia	145.27	329	⇑iP	PKPab	03 17 03.7	-0.3
PLOR	Plostina	145.31	329	⇑iP	PKPbc	03 17 03.5	+0.6
TIRR	Tirgusor	145.36	326	⇑iP	PKPbc	03 17 03.5	+0.5
IBBN	Ibbenburen	145.39	353	ePKPbc	PKPbc	03 17 03.6	+0.8
TRPA	Tarpa	145.43	335	⇓iP	PKPbc	03 17 03.7	+0.6
TRPA	Tarpa	145.43	335	⇓e	PKPbc	03 17 03.6	+0.5
CLZ	Clausthal	145.49	350	ePKPbc	PKPbc	03 17 04.1	+0.9
CLL	Collm	145.53	347	ePKPbc	PKPbc	03 17 03.9	+0.6
CLL	Collm	145.53	347	⇓iPKP	PKPbc	03 17 03.6	+0.3
	comp=Z,17nm,0.9s						
OKC	Ostrava-Krasne	145.54	341	⇓ePKP	PKPbc	03 17 04.1	+0.7
UPC	Upice	145.56	344	⇓ePKP	PKPbc	03 17 04.0	+0.6
DPC	Dobruska-Polom	145.62	343	⇓iPKP	PKPbc	03 17 04.6	+1.0
BRG	Berggiesshubel	145.73	346	i PKP	PKPbc	03 17 04.3	+0.5
	comp=Z,7.8nm,0.8s						
BRG	Berggiesshubel	145.73	346	ePKPbc	PKPbc	03 17 04.7	+0.8
KRLC	Kraliky	145.74	343	⇓iPKP	PKPbc	03 17 04.6	+0.6
MORC	Moravsky Berou	145.78	342	⇑iP	PKPbc	03 17 04.5	+0.4
PVCC	Panska Ves	145.91	345	⇓ePKP	PKPbc	03 17 04.9	+0.5
MLR	Muntele Rosu	145.92	329	⇑iP	PKPab	03 17 06.4	-0.3
VOIR		146.39	330	⇓iP	PKPbc	03 17 07.0	+1.0
PRU	Pruhonice	146.41	345	⇓ePKP	PKPbc	03 17 06.4	+0.6
DRGR		146.42	334	⇓iP	PKPbc	03 17 06.4	+0.4
MOX	Moxa	146.43	349	ePKPbc	PKPbc	03 17 06.6	+0.8
TANN	Tannenbergstha	146.48	347	ePKPbc	PKPbc	03 17 06.8	+0.7
PSZ	Piszkesteto	146.61	338	⇑e	PKPbc	03 17 07.2	+0.7
ARR	Arges	146.64	330	⇑iP	PKPbc	03 17 08.1	+1.4
NKC	Novy Kostel	146.66	347	⇓ePKP	PKPbc	03 17 07.1	+0.6
TREC	Trest	146.80	343	⇓ePKP	PKPbc	03 17 07.4	+0.5
ROTZ	Rotzenmuhle	147.15	347	ePKPbc	PKPbc	03 17 08.9	+1.1
BUD	Budapest	147.29	338	⇑e	PKPbc	03 17 09.2	+1.0
TNS	Taunus Mts	147.35	352	ePKPbc	PKPbc	03 17 09.1	+0.7
GRF	Grafenberg Arr	147.42	348	ePKPbc	PKPbc	03 17 09.4	+0.9
KHC	Kasperske Hory	147.44	345	⇓ePKP	PKPbc	03 17 09.2	+0.6
GEC2	GERESS Array S	147.68	345	ePKPbc	PKPbc	03 17 10.0	+0.7
GERES	GERESS Array B	147.68	345	PKPbc	PKPbc	03 17 10.0	+0.7
	comp=Z,4.5nm,0.6s,baz=26,slow=2.9,SNR=33						
BZS	Buzias	147.81	333	⇑iP	PKPbc	03 17 10.0	+0.4
SOP	Sopron	147.94	341	⇓e	PKPbc	03 17 10.5	+0.6
WLF	Walferdange	148.16	355	ePKPbc	PKPbc	03 17 11.8	+1.5
PKSM	Moragy	148.51	337	⇓e	PKPbc	03 17 11.3	0.0
RJOB	Jochberg	148.93	345	ePKPbc	PKPbc	03 17 12.9	+0.5
BFO	Black Forest	149.22	351	ePKPbc	PKPbc	03 17 13.6	+0.6
VTS	Vitosha	149.38	328	⇑iP	PKPbc	03 17 14.2	+0.4
ESDC	Sonseca Array	157.80	12	PKPab	PKPab	03 17 57.2	+0.4
	comp=Z,0.1nm,0.4s,baz=333,slow=4.2,SNR=4.9						
TORD	Torodi Ar. Bea	175.22	180	PKP	PKPdf	03 17 32.7	-1.4
	comp=Z,1.1nm,1.0s,baz=168,slow=1.8,SNR=4.2						

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*CSEM **01** 03:14:50.8±0.2, 43°.55N×6°.14E, h5^{km}, ML1.7/10, Error ellipse: s-maj=4.6km s-min=2.6km az=21.0*

*STR **01** 03:14:52.6±0.8, 43°.63N×6°.20E, h5^{km}, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

LDG 01 03:14:51.7±0.1**, 43°.55N×6°.16E, h4**^{km}**, Md1.7**/2**, Ml2.0**/7**, Error ellipse: s-maj=2.2km s-min=1.2km az=30.0, Near south coast of France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMR	La Mourre	0.34	130	ePg	Pg	03 14 58.4	+0.1
LMR				eSg	Sg	03 15 03.0	+0.3
	11nm,0.3s						
LMR	La Mourre	0.34	130	ePg	Pg	03 14 58.4	+0.1
LMR				eSg	Sg	03 15 03.0	+0.3
	5.3nm,0.3s						
FRF	La Foret Royal	0.36	89	ePg	Pg	03 14 58.2	-0.4
FRF				eSg	Sg	03 15 02.5	-0.8
	21nm,0.2s						
FRF	La Foret Royal	0.36	89	ePg	Pg	03 14 58.2	-0.4
FRF				eSg	Sg	03 15 02.5	-0.8
	11nm,0.2s						
SMRF	Simiane la Rot	0.59	315	ePg	Pg	03 15 03.1	-0.1
SMRF				eSg	Sg	03 15 10.9	-0.2
	4.2nm,0.2s						
SMRF	Simiane la Rot	0.59	315	ePg	Pg	03 15 03.1	-0.1
SMRF				eSg	Sg	03 15 10.9	-0.2
	2.1nm,0.2s						
MVIF	Mont Vial	0.80	64	Pg	Pg	03 15 05.7	-1.6
MVIF	Mont Vial	0.80	64	Pg	Pg	03 15 05.7	-1.6
REVF	Revere	0.90	78	Pg	Pg	03 15 09.0	-0.1
REVF	Revere	0.90	78	Pg	Pb	03 15 09.7	-0.3
REVF				Sg	Sg	03 15 20.0	-0.8
REVF	Revere	0.90	78	Pg	Pg	03 15 09.0	-0.1
REVF				Sg	Sg	03 15 20.0	-0.8
TOUF	Mont Tournerai	0.92	60	Pg	Pg	03 15 08.2	-1.4
TOUF				Sg	Sg	03 15 21.0	-0.6
TOUF	Mont Tournerai	0.92	60	Pg	Pg	03 15 08.2	-1.4
TOUF				Sg	Sg	03 15 21.0	-0.6
SBF	Sospel	0.98	71	ePg	Pg	03 15 10.2	-0.4
SBF				eSg	Sg	03 15 23.7	+0.3
	12nm,0.2s						
SBF	Sospel	0.98	71	ePg	Pg	03 15 10.2	-0.4
SBF				eSg	Sg	03 15 23.7	+0.3
	5.8nm,0.2s						
AUTN	L'Aution	1.02	64	Pg	Pg	03 15 10.9	-0.7
AUTN				Sg	Sg	03 15 23.6	-1.5
AUTN	L'Aution	1.02	64	Pg	Pg	03 15 10.9	-0.7
AUTN				Sg	Sg	03 15 23.6	-1.5
SAOF	Saorge	1.10	66	Pg	Pg	03 15 12.3	-0.6
SAOF				Sg	Sg	03 15 27.6	+0.3
SAOF	Saorge	1.10	66	Pg	Pg	03 15 12.3	-0.6
SAOF				Sg	Sg	03 15 27.6	+0.3
MBDF	Montbardon	1.25	21	ePg	Pg	03 15 14.9	-1.1
MBDF				eSg	Sg	03 15 31.6	-0.8
	2.4nm,0.3s						
MBDF	Montbardon	1.25	21	ePg	Pg	03 15 14.9	-1.1
MBDF				eSg	Sg	03 15 31.6	-0.8
	1.2nm,0.3s						
ORIF	Oris-en-Rattie	1.38	352	ePg	Pn	03 15 17.8	-0.1
ORIF				eSg	Sb	03 15 35.4	-0.9
	4.4nm,0.3s						
ORIF	Oris-en-Rattie	1.38	352	ePg	Pn	03 15 17.8	-0.1
ORIF				eSg	Sb	03 15 35.4	-0.9
	2.2nm,0.3s						
VIVF	Saint-Julien-l	1.68	321	eP	Pn	03 15 22.4	+0.4
VIVF				eSn	Sn	03 15 40.5	-3.5
VIVF				eSg	Sb	03 15 44.9	0.0
	0.6nm,0.2s						
LASF	Ste Croix	1.74	288	ePg	Pb	03 15 24.1	-0.2
LASF				eSn	Sn	03 15 41.9	-3.6
LASF				eSg	Sb	03 15 46.4	-0.2
	1.7nm,0.3s						
LASF	Ste Croix	1.74	288	ePg	Pb	03 15 24.1	-0.2
LASF				eSn	Sn	03 15 41.9	-3.6
LASF				eSg	Sb	03 15 46.4	-0.2
	0.9nm,0.3s						
LPG	La Plagne	1.99	12	eSg	Sb	03 15 54.9	+0.6
	0.4nm,0.2s						
LPG	La Plagne	1.99	12	eSg	Sb	03 15 54.9	+0.6
	0.2nm,0.2s						
PGF	Pioggiola	2.31	115	ePn	Pn	03 15 29.0	-1.7
PGF				eSn	Sn	03 15 56.3	-3.5
	2.0nm,0.2s						
PGF	Pioggiola	2.31	115	ePn	Pn	03 15 29.0	-1.7
PGF				eSn	Sn	03 15 56.3	-3.5
	1.0nm,0.2s						

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*ISCJB **01** 03:39:52.2±0.9, 21°.2S±0°.2×11°.4W±0°.1, h16^{km}, mb4.2/8, MS3.5/4, Error ellipse: s-maj=27.8km s-min=15.9km az=155.9*

*IDC **01** 03:39:52.0±1.2, 21°.13S×11°.49W, h0^{km}, mb4.1/7, mb1 4.1/7, mb1mx3.9/19, mbtmp4.1/7, MS3.5/4, Ms1 3.5/4, ms1mx3.0/36, Error ellipse: s-maj=37.7km s-min=21.8km az=156.0*

*NEIC **01** 03:39:52.3±0.8, 21°.34S×11°.35W, h10^{km}, mb4.5/3, Error ellipse: s-maj=23.4km s-min=14.2km az=158.0*

ISC 01 03:39:53.8±1.0**, 21°.3S**±0°.2×**11°.4W**±0°.1**, h16**^{km}**, n16, σ0.s97**/16**, mb4.1**/8**, MS3.5**/4**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	Dimbokro	28.49	14	P	P	03 45 48.0	-0.5
DBIC	Dimbokro	28.49	14	P	P	03 45 48.0	-0.5
	2.0nm,0.6s,baz=198,slow=9.6,SNR=2.8						
DBIC				LR	LR	03 55 01.7	
	comp=Z,42nm,18.3s,baz=327,slow=32						
BOSA	Boshof	33.96	110	eP	P	03 46 35.0	-1.9
	11nm,1.2s						
BOSA	Boshof	33.96	110	P	P	03 46 38.0	+1.1
	5.0nm,1.0s,baz=270,slow=11,SNR=3.2						
BOSA				LR	LR	03 57 44.6	
	comp=Z,125nm,18.8s,baz=93,slow=32						
BDFB	Brasilia	35.10	273	P	P	03 46 46.6	-0.3
BDFB	Brasilia	35.10	273	P	P	03 46 46.6	-0.3
	8.3nm,0.8s,baz=90,slow=11,SNR=11						
BDFB				LR	LR	03 57 36.1	
	comp=Z,105nm,22.0s,baz=56,slow=30						
TOA0	Torodi Ar. Sit	36.53	22	eP	P	03 46 58.3	-0.6
TORD	Torodi Ar. Bea	36.53	22	P	P	03 46 58.6	-0.3
TORD	Torodi Ar. Bea	36.53	22	P	P	03 46 58.6	-0.3
	2.8nm,0.9s,baz=201,slow=8.7,SNR=18						
TORD				LR	LR	03 58 48.9	
	comp=Z,87nm,19.5s,baz=180,slow=31						
SAML	Samuel	51.24	276	eP	P	03 48 57.4	+0.3
	9.1nm,1.3s						
LPAZ	La Paz	53.69	265	eP	P	03 49 15.8	-0.2
	2.6nm,1.1s						
LPAZ	La Paz	53.69	265	P	P	03 49 16.6	+0.6
	0.8nm,0.7s,baz=90,slow=3.0,SNR=2.6						
BRTR	Keskin Array B	73.81	35	P	P	03 51 29.4	+1.7
BRTR	Keskin Array B	73.81	35	P	P	03 51 29.4	+1.7
	0.7nm,0.7s,baz=207,slow=4.8,SNR=5.8						
AKASG	Malin Array Be	80.10	25	P	P	03 52 02.3	-0.4
AKASG	Malin Array Be	80.10	25	P	P	03 52 02.3	-0.4
	0.6nm,0.4s,baz=225,slow=6.1,SNR=6.9						

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*IDC **01** 03:47:23.1±6.0, 35°.84N×70°.97E, h57^{km}±47^{km}, mb3.3/6, mb1 3.5/10, mb1mx3.3/30, mbtmp3.4/10, ML3.7/4, Error ellipse: s-maj=44.6km s-min=26.3km az=165.0*

*NNC **01** 03:47:34.5±11.0, 36°.76N×70°.23E, h94^{km}±186^{km}, mb3.5, mpv4.0, Error ellipse: s-maj=88.5km s-min=57.4km az=15.0*

ISC 01 03:47:32.5±1.9**, 36°.7N**±0°.1×**70°.4E**±0°.1**, h64**^{km}**, n20, σ2.s26**/22**, mb3.4**/5**, 6C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	6.02	24	P	Pn	03 49 00.5	+1.2
	SNR=46						
KK31	Karatay Array	6.41	1	⇓P	Pn	03 49 07.1	+2.9
	3.4nm,0.3s,baz=179,slow=12,SNR=80						
KK31				⇑S	Sn	03 50 19.2	+3.3
	2.1nm,0.3s,baz=188,slow=27,SNR=4.3						
EKS2	Erkin-Say	6.52	23	P	Pn	03 49 08.0	+2.1
	SNR=8.5						
KZA	Kyzart	6.58	34	P	Pn	03 49 06.8	-0.1
	SNR=7.3						
AAK	Ala-Archa	6.74	27	P	Pn	03 49 10.0	+1.1
	SNR=9.1						
AAK	Ala-Archa	6.74	27	P	Pn	03 49 09.2	+0.3
	2.2nm,0.3s,baz=193,slow=8.6,SNR=17						
AAK				S	Sn	03 50 26.2	+1.9
	0.9nm,0.3s,baz=132,slow=23,SNR=6.9						
TKM2	Tokmak 2	7.42	31	⇑P	Pn	03 49 17.7	-0.5
	7.3nm,0.6s						
TKM2				⇑S	Sn	03 50 41.0	0.0
	4.6nm,0.9s						
TKM2	Tokmak 2	7.42	31	P	Pn	03 49 18.4	+0.1
	SNR=14						
MK31	Makanchi Array	13.45	38	⇑P	Pn	03 50 40.2	-0.1
	0.3nm,0.2s,baz=216,slow=14,SNR=19						
MKAR	Makanchi Array	13.45	38	P	Pn	03 50 38.0	-2.4
	0.1nm,0.3s,baz=214,slow=15,SNR=7.2						
AB31	Akbulak array	14.67	332	⇓P	Pn	03 50 57.4	+1.0
	3.4nm,0.5s,baz=145,slow=11,SNR=155						
AB31				⇑S	Sn	03 53 33.0	-4.5
	1.6nm,0.6s,baz=155,slow=24,SNR=6.4						
BVAR	Borovoye Array	16.34	0	P	Pn	03 51 18.1	+0.5
	0.3nm,0.3s,baz=180,slow=13,SNR=4.1						
AKTO	Aktyubinsk	16.36	331	⇓P	P	03 51 21.2	+1.5
	1.1nm,1.3s						
AKTO				⇑S	Sn	03 54 13.6	-4.9
	1.0nm,1.4s						
AKTO	Aktyubinsk	16.36	331	P	P	03 51 21.7	+2.0
	0.6nm,0.3s,baz=151,slow=13,SNR=12						
ZALV	Zalesovo Beam	19.96	26	P	P	03 51 56.4	-2.8
	3.7nm,0.5s,baz=221,slow=11,SNR=20						
SONM	Songino Array	28.66	56	P	P	03 53 15.4	-7.8
	0.2nm,0.4s,baz=284,slow=7.3,SNR=2.6						
ARCES	ARCESS Array B	40.77	338	P	P	03 55 07.6	+0.7
	1.6nm,0.8s,baz=97,slow=7.7,SNR=5.4						
NOA	NORSAR Array B	43.92	323	P	P	03 55 32.2	-0.5
	0.5nm,0.8s,baz=98,slow=7.4,SNR=2.5						
TORD	Torodi Ar. Bea	65.20	268	P	P	03 58 00.7	-6.8
	0.6nm,0.7s,baz=46,slow=6.1,SNR=6.1						
YKA	Yellowknife Ar	81.08	2	P	P	03 59 35.8	-4.5
	0.1nm,0.4s,baz=349,slow=5.4,SNR=7.0						

IDC 01 03:51:37.6±14.0**, 23°.66S**×**179°.85E, h539**^{km}±168^{km}**, mb3.4**/6**, mb1 3.6**/6**, mb1mx3.2**/19**, mbtmp3.4**/6**, Error ellipse: s-maj=98.8km s-min=54.2km az=163.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	31.33	270	P	P	03 57 15.0	+0.7
	7.0nm,0.4s,baz=93,slow=12,SNR=14						
STKA	Stephens Creek	34.68	248	P	P	03 57 41.8	-0.7
	0.9nm,0.3s,baz=106,slow=7.4,SNR=4.2						
ASAR	Alice Springs	41.94	260	P	P	03 58 41.0	-0.5
	1.7nm,0.5s,baz=97,slow=7.2,SNR=22						
WRA	Warramunga Arr	42.28	266	P	P	03 58 43.4	-0.8
	3.2nm,0.5s,baz=97,slow=8.4,SNR=99						
FITZ	Fitzroy Crossi	50.71	265	P	P	03 59 48.3	+0.3
	2.4nm,0.6s,baz=132,slow=6.4,SNR=13						
TXAR	Lajitas Array	90.42	58	P	P	04 03 42.0	-0.1
	0.5nm,0.7s,baz=214,slow=5.4,SNR=6.7						

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*IDC **01** 03:54:57.7±0.3, 3°.46S×143°.97E, h0^{km}, mb5.0/33, mb1 5.0/37, mb1mx5.0/37, mbtmp5.0/37, ML4.1/4, MS6.4/32, Ms1 6.4/32, ms1mx6.3/37, Error ellipse: s-maj=12.4km s-min=7.2km az=99.0*

*NEIC **01** 03:54:58.8±0.1, 3°.52S×144°.10E, h10^{km}, mb5.9/95, ME6.7, MS6.5/146, MW6.4, MW6.3, MW6.4(USGS), Error ellipse: s-maj=6.8km s-min=5.0km az=81.0, Moment Tensor Solution. s46 Moment tensor: Scale 10^{18}Nm; M_{rr}0.62; $M_{\theta\theta}$-0.11; $M_{\phi\phi}$-0.51; $M_{r\theta}$-0.19; $M_{\theta\phi}$2.91; $M_{\phi r}$1.23; Best double couple: $M_0$3.20000×10^{18} NP1:ϕ_s1.00000°, δ87.00000°, λ156.00000°. NP2:ϕ_s92.00000°, δ66.00000°, λ3.00000°. Principal axes: T 2.8500, Plg18.0000°, Azm313.0000°; N 0.6400, Plg65.0000°, Azm173.0000°; P -3.4900, Plg14.0000°, Azm48.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

*ISCJB **01** 03:54:59.6±0.2, 3°.49S±0°.02×144°.27E±0°.03, h18^{km}, mb5.7/200, MS6.4/223 Error ellipse: s-maj=3.7km s-min=3.4km az=165.6*

*AUST **01** 03:54:59.5±1.3, 3°.46S×143°.94E, h0^{km}, Error ellipse: s-maj=0.8km s-min=0.6km az=225.0*

*MOS **01** 03:55:02.2±1.8, 3°.54S×144°.18E, h33^{km}, mb6.0/50, MS6.4/60, Error ellipse: s-maj=8.2km s-min=4.7km az=104.9*

*SZGRF **01** 03:55:05.8, 3°.61S×144°.68E, h33^{km}, mb6.7, Near north coast of New Guinea, Papua New Guinea*

*GCMT **01** 03:55:06.5±0.1, 3°.36S×144°.22E, h12^{km}, MW6.4, Moment Tensor Solution. s121,c291; s99,c218; Moment tensor: Scale 10^{18}Nm; M_{rr}-0.03±.02; $M_{\theta\theta}$0.10±.02; $M_{\phi\phi}$-0.08±.03; $M_{r\theta}$-0.61±.06; $M_{\theta\phi}$5.01±.02; $M_{\phi r}$0.43±.06; Best double couple: $M_0$5.10000×10^{18} NP1:ϕ_s181.00000°, δ83.00000°, λ-175.00000°. NP2:ϕ_s90.00000°, δ85.00000°, λ-7.00000°. Principal axes: T 5.0300, Plg2.0000°, Azm136.0000°; N 0.0800, Plg82.0000°, Azm236.0000°; P -5.1000, Plg8.0000°, Azm45.0000°; Data Used: II IU CN IC G. Mantle waves from 112 sta. Surface waves: sta=125, comp=290, per= 50.*

*DJA **01** 03:55:07.1±0.5, 4°S±3°×14°4E±°, h44^{km}±5^{km}, M6.2/79, mb5.8/79, mB6.5/71, MLv6.4/2, Mw(mB)6.2/71, Mwp6.2/26*

ISC 01 03:55:01.7±0.3**, 3°.53S**±0°.03×**144°.23E**±0°.03**, h17**^{km}±1^{km}**, n1302, σ2.s67**/1250**, mb5.8**/198**, MS6.5**/225**, 153C-126D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	3.67	286	P	Pn	03 55 53.2	-4.5
JAY	Jayapura	3.67	286	P	Pn	03 55 53.0	-4.7
	baz=3.4,SNR=7.9						
SMPI	Sarmi	5.73	285	P	Pn	03 56 22.5	-3.5
	3µm,1.9s,61µm16nm						
PMG	Port Moresby	6.52	154	ePn	Pn	03 56 34.4	-2.5
PMG				Sn	Sn	03 58 00.4	+9.4
PMG	Port Moresby	6.52	154	P	Pn	03 56 38.1	+1.2
	1µm,1.2s,48µm398µm26nm						
PMG	Port Moresby	6.52	154	Pn	Pn	03 56 36.7	-0.2
	13nm,0.3s,baz=334,slow=7.8,SNR=14						
PMG				Sn	Sn	03 58 00.4	+9.4
	62nm,0.3s,baz=318,slow=21,SNR=5.7						
BAKI	Biak	8.45	286	P	Pn	03 57 01.5	-1.9
	859nm,1.3s,17µm331µm						
COEN	Coen	10.41	186	ePn	Pn	03 57 31.1	+0.7
COEN	Coen	10.41	186	P	Pn	03 57 31.0	+0.7
	baz=10,SNR=26						
TLE	Tual	11.65	259	P	Pn	03 57 45.6	-1.7
	2µm,1.7s,44µm117µm						
TLE	Tual	11.65	259	P	Pn	03 57 51.7	+4.4
	baz=11,SNR=4.6						
FAKI	Fak Fak	11.98	273	P	Pn	03 57 52.1	+0.2
	361nm,1.6s,8µm168µm						
BNDI	Bandanaira	14.33	266	P	P	03 58 32.8	+1.8
PALU	Palau	14.54	318	P	Pn	03 58 25.2	-1.7
	baz=14,SNR=13						
KDU	Kakadu	14.77	231	P	Pn	03 58 26.4	-3.5
	baz=15,SNR=68						
MTN	Manton Dam	15.92	234	P	Pn	03 58 41.8	-3.3
	baz=16,SNR=49						
AAI	Ambon	16.01	269	P	P	03 58 50.7	+1.0
	556nm,1.7s,11µm						
AAI	Ambon	16.01	269	P	P	03 58 54.2	+4.6
	baz=16,SNR=7.1						
CTA	Charters Tower	16.58	173	Pn	Pn	03 58 53.0	-0.5
CTA	Charters Tower	16.58	173	Pn	Pn	03 58 53.0	-0.5
	0.5nm,0.3s,baz=342,slow=13,SNR=17						
CTAO	Charters Tower	16.58	173	eP	Pn	03 58 52.9	-0.6
CTAO				pmax	pmax		
	comp=Z,1µm,2.0s						
CTAO	Charters Tower	16.58	173	eP	Pn	03 58 52.9	-0.6
	comp=Z,1µm,2.0s						
HNR	Honiara	16.67	111	eP	Pn	03 58 54.2	-0.5
	comp=Z,3µm,1.3s						
LBMI	Labuha	16.97	279	P	P	03 59 02.4	+2.1
	comp=Z,1µm,2.5s,comp=Z,25µmcomp=Z,92µm						
GUMO	Guam	17.02	2	eP	Pn	03 58 57.1	-2.0
	comp=Z,933nm,1.4s						
GUMO	Guam	17.02	2	Pn	Pn	03 58 56.9	-2.2
	comp=Z,2.2nm,0.3s,baz=205,slow=18,SNR=1.9						
NLAI	Namlea	17.11	270	P	Pn	03 59 00.8	+0.6
	comp=Z,414nm,1.9s,comp=Z,10µmcomp=Z,39µm						
TNTI	Ternate	17.39	284	P	P	03 59 08.2	+3.2
	comp=Z,1µm,2.0s,comp=Z,37µmcomp=Z,141µm						
PATS	Pohnpei	17.42	54	P	Pn	03 59 03.0	-1.1
	baz=18,SNR=7.3						
QIS	Mount Isa	17.52	195	P	P	03 59 09.1	+2.7
	baz=18,SNR=15						
WRAB	Tennant Creek	18.94	210	eP	P	03 59 18.5	-3.6
WRAB				pmax	pmax		
	comp=Z,792nm,1.3s						
WRAB	Tennant Creek	18.94	210	eP	P	03 59 18.5	-3.6
	comp=Z,792nm,1.3s						
WRAB	Tennant Creek	18.94	210	P	P	03 59 19.5	-2.6
	comp=Z,1µm,1.0s,SNR=13						
WRA	Warramunga Arr	18.96	210	P	P	03 59 20.5	-1.7
WRA				S	Sn	04 02 55.4	+0.4
WRA	Warramunga Arr	18.96	210	P	P	03 59 20.5	-1.7
	comp=Z,0.5nm,0.3s,baz=30,slow=11,SNR=30						
WRA				S	Sn	04 02 55.4	+0.4
	comp=Z,0.3nm,0.3s,baz=29,slow=24,SNR=4.3						
WRA				LR	LR	04 08 02.1	
	comp=Z,40µm,18.1s,baz=30,slow=42						
MNI	Manado	20.00	284	P	P	03 59 33.7	-0.1
	comp=Z,2µm,1.3s,comp=Z,34µm						
KMSI	Cibinong	20.65	281	P	Pn	03 59 42.5	-0.6
	comp=Z,5µm,1.1s,comp=Z,47µmcomp=Z,59µm						
DAV	Davao City (W)	21.39	299	P	P	03 59 46.2	-2.6
DAV	Davao City (W)	21.39	299	⇑eP	P	03 59 46.5	-2.3
DAV	Davao City (W)	21.39	299	P	P	03 59 51.2	+2.5
	SNR=20						
DAV	Davao City (W)	21.39	299	P	P	03 59 53.6	+4.8
	comp=Z,783nm,1.9s,comp=Z,25µm						
DAV	Davao City (W)	21.39	299	P	P	03 59 46.2	-2.6
	comp=Z,163nm,0.3s,baz=110,slow=8.5,SNR=2.0						
DAV				LR	LR	04 06 10.6	
	comp=Z,67µm,20.8s,baz=291,slow=32						
DMPH	Davao City--Mi	21.46	299	eP	P	03 59 52.6	+3.1
KDI	Kendari	21.57	268	P	P	03 59 51.9	+1.2
	comp=Z,286nm,2.8s,comp=Z,14µm						
LUWI	Luwuk	21.59	276	P	P	03 59 49.2	-1.7
	comp=Z,2µm,2.5s,comp=Z,37µmcomp=Z,76µm						
BBSI	Bau Bau	21.68	264	P	P	03 59 53.1	+1.2
	comp=Z,926nm,1.7s,comp=Z,28µm						
BUKP	Musuan	22.23	301	eP	P	03 59 56.1	-1.7
AS31	Alice Springs	22.37	206	eP	P	03 59 56.9	-2.4
ASAR	Alice Springs	22.37	206	P	P	03 59 55.8	-3.4
ASAR				S	S	04 04 03.9	-0.8
ASAR	Alice Springs	22.37	206	P	P	03 59 55.8	-3.4
	comp=Z,7.2nm,0.8s,baz=36,slow=7.9,SNR=26						
ASAR				S	S	04 04 03.9	-0.8
	comp=Z,17nm,0.9s,baz=28,slow=18,SNR=5.9						
ASAR				LR	LR	04 09 33.4	
	comp=Z,362µm,19.2s,baz=30,slow=39						
MMRI	Maumere	22.45	256	P	P	03 59 58.6	-1.5
	comp=Z,873nm,1.5s,comp=Z,14µmcomp=Z,48µm						
CTBH	Cotabato--PC H	22.63	298	⇓iP	P	04 00 03.8	+1.7
MRSI	Marisa	22.63	280	P	P	04 00 00.4	-1.7
	comp=Z,413nm,1.0s,comp=Z,12µmcomp=Z,44µm						
EIDS	Eidsvold	22.69	164	eP	P	03 59 60.0	-2.6
	comp=Z,521nm,1.3s						
EIDS	Eidsvold	22.69	164	P	P	04 00 04.2	+1.6
	baz=23,SNR=17						
EIDS				S	S	04 04 14.8	+4.4
	baz=23,SNR=5.0						
CGP	Cagayan de Oro	22.84	302	eP	P	04 00 14.1	+10
QLP	Quilpie	22.92	180	P	P	04 00 04.1	-0.9
	baz=23,SNR=70						
RMQ	Roma	23.23	170	P	P	04 00 07.2	-1.1
	baz=24,SNR=8.6						
FITZ	Fitzroy Crossi	23.27	230	eP	P	04 00 04.0	-4.6
	comp=Z,164nm,1.2s						
FITZ	Fitzroy Crossi	23.27	230	P	P	04 00 05.0	-3.6
	comp=Z,169nm,1.1s,baz=72,slow=7.1,SNR=19						
FITZ				LR	LR	04 09 50.9	
	comp=Z,173µm,18.7s,baz=54,slow=39						
FITZ	Fitzroy Crossi	23.27	230	P	P	04 00 04.4	-4.2
	baz=23,SNR=28						
MSLP	Maasin	23.59	305	eP	P	04 00 13.3	+1.5
PAGZ	Pagadian	23.68	299	eP	P	04 00 13.5	+0.8
PLP	Palo	24.09	308	⇓eP	P	04 00 13.0	-3.6
BKSI	Bulukumba	24.11	265	P	P	04 00 15.5	-1.3
	comp=Z,437nm,1.7s,comp=Z,12µm						
TTSI	Tana Toraja	24.38	270	P	P	04 00 19.3	0.0
	comp=Z,861nm,1.1s,comp=Z,19µmcomp=Z,28µm						
SPSI	Sidrap Palu	24.42	268	P	P	04 00 19.6	-0.1
	comp=Z,407nm,1.0s,comp=Z,14µm						
KAPI	Kappang	24.46	266	P	P	04 00 16.3	-3.8
KAPI	Kappang	24.46	266	P	P	04 00 16.7	-3.3
	comp=Z,1µm,1.1s,SNR=32						
KAPI	Kappang	24.46	266	P	P	04 00 16.3	-3.8
	comp=Z,19nm,0.6s,baz=94,slow=6.3,SNR=15						
PCI	Palu	24.52	276	P	P	04 00 19.4	-1.1
	baz=24,SNR=6.6						
PCI				S	S	04 04 49.8	+9.1
	baz=24,SNR=4.3						
WSI	Waingapu	24.54	254	P	P	04 00 15.9	-4.8
	baz=24,SNR=5.4						
GUIM	Jordan	25.73	303	eP	P	04 00 35.7	+4.2
RCP	Roxas	26.11	305	⇑eP	P	04 00 36.9	+1.9
PVCP	Virac	26.20	311	eP	P	04 00 36.3	+0.5
MYLDM	Lahad Datu	27.12	288	P	P	04 00 46.3	+2.2
SMKI	Samarinda	27.18	276	P	P	04 00 51.3	+6.6
TSM	Tawau	27.46	286	P	P	04 00 49.1	+1.9
ARMA	Armidale	27.64	166	eP	P	04 00 48.3	-0.4
	comp=Z,280nm,1.5s						
ARMA	Armidale	27.64	166	P	P	04 00 51.3	+2.5
	baz=28,SNR=4.7						
CMSA	Cobar Meteorol	27.89	177	P	P	04 00 50.4	-0.4
	baz=28,SNR=13						
SJMP	San Jose	27.93	305	eP	P	04 00 54.2	+2.8
KBKI	Kotabaru	28.02	270	P	P	04 00 54.2	+2.0
	comp=Z,152nm,1.3s,comp=Z,4µm						
STKA	Stephens Creek	28.31	185	eP	P	04 00 53.3	-1.2
STKA	Stephens Creek	28.31	185	P	P	04 00 54.2	-0.3
	comp=Z,9.5nm,0.7s,baz=357,slow=9.3,SNR=8.8						
STKA				LR	LR	04 13 56.8	

comp=Z,298µm,18.4s,baz=359,slow=40
STKA Stephens Creek 28.31 185 P **P** **04 00 53.2 -1.4**
baz=28,SNR=19
DZM Mont Dzumac 28.36 132 *e*P **P** **04 00 57.0 +1.8**
comp=Z,317nm,1.4s
DZM *e*S **S** **04 05 36.8 -4.7**
comp=Z,28µm,25.7s
DZM *e*LR LR 04 08 11.8
comp=Z,220µm,23.6s
DZM Mont Dzumac 28.36 132 *e*P **P** **04 00 55.6 +0.4**
comp=Z,265nm,1.5s
DZM Mont Dzumac 28.36 132 P **P** **04 00 55.9 +0.7**
comp=Z,38nm,0.9s,baz=16,slow=8.6,SNR=8.3
SDKM Sandakan 28.50 289 P **P** **04 00 58.5 +1.9**
KHKI Kahang-Kahang 28.86 259 P **P** **04 00 57.2 -2.5**
comp=Z,201nm,1.4s,comp=Z,3µmcomp=Z,58µm
TGY Tagaytay City 29.00 308 P **P** **04 00 59.7 -1.2**
TGY Tagaytay City 29.00 308 P **P** **04 00 59.7 -1.2**
comp=Z,136nm,0.3s,baz=353,slow=19,SNR=7.4
TGY LR LR 04 11 55.9
comp=Z,55nm,20.1s,baz=124,slow=35
TARA Tarawa 29.08 81 PFAKE 04 01 10.0 +8.3
TARA LR LR
comp=Z,83µm,19.0s
SRBI Singaraja 29.22 260 P P 04 00 59.4 -3.5
comp=Z,130nm,1.6s,comp=Z,5µm
BBKI Banjar Baru 29.34 269 P **P** **04 01 06.2 +2.2**
comp=Z,349nm,1.7s,comp=Z,9µm
KKM Kota Kinabalu 29.55 289 *e*P **P** **04 01 06.4 +0.4**
comp=Z,89nm,0.9s
KKM Kota Kinabalu 29.55 289 P **P** **04 01 07.9 +1.9**
KKM Kota Kinabalu 29.55 289 P P 04 01 13.1 +7.1
baz=29,SNR=5.1
MBWA Marble Bar 29.58 232 *e*P **P** **04 01 06.2 +0.2**
comp=Z,304nm,1.4s
MBWA LR LR
comp=Z,56µm,19.0s
NBBI Negara 29.84 259 P P 04 01 03.2 -5.1
comp=Z,184nm,1.4s,comp=Z,5µm
BYJI Banyuwangi 30.07 260 P **P** **04 01 09.8 -0.7**
comp=Z,352nm,1.6s
BBOO Buckleboo 30.12 194 *e*P P 04 01 07.3 -3.3
comp=Z,2µm,0.9s
BBOO Buckleboo 30.12 194 P **P** **04 01 12.1 +1.4**
baz=30,SNR=14
KMMI Kalianget 30.34 262 P **P** **04 01 12.7 -0.1**
comp=Z,129nm,1.3s,comp=Z,6µmcomp=Z,34µm
CBIJ Chichi jima 30.51 356 P **P** **04 01 13.6 -0.6**
CBIJ Chichi jima 30.51 356 P **P** **04 01 13.5 -0.6**
comp=Z,144nm,1.0s,baz=146,slow=11,SNR=4.1
CBIJ LR LR 04 12 17.3
comp=Z,26µm,18.6s,baz=174,slow=34
BLJI Banyuglugur 30.77 261 P P 04 01 23.9 +7.3
YNG Young 30.86 173 P **P** **04 01 18.7 +1.6**
baz=31,SNR=6.6
GMJI Gumukmas 30.98 260 P **P** **04 01 20.5 +2.1**
comp=Z,86nm,1.4s,comp=Z,3µm
FORT Forrest 31.11 208 *e*P **P** **04 01 19.3 -0.1**
comp=Z,362nm,0.9s
FORT Forrest 31.11 208 P **P** **04 01 19.4 -0.1**
baz=31,SNR=18
BWJI Bawean 31.55 265 P **P** **04 01 25.4 +1.9**
comp=Z,196nm,1.4s,comp=Z,3µm
WAKE Wake Island 31.63 43 PFAKE 04 01 40.0 +16
WAKE LR LR
comp=Z,64µm,21.0s
BTM Bintulu 31.84 282 P **P** **04 01 28.0 +1.9**
KRKI Karangkates 31.94 260 P P 04 01 35.7 +8.8
CAN Canberra 31.94 173 *e*P **P** **04 01 28.0 +1.3**
CAN pmax pmax
comp=Z,114nm,1.3s
CAN MLR MLR
comp=Z,111µm,22.0s
CAN Canberra 31.94 173 *e*P **P** **04 01 28.0 +1.3**
comp=Z,114nm,1.3s
CAN LR LR
comp=Z,111µm,22.0s
PBKI Pangkalan Bun 32.53 271 P P 04 01 39.8 +7.7
SBUM Sibu 32.55 280 P **P** **04 01 34.1 +1.9**
PWJI Pagerwojo 32.56 261 P **P** **04 01 29.9 -2.5**
comp=Z,112nm,1.2s
SJI Sawahan 32.57 261 P **P** **04 01 33.9 +1.3**
comp=Z,84nm,1.6s,comp=Z,3µm
STKI Sintang 32.93 276 P **P** **04 01 37.4 +1.7**
comp=Z,171nm,1.6s,comp=Z,30µm
ARPS Mount Arapiles 33.15 184 P **P** **04 01 39.6 +2.4**
baz=33,SNR=26
PCJI Pacitan 33.20 260 P **P** **04 01 37.2 -0.8**
comp=Z,181nm,1.0s,comp=Z,3µm
MEEK Meekatharra 33.61 224 P **P** **04 01 38.9 -2.6**
baz=34,SNR=18
UGM Wanagama 33.81 261 *e*P **P** **04 01 41.8 -1.6**
comp=Z,931nm,1.6s
UGM Wanagama 33.81 261 P **P** **04 01 43.6 +0.2**
comp=Z,299nm,1.4s,comp=Z,5µm
UGM Wanagama 33.81 261 P P 04 01 37.0 -6.4
baz=34,SNR=3.3
SMRI Semarang 33.82 263 P P 04 01 49.5 +6.0
JOW Kunigami 33.90 334 *e*P **P** **04 01 40.7 -3.2**
comp=Z,97nm,1.3s
JOW Kunigami 33.90 334 P **P** **04 01 42.7 -1.1**
comp=Z,136nm,1.2s,baz=161,slow=18,SNR=2.8
JOW LR LR 04 12 26.2
comp=Z,83µm,20.4s,baz=147,slow=31
TOO Toolangi 33.90 178 P **P** **04 01 46.5 +2.7**
baz=34,SNR=11
YOGI Yogyakarta 34.03 261 P P 04 01 48.6 +3.4
comp=Z,659nm,1.5s,comp=Z,9µm
KSM Kuching 34.27 278 P **P** **04 01 48.8 +1.5**
KSM Kuching 34.27 278 P **P** **04 01 45.4 -1.9**
baz=34,SNR=10
BJII Banjamegara 34.57 262 P **P** **04 01 49.8 -0.2**
comp=Z,255nm,1.4s,comp=Z,5µm
GIRL Giralia 34.72 234 P **P** **04 01 52.3 +1.2**
baz=35,SNR=14
KMBL Kambalda 34.78 215 P **P** **04 01 52.2 +0.7**
baz=35,SNR=5.0
YULB Yu-li 34.88 321 *e*P **P** **04 01 51.1 -1.3**
comp=Z,398nm,1.7s
TGJI Tegal 35.12 263 P **P** **04 01 57.4 +2.8**
comp=Z,78nm,1.4s,comp=Z,3µm
TPUB Ta-pu 35.23 320 *e*P **P** **04 01 56.2 +0.7**
NACB Ninganchiao 35.27 322 *e*P **P** **04 01 56.4 +0.6**
SSLB Suanglung 35.38 321 *e*P **P** **04 01 54.8 -2.0**
comp=Z,145nm,1.4s
YHNB Yeheng 35.77 323 *e*P **P** **04 01 59.5 -0.7**
comp=Z,1µm,1.6s
YHNB LR LR
comp=Z,69µm,21.0s
TATO Taipei 35.93 323 *e*P **P** **04 01 59.7 -1.8**
comp=Z,2µm,1.7s
TATO LR LR
comp=Z,66µm,21.0s
MSVF Nonsavu 36.01 116 *e*P **P** **04 02 00.7 -1.7**
MSVF pmax pmax
comp=Z,383nm,1.6s
MSVF MLR MLR
comp=Z,62µm,19.0s
MSVF Nonsavu 36.01 116 *e*P **P** **04 02 00.7 -1.7**
comp=Z,383nm,1.6s
MSVF LR LR
comp=Z,62µm,19.0s
CISI Cisompet, Garu 36.46 262 P **P** **04 02 04.2 -2.0**
comp=Z,439nm,0.8s,comp=Z,4µm
JHJ Hachijo jima 2 36.69 354 LR LR 04 15 21.2
comp=Z,26µm,18.1s,baz=336,slow=33
MORW Morawa 36.90 224 P **P** **04 02 11.0 +1.3**
baz=37,SNR=13
CBJI Citeko 37.35 264 P P 04 02 19.0 +5.3
KLBR Kellerberrin 37.41 219 P **P** **04 02 15.8 +1.7**
baz=37,SNR=7.5
BLDU Ballidu 37.43 221 P **P** **04 02 16.2 +2.0**
baz=37,SNR=18
DBJI Dramaga 37.45 264 P **P** **04 02 13.8 -0.8**
comp=Z,144nm,1.7s,comp=Z,5µm
QZH Quanzhou 37.70 320 ⇑*i*P **P** **04 02 18.1 +1.6**
QZH S **S** **04 08 05.4 -0.8**
QZH pmax pmax
comp=Z,290nm,1.0s
QZH pmax pmax
comp=Z,10µm,9.5s
QZH LR LR
comp=N,26µm,11.6s
QZH LR LR
comp=E,106µm,26.0s
QZH LR LR
comp=Z,148µm,28.5s

PPBI Pangkal Pinang 38.07 271 P **P** 04 02 15.7 -4.2
comp=Z,149nm,1.4s,comp=Z,19µmcomp=Z,19µm
CGJI Cibinong 38.50 264 P **P** **04 02 21.2 -2.3**
comp=Z,194nm,1.3s,comp=Z,3µm
JNU Nakatsue 38.58 342 *e*P **P** **04 02 21.9 -2.0**
JNU Nakatsue 38.58 342 P **P** **04 02 22.6 -1.3**
comp=Z,32nm,0.9s,baz=126,slow=6.2,SNR=6.5
JNU LR LR 04 16 10.9
comp=Z,47µm,19.4s,baz=323,slow=33
NWAO Narrogin (SRO) 38.64 218 *e*P **P** **04 02 23.6 -0.8**
comp=Z,693nm,2.1s
NWAO LR LR
comp=Z,107µm,19.0s
NWAO Narrogin (SRO) 38.64 218 P **P** **04 02 22.6 -1.8**
comp=Z,22nm,1.0s,baz=27,slow=6.8,SNR=2.9
MOO Moorlands 38.83 177 P P 04 02 33.1 +7.3
baz=39,SNR=5.0
HKC Hong Kong Obse 39.02 313 ⇓*i*P P 04 02 34.0 +6.3
HKC *i* S **S** **04 08 32.0 +5.8**
TAU Tasmania Unive 39.31 176 *e*P **P** **04 02 30.7 +0.9**
TAU pmax pmax
comp=Z,192nm,1.5s
TAU MLR MLR
comp=Z,119µm,21.0s
TAU Tasmania Unive 39.31 176 *e*P **P** **04 02 30.7 +0.9**
comp=Z,192nm,1.5s
TAU LR LR
comp=Z,119µm,21.0s
KASI Kota Agung 39.66 266 P P 04 02 29.0 -4.2
comp=Z,310nm,0.9s,comp=Z,3µm
LWLI Liwa 40.09 266 P **P** **04 02 37.9 +1.0**
comp=Z,324nm,1.4s
GZH Guangzhou 40.10 313 P P 04 02 40.1 +3.4
GZH PcS **PcS** **04 08 34.3 +2.5**
GZH S **S** **04 08 47.2 +4.7**
GZH LR LR
comp=N,23µm,19.8s
GZH LR LR
comp=E,18µm,18.7s
GZH LR LR
comp=Z,42µm,20.8s
MJAR Matsushiro Arr 40.26 352 P **P** **04 02 35.8 -2.0**
MJAR Matsushiro Arr 40.26 352 P **P** **04 02 35.8 -2.0**
comp=Z,27nm,1.1s,baz=184,slow=10,SNR=18
MJAR LR LR 04 17 41.3
comp=Z,12µm,19.1s,baz=185,slow=34
MAJO Matsushiro 40.26 352 *e*P **P** **04 02 37.8 -0.1**
MAJO pmax pmax
comp=Z,106nm,1.3s
MAJO Matsushiro 40.26 352 *e*P **P** **04 02 37.8 -0.1**
comp=Z,106nm,1.3s
MAT Matsushiro 40.26 352 P **P** **04 02 38.1 +0.3**
MAT S S 04 08 50.8 +6.3
QIZ Qiongzhong 40.59 305 P **P** **04 02 41.3 +0.5**
QIZ sP **sP** **04 02 47.0 -1.1**
QIZ S **S** **04 08 50.2 +0.2**
QIZ pmax pmax
comp=Z,4µm,7.0s
QIZ LR LR
comp=N,21µm,20.6s
QIZ LR LR
comp=E,10µm,19.8s
QIZ LR LR
comp=Z,45µm,21.2s
QIZ Qiongzhong 40.59 305 *e*P P 04 02 37.5 -3.3
comp=Z,232nm,1.5s
MYKOM **Kota Tinggi 40.71 277** P **P** **04 02 43.2 +1.3**
SSE Sheshan 40.85 329 P **P** **04 02 45.1 +2.4**
SSE sP **sP** **04 02 51.5 +1.5**
SSE PP **PnPn** **04 04 19.9 -1.4**
SSE S **S** **04 08 51.0 -2.4**
SSE pmax pmax
comp=Z,130nm,1.6s
SSE pmax pmax
comp=Z,4µm,9.1s
SSE LR LR
comp=N,31µm,24.6s
SSE LR LR
comp=E,17µm,24.9s
SSE LR LR
comp=Z,39µm,24.5s
KGM Kluang 41.27 277 P **P** **04 02 47.9 +1.4**
KSI Kapahiang 41.56 268 P **P** **04 02 48.4 -0.6**
comp=Z,141nm,1.7s,comp=Z,5µm
OUZ Omahuta 41.64 143 *e*P **P** **04 02 48.5 -0.8**
comp=Z,209nm,1.5s
KTGM Kuala Trenggan 41.99 282 P **P** **04 02 54.1 +1.7**
RGRI Rengat 41.99 273 P **P** **04 02 50.8 -1.6**
comp=Z,263nm,1.7s,comp=Z,88µm
KRJI Kerinci 42.74 271 P **P** **04 02 58.9 +0.2**
comp=Z,421nm,1.9s,comp=Z,8µm
NJ2 Nanjing 42.82 328 *e*P P 04 03 02.2 +3.3
NJ2 pP pP 04 03 07.6 +3.5
NJ2 sP sP 04 03 12.6 +6.4
NJ2 S **S** **04 09 28.5 +5.9**
NJ2 SS **SS** **04 12 30.5 -3.6**
NJ2 pmax pmax
comp=Z,240nm,1.1s
NJ2 pmax pmax
comp=Z,6µm,8.8s
NJ2 LR LR
comp=N,54µm,20.4s
NJ2 LR LR
comp=E,38µm,28.9s
NJ2 LR LR
comp=Z,80µm,25.1s
FRIM Kepong 43.11 278 P **P** **04 03 03.1 +1.5**
BKNI Bangkinang 43.34 274 P **P** **04 03 01.3 -2.1**
comp=Z,427nm,1.2s,comp=Z,6µm
KSRS Korea Array 43.51 341 P P 04 03 00.2 -4.0
comp=Z,49nm,1.1s,baz=162,slow=9.8,SNR=5.8
KSRS LR LR 04 19 20.3
comp=Z,41µm,19.0s,baz=147,slow=34
KSAR Wonju Array Be 43.51 341 P P 04 03 00.2 -4.1
IPM Ipoh 43.90 280 *e*P **P** **04 03 08.3 +0.4**
comp=Z,167nm,1.6s
IPM Ipoh 43.90 280 P **P** **04 03 09.4 +1.4**
PPI Padang Panjang 43.91 273 P **P** **04 03 07.7 -0.3**
comp=Z,346nm,1.1s,comp=Z,12µm
PPI Padang Panjang 43.91 273 P P 04 03 14.9 +6.9
baz=44,SNR=8.0
INCN Inchon 43.96 340 *e*P **P** **04 03 09.9 +1.9**
comp=Z,216nm,1.3s
INCN LR LR
comp=Z,30µm,19.0s
RAO Raoul Island 44.07 130 PFAKE 04 03 20.0 +11
RAO LR LR
comp=Z,37µm,20.0s
WHN Wuhan 44.30 322 P **P** **04 03 11.8 +1.0**
WHN S **S** **04 09 46.9 +2.6**
WHN LR LR
comp=N,33µm,13.5s
WHN LR LR
comp=E,23µm,17.9s
WHN LR LR
comp=Z,107µm,37.2s
KULM Kulim 44.41 281 *e*P **P** **04 03 11.4 -0.6**
comp=Z,162nm,1.6s
KULM Kulim 44.41 281 P **P** **04 03 13.3 +1.3**
AFI Afiamalu 44.61 106 LR LR 04 19 59.0
comp=Z,21µm,18.9s,baz=271,slow=34
MNSI Mandailing Nat 44.84 275 P **P** **04 03 13.6 -1.8**
comp=Z,133nm,1.5s
ERM Erimo 45.34 359 *e*P **P** **04 03 21.8 +2.9**
ERM pmax pmax
comp=Z,132nm,1.4s
ERM MLR MLR
comp=Z,21µm,21.0s
ERM Erimo 45.34 359 *e*P **P** **04 03 21.8 +2.9**
comp=Z,132nm,1.4s
ERM LR LR
comp=Z,21µm,21.0s
ERM Erimo 45.34 359 P **P** **04 03 21.8 +2.9**
comp=Z,219nm,1.1s,SNR=7.7
PSI Prapat 45.72 277 P P 04 03 19.0 -3.6
comp=Z,243nm,1.4s,comp=Z,6µm
PSI Prapat 45.72 277 P P 04 03 18.5 -4.1
baz=45,SNR=14
URZ Urewera 45.76 143 P **P** **04 03 24.4 +2.0**
URZ Urewera 45.76 143 P **P** **04 03 24.4 +2.0**
comp=Z,12nm,0.7s,baz=39,slow=3.7,SNR=5.5
SNZO South Karori 46.51 148 PFAKE 04 03 40.0 +12
SNZO LR LR
comp=Z,36µm,20.0s
RPZ Rata Peaks 46.53 153 *e*P **P** **04 03 31.0 +2.6**
comp=Z,97nm,1.0s

RPZ Rata Peaks 46.53 153 P **P** **04 03 28.0 -0.4**
comp=Z,64nm,1.0s,baz=6.0,slow=5.4,SNR=12
GSI Gunungsitoli 46.88 275 P **P** **04 03 31.8 +0.2**
comp=Z,208nm,0.7s,comp=Z,5µmcomp=Z,96µm
TIA Tai'an 46.96 330 ⇑⇑P **P** **04 03 32.5 +0.7**
TIA PP **PP** **04 05 17.5 -5.0**
TIA S **S** **04 10 21.8 -0.7**
TIA pmax pmax
comp=Z,140nm,1.4s
TIA pmax pmax
comp=Z,5µm,9.2s
TIA LR LR
comp=N,40µm,24.9s
TIA LR LR
comp=E,22µm,28.0s
TIA LR LR
comp=Z,52µm,29.7s
GYA Guiyang 46.99 312 ⇑*i*P P 04 03 28.9 -3.5
GYA PcP **PcP** **04 05 07.3 +2.6**
GYA PP **PP** **04 05 24.7 +1.6**
GYA ScP **ScP** **04 09 01.0 +3.0**
GYA S S 04 10 13.3 -10
GYA SS **SS** **04 13 45.5 -5.2**
GYA pmax pmax
comp=Z,90nm,1.0s
GYA pmax pmax
comp=Z,5µm,11.4s
GYA LR LR
comp=N,17µm,21.5s
GYA LR LR
comp=E,9µm,19.7s
GYA LR LR
comp=Z,10µm,23.1s
DL2 Dalian 47.10 336 P **P** **04 03 33.8 +1.0**
DL2 S **S** **04 10 23.1 -1.3**
DL2 pmax pmax
comp=Z,50nm,1.4s
DL2 pmax pmax
comp=Z,3µm,9.7s
DL2 LR LR
comp=E,12µm,19.4s
DL2 LR LR
comp=Z,20µm,31.5s
ENH Enshi 47.25 318 *e*P **P** **04 03 32.6 -1.6**
comp=Z,615nm,1.7s
YUK Yuzh-Kuril'sk 47.37 2*c* *i*P **P** **04 03 33.3 -1.5**
YUK *i* 04 05 30.0
YUK *i* PPP PPP 04 06 21.5
YUK *i* S **S** **04 10 25.6 -2.5**
YUK pmax pmax
comp=Z,2µm,1.8s
YUK pmax pmax
comp=Z,788nm,1.8s
YUK pmax pmax
comp=N,286nm,1.8s
YUK pmax pmax
comp=E,393nm,1.8s
YUK MLR MLR
comp=Z,5µm,21.0s
ASAJ Asahikawa 47.45 358 *e*P **P** **04 03 33.9 -1.6**
comp=Z,158nm,1.6s
ASAJ Asahikawa 47.45 358 P **P** **04 03 34.0 -1.6**
comp=Z,38nm,1.2s,baz=244,slow=16,SNR=6.1
COCO West Island 47.67 257 PFAKE 04 03 50.0 +12
COCO LR LR
comp=Z,9µm,21.0s
COCO West Island 47.67 257 P P 04 03 46.7 +9.0
LHMI Lhok Sumawe 48.03 280 P **P** **04 03 40.5 0.0**
comp=Z,249nm,1.1s,comp=Z,9µm
SRDT SRDT 48.12 293 P **P** **04 03 42.3 +1.2**
comp=Z,110nm,1.9s,comp=Z,5µm
MIDW Midway 48.58 47 PFAKE 04 04 00.0 +16
MIDW LR LR
comp=Z,25µm,22.0s
KUR Kuril'sk 48.66 3 *e*P **P** **04 03 47.0 +2.2**
KUR *e*S **S** **04 10 50.0 +3.8**
KUR pmax pmax
comp=Z,1µm,1.5s
KUR pmax pmax
comp=N,5µm,5.0s
KUR pmax pmax
comp=Z,8µm,5.0s
KUR smax smax
comp=N,44µm,9.0s
KUR smax smax
comp=E,8µm,9.0s
USRK Ussuriysk Arra 48.77 348 P **P** **04 03 43.4 -2.2**
comp=E,16nm,0.7s,baz=169,slow=7.6,SNR=19
USRK LR LR 04 20 05.1
comp=E,25µm,22.0s,baz=150,slow=31
SNY Shenyang 48.90 340 ⇓P **P** **04 03 48.6 +1.9**
SNY S **S** **04 10 49.8 0.0**
SNY pmax pmax
comp=Z,110nm,1.7s
SNY pmax pmax
comp=Z,5µm,9.2s
SNY LR LR
comp=N,30µm,19.4s
SNY LR LR
comp=E,28µm,17.8s
SNY LR LR
comp=Z,40µm,18.0s
KMI Kunming 49.32 308 P **P** **04 03 52.2 +1.7**
KMI pP **pP** **04 03 56.0 +0.2**
KMI PP **PP** **04 05 44.4 -0.2**
KMI S **S** **04 10 55.1 -1.6**
KMI SS **SS** **04 14 25.8 -2.8**
KMI pmax pmax
comp=Z,80nm,1.6s
KMI pmax pmax
comp=Z,5µm,11.4s
KMI LR LR
comp=N,15µm,21.6s
KMI LR LR
comp=E,14µm,27.3s
KMI LR LR
comp=Z,32µm,25.7s
CMAR Chiang Mai Arr 49.66 298 P **P** **04 03 50.8 -2.2**
CMAR P'P' 04 34 48.7
CMAR Chiang Mai Arr 49.66 298 P **P** **04 03 50.8 -2.2**
comp=Z,11nm,0.9s,baz=120,slow=6.0,SNR=23
CMAR LR LR 04 22 28.4
comp=Z,19µm,21.9s,baz=303,slow=33
CMAR PKPPKP **P'P'df** **04 34 48.7 -1.2**
comp=Z,1.2nm,0.4s,baz=272,slow=2.1,SNR=5.0
MDJ Mudanjiang 49.69 346 P **P** **04 03 54.0 +1.3**
MDJ pP **pP** **04 03 57.3 -0.8**
MDJ sP **sP** **04 03 58.4 -1.7**
MDJ ScP **ScP** **04 09 10.6 +1.7**
MDJ PcS **PcS** **04 09 11.7 +1.3**
MDJ S **S** **04 11 03.5 +2.6**
MDJ sS **sS** **04 11 08.9 -0.7**
MDJ pmax pmax
comp=Z,16nm,1.4s
MDJ pmax pmax
comp=Z,2µm,8.2s
MDJ LR LR
comp=N,13µm,27.2s
MDJ LR LR
comp=E,29µm,28.1s
MDJ LR LR
comp=Z,41µm,29.9s
MDJ Mudanjiang 49.69 346 *e*P **P** **04 03 50.4 -2.3**
comp=Z,37nm,1.1s
BSI Banda Aceh 49.70 280 P **P** **04 03 51.1 -2.2**
comp=Z,122nm,0.9s,comp=Z,3µm
CMMT Chiang Mai 49.79 298 P **P** **04 03 52.7 -1.3**
comp=Z,98nm,2.7s
CHTO Chiang Mai 49.79 298 *e*P **P** **04 03 51.4 -2.6**
CHTO pmax pmax
comp=Z,80nm,1.1s
CHTO MLR MLR
comp=Z,16µm,22.0s
CHTO Chiang Mai 49.79 298 *e*P **P** **04 03 51.4 -2.6**
comp=Z,80nm,1.1s
CHTO LR LR
comp=Z,16µm,22.0s
CHTO Chiang Mai 49.79 298 P **P** **04 03 52.2 -1.7**
SNR=24
CHTO Chiang Mai 49.79 298 P **P** **04 03 52.5 -1.5**
XAN Xi'an 50.04 321 P P 04 03 51.9 -3.8
XAN pP pP 04 04 03.8 +2.8
XAN sP sP 04 04 10.2 +7.2
XAN S **S** **04 11 08.5 +2.3**
XAN pmax pmax
comp=Z,47nm,1.6s

XAN pmax pmax
comp=Z,1µm,14.7s
XAN LR LR
comp=N,15µm,31.4s
XAN LR LR
comp=E,8µm,35.9s
XAN LR LR
comp=Z,8µm,28.7s
CN2 Changchun 50.06 342 *e*P **P** **04 03 57.3 +1.8**
CN2 *e*pP pP 04 04 07.2 +6.4
CN2 PP **PP** **04 05 53.4 +2.6**
CN2 *e*S **S** **04 11 07.1 +1.1**
CN2 SS **SS** **04 14 37.0 -2.4**
CN2 pmax pmax
comp=Z,50nm,1.4s
CN2 LR LR
comp=N,20µm,16.0s
CN2 LR LR
comp=E,31µm,16.0s
CN2 LR LR
comp=Z,35µm,23.0s
YSS Yuzh-Sakhalins 50.28 359*j* *i*P P 04 04 01.2 +4.0
YSS *e* 04 04 17.0
YSS *e* 04 05 14.2
YSS *i* S **S** **04 11 08.0 -1.0**
YSS *e* 04 13 39.0
YSS pmax pmax
comp=N,160nm,1.8s
YSS pmax pmax
comp=Z,310nm,1.8s
YSS pmax pmax
comp=Z,3µm,8.0s
YSS pmax pmax
comp=N,1µm,7.0s
YSS smax smax
comp=N,6µm,14.0s
YSS smax smax
comp=E,12µm,14.0s
YSS MLR MLR
comp=N,8µm,18.0s
YSS MLR MLR
comp=Z,10µm,18.0s
YSS MLR MLR
comp=E,5µm,17.0s
YSS Yuzh-Sakhalins 50.28 359 *e*P **P** **04 03 58.9 +1.7**
comp=E,318nm,1.6s
YSS LR LR
comp=Z,5µm,20.0s
BJT Baijiatuau 50.42 332 *e*P **P** **04 03 57.5 -0.8**
comp=Z,412nm,1.5s
BJI Beijing 50.43 332 P **P** **04 04 00.1 +1.7**
BJI PP **PP** **04 05 57.6 +3.4**
BJI S **S** **04 11 08.6 -2.7**
BJI pmax pmax
comp=Z,64nm,1.5s
BJI pmax pmax
comp=Z,5µm,8.9s
BJI LR LR
comp=N,31µm,21.5s
BJI LR LR
comp=E,18µm,21.5s
BJI LR LR
comp=Z,42µm,25.6s
CD2 Chengdu 51.59 315 ⇑P **P** **04 04 09.0 +1.6**
CD2 pP **pP** **04 04 13.5 +0.8**
CD2 sP **sP** **04 04 16.0 +1.2**
CD2 PcP **PcP** **04 05 23.1 +1.9**
CD2 PP **PP** **04 06 07.2 +2.2**
CD2 PcS **PcS** **04 09 19.5 +0.2**
CD2 S **S** **04 11 28.4 +0.6**
CD2 sS **sS** **04 11 35.5 -1.1**
CD2 ScS **ScS** **04 13 56.3 -1.2**
CD2 SS **SS** **04 15 02.3 -2.0**
CD2 pmax pmax
comp=Z,100nm,0.6s
CD2 pmax pmax
comp=Z,7µm,9.2s
CD2 LR LR
comp=N,15µm,23.5s
CD2 LR LR
comp=E,23µm,20.0s
CD2 LR LR
comp=Z,27µm,19.4s
HHC Hu-ho-hao-te 53.31 329 *e*P **P** **04 04 21.0 +1.0**
HHC sP **sP** **04 04 26.0 -1.4**
HHC PcP **PcP** **04 05 27.9 +0.3**
HHC PP **PP** **04 06 23.8 +3.4**
HHC S **S** **04 11 50.8 -0.3**
HHC ScS **ScS** **04 14 07.6 -1.6**
HHC SS **SS** **04 15 30.8 -0.5**
HHC pmax pmax
comp=Z,100nm,1.1s
HHC pmax pmax
comp=Z,9µm,6.8s
HHC LR LR
comp=N,37µm,16.3s
HHC LR LR
comp=E,21µm,16.8s
HHC LR LR
comp=Z,27µm,16.1s
KLR Kul'dur 53.65 350 *e*P P 04 04 18.2 -4.1
KLR *e* 04 05 33.0
KLR *e*S S 04 11 46.5 -8.8
KLR *e* 04 14 11.5
KLR pmax pmax
comp=N,2µm,10.0s
KLR pmax pmax
comp=Z,5µm,10.0s
KLR MLR MLR
comp=Z,30µm,13.0s
BTO Baotou 53.93 328 *e*P P 04 04 20.1 -4.5
BTO pmax pmax
comp=Z,44nm,1.6s
LZH Lanzhou 54.55 320 *e*P **P** **04 04 26.7 -2.6**
LZH S **S** **04 12 03.0 -5.3**
LZH sS **sS** **04 12 18.5 +1.4**
LZH SS **SS** **04 15 46.7 -4.6**
LZH pmax pmax
comp=Z,110nm,1.0s
LZH pmax pmax
comp=Z,530nm,4.3s
LZH LR LR
comp=N,17µm,15.4s
LZH LR LR
comp=E,22µm,16.8s
LZH LR LR
comp=Z,24µm,17.1s
SKR Severo-Kuril's 54.96 9 *e*P **P** **04 04 33.0 +1.3**
SKR *e* 04 04 47.5
SKR *e* 04 05 30.0
SKR *i* S **S** **04 12 18.0 +5.2**
SKR *e* 04 14 17.0
SKR *e*SS SS 04 15 48.0 -8.7
SKR *e*SSS SSS 04 17 54.0
SKR pmax pmax
comp=Z,2µm,2.0s
SKR pmax pmax
comp=N,2µm,8.0s
SKR pmax pmax
comp=E,3µm,8.0s
SKR pmax pmax
comp=Z,4µm,8.0s
SKR smax smax
comp=E,42µm,12.0s
SKR smax smax
comp=N,9µm,10.0s
SKR MLR MLR
comp=Z,12µm,18.0s
SKR MLR MLR
comp=N,5µm,20.0s
SKR MLR MLR
comp=E,6µm,16.0s
IMP Imphal 56.36 303 *e*P **P** **04 04 42.0 -0.4**
IMP *ex* x 04 05 41.0
HIA Hailar 56.72 341 *e*P **P** **04 04 42.3 -2.1**
comp=E,218nm,1.4s
RAR Rarotonga 57.12 113 LR LR 04 26 43.4
comp=E,9µm,20.8s,baz=288,slow=33
PEA0B Petropavlovsk- 57.56 10 *e*P **P** **04 04 49.1 -1.1**
PETK Petropavlovsk- 57.56 10 P **P** **04 04 47.4 -2.9**
PETK Petropavlovsk- 57.56 10 P **P** **04 04 47.4 -2.9**
PETK PKiKP **PKiKP** **04 12 12.7 +3.3**
PETK Petropavlovsk- 57.56 10 P **P** **04 04 47.4 -2.9**
comp=E,7.8nm,0.7s,baz=107,slow=5.0,SNR=6.4
PETK PKiKP **PKiKP** **04 12 12.7 +3.3**
comp=E,3.7nm,0.4s,baz=4.2,slow=8.2,SNR=5.3
PETK LR LR 04 26 47.0
comp=E,8µm,19.8s,baz=188,slow=33
PET Petropavlovsk 57.64 10*d* *i*P **P** **04 04 52.2 +1.4**
PET *e* 04 05 43.9
PET *e* 04 07 03.5
PET *e*S **S** **04 12 48.6 +0.3**
PET 04 18 48.4
PET pmax pmax
comp=Z,2µm,8.0s
PET pmax pmax
comp=Z,93nm,1.5s
PET pmax pmax
comp=Z,2µm,4.6s
PET Petropavlovsk 57.64 10 *e*P **P** **04 04 48.9 -2.0**
comp=Z,365nm,1.8s
PET LR LR
comp=Z,10µm,22.0s
AGT Agartala 58.30 301 *ex* x 04 05 04.0
AGT *ex* x 04 05 29.0
SHL Shillong 58.37 303 *e*P **P** **04 04 54.0 -2.7**
XMAS Kiritimati 58.55 85 PFAKE 04 05 10.0 +12
XMAS LR LR
comp=Z,41µm,19.0s
GTA Gaotai 59.09 321 ⇑P **P** **04 04 58.7 -2.8**
GTA pP **pP** **04 05 03.3 -3.6**
GTA PP **PP** **04 07 10.4 -1.8**
GTA S **S** **04 13 02.6 -5.6**
GTA pmax pmax
comp=Z,20nm,1.0s
GTA pmax pmax
comp=Z,5µm,9.0s
GTA LR LR
comp=N,13µm,20.4s
GTA LR LR
comp=E,12µm,20.0s
GTA LR LR
comp=Z,14µm,22.8s
CAL Calcutta 60.40 298 *e*P P 04 05 17.4 +6.8
CAL *e*S S 04 13 31.8 +6.7
CAL AMP 04 14 18.1
comp=Z,5µm,16.7s
LSA Lhasa 60.56 307 P **P** **04 05 13.8 +1.6**
LSA pP pP 04 05 22.8 +5.2
LSA sP sP 04 05 27.1 +7.5
LSA PP **PP** **04 07 29.9 +4.1**
LSA S **S** **04 13 27.7 -0.4**
LSA pmax pmax
comp=Z,4µm,10.3s
LSA LR LR
comp=N,9µm,29.4s
LSA LR LR
comp=E,15µm,28.5s
LSA LR LR
comp=Z,20µm,26.6s
LSA Lhasa 60.56 307 *e*P **P** **04 05 11.0 -1.2**
LSA pmax pmax
comp=Z,124nm,1.1s
LSA Lhasa 60.56 307 *e*P **P** **04 05 10.9 -1.2**
comp=Z,124nm,1.1s
ULN Ulaanbaatar 60.64 332 *e*P **P** **04 05 09.4 -2.6**
comp=Z,514nm,1.6s
ULN LR LR
comp=Z,35µm,19.0s
ULN Ulaanbaatar 60.64 332 P **P** **04 05 09.4 -2.6**
SNR=218
SONM Songino Array 60.93 332 P P 04 05 10.3 -3.6
SONM ⇑*e* 04 34 40.1
SONM P'P'ab **P'P'ab** **04 34 51.9 +2.1**
SONM Songino Array 60.93 332 P P 04 05 10.3 -3.6
comp=Z,6.7nm,0.9s,baz=145,slow=7.0,SNR=13
SONM LR LR 04 31 28.4
comp=Z,45µm,19.0s,baz=130,slow=36
SONM PKP2bc 04 34 40.1
comp=Z,11nm,1.1s,baz=283,slow=0.9,SNR=13
SONM PKP2ab 04 34 51.9
comp=Z,22nm,1.1s,baz=310,slow=1.4,SNR=13
CIT Chita 61.16 339 *e*P **P** **04 05 18.1 +2.8**
CIT *e* 04 05 34.9
CIT *e* 04 06 00.8
CIT *e* 04 07 26.9
CIT *e* 04 13 39.5
CIT pmax pmax
comp=Z,578nm,2.0s
FX1 Attu Island--F 61.26 20 *e*P **P** **04 05 13.9 -2.0**
FX1 Attu Island--F 61.26 20 P **P** **04 05 15.4 -0.5**
comp=Z,35nm,0.6s,baz=161,slow=6.3,SNR=8.0
FX1 LR LR 04 26 59.3
comp=Z,44µm,21.2s,baz=222,slow=31
KIP Kipapa 61.70 64⇑*e*P **P** **04 05 17.2 -2.3**
KIP pmax pmax
comp=Z,138nm,1.7s
KIP Kipapa 61.70 64 PFAKE 04 05 30.0 +11
KIP LR LR
comp=Z,16µm,20.0s
CLNS Chul'man 62.19 348 *e*P **P** **04 05 25.3 +3.2**
CLNS *e* 04 06 04.1
CLNS *e* 04 07 40.2
CLNS *e*PPP PPP 04 09 08.9
CLNS *e*S **S** **04 13 48.8 +1.9**
CLNS pmax pmax
comp=Z,108nm,1.4s
CLNS pmax pmax
comp=E,22nm,1.6s
CLNS pmax pmax
comp=N,101nm,1.8s
CLNS pmax pmax
comp=E,16nm,1.7s
CLNS pmax pmax
comp=Z,28nm,1.9s
CLNS pmax pmax
comp=N,29nm,1.9s
CLNS smax smax
comp=N,1µm,12.2s
CLNS smax smax
comp=E,5µm,15.4s
TAPN Taplejung 62.50 303 *e*P **P** **04 05 22.6 -2.5**
comp=E,415nm,1.2s
ODAN Odare 62.60 303 *e*P **P** **04 05 23.7 -2.0**
comp=E,389nm,1.0s
RAMN Ramite 63.30 302 *e*P **P** **04 05 28.3 -2.1**
comp=E,754nm,1.5s
POHA Pohakuloa 63.50 66 PFAKE 04 05 40.0 +8.2
POHA LR LR
comp=Z,42µm,19.0s
VIS Vishakhapatnam 63.63 292 *ex* **P** **04 05 35.2 +2.8**
VIS *ex* S 04 14 13.4 +7.1
ZAK Zakamensk 64.17 332 *e*P P 04 05 31.5 -4.0
ZAK *e* 04 14 33.6
ZAK pmax pmax
comp=Z,159nm,1.5s
GUN Gumba 64.22 303 *e*P **P** **04 05 33.8 -2.7**
comp=Z,668nm,1.2s
PALK Pallekele 64.30 280 *e*P **P** **04 05 38.1 +1.2**
comp=Z,306nm,2.1s
PALK Pallekele 64.30 280 P **P** **04 05 38.5 +1.5**
SNR=12
PALK Pallekele 64.30 280 P **P** **04 05 38.1 +1.2**
comp=Z,140nm,1.1s,SNR=15
PKI Pulchoki 64.50 303 *e*P **P** **04 05 36.1 -2.3**
comp=Z,609nm,1.4s
PKIN Phulchoki 64.51 303 *e*P **P** **04 05 36.1 -2.3**
comp=Z,119nm,0.9s
KKN Kakani 64.68 303 *e*P **P** **04 05 36.7 -2.7**
comp=Z,232nm,0.9s
DMN Daman 64.77 303 *e*P **P** **04 05 37.4 -2.6**
TLY Talaya 64.91 333 *e*P **P** **04 05 40.6 +0.4**
TLY *e* 04 06 12.0
TLY *e*S **S** **04 14 18.2 -2.8**
TLY *e* 04 14 55.5
TLY *e*SS **SS** **04 18 27.3 -5.6**
TLY pmax pmax
comp=Z,166nm,1.6s
TLY Talaya 64.91 333 *e*P **P** **04 05 38.6 -1.6**
comp=Z,369nm,1.6s
TLY LR LR
comp=Z,33µm,22.0s
TLY Talaya 64.91 333 P **P** **04 05 38.2 -1.9**
SNR=132
TLY Talaya 64.91 333 P **P** **04 05 39.6 -0.6**
comp=Z,519nm,1.2s,SNR=25
IRK Irkutsk 65.03 334 *e*P **P** **04 05 43.7 +2.8**
IRK *e* 04 08 05.8
IRK *e*S S 04 14 32.2 +10
IRK pmax pmax
comp=Z,269nm,3.3s
KOLN Koldanda 66.08 302 *e*P **P** **04 05 45.5 -3.0**
comp=Z,242nm,0.8s
MOY Mondy 66.11 332 *e*P **P** **04 05 45.4 -2.7**
MOY *e* 04 05 51.7
MOY pmax pmax
comp=Z,602nm,1.9s
DANN Dangsing 66.13 303 *e*P **P** **04 05 45.8 -3.1**
comp=Z,409nm,0.9s
PPT Papeete 66.25 108 P **P** **04 05 49.8 +0.3**
PPT Papeete 66.25 108 P **P** **04 05 49.8 +0.3**
comp=Z,73nm,1.1s,baz=86,slow=15,SNR=3.1
PPT LR LR 04 31 21.1
comp=Z,13µm,20.0s,baz=73,slow=33
PPT2 Papeete2 66.25 108 *e*P P 04 05 54.9 +5.3
comp=Z,118nm,1.2s
PPT2 *e*S **S** **04 14 40.6 +1.9**
comp=Z,23µm,33.0s
PPT2 *e*LQ LQ 04 23 05.4
comp=Z,37µm,30.2s
PPT2 *e*LR LR 04 25 57.9
comp=Z,29µm,23.5s
PAE Paea 66.25 108 *e*P P 04 05 54.5 +5.0
comp=Z,41nm,1.2s
YAK Yakutsk 66.33 353*c* *i*P **P** **04 05 51.8 +2.8**
YAK *e**PP pP 04 06 04.0 +10
YAK *e* 04 08 17.8
YAK *e*PPP PPP 04 09 47.1
YAK *e*S **S** **04 14 38.2 +0.4**
YAK pmax pmax
comp=Z,138nm,1.2s
YAK pmax pmax
comp=E,15nm,1.3s
YAK pmax pmax
comp=N,82nm,1.1s
YAK pmax pmax
comp=Z,236nm,2.6s
YAK pmax pmax
comp=N,210nm,2.2s
YAK pmax pmax
comp=E,126nm,2.3s
YAK smax smax
comp=E,9µm,9.6s
YAK smax smax
comp=N,2µm,7.4s
YAK Yakutsk 66.33 353 *e*P **P** **04 05 47.8 -1.3**
comp=N,158nm,1.0s
YAK LR LR
comp=Z,16µm,19.0s
TIAR Tiarei 66.47 108 *e*P P 04 05 56.1 +5.2
comp=Z,297nm,1.1s
SEY Seymchan 66.57 4⇑*e*P **P** **04 05 49.8 -0.8**
TVO Taravao 66.57 108 *e*P P 04 05 56.8 +5.2
comp=Z,190nm,1.0s
PYUN Piuthan 66.70 303 *e*P **P** **04 05 49.3 -3.1**
comp=Z,621nm,1.0s
TBI Tubuai 66.87 114 *e*P P 04 05 57.8 +4.4
comp=Z,334nm,1.2s
TBI *e*S **S** **04 14 47.1 +1.2**
comp=Z,14µm,35.8s
TBI *e*SS **SS** **04 19 09.1 +4.7**
comp=Z,7µm,31.2s
TBI *e*LQ LQ 04 23 16.3
comp=Z,51µm,35.8s
TBI *e*LR LR 04 26 05.7
comp=Z,28µm,34.5s
CASY Casey 66.93 194 *e*P **P** **04 05 51.2 -1.7**
comp=Z,83nm,0.9s
CASY LR LR
comp=Z,34µm,19.0s
MEH Mehetia 67.71 108 *e*P P 04 06 03.5 +4.7
comp=Z,274nm,1.3s
PMOR Pomariorio Ree 67.72 105 *e*P P 04 06 04.1 +5.2
comp=Z,488nm,1.3s
JBP Jabalpur 67.97 297⇑*i*P P 04 06 05.2 +4.9
JBP *e*S **S** **04 15 02.3 +3.3**
JBP ⇑*i*x x 04 32 40.0
comp=Z,8µm,20.7s
VAH Vaihoa 67.99 105 *e*P P 04 06 05.8 +5.2
comp=Z,260nm,1.2s
HYB Hyderabad 68.02 290 *i*P P 04 05 56.0 -4.8
HYB *e*S **S** **04 14 58.0 -2.0**
HYB LR LR 04 25 00.0
comp=Z,9.5nm,22.0s
TRD Trivandrum 68.14 281⇑*ex* **S** **04 15 03.5 +2.1**
TRD *ex* x 04 19 19.5
NGP Nagpur 68.34 294 *e*S **S** **04 15 03.2 -0.4**
NGP *ex* x 04 34 58.4
comp=Z,6µm,15.7s
WMQ Urumqi 69.14 320 P **P** **04 06 10.0 +2.7**
WMQ pP **pP** **04 06 15.0 +2.2**
WMQ sP **sP** **04 06 18.0 +3.2**
WMQ PcP **PcP** **04 06 34.5 +3.3**
WMQ PP **PP** **04 08 45.0 +4.8**
WMQ S **S** **04 15 13.0 +0.6**
WMQ ScS **SKSac** **04 16 06.4 -0.4**
WMQ SS **SS** **04 19 40.4 +1.5**
WMQ pmax pmax
comp=Z,150nm,1.4s
WMQ pmax pmax
comp=Z,4µm,8.0s
WMQ LR LR
comp=N,12µm,20.0s
WMQ LR LR
comp=E,8µm,18.0s
WMQ LR LR
comp=Z,12µm,18.0s
AKUT Akutan 70.84 29 *e*P **P** **04 06 16.9 -0.5**
comp=Z,441nm,1.4s
KAAM Kaadhehdhoo 71.31 272 P P 04 06 28.0 +6.9
baz=71,SNR=4.9
DDI Dehra Dun 71.47 303 *e*P **P** **04 06 23.0 +1.2**
DDI *ex* x 04 15 52.5
DGAR Diego Garcia 71.50 263 *e*P **P** **04 06 19.4 -2.8**
DGAR pmax pmax
comp=Z,1µm,1.6s
DGAR MLR MLR
comp=Z,8µm,20.0s
DGAR Diego Garcia 71.50 263 *e*P **P** **04 06 19.4 -2.8**
comp=Z,1µm,1.6s
DGAR LR LR
comp=Z,8µm,20.0s
GOA Goa 72.16 287⇓*i*P **P** **04 06 23.9 -2.2**
GOA *i* S **S** **04 15 47.8 -0.6**
GOA *i* S **S** **04 15 47.8 -0.6**
GOA AMS AMS 04 39 11.3
comp=Z,4µm,22.3s
MIR Mirnyy 72.17 199⇓*i*P **P** **04 06 28.3 +3.1**
MIR *e* 04 06 36.5
MIR *i* 04 06 42.0
MIR *e*PS **PnS** **04 16 16.0 -1.5**
MIR pmax pmax
comp=Z,231nm,1.2s
BILL Bilibino 73.06 8 *e*P **P** **04 06 31.3 +0.8**
BILL *i* 04 06 40.5
BILL *i* 04 06 49.3
BILL *i* 04 09 13.0
BILL *i* S **SKiKP** **04 16 02.4 -0.1**
BILL *i* SS **SS** **04 20 34.7 -3.3**
BILL pmax pmax
comp=Z,125nm,1.7s
BILL MLR MLR
comp=Z,7µm,17.0s
BILL Bilibino 73.06 8 *e*P **P** **04 06 30.7 +0.2**
comp=Z,349nm,1.9s
BILL LR LR
comp=Z,11µm,21.0s
AJM Ajmer 73.45 299 *ex* **P** **04 06 35.0 +1.3**
MK31 Makanchi Array 73.85 321 *i*P **P** **04 06 33.0 -2.7**
MK31 pmax pmax
comp=Z,346nm,1.4s
MK31 Makanchi Array 73.85 321 *e*P **P** **04 06 32.5 -3.2**
MKAR Makanchi Array 73.85 321 P P 04 06 32.4 -3.3
MKAR Makanchi Array 73.85 321 P P 04 06 32.4 -3.3
MKAR P'P' 04 34 13.1
MKAR Makanchi Array 73.85 321 P P 04 06 32.4 -3.3
comp=Z,5.3nm,0.9s,baz=109,slow=5.5,SNR=31
MKAR PKPPKP **P'P'df** **04 34 13.1 +3.3**
comp=Z,1.2nm,1.0s,baz=318,slow=2.7,SNR=7.2
MKAR LR LR 04 41 38.7
comp=Z,11µm,19.7s,baz=112,slow=38
THN Thein Dam 73.95 305 *e*P **P** **04 06 34.4 -2.1**
SDPT Sand Point 74.07 29 *e*P **P** **04 06 37.0 +0.3**
comp=Z,603nm,1.5s
VNDA Vanda 74.54 176 *e*P **P** **04 06 37.3 -1.8**
comp=Z,76nm,1.2s
VNDA Vanda 74.54 176 P **P** **04 06 36.8 -2.3**

comp=Z,17nm,1.0s,baz=333,slow=6.8,SNR=21
VNDA LR LR 04 37 21.9
comp=Z,37µm,18.3s,baz=345,slow=34
GAMB Gambell 74.70 19 *e*P **P 04 06 37.4 -2.7**
comp=Z,242nm,1.6s
SBA Scott Base 75.22 175 *e*P **P 04 06 42.0 -1.0**
SBA pmax pmax
comp=Z,328nm,1.9s
SBA MLR MLR
comp=Z,29µm,20.0s
SBA Scott Base 75.22 175 *e*P **P 04 06 42.0 -1.0**
comp=Z,328nm,1.9s
SBA LR LR
comp=Z,29µm,20.0s
ZAA0 Zalesovo Array 75.47 328 *e*P P 04 06 40.4 -4.4
ZALV Zalesovo Beam 75.47 328 P P 04 06 41.0 -3.8
ZALV Zalesovo Beam 75.47 328 P P 04 06 41.0 -3.8
ZALV P'P' 04 34 06.1
ZALV Zalesovo Beam 75.47 328 P P 04 06 41.0 -3.8
comp=Z,18nm,0.9s,baz=106,slow=5.3,SNR=24
ZALV PKPPKP **P'P'df 04 34 06.1 -0.3**
comp=Z,0.9nm,0.7s,baz=318,slow=2.0,SNR=4.5
ZALV LR LR 04 38 17.0
comp=Z,29µm,21.9s,baz=127,slow=34
KSH Kashi 75.69 312 P **P 04 06 45.7 -0.9**
KSH pP **pP 04 06 50.8 -1.3**
KSH sP **sP 04 06 53.0 -1.1**
KSH *e*PcP **PcP 04 06 58.4 -0.9**
KSH *e*PP **PP 04 09 38.9 +2.4**
KSH S **S 04 16 27.4 -0.3**
KSH sS **sS 04 16 35.5 -1.3**
KSH SKS **SKSac 04 16 51.1 -5.3**
KSH ScS **SKKSac 04 16 56.6 -0.2**
KSH SS **SS 04 21 23.0 +3.5**
KSH pmax pmax
comp=Z,130nm,1.6s
KSH pmax pmax
comp=Z,2µm,4.4s
KSH LR LR
comp=N,5µm,14.6s
KSH LR LR
comp=E,9µm,16.4s
KSH LR LR
comp=Z,40µm,21.6s
TIXI Tiksi 75.71 355 *e*P **P 04 06 44.2 -1.6**
TIXI pmax pmax
comp=Z,214nm,1.9s
TIXI MLR MLR
comp=Z,15µm,20.0s
TIXI Tiksi 75.71 355 *e*P **P 04 06 44.2 -1.6**
comp=Z,214nm,1.9s
TIXI LR LR
comp=Z,15µm,20.0s
AAA Alma-Ata 76.13 316 *e*P P 04 06 54.5 +5.6
AAA *i*S S 04 16 20.5 -12
AAA pmax pmax
comp=Z,4µm,10.0s
AAA smax smax
comp=N,9µm,13.7s
AAA MLR MLR
comp=Z,13µm,17.0s
ULHL Ulahol 76.31 315 P P 04 06 53.6 +3.4
SNR=17
NVS Novosibirsk 76.70 329 *e*P P 04 06 47.3 -4.5
NVS *e* 04 09 39.5
NVS *i*S S 04 16 30.9 -7.0
NVS pmax pmax
comp=Z,432nm,1.6s
NVS pmax pmax
comp=N,194nm,1.7s
NVS pmax pmax
comp=E,278nm,1.7s
NVS pmax pmax
comp=Z,325nm,3.3s
NVS pmax pmax
comp=N,243nm,3.8s
NVS pmax pmax
comp=E,372nm,4.6s
NVS smax smax
comp=N,609nm,4.5s
NVS smax smax
comp=E,530nm,4.5s
PAF Port-aux-Franc 76.94 220 PFAKE 04 07 00.0 +6.7
PAF LR LR
comp=Z,33µm,21.0s
KZA Kyzart 76.96 314 P **P 04 06 52.0 -2.1**
SNR=6.6
TKM2 Tokmak 2 76.96 315 *i*P **P 04 06 52.0 -1.8**
TKM2 Tokmak 2 76.96 315 *e*P **P 04 06 51.8 -2.0**
comp=Z,107nm,1.3s
TKM2 LR LR
comp=Z,10µm,20.0s
TKM2 Tokmak 2 76.96 315 P **P 04 06 52.0 -1.8**
SNR=20
TNA Tin City 77.11 18 *e*P **P 04 06 51.5 -2.3**
comp=Z,172nm,1.6s
KBK Karagaybulak 77.34 315 P P 04 07 02.8 +6.8
SNR=7.6
UCH Uchtor 77.53 314 P P 04 07 01.3 +3.9
SNR=8.0
CHMS Chumysh 77.58 315 P **P 04 07 00.2 +3.1**
SNR=12
KURK Kurchatov 77.60 324 *i*P **P 04 06 55.8 -1.1**
KURK pmax pmax
comp=Z,22nm,1.1s
KURK MLR MLR
comp=Z,12µm,23.0s
KURK Kurchatov 77.60 324 *e*P **P 04 06 54.1 -2.9**
comp=Z,542nm,1.8s
KURK LR LR
comp=Z,13µm,21.0s
KURK Kurchatov 77.60 324 P **P 04 06 53.9 -3.0**
SNR=126
KURK Kurchatov 77.60 324 P **P 04 06 55.4 -1.5**
comp=Z,630nm,1.3s,SNR=19
FRU Bishkek 77.63 315 *i*P P 04 07 01.0 +3.7
FRU *e* 04 09 55.0
FRU *e*S **S 04 16 52.0 +3.4**
FRU *e*SS **SS 04 21 42.0 -6.5**
FRU pmax pmax
comp=Z,510nm,2.4s
AAK Ala-Archa 77.66 315*c i*P **P 04 06 59.8 +2.1**
AAK pmax pmax
comp=Z,146nm,1.7s
AAK MLR MLR
comp=Z,26µm,20.0s
AAK Ala-Archa 77.66 315 *e*P **P 04 06 56.6 -1.1**
comp=Z,592nm,1.3s
AAK LR LR
comp=Z,12µm,20.0s
AAK Ala-Archa 77.66 315 P P 04 07 01.5 +3.8
SNR=38
AAK Ala-Archa 77.66 315 P **P 04 07 00.6 +2.9**
comp=Z,249nm,1.0s,SNR=13
AAK Ala-Archa 77.66 315 P **P 04 06 56.5 -1.2**
comp=Z,11nm,1.0s,baz=82,slow=5.0,SNR=17
USP Ospenovka 77.83 315 P **P 04 07 00.7 +2.2**
SNR=12
AML Almayashu 78.08 314 P P 04 07 03.7 +3.3
SNR=34
EKS2 Erkin-Say 78.17 315 *e*P **P 04 06 58.0 -2.5**
EKS2 pmax pmax
comp=Z,114nm,1.1s
EKS2 MLR MLR
comp=Z,16µm,22.0s
EKS2 Erkin-Say 78.17 315 *e*P **P 04 06 58.0 -2.5**
comp=Z,114nm,1.1s
EKS2 LR LR
comp=Z,16µm,22.0s
EKS2 Erkin-Say 78.17 315 P P 04 07 03.7 +3.2
SNR=23
KDAK Kodiak Island 79.07 29 *e*P **P 04 07 05.6 +0.7**
comp=Z,280nm,1.4s
KDAK Kodiak Island 79.07 29 P **P 04 07 05.8 +0.9**
comp=Z,107nm,1.2s,baz=106,slow=1.6,SNR=11
KDAK LR LR 04 38 19.6
comp=Z,19µm,20.1s,baz=241,slow=33
KBL Kabul 79.86 306 *e*P **P 04 07 07.8 -2.3**
KBL pmax pmax
comp=Z,174nm,1.6s
KBL Kabul 79.86 306 *e*P **P 04 07 07.8 -2.3**
comp=Z,174nm,1.6s
RKT Rikitea 80.16 113 *e*S **S 04 17 16.8 +0.5**
comp=Z,9µm,32.2s
RKT *e*LQ LQ 04 28 36.9
comp=Z,18µm,39.5s
RKT *e*LR LR 04 32 16.4

comp=Z,28µm,30.2s
KK31 Karatay Array 80.60 315 *i*P **P 04 07 15.8 +2.2**
KK31 pmax pmax
comp=Z,183nm,1.3s
KKAR Karatay Array 80.60 315 *e*P **P 04 07 15.6 +2.0**
KKAR pmax pmax
comp=Z,124nm,1.3s
KKAR Karatay Array 80.60 315 *e*P **P 04 07 15.6 +2.0**
comp=Z,124nm,1.3s
SEW Seward 81.49 28 *e*P **P 04 07 18.0 +0.1**
comp=Z,197nm,1.6s
PMR Palmer 82.21 26 *e*P **P 04 07 18.5 -3.2**
PMR pmax pmax
comp=Z,224nm,1.6s
PMR Palmer 82.21 26 *e*P **P 04 07 18.4 -3.2**
comp=Z,224nm,1.6s
TRF Thorofare Moun 82.44 24 *e*P **P 04 07 21.0 -2.1**
comp=Z,399nm,2.0s
SML Sawmill 82.64 26 *e*P **P 04 07 22.6 -1.4**
SML pmax pmax
comp=Z,122nm,1.7s
SML Sawmill 82.64 26 *e*P **P 04 07 22.6 -1.4**
comp=Z,122nm,1.7s
BVA0 Borovoye Array 83.17 324 *i*P **P 04 07 24.4 -2.5**
BVA0 pmax pmax
comp=Z,21nm,1.2s
BVAR Borovoye Array 83.17 324 P P 04 07 23.1 -3.8
BVAR Borovoye Array 83.17 324 P P 04 07 23.1 -3.8
BVAR Borovoye Array 83.17 324 P P 04 07 23.0 -3.8
comp=Z,15nm,1.0s,baz=117,slow=6.7,SNR=29
BRVK Borovoye 83.23 324 *e*P **P 04 07 24.9 -2.3**
BRVK pmax pmax
comp=Z,177nm,1.1s
BRVK MLR MLR
comp=Z,16µm,21.0s
BRVK Borovoye 83.23 324 *e*P **P 04 07 24.9 -2.3**
comp=Z,177nm,1.1s
BRVK LR LR
comp=Z,16µm,21.0s
BRVK Borovoye 83.23 324 P **P 04 07 24.4 -2.8**
SNR=152
BRVK Borovoye 83.23 324 P **P 04 07 25.1 -2.1**
comp=Z,671nm,2.0s,SNR=20
MAW Mawson 83.46 202 P P 04 07 24.0 -4.1
MAW Mawson 83.46 202 P P 04 07 24.0 -4.1
comp=Z,4.6nm,0.7s,baz=108,slow=6.4,SNR=3.4
MAW LR LR 04 43 51.2
comp=Z,34µm,18.5s,baz=75,slow=35
MAW Mawson 83.46 202 P P 04 07 33.5 +5.5
baz=83,SNR=9.4
DIV Divide 83.55 27 *e*P **P 04 07 27.6 -1.1**
comp=Z,243nm,1.5s
COLA College 83.98 23 *e*P **P 04 07 27.6 -3.1**
COLA pmax pmax
comp=Z,242nm,1.6s
COLA MLR MLR
comp=Z,21µm,22.0s
COLA College 83.98 23 *e*P **P 04 07 27.6 -3.1**
comp=Z,242nm,1.6s
COLA LR LR
comp=Z,21µm,22.0s
COLD Coldfoot 84.01 21 *e*P **P 04 07 29.0 -1.9**
comp=Z,217nm,1.6s
BMRM Bremner River 84.04 28 *e*P **P 04 07 29.8 -1.5**
comp=Z,254nm,1.6s
PAX Paxson 84.30 26 *e*P **P 04 07 30.3 -2.3**
PAX pmax pmax
comp=Z,140nm,1.7s
PAX Paxson 84.30 26 *e*P **P 04 07 30.3 -2.3**
comp=Z,140nm,1.7s
ILAR Eielson Array 84.33 24 P P 04 07 26.4 -6.2
ILAR Eielson Array 84.33 24 P P 04 07 26.4 -6.2
comp=Z,4.4nm,0.8s,baz=256,slow=5.0,SNR=20
ILAR LR LR 04 39 09.2
comp=Z,14µm,21.2s,baz=263,slow=31
MENT Mentasta 85.05 26 *e*P **P 04 07 34.5 -1.7**
DOT Dot Lake 85.12 25 *e*P **P 04 07 34.0 -2.6**
comp=Z,27nm,1.0s
MRIV Mauritius Mete 85.73 250 *e*P **P 04 07 41.9 +1.3**
PNL Peninsula 86.18 30 *e*P **P 04 07 40.3 -1.6**
comp=Z,163nm,1.4s
QSPA South Pole Qui 86.42 180 *e*P **P 04 07 40.0 -3.2**
comp=Z,152nm,0.9s
QSPA South Pole Qui 86.42 180 P P 04 07 38.3 -4.9
comp=Z,17nm,0.7s,baz=345,slow=1.6,SNR=26
QSPA LR LR 04 47 40.8
comp=Z,66µm,18.0s,baz=190,slow=37
EGAK Eagle 86.66 24 *e*P **P 04 07 42.3 -1.9**
comp=Z,215nm,1.6s
WBK Wadi Bani Khal 86.97 293 P P 04 07 50.1 +3.4
SNR=7.9
RER Riviere de l'E 87.33 249 PFAKE 04 08 00.0 +11
RER LR LR
comp=Z,8µm,22.0s
SKAG Skagway 88.16 30 *e*P **P 04 07 49.2 -2.3**
comp=Z,225nm,1.4s
AB31 Akbulak array 88.92 319 *i*P P 04 07 50.7 -4.6
AB31 pmax pmax
comp=Z,52nm,1.1s
ABKAR Akbulak array 88.92 319 *e*P P 04 07 50.4 -4.9
comp=Z,16nm,0.8s
ABKT Ailbek 89.08 308 P **P 04 07 58.8 +2.4**
comp=Z,193nm,1.2s,SNR=8.7
WRAK Wrangell Islan 89.27 34 PFAKE 04 08 10.0 +13
WRAK LR LR
comp=Z,22µm,20.0s
ARQ Araqi 89.28 293 P P 04 08 03.4 +5.8
SNR=6.7
SVE Sverdlovsk 89.42 327⇑ *e*P **P 04 07 59.9 +2.4**
SVE *e* 04 11 34.7
SVE *e*PPP PPP 04 13 30.3
SVE *e*S **SKSac 04 18 25.9 -1.1**
SVE pmax pmax
comp=Z,88nm,1.9s
SVE smax smax
comp=E,3µm,13.4s
SVE smax smax
comp=N,3µm,13.1s
SVE MLR MLR
comp=Z,14µm,19.0s
ASHO Ashiyiah 89.80 295 P P 04 08 04.8 +4.7
SNR=7.5
NAZ Nazwa, Dubai 90.18 295 P P 04 08 05.5 +3.7
SNR=6.3
AKTO Aktyubinsk 90.28 320 P P 04 07 57.7 -4.0
AKTO Aktyubinsk 90.28 320 P P 04 07 57.7 -4.0
AKTO Aktyubinsk 90.28 320 P P 04 07 57.7 -4.0
comp=Z,5.8nm,0.9s,baz=94,slow=8.1,SNR=7.9
INK Inuvik 90.38 22 P **P 04 07 59.2 -2.5**
INK Inuvik 90.38 22 P **P 04 07 59.2 -2.5**
comp=Z,23nm,1.2s,baz=255,slow=5.2,SNR=25
INK LR LR 04 43 51.6
comp=Z,23µm,21.9s,baz=249,slow=32
ARU Arti 90.52 326*d i*P **P 04 08 01.4 -1.2**
ARU 04 11 35.1
ARU PPP PPP 04 13 33.4
ARU S **SKSac 04 18 32.1 -1.2**
ARU SP **SP 04 19 55.8 -7.8**
ARU PS **PnS 04 20 06.7 +0.4**
ARU pmax pmax
comp=Z,45nm,1.6s
ARU MLR MLR
comp=Z,14µm,21.0s
ARU Arti 90.52 326 *e*P **P 04 08 01.0 -1.6**
comp=Z,155nm,1.8s
ARU LR LR
comp=Z,14µm,20.0s
ARU Arti 90.52 326 P **P 04 08 03.7 +1.1**
comp=Z,132nm,1.1s,SNR=6.6
DLBC Dease Lake 90.75 32 *e*P **P 04 08 02.7 -1.1**
DLBC Dease Lake 90.75 32 P **P 04 08 04.6 +0.8**
comp=Z,24nm,1.4s,baz=320,slow=4.3,SNR=7.6
DLBC LR LR 04 42 39.2
comp=Z,22µm,21.3s,baz=277,slow=32
RBK Rabkut 91.08 287 P **P 04 08 08.8 +2.6**
SNR=6.2
BBB Bella Bella 91.32 38 LR LR 04 47 14.5
comp=Z,24µm,18.3s,baz=266,slow=34
ABTO Aybut 91.93 287 P **P 04 08 12.7 +2.5**
SNR=5.3
SYO Syowa Base 91.94 200‖ *e*P **P 04 08 10.0 +1.0**
NLWA Neilton Lookou 93.86 43 PFAKE 04 08 30.0 +12
NLWA LR LR
comp=Z,13µm,21.0s
HUMO Hull Mountain 94.44 48 *e*P **P 04 08 18.2 -2.9**
comp=Z,33nm,1.4s
YBH Yreka Blue Hor 94.61 49 *e*P **P 04 08 21.3 -0.7**

comp=Z,36nm,1.6s
YBH Yreka Blue Hor 94.61 49 P **P 04 08 24.4 +2.4**
comp=Z,5.6nm,1.0s,baz=182,slow=3.8,SNR=7.1
YBH LR LR 04 42 01.2
comp=Z,32µm,21.9s,baz=327,slow=30
WDC Whiskeytown Da 94.73 50 *e*P **P 04 08 24.4 +1.9**
WDC pmax pmax
comp=Z,67nm,1.9s
WDC Whiskeytown Da 94.73 50 *e*P **P 04 08 24.4 +1.9**
comp=Z,67nm,1.9s
ABPO Ambohimpanom 95.47 251 PFAKE 04 08 40.0 +13
ABPO LR LR
comp=Z,10µm,21.0s
CMB Columbia Colle 96.40 52 *e*P **P 04 08 29.1 -1.1**
CMB pmax pmax
comp=Z,9.0nm,1.2s
CMB Columbia Colle 96.40 52 *e*P **P 04 08 29.1 -1.1**
comp=Z,8.6nm,1.2s
MOD Modoc 96.41 48 *e*P **P 04 08 28.6 -1.7**
comp=Z,53nm,1.8s
HAWA Hanford 96.84 44 PFAKE 04 08 40.0 +8.0
HAWA LR LR
comp=Z,13µm,22.0s
MAK Makhachkala 97.32 313 *e*P P 04 08 30.5 -3.7
MAK *e* 04 12 26.2
MAK *i*PPP PPP 04 14 34.6
MAK *e* 04 19 06.0
MAK *e*SS SS 04 26 39.9 +4.0
MAK pmax pmax
comp=Z,31nm,0.6s
RDF Al-Radifah 97.54 299 *e*P P 04 08 31.2 -4.3
RDF AMb AMB 04 08 42.9
comp=Z,46nm,1.2s
MIB Mutribah 97.72 299 *e*P P 04 08 31.9 -4.4
MIB AMb AMB 04 08 43.7
comp=Z,46nm,1.0s
NAY Al-Naaiem 97.81 299 *e*P P 04 08 32.8 -4.0
NAY AMb AMB 04 08 44.1
comp=Z,33nm,0.9s
NVAR Mina Array Bea 98.03 52 P **P 04 08 35.9 -2.0**
NVAR PP PP 04 12 45.6 +8.8
NVAR Mina Array Bea 98.03 52 P **P 04 08 35.9 -2.0**
comp=Z,0.7nm,0.8s,baz=256,slow=3.6,SNR=3.2
NVAR PP PP 04 12 45.6 +8.8
comp=Z,1.2nm,0.9s,baz=274,slow=7.4,SNR=4.3
NVAR LR LR 04 44 26.9
comp=Z,34µm,21.8s,baz=94,slow=30
YKA Yellowknife Ar 98.27 27 P **P 04 08 35.2 -2.8**
YKA PP **PP 04 12 42.5 +4.9**
YKA PKKPbc **PKKPbc 04 25 11.2 -0.9**
YKA PKKP **PKKPdf 04 25 17.4 +2.5**
YKA Yellowknife Ar 98.27 27 P **P 04 08 35.2 -2.8**
comp=Z,2.5nm,0.8s,baz=281,slow=4.3,SNR=20
YKA PP **PP 04 12 42.5 +4.9**
comp=Z,2.2nm,1.0s,baz=275,slow=7.7,SNR=6.2
YKA PKKPbc **PKKPbc 04 25 11.2 -0.9**
comp=Z,0.5nm,0.8s,baz=95,slow=2.7,SNR=6.9
YKA PKKP **PKKPdf 04 25 17.4 +2.5**
comp=Z,3.2nm,1.0s,baz=99,slow=2.8,SNR=19
NEW Newport 98.38 42 *e*P **P 04 08 38.1 -0.8**
comp=Z,47nm,2.1s
NEW PP PP 04 12 46.5 +7.5
NEW Newport 98.38 42⇑ Pdiff Pdif 04 08 41.4 +2.4
baz=98
NEW Newport 98.38 42 P Pdif 04 08 39.4 +0.4
comp=Z,1.3nm,0.8s,baz=332,slow=9.5,SNR=4.0
NEW PP PP 04 12 46.5 +7.5
comp=Z,1.1nm,0.7s,baz=293,slow=5.4,SNR=3.0
NEW LR LR 04 48 59.9
comp=Z,17µm,19.6s,baz=277,slow=33
EDW2 Edwards Air Fo 98.39 55⇑ Pdiff Pdif 04 08 42.1 +2.8
baz=98
BMO Blue Mountains 98.48 45 *e*P P 04 08 36.1 -3.4
BMO pmax pmax
comp=Z,48nm,1.6s
BMO MLR MLR
comp=Z,16µm,19.0s
BMO Blue Mountains 98.48 45 *e*P P 04 08 36.1 -3.4
comp=Z,48nm,1.6s
BMO LR LR
comp=Z,16µm,19.0s
LRMC Laurel Mountai 98.61 55⇑ Pdiff Pdif 04 08 41.5 +1.0
baz=99
DAC Darwin (Calif) 98.67 54 *e*P Pdif 04 08 40.8 +0.1
DAC pmax pmax
comp=Z,15nm,1.3s
DAC MLR MLR
comp=Z,46µm,21.0s
DAC Darwin (Calif) 98.67 54 *e*P Pdif 04 08 40.8 0.0
comp=Z,15nm,1.3s
DAC LR LR
comp=Z,46µm,21.0s
BFSC Mount Baldy Ra 98.68 56⇓ Pdiff Pdif 04 08 42.6 +1.8
baz=99
MPMC Manual Prospec 98.76 54⇑ Pdiff Pdif 04 08 43.5 +2.3
baz=99
BMN Battle Mountai 98.78 50 PFAKE 04 08 50.0 +8.9
BMN LR LR
comp=Z,15µm,19.0s
GRAC Grapevine Rang 98.82 53⇓ Pdiff Pdif 04 08 43.2 +2.0
baz=99
TPH Tonopah 98.89 52 PFAKE 04 08 50.0 +8.3
TPH LR LR
comp=Z,31µm,22.0s
DGRG David-gareji 98.97 311 P Pdif 04 08 46.1 +4.3
C11A Tepee Creek (N 98.99 42⇑ Pdiff **Pdif 04 08 44.1 +2.4**
baz=99
FURC Furnace Creek, 99.25 54⇓ Pdiff **Pdif 04 08 45.4 +2.4**
baz=99
GSC Goldstone 99.34 55⇓ Pdiff **Pdif 04 08 45.8 +2.2**
baz=100
TBLG Delisi 99.43 312 P **Pdif 04 08 46.0 +2.3**
NVL N'lazarevskaya 99.52 194 *e*P Pdif 04 08 56.1 +13
NVL pmax pmax
comp=Z,25nm,1.4s
MAIT Maitri 99.53 194 *e*P **Pdif 04 08 39.3 -4.3**
MFID Camas Ranch 99.64 47 *e*Pdif **Pdif 04 08 46.3 +1.5**
comp=Z,32nm,1.5s
MFID Camas Ranch 99.64 47⇑ Pdiff **Pdif 04 08 46.7 +2.0**
baz=100
D12A Red Ives Fores 99.67 43⇑ Pdiff **Pdif 04 08 47.4 +2.6**
baz=100
PFO Pinyon Flat Ob 99.70 57 PFAKE 04 09 00.0 +15
PFO LR LR
comp=Z,19µm,19.0s
MONP Monument Peak 99.75 57⇑ Pdiff **Pdif 04 08 47.3 +1.7**
baz=100
G12A Big Creek, Yel 99.86 45⇓ Pdiff **Pdif 04 08 48.8 +3.0**
baz=100
GOR Gori 99.88 312 P **Pdif 04 08 48.2 +2.4**
BSMT Bassoo Peak 99.98 42 *e*Pdif **Pdif 04 08 49.2 +2.9**
comp=Z,16nm,1.5s
ZEI Tsey 99.98 313 *e*P **Pdif 04 08 46.3 -0.1**
ZEI pmax pmax
comp=Z,15nm,1.4s
BELC Belle Mtn. Jos 100.06 56⇑ Pdiff **Pdif 04 08 49.8 +2.9**
baz=100
A13A Flathead Natio 100.11 41⇑ Pdiff **Pdif 04 08 49.9 +3.2**
baz=100
B13A Whitefish 100.13 42⇓ Pdiff **Pdif 04 08 49.7 +2.9**
baz=100
C13A Hot Springs 100.14 42⇓ Pdiff **Pdif 04 08 49.2 +2.3**
baz=100
BHD Baghdad 100.17 303 *i*x **Pdif 04 08 49.8 +2.6**
BHD *i*x x 04 12 58.0
BHD *i*x x 04 15 16.5
BHD *i*x **SKSac 04 19 26.5 +0.8**
BHD *i*x x 04 20 06.5
BHD *i*x x 04 20 28.5
R11A Troy Canyon, C 100.17 52⇓ Pdiff **Pdif 04 08 48.8 +1.5**
baz=100
TMCR Tamitsa 100.19 335 *e*P **Pdif 04 08 49.3 +2.8**
TMCR pmax pmax
comp=Z,39nm,1.5s
KLMR Klimovskoe 100.22 331 *e*P **Pdif 04 08 42.8 -4.0**
KLMR *e* 04 12 51.9
KLMR PS **PS 04 21 45.0 -7.3**
KLMR SS SS 04 27 21.8 +6.3
KLMR pmax pmax
comp=Z,70nm,1.5s
KLMR MLR MLR
comp=Z,23µm,19.0s
H12A Diamond D Ranc 100.24 46⇑ Pdiff **Pdif 04 08 49.7 +2.2**
baz=100
ELK Elko 100.27 49 *e*Pdif **Pdif 04 08 46.5 -1.3**
D13A Huson 100.27 43⇑ Pdiff **Pdif 04 08 50.4 +2.9**

baz=100
GMRC Granite Mounta 100.31 55 ⇑Pdiff Pdif 04 08 50.3 +2.4
baz=100
ONI Oni 100.32 312 P Pdif 04 08 48.9 +1.2
DYDN Diyadin 100.37 309 *i* P **Pdif 04 08 52.1 +3.8**
AKH Akhalkalaki 100.38 311 P Pdif 04 08 50.5 +2.3
HAKT HAKKARI 100.49 307 *i* P **Pdif 04 08 52.5 +3.6**
F13A Darby 100.49 44 ⇑Pdiff Pdif 04 08 50.8 +2.2
baz=101
E13A Victor 100.53 44 ⇓Pdiff Pdif 04 08 51.5 +2.8
baz=101
BC3 Big Chuckawall 100.53 57 ⇑Pdiff Pdif 04 08 50.8 +1.8
baz=101
LVZ Lovozero 100.56 339 PFAKE 04 09 00.0 +12
LVZ LR LR
comp=Z,11µm,20.0s
KBZ Khabaz 100.62 314 P Pdif 04 08 50.0 +1.1
KBZ Khabaz 100.62 314 P Pdif 04 08 50.0 +1.1
KBZ Khabaz 100.62 314 P Pdif 04 08 50.0 +1.1
comp=Z,0.7nm,0.8s,baz=112,slow=12,SNR=5.8
G13A Cobalt 100.63 45 ⇑Pdiff Pdif 04 08 52.5 +3.4
baz=101
HLID Hailey 100.65 46 *e*Pdif **Pdif 04 08 50.0 +0.6**
comp=Z,24nm,1.6s
HLID *e*PP **PP 04 12 56.2 -0.3**
HLID LR LR
comp=Z,31µm,21.0s
HLID Hailey 100.65 46 ⇓Pdiff Pdif 04 08 51.8 +2.4
baz=101
VRHR Novokhopersk 100.65 321 *e*P **Pdif 04 08 49.5 +0.6**
VRHR *e* 04 12 59.7
VRHR *e*S **SKSac 04 19 26.0 -1.3**
VRHR *e*SP **SP 04 21 52.7 -2.0**
VRHR *e*SS **SS 04 27 20.4 -1.7**
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=Z,20nm,0.9s
VRHR pmax pmax
comp=E,6.0nm,0.4s
VRHR pmax pmax
comp=N,20nm,1.3s
VRHR pmax pmax
comp=E,40nm,1.3s
VRHR pmax pmax
comp=Z,30nm,1.3s
VRHR smax smax
comp=N,80nm,2.8s
VRHR smax smax
comp=E,440nm,2.8s
VRHR smax smax
comp=Z,160nm,2.8s
VRHR MLR MLR
comp=N,2µm,20.0s
VRHR MLR MLR
comp=E,6µm,20.0s
VRHR MLR MLR
comp=Z,14µm,20.0s
MSO Missoula 100.66 43 PFAKE 04 09 00.0 +11
MSO LR LR
comp=Z,8µm,22.0s
H13A Challis 100.67 45 ⇓Pdiff Pdif 04 08 51.0 +1.6
baz=101
C14A Swan Lake 100.68 42 ⇓Pdiff Pdif 04 08 52.2 +2.9
baz=101
LDFC Landfair 100.74 55 *e*Pdif **Pdif 04 08 49.0 -0.9**
comp=Z,30nm,1.4s
A14A Double T Ranch 100.75 41 ⇑Pdiff Pdif 04 08 53.0 +3.4
baz=101
KIV Kislovodsk 100.75 314 *e*P **Pdif 04 08 52.3 +2.6**
KIV *e* 04 12 57.4
KIV *e*PPP PPP 04 15 09.0
KIV *e*PS **PS 04 21 54.7 -4.3**
KIV *e*SS SS 04 27 27.1 +2.9
KIV pmax pmax
comp=Z,6.0nm,0.9s
KIV Kislovodsk 100.75 314 PFAKE 04 09 00.0 +10
KIV LR LR
comp=Z,6µm,20.0s
IRM Iron Mountain 100.76 56 ⇑Pdiff Pdif 04 08 52.4 +2.5
baz=101
I13A Cove Ranch, Pi 100.83 46 ⇑Pdiff Pdif 04 08 53.7 +3.5
baz=101
J13A Cove Ranch, Pi 100.84 47 ⇓Pdiff Pdif 04 08 52.9 +2.8
baz=101
D14A Greenough 100.92 43 ⇑Pdiff Pdif 04 08 53.2 +2.8
baz=101
KBS Kingsbay 100.94 352 PFAKE 04 09 00.0 +10
KBS LR LR
comp=Z,7µm,21.0s
APA Apatity 101.11 339 *i* **PP 04 13 02.0 +3.0**
APA *i* **SKSac 04 19 29.0 +0.1**
APA *i*PS **PS 04 21 56.0 -5.6**
CHMT Chamberlain Mo 101.11 43 *e*Pdif **Pdif 04 08 52.0 +0.6**
comp=Z,8.6nm,1.7s
CHMT *e*PP PP 04 12 53.2 -6.8
A15A Johnson Ranch, 101.20 41 ⇑Pdiff Pdif 04 08 53.6 +2.0
baz=101
RES Resolute Bay 101.25 13 *e*Pdif **Pdif 04 08 50.0 -1.0**
comp=Z,19nm,1.4s
RES Resolute Bay 101.25 13 P **Pdif 04 08 51.9 +0.9**
comp=Z,3.4nm,1.0s,baz=306,slow=3.9,SNR=8.8
H14A Leadore 101.30 45 ⇑Pdiff Pdif 04 08 55.2 +3.0
baz=101
I14A Mackay 101.31 46 ⇓Pdiff Pdif 04 08 55.0 +2.7
baz=101
J14A Carey 101.32 47 ⇓Pdiff Pdif 04 08 54.2 +1.9
baz=101
B15A Bradely Ranch, 101.40 42 ⇓Pdiff Pdif 04 08 55.1 +2.6
baz=102
C15A Salmond Ranch, 101.44 42 ⇑Pdiff Pdif 04 08 54.1 +1.4
baz=102
SIRN S¯rnak 101.52 307 *i* P **Pdif 04 08 58.0 +4.8**
TATV Tatvan 101.55 308 *i* P **Pdif 04 08 57.6 +4.1**
PDMCI Parker Dam,Lak 101.58 56 ⇓Pdiff Pdif 04 08 56.3 +2.8
baz=102
D15A Lincoln 101.60 43 ⇑Pdiff Pdif 04 08 55.6 +2.2
baz=102
DAGI Agillar 101.60 311 *i* P **Pdif 04 08 57.0 +3.5**
K14A Jones Ranch, D 101.65 47 ⇑Pdiff Pdif 04 08 55.1 +1.3
baz=102
HOMI Horasan 101.70 310 *i* P **Pdif 04 08 57.8 +3.6**
W13A Hualapai Mount 101.74 55 ⇑Pdiff Pdif 04 08 55.8 +1.4
baz=102
F15A Butte 101.77 44 ⇑Pdiff Pdif 04 08 55.8 +1.5
baz=102
H15A Lima 101.81 45 ⇓Pdiff Pdif 04 08 55.2 +0.7
baz=102
G15A Dillon 101.85 45 ⇓Pdiff Pdif 04 08 56.2 +1.6
baz=102
A16A West Butte Ran 101.95 41 ⇑Pdiff Pdif 04 08 57.7 +2.8
baz=102
SNAA Sanae 101.95 190 *e*P **Pdif 04 09 01.5 +7.1**
SNAA Sanae 101.95 190 *e*near PP 04 13 11.5 +6.4
SNAA Sanae 101.95 190 *e*Pdif **Pdif 04 08 59.5 +5.1**
comp=Z,18nm,1.4s
SNAA *e*PP **PP 04 13 06.5 +1.4**
113A Mohawk Valley, 101.99 57 ⇓Pdiff Pdif 04 08 57.5 +2.2
baz=102
J15A Blackfoot 102.10 46 ⇑Pdiff Pdif 04 08 57.6 +1.9
baz=102
VORD Divnogorie 102.13 321 *e*P **Pdif 04 08 56.0 +0.5**
VORD *e* 04 13 10.9
VORD *e*S **SKSac 04 19 32.9 -1.5**
VORD *e*SP **SP 04 22 13.2 +2.8**
VORD *e*SS **SS 04 27 42.0 -0.5**
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,20nm,0.8s
VORD pmax pmax
comp=Z,7.0nm,0.8s
VORD pmax pmax
comp=Z,30nm,1.2s
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,30nm,0.6s
VORD smax smax
comp=N,180nm,2.8s
VORD smax smax
comp=E,70nm,2.8s
VORD smax smax
comp=Z,100nm,2.8s
VORD MLR MLR
comp=N,5µm,23.0s
VORD MLR MLR
comp=E,12µm,23.0s
VORD MLR MLR
comp=Z,18µm,23.0s
DUG Dugway 102.16 50 PFAKE 04 09 10.0 +14
DUG LR LR
comp=Z,14µm,20.0s
DUG Dugway 102.16 50 ⇑Pdiff Pdif 04 08 57.7 +1.5
baz=102
VSR Storozhevoye 102.17 322 *e*P **Pdif 04 08 56.2 +0.6**
VSR *e* 04 13 10.4
VSR *e*S **SKSac 04 19 33.2 -1.4**
VSR *e*SP **SP 04 22 15.1 +4.3**
VSR *e*SS **SS 04 27 49.1 +6.1**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,8.0nm,0.5s
VSR pmax pmax
comp=N,20nm,1.8s
VSR pmax pmax
comp=E,60nm,1.8s
VSR pmax pmax
comp=Z,70nm,1.8s
VSR smax smax
comp=N,280nm,3.6s
VSR smax smax
comp=E,430nm,3.6s
VSR smax smax
comp=Z,290nm,3.6s
VSR MLR MLR
comp=N,2µm,24.0s
VSR MLR MLR
comp=E,10µm,24.0s
VSR MLR MLR
comp=Z,16µm,24.0s
E16A East Helena 102.24 43 ⇓Pdiff Pdif 04 08 58.2 +1.9
baz=102
D16A Dana Ranch, Ca 102.26 43 ⇓Pdiff Pdif 04 08 59.4 +3.1
baz=102
G16A Moss Hill, Enn 102.32 45 ⇑Pdiff Pdif 04 08 58.3 +1.6
baz=102
BOZ Bozeman (W) 102.39 44 *e*P **Pdif 04 08 55.7 -1.3**
BOZ pmax pmax
comp=Z,14nm,1.8s
BOZ MLR MLR
comp=Z,15µm,22.0s
BOZ Bozeman (W) 102.39 44 *e*Pdif **Pdif 04 08 55.7 -1.3**
comp=Z,14nm,1.8s
BOZ LR LR
comp=Z,15µm,22.0s
BOZ Bozeman (W) 102.39 44 ⇑Pdiff Pdif 04 08 58.3 +1.3
baz=102
KEV Kevo 102.49 342 PFAKE 04 09 10.0 +13
KEV LR LR
comp=Z,17µm,22.0s
A17A Triple J Farms 102.53 41 ⇓Pdiff Pdif 04 08 59.2 +1.7
baz=103
B17A L&G Farms, Che 102.57 41 ⇓Pdiff Pdif 04 09 00.2 +2.6
baz=103
C17A Wharram Farm, 102.70 42 ⇓Pdiff Pdif 04 09 00.2 +2.0
baz=103
I16A Newdale 102.72 46 ⇑Pdiff Pdif 04 08 59.8 +1.3
baz=103
KOPT Kop Dagi 102.78 310 *i* P **Pdif 04 09 03.4 +4.4**
K16A Soda Springs 102.78 47 ⇓Pdiff Pdif 04 08 59.8 +0.9
baz=103
H16A Russell Place, 102.78 45 ⇑Pdiff Pdif 04 09 00.4 +1.5
baz=103
MVU Marysvale 102.79 51 PFAKE 04 09 10.0 +11
MVU LR LR
comp=Z,28µm,20.0s
D17A Six Diamond Ra 102.82 43 ⇓Pdiff Pdif 04 09 01.1 +2.2
baz=103
MARD Mardin 102.83 307 *i* P **Pdif 04 09 02.8 +3.6**
214A Organ Pipe Nat 102.85 58 ⇑Pdiff Pdif 04 09 01.1 +1.9
baz=103
U15A North Rim 102.93 54 ⇓Pdiff Pdif 04 09 01.7 +1.9
baz=103
SOC Sochi 102.93 314 *i* P **Pdif 04 09 01.1 +1.9**
SOC *e* 04 13 15.8
SOC *e* 04 19 39.4
SOC *e*PS **PS 04 22 16.0 -6.0**
SOC *e*SS SS 04 27 53.9 -0.3
SOC *e*SSS SSS 04 31 50.9
SOC pmax pmax
comp=Z,7.0nm,0.4s
SOC MLR MLR
comp=Z,7µm,20.0s
RPN Rapa Nui 102.94 119 PFAKE 04 09 10.0 +10
RPN LR LR
comp=Z,10µm,22.0s
HWUT Hardware Ranch 102.95 48 *e*Pdif **Pdif 04 08 57.4 -2.2**
HWUT LR LR
comp=Z,22µm,22.0s
OBN Obninsk 102.95 326 *i* P **Pdif 04 09 00.3 +1.3**
OBN *i* 04 13 13.6
OBN pmax pmax
comp=Z,38nm,1.7s
OBN MLR MLR
comp=Z,7µm,18.0s
OBN Obninsk 102.95 326 PFAKE 04 09 10.0 +11
OBN LR LR
comp=Z,10µm,21.0s
F17A Fitzpatrick Pl 103.03 44 ⇑Pdiff Pdif 04 09 02.6 +2.7
baz=103
G17A Pierce Place, 103.06 44 ⇓Pdiff Pdif 04 09 02.7 +2.7
baz=103
ARCES ARCESS Array B 103.06 342 Pdif **Pdif 04 08 59.0 -0.3**
ARCES ARCESS Array B 103.06 342 Pdiff **Pdif 04 08 59.0 -0.3**
comp=Z,4.5nm,0.9s,baz=84,slow=8.3,SNR=4.0
A18A Metzger Ranch, 103.09 41 ⇓Pdiff Pdif 04 09 00.5 +0.6
baz=103
AHID Auburn Hatcher 103.15 47 PFAKE 04 09 10.0 +9.5
AHID LR LR
comp=Z,22µm,19.0s
TPAW Teton Pass 103.16 46 *e*Pdif **Pdif 04 08 59.5 -1.1**
comp=Z,7.8nm,1.2s
B18A Beardsley Farm 103.23 41 ⇑Pdiff Pdif 04 09 02.8 +2.3
baz=103
MOOW Moose Ponds 103.27 46 *e*Pdif **Pdif 04 08 59.0 -2.1**
comp=Z,18nm,2.0s
DIYA Diyarbakir 103.29 308 *i* P **Pdif 04 09 05.0 +3.9**
EGMT Eagleton 103.31 42 PFAKE 04 09 10.0 +9.1
EGMT LR LR
comp=Z,10µm,20.0s
VNA2 Neumayer--Watz 103.36 189 *e*P **Pdif 04 09 00.8 +0.2**
baz=117,slow=3.5
VNA2 Neumayer--Watz 103.36 189 *e*near **PP 04 13 15.6 +0.1**
baz=117,slow=3.5
LKWY Lake 103.40 45 PFAKE 04 09 10.0 +8.3
LKWY LR LR
comp=Z,30µm,19.0s
VNA3 Neumayer Olymp 103.42 188 *e*P **Pdif 04 09 06.4 +5.5**
VNA3 Neumayer Olymp 103.42 188 *e*near PP 04 13 31.0 +15
E18A Harlowton 103.44 43 ⇓Pdiff Pdif 04 09 04.4 +2.7
baz=104
F18A Big Timber 103.68 44 ⇑Pdiff Pdif 04 09 04.9 +2.2
baz=104
WUAZ Wupatki 103.75 54 PFAKE 04 09 10.0 +6.7
WUAZ LR LR
comp=Z,24µm,21.0s
PTK Pertek 103.75 309 *e*P **PP 04 13 25.2 +5.2**
B19A Brinkman Farms 103.76 41 ⇑Pdiff Pdif 04 09 04.9 +2.0
baz=104
A19A Klindworth Far 103.81 40 ⇓Pdiff Pdif 04 09 04.5 +1.4
baz=104
C19A Slack Wire Ran 103.82 42 ⇓Pdiff Pdif 04 09 04.9 +1.7
baz=104
J18A Kendall Valley 103.87 46 ⇑Pdiff Pdif 04 09 05.8 +2.0
baz=104
K18A Toltan Ranch, 103.94 47 ⇓Pdiff Pdif 04 09 06.3 +2.3
baz=104
RLMT Red Lodge 104.11 44 PFAKE 04 09 10.0 +5.2
RLMT LR LR
comp=Z,16µm,21.0s
RLMT Red Lodge 104.11 44 ⇑Pdiff Pdif 04 09 06.5 +1.7
baz=104
ELZG Elazig 104.12 309 *i* P **Pdif 04 09 06.6 +1.7**
F19A Roth Farm, Mol 104.22 44 ⇓Pdiff Pdif 04 09 08.4 +3.3
baz=104
E19A Rath Farm, Rou 104.22 43 ⇓Pdiff Pdif 04 09 07.0 +1.9
baz=104
BW06 Boulder Array 104.27 47 *e*Pdif **Pdif 04 09 04.2 -1.4**
BW06 LR LR
comp=Z,25µm,20.0s
BW06 Boulder Array 104.27 47 ⇑Pdiff Pdif 04 09 06.7 +1.1
baz=104
PDAR Pinedale Array 104.27 47 Pdif **Pdif 04 09 04.3 -1.2**
PDAR PP **PP 04 13 26.3 +2.5**
PDAR Pinedale Array 104.27 47 Pdiff **Pdif 04 09 04.3 -1.2**
comp=Z,0.8nm,0.9s,baz=254,slow=5.5,SNR=3.5
PDAR PP **PP 04 13 26.3 +2.5**
comp=Z,1.3nm,1.0s,baz=262,slow=1.8,SNR=5.9
O18A Roosevelt 104.29 49 ⇑Pdiff Pdif 04 09 08.2 +2.6
baz=104
A20A Cobblestone Ra 104.35 40 ⇓Pdiff Pdif 04 09 07.5 +2.0
baz=104
H19A Powell 104.39 45 ⇑Pdiff Pdif 04 09 06.6 +0.7
baz=104
N18A Larsen Ranch, 104.44 49 ⇑Pdiff Pdif 04 09 06.9 +0.6
baz=104
I19A Meeteetse 104.48 45 ⇑Pdiff Pdif 04 09 07.6 +1.2
baz=105
C20A Veseth Ranch, 104.52 42 ⇓Pdiff Pdif 04 09 07.7 +1.4
baz=105
TUC Tucson 104.54 58 PFAKE 04 09 20.0 +13
TUC LR LR
comp=Z,13µm,19.0s
D20A Manuel Ranch, 104.55 42 ⇓Pdiff Pdif 04 09 08.7 +2.2
baz=105
J19A Crowheart 104.56 46 ⇓Pdiff Pdif 04 09 08.5 +1.8
baz=105
MALT Malatya 104.57 309 *e*P **PP 04 13 30.2 +4.1**
MALT Malatya 104.57 309 *e*P **Pdif 04 09 06.3 -0.5**
MALT pmax pmax
comp=Z,13nm,1.4s
MALT MLR MLR
comp=Z,6µm,19.0s
MALT Malatya 104.57 309 *e*Pdif **Pdif 04 09 06.3 -0.5**
comp=Z,13nm,1.4s
MALT LR LR
comp=Z,6µm,19.0s
MALT Malatya 104.57 309 *i* P **PP 04 13 22.4 -3.7**
S18A Hurst Farm, Bl 104.62 52 ⇓Pdiff Pdif 04 09 08.9 +1.6
baz=105
F20A Billings 104.78 44 ⇑PKiKP PKiKP 04 13 23.4 +0.4
baz=105
K19A Absolon Red Bu 104.78 47 ⇑PKiKP PKiKP 04 13 23.7 +0.5
baz=105
N19A John Jarvie Ra 104.83 49 ⇓PKiKP PKiKP 04 13 24.3 +1.1
baz=105
G20A Bridger 104.83 44 ⇑PKiKP PKiKP 04 13 24.9 +1.8
baz=105
A21A Bergtoll Ranch 104.97 40 ⇑PKiKP PKiKP 04 13 24.8 +1.7
baz=105
AKCD Akcadag 104.97 309 *i* P **Pdif 04 09 05.6 -3.1**
Q19A Hogan Spring (105.03 51 ⇑PKiKP PKiKP 04 13 25.3 +1.6
baz=105
C21A Desert Coulee 105.10 41 ⇓PKiKP PKiKP 04 13 24.5 +1.1
baz=105
K20A Yellowstone Ra 105.17 47 ⇑PKiKP PKiKP 04 13 25.0 +1.1
baz=105
J20A Shoshoni 105.25 46 ⇑PKiKP PKiKP 04 13 24.8 +0.9
baz=105
L20A Wamsutter 105.28 47 ⇑PKiKP PKiKP 04 13 24.9 +0.7
baz=105
A22A Carney Farms, 105.62 40 ⇓PKiKP PKiKP 04 13 26.0 +1.7
baz=106
GAZ Gaziantep 105.68 308 *e*P PP 04 13 39.9 +5.6
I21A Big Trails, Te 105.73 46 ⇑PKiKP PKiKP 04 13 26.3 +1.4
baz=106
H21A Big Horn, Sher 105.76 45 ⇑PKiKP PKiKP 04 13 26.0 +1.2
baz=106
Q20A Ridgley Place, 105.78 51 ⇑PKiKP PKiKP 04 13 25.5 +0.4
baz=106
D22A Cohagen 105.85 42 ⇑PKiKP PKiKP 04 13 26.2 +1.4
baz=106
MVCO Mesa Verde 105.86 52 *e*PKP **PKiKP 04 13 22.3 -3.1**
MVCO *e*PP **PP 04 13 34.6 -1.2**
MVCO LR LR
comp=Z,31µm,22.0s
C22A Vida 105.92 41 ⇓PKiKP PKiKP 04 13 26.0 +1.1
baz=106
L21A Rawlins 106.00 47 ⇓PKiKP PKiKP 04 13 26.2 +0.7
baz=106
M21A Separation Pea 106.07 48 ⇑PKiKP PKiKP 04 13 27.2 +1.5
baz=106
N21A Black Mountain 106.09 49 ⇓PKiKP PKiKP 04 13 27.8 +2.1
baz=106
SARI SarD1z-Kayseri 106.13 309 *e*P PP 04 13 43.2 +5.6
FINES FINESS Array B 106.26 334 Pdif **Pdif 04 09 15.7 +2.1**
FINES PP **PP 04 13 36.7 -0.8**
FINES FINESS Array B 106.26 334 Pdiff **Pdif 04 09 15.7 +2.1**
comp=Z,2.6nm,0.9s,baz=242,slow=21,SNR=2.9
FINES PP **PP 04 13 36.7 -0.8**
comp=Z,3.9nm,0.9s,baz=86,slow=2.0,SNR=3.1
I22A 9 Mile Ranch, 106.29 45 ⇓PKiKP PKiKP 04 13 27.6 +1.7
baz=106
S21A Coal Bank Pass 106.36 52 ⇑PKiKP PKiKP 04 13 26.3 -0.1
baz=106
C23A Lambert 106.36 41 ⇑PKiKP PKiKP 04 13 27.4 +1.7
baz=106
J22A Midwest 106.39 46 ⇓PKiKP PKiKP 04 13 26.6 +0.6
baz=106
FFC Flin Flon 106.46 34 PFAKE 04 13 40.0
FFC LR LR
comp=Z,24µm,20.0s
U21A Nageezi 106.64 53 ⇓PKiKP PKiKP 04 13 28.3 +1.4
baz=107
SIM Simferopol' 106.67 316 P **Pdif 04 09 22.3 +6.5**
SIM *i* 04 13 48.0
SIM *e*PS **PS 04 22 57.0 -3.9**
SIM *e*PPS PPS 04 23 57.0
SIM *e*SS SS 04 29 02.0 +17
KOZT Kozan 106.73 308 *e*P PP 04 13 47.6 +5.8
SMCO Snowmass 106.76 50 *e*PKP 04 13 26.5
SMCO *e*PP **PP 04 13 41.5 -1.0**
DGMT Dagmar 106.85 40 PFAKE 04 13 40.0
DGMT LR LR
comp=Z,11µm,20.0s
CEYT Ceyhan 106.86 308 *e*P **PP 04 13 46.5 +3.7**
P22A Eagle 106.86 50 ⇓PKiKP PKiKP 04 13 27.2 +0.1
baz=107
Q22A Crested Butte, 106.86 51 ⇑PKiKP PKiKP 04 13 27.0 -0.3
baz=107
KMBO Kilima Mbogo 106.88 268 PFAKE 04 13 40.0
KMBO LR LR
comp=Z,5µm,21.0s
N22A Wattenberg Ran 106.88 48 ⇓PKiKP PKiKP 04 13 26.7 -0.5
baz=107
O22A Kremmling 106.92 49 ⇓PKiKP PKiKP 04 13 27.4 0.0
baz=107
C24A Savage 106.92 41 ⇓PKiKP PKiKP 04 13 27.3 +0.5
baz=107
121A Cookes Peak, D 107.04 57 ⇑PKiKP PKiKP 04 13 27.6 0.0
baz=107
R22A Saguache, Gunn 107.08 51 ⇑PKiKP PKiKP 04 13 27.7 -0.1
baz=107
D24A Glendive 107.09 42 ⇓PKiKP PKiKP 04 13 27.3 +0.2
baz=107
S22A 4UR Ranch, Cre 107.10 52 ⇓PKiKP PKiKP 04 13 27.7 -0.1
baz=107
T22A Edith 107.16 52 ⇓PKiKP PKiKP 04 13 28.1 +0.3
baz=107
KRTS Karatas 107.22 307 *e*P PP 04 13 51.2 +5.7
F24A Ekalaka 107.30 43 ⇓PKiKP PKiKP 04 13 30.3 +2.7
baz=107
O23A Lake Granby, G 107.39 49 ⇓PKiKP PKiKP 04 13 28.5 +0.3
baz=108
G24A Alzada 107.44 44 ⇓PKiKP PKiKP 04 13 28.9 +1.0
baz=108
H24A Dirks Ranch, A 107.47 44 ⇑PKiKP PKiKP 04 13 27.5 -0.5
baz=108
Y22A Socorro 107.54 56 ⇑PKiKP PKiKP 04 13 29.1 +0.6
baz=108
P23A Jefferson 107.60 50 ⇑PKiKP PKiKP 04 13 28.3 -0.4
baz=108
ISCO Idaho Springs 107.69 49 *e*PKP **PKiKP 04 13 28.4 -0.4**
ISCO *e*PP **PP 04 13 50.9 +1.6**
ISCO LR LR
comp=Z,18µm,20.0s
ISCO Idaho Springs 107.69 49 ⇓PKiKP PKiKP 04 13 29.1 +0.3
baz=108
BNM Barren Site 107.79 55 *e*PKP **PKiKP 04 13 28.8 -0.2**
BNM *e*PP **PP 04 13 53.7 +3.6**
R23A Moffat 107.81 51 ⇓PKiKP PKiKP 04 13 29.0 0.0
baz=108
ANMO Albuquerque 107.82 55 *e*PKP **PKiKP 04 13 28.0 -1.0**
ANMO LR LR
comp=Z,11µm,21.0s

U23A	El Rito	107.82	53	⇑PKiKP	PKiKP	04 13 29.6	+0.6
	baz=108						
T23A	Casias Ranch,	107.84	52	⇓PKiKP	PKiKP	04 13 28.8	-0.3
	baz=108						
MERS	Mersin	107.85	308	eP	PP	04 13 53.2	+3.0
CANT	Cankiri	107.89	312	eP	PP	04 13 54.5	+4.2
V23A	Ortiz Mt. (NFS	107.92	54	⇓PKiKP	PKiKP	04 13 29.5	+0.3
	baz=108						
MICGM	Minsk	107.95	327	eP	Pdif	04 09 23.0	+1.7
MNK	Minsk	107.97	327	eP	Pdif	04 09 23.0	+1.6
MNK				e		04 13 52.0	
MNK				ePPP	PPP	04 16 10.0	
MNK				e		04 20 40.0	
MNK				ePS	PS	04 23 10.0	-3.8
MNK				eSS	SS	04 29 08.0	+5.9
MNK				MLR	MLR		
	comp=Z,32µm,19.0s						
MNK				MLR	MLR		
	comp=E,21µm,20.0s						
MNK				MLR	MLR		
	comp=N,11µm,16.0s						
RSSD	Black Hills	107.97	45	ePKP	PKiKP	04 13 27.5	-1.6
RSSD				ePP	PP	04 13 51.3	+0.3
BR131	Keskin Array S	108.04	311	ePKP	PKiKP	04 13 25.8	-3.4
BRTR	Keskin Array B	108.04	311	Pdif	Pdif	04 09 23.3	+1.0
BRTR				PP	PP	04 13 42.9	-8.7
BRTR				PKKPbc	PKKPbc	04 24 43.5	+0.9
BRTR				PKKPab	PKKPab	04 24 51.3	-4.0
BRTR	Keskin Array B	108.04	311	Pdiff	Pdif	04 09 23.3	+1.0
	comp=N,0.6nm,0.9s,baz=35,slow=5.3,SNR=5.3						
BRTR				PP	PP	04 13 42.9	-8.7
	comp=N,2.3nm,1.0s,baz=106,slow=4.0,SNR=4.3						
BRTR				PKKPbc	PKKPbc	04 24 43.5	+0.9
	comp=N,1.0nm,1.0s,baz=199,slow=2.6,SNR=5.8						
BRTR				PKKPab	PKKPab	04 24 51.3	-4.0
	comp=N,1.9nm,1.0s,baz=160,slow=3.9,SNR=6.3						
ELDT	Eldivan	108.06	311	i P	Pdif	04 09 13.0	-9.3
Y23A	Lovelace Mesa,	108.29	56	⇑PKiKP	PKiKP	04 13 29.4	-0.6
	baz=108						
IZAR	Zarasai	108.38	328	eP	PKiKP	04 13 34.5	+5.3
AKASG	Malin Array Be	108.39	323	PP	PP	04 13 53.9	+0.3
AKASG				PKKPbc	PKKPbc	04 24 43.5	+2.0
AKASG	Malin Array Be	108.39	323	PP	PP	04 13 53.9	+0.3
	comp=N,2.8nm,0.9s,baz=68,slow=4.2,SNR=4.4						
AKASG				PKKPbc	PKKPbc	04 24 43.5	+2.0
	comp=N,1.4nm,0.6s,baz=258,slow=3.2,SNR=5.2						
KIEV	Kiev	108.41	323	PFAKE		04 13 40.0	
KIEV				LR	LR		
	comp=Z,13µm,21.0s						
SULT	Sultanhani-AKS	108.41	309	eP	PP	04 13 59.9	+5.6
L25A	Engebretsen Ra	108.45	47	⇓PKiKP	PKiKP	04 13 30.2	+0.3
	baz=108						
AFSR	Af¯ar-Bala (A	108.53	310	eP	PP	04 14 01.2	+6.1
IIGN	Ignalina	108.54	328	eP	PKiKP	04 13 33.7	+4.2
W24A	Lazy 6 Ranch,	108.63	54	⇓PKiKP	PKiKP	04 13 30.6	0.0
	baz=109						
V24A	Rampart Ranch,	108.66	54	⇓PKiKP	PKiKP	04 13 30.3	-0.3
	baz=109						
LOD	Lodumlu	108.67	311	eP	PP	04 14 01.2	+5.1
PMSA	Palmer Station	108.75	168	PFAKE		04 13 40.0	
PMSA				LR	LR		
	comp=Z,18µm,21.0s						
Y24A	Capitan	108.80	55	⇑PKiKP	PKiKP	04 13 31.2	+0.3
	baz=109						
P25A	Willow Gulch B	108.84	49	⇓PKiKP	PKiKP	04 13 31.5	+0.7
	baz=109						
LFK	Lefkose	108.90	306	eP	PP	04 14 00.5	+2.6
K26A	Motz Farm, Whi	108.90	46	⇓PKiKP	PKiKP	04 13 31.9	+1.2
	baz=109						
Z24A	Sheeppen Canyo	108.95	56	⇓PKiKP	PKiKP	04 13 31.5	+0.2
	baz=109						
124A	Stringfield Ra	108.97	57	⇑PKiKP	PKiKP	04 13 32.4	+1.1
	baz=109						
S25A	Robets Cordova	108.99	51	⇑PKiKP	PKiKP	04 13 33.5	+2.4
	baz=109						
224A	Cornudas Mount	109.00	57	⇑PKiKP	PKiKP	04 13 33.0	+1.7
	baz=109						
T25A	Trinidad	109.10	52	⇑PKiKP	PKiKP	04 13 30.3	-1.1
	baz=109						
324A	Moseley Ranch,	109.12	58	⇑PKiKP	PKiKP	04 13 32.1	+0.6
	baz=109						
V25A	Rancho No Teng	109.16	53	⇑PKiKP	PKiKP	04 13 31.0	-0.5
	baz=109						
MNTX	Cornudas Mount	109.17	58	PFAKE		04 13 40.0	
MNTX				LR	LR		
	comp=Z,8µm,21.0s						
MNTX	Cornudas Mount	109.17	58	⇑PKiKP	PKiKP	04 13 31.6	+0.2
	baz=109						
KONT	Konya--Tatoy	109.36	309	eP	PP	04 14 01.2	+0.1
W25A	X Bar L Ranch,	109.39	54	⇑PKiKP	PKiKP	04 13 32.0	+0.1
	baz=110						
Y25A	Mesa, Roswell	109.41	55	⇑PKiKP	PKiKP	04 13 32.0	+0.1
	baz=110						
LEF	Lefka	109.44	306	eP	PP	04 14 05.8	+4.1
KIZT	Kizilcal	109.54	310	eP	PP	04 14 09.2	+6.7
325A	Bean Ranch, Si	109.56	58	⇓PKiKP	PKiKP	04 13 32.0	-0.3
	baz=110						
425A	Indio Mountain	109.63	59	⇑PKiKP	PKiKP	04 13 32.7	+0.3
	baz=110						
R26A	Arlington	109.63	51	⇑PKiKP	PKiKP	04 13 32.1	-0.1
	baz=110						
125A	Gardner Draw,	109.64	57	⇓PKiKP	PKiKP	04 13 32.2	-0.2
	baz=110						
MDUB	Mudurnu	109.72	312	eP	PP	04 14 07.8	+4.1
T26A	Comanche Natio	109.73	52	⇑PKiKP	PKiKP	04 13 32.1	-0.5
	baz=110						
KIS	Kishinev	109.74	319	ePKP	PP	04 13 58.0	-5.5
KIS	Kishinev	109.74	319	ePP	PP	04 14 10.0	+6.5
KIS				eSKP		04 16 50.0	
KIS				eSKS	SKSac	04 20 15.0	+6.4
KIS				eSKKS	SKSdf	04 20 39.0	-4.4
KIS				i S	Sdif	04 21 40.0	-1.5
KIS	Kishinev	109.74	319	ePS	PS	04 23 18.0	-14
S26A	Kim	109.75	51	⇓PKiKP	PKiKP	04 13 32.1	-0.4
	baz=110						
OGNE	Ogallala	110.14	48	PFAKE		04 13 40.0	
OGNE				LR	LR		
	comp=Z,11µm,19.0s						
OGNE	Ogallala	110.14	48	⇑PKiKP	PKiKP	04 13 33.4	+0.3
	baz=110						
226B	Tecolote Peak,	110.14	57	⇓PKiKP	PKiKP	04 13 33.7	+0.4
	baz=110						
GULT	Gulveren	110.24	312	eP	PP	04 14 13.8	+6.4
SPNC	Sapanca-Adapaz	110.34	312	eP	PP	04 14 11.2	+3.2
326A	Caldwell Ranch	110.41	58	⇑PKiKP	PKiKP	04 13 33.6	-0.2
	baz=110						
T27A	Campo	110.44	52	⇓PKiKP	PKiKP	04 13 34.0	+0.1
	baz=110						
426A	McDonald Obser	110.46	59	⇑PKiKP	PKiKP	04 13 34.3	+0.2
	baz=111						
526A	Mary Lane Ranc	110.49	59	⇓PKiKP	PKiKP	04 13 34.4	+0.2
	baz=111						
Y27A	Causey	110.67	55	⇑PKiKP	PKiKP	04 13 35.0	+0.7
	baz=111						
SUW	Suwalki	110.69	327	ePKIKP	PKiKP	04 13 33.0	-0.5
SUW	Suwalki	110.69	327	ePKP	PKiKP	04 13 33.0	-0.5
SILT	Sile	110.72	313	eP	PP	04 14 17.8	+7.1
CFR	Carcaliu	110.72	317	⇓PKIKP	PKiKP	04 13 34.1	+0.2
CFR	Carcaliu	110.72	317	⇓iP	PKiKP	04 13 34.1	+0.2
Z27A	Tatum	110.73	56	⇓PKiKP	PKiKP	04 13 33.7	-0.8
	baz=111						
TIRR	Tirgusor	110.73	316	⇑PKIKP	PKiKP	04 13 33.4	-0.5
TIRR	Tirgusor	110.73	316	⇑iP	PKiKP	04 13 33.4	-0.5
HRT	Hereke	110.78	312	eP	PP	04 14 17.2	+5.9
CAVI	Cavuskoy	110.80	312	eP	PP	04 14 17.2	+5.8
ISP	Isparta	110.81	309	eP	PP	04 14 14.6	+3.0
ISP	Isparta	110.81	309	PFAKE		04 13 40.0	
ISP				LR	LR		
	comp=Z,5µm,21.0s						
BCK	Bucak	110.83	309	eP	PP	04 14 15.8	+4.0
ALT	Altintas	110.86	310	eP	PP	04 14 18.6	+6.7
527A	Woodward Ranch	110.89	59	⇑PKiKP	PKiKP	04 13 34.6	-0.3
	baz=111						
T28A	Walsh	110.91	52	⇓PKiKP	PKiKP	04 13 34.8	+0.2
	baz=111						
TXAR	Lajitas Array	110.96	60	PKKPab	PKKPab	04 24 43.1	+0.6
TXAR	Lajitas Array	110.96	60	PKKPab	PKKPab	04 24 43.1	+0.6
	comp=Z,2.5nm,0.9s,baz=108,slow=6.0,SNR=12						
427A	Hayter Ranch,	110.97	58	⇓PKiKP	PKiKP	04 13 35.3	+0.3
	baz=111						
MSTX	Muleshoe	110.98	55	⇓PKiKP	PKiKP	04 13 34.4	-0.5
	baz=111						
YLV	Yalova	111.06	312	eP	PP	04 14 19.0	+5.7
ISK	Istanbul-Kandi	111.17	313	eP	PP	04 14 18.5	+4.5
627A	Terlingua Ranc	111.18	60	⇑PKiKP	PKiKP	04 13 35.1	-0.3

	baz=111						
GEMT	Gemlik	111.22	312	eP	PP	04 14 19.8	+5.4
BGKT	Bogazkoy	111.35	313	eP	PP	04 14 22.6	+7.4
328A	Wristen Ranch,	111.39	58	⇑PKiKP	PKiKP	04 13 35.2	-0.5
	baz=112						
ARMT	Armutlu	111.44	312	eP	PP	04 14 22.6	+6.6
128A	Castleberry Fa	111.45	56	⇑PKiKP	PKiKP	04 13 35.3	-0.5
	baz=112						
VRI	Vrincioaia	111.46	318	⇑PKIKP	PKiKP	04 13 43.2	+7.9
VRI	Vrincioaia	111.46	318	⇑iP	PKiKP	04 13 43.2	+7.9
ELL	Elmali	111.51	308	eP	PP	04 14 21.4	+4.6
PLOR	Plostina	111.52	318	⇑PKIKP	PKiKP	04 13 44.7	+9.2
PLOR	Plostina	111.52	318	⇑iP	PKiKP	04 13 44.7	+9.2
528A	Cox Ranch, San	111.59	59	⇑PKiKP	PKiKP	04 13 35.6	-0.6
	baz=112						
428A	Kincaid Ranch,	111.59	58	⇑PKiKP	PKiKP	04 13 34.8	-1.4
	baz=112						
628A	Black Gap, Mar	111.61	60	⇑PKiKP	PKiKP	04 13 34.5	-1.6
	baz=112						
AMTX	Amarillo	111.70	54	ePKP	PKiKP	04 13 35.0	-1.2
AMTX				LR	LR		
	comp=Z,14µm,22.0s						
AMTX	Amarillo	111.70	54	⇑PKiKP	PKiKP	04 13 35.5	-0.7
	baz=112						
SLVT	Silivri	111.74	313	eP	PP	04 14 25.8	+7.7
X29A	Tulia	111.77	54	⇑PKiKP	PKiKP	04 13 35.6	-0.7
	baz=112						
LVV	L'vov	111.83	323	i PKIKP	PKiKP	04 13 40.0	+4.1
LVV				e		04 20 07.0	
LVV				ePS	PS	04 23 45.0	-6.5
LVV				MLR	MLR		
	comp=Z,10µm,23.0s						
BUR08	Bucovina Ar. S	111.88	320	ePKP	PKiKP	04 13 34.2	-2.0
BURAR	Bucovina Array	111.88	320	⇓iP	PKiKP	04 13 40.8	+4.6
Y29A	Porterfield Fa	111.90	55	⇑PKiKP	PKiKP	04 13 35.6	-1.0
	baz=112						
Z29A	Hungry Hill Ra	111.98	56	⇑PKiKP	PKiKP	04 13 36.0	-0.7
	baz=112						
329A	Wagon Wheel Ra	112.07	58	⇑PKiKP	PKiKP	04 13 36.8	-0.2
	baz=112						
KULA	Kula-Manisa	112.08	310	eP	PP	04 14 26.6	+5.8
529A	Stev Forest Ra	112.09	59	⇓PKiKP	PKiKP	04 13 36.8	-0.2
	baz=112						
MLR	Muntele Rosu	112.10	318	⇓iP	PKiKP	04 13 39.2	+2.5
FETY	Fethiye	112.18	308	eP	PP	04 14 22.5	+1.0
AGMN	Agassiz Nation	112.20	39	PFAKE		04 13 50.0	
AGMN				LR	LR		
	comp=Z,17µm,20.0s						
429A	Davenport Ranc	112.28	58	⇑PKiKP	PKiKP	04 13 37.5	+0.1
	baz=112						
X30A	Coker Ranch, T	112.43	54	⇓PKiKP	PKiKP	04 13 36.9	-0.7
	baz=112						
NOA	NORSAR Array B	112.63	337	PP	PP	04 14 26.9	+3.2
NOA	NORSAR Array B	112.63	337	PP	PP	04 14 26.9	+3.2
	comp=Z,3.6nm,1.0s,baz=50,slow=7.7,SNR=3.7						
KWP	Kalwaria Pacla	112.69	323	⇓PKIKP	PKiKP	04 13 40.5	+3.0
KWP	Kalwaria Pacla	112.69	323	PFAKE		04 13 50.0	
KWP				LR	LR		
	comp=Z,8µm,20.0s						
KWP	Kalwaria Pacla	112.69	323	⇓iP	PKiKP	04 13 40.5	+3.0
VOIR		112.71	318	⇓PKIKP	PKiKP	04 13 47.4	+10
VOIR		112.71	318	⇓iP	PKiKP	04 13 47.4	+10
330A	Mertzon	112.76	57	⇑PKiKP	PKiKP	04 13 38.1	-0.2
	baz=113						
430A	Baggett Ranch,	112.81	58	⇓PKiKP	PKiKP	04 13 37.1	-1.3
	baz=113						
530A	J-C Ranch, Com	112.84	59	⇑PKiKP	PKiKP	04 13 37.4	-1.0
	baz=113						
NAO01	NORSAR Array S	112.88	337	ePKP	PKiKP	04 13 35.5	-2.0
ARR	Arges	113.01	318	⇑iP	PKiKP	04 13 42.5	+4.1
W31A	Holland Ranch,	113.03	53	⇓PKiKP	PKiKP	04 13 38.0	-0.6
	baz=113						
X31A	McDonald Ranch	113.12	54	⇑PKiKP	PKiKP	04 13 38.2	-0.6
	baz=113						
KOLS	Kolonicke sedl	113.23	322	i PKIKP	PKiKP	04 13 41.1	+2.5
KOLS	Kolonicke sedl	113.23	322	ePKP	PKiKP	04 13 41.1	+2.5
ECSD	EROS Data Cent	113.24	44	ePKP	PKiKP	04 13 37.2	-1.6
ECSD				ePP	PP	04 14 28.9	+0.2
ECSD				LR	LR		
	comp=Z,17µm,20.0s						
Z31A	Sharp Cattle R	113.26	55	⇓PKiKP	PKiKP	04 13 38.5	-0.7
	baz=113						
431A	Sonora	113.37	58	⇓PKiKP	PKiKP	04 13 38.4	-1.0
	baz=114						
TRPA	Tarpa	113.37	322	⇓ePKiKP	PKiKP	04 13 39.8	+1.0
231A	Bronte	113.38	57	⇓PKiKP	PKiKP	04 13 37.9	-1.6
	baz=114						
331A	San Angelo	113.41	57	⇓PKiKP	PKiKP	04 13 39.1	-0.4
	baz=114						
MBAR	Mbarara	113.41	268	PFAKE		04 13 50.0	
MBAR				LR	LR		
	comp=Z,1µm,22.0s						
531A	Rocksprings	113.51	59	⇓PKiKP	PKiKP	04 13 39.3	-0.5
	baz=114						
631A	Perdido Creek	113.61	60	⇓PKiKP	PKiKP	04 13 39.2	-0.7
	baz=114						
DRGR		113.77	320	⇓PKIKP	PKiKP	04 13 40.4	+0.6
DRGR		113.77	320	⇓iP	PKiKP	04 13 40.4	+0.6
Z32A	Haskell	113.80	55	⇓PKiKP	PKiKP	04 13 39.5	-0.7
	baz=114						
232A	Coleman	113.95	57	⇓PKiKP	PKiKP	04 13 39.8	-0.7
	baz=114						
332A	Millersview	113.97	57	⇓PKiKP	PKiKP	04 13 39.8	-0.7
	baz=114						
LSZ	Lusaka	114.02	252	ePKP	PKiKP	04 13 40.3	-0.8
LSZ				LR	LR		
	comp=Z,13µm,21.0s						
432A	Menard	114.02	58	⇓PKiKP	PKPdf	04 13 39.9	-0.7
	baz=114						
WMOK	Wichita Mounta	114.06	53	ePKIKP	PKPdf	04 13 35.9	-4.7
WMOK				MLR	MLR		
	comp=Z,12µm,22.0s						
WMOK	Wichita Mounta	114.06	53	ePKP	PKPdf	04 13 35.9	-4.8
WMOK				LR	LR		
	comp=Z,12µm,22.0s						
532A	Rocksprings	114.06	59	⇑PKiKP	PKPdf	04 13 40.0	-0.8
	baz=114						
JCT	Junction City	114.09	58	ePKIKP	PKPdf	04 13 41.6	+0.8
JCT				MLR	MLR		
	comp=Z,15µm,19.0s						
JCT	Junction City	114.09	58	ePKP	PKPdf	04 13 41.6	+0.8
JCT				LR	LR		
	comp=Z,15µm,19.0s						
JCT	Junction City	114.09	58	⇑PKiKP	PKiKP	04 13 40.9	+0.1
	baz=114						
LBTB	Lobatse	114.10	241	ePKP	PKiKP	04 13 40.5	-0.6
KONO	Kongsberg	114.13	337	PFAKE		04 13 50.0	+10
KONO				LR	LR		
	comp=Z,12µm,22.0s						
OJC	Ojcow	114.17	324	i PKIKP	PKPdf	04 13 41.1	+0.8
OJC				e		04 20 29.2	
OJC				eSP	SP	04 24 08.5	-1.6
OJC				MLR	MLR		
	comp=Z,11µm,19.3s						
OJC	Ojcow	114.17	324	ePKiKP	PKiKP	04 13 41.1	+0.8
OJC				ePP	PP	04 14 24.0	-11
OJC				eSKSac	SKSac	04 20 29.2	+2.9
OJC				eSP	SP	04 24 08.5	-1.6
OJC				eSS	SS	04 30 13.6	-11
OJC				L	L	05 05 01.6	
	comp=Z,11µm,19.3s						
NIE	Niedzica	114.21	324	ePKIKP	PKPdf	04 13 42.8	+2.3
NIE	Niedzica	114.21	324	ePKP	PKPdf	04 13 42.8	+2.3
732A	Laxson Ranch,	114.25	60	⇑PKiKP	PKPdf	04 13 40.7	-0.4
	baz=114						
632A	Uvalde	114.27	59	⇓PKiKP	PKPdf	04 13 41.0	-0.2
	baz=114						
KSU1	Kansas State U	114.63	48	ePKP	PKPdf	04 13 42.6	+1.0
KSU1				LR	LR		
	comp=Z,15µm,21.0s						
MMB	Musomiste	114.87	315	i P	PP	04 14 48.1	+7.8
VTS	Vitosha	114.91	316	⇑PKIKP	PKPdf	04 13 44.7	+2.5
VTS	Vitosha	114.91	316	⇑iP	PKPdf	04 13 44.7	+2.5
VTS	Vitosha	114.91	316	i P	PP	04 14 48.6	+7.9
BZS	Buzias	114.91	319	⇑PKIKP	PKPdf	04 13 43.3	+1.4
BZS	Buzias	114.91	319	⇑iP	PKPdf	04 13 43.3	+1.4
EYMN	Ely	115.03	38	PFAKE		04 13 50.0	+7.9
EYMN				LR	LR		
	comp=Z,25µm,22.0s						
PSZ	Piszkesteto	115.09	322	ePKIKP	PKPdf	04 13 40.4	-1.9
PSZ				MLR	MLR		
	comp=Z,9µm,20.0s						
PSZ	Piszkesteto	115.09	322	ePKPdf	PKPdf	04 13 40.4	-1.9
PSZ				LR	LR		
	comp=Z,9µm,20.0s						

PSZ	Piszkesteto	115.09	322	⇓iP	PKPdf	04 13 45.9	+3.6
PSZ	Piszkesteto	115.09	322	⇓ePKPdf	PKPdf	04 13 45.8	+3.5
KKB	Krupnik	115.23	315	P	PP	04 14 50.7	+7.8
SPMN	St. Paul	115.28	41	⇑PKiKP	PKiKP	04 13 41.9	-0.7
	baz=115						
OKC	Ostrava-Krasne	115.29	325	ePP	PP	04 14 48.2	+5.3
OKC				ePKKP	PKKPbc	04 24 09.9	-8.8
OKC				ex	x	04 30 51.0	
OKC				AMS	AMS	05 05 00.0	
	comp=Z,10µm,18.7s						
SUR	Sutherland	115.63	232	PFAKE		04 13 50.0	+6.0
SUR				LR	LR		
	comp=Z,18µm,20.0s						
MORC	Moravsky Berou	115.67	325	ePKIKP	PKPdf	04 13 43.6	+0.3
MORC				e		04 14 45.3	
MORC	Moravsky Berou	115.67	325	ePKPdf	PKPdf	04 13 43.6	+0.3
MORC				ePP	PP	04 14 45.3	-0.3
MORC	Moravsky Berou	115.67	325	⇑iP	PKPdf	04 13 45.8	+2.5
WHTX	Lake Whitney	115.75	56	⇑PKiKP	PKPdf	04 13 42.7	-1.2
	baz=116						
BUD	Budapest	115.80	322	⇓ePKPdf	PKPdf	04 13 46.9	+3.4
IDI	Anoyia	115.81	308	ePKPdf	PKPdf	04 13 43.9	-0.1
SFJD	Kangerlussuaq	115.81	6	PFAKE		04 13 50.0	+7.0
SFJD				LR	LR		
	comp=Z,7µm,21.0s						
KSP	Ksiaz	115.87	326	i PKIKP	PKPdf	04 13 47.8	+4.2
KSP				e		04 14 49.0	
KSP				eSP	SP	04 24 26.0	+0.4
KSP				eSS	SS	04 30 52.0	+4.7
KSP				MLR	MLR		
	comp=Z,26µm,24.0s						
DPC	Dobruska-Polom	116.09	326	ePKIKP	PKPdf	04 13 47.5	+3.4
DPC				e		04 14 56.0	
DPC				e		04 17 25.3	
DPC				e		04 24 26.8	
DPC				e		04 31 02.7	
DPC				MLR	MLR		
	comp=Z,10µm,20.3s						
DPC	Dobruska-Polom	116.09	326	ePKP	PKPdf	04 13 47.5	+3.4
DPC				ex	x	04 14 56.0	
DPC				ePKS	PKSdf	04 17 25.3	+4.6
DPC				ePS	PS	04 24 26.8	-3.9
DPC				ex	x	04 31 02.7	
DPC				AMS	AMS	05 04 40.0	
	comp=Z,10µm,20.3s						
TUL1	Tulsa	116.14	52	⇑PKiKP	PKPdf	04 13 43.7	-0.9
	baz=116						
UPC	Upice	116.19	326	ePKIKP	PKPdf	04 13 48.2	+4.0
UPC				e		04 14 53.5	
UPC	Upice	116.19	326	ePKP	PKPdf	04 13 48.2	+4.0
UPC				ePP	PP	04 14 53.5	+4.3
SCIA	State Center	116.20	45	PFAKE		04 13 50.0	+5.5
SCIA				LR	LR		
	comp=Z,10µm,20.0s						
KVTX	Kingsville	116.26	61	PFAKE		04 14 00.0	+15
KVTX				LR	LR		
	comp=Z,10µm,21.0s						
VRAC	Vranov	116.44	325	⇑iP	PKPdf	04 13 49.9	+5.2
PKSM	Moragy	116.58	321	⇑PKIKP	PKPdf	04 13 47.4	+2.3
PKSM	Moragy	116.58	321	⇑iP	PKPdf	04 13 47.4	+2.3
PKSM	Moragy	116.58	321	⇑ePKPdf	PKPdf	04 13 47.6	+2.5
PVCC	Panska Ves	116.98	327	ePKIKP	PKPdf	04 13 51.4	+5.7
PVCC				e		04 14 56.5	
PVCC				e		04 17 31.6	
PVCC				e		04 24 35.7	
PVCC				e		04 31 17.4	
PVCC				MLR	MLR		
	comp=Z,10µm,19.3s						
PVCC	Panska Ves	116.98	327	ePKPdf	PKPdf	04 13 51.4	+5.7
PVCC				ePP	PP	04 14 56.5	+1.9
PVCC				ex	x	04 17 31.6	
PVCC				ePS	PS	04 24 35.7	-2.9
PVCC				ex	x	04 31 17.4	
PVCC				AMS	AMS	05 06 00.0	
	comp=Z,10µm,19.3s						
TREC	Trest	117.08	325	ePKIKP	PKPdf	04 13 48.7	+2.7
TREC				e		04 15 03.0	
TREC				e		04 17 32.6	
TREC				e		04 24 27.8	
TREC				e		04 31 11.9	
TREC				MLR	MLR		
	comp=Z,17µm,20.1s						
TREC	Trest	117.08	325	ePKPdf	PKPdf	04 13 48.7	+2.7
TREC				ex	x	04 15 03.0	
TREC				ex	x	04 17 32.6	
TREC				ex	x	04 24 27.8	
TREC				eSS	SS	04 31 11.9	+8.7
TREC				AMS	AMS	05 05 50.0	
	comp=Z,17µm,20.1s						
BRG	Berggiesshubel	117.15	327	PDIF	Pdif	04 10 08.0	+5.7
BRG	Berggiesshubel	117.15	327	ePKP	PKPdf	04 13 48.8	+2.8
	comp=Z,73nm,2.0s						
BRG				ePP	PP	04 14 48.4	-7.4
	comp=Z,72nm,2.2s						
BRG				i		04 17 03.0	
BRG				SDIF		04 22 47.0	
BRG				e		04 24 11.2	
	comp=Z,15nm,1.5s						
BRG				SS	SS	04 31 20.0	+16
BRG							
	comp=N,11µm,27.4s						
BRG							
	comp=E,13µm,21.6s						
BRG							
	comp=Z,15µm,31.4s						
BRG	Berggiesshubel	117.15	327	ePKIKP	PKPdf	04 13 48.8	+2.8
BRG				SS	SS	04 31 20.0	+16
BRG				pmax	pmax		
	comp=Z,73nm,2.0s						
BRG	Berggiesshubel	117.15	327	ePKPdf	PKPdf	04 13 47.9	+1.9
BRG				ePP	PP	04 14 59.9	+4.1
SOP	Sopron	117.21	323	⇓ePKPdf	PKPdf	04 13 49.4	+3.2
PRU	Pruhonice	117.27	326	ePKIKP	PKPdf	04 13 49.3	+3.0
PRU				e		04 15 04.0	
PRU				e		04 17 28.5	
PRU				e		04 24 42.4	
PRU				e		04 31 20.3	
PRU				MLR	MLR		
	comp=Z,15µm,23.9s						
PRU	Pruhonice	117.27	326	ePKPdf	PKPdf	04 13 49.3	+3.0
PRU				ex	x	04 15 04.0	
PRU				ePKS	PKSdf	04 17 28.5	+5.7
PRU				ePS	PS	04 24 42.4	+1.1
PRU				ex	x	04 31 20.3	
PRU				AMS	AMS	05 02 40.0	
	comp=Z,15µm,23.9s						
PRA	Prague	117.29	326	PKPdf	PKPdf	04 13 47.0	+0.7
PRA				PP	PP	04 14 52.0	-4.8
PRA				AMS	AMS	05 03 30.0	
BSEG	Bad Segeberg	117.30	331	ePKIKP	PKPdf	04 13 48.7	+2.5
BSEG				e		04 15 01.2	
BSEG	Bad Segeberg	117.30	331	ePKPdf	PKPdf	04 13 48.7	+2.5
BSEG				ePP	PP	04 15 01.2	+4.5
CLL	Collm	117.42	328	ePKIKP	PKPdf	04 13 49.0	+2.5
CLL				i		04 13 54.7	
CLL				e		04 14 59.0	
CLL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CLL				pmax	pmax		
	comp=Z,69nm,2.0s						
CLL				MLR	MLR		
	comp=Z,26µm,21.3s						
CLL	Collm	117.42	328	ePKPdf	PKPdf	04 13 49.0	+2.5
CLL				ePP	PP	04 15 01.6	+4.0
CLL	Collm	117.42	328	e(sPKPdf)	PKPdf	04 13 49.0	+2.5
	comp=Z,8.0nm,1.0s						
CLL				i		04 13 54.7	
	comp=Z,24nm,1.2s						
CLL				ePP	PP	04 14 59.0	+1.4
	comp=Z,69nm,2.0s						
CLL				e		04 15 18.0	
CLL				ePPP	PPP	04 17 29.0	
CLL				eSdif	Sdif	04 22 50.0	+4.6
CLL				ePS	PKKPdf	04 24 40.0	+1.1
CLL				e(pPS)		04 24 55.0	
CLL				e(PPS)		04 26 24.0	
CLL				eSS	SS	04 31 14.0	+6.7
CLL				eSSS	SSS	04 35 28.0	
CLL				e		04 37 00.0	
CLL				Lm	MLR	05 05 00.0	
	comp=N,17µm,21.5s						
CLL				Lm	MLR	05 05 00.0	
	comp=E,10µm,21.0s						

CLL Lm MLR 05 05 00.0
comp=Z,26µm,21.3s
CLL LmH 06 01 00.0
comp=N,2µm,21.3s
CLL LmH 06 01 00.0
comp=E,2µm,21.7s
CLL Lm MLR 06 03 00.0
comp=Z,3µm,20.7s
CSNA Conrad Observa 117.52 324 ⇑*i*SPKiKP **PKPdf 04 13 49.3 +2.4**
comp=Z,13nm,1.3s
CSNA Conrad Observa 117.52 324 ⇑*i*P **PKPdf 04 13 49.3 +2.4**
HKT Hockley 117.56 58 *e*PKIKP **PKPdf 04 13 46.4 -1.0**
HKT Hockley 117.56 58 *e*PKPdf **PKPdf 04 13 46.4 -1.0**
TIR Tirane 117.68 315 *e*PKIKP **PKPdf 04 13 44.4 -2.9**
TIR MLR MLR
comp=Z,9µm,22.0s
TIR Tirane 117.68 315 *e*PKPdf **PKPdf 04 13 44.4 -2.9**
TIR LR LR
comp=Z,9µm,22.0s
BORG Borgarnes 118.03 353 PFAKE 04 14 00.0 +13
BORG LR LR
comp=Z,6µm,20.0s
TANN Tannenbergstha 118.19 327 *e*PKPdf **PKPdf 04 13 49.9 +1.8**
TANN *e*PP **PP 04 15 07.5 +4.4**
KHC Kasperske Hory 118.25 326 *e*PKIKP **PKPdf 04 13 48.5 +0.2**
KHC *e* 04 13 55.0
KHC *e* 04 15 10.7
KHC *e* 04 17 41.9
KHC *e* 04 24 52.8
KHC *e* 04 31 34.1
KHC MLR MLR
comp=Z,13µm,19.7s
KHC Kasperske Hory 118.25 326 *e*PKPdf **PKPdf 04 13 48.0 -0.3**
KHC *e*PP **PP 04 14 58.6 -4.9**
KHC Kasperske Hory 118.25 326 *e*PKPdf **PKPdf 04 13 48.5 +0.2**
KHC *ex* x 04 13 55.0
KHC *ex* x 04 15 10.7
KHC *ex* x 04 17 41.9
KHC *e*PS **PS 04 24 52.8 +2.6**
KHC *e*SKKS 04 31 34.1
KHC AMS AMS 05 07 20.0
comp=Z,13µm,19.7s
NRDL Niedersach Rie 118.25 330 *e*PKPdf **PKPdf 04 13 50.2 +2.2**
NRDL *e*PP **PP 04 15 08.1 +4.9**
MIAR Mount Ida 118.26 52 *e*PKIKP **PKPdf 04 13 47.9 -0.8**
MIAR *e* 04 15 04.7
MIAR Mount Ida 118.26 52 *e*PKP **PKPdf 04 13 47.9 -0.8**
MIAR *e*PP **PP 04 15 04.7 +0.4**
NKC Novy Kostel 118.30 327 *e*PKIKP **PKPdf 04 13 51.1 +2.8**
NKC *e* 04 15 03.5
NKC Novy Kostel 118.30 327 *e*PKPdf **PKPdf 04 13 51.1 +2.8**
NKC *e*PP **PP 04 15 03.5 -0.3**
GEC2 GERESS Array S 118.32 325 *e*PKIKP **PKPdf 04 13 50.8 +2.3**
GEC2 *e* 04 15 08.2
GEC2 GERESS Array S 118.32 325 *e*PKPdf **PKPdf 04 13 50.8 +2.3**
GEC2 *e*PP **PP 04 15 08.2 +4.1**
GERES GERESS Array B 118.32 325 PKP **PKPdf 04 13 46.1 -2.3**
GERES PP PP 04 15 09.6 +5.5
GERES PKKPbc **PKKPbc 04 24 08.1 0.0**
GERES GERESS Array B 118.32 325 PKP **PKPdf 04 13 46.1 -2.3**
comp=Z,3.7nm,1.0s,baz=76,slow=5.2,SNR=5.0
GERES PP PP 04 15 09.6 +5.5
comp=Z,0.7nm,0.8s,baz=45,slow=7.1,SNR=2.7
GERES PKKPbc **PKKPbc 04 24 08.1 0.0**
comp=Z,1.8nm,1.1s,baz=279,slow=2.6,SNR=6.5
CLZ Clausthal 118.49 329 *e*PKIKP **PKPdf 04 13 51.0 +2.3**
CLZ *e* 04 15 10.0
CLZ Clausthal 118.49 329 *e*PKPdf **PKPdf 04 13 51.0 +2.3**
CLZ *e*PP **PP 04 15 10.0 +4.9**
MOX Moxa 118.52 328 *e*PKIKP **PKPdf 04 13 51.1 +2.4**
MOX *e* 04 15 09.6
MOX *e*PS **PS 04 24 56.7 +4.2**
MOX *e*SS SS 04 31 38.5 +17
MOX *e*SSS SSS 04 35 49.9
MOX MLR MLR
comp=Z,26µm,21.5s
MOX Moxa 118.52 328 *e*Pdiff **Pdif 04 10 12.2 +3.8**
MOX *e*PKPdf **PKPdf 04 13 51.1 +2.4**
MOX *e*PP **PP 04 15 09.6 +4.3**
MOX *e*PS **PS 04 24 56.7 +4.2**
MOX *e*SS SS 04 31 38.5 +17
MOX *e*SSS SSS 04 35 49.9
MOX *e*L L 05 06 02.8
comp=Z,26µm,21.5s
GCIS Gornji Cirnik 118.61 322 *e*PKPdf **PKPdf 04 13 51.7 +2.7**
GCIS *e*PP PP 04 15 12.3 +6.1
WET Wettzell 118.63 326 *e*PKIKP **PKPdf 04 13 51.3 +2.3**
WET *e* 04 15 10.3
WET Wettzell 118.63 326 *e*PKPdf **PKPdf 04 13 51.3 +2.3**
WET *e*PP **PP 04 15 10.3 +4.1**
ROTZ Rotzenmuhle 118.68 327 *e*PKPdf **PKPdf 04 13 52.4 +3.4**
ROTZ *e*PP **PP 04 15 11.0 +4.6**
CRES Cresnjev 118.74 322 *e*PKPdf **PKPdf 04 13 51.9 +2.6**
CRES *e*PP PP 04 15 13.3 +6.2
CRES *e* 04 16 24.8
CRES *e* 04 17 46.0
CRES *e*SKSac SKSac 04 20 52.2 +8.6
CRES *e*Sdiff Sdif 04 23 09.9 +13
CRES *e*SP **SP 04 24 55.0 +3.1**
CRES *e* 04 27 15.5
CRES *i*SS **SKKSdf 04 31 43.8 -4.5**
PDKS Podkum 118.91 322 *e*PKPdf PKPdf 04 13 56.9 +7.3
PDKS *e*PP PP 04 15 14.3 +6.0
PDKS *e* 04 17 47.5
PDKS *e*SP SP 04 24 55.7 +2.3
UALR University of 119.16 52 *e*PKPdf **PKPdf 04 13 50.5 +0.1**
LJU Ljubljana 119.21 322 *e*PKPdf **PKPdf 04 13 52.8 +2.6**
LJU *e*SKSac **SKSac 04 20 47.1 +1.9**
LJU *e*Sdiff Sdif 04 23 12.2 +12
LJU *e*SP **SP 04 24 59.8 +3.8**
LJU *e*SS **SKKSdf 04 31 52.1 +4.7**
GRF Grafenberg Arr 119.25 327 *e*PKIKP **PKPdf 04 13 52.2 +2.0**
GRF *e* 04 15 14.8
GRF *e*PS **PS 04 25 00.1 +0.9**
GRF *e*SS SS 04 31 55.0 +24
GRF MLR MLR
comp=Z,13µm,21.8s
GRF Grafenberg Arr 119.25 327 *e*Pdiff **Pdif 04 10 17.2 +5.5**
GRF *e*PKPdf **PKPdf 04 13 52.2 +2.0**
GRF *e*PP **PP 04 15 14.8 +4.4**
GRF *e*PS **PS 04 25 00.1 +0.9**
GRF *e*SS SS 04 31 55.0 +24
GRF *e*SSS SSS 04 36 08.3
GRF *e*L L 05 05 12.6
comp=Z,13µm,21.8s
UBBA Unterbreizbach 119.27 329 *e*PKPdf **PKPdf 04 13 52.9 +2.9**
UBBA *e*PP **PP 04 15 15.0 +4.7**
RJOB Jochberg 119.41 324 *e*PKPdf **PKPdf 04 13 52.7 +2.1**
RJOB *e*PP **PP 04 15 16.3 +4.7**
HDIL Hopedale 119.45 45 *e*PKPdf **PKPdf 04 13 49.7 -1.1**
HDIL LR LR
comp=Z,9µm,20.0s
IBBN Ibbenburen 119.52 331 *e*PKPdf **PKPdf 04 13 53.5 +3.0**
IBBN *e*PP **PP 04 15 16.3 +4.3**
FUR Furstenfeldbru 120.05 326 *e*PKIKP **PKPdf 04 13 54.1 +2.4**
FUR *e* 04 15 20.4
FUR Furstenfeldbru 120.05 326 *e*PKPdf **PKPdf 04 13 54.1 +2.4**
FUR *e*PP **PP 04 15 20.4 +4.4**
ABTA Abfaltersbach 120.08 324 ⇑*i*PKPdf **PKPdf 04 13 51.3 -0.6**
comp=Z,35nm,1.3s
ABTA Abfaltersbach 120.08 324 ⇑*i*P **PKPdf 04 13 51.4 -0.6**
WTSB Winterswijk 120.19 331 *e*PP **PKiKP 04 13 54.4 +2.5**
comp=Z,116nm,2.1s
BUG Bochum--Univer 120.29 330 *e*PKPdf **PKPdf 04 13 54.4 +2.4**
BUG *e*PP **PP 04 15 22.0 +4.7**
WTTA Wattenberg 120.33 324 ⇑*i*PKIKP **PKPdf 04 13 50.7 -1.8**
WTTA Wattenberg 120.33 324 ⇑*i*PKiKP **PKPdf 04 13 50.7 -1.8**
comp=Z,41nm,1.3s,SNR=8.4
WTTA Wattenberg 120.33 324 ⇑*i*P **PKPdf 04 13 50.7 -1.8**
TNS Taunus Mts 120.42 329 *e*PKIKP **PKPdf 04 13 54.7 +2.3**
TNS *e* 04 15 23.3
TNS Taunus Mts 120.42 329 *e*PKPdf **PKPdf 04 13 54.7 +2.3**
TNS *e*PP **PP 04 15 23.3 +4.9**
CMIG Matias Romero 120.52 72 PKP **PKPdf 04 13 54.0 +0.5**
CMIG Matias Romero 120.52 72 PKP **PKPdf 04 13 54.0 +0.5**
comp=Z,2.7nm,0.9s,baz=304,slow=3.6,SNR=3.2
SIUC Southern Illin 120.57 48 *e*PKPdf **PKPdf 04 13 52.3 -0.7**
MOTA Moosalm 120.59 325 ⇓*i*PKIKP **PKPdf 04 13 52.7 -0.3**
MOTA Moosalm 120.59 325 ⇓*i*PKPdf **PKPdf 04 13 52.7 -0.3**
comp=Z,20nm,0.9s,SNR=8.7
MOTA Moosalm 120.59 325 ⇓*i*P **PKPdf 04 13 52.7 -0.3**
TOD Tromm 120.60 328 *e*PKIKP **PKPdf 04 13 55.4 +2.6**
TOD Tromm 120.60 328 *e*P **PKPdf 04 13 55.4 +2.6**
GLMI Grayling 120.69 39 PFAKE 04 14 00.0 +7.0
GLMI LR LR
comp=Z,22µm,20.0s
TIP Timpagrande 120.70 314 *e*PKPdf **PKPdf 04 13 53.2 -0.1**
TIP LR LR
comp=Z,10µm,21.0s
STU Stuttgart 120.87 327 *e*PKIKP **PKPdf 04 13 52.1 -1.1**
STU Stuttgart 120.87 327 *e*PKPdf **PKPdf 04 13 55.3 +2.0**
STU *e*PP **PP 04 15 26.1 +4.6**
STU Stuttgart 120.87 327 *e*PKPdf **PKPdf 04 13 52.1 -1.1**
OLIL Olney 121.01 46 *e*PKPdf **PKPdf 04 13 53.6 -0.2**
CUC Castrocucco 121.04 315 PFAKE 04 14 00.0 +6.1
CUC LR LR
comp=Z,5µm,20.0s
SFIN Scholer Farm 121.06 44 ⇑PKiKP **PKPdf 04 13 53.3 -0.6**
baz=121
DAVA Damuels 121.32 325 ⇑*i*PKPdf **PKPdf 04 13 51.0 -3.4**
comp=Z,26nm,1.0s
DAVA Damuels 121.32 325 ⇑*i*P **PKPdf 04 13 51.0 -3.4**
HGN Heimansgroeve 121.37 330 *e*PP **PKiKP 04 13 56.7 +2.4**
comp=Z,61nm,1.6s
VBMS Vicksburg 121.38 54 PFAKE 04 14 00.0 +5.3
VBMS LR LR
comp=Z,17µm,22.0s
RUP Ruppelstein 121.45 329 *e*PKIKP **PKPdf 04 13 55.2 +0.8**
RUP Ruppelstein 121.45 329 *e*P **PKPdf 04 13 55.2 +0.8**
LANF Langenberg 121.50 328 *e*PKIKP **PKPdf 04 13 57.5 +3.0**
LANF Langenberg 121.50 328 *e*P **PKPdf 04 13 57.5 +3.0**
LANF Langenberg 121.50 328 *e*P **PKPdf 04 13 57.5 +3.0**
OXF Oxford 121.54 51 *e*PKIKP **PKPdf 04 13 53.7 -1.3**
OXF MLR MLR
comp=Z,19µm,22.0s
OXF Oxford 121.54 51 *e*PKPdf **PKPdf 04 13 53.7 -1.3**
OXF LR LR
comp=Z,19µm,22.0s
BFO Black Forest 121.59 327 *e*PKIKP **PKPdf 04 13 52.9 -1.8**
BFO MLR MLR
comp=Z,14µm,21.0s
BFO Black Forest 121.59 327 *e*PKPdf **PKPdf 04 13 56.7 +2.0**
BFO *e*PP **PP 04 15 31.2 +4.7**
BFO Black Forest 121.59 327 *e*PKPdf **PKPdf 04 13 52.9 -1.8**
BFO LR LR
comp=Z,14µm,21.0s
USIN University of 121.62 47 *e*PKPdf **PKPdf 04 13 52.9 -2.1**
AQU L'Aquila 121.66 319 *e*PKPdf **PKPdf 04 13 55.3 +0.3**
AQU LR LR
comp=Z,11µm,22.0s
AQU L'Aquila 121.66 319 ⇓*i*P **PKPdf 04 13 59.9 +4.9**
CEL Celeste 121.68 313 *e*PKPdf **PKPdf 04 13 52.0 -3.2**
CEL LR LR
comp=Z,8µm,21.0s
EFI East Falkland 121.82 164 PFAKE 04 14 00.0 +5.0
EFI LR LR
comp=Z,8µm,21.0s
BCLA Clavier 121.90 330 E **PKPdf 04 13 57.9 +2.7**
WLF Walferdange 121.94 329 E **PKPdf 04 13 59.1 +3.8**
WLF Walferdange 121.94 329 *e*PKIKP **PKPdf 04 13 54.7 -0.6**
WLF MLR MLR
comp=Z,21µm,22.0s
WLF Walferdange 121.94 329 *e*PP PP 04 15 33.6 +4.9
WLF Walferdange 121.94 329 *e*PKPdf **PKPdf 04 13 54.7 -0.6**
WLF LR LR
comp=Z,21µm,22.0s
BLO Bloomington 121.96 45 *e*PKIKP **PKPdf 04 13 56.3 +0.7**
BLO Bloomington 121.96 45 *e*PKPdf **PKPdf 04 13 56.3 +0.7**
FELD Feldberg im Sc 122.04 327 *e*P **PKPdf 04 13 58.0 +2.3**
TUE Stuetta 122.08 325 *e*PKPdf **PKPdf 04 13 55.5 -0.4**
TUE LR LR
comp=Z,11µm,19.0s
ESK Eskdalemuir 122.08 339 *e*PKIKP **PKPdf 04 13 53.9 -1.5**
ESK MLR MLR
comp=Z,11µm,21.0s
ESK Eskdalemuir 122.08 339 *e*PKPdf **PKPdf 04 13 53.9 -1.5**
ESK LR LR
comp=Z,11µm,21.0s
CDF Champ du Feu 122.12 328 *e*PKIKP PKPdf 04 13 50.4 -5.4
comp=Z,66nm,1.5s
CDF Champ du Feu 122.12 328 *e*PKIKP PKPdf 04 13 50.4 -5.4
CDF Champ du Feu 122.12 328 *e*PKPdf PKPdf 04 13 50.4 -5.4
WVT Waverly 122.19 49 *e*PKIKP **PKPdf 04 13 56.0 -0.1**
WVT Waverly 122.19 49 *e*PKPdf **PKPdf 04 13 56.0 -0.1**
ECH Echery 122.30 327 *e*PKIKP **PKPdf 04 13 55.1 -1.0**
ECH MLR MLR
comp=Z,16µm,20.0s
ECH Echery 122.30 327 *e*PKPdf **PKPdf 04 13 55.1 -1.0**
ECH LR LR
comp=Z,16µm,20.0s
ECH Echery 122.30 327 *e*P **PKPdf 04 13 57.5 +1.4**
GIVF Givet 122.34 330 *e*PKIKP **PKPdf 04 13 51.4 -4.6**
comp=Z,139nm,1.4s
GIVF Givet 122.34 330 *e*PKIKP **PKPdf 04 13 51.4 -4.6**
GIVF Givet 122.34 330 *e*PKPdf **PKPdf 04 13 51.4 -4.6**
PLAL Pickwick Lake 122.41 50 *e*PKPdf **PKPdf 04 13 53.3 -3.4**
PLAL LR LR
comp=Z,12µm,20.0s
WCI Wyandotte Cave 122.51 46 *e*PKIKP **PKPdf 04 13 55.5 -1.3**
WCI Wyandotte Cave 122.51 46 *e*PKPdf **PKPdf 04 13 55.5 -1.3**
AAM Ann Arbor 122.52 41 PFAKE 04 14 10.0 +13
AAM LR LR
comp=Z,19µm,21.0s
MOF Molkenrain 122.53 327 *e*PKIKP **PKPdf 04 13 58.8 +2.2**
MOF Molkenrain 122.53 327 *e*P **PKPdf 04 13 58.8 +2.2**
MOF Molkenrain 122.53 327 *e*P **PKPdf 04 13 58.8 +2.2**
BBS Basel-Blauen 122.55 327 *e*PKIKP **PKPdf 04 13 57.7 +1.1**
BBS Basel-Blauen 122.55 327 *e*P **PKPdf 04 13 57.7 +1.1**
BAIF Baives 122.67 331 *e*PKIKP **PKPdf 04 13 52.0 -4.7**
comp=Z,82nm,1.4s
BAIF Baives 122.67 331 *e*PKIKP **PKPdf 04 13 52.0 -4.7**
BAIF Baives 122.67 331 *e*PKPdf **PKPdf 04 13 52.0 -4.7**
VLC Villacollemand 122.69 322 PFAKE 04 14 10.0 +13
VLC LR LR
comp=Z,11µm,21.0s
HINF Hinteralfeld 122.70 327 *e*PKIKP **PKPdf 04 13 51.7 -5.2**
comp=Z,136nm,1.3s
HINF Hinteralfeld 122.70 327 *e*PKIKP **PKPdf 04 13 51.7 -5.2**
HINF Hinteralfeld 122.70 327 *e*PKPdf **PKPdf 04 13 51.7 -5.2**
PAGF Fort de Pagny 122.85 328 *e*PKIKP **PKPdf 04 13 52.5 -4.6**
comp=Z,21nm,1.3s
PAGF Fort de Pagny 122.85 328 *e*PKPdf **PKPdf 04 13 52.5 -4.6**
HAU Haudompre 122.86 328 *e*PKIKP **PKPdf 04 13 52.2 -4.9**
comp=Z,111nm,1.3s
HAU Haudompre 122.86 328 *e*PKIKP **PKPdf 04 13 52.2 -4.9**
HAU Haudompre 122.86 328 *e*PKPdf **PKPdf 04 13 52.2 -4.9**
TSUM Tsumeb 122.89 245 *e*PKPdf **PKPdf 04 13 57.6 -0.6**
TSUM LR LR
comp=Z,11µm,22.0s
THEF They Montfort 122.92 328 *e*PKIKP **PKPdf 04 13 59.8 +2.6**
THEF They Montfort 122.92 328 *e*P **PKPdf 04 13 59.8 +2.6**
THEF They Montfort 122.92 328 *e*P **PKPdf 04 13 59.8 +2.6**
LOMF Lomont 122.99 327 *e*PKIKP **PKPdf 04 13 58.9 +1.4**
LOMF Lomont 122.99 327 *e*P **PKPdf 04 13 58.9 +1.4**
LOMF Lomont 122.99 327 *e*P **PKPdf 04 13 58.9 +1.4**
SCHQ Schefferville 122.99 21 PKP **PKPdf 04 13 56.2 -1.0**
SCHQ Schefferville 122.99 21 PKP **PKPdf 04 13 56.2 -1.0**
comp=Z,7.2nm,1.0s,baz=352,slow=2.4,SNR=7.2
MEZF Maizieres J'vi 123.23 329 *e*PKIKP **PKPdf 04 13 53.3 -4.5**
comp=Z,159nm,1.5s
MEZF Maizieres J'vi 123.23 329 *e*PKPdf **PKPdf 04 13 53.3 -4.5**
SFTF Sexfontaines 123.43 328 *e*PKIKP **PKPdf 04 13 53.4 -4.8**
comp=Z,206nm,1.8s
SFTF Sexfontaines 123.43 328 *e*PKPdf **PKPdf 04 13 53.4 -4.8**
WDD Wield Dalam 123.62 311 PFAKE 04 14 10.0 +11
WDD LR LR
comp=Z,2µm,22.0s
OG01 Vacheresse 123.67 326 *e*P **PKPdf 04 14 01.7 +2.9**
OG01 Vacheresse 123.67 326 *e*P **PKPdf 04 14 01.7 +2.9**
CABF La Chapelle 123.84 326 *e*PKIKP **PKPdf 04 13 54.8 -4.4**
comp=Z,172nm,1.3s
CABF La Chapelle 123.84 326 *e*PKIKP **PKPdf 04 13 54.8 -4.4**
CABF La Chapelle 123.84 326 *e*PKPdf **PKPdf 04 13 54.8 -4.4**
LRAL Lakeview Retre 123.93 52 *e*PKPdf **PKPdf 04 13 58.5 -1.1**
LRAL LR LR
comp=Z,15µm,22.0s
ACSO Alum Creek Sta 123.94 43 *e*PKPdf **PKPdf 04 13 58.4 -1.1**
ACSO LR LR
comp=Z,15µm,22.0s
SWET Sewanee 123.96 49 *e*PKPdf **PKPdf 04 13 58.8 -0.8**
LPG La Plagne 124.12 325 *e*PKIKP **PKPdf 04 13 55.3 -4.7**
comp=Z,28nm,0.9s
LPG La Plagne 124.12 325 *e*PKIKP **PKPdf 04 13 55.3 -4.7**
LPG La Plagne 124.12 325 *e*PKPdf **PKPdf 04 13 55.3 -4.7**
LPL La Plagne 124.12 325 *e*PKIKP **PKPdf 04 13 55.2 -4.7**
LPL La Plagne 124.12 325 *e*PKPdf **PKPdf 04 13 55.2 -4.7**
PGF Pioggiola 124.39 321 *e*PKIKP **PKPdf 04 13 55.4 -5.0**
comp=Z,213nm,1.5s
PGF Pioggiola 124.39 321 *e*PKIKP **PKPdf 04 13 55.4 -5.0**
PGF Pioggiola 124.39 321 *e*PKPdf **PKPdf 04 13 55.4 -5.0**
BNI Bardonecchia 124.42 325 *e*PKIKP **PKPdf 04 14 00.5 +0.1**
BNI *e* 04 15 46.9
BNI MLR MLR
comp=Z,24µm,21.0s
BNI Bardonecchia 124.42 325 *e*PKPdf **PKPdf 04 14 00.5 +0.1**
BNI *e*PP **PP 04 15 46.9 +1.1**
BNI LR LR
comp=Z,24µm,21.0s
MBDF Montbardon 124.55 324 *e*PKIKP **PKPdf 04 13 55.8 -4.9**
comp=Z,202nm,1.9s
MBDF Montbardon 124.55 324 *e*PKIKP **PKPdf 04 13 55.8 -4.9**
MBDF Montbardon 124.55 324 *e*PKPdf **PKPdf 04 13 55.8 -4.9**
BRAL Brewton 124.56 54 PFAKE 04 14 10.0 +9.1
BRAL LR LR
comp=Z,14µm,21.0s
LOR Lormes 124.64 328 *e*PKIKP **PKPdf 04 13 55.8 -4.8**
comp=Z,126nm,1.5s
LOR Lormes 124.64 328 *e*PKPdf **PKPdf 04 13 55.8 -4.8**
SBF Sospel 124.65 323 *e*PKIKP **PKPdf 04 13 55.7 -5.1**
comp=Z,190nm,1.4s
SBF Sospel 124.65 323 *e*PKIKP **PKPdf 04 13 55.7 -5.1**
SBF Sospel 124.65 323 *e*PKPdf **PKPdf 04 13 55.7 -5.1**
OSPF L'Ospedale 124.73 320 *e*P **PKPdf 04 14 03.5 +2.5**
OSPF L'Ospedale 124.73 320 *e*P **PKPdf 04 14 03.5 +2.5**
CPCT Cooper Cave 124.93 48 *e*PKPdf **PKPdf 04 14 01.7 +0.3**
SSF Saint Saulge 124.95 328 *e*PKIKP **PKPdf 04 13 56.6 -4.6**
comp=Z,90nm,1.2s
SSF Saint Saulge 124.95 328 *e*PKIKP **PKPdf 04 13 56.6 -4.6**
SSF Saint Saulge 124.95 328 *e*PKPdf **PKPdf 04 13 56.6 -4.6**
ORIF Oris-en-Rattie 124.96 325 *e*PKIKP **PKPdf 04 13 56.6 -4.8**
comp=Z,174nm,1.6s
ORIF Oris-en-Rattie 124.96 325 *e*PKIKP **PKPdf 04 13 56.6 -4.8**
ORIF Oris-en-Rattie 124.96 325 *e*PKPdf **PKPdf 04 13 56.6 -4.8**
ERPA Erie 124.96 39 PFAKE 04 14 10.0 +8.7
ERPA LR LR
comp=Z,12µm,20.0s
SMF Signal de Mont 125.04 328 *e*PKIKP **PKPdf 04 13 56.5 -4.9**
comp=Z,132nm,1.3s
SMF Signal de Mont 125.04 328 *e*PKIKP **PKPdf 04 13 56.5 -4.9**
SMF Signal de Mont 125.04 328 *e*PKPdf **PKPdf 04 13 56.5 -4.9**
TZTN Tazewell 125.19 47 *e*PKPdf **PKPdf 04 13 59.4 -2.5**
AVF Avril sur Loir 125.21 328 *e*PKIKP **PKPdf 04 13 56.6 -5.0**
comp=Z,29nm,1.0s
AVF Avril sur Loir 125.21 328 *e*PKIKP **PKPdf 04 13 56.6 -5.0**
AVF Avril sur Loir 125.21 328 *e*PKPdf **PKPdf 04 13 56.6 -5.0**
FRF La Foret Royal 125.29 323 *e*PKIKP **PKPdf 04 13 57.1 -4.8**
comp=Z,223nm,1.6s
FRF La Foret Royal 125.29 323 *e*PKIKP **PKPdf 04 13 57.1 -4.8**
FRF La Foret Royal 125.29 323 *e*PKPdf **PKPdf 04 13 57.1 -4.8**
PAYG Puerto Ayora 125.35 93 PFAKE 04 14 10.0 +7.1
PAYG LR LR
comp=Z,9µm,19.0s
TKL Tuckaleechee C 125.40 48 PKP **PKPdf 04 14 02.3 -0.1**
TKL *e*PKPdf **PKiKP 04 14 02.8 +0.1**
TKL Tuckaleechee C 125.40 48 PKP **PKPdf 04 14 02.3 -0.1**
comp=Z,6.6nm,0.7s,baz=165,slow=4.8,SNR=10.0
LMR La Mourre 125.50 323 *e*PKIKP **PKPdf 04 13 57.3 -5.0**
comp=Z,205nm,1.5s
LMR La Mourre 125.50 323 *e*PKIKP **PKPdf 04 13 57.3 -5.0**
LMR La Mourre 125.50 323 *e*PKPdf **PKPdf 04 13 57.3 -5.0**
SSB Saint Sauveur 125.50 326 *e*PKIKP **PKPdf 04 13 59.8 -2.6**
SSB MLR MLR
comp=Z,16µm,21.0s
SSB Saint Sauveur 125.50 326 *e*PKPdf **PKPdf 04 13 59.8 -2.6**
SSB LR LR
comp=Z,16µm,21.0s
PLDF La Plantade 125.58 327 *e*PKIKP **PKPdf 04 14 05.1 +2.6**
PLDF La Plantade 125.58 327 *e*P **PKPdf 04 14 05.1 +2.6**
PLDF La Plantade 125.58 327 *e*P **PKPdf 04 14 05.1 +2.6**
BGF Bois d'Agland 125.62 328 *e*PKIKP **PKPdf 04 13 57.9 -4.6**
comp=Z,145nm,1.4s
BGF Bois d'Agland 125.62 328 *e*PKIKP **PKPdf 04 13 57.9 -4.6**
BGF Bois d'Agland 125.62 328 *e*PKPdf **PKPdf 04 13 57.9 -4.6**
PLCA Paso Flores 125.68 148 *e*PKPdf **PKPdf 04 14 00.6 -2.3**
PLCA PKP **PKPdf 04 14 02.1 -0.8**
PLCA Paso Flores 125.68 148 PKP **PKPdf 04 14 02.1 -0.8**
comp=Z,13nm,1.0s,baz=220,slow=2.1,SNR=12
VIVF Saint-Julien-l 125.68 325 *e*PKIKP **PKPdf 04 13 58.0 -4.7**
comp=Z,125nm,1.3s
VIVF Saint-Julien-l 125.68 325 *e*PKIKP **PKPdf 04 13 58.0 -4.7**
VIVF Saint-Julien-l 125.68 325 *e*PKPdf **PKPdf 04 13 58.0 -4.7**
SMRF Simiane la Rot 125.69 324 *e*PKIKP **PKPdf 04 13 58.4 -4.3**
comp=Z,149nm,1.2s
SMRF Simiane la Rot 125.69 324 *e*PKPdf **PKPdf 04 13 58.4 -4.3**
VSL Villasalto 125.69 318 *e*PKPdf **PKPdf 04 14 00.5 -2.3**
LDF La Druitiere 125.75 332 *e*PKIKP **PKPdf 04 13 57.7 -4.9**
comp=Z,131nm,1.4s
LDF La Druitiere 125.75 332 *e*PKIKP **PKPdf 04 13 57.7 -4.9**
LDF La Druitiere 125.75 332 *e*PKPdf **PKPdf 04 13 57.7 -4.9**
AGO Saint Agoulin 125.79 327 *e*P **PKPdf 04 14 05.0 +2.2**
AGO Saint Agoulin 125.79 327 *e*P **PKPdf 04 14 05.0 +2.2**
FLN La Foliniere 125.80 332 *e*PKIKP **PKPdf 04 13 57.8 -4.9**
comp=Z,202nm,1.6s
FLN La Foliniere 125.80 332 *e*PKIKP **PKPdf 04 13 57.8 -4.9**
FLN La Foliniere 125.80 332 *e*PKPdf **PKPdf 04 13 57.8 -4.9**
PYM Petit Puy Mans 126.05 327 *e*PKIKP **PKPdf 04 14 06.1 +2.7**
PYM Petit Puy Mans 126.05 327 *e*P **PKPdf 04 14 06.1 +2.7**
PYM Petit Puy Mans 126.05 327 *e*P **PKPdf 04 14 06.1 +2.7**
TCF Toulx Ste Croi 126.13 328 *e*PKIKP **PKPdf 04 13 58.9 -4.6**
comp=Z,129nm,1.2s
TCF Toulx Ste Croi 126.13 328 *e*PKIKP **PKPdf 04 13 58.9 -4.6**
TCF Toulx Ste Croi 126.13 328 *e*PKPdf **PKPdf 04 13 58.9 -4.6**
GRR Gorron 126.24 332 *e*PKIKP **PKPdf 04 13 58.8 -4.8**
comp=Z,171nm,1.4s
GRR Gorron 126.24 332 *e*PKIKP **PKPdf 04 13 58.8 -4.8**
GRR Gorron 126.24 332 *e*PKPdf **PKPdf 04 13 58.8 -4.8**
TEIG Tepich 126.26 68 PFAKE 04 14 10.0 +5.6
TEIG LR LR
comp=Z,10µm,20.0s
LASF Ste Croix 126.62 325 *e*PKIKP **PKPdf 04 13 59.9 -4.6**
comp=Z,416nm,1.9s
LASF Ste Croix 126.62 325 *e*PKPdf **PKPdf 04 13 59.9 -4.6**
LONY Lake Ozonia 126.74 34 PFAKE 04 14 10.0 +5.3
LONY LR LR
comp=Z,16µm,20.0s
SSPA Standing Stone 127.09 40 *e*PKPdf **PKPdf 04 14 04.1 -1.4**
CAF Calviac 127.09 327 *e*PKIKP **PKPdf 04 14 01.1 -4.3**
comp=Z,235nm,1.8s
CAF Calviac 127.09 327 *e*PKIKP **PKPdf 04 14 01.1 -4.3**
CAF Calviac 127.09 327 *e*PKPdf **PKPdf 04 14 01.1 -4.3**
SGMF Saint Gilles 127.13 333 *e*PKIKP **PKPdf 04 14 00.4 -4.9**
comp=Z,151nm,1.3s
SGMF Saint Gilles 127.13 333 *e*PKIKP **PKPdf 04 14 00.4 -4.9**
SGMF Saint Gilles 127.13 333 *e*PKPdf **PKPdf 04 14 00.4 -4.9**
BLA Blacksburg 127.13 45 *e*PKIKP **PKPdf 04 14 03.8 -1.9**
BLA MLR MLR
comp=Z,12µm,21.0s
BLA Blacksburg 127.13 45 *e*PKPdf **PKPdf 04 14 03.8 -1.9**
BLA LR LR
comp=Z,12µm,21.0s
MFF Saint Martin d 127.14 330 *e*PKIKP **PKPdf 04 14 00.5 -4.8**
comp=Z,149nm,1.5s
MFF Saint Martin d 127.14 330 *e*PKIKP **PKPdf 04 14 00.5 -4.8**
MFF Saint Martin d 127.14 330 *e*PKPdf **PKPdf 04 14 00.5 -4.8**
RJF Les Rejaudoux 127.14 328 *e*PKIKP **PKPdf 04 14 01.0 -4.4**
comp=Z,80nm,1.4s
RJF Les Rejaudoux 127.14 328 *e*PKIKP **PKPdf 04 14 01.0 -4.4**
RJF Les Rejaudoux 127.14 328 *e*PKPdf **PKPdf 04 14 01.0 -4.4**
TIGA Tifton 127.20 53 ⇓PKiKP **PKiKP 04 14 06.2 -0.2**
baz=127
NCB Newcomb 127.35 34 *e*PKPdf **PKPdf 04 14 02.4 -3.4**
NCB LR LR
comp=Z,16µm,20.0s
BINY Binghamton 127.39 37 *e*PKPdf **PKPdf 04 14 03.9 -2.1**
BINY LR LR
comp=Z,27µm,20.0s
ROSF Rostrenen 127.39 333 *e*PKIKP **PKPdf 04 14 00.9 -4.9**
comp=Z,132nm,1.4s
ROSF Rostrenen 127.39 333 *e*PKIKP **PKPdf 04 14 00.9 -4.9**
ROSF Rostrenen 127.39 333 *e*PKPdf **PKPdf 04 14 00.9 -4.9**
KEST Kesra 127.49 313 *e*PKPdf **PKPdf 04 14 04.4 -2.1**
KEST PKP **PKPdf 04 14 04.8 -1.7**
KEST Kesra 127.49 313 PKP **PKPdf 04 14 04.8 -1.7**
comp=Z,1.7nm,1.0s,baz=9.0,slow=11,SNR=2.5
QUIF Quistinic 127.65 333 *e*PKIKP **PKPdf 04 14 01.3 -5.0**
comp=Z,179nm,1.6s
QUIF Quistinic 127.65 333 *e*PKIKP **PKPdf 04 14 01.3 -5.0**
QUIF Quistinic 127.65 333 *e*PKPdf **PKPdf 04 14 01.3 -5.0**

LFF	La Frestale	127.80	328	*e*PKIKP	PKPdf	04 14 02.2	-4.4
	comp=Z,331nm,1.8s						
LFF	La Frestale	127.80	328	*e*PKIKP	PKPdf	04 14 02.2	-4.4
LFF	La Frestale	127.80	328	*e*PKPdf	PKPdf	04 14 02.2	-4.4
JSC	Jenkinsville	127.85	48	*e*PKIKP	PKPdf	04 14 06.6	-0.5
JSC	Jenkinsville	127.85	48	*e*PKPdf	PKPdf	04 14 06.6	-0.5
MDV	Middlebury	127.91	34	*e*PKPdf	PKPdf	04 14 04.9	-2.0
MTLF	Montolieu	128.01	325	*e*PKIKP	PKPdf	04 14 02.4	-4.7
	comp=Z,243nm,1.9s						
MTLF	Montolieu	128.01	325	*e*PKIKP	PKPdf	04 14 02.4	-4.7
MTLF	Montolieu	128.01	325	*e*PKPdf	PKPdf	04 14 02.4	-4.7
TGUH	Tegucigalpa,Un	128.14	75	PFAKE		04 14 20.0	+12
TGUH				LR	LR		
	comp=Z,14µm,21.0s						
SDMD	Soldier's Deli	128.43	41	*e*PKPdf	PKPdf	04 14 02.2	-5.8
TRY	Troy	128.44	35	*e*PKPdf	PKPdf	04 14 05.4	-2.5
LBNH	Lisbon	128.44	33	PFAKE		04 14 20.0	+12
LBNH				LR	LR		
	comp=Z,27µm,19.0s						
CMAH	Djebel Manchou	128.45	315	P	PKPdf	04 14 11.8	+3.5
ABSA	Djebel Ababsia	128.58	315	P	PKPdf	04 14 12.0	+3.4
JSRW	J. Sargeant Re	128.65	43	*e*PKPdf	PKPdf	04 14 07.3	-1.2
CBN	Corbin	128.73	42	PFAKE		04 14 20.0	+11
CBN				LR	LR		
	comp=Z,15µm,20.0s						
CAEH	'Ain El Ouahch	128.77	316	P	PKPdf	04 14 13.0	+4.2
CKFL	Kef-Lekhel	129.05	315	P	PKPdf	04 14 13.5	+4.0
NHSC	New Hope	129.17	49	PFAKE		04 14 20.0	+10
NHSC				LR	LR		
	comp=Z,26µm,21.0s						
EPF	Esparros	129.26	326	*e*PKIKP	PKPdf	04 14 05.2	-4.4
	comp=Z,85nm,1.5s						
EPF	Esparros	129.26	326	*e*PKIKP	PKPdf	04 14 05.2	-4.4
EPF	Esparros	129.26	326	*e*PKPdf	PKPdf	04 14 05.2	-4.4
CASM	Ain Smara	129.28	315	P	PKPdf	04 14 13.3	+3.5
RESF	Ens	129.41	326	*e*P	PKPdf	04 14 10.5	+0.5
RESF	Ens	129.41	326	*e*P	PKPdf	04 14 10.5	+0.5
REYF	Montagne du Re	129.65	327	*e*P	PKPdf	04 14 10.5	+0.1
REYF	Montagne du Re	129.65	327	*e*P	PKPdf	04 14 10.5	+0.1
ETSF	Etsaut	129.85	327	*e*PKIKP	PKPdf	04 14 07.1	-3.6
	comp=Z,193nm,1.7s						
ETSF	Etsaut	129.85	327	*e*PKIKP	PKPdf	04 14 07.1	-3.6
ETSF	Etsaut	129.85	327	*e*PKPdf	PKPdf	04 14 07.1	-3.6
CNNC	Cliffs of the	129.88	46	PFAKE		04 14 20.0	+9.1
CNNC				LR	LR		
	comp=Z,27µm,21.0s						
SET	Setif	130.07	316	P	PKPdf	04 14 15.0	+3.6
SJPF	Ste Jean	130.07	327	*e*PKIKP	PKPdf	04 14 07.2	-3.9
	comp=Z,100nm,1.4s						
SJPF	Ste Jean	130.07	327	*e*PKIKP	PKPdf	04 14 07.2	-3.9
SJPF	Ste Jean	130.07	327	*e*PKPdf	PKPdf	04 14 07.2	-3.9
JTS	JuntasAbangare	130.76	80	*e*PKPdf	PKPdf	04 14 10.9	-2.3
JTS				*e*PP	PP	04 16 32.4	+3.5
AKET	Djebel Ketaf	131.20	317	P	PKPdf	04 14 20.0	+6.4
EMHD	Djebel Mahouad	131.75	317	P	PKPdf	04 14 18.0	+3.4
TRQA	Tornquist	132.02	152	*e*PKPdf	PKPdf	04 14 15.0	0.0
TRQA				LR	LR		
	comp=Z,10µm,19.0s						
EANR	'Ain N'Sour	133.13	318	P	PKPdf	04 14 15.0	-2.1
CFAA	Coronel Fontan	133.36	141	PKP	PKPdf	04 14 17.0	-0.7
CFAA	Coronel Fontan	133.36	141	PKP	PKPdf	04 14 17.0	-0.7
	comp=Z,0.6nm,0.7s,baz=247,slow=3.8,SNR=9.2						
PBRG	Braganca	133.88	330	*e*PP	PP	04 16 54.4	+7.1
ESDC	Sonseca Array	133.91	326	PKP	PKPdf	04 14 15.4	-3.1
ESDC				PP	PP	04 16 53.0	+5.4
ESDC	Sonseca Array	133.91	326	PKP	PKPdf	04 14 15.4	-3.1
	comp=Z,0.1nm,0.3s,baz=290,slow=27,SNR=3.4						
ESDC				PP	PP	04 16 53.0	+5.4
	comp=Z,0.9nm,0.6s,baz=44,slow=6.0,SNR=5.3						
PAB	San Pablo	134.22	326	*e*PKIKP	PKPdf	04 14 18.3	-0.8
PAB				MLR	MLR		
	comp=Z,10µm,21.0s						
PAB	San Pablo	134.22	326	*e*PKPdf	PKPdf	04 14 18.3	-0.8
PAB				LR	LR		
	comp=Z,10µm,21.0s						
MVO	Moncorvo	134.50	329	*e*PKPdf	PKPdf	04 14 22.2	+2.6
MVO	Moncorvo	134.50	329	*e*PP	PP	04 16 59.5	+8.2
MVO				*e*SS	SS	04 34 56.5	+15
MVO				*e*LQ	LQ	04 54 18.6	
MVO				*e*LR	LR	04 59 21.8	
	comp=Z,12µm,20.0s						
PGAV	Gavieira, Arco	134.51	331	*e*PKPdf	PKPdf	04 14 24.6	+5.0
PGAV	Gavieira, Arco	134.51	331	*e*PP	PP	04 17 02.0	+11
PGAV				*e*SS	SS	04 34 47.6	+6.2
PGAV				*e*LQ	LQ	04 54 41.1	
PGAV				*e*LR	LR	04 59 18.3	
	comp=Z,17µm,22.0s						
PCAB	Cabril	134.59	331	*e*PKPdf	PKPdf	04 14 25.6	+5.9
POLO	Lamas de Olo	134.73	330	*e*PKPdf	PKPdf	04 14 25.1	+5.1
POLO	Lamas de Olo	134.73	330	*e*PP	PP	04 17 04.2	+11
PVRL	Vila Real	134.76	330	*e*PKPdf	PKPdf	04 14 21.6	+1.6
MTE	Manteigas	135.33	329	*e*PKPdf	PKPdf	04 14 26.3	+5.2
MTE	Manteigas	135.33	329	*e*PP	PP	04 17 02.4	+5.9
MTE				*e*SS	SS	04 34 57.9	+6.7
MTE				*e*LQ	LQ	04 54 51.3	
MTE				*e*LR	LR	05 00 13.5	
	comp=Z,11µm,20.0s						
MTE	Manteigas	135.33	329	PFAKE		04 14 30.0	+8.9
MTE				LR	LR		
	comp=Z,11µm,19.0s						
TAM	Tamanrasset	135.70	299	*e*PKIKP	PKPdf	04 14 19.2	-3.2
TAM				*e*		04 16 59.7	
TAM				MLR	MLR		
	comp=Z,5µm,19.0s						
TAM	Tamanrasset	135.70	299	*e*PKPdf	PKPdf	04 14 19.2	-3.2
TAM				*e*PP	PP	04 16 59.7	-0.5
TAM				*e*SKPbc	SKPbc	04 17 52.1	-1.2
TAM				LR	LR		
	comp=Z,5µm,19.0s						
PCBR	Castelo Branco	135.71	329	*e*PKPdf	PKPdf	04 14 22.2	+0.5
BCIP	Isla Barro Col	135.87	81	*e*PKPdf	PKPdf	04 14 21.7	-1.0
BCIP				LR	LR		
	comp=Z,10µm,21.0s						
PMRV	Marv??o	135.96	328	*e*PKPdf	PKPdf	04 14 26.8	+4.5
PMRV	Marv??o	135.96	328	*e*PP	PP	04 17 07.2	+6.7
PMRV				A	A	05 19 09.0	
	comp=Z,9µm,20.0s						
ATAH	Atahualpa	136.16	104	PKP	PKPdf	04 14 22.3	-1.6
ATAH	Atahualpa	136.16	104	PKP	PKPdf	04 14 22.3	-1.6
	comp=Z,4.1nm,0.7s,baz=51,slow=6.8,SNR=3.9						
PTOM	Tomar	136.35	329	*e*PKPdf	PKPdf	04 14 27.3	+4.3
NNA	Nana	136.35	111	PFAKE		04 14 30.0	+6.3
NNA				LR	LR		
	comp=Z,7µm,19.0s						
PESTR	Estremoz	136.48	328	*e*PKPdf	PKPdf	04 14 27.4	+4.1
PESTR	Estremoz	136.48	328	*e*PP	PP	04 17 08.3	+4.6
MTDJ	Mount Denham	136.60	67	PFAKE		04 14 30.0	+5.9
MTDJ				LR	LR		
	comp=Z,7µm,19.0s						
PBAR	Barrancos	136.68	326	*e*PKPdf	PKPdf	04 14 25.6	+2.0
EVO	Evora	136.95	328	*e*PKIKP	PKPdf	04 14 20.1	-4.0
	comp=Z,134nm,1.6s						
EVO	Evora	136.95	328	*e*PKPdf	PKPdf	04 14 24.7	+0.6
EVO	Evora	136.95	328	*e*PP	PP	04 17 11.8	+5.2
EVOP	Sao Brissos	137.01	328	*e*PKIKP	PKPdf	04 14 20.1	-4.1
EVOP	Sao Brissos	137.01	328	*e*PKPdf	PKPdf	04 14 20.1	-4.1
PBEJ	Beja	137.24	327	*e*PKPdf	PKPdf	04 14 29.0	+4.3
PMAFR	Mafra	137.30	329	*e*PP	PP	04 17 16.2	+7.4
LIS	Lisbon	137.41	329	*e*P	PKPdf	04 14 25.4	+0.5
LIS				*e*SS	SS	04 35 20.4	+4.5
LIS				AMS	AMS	05 21 58.5	
	comp=Z,11µm,19.5s						
LIS	Lisbon	137.41	329	*e*PKPdf	PKPdf	04 14 25.4	+0.5
LIS				*e*SS	SS	04 35 20.4	+4.5
LIS				A	A	05 21 58.5	
	comp=Z,11µm,19.5s						
LIS	Lisbon	137.41	329	*e*PKIKP	PKPdf	04 14 25.4	+0.5
LIS				*e*SS	SS	04 35 20.3	+4.4
PNCL	Nicolau / Gran	137.53	328	*e*PKPdf	PKPdf	04 14 28.1	+2.9
PNCL	Nicolau / Gran	137.53	328	*e*PP	PP	04 17 17.9	+7.6
PVAQ	Vaqueiros	137.60	326	*e*PP	PP	04 17 17.7	+6.9
PVAQ				*e*SS	SS	04 35 31.3	+13
PVAQ				*e*LQ	LQ	04 54 48.3	
PVAQ				*e*LR	LR	05 00 07.2	
	comp=Z,7µm,20.0s						
PCVE	Castro Verde	137.62	327	*e*PKPdf	PKPdf	04 14 28.0	+2.6
PCVE	Castro Verde	137.62	327	*e*PP	PP	04 17 17.6	+6.7
PBDV	Barranco-do-Ve	137.84	326	*e*PKPdf	PKPdf	04 14 29.4	+3.6
PBDV	Barranco-do-Ve	137.84	326	*e*PP	PP	04 17 14.2	+1.9
MORF	Marmelete	138.19	327	*e*PKPdf	PKPdf	04 14 27.7	+1.2
MORF	Marmelete	138.19	327	*e*PP	PP	04 17 23.7	+9.2
MORF	Marmelete	138.19	327	*e*PKIKP	PKPdf	04 14 27.7	+1.2
MORF				*e*SS	SS	04 35 29.0	+3.6
GTBY	Guantanamo Bay	138.33	64	PFAKE		04 14 40.0	+13
GTBY				LR	LR		
	comp=Z,7µm,19.0s						
LVC	Limon Verde	138.49	130	*e*PKPdf	PKPdf	04 14 25.8	-2.0
BBSR	BB Station	140.52	40	PFAKE		04 14 40.0	+9.2
BBSR				LR	LR		
	comp=Z,14µm,22.0s						
ROSC	El Rosal	141.52	87	PKPpre	PKPpre	04 14 29.9	
ROSC				*e*PKPdf	PKPdf	04 14 30.2	-3.4
ROSC	El Rosal	141.52	87	PKhKP	PKPpre	04 14 29.9	
	comp=Z,5.0nm,0.6s,baz=277,slow=4.5,SNR=8.4						
TOA0	Torodi Ar. Sit	141.78	287	*e*PKPdf	PKPdf	04 14 32.3	-1.2
TORD	Torodi Ar. Bea	141.78	287	PKPpre	PKPpre	04 14 24.5	
TORD				PKP	PKPdf	04 14 30.5	-3.1
TORD				PP	PP	04 17 44.8	+6.8
TORD				SKKPbc	SKKPbc	04 26 18.0	-12
TORD	Torodi Ar. Bea	141.78	287	PKhKP	PKPpre	04 14 24.5	
	comp=Z,1.2nm,0.6s,baz=71,slow=1.7,SNR=7.0						
TORD				PKP	PKPdf	04 14 30.5	-3.1
	comp=Z,3.2nm,0.7s,baz=81,slow=3.4,SNR=16						
TORD				PP	PP	04 17 44.8	+6.8
	comp=Z,7.4nm,1.1s,baz=46,slow=6.0,SNR=4.4						
TORD				SKKPbc	SKKPbc	04 26 18.0	-12
	comp=Z,1.9nm,1.2s,baz=255,slow=2.7,SNR=3.9						
SDDR	Presa de Saban	142.05	63	*e*PKPdf	PKPdf	04 14 34.0	0.0
SDDR				LR	LR		
	comp=Z,12µm,20.0s						
LPAZ	La Paz	142.43	123	*e*PKPdf	PKPdf	04 14 32.5	-3.0
LPAZ				PKP	PKPdf	04 14 33.1	-2.4
LPAZ	La Paz	142.43	123	PKP	PKPdf	04 14 33.1	-2.4
	comp=Z,14nm,1.0s,baz=249,slow=2.2,SNR=27						
ROSA	Rosais	144.31	350	*e*LQ	LQ	04 55 29.3	
ROSA				*e*LR	LR	05 03 18.4	
	comp=Z,852nm,20.5s						
PSET	Sete Cidades	144.65	346	*e*LR	LR	05 03 21.1	
	comp=Z,757nm,23.5s						
CMLA	Cha da Macela	144.66	346	*e*LQ	LQ	04 54 50.0	
CMLA				*e*LR	LR	05 03 15.6	
	comp=Z,523nm,18.2s						
PDA	Ponta Delgada	144.71	346	*e*PKP	PKPdf	04 14 42.2	+4.1
SDV	Santo Domingo	144.95	80	*e*PKPdf	PKPab	04 14 38.3	-0.3
PSMN	Pico do Norte,	145.26	345	*e*PKP	PKPdf	04 14 40.1	+1.0
PSMN				*e*LQ	LQ	04 55 37.5	
PSMN				*e*LR	LR	05 02 26.8	
	comp=Z,550nm,16.4s						
PSMA	Santa Maria	145.29	345	*e*PKP	PKPdf	04 14 42.5	+3.4
PMPST	Porto Santo, M	145.44	331	*e*PKP	PKPab	04 14 40.5	+0.9
PMPS	Porto Santo	145.45	330	*e*PKP	PKPab	04 14 42.8	+3.2
AGPR	Aguadilla, PR	145.93	62	*e*PKPbc	PKPdf	04 14 40.0	-0.6
PMAR	Madeira	146.01	331	*e*PKP	PKPab	04 14 44.9	+2.9
FUL	Funchal	146.06	331	*e*PKP	PKPab	04 14 44.6	+2.7
PMOZ	Porto Moniz, M	146.06	331	*e*PKP	PKPab	04 14 44.4	+2.3
PMOZ				*e*SS	SS	04 36 56.5	-0.2
PMOZ				*e*LR	LR	05 05 35.9	
	comp=Z,6µm,20.0s						
CRPR	Cabo Rojo, PR	146.10	63	*e*PKPbc	PKPdf	04 14 40.8	-0.1
OBIP	Obispado Ponce	146.53	62	*e*PKPdf	PKPdf	04 14 40.0	-1.8
SJG	San Juan	146.91	62	*e*PKPbc	PKPdf	04 14 43.1	+0.7
SJG				LR	LR		
	comp=Z,10µm,22.0s						
SJG	San Juan	146.91	62	PKPbc	PKPbc	04 14 44.5	+0.3
	comp=Z,115nm,1.0s,baz=298,slow=1.7,SNR=13						
STVI	Saint Thomas	147.86	61	*e*PKPbc	PKPbc	04 14 45.9	-1.0
SIV	San Ignacio	148.33	128	PKPbc	PKPbc	04 14 46.8	-1.4
SIV	San Ignacio	148.33	128	PKPbc	PKPbc	04 14 46.8	-1.4
	comp=Z,24nm,0.8s,baz=252,slow=2.9,SNR=19						
DBIC	Dimbokro	149.06	277	*e*PKPbc	PKPbc	04 14 48.1	-2.0
DBIC				*e*PKPab	PKiKP	04 14 52.7	+1.2
DBIC	Dimbokro	149.06	277	PKPbc	PKPdf	04 14 47.7	+1.7
	comp=Z,15nm,0.8s,baz=44,slow=5.5,SNR=12						
LIC	Lamto	149.26	276	*e*PKIKP	PKPdf	04 14 41.5	-4.9
	comp=Z,197nm,0.9s						
LIC	Lamto	149.26	276	*e*PKPdf	PKPdf	04 14 41.5	-4.9
SAML	Samuel	149.99	115	*e*PKPbc	PKPdf	04 14 48.2	+0.7
SPB	Sao Paulo	150.74	158	*e*PKPbc	PKPbc	04 14 52.1	-1.9
ANWB	Willy Bob	150.88	59	*e*PKPdf	PKPdf	04 14 46.8	-2.0
ANWB				*e*PKPbc	PKPbc	04 14 53.3	-1.2
ANWB				LR	LR		
	comp=Z,7µm,21.0s						
HMG	Houelmont	151.65	62	*e*P	PKPdf	04 14 49.4	-0.6
TBG	Guadaloupe-3	151.75	63	*e*P	PKPbc	04 14 55.1	-1.4
FDF	Fort de France	152.62	64	*e*PKIKP	PKPbc	04 14 55.1	-3.4
FDF	Fort de France	152.62	64	*e*PKPbc	PKPbc	04 14 55.1	-3.4
GRGR	Grenville	152.99	70	PFAKE		04 15 00.0	+0.7
GRGR				LR	LR		
	comp=Z,8µm,21.0s						
CAM4	Nova Friburgo	153.43	166	⇑*i*P	PKPbc	04 14 59.9	-0.5
CAM4				*i*		04 15 03.9	
CAM4				*i*		04 15 07.2	
CAM4				*i*		04 15 11.3	
CAM4				*i*		04 15 12.8	
CAM4				*i*		04 15 16.2	
CAM4				*i*		04 15 28.1	
CAM4				*i*		04 15 32.1	
CAM4				*i*		04 15 45.7	
CAM4				*i*		04 15 48.5	
BBGH	Gun Hill	154.62	66	PFAKE		04 15 00.0	-2.9
BBGH				LR	LR		
	comp=Z,19µm,22.0s						
BDFB	Brasilia	157.42	148	PKP	PKPdf	04 14 57.6	-0.6
BDFB	Brasilia	157.42	148	PKP	PKPdf	04 14 57.6	-0.6
	comp=Z,5.5nm,0.9s,baz=165,slow=4.3,SNR=6.6						

IDC ***01*** *04:27:33.5±0.8, 62.°01N×79.°56W, h0km, mb3.3/3, mb1 3.7/7, mb1mx3.4/32, mbtmp3.5/7, ML2.9/4, Error ellipse: s-maj=12.4km s-min=8.2km az=174.0*

OTT ***01*** *04:27:33.8±0.2, 62.°04N×79.°60W, h5km, MN3.6/27, 97km southwest from Ivujivik, Qc Boothia Ungava Seismic Zone.*

ISC 01 04:27:31.2±0.6**, 61.°98N**±0.°04**×79.°67W**±0.°04**, h10km, n48, σ2.s35**/65**, mb3.2**/3**, Hudson Bay**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVKQ	Ivujivik	0.93	61	PG	Pb	04 27 50.4	+1.0
IVKQ				SG	Sg	04 28 01.3	+0.1
IVKQ				Trac		04 28 02.7	
	comp=Z,327nm,0.1s						
AKVQ	Akulivik	1.38	148	PG	Pg	04 28 00.2	+2.6
AKVQ				SG	Sg	04 28 17.7	+2.3
AKVQ				Trac		04 28 21.2	
	comp=Z,293nm,0.1s						
INUQ	Inukjuak	3.63	167	PN	Pn	04 28 31.8	+4.5
INUQ				PG	Pg	04 28 40.7	+0.1
INUQ				SN	Sn	04 29 14.3	+4.3
INUQ				LG	Lg	04 29 26.5	
INUQ				Trac		04 29 32.9	
	comp=Z,63nm,0.1s						
FRB	Frobisher Bay	5.39	66	PN	Pn	04 28 53.3	+1.8
FRB				PG	Pb	04 29 01.0	-4.3
FRB				SN	Sn	04 29 49.5	-3.9
FRB				LG	Lg	04 30 15.2	
FRB				Trac		04 30 23.1	
	comp=Z,23nm,0.3s						
FRB	Frobisher Bay	5.39	66	Pn	Pn	04 28 53.4	+1.9
	0.4nm,0.3s,baz=248,slow=13,SNR=17						
FRB				Pg	Pb	04 29 09.9	+4.6
	1.6nm,0.3s,baz=257,slow=17,SNR=18						
FRB				Sn	Sn	04 29 47.8	-5.7
	1.7nm,0.3s,baz=342,slow=20,SNR=3.7						
FRB				Lg	Lg	04 30 14.4	
	7.2nm,0.3s,baz=170,slow=19,SNR=13						
SEDN	First Sedna Si	5.48	288	PN	Pn	04 28 55.3	+2.6
SEDN				SN	Sn	04 29 55.0	-0.7
SEDN				LG	Lg	04 30 23.6	
SEDN				Trac		04 30 28.3	
	comp=Z,19nm,0.3s						
QILN	Qililugaq Expl	5.52	331	PN	Pn	04 28 55.5	+2.2
QILN				SN	Sn	04 29 53.5	-3.1
QILN				LG	Lg	04 30 21.6	
QILN				Trac		04 30 28.4	
	comp=Z,27nm,0.3s						
WAGN	Wager Bay	5.82	316	PN	Pn	04 28 59.5	+2.2
WAGN				SN	Sn	04 30 01.8	-2.2
WAGN				LG	Lg	04 30 32.8	
WAGN				Trac		04 30 43.6	
	comp=Z,57nm,0.4s						
NUNN	Nunuq Camp, NU	6.03	307	PN	Pn	04 29 02.6	+2.3
NUNN				SN	Sn	04 30 09.2	-0.2
NUNN				LG	Lg	04 30 38.9	
NUNN				Trac		04 30 48.5	
	comp=Z,18nm,0.2s						
SRLN	Sarcpa Lake, N	6.77	349	PN	Pn	04 29 12.6	+2.2
SRLN				SN	Sn	04 30 25.5	-2.0
SRLN				LG	Lg	04 30 59.1	
SRLN				Trac		04 31 03.1	
	comp=Z,33nm,0.3s						
KUQ	Kuujjuuaa	6.84	120	PN	Pn	04 29 11.9	+0.4
KUQ				SN	Sn	04 30 22.1	-7.1
KUQ				LG	Lg	04 31 03.9	
KUQ				Trac		04 31 11.9	
	comp=Z,17nm,0.2s						
ARVN	Arviat, NU	6.94	269	PN	Pn	04 29 15.5	+2.8
ARVN				SN	Sn	04 30 31.6	-0.1
ARVN				LG	Lg	04 31 10.1	
ARVN				Trac		04 31 18.8	
	comp=Z,38nm,0.7s						
BULN	Bullion Camp,	7.35	313	PN	Pn	04 29 20.1	+1.8
BULN				SN	Sn	04 30 39.4	-2.3
BULN				LG	Lg	04 31 19.3	
BULN				Trac		04 31 28.4	
	comp=Z,21nm,0.3s						
ILON	Igloolik, Nuna	7.47	354	PN	Pn	04 29 21.1	+1.1
ILON				SN	Sn	04 30 40.6	-4.1
ILON				LG	Lg	04 31 20.0	
ILON				Trac		04 31 27.9	
	comp=Z,45nm,0.6s						
KUGN	Kugaaruk Camp,	7.53	329	PN	Pn	04 29 21.8	+0.9
KUGN				SN	Sn	04 30 40.9	-5.3
KUGN				LG	Lg	04 31 23.7	
KUGN				Trac		04 31 31.7	
	comp=Z,28nm,0.5s						
STLN	Stellar Camp,	7.81	319	PN	Pn	04 29 26.8	+2.1
STLN				SN	Sn	04 30 50.3	-2.8
STLN				LG	Lg	04 31 32.7	
STLN				Trac		04 31 54.8	
	comp=Z,25nm,0.5s						
FCC	Fort Churchill	7.84	252	PN	Pn	04 29 28.8	+3.7
FCC				SN	Sn	04 30 52.8	-1.0
FCC				LG	Lg	04 31 34.5	
FCC				Trac		04 31 45.1	
	comp=Z,15nm,0.6s						
SILO	Sutton Inlier	8.02	202	PN	Pn	04 29 30.2	+2.7
SILO				SN	Sn	04 30 57.2	-0.9
SILO				LG	Lg	04 31 43.2	
SILO				Trac		04 31 54.1	
	comp=Z,15nm,0.3s						
GIFN	Gifford Fjord,	8.09	355	PN	Pn	04 29 29.1	+0.6
GIFN				SN	Sn	04 30 54.8	-5.0
GIFN				LG	Lg	04 31 35.6	
GIFN				Trac		04 31 43.0	
	comp=Z,27nm,0.4s						
LG4Q	La Grande 4	8.89	158	PN	Pn	04 29 41.4	+1.9
LG4Q				SN	Sn	04 31 17.0	-2.5
LG4Q				LG	Lg	04 32 05.7	
LG4Q				Trac		04 32 14.6	
	comp=Z,42nm,0.5s						
VIMO	Victor Mine	9.45	195	PN	Pn	04 29 49.9	+2.7
VIMO				SN	Sn	04 31 30.7	-2.6
VIMO				LG	Lg	04 32 20.9	
VIMO				Trac		04 32 31.0	
	comp=Z,61nm,1.1s						
SCHQ	Schefferville	9.82	131	PN	Pn	04 29 52.0	-0.3
SCHQ				SN	Sn	04 31 37.3	-5.2
SCHQ				LG	Lg	04 32 33.1	
SCHQ				Trac		04 32 53.6	
	comp=Z,57nm,0.8s						
SCHQ	Schefferville	9.82	131	Pn	Pn	04 29 51.9	-0.4
	0.6nm,0.3s,baz=330,slow=12,SNR=19						
SCHQ				Sn	Sn	04 31 38.3	-4.2
	1.4nm,0.3s,baz=154,slow=13,SNR=5.6						
SCHQ				Lg	Lg	04 32 36.0	
	3.8nm,0.3s,baz=43,slow=15,SNR=12						
YOSQ	Ashton Mining	9.98	153	PN	Pn	04 29 56.1	+1.6
YOSQ				SN	Sn	04 31 41.7	-4.7
YOSQ				LG	Lg	04 32 39.4	
YOSQ				Trac		04 32 46.0	
	comp=Z,25nm,0.4s						
MALO	McAlpine Lake	11.99	180	PN	Pn	04 30 23.6	+1.7
MALO				SN	Sn	04 32 28.9	-6.7
MALO				LG	Lg	04 33 45.0	
PKLO	Pickle Lake	12.01	214	PN	Pn	04 30 24.1	+1.9
PKLO				SN	Sn	04 32 30.3	-5.9
MATQ	Matagami	12.31	174	PN	Pn	04 30 27.2	+1.0
MATQ				SN	Sn	04 32 36.8	-6.6
NANO	Nakina Ontario	12.33	202	PN	Pn	04 30 27.2	+0.6
NANO				SN	Sn	04 32 38.7	-5.3
GDLN	Gardenia Lake,	12.34	282	PN	Pn	04 30 26.1	-0.5
GDLN				SN	Sn	04 32 37.5	-6.6
CHGQ	Chibougamau	12.45	164	SN	Sn	04 32 37.6	-9.4
CB31	Cambridge Bay	12.64	315	PN	Pn	04 30 31.1	+0.4
CB31				SN	Sn	04 32 44.8	-6.5
CB31				LG	Lg	04 34 00.8	
CB31				Trac		04 34 07.6	
	comp=Z,18nm,0.6s						
KAPO	Kapuskasing	12.66	188	PN	Pn	04 30 31.6	+0.4
KAPO				SN	Sn	04 32 46.1	-6.0
WHFN	White Fish Lak	12.74	285	PN	Pn	04 30 31.6	-0.5
WHFN				SN	Sn	04 32 45.5	-8.4
WHFN				LG	Lg	04 34 13.3	
GTO	Geraldton	12.92	202	PN	Pn	04 30 34.9	+0.2
GTO				SN	Sn	04 32 50.5	-7.9
GTO				LG	Lg	04 34 09.7	
MNQ	Manicouagan	12.95	147	PN	Pn	04 30 35.3	+0.2
MNQ				SN	Sn	04 32 53.1	-6.0
MNQ				LG	Lg	04 34 05.0	
MNQ				Trac		04 34 24.5	
	comp=Z,25nm,0.6s						
COKN	Cook Lake	13.39	288	SN	Sn	04 33 01.6	-8.2
COKN				LG	Lg	04 34 28.4	
KILO	Kirkland Lake	13.52	180	PN	Pn	04 30 44.2	+1.4
KILO				SN	Sn	04 33 09.6	-3.3
SMQ	Clarke City	13.79	143	PN	Pn	04 30 45.5	-1.1
SMQ				SN	Sn	04 33 09.4	-10
SMQ				LG	Lg	04 34 30.8	
SMQ				Trac		04 34 41.9	
	comp=Z,11nm,0.5s						
RES	Resolute Bay	13.86	343	PN	Pn	04 30 46.1	-1.3
RES				SN	Sn	04 33 08.0	-13
RES				LG	Lg	04 34 32.3	
RES				Trac		04 34 44.1	
	comp=Z,22nm,1.0s						
RES	Resolute Bay	13.86	343	Pn	Pn	04 30 45.7	-1.6
	0.2nm,0.3s,baz=154,slow=12,SNR=10						
RES				Sn	Sn	04 33 12.1	-9.0
	0.4nm,0.3s,baz=114,slow=21,SNR=7.1						
RES				Lg	Lg	04 34 43.1	
	0.6nm,0.3s,baz=226,slow=14,SNR=7.2						
VLDQ	Val d'Or	13.96	174	PN	Pn	04 30 46.7	-2.1
VLDQ				SN	Sn	04 33 11.5	-12
VLDQ				LG	Lg	04 34 38.3	
VLDQ				Trac		04 34 45.8	
	comp=Z,72nm,1.6s						
ULM	Lac du Bonnet	14.77	225	Pn	Pn	04 30 58.2	-1.7
	0.5nm,0.3s,baz=29,slow=13,SNR=6.0						
ULM				Sn	Sn	04 33 33.5	-10
	0.6nm,0.3s,baz=91,slow=19,SNR=3.8						
ULM				Lg	Lg	04 35 13.1	
	0.5nm,0.3s,baz=315,slow=18,SNR=7.1						
YKW3	Yellowknife Ar	16.16	288	PN	Pn	04 31 16.3	-1.7
YKW3				SN	Sn	04 34 03.9	-13
YKW3				LG	Lg	04 35 53.6	
YKW3				Trac		04 36 09.9	
	comp=Z,8.0nm,0.7s						
YKA	Yellowknife Ar	16.17	287	Pn	Pn	04 31 16.6	-1.5
	0.1nm,0.3s,baz=80,slow=12,SNR=17						
YKA				Sn	Sn	04 34 06.8	-10
	0.2nm,0.3s,baz=76,slow=21,SNR=11						
YKA				Lg	Lg	04 35 53.4	
	0.2nm,0.3s,baz=79,slow=30,SNR=10						
INK	Inuvik	22.80	309	P	P	04 32 35.7	+2.2
	0.5nm,0.6s,baz=85,slow=7.3,SNR=2.8						
PDAR	Pinedale Array	26.12	236	P	P	04 33 10.5	+5.2
	0.6nm,0.7s,baz=50,slow=7.2,SNR=3.2						
TXAR	Lajitas Array	36.26	217	P	P	04 34 39.6	+5.2
	0.2nm,0.7s,baz=46,slow=6.6,SNR=4.4						
QSPA	South Pole Qui	151.88	180	PKPbc	PKPbc	04 47 29.1	+4.6
	1.0nm,1.0s,baz=154,slow=1.4,SNR=3.1						

WEL 01 04:30:45.3±0.4**, 39.°67S×174.°18E, h196**km±3km**, ML3.5**/9**, 2C-3D, Error ellipse: s-maj=4.2km s-min=2.5km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAZ	Wanganui	0.63	98	⇑PN	Pn	04 31 13.2	+0.7

WAZ				SN	Sn	04 31 34.5	+1.0
TRVZ	Turoa	1.12	71	PN	Pn	04 31 15.5	-0.3
FWVZ	Far West T-bar	1.14	69	PN	Pn	04 31 15.4	-0.6
WNVZ	Wahianoa	1.15	73	PN	Pn	04 31 15.8	-0.1
WNVZ				SN	Sn	04 31 38.7	-0.9
DUWZ	D'Urville Isla	1.15	190	PN	Pn	04 31 15.5	-0.2
DUWZ				SN	Sn	04 31 38.3	-1.2
TUVZ	Tukino	1.21	71	PN	Pn	04 31 16.2	-0.1
MOVZ	Moawhango	1.25	78	PN	Pn	04 31 16.0	-0.6
MOVZ				SN	Sn	04 31 38.2	-2.6
KIW	Kapiti Island	1.32	155	PN	Pn	04 31 17.1	+0.1
OGWZ	Otaki Gorge	1.38	147	PN	Pn	04 31 17.9	+0.4
OGWZ				SN	Sn	04 31 41.1	-1.5
POWZ	Post Office Ro	1.42	121	SN	Sn	04 31 43.3	0.0
MRZ	Mangatainoka R	1.46	133	PN	Pn	04 31 18.4	+0.2
MRZ				SN	Sn	04 31 42.7	-1.3
BHHZ	Black Hill Sta	1.47	84	PN	Pn	04 31 17.8	-0.6
TCW	Tory Channel	1.54	177	PN	Pn	04 31 19.2	+0.2
PNHZ	Pukenui	1.58	100	PN	Pn	04 31 19.3	-0.1
CAW	Cannon Point	1.59	155	⇓PN	Pn	04 31 19.4	0.0
CAW				SN	Sn	04 31 45.0	-1.2
HOWZ	Holdsworth Sta	1.60	141	PN	Pn	04 31 19.5	0.0
DVHZ	Dannevirke	1.65	113	PN	Pn	04 31 20.1	+0.1
NNZ	Nelson	1.66	201	⇑PN	Pn	04 31 19.3	-0.8
SNZO	South Karori	1.69	166	PN	Pn	04 31 20.1	-0.2
QRZ	Quartz Range	1.71	227	PN	Pn	04 31 18.9	-1.7
TIWZ	Tintock	1.71	131	SN	Sn	04 31 47.0	-1.2
TUWZ	Tuamarina	1.77	186	PN	Pn	04 31 20.8	-0.3
BKZ	Black Stump Fm	1.86	75	⇓PN	Pn	04 31 21.3	-0.9
TMWZ	Te Maipa	1.94	138	PN	Pn	04 31 22.8	-0.1
PRHZ	Porangahau	1.98	108	PN	Pn	04 31 23.3	+0.1
BSWZ	Blackbirch Sta	2.06	186	PN	Pn	04 31 23.9	-0.1
PLWZ	Palliser	2.07	157	PN	Pn	04 31 23.6	-0.6
KAHZ	Kahuranaki	2.08	94	PN	Pn	04 31 24.6	+0.2
THZ	Tophouse	2.31	204	⇓PN	Pn	04 31 25.5	-1.3
KHZ	Kahutara	2.79	190	PN	Pn	04 31 31.2	-1.0
LTZ	Lake Taylor	3.43	204	PN	Pn	04 31 38.0	-1.8
MQZ	McQueen's Vall	4.19	195	PN	Pn	04 31 46.2	-3.1

*IDC **01** 04:31:07.7±3.0, 52°.01N×177°.01W, h0km, mb3.0/2, mb1 3.7/3, mb1mx3.3/29, mbtmp3.4/3, ML3.8/1, Error ellipse: s-maj=80.8km s-min=45.7km az=1.0*
*ISCJB **01** 04:31:31.7±0.8, 52°.8N±0°.1×175°.9W±0°.1, h165km, mb3.3/1, Error ellipse: s-maj=18.5km s-min=9.7km az=159.7*
*NEIC **01** 04:31:33.9, 52°.27N×175°.74W, h177km, MG3.0(AEIC), After AEIC.*
ISC 01 04:31:32.5±1.2**, 52°.7N**±0°.2×**175°.87W**±0°.09**, h165km, n16,** σ**0s.74**/18**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSTD	Great Sitkin T	0.67	195	P	Pn	04 31 56.7	+0.2
GSTD				S	Sn	04 32 15.7	+0.7
GSCK	Great Sitkin C	0.72	194	P	Pn	04 31 57.0	+0.2
GSCK				S	Sn	04 32 15.9	+0.6
ADAG	Mount Adagdak	0.85	212	P	Pn	04 31 58.5	+0.8
KOWE	Korovin West	1.05	108	P	Pn	04 32 00.2	+1.0
KOKL	Mount Kliuchef	1.09	110	P	Pn	04 32 00.5	+1.0
KINC	Kanaga Island	1.09	225	P	Pn	04 31 58.2	-1.3
ATKA	Atka Island	1.14	115	P	Pn	04 31 59.5	-0.4
ATKA				S	Sn	04 32 19.7	-1.1
KIKV	Kanaga Island	1.15	224	P	Pn	04 32 00.1	+0.1
KOFP	Korovin Flat P	1.17	111	P	Pn	04 32 00.9	+0.7
KIMD	Kanaga Island	1.26	222	P	Pn	04 32 01.3	+0.3
TAFP	Tanaga Falls P	1.53	239	P	Pn	04 32 04.2	+0.7
PETK	Petropavlovsk-	15.92	282	Pn	Pn	04 34 46.1	-21
	0.4nm,0.3s,baz=90,slow=7.5,SNR=3.9						
ILAR	Eielson Array	19.07	39	P	P	04 35 42.0	0.0
ILAR	Eielson Array	19.07	39	P	P	04 35 42.0	0.0
	0.3nm,0.6s,baz=242,slow=9.7,SNR=4.6						
TXAR	Lajitas Array	56.69	84	P	P	04 40 58.3	-0.5
TXAR	Lajitas Array	56.69	84	P	P	04 40 58.3	-0.5
	0.3nm,0.6s,baz=302,slow=5.2,SNR=5.2						

*IDC **01** 04:50:34.6±3.3, 34°.92S×179°.33W, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.9/16, mbtmp3.9/3, ML3.5/1, Error ellipse: s-maj=74.1km s-min=36.6km az=121.0*
ISC 01 04:50:35.5±2.8**, 35°.1S**±0°.2×**179°.2W**±0°.4**, h10km, n9,** σ**2s.04**/12**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.17	218	ePN	Pn	04 51 26.0	+0.6
MXZ				SN	Sn	04 52 04.2	+0.9
MWZ	Matawai	4.15	218	PN	Pn	04 51 40.4	+1.3
MWZ				SN	Sn	04 52 28.3	+0.6
URZ	Urewera	4.32	222	PN	Pn	04 51 42.0	+0.8
URZ				SN	Sn	04 52 32.3	+0.6
URZ	Urewera	4.32	222	Pn	Pn	04 51 42.4	+1.2
	2.8nm,0.3s,baz=82,slow=15,SNR=19						
URZ				Sn	Sn	04 52 32.8	+1.1
	5.4nm,0.3s,baz=195,slow=22,SNR=12						
TCW	Tory Channel	7.97	218	SN	Sn	04 53 56.0	-5.5
MQZ	McQueen's Vall	10.64	214	SN	Sn	04 54 55.1	-12
ASAR	Alice Springs	42.06	273	P	P	04 58 27.8	+0.1
	1.1nm,0.5s,baz=115,slow=7.7,SNR=17						
WRA	Warramunga Arr	43.48	278	P	P	04 58 38.6	-0.6
	0.5nm,0.3s,baz=116,slow=7.7,SNR=30						
FINES	FINESS Array B	149.12	336	PKPbc	PKPbc	05 10 22.7	-0.5
	1.1nm,0.7s,baz=27,slow=3.4,SNR=4.1						

*ISCJB **01** 04:59:03.8±0.5, 4°.70S±0°.07×129°.48E±0°.05, h224km±6km, mb3.4/1, Error ellipse: s-maj=11.5km s-min=6.9km az=27.2*
*DJA **01** 04:59:05.2±0.4, 5°S±4°×12°9E±°, h211km±5km, M4.1/8, mb4.2/5, MLv4.0/8*
*IDC **01** 04:59:06.9±3.7, 4°.99S×129°.14E, h238km±37km, mb3.1/1, mb1 3.7/4, mb1mx3.2/20, mbtmp3.5/4, Error ellipse: s-maj=84.2km s-min=15.1km az=71.0*
ISC 01 04:59:04.0±0.9**, 4°.73S**±0°.08×**129°.44E**±0°.06**, h224**km±8km**, n13,** σ**1s.58**/19**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.50	66	P	Pn	04 59 34.1	+0.2
BNDI				S	S	04 59 57.7	+0.6
AAI	Ambon	1.62	310	P	Pn	04 59 42.7	+1.8
AAI				S	S	05 00 07.6	-1.9
NLAI	Namlea	2.77	302	P	Pn	04 59 54.7	+2.4
NLAI				S	S	05 00 27.8	-2.2
FAKI	Fak Fak	3.33	57	P	Pn	04 59 58.9	+0.2
FAKI				S	S	05 00 39.7	-1.8
TLE	Tual	3.40	106	P	Pn	05 00 01.1	+1.5
TLE				S	S	05 00 42.6	-0.5
LBMI	Labuha	4.50	334	P	Pn	05 00 13.3	+0.4
LBMI				S	S	05 01 06.7	-0.5
BBSI	Bau Bau	6.89	263	P	Pn	05 00 45.7	+2.7
	67nm,1.0s,0.3nm						
BKSI	Bulukumba	9.30	266	P	Pn	05 01 15.4	+1.3
	12nm,0.8s						
SPSI	Sidrap Palu	9.68	274	P	Pn	05 01 19.7	+0.8
	12nm,0.7s						
FITZ	Fitzroy Crossi	13.80	195	P	Pn	05 02 09.4	-1.3
	0.8nm,0.3s,baz=28,slow=11,SNR=28						
WRA	Warramunga Arr	15.86	163	P	P	05 02 33.9	-1.0
	0.7nm,0.3s,baz=342,slow=12,SNR=72						
WRA				S	S	05 05 21.3	-8.9
	0.8nm,0.3s,baz=343,slow=23,SNR=6.5						
ASAR	Alice Springs	19.31	168	P	P	05 03 13.4	+0.9
	2.2nm,0.3s,baz=352,slow=12,SNR=145						
ASAR				S	S	05 06 36.9	-2.2
	0.3nm,0.3s,baz=350,slow=22,SNR=19						
MKAR	Makanchi Array	66.04	327	P	P	05 09 28.1	+1.3
	0.4nm,0.4s,baz=114,slow=8.3,SNR=4.3						

NNC 01 05:04:41.8±3.9**, 54°.22N**×**87°.13E, h0km, mb3.6, mpv3.2, 7C-4D, Error ellipse: s-maj=33.4km s-min=28.1km az=10.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	6.27	239	⇑Pn	Pn	05 06 15.2	-0.3
	5.9nm,0.7s						
KURK				⇓Sn	Sn	05 07 31.1	+3.3
	3.3nm,0.8s						
KURK				⇑Lg	Lg	05 08 00.2	
	8.1nm,0.8s						
KUR16	Kurchatov Arra	6.39	239	⇑Sn	Sn	05 07 32.1	+1.5
	0.1nm,0.7s						
KUR16				⇑Lg	Lg	05 08 04.0	
	0.4nm,0.9s						
KUR17	Kurchatov Arra	6.40	239	⇑Pn	Pn	05 06 17.1	-0.2
	0.5nm,0.9s						
MK31	Makanchi Array	8.04	204	⇑Pn	Pn	05 06 43.4	+3.5
	1.2nm,0.8s,baz=24,slow=12,SNR=6.5						
MK31				⇓Sn	Sn	05 08 15.0	+3.5
	1.2nm,0.8s,baz=27,slow=27,SNR=5.1						
MK31				⇓Lg	Lg	05 08 57.9	
	2.2nm,0.7s,baz=26,slow=31,SNR=5.7						
VOSK	Vostochnaya	9.75	268	⇑Pn	Pn	05 06 59.3	-3.9
	1.1nm,0.6s						
VOSK				⇓Sn	Sn	05 08 41.2	-12
	2.6nm,0.8s						

IDC 01 05:15:29.1±1.6**, 28°.43S**×**71°.07W, h0km, mb4.0**/1**, mb1 4.0**/1**, mb1mx3.5**/16**, mbtmp4.0**/1**, Error ellipse: s-maj=155.0km s-min=66.1km az=152.0, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	81.54	70	P	P	05 27 49.0	0.0
	0.8nm,0.6s,baz=252,slow=3.5,SNR=19						
WRA	Warramunga Arr	126.00	210	PKP	PKPdf	05 34 33.6	-0.3
	0.2nm,0.5s,baz=146,slow=1.7,SNR=5.4						
ZALV	Zalesovo Beam	149.01	28	PKPbc	PKPbc	05 35 18.4	-0.3
	1.2nm,0.5s,baz=308,slow=3.5,SNR=7.9						
MKAR	Makanchi Array	152.26	41	PKPbc	PKPbc	05 35 26.3	-0.4
	0.6nm,0.6s,baz=313,slow=1.9,SNR=7.5						

*IDC **01** 05:15:36.5±1.5, 33°.20N×0°.07E, h0km, mb3.1/2, mb1 3.2/5, mb1mx3.2/30, mbtmp3.2/5, ML3.4/3, MS3.9/1, Ms1 3.9/1, ms1mx3.8/19, Error ellipse: s-maj=31.8km s-min=19.9km az=170.0*
*CNRM **01** 05:15:38.3, 33°.49N×1°.08E, h30km, MD4.0*
*MDD **01** 05:15:38.9±2.6, 33°.55N×0°.78E, h0km, mb4.0/6, Error ellipse: s-maj=24.8km s-min=14.1km az=113.0, PRXIMO*
*ISCJB **01** 05:15:39.1±1.1, 33°.64N±0°.05×0°.61E±0°.07, h10km, mb3.4/1, Error ellipse: s-maj=9.4km s-min=6.7km az=37.7*
*CSEM **01** 05:15:40.3±1.3, 33°.57N×0°.63E, h10km, mb4.0/6, Error ellipse: s-maj=26.5km s-min=13.7km az=118.0*
ISC 01 05:15:43.2±1.2**, 33°.73N**±0°.06×**0°.56E**±0°.07**, h10km, n31,** σ**1s.95**/41**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAI	Zaio	3.00	295	P	Pn	05 16 30.0	-0.9
ZAI				S	Sn	05 17 06.0	-1.0
ZAI	Zaio	3.00	295	P	Pn	05 16 30.0	-0.9
ZAI				S	Sn	05 17 06.0	-1.0
MELI	Melilla	3.28	299	S	Sn	05 17 14.5	+0.8
	412nm,0.8s,SNR=7.9						
MELI	Melilla	3.28	299	S	Sn	05 17 14.5	+0.8
	412nm,0.8s,SNR=7.9						
EMLI	Melilla	3.29	299	P	Pn	05 16 37.6	+2.8
	24nm,0.1s,SNR=7.9						
EMLI				S	Sn	05 17 17.4	+3.4
	63nm,0.3s,SNR=7.9						
EMEL	Melilla	3.30	299	P	Pn	05 16 37.6	+2.7
	24nm,0.1s,SNR=7.9						
EMEL				S	Sn	05 17 17.4	+3.2
	63nm,0.3s,SNR=7.9						
TOU	Touzarine	3.77	290	P	Pn	05 16 42.0	+0.4
TOU				S	Sn	05 17 27.0	+0.9
TOU	Touzarine	3.77	290	P	Pn	05 16 42.0	+0.4
TOU				S	Sn	05 17 27.0	+0.9
EBER	Berja	4.23	319	P	Pn	05 16 48.1	+0.1
	1.1nm,0.3s,SNR=7.9						
EBER				S	Sn	05 17 37.6	0.0
	12nm,0.7s,SNR=7.9						
EBER	Berja	4.23	319	P	Pn	05 16 48.1	+0.1
	1.1nm,0.3s,SNR=7.9						
EBER				S	Sn	05 17 37.6	0.0
	12nm,0.7s,SNR=7.9						
EMUR	La Murta	4.35	341	S	Sn	05 17 39.3	-1.0
	9.7nm,0.6s,SNR=7.9						
EMUR	La Murta	4.35	341	S	Sn	05 17 39.3	-1.0
	9.7nm,0.6s,SNR=7.9						
MDT	Midelt	4.43	260	Pn	Pn	05 16 37.7	-13
	1.8nm,0.3s,baz=76,slow=19,SNR=60						
MDT				Lg	Lg	05 17 42.9	
	5.1nm,0.3s,baz=335,slow=17,SNR=4.3						
MDT				LR	LR	05 18 28.7	
	comp=Z,1μm,18.8s,baz=350,slow=44						
ZFT	Errachidia	4.47	249	P	Pn	05 16 47.0	-4.2
ZFT				S	Sn	05 17 40.0	-3.3
ZFT	Errachidia	4.47	249	P	Pn	05 16 47.0	-4.2
ZFT				S	Sn	05 17 40.0	-3.3
CZD	Col de Zad	4.74	263	P	Pn	05 16 52.0	-3.0
CZD				S	Sn	05 17 48.0	-2.1
CZD	Col de Zad	4.74	263	P	Pn	05 16 52.0	-3.0
CZD				S	Sn	05 17 48.0	-2.1
EHUE	Huescar	4.81	329	P	Pn	05 16 57.5	+1.7
	0.3nm,0.1s,SNR=7.9						
EHUE				S	Sn	05 17 46.7	-5.0
	1.8nm,0.4s,SNR=7.9						
EHUE	Huescar	4.81	329	P	Pn	05 16 57.5	+1.7
	0.3nm,0.1s,SNR=7.9						
EHUE				S	Sn	05 17 46.7	-5.0
	1.8nm,0.4s,SNR=7.9						
ERON	Agron	4.84	314	P	Pn	05 16 57.2	+0.9
	3.4nm,0.5s,SNR=7.9						
ERON	Agron	4.84	314	P	Pn	05 16 57.2	+0.9
	3.4nm,0.5s,SNR=7.9						
EQES	Quesada	5.02	325	P	Pn	05 16 56.2	-2.5
	1.4nm,0.4s,SNR=7.9						
EQES				S	Sn	05 17 53.7	-3.1
	6.7nm,0.6s,SNR=7.9						
EQES	Quesada	5.02	325	P	Pn	05 16 56.2	-2.5
	1.4nm,0.4s,SNR=7.9						
EQES				S	Sn	05 17 53.7	-3.1
	6.7nm,0.6s,SNR=7.9						
ETOB	Tobarra	5.19	341	P	Pn	05 17 00.3	-0.7
	1.4nm,0.4s,SNR=7.9						
ETOB				S	Sn	05 17 59.6	-1.3
	4.8nm,0.5s,SNR=7.9						
ETOB	Tobarra	5.19	341	P	Pn	05 17 00.3	-0.7
	1.4nm,0.4s,SNR=7.9						
ETOB				S	Sn	05 17 59.6	-1.3
	4.8nm,0.5s,SNR=7.9						
EVIA	Vianos	5.49	334	P	Pn	05 17 03.7	-1.4
	2.7nm,0.4s,SNR=4.0						
EVIA				S	Sn	05 18 05.0	-3.3
	5.3nm,0.5s,SNR=7.9						
EVIA	Vianos	5.49	334	P	Pn	05 17 03.7	-1.4
	2.7nm,0.4s,SNR=4.0						
EVIA				S	Sn	05 18 05.0	-3.3
	5.3nm,0.5s,SNR=7.9						
ESDC	Sonseca Array	6.95	330	Pn	Pn	05 17 24.0	-1.2
	0.4nm,0.3s,baz=155,slow=13,SNR=2.8						
KEST	Kesra	7.50	72	Pn	Pn	05 17 35.7	+2.9
	0.1nm,0.3s,baz=177,slow=3.3,SNR=6.4						
TORD	Torodi Ar. Bea	20.52	177	P	P	05 20 11.1	-11
	0.9nm,0.9s,baz=355,slow=12,SNR=4.2						
MKAR	Makanchi Array	61.05	51	P	P	05 25 56.1	-1.1
	0.2nm,0.6s,baz=281,slow=5.0,SNR=4.2						

IDC 01 05:19:09.3±2.2**, 23°.41S**×**175°.10W, h54**km±8km**, mb3.7**/7**, mb1 4.0**/7**, mb1mx3.8**/21**, mbtmp3.7**/7**, MS4.7**/1**, Ms1 4.7**/1**, ms1mx3.5**/36**, Error ellipse: s-maj=103.5km s-min=21.7km az=153.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	9.96	19	P	Pn	05 21 23.2	-6.7
	4.4nm,0.3s,baz=133,slow=21,SNR=4.1						
RAR	Rarotonga	14.35	84	P	Pn	05 22 18.4	-11
	2.6nm,0.3s,baz=251,slow=18,SNR=4.2						
CTA	Charters Tower	35.98	268	P	P	05 26 05.1	-0.2
	1.4nm,0.3s,baz=90,slow=12,SNR=6.3						
CTA				pP	pP	05 26 20.1	+1.0
	2.1nm,0.4s,baz=97,slow=11,SNR=2.6						
CTA				LR	LR	05 37 21.0	
	comp=Z,1μm,21.0s,baz=256,slow=30						
STKA	Stephens Creek	39.07	248	P	P	05 26 30.6	-0.7
	1.5nm,0.7s,baz=80,slow=11,SNR=3.2						
ASAR	Alice Springs	46.55	259	P	P	05 27 31.9	-0.1
	0.4nm,0.6s,baz=90,slow=6.2,SNR=7.3						
ASAR				pP	pP	05 27 46.1	0.0
	1.4nm,0.8s,baz=95,slow=8.0,SNR=6.0						
WRA	Warramunga Arr	46.93	264	P	P	05 27 33.9	-1.0
	0.6nm,0.3s,baz=103,slow=8.5,SNR=40						
FITZ	Fitzroy Crossi	55.35	264	P	P	05 28 39.1	+0.9
	2.4nm,0.8s,baz=116,slow=9.6,SNR=3.6						
TXAR	Lajitas Array	86.39	56	P	P	05 31 46.3	+0.1
	0.4nm,0.8s,baz=225,slow=8.9,SNR=4.2						
ILAR	Eielson Array	90.57	12	P	P	05 32 05.6	+0.5
	0.3nm,1.0s,baz=198,slow=5.5,SNR=5.2						
ILAR				pP	pP	05 32 19.6	-0.9
	0.8nm,1.0s,baz=197,slow=4.4,SNR=4.0						
AKASG	Malin Array Be	146.85	331	pPKPbc	pPKPbc	05 38 59.7	-1.6
	0.3nm,0.3s,baz=43,slow=3.8,SNR=2.8						

*ISCJB **01** 05:23:53.1±0.2, 47°.42N±0°.01×12°.31E±0°.02, h6km±2km, Error ellipse: s-maj=2.2km s-min=1.8km az=35.1*
*CSEM **01** 05:23:54.5±0.1, 47°.39N×12°.30E, h10km, ML2.8/4, Error ellipse: s-maj=1.7km s-min=1.3km az=35.0*
*VIE **01** 05:23:54.5±0.2, 47°.36N×12°.30E, h13km±2km, mb2.0/14, ML2.7/19, Error ellipse: s-maj=1.7km s-min=1.0km az=2.0 9 km S of Kirchberg in Tirol felt 3 ems98 at Kirchberg / TYROL*
*PRU **01** 05:23:55.5, 47°.44N×12°.32E, h3km, M2.5*
*BGR **01** 05:23:55.6±0.2, 47°.37N×12°.30E, h10km, ML2.5/13, Error ellipse: s-maj=3.3km s-min=2.2km az=8.0*
BGR Felt in Kirchberg/Tirol.
*LDG **01** 05:23:56.1±0.2, 47°.35N×12°.24E, h2km, Ml3.0/8, Error ellipse: s-maj=5.1km s-min=1.7km az=39.0*
ISC 01 05:23:55.0±0.9**, 47°.41N**±0°.01×**12°.29E**±0°.01**, h17**km±7km**, n133,** σ**1s.06**/232**, 34C-22D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WTTA	Wattenberg	0.47	253	ePg	Pg	05 24 04.3	-0.2
WTTA				eSg	Sg	05 24 11.0	+0.1
WTTA	Wattenberg	0.47	253	⇑iPg	Pg	05 24 04.0	-0.5
	11nm,0.1s,SNR=24						
WTTA				⇑iSg	Sg	05 24 11.0	+0.1
	87nm,0.3s						
WTTA	Wattenberg	0.47	253	Pg	Pg	05 24 04.3	-0.2
WTTA				i Sg	Sg	05 24 11.0	+0.1
RJOB	Jochberg	0.47	46	ePg	Pg	05 24 04.5	-0.1
RJOB				eSg	Sb	05 24 12.2	+0.6
RJOB	Jochberg	0.47	46	Pg	Pg	05 24 04.5	-0.1
RJOB				Sg	Sb	05 24 12.2	+0.6
RISI	Rein	0.48	198	⇓iPg	Pg	05 24 04.0	-0.7
RISI				i Sg	Sg	05 24 10.4	-0.9
WATA	Walderalm	0.49	262	⇑ePg	Pg	05 24 04.6	-0.3
	8.0nm,0.1s,SNR=12						
WATA				⇓eSg	Sb	05 24 12.2	0.0
	23nm,0.1s						
WATA	Walderalm	0.49	262	Pg	Pg	05 24 04.6	-0.3
	8.0nm,0.1s,SNR=12						
WATA				i Sg	Sb	05 24 12.2	0.0
ABTA	Abfaltersbach	0.68	167	⇓iPg	Pg	05 24 07.6	-0.7
	14nm,0.1s,SNR=8.1						
ABTA				⇑iSg	Sg	05 24 16.4	-0.9
	68nm,0.2s						
ABTA	Abfaltersbach	0.68	167	Pg	Pg	05 24 07.6	-0.7
	14nm,0.1s,SNR=8.1						
ABTA				i Sg	Sg	05 24 16.4	-0.9
SQTA	Sankt Quirin	0.76	256	⇑ePg	Pg	05 24 09.8	-0.1
SQTA				⇓eSg	Sb	05 24 20.6	+0.7
SQTA	Sankt Quirin	0.76	256	Pg	Pg	05 24 09.8	-0.1
SQTA				Sg	Sb	05 24 20.6	+0.7
ROSI	Rosskopf	0.77	232	⇑iPg	Pg	05 24 09.4	-0.6
KBA	Koelnbreinsper	0.79	114	ePg	Pg	05 24 09.8	-0.6
KBA				eSg	Sg	05 24 20.2	-0.6
KBA	Koelnbreinsper	0.79	114	⇓iPg	Pg	05 24 10.0	-0.4
	2.0nm,0.1s,SNR=9.8						
KBA				⇓iSg	Sg	05 24 19.1	-1.8
	23nm,0.2s						
KBA	Koelnbreinsper	0.79	114	Pg	Pg	05 24 10.0	-0.4
	2.0nm,0.1s,SNR=9.8						
KBA				Sg	Sg	05 24 19.1	-1.8
	23nm,0.2s						
MOTA	Moosalm	0.81	266	⇑ePg	Pb	05 24 11.1	+0.4
	5.0nm,0.1s						
MOTA				⇓iSg	Sb	05 24 22.7	+1.4
	49nm,0.2s						
MOTA	Moosalm	0.81	266	Pg	Pb	05 24 11.1	+0.4
	5.0nm,0.1s						
MOTA				i Sg	Sb	05 24 22.7	+1.4
AFL	Alpe Faloria	0.88	185	⇓ePg	Pg	05 24 11.7	-0.4
AFL	Alpe Faloria	0.88	185	⇓ePg	Pg	05 24 11.7	-0.4
CSMI	Casera Mimoias	0.93	164	⇓ePg	Pg	05 24 12.2	-0.8
CSMI				eSg	Sg	05 24 24.5	-0.8
CSMI	Casera Mimoias	0.93	164	⇓ePg	Pg	05 24 12.2	-0.8
CSMI				eSg	Sg	05 24 24.5	-0.8
ABSI	Aberstueckl	0.95	225	ePg	Pg	05 24 12.8	-0.6
ZOU	Zoufplan	0.97	151	⇓ePg	Pg	05 24 13.0	-0.9
ZOU				eSg	Sg	05 24 25.5	-1.1
FUR	Furstenfeldbru	1.02	318	ePg	Pn	05 24 15.1	+0.6
FUR				eSg	Sn	05 24 29.2	+0.7
FUR	Furstenfeldbru	1.02	318	Pg	Pn	05 24 15.1	+0.6
FUR				Sg	Sn	05 24 29.2	+0.7
PLRO	Paularo	1.04	145	ePg	Pb	05 24 14.3	-0.2
PLRO				eSg	Sb	05 24 27.3	-0.6
PLRO	Paularo	1.04	145	ePg	Pb	05 24 14.3	-0.2
PLRO				eSg	Sb	05 24 27.3	-0.6
RETA	Reutte	1.04	275	⇑ePg	Pn	05 24 15.7	+0.9
	6.1nm,0.2s,SNR=7.3						
RETA				⇑eSg	Sn	05 24 29.9	+0.9
	50nm,0.2s						
RETA	Reutte	1.04	275	Pg	Pn	05 24 15.7	+0.9
	6.1nm,0.2s,SNR=7.3						
RETA				i Sg	Sn	05 24 29.9	+0.9
CIMO	Cimolais	1.10	175	⇑ePg	Pb	05 24 15.7	+0.1
CIMO				eSg	Sb	05 24 29.7	+0.1
CIMO	Cimolais	1.10	175	⇑ePg	Pb	05 24 15.7	+0.1
CIMO				eSg	Sb	05 24 29.7	+0.1
FUSE	Fusea	1.10	154	ePg	Pb	05 24 15.2	-0.4
FUSE				eSg	Sb	05 24 29.3	-0.4
FUSE	Fusea	1.10	154	ePg	Pb	05 24 15.2	-0.4
FUSE				eSg	Sb	05 24 29.3	-0.4
KOSI	Kohlern	1.13	214	ePg	Pb	05 24 16.1	-0.1
KOSI				eSg	Sb	05 24 30.7	+0.1
CSO	Casso	1.13	179	ePg	Pg	05 24 17.1	+0.2
CSO				eSg	Sg	05 24 31.1	-0.7
CSO	Casso	1.13	179	ePg	Pg	05 24 17.1	+0.2
CSO				eSg	Sg	05 24 31.1	-0.7
FETA	Feichten	1.13	251	⇓ePg	Pb	05 24 16.1	-0.1
	1.3nm,0.2s						
FETA				⇑iSg	Sb	05 24 31.2	+0.5
	11nm,0.2s						
FETA	Feichten	1.13	251	Pg	Pb	05 24 16.1	-0.1
	1.3nm,0.2s						
FETA				i Sg	Sb	05 24 31.2	+0.5
ACOM	Acomizza, Ital	1.20	135	⇑ePg	Pn	05 24 17.2	+0.1
ACOM				eSg	Sg	05 24 33.2	-0.6
ACOM	Acomizza, Ital	1.20	135	⇑ePg	Pn	05 24 17.2	+0.1
ACOM				eSg	Sg	05 24 33.2	-0.6
MYKA	Terra Mystica	1.21	130	⇑iPg	Pn	05 24 17.0	0.0
	2.1nm,0.2s						
MYKA				⇑iSg	Sb	05 24 32.3	-0.3
	9.7nm,0.1s						
MYKA	Terra Mystica	1.21	130	Pg	Pn	05 24 17.0	0.0
	2.1nm,0.2s						
MYKA				i Sg	Sb	05 24 32.3	-0.3
MLNI	Malnisio	1.28	170	ePg	Pg	05 24 20.1	+0.5
MLNI	Malnisio	1.28	170	ePg	Pg	05 24 20.1	+0.5
VINO	Villanova	1.34	149	⇑ePg	Pn	05 24 19.5	+0.7
VINO				eSg	Sn	05 24 37.2	+1.0
VINO	Villanova	1.34	149	⇑ePg	Pn	05 24 19.5	+0.7
VINO				eSg	Sn	05 24 37.2	+1.0
BAD	Bernadia	1.34	151	⇑ePg	Pb	05 24 19.9	+0.3
BAD				eSg	Sg	05 24 37.6	-0.7
BAD	Bernadia	1.34	151	⇑ePg	Pb	05 24 19.9	+0.3
BAD				eSg	Sg	05 24 37.6	-0.7
OBER	Oberstdorf	1.36	271	ePg	Pg	05 24 21.3	+0.1
OBER				eSg	Sg	05 24 40.2	+1.3
OBER	Oberstdorf	1.36	271	Pg	Pg	05 24 21.3	+0.1
OBER				Sg	Sg	05 24 40.2	+1.3
MOA	Molln	1.41	71	ePg	Pg	05 24 21.7	-0.4
MOA				eSg	Sg	05 24 41.0	+0.6
MOA	Molln	1.41	71	⇓iPg	Pg	05 24 21.6	-0.4
	6.3nm,0.1s,SNR=26						
MOA				⇓iSg	Sg	05 24 41.1	+0.6
	32nm,0.1s						
MOA	Molln	1.41	71	Pg	Pg	05 24 21.7	-0.4
MOA				Sg	Sg	05 24 41.0	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VARN	**Col Varnada, M**	**1.42**	**185**	⇑*e*Pg	**Pn**	**05 24 20.5**	**+0.5**
VARN				*e*Sg	**Sg**	**05 24 41.4**	**+0.5**
VARN	**Col Varnada, M**	**1.42**	**185**	⇑*e*Pg	**Pn**	**05 24 20.5**	**+0.5**
VARN				*e*Sg	**Sg**	**05 24 41.3**	**+0.5**
MOSI	**Grossmontoni**	**1.43**	**237**	⇓*e*Pg	**Pb**	**05 24 21.8**	**+0.6**
MOSI	**Grossmontoni**	**1.43**	**237**	⇓*e*Pg	**Pb**	**05 24 21.8**	**+0.6**
ROBS	**Robic**	**1.43**	**144**	*i* Pg	**Pg**	**05 24 22.0**	**-0.5**
ROBS				*i* Sg	**Sg**	**05 24 40.9**	**-0.3**
ROBS							
	comp=Z,8.0nm,0.2s						
ROBS	**Robic**	**1.43**	**144**	*i* Pg	**Pg**	**05 24 22.0**	**-0.5**
ROBS				*i* Sg	**Sg**	**05 24 40.9**	**-0.3**
PANI	**Panarotta**	**1.52**	**207**	⇑*e*Pg	**Pb**	**05 24 23.2**	**+0.5**
PANI	**Panarotta**	**1.52**	**207**	⇑*e*Pg	**Pb**	**05 24 23.2**	**+0.5**
CADS	**Cadrg**	**1.54**	**139**	*i* Pn	**Pb**	**05 24 23.3**	**+0.3**
CADS				*i* Sn	**Sg**	**05 24 45.2**	**+0.5**
CADS							
	comp=Z,37nm,0.5s						
CADS	**Cadrg**	**1.54**	**139**	*i* Pg	**Pb**	**05 24 23.3**	**+0.3**
CADS				*i* Sg	**Sg**	**05 24 45.2**	**+0.5**
CGRP	**Cima Grappa**	**1.56**	**193**	⇑*e*Pg	**Pg**	**05 24 24.4**	**-0.7**
CGRP				*e*Sg	**Sg**	**05 24 45.9**	**+0.4**
CGRP	**Cima Grappa**	**1.56**	**193**	⇑*e*Pg	**Pg**	**05 24 24.4**	**-0.7**
CGRP				*e*Sg	**Sg**	**05 24 45.9**	**+0.4**
GORS	**Gorjuse**	**1.60**	**132**	*i* Pn	**Pb**	**05 24 24.5**	**+0.5**
GORS				*i* Sn	**Sg**	**05 24 45.5**	**-1.0**
GORS							
	comp=Z,15nm,0.3s						
GORS	**Gorjuse**	**1.60**	**132**	*i* Pg	**Pb**	**05 24 24.5**	**+0.5**
GORS				*i* Sg	**Sg**	**05 24 45.5**	**-1.0**
DAVA	**Damuels**	**1.65**	**267**	*e*Pg	**Pb**	**05 24 25.9**	**+1.0**
DAVA	**Damuels**	**1.65**	**267**	⇓*e*Pg	**Pb**	**05 24 25.8**	**+0.9**
	comp=Z,5.8nm,0.2s,SNR=10						
DAVA				⇓*i*Sg	**Sg**	**05 24 48.9**	**+0.9**
	comp=Z,47nm,0.3s						
DAVA	**Damuels**	**1.65**	**267**	Pg	**Pb**	**05 24 25.9**	**+1.0**
DAVA				*i* Sg	**Sg**	**05 24 48.9**	**+0.9**
SABO	**M.te Sabotino**	**1.69**	**147**	⇑*e*Pg	**Pb**	**05 24 26.0**	**+0.5**
SABO	**M.te Sabotino**	**1.69**	**147**	⇑*e*Pg	**Pb**	**05 24 26.0**	**+0.5**
DDS	**Dosso del Somm**	**1.71**	**207**	⇑*e*Pg	**Pb**	**05 24 26.4**	**+0.5**
DDS				*e*Sg	**Sb**	**05 24 48.3**	**+1.2**
DDS	**Dosso del Somm**	**1.71**	**207**	⇑*e*Pg	**Pb**	**05 24 26.4**	**+0.5**
DDS				*e*Sg	**Sb**	**05 24 48.3**	**+1.2**
GEC2	**GERESS Array S**	**1.72**	**33**	*e*Pn	**Pn**	**05 24 25.0**	**+0.8**
GEC2				*e*Sn	**Sn**	**05 24 47.3**	**+1.5**
GEC2	**GERESS Array S**	**1.72**	**33**	Pn	**Pn**	**05 24 25.0**	**+0.8**
GEC2				Sn	**Sn**	**05 24 47.3**	**+1.5**
VOJS	**Vojsko**	**1.76**	**141**	*i* Pn	**Pb**	**05 24 27.2**	**+0.4**
VOJS				*i* Sn	**Sg**	**05 24 51.7**	**+0.1**
VOJS							
	comp=Z,17nm,0.4s						
VOJS	**Vojsko**	**1.76**	**141**	*i* Pg	**Pb**	**05 24 27.2**	**+0.4**
VOJS				*e*Sg	**Sg**	**05 24 51.7**	**+0.1**
WET	**Wettzell**	**1.78**	**12**	*e*Pn	**Pn**	**05 24 25.5**	**+0.6**
WET				*e*Pg	**Pb**	**05 24 27.9**	**+0.7**
WET				*e*Sn	**Sn**	**05 24 49.2**	**+2.0**
WET	**Wettzell**	**1.78**	**12**	Pn	**Pn**	**05 24 25.5**	**+0.6**
OBKA	**Obir**	**1.79**	**119**	*e*Pg	**Pb**	**05 24 27.9**	**+0.7**
OBKA				*e*Sg	**Sg**	**05 24 52.3**	**-0.2**
OBKA	**Obir**	**1.79**	**119**	⇑*e*Pg	**Pb**	**05 24 28.1**	**+0.8**
	comp=Z,4.8nm,0.2s,SNR=6.9						
OBKA				⇓*e*Sg	**Sg**	**05 24 52.3**	**-0.2**
	comp=Z,16nm,0.3s						
OBKA	**Obir**	**1.79**	**119**	Pg	**Pb**	**05 24 28.1**	**+0.8**
	comp=Z,4.8nm,0.2s,SNR=6.9						
OBKA				Sg	**Sg**	**05 24 52.3**	**-0.2**
	comp=Z,16nm,0.3s						
RNI	**Roncone**	**1.82**	**219**	⇑*e*Pg	**Pb**	**05 24 28.9**	**+1.0**
RNI				*e*Sg	**Sb**	**05 24 52.1**	**+1.7**
RNI	**Roncone**	**1.82**	**219**	*e*Pg	**Pb**	**05 24 28.9**	**+1.0**
RNI				*e*Sg	**Sb**	**05 24 52.1**	**+1.7**
KHC	**Kasperske Hory**	**1.93**	**26**	*e*PN	**Pn**	**05 24 28.0**	**+1.0**
KHC				*e*PG	**Pb**	**05 24 30.6**	**+1.0**
KHC				*e*SN	**Sn**	**05 24 52.4**	**+1.6**
KHC				*e*SG	**Sg**	**05 24 55.9**	**-1.1**
	comp=Z,19nm,0.2s						
SOKA	**Soboth**	**2.01**	**110**	⇓*e*Pn	**Pb**	**05 24 30.7**	**-0.4**
	comp=Z,1.1nm,0.2s						
SOKA				⇓*e*Sn	**Sn**	**05 24 52.9**	**0.0**
	comp=Z,4.1nm,0.2s						
SOKA	**Soboth**	**2.01**	**110**	Pn	**Pb**	**05 24 30.7**	**-0.4**
	comp=Z,1.1nm,0.2s						
SOKA				Sn	**Sn**	**05 24 52.9**	**0.0**
	comp=Z,4.1nm,0.2s						
GRA1	**Grafenberg Arr**	**2.40**	**343**	Pg	**Pg**	**05 24 40.3**	**-0.6**
GRA1				Sg	**Sg**	**05 25 12.0**	**0.0**
GRF	**Grafenberg Arr**	**2.40**	**343**	*e*Pg	**Pg**	**05 24 40.3**	**-0.6**
GRF				*e*Sg	**Sg**	**05 25 12.0**	**0.0**
CSNA	**Conrad Observa**	**2.47**	**76**		**Pb**	**05 24 39.7**	**+0.8**
CONA	**Conrad Observa**	**2.47**	**76**	⇑*e*Pn	**Pb**	**05 24 39.6**	**+0.7**
	comp=Z,1.7nm,0.2s						
CONA				⇑*i*Sn	**Sn**	**05 25 06.9**	**+2.7**
	comp=Z,1.5nm,0.2s						
CONA	**Conrad Observa**	**2.47**	**76**	Pn	**Pb**	**05 24 39.6**	**+0.7**
	comp=Z,1.7nm,0.2s						
CONA				Sn	**Sn**	**05 25 06.9**	**+2.7**
	comp=Z,1.5nm,0.2s						
BFO	**Black Forest**	**2.82**	**291**	*e*Pn	**Pn**	**05 24 40.9**	**+1.6**
BFO				*e*Sn	**Sn**	**05 25 11.9**	**-1.0**
BFO				*e*Sg	**Sg**	**05 25 24.5**	**-1.2**
BFO	**Black Forest**	**2.82**	**291**	Pn	**Pn**	**05 24 40.9**	**+1.6**
BFO				Sn	**Sn**	**05 25 11.9**	**-1.0**
BFO				Sg	**Sg**	**05 25 24.5**	**-1.2**
TREC	**Trest**	**2.85**	**47**	*e*SG	**Sg**	**05 25 24.3**	**-2.1**
	comp=Z,11nm,0.3s						
PRU	**Pruhonice**	**2.98**	**29**	*e*SG	**Sg**	**05 25 28.8**	**-1.9**
	comp=Z,6.3nm,0.2s						
MOX	**Moxa**	**3.27**	**352**	*e*Pn	**Pn**	**05 24 46.3**	**+0.9**
MOX				*e*Sn	**Sn**	**05 25 23.1**	**-0.8**
MOX				*e*Sg	**Sg**	**05 25 39.2**	**-0.8**
MOX	**Moxa**	**3.27**	**352**	Pn	**Pn**	**05 24 46.3**	**+0.9**
MOX				Sn	**Sn**	**05 25 23.1**	**-0.8**
MOX				Sg	**Sg**	**05 25 39.2**	**-0.8**
PVCC	**Panska Ves**	**3.47**	**25**	*e*SG	**Sg**	**05 25 44.4**	**-1.8**
	comp=Z,16nm,0.2s						
CDF	**Champ du Feu**	**3.52**	**288**	*e*Pn	**Pn**	**05 24 50.0**	**+1.1**
CDF				*e*Sn	**Sn**	**05 25 27.3**	**-2.9**
CDF				*e*Sg	**Sg**	**05 25 45.4**	**-2.6**
	comp=Z,6.2nm,0.3s						
CDF	**Champ du Feu**	**3.52**	**288**	*e*Pn	**Pn**	**05 24 50.0**	**+1.1**
CDF				*e*Sn	**Sn**	**05 25 27.3**	**-2.9**
CDF				*e*Sg	**Sg**	**05 25 45.4**	**-2.6**
	comp=Z,3.1nm,0.3s						
BRG	**Berggiesshubel**	**3.63**	**17**	PG	**Pg**	**05 25 02.9**	**-1.7**
BRG				*i*		05 25 32.9	
BRG	**Berggiesshubel**	**3.63**	**17**	SG	**Sg**	**05 25 49.9**	**-1.7**
	comp=Z,4.3nm,0.5s						
HINF	**Hinteralfeld**	**3.70**	**278**	*e*Pn	**Pn**	**05 24 52.0**	**+0.6**
HINF				*e*Sn	**Sn**	**05 25 31.8**	**-2.8**
	comp=Z,6.0nm,0.2s						
HINF	**Hinteralfeld**	**3.70**	**278**	*e*Pn	**Pn**	**05 24 52.0**	**+0.6**
HINF				*e*Sn	**Sn**	**05 25 31.8**	**-2.8**
	comp=Z,3.0nm,0.2s						
TNS	**Taunus Mts**	**3.79**	**319**	*e*Sn	**Sn**	**05 25 37.2**	**+0.3**
TNS	**Taunus Mts**	**3.79**	**319**	Sn	**Sn**	**05 25 37.2**	**+0.3**
CLL	**Collm**	**3.93**	**7**	*e*Sg	**Sg**	**05 26 01.0**	**-0.2**
UPC	**Upice**	**3.95**	**37**	*e*SG	**Sg**	**05 25 58.1**	**-3.8**
	comp=Z,2.0nm,0.3s						
DPC	**Dobruska-Polom**	**3.97**	**41**	*e*SG	**Sg**	**05 25 57.9**	**-4.4**
	comp=Z,5.7nm,0.4s						
HAU	**Haudompre**	**4.06**	**281**	*e*Pn	**Pn**	**05 24 57.3**	**+1.1**
HAU				*e*Sn	**Sn**	**05 25 43.2**	**-0.1**
HAU				*e*Sg	**Sg**	**05 26 02.5**	**-2.7**
	comp=Z,5.4nm,0.3s						
HAU	**Haudompre**	**4.06**	**281**	*e*Pn	**Pn**	**05 24 57.3**	**+1.1**
HAU				*e*Sn	**Sn**	**05 25 43.2**	**-0.1**
HAU				*e*Sg	**Sg**	**05 26 02.5**	**-2.7**
	comp=Z,2.7nm,0.3s						
PAGF	**Fort de Pagny**	**4.56**	**287**	*e*Pn	**Pn**	**05 25 03.4**	**+0.3**
PAGF	**Fort de Pagny**	**4.56**	**287**	*e*Pn	**Pn**	**05 25 03.4**	**+0.3**
MBDF	**Montbardon**	**4.68**	**237**	*e*P	Pn	05 25 09.4	+4.5
MBDF	**Montbardon**	**4.68**	**237**	*e*P	Pn	05 25 09.4	+4.5
LOR	**Lormes**	**5.74**	**272**	*e*Pn	**Pn**	**05 25 19.3**	**+0.1**
LOR	**Lormes**	**5.74**	**272**	*e*Pn	**Pn**	**05 25 19.3**	**+0.1**
SMF	**Signal de Mont**	**5.83**	**266**	*e*Pn	**Pn**	**05 25 20.2**	**-0.3**
SMF				*e*Sn	**Sn**	**05 26 24.0**	**-2.9**
	comp=Z,0.6nm,0.2s						
SMF	**Signal de Mont**	**5.83**	**266**	*e*Pn	**Pn**	**05 25 20.2**	**-0.3**
VIVF	**Saint-Julien-l**	**5.88**	**247**	*e*Pn	**Pn**	**05 25 20.9**	**-0.3**
VIVF	**Saint-Julien-l**	**5.88**	**247**	*e*P	Pn	05 25 25.9	+4.7
VIVF	**Saint-Julien-l**	**5.88**	**247**	*e*Pn	**Pn**	**05 25 20.9**	**-0.3**
AVF	**Avril sur Loir**	**6.13**	**268**	*e*Pn	**Pn**	**05 25 25.0**	**+0.3**
AVF	**Avril sur Loir**	**6.13**	**268**	*e*Pn	**Pn**	**05 25 25.0**	**+0.3**
BGF	**Bois d'Agland**	**6.52**	**266**	*e*Pn	**Pn**	**05 25 30.1**	**+0.1**
BGF				*e*Sn	**Sn**	**05 26 40.7**	**-3.2**
	comp=Z,3.1nm,0.2s						
BGF	**Bois d'Agland**	**6.52**	**266**	*e*Pn	**Pn**	**05 25 30.1**	**+0.1**
TCF	**Toulx Ste Croi**	**7.00**	**265**	*e*Pn	**Pn**	**05 25 37.2**	**+0.5**
TCF	**Toulx Ste Croi**	**7.00**	**265**	*e*Pn	**Pn**	**05 25 37.2**	**+0.5**
MFF	**Saint Martin d**	**8.54**	**269**	*e*Pn	**Pn**	**05 25 58.6**	**+0.9**
MFF	**Saint Martin d**	**8.54**	**269**	*e*Pn	**Pn**	**05 25 58.6**	**+0.9**

NEIC ***01*** *05:25:27.3±0.4, 22°.62S×66°.04W, h239km±3km, mb4.9/60, Error ellipse: s-maj=5.7km s-min=4.8km az=49.0*
ISCJB ***01*** *05:25:28.0±0.2, 22°.55S±0°.04×66°.05W±0°.04, h251km, mb4.7/76, Error ellipse: s-maj=6.5km s-min=4.2km az=20.9*
IDC ***01*** *05:25:27.4±1.1, 22°.69S×66°.07W, h240km±8km, mb4.2/15, mb1 4.3/21, mb1mx4.3/24, mbtmp4.2/21, Error ellipse: s-maj=14.4km s-min=11.9km az=51.0*
BJI ***01*** *05:25:28.7, 22°.60S×66°.00W, h240km, mB5.1/2*
LDG ***01*** *05:25:29.1±0.3, 22°.10S×65°.66W, h240km, Mb4.8/20, Error ellipse: s-maj=22.6km s-min=14.3km az=141.0*
GUC ***01*** *05:25:29.3±0.6, 22°.57S×66°.80W, h283km±10km, ML5.5*
ISC 01 05:25:28.3±0.3**, 22°.61S**±0°.05×**66°.20W**±0°.05**, h251km, n521,** σ1.**40**/562**, mb4.8**/75**, 165C-137D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**1.87**	**260**	*e*P	**Pn**	**05 26 11.7**	**+1.6**
SPCH	**San Pedro de A**	**1.87**	**260**	*e*P	**Pn**	**05 26 11.7**	**+1.6**
LVC	**Limon Verde**	**2.51**	**269**	⇑*i*P	x	05 26 52.0	
LVC				*e*S	x	05 27 28.2	
PB09	**Plate Boundary**	**2.93**	**285**	⇑*i*P	**Pn**	**05 26 21.0**	**+0.6**
PB09				AML	AML	05 27 05.4	
	comp=E,4µm,0.3s						
PB04	**Plate Boundary**	**3.06**	**276**	⇑*i*P	Pn	05 26 28.0	+6.5
PB04				*i* S	S	05 27 12.6	+9.0
PB04				AML	AML	05 27 15.0	
	comp=N,4µm,0.3s						
PB01	**Plate Boundary**	**3.43**	**296**	⇑*i*P	**Pn**	**05 26 25.6**	**-0.1**
PB01				AML	AML	05 27 10.4	
	comp=E,4µm,0.2s						
PB07	**Plate Boundary**	**3.53**	**284**	⇑*i*P	**Pn**	**05 26 26.7**	**-0.2**
PB07				*i* S	**S**	**05 27 10.1**	**-3.3**
PB07				AML	AML	05 27 11.0	
	comp=N,4µm,0.3s						
CEN1	**Los Morros**	**3.77**	**257**	P	**Pn**	**05 26 30.3**	**+0.7**
CEN1	**Los Morros**	**3.77**	**257**	*e*P	**Pn**	**05 26 30.3**	**+0.7**
MECH	**Mejillones**	**3.95**	**262**	*e*P	**Pn**	**05 26 31.3**	**-0.3**
MECH	**Mejillones**	**3.95**	**262**	*e*P	**Pn**	**05 26 31.3**	**-0.3**
ANCH	**Antofagasta**	**4.02**	**254**	*e*P	**Pn**	**05 26 31.8**	**-0.6**
ANCH				*e*S	**S**	**05 27 19.8**	**-3.5**
ANCH	**Antofagasta**	**4.02**	**254**	*e*P	**Pn**	**05 26 31.8**	**-0.6**
ANCH				*e*S	**S**	**05 27 19.8**	**-3.5**
HMBC	**Humberston**	**4.14**	**303**	⇑*i*P	**Pn**	**05 26 33.1**	**-1.0**
HMBC				*e*S	**S**	**05 27 22.1**	**-4.1**
HMBC	**Humberston**	**4.14**	**303**	⇑*i*P	**Pn**	**05 26 33.1**	**-1.0**
HMBC				*e*S	**S**	**05 27 22.1**	**-4.1**
LPAZ	**La Paz**	**6.54**	**344**	*e*Pn	**Pn**	**05 27 04.8**	**+0.8**
LPAZ				S	**S**	**05 28 17.1**	**-3.4**
LPAZ				*e*S	S	05 28 20.9	0.0
LPAZ	**La Paz**	**6.54**	**344**	P	**Pn**	**05 27 04.7**	**+0.8**
	comp=N,10nm,0.3s,baz=172,slow=10,SNR=221						
LPAZ				S	**S**	**05 28 17.1**	**-3.4**
	comp=N,3.6nm,0.3s,baz=298,slow=16,SNR=6.8						
ARE	**Arequipa**	**7.89**	**320**	*e*P	**Pn**	**05 27 19.0**	**-1.6**
ARE				*e*S	S	05 28 43.0	-8.0
SIV	**San Ignacio**	**8.17**	**37**	P	**Pn**	**05 27 23.0**	**-0.9**
SIV	**San Ignacio**	**8.17**	**37**	P	**Pn**	**05 27 23.0**	**-0.9**
	comp=N,22nm,0.3s,baz=239,slow=11,SNR=550						
CFAA	**Coronel Fontan**	**9.14**	**191**	P	**Pn**	**05 27 33.4**	**-2.6**
CFAA				S	S	05 29 09.2	-10
CFAA	**Coronel Fontan**	**9.14**	**191**	P	**Pn**	**05 27 33.4**	**-2.6**
	comp=N,2.2nm,0.3s,baz=16,slow=15,SNR=42						
CFAA				S	S	05 29 09.1	-10
	comp=N,2.4nm,0.3s,baz=298,slow=22,SNR=16						
SAML	**Samuel**	**13.89**	**13**	*e*Pn	**Pn**	**05 28 34.6**	**-0.6**
	comp=N,88nm,0.6s						
NNA	**Nana**	**14.65**	**314**	P	**Pn**	**05 28 45.9**	**+1.5**
NNA	**Nana**	**14.65**	**314**	P	**Pn**	**05 28 45.9**	**+1.5**
	comp=N,0.7nm,0.3s,baz=168,slow=16,SNR=4.9						
TRQA	**Tornquist**	**15.82**	**168**	*e*P	**P**	**05 28 55.4**	**-1.7**
	comp=N,13nm,0.6s						
SPB	**Sao Paulo**	**17.30**	**97**	*e*Pn	**P**	**05 29 13.1**	**-0.2**
	comp=N,70nm,0.8s						
PLCA	**Paso Flores**	**18.44**	**191**	*e*P	**P**	**05 29 25.2**	**-0.4**
	comp=N,32nm,0.9s						
PLCA	**Paso Flores**	**18.44**	**191**	P	**P**	**05 29 25.2**	**-0.4**
	comp=N,1.1nm,0.3s,baz=352,slow=6.4,SNR=40						
BDFB	**Brasilia**	**18.52**	**71**	P	**P**	**05 29 26.9**	**+0.2**
BDFB	**Brasilia**	**18.52**	**71**	P	**P**	**05 29 26.9**	**+0.2**
	comp=N,4.7nm,0.3s,baz=236,slow=13,SNR=197						
CAM4	**Nova Friburgo**	**21.84**	**94**	*i*	**P**	**05 30 00.3**	**-0.8**
CAM4				*i*		05 30 02.7	
CAM4				*i*		05 30 05.5	
CAM4				*i*		05 30 07.8	
CAM4				*i*		05 30 22.2	
CAM4				*i*		05 30 29.2	
CAM4				*i*		05 30 31.0	
ROSC	**El Rosal**	**28.43**	**343**	*e*P	**P**	**05 31 01.6**	**+0.9**
ROSC	**El Rosal**	**28.43**	**343**	P	**P**	**05 31 02.6**	**+2.0**
	comp=N,1.7nm,0.4s,baz=281,slow=18,SNR=3.7						
RCBR	**Riachuelo**	**33.66**	**65**	*e*P	**P**	**05 31 44.2**	**-1.8**
	comp=N,56nm,1.0s						
GRGR	**Grenville**	**34.81**	**8**	*e*P	**P**	**05 31 55.5**	**-0.2**
FDF	**Fort de France**	**37.44**	**8**	*e*P	**P**	**05 32 17.1**	**-0.8**
	comp=N,445nm,1.3s						
ANWB	**Willy Bob**	**40.26**	**7**	*e*P	**P**	**05 32 38.6**	**-2.6**
	comp=N,165nm,0.6s						
OBIP	**Obispado Ponce**	**40.40**	**359**	*e*P	**P**	**05 32 41.4**	**-0.9**
	comp=N,27nm,0.8s						
VNA3	**Neumayer Olymp**	**58.23**	**161**	*e*P	**P**	**05 34 58.5**	**+2.4**
JSC	**Jenkinsville**	**58.36**	**345**	*e*P	**P**	**05 34 57.9**	**+0.5**
VNA1	**Neumayer--Stat**	**58.41**	**161**	*e*P	**P**	**05 35 00.0**	**+2.7**
VNA2	**Neumayer--Watz**	**58.78**	**161**	*e*P	**P**	**05 35 01.4**	**+1.5**
	baz=313,slow=9.5						
LRAL	**Lakeview Retre**	**58.78**	**340**	*e*P	**P**	**05 34 59.9**	**-0.4**
	comp=N,17nm,1.1s						
KMSC	**Kings Mountain**	**59.20**	**346**	⇑P	**P**	**05 35 03.7**	**+0.5**
	baz=60						
CPCT	**Cooper Cave**	**60.30**	**343**	*e*P	**P**	**05 35 10.9**	**+0.3**
SNAA	**Sanae**	**60.42**	**161**	*e*P	**P**	**05 35 12.0**	**+0.9**
SWET	**Sewanee**	**60.48**	**341**	*e*P	**P**	**05 35 11.9**	**0.0**
	comp=N,37nm,0.8s						
732A	**Laxson Ranch,**	**60.54**	**326**	⇓P	**P**	**05 35 13.3**	**+0.9**
	baz=61						
PLAL	**Pickwick Lake**	**60.92**	**340**	*e*P	P	05 35 22.2	+7.4
VWCC	**Virginia Weste**	**60.93**	**347**	*e*P	**P**	**05 35 15.4**	**+0.5**
632A	**Uvalde**	**61.07**	**327**	⇑P	**P**	**05 35 16.7**	**+0.7**
	baz=61						
631A	**Perdido Creek**	**61.40**	**326**	⇑P	**P**	**05 35 18.8**	**+0.6**
	baz=62						
532A	**Rocksprings**	**61.63**	**327**	⇓P	**P**	**05 35 21.1**	**+1.3**
	baz=62						
JCT	**Junction City**	**61.87**	**327**	*e*P	**P**	**05 35 21.2**	**-0.2**
	comp=N,6.6nm,0.7s						
JCT	**Junction City**	**61.87**	**327**	⇑P	**P**	**05 35 21.9**	**+0.6**
	baz=62						
WVT	**Waverly**	**61.90**	**340**	*e*P	**P**	**05 35 20.6**	**-0.7**
	comp=N,32nm,0.8s						
531A	**Rocksprings**	**61.99**	**326**	⇓P	**P**	**05 35 23.1**	**+0.9**
	baz=62,SNR=6.5						
432A	**Menard**	**62.18**	**327**	⇑P	**P**	**05 35 23.9**	**+0.5**
	baz=62,SNR=6.7						
530A	**J-C Ranch, Com**	**62.38**	**326**	⇑P	**P**	**05 35 25.6**	**+0.8**
	baz=63,SNR=5.7						
UTMT	**University of**	**62.42**	**339**	*e*P	**P**	**05 35 24.6**	**-0.2**
	comp=N,82nm,0.9s						
431A	**Sonora**	**62.44**	**327**	⇑P	**P**	**05 35 25.5**	**+0.4**
	baz=63						
MIAR	**Mount Ida**	**62.51**	**335**	*e*P	**P**	**05 35 25.3**	**-0.1**
	comp=N,3.2nm,0.6s						
332A	**Millersview**	**62.57**	**328**	⇑P	**P**	**05 35 26.5**	**+0.6**
	baz=63,SNR=6.5						
628A	**Black Gap, Mar**	**62.69**	**324**	⇑P	**P**	**05 35 28.0**	**+1.2**
	baz=63,SNR=5.8						
529A	**Stev Forest Ra**	**62.83**	**325**	⇑P	**P**	**05 35 28.6**	**+0.9**
	baz=63,SNR=7.5						
430A	**Baggett Ranch,**	**62.84**	**326**	⇑P	**P**	**05 35 28.2**	**+0.4**
	baz=63,SNR=8.6						
331A	**San Angelo**	**62.85**	**327**	⇑P	**P**	**05 35 28.2**	**+0.4**
	baz=63,SNR=6.8						
627A	**Terlingua Ranc**	**62.93**	**324**	⇑P	**P**	**05 35 29.2**	**+0.7**
	baz=63						
232A	**Coleman**	**62.94**	**328**	⇓P	**P**	**05 35 29.0**	**+0.6**
	baz=63,SNR=7.9						
TXAR	**Lajitas Array**	**62.99**	**323**	P	**P**	**05 35 29.4**	**+0.5**
TXAR	**Lajitas Array**	**62.99**	**323**	P	**P**	**05 35 29.4**	**+0.5**
	comp=N,1.1nm,0.8s,baz=149,slow=9.1,SNR=14						
PARMO	**Parma**	**63.01**	**339**	*e*P	**P**	**05 35 29.1**	**+0.4**
429A	**Davenport Ranc**	**63.05**	**326**	⇓P	**P**	**05 35 29.9**	**+0.7**
	baz=63,SNR=5.2						
528A	**Cox Ranch, San**	**63.16**	**325**	⇑P	**P**	**05 35 30.7**	**+0.7**
	baz=64						
231A	**Bronte**	**63.30**	**328**	⇑P	**P**	**05 35 30.9**	**+0.2**
	baz=64						
330A	**Mertzon**	**63.31**	**327**	⇑P	**P**	**05 35 31.1**	**+0.3**
	baz=64						
WCI	**Wyandotte Cave**	**63.39**	**342**	*e*P	**P**	**05 35 30.1**	**-1.1**
	comp=N,16nm,0.6s						
626A	**Big Bend Ranch**	**63.42**	**323**	⇓P	**P**	**05 35 32.8**	**+1.2**
	baz=64,SNR=7.7						
527A	**Woodward Ranch**	**63.59**	**324**	⇑P	**P**	**05 35 33.4**	**+0.5**
	baz=64						
329A	**Wagon Wheel Ra**	**63.78**	**326**	⇑P	**P**	**05 35 34.5**	**+0.5**
	baz=64,SNR=7.1						
526A	**Mary Lane Ranc**	**63.79**	**324**	⇓P	**P**	**05 35 35.2**	**+1.1**
	baz=64						
131A	**Roby**	**63.94**	**328**	⇑P	**P**	**05 35 35.7**	**+0.8**
	baz=64						
Z32A	**Haskell**	**64.02**	**329**	⇑P	**P**	**05 35 36.2**	**+0.8**
	baz=64						
427A	**Hayter Ranch,**	**64.03**	**325**	⇑P	**P**	**05 35 36.1**	**+0.5**
	baz=64						
328A	**Wristen Ranch,**	**64.13**	**325**	⇓P	**P**	**05 35 36.9**	**+0.7**
	baz=64,SNR=6.0						
130A	**Snyder**	**64.16**	**328**	⇓P	**P**	**05 35 36.9**	**+0.6**
	baz=64						
426A	**McDonald Obser**	**64.22**	**324**	⇑P	**P**	**05 35 37.5**	**+0.5**
	baz=65						
BLO	**Bloomington**	**64.33**	**343**	*e*P	**P**	**05 35 36.6**	**-0.6**
	comp=N,22nm,0.7s						
Z31A	**Sharp Cattle R**	**64.35**	**329**	⇑P	**P**	**05 35 38.0**	**+0.5**
	baz=65,SNR=5.6						
FVM	**French Village**	**64.43**	**339**	*e*P	**P**	**05 35 37.4**	**-0.5**
	comp=N,7.9nm,0.5s						
ACSO	**Alum Creek Sta**	**64.44**	**346**	*e*P	**P**	**05 35 37.9**	**-0.1**
	comp=N,30nm,0.8s						
Y32A	**R-V Farms, Ver**	**64.58**	**330**	⇑P	**P**	**05 35 40.0**	**+1.0**
	baz=65						
TUL1	**Tulsa**	**64.59**	**334**	⇑P	**P**	**05 35 39.6**	**+0.6**
	baz=65						
228A	**UT Block 9, Go**	**64.60**	**326**	⇓P	**P**	**05 35 39.5**	**+0.2**
	baz=65						
326A	**Caldwell Ranch**	**64.70**	**325**	⇑P	**P**	**05 35 40.7**	**+0.8**
	baz=65						
Z30A	**Sanderson Ranc**	**64.80**	**328**	⇓P	**P**	**05 35 41.2**	**+0.7**
	baz=65						
425A	**Indio Mountain**	**64.84**	**323**	⇓P	**P**	**05 35 41.9**	**+1.0**
	baz=65						
227A	**Bennet, Jal**	**64.88**	**326**	⇑P	**P**	**05 35 42.0**	**+1.0**
	baz=65						
Y31A	**Rekieta Farm,**	**64.93**	**329**	⇑P	**P**	**05 35 42.1**	**+0.8**
	baz=65						
128A	**Castleberry Fa**	**64.94**	**327**	⇓P	**P**	**05 35 42.0**	**+0.5**
	baz=65						
Z29A	**Hungry Hill Ra**	**65.06**	**328**	⇓P	**P**	**05 35 42.9**	**+0.7**
	baz=65						
Y30A	**Stafford Cattl**	**65.17**	**329**	⇓P	**P**	**05 35 43.7**	**+0.9**
	baz=66						
325A	**Bean Ranch, Si**	**65.28**	**324**	⇑P	**P**	**05 35 44.4**	**+0.6**
	baz=66,SNR=10						
226B	**Tecolote Peak,**	**65.39**	**325**	⇑P	**P**	**05 35 45.6**	**+1.2**
	baz=66						
Z28A	**Tucker Farm, M**	**65.42**	**327**	⇑P	**P**	**05 35 44.6**	**+0.1**
	baz=66						
127A	**Arkansas Junct**	**65.44**	**326**	⇓P	**P**	**05 35 45.1**	**+0.5**
	baz=66						
Y29A	**Porterfield Fa**	**65.53**	**328**	⇓P	**P**	**05 35 45.6**	**+0.4**
	baz=66						
GDL2	**Guadalupe Moun**	**65.59**	**325**	*e*P	**P**	**05 35 46.7**	**+1.1**
324A	**Moseley Ranch,**	**65.61**	**324**	⇓P	**P**	**05 35 45.8**	**0.0**
	baz=66,SNR=7.3						
X30A	**Coker Ranch, T**	**65.62**	**329**	⇓P	**P**	**05 35 46.5**	**+0.8**
	baz=66						
SFIN	**Scholer Farm**	**65.62**	**343**	⇑P	**P**	**05 35 44.8**	**-0.7**
	baz=66						
MNTX	**Cornudas Mount**	**65.75**	**324**	⇑P	**P**	**05 35 47.1**	**+0.6**
	baz=66						
126A	**Clayton Basin,**	**65.76**	**325**	⇑P	**P**	**05 35 47.6**	**+0.9**
	baz=66						
225A	**Deer Hill, Car**	**65.77**	**324**	⇑P	**P**	**05 35 48.4**	**+1.6**
	baz=66						
Z27A	**Tatum**	**65.86**	**326**	⇓P	**P**	**05 35 47.6**	**+0.2**
	baz=66						
X29A	**Tulia**	**66.01**	**328**	⇓P	**P**	**05 35 48.5**	**+0.3**
	baz=66						
125A	**Gardner Draw,**	**66.10**	**325**	⇓P	**P**	**05 35 49.1**	**+0.2**
	baz=66,SNR=6.7						
224A	**Cornudas Mount**	**66.12**	**324**	⇑P	**P**	**05 35 49.4**	**+0.3**
	baz=66,SNR=12						
MSTX	**Muleshoe**	**66.16**	**327**	⇓P	**P**	**05 35 49.7**	**+0.4**
	baz=66,SNR=7.8						
Z26A	**Caprock**	**66.22**	**326**	⇓P	**P**	**05 35 50.1**	**+0.4**
	baz=67,SNR=7.2						
Y27A	**Causey**	**66.29**	**327**	⇓P	**P**	**05 35 50.2**	**+0.1**
	baz=67,SNR=7.7						
LIC	**Lamto**	**66.31**	**72**	*e*P	**P**	**05 35 48.9**	**-1.6**
	comp=N,16nm,0.7s,baz=248						
LIC	**Lamto**	**66.31**	**72**	*e*P	**P**	**05 35 48.9**	**-1.6**
	comp=N,16nm,0.7s						
X28A	**Dimmitt**	**66.31**	**328**	⇑P	**P**	**05 35 50.9**	**+0.7**
	baz=67						
AMTX	**Amarillo**	**66.36**	**329**	⇑P	**P**	**05 35 51.2**	**+0.7**
	baz=67						
HDIL	**Hopedale**	**66.42**	**341**	*e*P	**P**	**05 35 49.7**	**-0.9**
124A	**Stringfield Ra**	**66.56**	**324**	⇑P	**P**	**05 35 52.7**	**+0.8**
	baz=67						
Z25A	**Roswell**	**66.61**	**325**	⇓P	**P**	**05 35 52.5**	**+0.3**
	baz=67						
DBIC	**Dimbokro**	**66.67**	**72**	P	**P**	**05 35 51.6**	**-1.1**
DBIC	**Dimbokro**	**66.67**	**72**	P	**P**	**05 35 51.6**	**-1.1**
	comp=N,14nm,0.7s,baz=236,slow=8.2,SNR=19						
X27A	**F and S Farms,**	**66.86**	**327**	⇓P	**P**	**05 35 55.8**	**+2.1**
	baz=67						
Z24A	**Sheeppen Canyo**	**67.00**	**325**	⇑P	**P**	**05 35 55.6**	**+1.0**
	baz=67						
Y25A	**Mesa, Roswell**	**67.10**	**326**	⇓P	**P**	**05 35 55.5**	**+0.3**
	baz=67,SNR=6.2						
X26A	**CR and CF Fran**	**67.14**	**327**	⇑P	**P**	**05 35 56.5**	**+1.1**
	baz=68						
W27A	**Bowe Ranch, En**	**67.18**	**328**	⇑P	**P**	**05 35 56.4**	**+0.8**
	baz=68						
320A	**Kipp Ranch, An**	**67.25**	**321**	⇑P	**P**	**05 35 57.7**	**+1.5**
	baz=68						
V28A	**Channing**	**67.32**	**329**	⇑P	**P**	**05 35 57.9**	**+1.4**
	baz=68						
LONY	**Lake Ozonia**	**67.34**	**354**	*e*P	**P**	**05 35 56.9**	**+0.6**
	comp=N,13nm,0.8s						
Z23A	**Rita Site, Whi**	**67.41**	**324**	⇑P	**P**	**05 35 58.8**	**+1.6**
	baz=68						
Y24A	**Capitan**	**67.49**	**325**	⇓P	**P**	**05 35 58.9**	**+1.1**
	baz=68						
QSPA	**South Pole Qui**	**67.59**	**180**	*e*P	**P**	**05 35 58.8**	**+0.9**
	comp=N,7.7nm,1.1s						
220A	**Playas Peak, P**	**67.67**	**322**	⇓P	**P**	**05 36 00.6**	**+1.8**
	baz=68						
121A	**Cookes Peak, D**	**67.71**	**323**	⇓P	**P**	**05 36 01.1**	**+2.0**
	baz=68,SNR=5.7						
319A	**Douglas**	**67.71**	**321**	⇓P	**P**	**05 36 01.1**	**+2.0**
	baz=68						
Z22A	**Elephant Butte**	**67.80**	**324**	⇑P	**P**	**05 36 01.6**	**+2.0**
	baz=68						
Y23A	**Lovelace Mesa,**	**67.83**	**325**	⇓P	**P**	**05 36 01.1**	**+1.3**
	baz=68						
W25A	**X Bar L Ranch,**	**68.00**	**327**	⇑P	**P**	**05 36 01.7**	**+0.9**
	baz=68						
V26A	**Tequesquite Ra**	**68.12**	**328**	⇑P	**P**	**05 36 02.4**	**+0.9**
	baz=68,SNR=5.5						
120A	**U Bar Ranch, L**	**68.20**	**322**	⇑P	**P**	**05 36 04.2**	**+2.1**
	baz=68						
Y22A	**Socorro**	**68.32**	**324**	⇓P	**P**	**05 36 04.5**	**+1.7**
	baz=69						
T28A	**Walsh**	**68.38**	**330**	⇓P	**P**	**05 36 04.2**	**+1.2**
	baz=69						
X23A	**Hourglass Bar**	**68.39**	**325**	⇓P	**P**	**05 36 05.2**	**+1.8**
	baz=69						
W24A	**Lazy 6 Ranch,**	**68.47**	**326**	⇑P	**P**	**05 36 04.9**	**+1.1**
	baz=69						
V25A	**Rancho No Teng**	**68.56**	**327**	⇓P	**P**	**05 36 05.4**	**+1.1**
	baz=69,SNR=5.0						
U26A	**Atchley Ranch,**	**68.57**	**328**	⇑P	**P**	**05 36 05.3**	**+1.0**

baz=69,SNR=7.5
Z20A Nine Sixteen R 68.60 323 ⇑P P 05 36 06.1 +1.5
baz=69
T27A Campo 68.61 329 ⇓P P 05 36 05.3 +0.8
baz=69,SNR=7.4
Y21A Point of Rocks 68.76 324 ⇑P P 05 36 07.5 +1.9
baz=69
V24A Rampart Ranch, 68.81 327 ⇑P P 05 36 07.1 +1.2
baz=69
ANMO Albuquerque 68.82 325 eP P 05 36 07.2 +1.2
W23A Werner Place, 68.82 326 ⇓P P 05 36 07.8 +1.8
baz=69
SCIA State Center 68.89 339 eP P 05 36 05.8 -0.1
comp=N,24nm,0.9s
U25A Circle Dot Ran 68.90 328 ⇑P P 05 36 07.5 +1.1
baz=69,SNR=5.7
Y20A Horse Springs, 69.07 323 ⇓P P 05 36 09.1 +1.6
baz=69
T26A Comanche Natio 69.12 329 ⇓P P 05 36 08.9 +1.1
baz=70,SNR=7.3
W22A Albuquerque 69.13 325 ⇓P P 05 36 09.7 +1.9
baz=70
V23A Ortiz Mt. (NFS 69.29 326 ⇓P P 05 36 10.6 +1.8
baz=70
S26A Kim 69.42 329 ⇑P P 05 36 10.8 +1.3
baz=70,SNR=8.9
T25A Trinidad 69.49 328 ⇑P P 05 36 11.9 +1.9
baz=70
W21A San Fidel 69.58 325 ⇓P P 05 36 12.1 +1.5
baz=70
X20A Quemado 69.61 324 ⇑P P 05 36 12.6 +1.8
baz=70
R27A Eads 69.64 330 ⇑P P 05 36 12.9 +2.2
baz=70
U23A El Rito 69.74 326 ⇓P P 05 36 13.7 +2.1
baz=70
T24A Torres, Weston 69.75 328 ⇑P P 05 36 13.8 +2.1
baz=70
S25A Robets Cordova 69.91 328 ⇓P P 05 36 13.9 +1.4
baz=70,SNR=8.5
R26A Arlington 69.95 330 ⇑P P 05 36 13.8 +1.1
baz=70,SNR=5.3
W20A Ramah 70.04 324 ⇓P P 05 36 14.8 +1.3
baz=70
U22A Llaves 70.12 326 ⇓P P 05 36 15.8 +2.0
baz=70
KSCO Kaye Shedlock' 70.14 331 ⇓P P 05 36 15.4 +1.6
baz=70
214A Organ Pipe Nat 70.23 319 ⇓P P 05 36 16.3 +1.9
baz=71
BGNE Belgrade 70.25 335 ⇑P P 05 36 15.2 +0.9
baz=71
S24A Houchin Ranch, 70.27 328 ⇓P P 05 36 16.8 +1.9
baz=71
X18A Snowflake 70.40 323 ⇑P P 05 36 17.5 +2.0
baz=71
Q26A Hugo 70.48 330 ⇓P P 05 36 18.1 +2.1
baz=71
V20A Brimhall 70.53 325 ⇓P P 05 36 17.7 +1.4
baz=71
U21A Nageezi 70.58 326 ⇑P P 05 36 18.6 +2.0
baz=71
T22A Edith 70.63 326 ⇑P P 05 36 18.6 +1.7
baz=71
R24A Sanders Place, 70.69 328 ⇑P P 05 36 19.3 +2.0
baz=71
Q25A Bedland, Calha 70.82 329 ⇓P P 05 36 19.6 +1.6
baz=71
T21A Navajo Lake 70.94 326 ⇑P P 05 36 20.3 +1.5
baz=71
U20A Newcomb 70.99 325 ⇓P P 05 36 20.6 +1.5
baz=71,SNR=5.3
R23A Moffat 71.00 328 ⇑P P 05 36 21.0 +1.8
baz=71,SNR=5.0
S22A 4UR Ranch, Cre 71.16 327 ⇓P P 05 36 21.8 +1.6
baz=72
X16A Lo Mia Camp, P 71.17 322 ⇓P P 05 36 21.7 +1.5
baz=72
P25A Willow Gulch B 71.26 330 ⇑P P 05 36 22.8 +2.2
baz=72
Q24A Divide 71.28 329 ⇑P P 05 36 23.1 +2.2
baz=72
R22A Saguache, Gunn 71.50 327 ⇓P P 05 36 24.8 +2.6
baz=72
N27A Anderson Farm, 71.56 332 ⇑P P 05 36 24.2 +1.9
baz=72
Q23A Hartsel 71.57 328 ⇓P P 05 36 24.5 +1.9
baz=72
S21A Coal Bank Pass 71.58 326 ⇑P P 05 36 24.8 +2.0
baz=72
P24A Kohler Place, 71.61 329 ⇓P P 05 36 24.7 +2.1
baz=72
MVCO Mesa Verde 71.61 326 ⇑P P 05 36 24.6 +1.8
baz=72
ECSD EROS Data Cent 71.68 337 eP P 05 36 22.9 +0.1
comp=N,16nm,1.3s
SPMN St. Paul 71.73 341 ⇓P P 05 36 23.5 +0.5
baz=72
WUAZ Wupatki 71.92 323 ⇓P P 05 36 26.9 +2.3
baz=72
P23A Jefferson 71.94 329 ⇑P P 05 36 26.9 +2.0
baz=72
R21A Cimarron 72.00 327 ⇑P P 05 36 27.2 +2.1
baz=72
S20A Disappointment 72.00 326 ⇑P P 05 36 27.5 +2.4
baz=72
Q22A Crested Butte, 72.06 328 ⇑P P 05 36 27.6 +2.0
baz=72
ISCO Idaho Springs 72.16 329 eP P 05 36 25.0 -1.2
comp=N,36nm,2.5s
ISCO Idaho Springs 72.16 329 ⇓P P 05 36 27.9 +1.8
baz=72
R20A Redvale 72.29 326 ⇓P P 05 36 28.9 +2.1
baz=73,SNR=8.3
SMCO Snowmass 72.34 328 eP P 05 36 29.5 +2.3
PV01 Paradox Valley 72.34 326 eP P 05 36 28.9 +1.7
comp=N,130nm,0.5s
Q21A Lamborn Mesa, 72.37 327 ⇑P P 05 36 29.1 +1.9
baz=73
P22A Eagle 72.55 328 ⇑P P 05 36 30.5 +2.1
baz=73
O23A Lake Granby, G 72.63 329 ⇑P P 05 36 30.8 +1.9
baz=73
S18A Hurst Farm, Bl 72.76 325 ⇑P P 05 36 31.5 +1.9
baz=73,SNR=7.0
L26A Underwood Farm 72.80 332 ⇓P P 05 36 31.8 +2.2
baz=73
P21A Newcastle 72.84 328 ⇓P P 05 36 32.0 +2.0
baz=73
O22A Kremmling 72.89 329 ⇑P P 05 36 31.9 +1.4
baz=73,SNR=6.3
K27A Flueckinger Fa 72.99 333 ⇑P P 05 36 32.4 +1.7
baz=73,SNR=5.4
W13A Hualapai Mount 73.06 321 ⇑P P 05 36 33.9 +2.5
baz=73
MONP Monument Peak 73.09 317 ⇓P P 05 36 33.4 +1.8
baz=73
U15A North Rim 73.09 323 ⇑P P 05 36 34.0 +2.4
baz=73
M24A Cheyenne 73.12 331 ⇓P P 05 36 33.4 +1.9
baz=74,SNR=6.2
IRM Iron Mountain 73.17 319 ⇑P P 05 36 34.0 +2.2
baz=74
N23A Red Feather La 73.18 330 ⇓P P 05 36 34.1 +2.1
baz=74
N22A Wattenberg Ran 73.35 329 ⇓P P 05 36 35.3 +2.2
baz=74
K26A Motz Farm, Whi 73.39 332 ⇑P P 05 36 35.2 +2.2
baz=74
P19A Cripple Cowboy 73.69 327 ⇑P P 05 36 36.8 +1.9
baz=74,SNR=11
O20A White River Ci 73.70 328 ⇑P P 05 36 36.7 +1.7
baz=74
EYMN Ely 73.81 343 eP P 05 36 35.0 -0.3
N21A Black Mountain 73.82 329 ⇑P P 05 36 38.6 +2.9
baz=74
M22A Cedar Creek Ra 73.88 330 ⇓P P 05 36 38.2 +2.1
baz=74
GMRC Granite Mounta 73.90 319 ⇑P P 05 36 38.1 +2.0
baz=74
L23A Garrett 74.03 331 ⇑P P 05 36 38.8 +1.9
baz=74
N20A Spence Gulch, 74.24 328 ⇑P P 05 36 40.0 +1.8
baz=75
O19A Miners Draw (B 74.26 327 ⇑P P 05 36 40.4 +2.2
baz=75
M21A Separation Pea 74.40 329 ⇑P P 05 36 40.8 +1.7
baz=75
CCUT Cedar City 74.49 323 eP P 05 36 41.9 +2.3
comp=N,4.7nm,0.8s
K23A Bowen Ranch, D 74.50 331 ⇓P P 05 36 41.2 +1.7
baz=75
MSU Marysvale 74.53 324 eP P 05 36 41.1 +1.3
comp=N,3.2nm,0.7s
J24A Dixon Ranch, L 74.54 332 ⇓P P 05 36 42.1 +2.5
baz=75
MVU Marysvale 74.54 324 eP P 05 36 42.4 +2.4
comp=N,3.2nm,0.8s
L21A Rawlins 74.68 329 ⇓P P 05 36 42.2 +1.5
baz=75,SNR=5.7
M20A Sweetwater, Wa 74.71 329 ⇑P P 05 36 42.6 +1.8
baz=75
N19A John Jarvie Ra 74.74 328 ⇓P P 05 36 42.8 +1.9
baz=75
K22A Casper 74.83 330 ⇓P P 05 36 43.3 +1.9
baz=75
RSSD Black Hills 74.91 333 eP P 05 36 42.2 +0.3
comp=N,3.0nm,0.8s
O17A Robinson Place 75.00 326 ⇓P P 05 36 44.4 +1.9
baz=75,SNR=6.1
K21A Alcova 75.15 330 ⇑P P 05 36 45.0 +1.8
baz=76,SNR=9.2
L20A Wamsutter 75.18 329 ⇑P P 05 36 45.6 +2.2
baz=76
TOA0 Torodi Ar. Sit 75.38 69 eP P 05 36 43.8 -1.1
TORD Torodi Ar. Bea 75.38 69 P P 05 36 43.8 -1.1
TORD pP pP 05 37 43.0 -0.7
TORD Torodi Ar. Bea 75.38 69 P P 05 36 43.8 -1.1
comp=N,22nm,0.6s,baz=252,slow=5.6,SNR=248
TORD pP pP 05 37 43.0 -0.7
comp=N,6.3nm,1.0s,baz=246,slow=4.9,SNR=4.3
J22A Midwest 75.41 331 ⇓P P 05 36 45.7 +1.1
baz=76,SNR=5.0
AGMN Agassiz Nation 75.42 340 eP P 05 36 44.6 +0.2
comp=N,11nm,0.8s
N17A Moffit Pass 75.60 327 ⇑P P 05 36 47.8 +1.9
baz=76,SNR=6.5
H24A Dirks Ranch, A 75.63 333 ⇑P P 05 36 46.7 +0.9
baz=76,SNR=9.0
JLU Jordanelle 75.67 326 eP P 05 36 48.1 +1.8
comp=N,4.2nm,0.6s
K20A Yellowstone Ra 75.68 329 ⇑P P 05 36 47.5 +1.3
baz=76,SNR=6.4
L19A Farson 75.74 328 ⇑P P 05 36 48.5 +1.8
baz=76
FURC Furnace Creek, 75.76 320 ⇑P P 05 36 48.6 +2.0
baz=76
I22A 9 Mile Ranch, 75.78 331 ⇑P P 05 36 47.9 +1.1
baz=76,SNR=7.5
J21A Lysite 75.79 330 ⇑P P 05 36 48.5 +1.6
baz=76
MPMC Manual Prospec 75.86 319 ⇑P P 05 36 49.3 +1.8
baz=76
N16A Rees Ranch, Co 75.87 326 ⇓P P 05 36 49.4 +2.0
baz=76
L18A Fontenelle, Gr 75.94 328 ⇓P P 05 36 49.1 +1.3
baz=76,SNR=6.8
G24A Alzada 76.04 333 ⇑P P 05 36 49.4 +1.3
baz=76
K19A Absolon Red Bu 76.04 329 ⇓P P 05 36 49.4 +1.1
baz=76,SNR=5.1
I21A Big Trails, Te 76.08 331 ⇓P P 05 36 49.4 +0.9
baz=76,SNR=9.4
J20A Shoshoni 76.09 330 ⇑P P 05 36 50.3 +1.8
baz=76
ISA Isabella 76.20 318 ⇓P P 05 36 51.0 +1.8
baz=76
MDND Maddock 76.28 338 ⇑P P 05 36 50.6 +1.3
baz=77
R11A Troy Canyon, C 76.30 322 ⇑P P 05 36 52.2 +2.4
baz=77
BW06 Boulder Array 76.34 329 ⇓P P 05 36 51.2 +1.2
baz=77
PDAR Pinedale Array 76.34 329 P P 05 36 51.2 +1.2
PDAR Pinedale Array 76.34 329 P P 05 36 51.2 +1.2
comp=N,1.2nm,0.7s,baz=128,slow=7.3,SNR=8.0
G23A Biddle 76.35 333 ⇑P P 05 36 50.7 +0.9
baz=77,SNR=7.5
K18A Toltan Ranch, 76.48 328 ⇓P P 05 36 52.3 +1.5
baz=77,SNR=5.7
J19A Crowheart 76.48 329 ⇑P P 05 36 52.1 +1.4
baz=77,SNR=9.0
L17A Cokeville 76.48 327 ⇑P P 05 36 52.3 +1.5
baz=77
I20A Worland 76.57 330 ⇑P P 05 36 52.4 +1.3
baz=77,SNR=6.3
H21A Big Horn, Sher 76.61 331 ⇓P P 05 36 52.3 +1.0
baz=77
J18A Kendall Valley 76.90 329 ⇓P P 05 36 54.4 +1.2
baz=77,SNR=14
H20A Greybull 76.93 331 ⇑P P 05 36 54.4 +1.3
baz=77
K17A Gardner Place, 76.99 328 ⇑P P 05 36 55.0 +1.3
baz=77,SNR=7.2
E24A Baker 76.99 334 ⇓P P 05 36 55.3 +1.9
baz=77
I19A Meeteetse 77.04 330 ⇑P P 05 36 55.3 +1.5
baz=77,SNR=6.1
AHID Auburn Hatcher 77.09 328 eP P 05 36 55.9 +1.7
comp=N,8.3nm,0.9s
SCHQ Schefferville 77.12 360 eP P 05 36 54.3 +0.5
SCHQ Schefferville 77.12 360 P P 05 36 53.9 0.0
comp=N,11nm,0.6s,baz=178,slow=5.4,SNR=43
G21A Lodge Grass 77.15 332 ⇑P P 05 36 55.9 +1.6
baz=78
ULM Lac du Bonnet 77.15 341 eP P 05 36 54.1 +0.1
ULM Lac du Bonnet 77.15 341 P P 05 36 54.1 +0.1
comp=N,12nm,0.6s,baz=154,slow=7.9,SNR=26
I18A Diamond G Ranc 77.17 329 ⇓P P 05 36 56.2 +1.6
baz=78,SNR=6.1
L15A Malad City 77.17 327 ⇑P P 05 36 56.0 +1.4
baz=78
F22A Rosebud 77.18 332 ⇑P P 05 36 55.5 +1.1
baz=78,SNR=8.2
TSUM Tsumeb 77.32 106 eP P 05 36 55.6 -0.3
J17A Brown Place, J 77.34 328 ⇑P P 05 36 57.6 +2.0
baz=78
K16A Soda Springs 77.38 328 ⇓P P 05 36 57.9 +2.1
baz=78
SNOW Snow King Moun 77.44 328 eP P 05 36 57.6 +1.4
D24A Glendive 77.45 334 ⇓P P 05 36 57.8 +2.0
baz=78
LOHW Long Hollow 77.48 329 eP P 05 36 58.2 +1.9
H19A Powell 77.52 330 ⇓P P 05 36 57.9 +1.5
baz=78
G20A Bridger 77.59 331 ⇑P P 05 36 57.7 +0.8
baz=78,SNR=6.9
RRI2 Red Ridge 77.63 328 eP P 05 36 59.2 +2.0
MOOW Moose Ponds 77.65 329 eP P 05 36 58.6 +1.3
I17A Pilgrim Ck. 77.70 329 ⇓P P 05 36 59.5 +2.0
baz=78
K15A Arbon 77.74 327 ⇓P P 05 36 59.3 +1.6
baz=78
C24A Savage 77.83 335 ⇓P P 05 36 59.4 +1.5
baz=78,SNR=5.4
H18A Shoshone NF, C 77.84 330 ⇑P P 05 36 59.5 +1.2
baz=78,SNR=8.3
D23A Lindsay 77.85 334 ⇓P P 05 36 59.9 +1.8
baz=78
NVAR Mina Array Bea 77.92 321 P P 05 37 00.6 +1.7
NVAR Mina Array Bea 77.92 321 P P 05 37 00.6 +1.7
comp=N,0.9nm,0.3s,baz=178,slow=4.1,SNR=7.6
RLMT Red Lodge 78.00 330 eP P 05 37 00.9 +1.7
RLMT Red Lodge 78.00 330 ⇓P P 05 37 00.7 +1.6
baz=78,SNR=7.1
H17A Grant Village 78.05 329 ⇓P P 05 37 01.6 +2.1
baz=78
I16A Newdale 78.10 328 ⇓P P 05 37 01.5 +1.9
baz=78
E21A Keefer Ranch, 78.13 333 ⇑P P 05 37 01.5 +1.9
baz=78
J15A Blackfoot 78.22 327 ⇑P P 05 37 02.3 +2.0
baz=79
D22A Cohagen 78.23 333 ⇓P P 05 37 01.6 +1.5
baz=79,SNR=5.3
G18A Lazy EL Ranch, 78.28 330 ⇑P P 05 37 01.9 +1.2
baz=79,SNR=7.8
F19A Roth Farm, Mol 78.41 331 ⇓P P 05 37 02.4 +1.1
baz=79,SNR=8.9
DGMT Dagmar 78.50 335 eP P 05 37 03.0 +1.4
comp=N,18nm,1.0s
DGMT Dagmar 78.50 335 ⇓P P 05 37 03.1 +1.5
baz=79
D21A La Casta Ranch 78.51 333 ⇓P P 05 37 03.1 +1.4
baz=79,SNR=6.1
E20A Meyer Farm, Mu 78.55 332 ⇓P P 05 37 03.3 +1.3
baz=79,SNR=11
C22A Vida 78.59 334 ⇑P P 05 37 03.4 +1.4
baz=79
H16A Russell Place, 78.60 329 ⇑P P 05 37 04.6 +2.1
baz=79
I15A Monteview 78.68 328 ⇑P P 05 37 05.1 +2.3
baz=79
GCMT Greycliff 78.69 331 eP P 05 37 04.1 +1.3
comp=N,3.8nm,1.1s
J14A Carey 78.70 327 ⇑P P 05 37 05.0 +2.0
baz=79
F18A Big Timber 78.80 331 ⇓P P 05 37 04.7 +1.3
baz=79,SNR=9.6
A24A Westby 78.80 336 ⇓P P 05 37 04.7 +1.5
baz=79
B23A Brockton 78.81 335 ⇑P P 05 37 04.8 +1.5
baz=79
E19A Rath Farm, Rou 78.81 332 ⇓P P 05 37 04.6 +1.2
baz=79,SNR=10
D20A Manuel Ranch, 79.01 332 ⇓P P 05 37 05.5 +1.0
baz=79,SNR=7.8
B22A Reddig Ranch S 79.08 334 ⇑P P 05 37 06.2 +1.5
baz=79
J13A Cove Ranch, Pi 79.09 327 ⇓P P 05 37 06.9 +1.8
baz=79
I14A Mackay 79.11 327 ⇓P P 05 37 07.3 +2.1
baz=80,SNR=5.1
C21A Desert Coulee 79.15 333 ⇑P P 05 37 06.2 +1.0
baz=80
F17A Fitzpatrick Pl 79.23 330 ⇓P P 05 37 07.3 +1.6
baz=80,SNR=5.8
G16A Moss Hill, Enn 79.26 329 ⇑P P 05 37 07.6 +1.7
baz=80
HLID Hailey 79.33 327 eP P 05 37 08.8 +2.5
comp=N,5.9nm,0.8s
HLID Hailey 79.33 327 ⇑P P 05 37 08.5 +2.1
baz=80,SNR=12
E18A Harlowton 79.39 331 ⇓P P 05 37 08.0 +1.5
baz=80
D19A Cripps Ranch, 79.39 332 ⇑P P 05 37 07.5 +1.0
baz=80,SNR=5.3
I13A Wildhorse Cree 79.43 327 ⇓P P 05 37 09.2 +2.2
baz=80
C20A Veseth Ranch, 79.44 333 ⇓P P 05 37 07.7 +1.0
baz=80
BOZ Bozeman (W) 79.48 329 ⇑P P 05 37 08.4 +1.3
baz=80
G15A Dillon 79.54 329 ⇑P P 05 37 09.6 +2.1
baz=80
H14A Leadore 79.56 328 ⇑P P 05 37 10.2 +2.5
baz=80
B21A Ellsworth Farm 79.59 334 ⇑P P 05 37 09.1 +1.6
baz=80
A22A Carney Farms, 79.60 335 ⇑P P 05 37 08.9 +1.4
baz=80,SNR=6.2
E17A Martinsdale 79.74 330 ⇑P P 05 37 09.9 +1.4
baz=80,SNR=7.4
D18A Linhart Farms, 79.82 331 ⇓P P 05 37 09.9 +1.1
baz=80
C19A Slack Wire Ran 79.90 332 ⇓P P 05 37 10.3 +1.1
baz=80
MFID Camas Ranch 79.96 326 ⇓P P 05 37 11.5 +1.8
baz=80
H13A Challis 79.97 327 ⇓P P 05 37 11.5 +1.8
baz=80,SNR=8.1
A21A Bergtoll Ranch 80.00 334 ⇑P P 05 37 10.4 +0.7
baz=80
B20A Solberg Farm, 80.01 333 ⇓P P 05 37 11.5 +1.7
baz=80
F15A Butte 80.04 329 ⇓P P 05 37 12.4 +2.2
baz=80
D17A Six Diamond Ra 80.18 331 ⇓P P 05 37 12.0 +1.2
baz=80,SNR=5.4
H12A Diamond D Ranc 80.26 327 ⇓P P 05 37 13.0 +1.7
baz=81,SNR=5.7
A20A Cobblestone Ra 80.32 334 ⇓P P 05 37 12.5 +1.1
baz=81,SNR=9.3
G13A Cobalt 80.33 328 ⇑P P 05 37 13.7 +2.0
baz=81,SNR=20
B19A Brinkman Farms 80.41 333 ⇓P P 05 37 13.0 +1.2
baz=81,SNR=7.8
EGMT Eagleton 80.43 332 eP P 05 37 12.8 +0.7
comp=N,8.5nm,1.0s
EGMT Eagleton 80.43 332 ⇑P P 05 37 13.4 +1.4
baz=81
D16A Dana Ranch, Ca 80.48 330 ⇑P P 05 37 14.0 +1.6
baz=81,SNR=11
C17A Wharram Farm, 80.58 331 ⇓P P 05 37 13.7 +0.9
baz=81
A19A Klindworth Far 80.69 333 ⇑P P 05 37 14.2 +0.9
baz=81,SNR=5.3
BOSA Boshof 80.71 117 P P 05 37 13.5 -0.6
BOSA Boshof 80.71 117 P P 05 37 13.5 -0.6
comp=N,6.5nm,0.9s,baz=265,slow=5.4,SNR=5.9
B18A Beardsley Farm 80.72 332 ⇓P P 05 37 14.7 +1.2
baz=81,SNR=7.4
F13A Darby 80.88 328 ⇑P P 05 37 16.4 +1.8
baz=81,SNR=12
G12A Big Creek, Yel 80.90 327 ⇓P P 05 37 16.4 +1.6
baz=81
E14A Clinton 80.93 329 ⇓P P 05 37 17.1 +2.3
baz=81
D15A Lincoln 80.93 330 ⇓P P 05 37 16.8 +2.0
baz=81
PBDV Barranco-do-Ve 80.94 43 eP P 05 37 15.8 +0.9
B17A L&G Farms, Che 81.09 332 ⇑P P 05 37 16.7 +1.3
baz=81
PNCL Nicolau / Gran 81.09 42 eP P 05 37 16.3 +0.7
PCVE Castro Verde 81.10 43 eP P 05 37 16.6 +0.9
C16A Fuhringer Ranc 81.14 331 ⇑P P 05 37 16.9 +1.0
baz=82
A18A Metzger Ranch, 81.15 333 ⇓P P 05 37 16.8 +1.0
baz=82
PVAQ Vaqueiros 81.17 43 eP P 05 37 16.6 +0.5
E13A Victor 81.28 329 ⇑P P 05 37 18.3 +1.7
baz=82,SNR=8.2
D14A Greenough 81.42 329 ⇓P P 05 37 18.8 +1.4
baz=82
MSO Missoula 81.44 329 ⇑P P 05 37 19.0 +1.6
baz=82
C15A Salmond Ranch, 81.51 330 ⇑P P 05 37 19.2 +1.4
baz=82,SNR=11
SLMT Seeley Lake 81.53 330 eP P 05 37 18.0 0.0
comp=N,5.1nm,1.3s
A17A Triple J Farms 81.54 332 ⇑P P 05 37 19.2 +1.4
baz=82
EVOP Sao Brissos 81.60 42 ⇑iP P 05 37 18.5 +0.3
comp=N,27nm,0.9s
EVO Evora 81.67 42 ⇑iP P 05 37 18.5 -0.1
comp=N,27nm,0.9s
EVO Evora 81.67 42 eP P 05 37 19.2 +0.6
PMTG Montargil 81.86 42 eP P 05 37 20.3 +0.7
comp=N,40nm,1.3s
D13A Huson 81.88 329 ⇓P P 05 37 21.3 +1.6
baz=82
B15A Bradely Ranch, 81.89 331 ⇓P P 05 37 20.1 +0.4
baz=82
A16A West Butte Ran 81.93 332 ⇑P P 05 37 20.8 +0.9
baz=82,SNR=15
C14A Swan Lake 82.03 330 ⇓P P 05 37 22.1 +1.6
baz=82
PBAR Barrancos 82.06 43 eP P 05 37 21.0 +0.3
PESTR Estremoz 82.13 42 eP P 05 37 21.7 +0.6
comp=N,19nm,0.9s
D12A Red Ives Fores 82.28 329 ⇓P P 05 37 23.2 +1.4
baz=83
C13A Hot Springs 82.36 329 ⇑P P 05 37 24.3 +2.2
baz=83
PMRV Marv??o 82.59 42 eP P 05 37 23.8 +0.3
YBH Yreka Blue Hor 82.64 321 P P 05 37 24.1 +0.4
YBH Yreka Blue Hor 82.64 321 P P 05 37 24.1 +0.4
comp=N,1.8nm,0.7s,baz=45,slow=2.9,SNR=4.1
B13A Whitefish 82.80 330 ⇓P P 05 37 25.7 +1.3
baz=83
FFC Flin Flon 82.90 340 eP P 05 37 25.4 +0.8
comp=N,17nm,1.4s
MTE Manteigas 83.09 41 eP P 05 37 26.3 +0.3
MTE Manteigas 83.09 41 eP P 05 37 26.6 +0.6
comp=N,18nm,0.8s
TAM Tamanrasset 83.09 62 eP P 05 37 26.4 -0.1
comp=N,15nm,1.1s
A13A Flathead Natio 83.18 330 ⇓P P 05 37 28.2 +1.9
baz=84
POLO Lamas de Olo 83.53 40 eP P 05 37 28.6 +0.3
MVO Moncorvo 83.86 41 eP P 05 37 30.4 +0.5
comp=N,47nm,1.2s
PAB San Pablo 84.57 43 eP P 05 37 33.3 -0.2
comp=N,34nm,1.1s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**84.88**	**43**	P	**P**	**05 37 35.3**	**+0.2**
ESDC	**Sonseca Array**	**84.88**	**43**	P	**P**	**05 37 35.3**	**+0.2**
	comp=N,13nm,0.8s,baz=248,slow=4.8,SNR=46						
ESLA	**Sonseca Array**	**84.88**	**43**	*e*P	**P**	**05 37 35.0**	**-0.1**
	comp=N,10.0nm,1.1s						
LSZ	**Lusaka**	**88.17**	**106**	*e*P	**P**	**05 37 51.7**	**0.0**
	comp=N,19nm,1.4s						
SJPF	**Ste Jean**	**88.51**	**42**	*e*P	**P**	**05 37 53.1**	**+0.7**
	comp=N,31nm,0.9s						
SJPF	**Ste Jean**	**88.51**	**42**	*e*P	**P**	**05 37 53.1**	**+0.7**
	comp=N,31nm,0.9s						
ETSF	**Etsaut**	**88.81**	**42**	*e*P	**P**	**05 37 54.6**	**+0.7**
	comp=N,15nm,0.8s						
ETSF	**Etsaut**	**88.81**	**42**	*e*P	**P**	**05 37 54.6**	**+0.7**
	comp=N,15nm,0.8s						
EPF	**Esparros**	**89.43**	**42**	*e*P	**P**	**05 37 57.2**	**+0.4**
	comp=N,21nm,0.8s						
EPF	**Esparros**	**89.43**	**42**	*e*P	**P**	**05 37 57.2**	**+0.4**
	comp=N,21nm,0.8s						
QUIF	**Quistinic**	**90.05**	**37**	*e*P	**P**	**05 37 59.0**	**-0.4**
	comp=N,33nm,1.1s						
QUIF	**Quistinic**	**90.05**	**37**	*e*P	**P**	**05 37 59.0**	**-0.4**
	comp=N,33nm,1.1s						
ROSF	**Rostrenen**	**90.23**	**36**	*e*P	**P**	**05 37 59.9**	**-0.4**
	comp=N,37nm,1.0s						
ROSF	**Rostrenen**	**90.23**	**36**	*e*P	**P**	**05 37 59.9**	**-0.4**
	comp=N,37nm,1.0s						
SGMF	**Saint Gilles**	**90.58**	**37**	*e*P	**P**	**05 38 01.3**	**-0.6**
SGMF	**Saint Gilles**	**90.58**	**37**	*e*P	**P**	**05 38 01.3**	**-0.6**
LFF	**La Frestale**	**90.69**	**41**	*e*P	**P**	**05 38 02.5**	**0.0**
	comp=N,37nm,0.8s						
LFF	**La Frestale**	**90.69**	**41**	*e*P	**P**	**05 38 02.5**	**0.0**
	comp=N,37nm,0.8s						
MTLF	**Montolieu**	**90.77**	**43**	*e*P	**P**	**05 38 02.6**	**-0.3**
MTLF	**Montolieu**	**90.77**	**43**	*e*P	**P**	**05 38 02.6**	**-0.3**
MFF	**Saint Martin d**	**91.05**	**39**	*e*P	**P**	**05 38 04.1**	**0.0**
	comp=N,38nm,0.9s						
MFF	**Saint Martin d**	**91.05**	**39**	*e*P	**P**	**05 38 04.1**	**0.0**
	comp=N,38nm,0.9s						
RJF	**Les Rejaudoux**	**91.35**	**41**	*e*P	**P**	**05 38 05.3**	**-0.2**
RJF	**Les Rejaudoux**	**91.35**	**41**	*e*P	**P**	**05 38 05.3**	**-0.2**
CAF	**Calviac**	**91.48**	**41**	*e*P	**P**	**05 38 05.7**	**-0.5**
	comp=N,7.5nm,0.7s						
CAF	**Calviac**	**91.48**	**41**	*e*P	**P**	**05 38 05.7**	**-0.5**
	comp=N,7.5nm,0.7s						
GRR	**Gorron**	**91.60**	**37**	*e*P	**P**	**05 38 06.0**	**-0.6**
	comp=N,18nm,0.8s						
GRR	**Gorron**	**91.60**	**37**	*e*P	**P**	**05 38 06.0**	**-0.6**
	comp=N,18nm,0.8s						
KEST	**Kesra**	**91.98**	**52**	*e*P	**P**	**05 38 07.5**	**-1.3**
KEST	**Kesra**	**91.98**	**52**	P	**P**	**05 38 09.8**	**+1.0**
	comp=N,4.5nm,0.8s,baz=320,slow=2.7,SNR=13						
FLN	**La Foliniere**	**92.01**	**37**	*e*P	**P**	**05 38 08.1**	**-0.4**
	comp=N,21nm,1.0s						
FLN	**La Foliniere**	**92.01**	**37**	*e*P	**P**	**05 38 08.1**	**-0.4**
	comp=N,21nm,1.0s						
LDF	**La Druitiere**	**92.12**	**37**	*e*P	**P**	**05 38 08.6**	**-0.4**
	comp=N,22nm,0.9s						
LDF	**La Druitiere**	**92.12**	**37**	*e*P	**P**	**05 38 08.6**	**-0.4**
	comp=N,22nm,0.9s						
TCF	**Toulx Ste Croi**	**92.27**	**40**	*e*P	**P**	**05 38 09.4**	**-0.4**
	comp=N,7.7nm,0.9s						
TCF	**Toulx Ste Croi**	**92.27**	**40**	*e*P	**P**	**05 38 09.4**	**-0.4**
	comp=N,7.7nm,0.9s						
BGF	**Bois d'Agland**	**92.78**	**40**	*e*P	**P**	**05 38 11.9**	**-0.3**
BGF	**Bois d'Agland**	**92.78**	**40**	*e*P	**P**	**05 38 11.9**	**-0.3**
VIVF	**Saint-Julien-l**	**93.06**	**42**	*e*P	**P**	**05 38 13.9**	**+0.4**
VIVF	**Saint-Julien-l**	**93.06**	**42**	*e*P	**P**	**05 38 13.9**	**+0.4**
YKA	**Yellowknife Ar**	**93.08**	**340**	P	**P**	**05 38 13.7**	**+0.6**
YKA				pP	**pP**	**05 39 13.2**	**-0.8**
YKA	**Yellowknife Ar**	**93.08**	**340**	P	**P**	**05 38 13.7**	**+0.6**
	comp=N,6.1nm,0.7s,baz=130,slow=4.5,SNR=152						
YKA				pP	**pP**	**05 39 13.2**	**-0.8**
	comp=N,0.5nm,0.7s,baz=129,slow=4.5,SNR=2.8						
AVF	**Avril sur Loir**	**93.20**	**40**	*e*P	**P**	**05 38 13.7**	**-0.3**
AVF	**Avril sur Loir**	**93.20**	**40**	*e*P	**P**	**05 38 13.7**	**-0.3**
SMF	**Signal de Mont**	**93.42**	**40**	*e*P	**P**	**05 38 15.1**	**0.0**
SMF	**Signal de Mont**	**93.42**	**40**	*e*P	**P**	**05 38 15.1**	**0.0**
SSF	**Saint Saulge**	**93.43**	**40**	*e*P	**P**	**05 38 14.5**	**-0.6**
	comp=N,21nm,1.2s						
SSF	**Saint Saulge**	**93.43**	**40**	*e*P	**P**	**05 38 14.5**	**-0.6**
	comp=N,21nm,1.2s						
ORIF	**Oris-en-Rattie**	**93.84**	**43**	*e*P	**P**	**05 38 17.8**	**+0.6**
	comp=N,29nm,1.0s						
ORIF	**Oris-en-Rattie**	**93.84**	**43**	*e*P	**P**	**05 38 17.8**	**+0.6**
	comp=N,29nm,1.0s						
LPL	**La Plagne**	**94.65**	**42**	*e*P	**P**	**05 38 21.7**	**+0.7**
	comp=N,8.8nm,0.8s						
LPL	**La Plagne**	**94.65**	**42**	*e*P	**P**	**05 38 21.7**	**+0.7**
	comp=N,8.8nm,0.8s						
LPG	**La Plagne**	**94.66**	**42**	*e*P	**P**	**05 38 22.0**	**+0.9**
	comp=N,12nm,0.9s						
LPG	**La Plagne**	**94.66**	**42**	*e*P	**P**	**05 38 22.0**	**+0.9**
	comp=N,12nm,0.9s						
CABF	**La Chapelle**	**94.77**	**41**	*e*P	**P**	**05 38 21.3**	**0.0**
	comp=N,15nm,0.8s						
CABF	**La Chapelle**	**94.77**	**41**	*e*P	**P**	**05 38 21.3**	**0.0**
	comp=N,15nm,0.8s						
CDF	**Champ du Feu**	**96.31**	**40**	*e*P	**P**	**05 38 27.9**	**-0.4**
CDF	**Champ du Feu**	**96.31**	**40**	*e*P	**P**	**05 38 27.9**	**-0.4**
DAVOX	**Davos/Dischmat**	**97.17**	**42**	P	Pdif	05 38 32.9	+0.5
DAVOX	**Davos/Dischmat**	**97.17**	**42**	P	Pdif	05 38 32.9	+0.5
	comp=N,5.4nm,0.9s,baz=293,slow=7.7,SNR=6.3						
RES	**Resolute Bay**	**98.81**	**353**	P	**P**	**05 38 39.1**	**+0.3**
RES	**Resolute Bay**	**98.81**	**353**	P	**P**	**05 38 39.1**	**+0.3**
	comp=N,1.1nm,0.9s,baz=168,slow=8.7,SNR=5.2						
INK	**Inuvik**	**102.85**	**339**	P	**Pdif**	**05 38 57.5**	**+0.6**
INK	**Inuvik**	**102.85**	**339**	P	**Pdif**	**05 38 57.5**	**+0.6**
	comp=N,0.5nm,0.6s,baz=68,slow=3.7,SNR=5.5						
KBZ	**Khabaz**	**118.84**	**51**	PKP	**PKPdf**	**05 43 47.1**	**+0.4**
KBZ	**Khabaz**	**118.84**	**51**	PKP	**PKPdf**	**05 43 47.1**	**+0.4**
	comp=N,2.6nm,0.3s,baz=309,slow=3.6,SNR=4.4						
AKTO	**Aktyubinsk**	**128.77**	**43**	PKP	**PKPdf**	**05 44 06.6**	**+1.0**
AKTO	**Aktyubinsk**	**128.77**	**43**	PKP	**PKPdf**	**05 44 06.6**	**+1.0**
	comp=N,2.2nm,0.8s,baz=263,slow=4.2,SNR=7.7						
ASAR	**Alice Springs**	**130.02**	**204**	PKP	**PKPdf**	**05 44 09.4**	**+0.4**
ASAR				SKPbc	**SKPab**	**05 47 07.8**	**+0.1**
ASAR	**Alice Springs**	**130.02**	**204**	PKP	**PKPdf**	**05 44 09.4**	**+0.4**
	comp=N,1.3nm,0.5s,baz=140,slow=2.3,SNR=14						
ASAR				SKPbc	**SKPab**	**05 47 07.8**	**+0.1**
	comp=N,1.4nm,0.8s,baz=147,slow=4.1,SNR=8.7						
ABKAR	**Akbulak array**	**130.23**	**44**	*e*PKPdf	**PKPdf**	**05 44 09.1**	**+0.7**
WRA	**Warramunga Arr**	**133.19**	**207**	PKP	**PKPdf**	**05 44 15.6**	**+0.6**
WRA				SKPbc	**SKPbc**	**05 47 19.1**	**-0.1**
WRA	**Warramunga Arr**	**133.19**	**207**	PKP	**PKPdf**	**05 44 15.6**	**+0.6**
	comp=N,0.8nm,0.4s,baz=152,slow=1.7,SNR=26						
WRA				SKPbc	**SKPbc**	**05 47 19.1**	**-0.1**
	comp=N,4.6nm,0.9s,baz=152,slow=2.9,SNR=22						
PETK	**Petropavlovsk-**	**134.94**	**324**	PKP	**PKPdf**	**05 44 18.6**	**+1.4**
PETK	**Petropavlovsk-**	**134.94**	**324**	PKP	**PKPdf**	**05 44 18.6**	**+1.4**
	comp=N,1.0nm,0.6s,baz=119,slow=12,SNR=3.8						
BVAR	**Borovoye Array**	**135.24**	**36**	PKP	**PKPdf**	**05 44 18.8**	**+1.0**
BVAR				SKPbc	**SKPbc**	**05 47 26.7**	**+2.0**
BVAR	**Borovoye Array**	**135.24**	**36**	PKP	**PKPdf**	**05 44 18.8**	**+1.0**
	comp=N,2.5nm,0.7s,baz=300,slow=3.2,SNR=13						
BVAR				SKPbc	**SKPbc**	**05 47 26.7**	**+2.0**
	comp=N,0.6nm,0.6s,baz=328,slow=4.1,SNR=4.2						
KURK	**Kurchatov**	**140.82**	**35**	*e*PKPdf	**PKPdf**	**05 44 27.7**	**-0.3**
AAK	**Ala-Archa**	**141.78**	**49**	PKPpre	PKPpre	05 44 25.6	
AAK				PKP	**PKPdf**	**05 44 30.8**	**+0.5**
AAK				SKPbc	**SKiKP**	**05 47 44.8**	**-0.4**
AAK	**Ala-Archa**	**141.78**	**49**	PKhKP	PKPpre	05 44 25.6	
	comp=N,1.1nm,0.5s,baz=241,slow=10,SNR=3.4						
AAK				PKP	**PKPdf**	**05 44 30.8**	**+0.5**
	comp=N,2.6nm,0.7s,baz=104,slow=4.9,SNR=6.9						
AAK				SKPbc	**SKiKP**	**05 47 44.8**	**-0.4**
	comp=N,5.6nm,1.0s,baz=218,slow=5.0,SNR=8.4						
ZALV	**Zalesovo Beam**	**141.82**	**28**	PKPpre	PKPpre	05 44 24.5	
ZALV				PKP	**PKPdf**	**05 44 30.3**	**+0.6**
ZALV				SKPbc	**SKiKP**	**05 47 44.3**	**-0.4**
ZALV	**Zalesovo Beam**	**141.82**	**28**	PKhKP	PKPpre	05 44 24.5	
	comp=N,1.4nm,0.5s,baz=287,slow=4.1,SNR=9.4						
ZALV				PKP	**PKPdf**	**05 44 30.3**	**+0.6**
	comp=N,3.7nm,0.5s,baz=289,slow=2.1,SNR=9.5						
ZALV				SKPbc	**SKiKP**	**05 47 44.3**	**-0.4**
	comp=N,2.9nm,0.6s,baz=307,slow=4.1,SNR=8.0						
KSH	**Kashi**	**143.79**	**53**	PKP	PKPbc	05 44 32.0	-0.2
KSH				PP	**PP**	**05 47 49.8**	**0.0**
KSH				PKS	**PKSdf**	**05 48 06.5**	**-3.1**
KSH				SKS	**SKSdf**	**05 51 17.4**	**-2.0**
KSH				SKKS	**SKKSac**	**05 54 15.4**	**-1.7**
KSH				SS	**SS**	**06 06 08.7**	**-3.6**
KSH				LR	LR		
	comp=N,190nm,4.5s						
KSH				LR	LR		
	comp=E,200nm,4.9s						
KSH				LR	LR		
	comp=Z,2µm,12.8s						
PALK	**Pallekele**	**144.69**	**110**	*e*PKPdf	**PKPab**	**05 44 35.5**	**0.0**
MK31	**Makanchi Array**	**144.99**	**39**	*e*PKPbc	**PKPab**	**05 44 35.9**	**+0.2**
MKAR	**Makanchi Array**	**144.99**	**39**	PKP	**PKPab**	**05 44 36.2**	**+0.5**
MKAR				SKPbc	**SKiKP**	**05 47 51.4**	**-0.1**
MKAR	**Makanchi Array**	**144.99**	**39**	PKP	**PKPab**	**05 44 36.2**	**+0.5**
	comp=Z,29nm,0.7s,baz=310,slow=3.2,SNR=252						
MKAR				SKPbc	**SKiKP**	**05 47 51.4**	**-0.1**
	comp=Z,2.9nm,0.9s,baz=323,slow=3.0,SNR=8.5						
HYB	**Hyderabad**	**146.53**	**92**	*i* P	**PKPdf**	**05 44 39.0**	**0.0**
WMQ	**Urumqi**	**149.81**	**39**	PKPbc	**PKPdf**	**05 44 42.8**	**-0.9**
TLY	**Talaya**	**149.93**	**13**	*e*PKPdf	**PKPdf**	**05 44 44.1**	**+0.5**
TLY				*e*PKPbc	**PKPbc**	**05 44 49.0**	**+0.3**
TLY				*e*PKPab	**PKPab**	**05 44 55.8**	**+0.7**
USRK	**Ussuriysk Arra**	**153.76**	**329**	PKPbc	**PKPbc**	**05 44 57.3**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=35,slow=1.7,SNR=8.0						
SONM	**Songino Array**	**154.14**	**11**	PKP	**PKPdf**	**05 44 50.7**	**+0.6**
SONM				PKPbc	**PKiKP**	**05 44 59.4**	**+0.9**
SONM				PKPab	**PKPab**	**05 45 14.1**	**+1.0**
SONM	**Songino Array**	**154.14**	**11**	PKP	**PKPdf**	**05 44 50.7**	**+0.6**
	comp=Z,2.4nm,0.9s,baz=255,slow=0.9,SNR=10						
SONM				PKPbc	**PKiKP**	**05 44 59.4**	**+0.9**
	comp=Z,1.6nm,0.5s,baz=1.7,slow=2.4,SNR=9.5						
SONM				PKPab	**PKPab**	**05 45 14.1**	**+1.0**
	comp=Z,3.3nm,0.7s,baz=324,slow=4.1,SNR=11						
MDJ	**Mudanjiang**	**154.50**	**333**	PKPbc	**PKPdf**	**05 44 50.2**	**-0.3**
CN2	**Changchun**	**156.77**	**338**	*e*PKP	**PKPdf**	**05 44 52.7**	**-0.8**
GTA	**Gaotai**	**159.45**	**32**	*e*PKP	**PKPdf**	**05 44 58.5**	**+1.4**
GTA				PKPab	**PKPab**	**05 45 37.0**	**+0.7**
GTA				pPKP	**pPKPdf**	**05 46 00.7**	**-0.7**
HHC	**Hu-ho-hao-te**	**161.72**	**5**	*e*PKP	**PKPdf**	**05 44 56.1**	**-3.4**
HHC				PP	**PP**	**05 49 30.9**	**+1.4**
HHC				SKS	**SKSdf**	**05 51 37.0**	**-3.5**
HHC				SKKS	**SKKSac**	**05 55 53.9**	**+0.3**
HHC				SS	**SS**	**06 09 25.7**	**+0.4**
LZH	**Lanzhou**	**164.02**	**31**	*e*PKP	**PKPdf**	**05 45 03.5**	**+1.5**
LZH				pPKP	**PKPab**	**05 45 59.5**	**+3.0**
LZH				sPKP		05 46 26.0	
CMAR	**Chiang Mai Arr**	**165.48**	**104**	PKP	**PKPdf**	**05 45 04.3**	**+0.8**
CMAR				PKPab	**PKPab**	**05 46 02.8**	**-0.6**
CMAR	**Chiang Mai Arr**	**165.48**	**104**	PKP	**PKPdf**	**05 45 04.3**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=269,slow=4.3,SNR=4.5						
CMAR				PKPab	**PKPab**	**05 46 02.8**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=259,slow=6.0,SNR=7.7						
CD2	**Chengdu**	**167.81**	**45**	PKP	**PKPdf**	**05 45 02.7**	**-2.3**
GYA	**Guiyang**	**172.46**	**58**	*e*PKP	**PKPdf**	**05 45 07.0**	**-0.8**
GYA				pPKP	**pPKPdf**	**05 46 09.0**	**-3.3**
GYA				PKPab	**PKPab**	**05 46 38.4**	**+4.2**
GYA				PKS	**PKSdf**	**05 48 38.2**	**-2.1**
GYA				PP	**PP**	**05 50 27.0**	**+1.1**
GYA				AMB	AMB		
	comp=Z,90nm,8.0s						

IDC 01 05:39:59.2±3.2**, 30.°30S**×**138.°40E, h0**^{km}**, mb1 2.9**/3**, mb1mx2.9**/15**, mbtmp2.7**/3**, ML2.5**/3**, Error ellipse: s-maj=73.5km s-min=15.7km az=44.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.16**	**121**	Pn	Pn	05 40 49.7	-0.6
	0.2nm,0.3s,baz=304,slow=11,SNR=2.5						
STKA				Pg	Pb	05 40 57.4	+1.1
	0.9nm,0.3s,baz=301,slow=14,SNR=12						
STKA				Sn	Sn	05 41 24.8	-3.9
	1.7nm,0.3s,baz=304,slow=9.7,SNR=8.0						
STKA				Lg	Lg	05 41 39.4	
	2.8nm,0.3s,baz=12,slow=20,SNR=9.3						
ASAR	**Alice Springs**	**7.73**	**328**	Pn	Pn	05 41 53.8	+0.7
	0.1nm,0.3s,baz=150,slow=12,SNR=5.3						
ASAR				Sn	Sn	05 43 22.8	+1.5
	0.1nm,0.3s,baz=151,slow=22,SNR=4.1						
WRA	**Warramunga Arr**	**10.95**	**339**	Pn	Pn	05 42 37.0	-0.2
	0.1nm,0.3s,baz=154,slow=12,SNR=6.5						
WRA				Sn	Sn	05 44 39.1	-1.3
	0.0nm,0.3s,baz=162,slow=24,SNR=3.4						

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*CSEM **01** 05:48:34.6±0.2, 39.°36N×23.°64E, h10^{km}, ML2.4/6, Error ellipse: s-maj=3.9km s-min=2.8km az=107.0*
*ATH **01** 05:48:34.7, 39.°35N×23.°60E, h5^{km}, MD3.2/10*
*ISCJB **01** 05:48:35.1±0.5, 39.°34N±0.°02×23.°62E±0.°03, h7^{km}±4^{km}, Error ellipse: s-maj=4.0km s-min=3.4km az=22.4*
*THE **01** 05:48:35.5, 39.°33N×23.°63E, h6^{km}±1^{km}, ML2.4/6, Error ellipse: s-maj=1.0km s-min=0.5km az=95.0*
ISC 01 05:48:35.0±0.9**, 39.°35N**±0.°02×**23.°61E**±0.°02**, h12**^{km}±6^{km}**, n47,** σ**0.^{s}70**/79**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKIA	**Skiathos**	**0.21**	**211**	P	**Pg**	**05 48 39.7**	**+0.1**
SKIA				S	**Sg**	**05 48 43.1**	**+0.4**
SKIA	**Skiathos**	**0.21**	**211**	P	**Pg**	**05 48 39.7**	**+0.1**
SKIA				S	**Sg**	**05 48 43.1**	**+0.4**
AOS	**Alonnisos**	**0.28**	**130**	P	**Pg**	**05 48 40.3**	**-0.4**
AOS				S	**Sg**	**05 48 44.1**	**-0.4**
AOS	**Alonnisos**	**0.28**	**130**	*e*PG	**Pg**	**05 48 40.5**	**-0.2**
AOS				*e*SG	**Sg**	**05 48 44.2**	**-0.3**
AOS	**Alonnisos**	**0.28**	**130**	P	**Pg**	**05 48 40.3**	**-0.4**
AOS				S	**Sg**	**05 48 44.1**	**-0.4**
NEO	**Neokhori**	**0.30**	**262**	*e*PG	**Pg**	**05 48 41.6**	**+0.5**
NEO				*e*SG	**Sg**	**05 48 46.0**	**+0.8**
NEO	**Neokhori**	**0.30**	**262**	*e*Pg	**Pg**	**05 48 41.6**	**+0.5**
NEO				*e*Sg	**Sg**	**05 48 46.0**	**+0.8**
XOR	**Xorichti**	**0.32**	**273**	P	**Pg**	**05 48 41.8**	**+0.3**
XOR				S	**Sb**	**05 48 47.5**	**-0.4**
XOR	**Xorichti**	**0.32**	**273**	P	**Pg**	**05 48 41.8**	**+0.3**
XOR				S	**Sb**	**05 48 47.5**	**-0.4**
PAIG	**Paliouri**	**0.58**	**6**	P	**Pb**	**05 48 47.2**	**+0.1**
PAIG				S	**Sb**	**05 48 56.5**	**+1.2**
PAIG	**Paliouri**	**0.58**	**6**	P	**Pb**	**05 48 47.2**	**+0.1**
MRKA	**Markates**	**0.64**	**181**	P	**Pg**	**05 48 47.1**	**-0.4**
MRKA				S	**Sb**	**05 48 56.4**	**-0.7**
MRKA	**Markates**	**0.64**	**181**	P	**Pg**	**05 48 47.1**	**-0.4**
MRKA				S	**Sb**	**05 48 56.4**	**-0.7**
ATAL	**Atalanti**	**0.80**	**215**	P	**Pg**	**05 48 50.3**	**-0.2**
ATAL				S	**Sb**	**05 49 02.0**	**+0.4**
ATAL	**Atalanti**	**0.80**	**215**	P	**Pg**	**05 48 50.3**	**-0.2**
ATAL				S	**Sb**	**05 49 02.0**	**+0.4**
LKR	**Lokris**	**0.84**	**214**	P	**Pg**	**05 48 51.1**	**-0.2**
LKR				S	**Sb**	**05 49 03.3**	**+0.4**
LKR	**Lokris**	**0.84**	**214**	P	**Pg**	**05 48 51.1**	**-0.2**
LKR				S	**Sb**	**05 49 03.3**	**+0.4**
AXAR	**Agios Charalam**	**0.94**	**232**	P	**Pg**	**05 48 53.0**	**-0.1**
AXAR				S	**Sb**	**05 49 06.5**	**+0.8**
AXAR	**Agios Charalam**	**0.94**	**232**	P	**Pg**	**05 48 53.0**	**-0.1**
AXAR				S	**Sb**	**05 49 06.5**	**+0.8**
PLG	**Polygyros**	**1.03**	**353**	P	**Pg**	**05 48 54.5**	**-0.3**
PLG	**Polygyros**	**1.03**	**353**	*e*PN	**Pg**	**05 48 54.5**	**-0.3**
PLG				*e*SB	**Sg**	**05 49 08.4**	**+0.1**
PLG	**Polygyros**	**1.03**	**353**	P	**Pg**	**05 48 54.5**	**-0.3**
PLG				*e*Sb	**Sg**	**05 49 08.4**	**+0.1**
AGG	**Agios Georgios**	**1.04**	**252**	P	**Pg**	**05 48 54.9**	**-0.2**
AGG	**Agios Georgios**	**1.04**	**252**	*e*PN	**Pg**	**05 48 54.9**	**-0.2**
AGG				*e*SB	**Sn**	**05 49 09.9**	**-0.1**
AGG	**Agios Georgios**	**1.04**	**252**	P	**Pg**	**05 48 54.9**	**-0.2**
AGG				*e*Sb	**Sn**	**05 49 09.9**	**-0.1**
LIT	**Litokhoron**	**1.14**	**311**	*e*PB	**Pb**	**05 48 55.0**	**-1.7**
LIT				*e*SB	**Sn**	**05 49 12.5**	**+0.1**
LIT	**Litokhoron**	**1.14**	**311**	*e*Pb	**Pb**	**05 48 55.0**	**-1.7**
LIT				*e*Sb	**Sn**	**05 49 12.5**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.20**	**254**	P	**Pg**	**05 48 57.8**	**-0.2**
MAKR				S	**Sn**	**05 49 16.0**	**+2.2**
MAKR	**Makrakomi, Fth**	**1.20**	**254**	P	**Pg**	**05 48 57.8**	**-0.2**
MAKR				S	**Sn**	**05 49 16.0**	**+2.2**
THL	**Klokotos Trika**	**1.25**	**280**	P	**Pn**	**05 48 58.6**	**+0.3**
THL	**Klokotos Trika**	**1.25**	**280**	*e*PB	**Pn**	**05 48 56.5**	**-1.8**
THL				*e*SB	**Sg**	**05 49 15.3**	**0.0**
THL	**Klokotos Trika**	**1.25**	**280**	*e*Pb	**Pn**	**05 48 56.5**	**-1.8**
THL	**Klokotos Trika**	**1.25**	**280**	P	**Pn**	**05 48 58.6**	**+0.3**
THL				*e*Sb	**Sg**	**05 49 15.3**	**0.0**
DSF	**Desfina**	**1.26**	**222**	P	**Pn**	**05 48 58.0**	**-0.5**
DSF	**Desfina**	**1.26**	**222**	P	**Pn**	**05 48 58.0**	**-0.5**
LIA	**Limnos Island**	**1.33**	**65**	*e*PB	**Pg**	**05 49 00.3**	**-0.3**
LIA				*e*SB	**Sg**	**05 49 19.2**	**+1.2**
LIA	**Limnos Island**	**1.33**	**65**	*e*Pb	**Pg**	**05 49 00.3**	**-0.3**
LIA				*e*Sb	**Sg**	**05 49 19.2**	**+1.2**
LTK	**Loutraki**	**1.42**	**201**	P	**Pn**	**05 49 00.7**	**+0.1**
LTK				S	**Sg**	**05 49 20.9**	**+0.3**
LTK	**Loutraki**	**1.42**	**201**	P	**Pn**	**05 49 00.7**	**+0.1**
LTK				S	**Sg**	**05 49 20.9**	**+0.3**
SOH	**Sokhos**	**1.48**	**353**	*e*PG	**Pn**	**05 49 01.6**	**+0.1**
SOH	**Sokhos**	**1.48**	**353**	*e*Pg	**Pn**	**05 49 01.6**	**+0.1**
DID	**Didima**	**1.86**	**189**	P	**Pn**	**05 49 06.4**	**-0.4**
DID	**Didima**	**1.86**	**189**	P	**Pn**	**05 49 06.4**	**-0.4**
NVR	**Nevrokopi**	**2.01**	**5**	*e*PN	**Pn**	**05 49 08.1**	**-0.6**
NVR	**Nevrokopi**	**2.01**	**5**	*e*Pn	**Pn**	**05 49 08.1**	**-0.6**
CHOS	**Chios island**	**2.14**	**116**	*e*PN	**Pb**	**05 49 14.0**	**+0.3**
CHOS	**Chios island**	**2.14**	**116**	*e*Pn	**Pb**	**05 49 14.0**	**+0.3**

IDC 01 06:01:57.7±0.8**, 28.°84N**×**139.°72E, h422**^{km}±20^{km}**, mb3.0**/8**, mb1 3.1**/10**, mb1mx2.9**/27**, mbtmp3.1**/10**, Error ellipse: s-maj=55.4km s-min=16.9km az=72.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.79**	**128**	P	P	06 03 01.1	+0.1
	77nm,0.3s,baz=269,slow=23,SNR=10						
CBIJ				S	S	06 03 52.5	+0.2
	25nm,0.3s,baz=306,slow=19,SNR=3.1						
USRK	**Ussuriysk Arra**	**16.52**	**340**	P	P	06 05 26.7	+1.3
	0.2nm,0.3s,baz=169,slow=8.9,SNR=6.1						
SONM	**Songino Array**	**31.95**	**316**	P	P	06 07 47.3	+0.6
	0.6nm,0.6s,baz=132,slow=7.9,SNR=5.2						
ZALV	**Zalesovo Beam**	**46.74**	**318**	P	P	06 09 45.6	-1.1
	0.3nm,0.4s,baz=96,slow=7.7,SNR=2.4						
MKAR	**Makanchi Array**	**47.69**	**308**	P	P	06 09 53.7	-0.3
	0.7nm,0.6s,baz=91,slow=9.2,SNR=8.1						
WRA	**Warramunga Arr**	**48.78**	**187**	P	P	06 10 02.5	0.0
	0.3nm,0.3s,baz=3.9,slow=7.8,SNR=11						
BVAR	**Borovoye Array**	**55.28**	**317**	P	P	06 10 49.5	+0.2
	0.7nm,0.5s,baz=72,slow=9.5,SNR=5.0						
AKTO	**Aktyubinsk**	**63.26**	**315**	P	P	06 11 43.0	-0.1
	0.7nm,0.5s,baz=101,slow=10,SNR=4.0						
ARCES	**ARCESS Array B**	**71.17**	**340**	P	P	06 12 32.0	+0.2
	2.5nm,0.9s,baz=46,slow=6.9,SNR=4.8						
FINES	**FINESS Array B**	**75.41**	**333**	P	P	06 12 56.4	0.0
	0.5nm,0.3s,baz=69,slow=5.1,SNR=6.8						

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*ATH **01** 06:04:27.0, 38.°12N×27.°69E, h5^{km}±2^{km}, MD3.1/3*
*ISK **01** 06:04:28.4, 38.°09N×27.°47E, h5^{km}, MD3.1*
*CSEM **01** 06:04:29.6±0.1, 38.°07N×27.°46E, h2^{km}, MD3.1, Error ellipse: s-maj=4.0km s-min=3.0km az=86.0*
*DDA **01** 06:04:29.0, 38.°09N×27.°50E, h6^{km}, MD3.2, ML3.5*
ISC 01 06:04:29.6±1.1**, 38.°10N**±0.°02×**27.°49E**±0.°02**, h5**^{km}±9^{km}**, n77,** σ**0.^{s}91**/104**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IZM	**Izmir**	**0.35**	**329**	PG	**Pg**	**06 04 36.5**	**+0.1**
GCAM	**G?zelcaml?**	**0.45**	**207**	*i* P	**Pg**	**06 04 37.7**	**-0.4**
GCAM				*i* S	**Sg**	**06 04 44.2**	**+0.3**
GCAM	**G?zelcaml?**	**0.45**	**207**	*i* P	**Pg**	**06 04 37.7**	**-0.4**
GCAM				*i* S	**Sg**	**06 04 44.2**	**+0.3**
BLCB	**Balcova**	**0.46**	**309**	PG	**Pg**	**06 04 38.3**	**0.0**
BLCB				*e*SG	**Sg**	**06 04 44.6**	**+0.3**
AYDN	**Tasoluk**	**0.53**	**145**	*i* P	**Pg**	**06 04 39.8**	**0.0**
AYDN				*i* S	**Sg**	**06 04 46.9**	**+0.1**
AYDN	**Tasoluk**	**0.53**	**145**	*i* P	**Pg**	**06 04 39.8**	**0.0**
AYDN				*i* S	**Sg**	**06 04 46.9**	**+0.1**
AKHS	**Akhisar**	**0.82**	**18**	*i* P	**Pg**	**06 04 45.1**	**-0.3**
AKHS				*i* S	**Sg**	**06 04 56.3**	**+0.3**
AKHS	**Akhisar**	**0.82**	**18**	*i* P	**Pg**	**06 04 45.1**	**-0.3**
AKHS				*i* S	**Sg**	**06 04 56.3**	**+0.3**
AKS	**Akhisar**	**0.82**	**18**	*e*PG	**Pg**	**06 04 45.3**	**-0.1**
MLSB	**Milas**	**0.83**	**164**	*e*PG	**Pg**	**06 04 45.6**	**+0.1**
MLSB				*e*SG	**Sb**	**06 04 58.1**	**+0.1**
MLSB	**Milas**	**0.83**	**164**	*e*Pg	**Pg**	**06 04 45.6**	**+0.1**
MLSB				*e*Sg	**Sb**	**06 04 58.1**	**+0.1**
KULA	**Kula-Manisa**	**1.01**	**65**	*e*PG	**Pb**	**06 04 49.2**	**-0.4**
KULA	**Kula-Manisa**	**1.01**	**65**	*e*Pg	**Pb**	**06 04 49.2**	**-0.4**
BODT	**Bodrum**	**1.04**	**188**	*e*PG	**Pg**	**06 04 49.2**	**-0.4**
BODT				*e*SG	**Sn**	**06 05 04.9**	**-1.0**
BODT	**Bodrum**	**1.04**	**188**	*e*Pg	**Pg**	**06 04 49.2**	**-0.4**
YER	**Yerkesik**	**1.15**	**147**	*e*PN	**Pg**	**06 04 51.2**	**-0.3**
YER	**Yerkesik**	**1.15**	**147**	*e*Pn	**Pg**	**06 04 51.3**	**-0.3**
CHOS	**Chios island**	**1.17**	**285**	*e*PB	**Pb**	**06 04 52.2**	**-0.1**
CHOS				*e*SB	**Sn**	**06 05 09.1**	**0.0**
CHOS	**Chios island**	**1.17**	**285**	*e*Pb	**Pb**	**06 04 52.2**	**-0.1**
CHOS				*e*Sb	**Sn**	**06 05 09.1**	**0.0**
DENT	**Denizli**	**1.27**	**105**	*e*PN	**Pn**	**06 04 54.3**	**+0.3**
DENT	**Denizli**	**1.27**	**105**	*e*Pn	**Pn**	**06 04 54.3**	**+0.3**
DNZL	**Cakiroluk**	**1.30**	**108**	*i* P	**Pn**	**06 04 54.7**	**+0.1**
DNZL				*i* S	**Sn**	**06 05 14.2**	**+1.8**
DNZL	**Cakiroluk**	**1.30**	**108**	*i* P	**Pn**	**06 04 54.7**	**+0.1**
DNZL				*i* S	**Sn**	**06 05 14.2**	**+1.8**
DEMI	**Demirci**	**1.35**	**45**	*i* P	**Pn**	**06 04 54.9**	**-0.3**
DEMI				*i* S	**Sg**	**06 05 11.4**	**-1.5**
DEMI	**Demirci**	**1.35**	**45**	*i* P	**Pn**	**06 04 54.9**	**-0.3**
DEMI				*i* S	**Sg**	**06 05 11.4**	**-1.5**
AYVA	**Ayvalik**	**1.36**	**333**	*i* P	**Pn**	**06 04 55.5**	**+0.2**
AYVA				*i* S	**Sn**	**06 05 14.6**	**+0.8**
AYVA	**Ayvalik**	**1.36**	**333**	*i* P	**Pn**	**06 04 55.5**	**+0.2**
AYVA				*i* S	**Sn**	**06 05 14.6**	**+0.8**
PRK	**Paraskevi**	**1.49**	**321**	*e*PG	**Pn**	**06 04 56.3**	**-0.8**
PRK				*e*SB	**Sg**	**06 05 18.6**	**+1.0**
PRK	**Paraskevi**	**1.49**	**321**	*e*Pg	**Pn**	**06 04 56.3**	**-0.8**
PRK				*e*Sb	**Sg**	**06 05 18.6**	**+1.0**
NIS1	**Nisyros Isl.**	**1.51**	**190**	*e*PG	**Pn**	**06 04 56.3**	**-1.1**
NIS1	**Nisyros Isl.**	**1.51**	**190**	*e*Pg	**Pn**	**06 04 56.3**	**-1.1**
BALB	**Balikesir**	**1.57**	**11**	*e*PN	**Pb**	**06 04 58.9**	**-0.3**
BALB	**Balikesir**	**1.57**	**11**	*e*Pn	**Pb**	**06 04 58.9**	**-0.3**
KHL	**Karahalli**	**1.62**	**81**	*e*PN	**Pb**	**06 04 59.8**	**-0.2**
KHL	**Karahalli**	**1.62**	**81**	*e*Pn	**Pb**	**06 04 59.8**	**-0.2**
BALY	**Balya**	**1.65**	**3**	*i* P	**Pn**	**06 04 58.0**	**-1.2**
BALY				*i* S	**Sn**	**06 05 19.3**	**-1.5**
BALY	**Balya**	**1.65**	**3**	*i* P	**Pn**	**06 04 58.0**	**-1.2**
BALY				*i* S	**Sn**	**06 05 19.3**	**-1.5**
DURS	**Dursunbey**	**1.69**	**27**	*i* P	**Pn**	**06 05 00.4**	**+0.5**
DURS				*i* S	**Sn**	**06 05 19.9**	**-2.0**
DURS	**Dursunbey**	**1.69**	**27**	*i* P	**Pn**	**06 05 00.4**	**+0.5**
DURS				*i* S	**Sn**	**06 05 19.9**	**-2.0**
GDZ	**Gediz**	**1.85**	**57**	*i* P	**Pg**	**06 05 04.4**	**-0.6**
GDZ				*i* S	**Sg**	**06 05 29.2**	**+0.2**
GDZ	**Gediz**	**1.85**	**57**	*i* P	**Pg**	**06 05 04.4**	**-0.6**
GDZ				*i* S	**Sg**	**06 05 29.2**	**+0.2**
APE	**Apeiranthos**	**1.86**	**237**	*e*PN	**Pb**	**06 05 03.3**	**-0.9**
APE	**Apeiranthos**	**1.86**	**237**	*e*PG	**Pb**	**06 05 04.2**	**0.0**
APE				*e*SN	**Sg**	**06 05 30.5**	**+1.0**
APE	**Apeiranthos**	**1.86**	**237**	*e*Pn	**Pb**	**06 05 03.3**	**-0.9**
APE	**Apeiranthos**	**1.86**	**237**	*e*Pg	**Pb**	**06 05 04.2**	**0.0**
FETY	**Fethiye**	**1.93**	**138**	*e*PN	**Pn**	**06 05 03.6**	**+0.4**
FETY	**Fethiye**	**1.93**	**138**	*e*Pn	**Pn**	**06 05 03.6**	**+0.4**
GONE	**Gonen-Balikesi**	**1.95**	**4**	*e*PN	**Pn**	**06 05 03.5**	**+0.1**
GONE	**Gonen-Balikesi**	**1.95**	**4**	*e*Pn	**Pn**	**06 05 03.5**	**+0.1**
ALT	**Altintas**	**2.27**	**64**	*e*PN	**Pn**	**06 05 08.8**	**+1.0**
ALT	**Altintas**	**2.27**	**64**	*e*Pn	**Pn**	**06 05 08.8**	**+1.0**
EDC	**Edincik**	**2.27**	**7**	*e*PN	**Pn**	**06 05 08.6**	**+0.9**
EDC	**Edincik**	**2.27**	**7**	*e*Pn	**Pn**	**06 05 08.6**	**+0.9**
KRBG	**Karabiga-Canak**	**2.30**	**356**	*e*PN	**Pn**	**06 05 09.0**	**+0.8**
KRBG	**Karabiga-Canak**	**2.30**	**356**	*e*Pn	**Pn**	**06 05 09.0**	**+0.8**
LPK	**Lapseki**	**2.34**	**346**	*e*PN	**Pn**	**06 05 09.7**	**+0.9**
LPK	**Lapseki**	**2.34**	**346**	*e*Pn	**Pn**	**06 05 09.7**	**+0.9**
ELL	**Elmali**	**2.35**	**124**	*e*PN	**Pn**	**06 05 09.9**	**+0.9**
ELL	**Elmali**	**2.35**	**124**	*e*Pn	**Pn**	**06 05 09.9**	**+0.9**
GELI	**Tayfur-Gelibol**	**2.43**	**341**	*e*PN	**Pn**	**06 05 10.9**	**+0.9**
GELI	**Tayfur-Gelibol**	**2.43**	**341**	*e*Pn	**Pn**	**06 05 10.9**	**+0.9**
MDNY	**Mudanya-Bursa**	**2.51**	**25**	*e*PN	**Pn**	**06 05 12.3**	**+1.2**
MDNY	**Mudanya-Bursa**	**2.51**	**25**	*e*Pn	**Pn**	**06 05 12.3**	**+1.2**
RKY	**Sarkoy-Tekirda**	**2.60**	**355**	*e*PN	**Pn**	**06 05 14.1**	**+1.7**
RKY	**Sarkoy-Tekirda**	**2.60**	**355**	*e*Pn	**Pn**	**06 05 14.1**	**+1.7**
ARMT	**Armutlu**	**2.69**	**23**	*e*PN	**Pn**	**06 05 14.8**	**+1.3**
ARMT	**Armutlu**	**2.69**	**23**	*e*Pn	**Pn**	**06 05 14.8**	**+1.3**
CAVI	**Cavuskoy**	**2.79**	**40**	*e*PN	**Pn**	**06 05 16.2**	**+1.3**
CAVI	**Cavuskoy**	**2.79**	**40**	*e*Pn	**Pn**	**06 05 16.2**	**+1.3**
ENEZ	**Enez**	**2.83**	**339**	*e*PN	**Pn**	**06 05 17.1**	**+1.6**
ENEZ	**Enez**	**2.83**	**339**	*e*Pn	**Pn**	**06 05 17.1**	**+1.6**
ALN	**Alexandroupoli**	**3.01**	**339**	*e*PB	**Pn**	**06 05 17.4**	**-0.6**
ALN	**Alexandroupoli**	**3.01**	**339**	*e*Pb	**Pn**	**06 05 17.4**	**-0.6**
HRT	**Hereke**	**3.20**	**31**	*e*PN	**Pn**	**06 05 22.5**	**+1.9**
HRT	**Hereke**	**3.20**	**31**	*e*Pn	**Pn**	**06 05 22.5**	**+1.9**
GULT	**Gulveren**	**3.31**	**44**	*e*PN	**Pn**	**06 05 23.4**	**+1.2**
GULT	**Gulveren**	**3.31**	**44**	*e*Pn	**Pn**	**06 05 23.4**	**+1.2**

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*ISCJB **01** 06:05:34.7±0.3, 38.°30N±0.°04×27.°38W±0.°03, h10^{km}, mb3.8/13, Error ellipse: s-maj=6.5km s-min=2.4km*

az=17.9

*IDC **01** 06:05:35.9±1.2, 38.°80N×26.°98W, h0km, mb3.5/6, mb1 3.8/6, mb1mx3.6/25, mbtmp3.5/6, Error ellipse: s-maj=49.8km s-min=22.5km az=29.0*

*CSEM **01** 06:05:38.2, 38.°45N×27.°39W, h4km, ML4.4, After PDA*

*PDA **01** 06:05:38.2±1.0, 38.°45N×27.°39W, h4km±5km, MD4.1, ML4.4, Error ellipse: s-maj=3.9km s-min=2.1km az=18.0*

ISC 01 06:05:34.2±0.6**, 38.°22N**±0.°05×**27.°38W**±0.°03**, h10km, n43, σ1.s62**/57**, mb3.8**/13**, 2D, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADH	**Angra Heroismo**	**0.45**	**15**	*i* P	**Pg**	**06 05 42.8**	**-0.2**
ADH				*e*S	**Sg**	**06 05 46.1**	**-2.8**
PID	**Ribeirinha**	**0.62**	**291**	*e*P	**Pn**	**06 05 48.4**	**-0.7**
PID				*i* S	**Sg**	**06 05 55.2**	**+0.8**
PID	**Ribeirinha**	**0.62**	**291**	*e*P	**Pn**	**06 05 48.4**	**-0.7**
PID				*i* S	**Sg**	**06 05 55.2**	**+0.8**
PMAN	**Manadas**	**0.69**	**307**	*i* P	**Pb**	**06 05 48.2**	**-0.1**
PMAN				*e*S	**Sg**	**06 05 55.9**	**-0.7**
ROSA	**Rosais**	**0.84**	**307**	*i* P	**Pg**	**06 05 50.4**	**+0.1**
ROSA				*e*S	**Sg**	**06 05 59.5**	**-1.8**
ROSA				A	A	06 06 04.8	
	8µm,0.4s						
PICO	**Pico**	**0.87**	**289**	*e*P	**Pb**	**06 05 51.9**	**+0.5**
PICO	**Pico**	**0.87**	**289**	*e*P	**Pb**	**06 05 51.9**	**+0.5**
PCAN	**Candelaria**	**0.90**	**286**	*i* P	**Pb**	**06 05 52.2**	**+0.3**
PCAN				*e*S	**Sg**	**06 06 02.9**	**-0.4**
PCAN				A	A	06 06 06.2	
	5µm,0.2s						
HOR	**Horta**	**1.03**	**288**	*e*P	**Pg**	**06 05 53.9**	**0.0**
HOR				*e*S	**Sg**	**06 06 05.1**	**-2.2**
HOR	**Horta**	**1.03**	**288**	*e*P	**Pg**	**06 05 53.9**	**0.0**
HOR				*e*S	**Sg**	**06 06 05.1**	**-2.2**
CALA	**Caldeira**	**1.10**	**290**	*e*P	**Pb**	**06 05 54.8**	**-0.5**
CALA	**Caldeira**	**1.10**	**290**	*e*P	**Pb**	**06 05 54.8**	**-0.5**
PCED	**Cedros**	**1.11**	**292**	*e*P	**Pb**	**06 05 54.4**	**-1.1**
PCED				*e*S	**Sb**	**06 06 07.4**	**-2.7**
PCED				A	A	06 06 09.1	
	4µm,0.3s						
PCED	**Cedros**	**1.11**	**292**	*e*P	**Pb**	**06 05 54.4**	**-1.1**
PCED				*e*S	**Sb**	**06 06 07.4**	**-2.7**
PSET	**Sete Cidades**	**1.37**	**106**	*e*P	**Pg**	**06 06 00.3**	**-0.2**
PSET				*e*S	**Sb**	**06 06 16.6**	**-0.9**
PSET				A	A	06 06 18.7	
	2µm,0.4s						
PSET	**Sete Cidades**	**1.37**	**106**	*e*P	**Pg**	**06 06 00.3**	**-0.2**
PSET				*e*S	**Sb**	**06 06 16.6**	**-0.9**
PDA	**Ponta Delgada**	**1.44**	**109**	*e*P	**Pg**	**06 06 01.3**	**-0.5**
PDA				*e*S	**Sb**	**06 06 18.9**	**-0.5**
PDA				A	A	06 06 21.3	
	1µm,0.3s						
PDA	**Ponta Delgada**	**1.44**	**109**	*e*P	**Pg**	**06 06 01.3**	**-0.5**
PDA				*e*S	**Sb**	**06 06 18.9**	**-0.5**
GRON	**Grota Negra**	**1.53**	**107**	*e*P	**Pg**	**06 06 04.1**	**+0.6**
GRON				*e*S	**Sg**	**06 06 23.6**	**+0.3**
GRON				A	A	06 06 29.5	
	346nm,0.2s						
CMLA	**Cha da Macela**	**1.54**	**107**	*e*P	**Pg**	**06 06 03.0**	**-0.7**
CMLA				*e*S	**Sb**	**06 06 21.4**	**-0.9**
CMLA				A	A	06 06 23.8	
	3µm,0.3s						
CMLA	**Cha da Macela**	**1.54**	**107**	*e*P	**Pg**	**06 06 03.0**	**-0.7**
CMLA				*e*S	**Sb**	**06 06 21.4**	**-0.9**
PSMA	**Santa Maria**	**2.17**	**124**	*e*P	**Pb**	**06 06 11.4**	**-2.1**
PSMA				*e*S	**Sn**	**06 06 36.1**	**-1.1**
PSMA				A	A	06 06 40.1	
	700nm,0.3s						
PSMN	**Pico do Norte,**	**2.21**	**123**	*e*P	**Pn**	**06 06 11.8**	**+1.0**
PSMN				*e*S	**Sn**	**06 06 36.0**	**-2.2**
PSMN				A	A	06 06 40.4	
	666nm,0.3s						
PSMN	**Pico do Norte,**	**2.21**	**123**	*e*P	**Pn**	**06 06 11.8**	**+1.0**
PSMN				*e*S	**Sn**	**06 06 36.0**	**-2.2**
EVO	**Evora**	**15.20**	**83**	*e*P	**Pn**	**06 09 06.6**	**-2.2**
	6.5nm,0.5s						
ESDC	**Sonseca Array**	**18.27**	**78**	P	**P**	**06 09 50.3**	**+2.4**
	0.8nm,0.3s,baz=276,slow=13,SNR=6.3						
ROSF	**Rostrenen**	**20.18**	**52**	*e*P	Pn	06 10 10.9	+0.3
	78nm,1.5s						
ETSF	**Etsaut**	**20.87**	**69**	*e*P	Pn	06 10 19.0	+0.1
	35nm,1.1s						
EPF	**Esparros**	**21.54**	**68**	*e*P	**P**	**06 10 25.5**	**+2.0**
	65nm,1.4s						
MFF	**Saint Martin d**	**21.70**	**59**	*e*P	**P**	**06 10 27.4**	**+2.2**
	35nm,1.1s						
GRR	**Gorron**	**21.71**	**54**	*e*P	**P**	**06 10 28.0**	**+2.7**
	26nm,1.1s						
EKA	**Eskdalemuir Ar**	**23.64**	**36**	P	**P**	**06 10 48.7**	**+3.3**
	0.5nm,0.5s,baz=221,slow=12,SNR=2.5						
BAIF	**Baives**	**25.38**	**52**	*e*P	**P**	**06 11 03.8**	**+2.4**
	27nm,1.2s						
TORD	**Torodi Ar. Bea**	**35.92**	**126**	P	P	06 12 39.6	+4.8
	0.3nm,0.6s,baz=313,slow=8.1,SNR=3.1						
AKASG	**Malin Array Be**	**41.31**	**54**	P	**P**	**06 13 21.1**	**+1.4**
	0.8nm,0.4s,baz=269,slow=8.7,SNR=3.8						
BRTR	**Keskin Array B**	**46.65**	**68**	P	**P**	**06 14 00.6**	**-2.3**
	0.6nm,0.4s,baz=304,slow=12,SNR=4.5						
YKA	**Yellowknife Ar**	**55.71**	**326**	P	**P**	**06 15 11.1**	**+0.7**
	0.2nm,0.7s,baz=70,slow=7.6,SNR=4.3						
PDAR	**Pinedale Array**	**60.28**	**303**	P	P	06 15 47.1	+4.0
	0.4nm,0.5s,baz=66,slow=7.0,SNR=2.4						
TXAR	**Lajitas Array**	**62.40**	**287**	P	**P**	**06 16 00.2**	**+2.7**
	0.6nm,0.8s,baz=78,slow=6.0,SNR=7.0						
ILAR	**Eielson Array**	**67.02**	**336**	P	**P**	**06 16 29.1**	**+2.2**
	0.1nm,0.7s,baz=58,slow=4.7,SNR=3.1						
SONM	**Songino Array**	**84.94**	**29**	P	P	06 18 13.0	+3.5
	0.2nm,0.4s,baz=343,slow=4.5,SNR=3.7						
SYO	**Syowa Base**	**117.63**	**158**⇓	*e*P	**PKPdf**	**06 24 15.6**	**-3.6**
SYO	**Syowa Base**	**117.63**	**158**⇓	*e*P	PKPdf	06 24 24.8	+5.6

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*BJI **01** 06:29:31.6, 6.°91S×101.°82E, h35km, mB5.4/29, mb5.1/54, Ms5.5/56, Ms7 5.1/51*

*IDC **01** 06:29:35.0±0.3, 5.°98S×102.°05E, h0km, mb5.0/33, mb1 5.0/35, mb1mx5.0/35, mbtmp5.0/35, ML4.9/2, MS5.0/28, Ms1 5.0/28, ms1mx4.8/41, Error ellipse: s-maj=12.0km s-min=8.2km az=57.0*

*AUST **01** 06:29:36.3±1.0, 6.°05S×101.°80E, h8km, Error ellipse: s-maj=0.9km s-min=0.5km az=233.0*

*ISCJB **01** 06:29:36.7±0.8, 6.°01S±0.°02×101.°86E±0.°02, h20km±5km, mb5.3/128, MS5.1/182, Error ellipse: s-maj=4.5km s-min=3.1km az=37.6*

*DJA **01** 06:29:38.8±0.8, 6°S±2°×10°2E±°, h15km±7km, M5.6/66, mb5.7/66, mB5.9/48, MLv6.0/27, Mw(mB)5.5/48, Mwp6.3/1*

*MOS **01** 06:29:39.0±1.0, 5.°91S×101.°99E, h33km, mb5.5/45, MS5.0/28, Error ellipse: s-maj=11.0km s-min=5.2km az=116.1*

*NEIC **01** 06:29:40.4±0.1, 5.°96S×101.°91E, h35km, mb5.3/44, MS5.2/132, Error ellipse: s-maj=5.3km s-min=3.6km az=52.0*

NEIC Felt [IV] at Bengkulu and [III] at Manna.

*TEH **01** 06:29:40.0, 6.°07S×101.°84E, h35km, ML5.5*

*GCMT **01** 06:29:40.3±0.2, 6.°09S×101.°82E, h29km±1km, MW5.6, Moment Tensor Solution. s59,c73; s14,c14; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.44±.08; $M_{\theta\theta}$-0.46±.07; $M_{\phi\phi}$0.89±.07; $M_{r\theta}$-0.20±.12; $M_{\theta\phi}$-2.85±.06; $M_{\phi r}$-0.85±.13; Best double couple: $M_0$3.10000×10^{17} NP1:ϕ_s97.00000°, δ73.00000°, λ-175.00000°. NP2:ϕ_s6.00000°, δ85.00000°, λ-17.00000°. Principal axes: T 3.2300, Plg9.0000°, Azm53.0000°; N -0.3200, Plg72.0000°, Azm170.0000°; P -2.9100, Plg16.0000°, Azm320.0000°; Data Used: II IU IC CN G. Surface waves: sta= 96, comp=158, per= 50.*

ISC 01 06:29:40.2±0.4**, 6.°02S**±0.°03×**101.°88E**±0.°04**, h34km**±1km**, h34km:pP-P, n743, σ1.s19**/686**, mb5.3**/128**, MS5.1**/182**, 68C-70D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.97**	**33**	P	**Pn**	**06 30 10.7**	**-0.6**
MBSI	**MBSI**	**2.28**	**10**	P	**Pn**	**06 30 15.4**	**-0.1**
LWLI	**Liwa**	**2.39**	**65**	P	**Pn**	**06 30 16.6**	**-0.5**
KSI	**Kapahiang**	**2.46**	**17**	P	**Pn**	**06 30 18.3**	**+0.2**
KSI				S	**Sn**	**06 30 45.0**	**-2.0**
KASI	**Kota Agung**	**2.65**	**79**	P	**Pn**	**06 30 20.3**	**-0.4**
BLSI	**Bandar Lampung**	**3.41**	**79**	P	**Pn**	**06 30 32.3**	**+1.2**
CGJI	**Cibinong**	**3.84**	**99**	P	**Pn**	**06 30 36.0**	**-1.0**
KRJI	**Kerinci**	**3.92**	**354**	P	**Pn**	**06 30 37.3**	**-1.0**
SBJI	**Serang**	**4.23**	**92**	P	**Pn**	**06 30 43.1**	**+0.7**
TNG	**Tangerang**	**4.74**	**92**	P	**Pn**	**06 30 50.8**	**+1.3**
TNG	**Tangerang**	**4.74**	**92**	P	**Pn**	**06 30 50.6**	**+1.1**
DBJI	**Dramaga**	**4.87**	**97**	P	**Pn**	**06 30 52.0**	**+0.8**
CBJI	**Citeko**	**4.96**	**95**	P	Pn	06 30 56.2	+3.8
	17µm,0.8s,177µm74nm						
PDSI	**Padang**	**5.27**	**344**	P	**Pn**	**06 30 55.0**	**-1.7**
	2µm,0.3s,150µm28nm						
RGRI	**Rengat**	**5.65**	**5**	P	Pb	06 31 11.2	-7.0
PPBI	**Pangkal Pinang**	**5.72**	**48**	P	**Pn**	**06 31 03.6**	**+0.7**
	482nm,0.8s,7µm1.9nm						
PPI	**Padang Panjang**	**5.72**	**345**	P	**Pn**	**06 31 01.8**	**-1.1**
	2µm,0.9s,25µm7.8nm						
PPI	**Padang Panjang**	**5.72**	**345**	P	**Pn**	**06 31 01.4**	**-1.5**
	baz=5.8,SNR=152						
PPI				S	**Sn**	**06 32 05.7**	**-1.8**
	baz=5.8,SNR=5.9						
LEM	**Lembang**	**5.76**	**98**	P	**Pn**	**06 31 05.0**	**+1.4**
	3µm,0.8s,26µm10nm						
LEM	**Lembang**	**5.76**	**98**	P	**Pn**	**06 31 05.8**	**+2.2**
	baz=5.8,SNR=96						
XMIS	**Christmas Isla**	**5.80**	**140**	P	Pn	06 30 57.7	-6.2
	baz=5.8,SNR=141						
XMIS				S	Sn	06 31 57.9	-11
	baz=5.8,SNR=5.9						
XMI	**Christmas Isla**	**5.80**	**140**	P	Pn	06 30 58.2	-5.8
	baz=5.8,SNR=47						
XMI				S	Sn	06 32 01.5	-7.8
	baz=5.8,SNR=6.6						
CISI	**Cisompet, Garu**	**6.09**	**105**	P	**Pn**	**06 31 06.4**	**-1.6**
	3µm,0.9s,56µm16nm						
BKNI	**Bangkinang**	**6.36**	**352**	P	**Pn**	**06 31 09.7**	**-2.0**
	676nm,1.2s,7µm6.0nm						
MNSI	**Mandailing Nat**	**7.15**	**341**	P	**Pn**	**06 31 19.7**	**-2.8**
	739nm,0.8s,10µm3.1nm						
TGJI	**Tegal**	**7.25**	**97**	P	**Pn**	**06 31 25.5**	**+1.6**
	1µm,0.9s,7µm2.7nm						
CLJI	**Cilicap**	**7.28**	**104**	P	**Pn**	**06 31 26.4**	**+2.0**
	842nm,0.9s,8µm3.1nm						
BJII	**Banjamegara**	**7.89**	**100**	P	**Pn**	**06 31 33.3**	**+0.6**
	591nm,1.1s,7µm2.1nm						
COCO	**West Island**	**7.90**	**219**	*i* P	**Pn**	**06 31 30.7**	**-2.1**
COCO	**West Island**	**7.90**	**219**	*e*Pn	**Pn**	**06 31 29.9**	**-2.9**
COCO				*e*Sn	Sn	06 32 47.4	-14
COCO	**West Island**	**7.90**	**219**	P	**Pn**	**06 31 30.9**	**-1.9**
	SNR=6.9						
COCO	**West Island**	**7.90**	**219**	P	**Pn**	**06 31 30.3**	**-2.5**
	2µm,0.7s,19µm6.0nm						
GSI	**Gunungsitoli**	**8.45**	**329**	P	**Pn**	**06 31 37.5**	**-2.9**
	873nm,0.8s,8µm3.1nm						
GSI	**Gunungsitoli**	**8.45**	**329**	P	**Pn**	**06 31 37.9**	**-2.5**
	baz=8.5,SNR=95						
SMRI	**Semarang**	**8.57**	**97**	P	**Pn**	**06 31 43.2**	**+1.2**
	937nm,0.7s,12µm3.5nm						
UGM	**Wanagama**	**8.79**	**103**	*e*Pn	**Pn**	**06 31 44.2**	**-0.8**
UGM	**Wanagama**	**8.79**	**103**	P	**Pn**	**06 31 44.3**	**-0.8**
	694nm,0.8s,11µm6.6nm						
UGM	**Wanagama**	**8.79**	**103**	P	**Pn**	**06 31 44.1**	**-0.9**
	baz=8.9,SNR=59						
UGM				S	**Sn**	**06 33 22.5**	**-0.5**
	baz=8.9,SNR=7.3						
PSI	**Prapat**	**9.24**	**341**	Pn	Pn	06 31 47.7	-3.7
PSI				Sn	Sn	06 33 25.4	-9.0
PSI	**Prapat**	**9.24**	**341**	P	Pn	06 31 47.7	-3.7
	63nm,0.8s,2µm						
PSI	**Prapat**	**9.24**	**341**	Pn	Pn	06 31 47.7	-3.7
	18nm,0.3s,baz=158,slow=15,SNR=28						
PSI				Sn	Sn	06 33 25.4	-9.0
	3.2nm,0.3s,baz=182,slow=23,SNR=6.9						
PSI				LR	LR	06 36 00.4	
	comp=Z,18µm,21.3s,baz=142,slow=42						
PSI	**Prapat**	**9.24**	**341**	P	Pn	06 31 48.5	-3.0
	baz=9.2,SNR=18						
PSI				S	Sn	06 33 28.0	-6.4
	baz=9.2,SNR=5.9						
PCJI	**Pacitan**	**9.48**	**104**	P	**Pn**	**06 31 53.2**	**-1.3**
	556nm,1.0s,6µm						
SJI	**Sawahan**	**9.96**	**100**	P	**Pn**	**06 32 01.0**	**-0.3**
	454nm,0.7s,5µm						
TSI	**Tuntungan**	**10.02**	**341**	P	Pn	06 32 05.7	+3.8
	328nm,0.9s						
PWJI	**Pagerwojo**	**10.05**	**102**	P	**Pn**	**06 32 00.9**	**-1.4**
	891nm,0.8s,7µm						
PBKI	**Pangkalan Bun**	**10.30**	**72**	P	**Pn**	**06 32 08.5**	**+2.7**
	634nm,0.9s						
IPM	**Ipoh**	**10.46**	**355**	*e*Pn	**Pn**	**06 32 07.6**	**-0.5**
	31nm,0.6s						
IPM	**Ipoh**	**10.46**	**355**	P	**Pn**	**06 32 08.0**	**0.0**
KRKI	**Karangkates**	**10.71**	**102**	P	**Pn**	**06 32 12.1**	**+0.8**
	740nm,0.7s						
KSM	**Kuching**	**11.24**	**49**	*e*Pn	**Pn**	**06 32 18.1**	**-0.5**
	100nm,1.1s						
KSM	**Kuching**	**11.24**	**49**	P	**Pn**	**06 32 19.1**	**+0.5**
KSM	**Kuching**	**11.24**	**49**	P	**Pn**	**06 32 18.9**	**+0.3**
	baz=11,SNR=16						
KULM	**Kulim**	**11.30**	**354**	*e*Pn	**Pn**	**06 32 18.0**	**-1.5**
KULM	**Kulim**	**11.30**	**354**	P	**Pn**	**06 32 18.6**	**-0.9**
STKI	**Sintang**	**11.33**	**58**	P	**Pn**	**06 32 22.2**	**+2.3**
	341nm,0.9s,17µm						
GMJI	**Gumukmas**	**11.69**	**102**	P	**Pn**	**06 32 26.9**	**+2.1**
	151nm,1.1s,2µm						
BLJI	**Banyuglugur**	**11.76**	**99**	P	**Pn**	**06 32 26.5**	**+0.8**
	198nm,0.5s,5µm						
KMMI	**Kalianget**	**12.05**	**96**	P	**Pn**	**06 32 30.1**	**+0.3**
	294nm,0.9s,4µm						
LHMI	**Lhok Sumawe**	**12.21**	**336**	P	**Pn**	**06 32 34.1**	**+2.2**
	153nm,0.8s,3µm						
BYJI	**Banyuwangi**	**12.57**	**101**	P	Pn	06 32 39.8	+2.9
	314nm,0.8s,18µm						
PLKI	**Palangkaraya**	**12.61**	**73**	P	Pn	06 32 42.1	+4.7
	435nm,1.0s						
NBBI	**Negara**	**12.86**	**101**	P	Pn	06 32 45.7	+5.0
	423nm,0.8s,4µm						
BBKI	**Banjar Baru**	**13.16**	**79**	P	**Pn**	**06 32 46.0**	**+1.0**
	163nm,0.9s,5µm126µm						
BSI	**Banda Aceh**	**13.19**	**330**	P	Pn	06 32 42.4	-3.0
	267nm,0.5s,4µm						
SBUM	**Sibu**	**13.32**	**51**	P	Pn	06 32 50.1	+3.0
SBUM	**Sibu**	**13.32**	**51**	P	**Pn**	**06 32 49.7**	**+2.6**
SRBI	**Singaraja**	**13.39**	**100**	P	**Pn**	**06 32 49.5**	**+1.4**
	284nm,0.8s,3µm						
DNP	**Denpasar**	**13.48**	**102**	P	**P**	**06 32 59.6**	**+1.5**
KHKI	**Kahang-Kahang**	**13.82**	**101**	P	**Pn**	**06 32 53.3**	**-0.6**
	177nm,0.8s,2µm						
BTM	**Bintulu**	**14.46**	**51**	P	**Pn**	**06 33 05.7**	**+3.0**
KBKI	**Kotabaru**	**14.49**	**80**	P	**Pn**	**06 33 03.6**	**+0.5**
	126nm,0.8s,3µm						
SMKI	**Samarinda**	**16.27**	**71**	P	**P**	**06 33 29.4**	**+0.3**
	363nm,1.4s,10µm						
KAPI	**Kappang**	**17.82**	**88**	P	**Pn**	**06 33 42.1**	**-3.7**
KAPI	**Kappang**	**17.82**	**88**	P	**Pn**	**06 33 42.1**	**-3.7**
	2.8nm,0.3s,baz=157,slow=16,SNR=13						
KAPI				LR	LR	06 42 00.1	
	comp=Z,6µm,18.2s,baz=87,slow=42						
SPSI	**Sidrap Palu**	**17.94**	**84**	P	**Pn**	**06 33 46.0**	**-1.3**
	82nm,1.8s,2µm						
TTSI	**Tana Toraja**	**18.13**	**81**	P	**P**	**06 33 50.5**	**+0.8**
	224nm,1.0s,5µm						
BKSI	**Bulukumba**	**18.17**	**89**	P	**Pn**	**06 33 48.8**	**-1.3**
	241nm,0.9s,2µm						
WSI	**Waingapu**	**18.60**	**102**	P	Pn	06 34 01.7	+6.3
	934nm,0.7s						
PCI	**Palu**	**18.63**	**75**	P	Pn	06 34 15.4	+20
	baz=19,SNR=3.3						
CHBT	**CHBT**	**18.66**	**1**	P	**P**	**06 33 55.3**	**-0.1**
	130nm,0.8s						
KKM	**Kota Kinabalu**	**18.66**	**50**	*e*P	**P**	**06 33 55.1**	**-0.6**
	120nm,0.6s						
KKM	**Kota Kinabalu**	**18.66**	**50**	P	**Pn**	**06 33 57.2**	**+1.0**
KKM	**Kota Kinabalu**	**18.66**	**50**	P	**Pn**	**06 33 56.6**	**+0.4**
KKM	**Kota Kinabalu**	**18.66**	**50**	P	**P**	**06 33 55.7**	**0.0**
KKM	**Kota Kinabalu**	**18.66**	**50**	P	**P**	**06 33 55.7**	**0.0**
	baz=19,SNR=17						
TSM	**Tawau**	**18.98**	**58**	P	**Pn**	**06 34 00.2**	**+0.3**
SDKM	**Sandakan**	**19.18**	**53**	P	**Pn**	**06 34 02.3**	**-0.2**
SDKM	**Sandakan**	**19.18**	**53**	P	**P**	**06 34 01.2**	**-0.2**
KDM	**Kudat**	**19.69**	**49**	P	**P**	**06 34 07.5**	**+0.6**
MYLDM	**Lahad Datu**	**19.98**	**56**	P	**Pn**	**06 34 11.9**	**0.0**
MMRI	**Maumere**	**20.36**	**99**	P	**P**	**06 34 13.3**	**-0.8**
	642nm,0.9s,6µm						
GIRL	**Giralia**	**20.38**	**145**	P	**P**	**06 34 15.3**	**+1.0**
	baz=20,SNR=12						
GIRL				S	S	06 37 42.9	-18
	baz=20,SNR=3.7						
SRDT	**SRDT**	**20.42**	**352**	P	Pn	06 34 16.6	-0.4
	25nm,1.0s,4µm						
KDI	**Kendari**	**20.76**	**85**	P	**P**	**06 34 19.2**	**+0.7**
	95nm,0.8s,1µm						
MRSI	**Marisa**	**21.04**	**73**	P	**P**	**06 34 22.3**	**+0.8**
	600nm,0.7s,5µm						
LUWI	**Luwuk**	**21.43**	**77**	P	**P**	**06 34 26.1**	**+0.5**
	364nm,1.1s,7µm						
MBWA	**Marble Bar**	**22.93**	**133**	*e*P	**P**	**06 34 40.6**	**-1.0**
	117nm,1.5s						
MBWA				LR	LR		
	comp=Z,4µm,19.0s						
MBWA	**Marble Bar**	**22.93**	**133**	P	**P**	**06 34 41.7**	**+0.1**
	SNR=6.7						
KMSI	**Cibinong**	**23.02**	**74**	P	P	06 34 51.1	+8.5
MNI	**Manado**	**24.10**	**73**	P	**P**	**06 34 56.3**	**+3.2**
	comp=Z,261nm,0.9s						
CM31	**Chiang Mai Arr**	**24.49**	**353**	*e*P	**P**	**06 34 56.8**	**+0.2**
	comp=Z,52nm,0.8s						
CMAR	**Chiang Mai Arr**	**24.49**	**353**	P	**P**	**06 34 56.5**	**-0.1**
CMAR				S	**S**	**06 39 14.8**	**-0.1**
CMAR	**Chiang Mai Arr**	**24.49**	**353**	P	**P**	**06 34 56.5**	**-0.1**
	comp=Z,40nm,0.8s,baz=188,slow=8.0,SNR=186						
CMAR				S	**S**	**06 39 14.8**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=185,slow=17,SNR=1.3						
CMAR				LR	LR	06 46 25.6	
	comp=Z,4µm,18.3s,baz=175,slow=41						
CHTO	**Chiang Mai**	**24.84**	**353**	*e*P	**P**	**06 35 00.0**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,50nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,2µm,21.0s						
CHTO	**Chiang Mai**	**24.84**	**353**	*e*P	**P**	**06 35 00.0**	**+0.2**
	comp=Z,50nm,1.0s						
CHTO				LR	LR		
	comp=Z,2µm,21.0s						
CHTO	**Chiang Mai**	**24.84**	**353**	P	**P**	**06 35 00.4**	**+0.6**
	SNR=13						
CHTO	**Chiang Mai**	**24.84**	**353**	P	**P**	**06 34 59.8**	**0.0**
	comp=Z,71nm,1.0s,comp=Z,1µm						
PALK	**Pallekele**	**24.91**	**302**	*e*P	**P**	**06 35 00.2**	**-0.3**
	comp=Z,442nm,2.7s						
PALK	**Pallekele**	**24.91**	**302**	P	**P**	**06 35 03.5**	**+3.0**
	SNR=6.5						
PALK	**Pallekele**	**24.91**	**302**	P	**P**	**06 35 03.9**	**+3.4**
	comp=Z,39nm,2.7s,comp=Z,1µm						
NLAI	**Namlea**	**25.29**	**85**	P	**P**	**06 35 03.7**	**-0.2**
	comp=Z,79nm,0.8s,comp=Z,994nm						
MEEK	**Meekatharra**	**25.98**	**144**	P	**P**	**06 35 09.9**	**-0.2**
	baz=26,SNR=6.2						
QIZ	**Qiongzhong**	**26.10**	**17**	P	**P**	**06 35 12.9**	**+1.8**
QIZ				S	**S**	**06 39 44.1**	**+3.6**
QIZ				LR	LR		
	comp=N,4µm,18.2s						
QIZ				LR	LR		
	comp=E,3µm,19.8s						
QIZ				LR	LR		
	comp=Z,3µm,17.5s						
FITZ	**Fitzroy Crossi**	**26.11**	**119**	*e*P	**P**	**06 35 11.0**	**-0.3**
	comp=Z,60nm,1.0s						
FITZ				S	S	06 39 57.3	+17
FITZ	**Fitzroy Crossi**	**26.11**	**119**	P	**P**	**06 35 11.5**	**+0.1**
	comp=Z,45nm,0.9s,baz=282,slow=5.2,SNR=47						
FITZ				S	S	06 39 57.3	+17
	comp=Z,4.4nm,0.6s,baz=303,slow=17,SNR=2.5						
FITZ	**Fitzroy Crossi**	**26.11**	**119**	P	**P**	**06 35 11.4**	**+0.1**
	baz=26,SNR=38						
FITZ				S	**S**	**06 39 43.5**	**+2.6**
	baz=26,SNR=7.3						
LBMI	**Labuha**	**26.12**	**79**	P	**P**	**06 35 13.0**	**+1.5**
	comp=Z,270nm,1.1s,comp=Z,4µm						
TNTI	**Ternate**	**26.33**	**76**	P	**P**	**06 35 12.4**	**-0.9**
	comp=Z,208nm,1.2s,comp=Z,3µm						
DAV	**Davao City (W)**	**26.99**	**62**	P	**P**	**06 35 19.0**	**-0.2**
DAV				LR	LR		
	comp=Z,3µm,19.0s						
DAV	**Davao City (W)**	**26.99**	**62**	P	**P**	**06 35 20.4**	**+1.1**
	SNR=7.0						
DAV	**Davao City (W)**	**26.99**	**62**	P	**P**	**06 35 19.0**	**-0.2**
	comp=Z,186nm,0.4s,baz=262,slow=4.9,SNR=5.5						
DGAR	**Diego Garcia**	**29.25**	**266**	PFAKE		06 35 50.0	+11
DGAR				LR	LR		
	comp=Z,3µm,20.0s						
MTN	**Manton Dam**	**29.62**	**105**	P	**P**	**06 35 43.2**	**+0.4**
	baz=30,SNR=52						
VIS	**Vishakhapatnam**	**29.87**	**322**	*e*P	**P**	**06 35 44.3**	**-0.5**
NWAO	**Narrogin (SRO)**	**30.35**	**154**	P	**P**	**06 35 49.7**	**+0.7**
NWAO	**Narrogin (SRO)**	**30.35**	**154**	P	**P**	**06 35 49.7**	**+0.7**
	comp=Z,14nm,0.8s,baz=0.0,slow=6.1,SNR=3.0						
NWAO				LR	LR	06 45 57.3	
	comp=Z,5µm,20.0s,baz=316,slow=32						
FAKI	**Fak Fak**	**30.43**	**86**	P	**P**	**06 35 48.5**	**-1.4**
	comp=Z,89nm,1.1s,comp=Z,2µm						
TLE	**Tual**	**30.70**	**91**	P	**P**	**06 35 52.0**	**-0.3**
	baz=31,SNR=4.3						
KDU	**Kakadu**	**30.88**	**105**	P	**P**	**06 35 53.4**	**-0.6**
	baz=31,SNR=10						
KMI	**Kunming**	**30.97**	**2**	P	**P**	**06 35 56.9**	**+2.2**
KMI				pP	**pP**	**06 36 05.1**	**+0.7**
KMI				sP	**sP**	**06 36 08.8**	**+0.3**
KMI				S	**S**	**06 40 59.2**	**+1.8**
KMI				pmax	pmax		
	comp=Z,26nm,1.0s						
KMI				LR	LR		
	comp=N,3µm,20.5s						
KMI				LR	LR		
	comp=E,10µm,18.9s						
KMI				LR	LR		
	comp=Z,3µm,20.5s						
KMBL	**Kambalda**	**31.42**	**146**	P	**P**	**06 35 58.8**	**+0.4**
	baz=32,SNR=12						
GYA	**Guiyang**	**32.62**	**8**⇑	*i*P	**P**	**06 36 08.9**	**-0.2**
GYA				pP	pP	06 36 22.4	+3.6
GYA				PP	**PP**	**06 37 22.0**	**-1.3**
GYA				S	**S**	**06 41 26.8**	**+3.8**
GYA				sS	sS	06 41 43.9	+4.9
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,4.8s						
GYA				LR	LR		
	comp=N,930nm,17.5s						
GYA				LR	LR		
	comp=E,710nm,18.7s						
GYA				LR	LR		
	comp=Z,840nm,17.1s						
HYB	**Hyderabad**	**32.76**	**316**	*i* P	**P**	**06 36 10.5**	**+0.1**
SHL	**Shillong**	**32.87**	**343**⇓	*i*P	**P**	**06 36 11.0**	**-0.4**
	comp=Z,7.5nm,0.6s						
SHL				*i* x	x	06 41 22.0	
WRA	**Warramunga Arr**	**34.43**	**117**	P	**P**	**06 36 24.9**	**-0.1**
WRA				S	**S**	**06 41 47.5**	**-3.8**
WRA	**Warramunga Arr**	**34.43**	**117**	P	**P**	**06 36 24.9**	**-0.1**
	comp=Z,26nm,0.9s,baz=290,slow=10,SNR=112						
WRA				S	**S**	**06 41 47.5**	**-3.8**
	comp=Z,1.4nm,0.9s,baz=288,slow=16,SNR=3.1						
WRA				LR	LR	06 50 12.7	
	comp=Z,2µm,21.6s,baz=10.0,slow=36						
WRAB	**Tennant Creek**	**34.44**	**117**	*e*P	**P**	**06 36 24.8**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,27nm,0.6s						
WRAB				MLR	MLR		
	comp=Z,2µm,21.0s						
WRAB	**Tennant Creek**	**34.44**	**117**	*e*P	**P**	**06 36 24.8**	**-0.2**
	comp=Z,27nm,0.6s						
WRAB				LR	LR		
	comp=Z,2µm,21.0s						
FORT	**Forrest**	**34.80**	**138**	*e*P	**P**	**06 36 28.1**	**+0.1**
	comp=Z,36nm,0.7s						
FORT	**Forrest**	**34.80**	**138**	P	**P**	**06 36 28.3**	**+0.4**
	baz=35,SNR=10.0						
ASAR	**Alice Springs**	**35.44**	**123**	P	**P**	**06 36 33.7**	**0.0**
ASAR				PcP	**PcP**	**06 39 03.8**	**+0.7**
ASAR				S	**S**	**06 42 04.5**	**-2.3**
ASAR	**Alice Springs**	**35.44**	**123**	P	**P**	**06 36 33.7**	**0.0**
	comp=Z,11nm,0.7s,baz=300,slow=8.0,SNR=87						
ASAR				PcP	**PcP**	**06 39 03.8**	**+0.7**
	comp=Z,3.4nm,0.7s,baz=291,slow=1.9,SNR=4.3						
ASAR				S	**S**	**06 42 04.5**	**-2.3**
	comp=Z,1.5nm,0.8s,baz=308,slow=14,SNR=4.6						
ASAR				LR	LR	06 51 29.5	
	comp=Z,2µm,18.4s,baz=288,slow=37						
AS31	**Alice Springs**	**35.44**	**123**	*e*P	**P**	**06 36 33.6**	**-0.1**
ODAN	**Odare**	**35.57**	**337**	*e*P	**P**	**06 36 35.4**	**+0.5**
	comp=Z,247nm,0.8s						
KAD	**Karad**	**35.86**	**311**	*e*P	**P**	**06 36 37.9**	**+0.6**
TAPN	**Taplejung**	**35.89**	**338**	*e*P	**P**	**06 36 38.8**	**+1.1**
	comp=Z,389nm,0.8s						
YHNB	**Yeheng**	**35.93**	**31**	PFAKE		06 36 50.0	+12
YHNB				LR	LR		
	comp=Z,2µm,21.0s						

RAMN Ramite 35.96 336 *e*P P 06 36 39.2 +1.0
comp=Z,174nm,0.7s
TATO Taipei 36.24 31 PFAKE 06 36 50.0 +10
TATO LR LR
comp=Z,3µm,21.0s
CD2 Chengdu 36.76 3 ⇑P P 06 36 45.1 +0.3
CD2 pP pP 06 36 54.8 +0.2
CD2 sP sP 06 36 58.8 +0.1
CD2 PP PnPn 06 38 11.7 +2.6
CD2 PcP PcP 06 39 06.3 -0.5
CD2 S S 06 42 27.6 +0.9
CD2 PcS PcS 06 42 53.3 -1.6
CD2 pmax pmax
comp=Z,50nm,0.7s
CD2 pmax pmax
comp=Z,310nm,6.8s
CD2 LR LR
comp=N,3µm,20.1s
CD2 LR LR
comp=E,11µm,22.5s
CD2 LR LR
comp=Z,3µm,17.6s
POO Poona 36.87 312 ⇑*i*P P 06 36 44.0 -1.9
comp=Z,60nm,1.0s
POO *e*x x 06 57 45.0
SMPI Sarmi 36.95 85 P P 06 36 45.8 -0.8
LSA Lhasa 36.98 344 P P 06 36 47.9 +0.7
PKI Pulchoki 36.99 335 *e*P P 06 36 47.5 +0.3
PKIN Phulchoki 37.01 335 *e*P P 06 36 47.7 +0.5
GUN Gumba 37.10 336 *e*P P 06 36 48.8 +0.7
comp=Z,138nm,0.5s
DMN Daman 37.16 335 *e*P P 06 36 48.9 +0.5
comp=Z,82nm,0.9s
KKN Kakani 37.24 335 *e*P P 06 36 49.6 +0.5
comp=Z,139nm,0.9s
KOLN Koldanda 37.95 333 *e*P P 06 36 55.8 +0.7
comp=Z,115nm,0.7s
WHN Wuhan 38.27 18 P P 06 36 57.9 +0.4
WHN S S 06 42 50.9 +1.5
WHN LR LR
comp=N,8µm,18.3s
WHN LR LR
comp=E,20µm,18.4s
WHN LR LR
comp=Z,7µm,17.8s
DANN Dangsing 38.38 334 *e*P P 06 36 59.2 +0.4
comp=Z,86nm,0.6s
PYUN Piuthan 38.51 333 *e*P P 06 37 00.2 +0.4
comp=Z,133nm,0.8s
JAY Jayapura 38.87 87 P P 06 37 01.4 -1.5
baz=39,SNR=5.6
QIS Mount Isa 39.33 115 P P 06 37 07.0 +0.3
baz=39,SNR=17
XAN Xi'an 40.40 9 P P 06 37 14.2 -1.1
XAN pP pP 06 37 24.4 -0.8
XAN sP sP 06 37 32.1 +2.9
XAN S S 06 43 19.8 -1.6
XAN pmax pmax
comp=Z,19nm,0.8s
XAN LR LR
comp=N,1µm,14.5s
XAN LR LR
comp=E,2µm,16.1s
XAN LR LR
comp=Z,920nm,17.7s
NJ2 Nanjing 41.17 22 *e*P P 06 37 23.1 +1.5
NJ2 pP pP 06 37 31.2 -0.3
NJ2 sP sP 06 37 36.7 +1.1
NJ2 S S 06 43 35.0 +2.1
NJ2 sS sS 06 43 50.0 +0.8
NJ2 pmax pmax
comp=Z,20nm,0.8s
NJ2 pmax pmax
comp=Z,360nm,5.8s
NJ2 LR LR
comp=N,2µm,25.0s
NJ2 LR LR
comp=E,3µm,21.5s
NJ2 LR LR
comp=Z,2µm,23.4s
COEN Coen 41.38 104 *e*P P 06 37 23.4 -0.3
comp=Z,176nm,0.9s
COEN Coen 41.38 104 P P 06 37 23.3 -0.3
baz=41,SNR=41
BBOO Buckleboo 41.49 134 P P 06 37 24.0 -0.3
baz=42,SNR=11
NDI New Delhi 41.89 327 *e*P P 06 37 24.5 -3.1
LZH Lanzhou 41.92 2 ⇑P P 06 37 29.3 +1.3
LZH pP pP 06 37 39.4 +1.5
LZH sP sP 06 37 44.0 +2.1
LZH S S 06 43 47.0 +2.7
LZH sS sS 06 44 04.6 +4.0
LZH pmax pmax
comp=Z,50nm,1.0s
LZH pmax pmax
comp=Z,270nm,5.9s
LZH LR LR
comp=N,3µm,16.2s
LZH LR LR
comp=E,6µm,17.2s
LZH LR LR
comp=Z,3µm,16.1s
SDNR Sundarnagar 44.24 329 *e*P P 06 37 46.0 -0.7
PMG Port Moresby 44.97 97 *e*P P 06 37 52.7 0.0
comp=Z,112nm,1.0s
PMG LR LR
comp=Z,3µm,21.0s
PMG Port Moresby 44.97 97 P P 06 37 52.7 0.0
comp=Z,124nm,1.2s,comp=Z,2µm
STKA Stephens Creek 45.12 130 *e*P P 06 37 54.1 +0.5
comp=Z,6.8nm,0.8s
STKA Stephens Creek 45.12 130 P P 06 37 54.2 +0.5
comp=Z,27nm,0.6s,baz=302,slow=8.1,SNR=79
STKA LR LR 06 55 53.8
comp=Z,3µm,22.0s,baz=274,slow=35
STKA Stephens Creek 45.12 130 P P 06 37 54.1 +0.5
baz=45,SNR=35
QLP Quilpie 45.21 122 P P 06 37 55.6 +1.2
baz=45,SNR=24
GTA Gaotai 45.24 358 *e*P P 06 37 55.6 +1.0
GTA pP pP 06 38 06.5 +1.9
GTA sP sP 06 38 09.8 +1.2
GTA PcS PcS 06 43 28.9 +0.7
GTA S S 06 44 31.1 -1.6
GTA ScS ScS 06 47 47.6 -1.5
GTA pmax pmax
comp=Z,19nm,0.8s
GTA pmax pmax
comp=Z,290nm,9.0s
GTA LR LR
comp=N,3µm,21.8s
GTA LR LR
comp=E,4µm,22.8s
GTA LR LR
comp=Z,3µm,17.6s
CTA Charters Tower 45.27 112 LR LR 06 58 10.9
comp=Z,2µm,19.9s,baz=278,slow=38
CTAO Charters Tower 45.27 112 *e*P P 06 37 55.8 +0.7
CTAO pmax pmax
comp=Z,36nm,1.0s
CTAO MLR MLR
comp=Z,3µm,22.0s
CTAO Charters Tower 45.27 112 *e*P P 06 37 55.8 +0.7
comp=Z,36nm,1.0s
CTAO LR LR
comp=Z,3µm,22.0s
THN Thein Dam 45.63 329 *e*P P 06 37 56.8 -0.8
GUMO Guam 46.92 65 PFAKE 06 38 20.0 +12
GUMO LR LR
comp=Z,1µm,22.0s
BTO Baotou 47.00 8 *e*P P 06 38 06.7 -1.6
RER Riviere de l'E 47.10 247 PFAKE 06 38 20.0 +10
RER LR LR
comp=Z,1µm,19.0s
HHC Hu-ho-hao-te 47.48 10 *e*P P 06 38 13.2 +1.1
HHC pP pP 06 38 24.0 +1.8
HHC sP sP 06 38 27.5 +1.3
HHC PP PP 06 40 05.0 +1.1
HHC S S 06 45 05.9 +1.2
HHC ScS ScS 06 48 02.0 -1.6
HHC SS SS 06 48 29.1 -3.9
HHC pmax pmax
comp=Z,77nm,0.9s
HHC pmax pmax
comp=Z,1µm,8.0s
HHC LR LR
comp=N,2µm,16.6s
HHC LR LR
comp=E,7µm,16.4s
HHC LR LR
comp=Z,5µm,17.8s
ARPS Mount Arapiles 47.61 136 P P 06 38 14.8 +1.6
baz=48,SNR=9.5
JNU Nakatsue 47.68 33 P P 06 38 12.7 -1.0
JNU Nakatsue 47.68 33 P P 06 38 12.7 -1.0
comp=Z,14nm,0.8s,baz=207,slow=2.3,SNR=2.9
JNU LR LR 06 58 00.2
comp=Z,1µm,21.8s,baz=146,slow=36
BJI Beijing 47.69 15 P P 06 38 13.4 -0.2
BJI S S 06 45 07.9 +0.5
BJI pmax pmax
comp=Z,49nm,0.8s
BJI pmax pmax
comp=Z,180nm,4.0s
BJI LR LR
comp=N,3µm,21.3s
BJI LR LR
comp=E,5µm,20.0s
BJI LR LR
comp=Z,940nm,23.9s
CMSA Cobar Meteorol 48.16 127 P P 06 38 18.5 +0.9
baz=48,SNR=73
RMQ Roma 49.04 120 P P 06 38 26.1 +1.7
baz=49,SNR=9.7
INCN Inchon 49.05 26 PFAKE 06 38 40.0 +16
INCN LR LR
comp=Z,1µm,20.0s
KSAR Wonju Array Be 49.58 27 P P 06 38 27.7 -0.5
KSRS Korea Array 49.61 27 P P 06 38 27.7 -0.7
comp=Z,7.8nm,0.6s,baz=233,slow=7.4,SNR=17
KSRS LR LR 06 58 37.5
comp=Z,1µm,19.6s,baz=39,slow=35
EIDS Eidsvold 50.78 118 *e*P P 06 38 36.8 -0.9
comp=Z,27nm,1.2s
CBIJ Chichi jima 51.03 48 LR LR 06 59 53.5
comp=Z,1µm,20.9s,baz=359,slow=36
WMQ Urumqi 51.24 347 P P 06 38 42.0 +1.3
WMQ pP pP 06 38 52.0 +1.1
WMQ sP sP 06 38 56.0 +1.2
WMQ PP PP 06 40 40.0 +2.0
WMQ S S 06 45 57.0 -0.2
WMQ ScS ScS 06 48 26.0 -2.8
WMQ SS SS 06 49 32.0 -1.2
WMQ pmax pmax
comp=Z,89nm,0.8s
WMQ pmax pmax
comp=Z,1µm,8.0s
WMQ LR LR
comp=N,2µm,20.0s
WMQ LR LR
comp=E,1µm,20.0s
WMQ LR LR
comp=Z,1µm,20.0s
KSH Kashi 51.24 334 P P 06 38 39.2 -1.7
KSH pP pP 06 38 49.1 -1.9
KSH sP sP 06 38 53.3 -1.7
KSH PcP PcP 06 39 54.0 -1.8
KSH PP PP 06 40 37.6 -0.6
KSH ScP ScP 06 43 45.9 -4.1
KSH PcS PcS 06 43 50.8 -2.8
KSH S S 06 45 54.5 -3.0
KSH ScS ScS 06 48 23.5 -5.7
KSH SS SS 06 49 28.7 -4.9
KSH pmax pmax
comp=Z,90nm,0.8s
KSH pmax pmax
comp=Z,470nm,2.7s
KSH LR LR
comp=N,2µm,15.7s
KSH LR LR
comp=E,2µm,16.1s
KSH LR LR
comp=Z,4µm,20.4s
YNG Young 51.32 130 P P 06 38 42.8 +1.3
baz=51,SNR=14
SMDO Samad 51.66 306 P P 06 38 46.3 +1.9
SNR=9.8
CAN Canberra 52.17 131 *e*P P 06 38 47.7 -0.2
CAN pmax pmax
comp=Z,124nm,1.6s
CAN MLR MLR
comp=Z,3µm,20.0s
CAN Canberra 52.17 131 *e*P P 06 38 47.7 -0.2
comp=Z,124nm,1.6s
CAN LR LR
comp=Z,3µm,20.0s
BSY Bisya 52.21 305 P P 06 38 50.1 +1.8
SNR=6.2
HOQ Hoqain 52.51 306 P P 06 38 52.2 +1.7
SNR=5.3
ARQ Araqi 53.03 305 P P 06 38 55.7 +1.3
SNR=6.4
ABTO Aybut 53.31 297 P P 06 38 57.5 +0.9
SNR=5.2
ULHL Ulahol 53.42 336 P P 06 38 57.6 +0.5
SNR=23
KZA Kyzart 53.68 336 P P 06 38 59.4 +0.2
SNR=41
SONM Songino Array 53.77 4 P P 06 39 00.7 +1.2
SONM PcP PcP 06 40 05.8 +0.6
SONM Songino Array 53.77 4 P P 06 39 00.7 +1.2
comp=Z,45nm,0.8s,baz=181,slow=8.8,SNR=288
SONM PcP PcP 06 40 05.8 +0.6
comp=Z,11nm,0.7s,baz=186,slow=4.5,SNR=2.9
SONM LR LR 07 06 20.5
comp=Z,3µm,18.0s,baz=174,slow=41
ULN Ulaanbaatar 53.85 4 *e*P P 06 39 01.1 +1.0
comp=Z,21nm,0.7s
ULN LR LR
comp=Z,2µm,19.0s
ULN Ulaanbaatar 53.85 4 P P 06 39 01.4 +1.3
SNR=16
ULN Ulaanbaatar 53.85 4 P P 06 39 00.9 +0.8
CN2 Changchun 53.97 21 *e*P P 06 38 59.9 -1.0
CN2 *e*pP pP 06 39 10.0 -1.0
CN2 *e*S S 06 46 33.8 -0.6
CN2 pmax pmax
comp=Z,30nm,1.2s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,2µm,18.0s
CN2 LR LR
comp=E,2µm,18.0s
CN2 LR LR
comp=Z,2µm,18.0s
ASHO Ashiyiah 54.04 306 P P 06 39 02.7 +1.0
SNR=6.3
HATD Hatta, Dubai 54.05 306 P P 06 39 02.5 +0.7
SNR=5.4
TKM2 Tokmak 2 54.24 336 *i* P P 06 39 02.9 -0.2
TKM2 Tokmak 2 54.24 336 *e*P P 06 39 03.0 -0.2
comp=Z,44nm,0.8s
TKM2 LR LR
comp=Z,1µm,20.0s
TKM2 Tokmak 2 54.24 336 P P 06 39 03.0 -0.2
SNR=48
KBK Karagaybulak 54.28 336 P P 06 39 04.0 +0.6
SNR=15
MAJO Matsushiro 54.30 36 *e*P P 06 39 01.1 -2.4
MAJO pmax pmax
comp=Z,17nm,0.8s
MAJO MLR MLR
comp=Z,2µm,22.0s
MAJO Matsushiro 54.30 36 *e*P P 06 39 01.1 -2.4
comp=Z,17nm,0.8s
MAJO LR LR
comp=Z,2µm,22.0s
MAT Matsushiro 54.30 36 P P 06 39 02.3 -1.2
MJAR Matsushiro Arr 54.30 36 P P 06 39 01.5 -2.0
MJAR Matsushiro Arr 54.30 36 P P 06 39 01.5 -2.0
comp=Z,7.8nm,0.7s,baz=220,slow=8.3,SNR=17
TAU Tasmania Unive 54.31 140 PFAKE 06 39 20.0 +17
TAU LR LR
comp=Z,2µm,19.0s
AML Almayashu 54.38 334 P P 06 39 04.3 -0.1
SNR=22
AAK Ala-Archa 54.45 335 *d i*P P 06 39 04.7 +0.1
AAK pmax pmax
comp=Z,145nm,2.6s
AAK Ala-Archa 54.45 335 P P 06 39 04.7 +0.1
AAK PcP PcP 06 40 07.9 0.0
AAK LR LR
comp=Z,1µm,20.0s
AAK Ala-Archa 54.45 335 P P 06 39 05.0 +0.4
SNR=16
AAK Ala-Archa 54.45 335 P P 06 39 05.6 +1.0
SNR=13
AAK Ala-Archa 54.45 335 P P 06 39 04.7 +0.1
comp=Z,9.5nm,0.7s,baz=144,slow=6.3,SNR=27
AAK PcP PcP 06 40 07.9 0.0
comp=Z,9.4nm,0.7s,baz=123,slow=3.8,SNR=5.1
FRU Bishkek 54.56 336 *e*P P 06 39 05.5 +0.2
FRU *e* 06 46 43.0
FRU pmax pmax
comp=Z,160nm,2.4s
CHMS Chumysh 54.65 336 P P 06 39 06.2 +0.3
SNR=7.7
OPO Ambohidratompo 54.67 252 P P 06 39 08.3 +1.6
OPO Ambohidratompo 54.67 252 P P 06 39 08.3 +1.6
comp=Z,4.9nm,0.7s,baz=59,slow=3.7,SNR=8.7
ABPO Ambohimpanom 54.68 251 PFAKE 06 39 20.0 +13
ABPO LR LR
comp=Z,771nm,19.0s
EKS2 Erkin-Say 54.77 335 *e*P P 06 39 07.1 +0.2
EKS2 pmax pmax
comp=Z,62nm,0.8s
EKS2 MLR MLR
comp=Z,952nm,20.0s
EKS2 Erkin-Say 54.77 335 *e*P P 06 39 07.1 +0.2
comp=Z,62nm,0.8s
EKS2 LR LR
comp=Z,952nm,20.0s
EKS2 Erkin-Say 54.77 335 P P 06 39 07.1 +0.2
SNR=71
USP Ospenovka 54.97 336 P P 06 39 08.7 +0.5
SNR=6.5
MK31 Makanchi Array 55.38 344 *e*P P 06 39 10.7 -0.4
MK31 Makanchi Array 55.38 344 *e*P P 06 39 10.7 -0.4
MKAR Makanchi Array 55.38 344 P P 06 39 11.1 0.0
MKAR S S 06 46 54.4 +1.0
MKAR Makanchi Array 55.38 344 P P 06 39 11.1 0.0
MKAR S S 06 46 54.4 +1.0
MKAR Makanchi Array 55.38 344 P P 06 39 11.1 0.0
comp=Z,50nm,0.8s,baz=147,slow=7.4,SNR=383
MKAR S S 06 46 54.4 +1.0
comp=Z,1.8nm,1.0s,baz=154,slow=14,SNR=6.7
MKAR LR LR 07 04 42.9
comp=Z,608nm,20.3s,baz=26,slow=38
ZAK Zakamensk 56.19 1 *e*P P 06 39 17.3 +0.4
ZAK *e* 06 40 14.8
ZAK pmax pmax
comp=Z,13nm,0.8s
MDJ Mudanjiang 56.23 24 P P 06 39 18.2 +1.0
MDJ pP pP 06 39 27.4 0.0
MDJ sP sP 06 39 31.1 -0.2
MDJ PcS PcS 06 44 15.6 +0.7
MDJ S S 06 47 07.2 +2.6
MDJ sS sS 06 47 23.1 +1.7
MDJ pmax pmax
comp=Z,8.0nm,1.2s
MDJ LR LR
comp=N,2µm,20.8s
MDJ LR LR
comp=E,1µm,20.8s
MDJ LR LR
comp=Z,1µm,18.2s
KK31 Karatay Array 56.56 333 P P 06 39 18.9 -0.7
KK31 pmax pmax
comp=Z,8.0nm,0.5s
KKAR Karatay Array 56.56 333 *e*P P 06 39 18.8 -0.8
KKAR pmax pmax
comp=Z,12nm,0.7s
KKAR Karatay Array 56.56 333 *e*P P 06 39 18.8 -0.8
comp=Z,12nm,0.7s
USRK Ussuriysk Arra 56.88 26 P P 06 39 21.4 -0.4
comp=Z,16nm,0.6s,baz=214,slow=6.7,SNR=47
MOY Mondy 57.46 359 *e*P P 06 39 27.1 +1.2
MOY pmax pmax
comp=Z,44nm,2.6s
TLY Talaya 57.49 1 *e*P P 06 39 25.6 -0.4
TLY pmax pmax
comp=Z,23nm,0.8s
TLY MLR MLR
comp=Z,1µm,18.0s
TLY Talaya 57.49 1 *e*P P 06 39 27.2 +1.1
comp=Z,24nm,0.8s
TLY LR LR
comp=Z,2µm,20.0s
TLY Talaya 57.49 1 P P 06 39 27.7 +1.7
SNR=11
TLY Talaya 57.49 1 P P 06 39 27.9 +1.9
comp=Z,190nm,0.7s,SNR=14
IMYA Miami 57.49 320 *e*P P 06 39 25.1 -1.4
HNR Honiara 57.59 97 PFAKE 06 39 40.0 +13
HNR LR LR
comp=Z,1µm,21.0s
IMOG Moghan 57.84 320 *e*P P 06 39 28.0 -1.1
IBAF Bafgh 57.86 313 *e*P P 06 39 28.0 -1.2
ISRO Mashad 57.88 320 *e*P P 06 39 28.7 -0.5
IRK Irkutsk 58.07 2 *e*P P 06 39 31.1 +1.0
IRK pmax pmax
comp=Z,52nm,2.8s
IPAY Payeh 58.27 320 *e*P P 06 39 31.5 -0.5
IMEH Mehriz 58.45 313 *e*P P 06 39 32.4 -1.0
IAKL Akhelmad 58.51 320 *e*P P 06 39 32.1 -1.7
ISRV Sarvestan 58.58 310 *e*P P 06 39 35.3 +0.8
IKRD Kardeh 58.77 320 *e*P P 06 39 31.0 -4.6
ABKT Ailbek 59.72 321 P P 06 39 41.2 -0.6
comp=Z,230nm,1.0s,SNR=10
KURBB Kurchatov Arra 59.91 343 LR LR 07 11 57.6
comp=Z,894nm,19.0s,baz=155,slow=42
KURK Kurchatov 59.97 343 *d i*P P 06 39 42.9 -0.3
KURK pmax pmax
comp=Z,65nm,1.0s
KURK Kurchatov 59.97 343 *e*P P 06 39 42.7 -0.5
comp=Z,52nm,0.8s
KURK Kurchatov 59.97 343 P P 06 39 43.3 +0.1
SNR=21
CASY Casey 60.46 176 PFAKE 06 40 00.0 +14
CASY LR LR
comp=Z,1µm,19.0s
ERM Erimo 60.82 34 PFAKE 06 40 00.0 +11
ERM LR LR
comp=Z,1µm,19.0s
KLR Kul'dur 60.88 22 *e*P P 06 39 45.8 -3.7
KLR *e*S S 06 48 00.0 -5.0
ZAA0 Zalesovo Array 61.45 349 *e*P P 06 39 52.8 -0.4
ZALV Zalesovo Beam 61.45 349 P P 06 39 52.9 -0.3
ZALV Zalesovo Beam 61.45 349 P P 06 39 52.9 -0.3
ZALV Zalesovo Beam 61.45 349 P P 06 39 52.9 -0.3
comp=Z,46nm,0.5s,baz=180,slow=4.3,SNR=136
ZALV LR LR 07 10 17.3
comp=Z,2µm,18.4s,baz=143,slow=40
ISFB Sefidab 61.68 314 *e*P P 06 39 54.7 -0.6
ASAJ Asahikawa 61.92 32 *e*P P 06 39 56.6 0.0
comp=Z,7.7nm,0.8s
ASAJ Asahikawa 61.92 32 P P 06 39 56.3 -0.3
comp=Z,7.9nm,0.7s,baz=240,slow=8.1,SNR=7.5
IFIR Firoozkooh 61.98 316 *e*P P 06 39 58.9 +1.3
RAYN Ar Rayn 62.34 300 P P 06 40 00.0 +0.1
comp=Z,194nm,0.7s,SNR=12
IVRN Varamin 62.37 315 *e*P P 06 40 00.1 +0.1
IDMV Damavand 62.45 315 *e*P P 06 40 01.2 +0.4
NVS Novosibirsk 62.60 348 *i* P P 06 40 00.6 -0.4
NVS *i* *PP pP 06 40 11.0 -0.3
NVS *i* 06 40 33.3
NVS *i* S S 06 48 25.0 -1.6
NVS *e* 06 49 45.2
NVS pmax pmax
comp=N,17nm,0.9s
NVS pmax pmax
comp=E,13nm,0.9s
NVS pmax pmax
comp=Z,31nm,0.9s
NVS smax smax
comp=N,57nm,2.4s
NVS smax smax
comp=E,78nm,2.4s
KBD Kabd 62.71 307 AMb AMB 06 40 03.9
comp=Z,108nm,0.8s
RDF Al-Radifah 62.72 307 *e*P P 06 40 02.5 +0.2
RDF AMb AMB 06 40 04.3
comp=Z,292nm,0.8s
UMR Umm Al-Rimmam 62.85 307 *e*P P 06 40 02.7 -0.5
UMR AMb AMB 06 40 04.9
comp=Z,285nm,0.7s

NAY Al-Naaiem 63.10 307 eP P 06 40 04.4 -0.4
NAY AMb AMB 06 40 06.2
comp=Z,115nm,0.7s
IR3 Iran Long-Peri 63.11 315 eP P 06 40 02.2 -2.7
MIB Mutribah 63.26 308 eP P 06 40 05.9 +0.1
MIB AMb AMB 06 40 07.5
comp=Z,189nm,0.9s
IR5 Iran Long-Peri 63.29 314 eP P 06 40 06.8 +0.6
IRAZ Razeghan 63.85 314 eP P 06 40 09.8 -0.1
YSS Yuzh-Sakhalins 63.94 30⇑eP P 06 40 11.7 +1.7
YSS e 06 40 23.0
YSS pmax pmax
comp=Z,20nm,1.0s
YSS Yuzh-Sakhalins 63.94 30 eP P 06 40 09.9 -0.1
comp=Z,25nm,0.8s
YSS LR LR
comp=Z,300nm,20.0s
BVA0 Borovoye Array 64.58 340 P P 06 40 12.1 -2.0
BVA0 pmax pmax
comp=Z,6.0nm,0.7s
BVAR Borovoye Array 64.58 340 P P 06 40 13.3 -0.8
BVAR Borovoye Array 64.58 340 P P 06 40 13.3 -0.8
BVAR Borovoye Array 64.58 340 P P 06 40 13.3 -0.8
comp=Z,25nm,0.5s,baz=144,slow=8.7,SNR=143
BVAR LR LR 07 10 13.6
comp=Z,942nm,19.8s,baz=3.8,slow=38
BRVK Borovoye 64.64 340d iP P 06 40 14.1 -0.4
BRVK pmax pmax
comp=Z,30nm,0.8s
BRVK Borovoye 64.64 340 eP P 06 40 13.5 -0.9
comp=Z,32nm,0.8s
BRVK LR LR
comp=Z,885nm,20.0s
BRVK Borovoye 64.64 340 P P 06 40 14.0 -0.4
SNR=11
KMBO Kilima Mbogo 64.65 272 eP P 06 40 16.5 +0.9
comp=Z,24nm,1.5s
KMBO LR LR
comp=Z,797nm,19.0s
KMBO Kilima Mbogo 64.65 272 P P 06 40 17.6 +1.9
SNR=6.3
IKOM Komasi 65.03 312 eP P 06 40 16.8 -0.8
ILIN Lien 65.77 312 eP P 06 40 21.7 -0.8
AB31 Akbulak array 66.04 331 i P P 06 40 23.0 -0.6
AB31 pmax pmax
comp=Z,61nm,0.7s
ABKAR Akbulak array 66.04 331 eP P 06 40 22.9 -0.7
comp=Z,70nm,0.8s
IDHR Dehrash 66.10 312 eP P 06 40 23.2 -1.4
MAW Mawson 66.90 195 P P 06 40 29.6 +0.8
MAW Mawson 66.90 195 P P 06 40 29.6 +0.8
comp=Z,4.8nm,0.3s,baz=66,slow=23,SNR=16
MAW LR LR 07 05 04.5
comp=Z,1µm,19.0s,baz=36,slow=32
BHD Baghdad 66.99 310 ex P 06 40 26.0 -4.0
BHD ex S 06 49 19.0 -2.5
AKTO Aktyubinsk 67.76 331 P P 06 40 33.8 -0.7
AKTO Aktyubinsk 67.76 331 P P 06 40 33.8 -0.7
AKTO Aktyubinsk 67.76 331 P P 06 40 33.8 -0.7
comp=Z,17nm,0.8s,baz=133,slow=6.9,SNR=35
WAKE Wake Island 68.52 67 PFAKE 06 40 50.0 +10
WAKE LR LR
comp=Z,2µm,21.0s
DGRG David-gareji 69.89 318 P P 06 40 48.8 +0.8
TBLG Delisi 70.44 318 P P 06 40 51.7 +0.3
KZR Kazreti 70.49 318 P P 06 40 52.1 +0.3
SVE Sverdlovsk 71.09 337⇓iP P 06 40 55.9 +0.9
SVE e 06 41 06.7
SVE eS S 06 50 16.9 +7.9
SVE eSS SS 06 54 47.2 +4.1
SVE pmax pmax
comp=Z,84nm,0.9s
SVE MLR MLR
comp=Z,1µm,21.0s
YAK Yakutsk 71.16 13 eP P 06 40 54.0 -1.3
YAK e*PP pP 06 41 03.1 -2.6
YAK e 06 41 10.9
YAK e 06 43 32.2
YAK ePPP PPP 06 45 12.7
YAK eS S 06 50 06.4 -3.2
YAK e 06 50 53.2
YAK eSS SS 06 54 47.6 +3.7
YAK pmax pmax
comp=Z,33nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=Z,14nm,0.9s
YAK smax smax
comp=N,337nm,4.3s
YAK smax smax
comp=E,61nm,3.0s
YAK MLR MLR
comp=Z,1µm,16.0s
YAK MLR MLR
comp=N,716nm,14.0s
YAK MLR MLR
comp=E,316nm,16.0s
YAK Yakutsk 71.16 13 eP P 06 40 54.6 -0.6
comp=E,55nm,0.8s
YAK LR LR
comp=Z,1µm,21.0s
MBAR Mbarara 71.18 271 PFAKE 06 41 10.0 +13
MBAR LR LR
comp=Z,796nm,19.0s
TARA Tarawa 71.31 87 PFAKE 06 41 10.0 +13
TARA LR LR
comp=Z,1µm,22.0s
ZEI Tsey 71.47 319 eP P 06 40 58.1 +0.2
ZEI pmax pmax
comp=Z,27nm,0.9s
ARU Arti 71.62 336d iP P 06 40 57.9 -0.2
ARU 06 43 32.2
ARU S S 06 50 17.2 +2.1
ARU SS SS 06 54 52.7 +1.5
ARU pmax pmax
comp=Z,64nm,1.0s
ARU Arti 71.62 336 eP P 06 40 57.9 -0.2
comp=Z,50nm,0.8s
ARU LR LR
comp=Z,1µm,22.0s
ONI Oni 71.68 318 P P 06 40 59.7 +0.7
KBZ Khabaz 72.56 319 P P 06 41 04.4 +0.4
KBZ Khabaz 72.56 319 P P 06 41 04.4 +0.4
KBZ Khabaz 72.56 319 P P 06 41 04.4 +0.4
comp=Z,31nm,0.8s,baz=116,slow=5.5,SNR=56
LSZ Lusaka 72.73 256 eP P 06 41 04.0 -1.8
comp=Z,24nm,1.3s
LSZ LR LR
comp=Z,948nm,20.0s
KIV Kislovodsk 72.79 320 eP P 06 41 05.0 -0.6
KIV pmax pmax
comp=Z,35nm,1.0s
KIV Kislovodsk 72.79 320 eP P 06 41 05.3 -0.3
comp=Z,24nm,0.8s
KIV LR LR
comp=Z,408nm,20.0s
KIV Kislovodsk 72.79 320 P P 06 41 05.7 +0.1
SNR=10
SNZO South Karori 73.16 131 PFAKE 06 41 20.0 +12
SNZO LR LR
comp=Z,2µm,21.0s
EIL Elat 73.27 303 P P 06 41 09.6 +0.9
baz=73,SNR=17
MALT Malatya 73.42 313 eP P 06 41 09.5 0.0
MALT pmax pmax
comp=Z,13nm,0.9s
MALT MLR MLR
comp=Z,545nm,19.0s
MALT Malatya 73.42 313 eP P 06 41 09.5 0.0
comp=Z,13nm,0.9s
MALT LR LR
comp=Z,545nm,19.0s
MALT Malatya 73.42 313⇑iP P 06 41 10.1 +0.6
SOKR Solikamsk 74.47 338⇑iP P 06 41 16.1 +1.2
SOKR pmax pmax
comp=Z,50nm,0.9s
SOKR MLR MLR
comp=Z,1µm,30.0s
SOC Sochi 74.58 318d iP P 06 41 14.8 -1.2
SOC e*SP sP 06 41 27.3 -3.1
SOC eS S 06 50 50.6 +1.3
SOC pmax pmax
comp=Z,47nm,0.7s
SOC MLR MLR
comp=Z,352nm,16.0s
URZ Urewera 74.70 128 LR LR 07 14 50.6
comp=Z,1µm,19.5s,baz=297,slow=36
MSVF Nonsavu 75.04 107 PFAKE 06 41 30.0 +11
MSVF LR LR
comp=Z,938nm,19.0s
PETK Petropavlovsk- 75.30 31 P P 06 41 20.2 +0.2
PETK Petropavlovsk- 75.30 31 P P 06 41 20.2 +0.2
PETK Petropavlovsk- 75.30 31 P P 06 41 20.2 +0.2
comp=Z,2.1nm,0.5s,baz=226,slow=5.4,SNR=6.2
PETK LR LR 07 17 26.9
comp=Z,366nm,20.3s,baz=120,slow=38
BOSA Boshof 75.41 242 P P 06 41 21.3 0.0
BOSA Boshof 75.41 242 P P 06 41 21.3 0.0
comp=Z,5.7nm,0.8s,baz=100,slow=6.8,SNR=8.3
BOSA LR LR 07 11 04.6
comp=Z,1µm,18.1s,baz=152,slow=33
PET Petropavlovsk 75.75 31 eP P 06 41 22.7 +0.2
PET pmax pmax
comp=Z,26nm,0.6s
PET Petropavlovsk 75.75 31 eP P 06 41 22.4 -0.1
comp=Z,21nm,0.7s
PET LR LR
comp=Z,952nm,20.0s
VRHR Novokhopersk 76.68 326 eP P 06 41 27.6 -0.2
VRHR eS S 06 51 10.2 -2.0
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.7s
VRHR pmax pmax
comp=Z,100nm,0.7s
VRHR smax smax
comp=N,270nm,2.5s
VRHR smax smax
comp=E,210nm,2.5s
VRHR smax smax
comp=Z,60nm,2.5s
BR131 Keskin Array S 77.41 313 eP P 06 41 31.5 -0.9
comp=Z,14nm,0.8s
BRTR Keskin Array B 77.41 313 P P 06 41 31.4 -0.9
BRTR Keskin Array B 77.41 313 P P 06 41 31.4 -0.9
comp=Z,17nm,0.8s,baz=129,slow=5.9,SNR=91
BRTR LR LR 07 16 55.4
comp=Z,590nm,18.9s,baz=230,slow=37
VNDA Vanda 77.88 169 P P 06 41 34.2 +0.1
VNDA Vanda 77.88 169 P P 06 41 34.2 +0.1
comp=Z,4.2nm,0.9s,baz=307,slow=4.9,SNR=16
VNDA LR LR 07 08 29.4
comp=Z,716nm,19.8s,baz=309,slow=30
VORD Divnogorie 77.94 325 eP P 06 41 34.6 -0.3
VORD pmax pmax
comp=N,10.0nm,0.4s
VORD pmax pmax
comp=E,10.0nm,0.4s
VORD pmax pmax
comp=Z,10.0nm,0.4s
VSR Storozhevoye 78.12 325 eP P 06 41 35.4 -0.5
VSR e*SP sP 06 41 49.1 -1.2
VSR eS S 06 51 24.4 -3.5
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,20nm,0.8s
VSR pmax pmax
comp=Z,50nm,0.8s
VSR smax smax
comp=N,90nm,2.0s
VSR smax smax
comp=E,70nm,2.0s
VSR smax smax
comp=Z,100nm,2.0s
SEY Seymchan 78.65 21 eP P 06 41 39.2 +0.6
SIM Simferopol’ 78.82 318 i P P 06 41 40.6 +0.7
SIM pmax pmax
comp=Z,40nm,0.8s
ISP Isparta 79.15 310 PFAKE 06 41 50.0 +7.9
ISP LR LR
comp=Z,529nm,20.0s
SUR Sutherland 79.27 238 P P 06 41 43.6 +0.7
SUR LR LR
comp=Z,635nm,19.0s
SUR Sutherland 79.27 238 P P 06 41 43.6 +0.7
comp=Z,3.7nm,0.7s,baz=146,slow=6.0,SNR=5.4
TIXI Tiksi 79.52 8 eP P 06 41 42.2 -0.9
TIXI pmax pmax
comp=Z,11nm,0.6s
TIXI MLR MLR
comp=Z,1µm,20.0s
TIXI Tiksi 79.52 8 eP P 06 41 42.2 -0.9
comp=Z,11nm,0.6s
TIXI LR LR
comp=Z,1µm,20.0s
OBN Obninsk 81.17 328d iP P 06 41 52.3 0.0
OBN i 06 42 03.9
OBN i 06 44 56.5
OBN i S S 06 52 03.1 +3.2
OBN pmax pmax
comp=Z,92nm,0.8s
OBN Obninsk 81.17 328 eP P 06 41 52.1 -0.2
comp=Z,84nm,0.8s
OBN LR LR
comp=Z,725nm,21.0s
KLMR Klimovskoe 82.24 334 eP P 06 41 57.2 -0.7
KLMR pmax pmax
comp=Z,54nm,0.9s
LAST Lasithi 82.42 307 P P 06 41 59.9 +0.4
TLCR 82.46 317 ⇓P P 06 41 59.0 -0.4
TLCR 82.46 317⇓iP P 06 41 59.0 -0.4
TIRR Tirgusor 82.53 316 P P 06 42 00.0 +0.2
TIRR Tirgusor 82.53 316 eP P 06 41 59.7 -0.1
comp=Z,20nm,0.8s
TIRR Tirgusor 82.53 316⇑iP P 06 41 59.9 +0.2
TSUM Tsumeb 82.67 251 PFAKE 06 42 10.0 +8.7
TSUM LR LR
comp=Z,1µm,19.0s
CHOS Chios island 82.70 310 P P 06 42 01.4 +0.5
APE Apeiranthos 82.81 308 ⇑P P 06 42 01.0 -0.5
APE Apeiranthos 82.81 308⇑iP P 06 42 01.0 -0.5
IDI Anoyia 82.92 307 P P 06 42 02.4 +0.3
IDI Anoyia 82.92 307 eP P 06 42 02.3 +0.3
comp=Z,24nm,0.6s
SIVA Sivas 82.92 306 P P 06 42 02.8 +0.8
VAM Vamos 83.50 307 P P 06 42 06.0 +1.0
AKASG Malin Array Be 83.79 322 P P 06 42 05.5 -0.6
AKASG Malin Array Be 83.79 322 P P 06 42 05.5 -0.6
AKASG Malin Array Be 83.79 322 P P 06 42 05.5 -0.6
comp=Z,11nm,0.5s,baz=100,slow=4.3,SNR=26
AKASG LR LR 07 25 27.2
comp=Z,584nm,19.0s,baz=70,slow=40
KIEV Kiev 83.80 322 eP P 06 42 05.1 -1.1
KIEV pmax pmax
comp=Z,20nm,0.7s
KIEV MLR MLR
comp=Z,625nm,20.0s
KIEV Kiev 83.80 322 eP P 06 42 05.1 -1.1
comp=Z,20nm,0.7s
KIEV LR LR
comp=Z,625nm,20.0s
QSPA South Pole Qui 83.97 180 P P 06 42 06.7 -0.2
QSPA South Pole Qui 83.97 180 P P 06 42 06.7 -0.2
comp=Z,5.0nm,1.0s,baz=332,slow=1.2,SNR=19
QSPA LR LR 07 15 22.7
comp=Z,496nm,21.1s,baz=128,slow=33
ISR Istrita 83.99 316 ⇓P P 06 42 09.5 +2.1
ISR Istrita 83.99 316⇓iP P 06 42 09.5 +2.1
VRI Vrincioaia 84.06 317 P P 06 42 08.7 +1.1
VRI Vrincioaia 84.06 317⇑iP P 06 42 08.6 +1.0
TESR 84.27 318⇑iP P 06 42 09.3 +0.6
TMCR Tamitsa 84.35 337 eP P 06 42 09.1 +0.5
TMCR pmax pmax
comp=Z,101nm,1.0s
NVL N’lazarevskaya 84.37 199 eP P 06 42 03.7 -5.1
MAIT Maitri 84.41 199 eP P 06 41 59.9 -9.0
KAVA Kavala 84.46 312 P P 06 42 09.6 -0.2
MLR Muntele Rosu 84.49 317⇓iP P 06 42 10.1 +0.1
VLI Veliai 84.76 308 P P 06 42 10.2 -1.2
VOIR 85.09 317 ⇑P P 06 42 12.6 -0.4
VOIR 85.09 317⇑iP P 06 42 12.6 -0.4
ATAL Atalanti 85.09 310 P P 06 42 10.6 -2.4
DYR Agios Nikonas 85.25 308 P P 06 42 14.1 +0.2
VLX Vlachokerasia 85.33 308 P P 06 42 13.9 -0.5
ARR Arges 85.36 316⇑iP P 06 42 14.7 +0.4
BURAR Bucovina Array 85.50 319 P P 06 42 16.8 +1.8
BURAR Bucovina Array 85.50 319⇓iP P 06 42 15.9 +0.9
BUR08 Bucovina Ar. S 85.51 319 eP P 06 42 15.7 +0.7
KNT Kendrikon 85.69 312 P P 06 42 15.7 -0.2
PYL PYLOS 85.74 308 P P 06 42 15.6 -0.7
VTS Vitosha 85.75 313 P P 06 42 16.1 -0.3
VTS Vitosha 85.75 313 ⇑P P 06 42 16.8 +0.4
VTS Vitosha 85.75 313⇑iP P 06 42 16.8 +0.4
TRIZ Trizonia 85.76 309 P P 06 42 16.1 -0.2
LIT Litokhoron 85.78 311 P P 06 42 15.8 -0.6
LAKA Lakka 85.81 309 P P 06 42 16.4 -0.2
PUL Pulkovo 86.02 331 eP P 06 42 18.8 +1.7
PUL pmax pmax
comp=Z,117nm,0.9s
THL Klokotos Trika 86.03 310 P P 06 42 16.8 -0.9
EVR Evrytania 86.06 310 P P 06 42 18.2 +0.2
BILL Bilibino 86.26 20⇓iP P 06 42 18.1 -0.1
BILL e 06 45 39.4
BILL eS S 06 52 47.6 -3.2
BILL pmax pmax
comp=Z,4.0nm,1.0s
BILL Bilibino 86.26 20 eP P 06 42 17.4 -0.8
comp=Z,6.3nm,0.8s
BILL LR LR
comp=Z,1µm,19.0s
JOF Joensuu 86.63 334 eP P 06 42 20.1 0.0
JOF pmax pmax
comp=Z,22nm,0.7s
JOF Joensuu 86.63 334 ep P 06 42 20.1 0.0
comp=Z,22nm,0.7s
DEV Deva 86.66 317 ⇓P P 06 42 21.9 +1.3
DEV Deva 86.66 317⇓iP P 06 42 21.9 +1.3
DRGR 86.98 317 ⇑P P 06 42 23.2 +0.9
DRGR 86.98 317⇑iP P 06 42 23.2 +0.9
LVZ Lovozero 87.18 340 eP P 06 42 22.7 0.0
LVZ pmax pmax
comp=Z,15nm,0.8s
LVZ Lovozero 87.18 340 PFAKE 06 42 30.0 +7.3
LVZ LR LR
comp=Z,1µm,19.0s
TRPA Tarpa 87.37 319⇑iP P 06 42 24.8 +0.8
APA Apatity 87.49 339⇓iP P 06 42 20.0 -4.1
BZS Buzias 87.49 316 ⇓P P 06 42 24.9 +0.3
BZS Buzias 87.49 316⇓iP P 06 42 24.9 +0.3
KWP Kalwaria Pacla 87.57 320 PFAKE 06 42 40.0 +15
KWP LR LR
comp=Z,814nm,20.0s
KOLS Kolonicke sedl 87.71 320 eP P 06 42 26.9 +1.3
KOLS pmax pmax
comp=Z,27nm,0.8s
KOLS Kolonicke sedl 87.71 320 eP P 06 42 26.9 +1.3
KEK Kerkira 87.74 310 P P 06 42 26.4 +0.4
TIR Tirane 87.97 312 PFAKE 06 42 40.0 +13
TIR LR LR
comp=Z,559nm,19.0s
CRVS Cervenica-Dubn 88.22 319 eP P 06 42 29.8 +1.7
CRVS pmax pmax
comp=Z,68nm,2.7s
CRVS Cervenica-Dubn 88.22 319 eP P 06 42 29.8 +1.7
SUW Suwalki 88.23 325 eP P 06 42 27.6 -0.4
SUW pmax pmax
comp=Z,57nm,0.8s
SUW Suwalki 88.23 325 eP P 06 42 27.6 -0.4
comp=Z,57nm,0.8s
SUW Suwalki 88.23 325 eP P 06 42 28.4 +0.5
FIA1 FINESS Array S 88.52 332 eP P 06 42 29.2 +0.1
FINES FINESS Array B 88.52 332 P P 06 42 29.6 +0.4
FINES FINESS Array B 88.52 332 P P 06 42 29.6 +0.4
comp=Z,20nm,0.7s,baz=102,slow=8.0,SNR=43
FINES LR LR 07 29 50.2
comp=Z,420nm,19.8s,baz=275,slow=41
KAF Kangasniemi 88.59 333 eP P 06 42 29.2 -0.3
KAF pmax pmax
comp=Z,48nm,0.7s
KAF Kangasniemi 88.59 333 ep P 06 42 29.2 -0.3
comp=Z,48nm,0.7s
SNAA Sanae 88.92 198 eP P 06 42 32.7 +1.6
SNAA Sanae 88.92 198 epP pP 06 42 38.0 -3.8
SNAA Sanae 88.92 198 eP P 06 42 31.6 +0.6
comp=Z,66nm,1.6s
SNAA Sanae 88.92 198 P P 06 42 32.5 +1.5
comp=Z,2.5nm,0.7s,baz=108,slow=4.2,SNR=23
PSZ Piszkesteto 89.07 318 ⇓P P 06 42 33.0 +0.8
PSZ Piszkesteto 89.07 318 eP P 06 42 30.4 -1.8
comp=Z,8.8nm,0.8s
PSZ LR LR
comp=Z,486nm,20.0s
PSZ Piszkesteto 89.07 318⇓iP P 06 42 33.0 +0.8
OJC Ojcow 89.53 320 eP P 06 42 35.0 +0.8
OJC Ojcow 89.53 320 eP P 06 42 35.0 +0.8
PKSM Moragy 89.64 316 ⇑P P 06 42 35.8 +1.0
PKSM Moragy 89.64 316⇑iP P 06 42 35.8 +1.0
VYHS Vyhne 89.86 319 eP P 06 42 36.3 +0.5
VYHS pmax pmax
comp=Z,5.0nm,1.1s
VYHS Vyhne 89.86 319 eP P 06 42 36.3 +0.5
TIP Timpagrande 89.99 309 eP P 06 42 36.9 +0.2
comp=Z,9.5nm,0.7s
TIP LR LR
comp=Z,370nm,20.0s
OKC Ostrava-Krasne 90.52 320⇑iP P 06 42 39.9 +1.1
OKC MLR MLR
comp=Z,700nm,18.8s
OKC Ostrava-Krasne 90.52 320⇑iP P 06 42 39.9 +1.1
OKC AMS AMS 07 29 50.0
comp=Z,700nm,18.8s
CEL Celeste 90.54 308 eP P 06 42 39.5 +0.3
comp=Z,26nm,0.9s
CEL LR LR
comp=Z,338nm,20.0s
VNA2 Neumayer--Watz 90.55 198 eP P 06 42 40.3 +1.7
baz=74,slow=3.5
VNA2 Neumayer--Watz 90.55 198 epP pP 06 42 46.6 -2.7
baz=74,slow=3.5
CUC Castrocucco 90.81 310 PFAKE 06 42 50.0 +9.5
CUC LR LR
comp=Z,265nm,19.0s
ARCES ARCESS Array B 90.86 340 P P 06 42 40.5 +0.4
ARCES ARCESS Array B 90.86 340 P P 06 42 40.5 +0.4
comp=Z,14nm,0.9s,baz=108,slow=4.0,SNR=16
ARCES LR LR 07 28 09.2
comp=Z,1µm,19.4s,baz=95,slow=39
MORC Moravsky Berou 90.90 320 ⇑P P 06 42 41.4 +0.7
MORC Moravsky Berou 90.90 320⇑iP P 06 42 41.3 +0.6
VNA3 Neumayer Olymp 91.12 198 eP P 06 42 44.7 +3.4
WDD Wield Dalam 91.35 306 PFAKE 06 42 50.0 +7.0
WDD LR LR
comp=Z,425nm,19.0s
DPC Dobruska-Polom 91.75 320⇑iP P 06 42 46.1 +1.5
DPC MLR MLR
comp=Z,700nm,20.9s
DPC Dobruska-Polom 91.75 320⇑iP P 06 42 46.1 +1.5
DPC AMS AMS 07 33 00.0
comp=Z,700nm,20.9s
KSP Ksiaz 91.83 321 eP P 06 42 45.4 +0.5
KSP Ksiaz 91.83 321 eP P 06 42 46.0 +1.1
UPC Upice 91.97 320 eP P 06 42 46.7 +1.1
UPC Upice 91.97 320⇑eP P 06 42 46.7 +1.1
TREC Trest 92.16 319 ⇑AMS AMS 07 30 20.0
comp=Z,600nm,18.4s
PRU Pruhonice 92.85 320 eP P 06 42 50.6 +1.0
PRU MLR MLR
comp=Z,700nm,19.9s
PRU Pruhonice 92.85 320⇑eP P 06 42 50.6 +1.0
PRU AMS AMS 07 31 00.0
comp=Z,700nm,19.9s
AQU L’Aquila 92.88 312 PFAKE 06 43 00.0 +10
AQU LR LR
comp=Z,515nm,21.0s
PVCC Panska Ves 92.89 320 ⇑AMS AMS 07 31 30.0
comp=Z,600nm,21.3s
GERES GERESS Array B 93.28 319 P P 06 42 52.2 +0.4
GERES GERESS Array B 93.28 319 P P 06 42 52.2 +0.4
comp=Z,3.9nm,0.7s,baz=93,slow=4.7,SNR=26
BRG Berggiesshubel 93.32 321 eP P 06 42 52.7 +0.9
comp=Z,9.1nm,1.0s
BRG Berggiesshubel 93.32 321 eP P 06 42 52.7 +0.9
BRG pmax pmax
comp=Z,9.0nm,1.0s
KHC Kasperske Hory 93.39 319 eP P 06 42 52.7 +0.5
KHC MLR MLR
comp=Z,700nm,22.0s
KHC Kasperske Hory 93.39 319⇑eP P 06 42 52.7 +0.5
KHC AMS AMS 07 30 50.0

comp=Z,700nm,22.0s
CLL Collm 93.95 321 *e*P **P** **06 42 56.0 +1.4**
CLL pmax pmax
comp=Z,12nm,1.4s
CLL MLR MLR
comp=Z,500nm,19.8s
CLL Collm 93.95 321 *e*P **P** **06 42 56.0 +1.4**
comp=Z,12nm,1.4s
CLL LmV 07 36 00.0
comp=Z,500nm,19.8s
NKC Novy Kostel 94.22 320 *e*P P 06 42 44.2 -12
VLC Villacollemand 95.22 314 PFAKE 06 43 10.0 +9.3
VLC LR LR
comp=Z,497nm,19.0s
KEST Kesra 95.53 305 *e*P **P** **06 43 02.7 +0.3**
KEST Kesra 95.53 305 P **P** **06 43 03.1 +0.8**
comp=Z,3.9nm,0.9s,baz=124,slow=4.6,SNR=8.2
KEST LR LR 07 30 04.8
comp=Z,221nm,18.1s,baz=9.5,slow=38
NB2 NORSAR Subarra 95.54 331 P **P** **06 43 01.5 -0.3**
comp=Z,4.7nm,0.9s,baz=93,slow=4.8
NOA NORSAR Array B 95.54 331 P **P** **06 43 01.8 -0.1**
NOA NORSAR Array B 95.54 331 P **P** **06 43 01.8 -0.1**
comp=Z,2.1nm,0.8s,baz=95,slow=4.7,SNR=8.7
NOA LR LR 07 31 52.3
comp=Z,539nm,21.1s,baz=115,slow=39
VSL Villasalto 95.71 309 PFAKE 06 43 10.0 +7.0
VSL LR LR
comp=Z,278nm,21.0s
KBS Kingsbay 95.85 349 PFAKE 06 43 10.0 +7.2
KBS LR LR
comp=Z,1µm,22.0s
TUE Stuetta 96.06 316 PFAKE 06 43 20.0 +15
TUE LR LR
comp=Z,539nm,21.0s
KONO Kongsberg 96.31 329 PFAKE 06 43 20.0 +15
KONO LR LR
comp=Z,677nm,20.0s
BFO Black Forest 96.81 318 PFAKE 06 43 20.0 +12
BFO LR LR
comp=Z,815nm,20.0s
ECH Echery 97.59 318 PFAKE 06 43 20.0 +8.5
ECH LR LR
comp=Z,582nm,21.0s
BNI Bardonecchia 97.89 315 PFAKE 06 43 20.0 +7.0
BNI LR LR
comp=Z,705nm,20.0s
TAM Tamanrasset 98.15 292 PFAKE 06 43 30.0 +15
TAM LR LR
comp=Z,345nm,19.0s
WLF Walferdange 98.26 319 PFAKE 06 43 30.0 +16
WLF LR LR
comp=Z,647nm,19.0s
SSB Saint Sauveur 99.41 315 PFAKE 06 43 30.0 +10
SSB LR LR
comp=Z,353nm,20.0s
TORD Torodi Ar. Bea 101.23 282 P **Pdif** **06 43 28.2 -0.1**
TORD Torodi Ar. Bea 101.23 282 P **Pdif** **06 43 28.2 -0.1**
comp=Z,1.2nm,1.1s,baz=106,slow=4.7,SNR=4.4
KDAK Kodiak Island 103.34 32 PFAKE 06 43 50.0 +13
KDAK LR LR
comp=Z,829nm,21.0s
ESK Eskdalemuir 103.50 325 PFAKE 06 43 50.0 +13
ESK LR LR
comp=Z,846nm,21.0s
COLA College 103.96 24 PFAKE 06 43 50.0 +11
COLA LR LR
comp=Z,527nm,19.0s
SHEL Horse Pasture 105.14 252 PFAKE 06 48 10.0
SHEL LR LR
comp=Z,809nm,19.0s
PAB San Pablo 106.32 309 PFAKE 06 48 10.0
PAB LR LR
comp=Z,450nm,21.0s
EGAK Eagle 106.70 23 PFAKE 06 48 10.0
EGAK LR LR
comp=Z,804nm,20.0s
MTE Manteigas 108.65 311 PFAKE 06 48 20.0
MTE LR LR
comp=Z,382nm,19.0s
RTC Rabat Centre 108.87 304 PFAKE 06 48 20.0
RTC LR LR
comp=Z,420nm,19.0s
SFJD Kangerlussuaq 116.26 348 *e*PKPdf **PKPdf** **06 48 18.9 -0.9**
YKA Yellowknife Ar 117.62 18 PKP **PKPdf** **06 48 21.8 -0.7**
YKA PKKPbc **PKKPbc** **06 58 47.1 +0.3**
YKA Yellowknife Ar 117.62 18 PKP **PKPdf** **06 48 21.8 -0.7**
comp=Z,0.7nm,0.7s,baz=338,slow=2.3,SNR=23
YKA PKKPbc **PKKPbc** **06 58 47.1 +0.3**
comp=Z,0.3nm,0.6s,baz=135,slow=5.0,SNR=12
NLWA Neilton Lookou 123.23 36 PFAKE 06 48 50.0 +16
NLWA LR LR
comp=Z,531nm,21.0s
SACV Santiago Islan 125.78 284 PFAKE 06 48 50.0 +10
SACV LR LR
comp=Z,366nm,19.0s
HAWA Hanford 126.26 35 PFAKE 06 48 50.0 +10
HAWA LR LR
comp=Z,460nm,20.0s
NEW Newport 126.44 32 PFAKE 06 48 50.0 +10
NEW LR LR
comp=Z,568nm,21.0s
FFC Flin Flon 127.77 17 *c i*PKIKP **PKPdf** **06 48 44.6 +2.4**
FFC Flin Flon 127.77 17 PFAKE 06 48 50.0 +7.8
FFC LR LR
comp=Z,1µm,20.0s
BMO Blue Mountains 128.43 35 PFAKE 06 49 00.0 +16
BMO LR LR
comp=Z,359nm,19.0s
MSO Missoula 129.01 31 PFAKE 06 49 00.0 +15
MSO LR LR
comp=Z,345nm,20.0s
MSO Missoula 129.01 31 ⇑P **PKPdf** **06 48 44.9 -0.1**
baz=129
C15A Salmond Ranch, 129.04 29 ⇑P **PKPdf** **06 48 44.9 -0.1**
baz=129
A17A Triple J Farms 129.11 27 ⇓P **PKPdf** **06 48 45.5 +0.4**
baz=129
B17A L&G Farms, Che 129.54 28 ⇑P **PKPdf** **06 48 46.2 +0.3**
baz=129
C17A Wharram Farm, 130.03 28 ⇑P **PKPdf** **06 48 47.1 +0.3**
baz=130
EGMT Eagleton 130.22 27 PFAKE 06 49 00.0 +13
EGMT LR LR
comp=Z,557nm,20.0s
I12A Atlanta 130.31 35 ⇓P **PKPdf** **06 48 48.1 +0.4**
baz=130
H13A Challis 130.32 34 ⇑P **PKPdf** **06 48 47.8 +0.2**
baz=130
D17A Six Diamond Ra 130.41 29 ⇓P **PKPdf** **06 48 47.7 0.0**
baz=130
SCHQ Schefferville 130.49 351 PKP **PKPdf** **06 48 47.3 -0.2**
SCHQ PP **PP** **06 50 58.4 -2.6**
SCHQ Schefferville 130.49 351 PKP **PKPdf** **06 48 47.3 -0.2**
comp=Z,2.1nm,0.6s,baz=37,slow=6.5,SNR=11
SCHQ PP **PP** **06 50 58.4 -2.6**
comp=Z,2.7nm,0.8s,baz=65,slow=4.0,SNR=4.6
DLMT Dillon 130.69 32 *e*PKPdf **PKPdf** **06 48 48.7 +0.4**
A21A Bergtoll Ranch 130.72 25 ⇑P **PKPdf** **06 48 48.7 +0.6**
baz=131
HLID Hailey 130.86 35 PFAKE 06 49 00.0 +11
HLID LR LR
comp=Z,450nm,20.0s
BOZ Bozeman (W) 130.99 31 *e*PKIKP **PKPdf** **06 48 49.3 +0.4**
BOZ MLR MLR
comp=Z,358nm,19.0s
BOZ Bozeman (W) 130.99 31 *e*PKPdf **PKPdf** **06 48 49.3 +0.4**
BOZ LR LR
comp=Z,358nm,19.0s
BOZ Bozeman (W) 130.99 31 ⇓P **PKPdf** **06 48 49.6 +0.7**
baz=131
BMN Battle Mountai 131.03 40 PFAKE 06 49 00.0 +11
BMN LR LR
comp=Z,475nm,21.0s
A22A Carney Farms, 131.14 24 ⇓P **PKPdf** **06 48 49.9 +1.0**
baz=131
F17A Fitzpatrick Pl 131.30 30 ⇑P **PKPdf** **06 48 50.3 +0.9**
baz=131
NVAR Mina Array Bea 131.40 42 PKP **PKPdf** **06 48 51.8 +1.9**
NVAR SKPbc **SKPab** **06 52 15.7 +2.5**
NVAR Mina Array Bea 131.40 42 PKP **PKPdf** **06 48 51.8 +1.9**
comp=Z,0.9nm,0.7s,baz=278,slow=2.5,SNR=4.5
NVAR SKPbc **SKPab** **06 52 15.7 +2.5**
comp=Z,1.6nm,1.0s,baz=278,slow=2.6,SNR=7.0
B23A Brockton 131.93 24 ⇑P **PKPdf** **06 48 50.6 +0.2**
baz=132
C22A Vida 132.13 25 ⇑P **PKPdf** **06 48 51.8 +0.9**
baz=132
DGMT Dagmar 132.24 23 PFAKE 06 49 00.0 +9.0
DGMT LR LR
comp=Z,590nm,22.0s
TPH Tonopah 132.31 42 PFAKE 06 49 00.0 +8.3
TPH LR LR
comp=Z,418nm,21.0s
LKWY Lake 132.37 31 PFAKE 06 49 00.0 +8.3
LKWY LR LR
comp=Z,864nm,19.0s
C23A Lambert 132.38 25 ⇓P **PKPdf** **06 48 52.8 +1.5**
baz=132
D22A Cohagen 132.47 26 ⇑P **PKPdf** **06 48 52.2 +0.7**
baz=132
RLMT Red Lodge 132.55 30 PFAKE 06 49 00.0 +8.1
RLMT LR LR
comp=Z,573nm,22.0s
RRI2 Red Ridge 132.72 33 *e*PKPdf **PKPdf** **06 48 52.6 +0.3**
DAC Darwin (Calif) 132.98 45 PFAKE 06 49 00.0 +7.0
DAC LR LR
comp=Z,609nm,22.0s
E22A Miles City 133.12 26 ⇑P **PKPdf** **06 48 53.3 +0.6**
baz=133
AHID Auburn Hatcher 133.22 33 PFAKE 06 49 00.0 +6.7
AHID LR LR
comp=Z,557nm,22.0s
R11A Troy Canyon, C 133.24 41 ⇓P **PKPdf** **06 48 53.9 +0.5**
baz=133
ULM Lac du Bonnet 133.47 16 PKP **PKPdf** **06 48 53.9 +0.7**
ULM Lac du Bonnet 133.47 16 PKP **PKPdf** **06 48 53.9 +0.7**
comp=Z,4.5nm,0.7s,baz=356,slow=2.7,SNR=12
TRQA Tornquist 133.65 198 PFAKE 06 49 10.0 +16
TRQA LR LR
comp=Z,292nm,21.0s
HWUT Hardware Ranch 133.73 35 PFAKE 06 49 10.0 +16
HWUT LR LR
comp=Z,522nm,22.0s
DUG Dugway 133.90 37 PFAKE 06 49 10.0 +15
DUG LR LR
comp=Z,558nm,21.0s
BW06 Boulder Array 134.06 32 PFAKE 06 49 10.0 +15
BW06 LR LR
comp=Z,500nm,21.0s
PDAR Pinedale Array 134.06 32 PKP **PKPdf** **06 48 55.3 +0.4**
PDAR SKP 06 52 33.5
PDAR Pinedale Array 134.06 32 PKP **PKPdf** **06 48 55.3 +0.4**
comp=Z,0.3nm,0.4s,baz=264,slow=0.9,SNR=2.1
PDAR SKP 06 52 33.5
comp=Z,0.9nm,1.0s,baz=25,slow=2.4,SNR=2.5
J20A Shoshoni 134.41 31 ⇓P **PKPdf** **06 48 55.9 +0.6**
baz=134
I21A Big Trails, Te 134.47 30 ⇓P **PKPdf** **06 48 55.7 +0.2**
baz=134
GMRC Granite Mounta 135.10 45 ⇓P **PKPdf** **06 48 58.3 +1.4**
baz=135
PFO Pinyon Flat Ob 135.11 47 PFAKE 06 49 10.0 +13
PFO LR LR
comp=Z,670nm,20.0s
J22A Midwest 135.16 29 ⇓P **PKPdf** **06 48 57.2 +0.4**
baz=135
AGMN Agassiz Nation 135.24 17 PFAKE 06 49 10.0 +13
AGMN LR LR
comp=Z,654nm,19.0s
MVU Marysvale 135.30 39 PFAKE 06 49 10.0 +13
MVU LR LR
comp=Z,562nm,21.0s
MSU Marysvale 135.32 39 *e*PKIKP **PKPdf** **06 48 57.5 +0.2**
MSU Marysvale 135.32 39 *e*PKPdf **PKPdf** **06 48 57.5 +0.2**
O18A Roosevelt 135.50 35 ⇓P **PKPdf** **06 48 58.1 +0.5**
baz=135
RSSD Black Hills 135.77 27 *e*PKIKP **PKPdf** **06 48 57.0 -1.0**
RSSD Black Hills 135.77 27 *e*PKPdf **PKPdf** **06 48 57.0 -1.0**
RCBR Riachuelo 136.24 255 PFAKE 06 49 10.0 +11
RCBR LR LR
comp=Z,501nm,19.0s
EYMN Ely 136.69 13 PFAKE 06 49 10.0 +11
EYMN LR LR
comp=Z,622nm,20.0s
Q19A Hogan Spring (136.80 36 ⇓P **PKPdf** **06 48 58.9 -1.0**
baz=137
WUAZ Wupatki 137.62 42 PFAKE 06 49 10.0 +8.4
WUAZ LR LR
comp=Z,389nm,19.0s
O23A Lake Granby, G 137.79 32 ⇓P **PKPdf** **06 49 00.9 -1.1**
baz=138
SPB Sao Paulo 138.00 224 PFAKE 06 49 10.0 +7.6
SPB LR LR
comp=Z,492nm,20.0s
ISCO Idaho Springs 138.25 32 PFAKE 06 49 10.0 +7.2
ISCO LR LR
comp=Z,446nm,21.0s
MVCO Mesa Verde 138.40 37 PFAKE 06 49 10.0 +6.9
MVCO LR LR
comp=Z,540nm,22.0s
ECSD EROS Data Cent 139.07 21 PFAKE 06 49 20.0 +16
ECSD LR LR
comp=Z,768nm,19.0s
OGNE Ogallala 139.18 28 PFAKE 06 49 20.0 +16
OGNE LR LR
comp=Z,639nm,19.0s
TUC Tucson 139.85 45 PFAKE 06 49 20.0 +14
TUC LR LR
comp=Z,518nm,20.0s
GLMI Grayling 140.93 7 PFAKE 06 49 20.0 +13
GLMI LR LR
comp=Z,636nm,21.0s
MSNY Massena 141.07 356 *e*PKPdf **PKPdf** **06 49 07.8 +0.4**
ANMO Albuquerque 141.13 38 PFAKE 06 49 20.0 +12
ANMO LR LR
comp=Z,487nm,22.0s
CFAA Coronel Fontan 141.41 194 PKPpre PKPpre 06 49 02.9
CFAA PKP **PKPdf** **06 49 07.8 -0.7**
CFAA Coronel Fontan 141.41 194 PKhKP PKPpre 06 49 02.9
baz=163,slow=5.8
CFAA PKP **PKPdf** **06 49 07.8 -0.7**
comp=Z,0.5nm,0.8s,baz=176,slow=5.1
LONY Lake Ozonia 141.43 356 PFAKE 06 49 20.0 +12
LONY LR LR
comp=Z,841nm,22.0s
LBNH Lisbon 141.54 353 PFAKE 06 49 20.0 +12
LBNH LR LR
comp=Z,650nm,20.0s
SCIA State Center 141.82 18 PFAKE 06 49 20.0 +11
SCIA LR LR
comp=Z,1µm,20.0s
NCB Newcomb 142.05 355 PFAKE 06 49 20.0 +11
NCB LR LR
comp=Z,604nm,21.0s
X26A CR and CF Fran 143.00 36 ⇓P **PKPdf** **06 49 10.1 -1.3**
baz=143
W27A Bowe Ranch, En 143.07 35 ⇓P PKPbc 06 49 09.7 +1.4
baz=143
KSU1 Kansas State U 143.07 24 *e*PKPdf PKPbc 06 49 09.7 +1.7
KSU1 LR LR
comp=Z,706nm,20.0s
BDFB Brasilia 143.23 234 PKPpre PKPpre 06 49 09.3
BDFB Brasilia 143.23 234 PKhKP PKPpre 06 49 09.3
comp=Z,3.3nm,0.6s,baz=113,slow=3.4,SNR=8.6
Z25A Roswell 143.31 39 ⇑P PKPbc 06 49 10.6 +1.6
baz=143
AAM Ann Arbor 143.54 7 PFAKE 06 49 20.0 +8.2
AAM LR LR
comp=Z,693nm,20.0s
125A Gardner Draw, 143.76 40 ⇑P PKPbc 06 49 11.1 +0.8
baz=144
Z26A Caprock 143.77 38 ⇑P PKPbc 06 49 11.2 +0.9
baz=144
MNTX Cornudas Mount 143.91 42 *e*PKPdf **PKPdf** **06 49 12.9 +0.1**
MNTX LR LR
comp=Z,398nm,20.0s
MNTX Cornudas Mount 143.91 42 ⇓P **PKPdf** **06 49 12.5 -0.3**
baz=144
BINY Binghamton 143.92 357 *e*PKPdf PKPbc 06 49 10.4 +0.1
BINY LR LR
comp=Z,656nm,19.0s
AMTX Amarillo 143.98 34 PFAKE 06 49 20.0 +7.0
AMTX LR LR
comp=Z,496nm,20.0s
324A Moseley Ranch, 144.00 42 ⇑P **PKPdf** **06 49 12.5 -0.7**
baz=144
ERPA Erie 144.01 2 PFAKE 06 49 20.0 +7.3
ERPA LR LR
comp=Z,793nm,20.0s
Z27A Tatum 144.21 37 ⇓P PKPbc 06 49 12.3 +0.7
baz=144
GDL2 Guadalupe Moun 144.25 40 *e*PKPdf **PKPdf** **06 49 13.1 -0.4**
Y28A McKinney Farm, 144.36 36 ⇓P PKPbc 06 49 12.8 +0.7
baz=144
325A Bean Ranch, Si 144.39 42 ⇓P **PKPdf** **06 49 13.7 -0.2**
baz=144
226B Tecolote Peak, 144.45 40 ⇑P **PKPdf** **06 49 13.8 -0.1**
baz=144
CLNB Carlsbad 144.51 39 *e*PKPdf **PKPdf** **06 49 13.9 -0.1**
W31A Holland Ranch, 144.69 32 ⇓P PKPbc 06 49 13.6 +0.6
baz=144
Z28A Tucker Farm, M 144.72 37 ⇓P **PKPab** **06 49 13.0 -0.1**
baz=145
Y29A Porterfield Fa 144.73 35 ⇓P PKPbc 06 49 13.8 +0.5
baz=145
SFIN Scholer Farm 144.85 12 ⇑P **PKPab** **06 49 13.4 +0.2**
baz=145
PAL Palisades 144.96 354 *e*PKIKP **PKPab** **06 49 13.3 -0.2**
PAL Palisades 144.96 354 *e*PKPdf **PKPab** **06 49 13.3 -0.2**
227A Bennet, Jal 145.05 39 ⇑P **PKPdf** **06 49 15.9 +1.0**
baz=145
326A Caldwell Ranch 145.07 41 ⇓P **PKPdf** **06 49 15.0 +0.1**
baz=145
Z29A Hungry Hill Ra 145.14 36 ⇑P **PKPdf** **06 49 16.0 +0.9**
baz=145
Y30A Stafford Cattl 145.16 34 ⇓P **PKPab** **06 49 15.0 +0.4**
baz=145
CPNY Central Park 145.18 354 *e*PKPbc **PKPbc** **06 49 13.6 -0.7**
228A UT Block 9, Go 145.41 38 ⇓P **PKPab** **06 49 17.1 +1.5**
baz=145
426A McDonald Obser 145.46 42 ⇓P **PKPab** **06 49 17.2 +1.1**
baz=145
Z30A Sanderson Ranc 145.46 35 ⇑P **PKPab** **06 49 16.6 +0.8**
baz=145
129A Stewart Farms, 145.50 37 ⇑P **PKPab** **06 49 17.4 +1.5**
baz=145
SSPA Standing Stone 145.53 360 *e*PKPbc **PKPdf** **06 49 15.1 -0.3**
WMOK Wichita Mounta 145.64 31 PFAKE 06 49 30.0 +14
WMOK LR LR
comp=Z,759nm,19.0s
ACSO Alum Creek Sta 145.66 7 *e*PKPdf **PKPdf** **06 49 15.4 -0.2**
ACSO LR LR
comp=Z,610nm,19.0s
427A Hayter Ranch, 145.75 41 ⇓P **PKPab** **06 49 18.2 +1.2**
baz=146
328A Wristen Ranch, 145.78 39 ⇓P **PKPab** **06 49 18.6 +1.6**
baz=146
526A Mary Lane Ranc 145.80 42 ⇓P **PKPab** **06 49 18.6 +1.3**
baz=146
Y32A R-V Farms, Ver 145.86 33 ⇑P **PKPab** **06 49 17.8 +0.6**
baz=146
Z31A Sharp Cattle R 145.99 34 ⇓P **PKPab** **06 49 17.9 +0.2**
baz=146
130A Snyder 146.05 36 ⇑P **PKPab** **06 49 18.2 +0.2**
baz=146
527A Woodward Ranch 146.07 42 ⇓P **PKPab** **06 49 19.0 +0.8**
baz=146
626A Big Bend Ranch 146.09 43 ⇓P **PKPab** **06 49 19.1 +0.8**
baz=146
BLO Bloomington 146.13 12 *e*PKP2 **PKPdf** **06 49 16.6 +0.2**
BLO Bloomington 146.13 12 *e*PKPdf **PKPdf** **06 49 16.6 +0.2**
OLIL Olney 146.20 14 *e*PKPdf **PKPdf** **06 49 17.1 +0.6**
329A Wagon Wheel Ra 146.22 38 ⇓P **PKPab** **06 49 19.1 +0.4**
baz=146
FVM French Village 146.27 18 *e*PKP2 **PKPdf** **06 49 17.1 +0.4**
FVM French Village 146.27 18 *e*PKPdf **PKPdf** **06 49 17.1 +0.4**
428A Kincaid Ranch, 146.29 40 ⇑P **PKPab** **06 49 19.2 +0.2**
baz=146
131A Roby 146.33 35 ⇓P **PKPbc** **06 49 18.9 +0.7**
baz=146
Z32A Haskell 146.37 33 ⇓P **PKPbc** **06 49 18.6 +0.3**
baz=146
230A Sterling City 146.47 37 ⇑P **PKPbc** **06 49 18.7 0.0**
baz=146
TXAR Lajitas Array 146.54 43 PKPbc **PKPbc** **06 49 19.8 +0.8**
TXAR Lajitas Array 146.54 43 PKPbc **PKPbc** **06 49 19.8 +0.8**
comp=Z,16nm,0.8s,baz=296,slow=1.0,SNR=110
528A Cox Ranch, San 146.60 41 ⇑P **PKPbc** **06 49 19.6 +0.4**
baz=146
627A Terlingua Ranc 146.66 43 ⇓P **PKPbc** **06 49 19.8 +0.4**
baz=146
SDMD Soldier's Deli 146.74 358 *e*PKPdf **PKPdf** **06 49 18.1 +0.7**
330A Mertzon 146.77 38 ⇑P **PKPbc** **06 49 19.6 0.0**
baz=147
ABTX Abilene, Hawle 146.79 34 ⇓P **PKPbc** **06 49 20.3 +0.8**
baz=147
429A Davenport Ranc 146.87 39 ⇑P **PKPbc** **06 49 20.3 +0.4**
baz=147
SIUC Southern Illin 146.87 16 *e*PKPdf **PKPbc** **06 49 19.0 -0.6**
231A Bronte 146.91 36 ⇓P **PKPbc** **06 49 19.6 -0.3**
baz=147
628A Black Gap, Mar 146.97 42 ⇑P **PKPbc** **06 49 20.4 +0.2**
baz=147
529A Stev Forest Ra 146.99 40 ⇑P **PKPbc** **06 49 20.5 +0.3**
baz=147
USIN University of 147.04 14 *e*PKPdf **PKPdf** **06 49 18.5 +0.5**
WCI Wyandotte Cave 147.09 12 *e*PKP2 **PKPbc** **06 49 19.7 -0.5**
WCI Wyandotte Cave 147.09 12 *e*PKPbc **PKPbc** **06 49 19.7 -0.5**
331A San Angelo 147.29 37 ⇓P **PKPbc** **06 49 21.7 +0.7**
baz=147
232A Coleman 147.33 35 ⇑P **PKPbc** **06 49 21.4 +0.3**
baz=147
530A J-C Ranch, Com 147.54 40 ⇓P **PKPbc** **06 49 22.0 +0.3**
baz=147
431A Sonora 147.63 38 ⇑P **PKPbc** **06 49 21.9 -0.1**
baz=148
332A Millersview 147.64 36 ⇑P **PKPbc** **06 49 22.4 +0.4**
baz=148
PARMO Parma 147.69 18 *e*PKPdf **PKPdf** **06 49 19.2 +0.1**
PARMO *e*PKPbc **PKPbc** **06 49 21.8 -0.1**
CBN Corbin 147.95 359 PFAKE 06 49 30.0 +4.9
CBN LR LR
comp=Z,594nm,22.0s
432A Menard 147.98 37 ⇓P **PKPbc** **06 49 23.3 +0.4**
baz=148
531A Rocksprings 148.03 39 ⇓P **PKPbc** **06 49 23.4 +0.4**
baz=148
MIAR Mount Ida 148.22 25 *e*PKP2 **PKPbc** **06 49 23.3 -0.1**
MIAR MLR MLR
comp=Z,582nm,20.0s
MIAR Mount Ida 148.22 25 *e*PKPbc **PKPbc** **06 49 23.3 -0.1**
MIAR LR LR
comp=Z,582nm,20.0s
JCT Junction City 148.26 37 *e*PKP2 **PKPbc** **06 49 23.9 +0.2**
JCT MLR MLR
comp=Z,495nm,19.0s
JCT Junction City 148.26 37 *e*PKPbc **PKPbc** **06 49 23.9 +0.2**
JCT LR LR
comp=Z,495nm,19.0s
JCT Junction City 148.26 37 ⇑P **PKPbc** **06 49 24.3 +0.6**
baz=148
532A Rocksprings 148.45 38 ⇓P **PKPbc** **06 49 24.7 +0.5**
baz=148
WHTX Lake Whitney 148.47 33 ⇑P **PKPbc** **06 49 24.8 +0.7**
baz=148
JSRW J. Sargeant Re 148.47 360 *e*PKPdf **PKPdf** **06 49 20.6 +0.2**
JSRW *e*PKPbc **PKPbc** **06 49 23.4 -0.5**
UALR University of 148.51 23 *e*PKPdf **PKPdf** **06 49 21.1 +0.5**
631A Perdido Creek 148.53 40 ⇓P **PKPbc** **06 49 24.9 +0.6**
baz=148
WVT Waverly 148.74 15 *e*PKP2 **PKPbc** **06 49 23.7 -0.9**
WVT Waverly 148.74 15 *e*PKPbc **PKPbc** **06 49 23.7 -0.9**
BLA Blacksburg 148.88 4 PFAKE 06 49 30.0 +1.1
BLA LR LR
comp=Z,607nm,20.0s
632A Uvalde 148.96 39 ⇓P **PKPbc** **06 49 26.3 +0.8**
baz=149
TZTN Tazewell 149.22 9 *e*PKPbc **PKPbc** **06 49 25.4 -0.5**
732A Laxson Ranch, 149.38 40 ⇓P **PKPbc** **06 49 26.2 -0.3**
baz=149
PLAL Pickwick Lake 149.75 16 PFAKE 06 49 30.0 -2.4
PLAL LR LR
comp=Z,684nm,21.0s
OXF Oxford 149.79 19 *e*PKP2 **PKPbc** **06 49 26.6 -0.7**
OXF MLR MLR
comp=Z,484nm,19.0s
OXF Oxford 149.79 19 *e*PKPbc **PKPbc** **06 49 26.6 -0.7**
OXF LR LR
comp=Z,484nm,19.0s
TKL Tuckaleechee C 150.05 9 *e*PKPbc **PKPbc** **06 49 27.4 -0.6**
SWET Sewanee 150.06 13 *e*PKPbc **PKPbc** **06 49 27.3 -0.7**
CPCT Cooper Cave 150.12 11 *e*PKPbc **PKPbc** **06 49 27.8 -0.4**
CNNC Cliffs of the 150.92 360 PFAKE 06 49 40.0 +2.8
CNNC LR LR
comp=Z,638nm,21.0s
HKT Hockley 150.93 33 *e*PKIKP **PKPbc** **06 49 31.2 +1.1**
HKT Hockley 150.93 33 *e*PKPbc **PKPbc** **06 49 31.2 +1.1**

VBMS	Vicksburg	151.48	22	ePKPbc	PKPbc	06 49 30.7	-0.7
VBMS				LR	LR		
	comp=Z,668nm,22.0s						
JSC	Jenkinsville	151.73	5	ePKIKP	PKPbc	06 49 31.4	-0.5
JSC	Jenkinsville	151.73	5	ePKPbc	PKPbc	06 49 31.4	-0.5
LRAL	Lakeview Retre	151.88	16	ePKPbc	PKPbc	06 49 31.6	-0.7
LRAL				LR	LR		
	comp=Z,647nm,20.0s						
SIV	San Ignacio	152.37	217	PKPbc	PKPbc	06 49 33.5	-0.4
SIV				PKPab	PKPab	06 49 45.0	+1.1
SIV	San Ignacio	152.37	217	PKPbc	PKPbc	06 49 33.5	-0.4
	comp=Z,1.9nm,0.6s,baz=120,slow=7.6,SNR=12						
SIV				PKPab	PKPab	06 49 45.0	+1.1
	comp=Z,3.8nm,0.7s,baz=118,slow=5.2,SNR=8.1						
NHSC	New Hope	152.98	4	PFAKE		06 49 40.0	+5.3
NHSC				LR	LR		
	comp=Z,568nm,19.0s						
BRAL	Brewton	153.76	18	PFAKE		06 49 40.0	+3.5
BRAL				LR	LR		
	comp=Z,627nm,20.0s						
LPAZ	La Paz	155.73	204	PKPab	PKPab	06 49 59.0	+0.3
LPAZ	La Paz	155.73	204	PKPbc	PKPbc	06 49 48.6	
	comp=Z,0.9nm,0.7s,baz=146,slow=3.6,SNR=4.3						
LPAZ				PKPab	PKPab	06 49 59.0	+0.3
	comp=Z,1.5nm,0.6s,baz=134,slow=2.3,SNR=5.0						
SAML	Samuel	158.96	225	PFAKE		06 49 50.0	+14
SAML				LR	LR		
	comp=Z,494nm,21.0s						
ANWB	Willy Bob	160.28	307	PFAKE		06 49 50.0	+13
ANWB				LR	LR		
	comp=Z,339nm,20.0s						
FDF	Fort de France	161.21	299	PFAKE		06 49 50.0	+12
FDF				LR	LR		
	comp=Z,383nm,19.0s						
GRGR	Grenville	162.65	292	PFAKE		06 49 50.0	+10
GRGR				LR	LR		
	comp=Z,354nm,19.0s						
TEIG	Tepich	162.78	34	PFAKE		06 49 50.0	+10
TEIG				LR	LR		
	comp=Z,456nm,19.0s						
GRTK	Grand Turk	163.18	337	PFAKE		06 49 50.0	+10
GRTK				LR	LR		
	comp=Z,490nm,20.0s						
SJG	San Juan	163.24	317	PFAKE		06 49 50.0	+10
SJG				LR	LR		
	comp=Z,352nm,21.0s						
SDDR	Presa de Saban	165.50	333	PFAKE		06 49 50.0	+7.6
SDDR				LR	LR		
	comp=Z,522nm,21.0s						
GTBY	Guantanamo Bay	165.87	348	PFAKE		06 49 50.0	+7.4
GTBY				LR	LR		
	comp=Z,476nm,21.0s						
MTDJ	Mount Denham	167.85	357	PFAKE		06 49 50.0	+5.7
MTDJ				LR	LR		
	comp=Z,314nm,20.0s						
TGUH	Tegucigalpa,Un	167.96	48	PFAKE		06 49 50.0	+5.7
TGUH				LR	LR		
	comp=Z,356nm,21.0s						
JTS	JuntasAbangare	172.02	57	PFAKE		06 50 00.0	+13
JTS				LR	LR		
	comp=Z,465nm,21.0s						
BCIP	Isla Barro Col	176.44	28	PFAKE		06 50 00.0	+12
BCIP				LR	LR		
	comp=Z,334nm,20.0s						

IDC 01 06:34:15.2±2.6**, 21°.00S**×**69°.58W, h0**km**, mb3.7**/2**, mb1 3.8**/3**, mb1mx3.5**/17**, mbtmp3.6**/3**, ML3.3**/1**, Error ellipse: s-maj=68.7km s-min=56.2km az=48.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.88	17	Pn	Pn	06 35 30.5	-0.2
	0.8nm,0.3s,baz=203,slow=7.2,SNR=25						
TORD	Torodi Ar. Bea	77.77	71	P	P	06 46 14.8	0.0
	0.1nm,0.4s,baz=237,slow=5.0,SNR=2.4						
YKA	Yellowknife Ar	90.51	341	P	P	06 47 18.5	0.0
	0.5nm,0.7s,baz=132,slow=4.7,SNR=14						

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*ISCJB **01** 06:43:42.3±1.4, 52°.2N±0°.3×173°.27W±0°.09, h59km, mb3.4/2, Error ellipse: s-maj=42.9km s-min=4.8km az=171.5*
*IDC **01** 06:43:42.5±11.0, 52°.40N×173°.57W, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.3/28, mbtmp3.2/3, ML3.9/1, Error ellipse: s-maj=229.5km s-min=62.7km az=89.0*
*NEIC **01** 06:43:43.1, 52°.00N×173°.23W, h28km, ML3.0(AEIC), After AEIC.*
ISC 01 06:43:43.8±1.8**, 52°.1N**±0°.3×**173°.31W**±0°.06**, h59**km**, n18, σ1s.86**/16**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	0.53	293	P	Pn	06 43 54.5	-1.5
ATKA	Atka Island	0.56	284	P	Pn	06 43 53.7	-2.6
ATKA				S	Sn	06 44 02.3	-3.1
KOKL	Mount Kliuchef	0.60	295	P	Pn	06 43 55.5	-1.4
KOWE	Korovin West	0.65	297	P	Pn	06 43 56.5	-0.8
GSTD	Great Sitkin T	1.75	271	P	Pn	06 44 11.6	-0.3
GSTD				S	Sn	06 44 33.3	+0.2
ADAG	Mount Adagdak	2.04	269	P	Pn	06 44 15.5	-0.2
NIKO	Nikolski	2.87	70	P	Pn	06 44 25.3	-1.7
NIKO				S	Sn	06 44 58.0	-2.3
TAFP	Tanaga Falls P	2.90	268	P	Pn	06 44 27.1	-0.2
OKSP	Okmok Steeple	3.28	67	P	Pn	06 44 31.7	-0.9
OKSO	Okmok South	3.39	66	P	Pn	06 44 33.0	-1.1
MREP	Makushin Rep't	4.33	64	P	Pn	06 44 46.8	-0.4
UNV	Unalaska Valle	4.48	64	P	Pn	06 44 49.5	+0.4
ILAR	Eielson Array	18.60	37	P	Pn	06 47 59.9	+3.1
ILAR	Eielson Array	18.60	37	P	Pn	06 47 59.9	+3.1
	0.2nm,0.3s,baz=230,slow=9.0,SNR=24						
YKA	Yellowknife Ar	32.25	48	P	P	06 50 10.0	+3.8
YKA	Yellowknife Ar	32.25	48	P	P	06 50 10.0	+3.8
	0.1nm,0.3s,baz=274,slow=8.8,SNR=4.0						
TXAR	Lajitas Array	55.18	86	P	P	06 53 18.6	+8.2
TXAR	Lajitas Array	55.18	86	P	P	06 53 18.6	+8.2
	0.5nm,0.7s,baz=302,slow=5.2,SNR=4.0						

IDC 01 07:08:41.1±5.2**, 5°.24S**×**152°.38E, h91**km±42km**, mb3.3**/8**, mb1 3.5**/9**, mb1mx3.4**/20**, mbtmp3.3**/9**, Error ellipse: s-maj=53.9km s-min=25.0km az=119.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.62	231	P	Pn	07 10 15.7	-0.3
	0.9nm,0.3s,baz=74,slow=19,SNR=2.2						
PMG				S	Sn	07 11 29.8	-0.2
	1.6nm,0.3s,baz=193,slow=23,SNR=5.8						
WRA	Warramunga Arr	22.84	229	P	P	07 13 37.1	+0.2
	2.1nm,1.0s,baz=54,slow=9.6,SNR=14						
ASAR	Alice Springs	25.54	222	P	P	07 14 01.4	-0.3
	0.9nm,0.8s,baz=61,slow=9.2,SNR=6.8						
FITZ	Fitzroy Crossi	29.08	242	P	P	07 14 35.0	+1.7
	1.0nm,0.4s,baz=60,slow=7.1,SNR=4.5						
SONM	Songino Array	66.47	328	P	P	07 19 22.0	+0.9
	0.3nm,0.5s,baz=123,slow=5.3,SNR=3.3						
MKAR	Makanchi Array	80.38	319	P	P	07 20 42.7	0.0
	0.3nm,0.6s,baz=118,slow=4.1,SNR=3.0						
ZALV	Zalesovo Beam	81.28	326	P	P	07 20 45.9	-1.4
	0.2nm,0.3s,baz=101,slow=7.7,SNR=3.5						
ILAR	Eielson Array	82.72	22	P	P	07 20 54.1	-0.5
	0.2nm,0.7s,baz=236,slow=5.2,SNR=4.1						
YKA	Yellowknife Ar	96.01	28	P	P	07 21 59.3	+1.4
	0.1nm,0.6s,baz=270,slow=5.7,SNR=4.3						
TORD	Torodi Ar. Bea	150.04	287	PKPbc	PKPbc	07 28 21.1	-1.2
	0.4nm,0.7s,baz=56,slow=2.6,SNR=2.6						
TORD				PKPab	PKPab	07 28 26.9	-1.4
	0.9nm,0.7s,baz=47,slow=2.3,SNR=5.7						

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*NIED **01** 07:20:00, 24°.80N×122°.50E, h38km, Mw4.1 Best double couple: M0 1.58000×10^15 NP1:φs305.00000°, δ89.00000°, λ5.00000°. NP2:φs215.00000°, δ85.00000°, λ179.00000°.*
*ISCJB **01** 07:20:52.3±0.4, 24°.84N±0°.03×122°.50E±0°.02, h17km±3km, mb3.8/8, MS3.8/1, Error ellipse: s-maj=4.4km s-min=2.9km az=7.5*
*TAP **01** 07:20:53.3, 24°.81N×122°.38E, h17km, ML4.0, C*
*JMA **01** 07:20:54.0±0.1, 24°.82N×122°.54E, h34km, M3.6*
*IDC **01** 07:21:12.6±5.9, 24°.78N×122°.28E, h203km±61km, mb3.1/7, mb1 3.3/8, mb1mx3.1/26, mbtmp3.1/8, MS3.6/3, Ms1 3.6/3, ms1mx3.1/36, Error ellipse: s-maj=37.9km s-min=11.9km az=64.0*
ISC 01 07:20:52.7±1.0**, 24°.78N**±0°.03×**122°.48E**±0°.03**, h19**km±3km**, n57, σ0s.94**/88**, mb3.6**/8**, 2C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.50	298⇓	iP	Pg	07 21 02.1	-0.7
	baz=298						
TWB1				i S	Sg	07 21 07.8	-1.8
	baz=298						
YOJ	Yonaguni jima	0.58	123	P	Pn	07 21 05.1	-0.8
YOJ				S	Sg	07 21 13.0	+0.9
TWC	Suao	0.59	254⇑	iP	Pb	07 21 03.5	-0.9
	baz=254						
TWC				eS	Sb	07 21 11.4	-0.9
	baz=254						
ILA	Ilan	0.66	269	eP	Pb	07 21 04.9	-0.6
	baz=265						
ILA				eS	Sb	07 21 14.0	-0.3
	baz=265						
NWF	Wu-fen Shan	0.69	295⇓	iP	Pb	07 21 06.1	-0.1
	baz=295						
NWF				i S	Sb	07 21 15.0	-0.4
	baz=295						
TWE	Neicheng	0.74	266⇑	iP	Pb	07 21 06.1	-0.8
	baz=261						
TWE				S	Sb	07 21 15.5	-1.1
	baz=261						
ENA	Nanau	0.75	243	eP	Pb	07 21 06.5	-0.7
	baz=243						
ENA				eS	Sb	07 21 17.1	0.0
	baz=243						
ENTT	Nioudou	0.84	261	eP	Pb	07 21 08.1	-0.5
	baz=256						
ENTT				eS	Sb	07 21 19.1	-0.4
	baz=256						
TAP1	Taipei	0.90	287	eP	Pb	07 21 09.6	-0.2
	baz=285						
TAP1				eS	Sb	07 21 21.2	-0.2
	baz=285						
TAP	Taipei	0.92	287	eP	Pb	07 21 10.0	0.0
	baz=285						
TAP				eS	Sb	07 21 21.4	-0.4
	baz=285						
TWY	Chenhua	0.94	302	P	Pb	07 21 10.0	-0.3
	baz=303						
TWY				S	Sb	07 21 22.0	-0.4
	baz=303						
TWS1	Kuangyinshan	1.01	289	eP	Pn	07 21 11.7	-0.1
	baz=288						
TWS1				eS	Sb	07 21 24.1	-0.4
	baz=288						
NSK	Sanguang	1.02	265	i P	Pb	07 21 11.2	-0.6
	baz=261						
NSK				S	Sb	07 21 24.5	-0.4
	baz=261						
NNS	Nan Shan	1.06	252	P	Pb	07 21 12.3	-0.2
	baz=237						
NNS				S	Sb	07 21 25.9	0.0
	baz=237						
TWD	Chiawan	1.06	229	eP	Pn	07 21 12.5	0.0
	baz=231						
TWD				eS	Sn	07 21 26.3	-0.4
	baz=231						
HWA	Hwalien	1.12	225	eP	Pg	07 21 14.3	-0.2
	baz=200						
HWA				eS	Sg	07 21 29.6	+0.3
	baz=200						
NCU	National Centr	1.19	280	eP	Pg	07 21 15.0	-0.7
	baz=278						
NCU				eS	Sb	07 21 28.7	-0.8
	baz=278						
IRIF	Iriomote-Funau	1.23	111	P	Pn	07 21 14.5	-0.3
WHF	Hehuan Shan	1.27	241	P	Pb	07 21 16.1	-0.1
	baz=246						
WHF				eS	Sn	07 21 32.0	-0.5
	baz=246						
TWT	Tachien	1.29	246	eP	Pb	07 21 17.0	+0.5
	baz=243						
TWT				eS	Sb	07 21 33.1	+0.3
	baz=243						
NSTT	Nanjuang	1.35	264	P	Pn	07 21 16.8	+0.3
	baz=261						
NSTT				eS	Sn	07 21 33.7	-0.2
	baz=261						
ESL	Shilin	1.35	225	eP	Pb	07 21 17.3	0.0
	baz=204						
ESL				eS	Sg	07 21 35.7	-0.8
	baz=204						
HSN	Hsinchu	1.37	271	eP	Pb	07 21 17.4	-0.3
	baz=271						
HATJ	Hateruma jima	1.41	120	P	Pn	07 21 17.6	+0.3
HATJ				S	Sn	07 21 34.8	-0.6
JKRS	Kuro-shima	1.50	111	P	Pn	07 21 18.7	+0.2
JKRS				S	Sn	07 21 37.3	-0.2
JIJ	Ishigaki jima	1.57	105	P	Pn	07 21 19.9	+0.3
NSY	Sanyi	1.60	257	eP	Pg	07 21 22.8	-0.7
	baz=254						
NSY				eS	Sb	07 21 40.8	-0.7
	baz=254						
TWQ1	Liyutan	1.61	255	eP	Pb	07 21 22.6	+0.8
	baz=252						
TWQ1				eS	Sb	07 21 43.1	+1.4
	baz=252						
EHY	Hungye	1.65	220	eP	Pn	07 21 21.4	+0.7
	baz=217						
EHY				eS	Sb	07 21 42.2	-0.7
	baz=217						
SMLT	Sun Moon Lake	1.69	239	eP	Pb	07 21 22.9	-0.3
	baz=242						
SMLT				eS	Sb	07 21 45.0	+0.8
	baz=242						
TYC	Yuchr	1.71	240	eP	Pb	07 21 23.1	-0.4
	baz=247						
TYC				eS	Sb	07 21 43.7	-1.0
	baz=247						
TCU	Taichung	1.75	249	eP	Pb	07 21 24.9	+0.6
	baz=265						
TCU				eS	Sb	07 21 46.8	+0.9
	baz=265						
TWF1	Yuli	1.78	217	eP	Pn	07 21 22.5	+0.1
	baz=201						
CHKT	Chengkung	1.96	212	eP	Pn	07 21 24.7	-0.1
	baz=195						
CHKT				eS	Sn	07 21 48.0	-0.8
	baz=195						
ALS	Alishan	1.98	231	eP	Pb	07 21 27.3	-1.0
	baz=211						
CHN5	Tsauling	2.02	235	eP	Pb	07 21 28.4	-0.4
	baz=214						
ELDTW	Lidau	2.07	220	eP	Pn	07 21 27.1	+0.6
	baz=204						
CHN4	Tsaushan	2.23	231	eP	Pb	07 21 30.9	-1.5
	baz=213						
CHN4				eS	Sb	07 21 58.6	-1.0
	baz=213						
WTP	Ta-pu	2.29	229	eP	Pb	07 21 31.8	-1.6
	baz=211						
WTP				eS	Sb	07 21 60.0	-1.3
	baz=211						
TWG	Pinlang	2.33	214	eP	Pn	07 21 30.4	+0.4
	baz=211						
TWG				eS	Sn	07 21 57.6	-0.6
	baz=211						
CHN1	Nanshi	2.38	229	eP	Pb	07 21 33.2	-1.8
	baz=226						
SSD	Sandimen	2.63	220	eP	Pb	07 21 37.0	-2.3
	baz=207						
SSD				eS	Sb	07 22 08.5	-2.8
	baz=207						
TWM1	Shoushan	2.71	224	eP	Pb	07 21 39.9	-0.6
	baz=222						
EAST	Anshuo	2.81	212	eP	Pn	07 21 38.1	+1.4
	baz=209						
SCZT	Fangliau	2.94	216	eP	Pn	07 21 41.1	+2.8
	baz=200						
SCZT				eS	Sn	07 22 16.1	+3.0
	baz=200						
JOW	Kunigami	5.61	67	LR	LR	07 25 15.4	
	comp=Z,358nm,18.1s,baz=119,slow=42						
KSRS	Korea Array	13.47	19	P	P	07 24 17.0	+5.1
	0.1nm,0.3s,baz=201,slow=10,SNR=5.5						
JHJ	Hachijo jima 2	17.26	57	LR	LR	07 30 44.5	
	comp=Z,158nm,21.7s,baz=231,slow=33						
GUMO	Guam	23.86	114	LR	LR	07 34 29.8	
	comp=Z,302nm,20.1s,baz=181,slow=33						
SONM	Songino Array	26.30	335	P	P	07 26 28.3	+1.1
	1.5nm,0.8s,baz=150,slow=9.8,SNR=13						
MKAR	Makanchi Array	38.74	315	P	P	07 28 16.6	+0.9
	0.3nm,0.7s,baz=116,slow=9.8,SNR=3.6						
ZALV	Zalesovo Beam	40.40	326	P	P	07 28 28.8	-0.6
	0.3nm,0.3s,baz=108,slow=9.5,SNR=4.0						
KURBB	Kurchatov Arra	42.42	319	P	P	07 28 46.4	+0.4
	44nm,0.3s,baz=108,slow=7.6,SNR=1.8						
WRA	Warramunga Arr	45.93	164	P	P	07 29 15.3	+0.9
	1.0nm,0.5s,baz=347,slow=8.8,SNR=16						
ASAR	Alice Springs	49.41	166	P	P	07 29 42.8	+1.4
	0.5nm,0.8s,baz=338,slow=7.2,SNR=6.8						
CTA	Charters Tower	50.24	150	P	P	07 29 48.5	+0.7
	0.5nm,0.3s,baz=343,slow=14,SNR=2.2						
YKA	Yellowknife Ar	81.97	23	P	P	07 33 10.1	-0.8
	0.3nm,0.8s,baz=316,slow=5.3,SNR=6.1						

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*ISK **01** 07:30:34.6, 37°.10N×27°.92E, h5km, MD2.4*
*CSEM **01** 07:30:35.2±0.5, 37°.08N×27°.93E, h5km, MD2.4, Error ellipse: s-maj=12.2km s-min=7.1km az=20.0*
*DDA **01** 07:30:35.9, 37°.16N×27°.87E, h7km, MD2.6*
ISC 01 07:30:34.9±1.1**, 37°.08N**±0°.04×**27°.96E**±0°.03**, h9**km±13km**, n10, σ0s.65**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSB	Milas	0.26	326	ePG	Pg	07 30 39.4	-0.7
MLSB				eSG	Sg	07 30 44.9	+1.3
MLSB	Milas	0.26	326	ePg	Pg	07 30 39.4	-0.7
MLSB				eSg	Sg	07 30 44.9	+1.3
YER	Yerkesik	0.27	78	ePG	Pb	07 30 42.0	+0.1
YER				eSG	Sb	07 30 47.1	+0.6
YER	Yerkesik	0.27	78	ePg	Pb	07 30 42.0	+0.1
YER				eSg	Sb	07 30 47.2	+0.6
BODT	Bodrum	0.52	268	ePG	Pg	07 30 44.9	-0.1
BODT				eSG	Sb	07 30 53.4	-0.5
BODT	Bodrum	0.52	268	ePg	Pg	07 30 44.9	-0.1
BODT				eSg	Sb	07 30 53.4	-0.5
TURN	Turunc	0.56	112	eP	Pg	07 30 45.1	-0.6
TURN				i S	Sg	07 30 53.2	+0.2
TURN	Turunc	0.56	112	eP	Pg	07 30 45.1	-0.6
TURN				i S	Sg	07 30 53.2	+0.2
AYDN	Tasoluk	0.58	354	i P	Pg	07 30 45.8	-0.4
AYDN				i S	Sg	07 30 53.6	-0.3
AYDN	Tasoluk	0.58	354	i P	Pg	07 30 45.8	-0.4
AYDN				i S	Sg	07 30 53.6	-0.3

IDC 01 07:34:41.7±1.2**, 4°.07N**×**126°.89E, h0**km**, mb3.6**/9**, mb1 3.7**/9**, mb1mx3.6**/25**, mbtmp3.6**/9**, MS3.5**/2**, Ms1 3.5**/2**, ms1mx2.9**/41**, Error ellipse: s-maj=107.3km s-min=15.0km az=71.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	3.25	336	LR	LR	07 36 58.9	
	comp=Z,171nm,20.3s,baz=90,slow=42						
FITZ	Fitzroy Crossi	22.07	183	P	P	07 39 38.9	+0.5
	0.8nm,0.6s,baz=32,slow=9.5,SNR=2.8						
WRA	Warramunga Arr	24.96	163	P	P	07 40 06.4	-0.7
	2.0nm,0.6s,baz=343,slow=11,SNR=36						
ASAR	Alice Springs	28.40	166	P	P	07 40 38.2	+0.1
	0.2nm,0.4s,baz=346,slow=9.8,SNR=2.4						
STKA	Stephens Creek	38.39	160	P	P	07 42 05.0	+0.1
	2.2nm,0.8s,baz=344,slow=9.1,SNR=4.6						
SONM	Songino Array	47.03	341	P	P	07 43 15.6	+0.6
	0.3nm,0.3s,baz=161,slow=9.2,SNR=2.5						
MKAR	Makanchi Array	57.37	325	P	P	07 44 31.6	-0.3
	0.6nm,0.5s,baz=116,slow=7.8,SNR=7.7						
ZALV	Zalesovo Beam	60.36	333	P	P	07 44 52.3	-0.2
	0.3nm,0.4s,baz=123,slow=5.3,SNR=3.0						
KURBB	Kurchatov Arra	61.54	327	P	P	07 44 59.3	-1.3
	0.4nm,0.5s,baz=131,slow=6.1,SNR=9.1						
AFI	Afiamalu	63.40	108	LR	LR	08 08 35.1	
	comp=Z,169nm,19.8s,baz=319,slow=32						
BVAR	Borovoye Array	67.12	327	P	P	07 45 38.1	+0.9
	0.5nm,0.7s,baz=116,slow=6.6,SNR=2.5						

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*ISCJB **01** 07:37:32.9±0.7, 24°.83N±0°.04×122°.49E±0°.02, h13km±5km, Error ellipse: s-maj=6.5km s-min=2.8km az=12.5*
*JMA **01** 07:37:34.1±0.2, 24°.82N×122°.51E, h35km, M2.6*
*TAP **01** 07:37:34.2, 24°.80N×122°.36E, h17km, ML3.2, C*
ISC 01 07:37:32.9±1.1**, 24°.78N**±0°.04×**122°.45E**±0°.02**, h19**km±3km**, n30, σ0s.59**/56**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.47	298	i P	Pb	07 37 42.6	0.0
	baz=301						
TWB1				i S	Sg	07 37 48.3	-0.7
	baz=301						
TWC	Suao	0.57	252	P	Pb	07 37 43.9	-0.4
	baz=252						
TWC				eS	Sb	07 37 50.5	-1.5
	baz=252						
YOJ	Yonaguni jima	0.60	122	P	Pg	07 37 45.6	+0.7
YOJ				S	Sg	07 37 53.7	+0.7
NWF	Wu-fen Shan	0.67	295	P	Pg	07 37 46.8	+0.6
	baz=297						
NWF				S	Sb	07 37 54.7	-0.3
	baz=297						
TWE	Neicheng	0.71	265⇑	iP	Pb	07 37 46.6	-0.1
	baz=262						
TWE				eS	Sb	07 37 55.8	-0.3
	baz=262						
ENA	Nanau	0.73	241	P	Pb	07 37 47.0	0.0
	baz=242						
ENA				eS	Sb	07 37 56.6	-0.1
	baz=242						
ENTT	Nioudou	0.81	260	P	Pg	07 37 49.0	+0.2
	baz=263						
ENTT				S	Sb	07 37 59.2	+0.1
	baz=263						
TWY	Chenhua	0.91	303	eP	Pg	07 37 51.2	+0.5
	baz=304						
TWY				eS	Sg	07 38 02.4	-0.4
	baz=304						
TWS1	Kuangyinshan	0.99	289	eP	Pn	07 37 51.9	+0.1
	baz=289						
TWS1				eS	Sg	07 38 05.2	+0.1
	baz=289						
NSK	Sanguang	1.00	264	P	Pb	07 37 51.7	+0.1
	baz=270						
NSK				eS	Sb	07 38 04.3	-0.1
	baz=270						
NNS	Nan Shan	1.04	251	P	Pn	07 37 53.0	+0.4
	baz=236						
NNS				eS	Sn	07 38 06.5	-0.1
	baz=236						
TWD	Chiawan	1.04	228	eP	Pn	07 37 52.9	+0.4
	baz=231						
TWD				eS	Sn	07 38 06.9	+0.3
	baz=231						
IRIF	Iriomote-Funau	1.25	111	P	Pn	07 37 55.0	-0.4
IRIF				S	Sb	07 38 11.5	-0.1
WHF	Hehuan Shan	1.25	240	P	Pb	07 37 56.8	+0.6
	baz=236						
WHF				S	Sb	07 38 12.4	+0.3
	baz=236						
TWT	Tachien	1.27	246	eP	Pg	07 37 57.5	-0.1
	baz=243						
TWT				eS	Sg	07 38 14.1	-0.1
	baz=243						
NSTT	Nanjuang	1.32	264	eP	Pg	07 37 58.6	+0.1
	baz=262						
NSTT				eS	Sb	07 38 14.3	+0.5
	baz=262						
ESL	Shilin	1.34	224	eP	Pg	07 37 58.4	-0.3
	baz=203						
HATJ	Hateruma jima	1.43	120	S	Sn	07 38 14.9	-1.3
JKRS	Kuro-shima	1.52	111	P	Pn	07 37 59.5	+0.4
JKRS				S	Sn	07 38 18.3	-0.1
TWQ1	Liyutan	1.58	254	eP	Pg	07 38 02.9	-0.6
	baz=252						
TWQ1				eS	Sb	07 38 22.8	+1.4
	baz=252						
JIJ	Ishigaki jima	1.60	105	P	Pn	07 38 00.0	-0.2
JIJ				S	Sn	07 38 19.7	-0.6
EHY	Hungye	1.64	219	eP	Pb	07 38 02.2	-0.3
	baz=203						
EHY				eS	Sb	07 38 23.8	+1.1
	baz=203						
SMLT	Sun Moon Lake	1.67	238	eP	Pb	07 38 04.4	+1.2
	baz=222						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TYC	Yuchr	1.69	239	eP	Pb	07 38 04.1	+0.7
	baz=247						
TYC				eS	Sg	07 38 26.3	-1.2
	baz=247						
TWF1	Yuli	1.77	217	eP	Pb	07 38 04.4	-0.4
	baz=214						
TWF1				eS	Sn	07 38 25.4	+0.8
	baz=214						
ALS	Alishan	1.96	230	eP	Pb	07 38 08.8	+0.6
	baz=211						
ALS				eS	Sb	07 38 32.6	+0.1
	baz=211						
CHN5	Tsauling	2.00	234	eP	Pb	07 38 09.3	+0.6
	baz=215						
CHN5				eS	Sb	07 38 34.0	+0.6
	baz=215						
CHN4	Tsaushan	2.21	230	eP	Pb	07 38 12.7	+0.3
	baz=212						
CHN4				eS	Sb	07 38 39.1	-0.3
	baz=212						
WTP	Ta-pu	2.27	228	eP	Pb	07 38 13.2	-0.1
	baz=209						
CHN1	Nanshi	2.37	228	eP	Pb	07 38 14.7	-0.4
	baz=212						
CHN1				eS	Sb	07 38 43.5	-0.4
	baz=212						

IDC 01 07:51:38.1±51.0, 16°.25S×177°.30W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/19, mbtmp3.7/3, Error ellipse: s-maj=939.5km s-min=169.6km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.37	240	P	P	07 59 17.9	-0.1
	1.2nm,0.8s,baz=84,slow=9.2,SNR=4.1						
WRA	Warramunga Arr	46.00	258	P	P	08 00 03.4	-0.3
	0.3nm,0.9s,baz=92,slow=7.7,SNR=5.5						
ASAR	Alice Springs	46.28	253	P	P	08 00 05.8	-0.1
	1.2nm,0.5s,baz=89,slow=8.2,SNR=26						

NIC 01 07:53:55.0±0.1, 35°.04N×32°.40E, h10km, ML2.4, MW2.9, 1D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMC	Akamas	0.06	254	P	Pg	07 53 57.5	+0.4
AKMC				S	Sg	07 53 59.2	+0.5
PPCY	Paphos	0.16	195	P	Pg	07 53 59.0	+0.4
PPCY				S	Sg	07 54 01.8	+0.8
ALFC	Alevga	0.20	55	⇓P	Pg	07 53 59.6	+0.3
	47nm,0.1s						
ALFC				S	Sg	07 54 03.3	+1.1
LEF	Lefka	0.41	79	ePG	Pg	07 54 02.2	-0.9
LEF				eSG	Sg	07 54 07.5	-1.0

IDC 01 08:00:12.8±2.6, 52°.26N×35°.75E, h0km, mb3.0/1, mb1 3.6/3, mb1mx3.2/24, mbtmp3.4/3, ML3.0/3, Error ellipse: s-maj=32.5km s-min=13.5km az=122.0, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKASG	Malin Array Be	4.37	252	Pn	Pn	08 01 18.5	-1.9
	0.9nm,0.3s,baz=60,slow=15,SNR=2.0						
AKASG				Pg	Pb	08 01 28.9	-1.5
	2.2nm,0.3s,baz=58,slow=15,SNR=5.7						
AKASG				Sn	Sn	08 02 09.9	-2.0
	1.9nm,0.3s,baz=66,slow=21,SNR=3.4						
AKASG				Lg	Lg	08 02 25.5	
	2.7nm,0.3s,baz=68,slow=30,SNR=5.7						
MICGM	Minsk	5.22	299	e	Sb	08 02 50.0	+1.9
FINES	FINESS Array B	10.61	334	Pn	Pn	08 02 42.9	-3.0
	0.2nm,0.3s,baz=142,slow=13,SNR=5.2						
FINES				Sn	Sn	08 04 33.5	-12
	0.2nm,0.3s,baz=139,slow=23,SNR=3.1						
ARCES	ARCESS Array B	17.99	348	Pn	Pn	08 04 18.7	-5.2
	0.1nm,0.3s,baz=159,slow=10,SNR=2.8						
YKA	Yellowknife Ar	63.22	345	P	P	08 10 41.1	-1.1
	0.1nm,0.6s,baz=13,slow=6.5,SNR=4.2						

IDC 01 08:08:38.6±3.2, 33°.57S×178°.75W, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.8/17, mbtmp4.0/3, ML4.0/1, Error ellipse: s-maj=71.0km s-min=36.5km az=116.0
ISCJB 01 08:08:43.0±2.8, 33°.7S±0°.1×178°.8W±0°.4, h41km, mb3.8/2, Error ellipse: s-maj=54.7km s-min=13.4km az=14.8
ISC 01 08:08:44.1±2.6, 33°.7S±0°.2×178°.8W±0°.4, h41km, n7, σ0s.91/10, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	5.03	208	PN	Pn	08 09 57.5	+0.6
URZ	Urewera	5.68	215	PN	Pn	08 10 05.6	-0.3
URZ				SN	Sn	08 11 10.7	+0.8
URZ	Urewera	5.68	215	Pn	Pn	08 10 05.8	-0.2
	4.2nm,0.3s,baz=39,slow=14,SNR=19						
URZ				Sn	Sn	08 11 11.1	+1.2
	4.2nm,0.3s,baz=37,slow=20,SNR=6.6						
BKZ	Black Stump Fm	6.70	214	PN	Pn	08 10 18.9	-1.0
BKZ				SN	Sn	08 11 33.6	-1.4
ASAR	Alice Springs	42.41	271	P	P	08 16 35.1	+0.3
	1.3nm,0.7s,baz=113,slow=7.5,SNR=12						
WRA	Warramunga Arr	43.69	276	P	P	08 16 45.2	0.0
	2.1nm,0.8s,baz=116,slow=7.5,SNR=24						
FINES	FINESS Array B	147.95	338	PKPbc	PKPbc	08 28 24.0	0.0
	0.6nm,0.3s,baz=29,slow=3.2,SNR=4.3						

KRSC 01 08:17:51.1±0.4, 53°.39N×160°.49E, h39km±29km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.41	224	i P	Pn	08 18 00.1	-0.3
SPN				i S	Sn	08 18 06.9	-0.2
KII	Karymskiy	0.90	317	eP	Pn	08 18 07.0	-0.3
KII				i S	Sn	08 18 18.9	-0.2
SDLR	Sedlovina	0.97	264	eP	Pn	08 18 08.4	0.0
SDLR				i S	Sn	08 18 21.2	+0.2
UGLR	Uglovaya	1.02	260	eP	Pn	08 18 09.3	+0.3
UGLR				i S	Sn	08 18 22.7	+0.6
SMAR	Somma	1.02	264	eP	Pn	08 18 09.6	+0.4
SMAR				i S	Sn	08 18 22.4	-0.1
KRER	Koryakskii	1.05	266	eP	Pn	08 18 10.0	+0.5
KRER				i S	Sn	08 18 23.8	+0.7
AVH	Avacha	1.06	264	eP	Pn	08 18 10.0	+0.5
AVH				i S	Sn	08 18 24.1	+1.0
KOK	Koryaka	1.12	266	eP	Pn	08 18 10.6	+0.3
KOK				i S	Sn	08 18 24.6	0.0
PET	Petropavlovsk	1.16	252	eP	Pn	08 18 11.0	+0.2
PET				i S	Sn	08 18 25.2	-0.3
MKZ	Mys Kozlova	1.38	32	eP	Pn	08 18 13.0	-0.8
MKZ				i S	Sn	08 18 29.0	-1.7
RUS	Russkaya	1.53	232	eP	Pn	08 18 15.6	-0.3
RUS				i S	Sn	08 18 33.2	-1.4
GNL	Ganaly	1.55	282	eP	Pn	08 18 17.3	+1.0
GNL				i S	Sn	08 18 36.6	+1.3
MTVR	Mutnovka	1.67	238	eP	Pn	08 18 18.2	+0.3
MTVR				i S	Sn	08 18 38.0	-0.2
GRL	Gorelyy	1.69	241	eP	Pn	08 18 18.8	+0.6
GRL				i S	Sn	08 18 39.3	+0.7
TUMR	Tumrok	1.91	354	eP	Pn	08 18 22.2	+1.0
TUMR				i S	Sn	08 18 44.6	+0.5
APC	Apacha	2.06	258	eP	Pn	08 18 25.0	+1.9
APC				i S	Sn	08 18 49.7	+2.2
KMNR	Kamenistaya	2.38	357	P	Pn	08 18 29.4	+1.8
KMNR				i S	Sn	08 18 57.2	+1.6
MIPR	Malaya Ipel'ka	2.52	245	P	Pn	08 18 31.9	+2.4
MIPR				i S	Sn	08 19 02.1	+3.0
BZGR	Bezymyannyi-Gr	2.56	3	P	Pn	08 18 32.6	+2.4
BZGR				i S	Sn	08 19 02.7	+2.6
BZWR	Bezymyannyi-We	2.58	0	P	Pn	08 18 32.3	+1.8
KPT	Kopyto	2.59	357	P	Pn	08 18 32.5	+2.0
ZLN	Zelenaya	2.64	4	P	Pn	08 18 34.1	+2.8
ZLN				i S	Sn	08 19 05.6	+3.5
KOZ	Kozyrevsk	2.70	353	P	Pn	08 18 33.3	+1.4
ESO	Esso	2.75	338	eP	Pn	08 18 33.7	+1.1
KRSR	Krestovskiy	2.83	1	P	Pn	08 18 35.1	+1.2
KLY	Klyuchi	2.93	2	P	Pn	08 18 35.8	+0.7
KLY				i S	Sn	08 19 08.9	-0.1
SRDR	Sredinnyy	2.97	352	P	Pn	08 18 36.5	+0.8
KBTR	Krutoberegovo	3.13	25	P	Pn	08 18 38.5	+0.7
KBTR				i S	Sn	08 19 13.5	-0.4
BKI	Bering	3.69	58	eP	Pn	08 18 45.0	-0.5
BKI				i S	Sn	08 19 23.0	-4.7

IDC 01 08:24:58.1±3.4, 1°.98S×102°.02E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/22, mbtmp3.6/5, Error ellipse: s-maj=152.8km s-min=21.4km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	36.27	122	P	P	08 32 03.1	-0.4
	0.3nm,0.9s,baz=307,slow=8.4,SNR=4.9						
ASAR	Alice Springs	37.65	128	P	P	08 32 15.2	-0.1
	0.5nm,0.5s,baz=304,slow=7.7,SNR=8.4						
SONM	Songino Array	49.75	4	P	P	08 33 54.0	+1.6
	0.5nm,0.4s,baz=186,slow=10,SNR=7.6						
MKAR	Makanchi Array	51.58	343	P	P	08 34 05.7	-0.4
	0.3nm,0.3s,baz=147,slow=9.3,SNR=4.6						
ZALV	Zalesovo Beam	57.54	348	P	P	08 34 48.2	-1.0
	0.5nm,0.3s,baz=145,slow=5.3,SNR=4.5						

ISCJB 01 08:51:32.2±0.5, 39°.18N±0°.03×28°.90E±0°.03, h3km±6km, Error ellipse: s-maj=5.1km s-min=3.6km az=9.8
CSEM 01 08:51:32.5±0.1, 39°.19N×28°.90E, h5km, MD2.8, Error ellipse: s-maj=3.2km s-min=2.4km az=21.0
DDA 01 08:51:32.3, 39°.19N×28°.89E, h7km, MD2.8
ISK 01 08:51:32.2, 39°.15N×28°.93E, h15km, MD2.6
ISC 01 08:51:32.5±0.9, 39°.18N±0°.02×28°.89E±0°.02, h12km±8km, n34, σ0s.37/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	Demirci	0.20	225	i P	Pg	08 51 36.9	+0.1
DEMI				i S	Sg	08 51 39.7	-0.1
DEMI	Demirci	0.20	225	i P	Pg	08 51 36.9	+0.1
DEMI				i S	Sg	08 51 39.7	-0.1
GDZ	Gediz	0.47	101	i P	Pg	08 51 41.7	0.0
GDZ				i S	Sg	08 51 48.2	+0.3
GDZ	Gediz	0.47	101	i P	Pg	08 51 41.7	0.0
GDZ				i S	Sg	08 51 48.2	+0.3
TVSB	Tavsanli	0.52	59	ePG	Pg	08 51 42.4	-0.2
TVSB	Tavsanli	0.52	59	ePg	Pg	08 51 42.4	-0.2
DURS	Dursunbey	0.53	322	i P	Pg	08 51 42.3	-0.5
DURS				i S	Sg	08 51 49.6	-0.3
DURS	Dursunbey	0.53	322	i P	Pg	08 51 42.3	-0.5
DURS				i S	Sg	08 51 49.6	-0.3
KULA	Kula-Manisa	0.69	195	ePG	Pg	08 51 45.7	-0.2
KULA	Kula-Manisa	0.69	195	ePg	Pg	08 51 45.7	-0.2
AKHS	Akhisar	0.89	251	i P	Pb	08 51 50.0	0.0
AKHS				i S	Sb	08 52 02.3	+0.5
AKHS	Akhisar	0.89	251	i P	Pb	08 51 50.0	0.0
AKHS				i S	Sb	08 52 02.3	+0.5
AKS	Akhisar	0.89	251	ePG	Pb	08 51 50.1	+0.2
AKS	Akhisar	0.89	251	ePg	Pb	08 51 50.2	+0.2
BALB	Balikesir	0.91	301	ePG	Pn	08 51 51.1	0.0
BALB	Balikesir	0.91	301	ePg	Pn	08 51 51.1	0.0
KHAL	Karahalli	0.94	150	i P	Pn	08 51 51.7	+0.1
KHAL				i S	Sg	08 52 02.5	-0.2
KHAL	Karahalli	0.94	150	i P	Pn	08 51 51.7	+0.1
KHAL				i S	Sg	08 52 02.5	-0.2
ALT	Altintas	0.95	97	ePG	Pg	08 51 50.5	-0.4
ALT				eSG	Sb	08 52 03.6	-0.1
ALT	Altintas	0.95	97	ePg	Pg	08 51 50.5	-0.4
ALT				eSg	Sb	08 52 03.6	-0.1
KHL	Karahalli	0.99	150	ePG	Pg	08 51 50.8	-0.7
KHL	Karahalli	0.99	150	ePg	Pg	08 51 50.8	-0.7
BALY	Balya	1.13	300	i P	Pb	08 51 53.4	-0.7
BALY				i S	Sg	08 52 09.1	+0.1
BALY	Balya	1.13	300	i P	Pb	08 51 53.4	-0.7
BALY				i S	Sg	08 52 09.1	+0.1
MDNY	Mudanya-Bursa	1.19	360	ePN	Pg	08 51 55.5	+0.2
MDNY	Mudanya-Bursa	1.19	360	ePn	Pg	08 51 55.5	+0.2
GONE	Gonen-Balikesi	1.27	313	ePN	Pg	08 51 56.5	-0.4
GONE	Gonen-Balikesi	1.27	313	ePn	Pg	08 51 56.5	-0.4
ARMT	Armutlu	1.38	359	ePN	Pb	08 51 57.9	-0.4
ARMT	Armutlu	1.38	359	ePn	Pb	08 51 57.9	-0.4
BORA	Eskisehir	1.39	59	i P	Pg	08 51 59.2	-0.1
BORA				i S	Sg	08 52 17.8	+0.5
BORA	Eskisehir	1.39	59	i P	Pg	08 51 59.2	-0.1
BORA				i S	Sg	08 52 17.8	+0.5
RKY	Sarkoy-Tekirda	2.00	319	ePN	Pn	08 52 06.9	+0.8
RKY	Sarkoy-Tekirda	2.00	319	ePn	Pn	08 52 06.9	+0.8

IDC 01 09:26:28.2±1.3, 1°.25N×126°.73E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.6/20, mbtmp3.8/4, Error ellipse: s-maj=138.3km s-min=20.0km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.34	161	P	P	09 31 27.9	0.0
	1.9nm,0.5s,baz=340,slow=10,SNR=29						
ASAR	Alice Springs	25.73	165	P	P	09 32 00.5	-0.1
	0.4nm,0.3s,baz=344,slow=8.2,SNR=14						
SONM	Songino Array	49.64	342	P	P	09 35 21.5	-0.2
	0.4nm,0.6s,baz=153,slow=7.5,SNR=3.4						
MKAR	Makanchi Array	59.59	326	P	P	09 36 34.0	+0.1
	2.0nm,0.7s,baz=120,slow=8.6,SNR=22						

ISK 01 09:55:51.1, 39°.45N×28°.15E, h14km, MD2.7
DDA 01 09:55:51.4, 39°.45N×28°.14E, h7km, MD2.9
CSEM 01 09:55:51.2±0.2, 39°.46N×28°.15E, h1km, MD2.7, Error ellipse: s-maj=3.9km s-min=3.3km az=42.0
ISC 01 09:55:51.7±0.9, 39°.43N±0°.02×28°.14E±0°.02, h10km±9km, n46, σ0s.79/64, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.29	316	ePG	Pg	09 55 57.5	0.0
BALB				eSG	Sg	09 56 02.2	+0.9
BALB	Balikesir	0.29	316	ePg	Pg	09 55 57.5	0.0
BALB				eSg	Sg	09 56 02.3	+0.9
DURS	Dursunbey	0.31	57	i P	Pg	09 55 57.4	-0.4
DURS				i S	Sg	09 56 02.6	+0.7
DURS	Dursunbey	0.31	57	i P	Pg	09 55 57.4	-0.4
DURS				i S	Sg	09 56 02.6	+0.7
BALY	Balya	0.51	307	i P	Pg	09 56 01.2	-0.4
BALY				i S	Sb	09 56 09.7	-0.6
BALY	Balya	0.51	307	i P	Pg	09 56 01.2	-0.4
BALY				i S	Sb	09 56 09.7	-0.6
DEMI	Demirci	0.59	131	i P	Pg	09 56 03.3	+0.1
DEMI				i S	Sb	09 56 12.4	-0.3
DEMI	Demirci	0.59	131	i P	Pg	09 56 03.3	+0.1
DEMI				i S	Sb	09 56 12.4	-0.3
AKHS	Akhisar	0.61	205	i P	Pg	09 56 03.4	-0.1
AKHS				i S	Sg	09 56 12.1	+0.6
AKHS	Akhisar	0.61	205	i P	Pg	09 56 03.4	-0.1
AKHS				i S	Sg	09 56 12.1	+0.6
AKS	Akhisar	0.61	205	ePG	Pb	09 56 04.0	-0.5
AKS				eSG	Sb	09 56 13.0	-0.1
AKS	Akhisar	0.61	205	ePg	Pb	09 56 04.0	-0.5
AKS				eSg	Sb	09 56 13.0	-0.1
GONE	Gonen-Balikesi	0.71	330	ePG	Pg	09 56 04.6	-0.7
GONE	Gonen-Balikesi	0.71	330	ePg	Pg	09 56 04.6	-0.7
ORLT	Orhaneli	0.84	43	ePG	Pg	09 56 07.8	-0.1
ORLT	Orhaneli	0.84	43	ePg	Pg	09 56 07.8	-0.1
KULA	Kula-Manisa	1.00	156	ePG	Pb	09 56 11.1	-0.1
KULA	Kula-Manisa	1.00	156	ePg	Pb	09 56 11.1	-0.1
TVSB	Tavsanli	1.02	89	ePG	Pg	09 56 11.2	0.0
TVSB	Tavsanli	1.02	89	ePg	Pg	09 56 11.3	0.0
GDZ	Gediz	1.09	108	i P	Pg	09 56 12.6	-0.1
GDZ				i S	Sb	09 56 28.0	+0.8
GDZ	Gediz	1.09	108	i P	Pg	09 56 12.6	-0.1
GDZ				i S	Sb	09 56 28.0	+0.8
MDNY	Mudanya-Bursa	1.09	31	ePG	Pg	09 56 12.2	-0.5
MDNY	Mudanya-Bursa	1.09	31	ePg	Pg	09 56 12.2	-0.5
AYVA	Ayvalik	1.13	264	i P	Pg	09 56 13.2	-0.2
AYVA				i S	Sn	09 56 31.4	+2.1
AYVA	Ayvalik	1.13	264	i P	Pg	09 56 13.2	-0.2
AYVA				i S	Sn	09 56 31.4	+2.1
KRBG	Karabiga-Canak	1.16	326	ePN	Pg	09 56 13.2	-0.7
KRBG	Karabiga-Canak	1.16	326	ePn	Pg	09 56 13.2	-0.7
ARMT	Armutlu	1.26	26	ePN	Pg	09 56 14.5	-1.3
ARMT	Armutlu	1.26	26	ePn	Pg	09 56 14.5	-1.3
BLCB	Balcova	1.35	220	ePN	Pg	09 56 15.9	-1.7
BLCB	Balcova	1.35	220	ePn	Pg	09 56 15.9	-1.7
RKY	Sarkoy-Tekirda	1.46	330	ePN	Pn	09 56 17.6	-0.6
RKY	Sarkoy-Tekirda	1.46	330	ePn	Pn	09 56 17.6	-0.6
YLV	Yalova	1.48	39	ePN	Pn	09 56 18.4	0.0
YLV	Yalova	1.48	39	ePn	Pn	09 56 18.4	0.0
KHAL	Karahalli	1.49	135	i P	Pn	09 56 19.3	+0.6
KHAL				i S	Sg	09 56 38.0	-1.7
KHAL	Karahalli	1.49	135	i P	Pn	09 56 19.3	+0.6
KHAL				i S	Sg	09 56 38.0	-1.7
MFT	Murefte	1.50	334	ePN	Pn	09 56 19.0	+0.2
MFT	Murefte	1.50	334	ePn	Pn	09 56 19.0	+0.2
ALT	Altintas	1.57	103	ePN	Pn	09 56 18.9	-0.9
ALT	Altintas	1.57	103	ePn	Pn	09 56 18.9	-0.9
GELI	Tayfur-Gelibol	1.60	307	ePN	Pn	09 56 19.6	-0.5
GELI	Tayfur-Gelibol	1.60	307	ePn	Pn	09 56 19.6	-0.5
HRT	Hereke	1.81	40	ePN	Pn	09 56 22.5	-0.6
HRT	Hereke	1.81	40	ePn	Pn	09 56 22.5	-0.6

IDC 01 09:58:29.2±1.1, 19°.59N×122°.28E, h0km, mb3.4/7, mb1 3.6/7, mb1mx3.5/24, mbtmp3.4/7, Error ellipse: s-maj=42.9km s-min=21.4km az=65.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	22.09	271	P	P	10 03 25.6	-0.5
	0.5nm,0.4s,baz=69,slow=10.0,SNR=1.5						
SONM	Songino Array	30.99	339	P	P	10 04 48.8	+0.4
	0.2nm,0.4s,baz=148,slow=10,SNR=2.9						
WRA	Warramunga Arr	41.03	163	P	P	10 06 13.8	-0.6
	0.4nm,0.9s,baz=342,slow=7.9,SNR=3.9						
MKAR	Makanchi Array	42.40	319	P	P	10 06 25.3	-0.2
	0.3nm,0.6s,baz=103,slow=9.3,SNR=3.8						
ASAR	Alice Springs	44.46	165	P	P	10 06 42.9	+0.5
	0.2nm,0.3s,baz=350,slow=7.4,SNR=4.4						
ZALV	Zalesovo Beam	44.67	329	P	P	10 06 43.9	+0.3
	0.4nm,0.4s,baz=116,slow=6.7,SNR=2.5						
YKA	Yellowknife Ar	86.79	23	P	P	10 11 14.7	-0.5
	0.2nm,0.6s,baz=308,slow=4.6,SNR=8.1						

ISCJB 01 10:00:29.0±0.7, 38°.82N±0°.04×40°.02E±0°.03, h5km±7km, Error ellipse: s-maj=6.7km s-min=4.5km az=2.5
ISK 01 10:00:28.4, 38°.85N×40°.02E, h5km, MD2.6
DDA 01 10:00:29.0, 38°.80N×40°.02E, h17km, MD2.8
CSEM 01 10:00:30.4±0.2, 38°.87N×39°.90E, h10km, MD2.6, Error ellipse: s-maj=7.9km s-min=3.9km az=162.0
ISC 01 10:00:29.1±1.1, 38°.84N±0°.05×40°.02E±0°.03, h13km±11km, n18, σ0s.43/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BINT	Bingol	0.37	84	ePg	Pn	10 00 39.3	-1.0
BINT				eSg	Sn	10 00 47.4	0.0
PTK	Pertek	0.49	276	ePG	Pg	10 00 38.3	-0.6
PTK	Pertek	0.49	276	ePg	Pg	10 00 38.3	-0.6
BNGB	Bingˆ¶l	0.54	73	ePG	Pg	10 00 39.3	-0.4
BNGB				eSG	Sg	10 00 47.4	+0.6
SVRC	Sivrice-ELAZID	0.72	231	ePG	Pg	10 00 42.9	-0.3
SVRC				eSG	Sb	10 00 53.5	-0.1
SVRC	Sivrice-ELAZID	0.72	231	ePg	Pg	10 00 42.9	-0.3
SVRC				eSg	Sb	10 00 53.5	-0.1
ERZN	Erzincan	0.78	343	ePG	Pg	10 00 43.9	-0.4
ELZG	Elazig	0.88	247	i P	Pb	10 00 45.9	-0.4
ELZG				i S	Sb	10 00 58.2	+0.2
ELZG	Elazig	0.88	247	i P	Pb	10 00 45.9	-0.4
ELZG				i S	Sb	10 00 58.2	+0.2
KEMA	Kemaliye	1.26	290	eP	Pb	10 00 52.8	0.0
KEMA				i S	Sg	10 01 10.6	+0.7
KEMA	Kemaliye	1.26	290	eP	Pb	10 00 52.8	0.0
KEMA				i S	Sg	10 01 10.6	+0.7
ILIC	ilic-Erzincan	1.28	299	ePN	Pb	10 00 53.3	+0.1
ILIC	ilic-Erzincan	1.28	299	ePn	Pb	10 00 53.3	+0.1
MALT	Malatya	1.35	248	ePN	Pg	10 00 54.9	-0.3
MALT	Malatya	1.35	248	ePn	Pg	10 00 54.9	-0.3
BEST	Besiri	1.37	134	i P	Pn	10 00 54.2	+0.3
BEST				i S	Sn	10 01 11.8	-0.1
EZM	Erzurum	1.49	44	ePN	Pb	10 00 57.1	+0.3
MARD	Mardin	1.64	158	eP	Pn	10 00 58.2	+0.5
MARD				i S	Sn	10 01 18.7	0.0

THE 01 10:14:49.8, 38°.20N×22°.79E, h17km±1km, ML1.4/4, Error ellipse: s-maj=1.3km s-min=0.5km az=145.0
ISCJB 01 10:14:50.0±0.6, 38°.20N±0°.03×22°.77E±0°.05, h13km±5km, Error ellipse: s-maj=6.4km s-min=5.0km az=11.9
ATH 01 10:14:50.0, 38°.20N×22°.77E, h5km, MD2.6/6
CSEM 01 10:14:50.0±0.1, 38°.20N×22°.78E, h10km, ML1.4/4, Error ellipse: s-maj=3.0km s-min=2.4km az=111.0
ISC 01 10:14:49.9±0.9, 38°.20N±0°.02×22°.80E±0°.03, h15km±8km, n21, σ0s.31/35, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTK	Loutraki	0.22	142	P	Pg	10 14 54.7	-0.2
LTK				S	Sb	10 14 59.2	-0.1
LTK	Loutraki	0.22	142	ePG	Pg	10 14 54.6	-0.3
LTK				eSG	Sg	10 14 58.4	+0.2
LTK	Loutraki	0.22	142	ePg	Pg	10 14 54.6	-0.3
LTK				eSg	Sg	10 14 58.4	+0.2
LTK				S	Sb	10 14 59.2	-0.1
DSF	Desfina	0.30	316	P	Pg	10 14 55.9	-0.4
DSF				S	Sg	10 15 01.1	+0.4
DSF	Desfina	0.30	316	P	Pg	10 14 55.9	-0.4
DSF				S	Sg	10 15 01.1	+0.4
GUR	Goura	0.44	234	P	Pg	10 14 58.6	-0.2
GUR	Goura	0.44	234	ePB	Pg	10 14 58.6	-0.2
GUR				eSB	Sg	10 15 04.6	-0.2
GUR	Goura	0.44	234	P	Pg	10 14 58.6	-0.2
GUR				eSb	Sg	10 15 04.6	-0.2
LKR	Lokris	0.48	19	P	Pg	10 14 59.0	-0.5
LKR				S	Sb	10 15 06.6	-0.3
LKR	Lokris	0.48	19	ePB	Pg	10 14 58.9	-0.5
LKR				eSB	Sb	10 15 07.1	+0.2
LKR	Lokris	0.48	19	P	Pg	10 14 59.0	-0.5
LKR				S	Sb	10 15 06.6	-0.3
LKR				eSb	Sb	10 15 07.1	+0.2
ATAL	Atalanti	0.53	20	P	Pg	10 15 00.4	+0.1
ATAL				S	Sb	10 15 08.2	0.0
ATAL	Atalanti	0.53	20	P	Pg	10 15 00.4	+0.1
ATAL				S	Sb	10 15 08.2	0.0
KALE	Kalithea	0.55	291	ePB	Pg	10 15 00.5	-0.3
KALE	Kalithea	0.55	291	ePb	Pg	10 15 00.5	-0.3
AXAR	Agios Charalam	0.58	349	P	Pg	10 15 00.9	-0.4
AXAR	Agios Charalam	0.58	349	P	Pg	10 15 00.9	-0.4
TRIZ	Trizonia	0.59	287	ePB	Pb	10 15 02.3	+0.4
TRIZ	Trizonia	0.59	287	ePb	Pb	10 15 02.3	+0.4
DID	Didima	0.77	153	ePB	Pn	10 15 06.2	0.0
DID	Didima	0.77	153	ePb	Pn	10 15 06.2	0.0

IDC 01 10:16:35.6±0.8, 3°.56S×144°.41E, h0km, mb4.1/12, mb1 4.3/13, mb1mx4.2/18, mbtmp4.1/13, ML3.8/1, MS3.6/7, Ms1 3.5/7, ms1mx3.1/26, Error ellipse: s-maj=32.1km s-min=15.2km az=97.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.42	155	Pn	Pn	10 18 15.3	+3.9
	5.2nm,0.3s,baz=1.2,slow=4.7,SNR=19						
GUMO	Guam	17.04	2	LR	LR	10 25 17.5	
	comp=Z,132nm,21.6s,baz=126,slow=31						
WRA	Warramunga Arr	19.02	210	P	Pn	10 20 60.0	0.0
	0.3nm,0.3s,baz=32,slow=11,SNR=31						
WRA				S	S	10 24 41.6	+5.4
	0.0nm,0.3s,baz=23,slow=23,SNR=2.8						
WRA				LR	LR	10 29 01.4	
	comp=Z,176nm,19.8s,baz=40,slow=39						
ASAR	Alice Springs	22.42	206	P	P	10 21 35.8	-0.3
	2.9nm,0.6s,baz=33,slow=9.4,SNR=48						
ASAR				LR	LR	10 31 25.3	
	comp=Z,263nm,18.1s,baz=37,slow=40						
FITZ	Fitzroy Crossi	23.39	230	P	P	10 21 45.4	-0.8
	11nm,0.9s,baz=60,slow=6.8,SNR=15						
STKA	Stephens Creek	28.30	185	P	P	10 22 31.3	+0.4
	2.4nm,0.7s,baz=347,slow=5.1,SNR=7.7						
STKA				LR	LR	10 35 28.5	
	comp=Z,115nm,20.1s,baz=24,slow=40						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	36.74	353	LR	LR	10 35 43.4	
	comp=Z,59nm,19.1s,baz=54,slow=31						
JNU	Nakatsue	38.66	342	LR	LR	10 36 33.9	
	comp=Z,97nm,19.8s,baz=224,slow=31						
KSRS	Korea Array	43.59	341	P	P	10 24 40.0	-1.5
	1.4nm,0.6s,baz=165,slow=8.9,SNR=4.4						
KSRS				LR	LR	10 39 00.8	
	comp=Z,44nm,21.4s,baz=130,slow=31						
CMAR	Chiang Mai Arr	49.84	298	P	P	10 25 30.1	-0.7
	0.9nm,0.5s,baz=116,slow=6.1,SNR=5.2						
PETK	Petropavlovsk-	57.56	9	P	P	10 26 26.6	-0.2
	3.4nm,0.8s,baz=158,slow=5.5,SNR=5.4						
SONM	Songino Array	61.04	332	P	P	10 26 52.4	+1.1
	1.3nm,1.0s,baz=142,slow=5.6,SNR=6.6						
MKAR	Makanchi Array	73.99	321	P	P	10 28 13.7	+0.6
	0.7nm,0.6s,baz=105,slow=7.4,SNR=9.7						
VNDA	Vanda	74.50	176	P	P	10 28 15.5	0.0
	1.6nm,0.7s,baz=315,slow=6.6,SNR=7.6						
ZALV	Zalesovo Beam	75.59	328	P	P	10 28 22.7	+0.5
	2.3nm,0.8s,baz=113,slow=3.4,SNR=11						
ILAR	Eielson Array	84.28	24	P	P	10 29 08.4	-0.6
	1.8nm,1.0s,baz=263,slow=5.0,SNR=12						
YKA	Yellowknife Ar	98.21	27	P	P	10 30 14.2	-0.2
	0.2nm,0.9s,baz=284,slow=4.5,SNR=5.0						

IDC 01 10:16:58.0±2.2**, 5°.75N×125°.34E, h0km, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/23**, mbtmp3.7**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.2**/31**, Error ellipse: s-maj=201.3km s-min=25.6km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	23.70	179	LR	LR	10 31 44.3	
	comp=Z,66nm,18.1s,baz=313,slow=37						
WRA	Warramunga Arr	27.02	161	P	P	10 22 41.5	-0.5
	1.1nm,0.3s,baz=340,slow=10,SNR=12						
ASAR	Alice Springs	30.41	164	P	P	10 23 12.8	+0.7
	0.4nm,0.5s,baz=340,slow=7.0,SNR=5.7						
MKAR	Makanchi Array	55.12	325	P	P	10 26 32.0	-0.1
	0.6nm,0.7s,baz=108,slow=8.3,SNR=7.8						

*IGIL **01** 10:26:53.0, 36°.72N×12°.70W, h30km, ML2.0*
*MDD **01** 10:26:55.9±2.7, 36°.95N×12°.26W, h0km, mb4.0/2, Error ellipse: s-maj=27.9km s-min=22.7km az=176.0, PRXIMO*
*INMG **01** 10:26:55.9±1.0, 36°.71N×12°.73W, h10km, ML2.2, Error ellipse: s-maj=10.0km s-min=7.9km az=151.0*
*CSEM **01** 10:26:56.8±0.3, 36°.96N×12°.17W, h10km, mb4.0/2, Error ellipse: s-maj=8.0km s-min=5.3km az=5.0*
ISC 01 10:26:56.6±4.2**, 37°.0N**±0°.1×**12°.2W**±0°.2**, h10km, n31, σ0s.58**/57**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.70	86	ePn	Pn	10 27 39.7	-0.3
PFVI				eSn	Sn	10 28 12.4	-0.3
PFVI	Vila Bisbo	2.70	86	P	Pn	10 27 39.7	-0.3
	2.7nm,0.1s,SNR=7.9						
PFVI				S	Sn	10 28 12.1	-0.6
	7.6nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	2.70	86	P	Pn	10 27 39.7	-0.3
	2.7nm,0.1s,SNR=7.9						
PFVI				S	Sn	10 28 12.1	-0.6
	7.6nm,0.1s,SNR=7.9						
PFVI				eSn	Sn	10 28 12.4	-0.3
PTEO	Sao Teotonio	2.82	77	ePn	Pn	10 27 41.9	+0.1
PTEO				eSn	Sn	10 28 16.0	+0.1
PTEO	Sao Teotonio	2.82	77	P	Pn	10 27 41.9	+0.1
PTEO				S	Sn	10 28 16.0	+0.1
PTEO	Sao Teotonio	2.82	77	P	Pn	10 27 41.9	+0.1
PTEO				S	Sn	10 28 16.0	+0.1
MORF	Marmelete	2.85	82	eSn	Sn	10 28 15.8	-0.8
MORF				A	A	10 28 19.0	
	6.8nm,0.1s						
MORF	Marmelete	2.85	82	P	Pn	10 27 41.8	-0.4
MORF				S	Sn	10 28 15.8	-0.8
	6.8nm,0.1s						
MORF	Marmelete	2.85	82	P	Pn	10 27 41.8	-0.4
MORF				S	Sn	10 28 15.8	-0.8
	6.8nm,0.1s						
PMAFR	Mafra	3.03	48	ePn	Pn	10 27 44.8	+0.2
PMAFR				eSn	Sn	10 28 21.9	+0.9
PMAFR	Mafra	3.03	48	P	Pn	10 27 44.8	+0.2
	3.3nm,0.1s,SNR=7.9						
PMAFR				S	Sn	10 28 19.6	-1.4
	1.8nm,0.1s,SNR=7.9						
PMAFR	Mafra	3.03	48	ePn	Pn	10 27 44.8	+0.2
PNCL	Nicolau / Gran	3.12	68	ePn	Pn	10 27 46.0	+0.1
PNCL				eSn	Sn	10 28 23.9	+0.7
PNCL				A	A	10 28 26.1	
	2.3nm,0.1s						
PNCL	Nicolau / Gran	3.12	68	ePn	Pn	10 27 46.0	+0.1
PNCL				eSn	Sn	10 28 23.9	+0.7
	2.3nm,0.1s						
MESJ	Messejana	3.28	74	eP	Pn	10 27 48.1	+0.1
MESJ				eS	Sn	10 28 26.8	-0.2
MESJ				AML	AML	10 28 28.8	
	comp=N,2.2nm,0.1s						
MESJ	Messejana	3.28	74	eP	Pn	10 27 48.1	+0.1
MESJ				eS	Sn	10 28 26.8	-0.2
MESJ	Messejana	3.28	74	P	Pn	10 27 48.1	+0.1
MESJ				S	Sn	10 28 26.8	-0.2
MESJ	Messejana	3.28	74	P	Pn	10 27 48.1	+0.1
MESJ				S	Sn	10 28 26.8	-0.2
PBDV	Barranco-do-Ve	3.42	84	eSn	Sn	10 28 32.5	+2.0
PBDV	Barranco-do-Ve	3.42	84	S	Sn	10 28 32.5	+2.0
PVAQ	Vaqueiros	3.60	82	ePn	Pn	10 27 52.6	+0.2
PVAQ				eSn	Sn	10 28 35.0	0.0
PVAQ				A	A	10 28 40.6	
	comp=N,3.8nm,0.7s						
PVAQ	Vaqueiros	3.60	82	P	Pn	10 27 52.6	+0.2
PVAQ				S	Sn	10 28 35.0	0.0
	comp=N,3.8nm,0.7s						
PVAQ	Vaqueiros	3.60	82	P	Pn	10 27 52.6	+0.2
PVAQ				eSn	Sn	10 28 35.0	0.0
	comp=N,3.8nm,0.7s						
PMTG	Montargil	3.76	55	ePn	Pn	10 27 54.5	-0.2
PMTG	Montargil	3.76	55	ePn	Pn	10 27 54.5	-0.2
PBAR	Barrancos	4.26	72	ePn	Pn	10 28 02.3	+0.7
PBAR				eSn	Sn	10 28 50.8	-0.6
PBAR	Barrancos	4.26	72	P	Pn	10 28 02.3	+0.7
PBAR				S	Sn	10 28 50.8	-0.6
PBAR	Barrancos	4.26	72	ePn	Pn	10 28 02.3	+0.7
PBAR				eSn	Sn	10 28 50.8	-0.6
PMRV	Marv??o	4.50	56	ePn	Pn	10 28 04.8	-0.1
PMRV				eSn	Sn	10 28 57.3	0.0
PMRV	Marv??o	4.50	56	P	Pn	10 28 04.8	-0.1
PMRV				S	Sn	10 28 57.3	0.0
PMRV	Marv??o	4.50	56	P	Pn	10 28 04.8	-0.1
PMRV				S	Sn	10 28 57.3	0.0

MEX 01 10:41:19.0±0.5**, 17°.24N×100°.48W, h52km**±7km**, MD3.6, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.28	133	eP	Pn	10 41 26.9	-1.3
CAIG				i S	Sn	10 41 32.8	-1.9
ACX	Acapulco	0.70	121	i P	Pn	10 41 30.4	-2.5
ACX				i S	Sn	10 41 40.2	-2.7
ZIIG	Zihuatanejo	1.01	291	i P	Pn	10 41 35.4	-1.5
ZIIG				eS	Sn	10 41 48.0	-2.1
ARIG	Puente Sto Nin	1.04	7	i P	Pn	10 41 36.0	-1.4
ARIG				i S	Sn	10 41 48.8	-2.3
MEIG	Mezcala	1.07	50	i P	Pn	10 41 35.5	-2.3
MEIG				i S	Sn	10 41 50.0	-1.8

*NEIC **01** 10:55:41.7, 19°.23N×64°.78W, h74km, MD3.5(RSPR), After RSPR.*
RSPR 01 10:55:41.7, 19°.23N×64°.78W, h74km±19km**, MD3.5**/6**, 15C-14D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TBVI	Tortola	0.82	169⇑	eP	Pn	10 55 57.9	-0.4
TBVI	Tortola	0.82	169⇑	eP	Pn	10 55 57.9	-0.4
TBVI	Tortola	0.82	169⇑	eP	Pn	10 55 57.9	-0.4
STVI	Saint Thomas	0.89	191⇓	eP	Pn	10 55 58.1	-1.0
STVI	Saint Thomas	0.89	191⇓	eP	Pn	10 55 58.1	-1.0
STVI	Saint Thomas	0.89	191⇓	eP	Pn	10 55 58.1	-1.0
STVI				eS	Sn	10 56 11.4	-0.5
HUMP	Col San Antoni	1.48	223	eS	Sn	10 56 25.4	+0.1
HUMP	Col San Antoni	1.48	223⇑	eP	Pn	10 56 06.0	-0.6
HUMP	Col San Antoni	1.48	223⇑	eP	Pn	10 56 06.0	-0.6
HUMP				eS	Sn	10 56 25.4	+0.1
HUMP	Col San Antoni	1.48	223⇑	eP	Pn	10 56 06.0	-0.6
HUMP				eS	Sn	10 56 25.4	+0.1
SJG	San Juan	1.71	230⇓	eP	Pn	10 56 08.5	-1.1
SJG				eS	Sn	10 56 30.2	-0.4
SJG	San Juan	1.71	230⇓	eP	Pn	10 56 08.7	-0.9
SJG				eS	Sn	10 56 29.7	-1.0
SJG	San Juan	1.71	230⇓	eP	Pn	10 56 08.7	-0.9
SJG				eS	Sn	10 56 29.7	-1.0
SJG				eS		10 56 30.2	
SJG	San Juan	1.71	230⇓	eP	Pn	10 56 08.5	-1.1
SJG	San Juan	1.71	230⇓	eP	Pn	10 56 08.7	-0.9
SJG				eS	Sn	10 56 29.7	-1.0
SJG				eS		10 56 30.2	
CELP	Cerrillos	2.05	236⇓	eP	Pn	10 56 13.5	-0.8
CELP	Cerrillos	2.05	236⇓	eP	Pn	10 56 13.5	-0.8
CELP	Cerrillos	2.05	236⇓	eP	Pn	10 56 13.5	-0.8
AOPR	Arecibo Observ	2.06	245⇑	eP	Pn	10 56 13.4	-1.0
AOPR	Arecibo Observ	2.06	245⇑	eP	Pn	10 56 13.4	-1.0
AOPR	Arecibo Observ	2.06	245⇑	eP	Pn	10 56 13.4	-1.0
OBIP	Obispado Ponce	2.09	236⇓	eP	Pn	10 56 14.2	-0.5
OBIP	Obispado Ponce	2.09	236⇓	eP	Pn	10 56 14.2	-0.5
OBIP	Obispado Ponce	2.09	236⇓	eP	Pn	10 56 14.2	-0.5
LRS	Lares	2.17	245	ePn	Pn	10 56 15.1	-0.7
LSP	Las Mesas	2.42	245⇑	eP	Pn	10 56 19.5	+0.2
LSP				eS	Sn	10 56 48.8	+0.8
LSP	Las Mesas	2.42	245⇑	eP	Pn	10 56 19.5	+0.2
LSP				eS	Sn	10 56 48.8	+0.8
LSP	Las Mesas	2.42	245⇑	eP	Pn	10 56 19.5	+0.2
LSP				eS	Sn	10 56 48.8	+0.8
CRPR	Cabo Rojo, PR	2.52	242⇑	eP	Pn	10 56 20.3	-0.2
CRPR	Cabo Rojo, PR	2.52	242⇑	eP	Pn	10 56 20.3	-0.2
CRPR	Cabo Rojo, PR	2.52	242⇑	eP	Pn	10 56 20.3	-0.2

*SOF **01** 11:15:29.2, 41°.81N×22°.66E, h20km, MD2.8*
*ISCJB **01** 11:15:29.7±0.4, 41°.84N±0°.02×22°.61E±0°.03, h6km±3km, Error ellipse: s-maj=3.8km s-min=2.7km az=165.1*
*SKO **01** 11:15:30.1, 41°.78N×22°.65E, h15km, M2.0, ML2.4*
*CSEM **01** 11:15:30.2±0.1, 41°.81N×22°.64E, h10km, MD2.8, Error ellipse: s-maj=3.5km s-min=2.7km az=63.0*
*BEO **01** 11:15:30.5±0.3, 41°.78N×22°.57E, h14km±3km, ML2.5/7*
*THE **01** 11:15:31.1, 41°.77N×22°.65E, h2km±2km, ML2.7/4, Error ellipse: s-maj=2.6km s-min=0.4km az=264.0*
ISC 01 11:15:30.4±0.9**, 41°.80N**±0°.02×**22°.64E**±0°.02**, h16km**±8km**, n68, σ0s.51**/96**, 5C-4D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KKB	Krupnik	0.34	78	i Pg	Pg	11 15 37.5	0.0
KKB	Krupnik	0.34	78	i Pg	Pg	11 15 37.5	0.0
VAY	Valandovo	0.48	186	P	Pg	11 15 39.6	-0.4
VAY				S	Sg	11 15 46.1	-0.4
VAY	Valandovo	0.48	186	i Pg	Pg	11 15 39.6	-0.4
VAY				i Sg	Sg	11 15 46.4	-0.1
VAY				eLg	Lg	11 15 46.4	
	comp=E,347nm,0.3s						
VAY				eLg	Lg	11 15 46.6	
	comp=N,410nm,0.6s						
VAY	Valandovo	0.48	186⇑	iPg	Pg	11 15 39.6	-0.4
VAY				i Sg	Sg	11 15 46.3	-0.1
VAY	Valandovo	0.48	186	P	Pg	11 15 39.6	-0.4
VAY				S	Sg	11 15 46.1	-0.4
VAY				eLg	Lg	11 15 47.0	
	comp=N,410nm,0.6s						
KNT	Kendrikon	0.67	163	P	Pg	11 15 43.2	-0.3
KNT				S	Sb	11 15 52.6	0.0
KNT	Kendrikon	0.67	163	P	Pg	11 15 43.2	-0.3
KNT				S	Sb	11 15 52.6	0.0
MMB	Musomiste	0.84	104	i Pg	Pb	11 15 46.8	+0.1
MMB	Musomiste	0.84	104	i Pg	Pb	11 15 46.8	+0.1
GRG	Griva	0.86	192	P	Pb	11 15 46.7	-0.3
GRG				S	Sg	11 15 59.2	+0.7
GRG	Griva	0.86	192	eP	Pb	11 15 46.9	-0.1
GRG	Griva	0.86	192	P	Pb	11 15 46.7	-0.3
VTS	Vitosha	0.90	28	P	Pb	11 15 47.8	+0.1
VTS				S	Sn	11 16 01.8	+0.5
VTS	Vitosha	0.90	28	ePg	Pb	11 15 47.5	-0.2
VTS				eSg	Sb	11 15 59.6	+0.1
VTS	Vitosha	0.90	28	i Pg	Pb	11 15 47.9	+0.2
VTS	Vitosha	0.90	28	i Pg	Pb	11 15 47.9	+0.2
VTS				eSg	Sb	11 15 59.6	+0.1
VTS				S	Sn	11 16 01.8	+0.5
SKO	Skopje	0.91	281	i Pg	Pn	11 15 48.8	+0.3
SKO				i Sg	Sn	11 16 00.8	-0.5
SKO				eLg	Lg	11 16 02.6	
	comp=N,43nm,0.2s						
SKO				eLg	Lg	11 16 02.7	
	comp=E,37nm,0.2s						
SKO	Skopje	0.91	281	i Pg	Pn	11 15 49.3	+0.8
SKO				eLg	Lg	11 16 01.2	
	comp=E,37nm,0.2s						
SKO				i Sg	Sg	11 16 01.2	+1.2
SRS	Serrai	0.99	133	P	Pb	11 15 49.3	+0.1
SRS	Serrai	0.99	133	eP	Pg	11 15 49.6	0.0
SRS	Serrai	0.99	133	P	Pb	11 15 49.3	+0.1
NVR	Nevrokopi	1.02	116	P	Pb	11 15 49.6	-0.2
NVR	Nevrokopi	1.02	116	eP	Pb	11 15 49.4	-0.4
NVR	Nevrokopi	1.02	116	P	Pb	11 15 49.6	-0.2
SOH	Sokhos	1.12	151	P	Pn	11 15 51.6	+0.2
SOH				S	Sg	11 16 07.0	+0.4
SOH	Sokhos	1.12	151	eP	Pn	11 15 51.6	+0.2
SOH	Sokhos	1.12	151	P	Pn	11 15 51.6	+0.2
SOH				S	Sg	11 16 07.0	+0.4
BARS	Barje	1.19	329	ePg	Pn	11 15 52.1	-0.2
BARS				i Sg	Sn	11 16 08.0	-0.1
BARS	Barje	1.19	329	ePg	Pn	11 15 52.1	-0.2
BARS				i Sg	Sn	11 16 08.0	-0.1
THE	Thessaloniki	1.19	168	P	Pg	11 15 53.0	-0.4
THE	Thessaloniki	1.19	168	eP	Pg	11 15 53.0	-0.4
THE	Thessaloniki	1.19	168	P	Pg	11 15 53.0	-0.4
HORT	Hortiatis	1.25	164	P	Pb	11 15 53.9	+0.3
HORT				S	Sg	11 16 11.4	+0.5
HORT	Hortiatis	1.25	164	eP	Pb	11 15 53.8	+0.2
HORT	Hortiatis	1.25	164	P	Pb	11 15 53.9	+0.3
BIA	Bitola	1.26	232	i Pg	Pb	11 15 54.1	+0.3
BIA				i Sg	Sg	11 16 11.5	+0.5
BIA				eLg	Lg	11 16 12.0	
	comp=N,17nm,0.3s						
BIA				eLg	Lg	11 16 13.2	
	comp=E,21nm,0.4s						
BIA	Bitola	1.26	232	i Pg	Pb	11 15 54.0	+0.3
BIA				i Sg	Sg	11 16 11.5	+0.5
BIA				eLg	Lg	11 16 13.1	
	comp=E,21nm,0.4s						
PGB	Panagyurishte	1.36	56	i Pg	Pb	11 15 55.6	0.0
PGB	Panagyurishte	1.36	56	i Pg	Pb	11 15 55.6	0.0
FNA	Florina	1.39	223	eP	Pg	11 15 57.5	+0.3
ZAPS	Zavoj	1.47	360⇑	iPg	Pb	11 15 57.7	+0.3
ZAPS				i Sg	Sg	11 16 18.3	+0.3
PLG	Polygyros	1.55	156	eP	Pb	11 15 59.4	+0.7
RZN	Rozhen	1.56	93	i P	Pn	11 15 57.0	-0.6
RZN	Rozhen	1.56	93	i P	Pn	11 15 57.0	-0.6
PLD	Plovdiv	1.57	78	ePg	Pg	11 16 00.5	-0.2
PLD				eSg	Sg	11 16 22.4	+1.3
PLD	Plovdiv	1.57	78	P	Pg	11 16 00.0	-0.7
PLD	Plovdiv	1.57	78	P	Pg	11 16 00.0	-0.7
PLD	Plovdiv	1.57	78	ePg	Pg	11 16 00.5	-0.2
KAVA	Kavala	1.62	119	P	Pb	11 15 59.8	-0.2
KAVA	Kavala	1.62	119	eP	Pb	11 16 00.1	+0.1
KAVA	Kavala	1.62	119	P	Pb	11 15 59.8	-0.2
OUR	Ouranopolis	1.78	145	eP	Pg	11 16 05.2	+0.5
SELS	Selova	1.81	322⇑	iPn	Pn	11 16 01.0	+0.1
SELS				eSn	Sn	11 16 23.6	+0.1
PAIG	Paliouri	2.03	157	eP	Pb	11 16 06.8	-0.1
KDZ	Kurdzhali	2.09	93	Pg	Pb	11 16 08.5	+0.6
KDZ	Kurdzhali	2.09	93	Pg	Pb	11 16 08.5	+0.6
BOLS	Boljevac	2.09	346	ePn	Pb	11 16 06.7	-1.2
BOLS				eSn	Sn	11 16 29.3	-1.1
BOLS	Boljevac	2.09	346	ePn	Pb	11 16 06.7	-1.2
BOLS				eSn	Sn	11 16 29.3	-1.1
XOR	Xorichti	2.47	170	eP	Pb	11 16 13.3	-1.1
GRUS	Gruza	2.52	327⇓	iPn	Pn	11 16 11.3	+0.6
GRUS				eSn	Sn	11 16 41.1	+0.1
GRUS	Gruza	2.52	327⇓	iPn	Pn	11 16 11.3	+0.6
IVAS	Ivanjica	2.55	315⇓	iPn	Pn	11 16 12.0	+0.9
IVAS	Ivanjica	2.55	315⇓	iPn	Pn	11 16 12.0	+0.9
TRUS	Trudelj	2.92	327	ePn	Pn	11 16 15.4	-0.8
TRUS	Trudelj	2.92	327	ePn	Pn	11 16 15.4	-0.8
DIVS	Divibare	3.01	321⇑	iPn	Pn	11 16 18.0	+0.6
DIVS				eSn	Sn	11 16 52.7	-0.5
DIVS	Divibare	3.01	321⇑	iPn	Pn	11 16 18.0	+0.6
DIVS				eSn	Sn	11 16 52.7	-0.5

*BJI **01** 11:24:44.2, 51°.22N×177°.08W, h26km, mB4.9/12, mb4.8/19, Ms4.4/4, Ms7 4.4/5*
*ISCJB **01** 11:24:45.3±0.4, 51°.67N±0°.06×176°.24W±0°.03, h59km±3km, mb4.3/36, MS3.4/8, Error ellipse: s-maj=10.1km s-min=2.9km az=172.3*
*IDC **01** 11:24:46.0±2.2, 51°.71N×176°.21W, h55km±18km, mb3.8/22, mb1 4.0/26, mb1mx3.9/39, mbtmp3.9/26, ML4.0/4, MS3.3/8, Ms1 3.3/8, ms1mx3.0/45, Error ellipse: s-maj=20.9km s-min=8.9km az=172.0*
*NEIC **01** 11:24:45.8±0.5, 51°.59N×176°.21W, h53km±3km, mb4.3/13, ML4.2(AEIC), Error ellipse: s-maj=10.0km s-min=3.0km az=167.0*
ISC 01 11:24:45.0±0.6**, 51°.57N**±0°.08×**176°.22W**±0°.03**, h46km**±4km**, h45km:pP-P, n315, σ1s.12**/345**, mb4.3**/36**, MS3.4**/8**, 101C-101D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSCK	Great Sitkin C	0.44	5	P	Pn	11 24 55.5	+0.2
ADAG	Mount Adagdak	0.47	330	P	Pn	11 24 56.4	+0.7
GSTD	Great Sitkin T	0.49	5	P	Pn	11 24 56.1	+0.2
KIMD	Kanaga Island	0.66	287	P	Pn	11 24 57.8	-0.2
KIKV	Kanaga Island	0.67	298	P	Pn	11 24 58.1	0.0
TASE	Tanaga Southea	1.16	284	P	Pn	11 25 05.4	+0.6
TANO	Tanaga North	1.23	287	P	Pn	11 25 05.4	-0.3
ATKA	Atka Island	1.41	62	P	Pn	11 25 07.1	-1.0
ATKA				S	Sn	11 25 25.8	+0.4
KOKL	Mount Kliuchef	1.46	58	P	Pn	11 25 09.3	+0.4
KOFP	Korovin Flat P	1.49	61	P	Pn	11 25 09.5	+0.2
KOKV	Korovin Volcan	1.50	57	P	Pn	11 25 10.2	+0.7
KOKV				S	Sn	11 25 29.4	+1.5
KOSE	Korovin Southe	1.55	59	P	Pn	11 25 10.9	+0.8
GAEA	Gareloi East	1.59	279	P	Pn	11 25 11.5	+0.9
GALAA	Gareloi Lava P	1.60	278	P	Pn	11 25 11.7	+0.9
GANE	Gareloi Northe	1.61	280	P	Pn	11 25 11.7	+0.8
CERAA	Semis' Rag'd T	2.57	279	P	Pn	11 25 25.5	+1.5
CESW	Semis' Southwe	2.64	279	P	Pn	11 25 26.8	+1.8
CEAP	Semis' Anvil P	2.65	281	P	Pn	11 25 26.7	+1.6
AMKA	Amchitka	2.81	268	P	Pn	11 25 27.7	+0.4
AMKA				S	Sn	11 26 02.0	+2.2
LSPA	Little Sitkin	3.26	279	P	Pn	11 25 35.3	+1.7
LSPA				S	Sn	11 26 13.9	+2.9
LSSE	Little Sitkin	3.26	278	P	Pn	11 25 35.4	+1.9
LSNW	Little Sitkin	3.29	279	P	Pn	11 25 35.6	+1.5
LSSA	Little Sitkin	3.29	279	P	Pn	11 25 36.1	+2.1
MREP	Makushin Rep't	6.18	65	P	Pn	11 26 14.6	+0.9
UNV	Unalaska Valle	6.33	65	P	Pn	11 26 16.8	+1.2
SPIA	Saint Paul Isl	6.61	29	P	Pn	11 26 21.0	+1.6
FX1	Attu Island--F	6.65	286	P	Pn	11 26 21.6	+1.5
FX1	Attu Island--F	6.65	286	P	Pn	11 26 21.5	+1.5
	4.0nm,0.3s,baz=111,slow=2.2,SNR=11						
FX1				S	Sn	11 27 37.6	+3.1
	5.7nm,0.3s,baz=118,slow=19,SNR=3.8						
ZRO	Akutan Zero	6.70	64	P	Pn	11 26 21.5	+0.7
FALS	False Pass	8.36	62	P	Pn	11 26 44.2	+0.8
DT1	Dutton Round H	9.06	62	P	Pn	11 26 53.5	+0.5
GAMB	Gambell	12.47	9	ePn	Pn	11 27 40.7	+1.1
	13nm,0.9s						
TNA	Tin City	14.66	14	ePn	Pn	11 28 12.1	+2.9
	3.4nm,0.8s						
SVW2	Sparrevohn	14.83	42	ePn	Pn	11 28 11.7	+0.2
KDAK	Kodiak Island	14.97	56	eP	P	11 28 17.0	-1.1
KDAK				S	Sn	11 31 01.7	+3.9
KDAK	Kodiak Island	14.97	56	P	Pn	11 28 13.7	+0.4
	4.3nm,0.3s,baz=287,slow=6.0,SNR=28						
KDAK				S	Sn	11 31 01.7	+3.9
	0.1nm,0.3s,baz=220,slow=8.6,SNR=5.4						
PETK	Petropavlovsk-	15.99	286	P	Pn	11 28 28.0	+1.5
PETK	Petropavlovsk-	15.99	286	P	Pn	11 28 28.0	+1.5
	0.1nm,0.3s,baz=99,slow=16,SNR=3.3						
PETK				LR	LR	11 34 14.8	
	comp=Z,41nm,21.3s,baz=245,slow=36						
TRF	Thorofare Moun	18.16	39	ePn	P	11 28 53.8	+0.4
	35nm,1.4s						
BILL	Bilibino	18.59	339	eP	Pn	11 28 59.5	+1.0
	9.4nm,1.0s						
BMRM	Bremner River	19.73	49	eP	Pn	11 29 12.1	-0.2
PAX	Paxson	19.94	43	eP	Pn	11 29 14.4	-0.4
	5.7nm,0.8s						
ILAR	Eielson Array	20.09	38	P	P	11 29 12.4	-2.0
ILAR				PcP	PcP	11 33 26.8	-1.0
ILAR	Eielson Array	20.09	38	P	P	11 29 12.4	-2.0
	0.8nm,0.3s,baz=229,slow=10,SNR=59						
ILAR				PcP	PcP	11 33 26.8	-1.0
	0.0nm,0.3s,baz=272,slow=3.6,SNR=5.2						
COLD	Coldfoot	20.28	30	eP	P	11 29 17.3	+1.0
	7.5nm,0.9s						
DOT	Dot Lake	20.77	42	eP	P	11 29 20.8	-1.0
	10.0nm,0.6s						
EGAK	Eagle	22.35	40	eP	P	11 29 38.4	-0.3
	4.6nm,0.6s						
INK	Inuvik	26.38	35	P	P	11 30 14.1	-2.4
INK				PcP	PcP	11 33 40.7	-0.1
INK	Inuvik	26.38	35	P	P	11 30 14.1	-2.4
	0.5nm,0.4s,baz=228,slow=7.8,SNR=10						
INK				PcP	PcP	11 33 40.7	-0.1
	2.0nm,0.8s,baz=285,slow=1.1,SNR=7.0						
DLBC	Dease Lake	26.91	57	LR	LR	11 39 57.4	
	comp=Z,52nm,18.1s,baz=254,slow=34						
ASAJ	Asahikawa	28.32	271	P	P	11 30 34.4	+0.2
ASAJ	Asahikawa	28.32	271	P	P	11 30 34.4	+0.2
	2.9nm,0.6s,baz=114,slow=13,SNR=5.8						
YKA	Yellowknife Ar	33.92	47	P	P	11 31 22.1	-1.1
YKA				PcP	PcP	11 34 00.8	+0.2
YKA	Yellowknife Ar	33.92	47	P	P	11 31 22.1	-1.1
	0.9nm,0.8s,baz=282,slow=8.1,SNR=15						
YKA				PcP	PcP	11 34 00.7	+0.2
	1.2nm,0.6s,baz=288,slow=2.9,SNR=24						
USRK	Ussuriysk Arra	34.86	279	P	P	11 31 29.7	-1.8
	1.9nm,0.5s,baz=42,slow=8.9,SNR=7.2						
MJAR	Matsushiro Arr	35.41	263	P	P	11 31 36.5	+0.1
MJAR	Matsushiro Arr	35.41	263	P	P	11 31 36.5	+0.1
	1.4nm,0.7s,baz=40,slow=6.3,SNR=5.4						
MDJ	Mudanjiang	36.13	281	P	P	11 31 43.2	+0.8
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,58nm,4.1s						
YBH	Yreka Blue Hor	37.26	84	LR	LR	11 44 51.4	
	comp=Z,66nm,18.9s,baz=324,slow=32						
NEW	Newport	37.30	71	eP	P	11 31 53.0	+0.6
	comp=Z,7.7nm,0.9s						
NEW	Newport	37.30	71	⇑P	P	11 31 52.8	+0.4
	baz=37						
NEW	Newport	37.30	71	P	P	11 31 52.0	-0.3
	comp=Z,1.8nm,0.5s,baz=293,slow=8.2,SNR=5.8						
NEW				LR	LR	11 44 12.6	
	comp=Z,56nm,21.0s,baz=245,slow=31						
A13A	Flathead Natio	38.57	69	⇑P	P	11 32 04.0	+0.8
	baz=38						
B13A	Whitefish	38.81	70	⇑P	P	11 32 05.8	+0.7
	baz=39						
RES	Resolute Bay	38.90	25	LR	LR	11 50 58.8	
	comp=Z,39nm,18.5s,baz=257,slow=41						
C13A	Hot Springs	39.08	71	⇓P	P	11 32 08.4	+1.0
	baz=39						
CN2	Changchun	39.09	282	eP	P	11 32 08.9	+1.5
A14A	Double T Ranch	39.13	68	⇓P	P	11 32 07.6	-0.3
	baz=39,SNR=7.3						
B14A	Marquette Ranc	39.51	69	⇓P	P	11 32 11.4	+0.3
	baz=39						
A15A	Johnson Ranch,	39.53	68	⇓P	P	11 32 11.2	0.0
	baz=39						
MSO	Missoula	39.88	71	⇑P	P	11 32 14.3	+0.2
	baz=40						
E13A	Victor	39.93	72	⇓P	P	11 32 15.0	+0.4
	baz=40						
SLMT	Seeley Lake	39.94	71	eP	P	11 32 14.9	+0.2
B15A	Bradely Ranch,	39.95	69	⇑P	P	11 32 15.1	+0.4
	baz=40						
D14A	Greenough	40.01	71	⇓P	P	11 32 15.7	+0.5
	baz=40						
F13A	Darby	40.18	73	⇓P	P	11 32 16.9	+0.2
	baz=40						
C15A	Salmond Ranch,	40.19	69	⇑P	P	11 32 16.8	+0.1

baz=40,SNR=7.8
E14A **Clinton** 40.36 72 ⇑P P 11 32 18.4 +0.2
baz=40
B16A **M & M Farms, S** 40.40 68 ⇓P P 11 32 18.1 -0.2
baz=40
H12A **Diamond D Ranc** 40.53 75 ⇑P P 11 32 19.9 +0.3
baz=40
D15A **Lincoln** 40.61 70 ⇑P P 11 32 19.8 -0.4
baz=40
G13A **Cobalt** 40.61 74 ⇓P P 11 32 20.4 +0.2
baz=40
C16A **Fuhringer Ranc** 40.68 69 ⇑P P 11 32 20.8 +0.1
baz=40
A17A **Triple J Farms** 40.71 67 ⇓P P 11 32 20.4 -0.5
baz=40,SNR=9.3
F14A **Wisdom** 40.74 72 ⇑P P 11 32 21.5 +0.1
baz=41
H13A **Challis** 40.88 75 ⇓P P 11 32 22.4 0.0
baz=41
B17A **L&G Farms, Che** 40.98 68 ⇑P P 11 32 22.9 -0.2
baz=41,SNR=5.4
D16A **Dana Ranch, Ca** 41.19 70 ⇑P P 11 32 24.5 -0.4
baz=41
KSRS **Korea Array** 41.24 273 P P 11 32 25.6 +0.3
comp=Z,2.7nm,0.8s,baz=59,slow=7.6,SNR=8.2
KSRS LR LR 11 50 28.0
comp=Z,13nm,18.6s,baz=88,slow=37
F15A **Butte** 41.25 72 ⇑P P 11 32 25.8 +0.2
baz=41
KSAR **Wonju Array Be** 41.28 273 P P 11 32 25.6 +0.1
I13A **Wildhorse Cree** 41.32 75 ⇓P P 11 32 26.4 +0.3
baz=41
HLID **Hailey** 41.33 76 ⇑P P 11 32 26.9 +0.7
baz=41
C17A **Wharram Farm,** 41.34 69 ⇑P P 11 32 26.0 -0.1
baz=41
B18A **Beardsley Farm** 41.52 67 ⇓P P 11 32 27.3 -0.3
baz=41,SNR=6.3
J13A **Cove Ranch, Pi** 41.57 76 ⇓P P 11 32 28.5 +0.4
baz=41,SNR=5.2
G15A **Dillon** 41.61 73 ⇓P P 11 32 29.0 +0.5
baz=41
D17A **Six Diamond Ra** 41.63 69 ⇓P P 11 32 29.3 +0.7
baz=42
I14A **Mackay** 41.71 75 ⇑P P 11 32 30.5 +1.1
baz=42
EGMT **Eagleton** 41.72 68 *e*P P 11 32 29.2 -0.1
comp=Z,46nm,2.3s
EGMT **Eagleton** 41.72 68 ⇓P P 11 32 29.6 +0.3
baz=42
F16A **Kennard Place,** 41.80 72 ⇓P P 11 32 30.2 +0.3
baz=42
H15A **Lima** 41.82 74 ⇓P P 11 32 30.5 +0.2
baz=42
A19A **Klindworth Far** 41.84 66 ⇓P P 11 32 30.3 +0.1
baz=42
BOZ **Bozeman (W)** 41.87 72 ⇓P P 11 32 31.0 +0.5
baz=42
E17A **Martinsdale** 41.89 70 ⇓P P 11 32 31.3 +0.5
baz=42
NVAR **Mina Array Bea** 41.93 85 P P 11 32 31.5 +0.3
NVAR **Mina Array Bea** 41.93 85 P P 11 32 31.5 +0.3
comp=Z,0.9nm,0.8s,baz=293,slow=7.8,SNR=3.5
B19A **Brinkman Farms** 41.97 67 ⇓P P 11 32 31.7 +0.5
baz=42
G16A **Moss Hill, Enn** 41.99 72 ⇓P P 11 32 32.0 +0.5
baz=42
J14A **Carey** 42.01 76 ⇓P P 11 32 32.7 +0.9
baz=42
D18A **Linhart Farms,** 42.12 69 ⇓P P 11 32 33.3 +0.7
baz=42
JNU **Nakatsue** 42.20 265 P P 11 32 33.7 +0.5
JNU **Nakatsue** 42.20 265 P P 11 32 33.7 +0.5
comp=Z,16nm,0.9s,baz=25,slow=9.4,SNR=3.7
C19A **Slack Wire Ran** 42.28 68 ⇓P P 11 32 34.4 +0.6
baz=42,SNR=11
F17A **Fitzpatrick Pl** 42.30 71 ⇓P P 11 32 34.5 +0.5
baz=42
A20A **Cobblestone Ra** 42.33 66 ⇓P P 11 32 34.1 0.0
baz=42
G17A **Pierce Place,** 42.57 72 ⇓P P 11 32 37.0 +0.7
baz=42
H16A **Russell Place,** 42.60 73 ⇑P P 11 32 36.9 +0.3
baz=42
D19A **Cripps Ranch,** 42.67 68 ⇑P P 11 32 37.5 +0.5
baz=42
A21A **Bergtoll Ranch** 42.84 65 ⇓P P 11 32 38.1 -0.2
baz=43,SNR=5.8
F18A **Big Timber** 42.86 70 ⇑P P 11 32 39.2 +0.6
baz=43
C20A **Veseth Ranch,** 42.89 67 ⇑P P 11 32 39.2 +0.5
baz=43
I16A **Newdale** 42.92 74 ⇓P P 11 32 39.7 +0.5
baz=43
K15A **Arbon** 42.97 76 ⇓P P 11 32 39.8 +0.3
baz=43
B21A **Ellsworth Farm** 43.08 66 ⇑P P 11 32 40.6 +0.4
baz=43
E19A **Rath Farm, Rou** 43.10 69 ⇓P P 11 32 40.7 +0.2
baz=43
D20A **Manuel Ranch,** 43.14 68 ⇑P P 11 32 40.8 0.0
baz=43
H17A **Grant Village** 43.18 73 ⇑P P 11 32 42.3 +1.0
baz=43
LKWY **Lake** 43.19 72 *e*P P 11 32 44.0 +2.6
comp=Z,4.8nm,0.6s
C21A **Desert Coulee** 43.35 67 ⇑P P 11 32 42.8 +0.3
baz=43
K16A **Soda Springs** 43.45 75 ⇑P P 11 32 45.0 +1.5
baz=43
E20A **Meyer Farm, Mu** 43.46 69 ⇓P P 11 32 44.1 +0.7
baz=43
RLMT **Red Lodge** 43.55 71 *e*P P 11 32 45.4 +1.2
comp=Z,8.8nm,1.3s
RLMT **Red Lodge** 43.55 71 ⇓P P 11 32 45.3 +1.0
baz=43
H18A **Shoshone NF, C** 43.56 72 ⇑P P 11 32 44.9 +0.5
baz=43
B22A **Reddig Ranch S** 43.73 65 ⇓P P 11 32 46.0 +0.6
baz=44
D21A **La Casta Ranch** 43.81 67 ⇑P P 11 32 46.7 +0.5
baz=44
F20A **Billings** 43.83 70 ⇑P P 11 32 46.6 +0.2
baz=44
H19A **Powell** 43.97 71 ⇓P P 11 32 48.6 +1.1
baz=44
C22A **Vida** 44.09 66 ⇑P P 11 32 48.2 -0.2
baz=44,SNR=6.1
G20A **Bridger** 44.12 70 ⇑P P 11 32 48.8 +0.1
baz=44
J18A **Kendall Valley** 44.18 74 ⇓P P 11 32 49.5 +0.1
baz=44
B23A **Brockton** 44.21 65 ⇓P P 11 32 49.1 -0.2
baz=44
D22A **Cohagen** 44.24 67 ⇑P P 11 32 50.3 +0.7
baz=44,SNR=14
DUG **Dugway** 44.25 79 ⇓P P 11 32 50.2 +0.3
baz=44
L17A **Cokeville** 44.31 76 ⇑P P 11 32 51.4 +1.0
baz=44
C23A **Lambert** 44.45 66 ⇑P P 11 32 51.5 +0.2
baz=44,SNR=6.1
K18A **Toltan Ranch,** 44.49 74 ⇓P P 11 32 52.3 +0.4
baz=44
A24A **Westby** 44.52 64 ⇑P P 11 32 51.9 +0.2
baz=44
BW06 **Boulder Array** 44.71 74 *e*P P 11 32 54.0 +0.4
comp=Z,4.4nm,0.6s
BW06 **Boulder Array** 44.71 74 ⇓P P 11 32 54.0 +0.4
baz=44,SNR=5.6
PDAR **Pinedale Array** 44.71 74 P P 11 32 53.7 +0.1
PDAR **Pinedale Array** 44.71 74 P P 11 32 53.7 +0.1
comp=Z,3.2nm,0.7s,baz=308,slow=3.7,SNR=24
J19A **Crowheart** 44.72 73 ⇑P P 11 32 53.7 +0.1
baz=44
E22A **Miles City** 44.76 68 ⇓P P 11 32 54.3 +0.6
baz=45
D23A **Lindsay** 44.78 66 ⇓P P 11 32 54.2 +0.3
baz=45,SNR=5.2
I20A **Worland** 44.88 72 ⇑P P 11 32 55.7 +0.9
baz=45
F22A **Rosebud** 44.95 69 ⇓P P 11 32 55.7 +0.5
baz=45
C24A **Savage** 45.03 65 ⇓P P 11 32 56.3 +0.4
baz=45,SNR=5.6
E23A **Ismay** 45.10 67 ⇓P P 11 32 57.0 +0.6
baz=45
K19A **Absolon Red Bu** 45.10 73 ⇑P P 11 32 56.5 -0.2
baz=45,SNR=5.6
M18A **Lyman** 45.19 76 ⇑P P 11 32 58.3 +0.9
baz=45
L19A **Farson** 45.22 75 ⇓P P 11 32 58.6 +1.0
baz=45
J20A **Shoshoni** 45.25 72 ⇑P P 11 32 58.8 +1.0
baz=45
D24A **Glendive** 45.32 66 ⇓P P 11 32 59.1 +0.9
baz=45,SNR=9.3
K20A **Yellowstone Ra** 45.50 73 ⇓P P 11 33 00.4 +0.6
baz=45
J21A **Lysite** 45.63 72 ⇑P P 11 33 01.2 +0.3
baz=46
E24A **Baker** 45.63 67 ⇑P P 11 33 01.1 +0.4
baz=45
F24A **Ekalaka** 45.96 67 ⇑P P 11 33 03.7 +0.4
baz=46
K21A **Alcova** 46.17 73 ⇑P P 11 33 05.1 +0.1
baz=46
J22A **Midwest** 46.17 71 ⇓P P 11 33 05.4 +0.3
baz=46
G24A **Alzada** 46.27 68 ⇓P P 11 33 05.8 +0.1
baz=46
O19A **Miners Draw (B** 46.44 76 ⇓P P 11 33 07.8 +0.6
baz=46,SNR=5.3
L21A **Rawlins** 46.49 74 ⇓P P 11 33 07.7 +0.1
baz=46
H24A **Dirks Ranch, A** 46.52 69 ⇑P P 11 33 08.3 +0.6
baz=46
W13A **Hualapai Mount** 46.78 85 ⇓P P 11 33 10.9 +0.9
baz=47
U15A **North Rim** 46.91 83 ⇑P P 11 33 12.1 +1.0
baz=47
P19A **Cripple Cowboy** 46.93 77 ⇑P P 11 33 12.2 +1.0
baz=47
O20A **White River Ci** 47.07 76 ⇑P P 11 33 12.7 +0.5
baz=47
N21A **Black Mountain** 47.13 75 ⇑P P 11 33 13.2 +0.6
baz=47
L23A **Garrett** 47.40 72 ⇑P P 11 33 15.3 +0.5
baz=47
O21A **Pagoda** 47.49 76 ⇑P P 11 33 16.0 +0.4
baz=47
N22A **Wattenberg Ran** 47.74 74 ⇓P P 11 33 18.0 +0.5
baz=48
P21A **Newcastle** 47.93 76 ⇓P P 11 33 19.5 +0.6
baz=48
SONM **Songino Array** 47.99 298 P P 11 33 18.5 -0.7
SONM PcP PcP 11 34 46.3 -0.3
SONM ScP ScP 11 38 37.6 +0.5
SONM **Songino Array** 47.99 298 P P 11 33 18.5 -0.7
comp=Z,0.5nm,0.6s,baz=54,slow=7.3,SNR=2.9
SONM PcP PcP 11 34 46.3 -0.3
comp=Z,2.3nm,0.7s,baz=75,slow=1.7,SNR=9.9
SONM ScP ScP 11 38 37.6 +0.5
comp=Z,0.7nm,0.9s,baz=68,slow=3.9,SNR=4.2
SONM LR LR 11 52 16.1
comp=Z,38nm,20.1s,baz=221,slow=34
Y14A **Wickenburg** 48.09 86 ⇓P P 11 33 21.8 +1.9
baz=48
P22A **Eagle** 48.30 76 ⇑P P 11 33 23.1 +1.3
baz=48
O23A **Lake Granby, G** 48.43 75 ⇓P P 11 33 23.8 +1.0
baz=48
S20A **Disappointment** 48.44 79 ⇑P P 11 33 23.3 +0.4
baz=48
Q22A **Crested Butte,** 48.67 77 ⇓P P 11 33 26.0 +1.3
baz=48
X16A **Lo Mia Camp, P** 48.74 84 ⇑P P 11 33 26.2 +1.1
baz=49
ISCO **Idaho Springs** 48.87 75 ⇓P P 11 33 27.3 +1.1
baz=49
S21A **Coal Bank Pass** 48.89 78 ⇑P P 11 33 27.1 +0.7
baz=49
HHC **Hu-ho-hao-te** 49.18 287 *e*P P 11 33 30.3 +2.0
HHC pP pP 11 33 40.0 -1.0
HHC sP sP 11 33 44.7 -1.6
HHC PcP PcP 11 34 54.9 +3.9
HHC PP PP 11 35 24.6 +2.5
HHC S S 11 40 31.5 +1.0
HHC ScS ScS 11 43 16.8 +0.6
HHC SS SS 11 43 57.2 -4.5
HHC pmax pmax
comp=Z,20nm,0.6s
HHC pmax pmax
comp=Z,230nm,6.4s
HHC LR LR
comp=N,290nm,15.5s
HHC LR LR
comp=E,150nm,15.5s
HHC LR LR
comp=Z,290nm,15.5s
Q23A **Hartsel** 49.30 76 ⇓P P 11 33 30.8 +1.3
baz=49
S22A **4UR Ranch, Cre** 49.42 78 ⇑P P 11 33 31.9 +1.5
baz=49
T21A **Navajo Lake** 49.48 79 ⇑P P 11 33 31.8 +1.0
baz=49
O25A **Wiggins** 49.57 73 ⇓P P 11 33 32.8 +1.4
baz=49
V20A **Brimhall** 49.68 81 ⇓P P 11 33 33.1 +0.8
baz=50
U21A **Nageezi** 49.77 80 ⇓P P 11 33 33.9 +0.9
baz=50
T22A **Edith** 49.85 78 ⇓P P 11 33 35.0 +1.3
baz=50
P25A **Willow Gulch B** 49.92 74 ⇑P P 11 33 35.2 +1.1
baz=50
BRSD **Miller** 49.93 66 ⇑P P 11 33 34.5 +0.6
baz=50
R24A **Sanders Place,** 50.16 76 ⇑P P 11 33 37.2 +1.3
baz=50
Q25A **Bedland, Calha** 50.25 75 ⇑P P 11 33 37.5 +0.9
baz=50
P26A **Davis Ranch, A** 50.38 74 ⇑P P 11 33 39.2 +1.6
baz=50
S24A **Houchin Ranch,** 50.48 77 ⇑P P 11 33 39.3 +0.8
baz=50
X20A **Quemado** 50.48 82 ⇓P P 11 33 40.2 +1.7
baz=50
TUC **Tucson** 50.56 86 *e*P P 11 33 39.4 +0.5
comp=Z,1.9nm,0.9s
R25A **Fountain Ranch** 50.71 76 ⇑P P 11 33 41.0 +1.0
baz=50
U23A **El Rito** 50.73 79 ⇓P P 11 33 41.6 +1.3
baz=51
S25A **Robets Cordova** 50.94 76 ⇓P P 11 33 42.8 +1.1
baz=51
T24A **Torres, Weston** 50.94 77 ⇓P P 11 33 42.9 +1.0
baz=51
Y20A **Horse Springs,** 50.98 82 ⇑P P 11 33 43.3 +1.1
baz=51
V23A **Ortiz Mt. (NFS** 51.12 79 ⇑P P 11 33 44.4 +1.2
baz=51
R26A **Arlington** 51.12 75 ⇑P P 11 33 43.9 +0.8
baz=51
KSCO **Kaye Shedlock'** 51.16 74 ⇓P P 11 33 44.3 +0.9
baz=51
T25A **Trinidad** 51.29 77 ⇑P P 11 33 45.4 +0.9
baz=51
Z20A **Nine Sixteen R** 51.38 83 ⇑P P 11 33 46.6 +1.5
baz=51
R27A **Eads** 51.52 74 ⇑P P 11 33 46.8 +0.7
baz=51
S26A **Kim** 51.54 76 ⇑P P 11 33 46.6 +0.4
baz=51
ECSD **EROS Data Cent** 51.69 65 *e*P P 11 33 46.0 -1.2
comp=Z,3.3nm,0.8s
T26A **Comanche Natio** 51.76 76 ⇑P P 11 33 47.7 -0.3
baz=52
U25A **Circle Dot Ran** 51.77 77 ⇓P P 11 33 48.8 +0.7
baz=52
Y22A **Socorro** 51.83 81 ⇓P P 11 33 49.8 +1.2
baz=52
W24A **Lazy 6 Ranch,** 51.94 79 ⇓P P 11 33 50.5 +1.1
baz=52
V25A **Rancho No Teng** 52.01 78 ⇑P P 11 33 50.9 +1.0
baz=52
U26A **Atchley Ranch,** 52.18 77 ⇑P P 11 33 51.7 +0.6
baz=52
220A **Playas Peak, P** 52.24 84 ⇑P P 11 33 52.3 +0.8
baz=52
121A **Cookes Peak, D** 52.27 83 ⇑P P 11 33 53.1 +1.3
baz=52
Z22A **Elephant Butte** 52.29 82 ⇓P P 11 33 53.2 +1.3
baz=52
Y23A **Lovelace Mesa,** 52.40 81 ⇓P P 11 33 53.8 +1.1
baz=52
W25A **X Bar L Ranch,** 52.52 79 ⇑P P 11 33 54.4 +0.8
baz=52
V26A **Tequesquite Ra** 52.55 78 ⇑P P 11 33 54.3 +0.6
baz=52
320A **Kipp Ranch, An** 52.62 85 ⇓P P 11 33 55.7 +1.3
baz=52
Y24A **Capitan** 52.78 80 ⇓P P 11 33 56.4 +0.8
baz=53,SNR=8.0
Y25A **Mesa, Roswell** 53.24 80 ⇑P P 11 33 59.5 +0.6
baz=53
Z25A **Roswell** 53.66 80 ⇓P P 11 34 03.3 +1.3
baz=54
224A **Cornudas Mount** 53.98 82 ⇓P P 11 34 04.9 +0.6
baz=54
125A **Gardner Draw,** 54.12 81 ⇓P P 11 34 06.0 +0.7
baz=54
Z26A **Caprock** 54.12 80 ⇓P P 11 34 06.2 +0.9
baz=54
Y27A **Causey** 54.20 79 ⇑P P 11 34 06.2 +0.3
baz=54,SNR=6.6
MNTX **Cornudas Mount** 54.33 82 ⇓P P 11 34 07.5 +0.8
baz=54,SNR=5.8
324A **Moseley Ranch,** 54.44 83 ⇓P P 11 34 08.3 +0.6
baz=54
Z27A **Tatum** 54.56 79 ⇓P P 11 34 08.5 0.0
baz=54
325A **Bean Ranch, Si** 54.80 82 ⇓P P 11 34 10.7 +0.3
baz=55
226B **Tecolote Peak,** 54.82 81 ⇓P P 11 34 10.7 +0.4
baz=55
ZALV **Zalesovo Beam** 55.06 315 P P 11 34 10.3 -1.3
ZALV PcP PcP 11 35 12.4 -0.2
ZALV **Zalesovo Beam** 55.06 315 P P 11 34 10.3 -1.3
comp=Z,0.3nm,0.3s,baz=32,slow=8.5,SNR=2.8
ZALV PcP PcP 11 35 12.4 -0.2
comp=Z,1.4nm,0.7s,baz=34,slow=4.5,SNR=8.7
ZALV LR LR 11 59 25.5
comp=Z,48nm,19.8s,baz=68,slow=38
Y29A **Porterfield Fa** 55.13 78 ⇑P P 11 34 13.5 +0.9
baz=55
425A **Indio Mountain** 55.20 83 ⇑P P 11 34 14.1 +0.9
baz=55
XAN **Xi'an** 55.20 283 P P 11 34 12.3 -0.7
XAN pP pP 11 34 22.2 -3.7
XAN sP sP 11 34 27.4 -3.7
XAN pmax pmax
comp=Z,4.0nm,0.9s
XAN pmax pmax
comp=Z,22nm,8.3s
326A **Caldwell Ranch** 55.46 82 ⇓P P 11 34 15.8 +0.8
baz=55
Z29A **Hungry Hill Ra** 55.52 78 ⇑P P 11 34 16.5 +1.1
baz=55
129A **Stewart Farms,** 55.85 79 ⇑P P 11 34 18.0 +0.2
baz=56
426A **McDonald Obser** 55.87 82 ⇓P P 11 34 18.7 +0.5
baz=56
328A **Wristen Ranch,** 56.13 81 ⇑P P 11 34 19.5 -0.3
baz=56
427A **Hayter Ranch,** 56.13 82 ⇑P P 11 34 19.9 0.0
baz=56
526A **Mary Lane Ranc** 56.26 83 ⇑P P 11 34 21.0 +0.2
baz=56
527A **Woodward Ranch** 56.49 82 ⇓P P 11 34 22.4 -0.1
baz=56
626A **Big Bend Ranch** 56.59 83 ⇓P P 11 34 23.6 +0.5
baz=56
428A **Kincaid Ranch,** 56.66 81 ⇑P P 11 34 24.2 +0.5
baz=56,SNR=5.7
230A **Sterling City** 56.83 79 ⇑P P 11 34 25.1 +0.4
baz=57
Z32A **Haskell** 56.85 77 ⇓P P 11 34 25.1 +0.4
baz=57
LZH **Lanzhou** 56.87 288 *e*P P 11 34 29.0 +3.9
LZH pP pP 11 34 39.1 +1.1
LZH sP sP 11 34 43.5 +0.3
LZH pmax pmax
comp=Z,13nm,1.0s
528A **Cox Ranch, San** 56.99 82 ⇑P P 11 34 26.3 +0.3
baz=57
TXAR **Lajitas Array** 57.03 83 P P 11 34 26.1 -0.1
TXAR **Lajitas Array** 57.03 83 P P 11 34 26.1 -0.1
comp=Z,2.0nm,0.8s,baz=297,slow=5.0,SNR=22
627A **Terlingua Ranc** 57.12 83 ⇓P P 11 34 27.2 +0.3
baz=57
330A **Mertzon** 57.12 80 ⇑P P 11 34 26.7 -0.1
baz=57
ABTX **Abilene, Hawle** 57.22 78 ⇑P P 11 34 27.8 +0.4
baz=57
429A **Davenport Ranc** 57.22 81 ⇑P P 11 34 27.1 -0.4
baz=57
529A **Stev Forest Ra** 57.37 81 ⇓P P 11 34 28.5 0.0
baz=57
628A **Black Gap, Mar** 57.40 82 ⇑P P 11 34 29.0 +0.2
baz=57
430A **Baggett Ranch,** 57.51 80 ⇑P P 11 34 29.0 -0.6
baz=57,SNR=6.3
331A **San Angelo** 57.65 79 ⇑P P 11 34 30.3 -0.2
baz=58
232A **Coleman** 57.72 78 ⇓P P 11 34 30.9 -0.1
baz=58
530A **J-C Ranch, Com** 57.90 81 ⇓P P 11 34 31.9 -0.4
baz=58,SNR=7.8
431A **Sonora** 57.97 80 ⇑P P 11 34 32.6 -0.2
baz=58
332A **Millersview** 58.02 79 ⇓P P 11 34 32.7 -0.3
baz=58
531A **Rocksprings** 58.37 80 ⇓P P 11 34 35.4 -0.2
baz=58
532A **Rocksprings** 58.79 80 ⇑P P 11 34 38.1 -0.4
baz=59
SCHQ **Schefferville** 58.84 40 P P 11 34 37.1 -1.3
SCHQ **Schefferville** 58.84 40 P P 11 34 37.1 -1.3
comp=Z,1.2nm,0.6s,baz=320,slow=7.9,SNR=3.1
631A **Perdido Creek** 58.88 81 ⇑P P 11 34 38.7 -0.4
baz=59
SFIN **Scholer Farm** 59.24 63 ⇑P P 11 34 40.6 -0.7
baz=59
632A **Uvalde** 59.30 80 ⇓P P 11 34 42.2 +0.1
baz=59
732A **Laxson Ranch,** 59.74 81 ⇑P P 11 34 46.1 +1.1
baz=60
KURK **Kurchatov** 60.04 315 *e*P P 11 34 46.2 -0.5
CD2 **Chengdu** 60.51 283 P P 11 34 48.1 -2.2
CD2 pP pP 11 34 58.2 -5.0
CD2 sP sP 11 35 02.1 -6.4
CD2 PP PP 11 37 03.0 -0.7
CD2 PcS PcS 11 39 33.8 -3.5
CD2 S S 11 42 58.4 -4.1
CD2 sS sS 11 43 15.2 -8.9
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,70nm,4.8s
WMQ **Urumqi** 60.58 304 P P 11 34 55.0 +4.4
WMQ pmax pmax
comp=Z,18nm,1.2s
MKAR **Makanchi Array** 61.16 310 P P 11 34 52.8 -1.7
MKAR **Makanchi Array** 61.16 310 P P 11 34 52.8 -1.7
comp=Z,0.9nm,0.6s,baz=46,slow=6.4,SNR=13
BVAR **Borovoye Array** 61.77 321 P P 11 34 58.0 -0.5
BVAR PcP PcP 11 35 38.1 -1.2
BVAR **Borovoye Array** 61.77 321 P P 11 34 58.0 -0.5
comp=Z,2.5nm,0.6s,baz=52,slow=7.7,SNR=15
BVAR PcP PcP 11 35 38.1 -1.2
comp=Z,1.9nm,0.5s,baz=55,slow=4.4,SNR=6.7
GYA **Guiyang** 61.90 278 *e*P P 11 35 02.8 +2.9
GYA pmax pmax
comp=Z,10.0nm,0.8s
KMSC **Kings Mountain** 66.16 63 ⇓P P 11 35 28.1 +0.5
baz=66
AAK **Ala-Archa** 67.97 311 P P 11 35 38.8 -0.3
AAK **Ala-Archa** 67.97 311 P P 11 35 38.8 -0.3
comp=Z,4.1nm,0.6s,baz=104,slow=4.2,SNR=17
AKTO **Aktyubinsk** 68.44 326 P P 11 35 41.2 -0.6
AKTO **Aktyubinsk** 68.44 326 P P 11 35 41.2 -0.6
comp=Z,2.4nm,0.9s,baz=38,slow=4.5,SNR=8.3
CMAR **Chiang Mai Arr** 72.59 278 P P 11 36 07.3 -0.2
CMAR **Chiang Mai Arr** 72.59 278 P P 11 36 07.3 -0.2
comp=Z,0.8nm,0.5s,baz=30,slow=6.6,SNR=8.0
WRA **Warramunga Arr** 83.29 226 P P 11 37 05.8 -0.8
WRA **Warramunga Arr** 83.29 226 P P 11 37 05.8 -0.8
comp=Z,0.4nm,0.5s,baz=33,slow=5.9,SNR=4.7
FITZ **Fitzroy Crossi** 85.87 234 P P 11 37 20.3 +0.6
FITZ **Fitzroy Crossi** 85.87 234 P P 11 37 20.3 +0.6
comp=Z,2.4nm,0.8s,baz=11,slow=4.6,SNR=5.7
ASAR **Alice Springs** 86.74 225 P P 11 37 23.6 -0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR				pP	pP	11 37 40.9	+3.4
ASAR	Alice Springs	86.74	225	P	P	11 37 23.6	-0.3
	comp=Z,1.3nm,0.8s,baz=27,slow=5.4,SNR=12						
ASAR				pP	pP	11 37 40.9	+3.4
	comp=Z,0.9nm,0.7s,baz=25,slow=5.2,SNR=5.5						
TORD	Torodi Ar. Bea	115.53	2	PKP	PKPdf	11 43 20.8	-1.3
TORD	Torodi Ar. Bea	115.53	2	PKP	PKPdf	11 43 20.8	-1.3
	comp=Z,0.6nm,0.6s,baz=348,slow=2.1,SNR=7.5						
BOSA	Boshof	151.99	317	PKPbc	PKPbc	11 44 34.3	-0.6
BOSA	Boshof	151.99	317	PKPbc	PKPbc	11 44 34.3	-0.6
	comp=Z,8.8nm,0.6s,baz=38,slow=2.6,SNR=23						

*ISCJB **01** 11:36:52.6±0.6, 38.°76N±0.°03×29.°31E±0.°05, h4km±12km, Error ellipse: s-maj=6.2km s-min=5.3km az=178.7*
*CSEM **01** 11:36:52.8±0.1, 38.°76N×29.°31E, h2km, MD2.8, Error ellipse: s-maj=3.1km s-min=2.7km az=103.0*
*DDA **01** 11:36:52.5, 38.°75N×29.°32E, h7km, MD2.8*
*ISK **01** 11:36:52.3, 38.°76N×29.°28E, h5km, MD2.5*
ISC 01 11:36:52.8±1.0, **38.°76N**±0.°03×**29.°30E**±0.°03, **h9**km±12km, **n19**, σ**0.s50**/27, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GDZ	Gediz	0.35	23	iP	Pg	11 36 59.5	-0.3
GDZ				iS	Sg	11 37 05.1	+0.5
GDZ	Gediz	0.35	23	iP	Pg	11 36 59.5	-0.3
GDZ				iS	Sg	11 37 05.1	+0.5
KHAL	Karahalli	0.42	159	iP	Pg	11 37 00.9	-0.1
KHAL				iS	Sg	11 37 06.8	+0.3
KHAL	Karahalli	0.42	159	iP	Pg	11 37 00.9	-0.1
KHAL				iS	Sg	11 37 06.8	+0.3
KHL	Karahalli	0.47	159	ePG	Pg	11 37 02.1	+0.2
DEMI	Demirci	0.54	302	iP	Pg	11 37 03.6	+0.4
DEMI				iS	Sb	11 37 12.0	-0.3
DEMI	Demirci	0.54	302	iP	Pg	11 37 03.6	+0.4
DEMI				iS	Sb	11 37 12.0	-0.3
KULA	Kula-Manisa	0.56	244	ePG	Pg	11 37 03.3	-0.4
KULA				eSG	Sg	11 37 11.2	+0.1
KULA	Kula-Manisa	0.56	244	ePg	Pg	11 37 03.3	-0.4
KULA				eSg	Sg	11 37 11.2	+0.1
ALT	Altintas	0.69	65	ePG	Pb	11 37 06.5	-0.6
ALT	Altintas	0.69	65	ePg	Pb	11 37 06.5	-0.6
TVSB	Tavsanli	0.70	10	ePG	Pg	11 37 06.1	-0.2
TVSB	Tavsanli	0.70	10	ePg	Pg	11 37 06.1	-0.2
DST	Dursunbey	0.99	328	ePG	Pg	11 37 11.8	-0.1
DST	Dursunbey	0.99	328	ePg	Pg	11 37 11.8	-0.1
YLV	Yalova	1.80	2	ePN	Pb	11 37 25.1	-0.9
YLV	Yalova	1.80	2	ePn	Pb	11 37 25.1	-0.9
ARMT	Armutlu	1.83	349	ePN	Pn	11 37 25.3	+0.9
ARMT	Armutlu	1.83	349	ePn	Pn	11 37 25.3	+0.9

KRSC 01 11:41:19.9±1.8, **49.°58N**×**156.°95E**, **h26**km±26km, **ML3.6**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	2.70	357	P	Pn	11 42 02.7	+1.0
MIPR				S	Sn	11 42 33.9	+0.4
MTVR	Mutnovka	3.01	15	P	Pn	11 42 08.9	+2.8
MTVR				eS	Sn	11 42 44.5	+3.1
RUS	Russkaya	3.02	18	P	Pn	11 42 08.1	+2.1
RUS				eS	Sn	11 42 43.4	+2.1
UGLR	Uglovaya	3.82	17	P	Pn	11 42 20.4	+3.3
SDLR	Sedlovina	3.90	17	P	Pn	11 42 20.9	+2.7
SPN	Mys Shipunski	4.01	27	S	Sn	11 43 07.6	+1.8
GNL	Ganaly	4.17	8	P	Pn	11 42 25.1	+3.2
MKZ	Mys Kozlova	5.79	29	P	Pn	11 42 46.2	+2.2

IDC 01 11:46:19.5±2.2, **4.°74N**×**127.°06E**, **h0**km, **mb3.1**/3, **mb1 3.4**/3, **mb1mx3.2**/22, **mbtmp3.1**/3, **Error ellipse: s-maj=173.1km s-min=25.5km az=66.0**, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.55	164	P	P	11 51 49.7	-0.5
	0.2nm,0.3s,baz=344,slow=10,SNR=8.0						
ASAR	Alice Springs	29.01	167	P	P	11 52 21.8	+0.5
	0.1nm,0.4s,baz=352,slow=7.5,SNR=3.5						
MKAR	Makanchi Array	56.92	325	P	P	11 56 06.5	-0.1
	0.1nm,0.4s,baz=115,slow=7.2,SNR=2.7						

*ISCJB **01** 12:03:24.9±0.4, 39.°47N±0.°03×28.°17E±0.°03, h0km, Error ellipse: s-maj=4.2km s-min=3.0km az=40.5*
*ISK **01** 12:03:24.5, 39.°45N×28.°14E, h9km, MD2.7*
*CSEM **01** 12:03:25.0±0.2, 39.°47N×28.°16E, h1km, MD2.9, Error ellipse: s-maj=4.2km s-min=3.1km az=32.0*
*DDA **01** 12:03:25.1, 39.°48N×28.°18E, h7km, MD2.9*
ISC 01 12:03:25.1±0.8, **39.°45N**±0.°02×**28.°15E**±0.°02, **h0**km, **n42**, σ**0.s69**/56, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BALB	Balikesir	0.28	313	ePG	Pg	12 03 30.7	+0.3
BALB	Balikesir	0.28	313	ePg	Pg	12 03 30.7	+0.3
DURS	Dursunbey	0.29	59	iP	Pg	12 03 30.7	0.0
DURS	Dursunbey	0.29	59	iP	Pg	12 03 30.7	0.0
DST	Dursunbey	0.40	67	ePG	Pg	12 03 32.9	+0.2
DST	Dursunbey	0.40	67	ePg	Pg	12 03 32.9	+0.2
BALY	Balya	0.50	306	iP	Pg	12 03 34.9	+0.2
BALY				iS	Sg	12 03 42.8	+1.7
BALY	Balya	0.50	306	iP	Pg	12 03 34.9	+0.2
BALY				iS	Sg	12 03 42.8	+1.7
DEMI	Demirci	0.60	132	iP	Pg	12 03 36.9	+0.3
DEMI				iS	Sg	12 03 45.9	+1.5
DEMI	Demirci	0.60	132	iP	Pg	12 03 36.9	+0.3
DEMI				iS	Sg	12 03 45.9	+1.5
AKHS	Akhisar	0.63	204	iP	Pg	12 03 36.8	-0.2
AKHS				iS	Sb	12 03 47.4	-0.9
AKHS	Akhisar	0.63	204	iP	Pg	12 03 36.8	-0.2
AKHS				iS	Sb	12 03 47.3	-0.9
GONE	Gonen-Balikesi	0.69	329	ePG	Pg	12 03 38.2	-0.2
GONE				eSG	Sg	12 03 48.4	+1.0
GONE	Gonen-Balikesi	0.69	329	ePg	Pg	12 03 38.2	-0.2
GONE				eSg	Sg	12 03 48.4	+1.0
ORLT	Orhaneli	0.83	44	ePG	Pg	12 03 41.1	+0.1
ORLT	Orhaneli	0.83	44	ePg	Pg	12 03 41.1	+0.1
EDC	Edincik	0.92	346	ePG	Pg	12 03 42.7	0.0
EDC				eSG	Sb	12 03 55.9	-0.9
EDC	Edincik	0.92	346	ePg	Pg	12 03 42.7	0.0
EDC				eSg	Sb	12 03 55.9	-0.9
KULA	Kula-Manisa	1.02	157	ePG	Pg	12 03 44.3	-0.2
KULA	Kula-Manisa	1.02	157	ePg	Pg	12 03 44.3	-0.2
TVSB	Tavsanli	1.02	90	ePG	Pg	12 03 44.4	-0.2
TVSB	Tavsanli	1.02	90	ePg	Pg	12 03 44.4	-0.2
MDNY	Mudanya-Bursa	1.08	32	ePN	Pg	12 03 45.8	0.0
MDNY	Mudanya-Bursa	1.08	32	ePn	Pg	12 03 45.8	0.0
GDZ	Gediz	1.10	109	iP	Pg	12 03 46.2	+0.1
GDZ				iS	Sg	12 04 01.3	+1.0
GDZ	Gediz	1.10	109	iP	Pg	12 03 46.2	+0.1
GDZ				iS	Sg	12 04 01.3	+1.0
AYVA	Ayvalik	1.14	263	iP	Pb	12 03 47.8	+0.2
AYVA				iS	Sb	12 04 03.1	+0.2
AYVA	Ayvalik	1.14	263	iP	Pb	12 03 47.8	+0.2
AYVA				iS	Sb	12 04 03.1	+0.2
KRBG	Karabiga-Canak	1.15	326	ePN	Pg	12 03 46.9	-0.1
KRBG	Karabiga-Canak	1.15	326	ePn	Pg	12 03 46.9	-0.1
ARMT	Armutlu	1.24	26	ePN	Pg	12 03 48.5	-0.3
ARMT	Armutlu	1.24	26	ePn	Pg	12 03 48.6	-0.3
LPK	Lapseki	1.41	311	ePN	Pn	12 03 50.8	-1.2
LPK	Lapseki	1.41	311	ePn	Pn	12 03 50.8	-1.2
RKY	Sarkoy-Tekirda	1.44	329	ePN	Pn	12 03 51.3	-1.2
RKY	Sarkoy-Tekirda	1.44	329	ePn	Pn	12 03 51.3	-1.2
YLV	Yalova	1.46	40	ePN	Pn	12 03 52.5	-0.2
YLV	Yalova	1.46	40	ePn	Pn	12 03 52.5	-0.2
MFT	Murefte	1.49	334	ePN	Pn	12 03 52.8	-0.4
MFT	Murefte	1.49	334	ePn	Pn	12 03 52.8	-0.4
BORA	Eskisehir	1.83	76	eP	Pb	12 03 59.4	-0.1
BORA	Eskisehir	1.83	76	eP	Pb	12 03 59.4	-0.1

*IDC **01** 12:06:08.0±1.2, 20.°83N×122.°35E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/23, mbtmp3.6/5, Error ellipse: s-maj=49.2km s-min=27.2km az=63.0*
*TAP **01** 12:06:09.0, 21.°19N×122.°48E, h7km±1km, ML3.6, D*
*ISCJB **01** 12:06:10.0±0.8, 21.°24N±0.°06×122.°46E±0.°06, h10km, mb3.6/5, Error ellipse: s-maj=9.8km s-min=6.5km az=41.6*
ISC 01 12:06:08.2±1.4, **21.°18N**±0.°08×**122.°47E**±0.°08, **h10**km, **n32**, σ**1.s74**/41, **mb3.7**/5, **Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	1.21	315	iP	Pn	12 06 30.9	-0.3
	baz=314						
LAY				eS	Sn	12 06 47.4	-0.3
	baz=314						
TWK1	Hengchun	1.72	296	eP	Pn	12 06 39.0	+0.7
	baz=295						
TWK1				eS	Sb	12 07 01.7	0.0
	baz=295						
HEN	Hengchun	1.81	297	eP	Pn	12 06 40.3	+0.8
	baz=296						
EAST	Anshuo	1.92	309	P	Pb	12 06 42.2	-1.3
	baz=308						
EAST				S	Sn	12 07 06.2	+0.9
	baz=308						
ECL	Taimali	1.99	315	eP	Pn	12 06 42.5	+0.6
	baz=314						
ECL				eS	Sn	12 07 06.9	-0.1
	baz=314						
TWG	Pinlang	2.08	322	eP	Pb	12 06 44.6	-1.6
	baz=321						
TWG				S	Sn	12 07 10.1	+0.8
	baz=321						
SCZT	Fangliau	2.09	305	eP	Pb	12 06 44.8	-1.5
	baz=304						
CHKT	Chengkung	2.17	332	eP	Pn	12 06 44.0	-0.4
	baz=331						
SSD	Sandimen	2.31	313	eP	Pn	12 06 48.0	+1.6
	baz=312						
ELDTW	Lidau	2.41	326	eP	Pn	12 06 49.1	+1.3
	baz=325						
TWF1	Yuli	2.42	334	eP	Pn	12 06 48.5	+0.7
	baz=333						
TWF1				eS	Sn	12 07 18.8	+1.2
	baz=333						
EHY	Hungye	2.55	336	P	Pn	12 06 50.9	+1.3
	baz=335						
EHY				eS	Sn	12 07 21.9	+1.2
	baz=335						
WTP	Ta-pu	2.68	320	eP	Pn	12 06 53.3	+1.8
	baz=319						
WTP				eS	Sn	12 07 25.9	+1.9
	baz=319						
CHN1	Nanshi	2.69	318	eP	Pb	12 06 54.6	-1.8
	baz=317						
CHN1				eS	Sn	12 07 26.4	+2.2
	baz=317						
TWK	Hsinying	2.77	319	eP	Pb	12 06 55.3	-2.6
	baz=318						
CHN4	Tsaushan	2.77	322	eP	Pb	12 06 55.2	-2.7
	baz=320						
CHN4				eS	Sn	12 07 28.4	+2.1
	baz=320						
ALS	Alishan	2.79	327	eP	Pn	12 06 55.4	+2.2
	baz=326						
ESL	Shilin	2.79	340	eP	Pn	12 06 53.8	+0.8
	baz=339						
ESL				eS	Sn	12 07 27.2	+0.5
	baz=339						
CHN5	Tsauling	2.92	326	eP	Pb	12 06 58.0	-2.5
	baz=325						
CHN5				eS	Sb	12 07 33.5	-2.8
	baz=325						
SMLT	Sun Moon Lake	3.06	332	eP	Pn	12 06 59.5	+2.8
	baz=331						
TYC	Yuchr	3.09	332	eP	Pb	12 07 00.2	-3.2
	baz=331						
TYC				eS	Sn	12 07 36.7	+2.5
	baz=331						
WHF	Hehuan Shan	3.15	340	eP	Pn	12 06 58.3	-0.1
	baz=339						
TWT	Tachien	3.28	339	eP	Pn	12 07 00.6	+0.7
	baz=338						
NNS	Nan Shan	3.40	343	eP	Pn	12 07 04.5	+3.1
	baz=342						
TWQ1	Liyutan	3.52	334	eP	Pb	12 07 06.7	-4.0
	baz=333						
ENTT	Nioudou	3.54	347	eP	Pn	12 07 05.7	+2.3
	baz=346						
ENTT				eS	Sn	12 07 45.6	+0.2
	baz=346						
TWE	Neicheng	3.60	348	eP	Pn	12 07 06.4	+2.3
	baz=348						
MKAR	Makanchi Array	41.33	318	P	P	12 13 57.3	+3.1
	1.7nm,0.8s,baz=110,slow=9.9,SNR=13						
WRA	Warramunga Arr	42.49	163	P	P	12 14 02.5	-1.4
	0.5nm,0.8s,baz=345,slow=8.9,SNR=4.7						
ZALV	Zalesovo Beam	43.41	328	P	P	12 14 13.4	+2.5
	1.2nm,0.6s,baz=110,slow=7.5,SNR=7.0						
ILAR	Eielson Array	71.34	27	P	P	12 17 31.1	+3.1
	0.4nm,0.8s,baz=279,slow=5.0,SNR=6.5						
YKA	Yellowknife Ar	85.26	23	P	P	12 18 49.1	+4.1
	0.3nm,0.6s,baz=312,slow=4.9,SNR=11						

*IDC **01** 12:19:21.8±1.1, 4.°54N×125.°60E, h0km, mb3.6/6, mb1 3.9/6, mb1mx3.6/23, mbtmp3.6/6, Error ellipse: s-maj=66.4km s-min=20.3km az=75.0*
ISC 01 12:19:22.9±0.9, **4.°60N**±0.°07×**125.°5E**±0.°1, **h10**km, **n10**, σ**0.s93**/9, **mb3.6**/6, **1D**, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	Mati	2.45	18	eP	Pb	12 20 07.6	+0.4
MATI				eS	Sg	12 20 40.9	-0.9
CTBH	Cotabato--PC H	2.88	335	⇓iP	Pb	12 20 13.9	-0.6
BUKP	Musuan	3.29	353	eP	Pg	12 20 31.6	+5.6
PAGZ	Pagadian	3.85	327	eP	Pn	12 20 26.3	+4.1
FITZ	Fitzroy Crossi	22.56	180	P	P	12 24 23.0	-0.5
	1.5nm,0.5s,baz=8.6,slow=10,SNR=6.2						
WRA	Warramunga Arr	25.89	161	P	P	12 24 54.3	-0.9
	2.0nm,0.6s,baz=336,slow=11,SNR=23						
ASAR	Alice Springs	29.27	164	P	P	12 25 25.6	+0.1
	0.2nm,0.4s,baz=347,slow=7.6,SNR=3.1						
STKA	Stephens Creek	39.38	158	P	P	12 26 52.7	-0.2
	1.6nm,0.6s,baz=348,slow=8.3,SNR=4.2						
MKAR	Makanchi Array	56.14	326	P	P	12 29 04.4	+1.6
	0.1nm,0.5s,baz=111,slow=9.8,SNR=2.8						
ILAR	Eielson Array	84.86	25	P	P	12 31 57.5	-0.2
	0.2nm,0.6s,baz=247,slow=4.6,SNR=6.4						

*ISCJB **01** 12:33:51.6±0.2, 61.°69N±0.°02×150.°83W±0.°05, h75km±1km, mb3.9/14, Error ellipse: s-maj=3.8km s-min=3.3km az=151.3*
*IDC **01** 12:33:51.2±1.9, 61.°79N×151.°16W, h66km±16km, mb3.7/14, mb1 3.9/19, mb1mx3.7/31, mbtmp3.7/19, MS2.8/2, Ms1 2.8/2, ms1mx2.4/36, Error ellipse: s-maj=16.2km s-min=12.2km az=65.0*
*NEIC **01** 12:33:53.1, 61.°66N×150.°89W, h73km, MG3.7(AEIC), After AEIC.*
NEIC Felt [II] at Anchorage. Also felt at Chugiak, Eagle River, Homer, Palmer and Willow.
ISC 01 12:33:52.3±0.6, **61.°65N**±0.°03×**150.°95W**±0.°04, **h80**km±5km, **n282**, σ**1.s26**/299, **mb4.0**/14, **84C-87D**, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SUA	Susitna One	0.21	152	P	Pn	12 34 04.3	0.0
SUA				S	Sn	12 34 13.0	-0.2
SKT	Skwentna	0.43	320	P	Pn	12 34 05.1	-0.5
SKT				S	Sn	12 34 14.7	-0.7
STLK	Strandline Lak	0.45	251	P	Pn	12 34 05.7	-0.1
FIB	Fire Island	0.61	142	P	Pn	12 34 08.0	+1.0
SPU	Mount Spurr	0.71	229	P	Pn	12 34 08.0	-0.1
TRAP	Trapper Creek	0.77	25	P	Pn	12 34 08.3	-0.3
BGL	Barrier Glacie	0.79	242	P	Pn	12 34 08.9	-0.2
RC01	Rabbit Creek A	0.81	133	P	Pn	12 34 08.9	-0.2
RC01				S	Sn	12 34 21.6	-0.1
CUT	Chulitna	0.82	22	P	Pn	12 34 09.1	-0.2
PMR	Palmer	0.87	93	P	Pn	12 34 09.1	-0.7
PMR				S	Sn	12 34 21.8	-1.0
SLKM	Skilak Lake	1.20	163	P	Pn	12 34 13.5	-0.3
SML	Sawmill	1.25	81	P	Pn	12 34 13.7	-0.8
SML				S	Sn	12 34 30.2	-0.9
DFR	Drift River	1.35	219	P	Pn	12 34 16.2	+0.3
PPLA	Purkeypile	1.38	336	P	Pn	12 34 15.9	-0.4
PPLA				S	Sn	12 34 34.3	+0.1
HUR	Hurricane	1.47	24	P	Pn	12 34 17.2	0.0
SEW	Seward	1.71	154	ePn	Pn	12 34 19.8	-0.6
SEW				eSn	Sn	12 34 39.3	-2.3
SEW				S		12 34 40.5	
TRF	Thorofare Moun	1.84	9	P	Pn	12 34 21.3	-0.9
BRLK	Bradley Lake	1.89	179	P	Pn	12 34 22.4	-0.3
IVE	Iliamna Volcan	1.93	213	P	Pn	12 34 23.8	+0.5
RND	Reindeer	2.01	28	P	Pn	12 34 24.1	-0.3
VLZ	Valdez	2.28	101	P	Pn	12 34 26.5	-1.3
OPT	Oil Point	2.30	210	P	Pn	12 34 29.1	+1.0
CHUM	Lake Minchumin	2.33	345	P	Pn	12 34 28.6	0.0
KLU	Klutina	2.41	91	P	Pn	12 34 28.6	-1.1
DIV	Divide	2.54	100	P	Pn	12 34 30.1	-1.4
DIV				eSn	Sn	12 35 00.0	-1.6
AUW	Augustine West	2.60	210	P	Pn	12 34 32.6	+0.3
TT01	Tatalina	2.69	300	P	Pn	12 34 32.9	-0.5
EYAK	Cordova Ski Ar	2.75	111	P	Pn	12 34 32.5	-1.7
HARP	HAARP	2.83	72	P	Pn	12 34 35.7	+0.3
PAX	Paxson	2.88	60	P	Pn	12 34 36.3	+0.2
PAX				eSn	Sn	12 35 09.0	-0.7
NEA	Nenana	3.06	15	P	Pn	12 34 38.4	0.0
WRH	Wood River Hil	3.12	23	P	Pn	12 34 38.8	-0.3
BMRM	Bremner River	3.13	100	P	Pn	12 34 39.6	+0.2
DDM	Donnelly Dome	3.18	45	P	Pn	12 34 41.9	+1.9
MID	Middleton Isla	3.18	132	P	Pn	12 34 39.3	-0.8
HDA	Harding Lake	3.31	32	P	Pn	12 34 42.0	+0.1
CCB	Clear Creek Bu	3.33	24	P	Pn	12 34 41.5	-0.5
MLY	Manley	3.40	1	P	Pn	12 34 42.7	-0.4
COLA	College	3.53	22	P	Pn	12 34 44.4	-0.3
MDM	Murphy Dome	3.54	19	P	Pn	12 34 44.5	-0.5
MENT	Mentasta	3.62	66	ePn	Pn	12 34 45.9	-0.1
VRDI	Verde Repeater	3.62	93	P	Pn	12 34 44.7	-1.6
IL1	Eielson Array	3.63	29	P	Pn	12 34 45.9	-0.3
ILAR	Eielson Array	3.63	29	P	Pn	12 34 45.6	-0.5
ILAR				S	Sn	12 35 24.9	-3.0
ILAR	Eielson Array	3.63	29	P	Pn	12 34 45.6	-0.5
	2.3nm,0.3s,baz=216,slow=14,SNR=147						
ILAR				S	Sn	12 35 24.8	-3.0
	11nm,0.3s,baz=208,slow=15,SNR=9.6						
BERG	Berg Lake	3.74	106	P	Pn	12 34 45.8	-1.9
DOT	Dot Lake	3.76	55	P	Pn	12 34 48.1	+0.2
KHIT	Khitrov Hills	3.93	105	P	Pn	12 34 49.0	-1.3
GRIN	Grindle Hills	3.96	107	P	Pn	12 34 49.2	-1.5
KDAK	Kodiak Island	3.96	193	P	Pn	12 34 49.7	-1.0
KDAK				S	Sn	12 35 31.7	-4.2
KDAK	Kodiak Island	3.96	193	P	Pn	12 34 49.1	-1.6
	0.8nm,0.3s,baz=27,slow=8.5,SNR=24						
KDAK				S	Sn	12 35 31.7	-4.2
	5.5nm,0.3s,baz=140,slow=23,SNR=7.4						
KCE	Katmai Mt Cerb	4.03	214	P	Pn	12 34 51.6	0.0
BGLC	Bering Glacier	4.05	109	P	Pn	12 34 52.2	+0.4
GCSA	Galena City Sc	4.11	322	P	Pn	12 34 53.1	+0.5
BALM	Baldy	4.19	95	P	Pn	12 34 52.4	-1.4
KIAG	Kiagna River	4.21	96	P	Pn	12 34 52.6	-1.6
KULT	Kultieth River	4.25	106	P	Pn	12 34 53.9	-0.7
BARK	Barkley Ridge	4.30	103	P	Pn	12 34 53.9	-1.4
ISLE	Juniper Island	4.30	100	P	Pn	12 34 54.1	-1.3
BAGL	Bagley Icefiel	4.46	101	P	Pn	12 34 56.7	-0.7
BCA3	Beaver Creek A	4.50	68	P	Pn	12 34 57.9	-0.1
BARN	Barnard Glacie	4.51	93	P	Pn	12 34 58.1	-0.2
IM3	Indian Mountai	4.53	345	P	Pn	12 34 58.0	-0.3
PRP	Porcupine Dome	4.58	30	P	Pn	12 35 00.2	+1.1
MESA	MESA	4.63	105	P	Pn	12 34 59.2	-0.8
TABL	Table Mountain	4.92	100	P	Pn	12 35 02.8	-1.1
EGAK	Eagle	5.42	50	ePn	Pn	12 35 10.6	0.0
	42nm,0.5s						
COLD	Coldfoot	5.61	3	P	Pn	12 35 12.5	-0.6
DAWY	Dawson	5.82	60	P	Pn	12 35 16.0	0.0
PNL	Peninsula	6.01	104	P	Pn	12 35 17.2	-1.4
BM3	Burnt Mountain	6.40	22	P	Pn	12 35 23.9	0.0
HYT	Haines Junctio	6.54	91	P	Pn	12 35 25.3	-0.6
WHY	Whitehorse	7.83	90	P	Pn	12 35 42.4	-1.1
SKAG	Skagway	8.00	99	ePn	Pn	12 35 43.5	-2.1
	8.2nm,0.6s						
SKAG				eSn	Sn	12 37 09.0	-5.4
TNA	Tin City	8.51	305	P	Pn	12 35 53.4	+0.9
TNA				eSn	Sn	12 37 23.8	-2.9
SIT	Sitka	9.20	113	P	Pn	12 36 01.0	-1.0
GAMB	Gambell	9.76	292	P	Pn	12 36 10.1	+0.6
INK	Inuvik	9.92	40	P	Pn	12 36 11.2	-0.5
INK	Inuvik	9.92	40	P	Pn	12 36 11.2	-0.5
	0.1nm,0.3s,baz=243,slow=20,SNR=20						
DLBC	Dease Lake	10.93	98	P	Pn	12 36 24.7	-0.9
DLBC	Dease Lake	10.93	98	P	Pn	12 36 24.7	-0.9
	0.3nm,0.3s,baz=303,slow=18,SNR=6.8						
DLBC				LR	LR	12 41 09.8	
	comp=Z,85nm,19.0s,baz=63,slow=40						
YKA	Yellowknife Ar	16.91	71	P	Pn	12 37 42.6	-0.8
YKA				ScP	ScP	12 45 53.4	+0.9
YKA	Yellowknife Ar	16.91	71	P	Pn	12 37 42.6	-0.8
	0.4nm,0.3s,baz=280,slow=9.5,SNR=38						
YKA				ScP	ScP	12 45 53.3	+0.9
	0.1nm,0.3s,baz=290,slow=2.1,SNR=12						
NEW	Newport	23.26	110	P	P	12 38 53.8	+1.2
NEW	Newport	23.26	110	⇑P	P	12 38 53.1	+0.5
	baz=23						
NEW	Newport	23.26	110	P	P	12 38 53.8	+1.2
	3.5nm,0.9s,baz=308,slow=11,SNR=5.3						
NEW				LR	LR	12 49 27.1	
	comp=Z,14nm,19.9s,baz=132,slow=40						
RES	Resolute Bay	23.37	34	P	P	12 38 53.7	+0.4
RES	Resolute Bay	23.37	34	P	P	12 38 53.7	+0.4
	0.3nm,0.4s,baz=282,slow=12,SNR=3.5						
A12A	Yaak River Ran	23.43	107	⇓P	P	12 38 55.2	+0.9
	baz=23						
B12A	Libby	23.80	107	⇓P	P	12 38 58.6	+1.0
	baz=24						
B13A	Whitefish	24.38	106	⇓P	P	12 39 03.7	+0.9
	baz=24						
C12B	Naegeli Ranch,	24.41	109	⇓P	P	12 39 04.0	+1.0
	baz=24						
A14A	Double T Ranch	24.43	104	⇑P	P	12 39 04.2	+0.8
	baz=24,SNR=6.9						
A15A	Johnson Ranch,	24.75	103	⇑P	P	12 39 07.1	+1.0
	baz=25,SNR=8.3						
C13A	Hot Springs	24.84	107	⇑P	P	12 39 08.4	+1.4
	baz=25						
B14A	Marquette Ranc	24.94	105	⇓P	P	12 39 09.0	+1.1
	baz=25						
D12A	Red Ives Fores	24.96	109	⇑P	P	12 39 08.9	+0.8
	baz=25						
B15A	Bradely Ranch,	25.30	104	⇓P	P	12 39 11.7	+0.5
	baz=25,SNR=5.5						
D13A	Huson	25.33	108	⇓P	P	12 39 12.2	+0.8
	baz=25						
B16A	M & M Farms, S	25.63	103	⇑P	P	12 39 14.8	+0.7
	baz=26						
C15A	Salmond Ranch,	25.67	105	⇑P	P	12 39 15.7	+1.1
	baz=26						
D14A	Greenough	25.77	107	⇑P	P	12 39 16.7	+1.2
	baz=26						
E13A	Victor	25.94	109	⇓P	P	12 39 18.0	+1.0
	baz=26						
B17A	L&G Farms, Che	26.14	102	⇑P	P	12 39 19.2	+0.5
	baz=26,SNR=6.6						
A18A	Metzger Ranch,	26.14	100	⇑P	P	12 39 19.0	+0.4
	baz=26						
D15A	Lincoln	26.25	106	⇓P	P	12 39 19.9	+0.1
	baz=26						
E14A	Clinton	26.28	108	⇓P	P	12 39 20.4	+0.3
	baz=26						
F13A	Darby	26.38	110	⇓P	P	12 39 21.8	+0.9
	baz=26,SNR=7.9						
B18A	Beardsley Farm	26.54	101	⇓P	P	12 39 22.6	+0.2
	baz=26						
C17A	Wharram Farm,	26.63	103	⇓P	P	12 39 24.3	+1.1
	baz=26,SNR=6.8						
A19A	Klindworth Far	26.65	99	⇓P	P	12 39 23.6	+0.3
	baz=26						
EGMT	Eagleton	26.82	102	⇓P	P	12 39 25.5	+0.7
	baz=27,SNR=6.1						
B19A	Brinkman Farms	26.89	100	⇓P	P	12 39 25.9	+0.5
	baz=27						
G13A	Cobalt	26.96	111	⇓P	P	12 39 26.9	+0.7
	baz=27						
D17A	Six Diamond Ra	27.02	104	⇑P	P	12 39 27.2	+0.5
	baz=27						
A20A	Cobblestone Ra	27.07	98	⇑P	P	12 39 27.9	+0.8
	baz=27						
H12A	Diamond D Ranc	27.11	112	⇓P	P	12 39 28.2	+0.6
	baz=27						
F15A	Butte	27.17	108	⇑P	P	12 39 28.9	+0.8
	baz=27						
C19A	Slack Wire Ran	27.36	101	⇑P	P	12 39 31.0	+1.3
	baz=27,SNR=6.4						
H13A	Challis	27.36	112	⇓P	P	12 39 30.7	+0.9
	baz=27						

A21A	Bergtoll Ranch baz=27	27.47	97	⇑P	P	12 39 32.0 +1.4
MFID	Camas Ranch baz=28	27.59	115	⇓P	P	12 39 33.4 +1.6
G15A	Dillon baz=28	27.69	109	⇓P	P	12 39 34.4 +1.7
BOZ	Bozeman (W) baz=28	27.71	107	⇑P	P	12 39 34.6 +1.7
E18A	Harlowton baz=28	27.81	104	⇑P	P	12 39 35.2 +1.4
D19A	Cripps Ranch, baz=28	27.85	102	⇑P	P	12 39 35.4 +1.3
C20A	Veseth Ranch, baz=28	27.86	100	⇓P	P	12 39 35.0 +0.8
I13A	Wildhorse Cree baz=28,SNR=12	27.94	112	⇑P	P	12 39 36.3 +1.3
G16A	Moss Hill, Enn baz=28	27.95	108	⇓P	P	12 39 36.2 +1.2
F17A	Fitzpatrick Pl baz=28	27.96	106	⇑P	P	12 39 36.2 +1.0
HLID	Hailey baz=28	28.09	113	⇑P	P	12 39 37.3 +1.0
I14A	Mackay baz=28	28.22	112	⇑P	P	12 39 38.7 +1.2
D20A	Manuel Ranch, baz=28	28.25	101	⇓P	P	12 39 39.2 +1.6
J13A	Cove Ranch, Pi baz=28	28.32	113	⇓P	P	12 39 39.9 +1.5
F18A	Big Timber baz=28	28.39	105	⇑P	P	12 39 40.5 +1.6
E19A	Rath Farm, Rou baz=28	28.41	103	⇑P	P	12 39 40.5 +1.5
H16A	Russell Place, baz=28	28.61	108	⇓P	P	12 39 42.4 +1.5
J14A	Carey baz=29	28.67	112	⇓P	P	12 39 43.1 +1.6
F19A	Roth Farm, Mol baz=29	28.79	104	⇑P	P	12 39 43.6 +1.2
D21A	La Casta Ranch baz=29	28.81	100	⇓P	P	12 39 43.7 +1.2
G18A	Lazy EL Ranch, baz=29	28.91	105	⇓P	P	12 39 44.8 +1.3
D22A	Cohagen baz=29	29.13	99	⇓P	P	12 39 46.9 +1.6
C23A	Lambert baz=29,SNR=5.1	29.13	97	⇓P	P	12 39 46.7 +1.3
I16A	Newdale baz=29	29.14	109	⇑P	P	12 39 47.2 +1.6
RLMT	Red Lodge baz=29,SNR=5.6	29.19	105	⇑P	P	12 39 48.0 +1.8
G20A	Bridger baz=30	29.60	104	⇑P	P	12 39 50.1 +0.4
C24A	Savage baz=30	29.68	97	⇑P	P	12 39 51.4 +1.2
E22A	Miles City baz=30,SNR=5.7	29.75	100	⇑P	P	12 39 52.0 +1.1
L15A	Malad City baz=30	30.23	113	⇓P	P	12 39 55.9 +0.6
J18A	Kendall Valley baz=30	30.32	108	⇑P	P	12 39 56.9 +0.7
E24A	Baker baz=30	30.44	98	⇑P	P	12 39 58.0 +1.0
NVAR	Mina Array Bea	30.73	124	P	P	12 40 02.0 +2.2
NVAR	Mina Array Bea 1.3nm,0.6s,baz=315,slow=9.5,SNR=4.7	30.73	124	P	P	12 40 02.0 +2.2
K18A	Toltan Ranch, baz=31	30.77	109	⇑P	P	12 40 01.3 +1.2
PDAR	Pinedale Array	30.88	108	P	P	12 40 02.6 +1.5
PDAR	Pinedale Array 1.7nm,0.5s,baz=326,slow=3.9,SNR=28	30.88	108	P	P	12 40 02.6 +1.5
I21A	Big Trails, Te baz=31	31.10	105	⇑P	P	12 40 04.0 +1.0
K19A	Absolon Red Bu baz=31	31.16	108	⇑P	P	12 40 03.9 +0.4
G24A	Alzada baz=31	31.30	100	⇓P	P	12 40 05.3 +0.7
J21A	Lysite baz=31	31.39	105	⇑P	P	12 40 06.5 +0.9
I22A	9 Mile Ranch, baz=31	31.42	104	⇓P	P	12 40 06.7 +1.0
K20A	Yellowstone Ra baz=31	31.52	107	⇑P	P	12 40 07.3 +0.6
H24A	Dirks Ranch, A baz=32	31.67	101	⇓P	P	12 40 09.0 +1.1
J22A	Midwest baz=32	31.79	104	⇓P	P	12 40 09.9 +1.0
ULM	Lac du Bonnet	31.88	85	P	P	12 40 10.6 +1.2
ULM	Lac du Bonnet 1.8nm,0.5s,baz=290,slow=7.8,SNR=4.8	31.88	85	P	P	12 40 10.6 +1.2
R11A	Troy Canyon, C baz=32	31.89	121	⇑P	P	12 40 11.4 +1.5
I24A	Kuemmerle Ranc baz=32	32.31	102	⇓P	P	12 40 14.4 +1.0
K22A	Casper baz=32	32.36	105	⇓P	P	12 40 15.0 +1.0
O17A	Robinson Place baz=32	32.42	113	⇓P	P	12 40 16.8 +2.1
N19A	John Jarvie Ra baz=32	32.55	110	⇓P	P	12 40 16.9 +1.3
J24A	Dixon Ranch, L baz=33	32.70	102	⇑P	P	12 40 18.0 +1.1
M21A	Separation Pea baz=33	32.80	107	⇑P	P	12 40 18.7 +0.8
L23A	Garrett baz=33	33.16	105	⇑P	P	12 40 22.3 +1.2
Q16A	Castle Valley baz=33	33.28	115	⇑P	P	12 40 23.6 +1.4
N21A	Black Mountain baz=33	33.40	108	⇓P	P	12 40 24.1 +0.9
SRU	San Rafael baz=33,SNR=5.4	33.41	114	⇑P	P	12 40 24.6 +1.4
LRMC	Laurel Mountai baz=34	33.54	126	⇑P	P	12 40 25.8 +1.5
O20A	White River Ci baz=34	33.58	110	⇓P	P	12 40 25.4 +0.7
P19A	Cripple Cowboy baz=34	33.66	111	⇓P	P	12 40 26.6 +1.2
M23A	Laramie baz=34	33.66	106	⇓P	P	12 40 26.3 +0.9
N22A	Wattenberg Ran baz=34	33.85	107	⇓P	P	12 40 27.7 +0.6
K26A	Motz Farm, Whi baz=34	33.87	102	⇑P	P	12 40 27.7 +0.6
GSC	Goldstone baz=34	34.04	125	⇓P	P	12 40 29.8 +1.3
Q19A	Hogan Spring (baz=34	34.09	112	⇓P	P	12 40 30.2 +1.2
S18A	Hurst Farm, Bl baz=35	34.81	114	⇓P	P	12 40 36.8 +1.4
U15A	North Rim baz=35	34.90	118	⇓P	P	12 40 37.7 +1.5
Q21A	Lamborn Mesa, baz=35	34.94	111	⇓P	P	12 40 37.7 +1.2
ISCO	Idaho Springs baz=35	35.04	107	⇓P	P	12 40 38.0 +0.6
R20A	Redvale baz=35,SNR=5.3	35.11	112	⇓P	P	12 40 39.3 +1.4
W13A	Hualapai Mount baz=35	35.38	121	⇑P	P	12 40 42.2 +1.9
S20A	Disappointment baz=35	35.41	112	⇑P	P	12 40 42.2 +1.6
BELC	Belle Mtn. Jos baz=35	35.49	125	⇑P	P	12 40 42.9 +1.7
R22A	Saguache, Gunn baz=36	35.80	110	⇓P	P	12 40 45.4 +1.5
S21A	Coal Bank Pass baz=36	35.81	112	⇑P	P	12 40 45.8 +1.8
MVCO	Mesa Verde baz=36	35.87	113	⇓P	P	12 40 45.8 +1.4
PDMCI	Parker Dam,Lak baz=36	35.97	122	⇑P	P	12 40 47.4 +2.3
WUAZ	Wupatki baz=36	36.06	118	⇑P	P	12 40 48.5 +2.4
S22A	4UR Ranch, Cre baz=36	36.16	111	⇓P	P	12 40 48.8 +1.7
R23A	Moffat baz=36	36.25	109	⇓P	P	12 40 48.5 +0.7
Q26A	Hugo baz=37	36.70	106	⇑P	P	12 40 52.7 +1.2
U21A	Nageezi baz=37	36.89	113	⇓P	P	12 40 54.8 +1.6
X16A	Lo Mia Camp, P baz=37	36.98	119	⇓P	P	12 40 55.9 +2.1
R25A	Fountain Ranch baz=37	36.98	108	⇓P	P	12 40 55.2 +1.4
KSCO	Kaye Shedlock' baz=37	37.04	105	⇓P	P	12 40 56.0 +1.7
R26A	Arlington baz=37	37.24	107	⇑P	P	12 40 56.9 +0.9
S25A	Robets Cordova baz=37	37.31	108	⇑P	P	12 40 56.6 0.0
R27A	Eads baz=37	37.55	106	⇑P	P	12 40 58.5 -0.1
T25A	Trinidad baz=38	37.75	109	⇑P	P	12 41 00.5 +0.1
S26A	Kim baz=38	37.78	107	⇑P	P	12 41 01.2 +0.6
W21A	San Fidel baz=38	38.00	114	⇓P	P	12 41 02.3 -0.2
T26A	Comanche Natio baz=38	38.09	108	⇑P	P	12 41 03.2 0.0
V23A	Ortiz Mt. (NFS baz=38	38.11	112	⇑P	P	12 41 04.2 +0.8
U25A	Circle Dot Ran baz=38	38.36	109	⇑P	P	12 41 06.4 +0.9
T27A	Campo baz=38	38.58	107	⇑P	P	12 41 08.2 +0.9
U26A	Atchley Ranch, baz=38	38.67	109	⇓P	P	12 41 09.3 +1.2
V26A	Tequesquite Ra baz=39	39.14	109	⇑P	P	12 41 13.5 +1.6
Y22A	Socorro baz=39	39.30	114	⇓P	P	12 41 14.6 +1.2
Z20A	Nine Sixteen R baz=39	39.30	117	⇓P	P	12 41 14.7 +1.3
Y23A	Lovelace Mesa, baz=40	39.70	113	⇑P	P	12 41 17.8 +1.1
Z22A	Elephant Butte baz=40	39.88	115	⇑P	P	12 41 19.4 +1.3
Y24A	Capitan baz=40	39.98	113	⇑P	P	12 41 20.6 +1.6
Y25A	Mesa, Roswell baz=40	40.31	112	⇓P	P	12 41 22.5 +0.9
220A	Playas Peak, P baz=40	40.37	118	⇑P	P	12 41 23.7 +1.5
Z25A	Roswell baz=41	40.84	112	⇓P	P	12 41 27.5 +1.4
Y27A	Causey baz=41	41.02	110	⇓P	P	12 41 28.6 +1.1
Z26A	Caprock baz=41	41.17	112	⇓P	P	12 41 29.8 +1.0
224A	Cornudas Mount baz=41	41.51	114	⇓P	P	12 41 33.3 +1.7
X30A	Coker Ranch, T baz=42	41.59	107	⇑P	P	12 41 32.8 +0.8
Y29A	Porterfield Fa baz=42	41.71	109	⇑P	P	12 41 34.2 +1.0
225A	Deer Hill, Car baz=42	41.79	113	⇓P	P	12 41 35.3 +1.4
SCHQ	Schefferville	41.84	60	P	P	12 41 34.1 +0.3
SCHQ	Schefferville 1.1nm,0.6s,baz=291,slow=8.6,SNR=3.6	41.84	60	P	P	12 41 34.1 +0.3
MNTX	Cornudas Mount baz=42	41.90	114	⇓P	P	12 41 35.8 +1.2
226B	Tecolote Peak, baz=42	42.10	113	⇓P	P	12 41 37.8 +1.5
Z29A	Hungry Hill Ra baz=42	42.20	109	⇓P	P	12 41 38.2 +1.0
325A	Bean Ranch, Si baz=42	42.36	114	⇓P	P	12 41 39.5 +1.0
128A	Castleberry Fa baz=42	42.39	110	⇓P	P	12 41 39.8 +1.2
Z30A	Sanderson Ranc baz=42	42.44	109	⇓P	P	12 41 40.2 +1.2
Y32A	R-V Farms, Ver baz=42	42.61	106	⇓P	P	12 41 41.6 +1.3
228A	UT Block 9, Go baz=43	42.77	111	⇓P	P	12 41 42.7 +1.0
425A	Indio Mountain baz=43,SNR=5.4	42.85	115	⇓P	P	12 41 44.5 +2.0
131A	Roby baz=43	43.29	108	⇑P	P	12 41 46.8 +1.0
426A	McDonald Obser baz=43	43.37	114	⇓P	P	12 41 48.2 +1.5
427A	Hayter Ranch, baz=43	43.49	113	⇑P	P	12 41 48.9 +1.4
329A	Wagon Wheel Ra baz=44	43.58	111	⇓P	P	12 41 49.7 +1.5
230A	Sterling City baz=44	43.62	110	⇓P	P	12 41 50.0 +1.4
526A	Mary Lane Ranc baz=44	43.87	114	⇑P	P	12 41 52.5 +1.9
428A	Kincaid Ranch, baz=44	43.91	112	⇑P	P	12 41 52.6 +1.6
330A	Mertzon baz=44	44.01	110	⇓P	P	12 41 52.5 +0.9
626A	Big Bend Ranch baz=44	44.28	115	⇑P	P	12 41 55.4 +1.5
232A	Coleman baz=44	44.29	108	⇓P	P	12 41 55.0 +1.1
429A	Davenport Ranc baz=44	44.35	111	⇑P	P	12 41 55.4 +1.0
528A	Cox Ranch, San baz=44	44.35	113	⇑P	P	12 41 56.0 +1.5
332A	Millersview baz=45	44.67	109	⇓P	P	12 41 57.7 +0.8
TXAR	Lajitas Array	44.68	114	P	P	12 41 59.0 +1.9
TXAR	Lajitas Array 1.0nm,0.6s,baz=315,slow=6.3,SNR=15	44.68	114	P	P	12 41 59.0 +1.9
627A	Terlingua Ranc baz=45	44.70	114	⇑P	P	12 41 58.8 +1.5
431A	Sonora baz=45	44.88	110	⇓P	P	12 41 59.8 +1.3
628A	Black Gap, Mar baz=45	44.89	113	⇑P	P	12 42 00.4 +1.7
530A	J-C Ranch, Com baz=45	45.00	111	⇑P	P	12 42 00.9 +1.3
WHTX	Lake Whitney baz=45	45.20	106	⇑P	P	12 42 01.7 +0.6
531A	Rocksprings baz=45	45.34	110	⇑P	P	12 42 03.5 +1.2
JCT	Junction City baz=45	45.41	109	⇑P	P	12 42 04.2 +1.4
532A	Rocksprings baz=46	45.66	110	⇑P	P	12 42 06.0 +1.2
631A	Perdido Creek baz=46	45.97	111	⇑P	P	12 42 08.5 +1.3
632A	Uvalde baz=46	46.25	110	⇑P	P	12 42 10.8 +1.5
732A	Laxson Ranch, baz=47	46.83	111	⇓P	P	12 42 15.6 +1.7
ARCES	ARCESS Array B	49.08	2	P	P	12 42 29.1 -1.7
ARCES	ARCESS Array B 3.9nm,0.9s,baz=5.9,slow=6.9,SNR=5.1	49.08	2	P	P	12 42 29.1 -1.7
SONM	Songino Array	54.63	306	P	P	12 43 13.4 +0.9
SONM	Songino Array 6.1nm,0.8s,baz=42,slow=6.8,SNR=45	54.63	306	P	P	12 43 13.4 +0.9
ZALV	Zalesovo Beam	56.63	324	P	P	12 43 24.6 -1.8
ZALV	Zalesovo Beam 1.4nm,0.3s,baz=24,slow=5.7,SNR=9.7	56.63	324	P	P	12 43 24.6 -1.8
NOA	NORSAR Array B	56.88	10	P	P	12 43 26.5 -1.7
NOA	NORSAR Array B 1.1nm,0.9s,baz=348,slow=7.3,SNR=3.4	56.88	10	P	P	12 43 26.5 -1.7
FINES	FINESS Array B	57.21	2	P	P	12 43 29.9 -0.6
FINES	FINESS Array B 1.4nm,0.6s,baz=352,slow=12,SNR=5.7	57.21	2	P	P	12 43 29.9 -0.6
MKAR	Makanchi Array	63.76	322	P	P	12 44 13.8 -1.4
MKAR	Makanchi Array 0.2nm,0.4s,baz=41,slow=5.7,SNR=5.7	63.76	322	P	P	12 44 13.8 -1.4
AKASG	Malin Array Be	68.00	360	P	P	12 44 41.6 -0.7
AKASG	Malin Array Be 2.2nm,0.6s,baz=356,slow=5.7,SNR=5.0	68.00	360	P	P	12 44 41.6 -0.7

GUC 01 12:52:31.5±0.8, 28°33S×69°10W, h100km, ML3.5, 1C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CPCH	Copiapo	1.47	311	eP		Pn	12 52 57.5	+0.1
CPCH				eS		Sn	12 53 17.2	+0.1
CPCH				AML		AML	12 53 21.0	
	comp=N,4μm,0.1s							
VACH	Vallenar	1.48	260	eP		Pn	12 52 49.4	-8.1
VACH				eS		Sn	12 53 09.7	-7.5
CDCH	Caldera	1.98	309	eP		Pn	12 53 04.5	+0.8
CDCH				eS		Sn	12 53 28.8	+0.5
TLL	Tololo Astrono	2.36	219	⇑iP		Pn	12 53 09.9	+0.9
TLL				iS		Sn	12 53 38.7	+0.8
TLL				AML		AML	12 53 44.0	
	comp=N,67nm,0.3s							

WEL 01 12:56:51.6±0.3, 45°03S×167°39E, h126km±1km, ML3.6/10, 4C-3D, Error ellipse: s-maj=2.5km s-min=1.6km az=90.0,

South Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.48	200	PN		Pn	12 57 09.7	-0.3
DCZ				SN		Sn	12 57 23.1	-0.9
DCZ				SN			12 57 23.3	
MSZ	Milford Sound	0.52	47	⇑PN		Pn	12 57 10.5	+0.3
MSZ				SN		Sn	12 57 24.0	-0.3
MLZ	Mavora Lakes	0.64	121	⇑PN		Pn	12 57 10.8	-0.3
MLZ				SN		Sn	12 57 25.1	-0.8
WHZ	Wether Hill Ro	0.95	156	PN		Pn	12 57 13.6	0.0
WKZ	Wanaka	1.17	81	⇓PN		Pn	12 57 15.8	-0.1
PYZ	Puysegur Point	1.25	203	PN		Pn	12 57 16.4	-0.1
JCZ	Jackson Bay	1.36	46	PN		Pn	12 57 17.5	-0.4
EAZ	Earnscleugh	1.37	99	⇓PN		Pn	12 57 17.5	-0.4
TUZ	Tuapeka	1.83	121	PN		Pn	12 57 22.9	-0.3
APZ	The Paps	1.86	167	PN		Pn	12 57 23.1	-0.4
SYZ	Scrubby Hill	1.94	142	PN		Pn	12 57 24.3	-0.3
LBZ	Lake Benmore	2.09	73	⇓PN		Pn	12 57 24.7	-1.7
LBZ				SN		Sn	12 57 49.5	-3.6
FOZ	Fox Glacier	2.20	49	PN		Pn	12 57 27.0	-0.8
ODZ	Otahua Downs	2.31	92	⇑PN		Pn	12 57 27.7	-1.3
RPZ	Rata Peaks	2.93	65	PN		Pn	12 57 34.8	-2.4
WVZ	Waitaha Valley	3.10	52	PN		Pn	12 57 36.8	-2.5
MQZ	McQueen's Vall	4.00	73	PN		Pn	12 57 49.6	-1.5
CRLZ	Canterbury Las	4.02	71	PN		Pn	12 57 49.1	-2.4
LTZ	Lake Taylor	4.18	59	PN		Pn	12 57 50.6	-3.0
DSZ	Denniston Nort	4.59	46	⇑PN		Pn	12 57 56.5	-2.6
KHZ	Kahutara	5.16	62	PN		Pn	12 58 04.9	-1.8
THZ	Tophouse	5.17	53	PN		Pn	12 58 04.0	-3.0
QRZ	Quartz Range	5.64	44	PN		Pn	12 58 11.1	-2.1
NNZ	Nelson	5.80	51	ePN		Pn	12 58 13.5	-1.8

CSEM ***01*** *13:01:09.4, 41°.14N×39°.94E, h7km, MD2.9, After DDA*
DDA ***01*** *13:01:09.4, 41°.14N×39°.94E, h7km, MD2.9*
ISCJB ***01*** *13:01:11.8±0.6, 41°.03N±0°.05×39°.92E±0°.04, h17km±6km, Error ellipse: s-maj=7.6km s-min=4.4km az=176.6*

ISC 01 13:01:11.7±1.1, 41°.02N±0°.05×39°.92E±0°.03, h19km±2km, n20, σ0°68/38, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KTUT	Trabzon	0.12	255	ePG		Pg	13 01 15.3	-0.4
MACK	Trabzon	0.13	237	iP		Pg	13 01 15.9	0.0
MACK				iS		Sg	13 01 19.0	+0.3
MACK	Trabzon	0.13	237	iP		Pg	13 01 15.9	0.0
MACK				iS		Sg	13 01 19.0	+0.3
BAYT	Ayd¨–ntepe-Bay	0.65	164	ePG		Pb	13 01 23.9	-0.5
BAYT				eSG		Sb	13 01 32.5	-0.6
GUMT	Gumushane	0.65	211	ePG		Pb	13 01 23.2	-1.2
GUMT				eSG		Sb	13 01 31.0	-2.0
ESPY	Espiye-Giresun	0.91	264	ePG		Pb	13 01 28.9	+0.1
ESPY				eSG		Sb	13 01 41.1	+0.7
KELT	Kelkit	1.00	210	iP		Pb	13 01 30.3	-0.3
KELT				iS		Sb	13 01 43.2	-0.3
KELT	Kelkit	1.00	210	iP		Pb	13 01 30.3	-0.3
KELT				iS		Sb	13 01 43.2	-0.3
KOPT	Kop Dagi	1.09	156	iP		Pn	13 01 32.8	+0.5
KOPT				iS		Sn	13 01 48.0	+1.0
KOPT	Kop Dagi	1.09	156	iP		Pn	13 01 32.8	+0.5
KOPT				iS		Sn	13 01 48.0	+1.0
GRSN	GIRESUNGRSN	1.25	266	iP		Pn	13 01 33.9	-0.3
GRSN				iS		Sb	13 01 50.5	+0.1
GRSN	GIRESUNGRSN	1.25	266	iP		Pn	13 01 33.9	-0.3
GRSN				iS		Sb	13 01 50.5	+0.1
DDEM	Demirkent	1.40	94	iP		Pn	13 01 36.7	+0.4
DDEM				iS		Sb	13 01 55.4	+0.7
DDEM	Demirkent	1.40	94	iP		Pn	13 01 36.7	+0.4
DDEM				iS		Sb	13 01 55.4	+0.7
ERZN	Erzincan	1.44	186	ePN		Pn	13 01 37.3	+0.5
DAGI	Agillar	1.51	87	iP		Pn	13 01 38.4	+0.5
DAGI				iS		Sb	13 01 58.1	0.0
ARTV	Artvin	1.53	83	eP		Pn	13 01 38.3	0.0
ARTV				iS		Sn	13 01 56.6	-1.2
ARTV	Artvin	1.53	83	eP		Pn	13 01 38.3	0.0
ARTV				iS		Sn	13 01 56.6	-1.2
SUSE	Susehri	1.53	239	iP		Pb	13 01 39.7	+0.1
SUSE				iS		Sb	13 01 59.6	+0.9
SUSE	Susehri	1.53	239	iP		Pb	13 01 39.7	+0.1
SUSE				iS		Sb	13 01 59.6	+0.9

SKHL 01 13:22:25.2±0.4, 48°.55N×142°.46E, h10km, mb3.9/3, 1C, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
UGL	Uglegorsk	0.59	334	ePg		Pg	13 22 37.0	+0.4
UGL					AMB	AMB	13 22 39.7	
	122nm,0.4s							
UGL				iSg		Sb	13 22 45.5	-0.5
UGL				A		A	13 22 45.6	
	1μm,0.4s							
UGL				A		A	13 22 45.6	
	652nm,0.4s							
YSS	Yuzh-Sakhalins	1.61	173	⇑iPg		Pg	13 22 57.0	+0.9
YSS					AMB	AMB	13 22 57.4	
	30nm,0.3s							
YSS				eSg		Sg	13 23 19.0	+2.1
YSS				A		A	13 23 19.2	
	75nm,0.3s							
TYV	Tymovskoe	2.32	3	ePg		Pg	13 23 11.5	+1.8
TYV				eSg		Sg	13 23 42.2	+2.5
GRNR	Gornyy	4.51	302	ePg		Pg	13 23 52.0	+0.5
GRNR					AMB	AMB	13 23 53.0	
	6.0nm,0.4s							
GRNR				eSg		Sb	13 24 43.0	+4.2
GRNR				A		A	13 24 44.0	
	19nm,0.5s							
NKL	Nikolayevsk	4.74	347	ePg		Pg	13 23 53.0	-3.0
NKL				eS(g			13 24 57.0	
NKL				A		A	13 24 58.0	
	18nm,0.7s							
EKMR	Ekimchan	7.53	310	eSg		Sb	13 26 11.0	+5.3
EKMR				A		A	13 26 13.5	
	5.0nm,0.6s							

IDC 01 13:45:14.0±1.7, 23°.05S×66°.18W, h221km±20km, mb3.4/4, mb1 3.6/9, mb1mx3.4/21, mbtmp3.5/9, Error ellipse: s-maj=34.7km s-min=13.2km az=113.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	6.97	344	P		Pn	13 46 54.7	-0.1
	5.0nm,0.3s,baz=146,slow=7.4,SNR=113							
LPAZ				S		S	13 48 11.6	-3.5
	1.4nm,0.3s,baz=255,slow=24,SNR=13							
SIV	San Ignacio	8.51	35	P		Pn	13 47 14.1	+0.2
	8.1nm,0.3s,baz=231,slow=12,SNR=154							
CFAA	Coronel Fontan	8.72	192	P		Pn	13 47 14.9	-1.6
	0.9nm,0.3s,baz=9.0,slow=12,SNR=39							
CFAA				S		S	13 48 47.8	-7.2
	0.6nm,0.3s,baz=217,slow=18,SNR=7.2							
PLCA	Paso Flores	18.02	191	P		P	13 49 08.5	-0.1
	0.7nm,0.3s,baz=26,slow=10,SNR=12							
BDFB	Brasilia	18.65	70	P		Pn	13 49 17.5	-1.3
	0.4nm,0.3s,baz=246,slow=11,SNR=8.4							
VNA3	Neumayer Olymp	57.81	161	eP		P	13 54 42.8	+0.9
VNA2	Neumayer--Watz baz=312,slow=8.1	58.36	161	eP		P	13 54 49.1	+3.4
SNAA	Sanae	60.00	161	P		P	13 54 56.7	-0.3
	0.4nm,0.5s,baz=298,slow=8.5,SNR=12							
DBIC	Dimbokro	66.79	71	P		P	13 55 42.6	+0.4
	0.9nm,0.3s,baz=234,slow=8.7,SNR=3.0							
QSPA	South Pole Qui	67.16	180	P		P	13 55 45.1	+1.1
	0.7nm,0.7s,baz=122,slow=7.0,SNR=10							
TORD	Torodi Ar. Bea	75.53	69	P		P	13 56 33.2	-1.4
	1.3nm,0.4s,baz=260,slow=5.9,SNR=40							
MKAR	Makanchi Array	145.31	39	PKPbc		PKPdf	14 04 25.4	+0.1
	0.1nm,0.3s,baz=320,slow=5.3,SNR=4.0							

IDC 01 13:45:17.7±5.3, 3°.86N×128°.69E, h51km±50km, mb3.7/15, mb1 3.8/15, mb1mx3.8/23, mbtmp3.7/15, 1C, Error ellipse: s-maj=32.5km s-min=12.2km az=77.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	5.54	307	⇑iP		Pn	13 46 38.6	+1.0
FITZ	Fitzroy Crossi	22.03	188	P		P	13 50 09.3	+1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	0.7nm,0.3s,baz=21,slow=9.7,SNR=8.2						
WRA	Warramunga Arr	24.30	167	P	P	13 50 30.1	-0.5
	1.4nm,0.5s,baz=346,slow=10,SNR=24						
ASAR	Alice Springs	27.83	170	P	P	13 51 01.8	-0.7
	0.9nm,0.6s,baz=356,slow=7.5,SNR=28						
ASAR				PcP	PcP	13 54 18.1	+0.3
	0.3nm,0.7s,baz=349,slow=2.2,SNR=5.7						
CMAR	Chiang Mai Arr	32.51	299	P	P	13 51 43.8	-0.2
	0.5nm,0.7s,baz=110,slow=8.0,SNR=3.4						
KSRS	Korea Array	33.44	359	P	P	13 51 52.1	+0.3
	0.8nm,0.6s,baz=171,slow=9.8,SNR=4.1						
MJAR	Matsushiro Arr	33.68	14	P	P	13 51 52.5	-1.5
	0.5nm,0.5s,baz=186,slow=9.3,SNR=5.2						
STKA	Stephens Creek	37.60	162	P	P	13 52 27.5	-0.1
	1.8nm,0.4s,baz=342,slow=7.4,SNR=13						
USRK	Ussuriysk Arra	40.28	4	P	P	13 52 51.2	+1.5
	1.4nm,0.6s,baz=169,slow=6.8,SNR=4.3						
SONM	Songino Array	47.82	340	P	P	13 53 50.6	+0.2
	1.3nm,0.8s,baz=148,slow=8.5,SNR=12						
SONM				PcP	PcP	13 55 18.5	0.0
	0.3nm,0.7s,baz=162,slow=5.4,SNR=4.0						
MKAR	Makanchi Array	58.58	324	P	P	13 55 09.5	+0.1
	3.1nm,0.5s,baz=117,slow=8.5,SNR=27						
ZALV	Zalesovo Beam	61.37	332	P	P	13 55 27.2	-1.1
	0.6nm,0.5s,baz=106,slow=9.4,SNR=4.9						
VNDA	Vanda	83.32	173	P	P	13 57 38.6	0.0
	1.2nm,1.1s,baz=288,slow=6.4,SNR=3.7						
ILAR	Eielson Array	84.14	25	P	P	13 57 43.0	-0.2
	0.9nm,1.0s,baz=227,slow=6.9,SNR=5.7						
FINES	FINESS Array B	92.64	332	P	P	13 58 22.5	-1.4
	2.7nm,1.1s,baz=74,slow=10,SNR=3.3						
YKA	Yellowknife Ar	98.56	25	P	Pdif	13 58 51.8	+1.0
	0.1nm,0.3s,baz=308,slow=5.7,SNR=3.6						
TORD	Torodi Ar. Bea	124.73	289	PKP	PKPdf	14 04 13.0	+0.1
	0.6nm,0.6s,baz=64,slow=1.1,SNR=8.0						

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*IDC **01** 14:02:17.9±2.1, 23°.55S×179°.81W, h500km±22km, mb3.5/9, mb1 3.7/10, mb1mx3.4/22, mbtmp3.5/10, Error ellipse: s-maj=20.8km s-min=18.5km az=162.0*

*ISCJB **01** 14:02:19.6±0.7, 23°.49S±0°.06×179°.9W±0°.1, h532km, mb3.9/10, Error ellipse: s-maj=15.7km s-min=7.4km az=176.9*

ISC 01 14:02:20.8±0.8**, 23°.67S**±0°.09×**179°.9W**±0°.1**, h532km, n27,** σ1^{s}**37**/35**, mb3.9**/10**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	14.77	189	PN	P	14 05 26.3	-1.7
URZ				eSN	S	14 08 00.6	-1.8
URZ	Urewera	14.77	189	P	P	14 05 27.0	-1.0
	7.7nm,0.3s,baz=314,slow=3.1,SNR=47						
URZ				S	S	14 08 03.2	+0.8
	0.8nm,0.3s,baz=276,slow=23,SNR=13						
BKZ	Black Stump Fm	15.76	190	ePN	P	14 05 35.5	-2.8
BKZ				SN	S	14 08 19.5	-0.8
TSZ	Takapari Road	16.72	191	PN	P	14 05 46.6	-1.0
TSZ				SN	S	14 08 36.1	-0.5
MRZ	Mangatainoka R	17.37	192	ePN	P	14 05 51.5	-2.2
MRZ				SN	S	14 08 47.7	+0.4
CAW	Cannon Point	17.90	193	PN	P	14 05 58.1	-0.3
CAW				SN	S	14 08 57.3	+1.5
QRZ	Quartz Range	18.26	199	PN	P	14 06 03.5	+1.7
NNZ	Nelson	18.39	196	ePN	P	14 06 03.1	+0.2
TUWZ	Tuamarina	18.45	195	PN	P	14 06 03.6	+0.1
THZ	Tophouse	19.03	197	ePN	P	14 06 09.5	+0.7
DSZ	Denniston Nort	19.32	199	PN	P	14 06 13.2	+1.7
KHZ	Kahutara	19.48	195	PN	P	14 06 13.2	+0.3
LTZ	Lake Taylor	20.15	197	PN	P	14 06 18.9	-0.1
RPZ	Rata Peaks	21.35	198	P	P	14 06 28.8	-1.0
	5.6nm,0.6s,baz=0.0,slow=5.1,SNR=3.8						
CTA	Charters Tower	31.60	270	P	P	14 08 00.7	+0.4
	6.0nm,0.6s,baz=94,slow=12,SNR=20						
PMG	Port Moresby	34.54	289	P	P	14 08 24.4	-0.7
	12nm,0.7s,baz=124,slow=11,SNR=5.8						
STKA	Stephens Creek	34.93	248	P	P	14 08 28.9	+0.8
	2.1nm,0.5s,baz=92,slow=11,SNR=11						
ASAR	Alice Springs	42.20	260	P	P	14 09 26.8	-0.5
	1.5nm,0.7s,baz=94,slow=7.1,SNR=13						
ASAR				ScP	ScP	14 14 12.1	+2.9
	1.4nm,0.9s,baz=111,slow=3.7,SNR=9.4						
WRA	Warramunga Arr	42.55	266	P	P	14 09 29.1	-0.9
	0.6nm,0.3s,baz=90,slow=5.9,SNR=67						
WRA				ScP	ScP	14 14 13.9	+3.3
	1.1nm,1.0s,baz=102,slow=5.0,SNR=4.9						
FITZ	Fitzroy Crossi	50.98	265	P	P	14 10 33.5	-0.2
	1.6nm,0.7s,baz=72,slow=6.4,SNR=4.7						
MJAR	Matsushiro Arr	71.78	325	P	P	14 12 47.6	-1.8
	2.2nm,0.9s,baz=170,slow=6.1,SNR=7.0						
SNAA	Sanae	84.89	179	eP	P	14 13 59.6	+0.4
VNA3	Neumayer Olymp	85.10	177	eP	P	14 14 00.9	+0.8
VNA2	Neumayer--Watz	85.52	178	eP	P	14 14 03.2	+1.1
	baz=191,slow=4.0						
TXAR	Lajitas Array	90.20	58	P	P	14 14 25.6	+0.7
	1.6nm,0.7s,baz=214,slow=6.0,SNR=12						
PDAR	Pinedale Array	92.44	44	P	P	14 14 34.8	-0.3
	0.8nm,0.8s,baz=197,slow=3.2,SNR=6.4						
BRTR	Keskin Array B	147.54	308	PKPbc	PKPbc	14 21 04.9	-0.6
	0.4nm,0.6s,baz=132,slow=2.1,SNR=3.3						

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*AUST **01** 14:14:38.8, 4°.97S×132°.53E, h0km*

*ISCJB **01** 14:14:39.8±0.5, 4°.90S±0°.04×132°.82E±0°.05, h33km, mb4.2/3, MS4.5/1, Error ellipse: s-maj=7.2km s-min=4.6km az=155.9*

*DJA **01** 14:14:43.1±0.3, 5°S±3°×13°3E±°, h75km±7km, M4.9/8, mB5.3/4, mb5.0/8, MLv5.0/6, Mw(mB)4.8/4*

*IDC **01** 14:14:44.0±5.0, 5°.03S×132°.73E, h63km±50km, mb3.4/2, mb1 4.1/7, mb1mx3.7/19, mbtmp4.0/7, ML4.3/5, Error ellipse: s-maj=47.6km s-min=24.3km az=53.0*

ISC 01 14:14:40.8±0.6**, 4°.91S**±0°.05×**132°.89E**±0°.06**, h35km, n33,** σ2^{s}**79**/40**, mb3.7**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TLE	Tual	0.74	192	P	Pn	14 15 02.1	+7.3
TLE				S	Sn	14 15 17.4	+13
FAKI	Fak Fak	2.08	342	P	Pn	14 15 12.2	-1.0
FAKI				S	Sn	14 15 32.8	-5.1
BNDI	Bandanaira	3.00	277	P	Pn	14 15 27.9	+2.0
BNDI				S	Sn	14 16 00.8	+0.1
SWI	Sorong	4.34	338	P	Pn	14 15 44.8	+0.5
SWI	Sorong	4.34	338	P	Pn	14 15 42.6	-1.7
	baz=4.3,SNR=28						
SWI				S	Sn	14 16 24.9	-8.8
	baz=4.3,SNR=22						
AAI	Ambon	4.84	284	P	Pn	14 15 52.4	+1.2
AAI	Ambon	4.84	284	P	Pn	14 15 52.2	+1.0
	baz=4.5,SNR=78						
BAKI	Biak	4.89	41	P	Pn	14 15 53.3	+1.3
LBMI	Labuha	6.86	308	P	Pn	14 16 18.9	0.0
	157nm,0.5s,3μm						
KDU	Kakadu	7.74	183	P	Pn	14 16 35.0	+4.0
	baz=7.7,SNR=142						
KDU				S	Sn	14 17 60.0	+2.4
	baz=7.7,SNR=6.0						
MTN	Manton Dam	8.07	192	P	Pn	14 16 39.2	+3.6
	baz=8.0,SNR=174						
MTN				S	Sn	14 18 07.8	+2.0
	baz=8.0,SNR=11						
JAY	Jayapura	8.15	73	S	Sn	14 18 46.2	+38
	baz=8.5,SNR=5.2						
MNI	Manado	10.22	308	P	Pn	14 17 05.3	+0.1
	85nm,0.8s						
KDI	Kendari	10.29	275	P	Pn	14 17 01.6	-4.4
	14nm,1.2s						
BBSI	Bau Bau	10.29	266	P	Pn	14 17 12.1	+6.0
KMSI	Cibinong	10.44	301	P	Pn	14 17 07.0	-1.1
	158nm,1.0s,2μm						
LUWI	Luwuk	10.81	291	P	Pn	14 17 12.8	-0.4
	70nm,1.3s,809nm						
MRSI	Marisa	12.18	296	P	Pn	14 17 35.0	+3.1
BKSI	Bulukumba	12.73	268	P	P	14 17 46.5	-3.6
KAPI	Kappang	13.09	269	P	Pn	14 17 45.7	+1.3
	0.3nm,0.3s,baz=192,slow=19,SNR=2.4						
COEN	Coen	13.55	132	P	Pn	14 17 53.0	+2.4
	baz=14,SNR=16						
COEN				S	Sn	14 20 13.4	-6.7
	baz=14,SNR=5.4						
PCI	Palu	13.63	287	P	P	14 18 08.2	+8.0
	baz=13,SNR=6.2						
PCI				S	Sn	14 20 18.2	-3.9
	baz=13,SNR=6.3						
PMG	Port Moresby	14.84	108	P	P	14 18 11.7	-1.9
	2.3nm,0.3s,baz=344,slow=6.9,SNR=9.7						
FITZ	Fitzroy Crossi	14.91	208	P	Pn	14 18 07.7	-1.4
	5.5nm,0.3s,baz=37,slow=12,SNR=121						
FITZ				S	Sn	14 20 42.9	-10
	2.9nm,0.3s,baz=192,slow=15,SNR=6.7						
FITZ	Fitzroy Crossi	14.91	208	P	Pn	14 18 08.1	-1.0
	baz=15,SNR=121						
FITZ				S	Sn	14 20 43.1	-10
	baz=15,SNR=7.0						
WRA	Warramunga Arr	15.01	175	P	Pn	14 18 09.8	-0.7
	1.6nm,0.3s,baz=356,slow=13,SNR=74						
WRA				S	Sn	14 20 49.1	-6.6
	1.9nm,0.3s,baz=355,slow=24,SNR=8.3						
QIS	Mount Isa	16.87	158	S	Sn	14 21 34.3	-6.6
	baz=17,SNR=4.8						
ASAR	Alice Springs	18.67	177	P	Pn	14 18 57.9	+1.2
	1.1nm,0.3s,baz=358,slow=8.2,SNR=97						
ASAR				S	Sn	14 22 18.3	-6.3
	0.7nm,0.3s,baz=5.3,slow=26,SNR=7.9						
CTA	Charters Tower	19.92	140	P	Pn	14 19 14.0	+2.5
	0.5nm,0.3s,baz=326,slow=12,SNR=13						
KSM	Kuching	23.44	285	P	P	14 19 47.8	+0.6
	baz=23,SNR=3.6						
STKA	Stephens Creek	28.04	164	P	P	14 20 28.4	-0.5
	1.1nm,0.6s,baz=350,slow=12,SNR=5.2						
HHC	Hu-ho-hao-te	49.56	339	eP	P	14 23 30.3	+1.8
HHC				sP	sP	14 23 47.4	+4.3
HHC				PcP	PcP	14 24 52.2	+2.3
HHC				PP	PP	14 25 26.0	+2.9
HHC				ScP	ScP	14 28 41.7	-1.2
HHC				PcS	PcS	14 28 47.1	+0.5
HHC				S	S	14 30 33.9	-0.3
HHC				sS	sS	14 30 55.1	+3.6
HHC				ScS	ScS	14 33 15.0	-2.7
HHC				SS	SS	14 34 02.8	-4.1
HHC				pmax	pmax		
	comp=Z,23nm,0.6s						
HHC				pmax	pmax		
	comp=Z,170nm,6.1s						
HHC				LR	LR		
	comp=N,240nm,16.7s						
HHC				LR	LR		
	comp=E,270nm,16.3s						
HHC				LR	LR		
	comp=Z,400nm,16.7s						
MKAR	Makanchi Array	68.12	325	P	P	14 25 37.4	+0.1
	comp=Z,0.2nm,0.4s,baz=110,slow=8.2,SNR=6.0						

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*ISK **01** 14:16:27.7, 34°.89N×33°.95E, h32km, MD3.1, ML3.1*

*ISCJB **01** 14:16:28.1±0.3, 34°.91N±0°.02×33°.91E±0°.03, h52km±5km, Error ellipse: s-maj=3.8km s-min=2.9km az=161.2*

*DDA **01** 14:16:28.4, 35°.30N×34°.15E, h5km, MD3.3*

*CSEM **01** 14:16:29.3±0.1, 34°.95N×33°.91E, h40km, Mw3.1, Error ellipse: s-maj=2.5km s-min=1.9km az=65.0*

*NIC **01** 14:16:29.9±0.3, 35°.07N×33°.85E, h35km, ML3.1, MW3.1*

*NSSC **01** 14:16:30.5±5.5, 34°.86N×34°.31E, h0km±79km, ML2.6*

ISC 01 14:16:29.1±1.1**, 34°.94N**±0°.02×**33°.91E**±0°.02**, h43km**±6km**, n88,** σ0^{s}**91**/124**, 2C-4D, Cyprus region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PHNC	Paralimni	0.11	58	P	Pn	14 16 36.1	0.0
	67nm,0.2s						
PHNC				S	Sn	14 16 41.5	+0.4
PHNC	Paralimni	0.11	58	P	Pn	14 16 36.1	0.0
	67nm,0.2s						
PHNC				S	Sn	14 16 41.5	+0.4
AKIN	Ak˜–nc˜–lar- K	0.37	281	ePG	Pn	14 16 37.4	-1.0
AKIN	Ak˜–nc˜–lar- K	0.37	281	ePg	Pn	14 16 37.4	-1.0
LFK	Lefkose	0.46	317	ePG	Pn	14 16 39.0	-0.5
LFK				eSG	Sn	14 16 47.2	+0.4
LFK	Lefkose	0.46	317	ePg	Pn	14 16 39.0	-0.5
LFK				eSg	Sn	14 16 47.2	+0.4
CSS	Prodhromos	0.48	272	P	Pn	14 16 39.3	-0.4
	17nm,0.3s						
CSS				S	Sn	14 16 47.2	0.0
CSS	Prodhromos	0.48	272	P	Pn	14 16 39.3	-0.4
	17nm,0.3s						
CSS				S	Sn	14 16 47.2	0.0
MAMC	Mammari	0.61	292	P	Pn	14 16 41.3	-0.1
MAMC	Mammari	0.61	292	P	Pn	14 16 41.3	-0.1
EREN	Erenkoy	0.62	20	ePG	Pn	14 16 41.2	-0.3
EREN				eSG	Sn	14 16 50.5	+0.1
EREN	Erenkoy	0.62	20	ePg	Pn	14 16 41.2	-0.3
EREN				eSg	Sn	14 16 50.5	+0.1
AKDN	Akdeniz- K˜–br	0.85	295	ePG	Pn	14 16 44.6	-0.1
AKDN				eSG	Sn	14 16 57.3	+1.3
LEF	Lefka	0.86	282	ePG	Pn	14 16 44.9	+0.2
LEF	Lefka	0.86	282	ePg	Pn	14 16 44.9	+0.2
SZAC	Souni-Zanaja	0.87	258	P	Pn	14 16 45.4	+0.5
SZAC	Souni-Zanaja	0.87	258	P	Pn	14 16 45.4	+0.5
ALFC	Alevga	1.10	282	P	Pn	14 16 47.7	-0.3
	5.1nm,0.3s						
ALFC				S	Sn	14 17 01.4	-0.7
ALFC	Alevga	1.10	282	P	Pn	14 16 47.7	-0.3
	5.1nm,0.3s						
ALFC				S	Sn	14 17 01.4	-0.7
PPCY	Paphos	1.29	268	P	Pn	14 16 51.2	+0.6
PPCY	Paphos	1.29	268	P	Pn	14 16 51.2	+0.6
AKMC	Akamas	1.30	274	P	Pn	14 16 51.6	+0.8
AKMC	Akamas	1.30	274	P	Pn	14 16 51.6	+0.8
BHL	Bhannes	1.77	125	eP	Pn	14 16 56.9	-0.4
BHL	Bhannes	1.77	125	eP	Pn	14 16 56.9	-0.4
HWQ	Hawqa	1.80	111	eP	Pn	14 16 58.1	+0.3
HWQ	Hawqa	1.80	111	eP	Pn	14 16 58.1	+0.3
GAZI	Gazipasa	1.83	315	i P	Pn	14 16 57.8	-0.2
GAZI				i S	Sn	14 17 18.8	-1.3
GAZI	Gazipasa	1.83	315	i P	Pn	14 16 57.8	-0.2
GAZI				i S	Sn	14 17 18.8	-1.3
ERMK	Ermenek	1.88	335	eP	Pn	14 17 00.0	+1.1
ERMK				eS	Sn	14 17 22.1	+0.6
ERMK	Ermenek	1.88	335	eP	Pn	14 17 00.0	+1.1
ERMK				eS	Sn	14 17 22.1	+0.6
BIDA	Albida	1.98	87⇓	eP	Pn	14 16 60.0	-0.2
BIDA				i		14 16 60.0	
	baz=231,slow=11						
BIDA				eS	Sn	14 17 22.1	-1.7
BIDA				AML	AML	14 17 25.2	
	comp=Z,188nm,0.4s						
BIDA	Albida	1.98	87⇓	eP	Pn	14 17 00.0	-0.2
	SNR=57						
BIDA				eS	Sn	14 17 22.1	-1.7
	comp=Z,188nm,0.4s,SNR=49						
MERS	Mersin	1.98	14	ePN	Pn	14 17 00.2	+0.1
MERS	Mersin	1.98	14	ePn	Pn	14 17 00.3	+0.1
KRTS	Karatas	2.01	36	ePN	Pn	14 17 00.7	+0.2
KRTS	Karatas	2.01	36	ePn	Pn	14 17 00.7	+0.2
HAWK	Haweek	2.10	101⇓	eP	Pn	14 17 01.9	+0.1
HAWK				AML	AML	14 17 29.1	
	comp=Z,54nm,0.2s						
HAWK	Haweek	2.10	101⇓	eP	Pn	14 17 01.9	+0.1
	SNR=45						
YAYL	Yayladag	2.10	58	eP	Pn	14 17 01.6	-0.2
YAYL				eS	Sn	14 17 24.9	-1.8
YAYL	Yayladag	2.10	58	eP	Pn	14 17 01.6	-0.2
YAYL				eS	Sn	14 17 24.9	-1.8
HNTI	Hanita	2.13	150	Pn	Pn	14 17 02.9	+0.7
HNTI				Sn	Sn	14 17 27.0	-0.4
RCY	Rachaya	2.15	132	eP	Pn	14 17 02.8	+0.2
RCY	Rachaya	2.15	132	eP	Pn	14 17 02.8	+0.2
HTY	Hatay	2.16	56	ePN	Pn	14 17 02.3	-0.3
HTY	Hatay	2.16	56	ePn	Pn	14 17 02.3	-0.3
KFRA	Kufra	2.38	83	eP	Pn	14 17 05.7	+0.1
KFRA				AML	AML	14 17 34.4	
	comp=Z,180nm,0.4s						
GULE	Gulek	2.44	16	eP	Pn	14 17 07.4	+0.9
GULE				eS	Sn	14 17 34.5	-0.7
GULE	Gulek	2.44	16	eP	Pn	14 17 07.4	+0.9
GULE				eS	Sn	14 17 34.5	-0.7
BLGI	Bet Lehem HaGe	2.45	154	Pn	Pn	14 17 07.2	+0.7
OFRI	‘Ofer	2.48	159	Pn	Pn	14 17 07.0	0.0
OFRI				Sn	Sn	14 17 35.2	-0.9
TOTH	TOTAH	2.62	126	eP	Pn	14 17 10.5	+1.6
TOTH				eS	Sn	14 17 39.6	+0.2
TOTH	TOTAH	2.62	126	eP	Pn	14 17 10.5	+1.6
	SNR=45						
TOTH				eS	Sn	14 17 39.6	+0.2
	SNR=40						
MMLI	Mount Malkishu	2.80	153	Pn	Pn	14 17 12.2	+0.8
MMLI				Sn	Sn	14 17 43.2	-0.7
SLTI	Sal’it	2.86	160	Pn	Pn	14 17 13.0	+0.9
SLTI				Sn	Sn	14 17 44.5	-0.8
ROOS	tl_alroos	2.89	105	eP	Pn	14 17 15.4	+2.8
ROOS	tl_alroos	2.89	105	eP	Pn	14 17 15.4	+2.8
	SNR=45						
KOZT	Kozan	2.97	31	ePN	Pn	14 17 14.1	+0.4
KOZT	Kozan	2.97	31	ePn	Pn	14 17 14.1	+0.4
HMDT	Nahal Hemdat	3.00	153	Pn	Pn	14 17 15.2	+1.1
HMDT				Sn	Sn	14 17 50.1	+1.2
NIG	Nigde	3.21	10	ePN	Pn	14 17 18.1	+0.9
NIG	Nigde	3.21	10	ePn	Pn	14 17 18.1	+0.9
SALA	Sala	3.23	133⇑	eP	Pn	14 17 19.3	+1.8
SALA				AML	AML	14 17 20.8	
	comp=Z,20nm,0.7s						
SALA				eS	Sn	14 17 53.8	-1.1
SALA	Sala	3.23	133⇑	eP	Pn	14 17 19.3	+1.8
	SNR=45						
SALA				eS	Sn	14 17 53.8	-1.1
	SNR=40						
ZALF	Zalf	3.49	124	eP	Pn	14 17 22.5	+1.7
ZALF				eS	Sn	14 18 00.1	-0.7
ZALF	Zalf	3.49	124	eP	Pn	14 17 22.5	+1.7
	SNR=45						
ZALF				eS	Sn	14 18 00.2	-0.7
	SNR=40						
YTIR	Yattir	3.71	164	Sn	Sn	14 18 06.2	-0.3
MZDA	Masada	3.82	161	Pn	Pn	14 17 26.2	+0.9
MZDA				Sn	Sn	14 18 08.4	-0.6
RTMI	Retamim	3.93	170	Sn	Sn	14 18 11.0	-0.8
KZIT	Kziot	4.05	174	Sn	Sn	14 18 14.0	-0.6
AMAG	Maghara	4.33	188	P	Pn	14 17 32.7	+0.3
SARI	SarD1z-Kayseri	4.34	30	ePN	Pn	14 17 29.1	-3.6
SARI	SarD1z-Kayseri	4.34	30	ePn	Pn	14 17 29.1	-3.6
RMNI	Mount Ramon	4.39	170	Pn	Pn	14 17 34.0	+0.7
ZFRI	Zfri	4.50	166	Sn	Sn	14 18 25.3	-0.6
PRNI	Paran	4.67	168	Pn	Pn	14 17 37.7	+0.6
KRMI	Paran Flat	4.86	172	Pn	Pn	14 17 40.3	+0.6
KRMI				Sn	Sn	14 18 32.7	-2.0
HRFI	Mount Harif	4.99	169	Pn	Pn	14 17 42.0	+0.6
HRFI				Sn	Sn	14 18 37.2	-0.6
HNKL	Nakhl	5.00	179	P	Pn	14 17 41.8	+0.2
HNKL				S	Sn	14 18 36.0	-2.2
SUZ		5.17	190	P	Pn	14 17 44.3	+0.4
MBRI	Mt Berech	5.20	170	Pn	Pn	14 17 45.2	+0.7
MBRI				Sn	Sn	14 18 43.3	+0.1
HHAG	Hagoal	5.21	198	P	Pn	14 17 44.0	-0.5
KOT	Kottamia	5.30	200	P	Pn	14 17 46.0	+0.2
KOT				S	Sn	14 18 42.6	-3.0
EIL	Elat	5.33	170	Sn	Sn	14 18 46.3	0.0
HNAT	Natroun	5.99	209	P	Pn	14 17 55.6	+0.5
HDHB	Dhahab	6.23	174	P	Pn	14 17 58.7	+0.2
GRB	Gharib	6.72	189	P	Pn	14 18 05.0	-0.2
HMAT	Matruh	6.89	238	P	Pn	14 18 07.7	+0.2

IDC 01 14:27:11.7±9.2**, 13°.83S**×**166°.68E, h107km**±95km**, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.4**/20**, mbtmp3.6**/4**, ML4.0**/1**, Error ellipse: s-maj=79.5km s-min=30.9km az=146.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.20	182	P	Pn	14 29 09.6	+1.4
	1.9nm,0.3s,baz=79,slow=16,SNR=5.0						
DZM				S	Sn	14 30 37.2	-2.1
	0.5nm,0.3s,baz=93,slow=19,SNR=2.5						
STKA	Stephens Creek	29.16	228	P	P	14 33 04.7	+1.7
	1.4nm,0.9s,baz=55,slow=12,SNR=5.3						
ASAR	Alice Springs	32.48	248	P	P	14 33 31.2	-1.1
	0.5nm,0.3s,baz=77,slow=9.3,SNR=31						
ILAR	Eielson Array	85.85	18	P	P	14 39 38.9	-0.2
	0.7nm,0.7s,baz=234,slow=5.4,SNR=13						

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*BJI **01** 14:27:42.5, 3°.93S×100°.68E, h31km, mB5.4/43, mb5.1/58, Ms5.4/63, Ms7 5.1/60*

*ISCJB **01** 14:27:45.8±0.7, 3°.60S±0°.03×100°.55E±0°.03, h32km±5km, mb5.0/102, MS5.0/51, Error ellipse: s-maj=5.6km s-min=3.2km az=136.6*

*NEIC **01** 14:27:46.7±0.3, 3°.51S×100°.63E, mb5.1/28, Error ellipse: s-maj=10.2km s-min=6.1km az=57.0*

*MOS **01** 14:27:46.4±1.1, 3°.41S×100°.73E, h33km, mb5.3/38, MS4.8/9, Error ellipse: s-maj=10.9km s-min=5.6km az=110.7*

*IDC **01** 14:27:47.8±0.6, 3°.50S×100°.71E, h28km±3km, mb4.5/27, mb1 4.6/29, mb1mx4.6/32, mbtmp4.6/29, ML4.5/2, MS4.8/22, Ms1 4.8/22, ms1mx4.6/40, Error ellipse: s-maj=15.6km s-min=8.1km az=47.0*

*DJA **01** 14:27:47.1±0.9, 4°S±3°×10°0E±°, h17km±7km, M5.2/50, mb5.2/50, mB5.6/33, MLv5.6/15, Mw(mB)5.1/33, Mwp5.6/1*

*GCMT **01** 14:27:49.8±0.3, 3°.80S×100°.39E, h20km, MW5.3, Moment Tensor Solution. s61,c87; s53,c65; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.30000×10^{17} NP1:ϕ_s323.00000°, δ13.00000°, λ108.00000°. NP2: ϕ_s124.00000°, δ78.00000°, λ86.00000°. Principal axes: T 1.2800, Plg57.0000°, Azm29.0000°; N 0.0400, Plg4.0000°, Azm125.0000°; P -1.3100, Plg33.0000°, Azm217.0000°; Data Used: II IU IC G CN.*

*AUST **01** 14:27:56.7±0.0, 2°.62S×101°.63E, h70km Error ellipse: s-maj=2.7km s-min=0.7km az=226.0*

ISC 01 14:27:47.4±0.3**, 3°.61S**±0°.03×**100°.54E**±0°.04**, h32km**±1km**, h32km:pP-P, n459,** σ1^{s}**46**/537**, mb5.1**/102**, MS4.9**/53**, 77C-51D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRJI	Kerinci	1.77	31	P	Pn	14 28 16.8	+0.9
KSI	Kapahiang	2.05	91	P	Pn	14 28 20.0	+0.3
MNAI	Manna	2.52	107	P	Pn	14 28 28.4	+2.2
MNAI				S	Sb	14 28 59.9	-2.8
PDSI	Padang	2.68	358	P	Pn	14 28 27.5	-0.9
PPI	Padang Panjang	3.13	357	P	Pn	14 28 33.4	-1.2
PPI	Padang Panjang	3.13	357	P	Pn	14 28 34.1	-0.5
	baz=2.5,SNR=18						
PPI				S	Sn	14 29 10.8	-0.2
	baz=2.5,SNR=4.9						
RGRI	Rengat	3.70	29	P	Pn	14 28 43.1	+0.7
LWLI	Liwa	3.78	112	P	Pn	14 28 44.6	+1.0
BKNI	Bangkinang	3.94	7	P	Pn	14 28 46.8	+1.1
BKNI				S	Sn	14 29 32.7	+1.8
KASI	Kota Agung	4.38	116	P	Pb	14 29 00.0	-3.6
MNSI	Mandailing Nat	4.48	348	P	Pn	14 28 51.8	-1.3
BLSI	Bandar Lampung	5.01	111	P	Pn	14 29 05.4	+5.0
BLSI				S	Sn	14 29 57.6	+0.4
PPBI	Pangkal Pinang	5.77	76	P	Pn	14 29 12.0	+1.1
	112nm,1.3s,1.8nm						
CGJI	Cibinong	5.94	120	P	Pn	14 29 11.6	-1.5
	515nm,0.7s,6μm						
SBJI	Serang	6.10	114	P	Pb	14 29 27.9	-5.1
KGM	Kluang	6.24	26	P	Pn	14 29 17.9	+0.6
MYKOM	Kota Tinggi	6.30	32	P	Pn	14 29 18.8	+0.7
MYKOM	Kota Tinggi	6.30	32	P	Pn	14 29 18.3	+0.1
	137nm,1.5s,3μm23μm2.8nm						
PSI	Prapat	6.57	346	Pn	Pn	14 29 18.7	-3.2
PSI	Prapat	6.57	346	P	Pn	14 29 21.7	-0.2
	44nm,0.8s,1μm0.6nm						
PSI	Prapat	6.57	346	Pn	Pn	14 29 18.7	-3.2
	4.3nm,0.3s,baz=172,slow=8.6,SNR=11						
PSI				LR	LR	14 32 36.2	
	comp=Z,14μm,20.2s,baz=48,slow=45						
PSI	Prapat	6.57	346	P	Pn	14 29 20.6	-1.3
	baz=6.0,SNR=8.9						
DBJI	Dramaga	6.84	116	P	Pn	14 29 26.4	+0.8
	653nm,1.5s,9μm3.3nm						
SKJI	Sukabumi	6.88	120	P	Pn	14 29 32.4	+6.4
CBJI	Citeko	6.88	114	P	Pn	14 29 29.8	+3.7
	1μm,1.2s,18μm7.0nm						
FRIM	Kepong	6.89	9	P	Pn	14 29 27.2	+1.0
TSI	Tuntungan	7.33	344	P	Pb	14 29 46.3	-7.6
LEM	Lembang	7.74	115	P	Pn	14 29 39.8	+1.7
	354nm,1.3s,7μm1.8nm						
LEM	Lembang	7.74	115	P	Pn	14 29 40.6	+2.6
	baz=7.3,SNR=7.1						
IPM	Ipoh	8.05	3	P	Pn	14 29 43.5	+1.3
CISI	Cisompet, Garu	8.23	119	P	Pn	14 29 43.6	-1.2
	560nm,0.6s,6μm2.1nm						
XMI	Christmas Isla	8.50	143	S	Sn	14 31 13.2	-10
	baz=8.8,SNR=6.4						
XMIS	Christmas Isla	8.51	144	P	Pn	14 29 43.8	-4.6
	baz=8.8,SNR=4.7						
KULM	Kulim	8.84	1	P	Pn	14 29 54.9	+1.8

TGJI	Tegal	9.14	111	P	Pn	14 30 00.3	+3.2
	206nm,1.0s,3µm						
KTGM	Kuala Trenggan	9.25	16	P	Pn	14 29 59.5	+0.9
COCO	West Island	9.28	203	eP	Pn	14 29 58.6	-0.4
COCO	West Island	9.28	203	ePn	Pn	14 29 58.6	-0.4
BJII	Banjamegara	9.85	112	P	Pn	14 30 08.5	+1.6
	137nm,1.5s,2µm						
SMRI	Semarang	10.43	110	P	Pn	14 30 18.5	+3.6
	214nm,1.3s,6µm						
BSI	Banda Aceh	10.45	330	P	Pn	14 30 17.7	+2.6
	31nm,0.8s,578nm						
UGM	Wanagama	10.81	114	P	Pn	14 30 30.3	+10
UGM	Wanagama	10.81	114	P	Pn	14 30 19.9	-0.2
	baz=10,SNR=5.5						
KSM	Kuching	10.99	63	P	Pn	14 30 24.1	+1.6
PBKI	Pangkalan Bun	11.15	86	P	Pn	14 30 28.9	+4.2
	186nm,1.3s,2µm						
PCJI	Pacitan	11.52	114	P	Pn	14 30 31.6	+1.9
	122nm,1.5s						
STKI	Sintang	11.52	72	P	Pn	14 30 34.3	+4.5
	81nm,1.3s,12µm						
SJI	Sawahan	11.90	111	P	Pn	14 30 35.0	0.0
	153nm,1.2s						
PWJI	Pagerwojo	12.03	112	P	Pn	14 30 36.0	-0.8
	104nm,1.2s						
KRKI	Karangkates	12.68	111	P	P	14 30 58.0	+1.5
SBUM	Sibu	13.13	63	P	Pn	14 30 53.7	+1.8
BLJI	Banyuglugur	13.62	108	P	P	14 31 12.5	+5.5
GMJI	Gumukmas	13.64	110	P	P	14 31 11.1	+3.9
KMMI	Kalianget	13.80	105	P	Pn	14 31 01.5	+0.6
	127nm,1.3s,2µm						
BTM	Bintulu	14.24	62	P	Pn	14 31 09.1	+2.1
BBKI	Banjar Baru	14.28	90	P	P	14 31 14.7	+0.4
SRBI	Singaraja	15.26	108	P	Pn	14 31 20.7	+0.1
	85nm,0.7s,1µm						
KBKI	Kotabaru	15.60	89	P	P	14 31 29.6	+0.6
	97nm,1.1s,2µm						
KHKI	Kahang-Kahang	15.71	108	P	P	14 31 29.2	-1.0
	68nm,1.1s,1µm						
CHBT	CHBT	16.35	6	P	P	14 31 38.0	+0.7
	58nm,1.4s						
SMKI	Samarinda	16.95	80	P	P	14 31 46.2	+2.2
	154nm,1.2s,4µm						
KKM	Kota Kinabalu	18.36	59	P	Pn	14 32 00.4	+0.6
SDKM	Sandakan	19.00	61	P	Pn	14 32 08.3	+0.7
TSM	Tawau	19.02	66	P	Pn	14 32 08.7	+1.0
SPSI	Sidrap Palu	19.19	92	P	P	14 32 08.3	-0.4
	148nm,1.0s,2µm						
KAPI	Kappang	19.21	95	P	P	14 32 07.0	-1.9
KAPI	Kappang	19.21	95	P	P	14 32 07.8	-1.1
	1µm,1.2s,SNR=26						
KAPI	Kappang	19.21	95	P	P	14 32 07.0	-1.9
	3.7nm,0.3s,baz=267,slow=9.6,SNR=61						
TTSI	Tana Toraja	19.25	89	P	Pn	14 32 10.7	+0.1
	157nm,1.2s,2µm						
KDM	Kudat	19.34	57	P	Pn	14 32 11.5	0.0
PCI	Palu	19.47	83	S	S	14 35 24.9	-25
	baz=18,SNR=5.4						
BKSI	Bulukumba	19.60	96	P	P	14 32 12.8	-0.4
	295nm,1.4s,4µm						
MYLDM	Lahad Datu	19.95	64	P	Pn	14 32 18.5	-0.4
WSI	Waingapu	20.52	108	P	Pn	14 32 36.3	+11
MRSI	Marisa	21.77	80	P	P	14 32 37.5	+0.8
	84nm,0.9s,1µm						
CM31	Chiang Mai Arr	21.98	356	eP	P	14 32 35.8	-3.1
	24nm,0.7s						
CMAR	Chiang Mai Arr	21.98	356	P	P	14 32 36.8	-2.1
CMAR	Chiang Mai Arr	21.98	356	P	P	14 32 36.8	-2.1
	15nm,0.5s,baz=184,slow=8.6,SNR=39						
CMAR				LR	LR	14 42 24.0	
	comp=Z,1µm,20.0s,baz=13,slow=40						
KDI	Kendari	22.04	92	P	P	14 32 39.4	-0.1
	90nm,1.1s,2µm						
BBSI	Bau Bau	22.04	96	P	P	14 32 39.2	-0.4
	82nm,1.0s,1µm						
MMRI	Maumere	22.14	104	P	P	14 32 46.4	+5.8
	69nm,0.7s,936nm						
CMMT	Chiang Mai	22.34	356	P	P	14 32 42.2	-0.5
	70nm,1.5s,670nm						
CHTO	Chiang Mai	22.34	356	eP	P	14 32 38.9	-3.8
CHTO				pmax	pmax		
	comp=Z,58nm,1.4s						
CHTO	Chiang Mai	22.34	356	eP	P	14 32 38.9	-3.8
	comp=Z,58nm,1.4s						
CHTO	Chiang Mai	22.34	356	P	P	14 32 41.7	-1.0
	SNR=10						
CHTO	Chiang Mai	22.34	356	P	P	14 32 41.6	-1.1
	comp=Z,35nm,1.8s,comp=Z,832nm						
LUWI	Luwuk	22.36	84	P	P	14 32 43.9	+0.9
	comp=Z,195nm,1.2s,comp=Z,2µm						
QIZ	Qiongzhong	24.29	22	P	P	14 33 01.1	-1.0
QIZ				pP	pP	14 33 10.4	-0.9
QIZ				S	S	14 37 20.3	+1.2
QIZ				sS	sS	14 37 37.3	+3.1
QIZ				pmax	pmax		
	comp=Z,81nm,1.6s						
QIZ				LR	LR		
	comp=N,2µm,13.2s						
QIZ				LR	LR		
	comp=E,2µm,13.0s						
QIZ				LR	LR		
	comp=Z,3µm,14.4s						
MNI	Manado	24.80	79	P	P	14 33 08.8	+1.9
	comp=Z,122nm,0.9s						
CTBH	Cotabato--PC H	25.99	66	⇓iP	P	14 33 17.2	-0.4
TGY	Tagaytay City	26.81	49	P	P	14 33 26.0	+1.0
TGY	Tagaytay City	26.81	49	P	P	14 33 26.0	+1.0
	comp=Z,141nm,0.4s,baz=161,slow=3.5,SNR=4.6						
LBMI	Labuha	27.10	84	P	P	14 33 27.4	-0.3
	comp=Z,113nm,1.2s,comp=Z,2µm						
FITZ	Fitzroy Crossi	28.49	122	eP	P	14 33 38.3	-1.7
	comp=Z,36nm,1.1s						
FITZ	Fitzroy Crossi	28.49	122	P	P	14 33 40.0	+0.1
	comp=Z,15nm,1.0s,baz=296,slow=7.9,SNR=6.6						
FITZ				LR	LR	14 45 13.1	
	comp=Z,689nm,22.0s,baz=308,slow=37						
FITZ	Fitzroy Crossi	28.49	122	P	P	14 33 44.0	+4.0
	baz=28,SNR=6.3						
KMI	Kunming	28.64	4	P	P	14 33 41.8	+0.3
KMI				pP	pP	14 33 48.6	-2.1
KMI				PP	PnPn	14 34 37.8	+5.4
KMI				S	S	14 38 27.8	-0.6
KMI				sS	sS	14 38 45.0	+1.3
KMI				pmax	pmax		
	comp=Z,18nm,1.2s						
KMI				pmax	pmax		
	comp=Z,240nm,5.1s						
KMI				LR	LR		
	comp=N,3µm,14.7s						
KMI				LR	LR		
	comp=E,2µm,11.8s						
KMI				LR	LR		
	comp=Z,4µm,14.5s						
HYB	Hyderabad	30.12	315	iP	P	14 33 54.0	-0.5
HYB				eS	S	14 38 52.0	+0.4
GYA	Guiyang	30.47	11	⇑iP	P	14 33 57.0	-0.6
GYA				pP	pP	14 34 09.4	+2.6
GYA				sP	sP	14 34 14.8	+4.1
GYA				PP	PnPn	14 35 01.2	+4.1
GYA				PcP	PcP	14 36 57.7	+1.1
GYA				S	S	14 38 57.0	0.0
GYA				sS	sS	14 39 14.5	+2.2
GYA				ScP	ScP	14 40 35.6	-1.4
GYA				ScS	ScS	14 44 31.0	-2.3
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,5.0s						
GYA				LR	LR		
	comp=N,580nm,18.5s						
GYA				LR	LR		
	comp=E,510nm,19.7s						
GYA				LR	LR		
	comp=Z,540nm,18.1s						
SWI	Sorong	30.82	86	P	P	14 33 59.9	-0.8
	comp=Z,46nm,1.4s,comp=Z,820nm						
MTN	Manton Dam	31.60	109	S	S	14 39 08.5	-6.3
	baz=31,SNR=4.0						
FAKI	Fak Fak	31.66	90	P	P	14 34 11.5	+3.3
	comp=Z,40nm,1.0s						
ODAN	Odare	32.85	338	eP	P	14 34 19.8	+1.2
	comp=Z,46nm,0.5s						
NWAO	Narrogin (SRO)	33.09	154	P	P	14 34 21.9	+1.5
NWAO	Narrogin (SRO)	33.09	154	P	P	14 34 21.9	+1.5
	comp=Z,9.8nm,0.9s,baz=334,slow=9.2,SNR=3.4						
NWAO				LR	LR	14 47 03.9	
	comp=Z,2µm,19.5s,baz=331,slow=35						
TAPN	Taplejung	33.18	339	eP	P	14 34 23.0	+1.4
	comp=Z,124nm,0.6s						
RAMN	Ramite	33.23	337	eP	P	14 34 23.5	+1.5
	comp=Z,36nm,0.6s						
QZH	Quanzhou	33.36	31	P	P	14 34 28.1	+5.2
QZH				S	S	14 39 46.5	+4.6
QZH				LR	LR		
	comp=N,5µm,15.7s						
QZH				LR	LR		
	comp=E,5µm,13.9s						
QZH				LR	LR		
	comp=Z,4µm,14.4s						
PKI	Pulchoki	34.26	336	eP	P	14 34 31.9	+0.8
	comp=Z,12nm,0.3s						
PKIN	Phulchoki	34.27	336	eP	P	14 34 32.3	+1.2
	comp=Z,9.3nm,0.4s						
LSA	Lhasa	34.32	345	P	P	14 34 32.2	+0.5
LSA				S	S	14 40 06.8	+9.3
LSA				LR	LR		
	comp=N,1µm,25.4s						
LSA				LR	LR		
	comp=Z,980nm,27.1s						
GUN	Gumba	34.37	337	eP	P	14 34 33.5	+1.4
	comp=Z,105nm,0.4s						
DMN	Daman	34.42	335	eP	P	14 34 33.3	+0.9
	comp=Z,12nm,0.3s						
CD2	Chengdu	34.46	5	P	P	14 34 33.0	+0.6
CD2				pP	pP	14 34 42.7	+1.0
CD2				sP	sP	14 34 46.6	+1.0
CD2				PP	PP	14 35 49.6	-1.3
CD2				PcP	PcP	14 37 07.7	+0.3
CD2				S	S	14 39 58.7	-0.2
CD2				sS	sS	14 40 14.7	+0.5
CD2				PcS	PcS	14 40 53.0	-0.9
CD2				SS	SnSn	14 42 11.0	-0.3
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
CD2				pmax	pmax		
	comp=Z,220nm,6.1s						
CD2				LR	LR		
	comp=N,3µm,14.7s						
CD2				LR	LR		
	comp=E,5µm,17.6s						
CD2				LR	LR		
	comp=Z,3µm,15.1s						
KKN	Kakani	34.51	336	eP	P	14 34 34.0	+0.9
	comp=Z,30nm,0.3s						
KOLN	Koldanda	35.21	333	eP	P	14 34 40.4	+1.3
	comp=Z,36nm,0.7s						
BAKI	Biak	35.61	87	P	P	14 34 53.7	+11
DANN	Dangsing	35.64	334	eP	P	14 34 43.9	+1.0
	comp=Z,78nm,0.4s						
PYUN	Piuthan	35.77	333	eP	P	14 34 45.0	+1.1
WHN	Wuhan	36.44	20	P	P	14 34 48.0	-1.3
WHN				S	S	14 40 32.7	+3.6
WHN				LR	LR		
	comp=N,10µm,14.4s						
WHN				LR	LR		
	comp=E,5µm,14.3s						
WHN				LR	LR		
	comp=Z,13µm,14.1s						
WRA	Warramunga Arr	36.73	119	P	P	14 34 51.8	-0.3
WRA				S	S	14 40 32.8	-1.3
WRA	Warramunga Arr	36.73	119	P	P	14 34 51.8	-0.3
	comp=Z,8.7nm,0.6s,baz=296,slow=9.4,SNR=36						
WRA				S	S	14 40 32.8	-1.3
	comp=Z,9.4nm,1.0s,baz=293,slow=17,SNR=11						
WRA				LR	LR	14 51 07.6	
	comp=Z,618nm,22.0s,baz=305,slow=38						
WRAB	Tennant Creek	36.74	119	eP	P	14 34 51.7	-0.5
WRAB				pmax	pmax		
	comp=Z,19nm,0.6s						
WRAB	Tennant Creek	36.74	119	eP	P	14 34 51.6	-0.5
	comp=Z,19nm,0.6s						
WRAB	Tennant Creek	36.74	119	P	P	14 34 52.0	-0.1
	comp=Z,195nm,0.6s,SNR=10						
ASAR	Alice Springs	37.89	125	P	P	14 35 02.3	+0.4
ASAR				S	S	14 40 51.1	-0.4
ASAR	Alice Springs	37.89	125	P	P	14 35 02.3	+0.4
	comp=Z,12nm,0.6s,baz=298,slow=8.0,SNR=57						
ASAR				S	S	14 40 51.1	-0.4
	comp=Z,9.5nm,1.1s,baz=294,slow=16,SNR=11						
ASAR				LR	LR	14 51 58.3	
	comp=Z,2µm,20.8s,baz=297,slow=38						
AS31	Alice Springs	37.89	125	eP	P	14 35 02.1	+0.2
SMPI	Sarmi	38.16	89	P	P	14 35 10.3	+6.1
	comp=Z,34nm,1.3s,comp=Z,4µm						
XAN	Xi'an	38.27	11	P	P	14 35 03.5	-1.4
XAN				pP	pP	14 35 12.4	-1.9
XAN				sP	sP	14 35 17.2	-0.9
XAN				PP	PP	14 36 33.1	+0.2
XAN				S	ScP	14 41 03.6	-0.9
XAN				pmax	pmax		
	comp=Z,24nm,0.9s						
XAN				pmax	pmax		
	comp=Z,87nm,6.8s						
XAN				LR	LR		
	comp=N,2µm,14.2s						
XAN				LR	LR		
	comp=E,640nm,14.8s						
XAN				LR	LR		
	comp=Z,1µm,12.6s						
NJ2	Nanjing	39.51	25	eP	P	14 35 16.1	+0.9
NJ2				pP	pP	14 35 23.6	-1.0
NJ2				sP	sP	14 35 28.6	+0.2
NJ2				S	S	14 41 15.5	-0.1
NJ2				sS	sS	14 41 31.5	+0.5
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,320nm,10.5s						
NJ2				LR	LR		
	comp=N,4µm,15.9s						
NJ2				LR	LR		
	comp=E,4µm,16.6s						
NJ2				LR	LR		
	comp=Z,5µm,16.7s						
LZH	Lanzhou	39.61	4	⇑P	P	14 35 16.3	+0.1
LZH				pP	pP	14 35 26.8	+1.2
LZH				sP	sP	14 35 30.0	+0.5
LZH				eS	S	14 41 23.0	+5.6
LZH				sS	sS	14 41 34.5	+1.6
LZH				SS	SS	14 44 08.3	-5.0
LZH				pmax	pmax		
	comp=Z,110nm,1.3s						
LZH				pmax	pmax		
	comp=Z,540nm,4.0s						
LZH				LR	LR		
	comp=N,3µm,13.7s						
LZH				LR	LR		
	comp=E,3µm,16.0s						
LZH				LR	LR		
	comp=Z,4µm,16.0s						
SSE	Sheshan	39.73	28	P	P	14 35 17.0	-0.1
SSE				pmax	pmax		
	comp=Z,34nm,1.0s						
SSE				pmax	pmax		
	comp=Z,270nm,4.8s						
SSE				LR	LR		
	comp=N,1µm,15.6s						
SSE				LR	LR		
	comp=E,970nm,15.9s						
SSE				LR	LR		
	comp=Z,1µm,19.6s						
DDI	Dehra Dun	40.01	329	ex	P	14 35 18.5	-1.0
JAY	Jayapura	40.12	90	P	P	14 35 18.5	-2.2
	baz=39,SNR=3.7						
JOW	Kunigami	40.42	40	LR	LR	14 51 34.0	
	comp=Z,448nm,20.0s,baz=176,slow=36						
QIS	Mount Isa	41.58	117	P	P	14 35 32.7	+0.1
	baz=41,SNR=11						
QIS				S	S	14 41 45.8	-1.2
	baz=41,SNR=7.2						
GTA	Gaotai	42.81	359	⇑P	P	14 35 42.5	0.0
GTA				pP	pP	14 35 49.6	-2.3
GTA				sP	sP	14 35 53.2	-2.6
GTA				PcP	PcP	14 37 35.0	+1.6
GTA				ScP	ScP	14 41 24.2	+1.9
GTA				S	S	14 42 02.8	-2.0
GTA				ScS	ScS	14 45 39.4	-2.0
GTA				pmax	pmax		
	comp=Z,37nm,1.7s						
GTA				pmax	pmax		
	comp=Z,460nm,6.6s						
GTA				LR	LR		
	comp=N,2µm,14.7s						
GTA				LR	LR		
	comp=E,2µm,17.1s						
GTA				LR	LR		
	comp=Z,2µm,15.2s						
COEN	Coen	43.30	106	P	P	14 35 44.9	-1.7
	baz=43,SNR=4.1						
BTO	Baotou	44.85	10	eP	P	14 35 58.9	+0.1
HHC	Hu-ho-hao-te	45.38	12	eP	P	14 36 03.9	+0.9
HHC				pP	pP	14 36 13.3	+0.8
HHC				sP	sP	14 36 18.1	+1.8
HHC				PcP	PcP	14 37 42.5	+0.4
HHC				PP	PP	14 37 50.8	+1.2
HHC				S	S	14 42 43.4	+1.3
HHC				SS	ScS	14 45 59.6	+2.1
HHC				pmax	pmax		
	comp=Z,120nm,1.0s						
HHC				pmax	pmax		
	comp=Z,980nm,6.6s						
HHC				LR	LR		
	comp=N,1µm,16.3s						
HHC				LR	LR		
	comp=E,3µm,16.1s						
HHC				LR	LR		
	comp=Z,1µm,16.6s						
BJI	Beijing	45.75	17	P	P	14 36 06.0	+0.2
BJI				PP	PP	14 37 54.6	+1.2
BJI				S	S	14 42 49.5	+2.3
BJI				pmax	pmax		
	comp=Z,44nm,1.1s						
BJI				pmax	pmax		
	comp=Z,450nm,7.4s						
BJI				LR	LR		
	comp=N,5µm,17.2s						
BJI				LR	LR		
	comp=E,2µm,15.1s						
BJI				LR	LR		
	comp=Z,2µm,18.6s						
JNU	Nakatsue	46.46	36	eP	P	14 36 10.9	-0.7
	comp=Z,37nm,1.1s						
JNU	Nakatsue	46.46	36	P	P	14 36 11.2	-0.4
	comp=Z,67nm,1.1s,baz=178,slow=5.1,SNR=7.4						
PMG	Port Moresby	46.64	99	eP	P	14 36 12.8	-0.5
	comp=Z,13nm,1.0s						
PMG	Port Moresby	46.64	99	P	P	14 36 14.0	+0.7
	comp=Z,28nm,1.5s						
PMG	Port Moresby	46.64	99	P	P	14 36 13.7	+0.5
	comp=Z,21nm,1.1s,baz=282,slow=4.6,SNR=7.7						
CTA	Charters Tower	47.44	114	P	P	14 36 19.4	0.0
CTA				S	S	14 43 12.5	+0.3
CTA	Charters Tower	47.44	114	P	P	14 36 19.4	0.0
	comp=Z,19nm,0.9s,baz=287,slow=9.6,SNR=20						
CTA				S	S	14 43 12.5	+0.3
	comp=Z,5.2nm,1.1s,baz=71,slow=18,SNR=11						
CTAO	Charters Tower	47.44	114	eP	P	14 36 19.3	-0.2
CTAO				pmax	pmax		
	comp=Z,48nm,1.1s						
CTAO	Charters Tower	47.44	114	eP	P	14 36 19.3	-0.2
	comp=Z,48nm,1.1s						
QLP	Quilpie	47.62	123	P	P	14 36 22.2	+1.5
	baz=47,SNR=13						
STKA	Stephens Creek	47.69	131	eP	P	14 36 20.2	-1.0
	comp=Z,7.1nm,0.9s						
STKA	Stephens Creek	47.69	131	P	P	14 36 22.3	+1.1
	comp=Z,11nm,1.1s,baz=302,slow=8.9,SNR=9.6						
STKA				LR	LR	14 57 37.8	
	comp=Z,2µm,21.6s,baz=296,slow=38						
STKA	Stephens Creek	47.69	131	P	P	14 36 22.4	+1.2
	baz=48,SNR=6.9						
KSAR	Wonju Array Be	48.11	29	P	P	14 36 23.9	-0.4
KSRS	Korea Array	48.13	29	P	P	14 36 23.9	-0.6
	comp=Z,39nm,1.0s,baz=219,slow=8.1,SNR=58						
KBL	Kabul	48.15	325	P	P	14 36 25.4	+0.5
KBL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KBL	Kabul	48.15	325	P	P	14 36 25.4	+0.5
	comp=Z,5.7nm,0.6s						
KSH	Kashi	48.51	335	P	P	14 36 26.5	-1.0
KSH				epP	pP	14 36 36.9	-0.2
KSH				esP	sP	14 36 40.6	-0.3
KSH				ePcP	PcP	14 37 52.7	-0.5
KSH				PP	PP	14 38 19.1	-1.5
KSH				eScP	ScP	14 41 44.0	-1.9
KSH				PcS	PcS	14 41 47.3	-2.0
KSH				S	S	14 43 32.6	+5.7
KSH				ScS	ScS	14 46 13.6	-4.6
KSH				SS	SS	14 46 50.6	-6.7
KSH				pmax	pmax		
	comp=Z,18nm,1.1s						
KSH				pmax	pmax		
	comp=Z,480nm,4.5s						
KSH				LR	LR		
	comp=N,740nm,12.8s						
KSH				LR	LR		
	comp=E,2µm,16.3s						
KSH				LR	LR		
	comp=Z,2µm,21.0s						
WMQ	Urumqi	48.61	348	P	P	14 36 29.0	+0.9
WMQ				pP	pP	14 36 39.0	+1.3
WMQ				sP	sP	14 36 43.0	+1.5
WMQ				PP	PP	14 38 22.0	+0.6
WMQ				ScP	ScP	14 41 46.0	-0.1
WMQ				S	S	14 43 28.0	0.0
WMQ				sS	sS	14 43 44.0	+0.2
WMQ				ScS	ScS	14 46 16.0	-2.5
WMQ				SS	SS	14 46 53.0	-5.7
WMQ				pmax	pmax		
	comp=Z,71nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,700nm,5.0s						
WMQ				LR	LR		
	comp=N,1µm,16.0s						
WMQ				LR	LR		
	comp=E,1µm,16.0s						
WMQ				LR	LR		
	comp=Z,1µm,20.0s						
SNY	Shenyang	49.84	22	⇑P	P	14 36 36.3	-1.2
SNY				S	S	14 43 54.0	+8.8
SNY				pmax	pmax		
	comp=Z,120nm,1.0s						
SNY				pmax	pmax		
	comp=Z,300nm,3.9s						
SNY				LR	LR		
	comp=N,2µm,19.4s						
SNY				LR	LR		
	comp=E,2µm,20.1s						
SNY				LR	LR		
	comp=Z,1µm,19.4s						
CMSA	Cobar Meteorol	50.69	129	P	P	14 36 45.7	+1.6
	baz=50,SNR=8.0						
ULHL	Ulahol	50.69	337	P	P	14 36 45.0	+0.8
	SNR=12						
KZA	Kyzart	50.95	336	P	P	14 36 44.7	-1.7
	SNR=19						
AAA	Alma-Ata	51.29	338	eP	P	14 36 49.5	+1.0
AAA				i S	S	14 44 06.4	+0.9
AAA				pmax	pmax		
	comp=Z,400nm,3.3s						
AAA				smax	smax		
	comp=N,1µm,12.6s						
AAA				MLR	MLR		
	comp=Z,800nm,13.0s						
RMQ	Roma	51.41	121	P	P	14 36 52.0	+2.3
	baz=51,SNR=5.0						
SONM	Songino Array	51.49	5	P	P	14 36 50.6	+0.7
SONM				pP	pP	14 36 58.2	-1.4
SONM				ScP	ScP	14 42 00.9	+2.4
SONM	Songino Array	51.49	5	P	P	14 36 50.6	+0.7
	comp=Z,36nm,0.8s,baz=188,slow=8.3,SNR=188						
SONM				pP	pP	14 36 58.2	-1.4
	comp=Z,68nm,0.9s,baz=187,slow=9.5,SNR=26						
SONM				ScP	ScP	14 42 00.9	+2.4
	comp=Z,0.9nm,1.0s,baz=166,slow=2.4,SNR=3.4						
TKM2	Tokmak 2	51.51	337	i P	P	14 36 50.9	+0.6
TKM2	Tokmak 2	51.51	337	P	P	14 36 51.0	+0.6
	SNR=31						
KBK	Karagaybulak	51.55	336	P	P	14 36 51.8	+1.1
	SNR=16						
ULN	Ulaanbaatar	51.58	6	eP	P	14 36 51.1	+0.4
	comp=Z,56nm,1.0s						
ULN	Ulaanbaatar	51.58	6	P	P	14 36 51.6	+1.0
	SNR=38						
ULN	Ulaanbaatar	51.58	6	P	P	14 36 51.2	+0.5
	comp=Z,57nm,1.2s,comp=Z,920nm						
AML	Almayashu	51.64	335	P	P	14 36 52.0	+0.4
	SNR=14						

AAK Ala-Archa 51.72 336 i P P 14 36 52.7 +0.8
AAK pmax pmax
comp=Z,52nm,1.7s
AAK Ala-Archa 51.72 336 eP P 14 36 52.1 +0.2
comp=Z,85nm,1.1s
AAK Ala-Archa 51.72 336 P P 14 36 52.9 +1.1
SNR=19
AAK Ala-Archa 51.72 336 P P 14 36 53.0 +1.1
SNR=7.4
AAK Ala-Archa 51.72 336 P P 14 36 52.8 +1.1
comp=Z,3.1nm,0.7s,baz=140,slow=6.2,SNR=17
FRU Bishkek 51.83 336 eP P 14 36 53.0 +0.4
FRU eS S 14 44 14.0 +1.1
FRU pmax pmax
comp=Z,150nm,2.5s
FRU MLR MLR
comp=E,1µm,18.0s
CHMS Chumysh 51.92 336 P P 14 36 53.8 +0.6
SNR=6.9
EKS2 Erkin-Say 52.04 335 eP P 14 36 55.3 +1.1
EKS2 pmax pmax
comp=Z,35nm,1.0s
EKS2 Erkin-Say 52.04 335 eP P 14 36 55.3 +1.1
comp=Z,35nm,1.0s
EKS2 Erkin-Say 52.04 335 P P 14 36 55.6 +1.4
SNR=19
USP Ospenovka 52.24 336 P P 14 36 55.9 +0.3
SNR=5.7
CN2 Changchun 52.24 23 ⇑P P 14 36 54.6 -0.9
CN2 epP pP 14 37 04.6 -0.6
CN2 PP PP 14 38 54.2 -0.1
CN2 eS S 14 44 17.2 -1.2
CN2 SS SS 14 47 53.4 -3.1
CN2 pmax pmax
comp=Z,60nm,0.9s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,2µm,14.0s
CN2 LR LR
comp=E,3µm,14.0s
CN2 LR LR
comp=Z,2µm,14.0s
MK31 Makanchi Array 52.71 344 eP P 14 36 59.0 0.0
MK31 pmax pmax
comp=Z,7.0nm,0.4s
MK31 Makanchi Array 52.71 344 eP P 14 36 58.9 0.0
MKAR Makanchi Array 52.71 344 P P 14 36 59.5 +0.5
MKAR Makanchi Array 52.71 344 P P 14 36 59.5 +0.5
MKAR Makanchi Array 52.71 344 P P 14 36 59.5 +0.5
comp=Z,18nm,0.7s,baz=148,slow=7.9,SNR=114
MKAR LR LR 15 04 15.5
comp=Z,667nm,19.4s,baz=162,slow=42
EIDS Eidsvold 53.10 119 eP P 14 37 03.5 +1.3
comp=Z,31nm,1.0s
EIDS Eidsvold 53.10 119 P P 14 37 03.8 +1.6
baz=53,SNR=4.0
MAJO Matsushiro 53.19 38 eP P 14 37 00.8 -1.9
MAJO pmax pmax
comp=Z,25nm,1.1s
MAJO Matsushiro 53.19 38 eP P 14 37 00.8 -1.9
comp=Z,25nm,1.1s
MAT Matsushiro 53.19 38 P P 14 37 01.5 -1.2
MAT S S 14 44 39.2 +7.5
MJAR Matsushiro Arr 53.19 38 P P 14 37 01.9 -0.9
MJAR pP pP 14 37 09.3 -3.1
MJAR Matsushiro Arr 53.19 38 P P 14 37 01.9 -0.9
comp=Z,20nm,1.1s,baz=223,slow=8.9,SNR=30
MJAR pP pP 14 37 09.3 -3.1
comp=Z,18nm,1.0s,baz=224,slow=8.8,SNR=11
KK31 Karatay Array 53.82 333 i P P 14 37 08.1 +0.9
KK31 pmax pmax
comp=Z,2.0nm,0.5s
KKAR Karatay Array 53.82 333 eP P 14 37 06.4 -0.8
KKAR pmax pmax
comp=Z,3.0nm,0.6s
KKAR Karatay Array 53.82 333 eP P 14 37 06.4 -0.8
comp=Z,2.7nm,0.6s
ZAK Zakamensk 53.83 2 eP P 14 37 06.6 -0.6
ZAK pmax pmax
comp=Z,12nm,1.5s
MDJ Mudanjiang 54.60 25 P P 14 37 12.3 -0.5
MDJ pP pP 14 37 21.4 -1.1
MDJ sP sP 14 37 25.2 -1.1
MDJ ScP ScP 14 42 10.9 -1.0
MDJ PcS PcS 14 42 14.8 -0.3
MDJ S S 14 44 50.4 +0.1
MDJ sS sS 14 45 05.9 -0.4
MDJ pmax pmax
comp=Z,12nm,1.4s
MDJ pmax pmax
comp=Z,94nm,3.6s
MDJ LR LR
comp=N,950nm,17.4s
MDJ LR LR
comp=E,1µm,18.7s
MDJ LR LR
comp=Z,2µm,13.7s
MOY Mondy 55.07 0 eP P 14 37 16.1 -0.1
MOY pmax pmax
comp=Z,57nm,2.6s
TLY Talaya 55.14 2 eP P 14 37 15.6 -1.0
TLY e 14 39 16.5
TLY eS S 14 44 48.2 -9.3
TLY e 14 46 54.3
TLY eSS SS 14 48 42.8 +0.8
TLY pmax pmax
comp=Z,23nm,1.3s
TLY MLR MLR
comp=Z,927nm,15.0s
TLY Talaya 55.14 2 eP P 14 37 17.4 +0.7
comp=Z,59nm,1.5s
TLY Talaya 55.14 2 P P 14 37 18.1 +1.4
SNR=23
TLY Talaya 55.14 2 P P 14 37 17.3 +0.7
comp=Z,111nm,1.9s,SNR=10
USRK Ussuriysk Arra 55.33 27 P P 14 37 17.4 -0.6
comp=Z,18nm,0.7s,baz=224,slow=5.3,SNR=59
USRK pP pP 14 37 25.7 -2.1
comp=Z,59nm,1.0s,baz=220,slow=6.9,SNR=15
USRK LR LR 15 03 14.1
comp=Z,957nm,18.0s,baz=334,slow=39
IRK Irkutsk 55.73 3 eP P 14 37 21.6 +0.7
IRK pmax pmax
comp=Z,91nm,1.8s
CIT Chita 56.51 10 eP P 14 37 35.6 +9.1
CIT e 14 37 44.3
CIT pmax pmax
comp=Z,110nm,1.9s
KURK Kurchatov 57.29 344c iP P 14 37 31.9 -0.1
KURK pmax pmax
comp=Z,50nm,1.2s
KURK Kurchatov 57.29 344 eP P 14 37 31.8 -0.2
comp=Z,97nm,1.5s
KURK Kurchatov 57.29 344 P P 14 37 32.1 +0.1
SNR=21
KURK Kurchatov 57.29 344 P P 14 37 32.3 +0.3
comp=Z,190nm,1.2s,SNR=27
ZAA0 Zalesovo Array 58.84 349 eP P 14 37 42.1 -0.6
ZALV Zalesovo Beam 58.84 349 P P 14 37 42.7 0.0
ZALV Zalesovo Beam 58.84 349 P P 14 37 42.7 0.0
ZALV Zalesovo Beam 58.84 349 P P 14 37 42.7 0.0
comp=Z,39nm,0.9s,baz=186,slow=4.7,SNR=74
ZALV LR LR 15 06 30.0
comp=Z,619nm,18.3s,baz=171,slow=40
KLR Kul'dur 59.18 23 eP P 14 37 41.6 -3.6
KLR pmax pmax
comp=E,45nm,2.0s
KLR pmax pmax
comp=Z,140nm,2.0s
HNR Honiara 59.25 99 eP P 14 37 44.6 -1.7
comp=Z,149nm,1.0s
NVS Novosibirsk 59.99 349⇑iP P 14 37 49.3 -1.3
NVS i S S 14 45 58.7 -2.2
NVS pmax pmax
comp=N,16nm,1.2s
NVS pmax pmax
comp=Z,33nm,1.2s
NVS pmax pmax
comp=E,9.0nm,1.0s
NVS smax smax
comp=N,7.0nm,1.5s
NVS smax smax
comp=E,24nm,2.0s
ASAJ Asahikawa 60.64 34 eP P 14 37 54.4 -1.0
comp=E,23nm,1.5s
ASAJ Asahikawa 60.64 34 P P 14 37 55.0 -0.3
comp=E,7.0nm,0.6s,baz=244,slow=10,SNR=22
BVA0 Borovoye Array 61.87 340 i P P 14 38 02.8 -0.7
BVA0 pmax pmax
comp=Z,2.0nm,0.6s
BRVK Borovoye 61.93 340c iP P 14 38 03.2 -0.7
BRVK pmax pmax
comp=Z,25nm,1.7s
BRVK Borovoye 61.93 340 eP P 14 38 03.0 -0.9
comp=Z,8.2nm,0.6s
BRVK Borovoye 61.93 340 P P 14 38 03.8 -0.1
SNR=7.5
YUK Yuzh-Kuril'sk 62.43 35 i P P 14 37 58.5 -8.9
YUK i PPP PPP 14 41 54.1
YUK pmax pmax
comp=Z,526nm,2.2s
YUK pmax pmax
comp=E,143nm,1.6s
YUK pmax pmax
comp=Z,125nm,1.3s
YUK pmax pmax
comp=N,81nm,0.8s
YUK MLR MLR
comp=Z,549nm,17.0s
YUK MLR MLR
comp=N,160nm,17.0s
YUK MLR MLR
comp=E,244nm,17.0s
YSS Yuzh-Sakhalins 62.56 31⇑iP P 14 38 08.3 +0.1
YSS e*PP pP 14 38 19.0 +0.9
YSS eS S 14 46 32.0 -1.9
YSS ePPS PPS 14 46 55.0
YSS pmax pmax
comp=Z,30nm,0.8s
YSS MLR MLR
comp=Z,500nm,16.0s
YSS MLR MLR
comp=E,500nm,17.0s
YSS Yuzh-Sakhalins 62.56 31 eP P 14 38 07.3 -1.0
comp=E,108nm,1.4s
AB31 Akbulak array 63.30 331 P P 14 38 12.7 -0.4
AB31 pmax pmax
comp=Z,5.0nm,0.3s
ABKAR Akbulak array 63.30 331 eP P 14 38 12.5 -0.6
comp=Z,18nm,0.7s
CLNS Chul'man 63.42 15 eP P 14 38 13.3 -0.5
CLNS e 14 38 46.9
CLNS ePPP PPP 14 42 07.2
CLNS eSS SS 14 50 54.9 +3.1
CLNS pmax pmax
comp=Z,6.0nm,1.1s
CLNS pmax pmax
comp=N,7.0nm,1.2s
CLNS pmax pmax
comp=E,11nm,1.2s
CLNS MLR MLR
comp=Z,3µm,18.0s
CLNS MLR MLR
comp=N,2µm,18.0s
CLNS MLR MLR
comp=E,1µm,17.0s
BHD Baghdad 64.44 310 ex P 14 38 20.0 -0.9
BHD i x S 14 46 57.8 0.0
DZM Mont Dzumac 66.34 112 eS S 14 47 22.9 +1.2
comp=E,655nm,25.2s
DZM eLR LR 14 58 28.5
comp=E,1µm,25.2s
DGRG David-gareji 67.21 318 P P 14 38 41.5 +2.8
DGRG S S 14 47 38.6 +7.0
TBLG Delisi 67.76 318 P P 14 38 44.4 +2.2
TBLG S S 14 47 41.3 +3.3
KZR Kazreti 67.82 318 P P 14 38 44.4 +1.8
GOR Gori 68.30 318 P P 14 38 47.0 +1.4
SVE Sverdlovsk 68.37 338⇑iP P 14 38 46.2 +0.6
SVE ePPP PPP 14 42 58.0
SVE eS S 14 47 45.3 +0.7
SVE e 14 48 36.7
SVE pmax pmax
comp=Z,45nm,1.5s
SVE MLR MLR
comp=Z,970nm,20.0s
AKH Akhalkalaki 68.46 317 P P 14 38 48.8 +2.1
AKH S S 14 47 51.0 +4.3
DRV Dumont d'Urvil 68.64 164 PP PP 14 40 40.0 -39
DRV S S 14 47 39.0 -8.5
DRV SS SS 14 52 13.0 +0.7
DRV L L 14 55 00.0
DRV R 14 59 00.0
ZEI Tsey 68.79 319 eP P 14 38 50.2 +1.4
ZEI eS S 14 47 52.5 +1.8
ZEI pmax pmax
comp=Z,8.0nm,0.8s
MAW Mawson 68.87 195 LR LR 15 02 18.7
comp=Z,1µm,21.7s,baz=20,slow=30
ARU Arti 68.89 337c iP P 14 38 48.6 -0.3
ARU 14 41 22.1
ARU S S 14 47 51.4 +0.6
ARU pmax pmax
comp=Z,32nm,1.7s
ARU MLR MLR
comp=Z,751nm,21.0s
ONI Oni 69.00 318 P P 14 38 51.2 +1.2
YAK Yakutsk 69.16 14c iP P 14 38 49.0 -1.4
YAK e*PP pP 14 38 57.1 -3.2
YAK e 14 39 09.4
YAK e 14 41 22.7
YAK eS S 14 47 51.3 -2.4
YAK e 14 48 48.2
YAK eSS SS 14 52 17.1 -3.5
YAK pmax pmax
comp=Z,56nm,1.1s
YAK pmax pmax
comp=N,24nm,1.4s
YAK pmax pmax
comp=E,22nm,1.5s
YAK pmax pmax
comp=Z,54nm,2.9s
YAK pmax pmax
comp=N,14nm,1.7s
YAK pmax pmax
comp=E,31nm,3.1s
YAK smax smax
comp=N,108nm,10.6s
YAK MLR MLR
comp=Z,3µm,20.0s
YAK MLR MLR
comp=E,1µm,18.0s
YAK MLR MLR
comp=N,1µm,16.0s
YAK Yakutsk 69.16 14 eP P 14 38 48.1 -2.3
comp=N,64nm,1.0s
KBZ Khabaz 69.87 319 P P 14 38 56.2 +1.1
KBZ Khabaz 69.87 319 P P 14 38 56.2 +1.1
KBZ Khabaz 69.87 319 P P 14 38 56.2 +1.1
comp=N,3.1nm,0.8s,baz=116,slow=4.3,SNR=8.8
KIV Kislovodsk 70.11 319 eP P 14 38 57.8 +1.0
KIV e 14 39 18.8
KIV eS S 14 48 06.0 +0.1
KIV eSS SS 14 52 36.4 +0.2
KIV pmax pmax
comp=Z,7.0nm,1.0s
MALT Malatya 70.81 313 P P 14 38 59.7 -1.6
MALT pmax pmax
comp=Z,28nm,1.6s
MALT Malatya 70.81 313 P P 14 38 59.7 -1.6
comp=Z,28nm,1.6s
SOC Sochi 71.90 318c iP P 14 39 06.4 -1.2
SOC e*PP pP 14 39 14.5 -3.0
SOC e 14 41 49.0
SOC ePPP PPP 14 43 32.0
SOC eS S 14 48 24.5 -2.0
SOC e 14 49 04.6
SOC eSS SS 14 53 02.3 -1.3
SOC pmax pmax
comp=Z,6.0nm,0.4s
SOC MLR MLR
comp=Z,443nm,18.0s
RPZ Rata Peaks 73.47 135 LR LR 15 10 30.3
comp=Z,1µm,21.0s,baz=284,slow=35
PETK Petropavlovsk- 73.95 32 P P 14 39 19.2 -0.3
PETK Petropavlovsk- 73.95 32 P P 14 39 19.2 -0.3
PETK Petropavlovsk- 73.95 32 P P 14 39 19.2 -0.3
comp=Z,4.0nm,0.8s,baz=190,slow=7.5,SNR=5.9
VRHR Novokhopersk 73.95 326 eP P 14 39 19.3 -0.2
VRHR e*PP pP 14 39 28.4 -1.1
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,20nm,0.9s
VRHR pmax pmax
comp=Z,20nm,0.9s
PET Petropavlovsk 74.42 32 eP P 14 39 21.5 -0.7
PET e 14 42 10.2
PET eS S 14 48 54.8 +0.2
PET pmax pmax
comp=Z,200nm,10.3s
PET pmax pmax
comp=Z,100nm,18.7s
PET MLR MLR
comp=Z,600nm,18.0s
PET MLR MLR
comp=Z,500nm,17.0s
BR131 Keskin Array S 74.80 313 eP P 14 39 24.4 -0.5
comp=Z,5.1nm,0.8s
BRTR Keskin Array B 74.80 313 P P 14 39 24.6 -0.3
BRTR Keskin Array B 74.80 313 P P 14 39 24.6 -0.3
comp=Z,2.0nm,0.8s,baz=132,slow=6.9,SNR=14
BRTR LR LR 15 14 51.7
comp=Z,395nm,19.7s,baz=288,slow=38
BOSA Boshof 75.36 242 P P 14 39 29.4 +1.0
BOSA Boshof 75.36 242 P P 14 39 29.4 +1.0
comp=Z,4.2nm,0.9s,baz=41,slow=16,SNR=4.2
BOSA LR LR 15 05 35.3
comp=Z,707nm,21.7s,baz=107,slow=30
VSR Storozhevoye 75.40 325 eP P 14 39 27.8 -0.1
VSR e*PP pP 14 39 36.3 -1.6
VSR pmax pmax
comp=N,7.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s
SEY Seymchan 76.91 22d iP P 14 39 36.5 +0.2
URZ Urewera 77.23 128 LR LR 15 14 07.1
comp=Z,626nm,21.8s,baz=99,slow=36
TIXI Tiksi 77.35 9 eP P 14 39 37.0 -1.6
TIXI pmax pmax
comp=Z,18nm,1.1s
TIXI Tiksi 77.35 9 eP P 14 39 37.0 -1.6
comp=Z,18nm,1.1s
OBN Obninsk 78.44 328⇑iP P 14 39 46.6 +1.7
OBN i 14 39 53.2
OBN i 14 42 50.4
OBN i S S 14 49 35.7 -2.9
OBN eSS SS 14 54 46.6 +4.4
OBN pmax pmax
comp=Z,32nm,1.6s
OBN MLR MLR
comp=Z,300nm,19.0s
KLMR Klimovskoe 79.50 334 eP P 14 39 49.6 -1.1
KLMR pmax pmax
comp=Z,39nm,1.3s
TIRR Tirgusor 79.88 316 P P 14 39 51.5 -1.5
TIRR pmax pmax
comp=Z,14nm,1.1s
TIRR Tirgusor 79.88 316 P P 14 39 51.5 -1.5
comp=Z,14nm,1.1s
VNDA Vanda 80.49 169 P P 14 39 57.5 +1.8
VNDA Vanda 80.49 169 P P 14 39 57.5 +1.8
comp=Z,1.0nm,1.0s,baz=297,slow=2.3,SNR=2.5
VNDA LR LR 15 13 54.8
comp=Z,482nm,18.7s,baz=310,slow=34
AKASG Malin Array Be 81.08 322 P P 14 40 00.4 +1.0
AKASG Malin Array Be 81.08 322 P P 14 40 00.4 +1.0
AKASG Malin Array Be 81.08 322 P P 14 40 00.4 +1.0
comp=Z,1.1nm,0.6s,baz=82,slow=5.1,SNR=7.1
AKASG LR LR 15 20 24.2
comp=Z,499nm,21.7s,baz=75,slow=39
TMCR Tamitsa 81.62 337 eP P 14 40 00.5 -1.4
TMCR pmax pmax
comp=Z,47nm,1.3s
BUR08 Bucovina Ar. S 82.83 319 eP P 14 40 10.1 +1.3
BILL Bilibino 84.47 20⇓iP P 14 40 16.5 -0.1
BILL i S S 14 50 44.4 +3.7
BILL pmax pmax
comp=Z,5.0nm,1.0s
BILL Bilibino 84.47 20 eP P 14 40 16.1 -0.5
comp=Z,44nm,1.9s
UZH Uzhgorod 84.95 319 eP P 14 40 23.0 +3.6
KOLS Kolonicke sedl 85.02 320 eP P 14 40 20.9 +1.1
KOLS pmax pmax
comp=Z,21nm,1.7s
KOLS Kolonicke sedl 85.02 320 eP P 14 40 20.9 +1.1
SUW Suwalki 85.50 325 eP P 14 40 22.8 +0.7
SUW e 14 40 31.5
CRVS Cervenica-Dubn 85.54 319 eP P 14 40 24.2 +1.8
CRVS pmax pmax
comp=Z,39nm,2.5s
CRVS Cervenica-Dubn 85.54 319 eP P 14 40 24.2 +1.8
FINES FINESS Array B 85.78 332 P P 14 40 23.8 +0.5
FINES pP pP 14 40 32.3 -1.2
FINES FINESS Array B 85.78 332 P P 14 40 23.8 +0.5
comp=Z,1.8nm,0.7s,baz=108,slow=6.2,SNR=4.4
FINES pP pP 14 40 32.3 -1.2
comp=Z,1.9nm,0.5s,baz=101,slow=5.6,SNR=3.5
FINES LR LR 15 22 54.8
comp=Z,485nm,21.1s,baz=344,slow=39
QSPA South Pole Qui 86.36 180 LR LR 15 16 35.2
comp=Z,850nm,18.6s,baz=330,slow=34
VYHS Vyhne 87.19 319 eP P 14 40 38.6 +8.0
VYHS pmax pmax
comp=Z,13nm,2.0s
VYHS Vyhne 87.19 319 eP P 14 40 38.6 +8.0
ARCES ARCESS Array B 88.16 340 P P 14 40 35.6 +0.8
ARCES ARCESS Array B 88.16 340 P P 14 40 35.6 +0.8
comp=Z,1.1nm,0.4s,baz=98,slow=2.5,SNR=6.8
ARCES LR LR 15 24 14.9
comp=Z,856nm,19.9s,baz=100,slow=38
KRLC Kraliky 88.73 320 eP P 14 40 39.1 +1.2
KRLC esP sP 14 40 54.3 +2.5
DPC Dobruska-Polom 89.06 320 eP P 14 40 40.4 +0.9
DPC e 14 40 48.6
DPC Dobruska-Polom 89.06 320 eP P 14 40 40.4 +0.9
DPC epP pP 14 40 48.6 -1.1
KSP Ksiaz 89.14 321 eP P 14 40 40.3 +0.6
KSP eS S 14 51 30.0 +3.5
KSP Ksiaz 89.14 321 eP P 14 40 41.9 +2.2
GERES GERESS Array B 90.61 319 P P 14 40 48.4 +1.6
GERES pP pP 14 40 57.5 +0.5
GERES GERESS Array B 90.61 319 P P 14 40 48.4 +1.6
comp=Z,1.5nm,1.0s,baz=97,slow=4.4,SNR=9.0
GERES pP pP 14 40 57.5 +0.5
comp=Z,1.7nm,0.9s,baz=72,slow=1.7,SNR=4.7
BRG Berggiesshubel 90.62 321 eP P 14 40 49.3 +2.6
comp=Z,24nm,1.8s
BRG e 14 40 58.7
comp=Z,5.7nm,1.1s
BRG
comp=N,314nm,17.2s
BRG
comp=E,604nm,24.3s
BRG
comp=Z,300nm,14.1s
BRG Berggiesshubel 90.62 321 eP P 14 40 49.3 +2.6
BRG e 14 40 58.7
BRG pmax pmax
comp=Z,24nm,1.8s
BRG pmax pmax
comp=Z,6.0nm,1.1s
BRG MLR MLR
comp=N,314nm,17.2s
BRG MLR MLR
comp=E,604nm,24.3s
KHC Kasperske Hory 90.71 319 eP P 14 40 48.8 +1.6
KHC e 14 41 03.7
KHC Kasperske Hory 90.71 319 eP P 14 40 48.8 +1.6
KHC esP sP 14 41 03.7 +2.6
CLL Collm 91.25 321 eP P 14 40 49.0 -0.6
CLL e 14 41 02.0
CLL eS S 14 51 46.0 0.0
CLL Collm 91.25 321 eP P 14 40 49.0 -0.6
CLL esP sP 14 41 02.0 -1.4
CLL ePP PP 14 44 30.0 +3.1
CLL ePPP PPP 14 46 24.0
CLL eS S 14 51 46.0 0.0
CLL ePS PnS 14 53 00.0 +1.0
CLL e 14 53 54.0
CLL eSS SS 14 57 45.0 -6.1
CLL eSSSS 15 04 41.0
NB2 NORSAR Subarra 92.80 331 P P 14 41 04.2 +7.6

comp=Z,5.2nm,1.2s,baz=95,slow=4.6
NOA NORSAR Array B 92.80 331 P P 14 40 59.2 +2.6
NOA NORSAR Array B 92.80 331 P P 14 40 59.2 +2.6
comp=Z,0.7nm,0.9s,baz=94,slow=4.6,SNR=2.3
TORD Torodi Ar. Bea 99.42 283 LR LR 15 22 58.9
comp=Z,401nm,21.9s,baz=65,slow=33
ILAR Eielson Array 102.75 24 PP PP 14 45 48.0 -7.0
ILAR Eielson Array 102.75 24 PP PP 14 45 48.0 -7.0
comp=Z,0.9nm,1.1s,baz=261,slow=5.6,SNR=4.1
TBI Tubuai 106.80 116 eSS SS 15 01 34.7 +4.5
comp=Z,242nm,26.8s
TBI eLR LR 15 17 21.5
comp=Z,859nm,23.5s
PPT2 Papeete2 107.76 110 eLR LR 15 17 47.3
comp=Z,310nm,22.0s
YKA Yellowknife Ar 115.74 17 PKP PKPdf 14 46 26.1 -0.2
YKA PP PP 14 47 23.4 -5.6
YKA Yellowknife Ar 115.74 17 PKP PKPdf 14 46 26.1 -0.2
comp=Z,0.4nm,0.8s,baz=327,slow=2.4,SNR=7.0
YKA PP PP 14 47 23.4 -5.6
comp=Z,0.3nm,0.8s,baz=325,slow=5.9,SNR=5.2
RKT Rikitea 119.73 119 eSS SS 15 04 22.3 +1.1
comp=Z,184nm,30.0s
RKT eLR LR 15 23 17.6
comp=Z,555nm,26.2s
C11A Tepee Creek (N 125.78 30 ⇑P PKPdf 14 46 44.9 -1.3
baz=126
A13A Flathead Natio 125.91 28 ⇑P PKPdf 14 46 44.9 -1.5
baz=126
B13A Whitefish 126.28 28 ⇑P PKPdf 14 46 46.2 -0.9
baz=126
A15A Johnson Ranch, 126.64 27 ⇑P PKPdf 14 46 46.7 -1.2
baz=126
A16A West Butte Ran 127.17 26 ⇑P PKPdf 14 46 48.2 -0.7
baz=127
D13A Huson 127.18 29 ⇑P PKPdf 14 46 48.2 -0.7
baz=127
B15A Bradely Ranch, 127.21 27 ⇓P PKPdf 14 46 48.4 -0.5
baz=127
MOD Modoc 127.25 38 ePKPdf PKPdf 14 46 50.4 +1.1
C15A Salmond Ranch, 127.58 28 ⇑P PKPdf 14 46 49.0 -0.8
baz=127
MSO Missoula 127.61 29 ⇑P PKPdf 14 46 48.9 -0.9
baz=127
E13A Victor 127.76 30 ⇓P PKPdf 14 46 49.5 -0.6
baz=128
FUH Fuhringer Ranc 127.95 27 ⇑P PKPdf 14 46 49.5 -0.9
baz=128
D16A Dana Ranch, Ca 128.61 28 ⇓P PKPdf 14 46 50.9 -0.8
baz=128
EGMT Eagleton 128.67 26 ⇑P PKPdf 14 46 51.0 -0.7
baz=128
B19A Brinkman Farms 128.68 25 ⇓P PKPdf 14 46 50.9 -0.8
baz=128
H12A Diamond D Ranc 128.71 32 ⇓P PKPdf 14 46 51.3 -0.7
baz=128
A20A Cobblestone Ra 128.77 24 ⇓P PKPdf 14 46 51.2 -0.6
baz=128
E16A East Helena 128.91 28 ⇓P PKPdf 14 46 51.5 -0.8
baz=129
D17A Six Diamond Ra 128.92 27 ⇓P PKPdf 14 46 51.6 -0.6
baz=129
MFID Camas Ranch 128.94 34 ⇑P PKPdf 14 46 51.7 -0.7
baz=129
H13A Challis 129.02 32 ⇑P PKPdf 14 46 52.5 0.0
baz=129
F15A Butte 129.02 29 ⇑P PKPdf 14 46 52.0 -0.6
baz=129
A21A Bergtoll Ranch 129.08 23 ⇑P PKPdf 14 46 52.3 -0.1
baz=129
C19A Slack Wire Ran 129.20 25 ⇑P PKPdf 14 46 51.7 -1.0
baz=129
G15A Dillon 129.50 30 ⇑P PKPdf 14 46 53.6 +0.1
baz=129
I13A Wildhorse Cree 129.53 32 ⇓P PKPdf 14 46 53.2 -0.5
baz=129
BOZ Bozeman (W) 129.58 29 ⇓P PKPdf 14 46 53.2 -0.4
baz=129
HLID Hailey 129.61 33 ⇑P PKPdf 14 46 53.8 +0.1
baz=129
C20A Veseth Ranch, 129.66 25 ⇓P PKPdf 14 46 53.5 0.0
baz=129
G16A Moss Hill, Enn 129.80 29 ⇑P PKPdf 14 46 54.0 -0.1
baz=130
J13A Cove Ranch, Pi 129.85 33 ⇓P PKPdf 14 46 54.3 +0.1
baz=130
F17A Fitzpatrick Pl 129.86 28 ⇑P PKPdf 14 46 54.3 +0.1
baz=130
F18A Big Timber 130.30 27 ⇓P PKPdf 14 46 55.3 +0.3
baz=130
H16A Russell Place, 130.45 30 ⇓P PKPdf 14 46 55.2 -0.2
baz=130
NVAR Mina Array Bea 130.48 40 PKP PKPdf 14 46 57.3 +1.7
NVAR Mina Array Bea 130.48 40 PKP PKPdf 14 46 57.3 +1.7
comp=Z,0.7nm,0.3s,baz=328,slow=1.4,SNR=3.6
G18A Lazy EL Ranch, 130.81 28 ⇓P PKPdf 14 46 55.9 -0.1
baz=131
D22A Cohagen 130.86 24 ⇑P PKPdf 14 46 56.1 +0.3
baz=131
ULM Lac du Bonnet 131.50 14 PKP PKPdf 14 46 57.1 +0.3
ULM Lac du Bonnet 131.50 14 PKP PKPdf 14 46 57.1 +0.3
comp=Z,1.1nm,0.4s,baz=16,slow=4.4,SNR=3.8
H19A Powell 131.56 28 ⇓P PKPdf 14 46 58.0 +0.6
baz=131
EDW2 Edwards Air Fo 132.65 44 ⇑P PKPdf 14 46 58.9 -0.7
baz=132
PDAR Pinedale Array 132.70 30 PKP PKPdf 14 46 60.0 +0.2
PDAR Pinedale Array 132.70 30 PKP PKPdf 14 46 60.0 +0.2
comp=Z,0.4nm,0.6s,baz=132,slow=2.2,SNR=3.9
K19A Absolon Red Bu 133.01 30 ⇑P PKPdf 14 47 00.9 +0.6
baz=133
P18A Preston Nutter 134.58 34 ⇓P PKPdf 14 47 03.8 +0.3
baz=134
M21A Separation Pea 134.65 30 ⇑P PKPdf 14 47 04.2 +0.8
baz=134
N23A Red Feather La 135.89 29 ⇓P PKPdf 14 47 06.2 +0.4
baz=136
R20A Redvale 136.63 34 ⇑P PKPdf 14 47 07.6 +0.4
baz=136
S21A Coal Bank Pass 137.33 34 ⇓P PKPdf 14 47 09.5 +0.9
baz=137
R22A Saguache, Gunn 137.48 32 ⇑P PKPdf 14 47 09.5 +0.6
baz=137
S22A 4UR Ranch, Cre 137.79 33 ⇓P PKPdf 14 47 10.2 +0.8
baz=138
S26A Kim 139.63 30 ⇑P PKPdf 14 47 12.7 +0.1
baz=139
T26A Comanche Natio 139.92 30 ⇑P PKPdf 14 47 14.0 +0.8
baz=140
U25A Circle Dot Ran 140.09 32 ⇓P PKPdf 14 47 13.7 +0.1
baz=140
120A U Bar Ranch, L 140.31 40 ⇑P PKPdf 14 47 14.5 +0.4
baz=140
Y22A Socorro 140.42 37 ⇑P PKPdf 14 47 14.6 +0.4
baz=140
T27A Campo 140.44 30 ⇓P PKPdf 14 47 14.8 +0.7
baz=140
Z22A Elephant Butte 140.89 38 ⇓P PKPdf 14 47 15.8 +0.8
baz=141
W25A X Bar L Ranch, 140.94 33 ⇓P PKPdf 14 47 15.9 +0.8
baz=141
Z23A Rita Site, Whi 141.33 37 ⇑P PKPdf 14 47 16.8 +1.0
baz=141
Y24A Capitan 141.33 36 ⇓P PKPdf 14 47 17.1 +1.2
baz=141
Y25A Mesa, Roswell 141.76 35 ⇓P PKPdf 14 47 17.7 +1.1
baz=142
X26A CR and CF Fran 141.79 33 ⇓P PKPdf 14 47 17.9 +1.3
baz=142
125A Gardner Draw, 142.69 36 ⇓P PKPdf 14 47 16.1 -2.1
baz=142
MNTX Cornudas Mount 142.92 38 ⇑P PKPdf 14 47 16.7 -1.9
baz=143
225A Deer Hill, Car 142.98 37 ⇑P PKPdf 14 47 16.6 -2.2
baz=143
Z27A Tatum 143.04 34 ⇑P PKPbc 14 47 16.8 +1.1
baz=143
226B Tecolote Peak, 143.40 37 ⇑P PKPbc 14 47 17.4 +0.8
baz=143
325A Bean Ranch, Si 143.40 38 ⇑P PKPbc 14 47 17.6 +0.9
baz=143
X31A McDonald Ranch 143.72 29 ⇑P PKPbc 14 47 18.5 +1.2
baz=144
425A Indio Mountain 143.80 39 ⇓P PKPbc 14 47 18.3 +0.5
baz=144,SNR=10
Z29A Hungry Hill Ra 143.91 33 ⇑P PKPbc 14 47 18.3 +0.2
baz=144
227A Bennet, Jal 143.96 36 ⇓P PKPbc 14 47 18.6 +0.4
baz=144
128A Castleberry Fa 143.97 34 ⇓P PKPbc 14 47 18.4 +0.1
baz=144
326A Caldwell Ranch 144.05 37 ⇑P PKPbc 14 47 18.9 +0.3
baz=144,SNR=6.5
Y31A Rekieta Farm, 144.12 30 ⇑P PKPbc 14 47 18.7 +0.1
baz=144
Z30A Sanderson Ranc 144.20 32 ⇑P PKPab 14 47 18.6 +0.1
baz=144,SNR=5.2
WMOK Wichita Mounta 144.21 28 ePKIKP PKPab 14 47 18.0 -0.4
WMOK Wichita Mounta 144.21 28 ePKP PKPab 14 47 18.0 -0.4
228A UT Block 9, Go 144.28 35 ⇑P PKPbc 14 47 19.6 +0.4
baz=144
327A Balmorhea Ranc 144.30 37 ⇑P PKPbc 14 47 19.3 0.0
baz=144
129A Stewart Farms, 144.31 33 ⇓P PKPab 14 47 18.9 0.0
baz=144
426A McDonald Obser 144.47 38 ⇓P PKPbc 14 47 20.2 +0.2
baz=144,SNR=17
Y32A R-V Farms, Ver 144.49 29 ⇑P PKPab 14 47 19.4 -0.1
baz=144
TUL1 Tulsa 144.49 23 ⇑P PKPab 14 47 19.3 -0.1
baz=144,SNR=5.5
Z31A Sharp Cattle R 144.69 31 ⇓P PKPab 14 47 20.3 0.0
baz=144,SNR=6.5
328A Wristen Ranch, 144.69 36 ⇓P PKPbc 14 47 20.6 +0.1
baz=144,SNR=17
427A Hayter Ranch, 144.73 37 ⇓P PKPbc 14 47 20.7 -0.1
baz=144,SNR=15
130A Snyder 144.82 32 ⇓P PKPab 14 47 20.8 0.0
baz=145,SNR=5.2
229A Bryant Ranch, 144.84 34 ⇓P PKPbc 14 47 21.1 +0.1
baz=145
526A Mary Lane Ranc 144.85 39 ⇓P PKPbc 14 47 21.6 +0.4
baz=145,SNR=30
SIUC Southern Illin 144.90 14 PKP PKPab 14 47 20.7 -0.1
WCI Wyandotte Cave 144.98 9 ePKIKP PKPab 14 47 20.7 -0.5
WCI Wyandotte Cave 144.98 9 ePKP PKPab 14 47 20.7 -0.5
Z32A Haskell 145.03 30 ⇑P PKPbc 14 47 21.1 -0.4
baz=145,SNR=6.2
131A Roby 145.07 32 ⇑P PKPab 14 47 21.8 +0.1
baz=145,SNR=7.3
329A Wagon Wheel Ra 145.10 35 ⇑P PKPbc 14 47 21.6 -0.2
baz=145,SNR=14
626A Big Bend Ranch 145.18 40 ⇓P PKPdf 14 47 22.6 -0.1
baz=145,SNR=60
428A Kincaid Ranch, 145.24 37 ⇑P PKPdf 14 47 23.0 +0.3
baz=145,SNR=41
230A Sterling City 145.28 33 ⇓P PKPdf 14 47 22.7 0.0
baz=145,SNR=22
ABTX Abilene, Hawle 145.49 31 ⇑P PKPab 14 47 23.1 -0.1
baz=145
528A Cox Ranch, San 145.59 37 ⇑P PKPab 14 47 23.9 +0.1
baz=145,SNR=36
330A Mertzon 145.61 34 ⇑P PKPab 14 47 23.8 0.0
baz=145,SNR=13
TXAR Lajitas Array 145.62 39 PKPbc PKPab 14 47 25.0 +1.1
TXAR pPKPbc pPKPbc 14 47 33.8 -0.3
TXAR Lajitas Array 145.62 39 PKPbc PKPab 14 47 25.0 +1.1
comp=Z,27nm,0.8s,baz=290,slow=1.8,SNR=111
TXAR pPKPbc pPKPbc 14 47 33.8 -0.3
comp=Z,9.0nm,0.6s,baz=300,slow=0.7,SNR=10
231A Bronte 145.68 32 ⇑P PKPbc 14 47 23.7 +0.1
baz=145,SNR=10.0
627A Terlingua Ranc 145.72 39 ⇑P PKPab 14 47 24.3 0.0
baz=146,SNR=113
429A Davenport Ranc 145.78 36 ⇓P PKPab 14 47 24.3 -0.1
baz=146,SNR=13
529A Stev Forest Ra 145.96 37 ⇑P PKPab 14 47 24.9 -0.2
baz=146,SNR=28
628A Black Gap, Mar 146.00 38 ⇑P PKPab 14 47 25.1 -0.2
baz=146,SNR=45
430A Baggett Ranch, 146.04 35 ⇓P PKPab 14 47 25.4 0.0
baz=146,SNR=9.1
JSRW J. Sargeant Re 146.05 358 ePKP PKPdf 14 47 24.0 +0.3
232A Coleman 146.07 32 ⇑P PKPbc 14 47 25.0 +0.2
baz=146,SNR=22
331A San Angelo 146.10 33 ⇑P PKPbc 14 47 25.0 0.0
baz=146,SNR=6.6
332A Millersview 146.41 32 ⇑P PKPbc 14 47 26.2 +0.3
baz=146,SNR=26
530A J-C Ranch, Com 146.46 36 ⇓P PKPbc 14 47 26.3 +0.2
baz=146,SNR=18
431A Sonora 146.48 34 ⇑P PKPbc 14 47 26.1 0.0
baz=146,SNR=6.5
WVT Waverly 146.73 12 ePKP2 PKPdf 14 47 25.2 +0.2
WVT Waverly 146.73 12 ePKPdf PKPdf 14 47 25.1 +0.2
432A Menard 146.78 33 ⇓P PKPbc 14 47 27.1 +0.1
baz=146
531A Rocksprings 146.90 35 ⇑P PKPbc 14 47 27.2 -0.2
baz=147,SNR=22
TZTN Tazewell 147.01 6 PKPbc PKPbc 14 47 26.6 -0.9
JCT Junction City 147.08 34 ePKP2 PKPbc 14 47 27.3 -0.5
JCT Junction City 147.08 34 ePKPbc PKPbc 14 47 27.3 -0.5
JCT Junction City 147.08 34 ⇑P PKPbc 14 47 27.9 0.0
baz=147,SNR=17
WHTX Lake Whitney 147.09 29 ⇓P PKPbc 14 47 28.1 +0.3
baz=147
631A Perdido Creek 147.45 36 ⇓P PKPbc 14 47 28.7 -0.1
baz=147
632A Uvalde 147.83 35 ⇑P PKPbc 14 47 30.0 0.0
baz=148
TKL Tuckaleechee C 147.86 7 ePKPbc PKPbc 14 47 29.1 -0.7
CPCT Cooper Cave 147.97 8 ePKPdf PKPdf 14 47 26.9 -0.2
732A Laxson Ranch, 148.31 36 ⇓P PKPbc 14 47 31.3 +0.1
baz=148
KMSC Kings Mountain 148.58 3 ⇑P PKPbc 14 47 31.1 -0.6
baz=148
HKT Hockley 149.56 29 ePKP2 PKPbc 14 47 35.3 +1.1
HKT Hockley 149.56 29 ePKPbc PKPbc 14 47 35.3 +1.1

*IDC **01** 14:52:02.1±17.0, 28.°72S×178.°93W, h117km±157km, mb3.4/3, mb1 3.6/4, mb1mx3.4/18, mbtmp3.5/4, ML4.2/1, Error ellipse: s-maj=154.1km s-min=81.1km az=7.0*

ISC 01 14:52:25.0±3.0, 29.°9S±0.°1×177.°8E±0.°3, h100km, n35, σ1s74/27, mb3.8/3, North of New Zealand

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	7.69	177	SN	Sn	14 55 38.7	-1.0
PUZ	Puketiti	8.20	177	PN	Pn	14 54 22.3	+1.2
PUZ				SN	Sn	14 55 48.3	-3.7
URZ	Urewera	8.39	184	ePN	Pn	14 54 25.7	+2.0
URZ				SN	Sn	14 55 58.3	+1.5
URZ	Urewera	8.39	184	P	Pn	14 54 23.6	-0.2
	2.1nm,0.3s,baz=323,slow=2.4,SNR=32						
URZ				S	Sn	14 55 59.8	+3.1
	5.8nm,0.3s,baz=90,slow=21,SNR=14						
MWZ	Matawai	8.45	181	PN	Pn	14 54 25.8	+1.2
MWZ				SN	Sn	14 55 58.0	-0.3
CNGZ	Carnagh Statio	8.61	178	PN	Pn	14 54 27.1	+0.5
RAHZ	Arahi	9.05	183	PN	Pn	14 54 33.9	+1.2
RAHZ				SN	Sn	14 56 12.5	-0.3
NMHZ	Naumai	9.25	185	PN	Pn	14 54 36.4	+0.9
BKZ	Black Stump Fm	9.34	186	ePN	Pn	14 54 35.6	-1.0
BKZ				SN	Sn	14 56 21.8	+1.9
MCHZ	McNeill Hill	9.60	185	SN	Sn	14 56 26.3	+0.2
BHHZ	Black Hill Sta	9.71	188	PN	Pn	14 54 42.0	+0.4
KAHZ	Kahuranaki	9.94	184	ePN	Pn	14 54 43.6	-1.1
PNHZ	Pukenui	10.11	187	PN	Pn	14 54 46.0	-1.2
PXZ	Pawanui	10.17	184	ePN	Pn	14 54 45.7	-2.2
TSZ	Takapari Road	10.28	188	ePN	Pn	14 54 46.4	-3.1
ANWZ	Angora Road	10.63	185	SN	Sn	14 56 48.2	-2.8
PRWZ	Pori Road	10.77	187	SN	Sn	14 56 51.8	-2.7
BFZ	Birch Farm	10.87	186	PN	Pn	14 54 55.0	-2.4
BFZ				SN	Sn	14 56 50.4	-6.5
MRZ	Mangatainoka R	10.92	189	PN	Pn	14 54 55.2	-2.9
MRZ				SN	Sn	14 56 52.9	-5.4
TIWZ	Tintock	11.00	188	ePN	Pn	14 54 57.4	-1.8
OGWZ	Otaki Gorge	11.14	190	PN	Pn	14 54 58.3	-2.7
KIW	Kapiti Island	11.22	191	ePN	Pn	14 55 00.2	-2.0
TMWZ	Te Maipa	11.32	187	SN	Sn	14 57 02.2	-5.9
CAW	Cannon Point	11.44	190	ePN	Pn	14 55 01.9	-3.1
TCW	Tory Channel	11.68	193	SN	Sn	14 57 13.5	-3.1
TUWZ	Tuamarina	11.96	194	PN	Pn	14 55 09.8	-2.2
THZ	Tophouse	12.51	197	PN	Pn	14 55 17.9	-1.5
KHZ	Kahutara	12.99	194	PN	Pn	14 55 23.1	-2.4
KHZ				SN	Sn	14 57 42.7	-5.5
LTZ	Lake Taylor	13.63	197	PN	Pn	14 55 31.6	-2.5
OXZ	Oxford	14.20	197	SN	Sn	14 58 10.2	-7.6
MQZ	McQueen's Vall	14.41	195	SN	Sn	14 58 12.3	-10
STKA	Stephens Creek	31.04	257	P	P	14 58 35.9	+2.5
	2.0nm,1.0s,baz=90,slow=12,SNR=3.3						
ASAR	Alice Springs	39.48	268	P	P	14 59 44.5	-1.3
	0.2nm,0.4s,baz=105,slow=7.2,SNR=12						
WRA	Warramunga Arr	40.42	274	P	P	14 59 52.3	-1.4
	1.0nm,0.5s,baz=111,slow=7.9,SNR=20						
FINES	FINESS Array B	143.32	338	PKP	PKPab	15 11 21.2	-22
	0.8nm,0.4s,baz=30,slow=5.5,SNR=9.1						

IDC 01 15:05:21.8±9.4, 9.°26S×126.°88E, h115km±107km, mb3.1/1, mb1 3.3/4, mb1mx3.1/19, mbtmp3.2/4, ML3.7/2, Error ellipse: s-maj=68.4km s-min=44.0km az=17.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	8.87	188	P	Pn	15 07 27.8	+0.7
	0.6nm,0.3s,baz=5.2,slow=8.3,SNR=25						
FITZ				S	Sn	15 09 06.9	+1.6
	0.6nm,0.3s,baz=276,slow=19,SNR=6.4						
WRA	Warramunga Arr	12.83	147	P	Pn	15 08 18.3	-1.9
	0.5nm,0.3s,baz=323,slow=14,SNR=35						
WRA				S	Sn	15 10 40.1	-1.5
	0.4nm,0.3s,baz=318,slow=25,SNR=8.4						
ASAR	Alice Springs	15.82	156	P	P	15 08 59.5	-0.2
	0.2nm,0.3s,baz=327,slow=9.9,SNR=15						
ASAR				S	Sn	15 11 54.5	+0.7
	0.1nm,0.3s,baz=326,slow=22,SNR=4.8						
MKAR	Makanchi Array	68.48	329	P	P	15 16 11.6	0.0
	0.2nm,0.4s,baz=113,slow=6.1,SNR=6.4						

*CSEM **01** 15:20:22.4, 35.°31N×29.°55E, h26km, ML3.1, After ISK*
*ISK **01** 15:20:22.4, 35.°31N×29.°55E, h26km, ML3.1*
*DDA **01** 15:20:30.1, 36.°15N×30.°27E, h7km, MD3.1*

ISC 01 15:20:23.2±3.3, 35.°4N±0.°1×29.°63E±0.°07, h11km±15km, n39, σ1s28/30, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSL	Kastellorizon	0.73	357	eP	Pn	15 20 42.1	+2.6
AKAS	Kas	0.81	359	eP	Pb	15 20 41.1	+1.7
AKAS				eS	Sg	15 20 48.2	-1.2
AKAS	Kas	0.81	359	eP	Pb	15 20 41.1	+1.7
AKAS				eS	Sg	15 20 48.2	-1.2
FETY	Fethiye	1.29	340	ePN	Pb	15 20 47.4	-0.1
FETY	Fethiye	1.29	340	ePn	Pb	15 20 47.4	-0.1
FETY				eSn	Sb	15 21 03.9	-0.2
TURN	Turunc	1.67	330	eP	Pn	15 20 53.2	+0.8
TURN				eS	Sn	15 21 13.4	-0.4
TURN	Turunc	1.67	330	eP	Pn	15 20 53.2	+0.8
TURN				eS	Sn	15 21 13.4	-0.4
GOLH	Golhisar	1.81	358	eP	Pn	15 20 54.6	+0.1
GOLH	Golhisar	1.81	358	eP	Pn	15 20 54.6	+0.1
KARP	Karpathos	2.02	274	eP	Pn	15 20 54.0	-3.3
YER	Yerkesik	2.02	328	ePN	Pn	15 20 56.6	-0.7
YER				eSN	Sn	15 21 22.4	-0.4
YER	Yerkesik	2.02	328	ePn	Pn	15 20 56.7	-0.7
YER				eSn	Sn	15 21 22.4	-0.4
DAT	Datca	2.11	309	ePN	Pn	15 20 57.0	-1.6
DAT	Datca	2.11	309	ePn	Pn	15 20 57.0	-1.6
GAZI	Gazipasa	2.33	69	eP	Pn	15 21 00.6	-0.9
GAZI				eS	Sn	15 21 28.5	-1.7
GAZI	Gazipasa	2.33	69	eP	Pn	15 21 00.6	-0.9
GAZI				eS	Sn	15 21 28.5	-1.7
BODT	Bodrum	2.49	312	ePN	Pn	15 21 02.6	-1.1
BODT	Bodrum	2.49	312	ePn	Pn	15 21 02.6	-1.1
AYDN	Tasoluk	2.64	328	eP	Pn	15 21 05.8	0.0
AYDN				eS	Sn	15 21 36.0	-1.9
AYDN	Tasoluk	2.64	328	eP	Pn	15 21 05.8	0.0
AYDN				eS	Sn	15 21 36.0	-1.9
LEF	Lefka	2.69	96	ePN	Pn	15 21 05.5	-0.8
LEF	Lefka	2.69	96	ePn	Pn	15 21 05.6	-0.8
ZKR	Zakros	2.81	265	eP	Pn	15 21 04.0	-4.1
KHAL	Karahalli	2.94	358	eP	Pn	15 21 12.2	+2.1
KHAL	Karahalli	2.94	358	eP	Pn	15 21 12.2	+2.1
LFK	Lefkose	3.19	91	ePN	Pn	15 21 13.5	+0.1
LFK	Lefkose	3.19	91	ePn	Pn	15 21 13.5	0.0
NPS	Neapolis	3.29	268	eP	Pn	15 21 12.0	-2.7
KONT	Konya--Tatoy	3.34	40	ePN	Pn	15 21 15.8	+0.3
KONT	Konya--Tatoy	3.34	40	ePn	Pn	15 21 15.8	+0.3
LAST	Lasithi	3.41	267	eP	Pn	15 21 08.4	-8.0
EREN	Erenkoy	3.71	87	ePN	Pn	15 21 21.2	+0.8
EREN	Erenkoy	3.71	87	ePn	Pn	15 21 21.2	+0.7
IDI	Anoyia	3.88	269	eP	Pn	15 21 18.6	-4.3
MERS	Mersin	4.21	69	ePN	Pn	15 21 28.2	+0.8
MERS	Mersin	4.21	69	ePn	Pn	15 21 28.3	+0.8
VAM	Vamos	4.43	271	eP	Pn	15 21 25.7	-4.8
KARN	Karanos	4.67	271	eP	Pn	15 21 28.6	-5.1
KYTH	Kithira	5.42	281	eP	Pn	15 21 40.4	-3.7

IDC 01 15:29:36.0±1.2, 31.°39N×104.°20E, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.3/25, mbtmp3.5/3, ML3.3/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/46, Error ellipse: s-maj=92.0km s-min=21.6km az=57.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	16.51	5	Pn	Pn	15 33 29.5	+0.5
	0.1nm,0.3s,baz=168,slow=14,SNR=3.8						
MKAR	Makanchi Array	22.82	319	P	P	15 34 39.2	-1.2
	0.3nm,0.7s,baz=117,slow=6.6,SNR=3.7						
KURBB	Kurchatov Arra	27.06	323	P	P	15 35 20.5	+0.6
	61nm,0.3s,baz=136,slow=8.5,SNR=2.1						
PETK	Petropavlovsk-	43.93	44	LR	LR	15 57 10.7	
	comp=Z,49nm,19.0s,baz=136,slow=38						
WRA	Warramunga Arr	58.67	146	P	P	15 39 35.4	+0.1
	0.6nm,0.5s,baz=341,slow=7.8,SNR=5.6						
ASAR	Alice Springs	61.70	149	P	P	15 39 55.9	-0.2
	0.2nm,0.4s,baz=339,slow=7.2,SNR=4.4						

*ISCJB **01** 15:31:27.7±0.8, 13.°37N±0.°06×90.°93W±0.°05, h46km±6km, mb4.2/15, MS3.8/2, Error ellipse: s-maj=11.9km s-min=4.7km az=31.8*
*CASC **01** 15:31:27.8±1.5, 13.°39N×90.°94W, h35km, MD4.2, ML4.6, mb4.4(NEIC)*
*NEIC **01** 15:31:30.4±1.5, 13.°53N×90.°76W, h63km±13km, mb4.4/1, MD4.8(SNET), Error ellipse: s-maj=22.0km s-min=10.1km az=50.0*
NEIC Felt [II] at San Salvador, El Salvador.
*IDC **01** 15:31:32.4±2.7, 13.°75N×90.°42W, h71km±23km, mb3.9/14, mb1 4.1/16, mb1mx3.9/26, mbtmp3.9/16, MS3.6/5, Ms1 3.7/5, ms1mx3.3/34, Error ellipse: s-maj=27.7km s-min=10.6km az=52.0*

ISC 01 15:31:28.1±1.3, 13.°38N±0.°07×90.°95W±0.°05, h42km±11km, n171, σ1s33/190, mb4.2/15, 46C-53D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IXG	Ixpaco	0.93	32	⇑eP	Pn	15 31 44.1	-0.8
PCG	Pacaya	1.06	18	eP	Pn	15 31 46.3	-0.5
FUG	Fuego 3	1.07	6	eP	Pn	15 31 46.2	-0.6
JAT	Jato	1.14	325	⇓eP	Pn	15 31 47.7	+0.1
FG6		1.17	3	⇓eP	Pn	15 31 47.9	-0.5
NBG	Las Nubes	1.34	26	eP	Pn	15 31 51.2	+0.6
RTR	El Retiro	1.37	68	eP	Pn	15 31 50.0	-1.0
SBLS	San Blas	1.37	70	eP	Pn	15 31 49.9	-1.2
TP2	Tecpan 2	1.40	357	iP	Pn	15 31 51.5	0.0
SNJE	San Jose	1.40	70	eP	Pn	15 31 50.2	-1.1
BOQS	Boqueron	1.67	78	eP	Pn	15 31 54.5	-0.5
BOQS				eS	Sn	15 32 15.1	-0.2
SNET	Serv Nac Est T	1.70	80	eP	Pn	15 31 54.6	-0.8
SNET				eS	Sn	15 32 16.2	+0.1
SNET				AML	AML	15 32 21.7	
	comp=Z,9μm,0.3s						
LFU	La Fuente	1.83	78	eP	Pn	15 31 57.0	-0.1
LFU				eS	Sn	15 32 18.8	-0.3
MTO2	Montecristo 2	1.85	57	eP	Pn	15 31 57.6	0.0
MTO2				eS	Sn	15 32 21.5	+1.6
LFRS	El Faro	1.86	82	eP	Pn	15 31 57.7	+0.1
LBRS	Las Brisas	1.89	79	⇑iP	Pn	15 31 58.2	+0.2
SNVI	San Vicente	2.07	83	eP	Pn	15 32 00.7	+0.2
SNVI				eS	Sn	15 32 25.6	+0.3
SNVI				AML	AML	15 32 29.5	
MRL	Marmol	2.08	36	⇑eP	Pn	15 32 02.1	+1.4
VSM	San Miguel	2.61	89	eP	Pn	15 32 08.4	+0.4
BLLM	Bellamira	2.64	88	eP	Pn	15 32 08.8	+0.5
CAHU	Cacacuatique	2.69	81	eP	Pn	15 32 09.0	-0.2
CNCH	Conchagua	3.04	92	eP	Pn	15 32 14.0	+0.2
CMIG	Matias Romero	5.29	315	P	Pn	15 32 44.3	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CMIG	Matias Romero	5.29	315	P	Pn	15 32 44.3	-0.4
	comp=Z,1.6nm,0.3s,baz=117,slow=9.8,SNR=14						
CMIG				S	Sn	15 33 43.3	-1.1
	comp=Z,5.1nm,0.3s,baz=73,slow=19,SNR=4.0						
CMIG				LR	LR	15 35 11.2	
	comp=Z,795nm,21.0s,baz=161,slow=40						
JTS	JuntasAbangare	6.63	117	P	Pn	15 33 04.7	+1.6
JTS				S	Sn	15 34 14.6	-2.9
JTS	JuntasAbangare	6.63	117	P	Pn	15 33 04.7	+1.6
	comp=Z,3.4nm,0.3s,baz=308,slow=21,SNR=18						
JTS				S	Sn	15 34 14.6	-2.9
	comp=Z,3.7nm,0.3s,baz=270,slow=19,SNR=1.8						
JTS				LR	LR	15 35 52.2	
	comp=Z,410nm,19.0s,baz=282,slow=41						
TEIG	Tepich	7.27	20	P	Pn	15 33 13.3	+1.4
TEIG	Tepich	7.27	20	P	Pn	15 33 13.3	+1.4
	comp=Z,18nm,0.3s,baz=197,slow=5.6,SNR=80						
TEIG				LR	LR	15 35 46.0	
	comp=Z,254nm,21.2s,baz=41,slow=38						
ROSC	El Rosal	18.46	116	P	Pn	15 35 44.4	+3.1
ROSC	El Rosal	18.46	116	P	Pn	15 35 44.4	+3.1
	comp=Z,0.4nm,0.3s,baz=282,slow=14,SNR=3.9						
432A	Menard	19.22	336	⇓P	Pn	15 35 50.6	+0.6
	baz=19						
530A	J-C Ranch, Com	19.25	332	⇑P	Pn	15 35 50.9	+0.5
	baz=19						
431A	Sonora	19.39	334	⇑P	Pn	15 35 52.5	+0.5
	baz=19,SNR=6.1						
628A	Black Gap, Mar	19.48	327	⇓P	Pn	15 35 53.8	+0.8
	baz=20,SNR=16						
529A	Stev Forest Ra	19.65	330	⇑P	P	15 35 54.8	+1.3
	baz=20,SNR=5.8						
332A	Millersview	19.66	337	⇓P	P	15 35 54.6	+1.1
	baz=20						
627A	Terlingua Ranc	19.72	326	⇓P	Pn	15 35 56.3	+0.3
	baz=20,SNR=16						
430A	Baggett Ranch,	19.75	333	⇓P	Pn	15 35 56.2	-0.1
	baz=20						
TXAR	Lajitas Array	19.77	325	P	Pn	15 35 57.5	+0.8
TXAR				PcP	PcP	15 40 14.1	+2.0
TXAR	Lajitas Array	19.77	325	P	Pn	15 35 57.5	+0.8
	comp=Z,0.3nm,0.3s,baz=154,slow=13,SNR=46						
TXAR				PcP	PcP	15 40 14.1	+2.0
	comp=Z,0.1nm,0.3s,baz=201,slow=6.7,SNR=4.2						
331A	San Angelo	19.86	336	⇑P	P	15 35 57.0	+1.3
	baz=20						
429A	Davenport Ranc	19.91	331	⇑P	P	15 35 57.6	+1.2
	baz=20,SNR=6.3						
528A	Cox Ranch, San	19.96	329	⇑P	P	15 35 58.3	+1.3
	baz=20						
232A	Coleman	20.07	338	⇑P	P	15 35 59.3	+1.2
	baz=20						
626A	Big Bend Ranch	20.20	325	⇓P	Pn	15 36 01.9	+0.1
	baz=20,SNR=31						
330A	Mertzon	20.25	334	⇓P	P	15 36 01.2	+1.1
	baz=20						
231A	Bronte	20.37	337	⇓P	P	15 36 01.8	+0.6
	baz=20						
428A	Kincaid Ranch,	20.37	330	⇓P	P	15 36 03.1	+1.8
	baz=20,SNR=7.7						
526A	Mary Lane Ranc	20.57	326	⇓P	P	15 36 04.9	+1.3
	baz=21,SNR=7.9						
230A	Sterling City	20.64	335	⇑P	P	15 36 05.1	+0.8
	baz=21						
329A	Wagon Wheel Ra	20.68	332	⇑P	P	15 36 05.1	+0.4
	baz=21						
427A	Hayter Ranch,	20.83	329	⇓P	P	15 36 07.4	+1.1
	baz=21,SNR=13						
328A	Wristen Ranch,	20.97	331	⇑P	P	15 36 09.2	+1.4
	baz=21,SNR=22						
426A	McDonald Obser	21.01	327	⇓P	P	15 36 09.7	+1.3
	baz=21,SNR=12						
Z32A	Haskell	21.30	340	⇑P	P	15 36 11.7	+0.4
	baz=21						
326A	Caldwell Ranch	21.50	328	⇑P	P	15 36 14.6	+1.1
	baz=22,SNR=11						
Z31A	Sharp Cattle R	21.54	339	⇑P	P	15 36 14.3	+0.4
	baz=22						
129A	Stewart Farms,	21.61	334	⇑P	P	15 36 14.5	-0.1
	baz=22						
425A	Indio Mountain	21.62	326	⇓P	P	15 36 16.0	+1.2
	baz=22,SNR=54						
227A	Bennet, Jal	21.72	331	⇑P	P	15 36 16.6	+0.7
	baz=22						
128A	Castleberry Fa	21.86	333	⇓P	P	15 36 17.5	+0.1
	baz=22						
325A	Bean Ranch, Si	22.06	327	⇓P	P	15 36 20.3	+0.6
	baz=22,SNR=8.6						
Z29A	Hungry Hill Ra	22.09	335	⇑P	P	15 36 19.2	-0.5
	baz=22						
226B	Tecolote Peak,	22.20	329	⇓P	P	15 36 21.8	+0.7
	baz=22,SNR=19						
324A	Moseley Ranch,	22.39	326	⇓P	P	15 36 23.8	+0.6
	baz=22,SNR=25						
MNTX	Cornudas Mount	22.54	326	⇓P	P	15 36 25.1	+0.5
	baz=23,SNR=26						
225A	Deer Hill, Car	22.56	328	⇓P	P	15 36 25.7	+0.7
	baz=23,SNR=11						
Z27A	Tatum	22.77	333	⇑P	P	15 36 27.0	-0.2
	baz=23						
X30A	Coker Ranch, T	22.82	338	⇓P	P	15 36 28.0	+0.4
	baz=23						
224A	Cornudas Mount	22.91	327	⇓P	P	15 36 28.8	+0.2
	baz=23,SNR=15						
Z26A	Caprock	23.09	331	⇓P	P	15 36 30.2	-0.2
	baz=23						
TKL	Tuckaleechee C	23.11	15	P	P	15 36 28.9	-1.5
TKL	Tuckaleechee C	23.11	15	P	P	15 36 28.9	-1.5
	comp=Z,6.3nm,0.9s,baz=166,slow=8.8,SNR=3.7						
TKL				LR	LR	15 46 13.1	
	comp=Z,225nm,19.7s,baz=209,slow=39						
X29A	Tulia	23.12	337	⇓P	P	15 36 29.8	-0.9
	baz=23						
124A	Stringfield Ra	23.36	328	⇓P	P	15 36 34.6	+1.4
	baz=23,SNR=13						
Z25A	Roswell	23.45	330	⇑P	P	15 36 34.3	+0.3
	baz=24						
Y26A	Elida	23.56	332	⇑P	P	15 36 35.0	0.0
	baz=24						
W29A	Amraillo	23.70	338	⇓P	P	15 36 36.5	+0.2
	baz=24						
222A	Williams Famil	23.80	324	⇓P	P	15 36 38.3	+1.0
	baz=24						
Z24A	Sheeppen Canyo	23.81	329	⇑P	P	15 36 37.5	0.0
	baz=24						
Y25A	Mesa, Roswell	23.96	331	⇓P	P	15 36 40.0	+1.3
	baz=24,SNR=6.1						
320A	Kipp Ranch, An	24.09	321	⇓P	P	15 36 42.8	+2.7
	baz=24,SNR=7.1						
Z23A	Rita Site, Whi	24.20	327	⇓P	P	15 36 42.5	+1.6
	baz=24,SNR=11						
W27A	Bowe Ranch, En	24.20	335	⇓P	P	15 36 41.9	+1.0
	baz=24						
Y24A	Capitan	24.32	330	⇓P	P	15 36 43.3	+1.1
	baz=24,SNR=6.9						
220A	Playas Peak, P	24.49	322	⇓P	P	15 36 45.6	+2.0
	baz=24,SNR=15						
121A	Cookes Peak, D	24.50	324	⇑P	P	15 36 45.6	+1.8
	baz=25,SNR=10.0						
Z22A	Elephant Butte	24.59	326	⇓P	P	15 36 45.9	+1.4
	baz=25,SNR=18						
Y23A	Lovelace Mesa,	24.64	329	⇓P	P	15 36 47.3	+2.3
	baz=25,SNR=14						
W25A	X Bar L Ranch,	24.93	333	⇑P	P	15 36 49.2	+1.6
	baz=25						
120A	U Bar Ranch, L	25.01	323	⇑P	P	15 36 51.0	+2.6
	baz=25,SNR=9.4						
Z21A	St. Cloud Mine	25.01	325	⇑P	P	15 36 50.6	+2.2
	baz=25,SNR=7.5						
Y22A	Socorro	25.11	327	⇑P	P	15 36 51.5	+2.2
	baz=25,SNR=9.9						
W24A	Lazy 6 Ranch,	25.35	331	⇑P	P	15 36 53.1	+1.6
	baz=25						
Z20A	Nine Sixteen R	25.39	324	⇑P	P	15 36 54.2	+2.4
	baz=25,SNR=13						
Y21A	Point of Rocks	25.54	326	⇑P	P	15 36 55.5	+2.2
	baz=26,SNR=5.2						
ANMO	Albuquerque	25.64	330	P	P	15 36 55.8	+1.7
ANMO	Albuquerque	25.64	330	P	P	15 36 55.8	+1.7
	comp=Z,1.4nm,0.4s,baz=138,slow=11,SNR=4.9						
W20A	Ramah	26.83	327	⇓P	P	15 37 06.9	+2.0
	baz=27,SNR=5.7						
X18A	Snowflake	27.19	324	⇓P	P	15 37 10.4	+2.3
	baz=27						
U20A	Newcomb	27.80	329	⇓P	P	15 37 15.4	+1.9
	baz=28						
X16A	Lo Mia Camp, P	27.99	322	⇑P	P	15 37 18.3	+3.0
	baz=28,SNR=6.9						
S22A	4UR Ranch, Cre	28.09	333	⇓P	P	15 37 17.7	+1.5
	baz=28						
MVCO	Mesa Verde	28.44	330	⇑P	P	15 37 20.7	+1.4
	baz=28						
WUAZ	Wupatki	28.71	324	⇓P	P	15 37 23.6	+1.9
	baz=29						
PDMCI	Parker Dam,Lak	29.59	319	⇓P	P	15 37 31.7	+2.4
	baz=30						
U15A	North Rim	29.88	324	⇓P	P	15 37 33.6	+1.4
	baz=30						
W13A	Hualapai Mount	29.94	320	⇑P	P	15 37 34.5	+1.9
	baz=30						
BC3	Big Chuckawall	30.06	316	⇓P	P	15 37 35.4	+1.9
	baz=30						
GMRC	Granite Mounta	30.87	318	⇓P	P	15 37 43.0	+2.2
	baz=31						
N20A	Spence Gulch,	31.26	334	⇑P	P	15 37 45.9	+1.7
	baz=31						
P17A	Butcher Ranch,	31.31	330	⇓P	P	15 37 45.9	+1.3
	baz=31						
L21A	Rawlins	31.85	336	⇓P	P	15 37 50.3	+0.9
	baz=32						
O17A	Robinson Place	31.87	331	⇑P	P	15 37 50.7	+1.1
	baz=32						
N17A	Moffit Pass	32.50	331	⇓P	P	15 37 56.5	+1.3
	baz=32						
MPMC	Manual Prospec	32.83	318	⇑P	P	15 37 59.7	+1.6
	baz=33						
R11A	Troy Canyon, C	33.11	323	⇑P	P	15 38 02.4	+2.1
	baz=33						
PDAR	Pinedale Array	33.41	335	P	P	15 38 03.0	0.0
PDAR				PcP	PcP	15 40 44.2	+0.3
PDAR	Pinedale Array	33.41	335	P	P	15 38 03.0	0.0
	comp=Z,0.4nm,0.6s,baz=144,slow=8.5,SNR=3.5						
PDAR				PcP	PcP	15 40 44.2	+0.3
	comp=Z,0.6nm,0.9s,baz=192,slow=1.4,SNR=4.9						
L15A	Malad City	34.05	331	⇑P	P	15 38 09.0	+0.4
	baz=34						
NVAR	Mina Array Bea	34.79	321	P	P	15 38 17.9	+2.8
NVAR				PcP	PcP	15 40 49.5	+1.6
NVAR	Mina Array Bea	34.79	321	P	P	15 38 17.9	+2.8
	comp=Z,8.1nm,0.7s,baz=133,slow=8.6,SNR=18						
NVAR				PcP	PcP	15 40 49.5	+1.6
	comp=Z,0.9nm,0.4s,baz=141,slow=4.3,SNR=4.2						
SAML	Samuel	35.39	127	*e*P	P	15 38 18.6	-1.6
	comp=Z,5.0nm,1.0s						
HLID	Hailey	36.21	331	⇑P	P	15 38 28.2	+1.1
	baz=36						
ULM	Lac du Bonnet	36.99	355	P	P	15 38 30.7	-2.7
ULM	Lac du Bonnet	36.99	355	P	P	15 38 30.7	-2.7
	comp=Z,3.5nm,0.7s,baz=178,slow=9.8,SNR=5.9						
LPAZ	La Paz	37.12	142	P	P	15 38 36.2	+0.6
LPAZ	La Paz	37.12	142	P	P	15 38 36.2	+0.6
	comp=Z,0.6nm,0.6s,baz=288,slow=9.6,SNR=4.3						
H12A	Diamond D Ranc	37.16	331	⇓P	P	15 38 36.2	+1.0
	baz=37						
G13A	Cobalt	37.29	332	⇑P	P	15 38 37.3	+1.0
	baz=37						
E16A	East Helena	37.37	336	⇑P	P	15 38 37.7	+0.8
	baz=37						
C19A	Slack Wire Ran	37.43	340	⇓P	P	15 38 38.2	+0.9
	baz=37						
D17A	Six Diamond Ra	37.51	338	⇑P	P	15 38 38.9	+0.8
	baz=38						
F13A	Darby	37.88	333	⇑P	P	15 38 42.0	+0.8
	baz=38						
E14A	Clinton	38.01	334	⇑P	P	15 38 43.3	+0.9
	baz=38						
B19A	Brinkman Farms	38.02	340	⇓P	P	15 38 43.5	+1.2
	baz=38						
D13A	Huson	38.95	334	⇓P	P	15 38 50.1	0.0
	baz=39						
A15A	Johnson Ranch,	39.79	338	⇓P	P	15 38 57.9	+0.8
	baz=40						
A14A	Double T Ranch	40.04	337	⇑P	P	15 39 00.0	+0.8
	baz=40						
SIV	San Ignacio	41.53	134	P	P	15 39 12.1	+0.4
SIV				PcP	PcP	15 41 09.3	+0.5
SIV	San Ignacio	41.53	134	P	P	15 39 12.1	+0.4
	comp=Z,5.0nm,0.7s,baz=316,slow=8.6,SNR=26						
SIV				PcP	PcP	15 41 09.3	+0.5
	comp=Z,1.5nm,0.8s,baz=288,slow=6.4,SNR=4.2						
SCHQ	Schefferville	45.46	19	P	P	15 39 40.4	-2.5
SCHQ				PcP	PcP	15 41 20.6	-0.8
SCHQ	Schefferville	45.46	19	P	P	15 39 40.4	-2.5
	comp=Z,1.7nm,0.4s,baz=222,slow=8.2,SNR=8.6						
SCHQ				PcP	PcP	15 41 20.6	-0.8
	comp=Z,1.1nm,0.5s,baz=260,slow=6.1,SNR=2.8						
BDFB	Brasilia	51.33	123	P	P	15 40 28.9	+0.1
BDFB	Brasilia	51.33	123	P	P	15 40 28.9	+0.1
	comp=Z,2.9nm,0.8s,baz=299,slow=7.0,SNR=3.8						
YKA	Yellowknife Ar	51.86	346	P	P	15 40 30.7	-1.3
YKA				PcP	PcP	15 41 43.8	-0.6
YKA	Yellowknife Ar	51.86	346	P	P	15 40 30.7	-1.3
	comp=Z,1.1nm,0.8s,baz=149,slow=7.7,SNR=15						
YKA				PcP	PcP	15 41 43.7	-0.6
	comp=Z,0.5nm,0.6s,baz=148,slow=4.0,SNR=7.1						
ILAR	Eielson Array	63.81	337	P	P	15 41 55.3	-0.5
ILAR				PcP	PcP	15 42 32.2	+0.9
ILAR	Eielson Array	63.81	337	P	P	15 41 55.3	-0.5
	comp=Z,0.5nm,0.4s,baz=122,slow=5.4,SNR=13						
ILAR				PcP	PcP	15 42 32.2	+0.9
	comp=Z,0.5nm,0.7s,baz=119,slow=2.6,SNR=4.1						
ILAR				LR	LR	16 11 42.2	
	comp=Z,94nm,19.3s,baz=124,slow=38						
EKA	Eskdalemuir Ar	77.87	36	P	P	15 43 17.7	-3.6
EKA	Eskdalemuir Ar	77.87	36	P	P	15 43 17.7	-3.6
	comp=Z,1.8nm,0.8s,baz=274,slow=4.2,SNR=5.3						
DBIC	Dimbokro	84.70	84	P	P	15 43 57.7	-0.7
DBIC	Dimbokro	84.70	84	P	P	15 43 57.7	-0.7
	comp=Z,9.5nm,0.6s,baz=245,slow=4.8,SNR=13						
TORD	Torodi Ar. Bea	89.53	77	P	P	15 44 18.9	-2.8
TORD	Torodi Ar. Bea	89.53	77	P	P	15 44 18.9	-2.8
	comp=Z,0.7nm,0.6s,baz=293,slow=5.2,SNR=6.4						
KURK	Kurchatov	115.53	7	PKP	PKPdf	15 50 05.7	+0.1
KURBB	Kurchatov Arra	115.61	7	PKP	PKPdf	15 50 05.7	-0.1
	comp=Z,0.9nm,0.7s,baz=351,slow=2.0,SNR=10						
SONM	Songino Array	117.12	347	PKP	PKPdf	15 50 09.4	+0.4
SONM	Songino Array	117.12	347	PKP	PKPdf	15 50 09.4	+0.4
	comp=Z,0.2nm,0.4s,baz=0.0,slow=1.4,SNR=2.6						
BOSA	Boshof	119.17	115	PKP	PKPdf	15 50 14.0	+0.6
BOSA	Boshof	119.17	115	PKP	PKPdf	15 50 14.0	+0.6
	comp=Z,1.4nm,0.7s,baz=155,slow=1.9,SNR=3.7						
MKAR	Makanchi Array	119.80	5	PKP	PKPdf	15 50 12.8	-1.2
MKAR	Makanchi Array	119.80	5	PKP	PKPdf	15 50 12.8	-1.2
	comp=Z,0.7nm,0.7s,baz=354,slow=2.0,SNR=6.4						
WRA	Warramunga Arr	136.22	255	PKP	PKPdf	15 50 46.8	+0.8
WRA	Warramunga Arr	136.22	255	PKP	PKPdf	15 50 46.8	+0.8
	comp=Z,1.0nm,0.8s,baz=86,slow=1.6,SNR=11						
ASAR	Alice Springs	136.41	250	PKP	PKPdf	15 50 46.6	+0.4
ASAR	Alice Springs	136.41	250	PKP	PKPdf	15 50 46.6	+0.4
	comp=Z,0.2nm,0.4s,baz=79,slow=2.7,SNR=4.4						
FITZ	Fitzroy Crossi	144.51	258	PKPbc	PKPab	15 50 59.6	+0.3
FITZ	Fitzroy Crossi	144.51	258	PKPbc	PKPab	15 50 59.6	+0.3
	comp=Z,1.4nm,0.8s,baz=56,slow=7.3,SNR=3.2						
CMAR	Chiang Mai Arr	146.89	343	PKPbc	PKPbc	15 51 07.3	+0.4
CMAR	Chiang Mai Arr	146.89	343	PKPbc	PKPbc	15 51 07.3	+0.4
	comp=Z,6.3nm,0.7s,baz=342,slow=3.4,SNR=64						

*IDC **01** 15:45:03.3±5.5, 36°.03N×70°.81E, h70km±47km, mb3.4/6, mb1 3.6/9, mb1mx3.3/29, mbtmp3.5/9, ML4.0/3, Error ellipse: s-maj=38.4km s-min=26.3km az=24.0*

*ISCJB **01** 15:45:09.0±0.8, 36°.42N±0°.05×71°.23E±0°.09, h188km, mb3.4/5, Error ellipse: s-maj=11.0km s-min=6.5km az=158.2*

*NNC **01** 15:45:11.2±5.7, 36°.69N×70°.71E, h145km±64km, mb3.1, mpv4.1, Error ellipse: s-maj=46.6km s-min=31.1km az=29.0*

ISC 01 15:45:09.3±1.4**, 36°.5N**±0°.1×**71°.0E**±0°.1**, h188km, n28, σ2.s30**/25**, mb3.4**/5**, 8C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	6.01	20	P	Pn	15 46 36.6	-0.3
	SNR=40						
KZA	Kyzart	6.49	29	P	Pn	15 46 42.9	-0.2
	SNR=16						
EKS2	Erkin-Say	6.53	18	P	Pn	15 46 43.6	+0.3
	SNR=7.1						
KK31	Karatay Array	6.62	357	⇓P	Pn	15 46 43.5	-0.9
	3.9nm,0.3s,baz=187,slow=13,SNR=178						
KK31				⇑S	Sn	15 47 56.0	-3.7
	2.9nm,0.4s,baz=190,slow=20,SNR=6.5						
AAK	Ala-Archa	6.71	23	P	Pn	15 46 46.2	+0.5
	SNR=40						
AAK	Ala-Archa	6.71	23	P	Pn	15 46 46.4	+0.6
	7.3nm,0.3s,baz=170,slow=6.0,SNR=143						
AAK				S	Sn	15 48 01.1	-0.9
	0.8nm,0.3s,baz=332,slow=22,SNR=5.6						
KBK	Karagaybulak	6.88	25	P	Pn	15 46 48.7	+0.7
	SNR=7.7						
CHMS	Chumysh	7.12	23	P	Pn	15 46 51.8	+0.8
	SNR=7.4						
TKM2	Tokmak 2	7.34	28	⇓P	Pn	15 46 54.5	+0.4
	7.4nm,0.6s						
TKM2				⇑S	Sn	15 48 17.6	+0.5
	2.6nm,0.7s						
TKM2	Tokmak 2	7.34	28	P	Pn	15 46 54.4	+0.4
	SNR=11						
PYUN	Piuthan	13.15	126	*e*P	Pn	15 48 04.6	-4.7
PYUN				*e*S	Sn	15 50 18.0	-18
MKAR	Makanchi Array	13.31	36	P	P	15 48 14.8	+0.7
	0.0nm,0.3s,baz=217,slow=14,SNR=2.5						
DANN	Dangsing	13.49	123	*e*P	Pn	15 48 10.0	-3.7
DMN	Daman	14.88	123	*e*P	Pn	15 48 27.7	-3.1
AB31	Akbulak array	15.09	331	⇑P	P	15 48 33.7	0.0
	0.9nm,0.3s,baz=159,slow=13,SNR=55						
AB31				⇑S	S	15 51 15.4	-6.1
	0.8nm,0.5s,baz=151,slow=25,SNR=4.4						
KURBB	Kurchatov Arra	15.14	19	P	P	15 48 40.1	+5.8
	0.1nm,0.3s,baz=211,slow=10,SNR=8.1						
GUN	Gumba	15.22	120	*e*P	Pn	15 48 33.5	-1.6
VOSK	Vostochnaya	16.23	360	⇑P	Pn	15 48 47.8	+1.1
	0.9nm,0.7s						
ZRNK	Zerenda	16.52	356	⇑P	P	15 48 47.8	-1.7
	6.4nm,1.2s						
AKTO	Aktyubinsk	16.79	330	⇑P	Pn	15 48 57.9	+4.5
	0.6nm,0.8s						
AKTO				⇑S	S	15 51 59.2	+1.4
	0.2nm,0.7s						
AKTO	Aktyubinsk	16.79	330	P	Pn	15 48 57.6	+4.2
	0.6nm,0.3s,baz=146,slow=13,SNR=16						
TAPN	Taplejung	16.85	118	*e*P	Pn	15 48 55.0	+0.2
ZALV	Zalesovo Beam	19.93	24	P	Pn	15 49 33.0	+2.4
	1.8nm,0.4s,baz=208,slow=11,SNR=17						
FINES	FINESS Array B	37.49	326	P	P	15 52 12.4	+8.0
	1.4nm,0.8s,baz=104,slow=10,SNR=2.6						
ARCES	ARCESS Array B	41.15	338	P	P	15 52 44.0	+9.3
	3.4nm,0.9s,baz=106,slow=8.9,SNR=4.5						
TORD	Torodi Ar. Bea	65.70	269	P	P	15 55 39.2	+5.3
	0.2nm,0.3s,baz=49,slow=5.9,SNR=5.9						
YKA	Yellowknife Ar	81.26	3	P	P	15 57 13.7	+10
	0.2nm,0.5s,baz=352,slow=5.4,SNR=5.9						
WRA	Warramunga Arr	82.00	122	P	P	15 57 15.5	+7.1
	0.2nm,0.6s,baz=322,slow=4.4,SNR=3.0						

IDC 01 16:19:15.6±3.6**, 21°.39S**×**178°.69W, h560km**±41km**, mb3.4**/12**, mb1 3.6**/13**, mb1mx3.4**/22**, mbtmp3.4**/13**, Error ellipse: s-maj=22.1km s-min=18.1km az=145.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	17.20	191	P	P	16 22 44.8	-0.6
	1.0nm,0.3s,baz=170,slow=2.2,SNR=8.4						
URZ				S	S	16 25 34.1	-2.4
	0.3nm,0.3s,baz=180,slow=19,SNR=3.0						
CTA	Charters Tower	32.77	266	P	P	16 25 03.2	0.0
	4.3nm,0.6s,baz=101,slow=10,SNR=8.9						
STKA	Stephens Creek	36.83	245	P	P	16 25 37.5	+0.6
	0.8nm,0.7s,baz=94,slow=10,SNR=3.9						
ASAR	Alice Springs	43.69	258	P	P	16 26 32.0	+0.2
	6.9nm,0.9s,baz=93,slow=8.2,SNR=104						
ASAR				PcP	PcP	16 28 06.5	+0.1
	0.5nm,0.6s,baz=113,slow=4.3,SNR=5.1						
WRA	Warramunga Arr	43.84	263	P	P	16 26 32.1	-0.9
	3.4nm,0.8s,baz=95,slow=5.6,SNR=38						
FITZ	Fitzroy Crossi	52.27	263	P	P	16 27 36.0	+0.2
	0.6nm,0.3s,baz=106,slow=9.1,SNR=5.3						
MJAR	Matsushiro Arr	70.55	324	P	P	16 29 33.4	-1.2
	1.7nm,0.6s,baz=152,slow=6.3,SNR=6.2						
YBH	Yreka Blue Hor	81.38	39	P	P	16 30 35.0	+0.5
	0.7nm,0.4s,baz=226,slow=5.2,SNR=5.5						
NVAR	Mina Array Bea	82.11	44	P	P	16 30 38.6	+0.3
	1.4nm,0.6s,baz=220,slow=8.3,SNR=2.8						
TXAR	Lajitas Array	88.08	58	P	P	16 31 08.4	+1.1
	0.9nm,0.9s,baz=230,slow=5.9,SNR=6.2						
ILAR	Eielson Array	89.32	13	P	P	16 31 10.7	-1.4
	0.8nm,0.4s,baz=226,slow=5.6,SNR=19						
CMAR	Chiang Mai Arr	89.80	290	P	P	16 31 17.2	+1.8
	1.5nm,0.9s,baz=121,slow=3.6,SNR=8.9						
PDAR	Pinedale Array	90.05	43	P	P	16 31 16.1	-0.2
	1.4nm,0.6s,baz=212,slow=3.2,SNR=13						
ZALV	Zalesovo Beam	110.78	321	PKiKP	PKiKP	16 36 44.3	-0.7
	0.3nm,0.3s,baz=222,slow=1.7,SNR=3.6						
MKAR	Makanchi Array	111.33	313	PKiKP	PKiKP	16 36 45.6	-0.7
	0.2nm,0.4s,baz=94,slow=1.0,SNR=7.5						
MKAR				PP	PP	16 37 37.5	-0.4
	0.5nm,0.8s,baz=356,slow=7.3,SNR=5.5						
ARCES	ARCESS Array B	129.67	349	PKP	PKPdf	16 37 20.5	-0.2
	4.8nm,0.9s,baz=36,slow=1.7,SNR=8.5						
FINES	FINESS Array B	136.43	343	PKP	PKPdf	16 37 31.6	-2.0
	3.0nm,0.9s,baz=85,slow=1.5,SNR=4.4						
NOA	NORSAR Array B	139.78	353	PKhKP	PKPpre	16 37 33.2	
	0.6nm,0.7s,baz=6.5,slow=3.1,SNR=3.6						
AKASG	Malin Array Be	143.47	330	PKP	PKPab	16 37 44.2	-0.9
	3.5nm,0.6s,baz=44,slow=4.2,SNR=11						
BRTR	Keskin Array B	146.94	311	PKPbc	PKPbc	16 37 55.6	-0.5
	1.2nm,0.6s,baz=134,slow=4.2,SNR=8.8						
KHC	Kasperske Hory	150.64	343	*e*P	PKPbc	16 38 04.5	-0.2
GERES	GERESS Array B	150.87	343	PKPbc	PKPbc	16 38 05.2	0.0
	1.5nm,0.6s,baz=29,slow=2.2,SNR=12						
TORD	Torodi Ar. Bea	171.80	183	PKP	PKPdf	16 38 20.9	-0.2
	0.9nm,0.8s,baz=197,slow=1.5,SNR=4.8						
TORD				PKPab	PKPab	16 39 47.4	+0.3
	0.6nm,0.9s,baz=193,slow=4.4,SNR=3.3						

IDC 01 16:29:18.6±1.9**, 5°.16N**×**127°.46E, h0km, mb3.5**/5**, mb1 3.7**/5**, mb1mx3.4**/23**, mbtmp3.5**/5**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.3**/19**, Error ellipse: s-maj=100.3km s-min=25.3km az=69.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	23.19	184	P	P	16 34 26.7	-0.4
	2.0nm,0.9s,baz=349,slow=10,SNR=2.6						
FITZ				LR	LR	16 44 32.9	
	comp=Z,54nm,18.8s,baz=154,slow=39						
WRA	Warramunga Arr	25.85	165	P	P	16 34 52.5	+0.4
	0.7nm,0.6s,baz=346,slow=10,SNR=8.5						
ASAR	Alice Springs	29.34	168	P	P	16 35 23.4	+0.1
	0.1nm,0.5s,baz=349,slow=7.2,SNR=5.6						
STKA	Stephens Creek	39.22	161	P	P	16 36 48.5	-0.3
	1.4nm,0.8s,baz=7.1,slow=8.1,SNR=3.6						
MKAR	Makanchi Array	56.81	324	P	P	16 39 04.8	-0.1
	0.1nm,0.4s,baz=118,slow=8.6,SNR=4.6						

MAN 01 16:33:54, 9°.04N×**122°.49E, h25km, mb4.6, ML3.5, MS3.5, 2C-2D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	Ipil	1.25	176	⇓*e*P	Pn	16 34 15.2	-0.7
IPIL				*e*S	Sn	16 34 30.5	-1.5
PAGZ	Pagadian	1.48	143	*e*P	Pn	16 34 19.2	+0.1
TBP	Tagbilaran	1.50	65	*e*P	Pn	16 34 19.4	0.0
TBP				*i* S	Sn	16 34 38.8	+0.6
GUIM	Jordan	1.57	4	*e*P	Pn	16 34 20.4	0.0
LLP	Lapu-Lapu	1.93	49	⇑*i*P	Pn	16 34 25.3	0.0
LLP				*i* S	Sn	16 34 49.0	+0.2
CUYO	Cuyo Island	2.31	321	*e*P	Pn	16 34 31.1	+0.7
CTBH	Cotabato--PC H	2.51	136	⇓*i*P	Pb	16 34 37.0	-1.5
RCP	Roxas	2.51	6	⇑*e*P	Pn	16 34 34.7	+1.4
RCP				*i* S	Sb	16 35 08.6	-0.4
MSLP	Maasin	2.58	65	*e*P	Pn	16 34 35.4	+1.2
ENPP	El Nido	3.70	306	*e*P	Pn	16 34 50.4	+0.8

JMA 01 16:35:59.8±0.4**, 37°.24N**×**135°.15E, h383km**±4km**, M3.5, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWT	Wachi	1.96	174	P	Pn	16 36 54.1	+0.1
JNG	Nsakai	2.51	108	P	Pn	16 36 58.4	+0.5
MAT	Matsushiro	2.55	105	P	Pn	16 36 58.5	+0.4
JSD	Sado	2.59	71	P	Pn	16 36 58.6	+0.3
JHS	Saijyo	2.78	217	P	Pn	16 37 00.2	+0.2
JFT	Otama	4.14	85	P	Pn	16 37 13.1	+0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMM	**Marumori**	**4.53**	**80**	P	Pn	16 37 16.3	+0.3
JFK	**Kawauchi**	**4.57**	**87**	P	Pn	16 37 16.7	+0.2
JMK	**Ichinoseki**	**5.08**	**69**	P	Pn	16 37 22.3	+0.5
JMK				*e*S	S	16 38 26.4	-1.9
BSO1	**Boso 1**	**5.39**	**117**	P	Pn	16 37 24.1	-0.3

IDC 01 17:03:11.7±1.4, 63°.19S×148°.10E, h0km, mb4.0/5, mb1 4.2/5, mb1mx4.1/12, mbtmp4.0/5, MS3.5/2, Ms1 3.4/2, ms1mx2.8/21, Error ellipse: s-maj=98.8km s-min=18.1km az=85.0

ISC 01 17:03:12.5±1.1**, 63°.2S**±0°.1×**149°.2E**±0°.6**, h10km, n19, σ1s.13**/18**, mb4.1**/5**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	**Vanda**	**14.94**	**169**	Pn	**Pn**	**17 06 41.7**	**-1.6**
	2.1nm,0.3s,baz=340,slow=14,SNR=72						
VNDA				Sn	Sn	17 09 20.1	-8.3
	0.6nm,0.3s,baz=223,slow=16,SNR=4.5						
QSPA	**South Pole Qui**	**26.89**	**180**	P	**P**	**17 08 54.7**	**+1.5**
	1.5nm,0.6s,baz=42,slow=12,SNR=14						
URZ	**Urewera**	**30.12**	**47**	LR	LR	17 18 03.8	
	comp=Z,69nm,20.5s,baz=86,slow=29						
STKA	**Stephens Creek**	**31.71**	**348**	P	**P**	**17 09 37.7**	**+1.6**
	2.8nm,1.0s,baz=160,slow=12,SNR=3.2						
MAW	**Mawson**	**33.44**	**224**	LR	LR	17 22 53.2	
	comp=Z,95nm,18.5s,baz=31,slow=36						
ASAR	**Alice Springs**	**40.82**	**338**	P	**P**	**17 10 53.2**	**-0.8**
	3.0nm,0.7s,baz=168,slow=8.9,SNR=74						
SNAA	**Sanae**	**44.04**	**192**	*e*P	**P**	**17 11 20.9**	**+1.2**
SNAA	**Sanae**	**44.04**	**192**	P	**P**	**17 11 18.9**	**-0.8**
	0.6nm,0.6s,baz=157,slow=14,SNR=11						
WRA	**Warramunga Arr**	**44.40**	**340**	P	**P**	**17 11 21.9**	**-1.2**
	2.8nm,0.7s,baz=170,slow=8.4,SNR=45						
WRA				PcP	**PP**	**17 13 06.1**	**-0.4**
	0.6nm,0.6s,baz=171,slow=3.2,SNR=5.8						
VNA3	**Neumayer Olymp**	**45.04**	**189**	*e*P	**P**	**17 11 28.8**	**+1.2**
VNA2	**Neumayer--Watz**	**45.17**	**191**	*e*P	**P**	**17 11 29.8**	**+1.1**
	baz=169,slow=6.0						
VNA1	**Neumayer--Stat**	**45.51**	**190**	*e*P	**P**	**17 11 32.6**	**+1.3**
MKAR	**Makanchi Array**	**121.70**	**312**	PKP	**PKPdf**	**17 22 04.2**	**-1.1**
	0.3nm,0.8s,baz=162,slow=1.8,SNR=2.5						
YKA	**Yellowknife Ar**	**144.31**	**52**	PKP	**PKPdf**	**17 22 47.6**	**+0.7**
	1.8nm,0.6s,baz=235,slow=3.1,SNR=43						
AKASG	**Malin Array Be**	**146.29**	**277**	PKPbc	**PKPdf**	**17 22 50.9**	**+0.1**
	1.3nm,0.6s,baz=132,slow=1.4,SNR=7.2						
ESDC	**Sonseca Array**	**151.52**	**227**	PKPbc	**PKPbc**	**17 23 06.5**	**+0.7**
	4.4nm,0.7s,baz=168,slow=1.2,SNR=16						
GERES	**GERESS Array B**	**151.97**	**260**	PKPbc	**PKPbc**	**17 23 06.0**	**-0.6**
	3.3nm,0.8s,baz=150,slow=2.2,SNR=19						
FINES	**FINESS Array B**	**154.25**	**292**	PKPbc	**PKPbc**	**17 23 10.8**	**-0.2**
	1.1nm,0.7s,baz=48,slow=2.3,SNR=5.3						
ARCES	**ARCESS Array B**	**157.34**	**311**	PKPab	**PKPab**	**17 23 37.6**	**-0.7**
	4.0nm,0.9s,baz=108,slow=5.0,SNR=4.4						

IDC 01 17:27:27.3±1.9**, 24°.09S×66°.58W, h189km**±18km**, mb3.5**/2**, mb1 3.5**/7**, mb1mx3.4**/20**, mbtmp3.4**/7**, Error ellipse: s-maj=30.9km s-min=17.9km az=110.0, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**7.63**	**191**	P	Pn	17 29 15.0	-0.8
	0.5nm,0.3s,baz=23,slow=13,SNR=69						
CFAA				S	Sn	17 30 36.5	-5.4
	0.9nm,0.3s,baz=202,slow=14,SNR=14						
LPAZ	**La Paz**	**7.90**	**349**	P	Pn	17 29 20.5	+0.3
	2.4nm,0.3s,baz=176,slow=9.1,SNR=83						
SIV	**San Ignacio**	**9.57**	**34**	P	Pn	17 29 40.5	-0.8
	0.6nm,0.3s,baz=223,slow=13,SNR=12						
PLCA	**Paso Flores**	**16.93**	**190**	P	Pn	17 31 13.5	+0.1
	0.1nm,0.3s,baz=9.6,slow=8.6,SNR=3.9						
BDFB	**Brasilia**	**19.36**	**68**	P	P	17 31 40.0	+1.1
	0.5nm,0.3s,baz=224,slow=6.0,SNR=3.5						
TORD	**Torodi Ar. Bea**	**76.24**	**69**	P	P	17 38 55.1	-0.3
	0.6nm,0.6s,baz=240,slow=4.6,SNR=10.0						
YKA	**Yellowknife Ar**	**94.34**	**340**	P	P	17 40 24.6	-0.2
	0.3nm,0.6s,baz=137,slow=4.2,SNR=10.0						
ASAR	**Alice Springs**	**128.54**	**204**	PKP	PKPdf	17 46 12.2	-0.3
	0.3nm,0.8s,baz=140,slow=1.3,SNR=6.1						
WRA	**Warramunga Arr**	**131.72**	**207**	PKP	PKPdf	17 46 18.7	+0.2
	0.1nm,0.3s,baz=151,slow=1.8,SNR=6.4						
ZALV	**Zalesovo Beam**	**143.29**	**28**	PKP	PKPbc	17 46 36.5	+0.2
	0.4nm,0.4s,baz=337,slow=1.5,SNR=3.8						
MKAR	**Makanchi Array**	**146.34**	**40**	PKPbc	PKPdf	17 46 45.0	+0.7
	1.1nm,0.6s,baz=320,slow=2.8,SNR=14						

IDC 01 17:27:47.8±1.1, 12°.95N×124°.59E, h0km, mb3.5/8, mb1 3.7/9, mb1mx3.5/25, mbtmp3.6/9, ML4.4/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/30, Error ellipse: s-maj=51.0km s-min=16.0km az=62.0
MAN 01 17:27:50, 12°.96N×124°.59E, h11km, mb4.9, ML3.8, MS3.9
ISCJB 01 17:27:51.5±0.7, 13°.01N±0°.05×124°.64E±0°.08, h44km, mb3.5/8, Error ellipse: s-maj=11.1km s-min=6.7km az=163.6

ISC 01 17:27:53.5±0.9**, 12°.97N**±0°.08×**124°.61E**±0°.09**, h44km, n16, σ1s.22**/16**, mb3.7**/8**, 2D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.46**	**174**	*e*P	Pn	17 28 00.1	-3.8
CNP				*e*S	**Sn**	**17 28 08.5**	**-2.9**
PLP	**Palo**	**1.83**	**169**	⇓*e*P	**Pn**	**17 28 21.8**	**-0.8**
PLP				*e*S	**Sn**	**17 28 45.1**	**+0.6**
OCLP	**Ormoc**	**1.91**	**180**	*e*P	**Pn**	**17 28 23.5**	**-0.1**
RCP	**Roxas**	**2.30**	**233**	⇓*e*P	**Pn**	**17 28 27.7**	**-1.3**
RCP				*e*S	**Sn**	**17 28 57.7**	**+1.6**
MSLP	**Maasin**	**2.83**	**175**	*e*P	Pn	17 28 39.5	+3.2
GUIM	**Jordan**	**3.06**	**221**	*e*P	**Pn**	**17 28 39.0**	**-0.4**
TGY	**Tagaytay City**	**3.75**	**288**	Pn	**Pn**	**17 28 47.0**	**-1.8**
	30nm,0.3s,baz=72,slow=16,SNR=4.3						
DAV	**Davao City (W)**	**5.94**	**171**	LR	LR	17 31 37.0	
	comp=Z,60nm,18.9s,baz=248,slow=39						
CMAR	**Chiang Mai Arr**	**25.29**	**286**	P	**P**	**17 33 15.8**	**-0.2**
	0.3nm,0.6s,baz=82,slow=6.5,SNR=4.1						
WRA	**Warramunga Arr**	**34.08**	**164**	P	**P**	**17 34 33.2**	**-0.8**
	0.2nm,0.7s,baz=344,slow=8.1,SNR=2.8						
ASAR	**Alice Springs**	**37.53**	**166**	P	**P**	**17 35 04.0**	**+0.5**
	0.4nm,0.6s,baz=350,slow=7.0,SNR=14						
SONM	**Songino Array**	**37.94**	**340**	P	**P**	**17 35 07.5**	**+0.7**
	0.2nm,0.4s,baz=165,slow=9.0,SNR=4.0						
STKA	**Stephens Creek**	**47.48**	**160**	P	**P**	**17 36 24.7**	**+0.6**
	1.4nm,0.7s,baz=338,slow=11,SNR=3.7						
MKAR	**Makanchi Array**	**48.91**	**322**	P	**P**	**17 36 36.1**	**+1.0**
	0.8nm,0.7s,baz=120,slow=8.6,SNR=11						
ZALV	**Zalesovo Beam**	**51.49**	**331**	P	**P**	**17 36 54.5**	**0.0**
	0.9nm,0.6s,baz=129,slow=7.3,SNR=5.1						
BVAR	**Borovoye Array**	**58.53**	**325**	P	**P**	**17 37 45.4**	**0.0**
	0.5nm,0.5s,baz=122,slow=5.2,SNR=4.2						

MAN 01 17:40:11, 10°.23N×125°.15E, h33km, mb3.9, ML2.7, MS2.4, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.30**	**252**	*e*P	Pn	17 40 20.6	+1.6
MSLP				*e*S	Sn	17 40 27.1	+3.0
PLP	**Palo**	**0.95**	**350**	⇓*e*P	Pn	17 40 28.4	+0.3
PLP				*e*S	Sn	17 40 40.8	+0.4
OCLP	**Ormoc**	**0.98**	**327**	*e*P	Pb	17 40 30.0	+0.5
OCLP				*e*S	Sn	17 40 37.9	-3.2

ISCJB 01 18:04:07.6±0.3, 46°.67N±0°.02×13°.80E±0°.02, h12km±5km, Error ellipse: s-maj=2.9km s-min=2.7km az=161.1
CSEM 01 18:04:08.1±0.1, 46°.65N×13°.80E, h15km, ML2.7/6, Error ellipse: s-maj=1.5km s-min=1.4km az=157.0
ROM 01 18:04:08.7±0.5, 46°.63N×13°.79E, h11km±4km, Md2.3/7, Ml2.0/8, Error ellipse: s-maj=2.5km s-min=1.8km az=150.0
LJU 01 18:04:08.1, 46°.65N×13°.82E, h14km, ML1.9
VIE 01 18:04:08.1±0.1, 46°.65N×13°.82E, h13km±1km, mb1.7/7, ML2.5/8, Error ellipse: s-maj=1.1km s-min=0.7km az=9.0 4 km NW of Villach
PRU 01 18:04:10.2, 46°.69N×13°.84E, h0km

ISC 01 18:04:08.4±0.8**, 46°.66N**±0°.02×**13°.80E**±0°.02**, h14km**±6km**, n62, σ0s.45**/115**, 26C-20D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MYKA	**Terra Mystica**	**0.11**	**256**	⇑*i*Pg	**Pb**	**18 04 12.1**	**-0.4**
	68nm,0.1s						
MYKA				⇑*i*Sg	**Sg**	**18 04 14.0**	**0.0**
	293nm,0.1s						
MYKA	**Terra Mystica**	**0.11**	**256**	Pg	**Pb**	**18 04 12.1**	**-0.4**
	68nm,0.1s						
MYKA				*i* Sg	**Sg**	**18 04 14.0**	**0.0**
LSR	**Lussari**	**0.26**	**226**	⇓*e*Pg	**Pg**	**18 04 14.2**	**+0.2**
LSR				*e*Sg	**Sg**	**18 04 17.7**	**-0.2**
LSR	**Lussari**	**0.26**	**226**	⇓*e*Pg	**Pg**	**18 04 14.2**	**+0.2**
LSR				*e*Sg	**Sg**	**18 04 17.7**	**-0.2**
GORS	**Gorjuse**	**0.37**	**158**	⇓*i*Pg	**Pg**	**18 04 15.8**	**-0.1**
GORS				*i* Sg	**Sg**	**18 04 20.6**	**-0.3**
GORS							
	comp=Z,61nm,0.1s						
GORS	**Gorjuse**	**0.37**	**158**	⇓*i*Pg	**Pg**	**18 04 15.8**	**-0.1**
GORS				*i* Sg	**Sg**	**18 04 20.6**	**-0.3**
PTCC	**Patocco-Chiusa**	**0.40**	**231**	Pg	**Pg**	**18 04 16.3**	**-0.1**
PTCC				Sg	**Sg**	**18 04 21.6**	**-0.2**
	comp=Z,203nm,0.3s						
PTCC	**Patocco-Chiusa**	**0.40**	**231**	*e*Pg	**Pg**	**18 04 16.3**	**-0.1**
PTCC				*e*Sg	**Sg**	**18 04 21.6**	**-0.2**
CADS	**Cadrg**	**0.43**	**186**	⇓*i*Pg	**Pg**	**18 04 16.7**	**-0.3**
CADS				*i* Sg	**Sg**	**18 04 22.8**	**0.0**
CADS							
	comp=Z,49nm,0.1s						
CADS	**Cadrg**	**0.43**	**186**	⇓*i*Pg	**Pg**	**18 04 16.7**	**-0.3**
CADS				*i* Sg	**Sg**	**18 04 22.8**	**0.0**
ROBS	**Robic**	**0.46**	**206**	*i* Pg	**Pg**	**18 04 17.1**	**-0.4**
ROBS				*i* Sg	**Sg**	**18 04 23.6**	**-0.1**
ROBS							
	comp=Z,53nm,0.1s						
ROBS	**Robic**	**0.46**	**206**	*i* Pg	**Pg**	**18 04 17.1**	**-0.4**
ROBS				*e*Sg	**Sg**	**18 04 23.6**	**-0.1**
PLRO	**Paularo**	**0.46**	**257**	⇑*e*Pg	**Pg**	**18 04 17.7**	**+0.1**
PLRO				*e*Sg	**Sg**	**18 04 23.8**	**0.0**
PLRO	**Paularo**	**0.46**	**257**	⇑*e*Pg	**Pg**	**18 04 17.7**	**+0.1**
PLRO				*e*Sg	**Sg**	**18 04 23.8**	**0.0**
DRE	**Drenchia**	**0.50**	**193**	⇓*e*Pg	**Pg**	**18 04 17.8**	**-0.4**
DRE	**Drenchia**	**0.50**	**193**	⇓*e*Pg	**Pg**	**18 04 17.8**	**-0.4**
KBA	**Koelnbreinsper**	**0.52**	**324**	⇑*e*Pg	**Pb**	**18 04 19.5**	**0.0**
	comp=Z,6.4nm,0.1s,SNR=27						
KBA				⇓*i*Sg	**Sb**	**18 04 26.7**	**-0.4**
	comp=Z,17nm,0.1s						
KBA	**Koelnbreinsper**	**0.52**	**324**	Pg	**Pb**	**18 04 19.5**	**0.0**
	comp=Z,6.4nm,0.1s,SNR=27						
KBA				Sg	**Sb**	**18 04 26.7**	**-0.4**
	comp=Z,17nm,0.1s						
OBKA	**Obir**	**0.54**	**106**	*e*Pg	**Pg**	**18 04 19.2**	**+0.2**
	comp=Z,45nm,0.1s,SNR=149						
OBKA				⇑*i*Sg	**Sg**	**18 04 26.2**	**0.0**
	comp=Z,38nm,0.1s						
OBKA	**Obir**	**0.54**	**106**	Pg	**Pg**	**18 04 19.2**	**+0.2**
	comp=Z,45nm,0.1s,SNR=149						
OBKA				Sg	**Sg**	**18 04 26.2**	**0.0**
	comp=Z,38nm,0.1s						
VINO	**Villanova**	**0.54**	**222**	⇓*e*Pg	**Pg**	**18 04 18.9**	**-0.2**
VINO				*e*Sg	**Sg**	**18 04 26.2**	**0.0**
VINO	**Villanova**	**0.54**	**222**	Pg	**Pg**	**18 04 18.8**	**-0.2**
VINO				Sg	**Sg**	**18 04 26.2**	**0.0**
	comp=Z,103nm,0.5s						
VINO	**Villanova**	**0.54**	**222**	Pg	**Pg**	**18 04 18.8**	**-0.2**
VINO				Sg	**Sg**	**18 04 26.2**	**0.0**
	comp=Z,103nm,0.5s						
BAD	**Bernadia**	**0.57**	**223**	⇑*e*Pg	**Pg**	**18 04 19.4**	**-0.2**
BAD				*e*Sg	**Sg**	**18 04 27.4**	**+0.2**
BAD	**Bernadia**	**0.57**	**223**	⇑*e*Pg	**Pg**	**18 04 19.4**	**-0.2**
BAD				*e*Sg	**Sg**	**18 04 27.4**	**+0.2**
ZOU	**Zoufplan**	**0.58**	**260**	⇑*i*Pg	**Pg**	**18 04 19.7**	**-0.1**
ZOU				*i* Sg	**Sg**	**18 04 28.1**	**+0.6**
COLI	**Coloredo**	**0.60**	**209**	⇓*e*Pg	**Pg**	**18 04 19.8**	**-0.4**
COLI				*e*Sg	**Sb**	**18 04 28.6**	**-0.5**
COLI	**Coloredo**	**0.60**	**209**	⇓*e*Pg	**Pg**	**18 04 19.8**	**-0.4**
COLI				*e*Sg	**Sb**	**18 04 28.6**	**-0.5**
FUSE	**Fusea**	**0.60**	**246**	⇑*e*Pg	**Pg**	**18 04 20.0**	**-0.2**
FUSE				*e*Sg	**Sg**	**18 04 27.8**	**-0.4**
FUSE	**Fusea**	**0.60**	**246**	⇑*e*Pg	**Pg**	**18 04 20.0**	**-0.2**
FUSE				*e*Sg	**Sg**	**18 04 27.8**	**-0.4**
VOJS	**Vojsko**	**0.63**	**175**	*i* Pg	**Pg**	**18 04 20.1**	**-0.6**
VOJS				*i* Sg	**Sb**	**18 04 29.9**	**-0.1**
VOJS							
	comp=Z,9.0nm,0.1s						
VOJS	**Vojsko**	**0.63**	**175**	*i* Pg	**Pg**	**18 04 20.1**	**-0.6**
VOJS				*i* Sg	**Sb**	**18 04 29.9**	**-0.1**
SABO	**M.te Sabotino**	**0.69**	**192**	⇓*e*Pg	**Pg**	**18 04 21.2**	**-0.7**
SABO	**M.te Sabotino**	**0.69**	**192**	Pg	**Pg**	**18 04 21.2**	**-0.7**
SABO				Sg	**Sg**	**18 04 31.0**	**0.0**
	comp=Z,41nm,0.6s						
SABO	**M.te Sabotino**	**0.69**	**192**	⇓*e*Pg	**Pg**	**18 04 21.2**	**-0.7**
MPRI	**Monte Prat**	**0.70**	**234**	⇑*e*Pg	**Pg**	**18 04 21.8**	**-0.2**
MPRI				*e*Sg	**Sg**	**18 04 31.3**	**+0.1**
MPRI	**Monte Prat**	**0.70**	**234**	⇑*e*Pg	**Pg**	**18 04 21.8**	**-0.2**
MPRI				*e*Sg	**Sg**	**18 04 31.3**	**+0.1**
FVI	**Forni Avoltri**	**0.70**	**265**	Pg	**Pg**	**18 04 21.8**	**-0.3**
FVI				Sg	**Sb**	**18 04 32.3**	**+0.1**
	comp=Z,52nm,0.1s						
FVI	**Forni Avoltri**	**0.70**	**265**	*e*Pg	**Pg**	**18 04 21.8**	**-0.3**
FVI				Sg	**Sb**	**18 04 32.3**	**+0.1**
	comp=Z,52nm,0.1s						
JAVS	**Javornik**	**0.79**	**166**	*i* Pg	**Pg**	**18 04 23.1**	**-0.6**
JAVS				*i* Sg	**Sb**	**18 04 35.3**	**+0.8**
JAVS							
	comp=Z,19nm,0.2s						
JAVS	**Javornik**	**0.79**	**166**	*i* Pg	**Pg**	**18 04 23.1**	**-0.6**
JAVS				*i* Sg	**Sb**	**18 04 35.3**	**+0.8**
SOKA	**Soboth**	**0.85**	**88**	⇑*i*Pg	**Pg**	**18 04 24.5**	**-0.4**
	comp=Z,7.0nm,0.1s						
SOKA				⇑*i*Sg	**Sg**	**18 04 35.6**	**-0.5**
	comp=Z,8.1nm,0.1s						
SOKA	**Soboth**	**0.85**	**88**	Pg	**Pg**	**18 04 24.5**	**-0.4**
	comp=Z,7.0nm,0.1s						
SOKA				*i* Sg	**Sg**	**18 04 35.6**	**-0.5**
ABTA	**Abfaltersbach**	**0.89**	**276**	⇑*e*Pg	**Pg**	**18 04 25.3**	**-0.4**
	comp=Z,5.9nm,0.1s,SNR=32						
ABTA				⇓*i*Sg	**Sb**	**18 04 38.2**	**+0.7**
	comp=Z,9.3nm,0.1s						
ABTA	**Abfaltersbach**	**0.89**	**276**	Pg	**Pg**	**18 04 25.3**	**-0.4**
	comp=Z,5.9nm,0.1s,SNR=32						
ABTA				*i* Sg	**Sb**	**18 04 38.2**	**+0.7**
RISI	**Rein**	**1.22**	**284**	Pg	**Pn**	**18 04 31.1**	**-0.1**
RISI				Sg	**Sb**	**18 04 47.1**	**+0.1**
	comp=Z,52nm,0.3s						
RISI	**Rein**	**1.22**	**284**	⇑*e*Pg	**Pn**	**18 04 31.1**	**-0.1**
RISI				*e*Sg	**Sn**	**18 04 47.7**	**+0.1**
MOA	**Molln**	**1.23**	**15**	⇑*e*Pn	**Pn**	**18 04 31.6**	**+0.3**
	SNR=9.7						
MOA				⇑*i*Pg	**Pg**	**18 04 32.3**	**+0.1**
	comp=Z,2.1nm,0.1s						
MOA				⇓*i*Sg	**Sg**	**18 04 49.4**	**+1.2**
	comp=Z,4.2nm,0.2s						
MOA	**Molln**	**1.23**	**15**	⇑*e*Pn	**Pn**	**18 04 31.6**	**+0.3**
ARSA	**Arzberg**	**1.32**	**63**	⇑*i*Pg	**Pb**	**18 04 33.4**	**+0.4**
	comp=Z,3.7nm,0.2s						
ARSA				⇓*i*Sn	**Sn**	**18 04 50.5**	**+0.5**
ARSA				⇓*i*Sg	**Sg**	**18 04 51.3**	**+0.3**
	comp=Z,6.3nm,0.2s						
ARSA	**Arzberg**	**1.32**	**63**	Pg	**Pb**	**18 04 33.4**	**+0.4**
ARSA				Sg	**Sn**	**18 04 50.5**	**+0.5**
	comp=Z,8.0nm,0.5s						
ARSA	**Arzberg**	**1.32**	**63**	⇑*i*Pg	**Pb**	**18 04 33.4**	**+0.4**
ARSA				Sg	**Sn**	**18 04 50.5**	**+0.5**
	comp=Z,8.0nm,0.5s						
VARN	**Col Varnada, M**	**1.35**	**241**	⇑*e*Pg	**Pb**	**18 04 33.8**	**+0.3**
VARN				*e*Sg	**Sg**	**18 04 52.1**	**+0.3**
VARN	**Col Varnada, M**	**1.35**	**241**	⇑*e*Pg	**Pb**	**18 04 33.8**	**+0.3**
VARN				*e*Sg	**Sg**	**18 04 52.2**	**+0.3**
WTTA	**Wattenberg**	**1.60**	**293**	⇓*e*Pg	**Pb**	**18 04 38.1**	**+0.2**
	comp=Z,5.3nm,0.2s,SNR=8.7						
WTTA	**Wattenberg**	**1.60**	**293**	Pg	**Pb**	**18 04 38.3**	**+0.4**
	comp=Z,11nm,0.4s						
WTTA	**Wattenberg**	**1.60**	**293**	⇓*e*Pg	**Pb**	**18 04 38.1**	**+0.2**
WATA	**Walderalm**	**1.67**	**295**	⇑*i*Pg	**Pb**	**18 04 39.5**	**+0.5**
	comp=Z,4.7nm,0.2s						
WATA	**Walderalm**	**1.67**	**295**	⇑*i*Pg	**Pb**	**18 04 39.5**	**+0.5**
KHC	**Kasperske Hory**	**2.48**	**357**	*e*PN	**Pb**	**18 04 51.2**	**-1.6**
KHC				*e*PG	**Pg**	**18 04 56.0**	**+0.1**
KHC				*e*SG	**Sg**	**18 05 26.9**	**-1.2**
	comp=Z,2.8nm,0.3s						
PRU	**Pruhonice**	**3.37**	**8**	*e*SG	**Sg**	**18 05 56.9**	**+0.3**
DPC	**Dobruska-Polom**	**4.06**	**23**	*e*SG	**Sg**	**18 06 16.6**	**-2.0**

DDA 01 18:08:47.9, 40°.84N×31°.11E, h29km, ML3.9
ISK 01 18:08:47.6, 40°.84N×31°.06E, h9km, ML4.0
IDC 01 18:08:47.0±1.0, 40°.80N×31°.22E, h0km, mb3.5/10, mb1 3.6/15, mb1mx3.5/33, mbtmp3.5/15, ML3.4/5, MS2.6/2, Ms1 2.6/2, ms1mx2.0/34, Error ellipse: s-maj=17.4km s-min=10.8km az=41.0
ISCJB 01 18:08:48.1±0.4, 40°.84N±0°.01×31°.03E±0°.02, h14km±3km, mb3.5/9, Error ellipse: s-maj=2.5km s-min=2.3km az=33.5
CSEM 01 18:08:48.4±0.1, 40°.81N×31°.04E, h5km, ML3.9, Error ellipse: s-maj=2.1km s-min=1.7km az=20.0

ISC 01 18:08:48.8±0.9**, 40°.83N**±0°.02×**31°.07E**±0°.02**, h11km**±6km**, n290, σ1s.02**/315**, mb3.5**/9**, 12C-13D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HENT	**Hendek**	**0.13**	**269**	*i* P	**Pg**	**18 08 51.5**	**-0.4**
HENT	**Hendek**	**0.13**	**269**	*i* P	**Pg**	**18 08 51.5**	**-0.4**
MDUB	**Mudurnu**	**0.37**	**164**	PG	**Pg**	**18 08 55.4**	**-0.7**
MDUB	**Mudurnu**	**0.37**	**164**	*i* Pg	**Pg**	**18 08 55.4**	**-0.7**
KDZE	**Karadeniz Ereo**	**0.56**	**30**	PG	**Pg**	**18 08 58.8**	**-1.0**
KDZE				*e*SG	**Sg**	**18 09 07.1**	**-0.1**
KDZE	**Karadeniz Ereo**	**0.56**	**30**	*i* Pg	**Pg**	**18 08 58.8**	**-1.0**
KDZE				*e*Sg	**Sg**	**18 09 07.1**	**-0.1**
GULT	**Gulveren**	**0.58**	**227**	PG	**Pg**	**18 08 59.2**	**-0.8**
GULT				*e*SG	**Sg**	**18 09 08.0**	**+0.4**
GULT	**Gulveren**	**0.58**	**227**	*i* Pg	**Pg**	**18 08 59.2**	**-0.8**
GULT				*e*Sg	**Sg**	**18 09 08.0**	**+0.4**
SPNC	**Sapanca-Adapaz**	**0.59**	**257**	*e*PG	**Pg**	**18 08 59.7**	**-0.6**
SPNC	**Sapanca-Adapaz**	**0.59**	**257**	*e*Pg	**Pg**	**18 08 59.7**	**-0.6**
BORA	**Eskisehir**	**1.05**	**207**	*i* P	**Pg**	**18 09 07.7**	**-1.4**
BORA				*i* S	**Sn**	**18 09 24.0**	**-0.3**
BORA	**Eskisehir**	**1.05**	**207**	*i* P	**Pg**	**18 09 07.7**	**-1.4**
HRT	**Hereke**	**1.06**	**270**	*e*PG	**Pb**	**18 09 08.1**	**-1.1**
HRT	**Hereke**	**1.06**	**270**	*e*Pg	**Pb**	**18 09 08.1**	**-1.1**
CAVI	**Cavuskoy**	**1.12**	**237**	*e*PN	**Pb**	**18 09 09.4**	**-0.8**
CAVI	**Cavuskoy**	**1.12**	**237**	*e*Pn	**Pb**	**18 09 09.4**	**-0.8**
SILT	**Sile**	**1.13**	**287**	*e*PN	**Pb**	**18 09 09.2**	**-1.0**
SILT	**Sile**	**1.13**	**287**	*e*Pn	**Pb**	**18 09 09.2**	**-1.0**
YLV	**Yalova**	**1.31**	**259**	*e*PN	**Pn**	**18 09 12.5**	**-0.6**
YLV	**Yalova**	**1.31**	**259**	*e*Pn	**Pn**	**18 09 12.5**	**-0.6**
ESKT	**Eskisehir**	**1.32**	**187**	*e*PN	**Pn**	**18 09 13.2**	**0.0**
ESKT	**Eskisehir**	**1.32**	**187**	*e*Pn	**Pn**	**18 09 13.2**	**0.0**
SEYT	**Eskypehyr**	**1.32**	**187**	*i* P	**Pn**	**18 09 12.5**	**-0.7**
SEYT	**Eskypehyr**	**1.32**	**187**	*i* P	**Pn**	**18 09 12.5**	**-0.7**
SVRH	**Sivrihisar-ESK**	**1.42**	**166**	*e*PN	**Pn**	**18 09 14.7**	**+0.1**
SVRH	**Sivrihisar-ESK**	**1.42**	**166**	*e*Pn	**Pn**	**18 09 14.7**	**+0.1**
BUY	**Buyukada**	**1.48**	**272**	*i* P	**Pn**	**18 09 15.1**	**-0.3**
BUY				*i* S	**Sb**	**18 09 35.1**	**+0.1**
BUY	**Buyukada**	**1.48**	**272**	*i* P	**Pn**	**18 09 15.0**	**-0.3**
BUY				*i* S	**Sb**	**18 09 35.1**	**+0.1**
GEMT	**Gemlik**	**1.48**	**255**	*e*PN	**Pn**	**18 09 14.7**	**-0.7**
GEMT	**Gemlik**	**1.48**	**255**	*e*Pn	**Pn**	**18 09 14.7**	**-0.7**
ISK	**Istanbul-Kandi**	**1.54**	**280**	*e*PN	**Pn**	**18 09 16.2**	**+0.1**
ISK	**Istanbul-Kandi**	**1.54**	**280**	*e*Pn	**Pn**	**18 09 16.2**	**+0.1**
LOD	**Lodumlu**	**1.60**	**125**	*e*PN	**Pn**	**18 09 17.0**	**0.0**
LOD	**Lodumlu**	**1.60**	**125**	*e*Pn	**Pn**	**18 09 17.0**	**0.0**
ARMT	**Armutlu**	**1.70**	**262**	*e*PN	**Pn**	**18 09 17.7**	**-0.6**
ARMT	**Armutlu**	**1.70**	**262**	*e*Pn	**Pn**	**18 09 17.7**	**-0.6**
MDNY	**Mudanya-Bursa**	**1.72**	**255**	*e*PN	**Pn**	**18 09 18.3**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.72**	**255**	*e*Pn	**Pn**	**18 09 18.3**	**-0.4**
BGKT	**Bogazkoy**	**1.77**	**282**	*e*PN	**Pn**	**18 09 19.5**	**+0.1**
BGKT	**Bogazkoy**	**1.77**	**282**	*e*Pn	**Pn**	**18 09 19.5**	**+0.1**
ELDT	**Eldivan**	**1.83**	**100**	*i* P	**Pn**	**18 09 20.6**	**+0.3**
ELDT				*i* S	**Sg**	**18 09 48.6**	**+1.1**
ELDT	**Eldivan**	**1.83**	**100**	*i* P	**Pn**	**18 09 20.6**	**+0.3**
ORLT	**Orhaneli**	**1.83**	**246**	*e*PN	**Pn**	**18 09 20.0**	**-0.2**
ORLT	**Orhaneli**	**1.83**	**246**	*e*Pn	**Pn**	**18 09 20.0**	**-0.2**
TVSB	**Tavsanli**	**1.85**	**222**	*e*PN	**Pn**	**18 09 20.1**	**-0.4**
TVSB	**Tavsanli**	**1.85**	**222**	*e*Pn	**Pn**	**18 09 20.1**	**-0.4**
BALT	**Daday**	**1.89**	**67**	*i* P	**Pn**	**18 09 21.5**	**+0.4**
BALT				*i* S	**Sn**	**18 09 44.7**	**-0.3**
BALT	**Daday**	**1.89**	**67**	*i* P	**Pn**	**18 09 21.5**	**+0.4**
BALT				*i* S	**Sn**	**18 09 44.7**	**-0.3**
ALT	**Altintas**	**1.92**	**203**	*e*PN	**Pn**	**18 09 21.1**	**-0.3**
ALT	**Altintas**	**1.92**	**203**	*i* P	**Pn**	**18 09 20.3**	**-1.1**
ALT				*i* S	**Sn**	**18 09 43.7**	**-1.9**
ALT	**Altintas**	**1.92**	**203**	*e*Pn	**Pn**	**18 09 21.1**	**-0.3**
CANT	**Cankiri**	**1.95**	**96**	*e*PN	**Pn**	**18 09 22.1**	**+0.2**
CTKS	**Kestanelik-??a**	**1.98**	**283**	*e*PN	**Pn**	**18 09 22.4**	**+0.2**
CTKS	**Kestanelik-??a**	**1.98**	**283**	*e*Pn	**Pn**	**18 09 22.4**	**+0.2**
ILGA	**Ilgaz**	**2.02**	**83**	*i* P	**Pn**	**18 09 23.5**	**+0.5**
ILGA	**Ilgaz**	**2.02**	**83**	*i* P	**Pn**	**18 09 23.5**	**+0.5**
ELBA	**Catalca**	**2.02**	**280**	*i* P	**Pn**	**18 09 23.6**	**+0.8**
ELBA				*i* S	**Sb**	**18 09 50.2**	**-0.5**
ELBA	**Catalca**	**2.02**	**280**	*i* P	**Pn**	**18 09 23.6**	**+0.8**
ELBA				*i* S	**Sb**	**18 09 50.2**	**-0.5**
BBAL	**Bala**	**2.03**	**128**	*i* P	**Pn**	**18 09 23.0**	**0.0**
BBAL				*i* S	**Sn**	**18 09 47.7**	**-0.7**
BBAL	**Bala**	**2.03**	**128**	*i* P	**Pn**	**18 09 23.0**	**0.0**
BBAL				*i* S	**Sn**	**18 09 47.7**	**-0.7**
KIZT	**Kizilcal**	**2.04**	**162**	*e*PN	**Pn**	**18 09 23.2**	**0.0**
KIZT	**Kizilcal**	**2.04**	**162**	*e*Pn	**Pn**	**18 09 23.2**	**0.0**
AFSR	**Af¯ar-Bala (A**	**2.06**	**131**	*e*PN	**Pn**	**18 09 23.5**	**+0.1**
AFSR	**Af¯ar-Bala (A**	**2.06**	**131**	*e*Pn	**Pn**	**18 09 23.5**	**+0.1**
BOLV	**Bolvadin**	**2.11**	**182**	*i* P	**Pn**	**18 09 24.4**	**+0.3**
BOLV				*i* S	**Sn**	**18 09 49.6**	**-0.7**
BOLV	**Bolvadin**	**2.11**	**182**	*i* P	**Pn**	**18 09 24.4**	**+0.3**
BOLV				*i* S	**Sn**	**18 09 49.6**	**-0.7**
GDZ	**Gediz**	**2.12**	**216**	*i* P	**Pn**	**18 09 23.8**	**-0.5**
GDZ				*i* S	**Sn**	**18 09 49.3**	**-1.4**
GDZ	**Gediz**	**2.12**	**216**	*i* P	**Pn**	**18 09 23.8**	**-0.5**
GDZ				*i* S	**Sn**	**18 09 49.3**	**-1.4**
CTYL	**Yal??k??y-??at**	**2.20**	**288**	*e*PN	**Pn**	**18 09 25.1**	**-0.1**
CTYL	**Yal??k??y-??at**	**2.20**	**288**	*e*Pn	**Pn**	**18 09 25.1**	**-0.1**
SLVT	**Silivri**	**2.20**	**281**	*e*PN	**Pn**	**18 09 25.6**	**+0.4**
SLVT	**Silivri**	**2.20**	**281**	*e*Pn	**Pn**	**18 09 25.6**	**+0.4**
DST	**Dursunbey**	**2.24**	**238**	*e*PN	**Pn**	**18 09 25.9**	**+0.1**
DST	**Dursunbey**	**2.24**	**238**	*e*Pn	**Pn**	**18 09 25.9**	**+0.1**
TOS	**Tosya**	**2.25**	**84**	*e*PN	**Pn**	**18 09 26.5**	**+0.5**
TOS	**Tosya**	**2.25**	**84**	*e*Pn	**Pn**	**18 09 26.5**	**+0.5**
BRTR	**Keskin Array B**	**2.25**	**118**	Pn	**Pn**	**18 09 25.9**	**-0.2**
	7.9nm,0.3s,baz=291,slow=12,SNR=295						
BRTR				Pg	**Pb**	**18 09 29.0**	**-0.6**
	36nm,0.3s,baz=298,slow=15,SNR=164						
BRTR				Lg	Lg	18 10 00.2	
	36nm,0.3s,baz=302,slow=23,SNR=16						
SHUT	**Suhut-Afyon**	**2.31**	**190**	*e*PN	**Pn**	**18 09 27.1**	**+0.3**
SHUT	**Suhut-Afyon**	**2.31**	**190**	*e*Pn	**Pn**	**18 09 27.1**	**+0.3**
DURS	**Dursunbey**	**2.33**	**239**	*i* P	**Pn**	**18 09 26.3**	**-0.8**
DURS	**Dursunbey**	**2.33**	**239**	*i* P	**Pn**	**18 09 26.3**	**-0.8**
KDHN	**Kadinhani**	**2.44**	**160**	*i* P	**Pn**	**18 09 28.1**	**-0.5**
KDHN	**Kadinhani**	**2.44**	**160**	*i* P	**Pn**	**18 09 28.1**	**-0.5**
BNT	**Bandirma**	**2.44**	**260**	*e*PN	**Pn**	**18 09 29.2**	**+0.6**
BNT	**Bandirma**	**2.44**	**260**	*e*Pn	**Pn**	**18 09 29.2**	**+0.6**
BZK	**Bozkurt**	**2.48**	**62**	*e*PN	**Pn**	**18 09 29.0**	**-0.1**
BZK	**Bozkurt**	**2.48**	**62**	*e*Pn	**Pn**	**18 09 29.0**	**-0.1**
EDC	**Edincik**	**2.49**	**260**	*e*PN	**Pn**	**18 09 29.5**	**+0.3**
EDC	**Edincik**	**2.49**	**260**	*e*Pn	**Pn**	**18 09 29.5**	**+0.3**
KAMT	**Kaman**	**2.50**	**125**	*e*PN	**Pn**	**18 09 30.1**	**+0.7**
KAMT	**Kaman**	**2.50**	**125**	*e*Pn	**Pn**	**18 09 30.1**	**+0.7**
DEMI	**Demirci**	**2.54**	**226**	*i* P	**Pn**	**18 09 29.4**	**-0.6**
DEMI	**Demirci**	**2.54**	**226**	*i* P	**Pn**	**18 09 29.4**	**-0.6**
CRLT	**Corlu**	**2.54**	**278**	*e*PN	**Pn**	**18 09 30.6**	**+0.7**
CRLT	**Corlu**	**2.54**	**278**	*e*Pn	**Pn**	**18 09 30.6**	**+0.7**
TKR	**Tekirdag**	**2.68**	**275**	*e*PN	**Pn**	**18 09 32.3**	**+0.4**
TKR	**Tekirdag**	**2.68**	**275**	*e*Pn	**Pn**	**18 09 32.3**	**+0.4**
GONE	**Gonen-Balikesi**	**2.70**	**254**	*e*PN	**Pn**	**18 09 31.7**	**-0.3**
GONE	**Gonen-Balikesi**	**2.70**	**254**	*e*Pn	**Pn**	**18 09 31.7**	**-0.3**
BALB	**Balikesir**	**2.71**	**245**	*e*PN	**Pn**	**18 09 32.0**	**-0.2**
BALB	**Balikesir**	**2.71**	**245**	*e*Pn	**Pn**	**18 09 32.1**	**-0.2**
KHAL	**Karahalli**	**2.74**	**207**	*i* P	**Pn**	**18 09 32.3**	**-0.5**
KHAL	**Karahalli**	**2.74**	**207**	*i* P	**Pn**	**18 09 32.3**	**-0.5**
KHL	**Karahalli**	**2.77**	**206**	*e*PN	**Pn**	**18 09 33.6**	**+0.5**
KHL	**Karahalli**	**2.77**	**206**	*e*Pn	**Pn**	**18 09 33.6**	**+0.5**
CORM	**Corum**	**2.79**	**102**	*e*PN	**Pn**	**18 09 34.1**	**+0.7**
CORM	**Corum**	**2.79**	**102**	*e*Pn	**Pn**	**18 09 34.2**	**+0.7**
LADK	**Ladik-KONYA**	**2.81**	**159**	*e*PN	**Pn**	**18 09 34.5**	**+0.8**
LADK	**Ladik-KONYA**	**2.81**	**159**	*e*Pn	**Pn**	**18 09 34.5**	**+0.8**
BALY	**Balya**	**2.85**	**249**	*i* P	**Pn**	**18 09 33.6**	**-0.6**
BALY	**Balya**	**2.85**	**249**	*i* P	**Pn**	**18 09 33.6**	**-0.6**
BYBT	**Boyabat**	**2.87**	**76**	*e*PN	**Pn**	**18 09 35.0**	**+0.6**
BYBT	**Boyabat**	**2.87**	**76**	*e*Pn	**Pn**	**18 09 35.0**	**+0.6**
MFT	**Murefte**	**2.87**	**270**	*e*PN	**Pn**	**18 09 34.3**	**-0.3**
MFT	**Murefte**	**2.87**	**270**	*e*Pn	**Pn**	**18 09 34.3**	**-0.3**
KRBG	**Karabiga-Canak**	**2.90**	**263**	*e*PN	**Pn**	**18 09 34.9**	**0.0**
KRBG	**Karabiga-Canak**	**2.90**	**263**	*e*Pn	**Pn**	**18 09 34.9**	**0.0**
RKY	**Sarkoy-Tekirda**	**2.96**	**269**	*e*PN	**Pn**	**18 09 35.7**	**0.0**
RKY	**Sarkoy-Tekirda**	**2.96**	**269**	*e*Pn	**Pn**	**18 09 35.7**	**0.0**
KULA	**Kula-Manisa**	**2.96**	**220**	*e*PN	**Pn**	**18 09 36.1**	**+0.3**
KULA	**Kula-Manisa**	**2.96**	**220**	*e*Pn	**Pn**	**18 09 36.1**	**+0.3**
ISP	**Isparta**	**3.03**	**188**	*e*PN	**Pn**	**18 09 38.2**	**+1.5**
ISP	**Isparta**	**3.03**	**188**	⇓*i*P	**Pb**	**18 09 44.7**	**+1.9**

ISP	Isparta	3.03	188	S	Sg	18 10 27.6	+1.5
ISP	Isparta	3.03	188	ePn	Pn	18 09 38.2	+1.5
KONT	Konya--Tatoy	3.05	160	ePN	Pn	18 09 38.1	+1.2
KONT	Konya--Tatoy	3.05	160	ePn	Pn	18 09 38.1	+1.2
AKHS	Akhisar	3.17	233	i P	Pn	18 09 37.7	-0.9
AKHS	Akhisar	3.17	233	i P	Pn	18 09 37.7	-0.9
AKS	Akhisar	3.17	233	ePN	Pn	18 09 39.4	+0.8
AKS	Akhisar	3.17	233	ePn	Pn	18 09 39.4	+0.8
SULT	Sultanhani-AKS	3.24	143	ePN	Pn	18 09 39.9	+0.3
SULT	Sultanhani-AKS	3.24	143	ePn	Pn	18 09 39.9	+0.3
DIKM	Dikmen	3.27	74	ePN	Pn	18 09 40.8	+0.9
DIKM	Dikmen	3.27	74	ePn	Pn	18 09 40.8	+0.9
LPK	Lapseki	3.31	264	ePN	Pn	18 09 41.4	+0.9
LPK	Lapseki	3.31	264	ePn	Pn	18 09 41.4	+0.9
BCK	Bucak	3.38	186	ePN	Pn	18 09 42.0	+0.5
BCK	Bucak	3.38	186	ePn	Pn	18 09 42.0	+0.5
EDRB	Edirne	3.41	289	ePN	Pn	18 09 41.6	-0.3
EDRB	Edirne	3.41	289	ePn	Pn	18 09 41.6	-0.3
YOZ	Yozgat	3.46	109	ePN	Pn	18 09 43.4	+0.6
YOZ	Yozgat	3.46	109	ePn	Pn	18 09 43.4	+0.6
MANR	Mangalia	3.51	329	⇑iP	Pn	18 09 43.5	+0.3
MANR	Mangalia	3.51	329	⇑iP	Pn	18 09 43.5	+0.3
MANR				S	Sn	18 10 23.5	-1.2
GELI	Tayfur-Gelibol	3.52	265	ePN	Pn	18 09 43.5	+0.1
GELI	Tayfur-Gelibol	3.52	265	ePn	Pn	18 09 43.5	+0.1
AVNT	Avonos	3.56	124	i P	Pn	18 09 45.0	+0.9
AVNT	Avonos	3.56	124	i P	Pn	18 09 45.0	+0.9
ROIA	ROIAK	3.56	311	i P	Pn	18 09 46.6	+2.6
PSN	Preselentsi	3.57	324	i P	Pn	18 09 44.0	0.0
PSN	Preselentsi	3.57	324	i P	Pn	18 09 44.0	0.0
ENEZ	Enez	3.73	270	ePN	Pn	18 09 46.7	+0.4
ENEZ	Enez	3.73	270	ePn	Pn	18 09 46.7	+0.4
JMB	Yambol	3.74	297	i P	Pn	18 09 49.7	+3.3
JMB	Yambol	3.74	297	i P	Pn	18 09 49.7	+3.3
EZN	Ezine	3.76	256	ePN	Pn	18 09 46.6	-0.1
EZN	Ezine	3.76	256	ePn	Pn	18 09 46.6	-0.1
KVT	Kavak	3.78	85	ePN	Pn	18 09 48.0	+1.0
KVT	Kavak	3.78	85	ePn	Pn	18 09 48.0	+1.0
ALN	Alexandroupoli	3.81	273	P	Pn	18 09 47.4	+0.1
ALN				S	Sb	18 10 44.4	+2.3
ALN	Alexandroupoli	3.81	273	P	Pn	18 09 47.4	+0.1
IZM	Izmir	3.81	232	ePN	Pn	18 09 48.2	+0.8
IZM	Izmir	3.81	232	ePn	Pn	18 09 48.2	+0.8
NIG	Nigde	3.86	134	ePN	Pn	18 09 49.6	+1.3
NIG	Nigde	3.86	134	ePn	Pn	18 09 49.6	+1.3
BLCB	Balcova	3.95	233	ePN	Pn	18 09 50.3	+1.0
BLCB	Balcova	3.95	233	ePn	Pn	18 09 50.3	+1.0
BOZC	Bozcaada	3.96	257	i P	Pn	18 09 45.7	-3.7
PRK	Paraskevi	4.00	248	eP	Pn	18 09 49.8	-0.2
AYDN	Tasoluk	4.01	219	i P	Pn	18 09 49.5	-0.8
AYDN	Tasoluk	4.01	219	i P	Pn	18 09 49.5	-0.8
TIRR	Tirgusor	4.12	333	⇓iP	Pn	18 09 52.2	+0.6
TIRR	Tirgusor	4.12	333	⇓iP	Pn	18 09 52.2	+0.6
TIRR				S	Sn	18 10 38.1	-1.7
CVD	Cernavoda	4.14	328	⇓iP	Pn	18 09 53.5	+1.6
CVD	Cernavoda	4.14	328	⇓iP	Pn	18 09 53.5	+1.6
CVD				S	Sn	18 10 41.9	+1.6
ELL	Elmali	4.17	193	ePN	Pn	18 09 53.9	+1.4
ELL	Elmali	4.17	193	ePn	Pn	18 09 53.9	+1.4
BNN	Bunyan	4.17	117	ePN	Pn	18 09 53.8	+1.3
BNN	Bunyan	4.17	117	ePn	Pn	18 09 53.8	+1.3
RDO	Rodhopi	4.20	276	eP	Sn	18 10 44.7	+3.0
YER	Yerkesik	4.28	211	ePN	Pn	18 09 54.4	+0.5
YER	Yerkesik	4.28	211	ePn	Pn	18 09 54.4	+0.5
KDZ	Kurdzhali	4.34	283	P	Pn	18 09 55.0	+0.3
KDZ	Kurdzhali	4.34	283	P	Pn	18 09 55.0	+0.3
MLSB	Milas	4.36	217	ePN	Pn	18 09 56.8	+1.9
MLSB	Milas	4.36	217	ePn	Pn	18 09 56.8	+1.9
FETY	Fethiye	4.46	201	ePN	Pn	18 09 57.5	+1.1
FETY	Fethiye	4.46	201	ePn	Pn	18 09 57.5	+1.1
SZH	Strazhica	4.53	304	i P	Pn	18 09 56.7	-0.6
SZH	Strazhica	4.53	304	i P	Pn	18 09 56.7	-0.6
CHOS	Chios island	4.57	239	P	Pn	18 09 57.1	-0.8
CHOS	Chios island	4.57	239	P	Pn	18 09 57.1	-0.8
LIA	Limnos Island	4.59	260	eP	Pn	18 09 58.1	0.0
TLCR		4.66	340	⇑iP	Pn	18 09 59.8	+0.8
TLCR		4.66	340	⇑iP	Pn	18 09 59.8	+0.8
TLCR				S	Sn	18 10 51.3	-1.7
AKAS	Kas	4.73	195	i P	Pn	18 09 59.4	-0.7
AKAS	Kas	4.73	195	i P	Pn	18 09 59.4	-0.7
BODT	Bodrum	4.76	219	ePN	Pn	18 10 01.7	+1.2
BODT	Bodrum	4.76	219	ePn	Pn	18 10 01.7	+1.2
RSDY	Resadiye-TOKAT	4.78	93	ePN	Pn	18 10 02.1	+1.3
RSDY	Resadiye-TOKAT	4.78	93	ePn	Pn	18 10 02.1	+1.3
SARI	SarD1z-Kayseri	4.79	119	ePN	Pn	18 10 02.1	+1.1
SARI	SarD1z-Kayseri	4.79	119	ePn	Pn	18 10 02.1	+1.1
CFR	Carcaliu	4.85	335	⇑iP	Pn	18 10 01.6	0.0
CFR	Carcaliu	4.85	335	S	Sn	18 10 53.5	-4.3
CFR	Carcaliu	4.85	335	⇑iP	Pn	18 10 01.6	0.0
RZN	Rozhen	4.86	282	i P	Pn	18 10 02.1	+0.1
RZN	Rozhen	4.86	282	i P	Pn	18 10 02.1	+0.1
DAT	Datca	4.92	215	ePN	Pn	18 10 03.9	+1.2
DAT	Datca	4.92	215	ePn	Pn	18 10 03.9	+1.2
KAVA	Kavala	4.97	274	P	Pn	18 10 02.9	-0.4
KAVA	Kavala	4.97	274	P	Pn	18 10 02.9	-0.4
KOZT	Kozan	4.98	131	ePN	Pn	18 10 05.3	+1.8
KOZT	Kozan	4.98	131	ePn	Pn	18 10 05.3	+1.8
ARG	Arkhangelos	5.15	208	eP	Pn	18 10 06.8	+1.0
NIS1	Nisyros Isl.	5.20	217	P	Pn	18 10 05.3	-1.2
NIS1	Nisyros Isl.	5.20	217	P	Pn	18 10 05.3	-1.2
OUR	Ouranopolis	5.42	267	P	Pn	18 10 08.7	-0.7
OUR	Ouranopolis	5.42	267	P	Pn	18 10 08.7	-0.7
ISR	Istrita	5.42	324	⇓iP	Pn	18 10 11.6	+2.0
ISR	Istrita	5.42	324	⇓iP	Pn	18 10 11.6	+2.0
ISR				S	Sn	18 11 14.9	+2.9
GRER		5.45	328	⇑iP	Pn	18 10 11.2	+1.3
GRER		5.45	328	⇑iP	Pn	18 10 11.2	+1.3
GRER				S	Sn	18 11 13.6	+1.1
NVR	Nevrokopi	5.47	278	eP	Pn	18 10 10.4	+0.2
MMB	Musomiste	5.59	280	i P	Pn	18 10 12.0	+0.2
MMB	Musomiste	5.59	280	i P	Pn	18 10 12.0	+0.2
SRS	Serrai	5.67	275	P	Pn	18 10 12.7	-0.2
SRS	Serrai	5.67	275	P	Pn	18 10 12.7	-0.2
AOS	Alonnisos	5.76	256	P	Pn	18 10 13.9	-0.3
AOS	Alonnisos	5.76	256	P	Pn	18 10 13.9	-0.3
PLG	Polygyros	5.82	268	eP	Pn	18 10 14.8	-0.2
VRI	Vrincioaia	5.95	329	⇓iP	Pn	18 10 17.3	+0.6
VRI	Vrincioaia	5.95	329	⇓iP	Pn	18 10 17.3	+0.6
VRI				S	Sn	18 11 26.6	+1.7
PLOR	Plostina	5.97	329	⇑iP	Pn	18 10 17.8	+0.8
PLOR	Plostina	5.97	329	⇑iP	Pn	18 10 17.8	+0.8
PLOR				S	Sn	18 11 26.7	+1.4
MLR	Muntele Rosu	5.98	323	Pn	Pn	18 10 18.4	+1.1
	0.3nm,0.3s,baz=152,slow=11,SNR=20						
MLR				Sn	Sn	18 11 28.6	+2.8
	0.3nm,0.3s,baz=142,slow=19,SNR=4.2						
KARP	Karpathos	6.10	212	eP	Pn	18 10 19.3	+0.4
VTS	Vitosha	6.14	289	⇓iP	Pn	18 10 20.4	+0.9
VTS	Vitosha	6.14	289	i P	Pn	18 10 20.5	+0.9
VTS	Vitosha	6.14	289	⇓iP	Pn	18 10 20.4	+0.9
VTS				S	Sn	18 11 29.7	-0.1
KNT	Kendrikon	6.19	276	P	Pn	18 10 20.4	+0.3
KNT	Kendrikon	6.19	276	P	Pn	18 10 20.4	+0.3
NEO	Neokhori	6.21	258	eP	Pn	18 10 19.3	-1.0
XOR	Xorichti	6.21	259	P	Pn	18 10 19.5	-0.9
XOR	Xorichti	6.21	259	P	Pn	18 10 19.5	-0.9
VOIR		6.37	318	⇑iP	Pn	18 10 23.7	+1.1
VOIR		6.37	318	⇑iP	Pn	18 10 23.7	+1.1
VOIR				S	Sn	18 11 38.0	+2.6
TESR		6.52	332	⇓iP	Pn	18 10 25.1	+0.5
TESR		6.52	332	S	Sn	18 11 37.4	-1.6
TESR		6.52	332	⇓iP	Pn	18 10 25.1	+0.5
LKR	Lokris	6.59	253	eP	Pn	18 10 23.8	-1.7
PTK	Pertek	6.69	104	ePN	Pn	18 10 28.5	+1.4
PTK	Pertek	6.69	104	ePn	Pn	18 10 28.5	+1.4
SVRC	Sivrice-ELAZID	6.81	108	ePN	Pn	18 10 30.3	+1.5
SVRC	Sivrice-ELAZID	6.81	108	ePn	Pn	18 10 30.3	+1.5
LTK	Loutraki	6.87	249	eP	Pn	18 10 29.5	+0.1
DID	Didima	6.93	244	eP	Pn	18 10 30.0	-0.2
AGG	Agios Georgios	6.95	258	P	Pn	18 10 30.6	0.0
AGG	Agios Georgios	6.95	258	P	Pn	18 10 30.6	0.0
THL	Klokotos Trika	7.04	263	eP	Pn	18 10 29.9	-1.9
LOT	Lotru	7.06	313	S	Pn	18 10 32.6	+0.5
BARS	Barje	7.19	289	ePn	Pn	18 10 35.5	+1.7
MDB	Medias	7.20	320	S	Pn	18 10 37.5	+3.6
GUR	Goura	7.35	250	eP	Pn	18 10 36.2	+0.1
EVR	Evrytania	7.37	258	eP	Pn	18 10 36.4	0.0
EFP	Efpalio	7.47	254	eP	Pn	18 10 38.2	+0.6
VLI	Veliai	7.56	240	eP	Pn	18 10 37.8	-1.1
VLX	Vlachokerasia	7.59	246	eP	Pn	18 10 39.7	+0.4
RLS	Riolos of Patr	7.93	253	eP	Pn	18 10 44.8	+0.9
ITM	Ithomi	7.99	246	eP	Pn	18 10 45.7	+0.9
GRUS	Gruza	8.25	295	ePn	Pn	18 10 50.1	+1.7
PYL	PYLOS	8.27	245	eP	Pn	18 10 50.1	+1.6
MMAI	Mount Meron Ar	8.53	155	Pn	Pn	18 10 49.2	-3.1
	1.2nm,0.3s,baz=327,slow=10,SNR=3.8						
DIVS	Divibare	8.81	295	ePn	Pn	18 10 54.8	-1.4
KBZ	Khabaz	9.24	68	Pn	Pn	18 11 01.0	-0.8
	0.1nm,0.3s,baz=223,slow=18,SNR=2.4						
AKASG	Malin Array Be	9.96	353	Pn	Pn	18 11 10.5	-1.2
	1.3nm,0.3s,baz=159,slow=13,SNR=7.7						
AKASG				Sn	Sn	18 12 57.6	-5.8
	1.4nm,0.3s,baz=180,slow=22,SNR=3.3						
VRAC	Vranov	13.27	315	LR	LR	18 16 42.4	
	comp=Z,14nm,18.3s,baz=251,slow=36						
DAVOX	Davos/Dischmat	16.39	298	LR	LR	18 18 46.0	
	comp=Z,28nm,18.3s,baz=82,slow=36						
FINES	FINESS Array B	20.87	353	P	Pn	18 13 32.6	-0.4
	1.8nm,0.8s,baz=158,slow=12,SNR=3.1						
AKTO	Aktyubinsk	21.05	54	P	P	18 13 32.6	0.0
	0.6nm,0.5s,baz=271,slow=10,SNR=2.8						
HFS	Hagfors	22.14	337	P	P	18 13 45.7	+1.6
	2.9nm,1.1s,baz=74,slow=11,SNR=2.7						
NB2	NORSAR Subarra	23.61	336	P	P	18 14 05.2	+5.7
	comp=Z,0.7nm,0.7s,baz=140,slow=9.3						
NOA	NORSAR Array B	23.61	336	P	P	18 14 01.6	+2.1
	comp=Z,0.8nm,0.8s,baz=131,slow=9.6,SNR=2.9						
EKA	Eskdalemuir Ar	26.75	314	P	P	18 14 29.4	+1.3
	comp=Z,0.3nm,0.5s,baz=290,slow=31,SNR=3.1						
MKAR	Makanchi Array	36.90	63	P	P	18 15 57.3	0.0
	comp=Z,0.9nm,0.6s,baz=281,slow=7.3,SNR=12						
TORD	Torodi Ar. Bea	37.69	231	P	P	18 16 03.5	-0.7
	comp=Z,0.8nm,0.7s,baz=35,slow=8.5,SNR=4.6						
ZALV	Zalesovo Beam	37.77	51	P	P	18 16 03.1	-1.4
	comp=Z,0.3nm,0.3s,baz=266,slow=4.2,SNR=2.7						
SONM	Songino Array	52.36	55	P	P	18 17 59.7	-1.0
	comp=Z,0.2nm,0.6s,baz=294,slow=7.2,SNR=3.2						
FRB	Frobisher Bay	58.20	329	P	P	18 18 42.9	+0.5
	comp=Z,1.6nm,0.3s,baz=136,slow=7.8,SNR=4.3						

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*IDC **01** 18:16:15.6±2.0, 43°.53N×105°.36W, h0km, mb4.5/1, mb1 3.9/4, mb1mx3.4/28, mbtmp3.7/4, ML3.5/3, Error ellipse: s-maj=45.1km s-min=7.3km az=150.0*

*ISCJB **01** 18:16:16.8±0.2, 43°.68N±0°.01×105°.26W±0°.02, h0km, mb4.6/1, Error ellipse: s-maj=2.2km s-min=1.7km az=168.7*

*NEIC **01** 18:16:18.6±0.8, 43°.80N×105°.15W, h0km, ML3.4, Error ellipse: s-maj=11.8km s-min=9.9km az=178.0, Suspected Mining explosion.*

NEIC 60 km [40 miles] SSE of Gillette.

ISC 01 18:16:16.5±0.5**, 43°.67N**±0°.02×**105°.26W**±0°.02**, h0km, n161,** σ**1s.33**/180**, 71C-59D, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I23A	Meade Ranch, G	0.33	333	P	Pg	18 16 24.7	+1.9
	baz=0.3,SNR=235						
I23A				⇑S	Sg	18 16 28.8	+1.8
	baz=0.3						
J23A	Dilts Ranch, B	0.34	219	P	Pg	18 16 24.1	+1.2
	baz=0.5,SNR=204						
J23A				⇓S	Sg	18 16 27.1	-0.3
	baz=0.5						
I24A	Kuemmerle Ranc	0.49	67	P	Pb	18 16 27.9	-0.2
	baz=0.4,SNR=472						
I24A				⇑S	Sb	18 16 35.1	-0.9
	baz=0.4						
J24A	Dixon Ranch, L	0.55	128	⇓P	Pg	18 16 28.4	+1.4
	baz=0.6						
H23A	Clabaugh Cattl	0.90	353	⇓P	Pg	18 16 34.6	+0.8
	baz=0.8,SNR=21						
I22A	9 Mile Ranch,	0.92	285	⇑P	Pg	18 16 34.6	+0.6
	baz=1.0,SNR=415						
J22A	Midwest	0.93	254	P	Pg	18 16 34.4	+0.2
	baz=1.0,SNR=307						
RSSD	Black Hills	0.99	62	eP	Pg	18 16 36.4	+0.9
K24A	Anderson Ranch	1.00	161	⇓P	Pg	18 16 36.3	+0.7
	baz=1.1						
H24A	Dirks Ranch, A	1.19	25	P	Pg	18 16 39.8	+0.5
	baz=1.0,SNR=444						
H22A	Clearmont	1.22	320	P	Pg	18 16 40.5	+0.7
	baz=1.2,SNR=82						
K22A	Casper	1.38	223	⇓P	Pg	18 16 42.3	-0.6
	baz=1.5						
K22A				⇓S	Sg	18 17 01.7	+1.0
	baz=1.5						
K25A	Mack Ranch, Ha	1.46	136	⇓P	Pb	18 16 45.3	+0.7
	baz=1.5						
I21A	Big Trails, Te	1.48	276	⇑P	Pn	18 16 43.7	-0.9
	baz=1.5						
G23A	Biddle	1.54	356	⇑P	Pn	18 16 46.0	+0.7
	baz=1.4,SNR=258						
G23A				⇓S	Sg	18 17 07.6	+1.8
	baz=1.4						
L23A	Garrett	1.59	192	⇑P	Pn	18 16 45.9	-0.1
	baz=1.7						
L23A				⇓S	Sn	18 17 07.9	+0.5
	baz=1.7						
H21A	Big Horn, Sher	1.60	307	⇑P	Pn	18 16 46.9	+0.7
	baz=1.6,SNR=56						
H21A				⇓S	Sb	18 17 08.8	+0.9
	baz=1.6						
J21A	Lysite	1.62	259	⇑P	Pn	18 16 46.4	-0.2
	baz=1.7,SNR=63						
J21A				⇑S	Sn	18 17 08.6	+0.3
	baz=1.7						
L24A	Wheatland	1.64	172	⇓P	Pn	18 16 47.3	+0.6
	baz=1.8						
L24A				⇓S	Sg	18 17 10.3	+1.2
	baz=1.8						
G22A	Birney	1.72	335	⇓P	Pn	18 16 49.0	+1.2
	baz=1.6,SNR=123						
G24A	Alzada	1.77	20	⇑P	Pb	18 16 50.1	+0.3
	baz=1.6,SNR=57						
G24A				⇑Sb	Sg	18 17 15.4	+2.2
	baz=1.6						
L25A	Engebretsen Ra	1.78	147	⇑Pb	Pb	18 16 50.7	+0.6
	baz=1.9,SNR=30						
L25A				⇑Sg	Sg	18 17 16.5	+2.7
	baz=1.9						
K21A	Alcova	1.79	235	⇑P	Pn	18 16 49.5	+0.7
	baz=1.9,SNR=94						
K21A				⇓S	Sn	18 17 12.7	+0.4
	baz=1.9						
K26A	Motz Farm, Whi	1.80	122	⇓Pb	Pg	18 16 51.4	+0.4
	baz=1.8,SNR=14						
L22A	Ellis Ranch, M	1.85	208	⇓P	Pn	18 16 50.4	+0.7
	baz=2.0,SNR=12						
L22A				⇑Sb	Sb	18 17 16.0	+0.9
	baz=2.0						
J20A	Shoshoni	2.08	262	⇓Pb	Pb	18 16 55.2	0.0
	baz=2.2,SNR=21						
J20A				⇑Sb	Sb	18 17 22.8	+1.2
	baz=2.2						
G21A	Lodge Grass	2.09	319	⇑P	Pn	18 16 54.0	+1.1
	baz=2.0,SNR=38						
G21A				⇓Sb	Sb	18 17 23.6	+1.7
	baz=2.0						
I20A	Worland	2.10	279	⇓P	Pn	18 16 54.3	+1.3
	baz=2.2,SNR=57						
I20A				⇓Sb	Sb	18 17 23.0	+0.9
	baz=2.2						
H20A	Greybull	2.14	293	⇑P	Pn	18 16 54.4	+0.9
	baz=2.2,SNR=40						
H20A				⇑Sb	Sb	18 17 24.5	+1.2
	baz=2.2						
M24A	Cheyenne	2.22	172	⇑P	Pn	18 16 56.6	+1.9
	baz=2.3,SNR=76						
M24A				⇓Sb	Sb	18 17 27.5	+1.8
	baz=2.3						
M23A	Laramie	2.23	189	⇑P	Pn	18 16 56.3	+1.5
	baz=2.4,SNR=21						
M23A				⇓Sb	Sb	18 17 27.3	+1.4
	baz=2.4						
F22A	Rosebud	2.23	342	⇓P	Pn	18 16 55.4	+0.6
	baz=2.1,SNR=71						
F22A				⇑Sb	Sg	18 17 28.4	+0.3
	baz=2.1						
L21A	Rawlins	2.31	223	⇓P	Pn	18 16 56.8	+0.8
	baz=2.5						
L21A				⇑Sb	Sb	18 17 28.6	+0.4
	baz=2.5						
PHWY	Pilot Hill	2.37	184	ePn	Pn	18 16 58.1	+1.3
M25A	Palm-Egli Farm	2.40	158	⇑P	Pn	18 16 57.6	+0.4
	baz=2.5						
K27A	Flueckinger Fa	2.41	113	⇓P	Pb	18 16 59.9	-0.9
	baz=2.4,SNR=22						
M22A	Cedar Creek Ra	2.47	204	⇓P	Pn	18 17 00.4	+2.2
	baz=2.6,SNR=96						
K20A	Yellowstone Ra	2.47	247	⇓P	Pn	18 16 59.7	+1.5
	baz=2.6,SNR=56						
K20A				⇑Sb	Sb	18 17 33.6	+0.7
	baz=2.6						
F21A	Absaloka Mine,	2.53	329	⇑P	Pn	18 16 59.7	+0.7
	baz=2.5,SNR=35						
M21A	Separation Pea	2.58	218	⇑P	Pn	18 17 01.4	+1.7
	baz=2.7,SNR=43						
G20A	Bridger	2.63	307	P	Pn	18 17 00.8	+0.6
	baz=2.6,SNR=103						
M26A	McRoberts Ranc	2.70	144	⇑Pb	Pb	18 17 06.3	+0.6
	baz=2.8						
I19A	Meeteetse	2.73	279	⇑P	Pn	18 17 03.3	+1.6
	baz=2.8,SNR=61						
K19A	Absolon Red Bu	2.75	253	P	Pn	18 17 03.2	+1.1
	baz=2.9,SNR=166						
J19A	Crowheart	2.79	263	⇑P	Pn	18 17 04.2	+1.6
	baz=2.9,SNR=153						
E22A	Miles City	2.81	350	⇓P	Pn	18 17 03.4	+0.6
	baz=2.7,SNR=10						
N23A	Red Feather La	2.82	191	⇑P	Pn	18 17 04.7	+1.7
	baz=3.0,SNR=52						
E23A	Ismay	2.83	359	⇓P	Pn	18 17 04.2	+1.2
	baz=2.7,SNR=11						
N24A	Carr	2.85	174	⇓P	Pn	18 17 03.8	+0.4
	baz=3.0						
H19A	Powell	2.87	292	⇓P	Pn	18 17 04.8	+1.2
	baz=2.9,SNR=18						
E24A	Baker	2.97	13	⇑P	Pn	18 17 06.7	+1.7
	baz=2.8,SNR=55						
N25A	Grover	2.98	163	⇑Pb	Pb	18 17 11.1	+0.6
	baz=3.1						
N22A	Wattenberg Ran	3.00	198	⇑Pb	Pb	18 17 10.7	-0.2
	baz=3.1						
E21A	Keefer Ranch,	3.15	336	⇑P	Pn	18 17 09.2	+1.8
	baz=3.1						
RLMT	Red Lodge	3.22	298	eP	Pn	18 17 09.7	+1.2
RLMT	Red Lodge	3.22	298	⇓P	Pn	18 17 09.7	+1.2
	baz=3.2						
BW06	Boulder Array	3.27	256	ePn	Pn	18 17 10.3	+1.0
BW06	Boulder Array	3.27	256	⇑P	Pn	18 17 10.4	+1.2
	baz=3.4,SNR=46						
PDAR	Pinedale Array	3.27	256	Pn	Pn	18 17 10.2	+1.0
PDAR				Pg	Pb	18 17 15.4	-0.1
PDAR				Lg	Lg	18 17 55.8	
PDAR	Pinedale Array	3.27	256	Pn	Pn	18 17 10.2	+1.0
	4.1nm,0.3s,baz=92,slow=13,SNR=87						
PDAR				Pg	Pb	18 17 15.4	-0.1
	19nm,0.3s,baz=66,slow=20,SNR=127						
PDAR				Lg	Lg	18 17 55.8	
	26nm,0.3s,baz=76,slow=34,SNR=20						
I18A	Diamond G Ranc	3.31	272	⇓P	Pn	18 17 11.0	+1.2
	baz=3.4						
H18A	Shoshone NF, C	3.33	289	⇑P	Pn	18 17 10.6	+0.6
	baz=3.4,SNR=39						
L19A	Farson	3.40	244	⇑P	Pn	18 17 12.8	+1.8
	baz=3.5						
F19A	Roth Farm, Mol	3.42	311	⇓P	Pn	18 17 12.2	+1.1
	baz=3.4,SNR=63						
O23A	Lake Granby, G	3.49	188	⇑P	Pn	18 17 14.8	+2.5
	baz=3.6						
G18A	Lazy EL Ranch,	3.50	300	P	Pn	18 17 13.5	+1.3
	baz=3.5,SNR=60						
N27A	Anderson Farm,	3.50	144	⇓P	Pn	18 17 14.1	+1.9
	baz=3.6						
D23A	Lindsay	3.51	1	⇑P	Pn	18 17 13.7	+1.4
	baz=3.4,SNR=10						
D24A	Glendive	3.51	10	⇓P	Pn	18 17 14.5	+2.2
	baz=3.4,SNR=26						
D22A	Cohagen	3.54	350	⇑P	Pn	18 17 13.7	+0.9
	baz=3.4,SNR=21						
D21A	La Casta Ranch	3.61	341	⇓P	Pn	18 17 14.7	+1.0
	baz=3.5						
OGNE	Ogallala	3.62	138	ePn	Pn	18 17 16.2	+2.3
OGNE	Ogallala	3.62	138	⇑P	Pn	18 17 15.4	+1.5
	baz=3.7						
O22A	Kremmling	3.63	196	⇓P	Pn	18 17 16.1	+1.9
	baz=3.8,SNR=9.4						
E19A	Rath Farm, Rou	3.75	319	⇓P	Pn	18 17 16.3	+0.7
	baz=3.7,SNR=17						
GCMT	Greycliff	3.79	306	ePn	Pn	18 17 17.4	+1.1
LKWY	Lake	3.81	285	ePn	Pn	18 17 17.8	+1.1
ISCO	Idaho Springs	3.87	184	ePn	Pn	18 17 19.1	+1.5
ISCO	Idaho Springs	3.87	184	⇓P	Pn	18 17 18.5	+0.9
	baz=4.0						
LOHW	Long Hollow	3.88	271	ePn	Pn	18 17 22.5	+4.8
F18A	Big Timber	3.88	307	⇓P	Pn	18 17 18.8	+1.3
	baz=3.9,SNR=14						
C24A	Savage	3.91	8	⇑P	Pn	18 17 19.9	+2.1
	baz=3.8,SNR=44						
D20A	Manuel Ranch,	3.98	330	⇑P	Pn	18 17 19.9	+1.1
	baz=3.9						
MOOW	Moose Ponds	3.98	273	ePn	Pn	18 17 20.6	+1.6
SNOW	Snow King Moun	4.00	269	ePn	Pn	18 17 22.8	+3.5
N19A	John Jarvie Ra	4.02	228	⇓P	Pn	18 17 20.4	+1.0
	baz=4.2,SNR=7.2						
REDW	Red Top Meadow	4.08	268	Pn	Pb	18 17 26.7	-2.7
YFT	Old Faithful	4.10	283	ePn	Pn	18 17 24.1	+3.5
C22A	Vida	4.10	354	⇑P	Pn	18 17 22.5	+2.0
	baz=4.0,SNR=34						
IMW	Indian Meadow	4.12	275	ePn	Pn	18 17 23.4	+2.4
C23A	Lambert	4.14	1	⇓P	Pn	18 17 23.0	+2.1
	baz=4.0,SNR=59						
TPAW	Teton Pass	4.14	270	ePn	Pn	18 17 23.5	+2.2
O20A	White River Ci	4.17	213	⇑P	Pn	18 17 23.2	+1.6
	baz=4.3,SNR=10						
YMR	Madison River	4.23	286	ePn	Pn	18 17 23.4	+1.1
G17A	Pierce Place,	4.26	295	⇓P	Pn	18 17 23.8	+1.1
	baz=4.3,SNR=12						
DCID1	Drake Creek	4.30	271	ePn	Pn	18 17 26.2	+2.8
P26A	Davis Ranch, A	4.35	160	⇑P	Pn	18 17 25.3	+1.4
	baz=4.4,SNR=10.0						
C21A	Desert Coulee	4.35	343	⇓P	Pn	18 17 25.1	+1.2
	baz=4.3						
AHID	Auburn Hatcher	4.37	260	ePn	Pn	18 17 29.2	+5.0
E18A	Harlowton	4.39	313	⇑P	Pn	18 17 25.5	+1.0
	baz=4.4,SNR=31						
L17A	Cokeville	4.42	251	⇑P	Pn	18 17 25.4	+0.5
	baz=4.5						
RRI2	Red Ridge	4.42	268	ePn	Pn	18 17 26.7	+1.6
C20A	Veseth Ranch,	4.48	336	⇓P	Pn	18 17 26.7	+1.0
	baz=4.4						
P27A	Ficken Ranch,	4.57	153	⇓P	Pn	18 17 28.3	+1.3
	baz=4.7						
QLMT	Earthquake Lak	4.59	287	ePn	Pn	18 17 30.8	+3.5
B22A	Reddig Ranch S	4.66	354	⇓P	Pn	18 17 29.5	+1.3
	baz=4.5						
SMCO	Snowmass	4.67	197	ePn	Pb	18 17 37.8	-1.7
B23A	Brockton	4.80	2	⇓P	Pn	18 17 32.0	+2.0
	baz=4.7						
L16A	Fish Haven	4.83	252	⇓P	Pn	18 17 31.4	+0.8
	baz=4.9,SNR=9.9						
E17A	Martinsdale	4.85	307	⇑P	Pn	18 17 32.2	+1.3
	baz=4.8,SNR=23						
C19A	Slack Wire Ran	4.86	328	⇓P	Pn	18 17 32.3	+1.4
	baz=4.8,SNR=11						
DGMT	Dagmar	4.86	8	ePn	Pn	18 17 32.9	+2.0
DGMT	Dagmar	4.86	8	⇑P	Pn	18 17 32.9	+2.0
	baz=4.7,SNR=52						
Q26A	Hugo	4.92	164	⇑P	Pn	18 17 32.5	+0.8
	baz=5.0						
BOZ	Bozeman (W)	4.96	296	ePn	Pn	18 17 32.4	+0.1
BOZ	Bozeman (W)	4.96	296	⇓P	Pn	18 17 32.6	+0.3
	baz=5.0,SNR=8.8						
B20A	Solberg Farm,	5.15	339	⇑P	Pn	18 17 35.9	+1.1
	baz=5.1,SNR=11						
D17A	Six Diamond Ra	5.17	314	⇑P	Pn	18 17 36.3	+1.0
	baz=5.1,SNR=51						
M16A	Huntsville	5.27	246	⇓P	Pn	18 17 37.8	+1.2
	baz=5.4						
A23A	Redstone	5.30	3	⇑P	Pn	18 17 38.5	+1.6
	baz=5.2,SNR=7.8						
A22A	Carney Farms,	5.35	355	⇑P	Pn	18 17 38.6	+1.0
	baz=5.2						
EGMT	Eagleton	5.37	326	ePn	Pn	18 17 39.4	+1.5
	16nm,0.3s						
E16A	East Helena	5.37	304	⇓P	Pn	18 17 39.2	+1.2
	baz=5.4,SNR=6.3						
A21A	Bergtoll Ranch	5.45	348	⇑P	Pn	18 17 40.1	+1.1
	baz=5.3,SNR=9.6						
L15A	Malad City	5.50	255	⇑P	Pn	18 17 40.8	+1.0
	baz=5.6						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
P18A	**Preston Nutter**	**5.50**	**224**	⇑P	**Pn**	**18 17 41.2**	**+1.3**
	baz=5.6,SNR=25						
DAU	**Daniels Canyon**	**5.53**	**236**	*e*Pn	**Pn**	**18 17 43.5**	**+3.2**
	8.9nm,0.3s						
C17A	**Wharram Farm,**	**5.53**	**318**	⇑P	**Pn**	**18 17 41.1**	**+1.0**
	baz=5.5,SNR=22						
R26A	**Arlington**	**5.53**	**165**	⇑P	**Pn**	**18 17 41.2**	**+1.0**
	baz=5.6,SNR=29						
LRM	**Limekiln Ridge**	**5.56**	**295**	*e*Pn	**Pn**	**18 17 42.1**	**+1.4**
	31nm,0.3s						
D16A	**Dana Ranch, Ca**	**5.57**	**309**	⇑P	**Pn**	**18 17 41.4**	**+0.8**
	baz=5.5,SNR=26						
MCMT	**McKenzie Canyo**	**5.58**	**285**	Pn	Pn	18 17 45.4	+4.4
	2.8nm,0.3s						
MDND	**Maddock**	**5.75**	**41**	⇑P	**Pn**	**18 17 44.2**	**+1.1**
	baz=5.6						
A19A	**Klindworth Far**	**5.79**	**337**	⇑P	**Pn**	**18 17 43.5**	**-0.1**
	baz=5.7,SNR=5.7						
HVU	**Hansel Valley**	**5.85**	**254**	*e*Pn	**Pn**	**18 17 47.1**	**+2.6**
	9.1nm,0.8s						
E15A	**Deer Lodge**	**5.91**	**300**	⇓P	**Pn**	**18 17 46.1**	**+0.6**
	baz=5.9,SNR=12						
B17A	**L&G Farms, Che**	**6.03**	**322**	⇑P	**Pn**	**18 17 47.7**	**+0.9**
	baz=6.0						
SRU	**San Rafael**	**6.03**	**223**	*e*Pn	**Pn**	**18 17 48.8**	**+1.7**
	427nm,0.6s						
D15A	**Lincoln**	**6.13**	**306**	⇑P	**Pn**	**18 17 49.2**	**+0.8**
	baz=6.1						
C16A	**Fuhringer Ranc**	**6.14**	**315**	⇑P	**Pn**	**18 17 49.0**	**+0.4**
	baz=6.1						
S26A	**Kim**	**6.19**	**167**	⇓P	**Pn**	**18 17 50.1**	**+0.8**
	baz=6.3						
ECSD	**EROS Data Cent**	**6.26**	**86**	*e*Pn	**Pn**	**18 17 51.9**	**+1.7**
	7.9nm,0.4s						
CHMT	**Chamberlain Mo**	**6.51**	**303**	*e*Pn	**Pn**	**18 17 54.7**	**+1.0**
	1.7nm,0.3s						
C15A	**Salmond Ranch,**	**6.58**	**311**	⇑P	**Pn**	**18 17 55.0**	**+0.3**
	baz=6.5						
HLID	**Hailey**	**6.65**	**272**	*e*Pn	**Pn**	**18 17 57.5**	**+1.9**
	3.0nm,0.7s						
D14A	**Greenough**	**6.74**	**303**	⇑P	**Pn**	**18 17 57.5**	**+0.7**
	baz=6.7						
SLMT	**Seeley Lake**	**6.81**	**305**	*e*Pn	**Pn**	**18 17 58.8**	**+1.1**
	3.3nm,0.6s						
T27A	**Campo**	**6.88**	**163**	⇓P	**Pn**	**18 17 59.4**	**+0.7**
	baz=7.0						
B15A	**Bradely Ranch,**	**6.89**	**315**	⇓P	**Pn**	**18 17 58.8**	**0.0**
	baz=6.8,SNR=12						
T28A	**Walsh**	**6.96**	**159**	⇑P	**Pn**	**18 18 00.4**	**+0.5**
	baz=7.1						
SWMT	**Swartz Lake**	**7.24**	**305**	*e*Pn	**Pn**	**18 18 04.2**	**+0.7**
	2.4nm,0.3s						
B14A	**Marquette Ranc**	**7.29**	**313**	⇓P	**Pn**	**18 18 04.6**	**+0.2**
	baz=7.2,SNR=18						
YBMT	**Yellow Bay**	**7.42**	**307**	*e*Pn	**Pn**	**18 18 07.6**	**+1.5**
	9.1nm,0.3s						
JTMT	**Jette**	**7.52**	**306**	*e*Pn	**Pn**	**18 18 09.1**	**+1.6**
	1.9nm,0.3s						
A14A	**Double T Ranch**	**7.75**	**316**	⇑P	**Pn**	**18 18 10.5**	**-0.1**
	baz=7.7						
ULM	**Lac du Bonnet**	**9.19**	**41**	Pn	**Pn**	**18 18 29.9**	**-0.3**
ULM				Sn	**Sn**	**18 20 10.4**	**-3.8**
ULM				Lg	Lg	18 21 05.9	
ULM	**Lac du Bonnet**	**9.19**	**41**	Pn	**Pn**	**18 18 29.9**	**-0.3**
	2.1nm,0.3s,baz=248,slow=12,SNR=7.7						
ULM				Sn	**Sn**	**18 20 10.4**	**-3.8**
	0.9nm,0.3s,baz=291,slow=8.0,SNR=6.0						
ULM				Lg	Lg	18 21 05.9	
	0.5nm,0.3s,baz=151,slow=9.3,SNR=5.6						
YKA	**Yellowknife Ar**	**19.64**	**347**	P	**P**	**18 20 45.1**	**-1.2**
YKA	**Yellowknife Ar**	**19.64**	**347**	P	**P**	**18 20 45.1**	**-1.2**
	0.1nm,0.3s,baz=157,slow=12,SNR=3.2						
ARCES	**ARCESS Array B**	**61.48**	**18**	P	**P**	**18 26 33.8**	**-0.6**
ARCES	**ARCESS Array B**	**61.48**	**18**	P	**P**	**18 26 33.8**	**-0.6**
	4.9nm,0.9s,baz=327,slow=7.6,SNR=3.7						

IDC 01 18:25:40.4±16.0**,6°.49S**×**155°.56E,h332**km±182km**,mb2.9**/5**,mb1 3.2**/6**,mb1mx3.0**/19**,mbtmp3.0**/6**,Error ellipse: s-maj=78.7km s-min=52.1km az=150.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.26**	**213**	P	P	18 29 10.7	+1.0
	0.4nm,0.3s,baz=33,slow=13,SNR=4.1						
WRA	**Warramunga Arr**	**24.56**	**235**	P	P	18 30 31.4	+0.1
	0.9nm,0.4s,baz=58,slow=9.4,SNR=39						
ASAR	**Alice Springs**	**26.92**	**228**	P	P	18 30 51.8	-0.6
	0.3nm,0.3s,baz=58,slow=9.1,SNR=20						
SONM	**Songino Array**	**69.22**	**327**	P	P	18 36 12.7	+0.6
	0.3nm,0.6s,baz=138,slow=6.6,SNR=3.5						
ILAR	**Eielson Array**	**82.70**	**21**	P	P	18 37 26.4	-0.7
	0.5nm,1.1s,baz=252,slow=5.8,SNR=4.7						
MKAR	**Makanchi Array**	**83.40**	**319**	P	P	18 37 31.7	+0.6
	0.3nm,0.7s,baz=96,slow=4.6,SNR=3.3						

*NEIC **01** 18:31:29.4±1.7, 15°.47S×167°.80E, h233km±15km, mb4.6/11, Error ellipse: s-maj=11.8km s-min=10.3km az=81.0*

*ISCJB **01** 18:31:30.1±0.4, 15°.42S±0°.04×167°.69E±0°.09, h250km, mb4.3/26, Error ellipse: s-maj=11.8km s-min=6.1km az=5.6*

*IDC **01** 18:31:32.9±1.6, 15°.49S×167°.62E, h261km±16km, mb3.9/20, mb1 4.0/21, mb1mx3.9/26, mbtmp3.9/21, Error ellipse: s-maj=12.6km s-min=9.7km az=121.0*

ISC 01 18:31:31.4±0.5**,15°.48S**±0°.06×**167°.67E**±0°.09**,h250**km**,n93,** σ**1§27**/90**,mb4.3**/23**,2C,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.66**	**190**	*e*P	**Pn**	**18 33 06.2**	**-1.6**
DZM				*e*S	**S**	**18 34 24.7**	**-0.4**
DZM	**Mont Dzumac**	**6.66**	**190**	*e*Pn	**Pn**	**18 33 06.8**	**-1.0**
	53nm,0.4s						
DZM	**Mont Dzumac**	**6.66**	**190**	P	**Pn**	**18 33 07.4**	**-0.4**
	8.8nm,0.3s,baz=45,slow=17,SNR=34						
NOUC	**Port Laguerre**	**6.71**	**191**	*e*P	Pn	18 33 09.8	+1.4
NOUC				*e*S	**S**	**18 34 28.9**	**+2.7**
EIDS	**Eidsvold**	**18.38**	**235**	*e*P	**Pn**	**18 35 30.2**	**-1.3**
	30nm,0.8s						
CTA	**Charters Tower**	**20.90**	**254**	P	**P**	**18 35 56.4**	**+1.3**
CTA	**Charters Tower**	**20.90**	**254**	P	**P**	**18 35 56.4**	**+1.3**
	2.2nm,0.5s,baz=79,slow=14,SNR=3.7						
CTAO	**Charters Tower**	**20.90**	**254**	*e*P	**P**	**18 35 54.3**	**-0.8**
	2.9nm,0.6s						
PMG	**Port Moresby**	**20.91**	**284**	P	**P**	**18 35 55.6**	**+0.3**
PMG	**Port Moresby**	**20.91**	**284**	P	**P**	**18 35 55.6**	**+0.3**
	8.1nm,0.8s,baz=15,slow=5.9,SNR=5.2						
URZ	**Urewera**	**24.17**	**162**	*e*P	**P**	**18 36 21.9**	**-3.2**
URZ	**Urewera**	**24.17**	**162**	P	**P**	**18 36 24.7**	**-0.4**
	6.4nm,0.6s,baz=12,slow=0.3,SNR=8.4						
STKA	**Stephens Creek**	**28.81**	**231**	P	**P**	**18 37 08.2**	**+1.6**
STKA	**Stephens Creek**	**28.81**	**231**	P	**P**	**18 37 08.2**	**+1.6**
	19nm,0.6s,baz=42,slow=7.1,SNR=66						
WRAB	**Tennant Creek**	**32.02**	**257**	*e*P	**P**	**18 37 34.0**	**-0.9**
WRA	**Warramunga Arr**	**32.03**	**257**	P	**P**	**18 37 34.0**	**-1.0**
WRA				S	**S**	**18 42 24.9**	**-3.3**
WRA	**Warramunga Arr**	**32.03**	**257**	P	**P**	**18 37 34.0**	**-1.0**
	0.6nm,0.3s,baz=83,slow=7.8,SNR=40						
WRA				S	**S**	**18 42 24.9**	**-3.3**
	1.8nm,0.9s,baz=88,slow=14,SNR=8.0						
AS31	**Alice Springs**	**32.77**	**250**	*e*P	**P**	**18 37 41.0**	**-0.5**
ASAR	**Alice Springs**	**32.78**	**250**	P	**P**	**18 37 41.2**	**-0.3**
ASAR				S	**S**	**18 42 39.3**	**-0.5**
ASAR				ScP	**ScP**	**18 43 43.5**	**+2.9**
ASAR	**Alice Springs**	**32.78**	**250**	P	**P**	**18 37 41.2**	**-0.3**
	4.0nm,0.5s,baz=77,slow=8.9,SNR=156						
ASAR				S	**S**	**18 42 39.3**	**-0.5**
	2.9nm,0.9s,baz=79,slow=17,SNR=18						
ASAR				ScP	**ScP**	**18 43 43.5**	**+2.9**
	1.8nm,0.8s,baz=96,slow=3.0,SNR=12						
BBOO	**Buckleboo**	**33.43**	**233**	*e*P	**P**	**18 37 48.1**	**+1.1**
	518nm,0.6s						
FITZ	**Fitzroy Crossi**	**40.26**	**260**	*e*P	**P**	**18 38 44.7**	**+0.1**
	5.3nm,0.9s						
FITZ	**Fitzroy Crossi**	**40.26**	**260**	P	**P**	**18 38 44.8**	**+0.1**
	3.0nm,0.5s,baz=84,slow=8.6						
MBWA	**Marble Bar**	**45.73**	**255**	*e*P	**P**	**18 39 28.1**	**-0.1**
KAPI	**Kappang**	**48.18**	**277**	P	**P**	**18 39 47.6**	**+0.4**
KAPI	**Kappang**	**48.18**	**277**	P	**P**	**18 39 47.7**	**+0.4**
	6.7nm,0.8s,baz=126,slow=6.2,SNR=6.3						
NWAO	**Narrogin (SRO)**	**48.70**	**240**	*e*P	**P**	**18 39 50.7**	**-0.2**
CBIJ	**Chichi jima**	**49.03**	**329**	P	**P**	**18 39 52.3**	**-1.1**
CBIJ	**Chichi jima**	**49.03**	**329**	P	**P**	**18 39 52.3**	**-1.1**
MJAR	**Matsushiro Arr**	**58.75**	**332**	P	**P**	**18 41 02.9**	**-0.6**
MJAR	**Matsushiro Arr**	**58.75**	**332**	P	**P**	**18 41 02.9**	**-0.6**
	10nm,0.7s,baz=167,slow=6.0,SNR=21						
MAJO	**Matsushiro**	**58.75**	**332**	*e*P	**P**	**18 41 03.1**	**-0.3**
	12nm,0.5s						
MAT	**Matsushiro**	**58.75**	**332**	P	**P**	**18 41 03.1**	**-0.3**
JNU	**Nakatsue**	**59.76**	**324**	P	**P**	**18 41 10.2**	**-0.2**
JNU	**Nakatsue**	**59.76**	**324**	P	**P**	**18 41 10.2**	**-0.2**
	11nm,0.9s,baz=130,slow=7.9,SNR=5.5						
VNDA	**Vanda**	**62.12**	**181**	P	**P**	**18 41 26.2**	**+0.7**
VNDA	**Vanda**	**62.12**	**181**	P	**P**	**18 41 26.2**	**+0.7**
	2.0nm,0.5s,baz=2.5,slow=7.5,SNR=17						
ASAJ	**Asahikawa**	**63.58**	**340**	*e*P	**P**	**18 41 36.2**	**+0.7**
	5.6nm,0.7s						
KSRS	**Korea Array**	**64.58**	**326**	P	**P**	**18 41 43.2**	**+1.1**
	1.1nm,0.6s,baz=146,slow=5.8,SNR=5.0						
KSAR	**Wonju Array Be**	**64.59**	**326**	P	**P**	**18 41 43.2**	**+1.0**
YSS	**Yuzh-Sakhalins**	**66.06**	**342**	*e*P	P	18 41 52.6	+1.1
	27nm,0.8s						
USRK	**Ussuriysk Arra**	**67.73**	**333**	P	**P**	**18 42 03.0**	**+1.0**
	9.6nm,0.8s,baz=143,slow=6.1,SNR=23						
PETK	**Petropavlovsk-**	**68.85**	**354**	P	**P**	**18 42 07.9**	**-0.8**
PETK	**Petropavlovsk-**	**68.85**	**354**	P	**P**	**18 42 07.9**	**-0.8**
	3.8nm,0.9s,baz=163,slow=5.4,SNR=3.0						
QSPA	**South Pole Qui**	**74.55**	**180**	*e*P	**P**	**18 42 42.8**	**+0.1**
	6.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**75.61**	**294**	P	P	18 42 51.0	+1.6
CMAR	**Chiang Mai Arr**	**75.61**	**294**	P	P	18 42 51.0	+1.6
	1.8nm,0.8s,baz=135,slow=4.7,SNR=16						
YAK	**Yakutsk**	**82.86**	**343**	*e*P	**P**	**18 43 28.0**	**+0.5**
	30nm,0.6s						
ULN	**Ulaanbaatar**	**82.97**	**324**	*e*P	**P**	**18 43 29.3**	**+0.6**
	11nm,0.8s						
SONM	**Songino Array**	**83.33**	**323**	P	**P**	**18 43 31.2**	**+0.7**
SONM	**Songino Array**	**83.33**	**323**	P	**P**	**18 43 31.2**	**+0.7**
	2.4nm,0.4s,baz=118,slow=4.8,SNR=43						
ILAR	**Eielson Array**	**87.12**	**18**	P	**P**	**18 43 47.2**	**-1.5**
ILAR	**Eielson Array**	**87.12**	**18**	P	**P**	**18 43 47.2**	**-1.5**
	1.4nm,0.6s,baz=239,slow=4.7,SNR=20						
TIXI	**Tiksi**	**90.78**	**349**	*e*P	**P**	**18 44 05.1**	**-0.5**
	2.0nm,0.8s						
SNAA	**Sanae**	**92.82**	**183**	*e*P	P	18 44 16.9	+1.6
VNA3	**Neumayer Olymp**	**93.47**	**181**	*e*P	**P**	**18 44 18.0**	**-0.3**
VNA2	**Neumayer--Watz**	**93.74**	**182**	*e*P	**P**	**18 44 18.7**	**-0.8**
	baz=199,slow=3.1						
VNA1	**Neumayer--Stat**	**94.04**	**181**	*e*P	P	18 44 17.5	-3.3
MK31	**Makanchi Array**	**98.01**	**316**	*e*P	Pdif	18 44 40.0	+0.7
MKAR	**Makanchi Array**	**98.01**	**316**	P	Pdif	18 44 40.0	+0.7
MKAR	**Makanchi Array**	**98.01**	**316**	P	Pdif	18 44 40.0	+0.7
	0.5nm,0.6s,baz=83,slow=7.1,SNR=7.6						
YKA	**Yellowknife Ar**	**98.04**	**27**	P	Pdif	18 44 37.5	-1.4
YKA	**Yellowknife Ar**	**98.04**	**27**	P	Pdif	18 44 37.5	-1.4
	1.0nm,0.9s,baz=255,slow=4.8,SNR=14						
ZALV	**Zalesovo Beam**	**98.23**	**324**	P	Pdif	18 44 39.4	-0.6
ZALV	**Zalesovo Beam**	**98.23**	**324**	P	Pdif	18 44 39.4	-0.6
	1.0nm,0.6s,baz=104,slow=4.6,SNR=6.2						
KEV	**Kevo**	**120.55**	**345**	*e*p	**PKPdf**	**18 49 49.7**	**-2.9**
	6.1nm,0.8s						
ARCES	**ARCESS Array B**	**121.08**	**345**	PKP	**PKPdf**	**18 49 53.5**	**-0.2**
ARCES	**ARCESS Array B**	**121.08**	**345**	PKP	**PKPdf**	**18 49 53.5**	**-0.2**
	2.9nm,0.3s,baz=61,slow=1.9,SNR=72						
JOF	**Joensuu**	**123.73**	**338**	*e*p	**PKPdf**	**18 49 58.3**	**-0.6**
	3.8nm,0.6s						
KBZ	**Khabaz**	**125.55**	**313**	PKP	**PKPdf**	**18 50 03.9**	**+0.9**
KBZ	**Khabaz**	**125.55**	**313**	PKP	**PKPdf**	**18 50 03.9**	**+0.9**
	1.3nm,0.8s,baz=118,slow=4.7,SNR=6.4						
KAF	**Kangasniemi**	**126.03**	**339**	*e*p	**PKPdf**	**18 50 02.0**	**-1.3**
	3.0nm,0.5s						
FINES	**FINESS Array B**	**126.56**	**338**	PKP	**PKPdf**	**18 50 04.5**	**+0.1**
FINES	**FINESS Array B**	**126.56**	**338**	PKP	**PKPdf**	**18 50 04.5**	**+0.1**
	1.3nm,0.3s,baz=67,slow=2.7,SNR=28						
NB2	**NORSAR Subarra**	**131.45**	**345**	PKPdf	**PKPdf**	**18 50 14.0**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=34,slow=1.8						
NOA	**NORSAR Array B**	**131.45**	**345**	PKP	**PKPdf**	**18 50 14.3**	**+0.6**
NOA	**NORSAR Array B**	**131.45**	**345**	PKP	**PKPdf**	**18 50 14.3**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=33,slow=2.0,SNR=6.6						
AKASG	**Malin Array Be**	**131.57**	**326**	PKP	**PKPdf**	**18 50 14.2**	**0.0**
AKASG				SKPab	**SKPab**	**18 53 19.3**	**+2.5**
AKASG	**Malin Array Be**	**131.57**	**326**	PKP	**PKPdf**	**18 50 14.2**	**0.0**
	comp=Z,1.1nm,0.4s,baz=45,slow=2.4,SNR=5.9						
AKASG				SKPab	**SKPab**	**18 53 19.3**	**+2.5**
	comp=Z,2.5nm,0.6s,baz=51,slow=4.2,SNR=8.6						
BRTR	**Keskin Array B**	**133.29**	**310**	PKP	**PKPdf**	**18 50 19.0**	**+1.0**
BRTR	**Keskin Array B**	**133.29**	**310**	PKP	**PKPdf**	**18 50 19.0**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=147,slow=3.9,SNR=8.2						
BUR08	**Bucovina Ar. S**	**135.44**	**324**	*e*PKPdf	**PKPdf**	**18 50 23.4**	**+1.6**
KHC	**Kasperske Hory**	**140.33**	**333**	*e*PKPdf	**PKPdf**	**18 50 31.5**	**+0.9**
GERES	**GERESS Array B**	**140.49**	**333**	PKP	**PKPdf**	**18 50 32.9**	**+1.9**
GERES	**GERESS Array B**	**140.49**	**333**	PKP	**PKPdf**	**18 50 32.9**	**+1.9**
	comp=Z,0.7nm,0.5s,baz=62,slow=2.5,SNR=5.2						
FETA	**Feichten**	**143.17**	**333**	⇑*i*PKPdf	**PKPdf**	**18 50 34.3**	**-1.6**
	comp=Z,3.7nm,0.6s						
FETA	**Feichten**	**143.17**	**333**	⇑*i*P	**PKPdf**	**18 50 34.3**	**-1.6**
TUE	**Stuetta**	**144.19**	**334**	*e*PKPdf	**PKPdf**	**18 50 36.8**	**-0.9**
BNI	**Bardonecchia**	**146.44**	**335**	*e*PKPbc	**PKPab**	**18 50 43.7**	**-1.1**
KEST	**Kesra**	**152.04**	**320**	PKPbc	**PKPbc**	**18 50 58.5**	**+1.0**
KEST	**Kesra**	**152.04**	**320**	PKPbc	**PKPbc**	**18 50 58.5**	**+1.0**
	comp=Z,2.7nm,0.4s,baz=333,slow=2.3,SNR=49						
ESDC	**Sonseca Array**	**154.81**	**345**	PKPab	**PKPab**	**18 51 19.8**	**+0.3**
ESDC	**Sonseca Array**	**154.81**	**345**	PKPab	**PKPab**	**18 51 19.8**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=19,slow=4.1,SNR=4.0						

KRSC 01 19:01:05.9±1.4**,49°.48N**×**157°.25E,h5**km±5km**,ML4.0, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**2.82**	**354**	P	Pn	19 01 52.7	+1.1
RUS	**Russkaya**	**3.06**	**15**	P	Pn	19 01 55.7	+0.8
RUS				*e*S	Sn	19 02 32.5	+0.6
MTVR	**Mutnovka**	**3.06**	**11**	*e*P	Pn	19 01 56.6	+1.4
MTVR				*e*S	Sn	19 02 33.0	+0.7
GRL	**Gorelyy**	**3.12**	**9**	P	Pn	19 01 57.6	+1.7
PET	**Petropavlovsk**	**3.66**	**13**	S	Sn	19 02 46.5	0.0
UGLR	**Uglovaya**	**3.86**	**14**	P	Pn	19 02 07.1	+1.0
AVH	**Avacha**	**3.90**	**13**	P	Pn	19 02 08.9	+2.3
SMAR	**Somma**	**3.91**	**14**	P	Pn	19 02 08.6	+1.7
SDLR	**Sedlovina**	**3.94**	**14**	P	Pn	19 02 08.4	+1.3
SPN	**Mys Shipunski**	**4.02**	**25**	S	Sn	19 02 55.6	+0.1
GNL	**Ganaly**	**4.24**	**6**	P	Pn	19 02 12.6	+1.3

IDC 01 19:01:42.8±6.9**,19°.21S**×**177°.70W,h0**km**,mb3.6**/3**, mb1 3.9**/3**,mb1mx3.6**/19**,mbtmp3.6**/3**,Error ellipse: s-maj=297.3km s-min=39.2km az=144.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.08**	**261**	P	P	19 10 01.1	+0.1
	0.4nm,0.7s,baz=96,slow=7.7,SNR=12						
ASAR	**Alice Springs**	**45.10**	**255**	P	P	19 10 00.9	-0.4
	0.6nm,0.6s,baz=100,slow=7.6,SNR=16						
ILAR	**Eielson Array**	**87.00**	**13**	P	P	19 14 29.6	0.0
	0.2nm,0.5s,baz=222,slow=7.3,SNR=4.2						

IDC 01 19:13:36.7±3.4**,4°.21S**×**152°.27E,h0**km**,mb3.5**/5**, mb1 3.6**/5**,mb1mx3.4**/19**,mbtmp3.5**/5**,Error ellipse: s-maj=112.6km s-min=29.4km az=111.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.45**	**227**	P	P	19 18 47.5	-0.5
	0.6nm,0.5s,baz=52,slow=9.9,SNR=18						
ASAR	**Alice Springs**	**26.24**	**221**	P	P	19 19 15.6	+1.8
	0.2nm,0.7s,baz=52,slow=8.9,SNR=4.4						
FITZ	**Fitzroy Crossi**	**29.49**	**240**	P	P	19 19 42.4	-0.4
	0.9nm,0.5s,baz=60,slow=12,SNR=4.6						
MKAR	**Makanchi Array**	**79.54**	**319**	P	P	19 25 46.2	+0.6
	0.1nm,0.4s,baz=96,slow=6.1,SNR=3.4						
ZALV	**Zalesovo Beam**	**80.38**	**326**	P	P	19 25 50.7	+0.9
	0.3nm,0.4s,baz=121,slow=5.0,SNR=2.4						
TORD	**Torodi Ar. Bea**	**149.62**	**289**	PKPbc	PKPdf	19 33 26.8	+2.0
	0.6nm,0.8s,baz=90,slow=2.4,SNR=4.5						

IDC 01 19:21:58.9±2.6**,26°.32S**×**71°.77E,h0**km**,mb3.6**/7**, mb1 3.8**/7**,mb1mx3.7**/23**,mbtmp3.6**/7**,MS3.5**/4**,Ms1 3.5**/4**, ms1mx2.8**/32**,Error ellipse: s-maj=81.0km s-min=29.7km az=41.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**23.96**	**284**	LR	LR	19 34 11.3	
	comp=Z,101nm,18.2s,baz=1.5,slow=31						
NWAO	**Narrogin (SRO)**	**39.83**	**111**	LR	LR	19 43 14.8	
	comp=Z,87nm,18.1s,baz=56,slow=32						
BOSA	**Boshof**	**41.13**	**256**	LR	LR	19 43 19.6	
	comp=Z,74nm,18.4s,baz=255,slow=31						
CMAR	**Chiang Mai Arr**	**51.75**	**34**	P	P	19 31 09.3	+1.0
	0.9nm,0.9s,baz=223,slow=6.1,SNR=7.1						
CMAR				LR	LR	19 50 30.0	
	comp=Z,20nm,18.4s,baz=85,slow=33						
ASAR	**Alice Springs**	**55.90**	**102**	P	P	19 31 39.0	+0.1
	0.7nm,1.0s,baz=250,slow=5.3,SNR=4.2						
WRA	**Warramunga Arr**	**57.42**	**98**	P	P	19 31 49.5	-0.2
	1.0nm,0.9s,baz=254,slow=7.0,SNR=3.9						
MKAR	**Makanchi Array**	**73.39**	**8**	P	P	19 33 31.5	-1.0
	0.6nm,0.7s,baz=191,slow=4.4,SNR=3.6						
BRTR	**Keskin Array B**	**74.70**	**330**	P	P	19 33 41.5	+0.9
	0.4nm,0.6s,baz=150,slow=5.4,SNR=4.4						
SONM	**Songino Array**	**80.11**	**23**	P	P	19 34 10.2	-0.4
	0.3nm,0.8s,baz=210,slow=5.4,SNR=3.3						
ZALV	**Zalesovo Beam**	**80.73**	**8**	P	P	19 34 13.1	-0.4
	0.5nm,0.6s,baz=193,slow=5.9,SNR=3.5						

IDC 01 19:49:18.8±4.9**,22°.21S**×**176°.71W,h0**km**,mb4.0**/5**, mb1 4.2**/5**,mb1mx3.9**/17**,mbtmp4.0**/5**,Error ellipse: s-maj=214.1km s-min=35.1km az=144.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.17**	**246**	P	P	19 56 40.4	+0.2
	1.3nm,0.6s,baz=96,slow=10,SNR=2.7						
ASAR	**Alice Springs**	**45.33**	**258**	P	P	19 57 38.5	-0.4
	1.5nm,0.8s,baz=93,slow=7.4,SNR=11						
WRA	**Warramunga Arr**	**45.58**	**263**	P	P	19 57 40.9	-0.1
	0.5nm,0.3s,baz=94,slow=8.3,SNR=25						
ILAR	**Eielson Array**	**89.71**	**12**	P	P	20 02 18.5	+0.2
	0.9nm,1.1s,baz=207,slow=5.8,SNR=4.8						
CMAR	**Chiang Mai Arr**	**91.82**	**289**	P	P	20 02 29.4	+0.2
	0.5nm,0.8s,baz=116,slow=4.1,SNR=4.9						
BRTR	**Keskin Array B**	**148.87**	**311**	PKPbc	PKPbc	20 09 07.7	-1.1
	0.3nm,0.6s,baz=29,slow=4.1,SNR=3.3						

*AUST **01** 19:58:51.9, 17°.30S×171°.19W, h5km*

*SZGRF **01** 19:59:16.7, 16°.88S×174°.41W, h33km, mb4.4, Tonga Islands*

*IDC **01** 19:59:35.2±1.5, 17°.16S×174°.71W, h194km±13km, mb3.8/13, mb1 4.1/14, mb1mx3.9/23, mbtmp3.9/14, MS3.5/1, Ms1 3.5/1, ms1mx2.3/33, Error ellipse: s-maj=20.9km s-min=9.7km az=131.0*

*NEIC **01** 19:59:38.6±1.3, 17°.07S×174°.67W, h225km±11km, mb4.5/8, Error ellipse: s-maj=24.9km s-min=9.9km az=142.0*

*ISCJB **01** 19:59:40.8±0.4, 17°.04S±0°.10×174°.88W±0°.09, h256km, mb4.1/21, Error ellipse: s-maj=16.4km s-min=7.5km az=139.6*

ISC 01 19:59:42.0±0.5**,17°.1S**±0°.1×**174°.87W**±0°.10**,h256**km**,n84,** σ**1§06**/87**,mb4.2**/21**,2D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.34**	**44**	*e*P	Pn	20 00 41.6	-8.6
AFI				*e*S	S	20 01 26.9	-18
AFI	**Afiamalu**	**4.34**	**44**	P	Pn	20 00 41.9	-8.2
	14nm,0.3s,baz=50,slow=2.1,SNR=7.9						
AFI				S	S	20 01 29.6	-15
	71nm,0.3s,baz=43,slow=19,SNR=15						
MSVF	**Nonsavu**	**6.79**	**263**	*e*P	**Pn**	**20 01 22.1**	**+1.9**
	192nm,1.0s						
DZM	**Mont Dzumac**	**18.29**	**251**	P	**Pn**	**20 03 39.3**	**-1.6**
DZM	**Mont Dzumac**	**18.29**	**251**	P	**Pn**	**20 03 39.3**	**-1.6**
	0.4nm,0.3s,baz=265,slow=22,SNR=4.3						
DZM				LR	LR	20 09 00.4	
	comp=Z,169nm,20.8s,baz=173,slow=31						
URZ	**Urewera**	**22.25**	**197**	*e*P	**P**	**20 04 17.4**	**-0.3**
URZ				S	**S**	**20 08 02.7**	**-0.7**
URZ	**Urewera**	**22.25**	**197**	P	**P**	**20 04 17.6**	**-0.1**
	8.9nm,0.5s,baz=8.7,slow=5.0,SNR=10						
URZ				S	**S**	**20 08 02.7**	**-0.7**
	2.8nm,0.4s,baz=0.0,slow=20,SNR=4.0						
ARMA	**Armidale**	**33.28**	**240**	P	**P**	**20 05 56.3**	**+0.4**
	baz=36,SNR=11						
RMQ	**Roma**	**34.95**	**248**	P	**P**	**20 06 10.8**	**+0.7**
	baz=38,SNR=6.1						
CMSA	**Cobar Meteorol**	**38.49**	**241**	P	**P**	**20 06 39.7**	**-0.2**
	baz=42,SNR=38						
QLP	**Quilpie**	**38.98**	**249**	P	**P**	**20 06 43.9**	**-0.1**
	baz=42,SNR=10.0						
COEN	**Coen**	**40.49**	**268**	P	**P**	**20 06 57.5**	**+1.0**
	baz=44,SNR=4.8						
STKA	**Stephens Creek**	**41.98**	**241**	*e*P	**P**	**20 07 08.8**	**+0.3**
	4.2nm,0.9s						
STKA	**Stephens Creek**	**41.98**	**241**	P	**P**	**20 07 08.5**	**0.0**
	20nm,0.8s,baz=71,slow=10,SNR=53						
STKA	**Stephens Creek**	**41.98**	**241**	P	**P**	**20 07 08.7**	**+0.2**
	baz=45,SNR=29						
BBOO	**Buckleboo**	**46.76**	**241**	P	**P**	**20 07 46.0**	**-0.1**
	baz=50,SNR=9.4						
WRAB	**Tennant Creek**	**48.09**	**258**	*e*P	**P**	**20 07 55.5**	**-1.0**
	3.6nm,0.4s						
WRA	**Warramunga Arr**	**48.10**	**258**	P	**P**	**20 07 56.1**	**-0.5**
WRA	**Warramunga Arr**	**48.10**	**258**	P	**P**	**20 07 56.1**	**-0.5**
	4.3nm,0.4s,baz=96,slow=7.1,SNR=86						
AS31	**Alice Springs**	**48.26**	**253**	*e*P	**P**	**20 07 57.3**	**-0.5**
ASAR	**Alice Springs**	**48.26**	**253**	P	**P**	**20 07 57.7**	**-0.1**
ASAR				S	**S**	**20 14 36.6**	**-1.2**
ASAR	**Alice Springs**	**48.26**	**253**	P	**P**	**20 07 57.7**	**-0.1**
	74nm,0.5s,baz=88,slow=8.7,SNR=1842						
ASAR				S	**S**	**20 14 36.6**	**-1.2**
	0.5nm,0.8s,baz=85,slow=16,SNR=3.9						
KDU	**Kakadu**	**50.96**	**267**	P	**P**	**20 08 18.4**	**+0.2**
	baz=54,SNR=3.6						
SWI	**Sorong**	**55.37**	**281**	P	**P**	**20 08 52.0**	**+1.8**
	baz=59,SNR=6.6						
SWI				S	S	20 16 57.3	+43
	baz=59,SNR=7.5						
FITZ	**Fitzroy Crossi**	**56.49**	**259**	P	**P**	**20 08 58.4**	**+0.3**
	baz=60,SNR=9.8						
MBWA	**Marble Bar**	**61.55**	**255**	*e*P	**P**	**20 09 31.8**	**-0.9**
	9.5nm,0.8s						
MEEK	**Meekatharra**	**61.88**	**249**	P	**P**	**20 09 34.6**	**-0.3**
	baz=65,SNR=8.4						
KLBR	**Kellerberrin**	**62.21**	**243**	P	**P**	**20 09 37.0**	**0.0**
	baz=65,SNR=15						
MORW	**Morawa**	**63.90**	**246**	P	**P**	**20 09 48.2**	**+0.1**
	baz=67,SNR=3.8						
PCI	**Palu**	**66.15**	**277**	S	SKiKP	20 19 09.9	-31
	baz=70,SNR=12						
QSPA	**South Pole Qui**	**72.98**	**180**	P	**P**	**20 10 44.5**	**+1.0**
QSPA	**South Pole Qui**	**72.98**	**180**	P	**P**	**20 10 44.5**	**+1.0**
	2.6nm,1.0s,baz=359,slow=2.6,SNR=4.3						
UGM	**Wanagama**	**73.06**	**267**	P	**P**	**20 10 45.7**	**+0.9**
	baz=76,SNR=5.6						
PETK	**Petropavlovsk-**	**73.80**	**343**	P	**P**	**20 10 48.8**	**+0.5**
PETK	**Petropavlovsk-**	**73.80**	**343**	P	**P**	**20 10 48.8**	**+0.5**
	3.8nm,0.8s,baz=143,slow=5.0,SNR=4.9						
YBH	**Yreka Blue Hor**	**75.78**	**38**	P	**P**	**20 11 00.4**	**+0.5**
YBH	**Yreka Blue Hor**	**75.78**	**38**	P	**P**	**20 11 00.4**	**+0.5**
	2.0nm,0.6s,baz=231,slow=1.6,SNR=10						
NVAR	**Mina Array Bea**	**76.51**	**42**	P	**P**	**20 11 04.5**	**+0.2**
NVAR	**Mina Array Bea**	**76.51**	**42**	P	**P**	**20 11 04.5**	**+0.2**
	3.7nm,1.0s,baz=235,slow=5.2,SNR=7.3						
BMRM	**Bremner River**	**81.48**	**14**	*e*P	**P**	**20 11 30.1**	**-0.4**
	9.3nm,0.7s						
TNA	**Tin City**	**82.55**	**3**	*e*P	**P**	**20 11 37.3**	**+1.5**
	14nm,1.4s						
TXAR	**Lajitas Array**	**82.71**	**56**	P	**P**	**20 11 38.6**	**+0.9**
TXAR	**Lajitas Array**	**82.71**	**56**	P	**P**	**20 11 38.6**	**+0.9**
	0.5nm,0.6s,baz=242,slow=3.9,SNR=6.4						
RRI2	**Red Ridge**	**83.62**	**41**	*e*P	**P**	**20 11 41.2**	**-0.9**
	5.6nm,1.0s						
COLA	**College**	**84.27**	**11**	*e*P	**P**	**20 11 44.0**	**-0.6**
	17nm,0.9s						
ILAR	**Eielson Array**	**84.36**	**12**	P	**P**	**20 11 44.4**	**-0.7**
ILAR	**Eielson Array**	**84.36**	**12**	P	**P**	**20 11 44.4**	**-0.7**
	3.2nm,1.0s,baz=217,slow=6.4,SNR=18						
PDAR	**Pinedale Array**	**84.45**	**42**	P	**P**	**20 11 45.6**	**-0.7**
PDAR	**Pinedale Array**	**84.45**	**42**	P	**P**	**20 11 45.6**	**-0.7**
	1.8nm,0.9s,baz=234,slow=3.0,SNR=11						
EGAK	**Eagle**	**85.57**	**14**	*e*P	**P**	**20 11 51.0**	**0.0**
	4.1nm,1.1s						
INK	**Inuvik**	**90.23**	**14**	P	**P**	**20 12 12.1**	**-0.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
INK	Inuvik	90.23	14	P	P	20 12 12.1	-0.9
	2.9nm,1.0s,baz=223,slow=6.3,SNR=8.0						
CMAR	Chiang Mai Arr	91.80	289	P	P	20 12 23.6	+2.2
CMAR				PP	PP	20 16 01.8	-2.7
CMAR	Chiang Mai Arr	91.80	289	P	P	20 12 23.7	+2.2
	0.3nm,0.9s,baz=97,slow=4.3,SNR=6.7						
CMAR				PP	PP	20 16 01.8	-2.7
	0.4nm,0.4s,baz=107,slow=9.4,SNR=4.8						
YKA	Yellowknife Ar	92.19	24	P	P	20 12 21.7	-0.5
YKA	Yellowknife Ar	92.19	24	P	P	20 12 21.7	-0.5
	0.3nm,0.7s,baz=241,slow=4.0,SNR=8.2						
NRDL	Niedersach Rie	144.44	355	ePKPbc	PKPdf	20 18 47.4	-0.1
IBBN	Ibbenburen	144.79	357	ePKPbc	PKPdf	20 18 48.8	+0.6
CLZ	Clausthal	145.06	354	ePKPbc	PKPab	20 18 49.7	+0.7
CLL	Collm	145.28	351	ePKPbc	PKPab	20 18 49.7	-0.1
BUR08	Bucovina Ar. S	145.33	336	ePKPdf	PKPdf	20 18 46.5	-2.9
UPC	Upice	145.52	348	ePKP	PKPab	20 18 51.7	+0.9
BRG	Berggiesshubel	145.55	350	eP	PKPab	20 18 50.6	-0.2
	9.2nm,1.2s						
BRG	Berggiesshubel	145.55	350	ePKPbc	PKPab	20 18 50.4	-0.4
DPC	Dobruska-Polom	145.61	347	ePKP	PKPab	20 18 51.4	+0.2
PVCC	Panska Ves	145.78	349	ePKP	PKPab	20 18 52.0	+0.3
MOX	Moxa	146.11	353	ePKPbc	PKPab	20 18 52.6	-0.4
MOX				eL	L	20 58 13.3	
	comp=Z,66nm,19.7s						
TANN	Tannenbergstha	146.22	352	ePKPbc	PKPab	20 18 53.1	-0.4
PRU	Pruhonice	146.30	349	ePKP	PKPab	20 18 53.5	-0.3
BR131	Keskin Array S	146.51	318	ePKPbc	PKPab	20 18 53.9	-1.3
BRTR	Keskin Array B	146.51	318	PKPbc	PKPab	20 18 54.2	-0.9
BRTR	Keskin Array B	146.51	318	PKPbc	PKPab	20 18 54.3	-0.9
	comp=Z,1.9nm,0.8s,baz=97,slow=4.5,SNR=12						
ROTZ	Rotzenmuhle	146.89	352	ePKPbc	PKPab	20 18 55.4	-0.7
GRF	Grafenberg Arr	147.09	353	ePKPbc	PKPab	20 18 57.3	+0.4
GRF				eL	L	20 52 02.5	
	comp=Z,60nm,18.9s						
KHC	Kasperske Hory	147.30	350	ePKP	PKPab	20 18 55.9	-1.9
WLF	Walferdange	147.48	359	ePKPbc	PKPab	20 18 56.5	-1.9
GERES	GERESS Array B	147.55	349	PKPbc	PKPbc	20 18 55.3	-0.8
GERES	GERESS Array B	147.55	349	PKPbc	PKPbc	20 18 55.3	-0.8
	comp=Z,1.3nm,0.8s,baz=36,slow=3.7,SNR=7.4						
CONA	Conrad Observa	147.99	346	⇓iPKiKP	PKPab	20 18 58.4	-2.2
	comp=Z,4.9nm,0.9s						
CONA	Conrad Observa	147.99	346	⇓iP	PKPab	20 18 58.5	-2.2
BFO	Black Forest	148.72	356	ePKPbc	PKPbc	20 19 00.0	+0.9
RJOB	Jochberg	148.78	350	ePKPbc	PKPbc	20 19 00.4	+1.1
ESDC	Sonseca Array	156.13	18	PKPab	PKPab	20 19 35.3	+0.3
ESDC	Sonseca Array	156.13	18	PKPab	PKPab	20 19 35.3	+0.3
	comp=Z,0.5nm,0.6s,baz=333,slow=3.7,SNR=5.4						

ISCJB ***01*** *20:03:04.8±0.6, 44°.72S±0°.09×15°.5W±0°.2, h10km, mb4.2/8, MS4.0/18, Error ellipse: s-maj=24.5km s-min=12.4km az=6.7*

IDC ***01*** *20:03:05.0±0.8, 44°.74S×15°.36W, h0km, mb4.0/6, mb1 4.0/6, mb1mx3.9/15, mbtmp3.9/6, MS4.0/18, Ms1 4.0/18, ms1mx3.8/29, Error ellipse: s-maj=43.8km s-min=22.8km az=94.0*

NEIC ***01*** *20:03:06.6±0.4, 44°.70S×15°.54W, h10km, mb4.7/2, Error ellipse: s-maj=18.8km s-min=12.0km az=101.0*

ISC 01 20:03:06.6±0.6**, 44°.7S**±0°.1×**15°.5W**±0°.2**, h10km, n37, σ0s.54**/24**, mb4.2**/8**, MS4.0**/18**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA2	Neumayer--Watz	26.56	174	eP	P	20 08 44.3	0.0
	baz=341,slow=11						
VNA3	Neumayer Olymp	26.73	176	eP	P	20 08 45.5	-0.4
SNAA	Sanae	27.69	171	LR	LR	20 17 04.9	
	comp=Z,72nm,20.4s,baz=331,slow=30						
SUR	Sutherland	30.73	79	LR	LR	20 19 04.6	
	comp=Z,734nm,18.3s,baz=269,slow=31						
PMSA	Palmer Station	33.27	216	LR	LR	20 20 07.9	
	comp=Z,215nm,18.0s,baz=356,slow=31						
USHA	Ushuaia	34.83	234	LR	LR	20 23 12.8	
	comp=Z,310nm,18.9s,baz=49,slow=35						
BOSA	Boshof	36.04	77	P	P	20 10 08.9	+0.7
BOSA	Boshof	36.04	77	LR	LR	20 21 26.2	
	comp=Z,352nm,20.8s,baz=167,slow=31						
BDFB	Brasilia	39.90	306	LR	LR	20 23 55.1	
	comp=Z,407nm,21.1s,baz=221,slow=31						
PLCA	Paso Flores	39.96	256	LR	LR	20 25 16.5	
	comp=Z,441nm,19.6s,baz=168,slow=33						
MAW	Mawson	45.34	148	LR	LR	20 27 16.5	
	comp=Z,108nm,18.7s,baz=109,slow=32						
QSPA	South Pole Qui	45.52	180	P	P	20 11 25.8	-0.3
QSPA	South Pole Qui	45.52	180	P	P	20 11 25.7	-0.3
	3.7nm,0.8s,baz=215,slow=4.2,SNR=11						
QSPA				LR	LR	20 28 08.3	
	comp=Z,144nm,18.3s,baz=329,slow=33						
SIV	San Ignacio	47.77	292	P	P	20 11 44.4	+0.4
SIV	San Ignacio	47.77	292	P	P	20 11 44.4	+0.4
	1.0nm,0.7s,baz=160,slow=11,SNR=4.1						
DBIC	Dimbokro	52.07	13	LR	LR	20 28 37.5	
	comp=Z,125nm,19.3s,baz=143,slow=29						
LPAZ	La Paz	52.32	285	LR	LR	20 34 43.2	
	comp=Z,344nm,18.2s,baz=300,slow=36						
SBA	Scott Base	57.67	181	eP	P	20 12 57.8	+1.3
	4.8nm,1.0s						
VNDA	Vanda	58.01	179	P	P	20 12 58.6	-0.2
VNDA	Vanda	58.01	179	P	P	20 12 58.6	-0.2
	1.1nm,0.8s,baz=208,slow=8.4,SNR=5.6						
VNDA				LR	LR	20 35 39.2	
	comp=Z,218nm,19.4s,baz=199,slow=34						
TOA0	Torodi Ar. Sit	59.70	20	eP	P	20 13 10.3	-1.0
TORD	Torodi Ar. Bea	59.70	20	P	P	20 13 10.6	-0.7
TORD	Torodi Ar. Bea	59.70	20	P	P	20 13 10.6	-0.7
	3.3nm,1.0s,baz=201,slow=6.4,SNR=12						
TORD				LR	LR	20 34 03.6	
	comp=Z,90nm,18.6s,baz=170,slow=31						
TAM	Tamanrasset	69.91	21	eP	P	20 14 18.7	+0.8
	21nm,1.8s						
ROSC	El Rosal	72.01	296	LR	LR	20 44 21.8	
	comp=Z,161nm,20.0s,baz=34,slow=34						
KEST	Kesra	83.21	20	LR	LR	20 48 22.3	
	comp=Z,44nm,18.3s,baz=278,slow=33						
ESDC	Sonseca Array	84.68	9	P	P	20 15 40.3	+0.1
ESDC	Sonseca Array	84.68	9	P	P	20 15 40.3	+0.1
	0.1nm,0.3s,baz=186,slow=5.9,SNR=4.3						
ESDC				LR	LR	20 47 43.5	
	comp=Z,61nm,18.5s,baz=155,slow=32						
BRTR	Keskin Array B	95.00	36	P	P	20 16 29.0	-0.2
BRTR	Keskin Array B	95.00	36	P	P	20 16 29.0	-0.2
	0.3nm,0.5s,baz=199,slow=3.1,SNR=5.1						
BRTR				LR	LR	20 58 24.8	
	comp=Z,45nm,20.2s,baz=8.8,slow=35						
GERES	GERESS Array B	96.65	19	LR	LR	20 57 16.1	
	comp=Z,59nm,20.5s,baz=100,slow=34						
MKAR	Makanchi Array	125.19	56	PKP	PKPdf	20 22 06.3	-0.4
MKAR	Makanchi Array	125.19	56	PKP	PKPdf	20 22 06.3	-0.4
	0.2nm,0.7s,baz=222,slow=1.9,SNR=3.6						
SONM	Songino Array	140.56	64	PKP	PKPdf	20 22 35.5	-0.2
SONM	Songino Array	140.56	64	PKP	PKPdf	20 22 35.5	-0.2
	0.4nm,0.9s,baz=205,slow=3.0,SNR=3.4						
ILAR	Eielson Array	146.68	324	PKPbc	PKPbc	20 22 47.4	0.0
ILAR	Eielson Array	146.68	324	PKPbc	PKPbc	20 22 47.4	0.0
	2.1nm,0.6s,baz=84,slow=1.3,SNR=31						

IDC 01 20:07:40.3±22.0**, 10°.02N×92°.88E, h0km, mb3.5**/2**, mb1 3.4**/3**, mb1mx3.1**/26**, mbtmp3.3**/3**, ML3.1**/1**, Error ellipse: s-maj=388.6km s-min=77.1km az=163.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.24	34	Pn	Pn	20 10 08.7	0.0
	0.1nm,0.3s,baz=223,slow=14,SNR=4.3						
MKAR	Makanchi Array	37.74	348	P	P	20 14 58.2	+0.4
	0.3nm,0.8s,baz=175,slow=8.0,SNR=3.7						
ZALV	Zalesovo Beam	44.28	353	P	P	20 15 51.0	-0.6
	0.2nm,0.4s,baz=164,slow=7.7,SNR=4.1						

MEX 01 20:16:45.2±0.3**, 16°.23N×97°.57W, h18km**±205km**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.56	287	iP	Pg	20 16 54.6	-2.0
PNIG				eS	Sg	20 17 02.2	-2.0
VHO	Vista Hermosa	1.16	43	iP	Pn	20 17 03.3	-3.5
VHO				eS	Sb	20 17 17.3	-4.6
HUIG	Huatulco	1.47	108	iP	Pn	20 17 06.9	-3.9
HUIG				eS	Sn	20 17 25.6	-4.1
CMIG	Matias Romero	2.71	71	iP	Pn	20 17 25.6	-2.3
CMIG				eS	Sn	20 17 56.7	-3.6

IDC ***01*** *20:17:48.0±0.7, 33°.86S×178°.88W, h0km, mb4.5/10, mb1 4.6/12, mb1mx4.5/20, mbtmp4.6/12, ML3.9/2, MS4.0/6, Ms1 4.0/6, ms1mx3.7/25, Error ellipse: s-maj=22.6km s-min=17.6km az=78.0*

NEIC ***01*** *20:17:53.0±2.4, 33°.84S×178°.78W, h36km±18km, mb4.7/3, Error ellipse: s-maj=20.8km s-min=11.1km az=64.0*

ISCJB ***01*** *20:17:54.5±0.6, 34°.22S±0°.03×179°.08W±0°.10, h50km, mb4.4/12, MS4.0/5, Error ellipse: s-maj=11.6km s-min=4.4km az=11.5*

AUST ***01*** *20:17:59.3, 34°.58S×179°.08W, h60km*

ISC 01 20:17:55.3±0.5**, 34°.03S**±0°.06×**178°.99W**±0°.08**, h50km, n124, σ1s.59**/122**, mb4.5**/12**, MS4.0**/5**, 1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.16	211	PN	Pn	20 18 55.0	-1.1
MXZ				SN	Sn	20 19 44.9	+1.4
PUZ	Puketiti	4.61	208	PN	Pn	20 19 00.7	-1.8
PUZ				SN	Sn	20 19 57.7	+3.0
CNGZ	Carnagh Statio	4.99	206	PN	Pn	20 19 07.0	-0.6
CNGZ				SN	Sn	20 20 07.3	+3.3
MWZ	Matawai	5.14	212	PN	Pn	20 19 07.8	-1.9
MWZ				SN	Sn	20 20 08.7	+1.0
URZ	Urewera	5.27	216	Pn	Pn	20 19 10.6	-0.9
URZ				Sn	Sn	20 20 13.7	+2.8
URZ	Urewera	5.27	216	ePN	Pn	20 19 10.4	-1.0
URZ	Urewera	5.27	216	Pn	Pn	20 19 10.6	-0.9
	37nm,0.3s,baz=32,slow=4.9,SNR=58						
URZ				Sn	Sn	20 20 13.7	+2.8
	50nm,0.3s,baz=140,slow=20,SNR=12						
PRGZ	Paritu Road	5.50	206	ePN	Pn	20 19 11.2	-3.4
PRGZ				SN	Sn	20 20 17.2	+0.6
KNZ	Kokohu	5.66	207	ePN	Pn	20 19 15.3	-1.5
KNZ				SN	Sn	20 20 18.2	-2.2
MHGZ	Mahia Peninsul	5.69	205	ePN	Pn	20 19 15.0	-2.2
RAHZ	Arahi	5.82	212	PN	Pn	20 19 18.9	0.0
ALRZ	Allen Road	5.89	218	ePN	Pn	20 19 19.3	-0.6
NMHZ	Naumai	6.09	213	ePN	Pn	20 19 21.8	-0.9
OUZ	Omahuta	6.23	257	eP	Pn	20 19 27.9	+3.3
	43nm,0.6s						
BKZ	Black Stump Fm	6.29	214	PN	Pn	20 19 24.0	-1.4
MCHZ	McNeill Hill	6.42	211	ePN	Pn	20 19 26.0	-1.2
MCHZ				SN	Sn	20 20 40.5	+1.4
KAHZ	Kahuranaki	6.64	209	ePN	Pn	20 19 26.0	-4.2
KAHZ				SN	Sn	20 20 43.4	-1.2
FWVZ	Far West T-bar	6.82	218	ePN	Pn	20 19 31.1	-1.7
PXZ	Pawanui	6.85	208	SN	Sn	20 20 48.2	-1.4
DVHZ	Dannevirke	7.36	210	SN	Sn	20 20 59.9	-2.4
ANWZ	Angora Road	7.37	208	SN	Sn	20 21 01.1	-1.3
POWZ	Post Office Ro	7.61	212	SN	Sn	20 21 05.6	-2.7
BFZ	Birch Farm	7.65	208	ePN	Pn	20 19 40.9	-3.1
MRZ	Mangatainoka R	7.91	212	SN	Sn	20 21 12.3	-3.4
HOWZ	Holdsworth Sta	8.13	211	SN	Sn	20 21 16.0	-5.2
KIW	Kapiti Island	8.37	214	ePN	Pn	20 19 50.9	-3.0
KIW				SN	Sn	20 21 23.3	-3.7
TUWZ	Tuamarina	9.27	215	SN	Sn	20 21 44.3	-4.7
CTZ	Chatham Island	9.87	170	ePN	Pn	20 20 12.3	-2.1
THZ	Tophouse	10.03	217	ePN	Pn	20 20 12.0	-4.7
THZ				SN	Sn	20 22 01.1	-6.6
KHZ	Kahutara	10.23	213	SN	Sn	20 22 03.6	-8.9
LTZ	Lake Taylor	11.11	216	ePN	Pn	20 20 26.9	-4.4
OXZ	Oxford	11.63	214	SN	Sn	20 22 36.8	-10
MQZ	McQueen's Vall	11.65	211	SN	Sn	20 22 35.9	-11
RPZ	Rata Peaks	12.39	216	Pn	Pn	20 20 45.1	-3.8
RPZ				Sn	Sn	20 22 56.1	-9.3
RPZ	Rata Peaks	12.39	216	Pn	Pn	20 20 45.1	-3.8
	4.7nm,0.3s,baz=38,slow=4.1,SNR=14						
RPZ				Sn	Sn	20 22 56.1	-9.3
	3.6nm,0.3s,baz=14,slow=19,SNR=10						
DZM	Mont Dzumac	17.50	309	eP	P	20 21 59.6	+3.2
	90nm,1.2s						
DZM				eLR	LR	20 26 14.7	
	673nm,23.0s						
DZM	Mont Dzumac	17.50	309	P	Pn	20 21 53.6	-2.2
DZM	Mont Dzumac	17.50	309	P	Pn	20 21 53.6	-2.2
	0.0nm,0.3s,baz=134,slow=17,SNR=2.1						
DZM				LR	LR	20 27 16.7	
	comp=Z,427nm,20.6s,baz=22,slow=33						
TBI	Tubuai	27.91	75	eLR	LR	20 30 49.9	
	231nm,28.0s						
RMQ	Roma	28.77	276	P	P	20 23 52.4	+4.0
	baz=29,SNR=9.7						
CMSA	Cobar Meteorol	29.71	265	P	P	20 23 59.3	+2.7
	baz=30,SNR=16						
PPT2	Papeete2	30.98	66	eLR	LR	20 31 55.7	
	130nm,22.2s						
QLP	Quilpie	32.48	273	P	P	20 24 24.0	+3.0
	baz=32,SNR=5.0						
STKA	Stephens Creek	33.01	263	eP	P	20 24 26.8	+1.2
	1.8nm,1.0s						
STKA				PcP	PcP	20 27 08.5	-0.1
STKA	Stephens Creek	33.01	263	P	P	20 24 26.5	+0.9
	3.3nm,0.5s,baz=105,slow=8.6,SNR=14						
STKA				PcP	PcP	20 27 08.5	-0.1
	2.7nm,0.7s,baz=112,slow=4.8,SNR=5.2						
STKA				LR	LR	20 37 56.2	
	comp=Z,528nm,18.3s,baz=26,slow=36						
STKA	Stephens Creek	33.01	263	P	P	20 24 28.1	+2.5
	baz=33,SNR=16						
CTA	Charters Tower	33.74	285	P	P	20 24 31.5	-0.7
CTA	Charters Tower	33.74	285	P	P	20 24 31.5	-0.7
	8.2nm,0.5s,baz=115,slow=10,SNR=20						
CTA				LR	LR	20 36 39.0	
	comp=Z,134nm,18.9s,baz=123,slow=34						
CTAO	Charters Tower	33.74	285	eP	P	20 24 33.9	+1.8
	8.1nm,0.6s						
QIS	Mount Isa	38.91	279	P	P	20 25 17.3	+1.1
	baz=39,SNR=6.6						
COEN	Coen	39.62	291	P	P	20 25 23.5	+1.3
	baz=40,SNR=11						
AS31	Alice Springs	42.21	271	eP	P	20 25 44.0	+0.5
ASAR	Alice Springs	42.22	271	P	P	20 25 44.0	+0.5
ASAR				PcP	PcP	20 27 36.2	-0.8
ASAR				S	S	20 32 00.8	+0.4
ASAR	Alice Springs	42.22	271	P	P	20 25 44.0	+0.5
	15nm,0.7s,baz=113,slow=7.4,SNR=157						
ASAR				PcP	PcP	20 27 36.2	-0.8
	1.1nm,0.5s,baz=124,slow=3.8,SNR=5.8						
ASAR				S	S	20 32 00.8	+0.4
	1.0nm,0.8s,baz=114,slow=15,SNR=7.2						
ASAR				LR	LR	20 43 08.9	
	comp=Z,166nm,19.5s,baz=131,slow=36						
WRAB	Tennant Creek	43.53	277	eP	P	20 25 54.1	0.0
	21nm,0.8s						
WRA	Warramunga Arr	43.53	276	P	P	20 25 54.5	+0.2
WRA	Warramunga Arr	43.53	276	P	P	20 25 54.5	+0.2
	20nm,0.8s,baz=118,slow=7.6,SNR=64						
WRA				LR	LR	20 44 11.0	
	comp=Z,189nm,19.4s,baz=110,slow=36						
VNDA	Vanda	44.41	186	P	P	20 26 02.1	+1.6
VNDA	Vanda	44.41	186	P	P	20 26 02.1	+1.6
	0.4nm,0.7s,baz=16,slow=5.6,SNR=3.3						
FORT	Forrest	44.42	259	P	P	20 26 01.8	+0.6
	baz=44,SNR=9.9						
KDU	Kakadu	48.84	284	P	P	20 26 35.7	-0.2
	baz=49,SNR=4.0						
MTN	Manton Dam	49.83	283	P	P	20 26 43.5	-0.1
	baz=50,SNR=5.9						
NWAO	Narrogin (SRO)	52.41	252	P	P	20 27 02.0	-0.7
NWAO	Narrogin (SRO)	52.41	252	P	P	20 27 02.0	-0.7
	4.2nm,0.5s,baz=124,slow=9.0,SNR=6.8						
KLBR	Kellerberrin	52.46	254	P	P	20 27 02.8	-0.3
	baz=52,SNR=12						
MEEK	Meekatharra	53.64	260	P	P	20 27 11.3	-0.5
	baz=53,SNR=15						
MORW	Morawa	54.77	256	P	P	20 27 19.7	-0.3
	baz=54,SNR=6.4						
QSPA	South Pole Qui	56.09	180	P	P	20 27 31.3	+2.1
QSPA	South Pole Qui	56.09	180	P	P	20 27 31.3	+2.1
	3.7nm,1.0s,baz=43,slow=1.5,SNR=9.2						
MAW	Mawson	68.63	201	P	P	20 28 52.6	0.0
MAW	Mawson	68.63	201	P	P	20 28 52.6	0.0
	3.5nm,0.9s,baz=135,slow=1.5,SNR=3.2						
SNAA	Sanae	74.56	179	eP	P	20 29 28.7	+0.3
SNAA	Sanae	74.56	179	e	P	20 29 39.4	+11
SNAA	Sanae	74.56	179	P	P	20 29 29.0	+0.6
SNAA	Sanae	74.56	179	P	P	20 29 29.0	+0.6
	1.1nm,1.0s,baz=197,slow=14,SNR=17						
VNA3	Neumayer Olymp	74.75	176	eP	P	20 29 30.2	+0.8
VNA3	Neumayer Olymp	74.75	176	e	P	20 29 41.4	+12
VNA2	Neumayer--Watz	75.17	177	eP	P	20 29 33.0	+1.1
	baz=178,slow=4.5						
VNA2	Neumayer--Watz	75.17	177	e	P	20 29 43.7	+12
	baz=178,slow=4.5						
PLCA	Paso Flores	80.65	133	LR	LR	21 01 00.8	
	comp=Z,96nm,18.2s,baz=6.3,slow=32						
PETK	Petropavlovsk-	89.11	346	P	P	20 30 44.9	+0.2
PETK	Petropavlovsk-	89.11	346	P	P	20 30 44.9	+0.2
	4.9nm,0.8s,baz=137,slow=9.5,SNR=5.2						
USRK	Ussuriysk Arra	89.72	327	P	P	20 30 48.1	+0.4
	1.3nm,0.8s,baz=127,slow=3.6,SNR=4.4						
CMAR	Chiang Mai Arr	93.81	290	PP	PP	20 34 53.1	-0.5
	1.1nm,1.1s,baz=145,slow=8.3,SNR=5.9						
MK31	Makanchi Array	119.42	309	ePKPdf	PKPdf	20 36 38.0	-0.8
MKAR	Makanchi Array	119.42	309	PKP	PKPdf	20 36 38.2	-0.6
MKAR	Makanchi Array	119.42	309	PKP	PKPdf	20 36 38.2	-0.6
	0.7nm,0.4s,baz=96,slow=1.4,SNR=28						
ZALV	Zalesovo Beam	120.15	317	PKP	PKPdf	20 36 39.1	-0.7
ZALV	Zalesovo Beam	120.15	317	PKP	PKPdf	20 36 39.1	-0.7
	0.7nm,0.4s,baz=140,slow=1.6,SNR=8.3						
KURK	Kurchatov	122.90	312	ePKPdf	PKPdf	20 36 44.2	-1.1
AAK	Ala-Archa	123.37	302	ePKPdf	PKPdf	20 36 46.1	-0.7
KBL	Kabul	124.81	291	ePKPdf	PKPdf	20 36 49.8	0.0
KKAR	Karatay Array	126.32	302	ePKPdf	PKPdf	20 36 51.9	-0.2
ABKAR	Akbulak array	134.55	308	ePKPdf	PKPdf	20 37 06.8	-0.7
KEV	Kevo	141.44	346	ep	PKPdf	20 37 12.6	-7.0
	6.6nm,0.8s						
ARCES	ARCESS Array B	141.93	346	PKP	PKPdf	20 37 17.9	-2.6
ARCES	ARCESS Array B	141.93	346	PKP	PKPdf	20 37 17.9	-2.6
	5.5nm,1.0s,baz=48,slow=1.3,SNR=5.4						
JOF	Joensuu	145.43	336	ep	PKPdf	20 37 24.8	-1.9
	11nm,0.6s						
KBZ	Khabaz	146.29	299	PKPbc	PKPbc	20 37 29.5	-0.6
KBZ	Khabaz	146.29	299	PKPbc	PKPbc	20 37 29.5	-0.6
	5.3nm,1.1s,baz=88,slow=0.9,SNR=11						
KAF	Kangasniemi	147.63	338	ep	PKPdf	20 37 31.3	+0.8
	6.7nm,0.6s						
FIA1	FINESS Array S	148.21	337	ePKPbc	PKPbc	20 37 34.2	-0.6
FINES	FINESS Array B	148.21	337	PKPbc	PKPbc	20 37 34.3	-0.5
FINES	FINESS Array B	148.21	337	PKPbc	PKPbc	20 37 34.3	-0.5
	23nm,0.8s,baz=56,slow=3.7,SNR=44						
MALT	Malatya	149.63	289	ePKPbc	PKPbc	20 37 39.4	+0.1
NB2	NORSAR Subarra	152.18	349	PKP	PKPbc	20 37 43.5	-1.0
	comp=Z,1.8nm,0.5s,baz=16,slow=2.6						
NOA	NORSAR Array B	152.18	349	PKPbc	PKPbc	20 37 44.2	-0.3
NOA	NORSAR Array B	152.18	349	PKPbc	PKPbc	20 37 44.2	-0.3
	comp=Z,0.7nm,0.7s,baz=21,slow=4.8,SNR=17						
NAO01	NORSAR Array S	152.41	350	ePKPbc	PKPbc	20 37 42.0	-3.0
NACGM	Naroch	152.46	327	e	PKPbc	20 37 43.0	-2.2
BR131	Keskin Array S	153.38	292	ePKPbc	PKPbc	20 37 47.5	-0.5
BRTR	Keskin Array B	153.38	292	PKPbc	PKPbc	20 37 48.1	+0.1
BRTR	Keskin Array B	153.38	292	PKPbc	PKPbc	20 37 48.1	+0.1
	comp=Z,4.7nm,0.9s,baz=126,slow=3.4,SNR=28						
AKASG	Malin Array Be	153.54	318	PKPbc	PKPbc	20 37 47.7	-0.1
AKASG	Malin Array Be	153.54	318	PKPbc	PKPbc	20 37 47.7	-0.1
	comp=Z,2.7nm,0.5s,baz=62,slow=2.5,SNR=13						
AK01	Malin Array Si	153.55	318	ePKPbc	PKPbc	20 37 47.2	-0.6
KIEV	Kiev	153.55	318	ePKPbc	PKPbc	20 37 47.9	+0.1
AK02	Malin Array Si	153.57	317	ePKPbc	PKPbc	20 37 47.4	-0.5
TORD	Torodi Ar. Bea	159.21	182	PKPab	PKPab	20 38 26.2	+0.7
TORD	Torodi Ar. Bea	159.21	182	PKPab	PKPab	20 38 26.2	+0.7
	comp=Z,1.4nm,0.8s,baz=182,slow=4.2,SNR=5.8						
CLL	Collm	160.65	337	⇓iPKPab	PKPab	20 38 30.4	-0.5
	comp=Z,7.0nm,0.9s						
BRG	Berggiesshubel	160.70	335	eP	PKPab	20 38 30.5	-0.7
	comp=Z,2.9nm,0.7s						
GERES	GERESS Array B	162.44	331	PKPab	PKPab	20 38 38.3	-0.7
GERES	GERESS Array B	162.44	331	PKPab	PKPab	20 38 38.3	-0.7
	comp=Z,0.6nm,0.8s,baz=46,slow=4.2,SNR=5.1						

KRSC 01 20:31:27.2±0.8**, 60°.46N×166°.42E, h6km**±5km**, ML4.7, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TILK	Tilichiki	0.14	264	iP	Pg	20 31 31.6	+1.6
TILK				iS	Sg	20 31 34.7	+2.8
KBTR	Krutoberegovo	4.67	206	P	Pn	20 32 39.6	+1.5
KBTR				iS	Sn	20 33 34.0	+1.5
KMNR	Kamenistaya	5.74	217	P	Pn	20 32 56.1	+3.1
MKZ	Mys Kozlova	6.43	205	P	Pn	20 33 05.9	+3.6

IDC ***01*** *20:33:33.1±2.9, 33°.91S×178°.85W, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.8/17, mbtmp3.9/3, ML3.9/1, Error ellipse: s-maj=70.4km s-min=35.4km az=121.0*

ISCJB ***01*** *20:33:35.2±2.5, 34°.0S±0°.1×178°.7W±0°.4, h37km, mb3.7/2, Error ellipse: s-maj=48.1km s-min=13.0km az=14.6*

ISC 01 20:33:37.7±2.4**, 34°.0S**±0°.2×**178°.8W**±0°.4**, h37km, n9, σ0s.75**/11**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	4.77	210	PN	Pn	20 34 46.2	-0.8
PUZ				SN	Sn	20 35 42.1	+1.1
CNGZ	Carnagh Statio	5.15	208	PN	Pn	20 34 52.2	0.0
MWZ	Matawai	5.31	213	PN	Pn	20 34 52.9	-1.5
URZ	Urewera	5.45	217	PN	Pn	20 34 56.0	-0.2
URZ				SN	Sn	20 35 57.7	+0.1
URZ	Urewera	5.45	217	Pn	Pn	20 34 56.1	-0.1
	4.2nm,0.3s,baz=36,slow=2.7,SNR=26						
URZ				Sn	Sn	20 35 57.8	+0.2
	3.0nm,0.3s,baz=141,slow=21,SNR=8.5						
THZ	Tophouse	10.20	218	SN	Sn	20 37 47.6	-7.1
ASAR	Alice Springs	42.40	271	P	P	20 41 29.0	+0.2
	1.2nm,0.7s,baz=114,slow=7.3,SNR=14						
WRA	Warramunga Arr	43.71	276	P	P	20 41 39.3	-0.1
	1.5nm,0.7s,baz=117,slow=7.6,SNR=5.6						
FINES	FINESS Array B	148.21	337	PKPbc	PKPbc	20 53 19.3	+0.4
	0.9nm,0.6s,baz=29,slow=3.2,SNR=10						

IDC 01 20:54:16.4±5.9**, 14°.81S×167°.23E, h112km**±47km**, mb3.7**/6**, mb1 3.9**/7**, mb1mx3.5**/20**, mbtmp3.8**/7**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx3.0**/31**, Error ellipse: s-maj=41.5km s-min=26.9km az=34.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.27	186	eP	Pn	20 55 60.0	0.0
DZM	Mont Dzumac	7.27	186	P	Pn	20 55 59.7	-0.3
	16nm,0.3s,baz=53,slow=14,SNR=101						
DZM				S	Sn	20 57 21.8	+0.7
	3.6nm,0.3s,baz=323,slow=20,SNR=3.6						
AFI	Afiamalu	20.36	90	LR	LR	21 05 28.1	
	comp=Z,439nm,18.5s,baz=308,slow=33						
CTA	Charters Tower	20.68	252	P	P	20 58 48.1	+0.5
	3.4nm,0.5s,baz=77,slow=11,SNR=7.6						
STKA	Stephens Creek	28.92	230	P	P	21 00 05.5	+0.6
	7.5nm,0.5s,baz=42,slow=8.3,SNR=32						
WRA	Warramunga Arr	31.77	256	P	P	21 00 29.8	-0.5
	0.3nm,0.6s,baz=85,slow=9.1,SNR=3.2						
ASAR	Alice Springs	32.61	249	P	P	21 00 37.0	-0.7
	1.2nm,0.6s,baz=77,slow=9.1,SNR=22						
VNDA	Vanda	62.78	181	P	P	21 04 29.3	-0.1
	0.5nm,0.4s,baz=15,slow=7.0,SNR=8.7						
MKAR	Makanchi Array	97.23	316	P	Pdif	21 07 37.1	+0.6
	0.2nm,0.6s,baz=95,slow=4.8,SNR=2.7						
ARCES	ARCESS Array B	120.32	345	PKP	PKPdf	21 12 53.2	-0.6
	4.2nm,0.9s,baz=45,slow=2.7,SNR=7.9						

NSSP ***01*** *20:58:14.8, 39°.82N×43°.53E, h10km, Ms3.5*

DDA ***01*** *20:58:21.6, 39°.83N×43°.66E, h4km, MD3.7, ML4.0*

ISK ***01*** *20:58:22.5, 39°.73N×43°.57E, h5km, MD3.7*

CSEM ***01*** *20:58:23.5±0.2, 39°.75N×43°.64E, h2km, ML4.0, Error ellipse: s-maj=5.3km s-min=4.2km az=141.0*

AZER ***01*** *20:58:24.4, 39°.46N×43°.49E, h0km*

TIF ***01*** *20:58:24.5, 39°.82N×43°.42E, h7km±3km*

ISC 01 20:58:22.1±1.0**, 39°.82N**±0°.02×**43°.66E**±0°.02**, h5km**±9km**, n92, σ1s.58**/110**, 14C-11D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DYDN	Diyadin	0.28	176	iP	Pg	20 58 27.5	0.0
DYDN				iS	Sg	20 58 31.7	+0.6
DYDN	Diyadin	0.28	176	iP	Pg	20 58 27.5	0.0
DYDN				iS	Sg	20 58 31.7	+0.6
AGRB	Hanur-Agry	0.57	245	ePG	Pg	20 58 32.3	-0.8
AGRB				eSG	Sg	20 58 40.1	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AGRB	Hanur-Agry	0.57	245	ePg	Pg	20 58 32.3	-0.8
AGRB				eSg	Sg	20 58 40.1	-0.5
CLDR	Caldiran	0.70	164	ePG	Pg	20 58 35.2	-0.3
CLDR				eSG	Sb	20 58 46.2	-0.7
CLDR	Caldiran	0.70	164	ePg	Pg	20 58 35.2	-0.3
CLDR				eSg	Sb	20 58 46.2	-0.7
ERE	Yerevan	0.71	60	⇑eP	Pg	20 58 35.0	-0.7
ERE				⇑eS	Sn	20 58 48.0	-2.2
ERE	Yerevan	0.71	60	⇑P	Pg	20 58 35.0	-0.7
ERE				S	Sn	20 58 48.0	-2.2
GNI	Garni	0.89	68	⇑iP	Pn	20 58 39.9	-1.5
GNI				⇑iS	Sn	20 58 55.2	+0.4
GNI	Garni	0.89	68	⇑P	Pn	20 58 39.9	-1.5
GNI				S	Sn	20 58 55.2	+0.4
KARS	Kars	0.92	331	ePG	Pn	20 58 41.0	-0.8
KARS	Kars	0.92	331	ePg	Pn	20 58 41.0	-0.8
SPIZ	Spitak	1.11	25	⇓iP	Pn	20 58 44.4	0.0
SPIZ	Spitak	1.11	25	⇓P	Pn	20 58 44.4	0.0
LMTZ	Lermontov	1.20	38	⇓iP	Pn	20 58 44.8	-0.8
LMTZ	Lermontov	1.20	38	⇓P	Pn	20 58 44.8	-0.8
VANB	Van	1.24	190	ePN	Pn	20 58 45.7	-0.4
VANB	Van	1.24	190	ePn	Pn	20 58 45.7	-0.4
STE	Stepanavan	1.30	24	P	Pg	20 58 46.0	-1.0
STE				S	Sn	20 59 12.0	+7.2
TVAN	Van	1.30	189	iP	Pb	20 58 46.8	-0.3
TVAN				iS	Sn	20 59 06.4	+1.5
TVAN	Van	1.30	189	iP	Pb	20 58 46.8	-0.3
STEZ	Stepenevan	1.31	25	⇑iP	Pb	20 58 47.0	-0.2
CKLZ	Chkalov	1.35	34	⇓iP	Pg	20 58 47.1	-0.8
CKLZ	Chkalov	1.35	34	⇓P	Pg	20 58 47.1	-0.8
HOMI	Horasan	1.37	280	iP	Pb	20 58 47.4	-0.9
HOMI				iS	Sn	20 59 11.5	+4.8
VANT	Van	1.43	193	ePN	Pg	20 58 49.2	-0.3
VANT	Van	1.43	193	ePn	Pg	20 58 49.2	-0.3
NAX	Nakhchivan	1.56	114	⇓P	Pg	20 58 51.9	0.0
	SNR=59						
NAX				⇓S	Sg	20 59 15.5	+3.4
NAX	Nakhchivan	1.56	114	P	Pg	20 58 51.9	0.0
	SNR=59						
NAX				S	Sg	20 59 15.5	+3.4
AKH	Akhalkalaki	1.59	355	P	Pg	20 58 53.7	+1.0
AKH				S	Sg	20 59 16.4	+3.1
AKH	Akhalkalaki	1.59	355	P	Pg	20 58 53.7	+1.0
AKH				S	Sg	20 59 16.4	+3.1
VADZ	Vardenis	1.64	77	eP	Pg	20 58 54.0	+0.6
VADZ				eS	Sg	20 59 21.0	+6.3
VADZ	Vardenis	1.64	77	P	Pg	20 58 54.0	+0.6
TATV	Tatvan	1.70	220	iP	Pb	20 58 53.2	-0.7
TATV				iS	Sg	20 59 15.9	-0.8
TATV	Tatvan	1.70	220	iP	Pb	20 58 53.2	-0.7
TATV				iS	Sg	20 59 15.9	-0.8
ERZM	Erzurum	1.77	274	iP	Pg	20 58 55.1	-0.9
ERZM				iS	Sg	20 59 24.9	+5.9
ERZM	Erzurum	1.77	274	iP	Pg	20 58 55.1	-0.9
EZM	Erzurum	1.77	274	ePN	Pb	20 58 54.8	-0.4
DDEM	Demirkent	1.81	307	iP	Pg	20 58 55.7	-1.1
DDEM	Demirkent	1.81	307	iP	Pg	20 58 55.7	-1.1
VRTB	Varto-Mus	1.83	250	ePN	Pb	20 58 55.0	-1.1
VRTB	Varto-Mus	1.83	250	ePn	Pb	20 58 55.0	-1.1
DAGI	Agillar	1.83	314	iP	Pg	20 58 55.8	-1.4
TBLG	Delisi	2.08	23	P	Pg	20 58 60.0	-1.9
TBLG				S	Sg	20 59 30.1	+1.3
TBLG	Delisi	2.08	23	P	Pg	20 59 00.0	-1.9
TBLG				S	Sg	20 59 30.1	+1.3
DGRG	David-gareji	2.09	38	P	Pg	20 59 01.0	-1.0
DGRG				S	Sg	20 59 35.4	+6.3
DGRG	David-gareji	2.09	38	P	Pg	20 59 01.0	-1.0
GOR	Gori	2.19	9	P	Pg	20 59 04.6	+0.6
GOR				S	Sg	20 59 33.8	+1.3
GOR	Gori	2.19	9	P	Pg	20 59 04.6	+0.6
GOR				S	Sg	20 59 33.8	+1.3
GANJ	Ganja	2.20	67	⇑P	Pb	20 59 01.6	-0.6
	SNR=14						
GANJ	Ganja	2.20	67	P	Pb	20 59 01.6	-0.6
	SNR=14						
BCA	Borcka	2.25	317	ePN	Pb	20 59 02.9	-0.2
BCA	Borcka	2.25	317	ePn	Pb	20 59 02.9	-0.2
HAKT	HAKKARI	2.26	179	iP	Pb	20 59 02.6	-0.8
HAKT				iS	Sg	20 59 38.8	+4.2
HAKT	HAKKARI	2.26	179	iP	Pb	20 59 02.6	-0.8
BTMT	Batman	2.35	227	ePN	Pb	20 59 04.5	-0.3
BTMT	Batman	2.35	227	ePn	Pb	20 59 04.5	-0.3
KOPT	Kop Dagi	2.44	276	iP	Pb	20 59 06.4	-0.2
KOPT				iS	Sg	20 59 43.2	+2.7
KOPT	Kop Dagi	2.44	276	iP	Pb	20 59 06.4	-0.2
BNGB	Bingˆ¶l	2.46	251	ePN	Pb	20 59 04.0	-2.7
CUKT	Cukurca	2.57	181	ePN	Pb	20 59 06.0	-2.6
CUKT	Cukurca	2.57	181	ePn	Pb	20 59 06.0	-2.6
BINT	Bingol	2.63	250	ePn	Pn	20 59 04.0	-1.3
BRDA	Brd	2.73	80	⇓P	Pg	20 59 14.3	-0.1
BAYT	Ayd˜–ntepe-Bay	2.76	283	ePN	Pb	20 59 09.1	-2.9
BAYT	Ayd˜–ntepe-Bay	2.76	283	ePn	Pb	20 59 09.1	-2.9
ONI	Oni	2.77	357	P	Pg	20 59 13.3	-1.9
ONI				S	Sg	20 59 53.7	+2.5
SEKA	Sheki	3.03	62	⇑P	Pb	20 59 13.9	-2.6
	SNR=10						
SEKA				⇑S	Sg	21 00 01.1	+1.6
SEKA	Sheki	3.03	62	P	Pb	20 59 13.9	-2.6
	SNR=10						
ERZN	Erzincan	3.05	267	ePN	Pn	20 59 12.9	+1.9
GUMT	Gumushane	3.27	283	ePN	Pb	20 59 16.5	-4.1
GUMT	Gumushane	3.27	283	ePn	Pb	20 59 16.5	-4.1
EZC	Erzincan	3.32	270	ePn	Pn	20 59 12.9	-1.9
KELT	Kelkit	3.40	277	iP	Pb	20 59 23.8	+0.9
PTK	Pertek	3.44	256	ePN	Pn	20 59 18.1	+1.7
PTK	Pertek	3.44	256	ePn	Pn	20 59 18.1	+1.7
IML	Ismayilli	3.59	73	⇑P	Pg	20 59 27.9	-2.9
SVRC	Sivrice-ELAZID	3.68	248	ePN	Pn	20 59 21.5	+1.7
SVRC	Sivrice-ELAZID	3.68	248	ePn	Pn	20 59 21.5	+1.7
GLBA	Clilabad	3.70	97	⇑P	Pb	20 59 26.8	-1.0
PQL	Pirkuli	3.89	74	⇑P	Pb	20 59 32.5	+1.3
ESPY	Espiye-Giresun	3.93	288	ePN	Pn	20 59 25.8	+2.8
ESPY	Espiye-Giresun	3.93	288	ePn	Pn	20 59 25.8	+2.8
ILIC	ilic-Erzincan	3.95	266	ePN	Pn	20 59 25.6	+2.2
ILIC	ilic-Erzincan	3.95	266	ePn	Pn	20 59 25.6	+2.2
QUBA	Quba, Azerbaij	3.98	66	⇓P	Pb	20 59 32.6	-0.2
LKRN	Lenkeran, Azer	4.12	104	⇓P	Pn	20 59 28.7	+3.1
LKRN	Lenkeran, Azer	4.12	104	P	Pn	20 59 28.7	+3.1
SIZA	Siyzn	4.19	71	⇑P	Pb	20 59 36.9	+0.6
	SNR=4.4						
SUSE	Susehri	4.21	277	iP	Pg	20 59 40.1	-2.6
MALT	Malatya	4.34	251	ePN	Pn	20 59 31.3	+2.5
MALT	Malatya	4.34	251	ePn	Pn	20 59 31.3	+2.5

*CSEM **01** 21:00:53.6±0.1, 41°.18N×23°.05E, h2km, ML2.2/8, Error ellipse: s-maj=2.2km s-min=1.8km az=66.0*
*THE **01** 21:00:53.7, 41°.18N×23°.05E, h2km±1km, ML2.2/8, Error ellipse: s-maj=2.0km s-min=0.5km az=189.0*
*SOF **01** 21:00:53.2, 41°.19N×23°.04E, h3km, MD2.6*
*SKO **01** 21:00:54.8, 41°.29N×22°.92E, h15km, M1.3, ML1.8*
*ATH **01** 21:00:54.2, 41°.17N×23°.09E, h23km±5km, MD3.1/4*
*BEO **01** 21:00:57.6±2.0, 41°.30N×23°.08E, h18km±13km, ML1.7/3*

ISC 01 21:00:53.4±0.8**, 41°.18N**±0°.02×**23°.03E**±0°.02**, h9**km±6km**, n49, σ0s.64**/80**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNT	Kendrikon	0.10	261	P	Pg	21 00 56.1	+0.1
KNT				S	Sg	21 00 57.6	-0.2
KNT	Kendrikon	0.10	261	P	Pg	21 00 56.1	+0.1
KNT				S	Sg	21 00 57.6	-0.2
VAY	Valandovo	0.38	292	P	Pg	21 01 00.7	-0.1
VAY				S	Sg	21 01 06.0	+0.2
VAY	Valandovo	0.38	292	iPg	Pg	21 01 00.7	-0.1
VAY				eSg	Sg	21 01 06.1	+0.3
VAY				eLg	Lg	21 01 06.3	
	comp=N,128nm,0.7s						
VAY				eLg	Lg	21 01 06.5	
	comp=E,57nm,0.4s						
VAY	Valandovo	0.38	292	P	Pg	21 01 00.7	-0.1
VAY	Valandovo	0.38	292	iPg	Pg	21 01 01.2	+0.4
VAY				eSg	Sg	21 01 01.6	-4.2
VAY				eLg	Lg	21 01 01.9	
	comp=E,57nm,0.4s						
VAY				S	Sg	21 01 06.0	+0.2
SRS	Serrai	0.43	98	P	Pg	21 01 01.9	+0.1
SRS				S	Sg	21 01 07.7	+0.2
SRS	Serrai	0.43	98	P	Pg	21 01 01.9	+0.1
SRS				S	Sg	21 01 07.7	+0.2
SOH	Sokhos	0.43	145	P	Pg	21 01 01.9	0.0
SOH				S	Sg	21 01 07.9	+0.3
SOH	Sokhos	0.43	145	P	Pg	21 01 01.9	0.0
SOH				S	Sg	21 01 07.9	+0.3
GRG	Griva	0.53	245	P	Pg	21 01 04.2	+0.6
GRG				S	Sb	21 01 12.0	-0.5
GRG	Griva	0.53	245	P	Pg	21 01 04.2	+0.6
GRG				S	Sb	21 01 12.0	-0.5
THE	Thessaloniki	0.55	185	P	Pg	21 01 04.3	+0.3
THE				S	Sg	21 01 11.7	+0.5
THE	Thessaloniki	0.55	185	P	Pg	21 01 04.3	+0.3
THE				S	Sg	21 01 11.7	+0.5
HORT	Hortiatis	0.58	175	P	Pg	21 01 05.0	+0.3
HORT				S	Sg	21 01 12.8	+0.4
HORT	Hortiatis	0.58	175	P	Pg	21 01 05.0	+0.3
HORT				S	Sg	21 01 12.8	+0.4
NVR	Nevrokopi	0.65	74	P	Pg	21 01 06.0	0.0
NVR	Nevrokopi	0.65	74	ePB	Pg	21 01 06.0	0.0
NVR				eSN	Sb	21 01 15.7	-0.4
NVR	Nevrokopi	0.65	74	P	Pg	21 01 06.0	0.0
NVR				eSn	Sb	21 01 15.7	-0.4
MMB	Musomiste	0.67	52	iPg	Pg	21 01 06.0	-0.3
MMB	Musomiste	0.67	52	iPg	Pg	21 01 06.0	-0.3
KKB	Krupnik	0.69	3	iPg	Pg	21 01 06.2	-0.5
KKB	Krupnik	0.69	3	iPg	Pg	21 01 06.2	-0.5
PLG	Polygyros	0.86	158	P	Pg	21 01 09.5	-0.5
PLG	Polygyros	0.86	158	ePB	Pg	21 01 09.8	-0.2
PLG				eSN	Sb	21 01 21.8	-0.5
PLG	Polygyros	0.86	158	P	Pg	21 01 09.5	-0.5
PLG	Polygyros	0.86	158	ePb	Pg	21 01 09.8	-0.2
PLG				eSn	Sb	21 01 21.8	-0.5
OUR	Ouranopolis	1.11	139	P	Pb	21 01 14.6	-0.2
OUR				S	Sn	21 01 29.8	-0.7
OUR	Ouranopolis	1.11	139	P	Pb	21 01 14.6	-0.2
OUR				S	Sn	21 01 29.8	-0.7
KAVA	Kavala	1.14	99	P	Pb	21 01 15.0	-0.2
KAVA				S	Sn	21 01 30.6	-0.5
KAVA	Kavala	1.14	99	P	Pb	21 01 15.0	-0.2
KAVA				S	Sn	21 01 30.6	-0.5
FNA	Florina	1.31	253	P	Pb	21 01 18.5	+0.2
FNA	Florina	1.31	253	P	Pb	21 01 18.5	+0.2
PAIG	Paliouri	1.34	158	P	Pn	21 01 18.1	-0.2
PAIG	Paliouri	1.34	158	P	Pn	21 01 18.1	-0.2
RZN	Rozhen	1.37	68	iP	Pg	21 01 20.2	+0.5
RZN	Rozhen	1.37	68	iP	Pg	21 01 20.2	+0.5
VTS	Vitosha	1.42	5	P	Pb	21 01 20.4	+0.3
VTS				S	Sg	21 01 39.2	+0.1
VTS	Vitosha	1.42	5	ePg	Pg	21 01 21.0	+0.3
VTS				eSg	Sn	21 01 38.3	-0.1
VTS	Vitosha	1.42	5	iP	Pg	21 01 21.2	+0.5
VTS	Vitosha	1.42	5	P	Pb	21 01 20.4	+0.3
VTS	Vitosha	1.42	5	ePg	Pg	21 01 21.0	+0.3
VTS				eSg	Sn	21 01 38.3	-0.1
VTS				S	Sg	21 01 39.2	+0.1
THL	Klokotos Trika	1.79	206	ePN	Pb	21 01 26.6	+0.3
THL	Klokotos Trika	1.79	206	ePn	Pb	21 01 26.6	+0.3
BARS	Barje	1.87	331	ePn	Pb	21 01 27.2	-0.6
BARS				eSg	Sg	21 01 54.0	+0.5
BARS	Barje	1.87	331	ePn	Pb	21 01 27.2	-0.6
BARS				eSg	Sg	21 01 54.0	+0.5
LIA	Limnos Island	2.08	127	ePB	Pn	21 01 29.0	+0.6
LIA	Limnos Island	2.08	127	ePb	Pn	21 01 29.0	+0.6
ZAPS	Zavoj	2.11	352	ePn	Pn	21 01 30.7	+1.7
ZAPS				eSg	Sg	21 02 01.4	0.0

KRSC 01 21:11:49.8±1.1**, 50°.49N**×**157°.30E, h10**km±10km**, ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	1.82	349	eP	Pn	21 12 20.8	-0.4
MIPR				S	Sn	21 12 43.5	-0.8
MTVR	Mutnovka	2.07	15	eP	Pb	21 12 26.6	-1.1
MTVR				eS	Sb	21 12 53.1	-0.5
RUS	Russkaya	2.09	21	eP	Pn	21 12 26.1	+1.3
RUS				eS	Sb	21 12 52.4	-1.3
APC	Apacha	2.44	358	S	Sb	21 13 02.4	-1.4
PET	Petropavlovsk	2.67	18	S	Sb	21 13 09.0	-1.5
UGLR	Uglovaya	2.88	19	eP	Pb	21 12 38.8	-2.6
SDLR	Sedlovina	2.96	19	eP	Pn	21 12 38.6	+1.6
SDLR				S	Sn	21 13 14.1	+1.4
GNL	Ganaly	3.23	7	eP	Pn	21 12 42.8	+2.0
MKZ	Mys Kozlova	4.89	32	P	Pn	21 13 04.9	+1.6
KBTR	Krutoberegovo	6.61	28	P	Pn	21 13 28.7	+1.8

*IDC **01** 21:48:34.9±0.8, 9°.82S×150°.92E, h0km, mb4.0/13, mb1 4.1/16, mb1mx4.1/19, mbtmp4.0/16, ML3.5/3, MS3.8/23, Ms1 3.8/23, ms1mx3.7/37, Error ellipse: s-maj=26.1km s-min=15.0km az=101.0*
*ISCJB **01** 21:48:38.5±0.6, 9°.91S±0°.06×150°.75E±0°.09, h33km, mb4.1/15, MS3.8/22, Error ellipse: s-maj=13.3km s-min=6.4km az=24.2*
*NEIC **01** 21:48:40.2±0.6, 9°.87S×150°.82E, h35km, mb4.2/4, Error ellipse: s-maj=17.1km s-min=8.5km az=119.0*

ISC 01 21:48:40.6±0.7**, 9°.90S**±0°.07×**150°.73E**±0°.08**, h35**km**, n54, σ1s.55**/46**, mb4.2**/15**, MS3.8**/22**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.56	278	ePn	Pn	21 49 32.8	-0.5
PMG				Sn	Sn	21 50 18.1	+3.9
PMG	Port Moresby	3.56	278	Pn	Pn	21 49 32.7	-0.7
	3.8nm,0.3s,baz=90,slow=12,SNR=7.3						
PMG				Sn	Sn	21 50 29.5	+15
	7.3nm,0.3s,baz=51,slow=19,SNR=1.5						
COEN	Coen	8.42	241	ePn	Pn	21 50 39.6	-0.7
	39nm,0.5s						
COEN				eSn	Sn	21 52 12.4	-1.8
CTA	Charters Tower	11.01	203	Pn	Pn	21 51 15.6	-0.1
CTA				Sn	Sn	21 53 18.7	+0.9
CTA	Charters Tower	11.01	203	Pn	Pn	21 51 15.6	-0.1
	0.5nm,0.3s,baz=30,slow=15,SNR=3.4						
CTA				Sn	Sn	21 53 18.7	+0.9
	0.8nm,0.3s,baz=295,slow=19,SNR=6.0						
WRAB	Tennant Creek	18.69	236	eP	Pn	21 52 57.5	+0.9
	4.3nm,0.8s						
WRA	Warramunga Arr	18.71	236	P	Pn	21 52 57.8	+1.0
WRA				S	Sn	21 56 20.3	-4.9
WRA	Warramunga Arr	18.71	236	P	Pn	21 52 57.8	+1.0
	0.3nm,0.3s,baz=62,slow=12,SNR=10						
WRA				S	Sn	21 56 20.3	-4.9
	0.1nm,0.3s,baz=62,slow=22,SNR=2.9						
DZM	Mont Dzumac	19.33	131	LR	LR	21 59 01.2	
	comp=Z,366nm,20.6s,baz=304,slow=32						
ASAR	Alice Springs	21.11	227	P	P	21 53 24.5	+2.1
ASAR	Alice Springs	21.11	227	P	P	21 53 24.5	+2.1
	1.5nm,0.7s,baz=56,slow=9.4,SNR=16						
ASAR				LR	LR	22 00 56.5	
	comp=Z,272nm,19.4s,baz=52,slow=35						
STKA	Stephens Creek	23.45	200	P	P	21 53 47.9	+0.9
	3.4nm,0.8s,baz=21,slow=12,SNR=6.6						
STKA				LR	LR	22 03 35.9	
	comp=Z,233nm,18.3s,baz=24,slow=38						
GUMO	Guam	24.05	346	LR	LR	22 01 32.8	
	comp=Z,133nm,20.5s,baz=129,slow=32						
FITZ	Fitzroy Crossi	25.65	249	eP	P	21 54 08.2	+0.8
	3.0nm,0.7s						
FITZ	Fitzroy Crossi	25.65	249	P	P	21 54 08.1	+0.8
	1.3nm,0.7s,baz=74,slow=10,SNR=4.5						
FITZ				LR	LR	22 04 07.3	
	comp=Z,154nm,18.4s,baz=79,slow=36						
KAPI	Kappang	31.09	277	LR	LR	22 07 39.0	
	comp=Z,41nm,18.5s,baz=248,slow=37						
URZ	Urewera	36.85	144	LR	LR	22 08 27.9	
	comp=Z,199nm,21.2s,baz=124,slow=32						
CBIJ	Chichi jima	37.70	347	LR	LR	22 08 22.1	
	comp=Z,325nm,21.9s,baz=107,slow=32						
RPZ	Rata Peaks	38.04	156	LR	LR	22 09 18.0	
	comp=Z,257nm,19.2s,baz=27,slow=33						
NWAO	Narrogin (SRO)	38.42	228	LR	LR	22 11 17.3	
	comp=Z,209nm,18.4s,baz=210,slow=35						
JOW	Kunigami	42.53	330	LR	LR	22 10 11.4	
	comp=Z,120nm,21.8s,baz=31,slow=30						
JNU	Nakatsue	46.78	337	P	P	21 57 06.8	0.0
JNU	Nakatsue	46.78	337	LR	LR	22 15 37.6	
	comp=Z,39nm,20.6s,baz=42,slow=35						
KSRS	Korea Array	51.73	337	P	P	21 57 44.8	+0.3
	3.7nm,0.8s,baz=154,slow=8.7,SNR=9.5						
KSRS				LR	LR	22 17 20.0	
	comp=Z,68nm,21.6s,baz=320,slow=33						
KSAR	Wonju Array Be	51.73	337	P	P	21 57 44.8	+0.2
USRK	Ussuriysk Arra	56.46	344	P	P	21 58 18.4	-0.5
	1.0nm,0.7s,baz=179,slow=9.0,SNR=3.6						
PPT	Papeete	58.29	105	LR	LR	22 17 16.5	
	comp=Z,157nm,21.7s,baz=1.3,slow=30						
CMAR	Chiang Mai Arr	58.35	299	P	P	21 58 33.9	+1.2
CMAR	Chiang Mai Arr	58.35	299	P	P	21 58 33.9	+1.2
	0.6nm,0.8s,baz=127,slow=5.2,SNR=7.3						
PETK	Petropavlovsk-	63.04	5	P	P	21 59 03.2	-0.8
PETK	Petropavlovsk-	63.04	5	P	P	21 59 03.2	-0.8
	1.9nm,0.8s,baz=173,slow=8.8,SNR=4.3						
PETK				LR	LR	22 22 30.6	
	comp=Z,40nm,21.1s,baz=268,slow=32						
VNDA	Vanda	67.85	177	P	P	21 59 36.1	+1.3
	0.7nm,0.8s,baz=319,slow=5.1,SNR=4.1						
ULN	Ulaanbaatar	69.30	330	eP	P	21 59 44.3	-0.2
SONM	Songino Array	69.60	330	P	P	21 59 46.8	+0.4
SONM	Songino Array	69.60	330	P	P	21 59 46.8	+0.4
	3.4nm,0.9s,baz=142,slow=5.4,SNR=25						
SONM				LR	LR	22 29 58.0	
	comp=Z,61nm,21.1s,baz=126,slow=36						
MAW	Mawson	80.11	203	P	P	22 00 46.3	-0.3
	2.0nm,0.8s,baz=219,slow=6.5,SNR=2.5						
MAW				LR	LR	22 32 03.4	
	comp=Z,100nm,19.5s,baz=28,slow=32						
KDAK	Kodiak Island	81.62	27	LR	LR	22 29 55.5	
	comp=Z,106nm,21.9s,baz=263,slow=30						
MK31	Makanchi Array	82.84	320	ePn	P	22 01 00.6	-0.9
MKAR	Makanchi Array	82.84	320	P	P	22 01 01.4	-0.2
MKAR	Makanchi Array	82.84	320	P	P	22 01 01.4	-0.2
	1.8nm,0.8s,baz=111,slow=5.8,SNR=17						
ZAA0	Zalesovo Array	84.27	327	eP	P	22 01 09.6	+1.0
ZALV	Zalesovo Beam	84.27	327	P	P	22 01 07.1	-1.5
ZALV	Zalesovo Beam	84.27	327	P	P	22 01 07.1	-1.5
	2.0nm,0.7s,baz=110,slow=5.7,SNR=13						
ZALV				LR	LR	22 35 54.5	
	comp=Z,34nm,19.8s,baz=338,slow=34						
TKM2	Tokmak 2	86.00	315	eP	P	22 01 18.0	+0.1
	1.8nm,0.8s						
AAK	Ala-Archa	86.69	314	eP	P	22 01 20.3	-0.9
	11nm,1.1s						
ILAR	Eielson Array	87.62	22	P	P	22 01 24.2	-0.8
ILAR	Eielson Array	87.62	22	P	P	22 01 24.2	-0.8
	1.5nm,0.7s,baz=253,slow=4.0,SNR=14						
ILAR				LR	LR	22 33 24.9	
	comp=Z,46nm,21.9s,baz=264,slow=31						
DLBC	Dease Lake	92.78	31	LR	LR	22 35 38.7	
	comp=Z,104nm,19.8s,baz=331,slow=30						
YBH	Yreka Blue Hor	93.95	48	LR	LR	22 35 16.9	
	comp=Z,82nm,21.9s,baz=354,slow=30						
NEW	Newport	98.73	42	LR	LR	22 39 12.4	
	comp=Z,102nm,20.9s,baz=60,slow=31						
BDFB	Brasilia	148.56	144	PKPbc	PKPbc	22 08 24.0	-1.0
BDFB	Brasilia	148.56	144	PKPbc	PKPbc	22 08 24.0	-1.0
	4.1nm,0.7s,baz=177,slow=5.9,SNR=8.3						
TORD	Torodi Ar. Bea	149.50	279	PKPbc	PKPbc	22 08 25.8	-1.5
TORD	Torodi Ar. Bea	149.50	279	PKPbc	PKPbc	22 08 25.8	-1.5
	2.1nm,0.8s,baz=78,slow=2.0,SNR=12						

IDC 01 22:23:48.2±2.2**, 3°.23S**×**125°.64E, h0**km**, mb3.2**/2**, mb1 3.3**/3**, mb1mx3.1**/21**, mbtmp3.1**/3**, ML3.1**/1**, Error ellipse: s-maj=307.7km s-min=27.1km az=63.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.65	154	P	P	22 28 05.7	-2.1
	0.1nm,0.3s,baz=332,slow=12,SNR=5.2						
ASAR	Alice Springs	21.83	159	P	P	22 28 43.8	+1.4
	0.3nm,0.3s,baz=331,slow=10,SNR=5.8						
MKAR	Makanchi Array	62.73	328	P	P	22 34 15.1	-0.1
	0.4nm,0.7s,baz=123,slow=7.4,SNR=5.5						

*ATH **01** 22:38:15.4, 39°.08N×21°.63E, h26km±1km, MD3.3/14*
*ISCJB **01** 22:38:16.1±0.5, 39°.07N±0°.02×21°.65E±0°.04, h22km±4km, Error ellipse: s-maj=5.2km s-min=4.0km az=173.6*
*CSEM **01** 22:38:16.2±0.2, 39°.05N×21°.68E, h15km, ML2.8/4, Error ellipse: s-maj=3.7km s-min=2.7km az=94.0*
*THE **01** 22:38:17.2, 39°.05N×21°.71E, h16km, ML2.8/4, Error ellipse: s-maj=1.1km s-min=1.0km az=115.0*

ISC 01 22:38:16.1±0.9**, 39°.08N**±0°.02×**21°.65E**±0°.02**, h16**km±6km**, n77, σ0s.54**/104**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	Evrytania	0.20	143	P	Pg	22 38 20.8	-0.2
EVR				S	Sg	22 38 24.2	0.0
EVR	Evrytania	0.20	143	ePB	Pg	22 38 20.9	-0.1
EVR	Evrytania	0.20	143	ePb	Pg	22 38 20.9	-0.1
EVR				S	Sg	22 38 24.2	0.0
MAKR	Makrakomi, Fth	0.38	99	P	Pb	22 38 24.2	-0.2
MAKR				S	Sb	22 38 30.2	+0.2
MAKR	Makrakomi, Fth	0.38	99	P	Pb	22 38 24.2	-0.2
MAKR				S	Sb	22 38 30.2	+0.2
AGG	Agios Georgios	0.53	95	P	Pg	22 38 26.5	-0.2
AGG				S	Sb	22 38 34.2	-0.2
AGG	Agios Georgios	0.53	95	P	Pg	22 38 26.5	-0.2
AGG				S	Sb	22 38 34.2	-0.2
THL	Klokotos Trika	0.56	30	P	Pg	22 38 27.1	-0.2
THL	Klokotos Trika	0.56	30	ePN	Pg	22 38 27.1	-0.2
THL				eSN	Sg	22 38 35.1	+0.2
THL	Klokotos Trika	0.56	30	P	Pg	22 38 27.1	-0.2
THL				eSn	Sg	22 38 35.1	+0.2
EFP	Efpalio	0.68	163	P	Pg	22 38 29.1	-0.3
EFP	Efpalio	0.68	163	ePN	Pg	22 38 29.2	-0.2
EFP				eSN	Sb	22 38 39.0	+0.4
EFP	Efpalio	0.68	163	P	Pg	22 38 29.1	-0.3
EFP				eSn	Sb	22 38 39.0	+0.4
TRIZ	Trizonia	0.78	155	P	Pg	22 38 30.7	-0.6
TRIZ	Trizonia	0.78	155	ePN	Pg	22 38 30.7	-0.6
TRIZ				eSN	Sb	22 38 42.2	+0.7
TRIZ	Trizonia	0.78	155	P	Pg	22 38 30.7	-0.6
TRIZ				eSn	Sb	22 38 42.2	+0.7
KALE	Kalithea	0.78	151	P	Pb	22 38 30.7	-0.6
KALE				S	Sb	22 38 42.0	+0.4
KALE	Kalithea	0.78	151	ePB	Pb	22 38 30.5	-0.8
KALE				eSN	Sb	22 38 42.1	+0.4
KALE	Kalithea	0.78	151	P	Pb	22 38 30.7	-0.6
KALE				eSn	Sb	22 38 42.1	+0.4
AXAR	Agios Charalam	0.84	111	P	Pb	22 38 32.0	-0.3
AXAR				S	Sb	22 38 43.4	0.0
AXAR	Agios Charalam	0.84	111	P	Pb	22 38 32.0	-0.3
AXAR				S	Sb	22 38 43.4	0.0
JAN	Janina	0.85	313	ePN	Pb	22 38 31.4	-1.1
JAN				eSN	Sb	22 38 43.5	-0.2
JAN	Janina	0.85	313	ePn	Pb	22 38 31.4	-1.1
JAN				eSn	Sb	22 38 43.5	-0.2
LAKA	Lakka	0.87	163	P	Pn	22 38 33.6	-0.1
LAKA	Lakka	0.87	163	ePN	Pg	22 38 33.1	+0.1
LAKA				eSN	Sg	22 38 44.8	+0.3
LAKA	Lakka	0.87	163	ePn	Pg	22 38 33.1	+0.1
LAKA	Lakka	0.87	163	P	Pn	22 38 33.6	-0.1
LAKA				eSn	Sg	22 38 44.8	+0.3
DSF	Desfina	0.95	134	P	Pb	22 38 33.1	-1.1
DSF				S	Sg	22 38 47.1	0.0
DSF	Desfina	0.95	134	P	Pb	22 38 33.1	-1.1
DSF				S	Sg	22 38 47.1	0.0
RLS	Riolos of Patr	1.03	188	P	Pg	22 38 36.1	+0.1
RLS	Riolos of Patr	1.03	188	ePN	Pg	22 38 35.9	-0.1
RLS	Riolos of Patr	1.03	188	ePn	Pg	22 38 35.9	-0.1
IGT	Igoumenitsa	1.12	294	P	Pg	22 38 38.0	+0.2
IGT	Igoumenitsa	1.12	294	P	Pg	22 38 38.0	+0.2
ATAL	Atalanti	1.13	109	P	Pn	22 38 37.0	-0.3
ATAL				S	Sb	22 38 51.3	-0.5
ATAL	Atalanti	1.13	109	P	Pn	22 38 37.0	-0.3
ATAL				S	Sb	22 38 51.3	-0.5
LKR	Lokris	1.13	112	P	Pn	22 38 37.0	-0.2
LKR	Lokris	1.13	112	ePN	Pn	22 38 37.0	-0.2
LKR	Lokris	1.13	112	P	Pn	22 38 37.0	-0.2
LIT	Litokhoron	1.21	32	P	Pb	22 38 39.1	+0.5
LIT	Litokhoron	1.21	32	P	Pb	22 38 39.1	+0.5
VLS	Valsamata	1.22	223	P	Pb	22 38 38.6	-0.2
VLS	Valsamata	1.22	223	ePN	Pn	22 38 38.3	-0.2
VLS	Valsamata	1.22	223	ePn	Pn	22 38 38.3	-0.2
VLS	Valsamata	1.22	223	P	Pb	22 38 38.6	-0.2
XOR	Xorichti	1.23	76	P	Pn	22 38 38.6	0.0
XOR	Xorichti	1.23	76	P	Pn	22 38 38.6	0.0
KZN	Kozani	1.23	4	ePN	Pb	22 38 39.2	+0.1
KZN	Kozani	1.23	4	ePn	Pb	22 38 39.2	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NEO	Neokhori	1.24	79	ePN	Pb	22 38 39.0	-0.2
NEO	Neokhori	1.24	79	ePn	Pb	22 38 39.0	-0.2
GUR	Goura	1.26	154	P	Pb	22 38 39.4	-0.1
GUR	Goura	1.26	154	ePN	Pn	22 38 39.0	-0.1
GUR	Goura	1.26	154	ePn	Pn	22 38 39.0	-0.1
GUR	Goura	1.26	154	P	Pb	22 38 39.4	-0.1
LTK	Loutraki	1.47	135	P	Pb	22 38 42.8	-0.2
LTK	Loutraki	1.47	135	ePN	Pb	22 38 42.8	-0.2
LTK	Loutraki	1.47	135	P	Pb	22 38 42.8	-0.2
AOS	Alonnisos	1.73	86	P	Pn	22 38 45.8	+0.3
AOS				S	Sn	22 39 06.6	-0.7
AOS	Alonnisos	1.73	86	P	Pn	22 38 45.8	+0.3
AOS				S	Sn	22 39 06.6	-0.7
PAIG	Paliouri	1.78	61	P	Pn	22 38 46.2	0.0
PAIG	Paliouri	1.78	61	P	Pn	22 38 46.2	0.0
PLG	Polygyros	1.90	46	P	Pn	22 38 47.7	-0.1
PLG	Polygyros	1.90	46	ePN	Pn	22 38 47.9	+0.1
PLG	Polygyros	1.90	46	ePn	Pn	22 38 47.9	+0.1
DID	Didima	2.00	141	ePB	Pn	22 38 50.0	+0.8
DID	Didima	2.00	141	ePb	Pn	22 38 50.0	+0.8
PTL	Penteli	2.01	120	ePB	Pn	22 38 50.4	+1.0
PTL	Penteli	2.01	120	ePb	Pn	22 38 50.4	+1.0
SOH	Sokhos	2.18	36	P	Pn	22 38 52.9	+1.2
SOH	Sokhos	2.18	36	P	Pn	22 38 52.9	+1.2
VLI	Veliai	2.56	156	ePB	Pn	22 38 58.5	+1.6
VLI	Veliai	2.56	156	ePb	Pn	22 38 58.5	+1.6
NVR	Nevrokopi	2.83	36	ePN	Pn	22 39 01.0	+0.3
NVR	Nevrokopi	2.83	36	ePn	Pn	22 39 01.0	+0.3
KYTH	Kithira	3.00	158	ePN	Pn	22 39 04.4	+1.5
KYTH	Kithira	3.00	158	ePn	Pn	22 39 04.4	+1.5

IDC 01 22:46:46.5±3.0, 33°.78S×178°.59W, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.8/17, mbtmp4.0/3, ML4.0/1, Error ellipse: s-maj=71.9km s-min=35.7km az=121.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	5.67	217	Pn	Pn	22 48 12.8	+0.9
	4.6nm,0.3s,baz=8.1,slow=7.1,SNR=22						
URZ				Sn	Sn	22 49 17.8	+0.1
	5.3nm,0.3s,baz=156,slow=19,SNR=9.7						
ASAR	Alice Springs	42.54	271	P	P	22 54 43.8	-0.3
	1.2nm,0.7s,baz=115,slow=7.1,SNR=9.8						
WRA	Warramunga Arr	43.84	276	P	P	22 54 54.4	-0.2
	1.1nm,0.6s,baz=119,slow=7.3,SNR=8.9						
FINES	FINESS Array B	148.11	338	PKPbc	PKPbc	23 06 32.6	-0.7
	0.7nm,0.5s,baz=35,slow=7.0,SNR=8.1						

IDC 01 22:47:07.7±1.6, 13°.25N×125°.02E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/23, mbtmp3.6/5, Error ellipse: s-maj=156.2km s-min=19.3km az=68.0
ISCJB 01 22:47:11.8±0.9, 12°.99N±0°.08×124°.5E±0°.2, h44km, mb3.6/5, Error ellipse: s-maj=25.7km s-min=9.5km az=161.9
ISC 01 22:47:13.2±1.1, 12°.9N±0°.1×124°.5E±0°.2, h44km, n7, σ0s.91/7, mb3.7/5, 1C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	Palo	1.82	166⇓	eP	Pn	22 47 41.1	-0.9
PLP				eS	Sn	22 48 05.0	+1.1
RCP	Roxas	2.22	232⇑	eP	Pn	22 47 46.9	-0.6
WRA	Warramunga Arr	34.08	163	P	P	22 53 53.6	0.0
	1.2nm,0.5s,baz=345,slow=10,SNR=16						
ASAR	Alice Springs	37.52	166	P	P	22 54 26.9	+3.7
	0.7nm,0.4s,baz=350,slow=14,SNR=10						
SONM	Songino Array	37.94	340	P	P	22 54 26.2	-0.3
	0.3nm,0.9s,baz=169,slow=10,SNR=3.2						
MKAR	Makanchi Array	48.88	322	P	P	22 55 55.5	+0.9
	0.6nm,0.7s,baz=123,slow=8.6,SNR=8.3						
ZALV	Zalesovo Beam	51.48	331	P	P	22 56 14.2	+0.2
	0.6nm,0.7s,baz=132,slow=8.2,SNR=4.5						

IDC 01 22:48:57.1±33.0, 29°.71S×179°.49W, h520km±321km, mb3.2/4, mb1 3.4/4, mb1mx3.1/18, mbtmp3.2/4, Error ellipse: s-maj=200.3km s-min=94.1km az=92.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	32.42	279	P	P	22 54 44.6	+0.5
	2.9nm,0.4s,baz=95,slow=10.0,SNR=5.5						
STKA	Stephens Creek	33.38	256	P	P	22 54 51.9	-0.3
	1.1nm,0.3s,baz=87,slow=12,SNR=6.8						
ASAR	Alice Springs	41.86	267	P	P	22 56 01.3	-0.3
	0.9nm,0.3s,baz=100,slow=7.2,SNR=10.0						
WRA	Warramunga Arr	42.78	272	P	P	22 56 08.6	-0.3
	1.7nm,0.6s,baz=111,slow=8.0,SNR=13						
FINES	FINESS Array B	144.05	339	PKP	PKPbc	23 07 31.8	-0.2
	4.0nm,0.4s,baz=56,slow=3.7,SNR=34						
NB2	NORSAR Subarra	147.87	350	PKP	PKPbc	23 07 42.6	-0.3
	comp=Z,1.7nm,1.2s,baz=17,slow=2.6						
NOA	NORSAR Array B	147.87	350	PKPbc	PKPbc	23 07 42.4	-0.5
	comp=Z,0.9nm,0.8s,baz=17,slow=4.5,SNR=4.3						

GUC 01 22:55:51.2±0.7, 21°.88S×68°.78W, h129km±5km, ML4.3
IDC 01 22:56:00.9±2.2, 21°.20S×68°.17W, h177km±18km, mb3.7/6, mb1 3.8/9, mb1mx3.5/19, mbtmp3.6/9, MS3.2/2, Ms1 3.2/2, ms1mx2.7/23, Error ellipse: s-maj=23.3km s-min=19.0km az=8.0
ISC 01 22:55:50.3±0.8, 21°.85S±0°.06×68°.44W±0°.08, h109km±8km, n23, σ1s.26/24, mb4.0/6, 6C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	Plate Boundary	0.75	274⇑	iP	Pn	22 56 10.4	+1.2
PB09				iS	Sn	22 56 25.2	+1.7
PB09				AML	AML	22 56 26.9	
	comp=N,23μm,0.8s						
LVC	Limon Verde	0.87	210	eP	x	22 56 51.3	
LVC				iS	x	22 57 07.1	
PB04	Plate Boundary	1.06	247⇑	iP	Pn	22 56 18.6	+6.5
PB04				iS	Sn	22 56 38.9	+10
PB01	Plate Boundary	1.27	309⇑	iP	Pn	22 56 15.1	+0.6
PB01				iS	Sn	22 56 33.1	+0.3
PB01				AML	AML	22 56 35.4	
	comp=N,6μm,0.2s						
MACH	Maria Elena	1.27	254	eP	Pn	22 56 14.6	-0.1
MACH				iS	Sn	22 56 32.4	-0.7
PB07	Plate Boundary	1.35	275⇑	iP	Pn	22 56 15.4	-0.1
PB07				iS	Sn	22 56 33.3	-1.4
PB07				AML	AML	22 56 34.8	
	comp=N,6μm,0.2s						
HMBC	Humberston	2.07	319⇑	iP	Pn	22 56 24.1	-0.3
HMBC				iS	Sn	22 56 49.9	-0.4
HMBC				AML	AML	22 56 52.2	
	comp=E,4μm,0.7s						
MECH	Mejillones	2.24	236	eP	Pn	22 56 25.6	-0.8
MECH				iS	Sn	22 56 51.7	-2.2
ANCH	Antofagasta	2.57	225⇓	iP	Pn	22 56 29.9	-0.8
PSGC	Pisagua	2.74	325⇑	iP	Pn	22 56 32.0	-1.0
PSGC				iS	Sn	22 57 04.1	-1.8
PSGC				AML	AML	22 57 05.6	
	comp=N,700nm,1.0s						
LPAZ	La Paz	5.54	3	P	Pn	22 57 15.2	+4.1
	comp=N,0.7nm,0.3s,baz=184,slow=5.2,SNR=45						
LPAZ				S	Sn	22 58 05.8	-8.1
	comp=N,0.5nm,0.3s,baz=164,slow=13,SNR=7.7						
SIV	San Ignacio	9.09	51	P	Pn	22 57 59.0	+0.4
	comp=N,2.5nm,0.3s,baz=246,slow=12,SNR=59						
SIV				S	Sn	22 59 35.9	-3.3
	comp=N,0.6nm,0.3s,baz=136,slow=23,SNR=5.5						
CFAA	Coronel Fontan	9.71	179	P	Pn	22 58 25.1	+18
	comp=N,0.1nm,0.3s,baz=359,slow=17,SNR=5.2						
ATAH	Atahualpa	17.51	325	LR	LR	23 06 19.8	
	comp=N,62nm,21.9s,baz=13,slow=36						
PLCA	Paso Flores	18.91	185	LR	LR	23 08 41.1	
	comp=N,84nm,18.3s,baz=192,slow=39						
BDFB	Brasilia	20.29	76	P	Pn	23 00 19.6	-1.1
	comp=N,0.7nm,0.3s,baz=244,slow=9.6,SNR=14						
RCBR	Riachuelo	35.26	68	P	P	23 02 34.8	0.0
	comp=N,5.4nm,0.7s,baz=236,slow=8.8,SNR=5.4						
DBIC	Dimbokro	68.42	73	P	P	23 06 41.8	+1.0
	comp=N,6.3nm,0.8s,baz=234,slow=8.7,SNR=5.9						
PDAR	Pinedale Array	74.63	330	P	P	23 07 17.6	-0.2
	comp=N,0.1nm,0.5s,baz=110,slow=5.2,SNR=3.5						
NVAR	Mina Array Bea	76.04	322	P	P	23 07 27.3	+1.3
	comp=N,0.3nm,0.4s,baz=182,slow=7.2,SNR=3.4						
TORD	Torodi Ar. Bea	77.06	70	P	P	23 07 32.5	+0.5
	comp=N,1.4nm,0.6s,baz=261,slow=5.6,SNR=25						
YKA	Yellowknife Ar	91.66	340	P	P	23 08 45.1	+0.4
	comp=N,1.1nm,0.9s,baz=135,slow=4.6,SNR=22						
MKAR	Makanchi Array	145.66	37	PKP	PKPdf	23 15 16.0	+0.1
	comp=N,0.7nm,0.9s,baz=307,slow=3.8,SNR=5.6						

MEX 01 23:11:01.8±0.4, 18°.21N×100°.39W, h67km±4km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	Puente Sto Nin	0.08	32	iP	Pn	23 11 10.5	-1.2
ARIG				iS	Sn	23 11 16.7	-2.1
CAIG	El Cayaco	1.16	174	iP	Pn	23 11 20.9	-1.4
CAIG				iS	Sn	23 11 35.3	-2.1
ZIIG	Zihuatanejo	1.18	240	iP	Pn	23 11 21.0	-1.5
ZIIG				iS	Sn	23 11 35.9	-2.1
YAIG	Yautepec	1.42	63	iP	Pn	23 11 24.8	-0.9
YAIG				eS	Sn	23 11 41.6	-2.2
PPM	Popocatepetl	1.88	63	iP	Pn	23 11 31.3	-1.2
PPM				eS	Sn	23 11 53.4	-2.3

IDC 01 23:12:39.2±3.2, 9°.83S×119°.59E, h0km, mb3.3/1, mb1 3.5/3, mb1mx3.3/18, mbtmp3.3/3, ML3.6/2, MS2.7/1, Ms1 2.7/1, ms1mx1.9/18, Error ellipse: s-maj=276.1km s-min=29.2km az=50.0
AUST 01 23:12:46.9, 10°.00S×120°.98E, h0km
ISC 01 23:12:49.3±1.2, 10°.15S±0°.08×120°.4E±0°.1, h39km, n12, σ2s.82/10, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	0.49	344	P	Pn	23 12 58.9	-1.0
	baz=0.7,SNR=8.3						
PCI	Palu	9.20	356	P	Pn	23 15 00.3	+0.8
	baz=9.2,SNR=20						
FITZ	Fitzroy Crossi	9.38	148	LR	LR	23 19 47.6	
	comp=Z,37nm,18.4s,baz=246,slow=42						
FITZ	Fitzroy Crossi	9.38	148	S	Sn	23 16 50.6	+4.4
	baz=9.3,SNR=5.9						
MTN	Manton Dam	10.82	105	S	Sn	23 17 20.8	-0.9
	baz=10,SNR=6.9						
KDU	Kakadu	12.07	103	P	Pn	23 15 29.6	-9.2
	baz=12,SNR=4.0						
KDU				S	Sn	23 17 51.5	-0.7
	baz=12,SNR=3.8						
MEEK	Meekatharra	16.50	186	P	P	23 16 41.6	+1.5
	baz=17,SNR=4.5						
MEEK				S	Sn	23 19 34.8	-5.2
	baz=17,SNR=11						
WRA	Warramunga Arr	16.58	128	P	P	23 16 42.4	+1.3
	0.2nm,0.3s,baz=300,slow=13,SNR=6.1						
WRA				S	Sn	23 19 40.4	-1.7
	0.2nm,0.3s,baz=293,slow=22,SNR=5.2						
ASAR	Alice Springs	18.60	138	P	Pn	23 17 08.0	+4.0
	0.2nm,0.3s,baz=308,slow=10,SNR=4.8						
ASAR				S	S	23 20 33.0	-0.6
	0.1nm,0.3s,baz=316,slow=24,SNR=4.5						
MORW	Morawa	19.27	192	P	Pn	23 17 17.5	+5.6
	baz=20,SNR=3.1						
MORW				S	S	23 20 37.2	-10
	baz=20,SNR=4.4						
JAY	Jayapura	21.51	71	S	Sn	23 21 37.5	-3.8
	baz=21,SNR=3.7						
MKAR	Makanchi Array	66.12	332	P	P	23 23 24.0	-8.5
	0.2nm,0.4s,baz=156,slow=7.2,SNR=6.4						

IDC 01 23:17:58.1±2.3, 4°.48N×124°.06E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.2/24, mbtmp3.4/3, Error ellipse: s-maj=270.9km s-min=25.2km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.29	158	P	P	23 23 34.1	-1.5
	0.1nm,0.4s,baz=335,slow=11,SNR=2.9						
ASAR	Alice Springs	29.58	161	P	P	23 24 06.2	+1.2
	0.1nm,0.3s,baz=348,slow=7.8,SNR=3.0						
MKAR	Makanchi Array	55.44	326	P	P	23 27 34.4	-0.1
	0.4nm,0.4s,baz=118,slow=7.1,SNR=14						

IDC 01 23:46:25.2±2.4, 0°.42N×129°.86E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.5/21, mbtmp3.6/4, ML3.1/1, Error ellipse: s-maj=127.7km s-min=25.5km az=73.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.87	192	P	P	23 50 47.2	0.0
	0.1nm,0.3s,baz=12,slow=14,SNR=1.9						
WRA	Warramunga Arr	20.71	168	P	P	23 51 07.0	-0.3
	1.3nm,0.8s,baz=348,slow=11,SNR=8.9						
ASAR	Alice Springs	24.27	171	P	P	23 51 44.5	+0.1
	2.0nm,0.8s,baz=346,slow=9.5,SNR=14						
MKAR	Makanchi Array	62.04	325	P	P	23 56 47.5	-0.1
	0.4nm,0.7s,baz=120,slow=8.3,SNR=5.1						

NEIC 01 23:56:12.6±0.7, 26°.77S×177°.66W, h195km±6km, mb4.2/8, Error ellipse: s-maj=12.9km s-min=10.6km az=181.0
IDC 01 23:56:14.5±0.8, 26°.70S×177°.81W, h204km±7km, mb4.0/21, mb1 4.1/21, mb1mx4.1/24, mbtmp4.0/21, MS3.6/2, Ms1 3.6/2, ms1mx2.9/28, Error ellipse: s-maj=14.0km s-min=11.6km az=136.0
ISC 01 23:56:13.7±0.4, 26°.80S±0°.06×177°.67W±0°.08, h200km, n150, σ1s.37/152, mb4.1/23, 7C-6D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.46	185	ePn	Pn	23 56 54.6	-2.5
RAO				eSn	Sn	23 57 30.9	-0.2
MSVF	Nonsavu	9.85	335	ePn	Pn	23 58 30.1	-1.1
	581nm,1.1s						
PUZ	Puketiti	11.76	196	ePN	Pn	23 58 43.8	-12
PUZ				SN	Sn	00 00 50.9	-16
MWZ	Matawai	12.20	198	SN	Sn	00 01 02.0	-15
URZ	Urewera	12.25	200	P	Pn	23 58 52.4	-9.2
URZ				S	Sn	00 01 04.3	-14
URZ	Urewera	12.25	200	ePN	Pn	23 58 51.6	-10
URZ				SN	Sn	00 01 02.1	-16
URZ	Urewera	12.25	200	P	Pn	23 58 52.4	-9.2
	0.4nm,0.3s,baz=231,slow=12,SNR=9.9						
URZ				S	Sn	00 01 04.3	-14
	5.6nm,0.3s,baz=141,slow=22,SNR=15						
MHGZ	Mahia Peninsul	12.87	196	SN	S	00 01 14.8	-18
AFI	Afiamalu	13.96	24	P	Pn	23 59 15.2	-8.2
AFI				S	S	00 01 37.0	-22
AFI	Afiamalu	13.96	24	P	Pn	23 59 15.2	-8.2
	22nm,0.3s,baz=176,slow=1.8,SNR=16						
AFI				S	S	00 01 37.0	-22
	18nm,0.3s,baz=59,slow=21,SNR=8.3						
PXZ	Pawanui	13.96	198	eSN	S	00 01 37.0	-21
BFZ	Birch Farm	14.74	198	eSN	S	00 01 54.9	-21
MRZ	Mangatainoka R	14.92	200	eSN	S	00 01 58.6	-22
DZM	Mont Dzumac	15.21	285	eP	P	23 59 39.0	-0.1
DZM	Mont Dzumac	15.21	285	ePn	Pn	23 59 37.6	-1.1
	50nm,0.6s						
NOUC	Port Laguerre	15.32	284	eP	P	23 59 41.5	+1.3
NNZ	Nelson	16.17	205	eSN	S	00 02 31.0	-18
THZ	Tophouse	16.82	205	PN	P	23 59 49.7	-7.0
THZ				SN	S	00 02 44.8	-17
CTZ	Chatham Island	16.92	177	PN	Pn	23 59 59.9	+1.0
CTZ				eSN	S	00 02 54.3	-9.5
KHZ	Kahutara	17.16	203	PN	P	23 59 53.7	-6.6
RAR	Rarotonga	17.27	75	P	P	23 59 59.6	-2.0
RAR	Rarotonga	17.27	75	P	P	23 59 59.6	-2.0
	1.8nm,0.3s,baz=247,slow=8.1,SNR=3.2						
RPZ	Rata Peaks	19.20	206	P	Pn	00 00 29.5	+3.8
RPZ				S	S	00 03 35.8	-13
RPZ	Rata Peaks	19.20	206	P	Pn	00 00 29.5	+3.8
	0.4nm,0.3s,baz=214,slow=8.9,SNR=3.6						
RPZ				S	S	00 03 35.8	-13
	1.5nm,0.3s,baz=8.9,slow=20,SNR=7.1						
TBI	Tubuai	25.76	89	eS	S	00 05 53.9	+14
	108nm,39.8s						
TBI				eLR	LR	00 07 53.4	
	94nm,29.8s						
PPT2	Papeete2	27.53	76	eLR	LR	00 08 46.4	
	114nm,22.9s						
CTA	Charters Tower	33.68	274	P	P	00 02 36.6	+0.6
	1.9nm,0.4s,baz=107,slow=9.0,SNR=5.9						
STKA	Stephens Creek	35.72	252	P	P	00 02 53.0	-0.4
	1.4nm,0.7s,baz=90,slow=8.2,SNR=1.9						
PMG	Port Moresby	37.46	291	eP	P	00 03 06.8	-1.4
	12nm,0.9s						
PMG	Port Moresby	37.46	291	P	P	00 03 07.8	-0.4
	13nm,1.0s,baz=229,slow=2.8,SNR=3.9						
ASAR	Alice Springs	43.71	263	P	P	00 03 58.0	-1.3
ASAR				pP	pP	00 04 41.9	-0.4
ASAR	Alice Springs	43.71	263	P	P	00 03 58.0	-1.3
	1.9nm,0.6s,baz=94,slow=6.7,SNR=21						
ASAR				pP	pP	00 04 41.9	-0.4
	3.6nm,0.9s,baz=110,slow=8.4,SNR=4.5						
WRAB	Tennant Creek	44.36	268	eP	P	00 04 03.2	-1.3
	2.4nm,0.5s						
WRA	Warramunga Arr	44.37	268	P	P	00 04 03.0	-1.6
WRA				pP	pP	00 04 47.4	-0.4
WRA	Warramunga Arr	44.37	268	P	P	00 04 03.0	-1.6
	2.9nm,0.8s,baz=105,slow=7.8,SNR=12						
WRA				pP	pP	00 04 47.4	-0.4
	4.7nm,0.9s,baz=104,slow=8.2,SNR=6.0						
VNDA	Vanda	51.70	186	eP	P	00 05 02.0	+2.2
	1.6nm,0.6s						
VNDA	Vanda	51.70	186	P	P	00 05 01.7	+1.9
	1.7nm,0.6s,baz=8.9,slow=7.5,SNR=20						
VNDA				LR	LR	00 23 46.0	
	comp=Z,81nm,18.4s,baz=58,slow=32						
FITZ	Fitzroy Crossi	52.74	267	pP	pP	00 05 52.6	-0.4
FITZ	Fitzroy Crossi	52.74	267	P	P	00 05 07.6	-0.8
	1.0nm,0.6s,baz=82,slow=7.1,SNR=6.2						
FITZ				pP	pP	00 05 52.6	-0.4
	4.9nm,0.9s,baz=135,slow=6.0,SNR=5.5						
MJAR	Matsushiro Arr	75.47	325	P	P	00 07 34.4	-1.4
MJAR	Matsushiro Arr	75.47	325	P	P	00 07 34.4	-1.4
	5.3nm,0.6s,baz=168,slow=6.6,SNR=13						
MAW	Mawson	75.78	200	P	P	00 07 38.0	+0.9
	8.1nm,0.6s,baz=129,slow=6.7,SNR=12						
JNU	Nakatsue	77.08	318	eP	P	00 07 44.6	-0.3
	1.9nm,0.5s						
JNU	Nakatsue	77.08	318	P	P	00 07 46.1	+1.2
	5.4nm,0.6s,baz=170,slow=6.1,SNR=4.8						
ASAJ	Asahikawa	79.39	332	eP	P	00 07 57.3	0.0
	3.3nm,0.8s						
ASAJ	Asahikawa	79.39	332	P	P	00 07 58.5	+1.2
	12nm,0.8s,baz=236,slow=11,SNR=9.3						
KSRS	Korea Array	81.81	319	P	P	00 08 10.5	+0.2
	4.0nm,0.5s,baz=129,slow=6.1,SNR=17						
KSAR	Wonju Array Be	81.82	319	P	P	00 08 10.5	+0.1
VNA3	Neumayer Olymp	81.87	176	eP	P	00 08 10.6	+0.4
VNA2	Neumayer--Watz	82.31	177	eP	P	00 08 12.4	-0.1
	baz=187,slow=4.5						
PETK	Petropavlovsk-	82.41	345	P	P	00 08 12.7	-0.4
PETK				PP	PP	00 11 27.1	+1.7
PETK	Petropavlovsk-	82.41	345	P	P	00 08 12.7	-0.4
	9.4nm,0.8s,baz=133,slow=8.7,SNR=11						
PETK				PP	PP	00 11 27.1	+1.7
	2.3nm,0.7s,baz=142,slow=7.3,SNR=4.1						
PETK				LR	LR	00 45 57.0	
	comp=Z,20nm,18.5s,baz=140,slow=36						
VNA1	Neumayer--Stat	82.54	176	eP	P	00 08 14.5	+0.9
USRK	Ussuriysk Arra	84.32	326	P	P	00 08 23.4	+0.4
	3.0nm,0.5s,baz=153,slow=4.1,SNR=11						
YBH	Yreka Blue Hor	85.03	38	P	P	00 08 27.9	+1.2
YBH	Yreka Blue Hor	85.03	38	P	P	00 08 28.0	+1.2
	1.2nm,0.6s,baz=90,slow=2.0,SNR=6.0						
NVAR	Mina Array Bea	85.41	43	P	P	00 08 29.6	+0.8
NVAR	Mina Array Bea	85.41	43	P	P	00 08 29.6	+0.8
	5.4nm,1.1s,baz=219,slow=7.3,SNR=9.1						
TXAR	Lajitas Array	90.20	57	P	P	00 08 52.8	+1.1
TXAR				pP	pP	00 09 43.9	+2.8
TXAR	Lajitas Array	90.20	57	P	P	00 08 52.8	+1.1
	1.4nm,1.0s,baz=212,slow=4.4,SNR=5.8						
TXAR				pP	pP	00 09 43.9	+2.8
	1.2nm,1.1s,baz=185,slow=12,SNR=3.0						
ANMO	Albuquerque	91.10	51	eP	P	00 08 52.5	-3.5
	1.3nm,0.8s						
ANMO	Albuquerque	91.10	51	P	P	00 08 56.6	+0.7
	0.7nm,0.4s,baz=235,slow=7.8,SNR=4.2						
CMAR	Chiang Mai Arr	92.48	289	P	P	00 09 03.0	+0.5
CMAR	Chiang Mai Arr	92.48	289	P	P	00 09 03.0	+0.5
	0.8nm,0.4s,baz=151,slow=3.3,SNR=5.0						
TRF	Thorofare Moun	92.52	12	eP	P	00 09 00.4	-1.3
	4.2nm,0.6s						
PDAR	Pinedale Array	93.33	43	P	P	00 09 06.3	+0.3
PDAR	Pinedale Array	93.33	43	P	P	00 09 06.3	+0.3
	1.5nm,0.9s,baz=244,slow=2.8,SNR=6.9						
ILAR	Eielson Array	94.36	13	P	P	00 09 08.9	-1.1
ILAR				PP	PP	00 13 03.2	+2.7
ILAR	Eielson Array	94.36	13	P	P	00 09 08.9	-1.1
	1.2nm,0.8s,baz=226,slow=5.7,SNR=11						
ILAR				PP	PP	00 13 03.2	+2.7
	1.1nm,0.9s,baz=218,slow=7.0,SNR=6.6						
INK	Inuvik	100.24	15	P	Pdif	00 09 36.8	+0.4
INK	Inuvik	100.24	15	P	Pdif	00 09 36.8	+0.4
	0.6nm,0.6s,baz=225,slow=2.9,SNR=2.5						
SONM	Songino Array	100.66	318	P	Pdif	00 09 38.4	-0.5
SONM				PP	PP	00 13 51.1	+1.9
SONM	Songino Array	100.66	318	P	Pdif	00 09 38.4	-0.5
	0.4nm,0.7s,baz=114,slow=3.6,SNR=3.6						
SONM				PP	PP	00 13 51.1	+1.9
	0.6nm,1.0s,baz=91,slow=3.1,SNR=3.6						
YKA	Yellowknife Ar	102.07	25	P	Pdif	00 09 44.6	-0.1
YKA	Yellowknife Ar	102.07	25	P	Pdif	00 09 44.6	-0.1
	0.1nm,0.5s,baz=240,slow=4.9,SNR=4.1						
ZALV	Zalesovo Beam	115.51	320	PKP	PKPdf	00 14 29.5	-1.9
ZALV	Zalesovo Beam	115.51	320	PKP	PKPdf	00 14 29.5	-1.9
	0.2nm,0.3s,baz=82,slow=11,SNR=4.0						
MKAR	Makanchi Array	115.65	311	PKP	PKPdf	00 14 30.2	-1.7
MKAR	Makanchi Array	115.65	311	PKP	PKPdf	00 14 30.2	-1.7
	0.3nm,0.5s,baz=101,slow=2.5,SNR=4.4						
FRB	Frobisher Bay	122.13	30	PKP	PKPdf	00 14 42.3	-1.5
FRB	Frobisher Bay	122.13	30	PKP	PKPdf	00 14 42.3	-1.5
	1.1nm,0.6s,baz=337,slow=3.4,SNR=5.2						
BVAR	Borovoye Array	123.99	317	PKP	PKPdf	00 14 46.5	-1.2
BVAR	Borovoye Array	123.99	317	PKP	PKPdf	00 14 46.5	-1.2
	0.6nm,0.8s,baz=248,slow=32,SNR=3.9						
SPITS	Spitsbergen Ar	128.14	356	PKP	PKPdf	00 14 54.2	-0.8
SPITS	Spitsbergen Ar	128.14	356	PKP	PKPdf	00 14 54.2	-0.8
	1.1nm,0.5s,baz=73,slow=2.8,SNR=5.5						
ARCES	ARCESS Array B	135.13	349	PKPpre	PKPpre	00 14 59.6	
ARCES				PKP	PKPdf	00 15 07.2	-1.2
ARCES	ARCESS Array B	135.13	349	PKhKP	PKPpre	00 14 59.6	
	2.7nm,0.9s,baz=72,slow=15,SNR=2.2						
ARCES				PKP	PKPdf	00 15 07.2	-1.2
	6.3nm,0.9s,baz=29,slow=2.8,SNR=6.3						
FINES	FINESS Array B	141.85	342	PKPpre	PKPpre	00 15 14.9	
FINES	FINESS Array B	141.85	342	PKhKP	PKPpre	00 15 14.9	
	1.9nm,0.7s,baz=44,slow=4.7,SNR=11						
KBZ	Khabaz	143.23	308	PKPpre	PKPpre	00 15 19.9	
KBZ	Khabaz	143.23	308	PKhKP	PKPpre	00 15 19.9	
	1.2nm,0.8s,baz=192,slow=5.1,SNR=5.2						
NB2	NORSAR Subarra	145.24	352	PKP	PKPdf	00 15 25.7	-1.2
	comp=Z,16nm,1.0s,baz=14,slow=3.1						
NOA	NORSAR Array B	145.24	352	PKPbc	PKPdf	00 15 25.9	-1.1
NOA	NORSAR Array B	145.24	352	PKPbc	PKPdf	00 15 25.9	-1.1
	comp=Z,6.4nm,0.8s,baz=16,slow=2.8,SNR=19						
HFS	Hagfors	145.77	350	PKPbc	PKPdf	00 15 27.3	-0.5
HFS	Hagfors	145.77	350	PKPbc	PKPdf	00 15 27.3	-0.5
	comp=Z,5.9nm,0.6s,baz=74,slow=5.3,SNR=38						
IZAR	Zarasai	146.28	336	eP	PKPbc	00 15 29.7	-0.6
ISAL	Salakas	146.47	335	eP	PKPdf	00 15 28.8	-0.3
IIGN	Ignalina	146.60	335	eP	PKPbc	00 15 31.0	-0.2
MALT	Malatya	147.67	300⇓	iP	PKPbc	00 15 35.8	+0.9
AKASG	Malin Array Be	148.53	327	PKPbc	PKPbc	00 15 35.5	-1.0
AKASG	Malin Array Be	148.53	327	PKPbc	PKPbc	00 15 35.5	-1.0
	comp=Z,1.6nm,0.4s,baz=44,slow=4.1,SNR=9.9						
ASF	Jabal al Asfar	149.52	288	PKPbc	PKPbc	00 15 40.2	+0.4
ASF	Jabal al Asfar	149.52	288	PKPbc	PKPbc	00 15 40.2	+0.4
	comp=Z,2.1nm,0.7s,baz=79,slow=5.2,SNR=3.8						
MMAI	Mount Meron Ar	150.74	290	PKPbc	PKPbc	00 15 43.2	+0.6
MMAI	Mount Meron Ar	150.74	290	PKPbc	PKPbc	00 15 43.2	+0.6
	comp=Z,2.7nm,0.5s,baz=80,slow=6.0,SNR=9.1						
BRTR	Keskin Array B	150.97	304	PKPbc	PKPbc	00 15 42.0	-1.0
BRTR				PKPab	PKPab	00 15 51.1	-0.1
BRTR	Keskin Array B	150.97	304	PKPbc	PKPbc	00 15 42.0	-1.0
	comp=Z,0.8nm,0.5s,baz=107,slow=3.0,SNR=8.4						
BRTR				PKPab	PKPab	00 15 51.1	-0.1
	comp=Z,2.9nm,0.7s,baz=120,slow=3.5,SNR=18						
EKA	Eskdalemuir Ar	151.21	7	PKPbc	PKPbc	00 15 41.9	-1.0
EKA				PKPab	PKPab	00 15 50.6	-0.8
EKA	Eskdalemuir Ar	151.21	7	PKPbc	PKPbc	00 15 41.9	-1.0
	comp=Z,1.9nm,0.4s,baz=329,slow=2.0,SNR=30						
EKA				PKPab	PKPab	00 15 50.6	-0.8
	comp=Z,1.8nm,0.5s,baz=335,slow=3.1,SNR=9.3						
BSEG	Bad Segeberg	152.25	350	eP	PKPab	00 15 56.2	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSEG				epP	PKPab	00 16 01.8	+6.0
	comp=Z,12nm,0.8s						
KWP	**Kalwaria Pacla**	**152.31**	**331**	⇑iP	**PKPab**	**00 15 55.9**	**-0.4**
CFR	**Carcaliu**	**152.39**	**318**	⇓iP	**PKPbc**	**00 15 45.7**	**-0.1**
TESR		**152.47**	**322**	⇓iP	**PKPab**	**00 15 56.8**	**-0.3**
BURAR	**Bucovina Array**	**152.54**	**325**	⇑iP	**PKPbc**	**00 15 47.0**	**+0.8**
TIRR	**Tirgusor**	**152.60**	**317**	⇓iP	**PKPab**	**00 15 57.7**	**0.0**
VRI	**Vrincioaia**	**152.81**	**321**	⇑iP	**PKPab**	**00 15 58.5**	**-0.1**
PLOR	**Plostina**	**152.87**	**321**	⇑iP	**PKPab**	**00 15 59.3**	**+0.5**
MLR	**Muntele Rosu**	**153.48**	**321**	⇑iP	**PKPab**	**00 16 02.3**	**+0.7**
NRDL	**Niedersach Rie**	**153.68**	**349**	eP	**PKPab**	**00 16 02.9**	**+1.1**
	comp=Z,4.0nm,0.8s						
NRDL				epP	PKPab	00 16 07.3	+5.5
VOIR		**154.01**	**322**	⇓iP	**PKPab**	**00 16 06.6**	**+2.8**
CLL	**Collm**	**154.21**	**344**	eP	**PKPab**	**00 16 03.4**	**-0.8**
	comp=Z,25nm,2.1s						
CLL	**Collm**	**154.21**	**344**	i PKPbc	**PKPbc**	**00 15 49.8**	**+0.2**
	comp=Z,6.0nm,1.2s						
CLL				i PKPab	**PKPab**	**00 16 03.2**	**-1.0**
	comp=Z,11nm,1.5s						
BRG	**Berggiesshubel**	**154.37**	**343**	eP	**PKPab**	**00 16 04.7**	**-0.3**
	comp=Z,2.3nm,0.9s						
BRG				e		00 16 10.1	
	comp=Z,2.9nm,0.7s						
BRG	**Berggiesshubel**	**154.37**	**343**	eP	**PKPab**	**00 16 04.5**	**-0.4**
BRG				epP	**PKPab**	**00 16 10.1**	**+5.2**
VRAC	**Vranov**	**154.96**	**338**	PKPab	**PKPab**	**00 16 06.1**	**-1.4**
VRAC	**Vranov**	**154.96**	**338**	PKPab	**PKPab**	**00 16 06.1**	**-1.4**
	comp=Z,2.4nm,0.5s,baz=38,slow=5.5,SNR=5.2						
MOX	**Moxa**	**155.15**	**346**	eP	**PKPab**	**00 16 07.3**	**-1.0**
MOX				epP	**PKPab**	**00 16 13.3**	**+5.0**
TANN	**Tannenbergstha**	**155.17**	**344**	eP	**PKPab**	**00 16 07.5**	**-0.9**
UBBA	**Unterbreizbach**	**155.31**	**348**	eP	**PKPab**	**00 16 08.8**	**0.0**
BZS	**Buzias**	**155.72**	**326**	⇑iP	**PKPdf**	**00 15 47.3**	**+3.8**
ROTZ	**Rotzenmuhle**	**155.83**	**344**	eP	**PKPab**	**00 16 11.4**	**+0.2**
KHC	**Kasperske Hory**	**156.05**	**342**	ePKPAB	**PKPab**	**00 16 11.5**	**-0.8**
KHC				ex	x	00 16 17.0	
GRF	**Grafenberg Arr**	**156.13**	**346**	eP	**PKPab**	**00 16 12.5**	**0.0**
TNS	**Taunus Mts**	**156.14**	**350**	eP	**PKPab**	**00 16 14.6**	**+2.0**
WET	**Wettzell**	**156.23**	**343**	eP	**PKPab**	**00 16 12.5**	**-0.5**
GEC2	**GERESS Array S**	**156.28**	**341**	eP	**PKPab**	**00 16 12.5**	**-0.8**
GERES	**GERESS Array B**	**156.28**	**341**	PKPab	**PKPab**	**00 16 12.7**	**-0.6**
GERES	**GERESS Array B**	**156.28**	**341**	PKPab	**PKPab**	**00 16 12.7**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=338,slow=7.5,SNR=3.6						
VTS	**Vitosha**	**156.79**	**318**	⇓iP	**PKPab**	**00 16 16.5**	**+0.7**
RJOB	**Jochberg**	**157.54**	**341**	eP	**PKPab**	**00 16 19.1**	**+0.4**
FUR	**Furstenfeldbru**	**157.55**	**344**	eP	**PKPab**	**00 16 18.8**	**+0.1**
	comp=Z,9.0nm,0.8s						
DAVOX	**Davos/Dischmat**	**159.18**	**345**	PKPab	**PKPab**	**00 16 25.5**	**-0.5**
DAVOX	**Davos/Dischmat**	**159.18**	**345**	PKPab	**PKPab**	**00 16 25.5**	**-0.5**
	comp=Z,2.6nm,0.5s,baz=22,slow=4.2,SNR=4.2						
AQU	**L'Aquila**	**162.03**	**333**	⇑iP	PKPab	00 16 33.1	-5.3
ESDC	**Sonseca Array**	**166.13**	**21**	PKPab	**PKPab**	**00 16 56.2**	**-0.4**
ESDC	**Sonseca Array**	**166.13**	**21**	PKPab	**PKPab**	**00 16 56.2**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=314,slow=3.9,SNR=5.3						
TORD	**Torodi Ar. Bea**	**166.41**	**177**	PKP	**PKPdf**	**00 15 54.8**	**-1.0**
TORD				PKPab	**PKPab**	**00 16 57.6**	**-0.5**
TORD				pPKPab	**pPKPab**	**00 17 45.5**	**-2.4**
TORD	**Torodi Ar. Bea**	**166.41**	**177**	PKP	**PKPdf**	**00 15 54.7**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=240,slow=0.7,SNR=9.2						
TORD				PKPab	**PKPab**	**00 16 57.6**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=177,slow=4.3,SNR=9.4						
TORD				pPKPab	**pPKPab**	**00 17 45.5**	**-2.4**
	comp=Z,1.7nm,1.0s,baz=201,slow=8.2,SNR=5.5						

IDC 02 00:02:29.3±4.9**,23°.57S**×**179°.69E,h665**km±56km**,mb3.2**/6**, mb1 3.5**/6**,mb1mx3.2**/18**,mbtmp3.2**/6**,Error ellipse: s-maj=45.1km s-min=31.9km az=151.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.19**	**270**	P	P	00 07 58.2	+0.1
	11nm,0.6s,baz=99,slow=10,SNR=25						
STKA	**Stephens Creek**	**34.58**	**248**	P	P	00 08 26.6	+0.4
	1.6nm,0.5s,baz=78,slow=20,SNR=4.7						
ASAR	**Alice Springs**	**41.80**	**260**	P	P	00 09 24.4	+0.1
	3.6nm,0.8s,baz=92,slow=8.1,SNR=19						
WRA	**Warramunga Arr**	**42.14**	**266**	P	P	00 09 26.7	-0.3
	4.3nm,0.7s,baz=102,slow=8.2,SNR=22						
NVAR	**Mina Array Bea**	**84.72**	**44**	P	P	00 13 56.0	+0.1
	0.2nm,0.3s,baz=220,slow=9.1,SNR=3.6						
TXAR	**Lajitas Array**	**90.50**	**58**	P	P	00 14 23.0	+0.1
	0.2nm,0.6s,baz=214,slow=6.0,SNR=6.7						
MKAR	**Makanchi Array**	**111.72**	**313**	PKiKP	PKiKP	00 19 51.7	+1.3
	0.1nm,0.7s,baz=90,slow=1.6,SNR=3.0						
NOA	**NORSAR Array B**	**141.71**	**351**	PKP	PKPdf	00 20 45.2	-1.4
	0.8nm,0.8s,baz=16,slow=4.7,SNR=3.8						
HFS	**Hagfors**	**142.17**	**349**	PKP	PKPdf	00 20 46.4	-1.0
	1.6nm,0.4s,baz=67,slow=3.9,SNR=22						
AKASG	**Malin Array Be**	**144.54**	**327**	PKP	PKPdf	00 20 50.8	-1.0
	0.9nm,0.5s,baz=42,slow=4.5,SNR=3.7						
BRTR	**Keskin Array B**	**147.15**	**307**	PKP	PKPdf	00 20 55.7	-1.1
	0.3nm,0.8s,baz=77,slow=6.2,SNR=2.5						
BRTR				PKPbc	PKPbc	00 20 59.9	-0.3
	0.3nm,0.8s,baz=349,slow=1.5,SNR=2.8						
BRTR				PKPab	PKPab	00 21 07.3	+3.0
	0.5nm,0.8s,baz=22,slow=3.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	**169.46**	**191**	PKPab	PKPab	00 22 40.6	-0.4
	1.1nm,1.3s,baz=187,slow=3.6,SNR=3.2						

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*IDC **02** 00:18:02.3±0.7, 35°.55N×143°.07E, h0km, mb3.7/14, mb1 3.9/16, mb1mx3.9/29, mbtmp3.8/16, ML3.6/2, MS2.5/1, Ms1 2.5/1, ms1mx1.5/44, Error ellipse: s-maj=19.8km s-min=16.9km az=143.0*

*JMA **02** 00:18:05.9±0.2, 35°.69N×142°.93E, h84km, M3.3*

ISC 02 00:18:03.5±3.6**,35°.61N**±0°.05×**143°.00E**±0°.06**,h8**km±23km**, n31,**σ**1°.73**/42**,mb3.8**/14**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.91**	**241**	P	**Pb**	**00 18 36.9**	**-1.4**
BSO2	**Boso 2**	**2.03**	**246**	eS	**Sb**	**00 19 05.1**	**-0.6**
JHO	**Hitachi**	**2.21**	**298**	P	**Pn**	**00 18 39.7**	**-0.7**
JHO				eS	**Sn**	**00 19 04.8**	**-3.0**
JFT	**Otama**	**2.87**	**312**	P	**Pn**	**00 18 49.6**	**+0.1**
JFT				S	**Sn**	**00 19 22.0**	**-2.1**
JAG	**Ashikaga**	**2.99**	**287**	P	**Pn**	**00 18 51.4**	**+0.3**
JAG				S	**Sn**	**00 19 24.9**	**-2.2**
JOD2	**Odawara 2**	**3.21**	**265**	P	**Pn**	**00 18 54.7**	**+0.5**
JOD2				S	**Sn**	**00 19 31.3**	**-1.4**
JRY	**Ryogami san**	**3.35**	**278**	P	**Pn**	**00 18 57.2**	**+1.0**
JRY				eS	**Sn**	**00 19 35.5**	**-0.7**
JMK	**Ichinoseki**	**3.62**	**337**	P	**Pn**	**00 18 59.3**	**-0.5**
JMK				eS	**Sn**	**00 19 39.3**	**-3.4**
JHJ2	**Mitsune**	**3.63**	**227**	P	**Pn**	**00 19 00.3**	**+0.4**
JHJ2				eS	**Sn**	**00 19 39.0**	**-3.8**
JYN	**Shimob**	**3.63**	**269**	P	**Pn**	**00 19 01.2**	**+1.1**
JYN				eS	**Sn**	**00 19 41.5**	**-1.7**
JHJ	**Hachijo jima 2**	**3.64**	**228**	Pn	**Pn**	**00 18 59.8**	**-0.3**
	10nm,0.3s,baz=242,slow=21,SNR=4.0						
JHJ				Sn	**Sn**	**00 19 40.0**	**-3.2**
	54nm,0.3s,baz=85,slow=22,SNR=6.9						
JYK	**Kaneyama**	**3.91**	**328**	P	**Pn**	**00 19 04.2**	**+0.3**
JYK				eS	**Sn**	**00 19 46.9**	**-3.1**
MJAR	**Matsushiro Arr**	**3.99**	**285**	Pn	**Pn**	**00 19 06.5**	**+1.6**
	4.0nm,0.3s,baz=171,slow=16,SNR=16						
MJAR				Sn	**Sn**	**00 19 53.9**	**+2.0**
	1.4nm,0.3s,baz=173,slow=33,SNR=5.3						
MAT	**Matsushiro**	**3.99**	**285**	P	**Pn**	**00 19 06.5**	**+1.6**
MAT				S	**Sn**	**00 19 51.5**	**-0.4**
MAT	**Matsushiro**	**3.99**	**285**	P	**Pn**	**00 19 07.8**	**+2.9**
JOM	**Ohasama**	**4.09**	**341**	eS	**Sn**	**00 19 50.4**	**-3.8**
KSRS	**Korea Array**	**12.27**	**283**	LR	LR	00 25 36.8	
	comp=Z,24nm,21.9s,baz=95,slow=37						
SONM	**Songino Array**	**29.65**	**306**	P	**P**	**00 24 10.7**	**+1.3**
	0.9nm,0.7s,baz=96,slow=8.9,SNR=8.6						
ZALV	**Zalesovo Beam**	**43.82**	**313**	P	**P**	**00 26 10.4**	**+0.7**
	1.1nm,0.6s,baz=100,slow=7.0,SNR=6.7						
MKAR	**Makanchi Array**	**45.96**	**304**	P	**P**	**00 26 27.4**	**+0.5**
	0.7nm,0.7s,baz=91,slow=8.4,SNR=9.6						
ILAR	**Eielson Array**	**50.02**	**32**	P	**P**	**00 26 58.0**	**+0.1**
	1.0nm,1.0s,baz=266,slow=6.6,SNR=8.6						
WRA	**Warramunga Arr**	**55.86**	**190**	P	**P**	**00 27 40.8**	**-0.7**
	0.9nm,0.8s,baz=6.6,slow=7.2,SNR=6.5						
ASAR	**Alice Springs**	**59.58**	**190**	P	**P**	**00 28 07.7**	**0.0**
	0.2nm,0.6s,baz=7.5,slow=7.8,SNR=3.7						
RES	**Resolute Bay**	**63.65**	**15**	P	**P**	**00 28 35.0**	**+0.4**
	2.1nm,0.8s,baz=311,slow=5.9,SNR=11						
YKA	**Yellowknife Ar**	**64.39**	**30**	P	**P**	**00 28 40.0**	**+0.5**
	0.4nm,0.7s,baz=299,slow=6.5,SNR=11						
KBZ	**Khabaz**	**72.80**	**312**	P	**P**	**00 29 33.4**	**+1.0**
	1.1nm,0.8s,baz=33,slow=4.1,SNR=5.2						
NVAR	**Mina Array Bea**	**74.81**	**54**	P	**P**	**00 29 45.1**	**+0.5**
	0.2nm,0.3s,baz=251,slow=5.6,SNR=3.1						
PDAR	**Pinedale Array**	**77.74**	**46**	P	**P**	**00 30 01.9**	**+0.7**
	0.5nm,0.6s,baz=261,slow=2.4,SNR=5.0						
FRB	**Frobisher Bay**	**77.85**	**14**	P	**P**	**00 30 01.1**	**0.0**
	0.8nm,0.5s,baz=340,slow=4.6,SNR=5.4						
BRTR	**Keskin Array B**	**80.75**	**313**	P	**P**	**00 30 18.2**	**+0.6**
	0.8nm,1.0s,baz=111,slow=6.8,SNR=4.6						
GERES	**GERESS Array B**	**84.59**	**329**	P	**P**	**00 30 37.2**	**-0.1**
	0.3nm,0.6s,baz=22,slow=6.3,SNR=2.1						

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*NIED **02** 00:48:00, 27°.10N×129°.80E, h5km, Mw3.8 Best double couple: M₀5.29000×10¹⁴ NP1:φs255.00000°, δ78.00000°, λ-45.00000°. NP2:φs357.00000°, δ47.00000°, λ-163.00000°.*

*IDC **02** 00:48:57.3±1.0, 27°.07N×129°.72E, h0km, mb3.6/9, mb1 3.8/10, mb1mx3.6/25, mbtmp3.6/10, ML3.4/1, MS3.4/1, Ms1 3.4/1, ms1mx2.2/46, Error ellipse: s-maj=24.3km s-min=18.6km az=78.0*

*ISCJB **02** 00:48:59.3±1.4, 27°.10N±0°.04×129°.80E±0°.04, h28km±10km, mb3.5/9, MS3.4/1, Error ellipse: s-maj=6.6km s-min=6.3km az=23.7*

*JMA **02** 00:48:59.8, 27°.12N×129°.82E, h52km±4km, M3.5*

ISC 02 00:48:58.7±3.7**,27°.10N**±0°.05×**129°.80E**±0°.05**,h13**km±24km**, n19,**σ**1°.02**/28**,mb3.6**/9**,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.01**	**312**	P	**Pb**	**00 49 18.1**	**0.0**
JTK				eS	**Sb**	**00 49 31.4**	**0.0**
JAMN	**Amaminishikomi**	**1.26**	**334**	P	**Pn**	**00 49 21.4**	**-0.7**
JAMN				eS	**Sb**	**00 49 36.9**	**-1.6**
JAM	**Amami Oshima**	**1.31**	**353**	P	**Pn**	**00 49 22.2**	**-0.6**
JAM				eS	**Sb**	**00 49 38.2**	**-1.8**
JOW	**Kunigami**	**1.39**	**259**	P	**Pn**	**00 49 23.6**	**-0.2**
JOW				eS	**Sn**	**00 49 40.7**	**-1.3**
JOW	**Kunigami**	**1.39**	**259**	Pn	**Pn**	**00 49 23.9**	**+0.1**
	61nm,0.3s,baz=105,slow=20,SNR=72						
JOW				Sn	**Sn**	**00 49 40.5**	**-1.5**
	133nm,0.3s,baz=267,slow=30,SNR=26						
JIH	**Iheya**	**1.63**	**268**	P	**Pn**	**00 49 27.2**	**0.0**
JIH				eS	**Sn**	**00 49 47.3**	**-0.8**
JMZ	**Minamidaito 2**	**1.81**	**135**	P	**Pn**	**00 49 29.2**	**-0.4**
JMZ				eS	**Sn**	**00 49 50.4**	**-2.0**
JAGN	**Aguni-jima**	**2.34**	**258**	P	**Pn**	**00 49 37.2**	**+0.3**
JAGN				eS	**Sn**	**00 50 04.0**	**-1.5**
JKE	**Kume jima 2**	**2.80**	**255**	P	**Pn**	**00 49 43.0**	**-0.3**
JKE				eS	**Sn**	**00 50 16.4**	**-0.6**
JNU	**Nakatsue**	**6.07**	**9**	Pn	**Pn**	**00 50 29.3**	**+1.1**
	1.0nm,0.3s,baz=195,slow=7.3,SNR=6.8						
SONM	**Songino Array**	**27.62**	**325**	P	**P**	**00 54 47.3**	**+1.4**
	0.3nm,0.7s,baz=120,slow=9.5,SNR=4.2						
ZALV	**Zalesovo Beam**	**42.42**	**322**	P	**P**	**00 56 53.2**	**+0.3**
	0.4nm,0.6s,baz=107,slow=7.7,SNR=2.3						
WRA	**Warramunga Arr**	**46.97**	**174**	P	**P**	**00 57 29.6**	**0.0**
	0.6nm,0.6s,baz=354,slow=8.5,SNR=6.9						
BVAR	**Borovoye Array**	**50.57**	**318**	P	**P**	**00 57 56.1**	**-0.9**
	0.2nm,0.5s,baz=90,slow=8.6,SNR=2.9						
BVAR				LR	LR	01 21 42.2	
	comp=Z,40nm,20.2s,baz=116,slow=39						
ASAR	**Alice Springs**	**50.63**	**175**	P	**P**	**00 57 58.1**	**+0.5**
	0.5nm,0.6s,baz=6.3,slow=13,SNR=8.3						
KBZ	**Khabaz**	**69.69**	**309**	P	**P**	**01 00 09.1**	**+0.9**
	0.9nm,0.8s,baz=31,slow=2.1,SNR=4.3						
FINES	**FINESS Array B**	**72.79**	**331**	P	**P**	**01 00 26.8**	**+0.1**
	1.8nm,1.0s,baz=70,slow=6.3,SNR=3.6						
BRTR	**Keskin Array B**	**77.60**	**308**	P	**P**	**01 00 55.8**	**+0.8**
	0.4nm,0.9s,baz=110,slow=6.7,SNR=3.9						
NOA	**NORSAR Array B**	**79.14**	**334**	P	**P**	**01 01 04.1**	**+1.1**
	0.5nm,0.8s,baz=51,slow=5.4,SNR=2.8						

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*ISCJB **02** 01:00:35.1±1.1, 23°.00S±0°.07×148°.61E±0°.10, h10km, Error ellipse: s-maj=15.2km s-min=7.4km az=144.0*

*IDC **02** 01:00:35.2±4.4, 22°.87S×148°.70E, h0km, mb1 3.6/4, mb1mx3.4/15, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=43.2km s-min=23.8km az=80.0*

*AUST **02** 01:00:37.8±99.0, 22°.98S×148°.68E, h21km, Error ellipse: s-maj=2.4km s-min=1.2km az=242.0*

ISC 02 01:00:37.3±1.2**,23°.05S**±0°.07×**148°.60E**±0°.09**,h10**km**,n9, **σ**1°.90**/14**,Queensland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EIDS	**Eidsvold**	**3.24**	**136**	P	**Pn**	**01 01 27.8**	**-0.5**
	baz=3.2,SNR=7.6						
EIDS				S	**Sb**	**01 02 15.9**	**+1.4**
	baz=3.2,SNR=4.9						
RMQ	**Roma**	**3.43**	**178**	P	**Pn**	**01 01 30.8**	**-0.1**
	baz=3.5,SNR=6.8						
CTA	**Charters Tower**	**3.66**	**323**	Pn	**Pn**	**01 01 33.6**	**-0.5**
	3.2nm,0.3s,baz=138,slow=16,SNR=26						
CTA				Pg	**Pb**	**01 01 41.8**	**-0.4**
	4.0nm,0.3s,baz=152,slow=17,SNR=21						
CTA				Sn	**Sn**	**01 02 15.7**	**-1.8**
	5.5nm,0.3s,baz=238,slow=22,SNR=14						
CTA				Lg	Lg	01 02 28.9	
	9.8nm,0.3s,baz=239,slow=22,SNR=14						
QLP	**Quilpie**	**5.30**	**227**	P	**Pn**	**01 01 57.5**	**+0.9**
	baz=5.4,SNR=9.4						
QIS	**Mount Isa**	**8.71**	**285**	P	**Pn**	**01 02 43.2**	**-0.3**
	baz=8.8,SNR=7.0						
STKA	**Stephens Creek**	**10.77**	**214**	Pn	**Pn**	**01 03 11.9**	**+0.3**
	0.2nm,0.3s,baz=20,slow=12,SNR=2.3						
STKA				Sn	**Sn**	**01 05 08.7**	**-3.6**
	0.1nm,0.3s,baz=317,slow=19,SNR=2.3						
STKA				Lg	Lg	01 06 36.5	
	0.1nm,0.3s,baz=330,slow=20,SNR=2.9						
ASAR	**Alice Springs**	**13.51**	**264**	Pn	**Pn**	**01 03 49.8**	**+0.5**
	0.3nm,0.3s,baz=93,slow=14,SNR=11						
ASAR				Lg	Lg	01 07 46.4	
	0.0nm,0.3s,baz=84,slow=29,SNR=4.3						
WRA	**Warramunga Arr**	**13.63**	**280**	Pn	**Pn**	**01 03 49.3**	**-1.5**
	0.2nm,0.3s,baz=98,slow=13,SNR=8.7						
WRA				Sn	**Sn**	**01 06 24.9**	**+2.6**
	0.1nm,0.3s,baz=270,slow=21,SNR=4.3						
WRA				Lg	Lg	01 07 49.9	
	0.1nm,0.3s,baz=116,slow=28,SNR=5.7						
WSI	**Waingapu**	**30.16**	**292**	S	**S**	**01 11 50.5**	**+3.4**
	baz=30,SNR=4.9						

MEX 02 01:02:52.7±0.4**,16°.71N**×**100°.48W,h8**km±2km**,MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.39**	**31**	i P	Pg	01 02 60.0	-0.3
CAIG				i S	Sg	01 03 05.5	+0.1
ACX	**Acapulco**	**0.61**	**75**	eP	Pg	01 03 03.5	-1.1
ACX				i S	Sg	01 03 10.5	-2.1
ZIIG	**Zihuatanejo**	**1.30**	**313**	i P	Pn	01 03 13.7	-3.6
ZIIG				i S	Sb	01 03 29.4	-4.9
MEIG	**Mezcala**	**1.46**	**34**	i P	Pn	01 03 15.9	-3.6
MEIG				i S	Sn	01 03 34.0	-4.9
ARIG	**Puente Sto Nin**	**1.57**	**4**	i P	Pn	01 03 17.4	-3.6
ARIG				i S	Sn	01 03 36.7	-4.8

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*IDC **02** 01:20:45.5±2.9, 34°.06S×179°.02W, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.8/17, mbtmp3.8/3, ML3.6/1, Error ellipse: s-maj=69.5km s-min=35.7km az=120.0*

ISC 02 01:20:47.1±3.3**,34°.3S**±0°.3×**178°.3W**±0°.5**,h51**km**,n6, **σ**0°.64**/9**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**5.24**	**219**	ePN	**Pn**	**01 22 02.2**	**-0.6**
MWZ				SN	**Sn**	**01 23 03.2**	**+1.2**
URZ	**Urewera**	**5.41**	**222**	ePN	**Pn**	**01 22 04.8**	**-0.4**
URZ				SN	**Sn**	**01 23 05.7**	**-0.3**
URZ	**Urewera**	**5.41**	**222**	Pn	**Pn**	**01 22 05.3**	**+0.1**
	2.0nm,0.3s,baz=332,slow=3.9,SNR=12						
URZ				Sn	**Sn**	**01 23 05.8**	**-0.3**
	1.8nm,0.3s,baz=353,slow=22,SNR=6.1						
ASAR	**Alice Springs**	**42.81**	**271**	P	**P**	**01 28 40.4**	**+0.2**
	0.8nm,0.6s,baz=114,slow=7.1,SNR=8.7						
WRA	**Warramunga Arr**	**44.15**	**276**	P	**P**	**01 28 50.7**	**-0.3**
	0.8nm,0.5s,baz=117,slow=7.5,SNR=13						
FINES	**FINESS Array B**	**148.71**	**338**	PKPbc	**PKPab**	**01 40 32.1**	**+0.3**
	1.4nm,0.8s,baz=86,slow=5.7,SNR=4.4						

IDC 02 01:21:34.5±1.7**,1°.94N**×**98°.82E,h129**km±9km**,mb3.5**/9**, mb1 3.6**/10**,mb1mx3.4**/29**,mbtmp3.5**/10**,Error ellipse: s-maj=55.9km s-min=13.3km az=52.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**0.86**	**7**	P	Pn	01 21 56.3	+0.1
	28nm,0.3s,baz=326,slow=6.1,SNR=54						
PSI				S	Sn	01 22 12.0	-0.6
	19nm,0.3s,baz=342,slow=17,SNR=35						
CMAR	**Chiang Mai Arr**	**16.41**	**0**	P	P	01 25 17.8	-0.2
	1.2nm,0.3s,baz=192,slow=10,SNR=9.1						
FITZ	**Fitzroy Crossi**	**33.08**	**128**	P	P	01 27 57.3	-0.9
	1.6nm,0.8s,baz=13,slow=16,SNR=4.0						
WRA	**Warramunga Arr**	**41.07**	**124**	P	P	01 29 05.8	0.0
	2.4nm,0.4s,baz=302,slow=9.1,SNR=40						
ASAR	**Alice Springs**	**42.57**	**129**	P	P	01 29 18.1	+0.1
	0.4nm,0.5s,baz=302,slow=7.6,SNR=4.9						
MKAR	**Makanchi Array**	**46.94**	**344**	P	P	01 29 52.5	+0.2
	0.7nm,0.4s,baz=153,slow=9.2,SNR=21						
ZALV	**Zalesovo Beam**	**53.10**	**350**	P	P	01 30 38.6	+0.1
	1.0nm,0.4s,baz=167,slow=6.5,SNR=8.6						
BVAR	**Borovoye Array**	**56.10**	**340**	P	P	01 30 60.0	-0.3
	0.6nm,0.5s,baz=132,slow=9.8,SNR=8.0						
AKTO	**Aktyubinsk**	**59.36**	**331**	P	P	01 31 22.4	-0.6
	0.5nm,0.4s,baz=108,slow=9.6,SNR=3.8						
BRTR	**Keskin Array B**	**69.82**	**312**	P	P	01 32 31.4	0.0
	0.3nm,0.6s,baz=126,slow=8.0,SNR=3.2						
HFS	**Hagfors**	**85.89**	**330**	P	P	01 33 59.9	+0.2
	0.6nm,0.5s,baz=183,slow=5.9,SNR=8.6						

IDC 02 01:33:41.3±6.7**,2°.23S**×**94°.82W,h0**km**,mb3.3**/4**, mb1 3.7**/4**,mb1mx3.5**/17**,mbtmp3.3**/4**,MS3.6**/3**,Ms1 3.7**/3**, ms1mx3.1**/16**,Error ellipse: s-maj=373.4km s-min=132.5km az=81.0,Galapagos Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**32.50**	**346**	P	P	01 40 14.3	+0.3
	0.4nm,0.7s,baz=174,slow=10.0,SNR=2.5						
ANMO	**Albuquerque**	**38.55**	**345**	LR	LR	01 54 12.7	
	comp=Z,64nm,19.4s,baz=359,slow=32						
NVAR	**Mina Array Bea**	**45.90**	**334**	LR	LR	01 57 21.2	
	comp=Z,125nm,21.2s,baz=351,slow=31						
PDAR	**Pinedale Array**	**46.72**	**345**	P	P	01 42 11.7	-0.7
	0.5nm,1.1s,baz=116,slow=6.1,SNR=2.9						
NEW	**Newport**	**53.91**	**342**	LR	LR	02 03 58.8	
	comp=Z,55nm,19.1s,baz=44,slow=34						
YKA	**Yellowknife Ar**	**66.27**	**350**	P	P	01 44 31.2	+0.1
	0.3nm,1.0s,baz=154,slow=6.2,SNR=3.2						
ILAR	**Eielson Array**	**76.80**	**340**	P	P	01 45 34.6	+0.1
	0.3nm,0.9s,baz=145,slow=3.3,SNR=2.4						

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*ISCJB **02** 01:44:39.9±3.1, 33°.9S±0°.1×178°.7W±0°.5, h37km, mb3.4/2, MS3.4/1, Error ellipse: s-maj=57.8km s-min=15.6km az=13.6*

*IDC **02** 01:44:39.2±2.9, 33°.68S×179°.06W, h0km, mb3.5/2, mb1 3.9/3, mb1mx3.7/17, mbtmp3.7/3, ML4.0/1, MS3.4/2, Ms1 3.4/2, ms1mx2.9/14, Error ellipse: s-maj=70.2km s-min=35.6km az=116.0*

ISC 02 01:44:41.1±2.9**,33°.9S**±0°.2×**178°.6W**±0°.4**,h37**km**,n10, **σ**2°.15**/10**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**4.91**	**211**	ePN	**Pn**	**01 45 53.1**	**+0.7**
URZ	**Urewera**	**5.60**	**217**	ePN	**Pn**	**01 46 02.8**	**+1.0**
URZ				eSN	**Sn**	**01 47 05.5**	**+0.7**
URZ	**Urewera**	**5.60**	**217**	Pn	**Pn**	**01 46 03.4**	**+1.6**
	4.4nm,0.3s,baz=48,slow=4.1,SNR=16						
URZ				Sn	**Sn**	**01 47 06.9**	**+2.2**
	3.7nm,0.3s,baz=157,slow=21,SNR=4.0						
BKZ	**Black Stump Fm**	**6.60**	**216**	ePN	**Pn**	**01 46 16.2**	**+0.5**
TCW	**Tory Channel**	**9.26**	**216**	eSN	**Sn**	**01 48 30.1**	**-4.7**
DZM	**Mont Dzumac**	**17.69**	**308**	LR	LR	01 53 43.6	
	comp=Z,141nm,22.0s,baz=18,slow=32						
STKA	**Stephens Creek**	**33.38**	**262**	LR	LR	02 04 19.6	
	comp=Z,71nm,18.6s,baz=199,slow=36						
ASAR	**Alice Springs**	**42.56**	**271**	P	**P**	**01 52 33.6**	**0.0**
	0.6nm,0.7s,baz=114,slow=7.3,SNR=4.6						
WRA	**Warramunga Arr**	**43.87**	**276**	P	**P**	**01 52 43.8**	**-0.3**
	0.5nm,0.6s,baz=118,slow=7.4,SNR=6.7						
FINES	**FINESS Array B**	**148.21**	**338**	PKPbc	**PKPab**	**02 04 24.7**	**-0.6**
	0.8nm,0.6s,baz=35,slow=5.1,SNR=4.2						

PGC 02 02:58:16.5±21.0**,47°.35N**×**128°.95W,h10**km**,ML3.1**/4**, Mw3.8,4D,301km Wsw of Tofino, Bc Off Coast Of Washington,Off coast of Washington**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GDR	**Gold River**	**3.11**	**37**	⇑Pn	Pn	02 59 04.0	-1.6
BTB	**Buttle Lake**	**3.12**	**46**	⇓Pn	Pn	02 59 04.3	-1.6
BTB				⇓Sn	Sn	02 59 39.8	-3.6
WOSB	**Woss**	**3.23**	**28**	Pn	Pn	02 59 06.2	-1.1
PFB	**Port Renfrew**	**3.27**	**66**	⇑Pn	Pn	02 59 06.4	-1.4
MAYB	**Maynard**	**3.28**	**20**	⇓Pn	Pn	02 59 06.2	-1.8
MGB	**Mount Grey**	**3.29**	**58**	⇑Pn	Pn	02 59 06.7	-1.6
LZB	**Mount Lazard**	**3.67**	**68**	⇓Pn	Pn	02 59 12.4	-0.9

IDC 02 03:04:04.9±2.6**,2°.57S**×**129°.48E,h0**km**,mb3.1**/2**, mb1 3.3**/3**,mb1mx3.2**/19**,mbtmp3.1**/3**,ML3.0**/1**,Error ellipse: s-maj=189.8km s-min=27.2km az=69.0,Seram**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.91**	**165**	P	Pn	03 08 14.3	-1.5
	0.1nm,0.3s,baz=348,slow=12,SNR=6.7						
ASAR	**Alice Springs**	**21.41**	**169**	P	P	03 08 55.5	+0.9
	0.2nm,0.4s,baz=345,slow=9.6,SNR=4.3						
MKAR	**Makanchi Array**	**64.27**	**326**	P	P	03 14 42.1	0.0
	0.3nm,0.9s,baz=114,slow=5.2,SNR=2.1						

IDC 02 03:16:01.9±2.0**,6°.69S**×**128°.86E,h0**km**,mb3.6**/1**, mb1 3.4**/3**,mb1mx3.2**/17**,mbtmp3.2**/3**,ML3.0**/2**,Error ellipse: s-maj=120.6km s-min=31.3km az=67.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.21**	**159**	Pn	Pn	03 19 23.7	-0.9
	0.1nm,0.3s,baz=337,slow=13,SNR=1.8						
WRA				Sn	Sn	03 21 51.0	-12
	0.6nm,0.3s,baz=334,slow=23,SNR=8.3						
ASAR	**Alice Springs**	**17.57**	**164**	P	P	03 20 09.0	-0.6
	0.0nm,0.3s,baz=342,slow=9.7,SNR=3.8						
MKAR	**Makanchi Array**	**67.35**	**327**	P	P	03 26 58.9	0.0
	0.3nm,0.4s,baz=116,slow=7.5,SNR=9.3						

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*BJI **02** 03:29:28.0, 4°.16S×144°.36E, h10km, mB5.6/46, mb4.8/48, Ms4.9/41, Ms7 4.6/44*

*IDC **02** 03:29:29.2±0.9, 3°.73S×144°.44E, h0km, mb4.2/13, mb1 4.3/14, mb1mx4.3/18, mbtmp4.2/14, ML3.9/1, MS4.7/20, Ms1 4.7/20, ms1mx4.6/27, Error ellipse: s-maj=29.1km s-min=15.9km az=105.0*

*ISCJB **02** 03:29:30.3±1.0, 3°.49S±0°.04×144°.40E±0°.05, h4km±6km, mb4.8/54, MS4.7/46, Error ellipse: s-maj=8.5km s-min=5.8km az=163.8*

*NEIC **02** 03:29:32.9±0.3, 3°.55S×144°.22E, h10km, mb5.1/21, Error ellipse: s-maj=13.6km s-min=6.8km az=85.0*

*MOS **02** 03:29:34.1±1.3, 3°.52S×144°.44E, h33km, mb5.3/14, MS4.6/5, Error ellipse: s-maj=17.5km s-min=7.3km az=105.3*

*GCMT **02** 03:29:35.0±0.1, 3°.38S×144°.19E, h12km, MW5.2, Moment Tensor Solution. s63,c89; s99,c177; Moment tensor: Scale 10¹⁶Nm; Mrr6.68±.12; Mθθ-5.88±.10; Mφφ-0.80±.13; Mrθ-3.03±.30; Mθφ2.16±.10; Mφr0.95±.35; Best double couple: M₀7.40000×10¹⁶ NP1:φs111.00000°, δ32.00000°, λ92.00000°. NP2:φs289.00000°, δ58.00000°, λ89.00000°. Principal axes: T 7.4000, Plg77.0000°, Azm195.0000°; N -0.0100, Plg1.0000°, Azm290.0000°; P -7.3900, Plg13.0000°, Azm20.0000°; Data Used: II IU IC G CN. Surface waves from 103 sta.*

*AUST **02** 03:29:39.1, 3°.38S×144°.03E, h60km*

DJA 02 03:29:42.5±1.1, 4°S±9°×14°4E±°, h49km±10km, M5.0/13, mB5.5/13, mb4.7/13, MLv5.3/2, Mw(mB)5.0/13, Mwp5.7/1

ISC 02 03:29:34.2±0.4, 3°.67S±0°.04×144°.22E±0°.05, h18km±1km, h18km:pP-P, n167, σ2.07/218, mb4.9/54, MS4.7/46, 3C-8D, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	3.70	288	P	Pn	03 30 31.9	+1.4
	baz=3.4,SNR=12						
JAY				S	Sg	03 31 34.3	+1.2
	baz=3.4,SNR=3.4						
SMPI	Sarmi	5.75	287	P	Pn	03 30 59.9	+1.1
	147nm,2.1s,27µm2.4nm						
PMG	Port Moresby	6.40	153	Pn	Pn	03 31 08.0	+0.4
PMG				Sn	Sn	03 32 24.4	+4.2
PMG	Port Moresby	6.40	153	P	Pn	03 31 15.1	+7.5
	58nm,1.8s,4µm1.0nm						
PMG	Port Moresby	6.40	153	Pn	Pn	03 31 08.0	+0.4
	1.8nm,0.3s,baz=17,slow=10,SNR=6.5						
PMG				Sn	Sn	03 32 24.4	+4.2
	2.9nm,0.3s,baz=305,slow=20,SNR=7.2						
BAKI	Biak	8.48	287	P	Pb	03 31 49.7	-11
COEN	Coen	10.27	186	*e*Pn	Pn	03 32 05.8	+5.0
COEN	Coen	10.27	186	P	Pn	03 32 06.2	+5.4
	baz=11,SNR=12						
PALU	Palau	14.64	318	P	Pn	03 33 03.2	+2.5
	baz=14,SNR=4.6						
KDU	Kakadu	14.67	232	P	P	03 33 04.6	-2.5
	baz=15,SNR=6.7						
CTA	Charters Tower	16.43	173	Pn	Pn	03 33 24.7	+0.6
CTA	Charters Tower	16.43	173	Pn	Pn	03 33 24.7	+0.6
	0.1nm,0.3s,baz=340,slow=12,SNR=4.3						
CTAO	Charters Tower	16.43	173	*e*P	P	03 33 26.5	-0.2
CTAO				pmax	pmax		
	comp=Z,156nm,2.3s						
CTAO	Charters Tower	16.43	173	*e*Pn	P	03 33 26.5	-0.2
	comp=Z,156nm,2.3s						
NLAI	Namlea	17.10	271	P	P	03 33 35.0	+0.9
	comp=Z,37nm,2.5s,comp=Z,2µm						
GUMO	Guam	17.16	2	LR	LR	03 39 51.9	
	comp=Z,2µm,19.2s,baz=156,slow=36						
PATS	Pohnpei	17.52	53	P	P	03 33 39.0	+0.3
	baz=18,SNR=6.9						
WRAB	Tennant Creek	18.81	210	*e*P	Pn	03 33 56.2	+2.7
WRAB				pmax	pmax		
	comp=Z,124nm,1.6s						
WRAB	Tennant Creek	18.81	210	*e*P	Pn	03 33 56.2	+2.7
	comp=Z,124nm,1.6s						
WRA	Warramunga Arr	18.83	210	P	P	03 33 51.7	-1.5
WRA				S	Sn	03 37 19.7	-4.4
WRA	Warramunga Arr	18.83	210	P	P	03 33 51.7	-1.5
	comp=Z,0.4nm,0.3s,baz=32,slow=12,SNR=14						
WRA				S	Sn	03 37 19.7	-4.4
	baz=31,slow=21,SNR=2.3						
WRA				LR	LR	03 41 42.7	
	comp=Z,6µm,19.2s,baz=35,slow=39						
DAV	Davao City (W)	21.45	300	LR	LR	03 42 31.5	
	comp=Z,599nm,19.0s,baz=157,slow=36						
LUWI	Luwuk	21.59	276	P	P	03 34 23.9	+0.6
	comp=Z,159nm,2.0s,comp=Z,3µm						
AS31	Alice Springs	22.23	206	*e*P	P	03 34 31.9	+1.8
ASAR	Alice Springs	22.24	206	P	P	03 34 27.1	-3.1
ASAR				S	S	03 38 30.6	-3.7
ASAR	Alice Springs	22.24	206	P	P	03 34 27.1	-3.1
	comp=Z,1.6nm,0.8s,baz=35,slow=8.6,SNR=7.8						
ASAR				S	S	03 38 30.6	-3.7
	comp=Z,0.9nm,0.8s,baz=24,slow=14,SNR=4.2						
ASAR				LR	LR	03 43 50.6	
	comp=Z,6µm,21.0s,baz=30,slow=39						
EIDS	Eidsvold	22.56	164	*e*P	P	03 34 35.7	+2.2
	comp=Z,414nm,2.5s						
QLP	Quilpie	22.78	180	P	P	03 34 38.9	+3.0
	baz=23,SNR=12						
RMQ	Roma	23.10	170	P	P	03 34 42.3	+3.1
	baz=24,SNR=18						
FITZ	Fitzroy Crossi	23.17	230	*e*P	P	03 34 39.0	-0.9
	comp=Z,235nm,1.9s						
FITZ	Fitzroy Crossi	23.17	230	P	P	03 34 38.7	-1.3
	comp=Z,26nm,1.2s,baz=59,slow=10.0,SNR=20						
FITZ				LR	LR	03 44 20.1	
	comp=Z,3µm,19.7s,baz=55,slow=38						
FITZ	Fitzroy Crossi	23.17	230	P	P	03 34 39.2	-0.8
	baz=23,SNR=17						
BKSI	Bulukumba	24.08	265	P	P	03 34 49.9	+1.0
	comp=Z,68nm,1.7s,comp=Z,1µmcomp=Z,7µm						
TTSI	Tana Toraja	24.37	271	P	P	03 34 53.3	+1.7
	comp=Z,75nm,2.1s,comp=Z,3µm						
SPSI	Sidrap Palu	24.40	269	P	P	03 34 52.7	+0.8
KAPI	Kappang	24.44	266	P	P	03 34 51.0	-1.2
KAPI	Kappang	24.44	266	P	P	03 34 51.7	-0.5
	comp=Z,93nm,1.3s,SNR=5.9						
KAPI	Kappang	24.44	266	P	P	03 34 51.0	-1.2
	comp=Z,4.8nm,0.7s,baz=92,slow=9.4,SNR=12						
PCI	Palu	24.52	276	S	S	03 39 01.9	-11
	baz=24,SNR=5.7						
DZM	Mont Dzumac	28.27	132	*e*LR	LR	03 42 48.6	
	comp=Z,3µm,24.6s						
MEEK	Meekatharra	33.50	225	P	P	03 36 15.1	+2.3
	baz=34,SNR=3.1						
KSM	Kuching	34.28	278	P	P	03 36 20.8	+1.1
	baz=34,SNR=3.7						
QZH	Quanzhou	37.80	320	⇓*i*P	P	03 36 52.3	+2.6
MJAR	Matsushiro Arr	40.40	353	LR	LR	03 53 20.8	
	comp=Z,712nm,18.7s,baz=160,slow=35						
MAJO	Matsushiro	40.40	353	*e*P	P	03 37 10.2	-1.1
MAJO				pmax	pmax		
	comp=Z,34nm,1.4s						
MAJO	Matsushiro	40.40	353	*e*P	P	03 37 10.2	-1.1
	comp=Z,34nm,1.4s						
QIZ	Qiongzhong	40.66	305	P	P	03 37 12.8	-1.0
QIZ				S	S	03 43 22.9	-0.3
QIZ				LR	LR		
	comp=Z,580nm,24.5s						
SSE	Sheshan	40.97	329	*e*P	P	03 37 15.9	-0.1
SSE				sP	sP	03 37 20.6	-3.3
SSE				S	S	03 43 27.5	+0.2
SSE				ScS	ScS	03 47 18.0	-2.5
SSE				pmax	pmax		
	comp=Z,17nm,0.6s						
SSE				pmax	pmax		
	comp=Z,130nm,3.7s						
SSE				LR	LR		
	comp=N,290nm,22.4s						
SSE				LR	LR		
	comp=E,270nm,22.4s						
SSE				LR	LR		
	comp=Z,590nm,21.3s						
NJ2	Nanjing	42.94	328	*e*P	P	03 37 32.2	+0.1
NJ2				pP	pP	03 37 35.2	-2.6
NJ2				PP	PP	03 39 11.3	-0.7
NJ2				S	S	03 43 58.0	+1.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,860nm,5.8s						
NJ2				LR	LR		
	comp=N,640nm,20.3s						
NJ2				LR	LR		
	comp=E,980nm,18.0s						
NJ2				LR	LR		
	comp=Z,610nm,28.6s						
KSRS	Korea Array	43.64	341	P	P	03 37 35.9	-1.8
	comp=Z,4.0nm,0.8s,baz=161,slow=9.0,SNR=12						
KSRS				LR	LR	03 52 31.8	
	comp=Z,999nm,21.3s,baz=154,slow=32						
KSAR	Wonju Array Be	43.64	341	P	P	03 37 35.9	-1.9
WHN	Wuhan	44.41	322	⇓*i*P	P	03 37 46.0	+2.0
WHN				S	S	03 44 21.3	+3.3
WHN				pmax	pmax		
	comp=Z,1µm,5.9s						
WHN				LR	LR		
	comp=Z,810nm,11.6s						
GYA	Guiyang	47.08	312	P	P	03 38 06.0	+0.6
GYA				PcP	PcP	03 39 38.4	+1.1
GYA				PP	PP	03 39 55.0	-1.3
GYA				ScP	ScP	03 43 31.8	+1.2
GYA				S	S	03 44 56.7	-0.3
GYA				SS	SS	03 48 17.0	-7.3
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,5.0s						
GYA				LR	LR		
	comp=N,680nm,19.5s						
GYA				LR	LR		
	comp=E,510nm,20.7s						
GYA				LR	LR		
	comp=Z,640nm,19.1s						
DL2	Dalian	47.23	336	P	P	03 38 09.7	+3.5
DL2				PP	PP	03 39 59.1	+1.7
DL2				S	S	03 45 04.0	+5.6
DL2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DL2				pmax	pmax		
	comp=Z,180nm,6.5s						
DL2				LR	LR		
	comp=N,220nm,17.2s						
DL2				LR	LR		
	comp=E,260nm,16.6s						
DL2				LR	LR		
	comp=Z,290nm,15.0s						
YUK	Yuzh-Kuril'sk	47.51	2*d*	*i*P	P	03 38 04.4	-3.9
YUK				*i*		03 39 53.8	
YUK				*i* PPP	PPP	03 40 46.3	
YUK				*i* S	S	03 44 54.9	-7.4
YUK				*i* SSS	SSS	03 49 36.4	
YUK				pmax	pmax		
	comp=N,223nm,1.5s						
YUK				pmax	pmax		
	comp=E,214nm,1.5s						
YUK				pmax	pmax		
	comp=Z,179nm,1.5s						
YUK				pmax	pmax		
	comp=Z,2µm,5.9s						
YUK				MLR	MLR		
	comp=N,143nm,19.0s						
YUK				MLR	MLR		
	comp=Z,323nm,19.0s						
YUK				MLR	MLR		
	comp=E,95nm,18.0s						
ASAJ	Asahikawa	47.60	358	*e*P	P	03 38 08.7	-0.2
	comp=E,13nm,1.4s						
USRK	Ussuriysk Arra	48.91	348	P	P	03 38 17.5	-1.5
	comp=E,1.7nm,0.8s,baz=95,slow=4.0,SNR=5.9						
USRK				LR	LR	03 56 15.7	
	comp=E,509nm,21.6s,baz=152,slow=33						
KMI	Kunming	49.40	308	P	P	03 38 25.7	+2.3
KMI				pP	pP	03 38 27.5	-1.7
KMI				sP	sP	03 38 28.7	-2.7
KMI				PcP	PcP	03 39 47.3	+1.5
KMI				PP	PP	03 40 19.3	+1.6
KMI				S	S	03 45 30.8	+0.8
KMI				SS	SS	03 48 57.3	-4.8
KMI				pmax	pmax		
	comp=Z,12nm,1.3s						
KMI				pmax	pmax		
	comp=Z,470nm,5.4s						
KMI				LR	LR		
	comp=N,300nm,10.7s						
KMI				LR	LR		
	comp=E,300nm,12.7s						
KMI				LR	LR		
	comp=Z,370nm,26.2s						
CMAR	Chiang Mai Arr	49.72	298	P	P	03 38 26.5	+0.8
CMAR	Chiang Mai Arr	49.72	298	P	P	03 38 26.5	+0.8
	comp=Z,1.4nm,0.3s,baz=120,slow=5.3,SNR=17						
CMAR				LR	LR	04 00 53.5	
	comp=Z,151nm,18.1s,baz=120,slow=38						
MDJ	Mudanjiang	49.83	346	P	P	03 38 24.8	-1.3
MDJ				S	S	03 45 35.8	+0.8
MDJ				SS	SS	03 49 09.6	+1.6
MDJ				pmax	pmax		
	comp=Z,8.0nm,2.2s						
MDJ				pmax	pmax		
	comp=Z,380nm,6.7s						
MDJ				LR	LR		
	comp=N,720nm,25.7s						
MDJ				LR	LR		
	comp=E,320nm,27.1s						
MDJ				LR	LR		
	comp=Z,940nm,28.6s						
CHTO	Chiang Mai	49.85	298	*e*P	P	03 38 27.6	+0.9
CHTO				pmax	pmax		
	comp=Z,232nm,2.6s						
CHTO	Chiang Mai	49.85	298	*e*P	P	03 38 27.6	+0.9
	comp=Z,232nm,2.6s						
XAN	Xi'an	50.14	321	P	P	03 38 26.6	-2.2
XAN				pP	pP	03 38 40.3	+5.8
XAN				S	S	03 45 42.0	+2.1
XAN				pmax	pmax		
	comp=Z,8.0nm,2.2s						
XAN				pmax	pmax		
	comp=Z,130nm,5.9s						
XAN				LR	LR		
	comp=N,200nm,14.9s						
XAN				LR	LR		
	comp=E,65nm,17.1s						
XAN				LR	LR		
	comp=Z,93nm,19.7s						
CN2	Changchun	50.19	342	*e*P	P	03 38 30.3	+1.4
CN2				*e*sP	sP	03 38 37.3	+0.5
CN2				*e*S	S	03 45 40.6	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,1µm,19.0s						
CN2				LR	LR		
	comp=E,400nm,19.0s						
CN2				LR	LR		
	comp=Z,400nm,20.0s						
YSS	Yuzh-Sakhalins	50.43	359	*ce*P	P	03 38 33.4	+2.8
YSS				*e*S	S	03 45 43.0	-0.2
YSS				pmax	pmax		
	comp=Z,500nm,7.0s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
BJI	Beijing	50.55	332	P	P	03 38 31.3	-0.3
BJI				PP	PP	03 40 27.1	-0.6
BJI				S	S	03 45 45.9	+0.7
BJI				SS	SS	03 49 21.8	+2.2
BJI				pmax	pmax		
	comp=Z,10.0nm,0.4s						
BJI				pmax	pmax		
	comp=Z,520nm,5.9s						
BJI				LR	LR		
	comp=N,630nm,19.0s						
BJI				LR	LR		
	comp=E,470nm,25.4s						
BJI				LR	LR		
	comp=Z,570nm,21.1s						
TIY	Taiyuan	50.66	327	*e*P	P	03 38 35.8	+3.2
TIY				S	S	03 45 44.1	-2.8
TIY				pmax	pmax		
	comp=Z,550nm,4.9s						
TIY				LR	LR		
	comp=N,330nm,5.4s						
TIY				LR	LR		
	comp=E,270nm,6.2s						
TIY				LR	LR		
	comp=Z,360nm,8.9s						
CD2	Chengdu	51.68	315	P	P	03 38 41.3	+0.9
CD2				pP	pP	03 38 51.3	+5.1
CD2				sP	sP	03 38 55.2	+6.8
CD2				PcP	PcP	03 39 54.0	+0.1
CD2				PP	PP	03 40 39.9	+1.7
CD2				PcS	PcS	03 43 50.6	-1.4
CD2				S	S	03 46 00.1	-1.2
CD2				sS	sS	03 46 16.8	+6.1
CD2				SS	SS	03 49 35.0	-3.0
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				pmax	pmax		
	comp=Z,580nm,6.3s						
CD2				LR	LR		
	comp=N,480nm,11.3s						
CD2				LR	LR		
	comp=E,420nm,19.6s						
CD2				LR	LR		
	comp=Z,440nm,15.3s						
HHC	Hu-ho-hao-te	53.42	329	*e*P	P	03 38 53.0	-0.2
HHC				sP	sP	03 39 00.4	-0.8
HHC				PcP	PcP	03 40 02.2	+1.9
HHC				PP	PP	03 40 56.9	+3.1
HHC				PcS	PcS	03 43 58.9	-0.4
HHC				S	S	03 46 24.0	-0.9
HHC				ScS	ScS	03 48 40.7	-1.5
HHC				SS	SS	03 50 03.9	-1.4
HHC				pmax	pmax		
	comp=Z,35nm,0.7s						
HHC				pmax	pmax		
	comp=Z,920nm,6.5s						
HHC				LR	LR		
	comp=N,560nm,16.2s						
HHC				LR	LR		
	comp=E,830nm,16.5s						
HHC				LR	LR		
	comp=Z,1µm,16.1s						
KLR	Kul'dur	53.79	350	*e*P	P	03 38 51.0	-4.6
KLR				*e*S	S	03 46 27.0	-2.4
KLR				pmax	pmax		
	comp=Z,63nm,2.0s						
KLR				MLR	MLR		
	comp=Z,1µm,13.0s						
BTO	Baotou	54.05	328	*e*P	P	03 38 57.3	-0.5
LZH	Lanzhou	54.66	320	⇓P	P	03 39 03.2	+0.8
LZH				pP	pP	03 39 08.5	+0.3
LZH				sP	sP	03 39 10.7	+0.3
LZH				S	S	03 46 42.0	+0.1
LZH				sS	sS	03 46 53.5	+2.1
LZH				SS	SS	03 50 22.2	-2.9
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,110nm,4.0s						
LZH				LR	LR		
	comp=N,280nm,14.2s						
LZH				LR	LR		
	comp=E,300nm,15.1s						
LZH				LR	LR		
	comp=Z,500nm,16.3s						
SKR	Severo-Kuril's	55.10	9	*e*P	P	03 39 06.0	+0.9
SKR				*e*		03 41 12.0	
SKR				*e*PPP	PPP	03 42 18.0	
SKR				*e*S	S	03 46 50.0	+3.1
SKR				pmax	pmax		
	comp=N,800nm,6.0s						
SKR				pmax	pmax		
	comp=E,1µm,6.0s						
SKR				pmax	pmax		
	comp=Z,1µm,6.0s						
SKR				smax	smax		
	comp=N,1µm,10.0s						
SKR				smax	smax		
	comp=E,800nm,12.0s						
SKR				MLR	MLR		
	comp=N,1µm,16.0s						
SKR				MLR	MLR		
	comp=Z,1µm,16.0s						
PETK	Petropavlovsk-	57.70	10	P	P	03 39 23.1	-0.5
PETK	Petropavlovsk-	57.70	10	P	P	03 39 23.1	-0.5
PETK	Petropavlovsk-	57.70	10	P	P	03 39 23.1	-0.5
	comp=Z,7.9nm,0.8s,baz=178,slow=7.4,SNR=5.5						
PETK				LR	LR	03 59 57.8	
	comp=Z,343nm,21.8s,baz=185,slow=32						
PET	Petropavlovsk	57.78	10	*e*P	P	03 39 22.6	-1.5
PET				*e*		03 41 30.0	
PET				*e*S	S	03 47 17.8	-4.6
PET				*e*SS	SS	03 51 12.9	-0.4
PET				pmax	pmax		
	comp=Z,300nm,7.7s						
PET				pmax	pmax		
	comp=Z,200nm,9.0s						
PET				MLR	MLR		
	comp=Z,200nm,19.0s						
SHL	Shillong	58.44	303	*e*S	S	03 47 35.0	+2.6
GTA	Gaotai	59.20	321	*e*P	P	03 39 35.1	+0.6
GTA				pP	pP	03 39 38.4	-1.9
GTA				sP	sP	03 39 41.3	-1.2
GTA				S	S	03 47 44.2	+2.5
GTA				sS	sS	03 47 51.3	0.0
GTA				SS	SS	03 51 39.8	+3.4
GTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,650nm,6.2s						
GTA				LR	LR		
	comp=N,210nm,18.5s						
GTA				LR	LR		
	comp=E,190nm,19.0s						
GTA				LR	LR		
	comp=Z,200nm,16.6s						
ULN	Ulaanbaatar	60.76	332	*e*P	P	03 39 45.6	+0.4
	comp=Z,11nm,1.0s						
SONM	Songino Array	61.05	332	P	P	03 39 47.1	0.0
SONM	Songino Array	61.05	332	P	P	03 39 47.1	0.0
	comp=Z,5.7nm,1.2s,baz=134,slow=6.4,SNR=8.9						
SONM				LR	LR	04 06 46.0	
	comp=Z,909nm,20.6s,baz=299,slow=36						
DRV	Dumont d'Urvil	62.95	182	S	S	03 48 09.0	-19
DRV	Dumont d'Urvil	62.95	182	S	S	03 48 15.0	-13
DRV				R		04 00 00.0	
ZAK	Zakamensk	64.30	332	*e*P	P	03 40 07.3	-1.3
ZAK				pmax	pmax		
	comp=Z,15nm,1.5s						
TLY	Talaya	65.03	333	*e*P	P	03 40 10.6	-2.7
TLY				*e*		03 50 01.2	
TLY				*e*SSS	SSS	03 52 59.9	
TLY				pmax	pmax		
	comp=Z,15nm,1.4s						
TLY	Talaya	65.03	333	*e*P	P	03 40 13.6	+0.3
	comp=Z,40nm,1.6s						
TLY	Talaya	65.03	333	P	P	03 40 13.2	-0.1
	comp=Z,64nm,1.2s,SNR=5.1						
PPT2	Papeete2	66.22	108	*e*LQ	LQ	03 57 36.9	
	comp=Z,316nm,28.5s						
PPT2				*e*LR	LR	04 00 24.0	
MOY	Mondy	66.23	332	*e*P	P	03 40 21.5	+0.3
YAK	Yakutsk	66.47	353	*e*P	P	03 40 20.9	-1.4
YAK				*e**PP	pP	03 40 30.5	+2.4
YAK				*e*		03 40 48.9	
YAK				*e*		03 42 46.6	
YAK				*e*PPP	PPP	03 44 24.4	
YAK				*e*S	S	03 49 10.7	-1.0
YAK				pmax	pmax		
	comp=Z,22nm,1.5s						
YAK				pmax	pmax		
	comp=N,14nm,1.8s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.7s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				smax	smax		
	comp=N,31nm,1.6s						
YAK				smax	smax		
	comp=E,107nm,2.8s						
SEY	Seymchan	66.71	4*c*	*i*P	P	03 40 23.6	-0.2
TBI	Tubuai	66.83	114	*e*LR	LR	04 00 39.3	
	comp=E,382nm,25.8s						
WMQ	Urumqi	69.24	320	P	P	03 40 41.0	+0.8
WMQ				sP	sP	03 40 48.0	-0.3
WMQ				PcP	PcP	03 41 05.0	+1.1
WMQ				PP	PP	03 43 16.0	+2.6
WMQ				S	S	03 49 45.0	-0.8
WMQ				ScS	SKSac	03 50 37.0	-2.7
WMQ				SS	SS	03 54 12.0	-0.7
WMQ				pmax	pmax		
	comp=Z,21nm,1.4s						
WMQ				pmax	pmax		
	comp=Z,790nm,7.0s						
WMQ				LR	LR		
	comp=N,310nm,20.0s						
WMQ				LR	LR		
	comp=E,210nm,18.0s						
WMQ				LR	LR		
	comp=Z,150nm,20.0s						
BILL	Bilibino	73.20	8	*e*P	P	03 41 02.9	-0.8
BILL				pmax	pmax		
	comp=Z,16nm,1.4s						
BILL	Bilibino	73.20	8	*e*P	P	03 41 02.5	-1.1
	comp=Z,23nm,1.7s						
MK31	Makanchi Array	73.96	321	*e*P	P	03 41 08.4	-0.2
MK31	Makanchi Array	73.96	321	*e*P	P	03 41 08.4	-0.2
MKAR	Makanchi Array	73.96	321	P	P	03 41 07.0	-1.6
MKAR	Makanchi Array	73.96	321	P	P	03 41 07.0	-1.6
MKAR	Makanchi Array	73.96	321	P	P	03 41 07.0	-1.6
	comp=Z,1.9nm,1.0s,baz=110,slow=7.1,SNR=15						
MKAR				LR	LR	04 15 51.6	
	comp=Z,191nm,19.8s,baz=276,slow=38						
VNDA	Vanda	74.39	176	*e*P	P	03 41 10.8	+0.3
VNDA	Vanda	74.39	176	P	P	03 41 09.3	-1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,1.2nm,0.6s,baz=328,slow=6.4,SNR=6.7						
VNDA				LR	LR	04 13 58.3	
	comp=Z,607nm,18.1s,baz=347,slow=36						
GAMB	Gambell	74.84	19	eP	P	03 41 13.4	+0.1
	comp=Z,111nm,2.4s						
SBA	Scott Base	75.08	175	eP	P	03 41 16.4	+1.9
SBA	Scott Base	75.08	175	eP	P	03 41 16.4	+1.9
ZAA0	Zalesovo Array	75.59	328	eP	P	03 41 15.9	-1.9
ZALV	Zalesovo Beam	75.59	328	P	P	03 41 16.3	-1.5
ZALV	Zalesovo Beam	75.59	328	P	P	03 41 16.2	-1.5
ZALV	Zalesovo Beam	75.59	328	P	P	03 41 16.2	-1.5
	comp=Z,5.6nm,0.9s,baz=117,slow=4.7,SNR=14						
ZALV				LR	LR	04 12 59.3	
	comp=Z,362nm,21.4s,baz=182,slow=34						
KSH	Kashi	75.78	312	P	P	03 41 21.2	+1.8
KSH				pP	pP	03 41 26.1	+0.8
KSH				sP	sP	03 41 28.2	+0.7
KSH				PcP	PcP	03 41 34.4	+2.4
KSH				ePP	PP	03 44 13.4	+3.9
KSH				S	S	03 51 01.0	+0.2
KSH				SKS	SKSac	03 51 26.1	-3.2
KSH				ScS	ScS	03 51 31.5	-1.5
KSH				SS	SS	03 55 56.4	+3.4
KSH				pmax	pmax		
	comp=Z,30nm,1.5s						
KSH				pmax	pmax		
	comp=Z,250nm,3.5s						
KSH				LR	LR		
	comp=N,310nm,5.2s						
KSH				LR	LR		
	comp=E,320nm,4.9s						
KSH				LR	LR		
	comp=Z,290nm,10.9s						
TIXI	Tiksi	75.85	355	eP	P	03 41 19.3	+0.4
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TIXI	Tiksi	75.85	355	eP	P	03 41 19.3	+0.4
	comp=Z,6.0nm,1.1s						
NVS	Novosibirsk	76.82	329	⇓iP	P	03 41 23.4	-1.4
NVS				pmax	pmax		
	comp=Z,137nm,2.4s						
NVS				pmax	pmax		
	comp=N,19nm,1.8s						
NVS				pmax	pmax		
	comp=E,30nm,1.8s						
TNA	Tin City	77.25	18	eP	P	03 41 26.0	-1.0
	comp=E,10nm,1.5s						
KURK	Kurchatov	77.71	324	d iP	P	03 41 29.7	-0.1
KURK				pmax	pmax		
	comp=Z,58nm,2.5s						
KURK	Kurchatov	77.71	324	eP	P	03 41 29.7	-0.1
	comp=Z,38nm,1.5s						
KURK	Kurchatov	77.71	324	P	P	03 41 29.5	-0.3
	comp=Z,78nm,1.6s,SNR=13						
FRU	Bishkek	77.72	315	eP	P	03 41 30.0	-0.2
AAK	Ala-Archa	77.75	315	d iP	P	03 41 30.9	+0.4
AAK				pmax	pmax		
	comp=Z,48nm,2.5s						
AAK	Ala-Archa	77.75	315	eP	P	03 41 30.5	-0.1
	comp=Z,104nm,1.8s						
EKS2	Erkin-Say	78.26	315	eP	P	03 41 33.9	+0.6
EKS2				pmax	pmax		
	comp=Z,56nm,1.8s						
EKS2	Erkin-Say	78.26	315	eP	P	03 41 33.9	+0.6
	comp=Z,56nm,1.8s						
KBL	Kabul	79.93	306	eP	P	03 41 40.4	-2.4
KBL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBL	Kabul	79.93	306	eP	P	03 41 40.4	-2.4
	comp=Z,4.3nm,0.9s						
RKT	Rikitea	80.11	113	eLR	LR	04 06 49.8	
	comp=Z,493nm,24.2s						
KKAR	Karatay Array	80.70	315	eP	P	03 41 46.6	+0.1
KKAR				pmax	pmax		
	comp=Z,19nm,1.5s						
KKAR	Karatay Array	80.70	315	eP	P	03 41 46.6	+0.1
	comp=Z,19nm,1.5s						
BVAR	Borovoye Array	83.28	324	LR	LR	04 19 35.6	
	comp=Z,315nm,22.0s,baz=86,slow=36						
MAW	Mawson	83.32	202	LR	LR	04 19 17.8	
	comp=Z,643nm,18.4s,baz=82,slow=36						
BRVK	Borovoye	83.34	324	d iP	P	03 42 00.1	0.0
BRVK				pmax	pmax		
	comp=Z,66nm,2.5s						
BRVK	Borovoye	83.34	324	eP	P	03 41 59.7	-0.4
	comp=Z,116nm,1.9s						
BRVK	Borovoye	83.34	324	P	P	03 42 00.8	+0.7
	comp=Z,92nm,1.8s,SNR=10						
COLA	College	84.11	23	eP	P	03 42 02.3	-1.4
COLA				pmax	pmax		
	comp=Z,63nm,2.0s						
COLA	College	84.11	23	eP	P	03 42 02.2	-1.4
	comp=Z,63nm,2.0s						
ILAR	Eielson Array	84.46	24	P	P	03 42 01.6	-3.9
ILAR	Eielson Array	84.46	24	P	P	03 42 01.6	-3.9
	comp=Z,2.2nm,0.9s,baz=252,slow=3.4,SNR=10						
ILAR				LR	LR	04 17 15.9	
	comp=Z,461nm,19.2s,baz=80,slow=34						
ABKAR	Akbulak array	89.02	319	eP	P	03 42 26.9	-1.3
	comp=Z,2.2nm,0.8s						
AKTO	Aktyubinsk	90.39	320	LR	LR	04 21 38.6	
	comp=Z,141nm,21.0s,baz=89,slow=35						
DLBC	Dease Lake	90.87	32	LR	LR	04 16 45.8	
	comp=Z,442nm,21.7s,baz=324,slow=31						
MAK	Makhachkala	97.41	313	eP	P	03 43 04.0	-2.9
MAK				i		03 47 01.2	
MAK				eS	SKSac	03 53 38.6	-5.0
MAK				ePS	PS	03 55 52.2	-2.8
NVAR	Mina Array Bea	98.12	52	LR	LR	04 18 56.4	
	comp=Z,556nm,20.9s,baz=77,slow=30						
YKA	Yellowknife Ar	98.40	27	P	P	03 43 08.1	-2.8
YKA	Yellowknife Ar	98.40	27	P	P	03 43 08.1	-2.8
	comp=Z,0.1nm,0.4s,baz=257,slow=3.7,SNR=3.3						
BHD	Baghdad	100.23	303	ex	Pdif	03 43 24.0	+4.2
BHD				ex	x	03 54 16.3	
BHD				ex	x	03 55 04.3	
BHD				ex	x	03 55 20.3	
KIV	Kislovodsk	100.85	314	eP	Pdif	03 43 17.2	-5.2
KIV				e		03 53 52.2	
KIV				ePS	PS	03 56 28.6	-3.8
KIV				eSS	SS	04 01 51.3	-6.4
KIV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
APA	Apatity	101.24	339	⇑eP	Pdif	03 43 16.0	-7.5
VNA2	Neumayer--Watz	103.21	189	ePKP	PKiKP	03 47 54.9	+3.3
OKC	Ostrava-Krasne	115.41	325	AMS	AMS	04 39 00.0	
	comp=Z,200nm,19.0s						
DPC	Dobruska-Polom	116.21	326	AMS	AMS	04 39 40.0	
	comp=Z,400nm,20.3s						
PVCC	Panska Ves	117.09	326	AMS	AMS	04 37 40.0	
	comp=Z,300nm,21.6s						
TREC	Trest	117.19	325	AMS	AMS	04 40 40.0	
	comp=Z,500nm,16.7s						
PRU	Pruhonice	117.38	326	AMS	AMS	04 39 50.0	
	comp=Z,400nm,22.3s						
CLL	Collm	117.54	328	ePS	PS	03 59 13.0	-2.9
CLL				ePPS	PPS	04 00 36.0	
CLL				eSS	SS	04 05 48.0	+7.0
CLL				eSSS	SSS	04 10 24.0	
KHC	Kasperske Hory	118.36	326	AMS	AMS	04 40 40.0	
	comp=Z,400nm,20.3s						
WLF	Walferdange	122.06	329	ePKIKP	PKPdf	03 48 27.9	+0.1
WLF	Walferdange	122.06	329	ePKPdf	PKPdf	03 48 27.9	+0.1
TAM	Tamanrasset	135.76	299	ePKIKP	PKPdf	03 48 55.6	+0.8
TAM	Tamanrasset	135.76	299	ePKPdf	PKPdf	03 48 55.6	+0.8
TORD	Torodi Ar. Bea	141.81	287	PKPpre	PKPpre	03 48 59.3	
TORD	Torodi Ar. Bea	141.81	287	PKhKP	PKPpre	03 48 59.3	
	comp=Z,0.6nm,0.9s,baz=69,slow=2.0,SNR=5.4						
LPAZ	La Paz	142.36	123	PKP	PKPdf	03 49 02.7	-4.9
LPAZ				ePKPdf	PKiKP	03 49 02.9	-7.8
LPAZ	La Paz	142.36	123	PKP	PKPdf	03 49 02.7	-4.9
	comp=Z,0.9nm,0.7s,baz=225,slow=7.8,SNR=3.1						
DBIC	Dimbokro	149.07	277	ePKPbc	PKPbc	03 49 23.9	+1.5
DBIC	Dimbokro	149.07	277	PKPbc	PKPbc	03 49 21.2	-1.3
	comp=Z,4.5nm,0.9s,baz=193,slow=11,SNR=5.6						
SAML	Samuel	149.94	115	ePKPdf	PKPdf	03 49 20.1	+0.3
SAML				ePKPbc	PKPbc	03 49 24.8	+0.2

*ISK **02** 03:32:48.8, 40°.37N×27°.10E, h9km, MD2.7*
*ISCJB **02** 03:32:49.3±0.4, 40°.37N±0°.03×27°.10E±0°.03, h6km±5km, Error ellipse: s-maj=4.6km s-min=4.0km az=147.4*
*CSEM **02** 03:32:49.5±0.1, 40°.37N×27°.09E, h10km, MD2.7, Error ellipse: s-maj=2.5km s-min=2.2km az=27.0*
*DDA **02** 03:32:49.1, 40°.34N×27°.06E, h3km, MD3.0, ML3.1*
ISC 02 03:32:49.7±0.9**, 40°.37N**±0°.02×**27°.08E**±0°.02**, h11**km±9km**, n37, σ0ˢ.53**/52**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	Lapseki	0.25	270	ePG	Pg	03 32 54.5	-0.3
LPK				eSG	Sg	03 32 58.7	+0.4
LPK	Lapseki	0.25	270	ePg	Pg	03 32 54.5	-0.3
LPK				eSg	Sg	03 32 58.7	+0.4
RKY	Sarkoy-Tekirda	0.32	13	ePG	Pg	03 32 55.8	-0.4
RKY				eSG	Sg	03 33 00.8	+0.2
RKY	Sarkoy-Tekirda	0.32	13	ePg	Pg	03 32 55.8	-0.4
RKY				eSg	Sg	03 33 00.8	+0.2
MFT	Murefte	0.44	20	ePG	Pg	03 32 58.3	-0.1
MFT				eSG	Sg	03 33 04.5	+0.2
MFT	Murefte	0.44	20	ePg	Pg	03 32 58.3	-0.1
MFT				eSg	Sg	03 33 04.5	+0.2
GELI	Tayfur-Gelibol	0.47	273	ePG	Pg	03 32 58.7	-0.1
GELI				eSG	Sg	03 33 05.7	+0.7
GELI	Tayfur-Gelibol	0.47	273	ePg	Pg	03 32 58.7	-0.1
GELI				eSg	Sg	03 33 05.7	+0.7
GONE	Gonen-Balikesi	0.56	125	ePG	Pg	03 33 00.1	-0.5
GONE	Gonen-Balikesi	0.56	125	ePg	Pg	03 33 00.1	-0.5
BALY	Balya	0.75	147	i P	Pg	03 33 04.2	0.0
BALY				i S	Sg	03 33 14.7	+0.6
BALY	Balya	0.75	147	i P	Pg	03 33 04.2	0.0
BALY				i S	Sg	03 33 14.7	+0.6
ENEZ	Enez	0.80	297	ePG	Pg	03 33 04.8	-0.3
ENEZ	Enez	0.80	297	ePg	Pg	03 33 04.8	-0.3
EZN	Ezine	0.80	227	ePG	Pg	03 33 04.0	-1.1
EZN	Ezine	0.80	227	ePg	Pg	03 33 04.0	-1.1
BOZC	Bozcaada	0.95	237	i P	Pg	03 33 07.2	-0.8
BOZC				i S	Sg	03 33 20.7	+0.3
BALB	Balikesir	0.95	140	ePG	Pg	03 33 07.2	-0.7
BALB	Balikesir	0.95	140	ePg	Pg	03 33 07.3	-0.7
AYVA	Ayvalik	1.10	196	eP	Pb	03 33 10.5	-0.2
AYVA				i S	Sn	03 33 26.3	+0.1
AYVA	Ayvalik	1.10	196	eP	Pb	03 33 10.5	-0.2
AYVA				i S	Sn	03 33 26.3	+0.1
DURS	Dursunbey	1.32	125	i P	Pn	03 33 14.6	+0.6
DURS				i S	Sg	03 33 33.3	+1.2
DURS	Dursunbey	1.32	125	i P	Pn	03 33 14.6	+0.6
DURS				i S	Sg	03 33 33.3	+1.2
ARMT	Armutlu	1.37	81	ePN	Pn	03 33 14.5	-0.2
ARMT	Armutlu	1.37	81	ePn	Pn	03 33 14.5	-0.2
MDNY	Mudanya-Bursa	1.38	90	ePN	Pn	03 33 14.5	-0.2
MDNY	Mudanya-Bursa	1.38	90	ePn	Pn	03 33 14.5	-0.2
CTKS	Kestanelik-??a	1.38	51	ePN	Pn	03 33 14.3	-0.5
CTKS	Kestanelik-??a	1.38	51	ePn	Pn	03 33 14.3	-0.5
EDRB	Edirne	1.50	350	ePN	Pn	03 33 17.1	+0.6
EDRB	Edirne	1.50	350	ePn	Pn	03 33 17.1	+0.6
BGKT	Bogazkoy	1.52	57	ePN	Pn	03 33 16.4	-0.2
BGKT	Bogazkoy	1.52	57	ePn	Pn	03 33 16.5	-0.2
GEMT	Gemlik	1.61	87	ePN	Pn	03 33 17.9	-0.1
GEMT	Gemlik	1.61	87	ePn	Pn	03 33 17.9	-0.1
TVSB	Tavsanli	2.05	116	ePN	Pn	03 33 24.2	+0.2
TVSB	Tavsanli	2.05	116	ePn	Pn	03 33 24.3	+0.2

*IDC **02** 03:52:19.9±0.9, 41°.14N×117°.21W, h0km, mb2.4/1, mb1 3.1/4, mb1mx3.0/27, mbtmp2.8/4, ML3.4/3, MS3.1/1, Ms1 3.1/1, ms1mx2.5/5, Error ellipse: s-maj=11.3km s-min=8.3km az=126.0*
*NEIC **02** 03:52:20.4, 41°.06N×117°.14W, h5km, ML3.8(REN), After REN.*
ISC 02 03:52:19.5±1.1**, 41°.06N**±0°.02×**117°.09W**±0°.02**, h1**km±9km**, n61, σ1ˢ.32**/134**, 10C-11D, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMN	Battle Mountai	0.63	189	eP	Pg	03 52 32.0	+0.4
BMN				eS	Sg	03 52 40.5	+0.7
ELK	Elko	1.44	102	ePn	Pn	03 52 44.3	-2.6
ELK				eSn	Sg	03 53 03.0	-2.6
MFID	Camas Ranch	2.54	21	ePn	Pn	03 53 00.6	-1.3
MFID				eSn	Sn	03 53 34.2	+0.7
MFID	Camas Ranch	2.54	21	⇑P	Pn	03 53 02.1	+0.2
	baz=2.5						
MFID				⇑Sb	Sn	03 53 34.8	+1.3
	baz=2.5						
MOD	Modoc	2.56	290	ePn	Pn	03 53 01.5	-0.8
MOD				ePg	Pg	03 53 10.5	+1.9
MOD				eSn	Sn	03 53 33.3	-0.8
MOD				eSg	Sg	03 53 43.1	+1.4
WCN	Washoe City	2.69	230	ePn	Pn	03 53 03.1	-1.0
WCN				ePg	Pg	03 53 10.6	-0.5
WCN				eSg	Sg	03 53 46.1	+0.1
NV11	Mina Array Sit	2.75	198	ePn	Pn	03 53 04.3	-0.5
NV11				ePg	Pg	03 53 13.3	+1.2
NV11				eS	Sg	03 53 47.7	-0.1
NVAR	Mina Array Bea	2.79	200	Pn	Pn	03 53 05.0	-0.5
NVAR				Pg	Pg	03 53 13.8	+0.9
NVAR				Lg	Lg	03 53 49.2	
NVAR	Mina Array Bea	2.79	200	Pn	Pn	03 53 05.0	-0.5
	6.8nm,0.3s,baz=16,slow=13,SNR=116						
NVAR				Pg	Pg	03 53 13.8	+0.9
	24nm,0.3s,baz=19,slow=18,SNR=62						
NVAR				Lg	Lg	03 53 49.2	
	14nm,0.3s,baz=30,slow=12,SNR=4.5						
R11A	Troy Canyon, C	2.94	156	⇓P	Pn	03 53 06.8	-0.8
	baz=3.0						
I12A	Atlanta	3.10	27	⇓P	Pn	03 53 08.9	-0.8
	baz=3.1						
I12A				⇓Sb	Sb	03 53 51.8	-2.0
	baz=3.1						
J13A	Cove Ranch, Pi	3.19	42	⇑P	Pn	03 53 09.5	-1.4
	baz=3.1						
HLID	Hailey	3.19	38	ePn	Pn	03 53 09.9	-1.2
HLID				ePg	Pg	03 53 22.2	+1.5
HLID				eSn	Sn	03 53 52.0	+2.2
HLID	Hailey	3.19	38	⇓P	Pn	03 53 09.8	-1.2
	baz=3.2						
HLID				⇑Sb	Sb	03 53 54.5	-2.2
	baz=3.2						
K14A	Jones Ranch, D	3.28	62	⇓P	Pn	03 53 10.1	-2.1
	baz=3.2						
K14A				⇓Sb	Sb	03 53 57.9	-1.1
	baz=3.2						
HVU	Hansel Valley	3.32	76	ePn	Pn	03 53 12.2	-0.5
HVU				ePg	Pg	03 53 24.5	+1.4
HVU				eSn	Sn	03 53 53.7	+0.7
DUG	Dugway	3.37	103	ePn	Pn	03 53 12.2	-1.1
DUG				ePg	Pg	03 53 24.7	+0.7
DUG				eSn	Sb	03 53 58.0	-3.5
DUG	Dugway	3.37	103	⇑P	Pn	03 53 11.8	-1.6
	baz=3.3						
DUG				⇓Sb	Sb	03 54 02.7	+1.2
	baz=3.3						
N15A	Stansbury Isla	3.46	91	⇓Sb	Sb	03 54 05.4	+1.1
	baz=3.4						
J14A	Carey	3.49	48	⇓P	Pn	03 53 13.3	-1.8
	baz=3.4						
J14A				⇑Sb	Sb	03 54 03.9	-1.2
	baz=3.4						
M15A	Larsen Ranch,	3.52	82	⇓Sb	Sb	03 54 06.3	+0.3
	baz=3.5						
I13A	Wildhorse Cree	3.60	37	⇑P	Pn	03 53 15.6	-1.1
	baz=3.6						
I13A				⇓Sb	Sb	03 54 06.7	-1.7
	baz=3.6						
BMO	Blue Mountains	3.80	358	ePn	Pn	03 53 20.2	+1.0
BMO				ePg	Pg	03 53 33.0	+0.8
BMO				eSn	Sb	03 54 10.0	-3.9
BMO				eSg	Sg	03 54 21.3	-0.1
H12A	Diamond D Ranc	3.86	24	⇑Sb	Sb	03 54 14.1	-1.6
	baz=3.8						
CMB	Columbia Colle	3.95	221	ePn	Pn	03 53 21.6	+0.3
CMB				ePg	Pg	03 53 35.3	+0.1
CMB				eSn	Sn	03 54 08.5	+0.2
CMB				eSg	Sg	03 54 25.5	-0.9
H13A	Challis	4.08	30	⇑Sb	Sb	03 54 20.5	-1.5
	baz=4.0						
WDC	Whiskeytown Da	4.17	265	ePn	Pn	03 53 22.8	-1.4
WDC				ePg	Pg	03 53 39.0	-0.3
WDC				eSn	Sn	03 54 12.2	-1.3
WDC				eSg	Sg	03 54 31.3	-2.0
J15A	Blackfoot	4.17	54	⇑P	Pn	03 53 23.5	-1.0
	baz=4.1						
HWUT	Hardware Ranch	4.20	81	ePn	Pn	03 53 25.7	+0.9
HWUT				ePg	Pg	03 53 38.9	-1.0
HWUT				eSg	Sg	03 54 36.2	+2.0
YBH	Yreka Blue Hor	4.28	281	Pn	Pn	03 53 25.2	-0.6
YBH				Pg	Pg	03 53 40.9	-0.7
YBH				Lg	Lg	03 54 34.9	
YBH	Yreka Blue Hor	4.28	281	Pn	Pn	03 53 25.3	-0.6
	0.3nm,0.3s,baz=98,slow=13,SNR=5.6						
YBH				Pg	Pg	03 53 40.9	-0.7
	0.5nm,0.3s,baz=84,slow=11,SNR=9.9						
YBH				Lg	Lg	03 54 34.9	
	0.8nm,0.3s,baz=200,slow=7.3,SNR=3.9						
MPU	Maple Canyon	4.29	102	ePn	Pn	03 53 26.5	+0.5
MPU				ePg	Pg	03 53 40.9	-0.7
MPU				eSg	Sg	03 54 33.5	-3.7
JLU	Jordanelle	4.30	94	ePn	Pn	03 53 25.7	-0.6
JLU				ePg	Pb	03 53 38.7	+2.6
ARUT	Antelope Range	4.32	138	ePn	Pn	03 53 26.5	0.0
ARUT				ePg	Pg	03 53 41.4	-0.8
ARUT				eSg	Sg	03 54 37.9	-0.3
CCUT	Cedar City	4.54	139	ePn	Pn	03 53 30.3	+0.8
CCUT				ePg	Pg	03 53 45.1	-1.4
CCUT				eSg	Sg	03 54 46.0	+0.7
MVU	Marysvale	4.54	123	ePn	Pn	03 53 30.1	+0.5
MVU				ePg	Pg	03 53 46.7	+0.2
MVU				Sn	Sn	03 54 23.6	+0.5
MVU				eSg	Sg	03 54 46.4	+1.0
MSU	Marysvale	4.56	122	ePn	Pn	03 53 30.3	+0.5
MSU				ePg	Pg	03 53 46.8	0.0
MSU				eSg	Sg	03 54 46.5	+0.5
HUMO	Hull Mountain	4.65	291	ePn	Pn	03 53 29.5	-1.4
SHPR	Sheep Range	4.79	161	ePg	Pg	03 53 50.3	-1.0
RRI2	Red Ridge	4.86	60	ePn	Pn	03 53 33.7	-0.3
RRI2				ePg	Pb	03 53 46.5	+1.0
RRI2				eSn	Sn	03 54 31.0	0.0
RRI2				eSg	Sg	03 54 56.3	+0.8
MCMT	McKenzie Canyo	4.89	38	ePn	Pn	03 53 34.9	+0.6
MCMT				ePg	Pg	03 53 52.1	-1.0
MCMT				eSn	Sn	03 54 30.7	-0.9
MCMT				eSg	Sg	03 54 54.0	-2.5
DCID1	Drake Creek	5.06	58	ePn	Pn	03 53 38.0	+1.4
	8.2nm,0.8s						
DCID1				ePg	Pg	03 53 56.1	-0.3
DCID1				eSg	Sg	03 55 00.9	-1.1
TPAW	Teton Pass	5.16	60	ePn	Pn	03 53 38.6	+0.5
TPAW				eSg	Sg	03 55 05.3	0.0
SNOW	Snow King Moun	5.28	61	ePn	Pn	03 53 39.8	+0.1
IMW	Indian Meadow	5.36	56	ePn	Pn	03 53 41.5	+0.7
IMW				ePg	Pg	03 54 03.0	+0.8
IMW				Sg	Sg	03 55 13.8	+2.2
SRU	San Rafael	5.40	109	ePn	Pn	03 53 41.5	+0.2
	141nm,0.6s						
SRU				ePg	Pg	03 54 02.9	0.0
SRU				eSg	Sb	03 55 06.3	+6.2
DLMT	Dillon	5.41	36	ePn	Pn	03 53 42.7	+1.3
DLMT				ePg	Pg	03 54 04.7	+1.6
MOOW	Moose Ponds	5.41	58	ePn	Pn	03 53 41.7	+0.1
MOOW				ePg	Pg	03 54 01.9	-1.3
MOOW				eSg	Sg	03 55 15.0	+1.7
LOHW	Long Hollow	5.44	60	ePn	Pn	03 53 44.2	+2.3
LOHW				eSg	Sg	03 55 16.4	+2.1
ISA	Isabella	5.50	192	ePn	Pn	03 53 42.7	+0.2
	5.7nm,0.5s						
ISA				ePg	Pg	03 54 07.0	+2.3
ISA				eSg	Sg	03 55 16.0	0.0
GSC	Goldstone	5.75	178	ePn	Pn	03 53 44.9	-1.2
GSC				ePg	Pg	03 54 08.8	-0.9
GSC				eSg	Sg	03 55 24.2	0.0
PDAR	Pinedale Array	5.87	71	Pn	Pn	03 53 51.6	+3.7
PDAR				Lg	Lg	03 55 30.1	
PDAR	Pinedale Array	5.87	71	Pn	Pn	03 53 51.6	+3.7
	0.1nm,0.3s,baz=230,slow=11,SNR=6.8						
PDAR				Lg	Lg	03 55 30.1	
	0.2nm,0.3s,baz=203,slow=24,SNR=4.3						
LKWY	Lake	6.04	52	ePn	Pn	03 53 50.7	+0.5
	4.1nm,0.8s						
LKWY				ePg	Pg	03 54 15.6	+0.4
LKWY				Sn	Sn	03 55 01.9	+1.8
LDFC	Landfair	6.17	165	ePn	Pn	03 53 53.1	+1.2
	39nm,0.7s						
LDFC				ePg	Pg	03 54 15.8	-2.0
LDFC				eSg	Sg	03 55 37.2	-0.5
MSO	Missoula	6.20	20	ePn	Pn	03 53 53.0	+0.8
MSO				eSg	Sg	03 55 39.2	+0.6
WUAZ	Wupatki	7.13	139	ePn	Pn	03 54 06.3	+1.2
WUAZ				ePg	Pg	03 54 33.4	-2.6
WUAZ				Sg	Sg	03 56 06.1	-2.3
NEW	Newport	7.21	360	Lg	Lg	03 56 06.2	
	0.1nm,0.3s,baz=290,slow=19,SNR=3.9						
BBB	Bella Bella	13.44	330	LR	LR	04 01 10.9	
	comp=Z,80nm,19.4s,baz=105,slow=40						
YKA	Yellowknife Ar	21.52	3	P	P	03 57 08.9	-0.7
YKA	Yellowknife Ar	21.52	3	P	P	03 57 08.9	-0.7
	0.1nm,0.4s,baz=186,slow=10,SNR=4.2						

*ISCJB **02** 03:59:21.8±0.3, 40°.57N±0°.01×111°.52W±0°.02, h4km±2km, Error ellipse: s-maj=2.3km s-min=1.9km az=169.8*
*NEIC **02** 03:59:22.0, 40°.58N×111°.51W, h8km, ML2.5(SLC), After SLC.*
NEIC Felt [II] at Salt Lake City. Also felt at Morgan, Park City and Sandy.
ISC 02 03:59:22.3±0.8**, 40°.58N**±0°.01×**111°.51W**±0°.02**, h8**km±6km**, n61, σ0ˢ.88**/107**, 30C-30D, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JLU	Jordanelle	0.05	67	ePg	Pg	03 59 24.0	-0.3
JLU				eS	Sg	03 59 25.5	-0.3
CTU	Camp Tracy	0.21	302	ePg	Pg	03 59 26.9	+0.2
CTU				eS	Sg	03 59 30.0	+0.4
DAU	Daniels Canyon	0.26	131	ePg	Pg	03 59 27.5	-0.1
N16A	Rees Ranch, Co	0.31	11	⇑P	Pg	03 59 29.0	+0.4
	baz=0.3						
N16A				⇑S	Sg	03 59 33.3	+0.6
	baz=0.3						
O16A	Springville	0.38	179	⇑P	Pg	03 59 29.6	-0.2
	baz=0.4						
O16A				⇑S	Sg	03 59 34.7	0.0
	baz=0.4						
MPU	Maple Canyon	0.57	189	ePg	Pg	03 59 33.2	-0.2
MPU				eS	Sg	03 59 39.2	-1.8
N17A	Moffit Pass	0.63	55	⇑P	Pg	03 59 34.1	-0.4
	baz=0.6,SNR=132						
N17A				⇓S	Sg	03 59 43.2	+0.4
	baz=0.6						
O17A	Robinson Place	0.71	123	P	Pg	03 59 35.8	-0.2
	baz=0.7,SNR=94						
O17A				⇑S	Sg	03 59 45.2	0.0
	baz=0.7						
O15A	The Old Anders	0.79	248	P	Pg	03 59 37.9	+0.3
	baz=0.8,SNR=89						
N15A	Stansbury Isla	0.82	292	⇓P	Pg	03 59 38.0	-0.2
	baz=0.8,SNR=183						
N15A				⇑S	Sg	03 59 49.4	+0.4
	baz=0.8						
P16A	Fountain Green	0.98	187	⇑P	Pg	03 59 40.8	-0.4
	baz=1.0,SNR=20						
P16A				⇑S	Sg	03 59 54.3	+0.4
	baz=1.0						
HWUT	Hardware Ranch	1.02	358	ePg	Pg	03 59 41.0	-1.1
DUG	Dugway	1.06	249	ePg	Pg	03 59 41.9	-0.9
DUG				eS	Sg	03 59 55.1	-1.5
DUG	Dugway	1.06	249	P	Pg	03 59 42.2	-0.6
	baz=1.1,SNR=315						
DUG				⇓S	Sb	03 59 57.4	+0.1
	baz=1.1						
M17A	Scullys Gap (B	1.10	35	⇑P	Pg	03 59 42.6	-0.8
	baz=1.1,SNR=47						
M17A				⇓S	Sg	03 59 57.4	-0.3
	baz=1.1						
M15A	Larsen Ranch,	1.13	322	P	Pg	03 59 43.4	-0.6
	baz=1.1,SNR=102						
M15A				⇓S	Sg	03 59 57.9	-0.8
	baz=1.1						
P15A	Leamington	1.17	210	⇓P	Pg	03 59 43.9	-0.9
	baz=1.2						
P15A				⇓S	Sg	03 59 59.1	-0.8
	baz=1.2						
O18A	Roosevelt	1.19	105	⇓P	Pb	03 59 44.5	-0.8
	baz=1.2,SNR=20						
O18A				⇓S	Sg	04 00 00.2	-0.5
	baz=1.2						
P17A	Butcher Ranch,	1.26	152	⇓P	Pn	03 59 45.0	-1.4
	baz=1.3						
P17A				⇑S	Sb	04 00 01.8	-1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=1.3						
TMUT	**Trail Mountain**	**1.30**	**170**	*e*Pn	**Pn**	**03 59 45.8**	**-1.4**
TMUT				*e*S	**Sb**	**04 00 05.0**	**+0.7**
M18A	**Lyman**	**1.38**	**52**	⇓Pb	**Pn**	**03 59 47.7**	**-0.5**
	baz=1.4,SNR=12						
M18A				⇓Sb	**Sb**	**04 00 05.9**	**-0.6**
	baz=1.4						
L16A	**Fish Haven**	**1.43**	**2**	⇑Pb	**Pn**	**03 59 49.0**	**+0.1**
	baz=1.4,SNR=18						
N18A	**Larsen Ranch,**	**1.45**	**74**	⇓P	**Pn**	**03 59 48.0**	**-1.1**
	baz=1.4,SNR=41						
N18A				⇑S	**Sn**	**04 00 06.6**	**-1.9**
	baz=1.4						
HVU	**Hansel Valley**	**1.53**	**322**	*e*Pn	**Pn**	**03 59 49.0**	**-1.2**
HVU				*e*S	**Sn**	**04 00 10.1**	**-0.2**
L15A	**Malad City**	**1.57**	**335**	⇑P	**Pn**	**03 59 49.9**	**-0.8**
	baz=1.6,SNR=34						
L15A				⇓Sb	**Sb**	**04 00 11.6**	**-0.1**
	baz=1.6						
L17A	**Cokeville**	**1.59**	**17**	⇓Pb	**Pn**	**03 59 51.1**	**+0.1**
	baz=1.6						
L17A				⇓Sb	**Sn**	**04 00 12.2**	**+0.3**
	baz=1.6						
SRU	**San Rafael**	**1.66**	**152**	*e*Pn	**Pn**	**03 59 52.1**	**+0.2**
SRU				*e*S	**Sn**	**04 00 13.4**	**0.0**
SRU	**San Rafael**	**1.66**	**152**	⇓Pb	**Pn**	**03 59 52.0**	**+0.1**
	baz=1.7,SNR=22						
SRU				⇑Sb	**Sn**	**04 00 13.9**	**+0.4**
	baz=1.7						
Q16A	**Castle Valley**	**1.68**	**171**	⇓Pb	**Pn**	**03 59 52.3**	**0.0**
	baz=1.7,SNR=17						
Q16A				⇓Sb	**Sn**	**04 00 14.7**	**+0.6**
	baz=1.7						
L18A	**Fontenelle, Gr**	**1.74**	**39**	⇓Sb	**Sb**	**04 00 16.7**	**-0.2**
	baz=1.7						
N19A	**John Jarvie Ra**	**1.80**	**79**	⇑Pb	**Pn**	**03 59 53.9**	**0.0**
	baz=1.8,SNR=79						
N19A				⇓S	**Sn**	**04 00 16.5**	**-0.6**
	baz=1.8						
O19A	**Miners Draw (B**	**1.85**	**98**	⇑Pb	**Pn**	**03 59 55.3**	**+0.8**
	baz=1.8						
O19A				⇓Sb	**Sn**	**04 00 19.2**	**+1.0**
	baz=1.8						
L14A	**Malta**	**1.95**	**319**	⇑P	**Pn**	**03 59 55.0**	**-0.9**
	baz=1.9,SNR=9.4						
L14A				⇓Sb	**Sb**	**04 00 22.1**	**-0.7**
	baz=1.9						
M19A	**Rock Springs**	**2.01**	**62**	⇓Pb	**Pn**	**03 59 58.1**	**+1.4**
	baz=2.0						
M19A				⇑Sb	**Sb**	**04 00 24.3**	**-0.2**
	baz=2.0						
MSU	**Marysvale**	**2.13**	**194**	*e*Pn	**Pn**	**03 59 58.5**	**+0.1**
MSU				*e*S	**Sb**	**04 00 27.0**	**-1.0**
MVU	**Marysvale**	**2.14**	**195**	*e*Pn	**Pn**	**03 59 59.1**	**+0.4**
MVU				*e*S	**Sn**	**04 00 27.2**	**+1.6**
P19A	**Cripple Cowboy**	**2.16**	**115**	⇑Pb	**Pn**	**04 00 00.7**	**+1.8**
	baz=2.2						
P19A				⇓Sb	**Sb**	**04 00 28.6**	**-0.3**
	baz=2.2						
AHID	**Auburn Hatcher**	**2.20**	**8**	*e*Pn	**Pn**	**03 59 59.6**	**+0.1**
AHID				*e*S	**Sb**	**04 00 31.3**	**+1.2**
K17A	**Gardner Place,**	**2.21**	**11**	⇓Sb	**Sb**	**04 00 31.7**	**+1.3**
	baz=2.2						
L19A	**Farson**	**2.22**	**46**	⇑P	**Pn**	**04 00 00.2**	**+0.4**
	baz=2.2,SNR=33						
L19A				⇓Sb	**Sb**	**04 00 31.1**	**+0.4**
	baz=2.2						
K15A	**Arbon**	**2.24**	**340**	⇑Sb	**Sb**	**04 00 31.5**	**+0.5**
	baz=2.2						
K16A	**Soda Springs**	**2.25**	**359**	⇓Sb	**Sb**	**04 00 33.0**	**+1.5**
	baz=2.3						
K14A	**Jones Ranch, D**	**2.33**	**328**	⇑Sb	**Sb**	**04 00 34.3**	**+0.7**
	baz=2.3						
K18A	**Toltan Ranch,**	**2.33**	**28**	⇑P	**Pn**	**04 00 01.4**	**+0.2**
	baz=2.3,SNR=22						
K18A				⇑Sb	**Sb**	**04 00 34.8**	**+0.9**
	baz=2.3						
Q19A	**Hogan Spring (**	**2.38**	**132**	⇑Sb	**Sb**	**04 00 34.8**	**-0.3**
	baz=2.4						
N20A	**Spence Gulch,**	**2.48**	**83**	⇑Sb	**Sb**	**04 00 38.8**	**+0.5**
	baz=2.5						
O20A	**White River Ci**	**2.54**	**99**	⇑Sb	**Sb**	**04 00 39.8**	**0.0**
	baz=2.5						
P20A	**De Beque**	**2.63**	**113**	⇑Sb	**Sb**	**04 00 42.3**	**-0.1**
	baz=2.6						
RRI2	**Red Ridge**	**2.77**	**3**	*e*Pn	**Pn**	**04 00 07.6**	**+0.3**
RRI2				*e*S	**Sn**	**04 00 43.8**	**+2.8**
ELK	**Elko**	**2.84**	**274**	*e*Pn	**Pn**	**04 00 07.9**	**-0.4**
ELK				*e*Pg	**Pb**	**04 00 14.7**	**+1.3**
ELK				*e*S	**Sb**	**04 00 49.2**	**+0.8**
SNOW	**Snow King Moun**	**2.93**	**11**	*e*Pn	**Pn**	**04 00 09.6**	**0.0**
SNOW				*e*S	**Sg**	**04 00 54.7**	**-1.9**
TPAW	**Teton Pass**	**2.94**	**8**	*e*Pn	**Pn**	**04 00 09.3**	**-0.3**
Q20A	**Ridgley Place,**	**2.97**	**122**	⇑P	**Pn**	**04 00 10.1**	**+0.2**
	baz=3.0,SNR=12						
PV04	**Paradox Valley**	**2.98**	**136**	*e*Pn	**Pn**	**04 00 10.8**	**+0.8**
PV04				*e*S	**Sb**	**04 00 53.1**	**+0.8**
K19A	**Absolon Red Bu**	**3.00**	**41**	⇓P	**Pn**	**04 00 10.3**	**-0.1**
	baz=3.0						
LOHW	**Long Hollow**	**3.10**	**12**	*e*Pn	**Pn**	**04 00 11.7**	**-0.2**
LOHW				*e*Pg	**Pg**	**04 00 20.5**	**-1.3**
LOHW				*e*S	**Sg**	**04 01 01.4**	**-0.6**
K20A	**Yellowstone Ra**	**3.16**	**48**	⇓P	**Pn**	**04 00 12.2**	**-0.3**
	baz=3.1,SNR=7.3						
MOOW	**Moose Ponds**	**3.22**	**10**	*e*Pn	**Pn**	**04 00 13.6**	**+0.2**
MOOW				*e*S	**Sg**	**04 01 03.6**	**-2.1**
IMW	**Indian Meadow**	**3.34**	**7**	*e*Pn	**Pn**	**04 00 15.5**	**+0.4**
IMW				*e*S	**Sg**	**04 01 09.5**	**-0.1**
PV01	**Paradox Valley**	**3.34**	**136**	*e*Pn	**Pn**	**04 00 16.1**	**+0.9**
PV01				*e*S	**Sb**	**04 01 05.4**	**+2.4**
SMCO	**Snowmass**	**3.76**	**110**	*e*Pn	**Pn**	**04 00 23.0**	**+1.9**
SMCO				*e*S	**Sb**	**04 01 15.5**	**+0.2**

IDC 02 04:02:07.0±1.0**,55°.73S×26°.66W,h0km,mb3.9**/4**, mb1 4.1**/4**,mb1mx3.9**/13**,mbtmp3.9**/4**,Error ellipse: s-maj=33.3km s-min=30.1km az=95.0,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**17.20**	**161**	*e*Pn	P	04 06 09.3	-0.6
VNA2	**Neumayer--Watz**	**17.38**	**159**	*e*Pn	P	04 06 11.8	-0.1
	baz=324,slow=15						
BOSA	**Boshof**	**45.60**	**76**	P	P	04 10 29.0	+0.1
	1.7nm,0.9s,baz=153,slow=11,SNR=3.0						
VNDA	**Vanda**	**46.91**	**183**	P	P	04 10 38.2	-0.2
	2.0nm,0.7s,baz=192,slow=6.5,SNR=12						
LPAZ	**La Paz**	**50.44**	**304**	P	P	04 11 07.0	0.0
	1.0nm,0.5s,baz=106,slow=7.4,SNR=11						
TORD	**Torodi Ar. Bea**	**72.63**	**29**	P	P	04 13 36.0	-0.1
	0.3nm,0.6s,baz=194,slow=6.1,SNR=11						
YKA	**Yellowknife Ar**	**136.13**	**318**	PKP	PKPdf	04 21 29.6	+1.1
	0.1nm,0.4s,baz=133,slow=2.4,SNR=4.2						
ILAR	**Eielson Array**	**150.12**	**312**	PKPbc	PKPbc	04 21 57.2	-0.9
	0.6nm,0.6s,baz=128,slow=2.1,SNR=17						

IDC 02 04:06:06.3±1.3**,43°.21N×133°.68E,h450**km±6km**,mb2.7**/5**, mb1 2.8**/8**,mb1mx2.7**/26**,mbtmp2.8**/8**,Error ellipse: s-maj=31.4km s-min=14.7km az=168.0,Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USRK	**Ussuriysk Arra**	**1.57**	**310**	P	P	04 07 05.0	+0.5
	0.8nm,0.3s,baz=116,slow=3.0,SNR=21						
USRK				S	S	04 07 52.3	+0.4
	0.1nm,0.3s,baz=145,slow=14,SNR=2.3						
ASAJ	**Asahikawa**	**6.53**	**79**	P	P	04 07 45.0	-1.0
	2.5nm,0.3s,baz=276,slow=7.8,SNR=12						
KSRS	**Korea Array**	**7.24**	**219**	P	P	04 07 54.2	+0.6
	0.8nm,0.3s,baz=37,slow=11,SNR=20						
SONM	**Songino Array**	**19.62**	**293**	P	P	04 10 04.8	+0.6
	0.1nm,0.3s,baz=86,slow=8.4,SNR=3.5						
ZALV	**Zalesovo Beam**	**33.42**	**306**	P	P	04 12 04.6	-1.2
	0.7nm,0.3s,baz=72,slow=9.8,SNR=5.0						
MKAR	**Makanchi Array**	**35.98**	**294**	P	P	04 12 27.2	-0.3
	0.9nm,0.6s,baz=82,slow=10.0,SNR=14						
ILAR	**Eielson Array**	**47.63**	**35**	P	P	04 13 58.9	-0.8
	0.2nm,0.5s,baz=289,slow=5.6,SNR=3.4						
INK	**Inuvik**	**51.68**	**28**	P	P	04 14 30.4	+0.8
	0.2nm,0.3s,baz=312,slow=5.7,SNR=5.7						
YKA	**Yellowknife Ar**	**61.40**	**29**	P	P	04 15 37.2	+0.3
	0.1nm,0.4s,baz=313,slow=6.6,SNR=5.0						

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*AUST **02** 04:13:45.6±4.2,3°.27S×142°.17E,h25km,Error ellipse: s-maj=2.2km s-min=0.9km az=15.0*
*IDC **02** 04:13:53.0±1.2,4°.30S×142°.74E,h54km±7km,mb3.7/10, mb1 3.9/11,mb1mx3.9/19,mbtmp3.8/11,MS3.5/1, Ms1 3.5/1,ms1mx2.5/24,Error ellipse: s-maj=36.6km s-min=11.8km az=106.0*
*ISCJB **02** 04:13:57.4±0.6,4°.30S±0°.07×142°.6E±0°.1,h105km, mb3.8/9,Error ellipse: s-maj=14.7km s-min=9.3km az=3.5*
*DJA **02** 04:14:01.1±1.0,5°S±11°×14°2E±°,h62km±12km,M4.8/6, mb4.5/6,MLv4.9/2*
ISC 02 04:13:59.5±0.7**,4°.21S**±0°.08**×142°.7E**±0°.1**,h105km,n22, σ1s.82**/22**,mb3.9**/10**,New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.83**	**139**	P	**Pn**	**04 15 36.1**	**-1.0**
	42nm,0.8s,0.2nm						
PMG	**Port Moresby**	**6.83**	**139**	P	**Pn**	**04 15 35.3**	**-1.8**
	3.1nm,0.3s,baz=340,slow=6.7,SNR=7.1						
COEN	**Coen**	**9.70**	**177**	P	**Pn**	**04 16 15.1**	**-1.0**
	baz=11,SNR=21						
KDU	**Kakadu**	**13.12**	**229**	P	Pn	04 16 57.0	-4.9
	baz=13,SNR=35						
MTN	**Manton Dam**	**14.25**	**232**	P	Pn	04 17 12.1	-4.6
	baz=14,SNR=17						
QIS	**Mount Isa**	**16.52**	**190**	P	**P**	**04 17 47.7**	**+1.9**
	baz=18,SNR=5.5						
WRA	**Warramunga Arr**	**17.61**	**207**	P	**P**	**04 17 56.0**	**-1.9**
	1.2nm,0.3s,baz=26,slow=12,SNR=72						
WRA				S	Sn	04 21 00.2	-15
	0.2nm,0.3s,baz=27,slow=22,SNR=3.7						
ASAR	**Alice Springs**	**21.11**	**203**	P	**P**	**04 18 34.5**	**-1.4**
	5.3nm,0.7s,baz=34,slow=12,SNR=36						
ASAR				S	**S**	**04 22 24.2**	**-0.8**
	0.9nm,0.6s,baz=16,slow=28,SNR=3.3						
ASAR				LR	LR	04 28 25.7	
	comp=Z,116nm,18.0s,baz=151,slow=41						
FITZ	**Fitzroy Crossi**	**21.63**	**229**	P	**P**	**04 18 39.4**	**-2.0**
	12nm,0.7s,baz=55,slow=8.0,SNR=31						
FITZ	**Fitzroy Crossi**	**21.63**	**229**	P	**P**	**04 18 40.7**	**-0.8**
	baz=22,SNR=20						
QLP	**Quilpie**	**22.30**	**176**	P	**P**	**04 18 50.8**	**+2.4**
	baz=23,SNR=3.9						
BKSI	**Bulukumba**	**22.48**	**266**	P	**P**	**04 18 53.6**	**+3.2**
KAPI	**Kappang**	**22.84**	**267**	P	**P**	**04 18 52.8**	**-1.3**
	3.8nm,0.6s,baz=108,slow=16,SNR=2.7						
RMQ	**Roma**	**22.91**	**166**	P	**P**	**04 18 59.1**	**+4.6**
	baz=24,SNR=5.1						
MEEK	**Meekatharra**	**32.03**	**223**	P	**P**	**04 20 16.5**	**+0.1**
	baz=32,SNR=5.6						
KSRS	**Korea Array**	**43.66**	**343**	P	**P**	**04 21 53.2**	**-0.6**
	0.9nm,0.4s,baz=157,slow=8.3,SNR=4.6						
USRK	**Ussuriysk Arra**	**49.14**	**350**	P	**P**	**04 22 37.0**	**+0.5**
	2.3nm,0.7s,baz=205,slow=8.4,SNR=7.0						
SONM	**Songino Array**	**60.80**	**333**	P	**P**	**04 24 01.3**	**+0.6**
	0.3nm,0.6s,baz=145,slow=5.3,SNR=3.1						
MKAR	**Makanchi Array**	**73.39**	**321**	P	**P**	**04 25 20.1**	**-0.2**
	0.5nm,0.7s,baz=106,slow=7.8,SNR=5.9						
MKAR				pP	**PcP**	**04 25 36.2**	**+0.3**
	1.0nm,0.8s,baz=109,slow=6.8,SNR=6.0						
ZALV	**Zalesovo Beam**	**75.23**	**329**	P	**P**	**04 25 29.9**	**-0.7**
	0.6nm,0.6s,baz=101,slow=7.5,SNR=3.5						
BVAR	**Borovoye Array**	**82.80**	**325**	P	**P**	**04 26 10.3**	**-1.7**
	0.5nm,0.4s,baz=91,slow=7.4,SNR=4.2						
BVAR				pP	PcP	04 26 26.6	+10
	0.9nm,0.6s,baz=101,slow=7.7,SNR=2.5						
ILAR	**Eielson Array**	**85.58**	**24**	P	**P**	**04 26 25.8**	**-0.1**
	0.4nm,0.6s,baz=257,slow=4.5,SNR=10						
ILAR				pP	PcP	04 26 40.2	+12
	0.7nm,0.9s,baz=264,slow=5.0,SNR=5.3						

IDC 02 04:17:34.6±2.8**,9°.08S×158°.96E,h0km,mb3.8**/4**, mb1 4.0**/4**,mb1mx3.8**/17**,mbtmp3.8**/4**,Error ellipse: s-maj=97.2km s-min=34.4km az=135.0,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.12**	**243**	P	P	04 23 10.4	-0.2
	1.2nm,0.7s,baz=69,slow=9.8,SNR=3.3						
SONM	**Songino Array**	**73.22**	**326**	P	P	04 29 08.2	+0.5
	0.6nm,0.6s,baz=135,slow=6.4,SNR=4.4						
ILAR	**Eielson Array**	**83.90**	**20**	P	P	04 30 05.8	-0.3
	0.3nm,0.4s,baz=247,slow=5.2,SNR=15						
MKAR	**Makanchi Array**	**87.56**	**318**	P	P	04 30 24.7	0.0
	0.5nm,0.6s,baz=99,slow=5.9,SNR=7.5						

WEL 02 04:17:58.9±0.3**,37°.12S×177°.76E,h114**km±3km**,ML3.5**/4**, Error ellipse: s-maj=3.7km s-min=3.3km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.62**	**136**	PN	Pn	04 18 17.3	+0.3
MXZ				SN	Sn	04 18 30.4	-0.3
PUZ	**Puketiti**	**1.03**	**158**	PN	Pn	04 18 20.6	-0.2
PUZ				*e*SN	Sn	04 18 37.2	-0.1
MWZ	**Matawai**	**1.23**	**189**	PN	Pn	04 18 22.4	-0.5
MWZ				SN	Sn	04 18 41.5	+0.4
URZ	**Urewera**	**1.25**	**204**	PN	Pn	04 18 22.0	-1.1
URZ				*e*SN	Sn	04 18 41.4	0.0
TARZ	**Mount Tarawera**	**1.50**	**221**	*e*PN	Pn	04 18 26.2	+0.1
RAHZ	**Arahi**	**1.87**	**196**	*e*PN	Pn	04 18 30.3	-0.2
KNZ	**Kokohu**	**1.90**	**182**	PN	Pn	04 18 30.2	-0.6
MHGZ	**Mahia Peninsul**	**2.03**	**177**	PN	Pn	04 18 32.0	-0.5
NMHZ	**Naumai**	**2.12**	**201**	PN	Pn	04 18 34.1	+0.4
KRVZ	**Karewarewa**	**2.59**	**220**	PN	Pn	04 18 40.3	+0.5
OTVZ	**Oturere**	**2.63**	**218**	PN	Pn	04 18 40.4	+0.1
NGZ	**Ngauruhoe**	**2.67**	**219**	PN	Pn	04 18 41.1	+0.2
TWVZ	**Taurewa**	**2.68**	**223**	PN	Pn	04 18 41.7	+0.7
BHHZ	**Black Hill Sta**	**2.72**	**209**	*e*PN	Pn	04 18 40.4	-1.0
FWVZ	**Far West T-bar**	**2.75**	**219**	PN	Pn	04 18 42.0	-0.1
KAHZ	**Kahuranaki**	**2.76**	**194**	PN	Pn	04 18 41.4	-0.5
MOVZ	**Moawhango**	**2.78**	**214**	PN	Pn	04 18 41.4	-0.9
WNVZ	**Wahianoa**	**2.79**	**217**	PN	Pn	04 18 42.1	-0.4
MTVZ	**Mangateitei**	**2.90**	**218**	PN	Pn	04 18 43.0	-0.8
PXZ	**Pawanui**	**2.99**	**193**	PN	Pn	04 18 43.1	-1.8
PXZ				SN	Sn	04 19 17.8	-2.6
TSZ	**Takapari Road**	**3.26**	**205**	*e*PN	Pn	04 18 46.0	-2.5
PRHZ	**Porangahau**	**3.27**	**195**	PN	Pn	04 18 46.4	-2.1
BFZ	**Birch Farm**	**3.75**	**198**	*e*PN	Pn	04 18 52.7	-2.2
MRZ	**Mangatainoka R**	**3.93**	**205**	PN	Pn	04 18 54.5	-2.9
MRZ				*e*SN	Sn	04 19 37.8	-4.8
HOWZ	**Holdsworth Sta**	**4.16**	**204**	PN	Pn	04 18 56.7	-3.8
OGWZ	**Otaki Gorge**	**4.21**	**208**	PN	Pn	04 18 57.7	-3.4
KIW	**Kapiti Island**	**4.35**	**210**	PN	Pn	04 18 59.7	-3.4
MTW	**Mount Morrison**	**4.40**	**203**	PN	Pn	04 19 00.0	-3.7
CAW	**Cannon Point**	**4.50**	**207**	PN	Pn	04 19 01.4	-3.7
PLWZ	**Palliser**	**4.85**	**203**	PN	Pn	04 19 05.8	-4.1

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*GUC **02** 04:20:04.0±0.8,27°.49S×71°.13W,h40km±7km,ML4.9*
*NEIC **02** 04:20:04.0,27°.49S×71°.13W,h40km,mb4.8/48,After GUC.*
*ISCJB **02** 04:20:05.8±0.8,27°.49S±0°.03×70°.98W±0°.07,h32km±5km, mb4.7/63,MS4.2/7,Error ellipse: s-maj=9.9km s-min=4.1km az=169.9*
*BJI **02** 04:20:05.8,27°.50S×71°.00W,h10km,mB4.9/4,Ms5.4/4, Ms7 5.0/4*
*IDC **02** 04:20:06.9±0.6,27°.54S×71°.10W,h29km±3km,mb4.5/16, mb1 4.6/18,mb1mx4.5/22,mbtmp4.4/18,ML3.8/2,MS4.2/9, Ms1 4.1/9,ms1mx3.8/28,Error ellipse: s-maj=18.2km s-min=12.5km az=68.0*
ISC 02 04:20:06.3±0.5**,27°.49S**±0°.03**×71°.03W**±0°.06**,h27**km±3km**, h27km:pP-P,n527,**σ**0s.94**/568**,mb4.8**/62**,MS4.2**/7**, 172C-161D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDCH	**Caldera**	**0.46**	**24**	*e*P	**Pb**	**04 20 15.4**	**-0.5**
CDCH				*e*S	**Sn**	**04 20 23.9**	**-0.4**
CDCH	**Caldera**	**0.46**	**24**	*e*P	**Pb**	**04 20 15.4**	**-0.5**
CDCH				*e*S	**Sn**	**04 20 23.9**	**-0.4**
CPCH	**Copiapo**	**0.61**	**78**	*e*P	**Pb**	**04 20 17.8**	**-0.8**
CPCH				*e*S	**Sn**	**04 20 27.8**	**-0.5**
CPCH	**Copiapo**	**0.61**	**78**	*e*P	**Pb**	**04 20 17.8**	**-0.8**
CPCH				*e*S	**Sn**	**04 20 27.8**	**-0.5**
LCO	**Las Campanas**	**1.55**	**169**	⇑*i*P	**Pn**	**04 20 30.9**	**-1.5**
LCO				*e*S	**Sn**	**04 20 51.3**	**-0.4**
LCO	**Las Campanas**	**1.55**	**169**	⇑*i*P	**Pn**	**04 20 30.9**	**-1.5**
LCO				*e*S	**Sn**	**04 20 51.3**	**-0.4**
LCO				AML	AML	04 20 56.4	
	comp=N,17µm,0.7s						
TLL	**Tololo Astrono**	**2.68**	**176**	*e*P	**Pn**	**04 20 48.2**	**+0.3**
TLL				*e*S	**Sn**	**04 21 21.0**	**+1.3**
TLL	**Tololo Astrono**	**2.68**	**176**	*e*P	**Pn**	**04 20 48.2**	**+0.3**
TLL				*e*S	**Sn**	**04 21 21.0**	**+1.3**
TLL				AML	AML	04 21 31.9	
	comp=E,8µm,0.8s						
CMCH	**Combarbala**	**3.67**	**180**	*e*P	**Pn**	**04 20 59.6**	**-1.9**
CMCH				*e*S	**Sn**	**04 21 42.0**	**-1.9**
CMCH	**Combarbala**	**3.67**	**180**	*e*P	**Pn**	**04 20 59.6**	**-1.9**
CMCH				*e*S	**Sn**	**04 21 42.0**	**-1.9**
ANCH	**Antofagasta**	**3.83**	**9**	⇑*i*P	**Pn**	**04 21 01.3**	**-2.3**
ANCH				*e*S	**Sn**	**04 21 45.6**	**-2.0**
ANCH	**Antofagasta**	**3.83**	**9**	⇑*i*P	**Pn**	**04 21 01.3**	**-2.3**
ANCH				*e*S	**Sn**	**04 21 45.6**	**-2.0**
CHNG	**Los Chungos**	**4.40**	**185**	*e*P	**Pn**	**04 21 09.3**	**-2.1**
CHNG	**Los Chungos**	**4.40**	**185**	*e*P	**Pn**	**04 21 09.3**	**-2.1**
CFAA	**Coronel Fontan**	**4.77**	**150**	Pn	**Pn**	**04 21 18.3**	**+1.8**
CFAA				Sn	Sn	04 22 17.1	+6.2
CFAA	**Coronel Fontan**	**4.77**	**150**	Pn	**Pn**	**04 21 18.3**	**+1.8**
	comp=E,5.0nm,0.3s,baz=330,slow=12,SNR=208						
CFAA				Sn	Sn	04 22 17.1	+6.2
	comp=E,3.3nm,0.3s,baz=52,slow=17,SNR=5.5						
PEL	**Peldehue**	**5.65**	**177**	*e*P	**Pn**	**04 21 26.9**	**-1.6**
ARE	**Arequipa**	**10.98**	**358**	*e*P	Pn	04 22 38.0	-4.0
LPAZ	**La Paz**	**11.46**	**14**	*e*Pn	**Pn**	**04 22 47.2**	**-1.6**
	comp=E,16nm,0.6s						
LPAZ	**La Paz**	**11.46**	**14**	Pn	**Pn**	**04 22 47.4**	**-1.5**
	comp=E,2.4nm,0.3s,baz=192,slow=6.9,SNR=144						
TRQA	**Tornquist**	**12.99**	**146**	*e*Pn	**Pn**	**04 23 09.7**	**+0.5**
	comp=E,26nm,0.7s						
PLCA	**Paso Flores**	**13.22**	**178**	*e*Pn	**Pn**	**04 23 11.3**	**-1.0**
PLCA	**Paso Flores**	**13.22**	**178**	Pn	**Pn**	**04 23 11.5**	**-0.8**
	comp=E,0.1nm,0.3s,baz=346,slow=12,SNR=2.2						
PLCA				LR	LR	04 28 40.2	
	comp=E,1µm,18.4s,baz=350,slow=39						
SIV	**San Ignacio**	**14.70**	**41**	Pn	Pn	04 23 28.5	-4.1
SIV	**San Ignacio**	**14.70**	**41**	Pn	Pn	04 23 28.5	-4.1
	comp=E,0.9nm,0.3s,baz=267,slow=11,SNR=19						
SIV				LR	LR	04 30 19.7	
	comp=E,449nm,19.1s,slow=42						
SAML	**Samuel**	**19.87**	**23**	*e*P	**P**	**04 24 35.7**	**+0.2**
	comp=E,20nm,0.8s						
ATAH	**Atahualpa**	**21.41**	**340**	P	**P**	**04 24 54.6**	**+1.9**
ATAH	**Atahualpa**	**21.41**	**340**	P	**P**	**04 24 54.6**	**+1.9**
	comp=E,12nm,1.0s,baz=30,slow=8.1,SNR=2.8						
SPB	**Sao Paulo**	**21.63**	**85**	*e*P	**P**	**04 24 54.5**	**-0.1**
	comp=E,28nm,0.8s						
BDFB	**Brasilia**	**24.39**	**66**	P	**P**	**04 25 22.5**	**-0.1**
BDFB	**Brasilia**	**24.39**	**66**	P	**P**	**04 25 22.5**	**-0.1**
	comp=E,9.0nm,0.5s,baz=234,slow=11,SNR=30						
BDFB				LR	LR	04 36 10.1	
	comp=E,761nm,18.5s,baz=69,slow=39						
USHA	**Ushuaia**	**27.39**	**177**	LR	LR	04 37 00.0	
	comp=E,585nm,19.9s,baz=15,slow=37						
OTAV	**Otavalo**	**28.47**	**344**	*e*P	**P**	**04 26 02.1**	**+2.3**
	comp=E,59nm,1.4s						
ROSC	**El Rosal**	**32.31**	**354**	*e*P	**P**	**04 26 33.6**	**0.0**
ROSC	**El Rosal**	**32.31**	**354**	P	**P**	**04 26 33.2**	**-0.4**
	comp=E,8.5nm,0.9s,baz=271,slow=20,SNR=7.2						
RPN	**Rapa Nui**	**33.95**	**262**	LR	LR	04 36 45.6	
	comp=E,320nm,18.2s,baz=119,slow=30						
BCIP	**Isla Barro Col**	**37.42**	**346**	*e*P	**P**	**04 27 17.6**	**+0.3**
	comp=E,8.4nm,0.5s						
RCBR	**Riachuelo**	**39.72**	**64**	*e*P	**P**	**04 27 37.6**	**+0.8**
	comp=E,12nm,1.0s						
RCBR	**Riachuelo**	**39.72**	**64**	P	**P**	**04 27 38.4**	**+1.6**
	comp=E,4.3nm,0.8s,baz=229,slow=9.4,SNR=7.7						
JTS	**JuntasAbangare**	**39.91**	**338**	*e*P	**P**	**04 27 38.9**	**+0.7**
	comp=E,11nm,1.2s						
SJG	**San Juan**	**45.57**	**7**	*e*P	**P**	**04 28 22.5**	**-1.5**
	comp=E,16nm,0.7s						
VNA3	**Neumayer Olymp**	**55.10**	**160**	*e*P	**P**	**04 29 36.2**	**+0.6**
VNA2	**Neumayer--Watz**	**55.72**	**159**	*e*P	**P**	**04 29 40.6**	**+0.5**
	baz=293,slow=8.7						
VNA2	**Neumayer--Watz**	**55.72**	**159**	*e*PcP	**PcP**	**04 30 39.6**	**+0.5**
	baz=293,slow=8.7						
VNA2	**Neumayer--Watz**	**55.72**	**159**	*e*PP	PP	04 31 52.5	+8.2
	baz=293,slow=8.7						
SNAA	**Sanae**	**57.32**	**160**	*e*P	**P**	**04 29 51.7**	**+0.2**
SNAA	**Sanae**	**57.32**	**160**	*e*P	**P**	**04 29 50.8**	**-0.7**
	comp=E,15nm,0.6s						
SNAA	**Sanae**	**57.32**	**160**	P	**P**	**04 29 51.4**	**-0.1**
	comp=E,6.1nm,0.6s,baz=282,slow=6.9,SNR=98						
JSC	**Jenkinsville**	**62.19**	**350**	*e*P	**P**	**04 30 24.9**	**-0.4**
732A	**Laxson Ranch,**	**62.40**	**331**	⇓P	**P**	**04 30 27.3**	**+0.5**
	baz=63,SNR=17						
QSPA	**South Pole Qui**	**62.73**	**180**	LR	LR	04 57 47.3	
	comp=E,102nm,18.9s,baz=344,slow=36						
632A	**Uvalde**	**63.01**	**332**	⇑P	**P**	**04 30 31.6**	**+0.7**
	baz=63,SNR=7.2						
KMSC	**Kings Mountain**	**63.05**	**351**	⇑P	**P**	**04 30 30.9**	**-0.1**
	baz=63						
631A	**Perdido Creek**	**63.26**	**331**	⇓P	**P**	**04 30 32.7**	**+0.1**
	baz=64,SNR=8.8						
JCT	**Junction City**	**63.86**	**332**	*e*P	**P**	**04 30 37.0**	**+0.5**
	comp=E,63nm,1.8s						
JCT	**Junction City**	**63.86**	**332**	⇑P	**P**	**04 30 37.1**	**+0.5**
	baz=64						
531A	**Rocksprings**	**63.90**	**332**	⇑P	**P**	**04 30 37.4**	**+0.6**
	baz=64,SNR=8.4						
SWET	**Sewanee**	**63.94**	**346**	*e*P	**P**	**04 30 36.5**	**-0.4**
	comp=E,29nm,0.8s						
TKL	**Tuckaleechee C**	**63.95**	**348**	*e*P	**P**	**04 30 35.7**	**-1.2**
OXF	**Oxford**	**64.07**	**343**	*e*P	**P**	**04 30 36.8**	**-1.0**
	comp=E,30nm,0.9s						
432A	**Menard**	**64.21**	**333**	⇑P	**P**	**04 30 38.9**	**+0.1**
	baz=64,SNR=11						
530A	**J-C Ranch, Com**	**64.22**	**331**	⇓P	**P**	**04 30 39.6**	**+0.6**
	baz=64,SNR=10						
WHTX	**Lake Whitney**	**64.28**	**335**	⇓P	**P**	**04 30 39.4**	**+0.2**
	baz=64						
628A	**Black Gap, Mar**	**64.34**	**329**	⇑P	**P**	**04 30 40.7**	**+1.0**
	baz=65,SNR=9.3						
431A	**Sonora**	**64.37**	**332**	⇑P	**P**	**04 30 40.2**	**+0.3**
	baz=65,SNR=8.0						
627A	**Terlingua Ranc**	**64.54**	**329**	⇑P	**P**	**04 30 41.4**	**+0.3**
	baz=65,SNR=5.2						
TXAR	**Lajitas Array**	**64.57**	**329**	P	**P**	**04 30 41.8**	**+0.5**
TXAR	**Lajitas Array**	**64.57**	**329**	P	**P**	**04 30 41.8**	**+0.5**
	comp=E,2.6nm,0.7s,baz=150,slow=8.6,SNR=20						
529A	**Stev Forest Ra**	**64.59**	**330**	⇓P	**P**	**04 30 41.9**	**+0.5**
	baz=65,SNR=16						
332A	**Millersview**	**64.63**	**333**	⇓P	**P**	**04 30 41.8**	**+0.2**
	baz=65,SNR=7.0						
430A	**Baggett Ranch,**	**64.73**	**331**	⇑P	**P**	**04 30 42.6**	**+0.3**
	baz=65,SNR=6.2						
331A	**San Angelo**	**64.84**	**332**	⇓P	**P**	**04 30 43.2**	**+0.2**
	baz=65,SNR=8.1						
528A	**Cox Ranch, San**	**64.87**	**330**	⇑P	**P**	**04 30 43.6**	**+0.3**
	baz=65,SNR=12						
429A	**Davenport Ranc**	**64.87**	**331**	⇓P	**P**	**04 30 44.0**	**+0.7**
	baz=65,SNR=8.2						
626A	**Big Bend Ranch**	**64.97**	**328**	⇑P	**P**	**04 30 44.8**	**+0.9**
	baz=65,SNR=27						
232A	**Coleman**	**65.04**	**333**	⇓P	**P**	**04 30 44.5**	**+0.2**
	baz=65,SNR=6.8						
WVT	**Waverly**	**65.23**	**345**	*e*P	**P**	**04 30 44.1**	**-1.2**
	comp=E,15nm,1.0s						
330A	**Mertzon**	**65.24**	**332**	⇓P	**P**	**04 30 45.5**	**-0.1**
	baz=66,SNR=6.0						
428A	**Kincaid Ranch,**	**65.31**	**330**	⇓P	**P**	**04 30 46.6**	**+0.6**
	baz=66,SNR=7.3						
231A	**Bronte**	**65.35**	**333**	⇑P	**P**	**04 30 46.7**	**+0.4**
	baz=66						
526A	**Mary Lane Ranc**	**65.38**	**329**	⇑P	**P**	**04 30 47.5**	**+0.9**
	baz=66,SNR=18						
230A	**Sterling City**	**65.63**	**332**	⇓P	**P**	**04 30 48.3**	**+0.2**
	baz=66						
329A	**Wagon Wheel Ra**	**65.65**	**331**	⇑P	**P**	**04 30 48.5**	**+0.3**
	baz=66,SNR=11						
ABTX	**Abilene, Hawle**	**65.68**	**334**	⇑P	**P**	**04 30 48.7**	**+0.3**
	baz=66,SNR=6.0						
427A	**Hayter Ranch,**	**65.73**	**330**	⇓P	**P**	**04 30 49.3**	**+0.4**
	baz=66						
426A	**McDonald Obser**	**65.86**	**329**	⇑P	**P**	**04 30 50.5**	**+0.7**
	baz=66,SNR=5.4						
328A	**Wristen Ranch,**	**65.92**	**330**	⇑P	**P**	**04 30 50.1**	**+0.1**
	baz=66,SNR=6.8						
229A	**Bryant Ranch,**	**66.00**	**332**	⇓P	**P**	**04 30 50.6**	**+0.1**
	baz=66						
131A	**Roby**	**66.02**	**333**	⇓P	**P**	**04 30 51.0**	**+0.4**
	baz=66						
130A	**Snyder**	**66.19**	**333**	⇓P	**P**	**04 30 52.1**	**+0.4**
	baz=66						

PARMO **Parma** 66.20 344 *eP* P 04 30 52.1 +0.5
Z32A **Haskell** 66.22 334 ⇓P P 04 30 52.1 +0.2
baz=66,SNR=6.2
326A **Caldwell Ranch** 66.39 329 ⇑P P 04 30 53.4 +0.4
baz=67,SNR=7.8
425A **Indio Mountain** 66.40 328 ⇓P P 04 30 53.4 +0.2
baz=67,SNR=8.5
228A **UT Block 9, Go** 66.46 331 ⇑P P 04 30 53.6 +0.2
baz=67,SNR=11
Z31A **Sharp Cattle R** 66.49 334 ⇓P P 04 30 53.8 +0.3
baz=67,SNR=8.0
129A **Stewart Farms,** 66.59 332 ⇓P P 04 30 54.5 +0.2
baz=67
Y32A **R-V Farms, Ver** 66.83 335 ⇑P P 04 30 55.7 +0.1
baz=67,SNR=7.3
Z30A **Sanderson Ranc** 66.86 333 ⇑P P 04 30 55.9 0.0
baz=67,SNR=10
325A **Bean Ranch, Si** 66.89 329 ⇓P P 04 30 56.5 +0.2
baz=67,SNR=11
WCI **Wyandotte Cave** 66.92 347 *eP* P 04 30 55.4 -0.8
comp=E,16nm,0.7s
SIUC **Southern Illin** 67.07 344 *eP* P 04 30 57.2 +0.2
comp=E,31nm,0.8s
Y31A **Rekieta Farm,** 67.11 334 ⇓P P 04 30 57.6 +0.1
baz=67,SNR=8.6
226B **Tecolote Peak,** 67.11 330 ⇑P P 04 30 58.4 +0.8
baz=67,SNR=6.8
324A **Moseley Ranch,** 67.18 328 ⇑P P 04 30 57.5 -0.6
baz=67,SNR=6.3
TUL1 **Tulsa** 67.25 338 ⇑P P 04 30 58.2 -0.1
baz=68,SNR=12
127A **Arkansas Junct** 67.27 331 ⇑P P 04 30 58.6 0.0
baz=68
MNTX **Cornudas Mount** 67.35 329 *eP* P 04 30 58.0 -1.1
comp=E,4.7nm,0.7s
MNTX **Cornudas Mount** 67.35 329 ⇓P P 04 30 58.5 -0.5
baz=68,SNR=8.2
Z28A **Tucker Farm, M** 67.38 332 ⇓P P 04 30 59.2 -0.1
baz=68
225A **Deer Hill, Car** 67.44 329 ⇑P P 04 31 00.1 +0.3
baz=68
126A **Clayton Basin,** 67.53 330 ⇓P P 04 31 01.0 +0.7
baz=68
Y29A **Porterfield Fa** 67.58 333 ⇓P P 04 31 00.7 +0.2
baz=68
FVM **French Village** 67.62 344 *eP* P 04 31 00.4 -0.2
comp=E,41nm,0.8s
224A **Cornudas Mount** 67.73 329 ⇓P P 04 31 01.5 -0.1
baz=68
Z27A **Tatum** 67.75 331 ⇑P P 04 31 01.4 -0.2
baz=68,SNR=7.4
X30A **Coker Ranch, T** 67.77 334 ⇑P P 04 31 01.4 -0.3
baz=68,SNR=6.0
125A **Gardner Draw,** 67.83 330 ⇑P P 04 31 01.9 -0.3
baz=68,SNR=7.2
Z26A **Caprock** 68.05 331 ⇓P P 04 31 03.6 0.0
baz=68,SNR=15
W31A **Holland Ranch,** 68.06 335 ⇓P P 04 31 03.6 +0.1
baz=68
SSPA **Standing Stone** 68.07 354 *eP* P 04 31 03.8 +0.5
comp=E,9.7nm,0.8s
X29A **Tulia** 68.10 333 ⇓P P 04 31 04.0 +0.2
baz=68
MSTX **Muleshoe** 68.13 332 ⇑P P 04 31 04.0 0.0
baz=68
Y27A **Causey** 68.22 332 ⇓P P 04 31 04.7 +0.1
baz=68
124A **Stringfield Ra** 68.22 329 ⇑P P 04 31 04.9 +0.1
baz=68,SNR=5.7
ACSO **Alum Creek Sta** 68.28 350 *eP* P 04 31 04.5 -0.3
comp=E,25nm,0.8s
Z25A **Roswell** 68.38 330 ⇓P P 04 31 05.9 +0.3
baz=69
222A **Williams Famil** 68.50 328 ⇓P P 04 31 07.0 +0.6
baz=69
W29A **Amraillo** 68.67 333 ⇑P P 04 31 07.6 +0.2
baz=69
Z24A **Sheeppen Canyo** 68.71 330 ⇓P P 04 31 08.1 +0.3
baz=69,SNR=7.9
Y25A **Mesa, Roswell** 68.91 330 ⇑P P 04 31 09.0 +0.1
baz=69
319A **Douglas** 68.97 325 ⇓P P 04 31 10.2 +0.8
baz=69,SNR=6.9
220A **Playas Peak, P** 69.02 326 ⇓P P 04 31 10.3 +0.6
baz=69,SNR=5.6
Z23A **Rita Site, Whi** 69.05 329 ⇓P P 04 31 10.7 +0.9
baz=69
BRYW **Bryant College** 69.06 360 *eP* P 04 31 09.9 +0.4
comp=E,108nm,1.2s
X26A **CR and CF Fran** 69.07 331 ⇑P P 04 31 10.6 +0.7
baz=69
121A **Cookes Peak, D** 69.17 327 ⇑P P 04 31 11.5 +0.8
baz=69,SNR=6.1
W27A **Bowe Ranch, En** 69.19 332 ⇑P P 04 31 10.7 +0.1
baz=69,SNR=5.2
Z22A **Elephant Butte** 69.38 328 ⇑P P 04 31 13.2 +1.2
baz=70,SNR=6.0
X25A **Clemmons Ranch** 69.41 331 ⇑P P 04 31 12.2 +0.1
baz=70
V28A **Channing** 69.45 333 ⇑P P 04 31 12.7 +0.5
baz=70,SNR=12
Y23A **Lovelace Mesa,** 69.53 329 ⇑P P 04 31 13.7 +0.8
baz=70,SNR=6.7
120A **U Bar Ranch, L** 69.60 327 ⇑P P 04 31 14.1 +0.8
baz=70
Z21A **St. Cloud Mine** 69.76 328 ⇑P P 04 31 15.3 +1.0
baz=70,SNR=5.9
X24A **Lazy VL Ranch,** 69.78 330 ⇓P P 04 31 15.0 +0.6
baz=70
HDIL **Hopedale** 69.79 345 *eP* P 04 31 13.4 -0.6
comp=E,41nm,0.7s
TRY **Troy** 69.91 358 *eP* P 04 31 16.3 +1.5
comp=E,37nm,1.0s
W25A **X Bar L Ranch,** 69.91 331 ⇑P P 04 31 16.2 +1.1
baz=70,SNR=6.2
Y22A **Socorro** 69.95 329 ⇑P P 04 31 16.0 +0.6
baz=70
Z20A **Nine Sixteen R** 70.04 327 ⇓P P 04 31 16.9 +1.0
baz=70,SNR=12
V26A **Tequesquite Ra** 70.12 332 ⇑P P 04 31 16.9 +0.5
baz=70,SNR=7.4
X23A **Hourglass Bar** 70.13 330 ⇓P P 04 31 17.5 +1.0
baz=70,SNR=6.1
W24A **Lazy 6 Ranch,** 70.31 331 ⇓P P 04 31 18.4 +0.7
baz=71
Y21A **Point of Rocks** 70.34 328 ⇑P P 04 31 18.8 +1.0
baz=71,SNR=6.2
LAZ **Ladron** 70.41 329 *eP* P 04 31 19.0 +0.8
comp=E,3.7nm,1.0s
TUC **Tucson** 70.48 325 *eP* P 04 31 19.6 +1.0
comp=E,7.9nm,1.2s
ANMO **Albuquerque** 70.56 330 *eP* P 04 31 20.1 +1.0
comp=E,31nm,2.0s
Y20A **Horse Springs,** 70.58 328 ⇓P P 04 31 20.4 +1.0
baz=71,SNR=7.8
T28A **Walsh** 70.59 334 ⇑P P 04 31 19.6 +0.4
baz=71
W23A **Werner Place,** 70.60 330 ⇑P P 04 31 20.5 +1.1
baz=71
U26A **Atchley Ranch,** 70.62 332 ⇑P P 04 31 20.7 +1.2
baz=71
VNDA **Vanda** 70.64 191 *eP* P 04 31 19.6 +0.7
comp=E,2.2nm,0.8s
VNDA **Vanda** 70.64 191 P P 04 31 18.8 -0.1
comp=E,1.6nm,0.9s,baz=130,slow=3.7,SNR=4.7
VNDA LR LR 05 00 04.3
comp=E,100nm,19.0s,baz=16,slow=34
X21A **Alamocita Cree** 70.75 328 ⇑P P 04 31 21.6 +1.2
baz=71,SNR=6.1
T27A **Campo** 70.78 334 ⇓P P 04 31 21.0 +0.6
baz=71
HNH **Hanover** 70.85 359 *eP* P 04 31 21.9 +1.5
X20A **Quemado** 71.16 328 ⇓P P 04 31 23.8 +1.0
baz=71,SNR=8.1
W21A **San Fidel** 71.24 329 ⇓P P 04 31 24.4 +1.1
baz=72
214A **Organ Pipe Nat** 71.26 323 ⇑P P 04 31 24.2 +0.9
baz=72,SNR=7.7
T25A **Trinidad** 71.53 332 ⇓P P 04 31 26.1 +1.1
baz=72
U23A **El Rito** 71.60 331 ⇓P P 04 31 26.5 +1.0
baz=72
SYO **Syowa Base** 71.61 159⇓*eP* P 04 31 22.8 -2.0
W20A **Ramah** 71.64 328 ⇓P P 04 31 26.9 +1.1
baz=72,SNR=8.1
T24A **Torres, Weston** 71.74 332 ⇑P P 04 31 27.6 +1.2
baz=72
LONY **Lake Ozonia** 71.83 357 *eP* P 04 31 27.3 +0.9
comp=E,13nm,1.0s
X18A **Snowflake** 71.84 327 ⇓P P 04 31 27.9 +1.0
baz=72
R27A **Eads** 71.88 334 ⇓P P 04 31 27.6 +0.6
baz=72
U22A **Llaves** 71.93 330 ⇑P P 04 31 28.7 +1.3
baz=72
S25A **Robets Cordova** 71.99 333 ⇑P P 04 31 28.8 +1.0
baz=72,SNR=7.0
FRNY **Flat Rock** 72.01 358 *eP* P 04 31 28.4 +1.0
T23A **Casias Ranch,** 72.13 331 ⇑P P 04 31 29.6 +0.9
baz=72
V20A **Brimhall** 72.18 329 ⇑P P 04 31 29.8 +0.8
baz=72
W18A **Petrified Fore** 72.22 327 ⇓P P 04 31 29.9 +0.8
baz=72
S24A **Houchin Ranch,** 72.29 332 ⇑P P 04 31 30.9 +1.2
baz=72,SNR=13
U21A **Nageezi** 72.33 330 ⇓P P 04 31 30.8 +1.0
baz=73,SNR=8.8
DBIC **Dimbokro** 72.33 72 P P 04 31 31.1 +1.1
comp=E,13nm,0.7s
DBIC **Dimbokro** 72.33 72 P P 04 31 31.1 +1.1
comp=E,15nm,0.6s,baz=218,slow=6.7,SNR=37
113A **Mohawk Valley,** 72.40 323 ⇓P P 04 31 31.0 +0.9
baz=73
KSCO **Kaye Shedlock'** 72.44 335 ⇓P P 04 31 31.4 +1.0
baz=73
T22A **Edith** 72.48 331 ⇓P P 04 31 32.0 +1.2
baz=73,SNR=7.5
X16A **Lo Mia Camp, P** 72.49 326 ⇑P P 04 31 31.7 +0.9
baz=73,SNR=11
U20A **Newcomb** 72.68 329 ⇑P P 04 31 32.7 +0.9
baz=73
Q26A **Hugo** 72.71 334 ⇓P P 04 31 33.2 +1.2
baz=73
T21A **Navajo Lake** 72.74 330 ⇓P P 04 31 33.3 +1.0
baz=73
R24A **Sanders Place,** 72.75 332 ⇑P P 04 31 33.7 +1.4
baz=73,SNR=8.5
P27A **Ficken Ranch,** 72.90 335 ⇑P P 04 31 33.8 +0.8
baz=73
Y14A **Wickenburg** 72.91 324 ⇓P P 04 31 34.0 +0.9
baz=73,SNR=7.2
BGNE **Belgrade** 73.01 339 ⇑P P 04 31 33.9 +0.4
baz=73
R23A **Moffat** 73.01 332 ⇓P P 04 31 35.0 +1.0
baz=73,SNR=6.1
S22A **4UR Ranch, Cre** 73.06 331 ⇓P P 04 31 35.1 +0.8
baz=73
P26A **Davis Ranch, A** 73.19 334 ⇓P P 04 31 35.7 +0.9
baz=74
WUAZ **Wupatki** 73.33 327 *eP* P 04 31 37.0 +1.3
comp=E,18nm,1.3s
WUAZ **Wupatki** 73.33 327 ⇓P P 04 31 36.9 +1.2
baz=74,SNR=7.8
MVCO **Mesa Verde** 73.35 330 *eP* P 04 31 36.2 +0.3
comp=E,9.8nm,0.9s
MVCO **Mesa Verde** 73.35 330 ⇑P P 04 31 36.9 +0.9
baz=74,SNR=7.9
Q24A **Divide** 73.39 333 ⇓P P 04 31 37.1 +0.9
baz=74,SNR=8.2
S21A **Coal Bank Pass** 73.41 330 ⇓P P 04 31 37.4 +1.0
baz=74,SNR=6.9
O27A **Beecher Island** 73.41 335 ⇓P P 04 31 37.1 +1.0
baz=74
P25A **Willow Gulch B** 73.47 334 ⇑P P 04 31 37.5 +1.0
baz=74,SNR=9.4
Y12C **Blythe** 73.56 323 ⇑P P 04 31 38.1 +1.2
baz=74
S20A **Disappointment** 73.80 330 ⇓P P 04 31 39.7 +1.1
baz=74,SNR=8.1
R21A **Cimarron** 73.89 331 ⇑P P 04 31 40.0 +0.9
baz=74,SNR=6.9
O25A **Wiggins** 73.97 334 ⇓P P 04 31 40.6 +1.2
baz=74,SNR=6.2
BC3 **Big Chuckawall** 73.98 323 ⇑P P 04 31 40.4 +0.8
baz=74,SNR=7.9
Q22A **Crested Butte,** 74.03 332 ⇑P P 04 31 41.2 +1.2
baz=74
R20A **Redvale** 74.11 330 ⇑P P 04 31 41.5 +1.2
baz=74,SNR=17
PV01 **Paradox Valley** 74.15 330 *eP* P 04 31 41.5 +1.0
comp=E,801nm,1.2s
IRM **Iron Mountain** 74.20 323 ⇑P P 04 31 41.8 +1.0
baz=74
W13A **Hualapai Mount** 74.26 325 ⇓P P 04 31 42.5 +1.2
baz=74,SNR=14
ISCO **Idaho Springs** 74.29 333 *eP* P 04 31 41.8 +0.3
comp=E,4.9nm,1.0s
ISCO **Idaho Springs** 74.29 333 ⇓P P 04 31 42.5 +1.0
baz=75,SNR=6.7
Q21A **Lamborn Mesa,** 74.29 331 ⇑P P 04 31 42.6 +1.3
baz=74
SMCO **Snowmass** 74.33 332 *eP* P 04 31 43.0 +1.2
comp=E,9.4nm,0.7s
S18A **Hurst Farm, Bl** 74.43 329 ⇓P P 04 31 43.4 +1.2
baz=75,SNR=21
PFO **Pinyon Flat Ob** 74.49 322 ⇑P P 04 31 43.7 +1.2
baz=75
U15A **North Rim** 74.51 326 ⇓P P 04 31 43.9 +1.1
baz=75,SNR=9.9
BELC **Belle Mtn. Jos** 74.54 322 ⇑P P 04 31 44.0 +1.2
baz=75
P22A **Eagle** 74.59 332 ⇓P P 04 31 44.2 +1.1
baz=75,SNR=5.0
ECSD **EROS Data Cent** 74.66 341 *eP* P 04 31 43.1 0.0
comp=E,22nm,0.8s
Q20A **Ridgley Place,** 74.70 331 ⇑P P 04 31 44.5 +0.7
baz=75
O23A **Lake Granby, G** 74.76 333 ⇓P P 04 31 45.0 +0.8
baz=75,SNR=7.2
P21A **Newcastle** 74.82 332 ⇓P P 04 31 45.7 +1.3
baz=75,SNR=9.9
MURC **Murrieta** 74.89 321 ⇑P P 04 31 45.7 +1.0
baz=75
GMRC **Granite Mounta** 74.95 323 ⇓P P 04 31 46.2 +1.1
baz=75,SNR=9.7
O22A **Kremling** 74.98 333 ⇑P P 04 31 46.2 +0.7
baz=75,SNR=6.5
SPMN **St. Paul** 75.04 344 ⇑P P 04 31 44.8 -0.5
baz=75,SNR=7.6
N23A **Red Feather La** 75.36 333 ⇓P P 04 31 48.5 +1.0
baz=76,SNR=5.5
M24A **Cheyenne** 75.41 334 ⇓P P 04 31 49.0 +1.2
baz=76,SNR=5.0
N22A **Wattenberg Ran** 75.48 333 ⇑P P 04 31 49.5 +1.2
baz=76
PHWY **Pilot Hill** 75.51 334 *eP* P 04 31 49.6 +1.1
K27A **Flueckinger Fa** 75.53 337 ⇓P P 04 31 49.5 +1.2
baz=76
P19A **Cripple Cowboy** 75.56 331 ⇑P P 04 31 49.8 +1.0
baz=76
TUQ **Turquoise Moun** 75.59 323 ⇑P P 04 31 50.1 +1.2
baz=76
BFSC **Mount Baldy Ra** 75.62 322 ⇓P P 04 31 50.1 +1.0
baz=76
O20A **White River Ci** 75.66 331 ⇓P P 04 31 50.3 +1.0
baz=76,SNR=12
SRU **San Rafael** 75.82 329 *eP* P 04 31 51.3 +1.2
SRU **San Rafael** 75.82 329 ⇑P P 04 31 51.1 +0.9
baz=76,SNR=8.9
N21A **Black Mountain** 75.88 332 ⇓P P 04 31 51.9 +1.4
baz=76
CCUT **Cedar City** 75.92 327 *eP* P 04 31 52.6 +1.8
GSC **Goldstone** 75.95 323 ⇑P P 04 31 52.3 +1.4
baz=76
Q16A **Castle Valley** 75.96 329 ⇑P P 04 31 52.1 +1.1
baz=76,SNR=6.8
MSU **Marysvale** 76.11 328 *eP* P 04 31 53.2 +1.4
MVU **Marysvale** 76.12 328 *eP* P 04 31 52.8 +0.9
comp=E,9.0nm,1.1s
O19A **Miners Draw (B** 76.17 331 ⇑P P 04 31 53.0 +0.9
baz=76,SNR=12
P17A **Butcher Ranch,** 76.22 329 ⇓P P 04 31 53.0 +0.6
baz=76,SNR=6.0
N20A **Spence Gulch,** 76.25 332 ⇓P P 04 31 53.6 +1.0
baz=76
M21A **Separation Pea** 76.53 333 ⇑P P 04 31 55.1 +0.9
baz=77
O18A **Roosevelt** 76.53 330 ⇑P P 04 31 55.3 +1.2
baz=77
LRMC **Laurel Mountai** 76.56 322 ⇓P P 04 31 55.1 +0.8
baz=77
N19A **John Jarvie Ra** 76.69 331 ⇑P P 04 31 55.8 +0.8
baz=77,SNR=8.6
P16A **Fountain Green** 76.74 329 ⇓P P 04 31 56.6 +1.3
baz=77
M20A **Sweetwater, Wa** 76.77 332 ⇓P P 04 31 56.3 +0.8
baz=77
O17A **Robinson Place** 76.80 330 ⇑P P 04 31 56.9 +1.1
baz=77,SNR=13
K23A **Bowen Ranch, D** 76.82 335 ⇑P P 04 31 56.6 +1.0
baz=77
L21A **Rawlins** 76.83 333 ⇓P P 04 31 56.5 +0.7
baz=77,SNR=7.6
FURC **Furnace Creek,** 76.86 324 ⇓P P 04 31 57.1 +1.3
baz=77
MPMC **Manual Prospec** 76.89 323 ⇓P P 04 31 56.9 +0.6
baz=77
J24A **Dixon Ranch, L** 76.95 335 ⇓P P 04 31 57.5 +1.1
baz=77
N18A **Larsen Ranch,** 76.97 331 ⇓P P 04 31 57.3 +0.6
baz=77,SNR=6.1
P15A **Leamington** 77.00 328 ⇑P P 04 31 57.8 +1.0
baz=77
MPU **Maple Canyon** 77.06 329 *eP* P 04 31 58.5 +1.4
K22A **Casper** 77.07 334 ⇑P P 04 31 58.1 +0.9
baz=77,SNR=5.3
ISA **Isabella** 77.13 322 ⇑P P 04 31 58.7 +1.2
baz=77
O16A **Springville** 77.15 329 ⇓P P 04 31 58.6 +1.0
baz=77
DAU **Daniels Canyon** 77.21 330 *eP* P 04 31 59.3 +1.1
L20A **Wamsutter** 77.26 332 ⇑P P 04 31 59.1 +0.8
baz=78,SNR=6.2
K21A **Alcova** 77.35 333 ⇓P P 04 31 59.5 +0.8
baz=78,SNR=11
RSSD **Black Hills** 77.41 336 *eP* P 04 32 00.1 +1.1
JLU **Jordanelle** 77.45 330 *eP* P 04 32 00.7 +1.3
N17A **Moffit Pass** 77.45 330 ⇑P P 04 32 00.4 +0.9
baz=78,SNR=18
M18A **Lyman** 77.51 331 ⇑P P 04 32 00.1 +0.4
baz=78
GRAC **Grapevine Rang** 77.53 324 ⇑P P 04 32 00.7 +1.0
baz=78
VES **Vestal, Richgr** 77.59 322 ⇓P P 04 32 01.0 +1.1
baz=78
R11A **Troy Canyon, C** 77.64 326 ⇑P P 04 32 01.5 +1.1
baz=78,SNR=7.2
O15A **The Old Anders** 77.65 329 ⇓P P 04 32 01.7 +1.3
baz=78
N16A **Rees Ranch, Co** 77.67 330 ⇓P P 04 32 01.8 +1.2
baz=78
SMMC **Simmler** 77.72 321 ⇓P P 04 32 01.9 +1.1
baz=78
DUG **Dugway** 77.75 329 *eP* P 04 32 01.9 +1.0
DUG **Dugway** 77.75 329 ⇓P P 04 32 01.8 +0.9
baz=78,SNR=11
L19A **Farson** 77.76 332 ⇑P P 04 32 02.0 +0.9
baz=78,SNR=11
K20A **Yellowstone Ra** 77.81 333 ⇑P P 04 32 01.7 +0.4
baz=78,SNR=7.3
M17A **Scullys Gap (B** 77.81 331 ⇓P P 04 32 01.6 +0.3
baz=78
L18A **Fontenelle, Gr** 77.90 331 ⇑P P 04 32 02.6 +0.7
baz=78,SNR=11
J21A **Lysite** 78.02 334 ⇑P P 04 32 03.5 +1.0
baz=78,SNR=6.0
I22A **9 Mile Ranch,** 78.11 335 ⇓P P 04 32 03.4 +0.5
baz=78,SNR=8.4
H24A **Dirks Ranch, A** 78.13 336 ⇓P P 04 32 03.4 +0.5
baz=78,SNR=12
K19A **Absolon Red Bu** 78.15 333 ⇓P P 04 32 03.5 +0.3
baz=78,SNR=6.3
N15A **Stansbury Isla** 78.16 329 ⇑P P 04 32 03.8 +0.6
baz=78,SNR=6.9
J20A **Shoshoni** 78.28 333 ⇑P P 04 32 04.8 +0.9
baz=78,SNR=9.3
HWUT **Hardware Ranch** 78.31 330 *eP* P 04 32 04.3 +0.3
comp=E,13nm,0.6s
I21A **Big Trails, Te** 78.36 334 ⇓P P 04 32 04.7 +0.5
baz=79,SNR=12
PDAR **Pinedale Array** 78.39 332 P P 04 32 05.0 +0.4
PDAR **Pinedale Array** 78.39 332 P P 04 32 05.0 +0.4
comp=E,2.3nm,0.6s,baz=140,slow=6.3,SNR=16
K18A **Toltan Ranch,** 78.49 332 ⇓P P 04 32 06.2 +1.1
baz=79,SNR=18
L16A **Fish Haven** 78.58 330 ⇑P P 04 32 06.3 +0.7
baz=79,SNR=14
G24A **Alzada** 78.59 337 ⇑P P 04 32 06.1 +0.7
baz=79,SNR=7.4
M15A **Larsen Ranch,** 78.59 330 ⇓P P 04 32 06.2 +0.7
baz=79,SNR=6.0
J19A **Crowheart** 78.60 333 ⇑P P 04 32 06.3 +0.6
baz=79,SNR=14
H22A **Clearmont** 78.66 335 ⇓P P 04 32 06.4 +0.6
baz=79,SNR=5.6
AGMN **Agassiz Nation** 78.66 343 *eP* P 04 32 05.6 0.0
I20A **Worland** 78.80 334 ⇑P P 04 32 07.4 +0.8
baz=79,SNR=7.6
G23A **Biddle** 78.83 336 ⇓P P 04 32 07.2 +0.5
baz=79,SNR=7.7
H21A **Big Horn, Sher** 78.95 335 ⇓P P 04 32 07.7 +0.3
baz=79
J18A **Kendall Valley** 78.95 332 ⇓P P 04 32 08.2 +0.5
baz=79,SNR=22
K17A **Gardner Place,** 78.96 331 ⇓P P 04 32 08.3 +0.6
baz=79,SNR=20
HVU **Hansel Valley** 78.99 330 *eP* P 04 32 08.6 +0.8
L15A **Malad City** 78.99 330 ⇓P P 04 32 08.3 +0.5
baz=79,SNR=11
AHID **Auburn Hatcher** 79.05 331 *eP* P 04 32 08.6 +0.5
comp=E,9.9nm,0.9s
F24A **Ekalaka** 79.05 337 ⇓P P 04 32 08.5 +0.6
baz=79,SNR=8.4
NVAR **Mina Array Bea** 79.09 324 P P 04 32 09.3 +0.8
NVAR pP pP 04 32 17.3 +0.1
NVAR **Mina Array Bea** 79.09 324 P P 04 32 09.3 +0.8
comp=E,2.2nm,0.7s,baz=155,slow=6.1,SNR=18
NVAR pP pP 04 32 17.3 +0.1
comp=E,1.3nm,0.8s,baz=162,slow=6.0,SNR=5.1
MAW **Mawson** 79.16 164 P P 04 32 08.3 0.0
MAW pP pP 04 32 17.3 +0.4
MAW **Mawson** 79.16 164 P P 04 32 08.3 0.0
comp=E,6.3nm,0.7s,baz=230,slow=8.6,SNR=6.7
MAW pP pP 04 32 17.3 +0.4
comp=E,12nm,0.9s,baz=227,slow=5.0,SNR=7.1
MAW LR LR 05 10 39.1
comp=E,184nm,18.1s,baz=106,slow=38
G22A **Birney** 79.17 335 ⇓P P 04 32 08.9 +0.3
baz=79
H20A **Greybull** 79.20 334 ⇑P P 04 32 09.2 +0.4
baz=80,SNR=10.0
I19A **Meeteetse** 79.22 333 ⇓P P 04 32 09.9 +0.8
baz=80,SNR=10
MDND **Maddock** 79.27 341 ⇑P P 04 32 09.8 +0.8
baz=80,SNR=5.0
I18A **Diamond G Ranc** 79.27 332 ⇑P P 04 32 10.3 +0.9
baz=80,SNR=25
K16A **Soda Springs** 79.31 331 ⇓P P 04 32 10.6 +1.0
baz=80,SNR=12
ELK **Elko** 79.32 327 *eP* P 04 32 10.2 +0.4
J17A **Brown Place, J** 79.37 332 ⇑P P 04 32 10.8 +0.9
baz=80,SNR=14
L14A **Malta** 79.40 329 ⇑P P 04 32 10.5 +0.5
baz=80,SNR=14
SNOW **Snow King Moun** 79.47 332 *eP* P 04 32 10.4 -0.1
comp=E,7.5nm,0.8s
G21A **Lodge Grass** 79.52 335 ⇓P P 04 32 11.3 +0.8
baz=80,SNR=6.3
LOHW **Long Hollow** 79.53 332 *eP* P 04 32 11.2 +0.5
comp=E,14nm,1.1s
TPAW **Teton Pass** 79.57 332 *eP* P 04 32 12.1 +1.1
K15A **Arbon** 79.60 330 ⇑P P 04 32 11.7 +0.6
baz=80,SNR=5.4
RRI2 **Red Ridge** 79.61 331 *eP* P 04 32 11.6 +0.3
comp=E,5.9nm,0.8s
E24A **Baker** 79.62 337 ⇑P P 04 32 11.9 +0.9
baz=80,SNR=11
F22A **Rosebud** 79.64 336 ⇑P P 04 32 11.7 +0.6
baz=80,SNR=16
MOOW **Moose Ponds** 79.70 332 *eP* P 04 32 11.9 +0.2
H19A **Powell** 79.74 334 ⇓P P 04 32 12.6 +0.8
baz=80,SNR=8.6
DCID1 **Drake Creek** 79.75 332 *eP* P 04 32 13.3 +1.4
I17A **Pilgrim Ck.** 79.77 332 ⇓P P 04 32 13.2 +1.1
baz=80,SNR=8.5
K14A **Jones Ranch, D** 79.78 330 ⇑P P 04 32 12.4 +0.4
baz=80,SNR=7.7
G20A **Bridger** 79.90 334 ⇓P P 04 32 13.1 +0.5
baz=80,SNR=20
IMW **Indian Meadow** 79.90 332 *eP* P 04 32 13.6 +0.7
E23A **Ismay** 79.91 337 ⇑P P 04 32 13.3 +0.8
baz=80

F21A	Absaloka Mine,	79.99	335	⇑P	P	04 32 14.0	+1.0
	baz=80						
H18A	Shoshone NF, C	80.02	333	⇑P	P	04 32 14.2	+0.8
	baz=80,SNR=31						
E22A	Miles City	80.09	336	⇓P	P	04 32 13.8	+0.3
	baz=80,SNR=7.4						
D24A	Glendive	80.11	338	⇑P	P	04 32 14.7	+1.1
	baz=80,SNR=7.0						
I16A	Newdale	80.11	332	⇑P	P	04 32 14.7	+0.8
	baz=80,SNR=8.4						
J15A	Blackfoot	80.13	331	⇑P	P	04 32 14.8	+0.8
	baz=80,SNR=6.2						
RLMT	Red Lodge	80.23	334	*e*P	P	04 32 15.0	+0.5
	comp=E,4.8nm,0.8s						
RLMT	Red Lodge	80.23	334	⇑P	P	04 32 15.3	+0.8
	baz=80,SNR=10.0						
F20A	Billings	80.36	335	⇑P	P	04 32 15.6	+0.5
	baz=81						
D23A	Lindsay	80.46	337	⇑P	P	04 32 16.6	+1.1
	baz=81,SNR=8.3						
ULM	Lac du Bonnet	80.47	344	P	P	04 32 15.2	-0.2
ULM	Lac du Bonnet	80.47	344	P	P	04 32 15.2	-0.2
	comp=E,8.9nm,0.7s,baz=147,slow=5.5,SNR=17						
C24A	Savage	80.50	338	⇑P	P	04 32 17.1	+1.4
	baz=81,SNR=6.3						
G18A	Lazy EL Ranch,	80.50	334	⇑P	P	04 32 16.8	+0.8
	baz=81,SNR=14						
YMR	Madison River	80.54	332	*e*P	P	04 32 17.8	+1.6
	comp=E,33nm,1.3s						
J14A	Carey	80.55	330	⇑P	P	04 32 16.8	+0.5
	baz=81						
E21A	Keefer Ranch,	80.58	336	⇓P	P	04 32 16.9	+0.7
	baz=81,SNR=5.6						
I15A	Monteview	80.64	331	⇓P	P	04 32 17.9	+1.3
	baz=81,SNR=6.2						
H16A	Russell Place,	80.68	332	⇓P	P	04 32 18.0	+1.0
	baz=81,SNR=8.4						
D22A	Cohagen	80.78	337	⇑P	P	04 32 18.1	+0.9
	baz=81,SNR=9.9						
QLMT	Earthquake Lak	80.86	332	*e*P	P	04 32 19.5	+1.6
	comp=E,0.4nm,0.4s						
J13A	Cove Ranch, Pi	80.90	330	⇓P	P	04 32 19.3	+1.2
	baz=81,SNR=12						
GCMT	Greycliff	80.94	334	*e*P	P	04 32 18.8	+0.6
	comp=E,1.5nm,0.3s						
E20A	Meyer Farm, Mu	80.94	335	⇓P	P	04 32 19.0	+0.9
	baz=81,SNR=21						
C23A	Lambert	81.00	337	⇑P	P	04 32 19.1	+0.8
	baz=81,SNR=8.3						
D21A	La Casta Ranch	81.00	336	⇑P	P	04 32 19.2	+0.8
	baz=81,SNR=11						
I14A	Mackay	81.00	330	⇑P	P	04 32 19.7	+1.1
	baz=81,SNR=10						
F18A	Big Timber	81.05	334	⇓P	P	04 32 19.4	+0.6
	baz=81,SNR=8.6						
HLID	Hailey	81.14	330	*e*P	P	04 32 20.5	+1.1
HLID	Hailey	81.14	330	⇑P	P	04 32 20.5	+1.1
	baz=81,SNR=20						
E19A	Rath Farm, Rou	81.15	335	⇑P	P	04 32 20.2	+0.9
	baz=81,SNR=28						
TOA0	Torodi Ar. Sit	81.19	70	*e*P	P	04 32 20.4	+0.4
TORD	Torodi Ar. Bea	81.19	70	P	P	04 32 20.6	+0.5
TORD	Torodi Ar. Bea	81.19	70	P	P	04 32 20.6	+0.5
	comp=E,16nm,0.7s,baz=263,slow=4.5,SNR=171						
C22A	Vida	81.19	337	⇑P	P	04 32 20.0	+0.6
	baz=82,SNR=6.7						
H15A	Lima	81.20	331	⇓P	P	04 32 20.7	+1.0
	baz=82						
DGMT	Dagmar	81.24	338	*e*P	P	04 32 20.9	+1.3
DGMT	Dagmar	81.24	338	⇑P	P	04 32 20.7	+1.1
	baz=82,SNR=6.7						
I13A	Wildhorse Cree	81.28	330	⇓P	P	04 32 21.4	+1.2
	baz=82,SNR=19						
F17A	Fitzpatrick Pl	81.42	333	⇑P	P	04 32 21.7	+0.9
	baz=82,SNR=6.5						
D20A	Manuel Ranch,	81.44	335	⇑P	P	04 32 21.3	+0.6
	baz=82,SNR=13						
MCMT	McKenzie Canyo	81.46	331	*e*P	P	04 32 20.8	-0.4
	comp=E,3.6nm,0.8s						
B23A	Brockton	81.50	338	⇓P	P	04 32 21.7	+0.7
	baz=82						
H14A	Leadore	81.51	331	⇑P	P	04 32 22.2	+0.9
	baz=82,SNR=9.2						
G15A	Dillon	81.58	332	⇑P	P	04 32 22.5	+0.8
	baz=82,SNR=8.7						
A24A	Westby	81.58	339	⇓P	P	04 32 22.2	+0.8
	baz=82,SNR=7.1						
BOZ	Bozeman (W)	81.61	333	*e*P	P	04 32 21.7	-0.1
	comp=E,1.0nm,0.8s						
BOZ	Bozeman (W)	81.61	333	⇑P	P	04 32 22.0	+0.2
	baz=82						
MFID	Camas Ranch	81.67	329	*e*P	P	04 32 21.3	-0.8
	comp=E,8.1nm,1.2s						
MFID	Camas Ranch	81.67	329	⇓P	P	04 32 22.6	+0.5
	baz=82						
E18A	Harlowton	81.67	334	⇓P	P	04 32 22.6	+0.5
	baz=82,SNR=5.0						
C21A	Desert Coulee	81.68	336	⇓P	P	04 32 22.5	+0.5
	baz=82,SNR=26						
B22A	Reddig Ranch S	81.70	337	⇑P	P	04 32 22.9	+0.8
	baz=82						
D19A	Cripps Ranch,	81.78	335	⇓P	P	04 32 23.0	+0.5
	baz=82,SNR=17						
H13A	Challis	81.86	330	⇓P	P	04 32 24.0	+0.8
	baz=82,SNR=12						
A23A	Redstone	81.89	338	⇓P	P	04 32 23.6	+0.5
	baz=82						
C20A	Veseth Ranch,	81.91	336	⇑P	P	04 32 23.7	+0.5
	baz=82,SNR=8.4						
E17A	Martinsdale	81.96	333	⇑P	P	04 32 24.2	+0.6
	baz=82						
G14A	Jackson	82.05	331	⇑P	P	04 32 25.2	+1.0
	baz=82						
SCHQ	Schefferville	82.06	2	P	P	04 32 22.9	-0.8
SCHQ	Schefferville	82.06	2	P	P	04 32 22.9	-0.8
	comp=E,9.1nm,1.1s,baz=181,slow=4.4,SNR=10						
LRM	Limekiln Ridge	82.09	332	*e*P	P	04 32 24.7	+0.3
H12A	Diamond D Ranc	82.11	330	⇓P	P	04 32 25.2	+0.7
	baz=82						
F15A	Butte	82.12	332	⇑P	P	04 32 25.2	+0.6
	baz=82,SNR=6.2						
D18A	Linhart Farms,	82.15	334	⇓P	P	04 32 25.2	+0.6
	baz=82						
B21A	Ellsworth Farm	82.17	337	⇑P	P	04 32 25.2	+0.7
	baz=82,SNR=8.8						
G13A	Cobalt	82.26	331	⇑P	P	04 32 26.0	+0.7
	baz=82,SNR=14						
A22A	Carney Farms,	82.27	338	⇑P	P	04 32 25.6	+0.5
	baz=82,SNR=15						
C19A	Slack Wire Ran	82.32	335	⇓P	P	04 32 25.7	+0.3
	baz=83,SNR=7.0						
E16A	East Helena	82.35	333	⇑P	P	04 32 26.3	+0.7
	baz=83,SNR=6.1						
D17A	Six Diamond Ra	82.46	334	⇑P	P	04 32 27.0	+0.8
	baz=83,SNR=17						
F14A	Wisdom	82.47	332	⇑P	P	04 32 27.3	+1.0
	baz=83,SNR=6.9						
B20A	Solberg Farm,	82.53	336	⇑P	P	04 32 26.8	+0.4
	baz=83,SNR=5.8						
A21A	Bergtoll Ranch	82.61	337	⇑P	P	04 32 27.2	+0.3
	baz=83,SNR=7.3						
E15A	Deer Lodge	82.65	332	⇑P	P	04 32 27.8	+0.6
	baz=83						
MOD	Modoc	82.69	325	*e*P	P	04 32 27.7	+0.2
	comp=E,3.0nm,0.6s						
D16A	Dana Ranch, Ca	82.70	333	⇓P	P	04 32 28.3	+0.8
	baz=83,SNR=9.3						
G12A	Big Creek, Yel	82.77	330	⇓P	P	04 32 28.1	+0.1
	baz=83						
EGMT	Eagleton	82.82	335	*e*P	P	04 32 27.4	-0.6
	comp=E,7.5nm,1.1s						
EGMT	Eagleton	82.82	335	⇓P	P	04 32 28.2	+0.2
	baz=83						
F13A	Darby	82.86	331	⇓P	P	04 32 28.8	+0.5
	baz=83,SNR=9.7						
A20A	Cobblestone Ra	82.87	336	⇑P	P	04 32 28.7	+0.5
	baz=83,SNR=21						
C17A	Wharram Farm,	82.88	334	⇓P	P	04 32 28.7	+0.4
	baz=83,SNR=9.6						
E14A	Clinton	83.00	332	⇓P	P	04 32 29.9	+0.8
	baz=83						
D15A	Lincoln	83.10	333	⇓P	P	04 32 30.2	+0.6
	baz=83						
B18A	Beardsley Farm	83.14	335	⇓P	P	04 32 30.0	+0.4
	baz=83,SNR=10.0						
A19A	Klindworth Far	83.20	336	⇑P	P	04 32 30.0	+0.1
	baz=84						
F12A	Elk City	83.23	331	⇓P	P	04 32 30.5	+0.2
	baz=84						
E13A	Victor	83.31	332	⇑P	P	04 32 31.0	+0.4
	baz=84						
C16A	Fuhringer Ranc	83.40	334	⇑P	P	04 32 31.6	+0.5
	baz=84,SNR=9.6						
B17A	L&G Farms, Che	83.44	335	⇓P	P	04 32 31.2	+0.1
	baz=84						
D14A	Greenough	83.53	332	⇓P	P	04 32 31.9	+0.1
	baz=84						
A18A	Metzger Ranch,	83.60	335	⇑P	P	04 32 32.1	+0.2
	baz=84						
C15A	Salmond Ranch,	83.72	333	⇑P	P	04 32 33.5	+0.8
	baz=84,SNR=7.0						
B16A	M & M Farms, S	83.89	334	⇓P	P	04 32 33.8	+0.3
	baz=84						
A17A	Triple J Farms	83.94	335	⇓P	P	04 32 34.0	+0.3
	baz=84,SNR=12						
D13A	Huson	83.94	332	⇑P	P	04 32 34.1	+0.3
	baz=84						
B15A	Bradely Ranch,	84.14	334	⇑P	P	04 32 34.8	0.0
	baz=84,SNR=8.7						
C14A	Swan Lake	84.18	333	⇑P	P	04 32 35.3	+0.3
	baz=84						
A16A	West Butte Ran	84.28	334	⇓P	P	04 32 35.8	+0.3
	baz=84,SNR=21						
D12A	Red Ives Fores	84.29	331	⇑P	P	04 32 36.0	+0.4
	baz=84						
C13A	Hot Springs	84.45	332	⇑P	P	04 32 36.7	+0.4
	baz=85						
B14A	Marquette Ranc	84.46	333	⇓P	P	04 32 37.3	+0.8
	baz=85						
A15A	Johnson Ranch,	84.74	334	⇓P	P	04 32 37.6	-0.2
	baz=85						
C12B	Naegeli Ranch,	84.85	332	⇓P	P	04 32 38.9	+0.6
	baz=85						
A14A	Double T Ranch	85.01	334	⇓P	P	04 32 39.1	-0.1
	baz=85						
WALA	Waterton Lakes	85.27	333	*e*P	P	04 32 41.1	+0.6
	comp=E,0.6nm,1.5s						
C11A	Tepee Creek (N	85.28	331	⇓P	P	04 32 40.5	0.0
	baz=86,SNR=6.8						
A13A	Flathead Natio	85.38	333	⇑P	P	04 32 41.5	+0.5
	baz=86						
B12A	Libby	85.49	332	⇑P	P	04 32 42.0	+0.5
	baz=86						
A12A	Yaak River Ran	85.88	332	⇓P	P	04 32 43.7	+0.2
	baz=86						
NEW	Newport	85.98	331	⇑P	P	04 32 43.1	-0.9
	baz=86						
FFC	Flin Flon	86.10	343	*e*P	P	04 32 44.0	-0.3
	comp=E,3.3nm,1.3s						
TAM	Tamanrasset	89.21	64	*e*P	P	04 32 59.6	-0.6
	comp=E,1.3nm,0.6s						
YKA	Yellowknife Ar	96.19	341	P	P	04 33 30.2	-1.0
YKA				pP	pP	04 33 41.1	+1.1
YKA	Yellowknife Ar	96.19	341	P	P	04 33 30.2	-1.0
	comp=E,1.5nm,0.8s,baz=139,slow=4.6,SNR=32						
YKA				pP	pP	04 33 41.1	+1.1
	comp=E,1.6nm,0.9s,baz=136,slow=4.7,SNR=6.9						
YKW3	Yellowknife Ar	96.25	341	*e*P	P	04 33 31.2	-0.3
	comp=E,0.1nm,0.9s						
KEST	Kesra	98.40	54	LR	LR	05 21 29.4	
	comp=E,83nm,19.6s,baz=223,slow=37						
DLBC	Dease Lake	98.61	333	P	Pdif	04 33 42.6	+0.1
DLBC	Dease Lake	98.61	333	P	Pdif	04 33 42.6	+0.1
	comp=E,0.9nm,0.3s,baz=157,slow=25,SNR=3.8						
INK	Inuvik	105.88	340	Pdif	Pdif	04 34 14.2	-0.3
INK	Inuvik	105.88	340	Pdiff	Pdif	04 34 14.2	-0.3
	comp=E,6.0nm,1.4s,baz=78,slow=5.9,SNR=3.5						
ILAR	Eielson Array	108.77	334	Pdif	Pdif	04 34 27.6	+0.3
ILAR	Eielson Array	108.77	334	Pdiff	Pdif	04 34 27.7	+0.3
	comp=E,0.2nm,0.7s,baz=145,slow=3.3,SNR=4.0						
AKASG	Malin Array Be	117.06	45	PKP	PKPdf	04 38 47.3	-1.1
AKASG	Malin Array Be	117.06	45	PKP	PKPdf	04 38 47.3	-1.1
	comp=E,0.2nm,0.3s,baz=264,slow=2.6,SNR=4.2						
BRTR	Keskin Array B	117.76	57	PKP	PKPdf	04 38 50.1	-0.2
BRTR	Keskin Array B	117.76	57	PKP	PKPdf	04 38 50.1	-0.2
	comp=E,0.5nm,0.9s,baz=175,slow=3.6,SNR=3.4						
ASAR	Alice Springs	123.74	208	PKP	PKPdf	04 39 01.4	-0.9
ASAR				pPKP	pPKPdf	04 39 09.8	-1.5
ASAR				PKKPbc	PKKPbc	04 48 50.0	+0.8
ASAR	Alice Springs	123.74	208	PKP	PKPdf	04 39 01.4	-0.9
	comp=E,1.2nm,0.6s,baz=141,slow=1.8,SNR=14						
ASAR				pPKP	pPKPdf	04 39 09.8	-1.5
	comp=E,1.0nm,0.7s,baz=139,slow=2.0,SNR=5.0						
ASAR				PKKPbc	PKKPbc	04 48 50.0	+0.8
	comp=E,0.6nm,0.5s,baz=329,slow=3.4,SNR=6.5						
AS31	Alice Springs	123.74	208	*e*PKPdf	PKPdf	04 39 01.2	-1.1
KBZ	Khabaz	125.27	54	PKP	PKPdf	04 39 05.1	+0.7
KBZ	Khabaz	125.27	54	PKP	PKPdf	04 39 05.1	+0.7
	comp=E,1.4nm,0.9s,baz=235,slow=1.7,SNR=5.0						
WRA	Warramunga Arr	126.83	210	PKPpre	PKPpre	04 39 03.1	
WRA				PKP	PKPdf	04 39 07.8	-0.4
WRA	Warramunga Arr	126.83	210	PKhKP	PKPpre	04 39 03.1	
	comp=E,3.2nm,0.6s,baz=153,slow=1.5,SNR=7.1						
WRA				PKP	PKPdf	04 39 07.8	-0.4
	comp=E,3.2nm,0.6s,baz=160,slow=1.7,SNR=66						
WRAB	Tennant Creek	126.84	210	*e*PKPdf	PKPdf	04 39 07.7	-0.6
PMG	Port Moresby	127.91	231	*e*PKPdf	PKPdf	04 39 10.9	+0.5
ABKAR	Akbulak array	136.76	46	*e*PKPdf	PKPdf	04 39 25.3	-0.7
BVAR	Borovoye Array	141.75	37	PKP	PKPdf	04 39 34.7	-0.3
BVAR	Borovoye Array	141.75	37	PKP	PKPdf	04 39 34.7	-0.3
	comp=E,1.0nm,0.6s,baz=325,slow=1.8,SNR=5.2						
KBL	Kabul	145.24	68	*e*PKPbc	PKPbc	04 39 41.3	-0.4
KKAR	Karatay Array	145.29	53	*e*PKPbc	PKPdf	04 39 41.9	+0.3
KAPI	Kappang	146.05	199	PKPbc	PKPdf	04 39 43.0	-0.7
KAPI	Kappang	146.05	199	PKPbc	PKPdf	04 39 43.0	-0.7
	baz=217,slow=2.2						
PALK	Pallekele	146.51	122	*e*PKPbc	PKPdf	04 39 44.4	-0.2
KURK	Kurchatov	147.33	37	*e*PKPbc	PKPbc	04 39 46.1	-1.0
EKS2	Erkin-Say	147.73	53	*e*PKPbc	PKPbc	04 39 47.6	-1.1
EKS2				*e*PKPab	PKiKP	04 39 50.2	-0.5
ZAA0	Zalesovo Array	148.15	27	*e*PKPdf	PKPdf	04 39 46.8	+0.8
ZAA0				*e*PKPbc	PKPbc	04 39 49.7	+0.4
ZALV	Zalesovo Beam	148.15	27	PKP	PKPdf	04 39 46.2	+0.3
ZALV				PKPbc	PKPbc	04 39 50.0	+0.8
ZALV				pPKPbc	pPKPbc	04 39 59.7	+1.5
ZALV	Zalesovo Beam	148.15	27	PKP	PKPdf	04 39 46.2	+0.3
	comp=E,24nm,0.7s,baz=275,slow=2.6,SNR=26						
ZALV				PKPbc	PKPbc	04 39 50.0	+0.8
	comp=E,25nm,0.7s,baz=304,slow=3.7,SNR=68						
ZALV				pPKPbc	pPKPbc	04 39 59.7	+1.5
	comp=E,17nm,0.7s,baz=308,slow=3.6,SNR=11						
AAK	Ala-Archa	148.24	53	*e*PKPdf	PKPdf	04 39 47.7	+1.0
AAK				*e*PKPbc	PKiKP	04 39 51.4	-0.4
AAK				*e*PKPab	PKPab	04 39 54.7	+1.5
ASAJ	Asahikawa	148.35	311	*e*PKPbc	PKPbc	04 39 50.4	+0.3
ASAJ	Asahikawa	148.35	311	PKPbc	PKPbc	04 39 50.2	+0.1
	comp=E,3.8nm,0.4s,baz=164,slow=28,SNR=5.7						
KSH	Kashi	150.15	58	PKPbc	PKPbc	04 39 55.6	+0.7
KSH				PKS	PP	04 43 28.5	-1.6
KSH				PP	PP	04 43 37.7	+7.6
KSH				SKS	SKSdf	04 46 58.0	+2.0
KSH				SKKS	SKKSac	04 50 21.6	+2.3
KSH				SS	SS	05 02 49.6	+3.2
KSH				LR	LR		
	comp=N,110nm,7.1s						
KSH				LR	LR		
	comp=E,110nm,4.5s						
KSH				LR	LR		
	comp=Z,300nm,5.6s						
MK31	Makanchi Array	151.52	40	*e*PKPbc	PKPbc	04 39 57.6	-0.2
MK31				*e*PKPab	PKPab	04 40 06.8	+0.5
MKAR	Makanchi Array	151.52	40	PKPbc	PKPbc	04 39 57.8	0.0
MKAR				PKPab	PKPab	04 40 07.2	+0.9
MKAR	Makanchi Array	151.52	40	PKPbc	PKPbc	04 39 57.8	0.0
	comp=Z,10.0nm,0.7s,baz=322,slow=2.0,SNR=90						
MKAR				PKPab	PKPab	04 40 07.2	+0.9
	comp=Z,10nm,0.7s,baz=319,slow=2.6,SNR=18						
MJAR	Matsushiro Arr	153.70	297	PKPbc	PKPbc	04 40 02.9	-0.1
MJAR				PKPab	PKPab	04 40 16.3	+0.5
MJAR	Matsushiro Arr	153.70	297	PKPbc	PKPbc	04 40 02.9	-0.1
	comp=Z,0.9nm,0.3s,baz=98,slow=1.9,SNR=4.0						
MJAR				PKPab	PKPab	04 40 16.3	+0.5
	comp=Z,1.8nm,0.5s,baz=124,slow=2.6,SNR=4.6						
USRK	Ussuriysk Arra	155.10	318	PKPbc	PKPdf	04 40 05.7	+8.9
	comp=Z,0.9nm,0.7s,baz=64,slow=4.4,SNR=4.6						
USRK				PKPab	PKPab	04 40 21.6	+0.2
	comp=Z,2.2nm,0.8s,baz=58,slow=6.2,SNR=4.8						
IPM	Ipoh	155.90	160	*e*PKPdf	PKPdf	04 39 59.0	+0.2
IPM				*e*PKPab	PKPab	04 40 25.0	-0.6
MDJ	Mudanjiang	156.23	321	PKP	PKPdf	04 39 58.1	-0.2
MDJ				PP	PP	04 44 04.9	+1.2
MDJ				SKS	SKSdf	04 46 59.0	-3.6
MDJ				AMB	AMB		
	comp=Z,49nm,6.1s						
WMQ	Urumqi	156.35	41	PKP	PKPdf	04 39 56.0	-2.6
CN2	Changchun	158.99	325	*e*PKP	PKPdf	04 40 01.4	-0.3
SONM	Songino Array	159.59	5	PKP	PKPdf	04 40 03.2	+0.7
SONM				PKPab	PKPab	04 40 41.7	+1.0
SONM	Songino Array	159.59	5	PKP	PKPdf	04 40 03.2	+0.7
	comp=Z,1.6nm,0.8s,baz=242,slow=3.2,SNR=9.0						
SONM				PKPab	PKPab	04 40 41.7	+1.0
	comp=Z,2.2nm,0.9s,baz=316,slow=4.0,SNR=7.9						
ULN	Ulaanbaatar	159.60	4	*e*PKPab	PKPab	04 40 41.9	+1.0
KSRS	Korea Array	161.20	307	PKP	PKPdf	04 40 04.9	+0.5
	comp=Z,0.5nm,0.3s,baz=8.5,slow=2.5,SNR=5.1						
KSRS				PKPab	PKPab	04 40 49.6	+1.5
	comp=Z,0.5nm,0.3s,baz=57,slow=4.5,SNR=3.4						
KSAR	Wonju Array Be	161.24	307	PKP	PKPdf	04 40 04.9	+0.4
KSAR				PKPab	PKPab	04 40 49.6	+1.4
GTA	Gaotai	165.88	30	*e*PKP	PKPdf	04 40 07.8	-1.1
GTA				PP	PP	04 44 57.8	+2.5
BJI	Beijing	166.13	336	PKP	PKPdf	04 40 09.0	+0.1
BJI				SS	SS	05 05 38.1	+3.9
BJI				LR	LR		
	comp=N,110nm,16.1s						
BJI				LR	LR		
	comp=E,150nm,14.9s						
BJI				LR	LR		
	comp=Z,27nm,19.6s						
CMAR	Chiang Mai Arr	167.12	132	PKP	PKPdf	04 40 11.9	+1.6
CMAR	Chiang Mai Arr	167.12	132	PKP	PKPdf	04 40 11.9	+1.6
	comp=Z,1.2nm,0.3s,baz=297,slow=0.6,SNR=4.0						
NJ2	Nanjing	170.28	300	*e*PKP	PKPdf	04 40 11.9	-0.1
LZH	Lanzhou	170.38	26	*e*PKP	PKPdf	04 40 09.2	-2.9
LZH				pPKP	pPKPdf	04 40 20.0	-1.2
KMI	Kunming	173.93	111	PKP	PKPdf	04 40 15.5	+1.3
CD2	Chengdu	174.31	52	PKPbc	PKPdf	04 40 11.8	-2.1
CD2	Chengdu	174.31	52	PKP	PKPdf	04 40 14.6	+0.7
GYA	Guiyang	177.70	116	*e*PKP	PKPdf	04 40 14.0	-0.9
GYA				PKPab	PKPab	04 42 02.8	+1.2
GYA				PKS	PKSdf	04 43 45.0	-2.2
GYA				PP	PP	04 45 55.9	+0.9
GYA				SKKS		04 52 39.0	
GYA				SS	SS	05 07 25.7	-4.6
GYA				AMB	AMB		
	comp=Z,120nm,8.2s						
GYA				LR	LR		
	comp=N,120nm,22.5s						
GYA				LR	LR		
	comp=E,110nm,25.7s						
GYA				LR	LR		
	comp=Z,120nm,12.1s						

PRE ***02*** *04:24:22.5±4.1, 21°.57S×33°.65E, h10km, ML5.4*
IDC ***02*** *04:24:23.7±0.6, 21°.27S×33°.30E, h0km, mb4.2/19, mb1 4.4/24, mb1mx4.3/32, mbtmp4.3/24, ML4.5/4, MS3.5/3, Ms1 3.5/3, ms1mx3.1/31, Error ellipse: s-maj=19.0km s-min=14.4km az=98.0*
ISCJB ***02*** *04:24:24.3±0.4, 21°.29S±0°.05×33°.04E±0°.07, h15km, mb4.2/20, Error ellipse: s-maj=10.5km s-min=4.1km az=35.4*
NEIC ***02*** *04:24:25.0±0.3, 21°.28S×33°.23E, h10km, mb4.4/7, Error ellipse: s-maj=9.6km s-min=7.3km az=130.0*
ISC 02 04:24:26.2±0.4**, 21°.28S**±0°.05×**32°.99E**±0°.05**, h15km, n133, σ1.77**/147**, mb4.2**/20**, 27C-25D, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	Messina	2.95	249	*e*P	Pb	04 25 17.8	-0.8
MSNA				*e*S	Sb	04 25 57.8	+3.2
MSNA				AML	AML	04 26 10.6	
	comp=Z,1μm,0.8s						
SLR	Silverton	6.19	223	*e*P	Pn	04 26 00.3	+3.1
SLR				*e*S	Sn	04 27 09.2	+1.4
SLR				AML	AML	04 27 51.0	
	comp=Z,506nm,0.6s						
ERPM	east rand prop	6.65	220	*e*P	Pn	04 26 05.2	+1.5
ERPM				*e*S	Sn	04 27 17.9	-1.4
ERPM				AML	AML	04 28 09.5	
	comp=Z,192nm,0.6s						
KLOF	Kloof	7.05	223	*e*P	Pn	04 26 11.7	+2.6
KLOF				*e*S	Sn	04 27 30.4	+1.3
KLOF				AML	AML	04 28 21.9	
	comp=Z,247nm,0.5s						
KSR	Koster	7.21	230	*e*P	Pn	04 26 15.3	+4.0
KSR				*e*S	Sn	04 27 36.8	+3.9
KSR				AML	AML	04 28 34.3	
	comp=Z,226nm,0.6s						
LSZ	Lusaka	7.52	322	Pn	Pn	04 26 16.0	+0.6
LSZ				Sn	Sn	04 27 37.0	-3.6
LSZ				Lg	Lg	04 28 19.6	
LSZ	Lusaka	7.52	322	Pn	Pn	04 26 16.0	+0.6
	comp=Z,28nm,0.3s,baz=138,slow=16,SNR=107						
LSZ				Sn	Sn	04 27 37.0	-3.6
	comp=Z,48nm,0.3s,baz=162,slow=12,SNR=9.6						
LSZ				Lg	Lg	04 28 19.6	
	comp=Z,50nm,0.3s,baz=59,slow=21,SNR=9.3						
PRYS	Parys	7.62	221	*e*P	Pn	04 26 18.7	+1.9
PRYS				*e*S	Sn	04 27 43.0	+0.1
PRYS				AML	AML	04 28 41.3	
	comp=Z,173nm,0.6s						
LBTB	Lobatse	7.75	240	*e*P	Pn	04 26 21.1	+2.5
LBTB				*e*S	Sn	04 27 50.0	+3.7
LBTB				AML	AML	04 28 44.2	
	comp=Z,255nm,0.6s						
LBTB	Lobatse	7.75	240	Pn	Pn	04 26 20.9	+2.2
LBTB				Sn	Sn	04 27 47.5	+1.2
LBTB				Lg	Lg	04 28 33.1	
LBTB	Lobatse	7.75	240	Pn	Pn	04 26 20.9	+2.2
	comp=Z,9.6nm,0.3s,baz=66,slow=13,SNR=50						
LBTB				Sn	Sn	04 27 47.5	+1.2
	comp=Z,22nm,0.3s,baz=319,slow=7.0,SNR=7.7						
LBTB				Lg	Lg	04 28 33.1	
	comp=Z,22nm,0.3s,baz=165,slow=23,SNR=9.5						
LBTB				LR	LR	04 28 56.2	
	comp=Z,185nm,18.1s,baz=84,slow=34						
SEK	Senekal	8.54	214	*e*P	Pn	04 26 30.4	+0.9
SEK				*e*S	Sn	04 28 03.4	-2.2
SEK				AML	AML	04 28 58.9	
	comp=Z,144nm,0.8s						
BOSA	Boshof	10.12	222	*e*P	Pn	04 26 51.9	+0.7
BOSA				*e*S	Sn	04 28 39.6	-4.9
BOSA				AML	AML	04 29 57.3	
	comp=Z,89nm,0.7s						
BOSA	Boshof	10.12	222	Pn	Pn	04 26 51.6	+0.5
BOSA				Sn	Sn	04 28 40.2	-4.3
BOSA				Lg	Lg	04 29 45.7	
BOSA	Boshof	10.12	222	Pn	Pn	04 26 51.6	+0.5
	comp=Z,2.2nm,0.3s,baz=50,slow=13,SNR=52						
BOSA				Sn	Sn	04 28 40.2	-4.3
	comp=Z,5.2nm,0.3s,baz=344,slow=13,SNR=4.7						
BOSA				Lg	Lg	04 29 45.7	
	comp=Z,8.1nm,0.3s,baz=314,slow=18,SNR=8.2						
BOSA				LR	LR	04 31 13.7	
	comp=Z,376nm,20.6s,baz=316,slow=40						
HVD	Gariep Dam	11.47	214	*e*P	Pn	04 27 08.0	-1.6
HVD				*e*S	Sn	04 29 09.3	-8.2
HVD				AML	AML	04 30 48.2	
	comp=Z,72nm,0.7s						
UPI	Upington	12.77	234	*e*P	Pn	04 27 26.8	-0.6
UPI				*e*S	Sn	04 29 45.2	-4.2
UPI				AML	AML	04 31 19.7	
	comp=Z,61nm,0.7s						
SOE	Somerset East	13.16	209	*e*P	Pn	04 27 32.8	+0.1
SOE				AML	AML	04 31 45.1	
	comp=Z,30nm,0.7s						
OPO	Ambohidratompo	13.62	81	Pn	Pn	04 27 33.3	-5.8
OPO				Sn	Sn	04 29 52.8	-18
OPO	Ambohidratompo	13.62	81	Pn	Pn	04 27 33.3	-5.8
	comp=Z,1.1nm,0.3s,baz=257,slow=15,SNR=5.7						
OPO				Sn	Sn	04 29 52.8	-18
	comp=Z,7.9nm,0.3s,baz=151,slow=19,SNR=9.1						
OPO				LR	LR	04 32 43.3	
	comp=Z,251nm,18.2s,baz=97,slow=38						
TSUM	Tsumeb	14.61	275	Pn	Pn	04 27 52.2	-0.4
TSUM				Sn	Sn	04 30 30.3	-4.1
TSUM				Lg	Lg	04 32 11.8	
TSUM	Tsumeb	14.61	275	Pn	Pn	04 27 52.2	-0.4
	comp=Z,2.3nm,0.3s,baz=104,slow=11,SNR=13						
TSUM				Sn	Sn	04 30 30.3	-4.1
	comp=Z,1.6nm,0.3s,baz=116,slow=20,SNR=5.1						
TSUM				Lg	Lg	04 32 11.8	
	comp=Z,3.2nm,0.3s,baz=62,slow=15,SNR=5.9						
SUR	Sutherland	15.49	222	*e*P	Pn	04 28 05.1	+0.8
SUR				*e*S	Sn	04 30 48.4	-7.4
SUR				AML	AML	04 33 15.1	

comp=Z,31nm,0.7s
SUR Sutherland 15.49 222 *e*Pn **Pn** 04 28 04.8 +0.4
comp=Z,35nm,0.8s
SUR Sn **Sn** 04 30 50.8 -5.0
SUR Lg Lg 04 32 33.7
SUR Sutherland 15.49 222 Pn **Pn** 04 28 04.4 +0.1
comp=Z,2.7nm,0.3s,baz=61,slow=13,SNR=28
SUR Sn **Sn** 04 30 50.8 -5.0
comp=Z,2.1nm,0.3s,baz=131,slow=17,SNR=5.5
SUR Lg Lg 04 32 33.7
comp=Z,3.1nm,0.3s,baz=296,slow=22,SNR=4.9
KOMG Komaggas 16.35 236 *e*P **P** 04 28 18.7 +0.6
KOMG *e*S **Sn** 04 31 13.4 -3.1
KOMG AML AML 04 33 21.2
comp=Z,44nm,0.7s
KMBO Kilima Mbogo 20.46 12 *e*P **P** 04 29 03.0 -0.7
comp=Z,6.5nm,1.4s
MBAR Mbarara 20.67 354 P **P** 04 29 04.9 -1.0
MBAR S S 04 32 47.4 -9.3
MBAR Lg Lg 04 35 08.2
MBAR Mbarara 20.67 354 P **P** 04 29 04.9 -1.0
comp=Z,5.2nm,0.2s,baz=217,slow=17,SNR=3.1
MBAR S S 04 32 47.4 -9.3
comp=Z,3.3nm,0.2s,baz=145,slow=22,SNR=3.6
MBAR Lg Lg 04 35 08.2
comp=Z,7.2nm,0.7s,baz=60,slow=24,SNR=3.6
TORD Torodi Ar. Bea 46.00 315 P **P** 04 32 49.9 +0.7
TORD Torodi Ar. Bea 46.00 315 P **P** 04 32 49.9 +0.7
comp=Z,3.6nm,0.7s,baz=126,slow=6.9,SNR=14
DBIC Dimbokro 46.38 303 *e*P **P** 04 32 53.3 +1.0
comp=Z,3.9nm,0.6s
DBIC Dimbokro 46.38 303 P **P** 04 32 53.5 +1.2
comp=Z,4.3nm,0.6s,baz=278,slow=13,SNR=5.4
SNAA Sanae 54.44 193 *e*P **P** 04 33 53.0 +0.5
comp=Z,6.5nm,1.2s
SNAA Sanae 54.44 193 P **P** 04 33 52.9 +0.3
comp=Z,0.6nm,0.8s,baz=23,slow=7.7,SNR=4.4
VNA2 Neumayer--Watz 54.94 195 *e*P **P** 04 33 57.2 +1.0
baz=19,slow=7.4
VNA2 Neumayer--Watz 54.94 195 *e* P 04 34 02.8 +6.6
baz=19,slow=7.4
VNA3 Neumayer Olymp 55.71 195 *e*P **P** 04 34 02.4 +0.7
VNA3 Neumayer Olymp 55.71 195 *e* P 04 34 07.6 +5.9
BRTR Keskin Array B 60.69 1 P **P** 04 34 36.5 -0.5
BRTR Keskin Array B 60.69 1 P **P** 04 34 36.5 -0.5
comp=Z,0.6nm,0.6s,baz=180,slow=8.5,SNR=5.2
KEST Kesra 60.97 338 *e*P **P** 04 34 40.4 +1.5
KEST Kesra 60.97 338 P **P** 04 34 40.1 +1.2
comp=Z,0.9nm,0.9s,baz=307,slow=5.1,SNR=2.9
ESDC Sonseca Array 69.78 330 P **P** 04 35 37.3 +1.4
ESDC Sonseca Array 69.78 330 P **P** 04 35 37.3 +1.4
comp=Z,1.9nm,0.7s,baz=144,slow=5.9,SNR=13
GERES GERESS Array B 71.91 347 P **P** 04 35 49.2 +0.5
GERES GERESS Array B 71.91 347 P **P** 04 35 49.2 +0.5
comp=Z,0.9nm,0.6s,baz=180,slow=4.9,SNR=8.5
ABKAR Akbulak array 74.21 18 *e*P **P** 04 36 00.3 -1.8
comp=Z,2.3nm,0.8s
BDFB Brasilia 76.28 258 P **P** 04 36 16.6 +1.5
BDFB Brasilia 76.28 258 P **P** 04 36 16.6 +1.5
comp=Z,6.3nm,0.6s,baz=106,slow=6.8,SNR=13
VNDA Vanda 77.00 170 *e*P **P** 04 36 17.6 -0.3
comp=Z,2.9nm,1.0s
VNDA Vanda 77.00 170 P **P** 04 36 18.4 +0.5
comp=Z,1.2nm,0.6s,baz=278,slow=4.9,SNR=5.5
USHA Ushuaia 79.19 215 P **P** 04 36 31.2 +0.8
USHA Ushuaia 79.19 215 P **P** 04 36 31.2 +0.8
comp=Z,4.9nm,0.8s,baz=56,slow=3.6,SNR=3.7
BVAR Borovoye Array 80.80 22 P **P** 04 36 37.8 -1.2
BVAR Borovoye Array 80.80 22 P **P** 04 36 37.8 -1.2
comp=Z,2.3nm,0.9s,baz=204,slow=5.8,SNR=9.9
MKAR Makanchi Array 81.05 32 P **P** 04 36 38.6 -1.9
MKAR Makanchi Array 81.05 32 P **P** 04 36 38.6 -1.9
comp=Z,0.6nm,0.8s,baz=220,slow=3.6,SNR=7.7
KURK Kurchatov 82.18 27 *e*P **P** 04 36 45.4 -0.9
comp=Z,4.5nm,1.2s
FINES FINESS Array B 82.62 357 P **P** 04 36 48.2 -0.2
FINES FINESS Array B 82.62 357 P **P** 04 36 48.2 -0.2
comp=Z,1.1nm,0.7s,baz=64,slow=6.3,SNR=2.5
NOA NORSAR Array B 83.90 350 P **P** 04 36 55.7 +0.7
NOA NORSAR Array B 83.90 350 P **P** 04 36 55.7 +0.7
comp=Z,1.5nm,0.9s,baz=153,slow=4.9,SNR=2.8
SIV San Ignacio 87.98 254 P **P** 04 37 18.1 +1.8
SIV San Ignacio 87.98 254 P **P** 04 37 18.1 +1.8
comp=Z,0.8nm,0.6s,baz=129,slow=13,SNR=4.9
ASAR Alice Springs 91.02 116 P **P** 04 37 29.6 -1.0
ASAR Alice Springs 91.02 116 P **P** 04 37 29.6 -1.0
comp=Z,1.9nm,0.8s,baz=238,slow=3.8,SNR=15
WRA Warramunga Arr 92.88 113 P **P** 04 37 37.3 -1.9
WRA Warramunga Arr 92.88 113 P **P** 04 37 37.3 -1.9
comp=Z,0.2nm,0.6s,baz=243,slow=2.8,SNR=5.1
LPAZ La Paz 94.14 251 P **P** 04 37 47.4 +1.7
LPAZ La Paz 94.14 251 P **P** 04 37 47.4 +1.7
comp=Z,0.7nm,0.7s,baz=130,slow=7.9,SNR=3.5
YKA Yellowknife Ar 133.25 340 PKP **PKPdf** 04 43 40.8 -0.2
YKA Yellowknife Ar 133.25 340 PKP **PKPdf** 04 43 40.7 -0.2
comp=Z,0.6nm,0.7s,baz=39,slow=2.2,SNR=14
ILAR Eielson Array 136.53 360 PKP **PKPdf** 04 43 47.3 +0.2
ILAR Eielson Array 136.53 360 PKP **PKPdf** 04 43 47.3 +0.2
comp=Z,0.3nm,0.8s,baz=353,slow=3.6,SNR=3.9
TXAR Lajitas Array 140.19 291 PKP **PKPdf** 04 43 55.4 +0.4
TXAR Lajitas Array 140.19 291 PKP **PKPdf** 04 43 55.4 +0.4
comp=Z,0.7nm,0.9s,baz=143,slow=4.4,SNR=3.8
PDAR Pinedale Array 142.13 313 PKPpre PKPpre 04 43 53.0
PDAR PKP **PKiKP** **04 43 59.6 -1.6**
PDAR Pinedale Array 142.13 313 PKhKP PKPpre 04 43 53.0
comp=Z,0.2nm,0.7s,baz=56,slow=6.8,SNR=2.9
PDAR PKP **PKiKP** **04 43 59.6 -1.6**
comp=Z,0.5nm,0.5s,baz=86,slow=4.3,SNR=4.6
O19A Miners Draw (B 142.70 309 ⇓P **PKPdf** 04 43 56.0 -3.3
baz=143
N18A Larsen Ranch, 142.86 310 ⇑P **PKPdf** 04 43 56.6 -3.0
baz=143
Q19A Hogan Spring (143.22 307 ⇓P **PKPdf** 04 43 58.7 -1.5
baz=143,SNR=18
121A Cookes Peak, D 143.46 296 ⇑P **PKPdf** 04 43 59.9 -1.0
baz=144
G14A Jackson 143.56 319 ⇑P **PKPdf** 04 44 00.2 -0.5
baz=144
W20A Ramah 143.60 301 ⇓P PKPbc 04 43 59.5 +0.9
baz=144
X20A Quemado 143.72 300 ⇑P **PKPdf** 04 44 00.7 -0.7
baz=144
D12A Red Ives Fores 143.72 323 ⇓P **PKPdf** 04 44 00.9 +0.1
baz=144
Y20A Horse Springs, 143.74 299 ⇓P **PKPdf** 04 44 01.1 -0.3
baz=144
F13A Darby 143.81 320 ⇓P **PKPdf** 04 44 00.6 -0.5
baz=144
O17A Robinson Place 143.90 310 ⇑P **PKPdf** 04 44 00.7 -0.7
baz=144,SNR=6.1
Z20A Nine Sixteen R 144.05 297 ⇑P **PKPdf** 04 44 01.1 -0.8
baz=144
SRU San Rafael 144.11 308 ⇓P **PKPdf** 04 44 01.3 -0.6
baz=144,SNR=6.6
G13A Cobalt 144.11 319 ⇓P **PKPdf** 04 44 01.0 -0.6
baz=144
S18A Hurst Farm, BI 144.14 305 ⇑P **PKPdf** 04 44 01.6 -0.4
baz=144,SNR=5.5
220A Playas Peak, P 144.17 295 ⇓P **PKPdf** 04 44 02.2 +0.1
baz=144
I14A Mackay 144.20 317 ⇑P **PKPdf** 04 44 02.2 +0.4
baz=144
L15A Malad City 144.35 313 ⇑P **PKPdf** 04 44 01.5 -0.6
baz=144
F12A Elk City 144.38 321 ⇓P **PKPdf** 04 44 01.5 -0.5
baz=144
H13A Challis 144.39 318 ⇓P **PKPdf** 04 44 02.5 +0.3
baz=144,SNR=19
J14A Carey 144.52 316 ⇑P **PKPdf** 04 44 03.1 +0.8
baz=145
I13A Wildhorse Cree 144.63 317 ⇓P **PKPdf** 04 44 03.1 +0.5
baz=145,SNR=6.3
K14A Jones Ranch, D 144.65 315 ⇑P **PKPdf** 04 44 03.2 +0.6
baz=145,SNR=8.1
G12A Big Creek, Yel 144.76 320 ⇑P **PKPdf** 04 44 02.1 -0.6
baz=145
P16A Fountain Green 144.77 309 ⇑P **PKPdf** 04 44 03.0 +0.1
baz=145
H12A Diamond D Ranc 144.77 319 ⇑P **PKPdf** 04 44 02.8 0.0
baz=145,SNR=6.0
319A Douglas 144.87 295 ⇑P **PKPdf** 04 44 04.7 +1.3
baz=145
X18A Snowflake 144.89 300 ⇓P **PKPdf** 04 44 03.9 +0.6
baz=145
J13A Cove Ranch, Pi 144.91 317 ⇑P **PKPdf** 04 44 04.6 +1.5
baz=145,SNR=34
L14A Malta 144.92 314 ⇓P **PKPdf** 04 44 03.9 +0.8
baz=145,SNR=9.1
HLID Hailey 144.99 317 ⇓P **PKPdf** 04 44 04.6 +1.4
baz=145,SNR=10
P15A Leamington 145.23 309 ⇓P **PKPdf** 04 44 04.8 +1.1
baz=145,SNR=5.0
DUG Dugway 145.37 311 ⇑P **PKPab** 04 44 04.8 +0.8
baz=146,SNR=6.3
WUAZ Wupatki 145.80 302 ⇓P **PKPab** 04 44 06.9 +1.2
baz=146
MFID Camas Ranch 145.95 318 ⇓P **PKPab** 04 44 07.3 +1.3
baz=146,SNR=14
X16A Lo Mia Camp, P 146.12 300 ⇑P **PKPab** 04 44 08.5 +1.5
baz=146
U15A North Rim 146.27 304 ⇓P **PKPab** 04 44 07.9 +0.3
baz=146
Y14A Wickenburg 147.49 300 ⇓P **PKPab** 04 44 11.3 -0.9
baz=148
W13A Hualapai Mount 147.89 303 ⇓P **PKPab** 04 44 12.5 -1.4
baz=148
PDMCI Parker Dam,Lak 148.31 301 ⇑P **PKPbc** 04 44 13.4 +1.1
baz=148
113A Mohawk Valley, 148.38 298 ⇓P **PKPab** 04 44 14.1 -1.6
baz=149
IRM Iron Mountain 149.16 301 ⇑P **PKPab** 04 44 16.4 -2.4
baz=149
GLA Glamis 149.18 299 ⇓P **PKPbc** 04 44 15.8 +1.2
baz=149
GMRC Granite Mounta 149.38 303 ⇑P **PKPbc** 04 44 16.7 +1.6
baz=150
SHOC Shoshone 149.49 305 ⇑P **PKPbc** 04 44 17.3 +2.1
baz=150
BC3 Big Chuckawall 149.54 301 ⇓P **PKPbc** 04 44 17.2 +1.7
baz=150
FURC Furnace Creek, 149.73 307 ⇑P **PKPab** 04 44 18.5 -2.5
baz=150
BELC Belle Mtn. Jos 149.88 301 ⇑P **PKPbc** 04 44 18.2 +1.8
baz=150
GRAC Grapevine Rang 149.91 308 ⇑P **PKPbc** 04 44 18.6 +2.3
baz=150
NVAR Mina Array Bea 149.98 311 PKPbc **PKPbc** 04 44 18.5 +1.8
NVAR Mina Array Bea 149.98 311 PKPbc **PKPbc** 04 44 18.5 +1.8
comp=Z,2.9nm,0.6s,baz=57,slow=4.6,SNR=21
MPMC Manual Prospec 150.35 306 ⇓P **PKPbc** 04 44 19.8 +2.2
baz=150
MURC Murrieta 150.95 301 ⇑P **PKPbc** 04 44 20.3 +1.5
baz=151
ISA Isabella 151.24 306 ⇑P **PKPbc** 04 44 21.7 +2.2
baz=151

IDC 02 04:41:30.0±16.0, 27.53N×139.95E, h498km±208km, mb2.8/5, mb1 3.0/5, mb1mx2.7/22, mbtmp2.8/5, Error ellipse: s-maj=63.5km s-min=21.5km az=69.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**47.50**	**187**	P	P	04 49 19.4	-0.2
	0.5nm,0.7s,baz=3.4,slow=7.6,SNR=7.4						
ZALV	**Zalesovo Beam**	**47.86**	**319**	P	P	04 49 21.5	-0.2
	0.3nm,0.3s,baz=114,slow=6.5,SNR=2.1						
MKAR	**Makanchi Array**	**48.66**	**309**	P	P	04 49 28.1	+0.1
	0.2nm,0.3s,baz=88,slow=11,SNR=8.0						
YKA	**Yellowknife Ar**	**72.70**	**28**	P	P	04 52 06.5	0.0
	0.2nm,0.5s,baz=297,slow=6.2,SNR=5.1						
FINES	**FINESS Array B**	**76.67**	**333**	P	P	04 52 28.9	0.0
	2.2nm,0.9s,baz=69,slow=6.3,SNR=3.6						

TAP 02 04:52:24.4, 24.80N×122.34E, h11km, ML3.5, 2D, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.38**	**303**	⇓*i*P	Pb	04 52 32.7	-0.4
	baz=303						
TWB1				*i* S	Sb	04 52 38.5	-0.6
	baz=303						
TWC	**Suao**	**0.48**	**247**	P	Pg	04 52 33.8	0.0
	baz=254						
TWC				*e*S	Sg	04 52 41.1	+0.8
	baz=254						
ILA	**Ilan**	**0.54**	**266**	*e*P	Pb	04 52 36.2	+0.4
	baz=265						
ILA				*e*S	Sn	04 52 45.4	-1.5
	baz=265						
NWF	**Wu-fen Shan**	**0.57**	**298**	P	Pb	04 52 36.7	+0.2
	baz=298						
NWF				S	Sb	04 52 45.7	+0.9
	baz=298						
TWE	**Neicheng**	**0.62**	**263**	P	Pg	04 52 36.7	+0.4
	baz=262						
TWE				*e*S	Sb	04 52 45.7	-0.1
	baz=262						
ENA	**Nanau**	**0.66**	**236**	P	Pg	04 52 37.3	+0.2
	baz=235						
ENA				*e*S	Sb	04 52 47.3	+0.2
	baz=235						
ENTT	**Nioudou**	**0.72**	**257**	*e*P	Pb	04 52 39.0	0.0
	baz=256						
ENTT				*e*S	Sb	04 52 49.8	+0.9
	baz=256						
TWY	**Chenhua**	**0.82**	**305**	P	Pn	04 52 41.4	-0.5
	baz=305						
TWY				*e*S	Sb	04 52 52.8	+1.1
	baz=305						
TWS1	**Kuangyinshan**	**0.89**	**290**	*e*P	Pn	04 52 43.2	+0.4
	baz=290						
TWS1				*e*S	Sn	04 52 55.1	-0.5
	baz=290						
NSK	**Sanguang**	**0.90**	**262**	P	Pg	04 52 41.9	0.0
	baz=261						
NSK				S	Sb	04 52 54.8	+0.7
	baz=261						
NNS	**Nan Shan**	**0.95**	**248**	P	Pb	04 52 43.1	0.0
	baz=247						
NNS				*e*S	Sb	04 52 56.3	+0.6
	baz=247						
TWD	**Chiawan**	**0.99**	**224**	*e*P	Pg	04 52 43.1	-0.2
	baz=231						
TWD				*e*S	Sn	04 52 57.6	-0.4
	baz=231						
WHF	**Hehuan Shan**	**1.18**	**237**	⇓*i*P	Pb	04 52 46.8	-0.4
	baz=235						
WHF				*e*S	Sb	04 53 02.2	-0.6
	baz=235						
TWT	**Tachien**	**1.19**	**243**	*e*P	Pb	04 52 47.2	0.0
	baz=242						
TWT				*e*S	Sn	04 53 04.6	+1.1
	baz=242						
NSTT	**Nanjuang**	**1.23**	**262**	P	Pg	04 52 48.0	-0.1
	baz=261						
NSTT				*e*S	Sn	04 53 04.3	+0.3
	baz=261						
ESL	**Shilin**	**1.28**	**220**	*e*P	Pg	04 52 48.9	-0.2
	baz=200						
ESL				*e*S	Sg	04 53 07.1	+1.3
	baz=200						
TWQ1	**Liyutan**	**1.50**	**253**	*e*P	Pg	04 52 52.9	-0.3
	baz=251						
TWQ1				*e*S	Sg	04 53 12.0	-0.6
	baz=251						
EHY	**Hungye**	**1.59**	**216**	*e*P	Pn	04 52 52.7	+0.2
	baz=214						
EHY				*e*S	Sb	04 53 14.0	+0.2
	baz=214						
SMLT	**Sun Moon Lake**	**1.60**	**235**	*e*P	Pb	04 52 53.7	-0.4
	baz=242						
SMLT				*e*S	Sb	04 53 14.9	+0.5
	baz=242						
TYC	**Yuchr**	**1.62**	**237**	*e*P	Pb	04 52 54.4	+0.2
	baz=235						
TYC				*e*S	Sg	04 53 15.8	-0.7
	baz=235						
TWF1	**Yuli**	**1.73**	**214**	*e*P	Pn	04 52 54.3	-0.1
	baz=211						
TWF1				*e*S	Sn	04 53 16.5	+0.1
	baz=211						
ALS	**Alishan**	**1.90**	**228**	*e*P	Pb	04 52 58.6	-0.9
	baz=209						
CHN5	**Tsauling**	**1.93**	**232**	*e*P	Pb	04 52 59.6	-0.2
	baz=230						
CHN5				*e*S	Sg	04 53 26.9	+0.2
	baz=230						
ELDTW	**Lidau**	**2.01**	**217**	*e*P	Pn	04 52 58.4	0.0
	baz=201						
ELDTW				*e*S	Sn	04 53 24.3	+0.7
	baz=201						
CHN4	**Tsaushan**	**2.15**	**228**	*e*P	Pb	04 53 02.3	-1.0
	baz=209						
CHN4				*e*S	Sb	04 53 31.4	+1.3
	baz=209						
WTP	**Ta-pu**	**2.21**	**226**	*e*P	Pn	04 53 02.7	+1.7
	baz=207						
WTP				*e*S	Sb	04 53 32.3	+0.5
	baz=207						
TWK	**Hsinying**	**2.28**	**228**	*e*P	Pn	04 53 03.8	+1.8
	baz=210						
TWK				*e*S	Sb	04 53 34.9	+1.1
	baz=210						
TWG	**Pinlang**	**2.29**	**211**	*e*P	Pn	04 53 02.5	+0.5
	baz=208						
TWG				*e*S	Sn	04 53 29.7	-0.5
	baz=208						
CHN1	**Nanshi**	**2.31**	**226**	*e*P	Pb	04 53 05.2	-0.8
	baz=208						
CHN1				*e*S	Sb	04 53 34.9	+0.3
	baz=208						

UPA ***02*** *05:30:18.9, 8.89N×82.86W, h15km, MW3.7*
UCR ***02*** *05:30:19.2, 8.91N×82.90W, h7km, MD3.4*
CASC 02 05:30:19.4±1.5, 8.88N×82.87W, h13km±19km, MD3.4, 3C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRU2	**Volcan**	**0.20**	**117**	⇑*i*P	Pb	05 30 24.8	-0.3
BRU2				*e*S	Sb	05 30 29.0	+0.1
TBS2		**0.23**	**113**	⇑*e*P	Pb	05 30 25.9	+0.3
TBS2				*e*S	Sb	05 30 29.2	-0.5
BRU	**Baru**	**0.31**	**104**	⇑*i*P	Pb	05 30 27.0	-0.5
BRU				*e*S	Sb	05 30 33.3	+0.4
ACR	**Cerro Adams**	**0.37**	**232**	⇓*e*P	Pg	05 30 27.3	+0.3
ACR				*e*S	Sg	05 30 32.3	+0.1
QCR	**Quepos**	**1.39**	**293**	*e*P	Pn	05 30 43.2	-1.3
SJS	**Escuela Geolog**	**1.57**	**312**	*e*P	Pn	05 30 46.8	-0.4
LAJ	**Bijagual**	**1.57**	**308**	*e*P	Pg	05 30 51.5	+1.6
CGA2	**Cerro Gallo 2**	**1.94**	**306**	*e*P	Pn	05 30 52.1	-0.1

TIR ***02*** *05:45:19.8±1.3, 41.13N×19.48E, h20km±21km, ML3.2*
ATH ***02*** *05:45:20.4, 41.26N×19.32E, h28km±12km, MD3.5/6*
ROM ***02*** *05:45:22.2±0.2, 41.16N×19.62E, h10km, Md2.9/4, MI2.9/7, Error ellipse: s-maj=3.6km s-min=2.0km az=119.0*
PDG ***02*** *05:45:22.2±0.4, 41.17N×19.59E, h11km, ML3.0/10, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
SKO ***02*** *05:45:23.0, 41.15N×19.63E, h13km, M2.7, ML3.0*
ISCJB ***02*** *05:45:23.3±0.4, 41.17N±0.02×19.55E±0.02, h19km±4km, Error ellipse: s-maj=3.0km s-min=2.7km az=150.3*
BEO ***02*** *05:45:23.1±0.8, 41.16N×19.62E, h14km±2km, ML2.8/7*
THE ***02*** *05:45:23.4, 41.30N×19.47E, h31km±19km, ML3.3/3, Error ellipse: s-maj=19.0km s-min=0.9km az=0.0*
CSEM ***02*** *05:45:24.0±0.1, 41.18N×19.55E, h20km, MD2.9/4, Error ellipse: s-maj=3.0km s-min=2.9km az=24.0*
ISC 02 05:45:22.0±1.0, 41.16N±0.01×19.58E±0.02, h8km±9km, n128, d=96/199, 23C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.29**	**49**	*i* Pg	Pb	05 45 28.1	-1.3
TIR				*i* SG	Sb	05 45 33.8	-0.6
TIR	**Tirane**	**0.29**	**49**	⇓*i*Pg	Pb	05 45 28.1	-1.3
TIR				*i* Sg	Sb	05 45 34.3	-0.1
TIR	**Tirane**	**0.29**	**49**	Pg	Pg	05 45 28.0	+0.2
TIR				Sg	Sg	05 45 32.5	+0.9
TIR	**Tirane**	**0.29**	**49**	*e*Pb	Pb	05 45 28.1	-1.3
TIR				*e*Sb	Sb	05 45 34.3	-0.1
PHP	**Peshkopia**	**0.84**	**51**	*i* PG	Pg	05 45 36.8	-1.3
PHP				*i* SG	Sn	05 45 51.6	-1.1
PHP	**Peshkopia**	**0.84**	**51**	*i* Pg	Pg	05 45 36.8	-1.3
	SNR=95						
PHP				*i* Sg	Sn	05 45 51.6	-1.1
	SNR=95						
ULC	**Ulcinj**	**0.84**	**343**	⇑*i*Pg	Pg	05 45 38.1	-0.1
ULC				*e*Sg	Sb	05 45 51.1	+0.7
ULC	**Ulcinj**	**0.84**	**343**	⇑*i*Pg	Pg	05 45 38.1	-0.1
ULC				*e*Sg	Sb	05 45 51.1	+0.7
PUK	**Puka**	**0.91**	**15**	*i* PG	Pg	05 45 39.1	-0.5
PUK				*i* SG	Sb	05 45 52.4	-0.1
PUK	**Puka**	**0.91**	**15**	*i* Pg	Pg	05 45 39.1	-0.5
	SNR=95						
PUK				*i* Sg	Sb	05 45 52.4	-0.1
	SNR=95						
BUM	**Brajici-Budva**	**1.25**	**336**	⇓*i*Pg	Pg	05 45 45.5	-0.5
BUM				*e*Sg	Sn	05 46 04.5	+1.6
BUM	**Brajici-Budva**	**1.25**	**336**	⇓*i*Pg	Pg	05 45 45.5	-0.5
BUM				*e*Sg	Sn	05 46 04.5	+1.6
BCI	**Bajram Curri**	**1.26**	**17**	*i* PG	Pg	05 45 45.7	-0.5
BCI				*i* SG	Sn	05 46 04.5	+1.4
BCI	**Bajram Curri**	**1.26**	**17**	*i* Pg	Pg	05 45 45.7	-0.5
	SNR=93						
BCI				*i* Sg	Sn	05 46 04.5	+1.4
	SNR=93						
PDG	**Podgorica**	**1.29**	**349**	*e*Pg	Pn	05 45 46.1	-0.3
PDG				*i* Sg	Sn	05 46 04.9	+1.1
PDG	**Podgorica**	**1.29**	**349**	Pg	Pb	05 45 46.3	-0.3
PDG				Sg	Sn	05 46 04.8	+1.0
PDG	**Podgorica**	**1.29**	**349**	Pg	Pg	05 45 46.3	-0.3
PDG				Sg	Sn	05 46 04.8	+1.0
TTG	**Podgorica**	**1.29**	**349**	⇑*i*Pg	Pn	05 45 45.8	-0.6
TTG				*e*Sg	Sn	05 46 05.5	+1.7
BIA	**Bitola**	**1.33**	**95**	*i* Pg	Pn	05 45 46.3	-0.7
BIA				*i* Sg	Sg	05 46 04.1	-0.7
BIA				*e*Lg	Lg	05 46 05.3	
	comp=E,112nm,0.3s						
BIA				*e*Lg	Lg	05 46 06.0	
	comp=N,85nm,0.3s						
BIA	**Bitola**	**1.33**	**95**	*i* Pg	Pn	05 45 46.2	-0.7
BIA				*i* Sg	Sg	05 46 04.0	-0.7
BIA				*e*Lg	Lg	05 46 06.0	
	comp=N,85nm,0.3s						
NEST	**Nestorio**	**1.34**	**123**	P	Pg	05 45 47.9	+0.1
NEST				S	Sn	05 46 06.3	+1.1
NEST	**Nestorio**	**1.34**	**123**	P	Pg	05 45 47.9	+0.1
NEST				S	Sn	05 46 06.3	+1.1
SCTE	**Santa Cesarea**	**1.38**	**218**	Pg	Pn	05 45 47.4	-0.1
SCTE				Sg	Sn	05 46 06.4	+0.6
SCTE	**Santa Cesarea**	**1.38**	**218**	Pg	Pn	05 45 47.4	-0.1
SCTE				Sg	Sn	05 46 06.4	+0.6
FNA	**Florina**	**1.41**	**105**	P	Pb	05 45 48.5	-0.2
FNA				S	Sg	05 46 07.8	+0.3
FNA	**Florina**	**1.41**	**105**	P	Pb	05 45 48.5	-0.2
FNA				S	Sg	05 46 07.8	+0.3
KEK	**Kerkira**	**1.45**	**173**	*e*PN	Pn	05 45 48.6	0.0
KEK				*e*SN	Sg	05 46 09.3	+0.5
KEK	**Kerkira**	**1.45**	**173**	Pg	Pn	05 45 48.6	0.0
KEK				Sg	Sg	05 46 09.3	+0.5
KEK	**Kerkira**	**1.45**	**173**	Pg	Pn	05 45 48.6	0.0
KEK				Sg	Sg	05 46 09.3	+0.5
PVY	**Plav**	**1.46**	**11**	⇑*i*Pg	Pb	05 45 49.2	-0.4
PVY				*e*Sg	Sg	05 46 10.6	+1.5
PVY	**Plav**	**1.46**	**11**	⇑*i*Pg	Pb	05 45 49.2	-0.4
PVY				*e*Sg	Sg	05 46 10.6	+1.5
HCY	**Herceg Novi**	**1.52**	**328**	*e*Pg	Pb	05 45 50.2	-0.3
HCY				*e*Sg	Sg	05 46 12.3	+1.4
HCY	**Herceg Novi**	**1.52**	**328**	*e*Pg	Pb	05 45 50.2	-0.3
HCY				*e*Sg	Sg	05 46 12.3	+1.4
SKO	**Skopje**	**1.62**	**59**	*i* Pg	Pb	05 45 51.7	-0.4
SKO				*i* Sg	Sg	05 46 13.7	-0.4
SKO				*e*Lg	Lg	05 46 15.2	
	comp=E,263nm,0.6s						
SKO				*e*Lg	Lg	05 46 15.4	
	comp=N,441nm,0.6s						
SKO	**Skopje**	**1.62**	**59**	*i* Pg	Pg	05 45 52.2	-0.8
SKO				*i* Sg	Sg	05 46 14.1	+0.1
SKO				*e*Lg	Lg	05 46 15.9	
	comp=N,441nm,0.6s						
NKY	**Niksic**	**1.71**	**345**	⇓*i*Pn	Pb	05 45 53.0	-0.7
NKY				*e*Sn	Sg	05 46 17.2	+0.2
NKY	**Niksic**	**1.71**	**345**	⇓*i*Pn	Pb	05 45 53.0	-0.7
NKY				*e*Sn	Sg	05 46 17.2	+0.2
IGT	**Igoumenitsa**	**1.72**	**160**	P	Pn	05 45 52.9	+0.6
IGT				S	Sb	05 46 16.3	+0.6
IGT	**Igoumenitsa**	**1.72**	**160**	P	Pn	05 45 52.9	+0.6
IGT				S	Sb	05 46 16.3	+0.6
BEY	**Berane**	**1.73**	**8**	⇑*i*Pn	Pb	05 45 53.2	-0.9
BEY				*e*Sn	Sg	05 46 17.7	+0.1
IVA	**Berane**	**1.73**	**8**	⇑*i*Pn	Pb	05 45 53.2	-0.9

IVA				eSn	Sg	05 46 17.7	+0.1
JAN	Janina	1.79	147	ePN	Pb	05 45 54.1	-0.9
JAN				eSN	Sg	05 46 19.1	-0.4
JAN	Janina	1.79	147	ePn	Pb	05 45 54.1	-0.9
JAN				eSn	Sg	05 46 19.1	-0.4
KZN	Kozani	1.87	116	ePB	Pb	05 45 56.3	-0.2
KZN				eSN	Sg	05 46 21.5	-0.7
KZN	Kozani	1.87	116	ePn	Pb	05 45 56.3	-0.2
KZN				eSn	Sg	05 46 21.5	-0.7
BRY	Bratogost	1.91	336	ePn	Pn	05 45 55.8	+0.9
BRY				eSn	Sg	05 46 22.2	-1.1
BRY	Bratogost	1.91	336	ePn	Pn	05 45 55.8	+0.9
BRY				eSn	Sg	05 46 22.2	-1.1
NOCI	Noci	1.94	260	Pg	Pb	05 45 56.6	-1.0
	comp=N,99nm,0.4s						
NOCI	Noci	1.94	260	Pg	Pb	05 45 56.6	-1.0
	comp=N,99nm,0.4s						
UPM	Unac-Piva	2.10	347	ePn	Pb	05 45 59.2	-1.3
UPM				eSn	Sb	05 46 26.8	0.0
UPM	Unac-Piva	2.10	347	ePn	Pb	05 45 59.2	-1.3
UPM				eSn	Sb	05 46 26.8	0.0
SJES	Sjenica	2.12	8	ePn	Pn	05 45 58.5	+0.6
SJES	Sjenica	2.12	8	ePn	Pn	05 45 58.5	+0.6
GRG	Griva	2.15	94	P	Pn	05 45 58.2	+0.1
GRG				S	Sn	05 46 25.1	+0.1
GRG	Griva	2.15	94	P	Pn	05 45 58.2	+0.1
GRG				S	Sn	05 46 25.1	+0.1
PLE	Pljevlja	2.17	356	⇑iPn	Pn	05 45 59.8	+1.2
PLE				eSn	Sb	05 46 28.3	-0.5
PLE	Pljevlja	2.17	356	⇑iPn	Pn	05 45 59.8	+1.2
PLE				eSn	Sb	05 46 28.3	-0.5
STON	Ston	2.21	321	i Pn	Pn	05 45 57.8	-1.1
STON				Sn	Sn	05 46 24.2	-2.3
STON	Ston	2.21	321	i Pn	Pn	05 45 57.8	-1.1
STON				Sn	Sn	05 46 24.1	-2.3
MATE	Matera	2.23	258	Pg	Pb	05 46 01.8	-0.8
	comp=N,75nm,0.6s						
MATE	Matera	2.23	258	Pg	Pb	05 46 01.8	-0.8
	comp=N,75nm,0.6s						
AMUR	Altamura	2.26	265	Pg	Pn	05 46 00.0	+0.3
	comp=N,58nm,0.5s						
AMUR	Altamura	2.26	265	Pg	Pn	05 46 00.0	+0.3
	comp=N,58nm,0.5s						
VAY	Valandovo	2.26	85	ePn	Pn	05 45 59.0	-0.7
VAY				eSg	Sg	05 46 33.2	-1.6
VAY				eLg	Lg	05 46 35.0	
	comp=N,68nm,0.7s						
VAY				eLg	Lg	05 46 36.1	
	comp=E,66nm,1.1s						
VAY	Valandovo	2.26	85	ePn	Pn	05 45 59.5	-0.2
VAY				eLg	Lg	05 46 36.5	
	comp=E,66nm,1.1s						
BARS	Barje	2.35	44	ePn	Pn	05 46 01.3	+0.4
BARS	Barje	2.35	44	ePg	Pb	05 46 05.4	+0.8
BARS				eSn	Sn	05 46 30.1	+0.1
BARS	Barje	2.35	44	ePn	Pn	05 46 01.3	+0.4
BARS	Barje	2.35	44	ePg	Pb	05 46 05.4	+0.8
BARS				eSn	Sn	05 46 30.1	+0.1
SELS	Selova	2.36	29	ePn	Pn	05 46 01.0	0.0
SELS				i Sn	Sn	05 46 29.5	-0.7
THL	Klokotos Trika	2.45	130	ePN	Pn	05 46 03.5	+1.2
THL				eSN	Sb	05 46 35.5	-1.1
THL	Klokotos Trika	2.45	130	ePn	Pn	05 46 03.5	+1.2
THL				eSn	Sb	05 46 35.5	-1.1
IVAS	Ivanjica	2.45	10	⇑iPn	Pn	05 46 02.5	+0.1
IVAS	Ivanjica	2.45	10	ePg	Pb	05 46 07.3	+0.9
IVAS	Ivanjica	2.45	10	⇑iPn	Pn	05 46 02.5	+0.1
IVAS	Ivanjica	2.45	10	ePg	Pb	05 46 07.3	+0.9
LIT	Litokhoron	2.46	115	P	Pn	05 46 03.0	+0.6
LIT	Litokhoron	2.46	115	P	Pn	05 46 03.0	+0.6
KNT	Kendrikon	2.51	89	P	Pn	05 46 02.9	-0.2
KNT				S	Sn	05 46 33.8	-0.1
KNT	Kendrikon	2.51	89	P	Pn	05 46 02.9	-0.2
KNT				S	Sn	05 46 33.8	-0.1
MRVN	Minervino Murg	2.56	269	Pg	Pn	05 46 05.3	+1.5
MRVN	Minervino Murg	2.56	269	Pg	Pn	05 46 05.3	+1.5
BBLS	Lazići	2.71	357	ePn	Pn	05 46 07.0	+1.1
BBLS	Lazići	2.71	357	ePn	Pn	05 46 07.0	+1.1
ACER	Acerenza	2.78	263	Pg	Pn	05 46 07.1	+0.3
ACER	Acerenza	2.78	263	Pg	Pn	05 46 07.1	+0.3
EVR	Evrytania	2.82	142	ePN	Pn	05 46 08.9	+1.4
EVR	Evrytania	2.82	142	ePn	Pn	05 46 08.9	+1.4
SCHR	S. Chirico Rap	2.83	251	Pg	Pn	05 46 06.6	-1.0
SCHR	S. Chirico Rap	2.83	251	Pg	Pn	05 46 06.6	-1.0
GRUS	Gruza	2.85	17	ePn	Pn	05 46 08.1	+0.3
GRUS	Gruza	2.85	17	ePn	Pn	05 46 08.5	+0.7
GRUS	Gruza	2.85	17	ePg	Pb	05 46 14.4	+1.2
GRUS				eSn	Sn	05 46 42.5	+0.1
GRUS	Gruza	2.85	17	ePn	Pn	05 46 08.1	+0.3
GRUS				eSn	Sn	05 46 42.5	+0.1
DIVS	Divibare	2.95	6	⇑iPn	Pn	05 46 08.7	-0.6
DIVS				i Sn	Sn	05 46 44.2	-0.8
DIVS	Divibare	2.95	6	⇑iPn	Pn	05 46 08.7	-0.6
DIVS				i Sn	Sn	05 46 44.2	-0.8
MCEL	Monticello	2.99	255	Pg	Pn	05 46 10.4	+0.7
MCEL	Monticello	2.99	255	Pg	Pn	05 46 10.4	+0.7
AGG	Agios Georgios	3.00	134	P	Pn	05 46 11.0	+1.1
AGG	Agios Georgios	3.00	134	P	Pn	05 46 11.0	+1.1
PLG	Polygyros	3.04	104	ePN	Pn	05 46 11.7	+1.2
PLG	Polygyros	3.04	104	ePn	Pn	05 46 11.7	+1.2
VTS	Vitosha	3.07	61	⇑iP	Pn	05 46 11.8	+0.9
VTS	Vitosha	3.07	61	⇑iP	Pn	05 46 11.8	+0.9
VTS				S	Sn	05 46 50.1	+2.3
ZAPS	Zavoj	3.10	46	⇑iPn	Pn	05 46 12.3	+1.0
ZAPS				eSn	Sn	05 46 46.9	-1.7
ZAPS	Zavoj	3.10	46	⇑iPn	Pn	05 46 12.3	+1.0
ZAPS				eSn	Sn	05 46 46.9	-1.7
CDRU	Civita di Ruta	3.31	260	Pg	Pn	05 46 13.6	-0.6
	comp=E,18nm,0.8s						
CDRU	Civita di Ruta	3.31	260	Pg	Pn	05 46 13.6	-0.6
	comp=E,18nm,0.8s						
MCRV	Calabrutti - M	3.36	265	Pg	Pn	05 46 15.4	+0.5
	comp=E,21nm,0.5s						
MCRV	Calabrutti - M	3.36	265	Pg	Pn	05 46 15.4	+0.5
	comp=E,21nm,0.5s						
PTRJ	Pietraroja	3.81	275	Pg	Pn	05 46 20.2	-0.9
PTRJ	Pietraroja	3.81	275	Pg	Pn	05 46 20.2	-0.9
SGG	Gregorio Mates	3.92	275	Pg	Pn	05 46 22.9	+0.3
	comp=E,16nm,0.5s						
SGG	Gregorio Mates	3.92	275	Pg	Pn	05 46 22.9	+0.3
	comp=E,16nm,0.5s						
VAGA	Valle Agricola	4.03	275	Pg	Pn	05 46 24.2	+0.1
	comp=E,20nm,0.3s						
VAGA	Valle Agricola	4.03	275	Pg	Pn	05 46 24.2	+0.1
	comp=E,20nm,0.3s						
BZS	Buzias	4.70	18	⇓iP	Pn	05 46 34.0	+0.8
BZS	Buzias	4.70	18	⇓iP	Pn	05 46 34.0	+0.8
CRES	Cresnjev	5.54	329	i Pn	Pn	05 46 44.9	+0.1
CRES				i Sn	Sn	05 47 44.5	-4.2
CRES	Cresnjev	5.54	329	i Pn	Pn	05 46 44.9	+0.1
VOIR		5.85	41	⇑iP	Pn	05 46 51.0	+1.9
VOIR		5.85	41	⇑iP	Pn	05 46 51.0	+1.9
MLR	Muntele Rosu	6.35	45	⇓iP	Pn	05 46 57.7	+1.7
MLR	Muntele Rosu	6.35	45	⇓iP	Pn	05 46 57.7	+1.7
PLOR	Plostina	6.96	45	⇑iP	Pn	05 47 06.0	+1.7
PLOR	Plostina	6.96	45	⇑iP	Pn	05 47 06.0	+1.7
BURAR	Bucovina Array	7.61	30	⇑iP	Pn	05 47 15.2	+1.9
BURAR	Bucovina Array	7.61	30	⇑iP	Pn	05 47 15.2	+1.9

*IDC **02** 06:20:14.3±1.3, 62°.02N×148°.95W, h0km, mb3.4/1, mb1 3.5/5, mb1mx3.3/29, mbtmp3.2/5, ML2.9/4, Error ellipse: s-maj=24.5km s-min=11.5km az=104.0*

*ISCJB **02** 06:20:15.8±0.2, 62°.12N±0°.02×149°.18W±0°.05, h50km±7km, mb3.1/1, Error ellipse: s-maj=3.8km s-min=3.4km az=9.7*

*NEIC **02** 06:20:16.9, 62°.11N×149°.18W, h28km, ML3.2(AEIC), After AEIC.*

ISC 02 06:20:16.7±1.0**, 62°.09N**±0°.03×**149°.27W**±0°.03**, h31**km±9km**, n74, σ0s.95**/85**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMR	Palmer	0.51	173	P	Pb	06 20 26.4	-0.9
PMR				S	Sb	06 20 34.9	+0.3
TRAP	Trapper Creek	0.52	298	P	Pb	06 20 27.6	+0.1
SML	Sawmill	0.53	123	P	Pb	06 20 26.3	-1.3
SML				S	Sb	06 20 35.0	-0.1
CUT	Chulitna	0.56	304	P	Pb	06 20 28.1	-0.1
HUR	Hurricane	0.90	349	P	Pn	06 20 32.8	-0.5
SUA	Susitna One	0.94	229	P	Pn	06 20 33.4	-0.5
SUA				S	Sb	06 20 47.4	+0.5
FIB	Fire Island	1.03	205	P	Pn	06 20 35.1	+0.1
FIB				S	Sb	06 20 50.8	+1.7
RC01	Rabbit Creek A	1.03	193	P	Pn	06 20 34.2	-0.8
RC01				S	Sb	06 20 49.4	+0.1
SKT	Skwentna	1.07	265	P	Pn	06 20 34.9	-0.7
RND	Reindeer	1.33	8	P	Pn	06 20 38.5	-0.7
RND				S	Sn	06 20 55.3	-0.6
STLK	Strandline Lak	1.36	245	P	Pn	06 20 39.3	-0.2
TRF	Thorofare Moun	1.44	341	P	Pn	06 20 39.9	-0.9
TRF				S	Sn	06 20 57.8	-0.9
PPLA	Purkeypile	1.58	302	P	Pn	06 20 42.5	-0.1
SPU	Mount Spurr	1.61	237	P	Pn	06 20 43.2	+0.1
SLKM	Skilak Lake	1.66	197	P	Pn	06 20 44.2	+0.5
SPBG	Spurr Blockage	1.70	242	P	Pn	06 20 45.1	+0.8
KLU	Klutina	1.70	109	P	Pn	06 20 43.2	-1.0
VLZ	Valdez	1.70	123	P	Pn	06 20 42.9	-1.3
BGL	Barrier Glacie	1.71	242	P	Pn	06 20 45.1	+0.7
DIV	Divide	1.93	119	P	Pn	06 20 46.2	-1.3
HARP	HAARP	1.95	79	P	Pn	06 20 47.9	+0.2
PAX	Paxson	1.97	62	P	Pn	06 20 47.7	-0.3
SEW	Seward	2.00	183	P	Pn	06 20 49.0	+0.7
DFR	Drift River	2.23	229	P	Pn	06 20 52.4	+0.8
EYAK	Cordova Ski Ar	2.30	131	P	Pn	06 20 52.0	-0.4
DDM	Donnelly Dome	2.30	41	P	Pn	06 20 53.2	+0.7
WRH	Wood River Hil	2.44	12	P	Pn	06 20 54.6	+0.1
BRLK	Bradley Lake	2.47	199	P	Pn	06 20 56.1	+1.3
NEA	Nenana	2.49	2	P	Pn	06 20 54.2	-0.9
BMRM	Bremner River	2.50	115	P	Pn	06 20 54.2	-1.1
HDA	Harding Lake	2.54	23	P	Pn	06 20 55.3	-0.6
CCB	Clear Creek Bu	2.65	14	P	Pn	06 20 56.2	-0.9
GOAT	Goat Mountain	2.66	123	P	Pn	06 20 58.0	+0.5
MENT	Mentasta	2.71	69	ePn	Pn	06 20 58.5	+0.4
MENT				eSg	Sb	06 21 41.3	+4.1
DOT	Dot Lake	2.85	55	P	Pn	06 21 00.2	+0.1
COLA	College	2.86	12	P	Pn	06 20 59.5	-0.7
IL1	Eielson Array	2.89	21	P	Pn	06 20 59.4	-1.2
ILAR	Eielson Array	2.89	21	Pn	Pn	06 20 59.5	-1.1
ILAR				Sn	Sn	06 21 34.7	+0.5
ILAR				Lg	Lg	06 21 47.3	
ILAR	Eielson Array	2.89	21	Pn	Pn	06 20 59.5	-1.1
	3.6nm,0.3s,baz=202,slow=14,SNR=53						
ILAR				Sn	Sn	06 21 34.7	+0.5
	7.1nm,0.3s,baz=200,slow=23,SNR=11						
ILAR				Lg	Lg	06 21 47.3	
	9.7nm,0.3s,baz=201,slow=26,SNR=13						
VRDI	Verde Repeater	2.91	105	P	Pn	06 20 60.0	-1.0
MDM	Murphy Dome	2.91	9	P	Pn	06 21 00.2	-0.7
MLY	Manley	3.02	348	P	Pn	06 21 01.8	-0.6
OPT	Oil Point	3.12	220	P	Pn	06 21 05.0	+1.2
BERG	Berg Lake	3.19	120	P	Pn	06 21 04.4	-0.3
TT01	Tatalina	3.24	288	P	Pn	06 21 04.8	-0.5
KHIT	Khitrov Hills	3.34	117	P	Pn	06 21 06.8	-0.1
GRIN	Grindle Hills	3.41	120	P	Pn	06 21 07.7	0.0
AUP	Augustine Pinn	3.42	218	P	Pn	06 21 09.2	+1.4
BALM	Baldy	3.48	105	P	Pn	06 21 07.5	-1.2
KIAG	Kiagna River	3.51	106	P	Pn	06 21 07.9	-1.4
BCA3	Beaver Creek A	3.60	71	P	Pn	06 21 09.8	-0.5
ISLE	Juniper Island	3.66	111	P	Pn	06 21 09.9	-1.4
KULT	Kultieth River	3.67	117	P	Pn	06 21 11.0	-0.3
BARK	Barkley Ridge	3.69	114	P	Pn	06 21 11.2	-0.4
BARN	Barnard Glacie	3.78	103	P	Pn	06 21 12.5	-0.5
BAGL	Bagley Icefiel	3.82	112	P	Pn	06 21 12.2	-1.1
GCSA	Galena City Sc	4.33	311	P	Pn	06 21 19.5	-0.8
IM3	Indian Mountai	4.37	335	P	Pn	06 21 20.6	-0.3
EGAK	Eagle	4.53	50	ePn	Pn	06 21 22.6	-0.4
KDAK	Kodiak Island	4.64	203	P	Pn	06 21 23.2	-1.2
KDAK	Kodiak Island	4.64	203	Pn	Pn	06 21 22.6	-1.9
	0.5nm,0.3s,baz=328,slow=6.1,SNR=14						
KABR	Katmai Barrier	4.89	218	P	Pn	06 21 27.9	-0.3
DAWY	Dawson	4.91	62	P	Pn	06 21 27.6	-0.7
COLD	Coldfoot	5.17	356	P	Pn	06 21 31.7	-0.1
OHAK	Old Harbor	5.29	204	P	Pn	06 21 32.3	-1.2
BM3	Burnt Mountain	5.71	18	P	Pn	06 21 39.7	+0.5
HYT	Haines Junctio	5.78	98	P	Pn	06 21 39.9	-0.4
TNA	Tin City	8.93	301	ePn	Pn	06 22 25.4	+2.0
	5.5nm,0.4s						
TNA				eSn	Sn	06 24 01.6	-1.2
INK	Inuvik	9.06	40	Pn	Pn	06 22 24.9	-0.3
INK	Inuvik	9.06	40	Pn	Pn	06 22 24.9	-0.3
	0.2nm,0.3s,baz=236,slow=16,SNR=22						
YKA	Yellowknife Ar	16.01	73	Pn	Pn	06 23 59.2	0.0
YKA	Yellowknife Ar	16.01	73	Pn	Pn	06 23 59.2	0.0
	0.0nm,0.3s,baz=282,slow=12,SNR=3.9						
NVAR	Mina Array Bea	30.34	127	P	P	06 26 24.8	-0.7
NVAR	Mina Array Bea	30.34	127	P	P	06 26 24.8	-0.7
	0.3nm,0.7s,baz=321,slow=8.5,SNR=2.5						

WEL 02 06:21:12.1±0.5**, 36°.10S**×**177°.67E, h196**km±7km**, ML3.8**/5**, 2D, Error ellipse: s-maj=11.4km s-min=8.5km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.55	161	PN	Pn	06 21 46.1	+0.3
MXZ				SN	Sn	06 22 11.7	-0.4
PUZ	Puketiti	2.03	167	PN	Pn	06 21 50.4	-0.1
PUZ				SN	Sn	06 22 20.0	-0.7
URZ	Urewera	2.20	192	PN	Pn	06 21 52.7	+0.3
URZ				SN	Sn	06 22 24.3	+0.4
MWZ	Matawai	2.24	183	⇓PN	Pn	06 21 53.0	+0.2
MWZ				SN	Sn	06 22 24.6	-0.1
CNGZ	Carnagh Statio	2.42	170	PN	Pn	06 21 55.2	+0.5
KNZ	Kokohu	2.92	180	PN	Pn	06 21 59.9	-0.5
NMHZ	Naumai	3.07	193	PN	Pn	06 22 02.9	+0.5
BKZ	Black Stump Fm	3.20	197	ePN	Pn	06 22 03.7	-0.2
BHHZ	Black Hill Sta	3.62	200	ePN	Pn	06 22 07.6	-1.4
KAHZ	Kahuranaki	3.75	189	ePN	Pn	06 22 09.5	-1.0
PXZ	Pawanui	3.98	189	⇓PN	Pn	06 22 11.7	-1.6
PRHZ	Porangahau	4.24	191	PN	Pn	06 22 15.1	-1.6
BFZ	Birch Farm	4.71	193	PN	Pn	06 22 20.2	-2.4
MRZ	Mangatainoka R	4.84	199	PN	Pn	06 22 21.5	-2.8
MRZ				SN	Sn	06 23 15.4	-5.9

IDC 02 06:45:52.2±10.0**, 14°.98S**×**178°.04W, h397**km±111km**, mb3.3**/7**, mb1 3.7**/7**, mb1mx3.4**/18**, mbtmp3.3**/7**, Error ellipse: s-maj=45.3km s-min=27.4km az=145.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.58	257	P	P	06 53 34.8	-0.1
	0.3nm,0.3s,baz=82,slow=6.7,SNR=12						
ASAR	Alice Springs	45.99	251	P	P	06 53 37.8	-0.3
	2.4nm,0.5s,baz=86,slow=7.8,SNR=39						
NVAR	Mina Array Bea	77.08	44	P	P	06 57 02.9	-0.4
	0.7nm,0.7s,baz=225,slow=9.4,SNR=7.0						
ILAR	Eielson Array	82.97	13	P	P	06 57 34.6	+1.1
	0.6nm,0.5s,baz=224,slow=6.3,SNR=3.1						
TXAR	Lajitas Array	84.14	58	P	P	06 57 39.4	-1.0
	0.8nm,0.8s,baz=216,slow=7.3,SNR=5.2						
YKA	Yellowknife Ar	91.54	25	P	P	06 58 14.5	+0.1
	0.3nm,0.6s,baz=241,slow=4.5,SNR=10						
PLCA	Paso Flores	93.08	133	P	P	06 58 23.2	+0.9
	0.8nm,0.3s,baz=207,slow=9.0,SNR=6.5						
BRTR	Keskin Array B	142.92	318	PKP	PKPdf	07 04 37.4	-2.4
	2.1nm,0.8s,baz=86,slow=1.6,SNR=10						
GERES	GERESS Array B	144.88	346	PKP	PKPbc	07 04 43.1	+0.2
	0.4nm,0.4s,baz=97,slow=2.4,SNR=3.1						

IDC 02 06:58:17.1±1.1**, 55°.79S**×**27°.17W, h0**km**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.7**/14**, mbtmp3.6**/4**, Error ellipse: s-maj=41.5km s-min=24.3km az=74.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	17.23	161	ePn	P	07 02 22.5	+2.0
VNA2	Neumayer--Watz	17.43	158	ePn	P	07 02 23.7	+1.0
SNAA	Sanae	18.98	156	ePn	Pn	07 02 40.2	-0.2
QSPA	South Pole Qui	34.46	180	P	P	07 05 06.4	+0.1
	baz=214,slow=3.6						
CFAA	Coronel Fontan	37.47	293	P	P	07 05 30.8	-1.4
	0.1nm,0.3s,baz=136,slow=9.9,SNR=3.7						
VNDA	Vanda	46.84	183	P	P	07 06 47.8	-0.2
	1.1nm,0.6s,baz=191,slow=6.4,SNR=5.3						
LPAZ	La Paz	50.23	305	P	P	07 07 16.6	+1.0
	1.2nm,0.5s,baz=180,slow=3.0,SNR=9.2						
TORD	Torodi Ar. Bea	72.82	29	P	P	07 09 47.2	-0.1
	0.4nm,0.8s,baz=200,slow=6.7,SNR=4.5						
YKA	Yellowknife Ar	135.98	318	PKP	PKPdf	07 17 38.4	0.0
	0.1nm,0.5s,baz=130,slow=2.0,SNR=4.2						
ILAR	Eielson Array	149.95	312	PKPbc	PKPbc	07 18 07.0	-0.8
	0.5nm,0.8s,baz=123,slow=1.1,SNR=6.4						

*IDC **02** 07:00:49.3±0.8, 14°.16N×91°.86W, h0km, mb4.2/11, mb1 4.4/13, mb1mx4.1/28, mbtmp4.2/13, ML4.1/2, MS3.3/6, Ms1 3.3/6, ms1mx3.0/37, Error ellipse: s-maj=35.2km s-min=15.6km az=59.0*

*NEIC **02** 07:00:53.8±1.7, 14°.08N×92°.22W, h22km±12km, mb4.5/26, MD4.5(MEX), Error ellipse: s-maj=12.4km s-min=6.5km az=218.0*

*MEX **02** 07:00:54.8±0.8, 13°.93N×92°.43W, h20km±46km, MD4.5*

*CASC **02** 07:00:57.5±0.9, 14°.06N×91°.95W, h33km±583km, MD4.2, ML4.1, mb4.5(NEIC)*

ISC 02 07:00:53.9±1.6**, 13°.97N**±0°.05×**92°.38W**±0°.05**, h29**km±10km**, n337, σ1s.43**/329**, mb4.4**/36**, MS3.6**/5**, 105C-118D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.94	7	i P	Pn	07 01 09.6	-1.5
THIG				i S	Sb	07 01 22.3	-1.3
THIG		0.94	7	i P	Pn	07 01 09.6	-1.5
THIG				i S	Sb	07 01 22.3	-1.3
CCIG	Comitan	2.31	6	eP	Pn	07 01 30.9	+0.8
CCIG				eS	Sn	07 01 57.8	+0.2
CCIG	Comitan	2.31	6	eP	Pn	07 01 30.9	+0.8
CCIG				eS	Sn	07 01 57.8	+0.2
RBDL	Robledal	2.61	87	eP	Pn	07 01 32.3	-2.0
RTR	El Retiro	2.65	91	eP	Pn	07 01 33.1	-1.8
SBLS	San Blas	2.68	93	eP	Pn	07 01 32.6	-2.6
SNJE	San Jose	2.69	92	eP	Pn	07 01 33.5	-2.0
TGIG		2.88	346	i P	Pn	07 01 38.0	+0.1
TGIG				i S	Sn	07 02 11.0	-0.7
TGIG		2.88	346	i P	Pn	07 01 38.0	+0.1
TGIG				i S	Sn	07 02 11.0	-0.7
MTO2	Montecristo 2	2.95	81	eP	Pn	07 01 36.6	-2.4
BOQS	Boqueron	3.02	94	eP	Pn	07 01 38.6	-1.3
SNET	Serv Nac Est T	3.07	95	eP	Pn	07 01 38.6	-1.9
SNET				AML	AML	07 02 21.4	
	comp=Z,1µm,0.3s						
LFU	La Fuente	3.18	94	eP	Pn	07 01 39.9	-2.1
LFRS	El Faro	3.24	96	eP	Pn	07 01 41.0	-1.8
LFRS				eS	Sn	07 02 14.3	-6.2
LBRS	Las Brisas	3.25	94	eP	Pn	07 01 41.3	-1.6
SNVI	San Vicente	3.46	96	eP	Pn	07 01 44.1	-1.8
CMIG	Matias Romero	3.93	322	Pn	Pn	07 01 52.0	-0.3
CMIG				i S	Sn	07 02 36.5	-1.0
CMIG				Sn	Sn	07 02 38.0	+0.4
CMIG				Lg	Lg	07 02 48.9	
CMIG	Matias Romero	3.93	322	i P	Pn	07 01 52.0	-0.3
CMIG				i S	Sn	07 02 36.5	-1.0
CMIG	Matias Romero	3.93	322	Pn	Pn	07 01 52.0	-0.3
	comp=Z,7.7nm,0.3s,baz=141,slow=11,SNR=44						
CMIG				Sn	Sn	07 02 38.0	+0.4
	comp=Z,33nm,0.3s,baz=117,slow=10,SNR=5.9						
CMIG				Lg	Lg	07 02 48.9	
	comp=Z,58nm,0.3s,baz=298,slow=17,SNR=10						
CMIG				LR	LR	07 03 32.5	
	comp=Z,187nm,22.0s,baz=7.5,slow=40						
HUIG	Huatulco	4.03	297	i P	Pn	07 01 53.1	-0.5
HUIG				i S	Sn	07 02 38.7	-1.2
HUIG	Huatulco	4.03	297	i P	Pn	07 01 53.1	-0.5
HUIG				i S	Sn	07 02 38.7	-1.2
CAHU	Cacacuatique	4.05	92	eP	Pn	07 01 52.2	-1.9
CAHU				eS	Sn	07 02 35.9	-4.8
CNCH	Conchagua	4.47	98	eP	Pn	07 01 58.0	-1.8
CNCH				eS	Sn	07 02 45.2	-5.8
TGUH	Tegucigalpa,Un	4.95	88	ePn	Pn	07 02 04.6	-1.7
TGUH	Tegucigalpa,Un	4.95	88	eP	Pn	07 02 04.7	-1.7
TGUH				eS	Sn	07 02 56.6	-6.1
VHO	Vista Hermosa	5.21	307	i P	Pn	07 02 09.6	-0.5
VHO				i S	Sn	07 03 07.8	-1.5
VHO	Vista Hermosa	5.21	307	i P	Pn	07 02 09.6	-0.5
VHO				i S	Sn	07 03 07.8	-1.5
PNIG	Pinotepa	6.05	294	i P	Pn	07 02 21.1	-0.4
PNIG				i S	Sn	07 03 28.5	-1.3
PNIG	Pinotepa	6.05	294	i P	Pn	07 02 21.1	-0.4
PNIG				i S	Sn	07 03 28.5	-1.3
TEIG	Tepich	7.35	32	ePn	Pn	07 02 38.8	-0.5
TEIG				eSn	Sn	07 04 01.7	-0.1
TEIG	Tepich	7.35	32	Pn	Pn	07 02 39.1	-0.2
	comp=Z,24nm,0.3s,baz=232,slow=2.2,SNR=156						
JTS	JuntasAbangare	8.13	116	ePn	Pn	07 02 50.4	+0.4
JTS				Sn	Sn	07 04 16.2	-4.8
JTS				Lg	Lg	07 04 46.5	
JTS	JuntasAbangare	8.13	116	Pn	Pn	07 02 48.3	-1.7
	comp=Z,1.6nm,0.3s,baz=301,slow=24,SNR=24						
JTS				Sn	Sn	07 04 16.2	-4.8
	baz=248,slow=19,SNR=1.2						
JTS				Lg	Lg	07 04 46.5	
	baz=315,slow=11,SNR=3.8						
JTS				LR	LR	07 06 07.8	
	comp=Z,153nm,18.3s,baz=323,slow=41						
BCIP	Isla Barro Col	13.18	110	Pn	Pn	07 03 58.1	-1.1
732A	Laxson Ranch,	16.29	336	⇑P	P	07 04 43.1	-0.3
	baz=16,SNR=6.1						
632A	Uvalde	16.91	337	⇓P	P	07 04 50.8	+0.5
	baz=17						
631A	Perdido Creek	17.14	335	⇓P	P	07 04 54.0	+1.2
	baz=17						
531A	Rocksprings	17.79	336	⇓P	P	07 05 02.1	+2.1
	baz=18						
JCT	Junction City	17.80	339	⇑P	P	07 05 01.9	+1.7
	baz=18						
530A	J-C Ranch, Com	18.10	334	⇑P	P	07 05 06.1	+2.6
	baz=18						
628A	Black Gap, Mar	18.25	329	⇑P	P	07 05 07.9	+2.8
	baz=18						
431A	Sonora	18.28	337	⇑P	P	07 05 07.0	+1.6
	baz=18						
529A	Stev Forest Ra	18.46	332	⇑P	Pn	07 05 09.5	+1.8
	baz=18,SNR=6.6						
627A	Terlingua Ranc	18.47	328	⇓P	Pn	07 05 10.2	+2.3
	baz=18,SNR=6.1						
TXAR	Lajitas Array	18.52	327	P	Pn	07 05 10.1	+1.6
TXAR	Lajitas Array	18.52	327	P	Pn	07 05 10.1	+1.6
	comp=Z,0.2nm,0.3s,baz=153,slow=13,SNR=16						
332A	Millersview	18.60	340	⇓P	Pn	07 05 10.5	+1.1
	baz=19						
430A	Baggett Ranch,	18.62	335	⇓P	Pn	07 05 11.4	+1.8
	baz=19						
429A	Davenport Ranc	18.75	334	⇓P	Pn	07 05 13.1	+1.9
	baz=19						
528A	Cox Ranch, San	18.76	331	⇓P	Pn	07 05 13.0	+1.6
	baz=19						
331A	San Angelo	18.77	338	⇓P	Pn	07 05 12.9	+1.4
	baz=19						
626A	Big Bend Ranch	18.94	327	⇓P	Pn	07 05 15.8	+2.3
	baz=19,SNR=16						
232A	Coleman	19.04	341	⇑P	Pn	07 05 15.4	+0.8
	baz=19						
330A	Mertzon	19.14	336	⇓P	Pn	07 05 16.8	+0.9
	baz=19,SNR=5.1						
527A	Woodward Ranch	19.15	329	⇓P	Pn	07 05 17.5	+1.4
	baz=19						
428A	Kincaid Ranch,	19.19	332	⇓P	Pn	07 05 18.3	+1.8
	baz=19,SNR=7.5						
231A	Bronte	19.30	339	⇓P	Pn	07 05 17.8	0.0
	baz=19						
526A	Mary Lane Ranc	19.32	328	⇑P	Pn	07 05 19.7	+1.5
	baz=19						
OTAV	Otavalo	19.40	134	P	Pn	07 05 21.3	+1.8
	comp=Z,9.6nm,0.8s						
329A	Wagon Wheel Ra	19.53	335	⇓P	Pn	07 05 21.4	+0.7
	baz=20,SNR=6.0						
230A	Sterling City	19.55	337	⇓P	Pn	07 05 21.0	+0.3
	baz=20						
LRAL	Lakeview Retre	19.60	14	ePn	P	07 05 17.9	-1.9
	comp=Z,48nm,1.9s						
427A	Hayter Ranch,	19.62	331	⇑P	Pn	07 05 22.7	+1.0
	baz=20,SNR=6.2						
ABTX	Abilene, Hawle	19.72	342	⇓P	Pn	07 05 22.4	-0.4
	baz=20						
426A	McDonald Obser	19.78	329	⇓P	Pn	07 05 24.7	+1.0
	baz=20						
328A	Wristen Ranch,	19.80	333	⇓P	Pn	07 05 24.7	+0.9
	baz=20,SNR=12						
229A	Bryant Ranch,	19.89	336	⇑P	Pn	07 05 25.1	+0.3
	baz=20						
ROSC	El Rosal	19.96	115	eP	Pn	07 05 26.3	+0.2
ROSC	El Rosal	19.96	115	P	Pn	07 05 25.9	-0.2

comp=Z,0.3nm,0.3s,baz=99,slow=23,SNR=9.6
131A Roby 20.00 340 ⇑P Pn 07 05 26.1 0.0
baz=20
130A Snyder 20.13 339 ⇑P Pn 07 05 27.5 -0.1
baz=20
326A Caldwell Ranch 20.29 330 ⇓P Pn 07 05 29.8 +0.3
baz=20,SNR=24
Z32A Haskell 20.30 343 ⇓P Pn 07 05 28.8 -0.9
baz=20
228A UT Block 9, Go 20.34 334 ⇓P Pn 07 05 29.4 -0.7
baz=20,SNR=7.7
425A Indio Mountain 20.36 327 ⇓P Pn 07 05 30.6 0.0
baz=20,SNR=5.6
129A Stewart Farms, 20.50 337 ⇓P Pn 07 05 30.9 -1.0
baz=20
Z31A Sharp Cattle R 20.52 341 ⇓P Pn 07 05 31.0 -1.2
baz=20
227A Bennet, Jal 20.55 333 ⇑P Pn 07 05 32.0 -0.6
baz=21,SNR=8.1
UALR University of 20.71 0 eP P 07 05 30.6 -1.3
comp=Z,22nm,1.0s
UALR e 07 05 44.1
UALR e 07 05 51.3
128A Castleberry Fa 20.73 335 ⇑P P 07 05 33.2 +1.0
baz=21,SNR=8.7
325A Bean Ranch, Si 20.82 328 ⇓P Pn 07 05 35.2 -0.7
baz=21,SNR=12
Z29A Hungry Hill Ra 21.00 338 ⇑P P 07 05 35.2 +0.1
baz=21,SNR=12
226B Tecolote Peak, 21.00 331 ⇓P 07 05 37.3
baz=21,SNR=30
324A Moseley Ranch, 21.14 327 ⇑P P 07 05 38.7 +1.9
baz=21,SNR=22
127A Arkansas Junct 21.14 334 ⇓P P 07 05 37.9 +1.2
baz=21
Y31A Rekieta Farm, 21.15 342 ⇓P P 07 05 37.2 +0.5
baz=21,SNR=7.6
GDL2 Guadalupe Moun 21.20 331 eP P 07 05 39.1 +1.7
comp=Z,31nm,0.8s
Y30A Stafford Cattl 21.27 340 ⇓P P 07 05 39.0 +0.9
baz=21
Z28A Tucker Farm, M 21.28 336 ⇑P P 07 05 39.0 +0.9
baz=21
MNTX Cornudas Mount 21.29 328 eP P 07 05 39.4 +1.2
comp=Z,6.9nm,0.9s
MNTX Cornudas Mount 21.29 328 ⇑P P 07 05 39.6 +1.4
baz=21,SNR=17
225A Deer Hill, Car 21.35 330 ⇓P P 07 05 40.5 +1.6
baz=21,SNR=23
126A Clayton Basin, 21.41 332 ⇓P P 07 05 40.8 +1.2
baz=22
WMOK Wichita Mounta 21.47 345 eP P 07 05 39.9 -0.2
comp=Z,4.7nm,0.8s
Y29A Porterfield Fa 21.52 339 ⇑P P 07 05 41.3 +0.6
baz=22
Z27A Tatum 21.64 335 ⇓P P 07 05 42.4 +0.4
baz=22,SNR=9.8
224A Cornudas Mount 21.67 328 ⇓P P 07 05 43.9 +1.5
baz=22,SNR=18
125A Gardner Draw, 21.72 331 ⇓P P 07 05 44.1 +1.2
baz=22,SNR=21
Y28A McKinney Farm, 21.78 337 ⇓P P 07 05 44.0 +0.5
baz=22
X30A Coker Ranch, T 21.79 341 ⇓P P 07 05 44.1 +0.5
baz=22,SNR=14
Z26A Caprock 21.92 333 ⇑P P 07 05 45.7 +0.6
baz=22,SNR=5.1
SWET Sewanee 21.94 14 eP P 07 05 43.1 -2.0
comp=Z,10.0nm,0.7s
MSTX Muleshoe 22.03 336 ⇑P P 07 05 46.4 +0.2
baz=22
X29A Tulia 22.06 339 ⇑P P 07 05 46.5 0.0
baz=22,SNR=7.8
Y27A Causey 22.11 336 ⇑P P 07 05 47.4 +0.3
baz=22
124A Stringfield Ra 22.14 330 ⇓P P 07 05 49.5 +2.0
baz=22,SNR=36
Z25A Roswell 22.26 332 ⇓P P 07 05 49.7 +0.9
baz=22,SNR=7.5
X28A Dimmitt 22.30 338 ⇓P P 07 05 49.4 +0.2
baz=22
Y26A Elida 22.41 334 ⇓P P 07 05 51.4 +1.0
baz=22
AMTX Amarillo 22.45 340 eP P 07 05 50.5 -0.3
comp=Z,23nm,0.8s
AMTX Amarillo 22.45 340 ⇑P P 07 05 50.8 0.0
baz=22,SNR=13
222A Williams Famil 22.52 326 ⇑P P 07 05 53.7 +2.1
baz=23
Z24A Sheeppen Canyo 22.61 331 ⇓P P 07 05 54.3 +1.7
baz=23,SNR=9.1
W29A Amraillo 22.66 340 ⇓P P 07 05 53.0 +0.1
baz=23
Y25A Mesa, Roswell 22.79 333 ⇑P P 07 05 55.9 +1.5
baz=23
TKL Tuckaleechee C 22.94 18 P P 07 05 52.2 -3.5
TKL Tuckaleechee C 22.94 18 P P 07 05 52.2 -3.5
comp=Z,2.4nm,0.6s,baz=208,slow=20,SNR=4.1
X26A CR and CF Fran 22.95 335 ⇑P P 07 05 57.0 +0.9
baz=23
W28A Vega 22.97 339 ⇓P P 07 05 56.4 +0.2
baz=23
Z23A Rita Site, Whi 22.97 329 ⇑P P 07 05 57.8 +1.5
baz=23,SNR=11
W27A Bowe Ranch, En 23.11 337 ⇓P P 07 05 57.8 +0.1
baz=23
Y24A Capitan 23.13 331 ⇓P P 07 05 59.2 +1.3
baz=23,SNR=24
220A Playas Peak, P 23.18 323 ⇓P P 07 06 00.4 +2.0
baz=23
121A Cookes Peak, D 23.22 325 ⇓P P 07 06 01.4 +2.5
baz=23,SNR=10
319A Douglas 23.25 321 ⇓P P 07 06 01.4 +2.2
baz=23
X25A Clemmons Ranch 23.29 334 ⇓P P 07 06 00.5 +1.0
baz=23
KMSC Kings Mountain 23.31 23 ⇓P P 07 05 57.7 -1.8
baz=23
Z22A Elephant Butte 23.34 328 ⇓P P 07 06 01.9 +1.9
baz=23
Y23A Lovelace Mesa, 23.43 330 ⇑P P 07 06 03.2 +2.3
baz=24,SNR=26
120A U Bar Ranch, L 23.71 324 ⇓P P 07 06 05.2 +1.6
baz=24
W25A X Bar L Ranch, 23.79 335 ⇑P P 07 06 05.1 +0.7
baz=24,SNR=8.2
Y22A Socorro 23.88 329 ⇓P P 07 06 07.1 +1.9
baz=24,SNR=5.5
BNM Barren Site 23.88 330 eP P 07 06 07.6 +2.3
LPM Los Pinos Moun 24.01 330 eP P 07 06 08.4 +1.9
Z20A Nine Sixteen R 24.11 325 ⇑P P 07 06 09.5 +2.2
baz=24,SNR=5.6
W24A Lazy 6 Ranch, 24.19 333 ⇑P P 07 06 09.6 +1.4
baz=24,SNR=14
Y21A Point of Rocks 24.30 328 ⇓P P 07 06 12.3 +3.1
baz=24
LAZ Ladron 24.34 329 eP P 07 06 11.6 +2.1
V25A Rancho No Teng 24.39 335 ⇑P P 07 06 11.4 +1.4
baz=24,SNR=5.5
ANMO Albuquerque 24.45 331 eP P 07 06 11.7 +1.2
ANMO Albuquerque 24.45 331 P P 07 06 10.0 -0.4
comp=Z,4.0nm,0.8s,baz=154,slow=12,SNR=25
W23A Werner Place, 24.48 332 ⇑P P 07 06 13.0 +2.2
baz=24
V24A Rampart Ranch, 24.57 334 ⇓P P 07 06 13.2 +1.6
baz=25,SNR=9.1
Y20A Horse Springs, 24.59 327 ⇓P P 07 06 14.5 +2.7
baz=25
X21A Alamocita Cree 24.70 328 ⇓P P 07 06 15.4 +2.6
baz=25,SNR=9.4
W22A Albuquerque 24.74 331 ⇑P P 07 06 15.6 +2.5
baz=25
WCI Wyandotte Cave 24.75 11 eP P 07 06 10.3 -2.8
comp=Z,20nm,0.8s
OLIL Olney 24.95 8 eP P 07 06 13.8 -1.0
comp=Z,18nm,0.9s
V23A Ortiz Mt. (NFS 24.98 333 ⇑P P 07 06 17.9 +2.6
baz=25,SNR=14
X20A Quemado 25.14 327 ⇑P P 07 06 19.3 +2.6
baz=25,SNR=7.3
ATAH Atahualpa 25.15 146 LR LR 07 13 58.6
comp=Z,77nm,21.2s,baz=260,slow=32
U24A Moreno Valley 25.16 335 ⇓P P 07 06 19.3 +2.3
baz=25
T26A Comanche Natio 25.18 339 ⇑P P 07 06 19.7 +2.6
baz=25
T25A Trinidad 25.45 337 ⇑P P 07 06 21.3 +1.8
baz=26
U23A El Rito 25.48 333 ⇑P P 07 06 21.7 +1.9
baz=26,SNR=23
SJG San Juan 25.53 77 LR LR 07 15 36.0
comp=Z,52nm,21.4s,baz=96,slow=36
S26A Kim 25.54 339 ⇓P P 07 06 21.5 +1.2
baz=26
W20A Ramah 25.59 328 ⇓P P 07 06 23.3 +2.4
baz=26
BLO Bloomington 25.63 11 eP P 07 06 19.9 -0.9
comp=Z,7.4nm,0.7s
T24A Torres, Weston 25.64 336 ⇑P P 07 06 23.3 +1.9
baz=26
U22A Llaves 25.81 332 ⇓P P 07 06 24.9 +2.1
baz=26,SNR=9.3
S25A Robets Cordova 25.92 338 ⇓P P 07 06 25.8 +2.0
baz=26
T23A Casias Ranch, 26.01 334 ⇑P P 07 06 26.6 +1.9
baz=26
V20A Brimhall 26.10 329 ⇓P P 07 06 28.0 +2.4
baz=26
S24A Houchin Ranch, 26.20 336 ⇓P P 07 06 28.3 +1.8
baz=26
U21A Nageezi 26.22 331 ⇑P P 07 06 29.0 +2.4
baz=26
T22A Edith 26.36 333 ⇓P P 07 06 29.1 +1.3
baz=26
U20A Newcomb 26.59 330 ⇓P P 07 06 32.4 +2.5
baz=27
T21A Navajo Lake 26.62 332 ⇑P P 07 06 32.4 +2.2
baz=27
R24A Sanders Place, 26.67 337 ⇑P P 07 06 32.9 +2.3
baz=27
X16A Lo Mia Camp, P 26.68 323 ⇑P P 07 06 32.6 +1.9
baz=27
R23A Moffat 26.91 336 ⇓P P 07 06 34.6 +1.8
baz=27
S22A 4UR Ranch, Cre 26.94 334 ⇑P P 07 06 35.0 +1.9
baz=27,SNR=9.6
Q25A Bedland, Calha 26.97 339 ⇓P P 07 06 34.4 +1.1
baz=27
MVCO Mesa Verde 27.25 331 eP P 07 06 37.6 +1.8
comp=Z,11nm,0.9s
MVCO Mesa Verde 27.25 331 ⇓P P 07 06 38.0 +2.1
baz=27,SNR=12
S21A Coal Bank Pass 27.29 333 ⇑P P 07 06 37.9 +1.6
baz=27
WUAZ Wupatki 27.43 325 ⇑P P 07 06 39.5 +2.1
baz=28
S20A Disappointment 27.68 332 ⇑P P 07 06 42.2 +2.4
baz=28
P23A Jefferson 27.95 337 ⇑P P 07 06 43.8 +1.6
baz=28
R20A Redvale 27.99 332 ⇑P P 07 06 44.9 +2.4
baz=28
PV01 Paradox Valley 28.03 332 eP P 07 06 44.3 +1.5
SMCO Snowmass 28.22 336 eP P 07 06 46.2 +1.5
comp=Z,20nm,2.1s
ISCO Idaho Springs 28.24 338 ⇑P P 07 06 46.0 +1.2
baz=28
S18A Hurst Farm, Bl 28.35 330 ⇑P P 07 06 47.9 +2.2
baz=28
PV04 Paradox Valley 28.39 332 eP P 07 06 47.8 +1.8
PV10 Paradox Valley 28.44 332 eP P 07 06 48.0 +1.5
U15A North Rim 28.60 325 ⇑P P 07 06 49.9 +1.9
baz=29
W13A Hualapai Mount 28.61 321 ⇓P P 07 06 50.2 +2.2
baz=29
BC3 Big Chuckawall 28.68 317 ⇑P P 07 06 51.0 +2.4
baz=29
O22A Kremmling 28.90 337 ⇑P P 07 06 51.8 +1.2
baz=29
Q19A Hogan Spring (29.01 332 ⇑P P 07 06 52.9 +1.5
baz=29
O20A White River Ci 29.55 335 ⇑P P 07 06 57.7 +1.4
baz=30
ALLY Alegheny Colle 29.55 19 eP P 07 06 55.9 -0.2
comp=Z,16nm,0.6s
ALLY ePP PP 07 08 00.9 -2.1
N21A Black Mountain 29.79 336 ⇓P P 07 07 00.2 +1.8
baz=30
O19A Miners Draw (B 30.05 334 ⇑P P 07 07 02.5 +1.8
baz=30
MSU Marysvale 30.08 328 eP P 07 07 01.8 +0.8
comp=Z,1.9nm,0.8s
P17A Butcher Ranch, 30.11 331 ⇓P P 07 07 03.1 +1.8
baz=30
N20A Spence Gulch, 30.14 336 ⇑P P 07 07 03.2 +1.6
baz=30,SNR=5.5
ARUT Antelope Range 30.22 326 eP P 07 07 05.1 +2.9
LUPA Lehigh Univers 30.41 26 eP P 07 07 03.2 -0.5
comp=Z,92nm,1.2s
LUPA epP pP 07 07 18.1 +6.0
O18A Roosevelt 30.41 333 ⇓P P 07 07 05.5 +1.6
baz=30,SNR=6.6
N19A John Jarvie Ra 30.57 334 ⇓P P 07 07 06.9 +1.6
baz=31
P16A Fountain Green 30.66 330 ⇓P P 07 07 08.3 +2.2
baz=31
O17A Robinson Place 30.68 332 ⇓P P 07 07 07.8 +1.5
baz=31,SNR=5.2
N18A Larsen Ranch, 30.85 334 ⇑P P 07 07 09.4 +1.6
baz=31
O16A Springville 31.05 331 ⇓P P 07 07 11.3 +1.8
baz=31
EDW2 Edwards Air Fo 31.10 317 ⇓P P 07 07 13.7 +3.9
baz=31
N17A Moffit Pass 31.33 333 ⇑P P 07 07 13.9 +1.8
baz=31
N16A Rees Ranch, Co 31.56 332 ⇑P P 07 07 16.1 +2.1
baz=32
DUG Dugway 31.67 329 ⇓P P 07 07 17.2 +2.2
baz=32
HWUT Hardware Ranch 32.19 332 eP P 07 07 21.6 +2.0
comp=Z,64nm,2.8s
L17A Cokeville 32.28 334 ⇑P P 07 07 21.0 +0.6
baz=32,SNR=6.2
PDAR Pinedale Array 32.30 336 P P 07 07 19.8 -0.7
PDAR PcP PcP 07 10 06.8 -1.4
PDAR Pinedale Array 32.30 336 P P 07 07 19.8 -0.7
comp=Z,0.8nm,0.8s,baz=142,slow=7.5,SNR=6.9
PDAR PcP PcP 07 10 06.8 -1.4
comp=Z,0.5nm,0.7s,baz=149,slow=3.3,SNR=4.7
I21A Big Trails, Te 32.37 340 ⇑P P 07 07 21.8 +0.8
baz=32
H24A Dirks Ranch, A 32.38 344 ⇑P P 07 07 21.0 0.0
baz=32
K18A Toltan Ranch, 32.38 335 ⇑P P 07 07 22.2 +1.0
baz=32,SNR=5.4
L16A Fish Haven 32.46 333 ⇑P P 07 07 23.0 +1.1
baz=32,SNR=6.0
SADO Sadowa 32.70 18 P P 07 07 19.4 -4.2
SADO Sadowa 32.70 18 P P 07 07 19.4 -4.2
comp=Z,4.1nm,0.8s,baz=203,slow=7.7,SNR=3.5
H22A Clearmont 32.76 341 ⇓P P 07 07 25.0 +0.6
baz=33
I20A Worland 32.78 339 ⇓P P 07 07 25.6 +1.0
baz=33
K17A Gardner Place, 32.84 334 ⇓P P 07 07 26.2 +1.0
baz=33
J18A Kendall Valley 32.85 336 ⇑P P 07 07 26.2 +0.8
baz=33
L15A Malad City 32.88 332 ⇓P P 07 07 26.8 +1.2
baz=33,SNR=5.5
G24A Alzada 32.88 344 ⇑P P 07 07 25.7 +0.3
baz=33
H21A Big Horn, Sher 33.01 341 ⇓P P 07 07 27.1 +0.5
baz=33
G23A Biddle 33.03 343 ⇑P P 07 07 27.2 +0.5
baz=33
I19A Meeteetse 33.16 338 ⇓P P 07 07 28.6 +0.6
baz=33
K16A Soda Springs 33.19 334 ⇓P P 07 07 28.8 +0.6
baz=33
H20A Greybull 33.20 339 ⇓P P 07 07 28.2 0.0
baz=33
J17A Brown Place, J 33.26 335 ⇑P P 07 07 30.2 +1.3
baz=33,SNR=7.3
L14A Malta 33.30 331 ⇑P P 07 07 30.7 +1.5
baz=33
ELK Elko 33.32 327 eP P 07 07 30.5 +1.0
SNOW Snow King Moun 33.36 335 eP P 07 07 31.0 +1.1
comp=Z,12nm,0.8s
F24A Ekalaka 33.37 345 ⇑P P 07 07 29.9 +0.3
baz=33
NV11 Mina Array Sit 33.38 322 eP P 07 07 32.3 +2.4
LOHW Long Hollow 33.42 336 eP P 07 07 31.5 +1.2
comp=Z,3.3nm,0.8s
TPAW Teton Pass 33.46 335 eP P 07 07 32.0 +1.3
comp=Z,3.9nm,0.8s
NVAR Mina Array Bea 33.46 321 P P 07 07 32.9 +2.1
NVAR PcP PcP 07 10 11.8 +0.2
NVAR Mina Array Bea 33.46 321 P P 07 07 32.9 +2.1
comp=Z,2.8nm,0.7s,baz=136,slow=8.5,SNR=28
NVAR PcP PcP 07 10 11.8 +0.2
comp=Z,0.6nm,0.7s,baz=115,slow=4.1,SNR=3.0
K15A Arbon 33.48 333 ⇑P P 07 07 32.3 +1.6
baz=34
MOOW Moose Ponds 33.59 336 eP P 07 07 32.5 +0.7
comp=Z,2.7nm,1.0s
I17A Pilgrim Ck. 33.67 336 ⇑P P 07 07 33.1 +0.6
baz=34
H19A Powell 33.71 338 ⇑P P 07 07 33.2 +0.5
baz=34
F22A Rosebud 33.80 342 ⇓P P 07 07 34.1 +0.7
baz=34
G20A Bridger 33.92 340 ⇑P P 07 07 35.0 +0.5
baz=34
H18A Shoshone NF, C 33.96 338 ⇓P P 07 07 36.0 +1.0
baz=34
I16A Newdale 34.00 335 ⇓P P 07 07 36.4 +1.1
baz=34
E24A Baker 34.00 345 ⇓P P 07 07 35.0 -0.1
baz=34
J15A Blackfoot 34.01 333 ⇓P P 07 07 36.7 +1.4
baz=34
RLMT Red Lodge 34.20 339 ⇓P P 07 07 37.1 +0.1
baz=34
J14A Carey 34.43 332 ⇑P P 07 07 40.2 +1.2
baz=34
G18A Lazy EL Ranch, 34.47 338 ⇑P P 07 07 39.4 0.0
baz=34
D24A Glendive 34.52 346 ⇓P P 07 07 39.4 -0.3
baz=34
J13A Cove Ranch, Pi 34.79 332 ⇓P P 07 07 43.4 +1.3
baz=35
HLID Hailey 35.02 332 eP P 07 07 45.5 +1.4
comp=Z,4.6nm,1.0s
E20A Meyer Farm, Mu 35.03 341 ⇑P P 07 07 44.3 +0.2
baz=35
D22A Cohagen 35.03 344 ⇓P P 07 07 44.4 +0.3
baz=35
F18A Big Timber 35.03 339 ⇓P P 07 07 44.6 +0.4
baz=35
H15A Lima 35.08 335 ⇑P P 07 07 46.6 +1.9
baz=35
I13A Wildhorse Cree 35.16 332 ⇑P P 07 07 47.5 +2.1
baz=35
D21A La Casta Ranch 35.19 343 ⇑P P 07 07 46.4 +1.0
baz=35
MCMT McKenzie Canyo 35.34 335 eP P 07 07 48.9 +1.9
C23A Lambert 35.37 345 ⇑P P 07 07 48.1 +1.1
baz=35
F17A Fitzpatrick Pl 35.37 338 ⇓P P 07 07 48.5 +1.4
baz=35
C22A Vida 35.50 344 ⇑P P 07 07 48.2 +0.2
baz=36
D20A Manuel Ranch, 35.55 341 ⇓P P 07 07 49.1 +0.6
baz=36
E18A Harlowton 35.67 339 ⇑P P 07 07 50.9 +1.2
baz=36
H13A Challis 35.73 333 ⇑P P 07 07 51.7 +1.5
baz=36
D19A Cripps Ranch, 35.85 341 ⇑P P 07 07 51.6 +0.5
baz=36
C21A Desert Coulee 35.91 343 ⇓P P 07 07 52.1 +0.6
baz=36
E17A Martinsdale 35.92 338 ⇑P P 07 07 52.8 +1.0
baz=36
G14A Jackson 35.93 334 ⇓P P 07 07 53.8 +1.8
baz=36
B23A Brockton 35.94 346 ⇓P P 07 07 52.0 +0.2
baz=36
F15A Butte 36.02 336 ⇓P P 07 07 54.0 +1.2
baz=36
C20A Veseth Ranch, 36.07 342 ⇑P P 07 07 53.6 +0.7
baz=36
G13A Cobalt 36.14 333 ⇓P P 07 07 54.8 +1.1
baz=36
A23A Redstone 36.38 346 ⇓P P 07 07 56.8 +1.3
baz=36
C19A Slack Wire Ran 36.41 341 ⇑P P 07 07 56.4 +0.6
baz=36
D17A Six Diamond Ra 36.45 339 ⇑P P 07 07 57.0 +0.7
baz=36
E15A Deer Lodge 36.56 336 ⇓P P 07 07 57.9 +0.6
baz=37
G12A Big Creek, Yel 36.65 332 ⇑P P 07 07 59.4 +1.3
baz=37
A22A Carney Farms, 36.66 345 ⇓P P 07 07 58.6 +0.6
baz=37
F13A Darby 36.73 334 ⇑P P 07 07 59.8 +1.0
baz=37
C17A Wharram Farm, 36.89 339 ⇑P P 07 08 01.1 +1.1
baz=37
E14A Clinton 36.89 335 ⇓P P 07 08 01.6 +1.5
baz=37
EGMT Eagleton 36.89 340 ⇑P P 07 08 00.4 +0.5
baz=37
D15A Lincoln 37.02 337 ⇑P P 07 08 02.7 +1.4
baz=37
A20A Cobblestone Ra 37.10 343 ⇓P P 07 08 02.5 +0.8
baz=37
B18A Beardsley Farm 37.22 341 ⇓P P 07 08 03.7 +0.9
baz=37
A19A Klindworth Far 37.38 342 ⇑P P 07 08 04.9 +0.8
baz=37
C16A Fuhringer Ranc 37.38 338 ⇓P P 07 08 05.1 +0.9
baz=37
D14A Greenough 37.44 336 ⇑P P 07 08 05.6 +0.9
baz=38
A18A Metzger Ranch, 37.71 341 ⇓P P 07 08 06.9 +0.1
baz=38
C14A Swan Lake 38.10 337 ⇓P P 07 08 11.2 +1.0
baz=38
D12A Red Ives Fores 38.17 334 ⇑P P 07 08 11.2 +0.4
baz=38
JTMT Jette 38.29 336 eP P 07 08 11.9 0.0
C13A Hot Springs 38.35 336 ⇓P P 07 08 12.9 +0.6
baz=38
A15A Johnson Ranch, 38.73 339 ⇑P P 07 08 16.6 +1.1
baz=39
B13A Whitefish 38.87 336 ⇑P P 07 08 17.7 +1.0
baz=39
A14A Double T Ranch 38.97 338 ⇑P P 07 08 18.4 +0.9
baz=39
C11A Tepee Creek (N 39.16 334 ⇓P P 07 08 20.2 +1.0
baz=39
B12A Libby 39.39 336 ⇓P P 07 08 22.6 +1.6
baz=39
A12A Yaak River Ran 39.79 336 ⇓P P 07 08 26.0 +1.7
baz=40
LON Longmire 40.92 329 eP P 07 08 34.8 +1.1
comp=Z,6.5nm,0.9s
SIV San Ignacio 42.94 133 P P 07 08 48.7 -1.9
SIV San Ignacio 42.94 133 P P 07 08 48.7 -1.9
comp=Z,2.9nm,0.7s,baz=315,slow=7.9,SNR=17
SCHQ Schefferville 45.37 21 P P 07 09 07.0 -2.6
SCHQ Schefferville 45.37 21 P P 07 09 07.0 -2.6
comp=Z,1.1nm,0.7s,baz=207,slow=13,SNR=3.7
CFAA Coronel Fontan 50.89 153 P P 07 09 51.6 -0.9
CFAA Coronel Fontan 50.89 153 P P 07 09 51.6 -0.9
comp=Z,0.1nm,0.6s,baz=350,slow=3.4,SNR=2.3
YKA Yellowknife Ar 50.97 347 P P 07 09 51.5 -1.1
YKA PcP PcP 07 11 07.9 -0.6
YKA Yellowknife Ar 50.97 347 P P 07 09 51.5 -1.1
comp=Z,4.8nm,0.7s,baz=150,slow=7.5,SNR=117
YKA PcP PcP 07 11 07.9 -0.6
comp=Z,1.0nm,0.8s,baz=149,slow=4.0,SNR=12
YKW3 Yellowknife Ar 51.03 347 eP P 07 09 52.5 -0.6
comp=Z,0.1nm,0.9s
DLBC Dease Lake 52.53 336 P P 07 10 06.3 +1.9
DLBC Dease Lake 52.53 336 P P 07 10 06.3 +1.9
comp=Z,3.6nm,0.8s,baz=124,slow=9.2,SNR=7.3
INK Inuvik 60.36 344 P P 07 10 59.8 -0.1
INK Inuvik 60.36 344 P P 07 10 59.8 -0.1
comp=Z,4.4nm,0.9s,baz=124,slow=7.2,SNR=21
ILAR Eielson Array 62.72 337 P P 07 11 15.8 -0.1
ILAR Eielson Array 62.72 337 P P 07 11 15.8 -0.1
comp=Z,2.4nm,1.0s,baz=151,slow=3.8,SNR=22
TRF Thorofare Moun 63.51 335 eP P 07 11 20.8 -0.5
comp=Z,5.1nm,0.7s
PPT Papeete 64.55 243 LR LR 07 30 02.0
comp=Z,39nm,21.6s,baz=180,slow=27
SPITS Spitsbergen Ar 80.19 11 LR LR 07 51 50.7
comp=Z,35nm,18.4s,baz=255,slow=38
BILL Bilibino 81.35 338 eP P 07 13 07.6 +0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,6.0nm,0.7s						
TIXI	Tiksi	90.21	348	eP	P	07 13 50.3	-1.0
	comp=Z,3.0nm,0.9s						
HHC	Hu-ho-hao-te	121.11	339	ePKP	PKPdf	07 19 43.5	-0.9
HHC				sPKP		07 20 08.8	
HHC				PP	PP	07 21 15.4	+2.3
HHC				SKS	SKSdf	07 26 50.8	-3.9
HHC				SKKS	SKKSac	07 28 01.1	-11
HHC				SS	SS	07 37 41.5	-2.0
HHC				AMB	AMB		
	comp=Z,140nm,9.6s						
HHC				LR	LR		
	comp=N,130nm,20.2s						
HHC				LR	LR		
	comp=E,160nm,21.3s						
HHC				LR	LR		
	comp=Z,170nm,21.1s						
WMQ	Urumqi	122.49	360	PKP	PKPdf	07 19 47.0	+0.1
NJ2	Nanjing	125.32	327	ePKP	PKPdf	07 19 52.0	-0.5
KSH	Kashi	125.69	11	PKP	PKPdf	07 19 56.1	+2.9
KSH				PP	PP	07 21 50.9	+7.1
KSH				PKS	PKSdf	07 23 32.2	+2.2
KSH				SKKS		07 28 38.6	
KSH				SS	SS	07 38 42.1	+1.0
KSH				AMB	AMB		
	comp=Z,88nm,4.1s						
KSH				LR	LR		
	comp=N,29nm,3.9s						
KSH				LR	LR		
	comp=E,43nm,2.7s						
KSH				LR	LR		
	comp=Z,250nm,5.4s						
WHN	Wuhan	128.81	330	PKP	PKPdf	07 20 02.3	+3.1
CD2	Chengdu	132.76	341	PKP	PKPdf	07 20 05.0	-1.8
KMI	Kunming	138.44	339	PKP	PKPdf	07 20 16.8	-0.9
CMAR	Chiang Mai Arr	145.90	341	PKPbc	PKPdf	07 20 31.2	+0.4
CMAR	Chiang Mai Arr	145.90	341	PKPbc	PKPdf	07 20 31.2	+0.4
	comp=Z,5.8nm,0.7s,baz=339,slow=4.0,SNR=22						

*ISCJB **02** 07:17:36.3±0.4, 33°.64N±0°.03×48°.76E±0°.03, h13km, Error ellipse: s-maj=4.7km s-min=4.1km az=22.6*
*THR **02** 07:17:36.7±1.4, 33°.68N×48°.80E, h15km±13km, ML3.5*
*TEH **02** 07:17:37.1, 33°.56N×48°.81E, h4km, ML3.6*
*CSEM **02** 07:17:38.9±0.2, 33°.62N×48°.85E, h20km, ML3.6, Error ellipse: s-maj=4.7km s-min=4.1km az=150.0*
ISC 02 07:17:37.9±1.0**, 33°.65N**±0°.03×**48°.81E**±0°.03**, h13**km**, n60,** σ**0s.84**/63**, Western Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IKOM	Komasi	1.20	296	ePg	Pn	07 17 57.5	-3.0
IKOM				e		07 18 22.9	
	comp=Z,9µm,0.4s						
SHGR	Shooshtar-Gavs	1.54	180	ePg	Pb	07 18 05.5	-0.7
SHGR				AML	AML	07 18 32.6	
	comp=N,693nm,0.5s						
SHGR	Shooshtar-Gavs	1.54	180	ePg	Pb	07 18 05.5	-0.7
IVIS	Veis	1.84	299	ePn	Pn	07 18 10.1	+0.8
IVIS				e		07 18 13.4	
	comp=Z,5µm,0.2s						
IVIS				eSg	Sg	07 18 36.6	-0.6
IVIS	Veis	1.84	299	ePn	Pn	07 18 10.1	+0.8
IVIS				eSg	Sg	07 18 36.6	-0.6
SNGE	Sanandaj	1.88	320	ePg	Pn	07 18 10.2	+0.3
SNGE				AML	AML	07 18 47.0	
	comp=N,381nm,0.6s						
SNGE	Sanandaj	1.88	320	ePg	Pn	07 18 10.2	+0.3
IGHG	Ghaleghazi	1.98	291	ePn	Pb	07 18 12.7	-1.2
IGHG				e		07 18 16.0	
	comp=Z,5µm,0.1s						
IGHG	Ghaleghazi	1.98	291	ePn	Pb	07 18 12.7	-1.2
IRAZ	Razeghan	1.98	28	ePn	Pn	07 18 10.1	-1.2
IRAZ				eSg	Sg	07 18 41.9	+0.3
IRAZ				e		07 18 51.3	
	comp=Z,4µm,0.3s						
IRAZ	Razeghan	1.98	28	ePn	Pn	07 18 10.1	-1.2
ILIN	Lien	1.98	310	eSg	Sb	07 18 39.9	+1.2
ILIN	Lien	1.98	310	eSg	Sb	07 18 39.9	+1.2
IPIR	Pirpir	2.00	118	ePn	Pn	07 18 10.9	-0.7
IPIR	Pirpir	2.00	118	ePn	Pn	07 18 10.9	-0.7
IR5	Iran Long-Peri	2.14	43	ePn	Pn	07 18 12.9	-0.5
IR5	Iran Long-Peri	2.14	43	ePn	Pn	07 18 12.9	-0.5
GHVR	GHOM	2.23	67	ePg	Pn	07 18 15.6	+1.1
GHVR				AML	AML	07 18 46.9	
	comp=E,316nm,0.5s						
GHVR				AML	AML	07 18 54.9	
	comp=N,251nm,0.5s						
GHVR	GHOM	2.23	67	ePg	Pn	07 18 15.6	+1.1
IDHR	Dehrash	2.26	298	ePn	Pn	07 18 15.7	+0.5
IDHR				e		07 18 19.8	
	comp=Z,7µm,0.1s						
IDHR	Dehrash	2.26	298	ePn	Pn	07 18 15.7	+0.5
IKLH	Kolahrood	2.34	97	ePn	Pn	07 18 16.5	+0.2
IKLH	Kolahrood	2.34	97	ePn	Pn	07 18 16.5	+0.2
IMHD	Mahdasht	2.54	37	ePn	Pn	07 18 19.1	+0.1
IMHD				e		07 18 56.0	
	comp=Z,3µm,0.1s						
IMHD	Mahdasht	2.54	37	ePn	Pn	07 18 19.1	+0.1
IVRN	Varamin	2.77	60	ePn	Pn	07 18 22.6	+0.6
IVRN				e		07 19 02.2	
	comp=Z,2µm,0.2s						
IVRN	Varamin	2.77	60	ePn	Pn	07 18 22.6	+0.6
THKV	Tehran--Karaj	2.83	36	ePn	Pn	07 18 23.9	+0.9
THKV				AML	AML	07 19 07.6	
	comp=N,128nm,0.6s						
THKV	Tehran--Karaj	2.83	36	ePn	Pn	07 18 23.9	+0.9
ISFB	Sefidab	2.94	75	ePn	Pn	07 18 24.7	+0.4
ISFB				e		07 19 08.0	
	comp=Z,1µm,0.2s						
ISFB	Sefidab	2.94	75	ePn	Pn	07 18 24.7	+0.4
CHTH	Charan	2.95	40	ePn	Pn	07 18 25.4	+0.7
CHTH	Charan	2.95	40	ePn	Pn	07 18 25.4	+0.7
IGAR	Gharneh	2.99	114	ePn	Pn	07 18 24.5	-0.7
IZEF	Zefreh	3.05	103	ePn	Pn	07 18 25.3	-0.7
IZEF	Zefreh	3.05	103	ePn	Pn	07 18 25.3	-0.7
DAMV	Damavand	3.27	52	ePn	Pn	07 18 29.4	+0.4
DAMV	Damavand	3.27	52	ePn	Pn	07 18 29.5	+0.4
IDMV	Damavand	3.28	53	ePn	Pn	07 18 29.8	+0.5
IDMV				e		07 19 22.7	
	comp=Z,1µm,0.5s						
IDMV	Damavand	3.28	53	ePn	Pn	07 18 29.8	+0.5
IFIR	Firoozkooh	3.81	57	ePn	Pn	07 18 36.9	+0.4
IFIR				e		07 19 33.9	
	comp=Z,810nm,0.2s						
IFIR	Firoozkooh	3.81	57	ePn	Pn	07 18 36.9	+0.4
ILAS	Lasjerd	3.84	62	ePn	Pn	07 18 37.2	+0.3
ILAS				e		07 19 48.5	
	comp=N,1µm,0.3s						
ILAS	Lasjerd	3.84	62	ePn	Pn	07 18 37.2	+0.3
MIB	Mutribah	4.03	198	eP	Pn	07 18 39.8	+0.4
MIB				AML	AML	07 19 28.8	
	comp=Z,26nm,0.6s						
MIB	Mutribah	4.03	198	eP	Pn	07 18 39.8	+0.4
ISHM	Shahmirzad	4.28	59	ePn	Pn	07 18 43.1	+0.2
ISHM				e		07 19 59.9	
	comp=Z,1µm,0.3s						
ISHM	Shahmirzad	4.28	59	ePn	Pn	07 18 43.1	+0.2
NAY	Al-Naaiem	4.59	197	eP	Pn	07 18 47.3	+0.3
NAY				AML	AML	07 19 43.9	
	comp=Z,11nm,0.6s						
NAY	Al-Naaiem	4.59	197	eP	Pn	07 18 47.3	+0.3
IANJ	Anjilo	4.59	65	ePn	Pn	07 18 47.1	-0.1
IANJ				e		07 20 13.2	
	comp=Z,444nm,0.4s						
IANJ	Anjilo	4.59	65	ePn	Pn	07 18 47.1	-0.1
RDF	Al-Radifah	4.83	193	eP	Pn	07 18 50.4	+0.1
RDF	Al-Radifah	4.83	193	eP	Pn	07 18 50.4	+0.1
IMEH	Mehriz	5.40	113	ePn	Pn	07 18 57.2	-1.1
IMEH				e		07 18 59.9	
	comp=Z,88nm,0.1s						
IMEH	Mehriz	5.40	113	ePn	Pn	07 18 57.2	-1.1
ISRV	Sarvestan	5.62	138	ePn	Pn	07 18 59.7	-1.8
ISRV				e		07 21 17.0	
	comp=Z,290nm,0.6s						
ISRV	Sarvestan	5.62	138	ePn	Pn	07 18 59.7	-1.8
TABS	Tabas	6.93	88	ePn	Pn	07 19 20.0	+0.7
TABS	Tabas	6.93	88	ePn	Pn	07 19 20.0	+0.7

GUC 02 07:31:39.6±1.0**, 21°.13S**×**70°.06W, h11**km±999km**, ML3.5, 1C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	0.54	81	⇑iP	Pg	07 31 49.8	-0.6
PB01				i S	Sg	07 31 56.7	-0.9
PB01				AML	AML	07 31 57.5	
	comp=E,20µm,0.2s						
HMBC	Humberston	0.86	11	⇓iP	Pg	07 31 54.8	-1.6
HMBC				i S	Sg	07 32 05.9	-1.8
HMBC				AML	AML	07 32 06.7	
	comp=E,1µm,0.6s						
PB09	Plate Boundary	1.01	131	⇓iP	Pg	07 31 57.8	-1.7
PB09				i S	Sg	07 32 10.8	-2.1
PB09				AML	AML	07 32 11.9	
	comp=E,4µm,0.1s						
PB04	Plate Boundary	1.25	155	⇓iP	Pn	07 32 00.5	-2.6
PB04				i S	Sb	07 32 16.4	-3.0
PB04				AML	AML	07 32 22.6	
	comp=N,1µm,0.8s						
PB11	Plate Boundary	1.41	16	⇓iP	Pn	07 32 03.3	-2.1
PB11				eS	Sn	07 32 21.6	-2.5
LVC	Limon Verde	1.83	144	eP	x	07 32 49.9	
LVC				eS	x	07 33 13.3	
MECH	Mejillones	2.00	190	eP	Pn	07 32 12.8	-0.6
MECH				AML	AML	07 32 48.9	
	comp=N,349nm,0.3s						
CEN1	Los Morros	2.26	183	eP	Pn	07 32 17.4	+0.4
CEN1				eS	Sb	07 32 50.3	+1.6

KRSC 02 07:40:51.2±1.1**, 49°.56N**×**157°.25E, h80**km±80km**, ML3.8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	2.74	354	eP	Pn	07 41 34.2	+1.2
MIPR				i S	Sn	07 42 06.1	+1.0
MTVR	Mutnovka	2.99	11	eP	Pn	07 41 39.3	+2.8
MTVR				i S	Sn	07 42 14.0	+2.6
RUS	Russkaya	2.99	15	eP	Pn	07 41 38.8	+2.5
RUS				i S	Sn	07 42 13.5	+2.5
GRL	Gorelyy	3.04	10	eP	Pn	07 41 40.6	+3.4
GRL				i S	Sn	07 42 15.8	+3.1
UGLR	Uglovaya	3.79	14	eP	Pn	07 41 50.9	+3.6
UGLR				i S	Sn	07 42 34.6	+3.9
AVH	Avacha	3.83	14	eP	Pn	07 41 51.9	+4.1
AVH				i S	Sn	07 42 36.5	+4.9
SMAR	Somma	3.83	14	eP	Pn	07 41 51.8	+3.7
GNL	Ganaly	4.16	6	eP	Pn	07 41 55.2	+2.8
MKZ	Mys Kozlova	5.71	27	eP	Pn	07 42 16.3	+2.9
MKZ				i S	Sn	07 43 18.6	+1.1
KBTR	Krutoberegovo	7.46	25	eP	Pn	07 42 40.3	+3.1

IDC 02 07:58:03.2±1.8**, 3°.90N**×**126°.85E, h0**km**, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/22**, mbtmp3.7**/4**, Error ellipse: s-maj=103.4km s-min=23.8km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.90	183	P	P	08 02 57.6	-0.5
	0.9nm,0.5s,baz=3.7,slow=11,SNR=5.7						
WRA	Warramunga Arr	24.81	163	P	P	08 03 27.8	+0.5
	5.0nm,0.7s,baz=344,slow=11,SNR=60						
ASAR	Alice Springs	28.25	166	P	P	08 03 58.0	-0.3
	0.3nm,0.3s,baz=343,slow=8.1,SNR=4.1						
MKAR	Makanchi Array	57.48	325	P	P	08 07 54.1	-0.1
	0.3nm,0.5s,baz=132,slow=7.2,SNR=4.3						

IDC 02 08:01:13.8±1.7**, 3°.56N**×**127°.71E, h0**km**, mb3.7**/6**, mb1 3.8**/6**, mb1mx3.6**/24**, mbtmp3.7**/6**, MS2.4**/1**, Ms1 2.4**/1**, ms1mx1.9**/29**, Error ellipse: s-maj=112.6km s-min=18.4km az=71.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	11.65	223	LR	LR	08 08 09.4	
	comp=Z,22nm,20.9s,baz=160,slow=36						
FITZ	Fitzroy Crossi	21.63	185	P	P	08 06 05.4	-0.3
	0.6nm,0.4s,baz=20,slow=12,SNR=2.9						
WRA	Warramunga Arr	24.25	165	P	P	08 06 32.3	-0.4
	1.6nm,0.5s,baz=345,slow=9.6,SNR=14						
ASAR	Alice Springs	27.73	168	P	P	08 07 04.2	0.0
	0.4nm,0.6s,baz=341,slow=7.5,SNR=6.7						
MKAR	Makanchi Array	58.25	325	P	P	08 11 09.3	-0.9
	0.6nm,0.6s,baz=131,slow=8.0,SNR=7.8						
BVAR	Borovoye Array	67.99	327	P	P	08 12 15.5	+0.7
	0.9nm,0.8s,baz=126,slow=7.5,SNR=4.6						
AKTO	Aktyubinsk	74.39	321	P	P	08 12 54.5	+0.9
	0.6nm,0.5s,baz=126,slow=8.7,SNR=4.1						

*ISCJB **02** 08:13:45.0±0.7, 37°.54N±0°.03×118°.88W±0°.05, h6km±7km, Error ellipse: s-maj=6.4km s-min=4.9km az=149.2*
*NEIC **02** 08:13:45.0, 37°.52N×118°.86W, h8km, MD3.4(NCEDC), After NCEDC.*
ISC 02 08:13:44.6±0.9**, 37°.52N**±0°.03×**118°.87W**±0°.03**, h9**km±8km**, n26,** σ**1s.57**/38**, 6C-9D, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MLAC	Mammoth Lakes	0.12	15	⇑P	Pg	08 13 47.8	+0.2
	baz=0.1						
MLAC				⇓S	Sg	08 13 50.2	+0.6
	baz=0.1						
MTUM	Tungsten Hills	0.30	124	eP	Pg	08 13 50.9	+0.3
RCTC	Rector, Farmer	1.24	194	⇓P	Pn	08 14 07.8	-0.4
	baz=1.2						
RCTC				⇑S	Sb	08 14 24.3	-0.1
	baz=1.2						
CWC	Cottonwood Cre	1.25	149	⇓P	Pn	08 14 08.0	-0.5
	baz=1.2						
CWC				⇓S	Sb	08 14 23.9	-0.9
	baz=1.2						
CMB	Columbia Colle	1.30	294	ePn	Pn	08 14 08.8	-0.4
CMB				eSg	Sb	08 14 25.7	-0.5
DAC	Darwin (Calif)	1.61	140	ePn	Pn	08 14 13.9	+0.4
DAC				eSn	Sn	08 14 34.9	+0.5
VES	Vestal, Richgr	1.68	186	⇑Pb	Pb	08 14 15.5	-0.3
	baz=1.7						
VES				⇑S	Sb	08 14 37.6	+0.5
	baz=1.7						
ISA	Isabella	1.88	170	ePn	Pb	08 14 19.1	-0.1
ISA				eSn	Sb	08 14 43.2	+0.3
ISA	Isabella	1.88	170	⇓Pb	Pb	08 14 19.2	-0.1
	baz=1.9						
ISA				⇑Sb	Sb	08 14 43.5	+0.7
	baz=1.9						
WCN	Washoe City	1.91	339	ePn	Pn	08 14 19.1	+1.6
CLC	China Lake	1.98	148	eP	Pb	08 14 21.8	+0.8
PTRM	Twissleman Ran	2.15	210	eP	Pn	08 14 22.7	+1.9
PTRM				eSn	Sb	08 14 50.3	-0.3
SAO	San Andreas Ge	2.19	251	ePn	Pn	08 14 22.5	+1.2
SAO				eSn	Sb	08 14 54.0	+2.3
LRMC	Laurel Mountai	2.25	155	⇓Sb	Sb	08 14 55.1	+1.6
	baz=2.2						
ARVC	Arvin	2.39	179	⇓Sb	Sb	08 14 57.9	+0.5
	baz=2.4						
EDW2	Edwards Air Fo	2.73	165	⇓Sb	Sb	08 15 09.2	+2.0
	baz=2.7						
R11A	Troy Canyon, C	2.73	71	⇓P	Pn	08 14 29.4	+0.6
	baz=2.7						
GSC	Goldstone	2.77	142	ePn	Pn	08 14 31.5	+2.2
OSI	Osito Adit	2.90	178	⇑Sb	Sb	08 15 13.5	+1.3
	baz=2.9						
MWC	Mount Wilson	3.35	168	ePn	Pn	08 14 40.7	+3.3
MWC				eSg	Sb	08 15 29.0	+3.6
PASC	Pasadena Art C	3.39	170	ePn	Pn	08 14 35.4	-2.3
PASC				eSg	Sg	08 15 32.3	-1.2
WDC	Whiskeytown Da	4.18	318	Pn	Pn	08 14 50.2	+1.6
WDC				eSg	Sg	08 15 54.7	-4.2
ELK	Elko	4.29	40	ePn	Pn	08 14 51.5	+1.2
ARUT	Antelope Range	4.32	85	ePg	Pg	08 15 05.6	-1.8
CCUT	Cedar City	4.38	88	ePn	Pn	08 14 52.5	+0.9
CCUT				eSg	Sg	08 16 02.5	-2.8
DUG	Dugway	5.43	59	ePn	Pn	08 15 02.4	-3.5

MAN 02 08:19:08, 17°.31N×**119°.84E, h1**km**, mb4.6, ML3.5, MS3.4, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABRA	Dolores	0.90	68	eP	Pg	08 19 25.5	+0.2
ABRA				eS	Sn	08 19 41.3	-0.1
BOLP	Bolinao	0.93	176	eP	Pg	08 19 26.3	+0.5
BCPH	Baguio City Da	1.17	142	⇓iP	Pg	08 19 20.6	-10
CAUP	Cauayan	1.93	101	eP	Pb	08 19 43.6	-0.4
BALP	Baler	2.28	133	eP	Pn	08 19 47.3	+0.4

IDC 02 08:32:35.7±0.7**, 4°.16N**×**126°.69E, h0**km**, mb4.0**/11**, mb1 4.1**/11**, mb1mx4.0**/22**, mbtmp4.0**/11**, MS3.8**/2**, Ms1 3.8**/2**, ms1mx3.1**/35**, 1D, Error ellipse: s-maj=47.8km s-min=15.0km az=79.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	3.89	321	⇓iP	Pb	08 33 46.1	+0.8
KAPI	Kappang	11.45	217	LR	LR	08 40 30.7	
	comp=Z,152nm,18.8s,baz=251,slow=42						
FITZ	Fitzroy Crossi	22.15	183	P	P	08 37 34.3	+1.1
	1.9nm,0.5s,baz=3.2,slow=9.9,SNR=11						
WRA	Warramunga Arr	25.11	163	P	P	08 38 02.1	-0.3
	7.3nm,0.8s,baz=345,slow=9.6,SNR=26						
ASAR	Alice Springs	28.54	166	P	P	08 38 33.3	-0.1
	0.9nm,0.6s,baz=350,slow=7.7,SNR=15						
KSRS	Korea Array	33.16	2	P	P	08 39 13.4	-0.5
	0.6nm,0.4s,baz=185,slow=12,SNR=3.9						
USRK	Ussuriysk Arra	40.15	6	P	P	08 40 14.1	+0.6
	0.7nm,0.6s,baz=176,slow=7.8,SNR=2.5						
ASAJ	Asahikawa	42.20	17	LR	LR	08 56 54.1	
	comp=Z,282nm,18.2s,baz=357,slow=35						
SONM	Songino Array	46.88	341	P	P	08 41 09.2	+1.3
	0.8nm,0.7s,baz=151,slow=9.4,SNR=3.5						
MKAR	Makanchi Array	57.18	325	P	P	08 42 24.7	+0.1
	1.1nm,0.5s,baz=123,slow=8.1,SNR=17						
ZALV	Zalesovo Beam	60.19	333	P	P	08 42 44.5	-0.9
	0.6nm,0.5s,baz=126,slow=6.7,SNR=3.9						
ILAR	Eielson Array	84.73	25	P	P	08 45 11.5	0.0
	0.8nm,1.0s,baz=253,slow=5.6,SNR=6.0						
BRTR	Keskin Array B	89.72	310	P	P	08 45 36.9	+0.5
	0.3nm,0.3s,baz=72,slow=5.2,SNR=3.2						
FINES	FINESS Array B	91.43	332	P	P	08 45 41.8	-1.9
	2.5nm,0.9s,baz=64,slow=6.8,SNR=2.9						
TORD	Torodi Ar. Bea	122.74	288	PKP	PKPdf	08 51 34.0	-0.7
	0.6nm,0.8s,baz=9.8,slow=1.2,SNR=3.1						

*NIED **02** 08:39:00, 24°.60N×125°.90E, h35km, Mw4.8 Best double couple: M₀1.84000×10^16 NP1:φs187.00000°, δ84.00000°, λ-147.00000°. NP2:φs94.00000°, δ57.00000°, λ-7.00000°.*
*BJI **02** 08:39:29.9, 24°.62N×125°.89E, h39km, mB4.7/32, mb4.9/43, ML4.2/3, Ms4.4/41, Ms7 4.1/41*
*MOS **02** 08:39:30.6±1.0, 24°.84N×125°.73E, h33km, mb5.2/38, MS4.0/5, Error ellipse: s-maj=9.4km s-min=5.3km az=115.7*
*ISCJB **02** 08:39:32.0±0.4, 24°.79N±0°.03×125°.77E±0°.02, h41km±3km, mb4.8/103, MS4.0/29, Error ellipse: s-maj=4.8km s-min=2.9km az=152.0*
*JMA **02** 08:39:32.7±0.1, 24°.71N×125°.84E, h54km±1km, M5.1*
JMA Felt II J1.
*IDC **02** 08:39:33.8±0.6, 24°.80N×125°.75E, h48km±5km, mb4.3/22, mb1 4.5/26, mb1mx4.5/30, mbtmp4.4/26, MS3.9/16, Ms1 3.9/16, ms1mx3.7/37, Error ellipse: s-maj=13.8km s-min=11.1km az=95.0*
*NEIC **02** 08:39:33.4±0.4, 24°.79N×125°.70E, h42km±4km, mb5.0/47, MW4.8(NIED), Error ellipse: s-maj=5.5km s-min=3.9km az=138.0*
NEIC Recorded [2 JMA] on Miyako-jima and [1 JMA] on Tarama-shima.
*DJA **02** 08:39:48.4±1.3, 25°N±8°×12°5E±1°1, h107km±11km, M4.8/8, mB5.7/2, mb4.9/8, MLv4.8/1, Mw(mB)5.2/2*
ISC 02 08:39:33.1±0.4**, 24°.77N**±0°.04×**125°.80E**±0°.03**, h40**km±2km**, h40**km**:pP-P, n348,** σ**1s.65**/401**, mb4.8**/103**, MS4.1**/30**, 29C-22D, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOGS	Gusukube	0.35	269	P	Pn	08 39 43.1	+1.2
JOGS				S	Sn	08 39 50.5	+2.4
JMJ	Miyako jima 2	0.46	276	P	Pn	08 39 44.3	+1.0
JMJ				S	Sn	08 39 52.7	+2.3
JTJ	Tarama	1.00	263	P	Pn	08 39 51.4	+0.8
JTJ				S	Sn	08 40 05.0	+1.5
JIJ	Ishigaki jima	1.56	255	P	Pn	08 39 58.6	+0.4
JIJ				S	Sn	08 40 17.0	-0.2
JKRS	Kuro-shima	1.71	252	P	Pn	08 40 00.7	+0.4
JKRS				eS	Sn	08 40 22.4	+1.4
JKE	Kume jima 2	1.79	30	P	Pn	08 40 01.3	-0.2
JKE				eS	Sn	08 40 23.9	+0.8
IRIF	Iriomote-Funau	1.93	258	P	Pn	08 40 03.8	+0.4
IRIF				eS	Sn	08 40 28.3	+1.9
HATJ	Hateruma jima	1.95	249	P	Pn	08 40 03.6	0.0
HATJ				eS	Sn	08 40 26.9	+0.1
JJT2	Tamagusuku 2	2.23	52	P	Pn	08 40 07.8	+0.2
JAGN	Aguni-jima	2.24	35	P	Pn	08 40 07.2	-0.4
YOJ	Yonaguni jima	2.55	264	P	Pn	08 40 12.2	+0.3
YOJ				eS	Sn	08 40 40.7	-1.1
JIH	Iheya	2.99	40	P	Pn	08 40 17.3	-0.6
JOW	Kunigami	3.04	47	ePn	Pn	08 40 18.1	-0.5
JOW				S	Sn	08 41 03.6	+10
JOW	Kunigami	3.04	47	P	Pn	08 40 18.1	-0.5
JOW	Kunigami	3.04	47	P	Pn	08 40 18.2	-0.5
	408nm,0.3s,baz=224,slow=9.4,SNR=692						
JOW				S	Sn	08 41 03.6	+10
	73nm,0.3s,baz=111,slow=26,SNR=6.1						
NACB	Ninganchiao	3.87	262	ePn	Pn	08 40 29.6	-0.5
NACB				eSn	Sn	08 41 11.6	-2.8
TATO	Taipei	3.92	274	ePn	Pn	08 40 28.1	-2.6
YHNB	Yeheng	4.02	270	ePn	Pn	08 40 32.6	+0.4
JTK	Tokunoshima	4.13	43	P	Pn	08 40 32.4	-1.3
YULB	Yu-li	4.33	253	ePn	Pn	08 40 34.4	-2.0
SSLB	Suanglung	4.52	259	ePn	Pn	08 40 38.4	-0.7
JAMN	Amaminishikomi	4.60	40	P	Pn	08 40 38.4	-1.7
TWG	Pinlang	4.74	247	ePn	Pn	08 40 39.8	-2.3
TWG				eSn	Sn	08 41 28.8	-7.0
TPUB	Ta-pu	4.94	254	ePn	Pn	08 40 44.2	-0.6
TPUB				eSn	Sn	08 41 38.8	-2.0
JAM	Amami Oshima	4.98	42	P	Pn	08 40 43.9	-1.4
JMZ	Minamidaito 2	5.02	77	P	Pn	08 40 42.6	-3.3
JMZ				eS	Sn	08 41 34.0	-8.7
JZK	Kikaishima	5.15	46	P	Pn	08 40 46.3	-1.3
QZH	Quanzhou	6.54	273	P	Pn	08 41 09.6	+2.8
QZH				S	Sn	08 42 15.5	-4.7
QZH				smax	smax		
	comp=N,260nm,1.0s						
QZH				smax	smax		
	comp=E,190nm,0.9s						
QZH				LR	LR		
	comp=N,3µm,4.8s						
QZH				LR	LR		
	comp=E,1µm,4.2s						
QZH				LR	LR		
	comp=Z,2µm,16.9s						
SSE	Sheshan	7.51	328	eP	Pn	08 41 21.9	+1.9
SSE				S	Sn	08 42 46.8	+3.0
SSE				pmax	pmax		
	comp=Z,56nm,0.5s						
SSE				pmax	pmax		
	comp=Z,59nm,4.4s						
SSE				smax	smax		
	comp=N,57nm,0.7s						
SSE				smax	smax		
	comp=E,69nm,0.8s						
SSE				LR	LR		
	comp=N,300nm,23.0s						
SSE				LR	LR		
	comp=E,810nm,23.0s						
SSE				LR	LR		
	comp=Z,370nm,20.8s						
JNU	Nakatsue	9.44	27	P	Pn	08 41 45.9	-0.6
JNU				eSn	Sn	08 43 31.7	+0.4
JNU	Nakatsue	9.44	27	P	Pn	08 41 45.9	-0.6
	comp=Z,8.6nm,0.3s,baz=182,slow=11,SNR=36						
NJ2	Nanjing	9.48	321	eP	Pn	08 41 45.1	-2.0
NJ2				S	Sn	08 43 29.0	-3.4
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,290nm,6.2s						
NJ2				LR	LR		
	comp=N,470nm,20.2s						
NJ2				LR	LR		
	comp=E,710nm,10.9s						
NJ2				LR	LR		

comp=Z,750nm,16.7s
TGY Tagaytay City 11.55 204 P Pn 08 42 16.5 +1.0
TGY Tagaytay City 11.55 204 P Pn 08 42 16.5 +1.0
comp=Z,26nm,0.3s,baz=97,slow=11,SNR=3.5
WHN Wuhan 11.66 302 ⇑ *i*P **Pn 08 42 19.2 +2.3**
WHN pP 08 42 26.5
WHN *e*S **Sn 08 44 24.3 -1.4**
WHN pmax pmax
comp=Z,100nm,1.2s
WHN LR LR
comp=N,1μm,5.7s
WHN LR LR
comp=E,1μm,9.7s
WHN LR LR
comp=Z,1μm,12.2s
KSAR Wonju Array Be 12.76 8 P Pn 08 42 32.5 +0.7
KSRS Korea Array 12.78 8 P Pn 08 42 32.5 +0.4
comp=Z,0.3nm,0.3s,baz=186,slow=13,SNR=15
KSRS LR LR 08 48 09.2
comp=Z,236nm,19.5s,baz=192,slow=40
JNT Takato 15.35 41 P P 08 43 13.0 +1.9
MAJO Matsushiro 15.85 39 *e*P **P 08 43 16.4 -0.2**
MAJO pmax pmax
comp=Z,121nm,1.0s
MAJO Matsushiro 15.85 39 *e*Pn **P 08 43 16.4 -0.2**
comp=Z,121nm,1.0s
MAT Matsushiro 15.85 39 P P 08 43 17.5 +1.0
MAT S **Sn 08 46 12.4 +4.5**
MAT Matsushiro 15.85 39 P P 08 43 17.6 +1.0
MJAR Matsushiro Arr 15.85 39 P P 08 43 15.8 -0.8
MJAR Matsushiro Arr 15.85 39 P P 08 43 15.8 -0.8
comp=Z,4.1nm,0.3s,baz=231,slow=11,SNR=123
QIZ Qiongzhong 15.86 252 P Pn 08 43 13.3 -0.2
QIZ S **Sn 08 46 08.9 +0.5**
QIZ LR LR
comp=N,560nm,18.5s
QIZ LR LR
comp=E,480nm,21.5s
QIZ LR LR
comp=Z,770nm,19.5s
JAG Ashikaga 16.51 42 P P 08 43 24.5 +0.6
SNY Shenyang 17.12 354 ⇑ P P 08 43 41.8 +11
SNY S **S 08 46 50.7 +4.1**
SNY pmax pmax
comp=Z,14nm,0.5s
SNY pmax pmax
comp=Z,170nm,5.9s
SNY LR LR
comp=E,1μm,22.1s
SNY LR LR
comp=Z,310nm,16.3s
BJI Beijing 17.24 334 P Pn 08 43 30.1 -0.7
BJI S **Sn 08 46 41.3 -0.2**
BJI pmax pmax
comp=Z,11nm,0.5s
BJI pmax pmax
comp=Z,75nm,3.9s
BJI LR LR
comp=N,440nm,17.0s
BJI LR LR
comp=E,730nm,18.2s
BJI LR LR
comp=Z,170nm,31.4s
GYA Guiyang 17.34 280 P Pn 08 43 32.0 -0.2
GYA pP **pP 08 43 41.2 -2.0**
GYA PP **pwP 08 43 47.8 +4.6**
GYA S **Sn 08 46 42.0 -2.3**
GYA sS **S 08 46 53.5 +1.9**
GYA SS **SnSn 08 47 03.9 +6.1**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,540nm,15.5s
GYA LR LR
comp=E,490nm,16.7s
GYA LR LR
comp=Z,510nm,15.1s
CN2 Changchun 18.99 359 *e*P **Pn 08 43 54.5 +2.4**
CN2 *es*P **sP 08 44 07.0 +0.8**
CN2 *e*S **Sn 08 47 21.5 -2.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,900nm,20.0s
CN2 LR LR
comp=E,500nm,20.0s
CN2 LR LR
comp=Z,300nm,16.0s
HHC Hu-ho-hao-te 19.96 327 *e*P **Pn 08 44 02.9 -0.9**
HHC pP **pP 08 44 12.0 +0.1**
HHC sP **sP 08 44 15.6 -1.4**
HHC PP **PnPn 08 44 22.7 +4.0**
HHC S **S 08 47 41.3 -3.1**
HHC sS **Sn 08 47 53.2 +5.8**
HHC SS **SnSn 08 48 09.9 +7.6**
HHC pmax pmax
comp=Z,61nm,1.0s
HHC pmax pmax
comp=Z,410nm,5.2s
HHC LR LR
comp=N,740nm,11.5s
HHC LR LR
comp=E,690nm,11.8s
HHC LR LR
comp=Z,650nm,11.2s
USRK Ussuriysk Arra 20.04 13 P P 08 44 02.8 +0.2
comp=Z,2.3nm,0.6s,baz=204,slow=9.0,SNR=7.0
MDJ Mudanjiang 20.04 8 P P 08 44 02.8 +0.2
MDJ pP **pP 08 44 09.4 -3.2**
MDJ S **S 08 47 46.8 +1.1**
MDJ pmax pmax
comp=Z,64nm,4.9s
MDJ LR LR
comp=N,120nm,32.3s
MDJ LR LR
comp=E,550nm,29.7s
MDJ LR LR
comp=Z,210nm,23.2s
CD2 Chengdu 20.41 292 ⇑ P **P 08 44 07.1 +0.3**
CD2 pP **pP 08 44 16.2 -0.6**
CD2 sP **sP 08 44 20.8 -1.1**
CD2 PP **PnPn 08 44 27.9 +3.1**
CD2 S **S 08 47 48.0 -5.3**
CD2 sS Sn 08 48 01.8 +3.5
CD2 SS **SnSn 08 48 18.1 +4.9**
CD2 pmax pmax
comp=Z,100nm,0.9s
CD2 pmax pmax
comp=Z,200nm,5.5s
CD2 LR LR
comp=N,970nm,11.7s
CD2 LR LR
comp=E,730nm,10.8s
CD2 LR LR
comp=Z,590nm,12.2s
BTO Baotou 20.58 324 *e*P **P 08 44 08.5 -0.1**
KKM Kota Kinabalu 20.76 208 *e*P **P 08 44 10.7 -0.1**
comp=Z,53nm,0.8s
KMI Kunming 20.91 276 P Pn 08 44 14.9 -0.3
KMI pP pP 08 44 23.9 +1.4
KMI sP sP 08 44 28.7 +1.1
KMI PP **PnPn 08 44 36.8 +5.0**
KMI S **S 08 48 00.8 -2.7**
KMI sS Sn 08 48 14.5 +3.9
KMI SS **SnSn 08 48 33.1 +7.5**
KMI pmax pmax
comp=Z,28nm,0.9s
KMI pmax pmax
comp=Z,160nm,3.9s
KMI LR LR
comp=N,750nm,15.1s
KMI LR LR
comp=E,320nm,11.4s
KMI LR LR
comp=Z,510nm,13.4s
GUMO Guam 21.14 118 P P 08 44 15.4 +0.7
GUMO Guam 21.14 118 P P 08 44 15.4 +0.7
comp=Z,49nm,0.8s,baz=315,slow=7.1,SNR=2.1
GUMO LR LR 08 51 09.6
comp=Z,183nm,18.7s,baz=87,slow=33
LZH Lanzhou 21.98 306 *e*P **P 08 44 23.2 -0.6**
LZH pP **pP 08 44 33.1 -0.8**
LZH sP **sP 08 44 36.6 -2.4**
LZH PP **PnPn 08 44 47.7 +1.2**
LZH S **S 08 48 17.6 -6.8**
LZH pmax pmax
comp=Z,32nm,1.1s
LZH pmax pmax
comp=Z,150nm,4.9s
LZH LR LR
comp=N,420nm,12.2s
LZH LR LR
comp=E,480nm,12.3s
LZH LR LR
comp=Z,670nm,15.0s
ERM Erimo 22.42 36 ⇓ *i*P **P 08 44 26.0 -2.3**
ERM pmax pmax
comp=Z,99nm,0.7s
ERM Erimo 22.42 36 *e*P **P 08 44 26.4 -1.9**
comp=Z,121nm,0.9s
ASAJ Asahikawa 23.68 31 P P 08 44 40.1 -0.8
comp=Z,4.4nm,0.9s
ASAJ Asahikawa 23.68 31 P P 08 44 40.1 -0.8
comp=Z,47nm,0.8s,baz=236,slow=8.0,SNR=32
TNTI Ternate 23.90 176 P P 08 44 58.9 +16
comp=Z,163nm,1.0s
KLR Kul'dur 24.86 9 *e*P P 08 44 46.2 -5.5
YUK Yuzh-Kuril'sk 25.25 35 ⇓ *i*P **P 08 44 56.5 +1.2**
YUK *i* 08 45 36.8
YUK *i* PPP PPP 08 45 47.9
YUK *i* S **S 08 49 15.9 -2.3**
YUK *i* SS **SnSn 08 50 20.3 +8.9**
YUK *i* SSS SSS 08 50 35.9
YUK pmax pmax
comp=Z,124nm,1.5s
YUK pmax pmax
comp=N,347nm,1.5s
YUK pmax pmax
comp=E,506nm,1.5s
YUK MLR MLR
comp=Z,569nm,28.0s
YUK MLR MLR
comp=N,139nm,19.0s
YUK MLR MLR
comp=Z,271nm,19.0s
YUK MLR MLR
comp=E,116nm,19.0s
CMMT Chiang Mai 25.60 262 P P 08 45 00.0 +1.3
CHTO Chiang Mai 25.60 262 *e*P **P 08 44 58.6 -0.2**
CHTO pmax pmax
comp=Z,26nm,1.2s
CHTO Chiang Mai 25.60 262 *e*P **P 08 44 58.5 -0.2**
comp=Z,26nm,1.2s
CHTO Chiang Mai 25.60 262 P P 08 44 59.5 +0.7
comp=Z,22nm,1.2s
CM31 Chiang Mai Arr 25.71 261 *e*P **P 08 45 00.5 +0.7**
CMAR Chiang Mai Arr 25.71 261 P P 08 45 00.3 +0.5
CMAR Chiang Mai Arr 25.71 261 P P 08 45 00.3 +0.5
comp=Z,5.2nm,0.9s,baz=62,slow=7.8,SNR=22
CMAR LR LR 08 55 28.8
comp=Z,273nm,21.0s,baz=251,slow=37
YSS Yuzh-Sakhalins 25.95 27 *e*P **P 08 45 02.0 +0.4**
YSS pmax pmax
comp=N,50nm,1.1s
YSS pmax pmax
comp=Z,80nm,1.1s
YSS MLR MLR
comp=N,200nm,20.0s
YSS MLR MLR
comp=Z,400nm,20.0s
YSS Yuzh-Sakhalins 25.95 27 *e*P **P 08 45 01.2 -0.4**
comp=Z,88nm,1.1s
GTA Gaotai 26.29 310 ⇑ P **P 08 45 04.0 -1.0**
GTA pP **pP 08 45 15.2 -0.8**
GTA sP **sP 08 45 20.0 -0.8**
GTA S **S 08 49 32.2 -2.9**
GTA sS **sS 08 49 51.2 -2.3**
GTA SS **SnSn 08 50 43.9 +6.7**
GTA pmax pmax
comp=Z,45nm,1.0s
GTA pmax pmax
comp=Z,130nm,7.1s
GTA LR LR
comp=N,350nm,15.2s
GTA LR LR
comp=E,370nm,15.7s
GTA LR LR
comp=Z,330nm,13.8s
ULN Ulaanbaatar 27.42 332 *e*P **P 08 45 13.9 -1.1**
comp=Z,17nm,1.0s
ULN Ulaanbaatar 27.42 332 P P 08 45 14.1 -0.9
comp=Z,14nm,1.3s
KSM Kuching 27.57 215 *e*P **P 08 45 16.7 +0.2**
comp=Z,34nm,1.1s
SONM Songino Array 27.68 331 P P 08 45 16.1 -1.3
SONM Songino Array 27.68 331 P P 08 45 16.1 -1.3
comp=Z,5.3nm,0.7s,baz=143,slow=9.8,SNR=16
SONM LR LR 08 57 53.1
comp=Z,315nm,20.0s,baz=158,slow=40
FAKI Fak Fak 28.23 166 P P 08 45 36.2 +14
comp=Z,20nm,0.9s
TTSI Tana Toraja 28.25 193 P P 08 45 37.0 +15
comp=Z,21nm,1.1s,comp=Z,3um
SHL Shillong 30.66 279 *e*P **P 08 45 44.0 -0.1**
ZAK Zakamensk 30.94 332 *e*P **P 08 45 43.7 -2.5**
MYKOM Kota Tinggi 31.16 226 P P 08 46 01.3 +13
IPM Ipoh 31.21 234 *e*P **P 08 45 48.0 -0.9**
comp=Z,33nm,0.9s
TLY Talaya 31.76 334 *e*P P 08 45 49.5 -3.8
TLY *e*PPP PPP 08 47 06.0
TLY *e*S **S 08 50 58.7 -1.8**
TLY pmax pmax
comp=Z,6.0nm,1.0s
TLY MLR MLR
comp=N,111nm,16.0s
MOY Mondy 32.87 331 *e*P **P 08 46 02.0 -1.2**
MOY pmax pmax
comp=Z,27nm,1.9s
PSI Prapat 33.88 234 P P 08 46 12.9 +0.5
PSI Prapat 33.88 234 P P 08 46 12.9 +0.5
comp=Z,7.7nm,0.9s,baz=329,slow=3.9,SNR=5.8
PSI LR LR 08 58 48.8
comp=Z,73nm,20.8s,baz=196,slow=34
TAPN Taplejung 34.22 283 *e*P **P 08 46 16.2 +0.7**
comp=Z,118nm,1.0s
ODAN Odare 34.55 282 *e*P **P 08 46 18.9 +0.7**
comp=Z,157nm,0.9s
SKR Severo-Kuril's 34.85 34 *e*P **P 08 46 19.9 -0.3**
SKR pmax pmax
comp=Z,90nm,1.0s
RAMN Ramite 35.24 282 *e*P **P 08 46 24.7 +0.5**
comp=Z,98nm,1.1s
JIRN Jiri 35.55 283 *e*P **P 08 46 27.8 +0.9**
GUN Gumba 35.80 284 *e*P **P 08 46 29.6 +0.5**
comp=Z,151nm,0.9s
PKI Pulchoki 36.24 283 *e*P **P 08 46 32.9 0.0**
comp=Z,118nm,0.9s
PKIN Phulchoki 36.26 283 *e*P **P 08 46 32.6 -0.3**
KKN Kakani 36.34 284 *e*P **P 08 46 33.8 +0.2**
comp=Z,149nm,0.9s
WMQ Urumqi 36.36 311 P P 08 46 33.0 -0.4
WMQ pP **pP 08 46 43.0 -1.6**
WMQ sP **sP 08 46 47.0 -2.4**
WMQ PP **PP 08 47 57.0 +0.5**
WMQ PcP **PcP 08 48 57.0 -0.3**
WMQ S **S 08 52 11.0 -0.9**
WMQ sS **sS 08 52 27.0 -3.5**
WMQ ScP **ScP 08 52 40.0 -0.7**
WMQ SS **SnSn 08 54 36.0 -5.7**
WMQ pmax pmax
comp=Z,21nm,1.2s
WMQ pmax pmax
comp=Z,140nm,5.0s
WMQ LR LR
comp=N,340nm,15.0s
WMQ LR LR
comp=E,270nm,16.0s
WMQ LR LR
comp=Z,210nm,16.0s
DMN Daman 36.51 283 *e*P **P 08 46 35.2 +0.1**
comp=Z,146nm,1.0s
PETK Petropavlovsk- 37.09 32 P P 08 46 39.1 -0.3
PETK Petropavlovsk- 37.09 32 P P 08 46 39.1 -0.3
PETK Petropavlovsk- 37.09 32 P P 08 46 39.1 -0.3
comp=Z,3.7nm,0.5s,baz=188,slow=4.4,SNR=7.9
PET Petropavlovsk 37.51 33 *e*P P 08 46 46.4 +3.6
PET *e*S **S 08 52 29.6 +0.8**
DANN Dangsing 37.63 285 *e*P **P 08 46 45.3 +0.7**
comp=Z,132nm,0.7s
KOLN Koldanda 37.82 284 *e*P **P 08 46 46.6 +0.4**
comp=Z,86nm,0.8s
PYUN Piuthan 38.33 285 *e*P **P 08 46 51.0 +0.6**
comp=Z,247nm,0.9s
MK31 Makanchi Array 40.91 314 *i*P **P 08 47 10.3 -1.1**
MK31 pmax pmax
comp=Z,2.0nm,0.4s
MK31 Makanchi Array 40.91 314 *e*P **P 08 47 10.5 -0.9**
MK31 *e*PP **PP 08 48 46.0 -0.2**
MKAR Makanchi Array 40.91 314 P **P 08 47 10.4 -1.1**
MKAR Makanchi Array 40.91 314 P **P 08 47 10.3 -1.1**
MKAR Makanchi Array 40.91 314 P **P 08 47 10.3 -1.1**
comp=Z,3.4nm,0.4s,baz=99,slow=9.3,SNR=67
COEN Coen 42.06 154 *e*P **P 08 47 21.4 +0.3**
comp=Z,91nm,0.9s
SEY Seymchan 42.07 18 *e*P **P 08 47 20.9 +0.3**
ZAA0 Zalesovo Array 42.12 325 *e*P **P 08 47 19.3 -1.9**
ZALV Zalesovo Beam 42.12 325 P **P 08 47 19.5 -1.7**
ZALV Zalesovo Beam 42.12 325 P **P 08 47 19.4 -1.7**
ZALV Zalesovo Beam 42.12 325 P **P 08 47 19.4 -1.7**
comp=Z,27nm,0.8s,baz=111,slow=8.1,SNR=94
ZALV LR LR 09 07 01.2
comp=Z,103nm,18.0s,baz=248,slow=39
DDI Dehra Dun 42.45 289 *ex* x 08 47 14.0
FITZ Fitzroy Crossi 42.61 180 *e*P **P 08 47 24.6 -0.9**
comp=Z,8.0nm,0.8s
FITZ Fitzroy Crossi 42.61 180 P **P 08 47 24.5 -0.9**
comp=Z,6.4nm,0.8s,baz=20,slow=8.5,SNR=13
NVS Novosibirsk 43.35 325 ⇑ *i*P **P 08 47 28.3 -2.8**
NVS pmax pmax
comp=Z,19nm,1.6s
NVS pmax pmax
comp=N,2.0nm,0.6s
NVS pmax pmax
comp=E,9.0nm,1.2s
KSH Kashi 44.13 302 P **P 08 47 40.8 +2.9**
KSH *e*pP **pP 08 47 49.0 -0.3**
KSH *es*P **sP 08 47 53.4 -0.6**
KSH PP **PcP 08 49 24.8 +2.4**
KSH ScP **ScP 08 53 12.4 +1.2**
KSH PcS **PcS 08 53 16.4 +0.7**
KSH S **S 08 54 10.4 +2.2**
KSH pmax pmax
comp=Z,70nm,1.2s
KSH LR LR
comp=N,950nm,9.5s
KSH LR LR
comp=E,430nm,6.6s
KSH LR LR
comp=Z,480nm,15.3s
ULHL Ulahol 44.20 306 P **P 08 47 38.6 +0.2**
SNR=19
KURK Kurchatov 44.40 318 *c i*P **P 08 47 38.3 -1.3**
KURK pmax pmax
comp=Z,8.0nm,0.7s
KURK Kurchatov 44.40 318 *e*P **P 08 47 38.1 -1.5**
comp=Z,4.8nm,0.7s
KURBB Kurchatov Arra 44.43 318 LR LR 09 07 59.2
comp=Z,100nm,19.2s,baz=180,slow=38
TKM2 Tokmak 2 44.75 307 *i*P **P 08 47 43.1 +0.3**
TKM2 Tokmak 2 44.75 307 *e*P **P 08 47 42.9 0.0**
comp=Z,26nm,1.1s
TKM2 Tokmak 2 44.75 307 P **P 08 47 43.2 +0.3**
SNR=22
KZA Kyzart 44.91 305 P **P 08 47 45.1 +0.8**
SNR=16
KBK Karagaybulak 45.20 306 P **P 08 47 46.8 +0.4**
SNR=5.6
WRAB Tennant Creek 45.20 169 *e*P **P 08 47 46.4 +0.1**
WRAB pmax pmax
comp=Z,40nm,0.9s
WRAB Tennant Creek 45.20 169 *e*P **P 08 47 46.4 +0.1**
comp=Z,40nm,0.9s
WRA Warramunga Arr 45.21 169 P **P 08 47 46.1 -0.2**
WRA Warramunga Arr 45.21 169 P **P 08 47 46.1 -0.2**
comp=Z,6.0nm,0.8s,baz=348,slow=8.7,SNR=39
CHMS Chumysh 45.38 307 P **P 08 47 48.0 +0.4**
SNR=6.4
FRU Bishkek 45.46 306 *e*P **P 08 47 48.0 -0.2**
AAK Ala-Archa 45.52 306 *c i*P **P 08 47 48.8 -0.1**
AAK pmax pmax
comp=Z,13nm,0.8s
AAK Ala-Archa 45.52 306 *e*P **P 08 47 49.1 +0.2**
comp=Z,18nm,0.8s
AAK Ala-Archa 45.52 306 LR LR 09 10 05.0
comp=Z,234nm,18.1s,baz=88,slow=40
USP Ospenovka 45.59 307 P **P 08 47 49.7 +0.4**
SNR=5.2
EKS2 Erkin-Say 46.05 306 *e*P **P 08 47 53.1 0.0**
EKS2 pmax pmax
comp=Z,4.0nm,0.8s
EKS2 Erkin-Say 46.05 306 *e*P **P 08 47 53.0 0.0**
comp=Z,3.9nm,0.8s
AML Almayashu 46.07 305 P **P 08 47 54.1 +0.6**
SNR=17
POO Poona 48.45 273 *e*P P 08 48 08.0 -3.9
KK31 Karatay Array 48.48 306 *i*P **P 08 48 12.1 +0.3**
KK31 pmax pmax
comp=Z,2.0nm,0.5s
KKAR Karatay Array 48.48 306 *e*P **P 08 48 11.2 -0.6**
KKAR pmax pmax
comp=Z,2.0nm,0.6s
KKAR Karatay Array 48.48 306 *e*P **P 08 48 11.2 -0.6**
comp=Z,2.1nm,0.6s
AS31 Alice Springs 48.78 170 *e*P **P 08 48 14.5 +0.2**
ASAR Alice Springs 48.78 170 P **P 08 48 14.4 +0.2**
ASAR Alice Springs 48.78 170 P **P 08 48 14.4 +0.2**
comp=Z,1.4nm,0.5s,baz=352,slow=7.6,SNR=32
VOSK Vostochnaya 49.51 319 P **P 08 48 17.3 -2.2**
VOSK pmax pmax
comp=Z,4.0nm,0.8s
KBL Kabul 49.72 295 *e*P **P 08 48 21.9 +0.3**
KBL pmax pmax
comp=Z,49nm,0.9s
KBL Kabul 49.72 295 *e*P **P 08 48 21.9 +0.3**
comp=Z,49nm,0.9s
BILL Bilibino 49.75 19 *c i*P **P 08 48 21.4 +0.3**
BILL *e* 08 48 34.3
BILL pmax pmax
comp=Z,7.0nm,1.2s
BILL MLR MLR
comp=Z,300nm,21.0s
BILL Bilibino 49.75 19 *e*P **P 08 48 20.6 -0.5**
comp=Z,6.7nm,0.8s
BRVK Borovoye 49.99 319 *c i*P **P 08 48 22.4 -0.8**
BRVK pmax pmax
comp=Z,11nm,1.2s
BRVK Borovoye 49.99 319 *e*P **P 08 48 22.5 -0.6**
comp=Z,8.9nm,1.0s
GAMB Gambell 55.97 28 *e*P **P 08 49 07.3 +0.3**
comp=Z,12nm,1.3s
AB31 Akbulak array 56.05 314 P **P 08 49 07.5 -0.4**
AB31 pmax pmax
comp=Z,4.0nm,0.4s
ABKAR Akbulak array 56.05 314 *e*P **P 08 49 07.6 -0.3**
comp=Z,5.7nm,0.6s
SVE Sverdlovsk 56.09 323 *e*P **P 08 49 07.8 -0.2**
SVE pmax pmax
comp=Z,28nm,1.4s
ARU Arti 57.19 322 *c i*P **P 08 49 15.0 -0.8**
ARU 08 51 19.4
ARU S **S 08 57 09.5 +1.1**
ARU pmax pmax
comp=Z,19nm,1.2s
AKTO Aktyubinsk 57.31 315 LR LR 09 16 23.3
comp=Z,42nm,18.7s,baz=97,slow=39
TNA Tin City 57.93 27 *e*P **P 08 49 22.5 +1.7**
comp=Z,12nm,1.1s
ABKT Ailbek 58.12 301 P **P 08 49 23.0 +0.2**
comp=Z,292nm,0.9s,SNR=13
DZM Mont Dzumac 61.04 136 *e*LR LR 09 07 45.0
comp=Z,209nm,25.1s
DZM Mont Dzumac 61.04 136 LR LR 09 12 28.8
comp=Z,162nm,18.5s,baz=175,slow=32
KDAK Kodiak Island 64.99 36 *e*P **P 08 50 09.2 +0.5**
comp=Z,21nm,0.8s
COLD Coldfoot 65.12 25 *e*P **P 08 50 10.5 +1.1**
comp=Z,4.1nm,0.5s
ILAR Eielson Array 66.76 28 P **P 08 50 20.0 +0.1**
ILAR Eielson Array 66.76 28 P **P 08 50 20.0 +0.1**
comp=Z,1.5nm,0.8s,baz=287,slow=6.3,SNR=4.1
KLMR Klimovskoe 66.91 328 *e*P **P 08 50 18.5 -2.5**
KLMR pmax pmax
comp=Z,22nm,1.3s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TMCR	Tamitsa	67.04	332	eP	P	08 50 20.0	-1.7
TMCR				pmax	pmax		
	comp=Z,32nm,1.2s						
DGRG	David-gareji	67.14	306	P	P	08 50 23.5	+0.6
TBLG	Delisi	67.54	307	P	P	08 50 25.9	+0.5
VRHR	Novokhopersk	67.57	317	eP	P	08 50 24.0	-1.3
VRHR				pmax	pmax		
	comp=N,10.0nm,1.0s						
VRHR				pmax	pmax		
	comp=Z,20nm,1.0s						
VRHR				pmax	pmax		
	comp=E,6.0nm,0.5s						
KZR	Kazreti	67.86	307	P	P	08 50 27.6	+0.2
ZEI	Tsey	67.90	308	eP	P	08 50 27.0	-0.9
ZEI				pmax	pmax		
	comp=Z,21nm,0.8s						
GOR	Gori	67.94	307	P	P	08 50 28.8	+0.9
ONI	Oni	68.26	308	P	P	08 50 30.3	+0.3
APA	Apatity	68.28	336	⇓eP	P	08 50 32.0	+2.5
APA				MLR	MLR		
	comp=Z,1μm,15.0s						
KBZ	Khabaz	68.38	309	P	P	08 50 30.8	+0.3
KBZ	Khabaz	68.38	309	P	P	08 50 30.8	+0.3
KBZ	Khabaz	68.38	309	P	P	08 50 30.8	+0.3
	comp=Z,23nm,0.9s,baz=100,slow=3.7,SNR=53						
KIV	Kislovodsk	68.47	310	c iP	P	08 50 31.8	+0.5
KIV				pmax	pmax		
	comp=Z,48nm,0.9s						
KIV				MLR	MLR		
	comp=Z,60nm,18.0s						
KIV	Kislovodsk	68.47	310	eP	P	08 50 31.9	+0.6
	comp=Z,36nm,0.9s						
KIV	Kislovodsk	68.47	310	P	P	08 50 32.5	+1.2
	comp=Z,286nm,0.8s,SNR=5.8						
MIB	Mutribah	68.64	294	eP	P	08 50 31.8	-0.6
MIB				AMb	AMB	08 50 35.6	
	comp=Z,26nm,1.0s						
RDF	Al-Radifah	68.73	293	eP	P	08 50 32.5	-0.5
NAY	Al-Naaiem	68.89	293	eP	P	08 50 33.3	-0.7
NAY				AMb	AMB	08 50 37.1	
	comp=Z,14nm,1.2s						
VORD	Divnogorie	69.03	317	eP	P	08 50 33.3	-1.2
VORD				pmax	pmax		
	comp=N,2.0nm,0.6s						
VORD				pmax	pmax		
	comp=Z,6.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,2.0nm,0.3s						
VSR	Storozhevoye	69.05	318	eP	P	08 50 33.6	-1.0
VSR				pmax	pmax		
	comp=N,2.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,1.0nm,0.4s						
VSR				pmax	pmax		
	comp=Z,9.0nm,0.4s						
OBN	Obninsk	69.63	322	eP	P	08 50 37.6	-0.5
OBN				e		08 51 03.1	
OBN				pmax	pmax		
	comp=Z,27nm,1.2s						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s						
KEV	Kevo	69.99	339	eP	P	08 50 38.3	-1.7
KEV	Kevo	69.99	339	ep	P	08 50 38.3	-1.7
	comp=Z,0.6nm,0.4s						
JOF	Joensuu	70.25	331	eP	P	08 50 40.7	-1.1
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
JOF	Joensuu	70.25	331	ep	P	08 50 40.7	-1.1
	comp=Z,3.3nm,0.5s						
ARCES	ARCESS Array B	70.56	338	P	P	08 50 42.8	-0.8
ARCES	ARCESS Array B	70.56	338	P	P	08 50 42.7	-0.8
	comp=Z,4.5nm,0.9s,baz=66,slow=7.0,SNR=9.3						
SOC	Sochi	70.65	310	eP	P	08 50 43.9	-0.7
SOC				e*SP	sP	08 50 56.7	-4.5
SOC				ePPP	PPP	08 54 58.1	
SOC				eS	S	08 59 54.6	-1.2
SOC				pmax	pmax		
	comp=Z,11nm,0.6s						
SOC				MLR	MLR		
	comp=Z,289nm,22.0s						
ANN	Anapa	71.88	312	eP	P	08 50 50.6	-1.3
ANN				pmax	pmax		
	comp=Z,32nm,0.8s						
KAF	Kangasniemi	72.71	331	eP	P	08 50 54.7	-1.9
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KAF	Kangasniemi	72.71	331	ep	P	08 50 54.7	-1.9
	comp=Z,3.9nm,0.7s						
FINES	FINESS Array B	73.05	330	P	P	08 50 58.3	-0.3
FINES	FINESS Array B	73.05	330	P	P	08 50 58.3	-0.3
	comp=Z,4.9nm,0.7s,baz=54,slow=7.1,SNR=18						
FINES				LR	LR	09 27 08.0	
	comp=Z,123nm,18.9s,baz=15,slow=39						
MALT	Malatya	73.14	305	eP	P	08 51 00.8	+1.0
MALT				pmax	pmax		
	comp=Z,13nm,0.8s						
MALT	Malatya	73.14	305	eP	P	08 51 00.8	+1.0
	comp=Z,14nm,0.8s						
SIM	Simferopol’	74.07	312	eP	P	08 51 04.9	-0.1
SIM				e		08 51 19.0	
SIM				pmax	pmax		
	comp=Z,20nm,0.8s						
AKASG	Malin Array Be	75.20	319	P	P	08 51 10.6	-0.8
AKASG	Malin Array Be	75.20	319	P	P	08 51 10.6	-0.8
AKASG	Malin Array Be	75.20	319	P	P	08 51 10.6	-0.8
	comp=Z,5.4nm,0.6s,baz=56,slow=6.4,SNR=13						
AK01	Malin Array Si	75.22	319	eP	P	08 51 10.7	-0.8
KIEV	Kiev	75.22	319	eP	P	08 51 10.3	-1.2
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KIEV	Kiev	75.22	319	eP	P	08 51 10.3	-1.2
	comp=Z,4.2nm,0.6s						
AK02	Malin Array Si	75.23	319	eP	P	08 51 10.9	-0.7
BR131	Keskin Array S	76.18	307	eP	P	08 51 17.5	+0.1
	comp=Z,11nm,0.8s						
BRTR	Keskin Array B	76.18	307	P	P	08 51 17.5	+0.1
BRTR				pP	pP	08 51 31.1	+1.5
BRTR	Keskin Array B	76.18	307	P	P	08 51 17.5	+0.1
	comp=Z,10nm,1.0s,baz=94,slow=4.6,SNR=40						
BRTR				pP	pP	08 51 31.1	+1.5
	comp=Z,11nm,0.8s,baz=90,slow=4.9,SNR=16						
MMAI	Mount Meron Ar	77.25	301	LR	LR	09 31 09.6	
	comp=Z,44nm,19.9s,baz=255,slow=40						
SUW	Suwalki	77.34	324	eP	P	08 51 23.3	-0.1
SUW				pmax	pmax		
	comp=Z,62nm,0.9s						
SUW	Suwalki	77.34	324	eP	P	08 51 23.3	-0.1
	comp=Z,62nm,0.9s						
SUW	Suwalki	77.34	324	eP	P	08 51 23.5	0.0
RES	Resolute Bay	77.38	10	eP	P	08 51 23.3	0.0
	comp=Z,14nm,1.2s						
LVV	L’vov	78.62	320	eP	P	08 51 30.8	+0.1
BUR08	Bucovina Ar. S	78.82	317	eP	P	08 51 32.3	+0.3
KWP	Kalwaria Pacla	79.47	320	eP	P	08 51 36.1	+0.7
BEL	Belsk	79.59	322	eP	P	08 51 37.4	+1.5
NB2	NORSAR Subarra	79.64	333	P	P	08 51 35.5	-0.6
	comp=Z,0.6nm,0.7s,baz=61,slow=6.2						
NOA	NORSAR Array B	79.64	333	P	P	08 51 35.7	-0.4
NOA				pP	pP	08 51 49.4	+1.2
NOA	NORSAR Array B	79.64	333	P	P	08 51 35.7	-0.4
	comp=Z,4.2nm,0.8s,baz=56,slow=5.6,SNR=12						
NOA				pP	pP	08 51 49.4	+1.2
	comp=Z,4.7nm,0.8s,baz=56,slow=5.8,SNR=7.9						
NOA				LR	LR	09 31 04.3	
	comp=Z,94nm,18.2s,baz=90,slow=39						
KOLS	Kolonicke sedl	80.04	319	eP	P	08 51 38.4	0.0
KOLS	Kolonicke sedl	80.04	319	eP	P	08 51 38.4	0.0
UZH	Uzhgorod	80.16	319	eP	P	08 51 38.5	-0.5
UZH				e		08 51 56.1	
CRVS	Cervenica-Dubn	80.53	320	eP	P	08 51 40.7	-0.4
CRVS				pmax	pmax		
	comp=Z,15nm,1.8s						
CRVS	Cervenica-Dubn	80.53	320	eP	P	08 51 40.7	-0.4
YKW3	Yellowknife Ar	80.72	24	eP	P	08 51 42.7	+1.0
	comp=Z,0.1nm,0.8s						
YKA	Yellowknife Ar	80.77	24	P	P	08 51 42.5	+0.4
YKA				pP	pP	08 51 56.0	+1.7
YKA	Yellowknife Ar	80.77	24	P	P	08 51 42.4	+0.4
	comp=Z,2.9nm,0.7s,baz=302,slow=5.3,SNR=27						
YKA				pP	pP	08 51 55.9	+1.7
	comp=Z,2.7nm,0.6s,baz=303,slow=5.4,SNR=9.3						
OJC	Ojcow	80.89	321	eP	P	08 51 43.4	+0.4
OJC	Ojcow	80.89	321	eP	P	08 51 43.4	+0.4
BSD	Bornholm Skovb	81.09	327	iP	P	08 51 43.9	0.0
	comp=Z,8.4nm,0.9s						
OKC	Ostrava-Krasne	82.01	321	eP	P	08 51 49.2	+0.3
OKC	Ostrava-Krasne	82.01	321	eP	P	08 51 49.2	+0.3
VYHS	Vyhne	82.26	320	eP	P	08 51 50.8	+0.5
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
VYHS	Vyhne	82.26	320	eP	P	08 51 50.8	+0.5
SCO	Scoresbysund	82.30	350	iP	P	08 51 57.2	+7.2
	comp=Z,6.1nm,0.9s						
SUMG	Summit	82.32	355	eP	P	08 51 47.9	-2.7
SUMG				pmax	pmax		
	comp=Z,20nm,1.0s						
SUMG	Summit	82.32	355	eP	P	08 51 47.9	-2.7
	comp=Z,20nm,1.0s						
SUMG	Summit	82.32	355	iP	P	08 52 05.3	+15
	comp=Z,12nm,0.8s						
KSP	Ksiaz	82.54	323	eP	P	08 51 52.2	+0.5
KSP	Ksiaz	82.54	323	eP	P	08 51 49.4	-2.3
DPC	Dobruska-Polom	82.78	322	eP	P	08 51 53.9	+0.9
DPC	Dobruska-Polom	82.78	322	eP	P	08 51 53.9	+0.9
TREC	Trest	83.78	322	eP	P	08 51 53.0	-5.1
CLL	Collm	84.07	324	⇓iP	P	08 52 00.0	+0.5
CLL				e		08 52 17.0	
CLL				pmax	pmax		
	comp=Z,17nm,1.2s						
CLL	Collm	84.07	324	⇓iP	P	08 52 00.0	+0.5
	comp=Z,17nm,1.2s						
CLL				esP	sP	08 52 17.0	+0.6
CLL				LmV		09 32 00.0	
	comp=Z,100nm,20.9s						
CONA	Conrad Observa	84.27	321	⇓iPcP	P	08 52 01.6	+0.9
	comp=Z,10nm,1.4s						
CONA	Conrad Observa	84.27	321	⇓iP	P	08 52 01.6	+0.9
	comp=Z,10nm,1.4s						
GERES	GERESS Array B	85.02	322	P	P	08 52 04.4	-0.1
GERES	GERESS Array B	85.02	322	P	P	08 52 04.4	-0.1
	comp=Z,1.3nm,0.7s,baz=49,slow=6.7,SNR=7.4						
GERES				LR	LR	09 33 20.1	
	comp=Z,109nm,21.3s,baz=87,slow=38						
CDF	Champ du Feu	88.77	324	eP	P	08 52 22.8	+0.1
CDF	Champ du Feu	88.77	324	eP	P	08 52 22.8	+0.1
CDF	Champ du Feu	88.77	324	eP	P	08 52 22.8	+0.1
A14A	Double T Ranch	89.61	34	⇓P	P	08 52 27.9	+1.1
	baz=89						
C13A	Hot Springs	89.81	36	⇑P	P	08 52 28.8	+1.2
	baz=90						
A15A	Johnson Ranch,	89.96	34	⇓P	P	08 52 29.4	+1.1
	baz=90						
B14A	Marquette Ranc	90.07	35	⇑P	P	08 52 30.2	+1.3
	baz=90						
C14A	Swan Lake	90.19	36	⇑P	P	08 52 30.8	+1.4
	baz=90						
B15A	Bradely Ranch,	90.47	35	⇑P	P	08 52 31.6	+0.9
	baz=90						
A16A	West Butte Ran	90.56	34	⇑P	P	08 52 32.0	+0.9
	baz=90						
F12A	Elk City	90.61	38	⇓P	P	08 52 32.3	+0.9
	baz=90						
SLMT	Seeley Lake	90.65	36	eP	P	08 52 32.1	+0.4
	comp=Z,5.3nm,0.8s						
D14A	Greenough	90.75	36	⇑P	P	08 52 32.5	+0.5
	baz=90						
C15A	Salmond Ranch,	90.79	35	⇑P	P	08 52 33.2	+0.9
	baz=91						
LPL	La Plagne	90.82	322	eP	P	08 52 32.7	+0.2
	comp=Z,15nm,0.7s						
LPL	La Plagne	90.82	322	eP	P	08 52 32.7	+0.2
LPL				pmax	pmax		
	comp=Z,15nm,0.7s						
LPL	La Plagne	90.82	322	eP	P	08 52 32.7	+0.2
	comp=Z,15nm,0.7s						
LPG	La Plagne	90.82	322	eP	P	08 52 32.9	+0.3
	comp=Z,22nm,0.8s						
LPG	La Plagne	90.82	322	eP	P	08 52 32.9	+0.3
LPG				pmax	pmax		
	comp=Z,22nm,0.8s						
LPG	La Plagne	90.82	322	eP	P	08 52 32.9	+0.3
	comp=Z,22nm,0.8s						
FFC	Flin Flon	90.86	25	iP	P	08 52 33.8	+1.5
FFC	Flin Flon	90.86	25	eP	P	08 52 32.4	+0.2
	comp=Z,20nm,1.4s						
G12A	Big Creek, Yel	90.95	38	⇓P	P	08 52 32.9	-0.2
	baz=91						
A17A	Triple J Farms	91.01	33	⇑P	P	08 52 33.9	+0.7
	baz=91						
F13A	Darby	91.10	37	⇑P	P	08 52 33.8	+0.1
	baz=91						
BNI	Bardonecchia	91.13	322	eP	P	08 52 33.4	-0.5
BNI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BNI	Bardonecchia	91.13	322	eP	P	08 52 33.4	-0.5
	comp=Z,10nm,0.9s						
MBDF	Montbardon	91.27	321	eP	P	08 52 33.9	-0.7
	comp=Z,11nm,0.7s						
MBDF	Montbardon	91.27	321	eP	P	08 52 33.9	-0.7
MBDF				pmax	pmax		
	comp=Z,11nm,0.7s						
MBDF	Montbardon	91.27	321	eP	P	08 52 33.9	-0.7
	comp=Z,11nm,0.7s						
B17A	L&G Farms, Che	91.39	34	⇓P	P	08 52 35.2	+0.2
	baz=91						
SBF	Sospel	91.41	320	eP	P	08 52 34.7	-0.4
	comp=Z,32nm,0.7s						
SBF	Sospel	91.41	320	eP	P	08 52 34.7	-0.4
SBF	Sospel	91.41	320	eP	P	08 52 34.7	-0.4
	comp=Z,32nm,0.7s						
A18A	Metzger Ranch,	91.45	33	⇑P	P	08 52 36.1	+0.9
	baz=91						
CASY	Casey	91.50	186	eP	P	08 52 34.4	-0.2
	comp=Z,16nm,0.9s						
H12A	Diamond D Ranc	91.57	39	⇓P	P	08 52 36.8	+0.9
	baz=91						
F14A	Wisdom	91.61	37	⇓P	P	08 52 37.3	+1.1
	baz=91						
SMF	Signal de Mont	91.69	324	eP	P	08 52 36.5	+0.2
SMF	Signal de Mont	91.69	324	eP	P	08 52 36.5	+0.2
SMF	Signal de Mont	91.69	324	eP	P	08 52 36.5	+0.2
MFID	Camas Ranch	91.69	40	eP	P	08 52 38.2	+1.7
	comp=Z,4.4nm,1.1s						
MFID	Camas Ranch	91.69	40	⇑P	P	08 52 37.2	+0.7
	baz=92						
D16A	Dana Ranch, Ca	91.81	35	⇑P	P	08 52 37.3	+0.3
	baz=92						
C17A	Wharram Farm,	91.83	34	⇑P	P	08 52 37.5	+0.5
	baz=92						
H13A	Challis	91.90	38	⇓P	P	08 52 37.8	+0.3
	baz=92						
FRF	La Foret Royal	92.05	321	eP	P	08 52 37.7	-0.3
	comp=Z,37nm,1.0s						
FRF	La Foret Royal	92.05	321	eP	P	08 52 37.7	-0.3
FRF	La Foret Royal	92.05	321	eP	P	08 52 37.7	-0.3
	comp=Z,37nm,1.0s						
E16A	East Helena	92.07	36	⇓P	P	08 52 39.0	+0.8
	baz=92						
F15A	Butte	92.07	37	⇓P	P	08 52 39.1	+0.7
	baz=92						
EGMT	Eagleton	92.09	34	⇑P	P	08 52 39.4	+1.2
	baz=92						
D17A	Six Diamond Ra	92.19	35	⇓P	P	08 52 39.8	+1.0
	baz=92						
LMR	La Mourre	92.27	320	eP	P	08 52 38.9	-0.1
	comp=Z,62nm,1.4s						
LMR	La Mourre	92.27	320	eP	P	08 52 38.9	-0.1
LMR	La Mourre	92.27	320	eP	P	08 52 38.9	-0.1
	comp=Z,62nm,1.4s						
DLMT	Dillon	92.32	37	eP	P	08 52 40.7	+1.3
	comp=Z,4.6nm,0.9s						
VIVF	Saint-Julien-l	92.37	322	eP	P	08 52 39.7	+0.2
VIVF	Saint-Julien-l	92.37	322	eP	P	08 52 39.7	+0.2
VIVF	Saint-Julien-l	92.37	322	eP	P	08 52 39.7	+0.2
I13A	Wildhorse Cree	92.38	39	⇓P	P	08 52 41.2	+1.4
	baz=92						
A20A	Cobblestone Ra	92.42	32	⇓P	P	08 52 40.5	+0.8
	baz=92						
HLID	Hailey	92.42	39	eP	P	08 52 41.7	+1.8
	comp=Z,4.4nm,0.8s						
HLID	Hailey	92.42	39	⇑P	P	08 52 40.9	+0.9
	baz=92						
G15A	Dillon	92.50	37	⇑P	P	08 52 41.1	+0.8
	baz=92						
PPT	Papeete	92.51	108	LR	LR	09 26 02.0	
	comp=Z,90nm,21.1s,baz=344,slow=30						
PPT2	Papeete2	92.52	108	eLR	LR	09 22 14.1	
	comp=Z,167nm,32.5s						
E17A	Martinsdale	92.55	35	⇑P	P	08 52 41.2	+0.7
	baz=92						
J13A	Cove Ranch, Pi	92.66	39	⇑P	P	08 52 42.9	+1.9
	baz=92						
I14A	Mackay	92.74	38	⇓P	P	08 52 42.6	+1.1
	baz=92						
E18A	Harlowton	92.97	35	⇓P	P	08 52 43.8	+1.4
	baz=93						
NVAR	Mina Array Bea	93.10	45	P	P	08 52 44.3	+1.0
NVAR				pP	pP	08 52 57.8	+2.2
NVAR	Mina Array Bea	93.10	45	P	P	08 52 44.3	+1.0
	comp=Z,1.3nm,1.0s,baz=264,slow=5.3,SNR=5.1						
NVAR				pP	pP	08 52 57.8	+2.2
	comp=Z,2.3nm,1.0s,baz=270,slow=5.2,SNR=7.6						
LKWY	Lake	94.03	37	eP	P	08 52 45.5	-1.9
LKWY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LKWY	Lake	94.03	37	eP	P	08 52 45.5	-1.9
	comp=Z,4.5nm,1.0s						
PDAR	Pinedale Array	95.67	38	pP	pP	08 53 09.9	+2.6
PDAR	Pinedale Array	95.67	38	pP	pP	08 53 09.9	+2.6
	comp=Z,1.0nm,1.0s,baz=285,slow=4.3,SNR=3.8						
ULM	Lac du Bonnet	96.69	25	LR	LR	09 40 57.1	
	comp=Z,50nm,18.1s,baz=13,slow=38						
TORD	Torodi Ar. Bea	113.72	298	PP	PP	08 58 52.0	-8.6
TORD	Torodi Ar. Bea	113.72	298	PP	PP	08 58 52.0	-8.6
	comp=Z,0.9nm,0.8s,baz=51,slow=4.8,SNR=5.9						
VNA2	Neumayer--Watz	126.73	197	ePKP	PKPdf	08 58 45.9	+15
VNA3	Neumayer Olymp	127.14	197	ePKP	PKPdf	08 58 45.8	+14
OTAV	Otavalo	145.81	47	ePKPdf	PKPab	08 59 10.2	+0.4

ISCJB **02** *08:54:13.3±0.2, 47.212N±0.010×6.42E±0.01, h7km±2km, Error ellipse: s-maj=1.8km s-min=1.5km az=41.4*

CSEM **02** *08:54:14.7±0.1, 47.21N×6.45E, h12km, ML3.2/16, Error ellipse: s-maj=1.5km s-min=1.2km az=128.0*

ZUR **02** *08:54:15.1, 47.23N×6.47E, h7km±1km, ML2.7/13*

LDG **02** *08:54:15.6±0.0, 47.20N×6.45E, h10km, Md3.3/3, Ml3.1/35, Error ellipse: s-maj=0.9km s-min=0.7km az=117.0*

STR **02** *08:54:15.9±0.2, 47.24N×6.50E, h10km, Ml2.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

BGR **02** *08:54:16.2±0.7, 47.24N×6.50E, h10km, ML2.6/8, Error ellipse: s-maj=6.7km s-min=4.4km az=36.0*

GEN **02** *08:54:19.5, 46.83N×6.30E, h0km, ML2.3*

ISC 02 08:54:14.6±0.3, 47.219N±0.009×6.438E±0.009, h17km±2km, n222, σ1.44/334, 16C-19D, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOMF	Lomont	0.30	63	⇑iP*	Pg	08 54 21.5	+0.4
LOMF				S*	Sg	08 54 25.7	+0.2
LOMF	Lomont	0.30	63	Pg	Pg	08 54 21.4	+0.3
LOMF				Sg	Sg	08 54 25.2	-0.3
LOMF	Lomont	0.30	63	Pg	Pg	08 54 21.4	+0.3
LOMF				Sg	Sg	08 54 25.2	-0.3
LOMF				Sb	Sb	08 54 25.7	-0.6
BOURR	Bourrignon	0.57	72	⇑iPg	Pb	08 54 26.1	0.0
	321nm,0.3s						
BOURR	Bourrignon	0.57	72	⇑iPg	Pb	08 54 26.2	+0.1
	321nm,2.0s						
TORNY	Torny/Romont	0.57	141	⇓iPg	Pg	08 54 26.4	+0.4
	1μm,0.2s						
TORNY				eSg	Sg	08 54 34.0	+0.4
	1μm,0.2s						
TORNY	Torny/Romont	0.57	141	⇓iPg	Pg	08 54 26.4	+0.4
	1μm,2.0s						
CABF	La Chapelle	0.65	202	ePg	Pg	08 54 28.2	+0.7
CABF	La Chapelle	0.65	202	ePn	Pb	08 54 29.4	+1.8
	SNR=1.0						
CABF				eSg	Sg	08 54 35.9	-0.3
	SNR=1.0						
CABF				eSn	Sb	08 54 39.0	+2.6
	140nm,0.3s						
CABF	La Chapelle	0.65	202	ePg	Pg	08 54 28.2	+0.7
CABF	La Chapelle	0.65	202	ePn	Pb	08 54 29.4	+1.8
	SNR=1.0						
CABF				eSg	Sg	08 54 35.9	-0.3
	SNR=1.0						
CABF				eSn	Sb	08 54 39.0	+2.6
	70nm,0.3s						
HINF	Hinteralfeld	0.66	25	ePg	Pb	08 54 28.0	+0.3
HINF	Hinteralfeld	0.66	25	ePn	Pn	08 54 29.5	+0.3
	SNR=1.0						
HINF				eSg	Sb	08 54 36.5	-0.1
	310nm,0.2s,SNR=1.0						
HINF				eSn	Sn	08 54 39.2	0.0
HINF	Hinteralfeld	0.66	25	ePg	Pb	08 54 28.0	+0.3
HINF	Hinteralfeld	0.66	25	ePn	Pn	08 54 29.5	+0.3
	SNR=1.0						
HINF				eSg	Sb	08 54 36.5	-0.1
	155nm,0.2s,SNR=1.0						
HINF				eSn	Sn	08 54 39.2	0.0
GIMEL	St. Georges /	0.69	190	⇓iPg	Pg	08 54 29.0	+0.7
	892nm,0.2s						
GIMEL				eSg	Sg	08 54 38.3	+0.8
	892nm,0.2s						
GIMEL	St. Georges /	0.69	190	⇓iPg	Pg	08 54 29.0	+0.7
	892nm,2.0s						
BBS	Basel-Blauen	0.77	71	P*	Pb	08 54 30.0	+0.5
BBS	Basel-Blauen	0.77	71	Pb	Pb	08 54 30.0	+0.5
BBS	Basel-Blauen	0.77	71	Pg	Pb	08 54 30.5	+1.0
BBS				Sg	Sb	08 54 40.3	+0.6
HAU	Haudompre	0.79	356	ePg	Pb	08 54 30.7	+0.8
	SNR=1.0						
HAU	Haudompre	0.79	356	ePn	Pn	08 54 31.7	+0.7
	SNR=1.0						
HAU				eSg	Sb	08 54 41.4	+1.1
	SNR=1.0						
HAU				eSn	Sn	08 54 43.1	+0.7
	500nm,0.3s						
HAU	Haudompre	0.79	356	ePg	Pb	08 54 30.7	+0.8
	SNR=1.0						
HAU	Haudompre	0.79	356	ePn	Pn	08 54 31.7	+0.7
	SNR=1.0						
HAU				eSg	Sb	08 54 41.4	+1.1
	SNR=1.0						
HAU				eSn	Sn	08 54 43.1	+0.7
	250nm,0.3s						
MOF	Molkenrain	0.79	36	P*	Pb	08 54 30.8	+0.9
MOF				S*	Sb	08 54 41.5	+1.2
MOF	Molkenrain	0.79	36	Pg	Pb	08 54 30.8	+0.9
MOF				Sg	Sb	08 54 41.4	+1.1
MOF	Molkenrain	0.79	36	Pb	Pb	08 54 30.8	+0.9
MOF				Sg	Sb	08 54 41.4	+1.1
BALST	Balsthal	0.86	82	ePg	Pb	08 54 31.6	+0.4
BALST				eSg	Sb	08 54 42.8	+0.3
BALST	Balsthal	0.86	82	⇑iP	Pb	08 54 31.5	+0.3
	607nm,0.5s						
BALST	Balsthal	0.86	82	⇑iPg	Pb	08 54 31.6	+0.4
	607nm,2.0s						
BALST				Sg	Sb	08 54 42.8	+0.3
AIGLE	Aigle	0.95	158	⇓iP	Pg	08 54 33.4	+0.4
	250nm,0.5s						
AIGLE	Aigle	0.95	158	⇓iPg	Pg	08 54 33.5	+0.4
	250nm,2.0s						
WIMIS	Wimmis	0.98	124	eP	Pb	08 54 33.9	+0.7
	468nm,0.1s						
WIMIS	Wimmis	0.98	124	⇓ePg	Pb	08 54 33.8	+0.6
	468nm,2.0s						
SENIN	Lac Senin/Sane	1.04	145	⇓iPg	Pg	08 54 34.6	-0.2
	384nm,2.0s						
THEF	They Montfort	1.05	343	P	Pn	08 54 36.0	+1.4
THEF				Sg	Sn	08 54 50.5	+1.6
THEF	They Montfort	1.05	343	Pg	Pn	08 54 35.9	+1.4
THEF				Sg	Sn	08 54 50.4	+1.6
THEF	They Montfort	1.05	343	Pg	Pn	08 54 35.9	+1.4
THEF				Sg	Sn	08 54 50.4	+1.6
GRYON	Gryon	1.07	154	⇓iP	Pg	08 54 35.4	0.0
	40nm,0.3s						
GRYON	Gryon	1.07	154	⇓iPg	Pg	08 54 35.5	0.0
	14nm,0.2s						
ECH	Echery	1.11	26	P	Pg	08 54 35.5	-0.6
ECH				Sg	Sn	08 54 51.4	+1.1
ECH	Echery	1.11	26	Pg	Pg	08 54 35.6	-0.6
ECH				Sg	Sn	08 54 51.2	+0.9
ECH	Echery	1.11	26	P	Pg	08 54 35.5	-0.6
ECH				Sg	Sn	08 54 51.2	+0.9
SALAN	Lac Salanfe	1.14	161	⇓eP	Pb	08 54 36.5	+0.6
	54nm,0.2s						
SALAN	Lac Salanfe	1.14	161	⇓iPg	Pb	08 54 37.0	+1.1
	35nm,0.2s						
LKBD	Leukerbad	1.17	135	eP	Pn	08 54 37.5	+1.2
	116nm,0.2s						
LKBD	Leukerbad	1.17	135	⇓iPg	Pn	08 54 37.4	+1.2
	37nm,0.2s						
SULZ	Cheisacher	1.18	74	ePn	Pb	08 54 36.4	0.0
SULZ				ePg	Pn	08 54 37.5	+1.2
SULZ				eSg	Sn	08 54 53.2	+1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SULZ	Cheisacher	1.18	74	⇑iPn	Pb	08 54 36.8	+0.3
	509nm,0.7s						
SULZ	Cheisacher	1.18	74	⇑iPn	Pb	08 54 36.5	0.0
	509nm,2.0s						
LKBD2	Leukerbad 2	1.18	135	⇓iPg	Pg	08 54 37.9	+0.4
	49nm,0.2s						
LIBD	Limburg	1.22	40	Pg	Pg	08 54 39.0	+0.8
LIBD	Limburg	1.22	40	Pg	Pg	08 54 38.9	+0.7
KIZ	Kirchzarten	1.24	53	⇑iP	Pb	08 54 36.9	-0.7
KIZ				Pg	Pg	08 54 38.6	0.0
KIZ				Sg	Sn	08 54 54.6	+1.0
KIZ	Kirchzarten	1.24	53	P	Pb	08 54 36.9	-0.7
FELD	Feldberg im Sc	1.25	58	⇑iP	Pb	08 54 37.2	-0.6
FELD				Pg	Pg	08 54 38.7	0.0
FELD				Sg	Sn	08 54 54.8	+1.0
FELD	Feldberg im Sc	1.25	58	P	Pb	08 54 37.2	-0.6
CDF	Champ du Feu	1.32	25	ePn	Pn	08 54 38.3	0.0
	SNR=1.0						
CDF	Champ du Feu	1.32	25	ePg	Pg	08 54 40.5	+0.4
	SNR=1.0						
CDF				eSn	Sb	08 54 55.7	+0.1
	SNR=1.0						
CDF				eSg	Sg	08 54 57.8	+0.4
	138nm,0.3s,SNR=1.0						
CDF	Champ du Feu	1.32	25	ePn	Pn	08 54 38.3	0.0
	SNR=1.0						
CDF	Champ du Feu	1.32	25	ePg	Pg	08 54 40.5	+0.4
	SNR=1.0						
CDF				eSn	Sb	08 54 55.7	+0.1
	SNR=1.0						
CDF				eSg	Sg	08 54 57.8	+0.4
	69nm,0.3s,SNR=1.0						
DIX	Grande Dixence	1.32	149	⇓iP	Pn	08 54 37.3	-1.2
	183nm,0.4s						
DIX	Grande Dixence	1.32	149	⇓iPb	Pb	08 54 40.2	+1.1
	183nm,2.0s						
SFTF	Sexfontaines	1.37	317	ePn	Pn	08 54 39.6	+0.7
	baz=137						
SFTF	Sexfontaines	1.37	317	ePg	Pg	08 54 42.0	+1.0
	baz=142						
SFTF				eSg	Sg	08 54 59.4	+0.6
	48nm,0.2s,baz=133						
SFTF	Sexfontaines	1.37	317	ePn	Pn	08 54 39.6	+0.7
	baz=137						
SFTF	Sexfontaines	1.37	317	ePg	Pg	08 54 42.0	+1.0
	baz=142						
SFTF				eSg	Sg	08 54 59.4	+0.6
	24nm,0.2s,baz=133						
BNALP	Bannalp	1.40	104	⇑iPn	Pn	08 54 40.1	+0.6
	254nm,0.5s						
BNALP	Bannalp	1.40	104	⇑iPn	Pn	08 54 40.5	+1.0
	254nm,2.0s						
PAGF	Fort de Pagny	1.42	341	eP	Pg	08 54 41.9	-0.1
	baz=168						
PAGF	Fort de Pagny	1.42	341	ePg	Pg	08 54 43.1	+1.1
	baz=163						
PAGF				eSn	Sn	08 54 58.1	+0.2
PAGF				eSg	Sg	08 55 01.3	+0.8
	10nm,0.2s						
PAGF	Fort de Pagny	1.42	341	eP	Pg	08 54 41.9	-0.1
	baz=168						
PAGF	Fort de Pagny	1.42	341	ePg	Pg	08 54 43.1	+1.1
	baz=163						
PAGF				eSn	Sn	08 54 58.1	+0.2
PAGF				eSg	Sg	08 55 01.3	+0.8
	5.1nm,0.2s						
FLACH	Flaach	1.49	76	⇓ePg	Pn	08 54 40.6	+0.1
	66nm,0.2s						
SLE	Schleitheim	1.50	68	ePn	Pn	08 54 40.5	-0.2
SLE				ePg	Pg	08 54 43.3	-0.1
SLE				eSg	Sg	08 55 02.2	-0.7
SLE	Schleitheim	1.50	68	⇑iPn	Pn	08 54 40.5	-0.2
	437nm,0.3s						
SLE	Schleitheim	1.50	68	Pn	Pn	08 54 40.5	-0.2
MMK	Mattmark	1.57	137	⇑iPb	Pg	08 54 47.1	+2.2
	103nm,2.0s						
TRULL	Truellikon	1.58	73	⇓ePb	Pg	08 54 45.7	+0.6
	49nm,0.2s						
MEZF	Maizieres J'vi	1.59	324	eP	Pb	08 54 44.5	+1.1
	baz=140,SNR=1.0						
MEZF	Maizieres J'vi	1.59	324	ePg	Pg	08 54 45.9	+0.8
	baz=144						
MEZF				eSn	Sn	08 55 02.1	+0.1
MEZF				eSg	Sg	08 55 06.4	+0.6
	48nm,0.3s,SNR=1.0						
MEZF	Maizieres J'vi	1.59	324	eP	Pb	08 54 44.5	+1.1
	baz=140,SNR=1.0						
MEZF	Maizieres J'vi	1.59	324	ePg	Pg	08 54 45.9	+0.8
	baz=144						
MEZF				eSn	Sn	08 55 02.1	+0.1
MEZF				eSg	Sg	08 55 06.4	+0.6
	24nm,0.3s,SNR=1.0						
WILA	Wila	1.69	82	ePg	Pg	08 54 47.0	-0.1
WILA				eSg	Sg	08 55 08.7	-0.4
WILA	Wila	1.69	82	Pg	Pg	08 54 47.0	-0.1
WILA				Sg	Sg	08 55 08.7	-0.4
BFO	Black Forest	1.69	48	⇑P	Pn	08 54 43.0	-0.4
BFO				Pg	Pg	08 54 47.1	0.0
BFO				Sg	Sg	08 55 08.9	-0.2
BFO	Black Forest	1.69	48	P	Pn	08 54 43.0	-0.4
LPL	La Plagne	1.71	173	eP	Pn	08 54 45.4	+1.5
	SNR=1.0						
LPL	La Plagne	1.71	173	ePg	Pg	08 54 48.1	+0.5
LPL				eSg	Sb	08 55 09.1	+2.0
	21nm,0.3s,SNR=1.0						
LPL	La Plagne	1.71	173	eP	Pn	08 54 45.4	+1.5
	SNR=1.0						
LPL	La Plagne	1.71	173	ePg	Pg	08 54 48.1	+0.5
LPL				eSg	Sb	08 55 09.1	+2.0
	10nm,0.3s,SNR=1.0						
LPG	La Plagne	1.74	173	eP	Pn	08 54 45.8	+1.6
	SNR=1.0						
LPG	La Plagne	1.74	173	ePg	Pb	08 54 47.9	+1.8
LPG				eSn	Sn	08 55 04.9	-1.1
LPG				eSg	Sb	08 55 09.9	+2.2
	22nm,0.3s,SNR=1.0						
LPG	La Plagne	1.74	173	eP	Pn	08 54 45.8	+1.6
	SNR=1.0						
LPG	La Plagne	1.74	173	ePg	Pb	08 54 47.9	+1.8
LPG				eSn	Sn	08 55 04.9	-1.1
LPG				eSg	Sb	08 55 09.9	+2.2
	11nm,0.3s,SNR=1.0						
LOR	Lormes	1.76	273	ePn	Pn	08 54 44.8	+0.5
	baz=97,SNR=1.0						
LOR	Lormes	1.76	273	ePg	Pg	08 54 48.9	+0.5
	baz=95,SNR=1.0						
LOR				eSg	Sb	08 55 11.2	+3.1
	34nm,0.2s,SNR=1.0						
LOR	Lormes	1.76	273	ePn	Pn	08 54 44.8	+0.5
	baz=97,SNR=1.0						
LOR	Lormes	1.76	273	ePg	Pg	08 54 48.9	+0.5
	baz=95,SNR=1.0						
LOR				eSg	Sb	08 55 11.2	+3.1
	17nm,0.2s,SNR=1.0						
SISB	Singen-Schiene	1.78	74	Sg	Sg	08 55 11.3	-0.5
SISB	Singen-Schiene	1.78	74	Sg	Sg	08 55 11.3	-0.5
SPAK	Spaichingen-Ko	1.82	60	Pg	Pg	08 54 49.5	0.0
SPAK				Sg	Sg	08 55 13.1	-0.1
SPAK	Spaichingen-Ko	1.82	60	Pg	Pg	08 54 49.3	-0.2
SPAK				Sg	Sg	08 55 13.1	-0.1
LSD	Lago del Serru	1.82	164	P	Pn	08 54 47.2	+1.8
SMF	Signal de Mont	1.87	253	ePn	Pn	08 54 46.5	+0.7
	SNR=1.0						
SMF	Signal de Mont	1.87	253	ePg	Pb	08 54 50.3	+2.0
SMF				eSn	Sn	08 55 08.4	-0.6
SMF				eSg	Sb	08 55 14.6	+3.3
	31nm,0.2s,SNR=1.0						
SMF	Signal de Mont	1.87	253	ePn	Pn	08 54 46.5	+0.7
	SNR=1.0						
SMF	Signal de Mont	1.87	253	ePg	Pb	08 54 50.3	+2.0
SMF				eSn	Sn	08 55 08.4	-0.6
SMF				eSg	Sb	08 55 14.6	+3.3
	16nm,0.2s,SNR=1.0						
TRAV	Traversella	1.93	152	P	Pn	08 54 48.3	+1.6
LANF	Langenberg	1.99	27	Sg	Sg	08 55 18.5	0.0
LANF	Langenberg	1.99	27	Sg	Sg	08 55 18.5	0.0
GUT	Gutenstein	2.00	64	P	Pn	08 54 47.2	-0.4
GUT				S	Sn	08 55 12.5	+0.2
GUT				Sg	Sg	08 55 18.3	-0.7
GUT	Gutenstein	2.00	64	P	Pn	08 54 47.2	-0.4
GUT				S	Sn	08 55 12.5	+0.2
GUT				Sg	Sg	08 55 18.3	-0.7
SSF	Saint Saulge	2.01	267	eP	Pn	08 54 49.7	+2.0
	SNR=1.0						
SSF	Saint Saulge	2.01	267	ePg	Pg	08 54 53.4	+0.2
SSF				eSn	Sn	08 55 11.8	-0.6
	SNR=1.0						
SSF				eSg	Sb	08 55 18.7	+3.4
	18nm,0.2s,SNR=1.0						
SSF	Saint Saulge	2.01	267	eP	Pn	08 54 49.7	+2.0
	SNR=1.0						
SSF	Saint Saulge	2.01	267	ePg	Pg	08 54 53.4	+0.2
SSF				eSn	Sn	08 55 11.8	-0.6
	SNR=1.0						
SSF				eSg	Sb	08 55 18.7	+3.4
	8.9nm,0.2s,SNR=1.0						
PLONS	Plons/SG	2.02	94	ePn	Pn	08 54 49.1	+1.3
PLONS				ePg	Pg	08 54 52.6	-0.7
PLONS				eSg	Sg	08 55 18.7	-0.8
PLONS	Plons/SG	2.02	94	Pn	Pn	08 54 49.2	+1.3
LBG	Lerchenberg	2.15	47	Sg	Sg	08 55 22.7	-0.9
LBG	Lerchenberg	2.15	47	Sg	Sg	08 55 22.7	-0.9
RSP	Reno Superiore	2.15	164	P	Pn	08 54 50.9	+1.2
AVF	Avril sur Loir	2.15	260	ePn	Pn	08 54 50.4	+0.7
AVF	Avril sur Loir	2.15	260	ePg	Pb	08 54 55.5	+2.4
	SNR=1.0						
AVF				eSn	Sn	08 55 15.3	-0.7
AVF				eSg	Sb	08 55 23.4	+3.9
	11nm,0.2s,SNR=1.0						
AVF	Avril sur Loir	2.15	260	ePn	Pn	08 54 50.4	+0.7
AVF	Avril sur Loir	2.15	260	ePg	Pb	08 54 55.5	+2.4
	SNR=1.0						
AVF				eSn	Sn	08 55 15.3	-0.7
AVF				eSg	Sb	08 55 23.4	+3.9
	5.4nm,0.2s,SNR=1.0						
PLDF	La Plantade	2.31	238	Pn	Pn	08 54 53.9	+2.0
PLDF	La Plantade	2.31	238	Pg	Pg	08 54 59.0	+0.1
PLDF	La Plantade	2.31	238	Pn	Pn	08 54 53.9	+2.0
PLDF	La Plantade	2.31	238	Pg	Pg	08 54 59.0	+0.1
BUCH	Bad Urach	2.32	57	⇑P	Pn	08 54 51.4	-0.6
BUCH				S	Sn	08 55 13.7	-6.4
BUCH				Sg	Sg	08 55 28.9	-0.2
BUCH	Bad Urach	2.32	57	P	Pn	08 54 51.4	-0.6
BUCH				Sg	Sg	08 55 28.9	-0.2
ORIF	Oris-en-Rattie	2.33	190	ePn	Pn	08 54 52.0	-0.2
	SNR=1.0						
ORIF	Oris-en-Rattie	2.33	190	ePg	Pb	08 54 58.5	+2.3
ORIF				eSg	Sb	08 55 28.1	+3.3
	19nm,0.2s,SNR=1.0						
ORIF	Oris-en-Rattie	2.33	190	ePn	Pn	08 54 52.0	-0.2
	SNR=1.0						
ORIF	Oris-en-Rattie	2.33	190	ePg	Pb	08 54 58.5	+2.3
ORIF				eSg	Sb	08 55 28.1	+3.3
	9.3nm,0.2s,SNR=1.0						
DAVA	Damuels	2.35	87	⇓iPn	Pg	08 54 59.4	-0.2
DAVA				⇑iSg	Sg	08 55 29.5	-0.6
	59nm,0.4s						
WLF	Walferdange	2.46	356	Sg	Sg	08 55 34.2	+0.7
WLF	Walferdange	2.46	356	Sg	Sg	08 55 34.2	+0.7
MBDF	Montbardon	2.50	175	ePn	Pn	08 54 54.8	+0.2
	SNR=1.0						
MBDF	Montbardon	2.50	175	ePg	Pb	08 55 02.0	+2.8
	SNR=1.0						
MBDF				eSg	Sg	08 55 34.2	-0.9
	7.7nm,0.4s						
MBDF	Montbardon	2.50	175	ePn	Pn	08 54 54.8	+0.2
	SNR=1.0						
MBDF	Montbardon	2.50	175	ePg	Pb	08 55 02.0	+2.8
	SNR=1.0						
MBDF				eSg	Sg	08 55 34.2	-0.9
	3.8nm,0.4s						
RUP	Ruppelstein	2.52	9	Sg	Sg	08 55 34.8	-0.8
RUP	Ruppelstein	2.52	9	Sg	Sg	08 55 34.8	-0.8
UBR	Ueberruh	2.53	78	Pg	Pg	08 55 03.1	-0.1
UBR				S	Sn	08 55 24.2	-1.2
UBR				Sg	Sg	08 55 36.0	0.0
UBR	Ueberruh	2.53	78	Pg	Pg	08 55 03.1	-0.1
UBR				S	Sn	08 55 24.2	-1.2
UBR				Sg	Sg	08 55 36.0	0.0
BGF	Bois d'Agland	2.55	256	ePn	Pn	08 54 56.2	+1.1
	SNR=1.0						
BGF	Bois d'Agland	2.55	256	ePg	Pg	08 55 03.7	+0.2
BGF				eSn	Sn	08 55 24.9	-0.8
	SNR=1.0						
BGF				eSg	Sb	08 55 35.1	+4.2
	36nm,0.3s,SNR=1.0						
BGF	Bois d'Agland	2.55	256	ePn	Pn	08 54 56.2	+1.1
	SNR=1.0						
BGF	Bois d'Agland	2.55	256	ePg	Pg	08 55 03.7	+0.2
BGF				eSn	Sn	08 55 24.9	-0.8
	SNR=1.0						
BGF				eSg	Sb	08 55 35.1	+4.2
	18nm,0.3s,SNR=1.0						
AGO	Saint Agoulin	2.56	244	Pn	Pn	08 54 57.3	+2.0
AGO	Saint Agoulin	2.56	244	Pg	Pg	08 55 04.4	+0.7
AGO	Saint Agoulin	2.56	244	Pn	Pn	08 54 57.3	+2.0
AGO	Saint Agoulin	2.56	244	Pg	Pg	08 55 04.4	+0.7
OBER	Oberstdorf	2.63	84	Sg	Sg	08 55 38.0	-1.1
OBER	Oberstdorf	2.63	84	Sg	Sg	08 55 38.0	-1.1
VIVF	Saint-Julien-l	2.66	208	ePn	Pn	08 54 56.9	+0.2
	SNR=1.0						
VIVF	Saint-Julien-l	2.66	208	ePg	Pb	08 55 04.9	+3.1
VIVF				eSg	Sb	08 55 37.8	+3.6
	30nm,0.2s,SNR=1.0						
VIVF	Saint-Julien-l	2.66	208	ePn	Pn	08 54 56.9	+0.2
	SNR=1.0						
VIVF	Saint-Julien-l	2.66	208	ePg	Pb	08 55 04.9	+3.1
VIVF				eSg	Sb	08 55 37.8	+3.6
	15nm,0.2s,SNR=1.0						
SWS	Schriesheim-Wi	2.72	33	Sg	Sg	08 55 42.4	+0.3
SWS	Schriesheim-Wi	2.72	33	Sg	Sg	08 55 42.4	+0.3
ABH	Alteburg	2.77	15	Sg	Sg	08 55 43.0	-0.4
ABH	Alteburg	2.77	15	Sg	Sg	08 55 43.0	-0.4
PYM	Petit Puy Mans	2.79	239	Pn	Pn	08 55 00.2	+1.7
PYM	Petit Puy Mans	2.79	239	Pn	Pn	08 55 00.2	+1.7
TOD	Tromm	2.86	33	Sg	Sg	08 55 46.2	-0.3
TOD	Tromm	2.86	33	Sg	Sg	08 55 46.2	-0.3
HDH	Heidenheim-Cha	2.88	60	Sg	Sg	08 55 44.9	-2.2
HDH	Heidenheim-Cha	2.88	60	Sg	Sg	08 55 44.9	-2.2
SIND	Sindeldorf	3.00	44	Pg	Pg	08 55 12.3	+0.1
SIND				Sg	Sg	08 55 50.0	-1.0
SIND	Sindeldorf	3.00	44	Pg	Pg	08 55 12.3	+0.1
SIND				Sg	Sg	08 55 50.0	-1.0
TCF	Toulx Ste Croi	3.05	254	ePn	Pn	08 55 02.4	+0.3
	SNR=1.0						
TCF	Toulx Ste Croi	3.05	254	ePg	Pg	08 55 12.6	-0.5
TCF				eSn	Sn	08 55 36.5	-1.7
TCF				eSg	Sb	08 55 49.2	+3.8
	10nm,0.2s,SNR=1.0						
TCF	Toulx Ste Croi	3.05	254	ePn	Pn	08 55 02.4	+0.3
	SNR=1.0						
TCF	Toulx Ste Croi	3.05	254	ePg	Pg	08 55 12.6	-0.5
TCF				eSn	Sn	08 55 36.5	-1.7
TCF				eSg	Sb	08 55 49.2	+3.8
	5.2nm,0.2s,SNR=1.0						
PCP	Piancastagn	3.06	150	P	Pn	08 55 04.5	+2.4
PCP				S	Sn	08 55 34.9	-3.4
GIVF	Givet	3.08	340	ePn	Pn	08 55 03.1	+0.7
GIVF	Givet	3.08	340	ePg	Pg	08 55 12.8	-0.8
GIVF				eSn	Sn	08 55 37.1	-1.6
	SNR=1.0						
GIVF				eSg	Sb	08 55 49.7	+3.6
	12nm,0.3s,SNR=1.0						
GIVF	Givet	3.08	340	ePn	Pn	08 55 03.1	+0.7
GIVF	Givet	3.08	340	ePg	Pg	08 55 12.8	-0.8
GIVF				eSn	Sn	08 55 37.1	-1.6
	SNR=1.0						
GIVF				eSg	Sb	08 55 49.7	+3.6
	6.1nm,0.3s,SNR=1.0						
BAIF	Baives	3.20	333	eP	Pn	08 55 07.6	+3.5
BAIF	Baives	3.20	333	ePg	Pg	08 55 15.4	-0.6
BAIF				eSg	Sg	08 55 56.5	-1.0
	7.8nm,0.3s						
BAIF	Baives	3.20	333	eP	Pn	08 55 07.6	+3.5
BAIF	Baives	3.20	333	ePg	Pg	08 55 15.4	-0.6
BAIF				eSg	Sg	08 55 56.5	-1.0
	3.9nm,0.3s						
TNS	Taunus Mts	3.29	23	Sg	Sg	08 55 59.4	-0.7
TNS	Taunus Mts	3.29	23	Sg	Sg	08 55 59.4	-0.7
SMRF	Simiane la Rot	3.30	191	ePn	Pn	08 55 05.7	+0.2
	SNR=1.0						
SMRF				eSn	Sn	08 55 42.3	-2.0
SMRF				eSg	Sg	08 55 58.6	-2.0
	3.1nm,0.4s						
SMRF	Simiane la Rot	3.30	191	ePn	Pn	08 55 05.7	+0.2
	SNR=1.0						
SMRF				eSn	Sn	08 55 42.3	-2.0
SMRF				eSg	Sg	08 55 58.6	-2.0
	1.5nm,0.4s						
SBF	Sospel	3.43	168	ePn	Pn	08 55 07.9	+0.6
SBF	Sospel	3.43	168	ePg	Pb	08 55 18.5	+3.6
SBF				eSn	Sn	08 55 45.4	-2.1
	3.1nm,0.2s						
SBF	Sospel	3.43	168	ePn	Pn	08 55 07.9	+0.6
SBF	Sospel	3.43	168	ePg	Pb	08 55 18.5	+3.6
SBF				eSn	Sn	08 55 45.4	-2.1
	1.5nm,0.2s						
LASF	Ste Croix	3.63	211	ePn	Pn	08 55 10.2	+0.2
LASF	Ste Croix	3.63	211	ePg	Pb	08 55 22.4	+4.2
LASF				eSn	Sn	08 55 50.2	-2.1
	SNR=1.0						
LASF				eSg	Sb	08 56 08.4	+6.5
	11nm,0.3s						
LASF	Ste Croix	3.63	211	ePn	Pn	08 55 10.2	+0.2
LASF	Ste Croix	3.63	211	ePg	Pb	08 55 22.4	+4.2
LASF				eSn	Sn	08 55 50.2	-2.1
	SNR=1.0						
LASF				eSg	Sb	08 56 08.4	+6.5
	5.4nm,0.3s						
FRF	La Foret Royal	3.66	178	ePn	Pn	08 55 10.5	+0.1
	SNR=1.0						
FRF	La Foret Royal	3.66	178	ePg	Pb	08 55 22.8	+4.0
FRF				eSn	Sn	08 55 51.7	-1.4
	5.1nm,0.3s,SNR=1.0						
FRF	La Foret Royal	3.66	178	ePn	Pn	08 55 10.5	+0.1
	SNR=1.0						
FRF	La Foret Royal	3.66	178	ePg	Pb	08 55 22.8	+4.0
FRF				eSn	Sn	08 55 51.7	-1.4
	2.5nm,0.3s,SNR=1.0						
CAF	Calviac	3.81	235	eSg	Sg	08 56 15.2	-1.8
	6.4nm,0.3s,SNR=1.0						
CAF	Calviac	3.81	235	eSg	Sg	08 56 15.2	-1.8
	3.2nm,0.3s,SNR=1.0						
LMR	La Mourre	3.89	179	eSn	Sn	08 55 56.2	-2.5
	6.5nm,0.7s,SNR=1.0						
LMR	La Mourre	3.89	179	eSn	Sn	08 55 56.2	-2.5
	3.2nm,0.7s,SNR=1.0						
RJF	Les Rejaudoux	3.91	243	ePn	Pn	08 55 14.1	+0.2
RJF	Les Rejaudoux	3.91	243	ePg	Pb	08 55 27.7	+4.6
RJF				eSn	Sn	08 55 56.9	-2.5
	SNR=1.0						
RJF				eSg	Sb	08 56 17.3	+7.2
	7.4nm,0.4s,SNR=1.0						
RJF	Les Rejaudoux	3.91	243	ePn	Pn	08 55 14.1	+0.2
RJF	Les Rejaudoux	3.91	243	ePg	Pb	08 55 27.7	+4.6
RJF				eSn	Sn	08 55 56.9	-2.5
	SNR=1.0						
RJF				eSg	Sb	08 56 17.3	+7.2
	3.7nm,0.4s,SNR=1.0						
MFF	Saint Martin d	4.55	265	eSg	Sg	08 56 38.7	-2.0
	3.4nm,0.3s						
MFF	Saint Martin d	4.55	265	eSg	Sg	08 56 38.7	-2.0
	1.7nm,0.3s						
LDF	La Druitiere	4.62	290	eSg	Sg	08 56 39.7	-3.2
	6.0nm,0.3s						
LDF	La Druitiere	4.62	290	eSg	Sg	08 56 39.7	-3.2
	3.0nm,0.3s						
MTLF	Montolieu	4.89	219	eSn	Sn	08 56 20.2	-3.2
MTLF				eSg	Sg	08 56 48.4	-3.1
	6.3nm,0.4s,SNR=1.0						
MTLF	Montolieu	4.89	219	eSn	Sn	08 56 20.2	-3.2
MTLF				eSg	Sg	08 56 48.4	-3.1
	3.2nm,0.4s,SNR=1.0						
FLN	La Foliniere	4.90	291	eSn	Sn	08 56 20.9	-2.6
FLN				eSg	Sg	08 56 47.9	-3.8
	6.5nm,0.2s,SNR=1.0						
FLN	La Foliniere	4.90	291	eSn	Sn	08 56 20.9	-2.6
GRR	Gorron	5.05	286	eSg	Sg	08 56 54.2	-2.5
	3.7nm,0.3s						
GRR	Gorron	5.05	286	eSg	Sg	08 56 54.2	-2.5
	1.9nm,0.3s						
EPF	Esparros	6.01	228	eSn	Sn	08 56 47.1	-4.0
EPF				eSg	Sg	08 57 24.0	-3.5
	2.3nm,0.3s						
ROSF	Rostrenen	6.64	283	eP	Pn	08 55 56.4	+5.1

*MOS **02** 08:59:49.3±0.9, 6°.01N×126°.79E, h33km, mb5.1/24, Error ellipse: s-maj=16.7km s-min=6.6km az=118.1*

*BJI **02** 08:59:49.0, 5°.14N×126°.98E, h78km, mB4.9/21, mb4.8/30, Ms4.6/21, Ms7 4.2/23*

*MAN **02** 08:59:49, 5°.88N×127°.15E, h55km, mb5.4, ML4.4, MS4.7*

*AUST **02** 08:59:50.0±1.8, 6°.26N×127°.40E, h39km, Error ellipse: s-maj=2.1km s-min=0.9km az=241.0*

*DJA **02** 08:59:53.0±0.7, 6°N±5°×12°7E±°, h10km, M5.1/8, mB5.6/5, mb5.1/8, MLv5.2/5, Mw(mB)5.0/5*

*ISCJB **02** 08:59:53.6±0.5, 5°.89N±0°.03×126°.82E±0°.05, h71km±4km, mb4.6/81, Error ellipse: s-maj=8.3km s-min=3.7km az=159.5*

*IDC **02** 08:59:53.2±1.7, 6°.00N×126°.96E, h53km±14km, mb4.2/34, mb1 4.3/35, mb1mx4.3/38, mbtmp4.2/35, ML4.2/1, MS3.7/15, Ms1 3.7/15, ms1mx3.4/40, Error ellipse: s-maj=15.5km s-min=9.0km az=74.0*

*NEIC **02** 08:59:55.0±0.9, 5°.97N×126°.89E, h70km±8km, mb4.9/18, Error ellipse: s-maj=9.0km s-min=4.8km az=74.0*

ISC 02 08:59:56.6±0.4**, 5°.90N**±0°.04×**126°.85E**±0°.06**, h82**km±2km**, n230, σ1**°**45**/281**, mb4.7**/81**, 7C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	1.20	330	eP	Pn	09 00 13.1	-5.2
MATI				eS	Sn	09 00 26.2	-8.3
DAV	Davao City (W)	1.72	313	ePn	Pn	09 00 22.4	-2.6
DAV				eSn	Sn	09 00 44.1	-2.3
DAV				S		09 00 45.2	
DAV	Davao City (W)	1.72	313	P	Pn	09 00 21.8	-3.1
DAV	Davao City (W)	1.72	313	P	Pn	09 00 22.4	-2.6
	708nm,0.3s,baz=212,slow=10,SNR=25						
DAV				S	Sn	09 00 45.2	-1.2
	476nm,0.3s,baz=277,slow=22,SNR=34						
DMPH	Davao City--Mi	1.78	311	⇓eP	Pn	09 00 21.8	-4.0
DMPH				i S	Sn	09 00 52.2	+4.4
GSPH	General Santos	1.90	276	⇑iP	Pn	09 00 21.4	-6.1
GSPH				i S	Sn	09 00 44.4	-6.5
KCP	Kidapawan	2.07	302	⇑eP	Pn	09 00 30.8	+1.2
KCP				i S	Sn	09 00 57.5	+2.7
BUKP	Musuan	2.65	318	eP	Pn	09 00 34.6	-2.8
CTBH	Cotabato--PC H	2.91	297	⇑iP	Pn	09 00 38.4	-2.3
BUTP	Butuan	3.29	338	eP	Pn	09 00 45.9	0.0
CGP	Cagayan de Oro	3.33	320	⇓eP	Pn	09 00 45.7	-0.7
CGP				i S	Sn	09 01 28.1	+3.2
PAGZ	Pagadian	3.96	300	eP	Pn	09 00 53.1	-1.9
MSLP	Maasin	4.65	335	eP	Pn	09 01 03.9	-0.5
TBP	Tagbilaran	4.80	322	⇓eP	Pn	09 01 03.5	-2.9
MNI	Manado	4.86	205	P	Pn	09 01 05.1	-2.2
TNTI	Ternate	5.12	174	P	Pn	09 01 09.1	-1.7
	406nm,0.8s,6μm1.9nm						
LLP	Lapu-Lapu	5.24	327	eP	Pn	09 01 09.7	-2.8
LLP				eS	Sn	09 02 09.9	-1.7
PLP	Palo	5.55	341	⇓eP	Pn	09 01 16.6	-0.2
PLP				eS	Sn	09 02 08.8	-11
KMSI	Cibinong	6.01	209	P	Pn	09 01 20.8	-2.3
	431nm,0.7s,7μm2.2nm						
LBMI	Labuha	6.52	174	P	Pn	09 01 29.8	-0.2
	293nm,0.8s,3μm1.0nm						
PALU	Palau	7.71	79	S	Sn	09 02 57.1	-15
	baz=7.1,SNR=3.6						
NLAI	Namlea	9.08	178	P	Pn	09 02 01.1	-3.8
	105nm,0.7s,4μm						
AAI	Ambon	9.61	172	P	Pn	09 02 15.4	+3.2
FAKI	Fak Fak	10.28	148	P	Pn	09 02 22.5	+1.1
	54nm,1.1s						
KDI	Kendari	10.66	203	P	Pn	09 02 21.3	-5.2
	27nm,0.6s,510nm						
SPSI	Sidrap Palu	12.08	216	P	Pn	09 02 43.7	-2.1
KAPI	Kappang	12.95	213	P	Pn	09 02 55.5	-2.1
KAPI	Kappang	12.95	213	P	Pn	09 02 55.5	-2.1
	1.2nm,0.3s,baz=30,slow=14,SNR=9.4						
KAPI				LR	LR	09 08 19.6	
	comp=Z,248nm,20.1s,baz=66,slow=39						
WSI	Waingapu	16.79	203	P	P	09 03 58.9	+11
	baz=17,SNR=7.3						
KSM	Kuching	17.08	256	eP	P	09 03 51.6	+0.8
	25nm,0.8s						
KSM	Kuching	17.08	256	P	P	09 03 51.7	+0.8
	baz=18,SNR=7.5						
SSLB	Suanglung	18.67	343	ePn	Pn	09 04 17.4	+7.8
	169nm,0.3s						
NACB	Ninganchiao	18.86	345	ePn	P	09 04 10.8	+0.4
	163nm,0.3s						
MTN	Manton Dam	19.10	167	P	P	09 04 11.7	-1.2
	baz=20,SNR=5.3						

KDU	Kakadu	19.29	163	P	P	09 04 14.4	-0.6
	baz=20,SNR=6.1						
GUMO	Guam	19.32	65	LR	LR	09 10 23.8	
	comp=Z,75nm,18.4s,baz=257,slow=33						
YHNB	Yeheng	19.39	345	eP	P	09 04 09.1	-7.2
	102nm,0.7s						
TATO	Taipei	19.66	345	ePn	Pn	09 04 21.8	+0.7
	421nm,1.7s						
JOW	Kunigami	20.86	4	P	Pn	09 04 34.4	-0.9
JOW	Kunigami	20.86	4	P	Pn	09 04 34.4	-0.9
	14nm,0.8s,baz=148,slow=9.5,SNR=2.2						
JOW				LR	LR	09 12 08.6	
	comp=Z,96nm,19.7s,baz=354,slow=35						
QIZ	Qiongzhong	21.09	310	P	P	09 04 34.3	-0.3
QIZ				S	S	09 08 25.0	+0.1
QIZ				pmax	pmax		
	comp=Z,26nm,1.8s						
QIZ				LR	LR		
	comp=Z,430nm,19.3s						
FITZ	Fitzroy Crossi	23.88	183	eP	P	09 05 02.8	+0.1
	comp=Z,5.9nm,0.6s						
FITZ	Fitzroy Crossi	23.88	183	P	P	09 05 03.3	+0.6
	comp=Z,4.1nm,0.5s,baz=2.3,slow=8.0,SNR=17						
FITZ	Fitzroy Crossi	23.88	183	P	P	09 05 03.3	+0.6
	baz=24,SNR=9.6						
COEN	Coen	25.52	141	P	P	09 05 17.5	-0.2
	baz=26,SNR=9.1						
WRAB	Tennant Creek	26.71	164	eP	P	09 05 28.6	+0.2
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.4s						
WRAB	Tennant Creek	26.71	164	eP	P	09 05 28.6	+0.2
	comp=Z,8.8nm,0.4s						
WRA	Warramunga Arr	26.71	164	P	P	09 05 28.5	+0.1
WRA				PcP	PcP	09 08 51.2	+1.0
WRA				ScP	ScP	09 12 26.1	+3.0
WRA	Warramunga Arr	26.71	164	P	P	09 05 28.5	+0.1
	comp=Z,4.3nm,0.5s,baz=345,slow=10.0,SNR=37						
WRA				PcP	PcP	09 08 51.2	+1.0
	comp=Z,1.3nm,0.8s,baz=341,slow=3.0,SNR=4.5						
WRA				ScP	ScP	09 12 26.1	+3.0
	comp=Z,1.3nm,0.6s,baz=342,slow=3.1,SNR=14						
NJ2	Nanjing	27.08	345	eP	P	09 05 32.0	+0.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WHN	Wuhan	27.19	336	P	P	09 05 34.7	+2.1
WHN				LR	LR		
	comp=Z,430nm,16.2s						
JNU	Nakatsue	27.35	7	P	P	09 05 31.5	-2.5
JNU	Nakatsue	27.35	7	P	P	09 05 31.5	-2.5
	comp=Z,4.8nm,0.7s,baz=31,slow=7.2,SNR=4.5						
JNU				LR	LR	09 15 01.8	
	comp=Z,71nm,19.5s,baz=49,slow=33						
PSI	Prapat	28.01	265	P	P	09 05 39.6	-0.7
PSI				PcP	PcP	09 08 53.2	-0.4
PSI	Prapat	28.01	265	P	P	09 05 39.6	-0.7
	comp=Z,2.7nm,0.4s,baz=86,slow=9.0,SNR=3.9						
PSI				PcP	PcP	09 08 53.2	-0.4
	comp=Z,2.4nm,0.4s,baz=217,slow=7.9,SNR=3.8						
PSI				LR	LR	09 19 56.3	
	comp=Z,55nm,18.7s,baz=92,slow=43						
GYA	Guiyang	28.09	319	P	P	09 05 42.0	+1.1
GYA				pP	pP	09 06 01.2	+1.3
GYA				sP	sP	09 06 11.8	+2.3
GYA				PP	PnPn	09 06 35.6	+2.6
GYA				S	S	09 10 19.9	-0.2
GYA				sS	sS	09 10 50.8	-2.2
GYA				ScP	ScP	09 12 27.7	+0.3
GYA				ScS	ScS	09 16 19.4	-0.9
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=N,560nm,19.5s						
GYA				LR	LR		
	comp=E,510nm,20.7s						
GYA				LR	LR		
	comp=Z,580nm,21.1s						
QIS	Mount Isa	29.12	155	P	P	09 05 50.9	+1.0
	baz=29,SNR=6.5						
JHJ	Hachijo jima 2	29.64	22	LR	LR	09 16 51.6	
	comp=Z,167nm,21.9s,baz=291,slow=34						
CMAR	Chiang Mai Arr	29.94	297	P	P	09 05 58.6	+1.3
CMAR				PcP	PcP	09 08 59.4	+1.1
CMAR	Chiang Mai Arr	29.94	297	P	P	09 05 58.6	+1.3
	comp=Z,1.8nm,0.6s,baz=102,slow=7.2,SNR=8.1						
CMAR				PcP	PcP	09 08 59.4	+1.1
	comp=Z,1.5nm,0.6s,baz=125,slow=0.8,SNR=8.7						
CMAR				LR	LR	09 17 18.1	
	comp=Z,147nm,19.7s,baz=119,slow=35						
KMI	Kunming	29.99	312	P	P	09 05 58.8	+1.0
KMI				S	S	09 10 50.2	+0.1
KMI				pmax	pmax		
	comp=Z,12nm,0.8s						
KMI				LR	LR		
	comp=N,190nm,8.8s						
KMI				LR	LR		
	comp=E,210nm,11.1s						
KMI				LR	LR		
	comp=Z,250nm,13.2s						
AS31	Alice Springs	30.18	167	eP	P	09 06 00.1	+0.8
ASAR	Alice Springs	30.18	167	P	P	09 05 59.2	0.0
ASAR				PcP	PcP	09 08 58.8	0.0
ASAR				ScP	ScP	09 12 36.9	+3.0
ASAR	Alice Springs	30.18	167	P	P	09 05 59.2	0.0
	comp=Z,2.3nm,0.6s,baz=344,slow=7.2,SNR=24						
ASAR				PcP	PcP	09 08 58.8	0.0
	comp=Z,3.0nm,0.6s,baz=344,slow=2.5,SNR=12						
ASAR				ScP	ScP	09 12 36.9	+3.0
	comp=Z,0.7nm,0.5s,baz=340,slow=2.8,SNR=8.7						
KSRS	Korea Array	31.43	2	LR	LR	09 16 38.4	
	comp=Z,83nm,21.5s,baz=28,slow=32						
CTA	Charters Tower	32.11	144	P	P	09 06 17.1	+0.8
CTA	Charters Tower	32.11	144	P	P	09 06 17.1	+0.8
	comp=Z,4.0nm,0.8s,baz=310,slow=12,SNR=7.1						
CTAO	Charters Tower	32.11	144	eP	P	09 06 17.5	+1.2
CTAO				pmax	pmax		
	comp=Z,97nm,2.8s						
CTAO	Charters Tower	32.11	144	eP	P	09 06 17.5	+1.2
	comp=Z,97nm,2.8s						
MJAR	Matsushiro Arr	32.23	17	P	P	09 06 14.9	-2.3
MJAR	Matsushiro Arr	32.23	17	P	P	09 06 14.9	-2.3
	comp=Z,1.3nm,0.6s,baz=202,slow=11,SNR=3.5						
MJAR				LR	LR	09 18 01.0	
	comp=Z,132nm,18.1s,baz=190,slow=34						
XAN	Xi’an	32.56	332	P	P	09 06 22.2	+2.0
XAN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,15nm,4.8s						
XAN				LR	LR		
	comp=N,97nm,11.2s						
XAN				LR	LR		
	comp=E,67nm,15.6s						
XAN				LR	LR		
	comp=Z,74nm,15.6s						
CD2	Chengdu	33.00	322	P	P	09 06 23.0	-1.1
CD2				pP	pP	09 06 41.9	-1.4
CD2				sP	sP	09 06 51.6	-1.2
CD2				PP	PnPn	09 07 35.4	-0.9
CD2				PcP	PcP	09 09 06.1	-0.2
CD2				S	S	09 11 33.5	-3.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,90nm,5.2s						
MEEK	Meekatharra	33.31	194	P	P	09 06 26.7	-0.1
	baz=34,SNR=5.6						
BJI	Beijing	35.33	346	P	P	09 06 45.0	+1.1
BJI				S	S	09 12 15.0	+2.8
BJI				pmax	pmax		
	comp=Z,12nm,0.6s						
BJI				pmax	pmax		
	comp=Z,74nm,4.9s						
BJI				LR	LR		
	comp=N,140nm,16.5s						
BJI				LR	LR		
	comp=E,180nm,16.1s						
BJI				LR	LR		
	comp=Z,74nm,23.1s						
FORT	Forrest	36.48	178	eP	P	09 06 53.5	-0.4
	comp=Z,32nm,1.0s						
FORT	Forrest	36.48	178	P	P	09 06 54.1	+0.2
	baz=37,SNR=14						
LZH	Lanzhou	36.73	328	eP	P	09 06 57.6	+1.4
LZH				pP	pP	09 07 15.1	-0.5
LZH				sP	sP	09 07 23.7	-1.4
LZH				eS	S	09 12 42.4	+8.3
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,140nm,4.6s						
LZH				LR	LR		
	comp=N,450nm,14.9s						
LZH				LR	LR		
	comp=E,540nm,16.4s						
LZH				LR	LR		
	comp=Z,780nm,17.0s						
HHC	Hu-ho-hao-te	37.40	341	eP	P	09 07 04.4	+2.6
HHC				pP	pP	09 07 23.2	+2.0
HHC				sP	sP	09 07 31.6	+0.9
HHC				PP	PnPn	09 08 34.6	+4.4
HHC				PcP	PcP	09 09 21.0	+1.9
HHC				S	S	09 12 47.9	+3.8
HHC				sS	sS	09 13 20.0	+2.5
HHC				SS	SnSn	09 15 26.1	-3.0
HHC				ScS	ScS	09 17 07.2	-0.2
HHC				pmax	pmax		
	comp=Z,37nm,0.6s						
HHC				pmax	pmax		
	comp=Z,290nm,6.1s						
HHC				LR	LR		
	comp=N,310nm,13.8s						
HHC				LR	LR		
	comp=E,360nm,12.1s						
HHC				LR	LR		
	comp=Z,310nm,12.6s						
BLDU	Ballidu	37.58	194	P	P	09 07 03.5	+0.3
	baz=38,SNR=5.4						
CN2	Changchun	37.77	358	eP	P	09 07 06.6	+1.9
CN2				esP	sP	09 07 33.9	+0.2
CN2				eS	S	09 12 51.5	+2.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	Ussuriysk Arra	38.42	6	P	P	09 07 07.8	-2.3
	comp=Z,1.1nm,0.6s,baz=181,slow=7.8,SNR=3.1						
MDJ	Mudanjiang	38.64	3	P	P	09 07 11.9	-0.1
MDJ				pP	pP	09 07 29.0	-2.5
MDJ				S	S	09 13 03.6	+1.1
MDJ				SS	SS	09 15 53.1	-3.0
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,110nm,5.5s						
BBOO	Buckleboo	39.47	168	P	P	09 07 19.9	+0.9
	baz=40,SNR=11						
NWAO	Narrogin (SRO)	39.68	193	P	P	09 07 21.1	+0.3
NWAO	Narrogin (SRO)	39.68	193	P	P	09 07 21.1	+0.3
	comp=Z,13nm,0.6s,baz=20,slow=6.4,SNR=7.1						
ASAJ	Asahikawa	40.50	18	P	P	09 07 25.9	-1.5
ASAJ	Asahikawa	40.50	18	P	P	09 07 25.9	-1.5
	comp=Z,4.1nm,0.6s,baz=218,slow=10,SNR=10.0						
ASAJ				LR	LR	09 21 43.2	
	comp=Z,267nm,19.6s,baz=170,slow=32						
GTA	Gaotai	41.33	328	eP	P	09 07 35.5	+1.0
GTA				pP	pP	09 07 54.5	+0.3
GTA				sP	sP	09 08 03.9	+0.2
GTA				PcP	PcP	09 09 34.0	+2.4
GTA				S	S	09 13 41.8	-1.3
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,74nm,6.2s						
GTA				LR	LR		
	comp=N,250nm,22.8s						
GTA				LR	LR		
	comp=E,390nm,19.5s						
GTA				LR	LR		
	comp=Z,320nm,20.0s						
RKGY	Rocky Gully	41.35	192	P	P	09 07 36.3	+1.8
	baz=42,SNR=7.3						
TAPN	Taplejung	42.87	304	eP	P	09 07 46.6	-0.9
	comp=Z,8.6nm,0.5s						
ODAN	Odare	42.95	304	eP	P	09 07 47.6	-0.4
	comp=Z,20nm,0.7s						
ARMA	Armidale	43.21	148	P	P	09 07 50.4	+0.6
	baz=43,SNR=4.4						
RAMN	Ramite	43.64	303	eP	P	09 07 52.8	-0.8
	comp=Z,18nm,0.6s						
GUN	Gumba	44.59	304	eP	P	09 08 00.9	-0.4
	comp=Z,26nm,0.6s						
ARPS	Mount Arapiles	44.70	163	P	P	09 08 06.2	+4.7
	baz=45,SNR=8.9						
PKI	Pulchoki	44.85	304	eP	P	09 08 03.0	-0.4
PKIN	Phulchoki	44.86	304	eP	P	09 08 02.0	-1.4
ULN	Ulaanbaatar	45.12	341	eP	P	09 08 05.2	+0.2
	comp=Z,8.0nm,1.1s						
DMN	Daman	45.12	303	eP	P	09 08 04.6	-0.8
SONM	Songino Array	45.30	341	P	P	09 08 05.5	-0.9
SONM	Songino Array	45.30	341	P	P	09 08 05.5	-0.9
	comp=Z,1.8nm,0.7s,baz=157,slow=7.8,SNR=11						
SONM				LR	LR	09 27 42.1	
	comp=Z,98nm,19.7s,baz=234,slow=37						
KOLN	Koldanda	46.42	303	eP	P	09 08 15.2	-0.4
	comp=Z,31nm,0.7s						
DANN	Dangsing	46.49	304	eP	P	09 08 15.4	-0.8
	comp=Z,22nm,0.6s						
TOO	Toolangi	46.61	160	P	P	09 08 18.0	+1.4
	baz=47,SNR=5.4						
PYUN	Piuthan	47.04	303	eP	P	09 08 20.2	-0.3
	comp=Z,21nm,0.6s						
DZM	Mont Dzumac	47.70	127	P	P	09 08 23.7	-1.8
DZM	Mont Dzumac	47.70	127	P	P	09 08 23.7	-1.8
	comp=Z,5.1nm,0.4s,baz=349,slow=18,SNR=15						
ZAK	Zakamensk	48.54	340	eP	P	09 08 31.9	+0.4
ZAK				e		09 09 57.0	
TLY	Talaya	49.53	341	eP	P	09 08 33.6	-5.3
TLY				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TLY				MLR	MLR		
	comp=Z,66nm,21.0s						
WMQ	Urumqi	51.04	324	P	P	09 08 52.3	+1.7
WMQ				pmax	pmax		
	comp=Z,19nm,0.8s						
PETK	Petropavlovsk-	53.39	23	P	P	09 09 07.2	-0.6
PETK	Petropavlovsk-	53.39	23	P	P	09 09 07.2	-0.6
PETK	Petropavlovsk-	53.39	23	P	P	09 09 07.2	-0.6
	comp=Z,3.4nm,0.6s,baz=192,slow=7.7,SNR=3.5						
MK31	Makanchi Array	55.87	324	eP	P	09 09 24.9	-0.9
MK31				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MK31	Makanchi Array	55.87	324	eP	P	09 09 24.9	-0.9
MKAR	Makanchi Array	55.87	324	P	P	09 09 25.2	-0.6
MKAR						09 10 25.4	
MKAR	Makanchi Array	55.87	324	P	P	09 09 25.2	-0.6
MKAR				PcP	PcP	09 10 25.4	+1.6
MKAR	Makanchi Array	55.87	324	P	P	09 09 25.2	-0.6
	comp=Z,3.6nm,0.5s,baz=119,slow=7.6,SNR=37						
MKAR				PcP	PcP	09 10 25.4	+1.6
	comp=Z,6.9nm,0.8s,baz=117,slow=4.2,SNR=13						
MKAR				LR	LR	09 35 09.9	
	comp=Z,98nm,19.5s,baz=347,slow=38						
KSH	Kashi	56.62	314	P	P	09 09 32.1	+0.7
KSH				pP	pP	09 09 52.0	-0.1
KSH				sP	sP	09 10 01.4	+0.1
KSH				PcP	PcP	09 10 28.4	+1.4
KSH				PP	PP	09 11 41.2	+3.0
KSH				eScP	ScP	09 14 18.6	-0.6
KSH				PcS	PcS	09 14 27.0	-0.8
KSH				S	S	09 17 18.1	+0.6
KSH				ScS	ScS	09 19 10.9	-2.4
KSH				SS	SS	09 21 08.7	+2.4
KSH				pmax	pmax		
	comp=Z,25nm,1.3s						
KSH				pmax	pmax		
	comp=Z,240nm,4.5s						
KSH				LR	LR		
	comp=N,2µm,13.3s						
KSH				LR	LR		
	comp=E,1µm,14.5s						
KSH				LR	LR		
	comp=Z,430nm,5.3s						
TKM2	Tokmak 2	58.23	318	eP	P	09 09 42.0	-0.8
TKM2				e		09 10 32.0	
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TKM2	Tokmak 2	58.23	318	eP	P	09 09 42.0	-0.8
	comp=Z,3.7nm,0.6s						
TKM2				ePcP	PcP	09 10 32.0	-1.3
ZAA0	Zalesovo Array	58.73	332	eP	P	09 09 43.7	-2.1
ZAA0				ePcP	PcP	09 10 34.5	-0.2
ZALV	Zalesovo Beam	58.73	332	P	P	09 09 43.8	-2.0
ZALV						09 10 36.3	
ZALV	Zalesovo Beam	58.73	332	P	P	09 09 43.8	-2.0
ZALV				PcP	PcP	09 10 36.3	+1.6
ZALV	Zalesovo Beam	58.73	332	P	P	09 09 43.8	-2.0
	comp=Z,2.9nm,0.5s,baz=134,slow=6.5,SNR=12						
ZALV				PcP	PcP	09 10 36.3	+1.6
	comp=Z,3.7nm,0.5s,baz=124,slow=2.6,SNR=8.2						
ZALV				LR	LR	09 37 00.5	
	comp=Z,66nm,18.7s,baz=247,slow=38						
AAK	Ala-Archa	58.86	317c	iP	P	09 09 45.8	-1.3
AAK				pmax	pmax		
	comp=Z,19nm,1.7s						
AAK	Ala-Archa	58.86	317	P	P	09 09 46.7	-0.4
AAK				PcP	PcP	09 10 37.7	+1.9
AAK	Ala-Archa	58.86	317	P	P	09 09 46.7	-0.4
	comp=Z,1.9nm,0.5s,baz=133,slow=7.8,SNR=4.5						
AAK				PcP	PcP	09 10 37.7	+1.9
	comp=Z,3.6nm,0.8s,baz=106,slow=7.2,SNR=5.5						
EKS2	Erkin-Say	59.35	317	eP	P	09 09 50.7	+0.2
EKS2				pmax	pmax		
	comp=Z,8.0nm,0.8s						
EKS2	Erkin-Say	59.35	317	eP	P	09 09 50.7	+0.2
	comp=Z,7.7nm,0.8s						
KURK	Kurchatov	60.00	327c	iP	P	09 09 53.4	-1.2
KURK				pmax	pmax		
	comp=Z,22nm,1.2s						
KURK	Kurchatov	60.00	327	eP	P	09 09 53.6	-0.9
	comp=Z,37nm,1.5s						
NVS	Novosibirsk	60.01	333	eP	P	09 09 52.1	-2.5
KK31	Karatay Array	61.75	316	iP	P	09 10 05.6	-1.1
KK31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KKAR	Karatay Array	61.75	316	eP	P	09 10 05.9	-0.8
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KKAR	Karatay Array	61.75	316	eP	P	09 10 05.9	-0.8
	comp=Z,2.4nm,0.6s						
VOSK	Vostochnaya	65.14	326	P	P	09 10 27.9	-0.9
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BVA2	Borovoye Array	65.58	326	P	P	09 10 30.5	-1.2
BVA2				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	Borovoye Array	65.59	326	P	P	09 10 31.1	-0.6
BVAR	Borovoye Array	65.59	326	P	P	09 10 31.1	-0.6
BVAR	Borovoye Array	65.59	326	P	P	09 10 31.1	-0.6
	comp=Z,4.9nm,0.6s,baz=131,slow=8.2,SNR=28						
BRVK	Borovoye	65.66	326	eP	P	09 10 31.2	-0.9
BRVK				pmax	pmax		
	comp=Z,12nm,0.9s						
BRVK	Borovoye	65.66	326	eP	P	09 10 31.2	-0.9
	comp=Z,12nm,0.9s						
ZRNK	Zerenda	66.33	326	P	P	09 10 35.0	-1.4
AB31	Akbulak array	70.57	320	iP	P	09 11 01.6	-1.3
AB31				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ABKAR	Akbulak array	70.57	320	eP	P	09 11 02.0	-0.9
	comp=Z,6.7nm,0.6s						
ABKAR				e		09 11 23.4	
AKTO	Aktyubinsk	72.05	321	P	P	09 11 11.3	-0.6
AKTO	Aktyubinsk	72.05	321	P	P	09 11 11.3	-0.6
AKTO	Aktyubinsk	72.05	321	P	P	09 11 11.3	-0.6
	comp=Z,7.2nm,0.7s,baz=99,slow=7.9,SNR=32						
SVE	Sverdlovsk	72.19	328	eP	P	09 11 09.9	-2.7
ARU	Arti	73.19	327c	iP	P	09 11 17.0	-1.5
ARU						09 13 57.9	
ARU				S	S	09 20 39.0	-0.9
ARU				pmax	pmax		
	comp=Z,10.0nm,0.6s						
RDF	Al-Radifah	77.82	298	eP	P	09 11 44.4	-1.2
MIB	Mutribah	78.01	299	eP	P	09 11 45.3	-1.3
MIB				AMb	AMB	09 11 48.1	
	comp=Z,23nm,0.9s						
NAY	Al-Naaiem	78.09	299	eP	P	09 11 45.5	-1.5
NAY				AMb	AMB	09 11 48.5	
	comp=Z,12nm,1.8s						
KDAK	Kodiak Island	80.01	32	P	P	09 11 56.1	-0.7
KDAK	Kodiak Island	80.01	32	P	P	09 11 56.1	-0.7
	comp=Z,6.5nm,0.5s,baz=266,slow=5.7,SNR=6.7						
ZEI	Tsey	80.86	312	eP	P	09 12 01.2	-0.9
ZEI				pmax	pmax		
	comp=Z,23nm,1.4s						
KBZ	Khabaz	81.59	313	P	P	09 12 05.2	-0.4
KBZ	Khabaz	81.59	313	P	P	09 12 05.2	-0.4
KBZ	Khabaz	81.59	313	P	P	09 12 05.2	-0.4
	comp=Z,2.9nm,0.8s,baz=98,slow=3.1,SNR=8.0						
KBZ				LR	LR	09 54 06.6	
	comp=Z,70nm,19.3s,baz=278,slow=40						
KIV	Kislovodsk	81.74	313	eP	P	09 12 06.0	-0.6
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,29nm,20.0s						
COLD	Coldfoot	81.86	23	eP	P	09 12 06.9	+0.3
	comp=Z,2.4nm,0.6s						
VRHR	Novokhopersk	82.45	321	eP	P	09 12 08.1	-1.9
VRHR				pmax	pmax		
	comp=N,5.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.5s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ILAR	Eielson Array	83.11	26	P	P	09 12 12.1	-1.1
ILAR	Eielson Array	83.11	26	P	P	09 12 12.1	-1.1
	comp=Z,1.1nm,0.6s,baz=260,slow=4.8,SNR=44						
KLMR	Klimovskoe	83.59	331	eP	P	09 12 16.5	+0.8
KLMR				pmax	pmax		
	comp=Z,59nm,1.5s						
PAX	Paxson	83.73	27	eP	P	09 12 16.9	+0.4
PAX	Paxson	83.73	27	eP	P	09 12 16.9	+0.4
VORD	Divnogorie	83.92	321	eP	P	09 12 17.9	+0.3
VORD				pmax	pmax		
	comp=N,30nm,0.7s						
VORD				pmax	pmax		
	comp=E,40nm,0.7s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VSR	Storozhevoye	84.00	321	eP	P	09 12 16.6	-1.3
VSR				pmax	pmax		
	comp=N,5.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,1.0nm,0.3s						
TMCR	Tamitsa	84.22	334	eP	P	09 12 18.8	0.0
TMCR				pmax	pmax		
	comp=Z,47nm,1.1s						
MALT	Malatya	85.15	308	eP	P	09 12 24.5	+0.3
MALT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MALT	Malatya	85.15	308	eP	P	09 12 24.5	+0.3
	comp=Z,5.2nm,0.9s						
OBN	Obninsk	85.37	325⇑	eP	P	09 12 24.1	-0.6
OBN				e		09 12 38.8	
OBN				pmax	pmax		
	comp=Z,73nm,1.6s						
OBN	Obninsk	85.37	325	eP	P	09 12 24.6	-0.2
	comp=Z,18nm,0.6s						
ANN	Anapa	85.48	314	eP	P	09 12 23.7	-1.8
ANN				eS	S	09 22 40.0	-10
ANN				pmax	pmax		
	comp=Z,39nm,1.2s						
VNDA	Vanda	85.55	173	eP	P	09 12 25.1	-0.1
VNDA	Vanda	85.55	173	P	P	09 12 23.9	-1.2
	comp=Z,3.2nm,0.9s,baz=313,slow=6.5,SNR=12						
ASF	Jabal al Asfar	86.86	302	P	P	09 12 32.4	-0.4
ASF	Jabal al Asfar	86.86	302	P	P	09 12 32.4	-0.4
	comp=Z,6.5nm,0.7s,baz=351,slow=3.2,SNR=5.0						
JOF	Joensuu	87.32	333	eP	P	09 12 32.7	-1.4
JOF				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JOF	Joensuu	87.32	333	ep	P	09 12 32.7	-1.4
	comp=Z,8.2nm,0.5s						
KEV	Kevo	87.91	340	eP	P	09 12 32.7	-4.1
KEV	Kevo	87.91	340	ep	P	09 12 32.7	-4.1
MMAI	Mount Meron Ar	88.04	303	P	P	09 12 37.1	-1.2
MMAI	Mount Meron Ar	88.04	303	P	P	09 12 37.1	-1.2
	comp=Z,1.2nm,0.3s,baz=148,slow=45,SNR=2.0						
SPITS	Spitsbergen Ar	88.39	349	P	P	09 12 38.3	-0.8
SPITS	Spitsbergen Ar	88.39	349	P	P	09 12 38.3	-0.8
	comp=Z,4.4nm,0.7s,baz=106,slow=6.9,SNR=6.2						
ARCES	ARCESS Array B	88.47	340	P	P	09 12 37.8	-1.8
ARCES	ARCESS Array B	88.47	340	P	P	09 12 37.8	-1.8
	comp=Z,5.4nm,0.6s,baz=84,slow=5.8,SNR=14						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BR131	Keskin Array S	88.74	310	eP	P	09 12 40.9	-0.7
	comp=Z,2.7nm,0.9s						
BRTR	Keskin Array B	88.74	310	P	P	09 12 40.4	-1.3
BRTR	Keskin Array B	88.74	310	P	P	09 12 40.4	-1.3
	comp=Z,1.8nm,0.7s,baz=124,slow=6.1,SNR=11						
KAF	Kangasniemi	89.75	332	eP	P	09 12 44.1	-1.5
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KAF	Kangasniemi	89.75	332	ep	P	09 12 44.1	-1.5
	comp=Z,3.5nm,0.5s						
FIA1	FINESS Array S	89.99	332	eP	P	09 12 46.8	0.0
FINES	FINESS Array B	89.99	332	P	P	09 12 46.9	+0.1
FINES	FINESS Array B	89.99	332	P	P	09 12 46.9	+0.1
	comp=Z,3.9nm,0.4s,baz=72,slow=4.8,SNR=16						
VSU	Vasula	90.29	329	eP	P	09 12 46.9	-1.3
VSU				pmax	pmax		
	comp=Z,17nm,1.1s						
AKASG	Malin Array Be	90.30	321	P	P	09 12 46.8	-1.6
AKASG	Malin Array Be	90.30	321	P	P	09 12 46.8	-1.6
AKASG	Malin Array Be	90.30	321	P	P	09 12 46.8	-1.6
	comp=Z,1.0nm,0.5s,baz=62,slow=5.2,SNR=6.3						
MLR	Muntele Rosu	93.43	316	P	P	09 13 04.2	+0.9
MLR	Muntele Rosu	93.43	316	P	P	09 13 04.2	+0.9
	comp=Z,0.3nm,0.5s,baz=22,slow=5.4,SNR=3.6						
BUR08	Bucovina Ar. S	93.48	318	eP	P	09 13 02.5	-0.9
HFS	Hagfors	96.17	332	P	P	09 13 15.9	+0.6
HFS	Hagfors	96.17	332	P	P	09 13 15.9	+0.6
	comp=Z,1.6nm,0.4s,baz=76,slow=6.1,SNR=8.0						
NB2	NORSAR Subarra	96.91	334	P	P	09 13 19.0	+0.3
	comp=Z,4.3nm,0.7s,baz=68,slow=4.6						
NOA	NORSAR Array B	96.91	334	P	P	09 13 19.3	+0.6
NOA	NORSAR Array B	96.91	334	P	P	09 13 19.3	+0.6
	comp=Z,3.0nm,0.7s,baz=67,slow=4.6,SNR=5.7						
NOA				LR	LR	10 00 50.8	
	comp=Z,85nm,18.1s,baz=10.0,slow=38						
YKA	Yellowknife Ar	97.49	24	P	P	09 13 19.8	-1.4
YKA	Yellowknife Ar	97.49	24	P	P	09 13 19.8	-1.4
	comp=Z,0.3nm,0.6s,baz=300,slow=4.4,SNR=7.8						
BRG	Berggiesshubel	99.58	324	eP	Pdif	09 13 32.6	+1.8
	comp=Z,8.3nm,1.0s						
BRG	Berggiesshubel	99.58	324	eP	Pdif	09 13 32.6	+1.8
BRG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NVAR	Mina Array Bea	105.37	48	Pdif	Pdif	09 13 59.1	+1.9
NVAR	Mina Array Bea	105.37	48	Pdiff	Pdif	09 13 59.1	+1.9
	comp=Z,0.3nm,0.6s,baz=251,slow=5.6,SNR=3.5						
SCHQ	Schefferville	118.42	9	PKP	PKPdf	09 18 36.3	+1.6
SCHQ	Schefferville	118.42	9	PKP	PKPdf	09 18 36.3	+1.6
	comp=Z,0.7nm,0.5s,baz=256,slow=4.2,SNR=4.4						
TORD	Torodi Ar. Bea	122.34	290	PKP	PKPdf	09 18 42.7	-0.6
TORD	Torodi Ar. Bea	122.34	290	PKP	PKPdf	09 18 42.7	-0.6
	comp=Z,2.2nm,0.6s,baz=55,slow=1.6,SNR=26						
DBIC	Dimbokro	130.22	284	PKP	PKPdf	09 18 58.5	+0.1
DBIC	Dimbokro	130.22	284	PKP	PKPdf	09 18 58.5	+0.1
	comp=Z,0.9nm,0.4s,baz=142,slow=4.2,SNR=3.7						
PLCA	Paso Flores	141.97	158	PKP	PKPdf	09 19 18.6	-0.9
PLCA	Paso Flores	141.97	158	PKP	PKPdf	09 19 18.6	-0.9
	comp=Z,2.6nm,0.9s,baz=238,slow=1.9,SNR=3.0						
LCO	Las Campanas	151.64	146	ePKPbc	PKPbc	09 19 42.1	-0.5
LPAZ	La Paz	162.05	126	PKPab	PKPab	09 20 37.2	+0.4
LPAZ	La Paz	162.05	126	PKPab	PKPab	09 20 37.2	+0.4
	comp=Z,1.7nm,0.9s,baz=226,slow=5.0,SNR=2.6						
BDFB	Brasilia	169.08	207	PKPab	PKPab	09 21 07.7	+0.7
BDFB	Brasilia	169.08	207	PKPab	PKPab	09 21 07.7	+0.7
	comp=Z,3.0nm,0.8s,baz=304,slow=3.6,SNR=3.5						

TAP 02 09:03:49.5, 24.°99N×121.°80E, h137km±1km, ML3.6, 5D, B, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NWF	Wu-fen Shan	0.08	346	P	Pn	09 04 08.0	-0.2
	baz=345						
NWF				S	Sn	09 04 22.1	-0.2
	baz=345						
TWB1	Santiao Chiao	0.17	84	eP	Pn	09 04 07.7	-0.4
	baz=85						
TWB1				eS	Sn	09 04 21.1	-1.1
	baz=85						
TAP1	Taipei	0.26	280	eP	Pn	09 04 08.4	+0.1
	baz=279						
TAP	Taipei	0.27	280	eP	Pn	09 04 08.4	0.0
	baz=279						
TWE	Neicheng	0.30	205	eP	Pn	09 04 08.5	0.0
	baz=201						
TWE				eS	Sn	09 04 22.3	-0.6
	baz=201						
TWY	Chenhua	0.34	327	eP	Pn	09 04 08.8	+0.1
	baz=327						
TWS1	Kuangyinshan	0.37	287	eP	Pn	09 04 08.9	+0.2
	baz=287						
TWS1				eS	Sn	09 04 22.9	-0.4
	baz=287						
TWC	Suao	0.38	174	eP	Pn	09 04 09.0	+0.1
	baz=172						
TWC				eS	Sn	09 04 23.5	0.0
	baz=172						
ENTT	Nioudou	0.41	212	P	Pn	09 04 08.9	-0.1
	baz=210						
ENTT				eS	Sn	09 04 23.0	-0.7
	baz=210						
NSK	Sanguang	0.51	232	⇓iP	Pn	09 04 09.3	-0.3
	baz=231						
NSK				S	Sn	09 04 22.9	-1.8
	baz=231						
NCU	National Centr	0.56	268	eP	Pn	09 04 09.8	+0.1
	baz=267						
NCU				eS	Sn	09 04 24.4	-0.6
	baz=267						
ENA	Nanau	0.56	186	eP	Pn	09 04 09.9	+0.1
	baz=184						
ENA				eS	Sn	09 04 25.3	+0.2
	baz=184						
NNS	Nan Shan	0.68	216	P	Pn	09 04 10.7	+0.1
	baz=214						
NNS				eS	Sn	09 04 26.4	-0.3
	baz=214						
HSN	Hsinchu	0.78	256	eP	Pn	09 04 11.1	-0.1
	baz=257						
NSTT	Nanjuang	0.81	244	⇓P	Pn	09 04 11.6	+0.1
	baz=243						
NSTT				eS	Sn	09 04 27.0	-1.1
	baz=243						
TWD	Chiawan	0.93	192	eP	Pn	09 04 11.0	-1.5
	baz=191						
TWD				eS	Sn	09 04 28.6	-1.3
	baz=191						
TWT	Tachien	0.93	218	eP	Pn	09 04 13.2	+0.5
	baz=218						
TWT				eS	Sn	09 04 30.6	+0.3
	baz=218						
WHF	Hehuan Shan	0.97	210	⇓P	Pn	09 04 13.8	+0.4
	baz=209						
WHF				S	Sn	09 04 31.7	+0.1
	baz=209						
NSY	Sanyi	1.11	239	eP	Pn	09 04 14.5	+0.3
	baz=238						
TWQ1	Liyutan	1.14	236	eP	Pn	09 04 14.4	0.0
	baz=235						
TWQ1				eS	Sn	09 04 32.5	-0.7
	baz=235						
ESL	Shilin	1.22	196	eP	Pn	09 04 14.1	-1.2
	baz=195						
ESL				eS	Sn	09 04 32.8	-2.0
	baz=195						
SMLT	Sun Moon Lake	1.38	217	⇓eP	Pn	09 04 17.4	+0.4
	baz=216						
SMLT				eS	Sn	09 04 37.0	-0.8
	baz=216						
TYC	Yuchr	1.38	219	⇓P	Pn	09 04 17.3	+0.4
	baz=218						
TYC				eS	Sn	09 04 37.2	-0.5
	baz=218						
EHY	Hungye	1.54	197	eP	Pn	09 04 17.6	-1.0
	baz=196						
EHY				eS	Sn	09 04 39.3	-1.6
	baz=196						
TWF1	Yuli	1.70	196	eP	Pn	09 04 19.7	-0.7
	baz=195						
TWF1				eS	Sn	09 04 42.6	-1.4
	baz=195						
CHN5	Tsauling	1.73	217	P	Pn	09 04 21.2	+0.4
	baz=216						
CHN5				eS	Sn	09 04 44.8	0.0
	baz=216						
ALS	Alishan	1.73	212	eP	Pn	09 04 21.7	+0.5
	baz=211						
ALS				eS	Sn	09 04 45.0	-0.3
	baz=211						
ELDTW	Lidau	1.93	202	eP	Pn	09 04 23.6	+0.3
	baz=201						
ELDTW				eS	Sn	09 04 48.7	-0.4
	baz=201						
CHN4	Tsaushan	1.97	214	eP	Pn	09 04 23.7	+0.1
	baz=214						
CHN4				eS	Sn	09 04 49.1	-0.6
	baz=214						
WTP	Ta-pu	2.05	212	eP	Pn	09 04 24.3	-0.3
	baz=211						
WTP				eS	Sn	09 04 50.1	-1.3
	baz=211						
TWK	Hsinying	2.10	215	eP	Pn	09 04 24.4	-0.8
	baz=214						
CHN1	Nanshi	2.14	213	eP	Pn	09 04 25.6	-0.1
	baz=212						
CHN1				eS	Sn	09 04 52.8	-0.6
	baz=212						

IDC 02 09:25:12.2±2.0, 3.°89N×127.°19E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=149.4km s-min=25.5km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.70	164	P	P	09 30 33.9	-1.3
	2.4nm,0.7s,baz=344,slow=11,SNR=30						
ASAR	Alice Springs	28.16	167	P	P	09 31 08.1	+1.6
	0.1nm,0.3s,baz=343,slow=8.8,SNR=5.9						
MKAR	Makanchi Array	57.69	325	P	P	09 35 04.6	-0.1
	0.1nm,0.4s,baz=136,slow=7.5,SNR=2.8						

*ISCJB **02** 09:31:15.5±0.6, 51.°47N±0.°03×16.°08E±0.°03, h0km, Error ellipse: s-maj=4.4km s-min=2.5km az=20.0*
*IPEC **02** 09:31:15.9±0.3, 51.°57N×16.°22E, h0km, ML2.7/3, Error ellipse: s-maj=3.3km s-min=1.7km az=67.0*
*WAR **02** 09:31:15.9, 51.°59N×15.°99E*
*CSEM **02** 09:31:16.0±0.2, 51.°53N×16.°12E, h2km, ML3.7/13, Error ellipse: s-maj=4.0km s-min=2.6km az=22.0*
*PRU **02** 09:31:17.3, 51.°51N×16.°11E, h0km*
*BGR **02** 09:31:17.9±0.5, 51.°47N×16.°08E, h1km, ML3.1/12, Error ellipse: s-maj=6.7km s-min=3.3km az=21.0*
*VIE **02** 09:31:18.9±0.3, 51.°31N×16.°22E, h0km, mb2.6/4, ML3.1/4, Error ellipse: s-maj=2.2km s-min=2.0km az=171.0 60 km WNW of Wroclaw Suspected Mining induced.*
ISC 02 09:31:15.9±1.0, 51.°56N±0.°04×16.°09E±0.°02, h0km, n56, σ0.s86/98, 2C-2D, Poland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.72	170	ePg	Pg	09 31 30.3	+0.5
KSP				eSg	Sg	09 31 39.2	0.0
KSP	Ksiaz	0.72	170	ePg	Pg	09 31 30.2	+0.4
KSP				eSg	Sg	09 31 39.6	+0.4
KSP	Ksiaz	0.72	170	i Pg	Pg	09 31 30.3	+0.5
KSP				i Sg	Sg	09 31 39.6	+0.4
KSP				e		09 31 44.2	
KSP	Ksiaz	0.72	170	ePg	Pg	09 31 30.1	+0.3
	baz=356						
KSP				Sg	Sg	09 31 39.2	0.0
UPC	Upice	1.05	183	ePG	Pb	09 31 36.3	-0.7
UPC				eSG	Sg	09 31 50.0	+0.4
	comp=Z,81nm,0.3s						
UPC	Upice	1.05	183	Pg	Pb	09 31 36.3	-0.7
UPC				Sg	Sg	09 31 50.0	+0.4
	81nm,0.3s						
DPC	Dobruska-Polom	1.22	173	ePg	Pg	09 31 39.2	0.0
DPC				eSg	Sg	09 31 54.8	-0.1
DPC	Dobruska-Polom	1.22	173	ePG	Pg	09 31 39.1	0.0
DPC				eSG	Sg	09 31 54.5	-0.4
	comp=Z,58nm,0.4s						
DPC	Dobruska-Polom	1.22	173	Pg	Pg	09 31 39.2	0.0
DPC				Sg	Sg	09 31 54.5	-0.4
	58nm,0.4s						
PVCC	Panska Ves	1.41	224	ePG	Pb	09 31 42.8	-0.3
PVCC				eSG	Sn	09 32 01.9	-0.1
	comp=Z,381nm,0.2s						
PVCC	Panska Ves	1.41	224	ePg	Pb	09 31 42.9	-0.2
	baz=44						
PVCC				Sg	Sn	09 32 01.9	-0.1
	381nm,0.2s						
BRG	Berggiesshubel	1.51	244	PN	Pb	09 31 44.2	-0.7
BRG				PG	Pg	09 31 45.2	+0.3
BRG				SG	Sn	09 32 05.6	+0.9
	310nm,0.4s						
KRLC	Kraliky	1.54	163	ePG	Pn	09 31 44.5	-0.3
KRLC				eSG	Sn	09 32 05.4	-0.1
KRLC	Kraliky	1.54	163	Pg	Pn	09 31 44.5	-0.3
KRLC				Sg	Sn	09 32 05.4	-0.1
FBE	Freiberg	1.83	251	ePg	Pg	09 31 51.1	+0.1
FBE				eSg	Sg	09 32 15.4	+0.6
FBE	Freiberg	1.83	251	Pg	Pg	09 31 51.1	+0.1
FBE				Sg	Sg	09 32 15.4	+0.6
PRU	Pruhonice	1.85	213	ePN	Pb	09 31 48.8	-1.8
PRU				ePG	Pg	09 31 50.6	-0.8
PRU				eSG	Sg	09 32 15.1	-0.3
	comp=Z,114nm,0.6s						
PRU	Pruhonice	1.85	213	Pn	Pb	09 31 48.8	-1.8
CLL	Collm	1.95	264	ePn	Pb	09 31 49.9	-2.4
CLL				ePg	Pg	09 31 52.9	-0.3
CLL	Collm	1.95	264	ePn	Pb	09 31 50.0	-2.4
CLL				ePg	Pg	09 31 53.0	-0.3
CLL				e		09 31 57.0	
CLL				eSg	Sg	09 32 19.0	+0.5
	comp=Z,84nm,0.7s						
CLL	Collm	1.95	264	Pn	Pb	09 31 49.9	-2.4
MORC	Moravsky Berou	2.01	152	ePn	Pn	09 31 50.9	-0.2
MORC	Moravsky Berou	2.01	152	Pn	Pn	09 31 50.9	-0.2
MORC				eSg	Sn	09 32 18.0	+1.1
	comp=Z,40nm,0.4s,baz=335						
OKC	Ostrava-Krasne	2.16	142	ePG	Pb	09 31 55.8	-0.1
OKC				eSG	Sb	09 32 25.1	+1.9
	comp=Z,52nm,0.5s						
OKC	Ostrava-Krasne	2.16	142	Pg	Pb	09 31 55.8	-0.1
OKC				Sg	Sb	09 32 25.1	+1.9
	comp=Z,52nm,0.5s						
VRAC	Vranov	2.27	172	ePn	Pn	09 31 54.9	+0.2
VRAC				eSg	Sb	09 32 27.1	+0.7
	comp=Z,61nm,0.6s,baz=354						
TREC	Trest	2.30	190	ePN	Pn	09 31 55.8	+0.7
TREC				ePG	Pb	09 31 58.6	+0.4
TREC				eSG	Sg	09 32 28.6	-1.0
	comp=Z,47nm,0.4s						
TREC	Trest	2.30	190	Pn	Pn	09 31 55.8	+0.7
KRUC	Moravsky	2.50	175	ePn	Pn	09 31 58.1	+0.2
	baz=358						
KRUC				eSg	Sb	09 32 34.5	+1.4
	comp=Z,34nm,0.5s,baz=358						
TANN	Tannenbergstha	2.56	245	ePn	Pn	09 31 59.1	+0.4
TANN				eSg	Sg	09 32 38.0	-0.2
TANN	Tannenbergstha	2.56	245	Pn	Pn	09 31 59.1	+0.4
TANN				Sg	Sg	09 32 38.0	-0.2
NKC	Novy Kostel	2.66	242	ePN	Pn	09 32 00.5	+0.4
NKC				ePG	Pg	09 32 05.6	-1.3
NKC				eSG	Sg	09 32 42.2	+0.9
	comp=Z,209nm,0.3s						
NKC	Novy Kostel	2.66	242	Pn	Pn	09 32 00.5	+0.4
OJC	Ojcow	2.70	118	ePg	Pg	09 32 07.3	-0.4
OJC	Ojcow	2.70	118	ePg	Pg	09 32 07.2	-0.4
OJC				eSg	Sg	09 32 43.2	+0.5
OJC	Ojcow	2.70	118	Pg	Pg	09 32 07.3	-0.4
OJC				eSg	Sg	09 32 43.2	+0.5
KHC	Kasperske Hory	2.91	215	ePN	Pn	09 32 04.3	+0.8
KHC				ePG	Pg	09 32 09.5	-2.2
KHC				eSN	Sn	09 32 38.5	-0.7
KHC				eSG	Sg	09 32 48.7	-0.7
	comp=Z,28nm,0.4s						
KHC	Kasperske Hory	2.91	215	Pn	Pn	09 32 04.3	+0.8
MOX	Moxa	2.96	254	eSg	Sg	09 32 52.4	+1.3
MOX	Moxa	2.96	254	Sg	Sg	09 32 52.4	+1.3
ROTZ	Rotzenmuhle	3.05	236	ePn	Pn	09 32 06.1	+0.7
ROTZ	Rotzenmuhle	3.05	236	Pn	Pn	09 32 06.1	+0.7
GEC2	GERESS Array S	3.12	210	ePn	Pn	09 32 07.5	+1.1
GEC2	GERESS Array S	3.12	210	Pn	Pn	09 32 07.5	+1.1
NIE	Niedzica	3.44	127	ePg	Pg	09 32 20.8	-1.1
NIE				eSg	Sg	09 33 05.4	-1.0
NIE	Niedzica	3.44	127	ePg	Pg	09 32 20.8	-1.1
NIE				eSg	Sg	09 33 05.4	-1.0
CLZ	Clausthal	3.57	277	ePn	Pn	09 32 13.6	+1.0
CLZ	Clausthal	3.57	277	Pn	Pn	09 32 13.6	+1.0
GRA1	Grafenberg Arr	3.62	241	Sg	Sg	09 33 12.7	+0.6
GRF	Grafenberg Arr	3.62	241	eSg	Sg	09 33 12.7	+0.6
CONA	Conrad Observa	3.63	182	⇓iPn	Pn	09 32 13.1	-0.4
CONA				⇑iSg	Sg	09 33 11.5	-1.1
	comp=Z,25nm,0.4s						
CONA	Conrad Observa	3.63	182	Pn	Pn	09 32 13.1	-0.4
CONA				Sg	Sg	09 33 11.5	-1.1
	comp=Z,25nm,0.4s						
MOA	Molln	3.89	198	⇑iPn	Pn	09 32 17.5	+0.5
MOA				⇓iSg	Sg	09 33 20.8	-0.1
	comp=Z,19nm,0.3s						
MOA	Molln	3.89	198	Pn	Pn	09 32 17.5	+0.5
MOA				Sg	Sg	09 33 20.8	-0.1
	comp=Z,19nm,0.3s						
KWP	Kalwaria Pacla	4.63	112	ePb	Pg	09 32 41.8	-2.9
KWP	Kalwaria Pacla	4.63	112	ePb	Pg	09 32 41.9	-2.8

*ISK **02** 09:33:05.6, 36.°07N×27.°11E, h6km, MD2.8*
*CSEM **02** 09:33:07.5±0.1, 36.°13N×27.°23E, h2km, MD3.0, Error ellipse: s-maj=5.0km s-min=2.9km az=130.0*
*ATH **02** 09:33:07.3, 36.°13N×27.°22E, h17km±1km, MD3.0/7*
*DDA **02** 09:33:07.2, 36.°07N×27.°26E, h4km, MD3.5*
ISC 02 09:33:07.9±1.1, 36.°12N±0.°02×27.°24E±0.°03, h9km±10km, n34, σ0.s70/53, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.57	187	ePN	Pg	09 33 18.7	-0.2
KARP				eSN	Sg	09 33 27.0	+0.6
KARP	Karpathos	0.57	187	ePn	Pg	09 33 18.7	-0.2
KARP				eSn	Sg	09 33 27.0	+0.6
DAT	Datca	0.67	24	ePG	Pg	09 33 20.4	-0.4
DAT				eSG	Sb	09 33 31.7	+0.4
DAT	Datca	0.67	24	ePg	Pg	09 33 20.4	-0.4
DAT				eSg	Sb	09 33 31.7	+0.4
ARG	Arkhangelos	0.72	82	ePN	Pg	09 33 21.5	-0.3
ARG				eSN	Sb	09 33 32.2	-0.5
ARG	Arkhangelos	0.72	82	ePn	Pg	09 33 21.5	-0.3
ARG				eSn	Sb	09 33 32.2	-0.5
BODT	Bodrum	0.95	3	ePG	Pg	09 33 25.3	-0.8
BODT				eSG	Sb	09 33 39.6	+0.4
BODT	Bodrum	0.95	3	ePg	Pg	09 33 25.3	-0.8
BODT				eSg	Sb	09 33 39.6	+0.4
MLSB	Milas	1.25	20	ePN	Pn	09 33 31.3	-0.3
MLSB	Milas	1.25	20	ePn	Pn	09 33 31.3	-0.3
ZKR	Zakros	1.30	220	ePN	Pn	09 33 32.1	-0.1
ZKR				eSN	Sn	09 33 50.0	+0.2
ZKR	Zakros	1.30	220	ePn	Pn	09 33 32.1	-0.1
ZKR				eSn	Sn	09 33 50.0	+0.2
YER	Yerkesik	1.32	39	ePN	Pn	09 33 32.4	-0.2
YER	Yerkesik	1.32	39	ePn	Pn	09 33 32.4	-0.2
TURN	Turunc	1.33	55	i P	Pn	09 33 27.2	-5.5
TURN				i S	Sb	09 33 42.5	-7.7
FETY	Fethiye	1.57	70	ePN	Pn	09 33 36.6	+0.5
FETY	Fethiye	1.57	70	ePn	Pn	09 33 36.6	+0.5
NPS	Neapolis	1.57	238	ePN	Pn	09 33 36.3	+0.3
NPS				eSN	Sb	09 33 57.2	0.0
NPS	Neapolis	1.57	238	ePn	Pn	09 33 36.3	+0.3
NPS				eSn	Sb	09 33 57.2	0.0
AYDN	Tasoluk	1.63	18	i P	Pn	09 33 37.0	+0.2
AYDN				i S	Sg	09 34 02.2	+2.0
AYDN	Tasoluk	1.63	18	i P	Pn	09 33 37.0	+0.2
AYDN				i S	Sg	09 34 02.2	+2.0
APE	Apeiranthos	1.67	305	ePN	Pn	09 33 35.4	-2.1
APE	Apeiranthos	1.67	305	ePN	Pn	09 33 37.8	+0.4
APE	Apeiranthos	1.67	305	ePn	Pn	09 33 37.8	+0.4
LAST	Lasithi	1.72	237	ePN	Pn	09 33 38.7	+0.6
LAST				eSN	Sb	09 34 01.8	+0.3
LAST	Lasithi	1.72	237	ePn	Pn	09 33 38.7	+0.6
LAST				eSn	Sb	09 34 01.8	+0.3
XRY	Khrisi	1.77	226	ePN	Pb	09 33 39.7	-0.7
XRY	Khrisi	1.77	226	ePn	Pb	09 33 39.7	-0.7
AKAS	Kas	1.92	86	i P	Pn	09 33 41.3	+0.5
AKAS				i S	Sg	09 34 09.7	+0.2
AKAS	Kas	1.92	86	i P	Pn	09 33 41.3	+0.5
AKAS				i S	Sg	09 34 09.7	+0.2
GOLH	Golhisar	2.17	58	i P	Pb	09 33 46.5	-1.0
GOLH				i S	Sb	09 34 15.2	+0.6
GOLH	Golhisar	2.17	58	i P	Pb	09 33 46.5	-1.0
GOLH				i S	Sb	09 34 15.2	+0.6
KARN	Karanos	2.79	256	ePN	Pn	09 33 53.3	+0.5
KARN	Karanos	2.79	256	ePn	Pn	09 33 53.3	+0.5

IDC 02 09:49:34.5±7.5, 17.°25S×174.°56W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/18, mbtmp3.7/3, MS3.6/2, Ms1 3.6/2, ms1mx2.9/28, Error ellipse: s-maj=340.0km s-min=35.2km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	37.17	259	LR	LR	10 09 46.7	
	comp=Z,73nm,21.1s,baz=49,slow=33						
WRA	Warramunga Arr	48.36	258	P	P	09 58 17.7	-0.8
	0.4nm,0.8s,baz=96,slow=7.5,SNR=7.7						
WRA				LR	LR	10 16 13.0	
	comp=Z,77nm,19.1s,baz=115,slow=33						
ASAR	Alice Springs	48.50	253	P	P	09 58 20.3	+0.8
	1.3nm,0.4s,baz=88,slow=7.7,SNR=46						
ILAR	Eielson Array	84.47	12	P	P	10 02 09.4	+0.7
	0.5nm,0.8s,baz=212,slow=6.0,SNR=6.9						
BRTR	Keskin Array B	146.83	318	PKPbc	PKPdf	10 09 16.7	-0.7
	0.3nm,0.4s,baz=70,slow=1.4,SNR=3.6						

*IDC **02** 09:58:05.8±0.7, 15.°70S×167.°31E, h0km, mb4.1/13, mb1 4.3/14, mb1mx4.1/23, mbtmp4.1/14, ML4.2/1, MS3.5/3, Ms1 3.5/3, ms1mx3.0/26, Error ellipse: s-maj=24.8km s-min=16.4km az=81.0*
*ISCJB **02** 09:58:08.0±0.6, 15.°91S±0.°04×167.°2E±0.°1, h27km, mb4.0/12, MS3.5/2, Error ellipse: s-maj=19.2km s-min=6.1km az=178.3*
*NOU **02** 09:58:07.0±1.0, 15.°72S×166.°92E, h30km±999km, MD3.4, ML3.6*
ISC 02 09:58:09.9±0.7, 15.°85S±0.°07×167.°2E±0.°2, h27km, n29, σ1.s27/30, mb4.1/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.24	187	eP	Pn	09 59 40.1	-0.2
DZM				eS	Sn	10 00 49.1	-1.6
DZM				AMP		10 00 52.5	
	comp=Z,536nm,4.3s						
DZM	Mont Dzumac	6.24	187	Pn	Pn	09 59 40.5	+0.2
	comp=Z,5.6nm,0.3s,baz=32,slow=13,SNR=80						
DZM				Sn	Sn	10 00 49.5	-1.2
	comp=Z,8.1nm,0.3s,baz=329,slow=22,SNR=9.4						
DZM				LR	LR	10 01 49.5	
	comp=Z,435nm,19.4s,baz=27,slow=35						
NOUC	Port Laguerre	6.28	188	eP	Pn	09 59 40.5	-0.3
NOUC				eS	Sn	10 00 49.9	-1.8
NOUC				AMP		10 00 54.3	
	comp=Z,27nm,0.8s						
NORM	Noumea	6.39	186	eP	Pn	09 59 42.9	+0.6
PLUM	Mont Dore	6.42	185	eS	Sn	10 00 54.2	-0.8
CTA	Charters Tower	20.40	255	P	Pn	10 02 46.9	-0.2
	comp=Z,4.2nm,0.2s,baz=63,slow=14,SNR=5.1						
PMG	Port Moresby	20.60	286	P	Pn	10 02 53.5	+4.0
	comp=Z,11nm,0.9s,baz=119,slow=10,SNR=3.1						
URZ	Urewera	23.96	161	P	P	10 03 23.5	+1.6
	comp=Z,9.2nm,0.6s,baz=326,slow=7.6,SNR=9.8						
URZ				LR	LR	10 11 48.1	
	comp=Z,145nm,18.8s,baz=353,slow=34						
RPZ	Rata Peaks	27.97	174	P	P	10 03 59.6	+1.4
	comp=Z,7.9nm,0.8s,baz=0.0,slow=14,SNR=5.7						
WRA	Warramunga Arr	31.54	258	P	P	10 04 29.3	-0.9
	comp=Z,0.8nm,0.9s,baz=89,slow=9.0,SNR=5.2						
WRA				PcP	PcP	10 07 25.4	+2.8
	comp=Z,0.2nm,0.7s,baz=95,slow=3.2,SNR=4.4						
ASAR	Alice Springs	32.26	251	P	P	10 04 36.5	0.0
	comp=Z,2.6nm,0.7s,baz=77,slow=8.8,SNR=26						
ASAR				PcP	PcP	10 07 27.9	+3.2
	comp=Z,0.3nm,0.7s,baz=98,slow=2.3,SNR=4.2						
MJAR	Matsushiro Arr	58.88	333	P	P	10 08 06.9	+0.5
	comp=Z,1.1nm,0.8s,baz=170,slow=7.4,SNR=4.1						
JNU	Nakatsue	59.81	325	P	P	10 08 12.2	-0.8
	comp=Z,2.8nm,0.7s,baz=163,slow=11,SNR=2.8						
JNU				LR	LR	10 29 58.1	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,30nm,18.5s,baz=52,slow=32						
VNDA	Vanda	61.75	181	P	P	10 08 26.1	+0.6
	comp=Z,1.9nm,0.8s,baz=18,slow=5.1,SNR=9.1						
CMAR	Chiang Mai Arr	75.38	294	P	P	10 09 52.0	+0.5
	comp=Z,0.6nm,0.3s,baz=129,slow=7.1,SNR=2.8						
SONM	Songino Array	83.37	324	P	P	10 10 34.9	+0.1
	comp=Z,1.6nm,1.0s,baz=119,slow=5.2,SNR=4.2						
ILAR	Eielson Array	87.59	18	P	P	10 10 53.7	-1.5
	comp=Z,0.4nm,0.6s,baz=238,slow=5.1,SNR=7.5						
VNA3	Neumayer Olymp	93.10	181	eP	P	10 11 16.0	-5.0
VNA2	Neumayer--Watz	93.37	182	eP	P	10 11 22.3	+0.1
	baz=277,slow=2.3						
MKAR	Makanchi Array	97.99	316	P	Pdif	10 11 44.1	+0.4
	comp=Z,0.1nm,0.6s,baz=108,slow=4.7,SNR=2.2						
YKA	Yellowknife Ar	98.55	27	P	P	10 11 43.8	-1.9
	comp=Z,0.2nm,0.7s,baz=256,slow=4.3,SNR=3.8						
KURBB	Kurchatov Arra	101.27	320	P	Pdif	10 11 57.5	-0.6
	comp=Z,0.2nm,0.5s,baz=88,slow=4.8,SNR=2.7						
AKTO	Aktyubinsk	114.28	319	PKP	PKPdf	10 16 47.0	0.0
	comp=Z,0.5nm,0.3s,baz=45,slow=1.4,SNR=4.6						
ARCES	ARCESS Array B	121.32	345	PKP	PKPdf	10 16 59.3	-0.7
	comp=Z,4.8nm,0.9s,baz=49,slow=2.7,SNR=7.6						
NOA	NORSAR Array B	131.69	345	PKP	PKPdf	10 17 19.3	-0.7
	comp=Z,0.9nm,0.7s,baz=31,slow=1.9,SNR=4.8						
BRTR	Keskin Array B	133.21	310	PKP	PKPdf	10 17 23.4	-0.3
	comp=Z,0.3nm,0.4s,baz=62,slow=3.4,SNR=2.8						
GERES	GERESS Array B	140.62	332	PKP	PKPdf	10 17 38.5	+1.5
	comp=Z,0.4nm,0.4s,baz=98,slow=3.4,SNR=3.4						
KEST	Kesra	152.04	319	PKPbc	PKPbc	10 18 03.2	0.0
	comp=Z,1.3nm,0.7s,baz=47,slow=4.0,SNR=5.4						
TORD	Torodi Ar. Bea	165.75	261	PKP	PKPdf	10 18 13.9	+0.7
	comp=Z,0.2nm,0.6s,baz=101,slow=0.2,SNR=3.0						
TORD				PKPab	PKPab	10 19 11.8	-0.7
	comp=Z,0.7nm,0.9s,baz=106,slow=3.9,SNR=3.5						

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*SKHL **02** 10:00:37.6±1.0, 52.°54N×142.°42E, h10km, mb4.5/11, Ms4.3/4*
SKHL Felt (III) at Chaivo, (II) at Nikolaevsk-na-Amure.
*MOS **02** 10:00:39.8±1.5, 52.°49N×142.°98E, h13km, mb4.3/21, Error ellipse: s-maj=11.2km s-min=6.6km az=89.9*
MOS Felt (III) at Chaivo; (II) at Nikolaevsk-na-Amure.
*ISCJB **02** 10:00:39.2±0.3, 52.°49N±0.°02×142.°87E±0.°07, h11km, mb4.2/30, MS3.6/12, Error ellipse: s-maj=6.1km s-min=2.9km az=9.2*
*IDC **02** 10:00:39.3±0.5, 52.°58N×142.°77E, h0km, mb4.0/19, mb1 4.2/23, mb1mx4.1/30, mbtmp4.0/23, ML3.5/4, MS3.4/14, Ms1 3.4/14, ms1mx3.2/38, Error ellipse: s-maj=15.0km s-min=12.7km az=124.0*
*BJI **02** 10:00:41.4, 53.°33N×143.°02E, h45km, mB4.7/1, mb4.8/3, Ms4.6/3, Ms7 4.3/2*
*NEIC **02** 10:00:42.6±2.1, 52.°58N×142.°81E, h21km±16km, mb4.3/6, Error ellipse: s-maj=6.4km s-min=4.9km az=136.0*
NEIC Felt [III] at Chayvo and [II] at Nikolaevsk-na-Amure.
ISC 02 10:00:41.1±0.4, **52.°61N**±0.°03×**142.°75E**±0.°03, **h11km, n105,** σ**1.s91**/108, **mb4.2**/30, **MS3.5**/12, **4C-1D, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKH	Okha	0.95	7	ePg	Pb	10 01 00.0	+0.3
OKH				i Sg	Sn	10 01 16.0	+2.0
NKL	Nikolayevsk	1.37	294	ePg	Pn	10 01 01.7	-4.4
NKL				AMB	AMB	10 01 02.2	
	99nm,0.4s						
NKL				AMB	AMB	10 01 02.2	
	320nm,0.4s						
NKL				eSg	Sb	10 01 19.0	-5.2
NKL				AMS	AMS	10 02 02.0	
	6μm,5.0s						
NKL				AMS	AMS	10 02 02.0	
	5μm,5.0s						
TYV	Tymovskoe	1.75	182	ePb	Pn	10 01 09.2	-2.1
TYV				AMB	AMB	10 01 10.0	
	38nm,0.6s						
TYV				AMB	AMB	10 01 10.0	
	32nm,0.6s						
TYV				AMB	AMB	10 01 10.0	
	74nm,0.6s						
TYV				ePg	Pb	10 01 11.3	-1.9
TYV				AMB	AMB	10 01 19.0	
	500nm,2.0s						
TYV				AMB	AMB	10 01 19.0	
	2μm,2.0s						
TYV				eSg	Sb	10 01 34.1	-1.0
TYV				A	A	10 01 49.0	
	8μm,4.0s						
UGL	Uglegorsk	3.56	187	PN	Pg	10 01 49.0	-0.3
UGL				pmax	pmax		
	comp=Z,96nm,0.5s						
UGL				MLR	MLR		
	comp=N,1μm,14.0s						
UGL				MLR	MLR		
	comp=E,3μm,14.0s						
UGL	Uglegorsk	3.56	187	ePg	Pg	10 01 49.0	-0.3
UGL				AMB	AMB	10 01 51.5	
	comp=E,96nm,0.5s						
UGL				eSg	Sg	10 02 34.0	-1.3
UGL				A	A	10 02 42.0	
	comp=E,210nm,0.7s						
UGL				A	A	10 02 42.0	
	comp=E,200nm,0.6s						
UGL				A	A	10 02 42.0	
	comp=E,390nm,0.6s						
UGL				AMS	AMS	10 03 53.0	
	comp=E,1μm,14.0s						
UGL				AMS	AMS	10 03 53.0	
	comp=E,3μm,14.0s						
GRNR	Gornyy	4.35	247	ePg	Pb	10 01 58.4	+0.9
GRNR				AMB	AMB	10 01 59.7	
	comp=E,36nm,0.5s						
GRNR				eSg	Sg	10 02 56.5	-4.1
GRNR				A	A	10 03 04.1	
	comp=E,500nm,0.5s						
YSS	Yuzh-Sakhalins	5.66	180⇑	iPN	Pn	10 02 05.0	-0.1
YSS				e		10 03 17.9	
YSS				pmax	pmax		
	comp=N,30nm,0.9s						
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				smax	smax		
	comp=N,60nm,1.0s						
YSS	Yuzh-Sakhalins	5.66	180	ePn	Pn	10 02 04.4	-0.7
	comp=N,32nm,0.6s						
YSS	Yuzh-Sakhalins	5.66	180⇑	iP	Pn	10 02 03.5	-1.6
YSS				AMB	AMB	10 02 07.0	
	comp=N,30nm,0.9s						
YSS				AMB	AMB	10 02 07.0	
	comp=N,30nm,0.9s						
YSS				ePg	Pg	10 02 28.5	-0.9
YSS				AMB	AMB	10 02 30.0	
	comp=N,32nm,0.6s						
YSS				eS	Sn	10 03 06.0	-4.0
YSS				A	A	10 03 07.0	
	comp=N,50nm,0.8s						
YSS				eSg	Sg	10 03 47.0	+4.4
YSS				A	A	10 03 54.0	
	comp=N,60nm,1.0s						
EKMR	Ekimchan	5.96	278	eP	Pn	10 02 05.8	-3.5
EKMR				ePg	Pg	10 02 32.3	-2.9
EKMR				AMB	AMB	10 02 38.0	
	comp=N,12nm,0.6s						
EKMR				AMB	AMB	10 02 38.0	
	comp=N,19nm,0.6s						
EKMR				AMB	AMB	10 02 38.0	
	comp=N,37nm,0.6s						
EKMR				eS	Sn	10 03 11.0	-6.5
EKMR				eSg	Sg	10 03 51.0	-1.3
EKMR				A	A	10 03 54.9	
	comp=N,300nm,0.6s						
EKMR				A	A	10 03 54.9	
	comp=N,120nm,0.6s						
EKMR				A	A	10 03 54.9	
	comp=N,110nm,0.6s						
KLR	Kul'dur	7.73	248	ePN	Pn	10 02 34.0	+0.5
KLR				MLR	MLR		
	comp=E,900nm,9.0s						
KLR				MLR	MLR		
	comp=Z,2μm,9.0s						
KLR	Kul'dur	7.73	248	eP	Pn	10 02 34.0	+0.5
KLR				eSg	Sb	10 04 31.5	+4.4
KLR				AMS	AMS	10 05 31.0	
	comp=Z,900nm,9.0s						
KLR				AMS	AMS	10 05 31.0	
	comp=Z,2μm,9.0s						
ASAJ	Asahikawa	8.50	181	ePn	Pn	10 02 43.8	-0.2
	comp=Z,3.6nm,0.6s						
ASAJ	Asahikawa	8.50	181	Pn	Pn	10 02 43.5	-0.6
	comp=Z,0.8nm,0.3s,baz=21,slow=13,SNR=21						
ASAJ				LR	LR	10 06 35.1	
	comp=Z,481nm,18.7s,baz=104,slow=42						
BMKR	Bomnak	8.53	290	eP	Pn	10 02 42.5	-1.9
BMKR				ePg	Pg	10 03 06.4	-18
BMKR				AMB	AMB	10 03 07.5	
	comp=Z,9.0nm,0.6s						
BMKR				eSg	Sg	10 05 11.5	-3.0
BMKR				A	A	10 05 12.6	
	comp=Z,56nm,0.8s						
TEY	Ternei	8.59	211	eSg	Sg	10 05 22.0	+5.4
TEY				A	A	10 05 24.8	
	comp=Z,60nm,1.0s						
TEY				A	A	10 05 24.8	
	comp=Z,40nm,1.0s						
TEY				A	A	10 05 24.8	
	comp=Z,110nm,1.0s						
YUK	Yuzh-Kuril'sk	8.82	165	PN	Pn	10 02 48.3	-0.2
YUK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
YUK				pmax	pmax		
	comp=N,24nm,0.6s						
YUK				pmax	pmax		
	comp=E,19nm,0.6s						
YUK				MLR	MLR		
	comp=E,99nm,14.0s						
YUK				MLR	MLR		
	comp=Z,211nm,14.0s						
YUK				MLR	MLR		
	comp=N,157nm,14.0s						
YASR	Yasnyy	8.95	280	AMB	AMB	10 03 05.0	
	comp=N,4μm,0.9s						
YASR				AMB	AMB	10 03 06.1	
	comp=N,10.0nm,0.3s						
YASR				AMB	AMB	10 03 06.1	
	comp=N,20nm,0.6s						
YASR				ePg	Pg	10 03 50.6	+18
YASR				AMB	AMB	10 04 03.0	
	comp=N,4.0nm,0.4s						
YASR				i Sg	Sg	10 05 26.9	-1.1
YASR				A	A	10 05 42.4	
	comp=N,7.0nm,0.7s						
PETK	Petropavlovsk-	9.06	81	PN	Pn	10 02 50.9	-0.9
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,76nm,21.4s						
PETK	Petropavlovsk-	9.06	81	Pn	Pn	10 02 50.9	-0.9
PETK				Sn	Sn	10 04 26.6	-7.1
PETK	Petropavlovsk-	9.06	81	Pn	Pn	10 02 50.9	-0.9
	comp=Z,0.6nm,0.3s,baz=286,slow=11,SNR=21						
PETK				Sn	Sn	10 04 26.6	-7.1
	comp=Z,0.1nm,0.3s,baz=273,slow=16,SNR=2.3						
PETK				LR	LR	10 06 12.0	
	comp=Z,76nm,21.4s,baz=136,slow=37						
ZEA	Zeya	9.38	283	ePg	Pn	10 03 18.3	+22
ZEA				AMB	AMB	10 03 21.5	
	comp=Z,20nm,0.7s						
ZEA				AMB	AMB	10 03 21.5	
	comp=Z,27nm,0.7s						
ZEA				eSg	Sn	10 05 10.8	+29
ZEA				A	A	10 05 15.0	
	comp=Z,55nm,1.0s						
ZEA				A	A	10 05 15.0	
	comp=Z,41nm,1.0s						
ZEA				A	A	10 05 15.0	
	comp=Z,46nm,1.0s						
ZEA				AMS	AMS	10 06 50.0	
	comp=Z,700nm,7.0s						
KROS	Kirovskiy	9.58	287	ePg	Pn	10 03 56.2	+57
KROS				AMB	AMB	10 04 08.5	
	comp=Z,5.0nm,0.6s						
KROS				eSg	Sn	10 05 40.0	+54
KROS				A	A	10 05 51.8	
	comp=Z,26nm,0.6s						
PET	Petropavlovsk	9.64	81	ePN	Pn	10 02 59.7	0.0
PET				MLR	MLR		
	comp=Z,300nm,12.0s						
PET				MLR	MLR		
	comp=Z,200nm,13.0s						
PET	Petropavlovsk	9.64	81	eP	Pn	10 02 59.7	0.0
PET				eS	Sn	10 04 44.8	-3.1
PET				AMS	AMS	10 08 55.5	
	comp=Z,285nm,12.0s						
PET				AMS	AMS	10 09 04.0	
	comp=Z,233nm,13.0s						
USRK	Ussuriysk Arra	11.03	225	LR	LR	10 07 54.5	
	comp=Z,249nm,20.4s,baz=173,slow=40						
CLNS	Chul'man	11.15	299	ePN	Pn	10 03 26.4	+6.0
CLNS				eS	Sn	10 05 35.0	+10
CLNS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,7.0nm,1.0s						
CLNS				pmax	pmax		
	comp=N,9.0nm,0.8s						
CLNS				smax	smax		
	comp=N,36nm,8.1s						
CLNS				smax	smax		
	comp=E,203nm,13.1s						
CLNS				MLR	MLR		
	comp=N,328nm,9.0s						
CLNS				MLR	MLR		
	comp=Z,357nm,12.0s						
CLNS				MLR	MLR		
	comp=E,466nm,12.0s						
SEY	Seymchan	11.54	22	ePN	Pn	10 03 29.0	+3.3
YAK	Yakutsk	11.77	328	ePN	Pn	10 03 35.7	+7.0
YAK				eS	Sn	10 05 50.7	+11
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.4s						
YAK				smax	smax		
	comp=N,82nm,2.7s						
YAK				smax	smax		
	comp=E,72nm,3.2s						
YAK				MLR	MLR		
	comp=Z,172nm,12.0s						
YAK				MLR	MLR		
	comp=N,189nm,15.0s						
YAK				MLR	MLR		
	comp=E,44nm,10.0s						
MJAR	Matsushiro Arr	16.38	193	Pn	P	10 04 32.2	-1.6
MJAR	Matsushiro Arr	16.38	193	Pn	P	10 04 32.2	-1.6
	comp=E,0.1nm,0.3s,baz=1.8,slow=9.4,SNR=3.3						
FX1	Attu Island--F	18.35	77	LR	LR	10 11 42.5	
	comp=E,64nm,19.6s,baz=258,slow=36						
KSRS	Korea Array	18.36	220	P	P	10 04 56.5	+0.8
	comp=E,0.1nm,0.3s,baz=36,slow=10.0,SNR=7.7						
KSRS				LR	LR	10 12 02.3	
	comp=E,155nm,19.1s,baz=220,slow=37						
KSAR	Wonju Array Be	18.39	220	P	P	10 04 56.5	+0.5
BILL	Bilibino	19.15	27	eP	Pn	10 05 07.8	+2.8
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,200nm,16.0s						
TIXI	Tiksi	20.08	347	eP	Pn	10 05 15.1	-0.8
TIXI				pmax	pmax		
	comp=Z,11nm,1.0s						
TIXI	Tiksi	20.08	347	eP	Pn	10 05 15.1	-0.8
	comp=Z,11nm,1.0s						
JNU	Nakatsue	21.27	208	P	P	10 05 27.4	0.0
JNU	Nakatsue	21.27	208	P	P	10 05 27.4	0.0
	comp=Z,8.6nm,1.0s,baz=20,slow=12,SNR=2.7						
JNU				LR	LR	10 13 42.5	
	comp=Z,115nm,19.1s,baz=48,slow=37						
SONM	Songino Array	23.57	273	P	P	10 05 51.4	-0.2
SONM	Songino Array	23.57	273	P	P	10 05 51.4	-0.2
	comp=Z,1.0nm,0.6s,baz=46,slow=10,SNR=2.8						
TLY	Talaya	23.82	284	eP	P	10 05 55.2	+1.3
TLY				pmax	pmax		
	comp=Z,15nm,0.9s						
TLY				MLR	MLR		
	comp=Z,145nm,14.0s						
TLY	Talaya	23.82	284	eP	P	10 05 55.1	+1.3
	comp=Z,11nm,0.8s						
HHC	Hu-ho-hao-te	24.20	253	eP	P	10 05 57.8	+0.2
HHC				sP	sP	10 06 11.0	+8.7
HHC				PP	PnPn	10 06 33.6	+6.7
HHC				PcP	PcP	10 09 38.1	+0.3
HHC				S	S	10 10 12.2	-3.4
HHC				SS	SnSn	10 11 06.1	+8.9
HHC				ScP	ScP	10 13 13.1	-2.9
HHC				PcS	PcS	10 13 17.4	-0.2
HHC				pmax	pmax		
	comp=Z,22nm,0.6s						
HHC				pmax	pmax		
	comp=Z,190nm,5.4s						
HHC				LR	LR		
	comp=N,540nm,10.1s						
HHC				LR	LR		
	comp=E,600nm,10.7s						
HHC				LR	LR		
	comp=Z,730nm,10.5s						
ZAK	Zakamensk	24.47	281	eP	P	10 05 59.5	-0.5
ZAK				e		10 06 04.0	
WHN	Wuhan	30.28	234	P	P	10 06 42.9	-9.2
ZALV	Zalesovo Beam	33.84	296	PcP	PcP	10 10 01.6	0.0
ZALV	Zalesovo Beam	33.84	296	PcP	PcP	10 10 01.6	0.0
	comp=Z,0.4nm,0.3s,baz=29,slow=3.3,SNR=4.1						
COLD	Coldfoot	34.66	39	eP	P	10 07 30.2	+0.1
	comp=Z,1.7nm,0.7s						
ILAR	Eielson Array	36.50	43	P	P	10 07 46.5	+0.5
ILAR	Eielson Array	36.50	43	P	P	10 07 46.5	+0.5
	comp=Z,1.4nm,0.6s,baz=271,slow=6.7,SNR=29						
MK31	Makanchi Array	38.52	286	eP	P	10 08 03.4	+0.1
MK31	Makanchi Array	38.52	286	eP	P	10 08 03.4	+0.1
MKAR	Makanchi Array	38.52	286	P	P	10 08 03.2	0.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	38.52	286	P	P	10 08 03.2	0.0
MKAR	Makanchi Array	38.52	286	P	P	10 08 03.2	0.0
	comp=Z,1.2nm,0.7s,baz=64,slow=8.7,SNR=14						
KURK	Kurchatov	38.66	294c	iP	P	10 08 07.1	+2.8
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KURK	Kurchatov	38.66	294	eP	P	10 08 04.4	+0.1
	comp=Z,4.3nm,0.8s						
KURBB	Kurchatov Arra	38.75	294	LR	LR	10 25 23.3	
	comp=Z,24nm,20.7s,baz=55,slow=38						
EGAK	Eagle	38.84	42	eP	P	10 08 06.0	+0.3
	comp=Z,90nm,0.6s						
BVAR	Borovoye Array	41.99	301	P	P	10 08 32.4	+0.4
BVAR						10 10 26.3	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR				MLR	MLR		
	comp=Z,71nm,21.6s						
BVAR	Borovoye Array	41.99	301	P	P	10 08 32.4	+0.4
BVAR				PcP	PcP	10 10 26.3	-0.6
BVAR	Borovoye Array	41.99	301	P	P	10 08 32.4	+0.4
	comp=Z,0.9nm,0.6s,baz=66,slow=8.8,SNR=6.2						
BVAR				PcP	PcP	10 10 26.3	-0.6
	comp=Z,1.0nm,0.5s,baz=72,slow=4.7,SNR=4.8						
BVAR				LR	LR	10 27 21.9	
	comp=Z,71nm,21.6s,baz=261,slow=38						
BRVK	Borovoye	42.03	301⇑	iP	P	10 08 36.1	+3.8
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AAK	Ala-Archa	45.45	286	eP	P	10 09 02.2	+2.1
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ARU	Arti	46.11	310d	iP	P	10 09 08.3	+3.4
ARU						10 10 55.9	
ARU				S	S	10 15 56.8	+6.7
ARU				SS	SS	10 19 17.6	+2.9
ARU				pmax	pmax		
	comp=Z,14nm,2.5s						
RES	Resolute Bay	47.37	18	eP	P	10 09 14.9	+0.4
	comp=Z,4.7nm,0.9s						
CMAR	Chiang Mai Arr	48.15	242	LR	LR	10 29 13.8	
	comp=Z,21nm,20.2s,baz=30,slow=36						
ABKAR	Akbulak array	49.55	301	eP	P	10 09 31.8	+0.1
	comp=Z,3.9nm,0.8s						
AKTO	Aktyubinsk	49.83	304	P	P	10 09 34.6	+0.8
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKTO				MLR	MLR		
	comp=Z,61nm,21.0s						
AKTO	Aktyubinsk	49.83	304	P	P	10 09 34.6	+0.8
AKTO	Aktyubinsk	49.83	304	P	P	10 09 34.6	+0.8
	comp=Z,1.1nm,0.5s,baz=92,slow=16,SNR=4.7						
AKTO				LR	LR	10 33 09.5	
	comp=Z,61nm,21.0s,baz=73,slow=39						
ARCES	ARCESS Array B	49.93	336	P	P	10 09 34.8	+0.4
ARCES	ARCESS Array B	49.93	336	P	P	10 09 34.8	+0.4
	comp=Z,5.5nm,0.9s,baz=32,slow=8.6,SNR=3.2						
YKA	Yellowknife Ar	50.22	36	P	P	10 09 36.3	-0.2
YKA	Yellowknife Ar	50.22	36	P	P	10 09 36.3	-0.2
	comp=Z,0.6nm,0.8s,baz=310,slow=7.2,SNR=19						
FINES	FINESS Array B	55.70	329	P	P	10 10 16.3	-0.7
FINES	FINESS Array B	55.70	329	P	P	10 10 16.3	-0.7
	comp=Z,3.1nm,0.9s,baz=34,slow=8.4,SNR=3.0						
NOA	NORSAR Array B	60.30	335	P	P	10 10 49.1	-0.1
NOA	NORSAR Array B	60.30	335	P	P	10 10 49.1	-0.1
	comp=Z,1.1nm,0.7s,baz=32,slow=6.7,SNR=3.7						
NOA				LR	LR	10 42 33.3	
	comp=Z,20nm,21.7s,baz=0.0,slow=42						
FFC	Flin Flon	60.36	37	i P	P	10 10 50.4	+0.7
KAPI	Kappang	60.63	207	LR	LR	10 38 56.0	
	comp=Z,29nm,19.2s,baz=108,slow=38						
PSI	Prapat	61.45	232	LR	LR	10 37 09.5	
	comp=Z,80nm,18.9s,baz=246,slow=36						
KIV	Kislovodsk	61.89	306	eP	P	10 11 04.0	+3.6
KIV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KIV				MLR	MLR		
	comp=Z,67nm,17.0s						
KBZ	Khabaz	61.95	306	LR	LR	10 41 40.5	
	comp=Z,56nm,18.0s,baz=279,slow=40						
AKASG	Malin Array Be	62.82	319	P	P	10 11 05.3	-1.1
AKASG	Malin Array Be	62.82	319	P	P	10 11 05.3	-1.1
AKASG	Malin Array Be	62.82	319	P	P	10 11 05.3	-1.1
	comp=Z,5.7nm,0.4s,baz=40,slow=7.1,SNR=7.7						
NVAR	Mina Array Bea	65.41	59	P	P	10 11 23.7	-0.2
NVAR	Mina Array Bea	65.41	59	P	P	10 11 23.7	-0.2
	comp=Z,0.9nm,0.7s,baz=308,slow=5.8,SNR=8.4						
ULM	Lac du Bonnet	66.19	37	P	P	10 11 28.1	-0.3
ULM	Lac du Bonnet	66.19	37	P	P	10 11 28.1	-0.3
	comp=Z,3.2nm,0.7s,baz=327,slow=5.1,SNR=8.3						
PDAR	Pinedale Array	66.44	50	P	P	10 11 30.6	+0.1
PDAR	Pinedale Array	66.44	50	P	P	10 11 30.6	+0.1
	comp=Z,1.8nm,0.5s,baz=1.5,slow=1.6,SNR=20						
BRTR	Keskin Array B	69.48	309	P	P	10 11 50.2	+0.6
BRTR	Keskin Array B	69.48	309	P	P	10 11 50.2	+0.6
	comp=Z,0.6nm,0.7s,baz=45,slow=4.4,SNR=3.8						
CTA	Charters Tower	72.45	177	P	P	10 12 07.1	-0.3
CTA	Charters Tower	72.45	177	P	P	10 12 07.1	-0.3
	comp=Z,1.3nm,0.6s,baz=352,slow=7.1,SNR=3.4						
WRAB	Tennant Creek	72.60	188	eP	P	10 12 07.2	-1.1
WRA	Warramunga Arr	72.61	188	P	P	10 12 07.1	-1.2
WRA	Warramunga Arr	72.61	188	P	P	10 12 07.1	-1.2
	comp=Z,2.2nm,0.7s,baz=6.0,slow=6.4,SNR=22						
ASAR	Alice Springs	76.34	188	P	P	10 12 29.8	-0.2
ASAR	Alice Springs	76.34	188	P	P	10 12 29.8	-0.2
	comp=Z,2.2nm,0.7s,baz=2.9,slow=5.3,SNR=20						
TXAR	Lajitas Array	80.03	54	P	P	10 12 51.3	+0.6
TXAR	Lajitas Array	80.03	54	P	P	10 12 51.3	+0.6
	comp=Z,0.5nm,0.8s,baz=315,slow=5.0,SNR=5.7						

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*ISCJB **02** 10:10:14.3±0.5, 37.°89N±0.°02×27.°28E±0.°04, h0km±7km, Error ellipse: s-maj=6.2km s-min=3.5km az=159.0*
*CSEM **02** 10:10:14.7±0.1, 37.°89N×27.°28E, h8km, MD2.8, Error ellipse: s-maj=3.9km s-min=2.4km az=65.0*
*DDA **02** 10:10:14.1, 37.°88N×27.°27E, h7km, MD2.9*
*ISK **02** 10:10:14.0, 37.°90N×27.°26E, h5km, MD2.8*
ISC 02 10:10:14.5±0.9, **37.°89N**±0.°02×**27.°27E**±0.°03, **h9km**±9km, **n31,** σ**0.s43**/46, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.19	188	i Pg	Pg	10 10 18.3	-0.1
GCAM				i Sg	Sg	10 10 20.8	-0.3
IZM	Izmir	0.51	360	ePG	Pg	10 10 24.3	-0.2
IZM				eSG	Sg	10 10 31.7	+0.5
IZM	Izmir	0.51	360	ePg	Pg	10 10 24.3	-0.2
IZM				eSg	Sg	10 10 31.7	+0.5
BLCB	Balcova	0.53	340	ePG	Pg	10 10 24.6	-0.2
BLCB				eSG	Sg	10 10 32.0	+0.3
BLCB	Balcova	0.53	340	ePg	Pg	10 10 24.6	-0.2
BLCB				eSg	Sg	10 10 32.0	+0.3
AYDN	Tasoluk	0.54	115	i P	Pg	10 10 25.1	+0.2
AYDN				i S	Sg	10 10 31.4	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AYDN	**Tasoluk**	**0.54**	**115**	*i* P	**Pg**	**10 10 25.1**	**+0.2**
AYDN				*i* S	**Sg**	**10 10 31.4**	**-0.5**
URLA	**Izmir**	**0.71**	**312**	*e*P	**Pg**	**10 10 28.6**	**+0.3**
URLA				*e*S	**Sb**	**10 10 38.6**	**-0.4**
URLA	**Izmir**	**0.71**	**312**	*e*P	**Pg**	**10 10 28.6**	**+0.3**
URLA				*e*S	**Sb**	**10 10 38.6**	**-0.4**
MLSB	**Milas**	**0.72**	**145**	*e*PG	**Pg**	**10 10 28.5**	**+0.2**
MLSB				*e*SG	**Sb**	**10 10 39.0**	**-0.1**
MLSB	**Milas**	**0.72**	**145**	*e*Pg	**Pg**	**10 10 28.5**	**+0.2**
MLSB				*e*Sg	**Sb**	**10 10 39.1**	**-0.1**
BODT	**Bodrum**	**0.82**	**178**	*e*PG	**Pg**	**10 10 30.6**	**+0.2**
BODT	**Bodrum**	**0.82**	**178**	*e*Pg	**Pg**	**10 10 30.6**	**+0.2**
AKS	**Akhisar**	**1.08**	**23**	*e*PG	**Pb**	**10 10 34.9**	**-0.5**
AKS	**Akhisar**	**1.08**	**23**	*e*Pg	**Pb**	**10 10 34.9**	**-0.5**
AKHS	**Akhisar**	**1.08**	**23**	*i* P	**Pb**	**10 10 34.9**	**-0.5**
AKHS				*i* S	**Sn**	**10 10 50.6**	**-0.4**
AKHS	**Akhisar**	**1.08**	**23**	*i* P	**Pb**	**10 10 34.9**	**-0.5**
AKHS				*i* S	**Sn**	**10 10 50.6**	**-0.4**
YER	**Yerkesik**	**1.10**	**133**	*e*PN	**Pb**	**10 10 35.7**	**-0.1**
YER	**Yerkesik**	**1.10**	**133**	*e*Pn	**Pb**	**10 10 35.7**	**-0.1**
DAT	**Datca**	**1.18**	**168**	*e*PN	**Pn**	**10 10 37.4**	**0.0**
DAT	**Datca**	**1.18**	**168**	*e*Pn	**Pn**	**10 10 37.4**	**0.0**
KULA	**Kula-Manisa**	**1.26**	**60**	*e*PN	**Pb**	**10 10 38.6**	**0.0**
KULA	**Kula-Manisa**	**1.26**	**60**	*e*Pn	**Pb**	**10 10 38.6**	**0.0**
DENT	**Denizli**	**1.41**	**95**	*e*PN	**Pb**	**10 10 40.9**	**-0.1**
DENT	**Denizli**	**1.41**	**95**	*e*Pn	**Pb**	**10 10 40.9**	**-0.1**
DNZL	**Cakiroluk**	**1.42**	**97**	*e*P	**Pn**	**10 10 40.5**	**-0.3**
DNZL				*e*S	**Sg**	**10 11 01.2**	**+0.8**
DNZL	**Cakiroluk**	**1.42**	**97**	*e*P	**Pn**	**10 10 40.5**	**-0.3**
DNZL				*e*S	**Sg**	**10 11 01.2**	**+0.8**
APE	**Apeiranthos**	**1.60**	**240**	*e*PN	**Pb**	**10 10 44.5**	**+0.1**
APE	**Apeiranthos**	**1.60**	**240**	*e*Pn	**Pb**	**10 10 44.5**	**+0.1**
TVSB	**Tavsanli**	**2.32**	**47**	*e*PN	**Pn**	**10 10 54.0**	**+1.0**
TVSB	**Tavsanli**	**2.32**	**47**	*e*Pn	**Pn**	**10 10 54.1**	**+1.0**

*NDI **02** 10:15:14.6±0.9, 34°.34N×82°.70E, h10km, ML3.0*
*IDC **02** 10:15:16.5±0.6, 33°.62N×82°.41E, h0km, mb4.0/17, mb1 4.1/19, mb1mx4.0/31, mbtmp4.0/19, ML3.4/2, MS3.4/3, Ms1 3.4/3, ms1mx2.7/35, Error ellipse: s-maj=21.8km s-min=13.4km az=51.0*
*ISCJB **02** 10:15:19.9±0.5, 33°.73N±0°.06×82°.60E±0°.07, h33km, mb3.9/16, MS3.7/2, Error ellipse: s-maj=8.7km s-min=7.4km az=136.0*
ISC 02 10:15:21.9±0.6**, 33°.78N**±0°.08×**82°.59E**±0°.08**, h35km, n26, σ1s.06**/22**, mb4.0**/16**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**5.16**	**229**	*e*x	Pn	10 16 42.0	+5.2
SMLA	**Simla**	**5.29**	**241**	*e*P	**Pn**	**10 16 38.4**	**0.0**
SMLA				*e*S	**Sn**	**10 17 39.5**	**+1.4**
SMLA				AML	AML	10 17 43.0	
	comp=N,20nm,0.2s						
SMLA				AML	AML	10 17 43.2	
	comp=E,24nm,0.2s						
DHRM	**DHARAMSHALA**	**5.50**	**256**	*e*P	**Pn**	**10 16 40.0**	**-1.5**
NDI	**New Delhi**	**6.85**	**224**	*e*P	**Pn**	**10 17 02.0**	**+2.1**
AAK	**Ala-Archa**	**10.88**	**327**	Pn	Pn	10 17 58.5	+3.2
	comp=E,0.1nm,0.3s,baz=159,slow=11,SNR=3.5						
AAK				Lg	Lg	10 21 08.4	
	comp=E,0.1nm,0.3s,baz=338,slow=19,SNR=3.9						
AAK				LR	LR	10 22 22.4	
	comp=E,71nm,19.4s,baz=114,slow=39						
SHL	**Shillong**	**11.50**	**133**	*e*P	**Pn**	**10 18 02.0**	**-1.8**
MKAR	**Makanchi Array**	**13.00**	**359**	Pn	**Pn**	**10 18 24.0**	**-0.1**
	comp=E,0.3nm,0.3s,baz=179,slow=13,SNR=9.8						
ZALV	**Zalesovo Beam**	**20.22**	**4**	P	Pn	10 19 55.5	-0.3
	comp=E,2.3nm,0.6s,baz=199,slow=9.0,SNR=17						
BVAR	**Borovoye Array**	**21.12**	**339**	P	**P**	**10 20 04.5**	**+1.0**
	comp=E,1.6nm,0.7s,baz=149,slow=11,SNR=7.5						
CMAR	**Chiang Mai Arr**	**21.14**	**132**	P	**P**	**10 20 04.2**	**+0.3**
	comp=E,8.4nm,0.8s,baz=309,slow=11,SNR=47						
SONM	**Songino Array**	**22.73**	**45**	P	**P**	**10 20 22.5**	**+1.7**
	comp=E,2.0nm,0.9s,baz=204,slow=3.3,SNR=7.2						
AKTO	**Aktyubinsk**	**24.51**	**320**	P	**P**	**10 20 38.5**	**+0.6**
	comp=E,3.1nm,0.6s,baz=120,slow=8.7,SNR=15						
KSRS	**Korea Array**	**36.77**	**71**	LR	LR	10 39 29.0	
	comp=E,22nm,20.7s,baz=245,slow=39						
BRTR	**Keskin Array B**	**39.27**	**293**	P	**P**	**10 22 47.4**	**0.0**
	comp=E,0.3nm,0.4s,baz=83,slow=4.5,SNR=3.3						
FINES	**FINESS Array B**	**45.07**	**326**	P	**P**	**10 23 34.0**	**-0.1**
	comp=E,1.4nm,0.7s,baz=84,slow=7.9,SNR=5.0						
ARCES	**ARCESS Array B**	**47.37**	**336**	P	**P**	**10 23 51.6**	**-0.4**
	comp=E,4.1nm,0.8s,baz=76,slow=7.6,SNR=2.6						
HFS	**Hagfors**	**51.00**	**323**	P	**P**	**10 24 19.9**	**-0.1**
	comp=E,1.9nm,0.8s,baz=111,slow=7.9,SNR=3.7						
NOA	**NORSAR Array B**	**52.20**	**324**	P	**P**	**10 24 29.3**	**+0.4**
	comp=E,1.8nm,0.9s,baz=87,slow=7.2,SNR=3.4						
WRA	**Warramunga Arr**	**72.70**	**129**	P	**P**	**10 26 46.8**	**+0.3**
	comp=E,2.4nm,0.9s,baz=326,slow=6.0,SNR=25						
ILAR	**Eielson Array**	**74.45**	**20**	P	**P**	**10 26 56.8**	**+0.6**
	comp=E,0.8nm,0.9s,baz=313,slow=5.1,SNR=9.0						
ASAR	**Alice Springs**	**75.15**	**132**	P	**P**	**10 27 00.9**	**+0.2**
	comp=E,0.9nm,0.8s,baz=325,slow=6.1,SNR=11						
TORD	**Torodi Ar. Bea**	**75.31**	**276**	P	**P**	**10 27 00.5**	**-1.4**
	comp=E,1.9nm,0.5s,baz=46,slow=5.2,SNR=23						
CTA	**Charters Tower**	**80.89**	**121**	P	**P**	**10 27 33.1**	**+0.4**
	comp=E,1.1nm,0.5s,baz=260,slow=10,SNR=3.8						
BOSA	**Boshof**	**82.44**	**228**	P	**P**	**10 27 39.5**	**-1.3**
	comp=E,2.9nm,0.7s,baz=70,slow=4.7,SNR=5.9						
YKA	**Yellowknife Ar**	**83.06**	**8**	P	**P**	**10 27 43.4**	**0.0**
	comp=E,0.6nm,0.5s,baz=336,slow=5.5,SNR=21						
DZM	**Mont Dzumac**	**97.13**	**112**	LR	LR	11 18 02.7	
	comp=E,115nm,18.4s,baz=256,slow=39						

IDC 02 10:31:41.7±1.9**, 2°.68N**×**125°.04E, h0km, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/21**, mbtmp3.2**/3**, Error ellipse: s-maj=194.5km s-min=25.3km az=64.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.26**	**158**	P	P	10 37 00.5	-0.2
	0.3nm,0.4s,baz=337,slow=10,SNR=5.8						
ASAR	**Alice Springs**	**27.57**	**162**	P	P	10 37 31.1	+0.5
	0.1nm,0.3s,baz=344,slow=9.6,SNR=3.5						
MKAR	**Makanchi Array**	**57.48**	**326**	P	P	10 41 32.3	-0.3
	0.1nm,0.4s,baz=118,slow=8.3,SNR=3.6						

IDC 02 10:59:56.1±2.7**, 7°.17S**×**152°.62E, h33km**±9km**, mb3.6**/4**, mb1 3.7**/5**, mb1mx3.4**/18**, mbtmp3.6**/5**, ML2.3**/1**, Error ellipse: s-maj=72.3km s-min=29.7km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.84**	**247**	Pn	Pn	11 01 21.8	+1.3
	0.6nm,0.3s,baz=54,slow=19,SNR=2.8						
WRA	**Warramunga Arr**	**21.81**	**233**	P	P	11 04 45.0	-0.7
	1.2nm,0.8s,baz=56,slow=10,SNR=8.1						
WRA				pP	pP	11 04 55.5	+1.1
	0.8nm,0.8s,baz=57,slow=8.9,SNR=4.6						
ASAR	**Alice Springs**	**24.33**	**226**	P	P	11 05 10.7	-0.4
	0.5nm,0.7s,baz=60,slow=8.7,SNR=13						
ASAR				pP	pP	11 05 20.4	-0.1
	0.5nm,0.7s,baz=61,slow=8.5,SNR=3.2						
FITZ	**Fitzroy Crossi**	**28.44**	**245**	P	P	11 05 47.7	-0.4
	0.7nm,0.5s,baz=81,slow=12,SNR=4.1						
FITZ				pP	pP	11 05 56.9	-0.6
	2.1nm,0.7s,baz=84,slow=12,SNR=4.0						
ZALV	**Zalesovo Beam**	**83.02**	**327**	P	P	11 12 18.7	+0.7
	2.1nm,0.4s,baz=108,slow=4.7,SNR=3.2						
TORD	**Torodi Ar. Bea**	**150.79**	**284**	PKPbc	PKPbc	11 19 46.4	+0.1
	0.6nm,0.8s,baz=86,slow=3.2,SNR=3.5						
TORD				PKPab	PKPab	11 19 52.3	-1.1
	0.4nm,0.8s,baz=29,slow=3.3,SNR=3.5						

*NSSC **02** 11:10:28.5±2.5, 33°.89N×36°.49E, h0km±11km, MD1.6, ML2.0*
*CSEM **02** 11:10:32.2±0.3, 33°.98N×36°.58E, h60km, ML3.1, Error ellipse: s-maj=12.2km s-min=8.0km az=73.0*
*GRAL **02** 11:10:33.4±0.5, 34°.00N×36°.55E, h58km±5km, MD3.1*
ISC 02 11:10:29.2±1.5**, 33°.88N**±0°.03×**36°.61E**±0°.05**, h0km**±13km**, n13, σ1s.87**/22**, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FKH	**Fakeheh**	**0.40**	**335**	*e*P	**Pn**	**11 10 43.0**	**+0.7**
FKH				*e*S	**Sb**	**11 10 49.6**	**+3.7**
FKH	**Fakeheh**	**0.40**	**335**	*e*P	**Pn**	**11 10 43.0**	**+0.7**
FKH				*e*S	**Sb**	**11 10 49.6**	**+3.7**
TOTH	**TOTAH**	**0.54**	**196**	*e*P	**Pg**	**11 10 38.8**	**-0.8**
TOTH				*e*S	**Sg**	**11 10 46.6**	**+0.1**
TOTH				AML	AML	11 11 01.6	
	comp=E,72nm,1.0s						
TOTH				AML	AML	11 11 26.9	
	comp=N,79nm,0.7s						
ROOS	**tl_alroos**	**0.63**	**63**	*e*P	**Pb**	**11 10 42.4**	**-0.8**
ROOS				*e*S	**Sn**	**11 10 52.4**	**-3.9**
HWQ	**Hawqa**	**0.68**	**306**	*e*P	**Pn**	**11 10 45.7**	**-0.4**
HWQ	**Hawqa**	**0.68**	**306**	*e*P	**Pn**	**11 10 45.7**	**-0.4**
RCY	**Rachaya**	**0.75**	**239**	*e*P	**Pn**	**11 10 47.9**	**+0.7**
RCY				*e*S	**Sn**	**11 10 59.0**	**-0.3**
BHL	**Bhannes**	**0.80**	**272**	*e*P	**Pn**	**11 10 47.5**	**-0.2**
BHL	**Bhannes**	**0.80**	**272**	*e*P	**Pn**	**11 10 47.5**	**-0.2**
ZALF	**Zalf**	**1.13**	**148**	*e*P	**Pn**	**11 10 53.9**	**+1.6**
ZALF				*e*S	**Sn**	**11 11 07.8**	**-0.8**
ZALF				AML	AML	11 11 28.3	
	comp=E,48nm,0.6s						
ZALF				AML	AML	11 11 45.6	
	comp=N,24nm,0.7s						
ZALF	**Zalf**	**1.13**	**148**	*e*P	**Pn**	**11 10 53.9**	**+1.6**
	SNR=57						
ZALF				*e*S	**Sn**	**11 11 07.8**	**-0.8**
	comp=N,24nm,0.7s,SNR=49						
BIDA	**Albida**	**1.15**	**348**	*e*P	**Pb**	**11 10 50.1**	**-2.0**
BIDA				*e*S	**Sg**	**11 11 07.4**	**+1.2**
BIDA				AML	AML	11 11 11.9	
	comp=N,44nm,0.4s						
BIDA				AML	AML	11 11 16.6	
	comp=E,111nm,0.5s						
BIDA	**Albida**	**1.15**	**348**	*e*P	**Pb**	**11 10 50.1**	**-2.0**
	SNR=57						
BIDA				*e*S	**Sg**	**11 11 07.4**	**+1.2**
	comp=E,111nm,0.5s,SNR=49						

IDC 02 11:16:00.8±1.8**, 3°.95N**×**126°.63E, h0km, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/22**, mbtmp3.6**/4**, Error ellipse: s-maj=103.7km s-min=23.8km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.93**	**183**	P	P	11 20 56.0	0.0
	0.6nm,0.5s,baz=355,slow=13,SNR=3.7						
WRA	**Warramunga Arr**	**24.92**	**163**	P	P	11 21 25.6	-0.2
	2.4nm,0.5s,baz=342,slow=10,SNR=37						
ASAR	**Alice Springs**	**28.35**	**166**	P	P	11 21 57.0	+0.2
	0.3nm,0.8s,baz=345,slow=7.3,SNR=5.8						
MKAR	**Makanchi Array**	**57.32**	**325**	P	P	11 25 50.6	0.0
	0.4nm,0.4s,baz=127,slow=9.2,SNR=3.7						

WEL 02 11:24:59.7±0.3**, 39°.09S**×**174°.96E, h196km**±2km**, ML3.6**/12**, 5C-3D, Error ellipse: s-maj=2.4km s-min=2.0km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.16**	**257**	PN	Pn	11 25 24.7	-0.7
VRZ				SN	Sn	11 25 44.9	-0.4
PKVZ	**Pokaka**	**0.36**	**124**	PN	Pn	11 25 25.7	-0.2
WPVZ	**Whakapapa**	**0.47**	**105**	PN	Pn	11 25 26.2	-0.2
FWVZ	**Far West T-bar**	**0.49**	**110**	PN	Pn	11 25 26.4	-0.2
MTVZ	**Mangateitei**	**0.49**	**127**	PN	Pn	11 25 26.3	-0.1
WNVZ	**Wahianoa**	**0.55**	**116**	PN	Pn	11 25 26.6	-0.1
WAZ	**Wanganui**	**0.67**	**178**	⇑PN	Pn	11 25 27.4	+0.4
MOVZ	**Moawhango**	**0.69**	**118**	⇓PN	Pn	11 25 26.9	-0.3
MOVZ				SN	Sn	11 25 47.4	-1.2
NWEZ	**Newall Road**	**0.87**	**257**	PN	Pn	11 25 27.9	-0.3
BHHZ	**Black Hill Sta**	**0.94**	**115**	PN	Pn	11 25 28.2	-0.5
BKZ	**Black Stump Fm**	**1.19**	**94**	PN	Pn	11 25 29.8	-0.7
BKZ				SN	Sn	11 25 52.5	-1.8
TSZ	**Takapari Road**	**1.24**	**142**	PN	Pn	11 25 31.0	+0.2
TSZ				SN	Sn	11 25 54.8	-0.3
PNHZ	**Pukenui**	**1.27**	**131**	PN	Pn	11 25 31.1	+0.1
PNHZ				SN	Sn	11 25 55.0	-0.4
NMHZ	**Naumai**	**1.44**	**91**	PN	Pn	11 25 32.6	+0.1
POWZ	**Post Office Ro**	**1.44**	**155**	PN	Pn	11 25 32.4	-0.1
WPHZ	**Waipukurau**	**1.50**	**131**	PN	Pn	11 25 33.2	+0.2
WPHZ				*e*SN	Sn	11 25 58.7	-0.3
DVHZ	**Dannevirke**	**1.53**	**143**	⇑PN	Pn	11 25 33.2	-0.1
DVHZ				*e*SN	Sn	11 25 58.5	-0.9
MRZ	**Mangatainoka R**	**1.64**	**163**	PN	Pn	11 25 34.1	-0.2
MRZ				SN	Sn	11 26 00.1	-1.3
KAHZ	**Kahuranaki**	**1.64**	**116**	PN	Pn	11 25 34.7	+0.3
OGWZ	**Otaki Gorge**	**1.73**	**175**	⇑PN	Pn	11 25 35.2	+0.1
PXZ	**Pawanui**	**1.75**	**123**	PN	Pn	11 25 35.3	0.0
PRHZ	**Porangahau**	**1.75**	**133**	PN	Pn	11 25 35.5	+0.2
KIW	**Kapiti Island**	**1.77**	**181**	PN	Pn	11 25 35.2	-0.4
TIWZ	**Tintock**	**1.83**	**157**	PN	Pn	11 25 35.9	-0.2
HOWZ	**Holdsworth Sta**	**1.86**	**167**	PN	Pn	11 25 36.0	-0.4
BFZ	**Birch Farm**	**1.87**	**149**	⇓PN	Pn	11 25 36.2	-0.3
URZ	**Urewera**	**1.88**	**64**	PN	Pn	11 25 35.1	-1.5
DUWZ	**D'Urville Isla**	**1.89**	**205**	PN	Pn	11 25 36.1	-0.6
CAW	**Cannon Point**	**2.02**	**178**	PN	Pn	11 25 37.6	-0.4
MTW	**Mount Morrison**	**2.11**	**169**	PN	Pn	11 25 38.2	-0.8
TMWZ	**Te Maipa**	**2.14**	**161**	PN	Pn	11 25 38.8	-0.6
MWZ	**Matawai**	**2.14**	**70**	⇑PN	Pn	11 25 37.3	-2.1
TCW	**Tory Channel**	**2.19**	**194**	PN	Pn	11 25 39.4	-0.4
WEL	**Wellington**	**2.20**	**184**	PN	Pn	11 25 39.2	-0.7
SNZO	**South Karori**	**2.23**	**185**	PN	Pn	11 25 39.4	-0.8
MHGZ	**Mahia Peninsul**	**2.29**	**93**	PN	Pn	11 25 40.1	-0.9
PAWZ	**Paruwai Farm**	**2.32**	**171**	PN	Pn	11 25 40.4	-0.9
MSWZ	**Moikau Station**	**2.33**	**175**	PN	Pn	11 25 40.6	-0.8
NNZ	**Nelson**	**2.45**	**209**	⇑PN	Pn	11 25 41.3	-1.4
TUWZ	**Tuamarina**	**2.47**	**198**	PN	Pn	11 25 42.0	-0.8
PLWZ	**Palliser**	**2.49**	**175**	PN	Pn	11 25 42.1	-1.1
QRZ	**Quartz Range**	**2.55**	**226**	PN	Pn	11 25 41.7	-2.2
BSWZ	**Blackbirch Sta**	**2.75**	**197**	PN	Pn	11 25 45.4	-0.7
THZ	**Tophouse**	**3.10**	**210**	⇓PN	Pn	11 25 48.3	-2.0
KHZ	**Kahutara**	**3.50**	**198**	PN	Pn	11 25 53.8	-1.2
DSZ	**Denniston Nort**	**3.59**	**221**	PN	Pn	11 25 53.5	-2.7
LTZ	**Lake Taylor**	**4.22**	**208**	PN	Pn	11 26 01.5	-2.5
MQZ	**McQueen's Vall**	**4.93**	**200**	PN	Pn	11 26 09.4	-3.5
WVZ	**Waitaha Valley**	**5.10**	**217**	PN	Pn	11 26 12.3	-2.9
FOZ	**Fox Glacier**	**5.98**	**220**	PN	Pn	11 26 21.8	-4.7
ODZ	**Otahua Downs**	**6.76**	**207**	PN	Pn	11 26 33.8	-2.9

*RSPR **02** 11:35:33.5, 19°.26N×63°.63W, h15km±31km, MD3.6/7*
*NEIC **02** 11:35:33.5, 19°.26N×63°.63W, h15km, MD3.6(RSPR), After RSPR.*
ISC 02 11:35:32.1±3.3**, 19°.1N**±0°.1×**63°.70W**±0°.07**, h5km**±24km**, n29, σ0s.69**/45**, 16C-9D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.10**	**233**	⇓*i*P	**Pn**	**11 35 52.4**	**-1.6**
TBVI				*e*S	**Sb**	**11 36 08.7**	**+0.6**
TBVI	**Tortola**	**1.10**	**233**	⇓*i*P	**Pn**	**11 35 52.4**	**-1.6**
TBVI				*e*S	**Sb**	**11 36 08.7**	**+0.6**
TBVI	**Tortola**	**1.10**	**233**	⇓*i*P	**Pn**	**11 35 52.4**	**-1.6**
TBVI				*e*S	**Sb**	**11 36 08.7**	**+0.6**
STVI	**Saint Thomas**	**1.40**	**239**	⇓*e*P	**Pn**	**11 35 58.0**	**-0.2**
STVI	**Saint Thomas**	**1.40**	**239**	⇑*e*P	**Pn**	**11 35 58.0**	**-0.2**
STVI				*e*S	**Sn**	**11 36 16.6**	**-0.4**
STVI	**Saint Thomas**	**1.40**	**239**	*e*S	**Sb**	**11 36 17.7**	**+0.9**
STVI	**Saint Thomas**	**1.40**	**239**	⇓*e*P	**Pn**	**11 35 58.0**	**-0.2**
STVI				*e*S	**Sn**	**11 36 16.6**	**-0.4**
STVI				*e*S	**Sb**	**11 36 17.7**	**+0.9**
STVI	**Saint Thomas**	**1.40**	**239**	⇓*e*P	**Pn**	**11 35 58.0**	**-0.2**
STVI	**Saint Thomas**	**1.40**	**239**	⇑*e*P	**Pn**	**11 35 58.5**	**+0.3**
STVI				*e*S	**Sn**	**11 36 16.6**	**-0.4**
STVI				*e*S	**Sb**	**11 36 17.7**	**+0.9**
SABA	**Saba**	**1.52**	**163**	⇑*e*P	**Pb**	**11 36 01.0**	**+0.3**
SABA	**Saba**	**1.52**	**163**	*e*S	**Sn**	**11 36 19.6**	**-0.4**
SABA	**Saba**	**1.52**	**163**	⇑*e*P	**Pb**	**11 36 01.0**	**+0.3**
SABA				*e*S	**Sn**	**11 36 19.6**	**-0.4**
SABA	**Saba**	**1.52**	**163**	⇑*e*P	**Pb**	**11 36 01.0**	**+0.3**
SABA				*e*S	**Sn**	**11 36 19.6**	**-0.4**
CDVI	**St. Croix**	**1.67**	**218**	⇑*e*P	**Pn**	**11 36 01.8**	**-0.2**
CDVI	**St. Croix**	**1.67**	**218**	⇑*e*P	**Pn**	**11 36 01.8**	**-0.2**
CDVI	**St. Croix**	**1.67**	**218**	⇑*e*P	**Pn**	**11 36 01.8**	**-0.2**
SJG	**San Juan**	**2.52**	**248**	*e*Pn	**Pb**	**11 36 16.9**	**-0.9**
SJG				*e*Sn	**Sn**	**11 36 45.3**	**+0.5**
CELP	**Cerrillos**	**2.91**	**250**	⇑*e*P	**Pn**	**11 36 19.2**	**+0.1**
CELP				*e*S	**Sn**	**11 36 54.3**	**-0.2**
CELP	**Cerrillos**	**2.91**	**250**	⇑*e*P	**Pn**	**11 36 19.2**	**+0.1**
CELP				*e*S	**Sn**	**11 36 54.3**	**-0.2**
CELP	**Cerrillos**	**2.91**	**250**	⇑*e*P	**Pn**	**11 36 19.2**	**+0.1**
CELP				*e*S	**Sn**	**11 36 54.3**	**-0.2**
CRPR	**Cabo Rojo, PR**	**3.41**	**252**	⇑*e*P	**Pn**	**11 36 26.7**	**+0.8**
CRPR	**Cabo Rojo, PR**	**3.41**	**252**	⇑*e*P	**Pn**	**11 36 26.7**	**+0.8**
CRPR	**Cabo Rojo, PR**	**3.41**	**252**	⇑*e*P	**Pn**	**11 36 26.7**	**+0.8**
DR12	**Loma Pena Alta**	**5.39**	**268**	⇑*e*P	**Pn**	**11 36 52.0**	**-1.2**
DR12	**Loma Pena Alta**	**5.39**	**268**	⇑*e*P	**Pn**	**11 36 52.0**	**-1.2**
SDDR	**Presa de Saban**	**7.18**	**270**	⇓*e*P	**Pn**	**11 37 18.0**	**+0.2**
SDDR	**Presa de Saban**	**7.18**	**270**	*e*S	**Sn**	**11 38 40.0**	**+0.1**
SDDR	**Presa de Saban**	**7.18**	**270**	⇓*e*P	**Pn**	**11 37 18.0**	**+0.2**
SDDR				*e*S	**Sn**	**11 38 40.0**	**+0.1**
SDDR	**Presa de Saban**	**7.18**	**270**	⇓*e*P	**Pn**	**11 37 18.2**	**+0.3**
SDDR				*e*S	**Sn**	**11 38 40.3**	**+0.4**

*ROM **02** 11:57:21.6±0.3, 44°.31N×7°.27E, h12km±5km, Md2.3/8, Ml2.1/5, Error ellipse: s-maj=4.3km s-min=2.2km az=66.0*
*GEN **02** 11:57:21.2, 44°.28N×7°.23E, h15km, ML2.0*
*LDG **02** 11:57:21.7±0.1, 44°.30N×7°.26E, h10km, Md2.6/2, Ml2.8/13, Error ellipse: s-maj=1.4km s-min=0.7km az=67.0*
*ISCJB **02** 11:57:21.5±0.3, 44°.28N±0°.02×7°.28E±0°.03, h21km±3km, Error ellipse: s-maj=3.9km s-min=2.6km az=169.5*
*CSEM **02** 11:57:21.1±0.1, 44°.31N×7°.27E, h17km, ML2.8/14, Error ellipse: s-maj=2.0km s-min=1.3km az=83.0*
*STR **02** 11:57:22.0±0.1, 44°.29N×7°.27E, h5km, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 02 11:57:21.0±0.9**, 44°.30N**±0°.01×**7°.26E**±0°.02**, h19km**±2km**, n61, σ0s.69**/111**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STV	**Sant Anna di V**	**0.07**	**136**	Pg	**Pg**	**11 57 24.5**	**-0.1**
STV				Sg	**Sg**	**11 57 26.1**	**-0.9**
	985nm,0.1s						
STV	**Sant Anna di V**	**0.07**	**136**	Pg	**Pg**	**11 57 24.5**	**-0.1**
STV				Sg	**Sg**	**11 57 26.1**	**-0.9**
	985nm,0.1s						
DOI	**San Damiano**	**0.21**	**357**	Pg	**Pg**	**11 57 26.7**	**+0.5**
DOI				Sg	**Sg**	**11 57 30.1**	**+0.3**
	767nm,0.2s						
DOI	**San Damiano**	**0.21**	**357**	Pg	**Pg**	**11 57 26.7**	**+0.5**
DOI				Sg	**Sg**	**11 57 30.1**	**+0.3**
	767nm,0.2s						
TOUF	**Mont Tournerai**	**0.28**	**182**	Pg	**Pg**	**11 57 27.6**	**+0.2**
AUTN	**L'Aution**	**0.32**	**158**	Pg	**Pg**	**11 57 28.4**	**+0.3**
AUTN				Sg	**Sg**	**11 57 32.6**	**-0.3**
SURF	**Saint Ours**	**0.37**	**300**	Pg	**Pb**	**11 57 29.5**	**+0.3**
SURF				Sg	**Sg**	**11 57 34.9**	**+0.6**
SURF	**Saint Ours**	**0.37**	**300**	Pg	**Pb**	**11 57 29.5**	**+0.3**
SURF				Sg	**Sg**	**11 57 34.9**	**+0.6**
SAOF	**Saorge**	**0.38**	**145**	Pg	**Pb**	**11 57 29.3**	**+0.1**
SAOF				Sg	**Sg**	**11 57 34.1**	**-0.1**
MVIF	**Mont Vial**	**0.41**	**191**	Pg	**Pg**	**11 57 29.8**	**+0.3**
MVIF				Sg	**Sg**	**11 57 35.4**	**+0.2**
MVIF	**Mont Vial**	**0.41**	**191**	Pg	**Pg**	**11 57 29.8**	**+0.3**
MVIF				Sg	**Sg**	**11 57 35.4**	**+0.2**
SBF	**Sospel**	**0.45**	**164**	*e*Pg	**Pb**	**11 57 30.5**	**+0.1**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**11 57 36.3**	**-0.1**
	102nm,0.2s						
SBF	**Sospel**	**0.45**	**164**	*e*Pg	**Pb**	**11 57 30.5**	**+0.1**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**11 57 36.3**	**-0.1**
	51nm,0.2s						
MBDF	**Montbardon**	**0.56**	**321**	*e*Pg	**Pg**	**11 57 32.6**	**+0.4**
	SNR=1.0						
MBDF				*e*Sg	**Sb**	**11 57 40.1**	**+0.3**
	363nm,0.5s,SNR=1.0						
MBDF	**Montbardon**	**0.56**	**321**	*e*Pg	**Pg**	**11 57 32.6**	**+0.4**
	SNR=1.0						
MBDF				*e*Sg	**Sb**	**11 57 40.1**	**+0.3**
	182nm,0.5s,SNR=1.0						
REVF	**Revere**	**0.56**	**172**	Pg	**Pg**	**11 57 32.8**	**+0.6**
REVF				Sg	**Sg**	**11 57 40.7**	**+0.9**
REVF	**Revere**	**0.56**	**172**	Pg	**Pg**	**11 57 32.8**	**+0.6**
REVF				Sg	**Sg**	**11 57 40.7**	**+0.9**
CALN	**Calern**	**0.60**	**206**	Pg	**Pg**	**11 57 33.7**	**+0.6**
CALN				Sg	**Sg**	**11 57 41.6**	**+0.4**
CALN	**Calern**	**0.60**	**206**	Pg	**Pg**	**11 57 33.7**	**+0.6**
CALN				Sg	**Sg**	**11 57 41.6**	**+0.4**
RORO	**Rocca Rossa**	**0.61**	**107**	Pg	**Pg**	**11 57 33.5**	**+0.4**
RORO				Sg	**Sg**	**11 57 41.4**	**+0.2**
	82nm,0.2s						
RORO	**Rocca Rossa**	**0.61**	**107**	P	**Pg**	**11 57 33.2**	**+0.1**
RORO				Sg	**Sg**	**11 57 41.4**	**+0.2**
	82nm,0.2s						
RSP	**Reno Superiore**	**0.85**	**0**	Pg	**Pb**	**11 57 36.6**	**-0.7**
RSP				Sg	**Sb**	**11 57 48.4**	**-0.1**
RSP	**Reno Superiore**	**0.85**	**0**	P	**Pb**	**11 57 36.6**	**-0.7**
RSP				S	**Sb**	**11 57 47.3**	**-1.2**
RSP				Sg	**Sb**	**11 57 48.4**	**-0.1**
FRF	**La Foret Royal**	**0.86**	**211**	*e*Pg	**Pb**	**11 57 37.5**	**+0.2**
	SNR=1.0						
FRF	**La Foret Royal**	**0.86**	**211**	*e*P	**Pn**	**11 57 39.0**	**+0.9**
FRF				*e*Sg	**Sb**	**11 57 48.4**	**0.0**
	48nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**0.86**	**211**	*e*Pg	**Pb**	**11 57 37.5**	**+0.2**
	SNR=1.0						
FRF	**La Foret Royal**	**0.86**	**211**	*e*P	**Pn**	**11 57 39.0**	**+0.9**
FRF				*e*Sg	**Sb**	**11 57 48.4**	**0.0**
	24nm,0.2s,SNR=1.0						
BNI	**Bardonecchia**	**0.86**	**331**	Pg	**Pn**	**11 57 38.5**	**+0.2**
BNI	**Bardonecchia**	**0.86**	**331**	Pg	**Pn**	**11 57 38.5**	**+0.2**
MONC	**Moncucco Torin**	**0.91**	**31**	Pg	**Pn**	**11 57 39.3**	**+0.4**
PCP	**Piancastagn**	**0.95**	**75**	Pg	**Pg**	**11 57 39.7**	**+0.1**
PCP				Sg	**Sg**	**11 57 52.4**	**+0.3**
	30nm,0.3s						
PCP	**Piancastagn**	**0.95**	**75**	P	**Pb**	**11 57 39.3**	**+0.3**
PCP				S	**Sb**	**11 57 51.2**	**-0.1**
PCP				Sg	**Sg**	**11 57 52.4**	**+0.3**
	30nm,0.3s						
LMR	**La Mourre**	**1.10**	**210**	*e*Pn	**Pn**	**11 57 41.0**	**-0.5**
	SNR=1.0						
LMR	**La Mourre**	**1.10**	**210**	*e*Pg	**Pg**	**11 57 42.2**	**-0.2**
LMR				*e*Sg	**Sn**	**11 57 56.2**	**0.0**
	103nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**1.10**	**210**	*e*Pn	**Pn**	**11 57 41.0**	**-0.5**
	SNR=1.0						
LMR	**La Mourre**	**1.10**	**210**	*e*Pg	**Pg**	**11 57 42.2**	**-0.2**
LMR				*e*Sg	**Sn**	**11 57 56.2**	**0.0**
	52nm,0.2s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.17**	**303**	*e*Pn	**Pn**	**11 57 42.7**	**+0.2**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.17**	**303**	*e*Pg	**Pg**	**11 57 43.7**	**+0.1**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**11 57 58.0**	**+0.1**
	13nm,0.2s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.17**	**303**	*e*Pn	**Pn**	**11 57 42.7**	**+0.2**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.17**	**303**	*e*Pg	**Pg**	**11 57 43.7**	**+0.1**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**11 57 58.0**	**+0.1**
	6.6nm,0.2s,SNR=1.0						
LSD	**Lago del Serru**	**1.17**	**356**	P	**Pn**	**11 57 42.6**	**0.0**
LSD				S	**Sb**	**11 57 58.1**	**+0.4**
SMRF	**Simiane la Rot**	**1.25**	**256**	*e*Pg	**Pg**	**11 57 45.4**	**+0.1**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**11 58 01.6**	**-0.1**
	26nm,0.2s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.25**	**256**	*e*Pg	**Pg**	**11 57 45.4**	**+0.1**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**11 58 01.6**	**-0.1**
	13nm,0.2s,SNR=1.0						
LPG	**La Plagne**	**1.26**	**343**	*e*Pn	**Pn**	**11 57 44.2**	**+0.3**
	SNR=1.0						
LPG	**La Plagne**	**1.26**	**343**	*e*Pg	**Pg**	**11 57 45.3**	**0.0**
LPG				*e*Sn	**Sb**	**11 58 00.5**	**+0.3**
	SNR=1.0						
LPG				*e*Sg	**Sn**	**11 58 01.6**	**+1.2**
	7.8nm,0.2s,SNR=1.0						
LPG	**La Plagne**	**1.26**	**343**	*e*Pn	**Pn**	**11 57 44.2**	**+0.3**
	SNR=1.0						
LPG	**La Plagne**	**1.26**	**343**	*e*Pg	**Pg**	**11 57 45.3**	**0.0**
LPG				*e*Sn	**Sb**	**11 58 00.5**	**+0.3**
	SNR=1.0						
LPG				*e*Sg	**Sn**	**11 58 01.6**	**+1.2**
	3.9nm,0.2s,SNR=1.0						
LPL	**La Plagne**	**1.28**	**343**	*e*Pn	**Pn**	**11 57 44.0**	**-0.1**
	SNR=1.0						
LPL	**La Plagne**	**1.28**	**343**	*e*Pg	**Pg**	**11 57 45.6**	**-0.1**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**11 58 00.7**	**-0.2**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**11 58 02.4**	**-0.1**
	5.7nm,0.2s,SNR=1.0						
LPL	**La Plagne**	**1.28**	**343**	*e*Pn	**Pn**	**11 57 44.0**	**-0.1**

	SNR=1.0						
LPL	La Plagne	1.28	343	ePg	Pg	11 57 45.6	-0.1
	SNR=1.0						
LPL				eSn	Sn	11 58 00.7	-0.2
	SNR=1.0						
LPL				eSg	Sg	11 58 02.4	-0.1
	2.8nm,0.2s,SNR=1.0						
VIVF	Saint-Julien-l	1.93	288	ePn	Pn	11 57 53.9	+1.0
	SNR=1.0						
VIVF				eSn	Sn	11 58 16.5	-0.2
	4.5nm,0.2s,SNR=1.0						
VIVF	Saint-Julien-l	1.93	288	ePn	Pn	11 57 53.9	+1.0
	SNR=1.0						
VIVF				eSn	Sn	11 58 16.5	-0.2
	2.2nm,0.2s,SNR=1.0						
PGF	Pioggiola	2.16	143	ePn	Pn	11 57 56.5	+0.4
	SNR=1.0						
PGF				eSn	Sn	11 58 21.0	-1.4
	11nm,0.2s,SNR=1.0						
PGF	Pioggiola	2.16	143	ePn	Pn	11 57 56.5	+0.4
	SNR=1.0						
PGF				eSn	Sn	11 58 21.0	-1.4
	5.7nm,0.2s,SNR=1.0						
LASF	Ste Croix	2.46	266	ePn	Pn	11 58 01.5	+1.4
	SNR=1.0						
LASF				eSn	Sn	11 58 28.6	-1.1
	5.4nm,0.4s,SNR=1.0						
LASF	Ste Croix	2.46	266	ePn	Pn	11 58 01.5	+1.4
	SNR=1.0						
LASF				eSn	Sn	11 58 28.6	-1.1
	2.7nm,0.4s,SNR=1.0						
MTLF	Montolieu	3.77	257	ePn	Pn	11 58 19.3	+1.1
MTLF				eSn	Sn	11 59 00.4	-1.7
	1.6nm,0.3s						
MTLF	Montolieu	3.77	257	ePn	Pn	11 58 19.3	+1.1
MTLF				eSn	Sn	11 59 00.4	-1.7
	0.8nm,0.3s						
BGF	Bois d'Agland	3.84	308	eP	Pn	11 58 22.5	+3.3
ETSF	Etsaut	5.85	259	eSg	Sg	12 00 24.9	-3.7
	2.0nm,0.3s,SNR=1.0						

WEL 02 11:57:22.5±0.3, 36°.95S×177°.54E, h121km±4km, ML3.6/4, 1C, Error ellipse: s-maj=4.9km s-min=3.4km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.86	135	PN	Pn	11 57 43.3	0.0
MXZ				SN	Sn	11 57 58.9	-0.2
PUZ	Puketiti	1.26	153	PN	Pn	11 57 47.3	+0.1
PUZ				SN	Sn	11 58 05.5	-0.6
URZ	Urewera	1.35	194	PN	Pn	11 57 48.1	-0.1
URZ				SN	Sn	11 58 07.5	-0.3
MWZ	Matawai	1.38	180	PN	Pn	11 57 48.6	-0.1
MWZ				SN	Sn	11 58 09.2	+0.6
PRGZ	Paritu Road	1.99	172	PN	Pn	11 57 55.8	-0.1
RAHZ	Arahi	1.99	190	PN	Pn	11 57 55.7	-0.2
KNZ	Kokohu	2.07	177	ePN	Pn	11 57 56.3	-0.5
MHGZ	Mahia Peninsul	2.22	173	PN	Pn	11 57 58.1	-0.6
NMHZ	Naumai	2.22	195	PN	Pn	11 57 58.8	0.0
BKZ	Black Stump Fm	2.36	200	⇑PN	Pn	11 58 00.0	-0.5
MCHZ	McNeill Hill	2.57	195	PN	Pn	11 58 02.9	-0.3
MCHZ				SN	Sn	11 58 34.2	-0.5
WPVZ	Whakapapa	2.74	214	PN	Pn	11 58 06.4	+0.9
FWVZ	Far West T-bar	2.78	214	PN	Pn	11 58 06.6	+0.4
BHHZ	Black Hill Sta	2.78	204	PN	Pn	11 58 05.1	-1.0
MOVZ	Moawhango	2.82	209	PN	Pn	11 58 05.8	-0.8
KAHZ	Kahuranaki	2.88	190	PN	Pn	11 58 06.1	-1.3
PXZ	Pawanui	3.12	190	PN	Pn	11 58 08.0	-2.3
PXZ				SN	Sn	11 58 43.2	-4.1
PNHZ	Pukenui	3.14	199	PN	Pn	11 58 08.7	-2.0
TSZ	Takapari Road	3.34	201	PN	Pn	11 58 11.0	-2.3
WAZ	Wanganui	3.44	215	PN	Pn	11 58 14.3	-0.3
DVHZ	Dannevirke	3.51	197	PN	Pn	11 58 12.8	-2.7
BFZ	Birch Farm	3.86	195	PN	Pn	11 58 16.8	-3.3
MRZ	Mangatainoka R	4.01	202	PN	Pn	11 58 18.8	-3.3
HOWZ	Holdsworth Sta	4.24	201	PN	Pn	11 58 21.5	-3.8
TMWZ	Te Maipa	4.34	197	PN	Pn	11 58 23.0	-3.6
KIW	Kapiti Island	4.41	207	PN	Pn	11 58 24.4	-3.1
MTW	Mount Morrison	4.49	200	PN	Pn	11 58 24.2	-4.3
PLWZ	Palliser	4.94	200	PN	Pn	11 58 29.9	-4.7
NNZ	Nelson	5.35	216	PN	Pn	11 58 36.2	-3.8
QRZ	Quartz Range	5.50	224	PN	Pn	11 58 39.3	-2.8

*IDC **02** 12:20:38.9±0.5, 19°.43N×70°.34W, h0km, mb4.0/19, mb1 4.2/20, mb1mx4.1/31, mbtmp4.0/20, ML4.3/1, MS3.8/2, Ms1 3.8/2, ms1mx2.8/33, Error ellipse: s-maj=18.6km s-min=13.6km az=49.0*

*NEIC **02** 12:20:42.5±0.3, 19°.66N×70°.49W, h10km, mb4.2/12, Error ellipse: s-maj=10.0km s-min=5.4km az=203.0*

ISC 02 12:20:40.6±2.9, 19°.46N±0°.08×70°.42W±0°.03, h9km±18km, n263, σ1s.23/275, mb4.1/29, 98C-80D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDDR	Presa de Saban	0.95	240	ePg	Pb	12 21 00.2	+1.0
SDDR				eSg	Sn	12 21 14.4	+0.6
AGPR	Aguadilla, PR	3.28	107	ePn	Pn	12 21 35.7	+3.6
AGPR				eSn	Sn	12 22 14.1	+2.8
LSP	Las Mesas	3.40	111	ePn	Pb	12 21 38.5	-2.6
LSP				eSn	Sn	12 22 15.7	+1.3
CRPR	Cabo Rojo, PR	3.45	114	ePn	Pb	12 21 40.2	-1.6
CRPR				eSn	Sn	12 22 19.7	+4.2
LRS	Lares	3.58	108	ePn	Pb	12 21 41.2	-2.8
LRS				eSn	Sn	12 22 21.7	+3.0
MASC	Masc	3.66	282	eP	Pn	12 21 37.8	+0.4
MASC				eS	Sn	12 22 21.1	+0.4
OBIP	Obispado Ponce	3.88	111	ePn	Pn	12 21 45.2	+4.8
OBIP				eSn	Sn	12 22 28.1	+2.2
CELP	Cerrillos	3.89	110	ePn	Pn	12 21 45.0	+4.5
CELP				eSn	Sn	12 22 29.0	+2.7
SJG	San Juan	4.26	108	ePn	Pn	12 21 50.1	+4.5
SJG				eSn	Sn	12 22 34.9	-0.6
SJG				Sn	Sb	12 22 35.1	-12
SJG				Lg	Lg	12 22 44.8	
SJG	San Juan	4.26	108	Pn	Pn	12 21 47.6	+2.0
	5.8nm,0.3s,baz=323,slow=14,SNR=2.4						
SJG				Sn	Sn	12 22 35.1	-0.3
	86nm,0.3s,baz=212,slow=23,SNR=12						
SJG				Lg	Lg	12 22 44.8	
	59nm,0.3s,baz=342,slow=20,SNR=6.2						
MOAC	Moa	4.44	286	eP	Pn	12 21 45.8	-2.2
MOAC				eS	Sn	12 22 38.2	-1.6
	comp=N,244nm,0.5s						
MOAC				e			
	comp=E,245nm,0.6s						
RCC	Rio Carpintero	5.00	277	eP	Pn	12 21 54.7	-1.1
RCC				eS	Sn	12 22 54.1	+0.3
	comp=N,80nm,0.7s						
RCC				e			
	comp=E,113nm,0.5s						
STVI	Saint Thomas	5.29	101	ePn	Pn	12 22 01.4	+1.7
	comp=E,40nm,0.4s						
STVI				eSn	Sn	12 22 59.4	-1.5
LMGC	Las Mercedes	6.24	277	eP	Pn	12 22 11.8	-1.0
LMGC				eS	Sn	12 23 21.1	-3.1
	comp=N,133nm,0.7s						
LMGC				e			
	comp=E,101nm,0.5s						
JTS	JuntasAbangare	16.74	239	Pn	P	12 24 38.3	+0.6
JTS	JuntasAbangare	16.74	239	Pn	P	12 24 38.3	+0.6
	baz=73,slow=20,SNR=2.4						
TEIG	Tepich	16.82	276	Pn	P	12 24 38.0	-0.6
TEIG	Tepich	16.82	276	Pn	P	12 24 38.0	-0.6
	comp=E,1.0nm,0.3s,baz=108,slow=16,SNR=3.5						
TKL	Tuckaleechee C	19.98	327	P	P	12 25 13.7	+0.4
TKL				S	S	12 28 47.5	-11
TKL	Tuckaleechee C	19.98	327	P	P	12 25 13.7	+0.4
	comp=E,3.5nm,0.7s,baz=145,slow=9.6,SNR=4.3						
TKL				S	S	12 28 47.5	-11
	comp=E,1.7nm,0.4s,baz=125,slow=19,SNR=2.4						
TKL				LR	LR	12 32 12.8	
	comp=E,58nm,20.0s,baz=83,slow=35						
LRAL	Lakeview Retre	20.06	316	eP	Pn	12 25 16.2	+0.3
	comp=E,20nm,1.4s						
OTAV	Otavalo	20.66	203	eP	Pn	12 25 25.6	+1.9
	comp=E,100nm,1.4s						
PLAL	Pickwick Lake	21.98	318	eP	P	12 25 43.8	+8.8
	comp=E,12nm,0.7s						
CMIG	Matias Romero	23.35	268	P	P	12 25 49.6	+0.1
CMIG	Matias Romero	23.35	268	P	P	12 25 49.6	+0.1
	comp=E,1.6nm,0.6s,baz=20,slow=8.4,SNR=3.8						
431A	Sonora	29.45	298	⇓P	P	12 26 45.8	+0.9
	baz=29						
330A	Mertzon	30.11	299	⇑P	P	12 26 51.4	+0.6
	baz=30						
429A	Davenport Ranc	30.51	298	⇑P	P	12 26 54.4	+0.1
	baz=30						
329A	Wagon Wheel Ra	30.80	299	⇑P	P	12 26 57.6	+0.7
	baz=31						
528A	Cox Ranch, San	31.16	296	⇑P	P	12 27 01.4	+1.4
	baz=31						
428A	Kincaid Ranch,	31.20	297	⇓P	P	12 27 01.7	+1.3
	baz=31						
627A	Terlingua Ranc	31.53	295	⇑P	P	12 27 04.7	+1.4
	baz=31						
TXAR	Lajitas Array	31.74	294	P	P	12 27 06.0	+0.8
TXAR				PcP	PcP	12 29 57.5	+0.7
TXAR	Lajitas Array	31.74	294	P	P	12 27 06.0	+0.8
	comp=E,0.8nm,0.7s,baz=109,slow=11,SNR=8.5						
TXAR				PcP	PcP	12 29 57.5	+0.7
	comp=E,1.1nm,0.8s,baz=123,slow=4.6,SNR=9.2						
427A	Hayter Ranch,	31.82	297	⇑P	P	12 27 07.1	+1.2
	baz=32						
527A	Woodward Ranch	31.85	296	⇑P	P	12 27 07.0	+0.8
	baz=32,SNR=5.7						
227A	Bennet, Jal	32.02	300	⇑P	P	12 27 08.7	+1.2
	baz=32						
MSTX	Muleshoe	32.16	303	⇑P	P	12 27 09.6	+0.8
	baz=32						
626A	Big Bend Ranch	32.18	295	⇑P	P	12 27 10.2	+1.1
	baz=32						
526A	Mary Lane Ranc	32.24	296	⇑P	P	12 27 10.8	+1.2
	baz=32						
426A	McDonald Obser	32.31	297	⇑P	P	12 27 11.3	+1.0
	baz=32						
Y27A	Causey	32.44	303	⇓P	P	12 27 11.7	+0.4
	baz=32						
226B	Tecolote Peak,	32.75	299	⇑P	P	12 27 14.8	+0.8
	baz=33						
126A	Clayton Basin,	32.77	300	⇑P	P	12 27 15.0	+0.8
	baz=33						
425A	Indio Mountain	33.14	297	⇓P	P	12 27 19.0	+1.4
	baz=33						
X26A	CR and CF Fran	33.16	304	⇓P	P	12 27 19.1	+1.5
	baz=33						
325A	Bean Ranch, Si	33.25	298	⇑P	P	12 27 19.7	+1.1
	baz=33,SNR=7.7						
125A	Gardner Draw,	33.30	300	⇓P	P	12 27 19.7	+0.9
	baz=33						
225A	Deer Hill, Car	33.30	299	⇑P	P	12 27 19.8	+0.9
	baz=33,SNR=11						
Z25A	Roswell	33.51	301	⇑P	P	12 27 21.8	+1.1
	baz=33						
V26A	Tequesquite Ra	33.54	306	⇓P	P	12 27 22.3	+1.3
	baz=33						
Y25A	Mesa, Roswell	33.66	302	⇑P	P	12 27 23.5	+1.5
	baz=34						
MNTX	Cornudas Mount	33.67	298	eP	P	12 27 22.8	+0.8
	comp=E,6.7nm,0.9s						
MNTX	Cornudas Mount	33.67	298	⇓P	P	12 27 23.0	+1.1
	baz=34,SNR=14						
324A	Moseley Ranch,	33.70	298	⇓P	P	12 27 23.3	+0.9
	baz=34,SNR=5.6						
U26A	Atchley Ranch,	33.72	307	⇓P	P	12 27 23.8	+1.3
	baz=34						
224A	Cornudas Mount	33.87	299	⇓P	P	12 27 24.9	+1.0
	baz=34,SNR=8.1						
W25A	X Bar L Ranch,	33.87	305	⇓P	P	12 27 25.2	+1.4
	baz=34						
124A	Stringfield Ra	33.96	300	⇑P	P	12 27 26.1	+1.3
	baz=34,SNR=6.3						
Z24A	Sheeppen Canyo	34.04	301	⇑P	P	12 27 26.8	+1.4
	baz=34,SNR=9.8						
V25A	Rancho No Teng	34.19	306	⇑P	P	12 27 27.8	+1.1
	baz=34						
U25A	Circle Dot Ran	34.23	307	⇑P	P	12 27 28.1	+1.1
	baz=34						
R26A	Arlington	34.23	310	⇓P	P	12 27 28.9	+2.0
	baz=34						
Y24A	Capitan	34.26	302	⇓P	P	12 27 28.6	+1.3
	baz=34						
T25A	Trinidad	34.49	308	⇓P	P	12 27 30.6	+1.4
	baz=34						
Q26A	Hugo	34.54	311	⇓P	P	12 27 31.2	+1.6
	baz=34						
V24A	Rampart Ranch,	34.66	305	⇑P	P	12 27 32.1	+1.3
	baz=34						
P26A	Davis Ranch, A	34.68	312	⇓P	P	12 27 32.7	+1.9
	baz=34						
S25A	Robets Cordova	34.70	309	⇑P	P	12 27 32.6	+1.5
	baz=34						
Z23A	Rita Site, Whi	34.73	301	⇓P	P	12 27 32.1	+0.8
	baz=35,SNR=5.6						
Y23A	Lovelace Mesa,	34.76	302	⇑P	P	12 27 33.1	+1.5
	baz=35						
T24A	Torres, Weston	34.94	307	⇓P	P	12 27 34.8	+1.5
	baz=35						
X23A	Hourglass Bar	35.04	303	⇓P	P	12 27 35.9	+1.9
	baz=35						
W23A	Werner Place,	35.17	304	⇓P	P	12 27 37.0	+1.8
	baz=35						
BNM	Barren Site	35.27	302	eP	P	12 27 37.0	+0.9
	comp=E,2.4nm,0.7s						
LPM	Los Pinos Moun	35.32	302	eP	P	12 27 37.9	+1.4
R24A	Sanders Place,	35.41	309	⇑P	P	12 27 38.4	+1.3
	baz=35						
SCHQ	Schefferville	35.42	4	P	P	12 27 36.6	-0.1
SCHQ	Schefferville	35.42	4	P	P	12 27 36.6	-0.1
	comp=E,2.4nm,0.9s,baz=221,slow=3.0,SNR=5.3						
Y22A	Socorro	35.49	301	⇓P	P	12 27 38.9	+1.0
	baz=35						
LPAZ	La Paz	35.59	176	P	P	12 27 38.1	-1.1
LPAZ	La Paz	35.59	176	P	P	12 27 38.1	-1.1
	comp=E,0.7nm,0.5s,baz=327,slow=4.5,SNR=2.0						
Q24A	Divide	35.72	310	⇓P	P	12 27 40.6	+0.7
	baz=36						
121A	Cookes Peak, D	35.84	299	⇓P	P	12 27 42.6	+1.7
	baz=36						
Y21A	Point of Rocks	36.08	301	⇑P	P	12 27 44.7	+1.7
	baz=36,SNR=8.9						
U22A	Llaves	36.08	306	⇑P	P	12 27 44.6	+1.6
	baz=36						
O24A	Longmont	36.13	312	⇓P	P	12 27 45.5	+2.3
	baz=36						
X21A	Alamocita Cree	36.27	302	⇑P	P	12 27 46.7	+2.1
	baz=36						
T22A	Edith	36.32	307	⇓P	P	12 27 46.7	+1.6
	baz=36						
220A	Playas Peak, P	36.33	298	⇓P	P	12 27 46.7	+1.6
	baz=36						
ISCO	Idaho Springs	36.38	312	eP	P	12 27 46.7	+1.1
	comp=E,3.4nm,0.8s						
ISCO	Idaho Springs	36.38	312	⇓P	P	12 27 46.9	+1.3
	baz=36						
SIV	San Ignacio	36.41	165	P	P	12 27 44.2	-1.4
SIV	San Ignacio	36.41	165	P	P	12 27 44.2	-1.4
	comp=E,0.8nm,0.6s,baz=52,slow=10,SNR=3.9						
S22A	4UR Ranch, Cre	36.50	308	⇑P	P	12 27 47.9	+1.2
	baz=36						
M24A	Cheyenne	36.53	314	⇑P	P	12 27 48.6	+1.9
	baz=36						
Y20A	Horse Springs,	36.62	301	⇓P	P	12 27 49.2	+1.5
	baz=36						
Z20A	Nine Sixteen R	36.62	300	⇓P	P	12 27 49.6	+2.0
	baz=36						
U21A	Nageezi	36.72	305	⇑P	P	12 27 50.2	+1.8
	baz=36						
O23A	Lake Granby, G	36.75	312	⇓P	P	12 27 50.5	+1.7
	baz=37						
T21A	Navajo Lake	36.79	306	⇓P	P	12 27 50.8	+1.8
	baz=37						
X20A	Quemado	36.87	302	⇓P	P	12 27 51.1	+1.3
	baz=37						
319A	Douglas	36.87	297	⇑P	P	12 27 51.6	+1.9
	baz=37						
W20A	Ramah	37.02	303	⇓P	P	12 27 51.9	+1.0
	baz=37						
M23A	Laramie	37.14	314	⇑P	P	12 27 52.8	+0.8
	baz=37						
O22A	Kremmling	37.18	312	⇑P	P	12 27 53.7	+1.3
	baz=37						
S21A	Coal Bank Pass	37.20	307	⇑P	P	12 27 53.5	+0.9
	baz=37						
N22A	Wattenberg Ran	37.37	313	⇓P	P	12 27 55.4	+1.5
	baz=37						
L23A	Garrett	37.41	315	⇑P	P	12 27 55.2	+1.0
	baz=37						
Q20A	Ridgley Place,	38.00	309	⇑P	P	12 28 00.7	+1.5
	baz=38						
X18A	Snowflake	38.03	301	⇓P	P	12 28 01.0	+1.5
	baz=38						
N21A	Black Mountain	38.09	312	⇓P	P	12 28 01.7	+1.6
	baz=38						
O20A	White River Ci	38.37	311	⇓P	P	12 28 04.4	+2.0
	baz=38						
F24A	Ekalaka	38.42	321	⇓P	P	12 28 04.8	+2.2
	baz=38						
N20A	Spence Gulch,	38.64	312	⇑P	P	12 28 06.8	+2.1
	baz=38						
K21A	Alcova	38.67	315	⇑P	P	12 28 05.6	+0.7
	baz=38,SNR=7.1						
Q19A	Hogan Spring (	38.71	309	⇑P	P	12 28 06.4	+1.3
	baz=38						
S18A	Hurst Farm, Bl	38.87	306	⇓P	P	12 28 07.3	+0.6
	baz=39						
J21A	Lysite	39.10	316	⇑P	P	12 28 09.2	+0.8
	baz=39						
L20A	Wamsutter	39.15	313	⇑P	P	12 28 10.2	+1.3
	baz=39						
N19A	John Jarvie Ra	39.31	311	⇑P	P	12 28 10.5	+0.3
	baz=39						
WUAZ	Wupatki	39.39	303	⇓P	P	12 28 12.3	+1.4
	baz=39						
K20A	Yellowstone Ra	39.41	314	⇓P	P	12 28 11.4	+0.4
	baz=39						
F22A	Rosebud	39.48	320	⇓P	P	12 28 11.7	+0.3
	baz=39,SNR=5.4						
SRU	San Rafael	39.69	308	eP	P	12 28 14.6	+1.2
	comp=E,78nm,0.9s						
I20A	Worland	39.81	316	⇑P	P	12 28 15.2	+1.0
	baz=40						
C23A	Lambert	39.90	323	⇓P	P	12 28 15.8	+0.9
	baz=40						
P17A	Butcher Ranch,	39.96	309	⇑P	P	12 28 16.5	+0.9
	baz=40						
D22A	Cohagen	40.13	322	⇑P	P	12 28 18.1	+1.4
	baz=40						
J19A	Crowheart	40.13	315	⇓P	P	12 28 17.3	+0.3
	baz=40						
B23A	Brockton	40.16	324	⇓P	P	12 28 18.9	+1.9
	baz=40						
O17A	Robinson Place	40.19	310	⇑P	P	12 28 18.8	+1.2
	baz=40						
TMUT	Trail Mountain	40.25	308	eP	P	12 28 20.2	+2.0
	comp=E,5.6nm,1.1s						
C22A	Vida	40.27	323	⇓P	P	12 28 18.9	+1.0
	baz=40						
BW06	Boulder Array	40.27	314	⇓P	P	12 28 19.2	+0.9
	baz=40						
PDAR	Pinedale Array	40.27	314	P	P	12 28 18.0	-0.3
PDAR				PcP	PcP	12 30 21.5	-0.5
PDAR	Pinedale Array	40.27	314	P	P	12 28 18.0	-0.3
	comp=E,0.5nm,0.5s,baz=105,slow=9.5,SNR=6.2						
PDAR				PcP	PcP	12 30 21.5	-0.5
	comp=E,0.6nm,0.5s,baz=118,slow=4.9,SNR=5.4						
L18A	Fontenelle, Gr	40.29	313	⇑P	P	12 28 19.5	+1.1
	baz=40						
Y14A	Wickenburg	40.40	300	⇑P	P	12 28 20.5	+1.3
	baz=40						
I19A	Meeteetse	40.41	316	⇑P	P	12 28 20.1	+0.8
	baz=40						
N17A	Moffit Pass	40.50	311	⇑P	P	12 28 21.1	+0.9
	baz=40						
K18A	Toltan Ranch,	40.55	314	⇑P	P	12 28 21.6	+1.0
	baz=40						
D21A	La Casta Ranch	40.56	321	⇓P	P	12 28 21.7	+1.3
	baz=40						
DAU	Daniels Canyon	40.63	310	eP	P	12 28 22.9	+1.5
H19A	Powell	40.68	317	⇑P	P	12 28 22.5	+1.1
	baz=40						
J18A	Kendall Valley	40.76	314	⇑P	P	12 28 22.9	+0.6
	baz=41						
I18A	Diamond G Ranc	40.82	315	⇑P	P	12 28 23.6	+0.8
	baz=41						
JLU	Jordanelle	40.83	310	eP	P	12 28 24.3	+1.3
	comp=E,4.0nm,0.7s						
N16A	Rees Ranch, Co	40.92	311	⇑P	P	12 28 24.4	+0.8
	baz=41						
A22A	Carney Farms,	40.96	324	⇑P	P	12 28 25.1	+1.4
	baz=41						
E20A	Meyer Farm, Mu	40.97	320	⇑P	P	12 28 24.2	+0.4
	baz=41						
C21A	Desert Coulee	41.01	322	⇓P	P	12 28 25.3	+1.2
	baz=41						
RLMT	Red Lodge	41.05	317	eP	P	12 28 25.2	+0.6
	comp=E,31nm,2.3s						
RLMT	Red Lodge	41.05	317	⇑P	P	12 28 24.8	+0.1
	baz=41						
H18A	Shoshone NF, C	41.12	317	⇓P	P	12 28 25.2	0.0
	baz=41						
K17A	Gardner Place,	41.20	313	⇑P	P	12 28 26.2	+0.3
	baz=41						
D20A	Manuel Ranch,	41.26	321	⇑P	P	12 28 27.0	+0.9
	baz=41						
BDFB	Brasilia	41.26	146	P	P	12 28 25.4	-1.1
BDFB	Brasilia	41.26	146	P	P	12 28 25.4	-1.1
	comp=E,1.1nm,0.3s,baz=315,slow=16,SNR=2.9						
J17A	Brown Place, J	41.28	314	⇑P	P	12 28 27.5	+0.9
	baz=41						
LOHW	Long Hollow	41.31	315	eP	P	12 28 27.6	+0.8
	comp=E,2.7nm,0.7s						
W13A	Hualapai Mount	41.32	301	⇓P	P	12 28 28.5	+1.5
	baz=41						
G18A	Lazy EL Ranch,	41.33	318	⇑P	P	12 28 27.4	+0.6
	baz=41						
E19A	Rath Farm, Rou	41.35	319	⇑P	P	12 28 27.8	+0.9
	baz=41						
I17A	Pilgrim Ck.	41.41	315	⇓P	P	12 28 28.5	+0.9
	baz=41						
MOOW	Moose Ponds	41.45	315	eP	P	12 28 28.8	+0.8
	comp=E,2.5nm,0.8s						
C20A	Veseth Ranch,	41.48	322	⇓P	P	12 28 29.0	+1.1
	baz=41						
A21A	Bergtoll Ranch	41.52	324	⇓P	P	12 28 29.8	+1.5
	baz=41,SNR=7.5						
F18A	Big Timber	41.68	318	⇑P	P	12 28 30.3	+0.7
	baz=42						
DUG	Dugway	41.70	309	eP	P	12 28 31.0	+1.1
	comp=E,4.3nm,0.9s						
DUG	Dugway	41.70	309	⇓P	P	12 28 30.8	+0.9
	baz=42						
D19A	Cripps Ranch,	41.74	320	⇓P	P	12 28 31.2	+1.1
	baz=42						
B20A	Solberg Farm,	41.85	322	⇑P	P	12 28 32.8	+1.9
	baz=42						
L15A	Malad City	41.96	312	⇑P	P	12 28 32.8	+0.8
	baz=42						
I16A	Newdale	42.00	315	⇑P	P	12 28 33.5	+1.1
	baz=42						
A20A	Cobblestone Ra	42.02	323	⇓P	P	12 28 33.6	+1.2
	baz=42						
G17A	Pierce Place,	42.08	317	⇓P	P	12 28 34.0	+1.1
	baz=42						
E18A	Harlowton	42.09	319	⇓P	P	12 28 33.8	+0.8
	baz=42						
C19A	Slack Wire Ran	42.11	321	⇑P	P	12 28 34.2	+1.2
	baz=42						
H16A	Russell Place,	42.16	316	⇓P	P	12 28 35.7	+2.0
	baz=42						
IRM	Iron Mountain	42.19	300	⇑P	P	12 28 35.3	+1.4
	baz=42						
F17A	Fitzpatrick Pl	42.27	318	⇓P	P	12 28 35.6	+1.1
	baz=42						
D18A	Linhart Farms,	42.31	320	⇑P	P	12 28 36.2	+1.5
	baz=42						
J15A	Blackfoot	42.47	314	⇓P	P	12 28 37.0	+0.9
	baz=42						
A19A	Klindworth Far	42.51	323	⇑P	P	12 28 37.7	+1.3
	baz=42						
L14A	Malta	42.57	312	⇑P	P	12 28 37.6	+0.6
	baz=42,SNR=5.8						
E17A	Martinsdale	42.63	319	⇑P	P	12 28 38.5	+1.0
	baz=42,SNR=5.8						
EGMT	Eagleton	42.66	321	⇑P	P	12 28 39.0	+1.4
	baz=42						
K14A	Jones Ranch, D	42.69	312	⇑P	P	12 28 38.9	+1.0
	baz=42						
GMRC	Granite Mounta	42.70	300	⇑P	P	12 28 39.8	+1.6
	baz=42						
I15A	Monteview	42.72	315	⇓P	P	12 28 39.9	+1.8
	baz=42						
D17A	Six Diamond Ra	42.83	320	⇑P	P	12 28 39.8	+0.8
	baz=43						
B18A	Beardsley Farm	42.85	322	⇑P	P	12 28 40.7	+1.6
	baz=43						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TUQ	**Turquoise Moun**	**43.02**	**301**	⇑P	**P**	**12 28 42.4**	**+1.6**
	baz=43						
C17A	**Wharram Farm,**	**43.09**	**320**	⇑P	**P**	**12 28 41.8**	**+0.7**
	baz=43,SNR=6.4						
A18A	**Metzger Ranch,**	**43.14**	**322**	⇓P	**P**	**12 28 42.5**	**+1.1**
	baz=43						
G15A	**Dillon**	**43.15**	**316**	⇑P	**P**	**12 28 42.9**	**+1.1**
	baz=43						
E16A	**East Helena**	**43.18**	**318**	⇓P	**P**	**12 28 42.4**	**+0.5**
	baz=43						
D16A	**Dana Ranch, Ca**	**43.31**	**319**	⇓P	**P**	**12 28 43.8**	**+0.9**
	baz=43						
R11A	**Troy Canyon, C**	**43.31**	**306**	⇑P	**P**	**12 28 44.4**	**+1.3**
	baz=43						
I14A	**Mackay**	**43.34**	**314**	⇑P	**P**	**12 28 44.7**	**+1.4**
	baz=43,SNR=5.9						
B17A	**L&G Farms, Che**	**43.41**	**321**	⇓P	**P**	**12 28 44.5**	**+0.9**
	baz=43						
F15A	**Butte**	**43.41**	**317**	⇑P	**P**	**12 28 44.8**	**+0.9**
	baz=43						
H14A	**Leadore**	**43.53**	**315**	⇑P	**P**	**12 28 46.1**	**+1.3**
	baz=43						
A17A	**Triple J Farms**	**43.65**	**322**	⇑P	**P**	**12 28 46.6**	**+1.1**
	baz=44						
J13A	**Cove Ranch, Pi**	**43.66**	**313**	⇓P	**P**	**12 28 46.5**	**+0.7**
	baz=44,SNR=5.0						
GSC	**Goldstone**	**43.71**	**301**	⇑P	**P**	**12 28 47.6**	**+1.3**
	baz=44						
C16A	**Fuhringer Ranc**	**43.76**	**320**	⇑P	**P**	**12 28 46.8**	**+0.3**
	baz=44,SNR=5.5						
I13A	**Wildhorse Cree**	**43.79**	**314**	⇓P	**P**	**12 28 48.6**	**+1.6**
	baz=44						
G14A	**Jackson**	**43.82**	**316**	⇓P	**P**	**12 28 48.6**	**+1.4**
	baz=44						
HLID	**Hailey**	**43.88**	**313**	⇑P	**P**	**12 28 49.0**	**+1.4**
	baz=44						
D15A	**Lincoln**	**43.91**	**319**	⇓P	**P**	**12 28 48.9**	**+1.1**
	baz=44						
B16A	**M & M Farms, S**	**44.00**	**321**	⇓P	**P**	**12 28 49.3**	**+0.9**
	baz=44						
H13A	**Challis**	**44.10**	**315**	⇓P	**P**	**12 28 50.6**	**+1.2**
	baz=44						
A16A	**West Butte Ran**	**44.18**	**321**	⇓P	**P**	**12 28 50.6**	**+0.7**
	baz=44						
C15A	**Salmond Ranch,**	**44.27**	**320**	⇑P	**P**	**12 28 51.2**	**+0.5**
	baz=44,SNR=5.9						
E14A	**Clinton**	**44.28**	**317**	⇓P	**P**	**12 28 51.9**	**+1.2**
	baz=44						
B15A	**Bradely Ranch,**	**44.47**	**320**	⇓P	**P**	**12 28 52.6**	**+0.3**
	baz=44,SNR=6.4						
D14A	**Greenough**	**44.55**	**318**	⇓P	**P**	**12 28 53.4**	**+0.5**
	baz=44						
F13A	**Darby**	**44.59**	**316**	⇑P	**P**	**12 28 53.8**	**+0.6**
	baz=44						
A15A	**Johnson Ranch,**	**44.86**	**321**	⇑P	**P**	**12 28 56.3**	**+1.0**
	baz=45						
D13A	**Huson**	**45.15**	**318**	⇑P	**P**	**12 28 58.4**	**+0.8**
	baz=45						
A14A	**Double T Ranch**	**45.27**	**321**	⇑P	**P**	**12 28 59.0**	**+0.4**
	baz=45						
NVAR	**Mina Array Bea**	**45.42**	**305**	P	**P**	**12 29 01.6**	**+1.5**
NVAR				PcP	**PcP**	**12 30 40.6**	**+1.3**
NVAR	**Mina Array Bea**	**45.42**	**305**	P	**P**	**12 29 01.6**	**+1.5**
	comp=E,3.1nm,0.7s,baz=88,slow=7.6,SNR=27						
NVAR				PcP	**PcP**	**12 30 40.6**	**+1.3**
	comp=E,0.5nm,0.6s,baz=122,slow=3.3,SNR=3.6						
C13A	**Hot Springs**	**45.45**	**319**	⇑P	**P**	**12 29 01.3**	**+1.3**
	baz=45						
B13A	**Whitefish**	**45.66**	**320**	⇑P	**P**	**12 29 02.7**	**+1.1**
	baz=45						
C11A	**Tepee Creek (N**	**46.56**	**318**	⇓P	**P**	**12 29 09.7**	**+0.9**
	baz=46						
NEW	**Newport**	**47.26**	**319**	*e*P	**P**	**12 29 14.6**	**+0.5**
NEW	**Newport**	**47.26**	**319**	⇓P	**P**	**12 29 14.2**	**+0.1**
	baz=47,SNR=5.1						
NEW	**Newport**	**47.26**	**319**	P	**P**	**12 29 14.3**	**+0.2**
	comp=E,4.1nm,0.7s,baz=117,slow=7.9,SNR=11						
YBH	**Yreka Blue Hor**	**49.34**	**309**	P	**P**	**12 29 29.4**	**-1.0**
YBH	**Yreka Blue Hor**	**49.34**	**309**	P	**P**	**12 29 29.4**	**-1.0**
	comp=E,1.8nm,0.8s,baz=63,slow=2.3,SNR=3.7						
YKA	**Yellowknife Ar**	**52.60**	**336**	P	**P**	**12 29 53.1**	**-1.3**
YKA	**Yellowknife Ar**	**52.60**	**336**	P	**P**	**12 29 53.1**	**-1.3**
	comp=E,1.2nm,0.9s,baz=115,slow=7.1,SNR=15						
DLBC	**Dease Lake**	**57.81**	**328**	P	**P**	**12 30 33.0**	**+0.7**
DLBC	**Dease Lake**	**57.81**	**328**	P	**P**	**12 30 33.0**	**+0.7**
	comp=E,2.2nm,0.8s,baz=169,slow=10,SNR=3.3						
ESDC	**Sonseca Array**	**59.90**	**55**	P	**P**	**12 30 46.4**	**-0.7**
ESDC	**Sonseca Array**	**59.90**	**55**	P	**P**	**12 30 46.4**	**-0.7**
	comp=E,1.2nm,0.5s,baz=273,slow=6.8,SNR=9.3						
INK	**Inuvik**	**62.22**	**338**	P	**P**	**12 31 01.4**	**-0.8**
INK				PcP	**PcP**	**12 31 42.1**	**+0.1**
INK	**Inuvik**	**62.22**	**338**	P	**P**	**12 31 01.4**	**-0.8**
	comp=E,0.3nm,0.4s,baz=57,slow=4.5,SNR=3.7						
INK				PcP	**PcP**	**12 31 42.1**	**+0.1**
	comp=E,0.5nm,0.6s,baz=98,slow=3.7,SNR=4.6						
ILAR	**Eielson Array**	**66.81**	**333**	P	**P**	**12 31 31.7**	**-0.6**
ILAR				PcP	**PcP**	**12 32 01.4**	**+0.3**
ILAR	**Eielson Array**	**66.81**	**333**	P	**P**	**12 31 31.7**	**-0.6**
	comp=E,0.3nm,0.5s,baz=85,slow=5.6,SNR=10						
ILAR				PcP	**PcP**	**12 32 01.4**	**+0.3**
	comp=E,0.8nm,0.7s,baz=101,slow=3.4,SNR=8.5						
TORD	**Torodi Ar. Bea**	**69.07**	**83**	P	**P**	**12 31 47.4**	**0.0**
TORD	**Torodi Ar. Bea**	**69.07**	**83**	P	**P**	**12 31 47.4**	**0.0**
	comp=E,0.9nm,0.7s,baz=289,slow=7.0,SNR=6.5						
ARCES	**ARCESS Array B**	**73.99**	**21**	P	**P**	**12 32 16.2**	**0.0**
ARCES	**ARCESS Array B**	**73.99**	**21**	P	**P**	**12 32 16.2**	**0.0**
	comp=E,8.9nm,1.1s,baz=339,slow=3.0,SNR=8.1						
BRTR	**Keskin Array B**	**88.05**	**48**	P	**P**	**12 33 32.2**	**+0.4**
BRTR	**Keskin Array B**	**88.05**	**48**	P	**P**	**12 33 32.2**	**+0.4**
	comp=E,0.6nm,0.7s,baz=291,slow=3.8,SNR=4.3						
RAR	**Rarotonga**	**96.27**	**250**	LR	LR	13 08 49.2	
	comp=E,220nm,18.0s,baz=218,slow=30						
VNA3	**Neumayer Olymp**	**99.45**	**163**	*e*PP	PP	12 38 29.4	+2.6
VNA1	**Neumayer--Stat**	**99.52**	**163**	*e*PP	PP	12 38 31.6	+4.4
VNA2	**Neumayer--Watz**	**99.91**	**163**	*e*PP	PP	12 38 33.7	+3.5
	baz=320,slow=14						
VNA2	**Neumayer--Watz**	**99.91**	**163**	*e*PKP	PKiKP	12 38 59.0	+5.8
	baz=320,slow=14						
SNAA	**Sanae**	**101.55**	**163**	*e*PP	PP	12 38 51.6	+8.8
MDJ	**Mudanjiang**	**113.67**	**345**	Pdif	**Pdif**	**12 35 27.8**	**+0.7**
MDJ				AMB	AMB		
	comp=Z,12nm,18.5s						
HHC	**Hu-ho-hao-te**	**119.97**	**358**	*e*PKP	**PKPdf**	**12 39 29.6**	**-2.4**
HHC				sPKP		12 39 40.4	
HHC				PP	**PP**	**12 40 56.5**	**+1.8**
LZH	**Lanzhou**	**124.49**	**6**	*e*PKP	**PKPdf**	**12 39 40.1**	**-0.8**
CD2	**Chengdu**	**129.61**	**7**	PKP	**PKPdf**	**12 39 50.5**	**-0.2**
WRA	**Warramunga Arr**	**156.69**	**265**	PKP	**PKPdf**	**12 40 36.2**	**-0.8**
WRA				PKPbc	PKPab	12 40 45.8	-21
WRA				PKPab	PKPab	12 41 05.8	-0.5
WRA	**Warramunga Arr**	**156.69**	**265**	PKP	**PKPdf**	**12 40 36.2**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=71,slow=1.3,SNR=8.1						
WRA				PKPbc	PKPab	12 40 45.8	-21
	comp=Z,0.2nm,0.5s,baz=33,slow=1.1,SNR=14						
WRA				PKPab	PKPab	12 41 05.8	-0.5
	comp=Z,1.1nm,0.8s,baz=86,slow=3.9,SNR=7.5						
ASAR	**Alice Springs**	**157.01**	**255**	PKP	**PKPdf**	**12 40 36.8**	**-0.6**
ASAR				PKPab	**PKPab**	**12 41 07.8**	**+0.1**
ASAR	**Alice Springs**	**157.01**	**255**	PKP	**PKPdf**	**12 40 36.8**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=104,slow=1.5,SNR=4.8						
ASAR				PKPab	**PKPab**	**12 41 07.8**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=106,slow=4.9,SNR=14						

*CSEM **02** 12:22:38.1±0.8, 37°.06N×38°.53E, h10km, MD2.6, Error ellipse: s-maj=15.6km s-min=8.3km az=152.0*
*ISCJB **02** 12:22:41.5±1.6, 37°.27N±0°.07×38°.66E±0°.06, h6km±7km, Error ellipse: s-maj=12.8km s-min=5.7km az=148.4*
*DDA **02** 12:22:41.8, 37°.34N×38°.64E, h7km, MD2.8*
*ISK **02** 12:22:41.2, 37°.26N×38°.68E, h5km, MD2.6*
ISC 02 12:22:42.1±1.7, **37°.32N**±0°.08×**38°.64E**±0°.04, **h7**km±10km, **n15**, σ**0s.48**/25, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.19**	**50**	*e*PG	**Pg**	**12 22 45.9**	**-0.2**
URFA	**Urfa**	**0.19**	**50**	*e*Pg	**Pg**	**12 22 45.9**	**-0.2**
ATAB	**Bozova**	**0.31**	**299**	*i* P	**Pg**	**12 22 47.9**	**-0.3**
ATAB				*i* S	**Sg**	**12 22 53.2**	**+0.8**
ATAB	**Bozova**	**0.31**	**299**	*i* P	**Pg**	**12 22 47.9**	**-0.3**
ATAB				*i* S	**Sg**	**12 22 53.2**	**+0.8**
GZT	**Gaziantep**	**0.85**	**273**	*i* P	**Pb**	**12 22 59.5**	**+0.1**
GZT				*i* S	**Sb**	**12 23 11.7**	**+0.5**
MALT	**Malatya**	**1.01**	**351**	*e*PG	**Pb**	**12 23 02.3**	**+0.2**
MALT				*e*SG	**Sn**	**12 23 17.2**	**-0.2**
MALT	**Malatya**	**1.01**	**351**	*e*Pg	**Pb**	**12 23 02.3**	**+0.2**
MALT				*e*Sg	**Sn**	**12 23 17.2**	**-0.2**
MYA	**Malataya**	**1.02**	**351**	*e*PN	**Pb**	**12 23 02.4**	**+0.1**
MYA	**Malataya**	**1.02**	**351**	*e*Pn	**Pb**	**12 23 02.4**	**+0.1**
GAZ	**Gaziantep**	**1.15**	**263**	*e*PN	**Pg**	**12 23 04.3**	**+0.2**
SVRC	**Sivrice-ELAZID**	**1.19**	**26**	*e*PN	**Pg**	**12 23 05.0**	**+0.1**
SVRC				*e*SN	**Sn**	**12 23 22.7**	**+0.8**
SVRC	**Sivrice-ELAZID**	**1.19**	**26**	*e*Pn	**Pg**	**12 23 05.0**	**+0.1**
SVRC				*e*Sn	**Sn**	**12 23 22.7**	**+0.8**
ELZG	**Elazig**	**1.21**	**13**	*i* P	**Pb**	**12 23 05.8**	**+0.3**
ELZG				*i* S	**Sg**	**12 23 20.7**	**-0.4**
ELZG	**Elazig**	**1.21**	**13**	*i* P	**Pb**	**12 23 05.8**	**+0.3**
ELZG				*i* S	**Sg**	**12 23 20.7**	**-0.4**
AYKD	**Aykdinkavak**	**1.46**	**274**	*i* P	**Pn**	**12 23 08.4**	**-0.6**
AYKD				*i* S	**Sb**	**12 23 27.8**	**-0.7**

*ISK **02** 12:35:46.8, 37°.87N×27°.14E, h11km, MD2.8*
*ISCJB **02** 12:35:47.6±0.5, 37°.88N±0°.03×27°.25E±0°.06, h6km±7km, Error ellipse: s-maj=8.1km s-min=3.8km az=156.9*
*DDA **02** 12:35:47.5, 37°.90N×27°.27E, h7km, MD2.8*
*CSEM **02** 12:35:47.6±0.1, 37°.87N×27°.24E, h8km, MD2.8, Error ellipse: s-maj=4.6km s-min=2.5km az=72.0*
ISC 02 12:35:47.8±0.9, **37°.87N**±0°.02×**27°.24E**±0°.03, **h8**km±9km, **n26**, σ**0s.43**/40, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.17**	**182**	*i* P	**Pg**	**12 35 51.4**	**+0.1**
GCAM				*i* S	**Sg**	**12 35 53.9**	**+0.2**
GCAM	**G?zelcaml?**	**0.17**	**182**	*i* P	**Pg**	**12 35 51.4**	**+0.1**
GCAM				*i* S	**Sg**	**12 35 53.9**	**+0.2**
IZM	**Izmir**	**0.53**	**2**	*e*PG	**Pg**	**12 35 57.8**	**-0.2**
IZM	**Izmir**	**0.53**	**2**	*e*Pg	**Pg**	**12 35 57.8**	**-0.2**
BLCB	**Balcova**	**0.54**	**343**	*e*PG	**Pg**	**12 35 57.5**	**-0.7**
BLCB				*e*SG	**Sg**	**12 36 05.2**	**0.0**
BLCB	**Balcova**	**0.54**	**343**	*e*Pg	**Pg**	**12 35 57.5**	**-0.7**
BLCB				*e*Sg	**Sg**	**12 36 05.2**	**0.0**
AYDN	**Tasoluk**	**0.55**	**112**	*i* P	**Pg**	**12 35 58.3**	**-0.1**
AYDN				*i* S	**Sg**	**12 36 05.2**	**-0.4**
AYDN	**Tasoluk**	**0.55**	**112**	*i* P	**Pg**	**12 35 58.3**	**-0.1**
AYDN				*i* S	**Sg**	**12 36 05.2**	**-0.4**
URLA	**Izmir**	**0.71**	**314**	*i* P	**Pg**	**12 36 01.7**	**+0.3**
URLA				*i* S	**Sb**	**12 36 12.4**	**+0.2**
URLA	**Izmir**	**0.71**	**314**	*i* P	**Pg**	**12 36 01.7**	**+0.3**
URLA				*i* S	**Sb**	**12 36 12.4**	**+0.2**
MLSB	**Milas**	**0.71**	**143**	*e*PG	**Pg**	**12 36 02.0**	**+0.4**
MLSB				*e*SG	**Sb**	**12 36 13.0**	**+0.6**
MLSB	**Milas**	**0.71**	**143**	*e*Pg	**Pg**	**12 36 02.0**	**+0.4**
MLSB				*e*Sg	**Sb**	**12 36 13.0**	**+0.6**
BODT	**Bodrum**	**0.81**	**176**	*e*PG	**Pg**	**12 36 02.9**	**-0.5**
BODT				*e*SG	**Sb**	**12 36 14.7**	**-0.5**
BODT	**Bodrum**	**0.81**	**176**	*e*Pg	**Pg**	**12 36 02.9**	**-0.5**
BODT				*e*Sg	**Sb**	**12 36 14.7**	**-0.5**
AKHS	**Akhisar**	**1.10**	**24**	*i* P	**Pg**	**12 36 08.1**	**-0.8**
AKHS				*i* S	**Sb**	**12 36 23.9**	**+0.3**
AKHS	**Akhisar**	**1.10**	**24**	*i* P	**Pg**	**12 36 08.1**	**-0.8**
AKHS				*i* S	**Sb**	**12 36 23.9**	**+0.3**
AKS	**Akhisar**	**1.10**	**24**	*e*PN	**Pb**	**12 36 09.2**	**+0.1**
AKS	**Akhisar**	**1.10**	**24**	*e*Pn	**Pb**	**12 36 09.2**	**+0.1**
YER	**Yerkesik**	**1.11**	**131**	*e*PN	**Pn**	**12 36 09.6**	**0.0**
YER	**Yerkesik**	**1.11**	**131**	*e*Pn	**Pn**	**12 36 09.6**	**0.0**
DAT	**Datca**	**1.17**	**167**	*e*PN	**Pb**	**12 36 09.8**	**-0.5**
DAT	**Datca**	**1.17**	**167**	*e*Pn	**Pb**	**12 36 09.8**	**-0.5**
KULA	**Kula-Manisa**	**1.29**	**60**	*e*PN	**Pb**	**12 36 12.3**	**0.0**
KULA	**Kula-Manisa**	**1.29**	**60**	*e*Pn	**Pb**	**12 36 12.3**	**0.0**
TVSB	**Tavsanli**	**2.34**	**47**	*e*PN	**Pn**	**12 36 27.4**	**+0.7**
TVSB	**Tavsanli**	**2.34**	**47**	*e*Pn	**Pn**	**12 36 27.4**	**+0.7**

*DDA **02** 12:42:59.9, 41°.29N×41°.35E, h7km, MD2.8*
*ISK **02** 12:42:59.2, 41°.44N×41°.29E, h13km, MD2.7*
*ISCJB **02** 12:43:00.0±0.4, 41°.30N±0°.04×41°.34E±0°.03, h0km, Error ellipse: s-maj=5.6km s-min=2.6km az=166.4*
*CSEM **02** 12:43:00.0±0.2, 41°.30N×41°.34E, h1km, MD2.8, Error ellipse: s-maj=6.3km s-min=3.1km az=162.0*
ISC 02 12:42:59.9±0.8, **41°.30N**±0°.04×**41°.30E**±0°.02, **h0**km, **n41**, σ**0s.71**/59, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DBOC	**Borcka**	**0.28**	**81**	*i* P	**Pg**	**12 43 05.2**	**-0.1**
DBOC				*i* S	**Sg**	**12 43 09.1**	**+0.2**
DBOC	**Borcka**	**0.28**	**81**	*i* P	**Pg**	**12 43 05.2**	**-0.1**
DBOC				*i* S	**Sg**	**12 43 09.1**	**+0.2**
BCA	**Borcka**	**0.28**	**60**	*e*PG	**Pg**	**12 43 05.0**	**-0.3**
BCA				*e*SG	**Sg**	**12 43 09.2**	**+0.3**
BCA	**Borcka**	**0.28**	**60**	*e*Pg	**Pg**	**12 43 05.0**	**-0.3**
BCA				*e*Sg	**Sg**	**12 43 09.2**	**+0.3**
PZAR	**Pazar-Rize**	**0.33**	**248**	*e*PG	**Pb**	**12 43 07.6**	**-1.0**
PZAR				*e*SG	**Sb**	**12 43 13.5**	**-0.9**
PZAR	**Pazar-Rize**	**0.33**	**248**	*e*Pg	**Pb**	**12 43 07.6**	**-1.0**
PZAR				*e*Sg	**Sb**	**12 43 13.5**	**-0.9**
DBAD	**Bademkaya**	**0.41**	**133**	*i* P	**Pn**	**12 43 15.0**	**+1.8**
ARTV	**Artvin**	**0.49**	**104**	*i* P	**Pg**	**12 43 09.0**	**-0.2**
ARTV				*i* S	**Sg**	**12 43 15.2**	**-0.4**
ARTV	**Artvin**	**0.49**	**104**	*i* P	**Pg**	**12 43 09.0**	**-0.2**
ARTV				*i* S	**Sg**	**12 43 15.2**	**-0.4**
DAGI	**Agillar**	**0.52**	**116**	*i* P	**Pg**	**12 43 09.7**	**-0.1**
DAGI				*i* S	**Sg**	**12 43 16.1**	**-0.3**
DDEM	**Demirkent**	**0.53**	**140**	*i* P	**Pg**	**12 43 09.9**	**-0.2**
DDEM				*i* S	**Sg**	**12 43 16.5**	**-0.5**
DDEM	**Demirkent**	**0.53**	**140**	*i* P	**Pg**	**12 43 09.9**	**-0.2**
DDEM				*i* S	**Sg**	**12 43 16.5**	**-0.5**
MACK	**Trabzon**	**1.21**	**253**	*i* P	**Pg**	**12 43 23.2**	**+0.1**
MACK				*i* S	**Sb**	**12 43 40.7**	**+0.8**
MACK	**Trabzon**	**1.21**	**253**	*i* P	**Pg**	**12 43 23.2**	**+0.1**
MACK				*i* S	**Sb**	**12 43 40.7**	**+0.8**
BAYT	**Ayd˜–ntepe-Bay**	**1.26**	**224**	*e*PN	**Pg**	**12 43 23.8**	**-0.3**
BAYT	**Ayd˜–ntepe-Bay**	**1.26**	**224**	*e*Pn	**Pg**	**12 43 23.8**	**-0.3**
ERZM	**Erzurum**	**1.40**	**178**	*i* P	**Pn**	**12 43 26.7**	**-0.2**
ERZM	**Erzurum**	**1.40**	**178**	*i* P	**Pn**	**12 43 26.7**	**-0.2**
EZM	**Erzurum**	**1.40**	**178**	*e*PN	**Pn**	**12 43 26.8**	**-0.1**
EZM	**Erzurum**	**1.40**	**178**	*e*Pn	**Pn**	**12 43 26.8**	**-0.1**
KOPT	**Kop Dagi**	**1.42**	**206**	*i* P	**Pn**	**12 43 27.3**	**+0.1**
KOPT				*i* S	**Sn**	**12 43 47.6**	**+0.9**
KOPT	**Kop Dagi**	**1.42**	**206**	*i* P	**Pn**	**12 43 27.3**	**+0.1**
KOPT				*i* S	**Sn**	**12 43 47.6**	**+0.9**
KARS	**Kars**	**1.51**	**116**	*e*PN	**Pn**	**12 43 27.9**	**-0.4**
KARS	**Kars**	**1.51**	**116**	*e*Pn	**Pn**	**12 43 27.9**	**-0.4**
GUMT	**Gumushane**	**1.62**	**239**	*e*PN	**Pn**	**12 43 29.0**	**-0.7**
GUMT	**Gumushane**	**1.62**	**239**	*e*Pn	**Pn**	**12 43 29.0**	**-0.7**
AKH	**Akhalkalaki**	**1.66**	**86**	P	**Pn**	**12 43 30.8**	**+0.5**
AKH	**Akhalkalaki**	**1.66**	**86**	P	**Pn**	**12 43 30.8**	**+0.5**
KELT	**Kelkit**	**1.93**	**234**	*i* P	**Pn**	**12 43 35.0**	**+0.8**
KELT				*i* S	**Sn**	**12 44 00.5**	**+1.2**
KELT	**Kelkit**	**1.93**	**234**	*i* P	**Pn**	**12 43 35.0**	**+0.8**
KELT				*i* S	**Sn**	**12 44 00.5**	**+1.2**
ESPY	**Espiye-Giresun**	**1.98**	**260**	*e*PN	**Pn**	**12 43 33.7**	**-1.0**
ESPY	**Espiye-Giresun**	**1.98**	**260**	*e*Pn	**Pn**	**12 43 33.7**	**-1.0**
ONI	**Oni**	**2.06**	**51**	P	**Pn**	**12 43 35.6**	**-0.2**
ERZN	**Erzincan**	**2.09**	**216**	*e*PN	**Pn**	**12 43 36.5**	**+0.2**
EZC	**Erzincan**	**2.14**	**224**	*e*Pn	**Pn**	**12 43 36.5**	**-0.6**
SUSE	**Susehri**	**2.59**	**246**	*i* P	**Pn**	**12 43 45.2**	**+2.0**
SUSE				*i* S	**Sb**	**12 44 20.1**	**+0.3**
SUSE	**Susehri**	**2.59**	**246**	*i* P	**Pn**	**12 43 45.2**	**+2.0**
ILIC	**ilic-Erzincan**	**2.79**	**229**	*e*PN	**Pn**	**12 43 46.1**	**+0.2**
ILIC	**ilic-Erzincan**	**2.79**	**229**	*e*Pn	**Pn**	**12 43 46.1**	**+0.2**
PTK	**Pertek**	**2.82**	**212**	*e*PN	**Pn**	**12 43 47.1**	**+0.7**
PTK	**Pertek**	**2.82**	**212**	*e*Pn	**Pn**	**12 43 47.1**	**+0.7**

IDC 02 12:43:08.3±2.8, **59°.15S**×**148°.59E**, **h0**km, **mb3.6**/3, **mb1 3.8**/4, **mb1mx3.8**/12, **mbtmp3.5**/4, **ML2.5**/1, **MS3.4**/3, **Ms1 3.4**/3, **ms1mx2.9**/24, **Error ellipse: s-maj=205.5km s-min=30.9km az=76.0**, **West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**18.99**	**171**	P	P	12 47 31.1	+0.2
	0.0nm,0.3s,baz=345,slow=11,SNR=3.6						
VNDA				LR	LR	12 53 24.0	
	comp=Z,88nm,19.6s,baz=164,slow=32						
ASAR	**Alice Springs**	**36.96**	**337**	P	P	12 50 19.4	+0.4
	0.3nm,0.5s,baz=161,slow=9.3,SNR=10						
WRA	**Warramunga Arr**	**40.50**	**339**	P	P	12 50 48.4	-0.3
	1.4nm,1.1s,baz=167,slow=7.5,SNR=4.5						
KAPI	**Kappang**	**58.39**	**326**	LR	LR	13 17 44.1	
	comp=Z,20nm,20.8s,baz=256,slow=36						
BOSA	**Boshof**	**80.83**	**228**	LR	LR	13 27 22.0	
	comp=Z,47nm,18.2s,baz=343,slow=33						
CMAR	**Chiang Mai Arr**	**87.31**	**314**	P	P	12 55 56.2	-0.5
	0.2nm,0.3s,baz=157,slow=4.9,SNR=2.8						

*IDC **02** 13:05:01.7±1.2, 23°.11S×174°.76W, h45km±7km, mb3.9/12, mb1 4.2/12, mb1mx4.0/21, mbtmp3.9/12, Error ellipse: s-maj=33.8km s-min=17.0km az=145.0*
*NEIC **02** 13:05:01.9±0.6, 23°.08S×174°.85W, mb4.5/2, Error ellipse: s-maj=23.8km s-min=11.1km az=148.0*
ISC 02 13:04:59.7±0.8, **23°.1S**±0°.2×**174°.6W**±0°.2, **h30**km, **n35**, σ**1s.39**/38, **mb4.1**/13, **Tonga Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.54**	**16**	S	Sn	13 08 41.3	-20
	2.3nm,0.3s,baz=43,slow=19,SNR=2.1						
RAR	**Rarotonga**	**13.82**	**85**	P	Pn	13 08 08.2	-5.6
RAR				S	Sn	13 10 27.6	-19
RAR	**Rarotonga**	**13.82**	**85**	P	Pn	13 08 08.1	-5.6
	3.4nm,0.3s,baz=214,slow=12,SNR=8.4						
RAR				S	Sn	13 10 27.5	-19
	0.7nm,0.3s,baz=7.6,slow=15,SNR=3.1						
RPZ	**Rata Peaks**	**23.72**	**207**	P	**P**	**13 10 09.5**	**+0.4**
RPZ	**Rata Peaks**	**23.72**	**207**	P	**P**	**13 10 09.5**	**+0.4**
	4.4nm,0.8s,baz=10,slow=11,SNR=4.4						
CTA	**Charters Tower**	**36.49**	**267**	P	**P**	**13 12 00.9**	**-1.7**
CTA				pP	**pP**	**13 12 14.3**	**+2.9**
CTA	**Charters Tower**	**36.49**	**267**	P	**P**	**13 12 00.9**	**-1.7**
	5.0nm,0.6s,baz=103,slow=11,SNR=15						
CTA				pP	**pP**	**13 12 14.3**	**+2.9**
	4.6nm,0.7s,baz=96,slow=11,SNR=5.9						
CTAO	**Charters Tower**	**36.49**	**267**	*e*P	**P**	**13 12 00.3**	**-2.3**
	5.0nm,0.6s						
AS31	**Alice Springs**	**47.09**	**259**	*e*P	**P**	**13 13 27.0**	**-2.3**
ASAR	**Alice Springs**	**47.09**	**259**	P	**P**	**13 13 27.4**	**-1.9**
ASAR				pP	**pP**	**13 13 40.5**	**+2.3**
ASAR	**Alice Springs**	**47.09**	**259**	P	**P**	**13 13 27.4**	**-1.9**
	2.9nm,1.0s,baz=96,slow=7.5,SNR=52						
ASAR				pP	**pP**	**13 13 40.5**	**+2.3**
	2.5nm,0.9s,baz=91,slow=8.3,SNR=8.1						
WRAB	**Tennant Creek**	**47.45**	**264**	*e*P	P	13 13 28.1	-4.0
	5.5nm,1.0s						
WRA	**Warramunga Arr**	**47.46**	**264**	P	P	13 13 29.3	-2.8
WRA				pP	pP	13 13 43.0	+1.8
WRA				PcP	**PcP**	**13 15 02.9**	**+0.7**
WRA	**Warramunga Arr**	**47.46**	**264**	P	P	13 13 29.3	-2.8
	3.7nm,0.6s,baz=102,slow=8.1,SNR=62						
WRA				pP	pP	13 13 43.0	+1.8
	3.2nm,0.8s,baz=100,slow=8.4,SNR=10						
WRA				PcP	**PcP**	**13 15 02.9**	**+0.7**
	0.6nm,0.7s,baz=98,slow=3.1,SNR=3.2						
FITZ	**Fitzroy Crossi**	**55.88**	**263**	P	**P**	**13 14 34.1**	**-1.0**
FITZ	**Fitzroy Crossi**	**55.88**	**263**	P	**P**	**13 14 34.1**	**-1.0**
	1.1nm,0.6s,baz=102,slow=9.3,SNR=5.0						
MJAR	**Matsushiro Arr**	**74.23**	**322**	P	**P**	**13 16 33.3**	**-0.6**
MJAR	**Matsushiro Arr**	**74.23**	**322**	P	**P**	**13 16 33.3**	**-0.6**
	0.8nm,0.5s,baz=163,slow=6.9,SNR=3.7						
PETK	**Petropavlovsk-**	**79.66**	**343**	P	**P**	**13 17 03.6**	**-0.4**
PETK	**Petropavlovsk-**	**79.66**	**343**	P	**P**	**13 17 03.6**	**-0.4**
	1.2nm,0.4s,baz=142,slow=7.3,SNR=2.8						
NVAR	**Mina Array Bea**	**80.80**	**41**	P	**P**	**13 17 11.6**	**+0.8**
NVAR	**Mina Array Bea**	**80.80**	**41**	P	**P**	**13 17 11.6**	**+0.8**
	1.2nm,0.7s,baz=221,slow=8.4,SNR=9.2						
USRK	**Ussuriysk Arra**	**82.94**	**324**	P	**P**	**13 17 22.1**	**+0.5**
	1.4nm,0.6s,baz=123,slow=7.0,SNR=4.2						
USRK				pP	**pP**	**13 17 33.9**	**+2.8**
	2.1nm,0.8s,baz=106,slow=4.2,SNR=3.3						
TXAR	**Lajitas Array**	**85.82**	**56**	P	**P**	**13 17 36.4**	**-0.3**
TXAR	**Lajitas Array**	**85.82**	**56**	P	**P**	**13 17 36.4**	**-0.3**
	0.7nm,0.6s,baz=216,slow=7.6,SNR=5.6						
PDAR	**Pinedale Array**	**88.72**	**42**	P	**P**	**13 17 50.9**	**+0.3**
PDAR	**Pinedale Array**	**88.72**	**42**	P	**P**	**13 17 50.9**	**+0.3**
	0.9nm,1.1s,baz=205,slow=2.8,SNR=4.1						
ILAR	**Eielson Array**	**90.20**	**11**	P	**P**	**13 17 56.7**	**0.0**
ILAR	**Eielson Array**	**90.20**	**11**	P	**P**	**13 17 56.7**	**0.0**
	1.1nm,1.0s,baz=212,slow=5.5,SNR=7.3						
MKAR	**Makanchi Array**	**115.33**	**312**	PKP	**PKPdf**	**13 23 37.0**	**-1.4**
MKAR	**Makanchi Array**	**115.33**	**312**	PKP	**PKPdf**	**13 23 37.0**	**-1.4**
	0.2nm,0.8s,baz=67,slow=3.7,SNR=2.4						
AKASG	**Malin Array Be**	**146.84**	**332**	PKPbc	**PKPdf**	**13 24 37.3**	**+0.3**
AKASG	**Malin Array Be**	**146.84**	**332**	PKPbc	**PKPdf**	**13 24 37.3**	**+0.3**
	0.6nm,0.4s,baz=40,slow=4.2,SNR=2.6						
BRTR	**Keskin Array B**	**150.97**	**311**	PKPbc	**PKPbc**	**13 24 49.7**	**-0.2**
BRTR				PKPab	**PKPab**	**13 24 57.1**	**-0.4**
BRTR	**Keskin Array B**	**150.97**	**311**	PKPbc	**PKPbc**	**13 24 49.7**	**-0.2**
	0.5nm,0.5s,baz=112,slow=1.6,SNR=2.9						
BRTR				PKPab	**PKPab**	**13 24 57.1**	**-0.4**
	0.5nm,0.7s,baz=77,slow=1.9,SNR=2.9						

MAN 02 13:09:56, **10°.96N**×**122°.60E**, **h68**km, **mb3.9**, **ML2.7**, **MS2.3**, **1C-2D**, **Panay**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.33**	**183**	*e*P	Pn	13 10 09.7	+2.5
GUIM				*e*S	Sn	13 10 18.5	+3.2
RCP	**Roxas**	**0.61**	**13**	⇓*e*P	Pn	13 10 11.6	+1.7
RCP				*i* S	Sn	13 10 21.7	+1.7
KALP	**Kalibo**	**0.76**	**340**	⇑*e*P	Sn	13 10 24.1	+1.2
OTRP	**Odiongan**	**1.51**	**338**	*e*P	Pn	13 10 21.8	+0.8
OTRP				*e*S	Sn	13 10 40.8	+0.9
CUYO	**Cuyo Island**	**1.56**	**266**	*e*P	Pn	13 10 22.7	+0.9
SNPH	**Sibulan**	**1.72**	**159**	⇓*i*P	Pn	13 10 17.9	-6.1
SNPH				*i* S	Sn	13 10 42.4	-2.8
SJMP	**San Jose**	**2.08**	**316**	*e*P	Pn	13 10 29.8	+1.1

KRSC 02 13:16:23.6±1.8, **49°.64N**×**159°.48E**, **h5**km±5km, **ML3.6**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**2.86**	**348**	*e*P	Pn	13 17 10.6	+0.7
RUS				*i* S	Sn	13 17 44.7	0.0
MTVR	**Mutnovka**	**2.96**	**344**	*e*P	Pn	13 17 12.2	+0.7
MTVR				*i* S	Sn	13 17 47.8	+0.3
MIPR	**Malaya Ipel'ka**	**3.15**	**328**	P	Pn	13 17 14.3	+0.4
UGLR	**Uglovaya**	**3.60**	**354**	*e*P	Pn	13 17 23.0	+2.9
AVH	**Avacha**	**3.66**	**353**	*e*P	Pn	13 17 23.2	+2.2
SDLR	**Sedlovina**	**3.66**	**354**	P	Pn	13 17 22.8	+1.8
GNL	**Ganaly**	**4.17**	**347**	*e*P	Pn	13 17 30.4	+2.4

*THR **02** 13:19:36.1±1.0, 37°.07N×54°.35E, h15km, ML3.5*
*ISCJB **02** 13:19:37.7±0.7, 36°.73N±0°.05×54°.42E±0°.05, h4km±6km, Error ellipse: s-maj=10.5km s-min=3.7km az=148.6*
*CSEM **02** 13:19:38.0±0.2, 36°.84N×54°.34E, h5km, ML3.6, Error ellipse: s-maj=9.3km s-min=4.0km az=154.0*
*TEH **02** 13:19:39.3, 36°.78N×54°.41E, h11km, ML3.6*
ISC 02 13:19:36.7±1.5, **36°.95N**±0°.07×**54°.33E**±0°.04, **h4**km±12km, **n56**, σ**1s.02**/59, **2C-3D**, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IGLO	**Ghaloghah**	**0.60**	**222**	*e*Pg	**Pg**	**13 19 48.9**	**+0.6**
IKIA	**Kiasar**	**0.91**	**215**	*e*Pg	**Pb**	**13 19 55.1**	**0.0**
IKIA	**Kiasar**	**0.91**	**215**	*e*Pg	**Pb**	**13 19 55.1**	**0.0**
IMND	**Minoodasht**	**0.91**	**70**	*e*Pg	**Pn**	**13 19 57.0**	**+0.7**
IMND				*e*Sg	**Sn**	**13 20 10.0**	**+0.1**
IMND	**Minoodasht**	**0.91**	**70**	*e*Pg	**Pn**	**13 19 57.0**	**+0.7**
IMND				*e*Sg	**Sn**	**13 20 10.0**	**+0.1**
ISHM	**Shahmirzad**	**1.42**	**217**	*e*Sg	**Sn**	**13 20 21.0**	**-1.8**
ISHM				*e*Pg	**Pn**	**13 20 03.2**	**-0.3**
ISHM				*e*		13 20 27.3	
	comp=Z,29μm,0.1s						
IALA	**Alasht**	**1.50**	**235**	*e*Pn	**Pn**	**13 20 04.5**	**-0.2**
IALA	**Alasht**	**1.50**	**235**	*e*Pn	**Pn**	**13 20 04.5**	**-0.2**
IANJ	**Anjilo**	**1.52**	**193**	*e*	**Sn**	**13 20 28.1**	**+2.9**
	comp=Z,14μm,0.2s						
IANJ				⇑*e*Pn	**Pn**	**13 20 04.5**	**-0.4**
MRVT	**Maraveh tapeh**	**1.57**	**63**	*e*PN5		13 20 04.9	
MRVT				AML	AML	13 20 30.6	
	comp=E,532nm,0.2s						
MRVT				AML	AML	13 20 31.0	
	comp=N,538nm,0.2s						
IFIR	**Firoozkooh**	**1.82**	**225**	*e*Sg	**Sb**	**13 20 33.6**	**-0.5**
IFIR				*e*Pn	**Pn**	**13 20 09.7**	**+0.6**
IFIR				*e*		13 20 35.9	
	comp=Z,23μm,0.1s						
ILAS	**Lasjerd**	**1.92**	**216**	*e*Pn	**Pn**	**13 20 10.8**	**+0.4**
ILAS				*e*Sg	**Sb**	**13 20 36.1**	**-0.7**
ILAS				*e*		13 20 41.1	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,10µm,0.3s						
ILAS	Lasjerd	1.92	216	ePn	Pn	13 20 10.8	+0.4
ILAS				eSg	Sb	13 20 36.1	-0.7
IDMV	Damavand	2.31	234	ePn	Pn	13 20 16.9	+1.1
IDMV				e		13 20 52.2	
	comp=Z,6µm,0.2s						
IDMV	Damavand	2.31	234	ePn	Pn	13 20 16.9	+1.1
DAMV	Damavand	2.32	236	ePn	Pn	13 20 17.2	+1.3
DAMV	Damavand	2.32	236	ePn	Pn	13 20 17.2	+1.3
ISHV	Shirvan	2.75	77	ePn	Pn	13 20 22.4	+0.6
ISHV				e		13 21 24.2	
	comp=Z,2µm,0.2s						
ISHV	Shirvan	2.75	77	ePn	Pn	13 20 22.4	+0.6
CHTH	Charan	2.79	249	ePn	Pn	13 20 23.8	+1.4
CHTH	Charan	2.79	249	ePn	Pn	13 20 23.8	+1.4
IVRN	Varamin	2.88	228	ePn	Pn	13 20 24.0	+0.7
IVRN				ePn	Pn	13 20 24.1	+0.7
IVRN				e		13 21 11.7	
	comp=Z,2µm,0.1s						
IVRN	Varamin	2.88	228	ePn	Pn	13 20 24.1	+0.7
ISFR	Sfrayin	2.94	87	ePn	Pn	13 20 25.1	+0.7
ISFR				e		13 21 25.5	
	comp=Z,1µm,0.1s						
ISFR	Sfrayin	2.94	87	ePn	Pn	13 20 25.1	+0.7
IR3	Iran Long-Peri	3.05	242	eSg	Sg	13 21 13.6	-1.2
IR3	Iran Long-Peri	3.05	242	eSg	Sg	13 21 13.6	-1.2
ISFB	Sefidab	3.10	214	ePn	Pn	13 20 26.2	-0.3
ISFB				e		13 21 19.0	
	comp=Z,1µm,0.1s						
ISFB	Sefidab	3.10	214	ePn	Pn	13 20 26.2	-0.3
IMHD	Mahdasht	3.22	248	ePn	Pn	13 20 30.2	+2.1
IMHD				e		13 20 39.1	
	comp=Z,1µm,0.1s						
IMHD	Mahdasht	3.22	248	ePn	Pn	13 20 30.2	+2.1
IKRD	Kardeh	3.36	92	ePn	Pg	13 20 41.9	+0.9
IKRD				e		13 20 53.6	
	comp=Z,233nm,0.1s						
IKRD	Kardeh	3.36	92	ePn	Pg	13 20 41.9	+0.9
GHVR	GHOM	3.49	226	ePn	Pn	13 20 33.6	+1.8
GHVR				AML	AML	13 21 37.8	
	comp=E,112nm,0.8s						
GHVR				AML	AML	13 21 40.0	
	comp=N,109nm,0.6s						
GHVR	GHOM	3.49	226	ePn	Pn	13 20 33.6	+1.8
IR5	Iran Long-Peri	3.50	241	ePn	Pn	13 20 32.1	+0.1
IR5	Iran Long-Peri	3.50	241	ePn	Pn	13 20 32.1	+0.1
IAKL	Akhelmad	3.57	94	ePn	Pn	13 20 33.2	+0.1
IPAY	Payeh	3.78	96	ePn	Pn	13 20 36.5	+0.5
IPAY				e		13 21 02.4	
	comp=Z,335nm,0.1s						
IPAY	Payeh	3.78	96	ePn	Pn	13 20 36.5	+0.5
IRAZ	Razeghan	3.88	248	ePn	Pn	13 20 38.5	+1.1
IRAZ				e		13 20 50.2	
	comp=Z,1µm,0.2s						
IRAZ	Razeghan	3.88	248	ePn	Pn	13 20 38.5	+1.1
TABS	Tabas	4.00	145	ePn	Pn	13 20 40.3	+1.4
TABS	Tabas	4.00	145	ePn	Pn	13 20 40.3	+1.4
IMOG	Moghan	4.12	100	ePn	Pn	13 20 40.5	-0.2
IMOG				e		13 20 59.6	
	comp=Z,252nm,0.1s						
IMOG	Moghan	4.12	100	ePn	Pn	13 20 40.5	-0.2
IMYA	Miami	4.68	96	ePn	Pn	13 20 48.7	+0.4
IMYA				e		13 21 13.3	
	comp=Z,256nm,0.3s						
IMYA	Miami	4.68	96	ePn	Pn	13 20 48.7	+0.4
GRMI	Germi	5.42	292	ePn	Pn	13 20 57.5	-0.9
GRMI	Germi	5.42	292	ePn	Pn	13 20 57.5	-0.9
SHRT	Shahrakht	5.88	122	ePn	Pn	13 21 05.0	+0.3
SHRT	Shahrakht	5.88	122	ePn	Pn	13 21 05.0	+0.3
AB31	Akbulak array	12.96	17	⇓Pn	Pn	13 22 49.2	+7.7
	comp=Z,0.4nm,0.7s,baz=213,slow=13						
AB31				⇑Sn	Sn	13 24 57.9	-8.2
	comp=Z,0.2nm,0.4s,baz=213,slow=22,SNR=5.2						
AB31	Akbulak array	12.96	17	Pn	Pn	13 22 49.2	+7.7
	comp=Z,0.4nm,0.7s						
AB31				Sn	Sn	13 24 57.9	-8.2
	comp=Z,0.2nm,0.4s,SNR=5.2						
AKTO	Aktyubinsk	13.74	10	⇓Pn	Pn	13 22 56.6	+4.4
	comp=Z,0.2nm,0.6s						
AKTO				⇓Sn	Sn	13 25 11.1	-14
	comp=Z,0.3nm,1.1s						
AKTO	Aktyubinsk	13.74	10	Pn	Pn	13 22 56.6	+4.4
	comp=Z,0.2nm,0.6s						
AKTO				Sn	Sn	13 25 11.1	-14
	comp=Z,0.3nm,1.1s						

*CSEM **02** 13:22:07.1±0.3, 37°.51N×34°.57E, h2km, MD2.8, Error ellipse: s-maj=9.6km s-min=7.2km az=33.0*
*ISK **02** 13:22:07.5, 37°.42N×34°.46E, h13km, MD2.6*
*DDA **02** 13:22:08.9, 37°.31N×34°.56E, h7km, MD2.8*
ISC 02 13:22:07.6±1.2**, 37°.46N**±0°.05×**34°.55E**±0°.04**, h10**km±11km**, n16, σ0.52**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GULE	Gulek	0.25	133	iP	Pg	13 22 12.6	-0.2
GULE				iS	Sg	13 22 16.3	+0.1
GULE	Gulek	0.25	133	iP	Pg	13 22 12.6	-0.2
GULE				iS	Sg	13 22 16.3	+0.1
MERS	Mersin	0.59	182	ePG	Pg	13 22 18.7	-0.3
MERS				eSG	Sg	13 22 27.1	+0.4
MERS	Mersin	0.59	182	ePg	Pg	13 22 18.7	-0.3
MERS				eSg	Sg	13 22 27.1	+0.4
KOZT	Kozan	1.02	88	ePN	Pn	13 22 28.8	+0.9
KOZT	Kozan	1.02	88	ePn	Pn	13 22 28.8	+0.9
KRTS	Karatas	1.10	143	ePN	Pn	13 22 29.4	+0.3
KRTS	Karatas	1.10	143	ePn	Pn	13 22 29.4	+0.3
SULT	Sultanhani-AKS	1.11	313	ePN	Pb	13 22 28.6	-0.3
SULT				eSN	Sn	13 22 44.1	-0.5
SULT	Sultanhani-AKS	1.11	313	ePn	Pb	13 22 28.6	-0.3
SULT				eSn	Sn	13 22 44.1	-0.5
ERMK	Ermenek	1.54	239	iP	Pb	13 22 36.6	+0.2
ERMK				iS	Sg	13 22 58.0	+0.8
ERMK	Ermenek	1.54	239	iP	Pb	13 22 36.6	+0.2
ERMK				iS	Sg	13 22 58.0	+0.8
YAYL	Yayladag	1.89	138	iP	Pb	13 22 41.8	-0.5
YAYL	Yayladag	1.89	138	iP	Pb	13 22 41.8	-0.5
GAZI	Gazipasa	2.17	236	eP	Pb	13 22 46.4	-0.5
GAZI				iS	Sg	13 23 16.6	-0.7
GAZI	Gazipasa	2.17	236	eP	Pb	13 22 46.4	-0.5

*IDC **02** 13:24:02.4±0.6, 55°.66N×163°.23E, h0km, mb3.8/17, mb1 4.0/19, mb1mx3.9/30, mbtmp3.9/19, ML4.2/2, MS3.3/3, Ms1 3.4/3, ms1mx2.8/38, Error ellipse: s-maj=16.4km s-min=11.3km az=5.0*
*MOS **02** 13:24:03.5±1.2, 55°.67N×163°.47E, h18km, mb4.4/13, Error ellipse: s-maj=10.3km s-min=7.0km az=89.5*
*NEIC **02** 13:24:03.8±0.4, 55°.81N×163°.29E, h10km, mb4.5/9, Error ellipse: s-maj=11.4km s-min=7.1km az=151.0*
*KRSC **02** 13:24:04.9±0.0, 55°.63N×163°.47E, h18km±17km, ML4.5*
*BJI **02** 13:24:09.2, 55°.90N×162°.00E, h33km, mB4.7/2, mb4.3/6, Ms4.3/2, Ms7 4.2/2*
ISC 02 13:24:04.0±0.7**, 55°.68N**±0°.03×**163°.42E**±0°.03**, h16**km±4km**, n128, σ1.74**/169**, mb4.1**/26**, MS3.4**/4**, 2C-1D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.63	327	PN	Pn	13 24 18.5	+0.3
KBTR	Krutoberegovo	0.63	327	P	Pn	13 24 18.5	+0.3
KBG	Krutoberegovo	0.70	325	PN	Pn	13 24 19.5	+0.2
KBG				S	Sn	13 24 29.2	-0.6
KBG	Krutoberegovo	0.70	325	eP	Pn	13 24 19.5	+0.2
KBG				iS	Sn	13 24 29.2	-0.6
SMKR	Semkarok	1.42	310	eP	Pg	13 24 30.9	-0.4
SMKR				iS	Sg	13 24 49.3	-0.4
MKZ	Mys Kozlova	1.49	221	PN	Pn	13 24 30.7	+0.7
MKZ				S	Sn	13 24 48.8	-0.3
MKZ	Mys Kozlova	1.49	221	P	Pn	13 24 30.7	+0.7
MKZ				iS	Sn	13 24 48.8	-0.3
ZLN	Zelenaya	1.52	284	eP	Pg	13 24 32.8	-0.3
ZLN				iS	Sg	13 24 53.3	+0.5
BDR	Baidarnaya	1.53	307	eP	Pg	13 24 33.0	-0.3
BDR				iS	Sg	13 24 53.3	+0.2
BKI	Bering	1.53	107	PN	Pn	13 24 31.1	+0.5
BKI				S	Sn	13 24 49.4	-0.7
BKI	Bering	1.53	107	eP	Pn	13 24 31.1	+0.5
BKI				iS	Sn	13 24 49.4	-0.7
BZGR	Bezymyannyi-Gr	1.56	281	eP	Pg	13 24 33.6	-0.4
BZGR				iS	Sg	13 24 54.5	+0.2
CIRR	Tsirk	1.57	287	eP	Pg	13 24 33.1	-1.0
CIRR				iS	Sg	13 24 53.6	-0.9
LGNR	Loginova	1.59	286	eP	Pg	13 24 33.9	-0.7
LGNR				iS	Sg	13 24 55.3	0.0
SRKR	Sorokina	1.59	309	eP	Pg	13 24 33.9	-0.7
BZMR	Bezymyannaya	1.68	280	eP	Pb	13 24 34.7	+0.2
BZMR				iS	Sg	13 24 55.6	-2.3
BZWR	Bezymyannyi-We	1.68	281	eP	Pg	13 24 35.0	-1.2
BZWR				iS	Sg	13 24 56.7	-1.2
KLY	Klyuchi	1.68	293	PN	Pb	13 24 33.5	-1.0
KLY				S	Sb	13 24 53.8	-1.6
KLY	Klyuchi	1.68	293	eP	Pb	13 24 33.5	-1.0
KLY				iS	Sb	13 24 53.8	-1.6
KRSR	Krestovskiy	1.69	290	eP	Pb	13 24 34.6	-0.2
KRSR				iS	Sg	13 24 56.1	-2.4
KIRR	Kirishev	1.76	280	eP	Pb	13 24 36.0	0.0
KIRR				iS	Sg	13 24 59.1	-1.5
KMNR	Kamenistaya	1.81	274	eP	Pb	13 24 37.3	+0.6
KMNR				iS	Sg	13 25 01.8	-0.2
KPT	Kopyto	1.83	280	eP	Pb	13 24 37.3	+0.2
KPT				iS	Sg	13 25 01.5	-1.3
TUMR	Tumrok	1.91	259	eP	Pb	13 24 39.1	+0.7
TUMR				eS	Sg	13 25 03.9	-1.4
KOZR	Kozyr	2.02	282	PN	Pb	13 24 40.4	0.0
KOZR				S	Sb	13 25 05.6	+0.3
KOZ	Kozyrevsk	2.04	282	eP	Pb	13 24 40.4	-0.2
KOZ				iS	Sb	13 25 05.6	-0.1
SRDR	Sredinnyy	2.18	289	eP	Pb	13 24 42.6	-0.4
SRDR				iS	Sb	13 25 09.6	-0.2
ESO	Esso	2.68	277	PN	Pb	13 24 48.8	-2.7
ESO				S	Sb	13 25 21.1	-3.0
ESO	Esso	2.68	277	eP	Pb	13 24 48.8	-2.7
ESO				iS	Sb	13 25 21.1	-3.0
KII	Karymskiy	2.83	236	P	Pn	13 24 50.7	+2.2
KII				iS	Sn	13 25 22.9	+0.6
SPN	Mys Shipunski	3.26	219	PN	Pn	13 24 54.9	+0.5
SPN	Mys Shipunski	3.26	219	eP	Pn	13 24 54.9	+0.5
SPN				iS	Sn	13 25 30.1	-2.8
SDLR	Sedlovina	3.58	230	P	Pn	13 25 01.4	+2.5
SDLR				iS	Sn	13 25 41.9	+1.0
KRER	Koryakskii	3.62	231	P	Pn	13 25 02.3	+2.8
KRER				iS	Sn	13 25 44.2	+2.2
SMAR	Somma	3.62	230	P	Pn	13 25 02.1	+2.5
SMAR				iS	Sn	13 25 43.3	+1.1
AVH	Avacha	3.65	230	P	Pn	13 25 02.7	+2.9
AVH				iS	Sn	13 25 45.4	+2.8
UGLR	Uglovaya	3.65	229	P	Pn	13 25 02.6	+2.7
UGLR				iS	Sn	13 25 45.1	+2.4
KOK	Koryaka	3.68	231	P	Pn	13 25 03.1	+2.9
GNL	Ganaly	3.75	240	eP	Pn	13 25 04.3	+3.0
PET	Petropavlovsk	3.86	228	⇓iPN	Pn	13 25 04.8	+2.2
PET				pmax	pmax		
	comp=Z,103nm,0.5s						
PET				MLR	MLR		
	comp=Z,200nm,15.0s						
PET				MLR	MLR		
	comp=Z,300nm,15.0s						
PET	Petropavlovsk	3.86	228	ePn	Pn	13 25 03.8	+1.2
PET	Petropavlovsk	3.86	228	eP	Pn	13 25 05.1	+2.5
PET				iS	Sn	13 25 48.6	+1.1
PALN	Palana	3.90	333	P	Pn	13 25 06.9	+3.8
PALN				iS	Sn	13 25 51.0	+2.5
PEA0B	Petropavlovsk-	4.22	235	ePn	Pn	13 25 08.8	+1.1
PETK	Petropavlovsk-	4.22	235	PN	Pn	13 25 10.4	+2.7
PETK						13 26 04.0	
PETK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
PETK				smax	smax		
	comp=N,5.0nm,0.3s						
PETK	Petropavlovsk-	4.22	235	Pn	Pn	13 25 10.3	+2.7
PETK				Sn	Sb	13 26 04.0	-4.6
PETK	Petropavlovsk-	4.22	235	Pn	Pn	13 25 10.3	+2.7
	comp=N,6.7nm,0.3s,baz=76,slow=16,SNR=72						
PETK				Sn	Sb	13 26 04.0	-4.6
	comp=N,5.0nm,0.3s,baz=28,slow=22,SNR=4.9						
RUS	Russkaya	4.35	224	PN	Pn	13 25 11.5	+2.1
RUS	Russkaya	4.35	224	eP	Pn	13 25 11.5	+2.1
RUS				iS	Sn	13 25 59.3	-0.5
GRL	Gorelyy	4.44	227	eP	Pn	13 25 13.7	+2.9
GRL				iS	Sn	13 26 03.9	+1.7
MTVR	Mutnovka	4.45	226	eP	Pn	13 25 13.9	+3.0
MTVR				eS	Sn	13 26 03.1	+0.8
APC	Apacha	4.59	236	eP	Pn	13 25 16.6	+3.9
TILK	Tilichiki	4.99	16	eP	Pn	13 25 21.8	+3.7
TILK				iS	Sn	13 26 17.5	+2.1
MIPR	Malaya Ipel'ka	5.21	232	eP	Pn	13 25 24.5	+3.4
FX1	Attu Island--F	6.36	112	ePn	Pn	13 25 37.1	+0.2
FX1				eSn	Sn	13 26 45.3	-3.8
FX1	Attu Island--F	6.36	112	Pn	Pn	13 25 37.0	0.0
	comp=N,28nm,0.3s,baz=335,slow=5.5,SNR=54						
FX1				Sn	Sn	13 26 45.4	-3.7
	comp=N,7.7nm,0.3s,baz=164,slow=23,SNR=7.8						
SKR	Severo-Kuril's	6.66	224	ePN	Pn	13 25 43.9	+2.9
SKR				pmax	pmax		
	comp=E,40nm,0.4s						
SKR				pmax	pmax		
	comp=Z,40nm,0.4s						
BILL	Bilibino	12.47	5	ePN	Pn	13 27 05.3	+4.7
BILL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GAMB	Gambell	14.85	47	ePn	Pn	13 27 32.1	-0.8
	comp=Z,4.5nm,0.9s						
TNA	Tin City	17.02	43	ePn	Pn	13 27 59.1	-1.8
	comp=Z,5.3nm,1.1s						
ASAJ	Asahikawa	17.64	238	P	P	13 28 09.8	+0.1
ASAJ	Asahikawa	17.64	238	P	P	13 28 09.8	+0.1
	comp=Z,0.9nm,0.3s,baz=19,slow=5.5,SNR=16						
YAK	Yakutsk	18.41	304	eP	P	13 28 19.3	+1.2
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK	Yakutsk	18.41	304	eP	Pn	13 28 16.5	-1.7
	comp=E,20nm,0.6s						
TIXI	Tiksi	21.65	331	iP	P	13 28 54.4	+1.2
TIXI	Tiksi	21.65	331	eP	P	13 28 53.7	+0.5
	comp=E,8.0nm,0.7s						
KDAK	Kodiak Island	23.91	67	P	P	13 29 17.6	+1.0
KDAK	Kodiak Island	23.91	67	P	P	13 29 17.6	+1.0
	comp=E,14nm,1.1s,baz=310,slow=7.9,SNR=3.3						
TRF	Thorofare Moun	24.20	52	eP	P	13 29 17.8	-1.8
	comp=E,15nm,0.9s						
COLD	Coldfoot	24.32	43	eP	P	13 29 16.9	-3.5
COLA	College	25.21	49	eP	P	13 29 39.8	+11
ILAR	Eielson Array	25.62	49	P	P	13 29 33.6	+1.3
ILAR	Eielson Array	25.62	49	P	P	13 29 33.6	+1.3
	comp=E,0.7nm,0.7s,baz=265,slow=9.7,SNR=8.1						
MJAR	Matsushiro Arr	25.68	232	P	P	13 29 33.4	+0.3
MJAR	Matsushiro Arr	25.68	232	P	P	13 29 33.4	+0.3
	comp=E,2.7nm,0.6s,baz=35,slow=7.0,SNR=12						
MJAR				LR	LR	13 39 55.2	
	comp=E,77nm,19.3s,baz=65,slow=37						
SONM	Songino Array	35.25	282	P	P	13 30 57.1	-0.5
SONM	Songino Array	35.25	282	P	P	13 30 57.1	-0.5
	comp=E,0.8nm,0.4s,baz=53,slow=6.8,SNR=7.1						
HHC	Hu-ho-hao-te	36.65	268	eP	P	13 31 06.7	-2.9
HHC				sP	sP	13 31 20.4	+4.0
HHC				PP	PnPn	13 32 28.1	-4.6
HHC				PcP	PcP	13 33 34.9	+2.6
HHC				S	S	13 36 40.4	-12
HHC				sS	sS	13 36 56.9	-3.1
HHC				ScP	ScP	13 37 17.2	-0.8
HHC				PcS	PcS	13 37 21.0	+0.8
HHC				SS	SnSn	13 39 01.8	-20
HHC				ScS	ScS	13 41 20.4	-4.3
HHC				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC				LR	LR		
	comp=N,200nm,11.9s						
HHC				LR	LR		
	comp=E,270nm,12.3s						
HHC				LR	LR		
	comp=Z,250nm,11.0s						
YKA	Yellowknife Ar	39.95	46	P	P	13 31 39.4	+2.4
YKA	Yellowknife Ar	39.95	46	P	P	13 31 39.3	+2.4
	comp=Z,0.1nm,0.4s,baz=300,slow=8.5,SNR=3.5						
TPUB	Ta-pu	45.07	242	eP	P	13 32 19.0	-0.1
KURK	Kurchatov	48.03	302c	iP	P	13 32 40.8	-1.1
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KURK	Kurchatov	48.03	302	eP	P	13 32 40.1	-1.8
	comp=Z,8.2nm,0.6s						
MK31	Makanchi Array	48.79	296	eP	P	13 32 46.2	-1.8
MK31	Makanchi Array	48.79	296	eP	P	13 32 46.2	-1.8
MKAR	Makanchi Array	48.79	296	P	P	13 32 47.0	-1.0
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	48.79	296	P	P	13 32 47.0	-1.0
MKAR	Makanchi Array	48.79	296	P	P	13 32 47.0	-1.0
	comp=Z,1.7nm,0.6s,baz=52,slow=7.0,SNR=14						
BRVK	Borovoye	50.33	308	⇑iP	P	13 32 58.8	-0.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	ARCESS Array B	51.42	342	P	P	13 33 09.2	+1.7
ARCES	ARCESS Array B	51.42	342	P	P	13 33 09.2	+1.7
	comp=Z,4.7nm,0.9s,baz=39,slow=5.8,SNR=3.0						
NVAR	Mina Array Bea	53.09	74	P	P	13 33 24.1	+3.5
NVAR	Mina Array Bea	53.09	74	P	P	13 33 24.2	+3.5
	comp=Z,0.3nm,0.6s,baz=284,slow=7.3,SNR=2.8						
PDAR	Pinedale Array	54.60	64	P	P	13 33 33.4	+1.8
PDAR	Pinedale Array	54.60	64	P	P	13 33 33.4	+1.8
	comp=Z,0.2nm,0.7s,baz=354,slow=1.8,SNR=2.7						
USP	Ospenovka	55.21	297	iP	P	13 33 36.4	+0.6
USP	Ospenovka	55.21	297	P	P	13 33 36.4	+0.6
	SNR=9.5						
AAK	Ala-Archa	55.67	297	iP	P	13 33 39.8	+0.5
AAK				pmax	pmax		
	comp=Z,13nm,1.2s						
AAK	Ala-Archa	55.67	297	eP	P	13 33 37.9	-1.3
	comp=Z,15nm,0.7s						
AAK	Ala-Archa	55.67	297	P	P	13 33 39.8	+0.5
	SNR=6.3						
KZA	Kyzart	55.69	296	iP	P	13 33 40.6	+0.9
KZA	Kyzart	55.69	296	P	P	13 33 40.6	+0.9
	SNR=5.9						
EKS2	Erkin-Say	56.01	297	eP	P	13 33 41.5	-0.2
EKS2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
EKS2	Erkin-Say	56.01	297	eP	P	13 33 41.5	-0.2
	comp=Z,5.1nm,0.7s						
EKS2	Erkin-Say	56.01	297	P	P	13 33 42.4	+0.8
	SNR=9.4						
AML	Almayashu	56.44	297	iP	P	13 33 46.0	+0.9
AML	Almayashu	56.44	297	P	P	13 33 46.0	+0.9
	SNR=8.2						
KKAR	Karatay Array	57.31	300	eP	P	13 33 49.0	-1.8
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KKAR	Karatay Array	57.31	300	eP	P	13 33 49.0	-1.8
	comp=Z,4.5nm,0.7s						
ABKAR	Akbulak array	57.58	311	eP	P	13 33 51.9	-0.7
	comp=Z,0.9nm,0.5s						
FINES	FINESS Array B	58.49	338	P	P	13 33 59.6	+0.9
FINES	FINESS Array B	58.49	338	P	P	13 33 59.6	+0.9
	comp=Z,1.8nm,0.8s,baz=27,slow=9.0,SNR=5.1						
CMAR	Chiang Mai Arr	60.60	259	P	P	13 34 14.6	+0.8
CMAR	Chiang Mai Arr	60.60	259	P	P	13 34 14.6	+0.8
	comp=Z,0.5nm,0.6s,baz=21,slow=6.9,SNR=4.7						
CMAR				LR	LR	14 01 15.0	
	comp=Z,26nm,21.1s,baz=328,slow=37						
NOA	NORSAR Array B	61.57	345	P	P	13 34 21.1	+1.1
NOA	NORSAR Array B	61.57	345	P	P	13 34 21.1	+1.1
	comp=Z,0.7nm,0.7s,baz=19,slow=6.9,SNR=2.6						
HFS	Hagfors	62.05	343	P	P	13 34 22.2	-0.9
HFS	Hagfors	62.05	343	P	P	13 34 22.2	-0.9
	comp=Z,4.2nm,1.1s,baz=48,slow=2.1,SNR=3.0						
AKASG	Malin Array Be	67.36	330	P	P	13 34 58.0	+0.2
AKASG	Malin Array Be	67.36	330	P	P	13 34 58.0	+0.2
AKASG	Malin Array Be	67.36	330	P	P	13 34 58.0	+0.2
	comp=Z,0.2nm,0.3s,baz=26,slow=5.8,SNR=3.7						
TXAR	Lajitas Array	67.88	70	P	P	13 35 04.2	+2.6
TXAR	Lajitas Array	67.88	70	P	P	13 35 04.2	+2.6
	comp=Z,1.6nm,0.6s,baz=293,slow=4.2,SNR=15						
BRTR	Keskin Array B	75.81	322	LR	LR	14 15 06.0	
	comp=Z,17nm,18.4s,baz=280,slow=40						
WRA	Warramunga Arr	79.27	208	P	P	13 36 08.3	0.0
WRA	Warramunga Arr	79.27	208	P	P	13 36 08.3	0.0
	comp=Z,0.4nm,0.7s,baz=11,slow=5.8,SNR=5.6						
ASAR	Alice Springs	82.94	207	P	P	13 36 29.2	+1.4
ASAR	Alice Springs	82.94	207	P	P	13 36 29.2	+1.4
	comp=Z,0.4nm,0.8s,baz=19,slow=4.9,SNR=4.8						

*ISCJB **02** 13:29:51.8±0.7, 37°.14N±0°.04×37°.15E±0°.04, h4km±4km, Error ellipse: s-maj=6.4km s-min=4.8km az=175.4*
*CSEM **02** 13:29:51.6±0.2, 37°.15N×37°.16E, h5km, MD2.9, Error ellipse: s-maj=5.5km s-min=4.0km az=176.0*
*ISK **02** 13:29:51.1, 37°.26N×37°.21E, h5km, MD2.4*
*DDA **02** 13:29:51.7, 37°.14N×37°.12E, h7km, MD2.9*
ISC 02 13:29:51.8±0.9**, 37°.16N**±0°.03×**37°.15E**±0°.02**, h5**km±6km**, n25, σ0.97**/39**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.05	81	ePG	Pg	13 29 52.5	-0.7
GAZ				eSG	Sg	13 29 55.5	+1.3
GAZ	Gaziantep	0.05	81	ePg	Pg	13 29 52.5	-0.7
GAZ				eSg	Sg	13 29 55.5	+1.3
GZT	Gaziantep	0.39	60	iP	Pn	13 30 04.6	+0.5
KMRS	Kahramanmaras	0.39	330	ePG	Pg	13 29 59.3	-0.1
KMRS				eSG	Sg	13 30 05.3	+0.7
KMRS	Kahramanmaras	0.39	330	ePg	Pg	13 29 59.3	-0.1
KMRS				eSg	Sg	13 30 05.3	+0.7
ANDN	Andirin	0.76	303	iP	Pb	13 30 07.1	-0.5
ANDN				iS	Sb	13 30 18.6	+0.3
ANDN	Andirin	0.76	303	iP	Pb	13 30 07.1	-0.5
ANDN				iS	Sb	13 30 18.6	+0.3
ATAB	Bozova	0.97	71	iP	Pb	13 30 10.2	-0.8
ATAB				iS	Sb	13 30 24.2	+0.1
ATAB	Bozova	0.97	71	iP	Pb	13 30 10.2	-0.8
ATAB				iS	Sb	13 30 24.2	+0.1
KOZT	Kozan	1.10	287	ePN	Pb	13 30 13.1	-0.2
KOZT				eSN	Sn	13 30 30.4	+1.1
KOZT	Kozan	1.10	287	ePn	Pb	13 30 13.1	-0.2
KOZT				eSn	Sn	13 30 30.5	+1.1
AKCD	Akcadag	1.29	28	eP	Pg	13 30 16.7	+0.3
AKCD				iS	Sn	13 30 35.2	+0.9
AKCD	Akcadag	1.29	28	eP	Pg	13 30 16.7	+0.3
AKCD				iS	Sn	13 30 35.2	+0.9
URFA	Urfa	1.36	78	ePN	Pb	13 30 17.4	-0.4
URFA	Urfa	1.36	78	ePn	Pb	13 30 17.4	-0.4
YAYL	Yayladag	1.40	217	iP	Pn	13 30 17.6	-0.5
YAYL				iS	Sg	13 30 37.3	+0.4
YAYL	Yayladag	1.40	217	iP	Pn	13 30 17.6	-0.5
YAYL				iS	Sg	13 30 37.3	+0.4
MALT	Malatya	1.53	41	ePN	Pn	13 30 19.2	-0.7
MALT	Malatya	1.53	41	ePn	Pn	13 30 19.2	-0.7
SARI	SarD1z-Kayseri	1.55	347	ePN	Pn	13 30 17.3	-3.0
SARI	SarD1z-Kayseri	1.55	347	ePn	Pn	13 30 17.3	-3.0
PINB	Pinarbasi	1.62	339	iP	Pn	13 30 20.7	-0.6
PINB				iS	Sb	13 30 43.6	+0.4
PINB	Pinarbasi	1.62	339	iP	Pn	13 30 20.7	-0.6
PINB				iS	Sb	13 30 43.6	+0.4
DARE	Darende-Malaty	1.86	16	ePN	Pn	13 30 17.8	-6.6
DARE	Darende-Malaty	1.86	16	ePn	Pn	13 30 17.8	-6.6

IDC 02 13:42:15.1±1.3**, 20°.04N**×**122°.51E, h0**km**, mb3.2**/3**, mb1 3.5**/4**, mb1mx3.3**/24**, mbtmp3.4**/4**, ML3.5**/1**, Error ellipse: s-maj=50.7km s-min=24.5km az=73.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOW	Kunigami	8.58	37	Pn	Pn	13 44 20.8	+0.2
	1.4nm,0.3s,baz=136,slow=18,SNR=2.6						
WRA	Warramunga Arr	41.39	163	P	P	13 50 02.7	-0.6
	0.4nm,0.5s,baz=344,slow=9.0,SNR=7.5						
MKAR	Makanchi Array	42.20	319	P	P	13 50 09.5	-0.2
	0.2nm,0.7s,baz=110,slow=8.2,SNR=3.0						
ASAR	Alice Springs	44.84	165	P	P	13 50 31.6	+0.4
	0.1nm,0.4s,baz=348,slow=7.6,SNR=8.7						

CASC 02 13:47:29.0±1.9**, 8°.67N**×**82°.83W, h19**km±9km**, MD3.5, 2C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.18	48	⇑iP	Pg	13 47 34.2	+0.2
BRU2				eS	Sg	13 47 38.3	+0.9
TBS2		0.21	55	eP	Pg	13 47 35.2	+0.9
TBS2				eS	Sg	13 47 39.5	+1.5
BRU	Baru	0.30	63	⇑iP	Pb	13 47 36.5	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRU				eS	Sb	13 47 41.4	+0.2
ACR	Cerro Adams	0.34	267	⇓eP	Pg	13 47 36.4	+0.1
ACR				eS	Sg	13 47 41.2	-0.1
LAJ	Bijagual	1.74	313	eP	Pb	13 48 01.4	+0.7
CGA2	Cerro Gallo 2	2.10	310	eP	Pn	13 48 02.7	-0.7
CGA2				eS	Sb	13 48 31.1	-1.4

IDC 02 14:00:35.3±9.7, 6°.47S×155°.26E, h51km±71km, mb3.4/5, mb1 3.6/6, mb1mx3.4/18, mbtmp3.5/6, ML3.4/1, Error ellipse: s-maj=68.5km s-min=30.1km az=96.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.54	249	P	Pn	14 02 37.4	+1.0
	2.5nm,0.3s,baz=82,slow=11,SNR=9.4						
PMG				S	Sn	14 04 12.2	+0.8
	0.6nm,0.3s,baz=7.0,slow=19,SNR=2.4						
WRA	Warramunga Arr	24.33	235	P	P	14 05 48.4	-0.2
	0.8nm,0.5s,baz=58,slow=9.6,SNR=30						
WRA				pP	pP	14 05 58.2	-3.4
	0.4nm,0.5s,baz=59,slow=9.5,SNR=3.2						
WRA				PcP	PcP	14 09 28.2	+0.8
	0.3nm,0.7s,baz=50,slow=2.4,SNR=4.7						
ASAR	Alice Springs	26.72	228	P	P	14 06 09.6	-0.6
	0.3nm,0.5s,baz=57,slow=9.5,SNR=15						
ASAR				pP	pP	14 06 20.2	-3.0
	0.4nm,0.5s,baz=59,slow=9.1,SNR=4.7						
ASAR				PcP	PcP	14 09 34.0	+1.2
	0.2nm,0.6s,baz=69,slow=2.3,SNR=4.2						
CMAR	Chiang Mai Arr	60.80	295	P	P	14 10 43.2	+0.6
	1.3nm,0.8s,baz=127,slow=5.9,SNR=7.8						
SONM	Songino Array	69.04	327	P	P	14 11 35.6	-0.2
	0.3nm,0.5s,baz=133,slow=8.1,SNR=2.6						
MKAR	Makanchi Array	83.19	319	P	P	14 12 56.1	-0.1
	0.4nm,0.8s,baz=98,slow=4.4,SNR=3.7						
TORD	Torodi Ar. Bea	153.14	286	PKPbc	PKPbc	14 20 26.8	-1.7
	0.3nm,0.5s,baz=74,slow=2.6,SNR=3.3						

*THE **02** 14:01:13.8, 36°.14N×27°.55E, h20km±5km, ML3.4/2, Error ellipse: s-maj=8.6km s-min=1.9km az=93.0*
*ISK **02** 14:01:13.2, 36°.11N×27°.09E, h6km, ML3.4*
*DDA **02** 14:01:13.6, 36°.21N×27°.06E, h26km, MD3.3*
*ISCJB **02** 14:01:14.4±0.7, 36°.12N±0°.03×27°.15E±0°.04, h9km±5km, Error ellipse: s-maj=6.0km s-min=3.3km az=43.9*
*ATH **02** 14:01:14.6, 36°.13N×27°.16E, h25km±2km, MD3.4/11*
*CSEM **02** 14:01:15.0±0.1, 36°.16N×27°.12E, h8km, MD3.4, Error ellipse: s-maj=5.5km s-min=3.0km az=131.0*
ISC 02 14:01:15.5±1.0, 36°.13N±0°.02×27°.17E±0°.03, h24km±12km, n68, σ1s32/88, 2C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIS2	Nisyros Isl.	0.45	1	P	Pb	14 01 23.8	-1.0
NIS1	Nisyros Isl.	0.47	1	P	Pb	14 01 24.1	-1.1
NIS1				S	Sn	14 01 33.7	-0.6
NIS1	Nisyros Isl.	0.47	1	⇑iPB	Pb	14 01 24.5	-0.7
NIS1	Nisyros Isl.	0.47	1	P	Pb	14 01 24.1	-1.1
NIS1	Nisyros Isl.	0.47	1	⇑iPb	Pb	14 01 24.5	-0.7
NIS1				S	Sn	14 01 33.7	-0.6
NIS4	Nisyros Isl.	0.54	357	P	Pb	14 01 25.9	-0.5
KARP	Karpathos	0.58	181	ePN	Pb	14 01 26.3	-0.8
KARP				eSN	Sb	14 01 34.7	-0.3
DAT	Datca	0.68	29	ePG	Pn	14 01 27.7	-2.1
DAT				eSG	Sb	14 01 38.0	+0.1
DAT	Datca	0.68	29	ePg	Pn	14 01 27.7	-2.1
DAT				eSg	Sb	14 01 38.0	+0.1
ARG	Arkhangelos	0.78	84	ePN	Pn	14 01 29.2	-1.8
ARG				eSN	Sb	14 01 41.9	+1.4
BODT	Bodrum	0.94	7	ePG	Pn	14 01 32.1	-1.1
BODT				eSG	Sb	14 01 45.9	+0.9
BODT	Bodrum	0.94	7	ePg	Pn	14 01 32.1	-1.1
BODT				eSg	Sb	14 01 45.9	+0.9
MLSB	Milas	1.26	23	ePN	Pb	14 01 38.6	0.0
MLSB				eSN	Sb	14 01 56.9	+2.5
MLSB	Milas	1.26	23	ePn	Pb	14 01 38.6	0.0
MLSB				eSn	Sb	14 01 56.9	+2.5
ZKR	Zakros	1.28	218	P	Pb	14 01 39.1	+0.2
ZKR				S	Sb	14 01 56.2	+1.3
ZKR	Zakros	1.28	218	ePN	Pb	14 01 39.5	+0.6
ZKR				eSN	Sb	14 01 56.5	+1.6
ZKR	Zakros	1.28	218	P	Pb	14 01 39.1	+0.2
ZKR	Zakros	1.28	218	ePn	Pb	14 01 39.5	+0.6
ZKR				S	Sb	14 01 56.2	+1.3
ZKR				eSn	Sb	14 01 56.5	+1.6
YER	Yerkesik	1.34	41	ePN	Pb	14 01 40.0	0.0
YER	Yerkesik	1.34	41	ePn	Pb	14 01 40.0	0.0
TURN	Turunc	1.37	57	iP	Pn	14 01 34.6	-4.5
TURN				iS	Sn	14 01 48.2	-8.3
NPS	Neapolis	1.54	236	ePN	Pn	14 01 41.8	+0.4
NPS				eSN	Sb	14 02 01.2	-1.1
NPS	Neapolis	1.54	236	ePn	Pn	14 01 41.8	+0.4
NPS				eSn	Sb	14 02 01.2	-1.1
APE	Apeiranthos	1.62	306	ePN	Pn	14 01 42.1	-0.4
APE	Apeiranthos	1.62	306	ePB	Pn	14 01 42.3	-0.3
APE	Apeiranthos	1.62	306	ePn	Pn	14 01 42.2	-0.4
FETY	Fethiye	1.62	71	ePN	Pb	14 01 43.9	-0.9
FETY	Fethiye	1.62	71	ePn	Pb	14 01 43.9	-0.9
AYDN	Tasoluk	1.63	20	iP	Pn	14 01 42.9	+0.2
AYDN				iS	Sb	14 02 07.1	+2.1
AYDN	Tasoluk	1.63	20	iP	Pn	14 01 42.9	+0.2
AYDN				iS	Sb	14 02 07.1	+2.1
LAST	Lasithi	1.68	235	P	Pn	14 01 44.2	+0.7
LAST	Lasithi	1.68	235	ePN	Pb	14 01 44.5	-1.4
LAST	Lasithi	1.68	235	P	Pn	14 01 44.2	+0.7
LAST	Lasithi	1.68	235	ePn	Pb	14 01 44.5	-1.4
XRY	Khrisi	1.74	224	ePN	Pb	14 01 46.6	-0.1
XRY	Khrisi	1.74	224	ePn	Pb	14 01 46.6	-0.1
AKAS	Kas	1.97	86	iP	Pn	14 01 48.6	+1.1
AKAS	Kas	1.97	86	iP	Pn	14 01 48.6	+1.1
IDI	Anoyia	2.04	246	P	Pn	14 01 48.5	+0.2
IDI	Anoyia	2.04	246	ePN	Pn	14 01 48.6	+0.2
IDI	Anoyia	2.04	246	ePn	Pn	14 01 48.6	+0.2
DNZL	Cakiroluk	2.16	43	iP	Pb	14 01 52.4	-1.7
DNZL	Cakiroluk	2.16	43	iP	Pb	14 01 52.4	-1.7
DENT	Denizli	2.20	42	ePN	Pn	14 01 52.1	+1.6
DENT	Denizli	2.20	42	ePn	Pn	14 01 52.2	+1.6
GOLH	Golhisar	2.22	59	iP	Pb	14 01 53.6	-1.3
GOLH				iS	Sb	14 02 21.2	-0.8
GOLH	Golhisar	2.22	59	iP	Pb	14 01 53.6	-1.3
GOLH				iS	Sb	14 02 21.2	-0.8
BLCB	Balcova	2.25	357	ePN	Pn	14 01 52.9	+1.7
BLCB	Balcova	2.25	357	ePn	Pn	14 01 52.9	+1.7
ELL	Elmali	2.29	74	ePN	Pn	14 01 53.7	+1.8
ELL	Elmali	2.29	74	ePn	Pn	14 01 53.7	+1.8
CHOS	Chios island	2.42	339	P	Pn	14 01 52.5	-1.1
CHOS				S	Sn	14 02 23.2	+0.7
CHOS	Chios island	2.42	339	P	Pn	14 01 52.5	-1.1
CHOS				S	Sn	14 02 23.2	+0.7
VAM	Vamos	2.52	254	ePB	Pb	14 01 57.5	-2.6
KULA	Kula-Manisa	2.66	26	ePN	Pn	14 01 59.0	+2.1
KULA	Kula-Manisa	2.66	26	ePn	Pn	14 01 59.0	+2.1
KORT	Korkueli	2.70	70	iP	Pn	14 01 59.5	+2.0
KORT	Korkueli	2.70	70	iP	Pn	14 01 59.6	+2.0
GVD	Gavdhos	2.83	244	P	Pb	14 02 02.2	-3.1
GVD	Gavdhos	2.83	244	P	Pb	14 02 02.2	-3.1
KHL	Karahalli	2.88	40	ePN	Pn	14 02 01.8	+1.8
KHL	Karahalli	2.88	40	ePn	Pn	14 02 01.8	+1.8
BCK	Bucak	3.05	63	ePN	Pn	14 02 04.4	+2.1
BCK	Bucak	3.05	63	ePn	Pn	14 02 04.4	+2.1
KYTH	Kithira	3.35	274	ePN	Pn	14 02 07.3	+1.0
KYTH	Kithira	3.35	274	ePn	Pn	14 02 07.3	+1.0
GAZI	Gazipasa	4.16	87	iP	Pn	14 02 17.5	0.0
GAZI				iS	Sn	14 03 02.5	-3.0
GAZI	Gazipasa	4.16	87	iP	Pn	14 02 17.5	0.0

*CSEM **02** 14:01:45.8, 37°.43N×23°.04E, h31km, MD3.0, After ATH*
ATH 02 14:01:45.8, 37°.43N×23°.04E, h31km±2km, MD3.0/4, Southern Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DID	Didima	0.17	64	ePB	Pb	14 01 52.1	+0.2
DID				eSB	Sn	14 01 56.5	0.0
DID	Didima	0.17	64	ePb	Pb	14 01 52.1	+0.2
DID				eSb	Sn	14 01 56.5	0.0
VLX	Vlachokerasia	0.53	264	ePN	Pn	14 01 57.6	+0.2
VLX				eSN	Sn	14 02 05.1	-0.3
VLX	Vlachokerasia	0.53	264	ePn	Pn	14 01 57.6	+0.2
VLX				eSn	Sn	14 02 05.1	-0.3
VLI	Veliai	0.71	187	ePN	Pb	14 02 00.0	+0.2
VLI				eSN	Sn	14 02 10.8	+1.1
VLI	Veliai	0.71	187	ePn	Pb	14 02 00.0	+0.2
VLI				eSn	Sn	14 02 10.8	+1.1
DYR	Agios Nikonas	0.87	220	ePN	Pb	14 02 02.7	+0.2
DYR	Agios Nikonas	0.87	220	ePn	Pb	14 02 02.7	+0.2

*CSEM **02** 14:02:19.8, 39°.93N×28°.06E, h10km, MD2.6, After ISK*
ISK 02 14:02:19.8, 39°.93N×28°.06E, h10km, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GONE	Gonen-Balikesi	0.31	292	ePG	Pg	14 02 26.1	+0.1
GONE				eSG	Sg	14 02 31.3	+1.2
GONE	Gonen-Balikesi	0.31	292	ePg	Pg	14 02 26.1	+0.1
GONE				eSg	Sg	14 02 31.3	+1.2
BALB	Balikesir	0.32	205	ePG	Pg	14 02 26.8	+0.6
BALB				eSG	Sb	14 02 31.8	-1.1
BALB	Balikesir	0.32	205	ePg	Pg	14 02 26.8	+0.5
BALB				eSg	Sb	14 02 31.8	-1.2
EDC	Edincik	0.44	340	ePG	Pg	14 02 28.9	+0.5
EDC				eSG	Sb	14 02 35.5	-0.8
EDC	Edincik	0.44	340	ePg	Pg	14 02 28.9	+0.5
EDC				eSg	Sb	14 02 35.5	-0.8
GEMT	Gemlik	1.00	60	ePG	Pb	14 02 39.5	+0.2
GEMT	Gemlik	1.00	60	ePg	Pb	14 02 39.5	+0.3
RKY	Sarkoy-Tekirda	1.01	318	ePG	Pb	14 02 39.7	+0.2
RKY				eSG	Sn	14 02 54.2	-0.2
RKY	Sarkoy-Tekirda	1.01	318	ePg	Pb	14 02 39.7	+0.2
RKY				eSg	Sn	14 02 54.2	-0.3
LPK	Lapseki	1.09	294	ePN	Pn	14 02 41.4	+0.3
LPK	Lapseki	1.09	294	ePn	Pn	14 02 41.4	+0.3
TVSB	Tavsanli	1.19	114	ePN	Pg	14 02 43.0	+0.2
TVSB	Tavsanli	1.19	114	ePn	Pg	14 02 43.0	+0.2
GELI	Tayfur-Gelibol	1.30	291	ePN	Pg	14 02 44.7	-0.1
GELI	Tayfur-Gelibol	1.30	291	ePn	Pg	14 02 44.7	-0.1
EZN	Ezine	1.34	266	ePN	Pn	14 02 44.3	-0.2
EZN	Ezine	1.34	266	ePn	Pn	14 02 44.3	-0.2
CTKS	Kestanelik-??a	1.34	15	ePN	Pn	14 02 44.6	0.0
CTKS	Kestanelik-??a	1.34	15	ePn	Pn	14 02 44.7	+0.1

*CSEM **02** 14:02:31.4, 45°.67N×26°.46E, h151km, MD3.5/2, After BUC*
BUC 02 14:02:31.4±1.5, 45°.67N×26°.46E, h151km±12km, MD3.5/2, 33C-12D, Error ellipse: s-maj=12.7km s-min=8.9km az=325.0, Romania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLOR	Plostina	0.23	36	⇓iP	Pn	14 02 52.1	+0.2
PLOR	Plostina	0.23	36	⇓iP	Pn	14 02 52.1	+0.2
PLOR				iS	Sn	14 03 06.9	-0.6
PLOR	Plostina	0.23	36	⇓iP	Pn	14 02 52.1	+0.2
PLOR				iS	Sn	14 03 06.9	-0.6
VRI	Vrincioaia	0.27	44	⇑iP	Pn	14 02 52.3	+0.3
VRI	Vrincioaia	0.27	44	⇑iP	Pn	14 02 52.3	+0.3
VRI				iS	Sn	14 03 07.6	-0.1
VRI	Vrincioaia	0.27	44	⇑iP	Pn	14 02 52.3	+0.3
VRI				iS	Sn	14 03 07.6	-0.1
MLR	Muntele Rosu	0.40	244	⇑iP	Pn	14 02 52.8	+0.2
MLR	Muntele Rosu	0.40	244	⇑iP	Pn	14 02 52.8	+0.2
MLR				iS	Sn	14 03 07.8	-0.8
MLR	Muntele Rosu	0.40	244	⇑iP	Pn	14 02 52.8	+0.2
MLR				iS	Sn	14 03 07.8	-0.8
ODBI	Odobesti	0.43	77	⇑iP	Pn	14 02 53.5	+1.0
ODBI	Odobesti	0.43	77	⇑iP	Pn	14 02 53.5	+1.0
ODBI				iS	Sn	14 03 08.3	-0.2
ODBI	Odobesti	0.43	77	⇑iP	Pn	14 02 53.5	+1.0
ODBI				iS	Sn	14 03 08.3	-0.2
GRER		0.46	128	S	Sn	14 03 07.4	-1.4
GRER		0.46	128	iS	Sn	14 03 07.4	-1.4
GRER		0.46	128	iS	Sn	14 03 07.4	-1.4
PETR		0.54	84	⇓iP	Pn	14 02 53.8	+0.8
PETR		0.54	84	⇓iP	Pn	14 02 53.8	+0.8
PETR				iS	Sn	14 03 09.9	+0.5
PETR		0.54	84	⇓iP	Pn	14 02 53.8	+0.8
PETR				iS	Sn	14 03 09.9	+0.5
ISR	Istrita	0.55	174	⇑iP	Pn	14 02 53.8	+0.6
ISR	Istrita	0.55	174	⇑iP	Pn	14 02 53.8	+0.6
ISR				iS	Sn	14 03 09.8	+0.1
ISR	Istrita	0.55	174	⇑iP	Pn	14 02 53.8	+0.6
ISR				iS	Sn	14 03 09.8	+0.1
SECR		0.69	204	⇑iP	Pn	14 02 54.5	+0.5
SECR		0.69	204	⇑iP	Pn	14 02 54.5	+0.5
SECR				iS	Sn	14 03 09.9	-1.2
SECR		0.69	204	⇑iP	Pn	14 02 54.5	+0.5
SECR				iS	Sn	14 03 09.9	-1.2
GHRR		0.77	59	S	Sn	14 03 12.4	+0.4
GHRR		0.77	59	iS	Sn	14 03 12.4	+0.4
GHRR		0.77	59	iS	Sn	14 03 12.4	+0.4
PGOR	Pogoanele	0.85	154	⇓iP	Pn	14 02 55.6	+0.6
PGOR	Pogoanele	0.85	154	⇓iP	Pn	14 02 55.6	+0.6
PGOR	Pogoanele	0.85	154	⇓iP	Pn	14 02 55.6	+0.6
TESR		0.85	9	⇑iP	Pn	14 02 55.1	+0.1
TESR		0.85	9	⇑iP	Pn	14 02 55.1	+0.1
TESR				iS	Sn	14 03 12.1	-1.1
TESR		0.85	9	⇑iP	Pn	14 02 55.1	+0.1
TESR				iS	Sn	14 03 12.1	-1.1
VOIR		1.02	257	⇑iP	Pn	14 02 56.5	0.0
VOIR		1.02	257	⇑iP	Pn	14 02 56.5	0.0
VOIR				iS	Sn	14 03 15.2	-0.4
VOIR		1.02	257	⇑iP	Pn	14 02 56.5	0.0
VOIR				iS	Sn	14 03 15.2	-0.4
AMRR	Amara	1.23	149	S	Sn	14 03 18.2	-0.5
AMRR	Amara	1.23	149	iS	Sn	14 03 18.2	-0.5
AMRR	Amara	1.23	149	iS	Sn	14 03 18.2	-0.5
CFR	Carcaliu	1.28	112	⇑iP	Pn	14 02 58.6	-0.1
CFR	Carcaliu	1.28	112	⇑iP	Pn	14 02 58.6	-0.1
CFR				iS	Sn	14 03 18.3	-1.3
CFR	Carcaliu	1.28	112	⇑iP	Pn	14 02 58.6	-0.1
CFR				iS	Sn	14 03 18.3	-1.3
LEOM	Leova	1.48	56	⇑iP	Pn	14 03 01.2	+0.5
LEOM	Leova	1.48	56	⇑iP	Pn	14 03 01.2	+0.5
LEOM				iS	Sn	14 03 22.7	-0.6
LEOM	Leova	1.48	56	⇑iP	Pn	14 03 01.2	+0.5
LEOM				iS	Sn	14 03 22.7	-0.6
HUMR	Humele	1.55	223	⇑iP	Pn	14 03 01.6	+0.1
HUMR	Humele	1.55	223	⇑iP	Pn	14 03 01.6	+0.1
HUMR				iS	Sn	14 03 24.3	-0.3
HUMR	Humele	1.55	223	⇑iP	Pn	14 03 01.6	+0.1
HUMR				iS	Sn	14 03 24.3	-0.3
TLCR		1.73	105	⇓iP	Pn	14 03 03.6	+0.2
TLCR		1.73	105	⇓iP	Pn	14 03 03.6	+0.2
TLCR				iS	Sn	14 03 27.3	-0.7
TLCR		1.73	105	⇓iP	Pn	14 03 03.6	+0.2
TLCR				iS	Sn	14 03 27.3	-0.7
TIRR	Tirgusor	1.84	130	⇑iP	Pn	14 03 04.7	0.0
TIRR	Tirgusor	1.84	130	⇑iP	Pn	14 03 04.7	0.0
TIRR				iS	Sn	14 03 28.5	-1.7
TIRR	Tirgusor	1.84	130	⇑iP	Pn	14 03 04.7	0.0
TIRR				iS	Sn	14 03 28.5	-1.7
LOT	Lotru	1.90	264	S	Sn	14 03 32.5	+0.7
LOT	Lotru	1.90	264	iS	Sn	14 03 32.5	+0.7
LOT	Lotru	1.90	264	iS	Sn	14 03 32.5	+0.7

MEX 02 14:04:31.2±0.5, 16°.93N×99°.79W, h10km±6km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.09	227	iP	Pg	14 04 33.4	-0.2
ACX				eS	Sg	14 04 35.1	-0.3
CAIG	El Cayaco	0.47	285	iP	Pg	14 04 40.0	-0.4
CAIG				eS	Sg	14 04 46.1	-0.5
MEIG	Mezcala	1.01	9	iP	Pg	14 04 47.6	-3.1
MEIG				eS	Sg	14 04 59.8	-4.2
ARIG	Puente Sto Nin	1.45	339	iP	Pn	14 04 53.9	-3.6
ARIG				eS	Sn	14 05 11.8	-4.8
PNIG	Pinotepa	1.68	108	iP	Pn	14 04 57.5	-3.3
PNIG				eS	Sn	14 05 17.4	-5.1

IDC 02 14:32:22.2±3.0, 44°.56N×153°.43E, h0km, mb3.0/2, mb1 3.4/5, mb1mx3.2/27, mbtmp3.3/5, ML3.2/3, Error ellipse: s-maj=91.6km s-min=27.6km az=149.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAJ	Asahikawa	7.78	271	Pn	Pn	14 34 15.7	-0.9
	0.4nm,0.3s,baz=329,slow=28,SNR=8.2						
PETK	Petropavlovsk-	9.00	17	Pn	Pn	14 34 34.7	+1.3
	0.2nm,0.3s,baz=206,slow=13,SNR=5.1						
MJAR	Matsushiro Arr	14.06	240	Pn	Pn	14 35 44.1	+1.5
	0.2nm,0.3s,baz=57,slow=48,SNR=4.0						
ILAR	Eielson Array	38.15	37	P	P	14 39 42.8	+0.1
	0.2nm,0.5s,baz=267,slow=5.4,SNR=5.7						
YKA	Yellowknife Ar	52.56	36	P	P	14 41 36.3	-0.6
	0.1nm,0.5s,baz=302,slow=7.2,SNR=2.9						

*IDC **02** 14:39:07.3±1.2, 33°.21S×179°.07W, h0km, mb4.1/5, mb1 4.2/6, mb1mx3.9/19, mbtmp4.1/6, ML3.8/1, MS3.2/2, Ms1 3.2/2, ms1mx2.8/28, Error ellipse: s-maj=34.2km s-min=25.5km az=44.0*
ISC 02 14:39:14.3±1.1, 33°.56S±0°.08×179°.1W±0°.1, h48km, n25, σ1s90/30, mb4.0/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.51	207	ePN	Pn	14 40 21.0	+0.8
MXZ				SN	Sn	14 41 16.3	+5.0
PUZ	Puketiti	4.99	205	ePN	Pn	14 40 26.5	-0.1
PUZ				eSN	Sn	14 41 25.3	+2.4
MWZ	Matawai	5.49	209	PN	Pn	14 40 33.2	-0.4
MWZ				eSN	Sn	14 41 37.4	+2.0
URZ	Urewera	5.60	212	ePN	Pn	14 40 34.4	-0.6
URZ				eSN	Sn	14 41 38.4	+0.3
URZ	Urewera	5.60	212	Pn	Pn	14 40 34.2	-0.8
	2.4nm,0.3s,baz=84,slow=0.7,SNR=14						
URZ				Sn	Sn	14 41 39.1	+1.1
	2.8nm,0.3s,baz=291,slow=23,SNR=3.9						
URZ				LR	LR	14 42 55.6	
	comp=Z,105nm,18.7s,baz=137,slow=39						
KNZ	Kokohu	6.04	205	ePN	Pn	14 40 41.8	+0.8
OUZ	Omahuta	6.25	253	PN	Pn	14 40 45.4	+1.4
BKZ	Black Stump Fm	6.62	211	ePN	Pn	14 40 48.4	-0.8
PXZ	Pawanui	7.22	205	ePN	Pn	14 40 57.1	-0.1
TSZ	Takapari Road	7.59	210	ePN	Pn	14 40 59.4	-3.0
TSZ				eSN	Sn	14 42 25.5	-1.6
BFZ	Birch Farm	8.02	206	eSN	Sn	14 42 34.6	-2.8
MRZ	Mangatainoka R	8.26	209	ePN	Pn	14 41 09.0	-2.5
MRZ				eSN	Sn	14 42 39.8	-3.6
THZ	Tophouse	10.35	215	ePN	Pn	14 41 35.1	-4.9
THZ				eSN	Sn	14 43 27.2	-7.3
DZM	Mont Dzumac	17.13	308	LR	LR	14 47 36.6	
	comp=Z,132nm,18.8s,baz=284,slow=30						
CTA	Charters Tower	33.53	285	P	P	14 45 50.4	+0.8
	2.0nm,0.5s,baz=120,slow=9.3,SNR=10						
ASAR	Alice Springs	42.11	271	P	P	14 47 01.2	-0.7
	1.7nm,0.6s,baz=110,slow=7.4,SNR=35						
WRA	Warramunga Arr	43.38	276	P	P	14 47 11.4	-0.9
	1.9nm,0.6s,baz=116,slow=7.9,SNR=48						
FITZ	Fitzroy Crossi	51.49	273	P	P	14 48 14.0	-1.3
	1.6nm,0.7s,baz=180,slow=7.6,SNR=6.9						
QSPA	South Pole Qui	56.56	180	P	P	14 48 54.6	+2.9
	1.1nm,0.8s,baz=35,slow=12,SNR=9.8						
VNA3	Neumayer Olymp	75.22	176	eP	P	14 50 53.0	+1.6
VNA2	Neumayer--Watz	75.64	177	eP	P	14 50 55.8	+2.0
	baz=193,slow=3.9						
FINES	FINESS Array B	147.74	337	PKPbc	PKPbc	14 58 51.1	-1.8
	2.1nm,0.5s,baz=30,slow=4.4,SNR=25						
NB2	NORSAR Subarra	151.70	349	PKP	PKPbc	14 59 01.1	-1.6
	comp=Z,1.2nm,0.6s,baz=18,slow=2.6						
NOA	NORSAR Array B	151.70	349	PKPbc	PKPbc	14 59 01.8	-0.9
	comp=Z,0.5nm,0.7s,baz=22,slow=4.7,SNR=7.1						
TORD	Torodi Ar. Bea	159.67	182	PKP	PKPdf	14 59 09.1	+0.7
	comp=Z,0.4nm,1.0s,baz=201,slow=1.2,SNR=2.5						
TORD				PKPab	PKPab	14 59 47.7	+0.9
	comp=Z,0.8nm,0.9s,baz=188,slow=3.6,SNR=3.5						

IDC 02 14:45:04.2±1.2, 1°.88N×125°.78E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.5/21, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=99.1km s-min=18.5km az=71.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.86	180	P	P	14 49 35.5	-1.5
	0.1nm,0.3s,baz=31,slow=12,SNR=2.4						
WRA	Warramunga Arr	23.26	159	P	P	14 50 13.5	0.0
	1.0nm,0.6s,baz=340,slow=11,SNR=16						
ASAR	Alice Springs	26.59	163	P	P	14 50 45.4	+1.0
	0.3nm,0.5s,baz=344,slow=7.8,SNR=13						
SONM	Songino Array	48.75	343	P	P	14 53 51.2	+0.3
	0.3nm,0.5s,baz=152,slow=6.5,SNR=2.4						
MKAR	Makanchi Array	58.54	326	P	P	14 55 02.0	-0.6
	0.5nm,0.4s,baz=122,slow=8.2,SNR=24						

*ISCJB **02** 14:45:58.1±0.5, 20°.33S±0°.09×177°.79W±0°.09, h550km, mb4.0/14, Error ellipse: s-maj=13.0km s-min=10.3km az=154.5*
*IDC **02** 14:45:58.6±2.5, 20°.28S×177°.81W, h540km±27km, mb3.6/14, mb1 3.7/15, mb1mx3.5/24, mbtmp3.6/15, Error ellipse: s-maj=17.4km s-min=14.6km az=109.0*
*AUST **02** 14:45:58.6±0.0, 20°.12S×177°.57W, h558km, Error ellipse: s-maj=2.5km s-min=1.8km az=15.0*
ISC 02 14:45:59.1±0.6, 20°.3S±0°.1×177°.77W±0°.10, h550km, n43, σ0s90/43, mb4.0/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	Niue	7.49	82	P	P	14 47 51.6	-0.2
	baz=7.3,SNR=3.0						
AFI	Afiamalu	8.57	43	S	S	14 49 33.3	-11
	5.5nm,0.3s,baz=34,slow=23,SNR=6.9						
DZM	Mont Dzumac	14.83	260	P	P	14 49 06.3	-0.7
	2.9nm,0.3s,baz=74,slow=14,SNR=23						
URZ	Urewera	18.42	193	P	P	14 49 37.7	-2.9
	2.9nm,0.3s,baz=339,slow=4.2,SNR=20						
RPZ	Rata Peaks	25.13	199	P	P	14 50 39.4	-1.4
	5.4nm,0.7s,baz=53,slow=3.7,SNR=5.5						
EIDS	Eidsvold	29.11	254	P	P	14 51 16.1	+0.2
	baz=29,SNR=6.6						
ARMA	Armidale	29.34	244	P	P	14 51 19.2	+1.2
	baz=30,SNR=5.2						
RMQ	Roma	31.27	252	P	P	14 51 35.8	+1.2
	baz=32,SNR=11						
CTA	Charters Tower	33.73	264	P	P	14 51 55.6	+0.2
	22nm,0.6s,baz=96,slow=10,SNR=47						
CMSA	Cobar Meteorol	34.56	244	P	P	14 52 02.8	+0.5
	baz=35,SNR=17						
QLP	Quilpie	35.32	252	P	P	14 52 08.9	+0.3
	baz=36,SNR=23						
PMG	Port Moresby	35.52	283	P	P	14 52 10.1	-0.4
	16nm,0.8s,baz=90,slow=4.9,SNR=6.9						
TOO	Toolangi	36.18	234	P	P	14 52 16.4	+0.7
	baz=36,SNR=6.8						
COEN	Coen	37.79	273	P	P	14 52 29.3	+0.2
	baz=38,SNR=15						
QIS	Mount Isa	39.86	262	P	P	14 52 45.4	-0.4
	baz=40,SNR=8.6						
BBOO	Buckleboo	42.82	243	P	P	14 53 09.4	+0.3
	baz=43,SNR=40						
ASAR	Alice Springs	44.77	257	P	P	14 53 24.4	0.0
	19nm,0.7s,baz=97,slow=7.5,SNR=274						
ASAR				PcP	PcP	14 54 54.6	0.0
	1.4nm,0.5s,baz=102,slow=4.0,SNR=5.1						
ASAR				S	S	14 59 21.9	0.0
	0.8nm,0.8s,baz=94,slow=17,SNR=5.4						
WRA	Warramunga Arr	44.84	262	P	P	14 53 24.2	-0.7
	13nm,0.5s,baz=96,slow=7.7,SNR=327						
KDU	Kakadu	48.17	271	P	P	14 53 49.8	-0.3
	baz=48,SNR=8.3						
MTN	Manton Dam	49.38	270	P	P	14 53 58.4	-0.7
	baz=50,SNR=12						
FORT	Forrest	49.57	246	P	P	14 54 00.0	-0.2
	baz=50,SNR=15						
FITZ	Fitzroy Crossi	53.27	262	P	P	14 54 27.1	0.0
	3.0nm,0.5s,baz=94,slow=3.2,SNR=36						
FITZ	Fitzroy Crossi	53.27	262	P	P	14 54 27.2	0.0
	baz=53,SNR=8.6						
MEEK	Meekatharra	58.19	251	P	P	14 55 00.5	-0.6
	baz=58,SNR=11						
KLBR	Kellerberrin	58.33	245	P	P	14 55 02.1	+0.1
	baz=58,SNR=6.8						
MORW	Morawa	60.10	248	P	P	14 55 13.9	0.0
	baz=60,SNR=4.9						
QSPA	South Pole Qui	69.75	180	P	P	14 56 15.7	+1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	1.2nm,0.6s,baz=345,slow=3.1,SNR=14						
UGM	**Wanagama**	**70.19**	**269**	P	**P**	**14 56 17.4**	**0.0**
	baz=70,SNR=7.7						
MJAR	**Matsushiro Arr**	**70.20**	**323**	P	**P**	**14 56 16.3**	**-0.7**
	2.7nm,0.5s,baz=160,slow=6.2,SNR=15						
ASAJ	**Asahikawa**	**73.68**	**331**	P	**P**	**14 56 37.9**	**+1.0**
	2.6nm,0.8s,baz=243,slow=13,SNR=4.9						
PETK	**Petropavlovsk-**	**76.16**	**345**	P	**P**	**14 56 50.3**	**-0.3**
	3.8nm,1.0s,baz=130,slow=4.5,SNR=2.8						
KSRS	**Korea Array**	**76.90**	**318**	P	**P**	**14 56 55.5**	**+0.5**
	0.6nm,0.6s,baz=138,slow=6.3,SNR=4.1						
USRK	**Ussuriysk Arra**	**78.94**	**326**	P	**P**	**14 57 06.7**	**+0.9**
	2.6nm,0.8s,baz=142,slow=4.8,SNR=6.3						
ILAR	**Eielson Array**	**88.09**	**13**	P	**P**	**14 57 49.7**	**-1.1**
	0.2nm,0.7s,baz=221,slow=4.9,SNR=4.6						
VNA3	**Neumayer Olymp**	**88.31**	**176**	*e*P	**P**	**14 57 52.0**	**+0.1**
VNA2	**Neumayer--Watz**	**88.75**	**177**	*e*P	**P**	**14 57 55.2**	**+1.2**
	baz=248,slow=1.8						
CMAR	**Chiang Mai Arr**	**90.26**	**289**	P	**P**	**14 58 03.5**	**+1.6**
	2.2nm,1.0s,baz=113,slow=3.2,SNR=13						
ZALV	**Zalesovo Beam**	**110.49**	**321**	PKiKP	**PKiKP**	**15 03 27.6**	**-1.2**
	0.3nm,0.5s,baz=212,slow=1.4,SNR=2.5						
MKAR	**Makanchi Array**	**111.24**	**313**	PKiKP	**PKiKP**	**15 03 29.2**	**-1.4**
	0.3nm,0.6s,baz=259,slow=0.6,SNR=4.9						
FINES	**FINESS Array B**	**135.66**	**344**	PKP	**PKPdf**	**15 04 18.0**	**+1.3**
	2.2nm,1.1s,baz=90,slow=5.6,SNR=3.7						
AKASG	**Malin Array Be**	**142.96**	**331**	PKhKP	PKPpre	15 04 26.7	
	3.3nm,0.5s,baz=42,slow=4.5,SNR=13						
BRTR	**Keskin Array B**	**146.88**	**313**	PKPbc	**PKPbc**	**15 04 39.8**	**-0.6**
	1.7nm,0.6s,baz=134,slow=4.5,SNR=13						
GERES	**GERESS Array B**	**150.09**	**345**	PKPbc	**PKPbc**	**15 04 48.0**	**0.0**
	0.7nm,0.6s,baz=29,slow=3.0,SNR=4.8						

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*IDC **02** 15:27:26.9±1.1, 18°.31N×121°.10E, h0km, mb3.3/6, mb1 3.5/6, mb1mx3.4/23, mbtmp3.3/6, Error ellipse: s-maj=45.2km s-min=20.5km az=62.0*
*ISCJB **02** 15:27:34.2±0.9, 18°.55N±0°.10×120°.68E±0°.07, h46km±9km, mb3.3/5, Error ellipse: s-maj=17.7km s-min=8.5km az=26.3*
*MAN **02** 15:27:34, 18°.48N×120°.72E, h34km, mb3.8, ML2.6, MS2.2*
ISC 02 15:27:35.2±1.1, **18°.44N**±0°.08×**120°.63E**±0°.07, **h46**km±8km, **n13**, σ1s75/16, **mb3.5**/5, **4C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.11**	**184**	⇑*i*P	**Pn**	**15 27 42.2**	**-0.4**
PIP				*e*S	**Sn**	**15 27 48.0**	**+0.1**
SIPP	**Brgy, Tapao**	**0.54**	**197**	⇑*e*P	**Pn**	**15 27 47.0**	**+0.3**
SIPP				*i* S	**Sn**	**15 27 57.8**	**+2.9**
ABRA	**Dolores**	**0.79**	**174**	*e*P	**Pn**	**15 27 49.3**	**-0.7**
ABRA				*e*S	**Sn**	**15 27 56.8**	**-3.9**
CVP	**Callao Caves**	**1.35**	**123**	⇓*i*P	**Pn**	**15 27 56.8**	**-0.8**
CVP				*i* S	**Sn**	**15 28 14.1**	**-0.3**
CAUP	**Cauayan**	**1.87**	**142**	*e*P	**Pn**	**15 28 06.3**	**+1.5**
CAUP				*e*S	**Sn**	**15 28 27.6**	**+0.4**
BCPH	**Baguio City Da**	**2.05**	**181**	⇑*i*P	**Pn**	**15 28 07.3**	**0.0**
PALP	**Palanan**	**2.19**	**128**	⇑*e*P	**Pn**	**15 28 09.8**	**+0.6**
PALP				*e*S	**Sn**	**15 28 37.1**	**+2.0**
CMAR	**Chiang Mai Arr**	**20.57**	**273**	P	Pn	15 32 12.4	-0.5
	0.4nm,0.5s,baz=74,slow=8.2,SNR=4.4						
WRA	**Warramunga Arr**	**40.45**	**160**	P	P	15 35 04.2	-5.1
	0.3nm,0.9s,baz=334,slow=11,SNR=4.8						
MKAR	**Makanchi Array**	**42.27**	**321**	P	**P**	**15 35 25.4**	**+1.4**
	1.0nm,0.7s,baz=114,slow=9.8,SNR=15						
ASAR	**Alice Springs**	**43.81**	**162**	P	P	15 35 33.2	-3.5
	0.1nm,0.3s,baz=342,slow=6.9,SNR=8.7						
ZALV	**Zalesovo Beam**	**44.88**	**331**	P	**P**	**15 35 45.3**	**+0.4**
	0.2nm,0.3s,baz=140,slow=7.0,SNR=2.6						
YKA	**Yellowknife Ar**	**88.45**	**22**	P	**P**	**15 40 20.6**	**-1.6**
	0.1nm,0.3s,baz=310,slow=4.8,SNR=2.9						

IDC 02 15:30:18.0±2.2, **16°.18S**×**175°.94W**, **h363**km±72km, **mb3.6**/3, **mb1 3.8**/4, **mb1mx3.2**/19, **mbtmp3.6**/4, **Error ellipse: s-maj=327.7km s-min=22.0km az=144.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.61**	**61**	P	Pn	15 31 34.3	0.0
	12nm,0.3s,baz=259,slow=23,SNR=7.6						
WRA	**Warramunga Arr**	**47.29**	**258**	P	P	15 38 16.2	-0.5
	1.4nm,0.5s,baz=89,slow=7.1,SNR=54						
ASAR	**Alice Springs**	**47.55**	**253**	P	P	15 38 18.7	0.0
	7.7nm,0.3s,baz=90,slow=7.5,SNR=473						
ILAR	**Eielson Array**	**83.69**	**12**	P	P	15 42 05.8	-0.7
	0.3nm,0.4s,baz=217,slow=5.2,SNR=12						
BRTR	**Keskin Array B**	**145.16**	**318**	PKPbc	PKPbc	15 49 13.7	0.0
	0.8nm,0.7s,baz=102,slow=1.5,SNR=6.3						

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*ISCJB **02** 15:45:18.9±0.7, 48°.12N±0°.08×154°.6E±0°.2, h42km, mb3.4/8, Error ellipse: s-maj=17.3km s-min=7.5km az=37.8*
*MOS **02** 15:45:21.6±2.0, 48°.12N×154°.65E, h72km, mb3.9/1, Error ellipse: s-maj=23.7km s-min=12.1km az=64.4*
*IDC **02** 15:45:23.0±3.2, 48°.21N×154°.39E, h62km±29km, mb3.1/8, mb1 3.3/10, mb1mx3.2/26, mbtmp3.1/10, ML3.0/2, Error ellipse: s-maj=29.5km s-min=17.5km az=151.0*
ISC 02 15:45:20.9±0.8, **48°.1N**±0°.1×**154°.6E**±0°.1, **h42**km, **n17**, σ1s34/17, **mb3.4**/8, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.74**	**21**	*e*PN	**Pn**	**15 46 03.0**	**+0.7**
SKR				*e*S	**Sn**	**15 46 34.0**	**-0.2**
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				pmax	pmax		
	comp=N,40nm,0.3s						
SKR				pmax	pmax		
	comp=E,20nm,0.3s						
SKR				smax	smax		
	comp=N,160nm,0.4s						
SKR				smax	smax		
	comp=E,240nm,0.4s						
SKR				smax	smax		
	comp=Z,70nm,0.4s						
PETK	**Petropavlovsk-**	**5.36**	**21**	PN	**Pn**	**15 46 40.0**	**+1.7**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK	**Petropavlovsk-**	**5.36**	**21**	P	**Pn**	**15 46 40.0**	**+1.7**
	comp=Z,1.5nm,0.3s,baz=188,slow=13,SNR=58						
PET	**Petropavlovsk**	**5.54**	**26**	*e*PN	Pn	15 46 46.0	+5.3
PET				*e*S	**Sn**	**15 47 43.3**	**+0.3**
PET				smax	smax		
	comp=N,45nm,0.6s						
PET				smax	smax		
	comp=E,40nm,0.6s						
YSS	**Yuzh-Sakhalins**	**8.09**	**266**	PN	Pn	15 47 21.8	+6.1
ASAJ	**Asahikawa**	**9.24**	**249**	P	**Pn**	**15 47 33.0**	**+1.5**
	comp=E,0.1nm,0.3s,baz=45,slow=16,SNR=2.6						
FX1	**Attu Island--F**	**12.74**	**61**	P	**Pn**	**15 48 18.4**	**-0.9**
	comp=E,1.2nm,0.3s,baz=268,slow=6.4,SNR=6.5						
FX1				S	Sn	15 50 28.1	-11
	comp=E,1.3nm,0.3s,baz=195,slow=23,SNR=5.1						
ILAR	**Eielson Array**	**34.84**	**40**	P	**P**	**15 52 07.3**	**-0.2**
	comp=E,0.2nm,0.8s,baz=280,slow=9.9,SNR=4.2						
ZALV	**Zalesovo Beam**	**42.62**	**305**	P	**P**	**15 53 10.3**	**-2.4**
ZALV	**Zalesovo Beam**	**42.62**	**305**	P	**P**	**15 53 10.3**	**-2.4**
	comp=E,0.3nm,0.5s,baz=50,slow=9.6,SNR=2.4						
MKAR	**Makanchi Array**	**47.19**	**297**	P	**P**	**15 53 48.8**	**-0.4**
MKAR	**Makanchi Array**	**47.19**	**297**	P	**P**	**15 53 48.8**	**-0.4**
	comp=E,0.1nm,0.7s,baz=64,slow=3.4,SNR=2.9						
YKA	**Yellowknife Ar**	**49.22**	**38**	P	**P**	**15 54 03.4**	**-1.1**
	comp=E,0.3nm,0.7s,baz=298,slow=8.1,SNR=5.6						
PDAR	**Pinedale Array**	**63.13**	**55**	P	**P**	**15 55 45.2**	**+0.8**
	comp=E,0.5nm,0.9s,baz=225,slow=1.9,SNR=4.3						
ASAR	**Alice Springs**	**73.84**	**200**	P	**P**	**15 56 50.4**	**-0.7**
	comp=E,0.3nm,0.9s,baz=6.1,slow=9.6,SNR=3.0						
TXAR	**Lajitas Array**	**75.95**	**62**	P	**P**	**15 57 04.5**	**+1.1**
	comp=E,0.5nm,0.7s,baz=302,slow=2.0,SNR=3.4						
BRTR	**Keskin Array B**	**78.05**	**317**	P	**P**	**15 57 14.9**	**-0.2**
	comp=E,0.4nm,0.5s,baz=95,slow=3.0,SNR=3.6						

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*IDC **02** 16:08:30.4±1.9, 23°.87N×94°.14E, h0km, mb3.3/5, mb1 3.4/6, mb1mx3.3/27, mbtmp3.3/6, ML3.1/1, Error ellipse: s-maj=84.9km s-min=19.1km az=66.0*
*ISCJB **02** 16:08:36.6±0.8, 23°.88N±0°.08×94°.00E±0°.07, h68km, mb3.2/5, Error ellipse: s-maj=11.5km s-min=8.2km az=29.7*
ISC 02 16:08:37.3±0.9, **23°.8N**±0°.1×**94°.00E**±0°.09, **h68**km, **n19**, σ1s72/23, **mb3.3**/5, **Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**0.98**	**356**	*e*P	**Pn**	**16 08 54.0**	**-1.5**
IMP				*e*S	**Sn**	**16 09 06.0**	**-3.0**
SHL	**Shillong**	**2.61**	**313**	*e*PN	**Pn**	**16 09 20.0**	**+2.7**
SHL				*e*SN	**Sn**	**16 09 47.0**	**-1.0**
TAPN	**Taplejung**	**6.69**	**303**	*e*Pn	**Pn**	**16 10 14.6**	**+1.4**
TAPN				*e*Sn	**Sn**	**16 11 25.5**	**-2.6**
	54nm,0.4s						
ODAN	**Odare**	**6.71**	**298**	*e*Pn	**Pn**	**16 10 14.8**	**+1.3**
ODAN				*e*Sn	**Sn**	**16 11 26.3**	**-2.3**
	99nm,0.3s						
CMAR	**Chiang Mai Arr**	**7.04**	**138**	Pn	**Pn**	**16 10 15.3**	**-2.5**
	0.1nm,0.3s,baz=321,slow=13,SNR=2.5						
CMAR				Lg	Lg	16 12 16.1	
	0.2nm,0.3s,baz=320,slow=28,SNR=5.5						
RAMN	**Ramite**	**7.39**	**297**	*e*Pn	**Pn**	**16 10 24.1**	**+1.3**
GUN	**Gumba**	**8.38**	**301**	*e*Pn	**Pn**	**16 10 37.1**	**+0.7**
PKI	**Pulchoki**	**8.61**	**298**	*e*Pn	**Pn**	**16 10 41.1**	**+1.6**
PKIN	**Phulchoki**	**8.62**	**298**	*e*Pn	**Pn**	**16 10 41.1**	**+1.5**
KKN	**Kakani**	**8.80**	**299**	*e*Pn	**Pn**	**16 10 43.1**	**+1.0**
DMN	**Daman**	**8.87**	**297**	*e*Pn	**Pn**	**16 10 44.3**	**+1.3**
KOLN	**Koldanda**	**10.17**	**295**	*e*Pn	**Pn**	**16 11 00.7**	**0.0**
DANN	**Dangsing**	**10.26**	**298**	*e*Pn	**Pn**	**16 11 02.0**	**0.0**
PYUN	**Piuthan**	**10.79**	**296**	*e*Pn	**Pn**	**16 11 08.2**	**-1.0**
MKAR	**Makanchi Array**	**24.79**	**341**	P	**P**	**16 13 53.6**	**+0.7**
	0.5nm,0.6s,baz=148,slow=11,SNR=9.5						
SONM	**Songino Array**	**25.93**	**19**	P	**P**	**16 14 03.3**	**0.0**
	0.3nm,0.4s,baz=205,slow=6.4,SNR=2.5						
ZALV	**Zalesovo Beam**	**30.89**	**349**	P	**P**	**16 14 48.6**	**+1.5**
	0.3nm,0.3s,baz=155,slow=6.1,SNR=2.8						
WRA	**Warramunga Arr**	**58.62**	**134**	P	**P**	**16 18 29.3**	**+1.6**
	0.3nm,0.9s,baz=324,slow=7.3,SNR=3.6						
ASAR	**Alice Springs**	**61.05**	**138**	P	**P**	**16 18 45.5**	**+1.2**
	0.2nm,0.8s,baz=318,slow=6.3,SNR=5.1						

IDC 02 16:11:49.2±43.0, **20°.79S**×**178°.56W**, **h479**km±382km, **mb2.7**/2, **mb1 2.9**/2, **mb1mx2.7**/17, **mbtmp2.7**/2, **Error ellipse: s-maj=306.8km s-min=124.2km az=107.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.95**	**257**	P	P	16 19 13.1	0.0
	0.7nm,0.5s,baz=92,slow=8.3,SNR=30						
ASAR				PcP	PcP	16 20 48.0	-0.8
	0.3nm,0.8s,baz=114,slow=4.4,SNR=4.8						
WRA	**Warramunga Arr**	**44.04**	**262**	P	P	16 19 13.6	-0.3
	0.2nm,0.3s,baz=96,slow=7.4,SNR=22						
AKASG	**Malin Array Be**	**143.01**	**330**	PKP	PKPbc	16 30 25.8	+0.3
	1.1nm,0.4s,baz=46,slow=4.0,SNR=6.0						
BRTR	**Keskin Array B**	**146.65**	**312**	PKPbc	PKPbc	16 30 37.1	+0.1
	0.3nm,0.4s,baz=61,slow=3.4,SNR=2.6						

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*IDC **02** 16:13:56.1±1.2, 55°.80S×26°.26W, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.7/15, mbtmp3.6/4, MS3.7/2, Ms1 3.7/2, ms1mx3.2/17, Error ellipse: s-maj=39.6km s-min=35.0km az=63.0*
*ISCJB **02** 16:13:59.8±1.0, 55°.7S±0°.1×26°.4W±0°.4, h35km, mb3.6/4, MS3.7/2, Error ellipse: s-maj=35.3km s-min=13.3km az=151.4*
ISC 02 16:14:01.4±1.0, **55°.8S**±0°.2×**26°.4W**±0°.2, **h35**km, **n10**, σ0s76/9, **mb3.7**/4, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**17.07**	**162**	*e*P	**P**	**16 17 57.9**	**-0.5**
VNA2	**Neumayer--Watz**	**17.24**	**159**	*e*P	**P**	**16 18 01.0**	**+0.6**
	baz=317,slow=11						
SNAA	**Sanae**	**18.78**	**157**	*e*P	**Pn**	**16 18 18.1**	**+0.1**
CFAA	**Coronel Fontan**	**37.89**	**292**	P	**P**	**16 21 14.0**	**-1.0**
	0.2nm,0.6s,baz=126,slow=4.6,SNR=5.5						
BOSA	**Boshof**	**45.47**	**75**	LR	LR	16 38 13.3	
	comp=Z,166nm,18.4s,baz=162,slow=32						
VNDA	**Vanda**	**46.83**	**182**	P	**P**	**16 22 26.8**	**-0.3**
	0.6nm,0.6s,baz=191,slow=5.4,SNR=3.3						
LPAZ	**La Paz**	**50.62**	**304**	P	**P**	**16 22 58.6**	**+1.1**
	1.5nm,0.6s,baz=180,slow=4.0,SNR=5.4						
LPAZ				LR	LR	16 43 25.2	
	comp=Z,42nm,21.9s,baz=251,slow=35						
TORD	**Torodi Ar. Bea**	**72.62**	**29**	P	**P**	**16 25 24.6**	**-0.5**
	0.7nm,0.8s,baz=196,slow=6.3,SNR=6.2						
YKA	**Yellowknife Ar**	**136.30**	**318**	PKP	**PKPdf**	**16 33 18.0**	**+0.4**
	0.1nm,0.3s,baz=141,slow=2.0,SNR=2.7						
ILAR	**Eielson Array**	**150.30**	**312**	PKPbc	**PKPbc**	**16 33 47.7**	**+0.4**
	0.9nm,0.9s,baz=125,slow=1.5,SNR=12						

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*NIED **02** 16:21:00, 44°.60N×140°.90E, h280km, Mw4.0 Best double couple: M0 1.14000×10^15 NP1:φs289.00000°, δ77.00000°, λ-111.00000°. NP2:φs169.00000°, δ24.00000°, λ-32.00000°.*
*ISCJB **02** 16:21:24.4±0.3, 44°.53N±0°.04×140°.91E±0°.06, h265km±2km, mb3.5/16, Error ellipse: s-maj=7.0km s-min=6.0km az=26.4*
*JMA **02** 16:21:24.2±0.2, 44°.57N×140°.85E, h269km±2km, M3.6*
*MOS **02** 16:21:24.2±0.8, 44°.53N×140°.84E, h265km, mb3.9/9, Error ellipse: s-maj=18.3km s-min=11.7km az=71.0*
*IDC **02** 16:21:24.9±0.5, 44°.57N×140°.88E, h255km±5km, mb3.4/16, mb1 3.5/19, mb1mx3.4/30, mbtmp3.4/19, Error ellipse: s-maj=12.3km s-min=9.5km az=160.0*
ISC 02 16:21:25.4±0.6, **44°.51N**±0°.05×**140°.94E**±0°.05, **h263**km±5km, **n60**, σ0s92/78, **mb3.7**/16, **1D, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYG	**Yagishiri**	**0.36**	**103**	P	**Pn**	**16 21 59.0**	**-0.4**
JYG				*e*S	**S**	**16 22 25.6**	**-0.5**
JSS	**Shosan**	**0.66**	**99**	P	**Pn**	**16 22 00.6**	**+0.3**
JSS				*e*S	**S**	**16 22 28.4**	**+0.7**
JRR	**Rishiri**	**0.68**	**23**	P	**Pn**	**16 22 00.1**	**-0.1**
JRR				*e*S	**S**	**16 22 28.5**	**+0.7**
JHR	**Hokuryu**	**0.95**	**143**	P	**Pn**	**16 22 02.1**	**+0.5**
JHR				*e*S	**S**	**16 22 30.9**	**+0.8**
JWK2	**Keihoku**	**1.05**	**40**	P	**Pn**	**16 22 01.5**	**-0.5**
JWK2				*e*S	**S**	**16 22 29.5**	**-1.4**
JSK	**Shakotan**	**1.21**	**196**	P	**Pn**	**16 22 02.8**	**-0.2**
JSK				*e*S	**S**	**16 22 32.1**	**-0.5**
ASAJ	**Asahikawa**	**1.25**	**108**	P	**Pn**	**16 22 03.0**	**-0.2**
	23nm,0.3s,baz=289,slow=8.7,SNR=810						
ASAJ				S	**S**	**16 22 31.8**	**-1.3**
	2.7nm,0.3s,baz=285,slow=31,SNR=8.0						
JSE	**Soyaes**	**1.25**	**69**	P	**Pn**	**16 22 02.4**	**-0.8**
JSE				*e*S	**S**	**16 22 31.5**	**-1.5**
JKK2	**Kamakawa 2**	**1.45**	**116**	P	**Pn**	**16 22 04.5**	**-0.1**
JKK2				*e*S	**S**	**16 22 35.5**	**0.0**
JEW	**Eniwo**	**1.71**	**167**	P	**Pn**	**16 22 06.8**	**+0.2**
JEW				*e*S	**S**	**16 22 40.0**	**+0.9**
JFR	**Furan**	**1.80**	**138**	P	**Pn**	**16 22 07.0**	**-0.3**
JFR				*e*S	**S**	**16 22 41.0**	**+0.6**
JTKR	**Abashiri--Toko**	**2.20**	**103**	P	**Pn**	**16 22 11.2**	**+0.5**
JTKR				*e*S	**S**	**16 22 47.3**	**+0.8**
JAR	**Ashorobuto**	**2.38**	**120**	P	**Pn**	**16 22 12.9**	**+0.5**
JAR				*e*S	**S**	**16 22 50.4**	**+0.8**
JCH	**Churui**	**2.59**	**136**	P	**Pn**	**16 22 14.1**	**-0.4**
JCH				*e*S	**S**	**16 22 50.6**	**-2.7**
JNBK	**Urakawa-nobuka**	**2.59**	**149**	P	**Pn**	**16 22 14.4**	**-0.1**
JNBK				*e*S	**S**	**16 22 53.4**	**0.0**
JKB	**Kayabe**	**2.62**	**178**	P	**Pn**	**16 22 14.4**	**-0.4**
JOSM	**Okushiri--Mats**	**2.65**	**204**	P	**Pn**	**16 22 14.6**	**-0.5**
YSS	**Yuzh-Sakhalins**	**2.75**	**27**	⇓*i*PN	**Pn**	**16 22 15.7**	**-0.3**
YSS				*e*S	**S**	**16 22 53.8**	**-2.4**
YSS				pmax	pmax		
	comp=N,100nm,0.8s						
YSS				pmax	pmax		
	comp=Z,170nm,0.8s						
YSS				smax	smax		
	comp=N,220nm,0.9s						
JAK	**Akkeshi**	**3.12**	**118**	P	**Pn**	**16 22 18.8**	**-1.1**
JAK				*e*S	**S**	**16 23 01.2**	**-1.9**
JOT	**Ohata**	**3.13**	**179**	P	**Pn**	**16 22 19.2**	**-0.9**
JOT				*e*S	**S**	**16 23 02.2**	**-1.3**
NEM2	**Nemuro 2**	**3.65**	**107**	*e*S	**S**	**16 23 10.3**	**-3.5**
USRK	**Ussuriysk Arra**	**6.42**	**270**	P	**Pn**	**16 22 58.0**	**-0.9**
	comp=N,0.4nm,0.3s,baz=85,slow=12,SNR=9.7						
MJAR	**Matsushiro Arr**	**8.23**	**196**	P	**Pn**	**16 23 20.7**	**-0.9**
	comp=N,0.4nm,0.3s,baz=11,slow=12,SNR=9.2						
SKR	**Severo-Kuril's**	**11.95**	**54**	*e*PN	**Pn**	**16 24 08.2**	**+0.3**
SKR				pmax	pmax		
	comp=N,10.0nm,0.5s						
SKR				pmax	pmax		
	comp=E,30nm,0.5s						
SKR				pmax	pmax		
	comp=Z,30nm,0.5s						
PETK	**Petropavlovsk-**	**13.97**	**46**	P	**P**	**16 24 34.0**	**+1.1**
PETK	**Petropavlovsk-**	**13.97**	**46**	P	**P**	**16 24 34.0**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=212,slow=11,SNR=7.9						
FX1	**Attu Island--F**	**22.70**	**57**	P	**P**	**16 26 05.3**	**+0.9**
	comp=Z,5.3nm,0.6s,baz=298,slow=5.2,SNR=11						
SONM	**Songino Array**	**24.03**	**290**	P	**P**	**16 26 17.0**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=84,slow=8.4,SNR=12						
ZALV	**Zalesovo Beam**	**36.94**	**305**	P	**P**	**16 28 08.8**	**-0.5**
ZALV	**Zalesovo Beam**	**36.94**	**305**	P	**P**	**16 28 08.8**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=67,slow=8.6,SNR=2.4						
MKAR	**Makanchi Array**	**40.24**	**295**	P	**P**	**16 28 36.5**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**40.24**	**295**	P	**P**	**16 28 36.5**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=82,slow=9.5,SNR=9.5						
KDAK	**Kodiak Island**	**42.02**	**47**	P	**P**	**16 28 50.8**	**-0.1**
	comp=Z,5.6nm,0.6s,baz=274,slow=2.4,SNR=17						
ILAR	**Eielson Array**	**43.52**	**36**	P	**P**	**16 29 02.1**	**-0.7**
	comp=Z,2.5nm,0.6s,baz=277,slow=9.8,SNR=45						
BVAR	**Borovoye Array**	**45.52**	**307**	P	**P**	**16 29 18.4**	**-0.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**45.52**	**307**	P	**P**	**16 29 18.4**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=63,slow=6.6,SNR=4.5						
GUN	**Gumba**	**46.53**	**268**	*e*P	**P**	**16 29 27.1**	**-0.3**
	comp=Z,4.0nm,0.4s						
GUN	**Gumba**	**46.53**	**268**	*e*P	**P**	**16 29 27.1**	**-0.3**
	comp=Z,4.3nm,0.5s						
RAMN	**Ramite**	**46.59**	**267**	*e*P	**P**	**16 29 27.2**	**-0.5**
	comp=Z,6.4nm,0.5s						
RAMN	**Ramite**	**46.59**	**267**	*e*P	**P**	**16 29 27.1**	**-0.6**
AAK	**Ala-Archa**	**46.96**	**292**	P	**P**	**16 29 29.9**	**-0.4**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AAK	**Ala-Archa**	**46.96**	**292**	P	**P**	**16 29 29.9**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=126,slow=8.0,SNR=4.2						
KKN	**Kakani**	**47.03**	**269**	*e*P	**P**	**16 29 30.3**	**-0.8**
KKN	**Kakani**	**47.03**	**269**	*e*P	**P**	**16 29 30.3**	**-0.8**
DMN	**Daman**	**47.26**	**269**	*e*P	**P**	**16 29 32.6**	**-0.3**
DMN	**Daman**	**47.26**	**269**	*e*P	**P**	**16 29 32.6**	**-0.3**
DANN	**Dangsing**	**47.79**	**270**	*e*P	**P**	**16 29 37.5**	**+0.5**
	comp=Z,11nm,0.6s						
DANN	**Dangsing**	**47.79**	**270**	*e*P	**P**	**16 29 37.2**	**+0.2**
	comp=Z,11nm,0.6s						
KOLN	**Koldanda**	**48.25**	**270**	*e*P	**P**	**16 29 40.2**	**-0.1**
	comp=Z,3.4nm,0.3s						
KOLN	**Koldanda**	**48.25**	**270**	*e*P	**P**	**16 29 40.3**	**-0.1**
	comp=Z,4.0nm,0.4s						
PYUN	**Piuthan**	**48.49**	**271**	*e*P	**P**	**16 29 42.3**	**+0.1**
PYUN	**Piuthan**	**48.49**	**271**	*e*P	**P**	**16 29 42.0**	**-0.2**
	comp=Z,3.7nm,0.4s						
YKA	**Yellowknife Ar**	**57.60**	**32**	P	**P**	**16 30 47.2**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=304,slow=6.5,SNR=29						
FINES	**FINESS Array B**	**62.08**	**330**	P	**P**	**16 31 16.7**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=45,slow=7.8,SNR=9.7						
WRA	**Warramunga Arr**	**64.42**	**187**	P	**P**	**16 31 33.9**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=2.3,slow=7.1,SNR=24						
ASAR	**Alice Springs**	**68.15**	**187**	P	**P**	**16 31 58.5**	**+1.2**
	comp=Z,1.6nm,0.7s,baz=1.7,slow=5.1,SNR=22						
NVAR	**Mina Array Bea**	**70.88**	**55**	P	**P**	**16 32 16.1**	**+1.9**
	comp=Z,0.8nm,0.6s,baz=287,slow=5.0,SNR=5.2						
PDAR	**Pinedale Array**	**72.73**	**47**	P	**P**	**16 32 25.6**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=283,slow=1.3,SNR=12						
ULM	**Lac du Bonnet**	**73.48**	**34**	P	**P**	**16 32 28.9**	**-0.2**
	comp=Z,2.2nm,0.4s,baz=328,slow=5.6,SNR=4.3						
BRTR	**Keskin Array B**	**73.70**	**310**	P	**P**	**16 32 31.4**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=25,slow=3.8,SNR=2.1						

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*ISCJB **02** 16:23:33.6±0.6, 37°.53N±0°.05×35°.56E±0°.04, h12km, Error ellipse: s-maj=7.4km s-min=5.1km az=0.1*
*CSEM **02** 16:23:33.9±0.2, 37°.48N×35°.54E, h20km, MD2.5, Error ellipse: s-maj=8.3km s-min=4.8km az=8.0*
*ISK **02** 16:23:33.4, 37°.51N×35°.55E, h20km, MD2.5*
*DDA **02** 16:23:34.7, 37°.47N×35°.48E, h2km, MD2.6*
ISC 02 16:23:34.2±1.0, **37°.47N**±0°.05×**35°.51E**±0°.03, **h12**km, **n13**, σ1s05/18, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.26**	**87**	*e*PG	**Pg**	**16 23 39.2**	**-0.4**
KOZT	**Kozan**	**0.26**	**87**	*e*Pg	**Pg**	**16 23 39.2**	**-0.4**
CEYT	**Ceyhan**	**0.50**	**157**	*e*PG	**Pb**	**16 23 44.5**	**-0.4**
CEYT	**Ceyhan**	**0.50**	**157**	*e*Pg	**Pb**	**16 23 44.5**	**-0.4**
GULE	**Gulek**	**0.61**	**253**	*i* P	**Pb**	**16 23 46.1**	**-0.8**
GULE				*i* S	**Sb**	**16 23 55.9**	**+0.4**
GULE	**Gulek**	**0.61**	**253**	*i* P	**Pb**	**16 23 46.1**	**-0.8**
GULE				*i* S	**Sb**	**16 23 55.9**	**+0.4**
ANDN	**Andirin**	**0.68**	**80**	*i* P	**Pg**	**16 23 47.3**	**-0.1**
ANDN				*i* S	**Sb**	**16 23 59.3**	**+1.9**
ANDN	**Andirin**	**0.68**	**80**	*i* P	**Pg**	**16 23 47.3**	**-0.1**
ANDN				*i* S	**Sb**	**16 23 59.3**	**+1.9**
NIG	**Nigde**	**0.96**	**312**	*e*PG	**Pb**	**16 23 52.2**	**-0.7**
NIG				*e*SG	**Sg**	**16 24 05.8**	**+0.6**
NIG	**Nigde**	**0.96**	**312**	*e*Pg	**Pb**	**16 23 52.2**	**-0.7**
NIG				*e*Sg	**Sg**	**16 24 05.8**	**+0.6**
KMRS	**Kahramanmaras**	**1.11**	**88**	*e*PG	**Pb**	**16 23 53.7**	**-1.6**
KMRS	**Kahramanmaras**	**1.11**	**88**	*e*Pg	**Pb**	**16 23 53.7**	**-1.6**
SARI	**SarD1z-Kayseri**	**1.53**	**38**	*e*PN	Pn	16 23 54.7	-6.8
SARI				*e*SN	Sn	16 24 10.2	-11

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*NOU **02** 16:24:03.9±0.5, 18°.57S×168°.83E, h30km±669km, MD3.0, ML3.0*
*IDC **02** 16:24:05.2±5.1, 19°.07S×169°.05E, h165km±62km, mb3.5/5, mb1 3.7/6, mb1mx3.4/19, mbtmp3.5/6, Error ellipse: s-maj=104.9km s-min=31.8km az=157.0*
ISC 02 16:24:04.0±1.9, **18°.9S**±0°.2×**169°.0E**±0°.3, **h147**km, **n9**, σ1s07/13, **mb3.9**/5, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.96**	**217**	*i* P	**Pn**	**16 25 04.6**	**+0.8**
DZM				*e*S	**Sn**	**16 25 49.2**	**-1.1**
DZM				AMP		16 26 02.7	
	comp=Z,362nm,1.7s						
DZM	**Mont Dzumac**	**3.96**	**217**	P	**Pn**	**16 25 04.6**	**+0.8**
	comp=Z,7.5nm,0.3s,baz=130,slow=14,SNR=170						
DZM				S	**Sn**	**16 25 50.0**	**-0.2**
	comp=Z,10nm,0.3s,baz=145,slow=23,SNR=7.5						
NORM	**Noumea**	**4.07**	**216**	*e*P	**Pn**	**16 25 05.9**	**+0.9**
NORM				*e*S	**Sn**	**16 25 51.6**	**-0.9**
NORM				AMP		16 25 52.6	
	comp=Z,50nm,4.1s						
NOUC	**Port Laguerre**	**4.07**	**219**	*e*P	**Pn**	**16 25 05.8**	**+0.8**
NOUC				*e*S	**Sn**	**16 25 52.2**	**-0.4**
NOUC				AMP		16 26 08.4	
	comp=Z,16nm,0.8s						
CTA	**Charters Tower**	**21.51**	**263**	P	**P**	**16 28 43.1**	**+1.7**
	comp=Z,2.8nm,0.6s,baz=92,slow=13,SNR=9.0						
WRA	**Warramunga Arr**	**32.70**	**262**	P	**P**	**16 30 21.2**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=90,slow=8.3,SNR=14						
ASAR	**Alice Springs**	**33.02**	**256**	P	**P**	**16 30 24.4**	**-1.0**
	comp=Z,4.5nm,0.4s,baz=84,slow=8.9,SNR=253						
FITZ	**Fitzroy Crossi**	**41.08**	**264**	P	**P**	**16 31 33.2**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=105,slow=6.5,SNR=9.2						
ILAR	**Eielson Array**	**89.99**	**17**	P	**P**	**16 36 46.0**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=237,slow=6.3,SNR=5.9						

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*IDC **02** 16:27:21.7±2.4, 0°.70S×133°.34E, h0km, mb3.4/2, mb1 3.8/4, mb1mx3.5/21, mbtmp3.6/4, ML3.7/2, MS3.5/2, Ms1 3.5/2, ms1mx2.6/20, Error ellipse: s-maj=97.9km s-min=24.7km az=78.0*
*ISCJB **02** 16:27:26.3±1.1, 1°.00S±0°.08×133°.43E±0°.08, h29km, mb3.5/2, MS3.4/2, Error ellipse: s-maj=12.5km s-min=11.0km az=34.8*
*DJA **02** 16:27:26.2±1.4, 1°S±7°×13°3E±1°2, h10km, M4.4/6, mb4.7/4, MLv4.3/6*
*AUST **02** 16:28:01.9±99.0, 3°.31S×131°.71E, h52km±9km, Error ellipse: s-maj=36.8km s-min=1.5km az=32.0*
ISC 02 16:27:26.3±1.2, **0°.90S**±0°.09×**133°.45E**±0°.07, **h29**km, **n17**, σ2s30/15, **Irian Jaya region**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FAKI	Fak Fak	2.34	211	P	Pb	16 28 05.7	-2.1
FAKI				S	Sb	16 28 36.9	+0.7
BAKI	Biak	2.67	96	P	Pn	16 28 08.5	+1.1
TLE	Tual	4.76	189	P	Pn	16 28 40.4	+4.3
TLE	Tual	4.76	189	P	Pn	16 28 40.7	+4.6
	baz=2.5,SNR=11						
BNDI	Bandanaira	5.05	225	P	Pn	16 28 42.5	+2.4
	100nm,0.9s,0.4nm						
AAI	Ambon	5.94	242	P	Pn	16 28 53.9	+1.5
AAI	Ambon	5.94	242	P	Pn	16 28 54.0	+1.7
	baz=3.5,SNR=5.1						
LBMI	Labuha	5.96	272	P	Pn	16 28 53.4	+0.8
	22nm,0.7s,0.1nm						
KDU	Kakadu	11.75	185	P	Pn	16 30 14.2	+2.1
	baz=9.4,SNR=13						
KDU				S	Sn	16 32 22.6	+0.3
	baz=9.4,SNR=5.0						
MTN	Manton Dam	12.08	191	P	Pn	16 30 17.3	+0.6
	baz=9.6,SNR=32						
FITZ	Fitzroy Crossi	18.74	204	P	P	16 31 43.0	0.0
	0.2nm,0.3s,baz=45,slow=17,SNR=4.0						
WRA	Warramunga Arr	18.94	177	P	Pn	16 31 47.6	+1.6
	0.2nm,0.3s,baz=357,slow=12,SNR=8.0						
WRA				S	Sn	16 35 11.6	-5.8
	0.1nm,0.3s,baz=356,slow=24,SNR=4.3						
ASAR	Alice Springs	22.63	179	P	P	16 32 26.6	+1.5
	1.7nm,0.7s,baz=2.1,slow=11,SNR=15						
GSI	Gunungsitoli	35.94	273	S	S	16 40 26.2	+25
	baz=34,SNR=6.8						
MJAR	Matsushiro Arr	37.52	6	LR	LR	16 47 38.7	
	comp=Z,147nm,18.6s,baz=95,slow=33						
ASAJ	Asahikawa	45.56	9	LR	LR	16 51 26.5	
	comp=Z,20nm,20.4s,baz=274,slow=32						
MKAR	Makanchi Array	65.20	324	P	P	16 38 03.4	-1.7
	0.2nm,0.5s,baz=130,slow=6.5,SNR=3.0						

*NIED **02** 16:45:00, 34°.80N×140°.40E, h65km, Mw3.9 Best double couple: M0 6.75000×10^14 NP1: φs199.00000°, δ46.00000°, λ99.00000°. NP2: φs6.00000°, δ45.00000°, λ81.00000°.*
*ISCJB **02** 16:45:35.2±0.4, 34°.79N±0°.04×140°.40E±0°.05, h81km±2km, mb3.7/11, Error ellipse: s-maj=7.3km s-min=6.1km az=150.7*
*JMA **02** 16:45:35.3±0.1, 34°.84N×140°.42E, h80km±2km, M3.8*
JMA Felt I J1.
*IDC **02** 16:45:37.2±1.3, 34°.78N×140°.37E, h80km±12km, mb3.5/11, mb1 3.7/14, mb1mx3.6/27, mbtmp3.5/14, MS2.4/1, Ms1 2.4/1, ms1mx2.0/24, Error ellipse: s-maj=18.8km s-min=6.6km az=75.0*
ISC 02 16:45:36.4±0.7**, 34°.80N**±0°.05×**140°.39E**±0°.05**, h75**km±6km**, n38, σ0.77**/50**, mb3.8**/11**, 4C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO3	Boso 3	0.10	88	⇑P	Pn	16 45 46.7	-0.3
BSO4	Boso 4	0.20	348	⇑P	Pn	16 45 47.2	-0.3
BSO4				S	Sn	16 45 56.3	+0.7
KTR	Katsuura	0.35	351	⇑P	Pn	16 45 47.8	-0.7
KTR				S	Sn	16 45 56.6	-0.8
TATJ	Tateyama 2	0.47	300	⇑P	Pn	16 45 49.6	+0.2
TATJ				S	Sn	16 46 00.2	+1.2
BSO1	Boso 1	0.51	106	⇓P	Pn	16 45 48.9	-0.3
JIM2	Oshima 3	0.79	264	⇓P	Pn	16 45 52.3	-0.5
JIM2				S	Sn	16 46 04.2	-0.7
JMY	Miyakejima3	1.02	225	P	Pn	16 45 55.8	+0.3
JMY				S	Sn	16 46 10.3	+0.5
JOD2	Odawara 2	1.16	294	⇓P	Pn	16 45 56.4	-0.8
JOD2				S	Sn	16 46 11.7	-1.1
JIZS	Izushimoda	1.24	267	⇓P	Pn	16 45 58.0	-0.3
JIZS				S	Sn	16 46 14.7	+0.1
JYN	Shimob	1.66	295	⇓P	Pn	16 46 03.5	-0.3
JYN				S	Sn	16 46 25.2	+0.7
JRY	Ryogami san	1.72	315	⇓P	Pn	16 46 03.8	-0.7
JRY				S	Sn	16 46 25.6	-0.1
JHJ	Hachijo jima 2	1.75	197	P	Pn	16 46 03.3	-1.5
	216nm,0.3s,baz=262,slow=18,SNR=16						
JHJ				S	Sn	16 46 27.4	+1.0
	295nm,0.3s,baz=282,slow=22,SNR=13						
JHJ				LR	LR	16 46 34.3	
	comp=Z,607nm,20.6s,baz=126,slow=33						
MJAR	Matsushiro Arr	2.48	315	P	Pn	16 46 14.6	-0.2
	48nm,0.3s,baz=155,slow=10,SNR=363						
MJAR				S	Sn	16 46 44.8	+0.7
	32nm,0.3s,baz=121,slow=33,SNR=12						
MAT	Matsushiro	2.49	315	P	Pn	16 46 14.6	-0.2
MAT				S	Sn	16 46 45.2	+1.1
JNU	Nakatsue	8.07	261	P	Pn	16 47 32.3	+1.3
	1.7nm,0.3s,baz=65,slow=2.3,SNR=20						
ASAJ	Asahikawa	9.46	10	P	Pn	16 47 46.4	-3.4
	0.4nm,0.3s,baz=249,slow=23,SNR=9.6						
KSRS	Korea Array	10.42	288	P	Pn	16 48 03.6	+0.6
	0.2nm,0.3s,baz=104,slow=14,SNR=5.1						
KSRS				LR	LR	16 51 25.8	
	comp=Z,23nm,21.9s,baz=120,slow=33						
SONM	Songino Array	28.41	308	P	P	16 51 22.8	-1.2
	0.4nm,0.4s,baz=109,slow=9.3,SNR=4.1						
CMAR	Chiang Mai Arr	40.15	257	P	P	16 53 04.2	-1.1
	0.4nm,0.6s,baz=43,slow=6.9,SNR=4.3						
ZALV	Zalesovo Beam	42.84	314	P	P	16 53 28.4	+1.5
	1.0nm,0.3s,baz=105,slow=8.0,SNR=10						
ZALV				PcP	PcP	16 55 15.9	-0.7
	0.5nm,0.4s,baz=103,slow=2.5,SNR=4.0						
MKAR	Makanchi Array	44.63	304	P	P	16 53 42.3	+0.9
	0.8nm,0.5s,baz=85,slow=10,SNR=19						
TAPN	Taplejung	45.30	276	eP	P	16 53 46.4	-0.8
	4.7nm,0.3s						
RAMN	Ramite	46.36	276	eP	P	16 53 54.8	-0.8
	12nm,0.7s						
PKI	Pulchoki	47.09	277	eP	P	16 54 00.6	-0.8
	5.3nm,0.4s						
PKIN	Phulchoki	47.10	277	eP	P	16 54 00.8	-0.6
	3.2nm,0.4s						
KKN	Kakani	47.11	277	eP	P	16 54 01.0	-0.4
	5.1nm,0.5s						
DMN	Daman	47.33	277	eP	P	16 54 02.4	-0.7
DANN	Dangsing	48.13	279	eP	P	16 54 09.3	-0.1
	10nm,0.6s						
KOLN	Koldanda	48.49	278	eP	P	16 54 11.7	-0.3
PYUN	Piuthan	48.86	279	eP	P	16 54 14.2	-0.7
	7.9nm,0.5s						
ILAR	Eielson Array	51.83	31	P	P	16 54 37.0	+0.5
	0.7nm,0.8s,baz=267,slow=6.0,SNR=8.6						
WRA	Warramunga Arr	54.74	187	P	P	16 54 57.5	-0.8
	1.0nm,0.4s,baz=3.6,slow=7.5,SNR=55						
ASAR	Alice Springs	58.47	187	P	P	16 55 24.6	0.0
	0.5nm,0.7s,baz=359,slow=5.7,SNR=12						
YKA	Yellowknife Ar	66.16	29	P	P	16 56 15.2	-0.3
	0.3nm,0.6s,baz=298,slow=6.4,SNR=7.6						
KBZ	Khabaz	71.73	311	P	P	16 56 51.0	+0.6
	1.9nm,1.0s,baz=20,slow=1.6,SNR=6.1						
NVAR	Mina Array Bea	77.00	52	P	P	16 57 21.9	+0.4
	0.7nm,0.6s,baz=258,slow=5.9,SNR=4.0						
PDAR	Pinedale Array	79.83	45	P	P	16 57 37.9	+0.9
	0.6nm,0.7s,baz=222,slow=1.1,SNR=6.4						
LPAZ	La Paz	148.52	61	PKPbc	PKPbc	17 05 16.6	+0.6
	1.3nm,0.8s,baz=359,slow=9.0,SNR=5.3						

*NAO **02** 17:01:10.7±1.0, 67°.11N×19°.78E, ML2.4*
*UPP **02** 17:01:14.5, 67°.09N×20°.95E, h0km, ML1.5, Mining explosion.*
*ISCJB **02** 17:01:14.1±0.3, 67°.05N±0°.02×21°.00E±0°.07, h0km, Error ellipse: s-maj=4.2km s-min=3.4km az=166.1*
*IDC **02** 17:01:15.7±1.1, 67°.09N×21°.13E, h0km, mb1 2.8/3, mb1mx2.7/28, mbtmp2.7/3, ML2.2/3, Error ellipse: s-maj=20.8km s-min=9.5km az=106.0*
*HEL **02** 17:01:15.3±0.1, 67°.08N×20°.92E, h0km, ML2.0, ML1.5(UPP), Explosion*
*CSEM **02** 17:01:15.0±0.1, 67°.09N×20°.83E, h2km, ML1.5, Error ellipse: s-maj=4.8km s-min=3.2km az=79.0, Mining explosion.*
*BER **02** 17:01:18.2±2.5, 67°.10N×20°.97E, h0km, ML1.9, ML2.4(NAO), Suspected explosion*
ISC 02 17:01:14.6±0.8**, 67°.09N**±0°.02×**20°.92E**±0°.03**, h0**km**, n75, σ1.03**/80**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERTU	Ertsjaerv	0.73	136	i P	Pg	17 01 28.2	-0.4
ERTU	Ertsjaerv	0.73	136	P	Pg	17 01 28.2	-0.4
KUA	Kurravaara	0.90	346	eP	Pg	17 01 31.4	-0.4
KUA	Kurravaara	0.90	346	P	Pg	17 01 31.4	-0.4
HARU	Harads	0.93	179	eP	Pg	17 01 31.8	-0.5
HARU	Harads	0.93	179	P	Pg	17 01 31.8	-0.5
SALU	Saltoluokta	0.99	289	eP	Pg	17 01 33.2	-0.2
SALU	Saltoluokta	0.99	289	P	Pg	17 01 33.2	-0.2
LANU	Lannavaara	1.05	22	eP	Pg	17 01 34.1	-0.5
LANU	Lannavaara	1.05	22	P	Pg	17 01 34.1	-0.5
NIKU	Nikkaluokta	1.07	318	eP	Pg	17 01 34.6	-0.4
NIKU	Nikkaluokta	1.07	318	P	Pg	17 01 34.6	-0.4
KALU	Kalix	1.57	140	eP	Pn	17 01 43.3	-0.4
KALU	Kalix	1.57	140	P	Pn	17 01 43.3	-0.4
SJUU	Sjulsmark	1.61	170	eP	Pn	17 01 43.8	-0.4
SJUU	Sjulsmark	1.61	170	P	Pn	17 01 43.8	-0.4
HEF	Hetta	1.69	37	eP	Pn	17 01 45.3	0.0
HEF	Hetta	1.69	37	P	Pn	17 01 45.2	0.0
LILU	Lilltraesk	1.86	194	eP	Pn	17 01 47.8	+0.2
LILU	Lilltraesk	1.86	194	P	Pn	17 01 47.8	+0.2
KIF	Kilpisjarvi	1.93	359	eP	Pb	17 01 50.1	-0.4
KIF	Kilpisjarvi	1.93	359	P	Pb	17 01 50.1	-0.4
RNF	Rovaniemi	2.07	101	eP	Pn	17 01 51.4	+1.0
RNF				eSG	Sg	17 02 21.2	+0.2
RNF	Rovaniemi	2.07	101	P	Pn	17 01 51.4	+1.0
RNF				Sg	Sg	17 02 21.1	+0.2
KTK1	Kautokeino	2.12	23	eP	Pb	17 01 52.6	-1.2
KTK1				AML	AML	17 02 31.6	
	comp=Z,18nm,0.3s						
KTK1	Kautokeino	2.12	23	eP	Pb	17 01 52.6	-1.2
	SNR=50						
SGF	Sodankyl	2.21	78	eP	Pn	17 01 53.7	+1.3
SGF	Sodankyl	2.21	78	P	Pn	17 01 53.6	+1.3
STEI	Steigen	2.34	294	eP	Pb	17 01 57.1	-0.5
SVAU	Svanoeiden	2.66	193	eP	Pn	17 01 59.3	+0.7
SVAU	Svanoeiden	2.66	193	P	Pn	17 01 59.3	+0.7
MOR8	Moi Rana	2.74	253	eP	Pn	17 02 00.3	+0.5
MOR8	Moi Rana	2.74	253	eP	Pn	17 02 00.3	+0.5
	SNR=50						
ARA0	ARCESS Array S	2.99	33	Pn	Pn	17 02 03.6	+0.5
	baz=214,slow=14						
ARA0				Lg	Lg	17 02 51.0	
	baz=214,slow=28						
ARA0	ARCESS Array S	2.99	33	Pn	Pn	17 02 03.6	+0.5
	baz=214,slow=14						
ARA0				Lg	Lg	17 02 51.0	
	baz=214,slow=28						
ARA0	ARCESS Array S	2.99	33	eP	Pn	17 02 04.1	+0.9
ARA0	ARCESS Array S	2.99	33	Pn	Pn	17 02 03.7	+0.5
	baz=214,slow=13,SNR=50						
ARA0	ARCESS Array S	2.99	33	P	Pn	17 02 04.0	+0.9
ARA0				Lg	Lg	17 02 51.0	
	baz=214,slow=27						
ARCES	ARCESS Array B	2.99	33	Pn	Pn	17 02 03.6	+0.5
	comp=Z,0.2nm,0.3s,baz=212,slow=14,SNR=36						
ARCES				Sn	Sn	17 02 40.9	+1.2
	comp=Z,0.4nm,0.3s,baz=226,slow=23,SNR=5.8						
ARE0	ARCESS Array S	2.99	33	eP	Pn	17 02 04.2	+1.0
ARE0	ARCESS Array S	2.99	33	eP	Pn	17 02 04.2	+1.0
	SNR=50						
LOF	Lofoten	3.01	294	eP	Pn	17 02 02.0	-1.4
LOF	Lofoten	3.01	294	eP	Pn	17 02 02.0	-1.4
	SNR=50						
FLOS	Flostrand	3.10	259	eP	Pn	17 02 07.0	+2.4
KONS	Konsvik	3.15	263	eP	Pn	17 02 07.3	+2.1
UMAU	Umeaa	3.22	182	eP	Pn	17 02 06.9	+0.6
UMAU	Umeaa	3.22	182	P	Pn	17 02 06.9	+0.6
STOK	Stokkvaagen	3.23	260	eP	Pn	17 02 07.2	+0.7
VRF	Varrio	3.42	75	eP	Pn	17 02 09.9	+0.9
VRF	Varrio	3.42	75	P	Pn	17 02 09.9	+0.9
KEV	Kevo	3.50	37	eP	Pn	17 02 10.6	+0.5
KEV				MSG		17 03 03.9	
	comp=Z,3.8nm,0.2s						
KEV	Kevo	3.50	37	P	Pn	17 02 10.5	+0.5
VAF	Ylistaro	4.13	169	eP	Pn	17 02 20.1	+1.3
VAF	Ylistaro	4.13	169	P	Pn	17 02 20.0	+1.3
SUF	Sumiainen	4.92	151	eP	Pn	17 02 32.4	+2.9
SUF				eS	Sn	17 03 26.4	-0.6
SUF				MSG		17 03 35.2	
	comp=Z,1.5nm,0.2s						
SUF	Sumiainen	4.92	151	P	Pn	17 02 32.4	+2.9
SUF				S	Sn	17 03 26.4	-0.6
KEF	Keuruu	5.22	159	eP	Pn	17 02 35.2	+1.4
KEF				eS	Sn	17 03 34.7	0.0
KEF				MSG		17 03 41.0	
	comp=Z,1.6nm,0.2s						
KEF	Keuruu	5.22	159	P	Pn	17 02 35.2	+1.4
KEF				S	Sn	17 03 34.6	0.0
KAF	Kangasniemi	5.50	153	eS	Sn	17 03 41.0	-0.5
KAF				MSG		17 03 50.2	
	comp=Z,1.7nm,0.2s						
KAF	Kangasniemi	5.50	153	S	Sn	17 03 41.0	-0.5
JOF	Joensuu	6.07	129	eP	Pn	17 02 48.0	+2.6
JOF	Joensuu	6.07	129	P	Pn	17 02 48.0	+2.6
FIA0	FINESS Array S	6.09	156	Pn	Pn	17 02 46.6	+0.9
	baz=346,slow=14						
FIA0				Sn	Sn	17 03 55.3	-0.7
	baz=345,slow=22						
FIA0	FINESS Array S	6.09	156	Pn	Pn	17 02 46.6	+0.9
	baz=346,slow=14						
FIA0				Sn	Sn	17 03 55.3	-0.7
	baz=345,slow=22						
FIA0	FINESS Array S	6.09	156	Pn	Pn	17 02 46.6	+0.9
	baz=346,slow=14,SNR=50						
FIA0				Sn	Sn	17 03 55.3	-0.7
	baz=345,slow=21,SNR=50						
FIA0				S	Sb	17 03 55.6	-19
FINES	FINESS Array B	6.09	156	Pn	Pn	17 02 47.1	+1.4
	comp=Z,0.1nm,0.3s,baz=346,slow=13,SNR=4.3						
FINES				Sn	Sn	17 03 55.6	-0.4
	comp=Z,0.2nm,0.3s,baz=351,slow=22,SNR=11						
RAF	Rauma	6.10	176	eP	Pn	17 02 46.1	+0.2
RAF	Rauma	6.10	176	P	Pn	17 02 46.0	+0.2
NB2	NORSAR Subarra	7.41	220	Pn	Pn	17 02 52.8	-11
	baz=39,slow=22						
NB2	NORSAR Subarra	7.41	220	Pn	Pn	17 02 52.8	-11
	baz=39,slow=22						
NOA	NORSAR Array B	7.41	220	Pn	Pn	17 03 04.2	+0.4
	comp=Z,0.1nm,0.3s,baz=62,slow=16,SNR=3.2						
HFS	Hagfors	7.68	208	Pn	Pn	17 02 59.2	-8.3
	baz=58,slow=18						
HFS	Hagfors	7.68	208	Pn	Pn	17 02 59.2	-8.3
	baz=58,slow=18						
SPA0	Spitsbergen Ar	11.23	355	Pn	Pn	17 03 48.5	-7.5
	baz=171,slow=16						
SPA0	Spitsbergen Ar	11.23	355	P	Pn	17 03 48.5	-7.5
	baz=171,slow=16						

*ISK **02** 17:36:47.8, 37°.54N×35°.65E, h7km, MD2.4*
*DDA **02** 17:36:47.6, 37°.57N×35°.69E, h7km, MD2.7*
*ISCJB **02** 17:36:48.4±0.8, 37°.53N±0°.05×35°.68E±0°.05, h9km±7km, Error ellipse: s-maj=9.3km s-min=4.6km az=146.0*
*CSEM **02** 17:36:48.3±0.2, 37°.56N×35°.66E, h5km, MD2.4, Error ellipse: s-maj=4.3km s-min=3.2km az=152.0*
ISC 02 17:36:48.5±0.9**, 37°.54N**±0°.03×**35°.70E**±0°.03**, h12**km±6km**, n15, σ0.49**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOZT	Kozan	0.12	119	ePG	Pg	17 36 51.4	-0.2
KOZT				eSG	Sg	17 36 54.0	+0.1
KOZT	Kozan	0.12	119	ePg	Pg	17 36 51.4	-0.2
KOZT				eSg	Sg	17 36 54.0	+0.1
ANDN	Andirin	0.52	85	eP	Pg	17 36 58.1	-0.6
ANDN				eS	Sb	17 37 07.0	0.0
ANDN	Andirin	0.52	85	eP	Pg	17 36 58.1	-0.6
ANDN				eS	Sb	17 37 07.0	0.0
CEYT	Ceyhan	0.53	176	ePG	Pg	17 36 58.4	-0.4
CEYT				eSG	Sg	17 37 06.5	+0.7
CEYT	Ceyhan	0.53	176	ePg	Pg	17 36 58.4	-0.4
CEYT				eSg	Sg	17 37 06.5	+0.7
GULE	Gulek	0.78	251	eP	Pg	17 37 03.1	-0.4
GULE				eS	Sb	17 37 14.4	-0.1
GULE	Gulek	0.78	251	eP	Pg	17 37 03.1	-0.4
GULE				eS	Sb	17 37 14.4	-0.1
AYKD	Aykdinkavak	0.89	98	eP	Pg	17 37 04.5	-1.2
AYKD				eS	Sb	17 37 17.9	+0.2
KMRS	Kahramanmaras	0.96	92	ePG	Pb	17 37 07.3	+0.3
KMRS				eSG	Sn	17 37 21.4	+0.1
KMRS	Kahramanmaras	0.96	92	ePg	Pb	17 37 07.3	+0.3
KMRS				eSg	Sn	17 37 21.4	+0.1
KRTS	Karatas	1.00	195	ePG	Pb	17 37 07.2	-0.4
KRTS				eSG	Sb	17 37 21.3	+0.6
KRTS	Karatas	1.00	195	ePg	Pb	17 37 07.2	-0.4
KRTS				eSg	Sb	17 37 21.3	+0.6
BNN	Bunyan	1.32	5	ePN	Pb	17 37 13.2	0.0
BNN				eSN	Sg	17 37 31.7	+0.7
BNN	Bunyan	1.32	5	ePn	Pb	17 37 13.2	0.0
BNN				eSn	Sg	17 37 31.7	+0.7

*GUC **02** 17:39:26.9±0.5, 29°.80S×71°.50W, h47km±2km, MD4.5, ML4.6*
*ISCJB **02** 17:39:27.6±0.9, 29°.80S±0°.03×71°.5W±0°.1, h51km±8km, mb4.1/17, MS3.6/4, Error ellipse: s-maj=14.7km s-min=5.0km az=7.5*
*NEIC **02** 17:39:27.8±0.3, 29°.79S×71°.51W, h35km, mb4.2/4, ML4.6(GUC), Error ellipse: s-maj=9.0km s-min=5.5km az=86.0*
NEIC Felt [III] at Coquimbo and La Serena.
*IDC **02** 17:39:29.8±2.6, 29°.80S×71°.40W, h52km±22km, mb4.0/13, mb1 4.1/18, mb1mx4.0/23, mbtmp4.0/18, ML4.2/5, MS3.6/6, Ms1 3.6/6, ms1mx3.2/33, Error ellipse: s-maj=22.5km s-min=14.2km az=88.0*
ISC 02 17:39:27.9±0.6**, 29°.79S**±0°.03×**71°.52W**±0°.08**, h37**km±1km**, n74, σ0.80**/81**, mb4.3**/17**, MS3.6**/4**, 6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLL	Tololo Astrono	0.73	121	⇓iP	Pn	17 39 41.7	-0.2
TLL				i S	Sn	17 39 52.8	+0.9
TLL	Tololo Astrono	0.73	121	⇓iP	Pn	17 39 41.7	-0.2
TLL				i S	Sn	17 39 52.8	+0.9
TLL				AML	AML	17 39 57.2	
	comp=E,45μm,0.6s						
LCO	Las Campanas	1.05	43	⇓iP	Pn	17 39 46.3	-0.1
LCO				i S	Sn	17 40 00.9	+0.9
LCO	Las Campanas	1.05	43	⇓iP	Pn	17 39 46.3	-0.1
LCO				i S	Sn	17 40 00.9	+0.9
LCO				AML	AML	17 40 04.5	
	comp=E,35μm,0.4s						
CMCH	Combarbala	1.45	162	eP	Pn	17 39 51.0	-0.7
CMCH				i S	Sn	17 40 10.0	+0.5
CMCH	Combarbala	1.45	162	eP	Pn	17 39 51.0	-0.7
CMCH				i S	Sn	17 40 10.0	+0.5
CMCH				AML	AML	17 40 13.8	
	comp=E,40μm,0.8s						
CHNG	Los Chungos	2.09	179	eP	Pn	17 39 59.8	-0.5
CHNG				i S	Sn	17 40 24.7	-0.4
CHNG	Los Chungos	2.09	179	eP	Pn	17 39 59.8	-0.5
CHNG				i S	Sn	17 40 24.7	-0.4
CHNG				AML	AML	17 40 35.1	
	comp=E,2μm,0.6s						
CPCH	Copiapo	2.63	23	⇓iP	Pn	17 40 07.5	-0.3
CPCH				i S	Sn	17 40 38.4	-0.1
CPCH	Copiapo	2.63	23	⇓iP	Pn	17 40 07.5	-0.3
CPCH				i S	Sn	17 40 38.4	-0.1
CFAA	Coronel Fontan	3.36	123	P	Pn	17 40 20.3	+2.4
CFAA				S	Sn	17 41 03.4	+6.8
CFAA	Coronel Fontan	3.36	123	P	Pn	17 40 20.3	+2.4
	comp=E,5.9nm,0.3s,baz=308,slow=11,SNR=55						
CFAA				S	Sn	17 41 03.4	+6.8
	comp=E,8.4nm,0.3s,baz=60,slow=21,SNR=6.0						
PLCA	Paso Flores	10.95	176	P	Pn	17 42 02.6	+0.6
PLCA	Paso Flores	10.95	176	P	Pn	17 42 02.6	+0.6
	comp=E,0.2nm,0.3s,baz=332,slow=9.9,SNR=3.9						
PLCA				LR	LR	17 46 44.1	
	comp=E,285nm,21.7s,baz=347,slow=40						
TRQA	Tornquist	11.43	139	eP	Pn	17 42 08.1	-0.4
	comp=E,44nm,1.1s						
CPUP	Villa Florida	13.00	78	P	Pn	17 42 30.1	+0.1
CPUP	Villa Florida	13.00	78	P	Pn	17 42 30.1	+0.1
	comp=E,1.2nm,0.3s,baz=231,slow=12,SNR=8.1						
CPUP				LR	LR	17 48 10.7	
	comp=E,282nm,19.0s,baz=198,slow=40						
LPAZ	La Paz	13.79	14	eP	Pn	17 42 42.9	+1.5
	comp=E,5.1nm,0.6s						
LPAZ	La Paz	13.79	14	P	Pn	17 42 42.4	+1.0
	comp=E,1.0nm,0.3s,baz=185,slow=6.7,SNR=26						
SIV	San Ignacio	16.75	37	P	Pn	17 43 19.3	-0.5
SIV	San Ignacio	16.75	37	P	Pn	17 43 19.3	-0.5
	comp=E,0.9nm,0.3s,baz=212,slow=9.5,SNR=19						
SAML	Samuel	22.16	22	eP	P	17 44 19.5	-1.1
	comp=E,7.7nm,0.9s						
USHA	Ushuaia	25.13	176	P	P	17 44 49.7	+0.6
USHA	Ushuaia	25.13	176	P	P	17 44 49.7	+0.6
	comp=E,8.9nm,0.7s,baz=349,slow=2.4,SNR=4.4						
BDFB	Brasilia	25.78	62	P	P	17 44 54.2	-1.3
BDFB	Brasilia	25.78	62	P	P	17 44 54.2	-1.3
	comp=E,6.1nm,0.7s,baz=209,slow=9.0,SNR=6.0						
BDFB				LR	LR	17 54 54.8	
	comp=E,37nm,19.9s,baz=280,slow=36						
PMSA	Palmer Station	35.32	174	P	P	17 46 19.1	+0.1
PMSA	Palmer Station	35.32	174	P	P	17 46 19.1	+0.1
	comp=E,4.6nm,0.4s,baz=0.0,slow=9.1,SNR=5.0						
RCBR	Riachuelo	41.16	62	LR	LR	18 04 53.0	
	comp=E,64nm,20.6s,baz=203,slow=37						
VNA3	Neumayer Olymp	53.11	159	eP	P	17 48 41.7	+0.5
VNA2	Neumayer--Watz	53.74	158	eP	P	17 48 46.3	+0.4
	baz=291,slow=9.0						
SNAA	Sanae	55.33	159	eP	P	17 48 57.5	0.0
SNAA	Sanae	55.33	159	P	P	17 48 57.4	0.0
SNAA	Sanae	55.33	159	P	P	17 48 57.4	0.0
	comp=E,0.3nm,0.4s,baz=276,slow=5.6,SNR=15						
TXAR	Lajitas Array	66.31	330	P	P	17 50 13.5	+0.8
TXAR	Lajitas Array	66.31	330	P	P	17 50 13.5	+0.8
	comp=E,0.5nm,0.7s,baz=170,slow=6.4,SNR=3.1						
VNDA	Vanda	68.31	191	P	P	17 50 25.4	+0.8
VNDA	Vanda	68.31	191	P	P	17 50 25.4	+0.8
	comp=E,0.4nm,0.6s,baz=121,slow=2.1,SNR=3.6						
BBTS	Babate	69.00	58	LR	LR	18 21 47.7	
	comp=E,38nm,19.1s,baz=129,slow=37						
DBIC	Dimbokro	73.44	72	P	P	17 50 56.6	-0.1
DBIC	Dimbokro	73.44	72	P	P	17 50 56.6	-0.1
	comp=E,3.4nm,0.8s,baz=205,slow=8.7,SNR=4.7						
SMCO	Snowmass	76.15	332	eP	P	17 51 14.2	+1.8
	comp=E,3.9nm,0.8s						
ECSD	EROS Data Cent	76.69	342	eP	P	17 51 14.5	-0.3
	comp=E,1.6nm,0.8s						
MAW	Mawson	77.09	164	LR	LR	18 25 50.5	
	comp=E,158nm,19.3s,baz=2.5,slow=36						
HWUT	Hardware Ranch	80.09	331	eP	P	17 51 34.1	+0.2
	comp=E,2.4nm,0.7s						
PDAR	Pinedale Array	80.22	333	P	P	17 51 35.0	+0.3
PDAR	Pinedale Array	80.22	333	P	P	17 51 35.0	+0.3
	comp=E,0.6nm,0.6s,baz=139,slow=6.9,SNR=6.6						
NVAR	Mina Array Bea	80.70	325	P	P	17 51 38.6	+1.3
NVAR	Mina Array Bea	80.70	325	P	P	17 51 38.6	+1.3
	comp=E,0.3nm,0.3s,baz=170,slow=5.5,SNR=2.9						
BOSA	Boshof	81.65	118	P	P	17 51 41.7	-0.9
BOSA	Boshof	81.65	118	P	P	17 51 41.7	-0.9
	comp=E,3.5nm,0.8s,baz=230,slow=5.6,SNR=5.3						
TORD	Torodi Ar. Bea	82.37	70	P	P	17 51 46.4	+0.1
TORD	Torodi Ar. Bea	82.37	70	P	P	17 51 46.4	+0.1
	comp=E,3.1nm,0.8s,baz=276,slow=4.9,SNR=16						
ULM	Lac du Bonnet	82.56	345	P	P	17 51 46.5	0.0
ULM	Lac du Bonnet	82.56	345	P	P	17 51 46.5	0.0
	comp=E,1.3nm,0.4s,baz=186,slow=3.1,SNR=4.5						
YKA	Yellowknife Ar	98.22	341	P	P	17 53 00.0	-0.5
YKA	Yellowknife Ar	98.22	341	P	P	17 52 60.0	-0.5
	comp=E,0.2nm,0.6s,baz=145,slow=3.9,SNR=6.8						
WRA	Warramunga Arr	124.63	210	PKP	PKPdf	17 58 22.9	-1.1
WRA	Warramunga Arr	124.63	210	PKP	PKPdf	17 58 22.9	-1.1
	comp=E,0.9nm,0.5s,baz=160,slow=1.6,SNR=23						
BVAR	Borovoye Array	143.82	39	PKP	PKPbc	17 58 57.1	+0.8
BVAR	Borovoye Array	143.82	39	PKP	PKPbc	17 58 57.1	+0.8
	comp=E,0.6nm,0.4s,baz=298,slow=2.5,SNR=5.8						
YAK	Yakutsk	144.88	343	eP	PKPab	17 58 58.2	-1.1
KKAR	Karatay Array	146.98	56	eP	PKPbc	17 59 06.2	-0.3
EKS2	Erkin-Say	149.42	56	ePKPbc	PKPbc	17 59 13.4	+0.4
AAK	Ala-Archa	149.94	55	ePKPbc	PKPbc	17 59 14.7	+0.4
ZAA0	Zalesovo Array	150.38	29	ePKPbc	PKPbc	17 59 14.8	0.0
ZALV	Zalesovo Beam	150.38	29	PKPbc	PKPbc	17 59 14.9	+0.2
ZALV	Zalesovo Beam	150.38	29	PKPbc	PKPbc	17 59 14.9	+0.2
	comp=E,7.9nm,0.6s,baz=304,slow=3.2,SNR=49						
TKM2	Tokmak 2	150.65	54	ePKPbc	PKPbc	17 59 16.0	-0.1
MK31	Makanchi Array	153.52	43	ePKPdf	PKPdf	17 59 16.3	+1.8
MKAR	Makanchi Array	153.52	43	PKPbc	PKPbc	17 59 22.0	-0.2
MKAR				PKPab	PKPab	17 59 35.2	+0.5
MKAR	Makanchi Array	153.52	43	PKPbc	PKPbc	17 59 22.0	-0.2
	comp=E,0.8nm,0.9s,baz=314,slow=1.2,SNR=6.4						
MKAR				PKPab	PKPab	17 59 35.2	+0.5
	comp=E,1.3nm,0.8s,baz=288,slow=3.6,SNR=9.4						
SONM	Songino Array	161.91	5	PKPab	PKPab	18 00 11.6	+0.8
SONM	Songino Array	161.91	5	PKPab	PKPab	18 00 11.6	+0.8
	comp=E,0.3nm,0.7s,baz=320,slow=4.4,SNR=3.7						

IDC 02 17:52:03.3±11.0, 1°.69N×96°.91W, h0km, mb3.3/3, mb1 3.7/3, mb1mx3.6/20, mbtmp3.3/3, Error ellipse: s-maj=431.6km s-min=209.1km az=97.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDAR	Pinedale Array	42.44	346	P	P	17 59 59.5	-0.7
	0.6nm,1.0s,baz=146,slow=9.8,SNR=3.5						
YKA	Yellowknife Ar	62.09	351	P	P	18 02 26.3	+0.7
	0.4nm,1.0s,baz=142,slow=5.2,SNR=4.1						
ILAR	Eielson Array	72.43	340	P	P	18 03 31.1	-0.2
	0.7nm,0.8s,baz=159,slow=5.1,SNR=7.5						

*ISCJB **02** 17:52:12.5±0.8, 23°.95N±0°.02×122°.34E±0°.02, h12km±5km, Error ellipse: s-maj=2.8km s-min=2.3km az=155.2*
*TAP **02** 17:52:13.4, 24°.00N×122°.31E, h22km, ML3.8, C*
*JMA **02** 17:52:14.3±0.3, 24°.08N×122°.31E, h35km, M3.0*
ISC 02 17:52:12.8±1.2, 23°.95N±0°.02×122°.32E±0°.02, h20km±5km, n63, σ0s.69/117, 2C-10D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.66	272	eP	Pb	17 52 26.1	+0.4
	baz=253						
HWA				eS	Sb	17 52 35.3	+0.9
	baz=253						
TWD	Chiawan	0.68	281	iP	Pb	17 52 26.1	+0.1
	baz=277						
TWD				S	Sb	17 52 35.4	+0.5
	baz=277						
ENA	Nanau	0.71	312	P	Pb	17 52 26.2	-0.3
	baz=320						
ENA				eS	Sb	17 52 35.8	-0.1
	baz=320						
TWC	Suao	0.79	327	⇑iP	Pb	17 52 27.1	-0.7
	baz=325						
TWC				eS	Sb	17 52 35.8	-2.2
	baz=325						
YOJ	Yonaguni jima	0.81	51	P	Pb	17 52 28.4	+0.2
YOJ				S	Sb	17 52 38.2	-0.5
ESL	Shilin	0.82	261	eP	Pb	17 52 27.9	-0.6
	baz=246						
ESL				eS	Sb	17 52 38.9	-0.3
	baz=246						
ILA	Ilan	0.97	327	P	Pn	17 52 30.9	-0.3
	baz=325						
ILA				eS	Sb	17 52 43.1	-0.1
	baz=325						
TWE	Neicheng	0.97	322	⇑iP	Pn	17 52 30.9	-0.4
	baz=328						
TWE				eS	Sb	17 52 43.6	+0.2
	baz=328						
ENTT	Nioudou	0.97	315	⇓iP	Pn	17 52 31.1	-0.2
	baz=324						
ENTT				eS	Sb	17 52 43.2	-0.2
	baz=324						
WHF	Hehuan Shan	0.99	282	⇓P	Pn	17 52 31.1	-0.8
	baz=278						
WHF				eS	Sb	17 52 43.9	-0.2
	baz=278						
NNS	Nan Shan	0.99	300	⇓P	Pn	17 52 31.3	-0.4
	baz=283						
NNS				eS	Sb	17 52 44.1	0.0
	baz=283						
EHY	Hungye	1.02	244	eP	Pn	17 52 31.6	-0.4
	baz=242						
EHY				eS	Sn	17 52 44.9	-0.7
	baz=242						
TWT	Tachien	1.09	286	eP	Pb	17 52 33.3	+0.2
	baz=272						
TWT				eS	Sb	17 52 47.5	+0.5
	baz=272						
TWB1	Santiao Chiao	1.10	344	P	Pn	17 52 32.6	-0.4
	baz=330						
TWB1				S	Sb	17 52 47.2	+0.2
	baz=330						
TWF1	Yuli	1.11	238	⇓eP	Pn	17 52 33.1	-0.1
	baz=235						
TWF1				eS	Sn	17 52 47.3	-0.7
	baz=235						
NSK	Sanguang	1.14	310	⇓iP	Pn	17 52 33.5	-0.1
	baz=307						
NSK				eS	Sn	17 52 48.0	-0.7
	baz=307						
CHKT	Chengkung	1.22	226	eP	Pb	17 52 35.2	0.0
	baz=213						
CHKT				eS	Sn	17 52 48.5	-2.1
	baz=213						
NWF	Wu-fen Shan	1.22	336	eP	Pn	17 52 34.7	-0.1
	baz=334						
NWF				S	Sb	17 52 50.9	+0.3
	baz=334						
SMLT	Sun Moon Lake	1.30	267	⇓P	Pn	17 52 36.2	+0.3
	baz=255						
SMLT				eS	Sn	17 52 52.7	-0.2
	baz=255						
TAP1	Taipei	1.31	326	eP	Pb	17 52 36.2	-0.4
	baz=323						
TAP1				eS	Sb	17 52 53.1	+0.1
	baz=323						
TAP	Taipei	1.31	326	eP	Pn	17 52 36.1	+0.1
	baz=323						
TAP				eS	Sb	17 52 53.1	-0.1
	baz=323						
IRIF	Iriomote-Funau	1.34	73	P	Pb	17 52 37.2	0.0
IRIF				eS	Sb	17 52 54.8	+0.8
TYC	Yuchr	1.34	268	⇓iP	Pn	17 52 36.7	+0.3
	baz=266						
TYC				eS	Sn	17 52 53.4	-0.2
	baz=266						
HATJ	Hateruma jima	1.36	85	P	Pb	17 52 37.4	-0.2
HATJ				eS	Sb	17 52 55.0	+0.5
NSTT	Nanjuang	1.38	300	⇓P	Pb	17 52 38.1	+0.1
	baz=297						
NSTT				S	Sb	17 52 55.7	+0.5
	baz=297						
TWS1	Kuangyinshan	1.41	324	⇓P	Pb	17 52 38.0	-0.5
	baz=333						
TWS1				eS	Sb	17 52 56.0	0.0
	baz=333						
ELDTW	Lidau	1.42	238	eP	Pn	17 52 37.0	-0.5
	baz=236						
ELDTW				eS	Sn	17 52 53.9	-1.7
	baz=236						
NCU	National Centr	1.45	315	eP	Pn	17 52 38.3	+0.4
	baz=311						
NCU				eS	Sb	17 52 57.6	+0.5
	baz=311						
ALS	Alishan	1.46	253	eP	Pb	17 52 39.1	-0.3
	baz=251						
ALS				eS	Sb	17 52 57.7	0.0
	baz=251						
TWQ1	Liyutan	1.47	286	eP	Pb	17 52 39.6	+0.2
	baz=283						
TWQ1				eS	Sb	17 52 58.9	+1.2
	baz=283						
TWY	Chenhua	1.48	334	eP	Pb	17 52 39.0	-0.5
	baz=331						
TWY				eS	Sb	17 52 57.4	-0.4
	baz=331						
HSN	Hsinchu	1.50	305	eP	Pb	17 52 39.5	-0.4
	baz=303						
HSN				eS	Sb	17 52 59.3	+0.8
	baz=303						
NSY	Sanyi	1.50	288	eP	Pb	17 52 40.3	+0.3
	baz=285						
NSY				eS	Sb	17 52 59.8	+1.2
	baz=285						
WNT	Mingjian	1.50	268	eP	Pb	17 52 40.1	+0.1
	baz=265						
WNT				eS	Sb	17 52 59.5	+0.9
	baz=265						
TCU	Taichung	1.52	278	⇓P	Pb	17 52 40.7	+0.5
	baz=275						
TCU				eS	Sb	17 53 00.1	+1.1
	baz=275						
CHN5	Tsauling	1.55	257	eP	Pb	17 52 40.6	-0.2
	baz=244						
CHN5				eS	Sb	17 53 01.0	+1.0
	baz=244						
JKRS	Kuro-shima	1.57	79	P	Pb	17 52 40.6	-0.5
JKRS				eS	Sb	17 53 00.4	-0.1
TTN	Taitung	1.61	222	eP	Pb	17 52 41.8	0.0
	baz=222						
TTN				eS	Sn	17 52 59.6	-0.5
	baz=222						
TWG	Pinlang	1.61	226	eP	Pn	17 52 39.7	-0.3
	baz=224						
WGK	Gukeng	1.63	261	eP	Pb	17 52 41.8	-0.5
	baz=259						
WGK				eS	Sb	17 53 03.1	+0.8
	baz=259						
CHN4	Tsaushan	1.69	250	eP	Pb	17 52 42.8	-0.5
	baz=248						
CHN4				eS	Sb	17 53 05.0	+0.9
	baz=248						
JIJ	Ishigaki jima	1.71	76	P	Pn	17 52 41.9	+0.4
JIJ				eS	Sn	17 53 02.9	+0.1
WTP	Ta-pu	1.72	246	eP	Pb	17 52 43.3	-0.4
	baz=245						
WTP				eS	Sb	17 53 05.1	+0.2
	baz=245						
CHN2	Minshiung	1.74	257	eP	Pn	17 52 42.6	+0.7
	baz=255						
CHY	Chiayi	1.80	256	eP	Pb	17 52 44.5	-0.5
	baz=254						
CHY				eS	Sb	17 53 06.9	-0.2
	baz=254						
CHN1	Nanshi	1.81	246	eP	Pb	17 52 45.1	-0.2
	baz=244						
CHN1				eS	Sb	17 53 07.8	+0.1
	baz=244						
TWK	Hsinying	1.81	248	eP	Pb	17 52 44.7	-0.7
	baz=246						
ECL	Taimali	1.84	223	eP	Pn	17 52 42.6	-0.7
	baz=232						
WTCT	Ta-ch'eng	1.87	268	eP	Pb	17 52 45.8	-0.5
	baz=266						
WTCT				eS	Sb	17 53 09.6	+0.4
	baz=266						
WSF	Szhu	1.95	261	eP	Pb	17 52 46.6	-1.0
	baz=259						
WSF				eS	Sb	17 53 11.8	+0.4
	baz=259						
SSD	Sandimen	1.96	233	eP	Pb	17 52 46.7	-1.1
	baz=225						
SSD				eS	Sb	17 53 11.2	-0.7
	baz=225						
CHN3	Shinhua	2.00	245	eP	Pb	17 52 48.1	-0.3
	baz=244						
CHN3				eS	Sb	17 53 13.7	+0.8
	baz=244						
CHN8	Yiju	2.03	253	eP	Pn	17 52 46.9	+1.1
	baz=252						
CHN8				eS	Sb	17 53 12.9	-0.9
	baz=252						
LAY	Lan-yu	2.03	201	eP	Pn	17 52 45.4	-0.5
	baz=200						
EAST	Anshuo	2.07	221	eP	Pn	17 52 46.9	+0.5
	baz=220						
TWM1	Shoushan	2.08	238	eP	Pb	17 52 49.6	-0.2
	baz=236						
SGLT	Jiouru	2.08	234	eP	Pn	17 52 48.1	+1.6
	baz=224						
SGLT				eS	Sb	17 53 14.8	-0.4
	baz=224						
SCLT	Jiali	2.10	249	eP	Pb	17 52 49.0	-1.2
	baz=248						
SCLT				eS	Sb	17 53 15.3	-0.5
	baz=248						
SCZT	Fangliau	2.22	225	eP	Pb	17 52 51.2	-1.0
	baz=217						
JTJ	Tarama	2.28	72	P	Pn	17 52 50.4	+1.2
JTJ				eS	Sn	17 53 15.5	-1.2
TWK1	Hengchun	2.44	215	eP	Pn	17 52 52.5	+1.0
	baz=216						
TWK1				eS	Sn	17 53 21.0	+0.3
	baz=216						
PNG	Penghu	2.56	262	eP	Pn	17 52 54.1	+0.9
	baz=260						
PNG				eS	Sn	17 53 25.3	+1.5
	baz=260						
KNM	Kinmen	3.58	278	eP	Pn	17 53 08.4	+1.2
	baz=276						

IDC 02 17:55:24.8±5.2, 1°.72N×97°.04W, h0km, mb3.9/8, mb1 4.2/8, mb1mx4.0/22, mbtmp3.9/8, MS3.2/8, Ms1 3.2/8, ms1mx3.0/43, Error ellipse: s-maj=122.0km s-min=104.6km az=53.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	JuntasAbangare	14.73	54	LR	LR	18 01 50.4	
	comp=Z,20nm,21.7s,baz=265,slow=26						
CMIG	Matias Romero	15.42	8	LR	LR	18 03 38.8	
	comp=Z,82nm,20.3s,baz=185,slow=32						
LPIG	La Paz	25.69	331	LR	LR	18 08 25.0	
	comp=Z,13nm,19.1s,baz=242,slow=30						
TXAR	Lajitas Array	28.18	348	P	P	18 01 20.1	+0.8
	1.2nm,0.8s,baz=158,slow=11,SNR=6.2						
TXAR				LR	LR	18 11 25.9	
	comp=Z,95nm,18.8s,baz=180,slow=34						
ANMO	Albuquerque	34.20	346	LR	LR	18 15 49.2	
	comp=Z,63nm,18.8s,baz=340,slow=36						
TKL	Tuckaleechee C	35.95	19	LR	LR	18 16 53.5	
	comp=Z,72nm,20.0s,baz=260,slow=36						
NVAR	Mina Array Bea	41.40	334	P	P	18 03 13.3	0.0
	0.3nm,0.3s,baz=157,slow=8.0,SNR=3.8						
PDAR	Pinedale Array	42.38	346	P	P	18 03 20.2	-1.0
	1.0nm,0.8s,baz=156,slow=8.9,SNR=7.1						
SADO	Sadowa	45.70	18	LR	LR	18 23 04.3	
	comp=Z,46nm,20.4s,baz=104,slow=36						
ULM	Lac du Bonnet	48.36	1	P	P	18 04 07.7	-0.6
	2.3nm,0.9s,baz=159,slow=4.0,SNR=3.6						
NEW	Newport	49.50	342	LR	LR	18 26 47.0	
	comp=Z,38nm,19.5s,baz=187,slow=38						
YKA	Yellowknife Ar	62.04	351	P	P	18 05 46.7	-0.1
	0.8nm,0.9s,baz=155,slow=7.0,SNR=10.0						
INK	Inuvik	70.94	346	P	P	18 06 44.6	+0.9
	3.4nm,0.9s,baz=128,slow=5.8,SNR=11						
ILAR	Eielson Array	72.35	340	P	P	18 06 51.8	-0.5
	2.1nm,0.8s,baz=151,slow=4.8,SNR=23						
RES	Resolute Bay	72.89	1	P	P	18 06 55.5	+0.1
	0.4nm,0.5s,baz=195,slow=6.5,SNR=3.9						

IDC 02 18:21:35.6±0.9, 54°.54S×133°.39W, h0km, mb4.1/3, mb1 4.4/3, mb1mx4.0/14, mbtmp4.1/3, MS4.0/11, Ms1 4.0/11, ms1mx3.7/21, Error ellipse: s-maj=139.1km s-min=24.1km az=167.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKT	Rikitea	31.40	357	eLR	LR	18 35 51.8	
	545nm,28.0s,baz=172						
RKT				eT	T	19 00 12.4	
	5.6nm,0.3s						
VNDA	Vanda	32.09	202	LR	LR	18 37 51.3	
	comp=Z,289nm,20.3s,baz=120,slow=30						
TBI	Tubuai	33.39	332	eLR	LR	18 36 39.5	
	362nm,28.0s,baz=158						
TBI				eT	T	19 02 44.4	
	103nm,0.5s						
PPT2	Papeete2	38.93	335	eLR	LR	18 39 26.6	
	378nm,25.5s						
PPT	Papeete	38.95	335	LR	LR	18 40 19.1	
	comp=Z,224nm,21.3s,baz=175,slow=29						
VAH	Vaihoa	40.76	339	eT	T	19 11 55.0	
	13nm,0.4s						
DZM	Mont Dzumac	55.08	281	eLR	LR	18 47 11.0	
	149nm,30.1s						
DZM	Mont Dzumac	55.08	281	LR	LR	18 48 14.2	
	comp=Z,108nm,18.9s,baz=174,slow=29						
MAW	Mawson	57.57	187	LR	LR	18 52 59.7	
	comp=Z,190nm,20.1s,baz=346,slow=33						
CPUP	Villa Florida	61.02	95	LR	LR	18 54 16.7	
	comp=Z,87nm,20.6s,baz=177,slow=32						
LPAZ	La Paz	62.56	79	P	P	18 32 02.8	+0.7
	0.7nm,0.5s,baz=271,slow=3.7,SNR=3.6						
LPAZ				LR	LR	18 52 43.2	
	comp=Z,36nm,19.7s,baz=198,slow=30						
ASAR	Alice Springs	72.59	254	P	P	18 33 04.6	-0.1
	2.2nm,0.9s,baz=135,slow=5.5,SNR=10						
ASAR				LR	LR	19 02 12.0	
	comp=Z,71nm,18.2s,baz=182,slow=34						
BDFB	Brasilia	74.75	96	LR	LR	19 02 48.4	
	comp=Z,102nm,20.5s,baz=326,slow=33						
WRA	Warramunga Arr	75.30	256	P	P	18 33 20.4	-0.1
	2.1nm,0.9s,baz=142,slow=5.2,SNR=11						
ANMO	Albuquerque	92.10	22	LR	LR	19 05 59.3	
	comp=Z,85nm,20.5s,baz=165,slow=29						
BOSA	Boshof	95.16	161	LR	LR	19 13 12.3	
	comp=Z,70nm,18.5s,baz=345,slow=32						
YBH	Yreka Blue Hor	96.33	8	LR	LR	19 09 28.9	
	comp=Z,129nm,19.6s,baz=177,slow=30						
ILAR	Eielson Array	119.43	353	PKP	PKPdf	18 40 24.2	-1.2
	0.3nm,0.7s,baz=194,slow=1.5,SNR=3.6						
SONM	Songino Array	142.95	285	PKP	PKPdf	18 41 07.5	-2.8
	0.2nm,0.4s,baz=108,slow=3.2,SNR=3.6						
EKA	Eskdalemuir Ar	151.88	68	PKPbc	PKPbc	18 41 30.2	-0.9
	0.7nm,0.6s,baz=209,slow=1.5,SNR=4.8						
EKA				PKPab	PKPab	18 41 39.5	-0.8
	1.2nm,0.5s,baz=252,slow=2.3,SNR=9.1						
MKAR	Makanchi Array	156.31	266	PKPab	PKPab	18 41 59.6	+0.1
	0.6nm,0.8s,baz=108,slow=4.0,SNR=6.0						
ZALV	Zalesovo Beam	157.84	284	PKPab	PKPab	18 42 07.0	+1.1
	0.7nm,0.6s,baz=174,slow=1.5,SNR=5.9						

IDC 02 18:51:26.5±2.0, 53°.95S×134°.19W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.9/15, mbtmp3.9/3, MS4.0/4, Ms1 4.0/4, ms1mx3.4/25, Error ellipse: s-maj=62.1km s-min=41.6km az=64.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKT	Rikitea	30.79	359	eT	T	19 30 04.8	
	3.7nm,0.2s						
VNDA	Vanda	32.46	201	LR	LR	19 09 06.6	
	comp=Z,69nm,18.7s,baz=148,slow=33						
TBI	Tubuai	32.65	333	eLR	LR	19 06 11.5	
	84nm,34.8s						
TBI				eT	T	19 32 33.5	
	38nm,0.4s						
QSPA	South Pole Qui	36.22	180	P	P	18 58 30.9	0.0
	1.7nm,0.7s,baz=81,slow=3.4,SNR=7.5						
URZ	Urewera	36.44	275	LR	LR	19 09 53.2	
	comp=Z,66nm,21.2s,baz=226,slow=30						
PPT2	Papeete2	38.20	336	eLR	LR	19 09 19.7	
	61nm,23.5s						
VAH	Vaihoa	40.04	340	eT	T	19 41 44.9	
	6.1nm,0.2s						
ATAH	Atahualpa	64.58	65	LR	LR	19 21 19.1	
	comp=Z,346nm,19.9s,baz=35,slow=28						
ASAR	Alice Springs	72.31	254	P	P	19 02 53.9	-0.1
	1.1nm,0.9s,baz=142,slow=7.1,SNR=12						
WRA	Warramunga Arr	74.98	257	P	P	19 03 09.2	-0.4
	1.2nm,0.9s,baz=146,slow=5.0,SNR=8.6						
NVAR	Mina Array Bea	93.02	12	LR	LR	19 36 03.4	
	comp=Z,228nm,18.3s,baz=47,slow=29						
ILAR	Eielson Array	118.79	354	PKP	PKPdf	19 10 14.7	-0.5
	0.4nm,0.9s,baz=204,slow=2.4,SNR=3.6						
SONM	Songino Array	142.34	286	PKP	PKPdf	19 10 58.5	-1.7
	0.2nm,0.5s,baz=94,slow=1.9,SNR=3.1						
MKAR	Makanchi Array	155.87	268	PKPab	PKPab	19 11 49.8	+1.2
	0.6nm,0.9s,baz=145,slow=2.5,SNR=3.8						

*DJA **02** 18:51:41.1±1.0, 0°S±8°×12°0E±°, h10km, M4.1/6, MLv4.1/6*
*IDC **02** 18:51:42.7±1.3, 0°.98S×119°.53E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.5/22, mbtmp3.6/4, ML3.3/1, MS4.1/1, Ms1 4.1/1, ms1mx2.8/32, Error ellipse: s-maj=127.2km s-min=19.5km az=63.0*
*ISCJB **02** 18:51:46.3±0.9, 0°.71S±0°.07×120°.1E±0°.1, h33km, mb3.8/4, MS4.1/1, Error ellipse: s-maj=15.6km s-min=10.0km az=10.2*
ISC 02 18:51:48.2±1.0, 0°.71S±0°.08×120°.2E±0°.1, h35km, n13, σ0s.78/11, mb3.6/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	Ampana	1.51	98	P	Pn	18 52 13.5	+0.8
APSI				S	Sn	18 52 39.8	+8.7
MRSI	Marisa	2.14	57	P	Pn	18 52 20.5	-0.9
TTSI	Tana Toraja	2.34	188	P	Pn	18 52 23.9	-0.3
LUWI	Luwuk	2.64	97	P	Pn	18 52 34.1	+5.9
SPSI	Sidrap Palu	3.25	187	P	Pn	18 52 36.4	-0.4
KDI	Kendari	4.06	143	P	Pn	18 52 47.4	-0.4
BKSI	Bulukumba	4.58	180	P	Pn	18 52 55.5	+0.5
FITZ	Fitzroy Crossi	18.10	163	P	Pn	18 55 56.5	-0.4
	0.1nm,0.3s,baz=342,slow=13,SNR=3.7						
WRA	Warramunga Arr	23.62	145	P	P	18 56 55.3	-1.0
	2.0nm,1.1s,baz=323,slow=9.4,SNR=13						
ASAR	Alice Springs	26.43	151	P	P	18 57 22.4	+0.4
	0.5nm,0.7s,baz=342,slow=13,SNR=7.5						
MJAR	Matsushiro Arr	40.68	23	LR	LR	19 14 21.3	
	comp=Z,247nm,19.8s,baz=125,slow=33						
SONM	Songino Array	49.82	348	P	P	19 00 38.9	+1.1
	0.5nm,0.6s,baz=167,slow=9.2,SNR=4.6						
MKAR	Makanchi Array	57.76	330	P	P	19 01 35.5	-0.3
	3.3nm,0.4s,baz=135,slow=7.0,SNR=4.2						

IDC 02 19:01:46.3±3.2, 31°.41S×176°.66W, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.8/19, mbtmp3.9/4, ML3.8/1, MS3.2/1, Ms1 3.2/1, ms1mx2.7/25, Error ellipse: s-maj=69.4km s-min=37.1km az=118.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.54	215	Pn	Pn	19 03 51.2	+0.1
	1.2nm,0.3s,baz=319,slow=3.1,SNR=6.6						
URZ				Sn	Sn	19 05 26.6	-1.5
	2.2nm,0.3s,baz=312,slow=23,SNR=7.6						
RPZ	Rata Peaks	15.65	215	LR	LR	19 11 08.7	
	comp=Z,90nm,19.7s,baz=138,slow=36						
CTA	Charters Tower	35.10	280	P	P	19 08 42.9	+1.5
	0.7nm,0.2s,baz=100,slow=7.2,SNR=3.7						
ASAR	Alice Springs	44.20	267	P	P	19 09 57.0	-0.4
	0.7nm,0.7s,baz=106,slow=7.9,SNR=13						
WRA	Warramunga Arr	45.28	272	P	P	19 10 05.5	-0.5
	0.7nm,0.5s,baz=112,slow=7.9,SNR=19						
FINES	FINESS Array B	146.48	340	PKPbc	PKPdf	19 21 27.6	+0.3
	0.8nm,0.6s,baz=90,slow=1.9,SNR=5.2						

IDC 02 19:10:22.4±0.8, 2°.02N×97°.98W, h0km, mb4.1/13, mb1 4.4/13, mb1mx4.2/24, mbtmp4.1/13, Error ellipse: s-maj=35.2km s-min=14.9km az=51.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	15.28	11	Pn	P	19 14 05.3	+0.6
	0.3nm,0.3s,baz=180,slow=10,SNR=3.1						
ATAH	Atahualpa	21.55	115	P	P	19 15 15.6	+1.4
	3.1nm,0.7s,baz=281,slow=15,SNR=5.0						
ROSC	El Rosal	23.77	83	P	P	19 15 37.9	+0.5
	5.1nm,0.3s,baz=267,slow=23,SNR=3.9						
TXAR	Lajitas Array	27.70	349	P	P	19 16 13.2	+0.6
	2.6nm,0.9s,baz=170,slow=8.6,SNR=11						
LPAZ	La Paz	34.64	123	P	P	19 17 14.4	-0.2
	0.8nm,0.7s,baz=318,slow=3.1,SNR=4.2						
SIV	San Ignacio	40.62	117	P	P	19 18 03.7	-0.8
	1.1nm,0.8s,baz=288,slow=17,SNR=4.3						
NVAR	Mina Array Bea	40.74	335	P	P	19 18 05.6	+0.2
	0.8nm,0.3s,baz=150,slow=7.3,SNR=6.4						
PDAR	Pinedale Array	41.87	347	P	P	19 18 15.6	+0.9
	3.1nm,0.8s,baz=168,slow=7.6,SNR=4.7						
ULM	Lac du Bonnet	48.09	2	P	P	19 19 02.6	-1.1
	1.1nm,0.4s,baz=342,slow=2.0,SNR=3.5						
CPUP	Villa Florida	48.31	128	P	P	19 19 05.4	-0.5
	0.9nm,0.6s,baz=355,slow=5.4,SNR=4.8						
YKA	Yellowknife Ar	61.60	351	P	P	19 20 40.9	-0.6
	1.8nm,1.0s,baz=155,slow=6.8,SNR=22						
FRB	Frobisher Bay	65.26	14	P	P	19 21 04.8	-0.9
	0.7nm,0.4s,baz=229,slow=9.3,SNR=3.3						
INK	Inuvik	70.44	347	P	P	19 21 38.9	+0.6
	6.8nm,0.9s,baz=141,slow=6.9,SNR=18						
ILAR	Eielson Array	71.75	340	P	P	19 21 45.5	-0.8
	5.0nm,0.8s,baz=150,slow=4.5,SNR=52						
ASAR	Alice Springs	125.42	242	PKP	PKPdf	19 29 26.6	+0.2
	0.9nm,0.8s,baz=103,slow=1.8,SNR=7.3						
WRA	Warramunga Arr	125.92	247	PKP	PKPdf	19 29 26.6	-0.9
	1.3nm,0.8s,baz=98,slow=1.9,SNR=16						
CMAR	Chiang Mai Arr	153.71	321	PKPbc	PKPbc	19 30 24.8	+0.4
	0.7nm,0.8s,baz=350,slow=3.2,SNR=6.6						
CMAR				PKPab	PKPab	19 30 37.1	+0.2
	0.8nm,0.8s,baz=18,slow=2.6,SNR=4.6						

*NIED **02** 19:11:00, 35°.70N×143°.10E, h5km, Mw4.1 Best double couple: $M_0$1.82000×10^15 NP1:ϕ_s179.00000°, δ59.00000°, λ-105.00000°. NP2:ϕ_s26.00000°, δ34.00000°, λ-67.00000°.*
*ISCJB **02** 19:11:33.1±1.4, 35°.75N±0°.03×143°.01E±0°.04,*

h20km±10km, mb4.1/27, MS3.3/7, Error ellipse: s-maj=6.0km s-min=4.9km az=152.5

*JMA **02** 19:11:33.8±0.2, 35°.71N×143°.06E, h56km, M4.0*

*MOS **02** 19:11:34.3±1.2, 35°.72N×143°.14E, h33km, mb4.3/19, Error ellipse: s-maj=10.8km s-min=7.2km az=115.4*

*NEIC **02** 19:11:34.7±2.2, 35°.58N×143°.12E, h21km±14km, mb4.5/5, MW4.1(NIED), Error ellipse: s-maj=7.8km s-min=6.3km az=140.0*

*IDC **02** 19:11:36.1±6.1, 35°.55N×143°.10E, h30km±43km, mb3.8/19, mb1 4.0/23, mb1mx4.0/32, mbtmp3.9/23, ML3.2/4, MS3.2/8, Ms1 3.2/8, ms1mx2.9/37, Error ellipse: s-maj=17.3km s-min=15.0km az=112.0*

ISC 02 19:11:36.1±3.7**, 35°.76N**±0°.05×**143°.01E**±0°.05**, h27**km±25km**, n98, σ0s.95**/100**, mb4.1**/27**, MS3.2**/7**, 1C-1D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.75**	**269**	P	Pn	19 12 03.0	-1.7
CHOJ				*e*S	**Sn**	**19 12 25.2**	**-0.9**
BSO1	**Boso 1**	**2.00**	**237**	P	Pn	19 12 05.2	-2.4
BSO1				*e*S	**Sn**	**19 12 29.9**	**-1.5**
JHO	**Hitachi**	**2.15**	**294**	P	Pn	19 12 08.6	-1.6
JHO				*e*S	Sn	19 12 33.4	-2.5
BSO3	**Boso 3**	**2.26**	**246**	P	**Pn**	**19 12 10.3**	**-1.1**
JFT	**Otama**	**2.77**	**310**	P	Pn	19 12 17.8	-1.0
JFT				*e*S	**Sn**	**19 12 50.7**	**-0.7**
JAG	**Ashikaga**	**2.96**	**284**	P	Pn	19 12 20.1	-1.2
JAG				*e*S	**Sn**	**19 12 54.8**	**-1.0**
JOD2	**Odawara 2**	**3.24**	**262**	P	Pn	19 12 23.3	-1.8
JOD2				*e*S	Sn	19 13 00.3	-2.5
JRY	**Ryogami san**	**3.34**	**276**	P	**Pn**	**19 12 25.9**	**-0.8**
JRY				*e*S	**Sn**	**19 13 05.2**	**-0.3**
JMK	**Ichinoseki**	**3.49**	**336**	P	Pn	19 12 27.2	-1.4
JMK				*e*S	**Sn**	**19 13 08.1**	**-0.9**
JYN	**Shimob**	**3.65**	**267**	P	**Pn**	**19 12 30.2**	**-0.6**
JYN				*e*S	**Sn**	**19 13 13.2**	**+0.2**
JHJ2	**Mitsune**	**3.73**	**226**	P	**Pn**	**19 12 30.9**	**-1.0**
JHJ2				*e*S	Sn	19 13 08.7	-6.3
JHJ	**Hachijo jima 2**	**3.75**	**226**	Pn	Pn	19 12 28.8	-3.4
	21nm,0.3s,baz=72,slow=22,SNR=3.8						
JHJ				Sn	Sn	19 13 09.9	-5.5
	70nm,0.3s,baz=82,slow=23,SNR=5.0						
JYK	**Kaneyama**	**3.79**	**327**	P	**Pn**	**19 12 33.2**	**+0.4**
JYK				*e*S	**Sn**	**19 13 15.9**	**-0.6**
JOM	**Ohasama**	**3.95**	**340**	P	**Pn**	**19 12 34.1**	**-0.8**
JOM				*e*S	**Sn**	**19 13 19.3**	**-1.1**
MJAR	**Matsushiro Arr**	**3.96**	**283**	Pn	**Pn**	**19 12 36.3**	**+1.1**
MJAR				Sn	**Sn**	**19 13 21.9**	**+1.2**
MJAR	**Matsushiro Arr**	**3.96**	**283**	Pn	**Pn**	**19 12 36.3**	**+1.1**
	6.3nm,0.3s,baz=120,slow=8.9,SNR=94						
MJAR				Sn	**Sn**	**19 13 21.9**	**+1.2**
	2.7nm,0.3s,baz=166,slow=16,SNR=7.1						
MAJO	**Matsushiro**	**3.96**	**283**	*e*P	**Pn**	**19 12 35.3**	**+0.1**
MAJO	**Matsushiro**	**3.96**	**283**	*e*P	**Pn**	**19 12 35.3**	**+0.1**
MAT	**Matsushiro**	**3.96**	**283**	P	**Pn**	**19 12 35.7**	**+0.5**
MAT				S	**Sn**	**19 13 20.6**	**-0.1**
MAT	**Matsushiro**	**3.96**	**283**	P	**Pn**	**19 12 35.7**	**+0.5**
JSD	**Sado**	**4.43**	**302**	P	**Pn**	**19 12 41.3**	**-0.3**
ERM	**Erimo**	**6.25**	**1**	*e*P	**Pn**	**19 13 05.9**	**-0.6**
ERM	**Erimo**	**6.25**	**1**	*e*P	**Pn**	**19 13 07.4**	**+0.9**
ASAJ	**Asahikawa**	**8.35**	**358**	*e*P	Pn	19 13 33.0	-2.3
	20nm,1.4s						
ASAJ				Sn	**Sn**	**19 15 07.0**	**-1.8**
ASAJ	**Asahikawa**	**8.35**	**358**	Pn	**Pn**	**19 13 34.4**	**-1.0**
	1.8nm,0.3s,baz=207,slow=11,SNR=30						
ASAJ				Sn	**Sn**	**19 15 07.0**	**-1.8**
	0.8nm,0.3s,baz=193,slow=27,SNR=4.7						
ASAJ				LR	LR	19 17 14.1	
	comp=Z,82nm,18.0s,baz=165,slow=40						
YSS	**Yuzh-Sakhalins**	**11.19**	**359**	*e*P	**Pn**	**19 14 13.0**	**-1.2**
USRK	**Ussuriysk Arra**	**11.92**	**318**	Pn	Pn	19 14 28.4	+4.2
	0.2nm,0.3s,baz=106,slow=14,SNR=5.2						
USRK				LR	LR	19 18 51.1	
	comp=Z,90nm,18.3s,baz=321,slow=36						
KSRS	**Korea Array**	**12.24**	**282**	Pn	**Pn**	**19 14 30.9**	**+2.3**
	0.1nm,0.3s,baz=102,slow=14,SNR=8.6						
KSRS				LR	LR	19 18 56.4	
	comp=Z,100nm,18.9s,baz=159,slow=36						
KSAR	**Wonju Array Be**	**12.27**	**282**	Pn	**Pn**	**19 14 30.9**	**+1.9**
GUMO	**Guam**	**22.14**	**175**	LR	LR	19 23 17.6	
	comp=Z,78nm,18.3s,baz=71,slow=32						
YAK	**Yakutsk**	**27.60**	**346**	*e*P	**P**	**19 17 20.2**	**-0.6**
SEY	**Seymchan**	**27.82**	**9**	⇓*i*P	**P**	**19 17 21.7**	**-1.0**
SONM	**Songino Array**	**29.57**	**305**	P	**P**	**19 17 40.3**	**+1.6**
SONM	**Songino Array**	**29.57**	**305**	P	**P**	**19 17 40.3**	**+1.6**
	1.7nm,0.8s,baz=100,slow=7.8,SNR=12						
SONM				LR	LR	19 29 06.3	
	comp=Z,54nm,18.4s,baz=229,slow=35						
ZAK	**Zakamensk**	**32.07**	**310**	*e*P	**P**	**19 18 01.4**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TLY	**Talaya**	**32.14**	**312**	*e*P	P	19 17 59.1	-2.1
TLY				*e*S	S	19 23 06.2	-5.7
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,37nm,14.0s						
TIXI	**Tiksi**	**36.71**	**353**	*e*P	**P**	**19 18 39.4**	**-1.0**
CMAR	**Chiang Mai Arr**	**42.45**	**258**	P	**P**	**19 19 29.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**42.45**	**258**	P	**P**	**19 19 29.1**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=46,slow=7.5,SNR=5.8						
ZAA0	**Zalesovo Array**	**43.72**	**313**	*e*P	**P**	**19 19 39.3**	**+0.6**
ZALV	**Zalesovo Beam**	**43.72**	**313**	P	**P**	**19 19 39.6**	**+0.9**
ZALV						19 21 25.5	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZALV				MLR	MLR		
	comp=Z,33nm,20.2s						
ZALV	**Zalesovo Beam**	**43.72**	**313**	P	**P**	**19 19 39.6**	**+0.9**
ZALV				PcP	**PcP**	**19 21 25.5**	**+0.2**
ZALV	**Zalesovo Beam**	**43.72**	**313**	P	**P**	**19 19 39.6**	**+0.9**
	comp=Z,2.7nm,0.7s,baz=94,slow=7.1,SNR=14						
ZALV				PcP	**PcP**	**19 21 25.5**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=83,slow=2.9,SNR=5.1						
ZALV				LR	LR	19 38 31.2	
	comp=Z,33nm,20.2s,baz=71,slow=37						
MK31	**Makanchi Array**	**45.89**	**303**	*e*P	**P**	**19 19 56.7**	**+0.6**
MK31	**Makanchi Array**	**45.89**	**303**	*e*P	**P**	**19 19 56.7**	**+0.6**
MKAR	**Makanchi Array**	**45.89**	**303**	P	**P**	**19 19 56.9**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,38nm,18.9s						
MKAR	**Makanchi Array**	**45.89**	**303**	P	**P**	**19 19 56.9**	**+0.7**
MKAR	**Makanchi Array**	**45.89**	**303**	P	**P**	**19 19 56.9**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=91,slow=9.2,SNR=19						
MKAR				LR	LR	19 38 35.8	
	comp=Z,38nm,18.9s,baz=352,slow=35						
KDAK	**Kodiak Island**	**47.20**	**41**	P	**P**	**19 20 06.1**	**0.0**
KDAK	**Kodiak Island**	**47.20**	**41**	P	**P**	**19 20 06.1**	**0.0**
	comp=Z,7.5nm,0.7s,baz=292,slow=8.1,SNR=5.5						
KURK	**Kurchatov**	**47.73**	**309**	⇑*e*P	**P**	**19 20 10.3**	**-0.1**
KURK				pmax	pmax		
	comp=Z,12nm,2.5s						
KURK	**Kurchatov**	**47.73**	**309**	*e*P	**P**	**19 20 09.9**	**-0.6**
	comp=Z,5.3nm,0.9s						
KURBB	**Kurchatov Arra**	**47.80**	**309**	LR	LR	19 40 40.4	
	comp=Z,38nm,21.1s,baz=70,slow=36						
ILAR	**Eielson Array**	**49.89**	**32**	P	**P**	**19 20 27.1**	**+0.2**
ILAR	**Eielson Array**	**49.89**	**32**	P	**P**	**19 20 27.1**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=268,slow=6.7,SNR=12						
TKM2	**Tokmak 2**	**51.37**	**300**	*e*P	**P**	**19 20 39.5**	**+0.9**
TKM2	**Tokmak 2**	**51.37**	**300**	*e*P	**P**	**19 20 39.5**	**+0.9**
	comp=Z,46nm,0.9s						
BVAR	**Borovoye Array**	**52.38**	**313**	P	**P**	**19 20 46.0**	**+0.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR	**Borovoye Array**	**52.38**	**313**	P	**P**	**19 20 46.0**	**+0.3**
BVAR	**Borovoye Array**	**52.38**	**313**	P	**P**	**19 20 46.0**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=89,slow=11,SNR=3.9						
KKAR	**Karatay Array**	**54.88**	**301**	*e*P	**P**	**19 21 04.8**	**+0.6**
KKAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KKAR	**Karatay Array**	**54.88**	**301**	*e*P	**P**	**19 21 04.8**	**+0.6**
	comp=Z,7.0nm,1.1s						
INK	**Inuvik**	**54.94**	**27**	P	**P**	**19 21 04.7**	**+0.6**
INK	**Inuvik**	**54.94**	**27**	P	**P**	**19 21 04.7**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=313,slow=5.8,SNR=6.1						
WRAB	**Tennant Creek**	**55.99**	**190**	*e*P	**P**	**19 21 10.0**	**-2.2**
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WRAB	**Tennant Creek**	**55.99**	**190**	*e*P	**P**	**19 21 10.0**	**-2.2**
	comp=Z,4.0nm,1.0s						
WRA	**Warramunga Arr**	**56.00**	**190**	P	**P**	**19 21 10.3**	**-2.1**
WRA	**Warramunga Arr**	**56.00**	**190**	P	**P**	**19 21 10.3**	**-2.1**
	comp=Z,2.0nm,0.7s,baz=8.7,slow=7.4,SNR=27						
ASAR	**Alice Springs**	**59.73**	**190**	P	**P**	**19 21 36.7**	**-1.8**
ASAR	**Alice Springs**	**59.73**	**190**	P	**P**	**19 21 36.7**	**-1.8**
	comp=Z,0.7nm,0.8s,baz=17,slow=10,SNR=16						
ABKAR	**Akbulak array**	**59.74**	**311**	*e*P	**P**	**19 21 38.5**	**+0.1**
	comp=Z,2.5nm,0.8s						
YKA	**Yellowknife Ar**	**64.26**	**30**	P	**P**	**19 22 09.0**	**+0.5**
YKA	**Yellowknife Ar**	**64.26**	**30**	P	**P**	**19 22 09.0**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=299,slow=6.6,SNR=20						
FINES	**FINESS Array B**	**70.54**	**333**	P	**P**	**19 22 48.7**	**+0.6**
FINES	**FINESS Array B**	**70.54**	**333**	P	**P**	**19 22 48.7**	**+0.6**
	comp=Z,3.9nm,1.0s,baz=64,slow=9.4,SNR=4.5						
KBZ	**Khabaz**	**72.71**	**312**	P	**P**	**19 23 02.9**	**+1.3**
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KBZ	**Khabaz**	**72.71**	**312**	P	**P**	**19 23 02.9**	**+1.3**
KBZ	**Khabaz**	**72.71**	**312**	P	**P**	**19 23 02.9**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=231,slow=0.7,SNR=6.2						
KIV	**Kislovodsk**	**72.71**	**312**	*e*P	P	19 23 00.1	-1.6
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,34nm,19.0s						
AKASG	**Malin Array Be**	**76.09**	**323**	P	**P**	**19 23 21.2**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**76.09**	**323**	P	**P**	**19 23 21.1**	**+0.1**
AKASG	**Malin Array Be**	**76.09**	**323**	P	**P**	**19 23 21.1**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=53,slow=8.4,SNR=4.7						
PDAR	**Pinedale Array**	**77.63**	**46**	P	**P**	**19 23 30.6**	**+0.3**
PDAR	**Pinedale Array**	**77.63**	**46**	P	**P**	**19 23 30.6**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=271,slow=2.6,SNR=7.0						
FRB	**Frobisher Bay**	**77.71**	**14**	P	**P**	**19 23 30.4**	**+0.4**
FRB	**Frobisher Bay**	**77.71**	**14**	P	**P**	**19 23 30.4**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=332,slow=5.3,SNR=6.5						
BRTR	**Keskin Array B**	**80.66**	**312**	P	**P**	**19 23 47.5**	**+0.7**
BRTR	**Keskin Array B**	**80.66**	**312**	P	**P**	**19 23 47.5**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=109,slow=3.8,SNR=6.6						
GERES	**GERESS Array B**	**84.47**	**329**	P	**P**	**19 24 06.6**	**+0.2**
GERES	**GERESS Array B**	**84.47**	**329**	P	**P**	**19 24 06.6**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=45,slow=4.0,SNR=4.1						
TXAR	**Lajitas Array**	**89.86**	**53**	P	**P**	**19 24 32.6**	**-0.3**
TXAR	**Lajitas Array**	**89.86**	**53**	P	**P**	**19 24 32.6**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=270,slow=2.5,SNR=5.1						
LPAZ	**La Paz**	**146.17**	**63**	PKPbc	**PKPdf**	**19 31 14.4**	**+0.3**
LPAZ	**La Paz**	**146.17**	**63**	PKPbc	**PKPdf**	**19 31 14.4**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=17,slow=4.7,SNR=6.0						
SIV	**San Ignacio**	**150.86**	**54**	PKPbc	**PKPbc**	**19 31 26.1**	**-0.6**
SIV	**San Ignacio**	**150.86**	**54**	PKPbc	**PKPbc**	**19 31 26.1**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=207,slow=3.6,SNR=6.1						
PLCA	**Paso Flores**	**153.28**	**111**	PKPbc	**PKPbc**	**19 31 30.9**	**-0.6**
PLCA	**Paso Flores**	**153.28**	**111**	PKPbc	**PKPbc**	**19 31 30.9**	**-0.6**
	comp=Z,2.6nm,0.9s,baz=223,slow=16,SNR=2.9						

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*IDC **02** 19:11:56.5±0.9, 2°.06N×98°.06W, h0km, mb4.3/14, mb1 4.5/14, mb1mx4.3/27, mbtmp4.3/14, MS4.1/14, Ms1 4.2/14, ms1mx4.1/17, Error ellipse: s-maj=30.5km s-min=16.2km az=50.0*

*ISCJB **02** 19:11:57.7±0.8, 2°.2N±0°.1×97°.5W±0°.1, h10km, mb4.5/30, MS4.0/12, Error ellipse: s-maj=20.7km s-min=10.0km az=138.8*

*NEIC **02** 19:11:57.5±0.7, 1°.92N×97°.95W, h10km, mb4.6/17, Error ellipse: s-maj=21.0km s-min=11.1km az=55.0*

*GCMT **02** 19:12:02.7±0.4, 2°.23N×97°.21W, h21km, MW5.1, Moment Tensor Solution. s37,c46; s75,c105; Moment tensor: Scale 10^16Nm; Mrr-5.08±.24; Mθθ4.73±.18; Mφφ0.35±.20; Mrθ0.02±.28; Mθφ-1.21±.13; Mφr-0.58±.34; Best double couple: M0 5.10000×10^16 NP1:φs98.00000°, δ44.00000°, λ-99.00000°. NP2:φs291.00000°, δ46.00000°, λ-82.00000°. Principal axes: T 5.0400, Plg1.0000°, Azm15.0000°; N 0.0900, Plg6.0000°, Azm105.0000°; P -5.1400, Plg84.0000°, Azm276.0000°; Data Used: II IU G CN IC.*

ISC 02 19:11:58.7±0.9**, 2°.2N**±0°.1×**97°.9W**±0°.1**, h10**km**, n232, σ1s.27**/221**, mb4.5**/30**, MS3.9**/12**, 85C-80D, West of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**15.10**	**11**	Pn	**P**	**19 15 37.5**	**-0.1**
CMIG	**Matias Romero**	**15.10**	**11**	Pn	**P**	**19 15 37.5**	**-0.1**
	0.2nm,0.3s,baz=170,slow=12,SNR=5.0						
CMIG				LR	LR	19 19 48.1	
	comp=Z,3μm,21.6s,baz=184,slow=31						
JTS	**JuntasAbangare**	**15.15**	**57**	LR	LR	19 19 33.6	
	comp=Z,2μm,18.9s,baz=49,slow=30						
OTAV	**Otavalo**	**19.51**	**95**	S	P	19 16 19.4	-7.4
TEIG	**Tepich**	**20.23**	**27**	P	Pn	19 16 37.1	+1.0
TEIG	**Tepich**	**20.23**	**27**	P	Pn	19 16 37.1	+1.0
	10nm,0.8s,baz=221,slow=18,SNR=3.8						
TEIG				LR	LR	19 23 21.2	
	comp=Z,2μm,19.1s,baz=66,slow=34						
ATAH	**Atahualpa**	**21.53**	**116**	P	**P**	**19 16 50.9**	**+2.2**
ATAH	**Atahualpa**	**21.53**	**116**	P	**P**	**19 16 50.9**	**+2.2**
	8.6nm,1.0s,baz=309,slow=15,SNR=4.2						
ROSC	**El Rosal**	**23.64**	**83**	P	**P**	**19 17 12.3**	**+1.4**
ROSC	**El Rosal**	**23.64**	**83**	P	**P**	**19 17 13.1**	**+2.2**
	5.6nm,0.4s,baz=106,slow=18,SNR=5.4						
ROSC				LR	LR	19 23 37.3	
	comp=Z,93nm,21.2s,baz=0.4,slow=29						
LPIG	**La Paz**	**24.89**	**332**	LR	LR	19 24 52.7	
	comp=Z,198nm,19.6s,baz=330,slow=31						
NNA	**Nana**	**25.20**	**124**	LR	LR	19 25 20.5	
	comp=Z,219nm,19.8s,baz=324,slow=32						
732A	**Laxson Ranch,**	**26.48**	**356**	⇑P	**P**	**19 17 37.1**	**+0.9**
	baz=27,SNR=6.7						
631A	**Perdido Creek**	**27.20**	**355**	⇑P	**P**	**19 17 43.5**	**+0.7**
	baz=28						
632A	**Uvalde**	**27.23**	**356**	⇑P	**P**	**19 17 44.8**	**+1.7**
	baz=28						
TXAR	**Lajitas Array**	**27.56**	**349**	P	**P**	**19 17 47.6**	**+1.5**
TXAR	**Lajitas Array**	**27.56**	**349**	P	**P**	**19 17 47.6**	**+1.5**
	4.6nm,0.9s,baz=163,slow=10,SNR=14						
TXAR				LR	LR	19 27 44.4	
	comp=Z,1μm,18.4s,baz=255,slow=34						
628A	**Black Gap, Mar**	**27.57**	**351**	⇓P	**P**	**19 17 47.3**	**+1.2**
	baz=28						
627A	**Terlingua Ranc**	**27.62**	**350**	⇑P	**P**	**19 17 48.0**	**+1.2**
	baz=28						
626A	**Big Bend Ranch**	**27.86**	**348**	⇑P	**P**	**19 17 50.6**	**+1.7**
	baz=28,SNR=6.2						
531A	**Rocksprings**	**27.95**	**355**	⇓P	**P**	**19 17 50.8**	**+1.3**
	baz=28						
530A	**J-C Ranch, Com**	**28.01**	**354**	⇓P	**P**	**19 17 51.3**	**+1.2**
	baz=28						
529A	**Stev Forest Ra**	**28.09**	**352**	⇓P	**P**	**19 17 51.6**	**+0.8**
	baz=28						
JCT	**Junction City**	**28.20**	**356**	⇑P	**P**	**19 17 52.8**	**+1.0**
	baz=29						
528A	**Cox Ranch, San**	**28.21**	**351**	⇑P	**P**	**19 17 52.9**	**+0.9**
	baz=29,SNR=5.4						
527A	**Woodward Ranch**	**28.34**	**349**	⇓P	**P**	**19 17 54.5**	**+1.4**
	baz=29						
526A	**Mary Lane Ranc**	**28.35**	**349**	⇓P	**P**	**19 17 55.1**	**+1.9**
	baz=29,SNR=10						
431A	**Sonora**	**28.46**	**355**	⇓P	**P**	**19 17 55.4**	**+1.3**
	baz=29,SNR=5.5						
429A	**Davenport Ranc**	**28.54**	**353**	⇑P	**P**	**19 17 55.4**	**+0.5**
	baz=29						
432A	**Menard**	**28.60**	**357**	⇑P	**P**	**19 17 55.7**	**+0.4**
	baz=29						
430A	**Baggett Ranch,**	**28.63**	**354**	⇑P	**P**	**19 17 56.9**	**+1.3**
	baz=29						
428A	**Kincaid Ranch,**	**28.75**	**351**	⇓P	**P**	**19 17 57.6**	**+0.8**
	baz=29						
426A	**McDonald Obser**	**28.93**	**349**	⇓P	**P**	**19 17 59.4**	**+1.0**
	baz=29,SNR=7.7						
427A	**Hayter Ranch,**	**28.99**	**350**	⇑P	**P**	**19 17 59.8**	**+0.9**
	baz=29						
332A	**Millersview**	**29.10**	**357**	⇓P	**P**	**19 18 00.3**	**+0.6**
	baz=30						
330A	**Mertzon**	**29.23**	**354**	⇓P	**P**	**19 18 02.6**	**+1.6**
	baz=30						
425A	**Indio Mountain**	**29.24**	**347**	⇑P	**P**	**19 18 02.2**	**+1.1**
	baz=30,SNR=7.4						
329A	**Wagon Wheel Ra**	**29.41**	**353**	⇓P	**P**	**19 18 03.1**	**+0.6**
	baz=30						
326A	**Caldwell Ranch**	**29.55**	**349**	⇓P	**P**	**19 18 04.6**	**+0.8**
	baz=30						
232A	**Coleman**	**29.59**	**357**	⇑P	**P**	**19 18 05.0**	**+0.8**
	baz=30						
230A	**Sterling City**	**29.70**	**354**	⇓P	**P**	**19 18 05.7**	**+0.6**
	baz=30						
325A	**Bean Ranch, Si**	**29.80**	**348**	⇑P	**P**	**19 18 06.5**	**+0.4**
	baz=30						
324A	**Moseley Ranch,**	**29.98**	**347**	⇑P	**P**	**19 18 08.5**	**+0.8**
	baz=30						
228A	**UT Block 9, Go**	**30.11**	**352**	⇑P	**P**	**19 18 09.1**	**+0.4**
	baz=30,SNR=5.5						
227A	**Bennet, Jal**	**30.11**	**351**	⇓P	**P**	**19 18 09.3**	**+0.6**
	baz=30						
226B	**Tecolote Peak,**	**30.32**	**349**	⇑P	**P**	**19 18 12.2**	**+1.5**
	baz=31						
ABTX	**Abilene, Hawle**	**30.33**	**357**	⇑P	**P**	**19 18 11.7**	**+1.1**
	baz=31						
130A	**Snyder**	**30.39**	**355**	⇓P	**P**	**19 18 12.1**	**+0.8**
	baz=31						
131A	**Roby**	**30.42**	**356**	⇑P	**P**	**19 18 12.4**	**+0.9**
	baz=31						
225A	**Deer Hill, Car**	**30.48**	**348**	⇓P	**P**	**19 18 13.5**	**+1.3**
	baz=31						
129A	**Stewart Farms,**	**30.52**	**353**	⇑P	**P**	**19 18 13.0**	**+0.6**
	baz=31,SNR=6.8						
128A	**Castleberry Fa**	**30.59**	**352**	⇓P	**P**	**19 18 13.9**	**+0.9**
	baz=31						
224A	**Cornudas Mount**	**30.60**	**347**	⇓P	**P**	**19 18 14.3**	**+1.1**
	baz=31						
127A	**Arkansas Junct**	**30.77**	**351**	⇓P	**P**	**19 18 15.4**	**+0.8**
	baz=31						
126A	**Clayton Basin,**	**30.85**	**350**	⇓P	**P**	**19 18 16.2**	**+0.8**
	baz=31						
125A	**Gardner Draw,**	**30.98**	**349**	⇑P	**P**	**19 18 17.4**	**+1.0**
	baz=31,SNR=11						
Z32A	**Haskell**	**31.00**	**357**	⇓P	**P**	**19 18 17.8**	**+1.3**
	baz=31						
222A	**Williams Famil**	**31.01**	**345**	⇑P	**P**	**19 18 18.0**	**+1.3**
	baz=31						
Z31A	**Sharp Cattle R**	**31.05**	**356**	⇑P	**P**	**19 18 18.1**	**+1.2**
	baz=32						
Z30A	**Sanderson Ranc**	**31.09**	**355**	⇓P	**P**	**19 18 18.3**	**+0.9**
	baz=32						
221A	**Mesquite Ranch**	**31.10**	**344**	⇑P	**P**	**19 18 18.9**	**+1.3**
	baz=32						
Z29A	**Hungry Hill Ra**	**31.12**	**354**	⇑P	**P**	**19 18 17.9**	**+0.1**
	baz=32,SNR=6.0						
RPN	**Rapa Nui**	**31.17**	**200**	LR	LR	19 27 31.2	
	comp=Z,1μm,18.2s,baz=22,slow=30						
124A	**Stringfield Ra**	**31.18**	**348**	⇓P	**P**	**19 18 19.5**	**+1.1**
	baz=32						
220A	**Playas Peak, P**	**31.22**	**342**	⇓P	**P**	**19 18 20.4**	**+1.8**
	baz=32						
Z28A	**Tucker Farm, M**	**31.23**	**353**	⇓P	**P**	**19 18 19.5**	**+0.9**
	baz=32						
Z27A	**Tatum**	**31.37**	**351**	⇑P	**P**	**19 18 20.9**	**+0.9**
	baz=32						
Z26A	**Caprock**	**31.45**	**350**	⇑P	**P**	**19 18 21.8**	**+1.2**
	baz=32						
122A	**Conniff Cattle**	**31.55**	**345**	⇑P	**P**	**19 18 23.1**	**+1.6**
	baz=32						
Z25A	**Roswell**	**31.59**	**349**	⇓P	**P**	**19 18 23.4**	**+1.5**
	baz=32						
121A	**Cookes Peak, D**	**31.60**	**344**	⇑P	**P**	**19 18 23.6**	**+1.6**
	baz=32						
Y30A	**Stafford Cattl**	**31.66**	**355**	⇓P	**P**	**19 18 23.3**	**+0.9**
	baz=32						
Y32A	**R-V Farms, Ver**	**31.69**	**358**	⇑P	**P**	**19 18 24.1**	**+1.5**
	baz=32						
Y31A	**Rekieta Farm,**	**31.70**	**356**	⇑P	**P**	**19 18 23.8**	**+1.1**
	baz=32						
Z24A	**Sheeppen Canyo**	**31.77**	**348**	⇑P	**P**	**19 18 24.7**	**+1.2**
	baz=32						
120A	**U Bar Ranch, L**	**31.86**	**343**	⇑P	**P**	**19 18 26.0**	**+1.8**
	baz=32						
Z23A	**Rita Site, Whi**	**31.90**	**347**	⇓P	**P**	**19 18 26.3**	**+1.7**
	baz=32						
MSTX	**Muleshoe**	**31.95**	**352**	⇓P	**P**	**19 18 26.3**	**+1.3**
	baz=32						
Y26A	**Elida**	**32.06**	**351**	⇑P	**P**	**19 18 27.4**	**+1.3**
	baz=32						
Z22A	**Elephant Butte**	**32.07**	**346**	⇑P	**P**	**19 18 27.6**	**+1.5**
	baz=32,SNR=8.7						
Y25A	**Mesa, Roswell**	**32.22**	**349**	⇓P	**P**	**19 18 28.8**	**+1.4**
	baz=33						
Y24A	**Capitan**	**32.36**	**348**	⇑P	**P**	**19 18 29.9**	**+1.1**
	baz=33						
Z20A	**Nine Sixteen R**	**32.37**	**343**	⇑P	**P**	**19 18 30.5**	**+1.7**
	baz=33,SNR=6.6						
Y23A	**Lovelace Mesa,**	**32.50**	**347**	⇑P	**P**	**19 18 31.2**	**+1.3**
	baz=33						
X26A	**CR and CF Fran**	**32.68**	**351**	⇑P	**P**	**19 18 32.4**	**+0.9**
	baz=33,SNR=8.0						
Y22A	**Socorro**	**32.72**	**346**	⇑P	**P**	**19 18 33.3**	**+1.5**
	baz=33						
AMTX	**Amarillo**	**32.73**	**354**	⇓P	**P**	**19 18 33.2**	**+1.4**
	baz=33						
BNM	**Barren Site**	**32.84**	**347**	*e*P	**P**	**19 18 34.2**	**+1.2**
	28nm,1.4s						
W31A	**Holland Ranch,**	**32.89**	**357**	⇓P	**P**	**19 18 35.1**	**+1.9**
	baz=33						
LENM	**Lemitar**	**32.94**	**346**	*e*P	**P**	**19 18 35.3**	**+1.6**
	7.7nm,1.1s						
W29A	**Amraillo**	**32.96**	**354**	⇓P	**P**	**19 18 35.3**	**+1.4**
	baz=33						
Y21A	**Point of Rocks**	**32.96**	**345**	⇓P	**P**	**19 18 35.6**	**+1.5**
	baz=33,SNR=8.3						
LPM	**Los Pinos Moun**	**32.99**	**347**	*e*P	**P**	**19 18 35.5**	**+1.2**
	3.3nm,1.2s						
Y20A	**Horse Springs,**	**33.06**	**344**	⇓P	**P**	**19 18 36.3**	**+1.4**
	baz=33						
LAZ	**Ladron**	**33.20**	**346**	*e*P	**P**	**19 18 37.7**	**+1.6**
	5.1nm,1.3s						
X21A	**Alamocita Cree**	**33.41**	**345**	⇑P	**P**	**19 18 39.6**	**+1.7**
	baz=34						
W25A	**X Bar L Ranch,**	**33.44**	**350**	⇓P	**P**	**19 18 38.8**	**+0.8**
	baz=34						
ANMO	**Albuquerque**	**33.56**	**347**	*e*P	**P**	**19 18 40.1**	**+0.8**
	4.0nm,0.5s						
113A	**Mohawk Valley,**	**33.89**	**336**	⇑P	**P**	**19 18 44.0**	**+2.1**
	baz=34						
V25A	**Rancho No Teng**	**34.07**	**350**	⇑P	**P**	**19 18 44.5**	**+0.9**
	baz=34						
V24A	**Rampart Ranch,**	**34.08**	**349**	⇓P	**P**	**19 18 44.8**	**+1.0**
	baz=34						
LPAZ	**La Paz**	**34.64**	**123**	P	**P**	**19 18 47.9**	**-1.4**
	13nm,1.6s						
LPAZ	**La Paz**	**34.64**	**123**	P	**P**	**19 18 50.4**	**+1.1**
	2.7nm,1.0s,baz=301,slow=9.2,SNR=3.8						
LPAZ				LR	LR	19 31 11.7	
	comp=Z,227nm,20.4s,baz=220,slow=33						
T28A	**Walsh**	**34.99**	**354**	⇓P	**P**	**19 18 52.3**	**+0.9**
	baz=35						
T27A	**Campo**	**34.99**	**353**	⇓P	**P**	**19 18 52.7**	**+1.1**
	baz=35						
MONP	**Monument Peak**	**35.16**	**332**	⇑P	**P**	**19 18 55.0**	**+1.9**
	baz=36						
T26A	**Comanche Natio**	**35.22**	**352**	⇑P	**P**	**19 18 54.6**	**+1.0**
	baz=36						
T25A	**Trinidad**	**35.30**	**351**	⇓P	**P**	**19 18 55.7**	**+1.4**
	baz=36,SNR=6.6						
BC3	**Big Chuckawall**	**35.37**	**334**	⇑P	**P**	**19 18 57.4**	**+2.6**
	baz=36						
PDMCI	**Parker Dam,Lak**	**35.38**	**336**	⇓P	**P**	**19 18 57.1**	**+2.4**
	baz=36						
T23A	**Casias Ranch,**	**35.49**	**349**	⇑P	**P**	**19 18 57.3**	**+1.3**
	baz=36						
S27A	**Las Animas**	**35.63**	**353**	⇑P	**P**	**19 18 58.3**	**+1.3**
	baz=36						
S26A	**Kim**	**35.64**	**352**	⇓P	**P**	**19 18 58.5**	**+1.4**
	baz=36						
T22A	**Edith**	**35.65**	**348**	⇑P	**P**	**19 18 58.8**	**+1.5**
	baz=36						
IRM	**Iron Mountain**	**35.67**	**335**	⇓P	**P**	**19 18 59.5**	**+2.2**
	baz=36						
S25A	**Robets Cordova**	**35.82**	**351**	⇑P	**P**	**19 18 59.4**	**+0.7**
	baz=36						
S24A	**Houchin Ranch,**	**35.93**	**350**	⇑P	**P**	**19 19 01.2**	**+1.4**
	baz=36						
W13A	**Hualapai Mount**	**35.98**	**337**	⇑P	**P**	**19 19 02.3**	**+2.1**
	baz=36						
R27A	**Eads**	**36.21**	**353**	⇑P	**P**	**19 19 02.8**	**+0.8**
	baz=37						
R25A	**Fountain Ranch**	**36.27**	**351**	⇑P	**P**	**19 19 03.6**	**+1.1**
	baz=37						
SAML	**Samuel**	**36.30**	**108**	*e*P	**P**	**19 18 59.8**	**-3.1**
	44nm,1.8s						
R26A	**Arlington**	**36.31**	**353**	⇓P	**P**	**19 19 04.1**	**+1.3**
	baz=37						
R24A	**Sanders Place,**	**36.48**	**350**	⇑P	**P**	**19 19 05.8**	**+1.4**
	baz=37						

KSCO	Kaye Shedlock' baz=37	36.91	354	⇓P	P	19 19 09.6	+1.7
Q26A	Hugo baz=37	36.93	353	⇑P	P	19 19 09.6	+1.5
Q24A	Divide baz=38	37.21	351	⇓P	P	19 19 11.8	+1.1
Q23A	Hartsel baz=38	37.27	350	⇓P	P	19 19 12.1	+1.0
GSC	Goldstone baz=38	37.36	334	⇓P	P	19 19 14.4	+2.7
BLG	Laguna Peak baz=38	37.42	330	⇑P	P	19 19 15.1	+2.8
EDW2	Edwards Air Fo baz=38	37.54	332	⇑P	P	19 19 14.9	+1.7
MPMC	Manual Prospec baz=39	38.29	334	⇓P	P	19 19 21.4	+1.6
HDIL	Hopedale 93nm,1.6s	38.98	10	*e*P	P	19 19 25.0	-0.3
O18A	Roosevelt baz=40	39.48	345	⇑P	P	19 19 31.6	+2.0
R11A	Troy Canyon, C baz=40	39.48	338	⇓P	P	19 19 32.0	+2.3
N20A	Spence Gulch, baz=40	39.61	348	⇓P	P	19 19 32.2	+1.4
N19A	John Jarvie Ra baz=40	39.87	347	⇑P	P	19 19 34.5	+1.7
N18A	Larsen Ranch, baz=40	40.06	346	⇓P	P	19 19 35.8	+1.3
DUG	Dugway baz=41	40.19	342	⇑P	P	19 19 37.2	+1.7
SIV	San Ignacio	40.60	118	P	P	19 19 38.2	-1.0
SIV	San Ignacio 1.1nm,0.8s,baz=323,slow=11,SNR=5.5	40.60	118	P	P	19 19 38.2	-1.0
SIV	comp=Z,134nm,18.9s,slow=35			LR	LR	19 35 48.3	
NVAR	Mina Array Bea	40.64	335	P	P	19 19 40.5	+1.1
NVAR	Mina Array Bea 1.9nm,0.7s,baz=154,slow=7.7,SNR=7.5	40.64	335	P	P	19 19 40.5	+1.1
HWUT	Hardware Ranch	41.14	344	*e*P	P	19 19 44.3	+0.9
M15A	Larsen Ranch, baz=42	41.25	343	⇓P	P	19 19 45.3	+1.0
ECSD	EROS Data Cent 26nm,1.5s	41.39	1	P	P	19 19 43.5	-1.7
L17A	Cokeville baz=42	41.42	345	⇓P	P	19 19 46.2	+0.5
HVU	Hansel Valley 12nm,1.2s	41.64	343	*e*P	P	19 19 48.2	+0.7
PDAR	Pinedale Array comp=Z,507nm,18.7s,baz=178,slow=35	41.74	347	LR	LR	19 36 36.9	
L14A	Malta baz=42	42.01	343	⇑P	P	19 19 51.8	+1.4
K14A	Jones Ranch, D baz=43	42.46	343	⇓P	P	19 19 55.8	+1.7
I20A	Worland baz=43	42.58	349	⇑P	P	19 19 56.7	+1.6
J15A	Blackfoot baz=43	43.04	344	⇑P	P	19 20 00.3	+1.4
I17A	Pilgrim Ck. baz=44	43.06	347	⇓P	P	19 20 00.1	+1.0
IMW	Indian Meadow 5.8nm,0.8s	43.13	346	*e*P	P	19 19 59.7	0.0
I16A	Newdale baz=44	43.24	346	⇑P	P	19 20 02.1	+1.6
J14A	Carey baz=44	43.27	343	⇓P	P	19 20 02.1	+1.4
HLID	Hailey baz=44	43.75	343	⇑P	P	19 20 06.0	+1.4
I14A	Mackay baz=44	43.81	344	⇑P	P	19 20 06.4	+1.3
CFAA	Coronel Fontan comp=Z,48nm,19.8s,baz=301,slow=30	43.83	142	LR	LR	19 33 51.2	
F24A	Ekalaka baz=44	43.87	353	⇓P	P	19 20 05.6	+0.2
H16A	Russell Place, baz=44	43.96	346	⇑P	P	19 20 07.0	+0.7
I13A	Wildhorse Cree baz=44	43.99	343	⇑P	P	19 20 07.5	+0.9
RKT	Rikitea 5.5nm,0.3s	44.03	233	*e*T	T	20 05 38.0	
QLMT	Earthquake Lak 0.4nm,0.3s	44.13	346	*e*P	P	19 20 09.5	+1.9
F20A	Billings baz=45	44.37	350	⇑P	P	19 20 10.2	+0.7
H14A	Leadore baz=45	44.42	344	⇓P	P	19 20 10.9	+0.9
MCMT	McKenzie Canyo 3.9nm,1.2s	44.48	345	*e*P	P	19 20 11.9	+1.4
E24A	Baker baz=45	44.56	354	⇑P	P	19 20 11.6	+0.7
H13A	Challis baz=45	44.62	343	⇑P	P	19 20 13.3	+1.7
G15A	Dillon baz=45	44.70	345	⇓P	P	19 20 13.6	+1.4
F18A	Big Timber baz=45	44.77	348	⇓P	P	19 20 13.7	+1.1
H12A	Diamond D Ranc baz=45	44.78	343	⇓P	P	19 20 14.7	+1.8
E20A	Meyer Farm, Mu baz=46	45.04	350	⇑P	P	19 20 16.0	+1.2
G13A	Cobalt baz=46,SNR=6.4	45.10	344	⇑P	P	19 20 15.9	+0.6
E19A	Rath Farm, Rou baz=46	45.12	349	⇑P	P	19 20 16.0	+0.6
LRM	Limekiln Ridge 192nm,1.9s	45.30	346	*e*P	P	19 20 17.4	+0.3
F15A	Butte baz=46	45.33	346	⇓P	P	19 20 17.8	+0.6
E18A	Harlowton baz=46	45.44	348	⇑P	P	19 20 18.5	+0.4
G12A	Big Creek, Yel baz=46	45.45	343	⇓P	P	19 20 19.4	+1.2
SADO	Sadowa	45.52	19	P	P	19 20 17.4	-1.0
SADO	Sadowa 1.2nm,0.4s,baz=269,slow=6.5,SNR=3.9	45.52	19	P	P	19 20 17.4	-1.0
F13A	Darby baz=46	45.77	344	⇓P	P	19 20 21.1	+0.5
E16A	East Helena baz=46	45.79	347	⇑P	P	19 20 20.9	+0.1
D19A	Cripps Ranch, baz=46	45.82	350	⇑P	P	19 20 21.3	+0.4
AGMN	Agassiz Nation 56nm,1.8s	45.97	2	*e*P	P	19 20 20.4	-1.6
C20A	Veseth Ranch, baz=47	46.20	351	⇓P	P	19 20 24.8	+1.0
D16A	Dana Ranch, Ca baz=47	46.23	347	⇓P	P	19 20 24.8	+0.6
E13A	Victor baz=47	46.33	344	⇑P	P	19 20 25.9	+0.9
MSO	Missoula baz=47	46.62	345	⇑P	P	19 20 28.3	+1.0
C17A	Wharram Farm, baz=47	46.63	348	⇑P	P	19 20 27.4	0.0
D14A	Greenough baz=47	46.74	345	⇓P	P	19 20 28.4	+0.1
C16A	Fuhringer Ranc baz=47	47.00	347	⇓P	P	19 20 30.7	+0.5
D13A	Huson baz=47	47.00	345	⇓P	P	19 20 30.9	+0.6
A22A	Carney Farms, baz=48	47.14	353	⇓P	P	19 20 32.2	+0.9
C15A	Salmond Ranch, baz=48	47.17	346	⇓P	P	19 20 32.6	+0.9
A20A	Cobblestone Ra baz=48	47.32	351	⇓P	P	19 20 33.1	+0.5
JTMT	Jette 18nm,1.7s	47.56	345	*e*P	P	19 20 35.6	+1.0
C13A	Hot Springs baz=48	47.57	345	⇓P	P	19 20 35.8	+1.1
YBMT	Yellow Bay 23nm,1.6s	47.60	345	*e*P	P	19 20 34.5	-0.5
B15A	Bradely Ranch, baz=48	47.67	347	⇓P	P	19 20 36.4	+1.0
BLMT	Blacktail Moun	47.82	345	*e*P	P	19 20 37.3	+0.6
A17A	Triple J Farms baz=48	47.87	349	⇓P	P	19 20 37.5	+0.6
B14A	Marquette Ranc baz=48	47.88	346	⇑P	P	19 20 37.7	+0.6
ULM	Lac du Bonnet	47.92	2	P	P	19 20 36.2	-1.0
ULM	Lac du Bonnet 3.1nm,0.7s,baz=190,slow=7.5,SNR=6.2	47.92	2	P	P	19 20 36.2	-1.0
B13A	Whitefish baz=49	48.19	345	⇓P	P	19 20 40.1	+0.7
CPUP	Villa Florida comp=Z,141nm,19.3s,baz=303,slow=35	48.33	129	LR	LR	19 40 18.5	
A15A	Johnson Ranch, baz=49,SNR=10	48.33	347	⇑P	P	19 20 40.9	+0.4
A14A	Double T Ranch baz=49	48.49	346	⇓P	P	19 20 42.2	+0.5
B12A	Libby baz=49	48.57	344	⇓P	P	19 20 43.0	+0.7
NEW	Newport baz=49	48.81	343	⇑P	P	19 20 44.6	+0.4
A12A	Yaak River Ran baz=49	49.01	345	⇑P	P	19 20 46.1	+0.4
PPT	Papeete comp=Z,155nm,19.8s,baz=6.5,slow=29	54.59	247	LR	LR	19 37 56.3	
PPT2	Papeete2 124nm,26.8s	54.60	247	*e*S	S	19 29 18.5	+10
PPT2	386nm,25.5s			*e*LR	LR	19 37 28.7	
YKA	Yellowknife Ar	61.46	351	P	P	19 22 14.4	-0.8
YKA	Yellowknife Ar 2.6nm,1.0s,baz=155,slow=6.6,SNR=14	61.46	351	P	P	19 22 14.4	-0.8
DLBC	Dease Lake	61.50	341	P	P	19 22 17.2	+1.5
DLBC	Dease Lake 4.6nm,1.0s,baz=142,slow=9.9,SNR=4.4	61.50	341	P	P	19 22 17.2	+1.5
FRB	Frobisher Bay	65.08	14	P	P	19 22 37.7	-1.5
FRB	Frobisher Bay 0.7nm,0.3s,baz=218,slow=9.8,SNR=4.4	65.08	14	P	P	19 22 37.7	-1.5
INK	Inuvik	70.31	347	P	P	19 23 12.2	+0.1
INK	Inuvik 10nm,0.9s,baz=135,slow=6.5,SNR=14	70.31	347	P	P	19 23 12.2	+0.1
SML	Sawmill 4.7nm,1.2s	70.41	337	*e*P	P	19 23 12.6	-0.4
ILAR	Eielson Array	71.64	340	P	P	19 23 19.6	-0.7
ILAR	Eielson Array 7.1nm,0.8s,baz=150,slow=4.7,SNR=23	71.64	340	P	P	19 23 19.6	-0.7
ABKAR	Akbulak array	125.29	18	PKPdf	PKPdf	19 31 01.8	+1.8
ASAR	Alice Springs	125.59	242	PKP	PKPdf	19 30 59.7	-1.7
ASAR	Alice Springs 0.5nm,0.9s,baz=76,slow=1.9,SNR=4.2	125.59	242	PKP	PKPdf	19 30 59.7	-1.7
WRA	Warramunga Arr	126.08	247	PKP	PKPdf	19 31 00.6	-1.8
WRA	Warramunga Arr 1.0nm,0.8s,baz=99,slow=1.3,SNR=7.3	126.08	247	PKP	PKPdf	19 31 00.6	-1.8
CMAR	Chiang Mai Arr	153.65	322	PKPbc	PKPbc	19 31 58.8	-0.2
CMAR				PKPab	PKPab	19 32 10.6	-0.8
CMAR	Chiang Mai Arr 0.7nm,0.9s,baz=5.7,slow=2.7,SNR=3.9	153.65	322	PKPbc	PKPbc	19 31 58.8	-0.2
CMAR	1.4nm,1.1s,baz=354,slow=6.1,SNR=5.1			PKPab	PKPab	19 32 10.6	-0.8

IDC 02 19:24:14.6±4.2, 1°40N×96°66W, h0km, mb3.8/4, mb1 4.2/4, mb1mx3.8/20, mbtmp3.8/4, Error ellipse: s-maj=315.6km s-min=70.4km az=86.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	28.57	347	P	P	19 30 12.4	-0.1
PDAR	1.1nm,0.9s,baz=168,slow=13,SNR=4.9 Pinedale Array 1.0nm,0.8s,baz=153,slow=8.1,SNR=7.0	42.77	346	P	P	19 32 13.8	-0.4
YKA	Yellowknife Ar 0.3nm,0.6s,baz=155,slow=6.8,SNR=9.3	62.41	351	P	P	19 34 39.6	+0.6
ILAR	Eielson Array 2.0nm,0.8s,baz=149,slow=4.5,SNR=22	72.78	340	P	P	19 35 44.5	-0.1
CMAR	Chiang Mai Arr 0.3nm,0.4s,baz=52,slow=5.8,SNR=4.1	155.00	323	PKPbc	PKPbc	19 44 19.0	-0.4

IDC 02 19:25:55.2±0.9, 33°57N×82°17E, h0km, mb3.5/8, mb1 3.7/9, mb1mx3.5/28, mbtmp3.5/9, ML3.0/1, MS3.4/1, Ms1 3.4/1, ms1mx2.3/24, Error ellipse: s-maj=29.7km s-min=19.8km az=56.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.21	0	Pn	Pn	19 29 04.8	+0.8
ZALV	0.1nm,0.3s,baz=191,slow=17,SNR=6.1 Zalesovo Beam 0.5nm,0.5s,baz=185,slow=12,SNR=4.5	20.46	4	P	P	19 30 34.1	-0.1
CMAR	Chiang Mai Arr 3.2nm,0.9s,baz=310,slow=10,SNR=23	21.26	131	P	P	19 30 44.1	+1.0
SONM	Songino Array 0.7nm,0.9s,baz=236,slow=10,SNR=3.6	23.12	45	P	P	19 31 03.7	+0.7
AKTO	Aktyubinsk 0.6nm,0.6s,baz=130,slow=12,SNR=5.2	24.45	321	P	P	19 31 16.6	+1.0
KEST	Kesra comp=Z,30nm,18.1s,baz=192,slow=39	58.62	294	LR	LR	20 04 14.2	
WRA	Warramunga Arr 0.8nm,1.0s,baz=325,slow=6.1,SNR=5.1	72.84	129	P	P	19 37 25.5	-0.5
TORD	Torodi Ar. Bea 0.7nm,0.6s,baz=45,slow=5.3,SNR=9.3	74.99	276	P	P	19 37 39.0	+0.2
ASAR	Alice Springs 0.1nm,0.4s,baz=317,slow=6.6,SNR=5.0	75.27	132	P	P	19 37 40.5	+0.3
YKA	Yellowknife Ar 0.2nm,0.5s,baz=340,slow=5.5,SNR=4.7	83.32	8	P	P	19 38 21.7	-1.9

GUC 02 19:33:34.2±0.8, 30°38S×71°58W, h20km±6km, MD3.9, ML3.8, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	Tololo Astrono	0.70	73	⇓*i*P	Pb	19 33 47.9	-0.3
TLL				*i*S	Sb	19 33 58.0	+0.4
TLL				AML	AML	19 34 02.1	
CMCH	comp=N,2μm,0.5s Combarbala	0.94	148	⇑*i*P	Pb	19 33 51.0	-0.9
CMCH				*i*S	Sb	19 34 04.0	-0.1
CMCH				AML	AML	19 34 06.9	
CHNG	comp=N,12μm,0.6s Los Chungos	1.50	177	*e*P	Pn	19 33 59.8	-0.2
CHNG				*i*S	Sb	19 34 21.0	+0.9
CHNG				AML	AML	19 34 23.1	
VACH	comp=E,608nm,0.6s Vallenar	1.93	22	⇑*i*P	Pn	19 33 57.6	-8.3
VACH				*i*S	Sn	19 34 21.9	-7.7
PEL	Peldehue	2.86	165	*e*P	Pn	19 34 20.6	+1.8
PEL				*i*S	Sn	19 34 55.0	+2.3
PEL				AML	AML	19 35 05.9	
CLCH	comp=E,913nm,0.4s Cerro Calan	3.14	164	*e*P	Pn	19 34 24.0	+1.4
CLCH				AML	AML	19 35 15.5	
FCH	comp=N,507nm,0.7s Farellones	3.14	160	*e*P	Pb	19 34 26.8	-3.0
FCH				*i*S	Sb	19 35 04.8	-3.2
FCH				AML	AML	19 35 15.3	
LNV	comp=E,188nm,0.2s Longovilo	3.57	178	*e*P	Pn	19 34 29.2	+0.8
LMEL	Las Melosas	3.66	162	*e*P	Pn	19 34 31.3	+1.5
LMEL				*i*S	Sn	19 35 14.0	+1.5
CACH	El Canelo	3.82	168	*e*P	Pn	19 34 33.2	+1.2

IDC 02 19:38:45.8±1.1, 33°60N×82°44E, h0km, mb3.3/7, mb1 3.5/8, mb1mx3.3/28, mbtmp3.3/8, MS4.0/1, Ms1 4.0/1, ms1mx2.5/22, Error ellipse: s-maj=31.1km s-min=20.6km az=60.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.18	360	Pn	Pn	19 41 54.7	+0.4
KURBB	0.0nm,0.3s,baz=185,slow=12,SNR=3.4 Kurchatov Arra 3.0nm,0.3s,baz=164,slow=10,SNR=2.7	17.26	352	P	Pn	19 42 48.7	+0.6
ZALV	Zalesovo Beam 0.3nm,0.3s,baz=210,slow=8.0,SNR=2.9	20.42	4	P	P	19 43 24.0	-0.3
CMAR	Chiang Mai Arr 2.1nm,0.9s,baz=310,slow=10,SNR=13	21.10	132	P	P	19 43 32.6	+0.6
SONM	Songino Array 0.3nm,0.8s,baz=240,slow=18,SNR=2.5	22.94	45	P	P	19 43 53.0	+1.3
AKTO	Aktyubinsk 0.5nm,0.6s,baz=103,slow=7.3,SNR=3.6	24.58	321	P	P	19 44 08.3	+0.9
FINES	FINESS Array B comp=Z,168nm,19.8s,baz=314,slow=38	45.16	326	LR	LR	20 06 59.2	
WRA	Warramunga Arr 0.3nm,0.8s,baz=330,slow=5.8,SNR=4.2	72.67	129	P	P	19 50 15.5	-0.1
TORD	Torodi Ar. Bea 0.3nm,0.6s,baz=56,slow=5.6,SNR=5.3	75.22	276	P	P	19 50 31.2	+0.5
YKA	Yellowknife Ar 0.1nm,0.4s,baz=339,slow=5.7,SNR=4.6	83.27	8	P	P	19 51 12.0	-1.9

*IDC **02** 19:43:33.1±2.6, 13°22N×125°26E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/23, mbtmp3.4/4, Error ellipse: s-maj=243.2km s-min=21.7km az=66.0*

*ISCJB **02** 19:43:38.0±1.1, 12°96N±0°09×124°6E±0°2, h44km, mb3.5/4, Error ellipse: s-maj=25.6km s-min=10.4km az=161.4*

*MAN **02** 19:43:39, 12°95N×123°75E, h64km, mb4.5, ML3.3, MS3.2*

ISC 02 19:43:40.0±1.4, 12°9N±0°1×124°6E±0°2, h44km, n9, σ0°78/7, mb3.6/4, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	Palo	1.76	168	⇓*e*P	Pn	19 44 08.0	-0.1
PLP				*e*S	Sn	19 44 29.0	-0.2
OCLP	Ormoc	1.83	180	*e*P	Pn	19 44 13.2	+4.2
OCLP				*e*S	Sn	19 44 23.4	-7.7
RCP	Roxas	2.24	234	*e*P	Pn	19 44 14.5	-0.1
MSLP	Maasin	2.76	175	*e*P	Pn	19 44 26.8	+5.1
GUIM	Jordan	2.99	221	*e*P	Pn	19 44 30.8	+5.9
WRA	Warramunga Arr 0.2nm,0.7s,baz=345,slow=9.4,SNR=4.1	34.01	163	P	P	19 50 19.1	-0.7
ASAR	Alice Springs 0.2nm,0.4s,baz=346,slow=7.0,SNR=6.5	37.46	166	P	P	19 50 50.7	+1.2
MKAR	Makanchi Array 0.6nm,0.7s,baz=121,slow=8.6,SNR=11	48.96	322	P	P	19 52 22.3	+0.3
ZALV	Zalesovo Beam 0.6nm,0.5s,baz=120,slow=8.8,SNR=4.8	51.55	331	P	P	19 52 41.0	-0.4

*ISCJB **02** 19:50:41.0±0.5, 32°39N±0°04×105°17E±0°08, h15km, mb3.6/6, Error ellipse: s-maj=9.5km s-min=6.1km az=4.4*

*IDC **02** 19:50:41.1±0.9, 32°54N×105°20E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.5/27, mbtmp3.5/8, ML3.2/2, Error ellipse: s-maj=36.5km s-min=18.9km az=59.0*

*BJI **02** 19:50:43.5, 32°40N×105°03E, h21km, mb3.6/1, ML3.7/16*

ISC 02 19:50:42.1±0.6, 32°31N±0°04×105°21E±0°05, h15km, n13, σ1°62/20, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.86	222	Pn	Pn	19 51 13.1	-0.4
CD2				Pg	Pb	19 51 15.2	-0.7
CD2				Sn	Sb	19 51 38.1	-0.9
CD2				Sg	Sn	19 51 39.4	+2.6
CD2				smax	smax		
CD2	comp=N,5μm,0.6s			smax	smax		
XAN	comp=E,3μm,0.8s Xi'an	3.56	60	Pn	Pn	19 51 36.4	-0.4
XAN				Pg	Pb	19 51 45.7	+0.9
XAN				Sg	Sg	19 52 33.4	-3.1
XAN				smax	smax		
XAN	comp=N,180nm,0.9s			smax	smax		
LZH	comp=E,110nm,1.0s Lanzhou	3.93	344	*e*Pn	Pn	19 51 42.2	+0.1
LZH				Sn	Sn	19 52 27.3	-0.7
LZH				Sg	Sb	19 52 40.2	+1.5
LZH				smax	smax		
LZH	comp=N,360nm,0.5s			smax	smax		
GYA	comp=E,290nm,0.6s Guiyang	5.97	167	Pn	Pn	19 52 16.4	+6.4
GYA				Pg	Pg	19 52 42.1	+5.7
GYA				Sn	Sn	19 53 17.3	-0.9
GYA				Sg	Sg	19 53 49.5	-4.2
GYA				smax	smax		
GYA	comp=N,50nm,0.7s			smax	smax		
GTA	comp=E,70nm,0.8s Gaotai	8.32	330	P	Pn	19 52 40.8	-1.6
GTA				smax	smax		
GTA	comp=N,9.0nm,1.2s			smax	smax		
CMAR	comp=E,11nm,1.0s Chiang Mai Arr	14.90	204	Pn	P	19 54 17.5	-0.4
KSRS	comp=E,0.0nm,0.3s,baz=223,slow=31,SNR=5.7 Korea Array	19.32	68	P	Pn	19 55 08.2	+0.6
MKAR	comp=E,0.1nm,0.3s,baz=252,slow=10,SNR=4.8 Makanchi Array	22.72	316	P	P	19 55 42.1	-1.3
ZALV	comp=E,1.2nm,0.8s,baz=119,slow=12,SNR=13 Zalesovo Beam	26.07	332	P	P	19 56 13.6	-1.3
FINES	comp=E,0.5nm,0.4s,baz=130,slow=9.9,SNR=4.5 FINESS Array B	57.09	326	P	P	20 00 29.3	+1.8
WRA	comp=E,2.2nm,0.9s,baz=87,slow=7.8,SNR=5.7 Warramunga Arr	58.97	148	P	P	20 00 43.4	+2.3
ASAR	comp=E,0.6nm,0.5s,baz=341,slow=8.0,SNR=13 Alice Springs	62.05	150	P	P	20 01 04.8	+2.8
YKA	comp=E,0.2nm,0.3s,baz=327,slow=6.4,SNR=4.7 Yellowknife Ar	80.26	18	P	P	20 02 51.4	-0.5
	comp=E,0.1nm,0.4s,baz=330,slow=5.4,SNR=3.2						

IDC 02 20:04:04.2±7.7, 15°22S×176°37W, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/18, mbtmp3.5/3, Error ellipse: s-maj=341.6km s-min=38.1km az=140.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.1nm,0.3s,baz=90,slow=7.6,SNR=5.8	47.09	257	P	P	20 12 38.9	+0.6
ASAR	Alice Springs 1.1nm,0.6s,baz=88,slow=8.5,SNR=14	47.44	252	P	P	20 12 40.4	-0.7
ILAR	Eielson Array 0.2nm,0.5s,baz=225,slow=5.1,SNR=4.0	82.85	12	P	P	20 16 30.1	0.0

IDC 02 20:13:51.8±5.1, 47°15N×152°37E, h225km±38km, mb2.9/3, mb1 2.9/4, mb1mx2.7/25, mbtmp2.9/4, Error ellipse: s-maj=148.9km s-min=21.6km az=130.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk- 0.0nm,0.3s,baz=218,slow=13,SNR=2.5	6.88	28	P	Pn	20 15 29.9	-0.6
PETK				S	S	20 16 50.4	+1.2
KSRS	0.9nm,0.3s,baz=172,slow=22,SNR=6.3 Korea Array 0.8nm,0.8s,baz=52,slow=13,SNR=4.5	20.44	251	P	P	20 18 12.6	+0.5
MKAR	Makanchi Array 0.4nm,0.8s,baz=69,slow=7.9,SNR=4.2	46.31	297	P	P	20 21 54.7	-0.2
FINES	FINESS Array B 0.6nm,0.5s,baz=22,slow=7.8,SNR=7.9	63.46	334	P	P	20 23 57.3	0.0

*NIED **02** 20:40:00, 26°20N×128°40E, h23km, Mw4.5 Best double couple: M0 6.28000×10^15 NP1: φ 47.00000°, δ 69.00000°, λ 90.00000°. NP2: φ 226.00000°, δ 21.00000°, λ 89.00000°.*

*BJI **02** 20:40:11.5, 26°17N×128°55E, h32km, mB4.7/19, mb4.5/23, Ms4.3/19, Ms7 4.1/17*

*ISCJB **02** 20:40:12.6±0.7, 26°14N±0°03×128°47E±0°03, h29km±4km, mb4.5/53, MS4.0/21, Error ellipse: s-maj=5.7km s-min=4.2km az=150.0*

*JMA **02** 20:40:13.7±0.2, 26°17N×128°47E, h36km±4km, M4.4*

JMA Felt II J1.

*MOS **02** 20:40:13.9±1.2, 26°29N×128°37E, h33km, mb4.7/34, Error ellipse: s-maj=11.2km s-min=6.6km az=103.3*

*NEIC **02** 20:40:15.6±0.4, 26°18N×128°19E, mb4.7/21, MW4.5(NIED), Error ellipse: s-maj=10.2km s-min=5.8km az=132.0*

NEIC Recorded [2 JMA] on Okinawa.

*IDC **02** 20:40:15.2±5.1, 26°26N×128°33E, h27km±35km, mb4.1/17, mb1 4.2/20, mb1mx4.1/29, mbtmp4.0/20, ML3.4/2, MS3.8/18, Ms1 3.8/18, ms1mx3.6/42, Error ellipse: s-maj=20.1km s-min=12.9km az=90.0*

ISC 02 20:40:14.9±0.5, 26°16N±0°04×128°45E±0°04, h32km±2km, h32km:pP-P, n172, σ1°54/189, mb4.6/53, MS4.0/21, 8C-8D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	Tamagusuku 2	0.63	268	P	Pb	20 40 26.3	-1.3
JJT2				*e*S	Sb	20 40 35.1	-1.2
JOW	Kunigami	0.69	347	Pn	Pb	20 40 26.7	-1.9
JOW				Sn	Sb	20 40 35.5	-2.3
JOW	Kunigami	0.69	347	P	Pb	20 40 26.9	-1.6
JOW				*e*S	Sb	20 40 35.7	-2.1
JOW	Kunigami 3μm,0.3s,baz=164,slow=11,SNR=3897	0.69	347	Pn	Pb	20 40 26.7	-1.9
JOW				Sn	Sb	20 40 35.5	-2.3
JIH	comp=N,3μm,0.3s,baz=84,slow=24,SNR=48 Iheya	0.97	333	P	Pn	20 40 31.5	-0.8
JIH				*e*S	Sb	20 40 44.6	-1.2
JAGN	Aguni-jima	1.17	292	P	Pn	20 40 34.3	-0.7
JAGN				*e*S	Sb	20 40 49.5	-1.8
JKE	Kume jima 2	1.51	277	P	Pn	20 40 38.3	-1.3
JKE				*e*S	Sb	20 40 58.4	-2.6
JTK	Tokunoshima	1.68	15	P	Pn	20 40 41.3	-0.7
JAMN	Amaminishikomi	2.17	17	P	Pn	20 40 48.0	-0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JAM	**Amami Oshima**	**2.46**	**24**	P	**Pn**	**20 40 52.2**	**-0.6**
JMZ	**Minamidaito 2**	**2.52**	**97**	P	**Pn**	**20 40 52.0**	**-1.5**
JMZ				*e*S	**Sn**	**20 41 20.2**	**-2.9**
JZK	**Kikaishima**	**2.53**	**32**	P	**Pn**	**20 40 54.3**	**+0.5**
JOGS	**Gusukube**	**3.09**	**244**	P	**Pn**	**20 41 01.0**	**-0.4**
JMJ	**Miyako jima 2**	**3.15**	**245**	P	**Pn**	**20 41 01.8**	**-0.5**
JTJ	**Tarama**	**3.71**	**247**	P	**Pn**	**20 41 08.7**	**-1.3**
JNN	**Nakanoshima**	**3.87**	**19**	P	**Pn**	**20 41 11.2**	**-1.0**
JIJ	**Ishigaki jima**	**4.29**	**246**	P	**Pn**	**20 41 15.8**	**-2.2**
JKRS	**Kuro-shima**	**4.46**	**245**	P	**Pn**	**20 41 20.2**	**-0.1**
IRIF	**Iriomote-Funau**	**4.65**	**248**	P	**Pn**	**20 41 20.5**	**-2.4**
YHNB	**Yeheng**	**6.57**	**258**	*e*Pn	**Pn**	**20 41 47.1**	**-2.3**
	38nm,0.8s						
YULB	**Yu-li**	**7.06**	**249**	*e*Pn	Pn	20 41 51.6	-4.5
	13nm,0.6s						
SSLB	**Suanglung**	**7.20**	**252**	*e*Pn	Pn	20 41 54.4	-3.7
	29nm,0.6s						
JNU	**Nakatsue**	**7.25**	**16**	*e*P	**Pn**	**20 41 59.4**	**+0.8**
	13nm,0.9s						
JNU	**Nakatsue**	**7.25**	**16**	Pn	**Pn**	**20 41 59.4**	**+0.8**
	1.2nm,0.3s,baz=181,slow=5.5,SNR=17						
JNU				LR	LR	20 45 14.0	
	comp=Z,427nm,18.1s,baz=9.7,slow=42						
TWG	**Pinlang**	**7.50**	**245**	*e*P	Pn	20 41 57.2	-4.9
TPUB	**Ta-pu**	**7.66**	**250**	*e*P	**Pn**	**20 42 01.6**	**-2.7**
	24nm,0.6s						
KSAR	**Wonju Array Be**	**11.26**	**358**	Pn	**Pn**	**20 42 54.4**	**+0.9**
KSRS	**Korea Array**	**11.27**	**358**	Pn	**Pn**	**20 42 54.4**	**+0.8**
	0.0nm,0.3s,baz=175,slow=14,SNR=5.3						
KSRS				LR	LR	20 47 33.0	
	comp=Z,402nm,18.7s,baz=173,slow=39						
WHN	**Wuhan**	**13.16**	**293**	P	**P**	**20 43 30.0**	**+0.8**
MAJO	**Matsushiro**	**13.28**	**36**	*e*P	**Pn**	**20 43 19.5**	**-1.6**
MJAR	**Matsushiro Arr**	**13.28**	**36**	Pn	**P**	**20 43 30.8**	**+0.3**
MJAR	**Matsushiro Arr**	**13.28**	**36**	Pn	**P**	**20 43 30.8**	**+0.3**
	0.3nm,0.3s,baz=225,slow=15,SNR=5.6						
CN2	**Changchun**	**17.77**	**353**	*e*P	P	20 44 27.7	+7.5
USRK	**Ussuriysk Arra**	**18.22**	**8**	P	**P**	**20 44 26.8**	**+1.5**
	0.3nm,0.3s,baz=188,slow=7.7,SNR=5.4						
USRK				LR	LR	20 51 40.2	
	comp=Z,131nm,19.5s,baz=188,slow=38						
XAN	**Xi'an**	**18.61**	**300**	P	**P**	**20 44 29.4**	**-0.3**
XAN				pP	**pP**	**20 44 39.8**	**+1.5**
XAN				sP	**sP**	**20 44 45.1**	**+2.7**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,31nm,6.5s						
XAN				LR	LR		
	comp=N,180nm,14.6s						
XAN				LR	LR		
	comp=E,94nm,15.2s						
GUMO	**Guam**	**19.84**	**126**	LR	LR	20 50 48.0	
	comp=E,81nm,21.9s,baz=311,slow=32						
ERM	**Erimo**	**19.91**	**34**	*e*P	**P**	**20 44 42.7**	**-1.0**
ERM				pmax	pmax		
	comp=Z,69nm,2.5s						
HHC	**Hu-ho-hao-te**	**20.27**	**320**	*e*P	Pn	20 44 51.6	+1.7
HHC				sP	sP	20 45 04.9	+4.3
HHC				PP	**PnPn**	**20 45 11.0**	**+6.0**
HHC				S	**S**	**20 48 30.8**	**-2.6**
HHC				sS	sS	20 48 44.0	-3.2
HHC				SS	**SnSn**	**20 48 59.9**	**+7.9**
HHC				pmax	pmax		
	comp=Z,43nm,0.5s						
HHC				pmax	pmax		
	comp=Z,360nm,5.4s						
HHC				LR	LR		
	comp=N,610nm,10.8s						
HHC				LR	LR		
	comp=E,610nm,10.7s						
HHC				LR	LR		
	comp=Z,690nm,10.3s						
ASAJ	**Asahikawa**	**21.27**	**29**	P	**P**	**20 44 59.6**	**+1.2**
ASAJ	**Asahikawa**	**21.27**	**29**	P	**P**	**20 44 59.6**	**+1.2**
	comp=Z,2.7nm,0.7s,baz=274,slow=18,SNR=5.3						
ASAJ				LR	LR	20 53 31.7	
	comp=Z,183nm,18.3s,baz=168,slow=38						
KMI	**Kunming**	**23.20**	**273**	P	**P**	**20 45 19.3**	**0.0**
KMI				pP	**pP**	**20 45 27.4**	**-0.8**
KMI				sP	**sP**	**20 45 32.1**	**-0.1**
KMI				PP	**PnPn**	**20 45 44.7**	**-0.6**
KMI				S	S	20 49 20.5	-8.7
KMI				sS	sS	20 49 36.4	-8.2
KMI				SS	**SnSn**	**20 50 05.7**	**+1.6**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,170nm,3.6s						
KMI				LR	LR		
	comp=N,410nm,14.7s						
KMI				LR	LR		
	comp=E,360nm,14.7s						
KMI				LR	LR		
	comp=Z,370nm,15.5s						
LZH	**Lanzhou**	**23.22**	**301**	*e*P	**P**	**20 45 18.5**	**-0.9**
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,140nm,4.6s						
LZH				LR	LR		
	comp=N,490nm,16.1s						
LZH				LR	LR		
	comp=E,460nm,16.5s						
LZH				LR	LR		
	comp=Z,510nm,17.0s						
YSS	**Yuzh-Sakhalins**	**23.64**	**25**	⇓*i*P	**P**	**20 45 25.0**	**+1.8**
YSS				*e*		20 45 31.1	
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS	**Yuzh-Sakhalins**	**23.64**	**25**	*e*P	**P**	**20 45 24.3**	**+1.1**
	comp=Z,42nm,1.0s						
GTA	**Gaotai**	**27.33**	**306**	*e*P	**P**	**20 45 55.5**	**-1.5**
GTA				PP	**PnPn**	**20 46 43.8**	**+2.2**
GTA				S	**S**	**20 50 34.2**	**-0.6**
GTA				SS	**SnSn**	**20 51 51.6**	**+6.7**
GTA				pmax	pmax		
	comp=Z,26nm,0.6s						
GTA				pmax	pmax		
	comp=Z,110nm,5.7s						
GTA				LR	LR		
	comp=N,160nm,14.7s						
GTA				LR	LR		
	comp=E,270nm,16.2s						
GTA				LR	LR		
	comp=Z,410nm,15.2s						
ULN	**Ulaanbaatar**	**27.42**	**328**	P	**P**	**20 45 58.1**	**+0.4**
	comp=Z,5.7nm,0.8s						
SONM	**Songino Array**	**27.72**	**327**	P	**P**	**20 46 01.6**	**+1.2**
SONM	**Songino Array**	**27.72**	**327**	P	**P**	**20 46 01.6**	**+1.2**
	comp=Z,4.3nm,0.5s,baz=139,slow=10,SNR=19						
SONM				LR	LR	20 58 17.8	
	comp=Z,238nm,20.3s,baz=323,slow=39						
CHTO	**Chiang Mai**	**28.18**	**261**	*e*P	**P**	**20 46 04.6**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CHTO	**Chiang Mai**	**28.18**	**261**	*e*P	**P**	**20 46 04.6**	**-0.1**
	comp=Z,5.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**28.31**	**260**	P	**P**	**20 46 07.0**	**+1.2**
CMAR	**Chiang Mai Arr**	**28.31**	**260**	P	**P**	**20 46 07.0**	**+1.2**
	comp=Z,2.2nm,0.7s,baz=54,slow=7.9,SNR=22						
CMAR				LR	LR	20 59 01.3	
	comp=Z,138nm,18.2s,baz=75,slow=40						
PETK	**Petropavlovsk-**	**34.65**	**31**	LR	LR	21 03 32.0	
	comp=Z,40nm,18.5s,baz=254,slow=40						
YAK	**Yakutsk**	**35.87**	**1**	*e*P	**P**	**20 47 09.6**	**-1.9**
TAPN	**Taplejung**	**36.29**	**281**	*e*P	**P**	**20 47 15.4**	**-0.5**
ODAN	**Odare**	**36.64**	**280**	*e*P	**P**	**20 47 18.3**	**-0.5**
	comp=Z,30nm,0.6s						
RAMN	**Ramite**	**37.32**	**281**	*e*P	**P**	**20 47 24.2**	**-0.5**
	comp=Z,13nm,0.5s						
GUN	**Gumba**	**37.82**	**282**	*e*P	**P**	**20 47 28.8**	**-0.2**
	comp=Z,18nm,0.5s						
PKI	**Pulchoki**	**38.28**	**282**	*e*P	**P**	**20 47 31.9**	**-1.0**
	comp=Z,23nm,0.6s						
PKIN	**Phulchoki**	**38.29**	**282**	*e*P	**P**	**20 47 32.4**	**-0.5**
	comp=Z,10nm,0.6s						
KKN	**Kakani**	**38.37**	**282**	*e*P	**P**	**20 47 32.6**	**-0.8**
	comp=Z,17nm,0.5s						
DMN	**Daman**	**38.54**	**282**	*e*P	**P**	**20 47 34.4**	**-0.6**
	comp=Z,30nm,0.9s						
DANN	**Dangsing**	**39.62**	**284**	*e*P	**P**	**20 47 43.9**	**-0.1**
	comp=Z,35nm,0.6s						
KOLN	**Koldanda**	**39.84**	**283**	*e*P	**P**	**20 47 45.3**	**-0.5**
	comp=Z,28nm,0.8s						
SEY	**Seymchan**	**40.02**	**17**	*e*P	**P**	**20 47 46.1**	**-0.4**
PYUN	**Piuthan**	**40.33**	**283**	*e*P	**P**	**20 47 49.6**	**-0.2**
	comp=Z,71nm,0.9s						
MK31	**Makanchi Array**	**41.73**	**312**	*ce*P	**P**	**20 47 59.5**	**-1.4**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MK31	**Makanchi Array**	**41.73**	**312**	*e*P	**P**	**20 47 59.9**	**-1.0**
MKAR	**Makanchi Array**	**41.73**	**312**	P	**P**	**20 47 59.9**	**-0.9**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,74nm,20.1s						
MKAR	**Makanchi Array**	**41.73**	**312**	P	**P**	**20 47 59.9**	**-0.9**
MKAR	**Makanchi Array**	**41.73**	**312**	P	**P**	**20 47 59.9**	**-0.9**
	comp=Z,5.6nm,0.6s,baz=100,slow=10,SNR=111						
MKAR				LR	LR	21 06 49.7	
	comp=Z,74nm,20.1s,baz=153,slow=38						
ZAA0	**Zalesovo Array**	**42.42**	**323**	*e*P	**P**	**20 48 04.5**	**-1.9**
ZALV	**Zalesovo Beam**	**42.42**	**323**	P	**P**	**20 48 04.8**	**-1.5**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZALV				MLR	MLR		
	comp=Z,185nm,19.9s						
ZALV	**Zalesovo Beam**	**42.42**	**323**	P	**P**	**20 48 04.8**	**-1.5**
ZALV	**Zalesovo Beam**	**42.42**	**323**	P	**P**	**20 48 04.8**	**-1.5**
	comp=Z,2.6nm,0.5s,baz=110,slow=8.8,SNR=16						
ZALV				LR	LR	21 07 28.7	
	comp=Z,185nm,19.9s,baz=250,slow=39						
KURK	**Kurchatov**	**45.01**	**317**	*c i*P	**P**	**20 48 25.6**	**-1.6**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KURK	**Kurchatov**	**45.01**	**317**	*e*P	**P**	**20 48 26.2**	**-0.9**
	comp=Z,3.8nm,0.8s						
TIXI	**Tiksi**	**45.52**	**0**	*e*P	**P**	**20 48 28.0**	**-3.0**
TIXI	**Tiksi**	**45.52**	**0**	*e*P	**P**	**20 48 30.1**	**-0.9**
	comp=Z,3.9nm,0.6s						
TKM2	**Tokmak 2**	**45.88**	**305**	*e*P	**P**	**20 48 34.1**	**-0.4**
TKM2				pmax	pmax		
	comp=Z,31nm,0.6s						
TKM2	**Tokmak 2**	**45.88**	**305**	*e*P	**P**	**20 48 34.1**	**-0.4**
	comp=Z,30nm,0.6s						
WRA	**Warramunga Arr**	**46.19**	**172**	P	**P**	**20 48 37.5**	**+0.7**
WRA	**Warramunga Arr**	**46.19**	**172**	P	**P**	**20 48 37.5**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=353,slow=8.4,SNR=10						
AAK	**Ala-Archa**	**46.67**	**305**	*e*P	**P**	**20 48 39.6**	**-1.1**
AAK				pmax	pmax		
	comp=Z,14nm,2.5s						
AAK	**Ala-Archa**	**46.67**	**305**	*e*P	**P**	**20 48 39.6**	**-1.1**
	comp=Z,8.9nm,0.6s						
AAK				*e*pP	**pP**	**20 48 49.7**	**-0.7**
EKS2	**Erkin-Say**	**47.20**	**305**	*e*P	P	20 48 54.2	+9.4
EKS2	**Erkin-Say**	**47.20**	**305**	*e*P	P	20 48 54.1	+9.4
BILL	**Bilibino**	**47.67**	**18**	*e*P	**P**	**20 48 48.1**	**+0.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL	**Bilibino**	**47.67**	**18**	*e*P	**P**	**20 48 48.6**	**+0.7**
	comp=Z,9.9nm,1.1s						
KKAR	**Karatay Array**	**49.61**	**305**	*e*P	**P**	**20 49 03.2**	**0.0**
KKAR				*e**PP	**pP**	**20 49 12.6**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KKAR	**Karatay Array**	**49.61**	**305**	*e*P	**P**	**20 49 03.2**	**0.0**
	comp=Z,2.0nm,0.6s						
KKAR				*e*pP	**pP**	**20 49 12.6**	**-0.4**
AS31	**Alice Springs**	**49.82**	**173**	*e*P	**P**	**20 49 06.2**	**+1.4**
ASAR	**Alice Springs**	**49.82**	**173**	P	**P**	**20 49 06.8**	**+1.9**
ASAR	**Alice Springs**	**49.82**	**173**	P	**P**	**20 49 06.8**	**+1.9**
	comp=Z,1.5nm,0.8s,baz=0.5,slow=9.5,SNR=17						
BVAR	**Borovoye Array**	**50.46**	**318**	LR	LR	21 12 18.1	
	comp=Z,219nm,18.7s,baz=87,slow=38						
BRVK	**Borovoye**	**50.52**	**318**	*c i*P	**P**	**20 49 09.4**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRVK	**Borovoye**	**50.52**	**318**	*e*P	**P**	**20 49 09.8**	**-0.1**
	comp=Z,7.0nm,0.6s						
KBL	**Kabul**	**51.31**	**294**	*e*P	**P**	**20 49 16.5**	**+0.1**
KBL				*e**PP	**pP**	**20 49 26.3**	**+0.1**
KBL				pmax	pmax		
	comp=Z,14nm,0.7s						
KBL	**Kabul**	**51.31**	**294**	*e*P	**P**	**20 49 16.5**	**+0.1**
	comp=Z,14nm,0.7s						
KBL				*e*pP	**pP**	**20 49 26.3**	**+0.1**
TNA	**Tin City**	**55.60**	**27**	*e*P	**P**	**20 49 49.5**	**+2.3**
	comp=Z,7.5nm,1.0s						
SVE	**Sverdlovsk**	**56.44**	**322**	⇓*i*P	**P**	**20 49 53.7**	**+0.5**
SVE				*e*		20 59 41.5	
SVE				pmax	pmax		
	comp=Z,12nm,1.5s						
SVE				MLR	MLR		
	comp=Z,309nm,14.0s						
AB31	**Akbulak array**	**56.84**	**313**	*ce*P	**P**	**20 49 55.5**	**-0.7**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ABKAR	**Akbulak array**	**56.84**	**313**	*e*P	**P**	**20 49 55.6**	**-0.6**
	comp=Z,6.7nm,0.8s						
ARU	**Arti**	**57.57**	**322**	*d i*P	**P**	**20 50 00.8**	**-0.5**
ARU						20 52 08.1	
ARU				S	**S**	**20 57 56.0**	**-0.8**
ARU				SS	**SS**	**21 01 39.7**	**-7.0**
ARU				pmax	pmax		
	comp=Z,15nm,2.5s						
ILAR	**Eielson Array**	**64.40**	**28**	P	**P**	**20 50 47.9**	**+0.3**
ILAR	**Eielson Array**	**64.40**	**28**	P	**P**	**20 50 47.9**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=271,slow=6.4,SNR=5.4						
INK	**Inuvik**	**68.87**	**23**	P	**P**	**20 51 17.5**	**+1.6**
INK	**Inuvik**	**68.87**	**23**	P	**P**	**20 51 17.5**	**+1.6**
	comp=Z,0.9nm,0.5s,baz=282,slow=4.3,SNR=4.1						
ZEI	**Tsey**	**68.93**	**308**	*e*P	**P**	**20 51 16.1**	**-1.0**
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KBZ	**Khabaz**	**69.36**	**309**	P	**P**	**20 51 20.2**	**+0.8**
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBZ	**Khabaz**	**69.36**	**309**	P	**P**	**20 51 20.1**	**+0.8**
KBZ	**Khabaz**	**69.36**	**309**	P	**P**	**20 51 20.1**	**+0.8**
	comp=Z,6.4nm,0.9s,baz=96,slow=4.6,SNR=16						
KIV	**Kislovodsk**	**69.44**	**310**	*e*P	**P**	**20 51 18.7**	**-1.4**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,78nm,18.0s						
KIV	**Kislovodsk**	**69.44**	**310**	P	**P**	**20 51 19.6**	**-0.4**
	comp=Z,11nm,1.3s						
KIV				*e*pP	**pP**	**20 51 29.5**	**-0.7**
ARCES	**ARCESS Array B**	**70.14**	**339**	LR	LR	21 28 29.5	
	comp=Z,78nm,20.0s,baz=44,slow=41						
JOF	**Joensuu**	**70.20**	**331**	*e*P	**P**	**20 51 23.9**	**-0.3**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
JOF	**Joensuu**	**70.20**	**331**	*e*p	**P**	**20 51 23.9**	**-0.3**
	comp=Z,3.8nm,0.6s						
MIB	**Mutribah**	**70.27**	**294**	*e*P	**P**	**20 51 24.1**	**-1.3**
MIB				AMb	AMB	20 51 35.8	
	comp=Z,17nm,0.8s						
RDF	**Al-Radifah**	**70.39**	**293**	*e*P	**P**	**20 51 25.4**	**-0.7**
RDF				AMb	AMB	20 51 26.8	
	comp=Z,23nm,0.8s						
NAY	**Al-Naaiem**	**70.54**	**294**	*e*P	**P**	**20 51 26.1**	**-0.9**
NAY				AMb	AMB	20 51 37.4	
	comp=Z,14nm,0.7s						
KAF	**Kangasniemi**	**72.65**	**331**	*e*P	**P**	**20 51 37.5**	**-1.6**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KAF	**Kangasniemi**	**72.65**	**331**	*e*p	**P**	**20 51 37.5**	**-1.6**
	comp=Z,1.9nm,0.6s						
FINES	**FINESS Array B**	**73.02**	**331**	P	**P**	**20 51 41.0**	**-0.3**
FINES	**FINESS Array B**	**73.02**	**331**	P	**P**	**20 51 41.0**	**-0.3**
	comp=Z,5.1nm,0.6s,baz=63,slow=5.8,SNR=31						
MALT	**Malatya**	**74.31**	**305**	*e*P	**P**	**20 51 50.2**	**+0.8**
MALT				*e**PP	**pP**	**20 51 59.2**	**-0.4**
MALT				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MALT	**Malatya**	**74.31**	**305**	*e*P	**P**	**20 51 50.2**	**+0.8**
	comp=Z,4.5nm,1.1s						
MALT				*e*pP	**pP**	**20 51 59.2**	**-0.4**
NACGM	**Naroch**	**75.35**	**324**	*e*	**P**	**20 51 52.0**	**-2.9**
RES	**Resolute Bay**	**75.58**	**11**	*e*P	**P**	**20 51 56.4**	**+0.5**
	comp=Z,5.6nm,0.8s						
RES	**Resolute Bay**	**75.58**	**11**	P	**P**	**20 51 56.9**	**+1.0**
	comp=Z,4.3nm,0.6s,baz=293,slow=5.0,SNR=11						
RES				LR	LR	21 29 37.4	
	comp=Z,50nm,19.2s,baz=311,slow=39						
AKASG	**Malin Array Be**	**75.71**	**320**	P	**P**	**20 51 56.8**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG				MLR	MLR		
	comp=Z,161nm,19.4s						
AKASG	**Malin Array Be**	**75.71**	**320**	P	**P**	**20 51 56.8**	**-0.3**
AKASG	**Malin Array Be**	**75.71**	**320**	P	**P**	**20 51 56.8**	**-0.3**
	comp=Z,3.0nm,0.5s,baz=59,slow=6.4,SNR=7.2						
AKASG				LR	LR	21 27 41.9	
	comp=Z,161nm,19.4s,baz=70,slow=38						
AK01	**Malin Array Si**	**75.72**	**320**	*e*P	**P**	**20 51 56.8**	**-0.4**
KIEV	**Kiev**	**75.72**	**320**	*i* P	**P**	**20 51 56.6**	**-0.6**
BR131	**Keskin Array S**	**77.23**	**308**	*e*P	**P**	**20 52 06.5**	**+0.4**
	comp=Z,2.5nm,0.7s						
BRTR	**Keskin Array B**	**77.23**	**308**	P	**P**	**20 52 06.5**	**+0.4**
BRTR	**Keskin Array B**	**77.23**	**308**	P	**P**	**20 52 06.5**	**+0.4**
	comp=Z,2.2nm,0.7s,baz=95,slow=4.1,SNR=16						
SUW	**Suwalki**	**77.62**	**324**	*e*P	**P**	**20 52 08.1**	**+0.3**
YKA	**Yellowknife Ar**	**78.50**	**25**	P	**P**	**20 52 13.7**	**+1.1**
YKA	**Yellowknife Ar**	**78.50**	**25**	P	**P**	**20 52 13.7**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=302,slow=5.7,SNR=9.6						
MMAI	**Mount Meron Ar**	**78.60**	**301**	LR	LR	21 32 32.0	
	comp=Z,42nm,18.3s,baz=80,slow=40						
TESR		**79.04**	**316**	⇓*i*P	**P**	**20 52 16.1**	**+0.3**
VRI	**Vrincioaia**	**79.27**	**316**	⇑*i*P	**P**	**20 52 18.7**	**+1.5**
BUR08	**Bucovina Ar. S**	**79.41**	**318**	*e*P	**P**	**20 52 18.2**	**+0.2**
BURAR	**Bucovina Array**	**79.41**	**318**	⇑*i*P	**P**	**20 52 18.6**	**+0.6**
NB2	**NORSAR Subarra**	**79.46**	**334**	P	**P**	**20 52 17.3**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=52,slow=5.9						
NOA	**NORSAR Array B**	**79.46**	**334**	P	**P**	**20 52 17.6**	**-0.3**
NOA	**NORSAR Array B**	**79.46**	**334**	P	**P**	**20 52 17.6**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=52,slow=5.6,SNR=10						
NOA				LR	LR	21 31 33.4	
	comp=Z,54nm,21.4s,baz=50,slow=39						
MLR	**Muntele Rosu**	**79.93**	**316**	⇑*i*P	**P**	**20 52 21.8**	**+0.9**
KWP	**Kalwaria Pacla**	**79.94**	**321**	*e*P	**P**	**20 52 21.4**	**+0.7**
KWP				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KWP	**Kalwaria Pacla**	**79.94**	**321**	*e*P	**P**	**20 52 21.4**	**+0.7**
	comp=Z,3.6nm,0.6s						
KWP	**Kalwaria Pacla**	**79.94**	**321**	⇑*i*P	**P**	**20 52 21.4**	**+0.7**
KWP	**Kalwaria Pacla**	**79.94**	**321**	*e*P	**P**	**20 52 21.7**	**+1.0**
SUMG	**Summit**	**81.11**	**356**	*e*P	**P**	**20 52 28.1**	**+1.0**
SUMG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SUMG	**Summit**	**81.11**	**356**	*e*P	**P**	**20 52 28.1**	**+1.0**
	comp=Z,8.0nm,0.6s						
SUMG	**Summit**	**81.11**	**356**	*i* P	P	20 52 30.7	+3.6
	comp=Z,11nm,0.7s						
SUMG				*i*		20 52 41.5	
BSD	**Bornholm Skovb**	**81.21**	**328**	*i* P	**P**	**20 52 28.0**	**+0.6**
	comp=Z,6.5nm,0.7s						
OJC	**Ojcow**	**81.29**	**322**	*e*P	**P**	**20 52 27.8**	**-0.1**
OJC	**Ojcow**	**81.29**	**322**	*e*P	**P**	**20 52 27.6**	**-0.3**
SCO	**Scoresbysund**	**81.35**	**350**	*i* P	**P**	**20 52 28.4**	**+0.6**
	comp=Z,3.0nm,1.0s						
MORC	**Moravsky Berou**	**82.76**	**322**	⇓*i*P	**P**	**20 52 37.0**	**+1.3**
VTS	**Vitosha**	**83.04**	**314**	⇓*i*P	**P**	**20 52 38.6**	**+1.2**
BRG	**Berggiesshubel**	**84.08**	**325**	*e*P	P	20 52 45.8	+3.4
	comp=Z,2.1nm,0.7s						
BRG	**Berggiesshubel**	**84.08**	**325**	*e*P	P	20 52 45.8	+3.4
BRG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CLL	**Collm**	**84.32**	**325**	⇓*i*P	**P**	**20 52 44.4**	**+0.8**
CLL				*e*		20 52 53.0	
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CLL				MLR	MLR		
	comp=Z,200nm,19.6s						
CLL	**Collm**	**84.32**	**325**	⇓*i*P	**P**	**20 52 44.4**	**+0.8**
	comp=Z,8.0nm,0.9s						
CLL				*e*pP	**pP**	**20 52 53.0**	**-0.9**
CLL				LmV		21 34 00.0	
	comp=Z,200nm,19.6s						
GERES	**GERESS Array B**	**85.37**	**323**	P	**P**	**20 52 50.0**	**+0.9**
GERES	**GERESS Array B**	**85.37**	**323**	P	**P**	**20 52 50.0**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=44,slow=4.1,SNR=8.4						
GERES				LR	LR	21 34 18.9	
	comp=Z,220nm,19.1s,baz=89,slow=38						
GVD	**Gavdhos**	**86.22**	**307**	*e*P	**P**	**20 52 53.1**	**-0.3**
	comp=Z,39nm,0.9s						
FFC	**Flin Flon**	**88.56**	**27**	*e*P	**P**	**20 53 05.2**	**+0.9**
FFC				*e**PP	**pP**	**20 53 15.8**	**+1.1**
FFC				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FFC	**Flin Flon**	**88.56**	**27**	*e*P	**P**	**20 53 05.2**	**+0.9**
	comp=Z,1.3nm,0.6s						
FFC				*e*pP	**pP**	**20 53 15.8**	**+1.1**
KEST	**Kesra**	**95.78**	**314**	LR	LR	21 42 04.1	
	comp=Z,23nm,18.9s,baz=233,slow=39						

MEX 02 20:42:12.7±0.6**, 16.46N×96.26W, h50**km±13km**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.70**	**168**	*i* P	Pn	20 42 24.6	-2.0
HUIG				*e*S	Sn	20 42 35.5	-1.0
VHO	**Vista Hermosa**	**0.76**	**324**	*i* P	Pn	20 42 25.8	-1.6
VHO				*e*S	Sn	20 42 35.9	-2.3
PNIG	**Pinotepa**	**1.79**	**268**	*i* P	Pn	20 42 39.9	-1.3
PNIG				*i* S	Sn	20 42 60.0	-2.9
UTMO	**Huajuapan**	**2.00**	**313**	*i* P	Pn	20 42 43.9	-0.6
UTMO				*e*S	Sn	20 43 07.0	-1.5
TGIG		**3.03**	**84**	*e*P	Pn	20 42 57.3	-0.9
TGIG				*i* S	Sn	20 43 32.5	-0.9
YAIG	**Yautepec**	**3.58**	**312**	*i* P	Pn	20 43 04.6	-1.4
YAIG				*i* S	Sn	20 43 45.8	-1.5
CCIG	**Comitan**	**3.97**	**92**	*i* P	Pn	20 43 10.1	-1.2
CCIG				*i* S	Sn	20 43 55.5	-1.2

*ISCJB **02** 20:47:00.2±0.9, 53.9S±0.2×133.7W±0.3, h12km, mb4.0/6, MS4.1/11, Error ellipse: s-maj=24.7km s-min=21.3km az=26.1*

*IDC **02** 20:47:00.1±0.8, 53.79S×133.85W, h0km, mb4.1/6, mb1 4.3/6, mb1mx4.1/14, mbtmp4.1/6, MS4.0/10, Ms1 4.0/10, ms1mx3.8/24, Error ellipse: s-maj=30.5km s-min=24.6km az=144.0*

ISC 02 20:47:02.1±0.7**, 53.9S**±0.2×**133.8W**±0.2**, h12**km**, n36, σ2.07/21, mb4.1**/6**, MS4.0**/11**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RKT	**Rikitea**	**30.72**	**358**	*e*LR	LR	21 01 17.5	
	650nm,27.2s						
RKT				*e*T	T	21 25 38.3	
	12nm,0.3s						
VNDA	**Vanda**	**32.61**	**201**	P	**P**	**20 53 35.1**	**+2.2**
	0.7nm,0.9s,baz=139,slow=2.5,SNR=3.0						
TBI	**Tubuai**	**32.68**	**333**	*e*LR	LR	21 02 04.6	
	546nm,28.8s,baz=166						
TBI				*e*T	T	21 28 07.8	
	68nm,0.4s						
QSPA	**South Pole Qui**	**36.30**	**180**	P	**P**	**20 54 05.2**	**+0.1**
	2.1nm,0.7s,baz=122,slow=4.5,SNR=9.2						
QSPA				LR	LR	21 06 25.1	
	comp=Z,300nm,20.8s,baz=162,slow=32						
USHA	**Ushuaia**	**36.88**	**119**	LR	LR	21 04 31.4	
	comp=Z,262nm,20.1s,baz=281,slow=28						
RAR	**Rarotonga**	**38.12**	**319**	LR	LR	21 05 25.5	
	comp=Z,3µm,18.9s,baz=270,slow=29						
PPT2	**Papeete2**	**38.22**	**335**	*e*LR	LR	21 04 49.9	
	528nm,25.8s,baz=159						
PPT	**Papeete**	**38.24**	**335**	LR	LR	21 06 56.7	
	comp=Z,256nm,19.6s,baz=170,slow=31						
VAH	**Vaihoa**	**40.04**	**339**	*e*T	T	21 37 18.9	
	13nm,0.3s						
VNA3	**Neumayer Olymp**	**49.09**	**159**	*e*P	**P**	**20 55 47.3**	**-1.3**
VNA2	**Neumayer--Watz**	**49.81**	**160**	*e*P	**P**	**20 55 51.9**	**-2.2**
	baz=219,slow=9.0						
SNAA	**Sanae**	**50.09**	**162**	LR	LR	21 14 37.5	
	comp=Z,102nm,20.3s,baz=162,slow=33						
DZM	**Mont Dzumac**	**54.69**	**281**	*e*LR	LR	21 12 26.5	
	183nm,32.5s						
CPUP	**Villa Florida**	**61.34**	**96**	LR	LR	21 19 56.1	
	comp=Z,96nm,21.4s,baz=185,slow=32						
LPAZ	**La Paz**	**62.70**	**80**	P	**P**	**20 57 26.4**	**-1.1**
	1.0nm,0.7s,baz=6.8,slow=4.9,SNR=4.2						
LPAZ				LR	LR	21 16 08.3	
	comp=Z,25nm,20.8s,baz=75,slow=28						
CTA	**Charters Tower**	**68.12**	**266**	LR	LR	21 22 46.3	
	comp=Z,95nm,19.7s,baz=158,slow=32						
ASAR	**Alice Springs**	**72.53**	**254**	P	**P**	**20 58 28.3**	**-0.6**
	1.9nm,0.8s,baz=142,slow=5.8,SNR=16						
BDFB	**Brasilia**	**75.08**	**96**	LR	LR	21 26 45.1	
	comp=Z,109nm,21.9s,baz=58,slow=32						
WRA	**Warramunga Arr**	**75.20**	**257**	P	**P**	**20 58 44.0**	**-0.5**
	2.0nm,0.7s,baz=142,slow=5.1,SNR=14						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	86.89	26	P	P	20 59 47.0	+0.6
	1.1nm,0.8s,baz=187,slow=8.8,SNR=4.2						
NVAR	Mina Array Bea	92.90	12	LR	LR	21 32 17.2	
	comp=Z,150nm,22.0s,baz=26,slow=29						
PDAR	Pinedale Array	98.49	18	LR	LR	21 37 28.1	
	comp=Z,118nm,19.4s,baz=5.2,slow=31						
ILAR	Eielson Array	118.74	354	PKP	PKPdf	21 05 48.5	0.0
	0.6nm,0.7s,baz=205,slow=2.4,SNR=8.5						
FRB	Frobisher Bay	127.71	31	PKP	PKPdf	21 06 05.7	0.0
	3.1nm,1.1s,baz=264,slow=4.8,SNR=5.1						
SONM	Songino Array	142.52	286	PKP	PKPdf	21 06 31.2	-2.8
	0.6nm,0.7s,baz=178,slow=2.1,SNR=4.7						
EPF	Esparros	148.26	91	ePKIKP	PKPab	21 06 55.9	+5.5
	9.6nm,0.9s						
QUIF	Quistinic	148.85	81	ePKIKP	PKPab	21 06 56.9	+4.3
	18nm,1.0s						
ROSF	Rostrenen	148.99	80	ePKIKP	PKPab	21 06 56.9	+3.7
MTLF	Montolieu	149.56	92	ePKIKP	PKPab	21 06 59.1	+3.5
MFF	Saint Martin d	149.96	85	ePKIKP	PKPab	21 06 59.7	+2.5
	7.0nm,0.8s						
CAF	Calviac	150.37	89	ePKIKP	PKPab	21 07 00.1	+1.1
FLN	La Foliniere	150.83	81	ePKIKP	PKPab	21 06 59.0	-1.7
	7.7nm,0.7s						
TCF	Toulx Ste Croi	151.19	87	ePKIKP	PKPab	21 07 02.1	-0.2
	17nm,1.1s						
MKAR	Makanchi Array	156.09	268	PKPab	PKPab	21 07 23.0	-0.1
	0.5nm,0.8s,baz=151,slow=5.3,SNR=5.3						
ZALV	Zalesovo Beam	157.42	286	PKPab	PKPab	21 07 28.6	0.0
	0.8nm,0.6s,baz=116,slow=6.8,SNR=5.9						
BRTR	Keskin Array B	163.49	144	PKPab	PKPab	21 07 55.7	+0.2
	0.9nm,1.0s,baz=186,slow=8.7,SNR=4.9						

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*IDC **02** 21:09:07.2±0.9, 61°83S×160°31E, h0km, mb4.1/9, mb1 4.3/10, mb1mx4.2/16, mbtmp4.1/10, ML4.0/1, MS4.3/10, Ms1 4.3/10, ms1mx4.1/19, Error ellipse: s-maj=46.9km s-min=17.4km az=72.0*

*NEIC **02** 21:09:08.4±0.6, 61°83S×160°15E, h10km, mb4.7/5, Error ellipse: s-maj=33.6km s-min=9.0km az=75.0*

*GCMT **02** 21:09:10.8±0.3, 61°67S×160°85E, h19km±1km, MW5.0, Moment Tensor Solution. s26,c30; s74,c105; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.34±.20; $M_{\theta\theta}$3.75±.16; $M_{\phi\phi}$-3.41±.14; $M_{r\theta}$-1.06±.33; $M_{\theta\phi}$-1.11±.13; $M_{\phi r}$0.92±.35; Best double couple: $M_0$4.00000×10^{16} NP1:ϕ_s233.00000°, δ70.00000°, λ179.00000°. NP2:ϕ_s324.00000°, δ89.00000°, λ20.00000°. Principal axes: T 4.2300, Plg15.0000°, Azm190.0000°; N -0.4800, Plg70.0000°, Azm327.0000°; P -3.7500, Plg13.0000°, Azm97.0000°; Data Used: II IU G CN IC.*

ISC 02 21:09:08.5±0.7**, 61°9S**±0°1×**160°3E**±0°3**, h10km, n54, σ1^{s}16**/41**, mb4.1**/9**, MS4.3**/8**, 1C-4D, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DRV	Dumont d'Urvil	10.02	232	R		21 13 00.0	
VNDA	Vanda	15.76	179	ePn	Pn	21 12 49.4	-0.8
	3.7nm,0.5s						
VNDA	Vanda	15.76	179	Pn	Pn	21 12 49.2	-0.9
	0.6nm,0.3s,baz=345,slow=14,SNR=24						
VNDA				LR	LR	21 18 01.7	
	comp=Z,3µm,18.0s,baz=360,slow=34						
SBA	Scott Base	16.22	175	ePn	Pn	21 12 55.4	-0.6
	107nm,1.6s						
RPZ	Rata Peaks	19.25	24	LR	LR	21 19 17.8	
	comp=Z,1µm,19.6s,baz=214,slow=32						
QSPA	South Pole Qui	28.25	180	P	P	21 14 60.0	-1.5
QSPA	South Pole Qui	28.25	180	P	P	21 14 60.0	-1.5
	1.4nm,0.9s,baz=60,slow=13,SNR=2.7						
QSPA				LR	LR	21 24 53.6	
	comp=Z,924nm,21.6s,baz=31,slow=34						
MAW	Mawson	37.84	218	LR	LR	21 32 09.5	
	comp=Z,714nm,20.3s,baz=119,slow=36						
DZM	Mont Dzumac	39.98	9	eLR	LR	21 27 41.1	
	503nm,23.9s						
ASAR	Alice Springs	42.18	323	P	P	21 16 59.8	-1.4
ASAR	Alice Springs	42.18	323	P	P	21 16 59.8	-1.4
	2.5nm,0.8s,baz=162,slow=8.4,SNR=23						
AS31	Alice Springs	42.18	323	eP	P	21 16 59.8	-1.4
CTA	Charters Tower	42.85	340	P	P	21 17 05.1	-1.5
CTA	Charters Tower	42.85	340	P	P	21 17 05.1	-1.5
	9.4nm,1.2s,baz=202,slow=5.4,SNR=3.7						
CTAO	Charters Tower	42.85	340	eP	P	21 17 04.8	-1.8
	20nm,1.4s						
WRA	Warramunga Arr	45.59	325	P	P	21 17 28.0	-0.6
WRA	Warramunga Arr	45.59	325	P	P	21 17 28.0	-0.6
	2.5nm,1.1s,baz=163,slow=6.5,SNR=4.7						
WRAB	Tennant Creek	45.60	325	eP	P	21 17 28.4	-0.2
SNAA	Sanae	46.25	187	P	P	21 17 33.1	-0.2
SNAA	Sanae	46.25	187	P	P	21 17 33.1	-0.2
	1.4nm,1.1s,baz=185,slow=5.9,SNR=4.3						
FITZ	Fitzroy Crossi	49.98	315	eP	P	21 18 02.2	-0.4
	14nm,1.4s						
FITZ	Fitzroy Crossi	49.98	315	P	P	21 18 04.5	+2.0
	3.7nm,1.1s,baz=165,slow=12,SNR=4.9						
TBI	Tubuai	51.27	65	eT	T	22 12 22.1	
	32nm,0.3s						
PAE	Paea	56.27	62	eT	T	22 18 39.5	
	6.4nm,0.3s						
TVO	Taravao	56.30	62	eT	T	22 18 41.5	
	9.5nm,0.3s						
PPT2	Papeete2	56.34	62	eLR	LR	21 34 58.2	
	132nm,26.2s						
PPT	Papeete	56.36	62	LR	LR	21 35 21.6	
	comp=Z,126nm,21.5s,baz=184,slow=28						
RKT	Rikitea	58.00	79	eT	T	22 20 33.3	
	20nm,0.2s						
VAH	Vaihoa	59.26	62	eT	T	22 22 22.5	
	47nm,0.2s						
BOSA	Boshof	82.85	219	P	P	21 21 34.0	+0.9
BOSA	Boshof	82.85	219	P	P	21 21 34.0	+0.9
	2.5nm,0.8s,baz=170,slow=6.6,SNR=3.3						
BOSA				LR	LR	21 58 24.2	
	comp=Z,172nm,19.9s,baz=265,slow=36						
CPUP	Villa Florida	87.07	147	LR	LR	21 58 19.5	
	comp=Z,179nm,18.6s,baz=80,slow=34						
LPAZ	La Paz	93.27	134	eP	P	21 22 25.4	+1.3
	6.2nm,1.3s						
LPAZ	La Paz	93.27	134	P	P	21 22 25.5	+1.4
	2.8nm,1.0s,baz=214,slow=3.6,SNR=7.1						
LPAZ				LR	LR	21 54 50.8	
	comp=Z,116nm,21.9s,baz=198,slow=29						
CMAR	Chiang Mai Arr	93.50	303	P	P	21 22 25.9	+1.7
CMAR	Chiang Mai Arr	93.50	303	P	P	21 22 25.9	+1.7
	0.4nm,0.8s,baz=162,slow=33,SNR=3.5						
CMAR				LR	LR	22 02 13.7	
	comp=Z,92nm,19.4s,baz=344,slow=34						
BDFB	Brasilia	99.59	152	LR	LR	22 03 28.0	
	comp=Z,105nm,20.2s,baz=38,slow=33						
MKAR	Makanchi Array	124.88	305	PKP	PKPdf	21 28 07.5	0.0
MKAR	Makanchi Array	124.88	305	PKP	PKPdf	21 28 07.5	0.0
	0.2nm,0.6s,baz=141,slow=3.0,SNR=2.9						
PDAR	Pinedale Array	126.63	67	PKP	PKPdf	21 28 10.7	-0.6
PDAR	Pinedale Array	126.63	67	PKP	PKPdf	21 28 10.7	-0.6
	2.1nm,1.2s,baz=220,slow=1.2,SNR=6.3						
TORD	Torodi Ar. Bea	128.98	207	PKP	PKPdf	21 28 17.9	+1.6
TORD	Torodi Ar. Bea	128.98	207	PKP	PKPdf	21 28 17.9	+1.6
	4.1nm,1.2s,baz=80,slow=0.1,SNR=8.5						
ILAR	Eielson Array	132.27	27	PKP	PKPdf	21 28 20.9	0.0
ILAR	Eielson Array	132.27	27	PKP	PKPdf	21 28 20.9	0.0
	1.0nm,1.0s,baz=285,slow=3.7,SNR=6.6						
YKA	Yellowknife Ar	139.55	45	PKPpre	PKPpre	21 28 29.3	
YKA	Yellowknife Ar	139.55	45	PKhKP	PKPpre	21 28 29.3	
	0.3nm,0.8s,baz=221,slow=1.8,SNR=5.2						
TIRR	Tirgusor	147.26	260⇑	iP	PKPab	21 28 55.0	+2.2
VRI	Vrincioaia	149.10	261⇓	iP	PKPab	21 28 59.4	-0.8
MLR	Muntele Rosu	149.19	259⇓	iP	PKPbc	21 28 54.7	-1.5
BURAR	Bucovina Array	151.09	261⇓	iP	PKPbc	21 29 00.3	-0.4
BZS	Buzias	151.28	255⇓	iP	PKPbc	21 29 00.2	-0.9
AKASG	Malin Array Be	151.34	270	PKPbc	PKPbc	21 29 01.4	+0.3
AKASG				PKPab	PKPab	21 29 09.5	+0.2
AKASG	Malin Array Be	151.34	270	PKPbc	PKPbc	21 29 01.4	+0.3
	1.4nm,0.6s,baz=89,slow=2.3,SNR=7.4						
AKASG				PKPab	PKPab	21 29 09.5	+0.2
	0.4nm,0.3s,baz=103,slow=2.8,SNR=5.2						

IDC 02 21:20:36.0±2.3**, 1°40N**×**128°23E, h0km, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/20**, mbtmp3.3**/3**, Error ellipse: s-maj=159.1km s-min=27.2km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.04	165	P	P	21 25 32.4	0.0
	0.6nm,0.5s,baz=344,slow=10,SNR=5.0						
ASAR	Alice Springs	25.52	168	P	P	21 26 06.4	0.0
	0.2nm,0.5s,baz=353,slow=9.3,SNR=4.7						
MKAR	Makanchi Array	60.31	325	P	P	21 30 46.6	-0.1
	0.3nm,0.5s,baz=115,slow=8.4,SNR=5.1						

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*IDC **02** 22:10:26.2±0.7, 3°33N×126°90E, h0km, mb4.0/15, mb1 4.1/16, mb1mx4.0/27, mbtmp4.0/16, MS3.8/7, Ms1 3.8/7, ms1mx3.3/38, Error ellipse: s-maj=34.0km s-min=13.6km az=73.0*

*ISCJB **02** 22:10:31.0±0.4, 3°54N±0°04×127°23E±0°07, h48km, mb4.2/23, MS3.8/7, Error ellipse: s-maj=9.6km s-min=6.2km az=176.3*

*NEIC **02** 22:10:31.3±0.4, 3°31N×126°89E, h35km, mb4.5/10, Error ellipse: s-maj=19.9km s-min=6.4km az=74.0*

*DJA **02** 22:10:33.8±3.2, 4°N±4°×12°7E±°, h19km±39km, M4.5/8, mb4.5/6, mB5.3/4, MLv4.5/8, Mw(mB)4.7/4*

ISC 02 22:10:32.7±0.5**, 3°44N**±0°06×**127°18E**±0°10**, h48km, n63, σ1^{s}35**/56**, mb4.2**/23**, MS3.8**/7**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.66	176	P	Pn	22 11 17.4	+4.3
TNTI				S	Sn	22 11 50.7	+6.6
MNI	Manado	3.07	230	P	Pn	22 11 20.4	+1.7
DAV	Davao City (W)	3.94	336	Pn	Pn	22 11 29.9	-1.0
DAV				Sn	Sn	22 12 23.6	+7.7
DAV	Davao City (W)	3.94	336	P	Pn	22 11 31.3	+0.5
DAV	Davao City (W)	3.94	336	Pn	Pn	22 11 29.8	-1.0
	baz=141,slow=19,SNR=1.6						
DAV				Sn	Sn	22 12 23.5	+7.7
	56nm,0.3s,baz=250,slow=13,SNR=1.8						
LBMI	Labuha	4.06	176	P	Pn	22 11 36.8	+4.4
KMSI	Cibinong	4.28	228	P	Pn	22 11 37.3	+1.9
CTBH	Cotabato--PC H	4.76	322⇓	iP	Pn	22 11 42.0	0.0
SWI	Sorong	5.90	136	P	Pn	22 12 00.1	+2.4
	57nm,1.4s,0.2nm						
MRSI	Marisa	6.01	241	P	Pn	22 11 59.9	+0.8
	59nm,1.0s,770nm0.2nm						
LUWI	Luwuk	6.26	225	P	Pn	22 12 06.4	+3.8
	94nm,1.1s,1µm0.4nm						
TTSI	Tana Toraja	9.78	229	P	Pn	22 12 54.8	+3.9
	20nm,2.0s,1µm						
BAKI	Biak	10.04	117	P	Pn	22 12 59.7	+5.3
	62nm,1.6s						
TLE	Tual	10.59	148	P	Pn	22 12 59.9	-2.0
STKI	Sintang	16.05	258	P	Pn	22 14 16.8	+1.5
GUMO	Guam	20.17	59	LR	LR	22 22 03.7	
	comp=Z,172nm,19.2s,baz=254,slow=34						
FITZ	Fitzroy Crossi	21.46	184	eP	P	22 15 15.3	-1.9
	13nm,1.1s						
FITZ	Fitzroy Crossi	21.46	184	P	P	22 15 14.6	-2.6
	1.5nm,0.4s,baz=17,slow=8.6,SNR=6.4						
WRAB	Tennant Creek	24.27	163	eP	P	22 15 44.7	-0.9
	26nm,1.3s						
WRA	Warramunga Arr	24.28	163	P	P	22 15 44.5	-1.2
WRA	Warramunga Arr	24.28	163	P	P	22 15 44.5	-1.2
	5.3nm,0.4s,baz=340,slow=10,SNR=61						
AS31	Alice Springs	27.73	167	eP	P	22 16 16.5	-0.3
ASAR	Alice Springs	27.73	167	P	P	22 16 16.0	-0.8
ASAR				PcP	PcP	22 19 34.4	+1.5
ASAR	Alice Springs	27.73	167	P	P	22 16 16.0	-0.8
	1.0nm,0.5s,baz=349,slow=7.8,SNR=18						
ASAR				PcP	PcP	22 19 34.4	+1.5
	0.6nm,0.5s,baz=11,slow=2.4,SNR=4.6						
CMAR	Chiang Mai Arr	31.41	300	P	P	22 16 48.0	-1.5
CMAR	Chiang Mai Arr	31.41	300	P	P	22 16 48.0	-1.5
	1.0nm,0.3s,baz=116,slow=7.3,SNR=7.8						
JHJ	Hachijo jima 2	31.80	20	LR	LR	22 29 33.4	
	comp=Z,402nm,18.0s,baz=13,slow=36						
KSAR	Wonju Array Be	33.85	1	P	P	22 17 12.7	+2.1
KSRS	Korea Array	33.86	1	P	P	22 17 12.7	+2.0
	0.7nm,0.5s,baz=179,slow=9.3,SNR=3.1						
MJAR	Matsushiro Arr	34.48	16	LR	LR	22 31 03.9	
	comp=Z,144nm,18.3s,baz=180,slow=36						
NWAO	Narrogin (SRO)	37.38	194	eP	P	22 17 38.3	-2.6
ULN	Ulaanbaatar	47.53	342	eP	P	22 19 03.0	-0.5
	5.4nm,1.3s						
SONM	Songino Array	47.72	341	P	P	22 19 05.0	+0.1
SONM	Songino Array	47.72	341	P	P	22 19 05.0	+0.1
	0.9nm,0.7s,baz=160,slow=8.8,SNR=7.9						
PETK	Petropavlovsk-	55.53	22	P	P	22 20 04.7	+1.7
PETK	Petropavlovsk-	55.53	22	P	P	22 20 04.7	+1.7
	1.7nm,0.6s,baz=201,slow=7.7,SNR=7.7						
MK31	Makanchi Array	58.05	325	eP	P	22 20 19.5	-1.6
MKAR	Makanchi Array	58.05	325	P	P	22 20 19.7	-1.3
MKAR	Makanchi Array	58.05	325	P	P	22 20 19.7	-1.3
	1.9nm,0.7s,baz=121,slow=8.2,SNR=19						
MKAR				LR	LR	22 49 57.4	
	comp=Z,74nm,18.1s,baz=319,slow=41						
TKM2	Tokmak 2	60.26	318	eP	P	22 20 36.5	-0.1
	4.6nm,1.1s						
AAK	Ala-Archa	60.87	318	eP	P	22 20 42.7	+1.9
	6.4nm,1.0s						
AAK	Ala-Archa	60.87	318	P	P	22 20 42.1	+1.4
	0.8nm,0.6s,baz=148,slow=9.4,SNR=4.6						
AAK				LR	LR	22 48 47.1	
	comp=Z,94nm,21.9s,baz=83,slow=38						
ZAA0	Zalesovo Array	61.05	333	eP	P	22 20 40.9	-0.6
ZALV	Zalesovo Beam	61.05	333	P	P	22 20 40.4	-1.1
ZALV	Zalesovo Beam	61.05	333	P	P	22 20 40.3	-1.1
	0.6nm,0.7s,baz=132,slow=9.9,SNR=3.0						
ZALV				LR	LR	22 48 46.5	
	comp=Z,52nm,18.1s,baz=246,slow=38						
EKS2	Erkin-Say	61.37	318	eP	P	22 20 42.5	-1.5
	4.2nm,1.1s						
KURK	Kurchatov	62.23	327	eP	P	22 20 48.4	-1.0
	5.9nm,0.7s						
KKAR	Karatay Array	63.75	317	eP	P	22 20 59.7	-0.1
	1.3nm,0.6s						
BVAR	Borovoye Array	67.81	327	P	P	22 21 24.7	-1.0
BVAR	Borovoye Array	67.81	327	P	P	22 21 24.7	-1.0
	2.5nm,0.8s,baz=116,slow=8.4,SNR=13						
BRVK	Borovoye	67.88	327	eP	P	22 21 25.1	-1.0
	4.8nm,0.8s						
ABKAR	Akbulak array	72.66	321	eP	P	22 21 54.2	-1.2
	1.2nm,0.6s						
AKTO	Aktyubinsk	74.17	322	P	P	22 22 03.5	-0.9
AKTO	Aktyubinsk	74.17	322	P	P	22 22 03.5	-0.9
	1.8nm,0.7s,baz=94,slow=11,SNR=7.9						
VNDA	Vanda	83.08	173	P	P	22 22 54.0	+1.2
VNDA	Vanda	83.08	173	P	P	22 22 54.0	+1.2
	0.8nm,0.8s,baz=302,slow=6.3,SNR=5.2						
KBZ	Khabaz	83.51	313	LR	LR	23 08 11.1	
	comp=Z,56nm,18.2s,baz=205,slow=42						
ILAR	Eielson Array	85.17	25	P	P	22 23 04.7	+1.0
ILAR	Eielson Array	85.17	25	P	P	22 23 04.7	+1.0
	0.4nm,0.8s,baz=256,slow=4.9,SNR=5.3						
BRTR	Keskin Array B	90.55	310	P	P	22 23 30.9	+0.7
BRTR	Keskin Array B	90.55	310	P	P	22 23 30.9	+0.7
	0.4nm,0.6s,baz=108,slow=4.7,SNR=3.5						
TORD	Torodi Ar. Bea	123.44	288	PKP	PKPdf	22 29 26.1	+0.3
TORD	Torodi Ar. Bea	123.44	288	PKP	PKPdf	22 29 26.1	+0.3
	0.8nm,0.8s,baz=44,slow=1.3,SNR=3.9						

IDC 02 22:15:59.2±1.5**, 7°64S**×**127°83E, h0km, mb3.7**/5**, mb1 3.9**/8**, mb1mx3.7**/20**, mbtmp3.7**/8**, ML3.8**/3**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.5**/36**, Error ellipse: s-maj=76.4km s-min=23.4km az=72.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	8.44	288	LR	LR	22 21 12.6	
	comp=Z,158nm,20.3s,baz=72,slow=37						
FITZ	Fitzroy Crossi	10.62	191	Pn	Pn	22 18 33.0	+0.2
	0.5nm,0.3s,baz=15,slow=12,SNR=11						
FITZ				Sn	Sn	22 20 23.3	-9.1
	0.4nm,0.3s,baz=16,slow=15,SNR=4.6						
WRA	Warramunga Arr	13.76	153	Pn	Pn	22 19 14.8	-1.0
	0.6nm,0.3s,baz=327,slow=14,SNR=7.6						
WRA				Sn	Sn	22 21 40.5	-9.0
	0.6nm,0.3s,baz=329,slow=24,SNR=8.0						
ASAR	Alice Springs	16.97	161	Pn	Pn	22 19 59.0	+0.7
	0.3nm,0.3s,baz=336,slow=10,SNR=9.4						
ASAR				Sn	Sn	22 22 57.1	-10
	0.2nm,0.3s,baz=333,slow=24,SNR=4.8						
CMAR	Chiang Mai Arr	38.53	313	P	P	22 23 23.8	0.0
	1.1nm,0.7s,baz=136,slow=6.6,SNR=6.3						
SONM	Songino Array	58.39	343	P	P	22 25 57.5	+0.9
	1.0nm,0.9s,baz=157,slow=7.8,SNR=3.9						
MKAR	Makanchi Array	67.60	328	P	P	22 26 57.9	+0.1
	0.5nm,0.5s,baz=119,slow=8.0,SNR=5.6						
AAK	Ala-Archa	69.66	321	P	P	22 27 10.8	-0.1
	0.4nm,0.4s,baz=121,slow=5.9,SNR=3.9						
ZALV	Zalesovo Beam	71.22	335	P	P	22 27 19.4	-0.6
	0.3nm,0.4s,baz=128,slow=5.5,SNR=2.3						

IDC 02 22:16:09.2±1.9**, 0°77N**×**128°35E, h0km, mb3.5**/5**, mb1 3.6**/5**, mb1mx3.4**/21**, mbtmp3.5**/5**, Error ellipse: s-maj=194.5km s-min=27.9km az=70.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.41	164	P	P	22 20 58.6	-0.2
	0.9nm,0.7s,baz=340,slow=10,SNR=2.3						
SONM	Songino Array	50.60	341	P	P	22 25 08.5	-1.5
	0.4nm,0.7s,baz=158,slow=6.6,SNR=1.8						
MKAR	Makanchi Array	60.89	326	P	P	22 26 23.4	-0.4
	0.4nm,0.5s,baz=120,slow=5.2,SNR=2.6						
ZALV	Zalesovo Beam	63.94	333	P	P	22 26 43.2	-0.8
	0.1nm,0.3s,baz=123,slow=5.3,SNR=2.3						
KURBB	Kurchatov Arra	65.08	328	P	P	22 26 52.9	+1.3
	40nm,0.3s,baz=126,slow=6.1,SNR=1.4						
BVAR	Borovoye Array	70.66	327	P	P	22 27 27.9	+1.2
	0.4nm,0.5s,baz=123,slow=5.3,SNR=2.8						

IDC 02 22:25:35.4±1.1**, 2°51N**×**125°04E, h0km, mb3.7**/7**, mb1 3.8**/7**, mb1mx3.7**/24**, mbtmp3.7**/7**, Error ellipse: s-maj=122.6km s-min=18.3km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.11	158	P	P	22 30 52.5	-0.5
	1.9nm,0.4s,baz=337,slow=11,SNR=28						
ASAR	Alice Springs	27.41	162	P	P	22 31 24.0	+1.0
	0.3nm,0.4s,baz=344,slow=7.6,SNR=5.6						
SONM	Songino Array	47.94	343	P	P	22 34 16.0	+0.2
	0.3nm,0.5s,baz=134,slow=4.3,SNR=3.1						
MKAR	Makanchi Array	57.61	326	P	P	22 35 27.7	+0.4
	0.7nm,0.6s,baz=119,slow=8.4,SNR=9.2						
ZALV	Zalesovo Beam	60.92	334	P	P	22 35 50.0	0.0
	0.3nm,0.5s,baz=116,slow=8.5,SNR=3.8						
KURBB	Kurchatov Arra	61.87	328	P	P	22 35 55.7	-0.8
	48nm,0.4s,baz=129,slow=6.1,SNR=1.9						
BVAR	Borovoye Array	67.43	328	P	P	22 36 32.2	-0.6
	0.8nm,0.9s,baz=120,slow=5.8,SNR=2.6						
AKTO	Aktyubinsk	73.57	322	P	P	22 37 10.6	+0.2
	0.9nm,0.7s,baz=101,slow=8.2,SNR=3.0						

IDC 02 22:28:10.0±2.3**, 3°05N**×**126°16E, h0km, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/21**, mbtmp3.4**/3**, Error ellipse: s-maj=205.4km s-min=26.5km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.22	161	P	P	22 33 28.3	-0.4
	0.9nm,0.4s,baz=340,slow=11,SNR=6.7						
ASAR	Alice Springs	27.61	165	P	P	22 34 00.0	+0.7
	0.2nm,0.4s,baz=350,slow=7.8,SNR=2.7						
MKAR	Makanchi Array	57.78	326	P	P	22 38 02.8	-0.4
	0.3nm,0.6s,baz=112,slow=8.9,SNR=5.3						

IDC 02 22:34:19.0±2.0**, 3°06N**×**126°92E, h0km, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/22**, mbtmp3.5**/4**, Error ellipse: s-maj=116.0km s-min=24.3km az=70.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.07	183	P	P	22 39 06.0	+1.1
	1.9nm,1.0s,baz=11,slow=10,SNR=2.8						
WRA	Warramunga Arr	24.00	163	P	P	22 39 35.1	-0.4
	1.2nm,0.4s,baz=340,slow=10,SNR=18						
ASAR	Alice Springs	27.43	166	P	P	22 40 06.6	-0.1
	0.2nm,0.3s,baz=344,slow=7.4,SNR=3.5						
MKAR	Makanchi Array	58.20	325	P	P	22 44 14.8	-0.2
	0.3nm,0.6s,baz=127,slow=8.1,SNR=5.5						

KRSC 02 22:45:12.3±1.1**, 50°40N**×**159°38E, h78km**±77km**, ML3.6, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RUS	Russkaya	2.11	345	eP	Pn	22 45 47.9	+2.4
RUS				eS	Sn	22 46 14.1	+3.2
MIPR	Malaya Ipel'ka	2.50	320	eP	Pn	22 45 52.6	+1.8
MIPR				eS	Sn	22 46 21.5	+1.2
SPN	Mys Shipunski	2.73	8	S	Sn	22 46 30.4	+4.5
AVH	Avacha	2.90	352	eP	Pn	22 45 59.9	+3.6
AVH				eS	Sn	22 46 34.3	+4.2
SDLR	Sedlovina	2.90	354	eP	Pn	22 45 59.2	+2.8
SDLR				eS	Sn	22 46 33.1	+2.8
KOK	Koryaka	2.93	351	eP	Pn	22 46 00.1	+3.3
GNL	Ganaly	3.42	346	eP	Pn	22 46 07.0	+3.6
GNL				eS	Sn	22 46 46.5	+3.6
MKZ	Mys Kozlova	4.40	18	eP	Pn	22 46 18.8	+2.2
MKZ				eS	Sn	22 47 06.3	-0.2

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*ISCJB **02** 22:45:22.8±0.5, 24°80N±0°04×122°43E±0°02, h5km±4km, Error ellipse: s-maj=6.3km s-min=2.9km az=4.8*

*JMA **02** 22:45:24.5±0.2, 25°04N×122°76E, h0km, M2.4*

*TAP **02** 22:45:25.0, 24°81N×122°29E, h12km, ML3.0, C*

ISC 02 22:45:22.5±1.2**, 24°79N**±0°04×**122°46E**±0°02**, h2km**±11km**, n25, σ0^{s}76**/47**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.48	298	P	Pg	22 45 32.4	+0.7
	baz=307						
TWB1				i S	Sg	22 45 37.4	-0.5
	baz=307						
TWC	Suao	0.58	252	P	Pg	22 45 33.7	+0.1
	baz=249						
TWC				eS	Sg	22 45 39.8	-1.4
	baz=249						
YOJ	Yonaguni jima	0.60	123	P	Pb	22 45 36.8	+1.2
YOJ				S	Sb	22 45 45.4	+0.9
NWF	Wu-fen Shan	0.68	295	P	Pb	22 45 36.4	-0.6
	baz=299						
NWF				S	Sg	22 45 44.6	+0.4
	baz=299						
TWE	Neicheng	0.72	265	P	Pg	22 45 36.3	0.0
	baz=254						
TWE				eS	Sg	22 45 45.4	-0.3
	baz=254						
ENA	Nanau	0.74	241	eP	Pg	22 45 36.7	0.0
	baz=232						
ENA				eS	Sg	22 45 46.6	+0.2
	baz=232						
ENTT	Nioudou	0.82	260	eP	Pg	22 45 38.6	+0.3
	baz=255						
ENTT				eS	Sg	22 45 48.7	-0.3
	baz=255						
TWY	Chenhua	0.92	302	P	Pb	22 45 41.2	+0.1
	baz=306						
TWY				S	Sg	22 45 52.2	+0.2
	baz=306						
NSK	Sanguang	1.01	264	P	Pg	22 45 41.8	0.0
	baz=261						
NSK				S	Sg	22 45 53.6	-1.2
	baz=261						
NNS	Nan Shan	1.05	251	P	Pb	22 45 43.0	-0.4
	baz=236						
NNS				S	Sg	22 45 55.3	-0.8
	baz=236						
TWD	Chiawan	1.05	228	eP	Pb	22 45 43.4	0.0
	baz=230						
TWD				eS	Sg	22 45 56.4	+0.1
	baz=230						
IRIF	Iriomote-Funau	1.24	111	P	Pg	22 45 46.1	-0.2
WHF	Hehuan Shan	1.26	240	P	Pg	22 45 46.5	-0.2
	baz=235						
WHF				S	Sg	22 46 01.9	-1.1
	baz=235						
TWT	Tachien	1.28	246	eP	Pn	22 45 47.8	+0.2
	baz=235						
TWT				eS	Sg	22 46 03.6	-0.1
	baz=235						
NSTT	Nanjuang	1.33	264	eP	Pb	22 45 48.6	+0.4
	baz=281						
NSTT				eS	Sg	22 46 04.1	-1.3
	baz=281						
HATJ	Hateruma jima	1.43	120	eS	Sg	22 46 08.4	0.0
JKRS	Kuro-shima	1.52	111	P	Pn	22 45 50.3	-0.3
JKRS				eS	Sn	22 46 09.3	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIJ	Ishigaki jima	1.59	105	P	Pn	22 45 51.8	+0.2
JIJ				eS	Sn	22 46 10.9	-1.8
TWQ1	Liyutan	1.59	254	eP	Pg	22 45 54.1	+1.1
	baz=253						
TWQ1				eS	Sn	22 46 11.9	-0.9
	baz=253						
SMLT	Sun Moon Lake	1.68	238	eP	Pb	22 45 53.6	-0.5
	baz=235						
SMLT				eS	Sn	22 46 14.4	-0.7
	baz=235						
TYC	Yuchr	1.70	239	eP	Pb	22 45 53.9	-0.6
	baz=237						
TYC				eS	Sn	22 46 15.1	-0.4
	baz=237						
CHN5	Tsauling	2.01	234	eP	Pn	22 45 58.4	+0.9
	baz=232						
CHN5				eS	Sg	22 46 26.4	-0.7
	baz=232						
JTJ	Tarama	2.05	94	P	Pn	22 45 58.2	+0.3
CHN4	Tsaushan	2.22	230	eP	Pn	22 46 01.4	+1.1
	baz=209						
CHN4				eS	Sn	22 46 29.6	+1.2
	baz=209						
CHN1	Nanshi	2.38	228	eP	Pn	22 46 02.8	+0.3
	baz=225						
CHN1				eS	Sn	22 46 33.0	+0.8
	baz=225						

IDC 02 22:56:53.3±0.8, 33°.51N×82°.27E, h0km, mb3.7/11, mb1 3.9/13, mb1mx3.7/29, mbtmp3.7/13, ML3.0/2, MS2.7/1, Ms1 2.9/1, ms1mx2.3/43, Error ellipse: s-maj=27.2km s-min=16.3km az=55.0, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DDI	Dehra Dun	4.79	230	ex	Pn	22 58 19.0	+12
AAK	Ala-Archa	10.97	328	Pn	Pn	22 59 35.8	+4.0
	0.1nm,0.3s,baz=132,slow=12,SNR=4.4						
MKAR	Makanchi Array	13.27	0	Pn	Pn	23 00 01.1	-1.9
	0.1nm,0.3s,baz=174,slow=13,SNR=11						
ZALV	Zalesovo Beam	20.52	4	P	P	23 01 33.0	0.0
	0.9nm,0.6s,baz=191,slow=10.0,SNR=6.7						
CMAR	Chiang Mai Arr	21.15	131	P	P	23 01 41.4	+1.3
	4.4nm,0.8s,baz=310,slow=10,SNR=29						
CMAR				LR	LR	23 10 31.5	
	comp=Z,19nm,20.2s,baz=310,slow=39						
BVAR	Borovoye Array	21.29	340	P	P	23 01 41.9	+0.6
	1.2nm,0.8s,baz=146,slow=11,SNR=8.0						
SONM	Songino Array	23.11	45	P	P	23 02 02.0	+1.1
	1.8nm,0.9s,baz=231,slow=10.0,SNR=6.2						
AKTO	Aktyubinsk	24.55	321	P	P	23 02 15.5	+0.8
	1.8nm,0.7s,baz=133,slow=8.8,SNR=9.2						
FINES	FINESS Array B	45.15	326	P	P	23 05 11.5	+0.2
	0.6nm,0.7s,baz=71,slow=8.3,SNR=3.3						
WRA	Warramunga Arr	72.73	129	P	P	23 08 24.1	+0.5
	1.1nm,0.8s,baz=326,slow=5.8,SNR=5.8						
ILAR	Eielson Array	74.80	20	P	P	23 08 35.0	-0.1
	0.7nm,1.0s,baz=287,slow=4.6,SNR=3.8						
TORD	Torodi Ar. Bea	75.08	276	P	P	23 08 37.4	-0.1
	1.3nm,0.5s,baz=37,slow=4.9,SNR=19						
ASAR	Alice Springs	75.16	132	P	P	23 08 37.0	-0.7
	0.5nm,0.8s,baz=324,slow=5.1,SNR=3.4						
YKA	Yellowknife Ar	83.37	8	P	P	23 09 20.2	-1.8
	0.4nm,0.7s,baz=339,slow=5.3,SNR=10						

IDC 02 22:57:50.9±0.9, 33°.62N×82°.24E, h0km, mb3.7/12, mb1 4.0/13, mb1mx3.7/28, mbtmp3.8/13, ML3.2/1, Error ellipse: s-maj=28.2km s-min=17.1km az=54.0, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.16	0	Pn	Pn	23 00 58.1	-1.0
	0.1nm,0.3s,baz=184,slow=15,SNR=7.3						
ZALV	Zalesovo Beam	20.41	4	P	Pn	23 02 30.6	-0.7
	2.1nm,0.7s,baz=190,slow=8.6,SNR=7.9						
BVAR	Borovoye Array	21.18	340	P	P	23 02 38.7	+1.1
	1.6nm,0.9s,baz=139,slow=9.9,SNR=4.9						
CMAR	Chiang Mai Arr	21.24	131	P	P	23 02 38.9	+0.3
	3.7nm,0.8s,baz=311,slow=11,SNR=8.5						
SONM	Songino Array	23.05	45	P	P	23 02 59.8	+1.9
	1.0nm,0.9s,baz=238,slow=8.3,SNR=4.7						
AKTO	Aktyubinsk	24.45	321	P	P	23 03 11.6	+0.3
	2.7nm,0.9s,baz=119,slow=9.1,SNR=5.9						
FINES	FINESS Array B	45.05	326	P	P	23 06 08.4	+0.3
	1.9nm,0.8s,baz=97,slow=7.9,SNR=5.4						
NB2	NORSAR Subarra	52.16	324	P	P	23 07 03.2	+0.3
	comp=Z,0.9nm,0.8s,baz=86,slow=7.4						
NOA	NORSAR Array B	52.16	324	P	P	23 07 03.3	+0.4
	comp=Z,1.3nm,0.8s,baz=87,slow=7.3,SNR=4.6						
WRA	Warramunga Arr	72.82	129	P	P	23 09 21.8	+0.3
	comp=Z,0.9nm,0.9s,baz=327,slow=5.8,SNR=5.3						
ILAR	Eielson Array	74.70	20	P	P	23 09 30.5	-1.5
	comp=Z,0.4nm,0.9s,baz=283,slow=4.5,SNR=3.6						
TORD	Torodi Ar. Bea	75.04	276	P	P	23 09 35.0	+0.2
	comp=Z,1.2nm,0.6s,baz=44,slow=4.5,SNR=9.4						
ASAR	Alice Springs	75.25	132	P	P	23 09 36.1	+0.4
	comp=Z,1.0nm,0.9s,baz=316,slow=5.7,SNR=5.2						
YKA	Yellowknife Ar	83.27	8	P	P	23 10 17.2	-1.8
	comp=Z,0.4nm,0.6s,baz=336,slow=5.3,SNR=9.5						

IDC 02 22:58:52.8±0.9, 33°.76N×82°.30E, h0km, mb3.6/9, mb1 3.8/10, mb1mx3.6/26, mbtmp3.6/10, ML3.0/1, MS2.2/1, Ms1 2.2/1, ms1mx2.0/38, Error ellipse: s-maj=30.3km s-min=19.6km az=63.0, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.02	360	Pn	Pn	23 01 58.5	-0.5
	0.1nm,0.3s,baz=185,slow=11,SNR=3.1						
ZALV	Zalesovo Beam	20.26	4	P	Pn	23 03 31.1	-0.5
	0.8nm,0.5s,baz=188,slow=8.7,SNR=3.7						
CMAR	Chiang Mai Arr	21.30	132	P	P	23 03 41.6	+0.5
	1.8nm,0.7s,baz=312,slow=10,SNR=4.2						
SONM	Songino Array	22.91	45	P	P	23 03 59.7	+1.4
	0.7nm,1.0s,baz=251,slow=9.0,SNR=3.2						
TGY	Tagaytay City	40.07	110	LR	LR	23 24 40.1	
	comp=Z,2.7nm,18.1s,baz=92,slow=39						
FINES	FINESS Array B	44.96	326	P	P	23 07 09.9	+0.7
	2.6nm,1.0s,baz=109,slow=11,SNR=4.6						
WRA	Warramunga Arr	72.87	129	P	P	23 10 23.6	-0.1
	0.2nm,0.3s,baz=326,slow=6.0,SNR=6.6						
ILAR	Eielson Array	74.55	20	P	P	23 10 31.6	-1.5
	0.2nm,0.6s,baz=317,slow=6.1,SNR=2.9						
TORD	Torodi Ar. Bea	75.08	276	P	P	23 10 37.3	+0.4
	0.5nm,0.7s,baz=62,slow=5.7,SNR=6.0						
ASAR	Alice Springs	75.31	132	P	P	23 10 38.2	+0.2
	0.5nm,0.8s,baz=322,slow=5.2,SNR=3.4						
YKA	Yellowknife Ar	83.12	8	P	P	23 11 19.1	-1.0
	0.3nm,0.5s,baz=339,slow=5.4,SNR=5.4						

IDC 02 23:06:12.2±0.7, 33°.68N×82°.42E, h0km, mb3.8/14, mb1 4.1/15, mb1mx3.9/28, mbtmp3.9/15, ML3.5/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/49, Error ellipse: s-maj=22.7km s-min=15.4km az=54.0, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DDI	Dehra Dun	4.99	229	ex	Pn	23 07 32.5	+3.9
AAK	Ala-Archa	10.89	327	Pn	Pn	23 08 56.6	+6.9
	0.1nm,0.3s,baz=182,slow=11,SNR=4.5						
AAK				LR	LR	23 13 27.7	
	comp=Z,89nm,19.5s,baz=118,slow=40						
MKAR	Makanchi Array	13.10	360	Pn	Pn	23 09 19.9	+0.3
	0.2nm,0.3s,baz=178,slow=13,SNR=18						
ZALV	Zalesovo Beam	20.33	4	P	P	23 10 50.6	+0.7
	2.1nm,0.6s,baz=186,slow=10.0,SNR=16						
BVAR	Borovoye Array	21.17	340	P	P	23 11 00.5	+1.6
	2.1nm,0.9s,baz=144,slow=13,SNR=9.1						
CMAR	Chiang Mai Arr	21.17	132	P	P	23 11 00.7	+1.4
	6.8nm,0.9s,baz=311,slow=11,SNR=36						
SONM	Songino Array	22.89	45	P	P	23 11 16.4	-1.2
	0.7nm,0.6s,baz=241,slow=8.9,SNR=2.9						
AKTO	Aktyubinsk	24.50	320	P	P	23 11 33.4	+0.3
	1.1nm,0.6s,baz=118,slow=11,SNR=6.9						
BRTR	Keskin Array B	39.18	293	P	P	23 13 43.5	+1.4
	0.4nm,0.7s,baz=96,slow=6.3,SNR=3.9						
JOF	Joensuu	43.08	329	ep	P	23 14 14.9	+1.3
	3.2nm,0.5s						
FINES	FINESS Array B	45.08	326	P	P	23 14 29.9	+0.3
	2.2nm,0.7s,baz=99,slow=10,SNR=10						
NB2	NORSAR Subarra	52.20	324	P	P	23 15 24.7	+0.1
	comp=Z,3.2nm,1.0s,baz=84,slow=7.9						
NOA	NORSAR Array B	52.20	324	P	P	23 15 24.3	-0.3
	comp=Z,1.4nm,0.8s,baz=86,slow=7.5,SNR=4.1						
WRA	Warramunga Arr	72.74	129	P	P	23 17 43.0	+0.5
	comp=Z,1.6nm,0.8s,baz=329,slow=5.7,SNR=11						
ILAR	Eielson Array	74.59	20	P	P	23 17 52.6	-0.1
	comp=Z,0.9nm,1.0s,baz=305,slow=5.2,SNR=6.9						
ASAR	Alice Springs	75.18	132	P	P	23 17 57.0	+0.2
	comp=Z,1.0nm,0.8s,baz=319,slow=6.9,SNR=9.6						
TORD	Torodi Ar. Bea	75.18	276	P	P	23 17 56.1	-0.9
	comp=Z,1.1nm,0.5s,baz=45,slow=5.2,SNR=7.4						
BOSA	Boshof	82.27	228	P	P	23 18 34.8	-0.9
	comp=Z,2.4nm,0.8s,baz=28,slow=5.4,SNR=6.0						
YKA	Yellowknife Ar	83.18	8	P	P	23 18 38.7	-1.2
	comp=Z,0.6nm,0.5s,baz=341,slow=5.2,SNR=18						

IDC 02 23:09:44.6±1.1, 33°.64N×82°.24E, h0km, mb3.4/8, mb1 3.7/9, mb1mx3.5/27, mbtmp3.5/9, ML2.9/1, Error ellipse: s-maj=32.2km s-min=20.4km az=60.0, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.14	0	Pn	Pn	23 12 52.3	-0.2
	0.1nm,0.3s,baz=189,slow=14,SNR=3.5						
ZALV	Zalesovo Beam	20.39	4	P	Pn	23 14 24.7	-0.1
	0.5nm,0.5s,baz=185,slow=9.8,SNR=4.2						
BVAR	Borovoye Array	21.15	340	P	P	23 14 31.2	+0.1
	0.2nm,0.4s,baz=161,slow=6.1,SNR=2.6						
CMAR	Chiang Mai Arr	21.26	131	P	P	23 14 32.6	+0.1
	1.8nm,0.8s,baz=311,slow=11,SNR=10						
SONM	Songino Array	23.03	45	P	P	23 14 51.7	+0.3
	0.3nm,0.7s,baz=243,slow=9.5,SNR=2.6						
FINES	FINESS Array B	45.02	326	P	P	23 18 01.0	-0.7
	1.2nm,0.7s,baz=103,slow=10,SNR=3.8						
TORD	Torodi Ar. Bea	75.04	276	P	P	23 21 29.2	+0.7
	0.6nm,0.6s,baz=53,slow=4.6,SNR=4.5						
ASAR	Alice Springs	75.27	132	P	P	23 21 29.7	+0.1
	0.4nm,0.7s,baz=323,slow=5.9,SNR=3.6						
YKA	Yellowknife Ar	83.25	8	P	P	23 22 11.2	-1.4
	0.2nm,0.6s,baz=341,slow=5.2,SNR=6.6						

IDC 02 23:14:36.7±1.3, 54°.50S×133°.42W, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.9/14, mbtmp3.8/4, MS3.7/2, Ms1 3.7/2, ms1mx3.2/23, Error ellipse: s-maj=112.1km s-min=29.8km az=161.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNDA	Vanda	32.12	202	LR	LR	23 32 03.8	
	comp=Z,142nm,18.5s,baz=230,slow=33						
TBI	Tubuai	33.35	332	eLR	LR	23 29 41.6	
	130nm,30.5s						
TBI				eT	T	23 55 47.6	
	15nm,0.3s						
PPT2	Papeete2	38.89	335	eLR	LR	23 32 29.6	
	94nm,26.8s						
PPT	Papeete	38.91	335	LR	LR	23 34 27.3	
	comp=Z,79nm,19.2s,baz=174,slow=31						
VAH	Vaihoa	40.71	339	eT	T	00 04 59.6	
	6.9nm,0.3s						
LPAZ	La Paz	62.57	79	P	P	23 25 03.2	-0.1
	0.9nm,0.6s,baz=277,slow=2.9,SNR=4.5						
ASAR	Alice Springs	72.59	254	P	P	23 26 05.9	+0.1
	0.7nm,0.8s,baz=145,slow=6.8,SNR=6.8						
WRA	Warramunga Arr	75.29	256	P	P	23 26 21.7	0.0
	0.7nm,0.5s,baz=139,slow=5.5,SNR=5.0						
TXAR	Lajitas Array	87.34	26	P	P	23 27 25.2	-0.1
	0.4nm,0.7s,baz=185,slow=6.9,SNR=3.7						

IDC 02 23:20:34.4±7.6, 21°.08S×174°.09W, h0km, mb3.8/3, mb1 4.2/3, mb1mx3.8/19, mbtmp3.8/3, Error ellipse: s-maj=326.0km s-min=41.2km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	47.95	257	P	P	23 29 14.2	-0.9
	0.6nm,0.5s,baz=96,slow=7.1,SNR=6.7						
WRA	Warramunga Arr	48.14	262	P	P	23 29 17.2	+0.5
	1.6nm,0.5s,baz=100,slow=8.3,SNR=11						
ILAR	Eielson Array	88.12	11	P	P	23 33 26.4	-0.1
	0.4nm,0.7s,baz=198,slow=5.6,SNR=4.6						

IDC 02 23:24:33.2±1.3, 3°.89N×127°.03E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/23, mbtmp3.7/6, Error ellipse: s-maj=95.6km s-min=17.7km az=73.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.90	184	P	P	23 29 28.7	+0.7
	1.1nm,0.5s,baz=22,slow=8.6,SNR=3.6						
WRA	Warramunga Arr	24.75	163	P	P	23 29 56.4	-0.3
	4.8nm,0.6s,baz=343,slow=11,SNR=24						
ASAR	Alice Springs	28.20	167	P	P	23 30 27.8	-0.1
	0.2nm,0.3s,baz=345,slow=9.2,SNR=4.9						
SONM	Songino Array	47.24	341	P	P	23 33 09.4	+1.2
	0.3nm,0.7s,baz=146,slow=8.0,SNR=2.6						
MKAR	Makanchi Array	57.60	325	P	P	23 34 25.6	+0.6
	0.5nm,0.6s,baz=121,slow=8.0,SNR=6.0						
ZALV	Zalesovo Beam	60.58	333	P	P	23 34 43.7	-1.8
	0.2nm,0.3s,baz=140,slow=7.0,SNR=3.2						

IDC 02 23:29:27.8±5.4, 33°.58N×82°.28E, h0km, mb3.2/3, mb1 3.5/4, mb1mx3.2/26, mbtmp3.3/4, ML2.6/1, Error ellipse: s-maj=189.4km s-min=29.6km az=67.0, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.20	0	Pn	Pn	23 32 35.7	-0.8
	0.0nm,0.3s,baz=179,slow=12,SNR=3.2						
ZALV	Zalesovo Beam	20.44	4	P	P	23 34 07.2	+0.5
	0.6nm,0.8s,baz=182,slow=10,SNR=3.6						
CMAR	Chiang Mai Arr	21.19	131	P	P	23 34 15.1	0.0
	0.7nm,0.8s,baz=309,slow=10,SNR=3.7						
YKA	Yellowknife Ar	83.30	8	P	P	23 41 56.0	-0.1
	0.1nm,0.8s,baz=338,slow=5.8,SNR=4.8						

*IDC **02** 23:32:17.8±0.7, 0°.65S×120°.15E, h0km, mb4.2/15, mb1 4.3/17, mb1mx4.2/29, mbtmp4.2/17, ML3.9/2, MS3.3/7, Ms1 3.3/7, ms1mx3.0/39, Error ellipse: s-maj=30.5km s-min=13.7km az=70.0*

*DJA **02** 23:32:18.7±0.4, 1°S±4°×12°0E±°, h10km, M4.7/8, mb4.6/2, mB5.2/2, MLv4.7/8, Mw(mB)4.5/2*

*ISCJB **02** 23:32:22.2±0.3, 0°.67S±0°.04×120°.06E±0°.06, h45km, mb4.3/19, MS3.2/5, Error ellipse: s-maj=8.2km s-min=4.9km az=166.8*

*NEIC **02** 23:32:22.7±0.3, 0°.71S×120°.16E, h35km, mb4.6/5, Error ellipse: s-maj=14.9km s-min=5.8km az=69.0*

ISC 02 23:32:24.5±0.5, 0°.63S±0°.05×120°.03E±0°.05, h45km, n59, σ1s27/55, mb4.4/19, MS3.2/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
APSI	Ampana	1.64	100	S	Sn	23 33 13.2	+2.3
MRSI	Marisa	2.20	60	P	Pn	23 32 56.0	-2.6
MRSI				S	Sn	23 33 32.4	+7.8
TTSI	Tana Toraja	2.41	185	P	Pn	23 33 00.1	-1.3
TTSI				S	Sn	23 33 31.6	+1.8
LUWI	Luwuk	2.77	99	P	Pn	23 33 05.6	-0.8
LUWI				S	Sn	23 33 21.9	-17
SMKI	Samarinda	2.83	274	P	Pn	23 33 05.0	-2.1
SPSI	Sidrap Palu	3.33	184	P	Pn	23 33 12.4	-1.6
KDI	Kendari	4.20	142	P	Pn	23 33 23.7	-2.3
KAPI	Kappang	4.37	184	ePn	Pn	23 33 24.8	-3.5
KAPI				Sn	Sn	23 34 18.5	+0.5
KAPI	Kappang	4.37	184	Pn	Pn	23 33 26.3	-2.1
	20nm,0.3s,baz=348,slow=7.5,SNR=28						
KAPI				Sn	Sn	23 34 18.5	+0.5
	baz=41,slow=21,SNR=3.5						
KAPI				LR	LR	23 35 20.1	
	comp=Z,730nm,18.6s,baz=1.9,slow=42						
BKSI	Bulukumba	4.67	179	P	Pn	23 33 30.7	-1.7
KBKI	Kotabaru	4.68	235	P	Pn	23 33 27.9	-4.8
BBSI	Bau Bau	5.46	152	P	Pn	23 33 42.3	-1.0
	72nm,1.1s,1μm0.5nm						
BBKI	Banjar Baru	5.90	241	P	Pn	23 33 47.8	-1.6
NLAI	Namlea	7.53	110	P	Pn	23 34 19.0	+7.3
KPJI	Karang Pucung	12.91	239	P	P	23 35 41.5	+6.4
FITZ	Fitzroy Crossi	18.22	163	ePn	P	23 36 32.7	-1.3
	4.8nm,0.8s						
FITZ	Fitzroy Crossi	18.22	163	P	P	23 36 33.1	-0.8
	0.1nm,0.3s,baz=334,slow=11,SNR=7.7						
FITZ				LR	LR	23 45 28.5	
	comp=Z,81nm,20.3s,baz=147,slow=44						
PSI	Prapat	21.37	279	LR	LR	23 45 12.6	
	comp=Z,98nm,18.9s,baz=263,slow=36						
WRAB	Tennant Creek	23.76	145	eP	P	23 37 30.2	-2.7
	16nm,1.0s						
WRA	Warramunga Arr	23.77	145	P	P	23 37 30.4	-2.6
WRA	Warramunga Arr	23.77	145	P	P	23 37 30.4	-2.6
	8.1nm,0.9s,baz=328,slow=10,SNR=29						
AS31	Alice Springs	26.57	151	eP	P	23 38 00.1	+1.6
ASAR	Alice Springs	26.57	151	P	P	23 37 57.5	-0.9
ASAR	Alice Springs	26.57	151	P	P	23 37 57.5	-0.9
	1.8nm,0.7s,baz=345,slow=15,SNR=13						
CMAR	Chiang Mai Arr	28.09	314	P	P	23 38 13.8	+1.5
CMAR	Chiang Mai Arr	28.09	314	P	P	23 38 13.8	+1.5
	1.4nm,0.4s,baz=134,slow=6.8,SNR=10						
GUMO	Guam	28.38	59	LR	LR	23 47 58.9	
	comp=Z,81nm,19.1s,baz=40,slow=33						
JNU	Nakatsue	35.09	16	LR	LR	23 53 25.5	
	comp=Z,42nm,18.9s,baz=230,slow=36						
KSAR	Wonju Array Be	38.57	10	P	P	23 39 43.1	+0.2
KSRS	Korea Array	38.59	10	P	P	23 39 43.1	0.0
	0.9nm,0.3s,baz=190,slow=9.3,SNR=6.0						
KSRS				LR	LR	23 54 49.6	
	comp=Z,32nm,20.4s,baz=347,slow=35						
USRK	Ussuriysk Arra	45.89	12	P	P	23 40 41.8	-0.7
	3.8nm,0.8s,baz=198,slow=7.2,SNR=9.3						
USRK				LR	LR	00 02 30.2	
	comp=Z,27nm,19.2s,baz=72,slow=40						
ASAJ	Asahikawa	48.89	22	eP	P	23 41 05.0	-0.8
ULN	Ulaanbaatar	49.60	349	eP	P	23 41 12.0	+0.6
	6.3nm,1.0s						
SONM	Songino Array	49.71	348	P	P	23 41 12.6	+0.4
SONM	Songino Array	49.71	348	P	P	23 41 12.6	+0.4
	2.7nm,0.8s,baz=168,slow=8.5,SNR=9.6						
MK31	Makanchi Array	57.63	330	eP	P	23 42 11.0	+1.0
MKAR	Makanchi Array	57.63	330	P	P	23 42 10.6	+0.5
MKAR	Makanchi Array	57.63	330	P	P	23 42 10.6	+0.5
	3.8nm,0.9s,baz=135,slow=8.4,SNR=18						
TKM2	Tokmak 2	58.86	323	eP	P	23 42 19.0	0.0
	6.7nm,1.1s						
KBL	Kabul	59.10	312	eP	P	23 42 20.5	-0.3
AAK	Ala-Archa	59.37	322	eP	P	23 42 22.9	+0.5
AAK	Ala-Archa	59.37	322	P	P	23 42 23.1	+0.6
	1.0nm,0.7s,baz=119,slow=19,SNR=3.9						
ZAA0	Zalesovo Array	61.70	337	eP	P	23 42 37.0	-0.8
ZALV	Zalesovo Beam	61.70	337	P	P	23 42 37.5	-0.4
ZALV	Zalesovo Beam	61.70	337	P	P	23 42 37.5	-0.4
	2.4nm,0.7s,baz=132,slow=6.2,SNR=10						
KURK	Kurchatov	62.07	332	eP	P	23 42 40.6	+0.1
	14nm,1.0s						
BVAR	Borovoye Array	67.51	330	P	P	23 43 16.0	+0.1
BVAR	Borovoye Array	67.51	330	P	P	23 43 16.0	+0.1
	3.3nm,0.9s,baz=134,slow=8.5,SNR=8.6						
ABKAR	Akbulak array	71.43	323	eP	P	23 43 39.8	-0.3
AKTO	Aktyubinsk	73.04	324	P	P	23 43 49.8	0.0
AKTO	Aktyubinsk	73.04	324	P	P	23 43 49.8	0.0
	2.8nm,0.7s,baz=108,slow=6.6,SNR=6.8						
KMBO	Kilima Mbogo	82.77	269	P	P	23 44 45.4	+0.6
KMBO	Kilima Mbogo	82.77	269	P	P	23 44 45.4	+0.6
	1.7nm,0.9s,baz=20,slow=3.3,SNR=5.0						
ASF	Jabal al Asfar	84.51	302	P	P	23 44 53.4	+0.2
ASF	Jabal al Asfar	84.51	302	P	P	23 44 53.4	+0.2
	3.2nm,0.8s,baz=90,slow=1.0,SNR=7.1						
MMAI	Mount Meron Ar	85.83	303	P	P	23 45 00.9	+1.1
MMAI	Mount Meron Ar	85.83	303	P	P	23 45 00.9	+1.1
	2.6nm,0.8s,baz=103,slow=3.1,SNR=4.4						
BRTR	Keskin Array B	87.61	310	P	P	23 45 07.7	-0.8
BRTR	Keskin Array B	87.61	310	P	P	23 45 07.7	-0.8
	1.9nm,1.0s,baz=103,slow=5.3,SNR=10						

*ISCJB **02** 23:32:58.3±0.3, 36°.46N±0°.02×70°.37E±0°.05, h204km, mb3.5/12, Error ellipse: s-maj=6.3km s-min=2.7km az=161.1*

*IDC **02** 23:33:00.4±2.7, 36°.42N×70°.29E, h222km±25km, mb3.4/13, mb1 3.6/17, mb1mx3.4/30, mbtmp3.4/17, MS3.5/1, Ms1 3.6/1, ms1mx2.3/33, Error ellipse: s-maj=15.4km s-min=12.9km az=20.0*

*NNC **02** 23:33:04.2±1.3, 36°.89N×70°.38E, h210km±9km, mb3.3, mpv4.7, Error ellipse: s-maj=10.2km s-min=8.8km az=25.0*

ISC 02 23:32:59.2±0.5, 36°.53N±0°.05×70°.42E±0°.06, h204km, n64, σ1s61/80, mb3.6/12, 8C-13D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.96	155	⇓P	Pn	23 33 50.3	+1.5
CEP				S	S	23 34 28.0	+1.1
CHCP	Chirah Chowk	3.69	140	⇓P	Pn	23 33 59.5	+2.1
THW	Thamme Wali	3.88	163	⇓P	Pn	23 34 00.5	+0.8
SARP	Sargodha	4.96	157	⇓P	Pn	23 34 13.6	+0.4
AML	Almayashu	6.14	23	P	Pn	23 34 30.0	+1.3
	SNR=457						
UCH	Uchtor	6.51	28	P	Pn	23 34 35.4	+1.9
	SNR=7.7						
KK31	Karatay Array	6.57	1	P	Pn	23 34 34.5	+0.7
	9.7nm,0.3s,baz=196,slow=14,SNR=576						
KK31				⇓S	S	23 35 46.1	-2.6
	10nm,0.3s						
EKS2	Erkin-Say	6.65	22	P	Pn	23 34 36.7	+1.7
	SNR=26						
KZA	Kyzart	6.69	33	P	Pn	23 34 37.1	+1.4
	SNR=40						
AAK	Ala-Archa	6.86	26	P	Pn	23 34 39.3	+1.6
	SNR=70						
AAK	Ala-Archa	6.86	26	P	Pn	23 34 39.2	+1.5
	13nm,0.3s,baz=220,slow=8.0,SNR=201						
AAK				S	S	23 35 54.9	-0.9
	5.1nm,0.3s,baz=223,slow=16,SNR=15						
KBK	Karagaybulak	7.05	28	P	Pn	23 34 42.2	+2.0
	SNR=14						
CHMS	Chumysh	7.27	26	P	Pn	23 34 44.2	+1.3
	SNR=22						
ULHL	Ulahol	7.27	36	P	Pn	23 34 45.2	+2.0
	SNR=13						
SDNR	Sundarnagar	7.39	131	eP	Pn	23 34 45.0	+0.4
SDNR				eS	S	23 36 05.0	-3.4
USP	Ospenovka	7.42	24	P	Pn	23 34 46.3	+1.4
	SNR=18						
TKM2	Tokmak 2	7.53	30	⇑P	Pn	23 34 47.7	+1.3
	39nm,0.7s						
TKM2				⇓S	S	23 36 10.1	-1.5
	27nm,0.9s						
TKM2	Tokmak 2	7.53	30	P	Pn	23 34 48.5	+2.0
	SNR=9.7						
SMLA	Simla	7.77	132	eP	Pn	23 34 49.5	0.0
SMLA				eS	S	23 36 14.3	-3.0
KNDC	Almaty	8.36	35	⇑P	Pn	23 34 58.7	+1.6
	87nm,0.9s						
KNDC				⇑S	S	23 36 30.2	-1.1
	23nm,0.7s						
DDI	Dehra Dun	8.88	132	eP	Pn	23 35 02.8	-1.2
DDI				eS	S	23 36 40.2	-3.7
KHET	Khetri	9.58	150	eP	Pn	23 35 12.3	-0.7
KHET				eS	S	23 36 52.9	-7.6
KHET				AML	AML	23 36 56.2	
	comp=N,182nm,0.4s						
KHET				AML	AML	23 36 56.6	
	comp=E,193nm,0.1s						
NDI	New Delhi	9.69	142	eP	Pn	23 35 11.0	-3.4
NDI				eS	S	23 36 53.0	-10
KUDL	Kundal	9.80	147	eP	Pn	23 35 14.4	-1.5
KUDL				eS	S	23 36 56.5	-9.2
KUDL				AML	AML	23 37 00.9	
	comp=E,35nm,0.4s						
KUDL				AML	AML	23 37 00.9	
	comp=N,16nm,0.4s						
AYAN	Aya Nagar	9.81	143	eP	Pn	23 35 14.7	-1.3
AYAN				ex	x	23 36 58.9	
AGRA	Agra	11.25	143	eP	Pn	23 35 35.2	+0.7
AGRA				ex	x	23 37 30.6	
AGRA				AML	AML	23 37 36.0	
	comp=E,74nm,0.4s						
AGRA				AML	AML	23 37 40.3	
	comp=N,84nm,0.2s						
PYUN	Piuthan	13.54	125	eP	Pn	23 36 02.7	-0.8
	comp=N,26nm,0.5s						
MK31	Makanchi Array	13.54	37	P	Pn	23 36 04.3	+1.0
	comp=N,1.3nm,0.5s,baz=229,slow=10,SNR=59						
MKAR	Makanchi Array	13.54	37	P	Pn	23 36 04.4	+1.2
	comp=N,0.5nm,0.3s,baz=223,slow=16,SNR=28						
DANN	Dangsing	13.89	122	eP	Pn	23 36 07.6	-0.4
	comp=N,21nm,0.5s						
KOLN	Koldanda	14.16	124	eP	Pn	23 36 11.0	-0.2
	comp=N,12nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AB31	Akbulak array	14.84	332	P	Pn	23 36 18.2	-0.9
	comp=N,2.6nm,0.3s,baz=155,slow=12,SNR=189						
AB31				⇓S	S	23 39 01.7	-1.9
	comp=N,1.8nm,0.5s,baz=152,slow=24,SNR=3.8						
DMN	Daman	15.28	121	eP	P	23 36 25.3	0.0
	comp=N,9.9nm,0.3s						
KKN	Kakani	15.29	121	eP	Pn	23 36 25.1	+0.1
KURK	Kurchatov	15.36	20	⇑P	Pn	23 36 25.1	-0.3
	comp=N,2.9nm,0.8s						
PKIN	Phulchoki	15.50	121	eP	P	23 36 28.8	+1.1
	comp=N,16nm,0.3s						
PKI	Pulchoki	15.51	121	eP	P	23 36 28.7	+0.8
GUN	Gumba	15.63	119	eP	P	23 36 29.1	-0.1
	comp=N,9.8nm,0.3s						
VOSK	Vostochnaya	16.20	1	⇑P	Pn	23 36 35.4	-0.1
	comp=N,4.9nm,0.6s						
VOSK				⇓S	S	23 39 31.3	-2.9
	comp=N,2.4nm,0.8s						
ZRNK	Zerenda	16.45	357	⇑P	Pn	23 36 39.1	+0.6
	comp=N,6.0nm,0.5s						
ZRNK				⇓S	S	23 39 37.0	-2.3
	comp=N,5.9nm,1.4s						
BVA0	Borovoye Array	16.50	360	⇓P	Pn	23 36 39.5	+0.4
	comp=N,0.4nm,0.4s,baz=161,slow=10,SNR=33						
BVA0				⇓S	S	23 39 37.4	-2.8
	comp=N,0.2nm,0.6s						
BVAR	Borovoye Array	16.50	360	P	Pn	23 36 39.6	+0.5
	comp=N,1.6nm,0.3s,baz=172,slow=12,SNR=29						
AKTO	Aktyubinsk	16.53	331	⇓P	P	23 36 38.7	+0.2
	comp=N,1.2nm,0.8s						
AKTO				⇑S	S	23 39 38.8	-2.1
	comp=N,1.0nm,1.1s						
AKTO	Aktyubinsk	16.53	331	P	Pn	23 36 39.1	-0.4
	comp=N,1.0nm,0.3s,baz=133,slow=9.9,SNR=20						
AKTO				S	S	23 39 38.9	-2.0
	comp=N,0.1nm,0.3s,baz=128,slow=19,SNR=2.6						
BRVK	Borovoye	16.53	360	⇓P	Pn	23 36 39.8	+0.3
	comp=N,7.6nm,0.6s						
BRVK				⇑S	S	23 39 38.1	-2.7
	comp=N,4.0nm,0.8s						
RAMN	Ramite	16.73	120	eP	Pn	23 36 42.9	+0.6
	comp=N,20nm,0.5s						
TAPN	Taplejung	17.27	117	eP	Pn	23 36 49.8	+1.0
	comp=N,7.9nm,0.3s						
ODAN	Odare	17.34	119	eP	Pn	23 36 51.1	+1.6
	comp=N,15nm,0.6s						
ZALV	Zalesovo Beam	20.09	25	P	P	23 37 18.3	+1.3
	comp=N,3.3nm,0.4s,baz=220,slow=11,SNR=25						
ZALV				S	S	23 40 50.0	-1.1
	comp=N,0.7nm,0.6s,baz=209,slow=18,SNR=3.1						
SONM	Songino Array	28.70	55	P	P	23 38 39.9	+2.5
	comp=N,1.1nm,0.6s,baz=264,slow=9.3,SNR=9.8						
BRTR	Keskin Array B	28.98	288	P	P	23 38 40.2	+0.3
	comp=N,0.3nm,0.6s,baz=97,slow=9.0,SNR=3.2						
CMAR	Chiang Mai Arr	30.88	118	P	P	23 38 57.5	+0.9
	comp=N,0.8nm,0.7s,baz=296,slow=9.0,SNR=4.8						
FINES	FINESS Array B	37.20	326	P	P	23 39 50.9	+0.4
	comp=N,1.3nm,0.6s,baz=99,slow=12,SNR=6.8						
ARCES	ARCESS Array B	40.94	338	P	P	23 40 21.5	+0.1
	comp=N,2.1nm,0.6s,baz=105,slow=8.9,SNR=12						
NB2	NORSAR Subarra	44.08	323	P	P	23 40 46.6	-0.2
	comp=Z,0.7nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.08	323	P	P	23 40 46.2	-0.6
	comp=Z,1.2nm,0.7s,baz=97,slow=7.8,SNR=5.3						
NOA				pP	pP	23 41 34.4	+3.8
	comp=Z,0.8nm,0.7s,baz=96,slow=8.0,SNR=2.5						
KMBO	Kilima Mbogo	48.51	227	P	P	23 41 21.6	-0.3
	comp=Z,1.0nm,0.5s,baz=38,slow=6.8,SNR=6.3						
ESDC	Sonseca Array	57.03	298	LR	LR	00 12 30.1	
	comp=Z,36nm,18.7s,baz=170,slow=42						
TORD	Torodi Ar. Bea	65.25	268	P	P	23 43 16.7	-2.6
	comp=Z,0.6nm,0.4s,baz=48,slow=6.3,SNR=23						
ILAR	Eielson Array	74.88	16	P	P	23 44 16.7	-0.3
	comp=Z,0.9nm,0.8s,baz=297,slow=5.2,SNR=8.5						
YKA	Yellowknife Ar	81.24	2	P	P	23 44 52.0	+0.1
	comp=Z,1.4nm,0.7s,baz=348,slow=5.4,SNR=34						
YKA				pP	pP	23 45 44.7	+3.4
	comp=Z,1.1nm,0.6s,baz=350,slow=5.5,SNR=15						
WRA	Warramunga Arr	82.40	122	P	P	23 44 56.7	-1.9
	comp=Z,0.8nm,0.7s,baz=325,slow=4.8,SNR=7.3						
ASAR	Alice Springs	84.65	125	P	P	23 45 08.5	-1.6
	comp=Z,0.9nm,0.7s,baz=318,slow=5.3,SNR=9.8						
QSPA	South Pole Qui	126.32	180	PKP	PKPdf	23 51 35.7	-0.9
	comp=Z,0.9nm,0.8s,baz=328,slow=0.8,SNR=3.8						

WEL 02 23:35:02.3±1.1, 47°.48S×165°.67E, h33km, ML4.1/9, 2D, Error ellipse: s-maj=10.4km s-min=7.2km az=90.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PYZ	Puysegur Point	1.48	28	⇓PN	Pn	23 35 25.3	-1.3
PYZ				eSN	Sn	23 35 44.4	-0.5
APZ	The Paps	1.71	69	PN	Pn	23 35 28.5	-1.3
APZ				SN	Sn	23 35 48.6	-1.9
WHZ	Wether Hill Ro	2.23	45	PN	Pn	23 35 36.3	-0.6
WHZ				eSN	Sn	23 36 02.1	-1.1
DCZ	Deep Cove	2.25	28	PN	Pn	23 35 37.5	+0.4
SYZ	Scrubby Hill	2.55	70	⇓PN	Pn	23 35 40.9	-0.4
MLZ	Mavora Lakes	2.75	40	PN	Pn	23 35 43.6	-0.4
TUZ	Tuapeka	3.12	62	PN	Pn	23 35 48.8	-0.4
MSZ	Milford Sound	3.22	30	ePN	Pn	23 35 52.0	+1.5
EAZ	Earnscleugh	3.38	50	PN	Pn	23 35 52.4	-0.2
WKZ	Wanaka	3.53	42	ePN	Pn	23 35 55.1	+0.4
JCZ	Jackson Bay	4.03	34	PN	Pn	23 36 03.0	+1.2
ODZ	Otahua Downs	4.22	57	ePN	Pn	23 36 02.1	-2.2
LBZ	Lake Benmore	4.41	47	ePN	Pn	23 36 05.7	-1.3
FOZ	Fox Glacier	4.83	37	PN	Pn	23 36 15.2	+2.6
WVZ	Waitaha Valley	5.67	41	ePN	Pn	23 36 25.3	+1.2

IDC 02 23:38:34.8±0.8, 54°.32S×133°.18W, h0km, mb4.0/5, mb1 4.3/5, mb1mx4.0/14, mbtmp4.0/5, MS4.1/16, Ms1 4.1/16, ms1mx4.0/24, Error ellipse: s-maj=36.7km s-min=25.3km az=153.0
NEIC 02 23:38:36.2±0.7, 54°.32S×133°.26W, h10km, mb4.5/2, Error ellipse: s-maj=32.9km s-min=23.2km az=154.0
ISC 02 23:38:37.1±0.7, 54°.5S±0°.2×133°.6W±0°.2, h10km, n49, σ1s.93/29, mb4.3/6, MS4.2/16, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RKT	Rikitea	31.32	358	eLR	LR	23 52 58.7	
	864nm,27.2s						
RKT				eT	T	00 17 05.9	
	11nm,0.3s						
TBI	Tubuai	33.28	333	eLR	LR	23 53 40.2	
	829nm,28.5s,baz=163						
TBI				eT	T	00 19 44.1	
	118nm,0.4s						
PMSA	Palmer Station	34.80	135	LR	LR	23 55 41.2	
	comp=Z,289nm,21.3s,baz=126,slow=30						
QSPA	South Pole Qui	35.70	180	P	P	23 45 36.5	+1.1
QSPA	South Pole Qui	35.70	180	P	P	23 45 36.5	+1.1
	0.4nm,0.3s,baz=74,slow=4.1,SNR=1.8						
QSPA				LR	LR	23 57 18.5	
	comp=Z,216nm,21.2s,baz=74,slow=31						
USHA	Ushuaia	36.46	118	LR	LR	23 56 27.0	
	comp=Z,270nm,21.8s,baz=315,slow=30						
URZ	Urewera	36.85	275	LR	LR	23 57 29.6	
	comp=Z,247nm,18.4s,baz=141,slow=31						
RPZ	Rata Peaks	36.91	264	LR	LR	23 56 48.0	
	comp=Z,388nm,18.6s,baz=182,slow=29						
PPT2	Papeete2	38.82	335	eS	S	23 52 02.2	+2.4
	96nm,27.5s						
PPT2				eLR	LR	23 56 27.8	
	833nm,25.5s,baz=172						
PPT	Papeete	38.84	335	LR	LR	23 58 48.6	
	comp=Z,389nm,18.1s,baz=182,slow=31						
VAH	Vaihoa	40.65	339	eT	T	00 28 57.8	
	16nm,0.3s						
PLCA	Paso Flores	43.19	98	LR	LR	23 59 48.8	
	comp=Z,396nm,21.1s,baz=25,slow=30						
DZM	Mont Dzumac	54.96	281	eLR	LR	00 04 09.2	
	230nm,27.4s						
DZM	Mont Dzumac	54.96	281	LR	LR	00 06 54.0	
	comp=Z,103nm,18.4s,baz=217,slow=31						
MAW	Mawson	57.63	187	LR	LR	00 10 41.8	
	comp=Z,165nm,19.2s,baz=251,slow=33						
CPUP	Villa Florida	61.13	96	LR	LR	00 11 24.8	
	comp=Z,186nm,18.7s,baz=194,slow=32						
LPAZ	La Paz	62.65	80	eP	P	23 48 58.2	-4.3
	4.9nm,1.2s						
LPAZ	La Paz	62.65	80	P	P	23 48 58.3	-4.3
	1.9nm,1.1s,baz=261,slow=3.0,SNR=3.6						
LPAZ				LR	LR	00 08 00.4	
	comp=Z,43nm,19.6s,baz=19,slow=28						
ASAR	Alice Springs	72.51	254	P	P	23 50 04.8	+0.7
ASAR	Alice Springs	72.51	254	P	P	23 50 04.8	+0.7
	2.2nm,0.8s,baz=135,slow=6.2,SNR=20						
NWAO	Narrogin (SRO)	73.87	236	LR	LR	00 14 42.0	
	comp=Z,158nm,19.9s,baz=5.0,slow=29						
BDFB	Brasilia	74.86	96	LR	LR	00 19 20.1	
	comp=Z,98nm,20.9s,baz=53,slow=33						
WRA	Warramunga Arr	75.21	256	P	P	23 50 20.6	+0.7
WRA	Warramunga Arr	75.21	256	P	P	23 50 20.6	+0.7
	2.0nm,0.8s,baz=140,slow=5.3,SNR=16						
WRAB	Tennant Creek	75.21	257	eP	P	23 50 18.1	-1.8
	2.7nm,0.7s						
FITZ	Fitzroy Crossi	81.56	251	LR	LR	00 22 49.5	
	comp=Z,233nm,20.5s,baz=36,slow=32						
TXAR	Lajitas Array	87.36	26	P	P	23 51 23.2	-0.8
TXAR	Lajitas Array	87.36	26	P	P	23 51 23.2	-0.8
	0.5nm,0.7s,baz=194,slow=7.2,SNR=4.9						
BOSA	Boshof	95.27	161	LR	LR	00 31 13.8	
	comp=Z,122nm,18.7s,baz=166,slow=33						
PDAR	Pinedale Array	99.01	18	LR	LR	00 29 04.5	
	comp=Z,74nm,20.3s,baz=245,slow=31						
ILAR	Eielson Array	119.35	353	PKP	PKPdf	23 57 24.9	-0.2
ILAR	Eielson Array	119.35	353	PKP	PKPdf	23 57 24.9	-0.2
	0.4nm,0.7s,baz=203,slow=2.8,SNR=4.9						
SONM	Songino Array	142.83	285	PKP	PKPdf	23 58 06.7	-3.2
SONM	Songino Array	142.83	285	PKP	PKPdf	23 58 06.7	-3.2
	0.6nm,0.9s,baz=105,slow=3.4,SNR=3.1						
QUIF	Quistinic	148.79	81	ePKIKP	PKPab	23 58 32.0	+4.3
	11nm,0.8s						
SGMF	Saint Gilles	149.31	81	ePKIKP	PKPab	23 58 32.5	+2.7
LFF	La Frestale	149.45	89	ePKIKP	PKPab	23 58 32.8	+2.4
MFF	Saint Martin d	149.85	86	ePKIKP	PKPab	23 58 34.4	+2.3
	29nm,1.4s						
RJF	Les Rejaudoux	150.11	89	ePKIKP	PKPab	23 58 34.3	+1.1
	5.0nm,0.8s						
CAF	Calviac	150.22	90	ePKIKP	PKPab	23 58 34.8	+1.1
	6.0nm,0.9s						
GRR	Gorron	150.36	82	ePKIKP	PKPab	23 58 34.6	+0.5
	7.5nm,0.9s						
TCF	Toulx Ste Croi	151.06	88	ePKIKP	PKPab	23 58 36.8	-0.3
	18nm,1.2s						
EKA	Eskdalemuir Ar	151.95	68	PKPbc	PKPbc	23 58 30.9	-0.2
EKA	Eskdalemuir Ar	151.95	68	PKPbc	PKPbc	23 58 30.9	-0.2
	1.4nm,0.7s,baz=255,slow=2.5,SNR=5.6						
SSF	Saint Saulge	152.22	88	ePKIKP	PKPab	23 58 37.5	-4.4
MKAR	Makanchi Array	156.21	266	PKPab	PKPab	23 58 59.2	+0.3
MKAR	Makanchi Array	156.21	266	PKPab	PKPab	23 58 59.2	+0.3
	0.7nm,0.8s,baz=115,slow=2.9,SNR=6.3						
ZALV	Zalesovo Beam	157.72	284	PKPab	PKPab	23 59 04.2	-1.0
ZALV	Zalesovo Beam	157.72	284	PKPab	PKPab	23 59 04.2	-1.0
	0.5nm,0.6s,baz=126,slow=4.0,SNR=5.8						

ISCJB 02 23:43:50.4±0.5, 36°.20N±0°.04×139°.80E±0°.06, h68km±3km, mb3.6/13, Error ellipse: s-maj=8.4km s-min=6.5km az=159.6
JMA 02 23:43:52.1±0.1, 36°.18N×139°.80E, h55km±1km, M3.7 Broadband fault plane solution: P waves. NP1: φs43.00000°, δ56.00000°, λ98.00000°. NP2:φs208.00000°, δ34.00000°, λ78.00000°. Principal axes: T Plg77.0000°, Azm339.0000°; N Plg7.0000°, Azm218.0000°; P Plg11.0000°, Azm127.0000°;
JMA Felt II J1.
IDC 02 23:43:52.1±1.7, 36°.16N×139°.76E, h68km±14km, mb3.4/13, mb1 3.5/15, mb1mx3.5/28, mbtmp3.4/15, MS3.1/1, Ms1 3.1/1, ms1mx2.2/27 Error ellipse: s-maj=23.3km s-min=7.7km az=63.0
NIED 02 23:44:00, 36°.20N×139°.80E, h50km, Mw3.8 Best double couple: Mo5.82000×10^14 NP1:φs41.00000°, δ61.00000°, λ68.00000°. NP2:φs261.00000°, δ36.00000°, λ124.00000°.
ISC 02 23:43:51.7±0.8, 36°.21N±0°.05×139°.79E±0°.05, h62km±6km, n23, σ0s.90/30, mb3.7/13, 1C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.33	87	⇑P	Pn	23 44 01.9	-0.3
JYT				S	Sn	23 44 09.2	-0.7
JAG	Ashikaga	0.34	309	⇓P	Pn	23 44 02.4	0.0
JAG				S	Sn	23 44 09.5	-0.6
JKT	Katashina	0.70	322	⇓P	Pn	23 44 06.2	0.0
JKT				S	Sn	23 44 16.9	+0.1
JRY	Ryogami san	0.74	255	⇓P	Pn	23 44 06.7	+0.1
JRY				S	Sn	23 44 17.1	-0.4
JOD2	Odawara 2	1.10	211	P	Pn	23 44 11.4	+0.2
JOD2				S	Sn	23 44 25.6	-0.1
MJAR	Matsushiro Arr	1.31	285	P	Pn	23 44 13.9	-0.1
	90nm,0.3s,baz=81,slow=9.3,SNR=575						
MJAR				S	Sn	23 44 30.6	-0.1
	40nm,0.3s,baz=90,slow=22,SNR=11						
MAT	Matsushiro	1.32	285	P	Pn	23 44 14.0	0.0
MAT				S	Sn	23 44 28.5	-2.2
JHJ	Hachijo jima 2	3.08	180	P	Pn	23 44 38.8	+0.8
	66nm,0.3s,baz=223,slow=17,SNR=4.5						
JHJ				S	Sn	23 45 13.1	-0.6
	40nm,0.3s,baz=232,slow=23,SNR=4.0						
KSRS	Korea Array	9.59	281	P	Pn	23 46 11.7	+4.7
	0.4nm,0.3s,baz=94,slow=14,SNR=6.0						
USRK	Ussuriysk Arra	9.95	326	P	Pn	23 46 13.8	+2.0
	0.2nm,0.3s,baz=150,slow=12,SNR=5.5						
SONM	Songino Array	27.18	306	P	P	23 49 29.1	-0.2
	0.2nm,0.4s,baz=106,slow=9.4,SNR=2.5						
ZALV	Zalesovo Beam	41.51	313	P	P	23 51 32.7	+0.2
	1.5nm,0.5s,baz=94,slow=7.6,SNR=12						
ZALV				LR	LR	00 09 32.6	
	comp=Z,22nm,19.4s,baz=61,slow=37						
MKAR	Makanchi Array	43.45	303	P	P	23 51 48.4	-0.1
	0.5nm,0.6s,baz=81,slow=8.4,SNR=8.3						
BVAR	Borovoye Array	50.16	313	P	P	23 52 41.6	+0.9
	0.6nm,0.5s,baz=77,slow=9.3,SNR=5.9						
ILAR	Eielson Array	50.89	32	P	P	23 52 47.5	+1.6
	0.4nm,0.8s,baz=272,slow=6.9,SNR=4.4						
FITZ	Fitzroy Crossi	55.65	196	P	P	23 53 21.0	-0.4
	0.5nm,0.5s,baz=15,slow=12,SNR=4.8						
WRA	Warramunga Arr	56.09	186	P	P	23 53 23.2	-1.3
	0.7nm,0.5s,baz=0.9,slow=7.6,SNR=10						
ASAR	Alice Springs	59.81	186	P	P	23 53 50.9	+0.3
	0.3nm,0.4s,baz=16,slow=11,SNR=4.7						
YKA	Yellowknife Ar	65.17	30	P	P	23 54 24.6	-1.2
	0.2nm,0.7s,baz=304,slow=6.8,SNR=5.3						
FINES	FINESS Array B	68.92	332	P	P	23 54 48.6	-1.1
	0.9nm,0.7s,baz=42,slow=5.9,SNR=4.2						
AKASG	Malin Array Be	74.14	322	P	P	23 55 19.9	-1.3
	1.1nm,0.6s,baz=50,slow=5.2,SNR=5.9						
NOA	NORSAR Array B	74.43	337	P	P	23 55 23.2	+0.3
	1.0nm,0.9s,baz=49,slow=5.7,SNR=2.9						
BRTR	Keskin Array B	78.41	311	P	P	23 55 46.2	+0.4
	0.8nm,1.0s,baz=76,slow=6.1,SNR=2.9						

MEX 02 23:49:53.8±0.7, 16°.28N×99°.04W, h16km±8km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.88	83	eP	Pb	23 50 08.1	-2.7
PNIG				i S	Sb	23 50 18.6	-3.8
ACX	Acapulco	0.98	307	i P	Pb	23 50 09.9	-2.6
ACX				i S	Sb	23 50 22.2	-3.1
CAIG	El Cayaco	1.41	303	eP	Pn	23 50 15.2	-3.6
CAIG				i S	Sn	23 50 31.4	-5.6
UTMO	Huajuapan	1.94	37	eP	Pn	23 50 22.5	-3.9
UTMO				i S	Sn	23 50 45.6	-5.2
VHO	Vista Hermosa	2.34	70	i P	Pn	23 50 28.5	-3.4
VHO				i S	Sn	23 50 56.1	-4.6
ARIG	Puente Sto Nin	2.35	328	i P	Pn	23 50 29.6	-2.3
ARIG				i S	Sn	23 50 55.3	-5.2
YAIG	Yautepec	2.57	359	eP	Pn	23 50 32.2	-2.8
YAIG				i S	Sn	23 51 02.5	-3.6
ZIIG	Zihuatanejo	2.67	300	i P	Pn	23 50 32.9	-3.3
ZIIG				i S	Sn	23 51 05.2	-3.1
HUIG	Huatulco	2.86	100	i P	Pn	23 50 37.6	-1.2
HUIG				i S	Sn	23 51 08.4	-4.6

IDC 02 23:51:11.1±2.0, 3°.38N×126°.90E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/23, mbtmp3.5/4, Error ellipse: s-maj=122.0km s-min=24.0km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.38	183	P	P	23 56 01.0	+0.6
	1.0nm,0.9s,baz=3.6,slow=16,SNR=2.4						
WRA	Warramunga Arr	24.30	163	P	P	23 56 30.0	-0.5
	1.1nm,0.5s,baz=341,slow=10,SNR=6.7						
ASAR	Alice Springs	27.73	166	P	P	23 57 01.8	+0.2
	0.3nm,0.5s,baz=341,slow=7.2,SNR=3.4						
MKAR	Makanchi Array	57.94	325	P	P	00 01 05.1	-0.2
	0.2nm,0.4s,baz=121,slow=7.9,SNR=7.5						

IDC 03 00:00:37.8±4.2, 31°.64N×142°.11E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.5/25, mbtmp3.4/6, ML3.2/1, Error ellipse: s-maj=101.0km s-min=30.8km az=180.0
JMA 03 00:00:40.7±0.7, 31°.99N×142°.05E, h37km, M3.7
ISC 03 00:00:44.8±1.4, 32°.1N±0°.1×142°.0E±0°.1, h29km, n13, σ1s.31/14, mb3.6/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.09	299	P	Pn	00 01 16.3	-1.7
BSO2	Boso 2	2.83	339	eS	Sn	00 02 01.8	+1.1
BSO3	Boso 3	2.95	335	P	Pn	00 01 28.5	-1.0
JYN	Shimob	4.43	320	P	Pn	00 01 50.6	+0.4
JRY	Ryogami san	4.66	327	P	Pn	00 01 53.8	+0.5
JAG	Ashikaga	4.79	335	P	Pn	00 01 54.7	-0.3
JAG				eS	Sn	00 02 49.3	-0.2
MJAR	Matsushiro Arr	5.41	326	Pn	Pn	00 02 04.6	+1.0
	0.7nm,0.3s,baz=150,slow=11,SNR=4.4						
JFT	Otama	5.56	346	eS	Sn	00 03 06.3	-2.2
SONM	Songino Array	31.15	311	P	P	00 07 03.7	+2.5
	0.5nm,0.6s,baz=99,slow=8.9,SNR=3.2						
MKAR	Makanchi Array	47.27	306	P	P	00 09 14.6	-0.9
	0.3nm,0.4s,baz=85,slow=9.5,SNR=16						
ILAR	Eielson Array	53.43	30	P	P	00 10 01.4	-0.4
	0.6nm,0.8s,baz=255,slow=5.7,SNR=5.5						
BVAR	Borovoye Array	54.31	315	P	P	00 10 07.9	-0.5
	0.3nm,0.5s,baz=77,slow=6.4,SNR=4.6						
YKA	Yellowknife Ar	67.83	29	P	P	00 11 40.0	+0.1
	0.2nm,0.8s,baz=300,slow=6.3,SNR=3.9						

ISCJB 03 00:02:12.9±1.1, 23°.9S±0°.2×180°.0E±0°.1, h526km, mb4.0/8, Error ellipse: s-maj=24.3km s-min=16.4km az=19.0
IDC 03 00:02:14.0±7.9, 23°.73S×179°.91W, h540km±90km, mb3.5/8, mb1 3.7/8, mb1mx3.4/20, mbtmp3.5/8, Error ellipse: s-maj=44.4km s-min=17.3km az=49.0
AUST 03 00:02:19.1±7.1, 22°.89S×179°.73E, h586km±1km, Error ellipse: s-maj=5.8km s-min=2.1km az=268.0
ISC 03 00:02:14.4±0.8, 24°.0S±0°.2×179°.98E±0°.10, h526km, n21, σ1s.39/21, mb4.2/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	Niue	10.57	65	S	S	00 06 39.0	+2.8
	baz=10,SNR=3.5						
RPZ	Rata Peaks	21.03	198	P	P	00 06 21.5	+0.7
	3.7nm,0.6s,baz=20,slow=5.7,SNR=4.5						
EIDS	Eidsvold	26.28	261	P	P	00 07 08.4	+0.6
	baz=26,SNR=5.4						
RMQ	Roma	28.32	258	P	P	00 07 27.6	+1.8
	baz=28,SNR=7.1						
RMQ				S	S	00 11 37.7	+2.4
	baz=28,SNR=7.8						
CMSA	Cobar Meteorol	31.18	248	P	P	00 07 51.1	+0.7
	baz=31,SNR=8.1						
CTA	Charters Tower	31.46	270	P	P	00 07 53.1	+0.2
	8.8nm,0.5s,baz=95,slow=11,SNR=19						
QLP	Quilpie	32.37	258	P	P	00 08 01.1	+0.5
	baz=32,SNR=5.4						
BBOO	Buckleboo	39.41	247	P	P	00 08 58.2	-0.6
	baz=40,SNR=7.8						
ASAR	Alice Springs	42.01	261	P	P	00 09 19.2	-0.5
	7.2nm,0.8s,baz=95,slow=7.9,SNR=51						
WRA	Warramunga Arr	42.38	266	P	P	00 09 21.4	-1.3
	7.6nm,0.6s,baz=102,slow=8.1,SNR=50						
FORT	Forrest	46.27	250	P	P	00 09 51.6	-0.9
	baz=46,SNR=16						
FITZ	Fitzroy Crossi	50.81	266	P	P	00 10 26.0	-0.5
	5.0nm,0.8s,baz=115,slow=6.4,SNR=23						
FITZ	Fitzroy Crossi	50.81	266	P	P	00 10 25.9	-0.5
	baz=51,SNR=8.1						
PALU	Palau	54.22	299	S	S	00 17 58.8	+10
	baz=54,SNR=5.9						
VNDA	Vanda	54.32	185	P	P	00 10 51.1	+0.5
	1.1nm,0.8s,baz=6.1,slow=8.1,SNR=9.1						
KLBR	Kellerberrin	54.95	247	P	P	00 10 55.2	-0.7
	baz=55,SNR=6.4						
MEEK	Meekatharra	55.08	253	P	P	00 10 55.8	-1.1
	baz=55,SNR=3.8						
MORW	Morawa	56.84	250	P	P	00 11 08.0	-1.0
	baz=57,SNR=7.3						
PCI	Palu	62.50	282	P	P	00 11 48.4	+1.4
	baz=62,SNR=15						
QSPA	South Pole Qui	66.12	180	P	P	00 12 09.0	-0.2
	7.0nm,1.0s,baz=34,slow=4.2,SNR=16						
TXAR	Lajitas Array	90.48	58	P	P	00 14 17.6	-2.7
	0.5nm,0.7s,baz=224,slow=4.8,SNR=4.4						

MEX 03 00:04:25.1±0.4, 16°.39N×98°.98W, h22km±29km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.82	90	i P	Pb	00 04 38.0	-2.6
PNIG				eS	Sb	00 04 48.3	-3.0
ACX	Acapulco	0.97	299	i P	Pb	00 04 40.9	-2.3
ACX				eS	Sb	00 04 52.8	-2.7
CAIG	El Cayaco	1.40	298	i P	Pn	00 04 46.5	-2.8
CAIG				eS	Sn	00 05 02.4	-4.7
MEIG	Mezcala	1.64	338	i P	Pn	00 04 49.8	-3.0
MEIG				eS	Sn	00 05 09.2	-4.1
UTMO	Huajuapan	1.82	38	i P	Pn	00 04 52.8	-2.6
UTMO				eS	Sn	00 05 13.7	-4.3
VHO	Vista Hermosa	2.25	72	i P	Pn	00 05 01.0	-0.4
VHO				i S	Sn	00 05 25.1	-3.6
ARIG	Puente Sto Nin	2.29	325	i P	Pn	00 04 60.0	-1.6
ARIG				eS	Sn	00 05 26.0	-3.1
YAIG	Yautepec	2.46	358	i P	Pn	00 05 01.6	-2.5
YAIG				eS	Sn	00 05 30.4	-3.2
HUIG	Huatulco	2.83	102	i P	Pn	00 05 07.1	-1.9
HUIG				i S	Sn	00 05 38.7	-3.8

BJI 03 00:06:27.2, 2°.69N×127°.18E, h35km, mB5.0/26, mb4.8/33, Ms4.7/24, Ms7 4.4/25
IDC 03 00:06:28.9±0.6, 3°.36N×126°.90E, h0km, mb4.3/19, mb1 4.4/19, mb1mx4.3/27, mbtmp4.3/19, MS3.8/5, Ms1 3.8/5, ms1mx3.3/37, Error ellipse: s-maj=32.0km s-min=12.7km az=73.0
ISCJB 03 00:06:32.5±0.2, 3°.46N±0°.03×127°.08E±0°.04, h33km, mb4.6/46, MS4.2/14, Error ellipse: s-maj=6.6km s-min=3.5km az=161.0
NEIC 03 00:06:33.7±0.4, 3°.35N×126°.95E, h35km, mb4.9/16, Error ellipse: s-maj=19.2km s-min=6.5km az=73.0
AUST 03 00:06:35.4, 3°.50N×127°.00E, h60km
DJA 03 00:06:39.1±0.4, 3°N±3°×12°7E±°, h10km, M4.7/7, mb5.0/5, mB5.1/3, MLv4.6/7, Mw(mB)4.4/3
ISC 03 00:06:34.7±0.4, 3°.40N±0°.03×127°.12E±0°.05, h33km±1km, n104, σ2s.02/154, mb4.7/46, MS4.4/14, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	2.62	175	P	Pn	00 07 15.4	+0.6
TNTI				S	Sb	00 07 49.5	-3.4
MNI	Manado	3.00	230	P	Pn	00 07 21.5	+1.6
MNI				S	Sb	00 08 01.2	-2.4
DAV	Davao City (W)	3.95	337	ePn	Pn	00 07 31.7	-1.3
DAV				Sn	Sb	00 08 26.8	-4.4
DAV	Davao City (W)	3.95	337	P	Pb	00 07 46.3	+2.6
DAV	Davao City (W)	3.95	337	Pn	Pn	00 07 33.7	+0.7
	37nm,0.3s,baz=68,slow=19,SNR=2.5						
DAV				Sn	Sb	00 08 26.7	-4.4
	115nm,0.3s,baz=241,slow=10,SNR=3.2						
LBMI	Labuha	4.03	175	P	Pn	00 07 36.0	+1.9
LBMI				S	Sn	00 08 23.8	+3.6
CTBH	Cotabato--PC H	4.75	323	⇓iP	Pn	00 07 42.9	-1.2
BUKP	Musuan	4.90	335	eP	Pn	00 07 47.0	+0.9
BUKP				eS	Sn	00 08 31.4	-10
PAGZ	Pagadian	5.78	320	eP	Pn	00 07 58.1	+0.1
PAGZ				eS	Sn	00 08 06.6	-57
SWI	Sorong	5.92	136	P	Pn	00 08 01.9	+1.8
	116nm,1.0s,2μm0.4nm						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SWI				S	**Sn**	**00 09 09.9**	**+3.0**
	116nm,1.0s,2µm0.4nm						
SWI	**Sorong**	**5.92**	**136**	P	**Pn**	**00 08 02.3**	**+2.2**
	baz=6.1,SNR=5.0						
MRSI	**Marisa**	**5.94**	**241**	P	**Pn**	**00 08 01.7**	**+1.4**
	80nm,0.6s,904nm0.3nm						
LUWI	**Luwuk**	**6.20**	**225**	P	Pn	00 08 09.6	+5.7
	199nm,1.0s,2µm0.7nm						
PALU	**Palau**	**8.30**	**62**	P	**Pn**	**00 08 35.0**	**+2.2**
	baz=8.4,SNR=4.4						
PCI	**Palu**	**8.45**	**240**	P	Pb	00 08 52.0	-8.2
	baz=8.4,SNR=11						
PCI				S	**Sn**	**00 10 11.5**	**+2.4**
	baz=8.4,SNR=4.5						
KDI	**Kendari**	**8.59**	**212**	P	Pn	00 08 44.1	+7.4
BAKI	**Biak**	**10.07**	**117**	P	Pn	00 09 02.1	+5.0
	96nm,1.1s						
TLE	**Tual**	**10.59**	**148**	P	Pn	00 09 08.4	+4.2
JAY	**Jayapura**	**14.79**	**113**	P	**P**	**00 10 08.3**	**+1.0**
	baz=15,SNR=4.6						
MTN	**Manton Dam**	**16.62**	**166**	P	**Pn**	**00 10 24.9**	**-0.4**
	baz=17,SNR=4.5						
GUMO	**Guam**	**20.24**	**59**	LR	LR	00 18 16.9	
	comp=Z,145nm,19.6s,baz=293,slow=35						
SSLB	**Suanglung**	**21.12**	**344**	*e*P	**P**	**00 11 14.5**	**-2.3**
	90nm,1.7s						
FITZ	**Fitzroy Crossi**	**21.42**	**184**	*e*P	**P**	**00 11 17.9**	**-2.0**
FITZ	**Fitzroy Crossi**	**21.42**	**184**	P	**P**	**00 11 18.4**	**-1.5**
	4.1nm,0.4s,baz=28,slow=8.8,SNR=23						
QIZ	**Qiongzhong**	**22.95**	**314**	P	**P**	**00 11 35.2**	**-1.1**
QIZ				pP	**pP**	**00 11 43.3**	**-1.9**
QIZ				sP	**sP**	**00 11 47.0**	**-2.4**
QIZ				S	**S**	**00 15 44.1**	**-0.3**
QIZ				pmax	pmax		
	comp=Z,22nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,300nm,4.7s						
WRAB	**Tennant Creek**	**24.25**	**163**	*e*P	**P**	**00 11 46.5**	**-2.3**
	comp=Z,20nm,0.7s						
WRA	**Warramunga Arr**	**24.26**	**163**	P	**P**	**00 11 46.8**	**-2.1**
WRA	**Warramunga Arr**	**24.26**	**163**	P	**P**	**00 11 46.8**	**-2.1**
	comp=Z,9.3nm,0.5s,baz=342,slow=10,SNR=43						
QIS	**Mount Isa**	**26.78**	**153**	P	**P**	**00 12 11.1**	**-0.6**
	baz=27,SNR=5.6						
AS31	**Alice Springs**	**27.70**	**167**	*e*P	**P**	**00 12 18.1**	**-1.9**
ASAR	**Alice Springs**	**27.70**	**167**	P	**P**	**00 12 18.2**	**-1.8**
ASAR				PcP	**PcP**	**00 15 36.4**	**-0.3**
ASAR				S	**S**	**00 17 07.2**	**+6.8**
ASAR	**Alice Springs**	**27.70**	**167**	P	**P**	**00 12 18.2**	**-1.8**
	comp=Z,2.4nm,0.5s,baz=341,slow=6.6,SNR=21						
ASAR				PcP	**PcP**	**00 15 36.4**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=343,slow=2.7,SNR=5.4						
ASAR				S	**S**	**00 17 07.2**	**+6.8**
	comp=Z,1.0nm,0.9s,baz=348,slow=18,SNR=4.2						
NJ2	**Nanjing**	**29.54**	**346**	*e*P	**P**	**00 12 35.6**	**-0.6**
NJ2				pP	**pP**	**00 12 44.3**	**-1.5**
NJ2				sP	**sP**	**00 12 48.3**	**-1.5**
NJ2				S	**S**	**00 17 31.0**	**+2.0**
NJ2				sS	**sS**	**00 17 46.0**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,450nm,5.2s						
NJ2				LR	LR		
	comp=N,210nm,11.3s						
NJ2				LR	LR		
	comp=E,310nm,12.6s						
NJ2				LR	LR		
	comp=Z,530nm,13.7s						
WHN	**Wuhan**	**29.57**	**337**	P	**P**	**00 12 37.0**	**+0.4**
WHN				*e*S	**S**	**00 17 34.9**	**+5.4**
WHN				LR	LR		
	comp=Z,850nm,15.4s						
GYA	**Guiyang**	**30.17**	**321**	P	**P**	**00 12 42.8**	**+0.7**
GYA				pP	**pP**	**00 12 51.6**	**0.0**
GYA				PP	**PnPn**	**00 13 42.5**	**+2.3**
GYA				PcP	**PcP**	**00 15 42.0**	**-0.9**
GYA				S	**S**	**00 17 38.9**	**-0.4**
GYA				sS	**sS**	**00 17 56.4**	**+1.3**
GYA				SS	**ScP**	**00 19 20.0**	**-3.0**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.7s						
GYA				LR	LR		
	comp=N,660nm,17.5s						
GYA				LR	LR		
	comp=E,610nm,18.7s						
GYA				LR	LR		
	comp=Z,780nm,17.1s						
MEEK	**Meekatharra**	**30.98**	**195**	P	**P**	**00 12 48.3**	**-0.7**
	baz=31,SNR=3.7						
CMAR	**Chiang Mai Arr**	**31.37**	**301**	P	**P**	**00 12 50.9**	**-1.8**
CMAR	**Chiang Mai Arr**	**31.37**	**301**	P	**P**	**00 12 50.9**	**-1.8**
	comp=Z,2.9nm,0.6s,baz=120,slow=7.4,SNR=15						
CHTO	**Chiang Mai**	**31.52**	**301**	*e*P	**P**	**00 12 52.8**	**-1.2**
	comp=Z,5.3nm,0.8s						
KMI	**Kunming**	**31.89**	**315**	P	**P**	**00 12 58.0**	**+0.6**
KMI				S	**S**	**00 18 08.4**	**+2.0**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMI				LR	LR		
	comp=N,340nm,13.7s						
KMI				LR	LR		
	comp=E,470nm,7.6s						
KMI				LR	LR		
	comp=Z,490nm,12.3s						
KSAR	**Wonju Array Be**	**33.88**	**1**	P	**P**	**00 13 13.2**	**-1.1**
KSRS	**Korea Array**	**33.90**	**1**	P	**P**	**00 13 13.2**	**-1.2**
	comp=Z,1.7nm,0.8s,baz=175,slow=9.3,SNR=6.6						
FORT	**Forrest**	**34.00**	**179**	*e*P	**P**	**00 13 13.7**	**-1.8**
	comp=Z,22nm,0.7s						
CD2	**Chengdu**	**35.14**	**324**	P	**P**	**00 13 24.7**	**-0.7**
CD2				pP	**pP**	**00 13 34.4**	**-0.7**
CD2				sP	**sP**	**00 13 38.3**	**-0.8**
CD2				PP	**PnPn**	**00 14 44.3**	**+0.7**
CD2				PcP	**PcP**	**00 15 55.2**	**-1.3**
CD2				S	**S**	**00 18 55.5**	**-0.9**
CD2				sS	**sS**	**00 19 11.5**	**-0.8**
CD2				PcS	**PcS**	**00 19 41.0**	**-2.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,90nm,5.2s						
CD2				LR	LR		
	comp=N,750nm,7.6s						
CD2				LR	LR		
	comp=E,720nm,7.3s						
CD2				LR	LR		
	comp=Z,560nm,7.0s						
KLBR	**Kellerberrin**	**35.92**	**194**	P	**P**	**00 13 30.7**	**-1.4**
	baz=36,SNR=4.7						
BBOO	**Buckleboo**	**37.00**	**167**	P	**P**	**00 13 39.7**	**-1.5**
	baz=37,SNR=19						
NWAO	**Narrogin (SRO)**	**37.33**	**194**	*e*P	**P**	**00 13 42.4**	**-1.6**
BJI	**Beijing**	**37.79**	**346**	P	**P**	**00 13 47.7**	**-0.1**
BJI				S	**S**	**00 19 38.3**	**+1.8**
BJI				pmax	pmax		
	comp=Z,18nm,1.0s						
BJI				pmax	pmax		
	comp=Z,120nm,5.6s						
BJI				LR	LR		
	comp=N,1µm,15.6s						
BJI				LR	LR		
	comp=E,380nm,13.8s						
BJI				LR	LR		
	comp=Z,220nm,18.0s						
LZH	**Lanzhou**	**38.98**	**329**	*e*P	**P**	**00 13 57.9**	**-0.2**
LZH				pP	**pP**	**00 14 07.7**	**-0.2**
LZH				sP	**sP**	**00 14 11.6**	**-0.3**
LZH				*e*S	S	00 20 01.2	+6.2
LZH				sS	sS	00 20 16.1	+5.1
LZH				pmax	pmax		
	comp=Z,30nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,6.0s						
LZH				LR	LR		
	comp=N,390nm,12.3s						
LZH				LR	LR		
	comp=E,440nm,15.5s						
LZH				LR	LR		
	comp=Z,560nm,17.2s						
HHC	**Hu-ho-hao-te**	**39.83**	**341**	*e*P	**P**	**00 14 04.4**	**-0.7**
HHC				pP	**pP**	**00 14 14.0**	**-0.8**
HHC				sP	**sP**	**00 14 18.3**	**-0.5**
HHC				PP	**PnPn**	**00 15 41.7**	**+1.3**
HHC				PcP	**PcP**	**00 16 09.5**	**-1.2**
HHC				S	**S**	**00 20 05.6**	**-1.9**
HHC				sS	**sS**	**00 20 23.9**	**+0.3**
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,300nm,5.4s						
HHC				LR	LR		
	comp=N,590nm,8.1s						
HHC				LR	LR		
	comp=E,580nm,11.3s						
HHC				LR	LR		
	comp=Z,750nm,14.4s						
CN2	**Changchun**	**40.26**	**358**	*e*P	**P**	**00 14 09.6**	**+1.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.3s						
USRK	**Ussuriysk Arra**	**40.86**	**5**	P	**P**	**00 14 13.6**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=180,slow=7.8,SNR=3.0						
MDJ	**Mudanjiang**	**41.10**	**3**	P	**P**	**00 14 15.2**	**-0.2**
MDJ				pP	**pP**	**00 14 24.1**	**-1.1**
MDJ				sP	**sP**	**00 14 27.8**	**-1.3**
MDJ				S	**S**	**00 20 27.8**	**+1.7**
MDJ				sS	**sS**	**00 20 43.0**	**+0.8**
MDJ				SS	**SS**	**00 23 31.9**	**+2.4**
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,100nm,5.2s						
MDJ				LR	LR		
	comp=N,450nm,16.0s						
MDJ				LR	LR		
	comp=E,300nm,11.3s						
MDJ				LR	LR		
	comp=Z,310nm,11.7s						
GTA	**Gaotai**	**43.58**	**329**	*e*P	**P**	**00 14 36.0**	**+0.2**
GTA				pP	**pP**	**00 14 46.3**	**+0.7**
GTA				sP	**sP**	**00 14 50.8**	**+1.2**
GTA				PP	**PcP**	**00 16 21.1**	**-2.0**
GTA				S	**S**	**00 21 05.6**	**+2.5**
GTA				sS	**sS**	**00 21 22.3**	**+3.0**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,170nm,5.2s						
GTA				LR	LR		
	comp=N,310nm,22.8s						
GTA				LR	LR		
	comp=E,230nm,25.2s						
GTA				LR	LR		
	comp=Z,500nm,19.5s						
ULN	**Ulaanbaatar**	**47.55**	**342**	*e*P	**P**	**00 15 05.9**	**-1.3**
	comp=Z,8.4nm,1.0s						
SONM	**Songino Array**	**47.73**	**341**	P	**P**	**00 15 06.3**	**-2.2**
SONM	**Songino Array**	**47.73**	**341**	P	**P**	**00 15 06.3**	**-2.2**
	comp=Z,1.2nm,0.8s,baz=161,slow=7.2,SNR=5.2						
HYB	**Hyderabad**	**49.59**	**290**	*i* P	**P**	**00 15 22.0**	**-1.2**
HYB				*e*S	S	00 21 44.0	-46
HYB				*e*		00 24 00.0	
NFK	**Norfolk Island**	**50.73**	**132**	P	P	00 15 27.2	-4.4
	baz=51,SNR=3.2						
WMQ	**Urumqi**	**53.22**	**325**	P	**P**	**00 15 50.0**	**0.0**
WMQ				pmax	pmax		
	comp=Z,18nm,1.0s						
PETK	**Petropavlovsk-**	**55.59**	**22**	LR	LR	00 42 11.0	
	comp=Z,82nm,18.7s,baz=257,slow=38						
MK31	**Makanchi Array**	**58.05**	**325**	*e*P	**P**	**00 16 21.6**	**-3.0**
MKAR	**Makanchi Array**	**58.05**	**325**	*e*P	**P**	**00 16 22.1**	**-2.4**
MKAR	**Makanchi Array**	**58.05**	**325**	P	**P**	**00 16 22.1**	**-2.4**
	comp=Z,2.5nm,0.5s,baz=121,slow=7.9,SNR=45						
MKAR				LR	LR	00 46 00.6	
	comp=Z,123nm,18.2s,baz=97,slow=41						
KSH	**Kashi**	**58.55**	**315**	P	**P**	**00 16 27.5**	**-0.9**
KSH				*e*pP	**pP**	**00 16 41.1**	**+2.6**
KSH				sP	**sP**	**00 16 44.3**	**+1.9**
KSH				PcP	**PcP**	**00 17 20.5**	**+2.0**
KSH				PP	**PP**	**00 18 42.1**	**+4.0**
KSH				PcS	**PcS**	**00 21 19.9**	**-0.3**
KSH				S	**S**	**00 24 32.7**	**+2.5**
KSH				sS	**sS**	**00 24 49.1**	**+2.2**
KSH				SS	**SS**	**00 28 27.7**	**+4.4**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,79nm,3.5s						
KSH				LR	LR		
	comp=N,350nm,5.0s						
KSH				LR	LR		
	comp=E,360nm,7.7s						
KSH				LR	LR		
	comp=Z,370nm,5.1s						
TKM2	**Tokmak 2**	**60.25**	**319**	*e*P	**P**	**00 16 37.9**	**-2.2**
	comp=Z,8.5nm,1.2s						
AAK	**Ala-Archa**	**60.86**	**318**	*e*P	**P**	**00 16 44.5**	**+0.2**
	comp=Z,9.1nm,0.8s						
AAK	**Ala-Archa**	**60.86**	**318**	P	**P**	**00 16 42.6**	**-1.6**
	comp=Z,1.6nm,0.8s,baz=165,slow=11,SNR=7.9						
AAK				LR	LR	00 45 12.2	
	comp=Z,130nm,21.9s,baz=80,slow=38						
ZAA0	**Zalesovo Array**	**61.05**	**333**	*e*P	**P**	**00 16 43.5**	**-1.7**
ZALV	**Zalesovo Beam**	**61.05**	**333**	P	**P**	**00 16 44.4**	**-0.7**
ZALV	**Zalesovo Beam**	**61.05**	**333**	P	**P**	**00 16 44.4**	**-0.7**
	comp=Z,5.0nm,0.9s,baz=103,slow=6.5,SNR=13						
ZALV				LR	LR	00 45 23.9	
	comp=Z,81nm,19.8s,baz=129,slow=38						
EKS2	**Erkin-Say**	**61.35**	**318**	*e*P	**P**	**00 16 46.4**	**-1.1**
	comp=Z,5.0nm,0.9s						
KBL	**Kabul**	**62.03**	**308**	*e*P	**P**	**00 16 49.2**	**-3.2**
	comp=Z,27nm,1.3s						
KURBB	**Kurchatov Arra**	**62.22**	**327**	P	**P**	**00 16 51.0**	**-2.1**
	comp=Z,52nm,0.2s,baz=134,slow=4.3,SNR=2.3						
KURK	**Kurchatov**	**62.23**	**327**	*e*P	**P**	**00 16 50.3**	**-2.7**
	comp=Z,17nm,0.7s						
KKAR	**Karatay Array**	**63.74**	**317**	*e*P	**P**	**00 17 00.7**	**-2.6**
BVAR	**Borovoye Array**	**67.81**	**327**	P	**P**	**00 17 27.2**	**-2.1**
BVAR	**Borovoye Array**	**67.81**	**327**	P	**P**	**00 17 27.2**	**-2.1**
	comp=Z,6.1nm,1.0s,baz=120,slow=5.6,SNR=23						
BRVK	**Borovoye**	**67.88**	**327**	*e*P	**P**	**00 17 27.6**	**-2.2**
	comp=Z,8.7nm,1.0s						
ABKAR	**Akbulak array**	**72.65**	**321**	*e*P	**P**	**00 17 56.5**	**-2.5**
AKTO	**Aktyubinsk**	**74.16**	**322**	P	**P**	**00 18 05.9**	**-2.0**
AKTO	**Aktyubinsk**	**74.16**	**322**	P	**P**	**00 18 05.9**	**-2.0**
	comp=Z,4.9nm,0.7s,baz=96,slow=7.3,SNR=19						
GAMB	**Gambell**	**74.54**	**24**	*e*P	**P**	**00 18 09.6**	**-0.2**
	comp=Z,8.2nm,1.0s						
ARU	**Arti**	**75.42**	**328**	*e*P	**P**	**00 18 13.1**	**-2.0**
	comp=Z,68nm,2.7s						
VNDA	**Vanda**	**83.06**	**173**	*e*P	**P**	**00 18 54.8**	**-1.5**
	comp=Z,62nm,2.7s						
VNDA	**Vanda**	**83.06**	**173**	P	**P**	**00 18 55.7**	**-0.7**
	comp=Z,2.3nm,0.9s,baz=308,slow=6.5,SNR=10						
SML	**Sawmill**	**84.44**	**28**	*e*P	P	00 18 59.3	-4.5
	comp=Z,5.0nm,1.3s						
ILAR	**Eielson Array**	**85.23**	**25**	P	**P**	**00 19 07.7**	**0.0**
ILAR	**Eielson Array**	**85.23**	**25**	P	**P**	**00 19 07.7**	**0.0**
	comp=Z,0.6nm,0.6s,baz=242,slow=6.5,SNR=7.3						
KMBO	**Kilima Mbogo**	**89.94**	**269**	*e*P	**P**	**00 19 30.1**	**-1.6**
	comp=Z,24nm,2.5s						
KMBO	**Kilima Mbogo**	**89.94**	**269**	P	**P**	**00 19 30.3**	**-1.4**
	comp=Z,0.9nm,0.8s,baz=40,slow=3.4,SNR=5.5						
BRTR	**Keskin Array B**	**90.53**	**310**	P	**P**	**00 19 33.4**	**-0.5**
BRTR	**Keskin Array B**	**90.53**	**310**	P	**P**	**00 19 33.4**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=134,slow=7.0,SNR=6.9						
ARCES	**ARCESS Array B**	**90.89**	**340**	P	**P**	**00 19 35.9**	**+1.2**
ARCES	**ARCESS Array B**	**90.89**	**340**	P	**P**	**00 19 35.9**	**+1.2**
	comp=Z,4.9nm,0.9s,baz=60,slow=5.8,SNR=3.8						
FINES	**FINESS Array B**	**92.30**	**332**	P	**P**	**00 19 42.1**	**+0.8**
FINES	**FINESS Array B**	**92.30**	**332**	P	**P**	**00 19 42.1**	**+0.8**
	comp=Z,1.6nm,0.9s,baz=97,slow=4.5,SNR=2.6						
QSPA	**South Pole Qui**	**93.31**	**180**	P	**P**	**00 19 47.0**	**+0.9**
QSPA	**South Pole Qui**	**93.31**	**180**	P	**P**	**00 19 46.9**	**+0.9**
	comp=Z,1.5nm,0.9s,baz=346,slow=2.7,SNR=5.8						
CRVS	**Cervenica-Dubn**	**97.67**	**320**	*e*P	Pdif	00 20 08.9	+2.6
MSU	**Marysvale**	**111.30**	**46**	*e*Pdif	**Pdif**	**00 21 02.1**	**-5.3**
TXAR	**Lajitas Array**	**121.49**	**53**	PKP	**PKPdf**	**00 25 25.9**	**+0.3**
TXAR	**Lajitas Array**	**121.49**	**53**	PKP	**PKPdf**	**00 25 25.9**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=331,slow=1.9,SNR=3.4						
LCO	**Las Campanas**	**149.41**	**148**	*e*PKPbc	**PKPbc**	**00 26 20.9**	**-0.5**

NIED ***03*** *00:10:00, 37.20N×142.00E, h47km, Mw3.8 Best double couple: M0 4.87000×10^14 NP1: φs 52.00000°, δ76.00000°, λ134.00000°. NP2: φs 157.00000°, δ46.00000°, λ20.00000°.*

JMA 03 00:10:38.8±0.2**, 37.17N×142.00E, h36km, M3.7, 3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.92**	**283**	⇓P	Pn	00 10 55.5	+0.3
JFK				*e*S	Sn	00 11 07.5	+0.2
ONAJ	**Iwakimizuishiy**	**0.96**	**266**	P	Pn	00 10 55.9	0.0
ONAJ				*e*S	Sn	00 11 08.1	-0.3
JMM	**Marumori**	**1.19**	**306**	⇓P	Pn	00 10 59.6	+0.8
JMM				*e*S	Sn	00 11 14.4	+0.7
JFT	**Otama**	**1.37**	**285**	P	Pn	00 11 03.0	+1.6
JFT				*e*S	Sn	00 11 20.6	+2.3
JIO	**Ouri**	**1.38**	**338**	⇓P	Pn	00 11 02.3	+0.8
JIO				*e*S	Sn	00 11 18.5	0.0
JOU	**Okura**	**1.59**	**319**	P	Pn	00 11 06.2	+1.7
JOU				*e*S	Sn	00 11 26.4	+2.5
JFY	**Yanaizu**	**1.85**	**278**	P	Pn	00 11 10.2	+2.3
JFY				*e*S	Sn	00 11 32.9	+2.8
JYS	**Shirataka**	**1.86**	**305**	P	Pn	00 11 10.4	+2.3
JYS				*e*S	Sn	00 11 33.8	+3.4
JMK	**Ichinoseki**	**1.88**	**341**	P	Pn	00 11 10.0	+1.6
JYK	**Kaneyama**	**2.17**	**324**	P	Pn	00 11 14.4	+2.0
JAG	**Ashikaga**	**2.17**	**251**	P	Pn	00 11 13.8	+1.4
JAG				*e*S	Sn	00 11 39.7	+1.5
MAT	**Matsushiro**	**3.11**	**260**	P	Pn	00 11 27.8	+2.5
MAT				S	Sn	00 12 02.5	+1.3

ISCJB ***03*** *00:15:02.5±0.2, 33.72N±0.02×82.47E±0.02, h10km, mb4.5/70, MS3.9/19, Error ellipse: s-maj=3.3km s-min=2.5km az=42.2*
LDG ***03*** *00:15:02.1±0.2, 33.79N×82.04E, h10km, Mb4.7/13, Ms3.7/6, Error ellipse: s-maj=10.2km s-min=6.1km az=102.0*
IDC ***03*** *00:15:02.1±0.5, 33.70N×82.42E, h0km, mb4.3/25, mb1 4.5/26, mb1mx4.4/31, mbtmp4.3/26, ML4.8/2, MS3.8/14, Ms1 3.8/14, ms1mx3.6/32, Error ellipse: s-maj=15.2km s-min=11.0km az=40.0*
NDI ***03*** *00:15:02.6±3.5, 34.16N×82.88E, h33km, ML3.9, mb4.8(NEIC)*
MOS ***03*** *00:15:05.4±1.3, 33.72N×82.39E, h33km, mb4.6/39, Error ellipse: s-maj=9.0km s-min=5.0km az=113.2*
NEIC ***03*** *00:15:08.9±0.4, 33.72N×82.45E, h52km±4km, mb4.8/29, Error ellipse: s-maj=6.2km s-min=3.5km az=57.0*
DJA ***03*** *00:15:09.2±2.7, 33°N±8°×8°3E±°, h17km±22km, M4.7/11, mB5.2/3, mb4.8/11, Mw(mB)4.5/3*
ISC 03 00:15:04.4±0.3**, 33.66N**±0.04**×82.37E**±0.03**, h10km, n246, σ1.92**/269**, mb4.5**/70**, MS3.9**/19**, 8C-9D, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LGTI	**Lohaghat**	**4.58**	**204**	*e*x	Pb	00 16 21.5	-3.3
LGTI				*e*x	x	00 16 55.2	
DDI	**Dehra Dun**	**4.95**	**229**	*e*P	**Pn**	**00 16 21.9**	**+3.0**
DDI				*e*S	**Sn**	**00 17 21.2**	**+4.8**
DDI				AML	AML	00 17 25.5	
	comp=E,385nm,0.3s						
DDI				AML	AML	00 17 25.5	
	comp=N,239nm,0.4s						
SDNR	**Sundarnagar**	**5.04**	**246**	*e*P	Pn	00 16 24.0	+3.8
SDNR				*e*x	x	00 17 28.0	
SMLA	**Simla**	**5.08**	**242**	*i* P	Pn	00 16 25.1	+4.5
SMLA				*i* S	Sn	00 17 25.9	+6.6
SMLA				*i* S	Sb	00 17 26.2	-8.2
SMLA						00 17 27.0	
	comp=E,861nm,0.5s						
SMLA				⇓		00 17 27.9	
	comp=N,587nm,0.5s						
DHRM	**DHARAMSHALA**	**5.30**	**256**	*e*P	**Pn**	**00 16 25.9**	**+2.0**
DHRM				*e*S	**Sn**	**00 17 29.9**	**+4.8**
DHRM				AML	AML	00 17 43.5	
	comp=E,147nm,0.7s						
DHRM				AML	AML	00 17 43.8	
	comp=N,111nm,0.5s						
DANN	**Dangsing**	**5.43**	**167**	*e*Pn	**Pn**	**00 16 27.6**	**+1.9**
DANN	**Dangsing**	**5.43**	**167**	*e*Pn	**Pn**	**00 16 27.6**	**+1.9**
BHK	**Bhakra**	**5.51**	**248**	*e*P	Pn	00 16 30.4	+3.9
PYUN	**Piuthan**	**5.57**	**174**	*e*Pn	**Pn**	**00 16 29.2**	**+1.6**
PYUN	**Piuthan**	**5.57**	**174**	*e*Pn	**Pn**	**00 16 29.2**	**+1.6**
THN	**Thein Dam**	**5.72**	**259**	*e*x	Pg	00 16 49.0	-5.1
KOLN	**Koldanda**	**5.97**	**169**	*e*Pn	**Pn**	**00 16 34.5**	**+1.4**
KOLN	**Koldanda**	**5.97**	**169**	*e*Pn	**Pn**	**00 16 34.5**	**+1.4**
KKN	**Kakani**	**6.37**	**156**	*e*Pn	**Pn**	**00 16 40.9**	**+2.4**
KKN				*e*Sn	**Sn**	**00 17 53.3**	**+1.9**
	comp=N,219nm,0.8s						
KKN	**Kakani**	**6.37**	**156**	*e*P	**Pn**	**00 16 40.9**	**+2.4**
KKN				*e*		00 17 53.3	
KKN	**Kakani**	**6.37**	**156**	*e*Pn	**Pn**	**00 16 40.9**	**+2.4**
KKN				*e*Sn	**Sn**	**00 17 53.3**	**+1.9**
DMN	**Daman**	**6.48**	**158**	*e*Pn	**Pn**	**00 16 42.5**	**+2.4**
DMN	**Daman**	**6.48**	**158**	*e*Pn	**Pn**	**00 16 42.5**	**+2.4**
GUN	**Gumba**	**6.48**	**151**	*e*Pn	**Pn**	**00 16 42.0**	**+1.8**
GUN				*e*Sn	**Sn**	**00 17 56.2**	**+1.9**
	comp=N,239nm,0.7s						
GUN	**Gumba**	**6.48**	**151**	*e*Pn	**Pn**	**00 16 42.0**	**+1.8**
GUN				*e*Sn	**Sn**	**00 17 56.2**	**+1.9**
NDI	**New Delhi**	**6.64**	**223**	*e*P	**Pn**	**00 16 44.0**	**+1.8**
CHCP	**Chirah Chowk**	**7.60**	**272**	P	**Pn**	**00 16 57.4**	**+2.2**
NIL	**Nilore**	**7.61**	**272**	*e*Pn	Pn	00 17 00.8	+5.4
RAMN	**Ramite**	**7.62**	**150**	*e*Pn	**Pn**	**00 16 57.6**	**+1.8**
RAMN				*e*Sn	**Sn**	**00 18 21.8**	**-0.6**
	comp=N,264nm,0.8s						
RAMN	**Ramite**	**7.62**	**150**	*e*Pn	**Pn**	**00 16 57.6**	**+1.8**
RAMN				*e*Sn	**Sn**	**00 18 21.8**	**-0.6**
KSH	**Kashi**	**7.79**	**320**	Pn	**Pn**	**00 16 59.7**	**+1.8**
KSH				Sn	**Sn**	**00 18 29.2**	**+3.0**
KSH				LR	LR		
	comp=N,3µm,6.6s						
KSH				LR	LR		
	comp=E,5µm,7.2s						
KSH				LR	LR		
	comp=Z,3µm,7.7s						
TAPN	**Taplejung**	**7.79**	**142**	*e*Pn	**Pn**	**00 17 00.4**	**+2.2**
TAPN				*e*Sn	**Sn**	**00 18 26.9**	**+0.2**
	comp=Z,102nm,0.7s						
TAPN	**Taplejung**	**7.79**	**142**	*e*Pn	**Pn**	**00 17 00.4**	**+2.2**
TAPN				*e*Sn	**Sn**	**00 18 26.9**	**+0.2**
ODAN	**Odare**	**8.05**	**146**	*e*Pn	**Pn**	**00 17 03.1**	**+1.5**
ODAN				*e*Sn	**Sn**	**00 18 31.8**	**-1.0**
	comp=Z,288nm,0.8s						
ODAN	**Odare**	**8.05**	**146**	*e*Pn	**Pn**	**00 17 03.1**	**+1.5**
ODAN				*e*Sn	**Sn**	**00 18 31.8**	**-1.0**
LSA	**Lhasa**	**8.46**	**115**	P	Pn	00 17 12.8	+5.3
LSA				LR	LR		
	comp=N,2µm,14.5s						
LSA				LR	LR		
	comp=E,2µm,15.5s						
CEP	**Cherat**	**8.72**	**274**	P	**Pn**	**00 17 11.1**	**+0.4**
CEP				S	**Sn**	**00 18 50.0**	**+0.8**
THW	**Thamme Wali**	**8.95**	**267**	P	**Pn**	**00 17 15.5**	**+1.7**
AJM	**Ajmer**	**9.80**	**225**	*e*P	**Pn**	**00 17 28.0**	**+2.5**
AJM				*e*S	**Sn**	**00 19 17.0**	**+1.4**
TKM2	**Tokmak 2**	**10.66**	**332**	*e*P	**Pn**	**00 17 39.5**	**+2.1**
TKM2	**Tokmak 2**	**10.66**	**332**	*e*Pn	**Pn**	**00 17 39.5**	**+2.1**
JBP	**Jabalpur**	**10.67**	**192**	⇓*e*x	**Sn**	**00 19 36.2**	**-0.6**
JBP				*i* x	x	00 19 39.3	
	comp=Z,30nm,0.6s						
JBP				*e*x	x	00 21 57.1	
AAK	**Ala-Archa**	**10.89**	**328**	P	Pn	00 17 45.4	+4.9
AAK				MLR	MLR		
	comp=Z,535nm,20.9s						
AAK	**Ala-Archa**	**10.89**	**328**	*e*Pn	Pn	00 17 45.0	+4.5
	comp=Z,37nm,0.9s						
AAK	**Ala-Archa**	**10.89**	**328**	Pn	Pn	00 17 45.4	+4.9
	comp=Z,0.1nm,0.3s,baz=176,slow=15,SNR=4.9						
AAK				LR	LR	00 22 08.5	
	comp=Z,534nm,20.9s,baz=127,slow=39						
WMQ	**Urumqi**	**10.96**	**21**	P	**Pn**	**00 17 44.0**	**+2.7**
WMQ				sP		00 17 50.0	
WMQ				PP	**PnPn**	**00 17 53.0**	**+3.9**
WMQ				S	**Sn**	**00 19 48.0**	**+4.0**
WMQ				sS		00 19 54.0	
WMQ				SS	**SnSn**	**00 20 02.0**	**+6.0**
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,12nm,5.0s						
FRU	**Bishkek**	**10.99**	**329**	*e*P	Pn	00 17 48.0	+6.2
FRU				pmax	pmax		
	comp=Z,60nm,1.6s						
FRU				pmax	pmax		
	comp=E,130nm,2.0s						

KBL Kabul 11.09 278 *e*P **Pn** **00 17 45.3 +2.0**
KBL *e* 00 19 44.1
KBL Kabul 11.09 278 *e*Pn **Pn** **00 17 45.3 +2.0**
KBL *e*Sn **Sn** **00 19 44.1 -3.3**
EKS2 Erkin-Say 11.24 326 *e*P Pn 00 17 50.6 +5.3
EKS2 Erkin-Say 11.24 326 *e*Pn Pn 00 17 50.6 +5.3
SHL Shillong 11.55 132 *e*P **Pn** **00 17 47.3 -2.3**
SHL AMB AMB 00 17 49.9
comp=Z,30nm,0.4s
SHL *ex* x 00 19 55.0
MK31 Makanchi Array 13.12 360 *i*P **Pn** **00 18 09.5 -1.3**
MK31 pmax pmax
comp=Z,16nm,0.7s
MK31 Makanchi Array 13.12 360 *e*Pn **Pn** **00 18 09.3 -1.5**
MKAR Makanchi Array 13.12 360 *e*P **Pn** **00 18 10.2 -0.6**
MKAR Makanchi Array 13.12 360 *e*Pn **Pn** **00 18 10.2 -0.6**
MKAR Makanchi Array 13.12 360 Pn Pn 00 18 07.5 -3.3
comp=Z,1.2nm,0.3s,baz=181,slow=12,SNR=28
KKAR Karatay Array 13.23 319 *e*P **Pn** **00 18 15.2 +2.9**
KKAR Karatay Array 13.23 319 *e*Pn **Pn** **00 18 15.2 +2.9**
GTA Gaotai 15.14 63 *e*P **Pn** **00 18 39.1 +0.6**
GTA pP **P** **00 18 43.2 -0.5**
GTA sP **sP** **00 18 46.7 -1.1**
GTA S **Sn** **00 21 28.1 +1.8**
GTA sS S 00 21 35.2 -8.4
GTA SS **SnSn** **00 21 45.6 +6.7**
GTA pmax pmax
comp=Z,8.0nm,1.4s
GTA pmax pmax
comp=Z,100nm,4.3s
GTA LR LR
comp=N,2μm,12.4s
GTA LR LR
comp=E,860nm,14.7s
GTA LR LR
comp=Z,1μm,14.7s
HYB Hyderabad 16.54 193 *i*P Pn 00 18 53.5 -3.1
HYB *e* 00 19 00.0
POO Poona 16.89 209 *ex* Pn 00 18 58.0 -3.1
KURBB Kurchatov Arra 17.18 352 P **Pn** **00 19 04.5 +0.1**
comp=Z,5.4nm,0.3s,baz=172,slow=11,SNR=1.8
KURBB LR LR 00 26 38.1
comp=Z,81nm,20.9s,baz=170,slow=41
KURK Kurchatov 17.26 352 *e*P **Pn** **00 19 03.7 -1.8**
KURK pmax pmax
comp=Z,9.0nm,0.9s
KURK Kurchatov 17.26 352 *e*Pn **Pn** **00 19 05.8 +0.3**
comp=Z,16nm,1.1s
LZH Lanzhou 17.78 76 P **P** **00 19 14.0 +1.0**
LZH pP **pP** **00 19 18.7 +2.9**
LZH sP **sP** **00 19 21.3 +4.2**
LZH PP **PnPn** **00 19 29.7 +6.9**
LZH S **S** **00 22 36.0 -1.6**
LZH pmax pmax
comp=Z,18nm,1.2s
LZH pmax pmax
comp=Z,170nm,5.4s
LZH LR LR
comp=N,650nm,8.8s
LZH LR LR
comp=E,450nm,7.4s
LZH LR LR
comp=Z,710nm,10.2s
CD2 Chengdu 18.29 93 P **Pn** **00 19 17.6 -0.7**
CD2 pP **pP** **00 19 21.2 -0.1**
CD2 sP **sP** **00 19 24.6 +2.0**
CD2 PP **PnPn** **00 19 32.7 +3.1**
CD2 S **Sn** **00 22 37.4 -5.2**
CD2 sS **S** **00 22 42.7 -5.0**
CD2 SS **SnSn** **00 23 00.5 +4.3**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,160nm,4.8s
CD2 LR LR
comp=N,750nm,7.6s
CD2 LR LR
comp=E,720nm,7.3s
CD2 LR LR
comp=Z,560nm,6.6s
KMI Kunming 19.66 110 ⇑P **P** **00 19 33.9 +0.2**
KMI pP **pP** **00 19 36.9 +0.3**
KMI PP **PnPn** **00 19 51.6 +3.0**
KMI S S 00 23 07.6 -8.1
KMI SS **SnSn** **00 23 35.1 +4.9**
KMI pmax pmax
comp=Z,19nm,1.1s
KMI pmax pmax
comp=Z,81nm,3.1s
KMI LR LR
comp=N,440nm,11.4s
KMI LR LR
comp=E,390nm,9.3s
KMI LR LR
comp=Z,540nm,17.3s
ZAA0 Zalesovo Array 20.35 4 *e*P **P** **00 19 39.9 -0.9**
ZALV Zalesovo Beam 20.35 4 P **P** **00 19 40.7 -0.2**
ZALV pmax pmax
comp=Z,8.0nm,0.6s
ZALV Zalesovo Beam 20.35 4 P **P** **00 19 40.7 -0.2**
ZALV Zalesovo Beam 20.35 4 P **P** **00 19 40.7 -0.2**
comp=Z,7.6nm,0.6s,baz=197,slow=9.6,SNR=28
CHTO Chiang Mai 20.92 131 *e*P **P** **00 19 46.5 -0.8**
CHTO pmax pmax
comp=Z,34nm,1.1s
CHTO Chiang Mai 20.92 131 *e*P **P** **00 19 46.5 -0.8**
comp=Z,34nm,1.1s
CHTO Chiang Mai 20.92 131 P **P** **00 19 47.1 -0.2**
comp=Z,38nm,1.6s,comp=Z,659nm
CMMT Chiang Mai 20.93 131 P **P** **00 19 47.6 +0.3**
comp=Z,34nm,1.6s,comp=Z,596nm
BVA0 Borovoye Array 21.17 340 *i*P **P** **00 19 48.3 -1.4**
BVA0 pmax pmax
comp=Z,5.0nm,1.2s
BVAR Borovoye Array 21.17 340 P **P** **00 19 49.5 -0.2**
BVAR 00 23 53.8
BVAR pmax pmax
comp=Z,3.0nm,0.5s
BVAR Borovoye Array 21.17 340 P **P** **00 19 49.5 -0.2**
BVAR PcP **PcP** **00 23 53.8 -1.3**
BVAR Borovoye Array 21.17 340 P **P** **00 19 49.5 -0.2**
comp=Z,2.5nm,0.5s,baz=133,slow=10,SNR=11
BVAR PcP **PcP** **00 23 53.8 -1.3**
comp=Z,0.6nm,0.7s,baz=134,slow=4.2,SNR=4.4
NVS Novosibirsk 21.18 1⇑*i*P **P** **00 19 48.5 -1.3**
NVS pmax pmax
comp=N,8.0nm,1.0s
NVS pmax pmax
comp=Z,14nm,1.0s
NVS pmax pmax
comp=E,8.0nm,1.1s
CM31 Chiang Mai Arr 21.19 132 *e*P **P** **00 19 49.7 -0.4**
comp=E,7.8nm,0.3s
CMAR Chiang Mai Arr 21.19 132 P **P** **00 19 49.9 -0.3**
CMAR PcP **PcP** **00 23 57.0 +1.3**
CMAR Chiang Mai Arr 21.19 132 P **P** **00 19 49.9 -0.3**
comp=E,11nm,0.7s,baz=312,slow=10,SNR=41
CMAR PcP **PcP** **00 23 57.0 +1.3**
comp=E,1.0nm,0.3s,baz=304,slow=4.1,SNR=4.4
CMAR LR LR 00 29 19.9
comp=E,150nm,18.5s,baz=115,slow=40
BRVK Borovoye 21.23 340*c i*P **P** **00 19 50.1 -0.3**
BRVK pmax pmax
comp=Z,27nm,1.3s
BRVK Borovoye 21.23 340 *e*P **P** **00 19 49.8 -0.6**
comp=Z,22nm,1.1s
XAN Xi'an 22.04 82 P **P** **00 19 57.2 -2.0**
XAN pP **pP** **00 20 05.6 +3.5**
XAN sP sP 00 20 10.6 +7.2
XAN pmax pmax
comp=Z,11nm,1.6s
XAN LR LR
comp=N,250nm,13.4s
XAN LR LR
comp=E,960nm,10.1s
XAN LR LR
comp=Z,150nm,14.0s
GYA Guiyang 22.18 102 P **P** **00 20 00.8 -0.2**
GYA PP **PnPn** **00 20 26.0 +2.8**
GYA S S 00 23 57.7 -7.7
GYA ScP **ScP** **00 27 35.4 +0.2**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,60nm,5.0s
GYA LR LR
comp=N,520nm,10.1s
GYA LR LR
comp=E,380nm,11.8s
GYA LR LR
comp=Z,480nm,11.5s
MOY Mondy 22.50 31 *e*P **P** **00 20 03.6 -0.5**
ZAK Zakamensk 22.69 36 *e*P **P** **00 20 05.3 -0.8**
ZAK *e* 00 20 46.8
ZAK pmax pmax
comp=Z,4.0nm,1.1s
AB31 Akbulak array 22.79 320 *i*P **P** **00 20 05.8 -1.3**
AB31 pmax pmax
comp=Z,10.0nm,0.7s
ABKAR Akbulak array 22.79 320 *e*P **P** **00 20 05.6 -1.5**
SONM Songino Array 22.93 45 P **P** **00 20 08.7 -0.1**
SONM Songino Array 22.93 45 P **P** **00 20 08.7 -0.1**
comp=Z,7.2nm,0.9s,baz=238,slow=9.6,SNR=15
BTO Baotou 23.05 64 *e*P **P** **00 20 09.0 -1.0**
ULN Ulaanbaatar 23.34 45 *e*P **P** **00 20 11.6 -1.4**
comp=Z,13nm,1.2s
ULN Ulaanbaatar 23.34 45 P **P** **00 20 14.8 +1.9**
comp=Z,9.9nm,2.0s
TLY Talaya 23.70 34 *e*P **P** **00 20 14.7 -1.6**
TLY pmax pmax
comp=Z,4.0nm,0.8s
TLY MLR MLR
comp=Z,189nm,15.0s
TLY Talaya 23.70 34 *e*P **P** **00 20 17.6 +1.3**
comp=Z,6.0nm,1.0s
HHC Hu-ho-hao-te 24.24 64 *e*P **P** **00 20 20.2 -1.4**
HHC pP **pP** **00 20 24.5 -0.2**
HHC sP **sP** **00 20 27.8 +1.9**
HHC PP **PnPn** **00 20 54.4 +3.2**
HHC S **S** **00 24 34.8 -5.4**
HHC sS **sS** **00 24 41.1 -4.1**
HHC SS **SnSn** **00 25 25.0 +2.8**
HHC pmax pmax
comp=Z,39nm,0.6s
HHC pmax pmax
comp=Z,470nm,5.2s
HHC LR LR
comp=N,710nm,10.4s
HHC LR LR
comp=E,540nm,10.7s
HHC LR LR
comp=Z,500nm,12.9s
AKTO Aktyubinsk 24.49 320 P **P** **00 20 23.0 -0.7**
AKTO pmax pmax
comp=Z,9.0nm,0.7s
AKTO MLR MLR
comp=Z,165nm,20.9s
AKTO Aktyubinsk 24.49 320 P **P** **00 20 23.0 -0.7**
AKTO Aktyubinsk 24.49 320 P **P** **00 20 23.0 -0.7**
comp=Z,9.2nm,0.7s,baz=115,slow=11,SNR=12
AKTO LR LR 00 30 02.8
comp=Z,165nm,20.9s,baz=298,slow=37
SRDT SRDT 24.50 138 P **P** **00 20 25.6 +1.6**
comp=Z,26nm,1.3s,comp=Z,2μm
PALK Pallekele 26.31 184 *e*P **P** **00 20 40.2 -0.2**
comp=Z,66nm,2.2s
SVE Sverdlovsk 27.53 334 *e*P **P** **00 20 52.0 +1.0**
SVE pmax pmax
comp=Z,10.0nm,1.1s
BJI Beijing 27.67 67 P **P** **00 20 50.4 -2.1**
BJI S **S** **00 25 31.8 -2.7**
BJI pmax pmax
comp=Z,12nm,0.6s
BJI pmax pmax
comp=Z,100nm,5.4s
BJI LR LR
comp=N,170nm,12.2s
BJI LR LR
comp=E,380nm,13.6s
BJI LR LR
comp=Z,250nm,28.9s
ARU Arti 28.04 332*c i*P **P** **00 20 55.5 -0.1**
ARU 00 21 41.3
ARU S **S** **00 25 39.7 -0.2**
ARU SS **SnSn** **00 26 52.1 -2.4**
ARU pmax pmax
comp=Z,8.0nm,1.7s
QIZ Qiongzhong 28.49 114 P **P** **00 20 58.6 -1.4**
QIZ S **S** **00 25 46.4 -1.4**
NJ2 Nanjing 30.59 83 *e*P P 00 21 15.2 -3.3
NJ2 S **S** **00 26 18.2 -2.3**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
NJ2 LR LR
comp=N,310nm,16.4s
NJ2 LR LR
comp=E,220nm,15.0s
NJ2 LR LR
comp=Z,800nm,17.8s
KBZ Khabaz 32.14 300 P **P** **00 21 32.7 +0.7**
KBZ pmax pmax
comp=Z,2.0nm,0.8s
KBZ MLR MLR
comp=Z,110nm,20.7s
KBZ Khabaz 32.14 300 P **P** **00 21 32.7 +0.7**
KBZ Khabaz 32.14 300 P **P** **00 21 32.7 +0.7**
comp=Z,1.5nm,0.8s,baz=90,slow=6.1,SNR=2.7
KBZ LR LR 00 36 39.4
comp=Z,110nm,20.7s,baz=239,slow=40
SSE Sheshan 32.75 84 P **P** **00 21 36.0 -1.5**
SSE pmax pmax
comp=Z,41nm,0.7s
SSE pmax pmax
comp=Z,130nm,4.8s
KULM Kulim 32.95 145 *e*P **P** **00 21 39.3 0.0**
comp=Z,18nm,1.1s
IPM Ipoh 33.83 145 P **P** **00 21 47.0 -0.1**
CN2 Changchun 34.75 60 *e*P **P** **00 21 54.5 -0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
MALT Malatya 35.61 290 *e*P **P** **00 22 01.7 -0.7**
MALT pmax pmax
comp=Z,4.0nm,0.9s
MALT Malatya 35.61 290 *e*P **P** **00 22 01.7 -0.7**
comp=Z,4.0nm,0.9s
KSAR Wonju Array Be 36.95 71 P **P** **00 22 12.4 -1.2**
KSRS Korea Array 36.98 71 P **P** **00 22 12.4 -1.5**
comp=Z,1.0nm,0.4s,baz=274,slow=9.1,SNR=7.3
KSRS LR LR 00 39 06.0
comp=Z,159nm,18.3s,baz=13,slow=39
MDJ Mudanjiang 37.74 59 P **P** **00 22 18.0 -2.4**
MDJ pmax pmax
comp=Z,3.0nm,0.8s
MDJ pmax pmax
comp=Z,220nm,5.2s
OBN Obninsk 38.22 318 *e*P **P** **00 22 25.1 +0.9**
OBN pmax pmax
comp=Z,6.0nm,1.1s
OBN MLR MLR
comp=Z,100nm,16.0s
SIM Simferopol' **38.48 302** P **P** **00 22 29.5 +2.9**
SIM pmax pmax
comp=Z,12nm,0.9s
KLMR Klimovskoe 38.70 328 *e*P **P** **00 22 28.3 +0.1**
KLMR pmax pmax
comp=Z,26nm,1.8s
BR131 Keskin Array S 39.16 293 *e*P **P** **00 22 31.8 -0.7**
comp=Z,1.4nm,0.7s
BRTR Keskin Array B 39.16 293 P **P** **00 22 32.7 +0.2**
BRTR Keskin Array B 39.16 293 P **P** **00 22 32.7 +0.2**
comp=Z,1.9nm,0.8s,baz=72,slow=6.5,SNR=9.0
BRTR LR LR 00 41 44.6
comp=Z,81nm,21.0s,baz=96,slow=41
USRK Ussuriysk Arra 39.48 60 LR LR 00 39 56.4
comp=Z,302nm,18.4s,baz=149,slow=38
JOW Kunigami 39.98 87 LR LR 00 40 33.0
comp=Z,234nm,19.3s,baz=237,slow=38
AKASG Malin Array Be 41.94 310 P **P** **00 22 54.2 -0.9**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 41.94 310 P **P** **00 22 54.2 -0.9**
AKASG Malin Array Be 41.94 310 P **P** **00 22 54.2 -0.9**
comp=Z,1.4nm,0.6s,baz=78,slow=8.3,SNR=3.9
JOF Joensuu 43.08 329 *e*P **P** **00 23 03.3 -0.9**
JOF pmax pmax
comp=Z,10.0nm,0.5s
JOF Joensuu 43.08 329 *ep* **P** **00 23 03.3 -0.9**
comp=Z,9.6nm,0.5s
VRI Vrincioaia 43.65 303 ⇓P **P** **00 23 12.3 +3.1**
VRI Vrincioaia 43.65 303 ⇓*i*P **P** **00 23 12.3 +3.1**
TESR 43.66 304 ⇓*i*P **P** **00 23 10.4 +1.1**
PLOR Plostina 43.71 303 ⇓P **P** **00 23 10.5 +0.8**
PLOR Plostina 43.71 303 ⇓*i*P **P** **00 23 10.5 +0.8**
MLR Muntele Rosu 44.23 303⇑*i*P **P** **00 23 14.8 +0.8**
FINES FINESS Array B 45.07 326 P **P** **00 23 20.1 -0.2**
FINES FINESS Array B 45.07 326 P **P** **00 23 20.1 -0.2**
comp=Z,4.0nm,0.5s,baz=100,slow=8.9,SNR=27
FINES LR LR 00 42 55.2
comp=Z,181nm,21.6s,baz=331,slow=37
KAF Kangasniemi 45.10 327 *e*P **P** **00 23 22.0 +1.5**
KAF pmax pmax
comp=Z,2.0nm,0.8s
KAF Kangasniemi 45.10 327 *ep* **P** **00 23 22.0 +1.5**
comp=Z,2.3nm,0.8s
TIXI Tiksi 45.16 19 *e*P **P** **00 23 19.9 -0.9**
TIXI pmax pmax
comp=Z,8.0nm,0.7s
TIXI Tiksi 45.16 19 *e*P **P** **00 23 19.9 -0.9**
comp=Z,7.6nm,0.7s
MJAR Matsushiro Arr 45.23 70 P **P** **00 23 20.4 -1.5**
MJAR Matsushiro Arr 45.23 70 P **P** **00 23 20.4 -1.5**
comp=Z,1.7nm,0.7s,baz=289,slow=7.6,SNR=3.9
KWP Kalwaria Pacla 46.13 309 *e*P **P** **00 23 29.5 +0.7**
KEV Kevo 46.98 337 *e*P P 00 23 31.9 -3.3
KEV pmax pmax
comp=Z,5.0nm,0.7s
KEV Kevo 46.98 337 *ep* P 00 23 31.9 -3.3
comp=Z,4.8nm,0.7s
ARCES ARCESS Array B 47.41 336 P **P** **00 23 37.7 -0.9**
ARCES ARCESS Array B 47.41 336 P **P** **00 23 37.7 -0.9**
comp=Z,6.7nm,0.8s,baz=98,slow=8.7,SNR=13
GVD Gavdhos 47.59 289 *e*P **P** **00 23 39.4 -1.1**
comp=Z,30nm,1.1s
KRLC Kraliky 49.91 310 *e*P **P** **00 23 59.9 +1.7**
KRLC Kraliky 49.91 310 *e*P **P** **00 23 59.9 +1.7**
DPC Dobruska-Polom 50.17 310 *e*P **P** **00 24 02.5 +2.4**
DPC Dobruska-Polom 50.17 310 *e*P **P** **00 24 02.5 +2.4**
UPC Upice 50.35 311 *e*P **P** **00 24 04.3 +2.9**
UPC Upice 50.35 311 *e*P **P** **00 24 04.3 +2.9**
CONA Conrad Observa 50.81 307⇑*i*P **P** **00 24 04.7 -0.3**
comp=Z,4.3nm,1.3s
CONA Conrad Observa 50.81 307⇑*i*P **P** **00 24 04.7 -0.3**
comp=Z,4.3nm,1.3s
SOKA Soboth 51.59 306⇓*i*P **P** **00 24 11.0 +0.1**
comp=Z,3.4nm,0.7s
SOKA Soboth 51.59 306⇓*i*P **P** **00 24 11.0 +0.1**
comp=Z,3.4nm,0.7s
GERES GERESS Array B 52.08 309 P **P** **00 24 14.0 -0.5**
GERES GERESS Array B 52.08 309 P **P** **00 24 14.0 -0.5**
comp=Z,1.5nm,0.9s,baz=65,slow=6.3,SNR=7.0
GERES LR LR 00 46 38.8
comp=Z,108nm,20.9s,baz=268,slow=36
KHC Kasperske Hory 52.11 309 *e*P **P** **00 24 17.4 +2.7**
KHC Kasperske Hory 52.11 309 *e*P **P** **00 24 17.4 +2.7**
CLL Collm 52.13 312 *e*P **P** **00 24 15.0 +0.3**
CLL Collm 52.13 312 *e*P **P** **00 24 15.0 +0.3**
CLL *e*(SS) 00 35 48.0
CLL LmV 00 48 00.0
comp=Z,100nm,21.9s
NB2 NORSAR Subarra 52.19 324 P **P** **00 24 13.8 -1.3**
comp=Z,4.2nm,0.8s,baz=86,slow=7.4
NOA NORSAR Array B 52.19 324 P **P** **00 24 13.9 -1.2**
NOA NORSAR Array B 52.19 324 P **P** **00 24 13.9 -1.2**
comp=Z,5.4nm,0.8s,baz=87,slow=7.4,SNR=17
NOA LR LR 00 47 03.6
comp=Z,111nm,19.8s,baz=100,slow=37
KMBO Kilima Mbogo 54.72 240 *e*P **P** **00 24 34.9 +0.4**
comp=Z,18nm,2.2s
KMBO Kilima Mbogo 54.72 240 P **P** **00 24 34.7 +0.2**
comp=Z,1.1nm,0.8s,baz=38,slow=13,SNR=8.9
KMBO LR LR 00 46 55.2
comp=Z,126nm,19.7s,baz=114,slow=35
SENIN Lac Senin/Sane 56.85 307 *e*P **P** **00 24 50.2 +0.8**
comp=Z,34nm,2.1s
BILL Bilibino 57.01 26⇑*e*P **P** **00 24 52.2 +2.3**
BILL pmax pmax
comp=Z,3.0nm,0.7s
LPG La Plagne 57.46 306 *e*P **P** **00 24 52.6 -1.3**
comp=Z,20nm,0.8s
LPG La Plagne 57.46 306 *e*P **P** **00 24 52.6 -1.3**
LPG pmax pmax
comp=Z,20nm,0.8s
LPG La Plagne 57.46 306 *e*P **P** **00 24 52.6 -1.3**
comp=Z,20nm,0.8s
LPL La Plagne 57.47 306 *e*P **P** **00 24 52.5 -1.3**
comp=Z,22nm,0.8s
LPL La Plagne 57.47 306 *e*P **P** **00 24 52.5 -1.3**
LPL pmax pmax
comp=Z,23nm,0.8s
LPL La Plagne 57.47 306 *e*P **P** **00 24 52.5 -1.3**
comp=Z,22nm,0.8s
MBDF Montbardon 57.67 305 *e*P **P** **00 24 53.2 -2.0**
comp=Z,17nm,1.0s
MBDF Montbardon 57.67 305 *e*P **P** **00 24 53.2 -2.0**
MBDF pmax pmax
comp=Z,17nm,1.0s
MBDF Montbardon 57.67 305 *e*P **P** **00 24 53.2 -2.0**
comp=Z,17nm,1.0s
SMF Signal de Mont 59.06 308 *e*P **P** **00 25 02.9 -1.8**
comp=Z,16nm,0.9s
SMF Signal de Mont 59.06 308 *e*P **P** **00 25 02.9 -1.8**
SMF pmax pmax
comp=Z,16nm,0.9s
SMF Signal de Mont 59.06 308 *e*P **P** **00 25 02.9 -1.8**
comp=Z,16nm,0.9s
SSF Saint Saulge 59.15 309 *e*P P 00 25 02.7 -2.6
comp=Z,16nm,1.0s
SSF Saint Saulge 59.15 309 *e*P P 00 25 02.7 -2.6
SSF pmax pmax
comp=Z,16nm,1.0s
SSF Saint Saulge 59.15 309 *e*P P 00 25 02.7 -2.6
comp=Z,16nm,1.0s
AVF Avril sur Loir 59.34 308 *e*P **P** **00 25 04.8 -1.8**
comp=Z,17nm,1.1s
AVF Avril sur Loir 59.34 308 *e*P **P** **00 25 04.8 -1.8**
AVF pmax pmax
comp=Z,17nm,1.1s
AVF Avril sur Loir 59.34 308 *e*P **P** **00 25 04.8 -1.8**
comp=Z,17nm,1.1s
TCF Toulx Ste Croi 60.24 308 *e*P **P** **00 25 11.5 -1.4**
comp=Z,16nm,1.1s
TCF Toulx Ste Croi 60.24 308 *e*P **P** **00 25 11.5 -1.4**
TCF pmax pmax
comp=Z,16nm,1.1s
TCF Toulx Ste Croi 60.24 308 *e*P **P** **00 25 11.5 -1.4**
comp=Z,16nm,1.1s
CAF Calviac 60.79 307 *e*P P 00 25 14.3 -2.3
CAF Calviac 60.79 307 *e*P P 00 25 14.3 -2.3
CAF Calviac 60.79 307 *e*P P 00 25 14.3 -2.3
LDF La Druitiere 60.99 311 *e*P **P** **00 25 15.9 -2.0**
comp=Z,21nm,1.1s
LDF La Druitiere 60.99 311 *e*P **P** **00 25 15.9 -2.0**
LDF pmax pmax
comp=Z,21nm,1.1s
LDF La Druitiere 60.99 311 *e*P **P** **00 25 15.9 -2.0**
comp=Z,21nm,1.1s
GRR Gorron 61.52 311 *e*P **P** **00 25 19.4 -2.1**
GRR Gorron 61.52 311 *e*P **P** **00 25 19.4 -2.1**
GRR Gorron 61.52 311 *e*P **P** **00 25 19.4 -2.1**
MFF Saint Martin d 61.67 309 *e*P P 00 25 19.8 -2.7
comp=Z,9.1nm,1.0s
MFF Saint Martin d 61.67 309 *e*P P 00 25 19.8 -2.7
MFF pmax pmax
comp=Z,9.0nm,1.0s
MFF Saint Martin d 61.67 309 *e*P P 00 25 19.8 -2.7
comp=Z,9.1nm,1.0s
SGMF Saint Gilles 62.63 311 *e*P **P** **00 25 27.3 -1.6**
SGMF Saint Gilles 62.63 311 *e*P **P** **00 25 27.3 -1.6**
SGMF Saint Gilles 62.63 311 *e*P **P** **00 25 27.3 -1.6**
ROSF Rostrenen 63.05 312 *e*P P 00 25 29.3 -2.4
ROSF Rostrenen 63.05 312 *e*P P 00 25 29.3 -2.4
ROSF Rostrenen 63.05 312 *e*P P 00 25 29.3 -2.4
FITZ Fitzroy Crossi 65.97 134 P **P** **00 25 50.6 -0.5**
FITZ Fitzroy Crossi 65.97 134 P **P** **00 25 50.6 -0.5**
comp=Z,2.5nm,0.8s,baz=0.4,slow=5.3,SNR=5.7
ESDC Sonseca Array 66.92 303 P **P** **00 25 56.1 -1.1**
ESDC Sonseca Array 66.92 303 P **P** **00 25 56.1 -1.1**
comp=Z,0.7nm,0.6s,baz=62,slow=7.2,SNR=7.6
TAM Tamanrasset 67.19 283 *e*P **P** **00 25 58.0 -1.2**
TAM pmax pmax
comp=Z,1.0nm,0.8s
TAM Tamanrasset 67.19 283 *e*P **P** **00 25 58.0 -1.2**
comp=Z,1.4nm,0.8s
LSZ Lusaka 70.94 236 *e*P **P** **00 26 22.4 -0.1**
comp=Z,56nm,2.2s
WRA Warramunga Arr 72.76 129 P **P** **00 26 32.3 -0.8**
WRA Warramunga Arr 72.76 129 P **P** **00 26 32.3 -0.8**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,6.8nm,0.8s,baz=326,slow=5.9,SNR=16						
ILAR	Eielson Array	74.62	20	P	P	00 26 41.8	-1.7
ILAR				PP	PP	00 29 26.1	-3.5
ILAR	Eielson Array	74.62	20	P	P	00 26 41.8	-1.7
	comp=Z,2.2nm,0.9s,baz=317,slow=5.6,SNR=17						
ILAR				PP	PP	00 29 26.1	-3.5
	comp=Z,1.1nm,1.0s,baz=304,slow=7.4,SNR=6.6						
INK	Inuvik	74.87	13	P	P	00 26 43.8	-1.0
INK	Inuvik	74.87	13	P	P	00 26 43.8	-1.0
	comp=Z,2.8nm,0.9s,baz=358,slow=8.1,SNR=13						
TORD	Torodi Ar. Bea	75.15	276	P	P	00 26 46.1	-1.3
TORD	Torodi Ar. Bea	75.15	276	P	P	00 26 46.1	-1.3
	comp=Z,6.4nm,0.8s,baz=46,slow=5.1,SNR=42						
ASAR	Alice Springs	75.20	132	P	P	00 26 46.6	-0.8
ASAR	Alice Springs	75.20	132	P	P	00 26 46.6	-0.8
	comp=Z,3.5nm,0.8s,baz=323,slow=5.9,SNR=18						
CTA	Charters Tower	80.98	121	P	P	00 27 19.1	-0.5
CTA	Charters Tower	80.98	121	P	P	00 27 19.1	-0.5
	comp=Z,5.5nm,0.9s,baz=299,slow=9.0,SNR=7.3						
CTAO	Charters Tower	80.98	121	eP	P	00 27 18.6	-0.9
CTAO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CTAO	Charters Tower	80.98	121	eP	P	00 27 18.6	-0.9
	comp=Z,4.4nm,0.8s						
BOSA	Boshof	82.23	228	P	P	00 27 24.9	-1.2
BOSA	Boshof	82.23	228	P	P	00 27 24.9	-1.2
	comp=Z,11nm,0.7s,baz=33,slow=3.9,SNR=16						
BOSA				LR	LR	01 02 26.7	
	comp=Z,82nm,18.5s,baz=268,slow=35						
YKA	Yellowknife Ar	83.21	8	P	P	00 27 28.5	-2.1
YKA	Yellowknife Ar	83.21	8	P	P	00 27 28.5	-2.1
	comp=Z,1.7nm,0.5s,baz=337,slow=5.4,SNR=63						
LIC	Lamto	84.43	274	eP	P	00 27 38.1	+0.4
	comp=Z,13nm,0.8s						
LIC	Lamto	84.43	274	eP	P	00 27 38.1	+0.4
	comp=Z,13nm,0.8s						
FFC	Flin Flon	91.89	3	i P	P	00 28 14.8	+2.0
VNDA	Vanda	120.36	166	PKP	PKPdf	00 33 54.9	+0.1
VNDA	Vanda	120.36	166	PKP	PKPdf	00 33 54.9	+0.1
	comp=Z,0.8nm,0.8s,baz=315,slow=3.8,SNR=4.4						
CPUP	Villa Florida	144.51	271	PKP	PKPab	00 34 40.8	+1.1
CPUP	Villa Florida	144.51	271	PKP	PKPab	00 34 40.8	+1.1
	comp=Z,2.9nm,0.8s,baz=43,slow=2.7,SNR=7.6						
LPAZ	La Paz	148.31	296	PKPbc	PKPdf	00 34 49.8	+0.9
LPAZ	La Paz	148.31	296	PKPbc	PKPdf	00 34 49.8	+0.9
	comp=Z,1.5nm,0.8s,baz=44,slow=7.8,SNR=6.3						

*IDC **03** 00:40:31.4±1.6, 51°.64N×175°.48E, h0km, mb4.0/6, mb1 4.0/6, mb1mx3.6/27, mbtmp4.0/6, Error ellipse: s-maj=41.7km s-min=17.5km az=22.0*
*NEIC **03** 00:40:36.4, 51°.81N×175°.15E, h12km, ML3.3(AEIC), After AEIC.*
ISC 03 00:40:39.3±1.1**, 52°.0N**±0°.2×**175°.21E**±0°.08**, h39km, n23, σ1s.34**/28**, mb4.2**/8**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	1.03	319	P	Pn	00 40 56.6	-0.5
SMY				S	Sn	00 41 13.1	+2.9
FX1	Attu Island--F	1.55	307	Pn	Pn	00 41 04.5	+0.1
FX1				Sn	Sn	00 41 25.5	+2.2
FX1	Attu Island--F	1.55	307	Pn	Pn	00 41 04.5	+0.1
	231nm,0.3s,baz=176,slow=4.6,SNR=141						
FX1				Sn	Sn	00 41 25.5	+2.2
	202nm,0.3s,baz=265,slow=21,SNR=21						
LSNW	Little Sitkin	2.04	89	P	Pn	00 41 11.1	0.0
LSSE	Little Sitkin	2.08	90	P	Pn	00 41 11.7	+0.2
LSPA	Little Sitkin	2.08	89	P	Pn	00 41 11.4	-0.2
LSPA				S	Sn	00 41 39.4	+3.1
AMKA	Amchitka	2.61	101	P	Pn	00 41 18.9	0.0
AMKA				S	Sn	00 41 51.7	+2.3
ILAR	Eielson Array	23.21	42	P	P	00 45 40.6	-1.8
ILAR	Eielson Array	23.21	42	P	P	00 45 40.6	-1.8
	0.3nm,0.7s,baz=259,slow=9.1,SNR=4.2						
SONM	Songino Array	43.02	293	P	P	00 48 35.0	+0.3
SONM	Songino Array	43.02	293	P	P	00 48 35.0	+0.3
	0.4nm,0.5s,baz=66,slow=6.4,SNR=4.8						
KURK	Kurchatov	55.85	310	P	P	00 50 12.9	+0.5
KURBB	Kurchatov Arra	55.96	310	P	P	00 50 12.9	-0.3
	73nm,0.4s,baz=41,slow=6.6,SNR=1.9						
MKAR	Makanchi Array	56.69	305	P	P	00 50 17.4	-1.1
MKAR	Makanchi Array	56.69	305	P	P	00 50 17.4	-1.1
	1.0nm,0.4s,baz=51,slow=5.8,SNR=30						
BVAR	Borovoye Array	57.96	316	P	P	00 50 27.2	-0.1
BVAR	Borovoye Array	57.96	316	P	P	00 50 27.2	-0.1
	0.8nm,0.4s,baz=39,slow=8.1,SNR=4.3						
SCHQ	Schefferville	61.77	35	P	P	00 50 52.5	-1.0
SCHQ	Schefferville	61.77	35	P	P	00 50 52.5	-1.0
	1.6nm,0.8s,baz=7.7,slow=7.0,SNR=4.0						
AKTO	Aktyubinsk	64.97	321	P	P	00 51 15.2	+0.5
AKTO	Aktyubinsk	64.97	321	P	P	00 51 15.2	+0.5
	1.4nm,0.6s,baz=39,slow=6.6,SNR=8.6						
BRTR	Keskin Array B	82.75	331	P	P	00 52 59.0	0.0
BRTR	Keskin Array B	82.75	331	P	P	00 52 59.0	0.0
	0.6nm,0.7s,baz=60,slow=3.4,SNR=5.6						

IDC 03 00:47:08.0±1.3**, 33°.69N**×**82°.26E, h0km, mb3.5**/6**, mb1 3.8**/6**, mb1mx3.4**/26**, mbtmp3.6**/6**, Error ellipse: s-maj=41.0km s-min=27.2km az=50.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	20.34	4	P	P	00 51 46.5	+0.8
	0.7nm,0.6s,baz=191,slow=8.6,SNR=5.6						
CMAR	Chiang Mai Arr	21.27	131	P	P	00 51 56.8	+0.6
	1.4nm,0.7s,baz=312,slow=10,SNR=8.3						
AKTO	Aktyubinsk	24.41	321	P	P	00 52 28.2	+0.1
	0.5nm,0.7s,baz=124,slow=11,SNR=4.0						
FINES	FINESS Array B	45.00	326	P	P	00 55 25.7	+0.8
	2.2nm,1.0s,baz=65,slow=9.0,SNR=3.6						
TORD	Torodi Ar. Bea	75.05	276	P	P	00 58 51.9	-0.1
	0.6nm,0.7s,baz=45,slow=4.9,SNR=13						
YKA	Yellowknife Ar	83.20	8	P	P	00 59 34.5	-1.2
	0.2nm,0.5s,baz=341,slow=5.4,SNR=6.2						

IDC 03 01:19:30.2±3.1**, 33°.31N**×**82°.74E, h0km, mb3.4**/5**, mb1 3.5**/6**, mb1mx3.3**/27**, mbtmp3.4**/6**, ML3.1**/1**, Error ellipse: s-maj=75.5km s-min=35.9km az=117.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.47	359	Pn	Pn	01 22 40.2	-2.5
	0.1nm,0.3s,baz=179,slow=12,SNR=5.1						
ZALV	Zalesovo Beam	20.69	3	P	P	01 24 12.6	+1.0
	0.7nm,0.6s,baz=182,slow=10,SNR=4.4						
BVAR	Borovoye Array	21.61	339	P	P	01 24 22.6	+1.0
	0.3nm,0.6s,baz=148,slow=11,SNR=3.0						
FINES	FINESS Array B	45.54	326	P	P	01 27 50.5	-0.7
	1.4nm,0.8s,baz=134,slow=9.9,SNR=3.2						
TORD	Torodi Ar. Bea	75.49	276	P	P	01 31 16.9	+0.2
	0.6nm,0.8s,baz=46,slow=5.0,SNR=9.8						
YKA	Yellowknife Ar	83.52	8	P	P	01 31 59.5	-0.1
	0.2nm,0.5s,baz=340,slow=4.9,SNR=4.8						

KRSC 03 01:24:32.3±0.3**, 55°.11N**×**162°.40E, h24km**±24km**, ML3.9, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.68	215	eP	Pb	01 24 45.2	-0.2
MKZ				i S	Sb	01 24 54.1	-0.3
KBTR	Krutoberegovo	1.13	12	eP	Pn	01 24 52.7	+0.1
KBTR				i S	Sb	01 25 08.7	+1.4
KBG	Krutoberegovo	1.16	8	eP	Pn	01 24 53.0	0.0
KBG				i S	Sb	01 25 08.8	+0.5
BZGR	Bezymyannyi-Gr	1.28	311	eP	Pb	01 24 55.4	-0.4
BZGR				i S	Sb	01 25 12.6	+0.7
TUMR	Tumrok	1.30	279	eP	Pn	01 24 55.4	+0.2
TUMR				i S	Sb	01 25 12.9	+0.2
BZMR	Bezymyannaya	1.36	308	eP	Pn	01 24 56.3	+0.3
BZMR				i S	Sn	01 25 13.9	+0.4
CIRR	Tsirk	1.38	318	eP	Pb	01 24 57.3	-0.2
CIRR				i S	Sb	01 25 16.0	+1.2
LGNR	Loginova	1.38	316	eP	Pb	01 24 57.2	-0.5
LGNR				i S	Sb	01 25 15.0	-0.1
BZWR	Bezymyannyi-We	1.38	309	eP	Pn	01 24 56.8	+0.5
BZWR				i S	Sb	01 25 14.8	-0.2
KMNR	Kamenistaya	1.39	299	eP	Pn	01 24 56.9	+0.5
KMNR				i S	Sb	01 25 14.9	-0.3
KIRR	Kirishev	1.44	307	eP	Pn	01 24 57.9	+0.8
KIRR				i S	Sb	01 25 16.6	-0.2
KPT	Kopyto	1.51	306	eP	Pn	01 24 58.8	+0.9
KPT				i S	Sb	01 25 17.9	-0.6
KRSR	Krestovskiy	1.52	318	eP	Pn	01 24 58.5	+0.4
KRSR				i S	Sn	01 25 17.3	0.0
KLY	Klyuchi	1.56	321	eP	Pn	01 24 57.8	-0.7
KLY				i S	Sn	01 25 15.6	-2.3
SMKR	Semkarok	1.57	341	eP	Pb	01 25 00.4	-0.3
SMKR				i S	Sb	01 25 20.9	+0.7
SRKR	Sorokina	1.70	336	eP	Pb	01 25 01.9	-1.0
SRKR				i S	Sb	01 25 23.5	-0.4
KOZ	Kozyrevsk	1.72	305	P	Pb	01 25 03.0	-0.2
KOZ				i S	Sb	01 25 25.2	+0.7
SRDR	Sredinnyy	1.94	310	eP	Pn	01 25 04.7	+0.9
SRDR				i S	Sn	01 25 28.0	+0.5
KII	Karymskiy	2.03	239	eP	Pn	01 25 05.5	+0.5
KII				i S	Sn	01 25 29.5	-0.2
BKI	Bering	2.05	86	eP	Pn	01 25 05.2	0.0
BKI				i S	Sn	01 25 29.2	-0.8
ESO	Esso	2.26	293	eP	Pn	01 25 08.6	+0.5
ESO				i S	Sn	01 25 35.9	+0.7
SPN	Mys Shipunski	2.45	216	eP	Pn	01 25 10.8	0.0
SPN				i S	Sn	01 25 38.8	-1.2
SDLR	Sedlovina	2.76	230	eP	Pn	01 25 16.4	+1.2
SDLR				i S	Sn	01 25 49.3	+1.4
KRER	Koryakskii	2.81	231	eP	Pn	01 25 17.9	+2.0
KRER				i S	Sn	01 25 51.4	+2.3
SMAR	Somma	2.81	230	eP	Pn	01 25 17.6	+1.6
SMAR				i S	Sn	01 25 51.3	+2.0
AVH	Avacha	2.84	231	eP	Pn	01 25 18.4	+2.2
AVH				i S	Sn	01 25 52.6	+3.0
UGLR	Uglovaya	2.84	229	eP	Pn	01 25 17.8	+1.6
UGLR				i S	Sn	01 25 51.0	+1.3
KOK	Koryaka	2.87	232	eP	Pn	01 25 19.1	+2.5
KOK				i S	Sn	01 25 53.6	+3.2
GNL	Ganaly	2.97	243	eP	Pn	01 25 19.5	+1.5
GNL				i S	Sn	01 25 54.3	+1.4
PET	Petropavlovsk	3.04	228	eP	Pn	01 25 21.0	+2.2
PET				i S	Sn	01 25 55.9	+1.5
RUS	Russkaya	3.54	222	eP	Pn	01 25 26.6	+0.9
RUS				i S	Sn	01 26 06.2	-0.5
GRL	Gorelyy	3.62	227	eP	Pn	01 25 28.8	+1.7
GRL				i S	Sn	01 26 10.5	+1.3
MTVR	Mutnovka	3.63	225	eP	Pn	01 25 29.1	+1.9
MTVR				i S	Sn	01 26 11.4	+2.1
APC	Apacha	3.79	237	eP	Pn	01 25 32.2	+3.1
APC				i S	Sn	01 26 16.6	+3.7

KRSC 03 01:26:25.6±0.2**, 55°.11N**×**162°.28E, h12km**±11km**, ML3.6, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.64	210	eP	Pb	01 26 38.4	-0.3
MKZ				eS	Sb	01 26 47.6	+0.1
KBTR	Krutoberegovo	1.14	15	eP	Pg	01 26 47.5	-0.1
KBTR				eS	Sn	01 27 03.9	+0.9
KBG	Krutoberegovo	1.17	12	eP	Pn	01 26 47.8	0.0
KBG				eS	Sn	01 27 04.0	+0.3
BZGR	Bezymyannyi-Gr	1.23	313	eP	Pn	01 26 48.7	0.0
BZGR				eS	Sg	01 27 05.6	+0.2
TUMR	Tumrok	1.24	279	eP	Pg	01 26 49.4	-0.1
TUMR				eS	Sg	01 27 06.4	+0.7
BZMR	Bezymyannaya	1.31	310	eP	Pn	01 26 49.6	-0.3
BZMR				eS	Sb	01 27 06.9	-0.4
BZWR	Bezymyannyi-We	1.33	311	eP	Pn	01 26 50.1	-0.1
BZWR				eS	Sg	01 27 08.9	+0.1
LGNR	Loginova	1.33	318	eP	Pb	01 26 50.8	0.0
LGNR				eS	Sg	01 27 10.0	+0.9
CIRR	Tsirk	1.33	320	eS	Sb	01 27 06.7	-1.1
KMNR	Kamenistaya	1.33	300	eP	Pn	01 26 50.1	-0.1
KMNR				eS	Sg	01 27 08.9	+0.1
KIRR	Kirishev	1.39	308	eP	Pn	01 26 51.1	+0.1
KIRR				eS	Sb	01 27 09.6	+0.1
KPT	Kopyto	1.45	307	eP	Pn	01 26 52.1	+0.3
KPT				eS	Sg	01 27 11.9	-0.6
KRSR	Krestovskiy	1.48	319	eP	Pn	01 26 51.7	-0.4
KRSR				eS	Sn	01 27 10.3	-1.1
KLY	Klyuchi	1.52	323	eP	Pn	01 26 51.0	-1.5
KLY				eS	Sn	01 27 08.7	-3.5
SMKR	Semkarok	1.54	343	eP	Pn	01 26 53.4	+0.3
SMKR				eS	Sb	01 27 14.1	+0.2
BDR	Baidarnaya	1.58	338	eP	Pb	01 26 54.3	-0.6
BDR				eS	Sb	01 27 15.2	+0.3
SRKR	Sorokina	1.67	338	eP	Pb	01 26 55.8	-0.6
SRKR				eS	Sb	01 27 17.9	+0.5
SRDR	Sredinnyy	1.89	311	eP	Pn	01 26 58.0	+0.2
SRDR				eS	Sn	01 27 21.6	+0.1
KII	Karymskiy	1.97	238	eP	Pn	01 26 59.3	+0.4
KII				eS	Sn	01 27 23.5	0.0
BKI	Bering	2.12	86	eP	Pn	01 26 59.0	-1.8
BKI				eS	Sn	01 27 22.5	-4.5
ESO	Esso	2.19	293	eP	Pn	01 27 01.9	0.0
SPN	Mys Shipunski	2.42	214	eP	Pn	01 27 04.4	-0.5
SPN				eS	Sn	01 27 32.3	-2.0
SDLR	Sedlovina	2.71	229	eP	Pn	01 27 10.0	+0.9
SDLR				eS	Sn	01 27 43.0	+1.1
KRER	Koryakskii	2.75	230	eP	Pn	01 27 11.5	+1.7
KRER				eS	Sn	01 27 45.7	+2.6
SMAR	Somma	2.76	229	eP	Pn	01 27 10.9	+1.0
SMAR				eS	Sn	01 27 43.6	+0.3
AVH	Avacha	2.78	230	eP	Pn	01 27 12.3	+2.2
AVH				eS	Sb	01 27 47.2	-2.3
UGLR	Uglovaya	2.79	228	eP	Pn	01 27 11.6	+1.5
UGLR				eS	Sn	01 27 44.8	+1.1
KOK	Koryaka	2.81	231	eP	Pn	01 27 11.9	+1.4
KOK				eS	Sn	01 27 45.2	+0.9
GNL	Ganaly	2.91	243	eP	Pn	01 27 12.9	+1.1
PET	Petropavlovsk	2.99	227	eP	Pn	01 27 14.2	+1.5
PET				eS	Sn	01 27 48.5	0.0
RUS	Russkaya	3.49	221	eP	Pn	01 27 20.0	+0.4
RUS				eS	Sn	01 27 59.2	-1.6
MTVR	Mutnovka	3.58	224	eP	Pn	01 27 22.3	+1.2
MTVR				eS	Sn	01 28 04.2	+0.7

IDC 03 01:44:39.7±7.1**, 19°.05S**×**175°.05W, h0km, mb3.7**/2**, mb1 4.0**/2**, mb1mx3.6**/18**, mbtmp3.7**/2**, Error ellipse: s-maj=340.7km s-min=60.9km az=146.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	47.56	255	P	P	01 53 17.6	+0.1
	0.5nm,0.4s,baz=90,slow=8.4,SNR=14						
WRA	Warramunga Arr	47.57	260	P	P	01 53 17.2	-0.3
	0.3nm,0.3s,baz=97,slow=8.5,SNR=6.9						
BRTR	Keskin Array B	147.83	316	PKPbc	PKPbc	02 04 26.3	-0.8
	0.5nm,0.8s,baz=85,slow=3.3,SNR=3.4						

*OMAN **03** 01:48:19.6±99.0, 26°.83N×56°.53E, h16km, Error ellipse: s-maj=58.6km s-min=24.6km az=253.0*
CSEM 03 01:48:08.3±1.1**, 27°.52N**×**56°.90E, h10km, ML4.1**/1**, 1C, Error ellipse: s-maj=63.1km s-min=25.3km az=104.0, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BANOM	Banah	1.68	199	⇑P	Pn	01 48 37.3	-0.5
	SNR=28						
BANOM	Banah	1.68	199	P	Pn	01 48 37.3	-0.5
	SNR=28						
BANOM				S	Sn	01 48 59.3	-0.1
NAZ	Nazwa, Dubai	2.75	204	P	Pn	01 48 52.7	+0.1
ASHO	Ashiyiah	2.92	195	P	Pn	01 48 55.3	+0.3
	SNR=15						
ASHO	Ashiyiah	2.92	195	P	Pn	01 48 55.3	+0.4
	SNR=15						
FAQ	Al Faqa, Dubai	3.00	203	P	Pn	01 48 55.8	-0.2
	SNR=23						
ASUD	Al Ashush, Dub	3.21	206	P	Pn	01 48 58.9	+0.1
	SNR=25						
ASUD	Al Ashush, Dub	3.21	206	P	Pn	01 48 58.9	+0.1
	SNR=25						

BJI 03 01:51:51.0, 46°.89N×**116°.02E, h6km, ML3.7**/5**, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HHC	Hu-ho-hao-te	6.84	210	ePg	Pg	01 54 05.8	+3.6
HHC				Sg	Sg	01 55 37.2	+6.3
HHC				smax	smax		
	comp=N,46nm,0.4s						
HHC				smax	smax		
	comp=E,50nm,0.3s						

MEX 03 02:10:02.1±0.9**, 15°.96N**×**93°.24W, h146km**±13km**, MD4.1, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGIG		0.82	8	eP	Pn	02 10 23.9	-1.3
TGIG				i S	Sn	02 10 40.5	-2.3
CCIG	Comitan	1.10	73	eP	Pn	02 10 26.0	-1.6
CCIG				eS	Sn	02 10 45.0	-2.1
THIG		1.40	138	i P	Pn	02 10 29.8	-0.5
THIG				eS	Sn	02 10 50.8	-1.1
CMIG	Matias Romero	1.94	306	i P	Pn	02 10 35.5	-0.8
CMIG				i S	Sn	02 11 01.5	-1.1
HUIG	Huatulco	2.77	267	i P	Pn	02 10 44.7	-1.7
HUIG				i S	Sn	02 11 17.8	-2.8
VHO	Vista Hermosa	3.53	289	i P	Pn	02 10 55.3	-1.2
VHO				i S	Sn	02 11 37.2	-1.4

MEX 03 02:14:23.5±0.6**, 18°.12N**×**103°.32W, h17km**±4km**, MD3.5, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.17	352	i P	Pg	02 14 26.8	-1.0
MMIG				i S	Sg	02 14 30.3	-0.5
R15V		1.22	329	i P	Pn	02 14 42.2	-3.6
R15V				eS	Sb	02 14 56.8	-4.8
EZ5V		1.38	349	i P	Pn	02 14 45.4	-3.0
EZ5V				eS	Sn	02 15 00.8	-5.6

*AUST **03** 02:15:12.2±2.3, 5°.06S×130°.88E, h1km, Error ellipse: s-maj=1.1km s-min=0.7km az=243.0*
*IDC **03** 02:15:12.1±1.3, 5°.10S×130°.92E, h0km, mb4.1/5, mb1 4.4/8, mb1mx4.1/18, mbtmp4.2/8, ML4.4/3, MS3.1/2, Ms1 3.1/2, ms1mx2.7/29, Error ellipse: s-maj=72.8km s-min=18.7km az=73.0*
*DJA **03** 02:15:15.9±2.2, 5°S±4°×13°1E±°, h14km±20km, M4.8/6, mb4.8/5, mB5.5/1, MLv4.8/6, Mw(mB)4.9/1*
*ISCJB **03** 02:15:17.7±0.3, 5°.17S±0°.03×131°.01E±0°.06, h68km, mb4.1/9, Error ellipse: s-maj=8.6km s-min=4.3km az=162.2*
*NEIC **03** 02:15:17.4±0.4, 5°.13S×130°.88E, h35km, mb4.2/9, Error ellipse: s-maj=13.9km s-min=7.4km az=60.0*
ISC 03 02:15:19.0±0.6**, 5°.31S**±0°.05×**131°.07E**±0°.07**, h68km, n59, σ2s.41**/51**, mb4.2**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.40	304	P	Pn	02 15 37.1	-5.5
FAKI	Fak Fak	2.66	26	P	Pn	02 15 54.9	-4.6
AAI	Ambon	3.29	299	P	Pn	02 16 03.6	-4.5
AAI	Ambon	3.29	299	P	Pn	02 16 04.1	-4.0
	baz=3.0,SNR=95						
SWI	Sorong	4.42	3	P	Pn	02 16 18.8	-4.9
SWI	Sorong	4.42	3	P	Pn	02 16 18.8	-4.9
	baz=4.2,SNR=11						
SWI				S	Sn	02 17 02.5	-11
	baz=4.2,SNR=16						
NLAI	Namlea	4.46	297	P	Pn	02 16 21.1	-3.0
BAKI	Biak	6.49	51	P	Pn	02 16 51.3	-0.6
	120nm,0.6s						
KDU	Kakadu	7.46	169	P	Pn	02 17 07.8	+2.6
	baz=7.8,SNR=31						
KDU				S	Sn	02 18 33.1	+4.9
	baz=7.8,SNR=4.9						
MTN	Manton Dam	7.48	180	P	Pn	02 17 08.4	+2.9
	baz=7.8,SNR=86						
MTN				S	Sn	02 18 33.3	+4.3
	baz=7.8,SNR=11						
KDI	Kendari	8.53	279	P	Pn	02 17 19.8	0.0
	38nm,1.1s						
KAPI	Kappang	11.27	271	LR	LR	02 22 05.0	
	comp=Z,90nm,19.2s,baz=278,slow=37						
WSI	Waingapu	11.52	247	P	Pn	02 17 52.4	-8.3
	baz=12,SNR=3.9						
WSI				S	Sn	02 20 27.4	+20
	baz=12,SNR=6.9						
FITZ	Fitzroy Crossi	13.77	202	Pn	Pn	02 18 30.1	-1.1
FITZ				Sn	Sn	02 20 57.6	-5.0
FITZ	Fitzroy Crossi	13.77	202	Pn	Pn	02 18 30.1	-1.1
	1.6nm,0.3s,baz=36,slow=10,SNR=60						
FITZ				Sn	Sn	02 20 57.6	-5.0
	1.1nm,0.3s,baz=171,slow=19,SNR=6.3						
FITZ	Fitzroy Crossi	13.77	202	P	Pn	02 18 30.1	-1.1
	baz=14,SNR=72						
COEN	Coen	14.70	127	ePn	Pn	02 18 43.9	+0.5
	48nm,0.5s						
COEN	Coen	14.70	127	P	Pn	02 18 44.1	+0.7
	baz=15,SNR=29						
COEN				S	Sn	02 21 20.7	-4.5
	baz=15,SNR=7.1						
WRAB	Tennant Creek	14.88	168	ePn	Pn	02 18 46.5	+0.8
	8.5nm,0.7s						
WRAB				eSn	Sn	02 21 26.1	-3.4
WRA	Warramunga Arr	14.89	168	Pn	Pn	02 18 45.1	-0.7
WRA				Sn	Sn	02 21 25.4	-4.3
WRA	Warramunga Arr	14.89	168	Pn	Pn	02 18 45.1	-0.7
	1.0nm,0.3s,baz=351,slow=13,SNR=19						
WRA				Sn	Sn	02 21 25.4	-4.3
	1.3nm,0.3s,baz=346,slow=24,SNR=10						
PMG	Port Moresby	16.47	105	ePn	P	02 19 08.9	+1.5
	13nm,0.9s						
QIS	Mount Isa	17.28	152	P	P	02 19 22.6	+6.2
	baz=18,SNR=7.0						
QIS				S	Sn	02 22 22.3	-5.2
	baz=18,SNR=7.3						
AS31	Alice Springs	18.45	172	eP	Pn	02 19 33.4	+3.3
ASAR	Alice Springs	18.45	172	P	Pn	02 19 33.0	+2.9
ASAR				S	Sn	02 22 53.0	-2.9
ASAR	Alice Springs	18.45	172	P	Pn	02 19 33.0	+2.9
	1.9nm,0.3s,baz=344,slow=9.5,SNR=74						
ASAR				S	Sn	02 22 53.0	-2.9
	0.4nm,0.3s,baz=355,slow=27,SNR=8.7						
MBWA	Marble Bar	19.21	214	eP	Pn	02 19 40.1	+1.0
	11nm,0.8s						
CTA	Charters Tower	20.83	136	P	Pn	02 20 00.5	+2.1
CTA	Charters Tower	20.83	136	P	Pn	02 20 00.5	+2.1
	4.7nm,0.7s,baz=303,slow=13,SNR=8.6						
CTAO	Charters Tower	20.83	136	eP	Pn	02 20 00.3	+2.0
	14nm,0.8s						
MEEK	Meekatharra	24.31	208	P	P	02 20 33.2	+2.9
	baz=25,SNR=6.1						
QLP	Quilpie	24.61	151	P	P	02 20 39.3	+6.3
	baz=25,SNR=4.9						
QLP				S	S	02 25 16.5	+27
	baz=25,SNR=4.1						
KMBL	Kambalda	27.31	197	P	P	02 21 01.2	+3.8
	baz=28,SNR=5.0						
KLBR	Kellerberrin	28.97	204	P	P	02 21 15.8	+3.6
	baz=29,SNR=5.3						
CMAR	Chiang Mai Arr	39.51	308	P	P	02 22 42.9	-0.5
CMAR	Chiang Mai Arr	39.51	308	P	P	02 22 42.9	-0.5
	1.4nm,0.4s,baz=140,slow=7.7,SNR=7.7						
CHTO	Chiang Mai	39.71	308	eP	P	02 22 44.3	-0.7
	7.2nm,1.0s						
KSRS	Korea Array	42.65	356	LR	LR	02 42 22.6	
	comp=Z,28nm,18.8s,baz=158,slow=38						
ODAN	Odare	52.98	309	eP	P	02 24 28.8	-0.5
TAPN	Taplejung	52.99	310	eP	P	02 24 29.0	-0.4
	9.9nm,0.4s						
RAMN	Ramite	53.64	309	eP	P	02 24 33.6	-0.6
	24nm,0.7s						
GUN	Gumba	54.67	310	eP	P	02 24 41.0	-0.8
	20nm,0.7s						
DMN	Daman	55.12	309	eP	P	02 24 44.4	-0.5
KOLN	Koldanda	56.37	308	eP	P	02 24 53.6	-0.2
	13nm,0.6s						
DANN	Dangsing	56.52	309	eP	P	02 24 54.6	-0.4
	15nm,0.8s						
PYUN	Piuthan	57.00	308	eP	P	02 24 58.2	-0.1
	38nm,0.9s						
SONM	Songino Array	57.20	340	P	P	02 24 59.8	+0.6
SONM	Songino Array	57.20	340	P	P	02 24 59.8	+0.6
	0.5nm,0.6s,baz=150,slow=7.2,SNR=3.1						
MK31	Makanchi Array	67.42	326	eP	P	02 26 08.2	+0.8
MKAR	Makanchi Array	67.42	326	P	P	02 26 08.1	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	67.42	326	P	P	02 26 08.1	+0.7
	2.9nm,0.4s,baz=123,slow=8.0,SNR=59						
TKM2	Tokmak 2	69.38	320	eP	P	02 26 20.4	+0.4
	1.6nm,0.7s						
ZALV	Zalesovo Beam	70.56	333	P	P	02 26 26.2	-0.4
ZALV	Zalesovo Beam	70.56	333	P	P	02 26 26.2	-0.4
	1.9nm,0.6s,baz=106,slow=4.8,SNR=7.7						
KURK	Kurchatov	71.65	328	eP	P	02 26 33.9	+0.6
	6.7nm,0.9s						
VNDA	Vanda	73.99	173	eP	P	02 26 51.1	+4.3
	2.3nm,0.9s						
VNDA	Vanda	73.99	173	P	P	02 26 50.5	+3.8
	0.9nm,0.6s,baz=339,slow=7.2,SNR=11						
BRVK	Borovoye	77.29	327	eP	P	02 27 06.0	0.0
	2.2nm,0.9s						
ABKAR	Akbulak array	81.86	321	eP	P	02 27 31.4	+0.5

WEL 03 02:27:04.7±0.4, 39.88S×173.80E, h216km±3km, ML4.3/20, 9C-33D, Error ellipse: s-maj=2.1km s-min=1.1km az=90.0, Off west coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NRZ	Ngariki Road	0.55	11	⇑PN	Pn	02 27 33.9	0.0
NRZ				SN	S	02 27 57.0	+0.4
DFE	Dawson Falls	0.60	23	⇓PN	Pn	02 27 34.2	0.0
NWEZ	Newall Road	0.60	5	⇓PN	Pn	02 27 34.0	-0.1
NEZ	North Egmont	0.65	21	ePN	Pn	02 27 34.5	+0.1
PKE	Pukeiti	0.70	12	⇓PN	Pn	02 27 34.3	-0.3
RAEZ	Rainy Point	0.75	38	PN	Pn	02 27 34.6	-0.1
DREZ	Durham Road	0.76	25	PN	Pn	02 27 34.8	+0.1
MHEZ	Mangahewa	0.90	27	⇑PN	Pn	02 27 35.6	0.0
WAZ	Wanganui	0.92	83	PN	Pn	02 27 36.3	+0.7
WAZ				SN	S	02 28 01.2	+1.6
DUWZ	D'Urville Isla	0.93	174	⇑PN	Pn	02 27 36.0	+0.4
DUWZ				SN	S	02 27 59.0	-0.9
VRZ	Vera Road	1.06	45	⇓PN	Pn	02 27 35.7	-0.8
KIW	Kapiti Island	1.30	139	PN	Pn	02 27 38.4	+0.2
KIW				SN	S	02 28 02.9	-1.3
PKVZ	Pokaka	1.33	64	⇓PN	Pn	02 27 38.2	-0.3
QRZ	Quartz Range	1.35	225	⇑PN	Pn	02 27 37.8	-0.8
QRZ				SN	S	02 28 02.6	-2.3
NNZ	Nelson	1.38	193	⇑PN	Pn	02 27 38.6	-0.1
NNZ				SN	S	02 28 03.9	-1.4
TCW	Tory Channel	1.38	165	PN	Pn	02 27 39.2	+0.4
MTVZ	Mangateitei	1.38	70	⇓PN	Pn	02 27 38.7	-0.2
OGWZ	Otaki Gorge	1.41	132	PN	Pn	02 27 39.3	+0.3
TRVZ	Turoa	1.47	67	PN	Pn	02 27 39.6	-0.3
DRZ	Dome Shelter	1.49	67	⇓PN	Pn	02 27 40.0	-0.2
FWVZ	Far West T-bar	1.49	66	PN	Pn	02 27 39.6	-0.5
WNVZ	Wahianoa	1.50	69	PN	Pn	02 27 39.8	-0.2
TWVZ	Taurewa	1.50	58	⇓PN	Pn	02 27 39.2	-0.8
WPVZ	Whakapapa	1.51	64	PN	Pn	02 27 39.6	-0.5
TUWZ	Tuamarina	1.56	176	PN	Pn	02 27 40.3	+0.1
TUVZ	Tukino	1.56	68	⇓PN	Pn	02 27 40.5	0.0
NGZ	Ngauruhoe	1.56	64	⇓PN	Pn	02 27 40.0	-0.5
CAW	Cannon Point	1.56	142	PN	Pn	02 27 40.4	+0.1
MRZ	Mangatainoka R	1.57	120	⇓PN	Pn	02 27 40.4	0.0
MRZ				SN	S	02 28 07.0	-1.1
MOVZ	Moawhango	1.58	73	⇓PN	Pn	02 27 40.1	-0.5
WTVZ	West Tongariro	1.58	62	PN	Pn	02 27 40.1	-0.6
SNZO	South Karori	1.59	154	PN	Pn	02 27 40.4	0.0
WEL	Wellington	1.59	153	PN	Pn	02 27 40.6	+0.1
HIZ	Hauiti	1.59	31	⇓PN	Pn	02 27 39.6	-1.1
POWZ	Post Office Ro	1.60	109	⇓PN	Pn	02 27 40.7	+0.1
OTVZ	Oturere	1.61	64	PN	Pn	02 27 40.8	-0.2
KRVZ	Karewarewa	1.63	62	PN	Pn	02 27 40.7	-0.4
HOWZ	Holdsworth Sta	1.66	128	⇓PN	Pn	02 27 41.1	-0.1
TSZ	Takapari Road	1.67	97	⇓PN	Pn	02 27 41.4	0.0
KATZ	Kakaramea	1.72	59	PN	Pn	02 27 41.6	-0.4
BHW	Baring Head	1.73	152	PN	Pn	02 27 41.5	-0.3
BHHZ	Black Hill Sta	1.79	78	⇓PN	Pn	02 27 41.8	-0.7
MTW	Mount Morrison	1.82	135	⇓PN	Pn	02 27 42.5	-0.1
RITZ	Rihia Road	1.83	61	PN	Pn	02 27 42.6	-0.2
TIWZ	Tintock	1.83	120	⇓PN	Pn	02 27 42.9	+0.1
RATZ	Rangitukua	1.83	57	⇓PN	Pn	02 27 42.6	-0.3
BSWZ	Blackbirch Sta	1.83	178	PN	Pn	02 27 42.8	+0.1
PNHZ	Pukenui	1.85	92	⇓PN	Pn	02 27 43.0	0.0
DVHZ	Dannevirke	1.87	104	⇓PN	Pn	02 27 43.1	0.0
MSWZ	Moikau Station	1.89	145	PN	Pn	02 27 43.2	-0.1
CMWZ	Cape Campbell	1.90	171	PN	Pn	02 27 43.9	+0.6
WATZ	Wairara	1.90	53	PN	Pn	02 27 42.7	-0.8
PAWZ	Paruwai Farm	1.95	141	PN	Pn	02 27 43.8	-0.1
THZ	Tophouse	2.00	199	PN	Pn	02 27 43.8	-0.7
TMWZ	Te Maipa	2.01	128	⇓PN	Pn	02 27 44.5	-0.1
PLWZ	Palliser	2.02	147	PN	Pn	02 27 44.2	-0.4
HATZ	Hinemaiaia	2.03	62	PN	Pn	02 27 43.8	-1.0
BFZ	Birch Farm	2.04	114	PN	Pn	02 27 44.7	0.0
WPHZ	Waipukurau	2.04	96	PN	Pn	02 27 44.5	-0.3
TRWZ	Traveller	2.09	137	PN	Pn	02 27 45.2	-0.1
BKZ	Black Stump Fm	2.20	72	⇑PN	Pn	02 27 45.7	-0.8
PRHZ	Porangahau	2.21	101	⇓PN	Pn	02 27 46.8	+0.2
MCHZ	McNeill Hill	2.28	80	⇓PN	Pn	02 27 47.6	+0.4
PXZ	Pawanui	2.36	95	⇓PN	Pn	02 27 48.2	+0.1
KAHZ	Kahuranaki	2.37	89	⇓PN	Pn	02 27 48.5	+0.2
ALRZ	Allen Road	2.37	57	PN	Pn	02 27 47.1	-1.1
NMHZ	Naumai	2.46	72	⇓PN	Pn	02 27 49.2	0.0
CKHZ	Cape Kidnapper	2.54	86	⇓PN	Pn	02 27 50.2	+0.2
KHZ	Kahutara	2.54	184	⇑PN	Pn	02 27 49.1	-0.9
KHZ				SN	S	02 28 22.9	-2.4
RAHZ	Arahi	2.72	70	PN	Pn	02 27 51.4	-0.7
URZ	Urewera	3.04	59	PN	Pn	02 27 53.4	-2.3
KNZ	Kokohu	3.12	75	PN	Pn	02 27 55.8	-0.8
LTZ	Lake Taylor	3.12	201	PN	Pn	02 27 55.0	-1.5
MHGZ	Mahia Peninsul	3.26	78	PN	Pn	02 27 57.8	-0.4
MWZ	Matawai	3.29	63	⇓PN	Pn	02 27 56.5	-2.1
PRGZ	Paritu Road	3.31	75	⇓PN	Pn	02 27 57.9	-0.9
CNGZ	Carnagh Statio	3.70	69	PN	Pn	02 28 02.4	-1.0
CRLZ	Canterbury Las	3.80	193	PN	Pn	02 28 02.0	-2.5
PUZ	Puketiti	3.92	64	⇓PN	Pn	02 28 03.7	-2.4
MQZ	McQueen's Vall	3.92	192	PN	Pn	02 28 02.9	-3.1
WVZ	Waitaha Valley	3.94	215	⇑PN	Pn	02 28 03.5	-2.7
MXZ	Matakaoa Point	4.22	58	PN	Pn	02 28 07.3	-2.4
RPZ	Rata Peaks	4.35	207	PN	Pn	02 28 08.5	-2.8
FOZ	Fox Glacier	4.80	219	PN	Pn	02 28 12.5	-4.3
LBZ	Lake Benmore	5.25	210	PN	Pn	02 28 19.2	-3.3
JCZ	Jackson Bay	5.63	220	⇓PN	Pn	02 28 23.7	-3.8
ODZ	Otahua Downs	5.67	203	⇑PN	Pn	02 28 25.4	-2.4
WKZ	Wanaka	6.08	214	PN	Pn	02 28 29.0	-4.2
EAZ	Earnscleugh	6.29	210	PN	Pn	02 28 31.5	-4.4
TUZ	Tuapeka	6.80	205	PN	Pn	02 28 39.3	-3.0
MLZ	Mavora Lakes	6.86	215	PN	Pn	02 28 39.8	-3.4
WHZ	Wether Hill Ro	7.39	214	ePN	Pn	02 28 45.4	-4.6
CTZ	Chatham Island	8.13	121	ePN	Pn	02 29 09.6	+10

NNC 03 02:29:58.3±2.7, 41.76N×80.97E, h0km±12km, mb3.8, mpv3.4, 8C-9D, Error ellipse: s-maj=19.9km s-min=9.8km az=133.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TKM2	Tokmak 2	4.15	288	⇑Pn	Pn	02 31 02.6	-0.5
	1.9nm,0.3s						
TKM2				⇑Pg	Pg	02 31 15.2	-2.8
	7.3nm,0.5s						
TKM2				⇓Lg	Lg	02 32 08.2	
	31nm,0.8s						
MK31	Makanchi Array	5.12	10	⇓Pn	Pn	02 31 14.8	-1.5
	0.8nm,0.2s,baz=194,slow=13,SNR=180						
MK31				⇓Sn	Sn	02 32 18.5	+2.4
	3.4nm,0.5s,baz=195,slow=13,SNR=9.5						
MK31				⇑Lg	Lg	02 32 39.6	
	5.6nm,0.5s						
KK31	Karatay Array	7.85	283	⇑Pg	Pg	02 32 24.3	-4.4
	1.0nm,0.5s,baz=92,slow=16,SNR=6.9						
KK31				⇓Lg	Lg	02 34 05.1	
	2.0nm,0.6s,baz=100,slow=27,SNR=4.7						
KURK	Kurchatov	9.10	351	⇑Pn	Pn	02 32 10.6	-0.1
	4.3nm,1.4s						
KURK				⇑Sn	Sn	02 33 54.3	+0.4
	6.3nm,1.1s						
KURK				⇑Lg	Lg	02 34 47.2	
	18nm,1.0s						
VOSK	Vostochnaya	12.88	332	⇓Pn	Pn	02 33 03.2	+0.7
	1.6nm,1.1s						
VOSK				⇓Lg	Lg	02 36 46.2	
	3.7nm,1.1s						
BRVK	Borovoye	13.40	331	⇓Pn	Pn	02 33 08.6	-0.9
	5.6nm,1.5s						
BRVK				⇓Lg	Lg	02 37 01.0	
	9.5nm,1.5s						
ZRNK	Zerenda	13.80	328	⇑Pn	Pn	02 33 15.7	+0.7
	1.8nm,0.8s						
ZRNK				⇓Lg	Lg	02 37 16.7	
	4.3nm,1.4s						
AB31	Akbulak array	16.50	304	P	Pn	02 33 51.2	+0.3
	3.1nm,1.4s,baz=108,slow=11,SNR=4.2						

DDA 03 03:31:26.3, 37.87N×29.18E, h7km, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DNZL	Cakiroluk	0.21	211	iP	Pg	03 31 31.0	+0.2
DNZL				iS	Sg	03 31 34.5	+0.7

*CSEM **03** 03:47:42.2, 45.42N×26.26E, h130km, MD3.3/2, After BUC*

BUC 03 03:47:42.2±1.1, 45.42N×26.26E, h130km±9km, MD3.3/2, 18C-15D, Error ellipse: s-maj=7.9km s-min=5.7km az=135.0, Romania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MLR	Muntele Rosu	0.23	287	⇑iP	Pn	03 48 00.6	+0.3
MLR	Muntele Rosu	0.23	287	⇑iP	Pn	03 48 00.6	+0.3
MLR				iS	Sn	03 48 13.3	-0.6
MLR	Muntele Rosu	0.23	287	⇑iP	Pn	03 48 00.6	+0.3
MLR				iS	Sn	03 48 13.3	-0.6
ISR	Istrita	0.36	147	⇓iP	Pn	03 48 01.0	+0.4
ISR	Istrita	0.36	147	⇓iP	Pn	03 48 01.0	+0.4
ISR	Istrita	0.36	147	⇓iP	Pn	03 48 01.0	+0.4
SECR		0.41	200	⇑iP	Pn	03 48 01.5	+0.7
SECR		0.41	200	⇑iP	Pn	03 48 01.5	+0.7
SECR				iS	Sn	03 48 13.5	-1.3
SECR		0.41	200	⇑iP	Pn	03 48 01.5	+0.7
SECR				iS	Sn	03 48 13.5	-1.3
PLOR	Plostina	0.51	32	⇓iP	Pn	03 48 01.6	+0.3
PLOR	Plostina	0.51	32	⇓iP	Pn	03 48 01.6	+0.3
PLOR				iS	Sn	03 48 15.4	-0.4
PLOR	Plostina	0.51	32	⇓iP	Pn	03 48 01.6	+0.3
PLOR				iS	Sn	03 48 15.4	-0.4
VRI	Vrincioaia	0.55	36	⇑iP	Pn	03 48 02.1	+0.5
VRI	Vrincioaia	0.55	36	⇑iP	Pn	03 48 02.1	+0.5
VRI				iS	Sn	03 48 16.2	0.0
VRI	Vrincioaia	0.55	36	⇑iP	Pn	03 48 02.1	+0.5
VRI				iS	Sn	03 48 16.2	0.0
PETR		0.74	66	S	Sn	03 48 18.1	-0.4
PETR		0.74	66	iS	Sn	03 48 18.1	-0.4
PETR		0.74	66	iS	Sn	03 48 18.1	-0.4
VOIR		0.85	272	⇑iP	Pn	03 48 03.8	-0.1
VOIR		0.85	272	⇑iP	Pn	03 48 03.8	-0.1
VOIR				iS	Sn	03 48 19.6	-0.7
VOIR		0.85	272	⇑iP	Pn	03 48 03.8	-0.1
VOIR				iS	Sn	03 48 19.6	-0.7
GHRR		1.03	51	S	Sn	03 48 22.7	-0.1
GHRR		1.03	51	iS	Sn	03 48 22.7	-0.1
GHRR		1.03	51	iS	Sn	03 48 22.7	-0.1
BUC1	Bucharest	1.09	189	S	Sn	03 48 23.8	0.0
BUC1	Bucharest	1.09	189	iS	Sn	03 48 23.8	0.0
BUC1	Bucharest	1.09	189	iS	Sn	03 48 23.8	0.0
TESR		1.12	14	⇓iP	Pn	03 48 06.5	+0.2
TESR		1.12	14	⇓iP	Pn	03 48 06.5	+0.2
TESR				iS	Sn	03 48 23.3	-1.3
TESR		1.12	14	⇓iP	Pn	03 48 06.5	+0.2
TESR				iS	Sn	03 48 23.3	-1.3
HUMR	Humele	1.27	226	⇓iP	Pn	03 48 08.0	+0.2
HUMR	Humele	1.27	226	⇓iP	Pn	03 48 08.0	+0.2
HUMR				iS	Sn	03 48 26.7	-0.6
HUMR	Humele	1.27	226	⇓iP	Pn	03 48 08.0	+0.2
HUMR				iS	Sn	03 48 26.7	-0.6
CFR	Carcaliu	1.34	100	⇓iP	Pn	03 48 08.8	+0.3
CFR	Carcaliu	1.34	100	⇓iP	Pn	03 48 08.8	+0.3
CFR				iS	Sn	03 48 27.0	-1.5
CFR	Carcaliu	1.34	100	⇓iP	Pn	03 48 08.8	+0.3
CFR				iS	Sn	03 48 27.0	-1.5
LEOM	Leova	1.74	52	⇑iP	Pn	03 48 13.6	+0.7
LEOM	Leova	1.74	52	⇑iP	Pn	03 48 13.6	+0.7
LEOM				iS	Sn	03 48 36.2	-0.3
LEOM	Leova	1.74	52	⇑iP	Pn	03 48 13.6	+0.7
LEOM				iS	Sn	03 48 36.2	-0.3
LOT	Lotru	1.76	272	S	Sn	03 48 36.3	-0.9
LOT	Lotru	1.76	272	iS	Sn	03 48 36.3	-0.9
LOT	Lotru	1.76	272	iS	Sn	03 48 36.3	-0.9
TIRR	Tirgusor	1.81	121	⇑iP	Pn	03 48 14.2	+0.4
TIRR	Tirgusor	1.81	121	⇑iP	Pn	03 48 14.2	+0.4
TIRR				iS	Sn	03 48 36.6	-1.3
TIRR	Tirgusor	1.81	121	⇑iP	Pn	03 48 14.2	+0.4
TIRR				iS	Sn	03 48 36.6	-1.3

IDC 03 04:01:20.6±5.5, 21.75S×179.60E, h0km, mb4.3/2, mb1 4.6/2, mb1mx3.9/17, mbtmp4.3/2, Error ellipse: s-maj=261.2km s-min=57.2km az=151.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.06	258	P	P	04 09 13.2	-1.3
	1.4nm,0.5s,baz=90,slow=6.8,SNR=21						
WRA	Warramunga Arr	42.22	264	P	P	04 09 16.6	+0.8
	2.8nm,0.3s,baz=99,slow=6.8,SNR=31						
NB2	NORSAR Subarra	139.91	351	PKP	PKPdf	04 20 49.1	-1.4
	comp=Z,0.7nm,0.6s,baz=15,slow=3.2						
NOA	NORSAR Array B	139.91	351	PKP	PKPdf	04 20 49.5	-1.0
	comp=Z,0.8nm,0.6s,baz=14,slow=2.3,SNR=5.4						
BRTR	Keskin Array B	145.96	310	PKPbc	PKPdf	04 21 02.2	+0.2
	comp=Z,0.5nm,0.6s,baz=48,slow=4.3,SNR=3.4						

*ISCJB **03** 04:06:04.8±0.5, 39.33N±0.03×28.01E±0.04, h22km±8km, Error ellipse: s-maj=5.1km s-min=4.9km az=0.1*
*DDA **03** 04:06:04.5, 39.32N×28.01E, h7km, MD2.8*
*CSEM **03** 04:06:04.6±0.1, 39.33N×28.01E, h20km, MD2.8, Error ellipse: s-maj=2.3km s-min=2.1km az=92.0*
*ISK **03** 04:06:04.0, 39.34N×27.98E, h19km, MD2.8*

ISC 03 04:06:04.6±0.9, 39.33N±0.02×28.00E±0.02, h16km±8km, n28, σ0.33/41, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BALB	Balikesir	0.32	343	ePG	Pg	04 06 11.2	-0.2
BALB				eSG	Sg	04 06 16.3	+0.3
BALB	Balikesir	0.32	343	ePg	Pg	04 06 11.2	-0.2
BALB				eSg	Sg	04 06 16.3	+0.3
DURS	Dursunbey	0.46	53	eP	Pg	04 06 13.6	-0.2
DURS				eS	Sg	04 06 20.4	+0.4
DURS	Dursunbey	0.46	53	eP	Pg	04 06 13.6	-0.2
DURS				eS	Sg	04 06 20.4	+0.4
AKHS	Akhisar	0.47	198	eP	Pg	04 06 13.6	-0.4
AKHS				eS	Sg	04 06 20.8	+0.4
AKHS	Akhisar	0.47	198	eP	Pg	04 06 13.6	-0.4
AKHS				eS	Sg	04 06 20.8	+0.4
AKS	Akhisar	0.47	198	ePG	Pg	04 06 14.3	+0.3
AKS	Akhisar	0.47	198	ePg	Pg	04 06 14.3	+0.3
BALY	Balya	0.50	324	eP	Pg	04 06 14.8	+0.2
BALY				eS	Sg	04 06 21.4	-0.1
BALY	Balya	0.50	324	eP	Pg	04 06 14.8	+0.2
BALY				eS	Sg	04 06 21.4	-0.1
DST	Dursunbey	0.55	60	ePG	Pg	04 06 15.7	+0.2
DST				eSG	Sb	04 06 24.1	+0.5
DST	Dursunbey	0.55	60	ePg	Pg	04 06 15.7	+0.2
DST				eSg	Sb	04 06 24.1	+0.5
DEMI	Demirci	0.63	117	eP	Pg	04 06 16.8	-0.1
DEMI				eS	Sg	04 06 25.5	+0.2
DEMI	Demirci	0.63	117	eP	Pg	04 06 16.8	-0.1
DEMI				eS	Sg	04 06 25.5	+0.2
GONE	Gonen-Balikesi	0.76	341	ePG	Pg	04 06 19.1	-0.2
GONE	Gonen-Balikesi	0.76	341	ePg	Pg	04 06 19.1	-0.2
KULA	Kula-Manisa	0.96	147	ePG	Pb	04 06 22.6	-0.3
KULA	Kula-Manisa	0.96	147	ePg	Pb	04 06 22.6	-0.3
AYVA	Ayvalik	1.02	269	eP	Pg	04 06 24.3	+0.1
AYVA				eS	Sn	04 06 38.8	+0.7
AYVA	Ayvalik	1.02	269	eP	Pg	04 06 24.3	+0.1
TVSB	Tavsanli	1.14	84	ePN	Pb	04 06 25.5	-0.4
TVSB	Tavsanli	1.14	84	ePn	Pb	04 06 25.5	-0.4
BLCB	Balcova	1.20	219	ePN	Pn	04 06 26.3	-0.4
BLCB	Balcova	1.20	219	ePn	Pn	04 06 26.3	-0.4
EZN	Ezine	1.39	291	ePN	Pn	04 06 28.9	-0.3
EZN	Ezine	1.39	291	ePn	Pn	04 06 28.9	-0.3
GEMT	Gemlik	1.43	39	ePN	Pn	04 06 29.6	-0.3
GEMT	Gemlik	1.43	39	ePn	Pn	04 06 29.6	-0.3

IDC 03 04:07:06.8±5.4, 35.39S×106.83W, h0km, mb3.5/3, mb1 4.0/3, mb1mx3.7/14, mbtmp3.5/3, MS3.5/3, Ms1 3.5/3, ms1mx3.1/16, Error ellipse: s-maj=271.3km s-min=65.2km az=61.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
USHA	Ushuaia	32.78	138	LR	LR	04 23 32.8	
	comp=Z,73nm,20.2s,baz=115,slow=30						
ATAH	Atahualpa	38.36	50	LR	LR	04 25 52.4	
	comp=Z,108nm,21.5s,baz=24,slow=29						
LPAZ	La Paz	39.37	71	LR	LR	04 26 01.9	
	comp=Z,36nm,18.5s,baz=240,slow=29						
TXAR	Lajitas Array	64.45	3	P	P	04 17 45.2	+0.2
	0.2nm,0.8s,baz=173,slow=8.2,SNR=2.4						
NVAR	Mina Array Bea	74.22	351	P	P	04 18 45.9	+0.3
	0.6nm,0.5s,baz=186,slow=8.2,SNR=3.2						
PDAR	Pinedale Array	77.82	358	P	P	04 19 05.3	-0.7
	0.8nm,1.0s,baz=164,slow=7.6,SNR=4.1						
BRTR	Keskin Array B	148.54	70	PKPbc	PKPbc	04 26 55.1	-0.6
	0.7nm,0.9s,baz=204,slow=3.2,SNR=3.3						

*ISCJB **03** 04:21:24.0±0.4, 49.86N±0.03×18.45E±0.03, h0km, Error ellipse: s-maj=4.7km s-min=2.5km az=10.2*
*CSEM **03** 04:21:24.8±0.2, 49.87N×18.48E, h1km, ML2.6/8, Error ellipse: s-maj=6.7km s-min=3.2km az=3.0*
*IPEC **03** 04:21:25.3±0.2, 49.85N×18.56E, h0km±3km, ML1.8/3, Error ellipse: s-maj=2.2km s-min=1.1km az=161.0*
*VIE **03** 04:21:25.1±0.5, 49.65N×18.55E, h0km, mb1.5/2, ML2.4/3, Error ellipse: s-maj=3.1km s-min=1.8km az=98.0 30 km SE of Ostrava Suspected Mining induced.*
*PRU **03** 04:21:26.1, 49.89N×18.48E, h0km*

ISC 03 04:21:25.6±0.8, 49.86N±0.03×18.51E±0.02, h0km, n28, σ0.81/52, 1C, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.23	266	ePG	Pg	04 21 31.2	+1.1
OKC				eSG	Sg	04 21 33.8	+0.7
	comp=Z,44nm,0.3s						
OKC	Ostrava-Krasne	0.23	266	ePg	Pg	04 21 30.8	+0.7
	baz=87						
OKC				Sg	Sg	04 21 33.8	+0.7
	44nm,0.3s						
MORC	Moravsky Berou	0.63	263	ePg	Pg	04 21 37.9	+0.2
	baz=83						
MORC				eSg	Sg	04 21 46.2	+0.4
	19nm,0.2s,baz=83						
OJC	Ojcow	0.91	66	ePg	Pg	04 21 42.4	-0.6
OJC				eSg	Sg	04 21 55.1	+0.3
OJC	Ojcow	0.91	66	ePg	Pg	04 21 42.2	-0.8
	baz=246						
OJC				eSg	Sg	04 21 55.1	+0.3
KRLC	Kraliky	1.14	282	ePG	Pg	04 21 46.6	-0.7
KRLC				eSG	Sg	04 22 02.5	+0.5
KRLC	Kraliky	1.14	282	Pg	Pg	04 21 46.6	-0.7
KRLC				Sg	Sg	04 22 02.5	+0.5
NIE	Niedzica	1.25	110	ePg	Pg	04 21 49.4	-0.2
NIE				eSg	Sg	04 22 06.2	+0.4
NIE	Niedzica	1.25	110	ePg	Pg	04 21 49.4	-0.2
NIE				eSg	Sg	04 22 06.2	+0.4
VRAC	Vranov	1.36	247	ePg	Pg	04 21 51.1	-0.6
	baz=66						
VRAC				eSg	Sg	04 22 08.8	-0.5
	15nm,0.3s,baz=66						
VYHS	Vyhne	1.38	171	ePN	Pn	04 21 51.1	-1.0
VYHS				eSN	Sg	04 22 09.4	-0.5
VYHS	Vyhne	1.38	171	ePn	Pn	04 21 51.1	-1.0
VYHS				eSn	Sg	04 22 09.4	-0.5
DPC	Dobruska-Polom	1.49	290	ePG	Pn	04 21 53.3	-0.4
DPC				eSG	Sg	04 22 13.1	-0.4
	comp=Z,12nm,0.3s						
DPC	Dobruska-Polom	1.49	290	Pg	Pn	04 21 53.3	-0.4
DPC				Sg	Sg	04 22 13.1	-0.4
	12nm,0.3s						
KRUC	Moravsky	1.59	241	ePg	Pn	04 21 54.8	-0.2
	baz=60						
KRUC				eSg	Sn	04 22 16.2	0.0
	10nm,0.2s,baz=60						
KSP	Ksiaz	1.73	306	ePg	Pg	04 21 58.8	+0.1
KSP				eSg	Sg	04 22 21.1	0.0
UPC	Upice	1.73	293	ePG	Pn	04 21 57.1	+0.1
UPC				eSG	Sg	04 22 21.2	0.0
UPC	Upice	1.73	293	Pg	Pn	04 21 57.1	+0.1
UPC				Sg	Sg	04 22 21.2	0.0
CRVS	Cervenica-Dubn	2.15	115	ePN	Pb	04 22 05.1	-0.4
CRVS				eSG	Sg	04 22 37.3	+2.5
CRVS	Cervenica-Dubn	2.15	115	ePn	Pb	04 22 05.2	-0.3
CRVS				eSg	Sg	04 22 37.3	+2.5
PRU	Pruhonice	2.56	274	ePG	Pb	04 22 11.8	-0.7
PRU				eSG	Sb	04 22 45.7	+1.2
	comp=Z,3.1nm,0.3s						
PRU	Pruhonice	2.56	274	Pg	Pb	04 22 11.8	-0.7
PRU				Sg	Sb	04 22 45.7	+1.2
	3.1nm,0.3s						
BRG	Berggiesshubel	3.09	291	SG	Sg	04 23 04.1	-0.9
	4.8nm,0.7s						
KHC	Kasperske Hory	3.29	259	ePG	Pb	04 22 25.9	+1.0
KHC				eSG	Sg	04 23 10.2	-1.2
	comp=Z,3.6nm,0.8s						
KHC	Kasperske Hory	3.29	259	Pg	Pb	04 22 25.9	+1.0
KHC				Sg	Sg	04 23 10.2	-1.2
	3.6nm,0.8s						
MOA	Molln	3.44	236	⇑iSg	Sg	04 23 15.9	-0.3
	1.4nm,0.2s						
MOA	Molln	3.44	236	Sg	Sg	04 23 15.9	-0.3
	1.4nm,0.2s						
CLL	Collm	3.80	295	eSg	Sg	04 23 27.0	-0.5

*ISCJB **03** 04:23:54.5±0.8, 2.59N±0.08×95.84E±0.07, h25km, mb3.9/8, Error ellipse: s-maj=13.9km s-min=6.7km az=40.6*
*DJA **03** 04:23:55.4±1.4, 2°N±10°×9°6E±1°1, h75km±36km, M4.2/6, mb4.5/2, mB4.6/1, MLv4.1/6, Mw(mB)3.8/1*
*IDC **03** 04:24:00.5±5.5, 2.63N×96.03E, h58km±45km, mb3.6/8, mb1 3.7/10, mb1mx3.5/27, mbtmp3.6/10, ML3.5/2, Error ellipse: s-maj=44.3km s-min=17.4km az=54.0*

ISC 03 04:23:56.0±1.0, 2.55N±0.08×95.81E±0.09, h25km, n18, σ0.84/19, mb4.0/8, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	2.15	125	P	Pn	04 24 30.2	-0.2
GSI				S	Sn	04 24 55.8	-0.5
LHMI	Lhok Sumawe	2.89	23	P	Pb	04 24 48.1	+1.1
BSI	Banda Aceh	2.97	350	P	Pn	04 24 40.5	-1.2
PSI	Prapat	3.12	85	P	Pn	04 24 43.8	0.0
PSI	Prapat	3.12	85	P	Pn	04 24 44.0	+0.2
	2.4nm,0.3s,baz=281,slow=6.4,SNR=20						
PSI				S	Sn	04 25 18.6	-1.8
	4.1nm,0.3s,baz=350,slow=12,SNR=5.4						
MNSI	Mandailing Nat	4.15	115	P	Pn	04 24 58.3	+0.4
KULM	Kulim	5.54	60	P	Pn	04 25 17.2	+0.2
IPM	Ipoh	5.55	70	P	Pn	04 25 17.2	+0.1
	40nm,1.1s,0.2nm						
CMAR	Chiang Mai Arr	16.11	11	P	Pn	04 27 42.1	+1.1
	0.1nm,0.3s,baz=196,slow=12,SNR=6.5						
WRA	Warramunga Arr	43.92	122	P	P	04 32 00.8	-0.4
	0.8nm,0.6s,baz=300,slow=9.1,SNR=4.1						
ASAR	Alice Springs	45.31	127	P	P	04 32 12.0	-0.3
	0.3nm,0.6s,baz=307,slow=8.1,SNR=4.0						
KSRS	Korea Array	45.56	36	P	P	04 32 12.4	-1.6
	1.1nm,0.6s,baz=224,slow=10,SNR=5.2						
MKAR	Makanchi Array	45.62	347	P	P	04 32 14.9	+0.6
	1.7nm,0.7s,baz=162,slow=8.0,SNR=25						
SONM	Songino Array	46.03	10	P	P	04 32 17.7	0.0
	1.9nm,0.7s,baz=189,slow=8.9,SNR=13						
ZALV	Zalesovo Beam	52.02	352	P	P	04 33 03.8	+0.4
	2.8nm,0.7s,baz=177,slow=6.1,SNR=13						
AKTO	Aktyubinsk	57.40	332	P	P	04 33 42.7	+0.3
	0.9nm,0.8s,baz=95,slow=11,SNR=3.3						
FINES	FINESS Array B	78.17	333	P	P	04 35 53.5	+0.4
	3.0nm,1.0s,baz=91,slow=6.1,SNR=2.7						
TXAR	Lajitas Array	143.22	29	PKP	PKPbc	04 43 26.5	+0.6
	0.3nm,0.9s,baz=222,slow=1.7,SNR=3.5						

*ISCJB **03** 04:43:52.3±1.2, 44.°3N±0.°2×149.°7E±0.°1, h33km, mb3.4/7, Error ellipse: s-maj=26.2km s-min=6.2km az=150.0*
*IDC **03** 04:44:01.3±2.9, 46.°40N×148.°72E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.5/25, mbtmp3.5/7, Error ellipse: s-maj=82.9km s-min=23.8km az=170.0*
*MOS **03** 04:44:02.4±1.7, 45.°96N×148.°66E, h40km, mb4.0/3, Error ellipse: s-maj=41.8km s-min=23.5km az=72.1*
ISC 03 04:43:55.0±1.3, **44.°4N**±0.°1×**149.°6E**±0.°1, **h35**km, **n23**, σ**1.s19**/24, **mb3.5**/7, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.48**	**305**	*e*PN	**Pn**	**04 44 18.5**	**-0.6**
KUR				pmax	pmax		
	comp=Z,100nm,0.5s						
NEM2	**Nemuro 2**	**2.96**	**251**	P	Pn	04 44 38.3	-1.2
NEM2				*e*S	**Sn**	**04 45 14.7**	**+1.0**
JRA	**Rausu**	**3.24**	**263**	P	**Pn**	**04 44 44.7**	**+1.4**
JAK	**Akkeshi**	**3.81**	**250**	P	**Pn**	**04 44 50.2**	**-0.9**
JAK				*e*S	**Sn**	**04 45 35.2**	**+0.6**
JTKR	**Abashiri--Toko**	**4.10**	**266**	P	**Pn**	**04 44 56.5**	**+1.3**
JAR	**Ashorobuto**	**4.35**	**257**	P	**Pn**	**04 44 59.2**	**+0.7**
JOB	**Onbets**	**4.43**	**252**	P	**Pn**	**04 44 59.5**	**-0.1**
JOB				*e*S	**Sn**	**04 45 50.9**	**+0.9**
JCH	**Churui**	**4.86**	**251**	*e*S	**Sn**	**04 46 00.2**	**-0.4**
JNBK	**Urakawa-nobuka**	**5.41**	**249**	P	**Pn**	**04 45 12.2**	**-0.9**
JBT2	**Biratori 2**	**5.49**	**255**	P	**Pn**	**04 45 14.4**	**+0.2**
JNB	**Noboribetsu**	**6.51**	**256**	P	**Pn**	**04 45 28.4**	**+0.2**
JNB				*e*S	**Sn**	**04 46 42.0**	**+0.7**
JKB	**Kayabe**	**6.74**	**251**	P	**Pn**	**04 45 30.8**	**-0.5**
JKB				*e*S	**Sn**	**04 46 44.4**	**-2.4**
JANG	**Nango**	**7.20**	**239**	*e*S	Sn	04 46 51.8	-6.4
JTM	**Tenmabayashi**	**7.24**	**243**	*e*S	Sn	04 46 54.5	-4.7
JOSM	**Okushiri--Mats**	**7.73**	**256**	P	**Pn**	**04 45 45.3**	**+0.3**
SONM	**Songino Array**	**29.85**	**292**	P	**P**	**04 49 59.3**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=78,slow=8.7,SNR=2.8						
INK	**Inuvik**	**44.96**	**31**	P	**P**	**04 52 05.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=247,slow=7.7,SNR=2.6						
MKAR	**Makanchi Array**	**45.84**	**298**	P	**P**	**04 52 13.5**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**45.84**	**298**	P	**P**	**04 52 13.5**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=73,slow=8.2,SNR=15						
RES	**Resolute Bay**	**53.84**	**17**	P	**P**	**04 53 13.1**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=319,slow=11,SNR=5.0						
YKA	**Yellowknife Ar**	**54.28**	**35**	P	**P**	**04 53 19.9**	**+2.8**
	comp=Z,0.1nm,0.7s,baz=302,slow=7.2,SNR=3.4						
NOA	**NORSAR Array B**	**69.62**	**340**	P	**P**	**04 54 57.8**	**-2.5**
	comp=Z,0.5nm,0.7s,baz=28,slow=6.7,SNR=4.4						
TXAR	**Lajitas Array**	**80.83**	**58**	P	P	04 56 14.0	+8.6
	comp=Z,0.2nm,0.5s,baz=297,slow=4.0,SNR=7.0						

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*ISCJB **03** 04:44:42.4±0.2, 42.°33N±0.°02×13.°34E±0.°02, h14km±2km, Error ellipse: s-maj=3.0km s-min=2.6km az=160.9*
*ROM **03** 04:44:42.6±0.1, 42.°31N×13.°38E, h9km±1km, Ml3.0/37, Error ellipse: s-maj=1.4km s-min=1.2km az=78.0*
*CSEM **03** 04:44:42.9±0.1, 42.°32N×13.°37E, h10km, ML3.5/13, Error ellipse: s-maj=2.5km s-min=1.9km az=69.0*
*LDG **03** 04:44:44.1±0.1, 42.°31N×13.°35E, h2km, Ml2.8/4, Error ellipse: s-maj=3.9km s-min=2.7km az=56.0*
ISC 03 04:44:42.9±0.8, **42.°32N**±0.°02×**13.°36E**±0.°02, **h13**km±4km, **n109**, σ**0.s89**/150, **8C-2D**, **Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**40**	⇓*i*Pg	**Pg**	**04 44 45.1**	**-0.3**
AQU				Sg	**Sg**	**04 44 46.6**	**-0.6**
	22µm,0.3s						
AQU	**L'Aquila**	**0.05**	**40**	⇓*i*Pg	**Pg**	**04 44 45.1**	**-0.3**
AQU				Sg	**Sg**	**04 44 46.6**	**-0.6**
	22µm,0.3s						
FAGN	**Fagnano**	**0.17**	**107**	⇑*e*Pg	**Pg**	**04 44 46.7**	**-0.2**
FAGN				Sg	**Sg**	**04 44 50.0**	**+0.3**
	14µm,0.6s						
FAGN	**Fagnano**	**0.17**	**107**	⇑*e*Pg	**Pg**	**04 44 46.7**	**-0.2**
FAGN				Sg	**Sg**	**04 44 50.0**	**+0.3**
	14µm,0.6s						
FIAM	**Fiamignano**	**0.19**	**255**	⇑*e*Pg	**Pg**	**04 44 47.5**	**+0.3**
FIAM				Sg	**Sg**	**04 44 50.8**	**+0.6**
	5µm,0.6s						
FIAM	**Fiamignano**	**0.19**	**255**	⇑*e*Pg	**Pg**	**04 44 47.5**	**+0.3**
FIAM				Sg	**Sg**	**04 44 50.8**	**+0.6**
	5µm,0.6s						
CAMP	**Campotosto**	**0.22**	**9**	Pg	**Pg**	**04 44 47.5**	**-0.3**
CAMP				Sg	**Sg**	**04 44 51.1**	**0.0**
	2µm,0.3s						
CAMP	**Campotosto**	**0.22**	**9**	Pg	**Pg**	**04 44 47.5**	**-0.3**
CAMP				Sg	**Sg**	**04 44 51.1**	**0.0**
	2µm,0.3s						
PTQR	**Pietraquaria**	**0.30**	**174**	Pg	**Pg**	**04 44 48.9**	**-0.2**
PTQR				Sg	**Sg**	**04 44 53.7**	**+0.5**
PTQR	**Pietraquaria**	**0.30**	**174**	Pg	**Pg**	**04 44 48.9**	**-0.2**
PTQR				Sg	**Sg**	**04 44 53.7**	**+0.5**
TERO	**Teramo**	**0.35**	**30**	Pg	**Pg**	**04 44 49.3**	**-0.8**
TERO				Sg	**Sg**	**04 44 55.2**	**+0.3**
	5µm,0.4s						
TERO	**Teramo**	**0.35**	**30**	Pg	**Pg**	**04 44 49.3**	**-0.8**
TERO				Sg	**Sg**	**04 44 55.2**	**+0.3**
	5µm,0.4s						
VCEL	**Villa Celiera**	**0.36**	**78**	Pg	**Pg**	**04 44 49.8**	**-0.5**
VCEL				Sg	**Sb**	**04 44 57.0**	**0.0**
	3µm,0.5s						
VCEL	**Villa Celiera**	**0.36**	**78**	Pg	**Pg**	**04 44 49.8**	**-0.5**
VCEL				Sg	**Sb**	**04 44 57.0**	**0.0**
	3µm,0.5s						
CERT	**Cerreto**	**0.46**	**218**	Pg	**Pg**	**04 44 52.0**	**-0.1**
	2µm,0.7s						
CERT	**Cerreto**	**0.46**	**218**	Pg	**Pg**	**04 44 52.0**	**-0.1**
	2µm,0.7s						
VVLD	**Villa Vallelon**	**0.49**	**156**	Pg	**Pg**	**04 44 52.0**	**-0.5**
VVLD				Sg	**Sg**	**04 44 59.4**	**+0.4**
	955nm,0.5s						
VVLD	**Villa Vallelon**	**0.49**	**156**	Pg	**Pg**	**04 44 52.0**	**-0.5**
VVLD				Sg	**Sg**	**04 44 59.4**	**+0.4**
	955nm,0.5s						
INTR	**Introdacqua**	**0.51**	**127**	Pg	**Pg**	**04 44 52.3**	**-0.6**
INTR				Sg	**Sb**	**04 45 01.1**	**+0.1**
	839nm,0.7s						
INTR	**Introdacqua**	**0.51**	**127**	Pg	**Pg**	**04 44 52.3**	**-0.6**
INTR				Sg	**Sb**	**04 45 01.1**	**+0.1**
	839nm,0.7s						
GUAR	**Guarcino**	**0.52**	**184**	Pg	**Pb**	**04 44 54.0**	**0.0**
	897nm,0.7s						
GUAR	**Guarcino**	**0.52**	**184**	Pg	**Pb**	**04 44 54.0**	**0.0**
	897nm,0.7s						
MTCE	**Montecelio**	**0.55**	**238**	Pg	**Pg**	**04 44 53.4**	**-0.2**
MTCE				Sg	**Sg**	**04 45 01.3**	**+0.4**
	541nm,0.4s						
MTCE	**Montecelio**	**0.55**	**238**	Pg	**Pg**	**04 44 53.4**	**-0.2**
MTCE				Sg	**Sg**	**04 45 01.3**	**+0.4**
	541nm,0.4s						
NRCA	**Norcia**	**0.55**	**341**	Pg	**Pg**	**04 44 53.2**	**-0.4**
NRCA	**Norcia**	**0.55**	**341**	Pg	**Pg**	**04 44 53.2**	**-0.4**
TRTR	**Tortoreto Alta**	**0.64**	**40**	Pg	**Pg**	**04 44 55.7**	**+0.4**
	4µm,0.8s						
TRTR	**Tortoreto Alta**	**0.64**	**40**	Pg	**Pg**	**04 44 55.7**	**+0.4**
	4µm,0.8s						
POFI	**Posta Fibreno**	**0.66**	**156**	Pg	**Pg**	**04 44 55.8**	**+0.2**
	332nm,0.6s						
POFI	**Posta Fibreno**	**0.66**	**156**	Pg	**Pg**	**04 44 55.8**	**+0.2**
	332nm,0.6s						
OFFI	**Offida**	**0.66**	**21**	Pg	**Pg**	**04 44 55.8**	**0.0**
	4µm,0.4s						
OFFI	**Offida**	**0.66**	**21**	Pg	**Pg**	**04 44 55.8**	**0.0**
	4µm,0.4s						
LPEL	**Lama dei Pelig**	**0.67**	**114**	Pg	**Pg**	**04 44 55.0**	**-0.9**
LPEL				Sg	**Sg**	**04 45 05.2**	**+0.5**
	406nm,0.4s						
LPEL	**Lama dei Pelig**	**0.67**	**114**	Pg	**Pg**	**04 44 55.0**	**-0.9**
LPEL				Sg	**Sg**	**04 45 05.2**	**+0.5**
	406nm,0.4s						
SDI	**San Donato**	**0.69**	**151**	Pg	**Pg**	**04 44 55.4**	**-1.0**
	164nm,0.3s						
SDI	**San Donato**	**0.69**	**151**	Pg	**Pg**	**04 44 55.4**	**-1.0**
	164nm,0.3s						
RMP	**Rome, Mte Porz**	**0.70**	**224**	Pg	**Pg**	**04 44 56.3**	**-0.3**
	881nm,0.4s						
RMP	**Rome, Mte Porz**	**0.70**	**224**	Pg	**Pg**	**04 44 56.3**	**-0.3**
	881nm,0.4s						
RDP	**Rocca di Papa**	**0.74**	**221**	Pg	**Pb**	**04 44 57.5**	**-0.1**
	2µm,0.5s						
RDP	**Rocca di Papa**	**0.74**	**221**	Pg	**Pb**	**04 44 57.5**	**-0.1**
	2µm,0.5s						
FDMO	**Fiordimonte**	**0.75**	**344**	Pg	**Pg**	**04 44 56.8**	**-0.6**
FDMO				Sg	**Sb**	**04 45 08.1**	**+0.2**
	481nm,0.5s						
FDMO	**Fiordimonte**	**0.75**	**344**	Pg	**Pg**	**04 44 56.8**	**-0.6**
FDMO				Sg	**Sb**	**04 45 08.1**	**+0.2**
	481nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.76**	**186**	Pg	**Pb**	**04 44 58.2**	**+0.1**
	414nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.76**	**186**	Pg	**Pb**	**04 44 58.2**	**+0.1**
	414nm,0.6s						
CESI	**CESI - Serrava**	**0.77**	**334**	Pg	**Pg**	**04 44 57.2**	**-0.5**
CESI				Sg	**Sb**	**04 45 09.3**	**+0.8**
	299nm,0.8s						
CESI	**CESI - Serrava**	**0.77**	**334**	Pg	**Pg**	**04 44 57.2**	**-0.5**
CESI				Sg	**Sb**	**04 45 09.3**	**+0.8**
	299nm,0.8s						
CERA	**Filignano**	**0.87**	**146**	Pg	**Pg**	**04 44 59.0**	**-0.7**
	451nm,0.6s						
CERA	**Filignano**	**0.87**	**146**	Pg	**Pg**	**04 44 59.0**	**-0.7**
	451nm,0.6s						
ASSB	**Assisi San Ben**	**0.89**	**325**	Pg	**Pg**	**04 44 59.8**	**-0.3**
	551nm,0.3s						
ASSB	**Assisi San Ben**	**0.89**	**325**	Pg	**Pg**	**04 44 59.8**	**-0.3**
	551nm,0.3s						
MIDA	**Miranda**	**0.95**	**135**	Pg	**Pg**	**04 44 59.8**	**-1.4**
	308nm,0.9s						
MIDA	**Miranda**	**0.95**	**135**	Pg	**Pg**	**04 44 59.8**	**-1.4**
	308nm,0.9s						
SNTG	**Esanatoglia**	**0.99**	**342**	Pg	**Pg**	**04 45 00.9**	**-1.0**
	400nm,0.8s						
SNTG	**Esanatoglia**	**0.99**	**342**	Pg	**Pg**	**04 45 00.9**	**-1.0**
	400nm,0.8s						
CING	**Cingoli**	**1.06**	**353**	Pg	**Pg**	**04 45 02.5**	**-0.9**
	342nm,0.6s						
CING	**Cingoli**	**1.06**	**353**	Pg	**Pg**	**04 45 02.5**	**-0.9**
	342nm,0.6s						
MURB	**Monte Urbino**	**1.13**	**327**	Pg	**Pb**	**04 45 04.3**	**0.0**
	961nm,0.5s						
MURB	**Monte Urbino**	**1.13**	**327**	Pg	**Pb**	**04 45 04.3**	**0.0**
	961nm,0.5s						
LATE	**Laterza**	**1.19**	**285**	Pg	**Pg**	**04 45 06.3**	**+0.5**
	33nm,0.7s						
LATE	**Laterza**	**1.19**	**285**	Pg	**Pg**	**04 45 06.3**	**+0.5**
	33nm,0.7s						
SGG	**Gregorio Mates**	**1.20**	**140**	Pn	**Pg**	**04 45 06.7**	**+0.7**
	172nm,0.7s						
SGG	**Gregorio Mates**	**1.20**	**140**	Pn	**Pg**	**04 45 06.7**	**+0.7**
	172nm,0.7s						
ARVD	**Arcevia**	**1.22**	**345**	Pg	**Pn**	**04 45 05.1**	**-0.6**
	253nm,0.7s						
ARVD	**Arcevia**	**1.22**	**345**	Pg	**Pn**	**04 45 05.1**	**-0.6**
	253nm,0.7s						
AOI	**Ancona**	**1.24**	**8**	Pg	**Pb**	**04 45 06.4**	**+0.1**
	466nm,1.1s						
AOI	**Ancona**	**1.24**	**8**	Pg	**Pb**	**04 45 06.4**	**+0.1**
	466nm,1.1s						
PIEI	**Pieia**	**1.36**	**334**	Pn	**Pn**	**04 45 08.1**	**+0.5**
	161nm,0.5s						
PIEI	**Pieia**	**1.36**	**334**	Pn	**Pn**	**04 45 08.1**	**+0.5**
	161nm,0.5s						
BADI	**Badiali**	**1.45**	**326**	Pn	**Pg**	**04 45 11.1**	**+0.4**
	192nm,0.7s						
BADI	**Badiali**	**1.45**	**326**	Pn	**Pg**	**04 45 11.1**	**+0.4**
	192nm,0.7s						
PARC	**Parchiule**	**1.56**	**329**	Pn	**Pb**	**04 45 11.8**	**+0.1**
	249nm,1.0s						
PARC	**Parchiule**	**1.56**	**329**	Pn	**Pb**	**04 45 11.8**	**+0.1**
	249nm,1.0s						
MAON	**Monte Argentar**	**1.66**	**275**	Pn	**Pn**	**04 45 12.2**	**+0.5**
	72nm,0.8s						
MAON	**Monte Argentar**	**1.66**	**275**	Pn	**Pn**	**04 45 12.2**	**+0.5**
	72nm,0.8s						
SGRT	**San Giovanni R**	**1.86**	**107**	Pn	**Pb**	**04 45 16.2**	**-0.6**
	133nm,0.9s						
SGRT	**San Giovanni R**	**1.86**	**107**	Pn	**Pb**	**04 45 16.2**	**-0.6**
	133nm,0.9s						
SFI	**Santa Sofia**	**1.94**	**326**	Pn	**Pn**	**04 45 16.8**	**+1.3**
	73nm,0.9s						
SFI	**Santa Sofia**	**1.94**	**326**	Pn	**Pn**	**04 45 16.8**	**+1.3**
	73nm,0.9s						
MSAG	**Monte S. Angel**	**1.99**	**107**	Pn	**Pb**	**04 45 18.2**	**-0.9**
	104nm,0.6s						
NVLJ	**Novalja**	**2.50**	**26**	*e*Pn	**Pn**	**04 45 24.2**	**+1.0**
NVLJ				Sn	**Sn**	**04 45 54.1**	**+0.5**
NVLJ	**Novalja**	**2.50**	**26**	*e*Pn	**Pn**	**04 45 24.2**	**+1.0**
NVLJ				Sn	**Sn**	**04 45 54.0**	**+0.5**
PGF	**Pioggiola**	**3.24**	**276**	*e*Pn	**Pn**	**04 45 34.8**	**+1.3**
PGF				*e*Sn	**Sn**	**04 46 10.1**	**-1.9**
	2.7nm,0.4s						
PGF	**Pioggiola**	**3.24**	**276**	*e*Pn	**Pn**	**04 45 34.8**	**+1.3**
PGF				*e*Sn	**Sn**	**04 46 10.1**	**-1.9**
	1.4nm,0.4s						
STON	**Ston**	**3.25**	**79**	*e*Pn	**Pn**	**04 45 34.8**	**+1.2**
STON				Sn	**Sn**	**04 46 12.3**	**+0.1**
STON	**Ston**	**3.25**	**79**	*e*Pn	**Pn**	**04 45 34.7**	**+1.2**
STON				Sn	**Sn**	**04 46 12.2**	**+0.1**
SKDS	**Skadanscina**	**3.26**	**8**	*i* Pn	**Pn**	**04 45 34.8**	**+1.0**
SKDS				*i* Sn	**Sn**	**04 46 12.7**	**+0.2**
SKDS							
	comp=Z,10.0nm,0.2s						
SKDS	**Skadanscina**	**3.26**	**8**	*i* Pn	**Pn**	**04 45 34.8**	**+1.0**
SKDS				*i* Sn	**Sn**	**04 46 12.7**	**+0.2**
	comp=Z,10.0nm,0.2s						
VOY	**Vojsko**	**3.73**	**6**	*e*Pn	Pn	04 45 44.5	+4.2
VOY				*e*(Sn)	**Sn**	**04 46 25.9**	**+1.7**
VOY				*e*		04 46 54.4	
VOY	**Vojsko**	**3.73**	**6**	*e*Pn	Pn	04 45 44.5	+4.2
ABTA	**Abfaltersbach**	**4.47**	**352**	⇑*i*Pn	**Pn**	**04 45 51.9**	**+1.5**
ABTA				⇑*i*Sn	**Sn**	**04 46 40.9**	**-1.4**
ABTA	**Abfaltersbach**	**4.47**	**352**	Pn	**Pn**	**04 45 51.9**	**+1.5**
ABTA				Sn	**Sn**	**04 46 40.9**	**-1.4**
SBF	**Sospel**	**4.61**	**292**	*e*Pn	**Pn**	**04 45 52.7**	**+0.4**
SBF				*e*Sn	**Sn**	**04 46 43.2**	**-2.5**
	comp=Z,3.7nm,0.4s						
SBF	**Sospel**	**4.61**	**292**	*e*Pn	**Pn**	**04 45 52.7**	**+0.4**
SBF				*e*Sn	**Sn**	**04 46 43.2**	**-2.5**
	comp=Z,1.9nm,0.4s						
ABSI	**Aberstueckl**	**4.64**	**342**	Pn	**Pn**	**04 45 55.0**	**+2.1**
	comp=Z,43nm,0.6s						
ABSI	**Aberstueckl**	**4.64**	**342**	Pn	**Pn**	**04 45 55.0**	**+2.1**
	comp=Z,43nm,0.6s						
KBA	**Koelnbreinsper**	**4.76**	**360**	⇑*i*Pn	**Pn**	**04 45 56.0**	**+1.5**
KBA				⇑*i*Sn	**Sn**	**04 46 49.9**	**+0.3**
KBA	**Koelnbreinsper**	**4.76**	**360**	Pn	**Pn**	**04 45 56.0**	**+1.5**
KBA				Sn	**Sn**	**04 46 49.0**	**-0.6**
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**04 45 58.8**	**0.0**
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**04 45 58.8**	**0.0**
LMR	**La Mourre**	**5.14**	**284**	*e*Pn	**Pn**	**04 45 59.8**	**+0.3**
LMR	**La Mourre**	**5.14**	**284**	*e*Pn	**Pn**	**04 45 59.8**	**+0.3**
MBDF	**Montbardon**	**5.36**	**299**	*e*Pn	**Pn**	**04 46 03.4**	**+0.7**
MBDF	**Montbardon**	**5.36**	**299**	*e*Pn	**Pn**	**04 46 03.4**	**+0.7**
LPG	**La Plagne**	**5.74**	**306**	*e*Pn	**Pn**	**04 46 08.3**	**+0.3**
LPG	**La Plagne**	**5.74**	**306**	*e*Pn	**Pn**	**04 46 08.3**	**+0.3**
SMRF	**Simiane la Rot**	**5.93**	**289**	*e*Pn	**Pn**	**04 46 10.7**	**+0.2**
SMRF	**Simiane la Rot**	**5.93**	**289**	*e*Pn	**Pn**	**04 46 10.7**	**+0.2**
HINF	**Hinteralfeld**	**7.17**	**322**	*e*Pn	**Pn**	**04 46 27.6**	**+0.1**
HINF				*e*Sn	**Sn**	**04 47 45.4**	**-3.4**
	comp=Z,2.0nm,0.4s						
CDF	**Champ du Feu**	**7.45**	**327**	*e*Pn	**Pn**	**04 46 31.4**	**+0.1**
CDF				*e*Sn	**Sn**	**04 47 51.8**	**-3.8**
	comp=Z,1.1nm,0.3s						

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*IDC **03** 04:57:17.8±0.7, 20.°55N×120.°72E, h0km, mb4.1/12, mb1 4.3/13, mb1mx4.1/25, mbtmp4.1/13, MS3.3/4, Ms1 3.4/4, ms1mx2.9/34, Error ellipse: s-maj=23.1km s-min=16.9km az=77.0*
*BJI **03** 04:57:19.5, 20.°55N×120.°41E, h21km, mB4.7/6, mb4.0/7, Ms4.3/2, Ms7 4.1/2*
*ISCJB **03** 04:57:20.2±0.4, 20.°54N±0.°06×120.°64E±0.°08, h26km, mb4.2/25, MS3.2/4, Error ellipse: s-maj=10.3km s-min=7.9km az=164.8*
*NEIC **03** 04:57:25.4±2.1, 20.°53N×120.°62E, h55km±21km, mb4.3/14, Error ellipse: s-maj=9.1km s-min=7.5km az=70.0*
ISC 03 04:57:22.0±0.6, **20.°58N**±0.°09×**120.°7E**±0.°1, **h26**km, **n50**, σ**0.s61**/47, **mb4.4**/25, **MS3.2**/4, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNU	**Nakatsue**	**15.44**	**34**	Pn	**P**	**05 01 02.2**	**-0.1**
JNU	**Nakatsue**	**15.44**	**34**	Pn	**P**	**05 01 02.2**	**-0.1**
	0.2nm,0.3s,baz=225,slow=6.6,SNR=5.0						
KSAR	**Wonju Array Be**	**17.93**	**19**	P	**Pn**	**05 01 29.4**	**0.0**
KSRS	**Korea Array**	**17.95**	**19**	P	**Pn**	**05 01 29.4**	**-0.3**
	baz=200,slow=12,SNR=13						
CHTO	**Chiang Mai**	**20.55**	**269**	*e*P	**P**	**05 01 58.4**	**-0.3**
	2.1nm,0.6s						
CMAR	**Chiang Mai Arr**	**20.60**	**268**	P	**P**	**05 01 59.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**20.60**	**268**	P	**P**	**05 01 59.5**	**+0.2**
	1.9nm,0.9s,baz=70,slow=8.7,SNR=9.0						
CMAR				LR	LR	05 10 25.5	
	comp=Z,52nm,20.1s,baz=75,slow=38						
LZH	**Lanzhou**	**21.36**	**320**	*e*P	**P**	**05 02 08.5**	**+1.0**
LZH				pP	**pP**	**05 02 14.0**	**-0.7**
LZH				sP	**sP**	**05 02 16.8**	**-1.2**
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
MJAR	**Matsushiro Arr**	**22.07**	**40**	P	**P**	**05 02 15.3**	**+0.2**
MJAR	**Matsushiro Arr**	**22.07**	**40**	P	**P**	**05 02 15.3**	**+0.2**
	comp=Z,5.1nm,1.1s,baz=223,slow=10,SNR=9.4						
GUMO	**Guam**	**24.12**	**103**	LR	LR	05 09 35.2	
	comp=Z,81nm,20.3s,baz=75,slow=31						
IPM	**Ipoh**	**24.93**	**233**	*e*P	**P**	**05 02 42.3**	**-1.0**
	comp=Z,6.3nm,0.6s						
ULN	**Ulaanbaatar**	**29.37**	**341**	*e*P	**P**	**05 03 23.1**	**+0.1**
	comp=Z,2.5nm,0.8s						
SONM	**Songino Array**	**29.55**	**340**	P	**P**	**05 03 24.7**	**+0.2**
SONM	**Songino Array**	**29.55**	**340**	P	**P**	**05 03 24.7**	**+0.2**
	comp=Z,1.4nm,1.0s,baz=155,slow=8.4,SNR=6.7						
ASAJ	**Asahikawa**	**29.71**	**33**	P	P	05 03 29.8	+3.9
ASAJ	**Asahikawa**	**29.71**	**33**	P	P	05 03 29.8	+3.9
	comp=Z,3.4nm,0.5s,baz=198,slow=13,SNR=4.1						
MK31	**Makanchi Array**	**40.67**	**319**	*e*P	**P**	**05 05 00.4**	**+0.3**
MKAR	**Makanchi Array**	**40.67**	**319**	P	**P**	**05 05 00.6**	**+0.4**
MKAR	**Makanchi Array**	**40.67**	**319**	P	**P**	**05 05 00.6**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=114,slow=9.2,SNR=18						
COEN	**Coen**	**40.83**	**145**	*e*P	**P**	**05 05 02.2**	**+0.5**
	comp=Z,27nm,0.9s						
WRAB	**Tennant Creek**	**42.43**	**161**	*e*P	**P**	**05 05 13.7**	**-1.1**
	comp=Z,8.2nm,0.8s						
WRA	**Warramunga Arr**	**42.43**	**161**	P	**P**	**05 05 13.7**	**-1.0**
WRA	**Warramunga Arr**	**42.43**	**161**	P	**P**	**05 05 13.7**	**-1.0**
	comp=Z,5.4nm,0.6s,baz=343,slow=9.0,SNR=31						
ZAA0	**Zalesovo Array**	**43.06**	**330**	*e*P	**P**	**05 05 19.1**	**-0.3**
ZALV	**Zalesovo Beam**	**43.06**	**330**	P	**P**	**05 05 19.4**	**0.0**
ZALV	**Zalesovo Beam**	**43.06**	**330**	P	**P**	**05 05 19.4**	**0.0**
	comp=Z,6.0nm,0.6s,baz=119,slow=7.5,SNR=37						
PETK	**Petropavlovsk-**	**43.13**	**32**	LR	LR	05 23 06.0	
	comp=Z,29nm,19.6s,baz=350,slow=36						
TKM2	**Tokmak 2**	**43.70**	**311**	*e*P	**P**	**05 05 26.0**	**+0.9**
	comp=Z,3.5nm,1.0s						
AAK	**Ala-Archa**	**44.40**	**310**	*e*P	**P**	**05 05 31.4**	**+0.7**
	comp=Z,4.5nm,0.5s						
KURK	**Kurchatov**	**44.61**	**323**	*e*P	**P**	**05 05 32.0**	**0.0**
	comp=Z,9.4nm,1.2s						
AS31	**Alice Springs**	**45.83**	**163**	*e*P	**P**	**05 05 42.0**	**0.0**
ASAR	**Alice Springs**	**45.83**	**163**	P	**P**	**05 05 41.6**	**-0.3**
ASAR	**Alice Springs**	**45.83**	**163**	P	**P**	**05 05 41.6**	**-0.3**
	comp=Z,4.8nm,1.0s,baz=335,slow=6.7,SNR=18						
KKAR	**Karatay Array**	**47.36**	**310**	*e*P	**P**	**05 05 54.4**	**+0.5**
	comp=Z,2.1nm,0.8s						
CTAO	**Charters Tower**	**47.54**	**147**	*e*P	**P**	**05 05 56.4**	**+1.0**
	comp=Z,8.7nm,0.8s						
BRVK	**Borovoye**	**50.28**	**323**	*e*P	**P**	**05 06 15.7**	**-0.3**
	comp=Z,1.3nm,0.5s						
ABKAR	**Akbulak array**	**55.66**	**316**	*e*P	**P**	**05 06 56.1**	**+0.3**
	comp=Z,0.9nm,0.4s						
KBZ	**Khabaz**	**67.39**	**310**	P	**P**	**05 08 14.2**	**-1.0**
KBZ	**Khabaz**	**67.39**	**310**	P	**P**	**05 08 14.2**	**-1.0**
	comp=Z,2.8nm,0.9s,baz=73,slow=6.8,SNR=4.1						
ILAR	**Eielson Array**	**72.62**	**27**	P	**P**	**05 08 46.2**	**-0.6**
ILAR	**Eielson Array**	**72.62**	**27**	P	**P**	**05 08 46.2**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=267,slow=4.9,SNR=6.6						
NOA	**NORSAR Array B**	**81.18**	**332**	LR	LR	05 51 42.5	
	comp=Z,25nm,18.4s,baz=125,slow=40						
RES	**Resolute Bay**	**82.28**	**9**	*e*P	**P**	**05 09 40.9**	**+0.2**
	comp=Z,6.3nm,1.2s						
RES	**Resolute Bay**	**82.28**	**9**	P	**P**	**05 09 41.4**	**+0.7**
	comp=Z,3.7nm,1.0s,baz=329,slow=6.3,SNR=12						
KMBO	**Kilima Mbogo**	**84.24**	**267**	*e*P	**P**	**05 09 53.2**	**+0.9**
	comp=Z,2.2nm,0.9s						
KMBO	**Kilima Mbogo**	**84.24**	**267**	P	**P**	**05 09 53.3**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=49,slow=20,SNR=4.4						
YKW3	**Yellowknife Ar**	**86.41**	**22**	*e*P	**P**	**05 10 01.8**	**-0.1**
	comp=Z,0.1nm,1.1s						
YKA	**Yellowknife Ar**	**86.46**	**22**	P	**P**	**05 10 02.1**	**+0.1**
YKA	**Yellowknife Ar**	**86.46**	**22**	P	**P**	**05 10 02.1**	**+0.1**
	comp=Z,3.0nm,1.0s,baz=312,slow=4.7,SNR=50						

WEL 03 04:57:23.9±0.8, **35.°35S**×**178.°74E**, **h214**km±12km, **ML4.1**/4, **1C-1D**, **Error ellipse: s-maj=16.2km s-min=15.1km az=90.0**, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.24**	**189**	PN	Pn	04 58 06.0	+0.1
MXZ				SN	S	04 58 38.3	-0.3
PUZ	**Puketiti**	**2.75**	**188**	⇓PN	Pn	04 58 11.5	+0.1
MWZ	**Matawai**	**3.14**	**198**	PN	Pn	04 58 16.3	+0.3
MWZ				*e*SN	S	04 58 57.2	+0.7
CNGZ	**Carnagh Statio**	**3.16**	**188**	PN	Pn	04 58 16.7	+0.5
URZ	**Urewera**	**3.19**	**204**	PN	Pn	04 58 16.3	-0.2
URZ				SN	S	04 58 58.1	+0.7
PRRZ	**Plateau Road**	**3.67**	**210**	PN	Pn	04 58 23.0	+0.8
KNZ	**Kokohu**	**3.77**	**193**	PN	Pn	04 58 22.5	-0.8
RAHZ	**Arahi**	**3.80**	**200**	PN	Pn	04 58 23.6	-0.2
NMHZ	**Naumai**	**4.05**	**202**	PN	Pn	04 58 26.9	0.0
BKZ	**Black Stump Fm**	**4.21**	**204**	PN	Pn	04 58 28.5	-0.4
MCHZ	**McNeill Hill**	**4.40**	**201**	PN	Pn	04 58 31.0	-0.2
BHHZ	**Black Hill Sta**	**4.65**	**206**	PN	Pn	04 58 33.3	-1.1
FWVZ	**Far West T-bar**	**4.66**	**212**	*e*PN	Pn	04 58 34.4	-0.2
KAHZ	**Kahuranaki**	**4.68**	**198**	PN	Pn	04 58 33.9	-0.7
WNVZ	**Wahianoa**	**4.70**	**211**	*e*PN	Pn	04 58 34.9	-0.1
PNHZ	**Pukenui**	**4.99**	**203**	PN	Pn	04 58 37.0	-1.5
PRHZ	**Porangahau**	**5.19**	**198**	PN	Pn	04 58 39.4	-1.6
BFZ	**Birch Farm**	**5.68**	**200**	PN	Pn	04 58 45.4	-1.8
MRZ	**Mangatainoka R**	**5.86**	**204**	⇑PN	Pn	04 58 47.2	-2.4
TIWZ	**Tintock**	**5.87**	**202**	PN	Pn	04 58 47.5	-2.2
HOWZ	**Holdsworth Sta**	**6.10**	**204**	PN	Pn	04 58 49.9	-2.7
OGWZ	**Otaki Gorge**	**6.14**	**206**	PN	Pn	04 58 50.8	-2.4
TMWZ	**Te Maipa**	**6.17**	**200**	PN	Pn	04 58 51.3	-2.3
KIW	**Kapiti Island**	**6.28**	**208**	PN	Pn	04 58 52.3	-2.6
MTW	**Mount Morrison**	**6.34**	**203**	PN	Pn	04 58 52.8	-2.9
CAW	**Cannon Point**	**6.44**	**206**	PN	Pn	04 58 53.9	-3.1
SNZO	**South Karori**	**6.75**	**207**	PN	Pn	04 58 57.6	-3.3
PLWZ	**Palliser**	**6.79**	**203**	PN	Pn	04 58 58.3	-3.2
TCW	**Tory Channel**	**6.83**	**210**	PN	Pn	04 58 58.5	-3.4

IDC 03 05:07:24.4±2.0, **1.°37N**×**127.°13E**, **h0**km, **mb3.6**/3, **mb1 3.9**/4, **mb1mx3.5**/21, **mbtmp3.6**/4, **ML4.0**/1, **Error ellipse: s-maj=109.4km s-min=25.7km az=70.0**, **Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.40**	**184**	P	Pn	05 11 52.8	-0.5
	0.4nm,0.3s,baz=19,slow=14,SNR=13						
WRA	**Warramunga Arr**	**22.33**	**162**	P	P	05 12 23.1	-0.8
	2.4nm,0.5s,baz=340,slow=11,SNR=12						
ASAR	**Alice Springs**	**25.74**	**166**	P	P	05 12 57.2	+0.3
	0.3nm,0.4s,baz=351,slow=15,SNR=6.0						
MKAR	**Makanchi Array**	**59.72**	**326**	P	P	05 17 30.9	-0.1
	0.2nm,0.3s,baz=122,slow=8.5,SNR=4.1						

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*IDC **03** 06:27:35.7±0.8, 21.°77S×68.°28W, h86km±5km, mb3.8/7, mb1 3.9/9, mb1mx3.7/17, mbtmp3.7/9, MS2.7/1, Ms1 2.7/1, ms1mx2.4/19, Error ellipse: s-maj=21.0km s-min=19.2km az=27.0*
*ISCJB **03** 06:27:37.9±0.5, 21.°79S±0.°04×68.°27W±0.°07, h121km±6km, mb4.0/9, Error ellipse: s-maj=10.4km s-min=5.9km az=8.5*
*GUC **03** 06:27:39.2±0.7, 21.°77S×68.°51W, h135km±4km, ML4.2*
*NEIC **03** 06:27:39.2, 21.°77S×68.°51W, h135km, mb4.3/8, After GUC.*
ISC 03 06:27:39.3±0.7, **21.°76S**±0.°04×**68.°40W**±0.°06, **h124**km±7km, **n55**, σ**1.s00**/52, **mb4.3**/9, **9C-2D**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	**Plate Boundary**	**0.78**	**267**	⇑*i*P	**Pn**	**06 28 00.6**	**+0.7**
PB09				*e*S	**Sn**	**06 28 16.9**	**+1.3**
PB09				AML	AML	06 28 18.6	
	comp=N,9µm,0.3s						
LVC	**Limon Verde**	**0.97**	**209**	*e*P	x	06 28 40.9	
LVC				*e*S	x	06 28 59.0	

PB04	Plate Boundary	1.12	243	⇑iP	Pn	06 28 10.2	+7.2
PB04				iS	Sn	06 28 33.2	+12
PB04				AML	AML	06 28 36.1	
	comp=N,2μm,0.6s						
SPCH	San Pedro de A	1.15	171	eP	Pn	06 28 05.1	+1.5
SPCH	San Pedro de A	1.15	171	eP	Pn	06 28 05.1	+1.5
PB01	Plate Boundary	1.24	305	iS	Sn	06 28 24.2	+1.0
PB01				AML	AML	06 28 25.6	
	comp=N,5μm,0.3s						
PB07	Plate Boundary	1.38	271	⇑iP	Pn	06 28 05.8	-0.1
PB07				eS	Sn	06 28 26.7	+0.6
PB07				AML	AML	06 28 27.5	
	comp=N,8μm,0.3s						
MECH	Mejillones	2.32	234	⇑iP	Pn	06 28 17.5	+0.6
MECH				eS	Sn	06 28 46.0	+0.1
MECH	Mejillones	2.32	234	⇑iP	Pn	06 28 17.5	+0.6
MECH				eS	Sn	06 28 46.0	+0.1
MECH				AML	AML	06 28 56.5	
	comp=E,1μm,0.3s						
CEN1	Los Morros	2.32	225	⇓iP	Pn	06 28 20.1	+3.0
CEN1	Los Morros	2.32	225	⇓iP	Pn	06 28 20.1	+3.0
ANCH	Antofagasta	2.66	224	⇑iP	Pn	06 28 21.5	+0.2
ANCH				iS	Sn	06 28 53.5	-0.2
ANCH	Antofagasta	2.66	224	⇑iP	Pn	06 28 21.5	+0.2
ANCH				iS	Sn	06 28 53.5	-0.2
PSGC	Pisagua	2.69	323	⇑iP	Pn	06 28 21.2	-0.6
PSGC				eS	Sn	06 28 54.0	-0.6
PSGC	Pisagua	2.69	323	⇑iP	Pn	06 28 21.2	-0.6
PSGC				eS	Sn	06 28 54.0	-0.6
PSGC				AML	AML	06 29 00.6	
	comp=E,513nm,0.4s						
LPAZ	La Paz	5.45	3	ePn	Pn	06 29 00.3	+1.2
	comp=E,16nm,0.4s						
LPAZ				S	Sn	06 30 01.8	+0.8
LPAZ	La Paz	5.45	3	P	Pn	06 29 00.5	+1.4
	comp=E,6.5nm,0.3s,baz=170,slow=7.0,SNR=142						
LPAZ				S	Sn	06 30 01.8	+0.8
	comp=E,0.3nm,0.3s,baz=146,slow=18,SNR=1.4						
ARE	Arequipa	6.03	330	eP	Pn	06 29 07.0	+0.5
LCO	Las Campanas	7.51	196	ePn	Pn	06 29 22.2	-4.2
	comp=E,16nm,0.4s						
LCO				eSn	Sn	06 30 43.7	-6.5
SIV	San Ignacio	9.00	52	P	Pn	06 29 42.9	-3.5
SIV	San Ignacio	9.00	52	P	Pn	06 29 42.9	-3.5
	comp=E,22nm,0.3s,baz=240,slow=12,SNR=302						
SIV				LR	LR	06 33 17.2	
	comp=E,47nm,19.3s,slow=38						
CFAA	Coronel Fontan	9.80	179	P	Pn	06 29 53.5	-3.6
CFAA				S	Sn	06 31 36.9	-8.4
CFAA	Coronel Fontan	9.80	179	P	Pn	06 29 53.5	-3.6
	comp=E,0.2nm,0.3s,baz=352,slow=13,SNR=18						
CFAA				S	Sn	06 31 36.9	-8.4
	comp=E,0.1nm,0.3s,baz=282,slow=20,SNR=5.1						
CPUP	Villa Florida	11.09	116	P	Pn	06 30 12.4	-1.9
CPUP	Villa Florida	11.09	116	P	Pn	06 30 12.4	-1.9
	comp=E,0.3nm,0.3s,baz=277,slow=12,SNR=4.1						
SAML	Samuel	13.70	22	ePn	Pn	06 30 46.0	-2.4
	comp=E,3.4nm,0.6s						
TRQA	Tornquist	17.16	163	eP	P	06 31 30.5	-0.6
	comp=E,14nm,1.1s						
PLCA	Paso Flores	19.00	185	P	Pn	06 31 51.5	-1.9
PLCA	Paso Flores	19.00	185	P	Pn	06 31 51.5	-1.9
	comp=E,0.1nm,0.3s,baz=199,slow=16,SNR=3.6						
BDFB	Brasilia	20.24	76	P	P	06 32 03.3	-1.7
BDFB	Brasilia	20.24	76	P	P	06 32 03.3	-1.7
	comp=E,3.7nm,0.4s,baz=219,slow=6.2,SNR=15						
RCBR	Riachuelo	35.20	68	eP	P	06 34 21.1	-0.6
	comp=E,5.6nm,0.7s						
RCBR	Riachuelo	35.20	68	P	P	06 34 20.9	-0.9
	comp=E,5.9nm,0.8s,baz=228,slow=9.6,SNR=6.2						
VNA3	Neumayer Olymp	59.67	161	eP	P	06 37 31.6	+1.4
VNA2	Neumayer--Watz	60.25	161	eP	P	06 37 35.3	+1.3
	baz=301,slow=7.6						
TXAR	Lajitas Array	61.12	325	P	P	06 37 41.2	+0.6
TXAR	Lajitas Array	61.12	325	P	P	06 37 41.2	+0.6
	comp=E,0.3nm,0.6s,baz=141,slow=8.0,SNR=5.1						
SNAA	Sanae	61.88	161	eP	P	06 37 46.1	+1.0
DBIC	Dimbokro	68.36	73	eP	P	06 38 27.7	-0.1
	comp=E,2.5nm,0.5s						
QSPA	South Pole Qui	68.43	180	eP	P	06 38 29.1	+1.5
	comp=E,3.4nm,0.6s						
PDAR	Pinedale Array	74.57	330	P	P	06 39 06.5	+1.7
PDAR				pP	pP	06 39 28.1	-7.9
PDAR	Pinedale Array	74.57	330	P	P	06 39 06.5	+1.7
	comp=E,0.2nm,0.5s,baz=129,slow=8.5,SNR=2.8						
PDAR				pP	pP	06 39 28.1	-7.9
	comp=E,0.3nm,0.5s,baz=157,slow=9.2,SNR=1.5						
TORD	Torodi Ar. Bea	77.00	70	P	P	06 39 18.6	-0.3
TORD				sP	sP	06 39 50.8	-13
TORD	Torodi Ar. Bea	77.00	70	P	P	06 39 18.6	-0.3
	comp=E,2.4nm,0.4s,baz=253,slow=5.6,SNR=44						
TORD				sP	sP	06 39 50.8	-13
	comp=E,0.9nm,0.6s,baz=252,slow=6.1,SNR=2.0						
HLID	Hailey	77.52	328	eP	P	06 39 23.4	+2.0
	comp=E,2.1nm,0.9s						
BOSA	Boshof	82.91	118	P	P	06 39 50.6	-0.1
BOSA	Boshof	82.91	118	P	P	06 39 50.6	-0.1
	comp=E,4.6nm,1.1s,baz=216,slow=8.7,SNR=3.5						
YKA	Yellowknife Ar	91.59	340	P	P	06 40 32.4	+0.8
YKA				pP	pP	06 40 54.4	-9.4
YKA				sP	sP	06 41 06.4	-10
YKA	Yellowknife Ar	91.59	340	P	P	06 40 32.4	+0.8
	comp=E,1.3nm,0.7s,baz=135,slow=4.5,SNR=42						
YKA				pP	pP	06 40 54.3	-9.4
	comp=E,0.3nm,0.6s,baz=128,slow=4.7,SNR=3.3						
YKA				sP	sP	06 41 06.4	-10
	comp=E,0.3nm,0.7s,baz=133,slow=4.4,SNR=2.7						
WRA	Warramunga Arr	132.97	210	PKP	PKPdf	06 46 41.4	+0.6
WRA				pPKP	pPKPdf	06 47 06.2	-8.1
WRA	Warramunga Arr	132.97	210	PKP	PKPdf	06 46 41.4	+0.6
	comp=E,1.1nm,0.7s,baz=155,slow=1.8,SNR=7.6						
WRA				pPKP	pPKPdf	06 47 06.2	-8.1
	comp=E,0.3nm,0.6s,baz=204,slow=37,SNR=2.1						
ZALV	Zalesovo Beam	141.99	26	PKP	PKPdf	06 46 56.9	+0.6
ZALV	Zalesovo Beam	141.99	26	PKP	PKPdf	06 46 56.9	+0.6
	comp=E,0.6nm,0.4s,baz=297,slow=3.2,SNR=4.1						
MKAR	Makanchi Array	145.56	36	PKPbc	PKPab	06 47 04.0	+0.4
MKAR	Makanchi Array	145.56	36	PKPbc	PKPab	06 47 04.0	+0.4
	comp=E,0.8nm,0.7s,baz=331,slow=4.0,SNR=7.7						

WEL 03 06:29:48.2±0.4, 37°.72S×176°.56E, h149km±4km, ML3.5/12, 4C-4D, Error ellipse: s-maj=3.8km s-min=3.5km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	0.69	141	⇑PN	Pn	06 30 10.3	-0.2
URZ				SN	Sn	06 30 28.1	+0.6
MWZ	Matawai	0.98	129	ePN	Pn	06 30 12.2	-0.5
MWZ				SN	Sn	06 30 31.3	-0.1
RAHZ	Arahi	1.26	161	PN	Pn	06 30 15.7	+0.4
PUZ	Puketiti	1.39	105	PN	Pn	06 30 15.8	-0.6
PUZ				SN	Sn	06 30 37.0	-1.1
NMHZ	Naumai	1.39	172	PN	Pn	06 30 17.0	+0.4
MXZ	Matakaoa Point	1.39	84	PN	Pn	06 30 16.6	+0.1
BKZ	Black Stump Fm	1.45	182	⇑PN	Pn	06 30 16.5	-0.6
BKZ				SN	Sn	06 30 38.9	-0.5
CNGZ	Carnagh Statio	1.51	121	PN	Pn	06 30 18.1	+0.4
KNZ	Kokohu	1.56	146	PN	Pn	06 30 18.1	-0.2
WTVZ	West Tongariro	1.59	208	PN	Pn	06 30 19.0	+0.3
OTVZ	Oturere	1.60	206	PN	Pn	06 30 19.3	+0.3
TWVZ	Taurewa	1.61	213	PN	Pn	06 30 19.3	+0.3
NGZ	Ngauruhoe	1.64	207	PN	Pn	06 30 19.9	+0.6
WPVZ	Whakapapa	1.68	208	PN	Pn	06 30 20.0	+0.2
MCHZ	McNeill Hill	1.72	177	PN	Pn	06 30 20.2	+0.1
FWVZ	Far West T-bar	1.73	207	⇓PN	Pn	06 30 20.5	+0.1
TRVZ	Turoa	1.77	206	PN	Pn	06 30 20.8	0.0
WNVZ	Wahianoa	1.77	205	PN	Pn	06 30 20.6	-0.2
MHGZ	Mahia Peninsul	1.78	144	⇓PN	Pn	06 30 20.9	+0.2
MOVZ	Moawhango	1.80	200	PN	Pn	06 30 20.3	-0.8
BHHZ	Black Hill Sta	1.81	192	⇑PN	Pn	06 30 20.4	-0.7
PKVZ	Pokaka	1.83	211	PN	Pn	06 30 21.4	0.0
MTVZ	Mangateitei	1.87	207	⇓PN	Pn	06 30 21.7	-0.1
CKHZ	Cape Kidnapper	1.98	168	PN	Pn	06 30 22.5	-0.4
KAHZ	Kahuranaki	2.09	173	PN	Pn	06 30 23.8	-0.5
PNHZ	Pukenui	2.21	187	PN	Pn	06 30 24.4	-1.3
PXZ	Pawanui	2.32	174	⇓PN	Pn	06 30 25.9	-1.1
TSZ	Takapari Road	2.38	191	PN	Pn	06 30 26.4	-1.5
PRHZ	Porangahau	2.54	179	PN	Pn	06 30 28.3	-1.4
DVHZ	Dannevirke	2.59	187	PN	Pn	06 30 28.4	-2.0
POWZ	Post Office Ro	2.74	193	PN	Pn	06 30 30.3	-1.9
BFZ	Birch Farm	2.97	185	PN	Pn	06 30 32.8	-2.2
MRZ	Mangatainoka R	3.04	194	PN	Pn	06 30 33.5	-2.5
MRZ				SN	Sn	06 31 09.7	-3.2
TIWZ	Tintock	3.10	190	⇑PN	Pn	06 30 34.4	-2.4
HOWZ	Holdsworth Sta	3.28	194	PN	Pn	06 30 36.0	-3.0
OGWZ	Otaki Gorge	3.28	199	PN	Pn	06 30 36.3	-2.7
KIW	Kapiti Island	3.39	202	PN	Pn	06 30 37.3	-3.2
TMWZ	Te Maipa	3.42	189	PN	Pn	06 30 38.2	-2.7
MTW	Mount Morrison	3.53	193	PN	Pn	06 30 38.9	-3.3
CAW	Cannon Point	3.58	198	PN	Pn	06 30 39.6	-3.2
TRWZ	Traveller	3.74	190	PN	Pn	06 30 41.7	-3.2
PAWZ	Paruwai Farm	3.76	193	PN	Pn	06 30 41.9	-3.4
WEL	Wellington	3.82	201	PN	Pn	06 30 42.8	-3.2
MSWZ	Moikau Station	3.83	195	PN	Pn	06 30 42.5	-3.6
BHW	Baring Head	3.91	199	PN	Pn	06 30 43.3	-3.8
TCW	Tory Channel	3.91	206	PN	Pn	06 30 44.0	-3.2
PLWZ	Palliser	3.98	194	PN	Pn	06 30 44.1	-4.0
NNZ	Nelson	4.27	214	PN	Pn	06 30 48.7	-3.2
QRZ	Quartz Range	4.41	224	PN	Pn	06 30 49.8	-3.9
KHZ	Kahutara	5.23	205	ePN	Pn	06 31 00.7	-3.8

IDC 03 06:32:29.9±0.7, 15°.86S×172°.97W, h0km, mb4.0/11, mb1 4.3/12, mb1mx4.1/21, mbtmp4.0/12, ML2.1/1, MS3.8/8, Ms1 3.8/8, ms1mx3.4/31, Error ellipse: s-maj=31.8km s-min=15.4km az=133.0

ISCJB 03 06:32:32.2±0.5, 15°.8S±0°.1×173°.0W±0°.1, h26km, mb4.1/14, MS3.9/6, Error ellipse: s-maj=22.0km s-min=11.7km az=42.8

NEIC 03 06:32:38.6±1.6, 15°.93S×173°.03W, h63km±14km, mb4.3/3, Error ellipse: s-maj=19.7km s-min=10.5km az=132.0

ISC 03 06:32:34.0±0.6, 15°.8S±0°.1×172°.9W±0°.2, h26km, n43, σ1s.49/39, mb4.1/14, MS3.9/6, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.15	30	ePn	Pb	06 33 15.4	+3.1
AFI				Sn	Sn	06 33 30.0	-4.1
AFI	Afiamalu	2.15	30	Pn	Pn	06 33 06.9	-1.3
	29nm,0.3s,baz=190,slow=11,SNR=2.4						
AFI				Sn	Sn	06 33 30.0	-4.1
	62nm,0.3s,baz=224,slow=16,SNR=6.0						
AFI				LR	LR	06 33 37.0	
	comp=Z,1μm,19.1s,baz=233,slow=30						
MSVF	Nonsavu	8.89	256	ePn	Pn	06 34 49.1	+8.2
RAR	Rarotonga	13.56	115	LR	LR	06 39 60.0	
	comp=Z,308nm,18.8s,baz=272,slow=33						
DZM	Mont Dzumac	20.52	249	eLR	LR	06 42 09.5	
	265nm,22.9s						
DZM	Mont Dzumac	20.52	249	LR	LR	06 43 20.2	
	comp=Z,251nm,18.5s,baz=36,slow=32						
PPT2	Papeete2	22.40	98	eLR	LR	06 42 39.1	
	254nm,27.5s						
TBI	Tubuai	23.30	113	eLR	LR	06 43 10.3	
	235nm,26.8s						
URZ	Urewera	24.07	200	eP	P	06 37 46.7	-0.5
	7.0nm,0.7s						
URZ	Urewera	24.07	200	P	P	06 37 45.3	-1.8
	2.2nm,0.3s,baz=18,slow=16,SNR=4.3						
CTA	Charters Tower	39.04	257	P	P	06 39 57.8	-1.1
CTA	Charters Tower	39.04	257	P	P	06 39 57.8	-1.1
	1.5nm,0.6s,baz=96,slow=10,SNR=3.6						
CTA				LR	LR	06 54 28.4	
	comp=Z,79nm,18.7s,baz=58,slow=34						
WRAB	Tennant Creek	50.23	257	eP	P	06 41 27.2	-1.0
	5.9nm,1.1s						
WRA	Warramunga Arr	50.24	257	P	P	06 41 26.4	-1.9
WRA				PcP	PcP	06 42 48.0	+0.7
WRA	Warramunga Arr	50.24	257	P	P	06 41 26.4	-1.9
	2.1nm,0.7s,baz=92,slow=7.0,SNR=22						
WRA				PcP	PcP	06 42 48.0	+0.7
	0.9nm,0.7s,baz=93,slow=3.3,SNR=4.8						
AS31	Alice Springs	50.46	252	eP	P	06 41 28.6	-1.4
ASAR	Alice Springs	50.46	252	P	P	06 41 28.6	-1.5
ASAR	Alice Springs	50.46	252	P	P	06 41 28.6	-1.5
	5.6nm,0.7s,baz=88,slow=8.2,SNR=47						
ASAR				LR	LR	07 01 51.6	
	comp=Z,142nm,18.8s,baz=199,slow=35						
VNDA	Vanda	63.05	186	P	P	06 42 58.4	-0.1
VNDA	Vanda	63.05	186	P	P	06 42 58.4	-0.1
	1.5nm,1.1s,baz=1.0,slow=10.0,SNR=5.9						
PETK	Petropavlovsk-	73.14	342	P	P	06 44 02.7	+0.7
PETK	Petropavlovsk-	73.14	342	P	P	06 44 02.7	+0.7
	0.8nm,0.4s,baz=159,slow=12,SNR=4.3						
QSPA	South Pole Qui	74.27	180	eP	P	06 44 08.2	-0.5
	3.3nm,1.0s						
NVAR	Mina Array Bea	74.28	42	P	P	06 44 10.2	+0.8
NVAR	Mina Array Bea	74.28	42	P	P	06 44 10.2	+0.8
	0.4nm,0.5s,baz=234,slow=7.7,SNR=2.9						
TXAR	Lajitas Array	80.42	56	P	P	06 44 43.9	+0.1
TXAR	Lajitas Array	80.42	56	P	P	06 44 43.9	+0.1
	0.6nm,1.0s,baz=214,slow=4.2,SNR=4.2						
TXAR				LR	LR	07 15 17.5	
	comp=Z,36nm,18.7s,baz=180,slow=32						
PDAR	Pinedale Array	82.22	42	P	P	06 44 53.4	+0.2
PDAR	Pinedale Array	82.22	42	P	P	06 44 53.4	+0.2
	1.0nm,0.8s,baz=212,slow=4.7,SNR=8.4						
ILAR	Eielson Array	82.72	11	P	P	06 44 55.5	+0.4
ILAR	Eielson Array	82.72	11	P	P	06 44 55.5	+0.4
	1.0nm,0.7s,baz=228,slow=6.4,SNR=23						
MAW	Mawson	87.59	198	LR	LR	07 24 18.0	
	comp=Z,121nm,18.2s,baz=161,slow=36						
YKA	Yellowknife Ar	90.25	23	P	P	06 45 32.8	+0.8
YKA	Yellowknife Ar	90.25	23	P	P	06 45 32.8	+0.8
	0.2nm,0.5s,baz=240,slow=4.5,SNR=8.0						
CMAR	Chiang Mai Arr	93.20	288	P	P	06 45 48.7	+2.0
CMAR	Chiang Mai Arr	93.20	288	P	P	06 45 48.7	+2.0
	0.8nm,0.3s,baz=98,slow=1.8,SNR=6.1						
LPAZ	La Paz	99.22	110	LR	LR	07 22 13.1	
	comp=Z,44nm,18.0s,baz=11,slow=30						
MALT	Malatya	144.48	315	ePKPdf	PKPdf	06 52 09.2	+0.6
GERES	GERESS Array B	146.59	352	PKPbc	PKPbc	06 52 13.5	+0.2
GERES	GERESS Array B	146.59	352	PKPbc	PKPbc	06 52 13.5	+0.2
	0.3nm,0.5s,baz=335,slow=4.3,SNR=2.7						
BR131	Keskin Array S	146.76	321	ePKPbc	PKPab	06 52 15.7	+0.3
BRTR	Keskin Array B	146.76	321	PKPbc	PKPab	06 52 15.2	-0.1
BRTR	Keskin Array B	146.76	321	PKPbc	PKPab	06 52 15.2	-0.1
	2.1nm,0.8s,baz=106,slow=2.7,SNR=12						

IDC 03 06:37:25.7±1.1, 15°.74S×173°.12W, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.9/21, mbtmp3.9/8, ML2.0/1, Error ellipse: s-maj=50.7km s-min=19.5km az=133.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.23	36	Pn	Pn	06 38 05.4	+1.3
	25nm,0.3s,baz=153,slow=11,SNR=2.1						
AFI				Sn	Sn	06 38 24.0	-8.5
	55nm,0.3s,baz=66,slow=20,SNR=4.2						
DZM	Mont Dzumac	20.33	249	eLR	LR	06 46 54.4	
	81nm,24.8s						
PPT2	Papeete2	22.62	98	eLR	LR	06 47 35.0	
	78nm,26.2s						
TBI	Tubuai	23.52	112	eLR	LR	06 48 04.9	
	103nm,26.2s						
URZ	Urewera	24.03	199	P	P	06 42 42.9	+0.5
	2.4nm,0.5s,baz=349,slow=19,SNR=4.0						
WRA	Warramunga Arr	50.03	257	P	P	06 46 21.7	-0.7
	0.7nm,0.4s,baz=92,slow=6.9,SNR=8.2						
ASAR	Alice Springs	50.27	252	P	P	06 46 23.4	-0.8
	2.1nm,0.6s,baz=88,slow=8.2,SNR=27						
PDAR	Pinedale Array	82.34	42	P	P	06 49 49.1	-0.7
	0.3nm,0.7s,baz=209,slow=7.2,SNR=2.9						
ILAR	Eielson Array	82.72	11	P	P	06 49 50.4	-0.6
	0.6nm,0.6s,baz=229,slow=6.5,SNR=14						
YKA	Yellowknife Ar	90.30	23	P	P	06 50 27.6	-0.6
	0.1nm,0.7s,baz=242,slow=4.7,SNR=3.6						
CMAR	Chiang Mai Arr	92.98	288	P	P	06 50 43.0	+1.5
	0.7nm,0.3s,baz=91,slow=4.8,SNR=2.5						
BRTR	Keskin Array B	146.59	321	PKPbc	PKPab	06 57 10.2	-0.5
	0.9nm,0.7s,baz=195,slow=3.3,SNR=5.3						

IDC 03 07:09:14.5±3.0, 3°.29N×123°.11E, h516km±38km, mb2.9/8, mb1 3.0/9, mb1mx2.9/25, mbtmp2.9/9, Error ellipse: s-maj=49.3km s-min=13.8km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	8.90	202	P	P	07 11 21.0	+0.4
	1.3nm,0.3s,baz=27,slow=2.3,SNR=4.3						
FITZ	Fitzroy Crossi	21.40	173	P	P	07 13 24.5	-0.5
	1.6nm,0.5s,baz=7.7,slow=9.0,SNR=12						
WRA	Warramunga Arr	25.59	155	P	P	07 14 02.1	-0.3
	0.2nm,0.3s,baz=336,slow=9.5,SNR=6.7						
ASAR	Alice Springs	28.78	159	P	P	07 14 30.9	+0.4
	0.2nm,0.6s,baz=343,slow=6.8,SNR=3.5						
SONM	Songino Array	46.66	345	P	P	07 16 56.4	+0.2
	0.9nm,0.7s,baz=144,slow=4.8,SNR=4.8						
MKAR	Makanchi Array	55.91	327	P	P	07 18 03.5	+0.4
	1.4nm,0.4s,baz=121,slow=8.0,SNR=31						
MKAR				PcP	PcP	07 18 54.1	-0.2
	0.6nm,0.5s,baz=124,slow=4.0,SNR=7.4						
ZALV	Zalesovo Beam	59.39	335	P	P	07 18 25.7	-1.0
	0.5nm,0.3s,baz=116,slow=6.6,SNR=2.3						
AKTO	Aktyubinsk	71.78	322	P	P	07 19 44.4	+0.1
	0.9nm,0.4s,baz=100,slow=12,SNR=2.8						
ILAR	Eielson Array	87.05	25	P	P	07 21 04.0	-0.7
	0.5nm,1.0s,baz=238,slow=4.8,SNR=5.4						
TORD	Torodi Ar. Bea	119.60	287	PKP	PKPdf	07 27 06.0	-0.5
	0.2nm,0.6s,baz=52,slow=2.4,SNR=2.7						
TXAR	Lajitas Array	124.70	51	PKP	PKPdf	07 27 17.2	+1.1
	0.1nm,0.3s,baz=223,slow=3.7,SNR=3.6						

IDC 03 07:11:51.8±5.4, 6°.53S×146°.21E, h161km±64km, mb3.0/3, mb1 3.1/5, mb1mx3.0/16, mbtmp2.9/5, Error ellipse: s-maj=71.4km s-min=28.6km az=144.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.01	162	P	Pn	07 12 39.8	0.0
	6.8nm,0.3s,baz=312,slow=7.8,SNR=14						
PMG				S	Sn	07 13 17.6	+0.4
	8.4nm,0.3s,baz=159,slow=21,SNR=16						
WRA	Warramunga Arr	17.63	220	P	P	07 15 45.5	-0.8
	0.1nm,0.3s,baz=43,slow=12,SNR=3.2						
ASAR	Alice Springs	20.75	213	pP	pP	07 16 48.0	-0.2
	0.7nm,0.8s,baz=38,slow=11,SNR=4.3						
FITZ	Fitzroy Crossi	23.12	238	P	P	07 16 44.0	+0.2
	0.6nm,0.5s,baz=58,slow=9.3,SNR=4.3						
MKAR	Makanchi Array	77.40	321	P	P	07 23 29.4	+0.3
	0.3nm,0.6s,baz=111,slow=8.2,SNR=4.5						
ILAR	Eielson Array	86.27	23	P	P	07 24 14.7	-0.3
	0.2nm,0.6s,baz=250,slow=5.0,SNR=3.9						

IDC 03 07:15:48.6±2.1, 3°.19N×127°.68E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/23, mbtmp3.4/4, MS4.2/1, Ms1 4.2/1, ms1mx2.9/18, Error ellipse: s-maj=120.8km s-min=24.0km az=71.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCI	Palu	8.83	243	P	Sn	07 19 47.8	+10
	baz=9.4,SNR=5.1						
KKM	Kota Kinabalu	11.78	284	P	Sn	07 21 01.2	+11
	baz=17,SNR=7.1						
WSI	Waingapu	14.74	210	P	P	07 19 32.2	+7.4
	baz=8.0,SNR=5.2						
WSI				S	Sn	07 21 12.1	-51
	baz=8.0,SNR=3.5						
MTN	Manton Dam	16.29	168	P	Pn	07 19 31.0	-8.0
	baz=7.5,SNR=3.9						
KDU	Kakadu	16.47	163	P	Pn	07 19 33.8	-7.5
	baz=8.1,SNR=13						
FITZ	Fitzroy Crossi	21.25	185	P	P	07 20 36.0	-0.4
	1.3nm,0.8s,baz=2.1,slow=9.0,SNR=3.7						
WRA	Warramunga Arr	23.90	164	P	P	07 21 03.5	-0.8
	0.9nm,1.0s,baz=345,slow=10,SNR=5.3						
ASAR	Alice Springs	27.37	168	P	P	07 21 36.5	+0.7
	0.1nm,0.3s,baz=347,slow=12,SNR=3.6						
DZM	Mont Dzumac	45.45	125	LR	LR	07 41 11.9	
	comp=Z,254nm,18.5s,baz=66,slow=34						
MKAR	Makanchi Array	58.54	325	P	P	07 25 47.1	+0.1
	0.3nm,0.4s,baz=115,slow=8.1,SNR=7.2						

MAN 03 07:28:17, 17°.41N×122°.59E, h36km, mb4.4, ML3.2, MS3.0, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALP	Palanan	0.38	205	⇓eP	Pn	07 28 27.4	+1.7
PALP				eS	Sn	07 28 35.3	+2.9
CAUP	Cauayan	0.87	238	eP	Pn	07 28 33.7	+1.0
ABRA	Dolores	1.81	278	eP	Pn	07 28 46.4	+0.8
BOLP	Bolinao	2.76	249	eP	Pn	07 29 01.1	+2.4

MOS 03 07:30:07.2±0.8, 22°.91S×175°.02W, h33km, mb5.1/14, Error ellipse: s-maj=15.5km s-min=11.1km az=52.8

IDC 03 07:30:10.0±0.6, 22°.98S×174°.93W, h45km±4km, mb4.4/19, mb1 4.6/20, mb1mx4.5/24, mbtmp4.4/20, MS3.9/15, Ms1 3.9/15, ms1mx3.6/38, Error ellipse: s-maj=16.4km s-min=13.4km az=124.0

NEIC 03 07:30:09.7±0.2, 23°.05S×174°.86W, mb4.8/28, Error ellipse: s-maj=9.5km s-min=6.1km az=144.0

ISCJB 03 07:30:10.2±1.5, 23°.09S±0°.06×174°.96W±0°.05, h60km±13km, mb4.8/54, Error ellipse: s-maj=10.3km s-min=6.3km az=156.2

BJI 03 07:30:10.7, 22°.66S×175°.16W, h44km, mB5.5/16, mb5.1/20, Ms5.2/9, Ms7 4.9/9

AUST 03 07:30:35.7, 23°.35S×176°.37W, h200km

ISC 03 07:30:10.0±0.4, 23°.02S±0°.06×174°.81W±0°.07, h47km±2km, h46km:pP-P, n353, σ0s.92/397, mb4.8/54, MS4.0/16, 100C-91D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	6.80	204	ePn	Pn	07 31 47.5	+0.2
MSVF	Nonsavu	8.51	307	eP	Pn	07 32 13.1	+2.3
MSVF				pmax	pmax		
	comp=Z,120nm,1.3s						
MSVF	Nonsavu	8.51	307	ePn	Pn	07 32 13.1	+2.3
	comp=Z,120nm,1.3s						
RAR	Rarotonga	14.06	86	P	Pn	07 33 16.5	-10
RAR	Rarotonga	14.06	86	P	Pn	07 33 16.5	-10
	comp=Z,3.1nm,0.3s,baz=270,slow=4.8,SNR=3.8						
RAR				LR	LR	07 37 31.0	
	comp=Z,386nm,21.4s,baz=90,slow=31						
URZ	Urewera	16.69	203	eP	Pn	07 33 59.9	-0.6
	comp=Z,6.8nm,0.7s						
URZ				S	Sn	07 36 49.6	-15
URZ	Urewera	16.69	203	P	Pn	07 34 00.5	-0.1
	comp=Z,0.4nm,0.3s,baz=356,slow=8.6,SNR=5.6						
URZ				S	Sn	07 36 49.6	-15
	comp=Z,0.3nm,0.3s,baz=75,slow=16,SNR=3.5						
DZM	Mont Dzumac	17.34	269	eP	P	07 34 12.1	+2.4
	comp=Z,148nm,1.4s						
DZM				eLR	LR	07 38 20.2	
	comp=Z,305nm,21.2s						
DZM	Mont Dzumac	17.34	269	P	P	07 34 10.6	+0.8
DZM	Mont Dzumac	17.34	269	P	P	07 34 10.6	+0.8
	comp=Z,0.6nm,0.3s,baz=86,slow=17,SNR=8.6						
TBI	Tubuai	23.30	96	eLQ	LQ	07 39 19.7	
	comp=Z,380nm,26.0s						
TBI				eLR	LR	07 40 34.1	
	comp=Z,280nm,27.0s						
RPZ	Rata Peaks	23.71	206	P	P	07 35 15.7	-2.0
RPZ	Rata Peaks	23.71	206	P	P	07 35 15.7	-2.0
	comp=Z,10nm,0.7s,baz=291,slow=3.5,SNR=6.7						
PPT2	Papeete2	24.26	82	eLR	LR	07 40 58.2	
	comp=Z,322nm,24.8s						
PPT	Papeete	24.27	82	LR	LR	07 43 00.8	
	comp=Z,302nm,18.2s,baz=62,slow=32						
ARMA	Armidale	30.79	249	eP	P	07 36 20.1	-1.4
	comp=Z,6.8nm,0.9s						
EIDS	Eidsvold	31.15	259	eP	P	07 36 23.5	-1.0
	comp=Z,6.6nm,1.0s						
RMQ	Roma	33.19	256	P	P	07 36 35.0	-7.4
	baz=32,SNR=4.8						
CMSA	Cobar Meteorol	35.96	248	P	P	07 37 05.2	-1.1
	baz=34,SNR=5.3						
CTA	Charters Tower	36.26	267	P	P	07 37 08.0	-1.0
CTA	Charters Tower	36.26	267	P	P	07 37 08.0	-1.0
	comp=Z,24nm,0.8s,baz=98,slow=11,SNR=53						
CTAO	Charters Tower	36.26	267	eP	P	07 37 08.0	-1.0
CTAO				e*PP	pP	07 37 21.4	-0.1
CTAO				pmax	pmax		
	comp=Z,28nm,0.8s						
CTAO	Charters Tower	36.26	267	eP	P	07 37 08.0	-1.0
	comp=Z,28nm,0.8s						
CTAO				epP	pP	07 37 21.4	-0.1
CTAO				esP	sP	07 37 33.0	+6.0
QLP	Quilpie	37.23	256	P	P	07 37 15.9	-1.3
	baz=36,SNR=6.1						
PMG	Port Moresby	38.81	284	eP	P	07 37 29.3	-1.4
	comp=Z,68nm,1.1s						

PMG epP pP 07 37 41.6 -1.6
PMG esP sP 07 37 55.1 +6.4
PMG Port Moresby 38.81 284 P P **07 37 29.1 -1.5**
comp=Z,41nm,0.9s,baz=117,slow=4.9,SNR=19
COEN Coen 40.73 275 eP P **07 37 46.0 -0.6**
comp=Z,380nm,2.0s
COEN epP pP **07 37 57.6 -1.6**
COEN Coen 40.73 275 P P **07 37 45.9 -0.7**
baz=39,SNR=7.0
QIS Mount Isa 42.27 264 P P **07 37 57.7 -1.5**
baz=41,SNR=5.8
AS31 Alice Springs 46.88 259 eP P **07 38 34.4 -1.6**
AS31 epP pP **07 38 49.0 +0.2**
AS31 esP sP 07 39 00.7 +6.4
ASAR Alice Springs 46.88 259 P P **07 38 34.2 -1.7**
ASAR Alice Springs 46.88 259 P P **07 38 34.2 -1.7**
comp=Z,10nm,0.9s,baz=96,slow=7.9,SNR=59
ASAR LR LR 07 57 30.3
comp=Z,234nm,18.9s,baz=166,slow=35
WRAB Tennant Creek 47.22 264 eP P **07 38 36.2 -2.5**
WRAB e*PP pP **07 38 49.7 -1.8**
WRAB pmax pmax
comp=Z,26nm,0.9s
WRAB Tennant Creek 47.22 264 eP P **07 38 36.2 -2.5**
comp=Z,26nm,0.9s
WRAB epP pP **07 38 49.7 -1.8**
WRAB esP sP **07 39 00.3 +3.4**
WRA Warramunga Arr 47.23 264 P P **07 38 36.1 -2.6**
WRA pP pP **07 38 49.6 -1.9**
WRA Warramunga Arr 47.23 264 P P **07 38 36.1 -2.6**
comp=Z,21nm,0.8s,baz=102,slow=8.2,SNR=77
WRA pP pP **07 38 49.6 -1.9**
comp=Z,5.4nm,0.7s,baz=102,slow=7.9,SNR=7.1
WRA LR LR 07 57 19.5
comp=Z,144nm,20.8s,baz=95,slow=35
GUMO Guam 53.68 309 LR LR 08 00 27.4
comp=Z,52nm,19.1s,baz=96,slow=34
FITZ Fitzroy Crossi 55.65 263 eP P **07 39 40.8 -0.9**
comp=Z,19nm,1.3s
FITZ Fitzroy Crossi 55.65 263 LR LR 08 02 58.9
comp=Z,164nm,19.0s,baz=302,slow=35
FITZ Fitzroy Crossi 55.65 263 P P **07 39 40.9 -0.9**
baz=54,SNR=12
VNDA Vanda 55.70 186 eP P **07 39 43.1 +1.9**
comp=Z,10.0nm,1.6s
VNDA epP pP **07 39 56.3 +2.1**
VNDA Vanda 55.70 186 P P **07 39 43.3 +2.1**
comp=Z,2.9nm,1.0s,baz=11,slow=5.2,SNR=7.5
PALU Palau 58.04 295 S S 07 47 41.5 -15
baz=57,SNR=5.9
KLBR Kellerberrin 59.71 246 P P **07 40 09.6 -0.5**
baz=58,SNR=9.6
MEEK Meekatharra 59.92 252 P P **07 40 10.5 -1.2**
baz=58,SNR=5.0
BLDU Ballidu 60.76 247 P P **07 40 16.8 -0.5**
baz=59,SNR=6.6
MORW Morawa 61.64 248 P P **07 40 22.9 -0.4**
baz=60,SNR=7.3
WSI Waingapu 63.23 271 S S 07 48 56.4 -6.5
baz=62,SNR=7.5
QSPA South Pole Qui 67.06 180 eP P **07 40 59.3 +1.0**
comp=Z,8.2nm,1.1s
QSPA South Pole Qui 67.06 180 P P **07 40 59.1 +0.9**
comp=Z,5.8nm,1.1s,baz=41,slow=4.0,SNR=12
MJAR Matsushiro Arr 74.00 322 P P **07 41 40.2 -0.5**
MJAR pP pP **07 41 53.7 -0.6**
MJAR Matsushiro Arr 74.00 322 P P **07 41 40.2 -0.5**
comp=Z,3.5nm,0.7s,baz=166,slow=6.1,SNR=9.4
MJAR pP pP **07 41 53.7 -0.6**
comp=Z,1.7nm,0.6s,baz=162,slow=6.6,SNR=3.4
FX1 Attu Island--F 76.30 353 LR LR 08 09 55.5
comp=Z,59nm,19.1s,baz=348,slow=31
ASAJ Asahikawa 77.36 330 eP P **07 42 01.1 +1.3**
comp=Z,5.6nm,1.0s
VES Vestal, Richgr 78.76 43 ⇓P P **07 42 07.8 0.0**
baz=79
ISA Isabella 79.04 44 eP P **07 42 09.7 +0.3**
ISA pmax pmax
comp=Z,11nm,1.3s
ISA Isabella 79.04 44 eP P **07 42 09.7 +0.3**
comp=Z,11nm,1.3s
ISA Isabella 79.04 44 ⇓P P **07 42 09.9 +0.5**
baz=79
CMB Columbia Colle 79.36 41 eP P **07 42 11.5 +0.5**
CMB pmax pmax
comp=Z,15nm,1.4s
CMB Columbia Colle 79.36 41 eP P **07 42 11.5 +0.5**
comp=Z,15nm,1.4s
YSS Yuzh-Sakhalins 79.48 332 eP P **07 42 10.0 -1.4**
PETK Petropavlovsk- 79.48 344 P P **07 42 11.5 +0.2**
PETK *PP pP **07 42 24.8 -0.1**
PETK Petropavlovsk- 79.48 344 P P **07 42 11.4 +0.2**
PETK pP pP **07 42 24.8 -0.1**
PETK Petropavlovsk- 79.48 344 P P **07 42 11.4 +0.2**
comp=Z,12nm,0.9s,baz=131,slow=8.8,SNR=12
PETK pP pP **07 42 24.8 -0.1**
comp=Z,6.8nm,0.9s,baz=147,slow=12,SNR=4.9
PETK LR LR 08 15 33.8
comp=Z,64nm,18.2s,baz=286,slow=34
BC3 Big Chuckawall 79.80 47 ⇓P P **07 42 13.9 +0.3**
baz=80
MPMC Manual Prospec 79.91 44 ⇓P P **07 42 14.9 +0.6**
baz=80
MAW Mawson 80.19 199 P P **07 42 16.2 +1.2**
MAW Mawson 80.19 199 P P **07 42 16.2 +1.2**
comp=Z,11nm,0.9s,baz=103,slow=5.7,SNR=8.0
MAW Mawson 80.19 199 P P **07 42 17.0 +1.9**
baz=79,SNR=5.2
IRM Iron Mountain 80.30 47 ⇑P P **07 42 16.5 +0.3**
baz=80
113A Mohawk Valley, 80.43 48 ⇑P P **07 42 16.5 -0.3**
baz=81
WCN Washoe City 80.55 40 eP P **07 42 17.8 +0.2**
WCN pmax pmax
comp=Z,18nm,1.2s
WCN Washoe City 80.55 40 eP P **07 42 17.8 +0.2**
comp=Z,18nm,1.2s
FURC Furnace Creek, 80.56 44 ⇑P P **07 42 18.3 +0.9**
baz=81
KSRS Korea Array 80.73 317 P P **07 42 19.1 +0.8**
comp=Z,5.1nm,1.0s,baz=141,slow=6.2,SNR=17
KSRS pP pP **07 42 32.6 +0.6**
comp=Z,2.9nm,1.0s,baz=142,slow=4.7,SNR=2.9
KSRS LR LR 08 13 15.7
comp=Z,39nm,19.1s,baz=146,slow=32
KSAR Wonju Array Be 80.75 317 P P **07 42 19.1 +0.7**
KSAR pP pP **07 42 32.6 +0.5**
NVAR Mina Array Bea 80.88 42 P P **07 42 19.6 +0.2**
NVAR Mina Array Bea 80.88 42 P P **07 42 19.6 +0.2**
comp=Z,5.0nm,0.9s,baz=222,slow=8.8,SNR=8.4
PDMCI Parker Dam,Lak 81.06 47 ⇑P P **07 42 21.2 +1.0**
baz=81
Y14A Wickenburg 81.62 48 ⇑P P **07 42 24.0 +0.7**
baz=82
TUC Tucson 82.25 50 eP P **07 42 27.4 +0.7**
TUC pmax pmax
comp=Z,5.0nm,1.0s
TUC Tucson 82.25 50 eP P **07 42 27.4 +0.7**
comp=Z,4.6nm,1.0s
R11A Troy Canyon, C 82.51 43 ⇓P P **07 42 28.6 +0.6**
baz=83
KDAK Kodiak Island 82.62 12 LR LR 08 14 06.9
comp=Z,79nm,19.2s,baz=116,slow=32
USRK Ussuriysk Arra 82.71 325 P P **07 42 30.2 +1.6**
comp=Z,11nm,0.8s,baz=132,slow=3.3,SNR=26
USRK pP pP **07 42 43.0 +0.6**
comp=Z,5.1nm,0.9s,baz=134,slow=3.7,SNR=4.7
X16A Lo Mia Camp, P 82.96 48 ⇑P P **07 42 30.8 +0.4**
baz=83,SNR=5.5
CCUT Cedar City 83.46 45 eP P **07 42 33.6 +0.6**
comp=Z,11nm,1.2s
CCUT epP pP **07 42 45.8 -0.9**
U15A North Rim 83.51 46 ⇑P P **07 42 34.4 +1.1**
baz=84
ARUT Antelope Range 83.54 44 eP P **07 42 33.8 +0.5**
ARUT e*PP pP **07 42 46.6 -0.5**
ARUT pmax pmax
comp=Z,5.0nm,1.0s
ARUT Antelope Range 83.54 44 eP P **07 42 33.8 +0.5**
comp=Z,5.3nm,1.0s
ARUT epP pP **07 42 46.6 -0.5**
220A Playas Peak, P 83.65 52 ⇓P P **07 42 34.6 +0.6**
baz=84
NJ2 Nanjing 83.76 309 eP P **07 42 35.6 +1.3**
120A U Bar Ranch, L 83.91 51 ⇓P P **07 42 36.2 +0.9**
baz=84

X18A Snowflake 84.05 49 ⇑P P **07 42 37.0 +0.9**
baz=84
ELK Elko 84.16 41 eP P **07 42 36.5 -0.1**
ELK epP pP **07 42 50.0 -0.3**
Z20A Nine Sixteen R 84.24 51 ⇓P P **07 42 38.2 +1.1**
baz=84
MDJ Mudanjiang 84.28 324 P P **07 42 38.0 +1.3**
MDJ pmax pmax
comp=Z,15nm,1.2s
MDJ pmax pmax
comp=Z,66nm,5.5s
121A Cookes Peak, D 84.51 51 ⇓P P **07 42 38.9 +0.5**
baz=85
QIZ Qiongzhong 84.58 293 P P **07 42 39.0 +0.2**
QIZ pmax pmax
comp=Z,29nm,1.4s
QIZ pmax pmax
comp=Z,330nm,4.4s
MVU Marysvale 84.75 44 eP P **07 42 40.2 +0.7**
comp=Z,6.7nm,1.1s
MVU epP pP **07 42 53.7 +0.4**
MSU Marysvale 84.77 44 eP P **07 42 40.7 +1.0**
MSU e*PP pP **07 42 53.4 -0.1**
MSU pmax pmax
comp=Z,11nm,1.3s
MSU Marysvale 84.77 44 eP P **07 42 40.7 +1.0**
comp=Z,11nm,1.3s
MSU epP pP **07 42 53.4 -0.1**
Y20A Horse Springs, 84.81 50 ⇓P P **07 42 40.8 +0.8**
baz=85,SNR=7.3
SYO Syowa Base 84.90 192 eP P **07 42 38.6 -1.0**
Z21A St. Cloud Mine 85.00 51 ⇑P P **07 42 41.8 +0.9**
baz=85
X20A Quemado 85.06 49 ⇑P P **07 42 42.0 +0.8**
baz=85,SNR=6.9
P15A Leamington 85.31 43 ⇑P P **07 42 43.2 +1.0**
baz=86
DUG Dugway 85.33 43 ⇑P P **07 42 43.4 +1.0**
baz=86
Y21A Point of Rocks 85.36 50 ⇑P P **07 42 43.9 +1.1**
baz=86
W20A Ramah 85.37 49 ⇓P P **07 42 43.7 +1.0**
baz=86,SNR=15
PLCA Paso Flores 85.40 132 LR LR 08 14 16.2
comp=Z,128nm,21.7s,baz=78,slow=31
SNAA Sanae 85.40 177 eP P **07 42 42.1 0.0**
SNAA Sanae 85.40 177 epP pP 07 42 59.8 +3.9
SNAA Sanae 85.40 177 eP P **07 42 42.0 -0.2**
comp=Z,21nm,1.4s
VNA3 Neumayer Olymp 85.42 175 eP P **07 42 42.3 +0.1**
VNA3 Neumayer Olymp 85.42 175 epP pP 07 42 58.0 +2.0
MFID Camas Ranch 85.43 39 eP P **07 42 42.7 0.0**
comp=Z,3.3nm,0.9s
MFID epP pP **07 42 54.4 -2.1**
MFID Camas Ranch 85.43 39 ⇓P P **07 42 43.3 +0.6**
baz=86
Z22A Elephant Butte 85.48 51 ⇑P P **07 42 43.9 +0.7**
baz=86
BMO Blue Mountains 85.48 37 eP P **07 42 42.8 -0.1**
BMO pmax pmax
comp=Z,3.0nm,1.4s
BMO Blue Mountains 85.48 37 eP P **07 42 42.8 -0.1**
comp=Z,3.4nm,1.4s
X21A Alamocita Cree 85.51 50 ⇑P P **07 42 44.3 +0.8**
baz=86,SNR=5.5
324A Moseley Ranch, 85.64 53 ⇑P P **07 42 43.8 -0.2**
baz=86,SNR=5.6
425A Indio Mountain 85.68 54 ⇑P P **07 42 44.4 +0.1**
baz=86,SNR=6.6
626A Big Bend Ranch 85.71 56 ⇓P P **07 42 44.7 +0.3**
baz=86,SNR=7.7
Y22A Socorro 85.83 51 ⇓P P **07 42 45.6 +0.6**
baz=86
MNTX Cornudas Mount 85.84 53 ⇑P P **07 42 44.9 +0.1**
baz=86,SNR=6.0
VNA2 Neumayer--Watz 85.89 176 eP P **07 42 45.1 +0.6**
baz=196,slow=4.2
224A Cornudas Mount 85.92 53 ⇓P P **07 42 46.1 +0.7**
baz=86
TXAR Lajitas Array 85.96 56 P P **07 42 45.6 -0.1**
TXAR pP pP **07 42 58.6 -0.8**
TXAR Lajitas Array 85.96 56 P P **07 42 45.6 -0.1**
comp=Z,4.6nm,1.0s,baz=216,slow=6.2,SNR=30
TXAR pP pP **07 42 58.6 -0.8**
comp=Z,2.2nm,1.0s,baz=210,slow=8.7,SNR=7.0
TXAR LR LR 08 14 27.7
comp=Z,53nm,18.4s,baz=180,slow=31
W21A San Fidel 85.96 49 ⇓P P **07 42 46.6 +1.0**
baz=86
325A Bean Ranch, Si 85.98 54 ⇓P P **07 42 46.0 +0.2**
baz=86
526A Mary Lane Ranc 85.99 55 ⇑P P **07 42 46.2 +0.3**
baz=86,SNR=6.3
Z23A Rita Site, Whi 86.01 51 ⇑P P **07 42 46.3 +0.5**
baz=86
U20A Newcomb 86.02 48 ⇑P P **07 42 46.6 +0.7**
baz=86
I12A Atlanta 86.06 39 ⇑P P **07 42 46.9 +1.0**
baz=86
X22A Bernardo 86.09 50 ⇑P P **07 42 47.5 +1.2**
baz=86
CN2 Changchun 86.10 321 eP P **07 42 47.0 +1.2**
CN2 pmax pmax
comp=Z,20nm,0.8s
L14A Malta 86.14 41 ⇑P P **07 42 47.0 +0.7**
baz=86
SRU San Rafael 86.18 45 eP P **07 42 46.8 +0.2**
SRU San Rafael 86.18 45 eP P **07 42 46.8 +0.2**
comp=Z,559nm,1.6s
SRU San Rafael 86.18 45 ⇑P P **07 42 46.7 +0.2**
baz=86
627A Terlingua Ranc 86.23 56 ⇑P P **07 42 46.9 0.0**
baz=86,SNR=11
P17A Butcher Ranch, 86.24 44 ⇑P P **07 42 47.8 +0.9**
baz=86
124A Stringfield Ra 86.29 52 ⇓P P **07 42 48.2 +0.8**
baz=86
426A McDonald Obser 86.33 55 ⇑P P **07 42 47.6 0.0**
baz=86,SNR=7.1
HLID Hailey 86.34 39 ⇓P P **07 42 47.7 +0.5**
baz=87
J13A Cove Ranch, Pi 86.39 40 ⇓P P **07 42 48.2 +0.7**
baz=87
527A Woodward Ranch 86.39 55 ⇑P P **07 42 47.8 -0.1**
baz=87,SNR=7.9
225A Deer Hill, Car 86.45 53 ⇑P P **07 42 48.6 +0.5**
baz=87
Y23A Lovelace Mesa, 86.47 51 ⇑P P **07 42 48.7 +0.5**
baz=87
GAMB Gambell 86.54 1 eP P **07 42 47.9 +0.5**
comp=Z,20nm,1.5s
N16A Rees Ranch, Co 86.59 43 ⇑P P **07 42 49.0 +0.4**
baz=87
628A Black Gap, Mar 86.63 56 ⇑P P **07 42 49.0 +0.1**
baz=87,SNR=6.5
L15A Malad City 86.64 41 ⇓P P **07 42 48.8 0.0**
baz=87
U21A Nageezi 86.64 48 ⇓P P **07 42 49.8 +0.8**
baz=87
O17A Robinson Place 86.64 44 ⇓P P **07 42 49.4 +0.5**
baz=87
Z24A Sheeppen Canyo 86.67 52 ⇓P P **07 42 49.8 +0.6**
baz=87
H12A Diamond D Ranc 86.68 38 ⇑P P **07 42 49.0 +0.1**
baz=87
326A Caldwell Ranch 86.69 54 ⇓P P **07 42 49.6 +0.4**
baz=87
ANMO Albuquerque 86.71 50 eP P **07 42 49.8 +0.4**
comp=Z,7.7nm,1.2s
ANMO epP pP **07 43 02.6 -0.5**
ANMO esP sP 07 43 18.3 +10
M16A Huntsville 86.71 42 ⇑P P **07 42 49.5 +0.3**
baz=87
I13A Wildhorse Cree 86.72 39 ⇓P P **07 42 49.8 +0.6**
baz=87
J14A Carey 86.73 40 ⇓P P **07 42 49.7 +0.6**
baz=87
G12A Big Creek, Yel 86.76 38 ⇓P P **07 42 49.8 +0.5**
baz=87
GDL2 Guadalupe Moun 86.84 53 eP P **07 42 50.4 +0.5**
GDL2 epP pP **07 43 03.3 -0.5**
125A Gardner Draw, 86.85 53 ⇑P P **07 42 50.3 +0.3**
baz=87
427A Hayter Ranch, 86.89 55 ⇓P P **07 42 50.4 +0.3**
baz=87,SNR=13
Y24A Capitan 86.92 51 ⇓P P **07 42 50.7 +0.4**
baz=87,SNR=11

226B Tecolote Peak, 86.92 53 ⇑P P **07 42 50.2 -0.1**
baz=87,SNR=6.4
N17A Moffit Pass 87.00 43 ⇓P P **07 42 51.0 +0.3**
baz=87
T21A Navajo Lake 87.02 48 ⇑P P **07 42 50.9 +0.1**
baz=87
528A Cox Ranch, San 87.03 56 ⇓P P **07 42 50.8 -0.1**
baz=87,SNR=6.2
W23A Werner Place, 87.03 50 ⇓P P **07 42 51.7 +0.8**
baz=87
Z25A Roswell 87.11 52 ⇓P P **07 42 51.7 +0.4**
baz=87,SNR=5.8
F12A Elk City 87.18 37 ⇓P P **07 42 51.7 +0.4**
baz=88
S21A Coal Bank Pass 87.20 47 ⇓P P **07 42 51.8 0.0**
baz=87
L16A Fish Haven 87.23 42 ⇓P P **07 42 51.9 +0.2**
baz=88
126A Clayton Basin, 87.31 53 ⇓P P **07 42 52.6 +0.4**
baz=88
V23A Ortiz Mt. (NFS 87.31 49 ⇓P P **07 42 53.4 +1.1**
baz=88
428A Kincaid Ranch, 87.38 55 ⇓P P **07 42 53.4 +0.8**
baz=88
529A Stev Forest Ra 87.44 56 ⇓P P **07 42 52.3 -0.5**
baz=88,SNR=6.0
Y25A Mesa, Roswell 87.45 52 ⇑P P **07 42 52.8 -0.1**
baz=88,SNR=6.8
P19A Cripple Cowboy 87.46 45 ⇓P P **07 42 52.2 -0.7**
baz=88
T22A Edith 87.46 48 ⇑P P **07 42 51.8 -1.2**
baz=88
H14A Leadore 87.57 39 ⇑P P **07 42 54.1 +0.9**
baz=88
W24A Lazy 6 Ranch, 87.58 50 ⇑P P **07 42 54.0 +0.5**
baz=88
328A Wristen Ranch, 87.59 55 ⇑P P **07 42 53.7 +0.2**
baz=88
K16A Soda Springs 87.60 41 ⇓P P **07 42 53.9 +0.4**
baz=88
U23A El Rito 87.60 49 ⇑P P **07 42 54.7 +1.0**
baz=88
PSI Prapat 87.64 274 P P **07 42 54.6 +0.3**
PSI Prapat 87.64 274 P P **07 42 54.6 +0.3**
comp=Z,2.6nm,0.6s,baz=138,slow=1.3,SNR=4.8
Z26A Conprock 87.64 52 ⇓P P **07 42 54.2 +0.4**
baz=88
NEW Newport 87.72 34 LR LR 08 18 18.7
comp=Z,63nm,18.4s,baz=24,slow=33
O19A Miners Draw (B 87.73 44 ⇑P P **07 42 54.5 +0.4**
baz=88
R21A Cimarron 87.73 47 ⇑P P **07 42 54.6 +0.3**
baz=88
M18A Lyman 87.75 43 ⇑P P **07 42 54.6 +0.3**
baz=88
N18A Larsen Ranch, 87.75 43 ⇑P P **07 42 54.4 +0.2**
baz=88
P20A De Beque 87.78 45 ⇓P P **07 42 54.5 +0.2**
baz=88
127A Arkansas Junct 87.81 53 ⇓P P **07 42 54.8 +0.3**
baz=88
S22A 4UR Ranch, Cre 87.89 47 ⇓P P **07 42 55.6 +0.5**
baz=88
D12A Red Ives Fores 87.92 36 ⇑P P **07 42 55.3 +0.6**
baz=88
429A Davenport Ranc 87.93 56 ⇓P P **07 42 54.8 -0.3**
baz=88,SNR=12
K17A Gardner Place, 87.96 41 ⇓P P **07 42 55.3 +0.2**
baz=88
H15A Lima 87.99 39 ⇑P P **07 42 55.8 +0.5**
baz=88
228A UT Block 9, Go 88.11 54 ⇑P P **07 42 56.2 +0.2**
baz=88
530A J-C Ranch, Com 88.13 56 ⇑P P **07 42 56.3 +0.2**
baz=88
O20A White River Ci 88.21 45 ⇓P P **07 42 56.6 +0.2**
baz=88
C12B Naegeli Ranch, 88.25 36 ⇓P P **07 42 56.6 +0.4**
baz=88
I16A Newdale 88.25 40 ⇓P P **07 42 56.6 +0.1**
baz=88
W25A X Bar L Ranch, 88.26 50 ⇑P P **07 42 56.5 -0.2**
baz=88
329A Wagon Wheel Ra 88.27 55 ⇑P P **07 42 56.8 +0.1**
baz=88
631A Perdido Creek 88.37 57 ⇑P P **07 42 57.0 -0.1**
baz=89,SNR=7.1
X26A CR and CF Fran 88.39 51 ⇓P P **07 42 57.4 0.0**
baz=89
G15A Dillon 88.40 39 ⇑P P **07 42 57.2 0.0**
baz=89
Q22A Crested Butte, 88.42 46 ⇓P P **07 42 57.8 +0.2**
baz=89
J17A Brown Place, J 88.43 41 ⇓P P **07 42 57.8 +0.4**
baz=89
128A Castleberry Fa 88.43 54 ⇑P P **07 42 57.4 -0.1**
baz=89
K18A Toltan Ranch, 88.43 42 ⇓P P **07 42 57.9 +0.5**
baz=89
732A Laxson Ranch, 88.53 58 ⇓P P **07 42 58.0 +0.1**
baz=89
Y27A Causey 88.54 52 ⇓P P **07 42 58.1 +0.1**
baz=89
E14A Clinton 88.56 37 ⇑P P **07 42 58.2 +0.3**
baz=89
L19A Farson 88.56 43 ⇓P P **07 42 58.3 +0.2**
baz=89
N20A Spence Gulch, 88.57 44 ⇓P P **07 42 58.7 +0.5**
baz=89
B12A Libby 88.65 35 ⇑P P **07 42 58.4 +0.3**
baz=89
531A Rocksprings 88.74 56 ⇓P P **07 42 58.4 -0.6**
baz=89,SNR=5.3
J18A Kendall Valley 88.76 41 ⇑P P **07 42 58.6 -0.4**
baz=89
BW06 Boulder Array 88.80 42 ⇑P P **07 42 59.0 -0.2**
baz=89
PDAR Pinedale Array 88.80 42 P P **07 42 58.3 -0.9**
PDAR Pinedale Array 88.80 42 P P **07 42 58.3 -0.9**
comp=Z,19nm,1.1s,baz=207,slow=1.7,SNR=7.4
Z28A Tucker Farm, M 88.82 53 ⇓P P **07 42 59.5 +0.1**
baz=89
330A Mertzon 88.84 55 ⇓P P **07 42 58.5 -0.9**
baz=89
H16A Russell Place, 88.86 40 ⇑P P **07 43 00.1 +0.7**
baz=89
U25A Circle Dot Ran 88.88 49 ⇑P P **07 42 59.2 -0.5**
baz=89
P22A Eagle 88.90 46 ⇓P P **07 43 00.2 +0.5**
baz=89
A12A Yaak River Ran 88.90 34 ⇑P P **07 42 59.9 +0.6**
baz=89
S24A Houchin Ranch, 88.94 48 ⇑P P **07 43 00.1 0.0**
baz=89
X27A F and S Farms, 88.95 52 ⇓P P **07 43 00.2 +0.3**
baz=89
N21A Black Mountain 89.01 44 ⇑P P **07 43 00.3 +0.1**
baz=89
632A Uvalde 89.03 57 ⇑P P **07 43 00.2 -0.1**
baz=89
H17A Grant Village 89.08 40 ⇑P P **07 43 00.7 +0.2**
baz=89
L20A Wamsutter 89.15 43 ⇓P P **07 43 01.1 +0.3**
baz=89
BOZ Bozeman (W) 89.17 39 ⇑P P **07 43 01.0 +0.3**
baz=89
532A Rocksprings 89.22 57 ⇑P P **07 43 01.6 +0.4**
baz=89
O22A Kremmling 89.33 45 ⇓P P **07 43 01.6 -0.3**
baz=90
J19A Crowheart 89.38 42 ⇓P P **07 43 02.0 +0.2**
baz=90
D15A Lincoln 89.47 37 ⇓P P **07 43 02.2 +0.1**
baz=90
S25A Robets Cordova 89.49 48 ⇑P P **07 43 02.3 -0.2**
baz=90
SEY Seymchan 89.51 346 ⇑/P P **07 43 01.5 -0.2**
DOT Dot Lake 89.69 13 eP P **07 43 02.4 -0.2**
comp=Z,8.4nm,1.3s
DOT epP pP **07 43 15.8 -0.7**
DOT esP sP 07 43 29.0 +7.4
BJI Beijing 89.76 314 P P **07 43 04.3 +0.9**
BJI S S **07 53 53.0 +1.3**
BJI pmax pmax
comp=Z,10.0nm,0.7s
BJI pmax pmax
comp=Z,140nm,4.3s
BJI LR LR

comp=N,120nm,25.3s
BJI LR LR
comp=E,190nm,25.1s
B14A Marquette Ranc 89.82 36 ⇓P P 07 43 03.3 -0.4
baz=90
C15A Salmond Ranch, 89.84 37 ⇓P P 07 43 03.8 0.0
baz=90
F17A Fitzpatrick Pl 89.88 39 ⇓P P 07 43 04.6 +0.5
baz=90
WALA Waterton Lakes 89.89 35 *eP* **P 07 43 03.6 -0.4**
comp=E,0.2nm,1.4s
M22A Cedar Creek Ra 89.94 44 ⇑P P 07 43 04.6 0.0
baz=90
D16A Dana Ranch, Ca 90.01 38 ⇑P P 07 43 05.0 +0.5
baz=90
COLA College 90.06 11 *eP* **P 07 43 02.8 -1.4**
COLA *e**PP **pP 07 43 17.5 -0.5**
COLA pmax pmax
comp=Z,14nm,1.3s
COLA College 90.06 11 *eP* **P 07 43 02.8 -1.4**
comp=Z,14nm,1.3s
COLA *e*pP **pP 07 43 17.5 -0.5**
A14A Double T Ranch 90.10 35 ⇑P P 07 43 05.0 0.0
baz=90
ILAR Eielson Array 90.14 12 P **P 07 43 04.0 -0.6**
ILAR pP **pP 07 43 17.6 -0.9**
ILAR Eielson Array 90.14 12 P **P 07 43 04.0 -0.6**
comp=Z,5.1nm,1.0s,baz=220,slow=5.4,SNR=24
ILAR pP **pP 07 43 17.6 -0.9**
comp=Z,2.6nm,1.0s,baz=217,slow=5.1,SNR=6.2
ILAR LR LR 08 18 45.1
comp=Z,36nm,18.6s,baz=352,slow=32
H19A Powell 90.19 41 ⇑P P 07 43 06.5 +1.0
baz=90
RLMT Red Lodge 90.26 40 ⇑P P 07 43 06.3 +0.4
baz=90
C16A Fuhringer Ranc 90.33 37 ⇓P P 07 43 06.3 +0.3
baz=91
F18A Big Timber 90.43 39 ⇑P P 07 43 06.7 +0.2
baz=91
A15A Johnson Ranch, 90.47 36 ⇓P P 07 43 06.6 -0.1
baz=91
D17A Six Diamond Ra 90.56 38 ⇓P P 07 43 07.6 +0.4
baz=91
E18A Harlowton 90.68 39 ⇑P P 07 43 08.8 +1.0
baz=91
H20A Greybull 90.68 41 ⇓P P 07 43 08.1 +0.4
baz=91
Y31A Rekieta Farm, 90.70 53 ⇑P P 07 43 08.2 +0.2
baz=91
I21A Big Trails, Te 90.76 42 ⇓P P 07 43 08.4 +0.1
baz=91
F19A Roth Farm, Mol 90.85 40 ⇓P P 07 43 08.7 +0.2
baz=91
Z32A Haskell 90.98 54 ⇑P P 07 43 09.1 -0.2
baz=91
B17A L&G Farms, Che 91.14 37 ⇑P P 07 43 09.9 +0.2
baz=91
E19A Rath Farm, Rou 91.27 39 ⇓P P 07 43 11.1 +0.7
baz=92
Y32A R-V Farms, Ver 91.33 54 ⇑P P 07 43 11.3 +0.4
baz=92
A17A Triple J Farms 91.56 36 ⇑P P 07 43 11.7 0.0
baz=92
EGMT Eagleton 91.57 38 ⇑P P 07 43 12.0 +0.2
baz=92
D19A Cripps Ranch, 91.60 39 ⇑P P 07 43 12.4 +0.5
baz=92
E20A Meyer Farm, Mu 91.68 39 ⇓P P 07 43 12.7 +0.5
baz=92
B18A Beardsley Farm 91.76 37 ⇓P P 07 43 12.9 +0.3
baz=92
C19A Slack Wire Ran 91.81 38 ⇓P P 07 43 13.2 +0.4
baz=92
BILL Bilibino 91.86 353 ⇑*iP* **P 07 43 12.9 +0.4**
BILL pmax pmax
comp=Z,6.0nm,1.4s
D20A Manuel Ranch, 91.99 39 ⇑P P 07 43 14.2 +0.5
baz=92
A18A Metzger Ranch, 92.01 37 ⇑P P 07 43 13.9 +0.2
baz=92
C20A Veseth Ranch, 92.39 38 ⇓P P 07 43 15.8 +0.2
baz=93
A19A Klindworth Far 92.63 37 ⇓P P 07 43 17.0 +0.4
baz=93
D21A La Casta Ranch 92.64 39 ⇓P P 07 43 17.4 +0.7
baz=93
H24A Dirks Ranch, A 92.93 42 ⇑P P 07 43 18.7 +0.6
baz=93
RSSD Black Hills 92.94 43 *eP* **P 07 43 18.0 -0.4**
RSSD pmax pmax
comp=Z,4.0nm,1.1s
RSSD Black Hills 92.94 43 *eP* **P 07 43 18.0 -0.4**
comp=Z,4.1nm,1.1s
A20A Cobblestone Ra 93.06 37 ⇑P P 07 43 18.8 +0.2
baz=93
KMI Kunming 93.12 296 P **P 07 43 20.4 +0.7**
KMI S **S 07 54 21.0 -2.3**
KMI pmax pmax
comp=Z,11nm,1.0s
D22A Cohagen 93.16 40 ⇓P P 07 43 19.2 +0.1
baz=93
HHC Hu-ho-hao-te 93.23 313 *eP* **P 07 43 21.5 +1.9**
HHC pP **pP 07 43 35.4 +1.9**
HHC sP **sP 07 43 40.0 +1.3**
HHC PP **PP 07 47 06.8 +2.8**
HHC S **S 07 54 20.6 -2.7**
HHC sS **sS 07 54 43.7 -3.1**
HHC SS **SS 08 00 40.0 -0.3**
HHC pmax pmax
comp=Z,28nm,0.9s
HHC pmax pmax
comp=Z,200nm,6.4s
HHC LR LR
comp=N,180nm,19.0s
HHC LR LR
comp=E,390nm,17.8s
HHC LR LR
comp=Z,230nm,16.4s
F24A Ekalaka 93.54 41 ⇓P P 07 43 21.1 +0.2
baz=94
A21A Bergtoll Ranch 93.68 38 ⇓P P 07 43 21.8 +0.4
baz=94
CMAR Chiang Mai Arr 93.73 288 P **P 07 43 24.1 +1.7**
CMAR Chiang Mai Arr 93.73 288 P **P 07 43 24.1 +1.7**
comp=Z,0.8nm,0.3s,baz=130,slow=3.1,SNR=11
CMAR LR LR 08 22 20.0
comp=Z,26nm,19.3s,baz=359,slow=33
D23A Lindsay 93.74 40 ⇑P P 07 43 22.6 +0.8
baz=94
C23A Lambert 94.07 39 ⇓P P 07 43 23.9 +0.7
baz=94
B23A Brockton 94.51 39 ⇑P P 07 43 26.2 +0.9
baz=95
DGMT Dagmar 94.98 39 *eP* **P 07 43 27.5 +0.1**
comp=Z,16nm,1.2s
DGMT Dagmar 94.98 39 ⇓P P 07 43 28.2 +0.8
baz=95
INK Inuvik 95.95 14 P **P 07 43 30.4 -0.8**
INK Inuvik 95.95 14 P **P 07 43 30.4 -0.8**
comp=Z,1.2nm,1.0s,baz=207,slow=2.3,SNR=3.8
LZH Lanzhou 96.64 306 *eP* **P 07 43 36.4 +0.9**
LZH pP **pP 07 43 49.9 +0.5**
LZH sP **sP 07 43 55.1 +0.5**
LZH pmax pmax
comp=Z,20nm,1.1s
ECSD EROS Data Cent 97.54 46 *eP* **P 07 43 38.8 -0.3**
comp=Z,4.0nm,1.2s
YKA Yellowknife Ar 97.58 24 P **P 07 43 38.2 -0.6**
YKA PP **PP 07 47 34.9 -2.2**
YKA PKKPbc **PKKPbc 08 00 15.8 -1.9**
YKA Yellowknife Ar 97.58 24 P **P 07 43 38.2 -0.6**
comp=Z,0.5nm,0.8s,baz=240,slow=4.3,SNR=12
YKA PP **PP 07 47 34.9 -2.2**
comp=Z,0.1nm,0.7s,baz=200,slow=3.9,SNR=3.5
YKA PKKPbc **PKKPbc 08 00 15.8 -1.9**
comp=Z,0.2nm,0.9s,baz=79,slow=3.8,SNR=4.0
GTA Gaotai 100.85 308 *eP* **Pdif 07 43 56.7 +2.5**
GTA pP pP 07 44 10.3 +2.1
GTA sP sP 07 44 15.1 +1.7
GTA pmax pmax
comp=Z,3.0nm,1.0s
MKAR Makanchi Array 115.08 312 PKIKP **PKPdf 07 48 44.3 -1.6**
MKAR Makanchi Array 115.08 312 PKP **PKPdf 07 48 44.3 -1.6**
MKAR Makanchi Array 115.08 312 PKP **PKPdf 07 48 44.3 -1.6**
comp=Z,0.5nm,0.8s,baz=113,slow=1.8,SNR=3.9
KSH Kashi 118.75 304 PKP **PKPdf 07 48 55.4 +2.0**
KSH sPKP 07 49 10.5
KSH PP PP 07 50 20.3 +7.9
KSH PKS **PKSdf 07 52 31.2 +1.1**
KSH SKS **SKSdf 07 56 02.6 +0.8**
KSH AMB AMB
comp=Z,190nm,4.2s
KSH LR LR
comp=N,50nm,3.7s
KSH LR LR
comp=E,41nm,4.6s
KSH LR LR
comp=Z,340nm,5.4s
BRVK Borovoye 122.97 319 *c iP*KIKP **PKPdf 07 49 00.8 -0.1**
BRVK pmax pmax
comp=Z,3.0nm,1.2s
AKASG Malin Array Be 146.63 332 PKP2 **PKPbc 07 49 45.7 -0.6**
AKASG Malin Array Be 146.63 332 PKPbc **PKPbc 07 49 45.6 -0.6**
AKASG Malin Array Be 146.63 332 PKPbc **PKPbc 07 49 45.6 -0.6**
comp=Z,3.5nm,0.7s,baz=35,slow=3.6,SNR=12
MALT Malatya 147.80 306 *e*PKP2 **PKPbc 07 49 50.3 +0.2**
MALT Malatya 147.80 306 *e*PKPbc **PKPbc 07 49 50.3 +0.2**
BUR08 Bucovina Ar. S 150.67 332 *e*PKPbc **PKPbc 07 49 57.7 +0.1**
BR131 Keskin Array S 150.72 311 *e*PKPbc **PKPbc 07 49 57.3 -0.2**
BRTR Keskin Array B 150.72 311 PKPbc **PKPbc 07 49 56.9 -0.6**
BRTR PKPab **PKPab 07 50 04.4 -0.1**
BRTR Keskin Array B 150.72 311 PKPbc **PKPbc 07 49 56.9 -0.6**
comp=Z,2.4nm,0.8s,baz=124,slow=2.2,SNR=13
BRTR PKPab **PKPab 07 50 04.4 -0.1**
comp=Z,2.0nm,0.8s,baz=114,slow=3.0,SNR=6.9
KOLS Kolonicke sedl 150.81 337 *e*PKIKP **PKPbc 07 49 58.2 +1.0**
KOLS *e* 07 50 04.6
KOLS Kolonicke sedl 150.81 337 *e*PKP **PKPbc 07 49 58.2 +1.0**
KOLS *e* 07 50 04.6
KSP Ksiaz 150.91 345 *e*PKIKP **PKPbc 07 49 57.2 -0.1**
UZH Uzhgorod 151.06 336 *e*PKIKP **PKPbc 07 49 58.0 +0.3**
UZH *i* 07 50 08.5
UZH *i* 07 50 14.0
NIE Niedzica 151.08 339 *e*PKIKP **PKPbc 07 49 59.2 +1.4**
NIE Niedzica 151.08 339 *e*PKP **PKPbc 07 49 59.2 +1.4**
CLL Collm 151.12 350 ⇑*i*PKIKP **PKPbc 07 49 58.2 +0.4**
CLL *e* 07 50 05.0
CLL pmax pmax
comp=Z,23nm,1.5s
CLL Collm 151.12 350 ⇑*i*PKPbc **PKPbc 07 49 58.2 +0.4**
comp=Z,23nm,1.5s
CLL *e*PKPab **PKPab 07 50 05.0 -0.5**
CLL *i* sPKPab **sPKPab 07 50 24.6 -0.1**
CRVS Cervenica-Dubn 151.13 337 *e*PKIKP **PKPbc 07 49 58.5 +0.6**
CRVS *e* 07 50 07.1
CRVS Cervenica-Dubn 151.13 337 *e*PKP **PKPbc 07 49 58.5 +0.6**
CRVS *e* 07 50 07.1
UPC Upice 151.29 346 *e*PKIKP **PKPbc 07 49 58.5 +0.3**
UPC Upice 151.29 346 ⇑*e*PKP **PKPbc 07 49 58.5 +0.3**
OKC Ostrava-Krasne 151.36 342 *e*PKIKP **PKPbc 07 49 59.6 +1.2**
OKC Ostrava-Krasne 151.36 342 ⇑*e*PKP **PKPbc 07 49 59.6 +1.2**
DPC Dobruska-Polom 151.36 345 *e*PKIKP **PKPbc 07 49 58.5 0.0**
DPC *e* 07 50 08.5
DPC Dobruska-Polom 151.36 345 ⇑*e*PKP **PKPbc 07 49 58.5 0.0**
DPC *e*PKPAB **PKPab 07 50 08.5 +1.8**
BRG Berggiesshubel 151.37 348 *eP* **PKPbc 07 49 58.8 +0.4**
comp=Z,7.2nm,1.0s
BRG Berggiesshubel 151.37 348 *e*PKIKP **PKPbc 07 49 58.8 +0.4**
BRG pmax pmax
comp=Z,7.0nm,1.0s
VYHS Vyhne 152.36 340 *e*PKIKP **PKPbc 07 50 01.2 +0.5**
VYHS *e* 07 50 11.7
VYHS Vyhne 152.36 340 *e*PKP **PKPbc 07 50 01.2 +0.5**
VYHS *e* 07 50 11.7
KHC Kasperske Hory 153.11 348 *e*PKIKP **PKPbc 07 50 03.3 +0.9**
KHC *e* 07 50 14.0
KHC Kasperske Hory 153.11 348 ⇑*e*PKP **PKPbc 07 50 03.3 +0.9**
KHC *e*PKPAB **PKPab 07 50 14.0 0.0**
GERES GERESS Array B 153.36 347 PKPbc **PKPbc 07 50 02.6 -0.4**
GERES GERESS Array B 153.36 347 PKPbc **PKPbc 07 50 02.6 -0.4**
comp=Z,0.3nm,0.2s,baz=116,slow=3.1,SNR=3.4
TORD Torodi Ar. Bea 169.64 161 PKP **PKPdf 07 50 12.1 -1.1**
TORD PKPab **PKPab 07 51 26.9 +0.2**
TORD Torodi Ar. Bea 169.64 161 PKP **PKPdf 07 50 12.1 -1.1**
comp=Z,0.7nm,1.0s,baz=288,slow=2.9,SNR=3.3
TORD PKPab **PKPab 07 51 26.9 +0.2**
comp=Z,0.5nm,0.9s,baz=179,slow=3.8,SNR=2.5

*ISCJB **03** 07:49:37.0±0.6, 43.°69N±0.°08×138.°25E±0.°09, h272km±7km, mb2.8/5, Error ellipse: s-maj=13.3km s-min=9.3km az=152.4*
*JMA **03** 07:49:36.8±0.3, 43.°78N×138.°12E, h267km, M2.8*
*IDC **03** 07:49:37.6±1.1, 43.°77N×138.°19E, h262km±11km, mb2.7/5, mb1 3.0/9, mb1mx2.8/29, mbtmp2.7/9, Error ellipse: s-maj=22.6km s-min=13.1km az=140.0*
ISC 03 07:49:37.9±1.0, 43.°63N±0.°09×138.°32E±0.°08, h268km±10km, n22, σ1°21/26, mb2.9/5, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSK	**Shakotan**	**1.59**	**99**	P		**Pn**	**07 50 18.7**	**+0.2**
JOSM	**Okushiri--Mats**	**1.76**	**151**	P		**Pn**	**07 50 20.6**	**+0.7**
JYG	**Yasshiri**	**2.38**	**69**	P		**Pn**	**07 50 24.9**	**-0.3**
JHR	**Hokuryu**	**2.47**	**86**	P		**Pn**	**07 50 26.6**	**+0.5**
JWK2	**Keihoku**	**3.06**	**55**	P		**Pn**	**07 50 32.5**	**+0.4**
ASAJ	**Asahikawa**	**3.13**	**80**	P		**Pn**	**07 50 32.8**	**0.0**
	5.0nm,0.3s,baz=294,slow=1.4,SNR=30						
ASAJ				S		**S**	**07 51 17.3**	**+0.9**
	baz=105,slow=20,SNR=1.9						
JFR	**Furan**	**3.15**	**97**	P		**Pn**	**07 50 33.4**	**+0.3**
JKK2	**Kamakawa 2**	**3.22**	**84**	P		**Pn**	**07 50 34.3**	**+0.5**
JKK2				*e*S		**S**	**07 51 19.6**	**+1.4**
JSE	**Soyaes**	**3.34**	**65**	P		**Pn**	**07 50 35.3**	**+0.3**
JNBK	**Urakawa-nobuka**	**3.52**	**111**	*e*S		**S**	**07 51 25.2**	**+1.0**
JCH	**Churui**	**3.83**	**104**	P		**Pn**	**07 50 39.6**	**-0.9**
JCH				*e*S		**S**	**07 51 26.7**	**-3.7**
JAR	**Ashorobuto**	**3.98**	**93**	P		**Pn**	**07 50 42.7**	**+0.4**
JAR				*e*S		**S**	**07 51 33.7**	**+0.2**
JANG	**Nango**	**4.03**	**143**	*e*S		**S**	**07 51 33.2**	**-1.5**
JTKR	**Abashiri--Toko**	**4.06**	**83**	P		**Pn**	**07 50 43.3**	**+0.2**
USRK	**Ussuriysk Arra**	**4.60**	**279**	P		**Pn**	**07 50 47.3**	**-2.2**
	0.3nm,0.3s,baz=104,slow=13,SNR=3.3						
USRK				S		S	07 51 38.0	-8.6
	0.2nm,0.3s,baz=91,slow=20,SNR=2.8						
MJAR	**Matsushiro Arr**	**7.08**	**181**	P		**Pn**	**07 51 21.5**	**+1.6**
	0.5nm,0.3s,baz=0.0,slow=11,SNR=4.2						
KSRS	**Korea Array**	**10.03**	**236**	P		**Pn**	**07 51 57.6**	**+1.0**
	0.3nm,0.3s,baz=54,slow=13,SNR=4.7						
ILAR	**Eielson Array**	**45.34**	**36**	P		**P**	**07 57 28.6**	**-0.8**
	0.2nm,0.7s,baz=291,slow=7.6,SNR=4.4						
INK	**Inuvik**	**49.69**	**29**	P		**P**	**07 58 02.3**	**-0.2**
	0.6nm,0.3s,baz=278,slow=4.6,SNR=9.0						
YKA	**Yellowknife Ar**	**59.34**	**31**	P		**P**	**07 59 11.0**	**-0.6**
	0.1nm,0.4s,baz=310,slow=6.8,SNR=5.0						
WRA	**Warramunga Arr**	**63.36**	**184**	P		**P**	**07 59 39.8**	**+0.8**
	0.1nm,0.4s,baz=3.6,slow=7.2,SNR=1.9						
TXAR	**Lajitas Array**	**87.86**	**50**	P		**P**	**08 01 57.9**	**+0.5**
	0.2nm,0.8s,baz=236,slow=1.0,SNR=3.0						

KRSC 03 08:02:05.8±0.5, 56.°00N×164.°37E, h11km±11km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.89**	**284**	*e*P		Pg	08 02 22.1	-0.9
KBTR				*i* S		Sg	08 02 33.9	-0.8
KBG	**Krutoberegovo**	**0.97**	**286**	*e*P		Pg	08 02 23.6	-0.8
KBG				*i* S		Sb	08 02 37.2	-0.1
SMKR	**Semkarok**	**1.72**	**291**	*e*P		Pn	08 02 36.3	+0.5
SMKR				*i* S		Sn	08 02 57.9	+0.1
BDR	**Baidarnaya**	**1.85**	**289**	*e*P		Pn	08 02 38.0	+0.4
BDR				*i* S		Sb	08 03 02.1	-0.9
ZLN	**Zelenaya**	**2.00**	**272**	*e*P		Pb	08 02 41.3	-1.1
ZLN				*i* S		Sb	08 03 07.6	+0.2
CIRR	**Tsirk**	**2.04**	**275**	*e*P		Pn	08 02 41.0	+0.8
CIRR				*i* S		Sb	08 03 07.3	-1.1
BZGR	**Bezymyannyi-Gr**	**2.07**	**270**	*e*P		Pb	08 02 43.0	-0.5
BZGR				*i* S		Sb	08 03 09.5	+0.3
LGNR	**Loginova**	**2.07**	**274**	*e*P		Pn	08 02 42.0	+1.2
LGNR				*i* S		Sb	08 03 09.0	-0.6
MKZ	**Mys Kozlova**	**2.09**	**227**	*e*P		Pn	08 02 40.6	-0.1
MKZ				*i* S		Sn	08 03 06.5	-0.2
KLY	**Klyuchi**	**2.10**	**280**	*e*P		Pn	08 02 39.4	-1.5
KLY				*i* S		Sn	08 03 04.6	-2.4
KRSR	**Krestovskiy**	**2.14**	**277**	*e*P		Pn	08 02 42.0	+0.4
KRSR				*i* S		Sn	08 03 08.0	-0.3
BZWR	**Bezymyannyi-We**	**2.18**	**271**	*e*P		Pb	08 02 44.0	-1.4
BZWR				*i* S		Sb	08 03 11.9	-0.7
BZMR	**Bezymyannaya**	**2.18**	**270**	*e*P		Pn	08 02 43.6	+1.4
BZMR				*i* S		Sb	08 03 11.7	-1.0
KIRR	**Kirishev**	**2.26**	**270**	*e*P		Pn	08 02 44.7	+1.4
KIRR				*i* S		Sb	08 03 13.7	-1.3
KPT	**Kopyto**	**2.33**	**271**	*e*P		Pn	08 02 46.0	+1.8
KPT				*i* S		Sb	08 03 14.9	-1.9
KMNR	**Kamenistaya**	**2.34**	**266**	*e*P		Pn	08 02 46.2	+1.9
KMNR				*i* S		Sb	08 03 15.8	-1.3
TUMR	**Tumrok**	**2.50**	**255**	*e*P		Pn	08 02 48.4	+1.9
TUMR				*i* S		Sn	08 03 19.0	+1.9
KOZ	**Kozyrevsk**	**2.52**	**273**	*e*P		Pb	08 02 49.5	-1.6
KOZ				*i* S		Sb	08 03 22.1	-0.1
SRDR	**Sredinnyy**	**2.62**	**279**	*e*P		Pn	08 02 49.6	+1.5
SRDR				*i* S		Sn	08 03 22.0	+2.0
KII	**Karymskiy**	**3.45**	**237**	*e*P		Pn	08 03 01.5	+2.0
KII				*i* S		Sn	08 03 41.9	+1.5
SPN	**Mys Shipunski**	**3.85**	**223**	*e*P		Pn	08 03 05.1	+0.1
SPN				*i* S		Sn	08 03 47.3	-2.9
SDLR	**Sedlovina**	**4.19**	**232**	*e*P		Pn	08 03 11.1	+1.3
SDLR				*i* S		Sn	08 03 59.6	+0.7
KRER	**Koryakskii**	**4.24**	**233**	*e*P		Pn	08 03 12.5	+2.0
KRER				*i* S		Sn	08 04 00.3	+0.2
SMAR	**Somma**	**4.24**	**232**	*e*P		Pn	08 03 12.0	+1.4
SMAR				*i* S		Sn	08 03 59.7	-0.5
AVH	**Avacha**	**4.27**	**232**	*e*P		Pn	08 03 13.0	+2.2
AVH				*i* S		Sn	08 04 02.2	+1.6
UGLR	**Uglovaya**	**4.27**	**231**	*e*P		Pn	08 03 12.4	+1.6
UGLR				*i* S		Sn	08 04 01.5	+0.8
GNL	**Ganaly**	**4.37**	**241**	*e*P		Pn	08 03 14.1	+1.8
TILK	**Tilichiki**	**4.56**	**11**	*e*P		Pn	08 03 12.7	-1.9
TILK				*i* S		Sn	08 04 02.4	-5.0
RUS	**Russkaya**	**4.96**	**226**	*e*P		Pn	08 03 21.5	+1.4
RUS				*i* S		Sn	08 04 16.2	-1.2
MTVR	**Mutnovka**	**5.06**	**228**	*e*P		Pn	08 03 23.2	+1.5
MTVR				*i* S		Sn	08 04 21.0	+0.8

*JMA **03** 08:12:21.4±0.1, 24.°84N×121.°82E, h78km, M2.6*
*ISCJB **03** 08:12:22.4±0.3, 24.°19N±0.°02×121.°86E±0.°02, h24km±3km, Error ellipse: s-maj=3.9km s-min=2.4km az=37.9*
*TAP **03** 08:12:22.6, 24.°22N×121.°79E, h27km, ML3.4, B*
ISC 03 08:12:22.6±0.9, 24.°21N±0.°02×121.°83E±0.°03, h27km±5km, n48, σ0.°70/84, 5C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.13**	**321**	P		**Pb**	**08 12 27.4**	**-0.3**
	baz=338						
EHP				*e*S		**Sn**	**08 12 31.2**	**0.0**
	baz=338						
ENA	**Nanau**	**0.23**	**340**	⇑*iP*		**Pb**	**08 12 28.7**	**-0.1**
	baz=344						
ENA				S		**Sb**	**08 12 33.2**	**+0.1**
	baz=344						
TWD	**Chiawan**	**0.25**	**238**	⇑*iP*		**Pb**	**08 12 28.7**	**-0.4**
	baz=237						
TWD				S		**Sb**	**08 12 33.4**	**-0.1**
	baz=237						
HWA	**Hwalien**	**0.31**	**221**	⇓P		**Pb**	**08 12 30.1**	**+0.2**
	baz=212						
HWA				*e*S		**Sb**	**08 12 35.6**	**+0.7**
	baz=212						
TWC	**Suao**	**0.40**	**3**	⇓P		**Pb**	**08 12 31.3**	**+0.1**
	baz=14						
TWC				*i* S		**Sn**	**08 12 37.7**	**-1.5**
	baz=14						
ESF	**Shoufeng Towns**	**0.45**	**221**	*e*P		**Pb**	**08 12 31.9**	**-0.1**
	baz=212						
ESF				*e*S		**Sb**	**08 12 39.4**	**+1.0**
	baz=212						
NNS	**Nan Shan**	**0.47**	**299**	⇑*iP*		**Pb**	**08 12 32.1**	**-0.4**
	baz=299						
NNS				S		**Sb**	**08 12 38.8**	**-0.5**
	baz=299						
ENTT	**Nioudou**	**0.49**	**331**	P		**Pb**	**08 12 32.5**	**-0.2**
	baz=329						
ENTT				S		**Sb**	**08 12 39.7**	**+0.1**
	baz=329						
WHF	**Hehuan Shan**	**0.52**	**263**	⇑*iP*		**Pb**	**08 12 33.0**	**-0.5**
	baz=261						
WHF				S		**Sb**	**08 12 40.3**	**-0.5**
	baz=261						
TWE	**Neicheng**	**0.53**	**344**	P		**Pb**	**08 12 33.1**	**-0.3**
	baz=343						
TWE				S		**Sb**	**08 12 40.7**	**+0.1**
	baz=343						
ESL	**Shilin**	**0.54**	**222**	*e*P		**Pb**	**08 12 33.0**	**-0.5**
	baz=228						
ESL				S		**Sb**	**08 12 40.8**	**0.0**
	baz=228						
ILA	**Ilan**	**0.56**	**353**	*e*P		**Pn**	**08 12 34.3**	**-0.4**
	baz=349						
ILA				*e*S		**Sn**	**08 12 42.4**	**-0.7**
	baz=349						
TWT	**Tachien**	**0.60**	**274**	P		**Pb**	**08 12 34.5**	**-0.1**
	baz=268						
TWT				S		**Sb**	**08 12 42.7**	**-0.1**
	baz=268						
NSK	**Sanguang**	**0.63**	**317**	⇑*iP*		**Pb**	**08 12 34.7**	**-0.4**
	baz=319						
NSK				S		**Sb**	**08 12 42.9**	**-0.8**
	baz=319						
TWB1	**Santiao Chiao**	**0.81**	**10**	*e*P		**Pb**	**08 12 38.2**	**+0.2**
	baz=8.0						
TWB1				*e*S		**Sb**	**08 12 49.4**	**+0.1**
	baz=8.0						
EHY	**Hungye**	**0.84**	**214**	*e*P		**Pn**	**08 12 36.9**	**-1.7**
	baz=210						
NWF	**Wu-fen Shan**	**0.86**	**357**	*e*P		**Pb**	**08 12 39.2**	**+0.3**
	baz=353						
NWF				S		**Sb**	**08 12 50.9**	**+0.8**
	baz=353						
NSTT	**Nanjuang**	**0.86**	**299**	*e*P		**Pb**	**08 12 38.9**	**0.0**
	baz=299						
NSTT				S		**Sb**	**08 12 50.0**	**-0.1**
	baz=299						
TAP1	**Taipei**	**0.87**	**341**	*e*P		**Pb**	**08 12 39.1**	**0.0**
	baz=343						
TAP1				*e*S		**Sb**	**08 12 51.0**	**+0.7**
	baz=343						
SMLT	**Sun Moon Lake**	**0.91**	**249**	*e*P		**Pn**	**08 12 38.9**	**-0.8**
	baz=241						
SMLT				*e*S		**Sn**	**08 12 50.9**	**-1.0**
	baz=241						
TYC	**Yuchr**	**0.94**	**251**	P		**Pn**	**08 12 39.6**	**-0.3**
	baz=244						
TYC				S		**Sn**	**08 12 52.2**	**-0.3**
	baz=244						
NCU	**National Centr**	**0.95**	**322**	*e*P		**Pb**	**08 12 40.7**	**+0.2**
	baz=324						
NCU				*e*S		**Sb**	**08 12 53.2**	**+0.5**
	baz=324						
TWS1	**Kuangyinshan**	**0.96**	**337**	*e*P		**Pb**	**08 12 40.2**	**-0.4**
	baz=339						
TWS1				*e*S		**Sb**	**08 12 54.0**	**+1.1**
	baz=339						
TWQ1	**Liyutan**	**0.97**	**278**	*e*P		**Pb**	**08 12 41.0**	**+0.2**
	baz=284						
TWQ1				*e*S		**Sb**	**08 12 53.9**	**+0.6**
	baz=284						
TWF1	**Yuli**	**0.98**	**210**	*e*P		**Pn**	**08 12 38.7**	**-1.9**
	baz=218						
NSY	**Sanyi**	**0.99**	**282**	*e*P		**Pb**	**08 12 41.6**	**+0.4**
	baz=282						
NSY				*e*S		**Sb**	**08 12 55.1**	**+1.2**
	baz=282						
TCU	**Taichung**	**1.05**	**267**	*e*P		**Pn**	**08 12 41.9**	**+0.3**
	baz=265						
TCU				*e*S		**Sb**	**08 12 57.2**	**+1.6**
	baz=265						
TWY	**Chenhua**	**1.08**	**349**	*e*P		**Pb**	**08 12 42.6**	**0.0**
	baz=340						
TWY				*e*S		**Sb**	**08 12 56.8**	**+0.5**
	baz=340						
WNT	**Mingjian**	**1.10**	**253**	*e*P		**Pn**	**08 12 42.2**	**+0.1**
	baz=250						
WNT				*e*S		**Sb**	**08 12 57.7**	**+0.9**
	baz=250						
YOJ	**Yonaguni jima**	**1.11**	**77**	*e*P		**Pn**	**08 12 42.4**	**0.0**
	baz=78						
YOJ	**Yonaguni jima**	**1.11**	**77**	P		**Pn**	**08 12 42.3**	**0.0**
YOJ				*e*S		**Sb**	**08 12 57.9**	**+0.8**
ALS	**Alishan**	**1.17**	**234**	*e*P		**Pn**	**08 12 43.8**	**+0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=230						
ALS				eS	Sn	08 12 58.8	+0.2
	baz=230						
CHKT	Chengkung	1.19	201	eP	Pn	08 12 42.8	-0.6
	baz=185						
CHN5	Tsauling	1.22	240	eP	Pn	08 12 44.4	+0.5
	baz=223						
CHN5				eS	Sb	08 13 00.7	+0.4
	baz=223						
ELDTW	Lidau	1.26	216	eP	Pn	08 12 44.1	-0.4
	baz=203						
CHN4	Tsaushan	1.42	233	eP	Pn	08 12 47.8	+1.2
	baz=230						
CHN4				eS	Sb	08 13 06.1	+0.1
	baz=230						
PCYT	Pengchaiyu	1.43	9	eP	Pb	08 12 47.5	-1.1
	baz=11						
CHY	Chiayi	1.47	241	eP	Pn	08 12 48.1	+0.9
	baz=238						
CHY				eS	Sb	08 13 08.0	+0.6
	baz=238						
WTP	Ta-pu	1.47	229	eP	Pn	08 12 48.2	+0.9
	baz=225						
WTP				eS	Sb	08 13 07.5	0.0
	baz=225						
TWK	Hsinying	1.55	233	eP	Pn	08 12 49.5	+1.1
	baz=231						
TWG	Pinlang	1.55	207	eP	Pn	08 12 48.6	+0.3
	baz=192						
CHN1	Nanshi	1.57	230	eP	Pn	08 12 49.8	+1.2
	baz=226						
CHN1				eS	Sb	08 13 10.2	-0.2
	baz=226						
IRIF	Iriomote-Funau	1.74	86	P	Pn	08 12 51.0	0.0
IRIF				eS	Sn	08 13 13.4	+1.1
SSD	Sandimen	1.82	217	eP	Pn	08 12 53.5	+1.3
	baz=202						
EAST	Anshuo	2.03	207	eP	Pn	08 12 55.4	+0.3
	baz=195						
JIJ	Ishigaki jima	2.12	85	P	Pn	08 12 56.3	+0.1
JIJ				eS	Sn	08 13 22.1	+0.5
LAY	Lan-yu	2.18	187	eP	Pn	08 12 55.9	-1.2
	baz=185						
JTJ	Tarama	2.66	80	P	Pn	08 13 02.4	-1.2

MEX 03 08:44:49.3±0.8, 15°.86N×93°.69W, h93km±18km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		1.06	31	i P	Pn	08 45 08.5	-1.5
TGIG				i S	Sn	08 45 24.0	-1.6
CCIG	Comitan	1.55	74	eP	Pn	08 45 14.4	-1.7
CCIG				i S	Sn	08 45 35.0	-1.5
THIG		1.67	124	i P	Pn	08 45 16.7	-0.7
THIG				eS	Sn	08 45 37.5	-1.2
CMIG	Matias Romero	1.67	317	i P	Pn	08 45 17.0	-0.4
CMIG				eS	Sn	08 45 37.2	-1.6
HUIG	Huatulco	2.33	268	i P	Pn	08 45 25.0	-1.0
HUIG				i S	Sn	08 45 51.8	-2.2

*IDC **03** 08:51:10.3±2.3, 5°.75S×130°.46E, h0km, mb3.6/1, mb1 3.7/4, mb1mx3.5/18, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=93.9km s-min=28.6km az=77.0*
*AUST **03** 08:51:25.0, 6°.48S×129°.53E, h100km*
*ISCJB **03** 08:51:25.5±1.0, 6°.56S±0°.07×129°.5E±0°.1, h146km, mb3.4/1, Error ellipse: s-maj=15.5km s-min=8.0km az=156.1*
ISC 03 08:51:26.5±1.1, 6°.67S±0°.09×129°.4E±0°.1, h146km, n9, σ1s88/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	Manton Dam	6.36	165	P	Pn	08 53 01.5	+3.5
	baz=6.6,SNR=19						
MTN				S	Sn	08 54 11.1	+1.5
	baz=6.6,SNR=11						
KDU	Kakadu	6.69	154	P	Pn	08 53 04.2	+1.7
	baz=6.8,SNR=62						
KDU				S	Sn	08 54 16.8	-0.8
	baz=6.8,SNR=7.7						
PCI	Palu	11.15	301	P	Pn	08 54 01.6	-0.3
	baz=11,SNR=3.5						
FITZ	Fitzroy Crossi	11.95	198	Pn	P	08 54 17.6	-1.5
	0.2nm,0.3s,baz=27,slow=12,SNR=13						
FITZ				Sn	Sn	08 56 25.6	+1.2
	0.2nm,0.3s,baz=267,slow=17,SNR=3.1						
FITZ	Fitzroy Crossi	11.95	198	P	P	08 54 18.1	-1.1
	baz=12,SNR=4.4						
WRA	Warramunga Arr	14.03	161	Pn	Pn	08 54 38.4	-0.7
	0.3nm,0.3s,baz=349,slow=14,SNR=28						
WRA				Sn	Sn	08 57 08.9	-5.6
	0.3nm,0.3s,baz=341,slow=22,SNR=6.6						
COEN	Coen	15.33	119	P	Pn	08 54 55.0	-0.3
	baz=15,SNR=3.7						
ASAR	Alice Springs	17.44	166	P	Pn	08 55 23.9	+3.0
	0.2nm,0.3s,baz=346,slow=11,SNR=18						
ASAR				S	S	08 58 30.9	-3.4
	0.0nm,0.3s,baz=0.6,slow=26,SNR=2.4						
MKAR	Makanchi Array	67.64	327	P	P	09 02 08.0	+0.3
	0.4nm,0.6s,baz=113,slow=8.1,SNR=5.1						

IGQ 03 09:08:33.4, 0°.06N×78°.88W, h19km±176km, Mb4.2, Ms4.0, 18C-16D, Error ellipse: s-maj=1.4km s-min=1.1km az=2.3, Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLV	Golondrinas	0.30	300	⇓P	Pb	09 08 40.4	+0.2
PINO	Pino	0.35	128	⇑P	Pg	09 08 41.2	-0.4
YANA	Yana	0.35	120	⇓P	Pg	09 08 41.1	-0.5
TERV	Terraza Guagua	0.36	130	⇓P	Pg	09 08 41.1	-0.7
GGP	Refugio Guagua	0.37	129	⇑P	Pg	09 08 40.9	-1.0
JUA2	San Juan 2	0.39	135	⇓P	Pg	09 08 41.5	-0.5
COTA	Cotacachi	0.61	63	⇓P	Pb	09 08 45.7	-0.3
NAS2	Nasa	0.81	149	P	Pb	09 08 49.7	+0.1
CAMI	Rancho Maria	0.82	153	⇑P	Pn	09 08 50.8	+0.3
BNAS	Cotopaxi Volca	0.83	151	⇑P	Pg	09 08 50.1	-0.2
VC1	Cotopaxi 1	0.84	146	⇓P	Pb	09 08 50.2	0.0
BREF	Cotopaxi Volca	0.85	149	⇑P	Pb	09 08 50.4	+0.1
BREF	Cotopaxi Volca	0.85	149	⇑S	Sn	09 09 03.3	-0.3
BVC2	Cotopaxi Volca	0.85	147	P	Pb	09 08 50.4	+0.1
BTAM	Cotopaxi Volca	0.87	146	⇑P	Pb	09 08 50.8	+0.1
BTAM	Cotopaxi Volca	0.87	146	⇑S	Sg	09 09 03.7	+0.4
ANTI	Antisana	0.88	125	⇓P	Pb	09 08 50.4	-0.4
MOV1	Cotopaxi Vol s	0.88	150	⇑P	Pb	09 08 50.8	-0.1
BMOR	Cotopaxi Volca	0.89	152	⇑P	Pb	09 08 50.9	-0.1
CAYA	Cayambe	0.89	89	⇓P	Pb	09 08 50.8	-0.1
COV1	Cotopaxi Volc	0.89	143	⇑P	Pb	09 08 50.5	-0.6
LITE	Lita	0.91	35	⇑S	Sg	09 09 03.1	-0.2
LITE	Lita	0.91	35	⇑P	Pb	09 08 50.1	-0.6
TAMB	Tambo	0.91	146	P	Pb	09 08 51.2	0.0
PISA	Pisayambo	1.21	156	⇓P	Pb	09 08 56.5	0.0
CHAR	Charly	1.22	97	⇓P	Pb	09 08 56.8	+0.4
CONE	Cono NE Rev Vo	1.24	96	⇓P	Pb	09 08 57.1	+0.4
LAV4	Lava4-Reventad	1.26	97	⇓S	Sn	09 09 13.5	+0.5
LAV4	Lava4-Reventad	1.26	97	⇓P	Pb	09 08 57.2	+0.3
JAMA	Jama	1.36	257	P	Pn	09 08 57.0	-0.5
JUI6	Juive	1.53	164	P	Pb	09 09 02.2	+0.6
JUI6	Juive	1.53	164	S	Sg	09 09 23.6	0.0
RUN5	Runtun	1.53	163	P	Pb	09 09 01.8	+0.1
BRUN	Tungurahua Vol	1.54	162	⇑P	Pb	09 09 01.6	-0.2
BBIL	Ulba Tungurahu	1.55	165	⇑P	Pg	09 09 02.8	-0.9
BIL2	Estacion Bilba	1.55	166	⇓P	Pg	09 09 03.0	-0.7
BIL2	Estacion Bilba	1.55	166	⇓S	Sg	09 09 23.9	-0.3
IGUA	Igualata	1.56	171	P	Pb	09 09 02.2	-0.2
BULB	Ulba Tungurahu	1.56	162	P	Pb	09 09 01.8	-0.3
BULB	Ulba Tungurahu	1.56	162	S	Sb	09 09 22.7	+0.9
RETU	Refugio	1.56	164	P	Pg	09 09 03.4	-0.8
ULBA	Ulba	1.57	162	S	Sb	09 09 22.8	+0.7
ULBA	Ulba	1.57	162	P	Pb	09 09 02.1	-0.2
BMAS	Trigal station	1.60	166	⇑P	Pb	09 09 03.4	+0.5
ARRY	Arrayan	1.61	165	⇑S	Sb	09 09 23.7	+0.3
ARRY	Arrayan	1.61	165	⇑P	Pb	09 09 02.6	-0.4
PAT1	Patacocha	1.62	164	⇓P	Pb	09 09 03.2	-0.1
RIOE	Riobamba	1.82	172	P	Pb	09 09 06.6	+0.1
MACE	Macas	2.40	163	P	Pb	09 09 17.3	+1.1

*ISCJB **03** 09:11:43.3±0.3, 59°.60S±0°.06×26°.3W±0°.1, h10km, mb4.9/30, MS4.7/19, Error ellipse: s-maj=9.9km s-min=6.4km az=136.4*
*MOS **03** 09:11:46.9±1.1, 59°.58S×26°.30W, h33km, mb5.1/9, Error ellipse: s-maj=23.6km s-min=12.4km az=106.3*
*NEIC **03** 09:11:48.3±0.2, 59°.55S×26°.25W, h35km, mb5.0/16, MW5.1, Error ellipse: s-maj=7.9km s-min=6.2km az=25.0, Moment Tensor Solution. s17 Moment tensor: Scale 10^16Nm; Mrr5.87; Mθθ-0.30; Mφφ-5.57; Mrθ-0.45; Mθφ-1.44; Mφr1.62; Best double couple: M0 6.10000×10^16 NP1:φs7.00000°, δ52.00000°, λ80.00000°. NP2: φs202.00000°, δ39.00000°, λ102.00000°. Principal axes: T 6.1600, Plg79.0000°, Azm235.0000°; N -0.0400, Plg7.0000°, Azm12.0000°; P -6.1200, Plg6.0000°, Azm103.0000°;*
*IDC **03** 09:11:51.9±1.2, 59°.57S×26°.44W, h65km±9km, mb4.6/20, mb1 4.7/21, mb1mx4.6/23, mbtmp4.6/21, MS4.5/15, Ms1 4.5/15, ms1mx4.5/17 Error ellipse: s-maj=13.6km s-min=10.1km az=40.0*
*GCMT **03** 09:11:54.6±0.2, 60°.08S×25°.94W, h46km, MW5.2, Moment Tensor Solution. s65,c95; s85,c131; Moment tensor: Scale 10^16Nm; Mrr5.57±.23; Mθθ1.15±.19; Mφφ-6.72±.18; Mrθ-2.50±.17; Mθφ-3.95±.13; Mφr2.48±.18; Best double couple: M0 8.20000×10^16 NP1:φs232.00000°, δ48.00000°, λ136.00000°. NP2:φs354.00000°, δ59.00000°, λ51.00000°. Principal axes: T 7.8000, Plg57.0000°, Azm210.0000°; N 0.6900, Plg33.0000°, Azm17.0000°; P -8.5000, Plg6.0000°, Azm111.0000°; Data Used: II IU CN G IC.*
ISC 03 09:11:47.9±0.9, 59°.51S±0°.07×26°.32W±0°.06, h32km±6km, n270, σ1s45/318, mb5.0/29, MS4.5/19, 27C-23D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.44	154	ePn	Pn	09 14 54.9	-1.0
VNA1	Neumayer--Stat	13.44	154	eSn	Sn	09 17 14.0	-10
VNA3	Neumayer Olymp	13.59	157	ePn	Pn	09 14 55.8	-2.2
VNA3	Neumayer Olymp	13.59	157	eSn	Sn	09 17 13.6	-14
VNA3	Neumayer Olymp	13.59	157	ePcP	PcP	09 20 22.2	+0.1
VNA2	Neumayer--Watz	13.83	154	ePn	Pn	09 14 58.9	-2.5
VNA2	Neumayer--Watz	13.83	154	eSn	Sn	09 17 19.9	-14
VNA2	Neumayer--Watz	13.83	154	ePcP	PcP	09 20 23.6	+1.2
SNAA	Sanae	15.42	152	ePn	Pn	09 15 20.4	-2.3
SNAA	Sanae	15.42	152	ePcP	PcP	09 20 25.5	+0.9
SNAA	Sanae	15.42	152	ePn	Pn	09 15 19.8	-2.9
	151nm,1.1s						
SNAA				S	Sn	09 17 55.0	-17
SNAA				eSn	S	09 17 59.0	-29
SNAA	Sanae	15.42	152	P	Pn	09 15 20.3	-2.5
	8.1nm,0.3s,baz=321,slow=14,SNR=133						
SNAA				S	Sn	09 17 55.0	-17
	0.6nm,0.3s,baz=322,slow=19,SNR=3.5						
SNAA				LR	LR	09 20 04.8	
	comp=Z,686nm,19.9s,baz=143,slow=32						
PMSA	Palmer Station	18.18	237	eP	P	09 16 00.3	+2.8
	45nm,0.8s						
PMSA	Palmer Station	18.18	237	P	Pn	09 15 57.3	-0.1
	1.7nm,0.3s,baz=82,slow=8.9,SNR=14						
PMSA				LR	LR	09 22 02.3	
	comp=Z,2μm,20.4s,baz=89,slow=34						
MAIT	Maitri	19.15	142	eP	P	09 15 58.2	-10
EFI	East Falkland	19.42	280	eP	P	09 16 11.1	0.0
EFI				pmax	pmax		
	comp=Z,71nm,0.6s						
EFI	East Falkland	19.42	280	eP	Pn	09 16 14.6	+2.2
EFI	East Falkland	19.42	280	eP	P	09 16 11.1	0.0
	comp=Z,71nm,0.6s						
USHA	Ushuaia	23.00	263	P	P	09 16 51.5	+1.9
USHA	Ushuaia	23.00	263	P	P	09 16 51.5	+1.9
	comp=Z,165nm,0.9s,baz=100,slow=9.3,SNR=46						
USHA				LR	LR	09 23 55.0	
	comp=Z,2μm,20.7s,baz=288,slow=32						
QSPA	South Pole Qui	30.73	180	eP	P	09 18 00.2	+0.5
	comp=Z,86nm,1.2s						
QSPA				PcP	PcP	09 20 56.4	-0.1
QSPA	South Pole Qui	30.73	180	P	P	09 17 59.8	+0.1
	comp=Z,43nm,0.9s,baz=205,slow=5.0,SNR=112						
QSPA				PcP	PcP	09 20 56.3	-0.1
	comp=Z,14nm,0.9s,baz=243,slow=3.0,SNR=3.6						
TRQA	Tornquist	31.23	297	eP	P	09 18 06.0	+1.9
	comp=Z,29nm,0.8s						
PLCA	Paso Flores	33.20	284	eP	P	09 18 21.4	-0.1
	comp=Z,11nm,0.7s						
PLCA	Paso Flores	33.20	284	P	P	09 18 21.4	-0.1
	comp=Z,15nm,0.9s,baz=147,slow=9.2,SNR=15						
PLCA				LR	LR	09 30 32.1	
	comp=Z,649nm,21.4s,baz=154,slow=34						
MAW	Mawson	37.12	141	P	P	09 18 54.6	-0.3
MAW				PcP	PcP	09 21 14.4	0.0
MAW	Mawson	37.12	141	P	P	09 18 54.6	-0.3
	comp=Z,13nm,1.0s,baz=256,slow=11,SNR=8.8						
MAW				PcP	PcP	09 21 14.4	0.0
	comp=Z,5.8nm,0.8s,baz=276,slow=6.6,SNR=4.1						
MAW				LR	LR	09 32 20.7	
	comp=Z,1μm,19.5s,baz=239,slow=33						
CFAA	Coronel Fontan	39.44	296	P	P	09 19 14.8	+0.1
CFAA	Coronel Fontan	39.44	296	P	P	09 19 14.8	+0.1
	comp=Z,3.8nm,0.7s,baz=155,slow=8.8,SNR=42						
CPUP	Villa Florida	39.49	313	P	P	09 19 15.3	+0.1
CPUP	Villa Florida	39.49	313	P	P	09 19 15.3	+0.1
	comp=Z,2.8nm,0.4s,baz=135,slow=6.7,SNR=16						
CPUP				LR	LR	09 35 06.1	
	comp=Z,365nm,19.9s,baz=151,slow=35						
SUR	Sutherland	41.24	70	P	P	09 19 32.1	+2.3
SUR				PcP	PcP	09 21 29.7	+1.5
SUR	Sutherland	41.24	70	P	P	09 19 32.1	+2.3
	comp=Z,5.3nm,0.9s,baz=196,slow=15,SNR=4.0						
SUR				PcP	PcP	09 21 29.7	+1.5
	comp=Z,8.2nm,0.9s,baz=228,slow=4.8,SNR=2.8						
SBA	Scott Base	42.65	184	eP	P	09 19 42.6	+2.0
SBA				pmax	pmax		
	comp=Z,30nm,0.9s						
SBA	Scott Base	42.65	184	eP	P	09 19 42.5	+2.0
	comp=Z,30nm,0.9s						
LCO	Las Campanas	42.76	296	eP	P	09 19 43.3	+1.0
	comp=Z,27nm,1.1s						
VNDA	Vanda	43.13	183	eP	P	09 19 44.6	+0.1
VNDA				PcP	PcP	09 21 33.6	+0.1
VNDA	Vanda	43.13	183	P	P	09 19 45.1	+0.6
	comp=Z,33nm,0.8s,baz=188,slow=7.0,SNR=126						
VNDA				PcP	PcP	09 21 33.6	+0.1
	comp=Z,8.6nm,0.9s,baz=209,slow=1.8,SNR=5.2						
VNDA				LR	LR	09 36 13.6	
	comp=Z,427nm,21.2s,baz=179,slow=34						
BOSA	Boshof	46.49	72	eP	P	09 20 12.5	+0.5
	comp=Z,7.4nm,0.8s						
BOSA				PcP	PcP	09 21 46.5	+0.5
BOSA	Boshof	46.49	72	P	P	09 20 12.5	+0.5
	comp=Z,5.5nm,0.5s,baz=196,slow=6.0,SNR=11						
BOSA				PcP	PcP	09 21 46.5	+0.5
	comp=Z,6.0nm,0.9s,baz=172,slow=5.4,SNR=3.6						
BOSA				LR	LR	09 36 18.7	
	comp=Z,513nm,19.1s,baz=211,slow=32						
BDFB	Brasilia	46.61	331	P	P	09 20 13.8	+0.8
BDFB	Brasilia	46.61	331	P	P	09 20 13.8	+0.8
	comp=Z,3.8nm,0.4s,baz=139,slow=5.6,SNR=9.2						
BDFB				LR	LR	09 36 37.9	
	comp=Z,526nm,21.8s,baz=114,slow=32						
LBTB	Lobatse	49.68	69	eP	P	09 20 37.6	+1.0
	comp=Z,9.4nm,0.9s						
SIV	San Ignacio	50.32	315	P	P	09 20 41.4	-0.1
SIV	San Ignacio	50.32	315	P	P	09 20 41.4	-0.1
	comp=Z,7.2nm,0.4s,baz=169,slow=8.3,SNR=42						
TSUM	Tsumeb	51.06	57	eP	P	09 20 48.0	+0.8
	comp=Z,3.3nm,0.7s						
LPAZ	La Paz	52.79	306	P	P	09 21 00.9	+0.3
LPAZ	La Paz	52.79	306	P	P	09 21 00.9	+0.3
	comp=Z,8.7nm,0.6s,baz=118,slow=5.4,SNR=39						
LPAZ				LR	LR	09 44 16.0	
	comp=Z,194nm,19.2s,baz=343,slow=37						
ARE	Arequipa	54.04	303	eP	P	09 21 10.0	+0.6
ARE	Arequipa	54.04	303	eP	P	09 21 10.0	+0.6
SAML	Samuel	57.59	315	eP	P	09 21 34.3	-0.1
	comp=Z,14nm,0.8s						
LSZ	Lusaka	59.27	66	eP	P	09 21 47.2	+0.9
	comp=Z,16nm,0.9s						
NNA	Nana	60.35	300	P	P	09 21 54.1	+0.5
NNA	Nana	60.35	300	P	P	09 21 54.1	+0.5
	comp=Z,13nm,0.7s,baz=159,slow=4.9,SNR=8.9						
ATAH	Atahualpa	65.35	301	P	P	09 22 28.8	+1.4
ATAH	Atahualpa	65.35	301	P	P	09 22 28.8	+1.4
	comp=Z,15nm,0.9s,baz=120,slow=2.5,SNR=9.6						
OPO	Ambohidratompo	65.82	86	P	P	09 22 31.2	+1.1
OPO	Ambohidratompo	65.82	86	P	P	09 22 31.2	+1.1
	comp=Z,3.0nm,0.8s,baz=257,slow=7.9,SNR=4.6						
OTAV	Otavalo	71.97	304	eP	P	09 23 09.1	+0.4
	comp=Z,166nm,1.4s						
TORD	Torodi Ar. Bea	75.87	28	P	P	09 23 32.1	+1.2
TORD	Torodi Ar. Bea	75.87	28	P	P	09 23 32.1	+1.2
	comp=Z,14nm,0.8s,baz=195,slow=6.3,SNR=79						
KMBO	Kilima Mbogo	75.89	67	P	P	09 23 35.3	+3.9
KMBO	Kilima Mbogo	75.89	67	P	P	09 23 35.3	+3.9
	comp=Z,1.7nm,0.7s,baz=178,slow=7.7,SNR=5.3						
KMBO				LR	LR	09 53 58.1	
	comp=Z,1μm,19.4s,baz=272,slow=33						
RPZ	Rata Peaks	76.14	193	P	P	09 23 32.4	+0.2
RPZ	Rata Peaks	76.14	193	P	P	09 23 32.4	+0.2
	comp=Z,18nm,0.9s,baz=162,slow=5.7,SNR=8.2						
RKT	Rikitea	79.30	243	eLR	LR	09 48 38.9	
	comp=Z,888nm,27.0s						
URZ	Urewera	80.67	198	eP	P	09 23 57.7	+0.5
	comp=Z,95nm,1.6s						
URZ	Urewera	80.67	198	P	P	09 23 56.9	-0.3
	comp=Z,20nm,0.9s,baz=250,slow=2.3,SNR=10						
TBI	Tubuai	85.25	231	eS	S	09 34 58.3	+9.2
	comp=Z,162nm,27.8s						
TBI				eLR	LR	09 51 24.6	
	comp=Z,212nm,21.5s						
TAM	Tamanrasset	86.08	29	P	P	09 24 25.2	0.0
TAM				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TAM	Tamanrasset	86.08	29	Pn	P	09 24 25.2	0.0
	comp=Z,10nm,1.4s						
PPT2	Papeete2	90.48	233	eS	S	09 35 49.3	+10
	comp=Z,193nm,29.5s						
PPT2				eLR	LR	09 53 56.2	
	comp=Z,434nm,23.5s						
PPT	Papeete	90.50	233	LR	LR	09 57 38.1	
	comp=Z,382nm,18.3s,baz=164,slow=30						
ASAR	Alice Springs	95.54	162	P	P	09 25 08.8	-0.9
ASAR				PP	PP	09 29 01.2	+1.4
ASAR	Alice Springs	95.54	162	P	P	09 25 08.8	-0.9
	comp=Z,7.8nm,0.8s,baz=184,slow=3.8,SNR=70						
ASAR				PP	PP	09 29 01.2	+1.4
	comp=Z,1.1nm,1.0s,baz=186,slow=8.6,SNR=5.6						
ASAR				LR	LR	10 05 02.5	
	comp=Z,695nm,20.8s,baz=180,slow=33						
AS31	Alice Springs	95.54	162	eP	P	09 25 08.8	-0.9
DZM	Mont Dzumac	98.04	192	eLR	LR	09 57 17.6	
	comp=Z,308nm,22.8s						
WRA	Warramunga Arr	99.26	162	P	Pdif	09 25 24.6	-1.8
WRA				PP	PP	09 29 30.7	+2.2
WRA				PKKP	PKKPdf	09 41 49.2	-0.7
WRA	Warramunga Arr	99.26	162	P	Pdif	09 25 24.6	-1.8
	comp=Z,1.8nm,0.9s,baz=193,slow=3.7,SNR=13						
WRA				PP	PP	09 29 30.7	+2.2
	comp=Z,0.6nm,0.8s,baz=185,slow=6.9,SNR=5.0						
WRA				PKKP	PKKPdf	09 41 49.2	-0.7
	comp=Z,0.4nm,0.8s,baz=357,slow=2.9,SNR=5.8						
WRA				LR	LR	10 07 40.4	
	comp=Z,612nm,20.9s,baz=190,slow=34						
FITZ	Fitzroy Crossi	99.34	153	LR	LR	10 05 08.9	
	comp=Z,187nm,20.4s,baz=195,slow=32						
TXAR	Lajitas Array	108.77	296	PP	PP	09 30 29.2	-11
TXAR				PKKPbc	PKKPbc	09 41 21.9	+2.0
TXAR	Lajitas Array	108.77	296	PP	PP	09 30 29.2	-11
	comp=Z,0.5nm,0.9s,baz=179,slow=5.4,SNR=3.6						
TXAR				PKKPbc	PKKPbc	09 41 21.9	+2.0
	comp=Z,0.7nm,0.9s,baz=329,slow=1.5,SNR=5.4						
BRTR	Keskin Array B	110.53	45	PP	PP	09 30 54.4	+1.2
BRTR	Keskin Array B	110.53	45	PP	PP	09 30 54.4	+1.2
	comp=Z,0.2nm,0.5s,baz=165,slow=5.1,SNR=3.7						
VYHS	Vyhne	113.77	31	eP	Pdif	09 26 38.2	+8.2
VYHS	Vyhne	113.77	31	PDIF	Pdif	09 26 38.2	+8.2
CLL	Collm	114.97	26	ePS	PS	09 41 09.0	+6.3
CLL				eSS	SS	09 47 48.0	+30
CLL				e		09 52 24.0	
CLL				LmV		10 13 00.0	
	comp=Z,100nm,21.6s						
SCHQ	Schefferville	118.51	335	PKP	PKPdf	09 30 29.9	-1.0
SCHQ	Schefferville	118.51	335	PKP	PKPdf	09 30 29.9	-1.0
	comp=Z,1.4nm,0.3s,baz=116,slow=0.5,SNR=14						
AKASG	Malin Array Be	118.71	37	PKIKP	PKPdf	09 30 30.3	-1.0
AKASG	Malin Array Be	118.71	37	PKP	PKPdf	09 30 30.3	-1.0
AKASG	Malin Array Be	118.71	37	PKP	PKPdf	09 30 30.3	-1.0
	comp=Z,0.5nm,0.3s,baz=238,slow=1.7,SNR=5.1						
Q19A	Hogan Spring (	119.33	297	⇓P	PKPdf	09 30 32.5	-0.7
	baz=120						
N22A	Wattenberg Ran	119.58	301	⇑P	PKPdf	09 30 33.2	-0.6
	baz=120						
SRU	San Rafael	120.03	297	ePKIKP	PKPdf	09 30 33.7	-0.9
SRU	San Rafael	120.03	297	ePKPdf	PKPdf	09 30 33.6	-0.9
MSU	Marysvale	120.30	295	ePKIKP	PKPdf	09 30 35.5	+0.3
MSU	Marysvale	120.30	295	ePKPdf	PKPdf	09 30 35.5	+0.3
P18A	Preston Nutter	120.32	297	⇑P	PKPdf	09 30 35.2	-0.1
	baz=121						
O19A	Miners Draw (B	120.36	298	⇑P	PKPdf	09 30 34.2	-0.9
	baz=121						
O17A	Robinson Place	121.00	297	⇓P	PKPdf	09 30 36.1	-0.4
	baz=121						
PKM	Peak Mountain	121.03	287	⇑P	PKPdf	09 30 36.4	-0.2
	baz=121						
DUG	Dugway	121.95	296	ePKIKP	PKPdf	09 30 38.1	0.0
DUG	Dugway	121.95	296	ePKPdf	PKPdf	09 30 38.1	0.0
DUG	Dugway	121.95	296	⇓P	PKPdf	09 30 38.0	-0.2
	baz=122						
K19A	Absolon Red Bu	122.27	300	⇑P	PKPdf	09 30 37.1	-1.6
	baz=123						
J20A	Shoshoni	122.36	301	⇑P	PKPdf	09 30 37.2	-1.7
	baz=123						
HWUT	Hardware Ranch	122.51	298	ePKPdf	PKPdf	09 30 38.8	-0.5
PDAR	Pinedale Array	122.53	300	PKP	PKPdf	09 30 37.8	-1.5
PDAR	Pinedale Array	122.53	300	PKP	PKPdf	09 30 37.8	-1.5
	comp=Z,0.5nm,0.5s,baz=127,slow=5.0,SNR=6.0						
L16A	Fish Haven	122.77	298	⇓P	PKPdf	09 30 39.1	-0.6
	baz=123						
ULM	Lac du Bonnet	123.04	314	PKP	PKPdf	09 30 37.8	-1.9
ULM	Lac du Bonnet	123.04	314	PKP	PKPdf	09 30 37.8	-1.9
	comp=Z,1.1nm,0.3s,baz=159,slow=1.0,SNR=4.1						
J18A	Kendall Valley	123.09	300	⇓P	PKPdf	09 30 39.2	-1.2
	baz=123						
NVAR	Mina Array Bea	123.12	290	PKP	PKPdf	09 30 40.9	+0.4
NVAR	Mina Array Bea	123.12	290	PKP	PKPdf	09 30 40.9	+0.4
	comp=Z,0.8nm,0.5s,baz=127,slow=4.2,SNR=4.0						
HFS	Hagfors	123.32	23	PKP	PKPdf	09 30 38.4	-1.5
HFS	Hagfors	123.32	23	PKP	PKPdf	09 30 38.3	-1.5
	comp=Z,3.7nm,0.8s,baz=129,slow=4.0,SNR=6.4						
CMAR	Chiang Mai Arr	123.38	112	PKP	PKPdf	09 30 41.0	-0.4
CMAR	Chiang Mai Arr	123.38	112	PKP	PKPdf	09 30 41.0	-0.4
	comp=Z,7.2nm,0.7s,baz=231,slow=3.6,SNR=32						
I18A	Diamond G Ranc	123.39	300	⇑P	PKPdf	09 30 39.7	-1.2
	baz=124						
KOLN	Koldanda	123.55	92	eP	PKPdf	09 30 40.8	-0.9
LOHW	Long Hollow	123.67	300	ePKPdf	PKPdf	09 30 41.1	-0.3
NB2	NORSAR Subarra	123.69	21	PKPdf	PKPdf	09 30 40.3	-0.4
	baz=202,slow=1.9						
NB2	NORSAR Subarra	123.69	21	PKPdf	PKPdf	09 30 40.3	-0.4
	comp=Z,6.9nm,1.1s,baz=202,slow=1.9						
NOA	NORSAR Array B	123.69	21	PKP	PKPdf	09 30 40.2	-0.5
NOA	NORSAR Array B	123.69	21	PKP	PKPdf	09 30 40.2	-0.5
	comp=Z,3.2nm,0.9s,baz=195,slow=1.8,SNR=7.1						
TPAW	Teton Pass	123.73	299	ePKPdf	PKPdf	09 30 41.5	-0.1
D24A	Glendive	123.78	307	⇑P	PKPdf	09 30 41.1	-0.2
	baz=124						
MOOW	Moose Ponds	123.84	300	ePKPdf	PKPdf	09 30 41.5	-0.3
I17A	Pilgrim Ck.	123.90	300	⇑P	PKPdf	09 30 41.6	-0.3
	baz=124						
G20A	Bridger	123.90	303	⇑P	PKPdf	09 30 40.9	-0.8
	baz=124						
IMW	Indian Meadow	124.04	300	ePKPdf	PKPdf	09 30 42.3	+0.1
DANN	Dangsing	124.10	91	eP	PKPdf	09 30 41.9	-1.0
	comp=Z,39nm,0.9s						
C24A	Savage	124.15	307	⇑P	PKPdf	09 30 41.0	-1.0
	baz=124						
DMN	Daman	124.18	93	eP	PKPdf	09 30 42.6	-0.4
	comp=Z,31nm,1.0s						
PKI	Pulchoki	124.31	93	eP	PKPdf	09 30 42.6	-0.7
RAMN	Ramite	124.40	95	eP	PKPdf	09 30 43.4	0.0
KKN	Kakani	124.42	93	eP	PKPdf	09 30 42.4	-1.0
ODAN	Odare	124.73	96	eP	PKPdf	09 30 44.0	0.0
	comp=Z,26nm,0.8s						
GUN	Gumba	124.82	94	eP	PKPdf	09 30 44.1	-0.2
	comp=Z,34nm,0.9s						
A24A	Westby	125.09	308	⇓P	PKPdf	09 30 42.7	-1.0
	baz=125						
F18A	Big Timber	125.09	302	⇑P	PKPdf	09 30 43.3	-0.7
	baz=125						
I14A	Mackay	125.19	298	⇑P	PKPdf	09 30 43.4	-0.9

baz=126
TAPN Taplejung 125.30 96 eP PKPdf 09 30 45.0 -0.2
comp=Z,11nm,0.7s
D20A Manuel Ranch, 125.35 304 ⇓P PKPdf 09 30 43.5 -0.9
baz=126
G16A Moss Hill, Enn 125.47 300 ⇓P PKPdf 09 30 44.9 +0.1
baz=126
H14A Leadore 125.69 299 ⇓P PKPdf 09 30 45.0 -0.3
baz=126
E18A Harlowton 125.69 302 ⇑P PKPdf 09 30 43.9 -1.2
baz=126
D19A Cripps Ranch, 125.72 304 ⇑P PKPdf 09 30 44.1 -1.0
baz=126
C20A Veseth Ranch, 125.78 305 ⇓P PKPdf 09 30 43.7 -1.4
baz=126
F16A Kennard Place, 125.83 301 ⇓P PKPdf 09 30 44.9 -0.5
baz=126
I12A Atlanta 125.85 297 ⇑P PKPdf 09 30 44.9 -0.7
baz=126
A22A Carney Farms, 125.92 307 ⇑P PKPdf 09 30 44.7 -0.7
baz=126
E17A Martinsdale 126.02 302 ⇑P PKPdf 09 30 45.1 -0.7
baz=126
H13A Challis 126.05 298 ⇓P PKPdf 09 30 45.2 -0.7
baz=126
G14A Jackson 126.22 299 ⇓P PKPdf 09 30 46.6 +0.3
baz=126
C19A Slack Wire Ran 126.24 304 ⇑P PKPdf 09 30 45.6 -0.5
baz=126
A21A Bergtoll Ranch 126.33 306 ⇑P PKPdf 09 30 45.9 -0.3
baz=127
D17A Six Diamond Ra 126.48 302 ⇓P PKPdf 09 30 46.5 -0.1
baz=127
D16A Dana Ranch, Ca 126.76 302 ⇑P PKPdf 09 30 47.0 -0.1
baz=127
C17A Wharram Farm, 126.89 303 ⇑P PKPdf 09 30 46.6 -0.7
baz=127
G12A Big Creek, Yel 126.97 298 ⇑P PKPdf 09 30 47.1 -0.5
baz=127
A19A Klindworth Far 127.04 305 ⇓P PKPdf 09 30 46.5 -1.0
baz=127
FINES FINESS Array B 127.22 29 PKP PKPdf 09 30 46.9 -0.4
FINES FINESS Array B 127.22 29 PKP PKPdf 09 30 46.9 -0.4
comp=Z,5.1nm,0.8s,baz=168,slow=2.2,SNR=15
B17A L&G Farms, Che 127.41 303 ⇓P PKPdf 09 30 47.6 -0.7
baz=128
F12A Elk City 127.42 298 ⇑P PKPdf 09 30 47.5 -1.0
baz=128
C16A Fuhringer Ranc 127.44 302 ⇑P PKPdf 09 30 47.9 -0.4
baz=128
E13A Victor 127.47 299 ⇓P PKPdf 09 30 48.3 -0.2
baz=128
SFJD Kangerlussuaq 127.47 348 *i* P PKPdf 09 30 47.9 +0.3
comp=Z,6.8nm,0.8s
MSO Missoula 127.65 300 ⇓P PKPdf 09 30 48.6 -0.2
baz=128
D14A Greenough 127.66 300 ⇑P PKPdf 09 30 48.1 -0.7
baz=128
KAF Kangasniemi 127.86 28 *e*PKIKP PKPdf 09 30 47.8 -0.7
KAF pmax pmax
comp=Z,4.0nm,0.5s
KAF Kangasniemi 127.86 28 *e*pkp PKPdf 09 30 47.8 -0.7
comp=Z,3.5nm,0.5s
A17A Triple J Farms 127.87 304 ⇓P PKPdf 09 30 49.1 0.0
baz=128
C14A Swan Lake 128.29 301 ⇑P PKPdf 09 30 49.1 -0.8
baz=129
D12A Red Ives Fores 128.45 299 ⇓P PKPdf 09 30 49.1 -1.2
baz=129
FFC Flin Flon 128.86 314 *i* PKIKP PKPdf 09 30 51.5 +0.8
ABKAR Akbulak array 128.91 57 *e*PKPdf PKPdf 09 30 50.6 -0.3
KSH Kashi 128.99 76 PKP PKPdf 09 30 51.3 -0.3
KSH PP PP 09 33 01.0 +0.9
KSH PKS PKSdf 09 34 25.7 -2.5
KSH SKS SKSdf 09 38 01.6 +1.0
KSH SKKS SKKSac 09 39 53.3 -0.5
KSH SS SS 09 50 16.7 -0.5
KSH AMB AMB
comp=Z,250nm,4.8s
KSH LR LR
comp=N,130nm,5.8s
KSH LR LR
comp=E,78nm,3.4s
KSH LR LR
comp=Z,320nm,5.1s
AKTO Aktyubinsk 128.99 55 PKIKP PKPdf 09 30 50.9 -0.2
AKTO Aktyubinsk 128.99 55 PKP PKPdf 09 30 50.9 -0.2
AKTO Aktyubinsk 128.99 55 PKP PKPdf 09 30 50.9 -0.2
comp=Z,7.7nm,0.9s,baz=160,slow=2.9,SNR=24
A14A Double T Ranch 129.06 302 ⇓P PKPdf 09 30 50.9 -0.6
baz=129
KKAR Karatay Array 129.06 69 *e*PKIKP PKPdf 09 30 51.6 +0.1
KKAR Karatay Array 129.06 69 *e*PKPdf PKPdf 09 30 51.6 +0.1
B13A Whitefish 129.06 301 ⇓P PKPdf 09 30 50.9 -0.5
baz=129
JOF Joensuu 129.78 30 *e*PKIKP PKPdf 09 30 52.0 -0.2
JOF pmax pmax
comp=Z,2.0nm,0.7s
JOF Joensuu 129.78 30 *e*pkp PKPdf 09 30 52.0 -0.2
comp=Z,2.1nm,0.7s
EKS2 Erkin-Say 130.30 72 *e*PKIKP PKPdf 09 30 54.1 +0.1
EKS2 Erkin-Say 130.30 72 *e*PKPdf PKPdf 09 30 54.0 +0.1
KLMR Klimovskoe 130.39 36 *e*PKIKP PKPdf 09 30 50.3 -3.1
KLMR pmax pmax
comp=Z,39nm,1.7s
AAK Ala-Archa 130.62 73 ⇓*i*PKIKP PKPdf 09 30 54.5 -0.2
AAK Ala-Archa 130.62 73 PKP PKPdf 09 30 54.5 -0.2
AAK *e*PKPdf PKiKP 09 30 54.9 -0.7
AAK Ala-Archa 130.62 73 PKP PKPdf 09 30 54.5 -0.2
comp=Z,4.6nm,0.8s,baz=217,slow=3.4,SNR=15
KMI Kunming 130.88 111 PKP PKPdf 09 30 58.1 +2.3
KMI PP PP 09 33 18.7 +6.4
KMI SS SS 09 50 45.0 +4.6
KMI AMB AMB
comp=Z,110nm,4.1s
KMI LR LR
comp=Z,120nm,22.2s
SUMG Summit 132.07 355 *i* P PKPdf 09 30 57.8 +1.0
comp=Z,6.2nm,0.8s
SUMG Summit 132.07 355 *i* P SKPbc 09 34 18.5 -1.8
comp=Z,5.5nm,0.8s
GYA Guiyang 133.86 115 *e*Pdif Pdif 09 28 01.0 +0.9
GYA PKP PKiKP 09 31 02.8 +0.3
GYA PP PP 09 33 35.9 +4.6
GYA PKS PKSdf 09 34 38.0 +0.2
GYA SKKS 09 40 25.6
GYA SS SS 09 51 20.4 +4.2
GYA AMB AMB
comp=Z,130nm,7.9s
GYA LR LR
comp=N,160nm,22.5s
GYA LR LR
comp=E,120nm,24.7s
GYA LR LR
comp=Z,140nm,22.1s
ARCES ARCESS Array B 133.98 23 PKPpre PKPpre 09 30 48.4
ARCES PKP PKPdf 09 30 60.0 0.0
ARCES SKP 09 34 26.6
ARCES ARCESS Array B 133.98 23 PKhKP PKPpre 09 30 48.4
comp=Z,2.5nm,0.9s,baz=260,slow=2.7,SNR=4.1
ARCES PKP PKPdf 09 30 60.0 0.0
comp=Z,2.1nm,0.5s,baz=167,slow=2.1,SNR=22
ARCES SKP 09 34 26.6
comp=Z,9.7nm,1.1s,baz=220,slow=0.7,SNR=3.9
BRVK Borovoye 136.16 60 *i* PKIKP PKPdf 09 31 03.0 -1.5
BVAR Borovoye Array 136.18 60 PKHKP PKPpre 09 30 52.5
BVAR 09 31 04.0
BVAR 09 31 20.4
BVAR Borovoye Array 136.18 60 PKPpre PKPpre 09 30 52.5
BVAR PKP PKPdf 09 31 04.0 -0.6
BVAR pPKP pPKPdf 09 31 20.4 +5.4
BVAR SKP 09 34 30.8
BVAR Borovoye Array 136.18 60 PKhKP PKPpre 09 30 52.5
comp=Z,0.5nm,0.4s,baz=149,slow=3.1,SNR=4.7
BVAR PKP PKPdf 09 31 04.0 -0.6
comp=Z,3.8nm,0.8s,baz=252,slow=3.0,SNR=13
BVAR pPKP pPKPdf 09 31 20.4 +5.4
comp=Z,1.3nm,0.5s,baz=228,slow=3.8,SNR=3.0
BVAR SKP 09 34 30.8
comp=Z,1.9nm,1.0s,baz=222,slow=6.0,SNR=5.3
CD2 Chengdu 136.21 108 PKP PKPdf 09 31 04.9 -0.5
CD2 PP PP 09 33 48.6 +2.5
CD2 PKS PKSdf 09 34 39.8 -1.9
CD2 SKS SKSdf 09 38 10.4 -3.3
CD2 SKKS SKKSac 09 40 35.5 -2.6
CD2 SS SS 09 51 43.7 -0.7
CD2 AMB AMB
comp=Z,120nm,5.4s
MK31 Makanchi Array 137.46 74 *e*PKIKP PKPdf 09 31 06.7 -0.5
MK31 Makanchi Array 137.46 74 *e*PKPdf PKPdf 09 31 06.7 -0.5
MKAR Makanchi Array 137.46 74 PKHKP PKPpre 09 30 56.5
MKAR 09 31 06.5
MKAR Makanchi Array 137.46 74 PKPpre PKPpre 09 30 56.5
MKAR PKP PKPdf 09 31 06.5 -0.6
MKAR SKP 09 34 35.3
MKAR Makanchi Array 137.46 74 PKhKP PKPpre 09 30 56.5
comp=Z,0.7nm,0.7s,baz=251,slow=3.7,SNR=5.2
MKAR PKP PKPdf 09 31 06.5 -0.6
comp=Z,2.9nm,0.8s,baz=262,slow=3.7,SNR=12
MKAR SKP 09 34 35.3
comp=Z,1.8nm,1.1s,baz=257,slow=2.1,SNR=4.3
WMQ Urumqi 138.05 82 PKP PKPdf 09 31 10.3 +1.9
KURK Kurchatov 138.38 68 *e*PKIKP PKPdf 09 31 07.9 -0.8
KURK Kurchatov 138.38 68 *e*PKPdf PKPdf 09 31 07.9 -0.8
YKA Yellowknife Ar 139.01 315 PKPpre PKPpre 09 31 01.0
YKA PKP PKPdf 09 31 08.6 -0.9
YKA PP PP 09 34 00.2 -3.1
YKA SKP 09 34 39.1
YKA PKKP PKKPdf 09 40 37.0 -0.8
YKA Yellowknife Ar 139.01 315 PKhKP PKPpre 09 31 01.0
comp=Z,1.5nm,1.2s,baz=119,slow=3.6,SNR=7.7
YKA PKP PKPdf 09 31 08.5 -0.9
comp=Z,2.3nm,0.8s,baz=107,slow=2.6,SNR=8.9
YKA PP PP 09 34 00.2 -3.1
comp=Z,1.1nm,1.0s,baz=123,slow=6.0,SNR=6.2
YKA SKP 09 34 39.1
comp=Z,1.7nm,0.8s,baz=125,slow=2.3,SNR=12
YKA PKKP PKKPdf 09 40 36.9 -0.8
comp=Z,0.2nm,0.7s,baz=330,slow=1.9,SNR=6.2
YKW3 Yellowknife Ar 139.06 315 *e*PKPdf PKPdf 09 31 09.2 -0.4
SPITS Spitsbergen Ar 139.86 13 PKPpre PKPpre 09 31 03.9
SPITS Spitsbergen Ar 139.86 13 PKhKP PKPpre 09 31 03.9
comp=Z,3.2nm,0.7s,baz=173,slow=3.4,SNR=4.1
LZH Lanzhou 140.43 104 *e*PKP PKPdf 09 31 16.6 +3.5
GTA Gaotai 140.97 96 PKPbc PKPdf 09 31 07.9 -6.1
GTA pPKP PKiKP 09 31 12.2 -4.5
GTA sPKP 09 31 15.1
GTA PP PP 09 34 12.8 -3.0
GTA PKS PKSdf 09 34 42.2 -7.7
GTA SKS SKSdf 09 38 13.6 -7.8
GTA SKKS SKKSac 09 40 59.9 -6.2
GTA SS SS 09 52 33.0 -8.0
GTA AMB AMB
comp=Z,100nm,7.1s
GTA LR LR
comp=N,190nm,20.4s
GTA LR LR
comp=E,170nm,20.4s
GTA LR LR
comp=Z,140nm,19.5s
RES Resolute Bay 141.25 337 PKPpre PKPpre 09 31 05.9
RES *e*PKPpre PKPpre 09 31 07.2
RES PKP PKPdf 09 31 12.6 -0.6
RES SKPbc SKPbc 09 34 45.0 -2.3
RES Resolute Bay 141.25 337 PKhKP PKPpre 09 31 05.9
comp=Z,1.9nm,0.8s,baz=71,slow=4.2,SNR=2.8
RES PKP PKPdf 09 31 12.6 -0.6
comp=Z,3.3nm,0.8s,baz=48,slow=4.5,SNR=4.9
RES SKPbc SKPbc 09 34 45.0 -2.3
comp=Z,2.4nm,1.0s,baz=75,slow=0.8,SNR=5.8
NVS Novosibirsk 143.17 65 *e*PKIKP PKPbc 09 31 14.6 +0.3
NVS pmax pmax
comp=Z,19nm,0.5s
NVS pmax pmax
comp=N,2.0nm,0.3s
NVS pmax pmax
comp=E,3.0nm,0.3s
ZAA0 Zalesovo Array 143.37 68 *e*PKPdf PKPab 09 31 14.1 +0.4
ZALV Zalesovo Beam 143.37 68 PKIKP PKPab 09 31 14.1 +0.4
ZALV Zalesovo Beam 143.37 68 PKPpre PKPpre 09 31 14.1
ZALV Zalesovo Beam 143.37 68 PKhKP PKPpre 09 31 14.1
comp=E,5.0nm,0.4s,baz=219,slow=3.9,SNR=11
BTO Baotou 146.99 105 *e*PKPbc PKPbc 09 31 26.1 -0.4
HHC Hu-ho-hao-te 147.93 107 *e*PKPbc PKPdf 09 31 25.4 -0.6
HHC pPKP pPKPdf 09 31 36.0 -0.4
HHC PKS PP 09 34 58.5 +1.2
HHC PP PP 09 35 00.0 +2.7
HHC SKS SKSdf 09 38 31.5 -0.2
HHC SKKS SKKSac 09 41 47.5 +1.8
HHC SS SS 09 54 03.2 +2.6
HHC AMB AMB
comp=Z,140nm,9.1s
HHC LR LR
comp=N,340nm,20.3s
HHC LR LR
comp=E,310nm,20.2s
HHC LR LR
comp=Z,280nm,20.1s
INK Inuvik 148.72 317 PKP PKPdf 09 31 23.4 -2.7
INK PKPbc PKPbc 09 31 29.2 -0.8
INK Inuvik 148.72 317 PKP PKPdf 09 31 23.4 -2.7
comp=Z,1.5nm,0.9s,baz=94,slow=0.5,SNR=4.4
INK PKPbc PKPbc 09 31 29.2 -0.8
comp=Z,14nm,0.8s,baz=91,slow=4.0,SNR=52
BJI Beijing 149.51 113 PKPbc PKPdf 09 31 30.0 +1.6
BJI SS SS 09 54 23.3 +5.4
BJI LR LR
comp=N,170nm,25.5s
BJI LR LR
comp=E,230nm,24.8s
BJI LR LR
comp=Z,71nm,32.0s
JNU Nakatsue 149.57 140 PKPbc PKPbc 09 31 33.1 -0.3
JNU Nakatsue 149.57 140 PKPbc PKPbc 09 31 33.1 -0.3
comp=Z,14nm,0.9s,baz=107,slow=3.6,SNR=8.4
MOY Mondy 149.94 81 *e*PKP2 PKPbc 09 31 34.2 +0.4
MOY pmax pmax
comp=Z,75nm,2.3s
SONM Songino Array 150.31 92 PKP PKPdf 09 31 29.0 -0.6
SONM PKPbc PKPbc 09 31 34.7 -0.1
SONM Songino Array 150.31 92 PKP PKPdf 09 31 29.0 -0.6
comp=Z,1.0nm,1.0s,baz=204,slow=3.3,SNR=6.0
SONM PKPbc PKPbc 09 31 34.7 -0.1
comp=Z,35nm,0.9s,baz=219,slow=2.7,SNR=124
BMRM Bremner River 150.32 300 *e*PKPdf PKPdf 09 31 29.4 +0.3
BMRM *e*PKPbc PKPbc 09 31 34.5 +0.2
BMRM *e*PKPab PKPab 09 31 40.9 +0.1
ZAK Zakamensk 150.33 85 *e*PKIKP PKPdf 09 31 28.7 -0.8
ZAK *e* 09 31 34.9
ZAK pmax pmax
comp=Z,31nm,1.0s
EGAK Eagle 150.35 308 *e*PKPbc PKPbc 09 31 33.6 -0.6
ULN Ulaanbaatar 150.66 92 *e*PKPdf PKPdf 09 31 29.9 -0.3
ULN *e*PKPbc PKPbc 09 31 35.2 -0.5
ULN *e*PKPab PKPab 09 31 43.1 +0.3
MENT Mentasta 150.73 304 *e*PKPdf PKPdf 09 31 30.2 +0.6
MENT *e*PKPbc PKPbc 09 31 34.9 -0.3
MENT *e*PKPab PKPab 09 31 42.6 +0.1
DIV Divide 150.91 300 *e*PKPbc PKPbc 09 31 35.8 +0.1
DOT Dot Lake 151.13 305 *e*PKPbc PKPbc 09 31 36.2 0.0
DOT *e*PKPab PKPab 09 31 44.3 +0.2
TLY Talaya 151.29 83 *e*PKIKP PKPdf 09 31 30.6 -0.2
TLY *e* 09 31 37.2
TLY *e* 09 31 45.1
TLY Talaya 151.29 83 *e*PKPdf PKPdf 09 31 30.6 -0.2
TLY *e*PKPbc PKiKP 09 31 37.2 -0.1
TLY *e*PKPab PKPab 09 31 45.1 0.0
PAX Paxson 151.48 303 *e*PKIKP PKPdf 09 31 30.7 -0.1
PAX *e* 09 31 36.6
PAX *e* 09 31 45.1
PAX Paxson 151.48 303 *e*PKPdf PKPdf 09 31 30.7 -0.1
PAX *e*PKPbc PKPbc 09 31 36.6 -0.4
PAX *e*PKPab PKPab 09 31 45.1 -0.6
SML Sawmill 152.30 300 *e*PKIKP PKPdf 09 31 31.5 -0.5
SML *e* 09 31 38.6
SML *e* 09 31 48.4
SML Sawmill 152.30 300 *e*PKPdf PKPdf 09 31 31.5 -0.5
SML *e*PKPbc PKPbc 09 31 38.6 -0.2
SML *e*PKPab PKPab 09 31 48.4 -0.7
KSAR Wonju Array Be 152.40 132 PKPbc PKPbc 09 31 39.5 -0.2
KSAR PKPab PKPab 09 31 50.1 +0.1
KSRS Korea Array 152.42 132 PKPbc PKPbc 09 31 39.5 -0.3
comp=Z,8.2nm,0.9s,baz=248,slow=1.3,SNR=4.3
KSRS PKPab PKPab 09 31 50.1 0.0
comp=Z,8.7nm,0.9s,baz=209,slow=4.3,SNR=12
KDAK Kodiak Island 152.62 290 PKPbc PKPbc 09 31 39.0 -0.6
KDAK Kodiak Island 152.62 290 PKPbc PKPbc 09 31 39.0 -0.6
comp=Z,12nm,0.6s,baz=93,slow=2.9,SNR=17
RC01 Rabbit Creek A 152.66 298 *e*PKPbc PKPbc 09 31 39.4 -0.3
ILAR Eielson Array 152.67 307 PKP PKPdf 09 31 27.9 -4.5
ILAR PKPbc PKPbc 09 31 38.4 -1.1
ILAR PKKP 09 40 08.2
ILAR Eielson Array 152.67 307 PKP PKPdf 09 31 27.9 -4.5
comp=Z,0.6nm,0.9s,baz=318,slow=0.8,SNR=6.1
ILAR PKPbc PKPbc 09 31 38.4 -1.1
comp=Z,6.0nm,0.8s,baz=204,slow=0.4,SNR=56
ILAR PKKP 09 40 08.2
comp=Z,1.0nm,1.1s,baz=262,slow=3.8,SNR=4.8
COLA College 153.09 306 *e*PKIKP PKPdf 09 31 33.4 +0.4
COLA *e* 09 31 39.4
COLA *e* 09 31 51.5
COLA College 153.09 306 *e*PKPdf PKPdf 09 31 33.4 +0.4
COLA *e*PKPbc PKPbc 09 31 39.4 -1.0
COLA *e*PKPab PKPab 09 31 51.5 -0.7
MJAR Matsushiro Arr 154.92 150 PKP PKPdf 09 31 36.4 -0.2
MJAR PKPbc PKPbc 09 31 45.0 -0.3
MJAR PKPab PKPab 09 32 00.4 -0.4
MJAR Matsushiro Arr 154.92 150 PKP PKPdf 09 31 36.4 -0.2
comp=Z,0.7nm,0.7s,baz=197,slow=3.7,SNR=3.3
MJAR PKPbc PKPbc 09 31 45.0 -0.3
comp=Z,4.7nm,1.1s,baz=197,slow=2.3,SNR=8.2
MJAR PKPab PKPab 09 32 00.4 -0.4
comp=Z,3.9nm,0.8s,baz=194,slow=5.3,SNR=8.5
CN2 Changchun 156.72 120 *e*PKP PKPdf 09 31 38.5 -0.2
MDJ Mudanjiang 159.16 125 PKP PKPdf 09 31 43.7 +2.0
MDJ pPKP pPKPdf 09 31 47.1 -5.1
MDJ sPKP 09 31 48.4
MDJ PP PP 09 36 02.0 +1.7
MDJ SS SS 09 56 07.9 +5.3
MDJ AMB AMB
comp=Z,130nm,10.4s
MDJ LR LR
comp=N,65nm,25.9s
MDJ LR LR
comp=E,53nm,30.3s
MDJ LR LR
comp=Z,100nm,25.9s
USRK Ussuriysk Arra 159.79 130 PKPab PKPab 09 32 21.3 -0.2
comp=Z,2.3nm,0.8s,baz=205,slow=3.4,SNR=5.9
KLR Kul'dur 163.68 119 *e*PKP2 PKPab 09 32 32.6 -5.9
PETK Petropavlovsk- 173.20 201 PKP2 PKPab 09 33 19.8 -0.7
PETK Petropavlovsk- 173.20 201 PKPab PKPab 09 33 19.8 -0.7
PETK Petropavlovsk- 173.20 201 PKPab PKPab 09 33 19.8 -0.7
comp=Z,8.7nm,0.8s,baz=154,slow=7.3,SNR=10

DJA 03 09:28:27.7±1.2,2°N±10°×12°6E±°,h69km±23km,M4.2/5, mb4.5/1,mB5.0/1,MLv4.0/5,Mw(mB)4.3/1,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**1.57**	**230**	P	Pn	09 28 53.3	-0.4
MNI				S	Sn	09 29 14.7	+1.4
TNTI	**Ternate**	**2.15**	**142**	P	Pn	09 29 01.6	+0.3
LBMI	**Labuha**	**3.42**	**155**	P	Pn	09 29 18.9	+0.3
LBMI				S	Sn	09 29 59.6	+1.7
MRSI	**Marisa**	**4.55**	**244**	P	Pn	09 29 34.3	+0.2
NLAI	**Namlea**	**5.77**	**169**	P	Pn	09 29 50.0	-0.8

*IDC **03** 09:46:07.2±2.1,1°71N×127°55E,h0km,mb3.4/3, mb1 3.6/4,mb1mx3.3/21,mbtmp3.4/4,ML3.5/1,Error ellipse: s-maj=115.5km s-min=25.1km az=70.0*
*DJA **03** 09:46:24.4±2.1,1°N±17°×12°8E±7°5,h115km±40km, M3.2/3,MLv3.2/3*
ISC 03 09:46:18.7±2.8,1°2N±0°2×128°7E±0°1,h22km,n7,σ1§66/7, mb3.6/3,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.38**	**251**	P	**Pn**	**09 46 43.5**	**+0.8**
TNTI				S	**Sb**	**09 47 00.9**	**-0.2**
LBMI	**Labuha**	**2.19**	**212**	P	**Pn**	**09 46 55.1**	**+1.3**
NLAI	**Namlea**	**4.70**	**200**	P	**Pn**	**09 47 30.1**	**+1.7**
NLAI				S	**Sn**	**09 48 21.0**	**-1.3**
FITZ	**Fitzroy Crossi**	**19.43**	**189**	P	P	09 50 39.1	-4.7
	0.1nm,0.3s,baz=13,slow=8.9,SNR=3.3						
WRA	**Warramunga Arr**	**21.75**	**165**	P	**P**	**09 51 09.0**	**0.0**
	1.0nm,0.4s,baz=342,slow=10,SNR=20						
ASAR	**Alice Springs**	**25.25**	**169**	P	**P**	**09 51 41.5**	**-2.0**
	0.4nm,0.9s,baz=347,slow=10,SNR=4.3						
MKAR	**Makanchi Array**	**60.71**	**325**	P	P	09 56 13.5	-15
	0.2nm,0.3s,baz=115,slow=7.7,SNR=5.1						

*HEL **03** 09:52:53.2±0.7,67°58N×34°45E,h0km,ML2.4,Explosion*
*CSEM **03** 09:52:57.1±0.5,67°73N×33°74E,h1km,ML2.7,Error ellipse: s-maj=8.7km s-min=7.2km az=90.0,Mining explosion.*
*IDC **03** 09:52:59.7±1.8,67°77N×33°55E,h0km,mb1 3.4/5, mb1mx3.1/28,mbtmp3.4/5,ML3.2/5,Error ellipse: s-maj=20.1km s-min=9.4km az=80.0*
*NAO **03** 09:52:59.4±1.2,67°63N×33°60E,ML2.9*
ISC 03 09:52:56.1±1.6,67.71N±0°05×33°86E±0°08,h0km,n35, σ1§05/48,Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APA0	**Apatity Array**	**0.35**	**253**	Pg	**Pb**	**09 53 04.5**	**-0.7**
	baz=68,slow=10						
APA0				Lg	Lg	09 53 07.1	
	baz=84,slow=37						
APA0				Rg	Rg	09 53 08.3	
	baz=84,slow=37						
APA0	**Apatity Array**	**0.35**	**253**	Pg	**Pb**	**09 53 04.5**	**-0.7**
	baz=68,slow=10						
APA0				Lg	Lg	09 53 07.1	
	baz=84,slow=37						
APA0				Rg	Rg	09 53 08.3	
	baz=84,slow=37						
APA0	**Apatity Array**	**0.35**	**253**	Pg	**Pb**	**09 53 04.5**	**-0.7**
	baz=68,slow=9.8,SNR=91						
APA0				Lg	Lg	09 53 07.1	
	baz=84,slow=35						
VRF	**Varrio**	**1.62**	**273**	PN	**Pn**	**09 53 25.3**	**-0.6**
	baz=91						
VRF				SG	**Sg**	**09 53 48.7**	**+0.6**
VRF				MSG		09 53 48.7	
	comp=Z,36nm,0.2s						
VRF	**Varrio**	**1.62**	**273**	Pn	**Pn**	**09 53 25.3**	**-0.6**
VRF				Sg	**Sg**	**09 53 48.7**	**+0.6**
MSF	**Maaselka**	**2.63**	**229**	SG	**Sb**	**09 54 16.9**	**+0.2**
MSF				MSG		09 54 16.9	
	comp=Z,6.1nm,0.2s						
MSF	**Maaselka**	**2.63**	**229**	Sg	**Sb**	**09 54 16.9**	**+0.2**
SGF	**Sodankyl**	**2.83**	**268**	PN	**Pn**	**09 53 44.0**	**+1.5**
SGF				SG	**Sb**	**09 54 23.7**	**+1.2**
SGF				MSG		09 54 23.7	
	comp=Z,15nm,0.4s						
SGF	**Sodankyl**	**2.83**	**268**	Pn	**Pn**	**09 53 44.0**	**+1.5**
SGF				Sg	**Sb**	**09 54 23.7**	**+1.2**
KEV	**Kevo**	**3.24**	**313**	PN	**Pn**	**09 53 49.3**	**+1.2**
KEV				SG	**Sg**	**09 54 39.1**	**-0.8**
KEV				MSG		09 54 39.1	
	comp=Z,18nm,0.4s						
KEV	**Kevo**	**3.24**	**313**	Pn	**Pn**	**09 53 49.2**	**+1.2**
KEV				Sg	**Sg**	**09 54 39.1**	**-0.8**
RNF	**Rovaniemi**	**3.25**	**254**	PN	**Pn**	**09 53 48.6**	**+0.3**
RNF	**Rovaniemi**	**3.25**	**254**	Pn	**Pn**	**09 53 48.6**	**+0.3**
ARA0	**ARCESS Array S**	**3.57**	**305**	Pn	**Pn**	**09 53 55.1**	**+2.4**
	baz=123,slow=16						
ARA0				Sn	**Sn**	**09 54 35.9**	**+0.4**
	baz=121,slow=22						
ARA0				Lg	Lg	09 54 45.9	
	baz=115,slow=28						
ARA0	**ARCESS Array S**	**3.57**	**305**	Pn	**Pn**	**09 53 55.1**	**+2.4**
	baz=123,slow=16						
ARA0				Sn	**Sn**	**09 54 35.9**	**+0.4**
	baz=121,slow=22						
ARA0				Lg	Lg	09 54 45.9	
	baz=115,slow=28						
ARA0	**ARCESS Array S**	**3.57**	**305**	PN	**Pn**	**09 53 52.5**	**-0.2**
	baz=123						
ARA0	**ARCESS Array S**	**3.57**	**305**	Pn	**Pn**	**09 53 52.5**	**-0.2**
ARA0				Sn	**Sn**	**09 54 35.9**	**+0.4**
	baz=121,slow=20,SNR=50						
ARA0				Lg	Lg	09 54 45.9	
	baz=115,slow=24						
ARCES	**ARCESS Array B**	**3.57**	**305**	Pn	**Pn**	**09 53 53.0**	**+0.3**
	comp=Z,6.6nm,0.3s,baz=122,slow=14,SNR=258						
ARCES				Sn	**Sn**	**09 54 36.7**	**+1.3**
	comp=Z,4.8nm,0.3s,baz=119,slow=26,SNR=16						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARCES				Lg	Lg	09 54 46.8	
	comp=Z,9.5nm,0.3s,baz=122,slow=32,SNR=16						
HEF	**Hetta**	**3.89**	**285**	PN	**Pn**	**09 53 58.9**	**+1.7**
	baz=97						
HEF				SG	**Sg**	**09 54 59.2**	**-1.9**
HEF				MSG		09 54 59.2	
	comp=Z,11nm,0.4s						
HEF	**Hetta**	**3.89**	**285**	Pn	**Pn**	**09 53 58.8**	**+1.7**
HEF				Sg	**Sg**	**09 54 59.2**	**-1.9**
KTK1	**Kautokeino**	**4.15**	**293**	*e*P	**Pn**	**09 54 00.7**	**+0.1**
KTK1				AML	AML	09 55 07.2	
	comp=Z,40nm,0.2s						
KTK1	**Kautokeino**	**4.15**	**293**	*e*P	**Pn**	**09 54 00.7**	**+0.1**
	SNR=49						
FIA0	**FINESS Array S**	**7.12**	**212**	Pn	**Pn**	**09 54 41.8**	**+0.4**
	baz=29,slow=14						
FIA0				Lg	Lg	09 56 33.7	
	baz=8.8,slow=28						
FIA0	**FINESS Array S**	**7.12**	**212**	Pn	**Pn**	**09 54 41.8**	**+0.4**
	baz=29,slow=14						
FIA0				Lg	Lg	09 56 33.7	
	baz=8.8,slow=28						
FIA0	**FINESS Array S**	**7.12**	**212**	Pn	**Pn**	**09 54 41.8**	**+0.4**
	baz=29,slow=13,SNR=50						
FIA0				Lg	Lg	09 56 33.7	
	baz=8.8,slow=26						
FINES	**FINESS Array B**	**7.12**	**212**	Pn	**Pn**	**09 54 41.4**	**0.0**
	comp=Z,0.2nm,0.3s,baz=27,slow=14,SNR=6.9						
FINES				Sn	**Sn**	**09 56 03.8**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=23,slow=24,SNR=2.9						
FINES				Lg	Lg	09 56 31.7	
	comp=Z,0.7nm,0.3s,baz=26,slow=26,SNR=4.3						
SPA0	**Spitsbergen Ar**	**11.61**	**342**	Pn	**Pn**	**09 55 42.9**	**+0.1**
	baz=135,slow=18						
SPA0	**Spitsbergen Ar**	**11.61**	**342**	P	**Pn**	**09 55 42.9**	**+0.1**
	baz=135,slow=18						
SPA0	**Spitsbergen Ar**	**11.61**	**342**	P	**Pn**	**09 55 42.9**	**+0.1**
	baz=135,slow=17,SNR=47						
SPITS	**Spitsbergen Ar**	**11.61**	**342**	Pn	**Pn**	**09 55 42.8**	**-0.1**
	baz=135,slow=19,SNR=10						
HFS	**Hagfors**	**11.62**	**239**	Pn	**Pn**	**09 55 41.7**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=43,slow=20,SNR=4.4						
HFS				Sn	Sn	09 57 41.4	-12
	comp=Z,0.1nm,0.3s,baz=46,slow=24,SNR=2.5						
HFS				Lg	Lg	09 58 51.3	
	comp=Z,0.1nm,0.3s,baz=40,slow=32,SNR=2.0						
NB2	**NORSAR Subarra**	**11.80**	**246**	Pn	**Pn**	**09 55 44.6**	**-0.9**
NB2	**NORSAR Subarra**	**11.80**	**246**	Pn	**Pn**	**09 55 44.6**	**-0.9**
NB2	**NORSAR Subarra**	**11.80**	**246**	Pn	**Pn**	**09 55 44.6**	**-0.9**
	SNR=50						
NOA	**NORSAR Array B**	**11.80**	**246**	Pn	**Pn**	**09 55 43.9**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=40,slow=11,SNR=4.5						

*CSEM **03** 09:53:57.9±0.3, 33°.42N×35°.57E, h10km, ML2.7, Error ellipse: s-maj=6.1km s-min=4.0km az=65.0*
*ISCJB **03** 09:53:58.1±0.8, 33°.43N±0°.04×35°.59E±0°.05, h10km±6km, Error ellipse: s-maj=8.0km s-min=6.0km az=31.0*
*NSSC **03** 09:53:58.6±1.1, 33°.40N×35°.60E, h11km±5km, MD1.1, ML1.9*
*GRAL **03** 09:53:58.9±0.3, 33°.42N×35°.61E, h0km±46km, MD2.7*
ISC 03 09:53:58.1±1.0, **33°.43N**±0°.03×**35°.61E**±0°.04, **h12**km±8km, **n18**, σ**0s.38**/32, **Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RCY	**Rachaya**	**0.20**	**69**	*e*P	**Pg**	**09 54 02.5**	**-0.2**
RCY				*e*S	**Sg**	**09 54 05.3**	**-0.5**
MATL	**Matarih**	**0.24**	**285**	*e*P	**Pg**	**09 54 03.3**	**+0.1**
MATL	**Matarih**	**0.24**	**285**	*e*P	**Pg**	**09 54 03.3**	**+0.1**
BRBR	**Barbar**	**0.29**	**93**	*e*P	**Pg**	**09 54 04.0**	**-0.1**
BRBR				*e*S	**Sg**	**09 54 08.8**	**+0.7**
BRBR				AML	AML	09 54 11.0	
	comp=N,158nm,0.3s						
BRBR				AML	AML	09 54 11.9	
	comp=E,74nm,0.3s						
BHL	**Bhannes**	**0.48**	**5**	*e*P	**Pg**	**09 54 07.7**	**+0.1**
BHL				*e*S	**Sg**	**09 54 14.0**	**0.0**
BHL	**Bhannes**	**0.48**	**5**	*e*P	**Pg**	**09 54 07.7**	**+0.1**
BHL				*e*S	**Sg**	**09 54 14.0**	**0.0**
QASN	**Qassioun**	**0.57**	**79**	*e*P	**Pb**	**09 54 10.1**	**+0.1**
QASN				*e*S	**Sb**	**09 54 19.0**	**+0.9**
QASN				AML	AML	09 54 23.1	
	comp=N,130nm,0.3s						
QASN				AML	AML	09 54 27.9	
	comp=E,154nm,0.4s						
QASN	**Qassioun**	**0.57**	**79**	*e*P	**Pb**	**09 54 10.1**	**+0.1**
	SNR=75						
QASN				*e*S	**Sb**	**09 54 19.0**	**+0.9**
	comp=E,154nm,0.4s,SNR=59						
TOTH	**TOTAH**	**0.69**	**95**	*e*P	**Pb**	**09 54 12.2**	**+0.1**
TOTH				*e*S	**Sb**	**09 54 21.7**	**+0.2**
TOTH				AML	AML	09 54 30.1	
	comp=N,219nm,0.4s						
TOTH				AML	AML	09 54 30.2	
	comp=E,31nm,0.3s						
TOTH	**TOTAH**	**0.69**	**95**	*e*P	**Pb**	**09 54 12.2**	**+0.1**
	SNR=75						
TOTH				*e*S	**Sb**	**09 54 21.7**	**+0.2**
	comp=E,31nm,0.3s,SNR=59						
TCHB	**Talchebab**	**0.81**	**158**	*e*P	**Pg**	**09 54 14.0**	**+0.2**
TCHB				*e*S	**Sb**	**09 54 24.9**	**-0.1**
TCHB				AML	AML	09 54 31.8	
	comp=N,45nm,0.5s						
TCHB				AML	AML	09 54 32.9	
	comp=E,44nm,0.4s						
TCHB	**Talchebab**	**0.81**	**158**	*e*P	**Pg**	**09 54 14.0**	**+0.2**
	SNR=75						
TCHB				*e*S	**Sb**	**09 54 24.9**	**-0.1**
	comp=E,44nm,0.4s,SNR=59						
HWQ	**Hawqa**	**0.90**	**18**	*e*P	**Pg**	**09 54 15.1**	**-0.4**
HWQ	**Hawqa**	**0.90**	**18**	*e*P	**Pg**	**09 54 15.1**	**-0.4**
SALA	**Sala**	**1.18**	**127**	*e*P	**Pn**	**09 54 20.3**	**-0.3**
SALA				*e*S	**Sb**	**09 54 35.2**	**-0.7**
SALA				AML	AML	09 54 39.4	
	comp=E,1.8nm,0.3s						
SALA				AML	AML	09 54 42.0	
	comp=N,278nm,0.2s						
SALA	**Sala**	**1.18**	**127**	*e*P	**Pn**	**09 54 20.3**	**-0.3**
	SNR=57						
SALA				*e*S	**Sb**	**09 54 35.2**	**-0.7**
	comp=N,278nm,0.2s,SNR=49						
ZALF	**Zalf**	**1.53**	**109**	*e*P	**Pb**	**09 54 26.7**	**+0.3**
ZALF				*e*S	**Sb**	**09 54 45.8**	**0.0**
ZALF				AML	AML	09 54 51.1	
	comp=N,11nm,0.6s						
ZALF				AML	AML	09 54 51.7	
	comp=E,18nm,0.3s						
ZALF	**Zalf**	**1.53**	**109**	*e*P	**Pb**	**09 54 26.7**	**+0.3**
	SNR=57						
ZALF				*e*S	**Sb**	**09 54 45.8**	**0.0**
	comp=E,18nm,0.3s,SNR=49						

KRSC 03 09:54:19.9±1.2, **49°.83N**×**159°.74E**, **h30**km±30km, **ML3.8**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**2.72**	**344**	*e*P	Pn	09 55 03.1	+1.6
RUS				*i* S	Sn	09 55 34.2	+0.9
MTVR	**Mutnovka**	**2.83**	**340**	*e*P	Pn	09 55 05.1	+1.8
MTVR				*i* S	Sn	09 55 38.5	+2.0
GRL	**Gorelyy**	**2.92**	**340**	*e*P	Pn	09 55 07.0	+2.6
GRL				*i* S	Sn	09 55 41.1	+2.5
SPN	**Mys Shipunski**	**3.28**	**3**	*e*P	Pn	09 55 11.8	+2.6
SPN				*i* S	Sn	09 55 49.2	+2.1
UGLR	**Uglovaya**	**3.43**	**351**	*e*P	Pn	09 55 14.1	+2.7
UGLR				*i* S	Sn	09 55 53.3	+2.1
SMAR	**Somma**	**3.49**	**351**	*e*P	Pn	09 55 15.5	+3.1
SDLR	**Sedlovina**	**3.49**	**352**	*e*P	Pn	09 55 15.1	+2.8
SDLR				*i* S	Sn	09 55 54.9	+2.1
APC	**Apacha**	**3.50**	**333**	*e*P	Pn	09 55 14.7	+2.6
AVH	**Avacha**	**3.50**	**350**	*e*P	Pn	09 55 15.1	+2.8
AVH				*i* S	Sn	09 55 55.1	+2.4
KRER	**Koryakskii**	**3.53**	**350**	*e*P	Pn	09 55 15.7	+2.7
KOK	**Koryaka**	**3.54**	**349**	*e*P	Pn	09 55 15.6	+2.8
KOK				*i* S	Sn	09 55 55.5	+1.8
GNL	**Ganaly**	**4.03**	**345**	*e*P	Pn	09 55 22.8	+3.1
GNL				*i* S	Sn	09 56 08.3	+2.4
KII	**Karymskiy**	**4.22**	**358**	*e*P	Pn	09 55 25.3	+3.1
KII				*i* S	Sn	09 56 13.7	+3.3
MKZ	**Mys Kozlova**	**4.89**	**14**	*e*P	Pn	09 55 33.7	+2.4
MKZ				*i* S	Sn	09 56 27.8	+1.0
TUMR	**Tumrok**	**5.47**	**2**	*e*P	Pn	09 55 43.8	+4.4
KMNR	**Kamenistaya**	**5.94**	**3**	*e*P	Pn	09 55 50.3	+4.4
SRDR	**Sredinnyy**	**6.50**	**360**	*e*P	Pn	09 55 58.2	+4.7
KBTR	**Krutoberegovo**	**6.65**	**15**	*e*P	Pn	09 55 58.8	+3.3

*ISCJB **03** 10:03:54.8±0.7, 8°.64S±0°.05×129°.0E±0°.1, h33km, mb3.5/2, Error ellipse: s-maj=16.6km s-min=6.5km az=177.3*
*DJA **03** 10:04:01.8±0.4, 9°S±3°×12°9E±°, h204km±12km, M4.2/5, mb3.8/5, MLv4.4/4*
*IDC **03** 10:04:07.0±10.0, 8°.98S×128°.95E, h146km±118km, mb3.2/2, mb1 3.3/5, mb1mx3.2/19, mbtmp3.2/5, ML3.8/3, Error ellipse: s-maj=77.3km s-min=40.6km az=18.0*
ISC 03 10:03:58.0±0.9, **8°.59S**±0°.06×**129°.1E**±0°.1, **h35**km, **n10**, σ**1s.89**/12, **Timor Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**4.66**	**51**	P	**Sn**	**10 05 58.4**	**-0.4**
NLAI	**Namlea**	**5.67**	**339**	P	Pn	10 05 24.7	+5.0
	28nm,0.7s,0.1nm						
FAKI	**Fak Fak**	**6.45**	**29**	P	**Pn**	**10 05 30.8**	**+0.3**
	23nm,0.7s,0.1nm						
SWI	**Sorong**	**7.97**	**16**	P	**Pn**	**10 05 53.0**	**+1.6**
	13nm,0.6s,0.1nm						
FITZ	**Fitzroy Crossi**	**10.04**	**199**	P	**Pn**	**10 06 22.1**	**+2.4**
	0.6nm,0.3s,baz=26,slow=13,SNR=35						
FITZ				S	**Sn**	**10 08 10.1**	**-1.1**
	2.4nm,0.3s,baz=93,slow=18,SNR=6.5						
WRA	**Warramunga Arr**	**12.38**	**156**	P	**Pn**	**10 06 53.8**	**+1.9**
	0.6nm,0.3s,baz=327,slow=14,SNR=41						
WRA				S	**Sn**	**10 09 08.2**	**-0.4**
	1.6nm,0.3s,baz=331,slow=22,SNR=12						
ASAR	**Alice Springs**	**15.69**	**163**	P	**Pn**	**10 07 37.5**	**+1.0**
	0.3nm,0.3s,baz=333,slow=9.4,SNR=25						
ASAR				S	**Sn**	**10 10 26.4**	**-3.0**
	0.3nm,0.3s,baz=343,slow=25,SNR=4.4						
MKAR	**Makanchi Array**	**69.06**	**328**	P	**P**	**10 14 58.3**	**-1.9**
	0.4nm,0.8s,baz=131,slow=6.5,SNR=3.4						
ZALV	**Zalesovo Beam**	**72.60**	**334**	P	**P**	**10 15 19.9**	**-1.7**
	0.3nm,0.3s,baz=97,slow=4.8,SNR=2.7						
KURBB	**Kurchatov Arra**	**73.39**	**329**	P	**P**	**10 15 24.9**	**-1.4**
	53nm,0.2s,baz=120,slow=5.5,SNR=2.8						

*IDC **03** 10:06:59.0±0.9, 59°.60S×26°.09W, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.8/17, mbtmp3.8/6, ML3.9/1, Error ellipse: s-maj=44.5km s-min=22.8km az=83.0*
ISC 03 10:07:03.0±1.2, **59°.8S**±0°.2×**24°.1W**±0°.4, **h10**km, **n14**, σ**1s.82**/8, **mb3.9**/5, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.68**	**156**	*e*Pn	Pn	10 10 10.6	+7.6
VNA3	**Neumayer Olymp**	**12.88**	**159**	*e*Pn	Pn	10 10 11.3	+5.4
VNA3	**Neumayer Olymp**	**12.88**	**159**	*e*Sn	**Sn**	**10 12 28.7**	**-0.3**
VNA2	**Neumayer--Watz**	**13.07**	**155**	*e*Pn	Pn	10 10 14.8	+6.3
	baz=315,slow=13						
SNAA	**Sanae**	**14.63**	**153**	*e*Pn	Pn	10 10 35.4	+5.7
SNAA	**Sanae**	**14.63**	**153**	Pn	**P**	**10 10 35.6**	**-0.5**
	0.5nm,0.3s,baz=309,slow=13,SNR=36						
SNAA				Sn	**Sn**	**10 13 13.6**	**+1.9**
	0.1nm,0.3s,baz=311,slow=18,SNR=5.9						
QSPA	**South Pole Qui**	**30.43**	**180**	P	P	10 13 15.0	-0.3
	1.0nm,0.7s,baz=216,slow=4.0,SNR=8.8						
VNDA	**Vanda**	**42.87**	**182**	P	**P**	**10 15 00.4**	**-0.3**
	0.7nm,0.6s,baz=183,slow=9.0,SNR=6.8						
LPAZ	**La Paz**	**53.89**	**304**	P	P	10 16 17.4	-10
	0.5nm,0.4s,baz=68,slow=7.1,SNR=4.6						
TORD	**Torodi Ar. Bea**	**75.62**	**26**	P	**P**	**10 18 47.6**	**-0.3**
	0.3nm,0.3s,baz=198,slow=6.3,SNR=11						
ASAR	**Alice Springs**	**94.89**	**160**	P	**P**	**10 20 23.9**	**-1.3**
	0.3nm,0.6s,baz=185,slow=4.8,SNR=6.4						
YKA	**Yellowknife Ar**	**140.03**	**314**	PKP	PKPdf	10 26 24.3	-5.6
	0.1nm,0.5s,baz=134,slow=2.6,SNR=3.8						
SONM	**Songino Array**	**149.17**	**90**	PKPbc	**PKPbc**	**10 26 50.3**	**-0.4**
	0.6nm,0.4s,baz=230,slow=2.1,SNR=6.6						
ILAR	**Eielson Array**	**153.76**	**305**	PKPbc	**PKPdf**	**10 26 55.9**	**+3.2**
	0.2nm,0.4s,baz=111,slow=1.3,SNR=5.2						

*ISK **03** 10:15:08.7, 39°.41N×28°.14E, h8km, MD2.7*
*ISCJB **03** 10:15:09.1±0.6, 39°.43N±0°.04×28°.14E±0°.04, h0km, Error ellipse: s-maj=6.1km s-min=3.2km az=27.9*
*DDA **03** 10:15:09.4, 39°.48N×28°.16E, h8km, MD3.0*
*CSEM **03** 10:15:09.3±0.2, 39°.43N×28°.13E, h1km, MD3.0, Error ellipse: s-maj=5.1km s-min=2.7km az=32.0*
ISC 03 10:15:09.2±0.9, **39°.42N**±0°.03×**28°.14E**±0°.02, **h0**km, **n34**, σ**0s.69**/48, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.30**	**317**	*e*PG	**Pg**	**10 15 15.5**	**+0.6**
BALB				*e*SG	**Sg**	**10 15 20.1**	**+1.4**
BALB	**Balikesir**	**0.30**	**317**	*e*Pg	**Pg**	**10 15 15.5**	**+0.6**
BALB				*e*Sg	**Sg**	**10 15 20.1**	**+1.4**
DURS	**Dursunbey**	**0.31**	**55**	*i* P	**Pg**	**10 15 14.8**	**-0.4**
DURS				*i* S	**Sg**	**10 15 19.6**	**+0.3**
DURS	**Dursunbey**	**0.31**	**55**	*i* P	**Pg**	**10 15 14.8**	**-0.4**
DURS				*i* S	**Sg**	**10 15 19.6**	**+0.3**
DST	**Dursunbey**	**0.41**	**64**	*e*PG	**Pg**	**10 15 17.2**	**+0.1**
DST				*e*SG	**Sg**	**10 15 23.7**	**+1.3**
DST	**Dursunbey**	**0.41**	**64**	*e*Pg	**Pg**	**10 15 17.2**	**+0.1**
DST				*e*Sg	**Sg**	**10 15 23.7**	**+1.3**
BALY	**Balya**	**0.51**	**308**	*i* P	**Pg**	**10 15 18.5**	**-0.5**
BALY				*i* S	**Sg**	**10 15 27.1**	**+1.4**
BALY	**Balya**	**0.51**	**308**	*i* P	**Pg**	**10 15 18.5**	**-0.5**
BALY				*i* S	**Sg**	**10 15 27.1**	**+1.4**
DEMI	**Demirci**	**0.59**	**130**	*i* P	**Pg**	**10 15 21.2**	**+0.8**
DEMI				*i* S	**Sb**	**10 15 30.0**	**-1.3**
DEMI	**Demirci**	**0.59**	**130**	*i* P	**Pg**	**10 15 21.2**	**+0.8**
DEMI				*i* S	**Sb**	**10 15 30.0**	**-1.3**
GONE	**Gonen-Balikesi**	**0.71**	**331**	*e*PG	**Pg**	**10 15 22.6**	**-0.3**
GONE	**Gonen-Balikesi**	**0.71**	**331**	*e*Pg	**Pg**	**10 15 22.6**	**-0.3**
ORLT	**Orhaneli**	**0.85**	**43**	*e*PG	**Pg**	**10 15 25.7**	**+0.2**
ORLT	**Orhaneli**	**0.85**	**43**	*e*Pg	**Pg**	**10 15 25.7**	**+0.2**
EDC	**Edincik**	**0.95**	**347**	*e*PG	**Pg**	**10 15 27.6**	**+0.3**
EDC	**Edincik**	**0.95**	**347**	*e*Pg	**Pg**	**10 15 27.6**	**+0.3**
KULA	**Kula-Manisa**	**0.99**	**156**	*e*PG	**Pg**	**10 15 27.9**	**-0.3**
KULA	**Kula-Manisa**	**0.99**	**156**	*e*Pg	**Pg**	**10 15 27.9**	**-0.3**
TVSB	**Tavsanli**	**1.02**	**88**	*e*PG	**Pg**	**10 15 29.4**	**+0.6**
TVSB	**Tavsanli**	**1.02**	**88**	*e*Pg	**Pg**	**10 15 29.4**	**+0.6**
GDZ	**Gediz**	**1.09**	**107**	*i* P	**Pb**	**10 15 30.9**	**-0.1**
GDZ				*i* S	**Sb**	**10 15 46.4**	**+0.5**
GDZ	**Gediz**	**1.09**	**107**	*i* P	**Pb**	**10 15 30.9**	**-0.1**
GDZ				*i* S	**Sb**	**10 15 46.4**	**+0.5**
ARMT	**Armutlu**	**1.27**	**26**	*e*PN	**Pg**	**10 15 33.3**	**-0.2**
ARMT	**Armutlu**	**1.27**	**26**	*e*Pn	**Pg**	**10 15 33.3**	**-0.2**
GEMT	**Gemlik**	**1.29**	**38**	*e*PN	**Pg**	**10 15 33.8**	**-0.2**
GEMT	**Gemlik**	**1.29**	**38**	*e*Pn	**Pg**	**10 15 33.8**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.46**	**330**	*e*PN	**Pn**	**10 15 36.2**	**-0.7**
RKY	**Sarkoy-Tekirda**	**1.46**	**330**	*e*Pn	**Pn**	**10 15 36.2**	**-0.7**
YLV	**Yalova**	**1.48**	**39**	*e*PN	**Pn**	**10 15 37.2**	**0.0**
YLV	**Yalova**	**1.48**	**39**	*e*Pn	**Pn**	**10 15 37.2**	**0.0**
GELI	**Tayfur-Gelibol**	**1.61**	**308**	*e*PN	**Pn**	**10 15 38.4**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.61**	**308**	*e*Pn	**Pn**	**10 15 38.4**	**-0.5**
BORA	**Eskisehir**	**1.84**	**75**	*i* P	**Pb**	**10 15 43.3**	**-0.5**
BORA				*i* S	**Sn**	**10 16 06.2**	**-0.1**
BORA	**Eskisehir**	**1.84**	**75**	*i* P	**Pb**	**10 15 43.3**	**-0.5**
BORA				*i* S	**Sn**	**10 16 06.2**	**-0.1**

*IDC **03** 10:53:37.0±0.9, 19°.02S×173°.59W, h0km, mb4.3/13, mb1 4.4/14, mb1mx4.3/25, mbtmp4.3/14, ML2.4/1, MS3.8/2, Ms1 3.8/2, ms1mx3.2/25, Error ellipse: s-maj=29.7km s-min=17.0km az=132.0*
*NEIC **03** 10:53:38.4±0.6, 19°.02S×173°.54W, h10km, mb4.6/3, Error ellipse: s-maj=19.7km s-min=9.7km az=131.0*
*AUST **03** 10:53:41.0±0.0, 19°.38S×172°.94W, h44km, Error ellipse: s-maj=4.9km s-min=1.3km az=3.0*
ISC 03 10:53:41.4±0.8, **18°.9S**±0°.1×**173°.5W**±0°.1, **h28**km, **n58**, σ**1s.31**/56, **mb4.4**/14, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.41**	**94**	P	Pn	10 54 24.3	-8.5
	baz=2.9,SNR=4.9						
AFI	**Afiamalu**	**5.23**	**19**	Pn	**Pn**	**10 54 57.3**	**-0.6**
AFI				Sn	**Sn**	**10 55 54.4**	**-2.9**
AFI	**Afiamalu**	**5.23**	**19**	Pn	**Pn**	**10 54 57.3**	**-0.6**
	7.9nm,0.3s,baz=214,slow=18,SNR=4.7						
AFI				Sn	**Sn**	**10 55 54.4**	**-2.9**
	11nm,0.3s,baz=102,slow=20,SNR=3.2						
MSVF	**Nonsavu**	**8.08**	**277**	*e*Pn	Pn	10 55 46.2	+9.2
RAR	**Rarotonga**	**13.13**	**102**	Pn	Pn	10 56 33.8	-12
RAR	**Rarotonga**	**13.13**	**102**	Pn	Pn	10 56 33.8	-12
	8.5nm,0.3s,baz=270,slow=11,SNR=9.9						
DZM	**Mont Dzumac**	**19.03**	**257**	*e*LR	LR	11 02 27.5	
	161nm,21.3s						
DZM	**Mont Dzumac**	**19.03**	**257**	P	**Pn**	**10 58 02.9**	**+0.7**
DZM	**Mont Dzumac**	**19.03**	**257**	P	**Pn**	**10 58 02.9**	**+0.7**
	0.5nm,0.3s,baz=86,slow=19,SNR=4.6						
URZ	**Urewera**	**20.95**	**201**	P	**P**	**10 58 19.5**	**-2.6**
URZ	**Urewera**	**20.95**	**201**	P	**P**	**10 58 19.5**	**-2.6**
	6.0nm,0.4s,baz=322,slow=5.0,SNR=17						
PPT2	**Papeete2**	**22.78**	**91**	*e*LR	LR	11 03 32.3	
	200nm,27.5s						
PPT	**Papeete**	**22.79**	**91**	LR	LR	11 04 26.0	
	comp=Z,140nm,19.4s,baz=255,slow=28						
TBI	**Tubuai**	**22.88**	**105**	*e*LR	LR	11 03 36.3	
	143nm,31.5s						
RPZ	**Rata Peaks**	**27.94**	**204**	P	**P**	**10 59 28.6**	**-0.7**
RPZ	**Rata Peaks**	**27.94**	**204**	P	**P**	**10 59 28.6**	**-0.7**
	7.6nm,0.7s,baz=20,slow=18,SNR=3.3						
CTA	**Charters Tower**	**37.87**	**261**	P	**P**	**11 00 55.5**	**-0.7**
CTA	**Charters Tower**	**37.87**	**261**	P	**P**	**11 00 55.5**	**-0.7**
	5.7nm,0.4s,baz=74,slow=7.4,SNR=18						
CTAO	**Charters Tower**	**37.87**	**261**	*e*P	**P**	**11 00 55.5**	**-0.7**
	12nm,0.8s						
PMG	**Port Moresby**	**39.19**	**278**	P	**P**	**11 01 06.6**	**-0.7**
PMG	**Port Moresby**	**39.19**	**278**	P	**P**	**11 01 06.6**	**-0.7**
	12nm,0.9s,baz=143,slow=8.5,SNR=4.2						
TOO	**Toolangi**	**40.24**	**234**	P	**P**	**11 01 14.4**	**-1.5**
	baz=40,SNR=4.1						
COEN	**Coen**	**41.74**	**270**	P	**P**	**11 01 28.9**	**+0.5**
	baz=42,SNR=4.7						
AS31	**Alice Springs**	**48.99**	**255**	*e*P	**P**	**11 02 24.6**	**-1.4**
ASAR	**Alice Springs**	**48.99**	**255**	P	**P**	**11 02 24.6**	**-1.4**
ASAR				PcP	**PcP**	**11 03 49.9**	**+0.1**
ASAR	**Alice Springs**	**48.99**	**255**	P	**P**	**11 02 24.6**	**-1.4**
	10nm,0.8s,baz=95,slow=7.8,SNR=82						
ASAR				PcP	**PcP**	**11 03 49.9**	**+0.1**
	0.9nm,0.7s,baz=91,slow=5.6,SNR=3.5						
WRAB	**Tennant Creek**	**49.00**	**260**	*e*P	**P**	**11 02 24.3**	**-1.7**
	1.6nm,0.4s						
WRA	**Warramunga Arr**	**49.01**	**260**	P	**P**	**11 02 24.4**	**-1.7**
WRA				PcP	**PcP**	**11 03 49.3**	**-0.6**
WRA	**Warramunga Arr**	**49.01**	**260**	P	**P**	**11 02 24.4**	**-1.7**
	1.6nm,0.4s,baz=97,slow=7.3,SNR=97						
WRA				PcP	**PcP**	**11 03 49.3**	**-0.6**
	0.5nm,0.6s,baz=95,slow=3.4,SNR=2.9						
KDU	**Kakadu**	**52.17**	**268**	P	**P**	**11 02 49.6**	**-0.3**
	baz=53,SNR=3.1						
MTN	**Manton Dam**	**53.40**	**268**	P	**P**	**11 02 59.6**	**+0.6**
	baz=54,SNR=5.5						
FITZ	**Fitzroy Crossi**	**57.43**	**260**	P	**P**	**11 03 27.3**	**-0.7**
FITZ	**Fitzroy Crossi**	**57.43**	**260**	P	**P**	**11 03 27.3**	**-0.7**
	2.7nm,0.7s,baz=136,slow=7.4,SNR=9.0						
FITZ	**Fitzroy Crossi**	**57.43**	**260**	P	**P**	**11 03 27.6**	**-0.5**
	baz=58,SNR=6.5						
KLBR	**Kellerberrin**	**62.54**	**244**	P	**P**	**11 04 03.3**	**+0.3**
	baz=63,SNR=5.7						
BLDU	**Ballidu**	**63.55**	**245**	P	**P**	**11 04 09.1**	**-0.6**
	baz=64,SNR=4.6						
MORW	**Morawa**	**64.33**	**246**	P	**P**	**11 04 14.5**	**-0.4**
	baz=65,SNR=3.3						
MJAR	**Matsushiro Arr**	**71.53**	**321**	P	**P**	**11 04 59.6**	**-0.2**
MJAR	**Matsushiro Arr**	**71.53**	**321**	P	**P**	**11 04 59.6**	**-0.2**
	1.7nm,0.7s,baz=166,slow=6.2,SNR=7.4						
KSM	**Kuching**	**77.40**	**276**	P	**P**	**11 05 37.0**	**+2.5**
	baz=78,SNR=3.1						
KSRS	**Korea Array**	**78.56**	**316**	P	**P**	**11 05 42.6**	**+2.2**
	2.2nm,1.0s,baz=136,slow=6.0,SNR=6.2						
KSAR	**Wonju Array Be**	**78.58**	**316**	P	**P**	**11 05 42.6**	**+2.1**
TXAR	**Lajitas Array**	**82.66**	**56**	P	**P**	**11 06 03.0**	**+0.2**
TXAR	**Lajitas Array**	**82.66**	**56**	P	**P**	**11 06 02.9**	**+0.2**
	0.2nm,0.8s,baz=206,slow=8.0,SNR=3.6						
COLA	**College**	**85.80**	**11**	*e*P	**P**	**11 06 19.2**	**+1.6**
	4.3nm,0.9s						
ILAR	**Eielson Array**	**85.88**	**11**	P	**P**	**11 06 19.2**	**+1.1**
ILAR	**Eielson Array**	**85.88**	**11**	P	**P**	**11 06 19.2**	**+1.1**
	0.9nm,0.8s,baz=227,slow=5.9,SNR=14						
YKA	**Yellowknife Ar**	**93.33**	**23**	P	**P**	**11 06 54.4**	**+1.1**
YKA	**Yellowknife Ar**	**93.33**	**23**	P	**P**	**11 06 54.4**	**+1.1**
	0.1nm,0.7s,baz=241,slow=4.6,SNR=2.5						
CMAR	**Chiang Mai Arr**	**93.58**	**288**	P	**P**	**11 06 56.0**	**+0.4**
CMAR	**Chiang Mai Arr**	**93.58**	**288**	P	**P**	**11 06 56.0**	**+0.4**
	0.6nm,0.3s,baz=94,slow=3.6,SNR=3.2						
ULM	**Lac du Bonnet**	**96.71**	**39**	LR	LR	11 46 44.4	
	comp=Z,80nm,19.1s,baz=234,slow=33						
CLL	**Collm**	**147.24**	**352**	*e*PKPbc	**PKPab**	**11 13 23.0**	**-0.7**
CLL				*e*pPKPbc	**PKiKP**	**11 13 26.0**	**+1.7**
CLL				*e*		11 13 34.0	
BRG	**Berggiesshubel**	**147.54**	**351**	*e*P	**PKPab**	**11 13 28.0**	**+3.1**
	5.7nm,1.0s						
BRTR	**Keskin Array B**	**148.71**	**317**	PKPbc	**PKPbc**	**11 13 25.9**	**-0.5**
BRTR	**Keskin Array B**	**148.71**	**317**	PKPbc	**PKPbc**	**11 13 25.9**	**-0.5**
	1.6nm,0.8s,baz=116,slow=2.8,SNR=8.5						
GERES	**GERESS Array B**	**149.55**	**351**	PKPbc	**PKPbc**	**11 13 28.4**	**+0.2**
GERES	**GERESS Array B**	**149.55**	**351**	PKPbc	**PKPbc**	**11 13 28.5**	**+0.2**
	0.2nm,0.3s,baz=345,slow=3.0,SNR=3.5						

*NIED **03** 11:40:00, 44°.80N×149°.30E, h59km, Mw4.1 Best double couple: $M_0$1.38000×10^15 NP1:ϕ_s234.00000°, δ82.00000°, λ109.00000°. NP2:ϕ_s347.00000°, δ20.00000°, λ24.00000°.*
*ISCJB **03** 11:40:08.0±0.9, 44°.42N±0°.08×149°.39E±0°.08, h89km±10km, mb3.7/13, Error ellipse: s-maj=13.7km s-min=7.8km az=155.7*
*JMA **03** 11:40:07.8±0.4, 44°.84N×149°.34E, h30km, M4.5*
*MOS **03** 11:40:07.0±1.1, 44°.92N×149°.36E, h55km, mb4.3/4, Error ellipse: s-maj=15.2km s-min=9.5km az=136.0*
*IDC **03** 11:40:10.1±2.1, 44°.93N×149°.34E, h72km±20km, mb3.5/13, mb1 3.8/19, mb1mx3.7/31, mbtmp3.6/19, MS2.9/2, Ms1 2.9/2, ms1mx2.3/48, Error ellipse: s-maj=21.0km s-min=11.4km az=147.0*
ISC 03 11:40:06.3±1.3, **44°.38N**±0°.07×**149°.59E**±0°.07, **h60**km±14km, **n57**, σ**2s.04**/69, **mb3.8**/13, **3D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.50**	**305**	⇓*i*PN	Pn	11 40 25.5	-5.4
KUR				*e*S	Sn	11 40 41.0	-8.4
KUR				pmax	pmax		
	comp=Z,1μm,0.9s						
KUR				smax	smax		
	comp=N,6μm,1.0s						
KUR				smax	smax		
	comp=E,1μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**2.71**	**264**	*d i*PN	**Pn**	**11 40 49.2**	**+1.8**
YUK				*i* S	**Sn**	**11 41 19.0**	**+0.1**
YUK				pmax	pmax		
	comp=N,104nm,0.4s						
YUK				pmax	pmax		
	comp=E,127nm,0.4s						
YUK				pmax	pmax		
	comp=Z,160nm,0.4s						
YUK				smax	smax		
	comp=N,1.0nm,0.7s						
NEM2	**Nemuro 2**	**2.96**	**251**	P	**Pn**	**11 40 51.8**	**+0.9**
NEM2				*e*S	**Sn**	**11 41 24.2**	**-1.0**
JRA	**Rausu**	**3.25**	**264**	P	**Pn**	**11 40 56.6**	**+1.8**
JRA				*e*S	**Sn**	**11 41 33.5**	**+1.3**
JNK	**Nakash**	**3.60**	**259**	P	**Pn**	**11 41 01.4**	**+1.7**
JNK				*e*S	**Sn**	**11 41 41.3**	**+0.3**
JAK	**Akkeshi**	**3.81**	**250**	P	**Pn**	**11 41 03.9**	**+1.4**
JAK				*e*S	**Sn**	**11 41 44.7**	**-1.3**
JTKR	**Abashiri--Toko**	**4.11**	**266**	P	**Pn**	**11 41 08.4**	**+1.8**
JAR	**Ashorobuto**	**4.35**	**258**	P	**Pn**	**11 41 12.4**	**+2.5**
JAR				*e*S	**Sn**	**11 42 00.4**	**+1.2**
JOB	**Onbets**	**4.43**	**253**	P	**Pn**	**11 41 13.1**	**+2.1**
JOB				*e*S	**Sn**	**11 42 00.7**	**-0.5**
JMP	**Maruseppu**	**4.50**	**267**	P	**Pn**	**11 41 13.7**	**+1.8**
JCH	**Churui**	**4.86**	**251**	P	**Pn**	**11 41 18.7**	**+1.8**
JCH				*e*S	**Sn**	**11 42 10.8**	**-1.1**
JKK2	**Kamakawa 2**	**4.95**	**267**	P	**Pn**	**11 41 20.5**	**+2.3**
ASAJ	**Asahikawa**	**5.03**	**269**	P	**Pn**	**11 41 21.5**	**+2.2**
ASAJ	**Asahikawa**	**5.03**	**269**	P	**Pn**	**11 41 21.4**	**+2.2**
	comp=N,3.0nm,0.3s,baz=100,slow=17,SNR=27						
ASAJ				S	**Sn**	**11 42 17.0**	**+1.0**
	comp=N,1.1nm,0.3s,baz=75,slow=20,SNR=2.2						
ASAJ				LR	LR	11 43 08.4	
	comp=N,89nm,20.5s,baz=15,slow=36						
JSE	**Soyaes**	**5.03**	**279**	P	**Pn**	**11 41 19.4**	**+0.2**
JFR	**Furan**	**5.21**	**259**	P	**Pn**	**11 41 24.5**	**+2.8**

JEM Erimo 5.26 246 P Pn 11 41 25.9 +3.5
JEM eS Sn 11 42 23.2 +1.5
ERM Erimo 5.26 246 i PN Pn 11 41 25.8 +3.4
JAB Ashibetsu 5.39 263 P Pn 11 41 27.5 +3.4
JNBK Urakawa-nobuka 5.41 250 P Pn 11 41 25.9 +1.5
JNBK eS Sn 11 42 23.6 -1.7
YSS Yuzh-Sakhalins 5.44 301⇓ePN Pn 11 41 24.0 -0.8
YSS eS Sn 11 42 20.5 -5.4
YSS pmax pmax
comp=Z,40nm,0.5s
YSS smax smax
comp=N,20nm,0.8s
YSS smax smax
comp=E,30nm,0.9s
JBT2 Biratori 2 5.49 256 P Pn 11 41 27.5 +2.0
JBT2 eS Sn 11 42 24.3 -2.9
JWK2 Keihoku 5.55 282 P Pn 11 41 28.5 +2.2
JEW Eniwo 6.11 258 P Pn 11 41 36.6 +2.6
JEW eS Sn 11 42 43.8 +1.4
JNB Noboribetsu 6.51 256 P Pn 11 41 41.2 +1.7
JNB eS Sn 11 42 51.8 -0.6
JKB Kayabe 6.74 251 P Pn 11 41 44.0 +1.4
JKB eS Sn 11 42 54.8 -3.1
JYM2 Yakumo 2 7.10 255 P Pn 11 41 49.0 +1.4
JYM2 eS Sn 11 43 04.0 -2.8
JANG Nango 7.20 239 P Pn 11 41 49.4 +0.5
JANG eS Sn 11 43 04.9 -4.2
JTM Tenmabayashi 7.24 243 P Pn 11 41 51.1 +1.6
JTM eS Sn 11 43 06.6 -3.6
JTH Tanohata 7.25 235 eS Sn 11 43 06.0 -4.6
JSR Shiriuchi 7.31 250 P Pn 11 41 51.4 +1.0
JSR eS Sn 11 43 07.9 -3.9
JOSM Okushiri--Mats 7.74 256 P Pn 11 41 57.4 +1.2
OFUJ Ofunato 7.94 231 P Pn 11 42 00.0 +0.9
JRG Rokugo 8.33 236 P Pn 11 42 05.9 +1.5
JRG eS Sn 11 43 32.4 -4.6
JIO Ouri 8.56 229 P Pn 11 42 08.8 +1.2
JIO eS Sn 11 43 37.9 -4.8
JFK Kawauchi 9.62 226 eS Sn 11 44 04.8 -3.8
PETK Petropavlovsk- 10.24 29 PN Pn 11 42 28.5 -1.9
PETK pmax pmax
comp=Z,1.0nm,0.3s
PETK Petropavlovsk- 10.24 29 P Pn 11 42 28.5 -1.9
comp=Z,1.3nm,0.3s,baz=212,slow=16,SNR=42
MAJO Matsushiro 11.67 232 i PN Pn 11 42 57.4 +7.3
MJAR Matsushiro Arr 11.67 232 P Pn 11 42 56.6 +6.6
comp=Z,0.2nm,0.3s,baz=24,slow=14,SNR=3.7
USRK Ussuriysk Arra 12.61 275 P Pn 11 43 03.8 +1.0
comp=Z,0.2nm,0.3s,baz=86,slow=12,SNR=6.7
FX1 Attu Island--F 17.69 53 P P 11 44 09.1 +0.7
comp=Z,1.1nm,0.3s,baz=311,slow=9.3,SNR=2.5
KSRS Korea Array 17.75 255 P Pn 11 44 11.8 +2.6
comp=Z,0.2nm,0.3s,baz=58,slow=10,SNR=7.4
KSRS LR LR 11 51 59.7
comp=Z,50nm,18.4s,baz=169,slow=40
SONM Songino Array 29.86 292 P P 11 46 07.1 -0.9
comp=Z,0.4nm,0.5s,baz=78,slow=7.1,SNR=3.8
KDAK Kodiak Island 37.52 48 P P 11 47 14.1 0.0
comp=Z,7.7nm,0.9s,baz=282,slow=9.3,SNR=4.1
ILAR Eielson Array 39.94 37 P P 11 47 34.0 -0.3
comp=Z,1.0nm,0.6s,baz=266,slow=8.1,SNR=37
INK Inuvik 44.97 31 P P 11 48 14.9 0.0
comp=Z,0.9nm,0.4s,baz=292,slow=7.3,SNR=17
MKAR Makanchi Array 45.85 298 eP P 11 48 21.3 -1.1
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 45.85 298 P P 11 48 21.2 -1.1
comp=Z,0.9nm,0.7s,baz=75,slow=8.0,SNR=13
YKA Yellowknife Ar 54.29 35 P P 11 49 25.9 0.0
comp=Z,1.3nm,0.6s,baz=300,slow=7.1,SNR=31
WRA Warramunga Arr 65.51 196 P P 11 50 49.0 +5.7
comp=Z,0.4nm,0.9s,baz=15,slow=7.0,SNR=2.7
NVAR Mina Array Bea 65.75 59 P P 11 50 46.6 +1.6
comp=Z,1.2nm,0.7s,baz=296,slow=7.2,SNR=5.1
PDAR Pinedale Array 68.15 51 P P 11 51 01.1 +0.8
comp=Z,1.1nm,0.6s,baz=277,slow=1.9,SNR=10
ASAR Alice Springs 69.22 195 P P 11 51 12.1 +5.4
comp=Z,0.4nm,0.9s,baz=12,slow=6.0,SNR=3.5
BRTR Keskin Array B 78.36 315 P P 11 52 00.2 -0.2
comp=Z,0.4nm,0.4s,baz=40,slow=7.7,SNR=3.0
GERES GERESS Array B 79.45 332 P P 11 52 05.3 -0.8
comp=Z,0.3nm,0.4s,baz=52,slow=6.4,SNR=3.3
TXAR Lajitas Array 80.83 58 P P 11 52 15.8 +1.9
comp=Z,1.4nm,0.6s,baz=303,slow=4.2,SNR=32

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*IDC **03** 11:56:28.7±0.6, 33.°62N×82.°45E, h0km, mb4.2/20, mb1 4.4/22, mb1mx4.2/32, mbtmp4.2/22, ML3.4/2, MS3.5/24, Ms1 3.5/24, ms1mx3.4/44, Error ellipse: s-maj=18.1km s-min=13.0km az=41.0*
*MOS **03** 11:56:31.8±1.0, 33.°60N×82.°41E, h33km, mb4.6/24, Error ellipse: s-maj=10.5km s-min=6.1km az=104.0*
*NEIC **03** 11:56:33.8±0.3, 33.°59N×82.°44E, h35km, mb4.7/9, Error ellipse: s-maj=6.6km s-min=5.1km az=53.0*
*NDI **03** 11:56:34.8±2.5, 33.°62N×82.°63E, h33km, ML3.5, mb4.7(NEIC)*
ISC 03 11:56:33.7±0.5**, 33.°63N**±0.°05×**82.°49E**±0.°04**, h33**km±3km**, h33**km**:pP-P, n128,** σ1.s58/137**, mb4.4**/34**, MS3.6**/25**, 1C-2D, Xizang**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
DDI Dehra Dun 5.01 230 eP Pn 11 57 49.5 +2.8
DDI eS Sn 11 58 42.5 -1.0
DDI eS Sb 11 59 13.0 +12
SMLA Simla 5.15 242 eP Pn 11 57 50.2 +1.7
SMLA eS Sn 11 58 46.6 -0.3
SMLA AML AML 11 59 02.6
comp=N,56nm,0.3s
SMLA AML AML 11 59 03.2
comp=E,57nm,0.5s
DHRM DHARAMSHALA 5.39 257 eP Pn 11 57 52.2 +0.3
DHRM eS Sn 11 58 52.5 -0.5
DHRM AML AML 11 59 05.1
comp=N,110nm,0.6s
DHRM AML AML 11 59 06.0
comp=E,97nm,0.6s
THN Thein Dam 5.82 260 eP Pn 11 58 02.0 +4.4
CHCP Chirah Chowk 7.70 273 P Pn 11 58 25.2 +1.7
LSA Lhasa 8.35 116 P Pn 11 58 39.4 +6.5
CEP Cherat 8.82 274 P Pn 11 58 35.9 -3.1
THW Thamme Wali 9.05 268 P Pn 11 58 41.8 -0.3
TKM2 Tokmak 2 10.74 332 eP Pn 11 59 06.8 +1.5
TKM2 pmax pmax
comp=Z,10.0nm,0.9s
TKM2 Tokmak 2 10.74 332 ePn Pn 11 59 06.8 +1.5
comp=Z,10.0nm,0.9s
AAK Ala-Archa 10.97 327⇓iP Pn 11 59 13.2 +4.7
AAK pmax pmax
comp=Z,30nm,1.2s
AAK Ala-Archa 10.97 327 ePn Pn 11 59 09.1 +0.6
comp=Z,40nm,0.9s
AAK Ala-Archa 10.97 327 Pn Pn 11 59 09.0 +0.6
comp=Z,0.1nm,0.3s,baz=143,slow=15,SNR=3.0
AAK LR LR 12 03 44.5
comp=Z,426nm,18.1s,baz=127,slow=40
FRU Bishkek 11.07 328 eP Pn 11 59 15.5 +5.7
FRU pmax pmax
comp=Z,55nm,1.4s
KBL Kabul 11.19 278 eP Pn 11 59 12.0 +0.4
KBL pmax pmax
comp=Z,11nm,0.6s
KBL Kabul 11.19 278 ePn Pn 11 59 12.0 +0.4
comp=Z,11nm,0.6s
MK31 Makanchi Array 13.15 359 eP Pn 11 59 37.6 -0.5
MK31 Makanchi Array 13.15 359 ePn Pn 11 59 37.6 -0.5
MKAR Makanchi Array 13.15 359 P Pn 11 59 36.5 -1.6
MKAR Makanchi Array 13.15 359 Pn Pn 11 59 36.5 -1.6
MKAR Makanchi Array 13.15 359 Pn Pn 11 59 36.5 -1.6
comp=Z,0.4nm,0.3s,baz=178,slow=12,SNR=37
KKAR Karatay Array 13.32 319 eP Pn 11 59 40.8 +0.3
KKAR e 12 02 05.7
KKAR pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 13.32 319 ePn Pn 11 59 40.8 +0.3
comp=Z,2.5nm,0.7s
KKAR eSn Sn 12 02 05.7 -1.6
GTA Gaotai 15.06 63 eP P 12 00 07.1 -2.1
GTA pP pP 12 00 14.1 -3.7
GTA sP sP 12 00 17.3 -4.7
GTA S Sn 12 02 53.9 +3.8
GTA pmax pmax
comp=Z,5.0nm,1.6s
GTA LR LR
comp=N,1μm,11.9s
GTA LR LR
comp=E,650nm,14.7s
GTA LR LR
comp=Z,800nm,14.3s
HYB Hyderabad 16.53 193 eP Pn 12 00 20.5 -2.7
HYB Hyderabad 16.53 193 eP Pn 12 00 20.5 -2.7
HYB Hyderabad 16.53 193 i P Pn 12 00 20.5 -2.7
KURBB Kurchatov Arra 17.23 351 LR LR 12 08 05.9
comp=Z,34nm,21.9s,baz=135,slow=40
KURK Kurchatov 17.31 352⇓iP Pn 12 00 33.0 +0.4
KURK pmax pmax
comp=Z,14nm,1.3s
KURK Kurchatov 17.31 352 ePn Pn 12 00 33.5 +0.9
comp=Z,17nm,1.3s
LZH Lanzhou 17.69 76 P P 12 00 41.5 +3.1
LZH pP pP 12 00 48.7 +1.7
LZH sP sP 12 00 51.9 +0.8
LZH PP PnPn 12 00 56.7 +8.3
LZH S S 12 04 00.5 0.0
LZH sS sS 12 04 12.1 -1.9
LZH pmax pmax
comp=Z,17nm,1.2s
LZH pmax pmax
comp=Z,120nm,4.1s
LZH LR LR
comp=N,400nm,12.5s
LZH LR LR
comp=E,380nm,12.1s
LZH LR LR
comp=Z,450nm,13.9s
KMI Kunming 19.55 110 P Pn 12 01 00.8 +0.4
KMI S S 12 04 32.4 -5.7
KMI pmax pmax
comp=Z,15nm,0.8s
KMI LR LR
comp=N,240nm,8.1s
KMI LR LR
comp=E,220nm,7.2s
KMI LR LR
comp=Z,290nm,12.5s
ZAA0 Zalesovo Array 20.38 4 eP P 12 01 08.2 +0.7
ZALV Zalesovo Beam 20.38 4 P P 12 01 07.7 +0.3
ZALV pmax pmax
comp=Z,4.0nm,0.5s
ZALV MLR MLR
comp=Z,60nm,21.3s
ZALV Zalesovo Beam 20.38 4 P P 12 01 07.7 +0.3
ZALV Zalesovo Beam 20.38 4 P P 12 01 07.7 +0.3
comp=Z,3.7nm,0.5s,baz=192,slow=9.8,SNR=20
ZALV LR LR 12 09 52.5
comp=Z,60nm,21.3s,baz=258,slow=39
CHTO Chiang Mai 20.83 131 eP P 12 01 13.7 +1.1
CHTO pmax pmax
comp=Z,24nm,0.9s
CHTO Chiang Mai 20.83 131 eP P 12 01 13.7 +1.1
comp=Z,24nm,0.9s
CMAR Chiang Mai Arr 21.09 132 P P 12 01 15.7 +0.2
CMAR Chiang Mai Arr 21.09 132 P P 12 01 15.7 +0.2
comp=Z,12nm,0.8s,baz=310,slow=11,SNR=75
NVS Novosibirsk 21.21 1 eP P 12 01 14.8 -1.6
BVAR Borovoye Array 21.24 340 P P 12 01 16.9 +0.1
BVAR pmax pmax
comp=Z,6.0nm,0.8s
BVAR Borovoye Array 21.24 340 P P 12 01 16.9 +0.1
BVAR Borovoye Array 21.24 340 P P 12 01 16.9 +0.1
comp=Z,5.7nm,0.8s,baz=141,slow=9.6,SNR=16
BRVK Borovoye 21.30 339 eP P 12 01 17.7 +0.3
BRVK pmax pmax
comp=Z,34nm,1.2s
BRVK Borovoye 21.30 339ceP P 12 01 18.5 +1.1
BRVK pmax pmax
comp=Z,29nm,1.7s
BRVK Borovoye 21.30 339 eP P 12 01 17.7 +0.3
comp=Z,34nm,1.2s
XAN Xi’an 21.94 82 P P 12 01 24.9 +0.4
XAN pP pP 12 01 34.7 +1.5
XAN sP sP 12 01 39.5 +2.1
XAN S S 12 05 20.0 -5.1
XAN pmax pmax
comp=Z,8.0nm,1.3s
XAN pmax pmax
comp=Z,15nm,7.7s
XAN LR LR
comp=N,160nm,10.0s
XAN LR LR
comp=E,70nm,12.3s
XAN LR LR
comp=Z,73nm,16.7s
MOY Mondy 22.47 31 eP P 12 01 33.4 +3.3
ZAK Zakamensk 22.65 36 eP P 12 01 31.4 -0.7
ZAK pmax pmax
comp=Z,2.0nm,1.1s
SONM Songino Array 22.89 45 P P 12 01 35.2 +0.7
SONM Songino Array 22.89 45 P P 12 01 35.2 +0.7
comp=Z,3.6nm,1.0s,baz=229,slow=10.0,SNR=16
SONM LR LR 12 10 32.4
comp=Z,182nm,19.3s,baz=75,slow=37
ULN Ulaanbaatar 23.29 45 eP P 12 01 39.8 +1.2
comp=Z,19nm,1.5s
TLY Talaya 23.67 34 eP P 12 01 41.1 -1.1
TLY eS S 12 05 24.5 -30
TLY pmax pmax
comp=Z,2.0nm,0.9s
TLY MLR MLR
comp=Z,91nm,15.0s
HHC Hu-ho-hao-te 24.16 64 eP P 12 01 45.5 -1.5
HHC sP sP 12 01 52.3 -8.1
HHC PP PnPn 12 02 19.7 +2.7
HHC PcP PcP 12 05 29.2 +2.0
HHC S S 12 05 59.0 -4.0
HHC sS sS 12 06 05.1 -13
HHC SS SnSn 12 06 50.1 +4.1
HHC ScP ScP 12 09 05.4 +2.1
HHC PcS PcS 12 09 06.5 -0.5
HHC ScS ScS 12 12 50.7 +0.1
HHC pmax pmax
comp=Z,36nm,0.5s
HHC pmax pmax
comp=Z,370nm,5.4s
HHC LR LR
comp=N,310nm,11.1s
HHC LR LR
comp=E,480nm,11.3s
HHC LR LR
comp=Z,260nm,11.1s
AKTO Aktyubinsk 24.58 320 P P 12 01 50.7 +0.1
AKTO pmax pmax
comp=Z,5.0nm,0.7s
AKTO MLR MLR
comp=Z,141nm,18.3s
AKTO Aktyubinsk 24.58 320 P P 12 01 50.6 +0.1
AKTO Aktyubinsk 24.58 320 P P 12 01 50.6 +0.1
comp=Z,5.4nm,0.7s,baz=114,slow=8.1,SNR=18
AKTO LR LR 12 12 15.9
comp=Z,141nm,18.3s,baz=298,slow=39
ARU Arti 28.11 331 P P 12 02 24.2 +1.9
KBZ Khabaz 32.24 300 LR LR 12 18 57.9
comp=Z,59nm,18.2s,baz=269,slow=42
KSAR Wonju Array Be 36.86 71 P P 12 03 39.1 +0.2
KSRS Korea Array 36.89 71 P P 12 03 39.1 -0.1
comp=Z,0.9nm,0.7s,baz=278,slow=8.7,SNR=4.2
KSRS LR LR 12 20 24.2
comp=Z,98nm,19.7s,baz=148,slow=39
ASF Jabal al Asfar 38.08 281 LR LR 12 22 32.6
comp=Z,52nm,18.6s,baz=290,slow=41
OBN Obninsk 38.31 318 P P 12 03 54.0 +3.0
OBN pmax pmax
comp=Z,9.0nm,0.9s
KLMR Klimovskoe 38.78 328 eP P 12 03 56.7 +1.8
KLMR pmax pmax
comp=Z,21nm,1.8s
MMAI Mount Meron Ar 39.09 283 LR LR 12 22 50.8
comp=Z,51nm,19.3s,baz=120,slow=40
BRTR Keskin Array B 39.26 293 P P 12 04 00.4 +1.0
BRTR Keskin Array B 39.26 293 P P 12 04 00.4 +1.0
comp=Z,1.5nm,0.9s,baz=112,slow=9.5,SNR=6.2
BRTR LR LR 12 23 01.9
comp=Z,47nm,21.3s,baz=208,slow=41
USRK Ussuriysk Arra 39.41 60 LR LR 12 21 31.4
comp=Z,97nm,18.6s,baz=143,slow=38
JNU Nakatsue 40.11 77 LR LR 12 22 58.1
comp=Z,74nm,18.2s,baz=30,slow=40
EIL Elat 40.39 278 LR LR 12 23 52.1
comp=Z,78nm,18.3s,baz=278,slow=41
JOF Joensuu 43.16 329 eP P 12 04 30.2 -0.7
JOF pmax pmax
comp=Z,4.0nm,0.5s
JOF Joensuu 43.16 329 ep P 12 04 30.2 -0.7
comp=Z,4.4nm,0.5s
MLR Muntele Rosu 44.33 303 LR LR 12 25 15.7
comp=Z,16nm,20.5s,baz=85,slow=39
MAJO Matsushiro 45.14 70 eP P 12 04 47.0 -0.2
MAJO e*PP pP 12 04 57.6 +0.7
MAJO e*SP sP 12 05 02.6 +1.8
MAJO Matsushiro 45.14 70 eP P 12 04 47.0 -0.2
MAJO epP pP 12 04 57.6 +0.7
MAJO esP sP 12 05 02.6 +1.8
MJAR Matsushiro Arr 45.15 70 P P 12 04 47.7 +0.4
MJAR Matsushiro Arr 45.15 70 P P 12 04 47.7 +0.4
comp=Z,1.3nm,0.8s,baz=280,slow=9.4,SNR=4.5
TIXI Tiksi 45.15 19 eP P 12 04 46.8 +0.1
TIXI pmax pmax
comp=Z,4.0nm,0.4s
TIXI Tiksi 45.15 19 eP P 12 04 46.8 +0.1
comp=Z,3.6nm,0.4s
FINES FINESS Array B 45.15 326 P P 12 04 46.5 -0.4
FINES FINESS Array B 45.15 326 P P 12 04 46.5 -0.4
comp=Z,2.4nm,0.6s,baz=103,slow=8.8,SNR=18
FINES LR LR 12 24 21.3
comp=Z,114nm,18.7s,baz=127,slow=37
ASAJ Asahikawa 47.00 59 LR LR 12 26 45.5
comp=Z,84nm,20.1s,baz=321,slow=39
KEV Kevo 47.05 337 eP P 12 05 01.0 -0.7
KEV pmax pmax
comp=Z,1.0nm,0.4s
KEV Kevo 47.05 337 ep P 12 05 01.0 -0.7
comp=Z,0.5nm,0.4s
ARCES ARCESS Array B 47.48 336 P P 12 05 05.0 0.0
ARCES ARCESS Array B 47.48 336 P P 12 05 05.0 0.0
comp=Z,8.1nm,0.9s,baz=98,slow=8.7,SNR=11
ARCES LR LR 12 26 04.1
comp=Z,56nm,18.9s,baz=219,slow=37
VRAC Vranov 50.23 309 LR LR 12 28 49.6
comp=Z,65nm,18.6s,baz=76,slow=39
HFS Hagfors 51.08 323 LR LR 12 29 07.0
comp=Z,87nm,18.4s,baz=85,slow=38
GERES GERESS Array B 52.18 309 P P 12 05 40.7 -0.5
GERES GERESS Array B 52.18 309 P P 12 05 40.7 -0.5
comp=Z,0.3nm,0.5s,baz=54,slow=6.8,SNR=4.4
NB2 NORSAR Subarra 52.27 324 P P 12 05 42.0 +0.4
comp=Z,7.4nm,1.0s,baz=87,slow=7.4
NOA NORSAR Array B 52.27 324 P P 12 05 41.5 -0.1
NOA NORSAR Array B 52.27 324 P P 12 05 41.5 -0.1
comp=Z,3.6nm,0.9s,baz=88,slow=7.3,SNR=8.0
NOA LR LR 12 28 06.8
comp=Z,56nm,20.9s,baz=90,slow=36
KMBO Kilima Mbogo 54.79 240 LR LR 12 29 12.0
comp=Z,40nm,18.2s,baz=95,slow=36
LPG La Plagne 57.56 306 eP P 12 06 19.5 -0.9
comp=Z,10nm,0.8s
LPG La Plagne 57.56 306 eP P 12 06 19.5 -0.9
LPG pmax pmax
comp=Z,10.0nm,0.8s
LPG La Plagne 57.56 306 eP P 12 06 19.5 -0.9
comp=Z,10nm,0.8s
LPL La Plagne 57.57 306 eP P 12 06 19.5 -0.9
comp=Z,12nm,0.8s
LPL La Plagne 57.57 306 eP P 12 06 19.5 -0.9
LPL pmax pmax
comp=Z,13nm,0.8s
LPL La Plagne 57.57 306 eP P 12 06 19.5 -0.9
comp=Z,12nm,0.8s
LOR Lormes 58.96 309 eP P 12 06 28.5 -1.4
LOR Lormes 58.96 309 eP P 12 06 28.5 -1.4
SMF Signal de Mont 59.16 308 eP P 12 06 29.7 -1.5
comp=Z,9.4nm,0.8s
SMF Signal de Mont 59.16 308 eP P 12 06 29.7 -1.5
SMF pmax pmax
comp=Z,9.0nm,0.8s
SMF Signal de Mont 59.16 308 eP P 12 06 29.7 -1.5
comp=Z,9.4nm,0.8s
WRA Warramunga Arr 72.66 129 P P 12 07 59.2 +0.8
WRA Warramunga Arr 72.66 129 P P 12 07 59.2 +0.8
comp=Z,5.0nm,0.9s,baz=327,slow=5.9,SNR=34
COLA College 74.27 20 eP P 12 08 08.0 +0.8
COLA pmax pmax
comp=Z,10.0nm,1.2s
COLA College 74.27 20 eP P 12 08 08.0 +0.8
comp=Z,10nm,1.2s
ILAR Eielson Array 74.62 20 P P 12 08 09.0 -0.2
ILAR Eielson Array 74.62 20 P P 12 08 09.0 -0.2
comp=Z,2.1nm,0.9s,baz=319,slow=5.5,SNR=19
ILAR LR LR 12 48 54.4
comp=Z,57nm,18.2s,baz=321,slow=42
INK Inuvik 74.88 13 P P 12 08 10.7 0.0
INK Inuvik 74.88 13 P P 12 08 10.7 0.0
comp=Z,2.4nm,0.9s,baz=341,slow=4.8,SNR=14
ASAR Alice Springs 75.10 132 P P 12 08 12.9 +0.3
ASAR Alice Springs 75.10 132 P P 12 08 12.9 +0.3
comp=Z,2.3nm,0.9s,baz=318,slow=5.7,SNR=18
TORD Torodi Ar. Bea 75.25 276 P P 12 08 13.2 -0.5
TORD Torodi Ar. Bea 75.25 276 P P 12 08 13.2 -0.5
comp=Z,3.7nm,0.6s,baz=47,slow=5.1,SNR=45
KDAK Kodiak Island 77.90 27 P P 12 08 27.6 -0.3
KDAK Kodiak Island 77.90 27 P P 12 08 27.6 -0.3
comp=Z,10.0nm,1.1s,baz=288,slow=6.4,SNR=2.7
BOSA Boshof 82.28 228 P P 12 08 51.5 -0.6
BOSA Boshof 82.28 228 P P 12 08 51.5 -0.6
comp=Z,4.9nm,0.8s,baz=2.6,slow=5.1,SNR=6.4
BOSA LR LR 12 39 34.7
comp=Z,35nm,21.9s,baz=38,slow=31
YKA Yellowknife Ar 83.22 8 P P 12 08 55.9 -0.6
YKA Yellowknife Ar 83.22 8 P P 12 08 55.8 -0.6
comp=Z,1.2nm,0.5s,baz=337,slow=5.5,SNR=48
DBIC Dimbokro 84.15 274 LR LR 12 50 06.7
comp=Z,39nm,19.4s,baz=264,slow=38
FFC Flin Flon 91.92 3 i P P 12 09 41.4 +2.8
CPUP Villa Florida 144.62 271 PKP PKPdf 12 16 07.0 -0.2
CPUP Villa Florida 144.62 271 PKP PKPdf 12 16 07.0 -0.2
comp=Z,1.7nm,0.6s,baz=34,slow=3.6,SNR=6.0

IDC 03 12:16:06.1±2.6**, 6.°91N**×**91.°74E, h0**km**, mb3.2**/3**, mb1 3.6**/4**, mb1mx3.3**/26**, mbtmp3.3**/4**, ML4.0**/1**, Error ellipse: s-maj=91.1km s-min=26.7km az=64.0, Nicobar Islands region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
CMAR Chiang Mai Arr 13.45 31 Pn Pn 12 19 18.0 -0.4
0.3nm,0.3s,baz=231,slow=15,SNR=6.5
MKAR Makanchi Array 40.56 350 P P 12 23 47.4 +0.1
0.1nm,0.5s,baz=161,slow=9.2,SNR=3.9
WRA Warramunga Arr 49.68 123 P P 12 25 00.4 +0.1
0.3nm,0.6s,baz=309,slow=7.7,SNR=7.5
ASAR Alice Springs 51.17 128 P P 12 25 11.0 -0.5
0.3nm,0.8s,baz=305,slow=7.7,SNR=3.1

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*JMA **03** 12:48:43.2±0.4, 25.°23N×122.°75E, h0km, M2.2*
*ISCJB **03** 12:48:44.4±0.8, 24.°64N±0.°05×122.°32E±0.°03, h70km±8km, Error ellipse: s-maj=8.9km s-min=4.0km az=171.9*
*TAP **03** 12:48:44.5, 24.°69N×122.°26E, h75km, ML3.0, C*
ISC 03 12:48:44.7±1.6**, 24.°65N**±0.°07×**122.°31E**±0.°03**, h70**km±12km**, n27,** σ0.s82/48**, Taiwan region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
TWC Suao 0.42 265 i P Pn 12 48 56.7 -0.1
baz=257
TWC i S Sn 12 49 05.3 -0.3
baz=257
ENA Nanau 0.57 247 eP Pn 12 48 58.6 +0.4
baz=240
ENA eS Sn 12 49 08.4 +0.4
baz=240
TWE Neicheng 0.59 277 i P Pn 12 48 58.4 0.0
baz=272
TWE S Sn 12 49 08.5 0.0
baz=272
NWF Wu-fen Shan 0.64 311 eP Pn 12 48 58.5 -0.5
baz=304
NWF S Sn 12 49 09.1 -0.4
baz=304
YOJ Yonaguni jima 0.66 106 P Pn 12 48 59.0 -0.2
YOJ eS Sn 12 49 10.2 +0.4
ENTT Nioudou 0.68 269 P Pn 12 48 59.7 +0.3
baz=269
ENTT S Sn 12 49 10.4 +0.2
baz=269

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWD	Chiawan	0.87	229	eP	Pn	12 49 02.8	+1.2
	baz=218						
NSK	Sanguang	0.87	272	P	Pn	12 49 01.8	+0.2
	baz=273						
NSK				S	Sn	12 49 14.2	0.0
	baz=273						
NNS	Nan Shan	0.88	256	iP	Pn	12 49 02.1	+0.2
	baz=246						
NNS				S	Sn	12 49 14.5	0.0
	baz=246						
TWS1	Kuangyinshan	0.93	299	eP	Pn	12 49 02.1	-0.2
	baz=298						
WHF	Hehuan Shan	1.08	242	eP	Pn	12 49 04.6	0.0
	baz=238						
WHF				eS	Sn	12 49 18.5	-0.9
	baz=238						
TWT	Tachien	1.11	249	P	Pn	12 49 05.7	+0.9
	baz=245						
TWT				S	Sn	12 49 20.2	+0.5
	baz=245						
ESL	Shilin	1.16	224	eP	Pn	12 49 04.4	-0.8
	baz=220						
NSTT	Nanjuang	1.19	269	eP	Pn	12 49 05.1	-0.5
	baz=266						
NSTT				eS	Sn	12 49 21.6	+0.2
	baz=266						
IRIF	Iriomote-Funau	1.33	103	P	Pn	12 49 07.0	-0.4
IRIF				eS	Sn	12 49 23.8	-0.6
TWQ1	Liyutan	1.44	258	eP	Pn	12 49 07.0	-1.8
	baz=255						
SMLT	Sun Moon Lake	1.50	240	eP	Pn	12 49 10.0	+0.2
	baz=229						
SMLT				eS	Sn	12 49 29.5	+0.9
	baz=229						
TYC	Yuchr	1.52	241	eP	Pn	12 49 11.0	+1.1
	baz=237						
TYC				eS	Sn	12 49 29.5	+0.5
	baz=237						
TWF1	Yuli	1.59	216	eP	Pn	12 49 10.5	-0.5
	baz=221						
TWF1				eS	Sn	12 49 28.6	-2.0
	baz=221						
JKRS	Kuro-shima	1.60	105	P	Pn	12 49 11.7	+0.7
JKRS				eS	Sn	12 49 31.9	+1.1
JIJ	Ishigaki jima	1.69	99	P	Pn	12 49 12.3	+0.1
CHKT	Chengkung	1.77	210	eP	Pn	12 49 11.0	-2.3
	baz=198						
CHN5	Tsauling	1.82	235	eP	Pn	12 49 14.3	+0.2
	baz=244						
CHN5				eS	Sn	12 49 37.6	+1.2
	baz=244						
ELDTW	Lidau	1.88	219	eP	Pn	12 49 15.2	+0.3
	baz=220						
ELDTW				eS	Sn	12 49 36.4	-1.2
	baz=220						
CHN4	Tsaushan	2.04	231	eP	Pn	12 49 18.4	+1.5
	baz=228						
CHN4				eS	Sn	12 49 42.1	+0.7
	baz=228						
WTP	Ta-pu	2.09	228	eP	Pn	12 49 18.1	+0.5
	baz=225						
WTP				eS	Sn	12 49 42.8	+0.1
	baz=225						
CHN1	Nanshi	2.19	229	eP	Pn	12 49 19.4	+0.4
	baz=226						
CHN1				eS	Sn	12 49 45.0	-0.1
	baz=226						

*CSEM **03** 12:52:12.8±1.0, 49°.95N×18°.54E, h2km, Error ellipse: s-maj=16.5km s-min=11.5km az=95.0*

PRU 03 12:52:12.7, 49°.84N×18°.56E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.27	270	ePG	Pg	12 52 18.3	+0.4
OKC				eSG	Sg	12 52 20.8	-0.5
	comp=Z,8.8nm,0.4s						
OKC	Ostrava-Krasne	0.27	270	Pg	Pg	12 52 18.3	+0.4
OKC				Sg	Sg	12 52 20.8	-0.5
	8.8nm,0.4s						
MORC	Moravsky Berou	0.66	265	ePg	Pg	12 52 25.9	+0.4
MORC				eSg	Sg	12 52 34.6	+0.4
KRLC	Kraliky	1.17	282	ePG	Pg	12 52 35.1	-0.2
KRLC	Kraliky	1.17	282	Pg	Pg	12 52 35.1	-0.2
DPC	Dobruska-Polom	1.53	290	ePG	Pn	12 52 40.7	-0.7
DPC				eSG	Sb	12 53 01.1	-0.9
	comp=Z,1.5nm,0.3s						
DPC	Dobruska-Polom	1.53	290	Pg	Pn	12 52 40.7	-0.7
DPC				Sg	Sb	12 53 01.1	-0.9
	1.5nm,0.3s						

IDC 03 12:52:41.6±50.0, 33°.38N×97°.83E, h0km, mb3.0/1, mb1 3.2/3, mb1mx3.0/26, mbtmp3.2/3, ML3.3/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/12, Error ellipse: s-maj=688.3km s-min=83.0km az=169.0, Qinghai

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM	Songino Array	15.83	22	Pn	Pn	12 56 25.1	-0.7
	0.3nm,0.3s,baz=206,slow=15,SNR=5.4						
SONM				LR	LR	13 02 30.4	
	comp=Z,49nm,20.7s,baz=63,slow=37						
MKAR	Makanchi Array	17.87	323	P	Pn	12 56 50.7	-0.9
	0.0nm,0.3s,baz=148,slow=12,SNR=2.7						
ZALV	Zalesovo Beam	22.55	340	P	P	12 57 43.6	+0.6
	0.5nm,0.7s,baz=133,slow=10,SNR=2.7						

BUC 03 12:53:34.4±0.8, 45°.06N×28°.27E, h2km, MD1.9/3, 8C-6D, Error ellipse: s-maj=7.5km s-min=6.1km az=78.0, Ukraine - Moldova - Southwestern Russia region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CFR	Carcaliu	0.15	323	⇑iP	Pg	12 53 36.9	-0.5
CFR				S	Sg	12 53 39.5	+0.1
CFR	Carcaliu	0.15	323	⇑iP	Pg	12 53 36.9	-0.5
CFR				iS	Sg	12 53 39.5	+0.1
TLCR		0.41	71	⇓iP	Pg	12 53 42.8	+0.5
TLCR		0.41	71	⇓iP	Pg	12 53 42.8	+0.5
TLCR				iS	Sg	12 53 48.7	+1.1
TIRR	Tirgusor	0.61	170	⇓iP	Pg	12 53 46.6	+0.6
TIRR	Tirgusor	0.61	170	⇑iP	Pg	12 53 46.6	+0.6
TIRR				iS	Sb	12 53 55.3	-1.4
ISR	Istrita	1.22	274	⇑iP	Pn	12 53 59.5	+0.9
ISR	Istrita	1.22	274	⇑iP	Pn	12 53 59.5	+0.9
ISR				iS	Sn	12 54 15.5	-0.3
VRI	Vrincioaia	1.35	307	⇓iP	Pb	12 54 01.1	+0.6
VRI	Vrincioaia	1.35	307	⇓iP	Pb	12 54 01.1	+0.6
PLOR	Plostina	1.39	306	⇑iP	Pb	12 54 02.1	+1.0
PLOR	Plostina	1.39	306	⇑iP	Pb	12 54 02.1	+1.0
PLOR				iS	Sn	12 54 21.0	+1.2
MLR	Muntele Rosu	1.69	286	⇓iP	Pb	12 54 06.0	-0.5
MLR	Muntele Rosu	1.69	286	⇑iP	Pb	12 54 06.0	-0.5
MLR				iS	Sg	12 54 28.9	-0.3

IDC 03 13:03:41.3±2.9, 22°.85N×11°.88W, h0km, mb3.9/5, mb1 3.9/6, mb1mx3.5/27, mbtmp3.8/6, ML3.5/1, Error ellipse: s-maj=93.1km s-min=34.7km az=84.0, Mauritania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	16.11	124	Pn	Pn	13 07 28.7	-0.6
	0.2nm,0.3s,baz=313,slow=12,SNR=12						
TORD				Sn	Sn	13 10 24.0	-4.8
	0.1nm,0.3s,baz=304,slow=21,SNR=4.9						
GERES	GERESS Array B	32.91	32	P	P	13 10 17.6	+0.2
	0.8nm,0.7s,baz=237,slow=7.3,SNR=6.3						
HFS	Hagfors	41.35	19	P	P	13 11 28.1	-0.7
	1.6nm,0.6s,baz=198,slow=9.2,SNR=9.7						
FINES	FINESS Array B	46.52	24	P	P	13 12 10.2	-0.1
	3.0nm,1.0s,baz=245,slow=3.6,SNR=6.1						
AKTO	Aktyubinsk	60.03	44	P	P	13 13 49.9	0.0
	0.3nm,0.4s,baz=259,slow=5.2,SNR=4.1						
KURBB	Kurchatov Arra	72.94	42	P	P	13 15 12.7	+0.2
	44nm,0.3s,baz=284,slow=6.2,SNR=1.9						
MKAR	Makanchi Array	76.44	45	P	P	13 15 33.1	+0.1
	0.4nm,0.5s,baz=277,slow=5.9,SNR=11						
WRA	Warramunga Arr	148.46	91	PKPbc	PKPbc	13 23 29.5	-1.2
	0.4nm,0.7s,baz=285,slow=2.1,SNR=4.3						
ASAR	Alice Springs	148.60	98	PKPbc	PKPbc	13 23 31.1	0.0

0.6nm,0.7s,baz=266,slow=2.8,SNR=6.4

*DDA **03** 13:06:32.5, 36°.95N×27°.65E, h7km, MD3.0, ML3.1*
*ISK **03** 13:06:35.0, 37°.16N×27°.96E, h13km, MD2.5*
*CSEM **03** 13:06:36.1±0.3, 37°.14N×27°.95E, h5km, MD2.5, Error ellipse: s-maj=11.3km s-min=6.4km az=178.0*

ISC 03 13:06:34.4±1.3, 37°.11N±0°.06×27°.94E±0°.03, h2km±15km, n17, σ1s77/21, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MLSB	Milas	0.23	324	ePG	Pg	13 06 39.8	+1.0
MLSB	Milas	0.23	324	ePg	Pg	13 06 39.8	+1.0
YER	Yerkesik	0.27	85	ePG	Pg	13 06 41.0	+1.3
YER	Yerkesik	0.27	85	ePg	Pg	13 06 41.0	+1.3
DAT	Datca	0.48	218	ePG	Pb	13 06 46.0	+0.3
DAT				eSG	Sb	13 06 53.8	+0.5
DAT	Datca	0.48	218	ePg	Pb	13 06 46.0	+0.3
DAT				eSg	Sb	13 06 53.8	+0.5
BODT	Bodrum	0.51	265	ePG	Pg	13 06 45.8	+1.6
BODT				eSG	Sb	13 06 53.7	-0.3
BODT	Bodrum	0.51	265	ePg	Pg	13 06 45.8	+1.6
BODT				eSg	Sb	13 06 53.7	-0.3
TURN	Turunc	0.58	114	iP	Pg	13 06 42.9	-2.6
TURN				iS	Sg	13 06 49.7	-3.3
TURN	Turunc	0.58	114	iP	Pg	13 06 42.9	-2.6
TURN				iS	Sg	13 06 49.7	-3.3
FETY	Fethiye	1.03	117	ePG	Pn	13 06 55.5	-0.5
FETY	Fethiye	1.03	117	ePg	Pn	13 06 55.5	-0.5
DNZL	Cakiroluk	1.05	56	iP	Pn	13 06 56.0	-0.4
DNZL				iS	Sn	13 07 15.9	+4.1
GOLH	Golhisar	1.30	84	iP	Pg	13 07 02.4	+3.1
GOLH				iS	Sg	13 07 23.8	+7.6
GOLH	Golhisar	1.30	84	iP	Pg	13 07 02.4	+3.1
AKAS	Kas	1.60	123	eP	Pb	13 07 04.8	0.0
AKAS	Kas	1.60	123	eP	Pb	13 07 04.8	0.0

NEIC 03 13:20:57.1, 50°.09N×177°.08W, h10km, ML3.1(AEIC), After AEIC., Andreanof Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KIMD	Kanaga Island	1.68	357	P	Pn	13 21 24.9	-1.7
KIKV	Kanaga Island	1.80	358	P	Pn	13 21 26.7	-1.5
GAKI	Gareloi-Kavalg	1.84	324	P	Pn	13 21 27.3	-1.4
GAKI				S	Sn	13 21 50.9	-1.1
TASE	Tanaga Southea	1.85	341	P	Pn	13 21 27.6	-1.4
TAFP	Tanaga Falls P	1.91	343	P	Pn	13 21 27.9	-1.8
TAFP				S	Sn	13 21 50.9	-2.9
TANO	Tanaga North	1.95	341	P	Pn	13 21 27.6	-2.7
GALAA	Gareloi Lava P	1.99	328	P	Pn	13 21 29.0	-1.9
GSCK	Great Sitkin C	2.01	16	P	Pn	13 21 29.7	-1.5
GANO	Gareloi North	2.05	329	P	Pn	13 21 28.0	-3.7
KOWE	Korovin West	2.89	37	P	Pn	13 21 42.6	-0.7

*CSEM **03** 13:28:50.5±0.3, 37°.61N×19°.76E, h2km, MD3.5, Error ellipse: s-maj=5.7km s-min=3.8km az=22.0*
*ATH **03** 13:28:51.4, 37°.66N×19°.83E, h20km±2km, MD3.5/11*
*THE **03** 13:28:52.1, 37°.66N×19°.83E, h2km±1km, ML3.0/3, Error ellipse: s-maj=2.1km s-min=1.0km az=354.0*

ISC 03 13:28:51.0±2.8, 37°.63N±0°.10×19°.80E±0°.09, h5km±12km, n42, σ0s53/61, Ionian Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.83	49	P	Pg	13 29 06.7	-0.3
VLS				S	Sb	13 29 18.5	-1.0
VLS	Valsamata	0.83	49	ePN	Pg	13 29 06.6	-0.4
VLS				eSN	Sb	13 29 18.3	-1.2
VLS	Valsamata	0.83	49	P	Pg	13 29 06.7	-0.3
VLS				S	Sb	13 29 18.5	-1.0
KFL	Anninata	0.92	59	P	Pg	13 29 08.7	0.0
KFL				S	Sb	13 29 21.5	-0.5
KFL	Anninata	0.92	59	P	Pg	13 29 08.7	0.0
KFL				S	Sb	13 29 21.5	-0.5
RLS	Riolos of Patr	1.39	72	P	Pn	13 29 17.2	+0.2
RLS				S	Sn	13 29 36.4	+0.6
RLS	Riolos of Patr	1.39	72	ePN	Pn	13 29 17.3	+0.2
RLS				eSN	Sb	13 29 34.8	-0.7
RLS	Riolos of Patr	1.39	72	ePn	Pn	13 29 17.3	+0.2
RLS				eSn	Sb	13 29 34.8	-0.7
RLS				S	Sn	13 29 36.4	+0.6
AMT	Artemida-Makis	1.52	93	P	Pn	13 29 18.7	-0.3
AMT				S	Sg	13 29 40.5	+0.5
AMT	Artemida-Makis	1.52	93	ePN	Pn	13 29 18.7	-0.3
AMT				eSN	Sn	13 29 39.3	+0.1
AMT	Artemida-Makis	1.52	93	P	Pn	13 29 18.7	-0.3
AMT				eSn	Sn	13 29 39.3	+0.1
AMT				S	Sg	13 29 40.5	+0.5
LAKA	Lakka	1.83	70	P	Pn	13 29 23.5	+0.4
LAKA				S	Sb	13 29 47.3	-0.9
LAKA	Lakka	1.83	70	ePN	Pn	13 29 23.6	+0.4
LAKA	Lakka	1.83	70	P	Pn	13 29 23.5	+0.4
LAKA				S	Sb	13 29 47.3	-0.9
EFP	Efpalio	1.85	64	P	Pn	13 29 23.8	+0.4
EFP				S	Sb	13 29 48.6	0.0
EFP	Efpalio	1.85	64	ePN	Pn	13 29 23.7	+0.4
EFP	Efpalio	1.85	64	ePn	Pn	13 29 23.7	+0.4
EFP				S	Sb	13 29 48.6	0.0
TRIZ	Trizonia	1.94	67	P	Pn	13 29 25.0	+0.3
TRIZ	Trizonia	1.94	67	ePN	Pn	13 29 25.0	+0.3
TRIZ	Trizonia	1.94	67	P	Pn	13 29 25.0	+0.3
IGT	Igoumenitsa	1.94	12	P	Pn	13 29 24.8	+0.1
IGT	Igoumenitsa	1.94	12	P	Pn	13 29 24.8	+0.1
KALE	Kalithea	2.00	67	P	Pn	13 29 25.8	+0.2
KALE				S	Sb	13 29 52.4	-0.8
KALE	Kalithea	2.00	67	ePN	Pn	13 29 25.7	+0.2
KALE	Kalithea	2.00	67	P	Pn	13 29 25.8	+0.2
KALE				S	Sb	13 29 52.4	-0.8
EVR	Evrytania	2.04	50	ePN	Pn	13 29 27.0	+0.9
EVR	Evrytania	2.04	50	ePn	Pn	13 29 27.0	+0.9
GUR	Goura	2.04	81	P	Pn	13 29 26.9	+0.8
GUR	Goura	2.04	81	ePN	Pn	13 29 26.9	+0.8
GUR	Goura	2.04	81	P	Pn	13 29 26.9	+0.8
KEK	Kerkira	2.08	0	P	Pn	13 29 26.6	+0.1
KEK	Kerkira	2.08	0	ePN	Pn	13 29 26.8	+0.3
KEK	Kerkira	2.08	0	ePn	Pn	13 29 26.8	+0.3
DSF	Desfina	2.29	69	P	Pn	13 29 29.4	-0.2
DSF	Desfina	2.29	69	P	Pn	13 29 29.4	-0.2
AGG	Agios Georgios	2.43	54	P	Pn	13 29 31.6	+0.2
AGG	Agios Georgios	2.43	54	P	Pn	13 29 31.6	+0.2
THL	Klokotos Trika	2.60	41	P	Pn	13 29 34.2	+0.6
THL	Klokotos Trika	2.60	41	ePN	Pn	13 29 34.3	+0.6
THL	Klokotos Trika	2.60	41	P	Pn	13 29 34.2	+0.6
NEST	Nestorio	2.94	19	P	Pn	13 29 39.0	+0.4
NEST	Nestorio	2.94	19	P	Pn	13 29 39.0	+0.4

*BJI **03** 13:37:52.6, 8°.26S×130°.69E, h35km, mB5.6/42, mb5.0/45, Ms5.1/54, Ms7 4.9/48*
*IDC **03** 13:37:53.4±0.4, 7°.87S×130°.29E, h0km, mb4.9/25, mb1 4.9/28, mb1mx4.9/31, mbtmp4.9/28, ML4.4/3, MS5.0/28, Ms1 5.0/28, ms1mx4.9/36, Error ellipse: s-maj=15.9km s-min=10.4km az=70.0*
*ISCJB **03** 13:37:57.7±0.4, 8°.01S±0°.02×130°.44E±0°.02, h48km±3km, mb5.2/110, MS5.1/184, Error ellipse: s-maj=4.0km s-min=3.4km az=176.0*
*GCMT **03** 13:37:58.9±0.1, 8°.07S×130°.28E, h21km, MW5.6, Moment Tensor Solution. s100,c183; s57,c61; Moment tensor: Scale 10^{17}Nm; M_{rr}2.18±.03; $M_{\theta\theta}$-2.25±.03; $M_{\phi\phi}$0.07±.03; $M_{r\theta}$2.05±.06; $M_{\theta\phi}$-0.24±.02; $M_{\phi r}$0.50±.06; Best double couple: $M_0$3.10000×10^{17} NP1:ϕ_s270.00000°, δ24.00000°, λ100.00000°. NP2:ϕ_s79.00000°, δ67.00000°, λ85.00000°. Principal axes: T 3.0300, Plg68.0000°, Azm340.0000°; N 0.0800, Plg4.0000°, Azm81.0000°; P -3.1000, Plg22.0000°, Azm172.0000°; Data Used: II IU IC G CN. Surface waves: sta=109, comp=227, per= 50.*
*DJA **03** 13:37:58.1±0.7, 8°S±1°×13°0E±°, h26km±7km, M5.4/63, mb5.4/63, mB5.8/50, MLv5.7/10, Mw(mB)5.4/50, Mwp5.7/14*
*NEIC **03** 13:37:58.5±0.2, 8°.01S×130°.23E, h35km, mb5.1/36, MS5.2/133, MW5.6, MW5.5, Error ellipse: s-maj=8.3km s-min=5.7km az=62.0, Moment Tensor Solution. s21 Moment tensor: Scale 10^{17}Nm; M_{rr}2.14; $M_{\theta\theta}$-2.56; $M_{\phi\phi}$0.42; $M_{r\theta}$-0.63; $M_{\theta\phi}$-0.91; $M_{\phi r}$0.27; Best double couple: $M_0$2.60000×10^{17} NP1:ϕ_s268.00000°, δ53.00000°, λ108.00000°. NP2:ϕ_s59.00000°, δ41.00000°, λ67.00000°. Principal axes: T 2.3100, Plg74.0000°, Azm232.0000°; N 0.5600, Plg14.0000°, Azm76.0000°; P -2.8700, Plg6.0000°, Azm345.0000°;*
*AUST **03** 13:37:59.8±0.2, 7°.97S×130°.38E, h45km Error ellipse: s-maj=0.6km s-min=0.5km az=229.0*
*MOS **03** 13:37:59.6±0.9, 7°.38S×130°.19E, h33km, mb5.6/31, MS4.9/22, Error ellipse: s-maj=15.2km s-min=6.8km az=115.9*

ISC 03 13:37:57.7±0.2, 8°.02S±0°.03×130°.32E±0°.04, h29km±1km, h29km:pP-P, n689, σ1s75/655, mb5.2/110, MS5.1/185, 63C-43D, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TLE	Tual	3.37	46	P	Pn	13 38 46.5	-1.9
TLE				S	Sn	13 39 26.5	-0.9
TLE	Tual	3.37	46	P	Pn	13 38 49.2	+0.8
	baz=3.3,SNR=210						
BNDI	Bandanaira	3.50	353	P	Pn	13 38 52.2	+2.0
BNDI				S	Sn	13 39 32.6	+2.0
AAI	Ambon	4.80	334	P	Pn	13 39 07.5	-0.5
AAI				S	Sn	13 40 07.6	+4.9
AAI	Ambon	4.80	334	P	Pn	13 39 10.0	+2.0
	baz=4.8,SNR=38						
MSAI	Masohi	4.85	343	P	Pn	13 39 10.1	+1.4
MSAI				S	Sn	13 40 07.3	+3.4
MTN	Manton Dam	4.86	171	P	Pn	13 39 08.3	-0.6
	baz=4.9,SNR=267						
KDU	Kakadu	5.10	156	P	Pn	13 39 11.2	-0.9
	baz=5.1,SNR=1000						
FAKI	Fak Fak	5.42	21	P	Pn	13 39 15.7	-0.8
	1µm,0.6s,15µm69µm5.1nm						
FAKI				S	Sn	13 40 19.1	+1.1
	1µm,0.6s,15µm69µm5.1nm						
SWI	Sorong	7.17	8	P	Pn	13 39 39.9	-0.7
	298nm,0.9s,9µm45µm2.7nm						
SWI				S	Sn	13 41 06.2	+5.0
	298nm,0.9s,9µm45µm2.7nm						
SWI	Sorong	7.17	8	P	Pn	13 39 39.3	-1.4
	baz=7.2,SNR=24						
LBMI	Labuha	7.85	339	P	Pn	13 39 52.9	+2.9
	2µm,1.1s,34µm22µm10nm						
LBMI				S	Sn	13 41 24.4	+6.4
	2µm,1.1s,34µm22µm10nm						
MMRI	Maumere	8.03	265	P	Pn	13 39 56.0	+3.6
	227nm,0.9s,7µm16µm1.9nm						
MMRI				S	Sn	13 41 28.6	+6.3
	227nm,0.9s,7µm16µm1.9nm						
BBSI	Bau Bau	8.10	288	P	Pn	13 39 57.1	+3.7
	644nm,1.3s,10µm23µm						
KDI	Kendari	8.66	297	P	Pn	13 40 04.1	+3.0
	172nm,1.2s,4µm						
BAKI	Biak	8.90	41	P	Pn	13 40 02.8	-1.6
	412nm,0.9s,5µm						
TNTI	Ternate	9.22	341	P	Pn	13 40 12.2	+3.4
	771nm,1.2s,12µm						
WAMI	Wamena	9.30	64	P	Pn	13 40 12.3	+2.5
	465nm,0.7s,6µm						
MMPI	Merauke	9.97	93	P	Pn	13 40 15.0	-4.0
	410nm,1.5s						
WSI	Waingapu	10.04	260	P	Pn	13 40 23.5	+3.5
	1µm,0.5s,16µm25µm						
WSI	Waingapu	10.04	260	P	Pn	13 40 23.6	+3.5
	baz=10,SNR=4.1						
WSI				S	Sn	13 42 19.2	+7.4
	baz=10,SNR=5.5						
LUWI	Luwuk	10.23	312	P	Pn	13 40 26.5	+3.9
	623nm,1.0s,8µm30µm						
SMPI	Sarmi	10.28	55	P	Pn	13 40 31.1	+7.8
BKSI	Bulukumba	10.48	284	P	Pn	13 40 29.0	+2.9
	214nm,0.9s,4µm						
KMSI	Cibinong	10.62	323	P	Pn	13 40 31.6	+3.6
	1µm,1.3s,21µm19µm						
MNI	Manado	10.88	330	P	Pn	13 40 34.2	+2.7
	677nm,1.4s,12µm						
KAPI	Kappang	10.92	285	ePn	Pn	13 40 29.3	-2.8
KAPI	Kappang	10.92	285	Pn	Pn	13 40 36.1	+4.0
	SNR=21						
KAPI	Kappang	10.92	285	P	Pn	13 40 34.0	+1.9
	180nm,1.2s,4µm						
KAPI	Kappang	10.92	285	Pn	Pn	13 40 30.0	-2.1
	0.8nm,0.3s,baz=66,slow=20,SNR=3.1						
KAPI				LR	LR	13 44 46.5	
	comp=Z,9µm,21.0s,baz=122,slow=38						
FITZ	Fitzroy Crossi	11.01	204	ePn	Pn	13 40 30.2	-3.1
FITZ				eSn	Sn	13 42 26.2	-9.4
FITZ	Fitzroy Crossi	11.01	204	Pn	Pn	13 40 30.1	-3.2
	24nm,0.3s,baz=34,slow=11,SNR=240						
FITZ				Sn	Sn	13 42 27.6	-8.0
	20nm,0.3s,baz=166,slow=14,SNR=6.3						
FITZ				LR	LR	13 45 43.5	
	comp=Z,9µm,18.3s,baz=29,slow=42						
FITZ	Fitzroy Crossi	11.01	204	P	Pn	13 40 30.2	-3.1
	baz=11,SNR=191						
SPSI	Sidrap Palu	11.24	290	P	Pn	13 40 40.1	+3.6
	285nm,1.4s,6µm						
TTSI	Tana Toraja	11.56	295	P	Pn	13 40 45.0	+4.1
	214nm,1.8s,5µm12µm						
JAY	Jayapura	11.69	63	P	Pn	13 40 41.1	-1.6
	94nm,0.9s,9µm						
JAY	Jayapura	11.69	63	P	Pn	13 40 45.0	+2.3
	baz=12,SNR=12						
JAY				S	Sn	13 43 10.6	+18
	baz=12,SNR=3.1						
MRSI	Marisa	11.88	315	P	Pn	13 40 49.0	+3.8
	432nm,1.8s,6µm14µm						
WRAB	Tennant Creek	12.47	162	eP	Pn	13 40 48.1	-5.2
WRAB	Tennant Creek	12.47	162	ePn	Pn	13 40 48.0	-5.2
WRA	Warramunga Arr	12.47	162	Pn	Pn	13 40 48.1	-5.3
WRA	Warramunga Arr	12.47	162	Pn	Pn	13 40 48.1	-5.3
	18nm,0.3s,baz=349,slow=13,SNR=257						
WRA				Sn	Sn	13 43 02.0	-9.4
	18nm,0.3s,baz=346,slow=22,SNR=5.8						
WRA				LR	LR	13 46 21.1	
	comp=Z,32µm,18.2s,baz=340,slow=40						
PCI	Palu	12.62	304	P	Pn	13 40 59.0	+3.7
	baz=13,SNR=9.3						
COEN	Coen	13.92	116	ePn	Pn	13 41 09.0	-4.2
COEN	Coen	13.92	116	P	Pn	13 41 09.2	-4.0
	baz=14,SNR=83						
KHKI	Kahang-Kahang	14.57	268	P	P	13 41 26.3	-1.9
	48nm,0.8s,1µm						
SRBI	Singaraja	14.96	269	P	P	13 41 35.1	+2.6
IGBI	Denpasar	15.04	266	P	P	13 41 36.7	+3.4
SMKI	Samarinda	15.08	299	P	P	13 41 33.1	-0.8
	316nm,1.6s						
QIS	Mount Isa	15.36	145	P	Pn	13 41 27.5	-5.1
	baz=15,SNR=45						
NBBI	Negara	15.55	268	P	P	13 41 42.4	+3.4
DAV	Davao City (W)	15.72	342	Pn	Pn	13 41 38.2	+1.0
DAV	Davao City (W)	15.72	342	⇓iP	Pn	13 41 38.7	+1.5
DAV	Davao City (W)	15.72	342	Pn	P	13 41 42.4	+1.5
	SNR=14						
DAV	Davao City (W)	15.72	342	P	P	13 41 44.0	+3.1
DAV	Davao City (W)	15.72	342	Pn	Pn	13 41 38.2	+1.0
	53nm,0.3s,baz=9.5,slow=12,SNR=2.4						
AS31	Alice Springs	15.93	168	ePn	Pn	13 41 34.4	-5.6
ASAR	Alice Springs	15.93	168	Pn	Pn	13 41 34.1	-5.9
ASAR	Alice Springs	15.93	168	Pn	Pn	13 41 34.1	-5.9
	5.6nm,0.3s,baz=339,slow=8.4,SNR=263						
ASAR				Sn	Sn	13 44 32.5	-3.4
	5.9nm,0.3s,baz=346,slow=25,SNR=4.1						
ASAR				LR	LR	13 48 17.1	
	comp=Z,18µm,18.0s,baz=332,slow=39						
BBKI	Banjar Baru	16.05	286	P	P	13 41 43.3	-1.4
	569nm,1.2s						
KMMI	Kalianget	16.25	272	P	P	13 41 47.4	+0.6
	126nm,1.2s,2µm						
CTBH	Cotabato--PC H	16.31	338	⇑iP	P	13 41 46.4	-1.1
BLJI	Banyuglugur	16.57	270	P	Pn	13 41 46.5	-1.6
	196nm,0.7s,2µm						
MBWA	Marble Bar	16.59	217	ePn	Pn	13 41 44.1	-4.2
	98nm,0.7s						
MBWA				eSn	Sn	13 44 36.5	-15
MBWA	Marble Bar	16.59	217	Pn	P	13 41 52.1	+1.5
	SNR=8.3						
BUKP	Musuan	16.64	342	eP	P	13 41 51.2	0.0
BUKP				eS	pP	13 42 00.8	+1.8
PMG	Port Moresby	16.70	96	Pn	P	13 41 51.0	-0.8
	10nm,0.9s						
PMG	Port Moresby	16.70	96	P	Pn	13 41 48.4	-1.3
	109nm,1.1s,2µm						
PMG	Port Moresby	16.70	96	Pn	P	13 41 51.0	-0.8

4.6nm,0.3s,baz=307,slow=6.5,SNR=14
GMJI Gumukmas 16.71 268 P P 13 41 53.8 +1.8
82nm,1.2s
PLKI Palangkaraya 17.29 289 P Pn 13 41 57.8 +0.6
1μm,1.0s,13μm
CGP Cagayan de Oro 17.30 341 *eP* **P 13 41 59.4 +0.9**
TSM Tawau 17.43 314 P P 13 42 07.4 +7.5
BUTP Butuan 17.52 344 *eP* **P 13 42 00.3 -0.5**
MYLDM Lahad Datu 17.64 318 P P **13 42 05.1 +3.0**
MYLDM Lahad Datu 17.64 318 P P **13 42 04.6 +2.4**
188nm,1.8s,12μm45μm
PWJI Pagerwojo 18.34 269 P P 13 42 08.7 -1.3
140nm,0.8s,2μm
SJI Sawahan 18.39 270 P P 13 42 10.6 0.0
171nm,0.7s,2μm
MSLP Maasin 18.84 343 *eP* P 13 42 09.4 -5.9
SDKM Sandakan 18.86 316 P Pn **13 42 17.2 +0.7**
PCJI Pacitan 18.96 268 P Pn **13 42 19.6 +2.0**
227nm,0.8s,4μm
PBKI Pangkalan Bun 19.30 285 P Pn 13 42 21.7 0.0
741nm,1.1s,7μm
CTA Charters Tower 19.54 130 P P 13 42 23.1 0.0
CTA Charters Tower 19.54 130 P P **13 42 23.1 0.0**
1.9nm,0.3s,baz=302,slow=14,SNR=42
CTA LR LR 13 50 41.1
comp=Z,17μm,18.2s,baz=310,slow=39
CTAO Charters Tower 19.54 130 *eP* **P 13 42 22.9 -0.2**
CTAO *eS* **S 13 46 01.6 -0.7**
CTAO pmax pmax
comp=Z,117nm,1.2s
CTAO Charters Tower 19.54 130 *eP* **P 13 42 22.9 -0.2**
comp=Z,117nm,1.2s
CTAO *eS* **S 13 46 01.6 -0.7**
UGM Wanagama 19.61 269 P P **13 42 23.6 -0.4**
baz=20,SNR=11
KKM Kota Kinabalu 19.83 314 *eP* **P 13 42 23.0 -3.4**
KKM Kota Kinabalu 19.83 314 P **Pn 13 42 28.4 +0.3**
KKM Kota Kinabalu 19.83 314 P P **13 42 24.2 -2.2**
comp=Z,361nm,1.1s,comp=Z,7μm
KKM Kota Kinabalu 19.83 314 P P **13 42 26.4 0.0**
baz=20,SNR=5.1
KDM Kudat 20.03 317 P Pn 13 42 34.1 +3.8
GUIM Jordan 20.06 337 *eP* **P 13 42 28.1 -0.7**
STKI Sintang 20.43 292 P P **13 42 32.0 -0.9**
comp=Z,149nm,1.3s,comp=Z,12μm
BJII Banjamegara 20.44 271 P P **13 42 31.5 -1.6**
comp=Z,88nm,1.5s
BTM Bintulu 20.49 302 P Pn 13 42 35.4 -0.5
SBUM Sibu 20.84 299 P P **13 42 38.2 +0.9**
SBUM Sibu 20.84 299 P Pn 13 42 38.6 -1.2
comp=Z,115nm,1.9s,comp=Z,2μmcomp=Z,13μm
RCP Roxas 20.86 339⇓ *eP* **P 13 42 37.3 -0.2**
CUYO Cuyo Island 20.91 334 *eP* Pn 13 42 46.2 +5.6
TGJI Tegal 21.06 272 P P 13 42 46.0 +6.4
comp=Z,59nm,1.1s
GIRL Giralia 21.23 225 P P 13 42 46.4 +4.9
baz=21,SNR=10
MEEK Meekatharra 21.60 210 P P **13 42 44.8 -0.5**
baz=22,SNR=28
OTRP Odiongan 21.87 338 *eP* **P 13 42 52.1 +3.9**
KSM Kuching 22.08 294 *eP* P 13 42 45.8 -4.8
comp=Z,85nm,1.0s
KSM LR LR
comp=Z,4μm,20.0s
KSM Kuching 22.08 294 P P **13 42 49.7 -0.9**
KSM Kuching 22.08 294 P P **13 42 50.2 -0.4**
comp=Z,58nm,1.0s,comp=Z,2μmcomp=Z,10μm
KSM Kuching 22.08 294 P P **13 42 49.6 -1.0**
baz=22,SNR=9.5
KSM S S **13 46 53.1 +0.4**
baz=22,SNR=5.2
CISI Cisompet, Garu 22.31 270 P P **13 42 56.6 +3.5**
comp=Z,190nm,0.7s,comp=Z,2μm
SJMP San Jose 22.31 336 *eP* P **13 42 54.8 +1.8**
LEM Lembang 22.55 271 P P 13 43 07.6 +12
QLP Quilpie 22.70 146 P P **13 42 58.1 +1.0**
baz=23,SNR=109
FORT Forrest 22.74 185 *eP* P **13 42 55.5 -2.0**
comp=Z,274nm,0.8s
FORT *eS* **S 13 47 00.6 -3.9**
FORT Forrest 22.74 185 P P **13 42 57.1 -0.4**
baz=23,SNR=41
TPI Tanjungpandan 23.16 282 P P **13 43 04.0 +2.0**
comp=Z,24nm,2.2s,comp=Z,950nm
DBJI Dramaga 23.43 272 P P **13 43 06.5 +1.8**
comp=Z,102nm,1.5s,comp=Z,2μm
LUBP Lubang 23.82 335 *eP* P **13 43 08.1 -0.2**
TGY Tagaytay City 23.87 337 P P **13 43 10.5 +1.6**
TGY Tagaytay City 23.87 337 P P **13 43 10.5 +1.6**
comp=Z,175nm,0.3s,baz=46,slow=23,SNR=4.9
CGJI Cibinong 24.47 272 P P **13 43 11.6 -2.9**
comp=Z,114nm,1.0s,comp=Z,1μm
KMBL Kambalda 24.53 198 P P **13 43 15.1 +0.3**
baz=25,SNR=14
PPBI Pangkal Pinang 24.77 282 P P **13 43 18.9 +1.7**
comp=Z,65nm,1.2s,comp=Z,2μm
MORW Morawa 24.88 211 P P **13 43 18.6 +0.5**
baz=25,SNR=35
MORW S S 13 47 55.8 +16
baz=25,SNR=4.4
BBOO Buckleboo 25.24 169 *eP* P **13 43 19.8 -1.4**
comp=Z,1μm,0.8s
BBOO *ep*P **pP 13 43 30.1 +0.3**
BBOO *es*P **sP 13 43 33.9 +0.6**
BBOO Buckleboo 25.24 169 P P **13 43 20.9 -0.3**
baz=25,SNR=24
RMQ Roma 25.38 139 P P **13 43 24.7 +2.1**
baz=25,SNR=13
KASI Kota Agung 25.76 274 P P 13 43 34.8 +8.6
BLDU Ballidu 25.84 208 P P **13 43 26.6 -0.1**
baz=26,SNR=16
GUMO Guam 25.87 34 PFAKE 13 43 40.0 +13
GUMO LR LR
comp=Z,2μm,20.0s
STKA Stephens Creek 25.95 158 LR LR 13 54 46.9
comp=Z,16μm,19.1s,baz=326,slow=39
KLBR Kellerberrin 26.22 205 P P **13 43 30.4 +0.3**
baz=26,SNR=42
EIDS Eidsvold 26.25 134 *eP* P **13 43 28.7 -1.8**
comp=Z,46nm,1.1s
EIDS *ep*P **pP 13 43 37.2 -1.8**
EIDS *es*P **sP 13 43 40.3 -2.3**
EIDS Eidsvold 26.25 134 P P **13 43 32.1 +1.5**
baz=26,SNR=9.5
CMSA Cobar Meteorol 27.44 151 P P **13 43 42.0 +0.9**
baz=28,SNR=64
NWAO Narrogin (SRO) 27.59 204 P P **13 43 42.9 +0.3**
comp=Z,17nm,0.8s,baz=36,slow=8.7,SNR=8.7
NWAO LR LR 13 54 55.7
comp=Z,3μm,20.0s,baz=125,slow=37
MYKOM Kota Tinggi 28.14 289 P P **13 43 45.9 -1.7**
MYKOM Kota Tinggi 28.14 289 P P 13 43 53.0 +5.4
comp=Z,31nm,1.0s
KGM Kluang 28.72 289 P P **13 43 51.8 -1.0**
RKGY Rocky Gully 29.17 203 P P 13 44 00.8 +4.3
baz=29,SNR=6.3
HNR Honiara 29.31 95 PFAKE 13 44 10.0 +12
HNR LR LR
comp=Z,3μm,21.0s
KTGM Kuala Trenggan 30.19 295 P P **13 44 08.2 +2.4**
ARPS Mount Arapiles 30.48 162 P P **13 44 09.1 +1.0**
baz=31,SNR=21
FRIM Kepong 30.73 290 P P 13 44 17.6 +7.0
YNG Young 31.00 150 P P **13 44 13.9 +1.2**
baz=31,SNR=32
MGCD Mangrove Creek 31.59 145 P P 13 44 22.8 +4.8
baz=32,SNR=4.0
IPM Ipoh 31.75 292 P P **13 44 17.6 -2.0**
MNSI Mandailing Nat 31.88 285 P P **13 44 21.2 +0.5**
comp=Z,39nm,0.9s,comp=Z,788nm
CNB Canberra Magne 32.29 150 P P **13 44 26.5 +2.4**
baz=32,SNR=6.0
TOO Toolangi 32.47 157 P P **13 44 27.8 +2.1**
baz=33,SNR=17
PSI Prapat 33.11 288 P P **13 44 29.9 -1.9**
PSI Prapat 33.11 288 P P **13 44 31.5 -0.2**
comp=Z,62nm,1.0s,comp=Z,936nm
PSI Prapat 33.11 288 P P **13 44 29.9 -1.9**
comp=Z,8.1nm,0.5s,baz=86,slow=10,SNR=8.3
PSI Prapat 33.11 288 P P **13 44 29.8 -1.9**
baz=33,SNR=8.8
PSI S S **13 49 46.0 -3.5**
baz=33,SNR=6.9
COCO West Island 33.21 260 PFAKE 13 44 40.0 +7.6
COCO LR LR
comp=Z,2μm,20.0s
QIZ Qiongzhong 33.62 323 P P **13 44 38.2 +2.4**
QIZ pP **pP 13 44 44.8 +0.4**
QIZ S S **13 49 57.3 +0.5**
QIZ sS **sS 13 50 12.2 +1.2**
QIZ LR LR
comp=N,1μm,15.2s
QIZ LR LR
comp=E,400nm,23.3s
QIZ LR LR
comp=Z,2μm,16.4s
YHNB Yeheng 33.64 345 PFAKE 13 44 50.0 +14
YHNB LR LR
comp=Z,2μm,21.0s
TATO Taipei 33.91 346 PFAKE 13 44 50.0 +12
TATO LR LR
comp=Z,2μm,20.0s
GSI Gunungsitoli 33.94 284 P P 13 44 47.3 +8.5
GSI Gunungsitoli 33.94 284 P P **13 44 37.2 -1.6**
baz=34,SNR=3.4
JOW Kunigami 34.70 357 *eP* P 13 44 41.5 -3.6
comp=Z,25nm,0.6s
JOW *ep*P pP 13 44 54.5 +0.8
QZH Quanzhou 34.70 341⇑ *eP* **P 13 44 45.0 -0.1**
QZH S **S 13 50 10.2 -3.2**
QZH LR LR
comp=N,2μm,18.6s
QZH LR LR
comp=E,2μm,16.6s
QZH LR LR
comp=Z,2μm,21.0s
CBIJ Chichi jima 36.75 18 P P **13 45 00.8 -1.9**
CBIJ Chichi jima 36.75 18 P P **13 45 00.8 -1.9**
comp=Z,37nm,0.3s,baz=139,slow=20,SNR=3.4
CBIJ LR LR 13 58 13.3
comp=Z,1μm,19.4s,baz=216,slow=33
MOO Moorlands 37.37 159 P P **13 45 10.1 +2.3**
baz=38,SNR=6.3
DZM Mont Dzumac 37.45 116 *eP* P 13 45 20.1 +11
comp=Z,114nm,1.5s
DZM *eS* **S 13 51 01.5 +5.5**
comp=Z,2μm,28.7s
DZM *e*LR LR 13 55 33.3
comp=Z,4μm,27.1s
DZM Mont Dzumac 37.45 116 P P **13 45 11.5 +2.6**
DZM Mont Dzumac 37.45 116 P P **13 45 11.5 +2.6**
comp=Z,13nm,0.9s,baz=262,slow=17,SNR=4.2
DZM LR LR 14 00 44.8
comp=Z,3μm,18.4s,baz=175,slow=36
TAU Tasmania Unive 37.83 160 PFAKE 13 45 20.0 +8.3
TAU LR LR
comp=Z,11μm,19.0s
SRDT SRDT 38.11 306 P P 13 45 28.7 +14
SSE Sheshan 39.87 348 P P **13 45 27.7 -1.1**
SSE pP **pP 13 45 36.4 -1.1**
SSE S **S 13 51 37.0 +5.2**
SSE sS **sS 13 51 49.2 +3.1**
SSE pmax pmax
comp=Z,28nm,0.7s
SSE pmax pmax
comp=Z,410nm,12.0s
SSE LR LR
comp=N,600nm,22.2s
SSE LR LR
comp=E,770nm,22.2s
SSE LR LR
comp=Z,940nm,23.6s
CM31 Chiang Mai Arr 40.63 311 *eP* **P 13 45 34.4 -1.1**
comp=Z,20nm,0.9s
CMAR Chiang Mai Arr 40.63 311 P P **13 45 34.0 -1.5**
CMAR ScP **ScP 13 51 28.2 +3.5**
CMAR Chiang Mai Arr 40.63 311 P P **13 45 34.0 -1.5**
comp=Z,3.2nm,0.8s,baz=141,slow=7.4,SNR=13
CMAR ScP **ScP 13 51 28.2 +3.5**
comp=Z,4.3nm,1.1s,baz=158,slow=3.1,SNR=7.6
CMAR LR LR 14 02 53.1
comp=Z,2μm,20.8s,baz=142,slow=37
CMMT Chiang Mai 40.84 311 P P **13 45 36.5 -0.7**
comp=Z,28nm,1.4s,comp=Z,648nm
CHTO Chiang Mai 40.85 311 PFAKE 13 45 50.0 +13
CHTO LR LR
comp=Z,1μm,21.0s
CHTO Chiang Mai 40.85 311 P P **13 45 35.7 -1.5**
SNR=13
CHTO Chiang Mai 40.85 311 P P **13 45 36.0 -1.2**
JNU Nakatsue 40.92 1 *eP* P **13 45 35.9 -1.6**
comp=Z,17nm,1.0s
JNU *ep*P **pP 13 45 46.0 -0.3**
JNU Nakatsue 40.92 1 P P **13 45 35.8 -1.8**
comp=Z,9.5nm,0.5s,baz=157,slow=22,SNR=20
JNU LR LR 14 01 08.1
comp=Z,3μm,21.5s,baz=140,slow=34
GYA Guiyang 41.26 327 P P **13 45 42.7 +2.1**
GYA pP **pP 13 45 51.4 +2.1**
GYA PP **PnPn 13 47 23.4 +2.5**
GYA PcP **PcP 13 47 40.8 +1.6**
GYA S **S 13 51 57.9 +4.9**
GYA SS **SS 13 54 56.0 -1.1**
GYA pmax pmax
comp=Z,40nm,0.7s
GYA pmax pmax
comp=Z,300nm,4.7s
GYA LR LR
comp=N,610nm,15.2s
GYA LR LR
comp=E,880nm,17.7s
GYA LR LR
comp=Z,930nm,14.7s
WHN Wuhan 41.29 339 P P **13 45 38.2 -2.5**
WHN PP **PnPn 13 47 21.0 -0.1**
WHN S **S 13 51 56.9 +3.8**
WHN LR LR
comp=N,1μm,12.5s
WHN LR LR
comp=E,1μm,10.7s
WHN LR LR
comp=Z,3μm,21.9s
NJ2 Nanjing 41.33 345 *eP* P 13 45 46.2 +5.3
NJ2 pP pP 13 45 53.2 +3.6
NJ2 sP sP 13 45 56.5 +3.4
NJ2 PP **PnPn 13 47 22.4 +1.0**
NJ2 S S 13 52 01.0 +7.5
NJ2 sS sS 13 52 09.0 +1.1
NJ2 pmax pmax
comp=Z,10.0nm,0.9s
NJ2 pmax pmax
comp=Z,560nm,10.2s
NJ2 LR LR
comp=N,10μm,16.4s
NJ2 LR LR
comp=E,11μm,19.4s
NJ2 LR LR
comp=Z,10μm,23.8s
KMI Kunming 42.51 322 P P **13 45 51.9 +0.9**
KMI pP **pP 13 46 01.0 +1.3**
KMI sP **sP 13 46 03.3 0.0**
KMI PP **PP 13 47 34.9 +5.0**
KMI S **S 13 52 13.7 +1.9**
KMI sS **sS 13 52 27.2 +1.0**
KMI SS **SS 13 55 20.6 -1.5**
KMI ScS **ScS 13 55 50.3 -0.9**
KMI pmax pmax
comp=Z,11nm,1.5s
KMI pmax pmax
comp=Z,320nm,6.4s
KMI LR LR
comp=N,630nm,22.9s
KMI LR LR
comp=E,890nm,21.3s
KMI LR LR
comp=Z,1μm,26.9s
DGPR DIGLIPUR 42.70 299 *ex* **PP 13 47 27.4 -4.4**
DGPR AMB AMB 13 47 47.1
comp=Z,28nm,2.1s
WAKE Wake Island 44.92 52 PFAKE 13 46 20.0 +10
WAKE LR LR
comp=Z,2μm,19.0s
MJAR Matsushiro Arr 44.94 9 P P **13 46 07.7 -2.4**
MJAR Matsushiro Arr 44.94 9 P P **13 46 07.7 -2.4**
comp=Z,20nm,0.6s,baz=193,slow=10.0,SNR=83
MJAR LR LR 14 03 59.7
comp=Z,1μm,21.1s,baz=190,slow=35
MAJO Matsushiro 44.94 9 PFAKE 13 46 20.0 +10
MAJO LR LR
comp=Z,1μm,21.0s
KSAR Wonju Array Be 45.28 357 P P **13 46 11.7 -1.0**
KSAR ScP **ScP 13 51 45.3 +2.2**
KSRS Korea Array 45.29 357 P P **13 46 11.7 -1.1**
comp=Z,9.1nm,0.5s,baz=173,slow=9.1,SNR=68
KSRS ScP **ScP 13 51 45.3 +2.2**
comp=Z,1.1nm,0.7s,baz=173,slow=2.9,SNR=4.5
KSRS LR LR 14 02 58.1
comp=Z,2μm,22.0s,baz=174,slow=33
INCN Inchon 45.40 356 *eP* **P 13 46 12.1 -1.6**
comp=Z,91nm,1.7s
INCN LR LR
comp=Z,2μm,21.0s
CD2 Chengdu 46.33 328 P P **13 46 23.8 +2.5**
CD2 pP **pP 13 46 33.7 +3.6**
CD2 sP **sP 13 46 37.6 +4.0**
CD2 PcP **PcP 13 47 56.4 +0.2**
CD2 PP **PP 13 48 13.9 +3.4**
CD2 PcS **PcS 13 51 50.1 -0.8**
CD2 S **S 13 53 11.8 +5.0**
CD2 sS sS 13 53 28.3 +6.9
CD2 ScS **ScS 13 56 13.0 -1.9**
CD2 pmax pmax
comp=Z,40nm,0.4s
CD2 pmax pmax
comp=Z,610nm,9.8s
CD2 LR LR
comp=N,2μm,15.3s
CD2 LR LR
comp=E,910nm,13.1s
CD2 LR LR
comp=Z,1μm,17.1s
XAN Xi'an 46.49 335 P P **13 46 19.4 -3.1**
XAN pP **pP 13 46 29.8 -1.5**
XAN sP **sP 13 46 36.1 +1.3**
XAN S **S 13 53 03.1 -6.0**
XAN pmax pmax
comp=Z,3.0nm,1.0s
XAN pmax pmax
comp=Z,110nm,13.8s
XAN LR LR
comp=N,500nm,22.8s
XAN LR LR
comp=E,84nm,22.8s
XAN LR LR
comp=Z,340nm,19.8s
DL2 Dalian 47.38 351 P P **13 46 28.4 -0.8**
DL2 S **S 13 53 21.1 -0.3**
DL2 pmax pmax
comp=Z,10.0nm,1.0s
DL2 pmax pmax
comp=Z,300nm,5.7s
DL2 LR LR
comp=N,500nm,16.7s
DL2 LR LR
comp=Z,600nm,17.2s
BJI Beijing 49.58 346 P P **13 46 43.8 -2.3**
BJI S S 13 53 58.6 +6.2
BJI pmax pmax
comp=Z,11nm,0.6s
BJI pmax pmax
comp=Z,460nm,5.0s
BJI LR LR
comp=N,730nm,19.9s
BJI LR LR
comp=E,690nm,15.8s
BJI LR LR
comp=Z,750nm,19.3s
SNY Shenyang 49.99 353⇑ P P **13 46 48.3 -0.9**
SNY S **S 13 53 54.9 -3.2**
SNY pmax pmax
comp=Z,440nm,8.4s
SNY LR LR
comp=N,2μm,22.2s
SNY LR LR
comp=E,350nm,14.4s
SNY LR LR
comp=Z,2μm,24.6s
SHL Shillong 50.12 313 *eP* P **13 46 48.5 -2.3**
SHL *ex* x 13 54 12.0
RPZ Rata Peaks 50.24 142 P P **13 46 51.8 +0.6**
RPZ Rata Peaks 50.24 142 P P **13 46 51.8 +0.6**
comp=Z,24nm,0.9s,baz=233,slow=3.5,SNR=8.1
RPZ LR LR 14 07 10.4
comp=Z,3μm,22.0s,baz=208,slow=35
LZH Lanzhou 50.45 332⇑ P P **13 46 52.3 -0.8**
LZH pP **pP 13 46 59.7 -2.3**
LZH sP **sP 13 47 02.5 -3.0**
LZH PP **PP 13 48 46.4 -2.6**
LZH S **S 13 54 06.1 +1.0**
LZH pmax pmax
comp=Z,45nm,1.1s
LZH pmax pmax
comp=Z,230nm,4.0s
LZH LR LR
comp=N,580nm,14.6s
LZH LR LR
comp=E,1μm,16.0s
LZH LR LR
comp=Z,1μm,17.6s
CAL Calcutta 51.12 307 *ex* P **13 46 55.1 -3.1**
CAL *ex* x 13 46 55.1
CAL *ex* x 14 05 23.6
CAL *ex* x 14 05 23.6
ERM Erimo 51.16 12 PFAKE 13 47 10.0 +12
ERM LR LR
comp=Z,2μm,22.0s
SNZO South Karori 51.36 138 PFAKE 13 47 10.0 +10
SNZO LR LR
comp=Z,7μm,19.0s
HHC Hu-ho-hao-te 51.61 342 *eP* **P 13 47 00.8 -0.8**
HHC pP **pP 13 47 08.8 -1.7**
HHC sP **sP 13 47 13.7 -0.3**
HHC PP **PP 13 48 59.9 +0.5**
HHC S **S 13 54 20.6 -0.2**
HHC sS **sS 13 54 35.3 -0.2**
HHC SS **SS 13 57 54.1 -3.5**
HHC pmax pmax
comp=Z,34nm,0.8s
HHC pmax pmax
comp=Z,860nm,6.4s
HHC LR LR
comp=N,1μm,17.8s
HHC LR LR
comp=E,700nm,15.5s
HHC LR LR
comp=Z,2μm,17.0s
URZ Urewera 51.73 133 P P **13 47 02.9 +0.3**
URZ Urewera 51.73 133 P P **13 47 02.9 +0.3**
comp=Z,8.9nm,0.6s,baz=229,slow=4.7,SNR=12
CN2 Changchun 51.77 356 *eP* **P 13 47 01.3 -1.3**
CN2 *ep*P **pP 13 47 11.3 -0.2**
CN2 *es*P **sP 13 47 14.4 -0.6**
CN2 *eS* **S 13 54 28.1 +5.4**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,1μm,22.0s
CN2 LR LR
comp=E,700nm,22.0s
CN2 LR LR
comp=Z,1μm,20.0s
USRK Ussuriysk Arra 52.00 2 P P **13 47 03.1 -1.1**
comp=Z,12nm,0.5s,baz=181,slow=7.3,SNR=30
USRK LR LR 14 08 34.8
comp=Z,1μm,20.9s,baz=174,slow=36
MDJ Mudanjiang 52.40 359 P P **13 47 06.9 -0.4**
MDJ pP **pP 13 47 13.2 -3.0**
MDJ sP **sP 13 47 15.8 -3.9**
MDJ PP **PP 13 49 05.1 -1.2**
MDJ PcS **PcS 13 52 13.4 -2.7**
MDJ S **S 13 54 28.8 -2.5**
MDJ ScS **ScS 13 56 53.3 -1.8**
MDJ SS **SS 13 58 08.3 -1.4**
MDJ pmax pmax
comp=Z,24nm,1.4s
MDJ pmax pmax
comp=Z,490nm,6.6s
MDJ LR LR
comp=N,1μm,23.1s
MDJ LR LR
comp=E,420nm,16.9s
MDJ LR LR
comp=Z,2μm,24.5s
RAO Raoul Island 52.91 121 PFAKE 13 47 20.0 +8.6

RAO LR LR
comp=Z,3μm,19.0s
VIS Vishakhapatnam 52.99 299 *e*P P 13 47 08.9 -3.3
VIS AMB AMB 13 47 13.5
comp=Z,33nm,0.9s
ASAJ Asahikawa 53.07 11 *e*P **P** **13 47 11.8 -0.4**
comp=Z,14nm,0.9s
ASAJ *e*pP **pP** **13 47 22.1 +1.0**
ASAJ *e*sP **sP** **13 47 27.1 +2.5**
ASAJ Asahikawa 53.07 11 P **P** **13 47 11.9 -0.4**
comp=Z,11nm,0.4s,baz=232,slow=7.9,SNR=50
LSA Lhasa 53.15 317 P **P** **13 47 14.3 +0.6**
YUK Yuzh-Kuril'sk 53.69 14 *i* P **P** **13 47 14.0 -2.8**
YUK *i* S **S** **13 54 45.1 -3.8**
YUK *i* SS **SKiKP** **13 58 25.0 -4.7**
YUK pmax pmax
comp=N,634nm,1.5s
YUK pmax pmax
comp=E,848nm,1.5s
YUK pmax pmax
comp=Z,1μm,1.5s
YUK pmax pmax
comp=Z,2μm,1.7s
YUK MLR MLR
comp=Z,1μm,19.0s
BOK Bokaro 53.69 307 *e*P **P** **13 47 14.2 -3.1**
BOK AMB AMB 13 47 32.6
comp=Z,16nm,1.8s
ODAN Odare 54.17 311 *e*P **P** **13 47 19.1 -1.8**
comp=Z,140nm,1.0s
TAPN Taplejung 54.20 312 *e*P **P** **13 47 19.6 -1.7**
RAMN Ramite 54.80 311 *e*P **P** **13 47 24.5 -1.1**
comp=Z,218nm,0.7s
GTA Gaotai 55.02 331 *e*P **P** **13 47 26.1 -0.6**
GTA pP **pP** **13 47 33.1 -2.6**
GTA sP **sP** **13 47 37.1 -2.1**
GTA PP **PP** **13 49 32.0 +1.8**
GTA ScP **ScP** **13 52 24.6 -0.4**
GTA S **S** **13 55 06.9 -0.4**
GTA ScS **ScS** **13 57 11.7 -2.5**
GTA SS **SS** **13 58 50.6 -0.9**
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,350nm,9.5s
GTA LR LR
comp=N,720nm,18.1s
GTA LR LR
comp=E,610nm,18.5s
GTA LR LR
comp=Z,1μm,30.2s
YSS Yuzh-Sakhalins 55.84 10*α**e*P **P** **13 47 32.5 +0.2**
YSS *e* 13 47 38.8
YSS *e* 13 48 38.0
YSS *e*S **S** **13 55 14.0 -3.7**
YSS *e*PS PnS 13 55 20.0 -10
YSS pmax pmax
comp=Z,80nm,1.5s
YSS pmax pmax
comp=Z,500nm,4.0s
YSS MLR MLR
comp=Z,500nm,18.0s
YSS Yuzh-Sakhalins 55.84 10 *e*P P 13 47 27.6 -4.7
comp=Z,31nm,0.7s
YSS LR LR
comp=Z,337nm,21.0s
GUN Gumba 55.86 312 *e*P **P** **13 47 31.4 -1.9**
comp=Z,56nm,0.5s
PKI Pulchoki 56.03 311 *e*P **P** **13 47 32.9 -1.6**
comp=Z,28nm,0.5s
PKIN Phulchoki 56.04 311 *e*P **P** **13 47 33.1 -1.4**
KKN Kakani 56.24 311 *e*P **P** **13 47 34.9 -1.0**
DMN Daman 56.28 311 *e*P **P** **13 47 35.3 -0.9**
comp=Z,97nm,0.9s
KLR Kul'dur 57.02 1 *e*P P 13 47 37.0 -3.7
KLR *e*S **S** **13 55 30.0 -3.3**
KLR *e* 13 57 22.0
KLR pmax pmax
comp=N,63nm,2.0s
KLR pmax pmax
comp=Z,180nm,2.0s
HYB Hyderabad 57.05 297 *e*P **P** **13 47 42.0 +0.4**
HYB Hyderabad 57.05 297 *e*P **P** **13 47 42.0 +0.4**
HYB Hyderabad 57.05 297 *i* P **P** **13 47 42.0 +0.4**
HYB *e* 13 51 12.0
HYB *e*S S 13 55 24.0 -11
HYB *e*ScS **ScS** **13 57 28.0 -1.5**
DGAR Diego Garcia 57.31 266 PFAKE 13 48 00.0 +17
DGAR LR LR
comp=Z,1μm,20.0s
KOLN Koldanda 57.50 310 *e*P **P** **13 47 43.6 -1.2**
comp=Z,124nm,0.7s
DANN Dangsing 57.68 311 *e*P **P** **13 47 45.3 -0.9**
comp=Z,66nm,0.7s
PYUN Piuthan 58.13 310 *e*P **P** **13 47 48.2 -1.0**
comp=Z,301nm,1.0s
DRV Dumont d'Urvil 58.94 176 PP PP 13 49 53.0 -11
DRV S S 13 55 40.0 -18
DRV SS SS 13 59 44.0 -7.8
DRV L L 14 02 00.0
DRV R 14 06 00.0
ULN Ulaanbaatar 59.33 342 *e*P **P** **13 47 56.7 -0.4**
comp=Z,22nm,0.7s
ULN LR LR
comp=Z,632nm,22.0s
ULN Ulaanbaatar 59.33 342 P **P** **13 47 57.9 +0.8**
SNR=14
SONM Songino Array 59.50 342 P **P** **13 47 57.5 -0.8**
SONM Songino Array 59.50 342 P **P** **13 47 57.5 -0.8**
comp=Z,4.7nm,0.5s,baz=160,slow=7.8,SNR=35
SONM LR LR 14 19 12.2
comp=Z,407nm,18.3s,baz=179,slow=42
CASY Casey 59.75 189 *e*P **P** **13 47 59.5 -0.1**
comp=Z,11nm,0.7s
CASY LR LR
comp=Z,3μm,21.0s
ZAK Zakamensk 62.73 341 *e*P **P** **13 48 18.5 -1.6**
ZAK pmax pmax
comp=Z,10.0nm,1.4s
NDI New Delhi 62.86 308 *e*P P 13 48 16.0 -5.3
DDI Dehra Dun 62.97 310 *e*P **P** **13 48 20.0 -2.1**
DDI AMB AMB 13 48 22.9
comp=Z,49nm,0.3s
DDI *ex* x 13 59 09.5
TLY Talaya 63.74 342 *e*P P 13 48 22.8 -3.8
TLY *e* 13 49 04.4
TLY *e*S S 13 56 44.0 -15
TLY pmax pmax
comp=Z,15nm,1.4s
TLY Talaya 63.74 342 *e*P **P** **13 48 25.0 -1.6**
comp=Z,5.5nm,0.6s
TLY *e*pP **pP** **13 48 36.9 +1.2**
TLY LR LR
comp=Z,507nm,19.0s
TLY Talaya 63.74 342 P **P** **13 48 27.8 +1.1**
SNR=6.9
TLY Talaya 63.74 342 P **P** **13 48 26.4 -0.2**
comp=Z,79nm,0.5s,SNR=6.3
SMLA Simla 64.03 310 *i* P **P** **13 48 28.5 -0.4**
SMLA AMB AMB 13 48 37.4
comp=Z,54nm,0.5s
SMLA *i* S **S** **13 57 02.1 -1.5**
IRK Irkutsk 64.04 343 *e*P **P** **13 48 27.9 -0.7**
IRK pmax pmax
comp=Z,88nm,1.8s
JOHN Johnston Islan 64.36 67 PFAKE 13 48 40.0 +8.7
JOHN LR LR
comp=Z,5.0nm,19.0s
WMQ Urumqi 64.42 327 P **P** **13 48 31.0 -0.3**
WMQ pP **pP** **13 48 39.0 -1.5**
WMQ sP **sP** **13 48 42.0 -1.9**
WMQ PcP **PcP** **13 49 05.0 -0.6**
WMQ PP **PP** **13 50 55.0 +1.6**
WMQ S **S** **13 57 07.0 -1.2**
WMQ ScS **SKSac** **13 58 20.0 -3.7**
WMQ SS **SS** **14 01 19.0 +0.1**
WMQ pmax pmax
comp=Z,47nm,1.0s
WMQ pmax pmax
comp=Z,49nm,5.0s
WMQ LR LR
comp=N,880nm,18.0s
WMQ LR LR
comp=E,890nm,20.0s
WMQ LR LR
comp=Z,880nm,22.0s
MOY Mondy 64.58 340 *e*P **P** **13 48 32.9 +0.6**
MOY pmax pmax
comp=Z,100nm,3.4s
CLNS Chul'man 64.78 357 *e*P **P** **13 48 32.7 -0.7**
CLNS *e**PP **pP** **13 48 45.6 +3.1**
CLNS *e* 13 49 04.2
CLNS *e* 13 50 55.5
CLNS *e*PPP PPP 13 52 29.1
CLNS *e*S **S** **13 57 15.9 +3.8**
CLNS *e* 13 58 14.0
CLNS *e*SS **SS** **14 01 18.8 -5.2**
CLNS pmax pmax
comp=Z,14nm,0.9s
CLNS pmax pmax
comp=N,9.0nm,1.0s
CLNS pmax pmax
comp=E,5.0nm,0.8s
CLNS pmax pmax
comp=Z,4.0nm,1.0s
CLNS pmax pmax
comp=E,6.0nm,1.0s
CLNS pmax pmax
comp=N,7.0nm,0.9s
CLNS smax smax
comp=N,315nm,11.5s
CLNS smax smax
comp=E,123nm,9.7s
CLNS MLR MLR
comp=Z,344nm,16.0s
CLNS MLR MLR
comp=E,300nm,17.0s
PEA0B Petropavlovsk- 65.19 18 *e*P **P** **13 48 34.8 -1.3**
PEA0B *e*pP **pP** **13 48 46.7 +1.5**
PETK Petropavlovsk- 65.19 18 P **P** **13 48 36.4 +0.3**
PETK Petropavlovsk- 65.19 18 P **P** **13 48 36.4 +0.3**
PETK Petropavlovsk- 65.19 18 P **P** **13 48 36.4 +0.3**
comp=E,10nm,0.6s,baz=177,slow=5.7,SNR=46
PETK LR LR 14 15 38.7
comp=E,576nm,21.4s,baz=210,slow=35
DHRM DHARAMSHALA 65.21 311 *e*P **P** **13 48 35.4 -1.5**
DHRM AMB AMB 13 48 45.0
comp=Z,40nm,0.7s
PET Petropavlovsk 65.41 18 *e*P P 13 48 48.0 +11
PET *e*S S 13 57 30.2 +10
PET *e*PS **PnS** **13 57 49.2 +7.7**
PET pmax pmax
comp=Z,42nm,0.8s
PET pmax pmax
comp=Z,300nm,16.5s
PET MLR MLR
comp=Z,500nm,16.0s
PET Petropavlovsk 65.41 18 *e*P **P** **13 48 37.9 +0.5**
comp=Z,48nm,1.1s
PET LR LR
comp=Z,826nm,20.0s
NIL Nilore 68.12 311 PFAKE 13 49 10.0 +15
NIL LR LR
comp=Z,27nm,19.0s
KSH Kashi 68.98 318 P **P** **13 49 01.7 +1.1**
KSH pP **pP** **13 49 09.6 -0.2**
KSH sP **sP** **13 49 10.7 -2.6**
KSH PcP **PcP** **13 49 24.2 -0.6**
KSH PP **PP** **13 51 36.4 +3.0**
KSH S **S** **13 58 05.4 +1.6**
KSH ScS **SKSac** **13 58 57.0 -1.6**
KSH SS **SS** **14 02 34.1 +4.1**
KSH pmax pmax
comp=Z,14nm,0.5s
KSH pmax pmax
comp=Z,610nm,3.9s
KSH LR LR
comp=N,510nm,8.7s
KSH LR LR
comp=E,430nm,12.7s
KSH LR LR
comp=Z,1μm,24.6s
MK31 Makanchi Array 69.25 327 *e*P **P** **13 49 02.4 +0.4**
MK31 pmax pmax
comp=Z,17nm,0.1s
MKAR Makanchi Array 69.25 327 P **P** **13 49 02.0 0.0**
MKAR Makanchi Array 69.25 327 P **P** **13 49 01.9 0.0**
MKAR Makanchi Array 69.25 327 P **P** **13 49 01.9 0.0**
comp=Z,36nm,0.5s,baz=119,slow=7.9,SNR=200
YAK Yakutsk 69.84 360 *e*P **P** **13 49 05.2 0.0**
YAK *e**PP **pP** **13 49 19.5 +5.1**
YAK *e* 13 49 27.6
YAK *e* 13 51 41.9
YAK *e*S **S** **13 58 12.7 +0.1**
YAK *e* 13 59 02.1
YAK *e*SS **SS** **14 02 39.0 -3.0**
YAK pmax pmax
comp=Z,71nm,0.9s
YAK pmax pmax
comp=N,18nm,1.4s
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK pmax pmax
comp=Z,119nm,4.9s
YAK pmax pmax
comp=N,150nm,6.4s
YAK pmax pmax
comp=E,130nm,7.8s
YAK smax smax
comp=N,270nm,2.2s
YAK smax smax
comp=E,168nm,1.8s
YAK Yakutsk 69.84 360 *e*P P 13 49 01.5 -3.8
comp=E,73nm,0.6s
YAK *e*pP pP 13 49 15.4 +1.0
YAK LR LR
comp=Z,543nm,20.0s
ULHL Ulahol 70.21 320 *i* P **P** **13 49 09.1 +0.8**
ULHL Ulahol 70.21 320 P **P** **13 49 09.1 +0.8**
SNR=10
FX1 Attu Island--F 70.74 26 *e*P **P** **13 49 10.7 -0.3**
KZA Kyzart 70.76 320 *i* P **P** **13 49 12.6 +0.7**
KZA Kyzart 70.76 320 P **P** **13 49 12.6 +0.7**
SNR=48
TKM2 Tokmak 2 70.97 321 *i* P **P** **13 49 13.1 +0.3**
TKM2 Tokmak 2 70.97 321 PFAKE 13 49 20.0 +7.1
TKM2 LR LR
comp=Z,590nm,19.0s
TKM2 Tokmak 2 70.97 321 P **P** **13 49 13.2 +0.3**
SNR=46
KBK Karagaybulak 71.25 320 *i* P **P** **13 49 15.3 +0.8**
KBK Karagaybulak 71.25 320 P **P** **13 49 15.3 +0.8**
SNR=20
VNDA Vanda 71.40 173 *e*P **P** **13 49 14.6 -0.1**
comp=Z,16nm,1.0s
VNDA Vanda 71.40 173 P **P** **13 49 15.1 +0.4**
comp=Z,1.7nm,0.5s,baz=323,slow=6.7,SNR=18
VNDA LR LR 14 19 34.7
comp=Z,1μm,20.5s,baz=352,slow=35
AAK Ala-Archa 71.52 320⇑ *i*P **P** **13 49 16.6 +0.4**
AAK pmax pmax
comp=Z,75nm,1.2s
AAK Ala-Archa 71.52 320 *e*P **P** **13 49 15.7 -0.4**
comp=Z,148nm,1.0s
AAK LR LR
comp=Z,564nm,22.0s
AAK Ala-Archa 71.52 320 P **P** **13 49 17.4 +1.2**
SNR=18
AAK Ala-Archa 71.52 320 P **P** **13 49 16.9 +0.7**
comp=Z,11nm,0.5s,baz=129,slow=5.3,SNR=62
CHMS Chumysh 71.54 320 *i* P **P** **13 49 15.7 -0.4**
CHMS Chumysh 71.54 320 P **P** **13 49 15.7 -0.4**
SNR=8.2
FRU Bishkek 71.54 320 *e*P **P** **13 49 17.0 +0.9**
FRU *i* 13 49 39.0
FRU pmax pmax
comp=Z,186nm,2.8s
KBL Kabul 71.66 310 *e*P **P** **13 49 16.8 -0.4**
KBL pmax pmax
comp=Z,18nm,0.8s
KBL Kabul 71.66 310 *e*P **P** **13 49 16.8 -0.4**
comp=Z,18nm,0.8s
AML Almayashu 71.79 319 *i* P **P** **13 49 18.8 +0.7**
AML Almayashu 71.79 319 P **P** **13 49 18.8 +0.7**
SNR=48
USP Ospenovka 71.84 321 *i* P **P** **13 49 17.8 -0.1**
USP Ospenovka 71.84 321 P **P** **13 49 17.8 -0.1**
SNR=29
EKS2 Erkin-Say 71.99 320 *e*P **P** **13 49 18.9 0.0**
EKS2 pmax pmax
comp=Z,48nm,1.3s
EKS2 MLR MLR
comp=Z,914nm,22.0s
EKS2 Erkin-Say 71.99 320 *e*P **P** **13 49 18.9 0.0**
comp=Z,48nm,1.3s
EKS2 LR LR
comp=Z,914nm,22.0s
EKS2 Erkin-Say 71.99 320 P **P** **13 49 20.2 +1.2**
SNR=20
SBA Scott Base 72.29 172 PFAKE 13 49 30.0 +10
SBA LR LR
comp=Z,2μm,20.0s
ZAA0 Zalesovo Array 72.63 334 *e*P **P** **13 49 21.0 -1.3**
ZALV Zalesovo Beam 72.63 334 P **P** **13 49 20.8 -1.6**
ZALV Zalesovo Beam 72.63 334 P **P** **13 49 20.8 -1.6**
ZALV Zalesovo Beam 72.63 334 P **P** **13 49 20.8 -1.6**
comp=Z,11nm,0.4s,baz=139,slow=5.7,SNR=46
ZALV LR LR 14 23 12.3
comp=Z,428nm,18.3s,baz=292,slow=38
SEY Seymchan 72.74 10⇑ *i*P **P** **13 49 22.8 0.0**
KURBB Kurchatov Arra 73.54 329 P **P** **13 49 26.6 -1.2**
comp=Z,53nm,0.2s,baz=130,slow=4.8,SNR=1.9
KURK Kurchatov 73.55 329⇑ *i*P **P** **13 49 27.1 -0.7**
KURK pmax pmax
comp=Z,117nm,2.9s
KURK Kurchatov 73.55 329 *e*P **P** **13 49 27.1 -0.7**
comp=Z,22nm,0.6s
KURK LR LR
comp=Z,562nm,20.0s
KURK Kurchatov 73.55 329 P **P** **13 49 27.4 -0.4**
SNR=15
NVS Novosibirsk 73.92 334⇑ *i*P **P** **13 49 27.8 -2.1**
NVS *i* 13 49 46.4
NVS *e*S **SKiKP** **13 58 52.6 -4.2**
NVS pmax pmax
comp=N,55nm,2.1s
NVS pmax pmax
comp=E,58nm,2.1s
NVS pmax pmax
comp=Z,152nm,2.1s
NVS smax smax
comp=N,54nm,2.5s
NVS smax smax
comp=E,69nm,1.9s
MAW Mawson 74.13 202 P **P** **13 49 33.0 +2.1**
MAW Mawson 74.13 202 P **P** **13 49 33.0 +2.1**
comp=E,8.2nm,0.7s,baz=51,slow=12,SNR=4.2
MAW LR LR 14 20 59.4
comp=E,942nm,18.8s,baz=64,slow=35
KK31 Karatay Array 74.31 319 *i* P **P** **13 49 32.7 +0.2**
KK31 pmax pmax
comp=Z,14nm,0.8s
KKAR Karatay Array 74.31 319 *e*P **P** **13 49 32.2 -0.3**
KKAR Karatay Array 74.31 319 *e*P **P** **13 49 32.2 -0.3**
HOQ Hoqain 77.86 296 P **P** **13 49 54.6 +1.5**
SNR=6.2
TBI Tubuai 77.92 112 *e*S **S** **13 59 46.2 +0.9**
comp=Z,883nm,29.2s
TBI *e*LQ LQ 14 10 58.2
comp=Z,1μm,36.5s
TBI *e*LR LR 14 14 09.1
comp=Z,1μm,28.5s
PPT2 Papeete2 78.23 106 *e*S **S** **13 59 49.2 +0.3**
comp=Z,1μm,28.2s
PPT2 *e*LQ LQ 14 11 04.5
comp=Z,912nm,25.8s
PPT2 *e*LR LR 14 14 26.7
comp=Z,1μm,23.2s
PPT Papeete 78.23 106 LR LR 14 20 42.0
comp=Z,530nm,21.6s,baz=262,slow=33
BVA0 Borovoye Array 79.09 328 *i* P **P** **13 49 58.5 -0.8**
BVA0 pmax pmax
comp=Z,6.0nm,1.4s
BVAR Borovoye Array 79.09 328 P **P** **13 49 58.6 -0.7**
BVAR Borovoye Array 79.09 328 P **P** **13 49 58.6 -0.7**
BVAR Borovoye Array 79.09 328 P **P** **13 49 58.6 -0.7**
comp=Z,7.7nm,0.5s,baz=134,slow=6.4,SNR=51
BRVK Borovoye 79.16 328*c**e*P **P** **13 49 59.4 -0.2**
BRVK pmax pmax
comp=Z,42nm,1.7s
BRVK Borovoye 79.16 328 *e*P **P** **13 49 59.1 -0.5**
comp=Z,39nm,1.3s
BRVK LR LR
comp=Z,603nm,20.0s
BRVK Borovoye 79.16 328 P **P** **13 49 59.4 -0.2**
SNR=13
HATD Hatta, Dubai 79.21 297 P **P** **13 50 01.5 +1.0**
SNR=6.8
TIXI Tiksi 79.51 360⇓ *i*P **P** **13 50 00.6 -0.5**
TIXI Tiksi 79.51 360 *e*P **P** **13 50 00.4 -0.7**
comp=Z,30nm,0.8s
TIXI LR LR
comp=Z,753nm,21.0s
BILL Bilibino 80.03 13 *e*P **P** **13 50 04.4 +0.4**
BILL *e*S **S** **14 00 04.7 -1.3**
BILL pmax pmax
comp=Z,3.0nm,0.7s
BILL MLR MLR
comp=Z,700nm,22.0s
BILL Bilibino 80.03 13 *e*P **P** **13 50 04.1 0.0**
comp=Z,11nm,1.1s
BILL LR LR
comp=Z,745nm,22.0s
ABPO Ambohimpanom 80.94 252 PFAKE 13 50 20.0 +10
ABPO LR LR
comp=Z,849nm,20.0s
OPO Ambohidratompo 81.02 252 P **P** **13 50 11.2 +0.6**
OPO Ambohidratompo 81.02 252 P **P** **13 50 11.2 +0.6**
comp=Z,5.0nm,0.8s,baz=105,slow=4.1,SNR=4.3
QSPA South Pole Qui 81.96 180 *e*P **P** **13 50 14.0 -0.6**
comp=Z,20nm,0.9s
QSPA LR LR
comp=Z,2μm,20.0s
QSPA South Pole Qui 81.96 180 P **P** **13 50 15.5 +0.9**
comp=Z,6.2nm,1.1s,baz=338,slow=1.6,SNR=20
SYO Syowa Base 82.83 201⇑ *e*P **P** **13 50 19.2 +0.2**
AB31 Akbulak array 83.50 322 P **P** **13 50 22.0 -0.7**
AB31 pmax pmax
comp=Z,5.0nm,0.4s
ABKAR Akbulak array 83.50 322 *e*P **P** **13 50 21.9 -0.8**
comp=Z,6.5nm,0.5s
GAMB Gambell 83.73 22 *e*P **P** **13 50 22.6 -0.9**
comp=Z,5.0nm,0.6s
AKTO Aktyubinsk 85.07 322 P **P** **13 50 30.9 +0.2**
AKTO Aktyubinsk 85.07 322 P **P** **13 50 30.9 +0.2**
AKTO Aktyubinsk 85.07 322 P **P** **13 50 30.9 +0.2**
comp=Z,7.1nm,0.6s,baz=101,slow=7.4,SNR=22
AKTO LR LR 14 28 05.3
comp=Z,393nm,21.0s,baz=123,slow=36
SVE Sverdlovsk 85.80 329⇓ *i*P **P** **13 50 35.1 +0.9**
SVE *e*S **SKSac** **14 00 54.5 -3.1**
SVE pmax pmax
comp=Z,56nm,1.1s
TNA Tin City 86.05 22 *e*P **P** **13 50 35.1 0.0**
comp=Z,9.9nm,1.1s
ARU Arti 86.73 328*c* *i*P **P** **13 50 39.0 +0.2**
ARU 13 54 00.4
ARU S **SKSac** **14 01 02.9 -0.5**
ARU SS **SS** **14 06 49.8 -6.5**
ARU pmax pmax
comp=Z,32nm,1.0s
ARU Arti 86.73 328 *e*P **P** **13 50 38.2 -0.6**
comp=Z,43nm,1.1s
ARU LR LR
comp=Z,461nm,21.0s
ARU Arti 86.73 328 P **P** **13 50 38.5 -0.3**
comp=Z,190nm,0.9s,SNR=10
RDF Al-Radifah 87.56 299 *e*P **P** **13 50 43.4 0.0**
RDF AMb AMB 13 50 51.3
comp=Z,99nm,1.3s
NAY Al-Naaiem 87.89 300 *e*P **P** **13 50 44.6 -0.4**
NAY AMb AMB 13 50 51.8
comp=Z,47nm,1.0s
MIB Mutribah 87.90 300 *e*P **P** **13 50 44.5 -0.6**
MIB AMb AMB 13 50 49.3
comp=Z,95nm,1.0s
RAYN Ar Rayn 88.45 294 P **P** **13 50 47.5 -0.4**
comp=Z,105nm,1.4s,SNR=8.9
SOKR Solikamsk 88.65 331 *e*P **P** **13 50 46.2 -1.6**
SOKR 13 54 12.6
SOKR S **SKSac** **14 01 12.8 -2.0**
SOKR pmax pmax
comp=Z,20nm,1.1s
SOKR MLR MLR
comp=Z,1μm,33.0s
KDAK Kodiak Island 89.92 31 PFAKE 13 51 10.0 +16
KDAK LR LR

comp=Z,880nm,19.0s
BHD Baghdad 90.97 303 *i* x **P** **13 50 57.7 -1.7**
BHD *i* x **SKSac** **14 01 30.0 +0.4**
BHD *i* x **S** **14 01 52.0 -3.1**
RKT Rikitea 91.18 113 *e*S **S** **14 01 57.3 -0.2**
comp=Z,452nm,28.8s
KMBO Kilima Mbogo 92.89 268 *e*P **P** **13 51 08.4 -0.5**
comp=Z,3.0nm,1.1s
KMBO Kilima Mbogo 92.89 268 P **P** **13 51 09.6 +0.6**
comp=Z,1.5nm,0.8s,baz=61,slow=15,SNR=4.7
KMBO LR LR 14 31 28.9
comp=Z,506nm,21.6s,baz=97,slow=35
COLD Coldfoot 93.28 23 *e*P **P** **13 51 09.5 +0.2**
comp=Z,6.1nm,0.9s
KBZ Khabaz 93.62 313 LR LR 14 36 43.6
comp=Z,187nm,20.9s,baz=104,slow=38
COLA College 93.74 25 *e*P **P** **13 51 09.8 -1.6**
COLA pmax pmax
comp=Z,4.0nm,0.8s
COLA MLR MLR
comp=Z,403nm,22.0s
COLA College 93.74 25 *e*P **P** **13 51 09.8 -1.6**
comp=Z,3.7nm,0.8s
COLA LR LR
comp=Z,403nm,22.0s
KIV Kislovodsk 93.81 314 P **P** **13 51 13.0 +0.6**
KIV *e* 13 51 19.0
KIV 13 55 01.0
KIV 14 01 47.0
KIV SS SS 14 08 43.0 +3.5
KIV pmax pmax
comp=Z,4.0nm,0.8s
KIV MLR MLR
comp=Z,200nm,19.0s
KIV Kislovodsk 93.81 314 PFAKE 13 51 20.0 +7.6
KIV LR LR
comp=Z,293nm,22.0s
ILAR Eielson Array 94.13 25 P **P** **13 51 11.3 -1.9**
ILAR PKKPbc **PKKPbc** **14 08 20.1 +2.5**
ILAR Eielson Array 94.13 25 P **P** **13 51 11.3 -1.9**
comp=Z,3.3nm,0.7s,baz=272,slow=4.2,SNR=85
ILAR PKKPbc **PKKPbc** **14 08 20.1 +2.5**
comp=Z,0.6nm,0.9s,baz=67,slow=2.3,SNR=3.6
ILAR LR LR 14 35 46.3
comp=Z,418nm,19.3s,baz=275,slow=37
PAX Paxson 94.45 27 *e*P **P** **13 51 16.0 +1.1**
PAX pmax pmax
comp=Z,29nm,1.7s
PAX Paxson 94.45 27 *e*P **P** **13 51 16.0 +1.1**
comp=Z,29nm,1.7s
BMRM Bremner River 94.56 29 *e*P **P** **13 51 15.5 +0.2**
SNAA Sanae 94.75 193 *e*P **P** **13 51 17.8 +1.6**
SNAA Sanae 94.75 193 *e*P **P** **13 51 15.2 -1.0**
comp=Z,15nm,1.2s
DOT Dot Lake 95.18 27 *e*P **P** **13 51 17.8 -0.3**
comp=Z,8.5nm,0.9s
MENT Mentasta 95.24 27 *e*P **P** **13 51 18.4 -0.1**
VRHR Novokhopersk 95.36 321 *e*P **P** **13 51 19.0 -0.2**
VRHR pmax pmax
comp=N,8.0nm,0.6s
VRHR pmax pmax
comp=E,7.0nm,0.6s
VRHR pmax pmax
comp=Z,8.0nm,0.6s
SOC Sochi 95.90 313 *e*P P 13 51 09.3 -13
SOC *e**PP **PcP** **13 51 26.4 +4.4**
SOC *e* 13 55 10.7
SOC *e*PS PS 14 03 50.7 -10
SOC MLR MLR
comp=Z,551nm,22.0s
VNA2 Neumayer--Watz 96.31 193 *e*P **P** **13 51 23.7 +0.5**
baz=135,slow=3.1
MALT Malatya 96.39 308 *e*P **P** **13 51 23.5 -0.9**
MALT pmax pmax
comp=Z,4.0nm,0.9s
MALT MLR MLR
comp=Z,452nm,22.0s
MALT Malatya 96.39 308 *e*P **P** **13 51 23.4 -0.9**
comp=Z,4.2nm,0.9s
MALT LR LR
comp=Z,452nm,22.0s
VNA3 Neumayer Olymp 96.56 192 *e*P P 13 51 35.5 +11
VORD Divnogorie 96.81 320 *e*P **P** **13 51 28.6 +2.8**
VORD pmax pmax
comp=N,100nm,0.6s
VORD pmax pmax
comp=E,120nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 96.91 321 *e*P **P** **13 51 25.4 -0.8**
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=E,10.0nm,1.3s
VSR pmax pmax
comp=Z,20nm,1.3s
ASF Jabal al Asfar 97.10 301 LR LR 14 39 03.7
comp=Z,321nm,18.9s,baz=337,slow=38
KLMR Klimovskoe 97.33 330 *e*P **P** **13 51 25.8 -2.1**
KLMR *i* S **SKSac** **14 02 01.1 -1.8**
KLMR pmax pmax
comp=Z,30nm,1.6s
TMCR Tamitsa 98.16 334 *e*P Pdif 13 51 32.6 +1.1
TMCR pmax pmax
comp=Z,31nm,1.1s
MMAI Mount Meron Ar 98.43 302 LR LR 14 40 29.9
comp=Z,470nm,19.5s,baz=95,slow=38
EIL Elat 98.57 299 LR LR 14 38 33.9
comp=Z,1μm,20.8s,baz=97,slow=37
OBN Obninsk 98.67 325 P Pdif 13 51 34.0 0.0
OBN *PP pP 13 51 43.0 -0.5
OBN *SP sP 13 51 47.0 +0.2
OBN *e* 13 55 34.0
OBN PS **PS** **14 04 35.0 +4.7**
OBN SS **SS** **14 09 45.0 -2.3**
OBN pmax pmax
comp=Z,26nm,1.4s
OBN Obninsk 98.67 325 PFAKE 13 51 40.0 +6.0
OBN LR LR
comp=Z,846nm,22.0s
MBAR Mbarara 99.41 268 PFAKE 13 51 50.0 +11
MBAR LR LR
comp=Z,563nm,19.0s
LSZ Lusaka 99.48 253 PFAKE 13 51 50.0 +11
LSZ LR LR
comp=Z,597nm,21.0s
LVZ Lovozero 99.52 338 PFAKE 13 51 50.0 +12
LVZ LR LR
comp=Z,665nm,21.0s
APA Apatity 100.01 337⇑ *e*P **Pdif** **13 51 47.4 +7.7**
APA MLR MLR
comp=Z,2μm,25.0s
BRTR Keskin Array B 100.20 309 P **Pdif** **13 51 42.9 +1.4**
BRTR Keskin Array B 100.20 309 P **Pdif** **13 51 42.9 +1.4**
comp=Z,0.4nm,0.4s,baz=118,slow=5.5,SNR=3.3
CSS Prodhromos 100.26 304 PFAKE 13 51 50.0 +8.3
CSS LR LR
comp=Z,512nm,19.0s
SUR Sutherland 101.89 235 PFAKE 13 52 00.0 +11
SUR LR LR
comp=Z,1μm,20.0s
KEV Kevo 102.08 340 PFAKE 13 52 00.0 +11
KEV LR LR
comp=Z,714nm,20.0s
ARCES ARCESS Array B 102.64 340 P **Pdif** **13 51 50.2 -1.2**
ARCES PKiKP **PKiKP** **13 56 13.2 +1.0**
ARCES ARCESS Array B 102.64 340 P **Pdif** **13 51 50.2 -1.2**
comp=Z,1.3nm,0.5s,baz=83,slow=6.9,SNR=10
ARCES PKiKP **PKiKP** **13 56 13.2 +1.0**
comp=Z,4.4nm,1.0s,baz=54,slow=2.3,SNR=6.7
KBS Kingsbay 103.12 350 PFAKE 13 52 00.0 +6.6
KBS LR LR
comp=Z,772nm,22.0s
KIEV Kiev 103.20 320 PFAKE 13 52 10.0 +16
KIEV LR LR
comp=Z,537nm,21.0s
KIS Kishinev 103.67 316 *e*P **Pdif** **13 52 00.0 +3.5**
KIS *e* 14 05 24.0
KIS *e* 14 06 12.0
KIS pmax pmax
comp=Z,700nm,22.0s
KIS Kishinev 103.67 316 *e*P **Pdif** **13 52 00.0 +3.5**
KIS LRM MLR 14 43 00.0
comp=Z,700nm,24.0s
FINES FINESS Array B 103.81 331 Pdif **Pdif** **13 51 55.8 -0.9**
FINES PKiKP **PKiKP** **13 56 14.8 +0.3**
FINES FINESS Array B 103.81 331 Pdiff **Pdif** **13 51 55.8 -0.9**
comp=Z,0.5nm,0.4s,baz=101,slow=4.7,SNR=8.4
FINES PKiKP **PKiKP** **13 56 14.8 +0.3**
comp=Z,1.1nm,0.6s,baz=99,slow=3.9,SNR=8.4
PMSA Palmer Station 106.61 174 PFAKE 13 56 30.0
PMSA LR LR
comp=Z,1μm,19.0s
KWP Kalwaria Pacla 107.47 319 PFAKE 13 56 30.0
KWP LR LR
comp=Z,480nm,20.0s
CRVS Cervenica-Dubn 108.39 319 *e*P **Pdif** **13 52 22.4 +4.9**
CRVS Cervenica-Dubn 108.39 319 PDIF **Pdif** **13 52 22.4 +4.9**
TSUM Tsumeb 108.45 247 PFAKE 13 56 40.0
TSUM LR LR
comp=Z,659nm,19.0s
YKA Yellowknife Ar 108.52 26 Pdif **Pdif** **13 52 17.6 0.0**
YKA PKiKP **PKiKP** **13 56 23.1 -0.1**
YKA PKKPbc **PKKPbc** **14 07 34.6 -0.9**
YKA Yellowknife Ar 108.52 26 Pdiff **Pdif** **13 52 17.6 0.0**
comp=Z,0.3nm,0.5s,baz=290,slow=4.9,SNR=6.1
YKA PKiKP **PKiKP** **13 56 23.1 -0.1**
comp=Z,0.5nm,0.6s,baz=290,slow=1.8,SNR=12
YKA PKKPbc **PKKPbc** **14 07 34.6 -0.9**
comp=Z,0.2nm,0.4s,baz=113,slow=3.4,SNR=6.6
PSZ Piszkesteto 109.58 318 PFAKE 13 56 40.0
PSZ LR LR
comp=Z,429nm,22.0s
HAWA Hanford 109.64 44 *e*Pdif **Pdif** **13 52 26.3 +3.2**
HAWA LR LR
comp=Z,1μm,19.0s
TIR Tirane 110.60 311 PFAKE 13 56 40.0
TIR LR LR
comp=Z,417nm,21.0s
NB2 NORSAR Subarra1 10.83 333 PKPdf **PKiKP** **13 56 28.2 +0.5**
comp=Z,0.6nm,0.7s,baz=68,slow=1.9
NOA NORSAR Array B 110.83 333 Pdif **Pdif** **13 52 26.9 -1.2**
NOA PKiKP **PKiKP** **13 56 29.5 +1.8**
NOA NORSAR Array B 110.83 333 Pdiff **Pdif** **13 52 26.9 -1.2**
comp=Z,0.4nm,0.6s,baz=66,slow=4.5,SNR=2.8
NOA PKiKP **PKiKP** **13 56 29.5 +1.8**
comp=Z,0.4nm,0.6s,baz=52,slow=5.8,SNR=4.3
BMO Blue Mountains 111.44 45 PFAKE 13 56 40.0
BMO LR LR
comp=Z,409nm,21.0s
NVAR Mina Array Bea 111.67 52 PKiKP **PKiKP** **13 56 31.8 +1.5**
NVAR Mina Array Bea 111.67 52 PKiKP **PKiKP** **13 56 31.8 +1.5**
comp=Z,0.8nm,0.5s,baz=241,slow=3.0,SNR=3.7
KONO Kongsberg 112.11 332 PFAKE 13 56 40.0
KONO LR LR
comp=Z,574nm,19.0s
BMN Battle Mountai 112.23 50 PFAKE 13 56 40.0
BMN LR LR
comp=Z,639nm,19.0s
DAC Darwin (Calif) 112.49 54 PFAKE 13 56 40.0
DAC LR LR
comp=Z,773nm,20.0s
A13A Flathead Natio 112.51 40⇑ P **PKiKP** **13 56 32.2 +0.9**
baz=113
TPH Tonopah 112.56 52 PFAKE 13 56 40.0
TPH LR LR
comp=Z,582nm,19.0s
BRG Berggiesshubel 112.71 322 *e*P PP 13 57 26.3 +7.3
comp=Z,5.3nm,1.3s
BRG
comp=N,326nm,16.6s
BRG
comp=E,220nm,29.7s
BRG
comp=Z,536nm,21.1s
D13A Huson 112.92 42⇓ P **PKiKP** **13 56 33.5 +1.4**
baz=113
SWMT Swartz Lake 113.13 42 *e*PKPdf **PKiKP** **13 56 33.5 +0.9**
CLL Collm 113.15 323 *e*P **Pdif** **13 52 37.0 -1.6**
CLL *e* 13 57 22.0
CLL *e* 14 03 17.0
CLL MLR MLR
comp=Z,400nm,21.2s
CLL Collm 113.15 323 *e*Pdif **Pdif** **13 52 37.0 -1.6**
CLL *e*PP **PP** **13 57 22.0 -0.1**
CLL *e*SKSac **SKSac** **14 03 17.0 +2.1**
CLL *e*PS **PS** **14 06 54.0 -4.0**
CLL *e* 14 07 29.0
CLL *e*PPS PPS 14 08 14.0
CLL *e*SS SS 14 13 30.0 +25
CLL *e*(SSS) 14 18 06.0
CLL *e* 14 23 54.0
CLL LV 14 56 00.0
comp=Z,400nm,21.2s
I12A Atlanta 113.17 46⇑ P **PKiKP** **13 56 33.9 +1.1**
baz=113
C14A Swan Lake 113.23 41⇑ P **PKiKP** **13 56 34.6 +1.9**
baz=113
TIP Timpagrande 113.26 309 PFAKE 13 56 40.0
TIP LR LR
comp=Z,255nm,19.0s
MSO Missoula 113.33 42 PFAKE 13 56 40.0
MSO LR LR
comp=Z,452nm,20.0s
GERES GERESS Array B 113.40 320 PKiKP **PKiKP** **13 56 33.3 +0.3**
GERES GERESS Array B 113.40 320 PKiKP **PKiKP** **13 56 33.3 +0.3**
comp=Z,1.8nm,0.6s,baz=78,slow=1.7,SNR=11
D14A Greenough 113.56 42⇑ P **PKiKP** **13 56 33.8 +0.4**
baz=114
PFO Pinyon Flat Ob 113.72 57 PFAKE 13 56 50.0
PFO LR LR
comp=Z,1μm,20.0s
HLID Hailey 113.73 46 PFAKE 13 56 50.0
HLID LR LR
comp=Z,635nm,22.0s
HLID Hailey 113.73 46⇓ P **PKiKP** **13 56 35.3 +1.4**
baz=114
CUC Castrocucco 113.85 310 PFAKE 13 56 50.0
CUC LR LR
comp=Z,222nm,22.0s
F14A Wisdom 113.95 43⇓ P **PKiKP** **13 56 35.7 +1.3**
baz=114
C15A Salmond Ranch, 113.97 41⇑ P **PKiKP** **13 56 34.5 +0.2**
baz=114
CEL Celeste 114.07 308 PFAKE 13 56 50.0 +15
CEL LR LR
comp=Z,269nm,19.0s
F16A Kennard Place, 115.14 43⇓ P **PKPdf** **13 56 37.8 +1.3**
baz=115
G16A Moss Hill, Enn 115.17 44⇑ P **PKPdf** **13 56 37.4 +0.7**
baz=115
AQU L'Aquila 115.18 313 PFAKE 13 56 50.0 +13
AQU LR LR
comp=Z,352nm,22.0s
A18A Metzger Ranch, 115.41 39⇑ P **PKPdf** **13 56 37.2 +0.3**
baz=115
WDD Wield Dalam 115.53 306 PFAKE 13 56 50.0 +13
WDD LR LR
comp=Z,264nm,20.0s
DUG Dugway 115.59 49 *e*PKIKP **PKPdf** **13 56 38.3 +0.7**
DUG MLR MLR
comp=Z,374nm,20.0s
DUG Dugway 115.59 49 *e*PKPdf **PKPdf** **13 56 38.2 +0.7**
DUG LR LR
comp=Z,374nm,20.0s
DUG Dugway 115.59 49⇑ P **PKPdf** **13 56 38.1 +0.5**
baz=116
N15A Stansbury Isla 115.66 48⇓ P **PKPdf** **13 56 38.1 +0.4**
baz=116
EGMT Eagleton 115.74 40 PFAKE 13 56 50.0 +12
EGMT LR LR
comp=Z,590nm,21.0s
EGMT Eagleton 115.74 40⇓ P **PKPdf** **13 56 38.6 +1.0**
baz=116
B19A Brinkman Farms 116.12 40⇓ P **PKPdf** **13 56 38.9 +0.6**
baz=116
HWUT Hardware Ranch 116.21 47 PFAKE 13 56 50.0 +11
HWUT LR LR
comp=Z,611nm,21.0s
AHID Auburn Hatcher 116.27 46 PFAKE 13 56 50.0 +11
AHID LR LR
comp=Z,704nm,22.0s
SNOW Snow King Moun 116.34 45 *e*PKPdf **PKPdf** **13 56 38.9 -0.2**
MVU Marysvale 116.38 51 PFAKE 13 56 50.0 +11
MVU LR LR
comp=Z,585nm,20.0s
LOHW Long Hollow 116.41 45 *e*PKPdf **PKPdf** **13 56 39.1 0.0**
A20A Cobblestone Ra 116.62 39⇓ P **PKPdf** **13 56 39.4 +0.2**
baz=117
B20A Solberg Farm, 116.71 39⇑ P **PKPdf** **13 56 40.0 +0.6**
baz=117
E19A Rath Farm, Rou 116.85 42⇓ P **PKPdf** **13 56 39.8 +0.1**
baz=117
VLC Villacollemand 116.87 316 PFAKE 13 56 50.0 +10
VLC LR LR
comp=Z,369nm,19.0s
N17A Moffit Pass 116.90 48⇑ P **PKPdf** **13 56 40.6 +0.4**
baz=117
TUE Stuetta 116.90 318 PFAKE 13 56 50.0 +10
TUE LR LR
comp=Z,608nm,20.0s
RLMT Red Lodge 116.92 43 PFAKE 13 56 50.0 +10
RLMT LR LR
comp=Z,596nm,20.0s
J18A Kendall Valley 116.92 45⇓ P **PKPdf** **13 56 40.2 0.0**
baz=117
C20A Veseth Ranch, 116.96 40⇑ P **PKPdf** **13 56 40.1 +0.2**
baz=117
BFO Black Forest 116.96 321 PFAKE 13 56 50.0 +10
BFO LR LR
comp=Z,356nm,21.0s
K18A Toltan Ranch, 117.06 46⇑ P **PKPdf** **13 56 41.4 +1.0**
baz=117
B21A Ellsworth Farm 117.34 39⇑ P **PKPdf** **13 56 40.9 +0.3**
baz=117
BW06 Boulder Array 117.37 46 PFAKE 13 56 50.0 +8.9
BW06 LR LR
comp=Z,552nm,20.0s
PDAR Pinedale Array 117.37 46 PKP **PKPdf** **13 56 41.6 +0.6**
PDAR Pinedale Array 117.37 46 PKP **PKPdf** **13 56 41.6 +0.6**
comp=Z,1.2nm,0.6s,baz=186,slow=1.3,SNR=11
SRU San Rafael 117.54 50 *e*PKIKP **PKPdf** **13 56 41.6 +0.2**
SRU San Rafael 117.54 50 *e*PKPdf **PKPdf** **13 56 41.6 +0.2**
SRU San Rafael 117.54 50⇑ P **PKPdf** **13 56 41.8 +0.3**
baz=118
CDF Champ du Feu 117.59 321 *e*PKIKP **PKPdf** **13 56 42.2 +1.1**
CDF Champ du Feu 117.59 321 *e*PKIKP **PKPdf** **13 56 42.2 +1.1**
CDF Champ du Feu 117.59 321 *e*PKPdf **PKPdf** **13 56 42.2 +1.1**
WUAZ Wupatki 117.59 54 PFAKE 13 56 50.0 +8.4
WUAZ LR LR
comp=Z,734nm,20.0s
WUAZ Wupatki 117.59 54⇓ P **PKPdf** **13 56 41.4 -0.2**
baz=118
FFC Flin Flon 117.66 31 PFAKE 13 56 50.0 +9.1
FFC LR LR
comp=Z,661nm,21.0s
ECH Echery 117.73 321 PFAKE 13 56 50.0 +8.7
ECH LR LR
comp=Z,439nm,20.0s
WLF Walferdange 117.83 323 PFAKE 13 56 50.0 +8.6
WLF LR LR
comp=Z,435nm,19.0s
J20A Shoshoni 118.25 45⇓ P **PKPdf** **13 56 42.7 +0.1**
baz=118
K20A Yellowstone Ra 118.26 46⇓ P **PKPdf** **13 56 42.7 +0.1**
baz=118
G21A Lodge Grass 118.28 43⇑ P **PKPdf** **13 56 43.1 +0.5**
baz=118
D22A Cohagen 118.32 40⇑ P **PKPdf** **13 56 43.4 +0.9**
baz=118
TUC Tucson 118.61 58 PFAKE 13 57 00.0 +16
TUC LR LR
comp=Z,614nm,20.0s
J21A Lysite 118.69 45⇑ P **PKPdf** **13 56 43.6 +0.1**
baz=119
M20A Sweetwater, Wa 118.69 47⇓ P **PKPdf** **13 56 44.6 +0.9**
baz=119
C23A Lambert 118.71 39⇑ P **PKPdf** **13 56 44.0 +0.8**
baz=119
VSL Villasalto 118.81 311 PFAKE 13 57 00.0 +16
VSL LR LR
comp=Z,194nm,22.0s
N20A Spence Gulch, 118.81 48⇑ P **PKPdf** **13 56 44.6 +0.8**
baz=119
LPG La Plagne 118.93 318 *e*PKIKP **PKPdf** **13 56 44.6 +0.6**
LPG La Plagne 118.93 318 *e*PKIKP **PKPdf** **13 56 44.6 +0.6**
LPG La Plagne 118.93 318 *e*PKPdf **PKPdf** **13 56 44.6 +0.6**
D23A Lindsay 118.93 40⇑ P **PKPdf** **13 56 44.7 +1.0**
baz=119
LPL La Plagne 118.93 318 *e*PKIKP **PKPdf** **13 56 44.6 +0.6**
comp=Z,9.2nm,0.6s
LPL La Plagne 118.93 318 *e*PKIKP **PKPdf** **13 56 44.6 +0.6**
LPL La Plagne 118.93 318 *e*PKPdf **PKPdf** **13 56 44.6 +0.6**
CABF La Chapelle 118.98 319 *e*PKIKP **PKPdf** **13 56 44.1 +0.3**
comp=Z,12nm,0.6s
CABF La Chapelle 118.98 319 *e*PKIKP **PKPdf** **13 56 44.1 +0.3**
CABF La Chapelle 118.98 319 *e*PKPdf **PKPdf** **13 56 44.1 +0.3**
DGMT Dagmar 119.08 38 PFAKE 13 57 00.0 +16
DGMT LR LR
comp=Z,370nm,19.0s
BNI Bardonecchia 119.12 318 PFAKE 13 57 00.0 +16
BNI LR LR
comp=Z,482nm,19.0s
MBDF Montbardon 119.17 317 *e*PKIKP **PKPdf** **13 56 45.2 +0.9**
comp=Z,1.1nm,0.7s
MBDF Montbardon 119.17 317 *e*PKIKP **PKPdf** **13 56 45.2 +0.9**
MBDF Montbardon 119.17 317 *e*PKPdf **PKPdf** **13 56 45.2 +0.9**
M21A Separation Pea 119.25 47⇓ P **PKPdf** **13 56 44.8 +0.1**
baz=119
Q20A Ridgley Place, 119.27 50⇓ P **PKPdf** **13 56 44.1 -0.6**
baz=119
C24A Savage 119.29 39⇓ P **PKPdf** **13 56 44.6 +0.3**
baz=119
J22A Midwest 119.34 44⇓ P **PKPdf** **13 56 44.7 0.0**
baz=119
S20A Disappointment 119.49 51⇓ P **PKPdf** **13 56 45.5 +0.2**
baz=120
MVCO Mesa Verde 119.52 52 *e*PKPdf **PKPdf** **13 56 45.5 +0.2**
MVCO LR LR
comp=Z,468nm,21.0s
MVCO Mesa Verde 119.52 52⇑ P **PKPdf** **13 56 45.8 +0.4**
baz=120
ORIF Oris-en-Rattie 119.70 318 *e*PKIKP **PKPdf** **13 56 46.3 +1.0**
ORIF *e*R
comp=Z,491nm,19.5s
ORIF Oris-en-Rattie 119.70 318 *e*PKIKP **PKPdf** **13 56 46.3 +1.0**
ORIF Oris-en-Rattie 119.70 318 *e*PKPdf **PKPdf** **13 56 46.3 +1.0**
LOR Lormes 120.16 321 *e*PKIKP **PKPdf** **13 56 46.1 +0.1**
LOR *e*R
comp=Z,493nm,20.8s
LOR Lormes 120.16 321 *e*PKPdf **PKPdf** **13 56 46.1 +0.1**
H24A Dirks Ranch, A 120.22 42⇓ P **PKPdf** **13 56 46.1 -0.1**
baz=120
O22A Kremmling 120.25 48⇑ P **PKPdf** **13 56 47.0 +0.2**
baz=120
Z20A Nine Sixteen R 120.30 56⇑ P **PKPdf** **13 56 48.3 +1.4**
baz=120
U21A Nageezi 120.36 52⇓ P **PKPdf** **13 56 47.7 +0.7**
baz=120
SMF Signal de Mont 120.41 320 *e*PKIKP **PKPdf** **13 56 47.7 +1.2**
SMF Signal de Mont 120.41 320 *e*PKIKP **PKPdf** **13 56 47.7 +1.2**
SMF Signal de Mont 120.41 320 *e*PKPdf **PKPdf** **13 56 47.7 +1.2**
SSF Saint Saulge 120.46 321 *e*PKIKP **PKPdf** **13 56 46.8 +0.3**
comp=Z,6.5nm,0.6s
SSF Saint Saulge 120.46 321 *e*PKIKP **PKPdf** **13 56 46.8 +0.3**
SSF Saint Saulge 120.46 321 *e*PKPdf **PKPdf** **13 56 46.8 +0.3**
SSB Saint Sauveur 120.46 318 PFAKE 13 57 00.0 +13
SSB LR LR
comp=Z,362nm,20.0s
220A Playas Peak, P 120.57 58⇑ P **PKPdf** **13 56 48.3 +0.9**
baz=121
AVF Avril sur Loir 120.66 320 *e*PKIKP **PKPdf** **13 56 48.2 +1.3**
AVF Avril sur Loir 120.66 320 *e*PKIKP **PKPdf** **13 56 48.2 +1.3**
AVF Avril sur Loir 120.66 320 *e*PKPdf **PKPdf** **13 56 48.2 +1.3**
S22A 4UR Ranch, Cre 120.68 51⇑ P **PKPdf** **13 56 48.8 +1.2**
baz=121
X21A Alamocita Cree 120.69 55⇓ P **PKPdf** **13 56 48.0 +0.3**
baz=121
RSSD Black Hills 120.78 43 *e*PKIKP **PKPdf** **13 56 47.4 -0.2**
RSSD Black Hills 120.78 43 *e*PKPdf **PKPdf** **13 56 47.4 -0.2**
U22A Llaves 121.00 52⇑ P **PKPdf** **13 56 49.1 +0.8**
baz=121
ISCO Idaho Springs 121.04 48 PFAKE 13 57 00.0 +12
ISCO LR LR
comp=Z,512nm,22.0s
121A Cookes Peak, D 121.07 57⇑ P **PKPdf** **13 56 49.7 +1.3**
baz=121
BGF Bois d'Agland 121.07 320 *e*PKIKP **PKPdf** **13 56 48.1 +0.4**
comp=Z,16nm,0.7s
BGF Bois d'Agland 121.07 320 *e*PKIKP **PKPdf** **13 56 48.1 +0.4**
BGF Bois d'Agland 121.07 320 *e*PKPdf **PKPdf** **13 56 48.1 +0.4**
LAZ Ladron 121.22 55 *e*PKPdf **PKPdf** **13 56 49.5 +0.9**
X22A Bernardo 121.30 54⇑ P **PKPdf** **13 56 49.7 +1.0**
baz=121
Y22A Socorro 121.46 55⇑ P **PKPdf** **13 56 49.7 +0.6**
baz=122
TCF Toulx Ste Croi 121.58 320 *e*PKIKP **PKPdf** **13 56 49.0 +0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,23nm,1.1s						
TCF	Toulx Ste Croi	121.58	320	ePKIKP	PKPdf	13 56 49.0	+0.2
TCF	Toulx Ste Croi	121.58	320	ePKPdf	PKPdf	13 56 49.0	+0.2
Z22A	Elephant Butte	121.61	56	⇓P	PKPdf	13 56 50.6	+1.3
	baz=122						
ANMO	Albuquerque	121.65	54	ePKPdf	PKPdf	13 56 50.8	+1.3
ANMO				LR	LR		
	comp=Z,646nm,20.0s						
LPM	Los Pinos Moun	121.65	55	ePKPdf	PKPdf	13 56 49.6	+0.1
BNM	Barren Site	121.69	55	ePKPdf	PKPdf	13 56 50.1	+0.5
Y23A	Lovelace Mesa,	122.20	55	⇑P	PKPdf	13 56 51.2	+0.7
	baz=122						
CAF	Calviac	122.22	319	ePKIKP	PKPdf	13 56 50.7	+0.7
CAF	Calviac	122.22	319	ePKIKP	PKPdf	13 56 50.7	+0.7
CAF	Calviac	122.22	319	ePKPdf	PKPdf	13 56 50.7	+0.7
W24A	Lazy 6 Ranch,	122.42	53	⇓P	PKPdf	13 56 51.6	+0.7
	baz=122						
R25A	Fountain Ranch	122.51	50	⇑P	PKPdf	13 56 51.3	+0.3
	baz=123						
Y24A	Capitan	122.70	55	⇓P	PKPdf	13 56 52.3	+0.8
	baz=123						
V25A	Rancho No Teng	122.89	52	⇑P	PKPdf	13 56 52.6	+0.8
	baz=123						
Z24A	Sheeppen Canyo	122.90	55	⇑P	PKPdf	13 56 52.9	+0.9
	baz=123						
MFF	Saint Martin d	122.93	321	ePKIKP	PKPdf	13 56 51.5	+0.2
	comp=Z,13nm,0.7s						
MFF	Saint Martin d	122.93	321	ePKIKP	PKPdf	13 56 51.5	+0.2
MFF	Saint Martin d	122.93	321	ePKPdf	PKPdf	13 56 51.5	+0.2
ULM	Lac du Bonnet	123.11	34	PKP	PKPdf	13 56 50.1	-1.4
ULM	Lac du Bonnet	123.11	34	PKP	PKPdf	13 56 50.1	-1.4
	comp=Z,1.7nm,0.4s,baz=295,slow=2.6,SNR=7.9						
W25A	X Bar L Ranch,	123.17	53	⇓P	PKPdf	13 56 52.8	+0.4
	baz=123						
324A	Moseley Ranch,	123.20	58	⇑P	PKPdf	13 56 53.5	+1.0
	baz=123						
MNTX	Cornudas Mount	123.24	57	ePKPdf	PKPdf	13 56 53.5	+1.1
MNTX				LR	LR		
	comp=Z,426nm,20.0s						
MNTX	Cornudas Mount	123.24	57	⇑P	PKPdf	13 56 53.3	+0.9
	baz=123						
OGNE	Ogallala	123.27	46	PFAKE		13 57 00.0	+7.7
OGNE				LR	LR		
	comp=Z,551nm,20.0s						
S26A	Kim	123.28	50	⇑P	PKPdf	13 56 52.7	+0.3
	baz=123						
Y25A	Mesa, Roswell	123.31	55	⇑P	PKPdf	13 56 53.3	+0.6
	baz=123						
T26A	Comanche Natio	123.32	51	⇓P	PKPdf	13 56 53.3	+0.7
	baz=123						
SGMF	Saint Gilles	123.61	324	ePKIKP	PKPdf	13 56 53.0	+0.5
SGMF	Saint Gilles	123.61	324	ePKIKP	PKPdf	13 56 53.0	+0.5
SGMF	Saint Gilles	123.61	324	ePKPdf	PKPdf	13 56 53.0	+0.5
125A	Gardner Draw,	123.63	56	⇓P	PKPdf	13 56 53.9	+0.7
	baz=124						
425A	Indio Mountain	123.75	58	⇑P	PKPdf	13 56 54.7	+1.1
	baz=124						
ROSF	Rostrenen	123.98	324	ePKIKP	PKPdf	13 56 54.3	+1.1
ROSF	Rostrenen	123.98	324	ePKIKP	PKPdf	13 56 54.3	+1.1
ROSF	Rostrenen	123.98	324	ePKPdf	PKPdf	13 56 54.3	+1.1
AGMN	Agassiz Nation	124.12	36	PFAKE		13 57 10.0	+16
AGMN				LR	LR		
	comp=Z,757nm,22.0s						
QUIF	Quistinic	124.13	324	ePKIKP	PKPdf	13 56 54.7	+1.2
	comp=Z,7.9nm,0.6s						
QUIF	Quistinic	124.13	324	ePKIKP	PKPdf	13 56 54.7	+1.2
QUIF	Quistinic	124.13	324	ePKPdf	PKPdf	13 56 54.7	+1.2
Y27A	Causey	124.55	54	⇑P	PKPdf	13 56 55.8	+0.8
	baz=125						
426A	McDonald Obser	124.58	58	⇓P	PKPdf	13 56 55.0	-0.2
	baz=125						
526A	Mary Lane Ranc	124.66	59	⇑P	PKPdf	13 56 56.5	+1.1
	baz=125						
626A	Big Bend Ranch	124.72	60	⇓P	PKPdf	13 56 56.4	+1.0
	baz=125						
ETSF	Etsaut	124.77	317	ePKIKP	PKPdf	13 56 56.1	+1.0
	comp=Z,14nm,0.9s						
ETSF	Etsaut	124.77	317	ePKIKP	PKPdf	13 56 56.1	+1.0
ETSF	Etsaut	124.77	317	ePKPdf	PKPdf	13 56 56.1	+1.0
527A	Woodward Ranch	125.05	59	⇑P	PKPdf	13 56 57.4	+1.4
	baz=125						
427A	Hayter Ranch,	125.07	58	⇓P	PKPdf	13 56 57.2	+1.2
	baz=125						
TAM	Tamanrasset	125.10	292	PFAKE		13 57 10.0	+14
TAM				LR	LR		
	comp=Z,331nm,20.0s						
SJPF	Ste Jean	125.13	318	ePKIKP	PKPdf	13 56 56.4	+0.8
SJPF	Ste Jean	125.13	318	ePKIKP	PKPdf	13 56 56.4	+0.8
SJPF	Ste Jean	125.13	318	ePKPdf	PKPdf	13 56 56.4	+0.8
TXAR	Lajitas Array	125.17	60	PKP	PKPdf	13 56 57.5	+1.2
TXAR	Lajitas Array	125.17	60	PKP	PKPdf	13 56 57.5	+1.2
	comp=Z,1.2nm,0.5s,baz=216,slow=2.9,SNR=17						
627A	Terlingua Ranc	125.38	60	⇓P	PKPdf	13 56 58.1	+1.4
	baz=126						
328A	Wristen Ranch,	125.45	57	⇓P	PKPdf	13 56 57.6	+1.0
	baz=126						
AMTX	Amarillo	125.46	53	PFAKE		13 57 10.0	+13
AMTX				LR	LR		
	comp=Z,685nm,20.0s						
X29A	Tulia	125.57	53	⇑P	PKPdf	13 56 58.1	+1.3
	baz=126						
428A	Kincaid Ranch,	125.70	58	⇓P	PKPdf	13 56 58.9	+1.7
	baz=126						
528A	Cox Ranch, San	125.74	59	⇑P	PKPdf	13 56 57.7	+0.3
	baz=126						
628A	Black Gap, Mar	125.80	59	⇑P	PKPdf	13 56 58.3	+0.9
	baz=126						
BGNE	Belgrade	125.82	44	⇓P	PKPdf	13 56 58.0	+1.0
	baz=126						
ECSD	EROS Data Cent	125.85	41	ePKPdf	PKPdf	13 56 57.1	+0.1
ECSD				LR	LR		
	comp=Z,531nm,20.0s						
329A	Wagon Wheel Ra	126.11	57	⇓P	PKPdf	13 56 59.1	+1.2
	baz=126						
429A	Davenport Ranc	126.39	58	⇑P	PKPdf	13 56 59.0	+0.5
	baz=126						
W31A	Holland Ranch,	126.73	52	⇓P	PKPdf	13 57 00.2	+1.2
	baz=127						
EYMN	Ely	126.78	34	ePKPdf	PKPdf	13 56 58.9	+0.3
EYMN				LR	LR		
	comp=Z,657nm,22.0s						
430A	Baggett Ranch,	126.90	57	⇓P	PKPdf	13 57 00.6	+1.1
	baz=127						
530A	J-C Ranch, Com	126.97	58	⇑P	PKPdf	13 57 00.7	+1.1
	baz=127						
331A	San Angelo	127.44	57	⇓P	PKPdf	13 57 01.3	+0.9
	baz=128						
531A	Rocksprings	127.63	58	⇑P	PKPdf	13 57 02.3	+1.4
	baz=128						
WMOK	Wichita Mounta	127.78	52	PFAKE		13 57 10.0	+9.0
WMOK				LR	LR		
	comp=Z,577nm,20.0s						
631A	Perdido Creek	127.78	59	⇓P	PKPdf	13 57 02.3	+1.2
	baz=128						
PLCA	Paso Flores	127.81	160	PKP	PKPdf	13 57 05.1	+4.1
PLCA	Paso Flores	127.81	160	PKP	PKPdf	13 57 05.1	+4.1
	comp=Z,7.9nm,0.6s,baz=180,slow=2.0,SNR=8.5						
KSU1	Kansas State U	127.83	46	PFAKE		13 57 10.0	+9.1
KSU1				LR	LR		
	comp=Z,448nm,20.0s						
JCT	Junction City	128.18	57	ePKIKP	PKPdf	13 57 02.7	+0.8
JCT				MLR	MLR		
	comp=Z,572nm,19.0s						
JCT	Junction City	128.18	57	ePKPdf	PKPdf	13 57 02.6	+0.8
JCT				LR	LR		
	comp=Z,572nm,19.0s						
JCT	Junction City	128.18	57	⇑P	PKPdf	13 57 03.4	+1.5
	baz=128						
ESDC	Sonseca Array	128.45	315	PKP	PKPdf	13 57 04.9	+2.7
ESDC	Sonseca Array	128.45	315	PKP	PKPdf	13 57 04.9	+2.7
	comp=Z,0.2nm,0.3s,baz=20,slow=4.1,SNR=3.5						
PAB	San Pablo	128.77	315	PFAKE		13 57 10.0	+7.2
PAB				LR	LR		
	comp=Z,277nm,19.0s						
SCIA	State Center	128.91	41	PFAKE		13 57 10.0	+7.1
SCIA				LR	LR		
	comp=Z,590nm,22.0s						
COWI	Conover	129.16	35	PFAKE		13 57 10.0	+6.7
COWI				LR	LR		
	comp=Z,574nm,21.0s						
TORD	Torodi Ar. Bea	129.31	280	PKP	PKPdf	13 57 05.2	+0.8
TORD				SKPbc	SKPbc	14 00 26.5	+2.4
TORD	Torodi Ar. Bea	129.31	280	PKP	PKPdf	13 57 05.2	+0.8
	comp=Z,2.7nm,0.8s,baz=60,slow=2.5,SNR=12						
TORD				SKPbc	SKPbc	14 00 26.5	+2.4
	comp=Z,7.6nm,1.1s,baz=62,slow=3.0,SNR=5.3						
KVTX	Kingsville	130.52	61	PFAKE		13 57 20.0	+14
KVTX				LR	LR		
	comp=Z,721nm,19.0s						
MTE	Manteigas	130.57	318	PFAKE		13 57 20.0	+14
MTE				LR	LR		
	comp=Z,465nm,20.0s						
SCHQ	Schefferville	131.34	13	PKP	PKPdf	13 57 09.1	+2.0
SCHQ				SKPbc	SKPab	14 00 31.5	+0.9
SCHQ	Schefferville	131.34	13	PKP	PKPdf	13 57 09.1	+2.0
	comp=Z,1.4nm,0.8s,baz=359,slow=5.9,SNR=3.8						
SCHQ				SKPbc	SKPab	14 00 31.5	+0.9
	comp=Z,3.4nm,0.8s,baz=25,slow=5.0,SNR=6.5						
HDIL	Hopedale	132.15	41	PFAKE		13 57 20.0	+11
HDIL				LR	LR		
	comp=Z,554nm,20.0s						
GLMI	Grayling	132.46	34	PFAKE		13 57 20.0	+10
GLMI				LR	LR		
	comp=Z,676nm,22.0s						
TRQA	Tornquist	132.75	167	PFAKE		13 57 20.0	+10
TRQA				LR	LR		
	comp=Z,1μm,19.0s						
RTC	Rabat Centre	132.90	310	PFAKE		13 57 20.0	+9.3
RTC				LR	LR		
	comp=Z,287nm,19.0s						
AAM	Ann Arbor	134.60	36	PFAKE		13 57 30.0	+16
AAM				LR	LR		
	comp=Z,702nm,19.0s						
OXF	Oxford	135.00	48	PFAKE		13 57 30.0	+15
OXF				LR	LR		
	comp=Z,829nm,19.0s						
VBMS	Vicksburg	135.12	52	PFAKE		13 57 30.0	+15
VBMS				LR	LR		
	comp=Z,783nm,21.0s						
LIC	Lamto	135.68	271	ePKIKP	PKPdf	13 57 17.1	+0.7
LIC				eR			
	comp=Z,714nm,21.2s						
LIC	Lamto	135.68	271	ePKPdf	PKPdf	13 57 17.1	+0.7
PLAL	Pickwick Lake	135.76	47	PFAKE		13 57 30.0	+14
PLAL				LR	LR		
	comp=Z,524nm,20.0s						
ACSO	Alum Creek Sta	136.29	37	PFAKE		13 57 30.0	+13
ACSO				LR	LR		
	comp=Z,615nm,19.0s						
ERPA	Erie	136.78	33	PFAKE		13 57 30.0	+12
ERPA				LR	LR		
	comp=Z,673nm,22.0s						
LRAL	Lakeview Retre	137.46	49	PFAKE		13 57 30.0	+11
LRAL				LR	LR		
	comp=Z,693nm,20.0s						
LONY	Lake Ozonia	137.60	26	PFAKE		13 57 30.0	+11
LONY				LR	LR		
	comp=Z,344nm,20.0s						
LCO	Las Campanas	137.97	152	PFAKE		13 57 30.0	+9.3
LCO				LR	LR		
	comp=Z,749nm,22.0s						
NCB	Newcomb	138.27	27	PFAKE		13 57 30.0	+10
NCB				LR	LR		
	comp=Z,434nm,19.0s						
BRAL	Brewton	138.31	52	PFAKE		13 57 30.0	+9.2
BRAL				LR	LR		
	comp=Z,713nm,20.0s						
BINY	Binghamton	138.80	30	PFAKE		13 57 30.0	+8.5
BINY				LR	LR		
	comp=Z,1μm,21.0s						
LBNH	Lisbon	139.04	25	PFAKE		13 57 30.0	+8.2
LBNH				LR	LR		
	comp=Z,474nm,20.0s						
BLA	Blacksburg	139.73	39	PFAKE		13 57 40.0	+17
BLA				LR	LR		
	comp=Z,687nm,19.0s						
TEIG	Tepich	140.76	68	PFAKE		13 57 40.0	+14
TEIG				LR	LR		
	comp=Z,371nm,20.0s						
CBN	Corbin	140.91	36	PFAKE		13 57 40.0	+15
CBN				LR	LR		
	comp=Z,931nm,22.0s						
CNNC	Cliffs of the	142.56	40	PFAKE		13 57 40.0	+12
CNNC				LR	LR		
	comp=Z,4μm,21.0s						
TGUH	Tegucigalpa,Un	142.65	77	PFAKE		13 57 40.0	+11
TGUH				LR	LR		
	comp=Z,310nm,20.0s						
CPUP	Villa Florida	145.06	168	PKPbc	PKPdf	13 57 33.6	+0.5
CPUP	Villa Florida	145.06	168	PKPbc	PKPdf	13 57 33.6	+0.5
	comp=Z,4.1nm,0.5s,baz=165,slow=2.2,SNR=14						
JTS	JuntasAbangare	145.11	84	ePKPdf	PKPdf	13 57 34.4	+0.9
JTS				LR	LR		
	comp=Z,656nm,22.0s						
NNA	Nana	146.46	126	PFAKE		13 57 50.0	+12
NNA				LR	LR		
	comp=Z,923nm,20.0s						
SPB	Sao Paulo	148.51	184	PFAKE		13 57 50.0	+4.3
SPB				LR	LR		
	comp=Z,1μm,20.0s						
LPAZ	La Paz	149.72	143	PKPbc	PKPbc	13 57 45.7	-0.8
LPAZ	La Paz	149.72	143	PKPbc	PKPbc	13 57 45.7	-0.8
	comp=Z,10nm,0.7s,baz=94,slow=2.5,SNR=30						
BCIP	Isla Barro Col	150.16	86	ePKPdf	PKPdf	13 57 41.5	-0.3
BCIP				ePKPbc	PKPbc	13 57 47.3	+0.4
BCIP				LR	LR		
	comp=Z,443nm,20.0s						
OTAV	Otavalo	150.30	104	ePKPdf	PKPdf	13 57 42.8	+0.1
OTAV				ePKPbc	PKPbc	13 57 47.7	-0.1
OTAV				LR	LR		
	comp=Z,440nm,21.0s						
MTDJ	Mount Denham	151.08	67	PFAKE		13 57 50.0	+0.9
MTDJ				LR	LR		
	comp=Z,388nm,20.0s						
BBSR	BB Station	152.04	28	PFAKE		13 58 00.0	-0.1
BBSR				LR	LR		
	comp=Z,415nm,20.0s						
GTBY	Guantanamo Bay	152.68	62	PFAKE		13 58 00.0	-3.2
GTBY				LR	LR		
	comp=Z,487nm,20.0s						
SACV	Santiago Islan	153.56	287	PFAKE		13 58 00.0	+5.4
SACV				LR	LR		
	comp=Z,483nm,21.0s						
SDDR	Presa de Saban	156.36	60	PFAKE		13 58 00.0	+9.3
SDDR				LR	LR		
	comp=Z,444nm,21.0s						
SAML	Samuel	158.43	141	PFAKE		13 58 00.0	+6.6
SAML				LR	LR		
	comp=Z,631nm,20.0s						
SDV	Santo Domingo	159.25	86	PFAKE		13 58 10.0	+15
SDV				LR	LR		
	comp=Z,1.0nm,19.0s						
RCBR	Riachuelo	160.56	225	PFAKE		13 58 10.0	+14
RCBR				LR	LR		
	comp=Z,605nm,20.0s						
SJG	San Juan	161.09	56	PFAKE		13 58 10.0	+14
SJG				LR	LR		
	comp=Z,596nm,21.0s						
ANWB	Willy Bob	164.80	50	PFAKE		13 58 10.0	+10
ANWB				LR	LR		
	comp=Z,587nm,21.0s						
FDF	Fort de France	166.93	58	PFAKE		13 58 10.0	+8.3
FDF				LR	LR		
	comp=Z,503nm,22.0s						
GRGR	Grenville	167.52	70	PFAKE		13 58 10.0	+7.9
GRGR				LR	LR		
	comp=Z,621nm,20.0s						
BBGH	Gun Hill	169.03	62	PFAKE		13 58 10.0	+6.9
BBGH				LR	LR		
	comp=Z,1μm,19.0s						

*IDC **03** 13:40:23.8±5.4, 37°.11N×71°.97E, h193km±39km, mb2.9/2, mb1 3.1/7, mb1mx2.9/30, mbtmp3.1/7, MS3.6/2, Ms1 3.6/2, ms1mx2.9/11, Error ellipse: s-maj=66.3km s-min=30.0km az=144.0*

*ISCJB **03** 13:40:26.0±0.7, 37°.40N±0°.04×71°.4E±0°.2, h109km, mb3.3/2, Error ellipse: s-maj=17.0km s-min=5.1km az=2.3*

ISC 03 13:40:27.3±1.0**, 37°.39N**±0°.06×**71°.7E**±0°.1**, h109km, n20, σ1s.72**/18**, 1C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.56	177	⇓P	Pn	13 41 21.6	+0.7
CEP				S	Sn	13 42 04.0	+1.7
CHCP	Chirah Chowk	3.94	160	P	Pn	13 41 26.3	+0.4
THW	Thamme Wali	4.58	179	⇓P	Pn	13 41 33.8	-0.7
AML	Almayashu	4.99	18	P	Pn	13 41 42.0	+1.7
	SNR=213						
UCH	Uchtor	5.31	24	P	Sn	13 42 45.8	+1.0
	SNR=15						
KZA	Kyzart	5.44	29	P	Pn	13 41 46.2	-0.2
	SNR=12						
EKS2	Erkin-Say	5.51	16	P	Pn	13 41 48.5	+1.4
	SNR=16						
AAK	Ala-Archa	5.67	22	P	Pn	13 41 50.6	+1.3
	5.1nm,0.3s,baz=182,slow=6.2,SNR=129						
AAK				S	Sn	13 42 55.3	+2.1
	1.2nm,0.3s,baz=308,slow=23,SNR=12						
KK31	Karatay Array	5.78	352	⇓P	Pn	13 41 52.5	+2.0
	3.1nm,0.3s,baz=158,slow=11,SNR=84						
KK31				⇑S	Sn	13 42 56.8	+1.3
	3.1nm,0.3s,baz=165,slow=16,SNR=9.8						
KBK	Karagaybulak	5.84	25	P	Pn	13 41 52.9	+1.3
	SNR=15						
ULHL	Ulahol	6.00	35	P	Pn	13 41 53.3	-0.5
	SNR=9.3						
TKM2	Tokmak 2	6.29	27	⇓P	Pn	13 41 57.6	-0.2
	12nm,0.5s						
TKM2	Tokmak 2	6.29	27	P	Pn	13 41 58.0	+0.3
	SNR=5.5						
MKAR	Makanchi Array	12.26	37	P	Pn	13 43 13.1	-5.0
	0.1nm,0.3s,baz=230,slow=9.0,SNR=7.3						
KURBB	Kurchatov Arra	14.12	18	P	Pn	13 43 36.8	-5.3
	3.0nm,0.3s,baz=204,slow=11,SNR=1.3						
KURBB				LR	LR	13 49 53.7	
	comp=Z,213nm,20.6s,baz=150,slow=40						
BVAR	Borovoye Array	15.66	357	P	Pn	13 43 58.2	-3.5
	0.3nm,0.3s,baz=160,slow=10,SNR=6.3						
BVAR				LR	LR	13 50 24.8	
	comp=Z,235nm,21.7s,baz=348,slow=38						
AKTO	Aktyubinsk	16.30	327	P	Pn	13 44 06.7	-2.9
	0.2nm,0.3s,baz=122,slow=10,SNR=3.5						
ZALV	Zalesovo Beam	18.89	25	P	P	13 44 31.6	-7.3
	0.8nm,0.3s,baz=217,slow=11,SNR=15						
TORD	Torodi Ar. Bea	66.27	269	P	P	13 50 52.6	-11
	0.2nm,0.3s,baz=48,slow=5.6,SNR=7.2						
YKA	Yellowknife Ar	80.33	3	P	P	13 52 14.4	-11
	0.2nm,0.4s,baz=353,slow=5.7,SNR=5.3						

IDC 03 13:42:38.8±1.9**, 8°.13S×130°.52E, h0km, mb4.3**/12**, mb1 4.5**/13**, mb1mx4.3**/20**, mbtmp4.4**/13**, Error ellipse: s-maj=54.6km s-min=29.5km az=124.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.99	205	Pn	Pn	13 45 17.9	+0.5
	baz=23,slow=14,SNR=2.7						
FITZ				Sn	Sn	13 47 15.0	-6.2
	3.6nm,0.3s,baz=194,slow=8.3,SNR=3.9						
FITZ	Fitzroy Crossi	10.99	205	Sn	Sn	13 47 15.0	-6.2
WRA	Warramunga Arr	12.31	163	Sn	Sn	13 47 49.0	-4.6
	1.4nm,0.3s,baz=351,slow=28,SNR=3.2						
MJAR	Matsushiro Arr	45.02	9	P	P	13 50 55.7	-0.5
	4.3nm,0.7s,baz=192,slow=10,SNR=13						
MAT	Matsushiro	45.02	9	P	P	13 50 54.3	-1.9
KSRS	Korea Array	45.41	357	P	P	13 50 59.5	+0.3
	1.1nm,0.5s,baz=174,slow=9.4,SNR=7.2						
USRK	Ussuriysk Arra	52.10	1	P	P	13 51 50.7	+0.1
	1.5nm,0.5s,baz=171,slow=7.3,SNR=3.6						
ASAJ	Asahikawa	53.14	11	P	P	13 51 58.1	-0.2
	2.7nm,0.6s,baz=256,slow=12,SNR=4.6						
SONM	Songino Array	59.67	341	P	P	13 52 44.4	-0.6
	1.3nm,0.7s,baz=160,slow=6.0,SNR=3.5						
PETK	Petropavlovsk-	65.23	18	P	P	13 53 23.8	+1.7
	4.0nm,0.8s,baz=203,slow=10,SNR=3.7						
MKAR	Makanchi Array	69.45	327	P	P	13 53 48.8	-0.1
	7.8nm,0.7s,baz=118,slow=7.7,SNR=12						
AAK	Ala-Archa	71.73	320	P	P	13 54 04.4	+1.3
	2.1nm,0.5s,baz=128,slow=7.6,SNR=5.4						
ZALV	Zalesovo Beam	72.82	334	P	P	13 54 08.6	-0.5
	2.0nm,0.6s,baz=101,slow=4.7,SNR=4.4						
KURBB	Kurchatov Arra	73.74	328	P	P	13 54 14.6	-0.1
	46nm,0.3s,baz=127,slow=4.9,SNR=1.7						
BVAR	Borovoye Array	79.29	328	P	P	13 54 45.2	-0.9
	2.9nm,0.8s,baz=125,slow=7.8,SNR=5.4						
AKTO	Aktyubinsk	85.28	322	P	P	13 55 17.6	+0.1
	1.9nm,0.7s,baz=116,slow=10,SNR=3.3						
ILAR	Eielson Array	94.14	25	P	P	13 55 57.5	-1.6
	1.2nm,0.9s,baz=266,slow=4.1,SNR=5.1						

*IDC **03** 13:46:30.9±0.6, 7°.90S×130°.30E, h0km, mb4.4/18, mb1 4.4/18, mb1mx4.4/22, mbtmp4.4/18, Error ellipse: s-maj=28.9km s-min=13.8km az=79.0*

*ISCJB **03** 13:46:31.5±0.3, 8°.24S±0°.04×130°.4E±0°.1, h33km, mb4.5/24, Error ellipse: s-maj=15.3km s-min=4.9km az=172.4*

*NEIC **03** 13:46:34.5±0.4, 8°.13S×130°.31E, h35km, mb4.6/6, Error ellipse: s-maj=21.7km s-min=7.9km az=81.0*

ISC 03 13:46:34.5±0.5**, 8°.20S**±0°.05×**130°.4E**±0°.1**, h35km, n57, σ1s.53**/58**, mb4.5**/24**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.89	205	Pn	Pn	13 49 07.9	-0.1
FITZ				Sn	Sn	13 51 06.5	-2.1
FITZ	Fitzroy Crossi	10.89	205	Pn	Pn	13 49 07.9	-0.1
	11nm,0.3s,baz=27,slow=12,SNR=6.1						
FITZ				Sn	Sn	13 51 06.5	-2.1
	5.9nm,0.3s,baz=151,slow=19,SNR=3.7						
WRAB	Tennant Creek	12.27	162	ePn	Pn	13 49 26.5	-0.4
WRA	Warramunga Arr	12.28	162	Pn	Pn	13 49 25.3	-1.7
WRA	Warramunga Arr	12.28	162	Pn	Pn	13 49 25.3	-1.7
	5.4nm,0.3s,baz=348,slow=13,SNR=5.4						
WRA				Sn	Sn	13 51 41.0	-1.6
	6.8nm,0.3s,baz=333,slow=23,SNR=5.4						
AS31	Alice Springs	15.74	168	ePn	Pn	13 50 14.3	+0.6
ASAR	Alice Springs	15.74	168	Pn	Pn	13 50 12.5	-1.2
ASAR				Sn	Sn	13 53 05.6	-1.6
ASAR	Alice Springs	15.74	168	Pn	Pn	13 50 12.5	-1.2
	3.3nm,0.3s,baz=343,slow=8.5,SNR=8.1						
ASAR				Sn	Sn	13 53 05.6	-1.6
	1.4nm,0.3s,baz=355,slow=27,SNR=4.4						
JOW	Kunigami	34.88	357	P	P	13 53 21.7	-1.1
JOW	Kunigami	34.88	357	P	P	13 53 21.7	-1.1
	5.5nm,0.3s,baz=179,slow=7.1,SNR=8.2						
CMAR	Chiang Mai Arr	40.82	311	P	P	13 54 11.2	-1.8
CMAR	Chiang Mai Arr	40.82	311	P	P	13 54 11.2	-1.8
	0.3nm,0.3s,baz=129,slow=6.9,SNR=4.1						
MJAR	Matsushiro Arr	45.10	9	P	P	13 54 45.6	-1.8
MJAR	Matsushiro Arr	45.10	9	P	P	13 54 45.6	-1.8
	6.5nm,0.7s,baz=189,slow=10.0,SNR=22						
MAJO	Matsushiro	45.10	9	eP	P	13 54 45.3	-2.1
	9.0nm,0.8s						
MAT	Matsushiro	45.10	9	P	P	13 54 45.1	-2.3
KSAR	Wonju Array Be	45.46	357	P	P	13 54 49.5	-0.8
KSRS	Korea Array	45.47	357	P	P	13 54 49.5	-0.9
	1.5nm,0.6s,baz=176,slow=8.7,SNR=9.3						
RPZ	Rata Peaks	50.04	142	P	P	13 55 29.3	+3.5
RPZ	Rata Peaks	50.04	142	P	P	13 55 29.3	+3.5
	12nm,0.9s,baz=329,slow=5.9,SNR=3.9						
USRK	Ussuriysk Arra	52.17	1	P	P	13 55 41.1	-0.5
	4.1nm,0.7s,baz=190,slow=7.5,SNR=8.7						
ASAJ	Asahikawa	53.22	11	P	P	13 55 49.2	-0.2
ASAJ	Asahikawa	53.22	11	P	P	13 55 49.2	-0.2
	2.2nm,0.4s,baz=198,slow=3.2,SNR=10						
CASY	Casey	59.59	189	eP	P	13 56 35.0	+0.5
	18nm,0.6s						
SONM	Songino Array	59.70	341	P	P	13 56 35.6	-0.1
SONM	Songino Array	59.70	341	P	P	13 56 35.6	-0.1
	1.7nm,0.8s,baz=169,slow=9.5,SNR=8.7						
PETK	Petropavlovsk-	65.33	18	P	P	13 57 13.7	+0.7
PETK	Petropavlovsk-	65.33	18	P	P	13 57 13.7	+0.7
	3.8nm,0.7s,baz=194,slow=9.0,SNR=7.2						
MK31	Makanchi Array	69.45	327	eP	P	13 57 38.0	-1.3
MKAR	Makanchi Array	69.45	327	P	P	13 57 39.5	+0.3
MKAR	Makanchi Array	69.45	327	P	P	13 57 39.5	+0.3
	7.8nm,0.7s,baz=125,slow=7.8,SNR=31						
VNDA	Vanda	71.22	173	P	P	13 57 52.3	+2.8
VNDA	Vanda	71.22	173	P	P	13 57 52.3	+2.8
	0.8nm,0.6s,baz=288,slow=15,SNR=6.4						
AAK	Ala-Archa	71.72	320	eP	P	13 57 50.6	-2.8
	12nm,0.8s						
AAK	Ala-Archa	71.72	320	P	P	13 57 53.5	+0.1
	2.8nm,0.8s,baz=109,slow=6.8,SNR=7.0						
EKS2	Erkin-Say	72.19	320	eP	P	13 57 55.2	-0.9
	2.5nm,0.8s						
ZAA0	Zalesovo Array	72.83	334	eP	P	13 57 57.6	-2.0
ZALV	Zalesovo Beam	72.83	334	P	P	13 57 58.8	-0.7
ZALV	Zalesovo Beam	72.83	334	P	P	13 57 58.8	-0.7
	2.9nm,0.7s,baz=121,slow=5.7,SNR=10						
KURBB	Kurchatov Arra	73.74	329	P	P	13 58 04.6	-0.4
	43nm,0.2s,baz=125,slow=5.0,SNR=2.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	73.75	329	P	P	13 58 04.6	-0.4
MAW	Mawson	74.00	202	P	P	13 58 10.0	+3.8
MAW	Mawson	74.00	202	P	P	13 58 10.0	+3.8
	4.1nm,0.7s,baz=61,slow=9.1,SNR=4.2						
BVAR	Borovoye Array	79.29	328	P	P	13 58 36.4	0.0
BVAR	Borovoye Array	79.29	328	P	P	13 58 36.4	0.0
	2.9nm,0.8s,baz=120,slow=5.3,SNR=11						
TIXI	Tiksi	79.68	359	eP	P	13 58 38.0	-0.1
	3.6nm,0.6s						
QSPA	South Pole Qui	81.79	180	P	P	13 58 52.0	+2.2
QSPA	South Pole Qui	81.79	180	P	P	13 58 52.0	+2.2
	2.0nm,1.0s,baz=349,slow=6.4,SNR=8.2						
ABKAR	Akbulak array	83.70	322	eP	P	13 58 59.7	-0.1
	1.0nm,0.4s						
AKTO	Aktyubinsk	85.27	322	P	P	13 59 08.2	+0.4
AKTO	Aktyubinsk	85.27	322	P	P	13 59 08.2	+0.4
	1.2nm,0.6s,baz=102,slow=9.2,SNR=5.6						
ILAR	Eielson Array	94.25	25	P	P	13 59 48.9	-0.9
ILAR	Eielson Array	94.25	25	P	P	13 59 48.9	-0.9
	0.9nm,0.8s,baz=284,slow=4.3,SNR=10.0						
TXAR	Lajitas Array	125.17	60	PKP	PKPdf	14 05 35.5	+3.3
	0.1nm,0.5s,baz=239,slow=4.9,SNR=2.8						
TORD	Torodi Ar. Bea	129.44	280	PKP	PKPdf	14 05 44.0	+3.4
	0.6nm,0.8s,baz=72,slow=2.2,SNR=3.1						
CPUP	Villa Florida	144.86	168	PKPbc	PKPdf	14 06 10.8	+2.1
	3.6nm,0.6s,baz=170,slow=1.9,SNR=12						
LPAZ	La Paz	149.52	143	PKPbc	PKPab	14 06 24.4	-2.4
	2.2nm,0.8s,baz=200,slow=2.1,SNR=3.6						

ISCJB ***03*** *14:01:33.0±0.4, 7°.47S±0°.09×116°.31E±0°.05, h350km, mb3.4/6, Error ellipse: s-maj=12.8km s-min=6.6km az=11.2*

IDC ***03*** *14:01:33.6±6.4, 7°.42S×116°.18E, h339km±56km, mb3.1/6, mb1 3.2/8, mb1mx3.0/24, mbtmp3.1/8, Error ellipse: s-maj=115.1km s-min=12.9km az=61.0*

AUST ***03*** *14:01:35.3, 7°.48S×116°.46E, h300km*

DJA ***03*** *14:01:36.8±1.4, 8°S±16°×11°6E±1°2, h336km±8km, M4.1/10, mb4.6/1, MLv3.9/10*

ISC 03 14:01:34.5±0.7**, 7°.5S**±0°.1×**116°.28E**±0°.07**, h350km, n29, σ2s.04**/31**, mb3.5**/6**, Bali Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KHKI	Kahang-Kahang	1.06	219	P	Pn	14 02 19.1	-1.4
KHKI				S	S	14 02 53.9	-3.5
SRBI	Singaraja	1.19	242	P	Pn	14 02 19.9	-1.2
SRBI				S	S	14 02 56.4	-2.0
IGBI	Denpasar	1.70	221	P	Pn	14 02 22.3	-1.5
IGBI				S	S	14 02 57.8	-5.6
BYJI	Banyuwangi	2.02	250	P	Pn	14 02 26.4	+0.4
KMMI	Kalianget	2.34	282	P	Pn	14 02 29.0	+0.7
BLJI	Banyuglugur	2.67	265	P	Pn	14 02 30.5	-0.5
GMJI	Gumukmas	2.91	255	P	Pn	14 02 32.0	-1.0
KAPI	Kappang	4.26	54	P	Pn	14 02 44.9	-1.3
	2.6nm,0.3s,baz=233,slow=3.4,SNR=9.0						
PWJI	Pagerwojo	4.46	263	P	Pn	14 02 47.1	-1.2
SJI	Sawahan	4.48	267	P	Pn	14 02 48.8	+0.2
WSI	Waingapu	4.50	118	S	S	14 03 44.0	-4.7
	baz=4.4,SNR=5.5						
PCJI	Pacitan	5.10	262	P	Pn	14 02 54.2	-1.0
UGM	Wanagama	5.72	266	P	Pn	14 03 01.4	-0.8
UGM	Wanagama	5.72	266	P	Pn	14 03 01.4	-0.8
	baz=5.9,SNR=3.3						
PCI	Palu	7.47	28	P	Pn	14 03 37.1	+15
	baz=7.4,SNR=5.1						
XMIS	Christmas Isla	10.90	254	P	P	14 04 06.9	+2.9
	baz=11,SNR=3.8						
FITZ	Fitzroy Crossi	13.91	140	P	Pn	14 04 38.8	0.0
	0.4nm,0.3s,baz=338,slow=6.0,SNR=8.4						
FITZ				S	S	14 07 24.4	+16
	0.1nm,0.3s,baz=143,slow=20,SNR=2.1						
FITZ	Fitzroy Crossi	13.91	140	P	Pn	14 04 39.4	+0.6
	baz=14,SNR=4.6						
MTN	Manton Dam	15.54	111	P	P	14 04 56.1	+1.0
	baz=15,SNR=11						
MTN				S	S	14 07 47.6	+6.2
	baz=15,SNR=6.7						
KDU	Kakadu	16.74	109	P	P	14 05 08.4	+0.4
	baz=17,SNR=10						
WRA	Warramunga Arr	21.42	127	P	P	14 05 56.4	+0.9
	3.7nm,0.6s,baz=302,slow=11,SNR=40						
ASAR	Alice Springs	23.31	135	P	P	14 06 13.8	+1.1
	0.7nm,0.4s,baz=307,slow=8.9,SNR=31						
COEN	Coen	27.17	106	P	P	14 06 47.0	-0.3
	baz=27,SNR=8.7						
STKA	Stephens Creek	33.80	139	P	P	14 07 46.6	+1.6
	3.1nm,0.6s,baz=315,slow=11,SNR=6.8						
STKA	Stephens Creek	33.80	139	P	P	14 07 46.6	+1.6
	baz=34,SNR=6.2						
SONM	Songino Array	55.81	352	P	P	14 10 36.4	-0.1
	0.5nm,0.5s,baz=167,slow=7.5,SNR=6.1						
MCQ	Macquarie Isla	57.93	152	P	P	14 10 48.3	-2.6
	baz=58,SNR=3.5						
MKAR	Makanchi Array	61.95	334	P	P	14 11 17.5	-0.7
	0.2nm,0.4s,baz=158,slow=6.8,SNR=5.5						
ZALV	Zalesovo Beam	66.74	340	P	P	14 11 47.3	-1.5
	0.4nm,0.3s,baz=145,slow=3.5,SNR=3.0						

IDC 03 14:04:31.9±1.3**, 3°.58S**×**144°.44E, h0km, mb3.8**/9**, mb1 4.0**/10**, mb1mx3.9**/18**, mbtmp3.8**/10**, ML3.3**/1**, Error ellipse: s-maj=42.8km s-min=18.1km az=100.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.38	155	Pn	Pn	14 06 12.8	+5.5
	1.8nm,0.3s,baz=315,slow=9.8,SNR=8.1						
PMG				Sn	Sn	14 07 26.9	+5.9
	0.8nm,0.3s,baz=162,slow=19,SNR=3.2						
WRA	Warramunga Arr	19.01	210	P	P	14 08 55.1	-0.3
	0.1nm,0.3s,baz=30,slow=11,SNR=6.7						
ASAR	Alice Springs	22.41	206	P	P	14 09 31.9	-0.4
	1.2nm,0.7s,baz=33,slow=8.8,SNR=17						
FITZ	Fitzroy Crossi	23.39	231	P	P	14 09 41.0	-1.5
	4.0nm,0.8s,baz=66,slow=8.8,SNR=6.3						
STKA	Stephens Creek	28.27	185	P	P	14 10 28.6	+1.6
	1.1nm,0.7s,baz=4.4,slow=13,SNR=3.0						
KSRS	Korea Array	43.62	341	P	P	14 12 37.6	-0.5
	0.9nm,0.8s,baz=160,slow=9.6,SNR=4.2						
CMAR	Chiang Mai Arr	49.87	298	P	P	14 13 28.6	+1.1
	0.4nm,0.4s,baz=105,slow=4.8,SNR=7.3						
SONM	Songino Array	61.07	332	P	P	14 14 48.3	+0.5
	0.8nm,1.0s,baz=123,slow=5.3,SNR=5.8						
MKAR	Makanchi Array	74.02	321	P	P	14 16 10.1	+0.5
	0.2nm,0.6s,baz=101,slow=7.3,SNR=3.5						
ZALV	Zalesovo Beam	75.62	328	P	P	14 16 17.9	-0.8
	1.2nm,0.8s,baz=108,slow=4.8,SNR=6.3						
ILAR	Eielson Array	84.29	24	P	P	14 17 05.0	-0.4
	1.4nm,1.0s,baz=256,slow=4.5,SNR=13						

IDC 03 14:09:33.9±2.3**, 8°.11S**×**130°.58E, h0km, mb3.4**/1**, mb1 3.4**/4**, mb1mx3.2**/19**, mbtmp3.2**/4**, ML3.4**/1**, Error ellipse: s-maj=77.5km s-min=29.9km az=79.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.03	205	Pn	Pn	14 12 12.5	-0.6
	0.2nm,0.3s,baz=32,slow=12,SNR=11						
FITZ				Sn	Sn	14 14 10.7	-6.6
	0.2nm,0.3s,baz=216,slow=11,SNR=5.6						
WRA	Warramunga Arr	12.31	163	Pn	Pn	14 12 31.0	+0.4
	0.1nm,0.3s,baz=347,slow=13,SNR=4.8						
WRA				Sn	Sn	14 14 45.9	-2.8
	0.1nm,0.3s,baz=332,slow=23,SNR=4.1						
ASAR	Alice Springs	15.79	169	Pn	Pn	14 13 17.8	0.0
	0.1nm,0.3s,baz=344,slow=8.9,SNR=5.8						
MKAR	Makanchi Array	69.47	327	P	P	14 20 44.1	0.0
	0.2nm,0.5s,baz=117,slow=6.9,SNR=4.2						

CSEM ***03*** *14:25:58.6, 60°.87N×25°.68E, h0km, ML1.2, Mining explosion. After HEL*

HEL 03 14:25:58.6±0.2**, 60°.87N**×**25°.68E, h0km, ML1.2, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PVF	Pernaja	0.34	164	PG	Pg	14 26 04.6	-0.4
PVF				SG	Sg	14 26 09.5	+0.1
PVF	Pernaja	0.34	164	Pg	Pg	14 26 04.5	-0.5
PVF				Sg	Sg	14 26 09.4	0.0
FIA0	FINESS Array S	0.61	18	PG	Pg	14 26 08.6	-1.7
	baz=194						
FIA0				SG	Sg	14 26 16.3	-1.9
FIA0				RG	Rg	14 26 24.8	
FIA0	FINESS Array S	0.61	18	Pg	Pg	14 26 08.6	-1.7
FIA0				Sg	Sg	14 26 16.3	-1.9
MEF	Metsahovi	0.91	225	PG	Pg	14 26 14.8	-1.2
MEF				SG	Sg	14 26 26.4	-1.4
MEF				RG	Rg	14 26 32.4	
MEF	Metsahovi	0.91	225	Pg	Pg	14 26 14.7	-1.3
MEF				Sg	Sg	14 26 26.4	-1.4
VJF	Virojoki	0.98	109	PG	Pg	14 26 15.7	-1.7
VJF				SG	Sg	14 26 29.4	-0.7
VJF				RG	Rg	14 26 35.1	
VJF	Virojoki	0.98	109	Pg	Pg	14 26 15.6	-1.8
VJF				Sg	Sg	14 26 29.3	-0.8
KAF	Kangasniemi	1.28	13	PG	Pg	14 26 21.2	-2.0
KAF				SG	Sg	14 26 38.1	-1.8
KAF				MSG		14 26 38.1	
	comp=Z,2.4nm,0.4s						
KAF	Kangasniemi	1.28	13	Pg	Pg	14 26 21.2	-2.0
KAF				Sg	Sg	14 26 38.1	-1.8
KEF	Keuruu	1.36	344	PG	Pg	14 26 22.8	-1.9
KEF				SG	Sg	14 26 41.2	-1.1
KEF				MSG		14 26 41.2	
	comp=Z,2.2nm,0.1s						
KEF	Keuruu	1.36	344	Pg	Pg	14 26 22.8	-1.9
KEF				Sg	Sg	14 26 41.2	-1.1
SUF	Sumiainen	1.87	7	PN	Pn	14 26 31.4	-0.4
SUF				SG	Sn	14 26 55.7	-0.5
SUF				MSG		14 26 55.7	
	comp=Z,0.4nm,0.2s						
SUF	Sumiainen	1.87	7	Pn	Pn	14 26 31.4	-0.4
SUF				Sg	Sn	14 26 55.7	-0.5
RAF	Rauma	1.92	276	PN	Pn	14 26 32.2	-0.2
RAF				SG	Sn	14 26 57.8	+0.6
RAF				MSG		14 26 57.8	
	comp=Z,1.8nm,0.1s						
RAF	Rauma	1.92	276	Pn	Pn	14 26 32.2	-0.2
RAF				Sg	Sn	14 26 57.8	+0.6
MTSE	Matsula	2.36	204	SG	Sb	14 27 11.8	+0.3
MTSE	Matsula	2.36	204	Sg	Sb	14 27 11.7	+0.3
VAF	Ylistaro	2.60	328	PN	Pn	14 26 43.6	+1.7
	baz=146						
VAF				SG	Sb	14 27 17.0	-1.6
VAF				MSG		14 27 17.0	
	comp=Z,0.4nm,0.1s						
VAF	Ylistaro	2.60	328	Pn	Pn	14 26 43.6	+1.7
VAF				Sg	Sb	14 27 16.9	-1.6

IDC 03 14:34:46.1±0.9**, 2°.26S**×**152°.67E, h0km, mb3.9**/11**, mb1 4.1**/11**, mb1mx4.0**/20**, mbtmp3.9**/11**, MS3.6**/2**, Ms1 3.6**/2**, ms1mx3.0**/31**, Error ellipse: s-maj=34.6km s-min=17.0km az=111.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.97	217	Pn	Pn	14 37 05.2	+8.2
	0.6nm,0.3s,baz=30,slow=8.7,SNR=6.2						
GUMO	Guam	17.54	334	LR	LR	14 44 05.1	
	comp=Z,134nm,19.8s,baz=108,slow=32						
CTA	Charters Tower	18.80	199	P	Pn	14 39 13.2	+5.4
	0.2nm,0.3s,baz=35,slow=12,SNR=9.0						
WRA	Warramunga Arr	25.09	224	P	P	14 40 12.1	-0.7
	2.6nm,0.5s,baz=49,slow=9.6,SNR=33						
ASAR	Alice Springs	27.98	219	P	P	14 40 37.5	-1.4
	0.4nm,0.6s,baz=54,slow=8.2,SNR=13						
ASAR				PcP	PcP	14 43 55.5	+1.2
	0.7nm,0.7s,baz=58,slow=2.9,SNR=6.9						
FITZ	Fitzroy Crossi	30.83	237	P	P	14 41 03.2	-0.9
	0.6nm,0.4s,baz=54,slow=8.7,SNR=4.0						
STKA	Stephens Creek	31.26	198	P	P	14 41 08.3	+0.6
	2.7nm,0.7s,baz=49,slow=12,SNR=3.6						
USRK	Ussuriysk Arra	49.81	341	LR	LR	15 01 17.6	
	comp=Z,99nm,21.8s,baz=127,slow=32						
PETK	Petropavlovsk-	55.33	4	P	P	14 44 21.1	-0.4
	1.6nm,0.8s,baz=206,slow=9.3,SNR=5.8						
CMAR	Chiang Mai Arr	56.71	294	P	P	14 44 33.5	+1.4
	1.5nm,0.9s,baz=115,slow=5.8,SNR=8.5						
SONM	Songino Array	64.12	327	P	P	14 45 22.7	+0.3
	0.4nm,0.6s,baz=146,slow=6.4,SNR=4.7						
MKAR	Makanchi Array	78.33	319	P	P	14 46 48.3	-0.1
	0.4nm,0.6s,baz=103,slow=6.4,SNR=5.6						
ILAR	Eielson Array	79.87	22	P	P	14 46 55.3	-1.1
	0.6nm,0.6s,baz=243,slow=5.9,SNR=8.8						
QSPA	South Pole Qui	87.69	180	P	P	14 47 37.7	+1.1
	1.4nm,0.7s,baz=337,slow=2.5,SNR=14						
YKA	Yellowknife Ar	93.25	28	P	P	14 48 02.3	-0.1
	0.5nm,0.8s,baz=267,slow=4.7,SNR=7.8						
TORD	Torodi Ar. Bea	149.31	292	PKPbc	PKPbc	14 54 37.1	-0.9
	0.6nm,0.4s,baz=56,slow=1.8,SNR=13						

MOS ***03*** *14:37:50.8±1.0, 31°.34S×178°.59W, h33km, mb5.6/21, Error ellipse: s-maj=10.8km s-min=9.1km az=74.5*

AUST ***03*** *14:37:51.2, 31°.46S×177°.68W, h60km*

ISCJB ***03*** *14:37:53.2±0.1, 31°.65S±0°.03×178°.57W±0°.04, h61km, mb5.2/67, Error ellipse: s-maj=5.5km s-min=2.8km az=40.6*

NEIC ***03*** *14:37:53.8±0.9, 31°.40S×178°.56W, h55km±7km, mb5.3/32, Error ellipse: s-maj=7.9km s-min=5.7km az=145.0*

GCMT ***03*** *14:37:55.9±0.4, 31°.43S×178°.16W, h64km±1km, MW5.0, Moment Tensor Solution. s35,c48; s58,c88; Moment tensor: Scale 10^{16}Nm; M_{rr}4.21±.21; $M_{\theta\theta}$-0.07±.20; $M_{\phi\phi}$-4.14±.17; $M_{r\theta}$-0.47±.14; $M_{\theta\phi}$-1.93±.14; $M_{\phi r}$0.58±.13; Best double couple: $M_0$4.60000×10^{16} NP1:ϕ_s212.00000°, δ44.00000°, λ105.00000°. NP2:ϕ_s12.00000°, δ48.00000°, λ76.00000°. Principal axes: T 4.3400, Plg80.0000°, Azm214.0000°; N 0.5800, Plg10.0000°, Azm21.0000°; P -4.9300, Plg2.0000°, Azm111.0000°; Data Used: II IU G IC CN.*

IDC ***03*** *14:37:58.1±2.4, 31°.19S×178°.51W, h88km±20km, mb4.7/24, mb1 4.8/25, mb1mx4.8/26, mbtmp4.7/25, MS4.3/15, Ms1 4.3/15, ms1mx4.1/29 Error ellipse: s-maj=13.3km s-min=10.9km az=5.0*

DJA ***03*** *14:38:13.4±2.6, 31°S±8°×17°8W±1°3, h313km±26km, M5.1/27, mB5.7/4, mb5.0/27, Mw(mB)5.2/4*

ISC 03 14:37:54.2±0.2**, 31°.53S**±0°.04×**178°.43W**±0°.05**, h61km, n681, σ1s.45**/662**, mb5.2**/63**, 104C-88D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.31	11	ePn	Pn	14 38 25.5	-4.4
RAO				eSn	Sn	14 38 50.4	-6.9
MXZ	Matakaoa Point	6.59	203	PN	Pn	14 39 27.4	-1.1
PUZ	Puketiti	7.07	202	PN	Pn	14 39 33.5	-1.6
PUZ				eSN	Sn	14 40 51.8	-2.2
WCZ	Waipu Caves	7.45	232	PN	Pn	14 39 47.0	+6.8
MWZ	Matawai	7.56	205	PN	Pn	14 39 39.7	-2.0
MWZ				eSN	Sn	14 41 04.8	-1.1
OUZ	Omahuta	7.62	239	ePn	Pn	14 39 48.2	+5.8
OUZ	Omahuta	7.62	239	ePN	Pn	14 39 48.3	+5.8
URZ	Urewera	7.65	207	P	Pn	14 39 41.4	-1.5
URZ				S	Sn	14 41 08.5	+0.5
URZ				eSn	Sn	14 41 11.1	+3.0
URZ	Urewera	7.65	207	ePN	Pn	14 39 41.1	-1.8
URZ				eSN	Sn	14 41 09.9	+1.8
URZ	Urewera	7.65	207	P	Pn	14 39 41.4	-1.5
	3.1nm,0.3s,baz=65,slow=2.7,SNR=50						
URZ				S	Sn	14 41 08.5	+0.5
	21nm,0.3s,baz=281,slow=22,SNR=13						
KNZ	Kokohu	8.12	202	ePN	Pn	14 39 47.2	-2.2
RAHZ	Arahi	8.23	205	ePN	Pn	14 39 48.9	-2.0
BKZ	Black Stump Fm	8.67	207	ePN	Pn	14 39 53.9	-3.1
BKZ				eSN	Sn	14 41 32.5	-0.8
MOVZ	Moawhango	9.18	209	ePN	Pn	14 40 02.4	-1.6
PXZ	Pawanui	9.30	203	ePN	Pn	14 40 00.6	-4.9
PXZ				eSN	Sn	14 41 44.0	-4.6
TSZ	Takapari Road	9.65	207	ePN	Pn	14 40 04.9	-5.4
TSZ				eSN	Sn	14 41 53.1	-4.1
BFZ	Birch Farm	10.09	204	ePN	Pn	14 40 11.8	-4.6
MRZ	Mangatainoka R	10.32	206	PN	Pn	14 40 13.6	-5.8
MRZ				eSN	Sn	14 42 07.6	-5.9
HOWZ	Holdsworth Sta	10.55	206	ePN	Pn	14 40 17.1	-5.5
MTW	Mount Morrison	10.78	205	ePN	Pn	14 40 19.4	-6.3
TCW	Tory Channel	11.30	209	ePN	Pn	14 40 28.4	-4.5
TCW				SN	Sn	14 42 31.1	-6.4
NNZ	Nelson	11.70	212	ePN	Pn	14 40 31.7	-6.6
NNZ				eSN	Sn	14 42 41.7	-5.5
CTZ	Chatham Island	12.27	174	PN	Pn	14 40 45.1	-0.9
THZ	Tophouse	12.35	212	ePN	Pn	14 40 40.7	-6.5
THZ				eSN	Sn	14 42 56.2	-7.0
KHZ	Kahutara	12.61	208	ePn	Pn	14 40 47.2	-3.5
LTZ	Lake Taylor	13.45	211	eSN	Sn	14 43 19.5	-10
MQZ	McQueen's Vall	14.05	208	eSN	Sn	14 43 31.5	-13
MSVF	Nonsavu	14.10	346	eP	Pn	14 41 09.4	-1.6
MSVF	Nonsavu	14.10	346	ePn	Pn	14 41 09.4	-1.6
RPZ	Rata Peaks	14.73	211	P	Pn	14 41 18.2	-0.8
RPZ				S	Sn	14 43 50.3	-11
RPZ	Rata Peaks	14.73	211	P	Pn	14 41 18.2	-0.8
	1.5nm,0.3s,baz=149,slow=2.2,SNR=7.5						
RPZ				S	Sn	14 43 50.3	-11
	2.7nm,0.3s,baz=214,slow=21,SNR=8.3						
ODZ	Otahua Downs	15.97	209	eP	P	14 41 39.7	+2.3
ODZ	Otahua Downs	15.97	209	ePN	Pn	14 41 27.4	-7.5
DZM	Mont Dzumac	16.45	301	eP	P	14 41 44.3	+1.3
	192nm,1.2s						
DZM				eLR	LR	14 45 32.4	
	4μm,25.8s						
DZM	Mont Dzumac	16.45	301	P	P	14 41 43.1	+0.2
DZM	Mont Dzumac	16.45	301	P	P	14 41 43.1	+0.2
	0.6nm,0.3s,baz=111,slow=16,SNR=6.8						
DZM				LR	LR	14 46 45.9	
	comp=Z,2μm,19.1s,baz=302,slow=33						
RAR	Rarotonga	19.59	63	P	Pn	14 42 19.4	+0.2
RAR	Rarotonga	19.59	63	P	Pn	14 42 19.4	+0.2
	1.6nm,0.3s,baz=91,slow=1.1,SNR=2.8						
ARMA	Armidale	25.66	265	eP	P	14 43 22.0	+3.5
ARMA	Armidale	25.66	265	P	P	14 43 24.2	+5.7
	baz=26,SNR=14						
MGCD	Mangrove Creek	25.74	258	P	P	14 43 23.3	+4.3
	baz=26,SNR=7.7						
TBI	Tubuai	26.91	80	eLQ	LQ	14 48 48.0	
	556nm,28.5s						
TBI				eLR	LR	14 50 24.1	
	1μm,27.5s,baz=248						
TBI				eT	T	15 11 33.3	
	209nm,0.3s						
CNB	Canberra Magne	27.08	253	P	P	14 43 35.0	+3.8
	baz=28,SNR=15						
MILA	Mila	27.26	249	P	P	14 43 37.1	+4.3
	baz=28,SNR=11						
EIDS	Eidsvold	27.44	275	eP	P	14 43 34.5	0.0
	65nm,1.0s						
EIDS	Eidsvold	27.44	275	P	P	14 43 37.7	+3.3
	baz=28,SNR=12						
YNG	Young	27.92	255	P	P	14 43 42.4	+3.8
	baz=28,SNR=10						
RMQ	Roma	29.07	272	P	P	14 43 52.2	+3.3
	baz=30,SNR=68						
PAE	Paea	29.54	69	eT	T	15 14 38.0	
	76nm,0.4s						
PPT2	Papeete2	29.58	69	eS	S	14 48 39.2	-5.3
	248nm,26.5s						
PPT2				eLR	LR	14 51 16.4	
	1μm,28.8s						
PPT2				eT	T	15 14 44.5	
	62nm,0.4s						
PPT	Papeete	29.59	69	LR	LR	14 53 34.0	
	comp=Z,201nm,19.0s,baz=8.6,slow=32						
TVO	Taravao	29.73	69	eT	T	15 14 49.8	
	51nm,0.4s						
TIAR	Tiarei	29.78	69	eT	T	15 14 47.1	
	58nm,0.4s						
TOO	Toolangi	30.19	249	P	P	14 44 02.1	+3.3
	baz=31,SNR=10						
CMSA	Cobar Meteorol	30.50	260	P	P	14 44 04.0	+2.5
	baz=31,SNR=71						
MEH	Mehetia	30.64	71	eT	T	15 16 01.7	
	315nm,0.3s						
PMOR	Pomariorio Ree	32.37	67	eT	T	15 18 13.7	
	12nm,0.3s						
VAH	Vaihoa	32.45	67	eT	T	15 18 16.4	
	266nm,0.2s						
QLP	Quilpie	32.90	269	P	P	14 44 24.4	+1.8
	baz=34,SNR=24						
ARPS	Mount Arapiles	33.12	250	P	P	14 44 27.4	+2.9
	baz=34,SNR=8.3						
CTA	Charters Tower	33.63	281	P	P	14 44 31.0	+1.9
CTA	Charters Tower	33.63	281	P	P	14 44 31.0	+1.9
	99nm,0.7s,baz=105,slow=11,SNR=181						
CTA				LR	LR	14 56 13.5	
	comp=Z,725nm,18.6s,baz=135,slow=33						
CTAO	Charters Tower	33.63	281	eP	P	14 44 30.9	+1.9
CTAO				pmax	pmax		
	comp=Z,101nm,0.7s						
CTAO	Charters Tower	33.63	281	eP	P	14 44 30.9	+1.9
	comp=Z,101nm,0.7s						
STKA	Stephens Creek	33.88	259	P	P	14 44 33.4	+2.3
	comp=Z,112nm,1.0s						
STKA	Stephens Creek	33.88	259	P	P	14 44 33.4	+2.3
	comp=Z,63nm,1.0s,baz=96,slow=9.2,SNR=40						
STKA				LR	LR	14 56 23.4	
	comp=Z,736nm,18.8s,baz=40,slow=33						
STKA	Stephens Creek	33.88	259	P	P	14 44 33.5	+2.3
	baz=34,SNR=37						
BBOO	Buckleboo	38.32	256	eP	P	14 45 09.8	+0.7
	comp=Z,676nm,0.8s						
BBOO	Buckleboo	38.32	256	P	P	14 45 10.1	+1.1
	baz=39,SNR=44						
PMG	Port Moresby	38.77	297	eP	P	14 45 12.4	-0.6
	comp=Z,48nm,0.6s						
PMG	Port Moresby	38.77	297	P	P	14 45 12.8	-0.2
	comp=Z,64nm,0.8s						
PMG	Port Moresby	38.77	297	P	P	14 45 13.5	+0.6
	comp=Z,42nm,0.6s,baz=103,slow=4.6,SNR=30						
QIS	Mount Isa	39.04	276	P	P	14 45 16.0	+0.8
	baz=40,SNR=43						
COEN	Coen	39.24	288	eP	P	14 45 17.6	+0.7
	comp=Z,434nm,1.0s						
COEN	Coen	39.24	288	P	P	14 45 18.3	+1.3
	baz=40,SNR=46						
RKT	Rikitea	39.30	89	eLR	LR	14 55 56.7	
	comp=Z,1μm,30.2s,baz=254						
RKT				eT	T	15 27 02.0	
	comp=Z,6.0nm,0.3s						
AS31	Alice Springs	42.69	268	eP	P	14 45 46.0	+0.7
ASAR	Alice Springs	42.69	268	P	P	14 45 46.0	+0.7
ASAR				ScP	ScP	14 51 20.8	-1.1
ASAR	Alice Springs	42.69	268	P	P	14 45 46.0	+0.7
	comp=Z,124nm,0.7s,baz=105,slow=7.4,SNR=933						
ASAR				ScP	ScP	14 51 20.8	-1.1
	comp=Z,2.7nm,0.6s,baz=118,slow=3.9,SNR=3.9						
ASAR				LR	LR	15 01 54.2	
	comp=Z,341nm,18.6s,baz=89,slow=34						
WRAB	Tennant Creek	43.78	274	eP	P	14 45 54.4	+0.3
WRAB	Tennant Creek	43.78	274	eP	P	14 45 54.4	+0.3
WRA	Warramunga Arr	43.78	274	P	P	14 45 54.5	+0.4
WRA				S	S	14 52 19.8	-0.7
WRA				PKiKP	PKiKP	14 54 40.6	-1.0
WRA	Warramunga Arr	43.78	274	P	P	14 45 54.5	+0.4
	comp=Z,252nm,0.5s,baz=113,slow=7.8,SNR=179						
WRA				S	S	14 52 19.8	-0.7
	comp=Z,1.3nm,0.9s,baz=111,slow=14,SNR=3.6						
WRA				PKiKP	PKiKP	14 54 40.6	-1.0
	comp=Z,0.5nm,0.8s,baz=137,slow=0.3,SNR=5.7						
WRA				LR	LR	15 03 14.5	
	comp=Z,433nm,19.3s,baz=125,slow=35						
FORT	Forrest	45.41	256	eP	P	14 46 06.0	-1.0
	comp=Z,166nm,1.2s						
FORT	Forrest	45.41	256	P	P	14 46 07.2	+0.3
	baz=46,SNR=21						
VNDA	Vanda	46.94	186	eP	P	14 46 21.1	+2.8
	comp=Z,18nm,1.4s						
VNDA	Vanda	46.94	186	P	P	14 46 22.4	+4.1
	comp=Z,2.4nm,0.5s,baz=0.7,slow=8.4,SNR=20						
VNDA				LR	LR	15 02 37.6	
	comp=Z,129nm,19.9s,baz=78,slow=31						
KDU	Kakadu	48.76	281	P	P	14 46 32.8	-0.4
	baz=49,SNR=13						
MTN	Manton Dam	49.80	280	P	P	14 46 40.9	-0.2
	baz=50,SNR=23						
KMBL	Kambalda	50.34	254	P	P	14 46 45.1	+0.1
	baz=51,SNR=5.0						
FITZ	Fitzroy Crossi	52.00	271	P	P	14 46 57.8	+0.2
FITZ	Fitzroy Crossi	52.00	271	P	P	14 46 57.8	+0.2
	comp=Z,31nm,0.6s,baz=126,slow=6.4,SNR=55						
FITZ				LR	LR	15 07 32.1	
	comp=Z,443nm,20.4s,baz=101,slow=34						
FITZ	Fitzroy Crossi	52.00	271	P	P	14 46 57.7	+0.1
	baz=53,SNR=61						
KLBR	Kellerberrin	53.64	252	P	P	14 47 09.0	-0.6
	baz=54,SNR=19						
NWAO	Narrogin (SRO)	53.66	250	P	P	14 47 10.2	+0.4
NWAO	Narrogin (SRO)	53.66	250	P	P	14 47 10.2	+0.4

comp=Z,9.0nm,0.7s,baz=170,slow=5.8,SNR=5.1
NWAO LR LR 15 08 42.6
comp=Z,274nm,19.0s,baz=267,slow=34
FAKI Fak Fak 54.39 291 P **P 14 47 13.5 -1.7**
comp=Z,30nm,1.4s
MEEK Meekatharra 54.58 258 P **P 14 47 15.7 -0.8**
baz=55,SNR=18
BNDI Bandamaira 55.33 288 P **P 14 47 19.1 -2.9**
comp=Z,110nm,0.9s
MBWA Marble Bar 55.74 265 *e*P **P 14 47 24.2 -0.7**
comp=Z,38nm,0.9s
MORW Morawa 55.86 254 P **P 14 47 25.2 -0.5**
baz=56,SNR=9.2
SWI Sorong 56.42 293 P **P 14 47 28.6 -1.2**
comp=Z,55nm,1.0s
SWI Sorong 56.42 293 P **P 14 47 29.5 -0.3**
baz=57,SNR=3.4
GUMO Guam 57.03 316 LR LR 15 07 46.9
comp=Z,276nm,19.2s,baz=104,slow=32
QSPA South Pole Qui 58.58 180 *e*P **P 14 47 45.0 +0.5**
comp=Z,68nm,1.1s
QSPA South Pole Qui 58.58 180 P P 14 47 48.1 +3.7
comp=Z,39nm,1.0s,baz=44,slow=1.7,SNR=106
MMRI Maumere 59.45 279 P **P 14 47 49.6 -1.4**
GIRL Giralia 59.79 261 P **P 14 47 54.0 +0.7**
baz=60,SNR=6.7
MIR Mirnyy 60.95 207 ⇓*i*P **P 14 48 02.0 +1.5**
MIR pmax pmax
comp=Z,110nm,1.4s
KAPI Kappang 63.45 281 P **P 14 48 16.4 -1.7**
KAPI Kappang 63.45 281 P **P 14 48 16.4 -1.7**
comp=Z,7.2nm,0.6s,baz=142,slow=8.9,SNR=4.9
CBIJ Chichi jima 69.35 323 LR LR 15 13 24.8
comp=Z,202nm,18.9s,baz=119,slow=31
MAW Mawson 71.12 201 P **P 14 49 07.4 +1.7**
MAW Mawson 71.12 201 P **P 14 49 07.4 +1.7**
comp=Z,24nm,0.8s,baz=111,slow=5.9,SNR=18
MAW LR LR 15 19 17.9
comp=Z,191nm,18.8s,baz=154,slow=35
MAW Mawson 71.12 201 P **P 14 49 07.4 +1.7**
baz=71,SNR=14
KSM Kuching 74.87 281 *e*P **P 14 49 28.8 0.0**
comp=Z,16nm,0.8s
SYO Syowa Base 75.93 193 ⇓*e*P **P 14 49 32.7 -1.2**
SYO Syowa Base 75.93 193 ⇓*e*P **P 14 49 36.8 +2.9**
SNAA Sanae 77.04 179 *e*P **P 14 49 42.6 +2.3**
SNAA Sanae 77.04 179 *e*PcP **PcP 14 49 47.5 -3.5**
SNAA Sanae 77.04 179 *e*P **P 14 49 41.0 +0.7**
comp=Z,79nm,1.2s
VNA3 Neumayer Olymp 77.21 176 *e*P **P 14 49 43.5 +2.4**
VNA3 Neumayer Olymp 77.21 176 *e*PcP **PcP 14 49 49.2 -2.5**
VNA2 Neumayer--Watz 77.64 177 *e*P **P 14 49 46.3 +2.8**
baz=181,slow=4.3
VNA2 Neumayer--Watz 77.64 177 *e*PcP **PcP 14 49 51.7 -1.8**
baz=181,slow=4.3
VNA2 Neumayer--Watz 77.64 177 *e*pP pP 14 49 56.5 -3.9
baz=181,slow=4.3
VNA2 Neumayer--Watz 77.64 177 *e*sP sP 14 50 00.1 -7.0
baz=181,slow=4.3
MAIT Maitri 77.73 183 *e*P P 14 49 35.1 -8.9
VNA1 Neumayer--Stat 77.87 177 *e*P **P 14 49 47.5 +2.7**
VNA1 Neumayer--Stat 77.87 177 *e*PcP **PcP 14 49 53.1 -1.4**
MJAR Matsushiro Arr 78.96 326 P **P 14 49 49.5 -1.7**
MJAR Matsushiro Arr 78.96 326 P **P 14 49 49.5 -1.7**
comp=Z,4.9nm,1.0s,baz=172,slow=5.5,SNR=11
MJAR LR LR 15 17 50.6
comp=Z,125nm,20.3s,baz=45,slow=30
MAT Matsushiro 78.96 326 P **P 14 49 48.7 -2.5**
TPUB Ta-pu 79.82 305 *e*P P 14 49 52.1 -4.1
SSLB Suanglung 79.92 306 *e*P **P 14 49 54.4 -2.4**
comp=Z,23nm,0.8s
JNU Nakatsue 80.16 319 *e*P **P 14 49 56.6 -1.2**
JNU Nakatsue 80.16 319 P **P 14 49 55.8 -2.0**
comp=Z,9.4nm,0.7s,baz=59,slow=3.7,SNR=8.4
YUK Yuzh-Kuril'sk 81.97 335 *d*P **P 14 50 05.7 -1.4**
YUK S **S 15 00 12.8 -3.4**
PLCA Paso Flores 82.01 133 P **P 14 50 10.9 +3.0**
PLCA Paso Flores 82.01 133 P **P 14 50 10.9 +3.0**
comp=Z,19nm,1.0s,baz=234,slow=5.9,SNR=16
EFI East Falkland 82.05 147 ⇓*e*P **P 14 50 09.3 +1.6**
PPI Padang Panjang 82.23 274 P pP 14 50 27.8 +1.5
baz=83,SNR=16
ASAJ Asahikawa 83.27 333 P **P 14 50 13.8 -0.1**
ASAJ Asahikawa 83.27 333 P **P 14 50 13.8 -0.1**
comp=Z,5.8nm,0.6s,baz=216,slow=9.2,SNR=10
IPM Ipoh 84.29 279 *e*P **P 14 50 18.9 -1.0**
KSRS Korea Array 84.97 320 P **P 14 50 21.9 -0.8**
comp=Z,3.9nm,0.8s,baz=139,slow=5.7,SNR=11
KSRS LR LR 15 23 29.2
comp=Z,90nm,20.8s,baz=3.1,slow=32
KSAR Wonju Array Be 84.98 320 P **P 14 50 21.9 -0.8**
QIZ Qiongzhong 85.14 296 P **P 14 50 27.1 +3.1**
PSI Prapat 85.19 276 P **P 14 50 22.1 -2.4**
PSI Prapat 85.19 276 P **P 14 50 22.1 -2.4**
comp=Z,3.7nm,0.4s,baz=167,slow=11,SNR=8.4
PSI LR LR 15 29 26.3
comp=Z,210nm,18.7s,baz=267,slow=36
PSI Prapat 85.19 276 P **P 14 50 22.9 -1.7**
baz=86,SNR=6.1
GSI Gunungsitoli 85.55 274 P **P 14 50 26.4 +0.1**
baz=86,SNR=5.2
YSS Yuzh-Sakhalins 85.60 334 ⇑*e*P **P 14 50 26.0 +0.4**
YSS pmax pmax
comp=Z,20nm,0.9s
YSS Yuzh-Sakhalins 85.60 334 *e*P **P 14 50 25.3 -0.3**
comp=Z,25nm,0.8s
BLG Laguna Peak 85.95 46 ⇑P **P 14 50 29.1 +1.3**
baz=86
PKM Peak Mountain 86.03 45 ⇓P **P 14 50 29.6 +1.3**
baz=86
PTRM Twissleman Ran 86.31 44 *e*P **P 14 50 31.9 +2.4**
OSI Osito Adit 86.50 46 ⇓P **P 14 50 32.1 +1.6**
baz=87
MWC Mount Wilson 86.65 46 *e*P **P 14 50 32.8 +1.4**
MWC pmax pmax
comp=Z,10.0nm,0.8s
MWC Mount Wilson 86.65 46 *e*P **P 14 50 32.8 +1.4**
comp=Z,9.6nm,0.8s
NJ2 Nanjing 86.70 311 *e*P P 14 50 35.0 +3.6
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
MURC Murrieta 86.77 47 ⇑P **P 14 50 32.9 +1.1**
baz=87,SNR=5.4
ARVC Arvin 86.78 45 ⇑P **P 14 50 33.1 +1.4**
baz=87
MONP Monument Peak 86.79 48 ⇑P **P 14 50 33.4 +1.2**
baz=87
PEA0B Petropavlovsk- 86.81 346 *e*P **P 14 50 30.2 -1.2**
PETK Petropavlovsk- 86.81 346 P **P 14 50 30.5 -0.9**
PETK Petropavlovsk- 86.81 346 P **P 14 50 30.5 -0.9**
PETK Petropavlovsk- 86.81 346 P **P 14 50 30.5 -0.9**
comp=Z,7.0nm,0.6s,baz=125,slow=8.3,SNR=14
BFSC Mount Baldy Ra 86.91 46 ⇑P **P 14 50 33.6 +1.1**
baz=87,SNR=6.7
VES Vestal, Richgr 87.11 44 ⇑P **P 14 50 34.3 +1.0**
baz=87
EDW2 Edwards Air Fo 87.13 46 ⇓P **P 14 50 34.8 +1.3**
baz=87,SNR=6.4
SWSC Sam W. Stewart 87.22 48 ⇓P **P 14 50 35.2 +1.2**
baz=88
PFO Pinyon Flat Ob 87.24 48 *e*P **P 14 50 35.9 +1.7**
comp=Z,19nm,1.0s
PFO Pinyon Flat Ob 87.24 48 ⇑P **P 14 50 35.5 +1.4**
baz=88,SNR=5.5
ISA Isabella 87.36 45 *e*P **P 14 50 35.7 +1.1**
ISA pmax pmax
comp=Z,30nm,1.0s
ISA Isabella 87.36 45 *e*P **P 14 50 35.7 +1.1**
comp=Z,30nm,1.0s
ISA Isabella 87.36 45 ⇑P **P 14 50 35.9 +1.3**
baz=88,SNR=12
RRX Edison Barstow 87.74 46 ⇑P **P 14 50 37.8 +1.4**
baz=88
BELC Belle Mtn. Jos 87.78 47 ⇓P **P 14 50 38.4 +1.6**
baz=88,SNR=11
CMB Columbia Colle 87.85 42 *e*P **P 14 50 37.5 +0.6**
CMB Columbia Colle 87.85 42 *e*P **P 14 50 37.5 +0.6**
USRK Ussuriysk Arra 87.89 327 P **P 14 50 36.3 -0.5**
comp=Z,3.5nm,0.7s,baz=112,slow=2.6,SNR=7.6
BC3 Big Chuckawall 87.91 48 ⇑P **P 14 50 39.1 +1.8**
baz=88,SNR=8.9
GLA Glamis 87.92 49 ⇓P **P 14 50 39.1 +1.8**
baz=88
CWC Cottonwood Cre 88.12 45 ⇑P **P 14 50 39.3 +1.0**
baz=88
HEC Hector,Ludlow 88.12 47 ⇑P **P 14 50 39.4 +1.2**
baz=88
GSC Goldstone 88.13 46 *e*P **P 14 50 39.6 +1.2**
GSC Goldstone 88.13 46 *e*P **P 14 50 39.6 +1.2**
GSC Goldstone 88.13 46 ⇓P **P 14 50 39.6 +1.2**
baz=88,SNR=9.8
MPMC Manual Prospec 88.22 45 ⇓P **P 14 50 40.0 +1.2**
baz=88,SNR=11
113A Mohawk Valley, 88.42 50 ⇓P **P 14 50 41.1 +1.5**
baz=89
IRM Iron Mountain 88.42 48 ⇑P **P 14 50 41.6 +1.9**
baz=89,SNR=18
MTUM Tungsten Hills 88.44 44 *e*P **P 14 50 41.4 +1.5**
GMRC Granite Mounta 88.50 47 ⇑P **P 14 50 41.5 +1.4**
baz=89
214A Organ Pipe Nat 88.54 51 ⇑P **P 14 50 41.8 +1.5**
baz=89
Y12C Blythe 88.56 48 ⇑P **P 14 50 41.9 +1.6**
baz=89
LCO Las Campanas 88.67 123 *e*P **P 14 50 41.2 -0.2**
WHN Wuhan 88.73 307 *e*P **P 14 50 42.2 +1.1**
TUQ Turquoise Moun 88.77 46 ⇑P **P 14 50 42.7 +1.3**
baz=89
FURC Furnace Creek, 88.87 45 ⇓P **P 14 50 43.1 +1.5**
baz=89
GRAC Grapevine Rang 88.91 44 ⇑P **P 14 50 43.4 +1.5**
baz=89
WCN Washoe City 89.07 42 *e*P **P 14 50 44.0 +1.2**
WCN pmax pmax
comp=Z,17nm,1.0s
WCN Washoe City 89.07 42 *e*P **P 14 50 44.0 +1.2**
comp=Z,17nm,1.0s
NEE2 Needles Airpor 89.15 48 ⇓P **P 14 50 44.7 +1.7**
baz=89
PDMCI Parker Dam,Lak 89.16 48 ⇑P **P 14 50 44.9 +1.8**
baz=89,SNR=7.8
NVAR Mina Array Bea 89.32 43 P **P 14 50 44.7 +0.7**
NVAR Mina Array Bea 89.32 43 P **P 14 50 44.7 +0.7**
comp=Z,16nm,0.9s,baz=220,slow=8.3,SNR=35
Z14A Wintersburg 89.33 50 ⇑P **P 14 50 45.8 +1.9**
baz=90,SNR=7.4
MDJ Mudanjiang 89.35 326 P **P 14 50 46.6 +2.9**
MDJ pP **pP 14 50 56.3 -4.6**
MDJ sP sP 14 51 00.0 -7.5
MDJ PP **PP 14 54 15.6 -0.2**
MDJ pmax pmax
comp=Z,6.0nm,0.8s
MDJ pmax pmax
comp=Z,72nm,5.4s
MDJ LR LR
comp=N,55nm,29.0s
MDJ LR LR
comp=E,47nm,25.1s
MDJ LR LR
comp=Z,90nm,24.0s
HUMO Hull Mountain 89.64 37 *e*P **P 14 50 46.9 +1.8**
comp=Z,296nm,3.0s
Y14A Wickenburg 89.65 49 ⇑P **P 14 50 47.2 +1.7**
baz=90,SNR=5.9
W13A Huntsman Mount 89.82 48 ⇓P **P 14 50 48.1 +1.6**
baz=90,SNR=7.4
TUC Tucson 90.10 52 *e*P **P 14 50 48.9 +1.2**
TUC pmax pmax
comp=Z,17nm,0.9s
TUC Tucson 90.10 52 *e*P **P 14 50 48.9 +1.2**
comp=Z,17nm,0.9s
MOD Modoc 90.55 39 *e*P **P 14 50 50.6 +1.0**
CN2 Changchun 90.82 323 *e*P **P 14 50 49.6 -1.0**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
R11A Troy Canyon, C 90.87 44 ⇑P **P 14 50 52.0 +0.8**
baz=91
X16A Lo Mia Camp, P 90.97 50 ⇓P **P 14 50 53.8 +2.0**
baz=91,SNR=16
320A Kipp Ranch, An 91.05 53 ⇓P **P 14 50 54.2 +2.0**
baz=91
BMN Battle Mountai 91.28 42 *e*P **P 14 50 54.1 +1.1**
BMN pmax pmax
comp=Z,15nm,0.9s
BMN Battle Mountai 91.28 42 *e*P **P 14 50 54.1 +1.1**
comp=Z,14nm,0.9s
220A Playas Peak, P 91.38 53 ⇑P **P 14 50 55.2 +1.5**
baz=92
U15A North Rim 91.67 48 ⇓P **P 14 50 56.8 +1.7**
baz=92,SNR=7.8
120A U Bar Ranch, L 91.69 52 ⇑P **P 14 50 57.0 +1.8**
baz=92,SNR=8.7
CCUT Cedar City 91.70 46 *e*P **P 14 50 57.2 +2.0**
comp=Z,10nm,1.1s
GYA Guiyang 91.79 300 P **P 14 50 56.1 +0.4**
GYA pP pP 14 51 06.7 -6.2
GYA PP **PP 14 54 36.4 +0.8**
GYA SKS **SKSac 15 01 24.0 +0.5**
GYA S **S 15 01 50.6 -1.5**
GYA SS **SS 15 07 59.8 -1.8**
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,60nm,3.4s
GYA LR LR
comp=N,580nm,19.8s
GYA LR LR
comp=E,490nm,18.7s
GYA LR LR
comp=Z,610nm,20.8s
ARUT Antelope Range 91.81 46 *e*P **P 14 50 57.0 +1.4**
ARUT pmax pmax
comp=Z,5.0nm,1.0s
ARUT Antelope Range 91.81 46 *e*P **P 14 50 57.0 +1.4**
comp=Z,4.9nm,1.0s
X18A Smyflake 92.01 50 ⇑P **P 14 50 58.0 +1.4**
baz=92
Z20A Nine Sixteen R 92.06 52 ⇑P **P 14 50 58.7 +1.9**
baz=92,SNR=7.1
121A Cookes Peak, D 92.26 53 ⇑P **P 14 50 58.9 +1.1**
baz=92
ELK Elko 92.62 43 *e*P **P 14 50 58.7 -0.7**
Y20A Horse Springs, 92.68 52 ⇑P **P 14 51 01.3 +1.6**
baz=93
X20A Quemado 92.97 51 ⇓P **P 14 51 02.8 +1.7**
baz=93,SNR=7.1
MSU Marysvale 93.03 46 *e*P **P 14 51 02.6 +1.3**
MSU Marysvale 93.03 46 *e*P **P 14 51 02.6 +1.3**
626A Big Bend Ranch 93.10 57 ⇓P **P 14 51 02.4 +0.8**
baz=93
425A Indio Mountain 93.19 56 ⇑P **P 14 51 02.9 +0.8**
baz=93
Y21A Point of Rocks 93.21 52 ⇑P **P 14 51 04.1 +1.9**
baz=93,SNR=6.1
324A Moseley Ranch, 93.22 55 ⇓P **P 14 51 02.8 +0.6**
baz=93
Z22A Elephant Butte 93.25 53 ⇑P **P 14 51 03.5 +1.2**
baz=94,SNR=6.8
TXAR Lajitas Array 93.31 58 P **P 14 51 03.3 +0.7**
TXAR Lajitas Array 93.31 58 P **P 14 51 03.3 +0.7**
comp=Z,1.3nm,0.9s,baz=213,slow=6.5,SNR=8.6
W20A Ramah 93.32 50 ⇑P **P 14 51 04.2 +1.5**
baz=94,SNR=14
X21A Alamocita Cree 93.39 51 ⇓P **P 14 51 04.0 +1.0**
baz=94
526A Mary Lane Ranc 93.41 57 ⇓P **P 14 51 03.9 +0.8**
baz=94
CMAR Chiang Mai Arr 93.42 289 P **P 14 51 03.7 +0.4**
CMAR PP **PP 14 54 49.1 +0.7**
CMAR PKKP **PKKPbc 15 08 11.5 +2.5**
CMAR Chiang Mai Arr 93.42 289 P **P 14 51 03.7 +0.4**
comp=Z,2.5nm,0.9s,baz=147,slow=3.2,SNR=14
CMAR PP **PP 14 54 49.1 +0.7**
comp=Z,2.1nm,0.8s,baz=112,slow=5.3,SNR=10
CMAR PKKP **PKKPbc 15 08 11.5 +2.5**
comp=Z,1.0nm,0.8s,baz=283,slow=5.0,SNR=5.6
MNTX Cornudas Mount 93.43 55 ⇓P **P 14 51 03.8 +0.7**
baz=94
BJI Beijing 93.47 316 P P 14 51 06.4 +3.5
BJI S S 15 02 12.6 +6.6
BJI pmax pmax
comp=Z,4.0nm,0.6s
BJI pmax pmax
comp=Z,93nm,6.2s
BJI LR LR
comp=N,160nm,14.2s
BJI LR LR
comp=E,210nm,15.5s
BJI LR LR
comp=Z,120nm,21.7s
325A Bean Ranch, Si 93.53 55 ⇑P **P 14 51 04.4 +0.7**
baz=94
224A Cornudas Mount 93.55 54 ⇓P **P 14 51 05.0 +1.2**
baz=94
627A Terlingua Ranc 93.58 58 ⇓P **P 14 51 04.7 +0.9**
baz=94,SNR=5.6
CHTO Chiang Mai 93.61 290 *e*P **P 14 51 03.7 -0.4**
CHTO pmax pmax
comp=Z,14nm,1.5s
CHTO Chiang Mai 93.61 290 *e*P **P 14 51 03.7 -0.4**
comp=Z,14nm,1.5s
P15A Leamington 93.63 45 ⇓P **P 14 51 04.8 +0.9**
baz=94
Y22A Socorro 93.64 52 ⇓P **P 14 51 05.3 +1.1**
baz=94
DUG Dugway 93.70 44 ⇑P **P 14 51 05.1 +0.9**
baz=94
426A McDonald Obser 93.80 56 ⇑P **P 14 51 05.6 +0.6**
baz=94
527A Woodward Ranch 93.80 57 ⇓P **P 14 51 05.4 +0.5**
baz=94
628A Black Gap, Mar 93.95 58 ⇑P **P 14 51 06.1 +0.6**
baz=94
KMI Kunming 94.00 297 P **P 14 51 07.0 +1.0**
KMI pP **pP 14 51 20.9 -2.4**
KMI sP **sP 14 51 25.3 -4.6**
KMI PP **PP 14 54 57.9 +4.8**
KMI S **ScS 15 02 13.1 -0.1**
KMI pmax pmax
comp=Z,14nm,1.3s
KMI pmax pmax
comp=Z,96nm,4.5s
MFID Camas Ranch 94.02 40 *e*P **P 14 51 05.3 -0.2**
MFID Camas Ranch 94.02 40 ⇓P **P 14 51 06.1 +0.5**
baz=94,SNR=9.1
U20A Newcomb 94.05 49 ⇑P **P 14 51 06.9 +0.9**
baz=94
TMUT Trail Mountain 94.11 46 *e*P **P 14 51 07.0 +0.7**
comp=Z,9.1nm,1.0s
BMO Blue Mountains 94.16 39 *e*P **P 14 51 06.6 +0.5**
BMO pmax pmax
comp=Z,45nm,2.3s
BMO Blue Mountains 94.16 39 *e*P **P 14 51 06.6 +0.5**
comp=Z,45nm,2.3s
Y23A Lovelace Mesa, 94.25 53 ⇑P **P 14 51 07.1 +0.1**
baz=94
427A Hayter Ranch, 94.35 56 ⇓P **P 14 51 08.0 +0.6**
baz=95
528A Cox Ranch, San 94.40 57 ⇑P **P 14 51 08.3 +0.7**
baz=95
SRU San Rafael 94.42 46 *e*P **P 14 51 08.0 +0.4**
SRU San Rafael 94.42 46 *e*P **P 14 51 08.0 +0.4**
comp=Z,245nm,0.9s
SRU San Rafael 94.42 46 ⇑P **P 14 51 08.2 +0.6**
baz=95
125A Gardner Draw, 94.48 54 ⇓P **P 14 51 08.8 +0.8**
baz=95
MVCO Mesa Verde 94.56 49 ⇑P **P 14 51 09.0 +0.6**
baz=95
L14A Malta 94.60 43 ⇑P **P 14 51 09.1 +0.8**
baz=95
U21A Nageezi 94.64 50 ⇓P **P 14 51 10.0 +1.2**
baz=95
I12A Atlanta 94.65 40 ⇑P **P 14 51 09.4 +0.8**
baz=95
Y24A Capitan 94.67 53 ⇓P **P 14 51 09.8 +0.9**
baz=95
M15A Larsen Ranch, 94.71 44 ⇑P **P 14 51 09.6 +0.8**
baz=95
HVU Hansel Valley 94.71 43 *e*P **P 14 51 10.0 +1.1**
HVU pmax pmax
comp=Z,14nm,1.0s
HVU Hansel Valley 94.71 43 *e*P **P 14 51 10.0 +1.1**
comp=Z,14nm,1.0s
428A Kincaid Ranch, 94.79 57 ⇓P **P 14 51 10.1 +0.7**
baz=95
HLID Hailey 94.90 41 *e*P **P 14 51 09.6 -0.1**
comp=Z,14nm,1.3s
HLID Hailey 94.90 41 ⇑P **P 14 51 10.5 +0.8**
baz=95,SNR=12
J13A Cove Ranch, Pi 94.93 41 ⇓P **P 14 51 10.6 +0.9**
baz=95,SNR=13
O17A Robinson Place 94.95 45 ⇓P **P 14 51 11.0 +0.9**
baz=95,SNR=6.0
N16A Rees Ranch, Co 94.95 44 ⇑P **P 14 51 11.2 +1.2**
baz=95
K14A Jones Ranch, D 94.96 42 ⇓P **P 14 51 10.4 +0.4**
baz=95
S20A Disappointment 95.01 48 ⇓P **P 14 51 11.4 +1.0**
baz=95
T21A Navajo Lake 95.05 49 ⇑P **P 14 51 11.7 +1.1**
baz=95
L15A Malad City 95.08 43 ⇑P **P 14 51 10.9 +0.4**
baz=95,SNR=7.9
Q19A Hogan Spring (95.11 47 ⇓P **P 14 51 11.5 +0.8**
baz=95
GAMB Gambell 95.13 3 *e*P **P 14 51 09.1 -0.9**
comp=Z,9.1nm,1.2s
J14A Carey 95.25 42 ⇓P **P 14 51 12.4 +1.1**
baz=96,SNR=16
H12A Diamond D Ranc 95.28 40 ⇓P **P 14 51 11.6 +0.2**
baz=96,SNR=11
I13A Wildhorse Cree 95.29 41 ⇑P **P 14 51 12.0 +0.5**
baz=96
429A Davenport Ranc 95.30 57 ⇑P **P 14 51 11.8 +0.1**
baz=96
N17A Moffit Pass 95.35 45 ⇑P **P 14 51 12.1 +0.2**
baz=96
K15A Arbon 95.42 43 ⇓P **P 14 51 12.3 +0.2**
baz=96
530A J-C Ranch, Com 95.44 58 ⇑P **P 14 51 12.7 +0.4**
baz=96
H13A Challis 95.62 40 ⇓P **P 14 51 13.2 +0.3**
baz=96
L16A Fish Haven 95.64 44 ⇑P **P 14 51 13.3 +0.2**
baz=96
732A Laxson Ranch, 95.67 60 ⇑P **P 14 51 13.7 +0.3**
baz=96
I14A Mackay 95.67 41 ⇑P **P 14 51 14.2 +1.0**
baz=96
Q20A Ridgley Place, 95.72 47 ⇑P **P 14 51 14.2 +0.7**
baz=96
M17A Scullys Gap (B 95.77 44 ⇓P **P 14 51 13.9 +0.2**
baz=96
R21A Cimarron 95.84 48 ⇑P **P 14 51 14.7 +0.5**
baz=96
J15A Blackfoot 95.92 42 ⇓P **P 14 51 15.5 +1.2**
baz=96,SNR=7.8
S22A 4UR Ranch, Cre 95.94 49 ⇑P **P 14 51 15.3 +0.6**
baz=96
G13A Cobalt 95.97 40 ⇓P **P 14 51 15.6 +1.1**
baz=96,SNR=5.7
K16A Soda Springs 96.06 43 ⇓P **P 14 51 15.4 +0.4**
baz=96
W25A X Bar L Ranch, 96.07 52 ⇓P **P 14 51 15.8 +0.6**
baz=96
H14A Leadore 96.15 41 ⇓P **P 14 51 16.1 +0.7**
baz=96,SNR=7.0
F13A Darby 96.36 39 ⇑P **P 14 51 16.0 -0.2**
baz=97
CD2 Chengdu 96.38 302 P **P 14 51 16.7 +0.2**
CD2 sP sP 14 51 35.1 -5.3
CD2 PP **PP 14 55 15.5 +4.2**
CD2 SKS **SKSac 15 01 50.9 +2.9**
CD2 S **ScS 15 02 32.9 +0.5**
CD2 sS sS 15 02 53.3 -8.1
CD2 SS **SS 15 09 11.1 +4.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,100nm,5.2s
K17A Gardner Place, 96.39 43 ⇓P **P 14 51 17.1 +0.5**
baz=97
532A Rocksprings 96.47 59 ⇓P **P 14 51 18.0 +0.9**
baz=97
G14A Jackson 96.49 40 ⇑P **P 14 51 17.9 +0.9**
baz=97
MCMT McKenzie Canyo 96.57 41 *e*P **P 14 51 18.1 +0.8**
comp=Z,2.0nm,1.1s
HHC Hu-ho-hao-te 96.75 314 *e*P **P 14 51 19.3 +1.2**
HHC pP pP 14 51 29.7 -5.6
HHC sP sP 14 51 33.6 -8.4
HHC PP **PP 14 55 15.2 +1.1**
HHC SKS **SKSac 15 01 53.0 +3.4**
HHC S **ScS 15 02 35.5 +0.3**
HHC sS sS 15 02 53.0 -11
HHC SS **SS 15 09 14.8 +3.0**
HHC pmax pmax
comp=Z,35nm,0.9s
HHC pmax pmax

comp=Z,270nm,7.1s
HHC LR LR
comp=N,270nm,16.7s
HHC LR LR
comp=E,340nm,16.3s
HHC LR LR
comp=Z,190nm,16.7s
I16A Newdale 96.75 42 ⇑P **P 14 51 18.3 +0.2**
baz=97
U25A Circle Dot Ran 96.77 51 ⇑P **P 14 51 18.3 -0.1**
baz=97
K18A Toltan Ranch, 96.84 44 ⇓P **P 14 51 19.2 +0.6**
baz=97
N20A Spence Gulch, 96.84 46 ⇓P **P 14 51 19.3 +0.7**
baz=97
J17A Brown Place, J 96.89 43 ⇑P **P 14 51 19.4 +0.6**
baz=97
L19A Farson 96.93 44 ⇓P **P 14 51 19.5 +0.5**
baz=97
G15A Dillon 96.98 41 ⇑P **P 14 51 19.6 +0.5**
baz=97,SNR=5.8
C12B Naegeli Ranch, 96.98 37 ⇑P **P 14 51 19.0 +0.1**
baz=97
SEY Seymchan 96.99 347 ⇓*i* P **P 14 51 16.5 -1.9**
IMW Indian Meadow 97.08 42 *e*P Pdif 14 51 20.9 +1.1
comp=Z,48nm,2.5s
LOHW Long Hollow 97.10 43 *e*P Pdif 14 51 20.0 +0.1
TNA Tin City 97.12 4 *e*P **P 14 51 18.4 -0.5**
comp=Z,9.5nm,1.2s
J18A Kendall Valley 97.20 43 ⇓P **P 14 51 20.4 +0.2**
baz=97
BW06 Boulder Array 97.20 44 *e*P Pdif 14 51 21.0 +0.6
comp=Z,53nm,2.7s
BW06 Boulder Array 97.20 44 ⇑P **P 14 51 20.3 0.0**
baz=97
PDAR Pinedale Array 97.20 44 P **P 14 51 20.4 +0.1**
PDAR PKKP **PKKPbc 15 07 59.4 -0.9**
PDAR Pinedale Array 97.20 44 P **P 14 51 20.4 +0.1**
comp=Z,1.7nm,0.9s,baz=206,slow=3.7,SNR=11
PDAR PKKP **PKKPbc 15 07 59.4 -0.9**
comp=Z,0.8nm,0.6s,baz=87,slow=4.1,SNR=7.5
U26A Atchley Ranch, 97.21 52 ⇑P Pdif 14 51 20.9 +0.4
baz=97
E14A Clinton 97.21 39 ⇓P Pdif 14 51 20.7 +0.5
baz=97
I17A Pilgrim Ck. 97.30 42 ⇓P Pdif 14 51 21.3 +0.6
baz=98
H16A Russell Place, 97.39 42 ⇑P Pdif 14 51 22.0 +0.9
baz=98
G16A Moss Hill, Enn 97.40 41 ⇑P Pdif 14 51 21.6 +0.6
baz=98
L20A Wamsutter 97.48 45 ⇑P Pdif 14 51 22.1 +0.5
baz=98
I18A Diamond G Ranc 97.61 43 ⇓P **P 14 51 21.9 -0.2**
baz=98
E15A Deer Lodge 97.68 40 ⇑P Pdif 14 51 22.8 +0.6
baz=98
T26A Comanche Natio 97.74 51 ⇑P Pdif 14 51 24.1 +1.3
baz=98
BOZ Bozeman (W) 97.75 41 *e*P Pdif 14 51 24.6 +2.0
BOZ Bozeman (W) 97.75 41 *e*P Pdif 14 51 24.6 +2.0
BOZ Bozeman (W) 97.75 41 ⇓P Pdif 14 51 23.9 +1.3
baz=98
J19A Crowheart 97.80 44 ⇓P Pdif 14 51 23.4 +0.5
baz=98
M21A Separation Pea 97.84 46 ⇑P **P 14 51 23.2 0.0**
baz=98
K20A Yellowstone Ra 97.86 44 ⇓P Pdif 14 51 23.4 +0.2
baz=98
LPAZ La Paz 98.02 115 P Pdif 14 51 26.5 +1.4
LPAZ La Paz 98.02 115 P Pdif 14 51 26.5 +1.4
comp=Z,1.2nm,0.6s,baz=208,slow=5.2,SNR=6.6
L21A Rawlins 98.05 45 ⇑P Pdif 14 51 24.9 +0.9
baz=98
S26A Kim 98.07 51 ⇓P Pdif 14 51 24.4 +0.2
baz=98
X30A Coker Ranch, T 98.10 55 ⇑Pdiff **P 14 51 24.1 -0.2**
baz=98
D15A Lincoln 98.12 39 ⇑Pdiff Pdif 14 51 24.4 +0.2
baz=98
E16A East Helena 98.27 40 ⇓Pdiff Pdif 14 51 25.5 +0.7
baz=98
I19A Meeteetse 98.29 43 ⇓Pdiff Pdif 14 51 25.7 +0.6
baz=98
N23A Red Feather La 98.31 47 ⇓Pdiff **P 14 51 25.4 0.0**
baz=98
J20A Shoshoni 98.42 44 ⇑Pdiff Pdif 14 51 25.9 +0.3
baz=99
C15A Salmond Ranch, 98.53 38 ⇓Pdiff Pdif 14 51 26.2 +0.2
baz=99
B14A Marquette Ranc 98.54 38 ⇓Pdiff Pdif 14 51 26.8 +0.8
baz=99
D16A Dana Ranch, Ca 98.64 40 ⇑Pdiff Pdif 14 51 26.8 +0.3
baz=99
G18A Lazy EL Ranch, 98.72 42 ⇑Pdiff Pdif 14 51 27.1 +0.2
baz=99
Q26A Hugo 98.76 50 ⇑Pdiff Pdif 14 51 27.9 +0.7
baz=99
J21A Lysite 98.80 44 ⇓Pdiff Pdif 14 51 27.9 +0.6
baz=99
A14A Double T Ranch 98.84 37 ⇓Pdiff Pdif 14 51 28.2 +0.9
baz=99
C16A Fuhringer Ranc 99.00 39 ⇓Pdiff **Pdif 14 51 28.9 +0.8**
baz=99
LZH Lanzhou 99.10 307 *e*P **Pdif 14 51 30.5 +1.7**
LZH pP **pP 14 51 41.1 -5.0**
LZH sP sP 14 51 45.0 -7.7
LZH pmax pmax
comp=Z,19nm,1.1s
ILAR Eielson Array 99.11 13 P **Pdif 14 51 26.9 -1.0**
ILAR PKiKP **PKiKP 14 55 57.8 0.0**
ILAR PKKPbc **PKKPbc 15 07 50.9 -4.6**
ILAR Eielson Array 99.11 13 P **Pdif 14 51 26.9 -1.0**
comp=Z,2.2nm,1.0s,baz=219,slow=5.3,SNR=14
ILAR PKiKP **PKiKP 14 55 57.8 0.0**
comp=Z,0.8nm,0.7s,baz=286,slow=2.7,SNR=11
ILAR PKKPbc **PKKPbc 15 07 50.9 -4.6**
comp=Z,0.3nm,0.6s,baz=329,slow=3.9,SNR=6.7
I21A Big Trails, Te 99.16 44 ⇑Pdiff **Pdif 14 51 28.9 0.0**
baz=99
D17A Six Diamond Ra 99.18 40 ⇑Pdiff **Pdif 14 51 28.6 -0.4**
baz=99
CPUP Villa Florida 99.57 129 P **Pdif 14 51 34.0 +3.0**
CPUP Villa Florida 99.57 129 P **Pdif 14 51 34.0 +3.0**
comp=Z,0.3nm,0.3s,baz=225,slow=5.7,SNR=3.3
I22A 9 Mile Ranch, 99.68 44 ⇑Pdiff **Pdif 14 51 31.1 -0.1**
baz=100
A19A Klindworth Far 101.28 39 ⇓Pdiff **Pdif 14 51 39.1 +1.0**
baz=102
H24A Dirks Ranch, A 101.31 44 ⇑Pdiff **Pdif 14 51 38.9 +0.6**
baz=102
SONM Songino Array 103.73 318 Pdif **Pdif 14 51 52.3 +3.2**
SONM Songino Array 103.73 318 Pdiff **Pdif 14 51 52.3 +3.2**
comp=Z,0.2nm,0.6s,baz=165,slow=6.0,SNR=3.5
SONM PP PP 14 56 00.1 -6.8
comp=Z,0.4nm,0.8s,baz=90,slow=3.6,SNR=3.7
SONM PKiKP **PKiKP 14 56 08.6 +1.7**
comp=Z,0.3nm,0.5s,baz=103,slow=2.9,SNR=4.1
SONM PKKPbc **PKKPbc 15 07 42.6 +1.2**
comp=Z,0.6nm,0.5s,baz=277,slow=4.5,SNR=6.3
YKA Yellowknife Ar 106.62 26 Pdif **Pdif 14 52 01.2 -0.2**
YKA PKiKP **PKiKP 14 56 11.2 -0.3**
YKA PKKPbc **PKKPbc 15 07 31.7 -1.1**
YKA PKKPab **PKKPdf 15 07 46.8 +1.4**
YKA Yellowknife Ar 106.62 26 Pdiff **Pdif 14 52 01.2 -0.2**
comp=Z,0.1nm,0.3s,baz=246,slow=3.7,SNR=5.6
YKA PKiKP **PKiKP 14 56 11.2 -0.3**
comp=Z,0.8nm,0.6s,baz=255,slow=1.6,SNR=17
YKA PKKPbc **PKKPbc 15 07 31.7 -1.1**
comp=Z,1.4nm,0.7s,baz=41,slow=3.3,SNR=21
YKA PKKPab **PKKPdf 15 07 46.8 +1.4**
comp=Z,1.2nm,0.8s,baz=49,slow=4.4,SNR=8.7
ULM Lac du Bonnet 109.15 42 PKiKP **PKiKP 14 56 15.6 -1.0**
ULM Lac du Bonnet 109.15 42 PKiKP **PKiKP 14 56 15.6 -1.0**
comp=Z,0.8nm,0.3s,baz=180,slow=1.0,SNR=3.2
TIXI Tiksi 109.25 345 *e*PKPdf **PKiKP 14 56 15.5 -0.7**
BOSA Boshof 116.08 203 *e*PKPdf **PKPdf 14 56 31.8 +0.9**
BOSA PKP **PKPdf 14 56 32.0 +1.1**
BOSA Boshof 116.08 203 PKP **PKPdf 14 56 32.0 +1.1**
comp=Z,4.7nm,0.6s,baz=193,slow=2.0,SNR=17
MK31 Makanchi Array 118.21 310 *e*PKiKP **PKPdf 14 56 32.7 -1.5**
MK31 Makanchi Array 118.21 310 *e*PKPdf **PKPdf 14 56 32.7 -1.5**
MKAR Makanchi Array 118.21 310 PKiKP **PKPdf 14 56 33.2 -1.0**
MKAR Makanchi Array 118.21 310 PKP **PKPdf 14 56 33.1 -1.0**
MKAR PKKPbc **PKKPbc 15 06 52.6 -0.9**
MKAR Makanchi Array 118.21 310 PKP **PKPdf 14 56 33.1 -1.0**
comp=Z,2.9nm,0.5s,baz=216,slow=1.5,SNR=61
MKAR PKKPbc **PKKPbc 15 06 52.6 -0.9**
comp=Z,0.3nm,0.5s,baz=267,slow=2.9,SNR=4.2
RES Resolute Bay 118.43 17 *e*PKPdf **PKPdf 14 56 32.3 -1.4**
ZAA0 Zalesovo Array 118.62 318 *e*PKPdf **PKPdf 14 56 33.3 -1.4**
ZALV Zalesovo Beam 118.62 318 PKIKP **PKPdf 14 56 33.2 -1.4**
ZALV Zalesovo Beam 118.62 318 PKP **PKPdf 14 56 33.2 -1.4**
ZALV Zalesovo Beam 118.62 318 PKP **PKPdf 14 56 33.2 -1.4**
comp=Z,1.6nm,0.4s,baz=164,slow=1.4,SNR=10
LBTB Lobatse 119.26 205 *e*PKPdf **PKPdf 14 56 36.4 -0.7**
NVS Novosibirsk 119.74 319 *e*PKIKP **PKPdf 14 56 34.4 -2.3**
KSH Kashi 120.49 300 PKP **PKPdf 14 56 39.0 +0.1**
KSH *e*PP **PP 14 58 11.7 +4.8**
KSH PKS **PKSdf 15 00 14.7 -0.9**
KSH SKS **SKSdf 15 03 46.2 +0.5**
KSH SKKS **SKKSac 15 04 59.9 -0.9**
KSH SS **SS 15 14 37.3 +5.3**
KSH AMB AMB
comp=Z,230nm,5.3s
KSH LR LR
comp=Z,260nm,6.1s
KURK Kurchatov 121.56 313*c i*PKIKP **PKPdf 14 56 38.8 -1.6**
KURK pmax pmax
comp=Z,14nm,1.2s
KURK Kurchatov 121.56 313 *e*PKPdf **PKPdf 14 56 38.8 -1.6**
KURK PKP **PKiKP 14 56 39.5 -1.0**
KURBB Kurchatov Arra 121.59 313 PKP **PKPdf 14 56 39.5 -0.9**
comp=Z,7.5nm,0.5s,baz=114,slow=2.1,SNR=82
TKM2 Tokmak 2 121.72 304 *e*PKIKP **PKPdf 14 56 39.7 -1.6**
TKM2 Tokmak 2 121.72 304 *e*PKPdf **PKPdf 14 56 39.7 -1.6**
AAK Ala-Archa 122.42 303*c i*PKIKP **PKPdf 14 56 41.5 -1.1**
AAK pmax pmax
comp=Z,18nm,1.0s
AAK Ala-Archa 122.42 303 *e*PKPdf **PKPdf 14 56 41.6 -1.0**
AAK PKP **PKPdf 14 56 41.9 -0.7**
AAK PKKPbc **PKKPbc 15 06 40.0 +2.1**
AAK Ala-Archa 122.42 303 PKP **PKPdf 14 56 41.9 -0.7**
comp=Z,5.1nm,0.6s,baz=133,slow=2.6,SNR=14
AAK PKKPbc **PKKPbc 15 06 40.0 +2.1**
comp=Z,1.7nm,1.0s,baz=226,slow=9.9,SNR=6.8
EKS2 Erkin-Say 122.94 303 *e*PKIKP **PKPdf 14 56 43.2 -0.3**
EKS2 Erkin-Say 122.94 303 *e*PKPdf **PKPdf 14 56 43.2 -0.3**
KBL Kabul 124.32 293 *e*PKIKP **PKPdf 14 56 44.7 -1.8**
KBL Kabul 124.32 293 *e*PKPdf **PKPdf 14 56 44.7 -1.8**
KKAR Karatay Array 125.38 303 *e*PKIKP **PKPdf 14 56 47.4 -0.7**
KKAR Karatay Array 125.38 303 *e*PKPdf **PKPdf 14 56 47.4 -0.7**
LSZ Lusaka 126.91 213 *e*PKPdf **PKPdf 14 56 53.2 +1.2**
BVAR Borovoye Array 126.95 315 PKIKP **PKPdf 14 56 49.8 -0.9**
BVAR Borovoye Array 126.95 315 PKP **PKPdf 14 56 49.8 -0.9**
BVAR Borovoye Array 126.95 315 PKP **PKPdf 14 56 49.8 -0.9**
comp=Z,7.0nm,0.5s,baz=128,slow=2.4,SNR=23
BRVK Borovoye 127.01 315*c i*PKIKP **PKPdf 14 56 50.1 -0.7**
BRVK pmax pmax
comp=Z,12nm,1.2s
BRVK Borovoye 127.01 315 *e*PKPdf **PKPdf 14 56 50.4 -0.4**
TSUM Tsumeb 127.27 199 *e*PKPdf **PKPdf 14 56 53.2 +0.6**
SCHQ Schefferville 127.32 43 PKP **PKPdf 14 56 50.8 -0.6**
SCHQ Schefferville 127.32 43 PKP **PKPdf 14 56 50.8 -0.6**
comp=Z,13nm,0.9s,baz=306,slow=1.8,SNR=23
KBS Kingsbay 132.30 357 *e*P **PKPdf 14 57 00.8 +0.7**
KMBO Kilima Mbogo 133.10 233 PKP **PKPdf 14 57 06.2 +2.2**
KMBO Kilima Mbogo 133.10 233 PKP **PKPdf 14 57 06.2 +2.2**
comp=Z,2.8nm,0.9s,baz=93,slow=2.1,SNR=5.2
SFJD Kangerlussuaq 133.18 25 *i*P **PKPdf 14 57 02.4 +0.4**
comp=Z,2.4nm,0.5s
ABKAR Akbulak array 133.35 310 *e*PKPdf **PKPdf 14 57 02.9 0.0**
ARU Arti 133.72 320 *i*PKIKP **PKPdf 14 57 03.0 -0.4**
ARU 14 59 28.9
ARU Arti 133.72 320 *e*PKPdf **PKPdf 14 57 01.6 -1.8**
SUMG Summit 133.88 16 *i*P **PKPdf 14 57 05.3 +1.5**
comp=Z,10.0nm,0.8s
SCO Scoresbysund 138.87 12 *i*P **PKPdf 14 57 14.7 +2.1**
comp=Z,6.7nm,1.0s
KEV Kevo 139.14 347 *e*PKHKP PKPpre 14 57 05.9
KEV Kevo 139.14 347 *e*pkp PKPpre 14 57 05.9
APA Apatity 139.37 342⇓*e*PKHKP PKPpre 14 57 06.0
ARCES ARCESS Array B 139.61 347 PKhKP PKPpre 14 57 04.5
comp=Z,3.1nm,0.5s,baz=66,slow=2.2,SNR=31
KTK1 Kautokeino 140.47 348 *e* PKPpre 14 56 59.5
TRO Tromso 140.61 351 *e*P **PKPdf 14 57 10.8 -4.9**
KLMR Klimovskoe 141.57 331 *e*PKIKP **PKPdf 14 57 14.1 -3.6**
KLMR pmax pmax
comp=Z,22nm,1.4s
JOF Joensuu 143.32 338 *e*PKHKP PKPab 14 57 16.9 +0.1
JOF Joensuu 143.32 338 *e*pkp PKPab 14 57 16.9 +0.1
DGRG David-gareji 143.75 298 P PKPbc 14 57 19.9 -0.2
TBLG Delisi 144.22 299 P **PKPdf 14 57 22.7 -0.4**
KONS Konsvik 144.31 352 *e*P **PKPab 14 57 20.1 -0.4**
MOR8 Moi Rana 144.46 351 *e*P **PKPab 14 57 20.1 -1.1**
KZR Kazreti 144.47 298 P **PKPdf 14 57 23.2 -0.4**
STOK Stokkvaagen 144.49 352 *e*P **PKPab 14 57 20.8 -0.4**
GOR Gori 144.68 299 P PKPbc 14 57 23.1 +0.2
VRHR Novokhopersk 144.69 315 *e*PKIKP **PKPdf 14 57 23.8 +0.3**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,6.0nm,0.8s
VRHR pmax pmax
comp=Z,30nm,0.8s
CLDR Caldiran 144.88 294 *e*PN **PKPab 14 57 22.4 -1.4**
HKR Hakkari 144.97 292 *e*PN PKPbc 14 57 24.1 -0.1
HAKT HAKKARI 144.99 292 *i*P **PKPab 14 57 24.6 +0.3**
MOS Moscow 145.04 324 *e*PKHKP PKPpre 14 57 21.2
CUKT Cukurca 145.06 291 *e*PN **PKPbc 14 57 23.8 -0.6**
ONI Oni 145.12 300 P **PKPbc 14 57 24.0 -0.3**
AKH Akhalkalaki 145.17 298 P **PKPdf 14 57 25.0 +0.1**
KBZ Khabaz 145.42 302 PKIKP **PKPab 14 57 25.2 -0.1**
KBZ Khabaz 145.42 302 PKPbc **PKPab 14 57 25.2 -0.1**
KBZ Khabaz 145.42 302 PKPbc **PKPab 14 57 25.2 -0.1**
comp=Z,37nm,1.1s,baz=104,slow=2.5,SNR=29
KAF Kangasniemi 145.48 340 *e*PKHKP PKPpre 14 57 21.8
KAF Kangasniemi 145.48 340 *e*pkp PKPpre 14 57 21.8
KARS Kars 145.51 297 *e*PN **PKPdf 14 57 25.5 0.0**
KIV Kislovodsk 145.54 303⇓*i*PKP2 **PKPdf 14 57 24.8 -0.6**
KIV pmax pmax
comp=Z,30nm,1.0s
KIV Kislovodsk 145.54 303 *e*PKPdf **PKPbc 14 57 25.7 0.0**
AGRB Hanur-Agry 145.60 295 *e*PN **PKPdf 14 57 25.1 -0.6**
TUTA Tutak 145.74 295 *i*P **PKPab 14 57 27.0 0.0**
PUL Pulkovo 145.86 334*c i*PKP2 **PKPdf 14 57 25.3 +0.1**
PUL pmax pmax
comp=Z,240nm,0.6s
OBN Obninsk 145.87 324α *i*PKIKP **PKPdf 14 57 25.1 -0.3**
OBN *e* 14 57 33.9
OBN pmax pmax
comp=Z,93nm,0.6s
OBN MLR MLR
comp=Z,200nm,21.0s
OBN Obninsk 145.87 324 *e*PKPdf **PKPdf 14 57 25.1 -0.3**
FIA1 FINESS Array S 146.07 339 *e*PKPdf **PKPdf 14 57 25.0 -0.5**
FIA1 *e*PKPbc **PKPbc 14 57 26.7 +0.2**
FINES FINESS Array B 146.07 339 PKPbc **PKPdf 14 57 25.3 -0.3**
FINES FINESS Array B 146.07 339 PKPbc **PKPdf 14 57 25.3 -0.3**
comp=Z,61nm,0.5s,baz=49,slow=4.0,SNR=399
VSR Storozhevoye 146.11 317 *e*PKIKP **PKPdf 14 57 25.9 0.0**
VSR pmax pmax
comp=N,6.0nm,0.8s
VSR pmax pmax
comp=E,20nm,0.8s
VSR pmax pmax
comp=Z,50nm,0.8s
VORD Divnogorie 146.12 316 *e*PKIKP **PKPdf 14 57 25.7 -0.3**
VORD pmax pmax
comp=N,6.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.8s
VORD pmax pmax
comp=Z,30nm,0.8s
NSS Namsos 146.35 352 *e*P **PKPdf 14 57 25.7 -0.2**
BCA Borcka 146.57 299 *e*PN **PKPbc 14 57 28.6 -0.2**
EZM Erzurum 146.85 296 *e*PN **PKPbc 14 57 30.3 +0.4**
KOPT Kop Dagi 147.51 296 *i*P **PKPbc 14 57 32.5 +0.8**
BAYT Ayd¨–ntepe-Bay 147.76 297 *e*PN **PKPbc 14 57 32.4 +0.1**
ERZN Erzincan 148.12 295 *e*PN **PKPdf 14 57 30.5 +0.6**
GUMT Gumushane 148.26 297 *e*PN **PKPbc 14 57 33.5 0.0**
KELT Kelkit 148.45 296 *i*P **PKPbc 14 57 33.9 -0.2**
SVRC Sivrice-ELAZID 148.49 293 *e*PN **PKPbc 14 57 32.8 -1.4**
MOL Molde 148.71 355 *e*P **PKPbc 14 57 33.6 -0.1**
ILIC ilic-Erzincan 149.02 295 *e*PN **PKPbc 14 57 36.1 +0.6**
ANN Anapa 149.11 306 *i*PKP2 **PKPbc 14 57 36.4 +1.1**
ANN pmax pmax
comp=Z,61nm,1.0s
MALT Malatya 149.18 293 *e*PN **PKPdf 14 57 32.6 +0.9**
MALT Malatya 149.18 293 *e*PKIKP **PKPdf 14 57 32.2 +0.6**
MALT *e*PKPbc **PKPbc 14 57 35.6 -0.3**
MALT Malatya 149.18 293⇑*i*P **PKPbc 14 57 35.8 -0.1**
AKCD Akcadag 149.57 293 *i*P **PKPbc 14 57 37.1 +0.1**
NB2 NORSAR Subarra 149.81 351 PKP **PKPbc 14 57 35.6 -1.0**
comp=Z,15nm,0.6s,baz=17,slow=2.6
NOA NORSAR Array B 149.81 351 PKPbc **PKPbc 14 57 35.9 -0.7**
NOA NORSAR Array B 149.81 351 PKPbc **PKPbc 14 57 35.9 -0.7**
comp=Z,18nm,0.6s,baz=15,slow=4.2,SNR=48
RSDY Resadiye-TOKAT 149.90 297 *e*PN **PKPab 14 57 41.1 -2.2**
DARE Darende-Malaty 149.91 293 *e*PN **PKPbc 14 57 37.9 +0.2**
NAO01 NORSAR Array S 150.04 351 *e*PKPdf **PKPdf 14 57 31.2 -0.9**
NAO01 *e*PKPbc **PKPbc 14 57 36.8 -0.4**
NAO01 *e*PKPab **PKPab 14 57 42.0 -1.1**
IZAR Zarasai 150.22 332 *e*P **PKPbc 14 57 36.6 -1.1**
IZAR AMB AMB 14 57 42.3
comp=Z,10nm,0.8s
ISAL Salakas 150.39 331 *e*P **PKPbc 14 57 36.9 -1.2**
ISAL AMB AMB 14 57 42.6
comp=Z,12nm,1.7s
AYKD Aykdinkavak 150.48 291 *i*P **PKPbc 14 57 39.1 +0.1**
IIGN Ignalina 150.51 331 *e*P **PKPbc 14 57 37.4 -1.0**
IIGN AMB AMB 14 57 43.5
comp=Z,15nm,0.6s
KVT Kavak 150.79 299 *e*PN **PKPbc 14 57 39.0 -0.6**
RUND Rundenannen 151.00 356 *e*P **PKPbc 14 57 37.4 -2.1**
RUND AMB AMB 14 57 39.7
comp=Z,121nm,1.4s
BNN Bunyan 151.17 294 *e*PN **PKPbc 14 57 40.3 -0.4**
KOZT Kozan 151.26 291 *e*PN **PKPbc 14 57 42.0 +1.2**
SIM Simferopol' 151.35 307 PKIKP **PKPbc 14 57 41.1 +0.4**
SIM pmax pmax
comp=Z,29nm,0.9s
KONO Kongsberg 151.37 351 *e*P **PKPbc 14 57 39.7 -0.6**
KONO Kongsberg 151.37 351 *e*PKIKP **PKPdf 14 57 34.5 +0.3**
KONO *e* 14 57 39.7
KONO Kongsberg 151.37 351 *e*PKPdf **PKPdf 14 57 34.5 +0.3**
KONO *e*PKPbc **PKPbc 14 57 39.7 -0.6**
ODD1 Odda 151.41 355 *e*P **PKPbc 14 57 39.0 -1.5**
ODD1 AMB AMB 14 57 41.7
comp=Z,76nm,1.3s
BLS5 Blasjo 151.91 355 *e*P **PKPbc 14 57 41.7 +0.1**
BLS5 AMB AMB 14 57 43.9
comp=Z,14nm,0.7s
AVNT Avonos 151.95 294 *i*P **PKPbc 14 57 42.3 -0.3**
AKASG Malin Array Be 151.96 321 PKIKP **PKPbc 14 57 41.0 -0.9**
AKASG Malin Array Be 151.96 321 PKPbc **PKPbc 14 57 41.0 -0.9**
AKASG Malin Array Be 151.96 321 PKPbc **PKPbc 14 57 41.0 -0.9**
comp=Z,11nm,0.5s,baz=44,slow=2.9,SNR=24
AK01 Malin Array Si 151.97 321 *e*PKPbc **PKPbc 14 57 41.2 -0.7**
KIEV Kiev 151.97 321 *e*PKIKP **PKPbc 14 57 41.2 -0.8**
KIEV Kiev 151.97 321 *e*PKPbc **PKPbc 14 57 41.1 -0.8**
CORM Corum 151.97 297 *e*PN **PKPbc 14 57 42.6 +0.1**
AK02 Malin Array Si 151.99 321 *e*PKPbc **PKPbc 14 57 41.2 -0.8**
GULE Gulek 152.10 291 *i*P **PKPbc 14 57 43.2 +0.3**
NIG Nigde 152.19 293 *e*PN **PKPbc 14 57 44.5 +1.3**
TOS Tosya 152.31 299 *e*PN **PKPbc 14 57 41.8 -1.4**
MERS Mersin 152.31 290 *e*PN **PKPbc 14 57 43.0 -0.3**
SUW Suwalki 152.70 332 *e*PKIKP **PKPdf 14 57 37.5 +1.1**
SUW *e* 14 57 43.1
SUW Suwalki 152.70 332 *e*PKPdf **PKPdf 14 57 37.5 +1.1**
SUW *e*PKPbc **PKPbc 14 57 43.1 -0.4**
SUW Suwalki 152.70 332 *e*PKP **PKPbc 14 57 43.0 -0.4**
KAMT Kaman 152.78 296 *e*PN **PKPbc 14 57 43.8 -0.5**
BR131 Keskin Array S 152.79 296 *e*PKPbc **PKPbc 14 57 43.6 -0.7**
BR131 *e*PKPab **PKPab 14 57 55.2 -0.3**
BRTR Keskin Array B 152.79 296 PKP **PKPdf 14 57 36.6 -0.5**
BRTR PKPbc **PKPbc 14 57 43.4 -1.0**
BRTR PKPab **PKPab 14 57 54.9 -0.6**
BRTR Keskin Array B 152.79 296 PKP **PKPdf 14 57 36.6 -0.5**
comp=Z,0.7nm,0.8s,baz=83,slow=3.9,SNR=5.4
BRTR PKPbc **PKPbc 14 57 43.4 -1.0**
comp=Z,7.0nm,0.5s,baz=140,slow=4.6,SNR=20
BRTR PKPab **PKPab 14 57 54.9 -0.6**
comp=Z,15nm,0.9s,baz=125,slow=2.7,SNR=14
SNART Snartemo 152.92 353 *e*P **PKPbc 14 57 44.0 +0.2**
SNART AMB AMB 14 57 44.7
comp=Z,19nm,0.7s
SNART *e* 14 57 48.3
LFK Lefkose 153.12 287 *e*PN **PKPbc 14 57 43.5 -1.6**
SAFT Safranbolu 153.26 300 *e*PN **PKPbc 14 57 44.6 -0.5**
CSS Prodhromos 153.28 286 *e*PN **PKPbc 14 57 45.0 -0.5**
LADK Ladik-KONYA 153.95 293 *e*PN **PKPbc 14 57 45.3 -1.6**
LIC Lamto 154.08 165 *e*PKIKP **PKPdf 14 57 39.8 +0.2**
LIC Lamto 154.08 165 *e*PKPdf **PKPdf 14 57 39.8 +0.2**
KIZT Kizilcal 154.25 295 *e*P **PKPbc 14 57 47.0 -0.5**
DBIC Dimbokro 154.55 165 *e*PKPdf **PKPdf 14 57 41.0 +0.8**
BSD Bornholm Skovb 154.59 342 *i*P **PKPbc 14 57 51.1 +3.6**
comp=Z,13nm,0.7s
COP Copenhagen 154.67 346 *i*P **PKPbc 14 57 51.7 +4.1**
comp=Z,13nm,0.7s
TLCR 154.80 311⇓PKIKP **PKPbc 14 57 49.5 +1.2**
TLCR 154.80 311⇓*i*P **PKPbc 14 57 49.5 +1.2**
LLD Lille Linde 155.04 346 *i*P PKPab 14 57 52.9 -11
comp=Z,25nm,0.7s
CFR Carcaliu 155.24 311⇑PKIKP PKPdf 14 57 48.5 +8.3
CFR Carcaliu 155.24 311⇑*i*P PKPdf 14 57 48.5 +8.3
TIRR Tirgusor 155.34 309⇓PKIKP PKPdf 14 57 52.8 +12
TIRR Tirgusor 155.34 309⇓*i*P PKPdf 14 57 52.8 +12
TESR 155.57 315⇑*i*P PKPdf 14 57 53.2 +13
VRI Vrincioaia 155.83 313⇑PKIKP PKPdf 14 57 51.6 +11
VRI Vrincioaia 155.83 313⇑*i*P PKPdf 14 57 51.6 +11
BURAR Bucovina Array 155.84 318⇓*i*P PKPdf 14 57 51.5 +10
KWP Kalwaria Pacla 155.96 325⇑PKIKP PKPdf 14 57 50.1 +9.0
KWP Kalwaria Pacla 155.96 325⇑P PKPdf 14 57 50.1 +9.0
KWP Kalwaria Pacla 155.96 325 *e*PKPdf PKPdf 14 57 50.5 +9.4
KWP *e*PKPbc PKPab 14 57 58.4 -10
KWP *e*PKPab PKPab 14 58 07.2 -1.3
MLR Muntele Rosu 156.49 313⇑*i*P **PKPdf 14 57 42.9 +0.8**
KOLS Kolonicke sedl 156.63 324 *e*PKIKP **PKPdf 14 57 46.8 +4.8**
KOLS Kolonicke sedl 156.63 324 *e*PKP **PKPdf 14 57 46.8 +4.8**
CRVS Cervenica-Dubn 157.05 325 *e*PKP2 **PKPab 14 58 12.1 -1.1**
CRVS Cervenica-Dubn 157.05 325 *e*PKP **PKPab 14 58 12.1 -1.1**
VOIR 157.07 314⇓PKIKP PKPdf 14 57 50.6 +7.8
VOIR 157.07 314⇓*i*P PKPdf 14 57 50.6 +7.8
ARR Arges 157.36 314⇑*i*P **PKPdf 14 57 45.2 +2.1**
DRGR 157.72 319⇓PKIKP PKPdf 14 57 48.9 +5.4
DRGR 157.72 319⇓*i*P PKPdf 14 57 48.8 +5.3
KSP Ksiaz 157.83 335 *e*PKP PKPdf 14 57 53.6 +10
CLL Collm 158.51 340 *e*PKIKP **PKPdf 14 57 45.0 +0.8**
CLL Collm 158.51 340 *e*PKPdf **PKPdf 14 57 45.0 +0.8**
CLL *e*PKPdiff PKPab 14 58 00.0 -19
CLL *e* 14 58 18.0
CLL *i*PKPab PKPab 14 58 21.6 +2.3
comp=Z,15nm,0.6s
CLL LmH 15 51 00.0
comp=Z,200nm,20.5s
VYHS Vyhne 158.59 327 *e*PKP2 **PKPab 14 58 18.9 -0.9**
VYHS Vyhne 158.59 327 *e*PKP **PKPab 14 58 18.9 -0.9**
BRG Berggiesshubel 158.60 338 *e*PKP **PKPdf 14 57 43.8 -0.6**
comp=Z,17nm,1.6s
BRG *e* 14 58 18.9
BRG Berggiesshubel 158.60 338 *e*PKIKP **PKPdf 14 57 43.8 -0.6**
BRG *e* 14 58 18.9
BRG pmax pmax
comp=Z,17nm,1.6s
VTS Vitosha 159.56 309⇓PKIKP PKPdf 14 57 51.4 +5.4
VTS Vitosha 159.56 309⇓*i*P PKPdf 14 57 51.4 +5.4
KHC Kasperske Hory 160.22 336 *e*PKIKP **PKPdf 14 57 49.0 +2.6**
KHC *e* 14 58 25.5
KHC Kasperske Hory 160.22 336 *e*PKPdf **PKPdf 14 57 46.2 -0.1**
KHC Kasperske Hory 160.22 336 *e*PKPDF **PKPdf 14 57 49.0 +2.6**
KHC *e*PKPAB **PKPab 14 58 25.5 -1.4**
PKSM Moragy 160.27 323⇑PKIKP **PKPdf 14 57 45.2 -1.2**
PKSM Moragy 160.27 323⇑*i*P **PKPdf 14 57 45.2 -1.2**
GERES GERESS Array B 160.42 336 PKP **PKPdf 14 57 45.6 -1.0**
GERES PKPab **PKPab 14 58 26.4 -1.4**
GERES GERESS Array B 160.42 336 PKP **PKPdf 14 57 45.6 -1.0**
comp=Z,1.1nm,0.9s,baz=50,slow=2.1,SNR=6.0
GERES PKPab **PKPab 14 58 26.4 -1.4**
comp=Z,1.5nm,0.7s,baz=36,slow=5.0,SNR=5.0
GIVF Givet 161.29 353 *e*PKIKP **PKPdf 14 57 47.2 -0.2**
GIVF Givet 161.29 353 *e*PKIKP **PKPdf 14 57 47.2 -0.2**
GIVF Givet 161.29 353 *e*PKPdf **PKPdf 14 57 47.2 -0.2**
BAIF Baives 161.38 355 *e*PKIKP **PKPdf 14 57 47.3 -0.2**
comp=Z,24nm,1.3s
BAIF Baives 161.38 355 *e*PKIKP **PKPdf 14 57 47.3 -0.2**
BAIF Baives 161.38 355 *e*PKPdf **PKPdf 14 57 47.3 -0.2**
TORD Torodi Ar. Bea 161.70 180 PKP **PKPdf 14 57 49.4 +0.5**
TORD PKPab **PKPab 14 58 35.6 +1.5**
TORD PP **PP 15 02 12.8 -3.6**

TORD	Torodi Ar. Bea	161.70	180	PKP	PKPdf	14 57 49.4	+0.5
	comp=Z,6.9nm,1.1s,baz=288,slow=0.4,SNR=17						
TORD				PKPab	PKPab	14 58 35.6	+1.5
	comp=Z,20nm,0.9s,baz=175,slow=3.1,SNR=21						
TORD				PP	PP	15 02 12.8	-3.6
	comp=Z,1.4nm,0.9s,baz=160,slow=5.0,SNR=3.5						
GOLS	Golise	161.90	327	ePKPdf	PKPdf	14 57 47.5	-0.7
LJU	Ljubljana	162.37	329	ePKPdf	PKPdf	14 57 47.8	-0.9
BOJS	Bojanci	162.45	327	ePKPdf	PKPdf	14 57 48.2	-0.5
PAGF	Fort de Pagny	162.70	351	ePKIKP	PKPdf	14 57 48.8	-0.1
	comp=Z,4.3nm,0.8s						
PAGF	Fort de Pagny	162.70	351	ePKPdf	PKPdf	14 57 48.8	-0.1
FLN	La Foliniere	162.72	5	ePKIKP	PKPdf	14 57 48.7	-0.2
FLN	La Foliniere	162.72	5	ePKIKP	PKPdf	14 57 48.7	-0.2
FLN	La Foliniere	162.72	5	ePKPdf	PKPdf	14 57 48.7	-0.2
ROSF	Rostrenen	162.81	11	ePKIKP	PKPdf	14 57 49.6	+0.6
ROSF	Rostrenen	162.81	11	ePKIKP	PKPdf	14 57 49.6	+0.6
ROSF	Rostrenen	162.81	11	ePKPdf	PKPdf	14 57 49.6	+0.6
MEZF	Maizieres J'vi	162.84	352	ePKIKP	PKPdf	14 57 49.2	+0.2
MEZF	Maizieres J'vi	162.84	352	ePKPdf	PKPdf	14 57 49.2	+0.2
LDF	La Druitiere	162.91	4	ePKIKP	PKPdf	14 57 48.8	-0.3
LDF	La Druitiere	162.91	4	ePKIKP	PKPdf	14 57 48.8	-0.3
LDF	La Druitiere	162.91	4	ePKPdf	PKPdf	14 57 48.8	-0.3
SGMF	Saint Gilles	163.00	9	ePKIKP	PKPdf	14 57 49.1	-0.1
SGMF	Saint Gilles	163.00	9	ePKIKP	PKPdf	14 57 49.1	-0.1
SGMF	Saint Gilles	163.00	9	ePKPdf	PKPdf	14 57 49.1	-0.1
SFTF	Sexfontaines	163.14	352	ePKIKP	PKPdf	14 57 49.3	-0.1
	comp=Z,62nm,1.3s						
SFTF	Sexfontaines	163.14	352	ePKPdf	PKPdf	14 57 49.3	-0.1
HAU	Haudompre	163.15	349	ePKIKP	PKPdf	14 57 48.8	-0.6
HAU	Haudompre	163.15	349	ePKIKP	PKPdf	14 57 48.8	-0.6
HAU	Haudompre	163.15	349	ePKPdf	PKPdf	14 57 48.8	-0.6
HINF	Hinteralfeld	163.24	348	ePKIKP	PKPdf	14 57 48.8	-0.7
HINF	Hinteralfeld	163.24	348	ePKIKP	PKPdf	14 57 48.8	-0.7
HINF	Hinteralfeld	163.24	348	ePKPdf	PKPdf	14 57 48.8	-0.7
LOR	Lormes	164.18	354	ePKIKP	PKPdf	14 57 50.2	-0.2
	comp=Z,29nm,1.3s						
LOR	Lormes	164.18	354	ePKPdf	PKPdf	14 57 50.2	-0.2
SSF	Saint Saulge	164.42	355	ePKIKP	PKPdf	14 57 50.4	-0.2
	comp=Z,13nm,0.9s						
SSF	Saint Saulge	164.42	355	ePKIKP	PKPdf	14 57 50.4	-0.2
SSF	Saint Saulge	164.42	355	ePKPdf	PKPdf	14 57 50.4	-0.2
AVF	Avril sur Loir	164.70	355	ePKIKP	PKPdf	14 57 50.3	-0.5
AVF	Avril sur Loir	164.70	355	ePKIKP	PKPdf	14 57 50.3	-0.5
AVF	Avril sur Loir	164.70	355	ePKPdf	PKPdf	14 57 50.3	-0.5
SMF	Signal de Mont	164.80	354	ePKIKP	PKPdf	14 57 50.6	-0.3
SMF	Signal de Mont	164.80	354	ePKIKP	PKPdf	14 57 50.6	-0.3
SMF	Signal de Mont	164.80	354	ePKPdf	PKPdf	14 57 50.6	-0.3
MFF	Saint Martin d	164.89	5	ePKIKP	PKPdf	14 57 51.0	0.0
MFF	Saint Martin d	164.89	5	ePKIKP	PKPdf	14 57 51.0	0.0
MFF	Saint Martin d	164.89	5	ePKPdf	PKPdf	14 57 51.0	0.0
BGF	Bois d'Agland	164.96	357	ePKIKP	PKPdf	14 57 51.0	-0.1
BGF	Bois d'Agland	164.96	357	ePKIKP	PKPdf	14 57 51.0	-0.1
BGF	Bois d'Agland	164.96	357	ePKPdf	PKPdf	14 57 51.0	-0.1
TCF	Toulx Ste Croi	165.25	358	ePKIKP	PKPdf	14 57 51.2	-0.2
	comp=Z,7.8nm,0.7s						
TCF	Toulx Ste Croi	165.25	358	ePKIKP	PKPdf	14 57 51.2	-0.2
TCF	Toulx Ste Croi	165.25	358	ePKPdf	PKPdf	14 57 51.2	-0.2
LPG	La Plagne	165.48	345	ePKIKP	PKPdf	14 57 52.5	+0.6
LPG	La Plagne	165.48	345	ePKIKP	PKPdf	14 57 52.5	+0.6
LPG	La Plagne	165.48	345	ePKPdf	PKPdf	14 57 52.5	+0.6
MBDF	Montbardon	166.21	344	ePKIKP	PKPdf	14 57 52.8	+0.5
	comp=Z,11nm,0.9s						
MBDF	Montbardon	166.21	344	ePKIKP	PKPdf	14 57 52.8	+0.5
MBDF	Montbardon	166.21	344	ePKPdf	PKPdf	14 57 52.8	+0.5
ORIF	Oris-en-Rattie	166.21	347	ePKIKP	PKPdf	14 57 52.4	+0.1
ORIF	Oris-en-Rattie	166.21	347	ePKIKP	PKPdf	14 57 52.4	+0.1
ORIF	Oris-en-Rattie	166.21	347	ePKPdf	PKPdf	14 57 52.4	+0.1
RJF	Les Rejaudoux	166.25	0	ePKIKP	PKPdf	14 57 52.3	+0.1
	comp=Z,22nm,1.0s						
RJF	Les Rejaudoux	166.25	0	ePKIKP	PKPdf	14 57 52.3	+0.1
RJF	Les Rejaudoux	166.25	0	ePKPdf	PKPdf	14 57 52.3	+0.1
VIVF	Saint-Julien-l	166.47	351	ePKIKP	PKPdf	14 57 52.5	+0.1
	comp=Z,46nm,1.4s						
VIVF	Saint-Julien-l	166.47	351	ePKIKP	PKPdf	14 57 52.5	+0.1
VIVF	Saint-Julien-l	166.47	351	ePKPdf	PKPdf	14 57 52.5	+0.1
LFF	La Frestale	166.59	3	ePKIKP	PKPdf	14 57 52.8	+0.4
LFF	La Frestale	166.59	3	ePKIKP	PKPdf	14 57 52.8	+0.4
LFF	La Frestale	166.59	3	ePKPdf	PKPdf	14 57 52.8	+0.4
CAF	Calviac	166.62	358	ePKIKP	PKPdf	14 57 52.8	+0.3
	comp=Z,22nm,1.2s						
CAF	Calviac	166.62	358	ePKIKP	PKPdf	14 57 52.8	+0.3
CAF	Calviac	166.62	358	ePKPdf	PKPdf	14 57 52.8	+0.3
POLO	Lamas de Olo	167.63	35	ePKPab	PKPab	14 58 59.5	-0.3
PBRG	Braganca	167.77	31	ePKPab	PKPab	14 58 59.9	-0.4
MVO	Moncorvo	168.16	33	ePKPab	PKPab	14 59 01.8	-0.3
EPF	Esparros	168.48	5	ePKIKP	PKPdf	14 57 54.5	+0.6
	comp=Z,21nm,1.0s						
EPF	Esparros	168.48	5	ePKIKP	PKPdf	14 57 54.5	+0.6
EPF	Esparros	168.48	5	ePKPdf	PKPdf	14 57 54.5	+0.6
ETSF	Etsaut	168.53	8	ePKIKP	PKPdf	14 57 54.8	+0.8
	comp=Z,18nm,1.1s						
ETSF	Etsaut	168.53	8	ePKIKP	PKPdf	14 57 54.8	+0.8
ETSF	Etsaut	168.53	8	ePKPdf	PKPdf	14 57 54.8	+0.8
PMRV	Marv??o	169.26	40	ePKPab	PKPab	14 59 06.4	-0.6
TAM	Tamanrasset	170.61	203	ePKIKP	PKPdf	14 57 57.3	+1.4
TAM	Tamanrasset	170.61	203	ePKPdf	PKPdf	14 57 57.3	+1.4
PAB	San Pablo	170.66	29	ePKIKP	PKPdf	14 57 56.8	+1.4
PAB	San Pablo	170.66	29	ePKPdf	PKPdf	14 57 56.8	+1.4
ESDC	Sonseca Array	170.71	27	PKP	PKPdf	14 57 56.6	+1.3
ESDC				PKPab	PKPab	14 59 13.1	-0.3
ESDC	Sonseca Array	170.71	27	PKP	PKPdf	14 57 56.6	+1.3
	comp=Z,4.3nm,0.9s,baz=354,slow=2.8,SNR=16						
ESDC				PKPab	PKPab	14 59 13.1	-0.3
	comp=Z,1.4nm,0.6s,baz=314,slow=3.8,SNR=5.3						
KEST	Kesra	172.28	305	PKP	PKPdf	14 57 56.8	+0.5
KEST	Kesra	172.28	305	PKP	PKPdf	14 57 56.8	+0.5
	comp=Z,2.4nm,0.9s,baz=132,slow=1.8,SNR=3.8						

IDC 03 14:54:23.9±0.8, 3°.31N×126°.97E, h0km, mb3.9/12, mb1 4.1/12, mb1mx3.9/26, mbtmp4.0/12, Error ellipse: s-maj=44.0km s-min=14.1km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.32	183	P	P	14 59 13.1	+0.5
	1.8nm,0.8s,baz=35,slow=6.8,SNR=5.3						
WRA	Warramunga Arr	24.22	163	P	P	14 59 42.0	-0.6
	3.1nm,0.6s,baz=333,slow=11,SNR=29						
ASAR	Alice Springs	27.66	166	P	P	15 00 13.2	-0.5
	0.9nm,1.1s,baz=354,slow=7.5,SNR=4.2						
CMAR	Chiang Mai Arr	31.29	301	P	P	15 00 45.6	-0.4
	0.4nm,0.3s,baz=123,slow=6.5,SNR=4.4						
STKA	Stephens Creek	37.66	159	P	P	15 01 41.2	+0.2
	4.9nm,0.8s,baz=342,slow=5.2,SNR=7.0						
SONM	Songino Array	47.77	341	P	P	15 03 03.1	0.0
	0.7nm,0.8s,baz=158,slow=7.1,SNR=5.0						
PETK	Petropavlovsk-	55.72	22	P	P	15 04 02.4	+0.1
	1.8nm,0.7s,baz=212,slow=7.8,SNR=4.2						
MKAR	Makanchi Array	58.03	325	P	P	15 04 17.8	-1.1
	1.2nm,0.6s,baz=118,slow=9.0,SNR=13						
AAK	Ala-Archa	60.82	318	P	P	15 04 39.2	+0.8
	0.3nm,0.5s,baz=194,slow=4.2,SNR=2.5						
ZALV	Zalesovo Beam	61.06	333	P	P	15 04 40.5	+1.0
	1.6nm,0.8s,baz=123,slow=7.3,SNR=6.9						
KURBB	Kurchatov Arra	62.22	327	P	P	15 04 46.3	-1.1
	3.5nm,0.7s,baz=123,slow=7.3,SNR=19						
BVAR	Borovoye Array	67.80	327	P	P	15 05 23.2	-0.5
	1.7nm,0.8s,baz=106,slow=11,SNR=6.8						
BRTR	Keskin Array B	90.47	310	P	P	15 07 29.9	+1.7
	0.9nm,0.8s,baz=130,slow=3.9,SNR=4.3						

HEL 03 14:55:52.1±0.5, 67°.92N×20°.38E, h0km, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANU	Lannavaara	0.62	77	eS	Sg	14 56 11.0	-1.1
KIF	Kilpisjarvi	1.10	8	eP	Pg	14 56 12.6	-0.6
KIF				eS	Sg	14 56 27.1	-0.4
HEF	Hetta	1.32	67	eS	Sg	14 56 32.9	-1.6

*IDC **03** 14:56:16.6±1.5, 2°.47S×101°.51E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.7/23, mbtmp3.9/7, Error ellipse: s-maj=74.5km s-min=19.0km az=52.0*
*ISCJB **03** 14:56:35.4±0.5, 2°.3S±0°.2×102°.1E±0°.3, h174km±10km, mb3.8/8, Error ellipse: s-maj=53.7km s-min=6.2km az=141.3*
*DJA **03** 14:56:36.2±0.5, 2°S±14°×10°2E±1°7, h153km±10km, M3.9/7, mb4.1/2, mB4.8/1, MLv3.8/7, Mw(mB)4.1/1*
ISC 03 14:56:36.6±0.8, 2°.3S±0°.2×102°.0E±0°.3, h169km±11km, n17, σ0.s93/21, mb3.8/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRJI	Kerinci	0.57	292	P	Pn	14 57 00.8	+0.2
KRJI				S	Sn	14 57 18.8	-0.2
KSI	Kapahiang	1.47	156	P	Pn	14 57 08.5	+1.1
KSI				S	Sn	14 57 31.6	+0.3
PDSI	Padang	2.06	312	P	Pn	14 57 13.3	-0.4
PDSI				S	Sn	14 57 43.2	+0.8
MNAI	Manna	2.26	155	P	Pn	14 57 16.6	+0.7
MNAI				S	Sn	14 57 46.1	-0.3
MDSI	Maura Dua	3.07	135	P	Pn	14 57 11.5	-14
MNSI	Mandailing Nat	3.91	322	P	Pn	14 57 35.9	-0.4
KASI	Kota Agung	4.06	142	P	Pn	14 57 38.2	0.0
KASI				S	Sn	14 58 23.8	-2.4
CGJI	Cibinong	5.65	139	P	Pn	14 57 57.8	-1.1
	17nm,1.6s,0.1nm						
GSI	Gunungsitoli	5.69	309	P	Pn	14 57 58.7	-0.8
WRA	Warramunga Arr	36.13	121	P	P	15 03 22.8	0.0
	0.1nm,0.4s,baz=302,slow=8.9,SNR=6.3						
ASAR	Alice Springs	37.47	127	P	P	15 03 35.2	+1.1
	0.4nm,0.5s,baz=301,slow=7.8,SNR=14						
SONM	Songino Array	50.08	4	P	P	15 05 15.6	+1.2
	1.4nm,0.6s,baz=185,slow=9.2,SNR=9.8						
MKAR	Makanchi Array	51.88	343	P	P	15 05 27.2	-0.5
	0.6nm,0.3s,baz=153,slow=9.1,SNR=16						
KURBB	Kurchatov Arra	56.42	342	P	P	15 05 59.7	-0.8
	39nm,0.3s,baz=159,slow=7.0,SNR=1.5						
ZALV	Zalesovo Beam	57.85	348	P	P	15 06 09.5	-0.9
	0.8nm,0.3s,baz=155,slow=4.9,SNR=5.6						
BRTR	Keskin Array B	75.00	312	P	P	15 07 59.6	-0.2
	0.2nm,0.3s,baz=96,slow=2.5,SNR=3.6						
ARCES	ARCESS Array B	87.44	340	P	P	15 09 04.5	0.0
	1.3nm,0.8s,baz=125,slow=4.7,SNR=2.7						

IDC 03 14:57:13.3±7.7, 18°.84S×177°.81W, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.5/19, mbtmp3.4/3, Error ellipse: s-maj=336.7km s-min=38.2km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.03	260	P	P	15 05 31.0	-0.1
	0.1nm,0.3s,baz=95,slow=7.7,SNR=4.8						
ASAR	Alice Springs	45.09	255	P	P	15 05 31.4	-0.2
	0.3nm,0.6s,baz=96,slow=8.7,SNR=3.8						
ILAR	Eielson Array	86.66	13	P	P	15 09 58.4	0.0
	0.3nm,0.6s,baz=211,slow=5.3,SNR=6.2						

IDC 03 15:04:08.6±12.0, 17°.41S×179°.02W, h603km±153km, mb2.7/6, mb1 3.0/6, mb1mx2.8/19, mbtmp2.7/6, Error ellipse: s-maj=59.0km s-min=50.5km az=133.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.16	259	P	P	15 11 25.0	-0.6
	0.1nm,0.3s,baz=95,slow=7.6,SNR=12						
ASAR	Alice Springs	44.37	254	P	P	15 11 27.5	+0.2
	0.4nm,0.5s,baz=89,slow=7.6,SNR=22						
MJAR	Matsushiro Arr	67.16	324	P	P	15 14 04.0	+0.1
	0.5nm,0.4s,baz=152,slow=5.0,SNR=3.3						
ILAR	Eielson Array	85.53	13	P	P	15 15 42.8	-0.8
	0.7nm,1.1s,baz=224,slow=5.5,SNR=6.4						
PDAR	Pinedale Array	87.39	44	P	P	15 15 53.4	+0.2
	0.2nm,0.5s,baz=267,slow=1.6,SNR=3.2						
YKA	Yellowknife Ar	94.12	25	P	P	15 16 23.3	0.0
	0.1nm,0.3s,baz=249,slow=5.2,SNR=3.1						
GERES	GERESS Array B	146.98	345	PKPbc	PKPbc	15 22 44.0	-0.7
	0.1nm,0.3s,baz=48,slow=1.5,SNR=4.1						

IDC 03 15:22:39.1±2.1, 7°.31S×120°.30E, h404km±19km, mb3.0/4, mb1 3.1/6, mb1mx2.9/23, mbtmp3.0/6, Error ellipse: s-maj=138.4km s-min=13.9km az=57.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	2.34	347	P	P	15 23 37.8	+0.1
	8.1nm,0.3s,baz=178,slow=5.3,SNR=17						
WRA	Warramunga Arr	18.53	134	P	P	15 26 28.6	-0.5
	0.4nm,0.3s,baz=315,slow=11,SNR=27						
ASAR	Alice Springs	20.86	143	P	P	15 26 51.3	0.0
	1.0nm,0.6s,baz=318,slow=8.2,SNR=35						
STKA	Stephens Creek	31.49	144	P	P	15 28 25.6	0.0
	0.8nm,0.3s,baz=322,slow=12,SNR=4.7						
MKAR	Makanchi Array	63.56	332	P	P	15 32 28.6	+0.3
	0.3nm,0.4s,baz=145,slow=7.6,SNR=7.5						
ZALV	Zalesovo Beam	67.94	338	P	P	15 32 55.4	-0.2
	0.6nm,0.3s,baz=133,slow=5.9,SNR=5.1						

IDC 03 15:22:42.5±2.0, 17°.16S×167°.29E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.6/21, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=50.3km s-min=34.3km az=131.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.95	189	Pn	Pn	15 23 58.0	-0.4
	1.5nm,0.3s,baz=344,slow=22,SNR=27						
DZM				Sn	Sn	15 24 52.0	-4.4
	3.0nm,0.3s,baz=148,slow=22,SNR=11						
WRA	Warramunga Arr	31.34	260	P	P	15 29 04.3	-0.8
	0.4nm,0.9s,baz=88,slow=8.5,SNR=4.9						
ASAR	Alice Springs	31.90	253	P	P	15 29 09.8	-0.3
	1.0nm,0.6s,baz=80,slow=8.6,SNR=23						
FITZ	Fitzroy Crossi	39.65	262	P	P	15 30 17.2	+0.7
	0.4nm,0.4s,baz=96,slow=9.2,SNR=3.2						
ILAR	Eielson Array	88.82	18	P	P	15 35 38.0	0.0
	0.2nm,0.7s,baz=228,slow=6.2,SNR=4.4						

*ISK **03** 15:46:30.9, 38°.31N×39°.20E, h3km, MD2.8*
*DDA **03** 15:46:30.9, 38°.29N×39°.25E, h18km, MD2.9*
*ISCJB **03** 15:46:31.3±0.5, 38°.28N±0°.03×39°.23E±0°.03, h9km±4km, Error ellipse: s-maj=4.7km s-min=3.7km az=28.5*
*CSEM **03** 15:46:31.5±0.2, 38°.31N×39°.21E, h2km, MD2.8, Error ellipse: s-maj=6.0km s-min=4.6km az=5.0*
ISC 03 15:46:31.1±0.8, 38°.32N±0°.02×39°.24E±0°.02, h11km±5km, n37, σ0.s99/54, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.08	41	ePG	Pg	15 46 33.6	-0.2
SVRC				eSG	Sg	15 46 35.7	0.0
SVRC	Sivrice-ELAZID	0.08	41	ePg	Pg	15 46 33.6	-0.2
SVRC				eSg	Sg	15 46 35.7	0.0
ELZG	Elazig	0.27	312	iP	Pg	15 46 37.4	+0.7
ELZG				iS	Sb	15 46 42.0	-0.9
ELZG	Elazig	0.27	312	iP	Pg	15 46 37.4	+0.7
ELZG				iS	Sb	15 46 42.0	-0.9
MALT	Malatya	0.64	270	ePG	Pg	15 46 43.2	-0.3
MALT				eSG	Sb	15 46 52.8	-0.6
MALT	Malatya	0.64	270	ePg	Pg	15 46 43.3	-0.3
MALT				eSg	Sb	15 46 52.8	-0.6
MYA	Malataya	0.64	271	ePG	Pg	15 46 43.6	0.0
MYA	Malataya	0.64	271	ePg	Pg	15 46 43.6	0.0
DIYA	Diyarbakir	0.80	119	iP	Pg	15 46 46.9	+0.3
DIYA				iS	Sg	15 46 56.2	-0.8
DIYA	Diyarbakir	0.80	119	iP	Pg	15 46 46.9	+0.3
DIYA				iS	Sg	15 46 56.2	-0.8
DIY	Diyarbakir	0.89	118	ePG	Pb	15 46 48.9	+0.3
DIY	Diyarbakir	0.89	118	ePg	Pb	15 46 48.9	+0.3
URFA	Urfa	0.93	201	ePG	Pg	15 46 49.2	0.0
URFA				eSG	Sb	15 47 02.5	+0.6
URFA	Urfa	0.93	201	ePg	Pg	15 46 49.2	0.0
URFA				eSg	Sb	15 47 02.5	+0.6
AKCD	Akcadag	1.04	269	iP	Pg	15 46 50.5	-0.6
AKCD				iS	Sg	15 47 04.0	-0.6
AKCD	Akcadag	1.04	269	iP	Pg	15 46 50.5	-0.6
AKCD				iS	Sg	15 47 04.0	-0.6
KEMA	Kemaliye	1.11	329	iP	Pg	15 46 51.7	-0.9
KEMA				iS	Sb	15 47 07.5	+0.4
KEMA	Kemaliye	1.11	329	iP	Pg	15 46 51.7	-0.9
KEMA				iS	Sb	15 47 07.5	+0.4
BINT	Bingol	1.13	60	ePn	Pn	15 46 57.2	+4.2
ILIC	ilic-Erzincan	1.25	335	ePN	Pg	15 46 55.8	+0.6
ILIC	ilic-Erzincan	1.25	335	ePn	Pg	15 46 55.8	+0.6
DARE	Darende-Malaty	1.29	300	ePN	Pg	15 46 57.2	+1.3
DARE	Darende-Malaty	1.29	300	ePn	Pg	15 46 57.2	+1.3
BNGB	Bing˜¶l	1.31	59	ePN	Pg	15 46 57.2	+0.8
ERZN	Erzincan	1.32	16	ePN	Pb	15 46 56.7	+0.6
EZC	Erzincan	1.44	4	ePn	Pn	15 46 56.7	-0.6
MARD	Mardin	1.58	129	iP	Pn	15 46 59.7	+0.5
MARD				iS	Sn	15 47 19.8	+0.1
BNGL	BINGOL	1.63	66	iP	Pn	15 46 52.3	-7.7
BNGL				iS	Sn	15 47 16.2	-4.8
BEST	Besiri	1.66	104	iP	Pn	15 47 00.6	+0.3
BEST				iS	Sn	15 47 22.3	+0.7
BTMT	Batman	1.78	93	ePN	Pn	15 47 02.0	+0.1
BTMT	Batman	1.78	93	ePn	Pn	15 47 02.0	+0.1
KELT	Kelkit	1.83	0	iP	Pn	15 47 04.3	+1.5
KELT				iS	Sb	15 47 28.2	+0.4
KELT	Kelkit	1.83	0	iP	Pn	15 47 04.3	+1.5
KELT				iS	Sb	15 47 28.2	+0.4
VRTB	Varto-Mus	1.93	63	ePN	Pb	15 47 06.3	-0.1
VRTB	Varto-Mus	1.93	63	ePn	Pb	15 47 06.3	-0.1
EZM	Erzurum	2.29	45	ePN	Pn	15 47 11.2	+2.0
KUZU	Kuzuini	2.31	229	iP	Pg	15 47 16.5	+1.1

*IGQ **03** 15:46:43.5, 0°.72N×77°.96W, h5km±121km, Mb4.6, Ms4.4, Error ellipse: s-maj=1.9km s-min=0.6km az=1.9*
*IDC **03** 15:46:44.8±0.5, 0°.87N×77°.83W, h0km, mb4.1/16, mb1 4.3/19, mb1mx4.3/26, mbtmp4.1/19, ML4.1/3, MS3.8/8, Ms1 3.8/8, ms1mx3.5/32, Error ellipse: s-maj=26.7km s-min=11.7km az=67.0*
*ISCJB **03** 15:46:45.4±0.2, 0°.75N±0°.02×77°.98W±0°.03, h11km, mb4.4/37, MS4.0/6, Error ellipse: s-maj=3.9km s-min=2.1km az=4.7*
*NEIC **03** 15:46:48.1±1.4, 0°.68N×78°.06W, h21km±10km, mb4.8/29, MD4.6(IGQ), Error ellipse: s-maj=8.1km s-min=6.1km az=86.0*
NEIC Felt strongly at El Angel, Ecuador. Also felt at Bolivar, Ibarra, Mira and San Gabriel.
*BJI **03** 15:47:20.4, 3°.00N×78°.30W, h186km, mB5.3/4*
ISC 03 15:46:46.2±0.3, 0°.70N±0°.04×78°.00W±0°.04, h11km, n375, σ1.s16/360, mb4.6/38, MS4.0/6, 119C-117D, Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LITE	Lita	0.38	287	⇓S	Sg	15 46 57.4	-1.6
LITE	Lita	0.38	287	⇓P	Pg	15 46 51.1	-2.7
COTA	Cotacachi	0.49	223	⇓P	Pg	15 46 55.1	-0.9
CAYA	Cayambe	0.62	179	⇑P	Pg	15 46 56.5	-1.9
OTAV	Otavalo	0.64	225	eP	Pg	15 46 57.1	-1.7
OTAV				eS	Sb	15 47 08.4	-0.5
CONE	Cono NE Rev Vo	0.84	155	⇑P	Pg	15 47 00.0	-2.5
CHAR	Charly	0.84	157	⇑P	Pg	15 47 00.4	-2.2
LAV4	Lava4-Reventad	0.87	155	⇑P	Pg	15 47 00.3	-2.7
YANA	Yana	0.99	215	P	Pg	15 47 03.6	-1.8
PINO	Pino	1.04	216	⇑P	Pb	15 47 04.5	-2.1
GGP	Refugio Guagua	1.05	215	⇑P	Pb	15 47 04.9	-1.9
TERV	Terraza Guagua	1.06	215	P	Pb	15 47 05.0	-1.8
JUA2	San Juan 2	1.09	214	P	Pb	15 47 05.2	-2.2
ANTI	Antisana	1.15	188	⇑P	Pb	15 47 06.7	-1.7
GOLV	Golondrinas	1.24	247	S	Sb	15 47 24.8	-0.8
GOLV	Golondrinas	1.24	247	P	Pn	15 47 06.9	-2.6
PITA	Cotopaxi Volc	1.32	199	⇑P	Pn	15 47 10.0	-1.0
VC1	Cotopaxi 1	1.39	197	P	Pn	15 47 11.5	-0.5
COV1	Cotopaxi Volc	1.39	194	P	Pn	15 47 12.2	0.0
BVC2	Cotopaxi Volca	1.41	197	P	Pn	15 47 11.4	-0.9
NAS2	Nasa	1.41	199	P	Pn	15 47 11.9	-0.4
BTAM	Cotopaxi Volca	1.42	196	⇑P	Pn	15 47 12.0	-0.5
BREF	Cotopaxi Volca	1.43	198	⇑P	Pn	15 47 12.2	-0.5
TAMB	Tambo	1.43	195	P	Pn	15 47 12.3	-0.3
CAMI	Rancho Maria	1.46	200	⇑P	Pn	15 47 12.7	-0.1
MOV1	Cotopaxi Vol s	1.47	197	P	Pn	15 47 12.5	-0.8
BMOR	Cotopaxi Volca	1.49	198	⇑P	Pn	15 47 12.9	-0.6
PISA	Pisayambo	1.79	192	P	Pb	15 47 18.7	-0.6
RUN5	Runtun	2.14	191	P	Pb	15 47 24.8	-0.4
BRUN	Tungurahua Vol	2.14	191	⇓P	Pb	15 47 25.0	-0.3
BULB	Ulba Tungurahu	2.16	191	P	Pb	15 47 25.0	-0.6
JUI6	Juive	2.16	193	P	Pb	15 47 24.7	-0.8
ULBA	Ulba	2.17	191	P	Pb	15 47 25.2	-0.6
BBIL	Ulba Tungurahu	2.19	193	P	Pb	15 47 25.6	-0.5
BIL2	Estacion Bilba	2.20	193	P	Pb	15 47 25.8	-0.4
PAT1	Patacocha	2.23	191	P	Pb	15 47 26.8	-0.1
ARRY	Arrayan	2.24	192	⇓P	Pb	15 47 26.3	-0.5
BMAS	Trigal station	2.24	192	P	Pb	15 47 25.8	-1.1
IGUA	Igualata	2.27	196	P	Pb	15 47 26.8	-0.7
JAMA	Jama	2.40	247	P	Pn	15 47 26.4	+0.8
RIOE	Riobamba	2.51	195	P	Pb	15 47 31.5	-0.1
MACE	Macas	2.94	184	P	Pb	15 47 37.3	-1.5
CHIS	Cerro-Chispas-	3.23	238	P	Pn	15 47 38.7	+1.8
ROSC	El Rosal	5.52	42	LR	LR	15 50 08.3	
	comp=Z,702nm,19.5s,baz=8.4,slow=38						
ATAH	Atahualpa	7.79	183	Pn	Pn	15 48 43.5	+3.6
ATAH	Atahualpa	7.79	183	Pn	Pn	15 48 43.5	+3.6
	2.9nm,0.3s,baz=13,slow=8.1,SNR=26						
BCIP	Isla Barro Col	8.61	348	ePn	Pn	15 48 52.9	+2.0
SDV	Santo Domingo	10.95	42	ePn	Pn	15 49 23.8	+0.6
JTS	JuntasAbangare	11.77	324	LR	LR	15 53 33.7	
	comp=Z,305nm,18.6s,baz=174,slow=35						
NNA	Nana	12.65	175	Pn	Pn	15 49 48.7	+2.4
NNA	Nana	12.65	175	Pn	Pn	15 49 49.3	+2.9
	1.1nm,0.3s,baz=4.7,slow=16,SNR=4.2						
MTDJ	Mount Denham	17.43	1	eP	P	15 50 51.7	+0.9
	133nm,1.4s						
SAML	Samuel	17.60	123	ePn	Pn	15 50 48.3	-3.3
	11nm,0.8s						
ARE	Arequipa	18.22	160	P	P	15 51 02.0	+2.2
SDDR	Presa de Saban	19.33	20	eP	P	15 51 11.6	-0.1
	193nm,2.2s						
LPAZ	La Paz	19.49	150	eP	Pn	15 51 15.4	+0.2
	19nm,1.4s						
LPAZ	La Paz	19.49	150	P	Pn	15 51 16.1	+0.8
	0.3nm,0.3s,baz=329,slow=11,SNR=15						
LPAZ				LR	LR	16 00 16.8	
	comp=Z,342nm,18.2s,baz=308,slow=42						
CRPR	Cabo Rojo, PR	20.26	31	eP	Pn	15 51 23.9	+0.1
	30nm,1.1s						
CELP	Cerrillos	20.59	32	eP	P	15 51 25.8	+0.4
LRS	Lares	20.63	31	eP	Pn	15 51 28.2	0.0
AOPR	Arecibo Observ	20.73	32	eP	Pn	15 51 29.1	-0.2
	97nm,1.5s						
SJG	San Juan	20.86	33	eP	P	15 51 29.4	+1.1
	26nm,0.8s						
SJG	San Juan	20.86	33	P	P	15 51 29.0	+0.7
	8.5nm,0.3s,baz=342,slow=19,SNR=3.9						
CPD	Cerro la Pandu	20.93	34	eP	Pn	15 51 31.8	+0.1
	35nm,1.1s						
CBYP	Canovanas	21.15	34	eP	P	15 51 32.3	+0.7
	114nm,1.3s						
MTP	Monte Pirata	21.18	35	eP	P	15 51 31.9	+0.1
	67nm,1.4s						
CDVI	St. Croix	21.37	37	eP	P	15 51 35.0	+1.2
STVI	Saint Thomas	21.73	35	eP	P	15 51 39.3	+1.6
	140nm,1.6s						
CMIG	Matias Romero	23.27	315	P	P	15 51 55.4	+1.3
CMIG	Matias Romero	23.27	315	P	P	15 51 55.4	+1.3
	4.1nm,0.7s,baz=126,slow=9.6,SNR=9.4						
SIV	San Ignacio	23.55	135	P	P	15 51 56.8	-0.1
SIV	San Ignacio	23.55	135	P	P	15 51 56.8	-0.1
	19nm,0.9s,baz=327,slow=11,SNR=30						
SIV				LR	LR	16 01 36.0	
	comp=Z,367nm,21.2s,slow=38						
CFAA	Coronel Fontan	33.43	165	P	P	15 53 26.4	+1.1
CFAA	Coronel Fontan	33.43	165	P	P	15 53 26.4	+1.1
	0.6nm,0.7s,baz=349,slow=7.0,SNR=9.6						
CPUP	Villa Florida	33.46	145	P	P	15 53 25.4	0.0
CPUP	Villa Florida	33.46	145	P	P	15 53 25.4	0.0
	0.9nm,0.6s,baz=281,slow=8.6,SNR=4.8						
BDFB	Brasilia	33.78	120	LR	LR	16 08 02.2	
	comp=Z,175nm,18.3s,baz=263,slow=38						
631A	Perdido Creek	35.76	325	⇓P	P	15 53 46.2	+0.8
	baz=36,SNR=9.4						
532A	Rocksprings	35.92	327	⇑P	P	15 53 47.4	+0.5
	baz=36						
531A	Rocksprings	36.31	326	⇑P	P	15 53 50.9	+0.7
	baz=36,SNR=5.8						
431A	Sonora	36.74	326	⇓P	P	15 53 54.4	+0.6
	baz=37						
530A	J-C Ranch, Com	36.75	325	⇑P	P	15 53 54.6	+0.7
	baz=37,SNR=11						
332A	Millersview	36.81	328	⇑P	P	15 53 54.5	+0.1
	baz=37						
430A	Baggett Ranch,	37.17	326	⇑P	P	15 53 58.3	+0.8
	baz=37						

628A **Black Gap, Mar** 37.18 323 ⇑P P 15 53 59.0 +1.4
baz=37,SNR=8.2
529A **Stev Forest Ra** 37.24 324 ⇓P P 15 53 59.1 +1.0
baz=37,SNR=13
429A **Davenport Ranc** 37.42 325 ⇓P P 15 54 00.4 +0.7
baz=38,SNR=14
627A **Terlingua Ranc** 37.46 322 ⇑P P 15 54 01.4 +1.3
baz=38,SNR=17
TXAR **Lajitas Array** 37.55 322 P P 15 54 02.0 +1.3
TXAR **Lajitas Array** 37.55 322 P P 15 54 02.0 +1.3
1.6nm,0.8s,baz=133,slow=6.6,SNR=8.1
TXAR LR LR 16 11 04.8
comp=Z,61nm,18.6s,baz=190,slow=39
528A **Cox Ranch, San** 37.60 323 ⇑P P 15 54 02.2 +0.9
baz=38,SNR=8.6
230A **Sterling City** 37.94 327 ⇓P P 15 54 04.4 +0.4
baz=38
428A **Kincaid Ranch,** 37.95 324 ⇓P P 15 54 05.1 +0.9
baz=38,SNR=12
626A **Big Bend Ranch** 37.99 321 ⇑P P 15 54 05.7 +1.2
baz=38,SNR=9.4
527A **Woodward Ranch** 38.09 323 ⇓P P 15 54 06.4 +1.1
baz=38,SNR=11
329A **Wagon Wheel Ra** 38.11 326 ⇑P P 15 54 06.1 +0.7
baz=38,SNR=7.3
Z32A **Haskell** 38.20 330 ⇓P P 15 54 06.2 0.0
baz=38
526A **Mary Lane Ranc** 38.32 322 ⇑P P 15 54 08.6 +1.3
baz=38,SNR=10
229A **Bryant Ranch,** 38.38 326 ⇑P P 15 54 08.0 +0.3
baz=38
427A **Hayter Ranch,** 38.47 324 ⇓P P 15 54 09.5 +1.0
baz=39,SNR=7.1
328A **Wristen Ranch,** 38.51 325 ⇓P P 15 54 09.7 +0.9
baz=39,SNR=7.3
Z31A **Sharp Cattle R** 38.55 330 ⇑P P 15 54 09.2 +0.1
baz=39
426A **McDonald Obser** 38.71 323 ⇑P P 15 54 11.7 +1.0
baz=39,SNR=5.1
TUL1 **Tulsa** 38.74 337 ⇑P P 15 54 10.0 -0.6
baz=39
Y32A **R-V Farms, Ver** 38.75 331 ⇓P P 15 54 10.6 -0.1
baz=39
228A **UT Block 9, Go** 38.93 326 ⇑P P 15 54 12.7 +0.3
baz=39
Z30A **Sanderson Ranc** 39.03 328 ⇓P P 15 54 13.5 +0.3
baz=39
Y31A **Rekieta Farm,** 39.12 330 ⇑P P 15 54 14.0 +0.2
baz=39
326A **Caldwell Ranch** 39.14 324 ⇓P P 15 54 15.1 +0.9
baz=39,SNR=9.3
128A **Castleberry Fa** 39.25 326 ⇓P P 15 54 15.4 +0.4
baz=39
227A **Bennet, Jal** 39.25 325 ⇑P P 15 54 15.5 +0.5
baz=39
Z29A **Hungry Hill Ra** 39.31 328 ⇓P P 15 54 15.7 +0.2
baz=39
425A **Indio Mountain** 39.38 322 ⇑P P 15 54 17.1 +0.9
baz=40,SNR=12
X31A **McDonald Ranch** 39.52 331 ⇓P P 15 54 17.1 -0.1
baz=40
Y29A **Porterfield Fa** 39.76 329 ⇑P P 15 54 19.5 +0.2
baz=40
127A **Arkansas Junct** 39.78 326 ⇓P P 15 54 19.7 +0.3
baz=40
325A **Bean Ranch, Si** 39.78 323 ⇓P P 15 54 20.6 +1.0
baz=40
226B **Tecolote Peak,** 39.80 324 ⇓P P 15 54 21.0 +1.3
baz=40,SNR=14
X30A **Coker Ranch, T** 39.81 330 ⇓P P 15 54 19.8 +0.2
baz=40
GDL2 **Guadalupe Moun** 40.01 324 *eP* P 15 54 21.7 +0.3
126A **Clayton Basin,** 40.13 325 ⇑P P 15 54 23.3 +0.9
baz=40
324A **Moseley Ranch,** 40.14 322 ⇑P P 15 54 23.4 +0.8
baz=40,SNR=12
Z27A **Tatum** 40.17 326 ⇓P P 15 54 23.1 +0.4
baz=40,SNR=7.7
MNTX **Cornudas Mount** 40.26 323 *eP* P 15 54 23.8 +0.4
5.4nm,0.9s
MNTX **Cornudas Mount** 40.26 323 ⇓P P 15 54 24.5 +1.1
baz=40,SNR=6.4
MSTX **Muleshoe** 40.42 328 ⇑P P 15 54 25.1 +0.3
baz=40,SNR=8.7
125A **Gardner Draw,** 40.51 324 ⇑P P 15 54 26.6 +1.0
baz=41,SNR=14
X28A **Dimmitt** 40.54 329 ⇓P P 15 54 26.1 +0.3
baz=41
AMTX **Amarillo** 40.56 329 ⇓P P 15 54 26.1 +0.1
baz=41
Z26A **Caprock** 40.57 326 ⇑P P 15 54 26.8 +0.8
baz=41,SNR=14
224A **Cornudas Mount** 40.61 323 ⇓P P 15 54 27.4 +1.0
baz=41
Y26A **Elida** 40.96 326 ⇓P P 15 54 30.0 +0.7
baz=41,SNR=9.9
Z25A **Roswell** 40.99 325 ⇑P P 15 54 30.7 +1.1
baz=41,SNR=14
124A **Stringfield Ra** 41.01 324 ⇓P P 15 54 30.8 +1.0
baz=41
X27A **F and S Farms,** 41.12 328 ⇓P P 15 54 30.9 +0.4
baz=41
Z24A **Sheeppen Canyo** 41.40 324 ⇓P P 15 54 33.7 +0.7
baz=42
X26A **CR and CF Fran** 41.42 327 ⇑P P 15 54 33.6 +0.5
baz=42
Y25A **Mesa, Roswell** 41.45 326 ⇑P P 15 54 34.1 +0.8
baz=42
PLCA **Paso Flores** 41.79 171 P P 15 54 37.4 +1.5
PLCA **Paso Flores** 41.79 171 P P 15 54 37.4 +1.5
3.5nm,0.7s,baz=351,slow=10.0,SNR=11
Z23A **Rita Site, Whi** 41.87 324 ⇓P P 15 54 37.7 +1.0
baz=42
Y24A **Capitan** 41.87 325 ⇓P P 15 54 37.6 +0.8
baz=42,SNR=7.0
320A **Kipp Ranch, An** 41.99 319 ⇑P P 15 54 39.4 +1.6
baz=42
Y23A **Lovelace Mesa,** 42.23 324 ⇑P P 15 54 40.7 +0.9
baz=42
W25A **X Bar L Ranch,** 42.28 327 ⇓P P 15 54 40.8 +0.7
baz=42,SNR=14
Z22A **Elephant Butte** 42.30 323 ⇑P P 15 54 41.4 +1.1
baz=42,SNR=7.3
121A **Cookes Peak, D** 42.31 321 ⇓P P 15 54 41.7 +1.3
baz=42,SNR=7.4
V26A **Tequesquite Ra** 42.35 328 ⇑P P 15 54 41.2 +0.5
baz=42,SNR=14
220A **Playas Peak, P** 42.36 320 ⇓P P 15 54 42.1 +1.3
baz=42
T28A **Walsh** 42.54 331 ⇓P P 15 54 42.2 0.0
baz=43
BNM **Barren Site** 42.73 324 *eP* P 15 54 44.9 +1.1
3.5nm,0.9s
Y22A **Socorro** 42.77 324 ⇑P P 15 54 45.1 +0.9
baz=43
U26A **Atchley Ranch,** 42.79 329 ⇓P P 15 54 44.5 +0.2
baz=43
W24A **Lazy 6 Ranch,** 42.79 326 ⇓P P 15 54 44.9 +0.5
baz=43
T27A **Campo** 42.79 330 ⇑P P 15 54 44.3 +0.1
baz=43
V25A **Rancho No Teng** 42.83 328 ⇑P P 15 54 45.0 +0.4
baz=43,SNR=12
120A **U Bar Ranch, L** 42.85 321 ⇑P P 15 54 46.1 +1.3
baz=43
V24A **Rampart Ranch,** 43.10 327 ⇑P P 15 54 47.5 +0.6
baz=43
U25A **Circle Dot Ran** 43.14 328 ⇓P P 15 54 47.4 +0.3
baz=43,SNR=7.1
Z20A **Nine Sixteen R** 43.20 321 ⇓P P 15 54 49.1 +1.5
baz=43
LAZ **Ladron** 43.20 324 *eP* P 15 54 49.2 +1.5
T26A **Comanche Natio** 43.31 330 ⇓P P 15 54 48.9 +0.3
baz=43
S26A **Kim** 43.60 330 ⇓P P 15 54 51.2 +0.4
baz=44,SNR=12
Y20A **Horse Springs,** 43.60 322 ⇑P P 15 54 52.2 +1.2
baz=44,SNR=6.7
V23A **Ortiz Mt. (NFS** 43.61 326 ⇓P P 15 54 52.1 +1.1
baz=44
X21A **Alamocita Cree** 43.62 323 ⇓P P 15 54 52.1 +1.0
baz=44
T25A **Trinidad** 43.70 329 ⇓P P 15 54 51.9 +0.2
baz=44
R27A **Eads** 43.80 332 ⇓P P 15 54 52.6 +0.3
baz=44,SNR=12
TUC **Tucson** 44.09 319 *eP* P 15 54 55.3 +0.6
14nm,1.4s

R26A **Arlington** 44.12 331 ⇑P P 15 54 55.3 +0.4
baz=44,SNR=13
R25A **Fountain Ranch** 44.41 330 ⇓P P 15 54 57.6 +0.3
baz=44
S24A **Houchin Ranch,** 44.50 329 ⇓P P 15 54 58.6 +0.4
baz=45
W20A **Ramah** 44.51 324 ⇑P P 15 54 59.2 +1.0
baz=45
T22A **Edith** 44.94 327 ⇑P P 15 55 02.5 +0.9
baz=45
P26A **Davis Ranch, A** 45.07 332 ⇑P P 15 55 02.9 +0.4
baz=45
R23A **Moffat** 45.23 329 ⇑P P 15 55 04.4 +0.4
baz=45
U20A **Newcomb** 45.39 325 ⇓P P 15 55 05.9 +0.7
baz=46
P25A **Willow Gulch B** 45.42 331 ⇑P P 15 55 05.4 0.0
baz=46
S22A **4UR Ranch, Cre** 45.43 328 ⇑P P 15 55 06.0 +0.4
baz=46
OGNE **Ogallala** 45.60 334 ⇓P P 15 55 06.4 -0.3
baz=46
R22A **Saguache, Gunn** 45.75 328 ⇑P P 15 55 08.7 +0.6
baz=46
X16A **Lo Mia Camp, P** 45.85 321 ⇓P P 15 55 10.6 +1.8
baz=46
O25A **Wiggins** 45.87 332 ⇑P P 15 55 09.6 +0.8
baz=46
S21A **Coal Bank Pass** 45.89 327 ⇑P P 15 55 10.4 +1.1
baz=46
ECSD **EROS Data Cent** 45.95 341 *eP* P 15 55 06.8 -2.4
5.2nm,0.9s
SPMN **St. Paul** 46.23 346 ⇓P P 15 55 10.7 -0.7
baz=46
R21A **Cimarron** 46.27 328 ⇓P P 15 55 12.9 +0.7
baz=46
Q22A **Crested Butte,** 46.30 329 ⇑P P 15 55 13.2 +0.7
baz=46
S20A **Disappointment** 46.33 326 ⇑P P 15 55 13.1 +0.5
baz=46
ISCO **Idaho Springs** 46.35 330 *eP* P 15 55 14.7 +1.9
5.6nm,1.2s
Y14A **Wickenburg** 46.56 319 ⇓P P 15 55 16.5 +2.3
baz=47
P22A **Eagle** 46.77 329 ⇓P P 15 55 17.0 +1.0
baz=47
O23A **Lake Granby, G** 46.81 331 ⇑P P 15 55 15.6 -0.8
baz=47
M25A **Palm-Egli Farm** 46.89 333 ⇓P P 15 55 16.2 -0.7
baz=47
O22A **Kremmling** 47.09 330 ⇑P P 15 55 19.0 +0.4
baz=47
N23A **Red Feather La** 47.35 331 ⇓P P 15 55 20.5 -0.1
baz=48
Q19A **Hogan Spring (** 47.62 327 ⇑P P 15 55 23.6 +1.0
baz=48
U15A **North Rim** 47.67 322 ⇓P P 15 55 25.0 +1.9
baz=48
P19A **Cripple Cowboy** 47.96 328 ⇓P P 15 55 26.1 +0.8
baz=48
IRM **Iron Mountain** 48.12 318 ⇓P P 15 55 28.2 +1.8
baz=48
L23A **Garrett** 48.18 332 ⇓P P 15 55 27.3 +0.4
baz=48
SRU **San Rafael** 48.43 326 *eP* P 15 55 29.8 +0.8
237nm,1.1s
SRU **San Rafael** 48.43 326 ⇓P P 15 55 29.5 +0.6
baz=48
N20A **Spence Gulch,** 48.46 329 ⇓P P 15 55 29.6 +0.4
baz=49
EYMN **Ely** 48.50 348 *eP* P 15 55 27.8 -1.2
5.2nm,0.9s
M21A **Separation Pea** 48.58 331 ⇓P P 15 55 29.9 -0.2
baz=49
BELC **Belle Mtn. Jos** 48.60 317 ⇑P P 15 55 32.6 +2.3
baz=49
P18A **Preston Nutter** 48.64 327 ⇓P P 15 55 30.8 +0.1
baz=49
Q16A **Castle Valley** 48.66 325 ⇑P P 15 55 31.6 +0.9
baz=49
J24A **Dixon Ranch, L** 48.67 334 ⇑P P 15 55 31.0 +0.4
baz=49
L21A **Rawlins** 48.86 331 ⇑P P 15 55 33.0 +0.8
baz=49
M20A **Sweetwater, Wa** 48.91 330 ⇓P P 15 55 33.4 +0.9
baz=49
O18A **Roosevelt** 48.96 327 ⇑P P 15 55 33.7 +0.7
baz=49
N19A **John Jarvie Ra** 48.97 329 ⇑P P 15 55 33.4 +0.4
baz=49
RSSD **Black Hills** 49.05 335 *eP* P 15 55 31.6 -2.0
16nm,1.1s
CCUT **Cedar City** 49.05 322 *eP* P 15 55 34.8 +1.1
11nm,1.7s
I24A **Kuemmerle Ranc** 49.09 335 ⇓P P 15 55 33.2 -0.6
baz=49
O17A **Robinson Place** 49.30 327 ⇓P P 15 55 36.2 +0.5
baz=49
DAU **Daniels Canyon** 49.74 327 *eP* P 15 55 39.6 +0.5
H24A **Dirks Ranch, A** 49.77 335 ⇑P P 15 55 38.4 -0.5
baz=50
K20A **Yellowstone Ra** 49.85 331 ⇑P P 15 55 40.2 +0.4
baz=50
N17A **Moffit Pass** 49.88 328 ⇑P P 15 55 40.8 +0.6
baz=50
I22A **9 Mile Ranch,** 49.93 333 ⇑P P 15 55 40.0 -0.2
baz=50
J21A **Lysite** 49.95 332 ⇑P P 15 55 40.5 +0.1
baz=50
K19A **Abiquiu Red Bu** 50.23 331 ⇓P P 15 55 43.3 +0.7
baz=50
I21A **Big Trails, Te** 50.23 333 ⇑P P 15 55 43.3 +0.7
baz=50
J20A **Shoshoni** 50.25 332 ⇑P P 15 55 42.7 0.0
baz=50
PDAR **Pinedale Array** 50.53 330 P P 15 55 45.8 +0.8
PDAR **Pinedale Array** 50.53 330 P P 15 55 45.8 +0.8
1.2nm,0.9s,baz=140,slow=9.4,SNR=6.6
BW06 **Boulder Array** 50.53 330 *eP* P 15 55 45.4 +0.4
27nm,2.5s
BW06 **Boulder Array** 50.53 330 ⇑P P 15 55 45.7 +0.7
baz=51
K18A **Toltan Ranch,** 50.68 330 ⇓P P 15 55 47.1 +1.0
baz=51
I20A **Worland** 50.73 332 ⇓P P 15 55 47.0 +0.7
baz=51
G22A **Birney** 50.89 334 ⇑P P 15 55 48.2 +0.8
baz=51
R11A **Troy Canyon, C** 50.91 322 ⇑P P 15 55 49.1 +1.2
baz=51
L16A **Fish Haven** 50.96 328 ⇑P P 15 55 48.9 +0.7
baz=51
H20A **Greybull** 51.08 333 ⇓P P 15 55 49.3 +0.5
baz=51
J18A **Kendall Valley** 51.09 330 ⇓P P 15 55 49.4 +0.3
baz=51
E24A **Baker** 51.15 337 ⇓P P 15 55 48.4 -1.0
baz=51
F22A **Rosebud** 51.32 335 ⇓P P 15 55 51.4 +0.8
baz=52
I18A **Diamond G Ranc** 51.35 331 ⇑P P 15 55 51.7 +0.6
baz=52
L15A **Malad City** 51.46 327 ⇓P P 15 55 53.1 +1.3
baz=52
J17A **Brown Place, J** 51.55 330 ⇑P P 15 55 53.2 +0.6
baz=52
D24A **Glendive** 51.62 337 ⇑P P 15 55 54.0 +1.2
baz=52
ULM **Lac du Bonnet** 51.67 345 P P 15 55 51.1 -1.9
ULM **Lac du Bonnet** 51.67 345 P P 15 55 51.1 -1.9
2.2nm,0.5s,baz=157,slow=6.0,SNR=5.1
G20A **Bridger** 51.74 333 ⇑P P 15 55 54.5 +0.7
baz=52
MOOW **Moose Ponds** 51.84 330 *eP* P 15 55 55.1 +0.3
40nm,2.9s
I17A **Pilgrim Ck.** 51.88 330 ⇑P P 15 55 56.2 +1.1
baz=52
D23A **Lindsay** 52.01 337 ⇓P P 15 55 56.4 +0.7
baz=52
IMW **Indian Meadow** 52.05 330 *eP* P 15 55 56.3 -0.1
29nm,2.0s
RLMT **Red Lodge** 52.15 332 ⇓P P 15 55 57.9 +0.9
baz=52
F20A **Billings** 52.16 334 ⇑P P 15 55 57.6 +0.7
baz=52
K14A **Jones Ranch, D** 52.26 327 ⇑P P 15 55 59.0 +1.2
baz=52
D22A **Cohagen** 52.38 336 ⇑P P 15 55 59.7 +1.2
baz=52,SNR=7.5
G18A **Lazy EL Ranch,** 52.43 332 ⇑P P 15 55 59.8 +0.7
baz=53
F19A **Roth Farm, Mol** 52.55 333 ⇑P P 15 56 00.9 +1.0
baz=53
D21A **La Casta Ranch** 52.65 335 ⇓P P 15 56 01.4 +0.9
baz=53
NVAR **Mina Array Bea** 52.67 320 P P 15 56 00.9 -0.1
NVAR **Mina Array Bea** 52.67 320 P P 15 56 00.9 -0.1
1.9nm,0.7s,baz=124,slow=8.0,SNR=5.8
E20A **Meyer Farm, Mu** 52.69 334 ⇑P P 15 56 02.3 +1.4
baz=53
C22A **Vida** 52.74 337 ⇓P P 15 56 02.0 +0.9
baz=53,SNR=6.4
F18A **Big Timber** 52.94 333 ⇓P P 15 56 03.8 +1.0
baz=53,SNR=9.0
E19A **Rath Farm, Rou** 52.95 334 ⇑P P 15 56 04.4 +1.7
baz=53
J14A **Carey** 52.97 328 ⇓P P 15 56 04.3 +1.2
baz=53,SNR=6.7
B23A **Brockton** 52.98 338 ⇑P P 15 56 03.9 +1.0
baz=53
G17A **Pierce Place,** 52.99 331 ⇑P P 15 56 04.5 +1.3
baz=53
A24A **Westby** 53.00 339 ⇓P P 15 56 04.2 +1.1
baz=53
D20A **Manuel Ranch,** 53.15 335 ⇓P P 15 56 04.9 +0.7
baz=53,SNR=7.1
B22A **Reddig Ranch S** 53.24 337 ⇑P P 15 56 05.7 +0.9
baz=53
C21A **Desert Coulee** 53.30 336 ⇓P P 15 56 06.3 +1.1
baz=53
A23A **Redstone** 53.35 338 ⇑P P 15 56 06.2 +0.6
baz=54
I14A **Mackay** 53.35 329 ⇓P P 15 56 07.3 +1.3
baz=54
J13A **Cove Ranch, Pi** 53.37 328 ⇑P P 15 56 07.5 +1.5
baz=54
F17A **Fitzpatrick Pl** 53.38 332 ⇑P P 15 56 07.6 +1.6
baz=54
H15A **Lima** 53.42 330 ⇑P P 15 56 07.6 +1.2
baz=54
G16A **Moss Hill, Enn** 53.44 331 ⇓P P 15 56 07.8 +1.3
baz=54
D19A **Cripps Ranch,** 53.53 334 ⇑P P 15 56 08.3 +1.3
baz=54
E18A **Harlowton** 53.53 333 ⇓P P 15 56 08.4 +1.3
baz=54
C20A **Veseth Ranch,** 53.58 335 ⇓P P 15 56 08.7 +1.3
baz=54
HLID **Hailey** 53.61 328 *eP* P 15 56 09.5 +1.6
53nm,3.0s
HLID **Hailey** 53.61 328 ⇓P P 15 56 09.4 +1.6
baz=54
BOZ **Bozeman (W)** 53.66 331 ⇓P P 15 56 08.5 +0.5
baz=54
I13A **Wildhorse Cree** 53.69 328 ⇑P P 15 56 10.4 +1.9
baz=54
G15A **Dillon** 53.73 330 ⇓P P 15 56 10.4 +1.7
baz=54
B21A **Ellsworth Farm** 53.74 336 ⇓P P 15 56 09.5 +1.0
baz=54
F16A **Kennard Place,** 53.75 331 ⇑P P 15 56 09.7 +1.0
baz=54
A22A **Carney Farms,** 53.77 338 ⇓P P 15 56 09.7 +1.0
baz=54
H14A **Leadore** 53.79 329 ⇓P P 15 56 10.1 +1.0
baz=54
E17A **Martinsdale** 53.89 332 ⇑P P 15 56 10.8 +1.0
baz=54
D18A **Linhart Farms,** 53.96 334 ⇓P P 15 56 11.4 +1.2
baz=54
C19A **Slack Wire Ran** 54.04 335 ⇓P P 15 56 12.0 +1.2
baz=54,SNR=5.8
I12A **Atlanta** 54.15 327 ⇑P P 15 56 13.3 +1.5
baz=54
A21A **Bergtoll Ranch** 54.16 337 ⇑P P 15 56 12.5 +1.0
baz=54,SNR=5.6
B20A **Solberg Farm,** 54.16 336 ⇑P P 15 56 12.7 +1.1
baz=54
H13A **Challis** 54.21 329 ⇑P P 15 56 12.4 +0.3
baz=54
F15A **Butte** 54.21 331 ⇓P P 15 56 13.3 +1.1
baz=54
G14A **Jackson** 54.27 330 ⇓P P 15 56 13.5 +0.9
baz=54
MFID **Camas Ranch** 54.28 327 *eP* P 15 56 14.9 +2.3
22nm,1.6s
MFID **Camas Ranch** 54.28 327 ⇑P P 15 56 14.2 +1.5
baz=54
D17A **Six Diamond Ra** 54.32 333 ⇑P P 15 56 14.0 +1.1
baz=54
E16A **East Helena** 54.32 332 ⇑P P 15 56 13.8 +0.9
baz=54
H12A **Diamond D Ranc** 54.51 328 ⇓P P 15 56 15.5 +1.1
baz=55
G13A **Cobalt** 54.56 329 ⇓P P 15 56 15.4 +0.7
baz=55
EGMT **Eagleton** 54.57 334 *eP* P 15 56 15.1 +0.5
11nm,1.4s
EGMT **Eagleton** 54.57 334 ⇓P P 15 56 15.9 +1.3
baz=55
D16A **Dana Ranch, Ca** 54.63 332 ⇑P P 15 56 16.3 +1.1
baz=55
SCHQ **Schefferville** 54.73 8 P P 15 56 14.7 -0.9
SCHQ **Schefferville** 54.73 8 P P 15 56 14.7 -0.9
4.0nm,1.0s,baz=176,slow=5.8,SNR=6.2
A19A **Klindworth Far** 54.84 336 ⇓P P 15 56 17.7 +1.1
baz=55
B18A **Beardsley Farm** 54.86 335 ⇓P P 15 56 18.1 +1.4
baz=55
D15A **Lincoln** 55.09 332 ⇓P P 15 56 19.5 +1.0
baz=55
F13A **Darby** 55.09 330 ⇑P P 15 56 19.6 +1.1
baz=55
E14A **Clinton** 55.11 331 ⇑P P 15 56 19.7 +1.1
baz=55
B17A **L&Q Farms, Che** 55.23 334 ⇓P P 15 56 20.3 +1.0
baz=55
C16A **Fuhringer Ranc** 55.29 333 ⇓P P 15 56 21.5 +1.7
baz=55
A18A **Metzger Ranch,** 55.29 335 ⇓P P 15 56 21.2 +1.4
baz=55
MSO **Missoula** 55.62 331 ⇓P P 15 56 23.9 +1.7
baz=56
C15A **Salmond Ranch,** 55.66 332 ⇑P P 15 56 24.0 +1.4
baz=56
A17A **Triple J Farms** 55.68 334 ⇓P P 15 56 23.7 +1.1
baz=56
D13A **Huson** 56.06 331 ⇑P P 15 56 26.2 +0.9
baz=56
B14A **Marquette Ranc** 56.40 332 ⇑P P 15 56 29.1 +1.2
baz=56
D12A **Red Ives Fores** 56.47 330 ⇑P P 15 56 29.9 +1.5
baz=57
A14A **Double T Ranch** 56.91 333 ⇓P P 15 56 32.6 +1.1
baz=57
C12B **Nazgeli Ranch,** 56.99 331 ⇓P P 15 56 33.4 +1.4
baz=57
FFC **Flin Flon** 57.33 344 *eP* P 15 56 32.7 -1.5
5.0nm,1.1s
C11A **Tepee Creek (N** 57.46 330 ⇓P P 15 56 36.5 +1.2
baz=58
YKA **Yellowknife Ar** 67.46 343 P P 15 57 40.0 -1.8
YKA **Yellowknife Ar** 67.46 343 P P 15 57 40.0 -1.8
1.2nm,0.9s,baz=133,slow=6.5,SNR=13
PPT **Papeete** 72.67 251 LR LR 16 22 31.6
comp=Z,146nm,19.8s,baz=256,slow=30
ESDC **Sonseca Array** 77.30 50 P P 15 58 40.9 -0.2
ESDC **Sonseca Array** 77.30 50 P P 15 58 40.9 -0.2
0.4nm,0.4s,baz=262,slow=5.4,SNR=3.9
TORD **Torodi Ar. Bea** 79.81 77 P P 15 58 54.0 -1.4
TORD **Torodi Ar. Bea** 79.81 77 P P 15 58 54.0 -1.4
0.6nm,0.9s,baz=283,slow=3.8,SNR=3.6
TORD LR LR 16 32 34.0
comp=Z,80nm,18.1s,baz=215,slow=34
ILAR **Eielson Array** 80.49 336 P P 15 58 57.2 -0.8
ILAR **Eielson Array** 80.49 336 P P 15 58 57.2 -0.8
1.8nm,1.1s,baz=102,slow=5.4,SNR=7.3
MFF **Saint Martin d** 81.15 43 *eP* P 15 59 02.4 +0.4
MFF **Saint Martin d** 81.15 43 *eP* P 15 59 02.4 +0.4
LDF **La Druitiere** 81.46 41 *eP* P 15 59 04.0 +0.4
24nm,1.1s
LDF **La Druitiere** 81.46 41 *eP* P 15 59 04.0 +0.4
24nm,1.1s
RJF **Les Rejaudoux** 82.13 44 *eP* P 15 59 06.8 -0.4
RJF **Les Rejaudoux** 82.13 44 *eP* P 15 59 06.8 -0.4
SMF **Signal de Mont** 83.88 43 *eP* P 15 59 16.4 +0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMF	Signal de Mont	83.88	43	eP	P	15 59 16.4	+0.1
BAIF	Baives	84.45	40	eP	P	15 59 19.2	+0.2
BAIF	Baives	84.45	40	eP	P	15 59 19.2	+0.2
ORIF	Oris-en-Rattie	85.17	45	eP	P	15 59 22.6	-0.3
	4.5nm,0.7s						
ORIF	Oris-en-Rattie	85.17	45	eP	P	15 59 22.6	-0.3
	4.5nm,0.7s						
TNA	Tin City	89.34	335	eP	P	15 59 42.0	-0.5
	8.7nm,1.2s						
GERES	GERESS Array B	90.60	41	P	P	15 59 50.1	+1.2
GERES	GERESS Array B	90.60	41	P	P	15 59 50.1	+1.2
	0.3nm,0.6s,baz=241,slow=2.0,SNR=3.8						
QSPA	South Pole Qui	90.75	180	P	P	15 59 50.2	+1.0
QSPA	South Pole Qui	90.75	180	P	P	15 59 50.2	+1.0
	6.0nm,1.1s						
ZALV	Zalesovo Beam	123.71	12	PKP	PKPdf	16 05 44.1	+0.1
ZALV	Zalesovo Beam	123.71	12	PKP	PKPdf	16 05 44.1	+0.1
	1.4nm,0.9s,baz=298,slow=3.2,SNR=7.4						
MK31	Makanchi Array	129.64	18	ePKPdf	PKPdf	16 05 54.9	-0.9
MKAR	Makanchi Array	129.64	18	PKP	PKPdf	16 05 55.9	+0.2
MKAR	Makanchi Array	129.64	18	PKP	PKPdf	16 05 55.9	+0.2
	1.3nm,1.0s,baz=337,slow=1.6,SNR=6.5						
CN2	Changchun	130.99	338	ePKP	PKPdf	16 06 09.1	+11
SONM	Songino Array	131.51	356	PKP	PKPdf	16 05 58.9	-0.5
SONM	Songino Array	131.51	356	PKP	PKPdf	16 05 58.9	-0.5
	1.4nm,1.1s,baz=38,slow=2.6,SNR=5.8						
KSH	Kashi	133.42	28	PKP	PKPdf	16 06 14.0	+11
KSH				PP	PP	16 08 39.0	+9.2
KSH				PKS	PKSdf	16 09 48.8	+9.0
KSH				SKS	SKSdf	16 13 08.5	-6.4
KSH				SKKS	SKKSac	16 15 13.4	-14
KSH				SS	SS	16 25 56.2	-18
KSH				AMB	AMB		
	comp=Z,280nm,4.9s						
KSH				LR	LR		
	comp=N,56nm,4.2s						
KSH				LR	LR		
	comp=E,78nm,4.7s						
KSH				LR	LR		
	comp=Z,330nm,4.7s						
WMQ	Urumqi	133.87	14	PKP	PKPdf	16 06 11.8	+7.9
BJI	Beijing	137.44	344	PKP	PKPdf	16 06 18.2	+7.7
BJI				SS	SS	16 26 35.6	-26
BJI				LR	LR		
	comp=N,130nm,16.4s						
BJI				LR	LR		
	comp=E,170nm,16.4s						
BJI				LR	LR		
	comp=Z,37nm,20.2s						
HHC	Hu-ho-hao-te	137.74	349	ePKP	PKPdf	16 06 17.3	+6.1
HHC				PP	PP	16 08 59.5	+2.9
HHC				PKS	PKSdf	16 09 51.9	+4.4
HHC				SKS	SKSdf	16 13 10.6	-12
HHC				SKKS	SKKSac	16 15 32.1	-21
HHC				SS	SS	16 26 38.0	-27
HHC				AMB	AMB		
	comp=Z,180nm,7.5s						
GTA	Gaotai	140.03	3	ePKP	PKPdf	16 06 24.6	+9.1
ASAR	Alice Springs	141.55	231	PKPpre	PKPpre	16 06 13.2	
ASAR	Alice Springs	141.55	231	PKhKP	PKPpre	16 06 13.2	
	comp=Z,0.4nm,0.9s,baz=121,slow=3.8,SNR=6.0						
WRA	Warramunga Arr	143.03	237	PKP	PKPdf	16 06 19.7	-1.5
WRA	Warramunga Arr	143.03	237	PKP	PKPdf	16 06 19.7	-1.5
	comp=Z,0.5nm,0.8s,baz=114,slow=3.0,SNR=7.5						
LZH	Lanzhou	143.36	357	ePKP	PKPdf	16 06 29.5	+7.9
LZH				sPKP		16 07 36.1	
WHN	Wuhan	146.78	340	PKP	PKPab	16 06 29.9	-0.3
FITZ	Fitzroy Crossi	151.04	232	PKPbc	PKPbc	16 06 40.4	0.0
FITZ	Fitzroy Crossi	151.04	232	PKPbc	PKPbc	16 06 40.4	0.0
	comp=Z,4.0nm,1.1s,baz=68,slow=3.9,SNR=5.3						
KMI	Kunming	154.32	358	PKPbc	PKPbc	16 06 44.5	-3.3

IDC 03 16:02:04.2±0.9, 3°.37N×127°.15E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.7/23, mbtmp3.7/7, MS3.2/1, Ms1 3.2/1, ms1mx2.3/31, 1C, Error ellipse: s-maj=75.6km s-min=17.3km az=71.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	4.79	323	⇑iP	Pn	16 03 12.5	-5.3
GUMO	Guam	20.23	59	LR	LR	16 13 10.7	
	comp=Z,79nm,22.0s,baz=106,slow=33						
WRA	Warramunga Arr	24.22	163	P	P	16 07 22.3	-0.6
	1.7nm,0.6s,baz=339,slow=10,SNR=13						
ASAR	Alice Springs	27.67	167	P	P	16 07 54.3	+0.2
	0.5nm,0.6s,baz=344,slow=9.5,SNR=7.7						
STKA	Stephens Creek	37.65	160	P	P	16 09 21.7	+0.5
	3.6nm,0.8s,baz=334,slow=12,SNR=5.1						
SONM	Songino Array	47.77	341	P	P	16 10 43.4	0.0
	0.3nm,0.7s,baz=150,slow=8.2,SNR=4.4						
MKAR	Makanchi Array	58.09	325	P	P	16 11 58.2	-1.3
	0.4nm,0.5s,baz=124,slow=8.3,SNR=9.6						
ZALV	Zalesovo Beam	61.09	333	P	P	16 12 21.3	+1.3
	0.2nm,0.3s,baz=106,slow=9.1,SNR=3.0						
ILAR	Eielson Array	85.24	25	P	P	16 14 42.2	-0.4
	0.7nm,1.2s,baz=248,slow=4.8,SNR=2.8						

IDC 03 16:44:09.6±1.2, 8°.08S×130°.52E, h0km, mb3.7/5, mb1 3.8/8, mb1mx3.6/19, mbtmp3.6/8, ML3.5/3, Error ellipse: s-maj=55.6km s-min=23.5km az=85.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.04	205	Pn	Pn	16 46 49.1	+0.2
	0.3nm,0.3s,baz=38,slow=14,SNR=26						
FITZ				Sn	Sn	16 48 43.1	-10
	0.7nm,0.3s,baz=249,slow=20,SNR=4.8						
WRA	Warramunga Arr	12.36	163	Pn	Pn	16 47 06.8	-0.2
	0.3nm,0.3s,baz=340,slow=13,SNR=14						
WRA				Sn	Sn	16 49 18.7	-7.0
	0.6nm,0.3s,baz=344,slow=22,SNR=8.1						
ASAR	Alice Springs	15.84	169	Pn	Pn	16 47 53.9	-0.3
	0.2nm,0.3s,baz=342,slow=8.6,SNR=20						
ASAR				Sn	Sn	16 50 47.1	-3.5
	0.2nm,0.3s,baz=328,slow=15,SNR=4.9						
MJAR	Matsushiro Arr	44.97	9	P	P	16 52 26.4	-0.2
	0.3nm,0.4s,baz=191,slow=9.2,SNR=4.7						
SONM	Songino Array	59.62	341	P	P	16 54 15.6	+0.1
	0.2nm,0.6s,baz=134,slow=6.2,SNR=2.3						
MKAR	Makanchi Array	69.40	327	P	P	16 55 20.2	+0.7
	0.6nm,0.6s,baz=120,slow=8.3,SNR=9.1						
ZALV	Zalesovo Beam	72.77	334	P	P	16 55 38.7	-1.0
	0.3nm,0.4s,baz=108,slow=4.7,SNR=2.6						
ILAR	Eielson Array	94.09	25	P	P	16 57 30.0	+0.3
	0.2nm,0.7s,baz=245,slow=3.9,SNR=2.7						

NNC 03 17:19:24.7±5.1, 39°.48N×73°.39E, h1km±25km, mb3.1, mpv2.7, Error ellipse: s-maj=45.9km s-min=22.0km az=2.0

ISC 03 17:19:28.8±3.2, 39°.8N±0°.2×73°.73E±0°.09, h14km, n9, σ1.40/12, 4C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	Almayashu	2.35	359	P	Pn	17 20 07.4	+0.1
	SNR=32						
KZA	Kyzart	2.57	26	P	Pn	17 20 10.4	0.0
	SNR=16						
EKS2	Erkin-Say	2.88	1	P	Pn	17 20 15.6	+1.2
	SNR=7.6						
AAK	Ala-Archa	2.91	11	P	Pn	17 20 15.1	+0.3
	SNR=14						
ULHL	Ulahol	3.11	37	P	Pn	17 20 19.9	+2.2
	SNR=11						
TKM2	Tokmak 2	3.44	24	⇓Pn	Pn	17 20 23.3	+1.1
	2.3nm,0.6s						
TKM2				⇑Sn	Sb	17 21 12.1	+0.8
	7.1nm,0.7s						
USP	Ospenovka	3.53	9	P	Pb	17 20 29.2	-1.9
	SNR=9.5						
KK31	Karatay Array	4.11	325	⇑Pn	Pn	17 20 31.5	+0.3
	0.2nm,0.3s,baz=129,slow=13,SNR=15						
KK31				⇑Pg	Pb	17 20 41.9	+1.0
	0.5nm,0.3s,baz=135,slow=16,SNR=7.7						
KK31				⇓Sn	Sn	17 21 20.3	+1.3
	1.0nm,0.3s,baz=295,slow=44,SNR=4.1						
KK31				⇑Lg	Lg	17 21 38.4	
	3.0nm,0.5s,baz=139,slow=25,SNR=4.4						
AB31	Akbulak array	13.63	319	P	Pn	17 22 39.9	-1.7
	0.4nm,0.7s,baz=90,slow=2.6,SNR=4.7						

ISCJB 03 17:22:06.6±0.6, 39°.81N±0°.04×40°.21E±0°.05, h12km, Error ellipse: s-maj=5.6km s-min=5.2km az=22.4
ISK 03 17:22:06.5, 39°.83N×40°.19E, h10km, MD2.5
CSEM 03 17:22:07.0±0.2, 39°.80N×40°.15E, h10km, MD2.5, Error ellipse: s-maj=5.6km s-min=4.7km az=17.0
DDA 03 17:22:09.8, 40°.00N×40°.09E, h7km, MD3.0

ISC 03 17:22:07.1±0.9, 39°.80N±0°.03×40°.17E±0°.03, h12km, n19, σ0.71/26, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOPT	Kop Dagi	0.33	49	i P	Pb	17 22 15.0	-0.1
KOPT				i S	Sb	17 22 22.5	+1.9
KOPT	Kop Dagi	0.33	49	i P	Pb	17 22 15.0	-0.1
KOPT				i S	Sb	17 22 22.5	+1.9
ERZN	Erzincan	0.41	239	ePG	Pg	17 22 15.5	+0.3
ERZN				eSG	Sb	17 22 22.1	-0.4
BAYT	Ayd˜–ntepe-Bay	0.59	358	ePG	Pg	17 22 17.9	-0.8
BAYT				eSG	Sg	17 22 26.2	-0.3
BAYT	Ayd˜–ntepe-Bay	0.59	358	ePg	Pg	17 22 17.9	-0.8
BAYT				eSg	Sg	17 22 26.3	-0.3
EZC	Erzincan	0.63	266	ePG	Pg	17 22 19.3	-0.1
EZC	Erzincan	0.63	266	ePg	Pg	17 22 19.3	-0.1
KELT	Kelkit	0.79	297	i P	Pb	17 22 22.4	-0.4
KELT				i S	Sg	17 22 32.8	+0.1
KELT	Kelkit	0.79	297	i P	Pb	17 22 22.4	-0.4
KELT				i S	Sg	17 22 32.8	+0.1
GUMT	Gumushane	0.85	321	ePG	Pg	17 22 23.1	-0.4
GUMT	Gumushane	0.85	321	ePg	Pg	17 22 23.1	-0.4
BNGB	Bingˆ¶l	0.90	154	ePG	Pb	17 22 24.6	0.0
EZM	Erzurum	0.92	83	ePG	Pg	17 22 24.2	-0.8
BINT	Bingol	0.96	165	ePg	Pg	17 22 24.7	-0.8
ILIC	ilic-Erzincan	1.29	255	ePN	Pb	17 22 31.4	+0.1
ILIC	ilic-Erzincan	1.29	255	ePn	Pb	17 22 31.4	+0.1
ESPY	Espiye-Giresun	1.57	316	ePN	Pn	17 22 34.8	0.0
ESPY	Espiye-Giresun	1.57	316	ePn	Pn	17 22 34.8	0.0
DAGI	Agillar	1.84	46	i P	Pg	17 22 42.0	-0.4

IDC 03 17:22:31.5±0.8, 3°.95N×125°.61E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.8/24, mbtmp3.8/8, MS2.7/1, Ms1 2.7/1, ms1mx2.0/44, Error ellipse: s-maj=48.5km s-min=16.1km az=70.0

ISC 03 17:22:36.6±0.9, 3°.9N±0°.1×125°.5E±0°.3, h35km, n14, σ1.23/11, mb3.8/8, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	Mati	3.11	14	eP	Pn	17 23 27.1	+3.9
CTBH	Cotabato--PC H	3.50	340	⇑iP	Pn	17 23 18.6	-10
BUKP	Musuan	3.96	354	eP	Pn	17 23 42.2	+7.3
PAGZ	Pagadian	4.42	332	eP	Pn	17 23 40.3	-1.0
IPIL	Ipil	4.81	323	eP	Pn	17 23 45.0	-1.6
FITZ	Fitzroy Crossi	21.88	180	P	P	17 27 25.4	-1.2
	3.0nm,0.7s,baz=11,slow=6.3,SNR=19						
WRA	Warramunga Arr	25.26	160	P	P	17 28 00.1	+0.4
	9.6nm,0.6s,baz=338,slow=10,SNR=44						
ASAR	Alice Springs	28.62	164	P	P	17 28 30.3	+0.4
	0.5nm,0.5s,baz=340,slow=7.9,SNR=19						
ASAR				PcP	PcP	17 31 39.5	-1.1
	0.3nm,0.6s,baz=340,slow=2.2,SNR=4.9						
CMAR	Chiang Mai Arr	29.70	301	P	P	17 28 41.8	+2.2
	0.4nm,0.3s,baz=119,slow=6.6,SNR=6.7						
KSRS	Korea Array	33.45	4	LR	LR	17 42 26.6	
	comp=Z,13nm,20.1s,baz=160,slow=36						
SONM	Songino Array	46.73	342	P	P	17 31 02.4	0.0
	0.3nm,0.6s,baz=155,slow=9.5,SNR=4.4						
MKAR	Makanchi Array	56.69	326	P	P	17 32 17.0	+0.3
	0.4nm,0.5s,baz=122,slow=7.6,SNR=12						
ZALV	Zalesovo Beam	59.86	334	P	P	17 32 38.0	-0.6
	0.7nm,0.7s,baz=126,slow=7.5,SNR=3.8						
ILAR	Eielson Array	85.47	25	P	P	17 35 11.3	+0.8
	0.7nm,1.1s,baz=265,slow=4.5,SNR=3.0						

IDC 03 17:26:10.7±6.0, 20°.31S×178°.03W, h560km±68km, mb3.3/12, mb1 3.5/12, mb1mx3.4/19, mbtmp3.3/12, Error ellipse: s-maj=27.1km s-min=23.0km az=103.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	33.48	264	P	P	17 32 04.4	0.0
	2.4nm,0.4s,baz=95,slow=12						
STKA	Stephens Creek	37.84	244	P	P	17 32 40.4	0.0
	2.0nm,0.9s,baz=68,slow=11,SNR=3.0						
ASAR	Alice Springs	44.53	257	P	P	17 33 33.3	-0.2
	2.5nm,0.5s,baz=89,slow=8.6,SNR=87						
WRA	Warramunga Arr	44.60	262	P	P	17 33 33.5	-0.5
	2.1nm,0.3s,baz=96,slow=7.6,SNR=32						
MJAR	Matsushiro Arr	70.04	324	P	P	17 36 26.0	-0.9
	1.5nm,0.5s,baz=157,slow=5.9,SNR=14						
PETK	Petropavlovsk-	76.08	345	P	P	17 37 00.3	-0.7
	1.8nm,0.6s,baz=138,slow=7.5,SNR=7.8						
KSRS	Korea Array	76.73	319	P	P	17 37 05.6	+0.7
	0.8nm,0.8s,baz=134,slow=6.0,SNR=4.4						
USRK	Ussuriysk Arra	78.79	326	P	P	17 37 16.7	+0.9
	1.3nm,0.8s,baz=135,slow=1.9,SNR=4.7						
NVAR	Mina Array Bea	80.91	43	P	P	17 37 27.8	+0.4
	0.7nm,0.6s,baz=233,slow=8.9,SNR=3.3						
TXAR	Lajitas Array	86.98	57	P	P	17 37 57.8	+0.4
	1.6nm,0.8s,baz=221,slow=6.1,SNR=7.9						
VNA3	Neumayer Olymp	88.33	176	eP	P	17 38 02.6	-0.2
VNA2	Neumayer--Watz	88.77	177	eP	P	17 38 04.9	0.0
	baz=202,slow=4.4						
PDAR	Pinedale Array	88.85	43	P	P	17 38 05.4	-0.5
	1.2nm,0.9s,baz=224,slow=3.6,SNR=4.1						
CMAR	Chiang Mai Arr	90.02	290	P	P	17 38 12.8	+1.1
	0.9nm,0.8s,baz=122,slow=3.2,SNR=8.0						
GERES	GERESS Array B	150.01	344	PKPbc	PKPbc	17 44 58.1	-0.4
	0.3nm,0.5s,baz=343,slow=4.2,SNR=3.9						
TORD	Torodi Ar. Bea	172.87	178	PKP	PKPdf	17 45 14.8	-2.0
	0.5nm,0.8s,baz=128,slow=0.5,SNR=2.9						
TORD				PKPab	PKPab	17 46 46.4	-0.6
	0.4nm,0.7s,baz=156,slow=3.9,SNR=3.0						

ISCJB 03 17:26:55.2±0.3, 24°.04N±0°.02×122°.01E±0°.02, h37km±10km, Error ellipse: s-maj=3.5km s-min=2.7km az=142.9
JMA 03 17:26:55.2±0.2, 24°.29N×122°.01E, h77km, M2.5
TAP 03 17:26:55.3, 24°.07N×121°.94E, h43km, ML3.2, C

ISC 03 17:26:55.8±1.9, 24°.04N±0°.03×121°.99E±0°.02, h36km±2km, n54, σ0.83/89, 2C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EHP	Heping Village	0.35	319	eP	Pn	17 27 03.6	-0.6
	baz=316						
EHP				eS	Sn	17 27 11.1	+0.3
	baz=316						
HWA	Hwalien	0.36	260	⇓P	Pn	17 27 04.3	-0.1
	baz=253						
HWA				eS	Sn	17 27 10.3	-0.5
	baz=253						
TWD	Chiawan	0.36	276	⇓iP	Pn	17 27 03.9	-0.5
	baz=272						
TWD				i S	Sn	17 27 10.3	-0.6
	baz=272						
ENA	Nanau	0.45	329	⇓iP	Pn	17 27 05.1	-0.4
	baz=327						
ENA				S	Sn	17 27 12.3	-0.2
	baz=327						
ESL	Shilin	0.56	246	eP	Pn	17 27 06.2	-1.1
	baz=248						
ESL				S	Sn	17 27 15.2	-0.2
	baz=248						
TWC	Suao	0.58	347	P	Pn	17 27 07.1	-0.5
	baz=360						
TWC				S	Sn	17 27 15.7	-0.1
	baz=360						
WHF	Hehuan Shan	0.67	279	⇓iP	Pn	17 27 08.1	-1.1
	baz=277						
WHF				S	Sn	17 27 17.5	-1.2
	baz=277						
NNS	Nan Shan	0.69	305	⇑iP	Pn	17 27 08.4	-0.8
	baz=297						
NNS				S	Sn	17 27 18.0	-0.7
	baz=297						
ENTT	Nioudou	0.71	327	P	Pn	17 27 08.6	-0.7
	baz=329						
ENTT				S	Sn	17 27 18.6	-0.5
	baz=329						
TWE	Neicheng	0.74	336	⇑iP	Pn	17 27 09.2	-0.5
	baz=340						
TWE				S	Sn	17 27 19.3	-0.4
	baz=340						
TWT	Tachien	0.77	286	eP	Pn	17 27 10.3	0.0
	baz=278						
TWT				eS	Sn	17 27 20.3	-0.6
	baz=278						
EHY	Hungye	0.81	229	eP	Pn	17 27 09.9	-0.9
	baz=233						
NSK	Sanguang	0.85	318	i P	Pn	17 27 10.8	-0.6
	baz=309						
NSK				S	Sn	17 27 21.5	-1.2
	baz=309						
TWF1	Yuli	0.94	223	eP	Pn	17 27 11.4	-1.0
	baz=230						
TWB1	Santiao Chiao	0.96	360	eP	Pn	17 27 12.4	-0.4
	baz=2.0						
TWB1				eS	Sn	17 27 24.1	-1.1
	baz=2.0						
SMLT	Sun Moon Lake	1.01	261	eP	Pn	17 27 13.4	-0.1
	baz=254						
SMLT				eS	Sn	17 27 26.4	-0.2
	baz=254						
YOJ	Yonaguni jima	1.02	66	P	Pn	17 27 13.4	-0.1
YOJ				eS	Sn	17 27 27.0	+0.4
NWF	Wu-fen Shan	1.04	349	P	Pn	17 27 14.2	+0.2
	baz=351						
NWF				eS	Sn	17 27 26.7	-0.6
	baz=351						
TYC	Yuchr	1.05	263	eP	Pn	17 27 13.9	0.0
	baz=261						
TYC				eS	Sn	17 27 26.6	-0.7
	baz=261						
NSTT	Nanjuang	1.08	303	i P	Pn	17 27 14.8	+0.4
	baz=297						
NSTT				eS	Sn	17 27 27.8	-0.3
	baz=297						
TAP1	Taipei	1.08	337	eP	Pn	17 27 13.7	-0.6
	baz=338						
TAP	Taipei	1.09	336	eP	Pn	17 27 13.9	-0.6
	baz=338						
CHKT	Chengkung	1.10	212	eP	Pn	17 27 14.7	+0.1
	baz=199						
CHKT				eS	Sn	17 27 26.5	-2.2
	baz=199						
TWQ1	Liyutan	1.15	285	P	Pn	17 27 15.7	+0.2
	baz=284						
TWQ1				eS	Sn	17 27 30.4	+0.4
	baz=284						
TWS1	Kuangyinshan	1.18	334	eP	Pn	17 27 15.5	-0.2
	baz=335						
TWS1				eS	Sn	17 27 30.2	-0.3
	baz=335						
NCU	National Centr	1.18	322	eP	Pn	17 27 15.5	-0.2
	baz=322						
NCU				eS	Sn	17 27 30.6	+0.1
	baz=322						
NSY	Sanyi	1.18	289	eP	Pn	17 27 16.2	+0.4
	baz=287						
NSY				eS	Sn	17 27 32.5	+1.8
	baz=287						
HSN	Hsinchu	1.20	309	eP	Pn	17 27 15.7	-0.3
	baz=311						
HSN				eS	Sn	17 27 29.9	-1.1
	baz=311						
TCU	Taichung	1.21	275	eP	Pn	17 27 16.5	+0.4
	baz=273						
TCU				eS	Sn	17 27 33.3	+2.1
	baz=273						
WNT	Mingjian	1.21	262	eP	Pn	17 27 15.9	-0.2
	baz=251						
ALS	Alishan	1.21	244	eP	Pn	17 27 16.7	+0.2
	baz=235						
ALS				eS	Sn	17 27 31.6	-0.1
	baz=235						
ELDTW	Lidau	1.23	227	eP	Pn	17 27 15.4	-1.2
	baz=224						
TWY	Chenhua	1.28	344	eP	Pn	17 27 16.8	-0.3
	baz=345						
TWY				eS	Sn	17 27 34.9	+1.9
	baz=345						
CHN5	Tsauling	1.28	250	eP	Pn	17 27 18.2	+0.9
	baz=239						
CHN5				eS	Sn	17 27 34.1	+0.9
	baz=239						
WGK	Gukeng	1.36	255	eP	Pn	17 27 18.5	+0.3
	baz=242						
CHN4	Tsaushan	1.46	242	eP	Pn	17 27 20.5	+0.9
	baz=231						
CHN4				eS	Sn	17 27 38.7	+1.3
	baz=231						
TWG	Pinlang	1.48	215	eP	Pn	17 27 19.7	-0.2
	baz=214						
TWG				eS	Sn	17 27 36.2	-1.9
	baz=214						
WTP	Ta-pu	1.49	238	eP	Pn	17 27 21.0	+0.9
	baz=237						
WTP				eS	Sn	17 27 39.1	+0.8
	baz=237						
CHY	Chiayi	1.54	250	eP	Pn	17 27 20.3	-0.3
	baz=248						
WTCT	Ta-ch'eng	1.58	264	eP	Pn	17 27 21.4	+0.2
	baz=275						
WTCT				eS	Sn	17 27 42.1	+1.8
	baz=275						
TWK	Hsinying	1.58	241	eP	Pn	17 27 21.2	-0.1
	baz=240						
TWK				eS	Sn	17 27 41.0	+0.4
	baz=240						
CHN1	Nanshi	1.59	238	eP	Pn	17 27 22.6	+1.1
	baz=236						
IRIF	Iriomote-Funau	1.61	79	P	Pn	17 27 21.6	-0.1
IRIF				S	Sn	17 27 41.5	+0.2
HATJ	Hateruma jima	1.66	89	eS	Sn	17 27 43.2	+0.8
ECL	Taimali	1.73	214	eP	Pn	17 27 19.3	-4.0
	baz=211						
SSD	Sandimen	1.80	224	eP	Pn	17 27 25.0	+0.7
	baz=222						
JKRS	Kuro-shima	1.85	84	P	Pn	17 27 25.5	+0.5
JKRS				S	Sn	17 27 47.9	+0.7
TWM1	Shoushan	1.89	230	eP	Pn	17 27 26.7	+1.2
	baz=228						
EAST	Anshuo	1.96	213	eP	Pn	17 27 25.4	-1.2
	baz=210						
JIJ	Ishigaki jima	1.99	80	P	Pn	17 27 26.7	-0.2
JIJ				S	Sn	17 27 49.8	-0.8
LAY	Lan-yu	2.04	192	eP	Pn	17 27 26.2	-1.4
	baz=181						
SCZT	Fangliau	2.09	217	eP	Pn	17 27 29.7	+1.4
	baz=205						
PNG	Penghu	2.28	259	eP	Pn	17 27 30.5	-0.4
	baz=257						
JTJ	Tarama	2.54	76	eS	Sn	17 28 04.0	-0.2

CASC 03 17:28:49.0±2.0, 14°.11N×92°.07W, h50km±22km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAT	Jato	0.47	64	eP	Pn	17 29 01.2	+1.3
JAT				eS	Sn	17 29 07.6	-0.1
FG6		1.23	69	eP	Pn	17 29 10.5	+0.2
FG6				eS	Sn	17 29 27.8	+1.6
FUG	Fuego 3	1.23	74	eP	Pn	17 29 10.2	0.0
FUG				eS	Sn	17 29 26.7	+0.8
PCG	Pacaya	1.44	79	eP	Pn	17 29 13.2	+0.1
PCG				eS	Sn	17 29 32.4	+1.2
IXG	Ixpaco	1.57	87	eP	Pn	17 29 14.9	+0.3
IXG				eS	Sn	17 29 38.7	+4.7
RBDL	Robledal	2.31	90	eP	Pn	17 29 25.1	+0.3
RBDL				eS	Sn	17 29 54.3	+2.1
SBLS	San Blas	2.39	96	eP	Pn	17 29 24.8	-1.2
SBLS				eS	Sn	17 29 53.7	-0.6

LDG 03 17:45:12.2±0.2, 34°.59N×73°.20E, h10km, Mb4.3/7, Ms2.9/1, Error ellipse: s-maj=16.2km s-min=7.6km az=36.0
IDC 03 17:45:13.8±0.6, 34°.66N×73°.06E, h0km, mb4.1/22, mb1 4.3/26, mb1mx4.2/32, mbtmp4.2/26, ML4.4/4, MS3.4/3, Ms1 3.4/3, ms1mx2.6/46, Error ellipse: s-maj=15.3km s-min=12.2km az=27.0
BJI 03 17:45:17.5, 34°.65N×73°.15E, h38km, mB4.8/17, mb4.7/25, ML4.2/2, Ms4.3/12, Ms7 3.9/12
MOS 03 17:45:17.1±0.8, 34°.63N×73°.03E, h33km, mb4.6/28, Error ellipse: s-maj=7.6km s-min=4.5km az=97.2

ISCJB ***03*** *17:45:18.1±0.4, 34.°71N±0.°02×73.°06E±0.°03, h43km±4km, mb4.3/58, MS3.8/7, Error ellipse: s-maj=3.9km s-min=3.0km az=156.9*

NEIC ***03*** *17:45:19.6±0.6, 34.°67N×73.°09E, h42km±5km, mb4.5/23, Error ellipse: s-maj=5.1km s-min=4.3km az=215.0*

NNC ***03*** *17:45:25.0±4.8, 34.°95N×72.°83E, h82km±42km, mb3.9, mpv4.5, Error ellipse: s-maj=36.5km s-min=31.0km az=38.0*

ISC 03 17:45:19.4±0.4**, 34.°69N**±0.°03×**73.°01E**±0.°03**, h42**km±3km**, n249,** σ1s**60**/295**, mb4.4**/58**, MS4.1**/7**, 9C-8D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.04	168	⇓P	Pn	17 45 35.6	-2.1
NIL	Nilore	1.05	169	ePn	Pn	17 45 36.3	-1.5
NIL				eSn	Sn	17 45 53.1	+1.8
CEP	Cherat	1.25	227	⇓P	Pn	17 45 38.7	-1.9
CEP				S	Sn	17 45 58.0	+1.6
THW	Thamme Wali	2.16	210	P	Pn	17 45 54.4	+1.4
JMU	Jammu	2.52	141	ex	Pn	17 46 02.0	+4.2
JMU				eS	Sn	17 46 32.5	+5.3
THN	Thein Dam	3.19	134	eP	Pn	17 46 06.9	-0.1
THN				ex	Sn	17 46 50.2	+6.5
KBL	Kabul	3.28	269	eP	Pn	17 46 11.2	+2.7
KBL				e		17 46 44.9	
KBL	Kabul	3.28	269	ePn	Pn	17 46 11.2	+2.7
KBL				eSn	Sn	17 46 44.9	-1.4
DHRM	DHARAMSHALA	3.67	131	eP	Pn	17 46 15.0	+1.2
DHRM				eS	Sn	17 46 58.7	+2.7
DHRM				AML	AML	17 47 02.0	
	comp=E,1μm,0.3s						
DHRM				AML	AML	17 47 02.2	
	comp=N,2μm,0.5s						
BHK	Bhakra	4.33	138	eP	Pn	17 46 23.6	+0.8
BHK				eS	Sn	17 47 14.8	+2.7
SDNR	Sundarnagar	4.60	133	eP	Pn	17 46 27.1	+0.7
SDNR				eS	Sn	17 47 19.1	+0.5
SMLA	Simla	4.98	134	iP	Pn	17 46 32.8	+1.2
SMLA				iS	Sn	17 47 29.9	+1.9
KSH	Kashi	5.37	25	P	Pn	17 46 34.8	-2.4
KSH				S	Sn	17 47 17.9	-20
KSH				smax	smax		
	comp=N,360nm,0.3s						
KSH				smax	smax		
	comp=E,250nm,0.3s						
DDI	Dehra Dun	6.09	134	eP	Pn	17 46 45.3	-1.7
DDI				ex	Sn	17 47 56.0	+0.6
DDI				AML	AML	17 48 02.7	
	comp=E,2μm,0.4s						
DDI				AML	AML	17 48 04.4	
	comp=N,2μm,0.2s						
NDI	New Delhi	6.97	148	eP	Pn	17 47 00.0	+0.9
NDI				ex	x	17 48 11.5	
AML	Almayashu	7.45	4	iP	Pn	17 47 08.0	+2.0
AML	Almayashu	7.45	4	P	Pn	17 47 08.0	+2.0
	SNR=64						
KZA	Kyzart	7.59	13	iP	Pn	17 47 09.8	+2.0
KZA	Kyzart	7.59	13	P	Pn	17 47 09.8	+2.0
	SNR=22						
UCH	Uchtor	7.62	8	P	Sn	17 48 33.9	+0.3
	SNR=8.5						
ULHL	Ulahol	7.96	18	iP	Pn	17 47 15.3	+2.5
ULHL	Ulahol	7.96	18	P	Pn	17 47 15.3	+2.5
	SNR=8.0						
PTH	Pithoragarh	7.97	128	ex	x	17 47 29.1	
PTH				ex	Sn	17 48 44.9	+3.0
EKS2	Erkin-Say	7.99	4	eP	Pn	17 47 14.8	+1.8
EKS2				e		17 48 41.9	
EKS2				pmax	pmax		
	comp=Z,13nm,0.6s						
EKS2	Erkin-Say	7.99	4	ePn	Pn	17 47 14.8	+1.8
	comp=Z,13nm,0.6s						
EKS2				eSn	Sn	17 48 41.9	-0.2
EKS2	Erkin-Say	7.99	4	P	Pn	17 47 15.1	+2.0
	SNR=34						
AAK	Ala-Archa	8.02	8	iP	Pn	17 47 15.3	+1.8
AAK	Ala-Archa	8.02	8	ePn	Pn	17 47 15.5	+1.9
	comp=Z,57nm,0.4s						
AAK				Sn	Sn	17 48 44.6	+1.6
AAK				eSn	Sn	17 48 44.8	+1.6
AAK	Ala-Archa	8.02	8	P	Pn	17 47 15.7	+2.1
	SNR=18						
AAK	Ala-Archa	8.02	8	Pn	Pn	17 47 15.4	+1.8
	comp=Z,2.8nm,0.3s,baz=146,slow=6.8,SNR=44						
AAK				Sn	Sn	17 48 44.6	+1.6
	comp=Z,4.1nm,0.3s,baz=17,slow=19,SNR=7.5						
LGTI	Lohaghat	8.06	128	eP	Pn	17 47 13.0	-0.9
LGTI				eS	Sn	17 48 40.6	-3.1
LGTI				ex	x	17 50 02.0	
LGTI				ex	x	17 52 11.5	
KBK	Karagaybulak	8.10	10	iP	Pn	17 47 17.8	+3.1
KBK	Karagaybulak	8.10	10	P	Pn	17 47 17.8	+3.1
	SNR=16						
AJM	Ajmer	8.30	170	eP	Pn	17 47 16.0	-1.3
AJM				eS	Sn	17 48 45.0	-4.7
CHMS	Chumysh	8.41	9	iP	Pn	17 47 20.4	+1.7
CHMS	Chumysh	8.41	9	P	Pn	17 47 20.4	+1.7
	SNR=6.6						
TKM2	Tokmak 2	8.47	13	⇑P	Pn	17 47 22.0	+2.3
	comp=Z,5.7nm,0.5s						
TKM2				⇑S	Sn	17 48 53.1	-0.9
	comp=Z,17nm,0.5s						
TKM2	Tokmak 2	8.47	13	iP	Pn	17 47 22.1	+2.5
TKM2	Tokmak 2	8.47	13	P	Pn	17 47 22.2	+2.5
	SNR=26						
KK31	Karatay Array	8.63	348	⇑P	Pn	17 47 23.0	+1.3
	comp=Z,14nm,0.3s,baz=157,slow=11,SNR=703						
KK31				⇓S	Sn	17 48 59.0	+1.3
	comp=Z,38nm,0.5s,baz=175,slow=24,SNR=13						
KKAR	Karatay Array	8.63	348	eP	Pn	17 47 22.9	+1.2
KKAR				e		17 48 56.8	
KKAR				pmax	pmax		
	comp=Z,37nm,0.3s						
KKAR	Karatay Array	8.63	348	ePn	Pn	17 47 22.9	+1.2
	comp=Z,37nm,0.3s						
KKAR				eSn	Sn	17 48 56.8	-0.9
PYUN	Piuthan	10.76	125	eP	Pn	17 47 48.4	-2.7
	comp=Z,79nm,0.4s						
DANN	Dangsing	11.13	122	eP	Pn	17 47 52.8	-3.5
	comp=Z,74nm,0.3s						
KOLN	Koldanda	11.38	124	eP	Pn	17 47 57.0	-2.6
	comp=Z,33nm,0.3s						
BHPL	Bhopal	12.04	160	eP	Pn	17 48 07.0	-1.5
BHPL				eS	Sn	17 50 14.1	-7.3
BHPL				AML	AML	17 50 17.0	
	comp=E,62nm,0.2s						
BHPL				AML	AML	17 50 17.6	
	comp=N,60nm,0.7s						
DMN	Daman	12.53	121	eP	Pn	17 48 11.5	-3.8
KKN	Kakani	12.54	120	eP	Pn	17 48 11.2	-4.3
	comp=N,62nm,0.5s						
PKIN	Phulchoki	12.75	120	eP	Pn	17 48 15.0	-3.4
	comp=N,52nm,0.3s						
PKI	Pulchoki	12.76	120	eP	Pn	17 48 14.2	-4.4
GUN	Gumba	12.90	118	eP	Pn	17 48 16.7	-3.9
	comp=N,47nm,0.4s						
MK31	Makanchi Array	13.98	27	eP	Pn	17 48 34.3	-0.5
MK31	Makanchi Array	13.98	27	ePn	Pn	17 48 34.3	-0.5
MKAR	Makanchi Array	13.98	27	P	Pn	17 48 34.0	-0.9
MKAR	Makanchi Array	13.98	27	Pn	Pn	17 48 34.0	-0.9
MKAR	Makanchi Array	13.98	27	Pn	Pn	17 48 34.0	-0.9
	comp=N,0.2nm,0.3s,baz=198,slow=13,SNR=15						
RAMN	Ramite	13.98	120	eP	Pn	17 48 30.2	-5.0
	comp=N,64nm,0.6s						
TAPN	Taplejung	14.56	116	eP	Pn	17 48 37.7	-5.3
WMQ	Urumqi	14.56	47	P	Pn	17 48 43.0	+0.2
WMQ				pP	P	17 48 52.0	+3.5
WMQ				sP		17 48 58.0	
WMQ				S	Sn	17 51 23.0	+0.1
WMQ				sS	S	17 51 37.0	-3.8
WMQ				SS	SnSn	17 51 43.0	+7.4
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,87nm,5.0s						
WMQ				LR	LR		
	comp=N,180nm,5.0s						
WMQ				LR	LR		
	comp=E,130nm,5.0s						
WMQ				LR	LR		
	comp=Z,86nm,6.0s						
ODAN	Odare	14.60	118	eP	Pn	17 48 38.9	-4.7
	comp=Z,41nm,0.5s						
LSA	Lhasa	16.14	103	P	Pn	17 48 58.9	-4.8
KURK	Kurchatov	16.53	13	⇑P	Pn	17 49 08.2	+0.1
	comp=Z,4.4nm,0.7s						
KURK	Kurchatov	16.53	13c	eP	P	17 49 09.6	-0.6
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	Kurchatov	16.53	13	ePn	Pn	17 49 05.5	-2.6
	comp=Z,4.9nm,0.5s						
AB31	Akbulak array	17.46	330	⇓P	Pn	17 49 19.3	-0.4
	comp=Z,8.8nm,0.7s,baz=143,slow=13,SNR=100						
AB31				S	Sn	17 52 27.3	-5.8
	comp=Z,5.6nm,0.8s,baz=152,slow=24,SNR=6.5						
ABKAR	Akbulak array	17.46	330	ePn	Pn	17 49 15.1	-4.6
	comp=Z,9.1nm,0.6s						
ABKAR				eSn	Sn	17 52 21.2	-12
HYB	Hyderabad	17.90	163	eP	Pn	17 49 24.5	-0.8
HYB	Hyderabad	17.90	163	eP	Pn	17 49 24.5	-0.8
HYB	Hyderabad	17.90	163	iP	Pn	17 49 24.5	-0.8
HYB				eS	Sn	17 52 42.0	-1.9
VOSK	Vostochnaya	18.09	356	⇓P	Pn	17 49 27.4	0.0
	comp=Z,4.7nm,0.6s						
BVA0	Borovoye Array	18.43	355	⇑P	Pn	17 49 31.4	-0.2
	comp=Z,0.8nm,0.5s,baz=137,slow=6.8,SNR=56						
BVAR	Borovoye Array	18.43	355	P	Pn	17 49 32.0	+0.5
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BVAR	Borovoye Array	18.43	355	P	Pn	17 49 32.0	+0.5
BVAR	Borovoye Array	18.43	355	P	Pn	17 49 32.0	+0.5
	comp=Z,3.4nm,0.3s,baz=158,slow=9.9,SNR=39						
BRVK	Borovoye	18.47	355c	eP	Pn	17 49 32.4	+0.4
BRVK				pmax	pmax		
	comp=Z,12nm,0.7s						
BRVK	Borovoye	18.47	355	ePn	P	17 49 30.2	-1.4
	comp=Z,12nm,0.6s						
ZRNK	Zerenda	18.48	352	⇓P	P	17 49 31.0	-0.7
	comp=Z,9.5nm,0.7s						
SHL	Shillong	18.66	114	ex	P	17 49 29.0	-5.1
AKTO	Aktyubinsk	19.17	330	P	Pn	17 49 40.3	-0.1
AKTO				pmax	pmax		
	comp=Z,7.0nm,0.3s						
AKTO	Aktyubinsk	19.17	330	P	Pn	17 49 40.3	-0.1
AKTO	Aktyubinsk	19.17	330	P	Pn	17 49 40.3	-0.1
	comp=Z,7.0nm,0.3s,baz=135,slow=9.1,SNR=83						
IMP	Imphal	20.64	113	eP	P	17 49 54.0	-1.5
ZAA0	Zalesovo Array	20.98	20	eP	P	17 49 57.7	-1.1
ZAA0				eS	S	17 53 43.5	-6.6
ZALV	Zalesovo Beam	20.98	20	P	P	17 49 58.3	-0.6
ZALV				S	S	17 53 46.7	-3.4
ZALV				pmax	pmax		
	comp=Z,24nm,0.5s						
ZALV				smax	smax		
	comp=N,2.0nm,0.8s						
ZALV	Zalesovo Beam	20.98	20	P	P	17 49 58.3	-0.6
ZALV				S	S	17 53 46.7	-3.4
ZALV	Zalesovo Beam	20.98	20	P	P	17 49 58.3	-0.6
	comp=N,24nm,0.5s,baz=213,slow=10,SNR=77						
ZALV				S	S	17 53 46.7	-3.4
	comp=N,1.9nm,0.8s,baz=212,slow=24,SNR=3.1						
ZALV				LR	LR	17 58 32.1	
	comp=N,35nm,19.9s,baz=266,slow=38						
NVS	Novosibirsk	21.38	16	eP	P	17 50 01.6	-1.5
NVS				eS	S	17 53 53.6	-4.4
NVS				pmax	pmax		
	comp=Z,7.0nm,0.4s						
NVS				pmax	pmax		
	comp=N,5.0nm,0.4s						
NVS				smax	smax		
	comp=N,11nm,1.6s						
NVS				smax	smax		
	comp=E,9.0nm,1.5s						
GTA	Gaotai	21.87	70	eP	P	17 50 09.2	+0.5
GTA				pP	pP	17 50 19.3	+0.2
GTA				sP	sP	17 50 24.3	-0.1
GTA				PP	PnPn	17 50 33.2	+2.1
GTA				S	S	17 54 07.5	-0.7
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,95nm,8.1s						
GTA				LR	LR		
	comp=E,98nm,13.3s						
GTA				LR	LR		
	comp=Z,140nm,15.7s						
MIB	Mutribah	22.23	265	eP	P	17 50 13.2	+0.7
MIB				AMb	AMB	17 50 16.4	
	comp=Z,61nm,1.0s						
RDF	Al-Radifah	22.36	262	eP	P	17 50 14.4	+0.5
RDF				AMb	AMB	17 50 16.3	
	comp=Z,43nm,0.8s						
NAY	Al-Naaiem	22.50	263	eP	P	17 50 15.3	-0.1
NAY				AMb	AMB	17 50 19.7	
	comp=Z,16nm,1.0s						
SVE	Sverdlovsk	23.69	343	eP	P	17 50 29.9	+2.8
SVE				pmax	pmax		
	comp=Z,11nm,0.7s						
ARU	Arti	23.89	340c	iP	P	17 50 29.9	+1.0
ARU						17 50 58.1	
ARU				S	S	17 54 40.5	-1.6
ARU				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ARU	Arti	23.89	340	eP	P	17 50 29.4	+0.4
	comp=Z,13nm,0.6s						
KBZ	Khabaz	24.91	300	P	P	17 50 39.6	+1.2
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	24.91	300	P	P	17 50 39.5	+1.2
KBZ	Khabaz	24.91	300	P	P	17 50 39.5	+1.2
	comp=Z,1.6nm,0.8s,baz=80,slow=5.8,SNR=3.6						
KIV	Kislovodsk	25.10	301	eP	P	17 50 40.5	+0.2
KIV				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KIV	Kislovodsk	25.10	301	eP	P	17 50 40.5	+0.2
	comp=Z,5.8nm,0.6s						
LZH	Lanzhou	25.13	78	eP	P	17 50 40.0	-0.7
LZH				pP	pP	17 50 50.2	-1.7
LZH				sP	sP	17 50 56.8	-0.1
LZH				PP	PnPn	17 51 18.4	+2.7
LZH				S	S	17 55 06.1	+3.3
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,100nm,4.0s						
LZH				LR	LR		
	comp=N,410nm,11.8s						
LZH				LR	LR		
	comp=E,280nm,10.1s						
LZH				LR	LR		
	comp=Z,590nm,12.5s						
CD2	Chengdu	26.07	90	P	P	17 50 48.9	-0.2
CD2				pP	pP	17 51 00.1	-0.2
CD2				sP	sP	17 51 05.5	+0.1
CD2				PP	PnPn	17 51 30.6	+2.2
CD2				PcP	PcP	17 54 17.4	+1.3
CD2				S	S	17 55 13.8	-3.7
CD2				sS	sS	17 55 32.9	-3.5
CD2				SS	SnSn	17 56 21.6	+3.8
CD2				ScS	ScS	18 01 40.2	-2.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,100nm,5.2s						
CD2				LR	LR		
	comp=N,590nm,17.1s						
CD2				LR	LR		
	comp=E,550nm,14.9s						
CD2				LR	LR		
	comp=Z,310nm,21.0s						
ZAK	Zakamensk	27.02	45	eP	P	17 50 57.8	+0.2
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KMI	Kunming	27.39	102	P	P	17 51 00.7	-0.6
KMI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
CHTO	Chiang Mai	27.92	118	eP	P	17 51 05.6	-0.2
CHTO				pmax	pmax		
	comp=Z,15nm,0.9s						
CHTO	Chiang Mai	27.92	118	eP	P	17 51 05.6	-0.2
	comp=Z,15nm,0.9s						
SONM	Songino Array	28.09	52	P	P	17 51 07.9	+0.8
SONM	Songino Array	28.09	52	P	P	17 51 07.9	+0.8
	comp=Z,2.0nm,1.1s,baz=257,slow=9.0,SNR=7.7						
SONM				LR	LR	18 03 16.6	
	comp=Z,34nm,21.2s,baz=157,slow=39						
CM31	Chiang Mai Arr	28.15	118	eP	P	17 51 07.6	-0.2
	comp=Z,16nm,1.0s						
CMAR	Chiang Mai Arr	28.15	118	P	P	17 51 08.2	+0.3
CMAR	Chiang Mai Arr	28.15	118	P	P	17 51 08.2	+0.3
	comp=Z,8.0nm,0.9s,baz=301,slow=9.5,SNR=22						
ULN	Ulaanbaatar	28.52	52	P	P	17 51 12.4	+1.3
	comp=Z,1.5nm,0.8s						
GYA	Guiyang	30.00	97	eP	P	17 51 25.0	+0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC	Hu-ho-hao-te	30.91	67	eP	P	17 51 32.0	-0.2
HHC				pP	pP	17 51 44.2	+0.6
HHC				sP	sP	17 51 48.8	+0.2
HHC				PP	PnPn	17 52 34.8	+1.0
HHC				PcP	PcP	17 54 28.7	+0.7
HHC				S	S	17 56 31.8	-1.8
HHC				sS	sS	17 56 51.0	-1.6
HHC				ScP	ScP	17 58 06.4	-1.0
HHC				PcS	PcS	17 58 11.8	-0.3
HHC				SS	SnSn	17 58 15.5	-0.2
HHC				ScS	ScS	18 02 01.2	-3.1
HHC				pmax	pmax		
	comp=Z,18nm,0.6s						
HHC				pmax	pmax		
	comp=Z,230nm,5.8s						
HHC				LR	LR		
	comp=N,190nm,12.3s						
HHC				LR	LR		
	comp=E,400nm,14.0s						
HHC				LR	LR		
	comp=Z,260nm,13.3s						
BR131	Keskin Array S	31.58	291	P	P	17 51 38.6	+0.5
BRTR	Keskin Array B	31.58	291	P	P	17 51 39.6	+1.4
BRTR	Keskin Array B	31.58	291	P	P	17 51 39.6	+1.4
	comp=Z,1.0nm,0.8s,baz=87,slow=7.5,SNR=4.8						
KLMR	Klimovskoe	33.86	331	eP	P	17 51 57.4	-0.3
KLMR				pmax	pmax		
	comp=Z,19nm,1.6s						
AKASG	Malin Array Be	35.36	311	P	P	17 52 10.8	0.0
AKASG	Malin Array Be	35.36	311	P	P	17 52 10.8	0.0
AKASG	Malin Array Be	35.36	311	P	P	17 52 10.8	0.0
	comp=Z,0.4nm,0.4s,baz=78,slow=7.9,SNR=3.2						
QIZ	Qiongzhong	36.14	106	P	P	17 52 17.4	-0.4
QIZ				pP	pP	17 52 28.3	-1.0
QIZ				S	S	17 57 56.3	+1.6
QIZ				sS	sS	17 58 13.8	-0.1
QIZ				pmax	pmax		
	comp=Z,30nm,1.5s						
MLR	Muntele Rosu	37.11	301	⇓iP	P	17 52 28.4	+2.5
NJ2	Nanjing	38.12	81	eP	P	17 52 34.6	+0.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
JOF	Joensuu	38.25	331	eP	P	17 52 35.2	0.0
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
JOF	Joensuu	38.25	331	ep	P	17 52 35.2	0.0
	comp=Z,2.5nm,0.5s						
FINES	FINESS Array B	39.90	327	P	P	17 52 49.6	+0.7
FINES	FINESS Array B	39.90	327	P	P	17 52 49.6	+0.7
	comp=Z,1.6nm,0.5s,baz=122,slow=11,SNR=26						
KAF	Kangasniemi	40.03	328	eP	P	17 52 50.3	+0.2
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KAF	Kangasniemi	40.03	328	ep	P	17 52 50.3	+0.2
	comp=Z,0.6nm,0.4s						
CN2	Changchun	41.02	61	eP	P	17 52 58.1	-0.4
PSZ	Piszkesteto	41.25	305	P	P	17 53 02.5	+2.1
PSZ	Piszkesteto	41.25	305	P	P	17 53 02.5	+2.1
VYHS	Vyhne	41.94	306	eP	P	17 53 07.6	+1.6
VYHS	Vyhne	41.94	306	eP	P	17 53 07.6	+1.6
KEV	Kevo	43.09	338	eP	P	17 53 16.0	+1.0
KEV				pmax	pmax		
	comp=Z,26nm,1.1s						
KEV	Kevo	43.09	338	eP	P	17 53 16.0	+1.0
	comp=Z,26nm,1.1s						
KEV	Kevo	43.09	338	ep	P	17 53 14.9	0.0
	comp=Z,0.9nm,0.3s						
ARCES	ARCESS Array B	43.44	338	P	P	17 53 19.0	+1.2
ARCES	ARCESS Array B	43.44	338	P	P	17 53 19.0	+1.2
	comp=Z,4.2nm,0.5s,baz=117,slow=9.1,SNR=58						
ARE0	ARCESS Array S	43.44	338	eP	P	17 53 18.4	+0.6
MDJ	Mudanjiang	43.89	59	P	P	17 53 20.8	-1.0
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,63nm,5.6s						
KSAR	Wonju Array Be	43.92	70	P	P	17 53 22.8	+0.7
KSRS	Korea Array	43.94	70	P	P	17 53 22.8	+0.5
	comp=Z,0.8nm,0.5s,baz=278,slow=7.5,SNR=4.9						
YAK	Yakutsk	44.52	34	eP	P	17 53 28.4	+1.9
NB2	NORSAR Subarra	46.81	324	P	P	17 53 45.3	+0.6
	comp=Z,2.0nm,0.6s,baz=95,slow=7.9						
NOA	NORSAR Array B	46.81	324	P	P	17 53 44.9	+0.2
NOA	NORSAR Array B	46.81	324	P	P	17 53 44.9	+0.2
	comp=Z,1.8nm,0.6s,baz=96,slow=7.6,SNR=14						
TIXI	Tiksi	46.86	21	eP	P	17 53 45.3	+0.4
TIXI	Tiksi	46.86	21	eP	P	17 53 44.8	0.0
	comp=Z,3.1nm,0.8s						
HINF	Hinteralfeld	49.98	306	eP	P	17 54 10.1	+0.7
	comp=Z,3.8nm,0.5s						
HINF	Hinteralfeld	49.98	306	eP	P	17 54 10.1	+0.7
HINF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HINF	Hinteralfeld	49.98	306	eP	P	17 54 10.1	+0.7
	comp=Z,3.8nm,0.5s						
HAU	Haudompre	50.29	307	eP	P	17 54 11.8	+0.2
HAU	Haudompre	50.29	307	eP	P	17 54 11.8	+0.2
HAU	Haudompre	50.29	307	eP	P	17 54 11.8	+0.2
LPG	La Plagne	50.50	303	eP	P	17 54 14.5	+0.9
LPG	La Plagne	50.50	303	eP	P	17 54 14.5	+0.9
LPG	La Plagne	50.50	303	eP	P	17 54 14.5	+0.9
LPL	La Plagne	50.51	303	eP	P	17 54 14.3	+0.7
LPL	La Plagne	50.51	303	eP	P	17 54 14.3	+0.7
LPL	La Plagne	50.51	303	eP	P	17 54 14.3	+0.7
PAGF	Fort de Pagny	50.60	308	eP	P	17 54 14.7	+0.8
PAGF	Fort de Pagny	50.60	308	eP	P	17 54 14.7	+0.8
MBDF	Montbardon	50.66	302	eP	P	17 54 15.5	+0.9
	comp=Z,4.2nm,0.7s						
MBDF	Montbardon	50.66	302	eP	P	17 54 15.5	+0.9
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MBDF	Montbardon	50.66	302	eP	P	17 54 15.5	+0.9
	comp=Z,4.2nm,0.7s						
CABF	La Chapelle	50.73	305	eP	P	17 54 16.0	+0.9
CABF	La Chapelle	50.73	305	eP	P	17 54 16.0	+0.9
CABF	La Chapelle	50.73	305	eP	P	17 54 16.0	+0.9
KEST	Kesra	51.19	291	P	P	17 54 20.1	+1.4
KEST	Kesra	51.19	291	P	P	17 54 20.1	+1.4
	comp=Z,0.6nm,0.5s,baz=268,slow=2.6,SNR=4.4						
BAIF	Baives	51.31	310	eP	P	17 54 20.0	+0.8
BAIF	Baives	51.31	310	eP	P	17 54 20.0	+0.8
BAIF	Baives	51.31	310	eP	P	17 54 20.0	+0.8
VIVF	Saint-Julien-l	52.08	303	eP	P	17 54 25.5	+0.4
VIVF	Saint-Julien-l	52.08	303	eP	P	17 54 25.5	+0.4
VIVF	Saint-Julien-l	52.08	303	eP	P	17 54 25.5	+0.4
LOR	Lormes	52.08	306	eP	P	17 54 26.2	+1.1
LOR	Lormes	52.08	306	eP	P	17 54 26.2	+1.1
MAJO	Matsushiro	52.10	68	eP	P	17 54 25.3	-0.1
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAJO	Matsushiro	52.10	68	eP	P	17 54 25.3	-0.1
	comp=Z,5.0nm,0.8s						
MJAR	Matsushiro Arr	52.10	68	P	P	17 54 25.8	+0.3
MJAR	Matsushiro Arr	52.10	68	P	P	17 54 25.8	+0.3
	comp=Z,3.2nm,0.9s,baz=285,slow=10,SNR=11						
SMF	Signal de Mont	52.23	305	eP	P	17 54 26.4	+0.2
	comp=Z,3.2nm,0.6s						
SMF	Signal de Mont	52.23	305	eP	P	17 54 26.4	+0.2
SMF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SMF	Signal de Mont	52.23	305	eP	P	17 54 26.4	+0.2
	comp=Z,3.2nm,0.6s						
SSF	Saint Saulge	52.36	306	eP	P	17 54 27.7	+0.5
SSF	Saint Saulge	52.36	306	eP	P	17 54 27.7	+0.5
SSF	Saint Saulge	52.36	306	eP	P	17 54 27.7	+0.5
AVF	Avril sur Loir	52.53	306	eP	P	17 54 28.5	+0.1
AVF	Avril sur Loir	52.53	306	eP	P	17 54 28.5	+0.1
AVF	Avril sur Loir	52.53	306	eP	P	17 54 28.5	+0.1
LASF	Ste Croix	52.84	302	eP	P	17 54 31.4	+0.6
LASF	Ste Croix	52.84	302	eP	P	17 54 31.4	+0.6
TCF	Toulx Ste Croi	53.41	305	eP	P	17 54 35.1	+0.2
TCF	Toulx Ste Croi	53.41	305	eP	P	17 54 35.1	+0.2
TCF	Toulx Ste Croi	53.41	305	eP	P	17 54 35.1	+0.2
RJF	Les Rejaudoux	54.13	304	eP	P	17 54 41.7	+1.5
RJF	Les Rejaudoux	54.13	304	eP	P	17 54 41.7	+1.5
RJF	Les Rejaudoux	54.13	304	eP	P	17 54 41.7	+1.5
MTLF	Montolieu	54.18	302	eP	P	17 54 41.6	+1.0

MTLF	**Montolieu**	**54.18**	**302**	*e*P	**P**	**17 54 41.6**	**+1.0**
MTLF	**Montolieu**	**54.18**	**302**	*e*P	**P**	**17 54 41.6**	**+1.0**
LDF	**La Druitiere**	**54.38**	**309**	*e*P	**P**	**17 54 41.5**	**-0.5**
LDF	**La Druitiere**	**54.38**	**309**	*e*P	**P**	**17 54 41.5**	**-0.5**
LDF	**La Druitiere**	**54.38**	**309**	*e*P	**P**	**17 54 41.5**	**-0.5**
SEY	**Seymchan**	**55.02**	**33**	*ce*P	**P**	**17 54 48.3**	**+2.0**
EPF	**Esparros**	**55.59**	**302**	*e*P	**P**	**17 54 50.3**	**-0.5**
EPF	**Esparros**	**55.59**	**302**	*e*P	**P**	**17 54 50.3**	**-0.5**
EPF	**Esparros**	**55.59**	**302**	*e*P	**P**	**17 54 50.3**	**-0.5**
ETSF	**Etsaut**	**56.26**	**302**	*e*P	**P**	**17 54 56.4**	**+0.8**
	comp=Z,6.5nm,0.5s						
ETSF	**Etsaut**	**56.26**	**302**	*e*P	**P**	**17 54 56.4**	**+0.8**
ETSF				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ETSF	**Etsaut**	**56.26**	**302**	*e*P	**P**	**17 54 56.4**	**+0.8**
	comp=Z,6.5nm,0.5s						
SJPF	**Ste Jean**	**56.65**	**302**	*e*P	**P**	**17 54 59.1**	**+0.7**
SJPF	**Ste Jean**	**56.65**	**302**	*e*P	**P**	**17 54 59.1**	**+0.7**
SJPF	**Ste Jean**	**56.65**	**302**	*e*P	**P**	**17 54 59.1**	**+0.7**
BILL	**Bilibino**	**59.52**	**26**	⇓*e*P	**P**	**17 55 19.3**	**+1.3**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BILL	**Bilibino**	**59.52**	**26**	*e*P	**P**	**17 55 19.2**	**+1.3**
	comp=Z,2.2nm,0.8s						
ESDC	**Sonseca Array**	**59.77**	**300**	P	**P**	**17 55 20.1**	**-0.1**
ESDC	**Sonseca Array**	**59.77**	**300**	P	**P**	**17 55 20.1**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=66,slow=8.1,SNR=6.0						
PETK	**Petropavlovsk-**	**60.13**	**44**	P	**P**	**17 55 21.2**	**-1.3**
PETK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PETK	**Petropavlovsk-**	**60.13**	**44**	P	**P**	**17 55 21.2**	**-1.3**
PETK	**Petropavlovsk-**	**60.13**	**44**	P	**P**	**17 55 21.2**	**-1.3**
	comp=Z,3.9nm,1.0s,baz=145,slow=4.4,SNR=7.6						
TORD	**Torodi Ar. Bea**	**67.34**	**271**	P	**P**	**17 56 10.5**	**-0.1**
TORD	**Torodi Ar. Bea**	**67.34**	**271**	P	**P**	**17 56 10.5**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=45,slow=5.5,SNR=29						
LBTB	**Lobatse**	**74.47**	**224**	P	**P**	**17 56 54.9**	**+1.3**
	comp=Z,4.3nm,0.9s						
ILAR	**Eielson Array**	**76.06**	**16**	P	**P**	**17 57 02.6**	**+0.5**
ILAR	**Eielson Array**	**76.06**	**16**	P	**P**	**17 57 02.6**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=311,slow=5.3,SNR=7.8						
DBIC	**Dimbokro**	**76.27**	**269**	*e*P	**P**	**17 57 03.2**	**-0.9**
	comp=Z,6.5nm,1.1s						
LIC	**Lamto**	**76.66**	**268**	*e*P	**P**	**17 57 06.2**	**-0.1**
	comp=Z,6.2nm,0.5s						
LIC	**Lamto**	**76.66**	**268**	*e*P	**P**	**17 57 06.2**	**-0.1**
	comp=Z,6.2nm,0.5s						
BOSA	**Boshof**	**77.45**	**222**	*e*P	**P**	**17 57 11.3**	**+0.7**
	comp=Z,4.7nm,0.8s						
BOSA	**Boshof**	**77.45**	**222**	P	**P**	**17 57 11.7**	**+1.2**
	comp=Z,3.4nm,0.7s,baz=28,slow=5.8,SNR=9.4						
WRA	**Warramunga Arr**	**79.64**	**123**	P	**P**	**17 57 23.0**	**+0.4**
WRA	**Warramunga Arr**	**79.64**	**123**	P	**P**	**17 57 23.0**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=322,slow=4.9,SNR=23						
WRAB	**Tennant Creek**	**79.64**	**123**	*e*P	**P**	**17 57 21.3**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WRAB	**Tennant Creek**	**79.64**	**123**	*e*P	**P**	**17 57 21.3**	**-1.3**
	comp=Z,5.4nm,1.0s						
AS31	**Alice Springs**	**81.87**	**126**	*e*P	**P**	**17 57 34.2**	**-0.3**
ASAR	**Alice Springs**	**81.87**	**126**	P	**P**	**17 57 34.8**	**+0.3**
ASAR	**Alice Springs**	**81.87**	**126**	P	**P**	**17 57 34.8**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=308,slow=5.3,SNR=43						
PMG	**Port Moresby**	**82.52**	**107**	P	**P**	**17 57 38.3**	**+0.2**
	comp=Z,16nm,1.1s						
YKA	**Yellowknife Ar**	**82.97**	**4**	P	**P**	**17 57 40.1**	**+0.5**
YKA	**Yellowknife Ar**	**82.97**	**4**	P	**P**	**17 57 40.1**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=349,slow=5.5,SNR=14						
SCHQ	**Schefferville**	**84.40**	**338**	P	**P**	**17 57 46.9**	**-0.3**
SCHQ	**Schefferville**	**84.40**	**338**	P	**P**	**17 57 46.9**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=25,slow=3.6,SNR=6.7						
SCHQ				LR	LR	18 36 30.8	
	comp=Z,126nm,19.6s,baz=144,slow=36						
CTA	**Charters Tower**	**88.29**	**116**	P	**P**	**17 58 06.8**	**+0.1**
CTA	**Charters Tower**	**88.29**	**116**	P	**P**	**17 58 06.8**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=355,slow=4.8,SNR=3.5						
FFC	**Flin Flon**	**90.85**	**357**	P	**P**	**17 58 18.0**	**-0.2**
FFC				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FFC	**Flin Flon**	**90.85**	**357**	P	**P**	**17 58 18.0**	**-0.2**
	comp=Z,1.5nm,0.8s						

*ISCJB **03** 17:54:44.2±0.7, 27.°77S±0.°03×66.°61W±0.°03, h125km±5km, mb5.4/228, Error ellipse: s-maj=4.9km s-min=3.6km az=44.4*

*BJI **03** 17:54:45.5, 27.°25S×67.°46W, h139km, mB5.3/24*

*MOS **03** 17:54:46.8±1.2, 27.°80S×66.°49W, h156km, mb5.5/59, Error ellipse: s-maj=13.7km s-min=7.0km az=106.5*

*IDC **03** 17:54:48.4±1.0, 27.°86S×66.°52W, h153km±8km, mb5.0/30, mb1 5.1/35, mb1mx5.1/37, mbtmp5.0/35, MS4.6/7, Ms1 4.6/7, ms1mx4.2/28, Error ellipse: s-maj=10.1km s-min=7.6km az=76.0*

*NEIC **03** 17:54:50.4±0.1, 27.°84S×66.°59W, mb5.3/167, MW5.7, MW5.7, MD5.5(SJA), Error ellipse: s-maj=5.1km s-min=4.1km az=75.0, Moment Tensor Solution. s39 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.59; $M_{\theta\theta}$-0.36; $M_{\phi\phi}$1.95; $M_{r\theta}$2.59; $M_{\theta\phi}$-1.91; $M_{\phi r}$-1.01; Best double couple: $M_0$3.80000×10^{17} NP1:ϕ_s186.00000°, δ35.00000°, λ-27.00000°. NP2:ϕ_s298.00000°, δ75.00000°, λ-122.00000°. Principal axes: T 3.9600, Plg23.0000°, Azm52.0000°; N -0.2900, Plg31.0000°, Azm307.0000°; P -3.6700, Plg49.0000°, Azm172.0000°;*

NEIC Felt [III] in the Cordoba-Tinogasta area.

*GCMT **03** 17:54:53.9±0.1, 28.°09S×66.°71W, h180km, MW5.7, Moment Tensor Solution. s100,c193; s56,c61; Moment tensor: Scale 10^{17}Nm; M_{rr}-2.23±.04; $M_{\theta\theta}$-0.25±.05; $M_{\phi\phi}$2.48±.06; $M_{r\theta}$2.56±.03; $M_{\theta\phi}$-2.53±.04; $M_{\phi r}$-0.41±.04; Best double couple: $M_0$4.30000×10^{17} NP1:ϕ_s183.00000°, δ43.00000°, λ-31.00000°. NP2:ϕ_s297.00000°, δ69.00000°, λ-129.00000°. Principal axes: T 4.4500, Plg15.0000°, Azm54.0000°; N -0.2600, Plg36.0000°, Azm313.0000°; P -4.1900, Plg50.0000°, Azm163.0000°; Data Used: II IU IC G CN. Surface waves: sta=113, comp=226, per= 50.*

*DJA **03** 17:55:19.8±8.9, 29°S±41°×6°6W±2°8, h416km±82km, M5.5/10, mB5.9/5, mb5.5/10, Mw(mB)5.5/5*

ISC 03 17:54:48.0±0.4**, 27.°90S**±0.°04×**66.°59W**±0.°04**, h156**km±3km**, h155**km**:pP-P, n1208,** σ1.°30/1281**, mb5.4**/224**, 296C-216D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**3.79**	**252**	*e*Pn	**Pn**	**17 55 44.8**	**-1.1**
LCO				*e*Sn	**Sn**	**17 56 28.4**	**-2.4**
CFAA	**Coronel Fontan**	**3.96**	**201**	P	**Pn**	**17 55 48.2**	**+0.4**
CFAA				S	Sn	17 56 27.5	-7.0
CFAA	**Coronel Fontan**	**3.96**	**201**	P	**Pn**	**17 55 48.2**	**+0.4**
	421nm,0.3s,baz=17,slow=12,SNR=3649						
CFAA				S	Sn	17 56 27.5	-7.0
	120nm,0.3s,baz=20,slow=12,SNR=8.6						
CPUP	**Villa Florida**	**8.40**	**81**	P	**Pn**	**17 56 47.2**	**+0.6**
CPUP	**Villa Florida**	**8.40**	**81**	P	**Pn**	**17 56 47.2**	**+0.6**
	60nm,0.3s,baz=246,slow=12,SNR=523						
CPUP				LR	LR	18 00 29.9	
	comp=Z,4µm,18.1s,baz=0.6,slow=41						
LPA	**La Plata**	**10.17**	**136**	*ce*P	**Pn**	**17 57 09.0**	**-1.0**
LPA				S	**Sn**	**17 59 00.0**	**-2.6**
LPA				PCP	**PcP**	**18 03 02.0**	**-2.1**
TRQA	**Tornquist**	**10.84**	**160**	*e*Pn	**Pn**	**17 57 18.3**	**-0.5**
	1µm,1.0s						
TRQA				*e*Sn	Sn	17 59 09.1	-10
LPAZ	**La Paz**	**11.65**	**353**	*e*Pn	**Pn**	**17 57 28.8**	**-1.4**
	2.8nm,1.1s						
LPAZ				S	Sn	17 59 32.1	-7.3
LPAZ	**La Paz**	**11.65**	**353**	P	**Pn**	**17 57 28.9**	**-1.4**
	26nm,0.3s,baz=154,slow=9.6,SNR=154						
LPAZ				S	Sn	17 59 32.1	-7.3
	1.7nm,0.3s,baz=24,slow=16,SNR=2.6						
ARE	**Arequipa**	**12.26**	**337**	*e*P	**Pn**	**17 57 35.0**	**-2.8**
ARE				*e*S	Sn	17 59 44.0	-10
ARE	**Arequipa**	**12.26**	**337**	*e*P	**Pn**	**17 57 35.0**	**-2.8**
ARE				*e*S	Sn	17 59 44.0	-10
SIV	**San Ignacio**	**12.91**	**24**	P	**Pn**	**17 57 45.5**	**-0.4**
SIV	**San Ignacio**	**12.91**	**24**	P	**Pn**	**17 57 45.5**	**-0.4**
	19nm,0.3s,baz=225,slow=13,SNR=224						
PLCA	**Paso Flores**	**13.21**	**193**	*e*Pn	**Pn**	**17 57 48.4**	**-1.2**
	411nm,1.4s						
PLCA	**Paso Flores**	**13.21**	**193**	P	**Pn**	**17 57 48.6**	**-1.0**
	2.2nm,0.3s,baz=4.0,slow=14,SNR=34						
SPB	**Sao Paulo**	**17.78**	**80**	⇑*i*P	**Pn**	**17 58 45.7**	**-0.2**
	2µm,1.5s						
SPB				*e*S	**S**	**18 02 01.0**	**-0.1**
NNA	**Nana**	**18.52**	**327**	*e*P	**P**	**17 58 53.5**	**+0.9**
	60nm,0.8s						
NNA	**Nana**	**18.52**	**327**	P	**P**	**17 58 53.4**	**+0.7**
	446nm,0.8s,SNR=7.4						
NNA	**Nana**	**18.52**	**327**	P	**Pn**	**17 58 54.7**	**0.0**
	2.4nm,0.3s,baz=182,slow=11,SNR=17						
SAML	**Samuel**	**19.13**	**10**	⇑*i*P	**P**	**17 58 58.2**	**-1.0**
	304nm,0.5s						
SAML				*e*S	**S**	**18 02 23.6**	**-4.3**
BDFB	**Brasilia**	**21.09**	**59**	P	**P**	**17 59 19.0**	**-1.5**
BDFB	**Brasilia**	**21.09**	**59**	P	**P**	**17 59 19.0**	**-1.5**
	357nm,0.9s,baz=228,slow=11,SNR=188						
CAM4	**Nova Friburgo**	**22.42**	**81**	⇓*i*P	**P**	**17 59 34.6**	**+0.4**
CAM4				*i*		17 59 35.0	
CAM4				*i*		17 59 36.6	
CAM4				*i*		17 59 41.7	
CAM4				*i*		17 59 48.5	
CAM4				*i*		17 59 57.4	
ATAH	**Atahualpa**	**23.49**	**329**	P	**P**	**17 59 45.8**	**+1.5**
ATAH	**Atahualpa**	**23.49**	**329**	P	**P**	**17 59 45.8**	**+1.5**
	20nm,0.7s,baz=159,slow=8.2,SNR=12						
EFI	**East Falkland**	**24.60**	**167**	⇓*e*P	**P**	**17 59 53.8**	**+0.3**
EFI				*e*		18 03 27.2	
EFI	**East Falkland**	**24.60**	**167**	⇓*e*P	**P**	**17 59 53.8**	**+0.3**
	1µm,1.0s						
EFI				*e*PcP	**PcP**	**18 03 27.2**	**+0.2**
EFI	**East Falkland**	**24.60**	**167**	P	**P**	**17 59 54.1**	**+0.6**
	7µm,1.3s,SNR=60						
USHA	**Ushuaia**	**26.94**	**182**	P	**P**	**18 00 14.8**	**+0.3**
USHA	**Ushuaia**	**26.94**	**182**	P	**P**	**18 00 14.8**	**+0.3**
	44nm,0.7s,baz=347,slow=7.9,SNR=30						
OTAV	**Otavalo**	**30.21**	**336**	*e*P	**P**	**18 00 45.8**	**+1.3**
	77nm,1.0s						
ROSC	**El Rosal**	**33.41**	**346**	LR	LR	18 14 50.7	
	comp=Z,930nm,20.8s,baz=190,slow=36						
RCBR	**Riachuelo**	**36.47**	**59**	⇑*i*P	**P**	**18 01 37.2**	**-1.1**
	208nm,1.0s						
RCBR				*e*		18 02 17.6	
RCBR				*e*PP	**PP**	**18 03 01.6**	**-3.0**
RCBR	**Riachuelo**	**36.47**	**59**	P	**P**	**18 01 37.5**	**-0.8**
	157nm,1.0s,baz=222,slow=10.0,SNR=50						
SDV	**Santo Domingo**	**36.78**	**353**	*e*P	**P**	**18 01 39.7**	**-1.3**
	1.1nm,1.1s						
PMSA	**Palmer Station**	**36.92**	**178**	P	**P**	**18 01 42.8**	**+1.4**
PMSA	**Palmer Station**	**36.92**	**178**	P	**P**	**18 01 42.8**	**+1.4**
	76nm,0.7s,baz=4.9,slow=6.9,SNR=53						
PMSA				LR	LR	18 17 14.3	
	comp=Z,479nm,20.1s,baz=350,slow=36						
RPN	**Rapa Nui**	**37.78**	**261**	LR	LR	18 14 05.8	
	comp=Z,590nm,19.3s,baz=99,slow=31						
BCIP	**Isla Barro Col**	**39.02**	**339**	*e*P	**P**	**18 02 00.7**	**+1.1**
	25nm,0.6s						
BCIP				*e*pP	pP	18 02 39.5	+6.1
GRGR	**Grenville**	**40.08**	**8**	⇑*i*P	**P**	**18 02 07.3**	**-1.0**
	847nm,1.0s						
JTS	**JuntasAbangare**	**41.93**	**332**	*e*P	**P**	**18 02 25.1**	**+1.6**
	49nm,0.9s						
JTS				*e*ScP	**ScP**	**18 07 50.7**	**-1.2**
JTS				ScP	**ScP**	**18 07 51.3**	**-0.6**
JTS	**JuntasAbangare**	**41.93**	**332**	P	**P**	**18 02 25.2**	**+1.7**
	312nm,0.7s,SNR=10						
JTS	**JuntasAbangare**	**41.93**	**332**	P	**P**	**18 02 25.4**	**+1.9**
	29nm,0.6s,baz=244,slow=1.7,SNR=30						
JTS				ScP	**ScP**	**18 07 51.3**	**-0.6**
	8.4nm,1.0s,baz=78,slow=4.4,SNR=7.9						
FDF	**Fort de France**	**42.71**	**8**	*e*P	**P**	**18 02 28.1**	**-1.7**
FDF				pmax	pmax		
	comp=Z,174nm,0.5s						
FDF	**Fort de France**	**42.71**	**8**	*e*P	**P**	**18 02 28.1**	**-1.7**
	comp=Z,174nm,0.5s						
MGG	**Marie-Galante**	**43.86**	**7**	*e*P	**P**	**18 02 42.0**	**+3.1**
PHG	**Guadaloupe-2**	**43.92**	**7**	*e*P	**P**	**18 02 38.5**	**-1.1**
SEG	**Port Louis**	**44.32**	**7**	*e*P	**P**	**18 02 41.2**	**-1.3**
ANWB	**Willy Bob**	**45.54**	**6**	*e*P	P	18 02 48.6	-3.6
	comp=Z,117nm,0.4s						
CRPR	**Cabo Rojo, PR**	**45.64**	**359**	*e*P	**P**	**18 02 51.1**	**-1.9**
	comp=Z,25nm,0.5s						
CRPR				*e*PP	**PP**	**18 04 41.0**	**-2.2**
OBIP	**Obispado Ponce**	**45.67**	**360**	*e*P	**P**	**18 02 51.5**	**-1.8**
	comp=Z,90nm,0.5s						
CELP	**Cerrillos**	**45.71**	**0**	*e*P	**P**	**18 02 51.6**	**-1.9**
CELP				*e*PP	**PP**	**18 04 42.4**	**-1.5**
MTP	**Monte Pirata**	**45.74**	**1**	*e*P	**P**	**18 02 50.8**	**-2.9**
	comp=Z,32nm,0.5s						
SJG	**San Juan**	**45.74**	**1**	*e*P	**P**	**18 02 51.0**	**-2.7**
	comp=Z,39nm,0.6s						
LSP	**Las Mesas**	**45.81**	**359**	*e*P	**P**	**18 02 52.5**	**-1.9**
CBYP	**Canovanas**	**45.91**	**1**	*e*P	**P**	**18 02 52.9**	**-2.3**
	comp=Z,118nm,1.1s						
CBYP				*e*PP	**PP**	**18 04 42.1**	**-3.8**
LRS	**Lares**	**45.92**	**360**	*e*P	**P**	**18 02 53.4**	**-1.9**
AGPR	**Aguadilla, PR**	**46.10**	**359**	*e*P	**P**	**18 02 55.0**	**-1.6**
TGUH	**Tegucigalpa,Un**	**46.28**	**332**	*e*P	**P**	**18 02 58.4**	**+0.3**
	comp=Z,133nm,0.8s						
SDDR	**Presa de Saban**	**46.83**	**354**	*e*P	**P**	**18 03 00.8**	**-1.5**
	comp=Z,14nm,0.7s						
MTDJ	**Mount Denham**	**47.07**	**346**	*e*P	**P**	**18 03 04.2**	**-0.1**
	comp=Z,223nm,0.8s						
MTDJ				*e*pP	**pP**	**18 03 42.4**	**+3.2**
TEIG	**Tepich**	**52.24**	**334**	*e*P	**P**	**18 03 42.7**	**-0.6**
	comp=Z,92nm,0.6s						
TEIG				*e*pP	**pP**	**18 04 19.7**	**+0.8**
VNA3	**Neumayer Olymp**	**53.36**	**160**	*e*P	**P**	**18 03 52.3**	**+1.4**
VNA3	**Neumayer Olymp**	**53.36**	**160**	*e*PcP	**PcP**	**18 04 57.3**	**+1.1**
VNA1	**Neumayer--Stat**	**53.57**	**159**	*e*P	**P**	**18 03 54.3**	**+1.9**
VNA1	**Neumayer--Stat**	**53.57**	**159**	*e*PcP	**PcP**	**18 04 53.3**	**-3.6**
VNA2	**Neumayer--Watz**	**53.94**	**160**	*e*P	**P**	**18 03 56.5**	**+1.4**
	baz=292,slow=8.1						
VNA2	**Neumayer--Watz**	**53.94**	**160**	*e*PcP	**PcP**	**18 04 59.6**	**+1.3**
	baz=292,slow=8.1						
VNA2	**Neumayer--Watz**	**53.94**	**160**	*e*PP	PP	18 05 57.8	+0.1
	baz=292,slow=8.1						
SNAA	**Sanae**	**55.57**	**160**	*e*P	**P**	**18 04 07.8**	**+0.9**
SNAA	**Sanae**	**55.57**	**160**	*e*PcP	**PcP**	**18 05 05.8**	**+1.1**
SNAA	**Sanae**	**55.57**	**160**	⇓*i*P	**P**	**18 04 07.2**	**+0.3**
SNAA	**Sanae**	**55.57**	**160**	*e*P	**P**	**18 04 07.1**	**+0.3**
	comp=Z,249nm,0.6s						
SNAA				*e*PcP	**PcP**	**18 05 04.3**	**-0.4**
SNAA	**Sanae**	**55.57**	**160**	P	**P**	**18 04 07.5**	**+0.7**
	comp=Z,84nm,0.5s,baz=285,slow=7.4,SNR=932						
TIGA	**Tifton**	**61.20**	**343**	⇑P	**P**	**18 04 46.1**	**-0.1**
	baz=62						
QSPA	**South Pole Qui**	**62.32**	**180**	P	**P**	**18 04 54.5**	**+0.9**
QSPA	**South Pole Qui**	**62.32**	**180**	P	**P**	**18 04 54.4**	**+0.9**
	comp=Z,275nm,0.6s,baz=159,slow=1.6,SNR=1080						
JSC	**Jenkinsville**	**63.39**	**346**	*e*P	**P**	**18 05 00.2**	**-0.5**
JSC	**Jenkinsville**	**63.39**	**346**	*e*P	**P**	**18 05 00.2**	**-0.5**
LRAL	**Lakeview Retre**	**63.63**	**341**	*e*P	**P**	**18 05 01.2**	**-1.1**
	comp=Z,33nm,0.8s						
HKT	**Hockley**	**63.96**	**332**	*e*P	**P**	**18 05 04.7**	**+0.2**
HKT				*e*		18 05 38.1	
HKT				pmax	pmax		
	comp=Z,21nm,1.1s						
HKT	**Hockley**	**63.96**	**332**	*e*P	**P**	**18 05 04.7**	**+0.2**
	comp=Z,21nm,1.1s						
HKT				*e*		18 05 38.1	
KMSC	**Kings Mountain**	**64.23**	**347**	⇑P	**P**	**18 05 06.1**	**-0.2**
	baz=64						
BBTS	**Babate**	**64.35**	**55**	P	**P**	**18 05 07.7**	**+0.3**
BBTS	**Babate**	**64.35**	**55**	P	**P**	**18 05 07.7**	**+0.3**
	comp=Z,77nm,1.0s,baz=214,slow=4.3,SNR=7.6						
732A	**Laxson Ranch,**	**64.76**	**328**	⇑P	**P**	**18 05 10.1**	**+0.3**
	baz=65,SNR=38						
CPCT	**Cooper Cave**	**65.25**	**344**	*e*P	**P**	**18 05 12.1**	**-0.7**
TKL	**Tuckaleechee C**	**65.27**	**345**	*e*P	**P**	**18 05 11.5**	**-1.5**
TKL				*e*pP	**pP**	**18 05 52.2**	**+2.2**
632A	**Uvalde**	**65.33**	**328**	⇑P	**P**	**18 05 13.9**	**+0.4**
	baz=66,SNR=23						
SWET	**Sewanee**	**65.39**	**343**	*e*P	**P**	**18 05 12.9**	**-0.8**
	comp=Z,69nm,0.7s						
SWET				*e*pP	**pP**	**18 05 54.2**	**+3.3**
631A	**Perdido Creek**	**65.62**	**328**	⇓P	**P**	**18 05 15.4**	**+0.1**
	baz=66,SNR=10						
OXF	**Oxford**	**65.73**	**339**	*e*P	**P**	**18 05 14.7**	**-1.2**
OXF				*e**PP	**pP**	**18 05 54.9**	**+1.9**
OXF				pmax	pmax		
	comp=Z,86nm,0.9s						
OXF	**Oxford**	**65.73**	**339**	*e*P	**P**	**18 05 14.7**	**-1.2**
	comp=Z,86nm,0.9s						
OXF				*e*pP	**pP**	**18 05 54.9**	**+1.9**
PLAL	**Pickwick Lake**	**65.76**	**341**	*e*P	P	18 05 22.2	+6.1
	comp=Z,52nm,0.8s						
PLAL				*e*		18 05 59.5	
PLAL				*e*PP	PP	18 07 35.8	-7.4
532A	**Rocksprings**	**65.91**	**329**	⇑P	**P**	**18 05 17.7**	**+0.5**
	baz=66,SNR=46						
532A				⇓S	**S**	**18 13 51.1**	**-1.0**
	baz=66						
532A				⇓S	**S**	**18 13 51.1**	**-1.0**
	baz=66						
JCT	**Junction City**	**66.16**	**329**	*e*P	**P**	**18 05 19.0**	**+0.2**
JCT				pmax	pmax		
	comp=Z,98nm,0.7s						
JCT	**Junction City**	**66.16**	**329**	*e*P	**P**	**18 05 18.9**	**+0.2**
	comp=Z,98nm,0.7s						
531A	**Rocksprings**	**66.23**	**328**	⇓P	**P**	**18 05 19.7**	**+0.4**
	baz=66,SNR=22						
WHTX	**Lake Whitney**	**66.42**	**332**	⇓P	**P**	**18 05 20.3**	**-0.1**
	baz=67,SNR=16						
432A	**Menard**	**66.49**	**329**	⇓P	**P**	**18 05 20.7**	**-0.2**
	baz=67,SNR=18						
530A	**J-C Ranch, Com**	**66.59**	**327**	⇑P	**P**	**18 05 21.8**	**+0.2**
	baz=67,SNR=22						
431A	**Sonora**	**66.70**	**328**	⇑P	**P**	**18 05 22.1**	**-0.2**
	baz=67,SNR=22						
WVT	**Waverly**	**66.76**	**341**	*e*P	**P**	**18 05 21.2**	**-1.3**
WVT				*e**PP	**pP**	**18 06 03.4**	**+3.7**
WVT				pmax	pmax		
	comp=Z,123nm,0.6s						
WVT	**Waverly**	**66.76**	**341**	*e*P	**P**	**18 05 21.1**	**-1.3**
	comp=Z,123nm,0.6s						
WVT				*e*pP	**pP**	**18 06 03.4**	**+3.7**
628A	**Black Gap, Mar**	**66.80**	**326**	⇑P	**P**	**18 05 23.5**	**+0.5**
	baz=67,SNR=19						
332A	**Millersview**	**66.89**	**329**	⇑P	**P**	**18 05 23.6**	**+0.1**
	baz=67,SNR=49						
UALR	**University of**	**66.93**	**337**	*e*P	**P**	**18 05 23.1**	**-0.5**
	comp=Z,87nm,1.0s						
529A	**Stev Forest Ra**	**67.00**	**327**	⇑P	**P**	**18 05 24.7**	**+0.5**
	baz=67,SNR=6.2						
627A	**Terlingua Ranc**	**67.03**	**325**	⇑P	**P**	**18 05 24.5**	**+0.1**
	baz=67,SNR=24						
TXAR	**Lajitas Array**	**67.07**	**325**	P	**P**	**18 05 25.3**	**+0.6**
TXAR				⇑*e*		18 33 50.4	
TXAR	**Lajitas Array**	**67.07**	**325**	P	**P**	**18 05 25.3**	**+0.6**
	comp=Z,9.9nm,0.6s,baz=148,slow=8.4,SNR=54						
TXAR				PKP2bc		18 33 50.4	
	comp=Z,1.3nm,0.9s,baz=300,slow=2.5,SNR=7.2						
430A	**Baggett Ranch,**	**67.08**	**328**	⇓P	**P**	**18 05 24.7**	**0.0**
	baz=67,SNR=51						
331A	**San Angelo**	**67.14**	**329**	⇓P	**P**	**18 05 25.0**	**0.0**
	baz=67,SNR=20						
429A	**Davenport Ranc**	**67.25**	**327**	⇓P	**P**	**18 05 26.2**	**+0.4**
	baz=68,SNR=70						
GNAR	**Gosnell**	**67.26**	**340**	*e*P	**P**	**18 05 25.2**	**-0.4**
	comp=Z,1µm,1.0s						
232A	**Coleman**	**67.28**	**330**	⇓P	**P**	**18 05 25.8**	**-0.1**
	baz=68,SNR=74						
528A	**Cox Ranch, San**	**67.31**	**326**	⇑P	**P**	**18 05 26.4**	**+0.2**
	baz=68,SNR=19						
GLAT	**Glass**	**67.32**	**340**	*e*P	**P**	**18 05 25.6**	**-0.4**
626A	**Big Bend Ranch**	**67.48**	**325**	⇑P	**P**	**18 05 28.0**	**+0.7**
	baz=68,SNR=68						
330A	**Mertzon**	**67.57**	**328**	⇑P	**P**	**18 05 27.5**	**-0.3**
	baz=68,SNR=29						
PVMO	**Portageville**	**67.58**	**340**	*e*P	**P**	**18 05 27.2**	**-0.4**
	comp=Z,192nm,0.6s						
231A	**Bronte**	**67.62**	**329**	⇑P	**P**	**18 05 27.6**	**-0.4**
	baz=68,SNR=10						
SDMD	**Soldier's Deli**	**67.65**	**351**	*e*P	**P**	**18 05 28.5**	**+0.5**
	comp=Z,36nm,0.8s						
527A	**Woodward Ranch**	**67.70**	**326**	⇑P	**P**	**18 05 28.8**	**+0.1**
	baz=68,SNR=30						
428A	**Kincaid Ranch,**	**67.72**	**327**	⇓P	**P**	**18 05 29.8**	**+1.0**
	baz=68,SNR=18						
526A	**Mary Lane Ranc**	**67.87**	**325**	⇑P	**P**	**18 05 30.3**	**+0.5**
	baz=68,SNR=49						
ABTX	**Abilene, Hawle**	**67.90**	**330**	⇓P	**P**	**18 05 29.6**	**-0.2**
	baz=68,SNR=9.9						
230A	**Sterling City**	**67.94**	**329**	⇑P	**P**	**18 05 30.1**	**+0.1**
	baz=68,SNR=9.3						
329A	**Wagon Wheel Ra**	**68.01**	**328**	⇑P	**P**	**18 05 30.4**	**-0.2**
	baz=68,SNR=34						
427A	**Hayter Ranch,**	**68.17**	**326**	⇑P	**P**	**18 05 31.6**	**0.0**
	baz=68,SNR=25						
131A	**Roby**	**68.28**	**330**	⇑P	**P**	**18 05 32.2**	**+0.1**
	baz=68,SNR=25						
328A	**Wristen Ranch,**	**68.32**	**327**	⇓P	**P**	**18 05 32.6**	**+0.1**
	baz=68,SNR=63						
WCI	**Wyandotte Cave**	**68.33**	**343**	*e*P	**P**	**18 05 31.1**	**-1.2**
WCI				pmax	pmax		
	comp=Z,33nm,0.8s						
WCI	**Wyandotte Cave**	**68.33**	**343**	*e*P	**P**	**18 05 31.1**	**-1.2**
	comp=Z,33nm,0.8s						
229A	**Bryant Ranch,**	**68.33**	**328**	⇓P	**P**	**18 05 32.1**	**-0.4**
	baz=69,SNR=5.7						
426A	**McDonald Obser**	**68.33**	**326**	⇓P	**P**	**18 05 33.1**	**+0.4**
	baz=68,SNR=37						
LIC	**Lamto**	**68.35**	**70**	⇑*i*P	**P**	**18 05 32.0**	**-1.0**
	comp=Z,57nm,0.6s,baz=249						
LIC	**Lamto**	**68.35**	**70**	⇑*i*P	**P**	**18 05 32.0**	**-1.0**
	comp=Z,57nm,0.6s						
Z32A	**Haskell**	**68.41**	**331**	⇓P	**P**	**18 05 33.0**	**+0.1**
	baz=69,SNR=30						
130A	**Snyder**	**68.47**	**329**	⇑P	**P**	**18 05 33.1**	**-0.2**
	baz=69,SNR=15						
327A	**Balmorhea Ranc**	**68.64**	**327**	⇓P	**P**	**18 05 34.8**	**+0.4**
	baz=69						
Z31A	**Sharp Cattle R**	**68.71**	**330**	⇓P	**P**	**18 05 34.7**	**-0.1**
	baz=69,SNR=29						
DBIC	**Dimbokro**	**68.74**	**70**	⇑*i*P	**P**	**18 05 34.5**	**-0.8**
DBIC	**Dimbokro**	**68.74**	**70**	*e*P	**P**	**18 05 34.5**	**-0.8**
	comp=Z,77nm,0.8s						
DBIC	**Dimbokro**	**68.74**	**70**	LR	LR	18 35 59.1	
	comp=Z,520nm,18.0s,baz=214,slow=36						
228A	**UT Block 9, Go**	**68.82**	**328**	⇑P	**P**	**18 05 35.3**	**-0.3**
	baz=69,SNR=25						
326A	**Caldwell Ranch**	**68.84**	**326**	⇑P	**P**	**18 05 35.8**	**+0.2**
	baz=69						
129A	**Stewart Farms,**	**68.91**	**329**	⇓P	**P**	**18 05 35.9**	**-0.2**
	baz=69,SNR=17						
425A	**Indio Mountain**	**68.91**	**325**	⇑P	**P**	**18 05 36.0**	**-0.2**
	baz=69,SNR=52						
Y32A	**R-V Farms, Ver**	**68.99**	**331**	⇓P	**P**	**18 05 36.5**	**0.0**
	baz=69,SNR=9.9						
SSPA	**Standing Stone**	**68.99**	**351**	*e*P	**P**	**18 05 36.5**	**+0.2**
	comp=Z,10nm,0.6s						
227A	**Bennet, Jal**	**69.07**	**327**	⇑P	**P**	**18 05 37.4**	**+0.2**
	baz=69,SNR=22						
Z30A	**Sanderson Ranc**	**69.12**	**329**	⇑P	**P**	**18 05 37.1**	**-0.3**
	baz=69,SNR=23						
TUL1	**Tulsa**	**69.19**	**335**	⇑P	**P**	**18 05 37.3**	**-0.4**
	baz=69,SNR=10						
128A	**Castleberry Fa**	**69.19**	**328**	⇓P	**P**	**18 05 37.5**	**-0.3**
	baz=69,SNR=31						
BLO	**Bloomington**	**69.28**	**344**	*e*P	**P**	**18 05 36.6**	**-1.5**
BLO				pmax	pmax		
	comp=Z,37nm,0.6s						
BLO	**Bloomington**	**69.28**	**344**	*e*P	**P**	**18 05 36.6**	**-1.5**
	comp=Z,37nm,0.6s						
OLIL	**Olney**	**69.28**	**342**	*e*P	**P**	**18 05 36.8**	**-1.3**
	comp=Z,16nm,0.7s						
Y31A	**Rekieta Farm,**	**69.31**	**330**	⇑P	**P**	**18 05 38.5**	**0.0**
	baz=70,SNR=18						
WMOK	**Wichita Mounta**	**69.34**	**332**	*e*P	**P**	**18 05 38.0**	**-0.7**
WMOK				*e*		18 06 00.7	
WMOK				pmax	pmax		
	comp=Z,59nm,0.8s						
WMOK	**Wichita Mounta**	**69.34**	**332**	*e*P	**P**	**18 05 38.0**	**-0.7**
	comp=Z,59nm,0.8s						
WMOK				*e*PcP	**PcP**	**18 06 00.7**	**-0.4**
Z29A	**Hungry Hill Ra**	**69.36**	**329**	⇑P	**P**	**18 05 38.2**	**-0.7**
	baz=70,SNR=28						
325A	**Bean Ranch, Si**	**69.38**	**325**	⇑P	**P**	**18 05 38.8**	**-0.3**
	baz=70,SNR=43						
ACSO	**Alum Creek Sta**	**69.48**	**347**	*e*P	**P**	**18 05 38.4**	**-1.0**
	comp=Z,64nm,1.0s						
Y30A	**Stafford Cattl**	**69.52**	**330**	⇓P	**P**	**18 05 39.5**	**-0.3**
	baz=70,SNR=7.7						
226B	**Tecolote Peak,**	**69.55**	**326**	⇓P	**P**	**18 05 41.2**	**+1.2**
	baz=70,SNR=31						
CLNB	**Carlsbad**	**69.56**	**327**	*e*P	**P**	**18 05 40.7**	**+0.5**
	comp=Z,6.9nm,0.8s						
BRYW	**Bryant College**	**69.62**	**356**	*e*P	**P**	**18 05 40.8**	**+0.6**
	comp=Z,57nm,0.9s						
127A	**Arkansas Junct**	**69.65**	**327**	⇓P	**P**	**18 05 40.5**	**-0.2**
	baz=70						
324A	**Moseley Ranch,**	**69.69**	**325**	⇓P	**P**	**18 05 40.3**	**-0.8**
	baz=70,SNR=34						
Z28A	**Tucker Farm, M**	**69.70**	**329**	⇑P	**P**	**18 05 40.4**	**-0.6**
	baz=70,SNR=8.8						

GDL2 **Guadalupe Moun** 69.75 326 *e*P P 18 05 41.2 -0.1
comp=Z,28nm,0.9s
X31A **McDonald Ranch** 69.76 331 ⇑P P 18 05 40.9 -0.3
baz=70,SNR=30
SYO **Syowa Base** 69.79 158 ⇑*i*P P 18 05 40.2 -0.7
MNTX **Cornudas Mount** 69.84 325 *e*P P 18 05 40.9 -0.9
comp=Z,6.0nm,1.4s
MNTX **Cornudas Mount** 69.84 325 ⇑P P 18 05 41.0 -0.8
baz=70,SNR=32
Y29A **Porterfield Fa** 69.85 329 ⇑P P 18 05 41.7 -0.2
baz=70,SNR=30
225A **Deer Hill, Car** 69.90 326 ⇑P P 18 05 42.0 -0.3
baz=70,SNR=8.2
SBA **Scott Base** 69.94 190 *e*P P 18 05 43.2 +1.4
SBA pmax pmax
comp=Z,117nm,1.2s
SBA **Scott Base** 69.94 190 *e*P P 18 05 43.1 +1.4
comp=Z,117nm,1.2s
126A **Clayton Basin,** 69.94 327 ⇓P P 18 05 42.4 -0.1
baz=70,SNR=17
X30A **Coker Ranch, T** 69.99 330 ⇓P P 18 05 42.2 -0.5
baz=70,SNR=12
QUA2 **Belchertown** 70.03 355 *e*P P 18 05 42.2 -0.5
comp=Z,35nm,0.9s
Z27A **Tatum** 70.11 328 ⇓P P 18 05 43.0 -0.5
baz=70,SNR=35
Y28A **McKinney Farm,** 70.15 329 ⇑P P 18 05 43.3 -0.4
baz=70
HRV **Adam Dziewonsk** 70.21 356 *e*P P 18 05 44.3 +0.6
HRV *e* 18 06 25.4
HRV pmax pmax
comp=Z,41nm,0.9s
HRV **Adam Dziewonsk** 70.21 356 *e*P P 18 05 44.2 +0.6
comp=Z,41nm,0.9s
HRV *e* 18 06 25.4
W31A **Holland Ranch,** 70.22 331 ⇓P P 18 05 43.6 -0.4
baz=70,SNR=6.5
224A **Cornudas Mount** 70.22 325 ⇓P P 18 05 43.7 -0.6
baz=70,SNR=23
125A **Gardner Draw,** 70.26 326 ⇑P P 18 05 44.1 -0.4
baz=70,SNR=22
BINY **Binghamton** 70.29 353 *e*P P 18 05 44.3 0.0
comp=Z,110nm,1.6s
X29A **Tulia** 70.35 330 ⇑P P 18 05 44.6 -0.4
baz=71,SNR=5.1
Z26A **Caprock** 70.43 327 ⇓P P 18 05 45.5 +0.1
baz=71,SNR=49
MSTX **Muleshoe** 70.44 329 ⇑P P 18 05 45.2 -0.3
baz=71,SNR=30
SFIN **Scholer Farm** 70.56 344 ⇓P P 18 05 44.4 -1.5
baz=71,SNR=6.4
TRY **Troy** 70.59 354 *e*P P 18 05 46.9 +0.9
comp=Z,105nm,1.1s
X28A **Dimmitt** 70.64 329 ⇑P P 18 05 46.1 -0.6
baz=71
124A **Stringfield Ra** 70.69 326 ⇓P P 18 05 47.4 +0.3
baz=71,SNR=23
AMTX **Amarillo** 70.71 330 *e*P P 18 05 46.7 -0.4
comp=Z,33nm,0.8s
AMTX **Amarillo** 70.71 330 ⇓P P 18 05 46.9 -0.2
baz=71,SNR=12
ERPA **Erie** 70.76 349 *e*P P 18 05 47.0 -0.1
comp=Z,90nm,0.7s
Z25A **Roswell** 70.80 327 ⇓P P 18 05 47.2 -0.4
baz=71,SNR=14
Y26A **Elida** 70.89 328 ⇑P P 18 05 48.3 +0.1
baz=71,SNR=8.8
W29A **Amraillo** 70.90 330 ⇓P P 18 05 47.7 -0.5
baz=71,SNR=8.6
VNDA **Vanda** 70.93 190 *e*P P 18 05 49.1 +1.4
comp=Z,66nm,0.9s
VNDA **Vanda** 70.93 190 P P 18 05 49.4 +1.6
comp=Z,61nm,1.0s,baz=138,slow=5.5,SNR=124
222A **Williams Famil** 71.05 324 ⇑P P 18 05 49.8 +0.6
baz=71,SNR=12
Z24A **Sheeppen Canyo** 71.15 326 ⇑P P 18 05 49.9 0.0
baz=71,SNR=39
X27A **F and S Farms,** 71.16 329 ⇑P P 18 05 49.7 -0.1
baz=71,SNR=5.7
FFD **Franklin Falls** 71.17 356 *e*P P 18 05 51.0 +1.5
320A **Kipp Ranch, An** 71.19 323 ⇑P P 18 05 50.4 +0.3
baz=71,SNR=13
ACCN **Adirondack Com** 71.23 355 *e*P P 18 05 47.5 -2.4
comp=Z,9.4nm,0.7s
W28A **Vega** 71.26 330 ⇓P P 18 05 50.8 +0.4
baz=72
HDIL **Hopedale** 71.30 342 *e*P P 18 05 49.1 -1.2
comp=Z,69nm,0.7s
Y25A **Mesa, Roswell** 71.31 327 ⇑P P 18 05 50.2 -0.5
baz=72,SNR=11
221A **Mesquite Ranch** 71.32 324 ⇑P P 18 05 51.1 +0.2
baz=72
X26A **CR and CF Fran** 71.41 328 ⇓P P 18 05 51.2 -0.1
baz=72,SNR=51
HNH **Hanover** 71.45 356 *e*P P 18 05 50.9 -0.3
comp=Z,68nm,1.0s
122A **Conniff Cattle** 71.47 325 ⇓P P 18 05 52.2 +0.5
baz=72
V29A **Stinnett** 71.48 331 ⇓P P 18 05 52.3 +0.6
baz=72
W27A **Bowe Ranch, En** 71.48 329 ⇑P P 18 05 51.9 +0.2
baz=72,SNR=8.8
Z23A **Rita Site, Whi** 71.53 326 ⇑P P 18 05 52.7 +0.7
baz=72,SNR=22
319A **Douglas** 71.63 322 ⇑P P 18 05 53.7 +1.0
baz=72
220A **Playas Peak, P** 71.63 323 ⇓P P 18 05 53.2 +0.5
baz=72,SNR=27
Y24A **Capitan** 71.67 327 ⇑P P 18 05 53.6 +0.6
baz=72,SNR=8.4
V28A **Channing** 71.68 330 ⇑P P 18 05 53.4 +0.4
baz=72
121A **Cookes Peak, D** 71.74 324 ⇑P P 18 05 54.2 +0.8
baz=72,SNR=44
X25A **Clemmons Ranch** 71.79 328 ⇓P P 18 05 53.3 -0.3
baz=72,SNR=11
MDV **Middlebury** 71.81 355 *e*P P 18 05 53.5 +0.2
NCB **Newcomb** 71.86 354 *e*P P 18 05 53.9 +0.2
comp=Z,26nm,0.8s
Z22A **Elephant Butte** 71.89 325 ⇑P P 18 05 55.4 +1.1
baz=72,SNR=21
LBNH **Lisbon** 71.96 356 *e*P P 18 05 55.3 +1.1
LBNH *e* 18 06 35.2
LBNH pmax pmax
comp=Z,56nm,1.1s
LBNH **Lisbon** 71.96 356 *e*P P 18 05 55.3 +1.1
comp=Z,56nm,1.1s
LBNH *e* 18 06 35.2
KOMG **Komaggas** 71.96 115 *e*P P 18 05 55.4 +0.6
KOMG AMB AMB 18 05 57.4
comp=Z,53nm,3.4s
Y23A **Lovelace Mesa,** 71.98 326 ⇓P P 18 05 55.3 +0.5
baz=72
CER **Ceres** 72.06 119 *e*P P 18 05 56.7 +1.3
CER AMB AMB 18 05 58.7
comp=Z,17nm,5.2s
X24A **Lazy VL Ranch,** 72.19 327 ⇑P P 18 05 56.2 +0.1
baz=72,SNR=10
120A **U Bar Ranch, L** 72.19 324 ⇓P P 18 05 56.5 +0.4
baz=72,SNR=19
W25A **X Bar L Ranch,** 72.26 328 ⇑P P 18 05 56.3 -0.1
baz=72,SNR=20
Z21A **St. Cloud Mine** 72.29 325 ⇓P P 18 05 57.8 +1.0
baz=72
KSU1 **Kansas State U** 72.31 336 *e*P P 18 05 55.8 -0.6
comp=Z,29nm,0.8s
V26A **Tequesquite Ra** 72.42 329 ⇓P P 18 05 57.6 +0.3
baz=73,SNR=20
Y22A **Socorro** 72.43 326 ⇑P P 18 05 58.3 +0.7
baz=73,SNR=7.9
BNM **Barren Site** 72.44 326 *e*P P 18 05 58.0 +0.4
comp=Z,31nm,0.8s
LONY **Lake Ozonia** 72.54 354 *e*P P 18 05 57.9 +0.2
comp=Z,35nm,1.1s
X23A **Hourglass Bar** 72.56 327 ⇓P P 18 05 59.0 +0.7
baz=73,SNR=18
LPM **Los Pinos Moun** 72.57 326 *e*P P 18 05 58.8 +0.4
comp=Z,10nm,0.7s
Z20A **Nine Sixteen R** 72.61 324 ⇑P P 18 05 59.3 +0.7
baz=73,SNR=19
FRNY **Flat Rock** 72.67 355 *e*P P 18 05 58.8 +0.4
comp=Z,40nm,1.0s
W24A **Lazy 6 Ranch,** 72.70 327 ⇑P P 18 05 59.3 +0.3
baz=73,SNR=14
T28A **Walsh** 72.78 331 ⇑P P 18 05 59.2 -0.3
baz=73,SNR=11
V25A **Rancho No Teng** 72.84 328 ⇑P P 18 05 59.8 -0.1
baz=73,SNR=9.5
Y21A **Point of Rocks** 72.85 325 ⇓P P 18 06 00.9 +0.9
baz=73,SNR=7.8
LAZ **Ladron** 72.89 326 *e*P P 18 06 01.3 +1.1
comp=Z,7.7nm,0.9s
U26A **Atchley Ranch,** 72.90 329 ⇑P P 18 06 00.4 +0.2
baz=73,SNR=24
X22A **Bernardo** 72.91 326 ⇓P P 18 06 01.4 +1.1
baz=73
ANMO **Albuquerque** 72.99 327 *e*P P 18 06 01.6 +0.8
comp=Z,21nm,0.8s
ANMO **Albuquerque** 72.99 327 P P 18 06 01.9 +1.1
comp=Z,23nm,0.8s,baz=145,slow=7.2,SNR=59
T27A **Campo** 73.00 330 ⇑P P 18 06 00.8 +0.1
baz=73,SNR=21
W23A **Werner Place,** 73.01 327 ⇑P P 18 06 01.4 +0.5
baz=73
V24A **Rampart Ranch,** 73.05 328 ⇓P P 18 06 01.6 +0.3
baz=73,SNR=9.1
Y20A **Horse Springs,** 73.12 325 ⇑P P 18 06 02.6 +0.9
baz=73,SNR=7.8
TUC **Tucson** 73.16 322 *e*P P 18 06 02.1 +0.4
TUC pmax pmax
comp=Z,28nm,1.3s
TUC **Tucson** 73.16 322 *e*P P 18 06 02.1 +0.4
comp=Z,28nm,1.3s
U25A **Circle Dot Ran** 73.20 329 ⇓P P 18 06 02.2 +0.2
baz=73,SNR=27
X21A **Alamocita Cree** 73.25 325 ⇑P P 18 06 03.4 +1.0
baz=74,SNR=10
W22A **Albuquerque** 73.29 326 ⇑P P 18 06 03.8 +1.2
baz=74
T26A **Comanche Natio** 73.47 330 ⇓P P 18 06 04.1 +0.5
baz=74,SNR=21
TBI **Tubuai** 73.48 252 *e*P P 18 06 05.5 +1.7
comp=Z,159nm,1.0s
TBI *e*S S 18 15 20.8 -0.2
comp=Z,1µm,31.0s
TBI **Tubuai** 73.48 252 *e*P P 18 06 05.5 +1.7
comp=Z,159nm,1.0s
TBI *e*S S 18 15 20.8 -0.2
V23A **Ortiz Mt. (NFS** 73.50 327 ⇑P P 18 06 04.7 +0.9
baz=74,SNR=7.3
S27A **Las Animas** 73.59 331 ⇑P P 18 06 05.1 +0.9
baz=74
SUR **Sutherland** 73.61 118 ⇓*i*P P 18 06 06.2 +1.5
SUR AMB AMB 18 06 06.7
comp=Z,58nm,2.6s
SUR **Sutherland** 73.61 118 *e*P P 18 06 06.0 +1.3
comp=Z,55nm,0.6s
SUR **Sutherland** 73.61 118 P P 18 06 06.3 +1.5
comp=Z,582nm,0.5s,SNR=83
SUR **Sutherland** 73.61 118 P P 18 06 06.2 +1.5
comp=Z,50nm,0.6s,baz=230,slow=6.2,SNR=128
X20A **Quemado** 73.68 325 ⇓P P 18 06 06.1 +1.2
baz=74
SCIA **State Center** 73.69 340 *e*P P 18 06 04.2 -0.3
comp=Z,30nm,0.4s
W21A **San Fidel** 73.71 326 ⇓P P 18 06 06.1 +1.1
baz=74,SNR=9.5
S26A **Kim** 73.79 330 ⇑P P 18 06 05.9 +0.5
baz=74,SNR=32
T25A **Trinidad** 73.81 329 ⇓P P 18 06 06.4 +0.8
baz=74,SNR=24
U23A **El Rito** 73.97 328 ⇑P P 18 06 07.8 +1.2
baz=74,SNR=9.9
214A **Organ Pipe Nat** 74.02 320 ⇓P P 18 06 07.6 +0.9
baz=74,SNR=9.4
T24A **Torres, Weston** 74.05 329 ⇑P P 18 06 08.1 +1.1
baz=74,SNR=8.4
R27A **Eads** 74.06 331 ⇑P P 18 06 07.0 +0.1
baz=74,SNR=9.4
W20A **Ramah** 74.14 325 ⇓P P 18 06 08.5 +0.9
baz=74,SNR=13
S25A **Robets Cordova** 74.25 330 ⇓P P 18 06 08.8 +0.7
baz=74,SNR=13
V21A **Milan** 74.25 326 ⇑P P 18 06 09.3 +1.1
baz=74,SNR=7.7
U22A **Llaves** 74.33 327 ⇓P P 18 06 09.7 +1.1
baz=75
R26A **Arlington** 74.35 331 ⇑P P 18 06 09.0 +0.5
baz=75,SNR=16
X18A **Snowflake** 74.42 324 ⇓P P 18 06 09.2 +0.1
baz=75
T23A **Casias Ranch,** 74.47 328 ⇓P P 18 06 10.0 +0.5
baz=75
MEH **Mehetia** 74.52 258 *e*P P 18 06 11.7 +1.7
comp=Z,117nm,0.9s
MEH **Mehetia** 74.52 258 *e*P P 18 06 11.7 +1.7
comp=Z,117nm,0.9s
R25A **Fountain Ranch** 74.59 330 ⇑P P 18 06 10.3 +0.3
baz=75,SNR=7.1
S24A **Houchin Ranch,** 74.59 329 ⇓P P 18 06 11.1 +0.9
baz=75,SNR=20
KSCO **Kaye Shedlock'** 74.59 332 ⇓P P 18 06 10.8 +0.8
baz=75,SNR=10
V20A **Brimhall** 74.66 326 ⇑P P 18 06 11.1 +0.6
baz=75
U21A **Nageezi** 74.76 327 ⇑P P 18 06 11.9 +0.8
baz=75,SNR=6.2
W18A **Petrified Fore** 74.77 324 ⇓P P 18 06 11.8 +0.7
baz=75,SNR=6.1
T22A **Edith** 74.86 328 ⇑P P 18 06 12.9 +1.2
baz=75,SNR=13
Q26A **Hugo** 74.90 331 ⇓P P 18 06 12.2 +0.4
baz=75,SNR=7.7
BGNE **Belgrade** 74.90 336 ⇑P P 18 06 11.9 +0.3
baz=75
R24A **Sanders Place,** 75.02 329 ⇓P P 18 06 13.5 +0.9
baz=75,SNR=20
P27A **Ficken Ranch,** 75.03 332 ⇓P P 18 06 13.2 +0.7
baz=75
X16A **Lo Mia Camp, P** 75.12 323 ⇑P P 18 06 14.5 +1.3
baz=75,SNR=19
U20A **Newcomb** 75.14 326 ⇓P P 18 06 14.2 +1.0
baz=75,SNR=8.5
Z14A **Wintersburg** 75.14 321 ⇑P P 18 06 14.4 +1.3
baz=75
T21A **Navajo Lake** 75.15 327 ⇑P P 18 06 14.4 +1.1
baz=75
113A **Mohawk Valley,** 75.16 320 ⇑P P 18 06 14.3 +1.1
baz=75,SNR=10
Q25A **Bedland, Calha** 75.20 330 ⇑P P 18 06 14.2 +0.6
baz=75,SNR=6.2
VAH **Vaihoa** 75.25 260 *e*P P 18 06 15.9 +1.8
comp=Z,76nm,0.9s
VAH **Vaihoa** 75.25 260 *e*P P 18 06 15.9 +1.8
comp=Z,76nm,0.9s
R23A **Moffat** 75.31 329 ⇓P P 18 06 15.4 +1.1
baz=76,SNR=9.5
P26A **Davis Ranch, A** 75.36 331 ⇑P P 18 06 15.5 +1.2
baz=76
S22A **4UR Ranch, Cre** 75.42 328 ⇓P P 18 06 15.7 +0.8
baz=76,SNR=13
O27A **Beecher Island** 75.52 332 ⇑P P 18 06 16.6 +1.4
baz=76,SNR=14
PMOR **Pomariorio Ree** 75.58 261 *e*P P 18 06 17.9 +1.9
comp=Z,220nm,1.2s
PMOR **Pomariorio Ree** 75.58 261 *e*P P 18 06 17.9 +1.9
comp=Z,220nm,1.2s
TVO **Taravao** 75.58 257 *e*P P 18 06 18.0 +1.9
comp=Z,194nm,1.3s
TVO **Taravao** 75.58 257 *e*P P 18 06 18.0 +1.9
TVO pmax pmax
comp=Z,194nm,1.3s
TVO **Taravao** 75.58 257 *e*P P 18 06 18.0 +1.9
comp=Z,194nm,1.3s
Y14A **Wickenburg** 75.61 322 ⇑P P 18 06 17.1 +1.3
baz=76,SNR=18
Q24A **Divide** 75.64 330 ⇓P P 18 06 17.5 +1.3
baz=76,SNR=26
P25A **Willow Gulch B** 75.67 331 ⇑P P 18 06 17.6 +1.4
baz=76,SNR=13
R22A **Saguache, Gunn** 75.77 328 ⇑P P 18 06 18.3 +1.3
baz=76
MVCO **Mesa Verde** 75.79 327 *e*P P 18 06 16.9 -0.1
comp=Z,27nm,0.9s
MVCO **Mesa Verde** 75.79 327 ⇑P P 18 06 18.1 +1.1
baz=76,SNR=5.1
S21A **Coal Bank Pass** 75.81 327 ⇑P P 18 06 18.2 +1.0
baz=76,SNR=13
Q23A **Hartsel** 75.90 329 ⇑P P 18 06 19.2 +1.6
baz=76
O26A **Horse Wrangler** 75.91 332 ⇓P P 18 06 18.6 +1.1
baz=76,SNR=7.0
PAE **Paea** 75.92 257 *e*P P 18 06 19.8 +1.9
comp=Z,22nm,1.1s
PAE **Paea** 75.92 257 *e*P P 18 06 19.8 +1.9
PAE pmax pmax
comp=Z,22nm,1.1s
PAE **Paea** 75.92 257 *e*P P 18 06 19.8 +1.9
comp=Z,22nm,1.1s
WUAZ **Wupatki** 75.92 324 ⇑P P 18 06 19.2 +1.5
baz=76
PPT2 **Papeete2** 75.94 257 *e*P P 18 06 20.1 +1.9
comp=Z,100nm,1.1s
PPT2 *e*S S 18 15 48.1 -0.5
comp=Z,2µm,26.8s
PPT **Papeete** 75.95 257 P P 18 06 20.4 +2.2
PPT **Papeete** 75.95 257 P P 18 06 20.4 +2.2
comp=Z,86nm,0.9s,baz=248,slow=24,SNR=4.9
GLA **Glamis** 75.97 320 ⇑P P 18 06 18.9 +1.0
baz=76
OGNE **Ogallala** 75.98 333 ⇓P P 18 06 18.9 +1.1
baz=76
P24A **Kohler Place,** 75.99 330 ⇑P P 18 06 19.0 +1.0
baz=76
N27A **Anderson Farm,** 76.06 333 ⇑P P 18 06 19.5 +1.1
baz=76
O25A **Wiggins** 76.14 331 ⇑P P 18 06 20.1 +1.3
baz=76,SNR=6.3
S20A **Disappointment** 76.21 327 ⇓P P 18 06 21.0 +1.6
baz=76,SNR=9.1
R21A **Cimarron** 76.26 328 ⇓P P 18 06 20.7 +1.1
baz=76,SNR=9.9
TSUM **Tsumeb** 76.28 105 *e*P P 18 06 20.4 +0.2
TSUM **Tsumeb** 76.28 105 *e*P P 18 06 20.3 +0.2
comp=Z,14nm,0.7s
TSUM *e*S S 18 15 43.3 -9.2
TSUM S S 18 15 46.7 -5.7
TSUM **Tsumeb** 76.28 105 P P 18 06 20.6 +0.5
comp=Z,15nm,0.8s,baz=223,slow=6.9,SNR=51
TSUM S S 18 15 46.7 -5.7
comp=Z,2.5nm,1.0s,baz=226,slow=6.1,SNR=4.3
P23A **Jefferson** 76.28 330 ⇓P P 18 06 21.0 +1.1
baz=76
Y12C **Blythe** 76.31 320 ⇑P P 18 06 21.1 +1.3
baz=76,SNR=12
Q22A **Crested Butte,** 76.36 329 ⇑P P 18 06 21.5 +1.3
baz=77,SNR=9.4
N26A **Koester Ranch,** 76.36 332 ⇑P P 18 06 22.0 +2.0
baz=77
ECSD **EROS Data Cent** 76.42 338 *e*P P 18 06 19.3 -0.8
comp=Z,59nm,0.7s
DVTC **Desert V Tower** 76.43 319 P P 18 06 21.7 +1.2
baz=77
COWI **Conover** 76.44 344 *e*P P 18 06 20.1 -0.1
comp=Z,12nm,0.5s
SWSC **Sam W. Stewart** 76.45 319 ⇑P P 18 06 21.4 +0.9
baz=77
PMOZ **Porto Moniz, M** 76.47 41 *e*P P 18 06 21.5 +0.7
comp=Z,171nm,1.9s
PDMCI **Parker Dam,Lak** 76.50 321 ⇑P P 18 06 21.8 +1.0
baz=77,SNR=5.8
R20A **Redvale** 76.51 327 ⇑P P 18 06 22.5 +1.5
baz=77,SNR=7.3
ISCO **Idaho Springs** 76.53 330 *e*P P 18 06 22.0 +0.8
ISCO pmax pmax
comp=Z,21nm,0.8s
ISCO **Idaho Springs** 76.53 330 *e*P P 18 06 22.0 +0.8
comp=Z,21nm,0.8s
ISCO **Idaho Springs** 76.53 330 ⇑P P 18 06 22.2 +1.0
baz=77,SNR=29
PMAR **Madeira** 76.57 41 *e*P P 18 06 22.4 +1.0
comp=Z,258nm,1.5s
M27A **Reverse DX Ran** 76.61 333 ⇓P P 18 06 22.7 +1.3
baz=77
SMCO **Snowmass** 76.64 329 *e*P P 18 06 22.9 +1.0
comp=Z,25nm,0.8s
Q21A **Lamborn Mesa,** 76.64 328 ⇑P P 18 06 22.6 +0.9
baz=77
BC3 **Big Chuckawall** 76.77 320 ⇓P P 18 06 23.6 +1.2
baz=77,SNR=14
BAR **Barrett** 76.78 318 *e*P P 18 06 23.1 +0.7
comp=Z,34nm,1.0s
MONP **Monument Peak** 76.78 319 ⇓P P 18 06 23.8 +1.1
baz=77,SNR=9.1
M26A **McRoberts Ranc** 76.87 333 ⇓P P 18 06 24.3 +1.5
baz=77
P22A **Eagle** 76.88 329 ⇓P P 18 06 24.0 +0.9
baz=77,SNR=11
S18A **Hurst Farm, Bl** 76.90 326 ⇑P P 18 06 24.6 +1.3
baz=77,SNR=22
W13A **Hualapai Mount** 76.96 322 ⇑P P 18 06 24.8 +1.2
baz=77,SNR=21
IRM **Iron Mountain** 76.97 320 ⇓P P 18 06 24.4 +1.0
baz=77,SNR=23
O23A **Lake Granby, G** 77.00 330 ⇓P P 18 06 24.9 +1.1
baz=77,SNR=22
L27A **T5 Ranch, Ells** 77.06 334 ⇑P P 18 06 25.0 +1.2
baz=77
N24A **Carr** 77.06 331 ⇑P P 18 06 25.4 +1.4
baz=77
Q20A **Ridgley Place,** 77.08 328 ⇑P P 18 06 25.4 +1.3
baz=77
U15A **North Rim** 77.10 324 ⇓P P 18 06 25.8 +1.3
baz=77,SNR=17
NEE2 **Needles Airpor** 77.12 321 ⇓P P 18 06 25.7 +1.5
baz=77
P21A **Newcastle** 77.14 329 ⇓P P 18 06 26.2 +1.6
baz=77
PMPS **Porto Santo** 77.14 41 *e*P P 18 06 26.1 +1.7
comp=Z,323nm,1.6s
SOE **Somerset East** 77.15 120 *e*P P 18 06 25.4 +0.6
SOE AMB AMB 18 06 26.5
comp=Z,136nm,1.5s
PMPST **Porto Santo, M** 77.16 41 *e*P P 18 06 26.5 +2.0
comp=Z,275nm,1.5s
M25A **Palm-Egli Farm** 77.22 332 ⇑P P 18 06 26.1 +1.3
baz=78
O22A **Kremmling** 77.24 330 ⇑P P 18 06 25.9 +0.7
baz=78,SNR=14
PFO **Pinyon Flat Ob** 77.31 319 *e*P P 18 06 26.3 +0.8
comp=Z,30nm,1.0s
PFO **Pinyon Flat Ob** 77.31 319 P P 18 06 26.0 +0.5
comp=Z,117nm,0.7s,SNR=5.6
PFO **Pinyon Flat Ob** 77.31 319 ⇓P P 18 06 26.5 +1.0
baz=78
L26A **Underwood Farm** 77.32 333 ⇓P P 18 06 27.0 +1.6
baz=78
BELC **Belle Mtn. Jos** 77.33 320 ⇓P P 18 06 26.5 +0.9
baz=78,SNR=12
Q19A **Hogan Spring (** 77.53 327 ⇑P P 18 06 27.5 +0.9
baz=78,SNR=12
K27A **Flueckinger Fa** 77.55 334 ⇑P P 18 06 27.8 +1.2
baz=78,SNR=6.6
P20A **De Beque** 77.55 328 ⇑P P 18 06 27.8 +1.1
baz=78,SNR=6.9
M24A **Cheyenne** 77.56 332 ⇓P P 18 06 27.9 +1.1
baz=78,SNR=16
N23A **Red Feather La** 77.57 331 ⇑P P 18 06 28.0 +1.0
baz=78,SNR=13
GRM **Grahamstown** 77.62 121 ⇓*i*P P 18 06 28.1 +0.8
GRM AMB AMB 18 06 29.0
comp=Z,182nm,1.5s
MAW **Mawson** 77.62 162 P P 18 06 27.4 +0.9
MAW **Mawson** 77.62 162 P P 18 06 27.4 +0.9
comp=Z,162nm,0.8s,baz=212,slow=6.4,SNR=211
TORD **Torodi Ar. Bea** 77.65 68 P P 18 06 27.2 -0.5
TORD PP PP 18 09 28.1 +2.9
TORD S S 18 16 01.3 -5.7
TORD **Torodi Ar. Bea** 77.65 68 P P 18 06 27.2 -0.5
comp=Z,73nm,0.5s,baz=258,slow=5.4,SNR=395
TORD PP PP 18 09 28.1 +2.9
comp=Z,26nm,1.0s,baz=238,slow=7.8,SNR=5.3
TORD S S 18 16 01.3 -5.7
comp=Z,7.4nm,0.9s,baz=234,slow=8.1,SNR=10
TORD LR LR 18 39 29.9
comp=Z,535nm,20.6s,baz=235,slow=35
GMRC **Granite Mounta** 77.71 320 ⇓P P 18 06 29.0 +1.3
baz=78,SNR=32
N22A **Wattenberg Ran** 77.72 330 ⇑P P 18 06 29.2 +1.4
baz=78,SNR=12
MURC **Murrieta** 77.74 319 ⇓P P 18 06 29.0 +1.2
baz=78
L25A **Engebretsen Ra** 77.78 332 ⇑P P 18 06 29.4 +1.5
baz=78,SNR=9.1
BRSD **Miller** 77.84 337 ⇑P P 18 06 28.4 +0.4
baz=78
K26A **Motz Farm, Whi** 77.92 333 ⇓P P 18 06 29.9 +1.3
baz=78
P19A **Cripple Cowboy** 77.94 328 ⇓P P 18 06 30.6 +1.6
baz=78
M23A **Laramie** 77.95 331 ⇑P P 18 06 30.2 +1.2
baz=78
HVD **Gariep Dam** 77.99 118 ⇓*i*P P 18 06 30.6 +1.1
HVD AMB AMB 18 06 31.3

comp=Z,163nm,1.6s
O20A White River Ci 77.99 329 ⇑P P 18 06 30.5 +1.3
baz=78,SNR=36
L24A Wheatland 78.09 332 ⇓P P 18 06 31.3 +1.7
baz=78
K25A Mack Ranch, Ha 78.12 333 ⇑P P 18 06 31.4 +1.6
baz=78,SNR=6.9
N21A Black Mountain 78.16 329 ⇑P P 18 06 31.4 +1.3
baz=78,SNR=14
SRU San Rafael 78.27 327 *eP* P 18 06 31.4 +0.7
SRU San Rafael 78.27 327 *eP* P 18 06 31.4 +0.7
comp=Z,1μm,0.8s
SRU San Rafael 78.27 327 ⇓P P 18 06 31.9 +1.1
baz=78,SNR=39
M22A Cedar Creek Ra 78.27 330 ⇑P P 18 06 31.8 +1.0
baz=78,SNR=15
Q16A Castle Valley 78.44 326 ⇑P P 18 06 32.9 +1.2
baz=79,SNR=15
L23A Garrett 78.47 331 ⇑P P 18 06 32.5 +0.7
baz=79,SNR=9.3
CCUT Cedar City 78.51 324 *eP* P 18 06 33.9 +1.7
comp=Z,35nm,0.8s
CCUT *e* 18 07 16.9
O19A Miners Draw (B 78.53 328 ⇑P P 18 06 33.3 +1.2
baz=79,SNR=13
P18A Preston Nutter 78.53 327 ⇑P P 18 06 33.6 +1.2
baz=79,SNR=41
N20A Spence Gulch, 78.56 329 ⇑P P 18 06 33.4 +1.0
baz=79,SNR=18
K24A Anderson Ranch 78.60 332 ⇓P P 18 06 33.6 +1.2
baz=79,SNR=6.2
MSU Marysvale 78.63 325 *eP* P 18 06 33.5 +0.7
MSU pmax pmax
comp=Z,26nm,0.7s
MSU Marysvale 78.63 325 *eP* P 18 06 33.5 +0.7
comp=Z,26nm,0.7s
MSU *e* 18 07 17.6
MVU Marysvale 78.64 325 *eP* P 18 06 33.8 +1.0
comp=Z,22nm,0.8s
MVU *e* 18 07 17.8
BOSA Boshof 78.65 116 ⇓*iP* P 18 06 33.6 +0.4
BOSA AMB AMB 18 06 34.2
comp=Z,104nm,1.6s
BOSA Boshof 78.65 116 *eP* P 18 06 33.5 +0.3
comp=Z,90nm,0.8s
BOSA S S 18 16 13.2 -4.5
BOSA Boshof 78.65 116 P P 18 06 33.6 +0.4
comp=Z,78nm,0.7s,baz=257,slow=4.0,SNR=202
BOSA S S 18 16 13.2 -4.5
comp=Z,12nm,1.1s,baz=28,slow=18,SNR=15
P17A Butcher Ranch, 78.65 327 ⇑P P 18 06 33.8 +1.0
baz=79,SNR=18
MWC Mount Wilson 78.69 319 *eP* P 18 06 33.7 +0.6
MWC pmax pmax
comp=Z,27nm,1.1s
MWC Mount Wilson 78.69 319 *eP* P 18 06 33.7 +0.6
comp=Z,27nm,1.1s
L22A Ellis Ranch, M 78.71 331 ⇑P P 18 06 34.4 +1.2
baz=79
ARUT Antelope Range 78.73 324 *eP* P 18 06 34.7 +1.4
ARUT *e* 18 07 18.5
ARUT pmax pmax
comp=Z,40nm,0.9s
ARUT Antelope Range 78.73 324 *eP* P 18 06 34.7 +1.4
comp=Z,40nm,0.9s
ARUT *e* 18 07 18.5
GSC Goldstone 78.73 320 *eP* P 18 06 34.1 +0.8
GSC pmax pmax
comp=Z,39nm,1.3s
GSC Goldstone 78.73 320 *eP* P 18 06 34.1 +0.8
comp=Z,39nm,1.3s
GSC Goldstone 78.73 320 ⇑P P 18 06 34.3 +1.1
baz=79,SNR=6.0
TMUT Trail Mountain 78.75 326 *eP* P 18 06 33.4 -0.2
comp=Z,38nm,1.1s
EYMN Ely 78.75 343 *eP* P 18 06 32.3 -0.6
comp=Z,36nm,1.2s
EYMN *e* 18 07 14.8
M21A Separation Pea 78.78 330 ⇑P P 18 06 34.8 +1.3
baz=79,SNR=34
DECC Green Verdugo 78.86 318 ⇓P P 18 06 34.9 +1.0
baz=79
O18A Roosevelt 78.92 328 ⇑P P 18 06 35.6 +1.3
baz=79,SNR=11
K23A Bowen Ranch, D 78.96 332 ⇑P P 18 06 35.6 +1.2
baz=79,SNR=26
N19A John Jarvie Ra 79.03 328 ⇓P P 18 06 35.9 +1.1
baz=79,SNR=12
J24A Dixon Ranch, L 79.04 333 ⇓P P 18 06 36.1 +1.4
baz=79,SNR=26
M20A Sweetwater, Wa 79.05 329 ⇑P P 18 06 36.0 +1.0
baz=79,SNR=22
L21A Rawlins 79.07 330 ⇑P P 18 06 35.9 +0.8
baz=79,SNR=64
EDW2 Edwards Air Fo 79.11 319 ⇑P P 18 06 35.7 +0.5
baz=79
BLG Laguna Peak 79.20 318 ⇓P P 18 06 36.9 +1.2
baz=79
P16A Fountain Green 79.21 326 ⇑P P 18 06 37.4 +1.5
baz=79
O17A Robinson Place 79.21 327 ⇓P P 18 06 37.4 +1.5
baz=79,SNR=66
K22A Casper 79.26 331 ⇓P P 18 06 37.4 +1.4
baz=80,SNR=16
N18A Larsen Ranch, 79.32 328 ⇓P P 18 06 37.4 +0.9
baz=80,SNR=18
RSSD Black Hills 79.45 334 *eP* P 18 06 37.2 +0.1
RSSD pmax pmax
comp=Z,28nm,0.8s
RSSD Black Hills 79.45 334 *eP* P 18 06 37.1 +0.1
comp=Z,28nm,0.8s
I24A Kuemmerle Ranc 79.47 333 ⇑P P 18 06 38.1 +1.0
baz=80,SNR=15
P15A Leamington 79.49 326 ⇓P P 18 06 38.2 +0.9
baz=80,SNR=5.4
M19A Rock Springs 79.50 329 ⇓P P 18 06 38.6 +1.1
baz=80,SNR=6.4
MPU Maple Canyon 79.51 326 *eP* P 18 06 37.9 +0.4
comp=Z,27nm,0.8s
MPU *e* 18 07 19.6
L20A Wamsutter 79.53 330 ⇓P P 18 06 38.4 +0.8
baz=80,SNR=26
FURC Furnace Creek, 79.60 321 ⇓P P 18 06 38.8 +1.0
baz=80,SNR=5.6
DAU Daniels Canyon 79.63 327 *eP* P 18 06 39.2 +0.9
DAU pmax pmax
comp=Z,46nm,0.9s
DAU Daniels Canyon 79.63 327 *eP* P 18 06 39.2 +0.9
comp=Z,46nm,0.9s
MPMC Manual Prospec 79.66 320 ⇓P P 18 06 39.0 +0.5
baz=80,SNR=7.4
N17A Moffit Pass 79.84 328 ⇑P P 18 06 40.5 +1.2
baz=80,SNR=11
M18A Lyman 79.86 328 ⇑P P 18 06 40.0 +0.6
baz=80,SNR=9.7
JLU Jordanelle 79.87 327 *eP* P 18 06 40.2 +0.7
comp=Z,30nm,0.7s
I23A Meade Ranch, G 79.89 333 ⇓P P 18 06 40.0 +0.6
baz=80
ISA Isabella 79.94 319 ⇓P P 18 06 40.7 +0.9
baz=80,SNR=6.3
K20A Yellowstone Ra 80.05 330 ⇑P P 18 06 40.7 +0.3
baz=80,SNR=36
L19A Farson 80.06 329 ⇓P P 18 06 41.5 +1.0
baz=80,SNR=29
N16A Rees Ranch, Co 80.09 327 ⇓P P 18 06 41.9 +1.3
baz=80,SNR=14
O15A The Old Anders 80.12 326 ⇓P P 18 06 41.8 +1.0
baz=80,SNR=5.9
M17A Scullys Gap (B 80.17 328 ⇑P P 18 06 41.7 +0.6
baz=80,SNR=14
H24A Dirks Ranch, A 80.18 334 ⇓P P 18 06 41.4 +0.5
baz=80,SNR=40
PKM Peak Mountain 80.19 318 ⇑P P 18 06 42.1 +0.8
baz=80
J21A Lysite 80.22 331 ⇓P P 18 06 41.9 +0.7
baz=80,SNR=7.9
DUG Dugway 80.23 326 *eP* P 18 06 42.1 +0.8
DUG pmax pmax
comp=Z,24nm,0.8s
DUG Dugway 80.23 326 *eP* P 18 06 42.1 +0.8
comp=Z,24nm,0.8s
DUG Dugway 80.23 326 ⇓P P 18 06 42.3 +1.0
baz=80,SNR=21
L18A Fontenelle, Gr 80.23 329 ⇑P P 18 06 42.1 +0.8
baz=80,SNR=34
I22A 9 Mile Ranch, 80.25 332 ⇑P P 18 06 42.0 +0.7
baz=80,SNR=66

CWC Cottonwood Cre 80.27 320 ⇑P P 18 06 43.1 +1.5
baz=80,SNR=5.9
AGMN Agassiz Nation 80.27 341 *eP* P 18 06 41.0 -0.1
comp=Z,59nm,0.8s
R11A Troy Canyon, C 80.28 323 ⇑P P 18 06 43.0 +1.4
baz=80,SNR=16
H23A Clabaugh Catt 80.36 333 ⇑P P 18 06 42.4 +0.5
baz=81,SNR=7.0
K19A Absolon Red Bu 80.41 330 ⇑P P 18 06 43.0 +0.7
baz=81,SNR=31
VES Vestal, Richgr 80.42 319 ⇑P P 18 06 43.0 +0.8
baz=81
LBTB Lobatse 80.49 113 ⇓*iP* P 18 06 43.8 +0.6
LBTB AMB AMB 18 06 44.3
comp=Z,119nm,1.8s
LBTB Lobatse 80.49 113 *eP* P 18 06 43.5 +0.3
comp=Z,114nm,0.8s
J20A Shoshoni 80.50 331 ⇑P P 18 06 43.7 +1.0
baz=81,SNR=34
M16A Huntsville 80.51 327 ⇓P P 18 06 43.5 +0.6
baz=81,SNR=42
I21A Big Trails, Te 80.53 331 ⇑P P 18 06 43.2 +0.4
baz=81,SNR=69
SMMC Simmler 80.59 318 ⇑P P 18 06 43.7 +0.5
baz=81
G24A Alzada 80.61 334 ⇑P P 18 06 43.5 +0.4
baz=81,SNR=18
N15A Stansbury Isla 80.61 326 ⇑P P 18 06 44.1 +0.8
baz=81,SNR=9.1
SEK Senekal 80.65 117 ⇓*iP* P 18 06 44.5 +0.4
SEK AMB AMB 18 06 45.2
comp=Z,166nm,1.6s
PDAR Pinedale Array 80.68 329 P P 18 06 43.9 +0.1
PDAR PKKPbc **PKKPbc** 18 25 22.1 -2.3
PDAR Pinedale Array 80.68 329 P P 18 06 43.9 +0.1
comp=Z,31nm,1.0s,baz=126,slow=7.4,SNR=122
PDAR PKKPbc **PKKPbc** 18 25 22.1 -2.3
comp=Z,2.5nm,0.6s,baz=197,slow=1.5,SNR=21
BW06 Boulder Array 80.68 329 ⇓P P 18 06 44.0 +0.2
baz=81,SNR=36
HWUT Hardware Ranch 80.70 328 *eP* P 18 06 44.0 +0.2
comp=Z,64nm,0.9s
HWUT *e* 18 07 28.5
L17A Cokeville 80.76 328 ⇑P P 18 06 44.4 +0.3
baz=81,SNR=22
H22A Clearmont 80.77 332 ⇑P P 18 06 44.4 +0.4
baz=81,SNR=13
K18A Toltan Ranch, 80.80 329 ⇑P P 18 06 45.7 +1.4
baz=81,SNR=65
J19A Crowheart 80.85 330 ⇓P P 18 06 45.3 +0.7
baz=81,SNR=50
G23A Biddle 80.89 333 ⇑P P 18 06 45.0 +0.4
baz=81,SNR=38
L16A Fish Haven 80.96 328 ⇓P P 18 06 45.8 +0.6
baz=81,SNR=34
I20A Worland 81.00 331 ⇑P P 18 06 45.9 +0.7
baz=81,SNR=52
M15A Larsen Ranch, 81.02 327 ⇑P P 18 06 46.0 +0.6
baz=81,SNR=14
MDND Maddock 81.04 338 ⇑P P 18 06 46.1 +0.8
baz=81,SNR=21
F24A Ekalaka 81.05 334 ⇓P P 18 06 45.6 +0.2
baz=81,SNR=26
KSD Kokstad 81.05 120 ⇓*iP* P 18 06 47.3 +1.2
KSD AMB AMB 18 06 49.3
comp=Z,128nm,2.1s
PRYS Parys 81.07 116 ⇓*iP* P 18 06 46.4 +0.1
PRYS AMB AMB 18 06 47.0
comp=Z,127nm,1.5s
H21A Big Horn, Sher 81.09 332 ⇑P P 18 06 46.0 +0.3
baz=81,SNR=39
KSR Koster 81.17 114 *eP* P 18 06 47.7 +0.8
KSR AMB AMB 18 06 48.0
comp=Z,30nm,1.6s
J18A Kendall Valley 81.24 329 ⇓P P 18 06 47.2 +0.5
baz=82,SNR=89
G22A Birney 81.26 333 ⇑P P 18 06 47.0 +0.4
baz=82,SNR=19
K17A Gardner Place, 81.29 329 ⇑P P 18 06 47.5 +0.5
baz=82,SNR=39
H20A Greybull 81.37 331 ⇓P P 18 06 47.4 +0.2
baz=82,SNR=31
AHID Auburn Hatcher 81.38 329 *eP* P 18 06 47.9 +0.5
comp=Z,41nm,0.8s
L15A Malad City 81.40 327 ⇓P P 18 06 47.7 +0.2
baz=82,SNR=51
HVU Hansel Valley 81.42 327 *eP* P 18 06 48.0 +0.4
HVU pmax pmax
comp=Z,38nm,0.7s
HVU Hansel Valley 81.42 327 *eP* P 18 06 48.0 +0.4
comp=Z,38nm,0.7s
I19A Meeteetse 81.44 331 ⇓P P 18 06 48.3 +0.6
baz=82,SNR=39
KLOF Kloof 81.52 115 ⇑*iP* P 18 06 49.2 +0.5
KLOF AMB AMB 18 06 50.1
comp=Z,113nm,0.7s
I18A Diamond G Ranc 81.54 330 ⇓P P 18 06 49.1 +0.9
baz=82,SNR=73
E24A Baker 81.60 335 ⇑P P 18 06 48.9 +0.6
baz=82,SNR=21
G21A Lodge Grass 81.64 332 ⇑P P 18 06 49.1 +0.5
baz=82,SNR=15
K16A Soda Springs 81.66 328 ⇓P P 18 06 49.9 +1.0
baz=82,SNR=58
J17A Brown Place, J 81.67 329 ⇑P P 18 06 49.6 +0.6
baz=82,SNR=9.2
F22A Rosebud 81.71 333 ⇑P P 18 06 49.3 +0.4
baz=82,SNR=48
REDW Red Top Meadow 81.73 329 *eP* P 18 06 49.6 +0.3
comp=Z,0.8nm,1.1s
SNOW Snow King Moun 81.77 329 *eP* P 18 06 50.1 +0.5
comp=Z,37nm,0.9s
NVAR Mina Array Bea 81.81 321 P P 18 06 50.5 +0.7
NVAR PKKPbc **PKKPbc** 18 25 22.0 +0.6
NVAR Mina Array Bea 81.81 321 P P 18 06 50.5 +0.7
comp=Z,8.2nm,0.8s,baz=156,slow=6.8,SNR=14
NVAR PKKPbc **PKKPbc** 18 25 22.0 +0.6
comp=Z,2.4nm,0.5s,baz=300,slow=2.3,SNR=7.8
LOHW Long Hollow 81.82 329 *eP* P 18 06 50.3 +0.6
comp=Z,22nm,0.7s
L14A Malta 81.83 327 ⇓P P 18 06 50.0 +0.3
baz=82,SNR=30
ELK Elko 81.86 325 *eP* P 18 06 50.4 +0.3
TPAW Teton Pass 81.88 329 *eP* P 18 06 50.5 +0.4
comp=Z,37nm,1.1s
E23A Ismay 81.93 334 ⇑P P 18 06 50.1 +0.1
baz=82,SNR=13
RRI2 Red Ridge 81.94 329 *eP* P 18 06 50.9 +0.5
comp=Z,26nm,0.7s
H19A Powell 81.94 331 ⇓P P 18 06 50.8 +0.5
baz=82,SNR=27
MOOW Moose Ponds 81.99 329 *eP* P 18 06 50.9 +0.3
comp=Z,9.8nm,0.8s
K15A Arbon 81.99 328 ⇑P P 18 06 51.1 +0.5
baz=82,SNR=5.8
ULM Lac du Bonnet 82.03 342 P P 18 06 50.2 -0.2
ULM PKKPbc **PKKPbc** 18 25 18.4 -3.0
ULM Lac du Bonnet 82.03 342 P P 18 06 50.2 -0.2
comp=Z,36nm,0.9s,baz=155,slow=6.8,SNR=62
ULM PKKPbc **PKKPbc** 18 25 18.4 -3.0
comp=Z,5.6nm,0.6s,baz=341,slow=2.7,SNR=15
ULM LR LR 18 43 20.4
comp=Z,305nm,21.4s,baz=319,slow=36
ERPM east rand prop 82.03 115 ⇑*iP* P 18 06 52.1 +0.7
ERPM AMB AMB 18 06 52.5
comp=Z,117nm,1.7s
I17A Pilgrim Ck. 82.05 330 ⇑P P 18 06 52.4 +1.5
baz=82,SNR=40
G20A Bridger 82.06 332 ⇑P P 18 06 51.2 +0.4
baz=82,SNR=66
DCID1 Drake Creek 82.07 329 *eP* P 18 06 51.8 +0.8
comp=Z,26nm,0.4s
D24A Glenclyde 82.07 335 ⇑P P 18 06 51.6 +0.9
baz=82,SNR=22
F21A Absaloka Mine, 82.09 333 ⇑P P 18 06 51.2 +0.3
baz=82,SNR=8.3
E22A Miles City 82.13 334 ⇑P P 18 06 50.9 -0.2
baz=82,SNR=6.5
IMW Indian Meadow 82.19 329 *eP* P 18 06 52.5 +0.7
comp=Z,46nm,0.9s
K14A Jones Ranch, D 82.19 327 ⇓P P 18 06 51.9 +0.3
baz=82,SNR=10
H18A Shoshone NF, C 82.24 331 ⇓P P 18 06 52.5 +0.6
baz=82,SNR=112
SLR Silverton 82.34 115 ⇓*iP* P 18 06 53.3 +0.3
SLR AMB AMB 18 06 54.6
comp=Z,187nm,0.8s

SCHQ Schefferville 82.39 360 *eP* P 18 06 51.6 -0.5
comp=Z,26nm,0.9s
SCHQ PKKPbc **PKKPbc** 18 25 18.4 -2.4
SCHQ Schefferville 82.39 360 P P 18 06 52.1 0.0
comp=Z,21nm,0.8s,baz=187,slow=4.4,SNR=40
SCHQ PKKPbc **PKKPbc** 18 25 18.4 -2.4
comp=Z,1.8nm,0.8s,baz=52,slow=1.5,SNR=4.6
H17A Grant Village 82.42 330 ⇓P P 18 06 53.8 +1.0
baz=83,SNR=11
RLMT Red Lodge 82.42 331 *eP* P 18 06 53.4 +0.5
comp=Z,34nm,0.7s
RLMT Red Lodge 82.42 331 ⇓P P 18 06 53.5 +0.7
baz=83,SNR=44
D23A Lindsay 82.45 335 ⇓P P 18 06 53.5 +0.8
baz=83,SNR=30
C24A Savage 82.45 335 ⇓P P 18 06 53.7 +1.0
baz=83,SNR=37
J15A Blackfoot 82.49 328 ⇓P P 18 06 54.0 +0.8
baz=83,SNR=27
F20A Billings 82.50 332 ⇓P P 18 06 53.2 +0.2
baz=83,SNR=11
YFT Old Faithful 82.58 330 *eP* P 18 06 55.5 +1.8
comp=Z,28nm,0.8s
E21A Keefer Ranch, 82.66 333 ⇑P P 18 06 54.1 +0.3
baz=83,SNR=5.5
G18A Lazy EL Ranch, 82.70 331 ⇑P P 18 06 54.8 +0.6
baz=83,SNR=44
D22A Cohagen 82.80 334 ⇓P P 18 06 55.2 +0.7
baz=83,SNR=21
YMR Madison River 82.81 330 *eP* P 18 06 56.1 +1.3
comp=Z,79nm,0.9s
F19A Roth Farm, Mol 82.87 332 ⇑P P 18 06 55.5 +0.6
baz=83,SNR=50
J14A Carey 82.95 328 ⇓P P 18 06 56.5 +1.0
baz=83,SNR=21
H16A Russell Place, 82.96 330 ⇓P P 18 06 56.7 +1.1
baz=83,SNR=33
C23A Lambert 82.96 335 ⇑P P 18 06 56.2 +0.8
baz=83,SNR=24
I15A Monteview 82.98 329 ⇑P P 18 06 56.7 +1.1
baz=83,SNR=8.7
RAR Rarotonga 83.02 250 P P 18 06 56.8 +0.5
RAR Rarotonga 83.02 250 P P 18 06 56.8 +0.5
comp=Z,16nm,0.8s,baz=200,slow=16,SNR=3.1
D21A La Casta Ranch 83.05 333 ⇑P P 18 06 56.4 +0.5
baz=83,SNR=32
E20A Meyer Farm, Mu 83.05 333 ⇓P P 18 06 56.5 +0.6
baz=83,SNR=70
GCMT Greycliff 83.12 331 *eP* P 18 06 56.5 +0.2
comp=Z,36nm,0.9s
QLMT Earthquake Lak 83.14 330 *eP* P 18 06 57.6 +1.1
comp=Z,4.1nm,1.0s
DGMT Dagmar 83.16 336 *eP* P 18 06 57.0 +0.7
comp=Z,83nm,0.7s
DGMT Dagmar 83.16 336 ⇓P P 18 06 57.2 +0.9
baz=83,SNR=21
C22A Vida 83.18 335 ⇓P P 18 06 56.8 +0.3
baz=83,SNR=8.2
G17A Pierce Place, 83.22 330 ⇓P P 18 06 57.3 +0.5
baz=84,SNR=5.5
WCN Washoe City 83.22 321 P P 18 06 56.5 -0.6
WCN Washoe City 83.22 321 P P 18 06 56.5 -0.6
F18A Big Timber 83.24 331 ⇓P P 18 06 57.4 +0.5
baz=84,SNR=103
E19A Rath Farm, Rou 83.29 332 ⇑P P 18 06 57.7 +0.6
baz=84,SNR=100
J13A Cove Ranch, Pi 83.32 327 ⇑P P 18 06 58.6 +1.3
baz=84,SNR=37
I14A Mackay 83.37 328 ⇓P P 18 06 59.2 +1.5
baz=84,SNR=56
B23A Brockton 83.44 335 ⇑P P 18 06 58.6 +0.8
baz=84
A24A Westby 83.47 336 ⇓P P 18 06 58.5 +0.6
baz=84,SNR=7.5
H15A Lima 83.53 329 ⇓P P 18 06 59.7 +1.2
baz=84,SNR=14
D20A Manuel Ranch, 83.53 333 ⇓P P 18 06 58.7 +0.4
baz=84,SNR=67
HLID Hailey 83.56 327 *eP* P 18 06 59.4 +0.7
comp=Z,39nm,0.7s
HLID Hailey 83.56 327 ⇓P P 18 06 59.9 +1.2
baz=84,SNR=77
DRV Dumont d'Urvil 83.58 190 PP PP 18 09 25.0 -47
DRV S S 18 16 55.0 -12
G16A Moss Hill, Enn 83.62 330 ⇑P P 18 06 59.4 +0.5
baz=84,SNR=15
F17A Fitzpatrick Pl 83.64 331 ⇓P P 18 07 00.1 +1.1
baz=84,SNR=64
I13A Wildhorse Cree 83.68 328 ⇑P P 18 07 00.7 +1.4
baz=84,SNR=72
B22A Reddig Ranch S 83.68 335 ⇓P P 18 06 59.6 +0.6
baz=84,SNR=22
C21A Desert Coulee 83.72 334 ⇑P P 18 06 59.5 +0.3
baz=84,SNR=24
MCMT McKenzie Canyo 83.78 329 *eP* P 18 07 00.8 +0.9
comp=Z,27nm,0.8s
A23A Redstone 83.81 336 ⇓P P 18 06 60.0 +0.4
baz=84,SNR=5.5
E18A Harlowton 83.84 332 ⇑P P 18 07 00.4 +0.4
baz=84,SNR=17
H14A Leadore 83.86 328 ⇓P P 18 07 01.5 +1.3
baz=84,SNR=29
BOZ Bozeman (W) 83.86 330 *eP* P 18 07 00.0 -0.1
comp=Z,11nm,0.8s
BOZ Bozeman (W) 83.86 330 ⇑P P 18 07 00.6 +0.4
baz=84,SNR=17
G15A Dillon 83.88 329 ⇑P P 18 07 00.9 +0.6
baz=84,SNR=27
D19A Cripps Ranch, 83.89 332 ⇓P P 18 07 00.4 +0.2
baz=84,SNR=37
F16A Kennard Place, 83.97 330 ⇓P P 18 07 01.2 +0.6
baz=84,SNR=13
C20A Veseth Ranch, 83.98 333 ⇓P P 18 07 00.4 -0.1
baz=84,SNR=28
I12A Atlanta 84.07 327 ⇓P P 18 07 02.0 +0.7
baz=84,SNR=26
DLMT Dillon 84.08 329 *eP* P 18 07 01.9 +0.7
comp=Z,33nm,1.0s
MFID Camas Ranch 84.13 326 ⇑P P 18 07 02.1 +0.6
baz=84,SNR=6.1
E17A Martinsdale 84.16 331 ⇑P P 18 07 02.3 +0.7
baz=84,SNR=45
B21A Ellsworth Farm 84.17 334 ⇑P P 18 07 02.3 +0.8
baz=84
A22A Carney Farms, 84.22 335 ⇑P P 18 07 02.4 +0.7
baz=84,SNR=46
H13A Challis 84.23 328 ⇑P P 18 07 03.3 +1.3
baz=84,SNR=49
D18A Linhart Farms, 84.30 332 ⇓P P 18 07 02.8 +0.5
baz=84,SNR=16
LRM Limekiln Ridge 84.36 330 *eP* P 18 07 03.3 +0.6
comp=Z,398nm,0.9s
LRM *e* 18 07 46.3
G14A Jackson 84.38 329 ⇓P P 18 07 03.5 +0.7
baz=85
F15A Butte 84.40 330 ⇓P P 18 07 03.7 +0.9
baz=85,SNR=31
C19A Slack Wire Ran 84.42 333 ⇑P P 18 07 03.0 +0.2
baz=85,SNR=25
H12A Diamond D Ranc 84.50 328 ⇓P P 18 07 04.0 +0.6
baz=85,SNR=15
MIR Mirnyy 84.57 172 ⇑*iP* P 18 07 04.5 +1.2
MIR pmax pmax
comp=Z,275nm,1.5s
E16A East Helena 84.57 331 ⇓P P 18 07 04.4 +0.7
baz=85,SNR=19
B20A Solberg Farm, 84.57 334 ⇑P P 18 07 03.7 +0.1
baz=85,SNR=17
A21A Bergtoll Ranch 84.60 335 ⇑P P 18 07 03.7 0.0
baz=85,SNR=5.1
G13A Cobalt 84.62 328 ⇑P P 18 07 05.1 +1.1
baz=85,SNR=56
MORF Marmelete 84.62 43 *eP* P 18 07 05.0 +1.0
comp=Z,89nm,1.6s
MORF Marmelete 84.62 43 *eP* P 18 07 03.8 -0.2
MORF *eS* S 18 17 13.7 -4.5
D17A Six Diamond Ra 84.63 332 ⇓P P 18 07 04.4 +0.5
baz=85,SNR=64
PTEO Sao Teotonio 84.74 43 *eP* P 18 07 06.2 +1.7
comp=Z,238nm,1.9s
F14A Wisdom 84.77 329 ⇓P P 18 07 05.8 +1.1
baz=85,SNR=8.5
A20A Cobblestone Ra 84.89 334 ⇑P P 18 07 05.4 +0.3
baz=85,SNR=50
D16A Dana Ranch, Ca 84.91 331 ⇓P P 18 07 06.4 +1.1
baz=85,SNR=67
E15A Deer Lodge 84.91 330 ⇓P P 18 07 06.1 +0.7
baz=85,SNR=11

EGMT Eagleton 84.94 333 *e*P P 18 07 05.0 -0.3
comp=Z,32nm,1.0s
EGMT Eagleton 84.94 333 ⇓P P 18 07 05.3 0.0
baz=85,SNR=18
PBDV Barranco-do-Ve 85.02 43 *e*P P 18 07 07.8 +1.8
comp=Z,149nm,2.6s
F13A Darby 85.19 329 ⇓P P 18 07 07.7 +0.9
baz=85,SNR=57
PCVE Castro Verde 85.20 43 *e*P P 18 07 08.6 +1.7
comp=Z,100nm,1.4s
PNCL Nicolau / Gran 85.23 42 *e*P P 18 07 08.5 +1.6
comp=Z,68nm,1.6s
MESJ Messejana 85.23 43 *e*P P 18 07 06.4 -0.6
MESJ AMb AMB 18 07 13.7
comp=Z,115nm,1.9s
MESJ *e*S S 18 17 17.6 -6.4
MESJ Messejana 85.23 43 *e*P P 18 07 06.4 -0.6
comp=Z,115nm,1.9s
MESJ *e*S S 18 17 17.6 -6.4
MESJ Messejana 85.23 43 *e*P P 18 07 06.4 -0.6
MESJ *e*S S 18 17 17.6 -6.4
B18A Beardsley Farm 85.24 333 ⇓P P 18 07 07.1 +0.2
baz=86,SNR=26
PVAQ Vaqueiros 85.25 43 *e*P P 18 07 08.6 +1.5
comp=Z,129nm,2.0s
PVAQ *e*SKSac SKSac 18 17 19.0 +1.7
PVAQ *e*S S 18 17 25.6 +1.3
PVAQ A A 18 44 36.8
comp=Z,280nm,18.0s
A19A Klindworth Far 85.25 334 ⇑P P 18 07 07.0 +0.1
baz=86,SNR=28
LIS Lisbon 85.26 41 *e*P P 18 07 06.4 -0.7
LIS AMb AMB 18 07 14.1
comp=Z,204nm,2.5s
LIS *e*S S 18 17 17.5 -6.8
LIS Lisbon 85.26 41 *e*P P 18 07 06.4 -0.7
comp=Z,204nm,2.5s
LIS *e*S S 18 17 17.5 -6.8
LIS Lisbon 85.26 41 *e*P P 18 07 06.4 -0.7
LIS *e*S S 18 17 17.4 -6.8
E14A Clinton 85.28 330 ⇓P P 18 07 08.3 +1.0
baz=86,SNR=19
MSNA Messina 85.32 113 ⇓*i*P P 18 07 09.2 +1.3
MSNA AMB AMB 18 07 10.0
comp=Z,155nm,1.6s
D15A Lincoln 85.33 330 ⇓P P 18 07 08.5 +1.1
baz=86,SNR=38
MOD Modoc 85.34 323 *e*P P 18 07 07.9 +0.3
CHMT Chamberlain Mo 85.56 330 *e*P P 18 07 09.0 +0.3
comp=Z,8.4nm,0.8s
PBEJ Beja 85.57 43 *e*P P 18 07 10.2 +1.6
comp=Z,112nm,1.9s
B17A L&G Farms, Che 85.58 332 ⇑P P 18 07 08.7 +0.2
baz=86,SNR=16
C16A Fuhringer Ranc 85.59 331 ⇓P P 18 07 09.0 +0.4
baz=86,SNR=27
E13A Victor 85.62 329 ⇓P P 18 07 09.7 +0.8
baz=86
WDC Whiskeytown Da 85.66 321 *e*P P 18 07 07.8 -1.2
WDC pmax pmax
comp=Z,12nm,0.9s
WDC Whiskeytown Da 85.66 321 *e*P P 18 07 07.8 -1.2
comp=Z,12nm,0.9s
A18A Metzger Ranch, 85.68 333 ⇓P P 18 07 08.9 -0.1
baz=86,SNR=14
EVOP Sao Brissos 85.74 42 ⇑*i*P P 18 07 10.8 +1.4
EVOP pmax pmax
comp=Z,137nm,1.0s
EVOP Sao Brissos 85.74 42 ⇑*i*P P 18 07 10.8 +1.4
comp=Z,137nm,1.0s
D14A Greenough 85.80 330 ⇑P P 18 07 10.3 +0.6
baz=86,SNR=28
MSO Missoula 85.80 330 *e*P P 18 07 10.3 +0.6
comp=Z,9.2nm,0.9s
MSO Missoula 85.80 330 ⇑P P 18 07 10.4 +0.7
baz=86,SNR=11
EVO Evora 85.81 42 ⇑*i*P P 18 07 10.8 +1.0
comp=Z,137nm,1.0s
EVO Evora 85.81 42 *e*P P 18 07 11.0 +1.2
comp=Z,91nm,1.9s
TAM Tamanrasset 85.89 62 *e*P P 18 07 11.7 +0.9
TAM pmax pmax
comp=Z,98nm,1.2s
TAM Tamanrasset 85.89 62 *e*P P 18 07 11.7 +0.9
comp=Z,98nm,1.2s
BMO Blue Mountains 85.91 326 *e*P P 18 07 10.2 -0.1
BMO pmax pmax
comp=Z,13nm,0.8s
BMO Blue Mountains 85.91 326 *e*P P 18 07 10.2 -0.1
comp=Z,13nm,0.8s
SLMT Seeley Lake 85.91 330 *e*P P 18 07 10.6 +0.3
comp=Z,26nm,0.7s
C15A Salmond Ranch, 85.94 331 ⇑P P 18 07 11.2 +0.8
baz=86,SNR=86
PMTG Montargil 86.03 42 *e*P P 18 07 12.3 +1.4
comp=Z,167nm,1.6s
A17A Triple J Farms 86.05 333 ⇑P P 18 07 11.0 +0.2
baz=86,SNR=22
B16A M & M Farms, S 86.05 332 ⇓P P 18 07 10.9 0.0
baz=86,SNR=15
CASY Casey 86.09 179 *e*P P 18 07 11.7 +0.8
comp=Z,116nm,0.8s
PBAR Barrancos 86.16 43 *e*P P 18 07 12.7 +1.2
comp=Z,80nm,1.5s
D13A Huson 86.23 329 ⇓P P 18 07 12.7 +0.9
baz=86,SNR=37
PESTR Estremoz 86.28 42 *e*P P 18 07 13.4 +1.3
comp=Z,131nm,2.4s
PTOM Tomar 86.28 41 *e*P P 18 07 13.3 +1.2
comp=Z,212nm,1.3s
B15A Bradely Ranch, 86.33 331 ⇑P P 18 07 12.0 -0.3
baz=87,SNR=44
SWMT Swartz Lake 86.34 330 *e*P P 18 07 12.7 +0.3
comp=Z,30nm,0.9s
A16A West Butte Ran 86.42 332 ⇓P P 18 07 13.0 +0.2
baz=87,SNR=57
YBH Yreka Blue Hor 86.53 321 *e*P P 18 07 12.5 -0.9
comp=Z,16nm,0.8s
YBH Yreka Blue Hor 86.53 321 P P 18 07 12.8 -0.6
comp=Z,16nm,0.8s,baz=94,slow=3.1,SNR=7.1
YBMT Yellow Bay 86.61 330 *e*P P 18 07 14.0 +0.3
comp=Z,26nm,0.7s
JTMT Jette 86.65 330 *e*P P 18 07 14.1 +0.2
comp=Z,40nm,0.8s
B14A Marquette Ranc 86.67 331 ⇑P P 18 07 13.9 -0.1
baz=87,SNR=17
C13A Hot Springs 86.72 330 ⇑P P 18 07 14.9 +0.7
baz=87,SNR=44
PMRV Marv??o 86.76 42 *e*P P 18 07 15.5 +1.0
comp=Z,65nm,1.5s
PMRV *e*SKSac SKSac 18 17 28.4 +1.8
PMRV A A 18 45 06.3
comp=Z,209nm,18.0s
BLMT Blacktail Moun 86.88 330 *e*P P 18 07 15.5 +0.4
comp=Z,75nm,0.9s
A15A Johnson Ranch, 86.92 332 ⇑P P 18 07 15.1 0.0
baz=87
BSMT Bassoo Peak 86.95 330 *e*P P 18 07 15.8 +0.4
comp=Z,48nm,0.9s
PCBR Castelo Branco 86.97 41 *e*P P 18 07 16.1 +0.6
comp=Z,81nm,1.4s
LSZ Lusaka 87.09 106 ⇓*i*P P 18 07 18.9 +2.1
LSZ Lusaka 87.09 106 *e*P P 18 07 18.7 +1.9
comp=Z,175nm,1.3s
LSZ Lusaka 87.09 106 P P 18 07 19.1 +2.3
SNR=31
C12B Naegeli Ranch, 87.15 329 ⇓P P 18 07 16.8 +0.6
baz=87,SNR=20
B13A Whitefish 87.20 330 ⇓P P 18 07 16.8 +0.4
baz=87,SNR=30
A14A Double T Ranch 87.20 331 ⇓P P 18 07 16.7 +0.2
baz=87,SNR=40
HUMO Hull Mountain 87.26 322 *e*P P 18 07 16.3 -0.5
comp=Z,20nm,1.1s
MTE Manteigas 87.30 41 *e*P P 18 07 18.6 +1.5
comp=Z,137nm,1.7s
MTE *e*SKSac SKSac 18 17 30.4 +0.4
MTE *e*S S 18 17 44.2 +0.1
MTE A A 18 44 32.4
comp=Z,410nm,20.0s
MTE Manteigas 87.30 41 *e*P P 18 07 17.7 +0.6
comp=Z,121nm,1.3s
PVIS Viseu 87.30 41 *e*P P 18 07 18.6 +1.5
comp=Z,77nm,1.8s
WALA Waterton Lakes 87.48 331 *e*P P 18 07 17.9 0.0
comp=Z,27nm,0.8s
FFC Flin Flon 87.75 340 *i*P P 18 07 18.9 +0.1
FFC Flin Flon 87.75 340 *e*P P 18 07 18.5 -0.2
comp=Z,22nm,1.0s
FFC Flin Flon 87.75 340 P P 18 07 18.6 -0.2
comp=Z,112nm,1.1s,SNR=12
B12A Libby 87.77 330 ⇓P P 18 07 20.0 +0.9
baz=88,SNR=32
POLO Lamas de Olo 87.79 40 *e*P P 18 07 21.8 +2.3
comp=Z,54nm,1.9s
PCAB Cabril 87.88 40 *e*P P 18 07 22.1 +2.3
comp=Z,117nm,1.9s
PGAV Gavieira, Arco 87.91 39 *e*P P 18 07 21.6 +1.6
comp=Z,128nm,1.7s
PGAV *e*SKSac SKSac 18 17 33.6 0.0
PGAV *e*S S 18 17 51.2 +1.3
PGAV A A 18 45 08.2
comp=Z,245nm,20.0s
MVO Moncorvo 88.09 41 *e*P P 18 07 21.6 +0.7
comp=Z,108nm,2.0s
MVO *e*SKSac SKSac 18 17 36.1 +1.4
MVO *e*S S 18 17 51.4 -0.2
MVO A A 18 44 58.6
comp=Z,303nm,20.0s
HAWA Hanford 88.10 326 *e*P P 18 07 21.0 +0.3
comp=Z,36nm,0.9s
A12A Yaak River Ran 88.14 330 ⇓P P 18 07 21.1 +0.2
baz=88,SNR=17
SNIWA Snively Ranch 88.22 326 P P 18 07 22.9 +1.7
NEW Newport 88.31 329 *e*P P 18 07 20.6 -1.0
comp=Z,18nm,1.3s
NEW Newport 88.31 329 ⇑P P 18 07 21.1 -0.5
baz=88
NEW Newport 88.31 329 P P 18 07 21.2 -0.5
comp=Z,4.9nm,0.7s,baz=146,slow=6.1,SNR=14
OD2 Odessa Site #2 88.42 328 P P 18 07 22.5 +0.3
TRW Toppenish Ridg 88.53 326 P P 18 07 23.8 +1.1
PAB San Pablo 88.65 43 *e*P P 18 07 24.0 +0.4
PAB pmax pmax
comp=Z,81nm,1.5s
PAB San Pablo 88.65 43 *e*P P 18 07 24.0 +0.4
comp=Z,81nm,1.5s
PBRG Braganca 88.67 40 *e*P P 18 07 25.0 +1.5
comp=Z,86nm,1.5s
ESDC Sonseca Array 88.96 43 P P 18 07 25.5 +0.5
ESDC Sonseca Array 88.96 43 P P 18 07 25.5 +0.5
comp=Z,9.0nm,0.8s,baz=242,slow=4.5,SNR=40
ESLA Sonseca Array 88.96 43 *e*P P 18 07 25.3 +0.3
comp=Z,13nm,1.3s
ETW Entiat 89.34 327 P P 18 07 26.8 +0.1
ETRT Tiaret 89.78 49 P P 18 07 32.0 +3.0
EANR 'Ain N'Sour 89.97 49 P P 18 07 33.0 +3.2
HTW Haystack Looko 90.18 326 P P 18 07 29.9 -0.5
ECHA Ech Chlef 90.26 49 P P 18 07 34.5 +3.5
MQZ McQueen's Vall 90.44 219 *e*PN P 18 07 33.6 +1.6
EBNR Beni Rached 90.45 49 P P 18 07 35.0 +3.0
JCW Jim Creek 90.53 327 P P 18 07 31.5 -0.6
ODZ Otahua Downs 90.64 217 *e*PN P 18 07 34.0 +1.1
HDW Hoodsport 90.71 326 P P 18 07 33.6 +0.6
CMW Cultus Mountai 90.78 327 P P 18 07 33.1 -0.1
KHZ Kahutara 90.78 220 *e*P P 18 07 34.7 +1.2
comp=Z,60nm,0.7s
KHZ Kahutara 90.78 220 *e*PN P 18 07 34.8 +1.2
URZ Urewera 91.24 225 P P 18 07 37.0 +1.3
URZ Urewera 91.24 225 P P 18 07 37.0 +1.3
comp=Z,6.6nm,0.8s,baz=127,slow=5.1,SNR=3.4
RPZ Rata Peaks 91.31 218 P P 18 07 37.3 +1.3
RPZ Rata Peaks 91.31 218 P P 18 07 37.3 +1.3
comp=Z,48nm,0.9s,baz=126,slow=4.3,SNR=12
EMHD Djebel Mahouad 91.35 49 P P 18 07 40.0 +3.7
THZ Tophouse 91.56 220 *e*PN P 18 07 38.8 +1.6
SJPF Ste Jean 92.68 42 ⇑*i*P P 18 07 43.4 +1.3
comp=Z,63nm,1.1s
SJPF Ste Jean 92.68 42 ⇑*i*P P 18 07 43.4 +1.3
SJPF pmax pmax
comp=Z,63nm,1.1s
SJPF Ste Jean 92.68 42 ⇑*i*P P 18 07 43.4 +1.3
comp=Z,63nm,1.1s
ETSF Etsaut 92.95 42 ⇑*i*P P 18 07 44.7 +1.3
comp=Z,42nm,1.0s
ETSF Etsaut 92.95 42 ⇑*i*P P 18 07 44.7 +1.3
ETSF pmax pmax
comp=Z,43nm,1.0s
ETSF Etsaut 92.95 42 ⇑*i*P P 18 07 44.7 +1.3
comp=Z,42nm,1.0s
CKHR Kef el Ahmar 92.98 51 P P 18 07 46.5 +2.7
SET Setif 93.00 50 P P 18 07 46.0 +2.1
EPF Esparros 93.57 43 *e*P P 18 07 47.2 +1.0
EPF Esparros 93.57 43 *e*P P 18 07 47.2 +1.0
EPF Esparros 93.57 43 *e*P P 18 07 47.2 +1.0
CASM Ain Smara 93.78 51 P P 18 07 50.0 +2.6
SALF Salau 93.92 43 *e*P P 18 07 50.2 +2.3
SALF Salau 93.92 43 *e*P P 18 07 50.2 +2.3
MLS Moulis 93.98 43 *e*P P 18 07 49.9 +1.8
MLS Moulis 93.98 43 *e*P P 18 07 49.9 +1.8
CKFL Kef-Lekhel 94.01 51 P P 18 07 50.6 +2.1
ABSA Djebel Ababsia 94.47 51 P P 18 07 52.0 +1.4
QUIF Quistinic 94.48 37 ⇑*i*P P 18 07 50.1 -0.1
comp=Z,12nm,0.6s
QUIF Quistinic 94.48 37 ⇑*i*P P 18 07 50.1 -0.1
QUIF pmax pmax
comp=Z,12nm,0.6s
QUIF Quistinic 94.48 37 ⇑*i*P P 18 07 50.1 -0.1
comp=Z,12nm,0.6s
CMAH Djebel Manchou 94.61 51 P P 18 07 52.0 +0.8
ROSF Rostrenen 94.68 37 ⇑*i*P P 18 07 51.2 +0.1
comp=Z,36nm,0.8s
ROSF Rostrenen 94.68 37 ⇑*i*P P 18 07 51.2 +0.1
ROSF pmax pmax
comp=Z,36nm,0.8s
ROSF Rostrenen 94.68 37 ⇑*i*P P 18 07 51.2 +0.1
comp=Z,36nm,0.8s
MTLF Montolieu 94.87 43 *e*P P 18 07 52.7 +0.5
comp=Z,68nm,1.5s
MTLF Montolieu 94.87 43 *e*P P 18 07 52.7 +0.5
MTLF pmax pmax
comp=Z,68nm,1.5s
MTLF Montolieu 94.87 43 *e*P P 18 07 52.7 +0.5
comp=Z,68nm,1.5s
LFF La Frestale 94.90 41 ⇑*i*P P 18 07 53.0 +0.8
comp=Z,33nm,0.5s
LFF La Frestale 94.90 41 ⇑*i*P P 18 07 53.0 +0.8
LFF pmax pmax
comp=Z,33nm,0.5s
LFF La Frestale 94.90 41 ⇑*i*P P 18 07 53.0 +0.8
comp=Z,33nm,0.5s
SGMF Saint Gilles 95.01 37 *e*P P 18 07 53.3 +0.7
SGMF Saint Gilles 95.01 37 *e*P P 18 07 53.3 +0.7
SGMF Saint Gilles 95.01 37 *e*P P 18 07 53.3 +0.7
MFF Saint Martin d 95.35 39 ⇑*i*P P 18 07 54.7 +0.5
MFF Saint Martin d 95.35 39 ⇑*i*P P 18 07 54.7 +0.5
MFF Saint Martin d 95.35 39 ⇑*i*P P 18 07 54.7 +0.5
KEST Kesra 95.49 52 *e*P P 18 07 56.9 +1.6
KEST PKKPbc PKKPdf 18 24 47.5 -0.1
KEST Kesra 95.49 52 P P 18 07 57.0 +1.8
comp=Z,5.6nm,0.8s,baz=228,slow=2.6,SNR=13
KEST PKKPbc PKKPdf 18 24 47.5 -0.1
comp=Z,1.1nm,0.6s,baz=76,slow=20,SNR=5.8
RJF Les Rejaudoux 95.56 41 *e*P P 18 07 55.6 +0.3
RJF Les Rejaudoux 95.56 41 *e*P P 18 07 55.6 +0.3
RJF Les Rejaudoux 95.56 41 *e*P P 18 07 55.6 +0.3
CAF Calviac 95.67 42 *e*P P 18 07 56.4 +0.6
CAF Calviac 95.67 42 *e*P P 18 07 56.4 +0.6
CAF Calviac 95.67 42 *e*P P 18 07 56.4 +0.6
GRR Gorron 96.00 38 ⇑*i*P P 18 07 57.0 -0.1
GRR Gorron 96.00 38 ⇑*i*P P 18 07 57.0 -0.1
GRR Gorron 96.00 38 ⇑*i*P P 18 07 57.0 -0.1
LASF Ste Croix 96.27 43 *e*P P 18 07 58.6 +0.1
LASF Ste Croix 96.27 43 *e*P P 18 07 58.6 +0.1
FLN La Foliniere 96.42 38 *e*P P 18 07 59.2 +0.2
FLN La Foliniere 96.42 38 *e*P P 18 07 59.2 +0.2
FLN La Foliniere 96.42 38 *e*P P 18 07 59.2 +0.2
TCF Toulx Ste Croi 96.51 41 *e*P P 18 07 59.9 +0.3
comp=Z,8.6nm,0.6s
TCF Toulx Ste Croi 96.51 41 *e*P P 18 07 59.9 +0.3
TCF pmax pmax
comp=Z,9.0nm,0.6s
TCF Toulx Ste Croi 96.51 41 *e*P P 18 07 59.9 +0.3
comp=Z,8.6nm,0.6s
LDF La Druitiere 96.52 38 *e*P P 18 07 59.5 0.0
LDF La Druitiere 96.52 38 *e*P P 18 07 59.5 0.0
LDF La Druitiere 96.52 38 *e*P P 18 07 59.5 0.0
LBL Lubilhac 96.53 42 *e*P P 18 08 01.2 +1.4
LBL Lubilhac 96.53 42 *e*P P 18 08 01.2 +1.4
LBL Lubilhac 96.53 42 *e*P P 18 08 01.2 +1.4
PYM Petit Puy Mans 96.68 41 *e*P P 18 08 02.4 +2.0
PYM Petit Puy Mans 96.68 41 *e*P P 18 08 02.4 +2.0
AGO Saint Agoulin 96.92 41 *e*P P 18 08 02.4 +0.8
AGO Saint Agoulin 96.92 41 *e*P P 18 08 02.2 +0.8
BGF Bois d'Agland 97.03 41 *e*P Pdif 18 08 02.4 +0.4
BGF Bois d'Agland 97.03 41 *e*P Pdif 18 08 02.4 +0.4
BGF Bois d'Agland 97.03 41 *e*P Pdif 18 08 02.4 +0.4
PLDF La Plantade 97.16 41 *e*P Pdif 18 08 03.9 +1.3
PLDF La Plantade 97.16 41 *e*P Pdif 18 08 03.9 +1.3
PLDF La Plantade 97.16 41 *e*P Pdif 18 08 03.9 +1.3
VIVF Saint-Julien-l 97.18 43 *e*P Pdif 18 08 03.6 +0.9
comp=Z,40nm,1.4s
VIVF Saint-Julien-l 97.18 43 *e*P Pdif 18 08 03.6 +0.9
VIVF pmax pmax
comp=Z,40nm,1.4s
VIVF Saint-Julien-l 97.18 43 *e*P Pdif 18 08 03.6 +0.9
comp=Z,40nm,1.4s
SMRF Simiane la Rot 97.26 44 *e*P Pdif 18 08 04.5 +1.4
comp=Z,51nm,1.2s
SMRF Simiane la Rot 97.26 44 *e*P Pdif 18 08 04.5 +1.4
comp=Z,51nm,1.2s
SSB Saint Sauveur 97.33 42 *e*P Pdif 18 08 04.1 +0.7
SSB pmax pmax
comp=Z,28nm,1.2s
SSB Saint Sauveur 97.33 42 *e*P Pdif 18 08 04.1 +0.7
comp=Z,28nm,1.2s
AVF Avril sur Loir 97.45 41 *e*P Pdif 18 08 04.0 +0.2
comp=Z,57nm,1.5s
AVF Avril sur Loir 97.45 41 *e*P Pdif 18 08 04.0 +0.2
AVF pmax pmax
comp=Z,57nm,1.5s
AVF Avril sur Loir 97.45 41 *e*P Pdif 18 08 04.0 +0.2
comp=Z,57nm,1.5s
LMR La Mourre 97.50 45 ⇑*i*P Pdif 18 08 05.1 +1.0
comp=Z,98nm,1.3s
LMR La Mourre 97.50 45 ⇑*i*P Pdif 18 08 05.1 +1.0
LMR pmax pmax
comp=Z,98nm,1.3s
LMR La Mourre 97.50 45 ⇑*i*P Pdif 18 08 05.1 +1.0
comp=Z,98nm,1.3s
SMF Signal de Mont 97.65 41 ⇑*i*P Pdif 18 08 05.3 +0.6
comp=Z,54nm,1.2s
SMF Signal de Mont 97.65 41 ⇑*i*P Pdif 18 08 05.3 +0.6
SMF pmax pmax
comp=Z,55nm,1.2s
SMF Signal de Mont 97.65 41 ⇑*i*P Pdif 18 08 05.3 +0.6
comp=Z,54nm,1.2s
SSF Saint Saulge 97.68 40 ⇑*i*P Pdif 18 08 04.9 +0.1
comp=Z,30nm,1.2s
SSF Saint Saulge 97.68 40 ⇑*i*P Pdif 18 08 04.9 +0.1
SSF pmax pmax
comp=Z,30nm,1.2s
SSF Saint Saulge 97.68 40 ⇑*i*P Pdif 18 08 04.9 +0.1
comp=Z,30nm,1.2s
FRF La Foret Royal 97.70 45 ⇑*i*P Pdif 18 08 06.0 +1.0
comp=Z,80nm,1.4s
FRF La Foret Royal 97.70 45 ⇑*i*P Pdif 18 08 06.0 +1.0
FRF pmax pmax
comp=Z,80nm,1.4s
FRF La Foret Royal 97.70 45 ⇑*i*P Pdif 18 08 06.0 +1.0
comp=Z,80nm,1.4s
YKA Yellowknife Ar 97.90 340 P P **18 08 05.1 -0.3**
YKA PKiKP **PKiKP** **18 12 38.6 +0.6**
YKA PKKPbc **PKKPbc** **18 24 38.6 -2.8**
YKA P'P' 18 32 53.0
YKA Yellowknife Ar 97.90 340 P P **18 08 05.1 -0.3**
comp=Z,5.1nm,0.7s,baz=135,slow=4.5,SNR=132
YKA PKiKP **PKiKP** **18 12 38.6 +0.6**
comp=Z,0.6nm,0.6s,baz=136,slow=2.1,SNR=5.9
YKA PKKPbc **PKKPbc** **18 24 38.6 -2.8**
comp=Z,1.3nm,0.5s,baz=324,slow=3.3,SNR=26
YKA PKPPKP **P'P'df** **18 32 53.0 +0.9**
comp=Z,0.2nm,0.8s,baz=287,slow=4.9,SNR=5.0
ORIF Oris-en-Rattie 97.94 43 ⇑*i*P Pdif 18 08 07.5 +1.3
comp=Z,21nm,0.7s
ORIF Oris-en-Rattie 97.94 43 ⇑*i*P Pdif 18 08 07.5 +1.3
ORIF pmax pmax
comp=Z,21nm,0.7s
ORIF Oris-en-Rattie 97.94 43 ⇑*i*P Pdif 18 08 07.5 +1.3
comp=Z,21nm,0.7s
YKW3 Yellowknife Ar 97.95 340 *e*P P **18 08 05.1 -0.5**
comp=Z,0.1nm,0.8s
YKW3 *e* 18 08 51.5
CALN Calern 97.95 45 *e*P Pdif 18 08 08.3 +2.0
CALN Calern 97.95 45 *e*P Pdif 18 08 08.3 +2.0
CALN Calern 97.95 45 *e*P Pdif 18 08 08.3 +2.0
LOR Lormes 98.00 40 ⇑*i*P Pdif 18 08 06.4 +0.1
comp=Z,46nm,1.3s
LOR Lormes 98.00 40 ⇑*i*P Pdif 18 08 06.4 +0.1
comp=Z,46nm,1.3s
MVIF Mont Vial 98.19 45 *e*P Pdif 18 08 09.6 +2.2
REVF Revere 98.25 45 *e*P Pdif 18 08 09.2 +1.7
TOUF Mont Tournerai 98.31 44 *e*P Pdif 18 08 10.0 +2.0
TOUF Mont Tournerai 98.31 44 *e*P Pdif 18 08 10.0 +2.0
TOUF Mont Tournerai 98.31 44 *e*P Pdif 18 08 10.0 +2.0
SBF Sospel 98.35 45 *e*P Pdif 18 08 09.0 +1.0
comp=Z,107nm,1.2s
SBF Sospel 98.35 45 *e*P Pdif 18 08 09.0 +1.0
SBF pmax pmax
comp=Z,107nm,1.2s
SBF Sospel 98.35 45 *e*P Pdif 18 08 09.0 +1.0
comp=Z,107nm,1.2s
MBDF Montbardon 98.39 44 ⇑*i*P Pdif 18 08 09.4 +1.2
comp=Z,48nm,1.2s
MBDF Montbardon 98.39 44 ⇑*i*P Pdif 18 08 09.4 +1.2
MBDF pmax pmax
comp=Z,48nm,1.2s
MBDF Montbardon 98.39 44 ⇑*i*P Pdif 18 08 09.4 +1.2
comp=Z,48nm,1.2s
SAOF Saorge 98.49 45 *e*P Pdif 18 08 11.2 +2.7
SAOF Saorge 98.49 45 *e*P Pdif 18 08 11.2 +2.7
SAOF Saorge 98.49 45 *e*P Pdif 18 08 11.2 +2.7
PGF Pioggiola 98.68 46 *e*P Pdif 18 08 10.6 +1.1
PGF Pioggiola 98.68 46 *e*P Pdif 18 08 10.6 +1.1
PGF Pioggiola 98.68 46 *e*P Pdif 18 08 10.6 +1.1
LPL La Plagne 98.77 43 ⇑*i*P Pdif 18 08 11.4 +1.4
comp=Z,34nm,1.0s
LPL La Plagne 98.77 43 ⇑*i*P Pdif 18 08 11.4 +1.4
LPL pmax pmax
comp=Z,35nm,1.0s
LPL La Plagne 98.77 43 ⇑*i*P Pdif 18 08 11.4 +1.4
comp=Z,34nm,1.0s
LPG La Plagne 98.77 43 ⇑*i*P Pdif 18 08 11.6 +1.5
comp=Z,42nm,1.2s
LPG La Plagne 98.77 43 ⇑*i*P Pdif 18 08 11.6 +1.5
LPG pmax pmax
comp=Z,42nm,1.2s
LPG La Plagne 98.77 43 ⇑*i*P Pdif 18 08 11.6 +1.5
comp=Z,42nm,1.2s
CABF La Chapelle 98.95 42 *e*P Pdif 18 08 11.3 +0.7
comp=Z,35nm,1.3s
CABF La Chapelle 98.95 42 *e*P Pdif 18 08 11.3 +0.7
CABF pmax pmax
comp=Z,35nm,1.3s
CABF La Chapelle 98.95 42 *e*P Pdif 18 08 11.3 +0.7
comp=Z,35nm,1.3s
SFTF Sexfontaines 99.17 40 *e*P **Pdif** **18 08 11.7 +0.3**
SFTF Sexfontaines 99.17 40 *e*P **Pdif** **18 08 11.7 +0.3**
MEZF Maizieres J'vi 99.34 40 *e*P **Pdif** **18 08 12.4 +0.3**
comp=Z,16nm,0.6s
MEZF Maizieres J'vi 99.34 40 *e*P **Pdif** **18 08 12.4 +0.3**
comp=Z,16nm,0.6s
BAIF Baives 99.69 38 *e*P **Pdif** **18 08 13.8 +0.1**
comp=Z,9.3nm,1.0s
BAIF Baives 99.69 38 *e*P **Pdif** **18 08 13.8 +0.1**
BAIF pmax pmax
comp=Z,9.0nm,1.0s
BAIF Baives 99.69 38 *e*P **Pdif** **18 08 13.8 +0.1**
comp=Z,9.3nm,1.0s
THEF They Montfort 99.72 40 *e*P **Pdif** **18 08 18.8 +4.9**
THEF They Montfort 99.72 40 *e*P **Pdif** **18 08 18.8 +4.9**
THEF They Montfort 99.72 40 *e*P **Pdif** **18 08 15.6 +1.7**
PAGF Fort de Pagny 99.75 40 *e*P **Pdif** **18 08 14.6 +0.6**
PAGF Fort de Pagny 99.75 40 *e*P **Pdif** **18 08 14.6 +0.6**
LOMF Lomont 99.76 41 *e*P **Pdif** **18 08 19.3 +5.1**
LOMF Lomont 99.76 41 *e*P **Pdif** **18 08 19.3 +5.1**
LOMF Lomont 99.76 41 *e*P **Pdif** **18 08 17.6 +3.4**
HAU Haudompre 99.82 41 *e*P **Pdif** **18 08 14.6 +0.3**
HAU Haudompre 99.82 41 *e*P **Pdif** **18 08 14.6 +0.3**
HAU Haudompre 99.82 41 *e*P **Pdif** **18 08 14.6 +0.3**
HINF Hinteralfeld 100.01 41 *e*P **Pdif** **18 08 15.5 +0.3**
HINF Hinteralfeld 100.01 41 *e*P **Pdif** **18 08 15.5 +0.3**
HINF Hinteralfeld 100.01 41 *e*P **Pdif** **18 08 15.5 +0.3**
GIVF Givet 100.05 38 *e*P **Pdif** **18 08 15.7 +0.4**
comp=Z,11nm,0.6s

GIVF Givet 100.05 38 *e*P **Pdif** 18 08 15.7 +0.4
GIVF pmax pmax
comp=Z,11nm,0.6s
GIVF Givet 100.05 38 *e*P **Pdif** 18 08 15.7 +0.4
comp=Z,11nm,0.6s
ECH Echery 100.39 41 *e*P **Pdif** 18 08 17.2 +0.3
ECH *e* 18 12 21.3
ECH pmax pmax
comp=Z,16nm,1.3s
ECH Echery 100.39 41 *e*Pdif **Pdif** 18 08 17.2 +0.3
comp=Z,16nm,1.3s
ECH *e*PP **PP** 18 12 21.3 -4.4
ECH Echery 100.39 41 *e*P **Pdif** 18 08 18.3 +1.4
CDF Champ du Feu 100.56 41 *e*P **Pdif** 18 08 18.1 +0.4
comp=Z,8.1nm,0.6s
CDF Champ du Feu 100.56 41 *e*P **Pdif** 18 08 18.1 +0.4
CDF pmax pmax
comp=Z,8.0nm,0.6s
CDF Champ du Feu 100.56 41 *e*P **Pdif** 18 08 18.1 +0.4
comp=Z,8.1nm,0.6s
FELD Feldberg im Sc 100.72 41 *e*P **Pdif** 18 08 21.2 +2.7
DLBC Dease Lake 100.82 331 P **Pdif** 18 08 19.0 +0.4
DLBC PKKPbc **PKKPbc** 18 24 31.1 -1.9
DLBC Dease Lake 100.82 331 P **Pdif** 18 08 19.0 +0.4
comp=Z,5.2nm,0.7s,baz=141,slow=2.8,SNR=12
DLBC PKKPbc **PKKPbc** 18 24 31.1 -1.9
comp=Z,1.7nm,0.6s,baz=7.2,slow=5.1,SNR=6.1
TUE Stuetta 100.82 43 *e*Pdif **Pdif** 18 08 19.2 +0.1
comp=Z,11nm,0.8s
RUP Ruppelstein 101.08 39 *e*P **Pdif** 18 08 21.5 +1.5
RUP Ruppelstein 101.08 39 *e*P **Pdif** 18 08 21.5 +1.5
LANF Langenberg 101.15 40 *e*P **Pdif** 18 08 23.2 +3.0
LANF Langenberg 101.15 40 *e*P **Pdif** 18 08 23.2 +3.0
LANF Langenberg 101.15 40 *e*P **Pdif** 18 08 23.2 +3.0
CADS Cadrg 103.40 45 *e*Pdiff **Pdif** 18 08 33.3 +2.9
CADS *e*PP **PP** 18 12 44.0 -4.4
VOY Vojsko 103.41 45 *e*PP PP 18 12 43.8 -4.8
LJU Ljubljana 103.82 45 *e*PP PP 18 12 47.0 -4.4
VISS Visnje 103.91 45 *e*PP PP 18 12 48.6 -3.5
RES Resolute Bay 103.99 353 Pdif **Pdif** 18 08 32.8 +0.5
RES Resolute Bay 103.99 353 Pdiff **Pdif** 18 08 32.8 +0.5
comp=Z,1.2nm,0.8s,baz=170,slow=5.8,SNR=7.2
BOJS Bojanci 104.04 46 *i* SKSac **SKSac** 18 18 59.5 +1.4
PERS Pernice 104.44 45 *e*PP PP 18 12 51.2 -4.9
PERS *e*SKSac **SKSac** 18 18 59.7 -0.3
PERS *e* 18 19 43.6
PERS *e* 18 20 16.0
GERES GERESS Array B 104.53 42 Pdif **Pdif** 18 08 38.6 +3.3
GERES PKiKP **PKiKP** 18 12 50.1 -0.4
GERES PKKPbc **PKKPbc** 18 24 21.4 -0.2
GERES GERESS Array B 104.53 42 Pdiff **Pdif** 18 08 38.6 +3.3
comp=Z,0.4nm,0.6s,baz=221,slow=5.3,SNR=4.9
GERES PKiKP **PKiKP** 18 12 50.1 -0.4
comp=Z,0.9nm,0.6s,baz=177,slow=2.5,SNR=5.2
GERES PKKPbc **PKKPbc** 18 24 21.4 -0.2
comp=Z,1.2nm,0.8s,baz=48,slow=2.0,SNR=9.4
KHC Kasperske Hory 104.58 42 *e*PKP **PKiKP** 18 12 54.0 +3.4
CLL Collm 105.19 40 *e*P **Pdif** 18 08 40.0 +1.9
CLL *e* 18 12 57.0
CLL *e* 18 19 04.0
CLL pmax pmax
comp=Z,11nm,1.4s
CLL Collm 105.19 40 *e*Pdif **Pdif** 18 08 40.0 +1.9
CLL *e*PP **PP** 18 12 57.0 -4.4
CLL *e*SKSac **SKSac** 18 19 04.0 +1.0
CLL *e*SKKSac **SKKSac** 18 19 54.0 +4.4
CLL *e*(SP) 18 21 51.0
CLL *e* 18 22 44.0
CLL *e*SP 18 23 12.0
CLL *e*SS **SKKPbc** 18 27 53.0 +3.6
CLL *e*SSS SSS 18 31 48.0
BRG Berggiesshubel 105.54 40 *e*P **PP** 18 13 01.1 -2.9
comp=Z,14nm,1.3s
BRG Berggiesshubel 105.54 40 *e*P **PKKPbc** 18 24 18.8 +0.4
comp=Z,4.0nm,1.1s
VYHS Vyhne 107.50 44 *e*P **Pdif** 18 08 50.2 +1.7
VYHS Vyhne 107.50 44 PDIF **Pdif** 18 08 50.2 +1.7
INK Inuvik 107.65 339 Pdif **Pdif** 18 08 49.8 +1.2
INK PKiKP **PKiKP** 18 12 55.2 -0.4
INK PKKPbc **PKKPbc** 18 24 10.9 -1.5
INK Inuvik 107.65 339 Pdiff **Pdif** 18 08 49.8 +1.2
comp=Z,1.8nm,1.0s,baz=176,slow=8.7,SNR=3.9
INK PKiKP **PKiKP** 18 12 55.2 -0.4
comp=Z,1.4nm,0.8s,baz=56,slow=2.5,SNR=3.6
INK PKKPbc **PKKPbc** 18 24 10.9 -1.5
comp=Z,8.1nm,0.7s,baz=351,slow=3.6,SNR=26
VTS Vitosha 108.15 51 *i*P **PKKPbc** 18 24 10.4 +0.2
BZS Buzias 108.19 48 *i*P **PKiKP** 18 12 58.4 +1.1
NB2 NORSAR Subarra 108.40 30 PKPdf **PKiKP** 18 12 55.4 -1.9
baz=248,slow=1.9
NB2 NORSAR Subarra 108.40 30 PKPdf **PKiKP** 18 12 55.4 -1.9
comp=Z,6.4nm,1.4s,baz=248,slow=1.9
NOA NORSAR Array B 108.40 30 PKiKP **PKiKP** 18 12 56.9 -0.4
NOA PKKPbc **PKKPbc** 18 24 07.9 -2.0
NOA PKKP **PKKPab** 18 24 20.8 +1.1
NOA NORSAR Array B 108.40 30 PKiKP **PKiKP** 18 12 56.9 -0.4
comp=Z,0.7nm,0.7s,baz=246,slow=2.0,SNR=4.2
NOA PKKPbc **PKKPbc** 18 24 07.9 -2.0
comp=Z,0.4nm,0.6s,baz=268,slow=2.7,SNR=3.4
NOA PKKP **PKKPab** 18 24 20.8 +1.1
comp=Z,2.3nm,0.7s,baz=66,slow=4.6,SNR=10
DZM Mont Dzumac 108.65 231 *e*PS PS 18 22 55.6 +0.4
comp=Z,260nm,25.7s
DZM *e*LR LR 18 45 01.5
comp=Z,373nm,23.6s
TRPA Tarpa 109.67 45 ⇓*i*P **PKiKP** 18 13 00.5 +0.5
ARR Arges 110.09 49 ⇑*i*P **PKiKP** 18 13 01.2 +0.2
ARR Arges 110.09 49 ⇓*i*P **PKKPab** 18 24 15.3 +2.4
KWP Kalwaria Pacla 110.28 44 ⇑PKiKP **PKiKP** 18 13 02.0 +0.9
KWP Kalwaria Pacla 110.28 44 ⇑*i*P **PKiKP** 18 13 02.0 +0.9
SML Sawmill 110.45 330 *e*P **Pdif** 18 09 00.2 -1.1
SML Sawmill 110.45 330 *e*Pdif **Pdif** 18 09 00.2 -1.1
ILAR Eielson Array 110.90 333 Pdif **Pdif** 18 09 02.6 -0.6
ILAR PKiKP **PKiKP** 18 13 01.6 -0.3
ILAR PKKPbc **PKKPbc** 18 23 59.2 -2.7
ILAR Eielson Array 110.90 333 Pdiff **Pdif** 18 09 02.6 -0.6
comp=Z,0.5nm,0.9s,baz=183,slow=7.3,SNR=4.7
ILAR PKiKP **PKiKP** 18 13 01.6 -0.3
comp=Z,1.2nm,0.8s,baz=70,slow=0.4,SNR=11
ILAR PKKPbc **PKKPbc** 18 23 59.2 -2.7
comp=Z,1.5nm,0.6s,baz=298,slow=3.5,SNR=20
MLR Muntele Rosu 111.00 49 ⇑*i*P **PKKPab** 18 24 12.4 +3.4
BURAR Bucovina Array 111.20 46 ⇑*i*P **PKiKP** 18 13 02.3 -0.8
BURAR Bucovina Array 111.20 46 ⇓*i*P **PKKPab** 18 24 10.8 +2.9
PLOR Plostina 111.58 49 ⇓PKiKP **PKiKP** 18 13 02.4 -1.4
PLOR Plostina 111.58 49 ⇓*i*P **PKiKP** 18 13 02.4 -1.4
VRI Vrincioaia 111.64 49 ⇓PKiKP **PKiKP** 18 13 03.6 -0.2
VRI Vrincioaia 111.64 49 ⇓*i*P **PKiKP** 18 13 03.6 -0.2
TESR 111.79 48 ⇓*i*P **PKiKP** 18 13 03.7 -0.4
TESR 111.79 48 ⇓*i*P **PKKPab** 18 24 07.5 +2.2
TIRR Tirgusor 112.34 50 ⇑PKiKP **PKiKP** 18 13 05.3 +0.1
TIRR Tirgusor 112.34 50 ⇑*i*P **PKiKP** 18 13 05.3 +0.1
CFR Carcaliu 112.37 50 ⇑PKiKP **PKiKP** 18 13 05.3 +0.1
CFR Carcaliu 112.37 50 ⇑*i*P **PKiKP** 18 13 05.3 +0.1
COLD Coldfoot 112.98 335 *e*PKPdf **PKiKP** 18 13 05.3 -0.5
KIEV Kiev 114.59 44 *e*PKIKP PKPdf 18 13 07.9 -1.3
KIEV *e* 18 14 03.5
KIEV Kiev 114.59 44 *e*PKPdf PKPdf 18 13 07.9 -1.3
KIEV *e*PP PP 18 14 03.5 -5.7
AKASG Malin Array Be 114.60 44 PKiKP PKPdf 18 13 08.8 -0.5
AKASG 18 23 48.5
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKASG Malin Array Be 114.60 44 PKP PKPdf 18 13 08.8 -0.4
AKASG PKKPbc **PKKPbc** 18 23 48.5 -0.5
AKASG Malin Array Be 114.60 44 PKP PKPdf 18 13 08.8 -0.5
comp=Z,5.4nm,0.7s,baz=260,slow=2.8,SNR=21
AKASG PKKPbc **PKKPbc** 18 23 48.5 -0.5
comp=Z,1.3nm,0.5s,baz=60,slow=4.4,SNR=6.6
BRTR Keskin Array B 114.68 57 PKP PKPdf 18 13 09.9 -0.1
BRTR PKKPbc **PKKPbc** 18 23 48.9 +0.3
BRTR Keskin Array B 114.68 57 PKP PKPdf 18 13 09.9 -0.1
comp=Z,3.4nm,0.8s,baz=184,slow=2.7,SNR=14
BRTR PKKPbc **PKKPbc** 18 23 48.9 +0.3
comp=Z,0.6nm,0.7s,baz=83,slow=4.5,SNR=4.0
STKA Stephens Creek 114.77 206 PKP PKPdf 18 13 10.2 -0.2
STKA Stephens Creek 114.77 206 PKP PKPdf 18 13 10.2 -0.2
comp=Z,3.6nm,0.7s,baz=341,slow=5.5,SNR=7.3
ASF Jabal al Asfar 114.94 65 PKKPbc PKKPbc 18 23 46.9 -0.5
ASF Jabal al Asfar 114.94 65 PKKPbc PKKPbc 18 23 46.9 -0.5
comp=Z,0.7nm,0.3s,baz=160,slow=5.8,SNR=4.3
FINES FINESS Array B 115.34 32 PKP **PKPdf** 18 13 10.4 0.0
FINES PKKPbc **PKKPbc** 18 23 46.1 -0.6
FINES FINESS Array B 115.34 32 PKP **PKPdf** 18 13 10.4 0.0
comp=Z,5.7nm,1.0s,baz=27,slow=0.9,SNR=8.8
FINES PKKPbc **PKKPbc** 18 23 46.1 -0.6
comp=Z,2.8nm,0.6s,baz=67,slow=4.1,SNR=9.7
KAF Kangasniemi 115.59 31 *e*PKIKP **PKPdf** 18 13 09.4 -1.4
KAF pmax pmax
comp=Z,4.0nm,0.5s
KAF Kangasniemi 115.59 31 *e*p **PKPdf** 18 13 09.4 -1.4
comp=Z,4.0nm,0.5s
KAF Kangasniemi 115.59 31 *e*p **PKKPbc** 18 23 43.8 -2.2
SPITS Spitsbergen Ar 115.67 13 PKKPbc PKKPbc 18 23 44.1 -1.9
SPITS Spitsbergen Ar 115.67 13 PKKPbc PKKPbc 18 23 44.1 -1.9
comp=Z,4.4nm,0.5s,baz=92,slow=10,SNR=13
ARCES ARCESS Array B 116.56 23 PKP **PKPdf** 18 13 12.7 +0.1
ARCES PKKPbc **PKKPbc** 18 23 41.4 -1.3
ARCES ARCESS Array B 116.56 23 PKP **PKPdf** 18 13 12.7 +0.1
comp=Z,2.0nm,0.6s,baz=234,slow=3.9,SNR=11
ARCES PKKPbc **PKKPbc** 18 23 41.4 -1.3
comp=Z,3.6nm,0.6s,baz=106,slow=4.3,SNR=15
KEV Kevo 117.11 23 *e*PKIKP **PKPdf** 18 13 12.4 -1.2
KEV pmax pmax
comp=Z,4.0nm,0.8s
KEV Kevo 117.11 23 *e*p **PKPdf** 18 13 12.4 -1.2
comp=Z,3.6nm,0.8s
MALT Malatya 117.89 59 ⇓PKIKP **PKPdf** 18 13 16.8 +0.6
MALT Malatya 117.89 59 *e*PKPdf **PKPdf** 18 13 16.5 +0.3
MALT Malatya 117.89 59 ⇓*i*P **PKPdf** 18 13 16.8 +0.6
JOF Joensuu 118.01 31 *e*PKIKP **PKPdf** 18 13 14.6 -0.9
JOF pmax pmax
comp=Z,8.0nm,0.6s
JOF Joensuu 118.01 31 *e*p **PKPdf** 18 13 14.6 -0.9
comp=Z,7.5nm,0.6s
JOF Joensuu 118.01 31 *e*p **PKKPbc** 18 23 35.5 -1.9
ANN Anapa 118.66 52 *i* PKIKP **PKPdf** 18 13 16.4 -0.9
ANN *e* 18 19 54.3
ANN *e* 18 24 05.1
ANN pmax pmax
comp=Z,12nm,0.9s
TNA Tin City 119.72 332 *e*PKPdf **PKPdf** 18 13 19.1 +0.4
OBN Obninsk 119.78 40α *i*PKIKP **PKPdf** 18 13 18.9 -0.2
OBN *e* 18 14 40.5
OBN 18 20 04.0
OBN *e*PPS PPS 18 25 47.2
OBN pmax pmax
comp=Z,41nm,1.7s
OBN MLR MLR
comp=Z,200nm,18.0s
VSR Storozhevoye 120.87 45 *e*PKIKP **PKPdf** 18 13 21.2 -0.1
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s
VSR pmax pmax
comp=E,2.0nm,0.4s
TMCR Tamitsa 121.09 30 *e*PKIKP **PKPdf** 18 13 19.8 -1.5
TMCR pmax pmax
comp=Z,17nm,0.7s
GAMB Gambell 121.30 330 *e*PKPdf **PKPdf** 18 13 22.1 +0.4
KLMR Klimovskoe 121.74 34 *e*PKIKP **PKPdf** 18 13 21.4 -1.3
KLMR *e* 18 14 53.0
KLMR pmax pmax
comp=Z,25nm,0.6s
KIV Kislovodsk 122.21 54α *i*PKIKP **PKPdf** 18 13 24.7 +0.4
KIV *e* 18 14 10.1
KIV *e* 18 15 05.6
KIV 18 20 23.0
KIV *e*PS PS 18 24 44.8 -14
KIV *e*PPS PPS 18 26 10.2
KIV SS SS 18 31 23.0 -6.6
KIV pmax pmax
comp=Z,26nm,1.2s
KIV Kislovodsk 122.21 54 *e*PKPdf **PKPdf** 18 13 23.0 -1.3
KBZ Khabaz 122.32 54 PKIKP **PKPdf** 18 13 25.1 +0.7
KBZ pmax pmax
comp=Z,9.0nm,0.8s
KBZ pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 122.32 54 PKP **PKPdf** 18 13 25.1 +0.7
KBZ PKKPbc **PKKPbc** 18 23 21.8 +0.9
KBZ Khabaz 122.32 54 PKP **PKPdf** 18 13 25.1 +0.7
comp=Z,8.5nm,0.8s,baz=228,slow=4.5,SNR=18
KBZ PKKPbc **PKKPbc** 18 23 21.8 +0.9
comp=Z,2.8nm,0.8s,baz=102,slow=4.8,SNR=6.0
VRHR Novokhopersk 122.39 45 *e*PKIKP **PKPdf** 18 13 24.0 -0.3
VRHR pmax pmax
comp=E,20nm,0.9s
VRHR pmax pmax
comp=Z,20nm,0.9s
VRHR pmax pmax
comp=N,9.0nm,0.4s
NAY Al-Naaiem 122.60 72 *e*P **PKPdf** 18 13 25.0 -0.4
NAY AMb AMB 18 13 26.3
comp=Z,7.0nm,0.9s
CTA Charters Tower 122.68 217 PKKPbc PKKPbc 18 23 20.2 +0.8
CTA Charters Tower 122.68 217 PKKPbc PKKPbc 18 23 20.2 +0.8
comp=Z,2.1nm,0.7s,baz=340,slow=5.7,SNR=3.8
RDF Al-Radifah 122.77 72 *e*P **PKPdf** 18 13 25.6 -0.1
RDF AMb AMB 18 13 34.8
comp=Z,53nm,1.2s
MIB Mutribah 122.83 71 *e*P **PKPdf** 18 13 25.9 +0.1
MIB AMb AMB 18 13 26.9
comp=Z,21nm,0.6s
UMR Umm Al-Rimmam 123.08 71 *e*P **PKPdf** 18 13 26.1 -0.2
UMR AMb AMB 18 13 28.0
comp=Z,37nm,1.0s
ASAR Alice Springs 125.05 203 PKPpre PKPpre 18 13 09.9
ASAR PKP **PKPdf** 18 13 29.6 -0.8
ASAR PKKPbc **PKKPbc** 18 23 10.0 -0.3
ASAR ⇑*e* 18 26 58.6
ASAR Alice Springs 125.05 203 PKhKP PKPpre 18 13 09.9
comp=Z,0.5nm,0.8s,baz=154,slow=1.9,SNR=4.5
ASAR PKP **PKPdf** 18 13 29.6 -0.8
comp=Z,41nm,0.6s,baz=138,slow=1.9,SNR=260
ASAR PKKPbc **PKKPbc** 18 23 10.0 -0.3
comp=Z,1.6nm,0.7s,baz=333,slow=3.1,SNR=10
ASAR PKP2bc 18 26 58.6
comp=Z,1.4nm,1.0s,baz=344,slow=4.2,SNR=4.8
AS31 Alice Springs 125.05 203 *e*PKPdf **PKPdf** 18 13 29.4 -1.1
WRA Warramunga Arr 128.31 205 PKPpre PKPpre 18 13 13.7
WRA PKP **PKPdf** 18 13 36.2 -0.5
WRA SKKP 18 26 46.5
WRA Warramunga Arr 128.31 205 PKhKP PKPpre 18 13 13.7
comp=Z,0.6nm,0.7s,baz=159,slow=2.5,SNR=5.1
WRA PKP **PKPdf** 18 13 36.2 -0.5
comp=Z,46nm,0.6s,baz=164,slow=1.6,SNR=184
WRA SKKP 18 26 46.5
comp=Z,1.4nm,0.7s,baz=343,slow=5.1,SNR=5.6
WRAB Tennant Creek 128.31 205 *e*PKIKP **PKPdf** 18 13 36.1 -0.6
WRAB Tennant Creek 128.31 205 *e*PKPdf **PKPdf** 18 13 36.1 -0.6
BILL Bilibino 129.22 337 ⇓*i*PKIKP **PKPdf** 18 13 37.1 +0.2
BILL *e* 18 15 49.2
BILL pmax pmax
comp=Z,21nm,1.1s
BILL Bilibino 129.22 337 *e*PKPdf **PKPdf** 18 13 36.2 -0.6
BILL *e*SKP 18 17 00.5
BSY Bisya 129.29 82 PKPdf **PKPdf** 18 13 38.7 +0.3
SNR=5.6
COEN Coen 129.37 219 *e*PKPdf **PKPdf** 18 13 39.0 +0.3
COEN *e*SKP 18 17 04.8
HOQ Hoqain 129.65 81 P SKPbc 18 16 47.0 +0.1
SNR=5.5
JMDO Jabal Madar 129.97 83 P SKPbc 18 16 47.6 -0.4
SNR=6.0
SMDO Samad 130.14 82 PKPdf **PKPdf** 18 13 40.8 +0.7
SNR=8.7
SOKR Solikamsk 130.43 34*c* *i*PKIKP **PKPdf** 18 13 40.0 +0.7
SOKR pmax pmax
comp=Z,20nm,1.0s
PMG Port Moresby 130.58 226 *e*PKPdf **PKPdf** 18 13 40.7 -0.4
PMG PKP **PKPdf** 18 13 41.5 +0.4
PMG *e*SKP 18 16 49.6
PMG SKPbc **SKPbc** 18 16 50.0 -0.5
PMG Port Moresby 130.58 226 PKP **PKPdf** 18 13 41.5 +0.4
comp=Z,23nm,1.0s,baz=43,slow=7.5,SNR=12
PMG SKPbc **SKPbc** 18 16 50.0 -0.5
comp=Z,5.7nm,0.7s,baz=74,slow=1.1,SNR=9.0
WBK Wadi Bani Khal 130.81 83 PKPdf **PKPdf** 18 13 43.5 +2.2
SNR=8.2
MBWA Marble Bar 130.84 188 *e*PKPdf **PKPdf** 18 13 40.9 -0.6
MBWA Marble Bar 130.84 188 P **SKPbc** 18 16 50.7 -0.5
SNR=6.0
ARU Arti 132.08 38 *i* PKIKP **PKPdf** 18 13 44.1 +1.5
ARU 18 16 09.0
ARU Arti 132.08 38 *e*PKPdf **PKPdf** 18 13 43.8 +1.2
ARU *e*SKP 18 16 52.4
FITZ Fitzroy Crossi 132.76 196 *e*PKPdf **PKPdf** 18 13 44.6 -0.5
FITZ PKP **PKPdf** 18 13 45.0 -0.1
FITZ *e*SKP 18 16 57.6
FITZ SKPbc **SKPbc** 18 16 57.7 -0.4
FITZ SKKPbc **SKKPbc** 18 26 18.0 +1.3
FITZ Fitzroy Crossi 132.76 196 PKP **PKPdf** 18 13 45.0 -0.1
comp=Z,35nm,0.6s,baz=198,slow=5.0,SNR=68
FITZ SKPbc **SKPbc** 18 16 57.7 -0.4
comp=Z,31nm,1.1s,baz=192,slow=3.8,SNR=20
FITZ SKKPbc **SKKPbc** 18 26 18.0 +1.3
comp=Z,2.1nm,0.9s,baz=245,slow=5.5,SNR=4.0
AKTO Aktyubinsk 132.79 46 PKIKP **PKPdf** 18 13 45.2 +1.0
AKTO pmax pmax
comp=Z,6.0nm,0.7s
AKTO pmax pmax
comp=N,8.0nm,0.9s
AKTO Aktyubinsk 132.79 46 PKP **PKPdf** 18 13 45.1 +1.0
AKTO SKPbc **SKPbc** 18 16 56.8 -0.3
AKTO Aktyubinsk 132.79 46 PKP **PKPdf** 18 13 45.1 +1.0
comp=N,5.9nm,0.7s,baz=283,slow=4.6,SNR=5.9
AKTO SKPbc **SKPbc** 18 16 56.8 -0.3
comp=N,7.9nm,0.9s,baz=290,slow=3.6,SNR=13
SVE Sverdlovsk 133.09 37 *e*PKIKP **PKPdf** 18 13 46.3 +1.8
ABKAR Akbulak array 134.18 47 *e*PKPpre PKPpre 18 13 35.2
ABKAR *e*PKPdf **PKPdf** 18 13 44.3 -2.4
TIXI Tiksi 135.38 353 *e*PKIKP **PKPdf** 18 13 44.0 -4.3
TIXI Tiksi 135.38 353 *e*PKPpre PKPpre 18 13 44.0
TIXI *e*PKPdf **PKPdf** 18 13 47.0 -1.4
TIXI *e*SKP 18 17 02.9
SEY Seymchan 136.78 335 *i* PKIKP **PKPdf** 18 13 51.9 +0.7
PETK Petropavlovsk- 138.88 320 PKHKP PKPpre 18 13 45.2
PETK 18 13 55.9
PETK pmax pmax
comp=Z,4.0nm,0.7s
PETK pmax pmax
comp=Z,20nm,0.8s
PETK Petropavlovsk- 138.88 320 PKPpre PKPpre 18 13 45.2
PETK PKP **PKPdf** 18 13 55.9 +0.5
PETK SKPbc **SKPbc** 18 17 15.9 +0.1
PETK Petropavlovsk- 138.88 320 PKhKP PKPpre 18 13 45.2
comp=Z,3.6nm,0.7s,baz=114,slow=6.0,SNR=4.2
PETK PKP **PKPdf** 18 13 55.9 +0.5
comp=Z,20nm,0.8s,baz=104,slow=4.9,SNR=14
PETK SKPbc **SKPbc** 18 17 15.9 +0.1
comp=Z,5.8nm,1.0s,baz=163,slow=11,SNR=4.5
BRVK Borovoye 139.55 40 *e*PKHKP PKPpre 18 13 43.3
BRVK *e* 18 13 56.7
BRVK *e* 18 16 49.3
BRVK Borovoye 139.55 40 *i* PKIKP **PKPdf** 18 13 57.3 +0.7
BRVK Borovoye 139.55 40 *e*PKPpre PKPpre 18 13 43.3
BRVK *e*PKPdf **PKPdf** 18 13 56.7 +0.1
BRVK *e*PP **PP** 18 16 49.2 -4.1
BRVK *e*SKP 18 17 17.3
BVAR Borovoye Array 139.62 40 *i* PKHKP PKPpre 18 13 49.1
BVAR 18 13 56.6
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR pmax pmax
comp=Z,11nm,0.7s
BVAR Borovoye Array 139.62 40 PKPpre PKPpre 18 13 49.1
BVAR PKP **PKPdf** 18 13 56.6 -0.1
BVAR SKPab **SKPab** 18 17 32.4 +3.5
BVAR SKKPbc **SKKPbc** 18 25 50.8 -3.9
BVAR Borovoye Array 139.62 40 PKhKP PKPpre 18 13 49.1
comp=Z,1.0nm,0.6s,baz=307,slow=3.2,SNR=7.8
BVAR PKP **PKPdf** 18 13 56.6 -0.1
comp=Z,11nm,0.7s,baz=271,slow=2.3,SNR=32
BVAR SKPab **SKPab** 18 17 32.4 +3.5
comp=Z,5.9nm,0.7s,baz=271,slow=3.2,SNR=8.2
BVAR SKKPbc **SKKPbc** 18 25 50.8 -3.9
comp=Z,2.0nm,0.8s,baz=104,slow=6.3,SNR=6.3
KBL Kabul 141.72 69 *e*PKHKP PKPpre 18 13 49.8
KBL Kabul 141.72 69 *e*PKPpre PKPpre 18 13 49.8
KKAR Karatay Array 142.35 55 *e*PKHKP PKPpre 18 13 57.1
KKAR Karatay Array 142.35 55 *e*PKPdf PKPpre 18 13 57.1
PALK Pallekele 142.87 117 *e*PKPdf **PKPdf** 18 14 01.5 -2.3
YAK Yakutsk 144.20 347 *e*PKHKP PKPpre 18 14 00.6
YAK pmax pmax
comp=Z,140nm,0.8s
YAK pmax pmax
comp=N,16nm,0.9s
YAK pmax pmax
comp=E,9.0nm,0.9s
YAK Yakutsk 144.20 347 *e*PKPdf **PKPab** 18 14 02.4 -0.3
EKS2 Erkin-Say 144.79 55 *e*PKIKP **PKPdf** 18 14 06.5 0.0
EKS2 *e* 18 17 23.7
EKS2 Erkin-Say 144.79 55 *e*PKPdf **PKPdf** 18 14 06.5 0.0
EKS2 *e* 18 17 23.7
EKS2 Erkin-Say 144.79 55 P **PKPdf** 18 14 06.9 +0.4
SNR=146
AML Almayashu 144.84 56 P **PKPdf** 18 14 07.3 +0.4
SNR=130
USP Ospenovka 145.18 53 P **PKPab** 18 14 07.8 +0.6
SNR=99
KURK Kurchatov 145.22 39*c* *i*PKIKP **PKPab** 18 14 07.6 +0.6
KURK pmax pmax
comp=Z,160nm,1.2s
KURK Kurchatov 145.22 39 *e*PKPdf **PKPab** 18 14 07.5 +0.5
KURK Kurchatov 145.22 39 PKPbc **PKPab** 18 14 07.8 +0.8
SNR=49
NVS Novosibirsk 145.31 31 ⇓*i*PKIKP **PKPab** 18 14 07.3 +0.1
NVS *e* 18 14 49.8
NVS *i* 18 17 25.7
NVS pmax pmax
comp=Z,191nm,1.0s
NVS pmax pmax
comp=E,25nm,0.6s
AAK Ala-Archa 145.32 55*c* *i*PKIKP **PKPab** 18 14 08.7 +0.8
AAK pmax pmax
comp=Z,575nm,0.7s
AAK Ala-Archa 145.32 55 *e*PKPdf **PKPab** 18 14 08.2 +0.3
AAK PKPbc **PKPab** 18 14 08.9 +1.1
AAK *e*SKP 18 17 29.0
AAK Ala-Archa 145.32 55 PKPbc **PKPab** 18 14 09.0 +1.1
SNR=118
AAK Ala-Archa 145.32 55 P **PKPab** 18 14 09.0 +1.1
SNR=402
AAK Ala-Archa 145.32 55 PKPbc **PKPab** 18 14 08.9 +1.1
comp=Z,243nm,0.7s,baz=206,slow=2.2,SNR=1085
FRU Bishkek 145.36 54 ⇓*i*PKP2 **PKPab** 18 14 09.0 +1.1
FRU *i* 18 17 29.0
FRU pmax pmax
comp=Z,402nm,1.8s
UCH Uchtor 145.41 55 P **PKPab** 18 14 09.7 +1.0
SNR=27
CHMS Chumysh 145.42 54 P **PKPab** 18 14 08.6 +0.5
SNR=163
AJM Ajmer 145.58 83 *e*P **PKPab** 18 14 09.0 -0.2
KBK Karagaybulak 145.64 54 P **PKPab** 18 14 10.1 +1.0
SNR=20
KZA Kyzart 145.98 55 P **PKPab** 18 14 11.8 +1.0
SNR=10
TKM2 Tokmak 2 146.04 54 P **PKPab** 18 14 11.4 +0.7
SNR=6.5
HYB Hyderabad 146.29 101 *e*PKP2 **PKPdf** 18 14 09.5 -0.1
HYB *e* 18 17 34.0
HYB Hyderabad 146.29 101 *e*P **PKPdf** 18 14 09.5 -0.1
HYB *e*PP **PP** 18 17 34.0 -0.9
HYB Hyderabad 146.29 101 *i* PKP **PKPdf** 18 14 09.5 -0.1
HYB *e* 18 14 54.0
HYB *e*PP **PP** 18 17 34.0 -0.9
ZAA0 Zalesovo Array 146.60 31 *e*PKPdf **PKPdf** 18 14 09.2 +0.2
ZAA0 *e*SKP 18 17 31.4
ZALV Zalesovo Beam 146.60 31 PKP2 **PKPbc** 18 14 10.2 -0.6
ZALV pmax pmax
comp=Z,169nm,0.7s
ZALV Zalesovo Beam 146.60 31 PKPbc **PKPbc** 18 14 10.2 -0.6
ZALV SKPab SKiKP 18 17 45.9 +11
ZALV Zalesovo Beam 146.60 31 PKPbc **PKPbc** 18 14 10.2 -0.6
comp=Z,168nm,0.7s,baz=287,slow=2.5,SNR=278
ZALV SKPab SKiKP 18 17 45.9 +11
comp=Z,17nm,0.8s,baz=290,slow=2.7,SNR=5.4
ULHL Ulahol 146.66 55 P **PKPab** 18 14 13.2 0.0
SNR=18
KAPI Kappang 146.71 192 *e*PKPdf **PKPdf** 18 14 09.4 -1.0
KAPI PKPbc **PKPbc** 18 14 11.6 -0.6
KAPI *e*PKPbc **PKPab** 18 14 11.8 -1.9
KAPI *e* 18 14 58.0
KAPI *e*SKP 18 17 29.5
KAPI Kappang 146.71 192 PKPdf **PKPdf** 18 14 10.4 -0.1
SNR=36
KAPI Kappang 146.71 192 PKPbc **PKPbc** 18 14 11.6 -0.6
comp=Z,207nm,0.7s,baz=264,slow=1.8,SNR=128
KHET Khetri 146.88 81 *e*P **PKPdf** 18 14 10.0 -0.3

KHET AMB AMB 18 14 13.2
comp=Z,43nm,0.9s
KSH Kashi 146.99 60 PKPbc **PKPdf 18 14 11.4 +1.1**
KSH PP **PP 18 17 42.0 +3.2**
KSH PKS **PKSdf 18 17 45.4 -0.2**
KSH SKS **SKSdf 18 21 02.1 -2.5**
KSH AMB AMB
comp=Z,400nm,3.4s
KSH LR LR
comp=N,210nm,4.9s
KSH LR LR
comp=E,150nm,4.4s
KSH LR LR
comp=Z,370nm,4.8s
THN Thein Dam 147.21 73 eP **PKPdf 18 14 10.3 -0.4**
GUMO Guam 147.44 251 PKPbc **PKPbc 18 14 13.6 -0.6**
GUMO Guam 147.44 251 PKPbc **PKPbc 18 14 13.6 -0.6**
comp=Z,106nm,0.6s,baz=176,slow=9.4,SNR=9.1
KUDL Kundal 147.48 81 eP **PKPdf 18 14 11.5 +0.2**
KUDL AMB AMB 18 14 15.8
comp=Z,117nm,1.1s
BHK Bhakra 147.76 75 ex **PKPbc 18 14 15.0 +0.3**
BHGR Bahadurgarh 147.95 80 ex x 18 14 05.8
KKR Kurukshetra 147.99 77 eP **PKPdf 18 14 12.2 +0.2**
SONA Sohna 148.02 81 eP **PKPdf 18 14 11.8 -0.4**
SONA AMB AMB 18 14 16.8
comp=Z,116nm,0.6s
AYAN Aya Nagar 148.09 80 eP **PKPdf 18 14 11.8 -0.4**
AYAN AMB AMB 18 14 17.1
comp=Z,85nm,0.4s
NDI New Delhi 148.19 80 eP **PKPdf 18 14 11.0 -1.4**
SDNR Sundarnagar 148.23 75 eP **PKPdf 18 14 13.9 +1.4**
BISR Bishrakh 148.37 80 ex **PKPdf 18 14 08.5 -4.2**
SMLA Simla 148.38 75 i P **PKPdf 18 14 13.9 +1.3**
AGRA Agra 148.62 83 eP **PKPdf 18 14 13.1 0.0**
DDI Dehra Dun 149.09 77 ex **PKPbc 18 14 18.5 +0.3**
DDI ex x 18 15 42.0
MK31 Makanchi Array 149.18 44 ePKHKP PKPpre 18 14 13.7
MK31 e 18 14 18.1
MK31 Makanchi Array 149.18 44 ePKPdf **PKPdf 18 14 13.7 +0.2**
MK31 ePKPbc **PKPbc 18 14 18.1 +0.2**
MKAR Makanchi Array 149.18 44 PKIKP **PKPdf 18 14 14.8 +1.3**
MKAR 18 14 18.8
MKAR pmax pmax
comp=Z,88nm,0.7s
MKAR pmax pmax
comp=Z,88nm,0.7s
MKAR Makanchi Array 149.18 44 PKP **PKPdf 18 14 14.8 +1.3**
MKAR PKPbc **PKiKP 18 14 18.8 -0.3**
MKAR Makanchi Array 149.18 44 PKP **PKPdf 18 14 14.8 +1.3**
comp=Z,88nm,0.7s,baz=273,slow=2.5,SNR=145
MKAR PKPbc **PKiKP 18 14 18.8 -0.3**
comp=Z,88nm,0.7s,baz=299,slow=2.8,SNR=435
CLNS Chul'man 149.95 347 ePKHKP **PKPbc 18 14 17.5 -2.0**
CLNS pmax pmax
comp=Z,57nm,1.1s
CLNS pmax pmax
comp=N,14nm,0.9s
CLNS pmax pmax
comp=E,12nm,0.9s
YSS Yuzh-Sakhalins 150.19 318 ePKIKP **PKPdf 18 14 16.0 +1.0**
YSS pmax pmax
comp=Z,110nm,0.8s
YSS Yuzh-Sakhalins 150.19 318 ePKPdf **PKPdf 18 14 15.2 +0.2**
YSS ePKPbc **PKPbc 18 14 20.4 +0.2**
PTH Pithoragarh 150.90 79 ex **PKPbc 18 14 23.0 +0.2**
PTH ex x 18 15 09.8
LGTI Lohaghat 150.91 79 ex **PKPbc 18 14 23.5 +1.0**
PSI Prapat 151.46 148 PKP **PKPdf 18 14 18.9 +0.7**
PSI PKPbc **PKPbc 18 14 24.0 -0.4**
PSI Prapat 151.46 148 PKP **PKPdf 18 14 18.9 +0.7**
comp=Z,14nm,0.8s,baz=241,slow=0.5,SNR=13
PSI PKPbc **PKPbc 18 14 24.0 -0.4**
comp=Z,118nm,0.6s,baz=173,slow=3.3,SNR=87
ASAJ Asahikawa 151.58 312 ePKPdf **PKPdf 18 14 17.8 +0.5**
ASAJ PKP **PKPdf 18 14 18.1 +0.8**
ASAJ ePKPbc **PKiKP 18 14 23.9 -0.1**
ASAJ PKPbc **PKiKP 18 14 24.1 0.0**
ASAJ Asahikawa 151.58 312 PKP **PKPdf 18 14 18.1 +0.8**
comp=Z,12nm,0.9s,baz=234,slow=14,SNR=9.0
ASAJ PKPbc **PKiKP 18 14 24.1 0.0**
comp=Z,88nm,0.8s,baz=224,slow=4.9,SNR=50
MYKOM Kota Tinggi 152.47 159 P **PKPdf 18 14 20.1 +0.5**
KGM Kluang 152.51 158 P **PKPdf 18 14 20.2 +0.6**
FRIM Kepong 153.01 153 P **PKPbc 18 14 27.6 -0.1**
PYUN Piuthan 153.17 82 eP **PKPdf 18 14 20.4 0.0**
comp=Z,214nm,0.5s
KSM Kuching 153.55 173 ePKPdf **PKPdf 18 14 20.5 -0.6**
KSM ePKPbc **PKPbc 18 14 28.8 -0.2**
KSM ePKPab **PKPab 18 14 42.3 +0.6**
KSM ePP **PP 18 18 11.5 -3.2**
KSM Kuching 153.55 173 P **PKPdf 18 14 21.7 +0.6**
KOLN Koldanda 153.66 83 eP **PKPdf 18 14 21.5 +0.4**
comp=Z,23nm,0.6s
DANN Dangsing 153.87 82 eP **PKPdf 18 14 22.1 +0.6**
comp=Z,255nm,0.6s
IPM Ipoh 153.89 151 ePKPbc **PKPdf 18 14 21.6 0.0**
IPM Ipoh 153.89 151 P **PKPdf 18 14 22.6 +1.0**
WMQ Urumqi 153.94 46 PKPbc **PKPdf 18 14 20.3 -0.5**
WMQ PKS **PKSdf 18 17 53.3 -1.8**
WMQ PP **PP 18 18 20.3 +2.2**
WMQ SKS **SKSdf 18 21 09.3 -3.8**
WMQ SKKS **SKKSac 18 24 51.3 -1.7**
WMQ SS **SS 18 37 43.3 +0.2**
WMQ AMB AMB
comp=Z,240nm,13.0s
WMQ LR LR
comp=N,240nm,20.0s
WMQ LR LR
comp=E,200nm,20.0s
WMQ LR LR
comp=Z,190nm,20.0s
KLR Kul'dur 154.46 331 ePKIKP **PKPdf 18 14 18.4 -2.9**
KLR pmax pmax
comp=Z,100nm,1.8s
MOY Mondy 154.49 18 ePKIKP **PKPdf 18 14 23.2 +1.8**
MOY pmax pmax
comp=Z,57nm,3.2s
SBUM Sibu 154.66 177 P **PKPdf 18 14 23.5 +0.8**
IRK Irkutsk 154.74 13 ePKIKP **PKPdf 18 14 22.3 +0.7**
IRK pmax pmax
comp=Z,48nm,1.4s
DMN Daman 154.97 84 eP **PKPdf 18 14 23.2 +0.2**
TLY Talaya 155.14 15 i PKIKP **PKPdf 18 14 23.3 +1.1**
TLY e 18 14 48.5
TLY pmax pmax
comp=Z,6.0nm,0.9s
TLY MLR MLR
comp=Z,126nm,24.0s
TLY Talaya 155.14 15 ePKPdf **PKPdf 18 14 21.9 -0.3**
TLY ePKPab **PKPab 18 14 48.5 +0.9**
TLY Talaya 155.14 15 PKPdf **PKPdf 18 14 24.6 +2.4**
SNR=6.0
KKN Kakani 155.14 84 eP **PKPdf 18 14 23.2 0.0**
comp=Z,62nm,0.6s
PKIN Phulchoki 155.22 84 eP **PKPdf 18 14 24.0 +0.6**
PKI Pulchoki 155.23 84 eP **PKPdf 18 14 23.7 +0.2**
BTM Bintulu 155.43 179 P PKPdf 18 14 34.2 +10
KTGM Kuala Trenggan 155.51 155 P PKPdf 18 14 29.6 +5.7
GUN Gumba 155.68 83 eP **PKPdf 18 14 24.4 +0.3**
CIT Chita 155.91 360 ePKIKP **PKPdf 18 14 24.3 +1.1**
CIT e 18 14 45.9
CIT e 18 15 10.6
TSM Tawau 156.14 191 P PKPdf 18 14 36.0 +11
RAMN Ramite 156.19 86 eP **PKPdf 18 14 25.2 +0.5**
comp=Z,66nm,0.6s
ODAN Odare 156.88 86 eP **PKPdf 18 14 26.1 +0.6**
comp=Z,46nm,0.7s
MYLDM Lahad Datu 156.89 193 P **PKPdf 18 14 28.5 +2.8**
TAPN Taplejung 157.23 85 eP **PKPdf 18 14 26.5 +0.4**
comp=Z,26nm,0.9s
MJAR Matsushiro Arr 157.37 299 PKP **PKPdf 18 14 25.6 0.0**
MJAR PKPab **PKPab 18 14 57.9 +0.1**
MJAR SKKPbc 18 24 51.3
MJAR Matsushiro Arr 157.37 299 PKP **PKPdf 18 14 25.6 0.0**
comp=Z,2.4nm,0.8s,baz=150,slow=1.0,SNR=11
MJAR PKPab **PKPab 18 14 57.9 +0.1**
comp=Z,16nm,0.7s,baz=83,slow=4.1,SNR=26
MJAR SKKPbc 18 24 51.3
comp=Z,1.3nm,0.9s,baz=137,slow=1.6,SNR=4.0
MAJO Matsushiro 157.37 299 ePKIKP **PKPdf 18 14 24.6 -1.0**
MAJO Matsushiro 157.37 299 ePKPdf **PKPdf 18 14 24.6 -1.0**
MAJO ePKPab **PKPab 18 14 57.8 0.0**
MAT Matsushiro 157.37 299 PKP **PKPdf 18 14 25.7 +0.1**

USRK Ussuriysk Arra 157.94 322 PKP **PKPdf 18 14 26.5 +0.5**
comp=Z,3.7nm,0.7s,baz=193,slow=3.4,SNR=7.7
USRK PKPab **PKPab 18 15 00.2 +0.3**
comp=Z,5.4nm,0.9s,baz=77,slow=2.5,SNR=4.3
KKM Kota Kinabalu 158.10 187 P **PKPdf 18 14 28.6 +1.4**
KDM Kudat 158.88 189 P PKPab 18 14 59.0 -5.6
MDJ Mudanjiang 158.89 326 P **PKPdf 18 14 27.5 +0.4**
MDJ pmax pmax
comp=Z,14nm,1.3s
MDJ pmax pmax
comp=Z,110nm,4.3s
MDJ Mudanjiang 158.89 326 PKP **PKPdf 18 14 27.6 +0.4**
MDJ pPKP **PKPab 18 15 02.6 -1.4**
MDJ sPKP 18 15 16.2
MDJ PP **PP 18 18 43.7 -1.2**
MDJ AMB AMB
comp=Z,210nm,7.6s
MDJ LR LR
comp=N,130nm,34.3s
MDJ LR LR
comp=E,160nm,25.2s
MDJ LR LR
comp=Z,110nm,37.3s
SONM Songino Array 159.36 14 PKP **PKPdf 18 14 28.4 +0.6**
SONM PKPab **PKPab 18 15 06.9 +0.8**
SONM SKP 18 17 46.8
SONM PP PP 18 18 38.9 -8.3
SONM Songino Array 159.36 14 PKP **PKPdf 18 14 28.4 +0.6**
comp=Z,19nm,1.1s,baz=268,slow=0.5,SNR=59
SONM PKPab **PKPab 18 15 06.9 +0.8**
comp=Z,11nm,0.8s,baz=317,slow=2.9,SNR=6.9
SONM SKP 18 17 46.8
comp=Z,2.2nm,1.1s,baz=236,slow=1.6,SNR=3.5
SONM PP PP 18 18 38.9 -8.3
comp=Z,2.0nm,0.8s,baz=314,slow=3.7,SNR=3.7
ULN Ulaanbaatar 159.46 12 ePKPdf **PKPdf 18 14 28.1 +0.2**
ULN ePKPab **PKPab 18 15 06.4 -0.1**
ULN ePP **PP 18 18 47.5 -0.2**
ULN Ulaanbaatar 159.46 12 PKPdf **PKPdf 18 14 28.8 +0.9**
SNR=14
SHL Shillong 160.63 92 eP **PKPdf 18 14 30.0 +0.1**
CN2 Changchun 161.41 332 ePKP **PKPdf 18 14 29.6 -0.3**
CM31 Chiang Mai Arr 163.72 122 ePKPdf **PKPdf 18 14 30.7 -2.3**
CM31 ePKPab **PKPab 18 15 24.7 -1.2**
CMAR Chiang Mai Arr 163.72 122 PKP **PKPdf 18 14 33.5 +0.5**
CMAR PKPab **PKPab 18 15 26.1 +0.2**
CMAR PP **PP 18 19 11.4 -0.1**
CMAR Chiang Mai Arr 163.72 122 PKP **PKPdf 18 14 33.5 +0.5**
comp=Z,6.8nm,0.8s,baz=260,slow=2.6,SNR=49
CMAR PKPab **PKPab 18 15 26.1 +0.2**
comp=Z,6.7nm,0.9s,baz=237,slow=6.2,SNR=16
CMAR PP **PP 18 19 11.4 -0.1**
comp=Z,1.5nm,0.9s,baz=252,slow=5.6,SNR=5.6
GTA Gaotai 163.90 41 ePKP **PKPdf 18 14 33.4 +0.7**
GTA pPKP pPKPdf 18 15 06.5 -7.6
GTA sPKP 18 15 18.9
GTA PKPab **PKPab 18 15 27.9 +1.6**
GTA PKS **PKSdf 18 18 05.6 -0.2**
GTA PP PP 18 19 18.8 +6.7
GTA SKKS 18 25 42.6
GTA SS **SS 18 39 33.0 +4.8**
GTA AMB AMB
comp=Z,170nm,7.6s
GTA LR LR
comp=N,140nm,14.2s
GTA LR LR
comp=E,97nm,19.0s
GTA LR LR
comp=Z,190nm,21.4s
CHTO Chiang Mai 163.94 121 ePKIKP **PKPdf 18 14 32.6 -0.6**
CHTO e 18 15 18.3
CHTO e 18 19 11.9
CHTO Chiang Mai 163.94 121 ePKPdf **PKPdf 18 14 32.6 -0.6**
CHTO e 18 15 18.2
CHTO eSKP 18 17 54.4
CHTO ePP **PP 18 19 11.9 -0.8**
CHTO Chiang Mai 163.94 121 PKPdf **PKPdf 18 14 34.4 +1.2**
SNR=7.2
CHTO Chiang Mai 163.94 121 P **PKPab 18 15 27.6 +0.7**
SNR=5.1
JNU Nakatsue 164.08 293 PKPab **PKPab 18 15 26.9 -0.4**
JNU Nakatsue 164.08 293 PKPab **PKPab 18 15 26.9 -0.4**
comp=Z,12nm,0.9s,baz=2.9,slow=2.6,SNR=4.8
KSRS Korea Array 164.53 312 PKP **PKPdf 18 14 34.0 +0.8**
comp=Z,8.2nm,0.9s,baz=106,slow=1.2,SNR=32
KSRS PKPab **PKPab 18 15 30.0 +1.1**
comp=Z,12nm,0.8s,baz=54,slow=4.6,SNR=24
KSAR Wonju Array Be 164.56 312 PKP **PKPdf 18 14 34.0 +0.8**
KSAR PKPab **PKPab 18 15 30.0 +0.9**
HHC Hu-ho-hao-te 167.00 6 ePKP **PKPdf 18 14 35.6 +0.4**
HHC PKS **PKSdf 18 18 06.4 -1.5**
HHC PP **PP 18 19 31.1 +3.9**
HHC SKS **SKSdf 18 21 21.7 -3.0**
HHC SKKS **SKKSac 18 26 00.1 -0.2**
HHC SS **SS 18 39 58.6 +0.6**
HHC AMB AMB
comp=Z,160nm,9.1s
HHC LR LR
comp=N,290nm,14.9s
HHC LR LR
comp=E,1μm,16.7s
HHC LR LR
comp=Z,410nm,17.8s
BJI Beijing 167.68 350 PKP **PKPdf 18 14 36.0 +0.5**
BJI LR LR
comp=N,140nm,25.6s
BJI LR LR
comp=E,180nm,25.6s
BJI LR LR
comp=Z,170nm,29.2s
LZH Lanzhou 168.49 42 ⇑PKP **PKPdf 18 14 38.7 +2.2**
LZH PP **PP 18 19 39.3 +3.4**
LZH SKKS 18 26 06.0
LZH SS **SS 18 40 16.1 +1.3**
LZH AMB AMB
comp=Z,180nm,4.6s
LZH LR LR
comp=N,220nm,14.6s
LZH LR LR
comp=E,240nm,14.0s
LZH LR LR
comp=Z,320nm,16.1s
KMI Kunming 170.05 104 PKP **PKPdf 18 14 38.8 +1.0**
KMI pPKP **pPKPdf 18 15 14.7 -4.5**
KMI sPKP 18 15 30.6
QIZ Qiongzhong 170.58 159 PKP **PKPdf 18 14 41.0 +3.0**
QIZ SS SS 18 40 39.2 +5.4
CD2 Chengdu 171.06 68 PKP **PKPdf 18 14 37.0 -1.0**
CD2 pPKP **pPKPdf 18 15 14.9 -4.5**
CD2 sPKP 18 15 29.6
CD2 PKPab **PKPab 18 16 01.8 +3.6**
CD2 PKS **PKSdf 18 18 08.1 -2.4**
CD2 PP **PP 18 19 53.7 +4.3**
CD2 SKS **SKSdf 18 21 24.6 -2.4**
CD2 SKKS **SKKSac 18 26 24.8 +3.6**
CD2 SS **SS 18 40 46.4 +4.8**
CD2 AMB AMB
comp=Z,270nm,5.7s
YULB Yu-li 171.59 239 ePKPdf **PKPdf 18 14 37.8 -0.6**
SSLB Suanglung 172.07 241 ePKPdf **PKPdf 18 14 39.2 +0.5**
SSLB e 18 15 24.9
SSE Sheshan 172.52 297 PKP **PKPdf 18 14 40.1 +1.5**
SSE AMB AMB
comp=Z,140nm,7.7s
SSE LR LR
comp=N,83nm,20.0s
SSE LR LR
comp=E,200nm,20.0s
SSE LR LR
comp=Z,120nm,20.0s
XAN Xi'an 172.77 31 PKP **PKPdf 18 14 39.3 +0.6**
NJ2 Nanjing 173.73 313 ePKP **PKPdf 18 14 39.4 +0.4**
GYA Guiyang 173.82 102 PKP **PKPdf 18 14 40.1 +0.7**
GYA pPKP **pPKPdf 18 15 16.0 -4.8**
GYA PKPab **PKPab 18 16 10.0 -0.7**
GYA SKS **SKSdf 18 21 27.2 -1.1**
GYA SKKS **SKKSac 18 26 39.1 +4.3**
GYA AMB AMB
comp=Z,220nm,6.3s
GYA LR LR
comp=N,280nm,25.8s
GYA LR LR
comp=E,190nm,24.7s
GYA LR LR

comp=Z,210nm,23.8s
QZH Quanzhou 174.50 239 ePKP **PKPdf 18 14 36.0 -3.5**
QZH PP **PP 18 20 07.0 +1.1**
WHN Wuhan 177.24 343 PKP **PKPdf 18 14 41.2 +1.2**
WHN PKPab PKPab 18 16 24.3 -0.9

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*NIED **03** 17:55:00, 27°.20N×141°.60E, h35km, Mw3.9 Best double couple: M0 8.89000×10^14 NP1: φs 281.00000°, δ59.00000°, λ-110.00000°. NP2: φs 136.00000°, δ37.00000°, λ-61.00000°.*

IDC 03 17:55:13.0±2.1**, 27°.32N×141°.23E, h0km, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.5**/22**, mbtmp4.0**/3**, Error ellipse: s-maj=102.6km s-min=27.5km az=81.0, Bonin Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 47.45 189 P P 18 03 49.5 -0.1
2.0nm,0.6s,baz=9.3,slow=8.5,SNR=18
MKAR Makanchi Array 49.68 309 P P 18 04 06.6 0.0
0.1nm,0.4s,baz=82,slow=10,SNR=2.3
ARCES ARCESS Array B 73.05 341 P P 18 06 45.0 +0.5
1.6nm,1.0s,baz=49,slow=8.9,SNR=4.8
KAF Kangasniemi 76.91 334 ep P 18 07 06.1 -0.7
0.4nm,0.4s
FINES FINESS Array B 77.37 334 P P 18 07 09.1 -0.4
0.6nm,0.4s,baz=71,slow=5.4,SNR=13

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*IDC **03** 18:01:15.9±3.2, 32°.49S×176°.17W, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.5/19, mbtmp3.4/3, ML3.4/1, Error ellipse: s-maj=87.9km s-min=44.3km az=133.0*

ISC 03 18:01:22.4±2.4**, 33°.2S**±0°.2×**176°.2W**±0°.4**, h35km, n13, σ1s.95**/13**, South of Kermadec Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MXZ Matakaoa Point 6.22 224 PN Pn 18 02 55.6 +4.0
MXZ eSN **Sn 18 04 03.3 +1.7**
MWZ Matawai 7.20 223 PN Pn 18 03 08.8 +3.7
MWZ eSN **Sn 18 04 26.1 +0.4**
URZ Urewera 7.39 225 eSN **Sn 18 04 29.6 -0.8**
URZ Urewera 7.39 225 Pn **Pn 18 03 10.6 +2.8**
0.5nm,0.3s,baz=73,slow=19,SNR=12
URZ Sn **Sn 18 04 29.1 -1.2**
2.4nm,0.3s,baz=314,slow=23,SNR=12
BKZ Black Stump Fm 8.36 223 SN **Sn 18 04 53.4 -0.7**
BFZ Birch Farm 9.57 217 eSN **Sn 18 05 22.1 -1.9**
MRZ Mangatainoka R 9.90 219 ePN **Pn 18 03 43.0 +0.8**
MRZ eSN **Sn 18 05 28.5 -3.5**
TCW Tory Channel 10.99 221 eSN Sn 18 05 52.4 -6.3
THZ Tophouse 12.12 222 ePN **Pn 18 04 13.9 +1.3**
THZ eSN Sn 18 06 18.9 -7.6
MQZ McQueen's Vall 13.61 217 eSN Sn 18 06 52.3 -10
ASAR Alice Springs 44.53 269 P **P 18 09 31.3 +0.4**
0.1nm,0.3s,baz=113,slow=9.3,SNR=3.4
WRA Warramunga Arr 45.77 274 P **P 18 09 38.4 -2.3**
0.3nm,0.3s,baz=113,slow=8.0,SNR=6.3
FINES FINESS Array B 148.32 340 PKPbc **PKPdf 18 21 00.7 0.0**
0.9nm,0.9s,baz=69,slow=4.6,SNR=2.3

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*ISCJB **03** 18:02:22.0±1.3, 40°.55N±0°.04×124°.7W±0°.2, h25km, mb2.4/1, Error ellipse: s-maj=16.4km s-min=6.3km az=179.8*

*IDC **03** 18:02:22.2±3.0, 40°.67N×124°.54W, h0km, mb2.6/1, mb1 3.6/3, mb1mx3.4/29, mbtmp3.2/3, ML3.7/2, MS2.8/1, Ms1 2.8/1, ms1mx2.6/7, Error ellipse: s-maj=32.6km s-min=16.7km az=80.0*

*NEIC **03** 18:02:22.7, 40°.51N×124°.75W, h16km, MW3.8(BRK), After NCEDC.*

NEIC Felt [II] at Arcata, Bayside and Eureka. Also felt at Blue Lake, Fields Landing, Korbel and McKinleyville.

ISC 03 18:02:22.2±1.9**, 40°.52N**±0°.06×**124°.7W**±0°.1**, h25km, n19, σ1s.66**/22**, Near coast of northern California**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRMB Red Mountain 1.17 31 ePn **Pn 18 02 42.3 -0.8**
KRMB eSn **Sn 18 02 56.4 -1.9**
KIPM Iron Peak 1.18 127 ePn **Pn 18 02 42.9 -0.4**
KCPM Cahto Peak 1.20 134 ePn **Pn 18 02 42.8 -0.8**
WDC Whiskeytown Da 1.65 87 ePn **Pn 18 02 49.6 0.0**
KBO Bosley Butte 1.73 12 ePn **Pn 18 02 49.7 -1.0**
YBH Yreka Blue Hor 1.93 51 ePn **Pn 18 02 53.8 +0.3**
YBH Sn **Sn 18 03 16.6 -0.6**
YBH Yreka Blue Hor 1.93 51 Pn **Pn 18 02 53.9 +0.3**
9.5nm,0.3s,baz=249,slow=11,SNR=94
YBH Sn **Sn 18 03 16.6 -0.6**
86nm,0.3s,baz=104,slow=17,SNR=25
HOPS Hopland 1.98 140 ePn **Pn 18 02 53.3 -0.9**
HUMO Hull Mountain 2.46 32 ePn **Pn 18 03 00.7 -0.1**
HUMO eSn **Sn 18 03 29.5 -0.6**
NVAR Mina Array Bea 5.38 111 Pn **Pn 18 03 42.9 +1.8**
NVAR Pg **Pb 18 03 53.5 -2.2**
NVAR Mina Array Bea 5.38 111 Pn **Pn 18 03 42.9 +1.8**
5.7nm,0.3s,baz=291,slow=14,SNR=56
NVAR Pg **Pb 18 03 53.4 -2.2**
2.8nm,0.3s,baz=302,slow=16,SNR=12
ISA Isabella 6.91 133 ePn **Pn 18 04 04.6 +2.6**
8.3nm,0.6s
DUG Dugway 9.09 88 ePn **Pn 18 04 34.4 +2.5**
3.6nm,0.7s
NEW Newport 9.45 33 LR LR 18 08 21.1
comp=Z,62nm,21.5s,baz=26,slow=39
MSU Marysvale 9.89 98 ePn **Pn 18 04 45.7 +2.7**
4.7nm,0.4s
PDAR Pinedale Array 11.56 74 Pn Pn 18 05 11.4 +5.6
PDAR Pinedale Array 11.56 74 Pn Pn 18 05 11.4 +5.6
0.1nm,0.3s,baz=236,slow=12,SNR=4.1
YKA Yellowknife Ar 22.83 12 P **P 18 07 25.1 +2.0**
YKA Yellowknife Ar 22.83 12 P **P 18 07 25.0 +2.0**
0.1nm,0.6s,baz=197,slow=12,SNR=3.8

IDC 03 18:20:03.8±51.0**, 15°.25S×171°.34W, h0km, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.7**/21**, mbtmp4.2**/3**, Error ellipse: s-maj=1002.0km s-min=176.9km az=79.0, Samoa Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STKA Stephens Creek 45.84 240 P P 18 28 28.3 +0.4
1.2nm,0.4s,baz=81,slow=10,SNR=8.8
WRA Warramunga Arr 51.81 256 P P 18 29 13.5 -0.5
0.7nm,0.5s,baz=96,slow=7.0,SNR=22
ASAR Alice Springs 52.05 252 P P 18 29 15.6 -0.2
6.9nm,0.5s,baz=89,slow=7.7,SNR=262

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*MOS **03** 18:23:59.9±2.1, 41°.46N×46°.71E, h6km, mb4.3/4, Error ellipse: s-maj=14.0km s-min=7.0km az=121.2*

*IDC **03** 18:24:00.9±1.8, 41°.71N×46°.44E, h0km, mb3.4/5, mb1 3.7/8, mb1mx3.4/28, mbtmp3.5/8, ML3.4/3, Error ellipse: s-maj=28.9km s-min=12.9km az=2.0*

*NSSP **03** 18:24:02.2, 41°.82N×46°.35E, h15km, Ms3.8*

*NNC **03** 18:24:03.6±3.4, 41°.77N×47°.06E, h0km, mb3.6, mpv3.8, Error ellipse: s-maj=44.7km s-min=12.5km az=6.0*

*CSEM **03** 18:24:04.8±0.1, 41°.67N×46°.48E, h2km, ML3.8, Error ellipse: s-maj=4.3km s-min=2.7km az=45.0*

*ISCJB **03** 18:24:05.9±0.6, 41°.69N±0°.02×46°.54E±0°.03, h17km±6km, mb3.2/4, Error ellipse: s-maj=4.2km s-min=2.9km az=44.1*

ISC 03 18:24:03.2±1.0**, 41°.71N**±0°.02×**46°.50E**±0°.02**, h17km**±7km**, n84, σ1s.38**/134**, mb3.4**/4**, 17C-18D, Eastern Caucasus**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SEKA Sheki 0.72 134 P **Pb 18 24 18.1 +0.7**
SNR=209
SEKA S **Sn 18 24 29.2 -0.2**
DGRG David-gareji 0.89 253 P **Pn 18 24 22.7 +1.8**
DGRG S **Sn 18 24 37.7 +4.3**
DGRG David-gareji 0.89 253 P **Pn 18 24 22.7 +1.8**
GANJ Ganja 1.07 187 P **Pg 18 24 24.3 +0.3**
SNR=284
GANJ S **Sn 18 24 39.6 +1.6**
TBLG Delisi 1.32 271 P **Pg 18 24 28.5 -0.2**
TBLG S **Sg 18 24 47.2 +1.2**
TBLG Delisi 1.32 271 P **Pg 18 24 28.5 -0.2**
TBLG S **Sg 18 24 47.2 +1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MAK	**Makhachkala**	**1.45**	**30**	*e*PG	**Pg**	**18 24 33.2**	**+2.0**
MAK				*e*		18 24 51.4	
MAK				pmax	pmax		
	comp=Z,302nm,0.4s						
MAK				smax	smax		
	comp=E,2µm,0.6s						
MAK				smax	smax		
	comp=N,3µm,0.7s						
MAK	**Makhachkala**	**1.45**	**30**	*e*Pg	**Pg**	**18 24 33.2**	**+2.0**
	comp=N,302nm,0.4s						
MAK				*e*Sg	**Sg**	**18 24 51.4**	**+1.2**
	comp=N,3µm,0.7s						
MTKZ	**Martakert**	**1.53**	**171**	⇓*i*P	**Pb**	**18 24 31.1**	**0.0**
MTKZ				⇓*i*S	**Sg**	**18 24 52.5**	**-0.1**
MTKZ	**Martakert**	**1.53**	**171**	⇓P	**Pb**	**18 24 31.1**	**0.0**
MTKZ				S	**Sg**	**18 24 52.5**	**-0.1**
BRDA	**Brd**	**1.54**	**160**	P	**Pg**	**18 24 33.0**	**+0.2**
	SNR=30						
QUBA	**Quba, Azerbaij**	**1.54**	**103**	P	**Pg**	**18 24 32.9**	**+0.1**
	SNR=4.1						
IML	**Ismayilli**	**1.56**	**125**	P	**Pg**	**18 24 32.8**	**-0.5**
	SNR=38						
KZR	**Kazreti**	**1.60**	**259**	P	**Pb**	**18 24 32.6**	**+0.2**
KZR				S	**Sg**	**18 24 53.4**	**-1.5**
KZR	**Kazreti**	**1.60**	**259**	P	**Pb**	**18 24 32.6**	**+0.2**
KZR				S	**Sg**	**18 24 53.4**	**-1.5**
VADZ	**Vardenis**	**1.64**	**201**	*e*P	**Pg**	**18 24 35.0**	**+0.2**
VADZ				*e*S	**Sg**	**18 24 59.0**	**+2.8**
VADZ	**Vardenis**	**1.64**	**201**	P	**Pg**	**18 24 35.0**	**+0.2**
LMTZ	**Lermontov**	**1.69**	**236**	⇑*i*P	**Pb**	**18 24 33.7**	**-0.3**
LMTZ				⇑*i*S	**Sg**	**18 24 57.1**	**-0.8**
LMTZ	**Lermontov**	**1.69**	**236**	⇑P	**Pb**	**18 24 33.7**	**-0.3**
STEZ	**Stepenevan**	**1.73**	**247**	⇑*i*P	**Pb**	**18 24 34.3**	**-0.4**
STEZ				⇑*i*S	**Sg**	**18 24 57.6**	**-1.6**
STEZ	**Stepenevan**	**1.73**	**247**	⇑*i*P	**Pb**	**18 24 34.6**	**-0.1**
STEZ				⇑S	**Sg**	**18 24 58.0**	**-1.2**
STE	**Stepanavan**	**1.75**	**247**	⇑P	**Pb**	**18 24 34.6**	**-0.4**
STE				S	**Sb**	**18 24 58.0**	**+1.2**
GOR	**Gori**	**1.81**	**280**	P	**Pb**	**18 24 36.1**	**+0.2**
GOR				S	**Sg**	**18 24 59.9**	**-1.6**
GOR	**Gori**	**1.81**	**280**	P	**Pb**	**18 24 36.1**	**+0.2**
GOR				S	**Sg**	**18 24 59.9**	**-1.6**
PQL	**Pirkuli**	**1.83**	**120**	P	**Pg**	**18 24 37.7**	**-0.6**
	SNR=5.2						
VLKR	**Vladikavkaz**	**1.90**	**315**	*e*PN	**Pg**	**18 24 38.8**	**-0.9**
VLKR				*e*S	**Sg**	**18 25 04.1**	**-0.3**
VLKR	**Vladikavkaz**	**1.90**	**315**	*e*Pn	**Pg**	**18 24 38.8**	**-0.9**
VLKR				*e*Sn	**Sg**	**18 25 04.1**	**-0.3**
SPIZ	**Spitak**	**1.90**	**243**	⇑*i*P	**Pn**	**18 24 35.2**	**+0.2**
SPIZ				⇓*i*S	**Sb**	**18 25 00.7**	**-0.3**
SPIZ	**Spitak**	**1.90**	**243**	⇑P	**Pn**	**18 24 35.2**	**+0.2**
SPIZ				S	**Sb**	**18 25 00.7**	**-0.3**
STKZ		**1.91**	**174**	⇑*i*P	Pg	18 25 00.6	+21
STKZ				⇑*i*S	Sg	18 25 25.9	+21
SIZA	**Siyzn**	**1.91**	**109**	P	**Pg**	**18 24 40.2**	**+0.2**
	SNR=22						
LACR	**Lac**	**1.98**	**305**	⇓*i*PN	**Pb**	**18 24 39.2**	**+0.3**
LACR				*i* S	**Sg**	**18 25 05.5**	**-1.5**
LACR	**Lac**	**1.98**	**305**	*i* Pn	**Pb**	**18 24 39.2**	**+0.3**
LACR				*i* Sn	**Sg**	**18 25 05.5**	**-1.5**
ERE	**Yerevan**	**2.18**	**226**	⇓*i*P	**Pb**	**18 24 41.0**	**-1.2**
ERE				⇓S	**Sg**	**18 25 12.0**	**-1.3**
ERE	**Yerevan**	**2.18**	**226**	⇓P	**Pb**	**18 24 41.0**	**-1.2**
BTKR	**Batakoyurt**	**2.20**	**320**	⇑*i*PN	**Pb**	**18 24 43.1**	**+0.5**
BTKR				*e*S	**Sb**	**18 25 11.0**	**+1.4**
BTKR	**Batakoyurt**	**2.20**	**320**	*i* Pn	**Pb**	**18 24 43.1**	**+0.5**
BTKR				*e*Sn	**Sb**	**18 25 11.0**	**+1.4**
ZEI	**Tsey**	**2.20**	**300**	⇑*i*PN	**Pb**	**18 24 42.6**	**-0.1**
ZEI				*e*S	**Sb**	**18 25 11.1**	**+1.3**
ZEI	**Tsey**	**2.20**	**300**	*i* Pn	**Pb**	**18 24 42.6**	**-0.1**
ZEI				*e*Sn	**Sb**	**18 25 11.1**	**+1.3**
ARNR	**Ardon**	**2.21**	**313**	*e*PN	**Pb**	**18 24 42.8**	**+0.1**
ARNR				*e*S	**Sb**	**18 25 11.2**	**+1.4**
ARNR	**Ardon**	**2.21**	**313**	*e*Pn	**Pb**	**18 24 42.8**	**+0.1**
ARNR				*e*Sn	**Sb**	**18 25 11.2**	**+1.4**
GRS	**Goris**	**2.21**	**183**	⇓*i*P	**Pg**	**18 24 45.0**	**-0.7**
GRS				⇓*i*S	**Sg**	**18 25 13.0**	**-1.4**
GRS	**Goris**	**2.21**	**183**	⇓P	**Pg**	**18 24 45.0**	**-0.7**
GRS				S	**Sg**	**18 25 13.0**	**-1.4**
KORR	**Kora**	**2.27**	**308**	*e*PN	**Pb**	**18 24 43.5**	**-0.2**
KORR				*e*S	**Sb**	**18 25 12.3**	**+0.8**
KORR	**Kora**	**2.27**	**308**	*e*Pn	**Pb**	**18 24 43.5**	**-0.2**
KORR				*e*Sn	**Sb**	**18 25 12.3**	**+0.8**
AKH	**Akhalkalaki**	**2.28**	**263**	P	**Pb**	**18 24 44.7**	**+0.7**
AKH				S	**Sb**	**18 25 14.1**	**+2.2**
AKH	**Akhalkalaki**	**2.28**	**263**	P	**Pb**	**18 24 44.7**	**+0.7**
AKH				S	**Sb**	**18 25 14.1**	**+2.2**
TRKR	**Terskaya**	**2.40**	**328**	*e*PN	**Pb**	**18 24 45.4**	**-0.5**
TRKR				*e*S	**Sb**	**18 25 15.6**	**+0.5**
TRKR	**Terskaya**	**2.40**	**328**	*e*Pn	**Pb**	**18 24 45.4**	**-0.5**
TRKR				*e*Sn	**Sb**	**18 25 15.6**	**+0.5**
ONI	**Oni**	**2.43**	**292**	P	**Pb**	**18 24 46.2**	**-0.3**
ONI				S	**Sb**	**18 25 17.4**	**+1.2**
ONI	**Oni**	**2.43**	**292**	P	**Pb**	**18 24 46.2**	**-0.3**
ONI				S	**Sb**	**18 25 17.4**	**+1.2**
DIGR	**Digorskoe uzhe**	**2.47**	**300**	⇓*i*PN	**Pb**	**18 24 46.7**	**-0.6**
DIGR				*e*S	**Sb**	**18 25 17.4**	**-0.1**
DIGR	**Digorskoe uzhe**	**2.47**	**300**	*i* Pn	**Pb**	**18 24 46.7**	**-0.6**
DIGR				*e*Sn	**Sb**	**18 25 17.4**	**-0.1**
LSNR	**Lesken**	**2.53**	**309**	*e*PN	**Pb**	**18 24 47.2**	**-0.9**
LSNR				*e*S	**Sb**	**18 25 18.5**	**-0.5**
LSNR	**Lesken**	**2.53**	**309**	*e*Pn	**Pb**	**18 24 47.2**	**-0.9**
LSNR				*e*Sn	**Sb**	**18 25 18.5**	**-0.5**
PRTR	**Priterechnaya**	**2.61**	**322**	⇑*i*PN	**Pb**	**18 24 48.3**	**-1.3**
PRTR				*e*S	**Sb**	**18 25 20.7**	**-0.7**
PRTR	**Priterechnaya**	**2.61**	**322**	*i* Pn	**Pb**	**18 24 48.3**	**-1.3**
PRTR				*e*Sn	**Sb**	**18 25 20.7**	**-0.7**
NAX	**Nakhchivan**	**2.65**	**197**	P	**Pb**	**18 24 50.4**	**+0.2**
	SNR=18						
GLBA	**Clilabad**	**2.86**	**149**	P	**Pn**	**18 24 50.6**	**+2.6**
	SNR=10						
GLBA				S	**Sb**	**18 25 25.9**	**-2.5**
KBZ	**Khabaz**	**3.33**	**308**	PN	**Pn**	**18 24 56.6**	**+2.1**
KBZ						18 25 07.3	
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KBZ	**Khabaz**	**3.33**	**308**	Pn	**Pn**	**18 24 56.5**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=81,slow=21,SNR=8.7						
KBZ				Pg	**Pg**	**18 25 07.3**	**+0.2**
	comp=Z,2.5nm,0.3s,baz=260,slow=6.1,SNR=28						
KBZ				Lg	Lg	18 25 46.7	
	comp=Z,1.8nm,0.3s,baz=206,slow=4.5,SNR=5.6						
KBZ	**Khabaz**	**3.33**	**308**	Pn	**Pn**	**18 24 56.6**	**+2.1**
	comp=Z,3.0nm,0.3s						
LKRN	**Lenkeran, Azer**	**3.47**	**149**	P	**Pn**	**18 24 59.0**	**+2.6**
LKRN				S	**Sn**	**18 25 41.0**	**+4.0**
KIV	**Kislovodsk**	**3.59**	**310**	⇓Pn	Pb	18 25 02.3	-4.0
	comp=Z,18nm,0.7s						
KIV				⇑Sn	**Sb**	**18 25 53.1**	**+3.5**
	comp=Z,90nm,0.9s						
KIV	**Kislovodsk**	**3.59**	**310**	PN	**Pb**	**18 25 04.0**	**-2.3**
KIV				*i*		18 25 16.1	
KIV				*e*		18 25 58.8	
KIV				*i*		18 26 08.3	
KIV				pmax	pmax		
	comp=Z,16nm,0.7s						
KIV				pmax	pmax		
	comp=Z,25nm,1.0s						
KIV				pmax	pmax		
	comp=Z,23nm,0.8s						
KIV				pmax	pmax		
	comp=N,44nm,0.8s						
KIV				pmax	pmax		
	comp=E,77nm,0.8s						
KIV	**Kislovodsk**	**3.59**	**310**	Pn	Pb	18 25 02.3	-4.0
	comp=E,18nm,0.7s						
KIV	**Kislovodsk**	**3.59**	**310**	*i* Pg	Pg	18 25 16.1	+4.0
	comp=E,23nm,0.8s						
KIV				*e*Sb	**Sg**	**18 25 58.8**	**+0.2**
	comp=E,44nm,0.8s						
AKTO	**Aktyubinsk**	**11.82**	**39**	⇓Pn	**Pn**	**18 26 49.3**	**-1.6**
	comp=E,0.9nm,0.8s						
AKTO				⇓Sn	**Sn**	**18 28 57.9**	**-4.5**
	comp=E,0.5nm,0.6s						
AKTO	**Aktyubinsk**	**11.82**	**39**	P	**Pn**	**18 26 49.6**	**-1.3**
AKTO						18 28 58.8	
AKTO	**Aktyubinsk**	**11.82**	**39**	Pn	**Pn**	**18 26 49.5**	**-1.3**
	comp=E,0.4nm,0.3s,baz=227,slow=11,SNR=11						
AKTO				Sn	**Sn**	**18 28 58.8**	**-3.5**
	comp=E,0.2nm,0.3s,baz=43,slow=19,SNR=2.9						
AB31	**Akbulak array**	**12.07**	**47**	Pn	**Pn**	**18 26 53.6**	**-0.6**
	comp=E,0.6nm,0.4s,baz=238,slow=14,SNR=21						
AB31				⇓Sn	**Sn**	**18 29 04.6**	**-3.7**
	comp=E,2.9nm,0.8s,baz=231,slow=22,SNR=5.4						
KK31	**Karatay Array**	**17.78**	**77**	P	**Pn**	**18 28 09.3**	**-0.4**
	comp=E,0.7nm,0.6s,baz=286,slow=12,SNR=8.2						
ZRNK	**Zerenda**	**18.86**	**46**	⇓P	**P**	**18 28 21.6**	**-0.7**
	comp=E,7.0nm,1.5s						
BVA0	**Borovoye Array**	**19.64**	**47**	⇑P	**P**	**18 28 29.9**	**-0.9**
	comp=E,0.8nm,1.5s,baz=228,slow=43,SNR=4.4						
BVAR	**Borovoye Array**	**19.64**	**47**	P	**P**	**18 28 30.7**	**-0.1**
BVAR	**Borovoye Array**	**19.64**	**47**	P	**P**	**18 28 30.7**	**-0.1**
	comp=E,0.3nm,0.3s,baz=242,slow=8.6,SNR=10						
VOSK	**Vostochnaya**	**19.84**	**48**	⇓P	**P**	**18 28 32.0**	**-1.0**
	comp=E,2.6nm,0.6s						
AAK	**Ala-Archa**	**20.73**	**78**	P	**P**	**18 28 43.8**	**+0.8**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AAK	**Ala-Archa**	**20.73**	**78**	P	**P**	**18 28 43.8**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=227,slow=13,SNR=3.8						
FINES	**FINESS Array B**	**23.29**	**335**	P	**P**	**18 29 08.2**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=129,slow=13,SNR=7.3						
GERES	**GERESS Array B**	**24.02**	**298**	P	**P**	**18 29 18.4**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=104,slow=6.3,SNR=4.2						
MKAR	**Makanchi Array**	**25.98**	**67**	P	**P**	**18 29 36.1**	**+1.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**25.98**	**67**	P	**P**	**18 29 36.1**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=280,slow=7.3,SNR=7.8						
YKA	**Yellowknife Ar**	**75.04**	**351**	P	**P**	**18 35 43.3**	**0.0**
	comp=Z,0.5nm,0.6s,baz=12,slow=6.0,SNR=11						

IDC 03 18:41:53.6±6.2**, 16.°71S×159.°07E, h0**km**, mb3.0**/3**, mb1 3.3**/3**, mb1mx3.2**/16**, mbtmp3.1**/3**, Error ellipse: s-maj=93.8km s-min=83.3km az=45.0, Northwest of New Caledonia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**21.90**	**223**	P	P	18 46 47.9	-0.6
	3.7nm,1.0s,baz=53,slow=12,SNR=3.9						
WRA	**Warramunga Arr**	**23.69**	**258**	P	P	18 47 07.7	+0.4
	0.2nm,0.6s,baz=87,slow=9.8,SNR=2.7						
ASAR	**Alice Springs**	**24.59**	**250**	P	P	18 47 15.8	0.0
	0.4nm,1.0s,baz=73,slow=10.0,SNR=8.4						

JMA 03 18:42:32.7±0.2**, 38.°27N×144.°73E, h52**km**, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.53**	**290**	P	Pn	18 43 12.5	+1.2
OFUJ				*e*S	Sn	18 43 42.0	+1.1
MIYJ	**Miyakonagasawa**	**2.62**	**301**	P	Pn	18 43 13.5	+1.0
MIYJ				*e*S	Sn	18 43 43.8	+0.7
JIO	**Ouri**	**2.66**	**275**	P	Pn	18 43 14.3	+1.2
JIO				S	Sn	18 43 45.3	+1.1
JMK	**Ichinoseki**	**2.83**	**285**	P	Pn	18 43 17.0	+1.6
JMK				*e*S	Sn	18 43 50.7	+2.4
JOT	**Ohata**	**4.21**	**319**	*e*S	Sn	18 44 21.8	-0.3
JCH	**Churui**	**4.46**	**347**	P	Pn	18 43 37.9	+0.1
JCH				*e*S	Sn	18 44 26.4	-2.0
JKB	**Kayabe**	**4.59**	**323**	*e*S	Sn	18 44 30.2	-1.4
NEM2	**Nemuro 2**	**5.15**	**8**	P	Pn	18 43 44.7	-2.4
NEM2				*e*S	Sn	18 44 39.8	-5.4
JRY	**Ryogami san**	**5.17**	**246**	P	Pn	18 43 48.7	+1.1
JRY				*e*S	Sn	18 44 45.4	-0.6
JOD2	**Odawara 2**	**5.43**	**238**	*e*S	Sn	18 44 51.0	-1.4
JOSM	**Okushiri--Mats**	**5.54**	**315**	P	Pn	18 43 54.5	+2.0
JTKR	**Abashiri--Toko**	**5.73**	**354**	P	Pn	18 43 55.0	-0.1
JTKR				*e*S	Sn	18 44 56.1	-3.4
JHR	**Hokuryu**	**5.92**	**338**	*e*S	Sn	18 45 05.8	+1.6

MAN 03 18:42:32, 8.°00N×126.°25E, h82km**, mb4.4, ML3.3, MS3.2, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.04**	**179**	*e*P	Pn	18 42 53.5	+1.8
MATI				*e*S	Sn	18 43 07.9	+1.4
BUTP	**Butuan**	**1.15**	**327**	*e*P	Pn	18 42 54.0	+1.1
BUKP	**Musuan**	**1.18**	**264**	*e*P	Pn	18 42 56.3	+2.8
CTBH	**Cotabato--PC H**	**2.13**	**249**	⇓*i*P	Pn	18 43 06.7	+1.0

KRSC 03 18:43:47.8±0.3**, 53.°82N×161.°13E, h23**km±23km**, ML3.5, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.82**	**25**	P	Pb	18 44 02.6	-0.7
MKZ				*e*S	Sb	18 44 12.8	-1.1
SPN	**Mys Shipunski**	**0.98**	**223**	*e*P	Pb	18 44 05.7	-0.4
SPN				*e*S	Sb	18 44 18.3	-0.3
KII	**Karymskiy**	**1.02**	**283**	P	Pn	18 44 06.7	-0.1
KII				*e*S	Sb	18 44 19.9	0.0
SDLR	**Sedlovina**	**1.45**	**249**	*e*S	Sn	18 44 31.6	+0.5
SMAR	**Somma**	**1.50**	**249**	*e*P	Pn	18 44 14.0	+0.5
SMAR				*e*S	Sn	18 44 32.4	-0.2
UGLR	**Uglovaya**	**1.51**	**247**	*e*P	Pb	18 44 14.4	-0.8
UGLR				*e*S	Sb	18 44 33.6	-0.4
KRER	**Koryakskii**	**1.51**	**251**	P	Pb	18 44 14.6	-0.8
KRER				*e*S	Sb	18 44 34.0	-0.3
AVH	**Avacha**	**1.53**	**250**	*e*P	Pb	18 44 14.9	-0.7
AVH				*e*S	Sb	18 44 35.0	+0.3
TUMR	**Tumrok**	**1.57**	**339**	*e*P	Pn	18 44 14.9	+0.4
KOK	**Koryaka**	**1.58**	**251**	P	Pn	18 44 15.4	+0.9
KOK				*e*S	Sb	18 44 35.7	-0.3
PET	**Petropavlovsk**	**1.68**	**243**	*e*P	Pn	18 44 16.3	+0.5
PET				*e*S	Sn	18 44 37.1	+0.5
GNL	**Ganaly**	**1.90**	**267**	P	Pn	18 44 20.3	+1.4
GNL				*e*S	Sb	18 44 44.5	-0.7
KMNR	**Kamenistaya**	**2.01**	**345**	*e*P	Pn	18 44 21.6	+1.2
KMNR				*e*S	Sn	18 44 46.3	+1.4
RUS	**Russkaya**	**2.10**	**230**	*e*P	Pn	18 44 23.1	+1.6
RUS				*e*S	Sb	18 44 49.0	-1.8
BZGR	**Bezymyannyi-Gr**	**2.14**	**353**	*e*P	Pn	18 44 23.1	+0.9
BZGR				*e*S	Sn	18 44 48.6	+0.4
BZWR	**Bezymyannyi-We**	**2.18**	**351**	*e*P	Pn	18 44 23.7	+0.8
BZWR				*e*S	Sn	18 44 50.7	+1.4
ZLN	**Zelenaya**	**2.21**	**355**	*e*P	Pn	18 44 23.9	+0.7
ZLN				*e*S	Sn	18 44 50.7	+0.8
KPT	**Kopyto**	**2.21**	**347**	*e*P	Pn	18 44 24.4	+1.2
MTVR	**Mutnovka**	**2.22**	**234**	*e*P	Pn	18 44 24.6	+1.2
MTVR				*e*S	Sn	18 44 52.3	+2.0
KOZ	**Kozyrevsk**	**2.36**	**343**	*e*P	Pn	18 44 26.8	+1.7
KOZ				*e*S	Sb	18 44 55.8	-2.5
KRSR	**Krestovskiy**	**2.42**	**353**	*e*P	Pn	18 44 28.4	+2.3
KBTR	**Krutoberegovo**	**2.58**	**21**	*e*P	Pn	18 44 29.2	+1.0
SRDR	**Sredinnyy**	**2.63**	**343**	*e*P	Pn	18 44 29.4	+0.5

*ISCJB **03** 18:51:48.2±0.5, 24.°16S±0.°03×66.°87W±0.°04, h171km±4km, mb4.5/44, Error ellipse: s-maj=6.5km s-min=4.3km az=161.0*
*NEIC **03** 18:51:49.2±0.5, 24.°16S×66.°80W, h172km±4km, mb4.6/35, Error ellipse: s-maj=6.4km s-min=4.8km az=73.0*
*IDC **03** 18:51:50.2±1.1, 24.°11S×66.°83W, h178km±9km, mb4.2/16, mb1 4.4/22, mb1mx4.3/27, mbtmp4.3/22, Error ellipse: s-maj=13.3km s-min=8.8km az=83.0*
*GUC **03** 18:51:52.5±0.4, 24.°12S×66.°88W, h49km±41km, ML5.6*
ISC 03 18:51:48.2±0.5**, 24.°16S**±0.°04×**66.°82W**±0.°05**, h165**km±4km**, n515, σ1.°11**/535**, mb4.6**/44**, 182C-162D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANCH	**Antofagasta**	**3.32**	**277**	⇑*i*P	**Pn**	**18 52 42.5**	**+2.3**
ANCH				*i* S	**Sn**	**18 53 20.2**	**-0.4**
ANCH	**Antofagasta**	**3.32**	**277**	⇑*i*P	**Pn**	**18 52 42.5**	**+2.3**
ANCH				*i* S	**Sn**	**18 53 20.2**	**-0.4**
ANCH				AML	AML	18 53 23.5	
	comp=N,8µm,0.5s						
MACH	**Maria Elena**	**3.34**	**305**	⇓*i*P	**Pn**	**18 52 43.1**	**+2.4**
MACH				*i* S	**Sn**	**18 53 21.4**	**+0.1**
MACH	**Maria Elena**	**3.34**	**305**	⇓*i*P	**Pn**	**18 52 43.1**	**+2.4**
MACH				*i* S	**Sn**	**18 53 21.4**	**+0.1**
MECH	**Mejillones**	**3.49**	**287**	*e*P	**Pn**	**18 52 44.7**	**+2.3**
MECH				*i* S	**Sn**	**18 53 24.9**	**+0.4**
MECH	**Mejillones**	**3.49**	**287**	*e*P	**Pn**	**18 52 44.7**	**+2.3**
MECH				*i* S	**Sn**	**18 53 24.9**	**+0.4**
MECH				AML	AML	18 53 27.4	
	comp=N,12µm,0.3s						
CPCH	**Copiapo**	**4.50**	**224**	⇓*i*P	**Pn**	**18 52 56.4**	**+1.0**
CPCH				*i* S	**Sn**	**18 53 47.3**	**-0.7**
CPCH	**Copiapo**	**4.50**	**224**	⇓*i*P	**Pn**	**18 52 56.4**	**+1.0**
CPCH				*i* S	**Sn**	**18 53 47.3**	**-0.7**
CDCH	**Caldera**	**4.63**	**230**	⇑*i*P	**Pn**	**18 52 57.3**	**+0.3**
CDCH				*i* S	**Sn**	**18 53 49.2**	**-1.6**
CDCH	**Caldera**	**4.63**	**230**	⇑*i*P	**Pn**	**18 52 57.3**	**+0.3**
CDCH				*i* S	**Sn**	**18 53 49.2**	**-1.6**
LCO	**Las Campanas**	**5.95**	**215**	*e*Pn	**Pn**	**18 53 14.3**	**-0.3**
LCO				*e*Sn	Sn	18 54 09.3	-13
CFAA	**Coronel Fontan**	**7.52**	**189**	P	**Pn**	**18 53 36.0**	**+0.8**
CFAA				S	**Sn**	**18 54 56.8**	**-2.8**
CFAA	**Coronel Fontan**	**7.52**	**189**	P	**Pn**	**18 53 36.0**	**+0.8**
	comp=N,0.6nm,0.3s,baz=5.7,slow=11,SNR=39						
CFAA				S	**Sn**	**18 54 56.8**	**-2.8**
	comp=N,2.0nm,0.3s,baz=142,slow=17,SNR=12						
LPAZ	**La Paz**	**7.93**	**351**	P	**Pn**	**18 53 43.0**	**+1.7**
LPAZ				*e*Pn	Pn	18 53 43.2	+1.8
LPAZ				*e*Sn	**Sn**	**18 55 05.0**	**-5.3**
LPAZ				S		18 55 08.2	
LPAZ	**La Paz**	**7.93**	**351**	P	**Pn**	**18 53 43.0**	**+1.7**
	comp=N,11nm,0.3s,baz=158,slow=8.4,SNR=164						
LPAZ				S	**Sn**	**18 55 08.2**	**-2.0**
	comp=N,0.4nm,0.3s,baz=185,slow=12,SNR=2.3						
ARE	**Arequipa**	**8.82**	**329**	*e*P	**Pn**	**18 53 52.0**	**-0.8**
ARE				*e*S	Sn	18 55 24.0	-7.3
CPUP	**Villa Florida**	**8.86**	**106**	P	**Pn**	**18 53 55.0**	**+2.1**
CPUP	**Villa Florida**	**8.86**	**106**	P	**Pn**	**18 53 55.0**	**+2.1**
	comp=N,1.5nm,0.3s,baz=263,slow=11,SNR=35						
SIV	**San Ignacio**	**9.75**	**35**	P	**Pn**	**18 54 05.8**	**+0.9**
SIV				S	Sn	18 55 41.2	-12
SIV	**San Ignacio**	**9.75**	**35**	P	**Pn**	**18 54 05.8**	**+0.9**
	comp=N,6.2nm,0.3s,baz=228,slow=12,SNR=80						
SIV				S	Sn	18 55 41.2	-12
	baz=238,slow=17,SNR=7.6						
TRQA	**Tornquist**	**14.46**	**165**	*e*Pn	**Pn**	**18 55 05.2**	**+0.1**
NNA	**Nana**	**15.39**	**320**	*e*Pn	**Pn**	**18 55 17.2**	**+0.2**
	comp=N,19nm,0.8s						
NNA	**Nana**	**15.39**	**320**	P	**P**	**18 55 18.8**	**+0.9**
	comp=N,1.6nm,0.3s,baz=157,slow=11,SNR=6.8						
SAML	**Samuel**	**15.52**	**14**	*e*Pn	**Pn**	**18 55 19.1**	**+0.6**
	comp=N,11nm,0.6s						
PLCA	**Paso Flores**	**16.82**	**190**	*e*Pn	**P**	**18 55 34.5**	**+1.0**
	comp=N,35nm,0.8s						
PLCA				*e*S	**S**	**18 58 34.7**	**-5.6**
PLCA	**Paso Flores**	**16.82**	**190**	P	**P**	**18 55 34.6**	**+1.2**
	comp=N,1.3nm,0.3s,baz=10,slow=14,SNR=17						
SPB	**Sao Paulo**	**17.74**	**92**	*e*Pn	**P**	**18 55 44.5**	**+0.8**
	comp=N,55nm,0.9s						
BDFB	**Brasilia**	**19.59**	**68**	P	**P**	**18 56 05.4**	**+1.4**
BDFB	**Brasilia**	**19.59**	**68**	P	**P**	**18 56 05.4**	**+1.4**
	comp=N,9.3nm,0.3s,baz=239,slow=11,SNR=92						
USHA	**Ushuaia**	**30.66**	**182**	P	**P**	**18 57 47.5**	**+0.7**
USHA	**Ushuaia**	**30.66**	**182**	P	**P**	**18 57 47.5**	**+0.7**
	comp=N,14nm,0.8s,baz=339,slow=8.0,SNR=8.1						
RCBR	**Riachuelo**	**34.85**	**63**	*e*P	**P**	**18 58 23.7**	**-0.1**
	comp=N,36nm,1.0s						
RCBR	**Riachuelo**	**34.85**	**63**	P	**P**	**18 58 24.5**	**+0.7**
	comp=N,30nm,0.9s,baz=229,slow=10,SNR=16						
FDF	**Fort de France**	**39.05**	**9**	*e*P	**P**	**18 58 57.3**	**-1.9**
	comp=N,68nm,1.1s						
PMSA	**Palmer Station**	**40.65**	**178**	P	**P**	**18 59 12.8**	**+1.0**
PMSA	**Palmer Station**	**40.65**	**178**	P	**P**	**18 59 12.8**	**+1.0**
	comp=N,7.6nm,0.4s,baz=12,slow=3.4,SNR=18						
ANWB	**Willy Bob**	**41.86**	**7**	*e*P	**P**	**18 59 20.7**	**-1.5**
SDDR	**Presa de Saban**	**43.10**	**354**	*e*P	**P**	**18 59 31.6**	**-0.7**
VNA3	**Neumayer Olymp**	**56.95**	**161**	*e*P	**P**	**19 01 17.0**	**+1.1**
VNA3	**Neumayer Olymp**	**56.95**	**161**	*e*pP	pP	19 01 55.1	+1.1
VNA1	**Neumayer--Stat**	**57.14**	**160**	*e*P	**P**	**19 01 19.2**	**+2.0**
VNA2	**Neumayer--Watz**	**57.51**	**160**	*e*P	**P**	**19 01 21.2**	**+1.4**
	baz=282,slow=8.1						
VNA2	**Neumayer--Watz**	**57.51**	**160**	*e*pP	pP	19 01 54.9	-3.1
	baz=282,slow=8.1						
SNAA	**Sanae**	**59.15**	**161**	*e*P	**P**	**19 01 32.0**	**+0.8**
SNAA	**Sanae**	**59.15**	**161**	*e*Jujuy		19 02 18.6	
SNAA	**Sanae**	**59.15**	**161**	*e*P	**P**	**19 01 31.8**	**+0.6**
	comp=N,27nm,0.8s						
SNAA	**Sanae**	**59.15**	**161**	P	**P**	**19 01 32.5**	**+1.3**
	comp=N,7.1nm,0.6s,baz=280,slow=6.2,SNR=77						
732A	**Laxson Ranch,**	**61.51**	**327**	⇓P	**P**	**19 01 48.1**	**+0.4**
	baz=62						
TKL	**Tuckaleechee C**	**61.62**	**344**	P	**P**	**19 01 47.6**	**-0.7**
TKL	**Tuckaleechee C**	**61.62**	**344**	P	**P**	**19 01 47.6**	**-0.7**
	comp=N,6.9nm,0.9s,baz=164,slow=9.9,SNR=3.7						
SWET	**Sewanee**	**61.77**	**342**	*e*P	**P**	**19 01 48.1**	**-1.2**
	comp=N,181nm,2.2s						
632A	**Uvalde**	**62.06**	**328**	⇓P	**P**	**19 01 51.4**	**+0.1**
	baz=62						
631A	**Perdido Creek**	**62.37**	**327**	⇑P	**P**	**19 01 53.3**	**-0.2**
	baz=63,SNR=5.9						
532A	**Rocksprings**	**62.62**	**328**	⇓P	**P**	**19 01 55.3**	**+0.1**
	baz=63,SNR=5.8						
JCT	**Junction City**	**62.87**	**328**	⇓P	**P**	**19 01 56.7**	**0.0**
	baz=63						
531A	**Rocksprings**	**62.97**	**327**	⇓P	**P**	**19 01 57.6**	**+0.1**
	baz=63,SNR=8.6						
WHTX	**Lake Whitney**	**63.05**	**331**	⇑P	**P**	**19 01 57.6**	**-0.2**
	baz=63						
432A	**Menard**	**63.19**	**328**	⇓P	**P**	**19 01 58.7**	**-0.2**
	baz=64,SNR=7.7						
530A	**J-C Ranch, Com**	**63.35**	**327**	⇓P	**P**	**19 02 00.4**	**+0.4**
	baz=64						
431A	**Sonora**	**63.42**	**328**	⇓P	**P**	**19 02 00.1**	**-0.3**
	baz=64						
332A	**Millersview**	**63.59**	**329**	⇓P	**P**	**19 02 01.3**	**-0.1**
	baz=64,SNR=5.4						
628A	**Black Gap, Mar**	**63.61**	**325**	⇓P	**P**	**19 02 02.4**	**+0.7**
	baz=64,SNR=11						
MAIT	**Maitri**	**63.64**	**159**	*e*P	P	19 01 51.2	-10
529A	**Stev Forest Ra**	**63.78**	**326**	⇓P	**P**	**19 02 03.1**	**+0.3**
	baz=64,SNR=17						
430A	**Baggett Ranch,**	**63.82**	**327**	⇑P	**P**	**19 02 02.8**	**-0.2**
	baz=64,SNR=6.5						
627A	**Terlingua Ranc**	**63.85**	**325**	⇑P	**P**	**19 02 03.4**	**+0.1**
	baz=64,SNR=11						
331A	**San Angelo**	**63.85**	**328**	⇓P	**P**	**19 02 02.8**	**-0.4**
	baz=64						
TXAR	**Lajitas Array**	**63.90**	**324**	P	**P**	**19 02 03.9**	**+0.3**
TXAR	**Lajitas Array**	**63.90**	**324**	P	**P**	**19 02 03.9**	**+0.3**
	comp=N,2.1nm,0.8s,baz=153,slow=8.2,SNR=9.6						
232A	**Coleman**	**63.96**	**329**	⇓P	**P**	**19 02 03.9**	**0.0**
	baz=64,SNR=7.0						
429A	**Davenport Ranc**	**64.02**	**327**	⇑P	**P**	**19 02 04.2**	**-0.1**
	baz=64,SNR=9.4						
528A	**Cox Ranch, San**	**64.10**	**326**	⇑P	**P**	**19 02 05.1**	**+0.1**
	baz=64,SNR=7.1						
330A	**Mertzon**	**64.30**	**328**	⇓P	**P**	**19 02 06.0**	**-0.1**
	baz=65						
231A	**Bronte**	**64.32**	**329**	⇑P	**P**	**19 02 05.9**	**-0.3**
	baz=65						
626A	**Big Bend Ranch**	**64.33**	**324**	⇑P	**P**	**19 02 07.5**	**+1.1**
	baz=65,SNR=20						
428A	**Kincaid Ranch,**	**64.50**	**326**	⇓P	**P**	**19 02 07.9**	**+0.4**
	baz=65						
527A	**Woodward Ranch**	**64.52**	**325**	⇑P	**P**	**19 02 08.0**	**+0.4**
	baz=65,SNR=11						
ABTX	**Abilene, Hawle**	**64.57**	**330**	⇑P	**P**	**19 02 07.6**	**-0.2**
	baz=65						
526A	**Mary Lane Ranc**	**64.70**	**324**	⇑P	**P**	**19 02 09.6**	**+0.7**
	baz=65,SNR=15						
329A	**Wagon Wheel Ra**	**64.76**	**327**	⇑P	**P**	**19 02 09.4**	**+0.2**
	baz=65,SNR=8.2						
131A	**Roby**	**64.96**	**329**	⇓P	**P**	**19 02 10.3**	**-0.1**
	baz=65						
427A	**Hayter Ranch,**	**64.97**	**326**	⇑P	**P**	**19 02 10.9**	**+0.4**
	baz=65,SNR=5.1						
229A	**Bryant Ranch,**	**65.06**	**327**	⇓P	**P**	**19 02 11.2**	**+0.1**
	baz=65						
Z32A	**Haskell**	**65.07**	**330**	⇑P	**P**	**19 02 10.9**	**-0.1**
	baz=65						
328A	**Wristen Ranch,**	**65.09**	**326**	⇓P	**P**	**19 02 11.5**	**+0.3**
	baz=65,SNR=7.3						
426A	**McDonald Obser**	**65.15**	**325**	⇓P	**P**	**19 02 12.4**	**+0.5**
	baz=65,SNR=8.8						
130A	**Snyder**	**65.17**	**329**	⇑P	**P**	**19 02 11.7**	**0.0**
	baz=65						
Z31A	**Sharp Cattle R**	**65.38**	**330**	⇓P	**P**	**19 02 13.2**	**+0.1**
	baz=66,SNR=6.5						
228A	**UT Block 9, Go**	**65.57**	**327**	⇑P	**P**	**19 02 14.6**	**+0.2**
	baz=66						
129A	**Stewart Farms,**	**65.63**	**328**	⇑P	**P**	**19 02 14.8**	**0.0**
	baz=66						
Y32A	**R-V Farms, Ver**	**65.63**	**331**	⇑P	**P**	**19 02 14.7**	**+0.1**
	baz=66						
326A	**Caldwell Ranch**	**65.64**	**325**	⇑P	**P**	**19 02 15.4**	**+0.6**
	baz=66,SNR=6.7						
425A	**Indio Mountain**	**65.75**	**324**	⇓P	**P**	**19 02 16.1**	**+0.5**

baz=66,SNR=13
Z30A Sanderson Ranc 65.81 329 ⇓P P 19 02 15.7 -0.2
baz=66,SNR=5.1
227A Bennet, Jal 65.84 326 ⇓P P 19 02 16.3 +0.2
baz=66
128A Castleberry Fa 65.93 327 ⇓P P 19 02 17.1 +0.4
baz=66
Y31A Rekieta Farm, 65.97 330 ⇓P P 19 02 17.1 +0.3
baz=66
Z29A Hungry Hill Ra 66.07 328 ⇑P P 19 02 17.5 0.0
baz=66
325A Bean Ranch, Si 66.20 325 ⇓P P 19 02 19.0 +0.4
baz=66,SNR=30
226B Tecolote Peak, 66.34 326 ⇑P P 19 02 20.0 +0.7
baz=67,SNR=7.3
X31A McDonald Ranch 66.40 331 ⇓P P 19 02 19.5 -0.1
baz=67,SNR=5.4
127A Arkansas Junct 66.40 327 ⇑P P 19 02 19.8 +0.1
baz=67
Z28A Tucker Farm, M 66.42 328 ⇓P P 19 02 19.8 0.0
baz=67
324A Moseley Ranch, 66.52 324 ⇑P P 19 02 20.4 -0.1
baz=67,SNR=11
Y29A Porterfield Fa 66.54 329 ⇑P P 19 02 20.7 +0.2
baz=67
X30A Coker Ranch, T 66.65 330 ⇓P P 19 02 21.0 -0.2
baz=67,SNR=5.5
225A Deer Hill, Car 66.70 325 ⇓P P 19 02 22.3 +0.6
baz=67
126A Clayton Basin, 66.71 326 ⇑P P 19 02 22.1 +0.4
baz=67
Z27A Tatum 66.85 327 ⇓P P 19 02 22.1 -0.4
baz=67,SNR=10
W31A Holland Ranch, 66.85 331 ⇓P P 19 02 22.3 -0.1
baz=67
X29A Tulia 67.04 329 ⇑P P 19 02 23.5 -0.2
baz=67
224A Cornudas Mount 67.04 325 ⇑P P 19 02 23.9 +0.1
baz=67,SNR=9.9
125A Gardner Draw, 67.05 326 ⇓P P 19 02 23.6 -0.2
baz=67,SNR=5.4
MSTX Muleshoe 67.16 328 ⇓P P 19 02 24.6 +0.1
baz=67,SNR=10.0
Z26A Caprock 67.19 327 ⇓P P 19 02 25.0 +0.3
baz=68,SNR=7.6
Y27A Causey 67.28 328 ⇑P P 19 02 25.1 -0.1
baz=68
AMTX Amarillo 67.39 329 ⇓P P 19 02 25.8 -0.1
baz=68
124A Stringfield Ra 67.49 325 ⇓P P 19 02 26.9 +0.2
baz=68,SNR=11
Z25A Roswell 67.57 326 ⇓P P 19 02 27.2 +0.1
baz=68,SNR=5.8
Y26A Elida 67.64 327 ⇑P P 19 02 27.9 +0.4
baz=68
DBIC Dimbokro 67.70 71 eP P 19 02 28.3 +0.1
comp=N,31nm,1.8s
222A Williams Famil 67.91 324 ⇓P P 19 02 30.1 +0.9
baz=68
W28A Vega 67.94 329 ⇑P P 19 02 29.9 +0.5
baz=68
Z24A Sheeppen Canyo 67.94 326 ⇓P P 19 02 29.8 +0.3
baz=68,SNR=5.6
320A Kipp Ranch, An 68.11 322 ⇑P P 19 02 31.4 +0.8
baz=68,SNR=5.3
X26A CR and CF Fran 68.13 328 ⇓P P 19 02 30.9 +0.3
baz=68,SNR=5.0
W27A Bowe Ranch, En 68.19 329 ⇑P P 19 02 31.0 +0.1
baz=68
Z23A Rita Site, Whi 68.34 325 ⇓P P 19 02 32.7 +0.8
baz=69
220A Playas Peak, P 68.53 323 ⇓P P 19 02 34.2 +1.0
baz=69,SNR=6.0
319A Douglas 68.56 322 ⇓P P 19 02 34.3 +1.0
baz=69
121A Cookes Peak, D 68.60 324 ⇑P P 19 02 34.7 +1.1
baz=69,SNR=9.6
Z22A Elephant Butte 68.72 325 ⇓P P 19 02 35.5 +1.3
baz=69,SNR=9.5
Y23A Lovelace Mesa, 68.77 326 ⇓P P 19 02 35.2 +0.6
baz=69
X24A Lazy VL Ranch, 68.95 327 ⇑P P 19 02 36.5 +0.7
baz=69
W25A X Bar L Ranch, 68.99 328 ⇑P P 19 02 36.3 +0.4
baz=69
120A U Bar Ranch, L 69.08 323 ⇑P P 19 02 37.7 +1.2
baz=69
V26A Tequesquite Ra 69.12 328 ⇓P P 19 02 37.1 +0.3
baz=69
Z21A St. Cloud Mine 69.14 324 ⇑P P 19 02 38.0 +1.1
baz=69
Y22A Socorro 69.25 325 ⇓P P 19 02 38.7 +1.2
baz=70
X23A Hourglass Bar 69.35 326 ⇑P P 19 02 38.9 +0.7
baz=70,SNR=7.1
T28A Walsh 69.43 330 ⇑P P 19 02 38.6 +0.1
baz=70
W24A Lazy 6 Ranch, 69.45 327 ⇑P P 19 02 39.1 +0.3
baz=70
Z20A Nine Sixteen R 69.48 323 ⇓P P 19 02 40.2 +1.2
baz=70,SNR=5.6
V25A Rancho No Teng 69.56 328 ⇑P P 19 02 39.7 +0.2
baz=70
U26A Atchley Ranch, 69.59 329 ⇓P P 19 02 40.1 +0.5
baz=70
T27A Campo 69.66 330 ⇓P P 19 02 40.4 +0.4
baz=70,SNR=5.8
Y21A Point of Rocks 69.67 325 ⇑P P 19 02 41.4 +1.1
baz=70,SNR=6.6
ANMO Albuquerque 69.77 326 P P 19 02 41.6 +0.9
ANMO Albuquerque 69.77 326 P P 19 02 41.6 +0.9
comp=N,8.0nm,0.9s,baz=147,slow=6.9,SNR=16
W23A Werner Place, 69.78 326 ⇓P P 19 02 41.7 +0.8
baz=70
V24A Rampart Ranch, 69.79 327 ⇑P P 19 02 41.6 +0.7
baz=70
U25A Circle Dot Ran 69.91 328 ⇑P P 19 02 42.4 +0.8
baz=70
X21A Alamocita Cree 70.07 325 ⇑P P 19 02 44.1 +1.4
baz=70,SNR=5.2
TUC Tucson 70.11 321 eP P 19 02 43.0 +0.3
comp=N,12nm,1.2s
T26A Comanche Natio 70.15 329 ⇓P P 19 02 43.5 +0.5
baz=70,SNR=6.1
S26A Kim 70.46 330 ⇓P P 19 02 45.6 +0.8
baz=71,SNR=8.8
T25A Trinidad 70.50 329 ⇓P P 19 02 45.8 +0.6
baz=71
W21A San Fidel 70.52 325 ⇑P P 19 02 46.6 +1.2
baz=71
R27A Eads 70.70 331 ⇑P P 19 02 46.6 +0.3
baz=71
U23A El Rito 70.72 327 ⇓P P 19 02 47.6 +1.0
baz=71
T24A Torres, Weston 70.76 328 ⇓P P 19 02 47.4 +0.6
baz=71
S25A Robets Cordova 70.94 329 ⇑P P 19 02 48.7 +1.0
baz=71,SNR=6.6
W20A Ramah 70.97 325 ⇑P P 19 02 49.0 +0.9
baz=71
R26A Arlington 71.00 330 ⇑P P 19 02 48.8 +0.8
baz=71,SNR=6.5
214A Organ Pipe Nat 71.03 320 ⇑P P 19 02 49.9 +1.6
baz=71
V21A Milan 71.04 326 ⇓P P 19 02 49.9 +1.4
baz=71
U22A Llaves 71.09 327 ⇑P P 19 02 50.0 +1.2
baz=71
KSCO Kaye Shedlock' 71.22 331 ⇑P P 19 02 50.0 +0.7
baz=72
R25A Fountain Ranch 71.26 330 ⇑P P 19 02 50.6 +0.9
baz=72
S24A Houchin Ranch, 71.29 329 ⇓P P 19 02 51.1 +1.1
baz=72,SNR=5.1
V20A Brimhall 71.47 325 ⇑P P 19 02 51.8 +0.8
baz=72
U21A Nageezi 71.53 326 ⇑P P 19 02 52.5 +1.0
baz=72
Q26A Hugo 71.54 331 ⇑P P 19 02 52.2 +0.8
baz=72
T22A Edith 71.61 327 ⇑P P 19 02 53.0 +1.0
baz=72
R24A Sanders Place, 71.71 329 ⇑P P 19 02 53.1 +0.6
baz=72
Q25A Bedland, Calha 71.86 330 ⇑P P 19 02 54.3 +0.9
baz=72
T21A Navajo Lake 71.91 327 ⇓P P 19 02 54.5 +0.9
baz=72
U20A Newcomb 71.94 326 ⇓P P 19 02 54.8 +1.0
baz=72
P26A Davis Ranch, A 71.98 331 ⇑P P 19 02 54.7 +0.7
baz=72
R23A Moffat 72.02 329 ⇑P P 19 02 55.0 +0.6
baz=72
X16A Lo Mia Camp, P 72.03 322 ⇑P P 19 02 55.8 +1.4
baz=72,SNR=5.4
O27A Beecher Island 72.13 332 ⇓P P 19 02 55.4 +0.7
baz=72
S22A 4UR Ranch, Cre 72.15 328 ⇑P P 19 02 56.1 +0.9
baz=72
113A Mohawk Valley, 72.17 320 ⇓P P 19 02 56.6 +1.6
baz=72
P25A Willow Gulch B 72.31 330 ⇑P P 19 02 57.0 +1.1
baz=73
Q24A Divide 72.32 330 ⇑P P 19 02 56.9 +0.7
baz=73
O26A Horse Wrangler 72.53 331 ⇓P P 19 02 57.7 +0.6
baz=73
S21A Coal Bank Pass 72.56 327 ⇓P P 19 02 58.6 +1.0
baz=73
MVCO Mesa Verde 72.57 326 ⇓P P 19 02 58.8 +1.2
baz=73
ECSD EROS Data Cent 72.89 338 eP P 19 02 58.8 -0.2
comp=N,13nm,0.9s
N26A Koster Ranch, 72.97 332 ⇑P P 19 03 01.1 +1.4
baz=73
S20A Disappointment 72.97 327 ⇑P P 19 03 01.1 +1.1
baz=73
R21A Cimarron 72.99 328 ⇑P P 19 03 01.0 +1.0
baz=73,SNR=5.8
SPMN St. Paul 73.00 341 ⇓P P 19 02 59.6 -0.1
baz=73
ISCO Idaho Springs 73.20 330 eP P 19 03 02.1 +0.7
comp=N,6.3nm,1.0s
ISCO Idaho Springs 73.20 330 ⇑P P 19 03 01.9 +0.6
baz=74,SNR=5.3
R20A Redvale 73.26 327 ⇑P P 19 03 02.9 +1.3
baz=74,SNR=6.3
Y12C Blythe 73.31 320 ⇓P P 19 03 03.8 +2.0
baz=74
SYO Syowa Base 73.34 159⇑ eP P 19 03 00.8 -0.6
SMCO Snowmass 73.35 328 eP P 19 03 02.7 +0.3
P22A Eagle 73.57 329 ⇓P P 19 03 04.3 +0.8
baz=74
O23A Lake Granby, G 73.67 330 ⇑P P 19 03 05.1 +1.1
baz=74
S18A Hurst Farm, Bl 73.70 326 ⇑P P 19 03 05.3 +1.1
baz=74,SNR=11
BC3 Big Chuckawall 73.80 319 ⇑P P 19 03 06.2 +1.5
baz=74
P21A Newcastle 73.85 328 ⇑P P 19 03 06.7 +1.6
baz=74
MONP Monument Peak 73.85 318 ⇑P P 19 03 06.3 +1.1
baz=74
W13A Hualapai Mount 73.91 321 ⇑P P 19 03 06.8 +1.4
baz=74,SNR=5.2
O22A Kremmling 73.92 329 ⇑P P 19 03 06.1 +0.6
baz=74,SNR=5.0
IRM Iron Mountain 73.97 320 ⇑P P 19 03 07.0 +1.3
baz=74,SNR=6.1
U15A North Rim 73.98 323 ⇓P P 19 03 07.6 +1.6
baz=74
K27A Flueckinger Fa 74.11 334 ⇑P P 19 03 07.8 +1.4
baz=74
M24A Cheyenne 74.19 331 ⇑P P 19 03 08.3 +1.4
baz=74,SNR=5.4
N23A Red Feather La 74.23 330 ⇑P P 19 03 08.5 +1.3
baz=74
Q19A Hogan Spring (74.29 327 ⇑P P 19 03 08.7 +1.2
baz=75
BELC Belle Mtn. Jos 74.36 319 ⇓P P 19 03 09.0 +1.0
baz=75
N22A Wattenberg Ran 74.39 330 ⇓P P 19 03 09.2 +1.0
baz=75
K26A Motz Farm, Whi 74.50 333 ⇑P P 19 03 09.3 +0.7
baz=75
VNDA Vanda 74.57 190 eP P 19 03 09.9 +1.5
comp=N,12nm,1.1s
VNDA Vanda 74.57 190 P P 19 03 10.2 +1.8
comp=N,7.0nm,0.9s,baz=131,slow=4.3,SNR=19
M23A Laramie 74.59 331 ⇑P P 19 03 10.1 +0.8
baz=75
P19A Cripple Cowboy 74.67 327 ⇓P P 19 03 11.2 +1.4
baz=75
O20A White River Ci 74.70 328 ⇑P P 19 03 10.7 +0.8
baz=75,SNR=5.1
GMRC Granite Mounta 74.71 320 ⇑P P 19 03 11.5 +1.5
baz=75,SNR=6.2
MURC Murrieta 74.81 318 ⇓P P 19 03 11.7 +1.2
baz=75
M22A Cedar Creek Ra 74.93 330 ⇑P P 19 03 12.6 +1.3
baz=75
SRU San Rafael 75.05 326 eP P 19 03 12.3 +0.4
comp=N,272nm,0.8s
SRU San Rafael 75.05 326 ⇓P P 19 03 12.7 +0.8
baz=75,SNR=8.7
L23A Garrett 75.10 331 ⇓P P 19 03 12.8 +0.6
baz=75
EYMN Ely 75.12 343 eP P 19 03 10.5 -1.4
comp=N,11nm,1.2s
K24A Anderson Ranch 75.21 332 ⇓P P 19 03 13.6 +0.9
baz=76
Q16A Castle Valley 75.23 326 ⇓P P 19 03 14.4 +1.4
baz=76
O19A Miners Draw (B 75.26 328 ⇓P P 19 03 14.1 +1.1
baz=76
N20A Spence Gulch, 75.26 329 ⇓P P 19 03 13.9 +0.8
baz=76
P18A Preston Nutter 75.30 327 ⇓P P 19 03 14.3 +0.8
baz=76,SNR=6.5
CCUT Cedar City 75.38 323 eP P 19 03 14.2 +0.3
comp=N,14nm,0.9s
P17A Butcher Ranch, 75.43 326 ⇑P P 19 03 15.2 +1.1
baz=76,SNR=5.6
M21A Separation Pea 75.44 330 ⇓P P 19 03 14.9 +0.7
baz=76
MSU Marysvale 75.45 325 eP P 19 03 14.9 +0.6
BFSC Mount Baldy Ra 75.53 318 ⇓P P 19 03 16.3 +1.6
baz=76
K23A Bowen Ranch, D 75.58 332 ⇓P P 19 03 15.7 +0.8
baz=76,SNR=5.0
J24A Dixon Ranch, L 75.64 332 ⇑P P 19 03 16.1 +1.0
baz=76
O18A Roosevelt 75.67 327 ⇓P P 19 03 16.3 +0.9
baz=76
L21A Rawlins 75.73 330 ⇑P P 19 03 16.3 +0.5
baz=76,SNR=5.1
M20A Sweetwater, Wa 75.73 329 ⇓P P 19 03 16.6 +0.8
baz=76
N19A John Jarvie Ra 75.74 328 ⇑P P 19 03 16.6 +0.8
baz=76
GSC Goldstone 75.74 320 ⇓P P 19 03 17.4 +1.5
baz=76
K22A Casper 75.89 331 ⇑P P 19 03 17.3 +0.7
baz=76
O17A Robson Place 75.97 327 ⇑P P 19 03 18.3 +1.1
baz=76,SNR=5.9
RSSD Black Hills 76.02 333 eP P 19 03 17.1 -0.2
comp=N,4.6nm,0.9s
N18A Larsen Ranch, 76.05 328 ⇑P P 19 03 18.5 +0.9
baz=76
M19A Rock Springs 76.20 329 ⇑P P 19 03 19.7 +1.2
baz=76
K21A Alcova 76.20 330 ⇑P P 19 03 19.7 +1.2
baz=76
L20A Wamsutter 76.21 329 ⇓P P 19 03 19.3 +0.8
baz=76
O16A Springville 76.37 326 ⇓P P 19 03 20.6 +1.3
baz=77
TORD Torodi Ar. Bea 76.47 69 P P 19 03 20.1 -0.2
TORD Torodi Ar. Bea 76.47 69 P P 19 03 20.1 -0.2
comp=N,4.7nm,0.5s,baz=270,slow=7.0,SNR=46
J22A Midwest 76.48 331 ⇓P P 19 03 21.0 +1.1
baz=77
BSC Santa Cruz Isl 76.57 317 ⇑P P 19 03 22.6 +2.1
baz=77
N17A Moffit Pass 76.59 327 ⇓P P 19 03 21.6 +0.8
baz=77,SNR=14
JLU Jordanelle 76.64 327 eP P 19 03 20.6 -0.3
comp=N,19nm,1.5s
MPMC Manual Prospec 76.67 320 ⇑P P 19 03 22.4 +1.2
baz=77
AGMN Agassiz Nation 76.69 341 eP P 19 03 20.6 -0.1
comp=N,8.7nm,0.8s
K20A Yellowstone Ra 76.72 330 ⇑P P 19 03 22.1 +0.8
baz=77
H24A Dirks Ranch, A 76.75 333 ⇑P P 19 03 21.5 +0.1
baz=77,SNR=6.3
L19A Farson 76.76 329 ⇓P P 19 03 22.7 +1.1
baz=77
N16A Rees Ranch, Co 76.84 327 ⇓P P 19 03 23.0 +0.9
baz=77
J21A Lysite 76.86 331 ⇓P P 19 03 22.6 +0.5
baz=77
I22A 9 Mile Ranch, 76.87 332 ⇓P P 19 03 22.4 +0.4
baz=77,SNR=7.3
M17A Scullys Gap (B 76.91 328 ⇓P P 19 03 23.0 +0.6
baz=77
O15A The Old Anders 76.92 326 ⇑P P 19 03 23.7 +1.2
baz=77
L18A Fontenelle, Gr 76.95 328 ⇑P P 19 03 23.5 +0.8
baz=77,SNR=8.9
ISA Isabella 76.98 319 eP P 19 03 24.4 +1.6
comp=N,11nm,0.9s
ISA Isabella 76.98 319 ⇑P P 19 03 24.2 +1.4
baz=77,SNR=5.8
DUG Dugway 77.03 326 eP P 19 03 23.6 +0.5
comp=N,12nm,1.3s
DUG Dugway 77.03 326 ⇑P P 19 03 24.2 +1.2
baz=77,SNR=5.8
K19A Absolon Red Bu 77.08 330 ⇓P P 19 03 23.7 +0.4
baz=77,SNR=5.3
J20A Shoshoni 77.15 330 ⇓P P 19 03 24.5 +0.8
baz=77
I21A Big Trails, Te 77.16 331 ⇓P P 19 03 24.2 +0.5
baz=77,SNR=14
G24A Alzada 77.17 334 ⇑P P 19 03 24.3 +0.7
baz=78
R11A Troy Canyon, C 77.18 323 ⇓P P 19 03 25.4 +1.4
baz=77,SNR=5.8
M16A Huntsville 77.26 327 ⇓P P 19 03 25.2 +0.8
baz=78
PKM Peak Mountain 77.28 318 ⇑P P 19 03 25.6 +0.9
baz=78
BW06 Boulder Array 77.37 329 eP P 19 03 25.6 +0.6
BW06 Boulder Array 77.37 329 ⇓P P 19 03 25.6 +0.6
baz=78
PDAR Pinedale Array 77.37 329 P P 19 03 25.2 +0.2
PDAR Pinedale Array 77.37 329 P P 19 03 25.2 +0.2
comp=N,2.0nm,0.8s,baz=141,slow=7.7,SNR=9.4
H22A Clearmont 77.38 332 ⇑P P 19 03 25.5 +0.6
baz=78
HWUT Hardware Ranch 77.45 327 eP P 19 03 26.2 +0.8
TSUM Tsumeb 77.45 106 eP P 19 03 28.4 +2.4
comp=N,5.3nm,1.0s
G23A Biddle 77.46 333 ⇓P P 19 03 25.8 +0.5
baz=78
L17A Cokeville 77.48 328 ⇓P P 19 03 26.3 +0.7
baz=78
K18A Toltan Ranch, 77.50 329 ⇓P P 19 03 26.9 +1.2
baz=78,SNR=5.8
MDND Maddock 77.50 338 ⇓P P 19 03 25.6 +0.3
baz=78,SNR=5.9
J19A Crowheart 77.52 330 ⇓P P 19 03 26.4 +0.7
baz=78,SNR=10
F24A Ekalaka 77.60 334 ⇓P P 19 03 26.4 +0.3
baz=78
I20A Worland 77.64 331 ⇓P P 19 03 27.0 +0.7
baz=78,SNR=6.7
L16A Fish Haven 77.69 328 ⇓P P 19 03 27.8 +1.0
baz=78
H21A Big Horn, Sher 77.70 332 ⇓P P 19 03 27.1 +0.4
baz=78
M15A Larsen Ranch, 77.78 327 ⇓P P 19 03 28.2 +1.0
baz=78
G22A Birney 77.85 333 ⇑P P 19 03 27.5 0.0
baz=78
J18A Kendall Valley 77.93 329 ⇑P P 19 03 28.8 +0.7
baz=78,SNR=16
K17A Gardner Place, 78.00 328 ⇑P P 19 03 29.3 +0.9
baz=78
H20A Greybull 78.00 331 ⇑P P 19 03 28.9 +0.6
baz=78
PTRM Twissleman Ran 78.03 318 eP P 19 03 31.1 +2.6
I19A Meeteetse 78.09 330 ⇓P P 19 03 29.7 +0.7
baz=78,SNR=5.9
AHID Auburn Hatcher 78.10 328 eP P 19 03 30.0 +1.0
comp=N,12nm,0.8s
E24A Baker 78.14 335 ⇓P P 19 03 29.7 +0.7
baz=78,SNR=5.0
L15A Malad City 78.15 327 ⇑P P 19 03 29.9 +0.6
baz=78,SNR=6.8
HVU Hansel Valley 78.18 327 eP P 19 03 30.7 +1.3
comp=N,9.6nm,1.0s
I18A Diamond G Ranc 78.21 330 ⇓P P 19 03 30.5 +0.8
baz=78,SNR=11
G21A Lodge Grass 78.24 332 ⇑P P 19 03 30.1 +0.5
baz=78,SNR=6.1
F22A Rosebud 78.29 333 ⇑P P 19 03 30.1 +0.3
baz=79,SNR=8.9
J17A Brown Place, J 78.37 329 ⇑P P 19 03 31.2 +0.7
baz=79
K16A Soda Springs 78.38 328 ⇑P P 19 03 31.6 +1.0
baz=79,SNR=14
ULM Lac du Bonnet 78.43 341 eP P 19 03 30.1 -0.2
comp=N,22nm,1.4s
ULM Lac du Bonnet 78.43 341 P P 19 03 30.1 -0.2
comp=N,5.8nm,0.6s,baz=153,slow=6.2,SNR=10
REDW Red Top Meadow 78.43 329 eP P 19 03 23.6 -7.3
E23A Ismay 78.48 334 ⇑P P 19 03 31.0 +0.2
baz=79
LOHW Long Hollow 78.51 329 eP P 19 03 32.3 +1.1
TPAW Teton Pass 78.58 329 eP P 19 03 32.8 +1.1
comp=N,9.1nm,1.0s
H19A Powell 78.58 331 ⇑P P 19 03 32.1 +0.5
baz=79
D24A Glendive 78.60 335 ⇓P P 19 03 31.8 +0.4
baz=79
L14A Malta 78.60 327 ⇑P P 19 03 32.6 +0.9
baz=79
RRI2 Red Ridge 78.64 329 eP P 19 03 32.6 +0.6
SCHQ Schefferville 78.67 360 P P 19 03 30.6 -1.0
SCHQ Schefferville 78.67 360 P P 19 03 30.6 -1.0
comp=N,1.9nm,0.5s,baz=146,slow=3.4,SNR=4.2
G20A Bridger 78.67 332 ⇓P P 19 03 32.2 +0.2
baz=79,SNR=9.4
MOOW Moose Ponds 78.68 329 eP P 19 03 33.1 +0.9
F21A Absaloka Mine, 78.69 333 ⇑P P 19 03 32.7 +0.7
baz=79
ELK Elko 78.70 325 eP P 19 03 33.4 +1.0
I17A Pilgrim Ck. 78.73 329 ⇑P P 19 03 33.8 +1.4
baz=79,SNR=7.4
K15A Arbon 78.73 327 ⇑P P 19 03 33.3 +0.9
baz=79
NVAR Mina Array Bea 78.77 321 P P 19 03 33.3 +0.6
NVAR Mina Array Bea 78.77 321 P P 19 03 33.3 +0.6
comp=N,4.6nm,0.9s,baz=147,slow=7.3,SNR=11
IMW Indian Meadow 78.88 329 eP P 19 03 34.5 +1.1
comp=N,9.4nm,0.9s
H18A Shoshone NF, C 78.89 330 ⇑P P 19 03 34.0 +0.6
baz=79,SNR=11
C24A Savage 78.98 335 ⇓P P 19 03 34.5 +1.0
baz=79
D23A Lindsay 78.99 334 ⇑P P 19 03 34.4 +0.8
baz=79,SNR=5.2
RLMT Red Lodge 79.06 331 eP P 19 03 35.0 +0.8
RLMT Red Lodge 79.06 331 ⇓P P 19 03 34.8 +0.6
baz=79,SNR=5.6
H17A Grant Village 79.09 330 ⇑P P 19 03 35.8 +1.3
baz=79
I16A Newdale 79.12 329 ⇓P P 19 03 35.7 +1.2
baz=79
J15A Blackfoot 79.22 328 ⇓P P 19 03 35.9 +0.9
baz=80,SNR=7.9
G18A Lazy EL Ranch, 79.34 331 ⇓P P 19 03 36.2 +0.5
baz=80,SNR=8.9
D22A Cohagen 79.36 334 ⇑P P 19 03 36.4 +0.8
baz=80
F19A Roth Farm, Mol 79.49 332 ⇓P P 19 03 37.0 +0.6
baz=80,SNR=7.8
C23A Lambert 79.50 335 ⇓P P 19 03 36.9 +0.6
baz=80
D21A La Casta Ranch 79.62 333 ⇑P P 19 03 37.6 +0.6
baz=80,SNR=6.5
H16A Russell Place, 79.64 330 ⇑P P 19 03 38.3 +0.9
baz=80
E20A Meyer Farm, Mu 79.65 332 ⇑P P 19 03 37.6 +0.4
baz=80,SNR=7.8
DGMT Dagmar 79.67 336 eP P 19 03 38.3 +1.1
comp=N,32nm,0.9s
DGMT Dagmar 79.67 336 ⇑P P 19 03 37.7 +0.5
baz=80
I15A Monteview 79.69 328 ⇓P P 19 03 39.3 +1.7
baz=80

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
J14A	Carey	79.69	327	⇓P	P	19 03 39.2	+1.5
	baz=80						
C22A	Vida	79.73	334	⇓P	P	19 03 38.3	+0.7
	baz=80						
F18A	Big Timber	79.87	331	⇑P	P	19 03 38.8	+0.4
	baz=80,SNR=12						
G17A	Pierce Place,	79.88	330	⇑P	P	19 03 40.3	+1.8
	baz=80						
E19A	Rath Farm, Rou	79.90	332	⇓P	P	19 03 39.2	+0.6
	baz=80,SNR=12						
B23A	Brockton	79.97	335	⇓P	P	19 03 39.4	+0.6
	baz=80						
A24A	Westby	79.97	336	⇓P	P	19 03 39.6	+0.8
	baz=80						
J13A	Cove Ranch, Pi	80.07	327	⇑P	P	19 03 40.8	+1.1
	baz=80						
I14A	Mackay	80.11	328	⇓P	P	19 03 40.9	+1.0
	baz=80,SNR=5.7						
D20A	Manuel Ranch,	80.12	333	⇑P	P	19 03 40.1	+0.4
	baz=80,SNR=8.2						
B22A	Reddig Ranch S	80.22	335	⇓P	P	19 03 40.8	+0.6
	baz=80						
H15A	Lima	80.23	329	⇑P	P	19 03 41.6	+1.1
	baz=80						
C21A	Desert Coulee	80.28	334	⇑P	P	19 03 40.7	+0.2
	baz=81,SNR=5.0						
F17A	Fitzpatrick Pl	80.29	331	⇓P	P	19 03 41.7	+0.9
	baz=81,SNR=7.6						
G16A	Moss Hill, Enn	80.29	330	⇑P	P	19 03 41.6	+0.8
	baz=81						
HLID	Hailey	80.31	327	eP	P	19 03 42.3	+1.4
	comp=N,14nm,0.8s						
HLID	Hailey	80.31	327	⇑P	P	19 03 42.3	+1.4
	baz=81,SNR=21						
A23A	Redstone	80.33	336	⇓P	P	19 03 41.4	+0.7
	baz=81						
I13A	Wildhorse Cree	80.42	327	⇓P	P	19 03 42.9	+1.3
	baz=81,SNR=9.7						
E18A	Harlowton	80.47	331	⇑P	P	19 03 42.4	+0.7
	baz=81						
D19A	Cripps Ranch,	80.49	332	⇑P	P	19 03 41.9	+0.2
	baz=81,SNR=7.4						
BOSA	Boshof	80.51	117	eP	P	19 03 43.3	+0.8
BOZ	Bozeman (W)	80.53	330	⇓P	P	19 03 42.7	+0.7
	baz=81						
C20A	Veseth Ranch,	80.56	333	⇓P	P	19 03 42.2	+0.2
	baz=81						
G15A	Dillon	80.57	329	⇑P	P	19 03 43.0	+0.8
	baz=81,SNR=6.5						
H14A	Leadore	80.57	328	⇑P	P	19 03 43.2	+0.8
	baz=81,SNR=7.9						
F16A	Kennard Place,	80.63	330	⇑P	P	19 03 43.6	+1.1
	baz=81						
B21A	Ellsworth Farm	80.73	334	⇑P	P	19 03 44.0	+1.2
	baz=81						
A22A	Carney Farms,	80.75	335	⇑P	P	19 03 43.6	+0.6
	baz=81,SNR=7.0						
DLMT	Dillon	80.76	329	eP	P	19 03 44.5	+1.2
	comp=N,11nm,1.2s						
E17A	Martinsdale	80.80	331	⇑P	P	19 03 44.0	+0.5
	baz=81,SNR=5.9						
I12A	Atlanta	80.84	327	⇑P	P	19 03 44.6	+0.9
	baz=81,SNR=7.0						
D18A	Linhart Farms,	80.91	332	⇑P	P	19 03 44.8	+0.9
	baz=81						
MFID	Camas Ranch	80.92	326	⇑P	P	19 03 45.4	+1.3
	baz=81						
H13A	Challis	80.96	328	⇑P	P	19 03 45.2	+0.8
	baz=81,SNR=19						
C19A	Slack Wire Ran	81.01	333	⇑P	P	19 03 44.7	+0.3
	baz=81,SNR=6.4						
LRM	Limekiln Ridge	81.04	330	eP	P	19 03 46.0	+1.1
F15A	Butte	81.07	330	⇑P	P	19 03 45.6	+0.6
	baz=81,SNR=12						
G14A	Jackson	81.08	329	⇓P	P	19 03 46.0	+0.9
	baz=81						
B20A	Solberg Farm,	81.14	334	⇑P	P	19 03 45.1	0.0
	baz=81,SNR=6.0						
A21A	Bergtoll Ranch	81.14	335	⇑P	P	19 03 45.7	+0.7
	baz=81						
E16A	East Helena	81.22	330	⇓P	P	19 03 46.7	+1.1
	baz=82						
MAW	Mawson	81.23	163	P	P	19 03 46.4	+1.1
MAW	Mawson	81.23	163	P	P	19 03 46.4	+1.1
	comp=N,30nm,0.8s,baz=228,slow=9.8,SNR=39						
H12A	Diamond D Ranc	81.25	327	⇑P	P	19 03 46.4	+0.6
	baz=82,SNR=7.4						
D17A	Six Diamond Ra	81.26	331	⇓P	P	19 03 45.9	+0.1
	baz=82,SNR=14						
G13A	Cobalt	81.34	328	⇓P	P	19 03 47.3	+1.0
	baz=82,SNR=34						
A20A	Cobblestone Ra	81.45	334	⇓P	P	19 03 47.0	+0.3
	baz=82,SNR=15						
F14A	Wisdom	81.46	329	⇓P	P	19 03 47.9	+0.9
	baz=82						
B19A	Brinkman Farms	81.53	333	⇓P	P	19 03 47.7	+0.6
	baz=82						
EGMT	Eagleton	81.53	332	eP	P	19 03 47.5	+0.3
	comp=N,16nm,1.0s						
EGMT	Eagleton	81.53	332	⇑P	P	19 03 47.2	0.0
	baz=82,SNR=7.9						
D16A	Dana Ranch, Ca	81.54	331	⇑P	P	19 03 48.0	+0.6
	baz=82,SNR=21						
E15A	Deer Lodge	81.58	330	⇑P	P	19 03 48.4	+0.9
	baz=82						
C17A	Wharram Farm,	81.66	332	⇑P	P	19 03 48.5	+0.6
	baz=82						
A19A	Klindworth Far	81.82	334	⇑P	P	19 03 48.7	0.0
	baz=82,SNR=7.6						
B18A	Beardsley Farm	81.83	333	⇓P	P	19 03 49.1	+0.4
	baz=82,SNR=9.0						
G12A	Big Creek, Yel	81.90	328	⇑P	P	19 03 49.9	+0.6
	baz=82						
F13A	Darby	81.90	329	⇓P	P	19 03 50.1	+0.9
	baz=82,SNR=24						
E14A	Clinton	81.97	329	⇑P	P	19 03 50.2	+0.6
	baz=82,SNR=6.2						
D15A	Lincoln	81.99	330	⇓P	P	19 03 50.5	+0.8
	baz=82,SNR=8.5						
LBTB	Lobatse	82.17	114	eP	P	19 03 52.2	+1.0
B17A	L&G Farms, Che	82.18	332	⇓P	P	19 03 51.0	+0.5
	baz=82						
C16A	Fuhringer Ranc	82.22	331	⇓P	P	19 03 51.1	+0.3
	baz=82,SNR=7.2						
MOD	Modoc	82.24	323	eP	P	19 03 52.1	+1.0
A18A	Metzger Ranch,	82.27	333	⇓P	P	19 03 51.3	+0.3
	baz=82						
E13A	Victor	82.31	329	⇑P	P	19 03 52.1	+0.8
	baz=83,SNR=11						
F12A	Elk City	82.32	328	⇓P	P	19 03 51.9	+0.5
	baz=83						
D14A	Greenough	82.47	330	⇑P	P	19 03 53.1	+0.9
	baz=83						
MSO	Missoula	82.48	330	⇑P	P	19 03 53.0	+0.9
	baz=83						
C15A	Salmond Ranch,	82.58	331	⇓P	P	19 03 53.2	+0.5
	baz=83,SNR=16						
SLMT	Seeley Lake	82.58	330	eP	P	19 03 53.4	+0.7
A17A	Triple J Farms	82.64	333	⇑P	P	19 03 53.1	+0.2
	baz=83						
B16A	M & M Farms, S	82.67	332	⇑P	P	19 03 53.6	+0.5
	baz=83						
BMO	Blue Mountains	82.69	326	eP	P	19 03 54.0	+0.7
D13A	Huson	82.92	329	⇓P	P	19 03 54.8	+0.4
	baz=83,SNR=5.9						
B15A	Bradely Ranch,	82.96	331	⇑P	P	19 03 54.4	-0.3
	baz=83,SNR=5.5						
SWMT	Swartz Lake	83.01	330	eP	P	19 03 55.8	+0.8
A16A	West Butte Ran	83.03	332	⇑P	P	19 03 55.5	+0.6
	baz=83						
C14A	Swan Lake	83.08	330	⇓P	P	19 03 56.3	+1.0
	baz=83						
D12A	Red Ives Fores	83.30	329	⇓P	P	19 03 57.2	+0.8
	baz=84						
B14A	Marquette Ranc	83.31	331	⇑P	P	19 03 56.9	+0.4
	baz=84						
JTMT	Jette	83.31	330	eP	P	19 03 57.2	+0.8
C13A	Hot Springs	83.40	330	⇑P	P	19 03 57.2	+0.4
	baz=84,SNR=5.9						
BLMT	Blacktail Moun	83.54	330	eP	P	19 03 58.5	+0.8
BSMT	Bassoo Peak	83.62	330	eP	P	19 03 58.8	+0.7
A14A	Double T Ranch	83.83	331	⇑P	P	19 03 59.4	+0.3
	baz=84						
C12B	Naegeli Ranch,	83.84	329	⇑P	P	19 03 59.8	+0.8
	baz=84						
B13A	Whitefish	83.86	330	⇑P	P	19 03 59.7	+0.6
	baz=84						
FFC	Flin Flon	84.16	340	eP	P	19 04 00.3	-0.2
A13A	Flathead Natio	84.25	331	⇓P	P	19 04 01.7	+0.5
	baz=84						
C11A	Tepee Creek (N	84.30	329	⇓P	P	19 04 01.3	-0.1
	baz=85						
B12A	Libby	84.44	330	⇑P	P	19 04 02.8	+0.8
	baz=85						
A12A	Yaak River Ran	84.81	330	⇑P	P	19 04 04.3	+0.4
	baz=85						
NEW	Newport	85.01	329	⇑P	P	19 04 05.3	+0.4
	baz=85						
PAB	San Pablo	86.08	43	eP	P	19 04 11.9	+1.4
	comp=N,6.0nm,0.9s						
ESDC	Sonseca Array	86.40	43	P	P	19 04 13.6	+1.6
ESDC	Sonseca Array	86.40	43	P	P	19 04 13.6	+1.6
	comp=N,0.4nm,0.3s,baz=244,slow=4.7,SNR=9.0						
LSZ	Lusaka	88.30	106	eP	P	19 04 24.0	+2.2
	comp=N,8.1nm,0.9s						
CASY	Casey	89.83	179	eP	P	19 04 29.4	+1.6
	comp=N,20nm,0.8s						
SJPF	Ste Jean	90.04	42	eP	P	19 04 34.2	+5.1
	comp=N,15nm,1.1s						
SJPF	Ste Jean	90.04	42	eP	P	19 04 34.2	+5.1
	comp=N,15nm,1.1s						
ETSF	Etsaut	90.33	42	eP	P	19 04 34.8	+4.3
	comp=N,12nm,1.0s						
ETSF	Etsaut	90.33	42	eP	P	19 04 34.8	+4.3
	comp=N,12nm,1.0s						
ROSF	Rostrenen	91.81	37	eP	P	19 04 41.8	+4.7
ROSF	Rostrenen	91.81	37	eP	P	19 04 41.8	+4.7
SGMF	Saint Gilles	92.16	37	eP	P	19 04 42.7	+4.0
SGMF	Saint Gilles	92.16	37	eP	P	19 04 42.7	+4.0
MTLF	Montolieu	92.29	43	eP	P	19 04 42.3	+2.8
MTLF	Montolieu	92.29	43	eP	P	19 04 42.3	+2.8
YKA	Yellowknife Ar	94.33	340	P	P	19 04 48.3	-0.1
YKA	Yellowknife Ar	94.33	340	P	P	19 04 48.3	-0.1
	comp=N,3.1nm,0.7s,baz=132,slow=4.5,SNR=47						
SMF	Signal de Mont	94.97	41	eP	P	19 04 56.3	+4.6
SMF	Signal de Mont	94.97	41	eP	P	19 04 56.3	+4.6
BRTR	Keskin Array B	112.77	55	PKiKP	PKiKP	19 10 05.1	-0.4
BRTR				PKKP	PKKPab	19 21 02.2	+1.2
BRTR	Keskin Array B	112.77	55	PKiKP	PKiKP	19 10 05.1	-0.4
	comp=N,0.4nm,0.7s,baz=224,slow=3.4,SNR=3.7						
BRTR				PKKP	PKKPab	19 21 02.2	+1.2
	comp=N,0.5nm,0.8s,baz=98,slow=3.7,SNR=3.6						
ARCES	ARCESS Array B	113.20	22	PKKPbc	PKKPbc	19 20 52.3	-1.5
ARCES	ARCESS Array B	113.20	22	PKKPbc	PKKPbc	19 20 52.3	-1.5
	comp=N,2.0nm,0.8s,baz=72,slow=4.0,SNR=5.3						
KBZ	Khabaz	120.25	52	PKP	PKPdf	19 10 19.8	+0.2
KBZ	Khabaz	120.25	52	PKP	PKPdf	19 10 19.8	+0.2
	comp=N,2.4nm,0.9s,baz=176,slow=2.1,SNR=5.2						
CTA	Charters Tower	125.48	219	PKP	PKPdf	19 10 30.6	+0.1
CTA	Charters Tower	125.48	219	PKP	PKPdf	19 10 30.6	+0.1
	comp=N,2.8nm,0.7s,baz=247,slow=3.2,SNR=4.6						
ASAR	Alice Springs	128.38	204	PKP	PKPdf	19 10 35.5	-0.5
ASAR	Alice Springs	128.38	204	PKP	PKPdf	19 10 35.5	-0.5
	comp=N,4.9nm,0.7s,baz=136,slow=2.0,SNR=54						
AKTO	Aktyubinsk	130.28	43	PKP	PKPdf	19 10 39.0	+0.4
AKTO				SKPbc	SKPab	19 13 44.7	-1.7
AKTO	Aktyubinsk	130.28	43	PKP	PKPdf	19 10 39.0	+0.4
	comp=N,2.5nm,0.8s,baz=252,slow=2.6,SNR=7.8						
AKTO				SKPbc	SKPab	19 13 44.7	-1.7
	comp=N,5.4nm,1.1s,baz=311,slow=5.2,SNR=10.0						
WRA	Warramunga Arr	131.56	207	PKP	PKPdf	19 10 42.1	0.0
WRA				SKPbc	SKPbc	19 13 49.1	-3.1
WRA	Warramunga Arr	131.56	207	PKP	PKPdf	19 10 42.1	0.0
	comp=N,2.5nm,0.3s,baz=153,slow=2.0,SNR=59						
WRA				SKPbc	SKPbc	19 13 49.1	-3.1
	comp=N,1.6nm,0.8s,baz=154,slow=3.6,SNR=12						
FITZ	Fitzroy Crossi	136.27	197	PKP	PKPdf	19 10 51.2	+0.3
FITZ	Fitzroy Crossi	136.27	197	PKP	PKPdf	19 10 51.2	+0.3
	comp=N,3.2nm,0.8s,baz=187,slow=8.5,SNR=11						
BVAR	Borovoye Array	136.82	37	PKP	PKPdf	19 10 51.9	+1.1
BVAR	Borovoye Array	136.82	37	PKP	PKPdf	19 10 51.9	+1.1
	comp=N,2.0nm,0.8s,baz=299,slow=1.5,SNR=9.5						
EKS2	Erkin-Say	142.69	51	ePKPpre	PKPpre	19 10 58.3	
AAK	Ala-Archa	143.21	50	ePKPdf	PKPab	19 11 00.4	+1.3
ZAA0	Zalesovo Array	143.46	28	ePKPdf	PKPab	19 11 00.4	+1.1
ZALV	Zalesovo Beam	143.46	28	PKP	PKPbc	19 11 00.6	+0.1
ZALV				SKPbc	SKPbc	19 14 24.3	-1.5
ZALV	Zalesovo Beam	143.46	28	PKP	PKPbc	19 11 00.6	+0.1
	comp=N,7.7nm,0.7s,baz=300,slow=4.2,SNR=45						
ZALV				SKPbc	SKPbc	19 14 24.3	-1.5
	comp=N,2.0nm,0.8s,baz=298,slow=3.2,SNR=5.5						
KSH	Kashi	145.15	55	PKP	PKPbc	19 11 05.9	-0.4
KSH				pPKP	pPKPdf	19 11 47.6	-2.3
KSH				sPKP		19 12 04.6	
KSH				PP	PP	19 14 29.2	+2.1
KSH				PKS	PKSdf	19 14 39.5	-2.4
KSH				SKS	SKSdf	19 17 56.0	-4.2
KSH				SKKS	SKKSac	19 21 00.7	-2.4
KSH				SS	SS	19 33 02.1	-2.4
KSH				AMB	AMB		
	comp=Z,160nm,4.2s						
KSH				LR	LR		
	comp=Z,240nm,5.3s						
MK31	Makanchi Array	146.54	40	ePKPdf	PKPdf	19 11 08.7	+0.3
MKAR	Makanchi Array	146.54	40	PKPbc	PKPdf	19 11 08.9	+0.6
MKAR	Makanchi Array	146.54	40	PKPbc	PKPdf	19 11 08.9	+0.6
	comp=Z,14nm,0.8s,baz=309,slow=1.4,SNR=89						
HYB	Hyderabad	147.00	95	eP	PKPdf	19 11 11.0	+1.0
HYB	Hyderabad	147.00	95	i PKP	PKPdf	19 11 11.0	+1.0
YSS	Yuzh-Sakhalins	147.21	321	ePKPdf	PKPdf	19 11 09.8	+0.4
KAPI	Kappang	150.31	193	ePKPbc	PKPbc	19 11 20.4	-0.4
KAPI				ePKPab	PKPab	19 11 26.9	-0.5
KAPI	Kappang	150.31	193	PKPbc	PKPbc	19 11 20.6	-0.2
	comp=Z,8.1nm,0.4s,baz=187,slow=4.3,SNR=12						
WMQ	Urumqi	151.36	41	PKPbc	PKPdf	19 11 16.3	+0.1
MJAR	Matsushiro Arr	155.21	306	PKPbc	PKPdf	19 11 30.7	+8.7
MJAR				PKPab	PKPab	19 11 47.8	+0.2
MJAR	Matsushiro Arr	155.21	306	PKPbc	PKPdf	19 11 30.7	+8.7
	comp=Z,1.3nm,0.6s,baz=118,slow=1.3,SNR=6.1						
MJAR				PKPab	PKPab	19 11 47.8	+0.2
	comp=Z,6.5nm,0.9s,baz=88,slow=1.7,SNR=16						
MAJO	Matsushiro	155.21	306	ePKPbc	PKPdf	19 11 31.4	+9.5
MAJO				ePKPab	PKPab	19 11 47.6	0.0
MAT	Matsushiro	155.21	306	ePKP	PKPdf	19 11 30.4	+8.5
SONM	Songino Array	155.76	11	PKP	PKPdf	19 11 22.7	+0.2
SONM				PKPab	PKPab	19 11 49.8	+0.1
SONM	Songino Array	155.76	11	PKP	PKPdf	19 11 22.7	+0.2
	comp=Z,1.3nm,0.8s,baz=303,slow=1.7,SNR=13						
SONM				PKPab	PKPab	19 11 49.8	+0.1
	comp=Z,1.2nm,0.7s,baz=318,slow=4.9,SNR=8.2						
CN2	Changchun	157.97	336	ePKP	PKPdf	19 11 23.6	-1.6
GTA	Gaotai	161.05	33	ePKP	PKPdf	19 11 29.3	+0.2
GTA				pPKP	PKPab	19 12 07.6	-5.4
GTA				sPKP		19 12 27.2	
HHC	Hu-ho-hao-te	163.30	4	ePKP	PKPdf	19 11 29.4	-1.9
HHC				pPKP	pPKPdf	19 12 11.3	-3.7
HHC				sPKP		19 12 28.5	
HHC				PKS	PKSdf	19 15 00.6	-3.7
HHC				PP	PP	19 16 08.6	+1.4
HHC				SKKS		19 22 40.2	
HHC				SS	SS	19 36 16.5	-2.2
HHC				AMB	AMB		
	comp=Z,610nm,9.2s						
CMAR	Chiang Mai Arr	165.57	110	PKP	PKPdf	19 11 33.6	-0.2
CMAR				PKPab	PKPab	19 12 33.4	0.0
CMAR	Chiang Mai Arr	165.57	110	PKP	PKPdf	19 11 33.6	-0.2
	comp=Z,0.8nm,0.9s,baz=233,slow=3.0,SNR=6.0						
CMAR				PKPab	PKPab	19 12 33.4	0.0
	comp=Z,0.7nm,0.8s,baz=257,slow=4.2,SNR=4.9						
LZH	Lanzhou	165.64	32	ePKP	PKPdf	19 11 34.8	+1.2
LZH				pPKP	pPKPdf	19 12 12.9	-4.4
LZH				sPKP		19 12 33.4	
CD2	Chengdu	169.27	49	PKP	PKPdf	19 11 34.5	-1.7
KMI	Kunming	170.45	82	PKP	PKPdf	19 11 36.9	-0.3
GYA	Guiyang	173.67	67	ePKP	PKPdf	19 11 37.0	-1.5
GYA				pPKP	pPKPdf	19 12 18.0	-4.3
GYA				PKPab	PKPab	19 13 09.9	+0.7
GYA				PKS	PKSdf	19 15 07.8	-3.2
GYA				PP	PP	19 17 02.0	+0.4
GYA				AMB	AMB		
	comp=Z,70nm,8.0s						

*IDC **03** 18:54:35.8±1.3, 11°.52N×86°.46W, h0km, mb3.9/6, mb1 4.2/7, mb1mx3.8/23, mbtmp3.9/7, ML3.9/1, MS3.6/4, Ms1 3.6/4, ms1mx3.0/39, Error ellipse: s-maj=53.1km s-min=18.4km az=46.0*

*NEIC **03** 18:54:38.9±3.0, 11°.37N×86°.55W, h24km±22km, mb4.6/3, Error ellipse: s-maj=22.9km s-min=11.0km az=47.0*

*ISCJB **03** 18:54:39.9±0.8, 11°.1N±0°.1×86°.8W±0°.1, h65km, mb4.0/11, Error ellipse: s-maj=22.6km s-min=4.5km az=42.9*

*CASC **03** 18:54:39.0±2.5, 11°.13N×86°.84W, h22km±23km, MD4.1, mb4.6(NEIC)*

ISC 03 18:54:42.6±0.9**, 11°.3N**±0°.1×**86°.6W**±0°.1**, h65km, n43, σ1^{s}36**/40**, mb4.1**/11**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	JuntasAbangare	1.90	121	ePn	Pn	18 55 09.9	-2.9
JTS				Sn	Sn	18 55 35.3	-0.4
JTS	JuntasAbangare	1.90	121	Pn	Pn	18 55 10.2	-2.6
	5.9nm,0.3s,baz=119,slow=23,SNR=40						
JTS				Sn	Sn	18 55 35.3	-0.4
	46nm,0.3s,baz=285,slow=21,SNR=7.4						
CNCH	Conchagua	2.32	329	eP	Pn	18 55 17.1	-1.6
CNCH				eS	Sn	18 55 43.8	-2.4
CGA2	Cerro Gallo 2	2.45	121	eP	Pn	18 55 19.0	-1.4
BLLM	Bellamira	2.68	324	eS	Sn	18 55 55.5	+0.7
VSM	San Miguel	2.69	323	eP	Pn	18 55 22.0	-1.8
LAJ	Bijagual	2.82	120	eP	Pn	18 55 19.8	-5.6
TGUH	Tegucigalpa,Un	2.84	347	Pn	Pn	18 55 20.3	-5.2
TGUH	Tegucigalpa,Un	2.84	347	eP	Pn	18 55 25.6	+0.1
CAHU	Cacacuatique	2.93	328	eP	Pn	18 55 25.7	-1.4
QCR	Quepos	3.02	127	eP	Pn	18 55 28.8	+0.6
SNVI	San Vicente	3.19	317	eP	Pn	18 55 26.9	-3.6
SNVI				eS	Sn	18 56 05.8	-1.6
RBDL	Robledal	4.12	313	eP	Pn	18 55 41.3	-2.0
ACR	Cerro Adams	4.27	127	eP	Pn	18 55 44.1	-1.2
CMIG	Matias Romero	9.89	307	Pn	Pn	18 57 00.4	-1.7
CMIG	Matias Romero	9.89	307	Pn	Pn	18 57 00.4	-1.7
	1.0nm,0.3s,baz=107,slow=9.5,SNR=9.9						
ATAH	Atahualpa	20.04	156	LR	LR	19 05 22.2	
	comp=Z,156nm,20.5s,baz=41,slow=32						
TXAR	Lajitas Array	24.00	321	P	P	18 59 52.0	+0.5
TXAR	Lajitas Array	24.00	321	P	P	18 59 52.0	+0.5
	2.4nm,0.8s,baz=136,slow=10,SNR=19						
TKL	Tuckaleechee C	24.40	6	P	P	18 59 57.0	+2.1
TKL	Tuckaleechee C	24.40	6	P	P	18 59 57.0	+2.1
	5.4nm,0.7s,baz=167,slow=11,SNR=5.4						
WMOK	Wichita Mounta	25.85	337	eP	P	19 00 09.6	+1.4
	15nm,1.1s						
ACSO	Alum Creek Sta	29.01	6	P	P	19 00 36.9	+0.5
	31nm,0.8s						
ECSD	EROS Data Cent	33.48	347	eP	P	19 01 15.2	-0.5
	3.6nm,0.9s						
PDAR	Pinedale Array	37.19	332	P	P	19 01 47.0	-0.9
PDAR	Pinedale Array	37.19	332	P	P	19 01 47.0	-0.9
	0.7nm,0.6s,baz=126,slow=7.5,SNR=6.4						
ULM	Lac du Bonnet	39.60	351	P	P	19 02 07.0	-0.6
ULM	Lac du Bonnet	39.60	351	P	P	19 02 07.0	-0.6
	1.3nm,0.3s,baz=181,slow=7.6,SNR=7.5						
MCMT	McKenzie Canyo	40.30	331	P	P	19 02 14.3	+0.4
	0.5nm,0.7s						
YBH	Yreka Blue Hor	43.78	320	LR	LR	19 23 05.3	
	comp=Z,107nm,18.6s,baz=166,slow=39						
SCHQ	Schefferville	46.16	16	P	P	19 03 00.1	-0.5
SCHQ	Schefferville	46.16	16	P	P	19 03 00.1	-0.5
	3.2nm,0.6s,baz=208,slow=6.6,SNR=5.8						
SCHQ				LR	LR	19 24 32.5	
	comp=Z,95nm,18.4s,baz=57,slow=39						
YKA	Yellowknife Ar	54.95	345	P	P	19 04 07.0	+0.3
YKA	Yellowknife Ar	54.95	345	P	P	19 04 07.0	+0.3
	0.3nm,0.5s,baz=134,slow=7.2,SNR=11						
ILAR	Eielson Array	67.42	336	P	P	19 05 31.4	+0.3
ILAR	Eielson Array	67.42	336	P	P	19 05 31.4	+0.3
	0.4nm,0.7s,baz=148,slow=4.4,SNR=6.2						
NOA	NORSAR Array B	83.98	29	LR	LR	19 46 42.8	
	comp=Z,20nm,18.1s,baz=180,slow=37						
KSRS	Korea Array	121.70	328	PKP	PKPdf	19 13 31.3	+1.8
	1.0nm,0.7s,baz=68,slow=0.7,SNR=4.3						
KSAR	Wonju Array Be	121.73	328	PKP	PKPdf	19 13 31.4	+1.7
WRA	Warramunga Arr	139.73	252	PKP	PKPdf	19 14 05.2	+1.1
WRA	Warramunga Arr	139.73	252	PKP	PKPdf	19 14 05.2	+1.1
	0.7nm,0.9s,baz=90,slow=1.9,SNR=3.0						
CMAR	Chiang Mai Arr	149.95	349	PKPbc	PKPbc	19 14 28.6	+2.0
CMAR	Chiang Mai Arr	149.95	349	PKPbc	PKPbc	19 14 28.6	+2.0
	1.6nm,0.8s,baz=339,slow=3.2,SNR=14						

MEX 03 18:57:04.4±0.8**, 17°.97N×99°.36W, h58km**±6km**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	Mezcala	0.25	260	eP	Pn	18 57 12.6	-1.5
MEIG				i S	Sn	18 57 19.1	-1.9
YAIG	Yautepec	0.93	17	eP	Pn	18 57 19.9	-1.7
YAIG				i S	Sn	18 57 33.0	-1.4
ARIG	Puente Sto Nin	0.99	288	eP	Pn	18 57 20.8	-1.4
ARIG				i S	Sn	18 57 33.1	-2.4
ACX	Acapulco	1.19	204	i P	Pn	18 57 23.5	-1.5
ACX				i S	Sn	18 57 39.6	-0.7
CAIG	El Cayaco	1.26	224	eP	Pn	18 57 24.3	-1.6
CAIG				i S	Sn	18 57 40.6	-1.2
PPM	Popocatepetl	1.29	32	i P	Pn	18 57 26.0	-0.9
PPM				i S	Sn	18 57 41.5	-2.2
UTMO	Huajuapan	1.49	95	i P	Pn	18 57 27.1	-2.1
UTMO				i S	Sn	18 57 45.8	-2.0
PNIG	Pinotepa	1.96	143	i P	Pn	18 57 33.3	-2.0
PNIG				i S	Sn	18 57 57.0	-1.9
ZIIG	Zihuatanejo	2.04	260	i P	Pn	18 57 34.9	-1.4
ZIIG				i S	Sn	18 57 58.8	-1.9

*IDC **03** 19:54:19.3±0.5, 27°.32S×176°.27W, h0km, mb4.4/22, mb1 4.5/23, mb1mx4.5/26, mbtmp4.4/23, ML4.1/1, MS4.2/22, Ms1 4.2/22, ms1mx4.1/36, Error ellipse: s-maj=20.0km s-min=14.8km az=149.0*

*MOS **03** 19:54:23.2±1.8, 27°.34S×176°.35W, h33km, mb5.1/19, Error ellipse: s-maj=12.3km s-min=10.8km az=95.9*

*ISCJB **03** 19:54:25.3±0.3, 27°.42S±0°.05×176°.39W±0°.07, h54km, mb4.8/46, MS4.3/22, Error ellipse: s-maj=9.3km s-min=7.2km az=20.0*

*BJI **03** 19:54:26.6, 26°.87S×176°.15W, h54km, mB5.5/15, mb5.1/25, Ms5.1/10, Ms7 4.8/10*

*NEIC **03** 19:54:27.2±1.3, 27°.42S×176°.37W, h63km±11km, mb4.9/23, Error ellipse: s-maj=10.3km s-min=8.2km az=111.0*

ISC 03 19:54:27.3±0.5**, 27°.45S**±0°.06×**176°.30W**±0°.08**, h60km**±3km**, h59km:pP-P, n251, σ1^{s}41**/226**, mb4.8**/46**, MS4.3**/22**, 22C-16D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.29	218	ePn	Pn	19 55 02.9	+0.1
MSVF	Nonsavu	10.98	331	eP	Pn	19 57 01.5	-0.3
MSVF				pmax	pmax		
	comp=Z,220nm,1.6s						
MSVF	Nonsavu	10.98	331	ePn	Pn	19 57 01.5	-0.3
	comp=Z,220nm,1.6s						
URZ	Urewera	12.12	205	Pn	Pn	19 57 06.9	-10
URZ				Sn	Sn	19 59 20.9	-10
URZ	Urewera	12.12	205	Pn	Pn	19 57 06.9	-10
	comp=Z,0.4nm,0.3s,baz=0.6,slow=6.1,SNR=3.5						
URZ				Sn	Sn	19 59 20.9	-10
	comp=Z,1.4nm,0.3s,baz=136,slow=18,SNR=3.5						
AFI	Afiamalu	14.12	18	Pn	Pn	19 57 30.6	-14
AFI				eSn	Sn	19 59 53.3	-26
AFI				Sn	S	19 59 56.0	-42
AFI	Afiamalu	14.12	18	Pn	Pn	19 57 30.6	-14
	comp=Z,8.1nm,0.3s,baz=196,slow=6.4,SNR=3.7						
AFI				Sn	Sn	19 59 56.0	-24
	comp=Z,4.6nm,0.3s,baz=39,slow=20,SNR=3.8						
SNZO	South Karori	15.68	206	Pn	Pn	19 58 02.2	-2.1
RAR	Rarotonga	16.29	71	ePn	Pn	19 57 59.3	-13
RAR	Rarotonga	16.29	71	LR	LR	20 02 16.7	
	comp=Z,645nm,21.8s,baz=259,slow=29						
DZM	Mont Dzumac	16.55	285	eLR	LR	20 02 19.0	
	comp=Z,2μm,23.4s						
DZM	Mont Dzumac	16.55	285	ePn	P	19 58 17.6	+0.3
	comp=Z,75nm,1.1s						
DZM	Mont Dzumac	16.55	285	Pn	P	19 58 18.3	+1.0
	comp=Z,0.7nm,0.3s,baz=99,slow=18,SNR=4.0						
DZM				LR	LR	20 03 20.2	
	comp=Z,1μm,20.7s,baz=159,slow=33						
KHZ	Kahutara	17.08	206	ePn	Pn	19 58 13.5	-8.4
	comp=Z,60nm,0.7s						
KHZ				eS	Sn	20 01 16.0	-15
RPZ	Rata Peaks	19.18	209	P	P	19 58 44.7	-1.3
RPZ	Rata Peaks	19.18	209	P	P	19 58 44.7	-1.3
	comp=Z,0.5nm,0.3s,baz=25,slow=3.1,SNR=4.4						
RPZ				LR	LR	20 05 46.6	
	comp=Z,432nm,19.2s,baz=13,slow=36						
TBI	Tubuai	24.57	86	eLR	LR	20 05 29.1	

comp=Z,950nm,29.8s
TBI eT T 20 24 45.6
comp=Z,23nm,0.3s
PAE Paea 26.48 74 eT T 20 27 01.3
comp=Z,8.2nm,0.3s
PPT2 Papeete2 26.52 74 eLR LR 20 06 17.9
comp=Z,1µm,28.8s,baz=244
PPT Papeete 26.53 74 LR LR 20 09 07.7
comp=Z,715nm,18.3s,baz=183,slow=34
EIDS Eidsvold 29.24 267 eP **P 20 00 21.9 -1.8**
comp=Z,25nm,1.2s
CTA Charters Tower 34.94 274 P **P 20 01 14.3 +0.6**
CTA Charters Tower 34.94 274 P **P 20 01 14.3 +0.6**
comp=Z,11nm,0.7s,baz=105,slow=8.9,SNR=13
CTAO Charters Tower 34.94 274 eP **P 20 01 12.8 -0.9**
CTAO pmax pmax
comp=Z,24nm,0.9s
CTAO Charters Tower 34.94 274 eP **P 20 01 12.8 -0.9**
comp=Z,24nm,0.9s
STKA Stephens Creek 36.69 253 eP **P 20 01 27.7 -0.8**
comp=Z,2.3nm,1.0s
STKA Stephens Creek 36.69 253 P **P 20 01 28.8 +0.3**
comp=Z,2.6nm,0.8s,baz=96,slow=6.3,SNR=6.5
STKA LR LR 20 15 43.8
comp=Z,326nm,20.2s,baz=282,slow=35
PMG Port Moresby 38.83 290 P **P 20 01 45.6 -1.1**
PMG Port Moresby 38.83 290 P **P 20 01 45.6 -1.1**
comp=Z,6.0nm,0.6s,baz=127,slow=5.0,SNR=3.6
AS31 Alice Springs 44.84 263 eP **P 20 02 35.0 -0.9**
ASAR Alice Springs 44.84 263 P **P 20 02 34.6 -1.3**
ASAR Alice Springs 44.84 263 P **P 20 02 34.6 -1.3**
comp=Z,1.3nm,0.4s,baz=97,slow=7.0,SNR=31
WRAB Tennant Creek 45.57 268 eP **P 20 02 39.7 -1.9**
WRAB pmax pmax
comp=Z,8.0nm,0.7s
WRAB Tennant Creek 45.57 268 eP **P 20 02 39.7 -1.9**
comp=Z,7.5nm,0.7s
WRA Warramunga Arr 45.57 268 P **P 20 02 40.4 -1.3**
WRA Warramunga Arr 45.57 268 P **P 20 02 40.4 -1.3**
comp=Z,4.1nm,0.8s,baz=108,slow=7.5,SNR=14
WRA LR LR 20 19 52.6
comp=Z,193nm,18.2s,baz=85,slow=34
SBA Scott Base 51.08 185 eP **P 20 03 24.7 +1.5**
SBA e*PP **pP 20 03 37.8 -1.0**
SBA pmax pmax
comp=Z,27nm,1.1s
SBA Scott Base 51.08 185 eP **P 20 03 24.7 +1.5**
comp=Z,27nm,1.1s
SBA epP **pP 20 03 37.8 -1.0**
VNDA Vanda 51.17 186 eP **P 20 03 23.5 -0.4**
comp=Z,9.0nm,1.3s
VNDA Vanda 51.17 186 P **P 20 03 26.1 +2.3**
comp=Z,1.7nm,1.0s,baz=23,slow=8.2,SNR=4.5
VNDA LR LR 20 21 50.5
comp=Z,193nm,20.4s,baz=353,slow=32
FITZ Fitzroy Crossi 53.93 267 eP **P 20 03 44.5 -0.6**
comp=Z,7.0nm,1.0s
FITZ Fitzroy Crossi 53.93 267 P **P 20 03 46.0 +0.8**
comp=Z,2.2nm,0.7s,baz=149,slow=3.2,SNR=6.9
FITZ LR LR 20 26 40.9
comp=Z,345nm,19.0s,baz=151,slow=36
MBWA Marble Bar 58.09 261 P **P 20 04 14.1 -0.8**
comp=Z,13nm,1.0s
CASY Casey 58.44 207 eP **P 20 04 17.4 +0.9**
comp=Z,47nm,0.9s
QSPA South Pole Qui 62.65 180 eP **P 20 04 46.9 +1.5**
comp=Z,58nm,1.0s
KKM Kota Kinabalu 73.11 286 P P 20 05 42.3 -10
comp=Z,32nm,1.1s
MAW Mawson 75.58 200 eP **P 20 06 05.7 +0.5**
comp=Z,13nm,1.4s
MAW Mawson 75.58 200 P **P 20 06 06.1 +0.8**
comp=Z,5.0nm,0.8s,baz=123,slow=11,SNR=5.9
MAW LR LR 20 39 38.8
comp=Z,247nm,18.4s,baz=120,slow=36
KSM Kuching 75.98 279 eP **P 20 06 06.7 -1.8**
comp=Z,21nm,0.9s
MJAR Matsushiro Arr 76.71 324 P **P 20 06 11.5 -0.5**
MJAR Matsushiro Arr 76.71 324 P **P 20 06 11.5 -0.5**
comp=Z,4.0nm,0.8s,baz=170,slow=5.7,SNR=12
MAJO Matsushiro 76.71 324 eP **P 20 06 12.0 0.0**
MAJO pmax pmax
comp=Z,33nm,1.4s
MAJO Matsushiro 76.71 324 eP **P 20 06 12.0 0.0**
comp=Z,33nm,1.4s
MAT Matsushiro 76.71 324 P **P 20 06 10.4 -1.6**
JNU Nakatsue 78.38 317 P **P 20 06 20.9 -0.6**
JNU Nakatsue 78.38 317 P **P 20 06 20.9 -0.6**
comp=Z,22nm,1.0s,baz=73,slow=9.5,SNR=7.3
SYO Syowa Base 80.31 192⇑eP **P 20 06 30.6 -0.8**
SYO Syowa Base 80.31 192⇑ePcP **PcP 20 06 37.4 -1.0**
SYO Syowa Base 80.31 192⇓epP pP 20 06 47.8 -0.3
FX1 Attu Island--F 80.52 354 LR LR 20 37 15.3
comp=Z,95nm,19.7s,baz=229,slow=32
ASAJ Asahikawa 80.55 331 P **P 20 06 34.0 +1.1**
ASAJ Asahikawa 80.55 331 P **P 20 06 34.0 +1.1**
comp=Z,6.4nm,0.7s,baz=198,slow=11,SNR=7.2
SNAA Sanae 81.05 178 eP **P 20 06 36.4 +0.9**
SNAA Sanae 81.05 178 epP pP 20 06 46.8 -5.3
SNAA Sanae 81.05 178 eP **P 20 06 35.8 +0.4**
comp=Z,15nm,1.0s
VNA3 Neumayer Olymp 81.13 176 eP **P 20 06 36.7 +0.8**
VNA3 Neumayer Olymp 81.13 176 epP pP 20 06 47.2 -5.3
VNA2 Neumayer--Watz 81.59 176 eP **P 20 06 39.6 +1.4**
baz=171,slow=4.0
VNA2 Neumayer--Watz 81.59 176 epP pP 20 06 50.1 -4.8
baz=171,slow=4.0
VNA1 Neumayer--Stat 81.81 176 eP **P 20 06 40.8 +1.4**
VNA1 Neumayer--Stat 81.81 176 epP pP 20 06 51.2 -4.8
YSS Yuzh-Sakhalins 82.77 333 eP **P 20 06 45.0 +0.5**
YSS e 20 06 58.5
YSS pmax pmax
comp=Z,20nm,1.0s
KSRS Korea Array 83.10 318 P **P 20 06 47.0 +0.5**
comp=Z,1.6nm,0.7s,baz=142,slow=4.3,SNR=7.1
KSRS LR LR 20 38 36.1
comp=Z,59nm,20.3s,baz=143,slow=32
KSAR Wonju Array Be 83.11 318 P **P 20 06 47.0 +0.4**
PETK Petropavlovsk- 83.35 345 P **P 20 06 46.8 -0.6**
PETK Petropavlovsk- 83.35 345 P **P 20 06 46.8 -0.6**
PETK Petropavlovsk- 83.35 345 P **P 20 06 46.8 -0.6**
comp=Z,4.3nm,0.7s,baz=156,slow=8.1,SNR=4.6
PLCA Paso Flores 83.41 133 LR LR 20 38 27.2
comp=Z,229nm,19.6s,baz=86,slow=32
YBH Yreka Blue Hor 84.79 37 P **P 20 06 54.7 -0.5**
YBH Yreka Blue Hor 84.79 37 P **P 20 06 54.7 -0.5**
comp=Z,2.0nm,0.7s,baz=165,slow=9.5,SNR=3.7
YBH LR LR 20 40 29.5
comp=Z,97nm,18.5s,baz=86,slow=33
NVAR Mina Array Bea 85.06 42 P **P 20 06 56.8 0.0**
NVAR Mina Array Bea 85.06 42 P **P 20 06 56.8 0.0**
comp=Z,2.1nm,0.8s,baz=216,slow=6.8,SNR=9.1
QIZ Qiongzhong 85.11 294 P **P 20 06 58.0 +0.8**
QIZ S **S 20 17 24.3 +1.8**
QIZ pmax pmax
comp=Z,160nm,4.6s
NJ2 Nanjing 85.49 310 eP **P 20 07 00.2 +1.5**
NJ2 pP **pP 20 07 14.5 -1.0**
NJ2 pmax pmax
comp=Z,20nm,1.0s
USRK Ussuriysk Arra 85.55 326 P **P 20 07 00.0 +1.3**
comp=Z,3.8nm,0.8s,baz=149,slow=4.0,SNR=7.5
USRK LR LR 20 38 57.4
comp=Z,83nm,20.6s,baz=232,slow=31
TUC Tucson 86.10 51 eP **P 20 07 00.8 -1.1**
TUC pmax pmax
comp=Z,11nm,1.1s
TUC Tucson 86.10 51 eP **P 20 07 00.8 -1.1**
comp=Z,11nm,1.1s
KDAK Kodiak Island 87.21 12 LR LR 20 43 56.1
comp=Z,174nm,18.3s,baz=281,slow=34
WHN Wuhan 87.79 306 P **P 20 07 10.8 +0.8**
CN2 Changchun 88.72 322 eP **P 20 07 13.9 -0.2**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
KLR Kul'dur 89.26 329 eP **P 20 07 14.1 -2.4**
TXAR Lajitas Array 89.53 56 P **P 20 07 18.6 +0.2**
TXAR Lajitas Array 89.53 56 P **P 20 07 18.6 +0.2**
comp=Z,1.8nm,1.0s,baz=213,slow=6.0,SNR=12
TXAR LR LR 20 43 45.4
comp=Z,116nm,18.4s,baz=205,slow=33
LAZ Ladron 89.80 51 eP **P 20 07 20.1 +0.4**
comp=Z,5.1nm,1.0s
BBB Bella Bella 89.80 27 LR LR 20 42 33.3
comp=Z,154nm,18.5s,baz=223,slow=32
CMIG Matias Romero 90.41 71 P **P 20 07 22.6 0.0**

CMIG Matias Romero 90.41 71 P **P 20 07 22.6 0.0**
comp=Z,0.5nm,0.4s,baz=341,slow=6.1,SNR=4.0
ANMO Albuquerque 90.57 50 eP **P 20 07 21.8 -1.5**
comp=Z,6.3nm,1.1s
ANMO Albuquerque 90.57 50 P **P 20 07 23.1 -0.2**
comp=Z,2.7nm,0.9s,baz=206,slow=4.2,SNR=6.2
ANMO LR LR 20 41 19.6
comp=Z,130nm,20.3s,baz=232,slow=31
GYA Guiyang 91.40 299 P **P 20 07 28.5 +1.3**
GYA pP **pP 20 07 45.6 +1.5**
GYA PP **PP 20 11 10.4 +4.6**
GYA SKS **SKSac 20 17 54.2 -0.6**
GYA S **S 20 18 21.5 -0.5**
GYA sS **sS 20 18 51.2 +0.4**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,90nm,5.3s
GYA LR LR
comp=N,380nm,19.7s
GYA LR LR
comp=E,200nm,20.9s
GYA LR LR
comp=Z,310nm,19.9s
BJI Beijing 91.89 315 P **P 20 07 30.7 +1.8**
BJI S **S 20 18 28.7 +3.2**
BJI pmax pmax
comp=Z,6.0nm,0.6s
BJI pmax pmax
comp=Z,150nm,4.3s
BJI LR LR
comp=N,160nm,25.2s
BJI LR LR
comp=E,120nm,25.8s
BJI LR LR
comp=Z,36nm,21.7s
NEW Newport 92.11 35 LR LR 20 42 52.8
comp=Z,122nm,18.8s,baz=215,slow=32
RRI2 Red Ridge 92.26 41 eP **P 20 07 31.3 +0.3**
TPAW Teton Pass 92.56 41 eP **P 20 07 30.4 -2.0**
LOHW Long Hollow 92.84 42 eP **P 20 07 33.0 -0.6**
TNA Tin City 92.93 3 eP **P 20 07 33.6 +0.4**
comp=Z,3.9nm,0.9s
PDAR Pinedale Array 92.97 43 P **P 20 07 33.5 -0.8**
PDAR Pinedale Array 92.97 43 P **P 20 07 33.5 -0.8**
comp=Z,1.0nm,0.8s,baz=279,slow=6.0,SNR=3.1
PDAR LR LR 20 46 54.6
comp=Z,145nm,18.4s,baz=254,slow=34
SEY Seymchan 93.46 346⇓iP **P 20 07 34.9 -0.8**
DLBC Dease Lake 93.83 22 LR LR 20 47 40.7
comp=Z,91nm,18.2s,baz=222,slow=34
KMI Kunming 93.84 296 P **P 20 07 40.0 +1.4**
KMI pmax pmax
comp=Z,10.0nm,1.2s
CMAR Chiang Mai Arr 93.85 289 P **P 20 07 40.0 +1.5**
CMAR Chiang Mai Arr 93.85 289 P **P 20 07 40.0 +1.5**
comp=Z,2.1nm,0.9s,baz=140,slow=3.1,SNR=13
CHTO Chiang Mai 94.01 289 eP **P 20 07 40.5 +1.2**
CHTO pmax pmax
comp=Z,10.0nm,1.2s
CHTO Chiang Mai 94.01 289 eP **P 20 07 40.5 +1.2**
comp=Z,9.6nm,1.2s
COLA College 94.65 12 eP **P 20 07 38.5 -2.5**
COLA College 94.65 12 eP **P 20 07 38.5 -2.5**
ILAR Eielson Array 94.73 12 P **P 20 07 40.6 -0.8**
ILAR Eielson Array 94.73 12 P **P 20 07 40.6 -0.8**
comp=Z,1.6nm,0.9s,baz=223,slow=5.2,SNR=10
HHC Hu-ho-hao-te 95.27 314 eP **P 20 07 45.0 +0.3**
HHC pP **pP 20 08 02.5 +0.9**
HHC sP **sP 20 08 08.8 +0.7**
HHC PP **PP 20 11 39.2 +3.3**
HHC S **S 20 18 53.2 -2.4**
HHC pmax pmax
comp=Z,18nm,0.8s
HHC pmax pmax
comp=Z,270nm,7.3s
HHC LR LR
comp=N,300nm,18.6s
HHC LR LR
comp=E,270nm,18.0s
HHC LR LR
comp=Z,240nm,18.4s
CD2 Chengdu 95.79 302 P **P 20 07 47.1 -0.1**
CD2 pP **pP 20 08 04.3 +0.1**
CD2 sP **sP 20 08 11.0 +0.3**
CD2 PP **PP 20 11 42.1 +2.0**
CD2 SKS **SKSac 20 18 16.8 -1.7**
CD2 S **S 20 18 56.9 -3.5**
CD2 SS **SS 20 25 32.2 +0.3**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,80nm,5.2s
BILL Bilibino 96.08 353⇑iP **P 20 07 47.3 -0.2**
BILL pmax pmax
comp=Z,5.0nm,1.2s
BILL Bilibino 96.08 353 P **P 20 07 47.1 -0.5**
LPAZ La Paz 97.95 113 LR LR 20 41 01.3
comp=Z,81nm,21.1s,baz=23,slow=29
LZH Lanzhou 98.17 306 eP Pdif 20 07 58.6 +0.6
LZH pP pP 20 08 13.8 -1.2
LZH sP sP 20 08 23.2 +1.7
LZH pmax pmax
comp=Z,18nm,1.0s
YKA Yellowknife Ar 102.15 25 P **Pdif 20 08 15.8 +1.0**
YKA Yellowknife Ar 102.15 25 P **Pdif 20 08 15.8 +1.0**
comp=Z,0.1nm,0.4s,baz=224,slow=4.3,SNR=3.0
GTA Gaotai 102.51 308 eP **Pdif 20 08 17.9 +0.7**
GTA pP 20 08 35.6
GTA sP 20 08 41.9
GTA pmax pmax
comp=Z,3.0nm,2.2s
TIXI Tiksi 105.83 344⇑iP **Pdif 20 08 31.0 0.0**
TIXI Tiksi 105.83 344 ePdif **Pdif 20 08 29.9 -1.1**
comp=Z,4.4nm,1.2s
TIXI ePKPdf **PKiKP 20 12 47.0 +3.8**
WMQ Urumqi 112.56 309 P **PKiKP 20 12 55.9 -0.9**
ZAA0 Zalesovo Array 116.80 319 ePKPdf **PKPdf 20 13 04.1 -0.4**
ZALV Zalesovo Beam 116.80 319 PKIKP **PKPdf 20 13 04.1 -0.4**
ZALV Zalesovo Beam 116.80 319 PKP **PKPdf 20 13 04.1 -0.4**
ZALV Zalesovo Beam 116.80 319 PKP **PKPdf 20 13 04.1 -0.4**
comp=Z,0.5nm,0.4s,baz=117,slow=0.6,SNR=6.1
NVS Novosibirsk 117.86 320 ePKIKP PKPdf 20 13 01.1 -5.4
KSH Kashi 119.99 302 PKP **PKPdf 20 13 13.3 +2.0**
KSH PP PP 20 14 44.2 +7.4
KSH PKS **PKSdf 20 16 49.1 +1.0**
KSH SKS **SKSdf 20 20 20.4 +2.0**
KSH AMB AMB
comp=Z,110nm,4.6s
KSH LR LR
comp=N,93nm,4.4s
KSH LR LR
comp=E,94nm,3.9s
KSH LR LR
comp=Z,270nm,4.9s
KURK Kurchatov 120.06 315 i PKIKP **PKPdf 20 13 09.6 -1.3**
KKAR Karatay Array 124.64 305 ePKIKP **PKPdf 20 13 18.1 -1.9**
KKAR Karatay Array 124.64 305 ePKPdf **PKPdf 20 13 18.1 -1.9**
BRVK Borovoye 125.36 317 i PKIKP **PKPdf 20 13 20.5 -0.5**
ARCES ARCESS Array B 136.00 349 PKP **PKPdf 20 13 39.9 -0.8**
ARCES ARCESS Array B 136.00 349 PKP **PKPdf 20 13 39.9 -0.8**
comp=Z,4.2nm,0.7s,baz=355,slow=3.0,SNR=7.5
KLMR Klimovskoe 138.81 334 ePKIKP **PKPdf 20 13 44.0 -2.1**
KLMR pmax pmax
comp=Z,18nm,1.9s
JOF Joensuu 140.18 341 ePKIKP **PKPdf 20 13 45.1 -3.4**
JOF pmax pmax
comp=Z,2.0nm,0.6s
JOF Joensuu 140.18 341 ep **PKPdf 20 13 45.1 -3.4**
comp=Z,2.3nm,0.6s
KAF Kangasniemi 142.22 343 ePKIKP **PKPdf 20 13 52.6 +0.4**
KAF pmax pmax
comp=Z,2.0nm,0.7s
KAF Kangasniemi 142.22 343 ep **PKPdf 20 13 52.6 +0.4**
comp=Z,2.3nm,0.7s
FINES FINESS Array B 142.84 342 PKPpre PKPpre 20 13 49.8
FINES FINESS Array B 142.84 342 PKhKP PKPpre 20 13 49.8
comp=Z,2.1nm,0.7s,baz=44,slow=4.0,SNR=8.4
VRHR Novokhopersk 142.93 320 ePKIKP **PKPdf 20 13 52.0 -1.8**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=Z,8.0nm,0.7s
VRHR pmax pmax
comp=E,2.0nm,0.3s

DGRG David-gareji 143.26 303 P **PKPdf 20 13 54.4 -0.4**
OBN Obninsk 143.52 328 i PKIKP **PKPdf 20 13 58.0 +3.3**
OBN e 20 14 05.0
OBN pmax pmax
comp=Z,18nm,1.5s
TBLG Delisi 143.68 304 P PKPab 20 13 52.0 -0.3
VSR Storozhevoye 144.26 321 ePKIKP **PKPdf 20 13 56.7 +0.6**
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=Z,6.0nm,0.6s
VSR pmax pmax
comp=E,1.0nm,0.3s
VORD Divnogorie 144.31 321 ePKIKP **PKPab 20 13 54.3 0.0**
VORD pmax pmax
comp=N,4.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.7s
VORD pmax pmax
comp=Z,6.0nm,0.7s
ONI Oni 144.46 306 P **PKPdf 20 13 56.4 -0.5**
KBZ Khabaz 144.59 308 PKIKP **PKPdf 20 13 57.4 +0.5**
KBZ Khabaz 144.59 308 PKP **PKPdf 20 13 57.4 +0.5**
KBZ Khabaz 144.59 308 PKP **PKPdf 20 13 57.4 +0.5**
comp=Z,1.3nm,0.8s,baz=180,slow=3.0,SNR=2.8
AKH Akhalkalaki 144.66 304 P PKPbc 20 13 56.7 +0.3
KIV Kislovodsk 144.69 308 i PKIKP **PKPdf 20 14 01.0 +3.7**
KIV e 20 14 12.2
KIV pmax pmax
comp=Z,5.0nm,0.8s
TUTA Tutak 145.50 300 i P **PKPab 20 14 00.1 +0.6**
ARTV Artvin 145.86 304 i P **PKPbc 20 13 60.0 -0.3**
NB2 NORSAR Subarra 146.03 353 PKP **PKPdf 20 13 58.8 -0.2**
baz=9.7,slow=3.0
NB2 NORSAR Subarra 146.03 353 PKP **PKPdf 20 13 58.8 -0.2**
comp=Z,82nm,2.0s,baz=9.7,slow=3.0
NOA NORSAR Array B 146.03 353 PKPbc **PKPdf 20 13 59.0 +0.1**
NOA NORSAR Array B 146.03 353 PKPbc **PKPdf 20 13 59.0 +0.1**
comp=Z,6.0nm,0.8s,baz=15,slow=4.5,SNR=18
NAO01 NORSAR Array S 146.26 354 ePKPdf **PKPdf 20 13 59.6 +0.3**
KOPT Kop Dagi 147.16 302 i P **PKPab 20 14 05.0 -0.9**
IZAR Zarasai 147.38 336 eP **PKPbc 20 14 04.8 +1.0**
KONO Kongsberg 147.55 354 ePKP2 **PKPbc 20 14 03.3 -0.9**
KONO Kongsberg 147.55 354 ePKPdf **PKPbc 20 14 03.3 -0.9**
ISAL Salakas 147.56 336 eP **PKPbc 20 14 05.2 +0.9**
IIGN Ignalina 147.69 336 eP **PKPbc 20 14 04.5 -0.2**
MICGM Minsk 147.70 333 e **PKPbc 20 14 04.0 -0.7**
MNK Minsk 147.72 333 ePKP2 **PKPbc 20 14 04.0 -0.8**
KELT Kelkit 148.06 303 i P **PKPbc 20 14 05.6 -0.9**
SUSE Susehri 148.84 303 i P **PKPdf 20 14 03.4 -1.1**
MALT Malatya 149.05 299 ⇓PKP2 **PKPbc 20 14 10.4 +1.4**
MALT Malatya 149.05 299⇓iP **PKPbc 20 14 10.4 +1.4**
AKCD Akcadag 149.44 299 i P **PKPab 20 14 13.4 -1.6**
AKASG Malin Array Be 149.75 327 PKP2 **PKPbc 20 14 09.7 -0.4**
AKASG Malin Array Be 149.75 327 PKPbc **PKPbc 20 14 09.7 -0.4**
AKASG Malin Array Be 149.75 327 PKPbc **PKPbc 20 14 09.7 -0.4**
comp=Z,4.6nm,0.7s,baz=42,slow=3.4,SNR=13
AK01 Malin Array Si 149.76 327 ePKPbc **PKPbc 20 14 09.1 -1.1**
KIEV Kiev 149.76 327 ePKHKP **PKPbc 20 14 08.9 -1.2**
KIEV Kiev 149.76 327 ePKPbc **PKPbc 20 14 08.9 -1.2**
AK02 Malin Array Si 149.78 327 ePKPbc **PKPdf 20 14 07.0 +1.6**
SUW Suwalki 149.84 337 ePKP2 **PKPbc 20 14 10.6 +0.4**
SUW Suwalki 149.84 337 ePKPbc **PKPbc 20 14 10.6 +0.4**
SUW Suwalki 149.84 337 ePKP **PKPbc 20 14 09.7 -0.5**
SIM Simferopol' 150.12 314 PKIKP **PKPbc 20 14 12.2 +1.0**
SIM pmax pmax
comp=Z,12nm,0.7s
AYKD Aykdinkavak 150.47 298 i P **PKPbc 20 14 13.0 +0.6**
MUD Monsted U'grnd 150.75 354 i P **PKPbc 20 14 12.6 +0.3**
comp=Z,6.0nm,0.9s
COP Copenhagen 151.09 350 i P **PKPbc 20 14 14.3 +1.2**
comp=Z,5.7nm,0.7s
BSD Bornholm Skovb 151.18 347 i P **PKPbc 20 14 12.7 -0.6**
comp=Z,15nm,0.9s
YAYL Yayladag 151.24 295 i P **PKPbc 20 14 12.4 -1.9**
LLD Lille Linde 151.46 350 i P **PKPbc 20 14 14.6 +0.6**
comp=Z,25nm,0.8s
BRTR Keskin Array B 152.35 304 PKPbc **PKPbc 20 14 17.0 +0.2**
BRTR Keskin Array B 152.35 304 PKPbc **PKPbc 20 14 17.0 +0.2**
comp=Z,1.6nm,1.0s,baz=142,slow=4.1,SNR=5.2
TLCR 153.28 318 ⇑PKIKP **PKPbc 20 14 19.7 +1.3**
TLCR 153.28 318⇑iP **PKPbc 20 14 19.7 +1.3**
PRAR RASCA 153.42 324⇓iP **PKPbc 20 14 21.1 +2.4**
KWP Kalwaria Pacla 153.47 332 ⇑PKIKP **PKPbc 20 14 15.5 -3.2**
KWP Kalwaria Pacla 153.47 332 ePKPbc **PKPbc 20 14 19.0 +0.3**
KWP Kalwaria Pacla 153.47 332⇑iP **PKPbc 20 14 15.5 -3.2**
KWP Kalwaria Pacla 153.47 332 ePKP **PKPbc 20 14 19.9 +1.2**
CFR Carcaliu 153.69 319 ⇓PKIKP **PKPbc 20 14 19.8 +0.5**
CFR Carcaliu 153.69 319⇓iP **PKPbc 20 14 19.8 +0.5**
TESR 153.74 323⇓iP **PKPbc 20 14 22.6 +3.2**
BUR08 Bucovina Ar. S 153.75 326 ePKPdf **PKPdf 20 14 12.1 +0.5**
BURAR Bucovina Array 153.76 326⇑iP **PKPbc 20 14 21.5 +2.0**
TIRR Tirgusor 153.91 317 ⇓PKIKP **PKPbc 20 14 20.0 +0.2**
TIRR Tirgusor 153.91 317⇓iP **PKPbc 20 14 20.0 +0.2**
VRI Vrincioaia 154.09 321 ⇓PKIKP PKPbc 20 14 26.5 +6.3
VRI Vrincioaia 154.09 321⇓iP PKPbc 20 14 26.5 +6.3
PLOR Plostina 154.14 321 ⇓PKIKP PKPab 20 14 28.7 -5.5
PLOR Plostina 154.14 321⇓iP PKPab 20 14 28.7 -5.5
MLR Muntele Rosu 154.75 321⇓iP **PKPbc 20 14 24.7 +2.9**
UPC Upice 155.13 341 ePKIKP **PKPdf 20 14 13.6 +0.3**
UPC Upice 155.13 341 ePKPDF **PKPdf 20 14 13.6 +0.3**
UPC epPKP **PKPab 20 14 42.9 +4.7**
CLL Collm 155.15 346 ePKIKP PKPdf 20 14 22.0 +8.7
CLL i 20 14 33.7
CLL pmax pmax
comp=Z,4.0nm,1.0s
CLL pmax pmax
comp=Z,8.0nm,1.0s
CLL Collm 155.15 346 ePKPdiff PKPdf 20 14 22.0 +8.7
comp=Z,4.0nm,1.0s
CLL i (PKPab) **PKPab 20 14 33.7 -4.5**
comp=Z,8.0nm,1.0s
CLL i 20 14 45.5
comp=Z,9.0nm,1.0s
DPC Dobruska-Polom 155.18 341 ePKIKP PKPdf 20 14 24.7 +11
DPC Dobruska-Polom 155.18 341⇑ePKP PKPdf 20 14 24.7 +11
DPC ex x 20 14 44.3
VOIR 155.28 322 ⇑PKIKP PKPdf 20 14 26.0 +12
VOIR 155.28 322⇑iP PKPdf 20 14 26.0 +12
MORC Moravsky Berou 155.30 338 ⇑PKIKP PKPdf 20 14 21.3 +7.7
MORC Moravsky Berou 155.30 338⇑iP PKPdf 20 14 21.3 +7.7
BRG Berggiesshubel 155.34 344 ePKP PKPdf 20 14 24.2 +11
comp=Z,5.8nm,1.3s
BRG Berggiesshubel 155.34 344 ePKIKP PKPdf 20 14 24.2 +11
BRG pmax pmax
comp=Z,6.0nm,1.3s
DRGR 155.56 327 ⇑PKIKP PKPdf 20 14 24.2 +10
DRGR 155.56 327⇑iP PKPdf 20 14 24.2 +10
VYHS Vyhne 155.92 335 ePKP2 **PKPab 20 14 42.6 +1.0**
VYHS Vyhne 155.92 335 ePKP **PKPab 20 14 42.6 +1.0**
PSZ Piszkesteto 155.97 333 ⇑PKIKP PKPdf 20 14 27.9 +13
PSZ Piszkesteto 155.97 333⇑iP PKPdf 20 14 27.9 +13
PRU Pruhonice 156.00 343 ePKP2 **PKPab 20 14 41.6 -0.3**
PRU Pruhonice 156.00 343 ePKPAB **PKPab 20 14 41.6 -0.3**
VRAC Vranov 156.01 339⇓iP PKPdf 20 14 23.8 +9.2
BZS Buzias 156.94 327 ⇑PKIKP PKPdf 20 14 21.9 +6.1
BZS Buzias 156.94 327⇑iP PKPdf 20 14 21.9 +6.1
KHC Kasperske Hory 157.04 343 ePKIKP **PKPdf 20 14 17.7 +1.8**
KHC e 20 14 31.5
KHC Kasperske Hory 157.04 343 ePKPDF **PKPdf 20 14 17.7 +1.8**
KHC epPKP **pPKPdf 20 14 31.5 -2.0**
KHC ePKPAB **PKPab 20 14 45.5 -0.9**
VTS Vitosha 158.09 319 ⇑PKIKP PKPdf 20 14 32.4 +15
VTS Vitosha 158.09 319⇑iP PKPdf 20 14 32.4 +15
TORD Torodi Ar. Bea 165.65 172 PKP **PKPdf 20 14 24.6 -1.3**
TORD PKPab **PKPab 20 15 25.8 +1.1**
TORD PP PP 20 19 21.4 +11
TORD Torodi Ar. Bea 165.65 172 PKP **PKPdf 20 14 24.6 -1.3**
comp=Z,1.0nm,0.8s,baz=326,slow=0.8,SNR=6.7
TORD PKPab **PKPab 20 15 25.8 +1.1**
comp=Z,4.2nm,0.7s,baz=186,slow=4.5,SNR=10
TORD PP PP 20 19 21.5 +11
comp=Z,0.7nm,1.0s,baz=167,slow=7.0,SNR=4.1
ESDC Sonseca Array 166.24 26 PKPab **PKPab 20 15 26.3 -0.6**
ESDC Sonseca Array 166.24 26 PKPab **PKPab 20 15 26.3 -0.6**
comp=Z,0.2nm,0.4s,baz=323,slow=7.3,SNR=4.2

*IDC **03** 20:03:03.5±0.8, 3°.69N×126°.49E, h0km, mb3.9/10, mb1 4.1/10, mb1mx3.9/24, mbtmp3.9/10, MS3.3/3, Ms1 3.3/3, ms1mx2.8/37, Error ellipse: s-maj=41.4km s-min=14.3km az=75.0*

*ISCJB **03** 20:03:07.9±0.3, 3°.79N±0°.03×126°.77E±0°.05, h45km, mb4.1/18, MS3.3/3, Error ellipse: s-maj=7.5km s-min=4.2km az=168.3*

*NEIC **03** 20:03:08.2±0.5, 3°.70N×126°.48E, h35km, mb4.4/10, Error ellipse: s-maj=23.8km s-min=8.2km az=72.0*

*DJA **03** 20:03:14.1±0.7, 4°N±8°×12°7E±°, h112km±14km, M4.4/8, mb4.4/7, mB4.6/3, MLv4.4/8, Mw(mB)3.9/3*

ISC 03 20:03:09.6±0.5**, 3°.76N**±0°.04×**126°.72E**±0°.07**, h45km, n59, σ1s.40**/52**, mb4.1**/18**, MS3.2**/3**, 2C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**2.91**	**323**	⇑iP	**Pn**	**20 03 54.6**	**+1.0**
MNI	**Manado**	**2.97**	**219**	P	**Pn**	**20 03 55.4**	**+1.1**
MNI				S	Sn	20 04 36.7	+8.0
TNTI	**Ternate**	**3.04**	**168**	P	**Pn**	**20 03 55.8**	**+0.6**
TNTI				S	**Sn**	**20 04 32.0**	**+1.6**
MATI	**Mati**	**3.20**	**352**	eP	**Pn**	**20 04 00.1**	**+2.7**
MATI				eS	**Sn**	**20 04 35.2**	**+0.9**
KCP	**Kidapawan**	**3.61**	**333**	⇓eP	Pn	20 04 07.7	+4.5
KCP				i S	Sn	20 04 52.0	+7.4
KMSI	**Cibinong**	**4.18**	**221**	P	Pn	20 04 15.2	+4.3
CTBH	**Cotabato--PC H**	**4.23**	**325**	⇑iP	**Pn**	**20 04 13.7**	**+2.1**
BUKP	**Musuan**	**4.41**	**338**	eP	Pn	20 04 17.1	+3.0
LBMI	**Labuha**	**4.44**	**170**	P	**Pn**	**20 04 15.6**	**+1.1**
PAGZ	**Pagadian**	**5.24**	**321**	eP	Pn	20 04 19.3	-6.3
MRSI	**Marisa**	**5.78**	**236**	P	**Pn**	**20 04 35.3**	**+2.4**
	106nm,0.9s,967nm0.4nm						
MRSI				S	**Sn**	**20 05 40.3**	**+2.3**
	106nm,0.9s,967nm0.4nm						
LUWI	**Luwuk**	**6.19**	**220**	P	**Pn**	**20 04 41.7**	**+3.2**
	120nm,1.0s,1µm0.5nm						
SWI	**Sorong**	**6.46**	**135**	P	**Pn**	**20 04 43.6**	**+1.4**
	47nm,1.0s,0.1nm						
MSAI	**Masohi**	**7.40**	**163**	P	**Pn**	**20 04 54.4**	**-0.7**
	6.2nm,0.7s,365nm0.0nm						
MYLDM	**Lahad Datu**	**8.31**	**280**	P	Pn	20 05 13.4	+5.7
	39nm,1.2s						
FAKI	**Fak Fak**	**8.64**	**140**	P	**Pn**	**20 05 13.3**	**+1.2**
	29nm,1.2s						
TTSI	**Tana Toraja**	**9.66**	**226**	P	**Pn**	**20 05 29.2**	**+3.1**
SBUM	**Sibu**	**14.54**	**265**	P	P	20 06 43.9	+5.6
KSM	**Kuching**	**16.55**	**263**	Pn	**P**	**20 07 01.0**	**+0.3**
NACB	**Ninganchiao**	**20.89**	**347**	ePn	Pn	20 07 51.8	+0.7
	26nm,1.2s						
FITZ	**Fitzroy Crossi**	**21.75**	**183**	P	**P**	**20 07 57.2**	**-0.2**
FITZ	**Fitzroy Crossi**	**21.75**	**183**	P	**P**	**20 07 57.2**	**-0.2**
	3.2nm,0.8s,baz=10,slow=8.0,SNR=5.3						
WRAB	**Tennant Creek**	**24.71**	**163**	eP	**P**	**20 08 25.8**	**-1.0**
	11nm,0.8s						
WRAB				eS	S	20 12 34.9	-11
WRA	**Warramunga Arr**	**24.72**	**163**	P	**P**	**20 08 26.6**	**-0.3**
WRA	**Warramunga Arr**	**24.72**	**163**	P	**P**	**20 08 26.6**	**-0.3**
	6.1nm,0.7s,baz=343,slow=10,SNR=20						
MBWA	**Marble Bar**	**25.70**	**195**	P	**P**	**20 08 35.0**	**-0.7**
	14nm,1.1s						
ASAR	**Alice Springs**	**28.15**	**166**	P	**P**	**20 08 56.8**	**-1.0**
ASAR	**Alice Springs**	**28.15**	**166**	P	**P**	**20 08 56.8**	**-1.0**
	0.4nm,0.3s,baz=351,slow=13,SNR=9.1						
JNU	**Nakatsue**	**29.47**	**7**	LR	LR	20 19 16.3	
	comp=Z,34nm,21.4s,baz=347,slow=33						
CMAR	**Chiang Mai Arr**	**30.85**	**300**	P	**P**	**20 09 20.4**	**-1.3**
CMAR	**Chiang Mai Arr**	**30.85**	**300**	P	**P**	**20 09 20.4**	**-1.3**
	1.1nm,0.8s,baz=117,slow=6.3,SNR=4.4						
CHTO	**Chiang Mai**	**31.00**	**301**	P	**P**	**20 09 21.2**	**-1.9**
	4.5nm,1.2s						
KSAR	**Wonju Array Be**	**33.54**	**2**	P	**P**	**20 09 46.5**	**+1.4**
KSRS	**Korea Array**	**33.55**	**2**	P	**P**	**20 09 46.5**	**+1.3**
	1.2nm,0.7s,baz=185,slow=11,SNR=4.3						
KSRS				LR	LR	20 24 14.7	
	comp=Z,45nm,19.3s,baz=190,slow=38						
STKA	**Stephens Creek**	**38.16**	**159**	eP	**P**	**20 10 24.7**	**-0.1**
	1.3nm,0.8s						
STKA	**Stephens Creek**	**38.16**	**159**	P	**P**	**20 10 25.3**	**+0.5**
	4.3nm,0.7s,baz=333,slow=6.7,SNR=11						
USRK	**Ussuriysk Arra**	**40.54**	**6**	P	**P**	**20 10 46.0**	**+1.5**
	1.1nm,0.5s,baz=190,slow=7.9,SNR=3.2						
ASAJ	**Asahikawa**	**42.57**	**17**	LR	LR	20 30 30.5	
	comp=Z,85nm,18.7s,baz=110,slow=39						
TAPN	**Taplejung**	**43.99**	**306**	eP	**P**	**20 11 12.2**	**-1.0**
GUN	**Gumba**	**45.70**	**306**	eP	**P**	**20 11 26.1**	**-0.8**
ULN	**Ulaanbaatar**	**47.09**	**342**	P	**P**	**20 11 36.0**	**-1.2**
	2.9nm,0.8s						
SONM	**Songino Array**	**47.27**	**341**	P	**P**	**20 11 38.7**	**+0.1**
SONM	**Songino Array**	**47.27**	**341**	P	**P**	**20 11 38.7**	**+0.1**
	0.6nm,0.6s,baz=156,slow=7.9,SNR=5.7						
KOLN	**Koldanda**	**47.50**	**305**	eP	**P**	**20 11 39.5**	**-1.3**
	6.3nm,0.5s						
DANN	**Dangsing**	**47.59**	**306**	eP	**P**	**20 11 39.9**	**-1.7**
	13nm,0.7s						
PYUN	**Piuthan**	**48.12**	**305**	eP	**P**	**20 11 44.6**	**-1.1**
MK31	**Makanchi Array**	**57.52**	**325**	eP	**P**	**20 12 52.7**	**-1.9**
MKAR	**Makanchi Array**	**57.52**	**325**	P	**P**	**20 12 53.6**	**-1.0**
MKAR	**Makanchi Array**	**57.52**	**325**	P	**P**	**20 12 53.6**	**-1.0**
	1.0nm,0.5s,baz=119,slow=7.4,SNR=19						
TKM2	**Tokmak 2**	**59.72**	**319**	ePKIKP	**P**	**20 13 10.1**	**0.0**
TKM2	**Tokmak 2**	**59.72**	**319**	ePKPdf	**P**	**20 13 10.1**	**0.0**
TKM2	**Tokmak 2**	**59.72**	**319**	eP	**P**	**20 13 10.0**	**-0.1**
AAK	**Ala-Archa**	**60.33**	**318**	P	**P**	**20 13 14.5**	**+0.3**
EKS2	**Erkin-Say**	**60.82**	**318**	eP	**P**	**20 13 15.4**	**-2.2**
	6.3nm,1.4s						
KBL	**Kabul**	**61.49**	**307**	eP	**P**	**20 13 20.2**	**-2.2**
	6.0nm,0.9s						
KURK	**Kurchatov**	**61.71**	**327**	eP	P	20 13 19.4	-3.8
	7.9nm,1.1s						
ABKAR	**Akbulak array**	**72.12**	**321**	eP	**P**	**20 14 28.0**	**-1.5**
	0.8nm,0.6s						
ILAR	**Eielson Array**	**85.08**	**25**	P	**P**	**20 15 40.9**	**+0.4**
ILAR	**Eielson Array**	**85.08**	**25**	P	**P**	**20 15 40.9**	**+0.4**
	0.4nm,0.7s,baz=237,slow=6.7,SNR=5.2						

IDC 03 20:38:24.7±4.8**, 2°.27S**×**152°.35E, h99km**±41km**, mb3.4**/12**, mb1 3.6**/13**, mb1mx3.6**/20**, mbtmp3.4**/13**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.6**/17**, Error ellipse: s-maj=32.0km s-min=16.6km az=93.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.77**	**216**	P	Pn	20 40 30.2	+1.5
	1.0nm,0.3s,baz=25,slow=7.3,SNR=6.0						
WRA	**Warramunga Arr**	**24.86**	**224**	P	P	20 43 37.9	-0.4
	2.1nm,0.6s,baz=47,slow=9.4,SNR=26						
ASAR	**Alice Springs**	**27.77**	**219**	P	P	20 44 03.8	-0.7
	0.4nm,0.7s,baz=56,slow=8.6,SNR=6.6						
ASAR				PcP	PcP	20 47 17.9	-0.9
	0.5nm,0.7s,baz=72,slow=3.0,SNR=5.0						
FITZ	**Fitzroy Crossi**	**30.56**	**237**	P	P	20 44 29.1	0.0
	1.8nm,0.9s,baz=56,slow=11,SNR=3.7						
FITZ				LR	LR	20 58 24.8	
	comp=Z,83nm,19.1s,baz=325,slow=39						
STKA	**Stephens Creek**	**31.14**	**198**	P	P	20 44 33.9	-0.2
	1.9nm,0.6s,baz=81,slow=9.2,SNR=2.9						
USRK	**Ussuriysk Arra**	**49.72**	**341**	P	P	20 47 06.9	+0.1
	0.7nm,0.6s,baz=154,slow=11,SNR=3.4						
CMAR	**Chiang Mai Arr**	**56.43**	**294**	P	P	20 47 55.1	-1.4
	0.2nm,0.5s,baz=118,slow=5.5,SNR=2.6						
SONM	**Songino Array**	**63.96**	**327**	P	P	20 48 49.1	+1.4
	0.3nm,0.6s,baz=156,slow=5.9,SNR=2.8						
VNDA	**Vanda**	**75.36**	**178**	P	P	20 49 57.6	+0.7
	1.3nm,0.7s,baz=341,slow=5.3,SNR=8.6						
MKAR	**Makanchi Array**	**78.14**	**319**	P	P	20 50 14.4	+1.2
	0.2nm,0.5s,baz=90,slow=10.0,SNR=4.7						
ZALV	**Zalesovo Beam**	**78.82**	**326**	P	P	20 50 15.9	-0.7
	0.3nm,0.4s,baz=99,slow=8.9,SNR=2.1						
ILAR	**Eielson Array**	**80.00**	**22**	P	P	20 50 21.6	-1.2
	0.6nm,0.8s,baz=242,slow=5.6,SNR=8.6						
YKA	**Yellowknife Ar**	**93.41**	**28**	P	P	20 51 28.8	+0.2
	0.2nm,0.3s,baz=270,slow=4.8,SNR=3.7						
TORD	**Torodi Ar. Bea**	**149.02**	**292**	PKPbc	PKPbc	20 58 02.9	+0.5
	0.3nm,0.5s,baz=23,slow=2.7,SNR=12						

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*CSEM **03** 21:01:11.6±0.3, 37°.80N×20°.07E, h2km, MD3.3, Error ellipse: s-maj=6.9km s-min=4.8km az=48.0*

*THE **03** 21:01:12.4, 37°.78N×20°.14E, h0km±1km, ML2.6/7, Error ellipse: s-maj=2.3km s-min=1.1km az=229.0*

*ATH **03** 21:01:15.3, 37°.84N×20°.38E, h20km±2km, MD3.3/20*

ISC 03 21:01:10.9±1.5**, 37°.78N**±0°.04×**20°.04E**±0°.04**, h6km**±10km**, n70, σ0s.91**/94**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.59**	**48**	P	**Pg**	**21 01 22.3**	**0.0**
VLS				S	**Sg**	**21 01 30.1**	**+0.1**
VLS	**Valsamata**	**0.59**	**48**	ePB	**Pg**	**21 01 22.4**	**+0.1**
VLS				eSB	**Sg**	**21 01 29.5**	**-0.5**
VLS	**Valsamata**	**0.59**	**48**	P	**Pg**	**21 01 22.3**	**0.0**
VLS				S	**Sg**	**21 01 30.1**	**+0.1**
KFL	**Anninata**	**0.68**	**61**	P	**Pg**	**21 01 23.6**	**-0.3**
KFL				S	**Sg**	**21 01 32.7**	**-0.1**
KFL	**Anninata**	**0.68**	**61**	P	**Pg**	**21 01 23.6**	**-0.3**
KFL				S	**Sg**	**21 01 32.7**	**-0.1**
LKD2	**Lefkada island**	**1.12**	**26**	P	**Pb**	**21 01 33.1**	**+0.4**
LKD2				S	**Sn**	**21 01 49.1**	**+0.1**
LKD2	**Lefkada island**	**1.12**	**26**	ePN	**Pn**	**21 01 34.1**	**+0.9**
LKD2	**Lefkada island**	**1.12**	**26**	P	**Pb**	**21 01 33.1**	**+0.4**
LKD2	**Lefkada island**	**1.12**	**26**	ePn	**Pn**	**21 01 34.1**	**+0.9**
LKD2				S	**Sn**	**21 01 49.1**	**+0.1**
RLS	**Riolos of Patr**	**1.17**	**76**	P	**Pg**	**21 01 32.3**	**-0.9**
RLS				S	**Sg**	**21 01 48.0**	**-0.3**
RLS	**Riolos of Patr**	**1.17**	**76**	ePN	**Pg**	**21 01 33.2**	**0.0**
RLS	**Riolos of Patr**	**1.17**	**76**	P	**Pg**	**21 01 32.3**	**-0.9**
RLS	**Riolos of Patr**	**1.17**	**76**	ePn	**Pg**	**21 01 33.2**	**0.0**
RLS				S	**Sg**	**21 01 48.0**	**-0.3**
AMT	**Artemida-Makis**	**1.35**	**100**	P	**Pg**	**21 01 35.9**	**-0.9**
AMT				S	**Sn**	**21 01 55.7**	**+1.1**
AMT	**Artemida-Makis**	**1.35**	**100**	ePN	**Pg**	**21 01 36.7**	**-0.1**
AMT	**Artemida-Makis**	**1.35**	**100**	P	**Pg**	**21 01 35.9**	**-0.9**
AMT	**Artemida-Makis**	**1.35**	**100**	ePn	**Pg**	**21 01 36.7**	**-0.1**
AMT				S	**Sn**	**21 01 55.7**	**+1.1**
LAKA	**Lakka**	**1.60**	**73**	P	**Pn**	**21 01 40.1**	**+0.3**
LAKA				S	**Sg**	**21 02 01.8**	**-0.6**
LAKA	**Lakka**	**1.60**	**73**	ePN	**Pb**	**21 01 40.8**	**-0.1**
LAKA	**Lakka**	**1.60**	**73**	P	**Pn**	**21 01 40.1**	**+0.3**
LAKA	**Lakka**	**1.60**	**73**	ePn	**Pb**	**21 01 40.8**	**-0.1**
LAKA				S	**Sg**	**21 02 01.8**	**-0.6**
EFP	**Efpalio**	**1.61**	**66**	P	**Pn**	**21 01 40.2**	**+0.3**
EFP				S	**Sn**	**21 02 01.1**	**+0.1**
EFP	**Efpalio**	**1.61**	**66**	ePN	**Pn**	**21 01 40.4**	**+0.5**
EFP	**Efpalio**	**1.61**	**66**	ePn	**Pn**	**21 01 40.4**	**+0.5**
EFP				S	**Sn**	**21 02 01.1**	**+0.1**
ITM	**Ithomi**	**1.62**	**111**	P	**Pn**	**21 01 39.9**	**-0.1**
ITM	**Ithomi**	**1.62**	**111**	ePN	**Pb**	**21 01 41.2**	**0.0**
ITM	**Ithomi**	**1.62**	**111**	P	**Pn**	**21 01 39.9**	**-0.1**
ITM	**Ithomi**	**1.62**	**111**	ePn	**Pb**	**21 01 41.2**	**0.0**
PYL	**PYLOS**	**1.62**	**122**	ePN	**Pb**	**21 01 41.8**	**+0.6**
PYL	**PYLOS**	**1.62**	**122**	ePn	**Pb**	**21 01 41.8**	**+0.6**
TRIZ	**Trizonia**	**1.71**	**69**	P	**Pn**	**21 01 41.7**	**+0.5**
TRIZ	**Trizonia**	**1.71**	**69**	ePN	**Pn**	**21 01 41.7**	**+0.5**
TRIZ	**Trizonia**	**1.71**	**69**	P	**Pn**	**21 01 41.7**	**+0.5**
IGT	**Igoumenitsa**	**1.77**	**7**	P	**Pn**	**21 01 43.0**	**+1.0**
IGT				S	**Sg**	**21 02 07.1**	**-0.5**
IGT	**Igoumenitsa**	**1.77**	**7**	P	**Pn**	**21 01 43.0**	**+1.0**
KALE	**Kalithea**	**1.77**	**69**	P	**Pn**	**21 01 43.0**	**+0.9**
KALE	**Kalithea**	**1.77**	**69**	ePN	**Pn**	**21 01 42.6**	**+0.5**
KALE	**Kalithea**	**1.77**	**69**	ePn	**Pn**	**21 01 42.6**	**+0.5**
KALE	**Kalithea**	**1.77**	**69**	P	**Pn**	**21 01 43.0**	**+0.9**
EVR	**Evrytania**	**1.80**	**50**	P	**Pn**	**21 01 43.3**	**+0.7**
EVR	**Evrytania**	**1.80**	**50**	ePN	**Pg**	**21 01 44.9**	**-0.4**
EVR	**Evrytania**	**1.80**	**50**	P	**Pn**	**21 01 43.3**	**+0.7**
EVR	**Evrytania**	**1.80**	**50**	ePn	**Pg**	**21 01 44.9**	**-0.4**
GUR	**Goura**	**1.83**	**84**	P	**Pn**	**21 01 43.6**	**+0.6**
GUR				S	**Sn**	**21 02 06.7**	**+0.1**
GUR	**Goura**	**1.83**	**84**	ePN	**Pn**	**21 01 43.4**	**+0.4**
GUR	**Goura**	**1.83**	**84**	P	**Pn**	**21 01 43.6**	**+0.6**
GUR				S	**Sn**	**21 02 06.7**	**+0.1**
KEK	**Kerkira**	**1.94**	**355**	P	**Pn**	**21 01 45.6**	**+1.2**
KEK	**Kerkira**	**1.94**	**355**	ePN	**Pg**	**21 01 49.6**	**+1.5**
KEK	**Kerkira**	**1.94**	**355**	P	**Pn**	**21 01 45.6**	**+1.2**
DSF	**Desfina**	**2.06**	**71**	P	**Pn**	**21 01 46.9**	**+0.7**
DSF				S	**Sn**	**21 02 13.4**	**+1.1**
DSF	**Desfina**	**2.06**	**71**	P	**Pn**	**21 01 46.9**	**+0.7**
DSF				S	**Sn**	**21 02 13.4**	**+1.1**
DYR	**Agios Nikonas**	**2.10**	**118**	ePN	**Pb**	**21 01 49.2**	**-0.1**
DYR	**Agios Nikonas**	**2.10**	**118**	ePn	**Pb**	**21 01 49.2**	**-0.1**
AGG	**Agios Georgios**	**2.19**	**55**	P	**Pn**	**21 01 49.5**	**+1.6**
AGG				S	**Sb**	**21 02 17.0**	**-1.3**
AGG	**Agios Georgios**	**2.19**	**55**	ePN	**Pn**	**21 01 49.4**	**+1.6**
AGG	**Agios Georgios**	**2.19**	**55**	ePn	**Pn**	**21 01 49.4**	**+1.6**
AGG				S	**Sb**	**21 02 17.0**	**-1.3**
LTK	**Loutraki**	**2.33**	**83**	ePN	**Pn**	**21 01 51.0**	**+1.2**
LTK	**Loutraki**	**2.33**	**83**	ePn	**Pn**	**21 01 51.0**	**+1.2**
THL	**Klokotos Trika**	**2.36**	**40**	ePB	**Pn**	**21 01 52.0**	**+1.8**
THL	**Klokotos Trika**	**2.36**	**40**	ePb	**Pn**	**21 01 52.0**	**+1.8**
LKR	**Lokris**	**2.49**	**69**	ePB	**Pn**	**21 01 52.4**	**+0.4**
LKR	**Lokris**	**2.49**	**69**	ePb	**Pn**	**21 01 52.4**	**+0.4**
NEO	**Neokhori**	**2.93**	**58**	ePN	**Pn**	**21 01 58.3**	**+0.3**
NEO	**Neokhori**	**2.93**	**58**	ePn	**Pn**	**21 01 58.3**	**+0.3**
PTL	**Penteli**	**3.04**	**84**	ePN	**Pn**	**21 02 01.1**	**+1.5**
PTL	**Penteli**	**3.04**	**84**	ePn	**Pn**	**21 02 01.1**	**+1.5**
STON	**Ston**	**5.39**	**341**	ePn	**Pn**	**21 02 31.8**	**-0.1**
STON				Sn	**Sn**	**21 03 31.2**	**-2.9**
STON	**Ston**	**5.39**	**341**	ePn	**Pn**	**21 02 31.7**	**-0.1**
NVLJ	**Novalja**	**7.81**	**332**	i Pn	**Pn**	**21 03 06.5**	**+1.4**
NVLJ				Sn	**Sn**	**21 04 30.5**	**-3.4**
NVLJ	**Novalja**	**7.81**	**332**	i Pn	**Pn**	**21 03 06.5**	**+1.4**

IDC 03 21:07:53.8±3.2**, 18°.96S**×**174°.37W, h0km, mb4.0**/3**, mb1 4.3**/3**, mb1mx3.7**/20**, mbtmp4.0**/3**, Error ellipse: s-maj=111.8km s-min=41.9km az=138.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**48.21**	**255**	P	P	21 16 36.8	+0.2
	3.7nm,0.8s,baz=86,slow=8.5,SNR=35						
WRA	**Warramunga Arr**	**48.22**	**260**	P	P	21 16 36.4	-0.3
	0.6nm,0.4s,baz=97,slow=8.5,SNR=7.7						
MJAR	**Matsushiro Arr**	**71.08**	**321**	P	P	21 19 14.2	+0.1
	1.2nm,0.9s,baz=173,slow=6.1,SNR=4.4						
BRTR	**Keskin Array B**	**148.21**	**317**	PKPbc	PKPdf	21 27 40.0	+1.0
	0.9nm,0.8s,baz=29,slow=3.3,SNR=5.2						
GERES	**GERESS Array B**	**149.48**	**349**	PKPbc	PKPbc	21 27 45.7	+0.5
	0.4nm,0.7s,baz=353,slow=5.5,SNR=4.1						

IDC 03 21:34:40.5±1.7**, 2°.61N**×**128°.96E, h0km, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/22**, mbtmp3.6**/4**, Error ellipse: s-maj=131.8km s-min=21.5km az=71.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.03**	**167**	P	P	21 39 47.9	+0.5
	1.8nm,0.5s,baz=346,slow=10,SNR=8.2						
ASAR	**Alice Springs**	**26.56**	**170**	P	P	21 40 19.5	-0.9
	0.4nm,0.5s,baz=345,slow=7.6,SNR=5.6						
SONM	**Songino Array**	**49.08**	**340**	P	P	21 43 28.4	-1.3
	0.1nm,0.5s,baz=161,slow=6.1,SNR=3.7						
MKAR	**Makanchi Array**	**59.74**	**325**	P	P	21 44 48.2	+0.9
	0.4nm,0.3s,baz=113,slow=7.9,SNR=13						

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*IDC **03** 21:41:09.4±0.6, 18°.24S×172°.33W, h0km, mb4.2/12, mb1 4.5/13, mb1mx4.3/23, mbtmp4.2/13, ML3.0/1, MS3.7/12, Ms1 3.7/12, ms1mx3.5/33, Error ellipse: s-maj=28.0km s-min=18.1km az=149.0*

*ISCJB **03** 21:41:11.6±0.3, 18°.07S±0°.08×172°.55W±0°.07, h21km, mb4.3/18, MS3.8/12, Error ellipse: s-maj=13.7km s-min=6.6km az=146.9*

*NEIC **03** 21:41:15.3±0.3, 17°.94S×172°.61W, h35km, mb4.6/5, Error ellipse: s-maj=14.0km s-min=6.8km az=139.0*

ISC 03 21:41:12.9±0.4**, 18°.04S**±0°.08×**172°.4W**±0°.1**, h21km, n236, σ0s.87**/223**, mb4.3**/18**, MS3.8**/12**, 78C-64D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.15**	**9**	ePn	**Pn**	**21 42 14.6**	**-0.4**
AFI				eSn	Sn	21 42 52.3	-11
AFI	**Afiamalu**	**4.15**	**9**	Pn	**Pn**	**21 42 15.9**	**+0.9**
	52nm,0.3s,baz=123,slow=5.5,SNR=18						
AFI				Sn	**Sn**	**21 43 00.7**	**-2.3**
	140nm,0.3s,baz=134,slow=21,SNR=8.7						
MSVF	**Nonsavu**	**9.08**	**270**	ePn	Pn	21 43 29.5	+6.7
	42nm,0.8s						
RAR	**Rarotonga**	**12.33**	**107**	Pn	Pn	21 44 00.6	-6.7
RAR	**Rarotonga**	**12.33**	**107**	Pn	Pn	21 44 00.6	-6.7
	3.1nm,0.3s,baz=306,slow=18,SNR=3.0						
DZM	**Mont Dzumac**	**20.25**	**255**	eLR	LR	21 50 54.5	
	246nm,24.9s						
DZM	**Mont Dzumac**	**20.25**	**255**	ePn	**P**	**21 45 48.1**	**+1.0**
DZM	**Mont Dzumac**	**20.25**	**255**	P	Pn	21 45 52.1	+3.0
	12nm,0.6s,baz=48,slow=15,SNR=6.8						
DZM				LR	LR	21 51 36.3	
	comp=Z,73nm,18.6s,baz=58,slow=31						
PPT2	**Papeete2**	**21.76**	**92**	eLR	LR	21 51 06.8	
	251nm,24.2s						
PPT	**Papeete**	**21.76**	**92**	LR	LR	21 51 55.9	
	comp=Z,238nm,19.1s,baz=324,slow=30						
TBI	**Tubuai**	**22.11**	**108**	eLQ	LQ	21 50 27.4	
	322nm,27.8s						
TBI				eLR	LR	21 51 05.2	
	161nm,26.8s						
URZ	**Urewera**	**22.13**	**202**	eP	**P**	**21 46 09.5**	**+2.4**
	24nm,0.5s						
URZ	**Urewera**	**22.13**	**202**	P	**P**	**21 46 09.4**	**+2.3**
	27nm,0.6s,baz=10,slow=4.2,SNR=27						
RPZ	**Rata Peaks**	**29.15**	**205**	P	P	21 47 19.8	+7.3
RPZ	**Rata Peaks**	**29.15**	**205**	P	P	21 47 19.8	+7.3
	6.3nm,0.5s,baz=4.7,slow=6.7,SNR=7.0						
CTA	**Charters Tower**	**39.04**	**260**	LR	LR	22 03 11.5	
	comp=Z,79nm,18.7s,baz=86,slow=34						
CTAO	**Charters Tower**	**39.04**	**260**	eP	**P**	**21 48 37.1**	**-1.4**
	5.8nm,0.6s						
STKA	**Stephens Creek**	**43.60**	**243**	eP	**P**	**21 49 15.5**	**-0.3**
STKA	**Stephens Creek**	**43.60**	**243**	P	**P**	**21 49 15.4**	**-0.4**
	1.5nm,0.5s,baz=106,slow=18,SNR=3.8						
STKA				LR	LR	22 04 08.2	
	comp=Z,79nm,19.8s,baz=25,slow=32						
WRAB	**Tennant Creek**	**50.20**	**259**	eP	**P**	**21 50 06.6**	**-0.9**
	12nm,1.1s						
WRA	**Warramunga Arr**	**50.20**	**259**	P	**P**	**21 50 06.8**	**-0.9**
WRA	**Warramunga Arr**	**50.20**	**259**	P	**P**	**21 50 06.8**	**-0.9**
	4.4nm,0.6s,baz=96,slow=8.5,SNR=32						
AS31	**Alice Springs**	**50.23**	**254**	eP	**P**	**21 50 07.0**	**-0.8**
ASAR	**Alice Springs**	**50.24**	**254**	P	**P**	**21 50 07.4**	**-0.5**
ASAR	**Alice Springs**	**50.24**	**254**	P	**P**	**21 50 07.4**	**-0.5**
	8.3nm,0.7s,baz=88,slow=8.7,SNR=58						
FITZ	**Fitzroy Crossi**	**58.62**	**259**	eP	**P**	**21 51 09.4**	**+0.6**
FITZ	**Fitzroy Crossi**	**58.62**	**259**	LR	LR	22 14 29.4	
	comp=Z,66nm,18.5s,baz=281,slow=34						
VNDA	**Vanda**	**60.87**	**186**	LR	LR	22 13 01.1	
	comp=Z,100nm,18.6s,baz=205,slow=32						
NWAO	**Narrogin (SRO)**	**64.17**	**242**	eP	**P**	**21 51 44.5**	**-1.8**
MJAR	**Matsushiro Arr**	**71.55**	**320**	P	**P**	**21 52 33.1**	**+0.7**
MJAR	**Matsushiro Arr**	**71.55**	**320**	P	**P**	**21 52 33.1**	**+0.7**
	2.0nm,0.8s,baz=164,slow=6.3,SNR=6.5						
PFO	**Pinyon Flat Ob**	**74.05**	**46**	⇑P	**P**	**21 52 48.4**	**+0.9**
	baz=74						
ASAJ	**Asahikawa**	**74.26**	**328**	eP	**P**	**21 52 50.3**	**+2.0**
MPMC	**Manual Prospec**	**74.78**	**43**	⇓P	**P**	**21 52 52.3**	**+0.5**
	baz=75						
GMRC	**Granite Mounta**	**75.25**	**45**	⇓P	**P**	**21 52 55.0**	**+0.5**
	baz=76						
NVAR	**Mina Array Bea**	**75.67**	**41**	P	**P**	**21 52 58.0**	**+1.0**
NVAR	**Mina Array Bea**	**75.67**	**41**	P	**P**	**21 52 58.0**	**+1.0**
	2.0nm,0.6s,baz=228,slow=8.4,SNR=4.5						
Z14A	**Wintersburg**	**76.35**	**48**	⇑P	**P**	**21 53 01.9**	**+1.2**
	baz=77						
U15A	**North Rim**	**78.45**	**46**	⇓P	**P**	**21 53 13.7**	**+1.0**
	baz=79						
KSRS	**Korea Array**	**78.69**	**316**	P	**P**	**21 53 16.5**	**+2.9**
	2.4nm,0.9s,baz=138,slow=7.4,SNR=7.1						
KSAR	**Wonju Array Be**	**78.70**	**316**	P	**P**	**21 53 16.5**	**+2.8**
Z20A	**Nine Sixteen R**	**79.35**	**50**	⇑P	**P**	**21 53 18.4**	**+0.8**
	baz=80						
DUG	**Dugway**	**80.16**	**42**	⇑P	**P**	**21 53 22.2**	**+0.5**
	baz=80						
P15A	**Leamington**	**80.16**	**43**	⇓P	**P**	**21 53 22.5**	**+0.7**
	baz=80						
W20A	**Ramah**	**80.41**	**48**	⇑P	**P**	**21 53 24.0**	**+0.6**
	baz=81						
Q16A	**Castle Valley**	**80.53**	**44**	⇓P	**P**	**21 53 24.7**	**+0.8**
	baz=81						
Z22A	**Elephant Butte**	**80.61**	**51**	⇑P	**P**	**21 53 25.2**	**+0.9**
	baz=81						
I12A	**Atlanta**	**80.79**	**38**	⇑P	**P**	**21 53 25.9**	**+0.8**
	baz=81						
324A	**Moseley Ranch,**	**80.86**	**53**	⇑P	**P**	**21 53 26.4**	**+0.6**
	baz=81						
425A	**Indio Mountain**	**80.94**	**54**	⇓P	**P**	**21 53 27.0**	**+0.8**
	baz=81						
626A	**Big Bend Ranch**	**81.04**	**55**	⇑P	**P**	**21 53 27.7**	**+1.0**
	baz=81						
SRU	**San Rafael**	**81.06**	**44**	⇑P	**P**	**21 53 27.6**	**+0.9**
	baz=81						
HLID	**Hailey**	**81.08**	**39**	⇓P	**P**	**21 53 27.8**	**+1.1**
	baz=81						
P17A	**Butcher Ranch,**	**81.11**	**44**	⇑P	**P**	**21 53 27.6**	**+0.7**
	baz=81						
224A	**Cornudas Mount**	**81.12**	**52**	⇓P	**P**	**21 53 28.1**	**+0.9**
	baz=81						
J13A	**Cove Ranch, Pi**	**81.12**	**39**	⇑P	**P**	**21 53 27.1**	**+0.2**
	baz=81						
325A	**Bean Ranch, Si**	**81.22**	**53**	⇓P	**P**	**21 53 28.5**	**+0.8**
	baz=81						
526A	**Mary Lane Ranc**	**81.30**	**55**	⇓P	**P**	**21 53 29.4**	**+1.2**
	baz=82						
TXAR	**Lajitas Array**	**81.31**	**55**	P	**P**	**21 53 29.2**	**+1.1**
TXAR	**Lajitas Array**	**81.31**	**55**	P	**P**	**21 53 29.2**	**+1.1**
	0.9nm,0.6s,baz=215,slow=7.6,SNR=9.2						
TXAR				LR	LR	22 21 48.5	
	comp=Z,21nm,19.4s,baz=0.0,slow=30						
H12A	**Diamond D Ranc**	**81.39**	**38**	⇑P	**P**	**21 53 28.5**	**+0.1**
	baz=82						
L15A	**Malad City**	**81.43**	**41**	⇓P	**P**	**21 53 29.2**	**+0.7**
	baz=82						
G12A	**Big Creek, Yel**	**81.46**	**37**	⇓P	**P**	**21 53 29.1**	**+0.4**
	baz=82						
O17A	**Robinson Place**	**81.50**	**43**	⇑P	**P**	**21 53 29.9**	**+0.9**
	baz=82						
P18A	**Preston Nutter**	**81.52**	**44**	⇓P	**P**	**21 53 29.9**	**+0.6**
	baz=82						
627A	**Terlingua Ranc**	**81.58**	**55**	⇓P	**P**	**21 53 30.9**	**+1.3**
	baz=82						
426A	**McDonald Obser**	**81.62**	**54**	⇑P	**P**	**21 53 30.5**	**+0.6**
	baz=82						
527A	**Woodward Ranch**	**81.71**	**55**	⇑P	**P**	**21 53 31.4**	**+1.0**
	baz=82						
Q19A	**Hogan Spring (**	**81.82**	**45**	⇑P	**P**	**21 53 31.3**	**+0.6**
	baz=82						
F12A	**Elk City**	**81.87**	**36**	⇑P	**P**	**21 53 31.1**	**+0.3**
	baz=82						
628A	**Black Gap, Mar**	**81.99**	**56**	⇓P	**P**	**21 53 32.1**	**+0.4**
	baz=82						
226B	**Tecolote Peak,**	**82.15**	**53**	⇑P	**P**	**21 53 33.2**	**+0.7**
	baz=82						
S21A	**Coal Bank Pass**	**82.17**	**46**	⇓P	**P**	**21 53 33.7**	**+1.0**
	baz=82,SNR=5.2						
J15A	**Blackfoot**	**82.17**	**40**	⇑P	**P**	**21 53 33.0**	**+0.6**
	baz=82						
427A	**Hayter Ranch,**	**82.19**	**54**	⇑P	**P**	**21 53 33.6**	**+0.9**
	baz=82						
M17A	**Scullys Gap (B**	**82.22**	**42**	⇓P	**P**	**21 53 33.0**	**+0.2**
	baz=82						
Z25A	**Roswell**	**82.28**	**51**	⇑P	**P**	**21 53 34.0**	**+0.8**
	baz=82						
H14A	**Leadore**	**82.30**	**38**	⇑P	**P**	**21 53 33.4**	**+0.2**
	baz=82						
P19A	**Cripple Cowboy**	**82.36**	**44**	⇑P	**P**	**21 53 34.2**	**+0.6**
	baz=83						
NEW	**Newport**	**82.36**	**34**	⇑P	**P**	**21 53 33.5**	**+0.4**
	baz=83						
NEW	**Newport**	**82.36**	**34**	LR	LR	22 23 38.3	
	comp=Z,83nm,18.9s,baz=48,slow=31						
528A	**Cox Ranch, San**	**82.36**	**55**	⇓P	**P**	**21 53 34.0**	**+0.3**
	baz=83						
K16A	**Soda Springs**	**82.38**	**40**	⇑P	**P**	**21 53 34.4**	**+0.9**
	baz=83						
F13A	**Darby**	**82.41**	**37**	⇑P	**P**	**21 53 33.4**	**-0.2**
	baz=83						
Q20A	**Ridgley Place,**	**82.47**	**45**	⇓P	**P**	**21 53 34.8**	**+0.7**
	baz=83						
126A	**Clayton Basin,**	**82.52**	**52**	⇑P	**P**	**21 53 35.4**	**+1.0**
	baz=83						
N18A	**Larsen Ranch,**	**82.60**	**43**	⇑P	**P**	**21 53 35.3**	**+0.5**
	baz=83						
R21A	**Cimarron**	**82.68**	**46**	⇓P	**P**	**21 53 36.3**	**+1.0**
	baz=83,SNR=6.8						
428A	**Kincaid Ranch,**	**82.69**	**55**	⇑P	**P**	**21 53 36.0**	**+0.7**
	baz=83						
H15A	**Lima**	**82.72**	**38**	⇑P	**P**	**21 53 36.1**	**+0.7**
	baz=83						
K17A	**Gardner Place,**	**82.75**	**41**	⇓P	**P**	**21 53 35.9**	**+0.4**
	baz=83						
529A	**Stev Forest Ra**	**82.79**	**55**	⇑P	**P**	**21 53 36.4**	**+0.6**
	baz=83						
L18A	**Fontenelle, Gr**	**82.86**	**42**	⇓P	**P**	**21 53 36.5**	**+0.3**
	baz=83						
S22A	**4UR Ranch, Cre**	**82.87**	**47**	⇑P	**P**	**21 53 37.3**	**+0.9**
	baz=83,SNR=6.8						
328A	**Wristen Ranch,**	**82.88**	**54**	⇑P	**P**	**21 53 37.2**	**+0.9**
	baz=83						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
N19A	**John Jarvie Ra**	**82.88**	**43**	⇑P	**P**	**21 53 36.7**	**+0.5**
	baz=83						
Q21A	**Lamborn Mesa,**	**82.90**	**45**	⇓P	**P**	**21 53 37.1**	**+0.7**
	baz=83						
D13A	**Huson**	**83.10**	**36**	⇑P	**P**	**21 53 37.6**	**+0.6**
	baz=83						
O20A	**White River Ci**	**83.10**	**44**	⇓P	**P**	**21 53 37.9**	**+0.5**
	baz=83						
G15A	**Dillon**	**83.12**	**38**	⇑P	**P**	**21 53 37.8**	**+0.4**
	baz=83,SNR=6.5						
R22A	**Saguache, Gunn**	**83.16**	**46**	⇑P	**P**	**21 53 39.3**	**+1.4**
	baz=83						
M19A	**Rock Springs**	**83.20**	**42**	⇑P	**P**	**21 53 38.3**	**+0.4**
	baz=83						
J17A	**Brown Place, J**	**83.20**	**40**	⇑P	**P**	**21 53 38.5**	**+0.6**
	baz=83						
K18A	**Toltan Ranch,**	**83.23**	**41**	⇑P	**P**	**21 53 38.9**	**+0.8**
	baz=84						
E14A	**Clinton**	**83.25**	**37**	⇑P	**P**	**21 53 37.5**	**-0.4**
	baz=84						
429A	**Davenport Ranc**	**83.26**	**55**	⇑P	**P**	**21 53 38.7**	**+0.4**
	baz=84						
Q22A	**Crested Butte,**	**83.36**	**46**	⇓P	**P**	**21 53 39.7**	**+0.8**
	baz=84						
228A	**UT Block 9, Go**	**83.36**	**53**	⇓P	**P**	**21 53 39.9**	**+1.1**
	baz=84						
L19A	**Farson**	**83.38**	**42**	⇑P	**P**	**21 53 39.7**	**+0.8**
	baz=84						
N20A	**Spence Gulch,**	**83.44**	**43**	⇑P	**P**	**21 53 39.3**	**+0.2**
	baz=84,SNR=5.4						
SMCO	**Snowmass**	**83.47**	**45**	*e*P	**P**	**21 53 40.3**	**+0.7**
	3.5nm,0.8s						
530A	**J-C Ranch, Com**	**83.49**	**56**	⇓P	**P**	**21 53 40.1**	**+0.7**
	baz=84						
F15A	**Butte**	**83.50**	**38**	⇓P	**P**	**21 53 39.3**	**0.0**
	baz=84						
J18A	**Kendall Valley**	**83.55**	**41**	⇓P	**P**	**21 53 40.3**	**+0.5**
	baz=84						
329A	**Wagon Wheel Ra**	**83.56**	**54**	⇓P	**P**	**21 53 40.8**	**+1.0**
	baz=84						
G16A	**Moss Hill, Enn**	**83.56**	**38**	⇑P	**P**	**21 53 40.0**	**+0.4**
	baz=84						
QLMT	**Earthquake Lak**	**83.56**	**39**	*e*P	**P**	**21 53 40.8**	**+1.1**
	0.2nm,0.2s						
H16A	**Russell Place,**	**83.60**	**39**	⇑P	**P**	**21 53 41.1**	**+1.2**
	baz=84,SNR=7.9						
BW06	**Boulder Array**	**83.61**	**41**	⇓P	**P**	**21 53 39.8**	**-0.2**
	baz=84,SNR=6.3						
PDAR	**Pinedale Array**	**83.61**	**41**	P	**P**	**21 53 40.2**	**+0.2**
PDAR	**Pinedale Array**	**83.61**	**41**	P	**P**	**21 53 40.2**	**+0.2**
	4.2nm,0.7s,baz=220,slow=3.4,SNR=36						
D14A	**Greenough**	**83.62**	**36**	⇑P	**P**	**21 53 38.9**	**-1.0**
	baz=84						
128A	**Castleberry Fa**	**83.67**	**53**	⇑P	**P**	**21 53 41.4**	**+1.0**
	baz=84						
E15A	**Deer Lodge**	**83.74**	**37**	⇓P	**P**	**21 53 40.8**	**+0.3**
	baz=84						
M20A	**Sweetwater, Wa**	**83.82**	**43**	⇑P	**P**	**21 53 41.2**	**+0.1**
	baz=84						
P22A	**Eagle**	**83.82**	**45**	⇓P	**P**	**21 53 42.3**	**+1.1**
	baz=84						
430A	**Baggett Ranch,**	**83.84**	**55**	⇑P	**P**	**21 53 42.0**	**+0.7**
	baz=84						
C14A	**Swan Lake**	**83.88**	**35**	⇓P	**P**	**21 53 41.5**	**+0.4**
	baz=84						
N21A	**Black Mountain**	**83.89**	**44**	⇓P	**P**	**21 53 41.9**	**+0.4**
	baz=84,SNR=5.1						
BOZ	**Bozeman (W)**	**83.89**	**38**	⇑P	**P**	**21 53 41.5**	**+0.2**
	baz=84						
I18A	**Diamond G Ranc**	**83.94**	**40**	⇓P	**P**	**21 53 42.0**	**+0.3**
	baz=84						
S24A	**Houchin Ranch,**	**83.95**	**47**	⇓P	**P**	**21 53 43.1**	**+1.1**
	baz=84						
F16A	**Kennard Place,**	**83.97**	**38**	⇓P	**P**	**21 53 42.1**	**+0.5**
	baz=84						
L20A	**Wamsutter**	**83.99**	**42**	⇓P	**P**	**21 53 42.1**	**+0.2**
	baz=84,SNR=5.2						
K19A	**Absolon Red Bu**	**84.08**	**41**	⇑P	**P**	**21 53 42.4**	**0.0**
	baz=84						
531A	**Rocksprings**	**84.12**	**56**	⇑P	**P**	**21 53 43.7**	**+1.1**
	baz=84						
330A	**Mertzon**	**84.15**	**54**	⇓P	**P**	**21 53 43.5**	**+0.7**
	baz=84						
D15A	**Lincoln**	**84.16**	**36**	⇑P	**P**	**21 53 42.9**	**+0.3**
	baz=84						
J19A	**Crowheart**	**84.18**	**41**	⇑P	**P**	**21 53 42.9**	**+0.1**
	baz=84,SNR=6.1						
G17A	**Pierce Place,**	**84.24**	**39**	⇓P	**P**	**21 53 43.6**	**+0.5**
	baz=84						
O22A	**Kremmling**	**84.24**	**45**	⇓P	**P**	**21 53 43.3**	**-0.1**
	baz=84						
T25A	**Trinidad**	**84.28**	**48**	⇓P	**P**	**21 53 44.4**	**+0.9**
	baz=84						
K20A	**Yellowstone Ra**	**84.32**	**42**	⇑P	**P**	**21 53 43.7**	**+0.2**
	baz=84						
M21A	**Separation Pea**	**84.42**	**43**	⇓P	**P**	**21 53 44.7**	**+0.6**
	baz=85						
B14A	**Marquette Ranc**	**84.48**	**35**	⇓P	**P**	**21 53 44.8**	**+0.6**
	baz=85						
S25A	**Robets Cordova**	**84.50**	**48**	⇑P	**P**	**21 53 45.3**	**+0.6**
	baz=85						
C15A	**Salmond Ranch,**	**84.52**	**36**	⇓P	**P**	**21 53 44.4**	**0.0**
	baz=85						
Z29A	**Hungry Hill Ra**	**84.53**	**53**	⇓P	**P**	**21 53 45.0**	**+0.3**
	baz=85						
H18A	**Shoshone NF, C**	**84.54**	**40**	⇓P	**P**	**21 53 45.3**	**+0.6**
	baz=85						
L21A	**Rawlins**	**84.59**	**43**	⇑P	**P**	**21 53 45.9**	**+0.9**
	baz=85						
F17A	**Fitzpatrick Pl**	**84.60**	**38**	⇑P	**P**	**21 53 45.6**	**+0.7**
	baz=85						
532A	**Rocksprings**	**84.61**	**56**	⇓P	**P**	**21 53 45.7**	**+0.5**
	baz=85						
N22A	**Wattenberg Ran**	**84.61**	**44**	⇓P	**P**	**21 53 46.2**	**+1.0**
	baz=85						
O23A	**Lake Granby, G**	**84.69**	**45**	⇑P	**P**	**21 53 46.4**	**+0.8**
	baz=85						
ISCO	**Idaho Springs**	**84.69**	**45**	⇓P	**P**	**21 53 45.5**	**-0.2**
	baz=85						
D16A	**Dana Ranch, Ca**	**84.70**	**37**	⇑P	**P**	**21 53 46.0**	**+0.7**
	baz=85						
A14A	**Double T Ranch**	**84.75**	**35**	⇓P	**P**	**21 53 45.7**	**+0.1**
	baz=85						
E17A	**Martinsdale**	**84.79**	**38**	⇑P	**P**	**21 53 46.0**	**+0.1**
	baz=85						
ILAR	**Eielson Array**	**84.84**	**11**	P	**P**	**21 53 45.6**	**+0.2**
ILAR	**Eielson Array**	**84.84**	**11**	P	**P**	**21 53 45.6**	**+0.2**
	1.2nm,0.7s,baz=225,slow=6.3,SNR=12						
ILAR				LR	LR	22 30 08.1	
	comp=Z,44nm,19.5s,baz=287,slow=35						
G18A	**Lazy EL Ranch,**	**84.94**	**39**	⇓P	**P**	**21 53 46.8**	**+0.2**
	baz=85						
N23A	**Red Feather La**	**85.00**	**44**	⇓P	**P**	**21 53 47.3**	**+0.2**
	baz=85						
K21A	**Alcova**	**85.00**	**42**	⇓P	**P**	**21 53 48.0**	**+1.0**
	baz=85						
C16A	**Fuhringer Ranc**	**85.02**	**36**	⇑P	**P**	**21 53 46.8**	**-0.1**
	baz=85						
RLMT	**Red Lodge**	**85.02**	**39**	⇓P	**P**	**21 53 47.7**	**+0.6**
	baz=85						
231A	**Bronte**	**85.03**	**54**	⇑P	**P**	**21 53 47.8**	**+0.6**
	baz=85						
I20A	**Worland**	**85.11**	**41**	⇑P	**P**	**21 53 47.7**	**+0.2**
	baz=85						
A15A	**Johnson Ranch,**	**85.13**	**35**	⇓P	**P**	**21 53 47.2**	**-0.2**
	baz=85						
F18A	**Big Timber**	**85.16**	**39**	⇓P	**P**	**21 53 48.2**	**+0.6**
	baz=85						
S26A	**Kim**	**85.16**	**48**	⇑P	**P**	**21 53 48.4**	**+0.5**
	baz=85						
J21A	**Lysite**	**85.23**	**42**	⇑P	**P**	**21 53 48.5**	**+0.4**
	baz=86						
332A	**Millersview**	**85.25**	**55**	⇑P	**P**	**21 53 49.5**	**+1.1**
	baz=86						
D17A	**Six Diamond Ra**	**85.26**	**37**	⇓P	**P**	**21 53 48.2**	**0.0**
	baz=86						
232A	**Coleman**	**85.53**	**55**	⇑P	**P**	**21 53 50.5**	**+0.8**
	baz=86						
I21A	**Big Trails, Te**	**85.56**	**41**	⇑P	**P**	**21 53 49.7**	**-0.1**
	baz=86						
X30A	**Coker Ranch, T**	**85.66**	**52**	⇓P	**P**	**21 53 51.1**	**+0.8**
	baz=86						
Z31A	**Sharp Cattle R**	**85.74**	**53**	⇓P	**P**	**21 53 52.0**	**+1.2**
	baz=86						
L23A	**Garrett**	**85.75**	**43**	⇑P	**P**	**21 53 50.8**	**0.0**
	baz=86						
ABTX	**Abilene, Hawle**	**85.84**	**54**	⇓P	**P**	**21 53 52.6**	**+1.4**
	baz=86						
T28A	**Walsh**	**85.91**	**49**	⇑P	**P**	**21 53 51.9**	**+0.3**
	baz=86						
Z32A	**Haskell**	**86.24**	**53**	⇑P	**P**	**21 53 53.3**	**+0.1**
	baz=86						
D20A	**Manuel Ranch,**	**86.71**	**38**	⇑P	**P**	**21 53 55.4**	**+0.2**
	baz=87						
WHTX	**Lake Whitney**	**87.28**	**55**	⇓P	**P**	**21 53 58.2**	**0.0**
	baz=88						
A19A	**Klindworth Far**	**87.31**	**36**	⇑P	**P**	**21 53 57.8**	**-0.3**
	baz=88						
H24A	**Dirks Ranch, A**	**87.73**	**41**	⇑P	**P**	**21 54 00.5**	**+0.2**
	baz=88						
A20A	**Cobblestone Ra**	**87.75**	**37**	⇓P	**P**	**21 54 00.1**	**-0.1**
	baz=88						
VNA3	**Neumayer Olymp**	**90.16**	**174**	*e*P	**P**	**21 54 10.4**	**-0.8**
SNAA	**Sanae**	**90.24**	**177**	*e*P	**P**	**21 54 10.5**	**-1.2**
INK	**Inuvik**	**90.59**	**14**	LR	LR	22 31 03.9	
	comp=Z,60nm,20.3s,baz=128,slow=33						
VNA2	**Neumayer--Watz**	**90.66**	**175**	*e*P	**P**	**21 54 13.2**	**-0.4**
	baz=210,slow=4.3						
YKA	**Yellowknife Ar**	**92.13**	**23**	P	**P**	**21 54 20.6**	**+0.3**
YKA	**Yellowknife Ar**	**92.13**	**23**	P	**P**	**21 54 20.5**	**+0.3**
	0.4nm,0.8s,baz=249,slow=5.0,SNR=7.6						
CFAA	**Coronel Fontan**	**92.20**	**124**	P	**P**	**21 54 21.3**	**-0.3**
CFAA	**Coronel Fontan**	**92.20**	**124**	P	**P**	**21 54 21.3**	**-0.3**
	0.3nm,0.7s,baz=282,slow=3.3,SNR=4.3						
CMAR	**Chiang Mai Arr**	**94.32**	**288**	P	**P**	**21 54 33.7**	**+2.3**
CMAR	**Chiang Mai Arr**	**94.32**	**288**	P	**P**	**21 54 33.7**	**+2.3**
	0.3nm,0.4s,baz=92,slow=2.6,SNR=4.0						
CHTO	**Chiang Mai**	**94.42**	**288**	*e*P	**P**	**21 54 30.3**	**-1.6**
ULM	**Lac du Bonnet**	**95.38**	**39**	LR	LR	22 32 19.3	
	comp=Z,54nm,20.7s,baz=332,slow=32						
ROSC	**El Rosal**	**99.17**	**88**	LR	LR	22 31 38.7	
	comp=Z,31nm,18.8s,baz=12,slow=31						
MK31	**Makanchi Array**	**113.33**	**314**	*e*PKPdf	**PKiKP**	**21 59 48.1**	**-1.0**
BVAR	**Borovoye Array**	**120.52**	**321**	PKP	**PKPdf**	**22 00 02.4**	**-0.3**
BVAR	**Borovoye Array**	**120.52**	**321**	PKP	**PKPdf**	**22 00 02.4**	**-0.3**
	0.9nm,0.7s,baz=101,slow=3.0,SNR=6.7						
ARCES	**ARCESS Array B**	**127.33**	**352**	PKP	**PKPdf**	**22 00 14.7**	**-0.6**
ARCES	**ARCESS Array B**	**127.33**	**352**	PKP	**PKPdf**	**22 00 14.7**	**-0.6**
	2.5nm,0.7s,baz=20,slow=1.4,SNR=9.5						
BOSA	**Boshof**	**130.57**	**201**	PKP	**PKPdf**	**22 00 22.8**	**-0.2**
BOSA	**Boshof**	**130.57**	**201**	PKP	**PKPdf**	**22 00 22.8**	**-0.2**
	1.4nm,0.7s,baz=146,slow=19,SNR=4.1						
FINES	**FINESS Array B**	**134.70**	**348**	PKP	**PKPdf**	**22 00 30.0**	**+0.6**
FINES	**FINESS Array B**	**134.70**	**348**	PKP	**PKPdf**	**22 00 30.0**	**+0.6**
	1.3nm,0.7s,baz=31,slow=4.4,SNR=8.0						
HFS	**Hagfors**	**137.72**	**355**	PKP	**PKPdf**	**22 00 36.2**	**+1.1**
HFS	**Hagfors**	**137.72**	**355**	PKP	**PKPdf**	**22 00 36.2**	**+1.1**
	1.6nm,1.1s,baz=222,slow=28,SNR=4.3						
KMBO	**Kilima Mbogo**	**145.14**	**240**	PKPbc	**PKPdf**	**22 00 50.1**	**-0.1**
KMBO	**Kilima Mbogo**	**145.14**	**240**	PKPbc	**PKPdf**	**22 00 50.1**	**-0.1**
	0.5nm,0.5s,baz=49,slow=22,SNR=6.8						
KWP	**Kalwaria Pacla**	**146.20**	**342**	*e*PKPdf	**PKPdf**	**22 00 51.2**	**+0.6**
KWP				*e*PKPbc	**PKPab**	**22 00 52.2**	**-0.1**
MALT	**Malatya**	**146.36**	**313**	*e*PKPbc	**PKPab**	**22 00 54.0**	**+0.6**
CLL	**Collm**	**146.52**	**354**	⇑*i*PKPbc	**PKPbc**	**22 00 52.8**	**+0.3**
	comp=Z,13nm,1.4s						
CLL				*i* pPKPbc	pPKPbc	22 01 03.1	+3.5
	comp=Z,7.0nm,1.0s						
CLL				*i* sPKiKP	sPKiKP	22 01 11.6	+6.6
BRG	**Berggiesshubel**	**146.84**	**353**	*e*P	**PKPbc**	**22 00 54.0**	**+0.6**
	comp=Z,6.6nm,1.0s						
UPC	**Upice**	**146.91**	**350**	*i* PKP	**PKPab**	**22 00 54.4**	**-0.6**
DPC	**Dobruska-Polom**	**147.01**	**350**	*i* PKP	**PKPab**	**22 00 54.9**	**-0.5**
DPC				*e*sPKP		22 01 13.8	
PVCC	**Panska Ves**	**147.10**	**352**	*i* PKP	**PKPab**	**22 00 55.3**	**-0.4**
OKC	**Ostrava-Krasne**	**147.15**	**347**	*i* PKP	**PKPab**	**22 00 56.6**	**+0.7**
PRU	**Pruhonice**	**147.63**	**352**	*i* PKP	**PKPbc**	**22 00 56.2**	**+0.5**
KHC	**Kasperske Hory**	**148.60**	**352**	*e*PKPbc	**PKPbc**	**22 00 58.6**	**+0.3**
KHC	**Kasperske Hory**	**148.60**	**352**	*i* PKP	**PKPbc**	**22 00 59.0**	**+0.7**
KHC				*e*pPKP	pPKPdf	22 01 10.6	+8.8
MLR	**Muntele Rosu**	**148.64**	**335**	PKPbc	**PKPbc**	**22 00 59.1**	**+0.4**
MLR	**Muntele Rosu**	**148.64**	**335**	PKPbc	**PKPbc**	**22 00 59.1**	**+0.4**
	comp=Z,0.4nm,0.9s,baz=246,slow=3.0,SNR=3.3						
BR131	**Keskin Array S**	**148.77**	**319**	*e*PKPbc	**PKPbc**	**22 00 59.0**	**-0.2**
BRTR	**Keskin Array B**	**148.77**	**319**	PKPbc	**PKPbc**	**22 00 59.3**	**+0.1**
BRTR	**Keskin Array B**	**148.77**	**319**	PKPbc	**PKPbc**	**22 00 59.3**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=112,slow=2.0,SNR=15						
GERES	**GERESS Array B**	**148.87**	**352**	PKPbc	**PKPbc**	**22 00 59.4**	**+0.3**
GERES	**GERESS Array B**	**148.87**	**352**	PKPbc	**PKPbc**	**22 00 59.4**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=29,slow=3.0,SNR=18						
BFO	**Black Forest**	**149.78**	**359**	*e*PKPbc	**PKPbc**	**22 01 01.4**	**+0.2**
DAVOX	**Davos/Dischmat**	**151.27**	**357**	PKPbc	**PKPbc**	**22 01 05.6**	**+0.5**
DAVOX	**Davos/Dischmat**	**151.27**	**357**	PKPbc	**PKPbc**	**22 01 05.6**	**+0.5**
	comp=Z,4.8nm,0.6s,baz=278,slow=3.1,SNR=14						
CRNS	**Crni Vrh**	**151.49**	**350**	*i* PKPbc	**PKPbc**	**22 01 05.2**	**-0.2**
TORD	**Torodi Ar. Bea**	**172.53**	**130**	PKP	**PKPdf**	**22 01 18.4**	**-2.9**
TORD				PKPab	**PKPab**	**22 02 44.6**	**-1.6**
TORD	**Torodi Ar. Bea**	**172.53**	**130**	PKP	**PKPdf**	**22 01 18.4**	**-2.9**
	comp=Z,1.0nm,1.0s,baz=220,slow=1.1,SNR=4.4						
TORD				PKPab	**PKPab**	**22 02 44.6**	**-1.6**
	comp=Z,1.4nm,0.8s,baz=245,slow=4.3,SNR=8.3						

IDC 03 21:44:25.0±25.0**, 19°.91S×68°.32W, h191**km±150km**, mb3.1**/2**, mb1 3.2**/3**, mb1mx3.0**/18**, mbtmp3.0**/3**, MS2.5**/1**, Ms1 2.5**/1**, ms1mx2.2**/8**, Error ellipse: s-maj=372.7km s-min=50.4km az=20.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.61**	**3**	P	Pn	21 45 22.2	0.0
	0.8nm,0.3s,baz=194,slow=5.6,SNR=20						
LPAZ				S	Sn	21 45 52.8	-14
	0.4nm,0.3s,baz=248,slow=7.7,SNR=4.8						
SIV	**San Ignacio**	**7.92**	**62**	LR	LR	21 50 07.0	
	comp=Z,33nm,18.6s,slow=43						
TORD	**Torodi Ar. Bea**	**76.30**	**70**	P	P	21 55 53.3	0.0
	0.3nm,0.5s,baz=261,slow=4.8,SNR=2.6						
YKA	**Yellowknife Ar**	**89.88**	**340**	P	P	21 57 01.6	-0.1
	0.2nm,0.5s,baz=136,slow=4.1,SNR=5.4						
MKAR	**Makanchi Array**	**144.03**	**35**	PKP	PKPdf	22 03 37.4	-0.4
	0.8nm,0.7s,baz=336,slow=3.9,SNR=9.4						

MAN 03 21:48:29, 10°.39N×125°.13E, h4km**, mb3.9, ML2.7, MS2.3, 1C-2D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.37**	**226**	*e*P	Pg	21 48 36.9	+0.8
MSLP				*e*S	Sb	21 48 43.1	-1.1
PLP	**Palo**	**0.78**	**349**	⇓*i*P	Pg	21 48 43.8	-0.3
PLP				*e*S	Sb	21 48 55.8	-0.5
OCLP	**Ormoc**	**0.83**	**322**	*e*P	Pb	21 48 45.8	-0.3
LLP	**Lapu-Lapu**	**1.15**	**266**	⇑*e*P	Pg	21 48 50.5	-0.5
LLP				*e*S	Sn	21 49 07.7	-0.3
TBP	**Tagbilaran**	**1.43**	**241**	*e*P	Pn	21 48 55.1	-0.6
TBP				*e*S	Sn	21 49 16.9	+2.0
GUIM	**Jordan**	**2.51**	**276**	*e*P	Pn	21 49 11.3	+0.7
RCP	**Roxas**	**2.61**	**297**	⇓*e*P	Pn	21 49 13.4	+1.4

AUST ***03*** *21:58:14.0, 2°.50N×127°.00E, h100km*
ISCJB ***03*** *21:58:23.4±0.8, 1°.65N±0°.07×127°.24E±0°.04, h103km, mb4.4/4, Error ellipse: s-maj=9.7km s-min=5.7km az=14.6*
IDC ***03*** *21:58:26.6±7.8, 1°.52N×127°.20E, h135km±71km, mb4.1/4, mb1 4.2/6, mb1mx3.6/23, mbtmp4.1/6, Error ellipse: s-maj=59.2km s-min=17.2km az=55.0*
DJA ***03*** *21:58:29.3±0.6, 1°N±4°×12°7E±°, h104km±5km, M4.4/10, mb4.7/7, mB5.1/5, MLv4.3/10, Mw(mB)4.5/5*
ISC 03 21:58:24.7±1.0**, 1°.61N**±0°.08×**127°.19E**±0°.06**, h103**km**, n29, σ2s.07**/38**, mb4.4**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.85**	**168**	P	Pn	21 58 47.0	+3.2
TNTI				S	**Sn**	**21 59 01.7**	**+3.5**
LBMI	**Labuha**	**2.25**	**172**	P	**Pn**	**21 59 03.2**	**+2.5**
LBMI				S	**Sn**	**21 59 29.2**	**+0.9**
MNI	**Manado**	**2.35**	**266**	P	**Pn**	**21 59 03.6**	**+1.6**
MNI				S	**Sn**	**21 59 33.7**	**+3.1**
KMSI	**Cibinong**	**3.37**	**252**	P	**Pn**	**21 59 18.0**	**+2.5**
SWI	**Sorong**	**4.75**	**121**	P	**Pn**	**21 59 36.9**	**+2.8**
LUWI	**Luwuk**	**5.14**	**239**	P	**Pn**	**21 59 41.3**	**+1.9**
LUWI				S	**Sn**	**22 00 38.9**	**+1.3**
AAI	**Ambon**	**5.36**	**169**	P	**Pn**	**21 59 43.8**	**+1.5**
	27nm,0.5s,2μm0.2nm						
MRSI	**Marisa**	**5.37**	**258**	P	**Pn**	**21 59 44.4**	**+1.9**
	111nm,0.5s,2μm0.4nm						
MRSI				S	**Sn**	**22 00 45.5**	**+2.4**
	111nm,0.5s,2μm0.4nm						
KDI	**Kendari**	**7.17**	**220**	P	**Pn**	**22 00 08.2**	**+1.2**
	37nm,0.7s,789nm0.2nm						
KDI				S	**Sn**	**22 01 25.4**	**-1.6**
	37nm,0.7s,789nm0.2nm						
TTSI	**Tana Toraja**	**8.70**	**238**	P	**Pn**	**22 00 29.1**	**+1.3**
	85nm,0.7s,2μm						
TTSI				S	**Sn**	**22 02 01.8**	**-2.4**
	85nm,0.7s,2μm						
BKSI	**Bulukumba**	**9.86**	**226**	P	Pn	22 00 46.9	+3.3
BKSI				S	**Sn**	**22 02 32.1**	**-0.4**
KAPI	**Kappang**	**9.93**	**228**	P	**Pn**	**22 00 45.8**	**+1.4**
	42nm,0.5s						
KAPI	**Kappang**	**9.93**	**228**	P	**Pn**	**22 00 46.0**	**+1.6**
	9.4nm,0.3s,baz=31,slow=4.0,SNR=32						
KAPI				S	**Sn**	**22 02 33.8**	**-0.3**
	2.6nm,0.3s,baz=68,slow=22,SNR=7.9						
MTN	**Manton Dam**	**14.88**	**165**	P	**Pn**	**22 01 49.3**	**-0.6**
	baz=16,SNR=15						
MTN				S	**Sn**	**22 04 34.6**	**+0.4**
	baz=16,SNR=5.6						
MTNI	**Mataram**	**14.97**	**227**	P	**Pn**	**22 01 49.5**	**-1.6**
KDU	**Kakadu**	**15.14**	**160**	P	**P**	**22 01 57.5**	**+1.7**
	baz=16,SNR=4.1						
KDU				S	**S**	**22 04 46.9**	**-3.8**
	baz=16,SNR=3.2						
FITZ	**Fitzroy Crossi**	**19.65**	**184**	P	**P**	**22 02 44.3**	**-1.1**
	0.7nm,0.3s,baz=24,slow=9.5,SNR=14						
FITZ	**Fitzroy Crossi**	**19.65**	**184**	P	**P**	**22 02 44.9**	**-0.6**
	baz=21,SNR=6.2						
WRA	**Warramunga Arr**	**22.54**	**162**	P	**P**	**22 03 13.9**	**-2.4**
	16nm,0.4s,baz=342,slow=11,SNR=52						
QIS	**Mount Isa**	**25.17**	**152**	P	**P**	**22 03 39.4**	**-1.2**
	baz=26,SNR=5.7						
ASAR	**Alice Springs**	**25.96**	**166**	P	**P**	**22 03 45.8**	**-2.1**
	3.5nm,0.5s,baz=348,slow=7.4,SNR=47						
MEEK	**Meekatharra**	**29.28**	**196**	P	**P**	**22 04 15.7**	**-1.7**
	baz=30,SNR=5.2						
BBOO	**Buckleboo**	**35.25**	**167**	P	**P**	**22 05 07.4**	**-2.0**
	baz=36,SNR=8.5						
EIDS	**Eidsvold**	**35.42**	**141**	S	**S**	**22 10 42.6**	**+4.1**
	baz=36,SNR=4.6						
STKA	**Stephens Creek**	**36.00**	**159**	P	**P**	**22 05 14.3**	**-1.6**
	6.9nm,0.3s,baz=334,slow=7.9,SNR=31						
STKA	**Stephens Creek**	**36.00**	**159**	P	**P**	**22 05 13.9**	**-2.0**
	baz=37,SNR=25						
CMSA	**Cobar Meteorol**	**37.35**	**153**	P	**P**	**22 05 26.2**	**-1.2**
	baz=38,SNR=9.9						
MKAR	**Makanchi Array**	**59.55**	**326**	P	**P**	**22 08 16.4**	**-1.1**
	0.6nm,0.4s,baz=117,slow=7.6,SNR=19						
TORD	**Torodi Ar. Bea**	**123.99**	**287**	PKP	**PKPdf**	**22 17 09.7**	**-2.3**
	0.4nm,0.6s,baz=64,slow=2.5,SNR=3.3						

MEX 03 21:59:28.9±0.4**, 18°.14N×100°.97W, h65**km±7km**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.61**	**77**	*i* P	Pn	21 59 41.1	-1.4
ARIG				*i* S	Sn	21 59 50.6	-1.8
ZIIG	**Zihuatanejo**	**0.71**	**222**	*e*P	Pn	21 59 42.2	-1.4
ZIIG				*i* S	Sn	21 59 52.8	-1.7
CAIG	**El Cayaco**	**1.28**	**148**	*i* P	Pn	21 59 50.3	-0.5
CAIG				*i* S	Sn	22 00 04.9	-2.2
MMIG	**Aquila**	**2.26**	**274**	*i* P	Pn	22 00 03.2	-0.9
MMIG				*i* S	Sn	22 00 29.2	-1.7

NIED ***03*** *22:08:00, 35°.60N×142°.90E, h5km, Mw3.7 Best double couple: M₀3.77000×10¹⁴ NP1:φs181.00000°, δ55.00000°, λ-92.00000°. NP2:φs4.00000°, δ35.00000°, λ-87.00000°.*
IDC ***03*** *22:08:24.1±0.8, 35°.54N×143°.11E, h0km, mb3.6/11, mb1 3.8/15, mb1mx3.7/30, mbtmp3.7/15, ML3.6/4, MS2.8/1, Ms1 2.8/1, ms1mx2.3/45, Error ellipse: s-maj=20.7km s-min=18.8km az=118.0*
JMA ***03*** *22:08:27.8±0.3, 35°.63N×142°.91E, h86km, M3.5*
ISCJB ***03*** *22:08:29.6±0.6, 35°.57N±0°.05×142°.82E±0°.05, h59km, mb3.5/11, Error ellipse: s-maj=6.7km s-min=5.7km az=157.2*
ISC 03 22:08:31.4±0.7**, 35°.70N**±0°.04×**142°.73E**±0°.06**, h59**km**, n29, σ2s.12**/36**, mb3.5**/11**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.52**	**271**	P	**Pn**	**22 08 56.4**	**0.0**
CHOJ				S	**Sn**	**22 09 17.9**	**+2.7**
BSO1	**Boso 1**	**1.77**	**235**	P	Pn	22 08 57.4	-1.9
BSO1				S	**Sn**	**22 09 20.9**	**+0.4**
BSO3	**Boso 3**	**2.03**	**244**	P	**Pn**	**22 09 02.6**	**-0.4**
BSO3				*e*S	**Sn**	**22 09 30.7**	**+3.7**
JFT	**Otama**	**2.65**	**314**	P	**Pn**	**22 09 11.5**	**-0.2**
JFT				S	**Sn**	**22 09 43.9**	**+1.2**
JAG	**Ashikaga**	**2.75**	**286**	P	**Pn**	**22 09 13.0**	**-0.2**
JAG				*e*S	**Sn**	**22 09 46.3**	**+1.0**
JOD2	**Odawara 2**	**3.00**	**263**	P	**Pn**	**22 09 16.1**	**-0.5**
JOD2				*e*S	**Sn**	**22 09 52.6**	**+1.2**
JRY	**Ryogami san**	**3.13**	**277**	P	**Pn**	**22 09 19.1**	**+0.8**
JRY				*e*S	**Sn**	**22 09 58.1**	**+3.6**
JYN	**Shimob**	**3.42**	**268**	P	**Pn**	**22 09 22.5**	**+0.2**
JMK	**Ichinoseki**	**3.46**	**340**	P	Pn	22 09 20.3	-2.6
JMK				*e*S	**Sn**	**22 10 00.0**	**-2.7**
JHJ2	**Mitsune**	**3.53**	**224**	P	Pn	22 09 21.2	-2.6
JHJ2				*e*S	**Sn**	**22 10 01.2**	**-3.1**
JHJ	**Hachijo jima 2**	**3.54**	**224**	Pn	Pn	22 09 22.1	-1.8
	12nm,0.3s,baz=28,slow=12,SNR=5.0						
JHJ				Sn	**Sn**	**22 10 02.0**	**-2.6**
	147nm,0.3s,baz=82,slow=23,SNR=13						
MJAR	**Matsushiro Arr**	**3.76**	**284**	Pn	**Pn**	**22 09 27.8**	**+0.9**
	3.7nm,0.3s,baz=107,slow=9.6,SNR=30						
MAT	**Matsushiro**	**3.76**	**284**	P	**Pn**	**22 09 27.8**	**+0.9**
MAT				*e*S	**Sn**	**22 10 12.6**	**+2.7**
MAT	**Matsushiro**	**3.76**	**284**	P	**Pn**	**22 09 28.9**	**+2.0**
JOM	**Ohasama**	**3.94**	**344**	P	**Pn**	**22 09 27.7**	**-1.7**
JOM				*e*S	**Sn**	**22 10 11.7**	**-2.6**
ASAJ	**Asahikawa**	**8.41**	**359**	Pn	**Pn**	**22 10 27.7**	**-2.9**
	1.1nm,0.3s,baz=211,slow=8.8,SNR=10						
ASAJ				Sn	**Sn**	**22 12 00.1**	**-3.9**
	0.7nm,0.3s,baz=177,slow=16,SNR=3.4						
USRK	**Ussuriysk Arra**	**11.82**	**319**	LR	LR	22 15 57.3	
	comp=Z,46nm,18.8s,baz=214,slow=37						
KSRS	**Korea Array**	**12.04**	**283**	Pn	**Pn**	**22 11 22.3**	**+2.2**
	0.1nm,0.3s,baz=93,slow=16,SNR=3.9						
SONM	**Songino Array**	**29.42**	**306**	P	P	22 14 33.2	+3.8
	0.7nm,0.8s,baz=101,slow=7.0,SNR=7.7						
ZALV	**Zalesovo Beam**	**43.60**	**313**	P	**P**	**22 16 32.4**	**+2.8**
	1.3nm,0.5s,baz=100,slow=7.5,SNR=7.8						
MKAR	**Makanchi Array**	**45.73**	**303**	P	**P**	**22 16 49.6**	**+2.9**
	0.6nm,0.7s,baz=91,slow=9.7,SNR=9.8						
ILAR	**Eielson Array**	**50.06**	**32**	P	**P**	**22 17 20.1**	**+0.2**
	0.3nm,0.6s,baz=272,slow=7.4,SNR=4.1						
AAK	**Ala-Archa**	**52.07**	**300**	P	**P**	**22 17 38.0**	**+2.5**
	0.2nm,0.4s,baz=43,slow=10,SNR=3.9						
WRA	**Warramunga Arr**	**55.90**	**190**	P	**P**	**22 18 02.7**	**-0.6**
	0.3nm,0.7s,baz=10,slow=7.3,SNR=5.7						
ASAR	**Alice Springs**	**59.63**	**189**	P	**P**	**22 18 29.1**	**-0.4**
	0.4nm,0.9s,baz=17,slow=8.1,SNR=5.0						
YKA	**Yellowknife Ar**	**64.43**	**30**	P	**P**	**22 19 01.9**	**+0.8**
	0.6nm,1.0s,baz=300,slow=6.5,SNR=7.2						
FINES	**FINESS Array B**	**70.49**	**333**	P	**P**	**22 19 41.8**	**+2.4**
	0.7nm,0.7s,baz=35,slow=5.1,SNR=4.3						
PDAR	**Pinedale Array**	**77.84**	**46**	P	**P**	**22 20 23.5**	**+0.6**
	0.3nm,0.7s,baz=298,slow=4.0,SNR=2.7						
BRTR	**Keskin Array B**	**80.53**	**312**	P	**P**	**22 20 40.2**	**+2.7**
	0.4nm,0.7s,baz=46,slow=5.3,SNR=4.3						

IDC ***03*** *22:23:50.6±4.8, 36°.34N×70°.32E, h174km±42km, mb3.1/7, mb1 3.2/12, mb1mx3.0/32, mbtmp3.0/12, Error ellipse: s-maj=48.2km s-min=29.3km az=147.0*
ISCJB ***03*** *22:23:53.0±0.4, 36°.52N±0°.03×70°.33E±0°.07, h204km, mb3.2/6, Error ellipse: s-maj=8.2km s-min=4.2km az=160.2*
NNC ***03*** *22:23:57.9±3.8, 36°.86N×70°.28E, h183km±34km, mb2.7, mpv3.9, Error ellipse: s-maj=37.3km s-min=21.0km az=34.0*
ISC 03 22:23:53.9±0.7**, 36°.54N**±0°.05×**70°.39E**±0°.08**, h204**km**, n42, σ0s.94**/45**, mb3.3**/6**, 8C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.98**	**155**	⇑P	**Pn**	**22 24 43.7**	**-0.1**
CEP				S	**S**	**22 25 21.0**	**-1.1**
CHCP	**Chirah Chowk**	**3.72**	**140**	⇑P	**Pn**	**22 24 52.8**	**+0.3**
THW	**Thamme Wali**	**3.90**	**163**	⇑P	**Pn**	**22 24 54.1**	**-0.6**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	6.14	24	P	Pn	22 25 23.3	0.0
	SNR=112						
UCH	Uchtor	6.51	28	P	S	22 26 40.9	-1.8
	SNR=13						
KK31	Karatay Array	6.55	1	⇑P	Pn	22 25 28.1	-0.2
	1.3nm,0.2s,baz=158,slow=38,SNR=53						
KK31				⇑S	S	22 26 39.5	-3.5
	1.2nm,0.3s,baz=185,slow=22,SNR=6.4						
EKS2	Erkin-Say	6.64	22	P	Pn	22 25 30.3	+0.7
	SNR=8.2						
KZA	Kyzart	6.69	33	P	Pn	22 25 30.6	+0.2
	SNR=7.5						
AAK	Ala-Archa	6.86	26	P	Pn	22 25 33.1	+0.7
	SNR=14						
AAK	Ala-Archa	6.86	26	P	Pn	22 25 33.2	+0.8
	2.2nm,0.3s,baz=186,slow=6.3,SNR=56						
AAK				S	S	22 26 49.4	-1.0
	1.4nm,0.3s,baz=219,slow=14,SNR=22						
KBK	Karagaybulak	7.04	29	P	Pn	22 25 35.3	+0.5
	SNR=5.8						
CHMS	Chumysh	7.27	26	P	Pn	22 25 37.7	+0.1
	SNR=5.5						
USP	Ospenovka	7.42	24	P	Pn	22 25 39.8	+0.3
	SNR=12						
TKM2	Tokmak 2	7.52	31	⇓P	Pn	22 25 41.5	+0.4
	9.0nm,0.5s						
TKM2	Tokmak 2	7.52	31	P	Pn	22 25 41.5	+0.4
	SNR=33						
MK31	Makanchi Array	13.55	37	P	P	22 27 01.7	+1.4
	0.7nm,0.7s,baz=208,slow=8.7,SNR=14						
MKAR	Makanchi Array	13.55	37	P	Pn	22 26 59.2	+1.2
	0.2nm,0.3s,baz=228,slow=13,SNR=14						
PYUN	Piuthan	13.57	125	eP	Pn	22 26 57.3	-1.3
PYUN				eS	S	22 29 19.3	-10
DANN	Dangsing	13.92	122	eP	Pn	22 27 03.2	+0.1
KOLN	Koldanda	14.19	124	eP	Pn	22 27 05.4	-0.9
AB31	Akbulak array	14.81	332	⇓P	P	22 27 15.5	+1.2
	0.9nm,0.5s,baz=141,slow=13,SNR=23						
KURBB	Kurchatov Arra	15.24	20	P	Pn	22 27 18.6	-0.1
	0.1nm,0.3s,baz=212,slow=9.8,SNR=7.0						
DMN	Daman	15.31	121	eP	Pn	22 27 19.9	-0.1
KKN	Kakani	15.32	121	eP	Pn	22 27 20.2	+0.1
	4.8nm,0.2s						
PKIN	Phulchoki	15.53	121	eP	Pn	22 27 23.9	+1.2
	8.0nm,0.3s						
PKI	Pulchoki	15.54	121	eP	Pn	22 27 24.1	+1.2
	12nm,0.5s						
GUN	Gumba	15.66	119	eP	Pn	22 27 25.0	+0.6
VOSK	Vostochnaya	16.18	1	⇑P	Pn	22 27 30.4	+0.4
	2.2nm,1.1s						
ZRNK	Zerenda	16.43	357	⇑P	Pn	22 27 33.5	+0.5
	0.8nm,0.4s						
BVA0	Borovoye Array	16.48	360	⇓P	Pn	22 27 34.0	+0.5
	0.2nm,0.9s,baz=178,slow=9.6,SNR=9.8						
BVAR	Borovoye Array	16.48	360	P	Pn	22 27 33.8	+0.2
	0.4nm,0.3s,baz=171,slow=8.0,SNR=9.3						
AKTO	Aktyubinsk	16.50	331	⇑P	Pn	22 27 34.0	+0.1
	0.9nm,0.9s						
AKTO	Aktyubinsk	16.50	331	P	Pn	22 27 34.1	+0.3
	0.3nm,0.3s,baz=143,slow=11,SNR=12						
RAMN	Ramite	16.76	120	eP	Pn	22 27 38.4	+1.0
	12nm,0.6s						
TAPN	Taplejung	17.30	117	eP	Pn	22 27 43.6	-0.2
ZALV	Zalesovo Beam	20.08	25	P	P	22 28 12.6	+0.9
	1.8nm,0.3s,baz=214,slow=10,SNR=22						
KBZ	Khabaz	22.15	297	P	P	22 28 32.1	-0.9
	1.0nm,0.8s,baz=110,slow=9.8,SNR=3.1						
FINES	FINESS Array B	37.17	326	P	P	22 30 45.6	+0.6
	0.6nm,0.6s,baz=142,slow=9.6,SNR=5.6						
ARCES	ARCESS Array B	40.92	338	P	P	22 31 16.7	+0.8
	1.9nm,0.7s,baz=116,slow=8.4,SNR=9.1						
GERES	GERESS Array B	42.51	305	P	P	22 31 29.7	+0.6
	0.1nm,0.3s,baz=82,slow=7.0,SNR=2.5						
NOA	NORSAR Array B	44.05	323	P	P	22 31 41.5	+0.2
	0.3nm,0.5s,baz=100,slow=7.8,SNR=2.8						
TORD	Torodi Ar. Bea	65.23	268	P	P	22 34 12.7	-1.2
	0.2nm,0.4s,baz=44,slow=5.3,SNR=5.8						

IDC 03 22:39:42.5±7.8**, 17°.35S×178°.15W, h467**^{km}±83^{km}**, mb3.4**/6**, mb1 3.6**/6**, mb1mx3.3**/20**, mbtmp3.4**/6**, Error ellipse: s-maj=33.2km s-min=30.9km az=81.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.12	241	P	P	22 46 28.8	+0.2
	3.0nm,0.4s,baz=85,slow=9.1,SNR=12						
WRA	Warramunga Arr	44.98	259	P	P	22 47 14.7	-0.5
	1.6nm,0.5s,baz=93,slow=7.3,SNR=12						
ASAR	Alice Springs	45.18	254	P	P	22 47 16.5	-0.3
	12nm,0.4s,baz=89,slow=8.1,SNR=144						
ASAR				PcP	pP	22 48 46.1	+0.8
	0.7nm,0.5s,baz=109,slow=3.8,SNR=5.1						
QSPA	South Pole Qui	72.70	180	P	P	22 50 22.3	+0.5
	2.7nm,0.8s,baz=36,slow=8.7,SNR=8.5						
ILAR	Eielson Array	85.29	13	P	P	22 51 29.9	+1.2
	0.1nm,0.3s,baz=221,slow=6.0,SNR=4.4						
TXAR	Lajitas Array	85.49	58	P	P	22 51 29.1	-1.5
	0.2nm,0.4s,baz=263,slow=7.2,SNR=4.3						
MKAR	Makanchi Array	108.93	314	PKiKP	PKiKP	22 57 16.9	-1.2
	0.1nm,0.4s,baz=234,slow=2.0,SNR=3.0						
BRTR	Keskin Array B	144.56	316	PKP	PKPbc	22 58 25.2	-0.2
	0.8nm,0.8s,baz=127,slow=5.2,SNR=6.2						
GERES	GERESS Array B	147.14	346	PKPbc	PKPbc	22 58 32.7	+0.3
	0.7nm,0.6s,baz=3.8,slow=2.0,SNR=8.4						

*ISCJB **03** 22:39:48.5±0.5, 27°.96S±0°.03×66°.70W±0°.06, h168^{km}±7^{km}, mb4.1/14, Error ellipse: s-maj=8.4km s-min=5.3km az=5.1*
*IDC **03** 22:39:48.5±1.3, 27°.88S×66°.64W, h145^{km}±12^{km}, mb4.0/11, mb1 4.0/15, mb1mx3.9/25, mbtmp3.9/15, Error ellipse: s-maj=16.8km s-min=10.2km az=106.0*
*NEIC **03** 22:39:49.4±0.4, 27°.92S×66°.66W, h157^{km}±5^{km}, mb4.5/9, Error ellipse: s-maj=6.9km s-min=5.7km az=110.0*
*GUC **03** 22:39:50.4±0.4, 28°.01S×66°.78W, h172^{km}±70^{km}, ML5.7*
ISC 03 22:39:49.1±0.8**, 27°.95S**±0°.04×**66°.68W**±0°.06**, h157**^{km}±8^{km}**, n78,** σ1^{s}27/100**, mb4.4**/13**, 5C-3D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	Copiapo	3.31	279	iP	Pn	22 40 42.3	+1.7
CPCH				iS	Sn	22 41 21.7	+1.0
CPCH	Copiapo	3.31	279	iP	Pn	22 40 42.3	+1.7
CPCH				iS	Sn	22 41 21.7	+1.0
CPCH				AML	AML	22 41 24.7	
	comp=E,9µm,0.1s						
LCO	Las Campanas	3.70	252	ePn	Pn	22 40 47.1	+1.3
LCO				eSn	Sn	22 41 30.2	+0.3
LCO	Las Campanas	3.70	252	⇑iP	Pn	22 40 47.4	+1.6
LCO				iS	Sn	22 41 30.9	+1.0
CFAA	Coronel Fontan	3.89	200	P	Pn	22 40 49.9	+1.8
CFAA				S	Sn	22 41 34.2	+0.1
CFAA	Coronel Fontan	3.89	200	P	Pn	22 40 49.9	+1.8
	comp=E,17nm,0.3s,baz=24,slow=13,SNR=1107						
CFAA				S	Sn	22 41 34.2	+0.1
	comp=E,20nm,0.3s,baz=216,slow=15,SNR=35						
TLL	Tololo Astrono	4.24	238	⇑iP	Pn	22 40 54.3	+1.5
TLL				iS	Sn	22 41 43.2	+0.7
TLL	Tololo Astrono	4.24	238	⇑iP	Pn	22 40 54.3	+1.5
TLL				iS	Sn	22 41 43.2	+0.7
CMCH	Combarbala	4.95	228	⇓iP	Pn	22 41 02.2	+0.1
CMCH				eS	Sn	22 41 57.9	-1.1
CMCH	Combarbala	4.95	228	⇓iP	Pn	22 41 02.2	+0.1
CMCH				eS	Sn	22 41 57.9	-1.1
ANCH	Antofagasta	5.42	321	iP	Pn	22 41 09.3	+1.2
ANCH				iS	Sn	22 42 10.2	+0.3
ANCH	Antofagasta	5.42	321	iP	Pn	22 41 09.3	+1.2
ANCH				iS	Sn	22 42 10.2	+0.3
CHNG	Los Chungos	5.74	226	iP	Pn	22 41 11.9	-0.4
CHNG				iS	Sn	22 42 15.3	-2.2
CHNG	Los Chungos	5.74	226	iP	Pn	22 41 11.9	-0.4
CHNG				iS	Sn	22 42 15.3	-2.2
PEL	Peldehue	6.23	213	⇓iP	Pn	22 41 19.7	+0.8
PEL				iS	Sn	22 42 28.1	-1.2
ROCH	El Roble	6.25	216	eP	Pn	22 41 18.8	-0.5
ROCH				iS	Sn	22 42 27.9	-2.2
LNV	Longovilo	7.24	213	⇑iP	Pn	22 41 30.4	-1.9
LNV				iS	Sn	22 42 49.1	-4.2
LNV	Longovilo	7.24	213	⇑iP	Pn	22 41 30.4	-1.9
LNV				iS	Sn	22 42 49.1	-4.2
CPUP	Villa Florida	8.48	81	P	Pn	22 41 48.9	0.0
CPUP	Villa Florida	8.48	81	P	Pn	22 41 48.9	0.0
	comp=E,0.4nm,0.3s,baz=247,slow=12,SNR=9.5						
TRQA	Tornquist	10.83	160	ePn	Pn	22 42 21.1	+1.3
	comp=E,9.5nm,0.6s						
LPAZ	La Paz	11.68	353	ePn	Pn	22 42 30.2	-1.4
	comp=E,6.3nm,0.4s						
LPAZ				S	Sn	22 44 37.2	-4.1
LPAZ	La Paz	11.68	353	P	Pn	22 42 31.6	-0.1
	comp=E,2.7nm,0.3s,baz=169,slow=10,SNR=48						
LPAZ				S	Sn	22 44 37.2	-4.1
	comp=E,0.1nm,0.3s,baz=21,slow=14,SNR=3.2						
SIV	San Ignacio	12.98	25	P	Pn	22 42 48.1	+0.2
SIV	San Ignacio	12.98	25	P	Pn	22 42 48.1	+0.2
	comp=E,0.8nm,0.3s,baz=215,slow=13,SNR=33						
SPB	Sao Paulo	17.87	80	eP	P	22 43 46.3	-0.2
	comp=E,14nm,0.6s						
SAML	Samuel	19.18	11	eP	P	22 44 00.2	-0.6
	comp=E,12nm,0.4s						
BDFB	Brasilia	21.18	59	P	P	22 44 22.0	-0.4
BDFB	Brasilia	21.18	59	P	P	22 44 22.0	-0.4
	comp=E,16nm,0.7s,baz=232,slow=9.9,SNR=25						
RCBR	Riachuelo	36.56	59	eP	P	22 46 39.7	-0.4
RCBR	Riachuelo	36.56	59	P	P	22 46 39.7	-0.4
	comp=E,9.8nm,1.0s,baz=233,slow=10,SNR=3.8						
TEIG	Tepich	52.25	334	eP	P	22 48 44.3	+0.1
TEIG	Tepich	52.25	334	P	P	22 48 44.0	-0.3
	comp=E,6.9nm,0.9s,baz=150,slow=8.1,SNR=3.8						
SNAA	Sanae	55.55	160	eP	P	22 49 07.9	+0.2
SNAA	Sanae	55.55	160	P	P	22 49 08.1	+0.3
	comp=E,0.7nm,1.0s,baz=276,slow=12,SNR=6.1						
QSPA	South Pole Qui	62.28	180	eP	P	22 49 55.5	+1.2
QSPA	South Pole Qui	62.28	180	P	P	22 49 56.1	+1.9
	comp=E,1.3nm,0.6s,baz=157,slow=6.5,SNR=17						
TKL	Tuckaleechee C	65.29	345	P	P	22 50 13.8	-0.2
TKL	Tuckaleechee C	65.29	345	P	P	22 50 13.8	-0.2
	comp=E,4.2nm,0.8s,baz=159,slow=8.6,SNR=3.2						
DBIC	Dimbokro	68.83	70	eP	P	22 50 35.7	-1.2
	comp=E,4.2nm,0.6s						
DBIC	Dimbokro	68.83	70	P	P	22 50 36.2	-0.7
	comp=E,4.7nm,0.4s,baz=208,slow=7.6,SNR=27						
ECSD	EROS Data Cent	76.43	338	eP	P	22 51 20.7	-0.4
SMCO	Snowmass	76.63	329	eP	P	22 51 21.7	-1.2
TORD	Torodi Ar. Bea	77.75	68	P	P	22 51 28.7	-0.4
TORD	Torodi Ar. Bea	77.75	68	P	P	22 51 28.7	-0.4
	comp=E,7.9nm,0.7s,baz=256,slow=5.4,SNR=54						
BOSA	Boshof	78.71	116	eP	P	22 51 34.8	+0.3
BOSA	Boshof	78.71	116	P	P	22 51 35.1	+0.6
	comp=E,6.3nm,0.7s,baz=264,slow=3.5,SNR=15						
LBTB	Lobatse	80.55	113	eP	P	22 51 44.8	+0.3
	comp=E,8.2nm,0.8s						
MCMT	McKenzie Canyo	83.77	329	eP	P	22 52 01.5	+0.7
	comp=E,1.9nm,1.1s						
TAM	Tamanrasset	85.99	62	eP	P	22 52 12.1	-0.1
	comp=E,6.7nm,1.2s						
LSZ	Lusaka	87.16	106	ePcP	PcP	22 52 20.0	0.0
	comp=E,6.5nm,1.1s						
ESDC	Sonseca Array	89.05	43	P	P	22 52 26.9	+0.5
ESDC	Sonseca Array	89.05	43	P	P	22 52 26.9	+0.5
	comp=E,1.0nm,0.7s,baz=242,slow=4.8,SNR=7.9						
YKA	Yellowknife Ar	97.91	340	P	Pdif	22 53 06.5	0.0
YKA	Yellowknife Ar	97.91	340	P	Pdif	22 53 06.5	0.0
	comp=E,0.1nm,0.4s,baz=134,slow=4.4,SNR=5.4						
ASAR	Alice Springs	124.98	203	PKP	PKPdf	22 58 31.4	+0.1
ASAR	Alice Springs	124.98	203	PKP	PKPdf	22 58 31.4	+0.1
	comp=E,0.8nm,0.4s,baz=136,slow=1.7,SNR=11						
WRA	Warramunga Arr	128.23	205	PKP	PKPdf	22 58 38.0	+0.4
WRA	Warramunga Arr	128.23	205	PKP	PKPdf	22 58 38.0	+0.4
	comp=E,0.7nm,0.3s,baz=154,slow=2.0,SNR=7.1						
EKS2	Erkin-Say	144.88	55	ePKPbc	PKPdf	22 59 08.3	+0.8
EKS2	Erkin-Say	144.88	55	P	PKPdf	22 59 08.8	+1.2
	SNR=11						
AML	Almayashu	144.93	56	P	PKPdf	22 59 09.1	+1.1
	SNR=9.7						
KURK	Kurchatov	145.31	39	ePKPbc	PKPab	22 59 09.2	+0.9
AAK	Ala-Archa	145.41	55	ePKPbc	PKPab	22 59 10.4	+1.2
AAK	Ala-Archa	145.41	55	PKPbc	PKPab	22 59 10.6	+1.4
	comp=E,20nm,0.8s,baz=216,slow=2.6,SNR=103						
CHMS	Chumysh	145.51	54	P	PKPab	22 59 10.5	+1.1
	SNR=11						
KBK	Karagaybulak	145.73	54	P	PKPab	22 59 11.6	+1.2
	SNR=12						
TKM2	Tokmak 2	146.13	54	ePKPbc	PKPbc	22 59 11.4	+0.3
TKM2	Tokmak 2	146.13	54	P	PKPab	22 59 11.7	-0.3
	SNR=18						
ZAA0	Zalesovo Array	146.68	31	ePKPbc	PKPbc	22 59 11.3	-0.7
ZALV	Zalesovo Beam	146.68	31	PKPbc	PKPbc	22 59 11.9	-0.1
ZALV	Zalesovo Beam	146.68	31	PKPbc	PKPbc	22 59 11.9	-0.1
	comp=E,6.0nm,0.3s,baz=314,slow=3.6,SNR=40						
ULHL	Ulahol	146.75	55	P	PKPbc	22 59 13.3	+0.4
	SNR=13						
MK31	Makanchi Array	149.27	44	ePKPbc	PKPbc	22 59 19.7	+0.6
MKAR	Makanchi Array	149.27	44	PKPbc	PKPbc	22 59 19.9	+0.8
MKAR				PKPab	PKPab	22 59 24.2	0.0
MKAR	Makanchi Array	149.27	44	PKPbc	PKPbc	22 59 19.9	+0.8
	comp=E,7.9nm,0.9s,baz=308,slow=2.4,SNR=63						
MKAR				PKPab	PKPab	22 59 24.2	0.0
	comp=E,4.7nm,0.7s,baz=306,slow=3.2,SNR=24						
SONM	Songino Array	159.42	13	PKP	PKPdf	22 59 29.4	+0.6
SONM				PKPab	PKPab	23 00 08.2	+0.9
SONM	Songino Array	159.42	13	PKP	PKPdf	22 59 29.4	+0.6
	comp=E,0.8nm,1.0s,baz=349,slow=1.5,SNR=3.5						
SONM				PKPab	PKPab	23 00 08.2	+0.9
	comp=E,0.6nm,0.7s,baz=324,slow=3.9,SNR=5.1						

*IDC **03** 22:52:28.2±1.5, 23°.47S×175°.11W, h0^{km}, mb4.2/6, mb1 4.4/6, mb1mx4.0/21, mbtmp4.2/6, Error ellipse: s-maj=46.8km s-min=32.8km az=151.0*
*ISCJB **03** 22:52:30.0±0.7, 23°.5S±0°.2×175°.1W±0°.1, h29^{km}, mb4.5/11, Error ellipse: s-maj=27.4km s-min=15.7km az=158.1*
*NEIC **03** 22:52:34.8±0.6, 23°.44S×175°.06W, h55^{km}, mb4.7/6, Error ellipse: s-maj=27.8km s-min=12.4km az=156.0*
ISC 03 22:52:31.7±0.8**, 23°.5S**±0°.2×**175°.0W**±0°.2**, h29**^{km}**, n27,** σ0^{s}75/28**, mb4.6**/11**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	36.07	268	P	P	22 59 31.3	+0.2
CTA	Charters Tower	36.07	268	P	P	22 59 31.3	+0.2
	3.9nm,0.5s,baz=102,slow=9.8,SNR=8.5						
STKA	Stephens Creek	39.12	248	P	P	22 59 57.2	+0.4
STKA	Stephens Creek	39.12	248	P	P	22 59 57.2	+0.4
	0.5nm,0.3s,baz=67,slow=7.7,SNR=2.9						
ASAR	Alice Springs	46.62	259	P	P	23 00 57.6	-0.1
ASAR	Alice Springs	46.62	259	P	P	23 00 57.6	-0.1
	3.4nm,0.9s,baz=90,slow=8.1,SNR=20						
WRAB	Tennant Creek	47.00	264	eP	P	23 00 59.9	-0.8
	4.4nm,0.7s						
WRA	Warramunga Arr	47.01	264	P	P	23 00 59.9	-0.8
WRA	Warramunga Arr	47.01	264	P	P	23 00 59.9	-0.8
	5.1nm,0.7s,baz=101,slow=8.0,SNR=21						
FITZ	Fitzroy Crossi	55.43	264	eP	P	23 02 04.0	0.0
	2.9nm,0.9s						
FITZ	Fitzroy Crossi	55.43	264	P	P	23 02 04.4	+0.4
	3.3nm,1.0s,baz=99,slow=9.2,SNR=5.1						
NWAO	Narrogin (SRO)	59.56	245	eP	P	23 02 31.7	-1.2
MJAR	Matsushiro Arr	74.28	322	P	P	23 04 06.4	+0.1
MJAR	Matsushiro Arr	74.28	322	P	P	23 04 06.4	+0.1
	0.7nm,0.5s,baz=144,slow=5.0,SNR=3.6						
VNA3	Neumayer Olymp	84.95	175	eP	P	23 05 03.4	-0.4
VNA2	Neumayer--Watz	85.43	176	eP	P	23 05 06.4	+0.2
	baz=154,slow=1.8						
RRI2	Red Ridge	88.52	41	eP	P	23 05 20.7	-1.2
	2.7nm,0.7s						
SNOW	Snow King Moun	88.93	41	eP	P	23 05 22.7	-1.1
	6.0nm,0.5s						
IMW	Indian Meadow	89.06	41	eP	P	23 05 24.6	+0.2
	2.8nm,0.6s						
LOHW	Long Hollow	89.10	41	eP	P	23 05 19.7	-4.9
	3.0nm,0.6s						
AKASG	Malin Array Be	146.98	331	PKPbc	PKPbc	23 12 11.6	+0.3
AKASG	Malin Array Be	146.98	331	PKPbc	PKPbc	23 12 11.6	+0.3
	0.4nm,0.3s,baz=39,slow=3.9,SNR=4.6						
BRTR	Keskin Array B	150.91	311	PKPbc	PKPbc	23 12 22.2	+0.3
BRTR				PKPab	PKPab	23 12 30.7	+1.4
BRTR	Keskin Array B	150.91	311	PKPbc	PKPbc	23 12 22.2	+0.3
	0.7nm,0.7s,baz=95,slow=2.7,SNR=5.8						
BRTR				PKPab	PKPab	23 12 30.7	+1.4
	1.0nm,0.9s,baz=90,slow=6.2,SNR=5.8						
CLL	Collm	151.56	349	ePKPbc	PKPbc	23 12 22.0	-0.9
TORD	Torodi Ar. Bea	169.23	162	PKPab	PKPab	23 13 49.9	+1.0
TORD	Torodi Ar. Bea	169.23	162	PKPab	PKPab	23 13 49.9	+1.0
	0.6nm,0.9s,baz=184,slow=4.6,SNR=3.8						

IDC 03 22:54:32.2±5.4**, 30°.30S×177°.44W, h0**^{km}**, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.8**/19**, mbtmp4.0**/3**, MS3.5**/1**, Ms1 3.4**/1**, ms1mx2.7**/21**, Error ellipse: s-maj=211.7km s-min=55.1km az=159.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	34.26	279	P	P	23 01 21.1	+0.9
	1.4nm,0.4s,baz=119,slow=10,SNR=3.9						
STKA	Stephens Creek	34.97	257	LR	LR	23 13 59.2	
	comp=Z,76nm,19.3s,baz=206,slow=33						
ASAR	Alice Springs	43.60	267	P	P	23 02 37.7	-0.7
	0.4nm,0.4s,baz=103,slow=7.8,SNR=4.0						
WRA	Warramunga Arr	44.58	272	P	P	23 02 45.6	-0.7
	0.9nm,0.3s,baz=109,slow=8.1,SNR=5.0						
FINES	FINESS Array B	145.22	340	PKPbc	PKPbc	23 14 10.0	-0.8
	0.9nm,0.8s,baz=44,slow=4.0,SNR=6.9						

MEX 03 23:07:50.2±0.5**, 16°.03N×97°.80W, h26**^{km}±9^{km}**, MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.48	319	eP	Pb	23 07 58.3	-1.9
PNIG				iS	Sb	23 08 05.3	-1.6
UTMO	Huajuapan	1.79	360	eP	Pn	23 08 17.8	-1.9
UTMO				iS	Sn	23 08 38.1	-3.8
MEIG	Mezcala	2.57	318	iS	Sn	23 08 58.4	-2.3
CAIG	El Cayaco	2.57	294	iP	Pn	23 08 27.7	-2.5
CAIG				iS	Sn	23 08 57.9	-2.8
CMIG	Matias Romero	2.99	69	eP	Pn	23 08 33.8	-2.2
CMIG				iS	Sn	23 09 08.5	-2.5
YAIG	Yautepec	3.07	337	iP	Pn	23 08 35.7	-1.5
YAIG				iS	Sn	23 09 09.7	-3.5

MEX 03 23:29:37.4±0.5**, 15°.65N×95°.92W, h10**^{km}**, MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.22	302	eP	Pg	23 29 41.3	-0.7
HUIG				iS	Sg	23 29 45.2	+0.1
VHO	Vista Hermosa	1.62	331	eP	Pn	23 30 03.3	-3.0
VHO				iS	Sn	23 30 23.4	-4.0
CMIG	Matias Romero	1.74	34	eP	Pn	23 30 04.4	-3.4
CMIG				iS	Sn	23 30 25.0	-5.1
TGIG		2.91	67	iP	Pn	23 30 21.3	-2.6
TGIG				iS	Sn	23 30 55.3	-3.7

IDC 03 23:35:10.4±5.9**, 28°.79S×177°.70W, h170**^{km}±52^{km}**, mb3.7**/7**, mb1 3.8**/7**, mb1mx3.6**/18**, mbtmp3.7**/7**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.9**/26**, Error ellipse: s-maj=22.6km s-min=18.2km az=7.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	15.79	22	P	Pn	23 38 34.9	-8.8
	baz=198,slow=13,SNR=3.2						
DZM	Mont Dzumac	15.80	291	LR	LR	23 43 34.9	
	comp=Z,198nm,18.1s,baz=189,slow=32						
PPT	Papeete	28.09	73	P	P	23 40 46.7	+0.4
	13nm,0.3s,baz=237,slow=23,SNR=3.6						
CTA	Charters Tower	33.84	277	P	P	23 41 37.6	+0.9
	1.3nm,0.5s,baz=120,slow=8.1,SNR=3.8						
STKA	Stephens Creek	35.13	255	P	P	23 41 47.9	+0.1
	1.1nm,0.5s,baz=110,slow=12,SNR=2.9						
ASAR	Alice Springs	43.48	265	P	P	23 42 56.3	-0.8
	1.5nm,0.5s,baz=98,slow=6.6,SNR=37						
WRA	Warramunga Arr	44.33	270	P	P	23 43 03.2	-0.6
	2.2nm,0.7s,baz=108,slow=8.4,SNR=7.7						
QSPA	South Pole Qui	61.32	180	P	P	23 45 07.6	-0.1
	4.0nm,0.9s,baz=85,slow=1.9,SNR=14						
MJAR	Matsushiro Arr	77.07	325	P	P	23 46 45.1	+0.4
	1.4nm,0.6s,baz=158,slow=6.2,SNR=5.5						
NVAR	Mina Array Bea	86.88	43	P	P	23 47 34.6	-1.4
	0.8nm,0.7s,baz=214,slow=8.8,SNR=4.1						
MKAR	Makanchi Array	116.93	311	PKP	PKPdf	23 53 33.6	-0.9
	0.2nm,0.4s,baz=139,slow=0.9,SNR=4.7						
ARCES	ARCESS Array B	137.07	348	PKP	PKPdf	23 54 13.5	+1.3
	6.9nm,1.1s,baz=48,slow=1.3,SNR=7.6						
KAF	Kangasniemi	143.12	341	ep	PKPab	23 54 18.1	-1.1
	0.3nm,0.3s						
FINES	FINESS Array B	143.72	341	PKhKP	PKPpre	23 54 21.2	
	1.5nm,0.6s,baz=50,slow=4.7,SNR=13						
FINES				PKP	PKPdf	23 54 24.6	+0.2
	0.8nm,0.6s,baz=307,slow=3.0,SNR=7.3						
NB2	NORSAR Subarra	147.20	352	PKP	PKPbc	23 54 31.9	-1.1
	comp=Z,0.9nm,0.5s,baz=23,slow=3.0						
NOA	NORSAR Array B	147.20	352	PKPbc	PKPbc	23 54 31.8	-1.1
	comp=Z,1.2nm,0.6s,baz=14,slow=4.4,SNR=7.1						
AKASG	Malin Array Be	150.16	325	PKPbc	PKPbc	23 54 40.2	-0.5
	comp=Z,2.5nm,0.5s,baz=42,slow=3.1,SNR=10.0						
BRTR	Keskin Array B	152.03	301	PKPbc	PKPbc	23 54 45.8	+0.2
	comp=Z,1.1nm,0.6s,baz=130,slow=3.7,SNR=8.7						
TORD	Torodi Ar. Bea	164.43	178	PKP	PKPdf	23 54 54.7	+0.4
	comp=Z,0.1nm,0.4s,baz=222,slow=2.0,SNR=2.4						
TORD				PKPab	PKPab	23 55 49.3	-0.2
	comp=Z,0.6nm,0.5s,baz=178,slow=4.3,SNR=2.3						

IDC 03 23:42:18.2±3.5**, 62°.77S×155°.03E, h0**^{km}**, mb3.7**/2**, mb1 4.0**/3**, mb1mx3.8**/13**, mbtmp3.7**/3**, ML3.6**/1**, MS3.9**/10**, Ms1 3.9**/10**, ms1mx3.8**/19**, Error ellipse: s-maj=238.3km s-min=41.0km az=73.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	14.99	174	Pn	Pn	23 45 51.4	+0.6
	0.2nm,0.3s,baz=352,slow=14,SNR=10						
VNDA				LR	LR	23 51 10.9	
	comp=Z,831nm,18.3s,baz=353,slow=36						
RPZ	Rata Peaks	21.24	34	LR	LR	23 54 24.8	
	comp=Z,581nm,18.1s,baz=20,slow=34						
QSPA	South Pole Qui	27.32	180	LR	LR	23 59 13.1	
	comp=Z,208nm,18.3s,baz=198,slow=37						
URZ	Urewera	27.97	39	LR	LR	23 57 02.8	
	comp=Z,139nm,18.7s,baz=327,slow=32						
STKA	Stephens Creek	32.08	338	LR	LR	00 00 27.6	
	comp=Z,74nm,18.4s,baz=18,slow=34						
MAW	Mawson	35.57	221	LR	LR	00 04 14.6	
	comp=Z,274nm,19.3s,baz=307,slow=37						
NWAO	Narrogin (SRO)	38.18	303	LR	LR	00 01 14.6	
	comp=Z,257nm,20.8s,baz=78,slow=30						
ASAR	Alice Springs	41.59	330	P	P	23 50 06.8	-0.9
	1.2nm,1.0s,baz=166,slow=8.4,SNR=3.5						
WRA	Warramunga Arr	45.09	332	P	P	23 50 36.6	+0.7
	0.9nm,0.8s,baz=169,slow=6.8,SNR=4.6						
WRA				LR	LR	00 07 04.8	
	comp=Z,152nm,20.6s,baz=150,slow=33						
BOSA	Boshof	80.55	223	LR	LR	00 26 01.3	
	comp=Z,55nm,19.4s,baz=340,slow=33						
CMAR	Chiang Mai Arr	92.05	308	LR	LR	00 33 32.7	
	comp=Z,24nm,21.4s,baz=334,slow=33						
YKA	Yellowknife Ar	141.97	49	PKP	PKPdf	00 01 48.1	-2.1
	0.2nm,0.7s,baz=232,slow=2.6,SNR=3.9						

MEX 03 23:50:40.6±0.8**, 15°.57N×95°.94W, h3**^{km}±13^{km}**, MD3.7, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.26	321	eP	Pg	23 50 45.3	-0.4
HUIG				iS	Sg	23 50 49.2	+0.1
VHO	Vista Hermosa	1.68	333	eP	Pn	23 51 08.1	-3.2
VHO				iS	Sn	23 51 27.9	-5.6
CMIG	Matias Romero	1.82	34	eP	Pn	23 51 08.8	-4.1
CMIG				iS	Sn	23 51 32.3	-4.3
TGIG		2.96	66	iP	Pn	23 51 26.6	-2.1
TGIG				iS	Sn	23 52 00.4	-4.5

IDC 03 23:56:40.1±1.4**, 8°.07S×124°.95E, h0**^{km}**, mb3.4**/3**, mb1 3.7**/5**, mb1mx3.5**/21**, mbtmp3.6**/5**, ML3.8**/2**, Error ellipse: s-maj=186.6km s-min=28.5km az=60.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.90	143	Pn	Pn	00 00 13.3	+1.1
	0.4nm,0.3s,baz=318,slow=13,SNR=8.1						
WRA				Sn	Sn	00 02 45.9	-12
	0.6nm,0.3s,baz=316,slow=24,SNR=6.8						
ASAR	Alice Springs	17.72	152	P	Pn	00 00 47.9	-0.7
	0.3nm,0.3s,baz=325,slow=12,SNR=21						
ASAR				S	Sn	00 03 52.8	-14

	0.2nm,0.3s,baz=311,slow=22,SNR=9.0						
MKAR	**Makanchi Array**	**66.49**	**329**	P	P	00 07 32.1	+0.4
	0.2nm,0.6s,baz=143,slow=7.6,SNR=3.1						
ZALV	**Zalesovo Beam**	**70.43**	**336**	P	P	00 07 56.1	0.0
	0.2nm,0.2s,baz=137,slow=4.9,SNR=2.5						
KURBB	**Kurchatov Arra**	**70.90**	**331**	P	P	00 07 58.6	-0.4
	0.3nm,0.9s,baz=128,slow=7.5,SNR=2.9						

*ISCJB **04** 00:18:40.7±0.7, 79°.32N±0°.05×114°.0W±0°.3, h10km, mb3.6/6, Error ellipse: s-maj=7.9km s-min=7.0km az=171.9*
*OTT **04** 00:18:41.4±0.8, 79°.66N×115°.16W, h18km, ML3.8/7, Arctic Ocean. 262km northwest from Isachsen, Nu*
*IDC **04** 00:18:41.0±0.9, 79°.70N×114°.81W, h0km, mb3.7/6, mb1 4.0/10, mb1mx3.7/32, mbtmp3.8/10, ML3.8/4, Error ellipse: s-maj=29.6km s-min=18.0km az=102.0*
ISC 04 00:18:41.0±0.7, **79°.37N**±0°.06×**114°.02W**±0°.07, **h10km, n29,** σ2.60/39, **mb3.7**/6, **Arctic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EUNU	**Eureka**	**4.96**	**69**	PN	**Pn**	**00 19 57.9**	**+2.5**
EUNU				SN	**Sn**	**00 20 49.1**	**-3.6**
EUNU				Trac		00 20 57.2	
	comp=Z,8.5nm,0.2s						
RES	**Resolute Bay**	**6.33**	**128**	PN	Pn	00 20 19.1	+4.9
RES				mb		00 20 20.5	
	comp=Z,4.5nm,0.1s						
RES				SN	**Sn**	**00 21 29.7**	**+3.3**
RES				Trac		00 21 31.8	
	comp=Z,7.8nm,0.2s						
RES	**Resolute Bay**	**6.33**	**128**	Pn	Pn	00 20 19.1	+4.9
	1.8nm,0.3s,baz=320,slow=9.4,SNR=143						
RES				Sn	**Sn**	**00 21 30.6**	**+4.2**
	2.4nm,0.3s,baz=251,slow=21,SNR=8.4						
CB31	**Cambridge Bay**	**10.56**	**162**	PN	**Pn**	**00 21 15.2**	**+3.1**
CB31				mb		00 21 17.9	
	comp=Z,16nm,0.3s						
CB31				SN	**Sn**	**00 23 09.8**	**-0.3**
CB31				Trac		00 23 13.2	
	comp=Z,11nm,0.4s						
INK	**Inuvik**	**12.25**	**216**	PN	**Pn**	**00 21 34.2**	**-0.9**
INK				mb		00 21 37.9	
	comp=N,2.7nm,0.4s						
INK				SN	Sn	00 23 42.5	-8.9
INK				Trac		00 23 47.4	
	comp=N,0.7nm,0.3s						
INK	**Inuvik**	**12.25**	**216**	Pn	**Pn**	**00 21 35.0**	**-0.1**
	0.7nm,0.3s,baz=13,slow=17,SNR=20						
INK				Sn	Sn	00 23 43.6	-7.9
	0.4nm,0.3s,baz=269,slow=30,SNR=4.6						
GIFN	**Gifford Fjord,**	**12.43**	**121**	PN	**Pn**	**00 21 39.9**	**+2.3**
GIFN				mb		00 21 41.0	
	comp=Z,28nm,1.6s						
GIFN				SN	**Sn**	**00 23 51.4**	**-4.6**
GIFN				Trac		00 23 56.3	
	comp=Z,3.1nm,0.6s						
ILON	**Igloolik, Nuna**	**12.96**	**123**	PN	**Pn**	**00 21 47.1**	**+2.3**
ILON				SN	Sn	00 24 04.0	-4.9
ILON				Trac		00 24 09.2	
	comp=Z,3.1nm,0.6s						
KUGN	**Kugaaruk Camp,**	**12.98**	**137**	PN	**Pn**	**00 21 47.2**	**+2.1**
KUGN				mb		00 21 52.6	
	comp=Z,0.7nm,0.2s						
KUGN				SN	**Sn**	**00 24 10.6**	**+1.3**
STLN	**Stellar Camp,**	**13.38**	**143**	PN	**Pn**	**00 21 52.4**	**+1.9**
STLN				SN	**Sn**	**00 24 18.7**	**-0.3**
JERN	**Jeri Cho Mine,**	**13.45**	**176**	PN	**Pn**	**00 21 53.8**	**+2.3**
JERN				SN	**Sn**	**00 24 16.2**	**-4.5**
SRLN	**Sarcpa Lake, N**	**13.48**	**126**	PN	**Pn**	**00 21 54.4**	**+2.4**
SRLN				SN	**Sn**	**00 24 18.4**	**-3.1**
SRLN				Trac		00 24 22.4	
	comp=Z,1.6nm,0.5s						
BULN	**Bullion Camp,**	**14.24**	**144**	PN	**Pn**	**00 22 03.3**	**+1.0**
BULN				SN	Sn	00 24 33.0	-7.1
QILN	**Qililugaq Expl**	**14.82**	**134**	PN	**Pn**	**00 22 12.3**	**+2.1**
QILN				mb		00 22 15.6	
	comp=Z,33nm,1.8s						
QILN				SN	Sn	00 24 47.7	-6.4
CTLN	**Castor Lake**	**15.04**	**183**	PN	**Pn**	**00 22 14.1**	**+0.9**
CTLN				SN	Sn	00 24 51.7	-7.8
WAGN	**Wager Bay**	**15.16**	**139**	PN	**Pn**	**00 22 15.7**	**+0.9**
ILKN	**Indian Lake**	**15.23**	**182**	PN	**Pn**	**00 22 16.6**	**+0.8**
NUNN	**Nunuq Camp, NU**	**15.61**	**142**	PN	**Pn**	**00 22 22.1**	**+1.4**
NUNN				SN	**Sn**	**00 25 08.8**	**-4.6**
COKN	**Cook Lake**	**16.26**	**171**	PN	**Pn**	**00 22 29.4**	**+0.3**
YKW3	**Yellowknife Ar**	**16.90**	**181**	PN	**P**	**00 22 38.6**	**-0.6**
YKW3				mb		00 22 41.8	
	comp=Z,2.6nm,0.3s						
YKW3				SN	**Sn**	**00 25 37.8**	**-6.9**
YKA	**Yellowknife Ar**	**16.97**	**181**	Pn	**Pn**	**00 22 38.7**	**+0.7**
	0.6nm,0.3s,baz=358,slow=12,SNR=36						
YKA				Sn	**Sn**	**00 25 44.7**	**-1.6**
	0.1nm,0.3s,baz=1.1,slow=23,SNR=4.0						
ILAR	**Eielson Array**	**17.33**	**231**	Pn	**P**	**00 22 44.1**	**+0.2**
	0.1nm,0.3s,baz=15,slow=15,SNR=6.7						
SEDN	**First Sedna Si**	**17.51**	**144**	PN	**P**	**00 22 45.9**	**+0.1**
DLBC	**Dease Lake**	**21.64**	**203**	P	**P**	**00 23 34.9**	**+3.9**
	2.5nm,0.7s,baz=331,slow=13,SNR=4.8						
FINES	**FINESS Array B**	**37.50**	**30**	P	**P**	**00 25 54.1**	**-0.1**
	2.2nm,0.7s,baz=358,slow=13,SNR=9.8						
SONM	**Songino Array**	**50.88**	**326**	P	**P**	**00 27 40.5**	**-1.1**
	0.2nm,0.5s,baz=2.0,slow=4.4,SNR=6.2						
MKAR	**Makanchi Array**	**53.73**	**346**	P	**P**	**00 28 00.7**	**-1.9**
	0.5nm,0.9s,baz=27,slow=8.1,SNR=5.5						
KBZ	**Khabaz**	**56.42**	**20**	P	**P**	**00 28 22.9**	**+0.9**
	0.6nm,0.6s,baz=346,slow=8.3,SNR=3.8						
TORD	**Torodi Ar. Bea**	**81.74**	**62**	P	**P**	**00 31 00.6**	**+1.1**
	0.6nm,1.0s,baz=335,slow=6.4,SNR=2.8						

IDC 04 00:19:21.8±1.5, **30°.08S**×**177°.83W, h0km, mb4.0**/3, **mb1 4.2**/3, **mb1mx3.9**/17, **mbtmp4.0**/3, **Error ellipse: s-maj=63.4km s-min=36.8km az=175.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.69**	**256**	P	P	00 26 13.9	+0.6
	1.3nm,0.4s,baz=88,slow=8.3,SNR=7.6						
ASAR	**Alice Springs**	**43.27**	**267**	P	P	00 27 24.9	-0.5
	0.6nm,0.5s,baz=106,slow=7.3,SNR=12						
WRA	**Warramunga Arr**	**44.23**	**272**	P	P	00 27 32.7	-0.4
	0.5nm,0.3s,baz=111,slow=7.6,SNR=6.0						
FINES	**FINESS Array B**	**144.89**	**340**	PKP	PKPbc	00 38 59.2	0.0
	0.9nm,0.5s,baz=54,slow=4.2,SNR=12						
NOA	**NORSAR Array B**	**148.46**	**352**	PKPbc	PKPbc	00 39 09.4	-0.4
	0.5nm,0.6s,baz=11,slow=4.3,SNR=2.8						
TORD	**Torodi Ar. Bea**	**163.15**	**178**	PKPab	PKPab	00 40 16.1	-0.5
	0.6nm,1.0s,baz=197,slow=4.5,SNR=2.4						

*ISCJB **04** 00:36:36.9±1.3, 32°.00N±0°.07×140°.7E±0°.1, h69km±10km, mb3.5/8, Error ellipse: s-maj=15.3km s-min=11.3km az=3.2*
*IDC **04** 00:36:36.5±2.3, 31°.75N×140°.26E, h48km±20km, mb3.4/8, mb1 3.6/9, mb1mx3.4/25, mbtmp3.4/9, ML3.1/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/18, Error ellipse: s-maj=35.4km s-min=17.2km az=78.0*
*JMA **04** 00:36:39.5±0.1, 32°.23N×140°.75E, h24km, M3.9*
ISC 04 00:36:36.0±2.6, **31°.9N**±0°.1×**140°.6E**±0°.1, **h48km**±21km, **n22,** σ1.46/30, **mb3.6**/8, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**1.41**	**330**	*e*S	**Sn**	**00 37 15.6**	**-1.2**
JHJ2	**Mitsune**	**1.44**	**331**	P	**Pn**	**00 37 00.4**	**+0.7**
JHJ2				S	**Sn**	**00 37 16.5**	**-0.9**
JHJ	**Hachijo jima 2**	**1.46**	**330**	P	**Pn**	**00 37 01.2**	**+1.3**
	27nm,0.3s,baz=70,slow=22,SNR=6.6						
JHJ				S	**Sn**	**00 37 16.9**	**-1.0**
	271nm,0.3s,baz=230,slow=23,SNR=18						
JKO	**Kozu shima**	**2.65**	**332**	*e*S	**Sn**	**00 37 47.1**	**-0.1**
BSO1	**Boso 1**	**2.81**	**6**	P	**Pn**	**00 37 18.7**	**+0.7**
BSO1				*e*S	**Sn**	**00 37 48.1**	**-2.2**
BSO2	**Boso 2**	**2.90**	**2**	*e*S	**Sn**	**00 37 50.9**	**-1.9**
BSO3	**Boso 3**	**2.95**	**358**	P	**Pn**	**00 37 21.2**	**+1.1**
BSO3				S	**Sn**	**00 37 52.1**	**-2.0**
JIM2	**Oshima 3**	**3.04**	**341**	P	**Pn**	**00 37 23.4**	**+1.8**
JIM2				*e*S	**Sn**	**00 37 55.1**	**-1.6**
BSO4	**Boso 4**	**3.14**	**355**	P	**Pn**	**00 37 24.6**	**+1.7**
BSO4				*e*S	**Sn**	**00 37 58.8**	**-0.3**
JOD2	**Odawara 2**	**3.65**	**340**	P	**Pn**	**00 37 31.4**	**+1.5**
JOD2				*e*S	**Sn**	**00 38 09.1**	**-2.6**
JYN	**Shimob**	**4.04**	**335**	P	Pn	00 37 38.8	+3.4
MJAR	**Matsushiro Arr**	**5.10**	**337**	P	**Pn**	**00 37 49.9**	**0.0**
	0.7nm,0.3s,baz=169,slow=13,SNR=11						
MJAR				S	**Sn**	**00 38 49.1**	**+1.7**
	1.0nm,0.3s,baz=146,slow=28,SNR=5.9						
MAT	**Matsushiro**	**5.10**	**337**	P	Pn	00 37 54.3	+4.4
MAT				S	**Sn**	**00 38 49.3**	**+1.9**
JOW	**Kunigami**	**11.89**	**248**	LR	LR	00 43 26.3	
	comp=Z,46nm,21.6s,baz=102,slow=36						
ZALV	**Zalesovo Beam**	**45.08**	**316**	P	**P**	**00 44 45.7**	**-1.4**
	0.2nm,0.3s,baz=74,slow=5.1,SNR=2.6						
ZALV				PcP	**PcP**	**00 46 26.2**	**-0.8**
	0.5nm,0.5s,baz=90,slow=0.4,SNR=3.4						
MKAR	**Makanchi Array**	**46.50**	**306**	P	**P**	**00 44 57.7**	**-0.8**
	0.3nm,0.7s,baz=93,slow=8.9,SNR=5.9						
MKAR				PcP	**PcP**	**00 46 32.3**	**0.0**
	0.4nm,0.8s,baz=87,slow=3.3,SNR=3.5						
WRA	**Warramunga Arr**	**51.85**	**188**	P	**P**	**00 45 38.3**	**-1.2**
	0.2nm,0.3s,baz=3.5,slow=7.5,SNR=3.3						
ASAR	**Alice Springs**	**55.58**	**187**	P	**P**	**00 46 06.0**	**-0.7**
	0.1nm,0.3s,baz=16,slow=11,SNR=3.2						
FINES	**FINESS Array B**	**73.11**	**333**	P	**P**	**00 48 00.7**	**-0.3**
	0.8nm,0.8s,baz=46,slow=8.2,SNR=4.0						
NVAR	**Mina Array Bea**	**78.64**	**52**	P	**P**	**00 48 35.8**	**+2.5**
	0.7nm,0.5s,baz=289,slow=2.8,SNR=3.5						
NOA	**NORSAR Array B**	**78.72**	**337**	P	**P**	**00 48 33.0**	**0.0**
	0.7nm,0.8s,baz=42,slow=7.1,SNR=3.3						
BRTR	**Keskin Array B**	**81.82**	**312**	P	**P**	**00 48 50.6**	**+0.4**
	0.5nm,0.8s,baz=126,slow=4.0,SNR=4.4						

MAN 04 01:02:34, 5°.59N×**125°.42E, h103km, mb4.2, ML3.0, MS2.8, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.68**	**317**	⇓*i*P	Pn	01 02 53.1	+1.4
GSPH				*i* S	Sn	01 03 01.5	-3.5
MATI	**Mati**	**1.59**	**32**	*e*P	Pn	01 03 03.2	+1.6
CTBH	**Cotabato--PC H**	**2.00**	**324**	⇑*i*P	Pn	01 03 08.3	+1.6
CTBH				*i* S	Sn	01 03 28.6	-3.1
BUKP	**Musuan**	**2.31**	**351**	*e*P	Pn	01 03 12.1	+1.3
BUKP				*e*S	Sn	01 03 40.3	+1.4
CGP	**Cagayan de Oro**	**2.94**	**346**	*e*P	Pn	01 03 21.0	+1.9
PAGZ	**Pagadian**	**3.02**	**318**	*e*P	Pn	01 03 22.1	+2.0

IDC 04 01:14:19.6±0.7, **33°.63N**×**82°.36E, h0km, mb3.7**/15, **mb1 3.9**/18, **mb1mx3.8**/31, **mbtmp3.7**/18, **ML3.1**/3, **MS3.0**/3, **Ms1 3.0**/3, **ms1mx2.5**/49, **Error ellipse: s-maj=21.1km s-min=14.8km az=47.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**4.92**	**229**	*e*x	Pn	01 15 57.0	+22
AAK	**Ala-Archa**	**10.91**	**328**	Pn	Pn	01 17 00.7	+3.6
	0.1nm,0.3s,baz=144,slow=17,SNR=2.1						
AAK				LR	LR	01 21 17.1	
	comp=Z,29nm,19.7s,baz=298,slow=38						
MKAR	**Makanchi Array**	**13.15**	**360**	Pn	Pn	01 17 26.8	-0.8
	0.2nm,0.3s,baz=178,slow=11,SNR=15						
KURBB	**Kurchatov Arra**	**17.21**	**352**	P	Pn	01 18 22.0	+0.8
	0.0nm,0.3s,baz=171,slow=11,SNR=9.3						
ZALV	**Zalesovo Beam**	**20.39**	**4**	P	P	01 18 58.5	+0.8
	1.2nm,0.6s,baz=192,slow=8.2,SNR=8.9						
CMAR	**Chiang Mai Arr**	**21.18**	**131**	P	P	01 19 08.2	+1.6
	2.8nm,0.7s,baz=310,slow=11,SNR=19						
BVAR	**Borovoye Array**	**21.20**	**340**	P	P	01 19 07.3	+0.7
	0.9nm,0.8s,baz=141,slow=9.3,SNR=4.1						
SONM	**Songino Array**	**22.97**	**45**	P	P	01 19 26.4	+0.7
	0.8nm,0.9s,baz=235,slow=10,SNR=6.1						
AKTO	**Aktyubinsk**	**24.50**	**321**	P	P	01 19 40.5	0.0
	1.0nm,0.7s,baz=98,slow=8.6,SNR=7.2						
KSRS	**Korea Array**	**37.00**	**71**	P	P	01 21 30.4	-0.4
	0.6nm,0.4s,baz=287,slow=8.5,SNR=3.0						
KSRS				LR	LR	01 38 02.2	
	comp=Z,22nm,20.2s,baz=115,slow=38						
BRTR	**Keskin Array B**	**39.16**	**293**	P	P	01 21 52.4	+3.2
	0.3nm,0.7s,baz=103,slow=6.9,SNR=2.8						
MLR	**Muntele Rosu**	**44.23**	**303**	P	P	01 22 32.3	+1.6
	0.7nm,0.9s,baz=80,slow=12,SNR=5.1						
FINES	**FINESS Array B**	**45.09**	**326**	P	P	01 22 37.1	0.0
	1.3nm,0.7s,baz=110,slow=8.7,SNR=6.3						
GERES	**GERESS Array B**	**52.09**	**309**	P	P	01 23 34.2	+2.9
	0.5nm,0.8s,baz=81,slow=6.1,SNR=3.8						
NOA	**NORSAR Array B**	**52.21**	**324**	P	P	01 23 31.6	-0.3
	0.9nm,0.8s,baz=88,slow=7.3,SNR=4.2						
WRA	**Warramunga Arr**	**72.75**	**129**	P	P	01 25 50.2	+0.3
	0.8nm,0.7s,baz=320,slow=6.8,SNR=4.2						
ILAR	**Eielson Array**	**74.66**	**20**	P	P	01 25 59.5	-1.0
	0.7nm,1.0s,baz=310,slow=5.7,SNR=4.3						
TORD	**Torodi Ar. Bea**	**75.14**	**276**	P	P	01 26 03.5	-0.6
	0.9nm,0.6s,baz=48,slow=5.2,SNR=17						
ASAR	**Alice Springs**	**75.19**	**132**	P	P	01 26 04.1	0.0
	0.5nm,0.7s,baz=326,slow=5.2,SNR=4.1						
LBTB	**Lobatse**	**79.45**	**231**	LR	LR	01 59 18.5	
	comp=Z,26nm,19.4s,baz=97,slow=34						
BOSA	**Boshof**	**82.19**	**228**	P	P	01 26 42.4	-0.3
	2.8nm,0.9s,baz=22,slow=5.4,SNR=3.8						
YKA	**Yellowknife Ar**	**83.24**	**8**	P	P	01 26 46.0	-1.6
	0.5nm,0.6s,baz=338,slow=5.4,SNR=13						

*NNC **04** 01:34:16.3±5.5, 36°.60N×70°.34E, h103km±95km, mb2.7, mpv3.5, Error ellipse: s-maj=43.5km s-min=36.1km az=177.0*
*IDC **04** 01:34:24.4±14.0, 36°.48N×71°.13E, h249km±147km, mb2.7/1, mb1 2.6/5, mb1mx2.5/30, mbtmp2.6/5, Error ellipse: s-maj=92.6km s-min=51.7km az=170.0*
ISC 04 01:34:13.2±3.2, **36°.4N**±0°.2×**70°.4E**±0°.2, **h64km, n9,** σ1.08/9, **4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.68**	**1**	⇓P	**Pn**	**01 35 50.1**	**+1.5**
	2.7nm,0.5s,baz=181,slow=13,SNR=66						
KK31				⇑S	**Sn**	**01 37 02.6**	**-0.7**
	1.2nm,0.3s,baz=184,slow=22,SNR=5.3						
TKM2	**Tokmak 2**	**7.64**	**30**	⇑P	**Pn**	**01 36 02.2**	**+0.3**
	1.0nm,0.5s						
TKM2				⇑S	**Sn**	**01 37 27.0**	**-0.1**
	1.1nm,0.6s						
MKAR	**Makanchi Array**	**13.65**	**37**	P	**Pn**	**01 37 23.3**	**-0.5**
	0.1nm,0.3s,baz=206,slow=11,SNR=5.1						
AB31	**Akbulak array**	**14.92**	**333**	⇓P	**Pn**	**01 37 40.4**	**+0.1**
	0.1nm,0.2s,baz=0.0,slow=0.1,SNR=7.2						
BVAR	**Borovoye Array**	**16.61**	**0**	P	**P**	**01 38 02.0**	**-1.1**
	0.1nm,0.3s,baz=170,slow=8.8,SNR=3.6						
AKTO	**Aktyubinsk**	**16.61**	**331**	⇑P	**Pn**	**01 38 00.1**	**-1.6**
	0.1nm,0.6s						
AKTO	**Aktyubinsk**	**16.61**	**331**	P	**P**	**01 38 03.5**	**+0.3**
	0.1nm,0.3s,baz=141,slow=11,SNR=6.1						
ZALV	**Zalesovo Beam**	**20.20**	**25**	P	P	01 38 36.9	-5.6
	0.3nm,0.3s,baz=218,slow=9.9,SNR=5.7						
TORD	**Torodi Ar. Bea**	**65.22**	**268**	P	P	01 44 43.5	-4.6
	0.4nm,1.0s,baz=50,slow=6.7,SNR=5.1						

*ISCJB **04** 01:47:33.9±1.0, 12°.9S±0°.2×68°.0E±0°.2, h10km, mb3.9/14, MS3.0/1, Error ellipse: s-maj=31.7km s-min=17.0km az=42.0*
*IDC **04** 01:47:34.2±1.0, 12°.93S×67°.98E, h0km, mb3.8/11, mb1 3.9/11, mb1mx3.7/28, mbtmp3.8/11, MS3.1/1, Ms1 3.1/1, ms1mx2.6/35, Error ellipse: s-maj=33.9km s-min=22.1km az=38.0*
*NEIC **04** 01:47:35.6±0.6, 12°.99S×67°.94E, h10km, mb4.4/3, Error ellipse: s-maj=22.0km s-min=12.3km az=221.0*
ISC 04 01:47:35.7±1.1, **13°.0S**±0°.2×**67°.9E**±0°.2, **h10km, n33,** σ0.80/34, **mb4.0**/14, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**32.59**	**289**	LR	LR	02 04 28.5	
	comp=Z,31nm,21.1s,baz=96,slow=31						
MKAR	**Makanchi Array**	**60.91**	**11**	P	**P**	**01 57 48.5**	**-0.1**
MKAR				PcP	**PcP**	**01 58 33.2**	**+1.1**
MKAR	**Makanchi Array**	**60.91**	**11**	P	**P**	**01 57 48.5**	**-0.1**
	0.8nm,0.7s,baz=210,slow=8.1,SNR=12						
MKAR				PcP	**PcP**	**01 58 33.2**	**+1.1**
	0.3nm,0.5s,baz=186,slow=2.9,SNR=3.8						
BRTR	**Keskin Array B**	**61.40**	**330**	P	**P**	**01 57 51.8**	**-0.5**
BRTR	**Keskin Array B**	**61.40**	**330**	P	**P**	**01 57 51.8**	**-0.5**
	0.4nm,0.9s,baz=338,slow=2.9,SNR=4.0						
ASAR	**Alice Springs**	**63.06**	**110**	P	**P**	**01 58 03.1**	**-0.6**
ASAR	**Alice Springs**	**63.06**	**110**	P	**P**	**01 58 03.1**	**-0.6**
	0.6nm,0.6s,baz=273,slow=6.2,SNR=9.4						
WRA	**Warramunga Arr**	**63.72**	**106**	P	**P**	**01 58 08.2**	**+0.1**
WRA	**Warramunga Arr**	**63.72**	**106**	P	**P**	**01 58 08.2**	**+0.1**
	1.0nm,0.9s,baz=270,slow=6.5,SNR=5.0						
WRAB	**Tennant Creek**	**63.73**	**106**	*e*P	**P**	**01 58 08.2**	**0.0**
	2.9nm,0.9s						
AKTO	**Aktyubinsk**	**63.76**	**353**	P	**P**	**01 58 07.2**	**-0.5**
AKTO	**Aktyubinsk**	**63.76**	**353**	P	**P**	**01 58 07.2**	**-0.5**
	0.6nm,0.8s,baz=166,slow=8.3,SNR=4.2						
KURBB	**Kurchatov Arra**	**64.03**	**7**	P	**P**	**01 58 07.1**	**-2.3**
	1.0nm,0.6s,baz=208,slow=7.1,SNR=9.4						
KURK	**Kurchatov**	**64.14**	**8**	*e*P	**P**	**01 58 09.8**	**-0.3**
	2.3nm,0.7s						
BVAR	**Borovoye Array**	**65.80**	**2**	P	**P**	**01 58 20.6**	**-0.3**
BVAR	**Borovoye Array**	**65.80**	**2**	P	**P**	**01 58 20.6**	**-0.3**
	0.8nm,0.6s,baz=164,slow=9.9,SNR=7.4						
BRVK	**Borovoye**	**65.83**	**2**	*e*P	**P**	**01 58 20.6**	**-0.5**
	1.3nm,0.8s						
ZALV	**Zalesovo Beam**	**68.23**	**11**	P	**P**	**01 58 35.8**	**-0.5**
ZALV	**Zalesovo Beam**	**68.23**	**11**	P	**P**	**01 58 35.8**	**-0.5**
	2.0nm,0.7s,baz=201,slow=6.8,SNR=12						
SONM	**Songino Array**	**69.58**	**27**	P	**P**	**01 58 45.9**	**+0.9**
SONM	**Songino Array**	**69.58**	**27**	P	**P**	**01 58 45.9**	**+0.9**
	0.5nm,0.6s,baz=222,slow=6.6,SNR=6.5						
TORD	**Torodi Ar. Bea**	**70.60**	**289**	P	**P**	**01 58 52.1**	**+0.3**
TORD	**Torodi Ar. Bea**	**70.60**	**289**	P	**P**	**01 58 52.1**	**+0.3**
	0.3nm,1.0s,baz=119,slow=5.1,SNR=2.5						
ESDC	**Sonseca Array**	**84.74**	**313**	P	**P**	**02 00 10.8**	**+0.5**
ESDC	**Sonseca Array**	**84.74**	**313**	P	**P**	**02 00 10.8**	**+0.5**
	0.9nm,0.8s,baz=118,slow=5.2,SNR=8.4						
YKA	**Yellowknife Ar**	**130.55**	**2**	PKP	**PKPdf**	**02 06 45.1**	**-1.3**
YKA	**Yellowknife Ar**	**130.55**	**2**	PKP	**PKPdf**	**02 06 45.1**	**-1.3**
	0.1nm,0.6s,baz=15,slow=2.6,SNR=3.8						
PDAR	**Pinedale Array**	**150.27**	**356**	PKPbc	**PKPbc**	**02 07 27.1**	**-0.6**
PDAR	**Pinedale Array**	**150.27**	**356**	PKPbc	**PKPbc**	**02 07 27.1**	**-0.6**
	0.8nm,0.7s,baz=343,slow=1.9,SNR=7.7						
NVAR	**Mina Array Bea**	**154.08**	**11**	PKPbc	**PKPbc**	**02 07 37.8**	**+1.3**
NVAR	**Mina Array Bea**	**154.08**	**11**	PKPbc	**PKPbc**	**02 07 37.7**	**+1.3**
	0.2nm,0.3s,baz=354,slow=2.7,SNR=3.1						
TXAR	**Lajitas Array**	**161.97**	**336**	PKPab	**PKPab**	**02 08 24.0**	**0.0**
TXAR	**Lajitas Array**	**161.97**	**336**	PKPab	**PKPab**	**02 08 24.0**	**0.0**
	0.2nm,0.7s,baz=338,slow=4.2,SNR=3.0						

IDC 04 01:47:59.0±2.7, **5°.51S**×**149°.05E, h179km**±27km, **mb3.3**/3, **mb1 3.5**/4, **mb1mx3.1**/19, **mbtmp3.3**/4, **Error ellipse: s-maj=88.4km s-min=21.5km az=123.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.30**	**206**	P	Pn	01 49 02.4	-1.5
	4.6nm,0.3s,baz=39,slow=7.9,SNR=16						
PMG				S	Sn	01 49 55.9	+1.1
	3.1nm,0.3s,baz=357,slow=19,SNR=4.7						
WRA	**Warramunga Arr**	**20.26**	**224**	P	P	01 52 20.7	-0.1
	0.8nm,0.3s,baz=48,slow=11,SNR=7.6						
WRA				S	S	01 55 58.6	+0.3
	1.3nm,0.8s,baz=40,slow=19,SNR=3.5						
ASAR	**Alice Springs**	**23.21**	**217**	P	P	01 52 50.4	+0.1
	0.8nm,0.3s,baz=56,slow=8.8,SNR=17						
FITZ	**Fitzroy Crossi**	**26.06**	**239**	P	P	01 53 16.7	+0.6
	0.9nm,0.3s,baz=54,slow=7.9,SNR=8.9						
TORD	**Torodi Ar. Bea**	**146.93**	**286**	PKPbc	PKPbc	02 07 20.5	-1.0
	0.5nm,1.1s,baz=68,slow=3.5,SNR=5.4						

*BJI **04** 01:59:13.9, 49°.21N×132°.05E, h7km, ML4.2/8*
*SKHL **04** 01:59:19.1±0.8, 48°.97N×131°.38E, h10km±1km, mb4.0/6*
ISC 04 01:59:20.8±0.9, **49°.20N**±0°.04×**131°.54E**±0°.04, **h14km**±5km, **n11,** σ**2.28**/25, **Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLR	**Kul'dur**	**0.14**	**77**	*e*Pg	**Pg**	**01 59 24.8**	**+0.2**
KLR				*e*Sg	**Sg**	**01 59 29.8**	**+2.8**
KHBR	**Khabarovsk**	**2.43**	**106**	*e*Pg	**Pb**	**02 00 04.8**	**+0.5**
KHBR				*e*Sg	**Sg**	**02 00 36.7**	**-2.3**
GRNR	**Gornyy**	**3.52**	**62**	*e*Pg	**Pg**	**02 00 27.4**	**-0.8**
GRNR				AMB	AMB	02 00 30.0	
	32nm,0.6s						
GRNR				*e*Sg	**Sg**	**02 01 17.2**	**+3.4**
GRNR				A	A	02 01 19.8	
	180nm,0.5s						
GRNR				A	A	02 01 19.8	
	95nm,0.5s						
EKMR	**Ekimchan**	**3.98**	**12**	*e*Pn	**Pn**	**02 00 22.4**	**+1.1**
EKMR				*e*Pg	**Pg**	**02 00 35.5**	**-1.4**
EKMR				AMB	AMB	02 00 44.0	
	11nm,0.5s						
EKMR				AMB	AMB	02 00 44.0	
	7.0nm,0.5s						
EKMR				AMB	AMB	02 00 44.0	
	20nm,0.5s						
EKMR				*e*Sn	**Sb**	**02 01 15.1**	**-3.4**
EKMR				*e*Sg	**Sg**	**02 01 29.6**	**+1.2**
EKMR				A	A	02 01 33.7	
	190nm,0.6s						
EKMR				A	A	02 01 33.7	
	110nm,0.6s						
EKMR				A	A	02 01 33.7	
	160nm,0.6s						
YASR	**Yasnyy**	**4.67**	**333**	*e*Pn	**Pn**	**02 00 30.2**	**-0.5**
YASR				AMB	AMB	02 00 30.9	
	6.0nm,0.6s						
YASR				AMB	AMB	02 00 30.9	
	4.0nm,0.6s						
YASR				AMB	AMB	02 00 30.9	
	7.0nm,0.6s						
YASR				sPn	**sPn**	**02 00 34.7**	**-1.6**
YASR				*e*Sg	**Sg**	**02 01 51.2**	**+0.7**
YASR				A	A	02 01 53.1	
	40nm,0.7s						
YASR				A	A	02 01 53.1	
	60nm,0.7s						
YASR				A	A	02 01 53.1	
	11nm,0.7s						
ZEA	**Zeya**	**5.28**	**331**	*e*Sg	**Sg**	**02 02 09.0**	**-1.0**
ZEA				A	A	02 02 12.0	
	120nm,0.7s						
ZEA				A	A	02 02 12.0	
	50nm,0.7s						
TEY	**Ternei**	**5.41**	**138**	*e*Pn	**Pn**	**02 00 37.9**	**-3.0**
TEY				pPn	**pPn**	**02 00 42.0**	**-2.3**
TEY				*e*rx	rx	02 00 58.0	
TEY				*e*Sn	**Sn**	**02 01 40.5**	**-2.4**
TEY				*e*Sg	**Sb**	**02 02 04.0**	**+4.3**
TEY				A	A	02 02 10.1	
	62nm,0.8s						
BMKR	**Bomnak**	**5.77**	**344**	*e*Pn	**Pn**	**02 00 47.4**	**+1.6**
BMKR				AMB	AMB	02 00 51.0	
	8.0nm,0.8s						
BMKR				*e*Pg	Pg	02 01 07.5	-3.6
BMKR				*e*Sg	**Sg**	**02 02 25.4**	**-0.3**
BMKR				A	A	02 02 28.9	
	46nm,0.5s						
BMKR				A	A	02 02 28.9	
	55nm,0.5s						
BMKR				A	A	02 02 28.9	
	40nm,0.5s						
KROS	**Kirovskiy**	**5.96**	**333**	*e*Pn	**Pn**	**02 00 49.0**	**+0.5**
KROS				*e*Pg	Pb	02 01 09.5	+5.2
KROS				AMB	AMB	02 01 13.4	
	8.0nm,0.7s						
KROS				*e*Sn	**Sn**	**02 02 00.5**	**+4.1**
KROS				*e*Sg	**Sg**	**02 02 30.5**	**-1.4**
KROS				A	A	02 02 35.0	
	10.0nm,0.6s						
KROS				A	A	02 02 35.0	
	31nm,0.6s						
KROS				A	A	02 02 35.0	
	19nm,0.6s						
CN2	**Changchun**	**6.84**	**220**	*e*Pg	**Pb**	**02 01 21.0**	**+1.7**
CN2				smax	smax		
	comp=N,100nm,0.8s						
CN2				smax	smax		
	comp=E,100nm,0.8s						
NKL	**Nikolayevsk**	**6.97**	**52**	*e*Pg	Pg	02 01 28.0	-6.2
NKL				AMB	AMB	02 01 30.6	
	comp=E,10.0nm,0.4s						
NKL				*e*Sg	**Sg**	**02 03 04.0**	**-0.5**
NKL				A	A	02 03 19.0	
	comp=E,43nm,1.0s						
NKL				A	A	02 03 19.0	

comp=E,53nm,0.9s

MEX 04 02:11:52.8±1.1**,16.°72N**×**99.°37W,h16**km±8km**,MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.49	288	*i* P	Pg	02 12 01.2	-1.5
ACX				*i* S	Sg	02 12 08.2	-1.2
CAIG	El Cayaco	0.92	291	*e*P	Pb	02 12 07.6	-2.9
CAIG				*i* S	Sb	02 12 19.4	-3.1
PNIG	Pinotepa	1.23	105	*i* P	Pn	02 12 11.8	-3.7
PNIG				*i* S	Sb	02 12 26.3	-5.2
ARIG	Puente Sto Nin	1.81	329	*i* P	Pn	02 12 20.7	-2.7
ARIG				*i* S	Sn	02 12 40.6	-5.6
UTMO	Huajuapan	1.86	53	*i* P	Pn	02 12 21.8	-2.5
UTMO				*i* S	Sn	02 12 42.2	-5.5
YAIG	Yautepec	2.15	8	*i* P	Pn	02 12 24.6	-3.7
YAIG				*i* S	Sn	02 12 50.2	-4.6

*DDA **04** 02:23:21.2, 39.°11N×29.°08E, h7km, MD2.7*
*ISK **04** 02:23:23.4, 39.°18N×29.°35E, h5km, MD2.4*
*CSEM **04** 02:23:24.7±0.2, 39.°14N×29.°35E, h8km, MD2.4, Error ellipse: s-maj=6.3km s-min=4.9km az=85.0*
ISC 04 02:23:21.9±1.2**,39.°09N**±0.°03×**29.°12E**±0.°03**,h1**km±17km**, n25,**σ**1.ˢ05**/28**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	Gediz	0.28	89	*i* P	Pg	02 23 27.6	+0.3
GDZ				*i* S	Sg	02 23 32.4	+1.5
GDZ	Gediz	0.28	89	*i* P	Pg	02 23 27.6	+0.3
GDZ				*i* S	Sg	02 23 32.4	+1.5
DEMI	Demirci	0.32	262	*i* P	Pg	02 23 27.3	-0.7
DEMI				*i* S	Sg	02 23 31.5	-0.6
TVSB	Tavsanli	0.45	36	*e*PG	Pg	02 23 30.1	-0.4
TVSB				*e*SG	Sg	02 23 35.4	-0.9
TVSB	Tavsanli	0.45	36	*e*Pg	Pg	02 23 30.1	-0.4
TVSB				*e*Sg	Sg	02 23 35.4	-0.9
KULA	Kula-Manisa	0.68	212	*e*PG	Pn	02 23 40.8	+2.2
KULA	Kula-Manisa	0.68	212	*e*Pg	Pn	02 23 40.8	+2.2
ALT	Altintas	0.77	92	*e*PG	Pg	02 23 36.4	-0.3
ALT				*e*SG	Sg	02 23 45.9	-0.8
ALT	Altintas	0.77	92	*e*Pg	Pg	02 23 36.4	-0.3
ALT				*e*Sg	Sg	02 23 45.9	-0.8
KHAL	Karahalli	0.77	158	*i* P	Pb	02 23 37.2	-0.9
KHAL				*i* S	Sg	02 23 47.9	+1.2
KHAL	Karahalli	0.77	158	*i* P	Pb	02 23 37.2	-0.9
KHAL				*i* S	Sg	02 23 47.9	+1.2
KHL	Karahalli	0.82	157	*e*PG	Pn	02 23 41.2	+0.5
KHL	Karahalli	0.82	157	*e*Pg	Pn	02 23 41.2	+0.5
BALB	Balikesir	1.11	300	*e*PN	Pn	02 23 48.3	+3.8
BALB	Balikesir	1.11	300	*e*Pn	Pn	02 23 48.3	+3.8
MDNY	Mudanya-Bursa	1.29	352	*e*PN	Pg	02 23 47.9	+1.2
MDNY	Mudanya-Bursa	1.29	352	*e*Pn	Pg	02 23 47.9	+1.2
GONE	Gonen-Balikesi	1.47	311	*e*PN	Pg	02 23 53.5	+3.5
GONE	Gonen-Balikesi	1.47	311	*e*Pn	Pg	02 23 53.5	+3.5
ARMT	Armutlu	1.49	352	*e*PN	Pg	02 23 51.8	+1.3
ARMT	Armutlu	1.49	352	*e*Pn	Pg	02 23 51.8	+1.3
YLV	Yalova	1.49	7	*e*PN	Pg	02 23 51.8	+1.3
YLV	Yalova	1.49	7	*e*Pn	Pg	02 23 51.8	+1.3
GULT	Gulveren	1.72	38	*e*PN	Pb	02 23 53.2	-1.1
GULT	Gulveren	1.72	38	*e*Pn	Pb	02 23 53.2	-1.1

*IDC **04** 02:26:59.4±3.1, 17.°88N×85.°70W, h0km, mb3.4/1, mb1 3.9/4, mb1mx3.5/25, mbtmp3.7/4, ML4.2/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/27, Error ellipse: s-maj=49.4km s-min=31.2km az=33.0*
ISC 04 02:27:06.8±2.0**,18.°1N**±0.°2×**85.°7W**±0.°1**,h35**km**,n15,** σ**2.ˢ34**/14**,5C-7D,North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	Tepich	3.20	312	Pn	Pn	02 27 55.4	+0.8
	83nm,0.3s,baz=338,slow=1.9,SNR=92						
TEIG				Sn	Sn	02 28 44.8	+13
	22nm,0.3s,baz=44,slow=21,SNR=26						
CMIG	Matias Romero	8.79	265	Pn	Pn	02 29 06.8	-4.8
	0.9nm,0.3s,baz=80,slow=17,SNR=9.8						
CMIG				Sn	Sn	02 30 49.3	-0.2
	0.1nm,0.3s,baz=102,slow=20,SNR=1.8						
732A	Laxson Ranch,	16.80	312	⇑P	P	02 31 01.3	+0.1
	baz=16,SNR=5.2						
632A	Uvalde	17.14	314	⇓P	P	02 31 06.6	+1.6
	baz=16,SNR=6.5						
632A				⇑S	Sn	02 34 10.4	-2.8
	baz=16						
ROSC	El Rosal	17.25	138	LR	LR	02 38 10.9	
	comp=Z,30nm,19.7s,baz=17,slow=39						
532A	Rocksprings	17.60	315	⇓P	P	02 31 14.1	+3.9
	baz=17,SNR=9.7						
532A				⇑S	Sn	02 34 25.1	+0.5
	baz=17						
631A	Perdido Creek	17.62	312	⇓P	P	02 31 12.2	+1.7
	baz=17,SNR=12						
631A				⇓S	Sn	02 34 22.1	-3.0
	baz=17						
531A	Rocksprings	18.06	314	⇑P	P	02 31 19.1	+3.8
	baz=17,SNR=7.4						
332A	Millersview	18.32	319	⇓P	Pn	02 31 23.1	+4.8
	baz=18						
431A	Sonora	18.42	316	⇑P	Pn	02 31 24.4	+4.9
	baz=18						
232A	Coleman	18.61	320	⇓P	Pn	02 31 27.8	+5.9
	baz=18,SNR=7.1						
TXAR	Lajitas Array	19.84	308	P	P	02 31 35.2	+0.3
	0.1nm,0.3s,baz=126,slow=11,SNR=6.9						
TXAR				S	Sn	02 35 20.4	+1.7
	0.1nm,0.3s,baz=127,slow=20,SNR=4.3						
626A	Big Bend Ranch	20.30	308	⇓P	Pn	02 31 42.9	+0.8
	baz=19,SNR=5.6						
PDAR	Pinedale Array	31.82	326	P	P	02 33 26.6	-2.0
	0.6nm,1.0s,baz=120,slow=8.6,SNR=3.1						
ASAR	Alice Springs	142.65	255	PKP	PKPdf	02 46 36.3	-0.8
	0.5nm,0.8s,baz=88,slow=1.6,SNR=5.7						

*IDC **04** 02:50:31.1±0.7, 35.°57N×143.°08E, h0km, mb3.8/17, mb1 4.0/21, mb1mx3.9/31, mbtmp3.8/21, ML3.6/3, MS3.1/4, Ms1 3.1/4, ms1mx2.7/45, Error ellipse: s-maj=17.8km s-min=17.4km az=178.0*
*JMA **04** 02:50:34.8±0.3, 35.°65N×142.°95E, h69km, M3.4*
*ISCJB **04** 02:50:37.3±0.5, 35.°68N±0.°04×142.°77E±0.°05, h59km, mb3.8/17, MS3.1/2, Error ellipse: s-maj=6.1km s-min=4.8km az=37.2*
ISC 04 02:50:39.0±0.6**,35.°68N**±0.°05×**142.°79E**±0.°06**,h59**km**,n39,** σ**1.ˢ83**/47**,mb3.8**/17**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.57	272	P	Pn	02 51 03.0	-1.7
CHOJ				*e*S	Sn	02 51 24.0	0.0
BSO1	Boso 1	1.80	236	P	Pn	02 51 04.7	-2.6
BSO1				*e*S	Sn	02 51 27.6	-1.1
BSO2	Boso 2	1.90	242	*e*S	Sn	02 51 33.3	+1.7
BSO3	Boso 3	2.06	246	P	Pn	02 51 09.9	-1.1
BSO3				*e*S	Sn	02 51 34.9	-0.6
JFT	Otama	2.70	314	P	Pn	02 51 18.4	-1.6
JFT				*e*S	Sn	02 51 50.9	-0.6
JAG	Ashikaga	2.81	286	P	Pn	02 51 20.1	-1.4
JAG				*e*S	Sn	02 51 53.1	-1.0
JOD2	Odawara 2	3.05	263	P	Pn	02 51 23.2	-1.6
JOD2				*e*S	Sn	02 52 00.4	+0.3
JRY	Ryogami san	3.18	277	P	Pn	02 51 26.3	-0.3
JYN	Shimob	3.46	268	P	Pn	02 51 29.3	-1.3
JMK	Ichinoseki	3.50	340	*e*S	Sn	02 52 09.1	-2.1
JHJ2	Mitsune	3.55	225	P	Pn	02 51 29.3	-2.3
JHJ2				*e*S	Sn	02 52 08.9	-3.4
JHJ	Hachijo jima 2	3.56	225	Pn	Pn	02 51 29.2	-2.6
	7.3nm,0.3s,baz=18,slow=19,SNR=2.0						
JHJ				Sn	Sn	02 52 06.2	-6.5
	19nm,0.3s,baz=60,slow=20,SNR=3.2						
JYK	Kaneyama	3.77	330	P	Pn	02 51 32.0	-2.7
JYK				*e*S	Sn	02 52 16.8	-1.0
MJAR	Matsushiro Arr	3.81	284	Pn	Pn	02 51 35.2	0.0
	2.1nm,0.3s,baz=101,slow=9.3,SNR=36						
MJAR				Sn	Sn	02 52 24.0	+5.2
	1.0nm,0.3s,baz=116,slow=9.6,SNR=5.7						
MAT	Matsushiro	3.81	284	P	Pn	02 51 35.6	+0.4
MAT				S	Sn	02 52 22.9	+4.1
MAT	Matsushiro	3.81	284	P	Pn	02 51 36.0	+0.8
JOM	Ohasama	3.97	343	P	Pn	02 51 34.7	-2.7
JOM				*e*S	Sn	02 52 19.4	-3.4
JSD	Sado	4.33	304	P	Pn	02 51 41.5	-0.8
ASAJ	Asahikawa	8.43	359	Pn	Pn	02 52 34.2	-4.2
	1.1nm,0.3s,baz=215,slow=17,SNR=8.4						
ASAJ				Sn	Sn	02 54 06.5	-5.6
	0.6nm,0.3s,baz=180,slow=20,SNR=4.5						
USRK	Ussuriysk Arra	11.87	319	LR	LR	02 58 21.5	
	comp=Z,80nm,18.8s,baz=11,slow=39						
KSRS	Korea Array	12.09	283	Pn	Pn	02 53 28.7	+0.3
	baz=94,slow=15,SNR=4.5						
KSRS				LR	LR	02 57 58.2	
	comp=Z,45nm,19.1s,baz=346,slow=36						
SONM	Songino Array	29.47	306	P	P	02 56 39.2	+1.8
	1.5nm,0.8s,baz=108,slow=9.2,SNR=14						
SONM				LR	LR	03 10 09.8	
	comp=Z,36nm,18.3s,baz=188,slow=40						
ZALV	Zalesovo Beam	43.65	313	P	P	02 58 39.6	+2.0
	1.8nm,0.7s,baz=84,slow=7.0,SNR=9.5						
ZALV				PcP	PcP	03 00 24.6	+0.8
	0.4nm,0.3s,baz=106,slow=4.8,SNR=4.0						
MKAR	Makanchi Array	45.79	303	P	P	02 58 57.0	+2.2
	1.1nm,0.7s,baz=90,slow=9.8,SNR=14						
MKAR				LR	LR	03 18 14.4	
	comp=Z,29nm,18.9s,baz=170,slow=36						
ILAR	Eielson Array	50.05	32	P	P	02 59 27.4	0.0
	0.7nm,0.8s,baz=273,slow=6.3,SNR=8.0						
BVAR	Borovoye Array	52.31	313	P	P	02 59 45.2	+0.7
	0.4nm,0.5s,baz=94,slow=12,SNR=3.2						
WRA	Warramunga Arr	55.89	190	P	P	03 00 09.4	-1.4
	1.9nm,0.9s,baz=6.8,slow=7.5,SNR=8.9						
ASAR	Alice Springs	59.62	189	P	P	03 00 36.4	-0.5
	0.7nm,0.8s,baz=3.8,slow=3.8,SNR=6.2						
AKTO	Aktyubinsk	60.41	313	P	P	03 00 43.9	+1.7
	0.7nm,0.7s,baz=58,slow=12,SNR=4.0						
YKA	Yellowknife Ar	64.42	30	P	P	03 01 08.5	-0.2
	0.8nm,0.7s,baz=300,slow=6.6,SNR=12						
FINES	FINESS Array B	70.53	333	P	P	03 01 48.4	+1.2
	1.0nm,0.9s,baz=43,slow=8.6,SNR=3.8						
KBZ	Khabaz	72.63	312	P	P	03 02 02.0	+1.8
	1.2nm,0.9s,baz=13,slow=5.4,SNR=3.5						
NOA	NORSAR Array B	75.86	338	P	P	03 02 19.2	+0.4
	1.1nm,0.9s,baz=40,slow=5.9,SNR=3.5						
AKASG	Malin Array Be	76.05	323	P	P	03 02 20.9	+1.0
	1.2nm,0.6s,baz=51,slow=7.2,SNR=3.8						
PDAR	Pinedale Array	77.82	46	P	P	03 02 30.9	+0.5
	0.4nm,0.6s,baz=292,slow=4.6,SNR=3.6						
BRTR	Keskin Array B	80.58	312	P	P	03 02 47.9	+2.4
	1.1nm,0.9s,baz=64,slow=6.2,SNR=7.2						
GERES	GERESS Array B	84.45	329	P	P	03 03 05.2	-0.1
	0.2nm,0.6s,baz=45,slow=5.8,SNR=3.6						
TXAR	Lajitas Array	90.06	53	P	P	03 03 32.8	0.0
	0.3nm,0.8s,baz=289,slow=3.8,SNR=4.3						
LPAZ	La Paz	146.37	63	PKPbc	PKPab	03 10 14.6	-0.8
	0.6nm,0.7s,baz=310,slow=3.7,SNR=4.6						

IDC 04 03:32:00.8±4.4**,16.°13S**×**175.°33W,h0**km**,mb4.1**/4**, mb1 4.3**/4**,mb1mx3.8**/19**,mbtmp4.1**/4**,MS3.8**/2**,Ms1 3.8**/2**, ms1mx2.9**/32**,Error ellipse: s-maj=191.2km s-min=35.2km az=137.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.06	240	P	P	03 39 54.7	+0.2
	1.7nm,0.4s,baz=94,slow=11,SNR=6.1						
WRA	Warramunga Arr	47.87	258	P	P	03 40 40.5	-0.5
	0.6nm,0.7s,baz=94,slow=7.9,SNR=4.3						
ASAR	Alice Springs	48.12	253	P	P	03 40 42.9	0.0
	5.5nm,0.5s,baz=89,slow=8.1,SNR=115						
ASAR				LR	LR	03 58 49.9	
	comp=Z,201nm,19.9s,baz=344,slow=33						
JNU	Nakatsue	70.96	314	LR	LR	04 12 55.1	
	comp=Z,32nm,18.2s,baz=228,slow=35						
ILAR	Eielson Array	83.53	12	P	P	03 44 30.2	0.0
	1.0nm,1.1s,baz=202,slow=6.8,SNR=4.4						

IDC 04 03:32:05.2±1.2**,1.°15N**×**124.°37E,h0**km**,mb3.4**/4**, mb1 3.6**/4**,mb1mx3.4**/22**,mbtmp3.4**/4**,Error ellipse: s-maj=159.5km s-min=21.4km az=67.0,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.12	156	P	P	03 37 13.8	+0.7
	1.0nm,0.4s,baz=341,slow=12,SNR=11						
ASAR	Alice Springs	26.35	160	P	P	03 37 43.0	-0.3
	0.2nm,0.5s,baz=343,slow=9.0,SNR=4.5						
SONM	Songino Array	49.05	344	P	P	03 40 55.1	+0.9
	0.2nm,0.5s,baz=168,slow=8.8,SNR=2.7						
MKAR	Makanchi Array	58.38	327	P	P	03 42 01.2	-1.3
	0.5nm,0.5s,baz=122,slow=7.9,SNR=6.0						

IDC 04 03:40:11.9±1.5**,2.°85S**×**142.°10E,h0**km**,mb3.4**/3**, mb1 3.8**/4**,mb1mx3.5**/18**,mbtmp3.5**/4**,ML3.4**/1**,MS3.2**/1**, Ms1 3.2**/1**,ms1mx2.3**/22**,Error ellipse: s-maj=68.4km s-min=27.1km az=101.0,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	17.61	167	LR	LR	03 50 25.2	
	comp=Z,74nm,18.9s,baz=235,slow=35						
WRA	Warramunga Arr	18.60	203	P	Pn	03 44 31.9	+0.8
	0.1nm,0.3s,baz=20,slow=13,SNR=4.7						
ASAR	Alice Springs	22.16	200	P	P	03 45 08.8	-0.9
	0.4nm,0.6s,baz=27,slow=12,SNR=4.0						
MKAR	Makanchi Array	71.99	321	P	P	03 51 37.9	+0.3
	0.7nm,0.8s,baz=115,slow=7.2,SNR=7.8						
ILAR	Eielson Array	84.57	24	P	P	03 52 46.1	-0.7
	0.6nm,0.9s,baz=264,slow=5.3,SNR=4.3						
LPAZ	La Paz	144.59	123	PKP	PKPdf	03 59 52.6	+0.3
	2.0nm,1.0s,baz=242,slow=2.9,SNR=5.0						

*IDC **04** 03:47:05.7±0.7, 5.°94S×122.°63E, h0km, mb4.3/6, mb1 4.4/9, mb1mx4.1/25, mbtmp4.3/9, ML4.0/3, MS3.5/10, Ms1 3.5/10, ms1mx3.2/35, Error ellipse: s-maj=41.5km s-min=15.6km az=55.0*
*AUST **04** 03:47:07.5, 6.°00S×122.°50E, h10km*
*ISCJB **04** 03:47:08.5±0.3, 5.°99S±0.°04×122.°56E±0.°04, h33km, mb4.4/18, MS3.5/9, Error ellipse: s-maj=6.2km s-min=4.1km az=38.0*
*DJA **04** 03:47:10.7±0.6, 6°S±3°×12°2E±°, h7km±5km, M4.6/12, mb4.8/12, mB5.4/5, MLv4.4/12, Mw(mB)4.8/5*
*NEIC **04** 03:47:10.7±0.4, 6.°05S×122.°55E, h35km, mb4.5/14, Error ellipse: s-maj=18.8km s-min=6.6km az=50.0*
ISC 04 03:47:10.7±0.5**,6.°02S**±0.°07×**122.°52E**±0.°05**,h35**km**,n77,** σ**1.ˢ11**/67**,mb4.4**/18**,MS3.4**/9**,Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSI	Bau Bau	0.53	6	P	Pn	03 47 17.6	-4.2
KDI	Kendari	2.05	3	P	Pn	03 47 41.3	-1.4
BKSI	Bulukumba	2.48	286	P	Pn	03 47 46.5	-2.2
MMRI	Maumere	2.62	186	P	Pn	03 47 57.5	+6.9
KAPI	Kappang	2.93	290	Pn	Pn	03 47 53.6	-1.2
KAPI				Sn	Sn	03 48 28.5	-0.3
KAPI	Kappang	2.93	290	P	Pn	03 47 54.3	-0.5
KAPI				S	Sn	03 48 29.5	+0.7
KAPI	Kappang	2.93	290	Pn	Pn	03 47 53.6	-1.2
	35nm,0.3s,baz=99,slow=6.8,SNR=38						
KAPI				Sn	Sn	03 48 28.5	-0.3
	27nm,0.3s,baz=120,slow=21,SNR=6.5						
SPSI	Sidrap Palu	3.41	307	P	Pn	03 48 01.2	-0.3
TTSI	Tana Toraja	3.99	318	P	Pn	03 48 10.8	+1.3
WSI	Waingapu	4.24	211	P	Pn	03 48 17.7	+4.8
LUWI	Luwuk	4.95	3	P	Pn	03 48 16.7	-5.9
NLAI	Namlea	5.34	59	P	Pn	03 48 30.7	+2.7
	63nm,0.7s,0.2nm						
PCI	Palu	5.74	332	P	Pn	03 48 45.4	+12
	baz=5.7,SNR=9.2						
PCI				S	Sn	03 49 19.4	-19
	baz=5.7,SNR=3.2						
AAI	Ambon	6.11	68	P	Pn	03 48 42.0	+3.3
	58nm,0.7s,2μm0.2nm						
MRSI	Marisa	6.48	355	P	Pn	03 48 42.3	-1.3
	75nm,0.6s,737nm0.2nm						
KMSI	Cibinong	6.71	13	P	Pn	03 48 46.0	-0.8
	115nm,0.7s,0.7nm						
KBKI	Kotabaru	6.88	293	P	Pn	03 48 48.1	-1.1
	16nm,1.2s,3μm						
MSAI	Masohi	6.92	68	P	Pn	03 48 52.6	+2.9
	14nm,0.6s,2μm0.2nm						
KHKI	Kahang-Kahang	7.24	251	P	Pn	03 48 55.5	+1.4
	47nm,1.1s						
LBMI	Labuha	7.30	43	P	Pn	03 48 56.1	+1.1
	77nm,0.8s						
SRBI	Singaraja	7.53	254	P	Pn	03 48 59.6	+1.4
	76nm,1.0s						
SMKI	Samarinda	7.66	316	P	Pn	03 48 58.0	-1.9
	105nm,0.3s						
MNI	Manado	7.77	17	P	Pn	03 49 01.1	-0.3
MTN	Manton Dam	10.87	129	P	Pn	03 49 43.9	-0.1
	baz=11,SNR=6.9						
KDU	Kakadu	11.85	125	P	Pn	03 49 55.9	-1.4
	baz=12,SNR=11						
KDU				S	Sn	03 52 38.4	+30
	baz=12,SNR=5.5						
FITZ	Fitzroy Crossi	12.39	166	*e*Pn	Pn	03 50 01.4	-3.4
	7.0nm,0.8s						
FITZ	Fitzroy Crossi	12.39	166	Pn	Pn	03 50 02.8	-1.9
	0.7nm,0.3s,baz=19,slow=2.6,SNR=5.6						
FITZ				LR	LR	03 54 51.5	
	comp=Z,209nm,21.4s,baz=345,slow=38						
WRA	Warramunga Arr	17.99	141	P	Pn	03 51 15.6	-2.6
WRA	Warramunga Arr	17.99	141	P	Pn	03 51 15.6	-2.6
	0.5nm,0.3s,baz=317,slow=13,SNR=28						
WRAB	Tennant Creek	17.99	141	*e*P	Pn	03 51 16.1	-2.1
	12nm,0.9s						
AS31	Alice Springs	20.69	149	*e*P	P	03 51 49.3	+1.3
ASAR	Alice Springs	20.69	149	P	P	03 51 49.1	+1.1
ASAR				PcP	PcP	03 55 57.8	+0.5
ASAR	Alice Springs	20.69	149	P	P	03 51 49.1	+1.1
	10nm,0.8s,baz=331,slow=12,SNR=60						
ASAR				PcP	PcP	03 55 57.8	+0.5
	0.8nm,0.5s,baz=346,slow=1.4,SNR=9.5						
MEEK	Meekatharra	20.84	190	P	Pn	03 51 54.0	+1.8
	baz=21,SNR=5.3						
COEN	Coen	21.81	113	*e*P	P	03 51 58.2	-1.9
	19nm,0.6s						
QIS	Mount Isa	22.00	133	P	P	03 52 02.9	+0.9
	baz=22,SNR=5.0						
MORW	Morawa	23.73	194	P	P	03 52 20.3	+0.5
	baz=24,SNR=3.7						
IPM	Ipoh	23.86	295	*e*P	P	03 52 22.2	+1.0
	6.8nm,0.5s						
KULM	Kulim	24.55	297	*e*P	P	03 52 27.2	-0.3
	7.8nm,0.6s						
PSI	Prapat	25.14	290	P	P	03 52 33.6	+0.7
PSI	Prapat	25.14	290	P	P	03 52 33.6	+0.7
	8.1nm,0.8s,baz=187,slow=7.0,SNR=6.3						
PSI	Prapat	25.14	290	P	P	03 52 34.8	+1.8
	baz=25,SNR=6.2						
FORT	Forrest	25.18	169	*e*P	P	03 52 34.2	+1.2
	9.4nm,0.5s						
KLBR	Kellerberrin	25.83	189	P	P	03 52 39.3	+0.4
	baz=26,SNR=6.6						
CTA	Charters Tower	26.97	123	LR	LR	04 03 11.3	
	comp=Z,91nm,21.5s,baz=43,slow=36						
CTAO	Charters Tower	26.97	123	*e*P	P	03 52 49.4	0.0
	7.7nm,1.3s						
NWAO	Narrogin (SRO)	27.22	190	LR	LR	04 03 38.5	
	comp=Z,94nm,18.7s,baz=206,slow=36						
BBOO	Buckleboo	29.49	156	P	P	03 53 12.0	+0.3
	baz=30,SNR=7.2						
STKA	Stephens Creek	31.31	148	P	P	03 53 27.4	-0.4
STKA	Stephens Creek	31.31	148	P	P	03 53 27.4	-0.4
	2.8nm,0.8s,baz=331,slow=9.6,SNR=4.9						
STKA				LR	LR	04 06 23.3	
	comp=Z,78nm,18.9s,baz=27,slow=37						
JOW	Kunigami	33.13	9	LR	LR	04 07 01.9	
	comp=Z,75nm,20.8s,baz=128,slow=36						
CMAR	Chiang Mai Arr	33.65	317	LR	LR	04 09 54.7	
	comp=Z,57nm,18.4s,baz=5.7,slow=41						
CASY	Casey	60.74	186	*e*P	P	03 57 19.0	+0.5
	5.8nm,0.4s						
MK31	Makanchi Array	63.51	330	*e*P	P	03 57 37.7	+0.2
MKAR	Makanchi Array	63.51	330	P	P	03 57 38.4	+0.9
MKAR	Makanchi Array	63.51	330	P	P	03 57 38.4	+0.9
	1.8nm,0.4s,baz=136,slow=6.9,SNR=37						
MKAR				LR	LR	04 26 07.7	
	comp=Z,27nm,19.4s,baz=325,slow=37						
KBL	Kabul	64.54	313	*e*P	P	03 57 44.5	-0.2
	4.6nm,0.6s						
TKM2	Tokmak 2	64.64	324	*e*P	P	03 57 45.9	+0.7
	4.8nm,1.3s						
AAK	Ala-Archa	65.12	323	*e*P	P	03 57 49.0	+0.6
	24nm,1.3s						
EKS2	Erkin-Say	65.57	322	*e*P	P	03 57 51.9	+0.7
	4.6nm,1.3s						
ZALV	Zalesovo Beam	67.59	337	P	P	03 58 03.5	-0.1
ZALV	Zalesovo Beam	67.59	337	P	P	03 58 03.5	-0.1
	1.6nm,0.4s,baz=130,slow=4.6,SNR=17						
KURK	Kurchatov	67.96	332	*e*P	P	03 58 06.1	0.0
	9.7nm,1.1s						
BVAR	Borovoye Array	73.39	330	LR	LR	04 32 33.2	
	comp=Z,37nm,18.8s,baz=74,slow=37						
BRVK	Borovoye	73.46	330	*e*P	P	03 58 39.8	+0.3
	12nm,1.5s						
VNDA	Vanda	74.40	172	P	P	03 58 45.3	+0.7
VNDA	Vanda	74.40	172	P	P	03 58 45.3	+0.7
	0.8nm,0.6s,baz=328,slow=5.8,SNR=10						
VNDA				LR	LR	04 28 54.0	
	comp=Z,83nm,19.1s,baz=88,slow=34						
ABKAR	Akbulak array	77.20	323	*e*P	P	03 59 01.2	+0.1
	0.9nm,0.6s						
AKTO	Aktyubinsk	78.83	324	LR	LR	04 38 50.3	
	comp=Z,28nm,18.3s,baz=38,slow=39						
YKA	Yellowknife Ar	110.05	25	PKiKP	PKiKP	04 05 38.1	-0.2
YKA	Yellowknife Ar	110.05	25	PKiKP	PKiKP	04 05 38.1	-0.2
	0.2nm,0.8s,baz=300,slow=1.8,SNR=5.6						
TORD	Torodi Ar. Bea	121.33	282	PKP	PKPdf	04 06 01.4	+0.1
TORD	Torodi Ar. Bea	121.33	282	PKP	PKPdf	04 06 01.4	+0.1
	0.4nm,0.8s,baz=50,slow=2.2,SNR=4.3						
TXAR	Lajitas Array	130.69	56	PKP	PKPdf	04 06 18.5	-0.5
TXAR	Lajitas Array	130.69	56	PKP	PKPdf	04 06 18.5	-0.5
	0.1nm,0.7s,baz=261,slow=3.5,SNR=2.4						
CPUP	Villa Florida	147.84	180	PKPbc	PKPab	04 06 54.5	-0.8
CPUP	Villa Florida	147.84	180	PKPbc	PKPab	04 06 54.5	-0.8
	2.3nm,0.7s,baz=163,slow=1.7,SNR=6.0						

*ISK **04** 04:33:49.8, 37.°26N×38.°61E, h8km, MD2.9*
*ISCJB **04** 04:33:51.8±0.8, 37.°35N±0.°03×38.°58E±0.°03, h8km±5km, Error ellipse: s-maj=5.0km s-min=3.4km az=13.7*
*DDA **04** 04:33:52.0, 37.°41N×38.°58E, h25km, MD2.8*
*CSEM **04** 04:33:52.1±0.2, 37.°36N×38.°57E, h10km, MD2.9, Error ellipse: s-maj=5.4km s-min=5.0km az=34.0*
*NSSC **04** 04:33:52.1±1.1, 37.°41N×38.°63E, h8km±16km, MD1.4, ML2.0*
ISC 04 04:33:51.6±1.0**,37.°37N**±0.°02×**38.°57E**±0.°02**,h7**km±8km**, n39,**σ**0.ˢ57**/64**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	Urfa	0.21	70	*e*PG	Pg	04 33 55.2	-0.6
URFA				*e*SG	Sg	04 33 59.1	+0.3
URFA	Urfa	0.21	70	*e*Pg	Pg	04 33 55.3	-0.6
URFA				*e*Sg	Sg	04 33 59.1	+0.3
GZT	Gaziantep	0.80	269	*i* P	Pg	04 34 07.1	+0.1
GZT				*i* S	Sb	04 34 20.5	+1.5
MALT	Malatya	0.95	353	*e*PG	Pn	04 34 11.2	-0.2
MALT				*e*SG	Sn	04 34 25.6	+0.3
MALT	Malatya	0.95	353	*e*Pg	Pn	04 34 11.2	-0.2
MALT				*e*Sg	Sn	04 34 25.6	+0.3
MYA	Malataya	0.96	353	*e*PG	Pb	04 34 10.8	+0.2
MYA	Malataya	0.96	353	*e*Pg	Pb	04 34 10.8	+0.2
AKCD	Akcadag	1.06	331	*i* P	Pn	04 34 13.1	+0.2
AKCD				*i* S	Sg	04 34 25.8	+0.1
AKCD	Akcadag	1.06	331	*i* P	Pn	04 34 13.1	+0.2
AKCD				*i* S	Sg	04 34 25.8	+0.1
GAZ	Gaziantep	1.10	260	*e*PN	Pg	04 34 11.5	-1.3
GAZ				*e*SN	Sg	04 34 27.5	+0.4
GAZ	Gaziantep	1.10	260	*e*Pn	Pg	04 34 11.5	-1.3
GAZ				*e*Sn	Sg	04 34 27.5	+0.4
SVRC	Sivrice-ELAZID	1.16	30	*e*PN	Pg	04 34 14.2	+0.2
SVRC	Sivrice-ELAZID	1.16	30	*e*Pn	Pg	04 34 14.2	+0.2
ELZG	Elazig	1.17	16	*i* P	Pg	04 34 13.8	-0.3
ELZG				*i* S	Sn	04 34 30.8	-0.1
ELZG	Elazig	1.17	16	*i* P	Pg	04 34 13.8	-0.3
ELZG				*i* S	Sn	04 34 30.8	-0.1
KUZU	Kuzuini	1.34	244	*i* P	Pg	04 34 18.0	+0.8
KUZU				*i* S	Sg	04 34 36.0	+1.4
KUZU	Kuzuini	1.34	244	*i* P	Pg	04 34 18.0	+0.8
KUZU				*i* S	Sg	04 34 36.0	+1.4

KMRS	**Kahramanmaras**	**1.34**	**276**	ePN	**Pn**	**04 34 16.0**	**-0.7**
KMRS	**Kahramanmaras**	**1.34**	**276**	ePn	**Pn**	**04 34 16.0**	**-0.7**
AYKD	**Aykdinkavak**	**1.41**	**272**	i P	**Pn**	**04 34 17.7**	**+0.1**
AYKD				i S	**Sb**	**04 34 35.6**	**-0.7**
SFNV	**Sufian**	**1.56**	**127**	eP	**Pn**	**04 34 19.8**	**+0.1**
SFNV				eS	**Sn**	**04 34 40.2**	**+0.1**
SFNV				AML	AML	04 34 44.0	
	comp=Z,85nm,0.3s						
SFNV	**Sufian**	**1.56**	**127**	eP	**Pn**	**04 34 19.8**	**+0.1**
	SNR=61						
SFNV				eS	**Sn**	**04 34 40.2**	**+0.1**
	comp=Z,85nm,0.3s,SNR=62						
KBSD	**Kabsdagh**	**1.61**	**103**	eP	**Pn**	**04 34 20.9**	**+0.5**
KBSD				eS	**Sn**	**04 34 40.8**	**-0.7**
KBSD				AML	AML	04 34 46.4	
	comp=Z,27nm,0.2s						
KBSD	**Kabsdagh**	**1.61**	**103**	eP	**Pn**	**04 34 21.0**	**+0.5**
	SNR=47						
KBSD				eS	**Sn**	**04 34 40.8**	**-0.7**
	comp=Z,27nm,0.2s,SNR=62						
JHLN	**Al Jahlan**	**1.69**	**184**	eP	**Pb**	**04 34 23.0**	**-0.1**
JHLN				eS	**Sb**	**04 34 44.8**	**+0.2**
JHLN				AML	AML	04 34 57.3	
	comp=Z,20nm,0.5s						
JHLN	**Al Jahlan**	**1.69**	**184**	eP	**Pb**	**04 34 23.0**	**-0.1**
	SNR=47						
JHLN				eS	**Sb**	**04 34 44.8**	**+0.2**
	comp=Z,20nm,0.5s,SNR=49						
MARD	**Mardin**	**1.76**	**91**	i P	**Pn**	**04 34 23.3**	**+0.7**
MARD				i S	**Sb**	**04 34 46.3**	**-0.2**
ANDN	**Andirin**	**1.79**	**277**	i P	**Pb**	**04 34 24.1**	**-0.5**
ANDN				i S	**Sn**	**04 34 45.2**	**-0.6**
ANDN	**Andirin**	**1.79**	**277**	i P	**Pb**	**04 34 24.1**	**-0.5**
ANDN				i S	**Sn**	**04 34 45.2**	**-0.6**
ILIC	**ilic-Erzincan**	**2.08**	**360**	ePN	**Pn**	**04 34 27.6**	**+0.6**
ILIC	**ilic-Erzincan**	**2.08**	**360**	ePn	**Pn**	**04 34 27.6**	**+0.6**
BINT	**Bingol**	**2.13**	**45**	ePn	**Pb**	**04 34 30.3**	**-0.3**
PINB	**Pinarbasi**	**2.15**	**308**	i P	**Pn**	**04 34 28.1**	**0.0**
PINB	**Pinarbasi**	**2.15**	**308**	i P	**Pn**	**04 34 28.1**	**0.0**
KOZT	**Kozan**	**2.19**	**274**	ePN	**Pn**	**04 34 28.0**	**-0.3**
KOZT	**Kozan**	**2.19**	**274**	ePn	**Pn**	**04 34 28.0**	**-0.3**
MZRK	**Al-Mazaregh**	**2.27**	**132**	eP	**Pn**	**04 34 29.1**	**-0.4**
MZRK				eS	**Sn**	**04 34 57.3**	**-0.4**
MZRK				AML	AML	04 35 09.5	
	comp=Z,13nm,0.3s						
MZRK	**Al-Mazaregh**	**2.27**	**132**	eP	**Pn**	**04 34 29.1**	**-0.4**
	SNR=47						
MZRK				eS	**Sn**	**04 34 57.3**	**-0.4**
	comp=Z,13nm,0.3s,SNR=49						
BNGB	**Bingˆ¶l**	**2.32**	**45**	ePN	**Pn**	**04 34 30.3**	**0.0**

IDC 04 04:43:58.2±1.1**, 33°.63N×82°.15E, h0^{km}, mb3.3**/4**, mb1 3.4**/5**, mb1mx3.2**/28**, mbtmp3.2**/5**, ML2.7**/1**, Error ellipse: s-maj=46.5km s-min=27.0km az=47.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.15**	**0**	Pn	Pn	04 47 07.9	+1.6
	0.0nm,0.3s,baz=184,slow=12,SNR=4.0						
CMAR	**Chiang Mai Arr**	**21.30**	**131**	P	P	04 48 47.6	+1.0
	0.6nm,0.3s,baz=311,slow=9.8,SNR=5.3						
TORD	**Torodi Ar. Bea**	**74.97**	**276**	P	P	04 55 42.0	+0.3
	0.3nm,0.6s,baz=51,slow=5.1,SNR=3.1						
ASAR	**Alice Springs**	**75.31**	**132**	P	P	04 55 43.2	-0.3
	0.2nm,0.8s,baz=308,slow=4.6,SNR=2.5						
YKA	**Yellowknife Ar**	**83.27**	**8**	P	P	04 56 25.5	-0.9
	0.1nm,0.5s,baz=338,slow=5.4,SNR=3.8						

IDC 04 04:45:25.3±1.9**, 2°.50N×125°.08E, h0^{km}, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/23**, mbtmp3.3**/3**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.3**/22**, Error ellipse: s-maj=184.1km s-min=26.3km az=64.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**4.57**	**6**	LR	LR	04 48 35.8	
	comp=Z,293nm,19.3s,baz=76,slow=42						
WRA	**Warramunga Arr**	**24.09**	**158**	P	P	04 50 41.5	-1.1
	1.1nm,0.5s,baz=336,slow=11,SNR=7.4						
ASAR	**Alice Springs**	**27.39**	**162**	P	P	04 51 14.6	+1.9
	0.1nm,0.4s,baz=344,slow=6.8,SNR=3.1						
MKAR	**Makanchi Array**	**57.64**	**326**	P	P	04 55 16.9	-0.4
	0.2nm,0.5s,baz=123,slow=8.2,SNR=6.2						

IDC 04 04:50:54.9±4.2**, 30°.70S×177°.50W, h0^{km}, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.7**/18**, mbtmp3.7**/3**, Error ellipse: s-maj=202.9km s-min=49.1km az=157.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.83**	**257**	P	P	04 57 48.1	+0.4
	0.9nm,0.5s,baz=96,slow=10,SNR=2.8						
ASAR	**Alice Springs**	**43.52**	**267**	P	P	04 59 00.3	-0.2
	0.2nm,0.7s,baz=103,slow=6.9,SNR=4.9						
WRA	**Warramunga Arr**	**44.54**	**272**	P	P	04 59 08.2	-0.5
	0.6nm,0.7s,baz=115,slow=8.1,SNR=6.8						
MKAR	**Makanchi Array**	**118.29**	**310**	PKP	PKPdf	05 09 43.7	-0.3
	0.1nm,0.3s,baz=101,slow=2.9,SNR=2.8						
FINES	**FINESS Array B**	**145.57**	**340**	PKPbc	PKPdf	05 10 33.8	-0.6
	1.2nm,0.9s,baz=56,slow=5.2,SNR=2.9						

*CSEM **04** 05:26:19.8±0.1, 38°.17N×22°.79E, h8^{km}, MD3.4, Error ellipse: s-maj=2.3km s-min=2.2km az=49.0*
*ATH **04** 05:26:19.7, 38°.15N×22°.77E, h21^{km}±1^{km}, MD3.4/31, ML3.5*
*ISCJB **04** 05:26:20.3±0.2, 38°.17N±0°.01×22°.78E±0°.02, h25^{km}±2^{km}, mb3.7/13, Error ellipse: s-maj=2.4km s-min=2.1km az=31.9*
*THE **04** 05:26:20.0, 38°.17N×22°.79E, h0^{km}±1^{km}, ML3.8/14, Error ellipse: s-maj=1.8km s-min=0.5km az=109.0*
*IDC **04** 05:26:25.9±2.4, 38°.40N×22°.75E, h52^{km}±22^{km}, mb3.4/13, mb1 3.5/17, mb1mx3.5/33, mbtmp3.4/17, ML3.3/3, MS2.6/1, Ms1 2.6/1, ms1mx2.1/40, Error ellipse: s-maj=23.2km s-min=14.4km az=160.0*
ISC 04 05:26:20.2±0.8**, 38°.17N**±0°.01×**22°.78E**±0°.01**, h13^{km}**±5^{km}**, n226, σ0^s.94**/303**, mb3.8**/13**, 8C-4D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTK	**Loutraki**	**0.21**	**135**	P	**Pg**	**05 26 24.3**	**-0.5**
LTK				S	**Sg**	**05 26 27.9**	**-0.1**
LTK	**Loutraki**	**0.21**	**135**	ePB	**Pg**	**05 26 24.4**	**-0.4**
LTK				eSB	**Sg**	**05 26 28.1**	**+0.1**
LTK	**Loutraki**	**0.21**	**135**	P	**Pg**	**05 26 24.3**	**-0.5**
LTK				S	**Sg**	**05 26 27.9**	**-0.1**
DSF	**Desfina**	**0.31**	**321**	P	**Pg**	**05 26 26.2**	**-0.5**
DSF				S	**Sg**	**05 26 31.8**	**+0.7**
DSF	**Desfina**	**0.31**	**321**	P	**Pg**	**05 26 26.2**	**-0.5**
DSF				S	**Sg**	**05 26 31.8**	**+0.7**
GUR	**Goura**	**0.42**	**236**	P	**Pg**	**05 26 27.7**	**-0.9**
GUR				S	**Sg**	**05 26 34.1**	**-0.1**
GUR	**Goura**	**0.42**	**236**	ePB	**Pg**	**05 26 27.7**	**-0.9**
GUR				eSB	**Sg**	**05 26 34.2**	**0.0**
GUR	**Goura**	**0.42**	**236**	P	**Pg**	**05 26 27.7**	**-0.9**
GUR				S	**Sg**	**05 26 34.1**	**-0.1**
LKR	**Lokris**	**0.51**	**20**	P	**Pg**	**05 26 29.6**	**-0.7**
LKR				S	**Sg**	**05 26 37.3**	**+0.1**
LKR	**Lokris**	**0.51**	**20**	ePN	**Pg**	**05 26 29.7**	**-0.6**
LKR				eSN	**Sb**	**05 26 38.1**	**-0.3**
LKR	**Lokris**	**0.51**	**20**	P	**Pg**	**05 26 29.6**	**-0.7**
LKR				S	**Sg**	**05 26 37.3**	**+0.1**
LKR				eSn	**Sb**	**05 26 38.1**	**-0.3**
KALE	**Kalithea**	**0.55**	**294**	P	**Pg**	**05 26 30.5**	**-0.5**
KALE				S	**Sg**	**05 26 38.2**	**-0.2**
KALE	**Kalithea**	**0.55**	**294**	ePN	**Pg**	**05 26 30.6**	**-0.5**
KALE				eSN	**Sg**	**05 26 38.8**	**+0.4**
KALE	**Kalithea**	**0.55**	**294**	ePn	**Pg**	**05 26 30.6**	**-0.5**
KALE				S	**Sg**	**05 26 38.2**	**-0.2**
KALE				eSn	**Sg**	**05 26 38.8**	**+0.4**
ATAL	**Atalanti**	**0.56**	**20**	P	**Pg**	**05 26 30.4**	**-0.8**
ATAL				S	**Sb**	**05 26 39.5**	**-0.2**
ATAL	**Atalanti**	**0.56**	**20**	P	**Pg**	**05 26 30.4**	**-0.8**
ATAL				S	**Sb**	**05 26 39.5**	**-0.2**
TRIZ	**Trizonia**	**0.59**	**290**	P	**Pg**	**05 26 31.3**	**-0.5**
TRIZ				S	**Sb**	**05 26 40.0**	**-0.7**
TRIZ	**Trizonia**	**0.59**	**290**	ePN	**Pg**	**05 26 31.4**	**-0.4**
TRIZ				eSN	**Sg**	**05 26 39.6**	**-0.1**
TRIZ	**Trizonia**	**0.59**	**290**	P	**Pg**	**05 26 31.3**	**-0.5**
TRIZ				eSn	**Sg**	**05 26 39.6**	**-0.1**
TRIZ				S	**Sb**	**05 26 40.0**	**-0.7**
AXAR	**Agios Charalam**	**0.60**	**351**	P	**Pg**	**05 26 31.4**	**-0.7**
AXAR				S	**Sb**	**05 26 41.1**	**-0.1**
AXAR	**Agios Charalam**	**0.60**	**351**	P	**Pg**	**05 26 31.4**	**-0.7**
AXAR				S	**Sb**	**05 26 41.1**	**-0.1**
LAKA	**Lakka**	**0.64**	**277**	P	**Pg**	**05 26 32.1**	**-0.6**
LAKA				S	**Sg**	**05 26 40.9**	**-0.2**
LAKA	**Lakka**	**0.64**	**277**	ePN	**Pg**	**05 26 31.9**	**-0.8**
LAKA				eSN	**Sg**	**05 26 40.9**	**-0.2**
LAKA	**Lakka**	**0.64**	**277**	P	**Pg**	**05 26 32.1**	**-0.6**
LAKA				S	**Sg**	**05 26 40.9**	**-0.2**
NAIG	**Nisos Aigina**	**0.69**	**126**	ePN	**Pg**	**05 26 33.6**	**-0.1**
NAIG	**Nisos Aigina**	**0.69**	**126**	ePn	**Pg**	**05 26 33.6**	**-0.1**
PSA1	**Psathopyrgos**	**0.72**	**283**	ePN	**Pb**	**05 26 34.4**	**-0.3**
PSA1				eSN	**Sb**	**05 26 44.0**	**-0.5**
EFP	**Efpalio**	**0.73**	**291**	P	**Pg**	**05 26 33.8**	**-0.7**
EFP				S	**Sb**	**05 26 45.0**	**+0.1**
EFP	**Efpalio**	**0.73**	**291**	ePN	**Pg**	**05 26 34.0**	**-0.5**
EFP				eSN	**Sg**	**05 26 44.2**	**0.0**
EFP	**Efpalio**	**0.73**	**291**	P	**Pg**	**05 26 33.8**	**-0.7**
EFP				eSn	**Sg**	**05 26 44.2**	**0.0**
EFP				S	**Sb**	**05 26 45.0**	**+0.1**
DID	**Didima**	**0.75**	**151**	P	**Pg**	**05 26 34.1**	**-0.8**
DID				S	**Sg**	**05 26 44.9**	**+0.1**
DID	**Didima**	**0.75**	**151**	ePN	**Pg**	**05 26 34.3**	**-0.6**
DID				eSN	**Sg**	**05 26 44.0**	**-0.8**
DID	**Didima**	**0.75**	**151**	P	**Pg**	**05 26 34.1**	**-0.8**
DID				eSn	**Sg**	**05 26 44.0**	**-0.8**
DID				S	**Sg**	**05 26 44.9**	**+0.1**
ATH	**Athens Observa**	**0.76**	**105**	P	**Pg**	**05 26 34.9**	**-0.2**
ATH				S	**Sb**	**05 26 45.8**	**+0.1**
ATH	**Athens Observa**	**0.76**	**105**	ePN	**Pb**	**05 26 35.3**	**-0.1**
ATH				eSN	**Sb**	**05 26 45.8**	**+0.1**
ATH	**Athens Observa**	**0.76**	**105**	P	**Pg**	**05 26 34.9**	**-0.2**
ATH	**Athens Observa**	**0.76**	**105**	ePn	**Pb**	**05 26 35.3**	**-0.1**
ATH				S	**Sb**	**05 26 45.8**	**+0.1**
UPR	**University Cam**	**0.79**	**279**	P	**Pg**	**05 26 35.5**	**-0.1**
UPR				S	**Sb**	**05 26 47.4**	**+0.9**
UPR	**University Cam**	**0.79**	**279**	ePN	**Pb**	**05 26 35.9**	**+0.1**
UPR				eSN	**Sb**	**05 26 46.6**	**+0.1**
UPR	**University Cam**	**0.79**	**279**	P	**Pg**	**05 26 35.5**	**-0.1**
UPR	**University Cam**	**0.79**	**279**	ePn	**Pb**	**05 26 35.9**	**+0.1**
UPR				eSn	**Sb**	**05 26 46.6**	**+0.1**
UPR				S	**Sb**	**05 26 47.4**	**+0.9**
ATHU	**Athens Univers**	**0.82**	**104**	P	**Pg**	**05 26 35.7**	**-0.4**
ATHU				S	**Sg**	**05 26 46.5**	**-0.3**
ATHU	**Athens Univers**	**0.82**	**104**	P	**Pg**	**05 26 35.7**	**-0.4**
ATHU				S	**Sg**	**05 26 46.5**	**-0.3**
MRKA	**Markates**	**0.83**	**49**	P	**Pg**	**05 26 35.6**	**-0.7**
MRKA	**Markates**	**0.83**	**49**	P	**Pg**	**05 26 35.6**	**-0.7**
VLX	**Vlachokerasia**	**0.86**	**202**	P	**Pg**	**05 26 35.7**	**-1.1**
VLX				S	**Sn**	**05 26 50.0**	**-0.5**
VLX	**Vlachokerasia**	**0.86**	**202**	ePN	**Pg**	**05 26 35.8**	**-1.1**
VLX				eSN	**Sg**	**05 26 48.3**	**+0.2**
VLX	**Vlachokerasia**	**0.86**	**202**	P	**Pg**	**05 26 35.7**	**-1.1**
VLX				eSn	**Sg**	**05 26 48.3**	**+0.2**
VLX				S	**Sn**	**05 26 50.0**	**-0.5**
PTL	**Penteli**	**0.86**	**98**	P	**Pg**	**05 26 36.9**	**-0.1**
PTL				S	**Sb**	**05 26 48.8**	**+0.2**
PTL	**Penteli**	**0.86**	**98**	ePN	**Pb**	**05 26 37.4**	**+0.3**
PTL				eSN	**Sb**	**05 26 48.7**	**+0.2**
PTL	**Penteli**	**0.86**	**98**	P	**Pg**	**05 26 36.9**	**-0.1**
PTL	**Penteli**	**0.86**	**98**	ePn	**Pb**	**05 26 37.4**	**+0.3**
PTL				eSn	**Sb**	**05 26 48.7**	**+0.2**
AGG	**Agios Georgios**	**0.92**	**338**	P	**Pg**	**05 26 37.2**	**-0.9**
AGG				S	**Sb**	**05 26 50.9**	**+0.6**
AGG	**Agios Georgios**	**0.92**	**338**	ePN	**Pg**	**05 26 37.1**	**-1.0**
AGG				eSN	**Sb**	**05 26 51.1**	**+0.8**
AGG	**Agios Georgios**	**0.92**	**338**	P	**Pg**	**05 26 37.2**	**-0.9**
AGG				S	**Sb**	**05 26 50.9**	**+0.6**
MAKR	**Makrakomi, Fth**	**0.98**	**329**	P	**Pb**	**05 26 39.0**	**-0.2**
MAKR				S	**Sb**	**05 26 52.3**	**+0.2**
MAKR	**Makrakomi, Fth**	**0.98**	**329**	P	**Pb**	**05 26 39.0**	**-0.2**
MAKR				S	**Sb**	**05 26 52.3**	**+0.2**
RLS	**Riolos of Patr**	**1.04**	**264**	P	**Pb**	**05 26 38.9**	**-1.2**
RLS				S	**Sn**	**05 26 55.8**	**+0.9**
RLS	**Riolos of Patr**	**1.04**	**264**	ePN	**Pb**	**05 26 39.0**	**-1.2**
RLS				eSN	**Sn**	**05 26 54.6**	**-0.3**
RLS	**Riolos of Patr**	**1.04**	**264**	P	**Pb**	**05 26 38.9**	**-1.2**
RLS				eSn	**Sn**	**05 26 54.6**	**-0.3**
RLS				S	**Sn**	**05 26 55.8**	**+0.9**
AMT	**Artemida-Makis**	**1.06**	**234**	P	**Pb**	**05 26 39.8**	**-0.6**
AMT				S	**Sn**	**05 26 55.0**	**-0.4**
AMT	**Artemida-Makis**	**1.06**	**234**	ePN	**Pg**	**05 26 40.5**	**-0.2**
AMT	**Artemida-Makis**	**1.06**	**234**	P	**Pb**	**05 26 39.8**	**-0.6**
AMT	**Artemida-Makis**	**1.06**	**234**	ePn	**Pg**	**05 26 40.5**	**-0.2**
AMT				S	**Sn**	**05 26 55.0**	**-0.4**
EVR	**Evrytania**	**1.07**	**315**	P	**Pb**	**05 26 40.2**	**-0.4**
EVR				S	**Sn**	**05 26 55.5**	**-0.2**
EVR	**Evrytania**	**1.07**	**315**	ePN	**Pb**	**05 26 39.9**	**-0.7**
EVR				eSN	**Sn**	**05 26 55.9**	**+0.2**
EVR	**Evrytania**	**1.07**	**315**	ePn	**Pb**	**05 26 39.9**	**-0.7**
EVR	**Evrytania**	**1.07**	**315**	P	**Pb**	**05 26 40.2**	**-0.4**
EVR				S	**Sn**	**05 26 55.5**	**-0.2**
EVR				eSn	**Sn**	**05 26 55.9**	**+0.2**
SKIA	**Skiathos**	**1.13**	**28**	P	**Pb**	**05 26 41.2**	**-0.5**
SKIA				S	**Sn**	**05 26 58.4**	**+1.2**
SKIA	**Skiathos**	**1.13**	**28**	P	**Pb**	**05 26 41.2**	**-0.5**
SKIA				S	**Sn**	**05 26 58.4**	**+1.2**
NEO	**Neokhori**	**1.19**	**17**	ePN	**Pn**	**05 26 42.2**	**-0.3**
NEO				eSN	**Sn**	**05 26 59.5**	**+0.9**
NEO	**Neokhori**	**1.19**	**17**	ePn	**Pn**	**05 26 42.3**	**-0.3**
NEO				eSn	**Sn**	**05 26 59.5**	**+0.9**
ITM	**Ithomi**	**1.20**	**215**	P	**Pn**	**05 26 42.5**	**-0.2**
ITM	**Ithomi**	**1.20**	**215**	ePN	**Pn**	**05 26 41.5**	**-1.2**
ITM	**Ithomi**	**1.20**	**215**	ePn	**Pn**	**05 26 41.5**	**-1.2**
ITM	**Ithomi**	**1.20**	**215**	P	**Pn**	**05 26 42.5**	**-0.2**
XOR	**Xorichti**	**1.24**	**15**	P	**Pn**	**05 26 43.0**	**-0.3**
XOR				S	**Sg**	**05 27 00.9**	**+0.7**
XOR	**Xorichti**	**1.24**	**15**	P	**Pn**	**05 26 43.0**	**-0.3**
XOR				S	**Sg**	**05 27 00.9**	**+0.7**
MRMA	**Marmari**	**1.27**	**95**	P	**Pn**	**05 26 43.6**	**0.0**
MRMA	**Marmari**	**1.27**	**95**	P	**Pn**	**05 26 43.6**	**0.0**
AOS	**Alonnisos**	**1.32**	**40**	P	**Pn**	**05 26 43.4**	**-1.0**
AOS	**Alonnisos**	**1.32**	**40**	ePB	**Pn**	**05 26 43.8**	**-0.6**
AOS	**Alonnisos**	**1.32**	**40**	P	**Pn**	**05 26 43.4**	**-1.0**
AOS	**Alonnisos**	**1.32**	**40**	ePb	**Pn**	**05 26 43.8**	**-0.6**
DYR	**Agios Nikonas**	**1.45**	**194**	P	**Pn**	**05 26 46.1**	**0.0**
DYR	**Agios Nikonas**	**1.45**	**194**	ePN	**Pn**	**05 26 46.1**	**0.0**
DYR	**Agios Nikonas**	**1.45**	**194**	P	**Pn**	**05 26 46.1**	**0.0**
VLI	**Veliai**	**1.45**	**175**	P	**Pn**	**05 26 46.1**	**-0.1**
VLI	**Veliai**	**1.45**	**175**	ePN	**Pn**	**05 26 46.3**	**+0.1**
VLI	**Veliai**	**1.45**	**175**	ePn	**Pn**	**05 26 46.3**	**+0.1**
PYL	**PYLOS**	**1.52**	**213**	P	**Pn**	**05 26 47.5**	**+0.5**
PYL	**PYLOS**	**1.52**	**213**	ePN	**Pn**	**05 26 47.5**	**+0.5**
PYL	**PYLOS**	**1.52**	**213**	P	**Pn**	**05 26 47.5**	**+0.5**
THL	**Klokotos Trika**	**1.52**	**337**	P	**Pb**	**05 26 47.6**	**-0.6**
THL	**Klokotos Trika**	**1.52**	**337**	ePN	**Pb**	**05 26 47.8**	**-0.4**
THL	**Klokotos Trika**	**1.52**	**337**	P	**Pb**	**05 26 47.6**	**-0.6**
KFL	**Anninata**	**1.57**	**268**	P	**Pb**	**05 26 49.4**	**+0.2**
KFL	**Anninata**	**1.57**	**268**	P	**Pb**	**05 26 49.4**	**+0.2**
VLS	**Valsamata**	**1.73**	**271**	P	**Pb**	**05 26 51.3**	**-0.5**
VLS				S	**Sg**	**05 27 14.5**	**-1.3**
VLS	**Valsamata**	**1.73**	**271**	ePN	**Pb**	**05 26 51.3**	**-0.5**
VLS	**Valsamata**	**1.73**	**271**	P	**Pb**	**05 26 51.3**	**-0.5**
VLS				S	**Sg**	**05 27 14.5**	**-1.3**
LKD2	**Lefkada island**	**1.78**	**291**	P	**Pb**	**05 26 53.4**	**+0.7**
LKD2	**Lefkada island**	**1.78**	**291**	P	**Pb**	**05 26 53.4**	**+0.7**
PAIG	**Paliouri**	**1.89**	**21**	P	**Pn**	**05 26 51.7**	**-0.5**
PAIG	**Paliouri**	**1.89**	**21**	P	**Pn**	**05 26 51.7**	**-0.5**
KYTH	**Kithira**	**1.90**	**174**	P	**Pb**	**05 26 53.8**	**-0.9**
KYTH	**Kithira**	**1.90**	**174**	ePN	**Pb**	**05 26 54.0**	**-0.7**
KYTH	**Kithira**	**1.90**	**174**	P	**Pb**	**05 26 53.8**	**-0.9**
MEV	**Metsovon**	**2.02**	**324**	P	**Pn**	**05 26 55.2**	**+1.1**
MEV	**Metsovon**	**2.02**	**324**	P	**Pn**	**05 26 55.2**	**+1.1**
PLG	**Polygyros**	**2.26**	**13**	P	**Pn**	**05 26 57.4**	**0.0**
PLG	**Polygyros**	**2.26**	**13**	P	**Pn**	**05 26 57.4**	**0.0**
KZN	**Kozani**	**2.27**	**340**	P	**Pn**	**05 26 58.5**	**+0.9**
KZN	**Kozani**	**2.27**	**340**	ePB	**Pn**	**05 26 58.7**	**+1.1**
KZN	**Kozani**	**2.27**	**340**	P	**Pn**	**05 26 58.5**	**+0.9**
OUR	**Ouranopolis**	**2.36**	**23**	P	**Pn**	**05 26 58.3**	**-0.3**
OUR	**Ouranopolis**	**2.36**	**23**	P	**Pn**	**05 26 58.3**	**-0.3**
HORT	**Hortiatis**	**2.44**	**6**	P	**Pn**	**05 26 59.7**	**-0.1**
HORT	**Hortiatis**	**2.44**	**6**	P	**Pn**	**05 26 59.7**	**-0.1**
CHOS	**Chios island**	**2.59**	**84**	ePN	**Pn**	**05 27 02.1**	**+0.3**
CHOS	**Chios island**	**2.59**	**84**	ePn	**Pn**	**05 27 02.1**	**+0.3**
NEST	**Nestorio**	**2.62**	**330**	P	**Pn**	**05 27 03.7**	**+1.4**
NEST	**Nestorio**	**2.62**	**330**	P	**Pn**	**05 27 03.7**	**+1.4**
SOH	**Sokhos**	**2.69**	**9**	P	**Pn**	**05 27 03.6**	**+0.4**
SOH	**Sokhos**	**2.69**	**9**	ePN	**Pn**	**05 27 03.8**	**+0.6**
SOH	**Sokhos**	**2.69**	**9**	P	**Pn**	**05 27 03.6**	**+0.4**
KEK	**Kerkira**	**2.79**	**304**	P	**Pn**	**05 27 06.4**	**+1.8**
KEK	**Kerkira**	**2.79**	**304**	ePN	**Pn**	**05 27 05.9**	**+1.3**
KEK	**Kerkira**	**2.79**	**304**	ePn	**Pn**	**05 27 05.9**	**+1.3**
KEK	**Kerkira**	**2.79**	**304**	P	**Pn**	**05 27 06.4**	**+1.8**
FNA	**Florina**	**2.83**	**338**	P	**Pn**	**05 27 05.9**	**+0.7**
FNA	**Florina**	**2.83**	**338**	P	**Pn**	**05 27 05.9**	**+0.7**
KARN	**Karanos**	**2.91**	**161**	P	**Pn**	**05 27 07.2**	**+1.0**
KARN	**Karanos**	**2.91**	**161**	P	**Pn**	**05 27 07.2**	**+1.0**
VAM	**Vamos**	**2.98**	**157**	P	**Pn**	**05 27 08.1**	**+0.9**
VAM	**Vamos**	**2.98**	**157**	P	**Pn**	**05 27 08.1**	**+0.9**
KNT	**Kendrikon**	**2.99**	**2**	P	**Pn**	**05 27 08.0**	**+0.6**
KNT	**Kendrikon**	**2.99**	**2**	P	**Pn**	**05 27 08.0**	**+0.6**
SRS	**Serrai**	**3.01**	**12**	P	**Pn**	**05 27 07.8**	**+0.2**
SRS	**Serrai**	**3.01**	**12**	P	**Pn**	**05 27 07.8**	**+0.2**
BIA	**Bitola**	**3.06**	**339**	i Pn	**Pn**	**05 27 10.2**	**+1.8**
BIA				eSn	**Sn**	**05 27 45.3**	**+0.4**
BIA	**Bitola**	**3.06**	**339**	i Pn	**Pn**	**05 27 10.1**	**+1.8**
BIA				eSn	**Sn**	**05 27 45.2**	**+0.4**
VAY	**Valandovo**	**3.15**	**357**	i Pn	**Pn**	**05 27 09.8**	**+0.3**
VAY				eSn	**Sn**	**05 27 46.8**	**-0.2**
VAY	**Valandovo**	**3.15**	**357**	i Pn	**Pn**	**05 27 10.3**	**+0.7**
VAY				eSn	**Sn**	**05 27 47.3**	**+0.3**
NVR	**Nevrokopi**	**3.29**	**14**	P	**Pn**	**05 27 11.5**	**+0.1**
NVR	**Nevrokopi**	**3.29**	**14**	P	**Pn**	**05 27 11.5**	**+0.1**
IDI	**Anoyia**	**3.34**	**149**	P	**Pn**	**05 27 12.8**	**+0.6**
IDI	**Anoyia**	**3.34**	**149**	P	**Pn**	**05 27 12.8**	**+0.6**
GVD	**Gavdhos**	**3.48**	**162**	P	**Pn**	**05 27 16.1**	**+2.0**
GVD	**Gavdhos**	**3.48**	**162**	P	**Pn**	**05 27 16.1**	**+2.0**
MMB	**Musomiste**	**3.49**	**12**	eP	**Pn**	**05 27 14.2**	**-0.1**
MMB	**Musomiste**	**3.49**	**12**	eP	**Pn**	**05 27 14.2**	**-0.1**
KKB	**Krupnik**	**3.70**	**4**	eP	**Pn**	**05 27 17.0**	**-0.1**
KKB	**Krupnik**	**3.70**	**4**	eP	**Pn**	**05 27 17.0**	**-0.1**
RZN	**Rozhen**	**3.82**	**22**	eP	**Pn**	**05 27 17.6**	**-1.3**
RZN	**Rozhen**	**3.82**	**22**	eP	**Pn**	**05 27 17.6**	**-1.3**
VTS	**Vitosha**	**4.43**	**4**	⇑ iP	**Pn**	**05 27 29.3**	**+2.0**
VTS	**Vitosha**	**4.43**	**4**	eP	Pn	05 27 21.6	-5.7
VTS	**Vitosha**	**4.43**	**4**	⇑ iP	**Pn**	**05 27 29.3**	**+2.0**
MPEP	**Malo Peshtene**	**5.23**	**8**	eP	**Pn**	**05 27 37.5**	**-0.7**
GRUS	**Gruza**	**5.92**	**345**	ePn	**Pn**	**05 27 47.1**	**-0.5**
STON	**Ston**	**6.09**	**322**	ePn	**Pn**	**05 27 49.2**	**-0.6**
STON				Sn	**Sn**	**05 28 57.6**	**-1.8**
STON	**Ston**	**6.09**	**322**	ePn	**Pn**	**05 27 49.2**	**-0.6**
STON				Sn	**Sn**	**05 28 57.5**	**-1.8**
BBLS	**Lazići**	**6.24**	**337**	ePn	**Pn**	**05 27 51.2**	**-0.8**
DIVS	**Divibare**	**6.29**	**341**	ePn	**Pn**	**05 27 52.3**	**-0.4**
MS1	**Monte Sant'Ang**	**6.33**	**306**	ePn	**Pn**	**05 27 53.8**	**+0.5**
GZR	**Gura Zlata**	**7.22**	**360**	⇓ iP	**Pn**	**05 28 05.7**	**+0.2**
GZR	**Gura Zlata**	**7.22**	**360**	⇓ iP	**Pn**	**05 28 05.7**	**+0.2**
ARR	**Arges**	**7.33**	**10**	⇑ iP	**Pn**	**05 28 07.3**	**+0.4**
ARR	**Arges**	**7.33**	**10**	⇑ iP	**Pn**	**05 28 07.3**	**+0.4**
MLR	**Muntele Rosu**	**7.69**	**17**	⇑ iP	**Pn**	**05 28 13.3**	**+1.3**
MLR	**Muntele Rosu**	**7.69**	**17**	P	**Pn**	**05 28 13.9**	**+2.0**
	0.2nm,0.3s,baz=230,slow=7.9,SNR=9.4						
MLR	**Muntele Rosu**	**7.69**	**17**	⇑ iP	**Pn**	**05 28 13.3**	**+1.3**
PLOR	**Plostina**	**8.20**	**19**	⇑ iP	**Pn**	**05 28 21.4**	**+2.5**
PLOR	**Plostina**	**8.20**	**19**	⇑ iP	**Pn**	**05 28 21.4**	**+2.5**
VRI	**Vrincioaia**	**8.23**	**20**	⇓ iP	**Pn**	**05 28 20.2**	**+0.9**
VRI	**Vrincioaia**	**8.23**	**20**	⇓ iP	**Pn**	**05 28 20.2**	**+0.9**
BRTR	**Keskin Array B**	**8.60**	**76**	P	Pn	05 28 28.2	+3.6
	0.1nm,0.3s,baz=257,slow=13,SNR=8.8						
NVLJ	**Novalja**	**8.72**	**320**	Sn	**Sn**	**05 29 59.8**	**-4.4**
BOJS	**Bojanci**	**9.23**	**325**	i Pn	**Pn**	**05 28 32.6**	**-0.4**
BOJS				i Sn	**Sn**	**05 30 14.6**	**-2.1**
BOJS	**Bojanci**	**9.23**	**325**	i Pn	**Pn**	**05 28 32.6**	**-0.4**
JAVS	**Javornik**	**10.07**	**323**	i Pn	Pn	05 28 48.4	+3.8
JAVS				i Sn	**Sn**	**05 30 33.8**	**-3.7**
PERS	**Pernice**	**10.18**	**329**	i Pn	**Pn**	**05 28 45.3**	**-0.8**
PERS				i Sn	Sn	05 30 30.4	-10
PERS	**Pernice**	**10.18**	**329**	i Pn	**Pn**	**05 28 45.3**	**-0.8**
VYHS	**Vyhne**	**10.71**	**346**	ePG	Px	05 29 43.0	
KEST	**Kesra**	**11.02**	**261**	P	Pn	05 29 01.5	+3.8
	baz=45,slow=13,SNR=2.4						
GERES	**GERESS Array B**	**12.53**	**331**	P	**Pn**	**05 29 18.1**	**-0.1**
	0.1nm,0.3s,baz=156,slow=15,SNR=4.2						
DAVOX	**Davos/Dischmat**	**12.82**	**316**	LR	LR	05 34 04.0	
	comp=Z,26nm,18.6s,baz=98,slow=36						
MBDF	**Montbardon**	**13.67**	**304**	eP	**Pn**	**05 29 34.8**	**+1.0**
	4.8nm,0.8s						
LPG	**La Plagne**	**14.00**	**307**	eP	**Pn**	**05 29 38.0**	**-0.5**
LPG	**La Plagne**	**14.00**	**307**	eP	**Pn**	**05 29 38.0**	**-0.5**
LPL	**La Plagne**	**14.02**	**307**	eP	**Pn**	**05 29 37.9**	**-0.8**
	3.6nm,0.7s						
LPL	**La Plagne**	**14.02**	**307**	eP	**Pn**	**05 29 37.9**	**-0.8**
	3.0nm,0.7s						
CABF	**La Chapelle**	**14.92**	**310**	eP	**Pn**	**05 29 50.4**	**-0.5**
HAU	**Haudompre**	**15.49**	**315**	eP	**Pn**	**05 30 00.2**	**+1.9**
	6.4nm,0.7s						
SMF	**Signal de Mont**	**16.32**	**307**	eP	**Pn**	**05 30 09.2**	**+0.1**
	4.5nm,0.7s						
MTLF	**Montolieu**	**16.40**	**295**	eP	**Pn**	**05 30 09.6**	**-0.5**
	5.3nm,1.0s						
SSF	**Saint Saulge**	**16.71**	**308**	eP	**Pn**	**05 30 13.1**	**-0.8**
ETSF	**Etsaut**	**18.34**	**292**	eP	**P**	**05 30 37.0**	**+2.6**
ETSF	**Etsaut**	**18.34**	**292**	eP	**P**	**05 30 37.0**	**+2.6**
MFF	**Saint Martin d**	**18.87**	**304**	eP	**Pn**	**05 30 42.2**	**+1.6**
MFF	**Saint Martin d**	**18.87**	**304**	eP	**Pn**	**05 30 42.2**	**+1.6**
LDF	**La Druitiere**	**19.57**	**310**	eP	**Pn**	**05 30 51.2**	**+2.2**
FLN	**La Foliniere**	**19.85**	**310**	eP	**Pn**	**05 30 54.9**	**+2.5**
GRR	**Gorron**	**19.94**	**308**	eP	**Pn**	**05 30 55.9**	**+2.5**
	5.9nm,0.6s						
ESDC	**Sonseca Array**	**20.84**	**283**	P	**P**	**05 31 02.4**	**+0.7**
	2.3nm,0.6s,baz=75,slow=11,SNR=19						
SGMF	**Saint Gilles**	**20.95**	**307**	eP	**P**	**05 31 03.0**	**+0.3**
SGMF	**Saint Gilles**	**20.95**	**307**	eP	**P**	**05 31 03.0**	**+0.3**
QUIF	**Quistinic**	**21.23**	**306**	eP	**P**	**05 31 04.1**	**-1.6**
QUIF	**Quistinic**	**21.23**	**306**	eP	**P**	**05 31 04.1**	**-1.6**
ROSF	**Rostrenen**	**21.43**	**307**	eP	**P**	**05 31 08.1**	**+0.2**
	28nm,1.1s						
ROSF	**Rostrenen**	**21.43**	**307**	eP	**P**	**05 31 08.1**	**+0.2**
	27nm,1.1s						
HFS	**Hagfors**	**22.73**	**348**	P	**P**	**05 31 19.8**	**-1.9**
	1.6nm,0.6s,baz=142,slow=13,SNR=9.2						
MDT	**Midelt**	**22.89**	**265**	P	**P**	**05 31 26.9**	**+3.1**
	2.2nm,0.9s,baz=39,slow=6.5,SNR=2.7						
FINES	**FINESS Array B**	**23.39**	**4**	P	**P**	**05 31 26.1**	**-2.3**
	1.7nm,0.9s,baz=170,slow=8.5,SNR=3.3						
NB2	**NORSAR Subarra**	**24.02**	**346**	P	**P**	**05 31 33.0**	**-1.6**
	comp=Z,2.0nm,0.8s,baz=148,slow=10						
NB2	**NORSAR Subarra**	**24.02**	**346**	P	**P**	**05 31 33.0**	**-1.6**
	comp=Z,2.0nm,0.8s,SNR=4.3						
NOA	**NORSAR Array B**	**24.02**	**346**	P	**P**	**05 31 32.0**	**-2.5**
	comp=Z,1.3nm,0.8s,baz=160,slow=10.0,SNR=3.0						
EKA	**Eskdalemuir Ar**	**24.49**	**323**	P	**P**	**05 31 39.0**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=122,slow=9.6,SNR=5.2						
TORD	**Torodi Ar. Bea**	**31.19**	**223**	P	**P**	**05 32 39.5**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=33,slow=8.9,SNR=4.3						
MKAR	**Makanchi Array**	**43.79**	**59**	P	**P**	**05 34 25.4**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=273,slow=7.6,SNR=19						
ZALV	**Zalesovo Beam**	**44.37**	**48**	P	**P**	**05 34 29.8**	**-0.2**
	comp=Z,3.0nm,0.5s,baz=275,slow=8.5,SNR=20						
SONM	**Songino Array**	**59.08**	**51**	P	**P**	**05 36 20.1**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=285,slow=8.7,SNR=5.5						
SCHQ	**Schefferville**	**59.67**	**318**	P	**P**	**05 36 23.8**	**-0.2**
	comp=Z,3.2nm,0.9s,baz=81,slow=9.5,SNR=7.5						
YKA	**Yellowknife Ar**	**74.00**	**341**	P	**P**	**05 37 54.9**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=33,slow=5.4,SNR=12						
ILAR	**Eielson Array**	**77.07**	**355**	P	**P**	**05 38 12.1**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=355,slow=2.6,SNR=5.8						

*ISK **04** 05:29:28.7, 37°.26N×44°.55E, h5^{km}, MD3.4*
*CSEM **04** 05:29:30.8±1.5, 37°.35N×44°.52E, h2^{km}, MD3.4, Error ellipse: s-maj=31.8km s-min=16.6km az=141.0*
ISC 04 05:29:30.5±2.7**, 37°.29N**±0°.09×**44°.5E**±0°.1**, h8^{km}**±11^{km}**, n21, σ1^s.12**/30**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.69**	**295**	ePG	**Pg**	**05 29 42.8**	**-1.0**
HKR				eSG	**Sb**	**05 29 53.9**	**-0.7**
HKR	**Hakkari**	**0.69**	**295**	ePg	**Pg**	**05 29 42.8**	**-1.0**
HKR				eSg	**Sb**	**05 29 53.9**	**-0.7**
HAKT	**HAKKARI**	**0.71**	**293**	i P	**Pg**	**05 29 43.0**	**-1.2**
HAKT				i S	**Sn**	**05 29 58.4**	**+0.3**
HAKT	**HAKKARI**	**0.71**	**293**	i P	**Pg**	**05 29 43.0**	**-1.2**
HAKT				i S	**Sn**	**05 29 58.4**	**+0.3**
CUKT	**Cukurca**	**0.73**	**267**	ePG	**Pg**	**05 29 43.5**	**-1.2**
CUKT	**Cukurca**	**0.73**	**267**	ePg	**Pg**	**05 29 43.5**	**-1.2**
GEVA	**Gevas**	**1.55**	**312**	i P	**Pg**	**05 30 00.3**	**+0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GEVA				*i* S	Sg	05 30 25.4	+5.1
GEVA	**Gevas**	**1.55**	**312**	*i* P	**Pg**	**05 30 00.3**	**+0.1**
VANB	**Van**	**1.58**	**326**	*e*PN	**Pn**	**05 29 58.7**	**-0.2**
VANB				*e*SN	**Sb**	**05 30 20.3**	**0.0**
VANB	**Van**	**1.58**	**326**	*e*Pn	**Pn**	**05 29 58.7**	**-0.2**
VANB				*e*Sn	**Sb**	**05 30 20.3**	**0.0**
SIRN	**S˜–rnak**	**1.70**	**278**	*i* P	**Pg**	**05 30 03.5**	**+0.4**
SIRN				*i* S	**Sg**	**05 30 25.6**	**+0.5**
SIRN	**S˜–rnak**	**1.70**	**278**	*i* P	**Pg**	**05 30 03.5**	**+0.5**
SIRN				*i* S	**Sg**	**05 30 25.6**	**+0.6**
CLDR	**Caldiran**	**1.91**	**346**	*e*PN	**Pn**	**05 30 03.6**	**+0.1**
CLDR	**Caldiran**	**1.91**	**346**	*e*Pn	**Pn**	**05 30 03.6**	**+0.1**
AGRB	**Hanur-Agry**	**2.58**	**333**	*e*PN	**Pn**	**05 30 13.1**	**+0.4**
AGRB	**Hanur-Agry**	**2.58**	**333**	*e*Pn	**Pn**	**05 30 13.1**	**+0.4**
MARD	**Mardin**	**2.99**	**272**	*i* P	**Pb**	**05 30 24.9**	**+0.8**
MARD				*i* S	**Sn**	**05 30 50.6**	**-3.8**
BNGB	**Bingˆ¶l**	**3.48**	**300**	*e*PN	**Pn**	**05 30 26.2**	**+1.3**
BINT	**Bingol**	**3.56**	**298**	*e*Pn	**Pn**	**05 30 26.3**	**+0.2**
SVRC	**Sivrice-ELAZID**	**4.27**	**286**	*e*PN	**Pn**	**05 30 37.7**	**+1.7**
SVRC	**Sivrice-ELAZID**	**4.27**	**286**	*e*Pn	**Pn**	**05 30 37.7**	**+1.7**

*BJI **04** 05:31:51.4, 4°.76N×127°.60E, h55^{km}, mB6.1/45, mb6.0/76, Ms6.0/80, Ms7 5.8/74*

*MOS **04** 05:31:52.8±0.8, 5°.31N×127°.20E, h33^{km}, mb6.3/85, MS5.7/87, Error ellipse: s-maj=10.3km s-min=4.9km az=122.9*

*MAN **04** 05:31:53, 4°.79N×127°.33E, h107^{km}, mb6.4, ML5.5, MS6.3*

MAN INTENSITY III - MATI DAVAO ORIENTAL; GENERAL SANTOS CITY; DAVAO CITY KIDAPAWAN CITY NORTH COTABATO.

*NEIC **04** 05:31:55.5±0.1, 5°.15N×127°.20E, h48^{km}, mb6.1/181, ME6.5, MS5.8/161, MW6.3, MW6.2, Error ellipse: s-maj=4.6km s-min=3.3km az=74.0, Moment Tensor Solution. s59 Moment tensor: Scale 10^{18}Nm; M_{rr}1.55; $M_{\theta\theta}$0.41; $M_{\phi\phi}$-1.96; $M_{r\theta}$-0.94; $M_{\theta\phi}$2.07; $M_{\phi r}$-0.21; Best double couple: $M_0$2.90000×10^{18} NP1:ϕ_s295.00000°, δ63.00000°, λ37.00000°. NP2:ϕ_s186.00000°, δ57.00000°, λ148.00000°. Principal axes: T 2.5100, Plg44.0000°, Azm152.0000°; N 0.6700, Plg45.0000°, Azm325.0000°; P -3.1800, Plg3.0000°, Azm59.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Felt [III PIVS] at Davao, General Santos, Kidapawan and Mati; [II PIVS] at Malita; [I PIVS] at Makilala, Mindanao. Also felt at Tagum.

*AUST **04** 05:31:57.0±0.2, 5°.05N×127°.26E, h61^{km} Error ellipse: s-maj=0.6km s-min=0.5km az=227.0*

*IDC **04** 05:31:57.1±0.7, 5°.16N×127°.19E, h58^{km}±5^{km}, mb5.8/41, mb1 5.8/43, mb1mx5.8/44, mbtmp5.8/43, MS5.6/38, Ms1 5.6/38, ms1mx5.5/49, Error ellipse: s-maj=9.7km s-min=6.2km az=88.0*

*ISCJB **04** 05:31:57.8±0.3, 5°.07N±0°.01×127°.19E±0°.02, h84^{km}±2^{km}, mb6.0/262, Error ellipse: s-maj=3.2km s-min=2.3km az=164.3*

*TEH **04** 05:31:58.0, 5°.11N×127°.21E, h68^{km}, ML6.3*

*GCMT **04** 05:31:59.0±0.1, 5°.21N×127°.20E, h57^{km}, MW6.2, Moment Tensor Solution. s117,c280; s98,c163; Moment tensor: Scale 10^{18}Nm; M_{rr}1.94±.02; $M_{\theta\theta}$-0.23±.02; $M_{\phi\phi}$-1.71±.02; $M_{r\theta}$-1.07±.02; $M_{\theta\phi}$2.04±.01; $M_{\phi r}$-0.25±.02; Best double couple: $M_0$2.90000×10^{18} NP1:ϕ_s175.00000°, δ50.00000°, λ137.00000°. NP2:ϕ_s296.00000°, δ59.00000°, λ49.00000°. Principal axes: T 2.6700, Plg55.0000°, Azm151.0000°; N 0.5000, Plg34.0000°, Azm321.0000°; P -3.1800, Plg5.0000°, Azm54.0000°; Data Used: II IU CN IC G. Surface waves: sta=126, comp=287, per= 50.*

*DJA **04** 05:32:01.3±0.3, 5°N±2°×12°7E±°, h88^{km}±3^{km}, M6.4/123, mb6.2/123, mB6.6/113, MLv6.9/5, Mw(mB)6.4/113, Mwp6.2/52*

*SZGRF **04** 05:32:32.3, 11°.62N×122°.99E, h71^{km}, mb5.9, MS5.9, Panay, Philippine Islands*

ISC 04 05:31:57.8±0.2, **5°.16N**±0°.02×**127°.19E**±0°.03, **h69**^{km}±1^{km}, **h69^{km}:pP-P, n1908,** σ**1ˢ43**/2267, **mb6.2**/260, **403C-358D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	**2.41**	**292**⇓	*e*P	**Pn**	**05 32 34.6**	**-0.6**
DAV	**Davao City (W)**	**2.48**	**320**	*e*Pn	**Pn**	**05 32 38.4**	**+2.5**
DAV				*e*Sn	Sn	05 33 16.4	+11
DAV	**Davao City (W)**	**2.48**	**320**⇓	*e*P	**Pn**	**05 32 38.5**	**+2.5**
DAV	**Davao City (W)**	**2.48**	**320**	P	**Pn**	**05 32 38.6**	**+2.6**
	SNR=1067						
DAV	**Davao City (W)**	**2.48**	**320**	P	**Pn**	**05 32 38.3**	**+2.3**
DAV	**Davao City (W)**	**2.48**	**320**	P	Pn	05 32 40.1	+4.1
	1µm,0.3s,baz=130,slow=1.6,SNR=200						
DAV				S	Sn	05 33 14.8	+10
	7µm,0.3s,baz=246,slow=21,SNR=12						
KCP	**Kidapawan**	**2.78**	**311**⇑	*i*P	**Pn**	**05 32 41.6**	**+1.5**
KCP				*i* S	Sn	05 33 20.0	+7.3
BUKP	**Musuan**	**3.43**	**322**	*e*P	**Pn**	**05 32 51.9**	**+2.9**
BUKP				*e*S	Sn	05 33 43.1	+15
CTBH	**Cotabato--PC H**	**3.57**	**305**⇑	*e*P	**Pn**	**05 32 52.4**	**+1.5**
CGP	**Cagayan de Oro**	**4.10**	**323**⇑	*i*P	Pn	05 33 04.1	+6.0
CGP				*i* S	**Sn**	**05 33 50.0**	**+5.1**
TNTI	**Ternate**	**4.37**	**178**	P	**Pn**	**05 33 02.2**	**+0.5**
MNI	**Manado**	**4.38**	**213**	P	**Pn**	**05 33 02.3**	**+0.4**
PAGZ	**Pagadian**	**4.63**	**305**	*e*P	**Pn**	**05 33 07.6**	**+2.3**
IPIL	**Ipil**	**5.28**	**300**⇑	*i*P	Pn	05 33 18.3	+4.1
IPIL				*e*S	**Sn**	**05 34 18.9**	**+5.1**
ZMPH	**Zamboanga City**	**5.40**	**289**⇓	*e*P	**Pn**	**05 33 16.5**	**+0.7**
ZMPH				*i* S	**Sn**	**05 34 14.0**	**-2.8**
MSLP	**Maasin**	**5.45**	**335**	*e*P	**Pn**	**05 33 19.6**	**+3.0**
KMSI	**Cibinong**	**5.57**	**215**	P	**Pn**	**05 33 18.9**	**+0.6**
	25µm,0.9s,283µm270µm						
TBP	**Tagbilaran**	**5.58**	**324**	*e*P	**Pn**	**05 33 20.3**	**+2.0**
LBMI	**Labuha**	**5.77**	**177**	P	**Pn**	**05 33 21.9**	**+0.9**
	14µm,1.0s,443µm87µm146nm						
LLP	**Lapu-Lapu**	**6.04**	**328**⇑	*e*P	Pn	05 33 28.0	+3.4
LLP				*e*S	Sn	05 34 39.4	+7.1
PLP	**Palo**	**6.35**	**340**⇓	*e*P	**Pn**	**05 33 31.1**	**+2.2**
OCLP	**Ormoc**	**6.38**	**337**	*e*P	Pn	05 33 33.4	+4.1
MRSI	**Marisa**	**7.01**	**229**	P	**Pn**	**05 33 38.1**	**+0.2**
	9µm,0.7s,96µm202µm						
GUIM	**Jordan**	**7.09**	**320**	*e*P	Pn	05 33 42.6	+3.7
PALU	**Palau**	**7.56**	**73**	P	**Pn**	**05 33 42.8**	**-2.6**
	baz=7.5,SNR=120						
PALU				S	Sn	05 35 03.4	-6.2
	baz=7.5,SNR=8.2						
LUWI	**Luwuk**	**7.58**	**216**	P	**Pn**	**05 33 46.4**	**+0.7**
	10µm,1.0s,115µm325µm39nm						
RCP	**Roxas**	**7.73**	**326**⇑	*e*P	Pn	05 33 51.4	+3.6
APSI	**Ampana**	**8.19**	**223**	P	**Pn**	**05 33 52.8**	**-1.3**
	638nm,0.9s						
NLAI	**Namlea**	**8.35**	**181**	P	**Pn**	**05 33 55.3**	**-0.9**
	2µm,1.0s,35µm						
MSAI	**Masohi**	**8.63**	**168**	P	**Pn**	**05 34 03.2**	**+3.1**
	948nm,1.9s,22µm						
MYLDM	**Lahad Datu**	**8.66**	**270**	P	Pn	05 34 04.3	+3.9
MYLDM	**Lahad Datu**	**8.66**	**270**	P	**Pn**	**05 34 03.0**	**+2.6**
	4µm,1.3s,85µm288µm						
AAI	**Ambon**	**8.85**	**173**	P	**Pn**	**05 34 04.0**	**+0.9**
AAI	**Ambon**	**8.85**	**173**	P	**Pn**	**05 34 04.6**	**+1.5**
	baz=8.8,SNR=13						
TSM	**Tawau**	**9.33**	**265**	P	Pn	05 34 16.4	+6.8
FAKI	**Fak Fak**	**9.49**	**148**	P	**Pn**	**05 34 13.3**	**+1.5**
	2µm,1.2s,32µm72µm						
PCI	**Palu**	**9.50**	**231**	P	Pn	05 34 01.6	-10
	baz=9.5,SNR=165						
GQP	**Guinayangan**	**9.87**	**332**⇑	*e*P	Pn	05 34 20.5	+3.6
SDKM	**Sandakan**	**9.96**	**273**	P	**Pn**	**05 34 20.2**	**+1.8**
BNDI	**Bandanaira**	**10.00**	**164**	P	**Pn**	**05 34 20.7**	**+2.0**
	9µm,1.8s,143µm113µm						
KDI	**Kendari**	**10.15**	**207**	P	**Pn**	**05 34 18.8**	**-2.0**
KDM	**Kudat**	**10.45**	**280**	P	**Pn**	**05 34 27.6**	**+2.7**
LQP	**Lukban**	**10.49**	**328**⇑	*e*P	Pn	05 34 33.5	+7.8
TGY	**Tagaytay City**	**10.81**	**326**	P	Pn	05 34 36.1	+6.2
TGY	**Tagaytay City**	**10.81**	**326**	P	Pn	05 34 36.1	+6.2
	55nm,0.3s,baz=96,slow=9.9,SNR=7.9						
TGY				LR	LR	05 39 15.8	
	comp=Z,272nm,19.9s,baz=132,slow=41						
BAKI	**Biak**	**10.92**	**125**	P	**Pn**	**05 34 34.2**	**+2.9**
	4µm,0.9s,85µm						
KKM	**Kota Kinabalu**	**10.96**	**275**	*e*Pn	**Pn**	**05 34 34.9**	**+2.9**
KKM	**Kota Kinabalu**	**10.96**	**275**	P	Pn	05 34 35.2	+3.1
KKM	**Kota Kinabalu**	**10.96**	**275**	P	**Pn**	**05 34 34.9**	**+2.9**
	1µm,1.7s,42µm						
KKM	**Kota Kinabalu**	**10.96**	**275**	P	**Pn**	**05 34 34.9**	**+2.9**
	baz=11,SNR=42						
TTSI	**Tana Toraja**	**10.99**	**222**	P	**Pn**	**05 34 33.4**	**+1.1**
SMKI	**Samarinda**	**11.42**	**241**	P	**Pn**	**05 34 40.5**	**+2.3**
	2µm,1.1s,29µm						
BBSI	**Bau Bau**	**11.54**	**204**	P	**Pn**	**05 34 38.1**	**-1.8**
	1µm,1.2s,15µm73µm						
SPSI	**Sidrap Palu**	**11.71**	**219**	P	**Pn**	**05 34 41.1**	**-1.1**
	747nm,1.4s,15µm138µm						
BALP	**Baler**	**11.87**	**333**	*e*P	Pn	05 34 50.3	+6.0
PCPH	**Palayan**	**11.94**	**330**⇓	*e*P	Pn	05 34 49.3	+4.0
KAPI	**Kappang**	**12.55**	**216**	*e*Pn	**Pn**	**05 34 51.0**	**-2.6**
KAPI				S	**Sn**	**05 37 13.4**	**+1.8**
KAPI				ScP	**ScP**	**05 43 54.9**	**-0.1**
KAPI	**Kappang**	**12.55**	**216**	P	**Pn**	**05 34 51.5**	**-2.1**
	SNR=216						
KAPI	**Kappang**	**12.55**	**216**	Pn	**Pn**	**05 34 51.8**	**-1.8**
	7µm,1.5s						
KAPI	**Kappang**	**12.55**	**216**	P	**Pn**	**05 34 51.3**	**-2.3**
	1µm,1.5s,16µm127µm						
KAPI	**Kappang**	**12.55**	**216**	P	**Pn**	**05 34 51.7**	**-1.9**
	15nm,0.3s,baz=46,slow=8.8,SNR=118						
KAPI				S	**Sn**	**05 37 13.4**	**+1.8**
	10nm,0.3s,baz=79,slow=19,SNR=2.5						
KAPI				ScP	**ScP**	**05 43 54.9**	**-0.1**
	0.5nm,0.3s,baz=40,slow=1.4,SNR=4.6						
BKSI	**Bulukumba**	**12.58**	**214**	P	**Pn**	**05 34 52.2**	**-1.9**
	589nm,1.3s,8µm113µm						
PALP	**Palanan**	**12.71**	**339**	*e*P	Pn	05 35 00.1	+4.2
PALP	**Palanan**	**12.71**	**339**⇓	*e*P	**P**	**05 35 05.2**	**+0.7**
PALP				*e*S	Sn	05 36 50.8	-25
CAUP	**Cauayan**	**12.84**	**336**	*e*P	Pn	05 35 01.2	+3.8
BOLP	**Bolinao**	**13.24**	**328**	*e*P	Pn	05 35 06.3	+3.4
CVP	**Callao Caves**	**13.52**	**338**⇓	*e*P	**P**	**05 35 16.4**	**+2.9**
SMPI	**Sarmi**	**13.52**	**121**	P	**Pn**	**05 35 08.2**	**+1.4**
	1µm,1.5s,41µm						
KBKI	**Kotabaru**	**13.86**	**233**	P	**Pn**	**05 35 11.3**	**+0.1**
	1µm,1.4s						
ABRA	**Dolores**	**13.93**	**333**	*e*P	**P**	**05 35 15.2**	**-2.9**
BTM	**Bintulu**	**14.21**	**263**	P	**Pn**	**05 35 17.0**	**+1.3**
MMRI	**Maumere**	**14.57**	**200**	P	**Pn**	**05 35 19.4**	**-1.1**
	3µm,1.7s,30µm						
PIP	**Pasuquin**	**14.57**	**334**⇓	*i*P	**P**	**05 35 24.6**	**-0.5**
BBKI	**Banjar Baru**	**15.02**	**235**	P	**P**	**05 35 28.4**	**-1.8**
	7µm,1.5s,99µm						
PLKI	**Palangkaraya**	**15.13**	**241**	P	**Pn**	**05 35 28.9**	**+1.1**
	4µm,1.4s,59µm117µm						
SBUM	**Sibu**	**15.18**	**260**	P	**P**	**05 35 30.6**	**-1.4**
SBUM	**Sibu**	**15.18**	**260**	P	**Pn**	**05 35 29.7**	**+1.3**
	4µm,1.2s,49µm127µm						
JAY	**Jayapura**	**15.51**	**119**	P	**Pn**	**05 35 33.1**	**+0.5**
	349nm,2.5s,16µm						
JAY	**Jayapura**	**15.51**	**119**	P	**Pn**	**05 35 32.9**	**+0.3**
	baz=15,SNR=9.6						
JAY				S	**Sn**	**05 38 28.6**	**+5.0**
	baz=15,SNR=10						
WSI	**Waingapu**	**16.26**	**205**	P	**Pn**	**05 35 41.1**	**-0.9**
	4µm,1.2s,67µm164µm						
WSI	**Waingapu**	**16.26**	**205**	P	**Pn**	**05 35 42.8**	**+0.8**
	baz=16,SNR=3.9						
WSI				S	**S**	**05 38 53.9**	**+3.1**
	baz=16,SNR=3.5						
STKI	**Sintang**	**16.49**	**253**	P	**P**	**05 35 46.4**	**-0.1**
	2µm,1.3s,27µm67µm						
KSM	**Kuching**	**17.25**	**258**	*e*P	**P**	**05 35 55.6**	**+0.7**
	5µm,1.0s						
KSM	**Kuching**	**17.25**	**258**	P	**P**	**05 35 55.4**	**+0.5**
KSM	**Kuching**	**17.25**	**258**	P	**P**	**05 35 55.2**	**+0.3**
	5µm,1.0s,55µm94µm						
KSM	**Kuching**	**17.25**	**258**	P	**P**	**05 35 55.0**	**+0.1**
	baz=17,SNR=842						
KSM				S	**S**	**05 39 12.2**	**+1.4**
	baz=17,SNR=8.1						
PBKI	**Pangkalan Bun**	**17.36**	**244**	P	**P**	**05 35 56.1**	**-0.1**
	4µm,1.1s,35µm						
KHKI	**Kahang-Kahang**	**17.72**	**221**	P	**P**	**05 35 58.4**	**-1.7**
	629nm,1.1s,13µm108µm						
SRBI	**Singaraja**	**17.78**	**222**	P	**P**	**05 35 59.4**	**-1.3**
	739nm,1.6s,19µm88µm						
KMMI	**Kalianget**	**17.93**	**228**	P	**P**	**05 36 01.8**	**-0.6**
	1µm,1.2s,15µm133µm						
BWJI	**Bawean**	**18.18**	**233**	P	**P**	**05 36 05.3**	**+0.2**
	684nm,1.3s,8µm						
DNP	**Denpasar**	**18.21**	**221**	P	**Pn**	**05 36 06.2**	**+0.1**
MTN	**Manton Dam**	**18.31**	**168**	P	**P**	**05 36 06.5**	**-0.1**
	baz=18,SNR=54						
IGBI	**Denpasar**	**18.36**	**221**	P	**P**	**05 36 07.1**	**0.0**
	892nm,1.1s,68µm						
NBBI	**Negara**	**18.38**	**223**	P	**P**	**05 36 05.4**	**-2.0**
	1µm,1.5s,23µm157µm						
BYJI	**Banyuwangi**	**18.45**	**224**	P	**P**	**05 36 08.1**	**0.0**
KDU	**Kakadu**	**18.50**	**164**	P	**P**	**05 36 07.2**	**-1.4**
	baz=18,SNR=222						
TWG	**Pinlang**	**18.52**	**342**	*e*P	**P**	**05 36 08.5**	**-0.4**
	1µm,0.6s						
TWG				*e*S	**Sn**	**05 39 39.3**	**+3.0**
BLJI	**Banyuglugur**	**18.67**	**227**	P	**P**	**05 36 09.5**	**-1.0**
	596nm,1.0s,11µm						
MMPI	**Merauke**	**18.88**	**136**	P	Pn	05 36 19.1	+5.0
	1µm,1.0s,38µm						
YULB	**Yu-li**	**18.99**	**343**	*e*P	**P**	**05 36 14.1**	**+0.1**
	216nm,0.6s						
TPUB	**Ta-pu**	**19.11**	**341**	*e*P	**P**	**05 36 15.2**	**-0.2**
	732nm,0.7s						
TPUB				*e*S	**Sn**	**05 39 54.5**	**+4.0**
GMJI	**Gumukmas**	**19.14**	**226**	P	**P**	**05 36 14.4**	**-1.2**
	638nm,1.3s,12µm82µm						
GUMO	**Guam**	**19.33**	**63**	*e*P	**Pn**	**05 36 19.0**	**-0.5**
	5µm,1.6s						
GUMO				S	**Sn**	**05 39 56.3**	**+0.3**
GUMO	**Guam**	**19.33**	**63**	P	**Pn**	**05 36 19.0**	**-0.5**
	30nm,0.3s,baz=219,slow=4.3,SNR=17						
GUMO				S	**Sn**	**05 39 56.3**	**+0.3**
	2.8nm,0.3s,baz=180,slow=20,SNR=1.7						
GUMO				LR	LR	05 42 47.5	
	comp=Z,23µm,21.7s,baz=237,slow=34						
SSLB	**Suanglung**	**19.47**	**343**	*e*P	**Pn**	**05 36 20.1**	**-0.9**
	540nm,0.8s						
SSLB				*e*S	**Sn**	**05 40 03.3**	**+4.1**
NACB	**Ninganchiao**	**19.65**	**345**	*e*P	**Pn**	**05 36 23.4**	**+0.2**
	197nm,0.7s						
KRKI	**Karangkates**	**19.78**	**228**	P	**P**	**05 36 22.4**	**-0.3**
	2µm,1.0s,23µm						
SJI	**Sawahan**	**20.02**	**230**	P	**P**	**05 36 23.9**	**-1.5**
	726nm,0.8s,13µm						
PWJI	**Pagerwojo**	**20.18**	**230**	P	**P**	**05 36 25.8**	**-1.2**
	492nm,1.3s,9µm						
YHNB	**Yeheng**	**20.18**	**345**	*e*P	Pn	05 36 28.4	-1.1
	362nm,0.7s						
YHNB				*e*S	Sn	05 40 15.2	-1.2
YHNB				LR	LR		
	comp=Z,27µm,19.0s						
TATO	**Taipei**	**20.45**	**345**	*e*P	Pn	05 36 32.1	-0.4
	comp=Z,351nm,0.9s						
TATO				LR	LR		
	comp=Z,23µm,22.0s						
SMRI	**Semarang**	**20.66**	**234**	P	**P**	**05 36 32.4**	**+0.2**
	comp=Z,2µm,1.6s,comp=Z,33µmcomp=Z,128µm						
PCJI	**Pacitan**	**20.77**	**230**	P	**P**	**05 36 32.6**	**-0.7**
	comp=Z,795nm,1.5s,comp=Z,11µmcomp=Z,78µm						
TPI	**Tanjungpandan**	**21.05**	**248**	P	**P**	**05 36 36.9**	**+0.5**
	comp=Z,487nm,1.2s,comp=Z,6µmcomp=Z,40µm						
UGM	**Wanagama**	**21.10**	**232**	*e*P	**P**	**05 36 36.5**	**-0.5**
	comp=Z,3µm,1.5s						
UGM	**Wanagama**	**21.10**	**232**	P	**P**	**05 36 36.5**	**-0.5**
	comp=Z,2µm,1.5s,comp=Z,23µm						
UGM	**Wanagama**	**21.10**	**232**	P	**P**	**05 36 35.9**	**-1.1**
	baz=21,SNR=30						
HKC	**Hong Kong Obse**	**21.19**	**325**⇑	*i*P	**P**	**05 36 40.0**	**+2.2**
HKC				*i* S	Sn	05 40 36.0	-4.4
QZH	**Quanzhou**	**21.33**	**338**⇑	*i*P	**P**	**05 36 42.9**	**+3.6**
QZH				S	**S**	**05 40 31.5**	**-1.0**
QZH				pmax	pmax		
	comp=Z,840nm,0.8s						
QZH				LR	LR		
	comp=N,32µm,20.2s						
QZH				LR	LR		
	comp=E,30µm,18.2s						
QZH				LR	LR		
	comp=Z,55µm,22.9s						
BJII	**Banjamegara**	**21.41**	**235**	P	**P**	**05 36 40.7**	**+0.4**
	comp=Z,2µm,1.7s,comp=Z,31µmcomp=Z,87µm						
JOW	**Kunigami**	**21.57**	**3**	*e*P	**P**	**05 36 42.1**	**+0.2**
	comp=Z,604nm,1.3s						
JOW				S	**S**	**05 40 35.4**	**-1.9**
JOW				ScP	**ScP**	**05 44 16.4**	**+3.3**
JOW	**Kunigami**	**21.57**	**3**	P	**P**	**05 36 41.7**	**-0.1**
	comp=Z,201nm,0.8s,baz=189,slow=9.1,SNR=15						
JOW				S	**S**	**05 40 35.4**	**-1.9**
	comp=Z,65nm,1.1s,baz=129,slow=18,SNR=5.8						
JOW				LR	LR	05 43 51.7	
	comp=Z,26µm,21.5s,baz=184,slow=33						
JOW				ScP	**ScP**	**05 44 16.4**	**+3.3**
	baz=195,slow=2.4						
TGJI	**Tegal**	**21.64**	**237**	P	**P**	**05 36 43.2**	**+0.5**
	comp=Z,1µm,1.5s,comp=Z,26µm						
QIZ	**Qiongzhong**	**21.82**	**311**	P	**P**	**05 36 44.9**	**+0.3**
QIZ				pP	**pP**	**05 36 59.0**	**-0.2**
QIZ				S	**S**	**05 40 40.7**	**-1.6**
QIZ				pmax	pmax		
	comp=Z,270nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,3µm,5.0s						
QIZ				LR	LR		
	comp=N,25µm,13.3s						
QIZ				LR	LR		
	comp=Z,18µm,20.4s						
CLJI	**Cilicap**	**22.20**	**235**	P	**P**	**05 36 46.1**	**-2.6**
	comp=Z,420nm,1.4s,comp=Z,14µm						
PPBI	**Pangkal Pinang**	**22.26**	**251**	P	**P**	**05 36 48.0**	**-1.4**
	comp=Z,600nm,1.3s,comp=Z,9µm						
GZH	**Guangzhou**	**22.27**	**324**	P	**P**	**05 36 51.8**	**+2.4**
GZH				S	**S**	**05 40 53.6**	**+3.3**
GZH				LR	LR		
	comp=N,18µm,25.0s						
GZH				LR	LR		
	comp=E,35µm,24.8s						
GZH				LR	LR		
	comp=Z,50µm,29.3s						
LEM	**Lembang**	**22.88**	**239**	P	**P**	**05 36 57.0**	**+0.9**
	comp=Z,3µm,1.1s,comp=Z,31µmcomp=Z,111µm						
LEM	**Lembang**	**22.88**	**239**	P	**P**	**05 36 55.8**	**-0.3**
	baz=23,SNR=50						
LEM				S	**S**	**05 41 07.8**	**+6.9**
	baz=23,SNR=4.5						
TPRI	**Tanjung Pinang**	**23.02**	**260**	P	**P**	**05 37 00.0**	**+2.6**
	comp=Z,13nm,0.7s						
CISI	**Cisompet, Garu**	**23.10**	**237**	P	**P**	**05 36 56.2**	**-2.0**
	comp=Z,1µm,1.1s,comp=Z,16µmcomp=Z,66µm						
FITZ	**Fitzroy Crossi**	**23.17**	**184**	*e*P	**P**	**05 36 58.8**	**+0.1**
	comp=Z,56nm,0.9s						
FITZ				S	**S**	**05 41 05.3**	**+0.3**
FITZ				ScP	**ScP**	**05 44 18.3**	**+1.0**
FITZ	**Fitzroy Crossi**	**23.17**	**184**	P	**P**	**05 36 58.1**	**-0.6**
	comp=Z,2µm,1.2s,baz=10,slow=12,SNR=282						
FITZ				S	**S**	**05 41 05.3**	**+0.3**
	comp=Z,43nm,0.9s,baz=340,slow=12,SNR=4.0						
FITZ				ScP	**ScP**	**05 44 18.3**	**+1.0**
	comp=Z,121nm,0.9s,baz=231,slow=0.4,SNR=9.4						
FITZ				LR	LR	05 46 13.7	
	comp=Z,6µm,21.8s,baz=21,slow=37						
FITZ	**Fitzroy Crossi**	**23.17**	**184**	P	**P**	**05 36 57.1**	**-1.6**
	baz=23,SNR=1000						
FITZ				S	**S**	**05 41 06.1**	**+1.0**
	baz=23,SNR=5.1						
TNG	**Tangerang**	**23.40**	**241**	P	**P**	**05 37 00.1**	**-0.9**
	comp=Z,3µm,1.6s,comp=Z,50µm						
TNG	**Tangerang**	**23.40**	**241**	P	**P**	**05 37 00.4**	**-0.6**
	comp=Z,2µm,1.6s,comp=Z,30µm						
DBJI	**Dramaga**	**23.49**	**241**	P	**P**	**05 37 01.9**	**+0.1**
	comp=Z,2µm,1.6s,comp=Z,31µm						
MYKOM	**Kota Tinggi**	**23.54**	**263**	P	**P**	**05 37 02.3**	**+0.1**
MYKOM	**Kota Tinggi**	**23.54**	**263**	P	**P**	**05 37 02.9**	**+0.7**
	comp=Z,2µm,1.0s,comp=Z,25µmcomp=Z,42µm						
BTDF	**Bukit Timah Da**	**23.68**	**262**	P	**P**	**05 37 04.1**	**+0.6**
	comp=Z,3µm,1.0s,comp=Z,27µmcomp=Z,21µm						
SBJI	**Serang**	**23.83**	**242**	P	**P**	**05 37 05.2**	**+0.4**
	comp=Z,2µm,1.8s,comp=Z,30µm						
SKJI	**Sukabumi**	**23.88**	**240**	P	**P**	**05 37 03.1**	**-2.2**
KTGM	**Kuala Trenggan**	**23.96**	**271**	P	**P**	**05 37 06.1**	**+0.1**
KGM	**Kluang**	**24.03**	**263**	P	**P**	**05 37 06.8**	**+0.2**
BLSI	**Bandar Lampung**	**24.29**	**245**	P	**P**	**05 37 07.9**	**-1.1**
	comp=Z,607nm,1.3s,comp=Z,12µm						
CGJI	**Cibinong**	**24.44**	**242**	P	**P**	**05 37 07.2**	**-3.2**
JMBI	**JAMBI**	**24.48**	**255**	P	**P**	**05 37 14.3**	**+3.6**
	comp=Z,237nm,0.7s,comp=Z,15µm						
PMG	**Port Moresby**	**24.61**	**126**	*e*P	**P**	**05 37 11.8**	**-0.2**
	comp=Z,215nm,1.1s						
PMG				ScP	**ScP**	**05 44 24.7**	**+3.3**
PMG	**Port Moresby**	**24.61**	**126**	P	**P**	**05 37 11.7**	**-0.2**
	comp=Z,97nm,1.2s,comp=Z,5µmcomp=Z,33µm						
PMG	**Port Moresby**	**24.61**	**126**	P	**P**	**05 37 11.0**	**-0.9**
	comp=Z,17nm,0.8s,baz=332,slow=9.1,SNR=13						
PMG				ScP	**ScP**	**05 44 24.7**	**+3.3**
	comp=Z,138nm,1.1s,baz=356,slow=6.3,SNR=7.8						
PMG				LR	LR	05 48 07.9	
	comp=Z,11µm,18.5s,baz=301,slow=40						
COEN	**Coen**	**24.75**	**140**	*e*P	**P**	**05 37 11.1**	**-2.1**
	comp=Z,11µm,2.0s						
COEN	**Coen**	**24.75**	**140**	P	**P**	**05 37 11.1**	**-2.1**
	baz=25,SNR=74						
COEN				S	**S**	**05 41 29.6**	**-1.1**
	baz=25,SNR=5.0						
MDSI	**Maura Dua**	**24.91**	**248**	P	**P**	**05 37 18.8**	**+4.2**
	comp=Z,0.1nm,0.9s						
KASI	**Kota Agung**	**25.03**	**245**	P	**P**	**05 37 13.9**	**-1.8**
	comp=Z,679nm,1.1s,comp=Z,14µm						
LWLI	**Liwa**	**25.22**	**247**	P	**P**	**05 37 15.9**	**-1.7**
	comp=Z,1µm,0.9s,comp=Z,15µmcomp=Z,37µm						
RGRI	**Rengat**	**25.42**	**258**	P	**P**	**05 37 19.1**	**-0.3**
	comp=Z,725nm,1.4s,comp=Z,231µm						
FRIM	**Kepong**	**25.57**	**267**	P	**P**	**05 37 20.3**	**-0.4**
CHBT	**CHBT**	**25.67**	**289**	P	**P**	**05 37 22.6**	**+1.0**
WRAB	**Tennant Creek**	**25.91**	**164**	*e*P	**P**	**05 37 22.0**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,1µm,0.8s						
WRAB				MLR	MLR		
	comp=Z,13µm,21.0s						
WRAB	**Tennant Creek**	**25.91**	**164**	*e*P	**P**	**05 37 22.0**	**-1.7**
	comp=Z,1µm,0.8s						
WRAB				LR	LR		
	comp=Z,13µm,21.0s						
WRAB	**Tennant Creek**	**25.91**	**164**	P	**P**	**05 37 22.0**	**-1.7**
	comp=Z,11µm,0.6s						
WRA	**Warramunga Arr**	**25.92**	**164**	P	**P**	**05 37 24.1**	**+0.3**
WRA				S	**S**	**05 41 46.5**	**-2.7**
WRA				ScP	**ScP**	**05 44 26.5**	**+1.5**
WRA				*e*		06 10 05.5	
WRA	**Warramunga Arr**	**25.92**	**164**	P	**P**	**05 37 24.1**	**+0.3**
	comp=Z,589nm,0.9s,baz=341,slow=9.1,SNR=326						
WRA				S	**S**	**05 41 46.5**	**-2.7**
	comp=Z,48nm,0.9s,baz=344,slow=15,SNR=4.8						
WRA				ScP	**ScP**	**05 44 26.5**	**+1.5**
	comp=Z,85nm,0.8s,baz=344,slow=3.3,SNR=15						
WRA				P3KPbc		06 10 05.5	
	comp=Z,0.3nm,0.4s,baz=153,slow=4.3,SNR=6.9						
MNAI	**Manna**	**25.99**	**249**	P	**P**	**05 37 22.8**	**-1.7**
	comp=Z,1µm,1.4s,comp=Z,23µmcomp=Z,56µm						
CBIJ	**Chichi jima**	**26.08**	**32**	P	**P**	**05 37 23.7**	**-1.5**
CBIJ	**Chichi jima**	**26.08**	**32**	P	**P**	**05 37 23.7**	**-1.5**
	comp=Z,474nm,0.4s,baz=211,slow=2.8,SNR=23						
CBIJ				LR	LR	05 45 30.6	
	comp=Z,24µm,21.8s,baz=200,slow=31						
IPM	**Ipoh**	**26.08**	**270**	*e*P	**P**	**05 37 24.5**	**-0.9**
	comp=Z,2µm,1.9s						
IPM	**Ipoh**	**26.08**	**270**	P	**P**	**05 37 24.4**	**-0.9**
IPM	**Ipoh**	**26.08**	**270**	P	**P**	**05 37 24.7**	**-0.7**
	comp=Z,598nm,1.3s,comp=Z,12µmcomp=Z,34µm						
KSI	**Kapahiang**	**26.09**	**251**	P	**P**	**05 37 25.1**	**-0.3**
	comp=Z,1µm,1.2s,comp=Z,25µm						
SSE	**Sheshan**	**26.41**	**348**	P	**P**	**05 37 29.4**	**+1.4**
SSE				pP	**pP**	**05 37 46.0**	**+1.6**
SSE				sP	**sP**	**05 37 53.2**	**+0.7**
SSE				S	**S**	**05 41 59.7**	**+3.1**
SSE				sS	**sS**	**05 42 28.6**	**+3.8**
SSE				ScP	**ScP**	**05 44 25.8**	**-0.4**
SSE				pmax	pmax		
	comp=Z,240nm,1.0s						
SSE				pmax	pmax		
	comp=Z,4µm,8.3s						
SSE				LR	LR		
	comp=N,10µm,14.8s						
SSE				LR	LR		
	comp=E,12µm,14.8s						
SSE				LR	LR		
	comp=Z,14µm,21.9s						
MBSI	**MBSI**	**26.43**	**251**	P	**P**	**05 37 27.6**	**-0.8**
	comp=Z,2µm,1.3s,comp=Z,31µm						
XMI	**Christmas Isla**	**26.44**	**234**	P	**P**	**05 37 30.2**	**+1.7**
	baz=26,SNR=4.8						
XMIS	**Christmas Isla**	**26.49**	**234**	P	**P**	**05 37 27.2**	**-1.8**
	baz=26,SNR=9.1						
BKNI	**Bangkinang**	**26.55**	**260**	P	**P**	**05 37 28.8**	**-0.8**

comp=Z,912nm,1.0s,comp=Z,15µmcomp=Z,38µm
KRJI Kerinci 26.70 255 P **P** **05 37 30.9 -0.1**
comp=Z,1µm,1.6s,comp=Z,22µmcomp=Z,35µm
MBWA Marble Bar 27.16 195 *e*P **P** **05 37 35.2 +0.2**
comp=Z,1µm,1.4s
MBWA LR LR
comp=Z,15µm,19.0s
MBWA Marble Bar 27.16 195 P **P** **05 37 35.6 +0.7**
SNR=41
PPI Padang Panjang 27.34 259 P **P** **05 37 35.2 -1.4**
comp=Z,437nm,1.5s,comp=Z,16µm
PPI Padang Panjang 27.34 259 P **P** **05 37 36.8 +0.2**
baz=27,SNR=11
PDSI Padang 27.37 258 P **P** **05 37 35.4 -1.6**
comp=Z,1µm,1.4s,comp=Z,21µm
NJ2 Nanjing 27.87 345 *e*P **P** **05 37 41.5 +0.4**
NJ2 pP **pP** **05 37 56.5 -1.1**
NJ2 sP **sP** **05 38 04.2 -1.5**
NJ2 PP **PnPn** **05 38 30.8 -0.5**
NJ2 S **S** **05 42 15.5 -4.1**
NJ2 pmax pmax
comp=Z,350nm,0.8s
NJ2 pmax pmax
comp=Z,2µm,7.4s
NJ2 LR LR
comp=N,14µm,20.0s
NJ2 LR LR
comp=E,6µm,13.0s
NJ2 LR LR
comp=Z,11µm,17.1s
MNSI Mandailing Nat 27.91 262 P **P** **05 37 40.2 -1.5**
comp=Z,314nm,1.2s,comp=Z,9µm
WHN Wuhan 27.99 336 P **P** **05 37 44.7 +2.4**
WHN S **S** **05 42 20.9 -0.8**
WHN pmax pmax
comp=Z,730nm,1.1s
WHN LR LR
comp=N,15µm,8.7s
WHN LR LR
comp=E,24µm,8.8s
WHN LR LR
comp=Z,58µm,21.7s
JNU Nakatsue 28.03 7 *e*P **P** **05 37 41.2 -1.4**
comp=Z,300nm,1.0s
JNU ScP **ScP** **05 44 31.8 +0.7**
JNU Nakatsue 28.03 7 P **P** **05 37 41.7 -0.9**
comp=Z,86nm,0.8s,baz=171,slow=6.8,SNR=37
JNU ScP **ScP** **05 44 31.8 +0.7**
comp=Z,72nm,0.9s,baz=111,slow=4.1,SNR=10
JNU LR LR 05 48 06.8
comp=Z,10µm,20.9s,baz=350,slow=35
PHET Kaeng Krachan 28.26 288 P **P** **05 37 45.0 +0.1**
comp=Z,1µm,0.9s,comp=Z,8µm
PSI Prapat 28.30 266 P **P** **05 37 44.3 -1.1**
PSI PcP **PcP** **05 40 57.9 +0.7**
PSI ScP **ScP** **05 44 32.3 -0.1**
PSI Prapat 28.30 266 P **P** **05 37 44.2 -1.1**
comp=Z,274nm,1.6s,comp=Z,7µmcomp=Z,30µm
PSI Prapat 28.30 266 P **P** **05 37 44.3 -1.1**
comp=Z,122nm,0.9s,baz=78,slow=5.3,SNR=84
PSI PcP **PcP** **05 40 57.9 +0.7**
comp=Z,71nm,0.9s,baz=201,slow=3.1,SNR=3.8
PSI ScP **ScP** **05 44 32.3 -0.1**
comp=Z,216nm,1.0s,baz=167,slow=2.2,SNR=23
PSI Prapat 28.30 266 P **P** **05 37 44.2 -1.1**
baz=28,SNR=107
PSI S **S** **05 42 26.6 -0.5**
baz=28,SNR=11
QIS Mount Isa 28.32 155 P **P** **05 37 43.9 -1.4**
baz=28,SNR=418
TSI Tuntungan 28.59 268 P **P** **05 37 47.1 -0.7**
comp=Z,526nm,1.3s,comp=Z,10µm
SISI Saibi 28.80 258 P **P** **05 37 48.0 -1.7**
comp=Z,632nm,1.1s,comp=Z,12µm
GYA Guiyang 28.86 319 ⇓*i*P **P** **05 37 50.8 +0.6**
GYA pP **pP** **05 38 08.4 +1.7**
GYA PP **PnPn** **05 38 44.8 0.0**
GYA PcP **PcP** **05 41 00.8 +2.4**
GYA S **S** **05 42 35.7 0.0**
GYA PcS PcS 05 44 33.2 -8.1
GYA ScS **ScS** **05 48 25.0 -3.0**
GYA pmax pmax
comp=Z,80nm,1.1s
GYA pmax pmax
comp=Z,480nm,4.9s
GYA LR LR
comp=N,14µm,17.0s
GYA LR LR
comp=E,18µm,20.8s
GYA LR LR
comp=Z,18µm,23.9s
SRDT SRDT 29.10 290 P **P** **05 37 52.4 +0.1**
comp=Z,316nm,0.8s,comp=Z,7µm
PBSI Pulau Batu 29.34 261 P P 05 37 58.7 +4.3
comp=Z,0.2nm,0.8s
AS31 Alice Springs 29.39 167 *e*P **P** **05 37 54.2 -0.6**
ASAR Alice Springs 29.39 167 P **P** **05 37 54.4 -0.4**
ASAR ScP **ScP** **05 44 37.0 +1.4**
ASAR *e* 06 09 54.5
ASAR Alice Springs 29.39 167 P **P** **05 37 54.4 -0.4**
comp=Z,75nm,0.6s,baz=343,slow=5.2,SNR=301
ASAR ScP **ScP** **05 44 37.0 +1.4**
comp=Z,57nm,1.0s,baz=356,slow=2.5,SNR=9.3
ASAR LR LR 05 51 24.9
comp=Z,8µm,18.4s,baz=349,slow=40
ASAR P3KPbc 06 09 54.5
comp=Z,0.6nm,1.0s,baz=167,slow=4.5,SNR=4.2
GSI Gunungsitoli 29.81 264 P **P** **05 37 56.5 -2.1**
comp=Z,573nm,0.9s,comp=Z,7µmcomp=Z,125µm
GSI Gunungsitoli 29.81 264 P **P** **05 37 56.9 -1.8**
baz=30,SNR=20
GSI S **S** **05 42 45.9 -4.9**
baz=30,SNR=14
LHMI Lhok Sumawe 30.12 272 P **P** **05 38 01.3 -0.1**
comp=Z,626nm,0.6s,comp=Z,10µmcomp=Z,24µm
JHJ Hachijo jima 2 30.19 21 LR LR 05 48 45.9
comp=Z,11µm,21.7s,baz=13,slow=33
GIRL Giralia 30.40 204 P **P** **05 38 05.1 +1.4**
baz=30,SNR=59
CM31 Chiang Mai Arr 30.58 298 *e*P **P** **05 38 05.7 +0.3**
comp=Z,57nm,0.6s
CMAR Chiang Mai Arr 30.58 298 P **P** **05 38 05.7 +0.3**
CMAR PcP **PcP** **05 41 05.2 +2.4**
CMAR ScP **ScP** **05 44 40.5 +1.0**
CMAR PKiKP **PKiKP** **05 48 34.5 +0.4**
CMAR *e* 06 09 55.0
CMAR Chiang Mai Arr 30.58 298 P **P** **05 38 05.7 +0.3**
comp=Z,38nm,0.6s,baz=111,slow=7.3,SNR=165
CMAR PcP **PcP** **05 41 05.2 +2.4**
comp=Z,20nm,0.9s,baz=110,slow=1.1,SNR=4.8
CMAR ScP **ScP** **05 44 40.5 +1.0**
comp=Z,125nm,1.1s,baz=132,slow=1.6,SNR=25
CMAR PKiKP **PKiKP** **05 48 34.5 +0.4**
comp=Z,2.3nm,0.7s,baz=264,slow=1.6,SNR=4.4
CMAR LR LR 05 49 00.4
comp=Z,16µm,21.8s,baz=115,slow=34
CMAR P3KPbc 06 09 54.9
comp=Z,1.5nm,0.3s,baz=288,slow=5.3,SNR=5.3
CMMT Chiang Mai 30.71 299 P **P** **05 38 07.1 +0.6**
comp=Z,199nm,0.9s,comp=Z,2µm
CHTO Chiang Mai 30.71 299 *e*P **P** **05 38 06.1 -0.5**
CHTO *e* 05 44 40.4
CHTO pmax pmax
comp=Z,301nm,1.4s
CHTO MLR MLR
comp=Z,11µm,20.0s
CHTO Chiang Mai 30.71 299 *e*P **P** **05 38 06.1 -0.5**
comp=Z,301nm,1.4s
CHTO *e*ScP **ScP** **05 44 40.4 +0.5**
CHTO LR LR
comp=Z,11µm,20.0s
CHTO Chiang Mai 30.71 299 P **P** **05 38 06.5 -0.1**
SNR=67
CHTO Chiang Mai 30.71 299 P **P** **05 38 06.1 -0.5**
comp=Z,218nm,0.9s,comp=Z,2µmcomp=Z,10µm
KMI Kunming 30.73 313 P **P** **05 38 07.9 +1.1**
KMI pP **pP** **05 38 24.9 +1.5**
KMI sP **sP** **05 38 30.8 -0.7**
KMI PP **PnPn** **05 39 10.5 +1.2**
KMI PcP **PcP** **05 41 04.6 +1.3**
KMI S **S** **05 43 05.2 0.0**
KMI sS **sS** **05 43 34.0 +0.5**
KMI ScP **ScP** **05 44 40.1 -0.1**
KMI pmax pmax
comp=Z,300nm,1.1s
KMI pmax pmax
comp=Z,1µm,3.2s
KMI LR LR
comp=N,12µm,23.4s
KMI LR LR
comp=E,11µm,22.7s
KMI LR LR
comp=Z,18µm,24.2s
PATS Pohnpei 30.99 85 P **P** **05 38 08.5 -0.6**
baz=31,SNR=5.0
CTA Charters Tower 31.32 144 P **P** **05 38 11.4 -0.5**
CTA ScP **ScP** **05 44 44.1 +2.2**
CTA *e* 06 09 53.6
CTA Charters Tower 31.32 144 P **P** **05 38 11.4 -0.5**
comp=Z,59nm,0.6s,baz=324,slow=11,SNR=36
CTA ScP **ScP** **05 44 44.1 +2.2**
comp=Z,58nm,1.1s,baz=316,slow=2.7,SNR=4.9
CTA P3KPbc 06 09 53.6
comp=Z,5.5nm,0.7s,baz=148,slow=3.4,SNR=7.5
CTAO Charters Tower 31.32 144 *e*P **P** **05 38 10.9 -1.0**
CTAO pmax pmax
comp=Z,596nm,1.5s
CTAO MLR MLR
comp=Z,13µm,22.0s
CTAO Charters Tower 31.32 144 *e*P **P** **05 38 10.9 -1.0**
comp=Z,596nm,1.5s
CTAO *e*ScP **ScP** **05 44 42.0 +0.1**
CTAO LR LR
comp=Z,13µm,22.0s
BSI Banda Aceh 31.76 272 P **P** **05 38 13.4 -2.4**
comp=Z,268nm,1.6s,comp=Z,3µm
KSAR Wonju Array Be 32.13 1 P **P** **05 38 18.6 -0.2**
KSAR PcP **PcP** **05 41 07.6 +1.1**
KSAR ScP **ScP** **05 44 46.5 +2.2**
KSRS Korea Array 32.15 1 P **P** **05 38 18.6 -0.3**
comp=Z,62nm,0.7s,baz=178,slow=8.2,SNR=101
KSRS PcP **PcP** **05 41 07.6 +1.1**
comp=Z,28nm,0.9s,baz=188,slow=2.9,SNR=6.4
KSRS ScP **ScP** **05 44 46.5 +2.1**
comp=Z,123nm,1.1s,baz=187,slow=3.4,SNR=32
KSRS LR LR 05 53 14.0
comp=Z,5µm,18.8s,baz=181,slow=40
INCN Inchon 32.17 359 *e*P **P** **05 38 20.7 +1.6**
comp=Z,71nm,0.7s
INCN *e*PcP **PcP** **05 41 07.3 +0.6**
INCN *e*ScP **ScP** **05 44 44.8 +0.3**
INCN LR LR
comp=Z,7µm,21.0s
TIA Tai'an 32.26 345 P **P** **05 38 19.7 -0.2**
TIA S **S** **05 43 27.7 -0.7**
TIA pmax pmax
comp=Z,330nm,0.8s
TIA pmax pmax
comp=Z,4µm,8.8s
TIA LR LR
comp=N,9µm,23.5s
TIA LR LR
comp=E,13µm,23.5s
TIA LR LR
comp=Z,13µm,21.5s
MEEK Meekatharra 32.69 194 P **P** **05 38 23.6 -0.2**
baz=33,SNR=222
MJAR Matsushiro Arr 32.83 16 P **P** **05 38 23.7 -1.2**
MJAR PcP **PcP** **05 41 09.4 +0.9**
MJAR ScP **ScP** **05 44 48.1 +1.4**
MJAR *e* 06 09 44.5
MJAR Matsushiro Arr 32.83 16 P **P** **05 38 23.7 -1.2**
comp=Z,44nm,0.9s,baz=198,slow=9.8,SNR=46
MJAR PcP **PcP** **05 41 09.4 +0.9**
comp=Z,36nm,0.8s,baz=192,slow=3.9,SNR=79
MJAR ScP **ScP** **05 44 48.1 +1.4**
comp=Z,80nm,0.9s,baz=193,slow=4.2,SNR=19
MJAR LR LR 05 49 25.6
comp=Z,20µm,21.0s,baz=205,slow=32
MJAR P3KPbc 06 09 44.5
comp=Z,0.6nm,0.2s,baz=18,slow=4.5,SNR=4.3
MAJO Matsushiro 32.83 16 *e*P **P** **05 38 22.7 -2.2**
MAJO pmax pmax
comp=Z,190nm,1.2s
MAJO MLR MLR
comp=Z,22µm,20.0s
MAJO Matsushiro 32.83 16 *e*P **P** **05 38 22.7 -2.2**
comp=Z,190nm,1.2s
MAJO *e*ScP **ScP** **05 44 46.4 -0.3**
MAJO LR LR
comp=Z,22µm,20.0s
MAT Matsushiro 32.83 16 P **P** **05 38 22.4 -2.5**
MAT S **S** **05 43 32.2 -5.1**
CMBY CAMPBELL BAY 33.12 275 *e*P **P** **05 38 27.3 -0.4**
CMBY AMB AMB 05 38 29.1
comp=Z,323nm,0.9s
XAN Xi'an 33.37 332 P **P** **05 38 29.7 0.0**
XAN pmax pmax
comp=Z,330nm,1.1s
XAN pmax pmax
comp=Z,310nm,4.8s
XAN LR LR
comp=N,16µm,31.5s
XAN LR LR
comp=E,5µm,26.5s
XAN LR LR
comp=Z,8µm,29.9s
CD2 Chengdu 33.78 322 ⇓*i*P **P** **05 38 34.1 +0.7**
CD2 pP **pP** **05 38 53.1 +3.1**
CD2 PP **PP** **05 39 49.9 -1.1**
CD2 PcP **PcP** **05 41 11.0 -0.4**
CD2 S **S** **05 43 52.0 -0.4**
CD2 sS **sS** **05 44 24.7 +3.8**
CD2 ScP **ScP** **05 44 47.4 -2.9**
CD2 PcS **PcS** **05 44 56.0 -1.5**
CD2 ScS **ScS** **05 48 47.8 -4.3**
CD2 pmax pmax
comp=Z,540nm,0.9s
CD2 pmax pmax
comp=Z,1µm,4.1s
CD2 LR LR
comp=N,26µm,14.7s
CD2 LR LR
comp=E,35µm,15.7s
CD2 LR LR
comp=Z,23µm,23.7s
DL2 Dalian 33.97 352 P **P** **05 38 34.8 +0.1**
DL2 pP **pP** **05 38 51.9 +0.5**
DL2 S **S** **05 43 54.1 -0.7**
DL2 pmax pmax
comp=Z,130nm,0.8s
DL2 pmax pmax
comp=Z,320nm,4.6s
DL2 LR LR
comp=N,3µm,15.2s
DL2 LR LR
comp=E,11µm,17.3s
DL2 LR LR
comp=Z,6µm,17.1s
PBA Port Blair 34.66 283 *e*P P 05 38 38.6 -2.4
DGPR DIGLIPUR 34.71 286 *e*P **P** **05 38 39.8 -1.7**
COCO West Island 34.76 240 *i*P **P** **05 38 39.5 -2.4**
COCO West Island 34.76 240 PFAKE 05 38 50.0 +8.1
COCO LR LR
comp=Z,8µm,22.0s
COCO West Island 34.76 240 P P 05 38 45.6 +3.7
comp=Z,233nm,1.4s
TIY Taiyuan 35.09 339 *e*P **P** **05 38 45.1 +0.6**
TIY sP **sP** **05 39 08.1 -1.2**
TIY PP **PP** **05 40 08.1 +2.7**
TIY S **S** **05 44 12.0 -0.3**
TIY SS **SnSn** **05 46 41.0 +6.1**
TIY pmax pmax
comp=Z,2µm,7.8s
TIY LR LR
comp=N,11µm,16.4s
TIY LR LR
comp=E,5µm,12.0s
TIY LR LR
comp=Z,11µm,23.8s
QLP Quilpie 35.62 153 P **P** **05 38 47.5 -1.6**
baz=36,SNR=154
MORW Morawa 35.69 197 P **P** **05 38 49.7 +0.1**
baz=36,SNR=98
HNR Honiara 35.72 114 PFAKE 05 39 00.0 +10
HNR LR LR
comp=Z,5µm,20.0s
FORT Forrest 35.75 179 *e*P **P** **05 38 49.6 -0.6**
comp=Z,872nm,0.9s
FORT Forrest 35.75 179 P **P** **05 38 50.1 -0.1**
baz=36,SNR=91
BJT Baijiatuan 36.09 346 PFAKE 05 39 00.0 +6.9
BJT LR LR
comp=Z,14µm,22.0s
BJI Beijing 36.11 346 P **P** **05 38 53.0 -0.2**
BJI S **S** **05 44 26.9 -0.9**
BJI pmax pmax
comp=Z,550nm,1.1s
BJI pmax pmax
comp=Z,980nm,3.5s
BJI LR LR
comp=N,9µm,25.4s
BJI LR LR
comp=E,9µm,19.6s
BJI LR LR
comp=Z,11µm,22.5s
SNY Shenyang 36.65 355 ⇓P **P** **05 38 57.4 -0.3**
SNY pmax pmax
comp=Z,100nm,1.0s
SNY pmax pmax
comp=Z,1µm,5.1s
SNY LR LR
comp=N,7µm,16.7s
SNY LR LR
comp=E,23µm,20.4s
SNY LR LR
comp=Z,18µm,26.0s
KMBL Kambalda 36.68 188 P **P** **05 38 57.9 -0.2**
baz=37,SNR=207
BLDU Ballidu 36.96 195 P **P** **05 39 00.6 0.0**
baz=37,SNR=119
IMP Imphal 37.41 305 *e*P **P** **05 39 02.0 -2.6**
IMP *ex* x 05 40 08.0
IMP *ex* x 05 41 20.0
IMP *ex* x 05 45 01.0
LZH Lanzhou 37.52 328 ⇑P **P** **05 39 07.2 +1.7**
LZH pP **pP** **05 39 22.7 +0.4**
LZH sP **sP** **05 39 28.5 -1.8**
LZH S **S** **05 44 52.2 +2.5**
LZH sS **sS** **05 45 19.0 +0.5**
LZH pmax pmax
comp=Z,1µm,1.2s
LZH LR LR
comp=N,23µm,15.1s
LZH LR LR
comp=E,21µm,15.8s
LZH LR LR
comp=Z,54µm,16.5s
KLBR Kellerberrin 37.64 193 P **P** **05 39 06.2 -0.1**
baz=38,SNR=156
RMQ Roma 37.77 147 P **P** **05 39 06.1 -1.4**
baz=38,SNR=50
RMQ S S 05 45 06.3 +13
baz=38,SNR=5.2
HHC Hu-ho-hao-te 38.20 341 *e*P **P** **05 39 11.9 +0.9**
HHC pP **pP** **05 39 27.0 -0.9**
HHC sP **sP** **05 39 34.0 -1.9**
HHC PP **PnPn** **05 40 44.1 +2.3**
HHC S **S** **05 45 02.8 +3.1**
HHC SS **SnSn** **05 47 47.5 -2.5**
HHC ScS **ScS** **05 49 14.3 -1.8**
HHC pmax pmax
comp=Z,540nm,1.0s
HHC pmax pmax
comp=Z,6µm,5.9s
HHC LR LR
comp=N,11µm,14.9s
HHC LR LR
comp=E,20µm,14.4s
HHC LR LR
comp=Z,16µm,15.7s
EIDS Eidsvold 38.21 144 *e*P **P** **05 39 09.6 -1.6**
comp=Z,2µm,1.9s
EIDS *e*ScP **ScP** **05 45 06.5 0.0**
EIDS Eidsvold 38.21 144 P **P** **05 39 09.5 -1.6**
baz=38,SNR=74
EIDS S S 05 45 07.0 +7.0
baz=38,SNR=3.6
CN2 Changchun 38.51 358 *e*P **P** **05 39 13.0 -0.4**
CN2 *e*pP **pP** **05 39 33.0 +2.7**
CN2 PcP **PcP** **05 41 25.3 +0.2**
CN2 *e*S **S** **05 45 01.2 -2.9**
CN2 ScP **ScP** **05 45 04.8 -2.5**
CN2 ScS **ScS** **05 49 15.5 -2.0**
CN2 pmax pmax
comp=Z,40nm,0.7s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,10µm,20.0s
CN2 LR LR
comp=E,17µm,20.0s
CN2 LR LR
comp=Z,11µm,20.0s
BTO Baotou 38.51 339 *e*P **P** **05 39 12.5 -1.2**
BTO pmax pmax
comp=Z,35nm,1.0s
BBOO Buckleboo 38.69 168 *e*P **P** **05 39 14.4 -0.7**
comp=Z,35µm,1.5s
BBOO Buckleboo 38.69 168 P **P** **05 39 14.3 -0.8**
baz=39,SNR=390
NWAO Narrogin (SRO) 39.04 193 *e*P **P** **05 39 18.2 +0.2**
comp=Z,1µm,1.4s
NWAO LR LR
comp=Z,15µm,22.0s
NWAO Narrogin (SRO) 39.04 193 P **P** **05 39 19.0 +1.0**
SNR=52
NWAO Narrogin (SRO) 39.04 193 P **P** **05 39 18.6 +0.5**
comp=Z,280nm,0.8s,baz=24,slow=9.7,SNR=113
USRK Ussuriysk Arra 39.11 5 P **P** **05 39 19.8 +1.4**
comp=Z,62nm,0.9s,baz=189,slow=6.5,SNR=86
USRK ScP **ScP** **05 45 10.7 +1.2**
comp=Z,110nm,1.0s,baz=211,slow=2.2,SNR=17
USRK LR LR 05 53 57.4
comp=Z,7µm,21.4s,baz=171,slow=34
USRK PKP2ab 06 13 14.4
comp=Z,0.9nm,0.6s,baz=299,slow=3.9,SNR=6.7
STKA Stephens Creek 39.31 160 *e*P **P** **05 39 18.7 -1.6**
comp=Z,203nm,0.8s
STKA ScP **ScP** **05 45 12.6 +2.0**
STKA Stephens Creek 39.31 160 P **P** **05 39 19.9 -0.4**
comp=Z,754nm,0.7s,baz=336,slow=8.1,SNR=161
STKA ScP **ScP** **05 45 12.6 +2.0**
comp=Z,88nm,1.1s,baz=45,slow=2.9,SNR=4.9
STKA LR LR 05 58 01.3
comp=Z,9µm,18.8s,baz=25,slow=40
STKA Stephens Creek 39.31 160 P **P** **05 39 19.1 -1.2**
baz=39,SNR=416
STKA S **S** **05 45 12.9 -3.5**
baz=39,SNR=4.7
MDJ Mudanjiang 39.35 3 P **P** **05 39 20.4 -0.1**
MDJ pP **pP** **05 39 35.7 -1.7**
MDJ sP **sP** **05 39 43.7 -1.7**
MDJ PP **PP** **05 40 51.3 -0.7**
MDJ PcP **PcP** **05 41 27.0 -0.8**
MDJ ScP **ScP** **05 45 10.6 +0.1**
MDJ S **S** **05 45 17.5 +0.8**
MDJ sS **sS** **05 45 43.5 -2.1**
MDJ pmax pmax
comp=Z,190nm,1.0s
MDJ pmax pmax
comp=Z,790nm,5.4s
MDJ LR LR
comp=N,14µm,21.3s
MDJ LR LR
comp=E,4µm,12.2s
MDJ LR LR
comp=Z,18µm,32.0s
ERM Erimo 39.36 19 *ce*P **P** **05 39 22.0 +1.5**
ERM pmax pmax
comp=Z,108nm,1.7s
ERM Erimo 39.36 19 *e*P **P** **05 39 22.3 +1.8**
comp=Z,80nm,0.9s
ERM LR LR
comp=Z,9µm,22.0s
ERM Erimo 39.36 19 P **P** **05 39 21.4 +0.9**
comp=Z,519nm,0.8s,SNR=8.4
SHL Shillong 39.42 305 ⇓*i*P **P** **05 39 22.0 +0.4**
SHL AMB AMB 05 39 22.9
comp=Z,966nm,0.2s
SHL *i* x x 05 45 16.5
CMSA Cobar Meteorol 40.54 155 P **P** **05 39 29.5 -1.0**
baz=41,SNR=177
RKGY Rocky Gully 40.72 193 P **P** **05 39 33.4 +1.5**
baz=41,SNR=172
WAKE Wake Island 40.91 66 *e*P **P** **05 39 32.2 -1.6**
comp=Z,335nm,1.4s
WAKE LR LR

comp=Z,8μm,21.0s
ASAJ Asahikawa 41.09 17 *e*P **P 05 39 34.6 -0.3**
comp=Z,89nm,0.9s
ASAJ *e*ScP **ScP 05 45 18.9 +1.6**
ASAJ Asahikawa 41.09 17 P **P 05 39 35.6 +0.7**
comp=Z,152nm,0.7s,baz=219,slow=10,SNR=105
ASAJ ScP **ScP 05 45 18.8 +1.4**
comp=Z,50nm,1.0s,baz=237,slow=6.2,SNR=6.1
ASAJ LR LR 05 57 52.1
comp=Z,16μm,19.2s,baz=211,slow=38
CAL Calcutta 41.31 299⇑*ix* **P 05 39 39.8 +2.7**
CAL *e*S **S 05 45 47.7 +1.1**
LSA Lhasa 41.86 310 P **P 05 39 42.5 +0.5**
LSA LR LR
comp=N,2μm,20.4s
LSA LR LR
comp=E,5μm,23.2s
LSA LR LR
comp=Z,7μm,25.0s
YUK Yuzh-Kuril'sk 42.06 20 *i* P P 05 39 55.0 +12
YUK *i* 05 41 28.4
YUK pmax pmax
comp=N,403nm,1.4s
YUK pmax pmax
comp=E,144nm,0.7s
YUK pmax pmax
comp=Z,994nm,1.3s
YUK pmax pmax
comp=Z,1μm,10.1s
YUK MLR MLR
comp=N,2μm,21.0s
YUK MLR MLR
comp=E,1μm,21.0s
YUK MLR MLR
comp=Z,5μm,21.0s
GTA Gaotai 42.12 328⇑P **P 05 39 44.6 +1.0**
GTA pP **pP 05 40 00.5 -0.2**
GTA sP **sP 05 40 08.6 0.0**
GTA PP **PP 05 41 25.5 +3.2**
GTA PcP **PcP 05 41 38.3 +1.2**
GTA ScP **ScP 05 45 22.0 +0.3**
GTA PcS **PcS 05 45 28.8 -0.2**
GTA S **S 05 45 59.1 +0.7**
GTA ScS **ScS 05 49 38.2 -1.4**
GTA pmax pmax
comp=Z,380nm,1.0s
GTA pmax pmax
comp=Z,2μm,4.8s
GTA LR LR
comp=N,17μm,26.1s
GTA LR LR
comp=E,18μm,25.6s
GTA LR LR
comp=Z,37μm,27.1s
ARMA Armidale 42.42 148 *e*P **P 05 39 45.5 -0.5**
comp=Z,840nm,1.4s
ARMA Armidale 42.42 148 P **P 05 39 45.5 -0.5**
baz=42,SNR=113
ARMA S **S 05 46 04.7 +1.8**
baz=42,SNR=6.0
TAPN Taplejung 43.56 305 *e*P **P 05 39 55.4 -0.2**
comp=Z,1μm,0.6s
ODAN Odare 43.63 304 *e*P **P 05 39 55.8 -0.3**
comp=Z,2μm,0.7s
YSS Yuzh-Sakhalins 43.75 15K*e*P **P 05 39 56.4 0.0**
YSS *e* 05 40 09.0
YSS *e* 05 41 42.0
YSS *e*S **S 05 46 20.0 -1.7**
YSS *e*SS SS 05 49 24.0 -16
YSS *e* 05 49 46.0
YSS pmax pmax
comp=Z,180nm,1.1s
YSS smax smax
comp=N,5μm,12.0s
YSS MLR MLR
comp=Z,6μm,19.0s
YSS MLR MLR
comp=N,6μm,18.0s
YSS MLR MLR
comp=E,5μm,20.0s
YSS Yuzh-Sakhalins 43.75 15 *e*P **P 05 39 56.3 -0.1**
comp=E,110nm,0.6s
YSS *e*ScP **ScP 05 45 28.6 +0.7**
YSS LR LR
comp=Z,5μm,22.0s
BOK Bokaro 43.85 299 *e*P **P 05 39 57.7 +0.1**
ARPS Mount Arapiles 43.91 163 P **P 05 39 57.6 -0.2**
baz=44,SNR=97
YNG Young 44.06 154 P **P 05 39 58.9 -0.2**
baz=44,SNR=157
KLR Kul'dur 44.08 4 *e*P P 05 39 55.1 -3.9
KLR *e*S S 05 46 18.0 -8.5
KLR *e*SS SS 05 49 32.5 -14
KLR pmax pmax
comp=N,64nm,1.8s
KLR pmax pmax
comp=Z,220nm,1.8s
RAMN Ramite 44.32 304 *e*P **P 05 40 01.6 0.0**
comp=Z,1μm,0.7s
MGCD Mangrove Creek 44.39 151 P **P 05 40 03.5 +1.8**
baz=44,SNR=42
VIS Vishakhapatnam 44.64 290 *e*P **P 05 40 04.0 +0.1**
VIS *e*P **P 05 40 04.1 +0.1**
VIS *e*S **S 05 46 34.1 -1.4**
CAN Canberra 45.19 155 *e*P **P 05 40 08.2 +0.1**
CAN *e* 05 41 53.4
CAN pmax pmax
comp=Z,1μm,1.3s
CAN MLR MLR
comp=Z,7μm,19.0s
CAN Canberra 45.19 155 *e*P **P 05 40 08.2 +0.1**
comp=Z,1μm,1.3s
CAN *e*PP **PP 05 41 53.4 -1.7**
CAN LR LR
comp=Z,7μm,19.0s
GUN Gumba 45.28 305 *e*P **P 05 40 09.1 -0.2**
CNB Canberra Magne 45.34 154 P **P 05 40 09.4 +0.1**
baz=45,SNR=46
PKI Pulchoki 45.54 304 *e*P **P 05 40 10.7 -0.7**
comp=Z,614nm,0.7s
PKIN Phulchoki 45.55 304 *e*P **P 05 40 12.0 +0.6**
comp=Z,375nm,0.7s
KKN Kakani 45.72 304 *e*P **P 05 40 12.2 -0.5**
comp=Z,724nm,0.7s
DMN Daman 45.80 304 *e*P **P 05 40 13.0 -0.4**
TARA Tarawa 45.80 93 PFAKE 05 40 20.0 +6.7
TARA LR LR
comp=Z,10μm,22.0s
TOO Toolangi 45.81 160 P **P 05 40 13.3 +0.4**
baz=46,SNR=58
ULN Ulaanbaatar 45.91 341 *e*P **P 05 40 14.2 +0.4**
comp=Z,672nm,1.3s
ULN *e*ScP **ScP 05 45 37.5 +0.5**
ULN LR LR
comp=Z,7μm,19.0s
ULN Ulaanbaatar 45.91 341 P **P 05 40 14.6 +0.8**
SNR=281
ULN Ulaanbaatar 45.91 341 P **P 05 40 15.9 +2.1**
comp=Z,413nm,1.3s,comp=Z,5μm
SONM Songino Array 46.10 341 P **P 05 40 16.7 +1.4**
SONM PcP **PcP 05 41 51.8 +1.4**
SONM ScP **ScP 05 45 39.9 +2.1**
SONM ScS **ScS 05 50 07.1 +2.7**
SONM P'P' 06 11 38.0
SONM P'P'ab **P'P'ab 06 12 43.5 +0.7**
SONM Songino Array 46.10 341 P **P 05 40 16.7 +1.4**
comp=Z,94nm,0.9s,baz=156,slow=6.4,SNR=426
SONM PcP **PcP 05 41 51.8 +1.4**
comp=Z,74nm,1.0s,baz=159,slow=5.4,SNR=4.2
SONM ScP **ScP 05 45 39.9 +2.1**
comp=Z,31nm,1.1s,baz=139,slow=2.4,SNR=6.6
SONM ScS **ScS 05 50 07.1 +2.7**
comp=Z,6.3nm,1.2s,baz=189,slow=3.8,SNR=3.8
SONM LR LR 06 02 40.1
comp=Z,8μm,20.8s,baz=157,slow=40
SONM PKPPKP **P'P'df 06 11 38.0 -4.6**
comp=Z,1.3nm,1.0s,baz=296,slow=1.9,SNR=4.6
SONM PKP2ab 06 12 43.5
comp=Z,1.8nm,1.1s,baz=304,slow=2.2,SNR=3.9
MILA Mila 46.74 156 P **P 05 40 22.6 +2.3**
baz=47,SNR=15
NOUC Port Laguerre 46.90 127 *e*P **P 05 40 19.1 -2.6**
DZM Mont Dzumac 47.00 127 *e*P **P 05 40 21.3 -1.3**
comp=Z,142nm,0.9s
DZM *e*S **S 05 47 12.6 +3.1**
comp=Z,9μm,26.1s
DZM *e*LR LR 05 53 44.5
comp=Z,27μm,31.8s
DZM Mont Dzumac 47.00 127 *e*P **P 05 40 19.8 -2.8**
DZM Mont Dzumac 47.00 127 *e*P **P 05 40 20.2 -2.4**
comp=Z,136nm,1.0s
KOLN Koldanda 47.10 303 *e*P **P 05 40 23.3 -0.2**
comp=Z,1μm,0.6s
DANN Dangsing 47.18 304 *e*P **P 05 40 23.7 -0.5**
comp=Z,1μm,0.6s
PYUN Piuthan 47.73 304 *e*P **P 05 40 28.2 -0.2**
comp=Z,1μm,0.6s
CIT Chita 48.06 349 *e*P **P 05 40 30.7 +0.4**
CIT *e* 05 40 40.6
JBP Jabalpur 48.88 296⇑*e*P **P 05 40 38.2 +1.1**
JBP *ex* x 05 42 49.2
HYB Hyderabad 49.08 289 *i* P **P 05 40 37.0 -1.7**
comp=Z,150nm,1.0s
HYB *e*pP **pP 05 40 53.0 -3.2**
HYB *e*PcP PP 05 42 24.0 -9.0
HYB *e*S **S 05 47 36.0 -3.0**
HYB *e* 05 47 56.0
HYB *e*ScS **ScS 05 50 24.0 -1.1**
HYB Hyderabad 49.08 289 *e*P **P 05 40 37.9 -0.9**
HYB AMB AMB 05 40 42.2
comp=Z,121nm,1.1s
NGP Nagpur 49.27 293 *e*P **P 05 40 38.4 -1.7**
NGP *ex* x 05 47 37.5
ZAK Zakamensk 49.34 340⇓*i*P **P 05 40 41.0 +0.8**
ZAK *e* 05 47 35.3
ZAK *e* 05 50 22.9
ZAK pmax pmax
comp=Z,69nm,1.6s
TRD Trivandrum 49.96 277 *e*P **P 05 40 44.9 -0.5**
TRD AMB AMB 05 40 44.9
comp=Z,272nm,3.4s
TLY Talaya 50.32 341 *d i*P **P 05 40 48.1 +0.5**
TLY *e* 05 41 03.7
TLY *e*S **S 05 47 54.3 -1.0**
TLY *e* 05 48 17.2
TLY *e* 05 50 28.7
TLY pmax pmax
comp=Z,308nm,1.0s
TLY MLR MLR
comp=Z,4μm,21.0s
TLY Talaya 50.32 341 *e*P **P 05 40 49.5 +1.9**
comp=Z,403nm,1.1s
TLY LR LR
comp=Z,5μm,22.0s
TLY Talaya 50.32 341 P **P 05 40 48.3 +0.7**
SNR=288
TLY Talaya 50.32 341 P **P 05 40 49.8 +2.2**
comp=Z,2μm,1.1s,SNR=59
LGTI Lohaghat 50.45 304 *e*P **P 05 40 50.2 +1.3**
LGTI *ex* x 05 42 08.5
PTH Pithoragarh 50.50 304 *e*P **P 05 40 49.0 -0.5**
PTH *ex* x 05 45 56.0
IRK Irkutsk 50.61 342⇑*i*P **P 05 40 51.0 +1.3**
IRK *e*S **S 05 48 03.3 +4.1**
IRK pmax pmax
comp=Z,600nm,1.8s
MOO Moorlands 50.75 161 P **P 05 40 51.3 +0.4**
baz=51,SNR=9.9
LATR Latur 51.11 289 *e*P **P 05 40 53.0 -1.0**
BHPL Bhopal 51.19 296 *e*P **P 05 40 54.0 -0.6**
BHPL AMB AMB 05 40 55.5
comp=Z,139nm,0.8s
MOY Mondy 51.20 339 *e*P **P 05 40 56.0 +1.7**
MOY pmax pmax
comp=Z,700nm,2.0s
TAU Tasmania Unive 51.21 161 *e*P **P 05 40 56.4 +2.1**
TAU pmax pmax
comp=Z,272nm,1.2s
TAU MLR MLR
comp=Z,6μm,20.0s
TAU Tasmania Unive 51.21 161 *e*P **P 05 40 56.4 +2.1**
comp=Z,272nm,1.2s
TAU LR LR
comp=Z,6μm,20.0s
TAU Tasmania Unive 51.21 161 P **P 05 40 56.0 +1.7**
comp=Z,910nm,1.1s,SNR=6.1
SKR Severo-Kuril's 51.42 23 *e*P P 05 41 05.7 +10
SKR *e* 05 42 08.0
SKR *e*S **S 05 48 14.0 +3.6**
SKR pmax pmax
comp=Z,170nm,1.0s
SKR pmax pmax
comp=Z,5μm,8.0s
SKR MLR MLR
comp=N,6μm,20.0s
SKR MLR MLR
comp=E,6μm,20.0s
SKR MLR MLR
comp=Z,7μm,20.0s
CLNS Chul'man 51.56 358 *e*P **P 05 40 57.1 +0.3**
CLNS *e**PP **pP 05 41 09.3 -5.1**
CLNS *e*PPP PPP 05 43 58.9
CLNS *e*S S 05 48 22.8 +10
CLNS *e*SSS SSS 05 53 26.6
CLNS pmax pmax
comp=Z,128nm,0.7s
CLNS pmax pmax
comp=N,72nm,0.9s
CLNS pmax pmax
comp=E,37nm,0.7s
WMQ Urumqi 51.83 324 P **P 05 41 01.0 +1.9**
WMQ pP **pP 05 41 17.0 +0.3**
WMQ sP **sP 05 41 24.0 -0.5**
WMQ PP **PP 05 43 00.0 +2.5**
WMQ ScP **ScP 05 46 03.0 +0.8**
WMQ S **S 05 48 18.0 +1.5**
WMQ sS **sS 05 48 47.0 +0.7**
WMQ ScS **ScS 05 50 42.0 -1.0**
WMQ SS **SS 05 51 53.0 -1.0**
WMQ pmax pmax
comp=Z,320nm,1.0s
WMQ pmax pmax
comp=Z,1μm,5.0s
WMQ LR LR
comp=N,33μm,18.0s
WMQ LR LR
comp=E,15μm,16.0s
WMQ LR LR
comp=Z,26μm,20.0s
DDI Dehra Dun 52.53 305 *e*P **P 05 41 05.1 +0.6**
DDI AMB AMB 05 41 05.7
comp=Z,1μm,2.1s
NDI New Delhi 52.73 302 *e*P P 05 41 02.5 -3.5
NDI *ex* x 05 48 19.0
KAD Karad 53.21 288 *e*P **P 05 41 08.0 -1.7**
KAD *ex* x 05 46 08.0
SMLA Simla 53.51 305 *i*P **P 05 41 12.1 +0.5**
SMLA AML AML 05 41 14.1
comp=Z,2μm,0.6s
SMLA *i* x x 05 48 33.0
SMLA *i* x x 05 48 38.7
POO Poona 53.67 289⇓*ix* **P 05 41 10.0 -3.0**
comp=Z,200nm,1.0s
POO *e*P **P 05 41 11.9 -1.1**
HMDM Hanimaadhoo 53.72 275 P **P 05 41 13.3 -0.1**
comp=Z,344nm,1.6s,comp=Z,6μm
SDNR Sundarnagar 53.78 306 *e*P **P 05 41 14.0 +0.3**
PEA0B Petropavlovsk- 53.94 22 *e*P **P 05 41 15.1 +0.7**
PETK Petropavlovsk- 53.94 22 P **P 05 41 15.2 +0.8**
PETK pmax pmax
comp=Z,265nm,0.8s
PETK pmax pmax
comp=N,17nm,0.8s
PETK MLR MLR
comp=Z,4μm,18.1s
PETK pmax pmax
comp=Z,5.0nm,0.9s
PETK Petropavlovsk- 53.94 22 P **P 05 41 15.2 +0.8**
PETK ScP **ScP 05 46 12.9 +1.8**
PETK P'P'ab P'P'ab 06 12 01.8 -7.6
PETK Petropavlovsk- 53.94 22 P **P 05 41 15.2 +0.8**
comp=Z,265nm,0.8s,baz=193,slow=5.2,SNR=158
PETK ScP **ScP 05 46 12.9 +1.8**
comp=Z,17nm,0.8s,baz=189,slow=5.7,SNR=3.9
PETK LR LR 06 06 22.5
comp=Z,4μm,18.1s,baz=217,slow=38
PETK PKP2ab 06 12 01.8
comp=Z,5.4nm,0.9s,baz=164,slow=7.5,SNR=3.8
PET Petropavlovsk 54.24 23 *e*P **P 05 41 16.6 +0.1**
PET *e*S **S 05 48 48.1 -0.5**
PET pmax pmax
comp=Z,1μm,3.2s
PET pmax pmax
comp=Z,464nm,1.2s
PET MLR MLR
comp=Z,6μm,19.0s
PET MLR MLR
comp=Z,8μm,18.0s
PET Petropavlovsk 54.24 23 *e*P **P 05 41 17.7 +1.3**
comp=Z,690nm,1.3s
PET LR LR
comp=Z,7μm,20.0s
KAAM Kaadhehdhoo 54.31 267 P **P 05 41 16.9 -0.8**
comp=Z,397nm,1.2s,comp=Z,4μm
KAAM Kaadhehdhoo 54.31 267 P **P 05 41 17.1 -0.7**
baz=54,SNR=9.2
DHRM DHARAMSHALA 54.56 306 *e*P **P 05 41 19.7 +0.1**
DHRM AMB AMB 05 41 20.8
comp=Z,552nm,0.6s
THN Thein Dam 55.09 306 *ex* **pP 05 41 40.9 +0.1**
THN *ex* **ScP 05 46 12.5 -4.1**
MSVF Nonsavu 55.10 116 *e*P **P 05 41 24.1 +0.6**
MSVF pmax pmax
comp=Z,210nm,1.1s
MSVF MLR MLR
comp=Z,9μm,19.0s
MSVF Nonsavu 55.10 116 *e*P **P 05 41 24.1 +0.6**
comp=Z,210nm,1.1s
MSVF LR LR
comp=Z,9μm,19.0s
MSVF Nonsavu 55.10 116 P **P 05 41 24.0 +0.6**
comp=Z,442nm,1.3s,SNR=5.4
DGAR Diego Garcia 56.03 258 *e*P **P 05 41 27.4 -2.7**
DGAR pmax pmax
comp=Z,292nm,1.1s
DGAR MLR MLR
comp=Z,3μm,20.0s
DGAR Diego Garcia 56.03 258 *e*P **P 05 41 27.4 -2.7**
comp=Z,292nm,1.1s
DGAR LR LR
comp=Z,3μm,20.0s
DGAR Diego Garcia 56.03 258 P **P 05 41 28.6 -1.5**
SNR=6.2
MK31 Makanchi Array 56.66 325 *i* P **P 05 41 34.7 +0.6**
MK31 pmax pmax
comp=Z,348nm,0.5s
MKAR Makanchi Array 56.66 325 P **P 05 41 36.0 +1.9**
MKAR S **S 05 49 22.7 +1.4**
MKAR pmax pmax
comp=Z,324nm,0.5s
MKAR pmax pmax
comp=N,19nm,0.8s
MKAR smax smax
comp=N,5.0nm,0.9s
MKAR MLR MLR
comp=Z,10μm,19.7s
MKAR Makanchi Array 56.66 325 P **P 05 41 36.0 +1.9**
MKAR ScP **ScP 05 46 22.8 -0.4**
MKAR S **S 05 49 22.7 +1.4**
MKAR P'P' 06 11 20.9
MKAR ⇑*e* 06 11 35.6
MKAR Makanchi Array 56.66 325 P **P 05 41 36.0 +1.9**
comp=Z,324nm,0.5s,baz=122,slow=8.2,SNR=983
MKAR ScP **ScP 05 46 22.8 -0.4**
comp=Z,19nm,0.8s,baz=125,slow=6.4,SNR=5.5
MKAR S **S 05 49 22.7 +1.4**
comp=Z,4.5nm,0.9s,baz=121,slow=14,SNR=3.0
MKAR LR LR 06 08 10.2
comp=Z,10μm,19.7s,baz=111,slow=38
MKAR PKPPKP P'P'df 06 11 20.9 -7.5
comp=Z,1.4nm,1.0s,baz=288,slow=4.8,SNR=5.5
MKAR PKP2bc 06 11 35.6
comp=Z,5.2nm,1.1s,baz=298,slow=2.6,SNR=7.5
YAK Yakutsk 56.77 1 *e*P **P 05 41 33.6 -0.9**
YAK *e**PP **pP 05 41 48.8 -3.6**
YAK *e* 05 42 29.5
YAK *e* 05 43 40.2
YAK *e*PPP PPP 05 44 53.6
YAK *e*S **S 05 49 18.0 -4.1**
YAK *e**SS sS 05 49 46.4 -6.0
YAK *e* 05 51 10.8
YAK pmax pmax
comp=Z,646nm,1.1s
YAK pmax pmax
comp=N,279nm,1.4s
YAK pmax pmax
comp=E,25nm,0.9s
YAK pmax pmax
comp=Z,357nm,3.2s
YAK smax smax
comp=E,2μm,9.0s
YAK smax smax
comp=N,3μm,7.8s
YAK Yakutsk 56.77 1 *e*P **P 05 41 34.0 -0.5**
comp=N,721nm,0.8s
YAK LR LR
comp=Z,8μm,22.0s
MIDW Midway 57.27 60 PFAKE 05 41 50.0 +11
MIDW LR LR
comp=Z,9μm,22.0s
KSH Kashi 57.37 314 P **P 05 41 41.5 +2.1**
KSH pP **pP 05 42 01.3 +4.0**
KSH PcP **PcP 05 42 34.8 +2.1**
KSH PP PP 05 43 52.7 +5.3
KSH ScP **ScP 05 46 24.9 -1.8**
KSH PcS **PcS 05 46 33.8 -0.1**
KSH S **S 05 49 32.8 +1.7**
KSH sS **sS 05 50 05.3 +3.9**
KSH ScS **ScS 05 51 21.0 -1.9**
KSH SS **SS 05 53 23.9 +2.3**
KSH pmax pmax
comp=Z,220nm,0.5s
KSH LR LR
comp=N,22μm,18.7s
KSH LR LR
comp=E,9μm,15.2s
KSH LR LR
comp=Z,23μm,25.1s
BHJ Bhuj 58.21 294 *e*P **P 05 41 44.4 -1.0**
BHJ AMB AMB 05 42 05.6
comp=Z,295nm,0.0s
AAA Alma-Ata 58.24 319 *e*P **P 05 41 47.0 +1.6**
AAA *e*S **S 05 49 41.8 -0.5**
AAA pmax pmax
comp=Z,2μm,4.8s
AAA smax smax
comp=E,5μm,10.7s
AAA MLR MLR
comp=Z,9μm,27.0s
ULHL Ulahol 58.28 317 *i* P **P 05 41 46.7 +0.9**
ULHL Ulahol 58.28 317 P **P 05 41 46.7 +0.9**
SNR=275
KZA Kyzart 58.88 317 *i* P **P 05 41 51.2 +0.9**
KZA Kyzart 58.88 317 P **P 05 41 51.2 +0.9**
SNR=355
TKM2 Tokmak 2 58.99 318 *e*P **P 05 41 51.9 +1.1**
TKM2 pmax pmax
comp=Z,166nm,0.5s
TKM2 MLR MLR
comp=Z,7μm,22.0s
TKM2 Tokmak 2 58.99 318 *e*P **P 05 41 51.9 +1.1**
comp=Z,166nm,0.5s
TKM2 LR LR
comp=Z,7μm,22.0s
TKM2 Tokmak 2 58.99 318 P **P 05 41 51.9 +1.1**
SNR=329
OUZ Omahuta 59.27 136 *e*P **P 05 41 54.9 +2.4**
comp=Z,148nm,1.3s
KBK Karagaybulak 59.32 317 *i* P **P 05 41 54.2 +1.2**
KBK Karagaybulak 59.32 317 P **P 05 41 54.2 +1.2**
SNR=176
UCH Uchtor 59.45 317 *i* P **P 05 41 55.0 +0.8**
UCH Uchtor 59.45 317 P **P 05 41 55.0 +0.8**
SNR=52
ZAA0 Zalesovo Array 59.53 332 *e*P **P 05 41 53.9 -0.1**
ZALV Zalesovo Beam 59.53 332 P **P 05 41 54.6 +0.7**
ZALV S **S 05 49 58.4 0.0**
ZALV pmax pmax
comp=Z,249nm,0.5s
ZALV smax smax
comp=N,23nm,1.0s
ZALV MLR MLR
comp=Z,6μm,20.2s
ZALV Zalesovo Beam 59.53 332 P **P 05 41 54.6 +0.7**
ZALV S **S 05 49 58.4 0.0**
ZALV P'P' 06 11 23.2
ZALV ⇑*e* 06 11 34.7

ZALV P'P'ab **P'P'ab** **06 11 44.9 -1.4**
ZALV Zalesovo Beam 59.53 332 P **P** **05 41 54.6 +0.7**
comp=Z,249nm,0.5s,baz=119,slow=6.5,SNR=471
ZALV S **S** **05 49 58.4 0.0**
comp=Z,23nm,1.0s,baz=138,slow=11,SNR=10
ZALV LR LR 06 10 38.1
comp=Z,6µm,20.2s,baz=19,slow=39
ZALV PKPPKP **P'P'df** **06 11 23.2 -0.3**
comp=Z,2.3nm,0.8s,baz=298,slow=3.2,SNR=4.5
ZALV PKP2bc 06 11 34.7
comp=Z,4.8nm,0.9s,baz=305,slow=3.1,SNR=9.2
ZALV PKP2ab 06 11 44.9
comp=Z,8.2nm,1.0s,baz=316,slow=4.1,SNR=7.2
CHMS Chumysh 59.59 318 *i* P **P** **05 41 56.1 +1.5**
CHMS Chumysh 59.59 318 P **P** **05 41 56.1 +1.5**
SNR=7.2
FRU Bishkek 59.61 317 *e*P **P** **05 41 56.0 +1.2**
FRU *e* 05 51 38.0
FRU pmax pmax
comp=Z,200nm,1.6s
AAK Ala-Archa 59.62 317 P **P** **05 41 56.5 +1.5**
AAK 05 42 43.3
AAK pmax pmax
comp=Z,119nm,0.8s
AAK pmax pmax
comp=Z,108nm,0.9s
AAK pmax pmax
comp=N,20nm,0.8s
AAK MLR MLR
comp=Z,11µm,21.7s
AAK pmax pmax
comp=Z,2.0nm,0.8s
AAK pmax pmax
comp=Z,16nm,1.3s
AAK pmax pmax
comp=Z,5.0nm,0.9s
AAK Ala-Archa 59.62 317 *e*P **P** **05 41 55.9 +0.9**
comp=Z,464nm,0.7s
AAK PcP **PcP** **05 42 43.3 +1.7**
AAK ScP **ScP** **05 46 38.3 +1.6**
AAK P'P' 06 11 24.4
AAK ⇑*e* 06 11 34.2
AAK P'P'ab **P'P'ab** **06 11 46.8 -0.2**
AAK Ala-Archa 59.62 317 P **P** **05 41 56.6 +1.5**
SNR=96
AAK Ala-Archa 59.62 317 P **P** **05 41 56.0 +0.9**
comp=Z,920nm,1.0s
AAK Ala-Archa 59.62 317 P **P** **05 41 56.5 +1.5**
comp=Z,119nm,0.8s,baz=103,slow=5.5,SNR=182
AAK PcP **PcP** **05 42 43.3 +1.7**
comp=Z,108nm,0.9s,baz=56,slow=4.2,SNR=5.0
AAK ScP **ScP** **05 46 38.3 +1.6**
comp=Z,20nm,0.8s,baz=92,slow=3.0,SNR=3.5
AAK LR LR 06 10 35.1
comp=Z,11µm,21.7s,baz=83,slow=39
AAK PKPPKP **P'P'df** **06 11 24.4 -0.1**
comp=Z,1.9nm,0.8s,baz=112,slow=5.2,SNR=6.5
AAK PKP2bc 06 11 34.2
comp=Z,16nm,1.3s,baz=153,slow=2.8,SNR=4.7
AAK PKP2ab 06 11 46.8
comp=Z,5.1nm,0.9s,baz=203,slow=5.7,SNR=4.0
USP Ospenovka 59.87 318 *i* P **P** **05 41 57.8 +1.3**
USP Ospenovka 59.87 318 P **P** **05 41 57.8 +1.3**
SNR=35
AML Almayashu 59.97 316 *i* P **P** **05 41 58.9 +1.2**
AML Almayashu 59.97 316 P **P** **05 41 59.0 +1.2**
SNR=375
EKS2 Erkin-Say 60.12 317 *e*P **P** **05 41 59.6 +1.2**
EKS2 pmax pmax
comp=Z,261nm,0.7s
EKS2 MLR MLR
comp=Z,10µm,22.0s
EKS2 Erkin-Say 60.12 317 *e*P **P** **05 41 59.6 +1.2**
comp=Z,261nm,0.7s
EKS2 LR LR
comp=Z,10µm,22.0s
EKS2 Erkin-Say 60.12 317 P **P** **05 41 59.6 +1.2**
SNR=368
SEY Seymchan 60.54 13⇑*i*P **P** **05 42 00.8 +0.1**
FX1 Attu Island--F 60.62 30 *e*P **P** **05 42 02.6 +1.2**
FX1 Attu Island--F 60.62 30 P **P** **05 42 02.6 +1.2**
comp=Z,446nm,0.8s,baz=258,slow=1.9,SNR=39
FX1 LR LR 06 03 04.4
comp=Z,7µm,22.0s,baz=254,slow=31
KURK Kurchatov 60.79 327*c i*P **P** **05 42 03.2 +0.5**
KURK Kurchatov 60.79 327 *e*P **P** **05 42 03.2 +0.5**
comp=Z,2µm,0.7s
KURK S **S** **05 50 15.3 +0.6**
KURK Kurchatov 60.79 327 P **P** **05 42 02.9 +0.3**
SNR=902
KURK Kurchatov 60.79 327 P **P** **05 42 03.4 +0.8**
comp=Z,15µm,0.6s
KURBB Kurchatov Arra 60.79 327 P **P** **05 42 04.0 +1.3**
comp=Z,777nm,0.6s,baz=128,slow=5.6,SNR=33
KURBB S **S** **05 50 15.3 +0.6**
comp=Z,26nm,1.3s,baz=121,slow=14,SNR=14
KURBB LR LR 06 12 54.9
comp=Z,3µm,19.6s,baz=135,slow=40
NVS Novosibirsk 60.81 333⇑*i*P **P** **05 42 01.9 -0.8**
NVS *e*S **S** **05 50 10.7 -4.1**
NVS *e*PS **PnS** **05 50 40.3 +2.4**
NVS pmax pmax
comp=Z,683nm,1.0s
NVS pmax pmax
comp=N,314nm,0.9s
NVS pmax pmax
comp=E,341nm,0.9s
NVS smax smax
comp=N,690nm,2.1s
NVS smax smax
comp=E,534nm,2.0s
KBL Kabul 61.03 307 *e*P **P** **05 42 04.6 -0.3**
KBL pmax pmax
comp=Z,201nm,0.7s
KBL Kabul 61.03 307 *e*P **P** **05 42 04.6 -0.3**
comp=Z,200nm,0.7s
KK31 Karatay Array 62.51 316 *i* P **P** **05 42 14.6 +0.2**
KK31 pmax pmax
comp=Z,178nm,0.7s
KKAR Karatay Array 62.51 316 *e*P **P** **05 42 15.0 +0.6**
KKAR Karatay Array 62.51 316 *e*P **P** **05 42 15.0 +0.6**
comp=Z,0.5nm,1.0s
RPZ Rata Peaks 62.67 146 *e*P **P** **05 42 14.6 -0.8**
comp=Z,274nm,1.1s
RPZ Rata Peaks 62.67 146 LR LR 06 09 50.5
comp=Z,6µm,20.5s,baz=310,slow=36
RAO Raoul Island 62.80 127 PFAKE 05 42 30.0 +13
RAO LR LR
comp=Z,5µm,21.0s
URZ Urewera 63.27 138 *e*P **P** **05 42 20.5 +1.0**
comp=Z,146nm,1.3s
ODZ Otahua Downs 63.29 147 *e*P **P** **05 42 20.6 +1.2**
comp=Z,428nm,1.1s
KHZ Kahutara 63.32 143 *e*P **P** **05 42 19.6 0.0**
comp=Z,70nm,0.6s
SNZO South Karori 63.39 142 *e*P **P** **05 42 21.3 +1.2**
comp=Z,144nm,1.1s
SNZO LR LR
comp=Z,4µm,19.0s
AFI Afiamalu 63.44 108 PFAKE 05 42 30.0 +8.9
AFI LR LR
comp=Z,11µm,22.0s
MCQ Macquarie Isla 65.08 160 *e*P **P** **05 42 32.6 +1.7**
MCQ Macquarie Isla 65.08 160 *e*P **P** **05 42 32.6 +1.7**
MCQ Macquarie Isla 65.08 160 P P 05 42 34.4 +3.5
baz=65,SNR=4.6
BVA0 Borovoye Array 66.38 327 *i* P **P** **05 42 39.8 +0.3**
BVA0 pmax pmax
comp=Z,361nm,1.5s
BVAR Borovoye Array 66.38 327 P **P** **05 42 40.5 +1.0**
BVAR S **S** **05 51 24.8 +0.7**
BVAR pmax pmax
comp=Z,422nm,0.6s
BVAR smax smax
comp=N,21nm,1.0s
BVAR MLR MLR
comp=Z,5µm,21.8s
BVAR Borovoye Array 66.38 327 P **P** **05 42 40.5 +1.0**
BVAR S **S** **05 51 24.8 +0.7**
BVAR ⇑*e* 06 11 12.1
BVAR P'P'ab **P'P'ab** **06 11 19.6 +0.6**
BVAR Borovoye Array 66.38 327 P **P** **05 42 40.5 +1.0**
comp=Z,422nm,0.6s,baz=126,slow=7.5,SNR=1323
BVAR S **S** **05 51 24.8 +0.7**
comp=Z,21nm,1.0s,baz=108,slow=9.3,SNR=11
BVAR PKP2bc 06 11 12.1
comp=Z,1.6nm,0.8s,baz=276,slow=2.8,SNR=6.4
BVAR PKP2ab 06 11 19.6
comp=Z,7.1nm,1.1s,baz=264,slow=4.2,SNR=9.7
BVAR LR LR 06 13 59.4
comp=Z,5µm,21.8s,baz=315,slow=38
TIXI Tiksi 66.41 1 *i* P **P** **05 42 39.6 +0.3**
TIXI Tiksi 66.41 1 PFAKE 05 42 50.0 +11
TIXI LR LR
comp=Z,13µm,22.0s
BRVK Borovoye 66.45 327*c i*P **P** **05 42 40.5 +0.6**
BRVK Borovoye 66.45 327 *e*P **P** **05 42 40.0 +0.1**
comp=Z,2µm,1.1s
BRVK LR LR
comp=Z,6µm,22.0s
BRVK Borovoye 66.45 327 P **P** **05 42 40.5 +0.6**
SNR=784
BRVK Borovoye 66.45 327 P **P** **05 42 40.6 +0.6**
comp=Z,9µm,0.6s
BILL Bilibino 68.06 15 *e*P **P** **05 42 49.6 -0.2**
BILL *e*S **S** **05 51 42.7 -1.1**
BILL pmax pmax
comp=Z,162nm,1.4s
BILL MLR MLR
comp=Z,5µm,22.0s
BILL Bilibino 68.06 15 *e*P **P** **05 42 49.6 -0.2**
comp=Z,103nm,1.0s
BILL LR LR
comp=Z,7µm,22.0s
IMYA Miami 68.54 307 *e*P **P** **05 42 54.6 +0.9**
JMDO Jabal Madar 68.72 292 P **P** **05 42 55.0 +0.2**
SNR=11
SMDO Samad 68.81 293 P **P** **05 42 55.6 +0.1**
SNR=9.8
IMOG Moghan 69.11 307 *e*P **P** **05 42 58.4 +1.0**
IPAY Payeh 69.44 307 *e*P **P** **05 43 00.3 +1.0**
HOQ Hoqain 69.52 293 P **P** **05 43 00.2 +0.4**
SNR=7.9
BSY Bisya 69.58 292 P **P** **05 43 00.2 +0.1**
SNR=6.2
IAKL Akhelmad 69.66 307 *e*P **P** **05 43 01.4 +0.7**
IKRD Kardeh 69.87 307 *e*P P 05 42 58.6 -3.4
ARQ Araqi 70.23 293 P **P** **05 43 04.3 +0.2**
SNR=7.3
ISFR Sfrayin 70.32 307 *e*P **P** **05 43 06.0 +1.2**
ABKT Ailbek 70.36 308 P **P** **05 43 06.6 +1.9**
comp=Z,1µm,1.0s,SNR=35
NIKO Nikolski 70.39 35 *e*P **P** **05 43 04.2 -0.3**
comp=Z,270nm,1.0s
ISHV Shirvan 70.63 308 *e*P **P** **05 43 08.2 +1.6**
AB31 Akbulak array 71.34 320 P **P** **05 43 10.5 +0.2**
AB31 pmax pmax
comp=Z,616nm,0.7s
ABKAR Akbulak array 71.34 320 *e*P **P** **05 43 10.9 +0.6**
comp=Z,461nm,0.7s
ASUD Al Ashush, Dub 71.38 294 P **P** **05 43 12.2 +1.1**
SNR=6.0
IBAF Bafgh 71.67 301 *e*P **P** **05 43 12.9 0.0**
UNV Unalaska Valle 71.99 35 *e*P **P** **05 43 14.2 +0.1**
comp=Z,800nm,1.3s
DRV Dumont d'Urvil 72.25 175 PP PP 05 45 42.0 -15
DRV S **S** **05 52 30.0 -2.6**
DRV SS SS 05 57 04.0 -7.8
DRV L L 06 01 00.0
DRV R 06 06 00.0
RBK Rabkut 72.25 287 P **P** **05 43 16.0 -0.5**
SNR=15
MSEY Mahe Island 72.29 263 PFAKE 05 43 30.0 +13
MSEY LR LR
comp=Z,3µm,22.0s
CASY Casey 72.29 187 *e*P **P** **05 43 16.5 +1.0**
comp=Z,1µm,1.7s
CASY LR LR
comp=Z,4µm,21.0s
IMEH Mehriz 72.46 301 *e*P **P** **05 43 16.7 -1.0**
ICHK Chekchek 72.71 302 *e*P **P** **05 43 18.8 -0.4**
AKTO Aktyubinsk 72.83 321 P **P** **05 43 20.3 +1.1**
AKTO S **S** **05 52 40.1 +0.1**
AKTO pmax pmax
comp=Z,529nm,0.7s
AKTO smax smax
comp=N,19nm,1.1s
AKTO Aktyubinsk 72.83 321 P **P** **05 43 20.3 +1.1**
AKTO S **S** **05 52 40.1 +0.1**
AKTO Aktyubinsk 72.83 321 P **P** **05 43 20.3 +1.1**
comp=N,529nm,0.7s,baz=100,slow=7.1,SNR=969
AKTO S **S** **05 52 40.1 +0.1**
comp=N,19nm,1.1s,baz=214,slow=19,SNR=22
GAMB Gambell 72.91 24 *e*P **P** **05 43 19.9 +0.5**
comp=N,372nm,1.2s
MRIV Mauritius Mete 72.93 247 *e*P **P** **05 43 20.1 -0.3**
SVE Sverdlovsk 72.99 328*d i*P **P** **05 43 20.3 +0.3**
SVE *e*S **S** **05 52 39.5 -2.0**
SVE *e* 05 53 08.8
SVE pmax pmax
comp=Z,1µm,1.4s
SVE pmax pmax
comp=Z,1µm,9.4s
SVE smax smax
comp=E,3µm,10.2s
SVE MLR MLR
comp=Z,5µm,20.0s
ABTO Aybut 73.12 286 P **P** **05 43 20.9 -0.8**
SNR=14
PAF Port-aux-Franc 73.30 215 *e*P **P** **05 43 23.8 +1.9**
PAF pmax pmax
comp=Z,838nm,1.4s
PAF MLR MLR
comp=Z,6µm,20.0s
PAF Port-aux-Franc 73.30 215 *e*P **P** **05 43 23.8 +1.9**
comp=Z,838nm,1.4s
PAF LR LR
comp=Z,6µm,20.0s
IANJ Anjilo 73.41 305 *e*P **P** **05 43 23.6 +0.4**
ISRV Sarvestan 73.61 299 *e*P **P** **05 43 23.8 -0.9**
ISHM Shahmirzad 73.94 306 *e*P **P** **05 43 26.9 +0.5**
ARU Arti 73.98 327*c i*P **P** **05 43 25.4 -0.4**
ARU 05 43 39.1
ARU 05 46 06.6
ARU PPP PPP 05 47 51.5
ARU S **SKiKP** **05 52 50.1 +2.0**
ARU 05 53 20.9
ARU SSS SSS 06 00 58.3
ARU pmax pmax
comp=Z,835nm,1.2s
ARU MLR MLR
comp=Z,7µm,23.0s
ARU Arti 73.98 327 *e*P **P** **05 43 25.4 -0.4**
comp=Z,552nm,0.8s
ARU LR LR
comp=Z,4µm,19.0s
ARU Arti 73.98 327 P **P** **05 43 25.9 +0.1**
comp=Z,5µm,0.8s,SNR=81
KIP Kipapa 73.99 69*ce*P **P** **05 43 26.3 -0.3**
KIP pmax pmax
comp=Z,385nm,1.7s
KIP Kipapa 73.99 69 *e*P **P** **05 43 27.2 +0.6**
comp=Z,248nm,1.1s
KIP LR LR
comp=Z,8µm,22.0s
ILAS Lasjerd 74.18 305 *e*P **P** **05 43 27.9 +0.1**
IFIR Firoozkooh 74.36 305 *e*P **P** **05 43 29.3 +0.4**
ISFB Sefidab 74.68 304 *e*P **P** **05 43 30.8 +0.3**
RER Riviere de l'E 74.71 247 *e*P **P** **05 43 30.4 -0.5**
comp=Z,151nm,0.9s
RER LR LR
comp=Z,4µm,19.0s
IDMV Damavand 74.94 305 *e*P **P** **05 43 32.6 +0.3**
TNA Tin City 75.10 23 *e*P **P** **05 43 33.3 +1.2**
comp=Z,40nm,1.0s
IVRN Varamin 75.15 305 *e*P **P** **05 43 33.5 +0.3**
XMAS Kiritimati 75.24 89 *e*P **P** **05 43 34.7 +0.7**
comp=Z,336nm,1.4s
XMAS LR LR
comp=Z,7µm,22.0s
MIR Mirnyy 75.65 193⇑*i*P **P** **05 43 36.0 +0.8**
MIR *e* 05 43 56.0
MIR *e*S **S** **05 53 12.0 +1.2**
MIR pmax pmax
comp=Z,6µm,2.0s
MIR pmax pmax
comp=Z,2µm,2.0s
SOKR Solikamsk 75.70 330*c i*P **P** **05 43 35.6 0.0**
SOKR PPP PPP 05 48 18.0
SOKR S S 05 53 05.5 -6.1
SOKR pmax pmax
comp=Z,230nm,1.1s
SOKR MLR MLR
comp=Z,6µm,18.0s
SDPT Sand Point 75.76 34 *e*P **P** **05 43 35.9 -0.2**
comp=Z,595nm,1.0s
POHA Pohakuloa 76.31 71 PFAKE 05 43 50.0 +10
POHA LR LR
comp=Z,3µm,20.0s
IRAZ Razeghan 76.65 305 *e*P **P** **05 43 42.4 +0.5**
STCH Steam Cracks 76.70 71 *e*P **P** **05 43 42.3 0.0**
MUKL Al Mukalla 77.28 284 *e*P **P** **05 43 45.8 +0.3**
MUKL AMb AMB 05 43 46.4
comp=Z,167nm,0.6s
QRN Al-Qurain 78.14 298 *e*P **P** **05 43 49.4 -0.7**
QRN AMb AMB 05 43 54.2
comp=Z,519nm,1.0s
KBD Kabd 78.34 299 *e*P **P** **05 43 50.2 -0.9**
KBD AMb AMB 05 43 55.6
comp=Z,248nm,1.2s
RDF Al-Radifah 78.46 298 *e*P **P** **05 43 51.1 -0.7**
RDF AMb AMB 05 43 55.4
comp=Z,368nm,1.0s
IKOM Komasi 78.59 304 *e*P **P** **05 43 52.0 -0.7**
NAY Al-Naaiem 78.73 299 *e*P **P** **05 43 52.5 -0.9**
NAY AMb AMB 05 43 56.5
comp=Z,262nm,1.0s
MAK Makhachkala 78.95 313 *e*P **P** **05 43 53.7 -0.5**
MAK *e* 05 44 02.5
MAK *e**PP **pP** **05 44 11.6 -1.4**
MAK *e* 05 46 58.3
MAK *e*S **S** **05 53 46.2 -1.4**
MAK *e* 05 54 10.0
MAK pmax pmax
comp=Z,745nm,1.7s
MAK MLR MLR
comp=Z,6µm,23.0s
IVIS Veis 79.14 304 *e*P **P** **05 43 55.1 -0.5**
IDHR Dehrash 79.53 304 *e*P **P** **05 43 56.9 -0.9**
OHAK Old Harbor 80.00 33 *e*P **P** **05 43 59.2 -0.5**
comp=Z,386nm,1.2s
RAYN Ar Rayn 80.35 293 P **P** **05 44 02.0 -0.3**
comp=Z,1µm,0.7s
KDAK Kodiak Island 80.44 32 *e*P **P** **05 44 02.5 +0.6**
comp=Z,599nm,1.3s
KDAK LR LR
comp=Z,8µm,21.0s
KDAK Kodiak Island 80.44 32 P **P** **05 44 02.0 +0.1**
comp=Z,2µm,0.9s,SNR=18
KDAK Kodiak Island 80.44 32 P **P** **05 44 02.6 +0.7**
comp=Z,185nm,0.8s,baz=256,slow=1.9,SNR=118
DGRG David-gareji 80.47 311 P **P** **05 44 03.9 +1.3**
DGRG S **S** **05 54 05.4 +1.6**
SARR Saratov 80.94 321*ce*P **P** **05 44 04.6 -0.2**
SARR *i* S **S** **05 54 04.2 -3.9**
SARR pmax pmax
comp=Z,1µm,1.2s
TBLG Delisi 80.96 311 P **P** **05 44 06.0 +0.8**
TBLG S **S** **05 54 07.0 -1.8**
LBOS 80.97 283 *e*P **P** **05 44 06.4 +0.3**
LBOS AMb AMB 05 44 07.7
comp=Z,353nm,1.4s
BHD Baghdad 81.19 303 *i* x **P** **05 44 03.9 -2.6**
BHD *i* x x 05 44 45.9
BHD *i* x x 05 45 13.9
BHD *i* x x 05 54 04.7
BHD *i* x **S** **05 54 11.0 -0.5**
BHD *i* x x 05 54 56.8
KZR Kazreti 81.19 311 P **P** **05 44 07.9 +1.4**
CLDR Caldiran 81.55 309 *e*PN **P** **05 44 09.4 +0.8**
HKR Hakkari 81.69 307 *e*PN **P** **05 44 10.4 +1.0**
DYDN Diyadin 81.73 309 *i* P **P** **05 44 11.3 +1.8**
DHBB Dhamar BB 81.77 284 *e*P **P** **05 44 10.6 +0.3**
DHBB AMb AMB 05 44 12.9
comp=Z,4µm,2.0s
CUKT Cukurca 81.80 307 *e*PN **P** **05 44 10.2 +0.3**
AKH Akhalkalaki 81.89 311 P **P** **05 44 11.8 +1.5**
AKH S **S** **05 54 16.0 -2.8**
ONI Oni 81.92 312 P **P** **05 44 11.4 +1.1**
TVAN Van 81.95 308 *i* P **P** **05 44 12.0 +1.3**
VANB Van 81.96 308 *e*PN **P** **05 44 08.6 -2.1**
TRBA At Turbah 82.11 283 *e*P **P** **05 44 12.3 +0.3**
TRBA AMb AMB 05 44 14.2
comp=Z,532nm,0.1s
KARS Kars 82.20 310 *e*PN **P** **05 44 13.1 +1.2**
OPO Ambohidratompo 82.20 251 P **P** **05 44 12.4 +0.1**
OPO Ambohidratompo 82.20 251 P **P** **05 44 12.4 +0.1**
comp=Z,173nm,1.1s,baz=72,slow=4.3,SNR=62
GEVA Gevas 82.22 308 *i* P **P** **05 44 14.1 +2.0**
ABPO Ambohimpanom 82.23 250 *e*P **P** **05 44 12.5 0.0**
ABPO pmax pmax
comp=Z,214nm,1.0s
ABPO MLR MLR
comp=Z,3µm,20.0s
ABPO Ambohimpanom 82.23 250 *e*P **P** **05 44 12.5 0.0**
comp=Z,214nm,1.0s
ABPO LR LR
comp=Z,3µm,20.0s
SEW Seward 82.24 30 *e*P **P** **05 44 11.1 -0.3**
comp=Z,293nm,1.0s
AGRB Hanur-Agry 82.27 309 *e*PN **P** **05 44 14.1 +1.8**
KBZ Khabaz 82.34 313 P **P** **05 44 12.7 +0.4**
KBZ pmax pmax
comp=Z,178nm,1.0s
KBZ Khabaz 82.34 313 P **P** **05 44 12.7 +0.4**
KBZ PKKPbc **PKKPbc** **06 02 40.5 -0.1**
KBZ Khabaz 82.34 313 P **P** **05 44 12.7 +0.4**
comp=Z,178nm,1.0s,baz=95,slow=3.0,SNR=168
KBZ PKKPbc **PKKPbc** **06 02 40.5 -0.1**
comp=Z,1.0nm,0.6s,baz=225,slow=4.3,SNR=2.6
KBZ LR LR 06 26 44.5
comp=Z,5µm,20.4s,baz=78,slow=40
COLD Coldfoot 82.40 23 *e*P **P** **05 44 12.7 +0.5**
comp=Z,273nm,1.2s
TUTA Tutak 82.41 309 *i* P **P** **05 44 15.2 +2.1**
PMR Palmer 82.47 29 *e*P **P** **05 44 11.9 -0.7**
PMR pmax pmax
comp=Z,387nm,1.2s
PMR Palmer 82.47 29 *e*P **P** **05 44 11.9 -0.7**
comp=Z,387nm,1.2s
KIV Kislovodsk 82.49 314 *e*P **P** **05 44 14.1 +0.8**
KIV pmax pmax
comp=Z,266nm,0.8s
KIV MLR MLR
comp=Z,3µm,19.0s
KIV Kislovodsk 82.49 314 *e*P **P** **05 44 14.1 +0.8**
comp=Z,266nm,0.8s
KIV LR LR
comp=Z,3µm,19.0s
KIV Kislovodsk 82.49 314 P **P** **05 44 14.0 +0.7**
SNR=115
KIV Kislovodsk 82.49 314 P **P** **05 44 13.0 -0.3**
comp=Z,2µm,1.0s,SNR=32
SIRN S¨¨rnak 82.75 307 *i* P **P** **05 44 16.6 +1.9**
SML Sawmill 82.86 28 *e*P **P** **05 44 14.6 -0.2**
SML pmax pmax
comp=Z,217nm,1.2s
SML Sawmill 82.86 28 *e*P **P** **05 44 14.6 -0.2**
comp=Z,217nm,1.2s
ARTV Artvin 83.07 311 *i* P **P** **05 44 17.6 +1.2**
DAGI Agillar 83.08 311 *i* P **P** **05 44 17.4 +1.0**
HOMI Horasan 83.10 310 *i* P **P** **05 44 17.7 +1.0**
DDEM Demirkent 83.20 310 *i* P **P** **05 44 17.7 +0.7**
COLA College 83.21 25 *e*P **P** **05 44 15.4 -1.0**
COLA pmax pmax
comp=Z,125nm,1.1s
COLA MLR MLR
comp=Z,2µm,20.0s
COLA College 83.21 25 *e*P **P** **05 44 15.4 -1.0**
comp=Z,125nm,1.1s
COLA LR LR
comp=Z,2µm,20.0s
DBAD Bademkaya 83.25 311 *i* P **P** **05 44 18.8 +1.6**
DBOC Borcka 83.26 311 *i* P **P** **05 44 18.8 +1.5**
BCA Borcka 83.29 311 *e*PN **P** **05 44 17.8 +0.4**
ATD Arta Tunnel 83.46 281 LR LR 06 20 39.7
comp=Z,913nm,21.1s,baz=95,slow=35
BTMT Batman 83.46 308 *e*PN **P** **05 44 19.8 +1.4**
VRTB Varto-Mus 83.47 309 *e*PN **P** **05 44 20.8 +2.3**
ERZM Erzurum 83.52 309 *i* P **P** **05 44 21.3 +2.4**
EZM Erzurum 83.52 309 *e*PN **P** **05 44 20.4 +1.5**
ILAR Eielson Array 83.62 25 P **P** **05 44 17.6 -1.0**
ILAR PKKPbc **PKKPbc** **06 02 37.9 -0.7**
ILAR P'P' 06 10 46.5
ILAR Eielson Array 83.62 25 P **P** **05 44 17.6 -1.0**

comp=Z,122nm,1.1s,baz=243,slow=2.9,SNR=245
ILAR PKKPbc **PKKPbc 06 02 37.9 -0.7**
comp=Z,1.0nm,0.5s,baz=104,slow=1.5,SNR=13
ILAR PKPPKP **P'P'df 06 10 46.5 +4.7**
comp=Z,3.2nm,1.1s,baz=175,slow=1.2,SNR=9.6
ILAR LR LR 06 25 17.0
comp=Z,1µm,18.4s,baz=253,slow=38
BEST Besiri 83.64 307 *i* P **P 05 44 20.9 +1.6**
BNGL BINGOL 83.71 309 *i* P P 05 44 11.4 -8.4
MARD Mardin 84.05 307 *i* P **P 05 44 22.6 +1.2**
BNGB Bingˆ¶l 84.07 309 *e*PN **P 05 44 22.9 +1.3**
DIV Divide 84.08 29 *e*P **P 05 44 21.5 +0.5**
comp=Z,1µm,1.2s
KOPT Kop Dagi 84.18 310 *i* P **P 05 44 24.7 +2.4**
PAX Paxson 84.22 27 *e*P **P 05 44 21.7 -0.1**
PAX pmax pmax
comp=Z,479nm,1.3s
PAX Paxson 84.22 27 *e*P **P 05 44 21.7 -0.1**
comp=Z,479nm,1.3s
KLMR Klimovskoe 84.39 331*c i*P **P 05 44 22.1 -0.4**
KLMR *i* S S 05 54 36.1 -6.9
KLMR pmax pmax
comp=Z,2µm,1.4s
KLMR pmax pmax
comp=Z,793nm,5.8s
KLMR MLR MLR
comp=Z,7µm,23.0s
BAYT Ayd˜–ntepe-Bay 84.44 310 *e*PN **P 05 44 24.9 +1.4**
DIY Diyarbakir 84.47 307 *e*PN **P 05 44 25.5 +2.0**
SOC Sochi 84.65 313*c i*P **P 05 44 23.7 -0.5**
SOC *e**PP pP 05 44 37.7 -5.4
SOC *e* 05 47 33.6
SOC *i* S S 05 54 37.2 -9.0
SOC pmax pmax
comp=Z,620nm,1.4s
SOC pmax pmax
comp=Z,469nm,1.0s
SOC MLR MLR
comp=E,3µm,23.0s
SOC MLR MLR
comp=Z,6µm,23.0s
SOC MLR MLR
comp=N,5µm,21.0s
BMRM Bremner River 84.65 29 *e*P **P 05 44 24.0 +0.1**
comp=N,783nm,1.2s
KTUT Trabzon 84.70 311 *e*PN **P 05 44 25.3 +0.8**
VOR Voronezh 84.74 321⇓*i*P **P 05 44 24.0 -0.4**
VOR *e*S S 05 54 37.0 -10
VOR pmax pmax
comp=Z,2µm,1.4s
VSR Storozhevoye 84.77 321 *e*P **P 05 44 24.2 -0.4**
VSR *e**PP **pP 05 44 42.7 -0.9**
VSR *e* 05 54 38.2
VSR *e*S **S 05 54 42.0 -5.2**
VSR pmax pmax
comp=N,60nm,0.9s
VSR pmax pmax
comp=E,470nm,0.9s
VSR pmax pmax
comp=Z,850nm,0.9s
VSR pmax pmax
comp=N,70nm,0.9s
VSR pmax pmax
comp=E,500nm,0.9s
VSR pmax pmax
comp=Z,940nm,0.9s
VSR smax smax
comp=N,780nm,1.5s
VSR smax smax
comp=Z,140nm,1.5s
VSR smax smax
comp=E,140nm,0.8s
VSR MLR MLR
comp=N,780nm,16.0s
VSR MLR MLR
comp=E,2µm,16.0s
VSR MLR MLR
comp=Z,3µm,16.0s
VNDA Vanda 84.78 173 *e*P **P 05 44 23.7 -0.4**
comp=Z,72nm,0.9s
VNDA PP **PP 05 47 39.0 -2.1**
VNDA PKKPbc **PKKPbc 06 02 34.3 -2.3**
VNDA P'P' 06 10 39.2
VNDA Vanda 84.78 173 P **P 05 44 24.1 0.0**
comp=Z,52nm,1.0s,baz=319,slow=5.5,SNR=55
VNDA PP **PP 05 47 39.0 -2.1**
comp=Z,46nm,1.1s,baz=332,slow=9.2,SNR=4.8
VNDA PKKPbc **PKKPbc 06 02 34.3 -2.3**
comp=Z,2.5nm,0.7s,baz=253,slow=1.3,SNR=7.9
VNDA PKPPKP **P'P'df 06 10 39.2 +1.5**
comp=Z,2.7nm,1.0s,baz=139,slow=1.7,SNR=4.2
VNDA LR LR 06 19 52.8
comp=Z,4µm,20.7s,baz=339,slow=34
ERZN Erzincan 84.80 309 *e*PN **P 05 44 26.5 +1.3**
DOT Dot Lake 84.85 27 *e*P **P 05 44 24.5 -0.3**
comp=Z,102nm,1.2s
GUMT Gumushane 84.94 310 *e*PN **P 05 44 27.3 +1.4**
TMCR Tamitsa 85.02 334 *e*P **P 05 44 24.4 -1.2**
TMCR *e*S S 05 54 39.8 -9.3
TMCR pmax pmax
comp=Z,479nm,1.6s
MENT Mentasta 85.02 27 *e*P **P 05 44 26.6 +0.9**
EZC Erzincan 85.07 309 *e*PN **P 05 44 27.8 +1.2**
PPT Papeete 85.12 108 LR LR 06 19 42.7
comp=Z,2µm,19.8s,baz=271,slow=34
PPT2 Papeete2 85.12 108 *e*P **P 05 44 27.1 0.0**
comp=Z,128nm,1.3s
PPT2 Papeete2 85.12 108 *e*PP PP 05 47 43.1 -2.3
comp=Z,932nm,26.2s
PPT2 *e*S **S 05 54 54.2 +2.3**
comp=Z,7µm,26.8s
PPT2 *e*SS **SS 06 00 28.8 +1.6**
comp=Z,2µm,24.5s
PPT2 *e*LQ LQ 06 07 48.2
comp=Z,13µm,34.0s
PPT2 *e*LR LR 06 11 07.3
comp=Z,10µm,27.2s,baz=278
PAE Paea 85.12 108 *e*P **P 05 44 26.7 -0.3**
comp=Z,29nm,1.3s
PAE Paea 85.12 108 *e*P **P 05 44 26.7 -0.3**
PAE pmax pmax
comp=Z,29nm,1.3s
PAE Paea 85.12 108 *e*P **P 05 44 26.7 -0.3**
comp=Z,29nm,1.3s
KELT Kelkit 85.13 310 *i* P **P 05 44 28.5 +1.5**
MAW Mawson 85.25 200 *e*P **P 05 44 27.3 +0.7**
comp=Z,26nm,1.0s
MAW PKKPbc **PKKPbc 06 02 33.1 -2.0**
MAW Mawson 85.25 200 P **P 05 44 27.1 +0.5**
comp=Z,68nm,1.0s,baz=61,slow=6.2,SNR=32
MAW PKKPbc **PKKPbc 06 02 33.1 -2.0**
comp=Z,6.0nm,0.9s,baz=282,slow=9.3,SNR=4.4
MAW LR LR 06 19 42.5
comp=Z,3µm,20.0s,baz=56,slow=34
MAW Mawson 85.25 200 P **P 05 44 27.3 +0.7**
baz=85,SNR=22
TIAR Tiarei 85.33 108 *e*P **P 05 44 28.1 0.0**
comp=Z,114nm,0.9s
TIAR Tiarei 85.33 108 *e*P **P 05 44 28.1 0.0**
comp=Z,114nm,0.9s
ELZG Elazig 85.42 308 *i* P **P 05 44 30.9 +2.5**
TVO Taravao 85.45 108 *e*P **P 05 44 28.9 +0.1**
comp=Z,194nm,1.2s
TVO Taravao 85.45 108 *e*P **P 05 44 28.9 +0.1**
TVO pmax pmax
comp=Z,194nm,1.2s
TVO Taravao 85.45 108 *e*P **P 05 44 28.9 +0.1**
comp=Z,194nm,1.2s
ESPY Espiye-Giresun 85.49 311 *e*PN **P 05 44 28.1 -0.4**
MOS Moscow 85.53 325 *e*P P 05 44 24.4 -3.9
MOS *e* 05 47 41.2
MOS *i* S **SKSac 05 54 41.0 -6.5**
MOS pmax pmax
comp=E,200nm,1.1s
MOS pmax pmax
comp=Z,10.0nm,1.1s
MOS pmax pmax
comp=N,200nm,1.3s
MOS pmax pmax
comp=Z,599nm,0.9s
MOS pmax pmax
comp=E,105nm,0.6s
MOS smax smax
comp=E,7µm,4.6s
MOS MLR MLR
comp=Z,6µm,22.0s

URFA Urfa 85.60 307 *e*PN **P 05 44 31.6 +2.4**
SBA Scott Base 85.68 172 *e*P **P 05 44 29.8 +1.2**
SBA pmax pmax
comp=Z,460nm,1.8s
SBA MLR MLR
comp=Z,3µm,20.0s
SBA Scott Base 85.68 172 *e*P **P 05 44 29.8 +1.2**
comp=Z,460nm,1.8s
SBA LR LR
comp=Z,3µm,20.0s
ILIC ilic-Erzincan 85.69 309 *e*PN **P 05 44 30.5 +0.9**
KEMA Kemaliye 85.76 309 *i* P **P 05 44 31.7 +1.7**
GRSN GIRESUNGRSN 85.84 311 *i* P **P 05 44 30.5 +0.2**
MALT Malatya 85.87 308 *e*PN **P 05 44 31.8 +1.2**
MALT Malatya 85.87 308 ⇓P **P 05 44 32.6 +2.1**
MALT Malatya 85.87 308 *e*P **P 05 44 31.9 +1.3**
comp=Z,393nm,0.8s
MALT LR LR
comp=Z,2µm,21.0s
MALT Malatya 85.87 308⇓*i*P **P 05 44 32.6 +2.1**
MALT Malatya 85.87 308 *e*P **P 05 44 31.3 +0.8**
MYA Malataya 85.87 308 *e*PN **P 05 44 32.3 +1.7**
SUSE Susehri 85.93 310 *i* P **P 05 44 32.3 +1.4**
TBI Tubuai 85.94 114 *e*P **P 05 44 30.7 -0.3**
comp=Z,250nm,1.1s
TBI Tubuai 85.94 114 *e*PP PP 05 47 49.0 -2.8
comp=Z,712nm,26.5s
TBI *e*S **S 05 55 04.5 +4.8**
comp=Z,5µm,31.0s
TBI *e*SS **SS 06 00 41.4 +2.5**
comp=Z,3µm,29.0s
TBI *e*LQ LQ 06 07 59.3
comp=Z,6µm,36.2s
TBI *e*LR LR 06 11 51.8
comp=Z,10µm,31.2s,baz=292
TBI Tubuai 85.94 114 *e*P **P 05 44 30.7 -0.3**
comp=Z,250nm,1.1s
TBI *e*PP **PP 05 47 49.0 -2.8**
TBI *e*S **S 05 55 04.5 +4.8**
TBI *e*SS **SS 06 00 41.4 +2.5**
TBI *e*LQ LQ 06 07 59.3
EGAK Eagle 86.07 25 PFAKE 05 44 40.0 +9.2
EGAK LR LR
comp=Z,3µm,22.0s
OBN Obninsk 86.16 325*c i*P **P 05 44 30.8 -0.6**
OBN *e* 05 47 55.0
OBN *e*S **SKSac 05 54 48.5 -2.9**
OBN pmax pmax
comp=Z,305nm,0.8s
OBN MLR MLR
comp=Z,6µm,19.0s
OBN Obninsk 86.16 325 *e*P **P 05 44 31.4 0.0**
comp=Z,612nm,0.6s
OBN LR LR
comp=Z,6µm,21.0s
OBN Obninsk 86.16 325 P **P 05 44 31.2 -0.2**
comp=Z,7µm,0.6s,SNR=38
LVZ Lovozero 86.21 338*d i*P **P 05 44 30.8 -0.7**
LVZ pmax pmax
comp=Z,238nm,1.2s
LVZ Lovozero 86.21 338 *e*P **P 05 44 30.6 -0.9**
comp=Z,213nm,1.0s
LVZ LR LR
comp=Z,8µm,21.0s
ANN Anapa 86.23 314*c i*P **P 05 44 31.3 -0.7**
ANN *e*S **SKSac 05 54 48.5 -3.8**
ANN pmax pmax
comp=N,259nm,1.8s
ANN pmax pmax
comp=E,170nm,1.8s
ANN pmax pmax
comp=Z,975nm,1.8s
ANN pmax pmax
comp=N,353nm,1.1s
ANN pmax pmax
comp=E,273nm,1.1s
ANN pmax pmax
comp=Z,2µm,1.1s
ANN smax smax
comp=N,2µm,10.8s
ANN smax smax
comp=E,2µm,10.7s
ANN MLR MLR
comp=N,3µm,25.0s
ANN MLR MLR
comp=E,6µm,25.0s
ANN MLR MLR
comp=Z,6µm,25.0s
AKCD Akcadag 86.26 308 *i* P **P 05 44 33.8 +1.2**
PMOR Pomariorio Ree 86.43 105 *e*P **P 05 44 33.7 +0.2**
comp=Z,298nm,1.3s
PMOR Pomariorio Ree 86.43 105 *e*P **P 05 44 33.7 +0.2**
comp=Z,298nm,1.3s
MEH Mehetia 86.58 108 *e*P **P 05 44 33.9 -0.4**
comp=Z,226nm,1.3s
MEH Mehetia 86.58 108 *e*P **P 05 44 33.9 -0.4**
comp=Z,226nm,1.3s
RSDY Resadiye-TOKAT 86.59 310 *e*PN **P 05 44 35.0 +1.0**
GZT Gaziantep 86.61 307 *i* P **P 05 44 36.0 +1.7**
DESE Dese 86.63 281 *i* P **P 05 44 37.9 +2.9**
DESE *e*S **S 05 55 02.9 -4.5**
VAH Vaihoa 86.71 106 *e*P **P 05 44 34.8 -0.1**
comp=Z,231nm,1.4s
VAH Vaihoa 86.71 106 *e*P **P 05 44 34.8 -0.1**
comp=Z,231nm,1.4s
APA Apatity 86.71 337⇑*i*P **P 05 44 33.8 -0.1**
APA *i* 05 44 39.2
APA *i* 05 54 51.0
APA *i* S **S 05 55 03.0 -2.6**
APA *i* SS **SS 06 00 49.0 +1.1**
APA pmax pmax
comp=Z,183nm,1.2s
APA MLR MLR
comp=Z,8µm,23.0s
GAZ Gaziantep 86.90 307 *e*PN **P 05 44 36.4 +0.7**
KUZU Kuzuini 87.04 306 *i* P **P 05 44 37.6 +1.4**
KUZU Kuzuini 87.04 306 *i* P **P 05 44 37.6 +1.4**
KMRS Kahramanmaras 87.12 307 *e*PN **P 05 44 37.2 +0.6**
TOKT Tokat 87.19 310 *e*PN **P 05 44 37.6 +0.7**
TOKA Tokat 87.24 310 *i* P **P 05 44 37.6 +0.5**
PINB Pinarbasi 87.43 308 *i* P **P 05 44 38.6 +0.3**
KVT Kavak 87.51 311 *e*PN **P 05 44 38.3 -0.1**
ASF Jabal al Asfar 87.53 302 PKKPbc PKKPbc 06 02 29.6 +1.5
ASF P'P' 06 10 37.2
ASF Jabal al Asfar 87.53 302 PKKPbc PKKPbc 06 02 29.6 +1.5
comp=Z,1.7nm,0.5s,baz=294,slow=4.9,SNR=4.3
ASF PKPPKP **P'P'df 06 10 37.2 +0.7**
comp=Z,1.1nm,0.5s,baz=257,slow=3.1,SNR=3.2
ANDN Andirin 87.56 307 *i* P **P 05 44 39.4 +0.6**
HAVZ Havza 87.76 311 *i* P **P 05 44 39.8 +0.2**
FKH Fakeheh 87.78 304 *e*P **P 05 44 40.9 +1.0**
FKH Fakeheh 87.78 304 *e*P **P 05 44 40.9 +1.0**
HTY Hatay 87.84 306 *e*PN **P 05 44 41.7 +1.6**
BNN Bunyan 87.84 309 *e*PN **P 05 44 39.7 -0.5**
YAYL Yayladag 87.88 306 *i* P **P 05 44 40.9 +0.5**
KOZT Kozan 87.98 307 *e*PN **P 05 44 41.5 +0.8**
DIKM Dikmen 88.05 311 *e*PN **P 05 44 39.9 -1.0**
CEYT Ceyhan 88.08 307 *e*PN **P 05 44 42.3 +1.2**
JOF Joensuu 88.12 333 *e*P **P 05 44 40.7 -0.1**
JOF pmax pmax
comp=Z,83nm,0.5s
JOF Joensuu 88.12 333 *e*p **P 05 44 40.7 -0.1**
comp=Z,83nm,0.5s
HWQ Hawqa 88.16 304 *e*P **P 05 44 41.9 +0.2**
YOZ Yozgat 88.18 309 *e*PN **P 05 44 42.2 +0.4**
RCY Rachaya 88.31 303 *e*P **P 05 44 43.1 +0.6**
KRTS Karatas 88.42 306 *e*PN **P 05 44 43.6 +0.8**
BHL Bhannes 88.43 304 *e*P **P 05 44 43.0 0.0**
BYBT Boyabat 88.44 311 *e*PN **P 05 44 42.8 +0.1**
KSDI Kefar Szold 88.49 303 *e*P **P 05 44 42.0 -1.2**
CTKT Corum 88.50 310 *i* P **P 05 44 43.8 +0.5**
SIM Simferopol' 88.57 315*ce*P **P 05 44 43.0 -0.3**
SIM *e*PPP PPP 05 50 12.0
SIM *e* 05 55 04.0
SIM *e*S **S 05 55 21.0 -3.2**
SIM pmax pmax
comp=Z,226nm,1.0s
AVNT Avonos 88.62 309 *i* P **P 05 44 44.6 +0.7**
CORM Corum 88.66 310 *e*PN **P 05 44 44.2 +0.1**
INK Inuvik 88.67 22 P **P 05 44 42.2 -1.0**
INK PKKPbc **PKKPbc 06 02 23.6 -2.9**
INK P'P' 06 10 34.0
INK Inuvik 88.67 22 P **P 05 44 42.2 -1.0**
comp=Z,102nm,1.1s,baz=286,slow=5.8,SNR=111

INK PKKPbc **PKKPbc 06 02 23.6 -2.9**
comp=Z,3.3nm,0.5s,baz=84,slow=3.2,SNR=17
INK PKPPKP **P'P'df 06 10 34.0 +1.8**
comp=Z,1.5nm,0.9s,baz=52,slow=1.8,SNR=3.4
KEV Kevo 88.71 340 *e*P **P 05 44 42.4 -1.0**
KEV pmax pmax
comp=Z,199nm,1.4s
KEV MLR MLR
comp=Z,3µm,22.0s
KEV Kevo 88.71 340 *e*P **P 05 44 42.4 -1.0**
comp=Z,199nm,1.4s
KEV LR LR
comp=Z,3µm,22.0s
KEV Kevo 88.71 340 *e*p **P 05 44 42.3 -1.1**
comp=Z,19nm,0.6s
GULE Gulek 88.83 307 *i* P **P 05 44 45.5 +0.5**
NIG Nigde 88.88 308 *e*PN **P 05 44 45.9 +0.6**
BZK Bozkurt 88.95 312 *e*PN **P 05 44 44.8 -0.4**
TOS Tosya 89.04 311 *e*PN **P 05 44 44.8 -0.9**
PUL Pulkovo 89.04 330*d i*P **P 05 44 44.9 -0.2**
PUL pmax pmax
comp=Z,780nm,1.2s
MERS Mersin 89.07 307 *e*PN **P 05 44 45.7 -0.2**
SPA0 Spitsbergen Ar 89.17 349 *e*P **P 05 44 44.7 -0.8**
SPA0 AMB AMB 05 44 45.7
SPA0 *e*SKS **SKSac 05 55 07.0 -2.0**
ILGA Ilgaz 89.27 311 *i* P **P 05 44 46.8 -0.1**
ARCES ARCESS Array B 89.27 340 P **P 05 44 45.3 -0.8**
ARCES PKiKP **PKiKP 05 49 44.5 +0.5**
ARCES PKKPbc **PKKPbc 06 02 23.9 -1.2**
ARCES ARCESS Array B 89.27 340 P **P 05 44 45.3 -0.8**
comp=Z,76nm,0.8s,baz=87,slow=5.8,SNR=166
ARCES PKiKP **PKiKP 05 49 44.5 +0.5**
comp=Z,8.8nm,0.9s,baz=78,slow=1.0,SNR=6.0
ARCES PKKPbc **PKKPbc 06 02 23.9 -1.2**
comp=Z,3.2nm,0.8s,baz=242,slow=2.6,SNR=6.7
ARCES LR LR 06 28 31.2
comp=Z,4µm,20.5s,baz=78,slow=38
ARE0 ARCESS Array S 89.27 340 *e*P **P 05 44 46.2 +0.1**
ARE0 ARCESS Array S 89.27 340 *e*P **P 05 44 45.0 -1.1**
CANT Cankiri 89.39 311 *e*PN **P 05 44 46.4 -0.9**
SKAG Skagway 89.39 30 *e*P **P 05 44 47.2 +0.5**
comp=Z,64nm,1.1s
EIL Elat 89.42 300 *e*P **P 05 44 45.6 -2.0**
EIL Elat 89.42 300 P **P 05 44 49.1 +1.5**
baz=90,SNR=53
KAMT Kaman 89.45 309 *e*PN **P 05 44 47.0 -0.7**
BR131 Keskin Array S 89.47 310 *e*P **P 05 44 47.4 -0.4**
comp=Z,96nm,0.8s
BRTR Keskin Array B 89.47 310 P **P 05 44 48.1 +0.3**
BRTR ScS **ScS 05 55 44.5 +6.9**
BRTR PKKP **PKKPdf 06 02 18.1 -0.9**
BRTR PKKPbc **PKKPbc 06 02 23.1 -0.6**
BRTR P'P' 06 10 34.0
BRTR Keskin Array B 89.47 310 P **P 05 44 48.1 +0.3**
comp=Z,152nm,0.9s,baz=122,slow=4.1,SNR=198
BRTR ScS **ScS 05 55 44.5 +6.9**
comp=Z,3.3nm,1.1s,baz=42,slow=5.7,SNR=4.1
BRTR PKKP **PKKPdf 06 02 18.1 -0.9**
comp=Z,0.5nm,0.8s,baz=169,slow=1.5,SNR=3.0
BRTR PKKPbc **PKKPbc 06 02 23.1 -0.6**
comp=Z,1.9nm,0.9s,baz=225,slow=3.3,SNR=4.9
BRTR PKPPKP **P'P'df 06 10 34.0 +1.5**
comp=Z,1.1nm,0.9s,baz=253,slow=1.3,SNR=4.5
BRTR LR LR 06 31 06.1
comp=Z,1µm,20.9s,baz=70,slow=40
EREN Erenkoy 89.49 305 *e*PN **P 05 44 47.8 0.0**
ELDT Eldivan 89.54 310 *i* P **P 05 44 48.0 -0.2**
PHNC Paralimni 89.66 305 P **P 05 44 49.1 +0.5**
comp=Z,2.3nm,0.9s
KBS Kingsbay 89.68 350 *e*P **P 05 44 47.3 -0.5**
KBS *e*SKS **SKSac 05 55 13.2 +1.3**
KBS Kingsbay 89.68 350*d i*P **P 05 44 47.0 -0.8**
KBS pmax pmax
comp=Z,27nm,1.0s
KBS Kingsbay 89.68 350 *e*P **P 05 44 46.8 -1.0**
comp=Z,50nm,1.1s
KBS LR LR
comp=Z,5µm,21.0s
SULT Sultanhani-AKS 89.73 308 *e*PN **P 05 44 48.6 -0.4**
HSP Hornsund 89.77 348 *e*P **P 05 44 47.8 -0.5**
BJO Bjornoya 89.81 345 *e*P **P 05 44 47.1 -1.4**
BBAL Bala 89.88 310 *i* P **P 05 44 49.2 -0.5**
SAFT Safranbolu 90.02 311 *e*PN **P 05 44 49.3 -0.9**
LFK Lefkose 90.03 305 *e*PN **P 05 44 49.5 -1.0**
KMBO Kilima Mbogo 90.04 269 *e*P **P 05 44 52.3 +1.1**
comp=Z,103nm,0.9s
KMBO LR LR
comp=Z,2µm,22.0s
KMBO Kilima Mbogo 90.04 269 P **P 05 44 52.6 +1.5**
SNR=50
KMBO Kilima Mbogo 90.04 269 P **P 05 44 52.4 +1.3**
comp=Z,71nm,0.8s,baz=59,slow=7.3,SNR=84
KMBO LR LR 06 21 32.2
comp=Z,2µm,21.9s,baz=76,slow=33
LOD Lodumlu 90.12 310 *e*PN **P 05 44 48.9 -1.9**
KTK1 Kautokeino 90.18 340 *e*P **P 05 44 48.6 -1.7**
KTK1 AMB AMB 05 44 50.3
comp=Z,92nm,1.0s
KTK1 *e* 05 55 01.1
KTK1 AMS AMS 06 30 05.3
comp=Z,7µm,25.2s
CSS Prodhromos 90.23 305 P **P 05 44 50.2 -1.1**
comp=Z,1.6nm,0.6s
CSS Prodhromos 90.23 305 P **P 05 44 51.2 -0.2**
CSS Prodhromos 90.23 305 *e*P **P 05 44 51.2 -0.2**
comp=Z,271nm,0.8s
CSS LR LR
comp=Z,2µm,22.0s
CSS Prodhromos 90.23 305 *e*P P 05 44 43.8 -7.5
MAMC Mammari 90.30 305 P **P 05 44 51.7 +0.1**
KAF Kangasniemi 90.55 332 *e*P **P 05 44 50.6 -1.5**
KAF pmax pmax
comp=Z,62nm,0.5s
KAF Kangasniemi 90.55 332 *e*p **P 05 44 50.6 -1.5**
comp=Z,62nm,0.5s
LEF Lefka 90.58 305 *e*PN **P 05 44 51.9 -1.0**
LADK Ladik-KONYA 90.63 308 *e*PN **P 05 44 51.0 -2.2**
KONT Konya--Tatoy 90.66 308 *e*PN **P 05 44 51.8 -1.6**
FIA1 FINESS Array S 90.79 332 *e*P **P 05 44 52.2 -1.1**
FINES FINESS Array B 90.79 332 P **P 05 44 52.5 -0.8**
FINES PKKPbc **PKKPbc 06 02 20.4 -0.6**
FINES FINESS Array B 90.79 332 P **P 05 44 52.5 -0.8**
comp=Z,43nm,0.5s,baz=71,slow=4.2,SNR=90
FINES PKKPbc **PKKPbc 06 02 20.4 -0.6**
comp=Z,1.0nm,0.5s,baz=312,slow=2.7,SNR=4.5
FINES LR LR 06 27 49.9
comp=Z,3µm,22.0s,baz=78,slow=37
ALFC Alevga 90.81 305 P **P 05 44 53.5 -0.5**
comp=Z,3.7nm,0.8s
KIZT Kizilcal 90.92 309 *e*PN **P 05 44 54.2 -0.4**
KDZE Karadeniz Ereo 90.94 311 *e*PN **P 05 44 51.6 -2.9**
AKMC Akamas 91.04 305 P **P 05 44 54.0 -1.1**
comp=Z,2.7nm,0.6s
PPCY Paphos 91.05 305 P **P 05 44 54.3 -0.8**
AKASG Malin Array Be 91.08 321 P **P 05 44 54.4 -0.5**
AKASG pmax pmax
comp=Z,54nm,0.6s
AKASG Malin Array Be 91.08 321 P **P 05 44 54.4 -0.5**
AKASG PKKPbc **PKKPbc 06 02 19.1 -0.8**
AKASG Malin Array Be 91.08 321 P **P 05 44 54.4 -0.5**
comp=Z,54nm,0.6s,baz=63,slow=4.2,SNR=132
AKASG PKKPbc **PKKPbc 06 02 19.1 -0.8**
comp=Z,0.3nm,0.3s,baz=290,slow=2.1,SNR=3.7
AKASG LR LR 06 32 03.5
comp=Z,5µm,21.6s,baz=55,slow=40
AK01 Malin Array Si 91.08 321 *e*P **P 05 44 54.1 -0.7**
VSU Vasula 91.09 329*c i*P **P 05 44 53.6 -1.1**
VSU pmax pmax
comp=Z,360nm,1.4s
KIEV Kiev 91.09 321 *e*P **P 05 44 53.3 -1.6**
KIEV pmax pmax
comp=Z,197nm,1.1s
KIEV MLR MLR
comp=Z,5µm,22.0s
KIEV Kiev 91.09 321 *e*P **P 05 44 53.3 -1.6**
comp=Z,197nm,1.1s
KIEV LR LR
comp=Z,5µm,22.0s
AK02 Malin Array Si 91.09 321 *e*P **P 05 44 54.2 -0.8**
SVRH Sivrihisar-ESK 91.12 310 *e*PN **P 05 44 55.0 -0.4**
MICGM Minsk 91.22 325⇓*i*P **P 05 44 54.0 -1.5**
MDUB Mudurnu 91.23 311 *e*PN **P 05 44 54.9 -1.1**
MNK Minsk 91.25 325⇓*i*P **P 05 44 54.0 -1.6**
MNK *e**PP pP 05 45 09.0 -5.7

MNK e 05 55 20.0
MNK eS **S** **05 55 44.0 -4.6**
MNK pmax pmax
comp=Z,470nm,1.0s
MNK smax smax
comp=E,1µm,1.6s
MNK smax smax
comp=N,4µm,1.8s
MNK MLR MLR
comp=Z,14µm,20.0s
TRO Tromso 91.46 341 eP **P** **05 44 55.0 -1.2**
TRO AMB AMB 05 45 02.2
comp=Z,178nm,1.3s
TRO eSKS **SKSac** **05 55 20.9 -1.5**
TRO AMS AMS 06 32 09.6
comp=Z,6µm,19.6s
WRAK Wrangell Islan 91.50 33 eP **P** **05 44 57.2 +0.5**
comp=Z,170nm,1.2s
WRAK LR LR
comp=Z,3µm,22.0s
ESKT Eskisehir 91.63 310 ePN **P** **05 44 57.1 -0.8**
GULT Gulveren 91.75 311 ePN **P** **05 44 57.2 -1.2**
NACGM Naroch 91.78 325 eP **P** **05 44 55.0 -3.0**
SPNC Sapanca-Adapaz 91.88 311 ePN **P** **05 44 56.2 -2.6**
IZAR Zarasai 91.90 326 eP **P** **05 44 57.8 -0.8**
IZAR AMB AMB 05 45 01.0
comp=Z,34nm,1.0s
KIS Kishinev 91.95 317 eP **P** **05 44 56.0 -3.0**
KIS e 05 48 37.0
KIS i 05 55 20.0
KIS iS **S** **05 55 50.0 -5.3**
KIS iPS **PnS** **05 57 20.0 +4.9**
KIS eSS **SS** **06 02 00.0 -4.8**
KIS MLR MLR
comp=E,5µm,25.0s
KIS MLR MLR
comp=Z,11µm,25.0s
KIS MLR MLR
comp=N,3µm,20.0s
KIS MLR MLR
comp=Z,10µm,28.0s
KIS Kishinev 91.95 317 eP **P** **05 44 56.0 -3.0**
KIS epP **pP** **05 45 17.0 -1.1**
KIS Kishinev 91.95 317 ePP PP 05 48 37.0 -2.0
KIS Kishinev 91.95 317 ePPP PPP 05 51 00.0
KIS iSKS **SKSac** **05 55 20.0 -6.1**
KIS iS **S** **05 55 50.0 -5.3**
KIS Kishinev 91.95 317 iPS PS 05 57 20.0 +6.0
KIS eSS SS 06 02 00.0 -4.8
KIS LRM MLR 06 28 55.0
comp=Z,3µm,20.0s
IIGN Ignalina 92.00 326 eP **P** **05 44 58.2 -0.8**
IIGN AMB AMB 05 45 00.2
comp=Z,33nm,1.6s
ISAL Salakas 92.00 326 eP **P** **05 44 58.3 -0.8**
ISAL AMB AMB 05 45 01.4
comp=Z,23nm,1.0s
DIB Dawson Inlet, 92.06 36 T T 07 28 12.1
SNR=13
BCK Bucak 92.12 308 ePN **P** **05 44 59.5 -0.6**
ISP Isparta 92.12 308 ePN **P** **05 44 58.2 -2.0**
ISP Isparta 92.12 308 P **P** **05 44 58.3 -1.9**
ISP Isparta 92.12 308 P **P** **05 44 59.5 -0.7**
ISP Isparta 92.12 308 eP **P** **05 44 59.3 -0.9**
comp=Z,186nm,1.0s
ISP LR LR
comp=Z,2µm,22.0s
ISP Isparta 92.12 308 ⇓iP **P** **05 44 58.9 -1.3**
TLCR 92.26 316 ⇓P **P** **05 45 00.4 0.0**
TLCR 92.26 316 ⇓iP **P** **05 45 00.4 0.0**
ALT Altintas 92.26 309 ePN **P** **05 44 59.8 -1.0**
DLBC Dease Lake 92.28 31 eP **P** **05 45 00.6 +0.2**
DLBC PKKPbc **PKKPbc** **06 02 17.3 0.0**
DLBC Dease Lake 92.28 31 PKKPbc PKKPbc 06 02 17.3 0.0
comp=Z,2.5nm,0.8s,baz=344,slow=13,SNR=3.9
CAVI Cavuskoy 92.30 311 ePN **P** **05 45 00.2 -0.6**
ALE Alert 92.31 1 P **P** **05 45 00.2 +0.2**
comp=Z,151nm,1.4s,SNR=16
HRT Hereke 92.33 311 ePN **P** **05 44 59.8 -1.3**
LEOM Leova 92.43 317 P **P** **05 45 01.5 +0.3**
LEOM Leova 92.43 317 ⇓P **P** **05 45 00.8 -0.4**
YLV Yalova 92.60 311 ePN **P** **05 45 01.0 -1.3**
TIRR Tirgusor 92.66 315 P **P** **05 45 02.0 -0.4**
TIRR Tirgusor 92.66 315 eP **P** **05 45 01.7 -0.6**
comp=Z,120nm,0.9s
TIRR Tirgusor 92.66 315⇑iP **P** **05 45 01.9 -0.4**
TVSB Tavsanli 92.70 310 ePN **P** **05 45 01.3 -1.5**
CFR Carcaliu 92.73 316 ⇓P **P** **05 45 02.1 -0.5**
CFR Carcaliu 92.73 316 ⇓iP **P** **05 45 02.1 -0.5**
ISK Istanbul-Kandi 92.75 311 ePN **P** **05 45 01.2 -1.6**
GEMT Gemlik 92.76 311 ePN **P** **05 45 01.9 -0.9**
ELL Elmali 92.76 307 ePN **P** **05 45 02.5 -0.7**
KHL Karahalli 92.83 309 ePN **P** **05 45 02.6 -0.8**
PSN Preselentsi 92.96 314 P **P** **05 45 03.3 -0.4**
CTYL Yal??k??y-??at 93.26 312 ePN **P** **05 45 04.2 -0.9**
PETR 93.26 316⇑iP **P** **05 45 06.8 +1.7**
DENT Denizli 93.30 308 ePN **P** **05 45 04.5 -1.0**
STEI Steigen 93.32 339 eP **P** **05 45 03.5 -1.3**
STEI AMB AMB 05 45 07.6
comp=Z,202nm,1.3s
SLVT Silivri 93.36 312 ePN **P** **05 45 02.9 -2.7**
AMRR Amara 93.39 315 P **P** **05 45 06.8 +1.1**
KULA Kula-Manisa 93.47 309 ePN **P** **05 45 04.5 -1.8**
GRER 93.50 316⇑iP **P** **05 45 06.3 +0.1**
TESR 93.51 317⇑iP **P** **05 45 05.8 -0.4**
VRI Vrincioaia 93.58 316 ⇓P **P** **05 45 06.6 0.0**
VRI Vrincioaia 93.58 316 ⇓iP **P** **05 45 06.6 0.0**
PRD Provadia 93.61 314 P **P** **05 45 06.1 -0.6**
PLOR Plostina 93.64 316⇑P **P** **05 45 06.7 -0.2**
PLOR Plostina 93.64 316⇑iP **P** **05 45 06.7 -0.2**
EDC Edincik 93.77 311 ePN **P** **05 45 08.0 +0.4**
LOF Lofoten 93.83 340 eP P 05 44 59.9 -7.3
ISR Istrita 93.85 316⇑P **P** **05 45 08.5 +0.6**
ISR Istrita 93.85 316⇑iP **P** **05 45 08.5 +0.6**
BALB Balikesir 93.88 310 ePN **P** **05 45 06.6 -1.5**
SYO Syowa Base 93.92 201 ⇓iP **P** **05 45 06.6 -0.9**
SYO Syowa Base 93.92 201 ⇓iPcP **PcP** **05 45 09.6 +1.6**
SYO Syowa Base 93.92 201⇑ipP pP 05 45 24.2 -2.4
GONE Gonen-Balikesi 93.95 311 ePN **P** **05 45 07.2 -1.2**
SUW Suwalki 94.02 325 eP **P** **05 45 07.6 -0.8**
SUW pmax pmax
comp=Z,350nm,1.1s
SUW Suwalki 94.02 325 eP **P** **05 45 07.6 -0.8**
comp=Z,350nm,1.1s
SUW Suwalki 94.02 325 eP **P** **05 45 07.8 -0.6**
SUW eSKSac **SKSac** **05 55 35.9 -1.3**
SUW LMZ LR 06 30 34.3
AKS Akhisar 94.06 309 ePN **P** **05 45 07.2 -1.8**
SULR 94.14 315 ⇓iP **P** **05 45 07.9 -1.2**
MLR Muntele Rosu 94.19 316 PKKPbc PKKPbc 06 02 11.0 -0.9
MLR Muntele Rosu 94.19 316⇑iP **P** **05 45 08.9 -0.7**
MLR Muntele Rosu 94.19 316 PKKPbc PKKPbc 06 02 11.0 -0.9
comp=Z,1.4nm,1.2s,baz=188,slow=8.7,SNR=3.3
MLR LR LR 06 34 31.0
comp=Z,1µm,21.0s,baz=57,slow=40
SECR 94.20 316⇑iP **P** **05 45 10.1 +0.7**
BURAR Bucovina Array 94.24 318 P **P** **05 45 09.6 -0.1**
BURAR Bucovina Array 94.24 318⇑iP **P** **05 45 10.6 +0.9**
BUR08 Bucovina Ar. S 94.25 318 eP **P** **05 45 09.5 -0.2**
ARG Arkhangelos 94.26 307 P **P** **05 45 09.2 -0.7**
ARG Arkhangelos 94.26 307 eP **P** **05 45 07.9 -2.0**
MOR8 Moi Rana 94.29 338 eP **P** **05 45 06.3 -3.1**
EDRB Edirne 94.33 313 ePN **P** **05 45 08.9 -1.2**
JMB Yambol 94.33 313 P **P** **05 45 10.3 +0.2**
JMB Yambol 94.33 313 P **P** **05 45 10.3 +0.2**
DOPR Dopca 94.47 317 ⇓iP **P** **05 45 11.4 +0.7**
LVV L'vov 94.52 321 eP **P** **05 45 10.2 -0.6**
LVV e 05 55 38.6
LVV eS **S** **05 56 14.2 -3.6**
LVV MLR MLR
comp=Z,3µm,20.0s
IZM Izmir 94.57 309 ePN **P** **05 45 10.9 -0.4**
DAT Datca 94.61 307 ePN **P** **05 45 10.2 -1.5**
FLOS Flostrand 94.62 338 eP **P** **05 45 09.0 -1.8**
FLOS AMB AMB 05 45 11.8
comp=Z,188nm,1.5s
KONS Konsvik 94.65 338 eP **P** **05 45 12.3 +1.3**
BLCB Balcova 94.74 309 ePN **P** **05 45 11.0 -1.0**
STOK Stokkvaagen 94.75 338 eP **P** **05 45 10.1 -1.3**
BODT Bodrum 94.77 308 ePN **P** **05 45 10.6 -1.6**
VOIR 94.82 316⇑P **P** **05 45 12.5 +0.1**
VOIR 94.82 316⇑iP **P** **05 45 12.5 +0.1**

BBB Bella Bella 94.88 37 PKPPKP **P'P'df** **06 10 20.4 -1.0**
comp=Z,28nm,1.3s,baz=320,slow=3.6,SNR=3.2
NIS1 Nisyros Isl. 94.95 307 P **P** **05 45 12.2 -0.9**
NIS2 Nisyros Isl. 94.95 307 P **P** **05 45 12.5 -0.6**
ZIMR 94.97 315 P **P** **05 45 13.2 +0.2**
EZN Ezine 95.02 311 eP **P** **05 45 12.6 -0.7**
ALN Alexandroupoli 95.03 312 P **P** **05 45 11.8 -1.5**
ALN Alexandroupoli 95.03 312 eP P 05 45 09.7 -3.6
HUMR Humele 95.06 315⇑iP **P** **05 45 12.7 -0.7**
QSPA South Pole Qui 95.06 180 eP **P** **05 45 12.7 -0.3**
comp=Z,396nm,1.9s
QSPA PKKPbc **PKKPdf** **06 02 08.3 -2.3**
QSPA P'P' 06 10 21.6
QSPA LR LR
comp=Z,4µm,20.0s
QSPA South Pole Qui 95.06 180 P **P** **05 45 12.9 -0.1**
comp=Z,21nm,1.0s,baz=321,slow=1.4,SNR=31
QSPA PKKPbc **PKKPdf** **06 02 08.3 -2.3**
comp=Z,3.0nm,0.8s,baz=170,slow=2.4,SNR=6.1
QSPA PKPPKP **P'P'df** **06 10 21.6 +2.6**
comp=Z,0.8nm,0.5s,baz=309,slow=2.4,SNR=6.2
PVL Pavlikeni 95.08 314 P **P** **05 45 13.2 -0.3**
ARR Arges 95.12 316 ⇓iP **P** **05 45 13.4 -0.3**
KARP Karpathos 95.15 306 eP **P** **05 45 11.5 -2.5**
PRK Paraskevi 95.17 310 P **P** **05 45 13.8 -0.2**
PRK Paraskevi 95.17 310 eP P 05 45 08.8 -5.2
DIM Dimitrovgrad 95.18 313 P **P** **05 45 13.1 -0.9**
BMR Baia Mare 95.36 319 P **P** **05 45 14.9 +0.2**
KWP Kalwaria Pacla 95.40 321 eP **P** **05 45 14.7 -0.1**
KWP pmax pmax
comp=Z,332nm,1.4s
KWP MLR MLR
comp=Z,6µm,22.0s
KWP Kalwaria Pacla 95.40 321 eP **P** **05 45 14.7 -0.1**
comp=Z,332nm,1.4s
KWP LR LR
comp=Z,6µm,22.0s
KWP Kalwaria Pacla 95.40 321 ⇓iP **P** **05 45 14.5 -0.3**
KWP Kalwaria Pacla 95.40 321 eP **P** **05 45 14.7 -0.1**
KWP eSKSac **SKSac** **05 55 43.9 -1.0**
KWP LMZ LR 06 23 23.8
CHOS Chios island 95.50 309 eP P 05 45 07.9 -7.7
LOT Lotru 95.70 317⇑iP **P** **05 45 16.1 -0.3**
PLD Plovdiv 95.77 313 P **P** **05 45 16.0 -0.7**
RZN Rozhen 95.85 313 P **P** **05 45 16.2 -1.1**
TRPA Tarpa 95.88 319⇑iP **P** **05 45 16.6 -0.4**
TRPA Tarpa 95.88 319⇑eP **P** **05 45 16.7 -0.3**
NSS Namsos 95.91 337 eP **P** **05 45 14.3 -2.5**
NSS AMB AMB 05 45 17.5
comp=Z,52nm,1.4s
CRAR CRAIOVA 95.93 315 P **P** **05 45 18.2 +0.9**
BEL Belsk 95.99 323 eP **P** **05 45 17.5 +0.1**
BEL eSKSac **SKSac** **05 55 47.9 +0.1**
BEL LMZ LR 06 31 59.3
PGB Panagyurishte 96.06 314 P **P** **05 45 17.4 -0.7**
DRGR 96.09 318 P **P** **05 45 18.1 0.0**
DRGR 96.09 318 ⇓iP **P** **05 45 17.7 -0.4**
KAVA Kavala 96.14 312 P **P** **05 45 17.1 -1.3**
DEV Deva 96.18 317 P **P** **05 45 18.6 +0.1**
MPEP Malo Peshtene 96.19 314 P **P** **05 45 18.3 -0.3**
RES Resolute Bay 96.33 10 eP **P** **05 45 17.7 -0.8**
comp=Z,50nm,1.2s
RES Resolute Bay 96.33 10 P **P** **05 45 18.1 -0.4**
comp=Z,25nm,1.0s,baz=311,slow=5.4,SNR=67
GZR Gura Zlata 96.39 317 P **P** **05 45 19.5 0.0**
GZR Gura Zlata 96.39 317⇑iP **P** **05 45 18.9 -0.6**
NPS Neapolis 96.44 306 P **P** **05 45 20.4 +0.5**
NVR Nevrokopi 96.55 312 P **P** **05 45 18.9 -1.4**
NVR Nevrokopi 96.55 312 eP **P** **05 45 19.3 -1.0**
LAST Lasithi 96.57 306 P **P** **05 45 18.2 -2.4**
LAST Lasithi 96.57 306 eP **P** **05 45 17.7 -2.9**
MMB Musomiste 96.59 313 P **P** **05 45 19.2 -1.3**
OUR Ouranopolis 96.68 311 P **P** **05 45 18.9 -1.9**
VTS Vitosha 96.74 314 ⇓P **P** **05 45 19.4 -1.9**
VTS Vitosha 96.74 314 ⇓iP **P** **05 45 19.4 -1.9**
VTS Vitosha 96.74 314 P **P** **05 45 20.3 -1.0**
SRS Serrai 96.80 312 P **P** **05 45 19.6 -1.8**
NIE Niedzica 96.96 321 eP **P** **05 45 21.9 0.0**
NIE e*PP **pP** **05 45 40.3 -0.8**
NIE Niedzica 96.96 321 eP **P** **05 45 21.9 0.0**
NIE epP **pP** **05 45 40.3 -0.8**
HFS Hagfors 96.97 332 P **P** **05 45 20.5 -1.2**
HFS PKKPbc **PKKPbc** **06 02 02.6 -2.2**
HFS Hagfors 96.97 332 P **P** **05 45 20.5 -1.2**
comp=Z,15nm,0.4s,baz=107,slow=4.1,SNR=128
HFS PKKPbc **PKKPbc** **06 02 02.6 -2.2**
comp=Z,1.6nm,0.6s,baz=200,slow=3.9,SNR=9.5
HFS LR LR 06 32 40.7
comp=Z,5µm,22.0s,baz=61,slow=38
PAIG Paliouri 97.00 311 P **P** **05 45 20.9 -1.4**
KKB Krupnik 97.00 313 P **P** **05 45 21.1 -1.2**
IDI Anoyia 97.02 306 P Pdif 05 45 22.8 +0.1
IDI Anoyia 97.02 306 eP **P** **05 45 22.4 -0.2**
comp=Z,105nm,0.9s
IDI Anoyia 97.02 306 eP **P** **05 45 19.5 -3.1**
SOH Sokhos 97.04 312 eP P 05 45 15.9 -6.6
OJC Ojcow 97.05 322 eP **P** **05 45 22.1 -0.2**
OJC e*PP **pP** **05 45 40.1 -1.4**
OJC e 05 49 14.7
OJC e 05 55 57.6
OJC eS **S** **05 56 37.8 -1.9**
OJC Ojcow 97.05 322 eP **P** **05 45 22.1 -0.2**
OJC epP **pP** **05 45 40.1 -1.4**
OJC ePP **PP** **05 49 14.7 -3.9**
OJC eSKSac **SKSac** **05 55 57.6 +4.1**
OJC eS **S** **05 56 37.8 -1.9**
OJC L L 06 35 47.4
comp=Z,4µm,22.3s
PLG Polygyros 97.07 312 P **P** **05 45 20.9 -1.8**
PLG Polygyros 97.07 312 eP P 05 45 16.8 -5.9
BZS Buzias 97.12 317 P **P** **05 45 22.5 -0.2**
BZS Buzias 97.12 317⇑iP **P** **05 45 21.7 -1.0**
SIVA Sivas 97.14 306 P **P** **05 45 22.6 -0.4**
SIVA Sivas 97.14 306 eP **P** **05 45 22.7 -0.3**
HORT Hortiatis 97.28 312 P **P** **05 45 21.8 -1.9**
KNT Kendrikon 97.30 312 P **P** **05 45 22.1 -1.5**
THE Thessaloniki 97.37 312 P **P** **05 45 21.6 -2.3**
ATH Athens Observa 97.39 309 P **P** **05 45 23.5 -0.6**
ATH Athens Observa 97.39 309 eP P 05 45 12.3 -12
NEO Neokhori 97.48 311 eP **P** **05 45 23.6 -0.9**
VAY Valandovo 97.50 313 P **P** **05 45 22.5 -2.0**
VAY Valandovo 97.50 313 iP **P** **05 45 22.7 -1.8**
VAY iS **SKSac** **05 55 50.5 -5.6**
VAY i 05 56 36.8
VAM Vamos 97.55 307 P Pdif 05 45 25.2 +0.3
VAM Vamos 97.55 307 eP **P** **05 45 24.0 -0.9**
GKP Gorka Klasztor 97.62 325 eP **P** **05 45 24.7 -0.1**
GKP eSKSac **SKSac** **05 55 54.5 -1.7**
GKP LMZ LR 06 32 49.9
GKP Gorka Klasztor 97.62 325 eP **P** **05 45 24.7 -0.1**
PSZ Piszkesteto 97.64 320 P **P** **05 45 25.1 0.0**
PSZ Piszkesteto 97.64 320 eP **P** **05 45 24.3 -0.8**
comp=Z,58nm,1.0s
PSZ LR LR
comp=Z,3µm,21.0s
PSZ Piszkesteto 97.64 320 ⇓iP **P** **05 45 24.5 -0.6**
PSZ Piszkesteto 97.64 320 ⇓eP **P** **05 45 24.8 -0.3**
NC602 NORSAR Array S 97.70 333 eP **P** **05 45 23.3 -1.7**
GRG Griva 97.71 312 P **P** **05 45 24.0 -1.5**
NB2 NORSAR Subarra 97.71 334 P **P** **05 45 23.2 -1.9**
comp=Z,42nm,1.0s,baz=68,slow=4.6
NOA NORSAR Array B 97.71 334 P **P** **05 45 23.6 -1.5**
NOA PP **PP** **05 49 21.7 -1.7**
NOA PKKPbc **PKKPbc** **06 02 00.9 -2.0**
NOA SKKPbc SKKPbc 06 05 38.0 +1.1
NOA NORSAR Array B 97.71 334 P **P** **05 45 23.6 -1.5**
comp=Z,10nm,0.6s,baz=66,slow=4.6,SNR=45
NOA PP **PP** **05 49 21.7 -1.7**
comp=Z,3.6nm,0.6s,baz=67,slow=7.5,SNR=4.2
NOA PKKPbc **PKKPbc** **06 02 00.9 -2.0**
comp=Z,1.6nm,0.9s,baz=71,slow=2.9,SNR=4.5
NOA SKKPbc SKKPbc 06 05 38.0 +1.1
comp=Z,1.4nm,0.9s,baz=72,slow=2.8,SNR=3.4
NOA LR LR 06 33 20.8
comp=Z,6µm,20.8s,baz=65,slow=38
GVD Gavdhos 97.75 306 P **P** **05 45 25.1 -0.7**
GVD Gavdhos 97.75 306 eP **P** **05 45 24.0 -1.8**
comp=Z,349nm,0.8s
GVD Gavdhos 97.75 306 eP **P** **05 45 23.1 -2.7**
ATAL Atalanti 97.77 310 P **P** **05 45 23.7 -2.1**
KARN Karanos 97.77 307 P Pdif 05 45 26.1 +0.1
KARN Karanos 97.77 307 eP **P** **05 45 24.8 -1.1**

LKR Lokris 97.79 310 P P 05 45 21.9 -4.0
LKR Lokris 97.79 310 eP P 05 45 20.4 -5.5
LIT Litokhoron 97.85 312 P P 05 45 22.5 -3.7
LIT Litokhoron 97.85 312 eP **P** **05 45 23.5 -2.7**
DID Didima 97.86 309 P **P** **05 45 24.9 -1.4**
NAO01 NORSAR Array S 97.94 334 eP **P** **05 45 24.7 -1.4**
comp=Z,14nm,0.6s
LTK Loutraki 97.96 309 P **P** **05 45 25.1 -1.6**
YKW3 Yellowknife Ar 97.97 24 eP **P** **05 45 25.1 -1.0**
comp=Z,0.9nm,1.3s
YKA Yellowknife Ar 98.01 24 P **P** **05 45 25.5 -0.8**
YKA PKiKP **PKiKP** **05 50 00.5 +1.3**
YKA PKKPbc **PKKPbc** **06 01 59.6 -2.4**
YKA P'P' 06 10 19.5
YKA Yellowknife Ar 98.01 24 P **P** **05 45 25.5 -0.8**
comp=Z,12nm,0.8s,baz=300,slow=4.5,SNR=142
YKA PKiKP **PKiKP** **05 50 00.5 +1.3**
comp=Z,1.4nm,0.6s,baz=294,slow=1.7,SNR=11
YKA PKKPbc **PKKPbc** **06 01 59.6 -2.4**
comp=Z,3.4nm,0.7s,baz=118,slow=2.6,SNR=18
YKA PKPPKP **P'P'df** **06 10 19.5 +4.6**
comp=Z,0.3nm,1.0s,baz=75,slow=1.9,SNR=4.0
AXAR Agios Charalam 98.03 310 P **P** **05 45 24.8 -2.2**
VYHS Vyhne 98.16 320 eP **P** **05 45 27.0 -0.4**
VYHS eS S 05 56 41.5 -7.7
VYHS pmax pmax
comp=Z,14nm,1.1s
VYHS Vyhne 98.16 320 eP **P** **05 45 26.9 -0.4**
VYHS e 05 48 50.5
VYHS eS S 05 56 41.5 -7.7
VYHS e 06 02 58.4
SKO Skopje 98.17 314 P **P** **05 45 26.7 -0.8**
SKO Skopje 98.17 314 iP **P** **05 45 27.5 0.0**
SKO iS **SKSac** **05 55 56.5 -3.0**
OKC Ostrava-Krasne 98.18 322 iP Pdif 05 45 27.6 +0.2
OKC e 05 45 40.0
OKC MLR MLR
comp=Z,2µm,17.7s
OKC Ostrava-Krasne 98.18 322 iP Pdif 05 45 27.6 +0.2
OKC epP pP 05 45 40.0 -6.5
OKC eSP sP 05 45 48.6 -5.4
OKC AMS AMS 06 42 50.0
comp=Z,2µm,17.7s
AGG Agios Georgios 98.22 310 P **P** **05 45 25.6 -2.3**
PKS6 Bocsa 98.23 318⇓eP Pdif 05 45 28.0 +0.3
BSD Bornholm Skovb 98.27 328 iP **P** **05 45 26.5 -1.1**
comp=Z,44nm,0.9s
BSD
comp=Z,5µm,24.0s
THL Klokotos Trika 98.33 311 eP **P** **05 45 25.4 -2.9**
KZN Kozani 98.33 312 P **P** **05 45 25.5 -2.9**
KZN Kozani 98.33 312 eP **P** **05 45 25.8 -2.6**
BUD Budapest 98.33 319⇑ePdiff **P** **05 45 27.8 -0.3**
MAKR Makrakomi, Fth 98.37 310 P **P** **05 45 27.1 -1.4**
PKS7 Kunszentmiklos 98.37 319⇓ePdiff Pdif 05 45 28.5 +0.2
GUR Goura 98.46 309 P **P** **05 45 26.0 -3.1**
GUR Goura 98.46 309 eP P 05 45 17.7 -11
BIA Bitola 98.49 313 P **P** **05 45 27.8 -1.3**
BIA Bitola 98.49 313 iP **P** **05 45 27.6 -1.5**
PKS2 Kecel 98.50 318⇓ePdiff **P** **05 45 28.7 -0.2**
FNA Florina 98.51 312 P **P** **05 45 27.2 -2.0**
KALE Kalithea 98.51 310 P **P** **05 45 27.5 -1.7**
VLX Vlachokerasia 98.56 309 eP Pdif 05 45 31.1 +1.6
MSNA Messina 98.56 248⇑iP **P** **05 45 29.5 -0.2**
MSNA AMB AMB 05 45 32.3
comp=Z,62nm,1.5s
MOL Molde 98.56 336 eP Pdif 05 45 29.2 +0.4
MOL eSKS **SKSac** **05 55 58.9 -1.7**
TRIZ Trizonia 98.57 310 P **P** **05 45 27.3 -2.1**
MORC Moravsky Berou 98.57 322 P Pdif 05 45 29.5 +0.3
MORC Moravsky Berou 98.57 322 eP **P** **05 45 29.1 0.0**
comp=Z,85nm,1.3s
MORC Moravsky Berou 98.57 322⇓iP **P** **05 45 29.2 0.0**
EVR Evrytania 98.64 310 P **P** **05 45 28.0 -1.8**
EVR Evrytania 98.64 310 eP **P** **05 45 28.0 -1.8**
LAKA Lakka 98.67 310 P **P** **05 45 28.4 -1.5**
EFP Efpalio 98.68 310 P **P** **05 45 28.9 -1.0**
PGC Sidney 98.74 39 eP **P** **05 45 29.4 -0.4**
comp=Z,2.7nm,1.4s
PKSG 98.77 319⇓ePdiff Pdif 05 45 30.2 +0.1
OSD Olympics--Snow 98.84 40 P Pdif 05 45 31.4 +0.7
NLWA Neilton Lookou 98.86 41 eP **P** **05 45 30.4 -0.1**
comp=Z,72nm,1.3s
NLWA LR LR
comp=Z,3µm,20.0s
KRLC Kraliky 98.94 322 iP **P** **05 45 30.7 -0.2**
KRLC Kraliky 98.94 322 iPDIFF **P** **05 45 30.7 -0.2**
ITM Ithomi 98.95 309 P **P** **05 45 29.3 -1.9**
ITM Ithomi 98.95 309 eP **P** **05 45 28.4 -2.8**
PKSM Moragy 98.96 318 P Pdif 05 45 31.2 +0.3
PKSM Moragy 98.96 318⇑iP **P** **05 45 30.2 -0.7**
PKSM Moragy 98.96 318⇑ePdiff **P** **05 45 30.3 -0.7**
PHP Peshkopia 98.96 313 P **P** **05 45 29.6 -1.6**
KSP Ksiaz 98.98 323⇑eP **P** **05 45 30.9 -0.1**
KSP e*PP **pP** **05 45 47.2 -2.9**
KSP Ksiaz 98.98 323 eP Pdif 05 45 31.0 0.0
KSP eSKSac **SKSac** **05 56 01.9 -1.3**
KSP LMZ LR 06 34 03.5
IVA Berane 99.04 315⇑iP **Pdif** **05 45 30.6 -0.9**
AMT Artemida-Makis 99.04 309 P **Pdif** **05 45 30.2 -1.4**
PKST T''s 99.04 319⇓ePdiff **Pdif** **05 45 31.1 -0.2**
KONO Kongsberg 99.05 333 eP **Pdif** **05 45 29.2 -1.8**
KONO AMB AMB 05 45 35.9
comp=Z,44nm,1.4s
KONO eSKS **SKSac** **05 56 01.9 -1.2**
KONO AMS AMS 06 32 21.6
comp=Z,5µm,19.3s
KONO Kongsberg 99.05 333 eP **Pdif** **05 45 29.5 -1.6**
KONO pmax pmax
comp=Z,24nm,0.9s
KONO MLR MLR
comp=Z,6µm,21.0s
KONO Kongsberg 99.05 333 eP **Pdif** **05 45 29.4 -1.6**
comp=Z,24nm,0.9s
KONO LR LR
comp=Z,6µm,21.0s
PVY Plav 99.07 314 eP **Pdif** **05 45 30.8 -0.9**
PKS9 Tamasi 99.09 319⇓ePdiff **Pdif** **05 45 31.6 +0.1**
RLS Riolos of Patr 99.10 310 P **Pdif** **05 45 31.1 -0.7**
RLS Riolos of Patr 99.10 310 eP **Pdif** **05 45 29.3 -2.5**
DPC Dobruska-Polom 99.13 323 iP **Pdif** **05 45 31.9 +0.2**
DPC e 05 45 45.3
DPC e 05 45 45.4
DPC e 05 56 02.9
DPC MLR MLR
comp=Z,3µm,19.3s
DPC Dobruska-Polom 99.13 323 iPDIFF **Pdif** **05 45 31.9 +0.2**
DPC epP pP 05 45 45.3 -5.6
DPC eSKS **SKSac** **05 56 02.9 -1.2**
DPC AMS AMS 06 33 40.0
comp=Z,3µm,19.3s
PYL PYLOS 99.16 308 P **Pdif** **05 45 30.3 -1.8**
PYL PYLOS 99.16 308 eP **Pdif** **05 45 28.4 -3.7**
RKT Rikitea 99.20 112 ePP PP 05 49 36.0 -0.1
comp=Z,938nm,33.5s
RKT eSKSac **SKSac** **05 56 07.2 +1.9**
comp=Z,2µm,28.2s
RKT eS **ScS** **05 56 56.7 -2.2**
comp=Z,2µm,27.5s
RKT Rikitea 99.20 112 ePS PS 05 58 30.5 -3.7
comp=Z,950nm,29.8s
RKT eSS SS 06 03 53.8 +4.6
comp=Z,3µm,30.2s
RKT eLQ LQ 06 13 38.4
comp=Z,7µm,34.5s
RKT eLR LR 06 17 57.5
comp=Z,6µm,33.5s,baz=278
UPC Upice 99.26 323 iP **Pdif** **05 45 32.7 +0.5**
UPC Upice 99.26 323 iPDIFF **Pdif** **05 45 32.7 +0.5**
UPC eSP **sP** **05 45 54.3 -4.6**
PLE Pljevlja 99.27 315 eP **Pdif** **05 45 31.5 -1.1**
HDW Hoodsport 99.31 40 P **Pdif** **05 45 33.4 +0.8**
VRAC Vranov 99.31 322⇓iP **Pdif** **05 45 32.7 +0.2**
VRAC Vranov 99.31 322 LR LR 06 31 14.5
comp=Z,2µm,22.0s,baz=71,slow=36
TIR Tirane 99.47 313 eP **Pdif** **05 45 32.8 -0.5**
TIR pmax pmax
comp=Z,196nm,1.4s
TIR MLR MLR
comp=Z,5µm,22.0s
TIR Tirane 99.47 313 eP **Pdif** **05 45 32.8 -0.5**
comp=Z,196nm,1.4s
TIR LR LR

comp=Z,5µm,22.0s
LKD2 Lefkada island 99.54 311 P Pdif 05 45 32.0 -1.8
KFL Anninata 99.61 310 P Pdif 05 45 33.4 -0.7
LLD Lille Linde 99.61 328 *i* P **Pdif 05 45 33.8 +0.2**
comp=Z,14nm,0.8s
LLD *i* 05 46 02.2
TTG Podgorica 99.61 314 *e*P **Pdif 05 45 32.8 -1.1**
UPM Unac-Piva 99.64 315 *e*P **Pdif 05 45 32.8 -1.5**
NKY Niksic 99.69 315 *e*P **Pdif 05 45 33.3 -1.2**
VLS Valsamata 99.74 310 P **Pdif 05 45 32.5 -2.2**
VLS Valsamata 99.74 310 *e*P **Pdif 05 45 31.1 -3.6**
ULC Ulcinj 99.75 314⇑*i*P **Pdif 05 45 33.5 -1.1**
JCW Jim Creek 99.85 39 P **Pdif 05 45 34.9 -0.1**
SOP Sopron 99.86 320⇑*e*Pdiff **Pdif 05 45 34.6 -0.3**
RUE Ruedersdorf 99.86 325 *e*Pdif **Pdif 05 45 35.6 +0.8**
comp=Z,88nm,0.8s
BUM Brajici-Budva 99.91 314⇑*i*P **Pdif 05 45 34.2 -1.2**
KEK Kerkira 99.95 312 P **Pdif 05 45 33.9 -1.6**
KEK Kerkira 99.95 312 *e*P **Pdif 05 45 32.9 -2.6**
BRY Bratogost 99.99 315 *e*P **Pdif 05 45 34.7 -1.1**
TREC Trest 100.00 322⇑*i*P **Pdif 05 45 35.7 +0.2**
TREC *e* 05 56 07.3
TREC MLR MLR
comp=Z,3µm,19.1s
TREC Trest 100.00 322 *i* PDIFF **Pdif 05 45 35.7 +0.2**
TREC *es*P sP 05 45 55.5 -6.7
TREC *e*SKS **SKSac 05 56 07.3 -1.1**
TREC AMS AMS 06 37 20.0
comp=Z,3µm,19.1s
LSZ Lusaka 100.01 255 *e*P **Pdif 05 45 35.6 -0.8**
LSZ Lusaka 100.01 255 *e*Pdif **Pdif 05 45 35.5 -0.9**
comp=Z,42nm,1.0s
LSZ PKiKP **PKiKP 05 50 05.4 +1.1**
LSZ LR LR
comp=Z,4µm,22.0s
LSZ Lusaka 100.01 255 Pdiff **Pdif 05 45 36.5 +0.1**
SNR=14
LSZ Lusaka 100.01 255 PKiKP **PKiKP 05 50 05.4 +1.1**
comp=Z,3.2nm,0.4s,baz=33,slow=3.2,SNR=6.3
PVCC Panska Ves 100.12 323 *i* P **Pdif 05 45 36.7 +0.7**
PVCC *e* 05 57 06.3
PVCC MLR MLR
comp=Z,4µm,20.8s
PVCC Panska Ves 100.12 323 *i* PDIFF **Pdif 05 45 36.7 +0.7**
PVCC *e*SDIF
PVCC AMS AMS 06 34 20.0
comp=Z,4µm,20.8s
HCY Herceg Novi 100.15 315 *e*P **Pdif 05 45 35.4 -1.0**
CONA Conrad Observa 100.22 320⇑*i*Pdiff **Pdif 05 45 36.6 0.0**
comp=Z,36nm,1.4s,SNR=11
CONA Conrad Observa 100.22 320⇑*i*P **Pdif 05 45 36.6 0.0**
comp=Z,36nm,1.4s
SLR Silverton 100.24 245 *e*P **Pdif 05 45 37.5 +0.2**
SLR AMB AMB 05 45 39.8
comp=Z,56nm,1.6s
ODD1 Odda 100.25 334 *e*P **Pdif 05 45 39.4 +2.9**
ODD1 AMB AMB 05 49 47.6
comp=Z,34nm,1.3s
ERPM east rand prop 100.28 244 *e*P **Pdif 05 45 37.1 -0.4**
ERPM AMB AMB 05 45 37.9
comp=Z,24nm,4.0s
PRU Pruhonice 100.33 323 *i* P **Pdif 05 45 37.5 +0.5**
PRU *e* 05 56 08.4
PRU *e* 05 57 07.6
PRU MLR MLR
comp=Z,4µm,19.7s
PRU Pruhonice 100.33 323 *i* PDIFF **Pdif 05 45 37.5 +0.5**
PRU *es*P sP 05 45 55.9 -7.7
PRU *e*SKS **SKSac 05 56 08.4 -1.5**
PRU *e*SDIF **Sdif 05 57 07.6 +0.2**
PRU AMS AMS 06 34 30.0
comp=Z,4µm,19.7s
PRA Prague 100.36 323 PDIFF **Pdif 05 45 37.0 -0.1**
PRA AMS AMS 06 30 30.0
BRG Berggiesshubel 100.36 324⇓*i*P **Pdif 05 45 37.5 +0.4**
comp=Z,91nm,1.1s
BRG Berggiesshubel 100.36 324 PDIF **Pdif 05 45 40.0 +2.9**
BRG *i* pP pP 05 45 59.0 +2.7
BRG *e*PP PP 05 49 32.9 -11
comp=Z,34nm,1.4s
BRG SKS **SKSac 05 56 09.0 -1.1**
BRG S **pS 05 57 31.0 -1.6**
BRG SS SS 06 04 27.0 +24
BRG
comp=N,2µm,19.1s
BRG
comp=E,5µm,20.4s
BRG
comp=Z,5µm,19.4s
BRG Berggiesshubel 100.36 324 P **Pdif 05 45 40.0 +2.9**
BRG 05 56 09.0
BRG pmax pmax
comp=Z,35nm,1.4s
BRG MLR MLR
comp=N,2µm,19.1s
BRG MLR MLR
comp=E,5µm,20.4s
BRG MLR MLR
comp=Z,5µm,19.4s
BRG Berggiesshubel 100.36 324 *e*P **Pdif 05 45 37.3 +0.2**
comp=Z,104nm,1.4s
BLS5 Blasjo 100.57 333 *e*P **Pdif 05 45 37.1 -0.8**
BLS5 AMB AMB 05 45 40.0
comp=Z,48nm,1.6s
BLS5 *e*SKS 05 56 12.4
BER Bergen 100.57 335 *e*P **Pdif 05 45 41.8 +4.1**
BER *e*SKS 05 56 11.0
BER AMS AMS 06 34 17.1
comp=Z,7µm,24.2s
ASK Askoy 100.58 335 *e*P **Pdif 05 45 40.6 +2.8**
STON Ston 100.59 315 P **Pdif 05 45 35.8 -2.4**
ARSA Arzberg 100.67 320⇑*i*Pdiff **Pdif 05 45 38.4 -0.2**
comp=Z,30nm,1.3s,SNR=18
ARSA Arzberg 100.67 320⇑*i*P **Pdif 05 45 38.4 -0.2**
comp=Z,30nm,1.3s
MUD Monsted U'grnd 100.68 330 *i* P **Pdif 05 45 38.2 -0.1**
comp=Z,14nm,0.8s
MUD
comp=Z,4µm,27.0s
CLL Collm 100.75 324 *i* P **Pdif 05 45 38.4 -0.4**
CLL *e* 05 56 10.0
CLL *e*S **Sdif 05 57 14.0 +3.2**
CLL pmax pmax
comp=Z,79nm,1.4s
CLL MLR MLR
comp=Z,5µm,20.8s
CLL Collm 100.75 324 *e*P **Pdif 05 45 38.7 -0.1**
comp=Z,56nm,1.3s
CLL Collm 100.75 324 *i* Pdif **Pdif 05 45 38.4 -0.4**
comp=Z,79nm,1.4s
CLL *es*Pdif sPdif 05 45 58.0 -7.4
CLL *i* 05 48 43.1
comp=Z,24nm,1.1s
CLL *e*PP **PP 05 49 50.0 +3.3**
comp=Z,36nm,1.0s
CLL *e*(sPP) 05 50 13.0
CLL *es*PPP 05 52 18.0
CLL *e*SKSac **SKSac 05 56 10.0 -1.9**
CLL *e*Sdif **Sdif 05 57 14.0 +3.2**
CLL *es*Sdiff **pS 05 57 37.0 +1.2**
CLL *e*(SP) 05 58 34.0
CLL *e*PPS PPS 05 59 35.0
CLL *e*PKKPbc **PKKPbc 06 01 53.0 -0.9**
CLL *e*SS **SS 06 04 06.0 -2.7**
CLL *e* 06 05 00.0
CLL *e* 06 05 48.0
CLL *e*SSS SSS 06 08 06.0
CLL *e*(PPPrev) 06 10 12.0
CLL LmV 06 36 00.0
comp=Z,5µm,20.8s
SEK Senekal 100.84 242⇑*i*P **Pdif 05 45 39.8 -0.2**
SEK AMB AMB 05 45 41.7
comp=Z,38nm,1.4s
HUMO Hull Mountain 100.92 45 *e*Pdif **Pdif 05 45 39.8 0.0**
comp=Z,21nm,1.3s
PRYS Parys 101.08 244 *e*P **Pdif 05 45 39.9 -1.1**
PRYS AMB AMB 05 45 43.4
comp=Z,44nm,1.7s
VFP Flag Point 101.09 42 P **Pdif 05 45 41.1 +0.4**
PERS Pernice 101.14 319 *i* P **Pdif 05 45 40.2 -0.5**
SOKA Soboth 101.18 319⇑*i*Pdiff **Pdif 05 45 40.4 -0.6**
comp=Z,29nm,1.0s
SOKA Soboth 101.18 319⇑*i*P **Pdif 05 45 40.4 -0.6**
comp=Z,29nm,1.0s
BSEG Bad Segeberg 101.19 327 *e*P **Pdif 05 45 40.8 +0.1**
BSEG pmax pmax
comp=Z,91µm,17.2s
BSEG Bad Segeberg 101.19 327 *e*P **Pdif 05 45 40.8 +0.1**
comp=Z,91µm,17.2s
KHC Kasperske Hory 101.22 322 *i* P **Pdif 05 45 41.0 0.0**
KHC *e* 05 56 13.0
KHC *e* 05 57 16.4
KHC MLR MLR
comp=Z,4µm,18.8s
KHC Kasperske Hory 101.22 322 *e*Pdif **Pdif 05 45 40.8 -0.3**
comp=Z,48nm,1.2s
KHC Kasperske Hory 101.22 322 *i* PDIFF **Pdif 05 45 41.0 0.0**
KHC *ep*P pP 05 45 57.5 -2.9
KHC *ex* x 05 48 55.0
KHC *e*SKS 05 56 13.0
KHC *e*SDIF **Sdif 05 57 16.4 +1.4**
KHC AMS AMS 06 40 30.0
comp=Z,4µm,18.8s
GEC2 GERESS Array S 101.25 322 *e*P **Pdif 05 45 41.4 +0.2**
GEC2 pmax pmax
comp=Z,62nm,1.3s
GEC2 GERESS Array S 101.25 322 *e*P **Pdif 05 45 41.4 +0.2**
comp=Z,62nm,1.3s
GERES GERESS Array B 101.25 322 P **Pdif 05 45 41.5 +0.3**
GERES PP **PP 05 49 49.3 -1.4**
GERES PKiKP **PKiKP 05 50 07.4 +1.8**
GERES *e* 05 53 36.4
GERES PKKPbc **PKKPbc 06 01 52.0 -0.6**
GERES P'P' 06 10 09.3
GERES GERESS Array B 101.25 322 P **Pdif 05 45 41.5 +0.3**
comp=Z,15nm,0.8s,baz=69,slow=4.4,SNR=76
GERES PP **PP 05 49 49.3 -1.4**
comp=Z,9.0nm,1.1s,baz=61,slow=8.0,SNR=2.4
GERES PKiKP **PKiKP 05 50 07.4 +1.8**
comp=Z,4.2nm,0.8s,baz=80,slow=1.3,SNR=5.4
GERES SKiKP **SKiKP 05 53 36.4 +1.6**
comp=Z,1.4nm,0.8s,baz=355,slow=2.1,SNR=4.1
GERES PKKPbc **PKKPbc 06 01 52.0 -0.6**
comp=Z,0.9nm,0.7s,baz=219,slow=1.7,SNR=6.2
GERES PKPPKP **P'P'df 06 10 09.3 -0.3**
comp=Z,0.2nm,0.5s,baz=329,slow=1.6,SNR=3.6
MOA Molln 101.26 321⇓*i*Pdiff **Pdif 05 45 41.7 +0.5**
comp=Z,70nm,1.2s,SNR=7.0
MOA Molln 101.26 321⇓*i*P **Pdif 05 45 41.7 +0.5**
comp=Z,70nm,1.2s
WTV Waterville 101.27 39 P **Pdif 05 45 41.2 0.0**
YBH Yreka Blue Hor 101.35 46 *e*Pdif **Pdif 05 45 41.8 0.0**
comp=Z,15nm,1.2s
YBH PKKPbc **PKKPbc 06 01 50.6 -1.4**
YBH Yreka Blue Hor 101.35 46 PKKPbc PKKPbc 06 01 50.6 -1.4
comp=Z,2.5nm,0.8s,baz=112,slow=5.4,SNR=2.6
TANN Tannenbergstha 101.41 324 *e*P **Pdif 05 45 42.1 +0.2**
comp=Z,42nm,1.3s
BOJS Bojanci 101.43 318 *i* P **Pdif 05 45 41.7 -0.3**
BOJS *e*PP **PP 05 49 54.4 +2.4**
BOJS *e*SKSac **SKSac 05 56 13.4 -2.0**
BOJS *e* 05 57 14.3
NKC Novy Kostel 101.49 323 *i* P **Pdif 05 45 42.6 +0.4**
NKC Novy Kostel 101.49 323 *i* PDIFF **Pdif 05 45 42.6 +0.4**
NKC *ep*P pP 05 45 57.3 -4.2
OBKA Obir 101.55 319⇑*i*Pdiff **Pdif 05 45 42.4 -0.2**
comp=Z,31nm,1.1s,SNR=13
OBKA Obir 101.55 319⇑*i*P **Pdif 05 45 42.4 -0.2**
comp=Z,31nm,1.1s
WET Wettzell 101.65 322 *e*P **Pdif 05 45 43.4 +0.5**
WET pmax pmax
comp=Z,36nm,1.1s
WET Wettzell 101.65 322 *e*P **Pdif 05 45 43.4 +0.5**
comp=Z,36nm,1.1s
SCO Scoresbysund 101.72 350 *i* P **Pdif 05 45 41.8 -0.9**
comp=Z,9.3nm,1.0s
LJU Ljubljana 101.72 319 *i* P **Pdif 05 45 43.0 -0.2**
LJU *ePP* **PKiKP 05 50 06.3 -0.1**
LJU *e*SKSac **SKSac 05 56 13.6 -3.2**
LJU *e* 05 57 17.2
MOX Moxa 101.82 324 *e*P **Pdif 05 45 43.9 +0.3**
MOX pmax pmax
comp=Z,48nm,1.2s
MOX Moxa 101.82 324 *e*P **Pdif 05 45 43.9 +0.3**
comp=Z,48nm,1.2s
MOX *ep*P pP 05 46 04.4 +1.4
MOX *e*L L 06 36 18.7
comp=Z,4µm,19.2s
SUMG Summit 101.86 356 *e*P **Pdif 05 45 43.0 -0.8**
SUMG pmax pmax
comp=Z,23nm,1.1s
SUMG Summit 101.86 356 *e*Pdif **Pdif 05 45 43.0 -0.8**
comp=Z,23nm,1.1s
SUMG Summit 101.86 356 *i* P **Pdif 05 45 44.1 +0.3**
comp=Z,11nm,1.0s
SUMG Summit 101.86 356 *i* P **PKiKP 05 50 07.3 +0.9**
SUMG Summit 101.86 356 *i* P **PKKPbc 06 01 51.5 -0.4**
NRDL Niedersach Rie 101.92 326 *e*P **Pdif 05 45 44.3 +0.4**
comp=Z,78nm,1.3s
VIPM Ingram Point 101.93 43 P **Pdif 05 45 44.6 +0.1**
VIPM Ingram Point 101.93 43 P **Pdif 05 45 44.6 +0.1**
HAWA Hanford 102.00 41 *e*Pdif **Pdif 05 45 44.7 +0.2**
comp=Z,34nm,1.7s
HAWA LR LR
comp=Z,4µm,21.0s
NVLJ Novalja 102.00 317 P **Pdif 05 45 43.2 -1.3**
CLZ Clausthal 102.04 326 *e*P **Pdif 05 45 45.1 +0.5**
CLZ pmax pmax
comp=Z,45nm,1.0s
CLZ Clausthal 102.04 326 *e*P **Pdif 05 45 45.1 +0.5**
comp=Z,45nm,1.0s
JAVS Javornik 102.08 319 *i* P **Pdif 05 45 44.1 -0.9**
MYKA Terra Mystica 102.09 320⇓*i*Pdiff **Pdif 05 45 44.3 -0.7**
comp=Z,15nm,1.2s
MYKA Terra Mystica 102.09 320⇓*i*P **Pdif 05 45 44.3 -0.7**
comp=Z,15nm,1.2s
KBA Koelnbreinsper 102.12 320⇑*i*P **Pdif 05 45 44.4 -0.8**
KBA pmax pmax
comp=Z,22nm,0.9s
KBA Koelnbreinsper 102.12 320⇑*i*Pdiff **Pdif 05 45 44.4 -0.8**
comp=Z,22nm,0.9s,SNR=9.9
KBA Koelnbreinsper 102.12 320⇑*i*P **Pdif 05 45 44.4 -0.8**
comp=Z,22nm,0.9s
VOY Vojsko 102.14 319 *e*P **Pdif 05 45 43.9 -1.4**
VOY *e* 05 45 53.4
RJOB Jochberg 102.22 321 *e*P **Pdif 05 45 45.4 -0.1**
comp=Z,24nm,1.2s
TIP Timpagrande 102.36 312 *e*Pdif **Pdif 05 45 45.8 -0.6**
comp=Z,57nm,1.3s
TIP LR LR
comp=Z,5µm,22.0s
GRF Grafenberg Arr 102.43 323 *e*P **Pdif 05 45 46.5 +0.1**
GRF pmax pmax
comp=Z,61nm,1.6s
GRF Grafenberg Arr 102.43 323 *e*P **Pdif 05 45 46.5 +0.1**
comp=Z,61nm,1.6s
GRF *ep*P 05 46 07.0
GRF *e*L L 06 36 45.4
comp=Z,5µm,21.8s
LBTB Lobatse 102.66 246 *e*P **Pdif 05 45 47.3 -0.8**
LBTB AMB AMB 05 45 51.8
comp=Z,18nm,4.6s
LBTB Lobatse 102.66 246 *e*Pdif **Pdif 05 45 47.5 -0.6**
comp=Z,12nm,0.9s
LBTB PKiKP **PKiKP 05 50 09.7 +0.9**
LBTB Lobatse 102.66 246 PKiKP **PKiKP 05 50 09.7 +0.9**
comp=Z,6.9nm,0.7s,baz=302,slow=0.9,SNR=5.7
UBBA Unterbreizbach 102.68 325 *e*P **Pdif 05 45 47.7 +0.4**
comp=Z,54nm,1.6s
ABTA Abfaltersbach 102.77 320⇓*i*Pdiff **Pdif 05 45 46.8 -1.2**
comp=Z,38nm,1.5s,SNR=14
ABTA Abfaltersbach 102.77 320⇓*i*P **Pdif 05 45 46.8 -1.2**
comp=Z,38nm,1.5s
CUC Castrocucco 102.81 313 *e*Pdif **Pdif 05 45 47.4 -0.9**
comp=Z,12nm,1.0s
CUC LR LR
comp=Z,3µm,22.0s
NEW Newport 102.82 38 *e*Pdif **Pdif 05 45 47.2 -1.0**
comp=Z,21nm,1.2s
NEW PKKPbc **PKKPbc 06 01 44.4 -3.5**
NEW LR LR
comp=Z,4µm,22.0s
NEW Newport 102.82 38⇓PKiKP **Pdif 05 45 46.7 -1.5**
baz=103
NEW Newport 102.82 38 PKKPbc PKKPbc 06 01 44.4 -3.5
comp=Z,1.6nm,0.8s,baz=180,slow=1.0,SNR=3.0
BOSA Boshof 102.93 242 *e*P **Pdif 05 45 47.8 -1.4**
BOSA AMB AMB 05 45 51.7
comp=Z,29nm,3.0s
BOSA Boshof 102.93 242 *e*Pdif **Pdif 05 45 48.6 -0.6**
comp=Z,8.1nm,0.9s
BOSA PKKPbc **PKKPbc 06 01 48.0 +1.0**
BOSA Boshof 102.93 242 Pdiff **Pdif 05 45 48.7 -0.4**
comp=Z,5.6nm,0.9s,baz=105,slow=8.5,SNR=6.2
BOSA PKKPbc **PKKPbc 06 01 48.0 +1.0**
comp=Z,1.8nm,0.5s,baz=303,slow=4.3,SNR=4.6
MOD Modoc 103.01 45 *e*Pdif **Pdif 05 45 49.1 -0.2**
comp=Z,13nm,1.1s
WTTA Wattenberg 103.13 321⇑*i*P **Pdif 05 45 49.6 -0.2**
WTTA pmax pmax
comp=Z,38nm,0.8s
WTTA Wattenberg 103.13 321⇑*i*Pdiff **Pdif 05 45 49.6 -0.2**
comp=Z,38nm,0.8s,SNR=16
WTTA Wattenberg 103.13 321⇑*i*P **Pdif 05 45 49.6 -0.2**
comp=Z,38nm,0.8s
CEL Celeste 103.28 311 *e*Pdif **Pdif 05 45 50.6 +0.1**
comp=Z,71nm,1.2s
CEL LR LR
comp=Z,3µm,22.0s
CEL Celeste 103.28 311 *e*P **Pdif 05 45 51.1 +0.7**
IBBN Ibbenburen 103.30 327 *e*P **Pdif 05 45 50.4 +0.3**
comp=Z,103nm,1.3s
MOTA Moosalm 103.43 321⇑*i*P **Pdif 05 45 50.3 -0.8**
MOTA pmax pmax
comp=Z,26nm,0.8s
MOTA Moosalm 103.43 321⇑*i*Pdiff **Pdif 05 45 50.3 -0.8**
comp=Z,26nm,0.8s,SNR=16
MOTA Moosalm 103.43 321⇑*i*P **Pdif 05 45 50.3 -0.8**
comp=Z,26nm,0.8s
A12A Yaak River Ran 103.45 37⇓PKiKP **Pdif 05 45 49.3 -1.7**
baz=103
C11A Tepee Creek (N 103.53 38⇑PKiKP **Pdif 05 45 50.1 -1.2**
baz=103
RETA Reutte 103.59 321⇑*i*Pdiff **Pdif 05 45 51.3 -0.4**
comp=Z,15nm,1.4s,SNR=8.0
RETA Reutte 103.59 321⇑*i*P **Pdif 05 45 51.3 -0.4**
comp=Z,15nm,1.4s
B12A Libby 103.68 38⇑PKiKP **Pdif 05 45 50.9 -1.0**
baz=104
AQU L'Aquila 103.76 316 *e*Pdif **Pdif 05 45 53.0 +0.5**
comp=Z,20nm,0.8s
AQU LR LR
comp=Z,4µm,22.0s
FETA Feichten 103.80 321⇓*i*Pdiff **Pdif 05 45 52.6 -0.1**
comp=Z,31nm,1.0s,SNR=20
FETA Feichten 103.80 321⇓*i*P **Pdif 05 45 52.6 -0.1**
comp=Z,31nm,1.0s
TNS Taunus Mts 103.84 325 *e*P **Pdif 05 45 53.2 +0.6**
TNS pmax pmax
comp=Z,47nm,1.4s
TNS Taunus Mts 103.84 325 *e*P **Pdif 05 45 53.2 +0.6**
comp=Z,47nm,1.4s
BUG Bochum--Univer 103.96 326 *e*P **Pdif 05 45 53.1 +0.1**
comp=Z,38nm,1.1s
BMO Blue Mountains 104.02 41 *e*P **Pdif 05 45 53.1 -0.6**
BMO pmax pmax
comp=Z,8.0nm,1.2s
BMO MLR MLR
comp=Z,2µm,22.0s
BMO Blue Mountains 104.02 41 *e*Pdif **Pdif 05 45 53.1 -0.6**
comp=Z,7.6nm,1.2s
BMO LR LR
comp=Z,2µm,22.0s
STU Stuttgart 104.02 323 *e*P **Pdif 05 45 53.7 +0.3**
STU pmax pmax
comp=Z,8.0nm,0.6s
STU Stuttgart 104.02 323 *e*Pdif **Pdif 05 45 53.7 +0.3**
comp=Z,7.6nm,0.6s
A13A Flathead Natio 104.19 37⇓PKiKP **Pdif 05 45 52.6 -1.7**
baz=104
CMB Columbia Colle 104.19 49 *e*P **Pdif 05 45 54.3 -0.2**
CMB pmax pmax
comp=Z,14nm,1.2s
CMB Columbia Colle 104.19 49 *e*Pdif **Pdif 05 45 54.3 -0.2**
comp=Z,14nm,1.2s
DAVA Damuels 104.22 321⇑*i*Pdiff **Pdif 05 45 54.4 -0.2**
comp=Z,17nm,1.0s
DAVA Damuels 104.22 321⇑*i*P **Pdif 05 45 54.4 -0.2**
comp=Z,17nm,1.0s
D12A Red Ives Fores 104.40 39⇓PKiKP **Pdif 05 45 53.7 -1.6**
baz=104
BSMT Bassoo Peak 104.42 38 *e*Pdif **Pdif 05 45 55.7 +0.2**
comp=Z,30nm,1.3s
WALA Waterton Lakes 104.43 36 *e*Pdif **Pdif 05 45 55.5 +0.1**
comp=Z,1.1nm,1.3s
SPAK Spaichingen-Ko 104.55 322 *e*P **Pdif 05 45 55.9 0.0**
BLMT Blacktail Moun 104.61 38 *e*Pdif **Pdif 05 45 57.1 +0.7**
comp=Z,16nm,1.1s
C13A Hot Springs 104.62 38⇓PKiKP **Pdif 05 45 54.8 -1.5**
baz=104
BFO Black Forest 104.73 323 *e*P **Pdif 05 45 56.1 -0.6**
BFO pmax pmax
comp=Z,28nm,1.6s
BFO MLR MLR
comp=Z,5µm,20.0s
BFO Black Forest 104.73 323 *e*P **Pdif 05 45 56.0 -0.6**
comp=Z,14nm,1.3s
BFO Black Forest 104.73 323 *e*Pdif **Pdif 05 45 56.1 -0.6**
comp=Z,28nm,1.6s
BFO LR LR
comp=Z,5µm,20.0s
LANF Langenberg 104.76 324 *e*P **Pdif 05 45 57.6 +0.9**
LANF Langenberg 104.76 324 *e*P **Pdif 05 45 57.6 +0.9**
LANF Langenberg 104.76 324 *e*P **Pdif 05 45 57.6 +0.9**
A14A Double T Ranch 104.76 36⇓PKiKP **Pdif 05 45 55.8 -1.1**
baz=105
JTMT Jette 104.78 38 *e*Pdif **Pdif 05 45 56.5 -0.5**
comp=Z,12nm,1.4s
TUE Stuetta 104.89 321 *e*Pdif **Pdif 05 45 57.8 +0.2**
comp=Z,94nm,1.8s
TUE LR LR
comp=Z,4µm,22.0s
YBMT Yellow Bay 104.89 38 *e*Pdif **Pdif 05 45 57.5 0.0**
comp=Z,16nm,1.4s
D13A Huson 104.94 38⇓PKiKP **Pdif 05 45 56.3 -1.3**
baz=105
F12A Elk City 104.99 40⇑PKiKP **Pdif 05 45 56.3 -1.7**
baz=105
WDD Wield Dalam 105.05 309 PFAKE 05 50 20.0
WDD LR LR
comp=Z,1µm,22.0s
SWMT Swartz Lake 105.05 38 *e*Pdif **Pdif 05 45 57.6 -0.6**
comp=Z,13nm,1.5s
C14A Swan Lake 105.09 38⇑PKiKP **Pdif 05 45 56.5 -1.9**
baz=105
B14A Marquette Ranc 105.12 37 Pdiff **Pdif 05 45 59.0 +0.5**
baz=105,SNR=35
FELD Feldberg im Sc 105.12 322 *e*P **Pdif 05 45 59.1 +0.6**
VLC Villacollemand 105.14 318 PFAKE 05 50 20.0
VLC LR LR
comp=Z,3µm,21.0s
A15A Johnson Ranch, 105.17 36 Pdiff **Pdif 05 45 58.6 -0.1**
baz=105,SNR=17
G12A Big Creek, Yel 105.20 41⇑Pdiff **Pdif 05 45 58.3 -0.7**
baz=105
G12A ⇑PKiKP **PKiKP 05 50 12.0 -1.0**
baz=105
G12A ⇑PKiKP **PKiKP 05 50 12.0 -1.0**
baz=105
G12A ⇑PKiKP **PKiKP 05 50 12.0 -1.0**
baz=105
CDF Champ du Feu 105.32 323 *e*P **Pdif 05 45 59.0 -0.4**
comp=Z,108nm,1.6s
CDF Champ du Feu 105.32 323 *e*P **Pdif 05 45 59.0 -0.4**
CDF pmax pmax
comp=Z,108nm,1.6s
CDF Champ du Feu 105.32 323 *e*P **Pdif 05 45 59.0 -0.4**
comp=Z,108nm,1.6s
MSO Missoula 105.38 39 *e*PP PP 05 50 21.7 +0.2
MSO *e*PKPdf **PP 05 50 22.0 +0.5**
MSO LR LR
comp=Z,2µm,22.0s
MSO Missoula 105.38 39⇓Pdiff **Pdif 05 45 59.3 -0.4**
baz=105
E13A Victor 105.39 39⇓Pdiff **Pdif 05 45 59.3 -0.4**
baz=105
WLF Walferdange 105.41 325 P **Pdif 05 46 00.8 +1.2**
comp=Z,31nm,1.4s
WLF Walferdange 105.41 325 *e*P **Pdif 05 46 00.6 +1.0**
WLF pmax pmax
comp=Z,69nm,1.4s
WLF MLR MLR
comp=Z,6µm,19.0s
WLF Walferdange 105.41 325 *e*P **Pdif 05 46 00.5 +1.0**
comp=Z,58nm,1.4s
WLF Walferdange 105.41 325 *e*Pdif **Pdif 05 46 00.6 +1.0**
comp=Z,69nm,1.4s

WLF LR LR
comp=Z,6µm,19.0s
SLMT Seeley Lake 105.47 38 *e*Pdif **Pdif 05 45 59.2 -0.9**
comp=Z,22nm,1.4s
ECH Echery 105.48 323 *e*P **Pdif 05 45 59.0 -1.0**
ECH pmax pmax
comp=Z,12nm,1.3s
ECH MLR MLR
comp=Z,4µm,20.0s
ECH Echery 105.48 323 *e*Pdif **Pdif 05 45 59.0 -1.0**
comp=Z,12nm,1.3s
ECH LR LR
comp=Z,4µm,20.0s
ECH Echery 105.48 323 *e*P **Pdif 05 46 00.0 0.0**
BCLA Clavier 105.54 326 P **Pdif 05 46 00.7 +0.6**
comp=Z,25nm,2.4s
D14A Greenough 105.54 38 ⇑Pdiff **Pdif 05 45 59.3 -1.1**
baz=105
MFID Camas Ranch 105.55 42 *e*Pdif **Pdif 05 46 00.4 -0.1**
comp=Z,13nm,1.2s
MFID Camas Ranch 105.55 42 ⇓Pdiff **Pdif 05 45 58.9 -1.6**
baz=106
B15A Bradely Ranch, 105.56 37 ⇑Pdiff **Pdif 05 45 59.6 -0.8**
baz=106,SNR=9.6
F13A Darby 105.57 40 ⇑Pdiff **Pdif 05 45 59.6 -1.0**
baz=106
BBS Basel-Blauen 105.60 322 *e*P **Pdif 05 46 00.5 -0.1**
BBS Basel-Blauen 105.60 322 *e*P **Pdif 05 46 00.5 -0.1**
NVAR Mina Array Bea 105.61 48 Pdif **Pdif 05 46 01.6 +0.6**
NVAR PKiKP **PKiKP 05 50 14.6 +0.6**
NVAR PKKPbc **PKKPbc 06 01 39.9 +0.5**
NVAR PKKPab **PKKPab 06 01 56.4 -0.1**
NVAR Mina Array Bea 105.61 48 Pdiff **Pdif 05 46 01.6 +0.6**
comp=Z,4.1nm,0.9s,baz=274,slow=5.2,SNR=16
NVAR PKiKP **PKiKP 05 50 14.6 +0.6**
comp=Z,3.5nm,0.8s,baz=300,slow=2.0,SNR=5.1
NVAR PKKPbc **PKKPbc 06 01 39.9 +0.5**
comp=Z,4.8nm,0.7s,baz=140,slow=4.2,SNR=21
NVAR PKKPab **PKKPab 06 01 56.4 -0.1**
comp=Z,8.7nm,0.8s,baz=129,slow=5.2,SNR=12
BMN Battle Mountai 105.70 46 PFAKE 05 50 30.0
BMN LR LR
comp=Z,3µm,21.0s
H12A Diamond D Ranc 105.74 41 ⇓Pdiff **Pdif 05 46 00.0 -1.4**
baz=106
CHMT Chamberlain Mo 105.77 38 *e*Pdif **Pdif 05 46 00.5 -1.0**
comp=Z,9.3nm,1.5s
C15A Salmond Ranch, 105.78 37 ⇓Pdiff **Pdif 05 46 00.4 -1.1**
baz=106,SNR=14
E14A Clinton 105.83 39 ⇑Pdiff **Pdif 05 46 00.6 -1.1**
baz=106
A16A West Butte Ran 105.84 36 ⇓Pdiff **Pdif 05 45 59.6 -2.1**
baz=106,SNR=8.3
HINF Hinteralfeld 105.84 323 *e*P **Pdif 05 46 00.9 -0.7**
comp=Z,48nm,1.5s
HINF Hinteralfeld 105.84 323 *e*P **Pdif 05 46 00.9 -0.7**
HINF pmax pmax
comp=Z,48nm,1.5s
HINF Hinteralfeld 105.84 323 *e*P **Pdif 05 46 00.9 -0.7**
comp=Z,48nm,1.5s
I12A Atlanta 105.86 42 ⇑Pdiff **Pdif 05 46 00.6 -1.4**
baz=106
G13A Cobalt 105.92 40 ⇑Pdiff **Pdif 05 46 00.7 -1.5**
baz=106
GIVF Givet 105.96 326 *e*P **Pdif 05 46 01.8 -0.2**
comp=Z,175nm,1.9s
GIVF Givet 105.96 326 *e*P **Pdif 05 46 01.8 -0.2**
GIVF pmax pmax
comp=Z,175nm,1.9s
GIVF Givet 105.96 326 *e*P **Pdif 05 46 01.8 -0.2**
comp=Z,175nm,1.9s
B16A M & M Farms, S 106.03 36 ⇑Pdiff **Pdif 05 46 01.2 -1.3**
baz=106
HAU Haudompre 106.06 323 *e*P **Pdif 05 46 02.1 -0.5**
HAU Haudompre 106.06 323 *e*P **Pdif 05 46 02.1 -0.5**
HAU Haudompre 106.06 323 *e*P **Pdif 05 46 02.1 -0.5**
SNF Seneffe 106.06 326 P **Pdif 05 46 02.6 +0.2**
comp=Z,12nm,1.6s
LOMF Lomont 106.07 322 *e*P **Pdif 05 46 02.0 -0.7**
LOMF Lomont 106.07 322 *e*P **Pdif 05 46 02.0 -0.7**
LOMF Lomont 106.07 322 *e*P **Pdif 05 46 02.0 -0.7**
DOU Dourbes 106.09 326 P **Pdif 05 46 03.2 +0.6**
H13A Challis 106.13 41 ⇓Pdiff **Pdif 05 46 01.2 -1.9**
baz=106,SNR=11
D15A Lincoln 106.16 38 ⇑Pdiff **Pdif 05 46 01.9 -1.3**
baz=106
D15A ⇓PKiKP **PKiKP 05 50 13.2 -1.5**
baz=106
D15A ⇓PKiKP **PKiKP 05 50 13.2 -1.5**
baz=106
D15A ⇓PKiKP **PKiKP 05 50 13.2 -1.5**
baz=106
PAGF Fort de Pagny 106.18 324 *e*P **Pdif 05 46 02.9 -0.1**
comp=Z,13nm,1.2s
PAGF Fort de Pagny 106.18 324 *e*P **Pdif 05 46 02.9 -0.1**
comp=Z,13nm,1.3s
C16A Fuhringer Ranc 106.29 37 ⇓Pdiff **Pdif 05 46 03.1 -0.6**
baz=106,SNR=9.9
BAIF Baives 106.33 326 *e*P **Pdif 05 46 03.5 -0.1**
comp=Z,96nm,1.8s
BAIF Baives 106.33 326 *e*P **Pdif 05 46 03.5 -0.1**
BAIF pmax pmax
comp=Z,96nm,1.8s
BAIF Baives 106.33 326 *e*P **Pdif 05 46 03.5 -0.1**
comp=Z,96nm,1.8s
E15A Deer Lodge 106.36 39 ⇑Pdiff **Pdif 05 46 03.3 -0.8**
baz=106,SNR=8.9
A17A Triple J Farms 106.37 36 ⇓Pdiff **Pdif 05 46 03.8 -0.2**
baz=106,SNR=7.3
A17A ⇑PKiKP **PKiKP 05 50 13.8 -1.1**
baz=106
A17A ⇑PKiKP **PKiKP 05 50 13.8 -1.1**
baz=106
A17A ⇑PKiKP **PKiKP 05 50 13.8 -1.1**
baz=106
HLID Hailey 106.43 42 *e*Pdif **Pdif 05 46 04.4 -0.1**
comp=Z,14nm,1.3s
HLID LR LR
comp=Z,4µm,21.0s
HLID Hailey 106.43 42 ⇑Pdiff **Pdif 05 46 04.2 -0.3**
baz=106,SNR=12
BORG Borgarnes 106.47 346 PFAKE 05 50 30.0
BORG LR LR
comp=Z,7µm,20.0s
I13A Wildhorse Cree 106.48 41 ⇓Pdiff **Pdif 05 46 03.3 -1.5**
baz=106,SNR=10.0
TPH Tonopah 106.53 48 PFAKE 05 50 30.0
TPH LR LR
comp=Z,4µm,22.0s
SUR Sutherland 106.58 238 PFAKE 05 50 30.0
SUR LR LR
comp=Z,4µm,21.0s
MEZF Maizieres J'vi 106.60 324 *e*P **Pdif 05 46 05.2 +0.3**
comp=Z,47nm,1.3s
MEZF Maizieres J'vi 106.60 324 *e*P **Pdif 05 46 05.2 +0.3**
comp=Z,47nm,1.3s
B17A L&Q Farms, Che 106.62 36 ⇓Pdiff **Pdif 05 46 04.9 -0.2**
baz=106,SNR=12
J13A Cove Ranch, Pi 106.66 42 ⇓Pdiff **Pdif 05 46 04.2 -1.3**
baz=107,SNR=11
PGF Pioggiola 106.71 317 *e*P **Pdif 05 46 05.3 -0.4**
comp=Z,44nm,1.1s
PGF Pioggiola 106.71 317 *e*P **Pdif 05 46 05.3 -0.4**
PGF pmax pmax
comp=Z,44nm,1.1s
PGF Pioggiola 106.71 317 *e*P **Pdif 05 46 05.3 -0.4**
comp=Z,44nm,1.1s
SNAA Sanae 106.71 195 *e*P **Pdif 05 46 08.2 +3.3**
SNAA Sanae 106.71 195 *e*PKKP 06 01 35.2
SNAA Sanae 106.71 195 *e*P **Pdif 05 46 10.3 +5.3**
SNAA Sanae 106.71 195 *e*Pdif **Pdif 05 46 06.7 +1.8**
comp=Z,27nm,1.6s
SNAA PP **PP 05 50 30.2 -0.5**
SNAA PKKPbc **PKKPbc 06 01 34.0 -3.0**
SNAA PKKPab **PKKPdf 06 01 49.1 +0.5**
SNAA Sanae 106.71 195 Pdiff **Pdif 05 46 07.3 +2.4**
comp=Z,1.5nm,0.9s,baz=150,slow=6.1,SNR=4.8
SNAA PP **PP 05 50 30.2 -0.5**
comp=Z,28nm,1.2s,baz=113,slow=8.5,SNR=10.0
SNAA PKKPbc **PKKPbc 06 01 34.0 -3.0**
comp=Z,3.3nm,0.9s,baz=28,slow=0.7,SNR=14
SNAA PKKPab **PKKPdf 06 01 49.1 +0.5**
comp=Z,4.9nm,1.1s,baz=346,slow=4.2,SNR=5.1
F15A Butte 106.71 39 ⇓Pdiff **Pdif 05 46 04.0 -1.7**
baz=107
LRM Limekiln Ridge 106.74 39 *e*Pdif **Pdif 05 46 04.8 -1.2**
comp=Z,60nm,1.4s
SFTF Sexfontaines 106.75 324 *e*P **Pdif 05 46 05.3 -0.3**
comp=Z,19nm,0.8s
SFTF Sexfontaines 106.75 324 *e*P **Pdif 05 46 05.3 -0.3**
comp=Z,19nm,0.8s
D16A Dana Ranch, Ca 106.76 38 ⇑Pdiff **Pdif 05 46 04.5 -1.3**
baz=107,SNR=8.2
CABF La Chapelle 106.85 322 *e*P **Pdif 05 46 04.0 -2.2**
comp=Z,75nm,1.6s
CABF La Chapelle 106.85 322 *e*P **Pdif 05 46 04.0 -2.2**
CABF pmax pmax
comp=Z,75nm,1.6s
CABF La Chapelle 106.85 322 *e*P **Pdif 05 46 04.0 -2.2**
comp=Z,75nm,1.6s
A18A Metzger Ranch, 106.87 35 ⇑Pdiff **Pdif 05 46 04.8 -1.4**
baz=107,SNR=8.5
E16A East Helena 106.91 38 ⇑Pdiff **Pdif 05 46 05.8 -0.7**
baz=107,SNR=10
LPG La Plagne 106.94 321 *e*P **Pdif 05 46 06.8 -0.1**
comp=Z,43nm,1.0s
LPG La Plagne 106.94 321 *e*P **Pdif 05 46 06.8 -0.1**
LPG pmax pmax
comp=Z,43nm,1.0s
LPG La Plagne 106.94 321 *e*P **Pdif 05 46 06.8 -0.1**
comp=Z,43nm,1.0s
LPL La Plagne 106.94 321 *e*P **Pdif 05 46 06.7 -0.1**
comp=Z,22nm,0.7s
LPL La Plagne 106.94 321 *e*P **Pdif 05 46 06.7 -0.1**
LPL pmax pmax
comp=Z,22nm,0.7s
LPL La Plagne 106.94 321 *e*P **Pdif 05 46 06.7 -0.1**
comp=Z,22nm,0.7s
C17A Wharram Farm, 106.95 37 ⇓Pdiff **Pdif 05 46 04.8 -1.8**
baz=107
ELK Elko 106.98 45 *e*Pdif **Pdif 05 46 07.6 +0.5**
G15A Dillon 107.01 40 ⇑Pdiff **Pdif 05 46 06.1 -1.0**
baz=107,SNR=5.7
MPMC Manual Prospec 107.02 50 ⇓Pdiff **Pdif 05 46 05.4 -1.9**
baz=107
SAOF Saorge 107.08 319 *e*P **Pdif 05 46 05.9 -1.3**
SAOF Saorge 107.08 319 *e*P **Pdif 05 46 05.9 -1.3**
SAOF Saorge 107.08 319 *e*P **Pdif 05 46 05.9 -1.3**
J14A Carey 107.13 42 ⇓Pdiff **Pdif 05 46 05.9 -1.6**
baz=107
H15A Lima 107.15 40 ⇑Pdiff **Pdif 05 46 06.1 -1.6**
baz=107
AUTN L'Aution 107.16 319 *e*P **Pdif 05 46 06.9 -0.9**
AUTN L'Aution 107.16 319 *e*P **Pdif 05 46 06.9 -0.9**
AUTN L'Aution 107.16 319 *e*P **Pdif 05 46 06.9 -0.9**
EKA Eskdalemuir Ar 107.16 333 Pdif **Pdif 05 46 07.3 +0.1**
EKA PP **PP 05 50 35.5 +1.4**
EKA Eskdalemuir Ar 107.16 333 Pdiff **Pdif 05 46 07.3 +0.1**
comp=Z,1.5nm,0.5s,baz=97,slow=8.7,SNR=11
EKA PP **PP 05 50 35.5 +1.4**
comp=Z,12nm,0.8s,baz=60,slow=7.7,SNR=4.6
B18A Beardsley Farm 107.17 36 ⇓Pdiff **Pdif 05 46 06.4 -1.1**
baz=107,SNR=7.6
B18A ⇑PKiKP **PKiKP 05 50 15.3 -1.1**
baz=107
B18A ⇑PKiKP **PKiKP 05 50 15.3 -1.1**
baz=107
B18A ⇑PKiKP **PKiKP 05 50 15.3 -1.1**
baz=107
BNI Bardonecchia 107.18 320 *e*P **Pdif 05 46 07.0 -0.8**
BNI *e* 05 50 33.5
BNI pmax pmax
comp=Z,11nm,1.0s
BNI MLR MLR
comp=Z,5µm,20.0s
BNI Bardonecchia 107.18 320 *e*Pdif **Pdif 05 46 07.0 -0.8**
comp=Z,12nm,1.0s
BNI *e*PP **PP 05 50 33.5 -1.4**
BNI LR LR
comp=Z,5µm,20.0s
ESK Eskdalemuir 107.19 333 PFAKE 05 50 30.0
ESK LR LR
comp=Z,7µm,22.0s
SBF Sospel 107.21 319 *e*P **Pdif 05 46 07.0 -0.8**
comp=Z,21nm,0.9s
SBF Sospel 107.21 319 *e*P **Pdif 05 46 07.0 -0.8**
SBF pmax pmax
comp=Z,21nm,0.9s
SBF Sospel 107.21 319 *e*P **Pdif 05 46 07.0 -0.8**
comp=Z,21nm,0.9s
D17A Six Diamond Ra 107.22 37 ⇓Pdiff **Pdif 05 46 06.0 -1.9**
baz=107,SNR=8.0
MBDF Montbardon 107.26 320 *e*P **Pdif 05 46 07.1 -1.1**
MBDF Montbardon 107.26 320 *e*P **Pdif 05 46 07.1 -1.1**
MBDF Montbardon 107.26 320 *e*P **Pdif 05 46 07.1 -1.1**
TOUF Mont Tournerai 107.26 319 *e*P **Pdif 05 46 05.9 -2.3**
TOUF Mont Tournerai 107.26 319 *e*P **Pdif 05 46 05.9 -2.3**
TOUF Mont Tournerai 107.26 319 *e*P **Pdif 05 46 05.9 -2.3**
F16A Kennard Place, 107.28 39 ⇑PKiKP **PKiKP 05 50 15.7 -1.1**
baz=107
BOZ Bozeman (W) 107.34 39 *e*P **Pdif 05 46 09.0 +0.5**
BOZ pmax pmax
comp=Z,7.0nm,1.6s
BOZ MLR MLR
comp=Z,2µm,22.0s
BOZ Bozeman (W) 107.34 39 *e*Pdif **Pdif 05 46 09.0 +0.5**
comp=Z,7.1nm,1.6s
BOZ *e*PKPdf **PKiKP 05 50 17.0 +0.1**
BOZ LR LR
comp=Z,2µm,22.0s
BOZ Bozeman (W) 107.34 39 ⇓Pdiff **Pdif 05 46 07.6 -0.9**
baz=107
BOZ ⇓PKiKP **PKiKP 05 50 15.9 -1.0**
baz=107
BOZ ⇓PKiKP **PKiKP 05 50 15.9 -1.0**
baz=107
BOZ ⇓PKiKP **PKiKP 05 50 15.9 -1.0**
baz=107
BOZ ⇓PKiKP **PKiKP 05 50 15.9 -1.0**
baz=107
BOZ ⇓PKiKP **PKiKP 05 50 15.9 -1.0**
baz=107
BOZ ⇓PKiKP **PKiKP 05 50 15.9 -1.0**
baz=107
EGMT Eagleton 107.36 36 *e*PKPdf **PKiKP 05 50 17.9 +1.1**
EGMT LR LR
comp=Z,2µm,21.0s
EGMT Eagleton 107.36 36 ⇑Pdiff **Pdif 05 46 07.8 -0.7**
baz=107
E17A Martinsdale 107.44 38 ⇓Pdiff **Pdif 05 46 08.1 -0.8**
baz=107,SNR=7.4
A19A Klindworth Far 107.50 35 ⇓Pdiff **Pdif 05 46 07.0 -2.0**
baz=107
VSL Villasalto 107.64 314 *e*Pdif **Pdif 05 46 09.3 -0.4**
comp=Z,19nm,1.0s
VSL *e*PKPdf **PKiKP 05 50 12.4 -5.1**
VSL LR LR
comp=Z,2µm,22.0s
R11A Troy Canyon, C 107.64 47 ⇓Pdiff **Pdif 05 46 07.7 -2.3**
baz=108
K14A Jones Ranch, D 107.68 42 ⇓Pdiff **Pdif 05 46 08.6 -1.5**
baz=108,SNR=8.2
ORIF Oris-en-Rattie 107.75 320 *e*P **Pdif 05 46 10.0 -0.2**
comp=Z,37nm,1.2s
ORIF Oris-en-Rattie 107.75 320 *e*P **Pdif 05 46 10.0 -0.2**
ORIF pmax pmax
comp=Z,37nm,1.2s
ORIF Oris-en-Rattie 107.75 320 *e*P **Pdif 05 46 10.0 -0.2**
comp=Z,37nm,1.2s
FFC Flin Flon 107.75 27 *e*P **Pdif 05 46 08.4 -1.5**
FFC pmax pmax
comp=Z,15nm,1.4s
FFC MLR MLR
comp=Z,5µm,22.0s
FFC Flin Flon 107.75 27 *e*Pdif **Pdif 05 46 08.4 -1.5**
comp=Z,15nm,1.4s
FFC LR LR
comp=Z,5µm,22.0s
J15A Blackfoot 107.81 41 ⇓Pdiff **Pdif 05 46 10.1 -0.5**
baz=108,SNR=6.5
F17A Fitzpatrick Pl 107.82 38 ⇓Pdiff **Pdif 05 46 08.5 -2.1**
baz=108
L14A Malta 107.85 43 ⇓Pdiff **Pdif 05 46 08.8 -2.0**
baz=108
FRF La Foret Royal 107.85 319 *e*P **Pdif 05 46 10.1 -0.5**
comp=Z,57nm,1.5s
FRF La Foret Royal 107.85 319 *e*P **Pdif 05 46 10.1 -0.5**
FRF pmax pmax
comp=Z,57nm,1.5s
FRF La Foret Royal 107.85 319 *e*P **Pdif 05 46 10.1 -0.5**
comp=Z,57nm,1.5s
LOR Lormes 107.89 323 *e*P **Pdif 05 46 10.3 -0.4**
LOR Lormes 107.89 323 *e*P **Pdif 05 46 10.3 -0.4**
A20A Cobblestone Ra 107.99 35 ⇑Pdiff **Pdif 05 46 10.2 -1.0**
baz=108
SFJD Kangerlussuaq 108.00 359 PFAKE 05 50 30.0
SFJD LR LR
comp=Z,4µm,21.0s
H16A Russell Place, 108.00 40 ⇓Pdiff **Pdif 05 46 10.5 -1.0**
baz=108
LMR La Mourre 108.04 319 *e*P **Pdif 05 46 10.9 -0.5**
comp=Z,45nm,1.3s
LMR La Mourre 108.04 319 *e*P **Pdif 05 46 10.9 -0.5**
LMR pmax pmax
comp=Z,45nm,1.3s
LMR La Mourre 108.04 319 *e*P **Pdif 05 46 10.9 -0.5**
comp=Z,45nm,1.3s
K15A Arbon 108.05 42 ⇑PKiKP **PKiKP 05 50 16.9 -1.5**
baz=108
B20A Solberg Farm, 108.16 35 ⇑Pdiff **Pdif 05 46 11.0 -0.9**
baz=108
SSF Saint Saulge 108.20 323 *e*P **Pdif 05 46 11.9 -0.2**
comp=Z,18nm,1.2s
SSF Saint Saulge 108.20 323 *e*P **Pdif 05 46 11.9 -0.2**
SSF pmax pmax
comp=Z,18nm,1.2s
SSF Saint Saulge 108.20 323 *e*P **Pdif 05 46 11.9 -0.2**
comp=Z,18nm,1.2s
SMF Signal de Mont 108.21 323 *e*P **Pdif 05 46 11.7 -0.4**
comp=Z,53nm,1.4s
SMF Signal de Mont 108.21 323 *e*P **Pdif 05 46 11.7 -0.4**
SMF pmax pmax
comp=Z,53nm,1.4s
SMF Signal de Mont 108.21 323 *e*P **Pdif 05 46 11.7 -0.4**
comp=Z,53nm,1.4s
HVU Hansel Valley 108.27 43 *e*PKPdf **PKiKP 05 50 20.5 +1.7**
D19A Cripps Ranch, 108.30 37 ⇑Pdiff **Pdif 05 46 11.9 -0.7**
baz=108,SNR=6.3
VNA2 Neumayer--Watz 108.32 194 *e*P **Pdif 05 46 15.8 +3.8**
baz=128,slow=3.4
VNA2 Neumayer--Watz 108.32 194 *e*PKiKP **PKiKP 05 50 21.1 +3.3**
baz=128,slow=3.4
VNA2 Neumayer--Watz 108.32 194 *e*PP PP 05 50 43.1 +0.7
baz=128,slow=3.4
VNA2 Neumayer--Watz 108.32 194 *e*PKKP PKKPbc 06 01 25.8 -6.0
baz=128,slow=3.4
HEC Hector,Ludlow 108.33 51 ⇑Pdiff **Pdif 05 46 11.6 -1.4**
baz=108
F18A Big Timber 108.40 38 ⇓Pdiff **Pdif 05 46 12.0 -1.1**
baz=108
SSB Saint Sauveur 108.42 321 *e*PKPdf **PKiKP 05 50 17.7 -1.2**
SSB *e*PP **PP 05 50 42.3 -1.5**
SSB LR LR
comp=Z,3µm,19.0s
AVF Avril sur Loir 108.43 323 *e*P **Pdif 05 46 12.6 -0.5**
comp=Z,43nm,1.3s
AVF Avril sur Loir 108.43 323 *e*P **Pdif 05 46 12.6 -0.5**
AVF pmax pmax
comp=Z,43nm,1.3s
AVF Avril sur Loir 108.43 323 *e*P **Pdif 05 46 12.6 -0.5**
comp=Z,43nm,1.3s
L15A Malad City 108.44 43 ⇑Pdiff **Pdif 05 46 12.1 -1.4**
baz=108
A21A Bergtoll Ranch 108.50 34 ⇓Pdiff **Pdif 05 46 12.7 -0.7**
baz=108
VIVF Saint-Julien-l 108.54 321 *e*P **Pdif 05 46 13.2 -0.5**
comp=Z,41nm,1.4s
VIVF Saint-Julien-l 108.54 321 *e*P **Pdif 05 46 13.2 -0.5**
VIVF pmax pmax
comp=Z,41nm,1.4s
VIVF Saint-Julien-l 108.54 321 *e*P **Pdif 05 46 13.2 -0.5**
comp=Z,41nm,1.4s
IMW Indian Meadow 108.56 40 *e*Pdif **Pdif 05 46 14.5 +0.4**
comp=Z,3.1nm,1.0s
LKWY Lake 108.61 40 PFAKE 05 50 30.0
LKWY LR LR
comp=Z,3µm,21.0s
PFO Pinyon Flat Ob 108.64 52 PFAKE 05 50 30.0
PFO LR LR
comp=Z,3µm,19.0s
VNA3 Neumayer Olymp 108.65 194 *e*P **Pdif 05 46 17.2 +3.7**
VNA3 Neumayer Olymp 108.65 194 *e*PP PP 05 50 44.7 -0.1
VNA3 Neumayer Olymp 108.65 194 *e*PKKP **PKKPbc 06 01 29.2 -1.6**
E19A Rath Farm, Rou 108.70 37 ⇓Pdiff **Pdif 05 46 13.9 -0.5**
baz=109
VNA1 Neumayer--Stat 108.72 194 *e*PP PP 05 50 46.2 +1.0
VNA1 Neumayer--Stat 108.72 194 *e*PKKP **PKKPbc 06 01 28.3 -2.1**
D20A Manuel Ranch, 108.78 36 ⇑Pdiff **Pdif 05 46 13.4 -1.3**
baz=109
G18A Lazy EL Ranch, 108.78 39 ⇑Pdiff **Pdif 05 46 13.2 -1.7**
baz=109
I17A Pilgrim Ck. 108.79 40 ⇑Pdiff **Pdif 05 46 13.5 -1.5**
baz=109
BGF Bois d'Agland 108.85 323 *e*P **Pdif 05 46 14.8 -0.2**
BGF Bois d'Agland 108.85 323 *e*P **Pdif 05 46 14.8 -0.2**
BGF Bois d'Agland 108.85 323 *e*P **Pdif 05 46 14.8 -0.2**
SNOW Snow King Moun 108.88 41 *e*PKPdf **PKiKP 05 50 20.4 +0.4**
DUG Dugway 108.90 45 *e*PKPdf **PKiKP 05 50 19.7 -0.2**
DUG LR LR
comp=Z,2µm,20.0s
DUG Dugway 108.90 45 ⇑PKiKP **PKiKP 05 50 19.8 -0.2**
baz=109
DUG ⇓SKP 05 53 51.5
baz=109
DUG ⇓SKP 05 53 51.5
baz=109
DUG ⇓SKP 05 53 51.5
baz=109
LOHW Long Hollow 108.91 41 *e*PKPdf **PKiKP 05 50 19.9 -0.1**
MONP Monument Peak 108.91 53 ⇓SKP **SKiKP 05 53 51.5 +1.6**
baz=109
AGO Saint Agoulin 108.92 322 *e*P **Pdif 05 46 17.2 +1.9**
AGO Saint Agoulin 108.92 322 *e*P **Pdif 05 46 17.2 +1.9**
J17A Brown Place, J 108.95 41 ⇑PKiKP **PKiKP 05 50 19.0 -1.1**
baz=109
AHID Auburn Hatcher 108.97 41 *e*PKPdf **PKiKP 05 50 19.7 -0.5**
AHID LR LR
comp=Z,3µm,22.0s
H18A Shoshone NF, C 109.02 39 ⇓SKP **SKiKP 05 53 51.7 +2.0**
baz=109
RLMT Red Lodge 109.05 39 *e*Pdif **Pdif 05 46 16.5 +0.3**
RLMT LR LR
comp=Z,2µm,22.0s
RLMT Red Lodge 109.05 39 ⇑Pdiff **Pdif 05 46 15.0 -1.2**
baz=109
KEST Kesra 109.06 310 Pdif **Pdif 05 46 16.4 +0.1**
KEST PKKPbc **PKKPbc 06 01 27.0 -1.4**
KEST Kesra 109.06 310 Pdiff **Pdif 05 46 16.4 +0.1**
comp=Z,3.1nm,1.1s,baz=316,slow=5.7,SNR=5.1
KEST PKKPbc **PKKPbc 06 01 27.0 -1.4**
comp=Z,1.8nm,1.0s,baz=190,slow=4.3,SNR=3.8
A22A Carney Farms, 109.06 34 ⇓PKiKP **PKiKP 05 50 18.6 -1.3**
baz=109
PYM Petit Puy Mans 109.15 322 *e*P **Pdif 05 46 16.8 +0.4**
HWUT Hardware Ranch 109.16 43 *e*Pdif **Pdif 05 46 17.3 +0.6**
HWUT *e*PKPdf **PKiKP 05 50 18.7 -1.8**
HWUT LR LR
comp=Z,6µm,22.0s
LBL Lubilhac 109.25 322 *e*P **Pdif 05 46 17.7 +0.8**
LBL Lubilhac 109.25 322 *e*P **Pdif 05 46 17.7 +0.8**
LBL Lubilhac 109.25 322 *e*P **Pdif 05 46 17.7 +0.8**
TCF Toulx Ste Croi 109.36 323 *e*P **Pdif 05 46 17.3 0.0**
comp=Z,24nm,1.2s
TCF Toulx Ste Croi 109.36 323 *e*P **Pdif 05 46 17.3 0.0**
TCF Toulx Ste Croi 109.36 323 *e*P **Pdif 05 46 17.3 0.0**
L17A Cokeville 109.41 42 ⇓SKP **SKiKP 05 53 52.0 +1.4**
baz=109
LASF Ste Croix 109.42 320 *e*P **Pdif 05 46 17.5 -0.1**
comp=Z,40nm,1.4s
LASF Ste Croix 109.42 320 *e*P **Pdif 05 46 17.5 -0.1**
D21A La Casta Ranch 109.46 36 ⇑SKP **SKiKP 05 53 52.0 +1.6**
baz=109
J18A Kendall Valley 109.47 41 ⇓Pdiff **Pdif 05 46 16.1 -2.0**
baz=109
G20A Bridger 109.66 38 ⇑PKiKP **PKiKP 05 50 19.5 -1.7**
baz=110
G20A ⇓SKP 05 53 50.7
baz=110
G20A ⇓SKP 05 53 50.7
baz=110
G20A ⇓SKP 05 53 50.7
baz=110
C22A Vida 109.75 35 ⇑PKiKP **PKiKP 05 50 21.1 -0.1**
baz=110
B23A Brockton 109.86 34 ⇑SKP **SKiKP 05 53 51.0 0.0**
baz=110
D22A Cohagen 109.89 36 ⇓PKiKP **PKiKP 05 50 20.2 -1.4**
baz=110
D22A ⇓SKP 05 53 50.7
baz=110

D22A ⇓SKP 05 53 50.7
baz=110
D22A ⇓SKP 05 53 50.7
baz=110
BW06 Boulder Array 109.98 41 *e*PKPdf **PKiKP 05 50 21.1 -1.0**
BW06 LR LR
comp=Z,4μm,22.0s
PDAR Pinedale Array 109.98 41 Pdif **Pdif 05 46 23.3 +3.0**
PDAR PKiKP **PKiKP 05 50 23.6 +1.6**
PDAR *e* 05 53 53.2
PDAR PKKPbc **PKKPbc 06 01 23.2 -2.7**
PDAR PKKPab **PKKPab 06 01 36.1 -0.9**
PDAR Pinedale Array 109.98 41 Pdiff **Pdif 05 46 23.3 +3.0**
comp=Z,1.3nm,1.0s,baz=281,slow=2.4,SNR=6.4
PDAR PKiKP **PKiKP 05 50 23.6 +1.6**
comp=Z,4.4nm,0.9s,baz=276,slow=0.3,SNR=6.1
PDAR SKiKP **SKiKP 05 53 53.2 +1.5**
comp=Z,5.3nm,1.1s,baz=212,slow=1.4,SNR=3.9
PDAR PKKPbc **PKKPbc 06 01 23.2 -2.7**
comp=Z,4.8nm,0.9s,baz=129,slow=5.2,SNR=11
PDAR PKKPab **PKKPab 06 01 36.1 -0.9**
comp=Z,11nm,0.8s,baz=117,slow=5.2,SNR=6.9
MVU Marysvale 110.02 46 PFAKE 05 50 30.0
MVU LR LR
comp=Z,5μm,22.0s
GRR Gorron 110.03 326 *e*P **Pdif 05 46 20.2 0.0**
comp=Z,85nm,1.6s
GRR Gorron 110.03 326 *e*P **Pdif 05 46 20.2 0.0**
GRR Gorron 110.03 326 *e*P **Pdif 05 46 20.2 0.0**
MSU Marysvale 110.04 46 *e*P **Pdif 05 46 22.4 +1.6**
MSU Marysvale 110.04 46 *e*Pdif **Pdif 05 46 22.4 +1.6**
MSU *e*PKPdf **PKiKP 05 50 24.1 +1.8**
L18A Fontenelle, Gr 110.05 42 ⇓PKiKP **PKiKP 05 50 21.0 -1.2**
baz=110
L18A ⇑SKP 05 53 52.4
baz=110
L18A ⇑SKP 05 53 52.4
baz=110
L18A ⇑SKP 05 53 52.4
baz=110
J19A Crowheart 110.07 40 ⇓SKP **SKiKP 05 53 53.6 +1.8**
baz=110
W13A Hualapai Mount 110.11 50 ⇑SKP **SKiKP 05 53 53.0 +0.9**
baz=110
C23A Lambert 110.11 35 ⇓SKP **SKiKP 05 53 52.5 +0.9**
baz=110
CAF Calviac 110.13 322 *e*P **Pdif 05 46 21.2 +0.4**
comp=Z,35nm,1.6s
CAF Calviac 110.13 322 *e*P **Pdif 05 46 21.2 +0.4**
CAF Calviac 110.13 322 *e*P **Pdif 05 46 21.2 +0.4**
A24A Westby 110.15 33 ⇑SKP **SKiKP 05 53 52.5 +1.0**
baz=110
TSUM Tsumeb 110.19 252 *e*PKPdf **PKiKP 05 50 22.4 -0.6**
TSUM PKKPbc **PKKPbc 06 01 24.5 +0.1**
TSUM PKKP **PKKPdf 06 01 38.6 -2.7**
TSUM LR LR
comp=Z,3μm,20.0s
TSUM Tsumeb 110.19 252 PKiKP **PKiKP 05 50 24.2 +1.3**
comp=Z,3.0nm,0.6s,baz=113,slow=3.8,SNR=2.9
TSUM SKiKP **SKiKP 05 53 53.0 +0.5**
comp=Z,3.5nm,0.9s,baz=107,slow=5.6,SNR=2.8
TSUM PKKPbc **PKKPbc 06 01 24.5 +0.1**
comp=Z,1.9nm,0.9s,baz=252,slow=3.2,SNR=2.0
TSUM PKKP **PKKPdf 06 01 38.6 -2.7**
comp=Z,1.7nm,0.8s,baz=311,slow=3.2,SNR=3.5
G21A Lodge Grass 110.27 38 ⇓SKP **SKiKP 05 53 53.4 +1.4**
baz=110
RJF Les Rejaudoux 110.28 322 *e*P **Pdif 05 46 21.8 +0.4**
comp=Z,45nm,1.5s
RJF Les Rejaudoux 110.28 322 *e*P **Pdif 05 46 21.8 +0.4**
RJF Les Rejaudoux 110.28 322 *e*P **Pdif 05 46 21.8 +0.4**
DGMT Dagmar 110.30 34 PFAKE 05 50 30.0
DGMT LR LR
comp=Z,2μm,22.0s
I20A Worland 110.33 39 ⇓PKiKP **PKiKP 05 50 21.4 -1.2**
baz=110
I20A ⇑SKP 05 53 52.9
baz=110
I20A ⇑SKP 05 53 52.9
baz=110
I20A ⇑SKP 05 53 52.9
baz=110
O17A Robinson Place 110.34 44 ⇓PKiKP **PKiKP 05 50 21.2 -1.6**
baz=110
O17A ⇑SKP 05 53 54.7
baz=110
O17A ⇑SKP 05 53 54.7
baz=110
O17A ⇑SKP 05 53 54.7
baz=110
E22A Miles City 110.40 36 ⇓SKP **SKiKP 05 53 52.8 +0.6**
baz=110
K19A Absolon Red Bu 110.41 41 ⇑PKiKP **PKiKP 05 50 21.6 -1.3**
baz=110
K19A ⇑SKP 05 53 52.6
baz=110
K19A ⇑SKP 05 53 52.6
baz=110
K19A ⇑SKP 05 53 52.6
baz=110
D23A Lindsay 110.44 35 ⇓SKP **SKiKP 05 53 53.0 +0.8**
baz=110
MFF Saint Martin d 110.59 324 *e*P **Pdif 05 46 22.9 +0.2**
MFF Saint Martin d 110.59 324 *e*P **Pdif 05 46 22.9 +0.2**
MFF Saint Martin d 110.59 324 *e*P **Pdif 05 46 22.9 +0.2**
J20A Shoshoni 110.65 40 ⇑PKiKP **PKiKP 05 50 22.0 -1.3**
baz=110
J20A ⇓SKP 05 53 53.9
baz=110
J20A ⇓SKP 05 53 53.9
baz=110
J20A ⇓SKP 05 53 53.9
baz=110
P17A Butcher Ranch, 110.65 45 ⇓SKP **SKiKP 05 53 53.6 +0.7**
baz=110
H21A Big Horn, Sher 110.67 38 ⇑PKiKP **PKiKP 05 50 21.7 -1.5**
baz=111
C24A Savage 110.69 35 ⇓SKP **SKiKP 05 53 54.0 +1.4**
baz=111
E23A Ismay 110.75 36 ⇓PKiKP **PKiKP 05 50 22.4 -0.8**
baz=111
E23A ⇓SKP 05 53 54.1
baz=111
E23A ⇓SKP 05 53 54.1
baz=111
E23A ⇓SKP 05 53 54.1
baz=111
U15A North Rim 110.80 48 ⇓PKiKP **PKiKP 05 50 21.9 -2.0**
baz=111
U15A ⇑SKP 05 53 54.4
baz=111
U15A ⇑SKP 05 53 54.4
baz=111
U15A ⇑SKP 05 53 54.4
baz=111
O18A Roosevelt 110.81 43 ⇓SKP **SKiKP 05 53 55.0 +1.8**
baz=111
MTLF Montolieu 110.82 320 *e*P **Pdif 05 46 23.8 0.0**
comp=Z,48nm,1.7s
MTLF Montolieu 110.82 320 *e*P **Pdif 05 46 23.8 0.0**
MTLF Montolieu 110.82 320 *e*P **Pdif 05 46 23.8 0.0**
LFF La Frestale 110.94 322 *e*P **Pdif 05 46 24.7 +0.4**
comp=Z,28nm,1.2s
LFF La Frestale 110.94 322 *e*P **Pdif 05 46 24.7 +0.4**
LFF La Frestale 110.94 322 *e*P **Pdif 05 46 24.7 +0.4**
SGMF Saint Gilles 111.05 327 *e*P **Pdif 05 46 23.6 -1.1**
comp=Z,116nm,1.9s
SGMF Saint Gilles 111.05 327 *e*P **Pdif 05 46 23.6 -1.1**
SGMF Saint Gilles 111.05 327 *e*P **Pdif 05 46 23.6 -1.1**
J21A Lysite 111.06 40 ⇓PKiKP **PKiKP 05 50 23.4 -0.7**
baz=111
H22A Clearmont 111.12 38 ⇓PKiKP **PKiKP 05 50 23.1 -1.0**
baz=111
H22A ⇓SKP 05 53 55.0
baz=111
H22A ⇓SKP 05 53 55.0
baz=111
H22A ⇓SKP 05 53 55.0
baz=111
L20A Wamsutter 111.13 41 ⇓PKiKP **PKiKP 05 50 23.1 -1.2**
baz=111
L20A ⇑SKP 05 53 55.1
baz=111
L20A ⇑SKP 05 53 55.1
baz=111
L20A ⇑SKP 05 53 55.1
baz=111
E24A Baker 111.29 35 ⇑SKP **SKiKP 05 53 55.2 +1.3**
baz=111
ROSF Rostrenen 111.39 327 *e*P **Pdif 05 46 26.3 +0.1**
comp=Z,68nm,1.4s
ROSF Rostrenen 111.39 327 *e*P **Pdif 05 46 26.3 +0.1**
ROSF Rostrenen 111.39 327 *e*P **Pdif 05 46 26.3 +0.1**
ROSF Rostrenen 111.39 327 *e*P **Pdif 05 46 26.3 +0.1**
comp=Z,67nm,1.4s
I22A 9 Mile Ranch, 111.39 39 ⇑PKiKP **PKiKP 05 50 23.0 -1.6**
baz=111
I22A ⇓SKP 05 53 54.3
baz=111
I22A ⇓SKP 05 53 54.3
baz=111
I22A ⇓SKP 05 53 54.3
baz=111
O19A Miners Draw (B 111.40 43 ⇑SKP **SKiKP 05 53 55.5 +1.1**
baz=111
QUIF Quistinic 111.57 327 *e*P **Pdif 05 46 26.5 -0.5**
comp=Z,81nm,1.6s
QUIF Quistinic 111.57 327 *e*P **Pdif 05 46 26.5 -0.5**
QUIF Quistinic 111.57 327 *e*P **Pdif 05 46 26.5 -0.5**
F24A Ekalaka 111.60 36 ⇓SKP **SKiKP 05 53 54.9 +0.4**
baz=112
J22A Midwest 111.64 39 ⇑PKiKP **PKiKP 05 50 24.3 -0.8**
baz=112
J22A ⇑SKP 05 53 54.6
baz=112
J22A ⇑SKP 05 53 54.6
baz=112
J22A ⇑SKP 05 53 54.6
baz=112
L21A Rawlins 111.79 41 ⇓SKP **SKiKP 05 53 55.8 +0.6**
baz=112
P19A Cripple Cowboy 111.80 44 ⇑SKP **SKiKP 05 53 57.2 +2.0**
baz=112
WUAZ Wupatki 111.84 49 PFAKE 05 50 40.0
WUAZ LR LR
comp=Z,3μm,22.0s
Q19A Hogan Spring (111.91 44 ⇓SKP **SKiKP 05 53 56.7 +1.4**
baz=112
M21A Separation Pea 111.96 41 ⇑PKiKP **PKiKP 05 50 25.3 -0.6**
baz=112
M21A ⇓SKP 05 53 56.6
baz=112
M21A ⇓SKP 05 53 56.6
baz=112
M21A ⇓SKP 05 53 56.6
baz=112
K22A Casper 111.99 40 ⇑PKiKP **PKiKP 05 50 25.0 -0.9**
baz=112
K22A ⇑SKP 05 53 56.5
baz=112
K22A ⇑SKP 05 53 56.5
baz=112
K22A ⇑SKP 05 53 56.5
baz=112
O20A White River Ci 112.08 43 ⇑PKiKP **PKiKP 05 50 24.8 -1.3**
baz=112,SNR=6.2
H24A Dirks Ranch, A 112.13 37 ⇑PKiKP **PKiKP 05 50 24.8 -1.1**
baz=112
EPF Esparros 112.16 321 *e*P **Pdif 05 46 29.9 +0.1**
comp=Z,13nm,1.3s
EPF Esparros 112.16 321 *e*P **Pdif 05 46 29.9 +0.1**
EPF Esparros 112.16 321 *e*P **Pdif 05 46 29.9 +0.1**
X16A Lo Mia Camp, P 112.23 50 ⇑SKP **SKiKP 05 53 58.8 +2.6**
baz=112
N21A Black Mountain 112.27 42 ⇓PKiKP **PKiKP 05 50 25.2 -1.3**
baz=112,SNR=9.1
N21A ⇓SKP 05 53 56.9
baz=112
N21A ⇓SKP 05 53 56.9
baz=112
N21A ⇓SKP 05 53 56.9
baz=112
P20A De Beque 112.27 44 ⇓SKP **SKiKP 05 53 58.4 +2.3**
baz=112
PV10 Paradox Valley 112.33 45 *e*PKPdf **PKiKP 05 50 26.7 0.0**
PV04 Paradox Valley 112.41 45 *e*PKPdf **PKiKP 05 50 27.7 +0.9**
PV04 *e*PP **PP 05 51 10.8 -2.1**
I24A Kuemmerle Ranc 112.56 38 ⇑PKiKP **PKiKP 05 50 26.2 -0.6**
baz=112
O21A Pagoda 112.56 43 ⇓SKP **SKiKP 05 53 57.8 +1.1**
baz=112
Q20A Ridgley Place, 112.58 44 ⇑PKiKP **PKiKP 05 50 25.5 -1.6**
baz=112
Q20A ⇓SKP 05 53 57.8
baz=112
Q20A ⇓SKP 05 53 57.8
baz=112
Q20A ⇓SKP 05 53 57.8
baz=112
PV01 Paradox Valley 112.76 45 *e*PKPdf **PKiKP 05 50 28.2 +0.7**
PV01 *e*SKPdf **SKiKP 05 53 59.4 +2.2**
RSSD Black Hills 112.78 38 *e*PKiKP **PKiKP 05 50 27.0 -0.3**
RSSD Black Hills 112.78 38 *e*PKPdf **PKiKP 05 50 27.0 -0.3**
RSSD *e*SKPdf **SKPdf 05 53 56.8 -0.2**
J24A Dixon Ranch, L 112.82 39 ⇑PKiKP **PKiKP 05 50 26.3 -1.0**
baz=113
P21A Newcastle 112.90 43 ⇓PKiKP **PKiKP 05 50 26.7 -1.1**
baz=113
N22A Wattenberg Ran 112.95 42 ⇑PKiKP **PKiKP 05 50 26.1 -1.7**
baz=113
S20A Disappointment 113.05 45 ⇑PKiKP **PKiKP 05 50 27.1 -1.0**
baz=113
S20A ⇓SKP 05 53 59.7
baz=113
S20A ⇓SKP 05 53 59.7
baz=113
S20A ⇓SKP 05 53 59.7
baz=113
MDND Maddock 113.15 32 ⇑PKiKP **PKiKP 05 50 26.8 -0.8**
baz=113
MDND ⇑SKP 05 53 58.6
baz=113
MDND ⇑SKP 05 53 58.6
baz=113
MDND ⇑SKP 05 53 58.6
baz=113
O22A Kremmling 113.20 42 ⇑PKiKP **PKiKP 05 50 27.2 -1.2**
baz=113
W18A Petrified Fore 113.23 48 ⇑SKP **SKiKP 05 53 59.7 +1.6**
baz=113
MVCO Mesa Verde 113.23 46 *e*PKPdf **PKiKP 05 50 28.8 +0.3**
MVCO LR LR
comp=Z,5μm,22.0s
MVCO Mesa Verde 113.23 46 ⇓PKiKP **PKiKP 05 50 27.2 -1.2**
baz=113
MVCO ⇓SKP 05 53 59.2
baz=113
MVCO ⇓SKP 05 53 59.2
baz=113
MVCO ⇓SKP 05 53 59.2
baz=113
N23A Red Feather La 113.25 41 ⇓SKP **SKiKP 05 53 59.6 +1.5**
baz=113
SMCO Snowmass 113.39 43 *e*PKPdf **PKiKP 05 50 29.7 +0.8**
ULM Lac du Bonnet 113.49 29 Pdif **Pdif 05 46 40.0 +4.5**
ULM PKiKP **PKiKP 05 50 27.7 -0.5**
ULM SKP 05 53 58.1
ULM PKKPbc **PKKPbc 06 01 12.8 -1.5**
ULM PKKPab **PKKPab 06 01 18.6 -2.5**
ULM Lac du Bonnet 113.49 29 Pdiff **Pdif 05 46 40.0 +4.5**
comp=Z,0.8nm,0.4s,baz=128,slow=0.7,SNR=3.8
ULM PKiKP **PKiKP 05 50 27.7 -0.5**
comp=Z,6.2nm,0.8s,baz=322,slow=2.3,SNR=6.6
ULM SKP 05 53 58.1
comp=Z,13nm,0.8s,baz=300,slow=2.7,SNR=7.6
ULM PKKPbc **PKKPbc 06 01 12.8 -1.5**
comp=Z,3.9nm,0.8s,baz=122,slow=1.9,SNR=5.1
ULM PKKPab **PKKPab 06 01 18.6 -2.5**
comp=Z,22nm,1.1s,baz=125,slow=2.8,SNR=13
S21A Coal Bank Pass 113.53 45 ⇓PKiKP **PKiKP 05 50 27.8 -1.3**
baz=113
S21A ⇓SKP 05 53 59.9
baz=113
S21A ⇓SKP 05 53 59.9
baz=113
S21A ⇓SKP 05 53 59.9
baz=113
TUC Tucson 113.56 52 PFAKE 05 50 40.0
TUC LR LR
comp=Z,2μm,19.0s
O23A Lake Granby, G 113.60 42 ⇓PKiKP **PKiKP 05 50 28.4 -0.7**
baz=114,SNR=17
O23A ⇑SKP 05 53 59.5
baz=114
O23A ⇑SKP 05 53 59.5
baz=114
O23A ⇑SKP 05 53 59.5
baz=114
ISCO Idaho Springs 114.01 42 *e*PKIKP PKPdf 05 50 30.4 +0.5
ISCO MLR MLR
comp=Z,3μm,21.0s
ISCO Idaho Springs 114.01 42 *e*PKPdf PKPdf 05 50 30.4 +0.5
ISCO *e*SKPdf **SKiKP 05 54 00.2 +0.5**
ISCO LR LR
comp=Z,3μm,21.0s
ISCO Idaho Springs 114.01 42 ⇓PKiKP PKPdf 05 50 28.6 -1.3
baz=114,SNR=8.2
ISCO ⇑SKP 05 54 00.8
baz=114
ISCO ⇑SKP 05 54 00.8
baz=114
ISCO ⇑SKP 05 54 00.8
baz=114
T21A Navajo Lake 114.01 46 ⇑SKP **SKiKP 05 54 00.9 +1.2**
baz=114
P23A Jefferson 114.06 43 ⇑PKiKP PKPdf 05 50 29.0 -1.2
baz=114
K26A Motz Farm, Whi 114.07 38 ⇑PKiKP PKPdf 05 50 28.4 -1.3
baz=114
K26A ⇑SKP 05 54 00.7
baz=114
K26A ⇑SKP 05 54 00.7
baz=114
K26A ⇑SKP 05 54 00.7
baz=114
W20A Ramah 114.14 48 ⇑SKP **SKiKP 05 54 00.9 +0.9**
baz=114
S22A 4UR Ranch, Cre 114.16 45 ⇑SKP **SKiKP 05 54 01.4 +1.4**
baz=114
U21A Nageezi 114.18 46 ⇑PKiKP PKPdf 05 50 28.7 -1.6
baz=114
U21A ⇑SKP 05 54 01.0
baz=114
U21A ⇑SKP 05 54 01.0
baz=114
U21A ⇑SKP 05 54 01.0
baz=114
Q23A Hartsel 114.30 43 ⇓PKiKP PKPdf 05 50 29.5 -1.0
baz=114,SNR=7.6
Q23A ⇓SKP 05 54 01.2
baz=114
Q23A ⇓SKP 05 54 01.2
baz=114
Q23A ⇓SKP 05 54 01.2
baz=114
T22A Edith 114.45 45 ⇓PKiKP PKPdf 05 50 29.6 -1.1
baz=114,SNR=5.9
T22A ⇑SKP 05 54 02.5
baz=114
T22A ⇑SKP 05 54 02.5
baz=114
T22A ⇑SKP 05 54 02.5
baz=114
L26A Underwood Farm 114.49 39 ⇑PKiKP **PKiKP 05 50 29.4 -1.1**
baz=114
P24A Kohler Place, 114.62 42 ⇑PKiKP **PKiKP 05 50 29.4 -1.5**
baz=114,SNR=5.5
P24A ⇓SKP 05 54 01.5
baz=114
P24A ⇓SKP 05 54 01.5
baz=114
P24A ⇓SKP 05 54 01.5
baz=114
K27A Flueckinger Fa 114.65 38 ⇓SKP **SKiKP 05 54 01.3 +0.8**
baz=114
Q24A Divide 114.73 43 ⇑PKiKP **PKiKP 05 50 30.4 -0.9**
baz=115
Q24A ⇑SKP 05 54 02.0
baz=115
Q24A ⇑SKP 05 54 02.0
baz=115
Q24A ⇑SKP 05 54 02.0
baz=115
Y20A Horse Springs, 114.75 49 ⇑PKiKP **PKiKP 05 50 30.1 -1.3**
baz=115
U22A Llaves 114.78 46 ⇓PKiKP **PKiKP 05 50 29.6 -1.8**
baz=115,SNR=8.0
U22A ⇓SKP 05 54 02.2
baz=115
U22A ⇓SKP 05 54 02.2
baz=115
U22A ⇓SKP 05 54 02.2
baz=115
AGMN Agassiz Nation 114.80 30 *e*PKPdf PKPdf 05 50 29.8 -0.9
AGMN LR LR
comp=Z,2μm,22.0s
Z20A Nine Sixteen R 114.92 50 ⇑PKiKP **PKiKP 05 50 29.9 -1.8**
baz=115
Z20A ⇓SKP 05 54 03.2
baz=115
Z20A ⇓SKP 05 54 03.2
baz=115
Z20A ⇓SKP 05 54 03.2
baz=115
X21A Alamocita Cree 114.96 48 ⇑SKP **SKiKP 05 54 03.4 +1.8**
baz=115
T23A Casias Ranch, 115.05 45 ⇓PKiKP **PKiKP 05 50 31.1 -0.9**
baz=115,SNR=8.3
T23A ⇑SKP 05 54 02.5
baz=115
T23A ⇑SKP 05 54 02.5
baz=115
T23A ⇑SKP 05 54 02.5
baz=115
319A Douglas 115.10 52 ⇑PKiKP **PKiKP 05 50 31.1 -0.9**
baz=115
P25A Willow Gulch B 115.12 42 ⇑PKiKP **PKiKP 05 50 30.3 -1.6**
baz=115,SNR=6.4
P25A ⇓SKP 05 54 02.8
baz=115
P25A ⇓SKP 05 54 02.8
baz=115
P25A ⇓SKP 05 54 02.8
baz=115
Y21A Point of Rocks 115.24 49 ⇓PKiKP **PKiKP 05 50 30.9 -1.5**
baz=115
U23A El Rito 115.28 46 ⇓SKP **SKiKP 05 54 03.5 +1.4**
baz=115
Q25A Bedland, Calha 115.37 42 ⇑SKP **SKiKP 05 54 03.7 +1.5**
baz=115
LAZ Ladron 115.46 48 *e*PKPdf **PKPdf 05 50 31.6 -1.2**
X22A Bernardo 115.51 48 ⇑SKP **SKiKP 05 54 04.1 +1.5**
baz=115
Z21A St. Cloud Mine 115.54 49 ⇓SKP **SKiKP 05 54 04.3 +1.6**
baz=115
P26A Davis Ranch, A 115.64 41 ⇑SKP **SKiKP 05 54 02.6 0.0**
baz=116
320A Kipp Ranch, An 115.70 52 ⇓PKiKP **PKiKP 05 50 32.3 -0.9**
baz=116
320A ⇑SKP 05 54 04.0
baz=116
320A ⇑SKP 05 54 04.0
baz=116
320A ⇑SKP 05 54 04.0
baz=116
ANMO Albuquerque 115.72 47 *e*PKPdf **PKPdf 05 50 33.7 +0.5**
ANMO PKP **PKPdf 05 50 34.1 +0.9**
ANMO *e*SKPdf **SKPdf 05 54 02.9 0.0**
ANMO SKP 05 54 05.2
ANMO PKKPab **PKKPab 06 01 11.5 -0.1**
ANMO PKKP **PKKPdf 06 01 30.6 -0.4**
ANMO LR LR
comp=Z,2μm,20.0s
ANMO Albuquerque 115.72 47 PKP **PKPdf 05 50 34.1 +0.9**
comp=Z,7.2nm,0.9s,baz=229,slow=1.9,SNR=12
ANMO SKP 05 54 05.2
comp=Z,14nm,0.9s,baz=250,slow=2.6,SNR=9.9
ANMO PKKPab **PKKPab 06 01 11.5 -0.1**
comp=Z,3.4nm,0.8s,baz=138,slow=6.5,SNR=9.7
ANMO PKKP **PKKPdf 06 01 30.6 -0.4**
comp=Z,3.7nm,1.0s,baz=169,slow=4.7,SNR=4.2
T24A Torres, Weston 115.73 45 ⇑SKP **SKiKP 05 54 04.5 +1.4**
baz=116
R25A Fountain Ranch 115.73 43 ⇓PKiKP **PKiKP 05 50 32.1 -1.0**
baz=116,SNR=7.8
R25A ⇓SKP 05 54 04.1
baz=116
R25A ⇓SKP 05 54 04.1
baz=116
R25A ⇓SKP 05 54 04.1
baz=116
OGNE Ogallala 115.75 40 *e*PKPdf **PKPdf 05 50 32.8 -0.2**

OGNE LR LR
comp=Z,3μm,22.0s
OGNE Ogallala 115.75 40 ⇑PKiKP PKiKP 05 50 32.3 -0.6
baz=116
121A Cookes Peak, D 115.78 50 ⇑SKP SKiKP 05 54 04.3 +1.1
baz=116
Y22A Socorro 115.80 48 ⇓PKiKP PKiKP 05 50 32.1 -1.3
baz=116
Y22A ⇓SKP 05 54 05.1
baz=116
Y22A ⇓SKP 05 54 05.1
baz=116
Y22A ⇓SKP 05 54 05.1
baz=116
W23A Werner Place, 115.85 47 ⇑SKP SKiKP 05 54 04.7 +1.5
baz=116
Q26A Hugo 115.85 42 ⇑PKiKP PKiKP 05 50 32.6 -0.8
baz=116,SNR=6.8
S25A Robets Cordova 115.87 44 ⇑PKiKP PKiKP 05 50 31.8 -1.6
baz=116
S25A ⇓SKP 05 54 03.6
baz=116
S25A ⇓SKP 05 54 03.6
baz=116
S25A ⇓SKP 05 54 03.6
baz=116
LPM Los Pinos Moun 115.88 48 ePKPdf PKPdf 05 50 34.5 +0.9
LPM eSKPdf SKiKP 05 54 04.3 +1.0
BNM Barren Site 115.95 48 ePKPdf PKPdf 05 50 33.4 -0.4
X23A Hourglass Bar 116.08 48 ⇓SKP SKiKP 05 54 04.6 +0.8
baz=116
Z22A Elephant Butte 116.10 49 ⇓PKiKP PKPdf 05 50 32.5 -1.4
baz=116
Z22A ⇑SKP 05 54 04.5
baz=116
Z22A ⇑SKP 05 54 04.5
baz=116
Z22A ⇑SKP 05 54 04.5
baz=116
P27A Ficken Ranch, 116.14 41 ⇑PKiKP PKPdf 05 50 32.7 -1.1
baz=116
P27A ⇑SKP 05 54 04.8
baz=116
P27A ⇑SKP 05 54 04.8
baz=116
P27A ⇑SKP 05 54 04.8
baz=116
T25A Trinidad 116.14 44 ⇓PKiKP PKPdf 05 50 32.6 -1.4
baz=116,SNR=8.8
T25A ⇓SKP 05 54 04.8
baz=116
T25A ⇓SKP 05 54 04.8
baz=116
T25A ⇓SKP 05 54 04.8
baz=116
V24A Rampart Ranch, 116.22 46 ⇑PKiKP PKPdf 05 50 32.8 -1.5
baz=116,SNR=16
V24A ⇓SKP 05 54 05.1
baz=116
V24A ⇓SKP 05 54 05.1
baz=116
V24A ⇓SKP 05 54 05.1
baz=116
R26A Arlington 116.22 43 ⇓PKiKP PKPdf 05 50 32.9 -1.1
baz=116,SNR=12
W24A Lazy 6 Ranch, 116.36 47 ⇑PKiKP PKPdf 05 50 33.0 -1.4
baz=116,SNR=14
W24A ⇓SKP 05 54 05.2
baz=116
W24A ⇓SKP 05 54 05.2
baz=116
W24A ⇓SKP 05 54 05.2
baz=116
KSCO Kaye Shedlock' 116.40 42 ⇑PKiKP PKPdf 05 50 33.1 -1.3
baz=116
KSCO ⇓SKP 05 54 05.4
baz=116
KSCO ⇓SKP 05 54 05.4
baz=116
KSCO ⇓SKP 05 54 05.4
baz=116
U25A Circle Dot Ran 116.51 45 ⇓PKiKP PKPdf 05 50 33.4 -1.3
baz=116,SNR=8.5
U25A ⇑SKP 05 54 06.0
baz=116
U25A ⇑SKP 05 54 06.0
baz=116
U25A ⇑SKP 05 54 06.0
baz=116
S26A Kim 116.55 43 ⇑PKiKP PKPdf 05 50 33.7 -0.9
baz=116,SNR=8.9
S26A ⇑SKP 05 54 06.1
baz=116
S26A ⇑SKP 05 54 06.1
baz=116
S26A ⇑SKP 05 54 06.1
baz=116
TAM Tamanrasset 116.62 299 ePKIKP PKPdf 05 50 35.6 +0.4
TAM MLR MLR
comp=Z,1μm,21.0s
TAM Tamanrasset 116.62 299 ePKPdf PKPdf 05 50 35.6 +0.4
TAM LR LR
comp=Z,1μm,21.0s
V25A Rancho No Teng 116.63 46 ⇑PKiKP PKPdf 05 50 33.8 -1.2
baz=116,SNR=17
V25A ⇑SKP 05 54 05.4
baz=116
V25A ⇑SKP 05 54 05.4
baz=116
V25A ⇑SKP 05 54 05.4
baz=116
R27A Eads 116.66 42 ⇑PKiKP PKPdf 05 50 33.5 -1.4
baz=116,SNR=8.0
R27A ⇑SKP 05 54 04.5
baz=116
R27A ⇑SKP 05 54 04.5
baz=116
R27A ⇑SKP 05 54 04.5
baz=116
ESDC Sonseca Array 116.68 319 PKP PKPdf 05 50 34.5 -0.2
ESDC PP PP 05 51 43.0 +0.3
ESDC SKP 05 54 05.1
ESDC PKKPbc PKKPbc 06 01 02.3 -0.7
ESDC Sonseca Array 116.68 319 PKP PKPdf 05 50 34.5 -0.2
comp=Z,1.9nm,0.6s,baz=29,slow=2.5,SNR=9.3
ESDC PP PP 05 51 43.0 +0.3
comp=Z,9.6nm,0.8s,baz=45,slow=7.4,SNR=5.5
ESDC SKP 05 54 05.1
comp=Z,3.4nm,1.0s,baz=19,slow=2.6,SNR=2.7
ESDC PKKPbc PKKPbc 06 01 02.3 -0.7
comp=Z,2.3nm,0.7s,baz=258,slow=3.4,SNR=12
T26A Comanche Natio 116.69 44 ⇓PKiKP PKPdf 05 50 33.5 -1.5
baz=117,SNR=16
T26A ⇑SKP 05 54 05.1
baz=117
T26A ⇑SKP 05 54 05.1
baz=117
T26A ⇑SKP 05 54 05.1
baz=117
Y24A Capitan 116.94 48 ⇑PKiKP PKPdf 05 50 33.5 -2.1
baz=117,SNR=9.9
Y24A ⇑SKP 05 54 06.4
baz=117
Y24A ⇑SKP 05 54 06.4
baz=117
Y24A ⇑SKP 05 54 06.4
baz=117
U26A Atchley Ranch, 116.98 45 ⇓PKiKP PKPdf 05 50 34.0 -1.6
baz=117,SNR=6.6
U26A ⇑SKP 05 54 06.0
baz=117
U26A ⇑SKP 05 54 06.0
baz=117
U26A ⇑SKP 05 54 06.0
baz=117
PAB San Pablo 117.00 319 ePKIKP PKPdf 05 50 35.9 +0.5
PAB MLR MLR
comp=Z,3μm,22.0s
PAB San Pablo 117.00 319 ePKPdf PKPdf 05 50 35.9 +0.5
PAB LR LR
comp=Z,3μm,22.0s
W25A X Bar L Ranch, 117.04 46 ⇑PKiKP PKPdf 05 50 33.9 -1.8
baz=117,SNR=11
EYMN Ely 117.16 28 PFAKE 05 50 50.0 +15
EYMN LR LR
comp=Z,4μm,22.0s
PBRG Braganca 117.21 323 ePKPdf PKPdf 05 50 36.7 +1.0
PBRG Braganca 117.21 323 ePP PP 05 51 47.3 +1.0

V26A Tequesquite Ra 117.24 45 ⇓PKiKP PKPdf 05 50 34.8 -1.2
baz=117,SNR=11
V26A ⇑SKP 05 54 07.2
baz=117
V26A ⇑SKP 05 54 07.2
baz=117
V26A ⇑SKP 05 54 07.2
baz=117
Z24A Sheeppen Canyo 117.26 48 ⇑PKiKP PKPdf 05 50 34.8 -1.4
baz=117,SNR=6.6
Z24A ⇓SKP 05 54 07.5
baz=117
Z24A ⇓SKP 05 54 07.5
baz=117
Z24A ⇓SKP 05 54 07.5
baz=117
T27A Campo 117.35 44 ⇓SKP SKiKP 05 54 08.0 +1.9
baz=117
ECSD EROS Data Cent 117.35 34 ePKPdf PKPdf 05 50 35.3 -0.6
ECSD eSKPdf SKPdf 05 54 04.4 -1.1
ECSD LR LR
comp=Z,3μm,22.0s
124A Stringfield Ra 117.48 49 ⇓PKiKP PKPdf 05 50 35.4 -1.3
baz=117,SNR=6.1
Y25A Mesa, Roswell 117.49 48 ⇑PKiKP PKPdf 05 50 35.2 -1.4
baz=117,SNR=15
Y25A ⇑SKP 05 54 07.3
baz=117
Y25A ⇑SKP 05 54 07.3
baz=117
Y25A ⇑SKP 05 54 07.3
baz=117
T28A Walsh 117.73 43 ⇓PKiKP PKPdf 05 50 35.6 -1.3
baz=118
T28A ⇓SKP 05 54 07.2
baz=118
T28A ⇓SKP 05 54 07.2
baz=118
T28A ⇓SKP 05 54 07.2
baz=118
MVO Moncorvo 117.76 322 ePKPdf PKPdf 05 50 36.0 -0.8
MVO Moncorvo 117.76 322 ePP PP 05 51 53.4 +3.2
MVO eSKPdf SKiKP 05 54 07.4 +0.7
MVO Moncorvo 117.76 322 ePKKP PKKPdf 06 01 16.0 -11
MVO eSS SS 06 08 12.6 +15
MVO eLQ LQ 06 25 21.8
MVO eLR LR 06 28 58.2
comp=Z,4μm,22.0s
Z25A Roswell 117.77 48 ⇓PKiKP PKPdf 05 50 35.8 -1.3
baz=118,SNR=9.5
Z25A ⇑SKP 05 54 07.1
baz=118
Z25A ⇑SKP 05 54 07.1
baz=118
Z25A ⇑SKP 05 54 07.1
baz=118
X26A CR and CF Fran 117.83 46 ⇓PKiKP PKPdf 05 50 36.4 -0.8
baz=118,SNR=10
BGNE Belgrade 117.88 37 ⇓PKiKP PKPdf 05 50 36.0 -1.0
baz=118
BGNE ⇓SKP 05 54 06.4
baz=118
BGNE ⇓SKP 05 54 06.4
baz=118
BGNE ⇓SKP 05 54 06.4
baz=118
324A Moseley Ranch, 118.02 50 ⇑PKiKP PKPdf 05 50 36.1 -1.5
baz=118
324A ⇑SKP 05 54 07.5
baz=118
324A ⇑SKP 05 54 07.5
baz=118
324A ⇑SKP 05 54 07.5
baz=118
PGAV Gavieira, Arco 118.03 324 ePKPdf PKPdf 05 50 37.9 +0.6
PGAV Gavieira, Arco 118.03 324 ePP PP 05 51 55.0 +3.0
PGAV eSKPdf SKPdf 05 54 05.2 -1.8
PGAV Gavieira, Arco 118.03 324 ePKKP PKKPdf 06 01 24.9 -1.7
PGAV eSS SS 06 08 09.8 +8.8
PGAV eLQ LQ 06 25 42.3
PGAV eLR LR 06 29 12.1
comp=Z,3μm,22.0s
PCAB Cabril 118.04 323 ePKPdf PKPdf 05 50 37.9 +0.6
PCAB Cabril 118.04 323 ePP PP 05 51 55.2 +3.2
PCAB eSKPdf SKPdf 05 54 06.3 -0.6
125A Gardner Draw, 118.10 49 ⇓PKiKP PKPdf 05 50 36.6 -1.1
baz=118
POLO Lamas de Olo 118.10 323 ePKPdf PKPdf 05 50 37.5 0.0
POLO eSKPdf SKPdf 05 54 06.7 -0.5
PVRL Vila Real 118.11 323 ePKPdf PKPdf 05 50 38.9 +1.5
PVRL eSKPdf SKiKP 05 54 08.5 +1.2
W27A Bowe Ranch, En 118.12 46 ⇑PKiKP PKPdf 05 50 36.7 -1.0
baz=118,SNR=9.5
225A Deer Hill, Car 118.22 49 ⇑PKiKP PKPdf 05 50 36.9 -1.2
baz=118
X27A F and S Farms, 118.30 46 ⇑PKiKP PKPdf 05 50 36.3 -1.8
baz=118
Z26A Caprock 118.32 48 ⇓PKiKP PKPdf 05 50 37.2 -1.0
baz=118
V28A Channing 118.36 45 ⇓PKiKP PKPdf 05 50 36.6 -1.5
baz=118
V28A ⇓SKP 05 54 09.1
baz=118
V28A ⇓SKP 05 54 09.1
baz=118
V28A ⇓SKP 05 54 09.1
baz=118
SPMN St. Paul 118.42 31 ⇑PKiKP PKPdf 05 50 36.8 -1.1
baz=118
SPMN ⇓SKP 05 54 08.6
baz=118
SPMN ⇓SKP 05 54 08.6
baz=118
SPMN ⇓SKP 05 54 08.6
baz=118
325A Bean Ranch, Si 118.44 50 ⇑PKiKP PKPdf 05 50 37.5 -1.0
baz=118,SNR=9.3
325A ⇓SKP 05 54 09.1
baz=118
325A ⇓SKP 05 54 09.1
baz=118
325A ⇓SKP 05 54 09.1
baz=118
MTE Manteigas 118.53 322 ePKPdf PKPdf 05 50 39.0 +0.7
MTE Manteigas 118.53 322 ePP PP 05 51 56.3 +0.8
MTE eSKPdf SKPdf 05 54 07.2 -0.8
MTE Manteigas 118.53 322 ePKKP PKKPdf 06 01 27.1 +1.6
MTE eSS SS 06 08 16.7 +9.1
MTE eLQ LQ 06 25 15.4
MTE eLR LR 06 29 27.9
comp=Z,5μm,20.0s
MTE Manteigas 118.53 322 ePKPdf PKPdf 05 50 39.0 +0.7
MTE eSKPdf SKPdf 05 54 07.9 -0.1
MTE LR LR
comp=Z,5μm,21.0s
PVIS Viseu 118.56 322 ePKPdf PKPdf 05 50 38.9 +0.6
PVIS eSKPdf SKiKP 05 54 08.3 +0.1
126A Clayton Basin, 118.58 48 ⇑PKiKP PKPdf 05 50 37.6 -1.0
baz=118,SNR=8.2
126A ⇑SKP 05 54 09.6
baz=118
126A ⇑SKP 05 54 09.6
baz=118
126A ⇑SKP 05 54 09.6
baz=118
Y27A Causey 118.62 47 ⇓PKiKP PKPdf 05 50 37.5 -1.3
baz=118,SNR=21
Y27A ⇑SKP 05 54 09.4
baz=118
Y27A ⇑SKP 05 54 09.4
baz=118
Y27A ⇑SKP 05 54 09.4
baz=118
425A Indio Mountain 118.69 51 ⇓PKiKP PKPdf 05 50 37.8 -1.2
baz=119,SNR=17
226B Tecolote Peak, 118.73 49 ⇑PKiKP PKPdf 05 50 38.0 -0.9
baz=119,SNR=17
V29A Stinnett 118.79 44 ⇓PKiKP PKPdf 05 50 37.8 -1.1
baz=119,SNR=7.9
V29A ⇑SKP 05 54 09.6
baz=119
V29A ⇑SKP 05 54 09.6
baz=119
V29A ⇑SKP 05 54 09.6
baz=119
PCBR Castelo Branco 118.82 321 ePKPdf PKPdf 05 50 39.4 +0.6
PCBR eSKPdf SKiKP 05 54 09.9 +1.2

Z27A Tatum 118.86 47 ⇑PKiKP PKPdf 05 50 38.2 -1.0
baz=119,SNR=28
Z27A ⇓SKP 05 54 09.9
baz=119
Z27A ⇓SKP 05 54 09.9
baz=119
Z27A ⇓SKP 05 54 09.9
baz=119
MSTX Muleshoe 118.86 47 ⇑PKiKP PKPdf 05 50 38.1 -1.1
baz=119,SNR=22
MSTX ⇑SKP 05 54 09.8
baz=119
MSTX ⇑SKP 05 54 09.8
baz=119
MSTX ⇑SKP 05 54 09.8
baz=119
X28A Dimmitt 119.00 46 ⇓PKiKP PKPdf 05 50 38.3 -1.1
baz=119,SNR=11
X28A ⇑SKP 05 54 10.3
baz=119
X28A ⇑SKP 05 54 10.3
baz=119
X28A ⇑SKP 05 54 10.3
baz=119
PMRV Marv??o 119.01 321 ePKPdf PKPdf 05 50 39.3 +0.1
PMRV Marv??o 119.01 321 ePP PP 05 52 02.2 +3.4
PMRV eSKPdf SKiKP 05 54 09.4 +0.3
PMRV Marv??o 119.01 321 ePKKP PKKPdf 06 01 28.5 +3.9
PMRV eSS SS 06 08 30.2 +17
PMRV eLQ LQ 06 23 48.2
PMRV eLR LR 06 28 56.5
comp=Z,3μm,22.0s
127A Arkansas Junct 119.06 48 ⇑PKiKP PKPdf 05 50 38.6 -1.0
baz=119,SNR=12
127A ⇓SKP 05 54 11.3
baz=119
127A ⇓SKP 05 54 11.3
baz=119
127A ⇓SKP 05 54 11.3
baz=119
SCHQ Schefferville 119.09 9 PKP PKPdf 05 50 39.1 +0.2
SCHQ ePKPdf PKiKP 05 50 39.6 +0.7
SCHQ SKP 05 54 08.2
SCHQ PKKPab PKKPbc 06 00 54.0 -0.9
SCHQ Schefferville 119.09 9 PKP PKPdf 05 50 39.1 +0.2
comp=Z,12nm,0.3s,baz=341,slow=1.7,SNR=103
SCHQ SKP 05 54 08.2
comp=Z,14nm,1.0s,baz=41,slow=2.4,SNR=3.9
SCHQ PKKPab PKKPbc 06 00 54.0 -0.9
comp=Z,5.0nm,0.9s,baz=149,slow=5.9,SNR=7.5
AMTX Amarillo 119.19 45 PFAKE 05 50 50.0 +10
AMTX LR LR
comp=Z,3μm,22.0s
326A Caldwell Ranch 119.22 50 ⇑PKiKP PKPdf 05 50 38.7 -1.2
baz=119,SNR=8.5
326A ⇑SKP 05 54 10.9
baz=119
326A ⇑SKP 05 54 10.9
baz=119
326A ⇑SKP 05 54 10.9
baz=119
Y28A McKinney Farm, 119.27 46 ⇓PKiKP PKPdf 05 50 38.9 -1.0
baz=119,SNR=16
Y28A ⇑SKP 05 54 11.1
baz=119
Y28A ⇑SKP 05 54 11.1
baz=119
Y28A ⇑SKP 05 54 11.1
baz=119
T31A Randall Ranch, 119.39 42 ⇑SKP SKiKP 05 54 10.8 +0.8
baz=119
X29A Tulia 119.40 46 ⇑PKiKP PKPdf 05 50 39.0 -1.1
baz=119,SNR=8.3
X29A ⇓SKP 05 54 10.8
baz=119
X29A ⇓SKP 05 54 10.8
baz=119
X29A ⇓SKP 05 54 10.8
baz=119
227A Bennet, Jal 119.42 49 ⇓PKiKP PKPdf 05 50 39.1 -1.2
baz=119
V30A Spur Ranch, Mi 119.42 44 ⇓PKiKP PKPdf 05 50 39.4 -0.8
baz=119
PESTR Estremoz 119.46 320 ePKPdf PKPdf 05 50 40.5 +0.4
PESTR eSKPdf SKPdf 05 54 09.3 -0.4
Z28A Tucker Farm, M 119.48 47 ⇑PKiKP PKPdf 05 50 39.3 -1.1
baz=119
Z28A ⇑SKP 05 54 11.2
baz=119
Z28A ⇑SKP 05 54 11.2
baz=119
Z28A ⇑SKP 05 54 11.2
baz=119
426A McDonald Obser 119.48 50 ⇑PKiKP PKPdf 05 50 39.2 -1.4
baz=119,SNR=9.2
PBAR Barrancos 119.51 320 ePKPdf PKPdf 05 50 39.9 -0.2
PTOM Tomar 119.53 322 ePKPdf PKPdf 05 50 40.9 +0.8
PTOM eSKPdf SKiKP 05 54 10.7 +0.6
526A Mary Lane Ranc 119.70 51 ⇑PKiKP PKPdf 05 50 39.1 -1.9
baz=120,SNR=17
Y29A Porterfield Fa 119.71 46 ⇑PKiKP PKPdf 05 50 39.9 -0.9
baz=120,SNR=22
Y29A ⇓SKP 05 54 11.5
baz=120
Y29A ⇓SKP 05 54 11.5
baz=120
Y29A ⇓SKP 05 54 11.5
baz=120
128A Castleberry Fa 119.73 48 ⇓PKiKP PKPdf 05 50 39.4 -1.5
baz=120,SNR=9.2
PMTG Montargil 119.74 321 ePKPdf PKPdf 05 50 40.8 +0.2
PMTG Montargil 119.74 321 ePP PP 05 52 03.5 -0.3
427A Hayter Ranch, 119.88 50 ⇓PKiKP PKPdf 05 50 39.7 -1.5
baz=120,SNR=24
427A ⇑SKP 05 54 12.2
baz=120
427A ⇑SKP 05 54 12.2
baz=120
427A ⇑SKP 05 54 12.2
baz=120
228A UT Block 9, Go 119.89 48 ⇓SKP SKiKP 05 54 12.1 +0.9
baz=120
626A Big Bend Ranch 119.89 52 ⇑PKiKP PKPdf 05 50 40.1 -1.2
baz=120,SNR=16
626A ⇓SKP 05 54 12.3
baz=120
626A ⇓SKP 05 54 12.3
baz=120
626A ⇓SKP 05 54 12.3
baz=120
EVO Evora 119.92 320 ePKIKP PKPdf 05 50 39.7 -1.2
comp=Z,69nm,1.0s
EVO Evora 119.92 320 ePKPdf PKPdf 05 50 41.0 +0.1
EVO Evora 119.92 320 ePP PP 05 52 06.1 +1.0
EVO eSKPdf SKiKP 05 54 11.3 +0.4
PMSA Palmer Station 119.96 174 PP PP 05 52 04.9 +0.5
PMSA LR LR
comp=Z,3μm,20.0s
PMSA Palmer Station 119.96 174 PP PP 05 52 04.9 +0.5
comp=Z,36nm,1.2s,baz=194,slow=4.7,SNR=6.5
X30A Coker Ranch, T 119.98 45 ⇑PKiKP PKPdf 05 50 40.2 -1.0
baz=120,SNR=14
X30A ⇓SKP 05 54 11.6
baz=120
X30A ⇓SKP 05 54 11.6
baz=120
X30A ⇓SKP 05 54 11.6
baz=120
Z29A Hungry Hill Ra 119.99 47 ⇓PKiKP PKPdf 05 50 40.0 -1.4
baz=120,SNR=12
Z29A ⇓SKP 05 54 12.5
baz=120
Z29A ⇓SKP 05 54 12.5
baz=120
Z29A ⇓SKP 05 54 12.5
baz=120
EVOP Sao Brissos 120.00 320 ePKIKP PKPdf 05 50 39.7 -1.4
EVOP Sao Brissos 120.00 320 ePKPdf PKPdf 05 50 39.7 -1.4
527A Woodward Ranch 120.04 51 ⇓PKiKP PKPdf 05 50 40.3 -1.3
baz=120,SNR=32
527A ⇑SKP 05 54 11.2
baz=120
527A ⇑SKP 05 54 11.2
baz=120
527A ⇑SKP 05 54 11.2
baz=120
328A Wristen Ranch, 120.08 49 ⇓PKiKP PKPdf 05 50 40.5 -1.0

baz=120,SNR=31
328A ⇓SKP 05 54 12.1
baz=120
328A ⇓SKP 05 54 12.1
baz=120
328A ⇓SKP 05 54 12.1
baz=120
PBEJ Beja 120.13 320 *e*PKPdf **PKPdf 05 50 42.1 +0.8**
PBEJ Beja 120.13 320 *e*PP PP 05 52 06.1 -0.4
PBEJ *e*SKPdf **SKPdf 05 54 11.1 +0.1**
129A Stewart Farms, 120.18 48 ⇑PKiKP **PKPdf 05 50 40.3 -1.4**
baz=120,SNR=11
129A ⇓SKP 05 54 12.9
baz=120
129A ⇓SKP 05 54 12.9
baz=120
129A ⇓SKP 05 54 12.9
baz=120
KSU1 Kansas State U 120.21 39 *e*PKPdf **PKPdf 05 50 41.6 +0.1**
KSU1 *e*SKPdf **SKPdf 05 54 10.4 -0.7**
KSU1 *e*PKKPbc **PKKPbc 06 00 49.5 -0.8**
KSU1 LR LR
comp=Z,3µm,22.0s
W31A Holland Ranch, 120.24 44 ⇑PKiKP **PKPdf 05 50 40.1 -1.6**
baz=120
W31A ⇓SKP 05 54 12.8
baz=120
W31A ⇓SKP 05 54 12.8
baz=120
W31A ⇓SKP 05 54 12.8
baz=120
Y30A Stafford Cattl 120.26 46 ⇓PKiKP **PKPdf 05 50 40.6 -1.2**
baz=120,SNR=11
Y30A ⇑SKP 05 54 12.9
baz=120
Y30A ⇑SKP 05 54 12.9
baz=120
Y30A ⇑SKP 05 54 12.9
baz=120
TXAR Lajitas Array 120.36 52 PKP **PKPdf 05 50 42.7 +0.5**
TXAR SKP 05 54 14.2
TXAR PKKPbc **PKKPbc 06 00 48.8 -0.7**
TXAR Lajitas Array 120.36 52 PKP **PKPdf 05 50 42.7 +0.5**
comp=Z,9.9nm,0.8s,baz=228,slow=1.1,SNR=27
TXAR SKP 05 54 14.2
comp=Z,3.9nm,0.8s,baz=116,slow=2.1,SNR=5.1
TXAR PKKPbc **PKKPbc 06 00 48.8 -0.7**
comp=Z,4.3nm,0.7s,baz=133,slow=6.3,SNR=15
PVAQ Vaqueiros 120.39 319 *e*PKPdf **PKPdf 05 50 41.2 -0.7**
PVAQ Vaqueiros 120.39 319 *e*PP PP 05 52 18.9 +11
PVAQ *e*SKPdf **SKiKP 05 54 13.3 +1.4**
PVAQ Vaqueiros 120.39 319 *e*PKKP 06 01 43.3
PVAQ *e*SS SS 06 08 49.9 +18
PVAQ *e*LQ LQ 06 22 46.0
PVAQ *e*LR LR 06 30 36.8
comp=Z,3µm,20.0s
Z30A Sanderson Ranc 120.39 46 ⇓PKiKP **PKPdf 05 50 40.7 -1.3**
baz=120,SNR=26
Z30A ⇓SKP 05 54 12.9
baz=120
Z30A ⇓SKP 05 54 12.9
baz=120
Z30A ⇓SKP 05 54 12.9
baz=120
SCIA State Center 120.44 34 *e*PKPdf **PKPdf 05 50 41.9 0.0**
SCIA *e*SKPdf **SKiKP 05 54 12.2 +0.3**
SCIA LR LR
comp=Z,2µm,21.0s
PCVE Castro Verde 120.47 320 *e*PKPdf **PKPdf 05 50 42.9 +0.9**
PCVE *e*SKPdf **SKPdf 05 54 11.8 +0.1**
PMAFR Mafra 120.47 321 *e*PKPdf **PKPdf 05 50 38.7 -3.3**
PMAFR Mafra 120.47 321 *e*PP PP 05 52 11.9 +3.1
428A Kincaid Ranch, 120.48 50 ⇑PKiKP **PKPdf 05 50 41.3 -1.1**
baz=120,SNR=35
428A ⇑SKP 05 54 12.8
baz=120
428A ⇑SKP 05 54 12.8
baz=120
428A ⇑SKP 05 54 12.8
baz=120
PNCL Nicolau / Gran 120.50 320 *e*PKPdf **PKPdf 05 50 42.3 +0.3**
PNCL Nicolau / Gran 120.50 320 *e*PP PP 05 52 11.8 +2.8
PNCL *e*SKPdf **SKPdf 05 54 08.2 -3.5**
X31A McDonald Ranch 120.51 45 ⇓PKiKP **PKPdf 05 50 41.0 -1.3**
baz=120
X31A ⇓SKP 05 54 13.4
baz=120
X31A ⇓SKP 05 54 13.4
baz=120
X31A ⇓SKP 05 54 13.4
baz=120
627A Terlingua Ranc 120.52 51 ⇓PKiKP **PKPdf 05 50 40.3 -2.2**
baz=120,SNR=37
229A Bryant Ranch, 120.55 48 ⇓PKiKP **PKPdf 05 50 40.8 -1.6**
baz=120,SNR=7.3
229A ⇑SKP 05 54 13.1
baz=120
229A ⇑SKP 05 54 13.1
baz=120
229A ⇑SKP 05 54 13.1
baz=120
PBDV Barranco-do-Ve 120.62 319 *e*PKPdf **PKPdf 05 50 42.4 0.0**
PBDV *e*SKPdf **SKiKP 05 54 12.3 -0.1**
329A Wagon Wheel Ra 120.65 49 ⇓PKiKP **PKPdf 05 50 40.9 -1.7**
baz=120,SNR=12
329A ⇑SKP 05 54 14.2
baz=120
329A ⇑SKP 05 54 14.2
baz=120
329A ⇑SKP 05 54 14.2
baz=120
528A Cox Ranch, San 120.66 50 ⇓PKiKP **PKPdf 05 50 42.1 -0.7**
baz=121,SNR=28
528A ⇓SKP 05 54 13.7
baz=121
528A ⇓SKP 05 54 13.7
baz=121
528A ⇓SKP 05 54 13.7
baz=121
Y31A Rekieta Farm, 120.67 45 ⇑PKiKP **PKPdf 05 50 40.7 -1.9**
baz=121,SNR=13
Y31A ⇑SKP 05 54 13.7
baz=121
Y31A ⇑SKP 05 54 13.7
baz=121
Y31A ⇑SKP 05 54 13.7
baz=121
MDT Midelt 120.72 313 PKP **PKPdf 05 50 43.7 +0.9**
MDT PP **PP 05 52 13.4 +2.4**
MDT PKKPbc **PKKPbc 06 00 47.0 -1.3**
MDT Midelt 120.72 313 PKP **PKPdf 05 50 43.7 +0.9**
comp=Z,11nm,0.8s,baz=65,slow=2.4,SNR=21
MDT PP **PP 05 52 13.4 +2.4**
comp=Z,9.5nm,0.9s,baz=41,slow=6.6,SNR=4.1
MDT PKKPbc **PKKPbc 06 00 47.0 -1.3**
comp=Z,7.4nm,0.9s,baz=263,slow=4.9,SNR=9.7
130A Snyder 120.86 47 ⇓PKiKP **PKPdf 05 50 41.8 -1.2**
baz=121,SNR=8.7
130A ⇑SKP 05 54 13.7
baz=121
130A ⇑SKP 05 54 13.7
baz=121
130A ⇑SKP 05 54 13.7
baz=121
628A Black Gap, Mar 120.89 51 ⇑PKiKP **PKPdf 05 50 42.0 -1.1**
baz=121,SNR=14
628A ⇓SKP 05 54 14.8
baz=121
628A ⇓SKP 05 54 14.8
baz=121
628A ⇓SKP 05 54 14.8
baz=121
PTEO Sao Teotonio 120.96 320 *e*PKPdf **PKPdf 05 50 45.1 +2.2**
MORF Marmelete 121.05 320 *e*PKPdf **PKPdf 05 50 43.6 +0.4**
MORF *e*SKPdf **SKPdf 05 54 12.2 -0.7**
Z31A Sharp Cattle R 121.08 46 ⇓PKiKP **PKPdf 05 50 42.0 -1.4**
baz=121,SNR=7.4
Z31A ⇑SKP 05 54 14.7
baz=121
Z31A ⇑SKP 05 54 14.7
baz=121
Z31A ⇑SKP 05 54 14.7
baz=121
230A Sterling City 121.10 48 ⇑PKiKP **PKPdf 05 50 42.1 -1.4**
baz=121,SNR=6.6
230A ⇓SKP 05 54 15.2
baz=121
230A ⇓SKP 05 54 15.2
baz=121
529A Stev Forest Ra 121.12 50 ⇑PKiKP **PKPdf 05 50 42.6 -0.9**
baz=121,SNR=35
529A ⇑SKP 05 54 14.6
baz=121
529A ⇑SKP 05 54 14.6
baz=121
529A ⇑SKP 05 54 14.6
baz=121
429A Davenport Ranc 121.13 50 ⇓PKiKP **PKPdf 05 50 42.3 -1.3**
baz=121,SNR=20
429A ⇑SKP 05 54 14.3
baz=121
429A ⇑SKP 05 54 14.3
baz=121
429A ⇑SKP 05 54 14.3
baz=121
Y32A R-V Farms, Ver 121.22 45 ⇓PKiKP **PKPdf 05 50 43.1 -0.5**
baz=121
Y32A ⇑SKP 05 54 14.5
baz=121
Y32A ⇑SKP 05 54 14.5
baz=121
Y32A ⇑SKP 05 54 14.5
baz=121
131A Roby 121.24 47 ⇓SKP **SKiKP 05 54 15.2 +1.4**
baz=121
PFVI Vila Bisbo 121.27 320 *e*PKPdf **PKPdf 05 50 45.4 +1.8**
WMOK Wichita Mounta 121.29 44 *e*PKIKP **PKPdf 05 50 43.8 +0.1**
WMOK MLR MLR
comp=Z,4µm,21.0s
WMOK Wichita Mounta 121.29 44 *e*PKPdf **PKPdf 05 50 43.8 +0.1**
WMOK LR LR
comp=Z,4µm,21.0s
330A Mertzon 121.29 48 ⇓PKiKP **PKPdf 05 50 42.5 -1.4**
baz=121,SNR=5.6
430A Baggett Ranch, 121.55 49 ⇑PKiKP **PKPdf 05 50 43.3 -1.1**
baz=121,SNR=19
430A ⇑SKP 05 54 15.7
baz=121
430A ⇑SKP 05 54 15.7
baz=121
430A ⇑SKP 05 54 15.7
baz=121
Z32A Haskell 121.57 46 ⇑SKP **SKiKP 05 54 16.1 +1.7**
baz=122
231A Bronte 121.67 47 ⇓PKiKP **PKPdf 05 50 43.1 -1.5**
baz=122,SNR=19
231A ⇓SKP 05 54 14.8
baz=122
231A ⇓SKP 05 54 14.8
baz=122
231A ⇓SKP 05 54 14.8
baz=122
RTC Rabat Centre 121.71 315 PFAKE 05 51 00.0 +16
RTC LR LR
comp=Z,2µm,21.0s
530A J-C Ranch, Com 121.78 50 ⇑SKP **SKiKP 05 54 16.0 +1.0**
baz=122
331A San Angelo 121.90 48 ⇑PKiKP **PKPdf 05 50 43.0 -2.0**
baz=122,SNR=26
331A ⇑SKP 05 54 16.1
baz=122
331A ⇑SKP 05 54 16.1
baz=122
331A ⇑SKP 05 54 16.1
baz=122
RPN Rapa Nui 122.02 119 PKP **PKPdf 05 50 48.0 +2.8**
RPN LR LR
comp=Z,3µm,21.0s
RPN Rapa Nui 122.02 119 PKP **PKPdf 05 50 48.0 +2.8**
comp=Z,14nm,0.3s,baz=315,slow=2.9,SNR=2.7
431A Sonora 122.07 49 ⇓PKiKP **PKPdf 05 50 44.2 -1.1**
baz=122,SNR=32
431A ⇓SKP 05 54 16.4
baz=122
431A ⇓SKP 05 54 16.4
baz=122
431A ⇓SKP 05 54 16.4
baz=122
232A Coleman 122.18 47 ⇓PKiKP **PKPdf 05 50 44.2 -1.3**
baz=122,SNR=10
332A Millersview 122.37 48 ⇓PKiKP **PKPdf 05 50 44.5 -1.4**
baz=122,SNR=16
332A ⇑SKP 05 54 17.1
baz=122
332A ⇑SKP 05 54 17.1
baz=122
332A ⇑SKP 05 54 17.1
baz=122
531A Rocksprings 122.37 49 ⇓PKiKP **PKPdf 05 50 44.2 -1.8**
baz=122
531A ⇓SKP 05 54 16.7
baz=122
531A ⇓SKP 05 54 16.7
baz=122
531A ⇓SKP 05 54 16.7
baz=122
432A Menard 122.58 48 ⇓PKiKP **PKPdf 05 50 45.9 -0.5**
baz=122,SNR=11
432A ⇑SKP 05 54 17.5
baz=122
432A ⇑SKP 05 54 17.5
baz=122
432A ⇑SKP 05 54 17.5
baz=122
TUL1 Tulsa 122.63 41 ⇑PKiKP **PKPdf 05 50 45.6 -0.7**
baz=122
GLMI Grayling 122.65 26 PFAKE 05 51 00.0 +14
GLMI LR LR
comp=Z,3µm,22.0s
631A Perdido Creek 122.71 50 ⇓PKiKP **PKPdf 05 50 45.4 -1.2**
baz=123,SNR=23
631A ⇑SKP 05 54 17.4
baz=123
631A ⇑SKP 05 54 17.4
baz=123
631A ⇑SKP 05 54 17.4
baz=123
JCT Junction City 122.78 49 *e*PKIKP **PKPdf 05 50 46.8 +0.1**
JCT MLR MLR
comp=Z,2µm,22.0s
JCT Junction City 122.78 49 *e*PKPdf **PKPdf 05 50 46.8 +0.1**
JCT *e*SKPdf **SKPdf 05 54 15.9 -0.5**
JCT LR LR
comp=Z,2µm,22.0s
JCT Junction City 122.78 49 ⇓PKiKP **PKPdf 05 50 46.3 -0.5**
baz=123,SNR=48
JCT ⇓SKP 05 54 18.0
baz=123
JCT ⇓SKP 05 54 18.0
baz=123
JCT ⇓SKP 05 54 18.0
baz=123
532A Rocksprings 122.87 49 ⇑PKiKP **PKPdf 05 50 45.6 -1.3**
baz=123
532A ⇑SKP 05 54 18.3
baz=123
532A ⇑SKP 05 54 18.3
baz=123
532A ⇑SKP 05 54 18.3
baz=123
TOA0 Torodi Ar. Sit 122.90 289 *e*PKPdf **PKPdf 05 50 47.1 -0.1**
TOA0 *e*SKPdf **SKPdf 05 54 17.1 +0.2**
TORD Torodi Ar. Bea 122.90 289 PKP **PKPdf 05 50 46.9 -0.3**
TORD SKP 05 54 17.3
TORD PKKPbc **PKKPbc 06 00 39.6 +0.2**
TORD SKKPbc SKKPbc 06 04 24.1 +1.5
TORD Torodi Ar. Bea 122.90 289 PKP **PKPdf 05 50 46.9 -0.3**
comp=Z,51nm,0.7s,baz=41,slow=1.9,SNR=125
TORD SKP 05 54 17.3
comp=Z,19nm,1.0s,baz=84,slow=2.3,SNR=6.2
TORD PKKPbc **PKKPbc 06 00 39.6 +0.2**
comp=Z,11nm,0.8s,baz=272,slow=3.5,SNR=18
TORD SKKPbc SKKPbc 06 04 24.1 +1.5
comp=Z,2.9nm,1.0s,baz=308,slow=4.3,SNR=3.6
ANIG Ahuacatlan 122.99 61 P **PKPdf 05 50 45.0 -2.4**
632A Uvalde 123.27 50 ⇓PKiKP **PKPdf 05 50 46.5 -1.1**
baz=123,SNR=24
732A Laxson Ranch, 123.50 51 ⇓PKiKP **PKPdf 05 50 46.8 -1.3**
baz=123,SNR=20
HDIL Hopedale 123.52 33 *e*PKPdf **PKPdf 05 50 47.5 -0.3**
HDIL LR LR
comp=Z,2µm,21.0s
RFTA Plano 123.69 44 *e*PKPdf **PKPdf 05 50 49.2 +0.9**
WHTX Lake Whitney 123.71 46 ⇓PKiKP **PKPdf 05 50 47.7 -0.7**
baz=124
ZAIG Zacatecas 124.02 58 P **PKPdf 05 50 51.0 +1.4**
SLM Saint Louis 124.32 35 *e*PKIKP **PKPdf 05 50 48.4 -1.0**
SLM Saint Louis 124.32 35 *e*PKPdf **PKPdf 05 50 48.4 -1.0**
AAM Ann Arbor 125.06 28 *e*PKIKP **PKPdf 05 50 51.0 +0.3**
AAM MLR MLR
comp=Z,2µm,22.0s
AAM Ann Arbor 125.06 28 *e*PKPdf **PKPdf 05 50 51.0 +0.3**
AAM LR LR
comp=Z,2µm,22.0s
OLIL Olney 125.46 34 *e*PKPdf **PKPdf 05 50 51.7 +0.2**
SIUC Southern Illin 125.54 35 *e*PKPdf **PKPdf 05 50 51.8 +0.1**
UALR University of 125.56 40 *e*PKPdf **PKPdf 05 50 51.7 -0.1**
KVTX Kingsville 125.68 51 *e*PKPdf **PKPdf 05 50 53.7 +1.5**
KVTX LR LR
comp=Z,2µm,20.0s
HKT Hockley 125.98 47 *e*PKIKP **PKPdf 05 50 53.1 +0.4**
HKT Hockley 125.98 47 *e*PKPdf **PKPdf 05 50 53.1 +0.4**
BLO Bloomington 126.00 32 *e*PKIKP **PKPdf 05 50 52.6 0.0**
BLO Bloomington 126.00 32 *e*PKPdf **PKPdf 05 50 52.6 0.0**
USIN University of 126.24 34 *e*PKPdf **PKPdf 05 50 53.3 +0.3**
GNAR Gosnell 126.24 37 *e*PKPdf **PKPdf 05 50 53.8 +0.7**
GNAR *e*SKPdf **SKiKP 05 54 25.1 +1.5**
MSNY Massena 126.30 19 *e*PKPdf **PKPdf 05 50 53.3 +0.4**
PQI Presque Isle 126.66 13 *e*PKPdf **PKPdf 05 50 53.4 -0.1**
HALT Halls 126.69 37 *e*PKPdf **PKPdf 05 50 54.1 +0.1**
LONY Lake Ozonia 126.72 19 *e*PKPdf **PKPdf 05 50 53.2 -0.6**
LONY LR LR
comp=Z,4µm,22.0s
WCI Wyandotte Cave 126.81 33 *e*PKIKP **PKPdf 05 50 53.9 -0.3**
WCI Wyandotte Cave 126.81 33 *e*PKPdf **PKPdf 05 50 53.9 -0.3**
ERPA Erie 126.83 25 PFAKE 05 51 10.0 +16
ERPA LR LR
comp=Z,3µm,22.0s
FRNY Flat Rock 126.85 18 *e*PKPdf **PKPdf 05 50 53.4 -0.6**
ACSO Alum Creek Sta 126.99 29 *e*PKPdf **PKPdf 05 50 54.1 -0.3**
ACSO LR LR
comp=Z,3µm,22.0s
NCB Newcomb 127.42 19 *e*PKPdf **PKPdf 05 50 54.9 -0.3**
NCB LR LR
comp=Z,4µm,22.0s
WVT Waverly 127.43 36 *e*PKIKP **PKPdf 05 50 55.3 -0.1**
WVT Waverly 127.43 36 *e*PKPdf **PKPdf 05 50 55.3 -0.1**
OXF Oxford 127.58 38 *e*PKIKP **PKPdf 05 50 55.4 -0.3**
OXF MLR MLR
comp=Z,2µm,21.0s
OXF Oxford 127.58 38 *e*PKPdf **PKPdf 05 50 55.4 -0.3**
OXF LR LR
comp=Z,2µm,21.0s
MDV Middlebury 127.73 19 *e*PKPdf **PKPdf 05 50 55.8 +0.1**
LBNH Lisbon 127.90 17 *e*PKIKP **PKPdf 05 50 56.3 +0.2**
LBNH MLR MLR
comp=Z,4µm,21.0s
LBNH Lisbon 127.90 17 *e*PKPdf **PKPdf 05 50 56.3 +0.2**
LBNH LR LR
comp=Z,4µm,21.0s
PLAL Pickwick Lake 128.08 37 PFAKE 05 51 10.0 +13
PLAL LR LR
comp=Z,2µm,21.0s
WVL Waterville 128.23 15 *e*PKPdf **PKPdf 05 50 55.9 -0.8**
HNH Hanover 128.27 18 *e*PKPdf **PKPdf 05 50 57.1 +0.3**
VBMS Vicksburg 128.35 41 *e*PKPdf **PKPdf 05 50 57.5 +0.2**
VBMS LR LR
comp=Z,2µm,20.0s
BINY Binghamton 128.35 22 *e*PKPdf **PKPdf 05 50 57.5 +0.4**
BINY LR LR
comp=Z,2µm,20.0s
PMPST Porto Santo, M 128.60 320 *e*PKPdf **PKPdf 05 50 57.9 +0.2**
PMPS Porto Santo 128.61 320 *e*PKPdf **PKPdf 05 51 00.6 +2.9**
PMPS Porto Santo 128.61 320 *e*PP PP 05 53 05.7 +2.4
TRY Troy 128.71 20 *e*PKPdf **PKPdf 05 50 58.1 +0.5**
USHA Ushuaia 128.89 168 PKPpre PKPpre 05 50 47.3
USHA PKP **PKiKP 05 50 59.9 +1.7**
USHA SKPbc SKiKP 05 54 13.4 -15
USHA Ushuaia 128.89 168 PKhKP PKPpre 05 50 47.3
comp=Z,6.4nm,1.0s,baz=172,slow=15,SNR=2.3
USHA PKP **PKiKP 05 50 59.9 +1.7**
comp=Z,16nm,0.7s,baz=94,slow=0.7,SNR=13
USHA SKPbc SKiKP 05 54 13.4 -15
comp=Z,17nm,0.8s,baz=223,slow=6.5,SNR=4.9
SSPA Standing Stone 128.94 25 *e*PKPdf **PKPdf 05 50 58.1 0.0**
SWET Sewanee 129.17 35 *e*PKPdf **PKPdf 05 50 57.8 -1.0**
PMAR Madeira 129.20 320 *e*PKPdf **PKPdf 05 51 02.0 +2.9**
PMAR Madeira 129.20 320 *e*PP PP 05 53 08.2 +0.8
PMOZ Porto Moniz, M 129.31 321 *e*PKPdf **PKPdf 05 50 57.8 -1.4**
PMOZ *e*LR LR 06 34 16.6
comp=Z,1µm,20.0s
TZTN Tazewell 129.52 32 *e*PKPdf **PKPdf 05 50 58.8 -0.6**
CPCT Cooper Cave 129.80 34 *e*PKPdf **PKPdf 05 50 59.2 -0.7**
LRAL Lakeview Retre 130.06 38 *e*PKPdf **PKPdf 05 51 00.1 -0.4**
LRAL LR LR
comp=Z,3µm,22.0s
TKL Tuckaleechee C 130.06 33 PKPpre PKPpre 05 50 48.9
TKL *e*PKPdf **PKPdf 05 51 00.2 -0.2**
TKL PKP **PKiKP 05 51 01.0 -0.3**
TKL SKPbc **SKPbc 05 54 18.4 +1.0**
TKL Tuckaleechee C 130.06 33 PKhKP PKPpre 05 50 48.9
comp=Z,3.5nm,0.7s,baz=80,slow=4.2,SNR=4.4
TKL PKP **PKiKP 05 51 01.0 -0.3**
comp=Z,36nm,0.7s,baz=142,slow=1.4,SNR=24
TKL SKPbc **SKPbc 05 54 18.4 +1.0**
comp=Z,160nm,1.1s,baz=275,slow=3.2,SNR=23
CMLA Cha da Macela 130.32 332 *e*PKP **PKPdf 05 51 03.0 +2.1**
CMLA Cha da Macela 130.32 332 PFAKE 05 51 10.0 +9.1
CMLA LR LR
comp=Z,3µm,22.0s
PSET Sete Cidades 130.36 332 *e*PKP **PKPdf 05 50 57.3 -3.7**
PSET *e*SKP 05 54 17.9
ADH Angra Heroismo 130.38 334 *e*PKP **PKPdf 05 51 02.9 +2.0**
ADH *e*SKP 05 54 17.9
PDA Ponta Delgada 130.40 332 *e*PKP **PKPdf 05 51 00.3 -0.7**
PDA *e*SKP 05 54 17.4
BLA Blacksburg 130.60 29 *e*PKIKP **PKPdf 05 51 01.0 -0.5**
BLA MLR MLR
comp=Z,2µm,20.0s
BLA Blacksburg 130.60 29 *e*PKPdf **PKPdf 05 51 01.0 -0.5**
BLA LR LR
comp=Z,2µm,20.0s
PSMN Pico do Norte, 130.70 331 *e*PKP **PKPdf 05 51 01.3 -0.3**
PSMN *e*SKP 05 54 17.0
DBIC Dimbokro 130.72 283 *e*P **PKPdf 05 51 02.9 +0.7**
DBIC Dimbokro 130.72 283 PKPpre PKPpre 05 50 53.1
DBIC PKP **PKPdf 05 51 02.4 +0.2**
DBIC *e*PKPdf **PKPdf 05 51 02.9 +0.7**
DBIC SKPbc **SKPab 05 54 20.8 +0.3**
DBIC Dimbokro 130.72 283 PKhKP PKPpre 05 50 53.1
comp=Z,3.2nm,0.6s,baz=30,slow=3.9,SNR=7.0
DBIC PKP **PKPdf 05 51 02.4 +0.2**
comp=Z,31nm,0.7s,baz=73,slow=2.4,SNR=29
DBIC SKPbc **SKPab 05 54 20.8 +0.3**
comp=Z,480nm,1.1s,baz=62,slow=5.5,SNR=52
PSMA Santa Maria 130.74 331 *e*PKP **PKPdf 05 51 02.1 +0.4**
PSMA *e*SKP 05 54 17.4
ROSA Rosais 130.76 335 *e*SKP **SKPbc 05 54 20.0 +0.2**
PMAN Manadas 130.77 334 *e*PKP **PKPdf 05 51 01.5 -0.2**
PMAN *e*SKP 05 54 19.0
PID Ribeirinha 130.94 334 *e*PKP **PKPdf 05 51 02.2 +0.1**
LIC Lamto 130.98 283 *e*PKIKP **PKPdf 05 51 03.0 +0.3**
comp=Z,112nm,0.7s
LIC Lamto 130.98 283 *e*PKPdf **PKPdf 05 51 03.0 +0.3**
CALA Caldeira 131.07 335 *e*SKP **SKPbc 05 54 21.6 +0.5**
PCAN Candelaria 131.08 335 *e*SKP **SKPbc 05 54 18.6 -2.4**
CBN Corbin 131.19 26 *e*PKPdf **PKPdf 05 51 02.9 +0.4**
CBN LR LR
comp=Z,3µm,22.0s
BRAL Brewton 131.38 40 *e*PKPdf **PKPdf 05 51 04.5 +1.5**
BRAL LR LR
comp=Z,3µm,22.0s
JSRW J. Sargeant Re 131.39 27 *e*PKPdf **PKPdf 05 51 03.8 +1.0**
KMSC Kings Mountain 131.75 32 ⇓SKP **SKPbc 05 54 22.4 -1.2**
baz=132
JSC Jenkinsville 132.45 32 *e*PKIKP **PKPdf 05 51 05.5 +0.5**
JSC Jenkinsville 132.45 32 *e*PKPdf **PKPdf 05 51 05.5 +0.5**
SHEL Horse Pasture 132.62 253 PFAKE 05 51 20.0 +14
SHEL LR LR
comp=Z,3µm,20.0s
CMIG Matias Romero 132.92 61 PKP **PKPdf 05 51 07.4 +1.1**
CMIG SKPbc **SKPbc 05 54 28.9 +0.8**
CMIG Matias Romero 132.92 61 PKP **PKPdf 05 51 07.4 +1.1**
comp=Z,24nm,1.0s,baz=285,slow=3.4,SNR=18
CMIG SKPbc **SKPbc 05 54 28.9 +0.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,22nm,1.0s,baz=284,slow=3.3,SNR=8.5						
TIGA	Tifton	133.24	37	⇑SKP	SKPbc	05 54 27.5	-1.3
	baz=133						
CNNC	Cliffs of the	133.40	29	PFAKE		05 51 20.0	+13
CNNC				LR	LR		
	comp=Z,3μm,22.0s						
EFI	East Falkland	133.44	175	PFAKE		05 51 20.0	+14
EFI				LR	LR		
	comp=Z,4μm,19.0s						
NHSC	New Hope	133.93	32	PFAKE		05 51 20.0	+12
NHSC				LR	LR		
	comp=Z,4μm,22.0s						
TEIG	Tepich	136.97	53	PKPpre	PKPpre	05 51 04.6	
TEIG				PKP	PKPdf	05 51 14.1	+0.3
TEIG				SKPbc	SKPbc	05 54 43.3	+2.3
TEIG				LR	LR		
	comp=Z,1μm,20.0s						
TEIG	Tepich	136.97	53	PKhKP	PKPpre	05 51 04.6	
	comp=Z,7.3nm,0.8s,baz=51,slow=6.5,SNR=3.0						
TEIG				PKP	PKPdf	05 51 14.1	+0.3
	comp=Z,22nm,0.9s,baz=31,slow=5.3,SNR=6.2						
TEIG				SKPbc	SKPbc	05 54 43.3	+2.3
	comp=Z,29nm,1.0s,baz=225,slow=1.4,SNR=3.5						
BBTS	Babate	139.00	299	PKPpre	PKPpre	05 51 10.8	
BBTS				PKP	PKiKP	05 51 19.3	-0.5
BBTS				SKPbc	SKPbc	05 54 47.2	+0.3
BBTS				SKPab	SKPab	05 54 58.0	+1.5
BBTS	Babate	139.00	299	PKhKP	PKPpre	05 51 10.8	
	comp=Z,25nm,0.9s,baz=39,slow=3.3,SNR=3.3						
BBTS				PKP	PKiKP	05 51 19.3	-0.5
	comp=Z,44nm,0.9s,baz=232,slow=1.0,SNR=4.7						
BBTS				SKPbc	SKPbc	05 54 47.2	+0.3
	comp=Z,366nm,1.4s,baz=46,slow=2.1,SNR=9.9						
BBTS				SKPab	SKPab	05 54 58.0	+1.5
	comp=Z,47nm,0.9s,baz=12,slow=3.9,SNR=3.1						
TGUH	Tegucigalpa,Un	140.83	60	ePKPdf	PKPdf	05 51 21.3	+0.3
TGUH				LR	LR		
	comp=Z,2μm,22.0s						
BBSR	BB Station	141.00	16	PFAKE		05 51 30.0	+9.2
BBSR				LR	LR		
	comp=Z,2μm,21.0s						
PLCA	Paso Flores	141.17	158	PKPpre	PKPpre	05 51 14.1	
PLCA				PKP	PKPdf	05 51 22.1	+1.1
PLCA				ePKPdf	PKiKP	05 51 22.5	-1.3
PLCA				SKPbc	SKPbc	05 54 52.0	-0.1
PLCA	Paso Flores	141.17	158	PKhKP	PKPpre	05 51 14.1	
	comp=Z,4.9nm,0.8s,baz=135,slow=19,SNR=2.7						
PLCA				PKP	PKPdf	05 51 22.1	+1.1
	comp=Z,12nm,0.7s,baz=136,slow=2.3,SNR=6.2						
PLCA				SKPbc	SKPbc	05 54 52.0	-0.1
	comp=Z,110nm,1.2s,baz=214,slow=3.3,SNR=7.1						
PAYG	Puerto Ayora	142.32	84	ePKPdf	PKPdf	05 51 24.6	+0.8
PAYG				LR	LR		
	comp=Z,4μm,21.0s						
JTS	JuntasAbangare	144.50	64	ePKPdf	PKPbc	05 51 26.5	+0.3
JTS				SKPbc	SKiKP	05 55 01.5	-0.1
JTS				LR	LR		
	comp=Z,3μm,22.0s						
JTS	JuntasAbangare	144.50	64	PKP	PKPbc	05 51 26.5	+0.3
	comp=Z,132nm,0.9s,baz=338,slow=3.3,SNR=96						
JTS				SKPbc	SKiKP	05 55 01.5	-0.1
	comp=Z,28nm,1.0s,baz=301,slow=7.3,SNR=5.4						
SACV	Santiago Islan	144.82	305	ePKPdf	PKPab	05 51 26.7	-0.4
SACV				LR	LR		
	comp=Z,1μm,20.0s						
CGA2	Cerro Gallo 2	145.04	64	eP	PKPdf	05 51 29.2	+0.5
LAJ	Bijagual	145.41	64	eP	PKPdf	05 51 29.2	-0.2
QCR	Quepos	145.55	65	eP	PKPab	05 51 29.8	-0.1
BUS	Buena Vista	145.87	65	eP	PKPab	05 51 31.9	+0.3
TRQA	Tornquist	146.21	167	ePKPbc	PKPbc	05 51 30.9	0.0
TRQA				LR	LR		
	comp=Z,2μm,21.0s						
MTDJ	Mount Denham	146.31	46	ePKPbc	PKPbc	05 51 32.1	+0.3
MTDJ				LR	LR		
	comp=Z,1μm,22.0s						
BBJ	Bamboo Saint A	146.40	45	i P	PKPbc	05 51 32.5	+0.5
BBJ	Bamboo Saint A	146.40	45	i P	PKPbc	05 51 32.5	+0.5
MCJ	Malvern	146.40	46	i P	PKPbc	05 51 32.4	+0.3
MCJ	Malvern	146.40	46	i P	PKPab	05 51 32.7	-0.3
BNJ	Bonny Gate	146.66	45	⇑iP	PKPbc	05 51 33.4	+0.6
BNJ	Bonny Gate	146.66	45	i P	PKPab	05 51 35.6	+1.6
ACR	Cerro Adams	146.76	66	eP	PKPbc	05 51 33.0	-0.3
GTBY	Guantanamo Bay	146.79	41	ePKPbc	PKPbc	05 51 33.5	+0.5
GTBY				LR	LR		
	comp=Z,3μm,22.0s						
PCJ	Portland Cotta	146.90	46	i P	PKPab	05 51 34.2	-0.7
PCJ	Portland Cotta	146.90	46	⇑iP	PKPab	05 51 34.1	-0.7
STH	Stony Hill	146.92	45	i P	PKPbc	05 51 34.0	+0.4
STH	Stony Hill	146.92	45	⇑iP	PKPbc	05 51 33.9	+0.4
GWJ	Greenwich	146.98	45	i P	PKPbc	05 51 34.6	+0.7
GWJ	Greenwich	146.98	45	i P	PKPbc	05 51 33.1	-0.8
HOJ	Hope	147.01	45	i P	PKPbc	05 51 34.1	+0.3
HOJ	Hope	147.01	45	i P	PKPbc	05 51 34.1	+0.3
LMEL	Las Melosas	147.20	153	⇑iP	PKPbc	05 51 34.3	+0.2
YHJ	Yallahs	147.27	45	i P	PKPbc	05 51 35.2	+0.6
YHJ	Yallahs	147.27	45	⇑iP	PKPbc	05 51 35.0	+0.5
CLCH	Cerro Calan	147.42	152	⇑iP	PKPbc	05 51 34.6	0.0
PEL	Peldehue	147.56	151	⇓iP	PKPbc	05 51 34.8	-0.2
GRTK	Grand Turk	147.98	34	ePKPbc	PKPbc	05 51 37.0	+0.7
GRTK				LR	LR		
	comp=Z,2μm,21.0s						
CMCH	Combarbala	148.99	149	⇑iP	PKPbc	05 51 39.1	+0.3
BCIP	Isla Barro Col	149.53	62	ePKPdf	PKPdf	05 51 35.4	-0.5
BCIP				ePKPbc	PKPbc	05 51 41.0	+0.5
BCIP				LR	LR		
	comp=Z,3μm,22.0s						
SDDR	Presa de Saban	149.88	37	ePKPdf	PKPdf	05 51 37.9	+1.4
SDDR				ePKPbc	PKiKP	05 51 41.9	-0.3
SDDR				LR	LR		
	comp=Z,2μm,22.0s						
TLL	Tololo Astrono	149.89	148	eP	PKPbc	05 51 40.8	-0.5
CFAA	Coronel Fontan	149.98	153	PKP	PKPdf	05 51 38.5	+2.3
CFAA				PKPbc	PKiKP	05 51 41.7	-0.4
CFAA	Coronel Fontan	149.98	153	PKP	PKPdf	05 51 38.5	+2.3
	comp=Z,1.8nm,0.8s,baz=232,slow=2.0,SNR=30						
CFAA				PKPbc	PKiKP	05 51 41.7	-0.4
	comp=Z,15nm,0.8s,baz=237,slow=3.7,SNR=69						
LCO	Las Campanas	150.85	146	ePKPdf	PKPdf	05 51 39.2	+1.2
LCO				ePKPbc	PKiKP	05 51 44.5	+0.2
LCO				LR	LR		
	comp=Z,2μm,20.0s						
AGPR	Aguadilla, PR	152.61	31	ePKPdf	PKPdf	05 51 39.3	-1.2
AGPR				ePKPbc	PKiKP	05 51 48.1	+0.3
LSP	Las Mesas	152.87	31	ePKPdf	PKPdf	05 51 42.5	+1.6
LSP				ePKPbc	PKPbc	05 51 48.0	-0.1
LRS	Lares	152.89	30	ePKPdf	PKPdf	05 51 41.3	+0.3
LRS				ePKPbc	PKPbc	05 51 48.2	0.0
LRS				ePKPab	PKPab	05 51 59.5	+0.1
CRPR	Cabo Rojo, PR	153.00	31	ePKPdf	PKPdf	05 51 39.7	-1.4
CELP	Cerrillos	153.21	30	ePKPdf	PKPdf	05 51 41.8	+0.4
CELP				ePKPbc	PKPbc	05 51 48.8	-0.1
OBIP	Obispado Ponce	153.22	30	ePKPdf	PKPdf	05 51 40.5	-1.0
OBIP				ePKPbc	PKPbc	05 51 48.4	-0.5
SJG	San Juan	153.39	29	ePKPdf	PKPdf	05 51 41.5	-0.2
SJG				PKP	PKPdf	05 51 42.3	+0.7
SJG				PKPbc	PKPbc	05 51 48.9	-0.4
SJG				LR	LR		
	comp=Z,2μm,21.0s						
SJG	San Juan	153.39	29	PKP	PKPdf	05 51 42.3	+0.7
	comp=Z,15nm,0.8s,baz=333,slow=5.0,SNR=6.5						
SJG				PKPbc	PKPbc	05 51 48.9	-0.4
	comp=Z,28nm,0.5s,baz=354,slow=4.9,SNR=9.7						
CBYP	Canovanas	153.39	29	ePKPdf	PKPdf	05 51 43.9	+2.1
CBYP				ePKPbc	PKPbc	05 51 49.2	-0.1
CBYP				ePKPab	PKPab	05 52 02.0	+0.5
MTP	Monte Pirata	153.69	28	ePKPdf	PKPdf	05 51 40.8	-1.3
MTP				ePKPbc	PKPbc	05 51 49.7	-0.2
MTP				ePKPab	PKPab	05 52 02.1	-0.5
STVI	Saint Thomas	153.74	27	ePKPdf	PKPdf	05 51 41.9	-0.3
STVI				ePKPbc	PKPbc	05 51 49.7	-0.3
OTAV	Otavalo	153.83	79	ePKPdf	PKPdf	05 51 43.0	-0.1
OTAV				LR	LR		
	comp=Z,3μm,22.0s						
CDVI	St. Croix	154.35	27	ePKPbc	PKPbc	05 51 50.8	-0.5
ATAH	Atahualpa	154.49	96	PKP	PKPdf	05 51 46.2	+2.3
ATAH				PKPbc	PKiKP	05 51 54.6	+2.3
ATAH	Atahualpa	154.49	96	PKP	PKPdf	05 51 46.2	+2.3
	comp=Z,39nm,1.2s,baz=101,slow=2.2,SNR=20						
ATAH				PKPbc	PKiKP	05 51 54.6	+2.3
	comp=Z,61nm,0.9s,baz=264,slow=3.4,SNR=15						
NNA	Nana	155.30	107	ePKPdf	PKPdf	05 51 45.1	+0.6
NNA				PKP	PKP	05 51 46.0	
NNA				ePKPbc	PKPab	05 51 51.0	-19
NNA				LR	LR		
	comp=Z,2μm,22.0s						
NNA	Nana	155.30	107	PKP	PKPdf	05 51 46.0	+1.5
	comp=Z,51nm,1.0s,baz=267,slow=4.7,SNR=8.7						
ANWB	Willy Bob	155.64	21	PFAKE		05 52 00.0	-11
ANWB				LR	LR		
	comp=Z,2μm,21.0s						
ROSC	El Rosal	156.31	65	PKP	PKPdf	05 51 47.4	+1.0
ROSC	El Rosal	156.31	65	PKP	PKPdf	05 51 47.4	+1.0
	comp=Z,16nm,0.7s,baz=306,slow=2.3,SNR=26						
SDV	Santo Domingo	157.40	52	ePKPdf	PKPdf	05 51 47.7	+0.2
ARE	Arequipa	158.51	123	ePKIKP	PKPdf	05 51 50.0	+1.1
ARE	Arequipa	158.51	123	eP	PKPdf	05 51 50.0	+1.1
CPUP	Villa Florida	158.51	169	PKP	PKPdf	05 51 49.0	+0.8
CPUP				PKPab	PKPab	05 52 24.6	+1.5
CPUP	Villa Florida	158.51	169	PKP	PKPdf	05 51 49.0	+0.8
	comp=Z,8.1nm,0.7s,baz=66,slow=0.3,SNR=32						
CPUP				PKPab	PKPab	05 52 24.6	+1.5
	comp=Z,20nm,0.8s,baz=171,slow=4.2,SNR=5.7						
FDF	Fort de France	158.57	23	ePKIKP	PKPdf	05 51 49.0	+0.4
FDF				MLR	MLR		
	comp=Z,2μm,22.0s						
FDF	Fort de France	158.57	23	ePKPdf	PKPdf	05 51 49.0	+0.4
FDF				LR	LR		
	comp=Z,2μm,22.0s						
CAM4	Nova Friburgo	160.24	209	⇑iP	PKPab	05 52 31.1	0.0
CAM4				i		05 52 32.5	
CAM4				i		05 52 34.6	
CAM4				i		05 52 40.8	
CAM4				i		05 52 45.6	
CAM4				i		05 52 50.4	
CAM4				i		05 52 55.2	
CAM4				i		05 53 01.9	
BBGH	Gun Hill	160.62	20	PFAKE		05 52 00.0	+9.1
BBGH				LR	LR		
	comp=Z,7μm,22.0s						
GRGR	Grenville	160.70	27	PFAKE		05 52 00.0	+9.0
GRGR				LR	LR		
	comp=Z,2μm,22.0s						
SPB	Sao Paulo	160.96	195	PFAKE		05 52 00.0	+8.9
SPB				LR	LR		
	comp=Z,2μm,22.0s						
LPAZ	La Paz	161.34	128	ePKPdf	PKPdf	05 51 53.2	+0.7
LPAZ				PKP	PKP	05 51 54.2	
LPAZ				ePKPab	PKPab	05 52 37.3	+0.7
LPAZ				PKPab	PKPab	05 52 38.7	+2.0
LPAZ	La Paz	161.34	128	PKP	PKPdf	05 51 54.2	+1.8
	comp=Z,26nm,0.9s,baz=17,slow=1.0,SNR=40						
LPAZ				PKPab	PKPab	05 52 38.7	+2.1
	comp=Z,61nm,0.9s,baz=238,slow=0.3,SNR=10						
RCBR	Riachuelo	163.16	267	ePKPdf	PKPdf	05 51 52.1	-1.6
RCBR				PKP	PKP	05 51 54.6	
RCBR				PKPab	PKPab	05 52 43.3	-0.8
RCBR				ePKPab	PKPab	05 52 43.5	-0.6
RCBR				LR	LR		
	comp=Z,2μm,22.0s						
RCBR	Riachuelo	163.16	267	PKP	PKPdf	05 51 54.6	+0.9
	comp=Z,28nm,0.9s,baz=126,slow=0.8,SNR=13						
RCBR				PKPab	PKPab	05 52 43.3	-0.8
	comp=Z,82nm,1.0s,baz=89,slow=4.9,SNR=12						
SIV	San Ignacio	166.53	144	PKP	PKPdf	05 51 57.5	+1.1
SIV				PKPab	PKPab	05 53 00.6	+2.1
SIV	San Ignacio	166.53	144	PKP	PKPdf	05 51 57.5	+1.1
	comp=Z,47nm,1.1s,baz=224,slow=1.3,SNR=59						
SIV				PKPab	PKPab	05 53 00.6	+2.1
	comp=Z,14nm,0.9s,baz=218,slow=6.8,SNR=6.0						
BDFB	Brasilia	168.57	204	PKP	PKPdf	05 51 57.4	-0.6
BDFB				PKPab	PKPab	05 53 09.2	+1.6
BDFB	Brasilia	168.57	204	PKP	PKPdf	05 51 57.4	-0.6
	comp=Z,9.4nm,0.9s,baz=58,slow=2.5,SNR=13						
BDFB				PKPab	PKPab	05 53 09.2	+1.6
	comp=Z,20nm,0.9s,baz=126,slow=0.4,SNR=6.4						
SAML	Samuel	169.04	111	ePKPdf	PKPdf	05 51 58.4	+0.2
SAML				LR	LR		
	comp=Z,3μm,22.0s						

DDA 04 05:34:27.7, 38.23N×26.63E, h6km, MD2.5, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.14	350	i P	Pg	05 34 30.8	+0.2
URLA				i S	Sg	05 34 33.4	+0.9

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*ISCJB **04** 05:41:43.2±0.3, 38.41N±0.02×21.94E±0.03, h11km±2km, Error ellipse: s-maj=3.9km s-min=3.2km az=39.1*
*THE **04** 05:41:43.6, 38.41N×21.93E, h9km±1km, ML2.2/6, Error ellipse: s-maj=1.2km s-min=0.6km az=139.0*
*ATH **04** 05:41:43.5, 38.41N×21.93E, h9km±1km, MD3.1/19*
*CSEM **04** 05:41:43.2±0.1, 38.41N×21.95E, h8km, MD3.1, Error ellipse: s-maj=3.3km s-min=2.7km az=120.0*
ISC 04 05:41:43.4±0.8**, 38.42N**±0.02×**21.93E**±0.02**, h10**km±4km**, n64,** σ**0.53**/98**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	Efpalio	0.02	291	P	Pg	05 41 45.0	-0.2
EFP				S	Sg	05 41 46.3	-0.1
EFP	Efpalio	0.02	291	ePG	Pg	05 41 45.0	-0.2
EFP				eSG	Sg	05 41 46.4	0.0
EFP	Efpalio	0.02	291	P	Pg	05 41 45.0	-0.2
EFP				eSg	Sg	05 41 46.4	0.0
PSA1	Psathopyrgos	0.10	201	ePG	Pg	05 41 46.0	0.0
PSA1				eSG	Sg	05 41 48.0	+0.2
TRIZ	Trizonia	0.12	116	P	Pg	05 41 46.3	0.0
TRIZ				S	Sg	05 41 48.7	+0.3
TRIZ	Trizonia	0.12	116	ePG	Pg	05 41 46.3	0.0
TRIZ				eSG	Sg	05 41 48.7	+0.3
TRIZ	Trizonia	0.12	116	P	Pg	05 41 46.3	0.0
TRIZ				S	Sg	05 41 48.7	+0.3
KALE	Kalithea	0.17	100	P	Pg	05 41 47.0	-0.1
KALE				S	Sg	05 41 50.0	+0.3
KALE	Kalithea	0.17	100	ePG	Pg	05 41 47.0	-0.1
KALE				eSG	Sg	05 41 49.9	+0.3
KALE	Kalithea	0.17	100	P	Pg	05 41 47.0	-0.1
KALE				S	Sg	05 41 50.0	+0.3
UPR	University Cam	0.18	220	P	Pg	05 41 47.3	+0.1
UPR	University Cam	0.18	220	ePG	Pg	05 41 47.5	+0.3
UPR				eSG	Sg	05 41 50.5	+0.7
UPR	University Cam	0.18	220	ePg	Pg	05 41 47.5	+0.3
UPR				eSg	Sg	05 41 50.5	+0.7
LAKA	Lakka	0.18	168	P	Pg	05 41 47.4	+0.1
LAKA	Lakka	0.18	168	ePG	Pg	05 41 47.4	+0.1
LAKA				eSG	Sg	05 41 50.4	+0.4
LAKA	Lakka	0.18	168	P	Pg	05 41 47.4	+0.1
LAKA				eSg	Sg	05 41 50.4	+0.4
DSF	Desfina	0.47	91	P	Pg	05 41 52.0	-0.6
DSF				S	Sg	05 41 59.5	+0.7
DSF	Desfina	0.47	91	P	Pg	05 41 52.0	-0.6
DSF				S	Sg	05 41 59.5	+0.7
EVR	Evrytania	0.51	349	P	Pg	05 41 53.1	-0.2
EVR				S	Sg	05 42 01.3	+1.3
EVR	Evrytania	0.51	349	ePG	Pg	05 41 53.2	-0.1
EVR				eSB	Sg	05 42 01.3	+1.3
EVR	Evrytania	0.51	349	P	Pg	05 41 53.1	-0.2
EVR				S	Sg	05 42 01.3	+1.3
RLS	Riolos of Patr	0.51	225	P	Pg	05 41 53.5	+0.1
RLS				S	Sb	05 42 01.7	-0.3
RLS	Riolos of Patr	0.51	225	ePB	Pg	05 41 53.5	+0.1
RLS				eSB	Sb	05 42 01.4	-0.6
RLS	Riolos of Patr	0.51	225	P	Pg	05 41 53.5	+0.1
RLS				eSb	Sb	05 42 01.4	-0.6
RLS				S	Sb	05 42 01.7	-0.3
GUR	Goura	0.58	146	P	Pg	05 41 53.8	-0.9
GUR	Goura	0.58	146	ePB	Pg	05 41 54.0	-0.7
GUR				eSB	Sg	05 42 03.2	+0.8
GUR	Goura	0.58	146	ePb	Pg	05 41 54.0	-0.7
GUR				eSb	Sg	05 42 03.2	+0.8
MAKR	Makrakomi, Fth	0.61	15	P	Pg	05 41 55.4	+0.1
MAKR				S	Sb	05 42 05.4	+0.4
MAKR	Makrakomi, Fth	0.61	15	P	Pg	05 41 55.4	+0.1
MAKR				S	Sb	05 42 05.4	+0.4
AXAR	Agios Charalam	0.67	59	P	Pg	05 41 55.6	-0.7
AXAR				S	Sb	05 42 07.1	+0.5
AXAR	Agios Charalam	0.67	59	P	Pg	05 41 55.6	-0.7
AXAR				S	Sb	05 42 07.1	+0.5
AGG	Agios Georgios	0.68	27	P	Pg	05 41 55.8	-0.8
AGG				S	Sb	05 42 06.7	-0.2
AGG	Agios Georgios	0.68	27	ePB	Pg	05 41 55.8	-0.8
AGG				eSB	Sb	05 42 06.9	0.0
AGG	Agios Georgios	0.68	27	P	Pg	05 41 55.8	-0.8
AGG				S	Sb	05 42 06.7	-0.2
LKR	Lokris	0.87	74	P	Pg	05 41 59.2	-1.0
LKR				S	Sb	05 42 13.1	+0.8
LKR	Lokris	0.87	74	ePB	Pg	05 42 00.0	-0.2
LKR	Lokris	0.87	74	P	Pg	05 41 59.2	-1.0
LKR	Lokris	0.87	74	ePb	Pg	05 42 00.0	-0.2
LKR				S	Sb	05 42 13.1	+0.8
AMT	Artemida-Makis	0.90	191	P	Pg	05 42 00.6	-0.2
AMT	Artemida-Makis	0.90	191	ePB	Pg	05 42 00.8	0.0
AMT	Artemida-Makis	0.90	191	ePb	Pg	05 42 00.8	0.0
LTK	Loutraki	0.91	116	P	Pg	05 42 00.4	-0.4
LTK	Loutraki	0.91	116	ePG	Pg	05 42 00.5	-0.4
LTK	Loutraki	0.91	116	ePg	Pg	05 42 00.5	-0.4
LKD2	Lefkada island	1.06	291	ePN	Pg	05 42 04.0	+0.2
LKD2	Lefkada island	1.06	291	ePn	Pg	05 42 04.0	+0.2
VLS	Valsamata	1.08	257	P	Pg	05 42 03.2	-1.0
VLS	Valsamata	1.08	257	ePG	Pg	05 42 03.2	-1.0
VLS	Valsamata	1.08	257	P	Pg	05 42 03.2	-1.0
THL	Klokotos Trika	1.15	3	P	Pb	05 42 04.7	-0.6
THL	Klokotos Trika	1.15	3	ePN	Pb	05 42 05.0	-0.3
THL	Klokotos Trika	1.15	3	P	Pb	05 42 04.7	-0.6
THL	Klokotos Trika	1.15	3	ePn	Pb	05 42 05.0	-0.3
ITM	Ithomi	1.24	180	ePN	Pn	05 42 06.2	-0.6
ITM	Ithomi	1.24	180	ePn	Pn	05 42 06.2	-0.6
NEO	Neokhori	1.34	48	ePG	Pn	05 42 08.3	0.0
NEO	Neokhori	1.34	48	ePg	Pn	05 42 08.3	0.0
DID	Didima	1.38	131	P	Pn	05 42 08.7	-0.1
DID	Didima	1.38	131	ePG	Pn	05 42 08.9	+0.1
DID	Didima	1.38	131	P	Pn	05 42 08.7	-0.1
PYL	PYLOS	1.53	186	ePG	Pb	05 42 11.9	+0.1
PYL	PYLOS	1.53	186	ePg	Pb	05 42 11.9	+0.1
VLI	Veliai	1.88	154	ePG	Pb	05 42 18.1	+0.3
VLI	Veliai	1.88	154	ePg	Pb	05 42 18.1	+0.3

IDC 04 05:47:56.8±2.2**, 3.66N×127.10E, h0**km**, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/23**, mbtmp3.7**/4**, Error ellipse: s-maj=189.6km s-min=26.2km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.51	163	P	P	05 53 17.4	-0.7
	0.6nm,0.3s,baz=343,slow=9.8,SNR=4.8						
ASAR	Alice Springs	27.96	167	P	P	05 53 49.5	+0.2
	0.7nm,0.8s,baz=349,slow=9.6,SNR=4.1						
STKA	Stephens Creek	37.93	160	P	P	05 55 16.4	+0.3
	2.1nm,0.8s,baz=337,slow=8.4,SNR=4.2						
MKAR	Makanchi Array	57.83	325	P	P	05 57 50.0	-0.2
	0.2nm,0.4s,baz=117,slow=7.3,SNR=4.2						

PRE 04 05:53:55.7±1.9**, 26.36S×27.49E, h2**km**, ML2.5, 1C, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLOF	Kloof	0.10	84	⇑iP	Pg	05 53 58.6	+0.5
KLOF				eS	Sg	05 53 59.8	+0.1
KLOF				AML	AML	05 53 59.9	
	comp=Z,2μm,0.2s						
PRYS	Parys	0.58	192	eP	Pg	05 54 07.1	+0.1
PRYS				eS	Sg	05 54 15.0	+0.3
PRYS				AML	AML	05 54 20.1	
	comp=Z,259nm,0.7s						
ERPM	east rand prop	0.67	89	eP	Pg	05 54 09.1	+0.2
ERPM				eS	Sg	05 54 16.7	-1.1
ERPM				AML	AML	05 54 23.2	
	comp=Z,76nm,0.9s						
KSR	Koster	0.74	313	eP	Pg	05 54 10.0	-0.1
KSR				eS	Sg	05 54 19.1	-0.8
KSR				AML	AML	05 54 26.7	
	comp=Z,264nm,0.8s						
SLR	Silverton	0.94	49	eP	Pg	05 54 14.1	+0.1
SLR				eS	Sg	05 54 26.6	+0.1
SLR				AML	AML	05 54 33.0	
	comp=Z,154nm,0.2s						
SEK	Senekal	1.96	177	eP	Pb	05 54 31.7	-0.6
SEK				eS	Sn	05 54 55.8	+0.3
SEK				AML	AML	05 54 58.0	
	comp=Z,65nm,0.6s						
LBTB	Lobatse	2.17	308	eP	Pn	05 54 34.4	+1.3
LBTB				eS	Sn	05 55 01.9	+1.3
LBTB				AML	AML	05 55 04.6	
	comp=Z,112nm,0.3s						
BOSA	Boshof	3.00	221	eP	Pn	05 54 44.3	-0.2
BOSA				eS	Sn	05 55 19.5	-1.6
BOSA				AML	AML	05 55 40.7	
	comp=Z,15nm,0.8s						
BLWY	Bulawayo	6.28	10	i P	Pn	05 55 29.6	0.0
BLWY				i		05 55 29.9	
	baz=254,slow=14						
BLWY				i S	Sb	05 57 00.2	-1.5

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*ISCJB **04** 06:01:29.8±0.4, 34.00N±0.06×136.54E±0.07, h376km±2km, mb3.4/13, Error ellipse: s-maj=10.5km s-min=7.5km az=145.3*
*IDC **04** 06:01:30.3±0.8, 33.98N×136.57E, h365km±8km, mb3.1/13, mb1 3.2/18, mb1mx3.1/35, mbtmp3.1/18, Error ellipse: s-maj=15.1km s-min=10.0km az=107.0*
*JMA **04** 06:01:30.0±0.3, 34.04N×136.47E, h378km±3km, M3.4*
ISC 04 06:01:30.8±0.7**, 34.02N**±0.07×**136.53E**±0.06**, h371**km±5km**, n33,** σ**0.89**/44**, mb3.4**/13**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	Ise	0.40	22	P	Pn	06 02 17.5	+0.4
TTO1	TONANKAI O.B.S	0.45	152	P	Pn	06 02 17.7	+0.7
TTO2	TONANKAI O.B.S	0.50	124	P	Pn	06 02 17.9	+0.9
TTO2				S	S	06 02 56.7	+2.5
JWY	Kouya	0.80	285	P	Pn	06 02 18.3	+0.1
JWY				S	S	06 02 55.0	-1.3
JWZ	Kozaga	0.83	234	P	Pn	06 02 17.8	-0.5
JWZ				S	S	06 02 55.4	-1.0
JWT	Wachi	1.56	324	P	Pn	06 02 21.4	+0.1
JWT				S	S	06 03 00.3	-1.7
JGM	Miyama	1.68	5	P	Pn	06 02 22.4	+0.4
JGM				S	S	06 03 03.0	-0.3
JAI	Aioi	1.74	263	P	Pn	06 02 22.3	-0.1
JKG	Kaga	2.26	356	P	Pn	06 02 25.8	+0.1
JKG				S	S	06 03 09.3	-0.7
JOD2	Odawara 2	2.45	59	P	Pn	06 02 27.8	+0.6
JOD2				S	S	06 03 13.5	+0.8
JRY	Ryogami san	2.79	44	P	Pn	06 02 30.0	+0.1
JRY				S	S	06 03 17.8	+0.2
MAT	Matsushiro	2.87	28	P	Pn	06 02 30.3	-0.2
MAT				S	S	06 03 18.0	-0.8
MJAR	Matsushiro Arr	2.87	28	P	Pn	06 02 30.4	-0.1
	8.3nm,0.3s,baz=206,slow=9.3,SNR=74						
MJAR				S	S	06 03 17.5	-1.3
	baz=215,slow=19,SNR=4.6						
JHS	Saijyo	2.98	290	P	Pn	06 02 31.8	+0.2
JTO	Tosashimizu	3.32	251	P	Pn	06 02 34.2	-0.4
BSO1	Boso 1	3.74	79	P	Pn	06 02 36.5	-1.3
BSO1				S	S	06 03 30.2	-1.9
JNU	Nakatsue	4.80	261	P	Pn	06 02 49.2	-0.1
	2.3nm,0.3s,baz=64,slow=7.4,SNR=23						
KSRS	Korea Array	7.79	299	P	P	06 03 23.4	-0.3
	0.3nm,0.3s,baz=123,slow=9.7,SNR=5.9						
USRK	Ussuriysk Arra	10.76	342	P	P	06 03 57.4	-0.1
	0.2nm,0.3s,baz=182,slow=31,SNR=3.7						
ASAJ	Asahikawa	11.13	23	P	P	06 04 01.2	-0.4
	1.2nm,0.3s,baz=245,slow=12,SNR=9.7						
SONM	Songino Array	26.43	311	P	P	06 06 37.4	+2.2
	0.5nm,0.8s,baz=125,slow=7.4,SNR=3.6						
MKAR	Makanchi Array	42.43	304	P	P	06 08 50.4	-0.1
	0.3nm,0.4s,baz=86,slow=10.0,SNR=6.8						
FITZ	Fitzroy Crossi	52.86	193	P	P	06 10 09.6	-0.4
	2.2nm,0.6s,baz=7.9,slow=8.7,SNR=9.9						
WRA	Warramunga Arr	53.70	183	P	P	06 10 15.0	-1.0
	2.2nm,0.3s,baz=359,slow=7.6,SNR=9.0						
ILAR	Eielson Array	54.15	31	P	P	06 10 18.8	+0.1
	0.7nm,0.6s,baz=269,slow=5.5,SNR=15						
ASAR	Alice Springs	57.42	183	P	P	06 10 42.0	-0.1
	0.5nm,0.3s,baz=4.3,slow=6.7,SNR=13						
INK	Inuvik	58.85	26	P	P	06 10 51.8	+0.4
	0.6nm,0.4s,baz=300,slow=5.4,SNR=7.5						
RES	Resolute Bay	66.47	13	P	P	06 11 41.3	+0.3
	0.6nm,0.4s,baz=320,slow=4.3,SNR=15						
YKA	Yellowknife Ar	68.38	28	P	P	06 11 53.1	+0.1
	0.2nm,0.3s,baz=299,slow=6.0,SNR=15						
FINES	FINESS Array B	69.58	331	P	P	06 11 59.6	-0.7
	0.4nm,0.3s,baz=47,slow=6.1,SNR=9.6						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HFS	Hagfors	75.12	334	P	P	06 12 32.1	-0.7
	0.7nm,0.4s,baz=74,slow=5.1,SNR=9.6						
NVAR	Mina Array Bea	79.98	50	P	P	06 13 00.8	+0.7
	0.4nm,0.7s,baz=327,slow=4.8,SNR=3.6						
PDAR	Pinedale Array	82.60	43	P	P	06 13 14.4	+0.8
	0.6nm,0.7s,baz=307,slow=0.7,SNR=4.1						

*IDC **04** 06:05:26.0±0.7, 5°.25N×127°.43E, h0km, mb4.4/13, mb1 4.5/13, mb1mx4.2/26, mbtmp4.4/13, MS3.5/1, Ms1 3.5/1, ms1mx2.8/49, Error ellipse: s-maj=54.2km s-min=13.2km az=72.0*
*MAN **04** 06:05:31, 4°.75N×127°.15E, h14km, mb5.0, ML4.0, MS4.1*
*NEIC **04** 06:05:35.7±1.4, 5°.11N×127°.26E, h72km±13km, mb4.5/13, Error ellipse: s-maj=19.7km s-min=6.8km az=73.0*
*DJA **04** 06:05:36.9±0.9, 5°N±6°×12°8E±°, h92km±8km, M5.1/12, mB5.5/3, mb4.9/12, MLv5.3/7, Mw(mB)4.9/3*
*ISCJB **04** 06:05:36.4±0.7, 5°.08N±0°.04×127°.16E±0°.07, h94km±6km, mb4.5/24, Error ellipse: s-maj=12.5km s-min=4.8km az=162.3*
*AUST **04** 06:05:58.5, 4°.50N×127°.01E, h300km*
ISC 04 06:05:38.4±1.1**, 5°.02N**±0°.05×**127°.2E**±0°.1**, h99**km±10km**, n90, σ1s.30**/84**, mb4.5**/24**, 1C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	2.14	334	eP	Pn	06 06 07.5	-5.3
MATI				eS	Sn	06 06 39.1	0.0
GSPH	General Santos	2.49	295 ⇓	iP	Pn	06 06 11.5	-6.0
DAV	Davao City (W)	2.61	322	ePn	Pn	06 06 13.6	-5.4
DAV				eSn	Sn	06 06 52.0	+2.0
DAV	Davao City (W)	2.61	322	P	Pn	06 06 18.0	-0.9
DAV	Davao City (W)	2.61	322	Pn	Pn	06 06 14.1	-4.8
	100nm,0.3s,baz=238,slow=7.8,SNR=8.6						
DAV				LR	LR	06 06 50.8	
	comp=Z,912nm,19.5s,baz=149,slow=33						
DAV				Sn	Sn	06 06 54.0	+4.0
	225nm,0.3s,baz=83,slow=17,SNR=9.5						
KCP	Kidapawan	2.89	313 ⇓	eP	Pn	06 06 18.7	-4.1
KCP				eS	Sn	06 06 56.4	-0.5
BUKP	Musuan	3.56	323	eP	Pn	06 06 29.7	-2.0
CTBH	Cotabato--PC H	3.67	307 ⇑	iP	Pn	06 06 29.5	-3.7
TNTI	Ternate	4.22	178	P	Pn	06 06 40.7	+0.1
BUTP	Butuan	4.23	338	eP	Pn	06 06 40.6	-0.1
CGP	Cagayan de Oro	4.23	324 ⇓	eP	Pn	06 06 39.3	-1.4
CGP				i S	Sn	06 07 32.2	+3.1
MNI	Manado	4.27	214	P	Pn	06 06 45.5	+4.2
PAGZ	Pagadian	4.73	307	eP	Pn	06 06 45.6	-1.9
KMSI	Cibinong	5.47	216	P	Pn	06 07 00.3	+2.8
	364nm,0.7s,6μm2.6nm						
MSLP	Maasin	5.59	335	eP	Pn	06 06 58.4	-0.8
LBMI	Labuha	5.63	177	P	Pn	06 06 59.1	-0.6
	495nm,0.5s,5μm1.8nm						
MRSI	Marisa	6.93	230	P	Pn	06 07 16.9	-0.5
	130nm,0.7s,0.6nm						
NLAI	Namlea	8.20	181	P	Pn	06 07 33.6	-1.1
	82nm,0.7s,2μm0.8nm						
MYLDM	Lahad Datu	8.68	271	P	Pn	06 07 47.9	+6.7
	266nm,1.8s						
TTSI	Tana Toraja	10.90	223	P	Pn	06 08 16.0	+4.6
	24nm,0.8s						
TLE	Tual	11.94	152	S	Sn	06 10 43.6	+6.9
	baz=12,SNR=5.9						
SBUM	Sibu	15.18	261	P	P	06 09 12.1	+1.8
	40nm,1.0s						
WSI	Waingapu	16.14	205	S	Sn	06 12 13.4	-4.9
	baz=16,SNR=3.1						
KSM	Kuching	17.24	259	eP	P	06 09 33.4	+0.3
	43nm,0.8s						
KSM	Kuching	17.24	259	P	P	06 09 33.3	+0.2
	64nm,0.8s						
KSM	Kuching	17.24	259	P	P	06 09 34.1	+0.9
	baz=17,SNR=14						
KDU	Kakadu	18.35	163	P	Pn	06 09 46.1	-0.4
	baz=18,SNR=6.6						
YULB	Yu-li	19.14	343	eP	P	06 09 52.9	-1.0
	4.4nm,0.6s						
TPUB	Ta-pu	19.25	341	eP	P	06 09 55.0	-0.2
	9.5nm,0.5s						
FITZ	Fitzroy Crossi	23.03	184	eP	P	06 10 35.2	+0.1
	4.7nm,0.7s						
FITZ	Fitzroy Crossi	23.03	184	P	P	06 10 34.9	-0.2
	5.3nm,0.6s,baz=6.3,slow=11,SNR=18						
FITZ	Fitzroy Crossi	23.03	184	P	P	06 10 35.7	+0.6
	baz=23,SNR=7.7						
MYKOM	Kota Tinggi	23.54	263	P	P	06 10 39.1	-0.9
	28nm,0.8s						
WRAB	Tennant Creek	25.77	164	eP	P	06 11 00.9	+0.8
	26nm,0.5s						
WRA	Warramunga Arr	25.77	164	P	P	06 11 00.6	+0.4
WRA	Warramunga Arr	25.77	164	P	P	06 11 00.6	+0.4
	27nm,0.5s,baz=345,slow=10,SNR=65						
QIS	Mount Isa	28.18	155	P	P	06 11 23.2	+1.4
	baz=28,SNR=8.6						
PSI	Prapat	28.31	267	S	S	06 15 40.2	-22
	baz=28,SNR=5.6						
AS31	Alice Springs	29.25	167	eP	P	06 11 32.9	+1.7
ASAR	Alice Springs	29.25	167	P	P	06 11 31.6	+0.4
ASAR	Alice Springs	29.25	167	P	P	06 11 31.6	+0.4
	1.8nm,0.5s,baz=356,slow=8.6,SNR=26						
MEEK	Meekatharra	32.55	194	P	P	06 12 01.9	+1.7
	baz=32,SNR=5.2						
QLP	Quilpie	35.48	153	P	P	06 12 27.0	+1.5
	baz=35,SNR=3.9						
BJT	Baijiatuau	36.24	346	eP	P	06 12 33.3	+1.4
	22nm,0.6s						
BBOO	Buckleboo	38.55	168	P	P	06 12 52.1	+0.7
	baz=38,SNR=14						
STKA	Stephens Creek	39.16	160	eP	P	06 12 57.2	+0.5
	3.5nm,0.7s						
STKA	Stephens Creek	39.16	160	P	P	06 12 57.5	+0.9
	20nm,0.7s,baz=335,slow=9.7,SNR=42						
STKA	Stephens Creek	39.16	160	P	P	06 12 57.7	+1.0
	baz=39,SNR=28						
CMSA	Cobar Meteorol	40.40	155	P	P	06 13 08.6	+1.8
	baz=40,SNR=7.3						
ARMA	Armidale	42.28	148	P	P	06 13 24.7	+2.2
	baz=42,SNR=5.2						
TAPN	Taplejung	43.66	305	eP	P	06 13 33.1	-0.8
	21nm,0.7s						
ODAN	Odare	43.73	304	eP	P	06 13 33.7	-0.7
ARPS	Mount Arapiles	43.76	163	P	P	06 13 36.0	+1.9
	baz=44,SNR=9.8						
RAMN	Ramite	44.42	304	eP	P	06 13 39.4	-0.5
	20nm,0.7s						
GUN	Gumba	45.38	305	eP	P	06 13 46.9	-0.7
	30nm,0.5s						
KKN	Kakani	45.82	304	eP	P	06 13 49.8	-1.2
DMN	Daman	45.90	304	eP	P	06 13 50.7	-0.9
	19nm,0.9s						
SONM	Songino Array	46.24	341	P	P	06 13 53.0	-0.8
SONM	Songino Array	46.24	341	P	P	06 13 53.0	-0.8
	1.5nm,0.7s,baz=159,slow=8.4,SNR=7.4						
KOLN	Koldanda	47.20	304	eP	P	06 14 01.0	-0.7
	27nm,0.6s						
PYUN	Piuthan	47.82	304	eP	P	06 14 06.0	-0.6
	48nm,0.9s						
TLY	Talaya	50.47	341	eP	P	06 14 27.5	+1.4
	4.1nm,0.8s						
MK31	Makanchi Array	56.78	325	eP	P	06 15 12.2	-0.1
MKAR	Makanchi Array	56.78	325	eP	P	06 15 12.4	+0.1
MKAR	Makanchi Array	56.78	325	P	P	06 15 12.4	+0.1
	6.0nm,0.5s,baz=117,slow=7.9,SNR=132						
ZALV	Zalesovo Beam	59.67	333	P	P	06 15 31.5	-0.7
ZALV	Zalesovo Beam	59.67	333	P	P	06 15 31.5	-0.7
	4.8nm,0.6s,baz=124,slow=6.9,SNR=15						
KURK	Kurchatov	60.92	327	eP	P	06 15 39.4	-1.4
	20nm,1.3s						
KURBB	Kurchatov Arra	60.93	327	P	P	06 15 40.1	-0.8
	55nm,0.3s,baz=125,slow=7.2,SNR=2.5						
KKAR	Karatay Array	62.63	316	eP	P	06 15 52.3	-0.2
BVAR	Borovoye Array	66.51	327	P	P	06 16 17.4	-0.1
BVAR	Borovoye Array	66.51	327	P	P	06 16 17.4	-0.1
	5.2nm,0.7s,baz=120,slow=8.5,SNR=19						
BRVK	Borovoye	66.58	327	eP	P	06 16 17.6	-0.3
	15nm,1.0s						
ABKAR	Akbulak array	71.47	320	eP	P	06 16 48.2	0.0
	2.3nm,0.6s						
ARU	Arti	74.11	327	eP	P	06 17 03.6	-0.1
	3.3nm,0.5s						
ILAR	Eielson Array	83.74	25	P	P	06 17 54.6	-1.6
ILAR	Eielson Array	83.74	25	P	P	06 17 54.6	-1.6
	1.1nm,1.2s,baz=267,slow=4.6,SNR=4.2						
JOF	Joensuu	88.26	333	ep	P	06 18 18.2	-0.2
	1.3nm,0.5s						
ARCES	ARCESS Array B	89.41	340	P	P	06 18 23.3	-0.5
ARCES	ARCESS Array B	89.41	340	P	P	06 18 23.3	-0.5
	0.8nm,0.5s,baz=81,slow=5.6,SNR=8.9						
BR131	Keskin Array S	89.58	310	eP	P	06 18 25.8	+0.5
	0.8nm,0.6s						
BRTR	Keskin Array B	89.58	310	P	P	06 18 24.6	-0.8
BRTR	Keskin Array B	89.58	310	P	P	06 18 24.6	-0.8
	1.0nm,0.6s,baz=116,slow=3.4,SNR=5.2						
KAF	Kangasniemi	90.69	333	ep	P	06 18 27.6	-2.2
	0.9nm,0.5s						
FINES	FINESS Array B	90.93	332	P	P	06 18 31.4	+0.5
FINES	FINESS Array B	90.93	332	P	P	06 18 31.4	+0.5
	0.8nm,0.4s,baz=57,slow=5.1,SNR=13						
HFS	Hagfors	97.11	332	P	P	06 18 58.2	-1.1
HFS	Hagfors	97.11	332	P	P	06 18 58.2	-1.1
	0.6nm,0.7s,baz=60,slow=4.4,SNR=4.9						
TORD	Torodi Ar. Bea	122.97	289	PKP	PKPdf	06 24 24.8	+0.6
TORD	Torodi Ar. Bea	122.97	289	PKP	PKPdf	06 24 24.8	+0.6
	0.3nm,0.7s,baz=68,slow=2.2,SNR=3.6						

*IDC **04** 06:09:23.4±0.7, 0°.62S×133°.17E, h0km, mb4.5/7, mb1 4.7/10, mb1mx4.4/23, mbtmp4.5/10, ML4.7/3, MS4.1/1, Ms1 4.1/1, ms1mx3.3/40, Error ellipse: s-maj=33.9km s-min=12.1km az=80.0*
*ISCJB **04** 06:09:26.4±0.4, 0°.65S±0°.04×133°.24E±0°.04, h32km, mb4.5/17, Error ellipse: s-maj=6.4km s-min=6.2km az=166.6*
*NEIC **04** 06:09:29.8±1.4, 0°.68S×133°.11E, h44km±13km, mb4.6/12, Error ellipse: s-maj=11.2km s-min=6.7km az=52.0*
*DJA **04** 06:09:31.9±1.7, 1°S±6°×13°3E±°, h39km±18km, M4.9/10, mB5.6/4, mb4.8/10, MLv4.9/7, Mw(mB)5.1/4*
*AUST **04** 06:09:32.4, 0°.98S×133°.00E, h60km*
ISC 04 06:09:28.3±0.5**, 0°.66S**±0°.06×**133°.21E**±0°.06**, h32**km**, n70, σ1s.45**/75**, mb4.6**/17**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.44	203	P	Pn	06 10 07.8	+1.7
BAKI	Biak	2.94	100	P	Pn	06 10 12.3	-0.6
TLE	Tual	4.97	185	P	Pn	06 10 42.6	+1.7
TLE				S	Sn	06 11 36.8	-0.4
TLE	Tual	4.97	185	P	Pn	06 10 42.5	+1.7
	baz=4.7,SNR=22						
TLE				S	Sn	06 11 37.0	-0.2
	baz=4.7,SNR=21						
MSAI	Masohi	5.04	238	P	Pn	06 10 44.2	+2.4
BNDI	Bandanaira	5.07	221	P	Pn	06 10 46.2	+4.1
AAI	Ambon	5.85	239	P	Pn	06 10 52.3	-0.6
	200nm,0.6s,3μm0.9nm						
AAI	Ambon	5.85	239	P	Pn	06 10 53.2	+0.4
	baz=5.5,SNR=5.5						
AAI				S	Sn	06 12 02.5	+3.6
	baz=5.5,SNR=5.2						
NLAI	Namlea	6.62	247	P	Pn	06 11 05.3	+1.8
	89nm,0.5s,2μm						
NLAI				S	Sn	06 12 18.0	0.0
	89nm,0.5s,2μm						
KDU	Kakadu	11.97	183	P	Pn	06 12 15.3	-1.6
	baz=12,SNR=48						
KDU				S	Sn	06 14 21.6	-7.9
	baz=12,SNR=7.5						
MTN	Manton Dam	12.28	190	P	Pn	06 12 19.1	-2.0
	baz=12,SNR=88						
MTN				S	Sn	06 14 31.8	-5.2
	baz=12,SNR=10						
PCI	Palu	13.38	269	P	Pn	06 12 39.8	+3.6
	baz=13,SNR=23						
PCI				S	S	06 15 26.9	-0.2
	baz=13,SNR=8.5						
KAPI	Kappang	14.12	252	ePn	Pn	06 12 46.3	0.0
KAPI	Kappang	14.12	252	Pn	Pn	06 12 46.5	+0.3
	0.9nm,0.3s,baz=101,slow=3.8,SNR=4.8						
WSI	Waingapu	15.66	235	S	S	06 16 08.9	-4.9
	baz=15,SNR=3.4						
PMG	Port Moresby	16.38	122	Pn	P	06 13 19.2	+0.6
PMG	Port Moresby	16.38	122	P	P	06 13 19.7	+1.1
	18nm,1.6s						
PMG	Port Moresby	16.38	122	Pn	P	06 13 19.2	+0.6
	0.6nm,0.3s,baz=306,slow=8.7,SNR=3.6						
COEN	Coen	16.49	144	eP	Pn	06 13 16.9	-0.5
	44nm,0.5s						
COEN	Coen	16.49	144	P	P	06 13 19.5	-0.3
	baz=16,SNR=6.0						
FITZ	Fitzroy Crossi	18.87	203	eP	P	06 13 45.1	-0.9
FITZ				S	Sn	06 17 03.5	-14
FITZ	Fitzroy Crossi	18.87	203	P	P	06 13 44.4	-1.6
	1.8nm,0.3s,baz=38,slow=12,SNR=13						
FITZ				S	Sn	06 17 03.5	-14
	0.4nm,0.3s,baz=127,slow=20,SNR=3.2						
FITZ				LR	LR	06 21 30.9	
	comp=Z,569nm,19.2s,baz=342,slow=38						
FITZ	Fitzroy Crossi	18.87	203	P	P	06 13 44.3	-1.6
	baz=19,SNR=9.1						
FITZ				S	Sn	06 17 08.9	-8.2
	baz=19,SNR=6.4						
WRAB	Tennant Creek	19.19	177	eP	P	06 13 49.5	-0.1
WRA	Warramunga Arr	19.20	177	P	P	06 13 49.3	-0.4
WRA				S	Sn	06 17 13.0	-12
WRA	Warramunga Arr	19.20	177	P	P	06 13 49.3	-0.4
	3.7nm,0.3s,baz=354,slow=11,SNR=18						
WRA				S	Sn	06 17 13.0	-12
	1.5nm,0.3s,baz=357,slow=23,SNR=8.7						
QIS	Mount Isa	20.74	163	S	S	06 17 27.2	-29
	baz=21,SNR=7.1						
AS31	Alice Springs	22.88	178	eP	P	06 14 29.3	-0.1
ASAR	Alice Springs	22.88	178	P	P	06 14 29.6	+0.1
ASAR				S	S	06 18 41.2	+4.0
ASAR	Alice Springs	22.88	178	P	P	06 14 29.6	+0.1
	22nm,0.4s,baz=357,slow=11,SNR=89						
ASAR				S	S	06 18 41.2	+4.0
	8.7nm,0.8s,baz=359,slow=26,SNR=11						
CTA	Charters Tower	23.15	147	P	P	06 14 33.5	+1.4
CTA	Charters Tower	23.15	147	P	P	06 14 33.5	+1.4
	18nm,0.7s,baz=326,slow=13,SNR=28						
CTAO	Charters Tower	23.15	147	eP	P	06 14 33.7	+1.6
	27nm,0.8s						
MBWA	Marble Bar	24.26	212	eP	P	06 14 43.1	+0.4
	24nm,0.9s						
QLP	Quilpie	27.87	159	P	P	06 15 15.0	-0.3
	baz=28,SNR=8.4						
EIDS	Eidsvold	30.02	146	eP	P	06 15 35.0	+0.5
	5.8nm,0.7s						
FORT	Forrest	30.36	189	eP	P	06 15 37.8	+0.5
	15nm,0.6s						
STKA	Stephens Creek	32.05	166	eP	P	06 15 51.8	-0.4
	2.6nm,0.4s						
STKA	Stephens Creek	32.05	166	P	P	06 15 51.8	-0.4
	13nm,0.4s,baz=345,slow=10,SNR=41						
STKA	Stephens Creek	32.05	166	P	P	06 15 52.0	-0.3
	baz=32,SNR=46						
BBOO	Buckleboo	32.09	175	P	P	06 15 52.5	-0.2
	baz=32,SNR=7.7						
KMBL	Kambalda	32.37	198	P	P	06 15 55.4	+0.3
	baz=32,SNR=9.9						
CMSA	Cobar Meteorol	32.91	160	P	P	06 15 59.8	0.0
	baz=33,SNR=4.8						
BLDU	Ballidu	33.66	206	P	P	06 16 06.2	-0.2
	baz=33,SNR=8.4						
ARMA	Armidale	34.38	151	eP	P	06 16 13.5	+0.7
	105nm,1.8s						
ARMA	Armidale	34.38	151	P	P	06 16 13.6	+0.8
	baz=34,SNR=10						
ARPS	Mount Arapiles	36.81	168	P	P	06 16 33.8	+0.4
	baz=37,SNR=63						
SONM	Songino Array	53.64	338	P	P	06 18 47.3	+0.4
SONM	Songino Array	53.64	338	P	P	06 18 47.3	+0.4
	0.3nm,0.4s,baz=141,slow=5.5,SNR=2.2						
MKAR	Makanchi Array	64.86	324	P	P	06 20 04.3	-0.1
MKAR	Makanchi Array	64.86	324	P	P	06 20 04.3	-0.1
	2.6nm,0.5s,baz=114,slow=7.7,SNR=19						
ZALV	Zalesovo Beam	67.46	331	P	P	06 20 20.2	-0.7
ZALV	Zalesovo Beam	67.46	331	P	P	06 20 20.2	-0.7
	1.7nm,0.8s,baz=120,slow=5.7,SNR=7.0						
KURK	Kurchatov	68.93	326	eP	P	06 20 30.0	-0.1
	6.2nm,0.9s						
KKAR	Karatay Array	70.84	316	eP	P	06 20 42.2	0.0
	2.9nm,0.9s						
BRVK	Borovoye	74.60	326	eP	P	06 21 04.0	-0.2
	3.1nm,0.9s						
VNDA	Vanda	78.34	174	P	P	06 21 25.5	+0.5
VNDA	Vanda	78.34	174	P	P	06 21 25.5	+0.5
	2.6nm,1.0s,baz=328,slow=7.1,SNR=7.7						
ABKAR	Akbulak array	79.63	320	eP	P	06 21 31.6	-0.9
	1.4nm,0.6s						
ILAR	Eielson Array	86.28	25	P	P	06 22 05.5	-1.2
ILAR	Eielson Array	86.28	25	P	P	06 22 05.5	-1.2
	0.5nm,0.5s,baz=247,slow=5.2,SNR=17						
QSPA	South Pole Qui	89.28	180	eP	P	06 22 21.2	0.0
	4.0nm,0.7s						
YKA	Yellowknife Ar	100.68	26	P	Pdif	06 23 13.1	-0.1
YKA	Yellowknife Ar	100.68	26	P	Pdif	06 23 13.1	-0.1
	0.1nm,0.8s,baz=294,slow=4.7,SNR=3.0						
TORD	Torodi Ar. Bea	130.41	287	PKP	PKPdf	06 28 35.9	-0.8
TORD	Torodi Ar. Bea	130.41	287	PKP	PKPdf	06 28 35.9	-0.8
	0.4nm,0.7s,baz=76,slow=2.4,SNR=3.0						
CPUP	Villa Florida	151.31	160	PKPbc	PKPbc	06 29 19.4	-0.1
CPUP	Villa Florida	151.31	160	PKPbc	PKPbc	06 29 19.4	-0.1
	3.7nm,0.6s,baz=196,slow=2.9,SNR=15						
LPAZ	La Paz	153.03	130	ePKPbc	PKPbc	06 29 25.8	+1.3
LPAZ	La Paz	153.03	130	PKPbc	PKPbc	06 29 26.4	+1.9
	2.3nm,1.0s,baz=25,slow=2.9,SNR=5.4						

*IDC **04** 06:25:50.9±3.5, 38°.28N×20°.28E, h0km, mb3.5/6, mb1 3.6/10, mb1mx3.4/32, mbtmp3.5/10, ML3.3/4, Error ellipse: s-maj=57.7km s-min=21.6km az=23.0*
*ISCJB **04** 06:25:55.8±0.6, 38°.77N±0°.02×20°.53E±0°.04, h3km±4km, mb3.5/6, Error ellipse: s-maj=5.0km s-min=3.4km az=160.3*
*CSEM **04** 06:25:57.0±0.2, 38°.73N×20°.61E, h2km, MD3.5, Error ellipse: s-maj=6.0km s-min=3.3km az=61.0*
*ATH **04** 06:25:57.4, 38°.74N×20°.64E, h5km±2km, MD3.5/22*
*THE **04** 06:25:58.0, 38°.74N×20°.65E, h0km±2km, ML3.2/5, Error ellipse: s-maj=2.8km s-min=0.8km az=48.0*
ISC 04 06:25:56.3±0.9**, 38°.74N**±0°.02×**20°.60E**±0°.03**, h4**km±6km**, n114, σ0s.94**/147**, mb3.6**/6**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD2	Lefkada island	0.07	40	P	Pg	06 25 57.9	0.0
LKD2				S	Sg	06 25 58.5	-0.5
LKD2	Lefkada island	0.07	40	ePG	Pg	06 25 57.9	0.0
LKD2				eSG	Sg	06 25 58.4	-0.5
LKD2	Lefkada island	0.07	40	P	Pg	06 25 57.9	0.0
LKD2				eSg	Sg	06 25 58.4	-0.5
VLS	Valsamata	0.56	181	P	Pb	06 26 07.9	-0.7
VLS				S	Sb	06 26 17.6	+0.7
VLS	Valsamata	0.56	181	ePG	Pb	06 26 07.9	-0.7
VLS				eSB	Sb	06 26 17.6	+0.7
VLS	Valsamata	0.56	181	P	Pb	06 26 07.9	-0.7
VLS				S	Sb	06 26 17.6	+0.7
KFL	Anninata	0.64	167	P	Pb	06 26 09.5	-0.5
KFL				S	Sb	06 26 20.8	+1.5
KFL	Anninata	0.64	167	P	Pb	06 26 09.5	-0.5
KFL				S	Sb	06 26 20.8	+1.5
IGT	Igoumenitsa	0.82	345	P	Pb	06 26 13.4	+0.3
IGT				S	Sn	06 26 26.3	-0.9
IGT	Igoumenitsa	0.82	345	P	Pb	06 26 13.4	+0.3
IGT				S	Sn	06 26 26.3	-0.9
JAN	Janina	0.94	12	P	Pn	06 26 16.0	-0.3
JAN				S	Sn	06 26 29.7	-0.5
JAN	Janina	0.94	12	ePN	Pn	06 26 16.0	-0.3
JAN	Janina	0.94	12	P	Pn	06 26 16.0	-0.3
JAN				S	Sn	06 26 29.7	-0.5
EVR	Evrytania	0.96	79	P	Pb	06 26 15.5	0.0
EVR				S	Sn	06 26 30.3	-0.5
EVR	Evrytania	0.96	79	ePN	Pb	06 26 15.6	0.0
EVR				eSG	Sb	06 26 29.3	+0.7
EVR	Evrytania	0.96	79	P	Pb	06 26 15.5	0.0
EVR				eSg	Sb	06 26 29.3	+0.7
EVR				S	Sn	06 26 30.3	-0.5
RLS	Riolos of Patr	0.96	135	P	Pg	06 26 15.1	+0.4
RLS	Riolos of Patr	0.96	135	ePN	Pb	06 26 16.0	+0.6
RLS				eSB	Sb	06 26 28.7	+0.2
RLS	Riolos of Patr	0.96	135	P	Pg	06 26 15.1	+0.4
RLS	Riolos of Patr	0.96	135	ePn	Pb	06 26 16.0	+0.6
RLS				eSb	Sb	06 26 28.7	+0.2
EFP	Efpalio	1.07	106	P	Pg	06 26 17.1	+0.3
EFP	Efpalio	1.07	106	ePG	Pg	06 26 17.0	+0.3
EFP	Efpalio	1.07	106	P	Pg	06 26 17.1	+0.3
PSA1	Psathopyrgos	1.09	112	ePB	Pn	06 26 18.2	0.0
MEV	Metsovon	1.16	25	P	Pn	06 26 19.8	+0.4
MEV	Metsovon	1.16	25	P	Pn	06 26 19.8	+0.4
KEK	Kerkira	1.16	328	P	Pn	06 26 19.9	+0.7
KEK				S	Sn	06 26 37.8	+2.3
KEK	Kerkira	1.16	328	ePB	Pn	06 26 19.9	+0.7
KEK				eSB	Sn	06 26 36.4	+0.9
KEK	Kerkira	1.16	328	P	Pn	06 26 19.9	+0.7
KEK				eSb	Sn	06 26 36.4	+0.9
KEK				S	Sn	06 26 37.8	+2.3
LAKA	Lakka	1.19	114	P	Pg	06 26 19.1	0.0
LAKA	Lakka	1.19	114	ePB	Pg	06 26 19.4	+0.3
LAKA	Lakka	1.19	114	P	Pg	06 26 19.1	0.0
LAKA	Lakka	1.19	114	ePb	Pg	06 26 19.4	+0.3
TRIZ	Trizonia	1.21	107	P	Pg	06 26 19.6	+0.1
TRIZ	Trizonia	1.21	107	ePG	Pg	06 26 19.5	+0.1
TRIZ				eSN	Sn	06 26 37.4	+0.6
TRIZ	Trizonia	1.21	107	P	Pg	06 26 19.6	+0.1
TRIZ				eSn	Sn	06 26 37.4	+0.6
KALE	Kalithea	1.25	105	P	Pg	06 26 20.1	-0.2
KALE	Kalithea	1.25	105	ePG	Pg	06 26 20.4	+0.1
KALE				eSB	Sn	06 26 38.2	+0.2
KALE	Kalithea	1.25	105	P	Pg	06 26 20.1	-0.2
KALE	Kalithea	1.25	105	ePg	Pg	06 26 20.4	+0.1
KALE				eSb	Sn	06 26 38.2	+0.2
THL	Klokotos Trika	1.38	53	P	Pg	06 26 22.9	+0.2
THL	Klokotos Trika	1.38	53	ePB	Pg	06 26 22.9	+0.2
THL	Klokotos Trika	1.38	53	P	Pg	06 26 22.9	+0.2
AGG	Agios Georgios	1.38	78	P	Pg	06 26 23.0	+0.3
AGG	Agios Georgios	1.38	78	ePB	Pg	06 26 23.4	+0.7
AGG	Agios Georgios	1.38	78	P	Pg	06 26 23.0	+0.3
AGG	Agios Georgios	1.38	78	ePb	Pg	06 26 23.4	+0.7
AMT	Artemida-Makis	1.49	144	P	Pb	06 26 24.7	+0.3
AMT	Artemida-Makis	1.49	144	ePB	Pg	06 26 26.0	+1.2
AMT	Artemida-Makis	1.49	144	P	Pb	06 26 24.7	+0.3
AMT	Artemida-Makis	1.49	144	ePb	Pg	06 26 26.0	+1.2
DSF	Desfina	1.54	102	P	Pg	06 26 26.1	+0.2
DSF	Desfina	1.54	102	P	Pg	06 26 26.1	+0.2
GUR	Goura	1.58	120	P	Pb	06 26 26.3	+0.1
GUR	Goura	1.58	120	ePG	Pb	06 26 26.6	+0.4
GUR	Goura	1.58	120	P	Pb	06 26 26.3	+0.1
GUR	Goura	1.58	120	ePg	Pb	06 26 26.6	+0.4
AXAR	Agios Charalam	1.61	88	P	Pn	06 26 26.1	+0.6
AXAR	Agios Charalam	1.61	88	P	Pn	06 26 26.1	+0.6
NEST	Nestorio	1.71	12	P	Pg	06 26 30.4	+1.3
NEST	Nestorio	1.71	12	P	Pg	06 26 30.4	+1.3
KZN	Kozani	1.81	30	ePN	Pg	06 26 32.4	+1.4
KZN				eSG	Sg	06 26 57.1	+2.6
ITM	Ithomi	1.87	146	P	Pb	06 26 30.7	-0.4
ITM	Ithomi	1.87	146	ePN	Pg	06 26 32.8	+0.6
ITM				eSN	Sg	06 26 58.8	+2.3
ITM	Ithomi	1.87	146	P	Pb	06 26 30.7	-0.4
LKR	Lokris	1.88	92	P	Pb	06 26 31.0	-0.1
LKR	Lokris	1.88	92	ePN	Pg	06 26 32.7	+0.4
LKR	Lokris	1.88	92	P	Pb	06 26 31.0	-0.1
VLX	Vlachokerasia	1.96	134	P	Pn	06 26 30.5	+0.2
VLX	Vlachokerasia	1.96	134	ePN	Pg	06 26 34.2	+0.4
VLX	Vlachokerasia	1.96	134	P	Pn	06 26 30.5	+0.2
LTK	Loutraki	1.99	110	P	Pb	06 26 32.6	-0.5
LTK	Loutraki	1.99	110	ePN	Pg	06 26 34.8	+0.4
LTK	Loutraki	1.99	110	P	Pb	06 26 32.6	-0.5
LIT	Litokhoron	2.00	46	ePG	Pb	06 26 33.7	+0.5
LIT	Litokhoron	2.00	46	ePg	Pb	06 26 33.7	+0.5
PYL	PYLOS	2.05	153	ePN	Pb	06 26 34.7	+0.7
PYL	PYLOS	2.05	153	ePn	Pb	06 26 34.7	+0.7
NEO	Neokhori	2.12	74	ePN	Pb	06 26 35.2	-0.1
NEO	Neokhori	2.12	74	ePn	Pb	06 26 35.2	-0.1
FNA	Florina	2.13	16	P	Pn	06 26 33.7	+1.0
FNA	Florina	2.13	16	P	Pn	06 26 33.7	+1.0
BIA	Bitola	2.35	13	ePn	Pg	06 26 41.4	+0.1
BIA				eSn	Sg	06 27 16.4	+4.7
BIA	Bitola	2.35	13	ePn	Pg	06 26 41.3	+0.1
DYR	Agios Nikonas	2.40	145	ePN	Pb	06 26 40.4	+0.3
DID	Didima	2.41	120	P	Pb	06 26 39.0	-1.3
DID	Didima	2.41	120	ePN	Pb	06 26 39.2	-1.1
DID	Didima	2.41	120	P	Pb	06 26 39.0	-1.3
VLI	Veliai	2.74	137	ePG	Pg	06 26 48.0	-0.7
VLI	Veliai	2.74	137	ePg	Pg	06 26 48.0	-0.7
PLG	Polygyros	2.74	52	ePB	Pn	06 26 43.2	+2.2
SOH	Sokhos	2.97	45	ePB	Pn	06 26 46.5	+2.3
VAY	Valandovo	2.99	30	ePn	Pb	06 26 48.4	-1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY				eSn	Sb	06 27 27.8	+0.8
VAY	Valandovo	2.99	30	ePn	Pb	06 26 48.8	-1.3
MLR	Muntele Rosu	7.83	29	Pn	Pn	06 27 56.1	+5.1
	0.0nm,0.3s,baz=230,slow=20,SNR=4.9						
BOJS	Bojanci	7.84	331	i Pn	Pn	06 27 51.5	+0.4
BOJS				i Sn	Sn	06 29 17.9	-2.3
BOJS	Bojanci	7.84	331	Pn	Pn	06 27 51.5	+0.4
VISS	Visnje	8.25	331	i Pn	Pn	06 27 56.4	-0.3
VISS				i Sn	Sn	06 29 27.8	-2.5
VISS	Visnje	8.25	331	i Pn	Pn	06 27 56.4	-0.3
JAVS	Javornik	8.63	328	i Pn	Pn	06 28 01.9	-0.2
JAVS				i Sn	Sn	06 29 38.8	-1.1
JAVS	Javornik	8.63	328	i Pn	Pn	06 28 01.9	-0.1
PERS	Pernice	8.87	335	i Pn	Pn	06 28 04.9	-0.2
PERS				i Sn	Sn	06 29 43.0	-2.5
PERS	Pernice	8.87	335	i Pn	Pn	06 28 04.9	-0.2
BRTR	Keskin Array B	10.16	80	Pn	Pn	06 28 23.0	-0.1
	0.1nm,0.3s,baz=264,slow=14,SNR=2.2						
GERES	GERESS Array B	11.26	336	Pn	Pn	06 28 36.9	-1.1
	0.1nm,0.3s,baz=160,slow=13,SNR=6.1						
KBZ	Khabaz	17.48	66	Pn	P	06 30 02.3	+0.3
	0.2nm,0.3s,baz=249,slow=8.6,SNR=3.2						
HFS	Hagfors	21.86	351	P	P	06 30 49.9	+0.2
	1.2nm,0.7s,baz=172,slow=11,SNR=3.7						
FINES	FINESS Array B	22.99	7	P	P	06 31 01.5	-0.1
	1.8nm,0.8s,baz=179,slow=8.3,SNR=6.1						
EKA	Eskdalemuir Ar	23.01	324	P	P	06 31 01.3	-0.7
	2.5nm,0.7s,baz=124,slow=9.8,SNR=8.2						
NB2	NORSAR Subarra	23.08	348	P	P	06 31 02.3	-0.4
	comp=Z,1.3nm,0.8s,baz=150,slow=10						
NB2	NORSAR Subarra	23.08	348	P	P	06 31 02.3	-0.4
	comp=Z,1.3nm,0.8s,SNR=5.1						
NOA	NORSAR Array B	23.08	348	P	P	06 31 01.8	-0.9
	comp=Z,0.9nm,0.7s,baz=158,slow=9.1,SNR=4.7						
MKAR	Makanchi Array	44.96	59	P	P	06 34 11.0	-1.3
	comp=Z,0.2nm,0.7s,baz=278,slow=8.6,SNR=3.2						
ZALV	Zalesovo Beam	45.27	49	P	P	06 34 13.8	-0.9
	comp=Z,0.7nm,0.6s,baz=281,slow=8.2,SNR=3.1						

*IDC **04** 06:41:29.6±0.8, 46.°78N×83.°52E, h0km, mb3.6/8, mb1 3.8/13, mb1mx3.6/32, mbtmp3.5/13, ML3.3/5, MS3.4/1, Ms1 3.4/1, ms1mx2.8/50, Error ellipse: s-maj=13.4km s-min=8.5km az=175.0*

*BJI **04** 06:41:31.3, 46.°81N×83.°29E, h6km, ML3.5/7*

*NNC **04** 06:41:33.0±0.7, 46.°82N×83.°30E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=10.7km s-min=3.5km az=172.0*

*ISCJB **04** 06:41:33.2±0.7, 46.°85N±0.°04×83.°29E±0.°06, h37km±8km, mb3.6/8, Error ellipse: s-maj=7.5km s-min=6.5km az=28.7*

ISC 04 06:41:32.2±1.4**, 46.°75N**±0.°08×**83.°36E**±0.°05**, h18**km±8km**, n32,** σ0.s94/45**, mb3.6**/8**, 30C-6D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MK07	Makanchi Array	0.72	270	⇑P	Pg	06 41 46.2	-0.2
MK07				⇑S	Sg	06 41 55.7	-0.2
MK06	Makanchi Array	0.72	272	⇑P	Pg	06 41 46.2	-0.1
MK06				⇑S	Sg	06 41 56.0	0.0
MK02	Makanchi Array	0.72	272	⇑P	Pg	06 41 46.3	-0.2
MK02				⇑S	Sg	06 41 55.8	-0.2
MK01	Makanchi Array	0.73	272	⇑P	Pg	06 41 46.4	-0.2
MK01				⇑S	Sg	06 41 56.1	-0.1
MK03	Makanchi Array	0.73	271	⇑P	Pg	06 41 46.3	-0.2
MK03				⇑S	Sg	06 41 56.1	-0.1
MK04	Makanchi Array	0.73	272	⇑P	Pg	06 41 46.4	-0.2
MK04				⇑S	Sg	06 41 56.2	-0.2
MK05	Makanchi Array	0.74	274	⇑P	Pg	06 41 46.5	-0.1
MK05				⇑S	Sg	06 41 56.2	-0.2
MK31	Makanchi Array	0.74	274	⇑P	Pg	06 41 46.5	-0.1
	17nm,0.1s,baz=100,slow=4.5,SNR=7900						
MK31				⇓S	Sg	06 41 56.1	-0.3
	177nm,0.2s,baz=88,slow=17,SNR=50						
MKAR	Makanchi Array	0.74	274	Pg	Pb	06 41 46.1	-0.4
	46nm,0.3s,baz=91,slow=18,SNR=1635						
MKAR				Lg	Lg	06 41 56.2	
	464nm,0.3s,baz=93,slow=30,SNR=168						
MK08	Makanchi Array	0.74	271	⇑P	Pg	06 41 46.5	-0.2
MK08				⇑S	Sg	06 41 56.4	-0.1
MK09	Makanchi Array	0.75	272	⇑P	Pg	06 41 46.6	-0.2
MK09				⇑S	Sg	06 41 56.5	-0.2
WMQ	Urumqi	4.24	132	Pn	Pn	06 42 38.7	+2.8
WMQ				Sg	Sg	06 43 46.5	-1.7
WMQ				smax	smax		
	comp=N,81nm,0.8s						
WMQ				smax	smax		
	comp=E,75nm,0.7s						
KURBB	Kurchatov Arra	5.02	322	Pn	Pn	06 42 46.2	-0.4
	comp=E,0.2nm,0.3s,baz=135,slow=13,SNR=16						
KURK	Kurchatov	5.06	323	⇓Pn	Pn	06 42 49.8	+2.8
	comp=E,7.2nm,0.5s						
KURK				⇑Lg	Lg	06 44 10.6	
	comp=E,52nm,0.5s						
TKM2	Tokmak 2	6.72	238	⇓Pn	Pn	06 43 11.6	+1.5
	comp=E,2.4nm,0.5s						
TKM2				⇑Lg	Lg	06 45 02.5	
	comp=E,18nm,0.8s						
ZALV	Zalesovo Beam	7.26	7	Pn	Pn	06 43 18.4	+1.1
	comp=E,1.7nm,0.3s,baz=189,slow=13,SNR=26						
ZALV				Sn	Sn	06 44 39.2	-0.1
	comp=E,4.3nm,0.3s,baz=182,slow=25,SNR=10						
ZALV				Lg	Lg	06 45 18.7	
	comp=E,2.1nm,0.3s,baz=194,slow=26,SNR=5.3						
ZALV				LR	LR	06 46 22.4	
	comp=E,267nm,19.9s,baz=105,slow=40						
AAK	Ala-Archa	7.54	240	Pn	Pn	06 43 24.9	+3.6
	comp=E,0.4nm,0.3s,baz=88,slow=8.9,SNR=6.5						
KK31	Karatay Array	9.82	253	⇑Pn	Pn	06 43 51.3	-1.2
	comp=E,0.3nm,0.3s,baz=61,slow=13,SNR=13						
KK31				⇑Lg	Lg	06 46 43.7	
	comp=E,5.2nm,0.6s,baz=60,slow=27,SNR=4.7						
VOSK	Vostochnaya	9.99	311	⇑Pn	Pn	06 43 59.0	+4.2
	comp=E,0.9nm,0.3s						
VOSK				⇑Sn	Sn	06 45 47.9	+1.6
	comp=E,1.8nm,0.5s						
VOSK				⇑Lg	Lg	06 46 46.3	
	comp=E,11nm,0.8s						
BVA0	Borovoye Array	10.45	312	⇑Pn	Pn	06 44 07.2	+6.1
	comp=E,0.2nm,0.8s,baz=112,slow=14,SNR=4.6						
BVA0				⇓Sn	Sn	06 45 57.6	-0.1
	comp=E,0.3nm,0.5s,baz=116,slow=21,SNR=4.1						
BVA0				⇑Lg	Lg	06 47 04.5	
	comp=E,1.6nm,0.7s,baz=116,slow=21,SNR=4.1						
BVAR	Borovoye Array	10.45	312	Pn	Pn	06 44 02.3	+1.2
	comp=E,0.3nm,0.3s,baz=111,slow=15,SNR=4.2						
BVAR				Sn	Sn	06 45 57.5	-0.2
	comp=E,0.5nm,0.3s,baz=107,slow=23,SNR=4.0						
BVAR				Lg	Lg	06 47 02.5	
	comp=E,0.8nm,0.3s,baz=105,slow=22,SNR=4.1						
ZRNK	Zerenda	11.14	309	⇑Pn	Pn	06 44 12.0	+1.5
	comp=E,1.7nm,0.5s						
ZRNK				⇑Sn	Sn	06 46 12.5	-2.0
	comp=E,4.4nm,0.7s						
ZRNK				⇓Lg	Lg	06 47 24.7	
	comp=E,19nm,1.1s						
SONM	Songino Array	15.66	78	Pn	Pn	06 45 11.7	-0.2
	comp=E,0.1nm,0.3s,baz=275,slow=13,SNR=4.0						
SONM				Lg	Lg	06 49 44.5	
	comp=E,0.1nm,0.3s,baz=267,slow=26,SNR=4.1						
AB31	Akbulak array	15.86	288	⇓P	P	06 45 18.3	+0.2
	comp=E,0.3nm,0.3s,baz=99,slow=7.4,SNR=15						
ARCES	ARCESS Array B	36.06	330	P	P	06 48 32.6	+0.4
	comp=E,4.9nm,1.0s,baz=88,slow=7.3,SNR=3.6						
NOA	NORSAR Array B	42.53	317	P	P	06 49 25.6	-0.7
	comp=E,0.3nm,0.7s,baz=62,slow=6.6,SNR=2.6						
ILAR	Eielson Array	62.12	22	P	P	06 51 51.0	-0.5
	comp=E,0.3nm,0.6s,baz=323,slow=5.2,SNR=5.4						
YKA	Yellowknife Ar	70.16	9	P	P	06 52 42.4	-0.7
	comp=E,0.1nm,0.5s,baz=343,slow=6.6,SNR=7.6						
TORD	Torodi Ar. Bea	74.86	273	P	P	06 53 11.2	-0.7
	comp=E,0.2nm,0.4s,baz=34,slow=4.5,SNR=4.0						
WRA	Warramunga Arr	80.73	132	P	P	06 53 44.4	0.0
	comp=E,0.7nm,0.5s,baz=337,slow=5.4,SNR=4.4						
ASAR	Alice Springs	83.64	135	P	P	06 53 59.7	+0.2
	comp=E,0.3nm,0.5s,baz=331,slow=5.6,SNR=4.4						
PDAR	Pinedale Array	90.13	9	P	P	06 54 31.4	0.0
	comp=E,0.2nm,0.5s,baz=0.0,slow=5.6,SNR=2.9						

*MDD **04** 06:46:12.8±2.7, 37.°20N×16.°71W, h0km, mb4.1/2, Error ellipse: s-maj=33.4km s-min=10.3km az=133.0, PRXIMO*

*CSEM **04** 06:46:15.9±0.7, 37.°04N×16.°33W, h10km, mb4.1/2, Error ellipse: s-maj=19.7km s-min=6.7km az=136.0*

*INMG **04** 06:46:16.8±1.1, 37.°39N×16.°99W, h10km, ML2.7, Error ellipse: s-maj=13.2km s-min=3.0km az=123.0*

ISC 04 06:46:13.2±1.9**, 37.°10N**±0.°09×**16.°47W**±0.°10**, h10**km**, n50,** σ1.s78/63**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMPST	Porto Santo, M	4.01	178	ePn	Pn	06 47 17.3	+2.6
PMPST				eSn	Sn	06 48 01.5	-0.2
PMPST				A	A	06 48 06.7	
	9.4nm,0.1s						
PMPST	Porto Santo, M	4.01	178	ePn	Pn	06 47 17.3	+2.6
PMPST				eSn	Sn	06 48 01.5	-0.2
	9.4nm,0.1s						
PMPS	Porto Santo	4.03	178	eSn	Sn	06 48 02.3	+0.1
PMPS	Porto Santo	4.03	178	P	Pn	06 47 17.3	+2.3
PMPS				S	Sn	06 48 01.5	-0.7
	4.7nm,0.1s						
PMPS	Porto Santo	4.03	178	eSn	Sn	06 48 02.3	+0.1
PMAR	Madeira	4.38	185	ePn	Pn	06 47 21.1	+1.2
PMAR				eSn	Sn	06 48 08.9	-2.1
PMAR	Madeira	4.38	185	P	Pn	06 47 21.1	+1.2
PMAR				S	Sn	06 48 08.9	-2.1
PMAR	Madeira	4.38	185	P	Pn	06 47 21.1	+1.2
PMAR				S	Sn	06 48 08.9	-2.1
PMAFR	Mafra	5.97	70	P	Pn	06 47 43.2	+1.6
	0.4nm,0.0s,SNR=4.0						
PMAFR				S	Sn	06 48 49.4	-0.6
	19nm,0.2s,SNR=7.9						
PMAFR	Mafra	5.97	70	P	Pn	06 47 43.2	+1.6
	0.4nm,0.0s,SNR=4.0						
PMAFR				eSn	Sn	06 48 47.9	-2.2
PMAFR				S	Sb	06 48 49.4	-20
	19nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	6.11	87	ePn	Pn	06 47 46.5	+3.0
PFVI				eSn	Sn	06 48 53.7	+0.2
PFVI	Vila Bisbo	6.11	87	P	Pn	06 47 45.9	+2.4
	0.2nm,0.0s,SNR=7.9						
PFVI				S	Sn	06 48 54.1	+0.7
	1.8nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	6.11	87	P	Pn	06 47 45.9	+2.4
	0.2nm,0.0s,SNR=7.9						
PFVI	Vila Bisbo	6.11	87	ePn	Pn	06 47 46.5	+3.0
PFVI				eSn	Sn	06 48 53.7	+0.2
PFVI				S	Sb	06 48 54.1	-19
	1.8nm,0.1s,SNR=7.9						
PTEO	Sao Teotonio	6.19	84	eSn	Sn	06 48 55.1	-0.3
PTEO	Sao Teotonio	6.19	84	S	Sn	06 48 55.1	-0.3
PTEO	Sao Teotonio	6.19	84	S	Sn	06 48 55.1	-0.3
MORF	Marmelete	6.25	86	eSn	Sn	06 48 58.1	+1.2
MORF				A	A	06 49 03.6	
	4.8nm,0.2s						
MORF	Marmelete	6.25	86	S	Sn	06 48 58.1	+1.2
	4.8nm,0.2s						
MORF	Marmelete	6.25	86	S	Sn	06 48 58.1	+1.2
	4.8nm,0.2s						
PNCL	Nicolau / Gran	6.39	78	eSn	Sn	06 48 59.7	-0.6
PNCL				A	A	06 49 04.9	
	5.6nm,0.5s						
PNCL	Nicolau / Gran	6.39	78	eSn	Sn	06 48 59.7	-0.6
	5.6nm,0.5s						
PCVE	Castro Verde	6.74	83	ePn	Pn	06 47 54.8	+2.7
PCVE				eSn	Sn	06 49 07.9	-1.0
PCVE				A	A	06 49 15.1	
	2.7nm,0.3s						
PCVE	Castro Verde	6.74	83	P	Pn	06 47 54.8	+2.7
PCVE				S	Sn	06 49 07.9	-1.0
	2.7nm,0.3s						
PCVE	Castro Verde	6.74	83	P	Pn	06 47 54.8	+2.7
PCVE				S	Sn	06 49 07.9	-1.0
	2.7nm,0.3s						
PMTG	Montargil	6.79	71	eSn	Sn	06 49 07.3	-3.1
PMTG	Montargil	6.79	71	eSn	Sn	06 49 07.3	-3.1
PTOM	Tomar	6.82	66	ePn	Pn	06 47 54.0	+0.8
PTOM				eSn	Sn	06 49 06.9	-4.0
PTOM				A	A	06 49 12.1	
	5.3nm,0.6s						
PTOM	Tomar	6.82	66	P	Pn	06 47 54.0	+0.8
PTOM				S	Sn	06 49 06.9	-4.0
	2.7nm,0.6s						
PTOM	Tomar	6.82	66	P	Pn	06 47 54.0	+0.8
PBDV	Barranco-do-Ve	6.82	86	eSn	Sn	06 49 12.3	+1.3
PBDV				A	A	06 49 17.5	
	2.1nm,0.2s						
PBDV	Barranco-do-Ve	6.82	86	S	Sn	06 49 12.3	+1.3
	2.1nm,0.2s						
PBDV	Barranco-do-Ve	6.82	86	S	Sn	06 49 12.3	+1.3
	2.1nm,0.2s						
EVO	Evora	6.85	75	eSn	Sn	06 49 09.8	-1.9
EVO				A	A	06 49 12.8	
	3.2nm,0.1s						
EVO	Evora	6.85	75	S	Sn	06 49 09.8	-1.9
	3.2nm,0.1s						
EVO	Evora	6.85	75	S	Sn	06 49 09.8	-1.9
	3.2nm,0.1s						
PBEJ	Beja	6.90	80	eSn	Sn	06 49 12.8	-0.1
PBEJ	Beja	6.90	80	S	Sn	06 49 12.8	-0.1
PBEJ	Beja	6.90	80	S	Sn	06 49 12.8	-0.1
PVAQ	Vaqueiros	6.99	85	eSn	Sn	06 49 14.0	-1.1
PVAQ				A	A	06 49 22.7	
	2.5nm,0.2s						
PVAQ	Vaqueiros	6.99	85	S	Sn	06 49 14.0	-1.1
	2.5nm,0.2s						
PVAQ	Vaqueiros	6.99	85	S	Sn	06 49 14.0	-1.1
	2.5nm,0.2s						
EGRO	El Granado	7.18	84	S	Sn	06 49 20.3	+0.5
	1.2nm,0.1s,SNR=7.9						
EGRO	El Granado	7.18	84	S	Sn	06 49 20.3	+0.5
	1.2nm,0.1s,SNR=7.9						
PMRV	Marv??o	7.51	69	ePn	Pn	06 48 02.9	+0.1
PMRV				eSn	Sn	06 49 23.6	-4.5
PMRV				A	A	06 49 27.9	
	2.4nm,0.3s						
PMRV	Marv??o	7.51	69	P	Pn	06 48 02.9	+0.1
PMRV				S	Sn	06 49 23.6	-4.5
	2.4nm,0.3s						
PMRV	Marv??o	7.51	69	P	Pn	06 48 02.9	+0.1
PBAR	Barrancos	7.56	79	eSn	Sn	06 49 27.3	-1.9
PBAR	Barrancos	7.56	79	S	Sn	06 49 27.3	-1.9
PBAR	Barrancos	7.56	79	S	Sn	06 49 27.3	-1.9

*IDC **04** 07:02:44.3±0.5, 71.°78N×1.°33W, h0km, mb3.9/22, mb1 4.2/28, mb1mx4.2/38, mbtmp4.0/28, ML4.0/6, MS3.9/13, Ms1 3.9/13, ms1mx3.7/57, Error ellipse: s-maj=15.6km s-min=9.3km az=47.0*

*MOS **04** 07:02:44.6±1.3, 71.°84N×1.°04W, h10km, mb4.6/45, Error ellipse: s-maj=18.2km s-min=4.2km az=97.2*

*BJI **04** 07:02:44.2, 71.°80N×1.°30W, h10km, mB5.2/11, mb4.9/19, Ms4.9/6, Ms7 4.7/7*

*ISCJB **04** 07:02:44.8±0.1, 71.°86N±0.°03×1.°06W±0.°07, h15km, mb4.4/77, MS4.1/16, Error ellipse: s-maj=4.5km s-min=2.2km az=39.6*

*CSEM **04** 07:02:44.3±0.1, 71.°83N×1.°25W, h2km, mb4.5/39, Error ellipse: s-maj=6.0km s-min=4.0km az=50.0*

*NEIC **04** 07:02:46.0±0.2, 71.°81N×1.°26W, h10km, mb4.6/36, Error ellipse: s-maj=6.0km s-min=4.1km az=56.0*

*BER **04** 07:02:47.8±4.3, 71.°85N×1.°26W, h10km, MD2.8, ML3.0, ML4.1(NAO)*

ISC 04 07:02:47.0±0.5**, 71.°78N**±0.°04×**1.°34W**±0.°04**, h16**km±2km**, h16**km**:pP-P, n512,** σ1.s28/536**, mb4.5**/77**, MS4.0**/16**, 78C-70D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMIC	Jan Mayen	2.44	254	LR	LR	07 03 57.7	
	comp=Z,369nm,21.4s,baz=274,slow=30						
LOF	Lofoten	6.28	118	eP	Pn	07 04 12.0	-6.7
BJO	Bjornoya	6.54	56	eP	Pn	07 04 20.1	-2.2
BJO	Bjornoya	6.54	56	eP	Pn	07 04 20.1	-2.2
	SNR=47						
SCO	Scoresbysund	6.80	269	i P	Pn	07 04 23.6	-2.2
	4.4nm,0.8s						
SCO	Scoresbysund	6.80	269	i P	Pn	07 04 23.6	-2.2
	4.4nm,0.8s						
STEI	Steigen	6.89	116	eP	Pn	07 04 25.8	-1.3
TRO	Tromso	7.04	98	eP	Pn	07 04 26.7	-2.4
TRO				eS	Sn	07 05 41.3	-7.3
TRO	Tromso	7.04	98	eP	Pn	07 04 26.7	-2.4
	SNR=47						
KONS	Konsvik	7.38	129	eP	Pn	07 04 31.1	-2.8
KONS				AML	AML	07 05 56.9	
	comp=Z,14nm,0.7s						
STOK	Stokkvaagen	7.49	130	eP	Pn	07 04 33.3	-2.0
FLOS	Flostrand	7.57	129	eP	Pn	07 04 34.4	-2.1
FLOS				AML	AML	07 05 59.8	
	comp=Z,22nm,0.6s						
SPA0	Spitsbergen Ar	7.85	27	Pn	Pn	07 04 39.6	-0.6
	baz=198,slow=16						
SPA0	Spitsbergen Ar	7.85	27	Pn	Pn	07 04 39.6	-0.6
	baz=198,slow=14,SNR=50						
SPITS	Spitsbergen Ar	7.85	27	Pn	Pn	07 04 39.3	-0.9
SPITS	Spitsbergen Ar	7.85	27	Pn	Pn	07 04 39.3	-0.9
	baz=197,slow=14,SNR=151						
SPITS	Spitsbergen Ar	7.85	27	P	Pn	07 04 39.3	-0.9
KBS	Kingsbay	7.89	19	Pn	Pn	07 04 38.9	-1.9
KBS				Sn	Sn	07 06 04.4	-5.2
KBS	Kingsbay	7.89	19	⇑eP	Pn	07 04 38.7	-2.1
KBS				pmax	pmax		
	comp=Z,48nm,2.5s						
KBS	Kingsbay	7.89	19	ePn	Pn	07 04 38.4	-2.5
KBS	Kingsbay	7.89	19	ePn	Pn	07 04 38.4	-2.5
KBS	Kingsbay	7.89	19	eP	Pn	07 04 38.7	-2.1
	comp=Z,48nm,2.5s						
MOR8	Moi Rana	7.97	127	eP	Pn	07 04 40.7	-1.3
MOR8				eS	Sn	07 06 05.7	-5.9
MOR8				AML	AML	07 06 08.5	
	comp=Z,15nm,0.7s						
MOR8	Moi Rana	7.97	127	eP	Pn	07 04 40.7	-1.3
	SNR=47						
KTK1	Kautokeino	8.68	97	eP	Pn	07 04 50.2	-1.4
KTK1	Kautokeino	8.68	97	eP	Pn	07 04 50.2	-1.4
	SNR=47						
NSS	Namsos	8.79	139	eP	Pn	07 04 52.6	-0.5
NSS	Namsos	8.79	139	eP	Pn	07 04 52.6	-0.5
	SNR=47						
ARA0	ARCESS Array S	9.14	91	Pn	Pn	07 04 55.7	-2.3
	baz=293,slow=9.3						
ARA0	ARCESS Array S	9.14	91	Pn	Pn	07 04 55.7	-2.3
	baz=293,slow=8.6,SNR=50						
ARCES	ARCESS Array B	9.14	91	Pn	Pn	07 04 55.8	-2.2
ARCES	ARCESS Array B	9.14	91	Pn	Pn	07 04 55.8	-2.2
	comp=Z,3.4nm,0.3s,baz=298,slow=11,SNR=92						
ARCES				LR	LR	07 08 10.5	
	comp=Z,630nm,20.5s,baz=250,slow=36						
ARCES	ARCESS Array B	9.14	91	P	Pn	07 04 55.8	-2.2
	comp=Z,630nm,20.5s						
ARE0	ARCESS Array S	9.14	91	eP	Pn	07 04 55.7	-2.3
ARE0	ARCESS Array S	9.14	91	ePn	Pn	07 04 55.5	-2.5
ARE0	ARCESS Array S	9.14	91	eP	Pn	07 04 55.7	-2.3
	SNR=47						
KEV	Kevo	9.52	89	eP	Pn	07 05 00.2	-2.9
KEV	Kevo	9.52	89	ePn	Pn	07 05 00.2	-2.9
KEV	Kevo	9.52	89	ep	Pn	07 04 59.3	-3.8
	comp=Z,8.1nm,0.5s						
KEV	Kevo	9.52	89	eP	Pn	07 05 00.2	-2.9
TBLU	Trondheim	9.63	147	eP	Pn	07 04 52.8	-12
MOL	Molde	9.86	155	eP	Pn	07 05 08.2	+0.4
MOL	Molde	9.86	155	eP	Pn	07 05 08.2	+0.4
	SNR=47						
BORG	Borgarnes	10.18	236	LR	LR	07 08 21.5	
	comp=Z,537nm,21.3s,baz=292,slow=33						
SUMG	Summit	11.27	292	eP	Pn	07 05 25.8	-1.7
SUMG	Summit	11.27	292	ePn	Pn	07 05 25.8	-1.7
SUMG	Summit	11.27	292	i P	Pn	07 05 26.3	-1.2
	comp=Z,18nm,0.8s						
SUMG	Summit	11.27	292	eP	Pn	07 05 25.8	-1.7
NB2	NORSAR Subarra	11.86	149	Pn	Pn	07 05 34.7	-0.6
	baz=342,slow=12						
NB2	NORSAR Subarra	11.86	149	Pn	Pn	07 05 34.0	-1.2
	comp=Z,12nm,1.0s,baz=341,slow=14						
NB2	NORSAR Subarra	11.86	149	Pn	Pn	07 05 34.7	-0.6
	baz=342,slow=12,SNR=50						
NOA	NORSAR Array B	11.86	149	Pn	Pn	07 05 34.6	-0.6
NOA				Sn	Sn	07 07 42.1	-4.9
NOA	NORSAR Array B	11.86	149	Pn	Pn	07 05 34.6	-0.6
	comp=Z,0.6nm,0.3s,baz=346,slow=13,SNR=16						
NOA				Sn	Sn	07 07 42.1	-4.9
	comp=Z,0.3nm,0.3s,baz=330,slow=22,SNR=2.9						
NOA				LR	LR	07 09 58.4	
	comp=Z,638nm,20.6s,baz=345,slow=37						
NOA	NORSAR Array B	11.86	149	P	Pn	07 05 34.6	-0.6
	comp=Z,638nm,20.6s						
NAO01	NORSAR Array S	11.99	150	ePn	Pn	07 05 37.2	+0.2
	comp=Z,5.2nm,0.7s						
NAO01	NORSAR Array S	11.99	150	ePn	Pn	07 05 37.2	+0.2
	comp=Z,5.2nm,0.7s						
LVZ	Lovozero	12.85	90	⇑eP	Pn	07 05 46.7	-2.0
LVZ				pmax	pmax		
	comp=Z,22nm,0.7s						
LVZ				MLR	MLR		
	comp=Z,489nm,22.0s						
LVZ	Lovozero	12.85	90	eP	Pn	07 05 46.7	-2.0
	comp=Z,489nm,22.0s						
KONO	Kongsberg	12.95	155	eP	Pn	07 05 48.3	-1.8
KONO				pmax	pmax		
	comp=Z,16nm,0.8s						
KONO	Kongsberg	12.95	155	ePn	Pn	07 05 48.3	-1.8
	comp=Z,16nm,0.8s						
KONO	Kongsberg	12.95	155	eP	Pn	07 05 48.3	-1.8
	comp=Z,16nm,0.8s						
HFS	Hagfors	13.14	145	Pn	Pn	07 05 51.3	-1.3
	baz=340,slow=10						
HFS	Hagfors	13.14	145	Pn	Pn	07 05 51.7	-0.9
HFS	Hagfors	13.14	145	Pn	Pn	07 05 51.7	-0.9
	comp=Z,1.7nm,0.3s,baz=356,slow=10,SNR=81						
HFS				LR	LR	07 10 37.9	
	comp=Z,594nm,21.8s,baz=301,slow=36						
HFS	Hagfors	13.14	145	P	Pn	07 05 51.7	-0.9
	comp=Z,594nm,21.8s						
KAF	Kangasniemi	14.36	118	eP	Pn	07 06 05.2	-4.0
KAF				pmax	pmax		
	comp=Z,11nm,0.6s						
KAF	Kangasniemi	14.36	118	ep	Pn	07 06 05.2	-4.0
	comp=Z,11nm,0.6s						
FIA0	FINESS Array S	14.84	120	Pn	Pn	07 06 13.3	-2.4
	baz=335,slow=9.3						
FIA0	FINESS Array S	14.84	120	Pn	Pn	07 06 13.4	-2.4
	baz=335,slow=9.2,SNR=50						
FIA1	FINESS Array S	14.84	120	ePn	Pn	07 06 13.4	-2.4
FIA1	FINESS Array S	14.84	120	ePn	Pn	07 06 13.4	-2.4
FINES	FINESS Array B	14.84	120	Pn	Pn	07 06 13.5	-2.4
FINES	FINESS Array B	14.84	120	Pn	Pn	07 06 13.5	-2.4
	comp=Z,0.7nm,0.3s,baz=343,slow=12,SNR=58						
FINES				LR	LR	07 11 28.0	
	comp=Z,966nm,20.2s,baz=344,slow=35						
FINES	FINESS Array B	14.84	120	Pn	Pn	07 06 13.5	-2.4
JOF	Joensuu	15.16	109	eP	Pn	07 06 16.8	-3.3
JOF				pmax	pmax		
	comp=Z,19nm,0.7s						
JOF	Joensuu	15.16	109	ep	Pn	07 06 16.8	-3.3
	comp=Z,19nm,0.7s						
EKA	Eskdalemuir Ar	16.54	184	Pn	Pn	07 06 38.7	+0.9
EKA	Eskdalemuir Ar	16.54	184	Pn	Pn	07 06 38.7	+0.9
	baz=14,slow=14,SNR=4.4						
EKA	Eskdalemuir Ar	16.54	184	P	Pn	07 06 38.7	+0.9
PUL	Pulkovo	17.41	117	i P	Pn	07 06 47.5	-1.2
PUL				pmax	pmax		
	comp=Z,62nm,0.7s						
PUL				MLR	MLR		
	comp=Z,855nm,19.0s						
PUL	Pulkovo	17.41	117	i P	Pn	07 06 47.5	-1.2
	comp=Z,855nm,19.0s						
LLD	Lille Linde	17.50	154	i P	P	07 06 51.1	+0.1
LLD	Lille Linde	17.50	154	i P	P	07 06 51.1	+0.1
VSU	Vasula	17.56	125	⇓eP	Pn	07 06 47.4	-3.2
VSU				pmax	pmax		
	comp=Z,111nm,1.6s						
VSU				MLR	MLR		
	comp=Z,862nm,21.0s						
BSD	Bornholm Skovb	18.12	149	i P	Pn	07 06 56.6	-0.9
	comp=Z,14nm,0.8s						
BSD	Bornholm Skovb	18.12	149	i P	Pn	07 06 56.6	-0.9
	comp=Z,14nm,0.9s						
KLMR	Klimovskoe	19.23	104	eP	P	07 07 06.5	-3.5
KLMR				pmax	pmax		
	comp=Z,122nm,1.6s						
IZAR	Zarasai	19.85	130	eP	P	07 07 15.9	-0.9
IZAR				AMB	AMB	07 07 21.0	
	comp=Z,8.2nm,0.7s						
ISAL	Salakas	19.98	130	eP	P	07 07 17.3	-1.0
ISAL				AMB	AMB	07 07 21.2	
	comp=Z,17nm,1.1s						
IIGN	Ignalina	20.21	130	eP	P	07 07 19.7	-1.0
IIGN				AMB	AMB	07 07 25.8	
	comp=Z,7.7nm,1.1s						
SUW	Suwalki	20.74	136	eP	P	07 07 26.0	-0.5
SUW				pmax	pmax		
	comp=Z,108nm,1.0s						
SUW	Suwalki	20.74	136	eP	P	07 07 26.0	-0.5

comp=Z,108nm,1.0s
SUW Suwalki 20.74 136 eP P 07 07 26.4 -0.1
SUW Suwalki 20.74 136 eP P 07 07 26.0 -0.5
comp=Z,108nm,1.0s
NACGM Naroch 20.75 130 e P 07 07 24.0 -2.6
MNK Minsk 21.37 129 eP P 07 07 31.0 -2.3
MNK Minsk 21.37 129 eP P 07 07 31.0 -2.3
MICGM Minsk 21.39 129 eP P 07 07 31.0 -2.4
CLL Collm 21.53 155 eP P 07 07 35.0 0.0
CLL i 07 07 39.8
CLL pmax pmax
comp=Z,13nm,1.5s
CLL Collm 21.53 155 eP P 07 07 35.0 0.0
comp=Z,13nm,1.5s
CLL i sP sP 07 07 39.8 -1.9
comp=Z,16nm,1.2s
CLL Collm 21.53 155 eP P 07 07 35.0 0.0
comp=Z,13nm,1.5s
GIVF Givet 21.94 169 eP P 07 07 39.4 0.0
GIVF Givet 21.94 169 eP P 07 07 39.4 0.0
GIVF Givet 21.94 169 eP P 07 07 39.4 0.0
GIVF Givet 21.94 169 eP P 07 07 39.4 0.0
BAIF Baives 21.95 170 eP P 07 07 39.9 +0.5
comp=Z,54nm,1.4s
BAIF Baives 21.95 170 eP P 07 07 39.9 +0.5
BAIF pmax pmax
comp=Z,54nm,1.4s
BAIF Baives 21.95 170 eP P 07 07 39.9 +0.5
comp=Z,54nm,1.4s
BRG Berggiesshubel 22.09 154 eP P 07 07 40.9 -0.1
comp=Z,19nm,1.7s
BRG Berggiesshubel 22.09 154 eP P 07 07 40.8 -0.1
BRG pmax pmax
comp=Z,19nm,1.7s
BRG Berggiesshubel 22.09 154 eP P 07 07 40.8 -0.1
comp=Z,19nm,1.7s
BEL Belsk 22.30 142 eP P 07 07 44.4 +1.2
BEL Belsk 22.30 142 eP P 07 07 44.4 +1.2
KSP Ksiaz 22.46 150 eP P 07 07 44.8 -0.2
KSP Ksiaz 22.46 150 eP P 07 07 45.5 +0.5
KSP Ksiaz 22.46 150 eP P 07 07 44.8 -0.2
PVCC Panska Ves 22.51 153 eP P 07 07 46.1 +0.6
PVCC e 07 07 51.3
PVCC Panska Ves 22.51 153 eP P 07 07 46.1 +0.6
PVCC epP pP 07 07 51.3 +1.2
PVCC Panska Ves 22.51 153 eP P 07 07 46.1 +0.6
UPC Upice 22.75 150 eP P 07 07 48.1 +0.1
UPC Upice 22.75 150 eP P 07 07 48.1 +0.1
UPC Upice 22.75 150 eP P 07 07 48.1 +0.1
MOS Moscow 22.90 114 eP P 07 07 46.6 -3.0
MOS pmax pmax
comp=Z,65nm,1.2s
MOS Moscow 22.90 114 eP P 07 07 46.6 -3.0
comp=Z,65nm,1.2s
DPC Dobruska-Polom 22.95 150 eP P 07 07 50.2 0.0
DPC pmax pmax
comp=Z,30nm,1.2s
DPC Dobruska-Polom 22.95 150 eP P 07 07 50.2 0.0
comp=Z,30nm,1.2s
DPC Dobruska-Polom 22.95 150 eP P 07 07 50.0 -0.2
DPC epP pP 07 07 55.2 +0.4
DPC AMS AMS 07 15 10.0
comp=Z,300nm,22.1s
DPC Dobruska-Polom 22.95 150 eP P 07 07 50.2 0.0
comp=Z,30nm,1.2s
PRU Pruhonice 23.03 153 eP P 07 07 51.4 +0.4
PRU MLR MLR
comp=Z,400nm,20.5s
PRU Pruhonice 23.03 153 eP P 07 07 51.4 +0.4
PRU AMS AMS 07 15 00.0
comp=Z,400nm,20.5s
PRU Pruhonice 23.03 153 P P 07 07 51.4 +0.4
FLN La Foliniere 23.10 179 eP P 07 07 51.0 -0.7
comp=Z,23nm,1.0s
FLN La Foliniere 23.10 179 eP P 07 07 51.0 -0.7
FLN pmax pmax
comp=Z,23nm,1.0s
FLN La Foliniere 23.10 179 eP P 07 07 51.0 -0.7
comp=Z,23nm,1.0s
FLN La Foliniere 23.10 179 eP P 07 07 51.0 -0.7
comp=Z,12nm,1.0s
OBN Obninsk 23.14 116⇑eP P 07 07 51.9 -0.1
OBN e 07 07 56.2
OBN e 07 11 38.2
OBN pmax pmax
comp=Z,76nm,1.2s
OBN MLR MLR
comp=Z,1μm,24.0s
OBN Obninsk 23.14 116 eP P 07 07 52.8 +0.8
comp=Z,48nm,0.9s
OBN Obninsk 23.14 116 eP P 07 07 51.9 -0.1
comp=Z,76nm,1.2s
OBN Obninsk 23.14 116 ePcP PcP 07 11 38.2 -1.6
comp=Z,1μm,24.0s
LDF La Druitiere 23.27 178 eP P 07 07 52.0 -1.4
comp=Z,69nm,1.4s
LDF La Druitiere 23.27 178 eP P 07 07 52.0 -1.4
LDF pmax pmax
comp=Z,69nm,1.4s
LDF La Druitiere 23.27 178 eP P 07 07 52.0 -1.4
comp=Z,69nm,1.4s
KRLC Kraliky 23.29 150 eP P 07 07 54.7 +1.1
KRLC e 07 08 00.8
KRLC Kraliky 23.29 150 eP P 07 07 54.7 +1.1
KRLC epP pP 07 08 00.8 +2.5
KRLC Kraliky 23.29 150 P P 07 07 54.7 +1.1
PAGF Fort de Pagny 23.53 168 eP P 07 07 55.8 -0.2
PAGF Fort de Pagny 23.53 168 eP P 07 07 55.8 -0.2
ROSF Rostrenen 23.54 183 eP P 07 07 55.4 -0.7
comp=Z,28nm,1.0s
ROSF Rostrenen 23.54 183 eP P 07 07 55.4 -0.7
ROSF pmax pmax
comp=Z,28nm,1.0s
ROSF Rostrenen 23.54 183 eP P 07 07 55.4 -0.7
comp=Z,28nm,1.0s
OJC Ojcow 23.66 145 eP P 07 07 58.7 +1.4
OJC pmax pmax
comp=Z,34nm,1.5s
OJC Ojcow 23.66 145 eP P 07 07 58.7 +1.4
comp=Z,34nm,1.5s
OJC Ojcow 23.66 145 eP P 07 07 56.9 -0.4
OJC Ojcow 23.66 145 eP P 07 07 58.7 +1.4
comp=Z,34nm,1.5s
MORC Moravsky Berou 23.70 149 eP P 07 07 59.9 +2.2
MORC pmax pmax
comp=Z,6.0nm,1.0s
MORC Moravsky Berou 23.70 149 eP P 07 07 59.9 +2.2
comp=Z,6.0nm,1.0s
MORC Moravsky Berou 23.70 149⇑iP P 07 07 59.8 +2.1
MORC Moravsky Berou 23.70 149⇑iP P 07 07 59.8 +2.1
KHC Kasperske Hory 23.74 155 eP P 07 07 59.4 +1.3
KHC e 07 08 04.6
KHC MLR MLR
comp=Z,500nm,18.6s
KHC Kasperske Hory 23.74 155 eP P 07 07 59.4 +1.3
KHC epP pP 07 08 04.6 +1.7
KHC AMS AMS 07 17 00.0
comp=Z,500nm,18.6s
KHC Kasperske Hory 23.74 155 P P 07 07 59.4 +1.3
OKC Ostrava-Krasne 23.74 148 eP P 07 07 59.2 +1.2
OKC Ostrava-Krasne 23.74 148 eP P 07 07 59.2 +1.2
OKC Ostrava-Krasne 23.74 148 P P 07 07 59.2 +1.2
CDF Champ du Feu 23.79 166 eP P 07 07 58.1 -0.5
comp=Z,21nm,1.2s
CDF Champ du Feu 23.79 166 eP P 07 07 58.1 -0.5
CDF pmax pmax
comp=Z,21nm,1.3s
CDF Champ du Feu 23.79 166 eP P 07 07 58.1 -0.5
comp=Z,21nm,1.3s
TREC Trest 23.85 152 AMS AMS 07 17 50.0
comp=Z,500nm,15.1s
VRAC Vranov 24.00 150 P P 07 08 01.2 +0.7
VRAC Vranov 24.00 150 P P 07 08 01.2 +0.7
comp=Z,4.4nm,0.7s,baz=350,slow=11,SNR=8.2
VRAC LR LR 07 17 23.5
comp=Z,314nm,21.8s,baz=309,slow=37
VRAC Vranov 24.00 150 P P 07 08 01.2 +0.7
comp=Z,314nm,21.8s
GERES GERESS Array B 24.04 155 P P 07 08 01.6 +0.6
GERES GERESS Array B 24.04 155 P P 07 08 01.6 +0.6
comp=Z,1.6nm,0.7s,baz=350,slow=10.0,SNR=9.4
GERES LR LR 07 18 07.9
comp=Z,269nm,18.5s,baz=269,slow=38
GERES GERESS Array B 24.04 155 P P 07 08 01.6 +0.6
comp=Z,269nm,18.5s

RES Resolute Bay 24.50 320 P P 07 08 05.6 +0.7
RES Resolute Bay 24.50 320 P P 07 08 05.6 +0.7
comp=Z,0.9nm,0.9s,baz=62,slow=16,SNR=2.6
RES Resolute Bay 24.50 320 P P 07 08 05.6 +0.7
NIE Niedzica 24.52 145 eP P 07 08 06.4 +1.0
NIE Niedzica 24.52 145 eP P 07 08 06.4 +1.0
NIE Niedzica 24.52 145 eP P 07 08 06.4 +1.0
LOR Lormes 24.71 172 eP P 07 08 06.2 -0.9
comp=Z,9.2nm,1.0s
LOR Lormes 24.71 172 eP P 07 08 06.2 -0.9
comp=Z,9.2nm,1.0s
KWP Kalwaria Pacla 24.78 141 eP P 07 08 09.7 +2.1
KWP pmax pmax
comp=Z,10.0nm,0.6s
KWP Kalwaria Pacla 24.78 141 eP P 07 08 09.7 +2.1
comp=Z,10.0nm,0.6s
KWP Kalwaria Pacla 24.78 141⇑iP P 07 08 10.3 +2.7
KWP Kalwaria Pacla 24.78 141 eP P 07 08 11.4 +3.8
KWP Kalwaria Pacla 24.78 141 eP P 07 08 09.7 +2.1
comp=Z,10.0nm,0.6s
LVV L'vov 24.87 139 eP P 07 08 09.6 +1.2
LVV L'vov 24.87 139 eP P 07 08 09.6 +1.2
SSF Saint Saulge 24.91 172 eP P 07 08 08.7 -0.1
comp=Z,14nm,0.9s
SSF Saint Saulge 24.91 172 eP P 07 08 08.7 -0.1
SSF pmax pmax
comp=Z,14nm,0.9s
SSF Saint Saulge 24.91 172 eP P 07 08 08.7 -0.1
comp=Z,14nm,0.9s
VYHS Vyhne 25.16 147 eP P 07 08 12.5 +1.5
VYHS Vyhne 25.16 147 eP P 07 08 12.5 +1.5
VYHS Vyhne 25.16 147 eP P 07 08 12.5 +1.5
AVF Avril sur Loir 25.17 172 eP P 07 08 11.0 -0.1
comp=Z,18nm,1.0s
AVF Avril sur Loir 25.17 172 eP P 07 08 11.0 -0.1
AVF pmax pmax
comp=Z,18nm,1.0s
AVF Avril sur Loir 25.17 172 eP P 07 08 11.0 -0.1
comp=Z,18nm,1.0s
AKASG Malin Array Be 25.20 131 P P 07 08 09.6 -1.8
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKASG Malin Array Be 25.20 131 P P 07 08 09.6 -1.8
AKASG Malin Array Be 25.20 131 P P 07 08 09.6 -1.8
comp=Z,4.1nm,0.7s,baz=340,slow=10.0,SNR=15
AKASG Malin Array Be 25.20 131 P P 07 08 09.6 -1.8
comp=Z,4.0nm,0.7s
KIEV Kiev 25.20 131 eP P 07 08 11.0 -0.4
KIEV pmax pmax
comp=Z,54nm,1.7s
KIEV Kiev 25.20 131 eP P 07 08 10.9 -0.4
comp=Z,54nm,1.7s
KIEV Kiev 25.20 131 eP P 07 08 11.0 -0.4
comp=Z,54nm,1.7s
AK01 Malin Array Si 25.21 131 eP P 07 08 10.7 -0.8
AK02 Malin Array Si 25.24 131 eP P 07 08 10.6 -1.1
MFF Saint Martin d 25.27 178 eP P 07 08 11.9 -0.1
comp=Z,66nm,1.5s
MFF Saint Martin d 25.27 178 eP P 07 08 11.9 -0.1
MFF pmax pmax
comp=Z,66nm,1.5s
MFF Saint Martin d 25.27 178 eP P 07 08 11.9 -0.1
comp=Z,66nm,1.5s
SMF Signal de Mont 25.34 172 eP P 07 08 14.1 +1.4
comp=Z,18nm,1.1s
SMF Signal de Mont 25.34 172 eP P 07 08 14.1 +1.4
SMF pmax pmax
comp=Z,18nm,1.1s
SMF Signal de Mont 25.34 172 eP P 07 08 14.1 +1.4
comp=Z,18nm,1.1s
BGF Bois d'Agland 25.38 173 eP P 07 08 14.3 +1.2
comp=Z,10.0nm,0.6s
BGF Bois d'Agland 25.38 173 eP P 07 08 14.3 +1.2
BGF pmax pmax
comp=Z,10.0nm,0.6s
BGF Bois d'Agland 25.38 173 eP P 07 08 14.3 +1.2
comp=Z,10.0nm,0.6s
CABF La Chapelle 25.49 168 eP P 07 08 15.2 +1.0
comp=Z,50nm,1.5s
CABF La Chapelle 25.49 168 eP P 07 08 15.2 +1.0
CABF pmax pmax
comp=Z,50nm,1.5s
CABF La Chapelle 25.49 168 eP P 07 08 15.2 +1.0
comp=Z,50nm,1.5s
TCF Toulx Ste Croi 25.63 174 eP P 07 08 15.1 -0.3
comp=Z,35nm,1.4s
TCF Toulx Ste Croi 25.63 174 eP P 07 08 15.1 -0.3
TCF pmax pmax
comp=Z,35nm,1.4s
TCF Toulx Ste Croi 25.63 174 eP P 07 08 15.1 -0.3
comp=Z,35nm,1.4s
SOKR Solikamsk 25.63 88 eP P 07 08 15.7 +0.5
SOKR pmax pmax
comp=Z,10.0nm,0.8s
SOKR Solikamsk 25.63 88 eP P 07 08 15.7 +0.5
comp=Z,10.0nm,0.8s
UZH Uzhgorod 25.65 142 i P P 07 08 16.8 +1.3
UZH i 07 08 23.8
UZH e 07 08 57.2
UZH ePPP PPP 07 09 07.0
UZH e 07 11 45.6
UZH eS S 07 12 43.0 +0.2
UZH eSS SnSn 07 13 43.7 +6.7
UZH Uzhgorod 25.65 142 i P P 07 08 16.8 +1.3
UZH Uzhgorod 25.65 142 ePcP PcP 07 11 45.6 +0.2
UZH eS S 07 12 43.0 +0.2
RJF Les Rejaudoux 26.59 175 eP P 07 08 24.0 -0.1
RJF Les Rejaudoux 26.59 175 eP P 07 08 24.0 -0.1
RJF Les Rejaudoux 26.59 175 eP P 07 08 24.0 -0.1
LPG La Plagne 26.65 167 eP P 07 08 25.0 +0.1
LPG La Plagne 26.65 167 eP P 07 08 25.0 +0.1
LPG La Plagne 26.65 167 eP P 07 08 25.0 +0.1
CAF Calviac 26.99 175 eP P 07 08 27.8 +0.2
comp=Z,10.0nm,1.1s
CAF Calviac 26.99 175 eP P 07 08 27.8 +0.2
CAF pmax pmax
comp=Z,10.0nm,1.1s
CAF Calviac 26.99 175 eP P 07 08 27.8 +0.2
comp=Z,10.0nm,1.1s
VIVF Saint-Julien-l 27.16 171 eP P 07 08 30.2 +1.0
comp=Z,27nm,1.4s
VIVF Saint-Julien-l 27.16 171 eP P 07 08 30.2 +1.0
VIVF pmax pmax
comp=Z,27nm,1.4s
VIVF Saint-Julien-l 27.16 171 eP P 07 08 30.2 +1.0
comp=Z,27nm,1.4s
BUR08 Bucovina Ar. S 27.18 139 eP P 07 08 30.2 +0.8
BURAR Bucovina Array 27.21 139⇑iP P 07 08 31.0 +1.3
VSR Storozhevoye 27.33 117 eP P 07 08 29.9 -0.7
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,7.0nm,0.9s
VSR pmax pmax
comp=Z,20nm,0.9s
VSR Storozhevoye 27.33 117 eP P 07 08 29.9 -0.7
VORD Divnogorie 27.59 117 eP P 07 08 32.1 -0.8
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,60nm,0.9s
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD Divnogorie 27.59 117 eP P 07 08 32.1 -0.8
ARU Arti 28.73 90 d iP P 07 08 43.1 +0.1
ARU 07 09 32.7
ARU S S 07 13 33.9 +2.7
ARU SS SnSn 07 14 50.8 -1.0
ARU pmax pmax
comp=Z,8.0nm,1.7s
ARU Arti 28.73 90 i P P 07 08 43.1 +0.1
comp=Z,8.0nm,1.7s
ARU S S 07 13 33.9 +2.7
EPF Esparros 28.84 177 eP P 07 08 45.2 +1.0
EPF Esparros 28.84 177 eP P 07 08 45.2 +1.0
EPF Esparros 28.84 177 eP P 07 08 45.2 +1.0
PLOR Plostina 29.19 138 ⇓P P 07 08 48.2 +0.9
PLOR Plostina 29.19 138⇓iP P 07 08 48.2 +0.9
PLOR Plostina 29.19 138 P P 07 08 48.2 +0.9
VRI Vrincioaia 29.19 138 ⇑P P 07 08 49.2 +1.9
VRI Vrincioaia 29.19 138⇑iP P 07 08 49.2 +1.9
VRI Vrincioaia 29.19 138 P P 07 08 49.2 +1.9
MLR Muntele Rosu 29.39 139 P P 07 08 49.9 +0.7
MLR Muntele Rosu 29.39 139⇑iP P 07 08 51.0 +1.9
MLR Muntele Rosu 29.39 139 P P 07 08 49.9 +0.7

comp=Z,0.7nm,0.9s,baz=329,slow=15,SNR=3.5
MLR LR LR 07 21 05.0
comp=Z,135nm,18.6s,baz=165,slow=38
MLR Muntele Rosu 29.39 139 P P 07 08 51.0 +1.9
ESDC Sonseca Array 32.21 184 P P 07 09 14.3 +0.3
ESDC Sonseca Array 32.21 184 P P 07 09 14.3 +0.3
comp=Z,0.5nm,0.5s,baz=12,slow=7.9,SNR=5.9
TIXI Tiksi 33.27 26⇓eP P 07 09 24.1 +1.2
TIXI pmax pmax
comp=Z,14nm,1.7s
TIXI Tiksi 33.27 26 eP P 07 09 24.3 +1.4
comp=Z,9.6nm,1.1s
TIXI Tiksi 33.27 26 eP P 07 09 24.1 +1.2
comp=Z,14nm,1.7s
KIV Kislovodsk 34.93 119 eP P 07 09 37.4 -0.2
KIV pmax pmax
comp=Z,11nm,0.9s
KIV Kislovodsk 34.93 119 eP P 07 09 37.4 -0.2
comp=Z,11nm,0.9s
KBZ Khabaz 35.19 119 P P 07 09 41.4 +1.6
KBZ pmax pmax
comp=Z,7.0nm,0.8s
KBZ MLR MLR
comp=Z,311nm,18.7s
KBZ Khabaz 35.19 119 P P 07 09 41.4 +1.6
KBZ Khabaz 35.19 119 P P 07 09 41.4 +1.6
comp=Z,6.8nm,0.8s,baz=338,slow=5.4,SNR=12
KBZ LR LR 07 24 08.0
comp=Z,311nm,18.7s,baz=195,slow=36
KBZ Khabaz 35.19 119 P P 07 09 41.4 +1.6
comp=Z,311nm,18.7s
BRVK Borovoye 35.24 83 i P P 07 09 40.4 +0.2
BRVK pmax pmax
comp=Z,2.0nm,0.7s
BRVK Borovoye 35.24 83 i P P 07 09 40.4 +0.2
comp=Z,2.0nm,0.7s
ABKAR Akbulak array 35.30 96 eP P 07 09 40.8 +0.1
BR131 Keskin Array S 36.58 132 eP P 07 09 52.6 +0.6
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 36.58 132 P P 07 09 51.4 -0.6
BRTR Keskin Array B 36.58 132 P P 07 09 51.4 -0.6
comp=Z,2.1nm,0.9s,baz=341,slow=6.7,SNR=8.8
BRTR LR LR 07 25 28.4
comp=Z,162nm,21.6s,baz=114,slow=37
BRTR Keskin Array B 36.58 132 P P 07 09 51.4 -0.6
comp=Z,162nm,21.6s
INK Inuvik 36.61 332 P P 07 09 52.7 +1.0
INK Inuvik 36.61 332 P P 07 09 52.7 +1.0
comp=Z,2.1nm,0.9s,baz=18,slow=9.7,SNR=7.0
INK Inuvik 36.61 332 P P 07 09 52.7 +1.0
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 38.46 317 P P 07 10 07.5 +0.2
YKA PcP PcP 07 12 19.4 -0.5
YKA Yellowknife Ar 38.46 317 P P 07 10 07.5 +0.2
comp=Z,1.2nm,0.7s,baz=27,slow=8.6,SNR=28
YKA PcP PcP 07 12 19.4 -0.5
comp=Z,1.0nm,0.8s,baz=19,slow=2.8,SNR=20
YKA Yellowknife Ar 38.46 317 P P 07 10 07.5 +0.2
comp=Z,1.0nm,0.7s
ZALV Zalesovo Beam 38.91 70 P P 07 10 12.6 +1.4
ZALV MLR MLR
comp=Z,160nm,20.0s
ZALV Zalesovo Beam 38.91 70 P P 07 10 12.6 +1.4
ZALV Zalesovo Beam 38.91 70 P P 07 10 12.6 +1.4
comp=Z,0.4nm,0.4s,baz=317,slow=6.1,SNR=3.5
ZALV LR LR 07 27 50.7
comp=Z,160nm,20.0s,baz=330,slow=39
ZALV Zalesovo Beam 38.91 70 P P 07 10 12.6 +1.4
comp=Z,160nm,20.0s
MALT Malatya 39.08 127 ⇑P P 07 10 14.9 +1.9
MALT Malatya 39.08 127 eP P 07 10 15.0 +1.9
comp=Z,2.7nm,0.6s
MALT Malatya 39.08 127⇑iP P 07 10 14.9 +1.9
MALT Malatya 39.08 127 P P 07 10 14.9 +1.9
KURK Kurchatov 39.86 78⇓eP P 07 10 19.7 +0.5
KURK pmax pmax
comp=Z,3.0nm,0.8s
KURK MLR MLR
comp=Z,175nm,18.0s
KURK Kurchatov 39.86 78 eP P 07 10 19.4 +0.1
comp=Z,8.3nm,1.5s
KURK Kurchatov 39.86 78 eP P 07 10 19.7 +0.5
comp=Z,175nm,18.0s
BILL Bilibino 40.18 7⇓eP P 07 10 22.4 +0.7
BILL pmax pmax
comp=Z,10.0nm,1.4s
BILL Bilibino 40.18 7 eP P 07 10 22.4 +0.7
comp=Z,10.0nm,1.4s
ILAR Eielson Array 41.71 339 P P 07 10 34.7 +0.4
ILAR PcP PcP 07 12 29.4 -1.0
ILAR Eielson Array 41.71 339 P P 07 10 34.7 +0.4
comp=Z,1.6nm,0.8s,baz=7.6,slow=7.0,SNR=21
ILAR PcP PcP 07 12 29.4 -1.0
comp=Z,0.7nm,0.8s,baz=335,slow=4.1,SNR=5.2
ILAR Eielson Array 41.71 339 P P 07 10 34.7 +0.4
comp=Z,2.0nm,0.8s
FFC Flin Flon 42.31 302 i P P 07 10 40.2 +0.9
FFC Flin Flon 42.31 302 eP P 07 10 39.8 +0.5
comp=Z,6.2nm,1.0s
FFC Flin Flon 42.31 302 i P P 07 10 40.2 +0.9
KKAR Karatay Array 44.10 90 eP P 07 10 55.2 +1.2
KKAR pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 44.10 90 eP P 07 10 55.2 +1.2
comp=Z,2.8nm,0.8s
KKAR Karatay Array 44.10 90 eP P 07 10 55.2 +1.2
comp=Z,3.0nm,0.8s
SEY Seymchan 44.35 17⇑eP P 07 10 56.3 +0.7
SEY Seymchan 44.35 17 eP P 07 10 56.3 +0.7
MK31 Makanchi Array 44.46 77 eP P 07 10 59.4 +2.6
MK31 Makanchi Array 44.46 77 eP P 07 10 59.4 +2.6
MK31 Makanchi Array 44.46 77 eP P 07 10 59.4 +2.6
MKAR Makanchi Array 44.46 77 eP P 07 10 58.9 +2.1
MKAR Makanchi Array 44.46 77 eP P 07 10 58.9 +2.1
MKAR Makanchi Array 44.46 77 P P 07 10 57.1 +0.3
comp=Z,1.2nm,0.8s,baz=340,slow=7.1,SNR=13
MKAR Makanchi Array 44.46 77 eP P 07 10 58.9 +2.1
ULM Lac du Bonnet 44.61 294 P P 07 10 56.8 -1.1
ULM Lac du Bonnet 44.61 294 P P 07 10 56.8 -1.1
comp=Z,3.5nm,0.8s,baz=356,slow=2.6,SNR=4.7
ULM Lac du Bonnet 44.61 294 P P 07 10 56.8 -1.1
comp=Z,4.0nm,0.8s
AAK Ala-Archa 45.78 87⇓eP P 07 11 09.2 +1.7
AAK pmax pmax
comp=Z,7.0nm,1.2s
AAK Ala-Archa 45.78 87 eP P 07 11 09.2 +1.7
comp=Z,7.0nm,1.2s
TKM2 Tokmak 2 45.87 86 eP P 07 11 09.4 +1.2
TKM2 pmax pmax
comp=Z,4.0nm,1.1s
TKM2 Tokmak 2 45.87 86 eP P 07 11 09.4 +1.2
comp=Z,3.9nm,1.1s
TKM2 Tokmak 2 45.87 86 eP P 07 11 09.4 +1.2
comp=Z,3.9nm,1.1s
MDND Maddock 47.84 296 ⇓P P 07 11 24.6 +1.2
baz=48
A22A Carney Farms, 48.54 302 ⇑P P 07 11 28.8 0.0
baz=48
B23A Brockton 48.77 301 ⇓P P 07 11 30.7 +0.2
baz=48
WMQ Urumqi 48.79 74 P P 07 11 34.7 +3.9
WMQ PP PP 07 13 27.7 +4.1
WMQ ScP ScP 07 16 49.7 +0.6
WMQ S S 07 18 35.7 +2.9
WMQ ScS ScS 07 21 21.7 -0.3
WMQ SS SS 07 22 02.7 +0.1
WMQ pmax pmax
comp=Z,18nm,1.0s
WMQ pmax pmax
comp=Z,290nm,6.0s
WMQ LR LR
comp=N,280nm,20.0s
WMQ LR LR
comp=E,220nm,18.0s
WMQ LR LR
comp=Z,250nm,20.0s
A21A Bergtoll Ranch 48.81 303 ⇑P P 07 11 30.8 0.0
baz=49
KSH Kashi 49.08 87 P P 07 11 34.5 +1.4
KSH pP pP 07 11 39.4 +1.2
KSH sP sP 07 11 41.4 +1.2
KSH PcP PcP 07 12 58.6 +2.1
KSH ScP ScP 07 16 52.2 +1.8
KSH PcS PcS 07 16 53.2 +0.2
KSH S S 07 18 37.4 +0.3
KSH ScS ScS 07 21 23.3 -0.9

KSH pmax pmax
comp=Z,4.0nm,0.7s
KSH pmax pmax
comp=Z,150nm,4.8s
KSH LR LR
comp=N,520nm,9.0s
KSH LR LR
comp=E,320nm,6.3s
KSH LR LR
comp=Z,550nm,5.4s

A20A Cobblestone Ra 49.17 303 ⇑P P 07 11 33.9 +0.2
baz=49
A19A Klindworth Far 49.34 304 ⇑P P 07 11 34.6 -0.4
baz=49
C24A Savage 49.47 300 ⇑P P 07 11 35.6 -0.3
baz=49
A18A Metzger Ranch, 49.64 305 ⇑P P 07 11 37.2 0.0
baz=49
C20A Veseth Ranch, 50.27 303 ⇑P P 07 11 42.0 0.0
baz=50
SONM Songino Array 50.44 56 P P 07 11 42.7 -0.7
SONM Songino Array 50.44 56 P P 07 11 42.7 -0.7
comp=Z,0.3nm,0.6s,baz=347,slow=5.0,SNR=3.7
SONM Songino Array 50.44 56 P P 07 11 42.7 -0.7
EGMT Eagleton 50.44 304 *e*P P 07 11 43.6 +0.3
comp=Z,8.2nm,0.8s
EGMT Eagleton 50.44 304 ⇓P P 07 11 43.4 +0.1
baz=50,SNR=6.9
EGMT Eagleton 50.44 304 *e*P P 07 11 43.6 +0.3
comp=Z,8.2nm,0.8s
A14A Double T Ranch 50.50 308 ⇑P P 07 11 43.9 +0.1
baz=50
C19A Slack Wire Ran 50.52 304 ⇑P P 07 11 44.3 +0.4
baz=50
B16A M & M Farms, S 50.58 306 ⇓P P 07 11 44.5 +0.1
baz=50
A13A Flathead Natio 50.78 308 ⇓P P 07 11 45.8 0.0
baz=50
D20A Manuel Ranch, 50.88 303 ⇓P P 07 11 47.1 +0.5
baz=51
B15A Bradely Ranch, 50.89 307 ⇑P P 07 11 46.4 -0.3
baz=51
D19A Cripps Ranch, 51.00 303 ⇓P P 07 11 48.4 +0.8
baz=51
B14A Marquette Ranc 51.03 307 ⇑P P 07 11 47.6 -0.3
baz=51
C17A Wharram Farm, 51.06 305 ⇓P P 07 11 47.6 -0.4
baz=51
C16A Fuhringer Ranc 51.16 306 ⇑P P 07 11 48.9 +0.1
baz=51
C15A Salmond Ranch, 51.40 306 ⇑P P 07 11 50.6 -0.1
baz=51
E20A Meyer Farm, Mu 51.42 302 ⇓P P 07 11 50.6 0.0
baz=51
E18A Harlowton 51.83 304 ⇓P P 07 11 54.4 +0.6
baz=52
G23A Biddle 51.88 299 ⇓P P 07 11 54.4 +0.3
baz=52
C13A Hot Springs 51.98 308 ⇑P P 07 11 55.3 +0.4
baz=52
D15A Lincoln 52.06 306 ⇓P P 07 11 55.3 -0.2
baz=52
NEW Newport 52.06 310 P P 07 11 55.5 +0.1
NEW Newport 52.06 310 ⇑P P 07 11 55.7 +0.3
baz=52
NEW Newport 52.06 310 P P 07 11 55.5 +0.1
comp=Z,1.4nm,0.7s,baz=310,slow=8.5,SNR=4.3
NEW Newport 52.06 310 P P 07 11 55.5 +0.1
D14A Greenough 52.27 307 ⇑P P 07 11 57.1 0.0
baz=52
CHMT Chamberlain Mo 52.36 307 *e*P P 07 11 57.6 -0.3
CHMT Chamberlain Mo 52.36 307 *e*P P 07 11 57.6 -0.3
F18A Big Timber 52.39 303 ⇑P P 07 11 58.8 +0.8
baz=52
D13A Huson 52.50 308 ⇓P P 07 11 58.9 +0.1
baz=52
MSO Missoula 52.62 307 ⇑P P 07 11 59.9 +0.2
baz=52
G20A Bridger 52.62 302 ⇑P P 07 12 00.0 +0.2
baz=52
D12A Red Ives Fores 52.76 308 ⇑P P 07 12 00.8 +0.1
baz=52
I24A Kuemmerle Ranc 52.90 298 ⇑P P 07 12 01.8 -0.1
baz=53
E13A Victor 53.04 307 ⇓P P 07 12 02.8 0.0
baz=53
I21A Big Trails, Te 53.68 300 P P 07 12 07.7 +0.1
baz=54,SNR=5.2
K25A Mack Ranch, Ha 53.85 297 ⇑P P 07 12 09.4 +0.6
baz=54
KMSC Kings Mountain 53.93 273 ⇓P P 07 12 10.1 +0.8
baz=54
F12A Elk City 53.95 308 ⇑P P 07 12 09.3 -0.2
baz=54
G13A Cobalt 54.31 307 P P 07 12 12.8 +0.6
baz=54,SNR=6.0
H15A Lima 54.35 305 ⇓P P 07 12 13.2 +0.7
baz=54
PETK Petropavlovsk- 54.53 15 P P 07 12 12.0 -1.4
PETK pmax pmax
comp=Z,4.0nm,0.9s
PETK Petropavlovsk- 54.53 15 P P 07 12 12.0 -1.4
PETK Petropavlovsk- 54.53 15 P P 07 12 12.0 -1.4
comp=Z,3.9nm,0.9s,baz=98,slow=3.0,SNR=3.6
PETK Petropavlovsk- 54.53 15 P P 07 12 12.0 -1.4
comp=Z,4.0nm,0.9s
H14A Leadore 54.53 306 ⇓P P 07 12 13.1 -0.8
baz=54
K22A Casper 54.55 299 ⇓P P 07 12 13.4 -0.6
baz=54
G12A Big Creek, Yel 54.55 307 ⇑P P 07 12 13.4 -0.5
baz=54
H13A Challis 54.81 306 ⇑P P 07 12 15.5 -0.2
baz=55
H12A Diamond D Ranc 54.98 307 ⇑P P 07 12 17.1 +0.1
baz=55
K19A Absolon Red Bu 55.02 301 ⇓P P 07 12 17.5 +0.1
baz=55
K20A Yellowstone Ra 55.04 301 ⇓P P 07 12 17.3 -0.1
baz=55
PDAR Pinedale Array 55.26 302 P P 07 12 18.3 -0.9
PDAR Pinedale Array 55.26 302 P P 07 12 18.3 -0.9
comp=Z,1.8nm,1.0s,baz=23,slow=7.2,SNR=8.2
PDAR Pinedale Array 55.26 302 P P 07 12 18.3 -0.9
BW06 Boulder Array 55.26 302 *e*P P 07 12 18.9 -0.3
comp=Z,5.5nm,1.4s
BW06 Boulder Array 55.26 302 ⇓P P 07 12 19.1 -0.1
baz=55
BW06 Boulder Array 55.26 302 *e*P P 07 12 18.9 -0.3
comp=Z,5.5nm,1.4s
L21A Rawlins 55.42 299 ⇑P P 07 12 20.2 -0.1
baz=55
L20A Wamsutter 55.64 300 ⇑P P 07 12 21.8 0.0
baz=55
HLID Hailey 55.79 306 *e*P P 07 12 22.6 -0.4
comp=Z,6.7nm,1.5s
HLID Hailey 55.79 306 ⇑P P 07 12 22.4 -0.4
baz=56
HLID Hailey 55.79 306 *e*P P 07 12 22.5 -0.4
comp=Z,6.7nm,1.5s
N23A Red Feather La 56.02 298 ⇑P P 07 12 25.2 +0.6
baz=56
L18A Fontenelle, Gr 56.18 302 ⇓P P 07 12 25.5 -0.2
baz=56
P26A Davis Ranch, A 56.52 295 ⇓P P 07 12 28.6 +0.5
baz=56
O23A Lake Granby, G 56.65 297 ⇑P P 07 12 29.8 +0.6
baz=56,SNR=5.6
N20A Spence Gulch, 56.71 300 ⇑P P 07 12 29.8 +0.2
baz=56
L15A Malad City 56.72 304 ⇓P P 07 12 29.9 +0.3
baz=56
M17A Scullys Gap (B 56.77 302 ⇓P P 07 12 30.0 +0.1
baz=56
P25A Willow Gulch B 56.80 296 ⇓P P 07 12 30.2 0.0
baz=57
O22A Kremmling 56.87 298 ⇓P P 07 12 30.8 0.0
baz=57
L14A Malta 56.92 304 ⇓P P 07 12 30.9 0.0
baz=57
ISCO Idaho Springs 56.94 297 ⇓P P 07 12 31.1 -0.3
baz=57
P24A Kohler Place, 57.01 296 ⇓P P 07 12 31.7 0.0
baz=57
M16A Huntsville 57.17 303 ⇓P P 07 12 32.8 0.0
baz=57
O20A White River Ci 57.36 299 ⇑P P 07 12 34.6 +0.5
baz=57,SNR=7.4

P23A Jefferson 57.40 297 ⇑P P 07 12 34.0 -0.6
baz=57
O19A Miners Draw (B 57.45 300 ⇑P P 07 12 34.1 -0.6
baz=57,SNR=5.3
N16A Rees Ranch, Co 57.52 302 ⇓P P 07 12 35.3 0.0
baz=57
P21A Newcastle 57.71 298 ⇓P P 07 12 36.7 +0.1
baz=58,SNR=5.8
SMCO Snowmass 57.90 298 *e*P P 07 12 38.4 +0.2
comp=Z,3.9nm,0.9s
SMCO Snowmass 57.90 298 *e*P P 07 12 38.4 +0.2
comp=Z,3.9nm,0.9s
O17A Robinson Place 57.98 302 ⇑P P 07 12 38.9 +0.4
baz=58,SNR=5.0
P19A Cripple Cowboy 58.03 300 ⇓P P 07 12 39.3 +0.5
baz=58
Q22A Crested Butte, 58.18 298 ⇓P P 07 12 39.5 -0.5
baz=58
R24A Sanders Place, 58.26 296 ⇑P P 07 12 40.0 -0.5
baz=58
HHC Hu-ho-hao-te 58.29 55 *e*P P 07 12 41.1 +0.6
HHC pP pP 07 12 45.8 +0.1
HHC pmax pmax
comp=Z,26nm,0.7s
HHC pmax pmax
comp=Z,270nm,6.1s
HHC LR LR
comp=N,380nm,14.3s
HHC LR LR
comp=E,500nm,17.8s
HHC LR LR
comp=Z,520nm,15.5s
O15A The Old Anders 58.36 303 ⇓P P 07 12 41.4 +0.3
baz=58
S26A Kim 58.36 294 ⇑P P 07 12 40.9 -0.2
baz=58
P18A Preston Nutter 58.38 301 ⇓P P 07 12 41.0 -0.4
baz=58
T28A Walsh 58.44 293 ⇓P P 07 12 41.5 -0.1
baz=58
Q20A Ridgley Place, 58.48 299 ⇑P P 07 12 42.1 +0.1
baz=58
R23A Moffat 58.50 297 ⇓P P 07 12 42.3 0.0
baz=58
DUG Dugway 58.53 303 *e*P P 07 12 42.3 0.0
DUG pmax pmax
comp=Z,7.0nm,1.0s
DUG Dugway 58.53 303 *e*P P 07 12 42.3 0.0
comp=Z,6.6nm,1.0s
DUG Dugway 58.53 303 ⇓P P 07 12 41.9 -0.3
baz=58
DUG Dugway 58.53 303 *e*P P 07 12 42.3 0.0
comp=Z,6.6nm,1.0s
S25A Robets Cordova 58.60 295 P P 07 12 43.2 +0.4
baz=58,SNR=7.3
TORD Torodi Ar. Bea 58.64 177 P P 07 12 43.2 +0.2
TORD Torodi Ar. Bea 58.64 177 P P 07 12 43.2 +0.2
comp=Z,1.6nm,0.6s,baz=5.7,slow=7.3,SNR=13
TORD Torodi Ar. Bea 58.64 177 P P 07 12 43.2 +0.2
T27A Campo 58.67 293 ⇑P P 07 12 43.7 +0.5
baz=58
Q19A Hogan Spring (58.74 300 ⇓P P 07 12 43.1 -0.6
baz=58
Q19A ⇑P pP 07 12 43.7 -5.2
CN2 Changchun 58.78 43 *e*P P 07 12 43.3 -0.4
CN2 pmax pmax
comp=Z,10.0nm,0.6s
R21A Cimarron 58.82 298 ⇓P P 07 12 44.9 +0.5
baz=59
SRU San Rafael 58.94 301 ⇓P P 07 12 45.5 +0.3
baz=59
S22A 4UR Ranch, Cre 59.20 297 ⇓P P 07 12 47.7 +0.6
baz=59
R20A Redvale 59.21 299 ⇑P P 07 12 47.4 +0.3
baz=59
Q16A Castle Valley 59.29 301 ⇑P P 07 12 47.9 +0.3
baz=59
PV01 Paradox Valley 59.32 299 *e*P P 07 12 48.5 +0.6
comp=Z,574nm,0.9s
PV01 Paradox Valley 59.32 299 *e*P P 07 12 48.5 +0.6
comp=Z,574nm,0.9s
T24A Torres, Weston 59.32 295 ⇓P P 07 12 48.3 +0.3
baz=59
S21A Coal Bank Pass 59.54 298 ⇑P P 07 12 49.3 -0.2
baz=59
S20A Disappointment 59.55 299 ⇑P P 07 12 50.1 +0.6
baz=59
U26A Atchley Ranch, 59.58 294 ⇓P P 07 12 50.1 +0.4
baz=59
T23A Casias Ranch, 59.64 296 ⇑P P 07 12 49.8 -0.3
baz=59
U25A Circle Dot Ran 59.77 295 ⇑P P 07 12 50.9 0.0
baz=60
T22A Edith 59.90 297 ⇓P P 07 12 52.4 +0.5
baz=60
S18A Hurst Farm, Bl 60.12 300 ⇑P P 07 12 53.7 +0.3
baz=60
MVCO Mesa Verde 60.16 298 *e*P P 07 12 54.6 +0.9
comp=Z,11nm,1.0s
MVCO Mesa Verde 60.16 298 ⇑P P 07 12 53.7 0.0
baz=60
MVCO Mesa Verde 60.16 298 *e*P P 07 12 54.6 +0.9
comp=Z,11nm,1.0s
BJI Beijing 60.22 52 P P 07 12 51.9 -1.8
BJI S S 07 21 05.0 -1.4
BJI pmax pmax
comp=Z,11nm,0.6s
BJI pmax pmax
comp=Z,210nm,8.0s
BJI LR LR
comp=N,170nm,17.7s
BJI LR LR
comp=E,180nm,14.1s
BJI LR LR
comp=Z,120nm,20.8s
V25A Rancho No Teng 60.35 295 ⇓P P 07 12 55.6 +0.6
baz=60
X30A Coker Ranch, T 60.57 291 ⇑P P 07 12 56.8 +0.6
baz=60
LZH Lanzhou 60.66 64 *e*P P 07 12 57.1 +0.1
LZH pP pP 07 13 01.7 -0.5
LZH sP sP 07 13 04.2 0.0
LZH pmax pmax
comp=Z,18nm,1.0s
R11A Troy Canyon, C 60.99 305 ⇑P P 07 12 59.5 +0.2
baz=61
Z32A Haskell 61.22 289 ⇑P P 07 13 00.9 +0.3
baz=61,SNR=5.1
NVAR Mina Array Bea 61.60 307 P P 07 13 03.1 -0.3
NVAR Mina Array Bea 61.60 307 P P 07 13 03.1 -0.3
comp=Z,0.7nm,0.8s,baz=39,slow=5.9,SNR=4.6
NVAR Mina Array Bea 61.60 307 P P 07 13 03.1 -0.3
Y27A Casey 61.76 292 ⇑P P 07 13 04.7 +0.3
baz=62
WHTX Lake Whitney 61.84 287 ⇓P P 07 13 04.8 0.0
baz=62
ABTX Abilene, Hawle 61.90 289 ⇓P P 07 13 05.4 +0.1
baz=62
Z29A Hungry Hill Ra 61.92 291 ⇑P P 07 13 05.9 +0.5
baz=62
U15A North Rim 61.93 301 ⇑P P 07 13 05.1 -0.7
baz=62
Z27A Tatum 62.31 292 ⇑P P 07 13 08.1 0.0
baz=62
Y24A Capitan 62.38 294 ⇓P P 07 13 08.8 +0.1
baz=62
Y23A Lovelace Mesa, 62.55 295 ⇓P P 07 13 09.7 -0.1
baz=62
Z25A Roswell 62.77 294 ⇑P P 07 13 11.9 +0.7
baz=63
127A Arkansas Junct 62.95 292 ⇑P P 07 13 12.9 +0.5
baz=63
332A Millersview 63.09 288 ⇑P P 07 13 13.8 +0.6
baz=63
125A Gardner Draw, 63.34 293 ⇑P P 07 13 15.9 +0.9
baz=63
226B Tecolote Peak, 63.74 293 P P 07 13 18.5 +0.9
baz=64,SNR=5.2
JCT Junction City 63.95 288 *e*P P 07 13 19.1 +0.1
JCT pmax pmax
comp=Z,12nm,1.4s
JCT Junction City 63.95 288 *e*P P 07 13 19.1 +0.1
comp=Z,12nm,1.4s
JCT Junction City 63.95 288 ⇓P P 07 13 19.3 +0.3
baz=64
JCT Junction City 63.95 288 *e*P P 07 13 19.1 +0.1
comp=Z,12nm,1.4s

328A Wristen Ranch, 64.00 291 ⇑P P 07 13 19.3 0.0
baz=64
431A Sonora 64.00 289 ⇑P P 07 13 19.9 +0.6
baz=64
430A Baggett Ranch, 64.09 290 ⇑P P 07 13 19.9 0.0
baz=64
326A Caldwell Ranch 64.40 292 ⇓P P 07 13 22.6 +0.6
baz=64
427A Hayter Ranch, 64.67 291 ⇓P P 07 13 23.9 +0.2
baz=64
324A Moseley Ranch, 64.72 294 ⇓P P 07 13 24.4 +0.2
baz=64
IRM Iron Mountain 64.83 303 ⇓P P 07 13 25.1 +0.4
baz=65
529A Stev Forest Ra 65.00 290 ⇓P P 07 13 26.2 +0.3
baz=65
426A McDonald Obser 65.02 292 ⇓P P 07 13 26.3 +0.2
baz=65
Y12C Blythe 65.05 302 ⇑P P 07 13 26.8 +0.7
baz=65
425A Indio Mountain 65.19 293 ⇓P P 07 13 27.2 0.0
baz=65
628A Black Gap, Mar 65.80 291 ⇓P P 07 13 31.2 +0.2
baz=66
FMP Fort Macarthur 66.07 306 ⇓P P 07 13 32.6 0.0
baz=66
626A Big Bend Ranch 66.10 292 ⇑P P 07 13 33.1 +0.1
baz=66
TXAR Lajitas Array 66.17 291 P P 07 13 32.7 -0.7
TXAR Lajitas Array 66.17 291 P P 07 13 32.7 -0.7
comp=Z,1.2nm,0.8s,baz=35,slow=3.3,SNR=7.2
TXAR Lajitas Array 66.17 291 P P 07 13 32.7 -0.7
comp=Z,1.0nm,0.9s
MJAR Matsushiro Arr 68.28 34 P P 07 13 45.7 -0.9
MJAR Matsushiro Arr 68.28 34 P P 07 13 45.7 -0.9
comp=Z,1.9nm,0.8s,baz=336,slow=5.6,SNR=4.2
MJAR Matsushiro Arr 68.28 34 P P 07 13 45.7 -0.9
comp=Z,2.0nm,0.8s
NJ2 Nanjing 68.47 52 *e*P P 07 13 51.2 +3.4
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
GYA Guiyang 70.52 65 *e*P P 07 14 01.0 +0.3
GYA pmax pmax
comp=Z,10.0nm,1.0s
KMI Kunming 70.64 69 P P 07 14 02.1 +0.5
KMI pmax pmax
comp=Z,7.0nm,0.5s
KMBO Kilima Mbogo 76.87 140 LR LR 07 51 55.7
comp=Z,591nm,21.8s,baz=121,slow=38
WRA Warramunga Arr 122.24 51 PKP PKPdf 07 21 39.1 -1.4
WRA Warramunga Arr 122.24 51 PKP PKPdf 07 21 39.1 -1.4
comp=Z,0.7nm,0.8s,baz=349,slow=3.0,SNR=5.3
ASAR Alice Springs 125.71 53 PKP PKPdf 07 21 45.6 -1.4
ASAR Alice Springs 125.71 53 PKP PKPdf 07 21 45.6 -1.4
comp=Z,0.6nm,0.8s,baz=348,slow=2.3,SNR=5.7

IDC 04 07:16:43.4±3.7, 31°.44N×70°.06E, h0km, mb3.3/3, mb1 3.5/5, mb1mx3.3/31, mbtmp3.4/5, ML3.5/2, MS4.1/1, Ms1 4.1/1, ms1mx3.0/51, Error ellipse: s-maj=127.7km s-min=44.7km az=116.0, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**11.72**	**16**	Pn	Pn	Pn	07 19 32.7	+0.6
	0.7nm,0.3s,baz=191,slow=2.9,SNR=15							
AAK				Sn	Sn	Sn	07 21 39.8	-4.0
	0.2nm,0.3s,baz=195,slow=16,SNR=2.7							
MKAR	**Makanchi Array**	**18.00**	**28**	Pn	P	P	07 20 55.4	-0.2
	0.1nm,0.3s,baz=209,slow=12,SNR=6.7							
MKAR				Sn	Sn	Sn	07 24 09.2	-7.1
	0.0nm,0.3s,baz=336,slow=21,SNR=1.8							
KURBB	**Kurchatov Arra**	**20.18**	**16**	P	Pn	Pn	07 21 20.5	-0.7
	0.6nm,0.5s,baz=206,slow=10,SNR=8.3							
BVAR	**Borovoye Array**	**21.57**	**1**	P	P	P	07 21 35.2	+0.7
	0.6nm,0.7s,baz=170,slow=8.8,SNR=5.5							
ZALV	**Zalesovo Beam**	**24.88**	**21**	P	P	P	07 22 07.2	-0.4
	0.4nm,0.3s,baz=201,slow=7.6,SNR=3.6							
KSRS	**Korea Array**	**47.46**	**66**	LR	LR	LR	07 49 32.0	
	comp=Z,226nm,20.3s,baz=166,slow=42							
YKA	**Yellowknife Ar**	**86.32**	**2**	P	P	P	07 29 26.4	-0.6
	0.1nm,0.4s,baz=355,slow=5.2,SNR=4.1							

*IDC **04** 07:19:39.6±0.4, 62°.56S×155°.27E, h0km, mb4.7/20, mb1 4.8/20, mb1mx4.8/24, mbtmp4.7/20, MS5.6/27, Ms1 5.6/27, ms1mx5.4/36, Error ellipse: s-maj=19.8km s-min=11.6km az=80.0*

*ISCJB **04** 07:19:40.4±0.3, 62°.53S×0°.04×155°.2E±0°.1, h10km, mb5.1/38, MS5.6/204, Error ellipse: s-maj=9.3km s-min=6.3km az=6.6*

*NEIC **04** 07:19:41.7±0.2, 62°.60S×155°.12E, h10km, mb5.3/27, MS5.7/158, MW5.9, Error ellipse: s-maj=11.4km s-min=7.6km az=89.0, Moment Tensor Solution. s13 Moment tensor: Scale 10^{17}Nm; M_{rr}3.13; $M_{\theta\theta}$6.24; $M_{\phi\phi}$-9.36; $M_{r\theta}$-0.57; $M_{\theta\phi}$-3.82; $M_{\phi r}$-2.33; Best double couple: $M_0$9.40000×10^{17} NP1:ϕ_s58.00000°, δ83.00000°, λ-173.00000°. NP2:ϕ_s328.00000°, δ83.00000°, λ-7.00000°. Principal axes: T 7.1000, Plg0.0000°, Azm192.0000°; N 3.6000, Plg80.0000°, Azm100.0000°; P -10.7000, Plg9.0000°, Azm283.0000°;*

*MOS **04** 07:19:41.5±1.8, 62°.26S×155°.57E, h10km, mb5.3/10, MS5.6/19 Error ellipse: s-maj=33.2km s-min=9.9km az=94.1*

*DJA **04** 07:19:42.7±0.4, 63°S±4°×15°6E±1°1, h10km, M6.4/19, mB5.8/2, mb5.2/19, MLv7.0/1, Mw(mB)5.3/2*

*GCMT **04** 07:19:46.2±0.1, 62°.49S×155°.23E, h12km, MW5.9, Moment Tensor Solution. s108,c204; s84,c113; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.64±.08; $M_{\theta\theta}$7.88±.07; $M_{\phi\phi}$-7.24±.08; $M_{r\theta}$-0.49±.21; $M_{\theta\phi}$-5.66±.07; $M_{\phi r}$-0.30±.22; Best double couple: $M_0$9.50000×10^{17} NP1:ϕ_s333.00000°, δ86.00000°, λ-1.00000°. NP2: ϕ_s63.00000°, δ89.00000°, λ-176.00000°. Principal axes: T 9.7800, Plg2.0000°, Azm198.0000°; N -0.6300, Plg86.0000°, Azm74.0000°; P -9.1500, Plg3.0000°, Azm288.0000°; Data Used: II IU CN IC G. Surface waves: sta=101, comp=201, per= 50.*

ISC 04 07:19:42.2±0.3, 62.70S±0.05×155.47E±0.07, h10km, n467, σ1§80/306, mb5.2/39, MS5.7/205, 21C-14D, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**8.43**	**14**	*e*P	Pn	Pn	07 21 37.5	-6.7
MCQ	**Macquarie Isla**	**8.43**	**14**	*e*Pn	Pn	Pn	07 21 37.5	-6.7
VNDA	**Vanda**	**15.03**	**175**	*e*Pn	Pn	Pn	07 23 08.7	-5.5
VNDA	**Vanda**	**15.03**	**175**	Pn	Pn	Pn	07 23 09.1	-5.2
	1.0nm,0.3s,baz=344,slow=13,SNR=51							
VNDA				LR	LR	LR	07 28 30.7	
	comp=Z,58μm,19.3s,baz=356,slow=35							
SBA	**Scott Base**	**15.63**	**171**	*e*P	**Pn**	**07 23 18.9**		**-3.2**
SBA				pmax	pmax			
	comp=Z,1μm,2.8s							
SBA	**Scott Base**	**15.63**	**171**	*e*P	**Pn**	**07 23 18.9**		**-3.2**
	comp=Z,1μm,2.8s							
WHZ	**Wather Hill Ro**	**18.29**	**29**	*e*P	**Pn**	**07 23 55.5**		**-0.3**
CASY	**Casey**	**19.34**	**240**	*e*P	**Pn**	**07 24 10.0**		**+1.6**
	comp=Z,74nm,1.1s							
ODZ	**Otahua Downs**	**19.73**	**33**	*e*P	**Pn**	**07 24 13.1**		**-0.1**
	comp=Z,212nm,1.5s							
TAU	**Tasmania Unive**	**20.40**	**343**	*e*P	**P**	**07 24 16.8**		**-2.2**
TAU				pmax	pmax			
	comp=Z,388nm,1.6s							
TAU				MLR	MLR			
	comp=Z,20μm,19.0s							
TAU	**Tasmania Unive**	**20.40**	**343**	*e*P	**P**	**07 24 16.8**		**-2.2**
	comp=Z,388nm,1.6s							
TAU				LR	LR			
	comp=Z,20μm,19.0s							
RPZ	**Rata Peaks**	**21.08**	**33**	*e*P	**P**	**07 24 25.9**		**-0.4**
	comp=Z,132nm,1.5s							
RPZ	**Rata Peaks**	**21.08**	**33**	P	**P**	**07 24 24.2**		**-2.1**
	comp=Z,20nm,1.0s,baz=187,slow=14,SNR=5.8							
RPZ				LR	LR		07 31 10.8	
	comp=Z,45μm,18.4s,baz=185,slow=33							
KHZ	**Kahutara**	**22.94**	**36**	*e*P	**P**	**07 24 45.3**		**-0.9**
	comp=Z,579nm,1.9s							
SNZO	**South Karori**	**24.29**	**37**	PFAKE			07 25 10.0	+11
SNZO				LR	LR			
	comp=Z,26μm,20.0s							
MIR	**Mirnyy**	**26.03**	**234**	*i*P	P		07 25 21.0	+6.1
MIR				pmax	pmax			

comp=Z,558nm,3.0s
QSPA South Pole Qui 27.38 180 *e*P **P 07 25 27.8 +0.4**
comp=Z,39nm,1.0s
QSPA South Pole Qui 27.38 180 P **P 07 25 27.5 +0.1**
QSPA LR LR 07 36 33.0
comp=Z,12μm,20.1s,baz=196,slow=37
CAN Canberra 27.70 349 PFAKE 07 25 40.0 +10
CAN LR LR
comp=Z,14μm,20.0s
URZ Urewera 27.80 39 *e*P **P 07 25 32.1 +1.0**
comp=Z,34nm,1.2s
URZ Urewera 27.80 39 P **P 07 25 29.8 -1.3**
comp=Z,9.9nm,1.0s,baz=111,slow=4.2,SNR=4.4
URZ LR LR 07 35 36.5
comp=Z,17μm,18.3s,baz=108,slow=34
STKA Stephens Creek 32.10 337 *e*P **P 07 26 07.0 -2.2**
comp=Z,10nm,1.2s
STKA Stephens Creek 32.10 337 P **P 07 26 07.0 -2.2**
comp=Z,14nm,0.9s,baz=164,slow=11,SNR=11
STKA LR LR 07 38 28.7
comp=Z,8μm,18.5s,baz=160,slow=35
BBOO Buckleboo 32.36 328 *e*P **P 07 26 09.2 -2.3**
comp=Z,1μm,1.4s
ARMA Armidale 32.39 354 *e*P **P 07 26 11.7 -0.3**
comp=Z,144nm,1.9s
MAW Mawson 35.74 221 *e*P **P 07 26 42.3 +1.9**
MAW Mawson 35.74 221 P **P 07 26 39.8 -0.7**
comp=Z,15nm,0.9s,baz=119,slow=11,SNR=8.2
MAW LR LR 07 41 34.5
comp=Z,29μm,19.4s,baz=119,slow=37
FORT Forrest 36.48 318 *e*P **P 07 26 45.1 -2.0**
comp=Z,122nm,1.4s
EIDS Eidsvold 37.44 353 *e*P **P 07 26 54.8 -0.6**
comp=Z,71nm,1.5s
RAO Raoul Island 37.67 40 PFAKE 07 27 10.0 +13
RAO LR LR
comp=Z,14μm,20.0s
NWAO Narrogin (SRO) 38.31 303 P **P 07 26 60.0 -2.7**
NWAO Narrogin (SRO) 38.31 303 P **P 07 26 60.0 -2.7**
comp=Z,8.1nm,0.8s,baz=150,slow=8.1,SNR=3.6
NWAO LR LR 07 38 45.8
comp=Z,17μm,19.6s,baz=142,slow=30
SYO Syowa Base 40.95 210‖ *e*P **P 07 27 23.0 -1.2**
SYO Syowa Base 40.95 210‖ *e*pP pP 07 27 27.0 -0.3
DZM Mont Dzumac 41.29 16 *e*S **S 07 33 45.4 +3.7**
comp=Z,5μm,27.9s
DZM *e*LQ LQ 07 36 55.2
comp=Z,7μm,30.2s
DZM *e*LR LR 07 38 54.2
comp=Z,27μm,22.1s
DZM Mont Dzumac 41.29 16 P **P 07 27 26.0 -1.6**
DZM Mont Dzumac 41.29 16 P **P 07 27 26.0 -1.6**
comp=Z,40nm,1.1s,baz=186,slow=9.2,SNR=4.8
DZM LR LR 07 40 55.1
comp=Z,19μm,20.2s,baz=185,slow=31
ASAR Alice Springs 41.64 330 P P 07 27 27.1 -3.3
ASAR Alice Springs 41.64 330 P P 07 27 27.1 -3.3
comp=Z,24nm,0.9s,baz=165,slow=8.7,SNR=45
ASAR LR LR 07 42 19.7
comp=Z,10μm,19.4s,baz=161,slow=33
AS31 Alice Springs 41.64 330 *e*P **P 07 27 27.6 -2.8**
CTA Charters Tower 43.05 347 P **P 07 27 39.9 -2.0**
CTA Charters Tower 43.05 347 P **P 07 27 39.9 -2.0**
comp=Z,28nm,1.0s,baz=181,slow=9.5,SNR=10
CTA LR LR 07 42 45.7
comp=Z,10μm,18.1s,baz=175,slow=32
CTAO Charters Tower 43.05 347 *e*P **P 07 27 40.5 -1.4**
CTAO pmax pmax
comp=Z,229nm,1.7s
CTAO MLR MLR
comp=Z,9μm,21.0s
CTAO Charters Tower 43.05 347 *e*P **P 07 27 40.5 -1.4**
comp=Z,229nm,1.7s
CTAO LR LR
comp=Z,9μm,21.0s
MAIT Maitri 44.42 196 *e*P P 07 27 42.2 -10
SNAA Sanae 45.07 190 *e*P **P 07 27 59.1 +1.5**
SNAA Sanae 45.07 190 *e*P **P 07 27 57.8 +0.2**
comp=Z,30nm,1.2s
SNAA Sanae 45.07 190 P **P 07 27 57.4 -0.2**
comp=Z,3.2nm,0.9s,baz=175,slow=8.2,SNR=12
WRA Warramunga Arr 45.13 331 P P 07 27 55.1 -3.6
WRA Warramunga Arr 45.13 331 P P 07 27 55.1 -3.6
comp=Z,19nm,1.0s,baz=171,slow=7.0,SNR=25
WRA LR LR 07 44 24.6
comp=Z,9μm,19.5s,baz=165,slow=33
WRAB Tennant Creek 45.14 331 *e*P P 07 27 55.0 -3.7
WRAB pmax pmax
comp=Z,82nm,1.4s
WRAB MLR MLR
comp=Z,9μm,20.0s
WRAB Tennant Creek 45.14 331 *e*P P 07 27 55.0 -3.7
comp=Z,82nm,1.4s
WRAB LR LR
comp=Z,9μm,20.0s
WRAB Tennant Creek 45.14 331 P P 07 27 55.2 -3.5
comp=Z,223nm,1.6s,SNR=11
PAF Port-aux-Franc 45.87 245 PFAKE 07 28 10.0 +5.9
PAF LR LR
comp=Z,9μm,19.0s
VNA3 Neumayer Olymp 45.93 187 *e*P **P 07 28 04.9 +0.5**
VNA2 Neumayer--Watz 46.11 188 *e*P **P 07 28 06.3 +0.5**
baz=151,slow=6.2
VNA1 Neumayer--Stat 46.44 187 *e*P **P 07 28 11.4 +3.1**
MSVF Nonsavu 47.60 30 PFAKE 07 28 30.0 +12
MSVF LR LR
comp=Z,12μm,20.0s
MBWA Marble Bar 48.11 313 *e*P **P 07 28 21.7 -0.2**
comp=Z,26nm,1.0s
MBWA LR LR
comp=Z,7μm,21.0s
FITZ Fitzroy Crossi 49.12 321 P **P 07 28 27.1 -2.6**
FITZ Fitzroy Crossi 49.12 321 P **P 07 28 27.1 -2.6**
comp=Z,19nm,0.9s,baz=179,slow=11,SNR=10
FITZ LR LR 07 47 41.7
comp=Z,8μm,18.2s,baz=167,slow=34
COEN Coen 49.46 344 *e*P **P 07 28 30.4 -1.9**
comp=Z,606nm,1.4s
PMSA Palmer Station 49.51 159 LR LR 07 47 04.9
comp=Z,2μm,20.0s,baz=210,slow=33
HNR Honiara 53.28 6 PFAKE 07 29 10.0 +9.1
HNR LR LR
comp=Z,11μm,21.0s
PMG Port Moresby 53.54 350 *e*P **P 07 29 03.6 +0.8**
comp=Z,110nm,1.5s
PMG Port Moresby 53.54 350 P **P 07 29 04.5 +1.6**
comp=Z,50nm,1.7s,comp=Z,762nm
PMG Port Moresby 53.54 350 P **P 07 29 01.3 -1.5**
comp=Z,19nm,0.9s,baz=181,slow=8.0,SNR=12
PMG LR LR 07 48 13.2
comp=Z,9μm,20.7s,baz=164,slow=32
TBI Tubuai 53.68 69 *e*S **S 07 36 39.1 +1.6**
comp=Z,3μm,28.8s
TBI *e*LQ LQ 07 41 36.8
comp=Z,9μm,27.8s
TBI *e*LR LR 07 44 18.3
comp=Z,3μm,29.8s,baz=202
AFI Afiamalu 53.95 41 LR LR 07 46 00.4
comp=Z,923nm,21.3s,baz=207,slow=29
PPT2 Papeete2 58.73 66 *e*S **S 07 37 43.3 -1.6**
comp=Z,3μm,28.8s
PPT2 *e*LQ LQ 07 44 17.6
comp=Z,9μm,26.0s
PPT2 *e*LR LR 07 46 36.1
comp=Z,6μm,30.0s,baz=207
PPT Papeete 58.75 66 LR LR 07 50 03.3
comp=Z,2μm,20.6s,baz=212,slow=31
RKT Rikitea 60.35 83 *e*S **S 07 38 10.9 +5.4**
comp=Z,5μm,29.5s
RKT *e*LQ LQ 07 44 56.0
comp=Z,4μm,37.0s
RKT *e*LR LR 07 47 29.4
comp=Z,7μm,29.2s,baz=208
EFI East Falkland 62.93 157 PFAKE 07 30 20.0 +12
EFI LR LR
comp=Z,3μm,20.0s
KAPI Kappang 63.26 319 *e*P **P 07 30 09.4 -1.3**
comp=Z,45nm,1.0s
KAPI Kappang 63.26 319 P **P 07 30 13.4 +2.7**
comp=Z,50nm,1.2s
KAPI Kappang 63.26 319 P **P 07 30 10.0 -0.8**
comp=Z,30nm,1.0s,baz=200,slow=2.7,SNR=4.8
KAPI LR LR 07 54 20.4
comp=Z,5μm,21.3s,baz=172,slow=33
COCO West Island 65.11 293 PFAKE 07 30 30.0 +7.1
COCO LR LR
comp=Z,4μm,20.0s
TARA Tarawa 65.24 19 PFAKE 07 30 40.0 +16
TARA LR LR
comp=Z,7μm,20.0s
RPN Rapa Nui 68.58 108 PFAKE 07 31 00.0 +15
RPN LR LR
comp=Z,3μm,20.0s
PLCA Paso Flores 70.52 145 *e*P **P 07 30 59.3 +2.5**
comp=Z,16nm,1.1s
PLCA Paso Flores 70.52 145 P **P 07 30 58.6 +1.8**
comp=Z,4.9nm,0.8s,baz=219,slow=6.5,SNR=2.7
KSM Kuching 72.40 312 *e*P **P 07 31 06.7 -1.6**
comp=Z,38nm,1.0s
KSM LR LR
comp=Z,5μm,21.0s
KSM Kuching 72.40 312 P **P 07 31 10.8 +2.5**
comp=Z,34nm,1.1s
DAV Davao City (W) 73.25 329 PFAKE 07 31 20.0 +6.7
DAV LR LR
comp=Z,2μm,21.0s
XMAS Kiritimati 73.61 50 PFAKE 07 31 30.0 +15
XMAS LR LR
comp=Z,5μm,19.0s
KKM Kota Kinabalu 74.80 319 *e*P **P 07 31 22.8 +0.3**
comp=Z,67nm,1.1s
KKM LR LR
comp=Z,4μm,22.0s
KKM Kota Kinabalu 74.80 319 P P 07 31 29.2 +6.7
TRQA Tornquist 75.18 150 *e*P **P 07 31 25.2 +0.8**
comp=Z,210nm,2.3s
TRQA LR LR
comp=Z,2μm,20.0s
RER Riviere de l'E 75.77 252 PFAKE 07 31 40.0 +12
RER LR LR
comp=Z,3μm,20.0s
GUMO Guam 76.50 349 LR LR 08 00 12.2
comp=Z,1μm,21.5s,baz=178,slow=32
PSI Prapat 77.83 302 P **P 07 31 37.9 -1.9**
PSI Prapat 77.83 302 P **P 07 31 37.9 -1.9**
comp=Z,4.3nm,0.5s,baz=335,slow=18,SNR=4.6
PSI LR LR 08 00 21.3
comp=Z,2μm,19.2s,baz=140,slow=32
SUR Sutherland 78.53 218 PFAKE 07 31 50.0 +6.3
SUR LR LR
comp=Z,7μm,20.0s
IPM Ipoh 78.55 304 *e*P **P 07 31 43.5 -0.2**
comp=Z,23nm,1.0s
KULM Kulim 79.44 304 PFAKE 07 32 00.0 +12
KULM LR LR
comp=Z,3μm,20.0s
CFAA Coronel Fontan 79.72 143 P **P 07 31 49.0 -1.0**
CFAA Coronel Fontan 79.72 143 P **P 07 31 49.0 -1.0**
comp=Z,0.9nm,0.9s,baz=204,slow=6.8,SNR=6.5
DGAR Diego Garcia 80.25 273 PFAKE 07 32 00.0 +7.1
DGAR LR LR
comp=Z,3μm,19.0s
BOSA Boshof 80.73 223 *e*P **P 07 31 55.1 -0.4**
comp=Z,43nm,1.3s
BOSA Boshof 80.73 223 P **P 07 31 55.4 -0.2**
comp=Z,12nm,0.9s,baz=166,slow=7.1,SNR=12
BOSA LR LR 08 04 21.9
comp=Z,4μm,20.3s,baz=159,slow=33
ABPO Ambohimpanom 81.32 245 PFAKE 07 32 10.0 +11
ABPO LR LR
comp=Z,2μm,21.0s
LCO Las Campanas 81.46 140 PFAKE 07 32 10.0 +10
LCO LR LR
comp=Z,741nm,21.0s
LBTB Lobatse 83.97 224 *e*P **P 07 32 12.8 +0.2**
comp=Z,24nm,1.1s
CPUP Villa Florida 87.50 151 P **P 07 32 29.5 -0.4**
CPUP Villa Florida 87.50 151 P **P 07 32 29.5 -0.4**
comp=Z,1.1nm,0.6s,baz=214,slow=7.3,SNR=3.6
LVC Limon Verde 88.01 140 PFAKE 07 32 40.0 +7.3
LVC LR LR
comp=Z,67nm,20.0s
QIZ Qiongzhong 89.00 317 P **P 07 32 36.4 -0.4**
QIZ PP **PP 07 36 07.0 +0.1**
QIZ S **S 07 43 26.7 +1.9**
QIZ SS **SS 07 49 15.8 -2.6**
QIZ LR LR
comp=E,960nm,23.3s
QIZ LR LR
comp=Z,2μm,33.7s
CBIJ Chichi jima 90.12 348 LR LR 08 12 03.2
comp=Z,1μm,18.3s,baz=175,slow=35
MSEY Mahe Island 90.45 259 PFAKE 07 32 50.0 +6.0
MSEY LR LR
comp=Z,4μm,22.0s
YHNB Yeheng 91.20 329 PFAKE 07 33 00.0 +13
YHNB LR LR
comp=Z,2μm,22.0s
TATO Taipei 91.47 330 PFAKE 07 33 00.0 +12
TATO LR LR
comp=Z,2μm,22.0s
KIP Kipapa 91.53 43 PFAKE 07 33 00.0 +11
KIP LR LR
comp=Z,4μm,20.0s
TSUM Tsumeb 91.89 219 *e*P **P 07 32 51.5 +0.7**
comp=Z,5.6nm,1.0s
TSUM Tsumeb 91.89 219 LR LR 08 12 55.7
comp=Z,6μm,20.0s,baz=155,slow=35
SPB Sao Paulo 92.09 159 PFAKE 07 33 00.0 +8.6
SPB LR LR
comp=Z,1μm,22.0s
LSZ Lusaka 92.13 230 LR LR 08 09 29.3
comp=Z,2μm,21.4s,baz=156,slow=32
CMAR Chiang Mai Arr 92.17 308 LR LR 08 13 10.2
comp=Z,2μm,18.6s,baz=160,slow=35
CHTO Chiang Mai 92.50 308 PFAKE 07 33 00.0 +6.9
CHTO LR LR
comp=Z,2μm,19.0s
MIDW Midway 93.18 24 PFAKE 07 33 10.0 +14
MIDW LR LR
comp=Z,4μm,21.0s
LPAZ La Paz 94.20 138 *e*P **P 07 33 01.2 -0.8**
comp=Z,20nm,1.5s
LPAZ La Paz 94.20 138 P **P 07 33 01.4 -0.6**
comp=Z,1.1nm,0.7s,baz=162,slow=4.4,SNR=4.6
LPAZ LR LR 08 08 51.4
comp=Z,974nm,20.1s,baz=275,slow=31
NNA Nana 95.32 129 PFAKE 07 33 20.0 +14
NNA LR LR
comp=Z,3μm,22.0s
GYA Guiyang 96.95 317 P **P 07 33 16.1 +2.6**
GYA PP **PP 07 37 14.1 +4.7**
GYA SKS **SKSac 07 43 51.3 +1.1**
GYA S **ScS 07 44 38.6 +2.5**
GYA SS **SS 07 51 16.3 +3.8**
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,210nm,5.5s
GYA LR LR
comp=N,2μm,23.6s
GYA LR LR
comp=E,850nm,22.1s
GYA LR LR
comp=Z,3μm,24.6s
KMI Kunming 96.98 313 P **P 07 33 16.8 +3.0**
KMI sP sP 07 33 23.7 +5.4
KMI PP PP 07 37 16.7 +6.9
KMI SKS **SKSac 07 43 52.7 +2.0**
KMI S **S 07 44 34.6 -1.7**
KMI SS **SS 07 51 13.4 +0.2**
KMI pmax pmax
comp=Z,13nm,0.8s
KMI pmax pmax
comp=Z,120nm,4.9s
KMI LR LR
comp=N,1μm,29.0s
KMI LR LR
comp=E,430nm,29.0s
KMI LR LR
comp=Z,3μm,29.0s
SSE Sheshan 97.43 331 P **P 07 33 15.3 -0.1**
SSE S **S 07 44 41.2 +1.9**
SSE sS **sS 07 44 47.0 +2.2**
SSE SS **SS 07 51 22.1 +3.2**
SSE pmax pmax
comp=Z,11nm,0.7s
SSE pmax pmax
comp=Z,170nm,12.0s
SSE LR LR
comp=N,1μm,23.5s
SSE LR LR
comp=E,600nm,23.5s
SSE LR LR
comp=Z,2μm,20.5s
NJ2 Nanjing 98.88 329 *e*P **P 07 33 21.4 -0.5**
NJ2 pP **pP 07 33 25.5 +0.3**
NJ2 sP **sP 07 33 28.8 +2.4**
NJ2 PP **PP 07 37 24.6 +0.6**
NJ2 S S 07 44 45.0 -6.6
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
NJ2 pmax pmax
comp=Z,70nm,5.0s
NJ2 LR LR
comp=N,410nm,10.8s
NJ2 LR LR
comp=E,1μm,17.7s
NJ2 LR LR
comp=Z,280nm,11.2s
BDFB Brasilia 99.77 157 LR LR 08 15 10.7
comp=Z,2μm,21.8s,baz=312,slow=33
MJAR Matsushiro Arr 99.88 346 LR LR 08 16 49.2
comp=Z,1μm,21.8s,baz=180,slow=34
MAJO Matsushiro 99.88 346 PFAKE 07 33 40.0 +14
MAJO LR LR
comp=Z,1μm,21.0s
SHEL Horse Pasture 100.22 198 PFAKE 07 33 40.0 +12
SHEL LR LR
comp=Z,5μm,21.0s
PAYG Puerto Ayora 100.31 112 PFAKE 07 33 40.0 +11
PAYG LR LR
comp=Z,4μm,21.0s
KMBO Kilima Mbogo 101.57 244 PFAKE 07 33 50.0 +15
KMBO LR LR
comp=Z,1μm,20.0s
CD2 Chengdu 102.01 316 P **Pdif 07 33 37.8 +1.9**
CD2 pP 07 33 42.6
CD2 PP **PP 07 37 51.3 +3.5**
CD2 SKS 07 44 15.9
CD2 S **Sdif 07 45 16.2 -1.7**
CD2 sS sS 07 45 23.8 +0.1
CD2 SS **SS 07 52 24.0 +0.9**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.5s
CD2 LR LR
comp=N,970nm,23.5s
CD2 LR LR
comp=E,1μm,28.4s
CD2 LR LR
comp=Z,540nm,23.5s
INCN Inchon 102.50 337 PFAKE 07 33 50.0 +12
INCN LR LR
comp=Z,1μm,19.0s
SAML Samuel 102.63 141 PFAKE 07 33 50.0 +11
SAML LR LR
comp=Z,940nm,19.0s
MBAR Mbarara 104.68 238 PFAKE 07 34 00.0 +12
MBAR LR LR
comp=Z,662nm,20.0s
ERM Erimo 104.84 351 PFAKE 07 34 00.0 +12
ERM LR LR
comp=Z,3μm,19.0s
OTAV Otavalo 105.97 123 PFAKE 07 38 20.0
OTAV LR LR
comp=Z,872nm,21.0s
BJT Baijiatuan 107.12 329 PFAKE 07 38 20.0
BJT LR LR
comp=Z,2μm,22.0s
HHC Hu-ho-hao-te 109.04 326 *e*Pdif **Pdif 07 34 05.4 -1.6**
HHC PP **PP 07 38 41.3 +1.5**
HHC SS SS 07 53 58.6 -0.5
HHC AMB AMB
comp=Z,230nm,8.4s
HHC LR LR
comp=N,1μm,17.8s
HHC LR LR
comp=E,1μm,17.8s
HHC LR LR
comp=Z,2μm,20.2s
YSS Yuzh-Sakhalins 109.78 351 PFAKE 07 38 20.0
YSS LR LR
comp=Z,457nm,20.0s
RCBR Riachuelo 111.11 168 PFAKE 07 38 30.0
RCBR LR LR
comp=Z,934nm,19.0s
JTS JuntasAbangare 112.42 112 PFAKE 07 38 30.0
JTS LR LR
comp=Z,4μm,21.0s
BCIP Isla Barro Col 113.55 118 PFAKE 07 38 30.0
BCIP LR LR
comp=Z,1μm,21.0s
TGUH Tegucigalpa,Un 114.78 108 PFAKE 07 38 30.0 +7.4
TGUH LR LR
comp=Z,973nm,22.0s
PET Petropavlovsk 115.41 2 PFAKE 07 38 30.0 +7.4
PET LR LR
comp=Z,3μm,21.0s
NIL Nilore 115.93 293 PFAKE 07 38 40.0 +16
NIL LR LR
comp=Z,54nm,19.0s
ULN Ulaanbaatar 116.75 326 PFAKE 07 38 40.0 +14
ULN LR LR
comp=Z,1μm,22.0s
SONM Songino Array 116.89 325 PKP **PKPdf 07 38 24.9 -1.0**
SONM Songino Array 116.89 325 PKP **PKPdf 07 38 24.9 -1.0**
comp=Z,0.3nm,0.3s,baz=132,slow=2.1,SNR=5.5
PFO Pinyon Flat Ob 118.43 72 PFAKE 07 38 40.0 +11
PFO LR LR
comp=Z,3μm,20.0s
WMQ Urumqi 119.08 310 PKP **PKPdf 07 38 31.0 +0.8**
WMQ PP **PP 07 39 55.0 +4.1**
WMQ PKS **PKSdf 07 42 06.0 -0.7**
WMQ SKS **SKSdf 07 45 42.0 +0.3**
WMQ SKKS **SKKSac 07 46 47.0 -2.9**
WMQ SS **SS 07 56 12.0 +0.6**
WMQ AMB AMB
comp=Z,210nm,10.0s
WMQ LR LR
comp=N,2μm,25.0s
WMQ LR LR
comp=E,1μm,25.0s
WMQ LR LR
comp=Z,2μm,25.0s
TEIG Tepich 119.77 104 PFAKE 07 38 40.0 +7.9
TEIG LR LR
comp=Z,1μm,20.0s
KSH Kashi 119.83 299 PKP **PKPdf 07 38 34.4 +2.6**
KSH PP PP 07 40 02.0 +5.8
KSH PKS **PKSdf 07 42 10.1 +1.6**
KSH SKS **SKSdf 07 45 45.1 +1.6**
KSH SKKS **SKKSac 07 46 55.7 +0.6**
KSH AMB AMB
comp=Z,230nm,3.7s
KSH LR LR
comp=N,140nm,4.0s
KSH LR LR
comp=E,69nm,2.9s
KSH LR LR
comp=Z,1μm,15.2s
TUC Tucson 119.84 77 PFAKE 07 38 40.0 +8.0
TUC LR LR
comp=Z,2μm,20.0s
ZAK Zakamensk 120.05 324 *e*PKIKP PKPdf 07 38 42.1 +10
ZAK pmax pmax
comp=Z,3.0nm,1.5s
TXAR Lajitas Array 120.56 85 PKP **PKPdf 07 38 35.3 +1.8**
TXAR Lajitas Array 120.56 85 PKP **PKPdf 07 38 35.3 +1.8**
comp=Z,0.8nm,0.9s,baz=215,slow=4.1,SNR=3.9
TLY Talaya 121.13 325 *i* PKIKP **PKPdf 07 38 28.7 -5.1**
TLY pmax pmax
comp=Z,4.0nm,1.1s
TLY MLR MLR
comp=Z,1μm,22.0s
TLY Talaya 121.13 325 PFAKE 07 38 40.0 +6.2
TLY LR LR
comp=Z,1μm,21.0s
KVTX Kingsville 121.70 91 PFAKE 07 38 50.0 +14
KVTX LR LR
comp=Z,2μm,19.0s
NVAR Mina Array Bea 121.70 67 PKP **PKPdf 07 38 34.3 -1.3**
NVAR Mina Array Bea 121.70 67 PKP **PKPdf 07 38 34.3 -1.3**
comp=Z,0.9nm,0.8s,baz=225,slow=1.9,SNR=4.9
TPH Tonopah 121.86 68 PFAKE 07 38 50.0 +14
TPH LR LR

comp=Z,1µm,20.0s
WUAZ Wupatki 122.27 74 PFAKE 07 38 50.0 +13
WUAZ LR LR
comp=Z,2µm,21.0s
MTDJ Mount Denham 122.66 116 PFAKE 07 38 50.0 +12
MTDJ LR LR
comp=Z,2µm,22.0s
TKM2 Tokmak 2 122.86 301 PFAKE 07 38 50.0 +12
TKM2 LR LR
comp=Z,1µm,20.0s
GRGR Grenville 123.01 135 PFAKE 07 38 50.0 +11
GRGR LR LR
comp=Z,1µm,20.0s
AAK Ala-Archa 123.06 300 *i* PKIKP **PKPdf 07 38 37.5 -0.5**
AAK Ala-Archa 123.06 300 PKP **PKPdf 07 38 35.9 -2.1**
AAK LR LR
comp=Z,2µm,20.0s
AAK Ala-Archa 123.06 300 PKP **PKPdf 07 38 35.9 -2.1**
comp=Z,0.4nm,0.3s,baz=220,slow=18,SNR=2.7
JCT Junction City 123.30 87 PFAKE 07 38 50.0 +11
JCT LR LR
comp=Z,946nm,21.0s
EKS2 Erkin-Say 123.37 299 *e*PKIKP **PKPdf 07 38 40.3 +1.8**
EKS2 MLR MLR
comp=Z,2µm,20.0s
EKS2 Erkin-Say 123.37 299 *e*PKPdf **PKPdf 07 38 40.3 +1.8**
EKS2 LR LR
comp=Z,2µm,20.0s
MKAR Makanchi Array 123.58 308 PKIKP **PKPdf 07 38 36.3 -2.3**
MKAR Makanchi Array 123.58 308 PKP **PKPdf 07 38 36.3 -2.3**
MKAR Makanchi Array 123.58 308 PKP **PKPdf 07 38 36.3 -2.3**
comp=Z,1.2nm,0.9s,baz=154,slow=1.5,SNR=7.1
BMN Battle Mountai 123.83 67 PFAKE 07 38 50.0 +10
BMN LR LR
comp=Z,1µm,19.0s
ANMO Albuquerque 124.00 79 PFAKE 07 38 50.0 +10
ANMO LR LR
comp=Z,2µm,19.0s
MVU Marysvale 124.39 72 PFAKE 07 38 50.0 +9.2
MVU LR LR
comp=Z,1µm,19.0s
BBGH Gun Hill 124.63 137 PFAKE 07 38 50.0 +8.4
BBGH LR LR
comp=Z,1µm,20.0s
MVCO Mesa Verde 124.96 76 PFAKE 07 38 50.0 +8.1
MVCO LR LR
comp=Z,1µm,21.0s
KKAR Karatay Array 125.06 297 *e*PKIKP **PKPdf 07 38 41.1 -0.5**
KKAR Karatay Array 125.06 297 *e*PKPdf **PKPdf 07 38 41.1 -0.5**
GTBY Guantanamo Bay 125.18 117 PFAKE 07 38 50.0 +7.5
GTBY LR LR
comp=Z,1µm,20.0s
SEY Seymchan 125.34 358 *i* PKIKP **PKPdf 07 38 40.5 -0.9**
DUG Dugway 125.53 70 PFAKE 07 38 50.0 +7.2
DUG LR LR
comp=Z,1µm,21.0s
FDF Fort de France 125.61 135 PFAKE 07 38 50.0 +6.5
FDF LR LR
comp=Z,995nm,21.0s
SDDR Presa de Saban 125.86 122 PFAKE 07 39 00.0 +16
SDDR LR LR
comp=Z,906nm,21.0s
YAK Yakutsk 125.94 345 PFAKE 07 38 50.0 +7.4
YAK LR LR
comp=Z,958nm,19.0s
AMTX Amarillo 126.12 83 PFAKE 07 39 00.0 +16
AMTX LR LR
comp=Z,2µm,20.0s
KDAK Kodiak Island 126.66 32 PFAKE 07 39 00.0 +16
KDAK LR LR
comp=Z,2µm,20.0s
MFID Camas Ranch 126.88 66 *e*PKPdf **PKPdf 07 38 44.4 -0.9**
NLWA Neilton Lookou 126.89 57 PFAKE 07 39 00.0 +15
NLWA LR LR
comp=Z,3µm,20.0s
SJG San Juan 127.01 128 PFAKE 07 39 00.0 +14
SJG LR LR
comp=Z,706nm,19.0s
TORD Torodi Ar. Bea 127.11 213 PKP **PKPdf 07 38 44.6 -1.7**
TORD Torodi Ar. Bea 127.11 213 PKP **PKPdf 07 38 44.6 -1.7**
comp=Z,2.2nm,1.0s,baz=153,slow=3.0,SNR=8.3
S25A Robets Cordova 127.16 79 ⇑P **PKPdf 07 38 45.7 -0.3**
baz=128
HWUT Hardware Ranch 127.22 70 PFAKE 07 39 00.0 +14
HWUT LR LR
comp=Z,1µm,22.0s
WMOK Wichita Mounta 127.33 85 PFAKE 07 39 00.0 +14
WMOK LR LR
comp=Z,2µm,19.0s
BMO Blue Mountains 127.44 63 PFAKE 07 39 00.0 +14
BMO LR LR
comp=Z,1µm,20.0s
HLID Hailey 127.60 67 PFAKE 07 39 00.0 +13
HLID LR LR
comp=Z,1µm,21.0s
P22A Eagle 127.70 75 ⇑P **PKPdf 07 38 46.6 -0.5**
baz=128
HAWA Hanford 127.78 61 PFAKE 07 39 00.0 +13
HAWA LR LR
comp=Z,2µm,19.0s
R26A Arlington 128.13 79 ⇓P **PKPdf 07 38 47.4 -0.4**
baz=128
ANWB Willy Bob 128.14 133 PFAKE 07 39 00.0 +12
ANWB LR LR
comp=Z,780nm,21.0s
L18A Fontenelle, Gr 128.15 71 ⇓P **PKPdf 07 38 47.9 +0.1**
baz=128
KURK Kurchatov 128.19 308 *i* PKIKP **PKPdf 07 38 48.6 +1.3**
KURK MLR MLR
comp=Z,1µm,20.0s
KURK Kurchatov 128.19 308 *e*PKPdf **PKPdf 07 38 48.0 +0.7**
KURK LR LR
comp=Z,1µm,20.0s
GRTK Grand Turk 128.21 121 PFAKE 07 39 00.0 +12
GRTK LR LR
comp=Z,1µm,20.0s
K16A Soda Springs 128.21 69 ⇑P **PKPdf 07 38 47.9 +0.1**
baz=128
AHID Auburn Hatcher 128.37 70 PFAKE 07 39 00.0 +12
AHID LR LR
comp=Z,1µm,19.0s
ISCO Idaho Springs 128.38 76 PFAKE 07 39 00.0 +12
ISCO LR LR
comp=Z,1µm,19.0s
ISCO Idaho Springs 128.38 76 ⇑P **PKPdf 07 38 47.6 -0.8**
baz=129
R27A Eads 128.41 80 ⇑P **PKPdf 07 38 47.4 -0.9**
baz=129
H13A Challis 128.47 66 ⇓P **PKPdf 07 38 48.1 -0.2**
baz=129
ZAA0 Zalesovo Array 128.72 314 *e*PKPdf **PKPdf 07 38 50.4 +2.2**
ZALV Zalesovo Beam 128.72 314 PKIKP **PKPdf 07 38 48.6 +0.4**
ZALV Zalesovo Beam 128.72 314 PKP **PKPdf 07 38 48.6 +0.4**
ZALV Zalesovo Beam 128.72 314 PKP **PKPdf 07 38 48.6 +0.4**
comp=Z,0.3nm,0.2s,baz=124,slow=2.6,SNR=3.0
RRI2 Red Ridge 128.74 69 *e*PKPdf **PKPdf 07 38 48.5 -0.4**
BW06 Boulder Array 129.04 71 PFAKE 07 39 00.0 +10
BW06 LR LR
comp=Z,1µm,21.0s
PDAR Pinedale Array 129.04 71 PKP **PKPdf 07 38 49.3 -0.2**
PDAR Pinedale Array 129.04 71 PKP **PKPdf 07 38 49.3 -0.2**
comp=Z,1.3nm,1.1s,baz=287,slow=3.7,SNR=5.2
VBMS Vicksburg 129.04 95 PFAKE 07 39 00.0 +10
VBMS LR LR
comp=Z,708nm,20.0s
H15A Lima 129.20 67 ⇓P **PKPdf 07 38 49.1 -0.7**
baz=130
MOOW Moose Ponds 129.31 69 *e*PKPdf **PKPdf 07 38 49.9 -0.1**
IMW Indian Meadow 129.35 69 *e*PKPdf **PKPdf 07 38 51.3 +1.1**
K19A Absolon Red Bu 129.39 71 ⇑P **PKPdf 07 38 50.4 +0.3**
baz=130
BRAL Brewton 129.61 99 PFAKE 07 39 00.0 +9.4
BRAL LR LR
comp=Z,1µm,22.0s
NVS Novosibirsk 129.98 314 *e*PKIKP **PKPdf 07 38 54.1 +3.6**
LKWY Lake 130.12 69 PFAKE 07 39 00.0 +8.5
LKWY LR LR
comp=Z,3µm,19.0s
NEW Newport 130.26 61 PFAKE 07 39 00.0 +8.6
NEW LR LR
comp=Z,2µm,21.0s
MSO Missoula 130.42 64 PFAKE 07 39 00.0 +8.2
MSO LR LR
comp=Z,1µm,19.0s
BOZ Bozeman (W) 130.45 67 PFAKE 07 39 00.0 +8.0
BOZ LR LR
comp=Z,950nm,20.0s
BILL Bilibino 130.68 5 *i* PKIKP **PKPdf 07 38 53.5 +2.0**
BILL Bilibino 130.68 5 PFAKE 07 39 00.0 +8.5
BILL LR LR
comp=Z,2µm,21.0s
TNA Tin City 130.77 19 *e*PKPdf **PKPdf 07 38 52.4 +0.7**
OGNE Ogallala 130.91 78 PFAKE 07 39 00.0 +7.1
OGNE LR LR
comp=Z,2µm,21.0s
SWMT Swartz Lake 130.94 64 *e*PKPdf **PKPdf 07 38 51.5 -1.3**
RLMT Red Lodge 131.05 69 PFAKE 07 39 00.0 +6.8
RLMT LR LR
comp=Z,2µm,20.0s
WRAK Wrangell Islan 131.25 45 PFAKE 07 39 00.0 +7.1
WRAK LR LR
comp=Z,3µm,20.0s
LRAL Lakeview Retre 131.34 97 PFAKE 07 39 10.0 +16
LRAL LR LR
comp=Z,806nm,20.0s
OXF Oxford 131.46 94 PFAKE 07 39 10.0 +16
OXF LR LR
comp=Z,994nm,20.0s
KSU1 Kansas State U 131.90 84 PFAKE 07 39 10.0 +15
KSU1 LR LR
comp=Z,2µm,20.0s
SACV Santiago Islan 132.32 181 PFAKE 07 39 10.0 +14
SACV LR LR
comp=Z,2µm,21.0s
PLAL Pickwick Lake 132.47 95 PFAKE 07 39 10.0 +14
PLAL LR LR
comp=Z,893nm,20.0s
BVAR Borovoye Array 133.10 304 PKIKP **PKPdf 07 38 55.5 -1.1**
BVAR Borovoye Array 133.10 304 PKP **PKPdf 07 38 55.5 -1.1**
BVAR Borovoye Array 133.10 304 PKP **PKPdf 07 38 55.5 -1.1**
comp=Z,0.5nm,0.4s,baz=177,slow=2.7,SNR=4.5
EGMT Eagleton 133.12 66 PFAKE 07 39 10.0 +13
EGMT LR LR
comp=Z,1µm,20.0s
BRVK Borovoye 133.17 304 *i* PKIKP **PKPdf 07 38 57.0 +0.4**
BRVK MLR MLR
comp=Z,885nm,17.0s
BRVK Borovoye 133.17 304 PFAKE 07 39 10.0 +13
BRVK LR LR
comp=Z,2µm,20.0s
COLA College 133.97 30 PFAKE 07 39 10.0 +12
COLA LR LR
comp=Z,2µm,20.0s
ILAR Eielson Array 134.11 30 PKP **PKPdf 07 38 55.8 -2.3**
ILAR Eielson Array 134.11 30 PKP **PKPdf 07 38 55.8 -2.3**
comp=Z,2.7nm,1.1s,baz=240,slow=2.9,SNR=6.0
NHSC New Hope 134.49 104 PFAKE 07 39 10.0 +10
NHSC LR LR
comp=Z,929nm,20.0s
MAK Makhachkala 134.99 279 PKIKP PKPdf 07 39 07.9 +7.5
MAK *e* 07 41 38.9
MAK *e* 07 46 13.5
MAK *e*PS **PS 07 51 58.4 +1.9**
MAK *e*SSS SSS 08 04 38.0
MAK pmax pmax
comp=Z,54nm,0.6s
MAK MLR MLR
comp=Z,1µm,17.0s
CSS Prodhromos 135.04 260 PFAKE 07 39 10.0 +9.2
CSS LR LR
comp=Z,2µm,19.0s
TAM Tamanrasset 135.24 221 PFAKE 07 39 10.0 +8.3
TAM LR LR
comp=Z,2µm,19.0s
TIXI Tiksi 135.33 348 *i* PKIKP **PKPdf 07 39 01.0 +0.9**
TIXI Tiksi 135.33 348 PFAKE 07 39 10.0 +10
TIXI LR LR
comp=Z,2µm,20.0s
MALT Malatya 135.46 267 PFAKE 07 39 10.0 +8.4
MALT LR LR
comp=Z,2µm,20.0s
EGAK Eagle 135.50 33 PFAKE 07 39 10.0 +9.3
EGAK LR LR
comp=Z,3µm,22.0s
ECSD EROS Data Cent 135.57 80 PFAKE 07 39 10.0 +8.5
ECSD LR LR
comp=Z,2µm,19.0s
SCIA State Center 135.69 85 PFAKE 07 39 10.0 +8.2
SCIA LR LR
comp=Z,2µm,20.0s
DGMT Dagmar 135.84 70 PFAKE 07 39 10.0 +8.1
DGMT LR LR
comp=Z,2µm,21.0s
AKTO Aktyubinsk 136.09 294 PKIKP **PKPdf 07 38 58.7 -3.6**
AKTO Aktyubinsk 136.09 294 PKP **PKPdf 07 38 58.6 -3.6**
AKTO Aktyubinsk 136.09 294 PKP **PKPdf 07 38 58.6 -3.6**
comp=Z,0.7nm,0.8s,baz=135,slow=17,SNR=3.0
HDIL Hopedale 136.43 89 PFAKE 07 39 10.0 +6.8
HDIL LR LR
comp=Z,1µm,20.0s
CNNC Cliffs of the 137.30 104 PFAKE 07 39 20.0 +15
CNNC LR LR
comp=Z,1µm,22.0s
BLA Blacksburg 137.80 100 PFAKE 07 39 20.0 +14
BLA LR LR
comp=Z,1µm,20.0s
KIV Kislovodsk 137.96 276 *i* PKIKP **PKPdf 07 39 07.1 +1.1**
KIV Kislovodsk 137.96 276 PFAKE 07 39 20.0 +14
KIV LR LR
comp=Z,2µm,21.0s
ISP Isparta 138.68 259 PFAKE 07 39 20.0 +12
ISP LR LR
comp=Z,1µm,20.0s
BRTR Keskin Array B 138.80 264 PKP **PKPdf 07 39 05.0 -2.7**
BRTR Keskin Array B 138.80 264 PKP **PKPdf 07 39 05.0 -2.7**
comp=Z,0.4nm,0.6s,baz=108,slow=3.2,SNR=3.9
ACSO Alum Creek Sta 139.08 95 PFAKE 07 39 20.0 +12
ACSO LR LR
comp=Z,1µm,19.0s
AGMN Agassiz Nation 139.39 76 *e*PKPdf **PKPdf 07 39 09.2 +0.8**
AGMN LR LR
comp=Z,1µm,20.0s
CBN Corbin 139.99 102 PFAKE 07 39 20.0 +10
CBN LR LR
comp=Z,1µm,21.0s
INK Inuvik 140.18 33 PKPpre PKPpre 07 39 05.7
INK Inuvik 140.18 33 PKHKP PKPpre 07 39 05.7
comp=Z,1.7nm,1.0s,baz=263,slow=2.4,SNR=4.6
ARU Arti 140.23 300 *i* PKIKP **PKPdf 07 39 08.9 -0.7**
ARU Arti 140.23 300 PFAKE 07 39 20.0 +10
ARU LR LR
comp=Z,927nm,20.0s
AAM Ann Arbor 140.41 93 PFAKE 07 39 20.0 +10
AAM LR LR
comp=Z,1µm,20.0s
BBSR BB Station 140.44 121 PFAKE 07 39 20.0 +9.2
BBSR LR LR
comp=Z,848nm,20.0s
ULM Lac du Bonnet 140.81 74 PKPpre PKPpre 07 39 07.3
ULM Lac du Bonnet 140.81 74 PKHKP PKPpre 07 39 07.3
comp=Z,1.8nm,0.5s,baz=261,slow=2.6,SNR=4.9
EYMN Ely 141.10 80 PFAKE 07 39 20.0 +8.5
EYMN LR LR
comp=Z,2µm,20.0s
FFC Flin Flon 141.35 65 PFAKE 07 39 20.0 +8.3
FFC LR LR
comp=Z,2µm,22.0s
YKA Yellowknife Ar 141.78 49 PKPpre PKPpre 07 39 06.1
YKA Yellowknife Ar 141.78 49 PKHKP PKPpre 07 39 06.1
comp=Z,1.1nm,0.9s,baz=235,slow=2.5,SNR=17
YKW3 Yellowknife Ar 141.82 49 *e*PKPdf **PKPdf 07 39 10.3 -2.0**
GLMI Grayling 141.91 89 PFAKE 07 39 20.0 +6.9
GLMI LR LR
comp=Z,2µm,20.0s
ERPA Erie 141.95 96 PFAKE 07 39 20.0 +6.8
ERPA LR LR
comp=Z,991nm,19.0s
SOKR Solikamsk 143.05 303 *i* PKIKP **PKPdf 07 39 19.4 +4.9**
SOKR pmax pmax
comp=Z,10.0nm,1.1s
SOKR MLR MLR
comp=Z,640nm,14.0s
BINY Binghamton 143.84 100 PFAKE 07 39 30.0 +13
BINY LR LR
comp=Z,1µm,20.0s
WDD Wield Dalam 143.94 240 *e*PKPdf PKPbc 07 39 14.8 0.0
WDD LR LR
comp=Z,2µm,19.0s
KDZ Kurdzhali 144.08 258 *e*P **PKPdf 07 39 16.2 -0.8**
PRD Provadia 144.40 262 *e*P **PKPdf 07 39 17.3 -0.2**
RZN Rozhen 144.43 257 *e*P **PKPab 07 39 16.0 -0.1**
VORD Divnogorie 144.69 281 *e*PKIKP **PKPab 07 39 16.5 0.0**
VORD pmax pmax
comp=E,40nm,1.1s
VORD pmax pmax
comp=Z,40nm,1.1s
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD MLR MLR
comp=N,810nm,19.0s
VORD MLR MLR
comp=E,590nm,19.0s
VORD MLR MLR
comp=Z,1µm,19.0s
MMB Musomiste 144.79 256 *e*P **PKPdf 07 39 18.5 +0.2**
TIRR Tirgusor 144.92 264 *e*PKP2 **PKPab 07 39 16.2 -1.3**
TIRR Tirgusor 144.92 264 *e*PKPdf **PKPab 07 39 16.2 -1.3**
TIRR Tirgusor 144.92 264 ⇑*i*P **PKPab 07 39 16.6 -0.9**
VSR Storozhevoye 144.92 281 *e*PKIKP **PKPab 07 39 16.4 -1.0**
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,30nm,1.1s
VSR pmax pmax
comp=Z,50nm,1.1s
VSR MLR MLR
comp=N,290nm,19.0s
VSR MLR MLR
comp=E,1µm,19.0s
VSR MLR MLR
comp=Z,900nm,19.0s
PGB Panagyurishte 145.36 258 *e*P **PKPab 07 39 21.0 +1.6**
CEL Celeste 145.44 244 *e*PKPdf **PKPab 07 39 20.8 +1.0**
CEL LR LR
comp=Z,1µm,20.0s
CFR Carcaliu 145.59 264 ⇑PKIKP **PKPdf 07 39 18.9 -0.5**
CFR Carcaliu 145.59 264 ⇑*i*P **PKPdf 07 39 18.9 -0.5**
VTS Vitosha 145.82 257 ⇑PKP2 **PKPab 07 39 22.4 +1.2**
VTS Vitosha 145.82 257 ⇑*i*P **PKPab 07 39 22.4 +1.2**
VTS Vitosha 145.82 257 *e*P **PKPdf 07 39 19.7 -0.5**
KEST Kesra 145.83 234 PKPbc **PKPbc 07 39 21.0 +0.1**
KEST *e*PKPdf **PKPab 07 39 21.5 +0.2**
KEST Kesra 145.83 234 PKPbc **PKPbc 07 39 21.0 +0.1**
comp=Z,9.5nm,1.1s,baz=240,slow=2.1,SNR=14
TIP Timpagrande 145.85 246 *e*PKPdf **PKPab 07 39 22.2 +1.0**
TIP LR LR
comp=Z,1µm,19.0s
NCB Newcomb 146.03 100 *e*PKPdf **PKPdf 07 39 19.3 -1.0**
NCB LR LR
comp=Z,1µm,20.0s
MPEP Malo Peshtene 146.19 258 *e*P **PKPdf 07 39 20.2 -0.4**
ISR Istrita 146.28 263 ⇓PKP2 **PKPbc 07 39 21.4 -0.5**
ISR Istrita 146.28 263 ⇓*i*P **PKPbc 07 39 21.4 -0.5**
TIR Tirane 146.31 252 PFAKE 07 39 30.0 +7.1
TIR LR LR
comp=Z,1µm,21.0s
LONY Lake Ozonia 146.37 99 PFAKE 07 39 30.0 +7.0
LONY LR LR
comp=Z,1µm,20.0s
KIS Kishinev 146.65 267 *e*PKP2 PKPab 07 39 30.0 +6.0
KIS *e* 07 42 58.0
KIS Kishinev 146.65 267 *e*PKP PKPab 07 39 30.0 +6.0
KIS LRM MLR 08 39 26.0
comp=Z,2µm,22.0s
VRI Vrincioaia 146.76 264 ⇑PKP2 **PKPab 07 39 24.9 +0.4**
VRI Vrincioaia 146.76 264 ⇑*i*P **PKPab 07 39 24.9 +0.4**
MLR Muntele Rosu 146.84 263 PKPbc **PKPdf 07 39 21.7 0.0**
MLR Muntele Rosu 146.84 263 ⇓*i*P **PKPbc 07 39 22.9 -0.7**
MLR Muntele Rosu 146.84 263 PKPbc **PKPdf 07 39 21.7 0.0**
comp=Z,2.0nm,0.8s,baz=167,slow=3.0,SNR=13
CUC Castrocucco 146.93 246 *e*PKPdf **PKPdf 07 39 21.5 -0.5**
CUC LR LR
comp=Z,853nm,20.0s
ABSA Djebel Ababsia 146.99 232 P **PKPab 07 39 27.2 +1.4**
LBNH Lisbon 147.28 102 PFAKE 07 39 30.0 +3.4
LBNH LR LR
comp=Z,1µm,20.0s
TESR 147.28 265 ⇑*i*P **PKPbc 07 39 24.2 -0.5**
CMAH Djebel Manchou 147.33 232 P **PKPbc 07 39 25.1 -0.1**
CASM Ain Smara 147.34 231 P **PKPbc 07 39 26.1 +0.9**
ARR Arges 147.34 261 ⇓*i*P **PKPdf 07 39 22.7 +0.2**
CKFL Kef-Lekhel 147.38 231 P **PKPab 07 39 29.7 +2.3**
MOS Moscow 148.61 286 *e*PKHKP PKPpre 07 39 16.7
MOS *e* 07 39 29.3
MOS pmax pmax
comp=Z,30nm,1.0s
OBN Obninsk 148.68 285 *e*PKP2 **PKPbc 07 39 27.3 -0.8**
OBN *e* 07 42 57.2
OBN *e*SS SS 08 02 48.9 +40
OBN pmax pmax
comp=Z,7.0nm,0.9s
OBN Obninsk 148.68 285 PFAKE 07 39 30.0 -1.8
OBN LR LR
comp=Z,1µm,20.0s
BURAR Bucovina Array 148.76 265 ⇑*i*P **PKPab 07 39 30.7 -1.9**
BUR08 Bucovina Ar. S 148.79 265 *e*PKPbc **PKPbc 07 39 29.5 +0.7**
BZS Buzias 148.90 258 ⇑PKIKP **PKPdf 07 39 26.3 +1.3**
BZS Buzias 148.90 258 ⇑*i*P **PKPdf 07 39 26.3 +1.3**
AKASG Malin Array Be 149.11 272 PKIKP **PKPbc 07 39 27.3 -2.0**
AKASG Malin Array Be 149.11 272 PKPbc **PKPbc 07 39 27.3 -2.0**
AKASG Malin Array Be 149.11 272 PKPbc **PKPbc 07 39 27.3 -2.0**
comp=Z,4.9nm,0.8s,baz=80,slow=2.9,SNR=6.8
VSL Villasalto 149.11 237 *e*PKPdf **PKPdf 07 39 27.6 +2.0**
VSL LR LR
comp=Z,1µm,22.0s
KIEV Kiev 149.11 272 *e*PKP2 **PKPbc 07 39 29.8 +0.5**
KIEV MLR MLR
comp=Z,2µm,21.0s
KIEV Kiev 149.11 272 *e*PKPbc **PKPbc 07 39 29.8 +0.5**
KIEV LR LR
comp=Z,2µm,21.0s
RTC Rabat Centre 149.18 210 PFAKE 07 39 40.0 +5.6
RTC LR LR
comp=Z,3µm,21.0s
DRGR 149.29 261 ⇑PKIKP **PKPdf 07 39 25.3 -0.4**
DRGR 149.29 261 ⇑*i*P **PKPdf 07 39 25.3 -0.4**
AQU L'Aquila 149.90 245 PFAKE 07 39 40.0 +2.7
AQU LR LR
comp=Z,2µm,21.0s
AQU L'Aquila 149.90 245 ⇓*i*P **PKPab 07 39 39.7 +2.4**
TRPA Tarpa 150.36 263 *e*PKPdf **PKPbc 07 39 33.1 +0.7**
PKSM Moragy 150.69 256 ⇑PKIKP **PKPbc 07 39 34.9 +1.6**
PKSM Moragy 150.69 256 ⇑*i*P **PKPbc 07 39 34.9 +1.6**
PKSM Moragy 150.69 256 *e*PKPdf **PKPbc 07 39 31.7 -1.6**
KLMR Klimovskoe 150.75 296 *e*PKIKP **PKPbc 07 39 30.8 -2.2**
KLMR pmax pmax
comp=Z,141nm,1.4s
UZH Uzhgorod 150.84 263 *i* PKIKP **PKPdf 07 39 30.0 +2.1**
UZH *e* 07 39 33.0
UZH *i* 07 39 43.0
UZH *e*PPP PPP 07 46 38.8
UZH *i* SS SS 08 02 40.6 +8.1
LVV L'vov 150.89 267 *e*PKIKP **PKPbc 07 39 35.2 +1.5**
KWP Kalwaria Pacla 151.37 265 PFAKE 07 39 40.0 -3.1
KWP LR LR
comp=Z,2µm,22.0s
KWP Kalwaria Pacla 151.37 265 *e*PKP **PKPbc 07 39 36.3 +1.5**
PSZ Piszkesteto 151.41 260 *e*PKIKP **PKPbc 07 39 34.2 -0.8**
PSZ MLR MLR
comp=Z,1µm,21.0s
PSZ Piszkesteto 151.41 260 *e*PKPbc **PKPbc 07 39 34.2 -0.8**
PSZ LR LR
comp=Z,1µm,21.0s
PSZ Piszkesteto 151.41 260 *e*PKPdf **PKPbc 07 39 32.3 -2.8**
BOJS Bojanci 151.64 251 *e*PKPdf **PKPdf 07 39 31.2 +1.9**
PGF Pioggiola 151.87 240 *e*PKIKP **PKPdf 07 39 29.1 -0.8**
comp=Z,44nm,1.2s
PGF Pioggiola 151.87 240 *e*PKIKP **PKPdf 07 39 29.1 -0.8**
PGF Pioggiola 151.87 240 *e*PKPdf **PKPdf 07 39 29.1 -0.8**
NIE Niedzica 152.31 262 *e*PKIKP **PKPbc 07 39 37.8 +0.8**
NIE Niedzica 152.31 262 *e*PKP **PKPbc 07 39 37.8 +0.8**
VYHS Vyhne 152.31 259 *e*PKIKP **PKPdf 07 39 31.1 +0.9**
VYHS *e* 07 39 37.0
VYHS *e* 07 39 46.4
VYHS Vyhne 152.31 259 *e*PKP **PKPdf 07 39 31.1 +0.9**
VYHS *e* 07 39 36.9
VYHS *e* 07 39 46.4
LJU Ljubljana 152.38 251 *e*PKPdf **PKPbc 07 39 34.4 -2.8**
JAVS Javornik 152.47 250 *e*PKPdf **PKPdf 07 39 33.2 +2.5**
PERS Pernice 152.58 253 *e*PKPdf **PKPdf 07 39 32.3 +1.5**
VLC Villacollemand 152.64 244 PFAKE 07 39 40.0 +2.1
VLC LR LR
comp=Z,2µm,22.0s

PVAQ	**Vaqueiros**	**152.64**	**210**	*e*PKP	**PKPdf**	**07 39 33.5**	**+2.5**
MORF	**Marmelete**	**152.76**	**208**	*e*PKP	**PKPdf**	**07 39 33.9**	**+2.6**
PCVE	**Castro Verde**	**152.94**	**210**	*e*PKP	**PKPdf**	**07 39 35.0**	**+3.5**
OJC	**Ojcow**	**153.12**	**263**	*e*PKIKP	**PKPbc**	**07 39 39.5**	**+0.8**
OJC	**Ojcow**	**153.12**	**263**	*e*PKP	**PKPbc**	**07 39 39.5**	**+0.8**
PNCL	**Nicolau / Gran**	**153.51**	**209**	*e*PKP	**PKPdf**	**07 39 33.9**	**+1.6**
LMR	**La Mourre**	**153.51**	**238**	*e*PKIKP	**PKPdf**	**07 39 30.6**	**-1.5**
LMR	**La Mourre**	**153.51**	**238**	*e*PKIKP	**PKPdf**	**07 39 30.6**	**-1.5**
LMR	**La Mourre**	**153.51**	**238**	*e*PKPdf	**PKPdf**	**07 39 30.6**	**-1.5**
SBF	**Sospel**	**153.59**	**239**	*e*PKIKP	**PKPdf**	**07 39 31.2**	**-1.1**
	comp=Z,26nm,0.9s						
SBF	**Sospel**	**153.59**	**239**	*e*PKIKP	**PKPdf**	**07 39 31.2**	**-1.1**
SBF	**Sospel**	**153.59**	**239**	*e*PKPdf	**PKPdf**	**07 39 31.2**	**-1.1**
OKC	**Ostrava-Krasne**	**153.60**	**261**	AMS	AMS	08 56 50.0	
	comp=Z,1μm,21.7s						
SAOF	**Saorge**	**153.65**	**240**	PKP	**PKPab**	**07 39 48.6**	**-4.3**
FRF	**La Foret Royal**	**153.65**	**238**	*e*PKIKP	**PKPdf**	**07 39 31.2**	**-1.1**
	comp=Z,64nm,1.5s						
FRF	**La Foret Royal**	**153.65**	**238**	*e*PKIKP	**PKPdf**	**07 39 31.2**	**-1.1**
FRF	**La Foret Royal**	**153.65**	**238**	*e*PKPdf	**PKPdf**	**07 39 31.2**	**-1.1**
AUTN	**L'Aution**	**153.70**	**240**	PKP	PKPbc	07 39 46.7	+6.2
RES	**Resolute Bay**	**153.72**	**34**	*e*PKPdf	**PKPdf**	**07 39 33.0**	**+1.5**
RES				PKPbc	**PKPbc**	**07 39 36.7**	**-2.6**
RES				*e*PKPbc	**PKiKP**	**07 39 40.4**	**+1.0**
RES	**Resolute Bay**	**153.72**	**34**	PKPbc	**PKPbc**	**07 39 36.7**	**-2.6**
	comp=Z,3.6nm,1.1s,baz=165,slow=2.3,SNR=5.7						
TOUF	**Mont Tournerai**	**153.79**	**239**	PKP	**PKPbc**	**07 39 42.8**	**+2.2**
PAB	**San Pablo**	**153.81**	**217**	PFAKE		07 39 40.0	-0.7
PAB				LR	LR		
	comp=Z,2μm,20.0s						
ESDC	**Sonseca Array**	**153.82**	**218**	PKPbc	**PKPbc**	**07 39 38.2**	**-2.5**
ESDC	**Sonseca Array**	**153.82**	**218**	PKPbc	**PKPbc**	**07 39 38.2**	**-2.5**
	comp=Z,0.8nm,0.6s,baz=248,slow=2.3,SNR=7.3						
MORC	**Moravsky Berou**	**153.83**	**260**	⇓PKIKP	**PKPbc**	**07 39 40.7**	**+0.4**
MORC	**Moravsky Berou**	**153.83**	**260**	*e*PKPbc	**PKPbc**	**07 39 40.1**	**-0.3**
MORC	**Moravsky Berou**	**153.83**	**260**	⇓*i*P	**PKPbc**	**07 39 40.7**	**+0.4**
PESTR	**Estremoz**	**154.01**	**211**	*e*PKP	**PKPdf**	**07 39 35.1**	**+2.1**
KRLC	**Kraliky**	**154.39**	**260**	*e*PKIKP	**PKPdf**	**07 39 37.3**	**+4.1**
KRLC	**Kraliky**	**154.39**	**260**	*e*PKPDF	**PKPdf**	**07 39 37.3**	**+4.1**
TREC	**Trest**	**154.41**	**257**	AMS	AMS	08 54 00.0	
	comp=Z,2μm,21.7s						
SMRF	**Simiane la Rot**	**154.41**	**237**	*e*PKIKP	**PKPdf**	**07 39 32.1**	**-1.3**
	comp=Z,32nm,1.3s						
SMRF	**Simiane la Rot**	**154.41**	**237**	*e*PKPdf	**PKPdf**	**07 39 32.1**	**-1.3**
MBDF	**Montbardon**	**154.57**	**240**	*e*PKIKP	**PKPdf**	**07 39 32.8**	**-1.0**
MBDF	**Montbardon**	**154.57**	**240**	*e*PKIKP	**PKPdf**	**07 39 32.8**	**-1.0**
MBDF	**Montbardon**	**154.57**	**240**	*e*PKPdf	**PKPdf**	**07 39 32.8**	**-1.0**
DPC	**Dobruska-Polom**	**154.79**	**260**	*e*PKIKP	PKPdf	07 39 28.0	-5.7
DPC				MLR	MLR		
	comp=Z,2μm,20.8s						
DPC	**Dobruska-Polom**	**154.79**	**260**	*e*PKPDF	**PKPbc**	**07 39 42.8**	**+0.4**
DPC				AMS	AMS	08 59 10.0	
	comp=Z,2μm,20.8s						
GERES	**GERESS Array B**	**154.88**	**254**	PKPbc	**PKPbc**	**07 39 41.6**	**-1.1**
GERES	**GERESS Array B**	**154.88**	**254**	PKPbc	**PKPbc**	**07 39 41.6**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=188,slow=3.7,SNR=6.5						
BNI	**Bardonecchia**	**154.88**	**240**	PFAKE		07 39 40.0	-2.9
BNI				LR	LR		
	comp=Z,2μm,22.0s						
TUE	**Stuetta**	**154.94**	**245**	PFAKE		07 39 40.0	-3.0
TUE				LR	LR		
	comp=Z,3μm,19.0s						
CMLA	**Cha da Macela**	**155.02**	**178**	PFAKE		07 39 50.0	-8.8
CMLA				LR	LR		
	comp=Z,2μm,20.0s						
UPC	**Upice**	**155.04**	**260**	*e*PKIKP	**PKPdf**	**07 39 37.8**	**+3.8**
UPC	**Upice**	**155.04**	**260**	*e*PKPDF	**PKPdf**	**07 39 37.8**	**+3.8**
UPC				*e*pPKP	PKPab	07 39 48.8	-10
MTLF	**Montolieu**	**155.12**	**231**	*e*PKIKP	**PKPdf**	**07 39 33.2**	**-1.2**
	comp=Z,35nm,1.6s						
MTLF	**Montolieu**	**155.12**	**231**	*e*PKIKP	**PKPdf**	**07 39 33.2**	**-1.2**
MTLF	**Montolieu**	**155.12**	**231**	*e*PKPdf	**PKPdf**	**07 39 33.2**	**-1.2**
KHC	**Kasperske Hory**	**155.14**	**255**	*e*PKIKP	PKPab	07 39 50.2	-9.0
KHC				MLR	MLR		
	comp=Z,2μm,18.2s						
KHC	**Kasperske Hory**	**155.14**	**255**	*e*pPKP	PKPab	07 39 50.2	-9.0
KHC				*e*x	x	07 40 02.8	
KHC				AMS	AMS	08 57 00.0	
	comp=Z,2μm,18.2s						
LASF	**Ste Croix**	**155.16**	**235**	*e*PKIKP	**PKPdf**	**07 39 33.3**	**-1.1**
	comp=Z,41nm,1.3s						
LASF	**Ste Croix**	**155.16**	**235**	*e*PKPdf	**PKPdf**	**07 39 33.3**	**-1.1**
PRU	**Pruhonice**	**155.34**	**257**	*e*PKP2	PKPab	07 40 05.3	+5.4
PRU				MLR	MLR		
	comp=Z,1μm,17.0s						
PRU	**Pruhonice**	**155.34**	**257**	*e*pPKP	PKPab	07 40 05.3	+5.4
PRU				AMS	AMS	08 54 00.0	
	comp=Z,1μm,17.0s						
PRA	**Prague**	**155.44**	**257**	PKPAB	**PKPab**	**07 40 04.0**	**+3.7**
MTE	**Manteigas**	**155.45**	**212**	PFAKE		07 39 50.0	-11
MTE				LR	LR		
	comp=Z,4μm,20.0s						
VIVF	**Saint-Julien-l**	**155.50**	**237**	*e*PKIKP	**PKPdf**	**07 39 33.8**	**-1.1**
	comp=Z,19nm,1.2s						
VIVF	**Saint-Julien-l**	**155.50**	**237**	*e*PKIKP	**PKPdf**	**07 39 33.8**	**-1.1**
VIVF	**Saint-Julien-l**	**155.50**	**237**	*e*PKPdf	**PKPdf**	**07 39 33.8**	**-1.1**
LVZ	**Lovozero**	**155.61**	**308**	PFAKE		07 39 40.0	+5.7
LVZ				LR	LR		
	comp=Z,2μm,22.0s						
PVCC	**Panska Ves**	**155.71**	**258**	AMS	AMS	08 54 50.0	
	comp=Z,2μm,19.7s						
SSB	**Saint Sauveur**	**155.91**	**237**	PFAKE		07 39 50.0	-13
SSB				LR	LR		
	comp=Z,2μm,19.0s						
BRG	**Berggiesshubel**	**156.24**	**258**	*e*PKP	**PKPab**	**07 40 06.9**	**+3.2**
	comp=Z,29nm,1.9s						
BRG				*e*		07 40 15.5	
	comp=Z,13nm,1.5s						
BRG							
	comp=N,1μm,18.0s						
BRG							
	comp=E,671nm,19.8s						
BRG							
	comp=Z,2μm,19.6s						
BRG	**Berggiesshubel**	**156.24**	**258**	*e*PKP2	**PKPab**	**07 40 06.9**	**+3.2**
BRG				pmax	pmax		
	comp=Z,29nm,1.9s						
BRG				MLR	MLR		
	comp=N,1μm,18.0s						
BRG				MLR	MLR		
	comp=E,671nm,19.8s						
BRG				MLR	MLR		
	comp=Z,2μm,19.6s						
LBL	**Lubilhac**	**156.37**	**235**	PKP	**PKPab**	**07 40 05.8**	**+1.3**
LOMF	**Lomont**	**156.69**	**243**	PKP	PKPab	07 40 11.8	+5.9
FINES	**FINESS Array B**	**156.75**	**290**	PKP	**PKPdf**	**07 39 39.0**	**+3.1**
FINES	**FINESS Array B**	**156.75**	**290**	PKP	**PKPdf**	**07 39 39.0**	**+3.1**
	comp=Z,1.3nm,1.0s,baz=51,slow=0.9,SNR=2.4						
BFO	**Black Forest**	**156.82**	**247**	PFAKE		07 39 50.0	+14
BFO				LR	LR		
	comp=Z,2μm,20.0s						
CLL	**Collm**	**156.96**	**258**	*e*PKIKP	PKPdf	07 39 49.0	+12
CLL				pmax	pmax		
	comp=Z,26nm,2.0s						
CLL	**Collm**	**156.96**	**258**	*e*PKPdiff	PKPdf	07 39 49.0	+12
	comp=Z,26nm,2.0s						
CLL				*e*PKPab	**PKPab**	**07 40 09.0**	**+2.2**
	comp=Z,64nm,2.6s						
CLL				*i*		07 40 28.8	
	comp=Z,44nm,1.7s						
CLL				*e*SS	SS	08 03 35.0	-4.2
CLL				*e*		08 05 15.0	
CLL				*e*(SSS)		08 09 18.0	
CLL				*e*SSSS		08 13 42.0	
ECH	**Echery**	**157.23**	**245**	PFAKE		07 39 50.0	+13
ECH				LR	LR		
	comp=Z,1μm,20.0s						
ECH	**Echery**	**157.23**	**245**	PKP	**PKPab**	**07 40 11.1**	**+3.0**
PAGF	**Fort de Pagny**	**158.09**	**244**	*e*PKIKP	**PKPdf**	**07 39 36.2**	**-1.8**
PAGF	**Fort de Pagny**	**158.09**	**244**	*e*PKPdf	**PKPdf**	**07 39 36.2**	**-1.8**
KEV	**Kevo**	**158.70**	**311**	PFAKE		07 39 50.0	+12
KEV				LR	LR		
	comp=Z,2μm,20.0s						
WLF	**Walferdange**	**158.77**	**246**	PFAKE		07 39 50.0	+11
WLF				LR	LR		
	comp=Z,2μm,19.0s						
ARCES	**ARCESS Array B**	**159.20**	**311**	PKPab	**PKPab**	**07 40 14.7**	**-1.4**
ARCES	**ARCESS Array B**	**159.20**	**311**	PKPab	**PKPab**	**07 40 14.7**	**-1.4**
	comp=Z,4.8nm,0.8s,baz=92,slow=4.3,SNR=7.5						
KBS	**Kingsbay**	**160.44**	**340**	PFAKE		07 39 50.0	+10
KBS				LR	LR		
	comp=Z,2μm,20.0s						
ROSF	**Rostrenen**	**161.38**	**229**	*e*PKIKP	**PKPdf**	**07 39 39.9**	**-1.9**
	comp=Z,44nm,1.2s						
ROSF	**Rostrenen**	**161.38**	**229**	*e*PKIKP	**PKPdf**	**07 39 39.9**	**-1.9**
ROSF	**Rostrenen**	**161.38**	**229**	*e*PKPdf	**PKPdf**	**07 39 39.9**	**-1.9**
KONO	**Kongsberg**	**163.38**	**275**	PFAKE		07 39 50.0	+6.6
KONO				LR	LR		
	comp=Z,2μm,21.0s						
ESK	**Eskdalemuir**	**166.80**	**246**	PFAKE		07 40 00.0	+14
ESK				LR	LR		
	comp=Z,3μm,20.0s						
SFJD	**Kangerlussuaq**	**168.16**	**57**	PFAKE		07 40 00.0	+13
SFJD				LR	LR		
	comp=Z,3μm,19.0s						

CASC 04 07:19:54.4±1.3**, 9°.54N×83°.96W, h60**km±4km**, MD3.5, 3D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUS	**Buena Vista**	**0.20**	**87**	*e*P	Pn	07 20 04.3	-0.1
BUS				*e*S	Sn	07 20 12.5	+0.9
QCR	**Quepos**	**0.24**	**240**	⇓*i*P	Pn	07 20 03.9	-0.1
QCR				*e*S	Sn	07 20 11.7	+0.6
SJS	**Escuela Geolog**	**0.40**	**346**	⇓*e*P	Pn	07 20 06.0	+0.3
CGA2	**Cerro Gallo 2**	**0.69**	**313**	⇓*e*P	Pn	07 20 08.7	0.0
CGA2				*e*S	Sn	07 20 19.4	+0.3
ACR	**Cerro Adams**	**1.18**	**139**	*e*P	Pn	07 20 15.3	+0.4
ACR				*e*S	Sn	07 20 31.4	+1.2
BRU2	**Volcan**	**1.45**	**121**	*e*P	Pn	07 20 19.1	+0.4
BRU2				*e*S	Sn	07 20 38.2	+1.2
AMAS	**Alto Masis**	**1.47**	**316**	*i*P	Pn	07 20 19.2	+0.3
TBS2		**1.48**	**120**	*e*P	Pn	07 20 19.9	+0.8
TBS2				*e*S	Sn	07 20 39.2	+1.5
PTEN	**Parque Tenorio**	**1.54**	**319**	*i*P	Pn	07 20 19.5	-0.3
PTEN				*i*S	Sn	07 20 39.9	+0.9
BRU	**Baru**	**1.56**	**118**	*i*P	Pn	07 20 20.9	+0.4
BRU				*e*S	Sn	07 20 41.7	+1.6
CUI	**Cuipilapa**	**1.62**	**313**	*i*P	Pn	07 20 20.7	-0.1
MESS	**Mesas**	**1.70**	**314**	*i*P	Pn	07 20 21.8	-0.2
LIM1	**Limonal**	**1.72**	**312**	*i*P	Pn	07 20 21.7	-0.4

*ISCJB **04** 07:29:43.4±0.6, 13°.77S±0°.06×167°.2E±0°.1, h200km, mb4.0/20, Error ellipse: s-maj=14.6km s-min=7.5km az=9.8*

*NEIC **04** 07:29:44.2±1.8, 13°.78S×167°.23E, h197km±16km, mb4.5/6, Error ellipse: s-maj=13.1km s-min=10.6km az=152.0*

*IDC **04** 07:29:46.0±1.9, 13°.88S×167°.13E, h210km±18km, mb3.8/16, mb1 3.9/17, mb1mx3.8/23, mbtmp3.8/17, Error ellipse: s-maj=17.5km s-min=11.2km az=127.0*

ISC 04 07:29:44.7±0.6**, 13°.84S**±0°.07×**167°.2E**±0°.1**, h200**km**, n56, σ0s.80**/64**, mb4.1**/20**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.21**	**185**	P	**Pn**	**07 31 41.1**	**+0.3**
DZM				S	**Sn**	**07 33 13.0**	**-0.4**
DZM	**Mont Dzumac**	**8.21**	**185**	P	**Pn**	**07 31 41.1**	**+0.3**
	2.4nm,0.3s,baz=28,slow=19,SNR=29						
DZM				S	**Sn**	**07 33 13.0**	**-0.4**
	1.5nm,0.3s,baz=315,slow=20,SNR=2.7						
EIDS	**Eidsvold**	**18.98**	**230**	*e*P	**Pn**	**07 33 53.1**	**-1.2**
	44nm,1.3s						
CTA	**Charters Tower**	**20.94**	**250**	P	**P**	**07 34 12.2**	**0.0**
CTA	**Charters Tower**	**20.94**	**250**	P	**P**	**07 34 12.2**	**0.0**
	7.4nm,0.7s,baz=74,slow=7.4,SNR=10						
CTAO	**Charters Tower**	**20.94**	**250**	*e*P	**P**	**07 34 12.4**	**+0.3**
ARMA	**Armidale**	**21.85**	**218**	*e*P	**P**	**07 34 23.1**	**+1.5**
	15nm,0.8s						
COEN	**Coen**	**23.29**	**267**	*e*P	**P**	**07 34 36.2**	**+1.4**
	34nm,0.9s						
STKA	**Stephens Creek**	**29.50**	**228**	P	**P**	**07 35 31.1**	**+0.8**
STKA	**Stephens Creek**	**29.50**	**228**	P	**P**	**07 35 31.1**	**+0.8**
	4.5nm,0.9s,baz=58,slow=11,SNR=6.9						
WRAB	**Tennant Creek**	**31.95**	**255**	*e*P	**P**	**07 35 51.5**	**-0.4**
	11nm,1.4s						
WRA	**Warramunga Arr**	**31.96**	**255**	P	**P**	**07 35 51.2**	**-0.8**
WRA				PcP	**PcP**	**07 38 37.7**	**+0.3**
WRA	**Warramunga Arr**	**31.96**	**255**	P	**P**	**07 35 51.2**	**-0.8**
	0.9nm,0.5s,baz=86,slow=9.3,SNR=7.6						
WRA				PcP	**PcP**	**07 38 37.7**	**+0.3**
	1.4nm,0.7s,baz=82,slow=3.2,SNR=9.1						
ASAR	**Alice Springs**	**32.91**	**248**	P	**P**	**07 35 59.9**	**-0.4**
ASAR				PcP	**PcP**	**07 38 40.0**	**0.0**
ASAR				S	**S**	**07 41 01.2**	**-2.2**
ASAR	**Alice Springs**	**32.91**	**248**	P	**P**	**07 35 59.9**	**-0.4**
	2.8nm,0.5s,baz=74,slow=9.2,SNR=62						
ASAR				PcP	**PcP**	**07 38 40.0**	**0.0**
	0.8nm,0.6s,baz=74,slow=2.5,SNR=7.2						
ASAR				S	**S**	**07 41 01.2**	**-2.2**
	2.5nm,1.0s,baz=80,slow=16,SNR=15						
FORT	**Forrest**	**39.67**	**238**	*e*P	**P**	**07 36 57.8**	**+0.3**
	12nm,0.7s						
FITZ	**Fitzroy Crossi**	**40.09**	**258**	P	**P**	**07 37 01.3**	**+0.3**
FITZ	**Fitzroy Crossi**	**40.09**	**258**	P	**P**	**07 37 01.3**	**+0.3**
	2.0nm,0.9s,baz=89,slow=6.6,SNR=3.7						
MJAR	**Matsushiro Arr**	**57.08**	**332**	P	**P**	**07 39 09.1**	**-1.0**
MJAR	**Matsushiro Arr**	**57.08**	**332**	P	**P**	**07 39 09.1**	**-1.0**
	0.5nm,0.3s,baz=170,slow=8.8,SNR=7.9						
KSRS	**Korea Array**	**62.95**	**326**	P	**P**	**07 39 50.4**	**+0.4**
	1.4nm,0.6s,baz=142,slow=6.2,SNR=6.8						
KSAR	**Wonju Array Be**	**62.97**	**326**	P	**P**	**07 39 50.4**	**+0.3**
USRK	**Ussuriysk Arra**	**66.05**	**333**	P	**P**	**07 40 11.1**	**+1.2**
	3.3nm,0.8s,baz=158,slow=6.3,SNR=11						
PETK	**Petropavlovsk-**	**67.17**	**354**	P	**P**	**07 40 16.7**	**-0.2**
PETK	**Petropavlovsk-**	**67.17**	**354**	P	**P**	**07 40 16.7**	**-0.2**
	9.2nm,0.9s,baz=157,slow=7.8,SNR=5.0						
CMAR	**Chiang Mai Arr**	**74.50**	**294**	P	**P**	**07 41 03.1**	**+1.4**
CMAR	**Chiang Mai Arr**	**74.50**	**294**	P	**P**	**07 41 03.1**	**+1.4**
	2.9nm,0.6s,baz=129,slow=4.7,SNR=9.1						
QSPA	**South Pole Qui**	**76.18**	**180**	P	**P**	**07 41 11.0**	**+0.3**
QSPA	**South Pole Qui**	**76.18**	**180**	P	**P**	**07 41 11.0**	**+0.3**
	3.6nm,0.9s,baz=296,slow=2.5,SNR=6.5						
BILL	**Bilibino**	**81.66**	**360**	*e*P	**P**	**07 41 40.3**	**+0.3**
	3.3nm,0.7s						
SONM	**Songino Array**	**81.73**	**324**	P	**P**	**07 41 41.4**	**+0.4**
SONM	**Songino Array**	**81.73**	**324**	P	**P**	**07 41 41.4**	**+0.4**
	0.5nm,0.4s,baz=136,slow=4.6,SNR=7.4						
ILAR	**Eielson Array**	**85.72**	**18**	P	**P**	**07 42 00.0**	**-0.6**
ILAR	**Eielson Array**	**85.72**	**18**	P	**P**	**07 42 00.0**	**-0.6**
	0.7nm,0.8s,baz=235,slow=6.3,SNR=7.7						
NVAR	**Mina Array Bea**	**86.77**	**49**	P	**P**	**07 42 05.2**	**-1.5**
NVAR	**Mina Array Bea**	**86.77**	**49**	P	**P**	**07 42 05.2**	**-1.5**
	0.4nm,0.7s,baz=233,slow=6.7,SNR=3.3						
MK31	**Makanchi Array**	**96.50**	**316**	*e*P	**P**	**07 42 51.4**	**+0.1**
MKAR	**Makanchi Array**	**96.50**	**316**	P	**P**	**07 42 51.6**	**+0.3**
MKAR	**Makanchi Array**	**96.50**	**316**	P	**P**	**07 42 51.6**	**+0.3**
	2.0nm,0.7s,baz=94,slow=6.4,SNR=15						
ZALV	**Zalesovo Beam**	**96.62**	**324**	P	**P**	**07 42 50.2**	**-1.5**
ZALV	**Zalesovo Beam**	**96.62**	**324**	P	**P**	**07 42 50.2**	**-1.5**
	0.2nm,0.4s,baz=108,slow=4.7,SNR=4.4						
ARCES	**ARCESS Array B**	**119.37**	**346**	PKP	**PKPdf**	**07 48 09.5**	**-0.1**
ARCES	**ARCESS Array B**	**119.37**	**346**	PKP	**PKPdf**	**07 48 09.5**	**-0.1**
	1.6nm,0.7s,baz=72,slow=2.9,SNR=7.2						
FINES	**FINESS Array B**	**124.87**	**338**	PKP	**PKPdf**	**07 48 20.3**	**0.0**
FINES	**FINESS Array B**	**124.87**	**338**	PKP	**PKPdf**	**07 48 20.3**	**0.0**
	2.8nm,0.9s,baz=116,slow=3.2,SNR=6.1						
NOA	**NORSAR Array B**	**129.75**	**345**	PKP	**PKPdf**	**07 48 29.2**	**-0.5**
NOA	**NORSAR Array B**	**129.75**	**345**	PKP	**PKPdf**	**07 48 29.2**	**-0.5**
	0.6nm,0.7s,baz=30,slow=2.0,SNR=3.9						
TIP	**Timpagrande**	**143.72**	**320**	*e*PKPdf	PKPbc	07 48 54.9	+0.5
CEL	**Celeste**	**144.80**	**319**	*e*PKPdf	PKPbc	07 48 57.2	-0.4
SSB	**Saint Sauveur**	**145.37**	**338**	*e*PKPdf	**PKPdf**	**07 48 59.0**	**+0.1**
KEST	**Kesra**	**150.46**	**321**	*e*PKPbc	**PKPbc**	**07 49 13.7**	**+0.6**
KEST	**Kesra**	**150.46**	**321**	PKPbc	**PKPbc**	**07 49 13.9**	**+0.9**
	4.7nm,0.8s,baz=148,slow=0.8,SNR=15						
ESDC	**Sonseca Array**	**153.11**	**345**	PKPbc	**PKPbc**	**07 49 19.0**	**+0.1**
ESDC	**Sonseca Array**	**153.11**	**345**	PKPbc	**PKPbc**	**07 49 19.0**	**+0.1**
	0.1nm,0.3s,baz=19,slow=2.0,SNR=5.8						
TORD	**Torodi Ar. Bea**	**165.85**	**269**	PKP	**PKPdf**	**07 49 27.0**	**+0.5**
TORD				PKPab	**PKPab**	**07 50 27.5**	**+0.2**
TORD	**Torodi Ar. Bea**	**165.85**	**269**	PKP	**PKPdf**	**07 49 27.0**	**+0.5**
	1.4nm,0.8s,baz=61,slow=0.7,SNR=7.8						
TORD				PKPab	**PKPab**	**07 50 27.5**	**+0.2**
	1.1nm,1.0s,baz=94,slow=2.5,SNR=4.8						

IDC 04 07:43:12.7±48.0**, 15°.39S**×**172°.07W, h0**km**, mb4.2**/3**, mb1 4.3**/3**, mb1mx3.8**/21**, mbtmp4.2**/3**, MS5.2**/3**, Ms1 5.2**/3**, ms1mx4.3**/34**, Error ellipse: s-maj=928.6km s-min=195.8km az=79.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**45.15**	**240**	P	P	07 51 31.2	-0.1
	2.2nm,0.5s,baz=90,slow=6.1,SNR=4.8						
WRA	**Warramunga Arr**	**51.09**	**257**	P	P	07 52 17.1	-0.4
	0.6nm,0.8s,baz=92,slow=7.1,SNR=6.1						
ASAR	**Alice Springs**	**51.33**	**252**	P	P	07 52 19.3	0.0
	4.2nm,0.5s,baz=90,slow=8.1,SNR=96						
NVAR	**Mina Array Bea**	**73.47**	**41**	LR	LR	08 21 12.3	
	comp=Z,2μm,20.4s,baz=131,slow=31						
PDAR	**Pinedale Array**	**81.41**	**41**	LR	LR	08 25 38.7	
	comp=Z,872nm,20.7s,baz=237,slow=31						
ILAR	**Eielson Array**	**82.19**	**11**	LR	LR	08 27 43.2	
	comp=Z,2μm,21.1s,baz=232,slow=32						

IDC 04 08:06:25.8±2.8**, 1°.00S**×**135°.26E, h0**km**, mb3.5**/2**, mb1 3.7**/4**, mb1mx3.5**/21**, mbtmp3.5**/4**, ML3.3**/1**, Error ellipse: s-maj=101.3km s-min=27.0km az=82.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.85**	**183**	P	P	08 10 47.7	+0.1
	0.1nm,0.3s,baz=1.3,slow=11,SNR=4.7						
FITZ	**Fitzroy Crossi**	**19.45**	**209**	P	P	08 10 54.2	0.0
	0.1nm,0.3s,baz=38,slow=11,SNR=7.1						
ASAR	**Alice Springs**	**22.57**	**183**	P	P	08 11 27.8	-0.2
	1.8nm,0.8s,baz=9.6,slow=12,SNR=23						
MKAR	**Makanchi Array**	**66.35**	**323**	P	P	08 17 16.6	+0.1
	0.3nm,0.6s,baz=113,slow=7.9,SNR=4.4						

IGQ 04 08:19:48.4, 2°.89S×**80°.49W, h12**km±151km**, Mb4.0, Ms3.8, 2C-11D, Error ellipse: s-maj=16.6km s-min=4.8km az=16.2, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNL	**Arenillas**	**0.78**	**148**	⇓S	Sg	08 20 13.7	+0.1
ARNL	**Arenillas**	**0.78**	**148**	⇓P	Pg	08 20 03.0	-0.4
CATE	**Catamayo**	**1.54**	**134**	⇓S	Sb	08 20 37.0	+0.3
CATE	**Catamayo**	**1.54**	**134**	⇓P	Pn	08 20 16.1	+0.3
RIOE	**Riobamba**	**2.17**	**59**	P	Pn	08 20 25.4	+0.6
IGUA	**Igualata**	**2.31**	**53**	P	Pn	08 20 28.5	+1.5
BMAS	**Trigal station**	**2.43**	**56**	P	Pn	08 20 30.2	+1.8
ARRY	**Arrayan**	**2.45**	**56**	P	Pn	08 20 29.9	+1.2
BULB	**Ulba Tungurahu**	**2.53**	**55**	⇓P	Pb	08 20 32.3	-1.9
PISA	**Pisayambo**	**2.78**	**49**	P	Pb	08 20 36.3	-2.4
BMOR	**Cotopaxi Volca**	**2.95**	**43**	P	Pn	08 20 37.4	+1.6
CAMI	**Rancho Maria**	**2.96**	**42**	P	Pn	08 20 38.4	+2.6
MOV1	**Cotopaxi Vol s**	**2.97**	**43**	P	Pn	08 20 38.5	+2.3
BNAS	**Cotopaxi Volca**	**2.98**	**42**	⇑P	Pn	08 20 38.4	+2.3
NAS2	**Nasa**	**3.00**	**42**	P	Pb	08 20 39.7	-2.9
BREF	**Cotopaxi Volca**	**3.01**	**43**	⇑P	Pn	08 20 39.4	+2.7
BTAM	**Cotopaxi Volca**	**3.03**	**44**	⇓P	Pn	08 20 39.6	+2.7
BVC2	**Cotopaxi Volca**	**3.03**	**43**	⇓P	Pn	08 20 39.8	+2.8
BVC2	**Cotopaxi Volca**	**3.03**	**43**	P	Pn	08 20 39.9	+2.9
TAMB	**Tambo**	**3.04**	**44**	P	Pn	08 20 39.6	+2.6
VC1	**Cotopaxi 1**	**3.05**	**43**	⇓P	Pn	08 20 40.2	+3.0
JUA2	**San Juan 2**	**3.25**	**35**	P	Pn	08 20 42.2	+2.3
TERV	**Terraza Guagua**	**3.29**	**35**	P	Pn	08 20 42.2	+1.8
GGP	**Refugio Guagua**	**3.29**	**35**	⇓P	Pn	08 20 42.0	+1.5
PINO	**Pino**	**3.30**	**35**	⇓P	Pn	08 20 42.4	+1.7
YANA	**Yana**	**3.35**	**35**	P	Pn	08 20 42.7	+1.5
ANTI	**Antisana**	**3.36**	**44**	P	Pn	08 20 44.1	+2.7
OTAV	**Otavalo**	**3.71**	**33**	⇓P	Pn	08 20 47.3	+1.1
COTA	**Cotacachi**	**3.85**	**34**	P	Pn	08 20 50.2	+2.0

*ISCJB **04** 08:26:53.4±0.5, 8°.96S±0°.10×67°.41E±0°.07, h13km, mb4.4/23, MS3.9/4, Error ellipse: s-maj=14.6km s-min=9.1km az=158.6*

*IDC **04** 08:26:53.5±0.6, 8°.99S×67°.35E, h0km, mb4.2/16, mb1 4.4/16, mb1mx4.1/29, mbtmp4.2/16, MS4.0/4, Ms1 4.1/4, ms1mx3.6/55, Error ellipse: s-maj=20.0km s-min=14.8km az=159.0*

*NEIC **04** 08:26:54.9±0.4, 9°.01S×67°.41E, h10km, mb4.7/9, Error ellipse: s-maj=10.8km s-min=6.8km az=158.0*

ISC 04 08:26:55.3±0.6**, 9°.0S**±0°.1×**67°.41E**±0°.08**, h13**km**, n56, σ0s.76**/53**, mb4.4**/23**, MS3.9**/4**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**5.24**	**73**	*e*Pn	**Pn**	**08 28 11.5**	**-2.0**
MSEY	**Mahe Island**	**12.61**	**289**	*e*Pn	**Pn**	**08 29 54.3**	**-0.3**
	95nm,0.4s						
OPO	**Ambohidratompo**	**21.79**	**242**	LR	LR	08 37 53.6	
	comp=Z,487nm,18.1s,baz=13,slow=30						
ABPO	**Ambohimpanom**	**21.93**	**241**	*e*P	**P**	**08 31 49.1**	**+0.2**
	49nm,1.3s						
KMBO	**Kilima Mbogo**	**31.02**	**283**	P	**P**	**08 33 13.4**	**0.0**
KMBO	**Kilima Mbogo**	**31.02**	**283**	P	**P**	**08 33 13.4**	**0.0**
	2.0nm,0.8s,baz=52,slow=10,SNR=4.6						
KMBO				LR	LR	08 42 57.5	
	comp=Z,209nm,20.5s,baz=276,slow=31						
PSI	**Prapat**	**33.54**	**71**	LR	LR	08 43 53.1	
	comp=Z,414nm,19.8s,baz=219,slow=30						
LSZ	**Lusaka**	**38.80**	**257**	*e*P	**P**	**08 34 20.0**	**-0.3**
	17nm,0.9s						
LSZ	**Lusaka**	**38.80**	**257**	P	**P**	**08 34 20.2**	**-0.1**
	13nm,0.8s,baz=73,slow=9.9,SNR=22						
CMAR	**Chiang Mai Arr**	**41.40**	**49**	P	**P**	**08 34 43.4**	**+1.6**
CMAR	**Chiang Mai Arr**	**41.40**	**49**	P	**P**	**08 34 43.4**	**+1.6**
	2.6nm,0.7s,baz=245,slow=9.1,SNR=15						
CMAR				LR	LR	08 48 37.4	
	comp=Z,156nm,20.7s,baz=0.0,slow=32						
LBTB	**Lobatse**	**42.82**	**243**	P	**P**	**08 34 52.9**	**-0.5**
LBTB	**Lobatse**	**42.82**	**243**	P	**P**	**08 34 52.9**	**-0.5**
	5.5nm,0.9s,baz=109,slow=14,SNR=7.2						
BOSA	**Boshof**	**44.10**	**238**	*e*P	**P**	**08 35 02.9**	**-0.9**
	7.6nm,1.0s						
BOSA	**Boshof**	**44.10**	**238**	P	**P**	**08 35 03.0**	**-0.7**
	5.7nm,1.0s,baz=65,slow=8.3,SNR=7.1						
EKS2	**Erkin-Say**	**51.77**	**6**	*e*P	**P**	**08 36 03.6**	**+0.8**
	4.2nm,0.8s						
AAK	**Ala-Archa**	**51.82**	**7**	*e*P	**P**	**08 36 03.8**	**+0.6**
	21nm,0.9s						
KBZ	**Khabaz**	**57.03**	**339**	P	**P**	**08 36 40.2**	**-0.8**
KBZ	**Khabaz**	**57.03**	**339**	P	**P**	**08 36 40.2**	**-0.8**
	2.7nm,1.0s,baz=149,slow=18,SNR=3.4						
MK31	**Makanchi Array**	**57.14**	**12**	*e*P	**P**	**08 36 40.7**	**-1.0**
MKAR	**Makanchi Array**	**57.14**	**12**	P	**P**	**08 36 40.9**	**-0.8**
MKAR	**Makanchi Array**	**57.14**	**12**	P	**P**	**08 36 40.9**	**-0.8**
	2.1nm,0.7s,baz=198,slow=7.8,SNR=30						
BRTR	**Keskin Array B**	**57.72**	**330**	P	**P**	**08 36 45.8**	**-0.4**
BRTR	**Keskin Array B**	**57.72**	**330**	P	**P**	**08 36 45.8**	**-0.4**
	2.1nm,0.9s,baz=144,slow=11,SNR=11						
ABKAR	**Akbulak array**	**58.40**	**354**	*e*P	**P**	**08 36 50.0**	**-0.5**
	7.6nm,0.9s						
AKTO	**Aktyubinsk**	**59.78**	**353**	P	**P**	**08 36 59.5**	**-0.6**
AKTO	**Aktyubinsk**	**59.78**	**353**	P	**P**	**08 36 59.5**	**-0.6**
	baz=164,slow=7.4						
KURK	**Kurchatov**	**60.29**	**8**	*e*P	**P**	**08 37 03.3**	**-0.2**
	10nm,1.3s						
BRVK	**Borovoye**	**61.89**	**2**	*e*P	**P**	**08 37 14.1**	**-0.2**
	3.1nm,0.9s						
ZALV	**Zalesovo Beam**	**64.44**	**11**	P	**P**	**08 37 30.3**	**-1.0**
ZALV	**Zalesovo Beam**	**64.44**	**11**	P	**P**	**08 37 30.3**	**-1.0**
	2.5nm,0.7s,baz=208,slow=6.6,SNR=14						
ASAR	**Alice Springs**	**64.95**	**112**	P	**P**	**08 37 35.4**	**+0.1**
ASAR	**Alice Springs**	**64.95**	**112**	P	**P**	**08 37 35.4**	**+0.1**
	1.4nm,0.8s,baz=274,slow=6.1,SNR=11						
WRA	**Warramunga Arr**	**65.36**	**108**	P	**P**	**08 37 38.8**	**+0.8**
WRA	**Warramunga Arr**	**65.36**	**108**	P	**P**	**08 37 38.8**	**+0.8**
	1.3nm,0.8s,baz=279,slow=5.9,SNR=6.8						
SONM	**Songino Array**	**66.29**	**28**	P	**P**	**08 37 44.8**	**+1.2**
SONM	**Songino Array**	**66.29**	**28**	P	**P**	**08 37 44.8**	**+1.2**
	4.9nm,0.9s,baz=216,slow=6.8,SNR=34						
TORD	**Torodi Ar. Bea**	**68.87**	**288**	P	**P**	**08 38 01.0**	**+0.6**
TORD	**Torodi Ar. Bea**	**68.87**	**288**	P	**P**	**08 38 01.0**	**+0.6**
	0.4nm,0.8s,baz=104,slow=6.1,SNR=3.0						
CLL	**Collm**	**76.14**	**328**	*e*P	**P**	**08 38 43.0**	**+0.1**
MJAR	**Matsushiro Arr**	**80.26**	**51**	P	**P**	**08 39 05.8**	**-0.3**
MJAR	**Matsushiro Arr**	**80.26**	**51**	P	**P**	**08 39 05.8**	**-0.3**
	2.4nm,0.9s,baz=253,slow=7.4,SNR=5.2						
HFS	**Hagfors**	**80.93**	**336**	P	**P**	**08 39 09.3**	**+0.2**
HFS	**Hagfors**	**80.93**	**336**	P	**P**	**08 39 09.3**	**+0.2**
	2.8nm,0.7s,baz=152,slow=6.7,SNR=8.4						
ARCES	**ARCESS Array B**	**83.53**	**346**	P	**P**	**08 39 22.6**	**0.0**
ARCES	**ARCESS Array B**	**83.53**	**346**	P	**P**	**08 39 22.6**	**0.0**
	4.2nm,0.8s,baz=146,slow=5.2,SNR=7.8						
YAK	**Yakutsk**	**85.46**	**25**	*e*P	P	08 39 28.5	-4.0
	13nm,0.6s						
YKA	**Yellowknife Ar**	**126.61**	**1**	PKP	**PKPdf**	**08 45 57.8**	**-0.4**
YKA	**Yellowknife Ar**	**126.61**	**1**	PKP	**PKPdf**	**08 45 57.7**	**-0.4**
	0.2nm,0.4s,baz=348,slow=2.4,SNR=7.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OTAV	Otavalo	144.90	257	ePKPdf	PKPdf	08 46 34.7	+0.8
PDAR	Pinedale Array	146.29	356	PKPbc	PKPbc	08 46 36.0	-0.3
PDAR	Pinedale Array	146.29	356	PKPbc	PKPbc	08 46 36.0	-0.3
	0.7nm,0.7s,baz=82,slow=3.1,SNR=5.3						
NVAR	Mina Array Bea	150.28	9	PKPbc	PKPbc	08 46 48.3	+1.3
NVAR	Mina Array Bea	150.28	9	PKPbc	PKPbc	08 46 48.3	+1.3
	2.5nm,0.8s,baz=263,slow=2.5,SNR=15						
TXAR	Lajitas Array	158.13	339	PKPab	PKPab	08 47 26.6	+0.1
TXAR	Lajitas Array	158.13	339	PKPab	PKPab	08 47 26.6	+0.1
	0.8nm,0.8s,baz=57,slow=4.6,SNR=8.2						

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*ISCJB **04** 08:37:49.7±0.5, 26°.28N±0°.07×99°.51E±0°.07, h10km, mb4.0/16, MS4.4/1, Error ellipse: s-maj=12.6km s-min=5.7km az=35.8*
*BJI **04** 08:37:49.3, 26°.31N×99°.35E, h10km, ML3.6/7, Ms7 3.3/1*
*IDC **04** 08:37:50.0±0.7, 26°.41N×99°.66E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.7/30, mbtmp3.9/10, ML4.1/1, MS4.4/1, Ms1 4.4/1, ms1mx3.1/51, Error ellipse: s-maj=30.9km s-min=13.6km az=68.0*
*NEIC **04** 08:37:52.0±0.5, 26°.37N×99°.49E, h10km, mb4.3/5, Error ellipse: s-maj=17.1km s-min=8.5km az=56.0*
*MOS **04** 08:37:53.0±1.1, 26°.25N×99°.33E, h33km, mb4.5/11, Error ellipse: s-maj=27.0km s-min=10.9km az=118.4*
ISC 04 08:37:52.0±0.6**, 26°.34N**±0°.09×**99°.42E**±0°.07**, h10km, n45, σ1s.06**/47**, mb4.0**/16**, Yunnan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMI	Kunming	3.23	111	Pn	Pn	08 38 44.9	+1.9
KMI				Pg	Pb	08 38 50.6	+1.0
KMI				Sg	Sg	08 39 34.6	-1.2
KMI				smax	smax		
	comp=N,140nm,0.8s						
KMI				smax	smax		
	comp=E,160nm,0.9s						
KMI				LR	LR		
	comp=Z,380nm,7.6s						
KMI	Kunming	3.23	111	P	Pn	08 38 44.9	+1.9
KMI	Kunming	3.23	111	Pn	Pn	08 38 44.9	+1.9
KMI				Pg	Pb	08 38 50.6	+1.0
KMI				Sg	Sg	08 39 34.6	-1.2
CMAR	Chiang Mai Arr	7.85	183	Pn	Pn	08 39 47.0	+0.6
CMAR				Pg	Pb	08 40 15.4	+7.1
CMAR				Lg	Lg	08 42 04.2	
CMAR	Chiang Mai Arr	7.85	183	Pn	Pn	08 39 47.0	+0.6
	comp=Z,0.7nm,0.3s,baz=359,slow=14,SNR=5.2						
CMAR				Pg	Pb	08 40 15.4	+7.1
	comp=Z,0.7nm,0.3s,baz=353,slow=17,SNR=13						
CMAR				Lg	Lg	08 42 04.2	
	comp=Z,0.4nm,0.3s,baz=3.3,slow=27,SNR=6.3						
WHN	Wuhan	13.79	69	P	Pn	08 41 10.0	+2.4
SONM	Songino Array	22.15	13	P	P	08 42 47.1	-1.0
SONM	Songino Array	22.15	13	P	P	08 42 47.1	-1.0
	comp=Z,0.2nm,0.7s,baz=200,slow=12,SNR=2.8						
ZAK	Zakamensk	24.19	6	eP	P	08 43 08.8	+0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,2.3s						
MK31	Makanchi Array	24.52	331	eP	P	08 43 11.5	-0.1
MK31	Makanchi Array	24.52	331	eP	P	08 43 11.5	-0.1
MKAR	Makanchi Array	24.52	331	P	P	08 43 11.2	-0.5
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	Makanchi Array	24.52	331	P	P	08 43 11.2	-0.5
MKAR	Makanchi Array	24.52	331	P	P	08 43 11.2	-0.5
	comp=Z,3.1nm,0.8s,baz=140,slow=8.7,SNR=25						
AAK	Ala-Archa	26.06	315	P	P	08 43 26.9	+1.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AAK	Ala-Archa	26.06	315	eP	P	08 43 28.0	+2.1
	comp=Z,18nm,0.9s						
AAK	Ala-Archa	26.06	315	P	P	08 43 26.9	+1.1
	comp=Z,2.3nm,0.6s,baz=161,slow=5.5,SNR=10.0						
KBL	Kabul	27.36	295	eP	P	08 43 39.0	+1.3
KBL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KBL	Kabul	27.36	295	eP	P	08 43 39.0	+1.3
	comp=Z,4.2nm,0.7s						
KURBB	Kurchatov Arra	29.05	332	P	P	08 43 51.6	-0.7
	comp=Z,42nm,0.3s,baz=146,slow=9.4,SNR=1.8						
KURK	Kurchatov	29.08	332	P	P	08 43 51.6	-1.0
KURK	Kurchatov	29.08	332	P	P	08 43 51.6	-1.0
ZALV	Zalesovo Beam	29.63	342	P	P	08 43 56.5	-0.9
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	29.63	342	P	P	08 43 56.5	-0.9
ZALV	Zalesovo Beam	29.63	342	P	P	08 43 56.5	-0.9
	comp=Z,0.7nm,0.4s,baz=147,slow=8.8,SNR=5.5						
BRVK	Borovoye	34.42	329	eP	P	08 44 40.4	+0.9
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	Borovoye	34.42	329	eP	P	08 44 40.4	+0.9
	comp=Z,2.2nm,0.7s						
ABKAR	Akbulak array	38.08	318	eP	P	08 45 10.8	+0.1
	comp=Z,2.5nm,0.8s						
AKTO	Aktyubinsk	39.68	319	P	P	08 45 24.9	+0.7
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKTO	Aktyubinsk	39.68	319	P	P	08 45 24.9	+0.7
AKTO	Aktyubinsk	39.68	319	P	P	08 45 24.9	+0.7
	comp=Z,1.6nm,0.6s,baz=122,slow=5.6,SNR=9.0						
MMAI	Mount Meron Ar	55.28	293	LR	LR	09 12 49.4	
	comp=Z,292nm,18.2s,baz=230,slow=38						
WRAB	Tennant Creek	57.13	140	eP	P	08 47 38.1	-1.0
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRAB	Tennant Creek	57.13	140	eP	P	08 47 38.1	-1.0
	comp=Z,1.5nm,0.5s						
WRA	Warramunga Arr	57.14	140	P	P	08 47 37.9	-1.2
WRA	Warramunga Arr	57.14	140	P	P	08 47 37.9	-1.2
	comp=Z,1.6nm,0.5s,baz=330,slow=7.5,SNR=31						
AKASG	Malin Array Be	57.73	315	P	P	08 47 42.7	-0.2
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	Malin Array Be	57.73	315	P	P	08 47 42.7	-0.2
AKASG	Malin Array Be	57.73	315	P	P	08 47 42.7	-0.2
	comp=Z,2.9nm,0.7s,baz=73,slow=7.2,SNR=2.8						
ASAR	Alice Springs	59.86	143	P	P	08 47 57.0	-1.1
ASAR	Alice Springs	59.86	143	P	P	08 47 57.0	-1.1
	comp=Z,0.5nm,0.7s,baz=328,slow=6.6,SNR=12						
INK	Inuvik	77.96	18	P	P	08 49 50.0	0.0
INK	Inuvik	77.96	18	P	P	08 49 50.0	0.0
	comp=Z,0.9nm,0.8s,baz=331,slow=4.2,SNR=3.6						
YKA	Yellowknife Ar	87.39	15	P	P	08 50 37.8	-1.5
YKA	Yellowknife Ar	87.39	15	P	P	08 50 37.7	-1.5
	comp=Z,0.1nm,0.3s,baz=324,slow=4.9,SNR=7.2						

IDC 04 08:52:51.8±1.0**, 3°.52N**×**126°.36E, h0km, mb4.1**/10**, mb1 4.2**/10**, mb1mx4.0**/24**, mbtmp4.1**/10**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.7**/44**, Error ellipse: s-maj=116.8km s-min=15.8km az=67.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	3.61	348	LR	LR	08 55 21.1	
	comp=Z,237nm,19.8s,baz=252,slow=41						
WRA	Warramunga Arr	24.60	162	P	P	08 58 13.9	0.0
	5.3nm,0.7s,baz=343,slow=10,SNR=6.9						
ASAR	Alice Springs	28.00	165	P	P	08 58 44.8	+0.1
	0.4nm,0.6s,baz=354,slow=7.8,SNR=2.6						
STKA	Stephens Creek	38.06	159	P	P	09 00 11.8	-0.5
	1.7nm,0.5s,baz=319,slow=11,SNR=6.2						
SONM	Songino Array	47.38	342	P	P	09 01 28.8	+0.9
	1.0nm,0.6s,baz=161,slow=8.6,SNR=8.1						
SONM				PcP	PcP	09 02 59.5	+0.8
	0.9nm,1.0s,baz=157,slow=4.8,SNR=3.7						
MKAR	Makanchi Array	57.52	325	P	P	09 02 44.0	+0.9
	1.1nm,0.4s,baz=118,slow=7.3,SNR=34						
ZALV	Zalesovo Beam	60.61	333	P	P	09 03 03.4	-1.0
	0.3nm,0.3s,baz=99,slow=7.9,SNR=4.4						
KURBB	Kurchatov Arra	61.72	328	P	P	09 03 10.3	-1.6
	1.2nm,0.5s,baz=133,slow=6.5,SNR=13						
AKTO	Aktyubinsk	73.60	322	P	P	09 04 26.7	-0.3
	1.6nm,0.7s,baz=77,slow=6.6,SNR=5.8						
BRTR	Keskin Array B	89.87	310	P	P	09 05 54.1	+0.8
	0.6nm,0.9s,baz=146,slow=9.4,SNR=3.2						
ARCES	ARCESS Array B	90.52	340	P	P	09 05 55.1	-0.3
	2.9nm,0.9s,baz=90,slow=7.3,SNR=9.4						
FINES	FINESS Array B	91.84	332	P	P	09 06 01.1	-0.5
	1.0nm,0.8s,baz=69,slow=6.9,SNR=3.4						
TORD	Torodi Ar. Bea	122.63	288	PKP	PKPdf	09 11 50.9	+0.2
	0.4nm,0.8s,baz=128,slow=0.7,SNR=3.2						

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*IDC **04** 08:57:02.9±1.1, 34°.94N×24°.81E, h0km, mb3.7/10, mb1 3.9/15, mb1mx3.7/33, mbtmp3.8/15, ML4.0/5, Error ellipse: s-maj=22.2km s-min=17.8km az=4.0*
*ISCJB **04** 08:57:06.6±0.5, 34°.67N±0°.05×24°.90E±0°.04, h59km±4km, mb3.7/10, Error ellipse: s-maj=8.7km s-min=4.6km az=25.4*
*CSEM **04** 08:57:07.7±0.2, 34°.65N×24°.87E, h30km, MD3.3, Error ellipse: s-maj=6.1km s-min=3.0km az=37.0*
*ATH **04** 08:57:09.6, 34°.86N×24°.83E, h41km±1km, MD3.3/10*
*THE **04** 08:57:11.1, 34°.87N×24°.79E, h29km±1km, Error ellipse: s-maj=2.3km s-min=1.1km az=353.0*
ISC 04 08:57:08.2±0.8**, 34°.79N**±0°.06×**24°.89E**±0°.04**, h44km**±6km**, n68, σ1s.46**/83**, mb3.6**/10**, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.24	345	P	Pn	08 57 16.0	-0.2
SIVA				S	Sn	08 57 20.7	-1.1
SIVA	Sivas	0.24	345	eP	Pn	08 57 16.1	-0.2
SIVA				eS	Sn	08 57 22.4	+0.6
SIVA	Sivas	0.24	345	P	Pn	08 57 16.0	-0.2
SIVA				eS	Sn	08 57 22.4	+0.6
IDI	Anoyia	0.50	0	P	Pn	08 57 19.8	+0.6
IDI				S	Sn	08 57 28.0	+1.0
IDI	Anoyia	0.50	0	eP	Pn	08 57 19.8	+0.6
IDI				eS	Sn	08 57 27.9	+1.0
IDI	Anoyia	0.50	0	P	Pn	08 57 19.8	+0.6
IDI				S	Sn	08 57 28.0	+1.0
LAST	Lasithi	0.61	52	P	Pn	08 57 22.6	+1.9
LAST				S	Sn	08 57 32.9	+3.3
LAST	Lasithi	0.61	52	eP	Pn	08 57 22.5	+1.9
LAST				eS	Sn	08 57 32.0	+2.4
LAST	Lasithi	0.61	52	eP	Pn	08 57 22.5	+1.9
LAST				eS	Sn	08 57 32.0	+2.4
GVD	Gavdhos	0.66	275	P	Pn	08 57 22.1	+0.9
GVD				S	Sn	08 57 31.9	+1.4
GVD	Gavdhos	0.66	275	eP	Pn	08 57 22.4	+1.2
GVD				eS	Sn	08 57 32.5	+2.0
GVD	Gavdhos	0.66	275	P	Pn	08 57 22.1	+0.9
GVD				S	Sn	08 57 31.9	+1.4
NPS	Neapolis	0.76	51	P	Pn	08 57 25.2	+2.6
NPS	Neapolis	0.76	51	eP	Pn	08 57 25.1	+2.5
NPS				eS	Sn	08 57 35.0	+2.0
NPS	Neapolis	0.76	51	eP	Pn	08 57 25.1	+2.5
NPS				eS	Sn	08 57 35.0	+2.0
VAM	Vamos	0.83	318	P	Pn	08 57 24.6	+1.0
VAM	Vamos	0.83	318	eP	Pn	08 57 24.6	+1.0
VAM				eS	Sn	08 57 36.4	+1.7
VAM	Vamos	0.83	318	P	Pn	08 57 24.6	+1.0
VAM				eS	Sn	08 57 36.4	+1.7
KARN	Karanos	1.00	308	P	Pn	08 57 27.5	+1.7
KARN				S	Sn	08 57 38.9	+0.1
KARN	Karanos	1.00	308	eP	Pn	08 57 27.6	+1.7
KARN	Karanos	1.00	308	P	Pn	08 57 27.5	+1.7
KARN				S	Sn	08 57 38.9	+0.1
ZKR	Zakros	1.14	73	P	Pn	08 57 31.0	+3.3
ZKR	Zakros	1.14	73	eP	Pn	08 57 31.2	+3.5
ZKR	Zakros	1.14	73	eP	Pn	08 57 31.2	+3.5
THR6	Thira Island,	1.62	15	P	Pn	08 57 36.5	+2.3
THR6	Thira Island,	1.62	15	P	Pn	08 57 36.5	+2.3
THR1	Thera Island	1.65	16	P	Pn	08 57 36.1	+1.4
THR1	Thera Island	1.65	16	P	Pn	08 57 36.1	+1.4
THR5	Thira Island,	1.67	13	P	Pn	08 57 36.7	+1.8
THR5	Thira Island,	1.67	13	P	Pn	08 57 36.7	+1.8
KARP	Karpathos	2.01	67	eP	Pn	08 57 43.5	+3.8
KARP	Karpathos	2.01	67	eP	Pn	08 57 43.5	+3.8
KYTH	Kithira	2.12	315	P	Pn	08 57 42.5	+1.4
KYTH	Kithira	2.12	315	eP	Pn	08 57 42.5	+1.4
KYTH	Kithira	2.12	315	P	Pn	08 57 42.5	+1.4
VLI	Veliai	2.49	321	P	Pn	08 57 46.9	+0.7
VLI				S	Sn	08 58 14.9	-0.6
VLI	Veliai	2.49	321	eP	Pn	08 57 47.0	+0.7
VLI	Veliai	2.49	321	eP	Pn	08 57 47.0	+0.7
DYR	Agios Nikonas	2.86	314	P	Pn	08 57 52.2	+0.9
DYR	Agios Nikonas	2.86	314	P	Pn	08 57 52.2	+0.9
DID	Didima	3.02	334	P	Pn	08 57 54.0	+0.4
DID	Didima	3.02	334	P	Pn	08 57 54.0	+0.4
CSS	Prodhromos	6.94	86	Pn	Pn	08 58 49.0	+1.7
BRTR	Keskin Array B	8.54	52	Pn	Pn	08 59 08.0	-1.4
	0.1nm,0.3s,baz=235,slow=12,SNR=2.6						
SLTI	Sal'it	8.85	104	Pn	Pn	08 59 12.8	-0.7
MMAI	Mount Meron Ar	8.92	98	Pn	Pn	08 59 14.9	+0.4
	0.6nm,0.3s,baz=281,slow=10,SNR=3.0						
MMAI				Sn	Sn	09 00 49.8	-3.8
	4.2nm,0.3s,baz=285,slow=10,SNR=6.3						
RTMI	Retamim	9.04	112	Pn	Pn	08 59 15.2	-0.9
DSI	Dead Sea	9.36	107	Pn	Pn	08 59 19.9	-0.6
MZDA	Masada	9.45	109	Pn	Pn	08 59 20.9	-0.8
KRMI	Paran Flat	9.53	117	Pn	Pn	08 59 22.5	-0.3
PRNI	Paran	9.61	115	Pn	Pn	08 59 23.1	-0.9
HRFI	Mount Harif	9.80	116	Pn	Pn	08 59 25.7	-0.8
MBRI	Mt Berech	9.84	118	Pn	Pn	08 59 26.2	-0.9
EIL	Elat	9.93	118	Pn	Pn	08 59 27.7	-0.6
	0.6nm,0.3s,baz=21,slow=16,SNR=9.7						
EIL				Sn	Sn	09 01 09.2	-9.3
	1.4nm,0.3s,baz=331,slow=17,SNR=5.6						
EIL	Elat	9.93	118	Pn	Pn	08 59 27.7	-0.6
AKASG	Malin Array Be	16.21	10	Pn	Pn	09 00 50.8	-1.9
	1.9nm,0.3s,baz=200,slow=11,SNR=6.5						
GERES	GERESS Array B	16.31	333	Pn	Pn	09 00 53.7	-0.3
	0.3nm,0.3s,baz=147,slow=12,SNR=21						
KBZ	Khabaz	16.54	52	Pn	P	09 00 59.0	+0.2
	0.1nm,0.3s,baz=243,slow=8.0,SNR=14						
HFS	Hagfors	26.39	347	P	P	09 02 38.6	-1.5
	0.5nm,0.4s,baz=152,slow=14,SNR=9.7						
FINES	FINESS Array B	26.68	1	P	P	09 02 40.5	-2.2
	0.4nm,0.3s,baz=162,slow=10,SNR=7.1						
EKA	Eskdalemuir Ar	28.22	325	P	P	09 02 57.0	+0.4
	0.6nm,0.4s,baz=115,slow=9.1,SNR=5.6						
TORD	Torodi Ar. Bea	30.08	230	P	P	09 03 14.7	+1.2
	0.4nm,0.5s,baz=32,slow=8.9,SNR=8.1						
ARCES	ARCESS Array B	34.80	0	P	P	09 03 52.4	-1.8
	4.2nm,1.1s,baz=184,slow=9.6,SNR=6.3						
MKAR	Makanchi Array	44.17	56	P	P	09 05 13.3	+0.8
	1.2nm,0.6s,baz=279,slow=6.8,SNR=16						
ZALV	Zalesovo Beam	45.42	46	P	P	09 05 22.5	+0.1
	0.4nm,0.3s,baz=254,slow=8.7,SNR=2.9						
SONM	Songino Array	59.90	50	P	P	09 07 10.6	+1.1
	0.3nm,0.5s,baz=295,slow=6.3,SNR=5.2						
SCHQ	Schefferville	63.32	320	P	P	09 07 32.5	+0.1
	0.8nm,0.3s,baz=66,slow=11,SNR=8.9						
YKA	Yellowknife Ar	77.73	342	P	P	09 09 00.1	+0.1
	0.2nm,0.4s,baz=31,slow=5.3,SNR=8.2						

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*IDC **04** 09:01:36.0±2.3, 6°.14S×129°.13E, h0km, mb3.5/1, mb1 4.4/4, mb1mx3.9/20, mbtmp4.2/4, ML4.4/3, Error ellipse: s-maj=110.9km s-min=28.1km az=75.0*
*AUST **04** 09:02:39.6±0.0, 9°.56S×131°.57E, h149km, Error ellipse: s-maj=1.6km s-min=0.8km az=254.0*
ISC 04 09:01:37.9±1.4**, 6°.2S**±0°.1×**129°.2E**±0°.2**, h10km, n11, σ0s.68**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MTN	Manton Dam	6.92	164	P	Pb	09 03 28.4	-10
	baz=3.3,SNR=181						
MTN				S	Sn	09 04 38.0	-0.3
	baz=3.3,SNR=7.6						
KDU	Kakadu	7.26	153	P	Pb	09 03 33.9	-10
	baz=3.2,SNR=91						
FITZ	Fitzroy Crossi	12.36	196	Pn	Pn	09 04 34.1	+0.2
	1.2nm,0.3s,baz=21,slow=11,SNR=34						
FITZ				Sn	Sn	09 06 40.5	-11
	1.4nm,0.3s,baz=280,slow=19,SNR=5.7						
WRA	Warramunga Arr	14.60	160	Pn	Pn	09 05 04.4	-0.3
	1.5nm,0.3s,baz=335,slow=13,SNR=21						
WRA				Sn	Sn	09 07 37.3	-9.4
	1.6nm,0.3s,baz=332,slow=24,SNR=7.2						
COEN	Coen	15.82	120	P	P	09 05 29.5	+4.7
	baz=12,SNR=8.8						
QIS	Mount Isa	17.54	146	P	P	09 05 44.4	+0.7
	baz=14,SNR=20						
ASAR	Alice Springs	18.00	166	P	Pn	09 05 47.5	-0.9
	3.2nm,0.3s,baz=338,slow=9.7,SNR=73						
ASAR				S	Sn	09 08 56.2	-13
	0.1nm,0.3s,baz=345,slow=21,SNR=11						
MKAR	Makanchi Array	67.07	327	P	P	09 12 31.1	-0.4
	0.3nm,0.5s,baz=115,slow=7.9,SNR=5.1						
SNAA	Sanae	96.28	194	eP	P	09 15 06.9	+0.5
SNAA	Sanae	96.28	194	e	P	09 15 16.0	+10
VNA2	Neumayer--Watz	97.85	193	eP	Pdif	09 15 16.1	+2.6
	baz=60,slow=14						

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*IDC **04** 09:05:56.4±8.8, 35°.99N×71°.38E, h119km±56km, mb3.6/7, mb1 3.5/11, mb1mx3.2/33, mbtmp3.5/11, Error ellipse: s-maj=71.4km s-min=28.4km az=1.0*
*ISCJB **04** 09:06:03.9±0.5, 36°.50N±0°.03×71°.14E±0°.08, h188km, mb3.6/6, Error ellipse: s-maj=9.5km s-min=4.4km az=166.5*
*NNC **04** 09:06:05.8±10.0, 36°.74N×70°.64E, h138km±144km, mb3.2, mpv4.0, Error ellipse: s-maj=88.0km s-min=53.0km az=7.0*
ISC 04 09:06:03.6±0.9**, 36°.46N**±0°.05×**71°.1E**±0°.1**, h188km, n37, σ1s.96**/37**, mb3.5**/6**, 4C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.72	165	⇓P	Pn	09 06 49.0	-0.5
CEP				S	Sn	09 07 20.0	-5.3
CHCP	Chirah Chowk	3.33	146	P	Pn	09 06 56.8	+0.1
THW	Thamme Wali	3.70	171	⇑P	Pn	09 07 01.3	0.0
SARP	Sargodha	4.72	163	P	Pn	09 07 15.0	+0.8
AML	Almayashu	6.02	19	P	Pn	09 07 30.2	-1.0
	SNR=42						
UCH	Uchtor	6.35	24	P	Sn	09 08 42.9	-5.4
	SNR=8.5						
KZA	Kyzart	6.48	29	P	Pn	09 07 37.4	+0.1
	SNR=6.2						
EKS2	Erkin-Say	6.54	18	P	Pn	09 07 37.4	-0.4
	SNR=12						
KK31	Karatay Array	6.65	357	⇓P	Pn	09 07 38.3	-0.7
	2.7nm,0.3s,baz=179,slow=13,SNR=156						
KK31				⇑S	Sn	09 08 49.8	-4.8
	8.2nm,0.4s,baz=186,slow=28,SNR=19						
AAK	Ala-Archa	6.71	22	P	Pn	09 07 38.2	-1.8
	2.2nm,0.3s,baz=165,slow=5.1,SNR=24						
AAK				S	Sn	09 08 55.9	-0.5
	1.9nm,0.3s,baz=149,slow=23,SNR=8.7						
USP	Ospenovka	7.29	20	P	Pn	09 07 48.2	+0.6
	SNR=6.8						
TKM2	Tokmak 2	7.34	27	⇑P	Pn	09 07 48.9	+0.7
	10.0nm,0.6s						
TKM2				⇓S	Sn	09 09 09.2	-2.0
	6.5nm,0.8s						
TKM2	Tokmak 2	7.34	27	P	Pn	09 07 49.0	+0.7
	SNR=30						
PYUN	Piuthan	13.09	126	eP	Pn	09 09 01.4	-1.4
	14nm,0.3s						
MK31	Makanchi Array	13.30	36	⇓P	Pn	09 09 06.4	+1.4
	1.7nm,0.5s,baz=224,slow=14,SNR=19						
MKAR	Makanchi Array	13.30	36	P	Pn	09 09 05.0	0.0
	0.3nm,0.3s,baz=222,slow=15,SNR=16						
DANN	Dangsing	13.43	123	eP	Pn	09 09 06.3	-0.9
	16nm,0.3s						
KOLN	Koldanda	13.71	126	eP	Pn	09 09 10.1	-0.4
	10nm,0.3s						
DMN	Daman	14.82	123	eP	P	09 09 25.6	+0.1
KKN	Kakani	14.82	122	eP	P	09 09 25.6	+0.1
	25nm,0.4s						
PKIN	Phulchoki	15.04	122	eP	P	09 09 28.1	+0.2
	14nm,0.3s						
PKI	Pulchoki	15.05	122	eP	P	09 09 28.1	0.0
AB31	Akbulak array	15.14	331	P	Pn	09 09 27.8	0.0
	1.4nm,0.5s,baz=145,slow=12,SNR=60						
GUN	Gumba	15.16	120	eP	P	09 09 30.0	+0.6
	13nm,0.3s						
RAMN	Ramite	16.26	121	eP	Pn	09 09 43.4	+1.6
	11nm,0.3s						
BVAR	Borovoye Array	16.57	359	P	Pn	09 09 46.7	+1.6
	0.4nm,0.3s,baz=158,slow=10.0,SNR=5.7						
TAPN	Taplejung	16.79	118	eP	Pn	09 09 50.9	+2.6
AKTO	Aktyubinsk	16.84	330	⇑P	Pn	09 09 49.8	+1.5
	0.4nm,0.6s						
AKTO	Aktyubinsk	16.84	330	P	Pn	09 09 49.1	+0.9
	0.3nm,0.3s,baz=128,slow=12,SNR=13						
ODAN	Odare	16.86	120	eP	Pn	09 09 51.7	+2.6
	11nm,0.4s						
ZALV	Zalesovo Beam	19.93	24	P	P	09 10 21.9	+1.2
	4.9nm,0.6s,baz=223,slow=11,SNR=27						
FINES	FINESS Array B	37.54	326	P	P	09 13 02.4	+3.3
	1.2nm,0.9s,baz=101,slow=13,SNR=3.4						
ARCES	ARCESS Array B	41.20	338	P	P	09 13 33.3	+4.0
	2.2nm,0.9s,baz=104,slow=9.2,SNR=3.7						
HFS	Hagfors	43.12	322	P	P	09 13 48.7	+3.8
	0.3nm,0.3s,baz=95,slow=12,SNR=5.7						
PETK	Petropavlovsk-	59.97	44	P	P	09 15 49.0	-0.8
	5.7nm,0.9s,baz=286,slow=10,SNR=3.6						
INK	Inuvik	73.94	9	P	P	09 17 20.7	+3.2
	0.5nm,0.4s,baz=342,slow=9.5,SNR=7.8						
YKA	Yellowknife Ar	81.28	3	P	P	09 18 02.6	+4.3
	0.2nm,0.5s,baz=351,slow=5.5,SNR=7.9						

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*IDC **04** 09:09:37.2±5.4, 6°.01S×130°.27E, h97km±57km, mb3.9/10, mb1 4.0/14, mb1mx3.8/24, mbtmp3.9/14, ML4.3/4, Error ellipse: s-maj=29.3km s-min=20.6km az=40.0*
*ISCJB **04** 09:09:38.3±0.3, 6°.14S±0°.03×130°.27E±0°.05, h124km, mb4.1/10, Error ellipse: s-maj=7.4km s-min=3.8km az=157.4*
*AUST **04** 09:09:38.9±0.8, 6°.16S×130°.03E, h90km, Error ellipse: s-maj=1.2km s-min=0.9km az=267.0*
*NEIC **04** 09:09:39.2±2.4, 6°.06S×130°.31E, h118km±26km, mb4.5/4, Error ellipse: s-maj=14.4km s-min=10.6km az=219.0*
*DJA **04** 09:09:44.6±0.2, 6°S±3°×13°1E±°, h151km±7km, M4.4/12, mB5.2/5, mb4.5/12, MLv4.3/9, Mw(mB)4.5/5*
ISC 04 09:09:40.0±0.5**, 6°.13S**±0°.05×**130°.29E**±0°.06**, h124km, n71, σ1s.72**/65**, mb4.1**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.65	347	P	Pn	09 10 16.3	+6.9
TLE	Tual	2.49	79	P	Pn	09 10 24.6	+4.8
TLE				S	Sn	09 10 52.3	+1.9
TLE	Tual	2.49	79	P	Pn	09 10 24.9	+5.0
	baz=2.7,SNR=57						
TLE				S	Sn	09 10 53.9	+3.5
	baz=2.7,SNR=16						
MSAI	Masohi	3.08	334	P	Pn	09 10 32.4	+4.9
AAI	Ambon	3.20	319	P	Pn	09 10 35.0	+5.9
FAKI	Fak Fak	3.75	32	P	Pn	09 10 38.5	+2.2
FAKI				S	Sn	09 11 16.0	-3.9
NLAI	Namlea	4.28	312	P	Pn	09 10 50.6	+7.2
SWI	Sorong	5.33	11	P	Pn	09 11 00.0	+2.6
	45nm,0.7s,5µm1.1nm						
SWI	Sorong	5.33	11	P	Pn	09 11 00.4	+3.0
	baz=5.4,SNR=4.2						
SWI				S	Sn	09 11 55.2	-2.6
	baz=5.4,SNR=11						
LBMI	Labuha	6.13	333	P	Pn	09 11 11.1	+2.9
	104nm,1.0s,2µm0.5nm						
MTN	Manton Dam	6.72	173	P	Pn	09 11 19.3	+3.1
	baz=6.8,SNR=171						
MTN				S	Sn	09 12 31.9	+0.5
	baz=6.8,SNR=9.3						
KDU	Kakadu	6.86	162	P	Pn	09 11 20.4	+2.3
	baz=7.0,SNR=252						
KDU				S	Sn	09 12 33.7	-1.1
	baz=7.0,SNR=7.9						
KDI	Kendari	7.94	285	P	Pn	09 11 41.7	+9.0
	42nm,1.2s,626nm						
WSI	Waingapu	10.50	250	S	Sn	09 13 44.9	-18
	baz=10,SNR=7.7						
MRSI	Marisa	10.61	308	P	Pn	09 12 12.1	+3.4
	108nm,0.8s,942nm						
PCI	Palu	11.65	296	S	Sn	09 14 20.4	-11
	baz=11,SNR=15						
FITZ	Fitzroy Crossi	12.73	200	ePn	Pn	09 12 36.6	-0.1
FITZ				S	Sn	09 14 49.0	-8.0
FITZ	Fitzroy Crossi	12.73	200	P	Pn	09 12 36.6	-0.1
	2.1nm,0.3s,baz=34,slow=10.0,SNR=31						
FITZ				S	Sn	09 14 49.0	-8.0
	8.7nm,0.3s,baz=236,slow=20,SNR=7.5						
FITZ	Fitzroy Crossi	12.73	200	P	Pn	09 12 37.5	+0.8
	baz=13,SNR=25						
WRAB	Tennant Creek	14.27	164	ePn	Pn	09 12 56.1	-0.4
	6.3nm,0.5s						
WRAB				eSn	Sn	09 15 22.1	-12
WRA	Warramunga Arr	14.28	164	P	Pn	09 12 55.0	-1.6
WRA				S	Sn	09 15 25.8	-8.7
WRA	Warramunga Arr	14.28	164	P	Pn	09 12 55.0	-1.6
	2.1nm,0.3s,baz=348,slow=13,SNR=28						
WRA				S	Sn	09 15 25.8	-8.7
	4.1nm,0.3s,baz=349,slow=22,SNR=17						

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
COEN	Coen	14.88	122	*e*Pn	Pn	09 13 03.9	-0.3
	21nm,0.6s						
COEN	Coen	14.88	122	P	P	09 13 05.3	-1.5
	baz=15,SNR=64						
COEN				S	Sn	09 15 42.9	-6.0
	baz=15,SNR=4.0						
BBKI	Banjar Baru	15.62	279	P	P	09 13 21.3	+6.3
	58nm,0.8s						
MYLDM	Lahad Datu	16.27	313	P	P	09 13 26.8	+4.6
	34nm,1.1s						
QIS	Mount Isa	16.95	149	P	Pn	09 13 30.9	+1.1
	baz=17,SNR=12						
QIS				S	Sn	09 16 30.8	-8.0
	baz=17,SNR=5.2						
PMG	Port Moresby	17.03	102	P	P	09 13 30.0	-0.6
PMG	Port Moresby	17.03	102	P	P	09 13 30.0	-0.6
	0.8nm,0.3s,baz=282,slow=9.3,SNR=6.7						
AS31	Alice Springs	17.77	169	*e*P	Pn	09 13 41.5	+1.7
AS31				*e*Sn	S	09 16 47.8	-9.4
ASAR	Alice Springs	17.78	169	P	Pn	09 13 40.2	+0.5
ASAR				S	S	09 16 49.9	-7.3
ASAR	Alice Springs	17.78	169	P	Pn	09 13 40.2	+0.5
	1.0nm,0.3s,baz=347,slow=10,SNR=35						
ASAR				S	S	09 16 49.9	-7.3
	0.3nm,0.3s,baz=330,slow=18,SNR=5.4						
MBWA	Marble Bar	18.10	213	P	Pn	09 13 44.0	+0.3
	2.3nm,0.4s						
KKM	Kota Kinabalu	18.54	310	*e*P	P	09 13 48.2	+0.9
	18nm,0.4s						
KKM	Kota Kinabalu	18.54	310	P	P	09 13 48.2	+0.9
	35nm,1.1s						
KKM	Kota Kinabalu	18.54	310	P	Pn	09 13 49.2	+0.3
	baz=18,SNR=7.4						
SBUM	Sibu	19.95	295	P	Pn	09 14 05.2	-0.2
CTA	Charters Tower	20.81	133	P	P	09 14 12.8	+1.1
CTA	Charters Tower	20.81	133	P	P	09 14 12.8	+1.1
	3.0nm,0.7s,baz=299,slow=10.0,SNR=4.4						
CTAO	Charters Tower	20.81	133	*e*P	P	09 14 12.2	+0.5
	4.9nm,0.7s						
MEEK	Meekatharra	23.23	207	P	P	09 14 37.4	+1.0
	baz=23,SNR=5.5						
FORT	Forrest	24.61	185	*e*P	P	09 14 46.8	-1.9
	8.3nm,0.6s						
STKA	Stephens Creek	27.71	159	P	P	09 15 17.1	+0.4
STKA	Stephens Creek	27.71	159	P	P	09 15 17.1	+0.4
	1.5nm,0.5s,baz=346,slow=8.3,SNR=5.0						
KLBR	Kellerberrin	27.91	203	P	P	09 15 19.8	+1.2
	baz=28,SNR=6.7						
PSI	Prapat	32.55	285	P	P	09 15 58.6	-1.2
PSI	Prapat	32.55	285	P	P	09 15 58.6	-1.2
	6.0nm,0.7s,baz=90,slow=18,SNR=3.0						
LHI	Lord Howe Isla	36.91	137	P	P	09 16 41.0	+4.0
	baz=37,SNR=3.3						
CMAR	Chiang Mai Arr	39.40	309	P	P	09 16 57.1	-0.9
CMAR	Chiang Mai Arr	39.40	309	P	P	09 16 57.1	-0.9
	4.4nm,0.8s,baz=140,slow=7.3,SNR=19						
MJAR	Matsushiro Arr	43.10	9	P	P	09 17 25.8	-2.2
MJAR	Matsushiro Arr	43.10	9	P	P	09 17 25.8	-2.2
	0.7nm,0.7s,baz=190,slow=10,SNR=4.1						
ODAN	Odare	52.91	310	*e*P	P	09 18 43.5	-0.4
	6.2nm,0.5s						
TAPN	Taplejung	52.93	311	*e*P	P	09 18 43.7	-0.4
	7.8nm,0.3s						
RAMN	Ramite	53.56	310	*e*P	P	09 18 48.7	0.0
	20nm,0.4s						
GUN	Gumba	54.60	311	*e*P	P	09 18 56.0	-0.4
KKN	Kakani	55.00	310	*e*P	P	09 18 58.6	-0.5
KOLN	Koldanda	56.27	309	*e*P	P	09 19 07.9	-0.3
	7.8nm,0.5s						
DANN	Dangsing	56.44	310	*e*P	P	09 19 08.9	-0.5
SONM	Songino Array	57.72	341	P	P	09 19 18.2	+0.4
SONM	Songino Array	57.72	341	P	P	09 19 18.2	+0.4
	1.1nm,0.6s,baz=161,slow=6.7,SNR=9.5						
MK31	Makanchi Array	67.66	326	*e*P	P	09 20 23.8	0.0
MKAR	Makanchi Array	67.66	326	P	P	09 20 23.9	+0.1
MKAR	Makanchi Array	67.66	326	P	P	09 20 23.9	+0.1
	6.5nm,0.5s,baz=113,slow=8.6,SNR=133						
ZAA0	Zalesovo Array	70.94	334	*e*P	P	09 20 42.8	-1.0
ZALV	Zalesovo Beam	70.94	334	P	P	09 20 42.9	-0.8
ZALV	Zalesovo Beam	70.94	334	P	P	09 20 42.9	-0.8
	1.9nm,0.5s,baz=123,slow=5.3,SNR=10						
BVAR	Borovoye Array	77.49	328	P	P	09 21 20.9	-0.9
BVAR	Borovoye Array	77.49	328	P	P	09 21 20.9	-0.9
	0.8nm,0.4s,baz=125,slow=7.8,SNR=5.7						
AKTO	Aktyubinsk	83.57	322	P	P	09 21 54.0	-0.2
AKTO	Aktyubinsk	83.57	322	P	P	09 21 54.0	-0.2
	0.8nm,0.6s,baz=137,slow=11,SNR=4.3						

SKHL 04 09:11:56.0±0.4, 52.14N×134.45E, h13km±1km, mb3.9/5, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
EKMR	Ekimchan	1.31	316	*i* Pg	Pn	09 12 19.7	-0.3
EKMR				AMB	AMB	09 12 21.5	
	52nm,0.4s						
EKMR				AMB	AMB	09 12 21.5	
	60nm,0.4s						
EKMR				AMB	AMB	09 12 21.5	
	120nm,0.4s						
EKMR				pPg	Pg	09 12 23.5	+2.3
EKMR				*e*Sg	Sb	09 12 36.9	-0.2
EKMR				A	A	09 12 39.0	
	520nm,0.3s						
EKMR				A	A	09 12 39.0	
	120nm,0.3s						
EKMR				A	A	09 12 39.0	
	480nm,0.3s						
GRNR	Gornyy	1.85	137	*e*Pg	Pg	09 12 33.4	+1.9
GRNR				AMB	AMB	09 12 33.9	
	16nm,0.2s						
GRNR				*e*Sg	Sg	09 12 56.5	+1.1
GRNR				A	A	09 12 57.4	
	184nm,0.2s						
GRNR				A	A	09 12 57.4	
	230nm,0.2s						
KLR	Kul'dur	3.38	212	*e*Pg	Pb	09 12 56.8	+1.0
KLR				*e*Sg	Sb	09 13 40.6	+3.8
KHBR	Khabarovsk	3.69	174	*e*Sg	Sg	09 13 52.5	-2.0
NKL	Nikolayevsk	3.93	73	*e*Pg	Pb	09 13 06.2	+1.2
NKL				AMB	AMB	09 13 08.0	
	10.0nm,0.3s						
NKL				AMB	AMB	09 13 08.0	
	19nm,0.3s						
NKL				*e*Sg	Sg	09 13 57.7	-4.3
NKL				A	A	09 14 08.3	
	17nm,0.5s						
NKL				A	A	09 14 08.3	
	10.0nm,0.5s						
YASR	Yasnyy	4.10	289	*e*Pn	Pn	09 12 57.9	-0.4
YASR				*e*Pg	Pb	09 13 09.7	+1.7
YASR				AMB	AMB	09 13 13.4	
	8.0nm,0.7s						
YASR				*e*Sg	Sb	09 14 02.5	+5.1
YASR				A	A	09 14 08.4	
	53nm,0.5s						
YASR				A	A	09 14 08.4	
	13nm,0.5s						
YASR				A	A	09 14 08.4	
	21nm,0.5s						
BMKR	Bomnak	4.23	310	*e*Pn	Pn	09 13 00.5	+0.4
BMKR				*e*Pg	Pb	09 13 12.7	+2.5
BMKR				AMB	AMB	09 13 15.4	
	6.0nm,0.4s						
BMKR				*e*Sg	Sg	09 14 08.5	-3.2
BMKR				A	A	09 14 10.4	
	35nm,0.5s						
ZEA	Zeya	4.64	293	*e*Sg	Sg	09 14 19.3	-5.6
ZEA				A	A	09 14 24.4	
	60nm,0.6s						
ZEA				A	A	09 14 24.4	
	29nm,0.6s						
KROS	Kirovskiy	5.04	300	*e*Pn	Pn	09 13 11.3	0.0
KROS				pPn	pPn	09 13 16.4	+2.1
KROS				*e*Sn	Sn	09 14 09.7	+0.4
KROS				*e*Sg	Sg	09 14 32.2	-5.6
KROS				A	A	09 14 38.1	
	16nm,0.5s						
KROS				A	A	09 14 38.1	
	10.0nm,0.5s						
KROS				A	A	09 14 38.1	
	9.0nm,0.5s						

LDG ***04*** *09:24:27.7±0.3, 10.17N×61.16W, h10km, Mb5.1/38, Ms4.1/1, Error ellipse: s-maj=21.5km s-min=7.4km az=98.0*

ISCJB ***04*** *09:24:32.9±0.2, 10.24N±0.02×61.48W±0.02, h59km±1km, mb4.8/112, MS4.3/14, Error ellipse: s-maj=3.4km s-min=2.4km az=145.2*

NEIC ***04*** *09:24:33.8, 10.21N×61.23W, h45km, mb4.9/59, MD4.4(TRN), After TRN.*

NEIC Felt at Barrackpore, Carapichaima, Debe, Freeport, Penal, Rio Claro and Saint Joseph.

IDC ***04*** *09:24:33.4±0.5, 10.23N×61.45W, h42km±4km, mb4.2/24, mb1 4.3/26, mb1mx4.3/30, mbtmp4.2/26, MS4.2/13, Ms1 4.2/13, ms1mx3.9/41, Error ellipse: s-maj=11.9km s-min=10.0km az=98.0*

FUNV ***04*** *09:24:33.9, 10.16N×61.27W, h43km, MW4.4*

TRN ***04*** *09:24:34.1, 10.22N×61.23W, h43km, MD4.4*

ISC 04 09:24:33.5±0.3, 10.22N±0.03×61.37W±0.03, h48km±2km, h48km:pP-P, n596, σ1§13/696, mb4.9/112, MS4.3/14, 129C-106D, Trinidad

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
TPP	Pointe-a-Pierr	0.12	321	*i* P	Pn	09 24 42.0	+0.7
TPP				*e*S	Sn	09 24 48.5	+1.8
TPP	Pointe-a-Pierr	0.12	321	*i* P	Pn	09 24 42.0	+0.7
TPP				*e*S	Sn	09 24 48.5	+1.8
SIPA	Siparia	0.15	240	⇓*i*P	Pn	09 24 41.9	+0.5
SIPA	Siparia	0.15	240	⇓*i*P	Pn	09 24 41.9	+0.5
SIPA	Siparia	0.15	240	⇓*i*P	Pn	09 24 41.9	+0.5
ALNG	Atlantic LNG	0.31	263	⇓*e*P	Pn	09 24 43.8	+1.2
ALNG				*e*S	Sn	09 24 52.0	+2.9
ALNG	Atlantic LNG	0.31	263	⇓*e*P	Pn	09 24 43.8	+1.2
ALNG				*e*S	Sn	09 24 52.0	+2.9
ALNG	Atlantic LNG	0.31	263	⇓*e*P	Pn	09 24 43.8	+1.2
BUAY	Buenos Aires	0.33	250	⇓*i*P	Pn	09 24 44.1	+1.4
BUAY				*e*S	Sn	09 24 52.8	+3.5
BUAY	Buenos Aires	0.33	250	⇓*i*P	Pn	09 24 44.1	+1.4
BUAY				*e*S	Sn	09 24 52.9	+3.6
BUAY	Buenos Aires	0.33	250	⇓*i*P	Pn	09 24 44.1	+1.4
TBH	Brigand Hill	0.40	49	⇑*i*P	Pn	09 24 42.9	-0.6
TBH				*e*S	Sn	09 24 49.7	-0.9
TBH	Brigand Hill	0.40	49	⇑*i*P	Pn	09 24 42.9	-0.6
TBH				*e*S	Sn	09 24 49.7	-0.9
TBH	Brigand Hill	0.40	49	⇑*i*P	Pn	09 24 42.9	-0.6
TRN	Trinidad (W)	0.43	356	⇑*i*P	Pn	09 24 44.0	+0.2
TRN				*e*S	Sn	09 24 51.4	+0.2
TRN	Trinidad (W)	0.43	356	⇑*i*P	Pn	09 24 44.0	+0.2
TRN				*e*S	Sn	09 24 51.4	+0.2
TRN	Trinidad (W)	0.43	356	⇑*i*P	Pn	09 24 44.0	+0.2
GUIV	Guiria	0.94	297	⇑*i*P	Pn	09 24 51.5	+1.1
GUIV				*e*S	Sn	09 25 04.4	+1.6
TPR	Prospect	1.12	31	⇑*i*P	Pn	09 24 52.8	-0.2
TPR				*e*S	Sn	09 25 06.2	-1.1
TPR	Prospect	1.12	31	⇑*i*P	Pn	09 24 52.8	-0.2
BOT	Bacolet	1.14	34	⇑*i*P	Pn	09 24 52.5	-0.6
BOT				*e*S	Sn	09 25 07.4	-0.3
BOT	Bacolet	1.14	34	⇑*i*P	Pn	09 24 52.5	-0.6
TOSP	Speyside	1.35	37	*e*P	Pn	09 24 55.3	-0.7
TOSP	Speyside	1.35	37	*e*	Pn	09 25 02.7	+6.7
TOSP				*e*S	Sn	09 25 10.6	-2.2
GUNV	Guanoco	1.55	268	⇑*e*P	Pn	09 25 00.6	+2.0
GUNV				*e*S	Sn	09 25 18.7	+1.1
CRUV	Carupano	1.89	284	⇑*e*P	Pn	09 25 03.2	-0.1
CRUV				*e*S	Sn	09 25 24.8	-1.1
GRGR	Grenville	1.92	352	*e*Pn	Pn	09 25 04.0	+0.2
GRGR				*e*Sn	Sn	09 25 33.3	+6.4
GRW	Mount Saint Ca	1.95	352	⇑*e*P	Pn	09 25 05.2	+0.9
GRW	Mount Saint Ca	1.95	352	⇑*e*P	Pn	09 25 05.2	+0.9
GRW	Mount Saint Ca	1.95	352	⇑*e*P	Pn	09 25 05.2	+0.9
GRHS	Sauteurs	2.01	352	⇓*e*P	Pn	09 25 06.4	+1.4
GRHS				*e*S	Sn	09 25 29.0	0.0
GRHS	Sauteurs	2.01	352	⇓*e*P	Pn	09 25 06.4	+1.4
GRHS				*e*S	Sn	09 25 29.0	0.0
GRHS	Sauteurs	2.01	352	⇓*e*P	Pn	09 25 06.4	+1.4
GRIC	Isle de Caille	2.06	354	*e*P	Pn	09 25 07.4	+1.6
GRSS	Sisters	2.08	354	⇑*e*P	Pn	09 25 06.7	+0.8
GRSS	Sisters	2.08	354	⇑*e*P	Pn	09 25 06.7	+0.8
GRSS	Sisters	2.08	354	⇑*e*P	Pn	09 25 06.7	+0.8
RIOV	Rio Grande	2.18	192	⇑*e*P	Pn	09 25 06.1	-1.3
RIOV				*e*S	Sn	09 25 30.6	-2.6
ORIV	Oritupano	2.31	241	⇑*e*P	Pn	09 25 10.5	+1.4
ORIV				*e*S	Sn	09 25 34.9	-1.4
FCV	Fort Charlotte	2.92	2	⇓*e*P	Pn	09 25 17.9	+0.3
FCV	Fort Charlotte	2.92	2	⇓*e*P	Pn	09 25 17.9	+0.3
GURV	El Guri	2.97	215	⇑*e*P	Pn	09 25 17.1	-1.1
GURV				*e*S	Sn	09 25 49.6	-3.1
SVB	Belmont	3.04	2	*e*P	Pn	09 25 20.0	+0.8
SVB				*e*S	Sn	09 25 53.1	-1.2
SVB	Belmont	3.04	2	*e*P	Pn	09 25 20.0	+0.8
SVB	Belmont	3.04	2	*e*	Pn	09 25 34.7	+16
SVB				*e*S	Sn	09 25 53.1	-1.2
BHS	Barnard House	3.07	4	*e*P	Pn	09 25 21.0	+1.5
BHS				*e*S	Sn	09 25 54.8	-0.2
BHS	Barnard House	3.07	4	*e*P	Pn	09 25 21.0	+1.5
BHS				*e*S	Sn	09 25 54.8	-0.2
SVV	Soufriere Volc	3.08	3	⇓*e*P	Pn	09 25 22.6	+2.8
SVV				*e*S	Sn	09 25 55.4	-0.1
SVV	Soufriere Volc	3.08	3	⇓*e*P	Pn	09 25 22.6	+2.8
SVV				*e*S	Sn	09 25 55.4	-0.1
PCRV	Puerto La Cruz	3.21	270	*e*P	Pn	09 25 21.8	+0.2
PCRV				*e*S	Sn	09 25 56.9	-1.8
BBGH	Gun Hill	3.41	31	*e*Pn	Pn	09 25 25.5	+1.3
MCLT	Moule a Chique	3.50	7	*e*P	Pn	09 25 25.6	+0.2
MCLT				*e*S	Sn	09 26 04.9	-0.6
MCLT	Moule a Chique	3.50	7	*e*P	Pn	09 25 25.6	+0.2
MCLT	Moule a Chique	3.50	7	*e*	Pn	09 25 37.1	+12
MCLT				*e*S	Sn	09 26 04.9	-0.6
PRGV	PARIAGUAN	3.54	246	⇓*e*P	Pn	09 25 26.2	+0.2
PRGV				*e*S	Sn	09 26 04.5	-2.2
SLB	Belfond	3.60	5	*e*P	Pn	09 25 28.3	+1.4
SLB				*e*S	Sn	09 26 08.1	-0.2
SLB	Belfond	3.60	5	*e*P	Pn	09 25 28.3	+1.4
SLB				*e*S	Sn	09 26 08.1	-0.2
CUPV	Cœpira	4.35	268	*e*P	Pn	09 25 37.8	+0.5
CUPV				*e*S	Sn	09 26 24.7	-2.0
FDF	Fort de France	4.49	3	*e*Pn	Pn	09 25 40.0	+0.8
FDF				*e*Sn	Sn	09 26 28.1	-2.1
BIRV	Birongo	4.83	273	⇑*e*P	Pn	09 25 44.6	+1.0
BIRV				*e*S	Sn	09 26 35.0	-3.3
MERV	Las Mercedes	4.95	259	⇑*e*P	Pn	09 25 45.2	-0.1
ORCV	Isla La Orchil	4.99	289	*e*P	Pn	09 25 46.0	0.0
DLPL	La Plaine	5.08	1	*e*S	Sn	09 26 43.2	-1.5
FUNV	FUNVISIS	5.36	273	*e*P	Pn	09 25 51.2	+0.1
TBG	Guadaloupe-3	5.61	357	*e*P	Pn	09 25 55.4	+1.0
MGG	Marie-Galante	5.67	1	*e*P	Pn	09 25 56.4	+1.2
HMG	Houelmont	5.74	357	*e*P	Pn	09 25 58.0	+1.7
PHG	Guadaloupe-2	5.77	357	*e*P	Pn	09 25 59.0	+2.3
DOG	Dongo Capester	5.78	358	*e*P	Pn	09 25 59.2	+2.4
SCG	Saint Claude	5.78	357	*e*P	Pn	09 25 59.7	+2.8
LZG	Guadaloupe-1	5.90	356	*e*P	Pn	09 26 00.5	+2.1
SEG	Port Louis	6.15	359	*e*P	Pn	09 26 05.2	+3.4
TURV	Turiamo	6.37	273	*e*P	Pn	09 26 03.6	-1.2
TURV				*e*S	Sn	09 27 11.8	-4.5
BAUV	El Baul	6.70	260	*e*P	Pn	09 26 08.6	-0.8
BAUV				*e*S	Sn	09 27 19.3	-5.2
MAPV	Macapo	6.99	267	⇑*e*P	Pn	09 26 13.2	-0.2
SKI	Saint Kitts	7.20	350	*e*P	Pn	09 26 18.1	+1.9
SKI				*e*S	Sn	09 27 34.2	-2.4
SKI	Saint Kitts	7.20	350	*e*P	Pn	09 26 18.1	+1.9
SKI				*e*S	Sn	09 27 34.2	-2.4
JACV	Jacura	7.38	277	*e*P	Pn	09 26 19.2	+0.4
ANWB	Willy Bob	7.42	357	*e*Pn	Pn	09 26 19.6	+0.4
ANWB				*e*Sn	Sn	09 27 37.8	-4.3
TEPV	Terepaima	7.70	269	⇑*e*P	Pn	09 26 22.0	-1.3
SANV	Sanarito	8.08	266	*e*P	Pn	09 26 27.4	-1.1
CDVI	St. Croix	8.18	337	*e*Pn	Pn	09 26 28.8	-0.8
	552nm,0.6s						
SIQV	Siquisique	8.31	274	*e*P	Pn	09 26 30.8	-0.8
CURV	Curarigua	8.46	269	*e*P	Pn	09 26 32.9	-0.7
MONV	Montecano	8.62	282	*e*P	Pn	09 26 35.1	-0.6
ELOV	Elorza	8.63	249	*e*P	Pn	09 26 35.5	-0.5
STVI	Saint Thomas	8.80	337	*e*Pn	Pn	09 26 38.6	+0.4
MTP	Monte Pirata	8.82	333	*e*Pn	Pn	09 26 38.2	-0.2
CPD	Cerro la Pandu	8.93	331	*e*Pn	Pn	09 26 39.3	-0.7
HUMP	Col San Antoni	8.99	332	*e*Pn	Pn	09 26 41.5	+0.6
QARV	Quebrada Arrib	9.01	271	*e*P	Pn	09 26 39.5	-1.7
CBYP	Canovanas	9.11	332	*e*Pn	Pn	09 26 41.4	-1.1
SJG	San Juan	9.11	330	*e*Pn	Pn	09 26 41.2	-1.2
SJG	San Juan	9.11	330	P	Pn	09 26 40.9	-1.5
	1.3nm,0.3s,baz=324,slow=19,SNR=2.9						
SJG				LR	LR	09 29 46.4	
	comp=Z,528nm,21.9s,baz=98,slow=34						
DABV	Dabajuro	9.13	275	*e*P	Pn	09 26 42.0	-0.9
SDV	Santo Domingo	9.23	263	*e*Pn	Pn	09 26 44.9	+0.6
SDV				*e*Sn	Sn	09 28 20.1	-6.8
CELP	Cerrillos	9.30	328	*e*Pn	Pn	09 26 45.7	+0.6
SOCV	Socops	9.56	259	*e*P	Pn	09 26 46.6	-2.0
AOPR	Arecibo Observ	9.62	328	*e*Pn	Pn	09 26 52.7	+3.3
LRS	Lares	9.62	327	*e*Pn	Pn	09 26 49.3	-0.1
SDDR	Presa de Saban	12.96	313	*e*Pn	Pn	09 27 34.1	-1.0
SDDR				*e*Sn	Sn	09 29 50.2	-7.7
ROSC	El Rosal	13.90	248	P	Pn	09 27 47.4	-1.0
ROSC	El Rosal	13.90	248	P	Pn	09 27 47.4	-1.0
	1.8nm,0.3s,baz=90,slow=20,SNR=4.7						
GTBY	Guantanamo Bay	16.39	308	P	P	09 28 23.6	+1.0
	56nm,1.0s						
BCIP	Isla Barro Col	18.23	268	*e*Pn	P	09 28 43.0	+0.1
	38nm,1.1s						
SAML	Samuel	19.13	185	*e*P	P	09 28 51.5	-1.3
	18nm,0.7s						
SAML				*e*S	S	09 32 20.7	-6.5
OTAV	Otavalo	19.67	241	*e*Pn	Pn	09 29 01.4	+0.4
	183nm,1.1s						
JTS	JuntasAbangare	23.20	272	P	P	09 29 35.7	-0.8
JTS	JuntasAbangare	23.20	272	P	P	09 29 35.7	-0.8
	1.2nm,0.4s,baz=12,slow=20,SNR=2.1						
ATAH	Atahualpa	24.18	225	P	P	09 29 47.0	+0.9
ATAH	Atahualpa	24.18	225	P	P	09 29 47.0	+0.9
	19nm,0.6s,baz=42,slow=5.2,SNR=18						
ATAH				LR	LR	09 40 32.0	
	comp=Z,620nm,21.4s,baz=247,slow=40						
SIV	San Ignacio	26.04	179	P	P	09 30 03.1	+0.6
SIV	San Ignacio	26.04	179	P	P	09 30 03.1	+0.6
	4.5nm,0.8s,baz=20,slow=10,SNR=11						
SIV				LR	LR	09 41 08.8	
	comp=Z,657nm,21.0s,slow=38						
LPAZ	La Paz	27.17	194	P	P	09 30 13.5	+0.2
LPAZ				*e*pP	pP	09 30 27.3	+1.5
LPAZ	La Paz	27.17	194	P	P	09 30 13.5	+0.2
	1.6nm,0.8s,baz=6.4,slow=8.0,SNR=7.1						
LPAZ				LR	LR	09 42 12.2	
	comp=Z,671nm,18.1s,baz=358,slow=39						
TEIG	Tepich	27.76	294	LR	LR	09 42 58.1	
	comp=Z,456nm,18.5s,baz=25,slow=40						
BDFB	Brasilia	28.90	153	P	P	09 30 28.5	+0.3
BDFB	Brasilia	28.90	153	P	P	09 30 28.5	+0.3
	2.9nm,0.6s,baz=285,slow=13,SNR=3.9						
BDFB				LR	LR	09 42 41.0	
	comp=Z,870nm,19.4s,baz=270,slow=38						
TKL	Tuckaleechee C	32.50	325	*e*P	P	09 30 59.6	-0.1
LRAL	Lakeview Retre	32.74	318	*e*P	P	09 31 01.5	-0.3
	3.1nm,0.6s						
TZTN	Tazewell	33.01	326	*e*P	P	09 31 04.2	0.0
	5.7nm,0.6s						
PLAL	Pickwick Lake	34.65	320	*e*P	P	09 31 26.2	+7.8
	7.7nm,0.6s						
PLAL				*e*PcP	PcP	09 34 00.5	+8.6
WVT	Waverly	35.23	321	*e*P	P	09 31 22.7	-0.7
	10nm,0.8s						
WVT				*e*pP	pP	09 31 35.8	-0.3
WVT				*e*PcP	PcP	09 33 53.6	+0.1
WCI	Wyandotte Cave	35.74	325	*e*P	P	09 31 27.6	-0.2
	24nm,1.2s						
BLO	Bloomington	36.53	326	*e*P	P	09 31 34.9	+0.4
	12nm,0.6s						
BLO				*e*pP	pP	09 31 47.0	-0.3
BLO				*e*PcP	PcP	09 33 57.7	+0.3
CPUP	Villa Florida	36.54	174	P	P	09 31 33.7	-0.9
CPUP				pP	pP	09 31 47.6	+0.2
CPUP	Villa Florida	36.54	174	P	P	09 31 33.7	-0.9
	2.8nm,0.8s,baz=317,slow=7.5,SNR=5.3						
CPUP				pP	pP	09 31 47.6	+0.2
	12nm,0.8s,baz=338,slow=8.6,SNR=12						
SIUC	Southern Illin	37.10	322	*e*P	P	09 31 39.1	-0.3
	26nm,0.8s						
SIUC				*e*pP	pP	09 31 52.0	-0.1
SFIN	Scholer Farm	37.70	327	⇓P	P	09 31 44.5	+0.1
	baz=38						
HDIL	Hopedale	39.03	325	*e*P	P	09 31 55.0	-0.6
	8.8nm,0.6s						
WHTX	Lake Whitney	39.75	308	⇓P	P	09 32 01.0	-0.7
	baz=40,SNR=6.6						
TUL1	Tulsa	40.35	315	⇑P	P	09 32 06.2	-0.4
	baz=40						
732A	Laxson Ranch,	40.54	303	⇑P	P	09 32 07.4	-1.0
	baz=41						
632A	Uvalde	40.65	304	⇑P	P	09 32 08.0	-1.2
	baz=41						
532A	Rocksprings	40.96	305	⇓P	P	09 32 11.1	-0.7
	baz=41,SNR=6.9						
JCT	Junction City	41.01	305	*e*P	P	09 32 11.1	-1.1
	14nm,1.1s						
JCT				*e*pP	pP	09 32 24.2	-0.9
JCT	Junction City	41.01	305	⇑P	P	09 32 11.6	-0.6
	baz=41						
432A	Menard	41.14	306	⇑P	P	09 32 12.6	-0.8
	baz=41						
631A	Perdido Creek	41.27	303	⇑P	P	09 32 13.5	-0.8
	baz=41						
332A	Millersview	41.29	306	⇓P	P	09 32 13.8	-0.7
	baz=41						
232A	Coleman	41.41	307	⇓P	P	09 32 14.7	-0.8
	baz=42						
531A	Rocksprings	41.50	304	⇓P	P	09 32 15.8	-0.5
	baz=42						
ABTX	Abilene, Hawle	41.69	308	⇓P	P	09 32 17.1	-0.8
	baz=42						
431A	Sonora	41.73	305	⇑P	P	09 32 17.5	-0.7
	baz=42,SNR=5.7						
331A	San Angelo	41.81	306	⇓P	P	09 32 18.0	-0.8
	baz=42						
Z32A	Haskell	41.84	309	⇑P	P	09 32 17.9	-1.1
	baz=42						
231A	Bronte	41.95	307	⇓P	P	09 32 18.5	-1.4
	baz=42						
CFAA	Coronel Fontan	42.10	189	P	P	09 32 19.4	-1.7
CFAA	Coronel Fontan	42.10	189	P	P	09 32 19.4	-1.7
	0.4nm,0.7s,baz=3.9,slow=6.5,SNR=6.2						
Y32A	R-V Farms, Ver	42.11	310	⇑P	P	09 32 19.9	-1.2
	baz=42						
530A	J-C Ranch, Com	42.14	304	⇑P	P	09 32 20.8	-0.7
	baz=42						
SCIA	State Center	42.14	324	*e*P	P	09 32 20.9	-0.4
	16nm,0.6s						
SCIA				*e*pP	pP	09 32 33.2	-1.1
430A	Baggett Ranch,	42.27	305	⇓P	P	09 32 21.6	-1.0
	baz=42						
Z31A	Sharp Cattle R	42.36	309	P	P	09 32 22.3	-0.9
	baz=42,SNR=8.3						
330A	Mertzon	42.44	306	⇑P	P	09 32 22.6	-1.3
	baz=43						
230A	Sterling City	42.56	306	⇑P	P	09 32 24.0	-1.0
	baz=43						
Y31A	Rekieta Farm,	42.71	310	⇑P	P	09 32 25.1	-1.0
	baz=43						
130A	Snyder	42.71	308	⇑P	P	09 32 25.6	-0.5
	baz=43						
429A	Davenport Ranc	42.75	304	⇓P	P	09 32 25.4	-1.0
	baz=43						
X31A	McDonald Ranch	42.78	311	⇑P	P	09 32 24.9	-1.7
	baz=43,SNR=6.7						
529A	Stev Forest Ra	42.85	304	⇑P	P	09 32 26.7	-0.6
	baz=43						
Z30A	Sanderson Ranc	43.10	308	P	P	09 32 28.4	-0.9
	baz=43,SNR=9.1						
329A	Wagon Wheel Ra	43.11	306	⇓P	P	09 32 28.0	-1.4
	baz=43						
229A	Bryant Ranch,	43.15	306	⇓P	P	09 32 28.9	-0.7
	baz=43						
628A	Black Gap, Mar	43.20	302	⇑P	P	09 32 28.9	-1.3
	baz=43,SNR=7.2						
528A	Cox Ranch, San	43.33	303	⇓P	P	09 32 30.8	-0.4
	baz=44,SNR=10						
428A	Kincaid Ranch,	43.42	304	⇓P	P	09 32 31.0	-1.0
	baz=44,SNR=8.3						
129A	Stewart Farms,	43.43	307	P	P	09 32 31.2	-0.7
	baz=44,SNR=7.3						
Z29A	Hungry Hill Ra	43.54	308	P	P	09 32 31.9	-0.9
	baz=44,SNR=5.8						
328A	Wristen Ranch,	43.74	305	⇓P	P	09 32 33.6	-0.9
	baz=44						
Y29A	Porterfield Fa	43.74	309	P	P	09 32 33.7	-0.8
	baz=44,SNR=18						
TXAR	Lajitas Array	43.81	302	P	P	09 32 34.3	-0.7
TXAR				pP	pP	09 32 46.9	-1.1
TXAR				PcP	PcP	09 34 22.5	+1.5
TXAR				pPcP		09 34 35.3	

TXAR ScP **ScP** 09 38 10.8 +1.9
TXAR Lajitas Array 43.81 302 P **P** 09 32 34.3 -0.7
1.0nm,0.6s,baz=109,slow=9.6,SNR=12
TXAR pP **pP** 09 32 46.9 -1.1
2.5nm,0.8s,baz=118,slow=9.1,SNR=8.6
TXAR PcP **PcP** 09 34 22.5 +1.5
5.2nm,0.7s,baz=120,slow=5.8,SNR=20
TXAR pPcP 09 34 35.3
3.1nm,0.7s,baz=125,slow=6.5,SNR=7.0
TXAR ScP **ScP** 09 38 10.8 +1.9
1.5nm,1.0s,baz=131,slow=5.1,SNR=5.4
128A Castleberry Fa 43.91 307 ⇓P **P** 09 32 35.0 -0.9
baz=44
X29A Tulia 43.99 310 P **P** 09 32 35.4 -1.2
baz=44,SNR=6.5
527A Woodward Ranch 44.00 303 ⇑P **P** 09 32 36.0 -0.7
baz=44
427A Hayter Ranch, 44.05 304 ⇑P **P** 09 32 36.4 -0.6
baz=44,SNR=7.8
Y28A McKinney Farm, 44.20 309 P **P** 09 32 37.4 -0.8
baz=44,SNR=8.6
626A Big Bend Ranch 44.26 302 ⇑P **P** 09 32 37.9 -0.8
baz=44
526A Mary Lane Ranc 44.37 303 ⇑P **P** 09 32 39.1 -0.6
baz=44,SNR=7.3
X28A Dimmitt 44.40 310 ⇓P **P** 09 32 38.6 -1.2
baz=44
426A McDonald Obser 44.51 304 ⇑P **P** 09 32 40.6 -0.2
baz=45
127A Arkansas Junct 44.62 307 ⇑P **P** 09 32 40.5 -1.0
baz=45,SNR=12
MSTX Muleshoe 44.63 309 P **P** 09 32 40.8 -0.9
baz=45,SNR=9.4
SCHQ Schefferville 44.71 356 P **P** 09 32 43.2 +1.4
SCHQ Schefferville 44.71 356 P **P** 09 32 43.2 +1.4
34nm,0.8s,baz=174,slow=6.3,SNR=66
SCHQ LR LR 09 50 19.5
comp=Z,216nm,19.8s,baz=159,slow=35
Z27A Tatum 44.73 307 P **P** 09 32 41.0 -1.4
baz=45,SNR=9.8
Y27A Causey 44.90 308 ⇓P **P** 09 32 43.3 -0.5
baz=45,SNR=5.8
X27A F and S Farms, 45.13 309 P **P** 09 32 45.0 -0.7
baz=45,SNR=10
CPRX Cap Rock 45.15 307 *e*P **P** 09 32 44.4 -1.3
10nm,0.8s
CPRX *e*pP **pP** 09 32 58.1 -0.7
ECSD EROS Data Cent 45.24 324 *e*P **P** 09 32 44.8 -1.4
7.9nm,0.7s
ECSD *e*PcP **PcP** 09 34 26.0 +0.4
W27A Bowe Ranch, En 45.27 310 P **P** 09 32 46.3 -0.4
baz=45,SNR=7.5
Z26A Caprock 45.32 307 P **P** 09 32 46.2 -0.9
baz=46,SNR=7.8
425A Indio Mountain 45.33 303 ⇑P **P** 09 32 46.2 -1.0
baz=46
T28A Walsh 45.41 313 ⇑P **P** 09 32 46.4 -1.3
baz=46
325A Bean Ranch, Si 45.49 304 ⇑P **P** 09 32 47.4 -1.1
baz=46,SNR=8.5
225A Deer Hill, Car 45.60 305 ⇓P **P** 09 32 48.8 -0.6
baz=46
125A Gardner Draw, 45.65 306 ⇑P **P** 09 32 48.9 -0.8
baz=46
Z25A Roswell 45.90 307 ⇓P **P** 09 32 50.6 -1.1
baz=46,SNR=6.2
324A Moseley Ranch, 45.93 304 ⇑P **P** 09 32 51.6 -0.3
baz=46
V26A Tequesquite Ra 46.10 310 P **P** 09 32 52.6 -0.7
baz=46,SNR=6.0
X25A Clemmons Ranch 46.29 308 ⇑P **P** 09 32 54.4 -0.4
baz=46
124A Stringfield Ra 46.29 306 ⇓P **P** 09 32 54.5 -0.5
baz=46
U26A Atchley Ranch, 46.30 311 ⇓P **P** 09 32 54.1 -0.8
baz=46
Z24A Sheeppen Canyo 46.43 307 ⇑P **P** 09 32 55.5 -0.4
baz=47
S26A Kim 46.60 313 ⇓P **P** 09 32 55.9 -1.3
baz=47
Y24A Capitan 46.68 307 ⇑P **P** 09 32 57.3 -0.6
baz=47,SNR=8.3
V25A Rancho No Teng 46.74 310 P **P** 09 32 57.4 -1.0
baz=47,SNR=8.1
U25A Circle Dot Ran 46.80 311 P **P** 09 32 58.1 -0.6
baz=47,SNR=5.9
T25A Trinidad 47.09 312 ⇑P **P** 09 33 00.5 -0.6
baz=47
W24A Lazy 6 Ranch, 47.11 309 ⇓P **P** 09 33 00.5 -0.8
baz=47
Y23A Lovelace Mesa, 47.17 307 ⇓P **P** 09 33 00.9 -0.8
baz=47,SNR=5.5
S25A Robets Cordova 47.31 313 ⇓P **P** 09 33 01.9 -0.9
baz=48
R25A Fountain Ranch 47.40 313 ⇑P **P** 09 33 02.5 -0.9
baz=48
222A Williams Famil 47.44 304 ⇑P **P** 09 33 03.6 -0.2
baz=48
X23A Hourglass Bar 47.49 308 ⇑P **P** 09 33 03.3 -1.0
baz=48
T24A Torres, Weston 47.53 312 ⇑P **P** 09 33 04.0 -0.6
baz=48
BNM Barren Site 47.69 307 *e*P **P** 09 33 06.0 +0.1
5.7nm,0.8s
BNM *e*pP **pP** 09 33 19.4 +0.5
AGMN Agassiz Nation 47.70 329 *e*P **P** 09 33 03.4 -2.0
3.0nm,0.5s
ANMO Albuquerque 47.82 308 LR LR 09 54 36.2
comp=Z,314nm,21.0s,baz=73,slow=38
S24A Houchin Ranch, 47.87 312 ⇓P **P** 09 33 06.8 -0.4
baz=48
Y22A Socorro 47.89 307 ⇓P **P** 09 33 06.6 -0.7
baz=48
V23A Ortiz Mt. (NFS 47.89 309 ⇓P **P** 09 33 07.0 -0.4
baz=48
Z21A St. Cloud Mine 48.25 306 ⇓P **P** 09 33 09.4 -0.8
baz=48
Y21A Point of Rocks 48.47 307 ⇑P **P** 09 33 11.4 -0.4
baz=49,SNR=5.6
V22A San Miguel Ran 48.50 309 ⇓P **P** 09 33 11.7 -0.4
baz=49
R23A Moffat 48.53 313 ⇓P **P** 09 33 11.9 -0.4
baz=49
220A Playas Peak, P 48.55 304 ⇑P **P** 09 33 11.5 -0.8
baz=49
120A U Bar Ranch, L 48.81 304 ⇑P **P** 09 33 12.8 -1.6
baz=49
T22A Edith 48.88 311 ⇑P **P** 09 33 14.9 -0.1
baz=49
ULM Lac du Bonnet 49.01 331 P **P** 09 33 13.5 -2.0
ULM Lac du Bonnet 49.01 331 P **P** 09 33 13.5 -2.0
2.8nm,0.5s,baz=121,slow=7.7,SNR=5.9
ULM LR LR 09 54 30.7
comp=Z,341nm,20.3s,baz=138,slow=37
ISCO Idaho Springs 49.03 315 ⇑P **P** 09 33 15.2 -0.9
baz=49
S22A 4UR Ranch, Cre 49.10 312 P **P** 09 33 16.5 -0.2
baz=49,SNR=5.3
M24A Cheyenne 49.21 317 ⇑P **P** 09 33 16.7 -0.7
baz=49
U21A Nageezi 49.24 310 ⇓P **P** 09 33 17.6 -0.2
baz=49
O23A Lake Granby, G 49.41 315 ⇑P **P** 09 33 18.5 -0.6
baz=50
Q22A Crested Butte, 49.58 313 ⇓P **P** 09 33 19.7 -0.7
baz=50
N23A Red Feather La 49.72 316 ⇑P **P** 09 33 20.4 -0.9
baz=50
P22A Eagle 49.76 314 ⇓P **P** 09 33 20.9 -0.7
baz=50
S21A Coal Bank Pass 49.78 311 ⇑P **P** 09 33 21.7 -0.2
baz=50
O22A Kremmling 49.83 315 ⇑P **P** 09 33 22.2 -0.1
baz=50
R21A Cimarron 49.86 312 ⇑P **P** 09 33 22.3 -0.1
baz=50
Q21A Lamborn Mesa, 50.05 313 ⇑P **P** 09 33 23.3 -0.5
baz=50
L23A Garrett 50.08 317 ⇑P **P** 09 33 23.8 -0.2
baz=50
MVCO Mesa Verde 50.15 310 ⇓P **P** 09 33 23.8 -0.8
baz=50
P21A Newcastle 50.22 314 ⇓P **P** 09 33 24.9 -0.2
baz=50
S20A Disappointment 50.26 311 ⇓P **P** 09 33 25.2 -0.2
baz=50,SNR=7.2
R20A Redvale 50.40 312 ⇑P **P** 09 33 25.7 -0.8
baz=50
X18A Snowflake 50.42 307 ⇓P **P** 09 33 25.9 -0.8
baz=50
PV01 Paradox Valley 50.52 311 *e*P **P** 09 33 26.8 -0.7
PV01 *e*pP **pP** 09 33 39.8 -0.8
Q20A Ridgley Place, 50.61 313 ⇓P **P** 09 33 27.9 -0.1
baz=51
N21A Black Mountain 50.75 315 ⇑P **P** 09 33 29.1 0.0
baz=51
O20A White River Ci 51.02 314 ⇓P **P** 09 33 30.4 -0.7
baz=51
F24A Ekalaka 51.05 322 ⇓P **P** 09 33 30.7 -0.4
baz=51
G23A Biddle 51.31 321 ⇑P **P** 09 33 32.3 -0.7
baz=51
Q19A Hogan Spring (51.32 312 ⇑P **P** 09 33 32.5 -0.7
baz=51
K21A Alcova 51.34 317 ⇓P **P** 09 33 32.6 -0.9
baz=52
P19A Cripple Cowboy 51.36 313 ⇑P **P** 09 33 32.7 -1.0
baz=52
D24A Glendive 51.63 324 ⇑P **P** 09 33 35.5 +0.2
baz=52
H22A Clearmont 51.63 320 ⇓P **P** 09 33 34.9 -0.6
baz=52
O19A Miners Draw (B 51.70 314 ⇓P **P** 09 33 35.4 -0.7
baz=52
I21A Big Trails, Te 51.88 319 ⇓P **P** 09 33 36.6 -0.8
baz=52
G22A Birney 51.88 321 ⇓P **P** 09 33 37.1 -0.3
baz=52
E23A Ismay 51.89 322 ⇓P **P** 09 33 37.6 +0.2
baz=52
C24A Savage 51.90 324 ⇓P **P** 09 33 37.2 -0.2
baz=52
N19A John Jarvie Ra 51.97 315 ⇓P **P** 09 33 37.1 -1.1
baz=52
H21A Big Horn, Sher 52.08 320 ⇑P **P** 09 33 38.4 -0.5
baz=52
K20A Yellowstone Ra 52.09 317 P **P** 09 33 37.8 -1.2
baz=52,SNR=7.7
F22A Rosebud 52.12 321 P **P** 09 33 38.3 -0.8
baz=52,SNR=12
D23A Lindsay 52.17 323 ⇑P **P** 09 33 39.8 +0.3
baz=52,SNR=5.6
J20A Shoshoni 52.20 318 ⇓P **P** 09 33 39.2 -0.6
baz=52
E22A Miles City 52.25 322 P **P** 09 33 39.0 -1.0
baz=52,SNR=5.7
DGMT Dagmar 52.26 325 *e*P **P** 09 33 40.4 +0.4
12nm,0.7s
DGMT *e*pP **pP** 09 33 53.1 -0.2
DGMT Dagmar 52.26 325 ⇓P **P** 09 33 40.5 +0.4
baz=52
P18A Preston Nutter 52.27 313 P **P** 09 33 40.6 +0.1
baz=52,SNR=5.5
SRU San Rafael 52.29 312 ⇓P **P** 09 33 39.5 -1.1
baz=52
O18A Roosevelt 52.32 313 ⇓P **P** 09 33 40.0 -0.7
baz=52
C23A Lambert 52.48 324 P **P** 09 33 42.1 +0.4
baz=53,SNR=5.4
K19A Absolon Red Bu 52.49 317 P **P** 09 33 40.8 -1.3
baz=53,SNR=5.4
L19A Farson 52.55 316 P **P** 09 33 41.8 -0.7
baz=53,SNR=6.7
P17A Butcher Ranch, 52.57 312 ⇓P **P** 09 33 41.9 -0.7
baz=53
H20A Greybull 52.63 319 ⇑P **P** 09 33 41.6 -1.3
baz=53
B23A Brockton 52.71 325 ⇑P **P** 09 33 44.1 +0.7
baz=53
D22A Cohagen 52.74 323 P **P** 09 33 44.0 +0.4
baz=53,SNR=13
U15A North Rim 52.80 308 ⇑P **P** 09 33 43.9 -0.6
baz=53
J19A Crowheart 52.81 317 ⇓P **P** 09 33 43.6 -0.8
baz=53,SNR=6.9
O17A Robinson Place 52.82 313 ⇓P **P** 09 33 44.6 +0.1
baz=53,SNR=5.7
C22A Vida 52.86 324 P **P** 09 33 44.7 +0.2
baz=53,SNR=8.1
A23A Redstone 52.91 325 ⇑P **P** 09 33 44.6 -0.2
baz=53
PDAR Pinedale Array 52.95 317 P **P** 09 33 44.2 -1.2
PDAR ScP **ScP** 09 38 48.7 +1.1
PDAR Pinedale Array 52.95 317 P **P** 09 33 44.2 -1.2
4.0nm,0.7s,baz=116,slow=8.8,SNR=26
PDAR ScP **ScP** 09 38 48.7 +1.1
2.4nm,1.1s,baz=126,slow=4.2,SNR=7.0
PDAR LR LR 09 56 57.9
comp=Z,230nm,20.3s,baz=237,slow=37
L18A Fontenelle, Gr 52.95 315 ⇓P **P** 09 33 44.8 -0.7
baz=53
G20A Bridger 53.09 320 ⇓P **P** 09 33 45.7 -0.6
baz=53
N17A Moffit Pass 53.15 314 ⇑P **P** 09 33 46.1 -1.0
baz=53
D21A La Casta Ranch 53.18 322 P **P** 09 33 47.1 +0.2
baz=53,SNR=28
B22A Reddig Ranch S 53.20 324 ⇑P **P** 09 33 47.4 +0.4
baz=53,SNR=7.7
M17A Scullys Gap (B 53.22 315 ⇓P **P** 09 33 46.4 -1.1
baz=53
K18A Toltan Ranch, 53.23 316 ⇓P **P** 09 33 47.1 -0.4
baz=53
F20A Billings 53.31 321 ⇓P **P** 09 33 47.5 -0.3
baz=53,SNR=6.5
H19A Powell 53.35 319 ⇑P **P** 09 33 47.4 -0.9
baz=54
O16A Springville 53.37 313 ⇑P **P** 09 33 48.2 -0.4
baz=54
I18A Diamond G Ranc 53.49 318 P **P** 09 33 49.0 -0.5
baz=54,SNR=7.9
A22A Carney Farms, 53.51 325 ⇑P **P** 09 33 49.5 +0.2
baz=54
N16A Rees Ranch, Co 53.56 314 ⇓P **P** 09 33 49.8 -0.2
baz=54
L17A Cokeville 53.60 315 ⇓P **P** 09 33 49.9 -0.3
baz=54
C21A Desert Coulee 53.61 323 P **P** 09 33 50.1 +0.1
baz=54,SNR=9.2
E20A Meyer Farm, Mu 53.61 321 P **P** 09 33 49.9 -0.2
baz=54,SNR=24
RLMT Red Lodge 53.72 319 *e*P **P** 09 33 50.5 -0.6
14nm,1.1s
RLMT *e*pP **pP** 09 34 03.4 -1.0
RLMT Red Lodge 53.72 319 P **P** 09 33 50.7 -0.4
baz=54,SNR=7.0
H18A Shoshone NF, C 53.79 319 ⇑P **P** 09 33 50.8 -0.8
baz=54
F19A Roth Farm, Mol 53.83 320 ⇓P **P** 09 33 51.3 -0.4
baz=54
M16A Huntsville 53.84 314 ⇓P **P** 09 33 51.1 -0.9
baz=54
B21A Ellsworth Farm 53.86 324 ⇑P **P** 09 33 51.8 0.0
baz=54
K17A Gardner Place, 53.87 316 ⇓P **P** 09 33 51.2 -1.0
baz=54
D20A Manuel Ranch, 53.88 322 P **P** 09 33 52.0 0.0
baz=54,SNR=12
HWUT Hardware Ranch 53.90 315 *e*P **P** 09 33 51.2 -1.2
7.3nm,0.8s
HWUT *e*pP **pP** 09 34 04.1 -1.7
HWUT *e*ScP **ScP** 09 38 52.7 +1.0
L16A Fish Haven 53.95 315 ⇓P **P** 09 33 51.9 -0.9
baz=54
J17A Brown Place, J 53.96 317 ⇑P **P** 09 33 52.6 -0.2
baz=54
G18A Lazy EL Ranch, 53.99 319 ⇑P **P** 09 33 52.3 -0.7
baz=54
E19A Rath Farm, Rou 54.00 321 P **P** 09 33 52.7 -0.2
baz=54,SNR=13
SNOW Snow King Moun 54.03 317 *e*P **P** 09 33 51.8 -1.6
3.0nm,0.7s
SNOW *e*pP **pP** 09 34 05.5 -1.3
ARUT Antelope Range 54.06 309 *e*P **P** 09 33 54.2 +0.5
6.7nm,0.9s
A21A Bergtoll Ranch 54.08 325 ⇓P **P** 09 33 53.0 -0.4
baz=54,SNR=7.7
I17A Pilgrim Ck. 54.09 318 ⇑P **P** 09 33 52.7 -1.0
baz=54
C20A Veseth Ranch, 54.09 323 P **P** 09 33 53.5 0.0
baz=54,SNR=9.4
GCMT Greycliff 54.26 320 *e*P **P** 09 33 54.2 -0.7
17nm,1.4s
DUG Dugway 54.32 312 *e*P **P** 09 33 54.8 -0.6
7.4nm,1.1s
DUG *e*PcP **PcP** 09 34 58.7 -0.3
DUG *e*PP **PP** 09 35 56.7 -1.0
DUG Dugway 54.32 312 P **P** 09 33 55.0 -0.4
baz=54,SNR=5.6
F18A Big Timber 54.34 320 P **P** 09 33 55.0 -0.4
baz=54,SNR=10
DCID1 Drake Creek 54.37 317 *e*P **P** 09 33 55.4 -0.4
11nm,0.9s
D19A Cripps Ranch, 54.37 322 P **P** 09 33 55.3 -0.3
baz=54,SNR=15
A20A Cobblestone Ra 54.60 324 ⇓P **P** 09 33 57.6 +0.3
baz=55
L15A Malad City 54.62 315 P **P** 09 33 56.8 -0.8
baz=55,SNR=7.8
C19A Slack Wire Ran 54.73 322 ⇑P **P** 09 33 57.9 -0.3
baz=55
E18A Harlowton 54.74 321 ⇑P **P** 09 33 58.2 -0.2
baz=55
G17A Pierce Place, 54.75 319 ⇓P **P** 09 33 58.2 -0.3
baz=55
H16A Russell Place, 54.84 318 ⇑P **P** 09 33 58.7 -0.5
baz=55
F17A Fitzpatrick Pl 54.94 320 ⇑P **P** 09 33 59.8 0.0
baz=55,SNR=8.2
D18A Linhart Farms, 54.95 321 ⇑P **P** 09 33 59.8 0.0
baz=55
K15A Arbon 54.95 315 ⇑P **P** 09 33 59.3 -0.7
baz=55
DVTC Desert V Tower 54.96 303 ⇑P **P** 09 33 59.2 -0.9
baz=55
B19A Brinkman Farms 55.00 323 ⇓P **P** 09 33 59.9 -0.2
baz=55
QLMT Earthquake Lak 55.00 318 *e*P **P** 09 34 00.7 +0.3
1.7nm,1.1s
QLMT *e*pP **pP** 09 34 13.2 -0.5
A19A Klindworth Far 55.10 324 ⇓P **P** 09 34 01.3 +0.5
baz=55,SNR=8.3
J15A Blackfoot 55.14 316 ⇑P **P** 09 34 00.3 -1.0
baz=55
L14A Malta 55.22 314 P **P** 09 34 01.2 -0.7
baz=55,SNR=6.1
PMTG Montargil 55.23 49 *e*P **P** 09 34 02.9 +1.0
26nm,1.6s
EGMT Eagleton 55.28 322 *e*P **P** 09 34 01.8 -0.4
28nm,1.1s
EGMT *e*pP **pP** 09 34 13.7 -1.9
EGMT *es*P **sP** 09 34 19.3 -1.8
EGMT Eagleton 55.28 322 P **P** 09 34 02.2 0.0
baz=55,SNR=8.8
K14A Jones Ranch, D 55.35 315 P **P** 09 34 02.1 -0.7
baz=56,SNR=8.2
I15A Monteview 55.39 317 ⇑P **P** 09 34 03.4 +0.3
baz=56
BOZ Bozeman (W) 55.45 319 *e*P **P** 09 34 02.8 -0.8
9.7nm,1.2s
BOZ *e*pP **pP** 09 34 15.3 -1.6
BOZ Bozeman (W) 55.45 319 ⇑P **P** 09 34 03.3 -0.2
baz=56
B18A Beardsley Farm 55.46 323 P **P** 09 34 03.5 +0.1
baz=56,SNR=7.4
D17A Six Diamond Ra 55.47 321 P **P** 09 34 03.1 -0.6
baz=56,SNR=7.8
F16A Kennard Place, 55.51 319 P **P** 09 34 03.6 -0.3
baz=56,SNR=5.7
PESTR Estremoz 55.65 50 *e*P **P** 09 34 06.0 +1.1
24nm,1.4s
H15A Lima 55.72 318 ⇑P **P** 09 34 05.7 +0.2
baz=56
C17A Wharram Farm, 55.73 322 P **P** 09 34 04.8 -0.6
baz=56,SNR=14
A18A Metzger Ranch, 55.74 323 ⇓P **P** 09 34 05.1 -0.3
baz=56
G15A Dillon 55.83 318 ⇑P **P** 09 34 05.9 -0.4
baz=56
E16A East Helena 55.84 320 ⇑P **P** 09 34 05.7 -0.6
baz=56
J14A Carey 55.85 316 ⇓P **P** 09 34 06.6 +0.1
baz=56
LIC Lamto 55.85 89 *e*P **P** 09 34 06.0 -0.7
19nm,0.8s,baz=264
LIC Lamto 55.85 89 *e*P **P** 09 34 06.0 -0.7
19nm,0.8s
PMRV Marv??o 55.96 49 *e*P **P** 09 34 08.3 +1.2
16nm,1.8s
PVIS Viseu 55.96 47 *e*P **P** 09 34 08.4 +1.3
D16A Dana Ranch, Ca 55.96 321 P **P** 09 34 06.9 -0.2
baz=56,SNR=8.3
DBIC Dimbokro 55.96 89 *e*P **P** 09 34 06.7 -0.8
8.4nm,0.8s
HRY Holter Researc 56.01 320 *e*P **P** 09 34 07.2 -0.3
8.8nm,0.8s
PCBR Castelo Branco 56.01 49 *e*P **P** 09 34 08.7 +1.3
24nm,1.4s
B17A L&G Farms, Che 56.03 322 ⇓P **P** 09 34 07.3 -0.3
baz=56
LRM Limekiln Ridge 56.05 319 *e*P **P** 09 34 06.4 -1.5
27nm,1.1s
LRM *e*pP **pP** 09 34 19.9 -1.5
PGAV Gavieira, Arco 56.07 46 *e*P **P** 09 34 09.1 +1.1
F15A Butte 56.09 319 ⇓P **P** 09 34 07.7 -0.5
baz=56
MTE Manteigas 56.12 48 *e*P **P** 09 34 09.4 +1.1
21nm,1.5s
H14A Leadore 56.20 317 ⇑P **P** 09 34 08.3 -0.7
baz=56
POLO Lamas de Olo 56.23 47 *e*P **P** 09 34 10.2 +1.1
PVRL Vila Real 56.25 47 *e*P **P** 09 34 10.5 +1.3
26nm,1.1s
A17A Triple J Farms 56.26 323 P **P** 09 34 09.1 -0.1
baz=56,SNR=6.6
J13A Cove Ranch, Pi 56.33 316 P **P** 09 34 09.4 -0.4
baz=56,SNR=8.1
C16A Fuhringer Ranc 56.40 321 P **P** 09 34 09.6 -0.7
baz=56,SNR=12
E15A Deer Lodge 56.41 320 ⇑P **P** 09 34 09.9 -0.5
baz=56
I13A Wildhorse Cree 56.46 316 P **P** 09 34 11.1 +0.2
baz=57,SNR=8.7
HLID Hailey 56.55 316 P **P** 09 34 11.4 0.0
baz=57,SNR=7.9
D15A Lincoln 56.57 320 P **P** 09 34 11.2 -0.3
baz=57,SNR=16
B16A M & M Farms, S 56.63 322 P **P** 09 34 11.3 -0.5
baz=57,SNR=18
F14A Wisdom 56.64 319 ⇑P **P** 09 34 12.0 -0.1
baz=57
MVO Moncorvo 56.72 47 *e*P **P** 09 34 13.0 +0.5
30nm,1.1s
H13A Challis 56.78 317 ⇓P **P** 09 34 12.3 -0.7
baz=57,SNR=5.3
A16A West Butte Ran 56.79 323 ⇓P **P** 09 34 13.1 +0.1
baz=57
GRAC Grapevine Rang 56.89 308 ⇓P **P** 09 34 13.8 0.0
baz=57
C15A Salmond Ranch, 56.92 321 P **P** 09 34 13.6 -0.3
baz=57,SNR=9.7
E14A Clinton 56.95 319 ⇑P **P** 09 34 13.6 -0.6
baz=57
G13A Cobalt 56.95 318 ⇓P **P** 09 34 13.7 -0.5
baz=57
CHMT Chamberlain Mo 56.98 320 *e*P **P** 09 34 14.2 -0.4
7.1nm,1.3s
CHMT *e*pP **pP** 09 34 25.3 -2.6
B15A Bradely Ranch, 57.11 322 P **P** 09 34 14.5 -0.8
baz=57,SNR=6.2
I12A Atlanta 57.12 316 ⇑P **P** 09 34 15.2 -0.3
baz=57
D14A Greenough 57.21 320 ⇑P **P** 09 34 15.7 -0.3
baz=57
F13A Darby 57.26 318 ⇑P **P** 09 34 16.2 -0.3
baz=57
SLMT Seeley Lake 57.26 320 *e*P **P** 09 34 15.7 -0.7
28nm,1.3s
SLMT *e*pP **pP** 09 34 28.7 -1.1
MSO Missoula 57.39 320 ⇑P **P** 09 34 16.7 -0.5
baz=58
E13A Victor 57.40 319 ⇑P **P** 09 34 17.1 -0.3
baz=58
MFID Camas Ranch 57.47 315 ⇑P **P** 09 34 17.6 -0.3
baz=58
A15A Johnson Ranch, 57.48 322 ⇑P **P** 09 34 17.5 -0.4
baz=58,SNR=15
B14A Marquette Ranc 57.56 322 ⇓P **P** 09 34 17.8 -0.7
baz=58
C14A Swan Lake 57.62 321 P **P** 09 34 18.5 -0.3
baz=58,SNR=5.7
G12A Big Creek, Yel 57.69 317 ⇓P **P** 09 34 18.8 -0.7
baz=58
D13A Huson 57.82 320 P **P** 09 34 19.8 -0.4

baz=58,SNR=9.5
F12A Elk City 57.85 318 ⇓P P 09 34 20.1 -0.5
baz=58
A14A Double T Ranch 57.90 322 P P 09 34 20.2 -0.5
baz=58,SNR=7.6
NVAR Mina Array Bea 57.93 309 P P 09 34 21.4 +0.1
NVAR pP pP 09 34 35.4 +0.5
NVAR ScP ScP 09 39 11.1 +1.6
NVAR Mina Array Bea 57.93 309 P P 09 34 21.4 +0.1
1.3nm,0.6s,baz=101,slow=6.9,SNR=9.8
NVAR pP pP 09 34 35.3 +0.5
1.6nm,0.8s,baz=113,slow=7.7,SNR=5.0
NVAR ScP ScP 09 39 11.1 +1.6
0.7nm,0.9s,baz=114,slow=5.5,SNR=3.7
NVAR LR LR 10 00 49.7
comp=Z,238nm,21.9s,baz=44,slow=38
C13A Hot Springs 58.10 320 ⇓P P 09 34 21.8 -0.4
baz=58
PAB San Pablo 58.26 50 eP P 09 34 24.2 +0.7
10nm,0.8s
B13A Whitefish 58.30 321 ⇓P P 09 34 23.2 -0.3
baz=58
BSMT Bassoo Peak 58.30 321 eP P 09 34 22.7 -1.0
2.1nm,0.8s
BSMT epP pP 09 34 35.7 -1.5
BSMT esP sP 09 34 40.7 -2.0
D12A Red Ives Fores 58.37 319 ⇑P P 09 34 23.7 -0.4
baz=58
A13A Flathead Natio 58.48 322 ⇑P P 09 34 24.4 -0.4
baz=59
ESDC Sonseca Array 58.58 50 P P 09 34 27.1 +1.4
ESDC Sonseca Array 58.58 50 P P 09 34 27.1 +1.4
9.6nm,0.7s,baz=262,slow=7.3,SNR=57
ESLA Sonseca Array 58.58 50 eP P 09 34 26.6 +0.9
3.7nm,0.9s
C12B Naegeli Ranch, 58.68 320 P P 09 34 25.9 -0.3
baz=59,SNR=9.5
B12A Libby 59.03 321 ⇑P P 09 34 28.5 -0.1
baz=59,SNR=7.0
C11A Tepee Creek (N 59.22 320 ⇑P P 09 34 29.4 -0.5
baz=59
A12A Yaak River Ran 59.24 321 ⇓P P 09 34 30.3 +0.3
baz=59
NEW Newport 59.91 320 eP P 09 34 33.4 -1.3
12nm,0.7s
NEW Newport 59.91 320 P P 09 34 33.8 -0.9
baz=60,SNR=13
NEW Newport 59.91 320 LR LR 10 00 53.5
comp=Z,195nm,19.8s,baz=94,slow=36
QUIF Quistinic 61.36 41 eP P 09 34 45.6 +1.1
30nm,0.9s
QUIF Quistinic 61.36 41 eP P 09 34 45.6 +1.1
30nm,0.9s
SJPF Ste Jean 61.39 46 eP P 09 34 46.3 +1.5
48nm,1.0s
SJPF Ste Jean 61.39 46 eP P 09 34 46.3 +1.5
48nm,1.0s
ROSF Rostrenen 61.42 40 eP P 09 34 45.3 +0.4
ROSF Rostrenen 61.42 40 eP P 09 34 45.3 +0.4
TOA0 Torodi Ar. Sit 61.70 81 eP P 09 34 46.5 -0.8
TORD Torodi Ar. Bea 61.70 81 P P 09 34 46.7 -0.6
TORD Torodi Ar. Bea 61.70 81 P P 09 34 46.7 -0.6
8.9nm,0.7s,baz=278,slow=5.8,SNR=56
ETSF Etsaut 61.82 47 eP P 09 34 49.2 +1.4
23nm,1.0s
ETSF Etsaut 61.82 47 eP P 09 34 49.2 +1.4
23nm,1.0s
SGMF Saint Gilles 61.85 40 eP P 09 34 49.0 +1.2
108nm,1.4s
SGMF Saint Gilles 61.85 40 eP P 09 34 49.0 +1.2
108nm,1.4s
YBH Yreka Blue Hor 61.95 312 LR LR 10 01 57.4
comp=Z,202nm,19.2s,baz=124,slow=36
EPF Esparros 62.49 47 eP P 09 34 53.8 +1.5
43nm,0.9s
EPF Esparros 62.49 47 eP P 09 34 53.8 +1.5
43nm,0.9s
GRR Gorron 62.98 41 eP P 09 34 56.0 +0.7
56nm,1.1s
GRR Gorron 62.98 41 eP P 09 34 56.0 +0.7
56nm,1.1s
MFF Saint Martin d 62.98 43 eP P 09 34 56.3 +1.0
24nm,1.1s
MFF Saint Martin d 62.98 43 eP P 09 34 56.3 +1.0
24nm,1.1s
LFF La Frestale 63.19 45 eP P 09 34 57.7 +0.9
52nm,1.0s
LFF La Frestale 63.19 45 eP P 09 34 57.7 +0.9
52nm,1.0s
FLN La Foliniere 63.32 40 eP P 09 34 58.5 +0.9
44nm,1.0s
FLN La Foliniere 63.32 40 eP P 09 34 58.5 +0.9
44nm,1.0s
LDF La Druitiere 63.50 41 eP P 09 34 59.6 +0.8
27nm,1.1s
LDF La Druitiere 63.50 41 eP P 09 34 59.6 +0.8
27nm,1.1s
RJF Les Rejaudoux 63.80 44 eP P 09 35 01.6 +0.7
43nm,1.2s
RJF Les Rejaudoux 63.80 44 eP P 09 35 01.6 +0.7
43nm,1.2s
SUMG Summit 63.82 8 eP P 09 35 01.7 +0.8
27nm,1.0s
SUMG Summit 63.82 8 iP P 09 35 02.6 +1.7
18nm,0.9s
SUMG i 09 35 17.1
MTLF Montolieu 63.90 47 eP P 09 35 02.2 +0.7
40nm,1.0s
MTLF Montolieu 63.90 47 eP P 09 35 02.2 +0.7
40nm,1.0s
PGC Sidney 64.05 319 eP P 09 35 01.3 -1.1
CAF Calviac 64.10 45 eP P 09 35 03.6 +0.7
46nm,0.9s
CAF Calviac 64.10 45 eP P 09 35 03.6 +0.7
46nm,0.9s
TCF Toulx Ste Croi 64.49 43 eP P 09 35 06.0 +0.6
10nm,0.8s
TCF Toulx Ste Croi 64.49 43 eP P 09 35 06.0 +0.6
10nm,0.8s
YKA Yellowknife Ar 64.55 336 P P 09 35 03.7 -1.7
YKA pP pP 09 35 16.8 -2.3
YKA Yellowknife Ar 64.55 336 P P 09 35 03.7 -1.7
3.0nm,0.6s,baz=110,slow=7.3,SNR=84
YKA pP pP 09 35 16.7 -2.3
4.1nm,0.9s,baz=109,slow=7.2,SNR=11
TAM Tamanrasset 64.89 70 eP P 09 35 09.5 +1.0
20nm,1.0s
BGF Bois d'Agland 64.98 43 eP P 09 35 09.2 +0.7
26nm,0.9s
BGF Bois d'Agland 64.98 43 eP P 09 35 09.2 +0.7
26nm,0.9s
LASF Ste Croix 65.20 46 eP P 09 35 11.5 +1.5
18nm,1.1s
LASF Ste Croix 65.20 46 eP P 09 35 11.5 +1.5
18nm,1.1s
AVF Avril sur Loir 65.36 43 eP P 09 35 11.4 +0.4
21nm,1.0s
AVF Avril sur Loir 65.36 43 eP P 09 35 11.4 +0.4
21nm,1.0s
SSF Saint Saulge 65.52 43 eP P 09 35 12.3 +0.3
14nm,1.0s
SSF Saint Saulge 65.52 43 eP P 09 35 12.3 +0.3
14nm,1.0s
SMF Signal de Mont 65.67 43 eP P 09 35 13.6 +0.6
50nm,1.3s
SMF Signal de Mont 65.67 43 eP P 09 35 13.6 +0.6
50nm,1.3s
LOR Lormes 65.80 43 eP P 09 35 14.1 +0.3
27nm,1.1s
LOR Lormes 65.80 43 eP P 09 35 14.1 +0.3
27nm,1.1s
VIVF Saint-Julien-l 65.91 45 eP P 09 35 16.0 +1.4
21nm,1.1s
VIVF Saint-Julien-l 65.91 45 eP P 09 35 16.0 +1.4
21nm,1.1s
SMRF Simiane la Rot 66.41 46 eP P 09 35 19.2 +1.4
14nm,1.0s
SMRF Simiane la Rot 66.41 46 eP P 09 35 19.2 +1.4
14nm,1.0s
BAIF Baives 66.61 40 eP P 09 35 19.1 +0.2
BAIF Baives 66.61 40 eP P 09 35 19.1 +0.2
SFTF Sexfontaines 66.76 42 eP P 09 35 20.0 0.0
SFTF Sexfontaines 66.76 42 eP P 09 35 20.0 0.0
ORIF Oris-en-Rattie 66.77 45 eP P 09 35 21.6 +1.4
18nm,1.1s
ORIF Oris-en-Rattie 66.77 45 eP P 09 35 21.6 +1.4
18nm,1.1s
MEZF Maizieres J'vi 66.83 42 eP P 09 35 20.8 +0.4
39nm,0.9s
MEZF Maizieres J'vi 66.83 42 eP P 09 35 20.8 +0.4
39nm,0.9s
LMR La Mourre 66.99 47 eP P 09 35 22.0 +0.5
26nm,1.1s
LMR La Mourre 66.99 47 eP P 09 35 22.0 +0.5
26nm,1.1s
FRF La Foret Royal 67.12 47 eP P 09 35 22.9 +0.6
16nm,0.8s
FRF La Foret Royal 67.12 47 eP P 09 35 22.9 +0.6
16nm,0.8s
RES Resolute Bay 67.17 351 eP P 09 35 21.8 -0.3
5.9nm,0.9s
CABF La Chapelle 67.18 44 eP P 09 35 23.2 +0.4
34nm,1.2s
CABF La Chapelle 67.18 44 eP P 09 35 23.2 +0.4
34nm,1.2s
PAGF Fort de Pagny 67.28 42 eP P 09 35 23.6 +0.4
7.8nm,1.0s
PAGF Fort de Pagny 67.28 42 eP P 09 35 23.6 +0.4
7.8nm,1.0s
MBDF Montbardon 67.37 46 eP P 09 35 25.2 +1.1
8.6nm,0.8s
MBDF Montbardon 67.37 46 eP P 09 35 25.2 +1.1
8.6nm,0.8s
BCLA Clavier 67.37 40 P P 09 35 23.2 -0.5
LPL La Plagne 67.45 45 eP P 09 35 25.9 +1.2
LPL La Plagne 67.45 45 eP P 09 35 25.9 +1.2
LPG La Plagne 67.46 45 eP P 09 35 26.2 +1.4
55nm,1.5s
LPG La Plagne 67.46 45 eP P 09 35 26.2 +1.4
55nm,1.5s
HAU Haudompre 67.59 42 eP P 09 35 25.3 0.0
HAU Haudompre 67.59 42 eP P 09 35 25.3 0.0
BEBN Eben Emael 67.68 39 P P 09 35 26.1 +0.4
SBF Sospel 67.72 47 eP P 09 35 26.8 +0.6
28nm,1.0s
SBF Sospel 67.72 47 eP P 09 35 26.8 +0.6
28nm,1.0s
WLF Walferdange 67.76 40 P P 09 35 26.8 +0.6
comp=Z,9.1nm,1.5s
HINF Hinteralfeld 67.89 42 eP P 09 35 26.9 -0.3
HINF Hinteralfeld 67.89 42 eP P 09 35 26.9 -0.3
ECH Echery 68.16 42 eP P 09 35 28.6 -0.2
comp=Z,19nm,1.4s
CDF Champ du Feu 68.27 42 eP P 09 35 29.6 0.0
comp=Z,28nm,1.2s
CDF Champ du Feu 68.27 42 eP P 09 35 29.6 0.0
comp=Z,28nm,1.2s
KEST Kesra 68.47 56 eP P 09 35 32.0 +0.9
KEST Kesra 68.47 56 P P 09 35 32.2 +1.1
comp=Z,3.6nm,0.9s,baz=183,slow=1.2,SNR=10
PGF Pioggiola 68.71 48 eP P 09 35 32.9 +0.4
comp=Z,19nm,1.0s
PGF Pioggiola 68.71 48 eP P 09 35 32.9 +0.4
comp=Z,19nm,1.0s
VSL Villasalto 68.73 52 eP P 09 35 33.3 +0.8
comp=Z,14nm,0.8s
CLL Collm 72.32 39 eP P 09 35 55.0 +0.8
comp=Z,15nm,1.5s
CLL epP pP 09 36 08.0 0.0
KHC Kasperske Hory 72.50 42 eP P 09 35 54.9 -0.4
KHC ex x 09 36 03.4
KHC epP pP 09 36 09.9 +0.7
GERES GERESS Array B 72.55 42 P P 09 35 55.7 0.0
GERES pP pP 09 36 09.2 -0.3
GERES GERESS Array B 72.55 42 P P 09 35 55.7 0.0
comp=Z,3.3nm,0.8s,baz=261,slow=5.3,SNR=28
GERES pP pP 09 36 09.2 -0.3
comp=Z,2.3nm,0.7s,baz=254,slow=5.0,SNR=5.6
NB2 NORSAR Subarra 72.70 29 P P 09 35 57.8 +1.5
comp=Z,13nm,1.1s,baz=257,slow=6.2
NOA NORSAR Array B 72.70 29 P P 09 35 58.1 +1.8
NOA pP pP 09 36 11.0 +0.9
NOA NORSAR Array B 72.70 29 P P 09 35 58.1 +1.8
comp=Z,5.2nm,0.9s,baz=259,slow=5.9,SNR=16
NOA pP pP 09 36 11.0 +0.9
comp=Z,7.1nm,1.1s,baz=260,slow=5.9,SNR=8.4
BRG Berggiesshubel 72.87 40 eP P 09 35 58.4 +0.9
comp=Z,4.0nm,1.0s
PRU Pruhonice 73.19 41 eP P 09 36 00.4 +1.1
PRU ex x 09 36 08.5
PRU epP pP 09 36 14.3 +1.1
DPC Dobruska-Polom 74.35 41 eP P 09 36 06.6 +0.4
DPC epP pP 09 36 20.2 +0.1
VRAC Vranov 74.48 42 ⇑iP P 09 36 07.6 +0.7
VYHS Vyhne 75.94 43 eP P 09 36 16.5 +1.1
MENT Mentasta 77.48 332 P P 09 36 24.6 +0.8
DRGR 78.59 44 ⇓iP P 09 36 30.7 +0.4
ILAR Eielson Array 78.92 334 P P 09 36 31.1 -0.6
ILAR Eielson Array 78.92 334 P P 09 36 31.1 -0.6
comp=Z,0.6nm,0.5s,baz=90,slow=4.3,SNR=19
ARCES ARCESS Array B 79.41 21 P P 09 36 35.1 +0.9
ARCES ARCESS Array B 79.41 21 P P 09 36 35.1 +0.9
comp=Z,3.1nm,0.8s,baz=295,slow=5.0,SNR=7.2
FINES FINESS Array B 79.89 29 P P 09 36 37.8 +0.8
FINES FINESS Array B 79.89 29 P P 09 36 37.8 +0.8
comp=Z,4.9nm,0.8s,baz=302,slow=3.6,SNR=15
KAF Kangasniemi 79.96 28 ep P 09 36 36.4 -1.0
comp=Z,2.9nm,0.7s
ARR Arges 80.02 46 ⇑iP P 09 36 38.7 +0.6
BUR08 Bucovina Ar. S 80.23 43 eP P 09 36 40.7 +1.4
BURAR Bucovina Array 80.25 43 ⇑iP P 09 36 41.4 +2.0
MLR Muntele Rosu 80.93 45 ⇑iP P 09 36 44.5 +1.4
JOF Joensuu 82.21 27 ep P 09 36 48.6 -0.7
comp=Z,3.1nm,0.8s
AKASG Malin Array Be 82.56 40 P P 09 36 51.5 +0.2
AKASG Malin Array Be 82.56 40 P P 09 36 51.5 +0.2
comp=Z,0.2nm,0.3s,baz=261,slow=6.0,SNR=4.2
TSUM Tsumeb 83.07 111 eP P 09 36 55.1 +0.3
comp=Z,8.8nm,1.1s
BR131 Keskin Array S 87.37 50 eP P 09 37 16.8 +0.9
comp=Z,2.4nm,0.8s
BRTR Keskin Array B 87.37 50 P P 09 37 16.9 +0.9
BRTR Keskin Array B 87.37 50 P P 09 37 16.9 +0.9
comp=Z,2.1nm,0.9s,baz=260,slow=4.9,SNR=12
TNA Tin City 87.50 336 P P 09 37 18.3 +2.5
comp=Z,8.2nm,1.0s
VNA3 Neumayer Olymp 88.25 165 eP P 09 37 20.3 +1.1
VNA3 Neumayer Olymp 88.25 165 epP pP 09 37 37.3 +3.9
VNA2 Neumayer--Watz 88.63 165 eP P 09 37 22.1 +1.1
baz=314,slow=3.8
VNA2 Neumayer--Watz 88.63 165 epP pP 09 37 34.8 -0.4
baz=314,slow=3.8
SNAA Sanae 90.27 164 eP P 09 37 29.4 +0.7
SNAA Sanae 90.27 164 epP pP 09 37 44.9 +1.9
BOSA Boshof 91.89 119 P P 09 37 38.0 +0.7
BOSA Boshof 91.89 119 P P 09 37 38.0 +0.7
comp=Z,7.1nm,0.9s,baz=286,slow=6.5,SNR=6.9
KBZ Khabaz 93.12 45 P P 09 37 42.9 +0.3
KBZ Khabaz 93.12 45 P P 09 37 42.9 +0.3
comp=Z,2.1nm,0.8s,baz=259,slow=2.1,SNR=6.5
RAR Rarotonga 101.40 250 P Pdif 09 38 19.8 -0.6
RAR Rarotonga 101.40 250 P Pdif 09 38 19.8 -0.6
comp=Z,16nm,0.5s,baz=213,slow=11,SNR=4.9
KSH Kashi 116.63 36 PKP PKPdf 09 43 13.0 0.0
KSH sPKP 09 43 28.0
KSH PP PP 09 44 25.1 +5.0
KSH PKS PKSdf 09 46 48.9 -0.9
KSH SKS SKSdf 09 50 20.9 -0.6
KSH SKKS SKKSac 09 51 14.0 -4.1
KSH SS SS 10 00 23.3 +0.9
KSH AMB AMB
comp=Z,99nm,3.6s
KSH LR LR
comp=N,77nm,4.0s
KSH LR LR
comp=E,70nm,4.3s
KSH LR LR
comp=Z,140nm,4.8s
WMQ Urumqi 119.31 25 PKP PKPdf 09 43 17.2 -0.7
SONM Songino Array 121.19 10 PKP PKPdf 09 43 21.0 -0.5
SONM Songino Array 121.19 10 PKP PKPdf 09 43 21.0 -0.5
comp=Z,0.7nm,0.5s,baz=292,slow=0.7,SNR=8.9
CN2 Changchun 125.88 354 ePKP PKPdf 09 43 30.8 +0.4
HHC Hu-ho-hao-te 128.77 7 ePKP PKPdf 09 43 35.7 -0.5
HHC sPKP 09 43 49.9
HHC PP PP 09 45 45.7 +4.2
HHC PKS PKSdf 09 47 11.1 -1.7
HHC SKS SKSdf 09 50 41.8 -2.4
HHC SKKS SKKSac 09 52 32.4 -3.8
HHC SS SS 10 02 56.3 +1.2
HHC AMB AMB
comp=Z,320nm,9.3s
HHC LR LR
comp=N,180nm,20.1s
HHC LR LR
comp=E,330nm,21.8s
HHC LR LR
comp=Z,200nm,21.4s
BJI Beijing 129.95 2 PKP PKPdf 09 43 37.4 -0.9
BJI SS SS 10 03 10.1 +0.8
BJI LR LR
comp=N,140nm,16.3s
BJI LR LR
comp=E,190nm,15.2s
BJI LR LR
comp=Z,82nm,23.1s
KSRS Korea Array 131.78 350 PKP PKPdf 09 43 41.5 -0.4
comp=Z,1.2nm,0.8s,baz=199,slow=2.3,SNR=5.9
KSRS SKPbc SKPab 09 47 06.7 +2.2
comp=Z,2.8nm,1.0s,baz=0.6,slow=5.0,SNR=9.8
KSAR Wonju Array Be 131.80 350 PKP PKPdf 09 43 41.5 -0.4
KSAR SKPbc SKPab 09 47 06.7 +2.1
LZH Lanzhou 131.88 16 ePKP PKPdf 09 43 43.2 +0.9
LZH sPKP 09 43 58.9
CD2 Chengdu 136.69 19 PKP PKPdf 09 43 49.6 -1.7
KMI Kunming 141.61 24 PKP PKPdf 09 43 57.4 -3.3
GYA Guiyang 141.73 17 ePKP PKPdf 09 43 58.8 -1.9
GYA sPKP 09 44 18.0
GYA PP PP 09 47 06.2 +2.7
GYA AMB AMB
comp=Z,90nm,7.9s
CHTO Chiang Mai 145.23 34 ePKPbc PKPdf 09 44 07.1 +0.2
CHTO epPKPdf pPKPdf 09 44 19.9 -1.7
CMAR Chiang Mai Arr 145.51 34 PKPbc PKPab 09 44 08.4 +0.7
CMAR Chiang Mai Arr 145.51 34 PKPbc PKPab 09 44 08.4 +0.7
comp=Z,23nm,1.0s,baz=314,slow=5.0,SNR=78
STKA Stephens Creek 149.73 221 PKPbc PKPbc 09 44 19.2 +0.5
STKA Stephens Creek 149.73 221 PKPbc PKPbc 09 44 19.2 +0.5
comp=Z,8.4nm,1.1s,baz=348,slow=3.7,SNR=4.7
CTA Charters Tower 151.63 247 PKPbc PKPbc 09 44 24.9 +1.4
CTA Charters Tower 151.63 247 PKPbc PKPbc 09 44 24.9 +1.4
comp=Z,12nm,0.7s,baz=144,slow=1.5,SNR=11
CTAO Charters Tower 151.63 247 ePKPdf PKPdf 09 44 17.1 -0.1
CTAO ePKPbc PKiKP 09 44 24.8 +0.9
ASAR Alice Springs 160.22 226 PKP PKPdf 09 44 29.3 +0.8
ASAR PKPab PKPab 09 45 09.5 +0.6
ASAR Alice Springs 160.22 226 PKP PKPdf 09 44 29.3 +0.8
comp=Z,1.3nm,0.9s,baz=128,slow=0.7,SNR=8.1
ASAR PKPab PKPab 09 45 09.5 +0.6
comp=Z,2.1nm,0.8s,baz=119,slow=4.8,SNR=8.2
WRA Warramunga Arr 162.03 236 PKP PKPdf 09 44 31.4 +0.8
WRA PKPab PKPab 09 45 16.9 0.0
WRA Warramunga Arr 162.03 236 PKP PKPdf 09 44 31.4 +0.8
comp=Z,3.2nm,1.1s,baz=94,slow=0.8,SNR=10.0
WRA PKPab PKPab 09 45 16.9 0.0
comp=Z,1.9nm,0.9s,baz=114,slow=4.2,SNR=7.1

DJA ***04*** *09:29:45.7±0.6,3°S±2°×12°7E±°,h14km±5km,M4.9/18, mb5.2/9,mB5.2/6,MLv5.1/18,Mw(mB)4.6/6*

GCMT ***04*** *09:29:46.8±0.3,2.85S×126.59E,h22km±2km,MW5.1, Moment Tensor Solution. s12,c15; s61,c86; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.26±.31; $M_{\theta\theta}$-4.41±.23; $M_{\phi\phi}$4.67±.28; $M_{r\theta}$0.72±.33; $M_{\theta\phi}$1.64±.16; $M_{r\phi}$0.65±.40; Best double couple: M_o4.90000×10^{16} NP1:ϕ_s325.00000°, δ79.00000°,λ180.00000°. NP2:ϕ_s55.00000°,δ90.00000°, λ11.00000°. Principal axes: T 5.0700, Plg8.0000°, Azm280.0000°; N -0.2900, Plg79.0000°, Azm57.0000°; P -4.7800, Plg8.0000°, Azm189.0000°; Data Used: II IC IU G CN.*

ISCJB ***04*** *09:29:46.0±0.2,3°10S±0°03×126°63E±0°03,h32km, mb4.6/42,MS4.2/13 Error ellipse: s-maj=4.2km s-min=3.1km az=136.8*

IDC ***04*** *09:29:47.5±2.6,3°13S×126°61E,h30km±18km,mb4.1/16, mb1 4.3/19,mb1mx4.2/29,mbtmp4.2/19,ML4.5/3,MS4.1/9, Ms1 4.1/9,ms1mx3.7/41,Error ellipse: s-maj=20.2km s-min=7.7km az=67.0*

NEIC ***04*** *09:29:48.0±0.2,3°09S×126°67E,h35km,mb4.7/23,Error ellipse: s-maj=6.8km s-min=3.7km az=61.0*

AUST ***04*** *09:29:49.4±0.0,3°02S×126°65E,h66km,Error ellipse: s-maj=1.1km s-min=0.8km az=3.0*

ISC 04 09:29:48.2±0.3,3°09S±0°03×126°71E±0°04,h32km,n142,
σ1§69/200,mb4.7/42,MS4.2/14,1C-1D,Buru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	Namlea	0.42	111	P	Pb	09 29 56.2	-1.3
NLAI				S	Sn	09 30 04.7	0.0
AAI	Ambon	1.60	112	P	Pb	09 30 15.8	-1.3
AAI	Ambon	1.60	112	P	Pb	09 30 16.7	-0.4
	baz=1.7,SNR=146						
MSAI	Masohi	2.23	97	P	Pn	09 30 23.8	+0.8
LBMI	Labuha	2.56	18	P	Pn	09 30 25.0	-2.5
LBMI				S	Sn	09 30 53.5	-4.1
BNDI	Bandanaira	3.50	114	P	Pn	09 30 41.8	+1.5
TNTI	Ternate	3.89	10	P	Pn	09 30 43.1	-2.7
TNTI				S	Sn	09 31 25.9	-4.5
KDI	Kendari	4.17	258	P	Pn	09 30 48.2	-1.4
LUWI	Luwuk	4.43	297	P	Pn	09 30 50.6	-2.5
LUWI				S	Sn	09 31 39.5	-4.1
BBSI	Bau Bau	4.76	240	P	Pn	09 30 58.4	+0.6
BBSI				S	Sn	09 31 59.3	+7.4
MNI	Manado	4.87	337	P	Pn	09 30 56.4	-2.9
MNI				S	Sn	09 31 50.0	-4.7
SWI	Sorong	5.06	64	P	Pn	09 31 00.8	-1.1
SWI				S	Sn	09 31 56.4	-2.8
SWI	Sorong	5.06	64	P	Pn	09 31 01.8	-0.1
	baz=5.1,SNR=26						
SWI				S	Sn	09 31 56.9	-2.3
	baz=5.1,SNR=12						
FAKI	Fak Fak	5.54	88	P	Pn	09 31 10.3	+1.9
	191nm,0.8s,4μm1.3nm						
TLE	Tual	6.52	113	P	Pn	09 31 23.8	+1.8
	379nm,0.9s,1.1nm						
TLE	Tual	6.52	113	P	Pn	09 31 25.9	+3.8
	baz=6.6,SNR=14						
BKSI	Bulukumba	6.93	251	P	Pn	09 31 26.9	-0.7
	166nm,0.9s,2μm0.5nm						
SPSI	Sidrap Palu	6.98	263	P	Pn	09 31 27.4	-0.8
	115nm,0.7s,1μm0.4nm						
MMRI	Maumere	7.08	219	P	Pn	09 31 29.7	+0.1
	160nm,1.2s,2μm0.6nm						
KAPI	Kappang	7.20	254	Pn	Pn	09 31 30.8	-0.4
KAPI				eSn	Sn	09 32 49.8	-2.1
KAPI	Kappang	7.20	254	P	Pn	09 31 31.0	-0.2
	159nm,0.6s,2μm0.6nm						
KAPI	Kappang	7.20	254	Pn	Pn	09 31 30.8	-0.4
	16nm,0.3s,baz=110,slow=4.9,SNR=52						
KAPI				LR	LR	09 34 23.4	
	comp=Z,3μm,21.9s,baz=91,slow=39						
PCI	Palu	7.20	287	S	Sn	09 32 36.7	-15
	baz=7.1,SNR=10.0						
BAKI	Biak	9.58	79	P	Pn	09 32 01.3	-2.7
	102nm,1.0s						
CTBH	Cotabato--PC H	10.53	347	⇑iP	Pn	09 32 13.7	-3.3
MTN	Manton Dam	10.63	156	P	Pn	09 32 22.7	+4.3
	baz=11,SNR=23						
KDU	Kakadu	11.11	149	P	Pn	09 32 28.3	+3.4
	baz=11,SNR=22						
SMPI	Sarmi	12.04	85	P	Pn	09 32 38.5	+0.8
KKM	Kota Kinabalu	13.86	311	ePn	Pn	09 33 01.2	-1.4
FITZ	Fitzroy Crossi	14.96	184	ePn	Pn	09 33 16.4	-1.0
	45nm,1.0s						
FITZ				eSn	Sn	09 35 50.5	-12
FITZ				Sn	S	09 36 01.4	-18
FITZ	Fitzroy Crossi	14.96	184	Pn	Pn	09 33 16.4	-1.0
	0.8nm,0.3s,baz=23,slow=10,SNR=16						
FITZ				Sn	Sn	09 36 01.4	-0.8
	0.3nm,0.3s,baz=60,slow=9.9,SNR=3.6						
FITZ				LR	LR	09 39 25.3	
	comp=Z,417nm,18.0s,baz=211,slow=39						
FITZ	Fitzroy Crossi	14.96	184	P	Pn	09 33 17.0	-0.4
	baz=15,SNR=40						
KSM	Kuching	17.01	285	ePn	Pn	09 33 43.3	-0.5
	28nm,1.1s						
KSM				eS	Sn	09 36 53.4	+1.4
KSM	Kuching	17.01	285	P	Pn	09 33 44.2	+0.4
	baz=17,SNR=4.6						
WRAB	Tennant Creek	18.33	157	eP	P	09 33 59.3	-0.7
	43nm,0.8s						
WRAB				eS	Sn	09 37 19.0	-5.0
WRA	Warramunga Arr	18.33	157	P	P	09 33 59.8	-0.3
WRA				S	Sn	09 37 25.6	+1.5
WRA				ScP	ScP	09 42 04.1	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.33**	**157**	P	**P**	**09 33 59.8**	**-0.3**
	2.1nm,0.3s,baz=340,slow=12,SNR=67						
WRA				S	**Sn**	**09 37 25.6**	**+1.5**
	0.5nm,0.3s,baz=335,slow=21,SNR=5.9						
WRA				ScP	**ScP**	**09 42 04.1**	**-0.2**
	0.1nm,0.3s,baz=330,slow=2.2,SNR=4.9						
MBWA	**Marble Bar**	**19.20**	**200**	*e*P	**P**	**09 34 09.7**	**+0.2**
	23nm,1.0s						
COEN	**Coen**	**19.52**	**125**	*e*P	**P**	**09 34 12.8**	**-0.3**
	350nm,0.8s						
COEN	**Coen**	**19.52**	**125**	P	**P**	**09 34 12.0**	**-1.1**
	baz=20,SNR=58						
COEN				S	**S**	**09 37 51.6**	**-0.5**
	baz=20,SNR=4.7						
PMG	**Port Moresby**	**21.27**	**108**	P	**P**	**09 34 31.8**	**-0.2**
	2.0nm,0.9s						
PMG	**Port Moresby**	**21.27**	**108**	P	**P**	**09 34 31.8**	**-0.2**
	16nm,0.8s,baz=114,slow=1.6,SNR=7.4						
QIS	**Mount Isa**	**21.44**	**145**	P	**P**	**09 34 33.9**	**+0.1**
	baz=22,SNR=20						
AS31	**Alice Springs**	**21.61**	**162**	*e*P	**P**	**09 34 35.2**	**-0.5**
AS31				*e*S	**S**	**09 38 31.1**	**-2.4**
ASAR	**Alice Springs**	**21.61**	**162**	P	**P**	**09 34 35.1**	**-0.5**
ASAR				S	**S**	**09 38 32.7**	**-0.8**
ASAR				ScP	**ScP**	**09 42 11.9**	**0.0**
ASAR	**Alice Springs**	**21.61**	**162**	P	**P**	**09 34 35.1**	**-0.5**
	10.0nm,0.5s,baz=342,slow=12,SNR=313						
ASAR				S	**S**	**09 38 32.7**	**-0.8**
	17nm,0.9s,baz=349,slow=23,SNR=13						
ASAR				ScP	**ScP**	**09 42 11.9**	**0.0**
	0.6nm,0.7s,baz=338,slow=2.1,SNR=4.0						
GIRL	**Giralia**	**22.89**	**211**	P	**P**	**09 34 49.3**	**-0.1**
	baz=23,SNR=5.2						
GUMO	**Guam**	**24.48**	**47**	LR	LR	09 42 26.5	
	comp=Z,353nm,20.3s,baz=269,slow=31						
MEEK	**Meekatharra**	**24.67**	**198**	P	**P**	**09 35 04.6**	**-1.7**
	baz=25,SNR=12						
CTA	**Charters Tower**	**25.48**	**133**	P	**P**	**09 35 13.9**	**+0.2**
CTA	**Charters Tower**	**25.48**	**133**	P	**P**	**09 35 13.9**	**+0.2**
	8.7nm,0.8s,baz=313,slow=12,SNR=9.7						
CTAO	**Charters Tower**	**25.48**	**133**	*e*P	**P**	**09 35 13.8**	**+0.1**
	143nm,2.4s						
TWG	**Pinlang**	**26.33**	**348**	*e*P	**P**	**09 35 19.2**	**-2.1**
	44nm,0.6s						
IPM	**Ipoh**	**26.74**	**286**	*e*P	**P**	**09 35 24.7**	**-0.5**
	19nm,0.9s						
TPUB	**Ta-pu**	**26.89**	**348**	*e*P	**P**	**09 35 25.0**	**-1.4**
	52nm,1.3s						
SSLB	**Suanglung**	**27.30**	**348**	*e*P	**P**	**09 35 28.8**	**-1.2**
	14nm,0.9s						
FORT	**Forrest**	**27.57**	**177**	*e*P	**P**	**09 35 30.9**	**-1.5**
	48nm,1.2s						
MORW	**Morawa**	**27.76**	**200**	P	**P**	**09 35 31.6**	**-2.5**
	baz=28,SNR=3.4						
YHNB	**Yeheng**	**28.07**	**350**	*e*P	**P**	**09 35 35.5**	**-1.5**
	20nm,0.8s						
PSI	**Prapat**	**28.38**	**282**	P	**P**	**09 35 38.7**	**-1.3**
PSI	**Prapat**	**28.38**	**282**	P	**P**	**09 35 38.7**	**-1.3**
	5.4nm,0.5s,baz=265,slow=23,SNR=5.4						
PSI				LR	LR	09 48 45.2	
	comp=Z,689nm,18.7s,baz=247,slow=40						
BLDU	**Ballidu**	**28.96**	**198**	P	**P**	**09 35 43.4**	**-1.5**
	baz=29,SNR=4.2						
GSI	**Gunungsitoli**	**29.45**	**278**	S	S	09 40 55.5	+14
	baz=29,SNR=3.8						
STKA	**Stephens Creek**	**31.88**	**156**	P	**P**	**09 36 09.3**	**-1.4**
	14nm,0.7s						
STKA				*e*PcP	**PcP**	**09 39 01.4**	**+0.5**
STKA	**Stephens Creek**	**31.88**	**156**	P	**P**	**09 36 09.3**	**-1.4**
	3.5nm,0.5s,baz=319,slow=11,SNR=11						
STKA	**Stephens Creek**	**31.88**	**156**	P	**P**	**09 36 09.2**	**-1.4**
	baz=32,SNR=8.6						
CMSA	**Cobar Meteorol**	**33.48**	**150**	P	**P**	**09 36 23.9**	**-0.7**
	baz=34,SNR=14						
CMAR	**Chiang Mai Arr**	**34.73**	**309**	P	**P**	**09 36 35.7**	**+0.1**
CMAR	**Chiang Mai Arr**	**34.73**	**309**	P	**P**	**09 36 35.7**	**+0.1**
	5.7nm,0.9s,baz=140,slow=8.0,SNR=22						
CMAR				LR	LR	09 51 19.2	
	comp=Z,261nm,18.3s,baz=136,slow=37						
CHTO	**Chiang Mai**	**34.93**	**310**	*e*P	**P**	**09 36 37.1**	**-0.3**
	11nm,1.0s						
GYA	**Guiyang**	**35.19**	**328**	P	**P**	**09 36 41.0**	**+1.4**
GYA				pP	**pP**	**09 36 51.2**	**+2.2**
GYA				sP	**sP**	**09 36 56.0**	**+3.1**
GYA				PP	**PP**	**09 38 01.2**	**+1.3**
GYA				PcP	**PcP**	**09 39 11.8**	**+1.3**
GYA				S	**S**	**09 42 12.4**	**+1.2**
GYA				sS	**sS**	**09 42 30.3**	**+3.7**
GYA				ScP	**ScP**	**09 42 52.7**	**-1.3**
GYA				ScS	**ScS**	**09 46 55.6**	**-2.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,80nm,4.9s						
GYA				LR	LR		
	comp=N,370nm,17.6s						
GYA				LR	LR		
	comp=E,250nm,18.1s						
GYA				LR	LR		
	comp=Z,360nm,17.6s						
WHN	**Wuhan**	**35.47**	**341**	P	**P**	**09 36 44.3**	**+2.5**
NJ2	**Nanjing**	**35.73**	**349**	*e*P	**P**	**09 36 45.8**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,50nm,1.0s						
ARPS	**Mount Arapiles**	**36.30**	**159**	P	**P**	**09 36 49.3**	**+0.4**
	baz=36,SNR=6.3						
KMI	**Kunming**	**36.43**	**322**	P	**P**	**09 36 52.3**	**+1.9**
KMI				pP	**pP**	**09 37 01.1**	**+1.3**
KMI				sP	**sP**	**09 37 05.9**	**+2.2**
KMI				PP	**PP**	**09 38 17.3**	**+3.6**
KMI				S	**S**	**09 42 32.0**	**+1.6**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,72nm,5.4s						
KMI				LR	LR		
	comp=N,170nm,22.0s						
KMI				LR	LR		
	comp=E,220nm,19.7s						
KMI				LR	LR		
	comp=Z,290nm,19.7s						
YNG	**Young**	**37.04**	**149**	P	**P**	**09 36 55.1**	**-0.2**
	baz=37,SNR=6.3						
KSAR	**Wonju Array Be**	**40.34**	**1**	P	**P**	**09 37 22.4**	**-0.5**
KSRS	**Korea Array**	**40.35**	**1**	P	**P**	**09 37 22.4**	**-0.6**
	comp=Z,7.5nm,0.8s,baz=180,slow=9.9,SNR=29						
KSRS				LR	LR	09 54 05.8	
	comp=Z,183nm,19.1s,baz=355,slow=36						
MJAR	**Matsushiro Arr**	**40.86**	**14**	P	**P**	**09 37 26.8**	**-0.4**
MJAR	**Matsushiro Arr**	**40.86**	**14**	P	**P**	**09 37 26.8**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=190,slow=9.6,SNR=4.9						
SHL	**Shillong**	**44.16**	**312**	*e*P	**P**	**09 37 55.0**	**+0.6**
LZH	**Lanzhou**	**44.45**	**333**	*e*P	**P**	**09 37 57.2**	**+0.7**
LZH				pP	**pP**	**09 38 08.8**	**+2.8**
LZH				sP	**sP**	**09 38 14.2**	**+4.3**
LZH				*e*S	**S**	**09 44 32.5**	**+2.9**
LZH				SS	SS	09 47 41.3	-8.4
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,6.9s						
LZH				LR	LR		
	comp=N,410nm,15.8s						
LZH				LR	LR		
	comp=E,340nm,15.7s						
LZH				LR	LR		
	comp=Z,540nm,18.8s						
SNY	**Shenyang**	**44.80**	**357**	⇓P	**P**	**09 38 01.5**	**+2.6**
SNY				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC	**Hu-ho-hao-te**	**45.87**	**344**	*e*P	**P**	**09 38 09.3**	**+1.7**
HHC				sP	**sP**	**09 38 18.3**	**-2.7**
HHC				PcP	**PcP**	**09 39 46.2**	**+1.6**
HHC				PP	**PP**	**09 39 57.4**	**+1.8**
HHC				ScP	**ScP**	**09 43 37.1**	**+1.6**
HHC				PcS	**PcS**	**09 43 38.8**	**-0.1**
HHC				S	**S**	**09 44 52.9**	**+3.0**
HHC				sS	**sS**	**09 45 02.8**	**-2.8**
HHC				ScS	**ScS**	**09 48 01.4**	**0.0**
HHC				SS	**SS**	**09 48 10.1**	**-4.9**
HHC				pmax	pmax		
	comp=Z,24nm,0.6s						
HHC				pmax	pmax		
	comp=Z,290nm,6.3s						
HHC				LR	LR		
	comp=N,360nm,15.9s						
HHC				LR	LR		
	comp=E,300nm,15.9s						
HHC				LR	LR		
	comp=Z,330nm,15.3s						
CN2	**Changchun**	**46.69**	**359**	*e*P	**P**	**09 38 15.7**	**+1.8**
LSA	**Lhasa**	**47.12**	**316**	P	P	09 38 12.2	-5.9
USRK	**Ussuriysk Arra**	**47.31**	**5**	P	**P**	**09 38 18.1**	**-0.7**
	comp=Z,4.6nm,0.8s,baz=204,slow=5.9,SNR=9.5						
ODAN	**Odare**	**48.23**	**311**	*e*P	**P**	**09 38 26.7**	**+0.2**
	comp=Z,25nm,0.7s						
TAPN	**Taplejung**	**48.25**	**311**	*e*P	**P**	**09 38 26.7**	**0.0**
	comp=Z,79nm,1.1s						
RAMN	**Ramite**	**48.88**	**310**	*e*P	**P**	**09 38 32.0**	**+0.5**
	comp=Z,39nm,0.6s						
GTA	**Gaotai**	**49.00**	**332**	*e*P	**P**	**09 38 32.8**	**+0.7**
GTA				pP	**pP**	**09 38 43.5**	**+1.8**
GTA				sP	**sP**	**09 38 47.3**	**+1.8**
GTA				PP	**PP**	**09 40 28.2**	**+2.4**
GTA				S	**S**	**09 45 35.6**	**+1.0**
GTA				sS	**sS**	**09 45 53.1**	**+2.7**
GTA				SS	**SS**	**09 49 03.6**	**-2.4**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,210nm,5.2s						
GTA				LR	LR		
	comp=N,220nm,15.2s						
GTA				LR	LR		
	comp=E,180nm,20.4s						
GTA				LR	LR		
	comp=Z,230nm,19.0s						
GUN	**Gumba**	**49.93**	**311**	*e*P	**P**	**09 38 39.7**	**+0.1**
PKI	**Pulchoki**	**50.11**	**310**	*e*P	**P**	**09 38 40.6**	**-0.4**
DMN	**Daman**	**50.36**	**310**	*e*P	**P**	**09 38 43.0**	**+0.2**
	comp=Z,34nm,1.0s						
KOLN	**Koldanda**	**51.60**	**309**	*e*P	**P**	**09 38 52.0**	**0.0**
	comp=Z,37nm,0.7s						
HYB	**Hyderabad**	**51.68**	**295**	*i* P	**P**	**09 38 51.0**	**-1.6**
DANN	**Dangsing**	**51.76**	**310**	*e*P	**P**	**09 38 53.1**	**-0.3**
	comp=Z,47nm,0.7s						
PYUN	**Piuthan**	**52.23**	**309**	*e*P	**P**	**09 38 56.8**	**+0.1**
	comp=Z,65nm,1.0s						
MSVF	**Nonsavu**	**52.36**	**110**	*e*P	P	09 38 50.9	-6.8
	comp=Z,312nm,2.1s						
ULN	**Ulaanbaatar**	**53.58**	**344**	*e*P	**P**	**09 39 05.9**	**-0.4**
	comp=Z,8.1nm,1.0s						
SONM	**Songino Array**	**53.74**	**343**	P	**P**	**09 39 07.0**	**-0.5**
SONM	**Songino Array**	**53.74**	**343**	P	**P**	**09 39 07.0**	**-0.5**
	comp=Z,6.5nm,1.1s,baz=160,slow=7.6,SNR=16						
HMDM	**Hanimaadhoo**	**54.32**	**281**	P	P	09 39 18.3	+6.2
	baz=54,SNR=4.1						
WMQ	**Urumqi**	**58.35**	**328**	P	**P**	**09 39 41.0**	**+0.6**
WMQ				pP	**pP**	**09 39 51.0**	**+0.8**
WMQ				sP	**sP**	**09 39 55.0**	**+1.0**
WMQ				PcP	**PcP**	**09 40 32.0**	**+0.8**
WMQ				PP	**PP**	**09 41 51.0**	**+1.1**
WMQ				ScP	**ScP**	**09 44 28.0**	**-1.4**
WMQ				S	**S**	**09 47 39.0**	**-2.1**
WMQ				ScS	**ScS**	**09 49 24.0**	**-4.0**
WMQ				SS	**SS**	**09 51 33.0**	**-0.7**
WMQ				pmax	pmax		
	comp=Z,19nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,23nm,5.0s						
WMQ				LR	LR		
	comp=N,190nm,18.0s						
WMQ				LR	LR		
	comp=E,180nm,18.0s						
WMQ				LR	LR		
	comp=Z,200nm,18.0s						
KSH	**Kashi**	**62.94**	**318**	P	**P**	**09 40 12.2**	**+0.3**
KSH				pP	**pP**	**09 40 23.4**	**+1.7**
KSH				sP	**sP**	**09 40 26.3**	**+0.8**
KSH				PcP	**PcP**	**09 40 49.5**	**-0.3**
KSH				PP	**PP**	**09 42 33.2**	**+2.6**
KSH				ScP	**ScP**	**09 44 47.0**	**-2.9**
KSH				PcS	**PcS**	**09 44 51.4**	**-2.0**
KSH				S	**S**	**09 48 40.5**	**+0.5**
KSH				sS	**sS**	**09 48 57.4**	**+1.1**
KSH				ScS	**SKSac**	**09 50 00.3**	**-2.3**
KSH				SS	**SS**	**09 52 48.0**	**+2.1**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,190nm,4.0s						
KSH				LR	LR		
	comp=N,950nm,15.0s						
KSH				LR	LR		
	comp=E,330nm,9.0s						
KSH				LR	LR		
	comp=Z,330nm,8.6s						
MKAR	**Makanchi Array**	**63.18**	**327**	P	**P**	**09 40 12.9**	**-0.3**
MKAR	**Makanchi Array**	**63.18**	**327**	P	**P**	**09 40 12.9**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=126,slow=8.1,SNR=18						
TKM2	**Tokmak 2**	**64.90**	**321**	*e*P	**P**	**09 40 24.5**	**-0.3**
	comp=Z,8.7nm,1.4s						
YAK	**Yakutsk**	**64.98**	**2**	*e*P	**P**	**09 40 25.0**	**+0.3**
	comp=Z,12nm,0.5s						
AAK	**Ala-Archa**	**65.45**	**320**	P	**P**	**09 40 27.5**	**-0.9**
AAK	**Ala-Archa**	**65.45**	**320**	P	**P**	**09 40 27.5**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=156,slow=12,SNR=2.4						
AAK				LR	LR	10 09 36.2	
	comp=Z,142nm,21.8s,baz=335,slow=36						
KBL	**Kabul**	**65.75**	**310**	*e*P	**P**	**09 40 30.4**	**-0.1**
	comp=Z,2.7nm,0.3s						
EKS2	**Erkin-Say**	**65.93**	**320**	*e*P	**P**	**09 40 31.5**	**+0.1**
	comp=Z,6.5nm,1.2s						
ZAA0	**Zalesovo Array**	**66.66**	**335**	*e*P	**P**	**09 40 34.6**	**-1.1**
ZALV	**Zalesovo Beam**	**66.66**	**335**	P	**P**	**09 40 34.1**	**-1.5**
ZALV	**Zalesovo Beam**	**66.66**	**335**	P	**P**	**09 40 34.1**	**-1.5**
	comp=Z,2.7nm,1.1s,baz=111,slow=6.5,SNR=8.2						
KURK	**Kurchatov**	**67.50**	**329**	*e*P	**P**	**09 40 40.1**	**-0.9**
	comp=Z,30nm,1.5s						
BRVK	**Borovoye**	**73.10**	**328**	*e*P	**P**	**09 41 14.2**	**-1.0**
	comp=Z,12nm,1.3s						
TIXI	**Tiksi**	**74.62**	**1**	*e*P	**P**	**09 41 23.1**	**-0.7**
	comp=Z,2.7nm,0.6s						
VNDA	**Vanda**	**76.71**	**173**	P	**P**	**09 41 33.8**	**-1.9**
VNDA	**Vanda**	**76.71**	**173**	P	**P**	**09 41 33.8**	**-1.9**
	comp=Z,0.9nm,0.5s,baz=333,slow=6.3,SNR=9.2						
MAW	**Mawson**	**77.40**	**201**	LR	LR	10 15 27.2	
	comp=Z,241nm,18.8s,baz=18,slow=35						
ABKAR	**Akbulak array**	**77.43**	**322**	*e*P	**P**	**09 41 39.3**	**-1.0**
	comp=Z,0.9nm,0.6s						
AKTO	**Aktyubinsk**	**78.99**	**323**	P	**P**	**09 41 47.9**	**-1.0**
AKTO	**Aktyubinsk**	**78.99**	**323**	P	**P**	**09 41 47.9**	**-1.0**
	comp=Z,1.8nm,0.6s,baz=116,slow=8.5,SNR=6.1						
ILAR	**Eielson Array**	**91.23**	**25**	P	**P**	**09 42 51.5**	**+1.4**
ILAR	**Eielson Array**	**91.23**	**25**	P	**P**	**09 42 51.5**	**+1.4**
	comp=Z,0.9nm,0.9s,baz=238,slow=4.6,SNR=6.8						
BRTR	**Keskin Array B**	**94.32**	**309**	LR	LR	10 33 40.3	
	comp=Z,49nm,19.5s,baz=187,slow=41						
VNA2	**Neumayer--Watz**	**100.25**	**194**	*e*PKiKP	**PKiKP**	**09 47 56.8**	**-1.2**
	baz=186,slow=5.5						
VNA3	**Neumayer Olymp**	**100.56**	**193**	*e*PKiKP	**PKiKP**	**09 47 54.2**	**-4.4**
PFO	**Pinyon Flat Ob**	**113.94**	**55**	*e*PKPdf	**PKiKP**	**09 48 26.8**	**+2.1**
GLA	**Glamis**	**115.39**	**55**	*e*PKPdf	**PKPdf**	**09 48 29.5**	**+2.2**
TORD	**Torodi Ar. Bea**	**124.76**	**284**	PKP	**PKPdf**	**09 48 45.5**	**-0.3**
TORD	**Torodi Ar. Bea**	**124.76**	**284**	PKP	**PKPdf**	**09 48 45.5**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=66,slow=1.7,SNR=7.5						
JTS	**JuntasAbangare**	**147.78**	**76**	*e*PKPbc	**PKPbc**	**09 49 31.3**	**+0.4**
JTS	**JuntasAbangare**	**147.78**	**76**	PKPbc	**PKPbc**	**09 49 31.4**	**+0.4**
	comp=Z,8.8nm,0.8s,baz=285,slow=2.3,SNR=11						
CPUP	**Villa Florida**	**150.49**	**173**	PKPbc	**PKPbc**	**09 49 35.9**	**-1.5**
CPUP	**Villa Florida**	**150.49**	**173**	PKPbc	**PKPbc**	**09 49 35.9**	**-1.5**
	comp=Z,1.3nm,0.5s,baz=135,slow=3.0,SNR=5.2						
ATAH	**Atahualpa**	**152.97**	**112**	PKPbc	**PKPbc**	**09 49 44.9**	**+0.9**
ATAH	**Atahualpa**	**152.97**	**112**	PKPbc	**PKPbc**	**09 49 44.9**	**+0.9**
	comp=Z,3.5nm,0.6s,baz=231,slow=14,SNR=2.9						
LPAZ	**La Paz**	**155.80**	**143**	PKPab	**PKPab**	**09 50 07.0**	**-0.2**
LPAZ	**La Paz**	**155.80**	**143**	PKPab	**PKPab**	**09 50 07.0**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=92,slow=1.8,SNR=6.3						

*IDC **04** 09:36:00.1±6.8, 28°.97S×178°.30W, h130km±58km, mb3.5/6, mb1 3.6/7, mb1mx3.6/18, mbtmp3.6/7, Error ellipse: s-maj=40.9km s-min=32.6km az=45.0*
*ISCJB **04** 09:36:05.7±1.2, 29°.49S±0°.06×178°.3W±0°.2, h204km, mb3.5/6, Error ellipse: s-maj=29.8km s-min=6.7km az=9.0*
ISC 04 09:36:07.7±1.1**, 29°.51S**±0°.08×**178°.5W**±0°.2**, h204**km**, n24, σ2ˢ.32**/33**, mb3.7**/6**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**8.97**	**197**	*e*PN	**Pn**	**09 38 13.1**	**-0.4**
PUZ				*e*SN	**S**	**09 39 53.4**	**-0.8**
MWZ	**Matawai**	**9.41**	**200**	*e*PN	**Pn**	**09 38 18.7**	**-0.6**
MWZ				*e*SN	**S**	**09 40 07.4**	**+2.5**
URZ	**Urewera**	**9.47**	**202**	*e*PN	**Pn**	**09 38 20.4**	**+0.4**
URZ				*e*SN	**S**	**09 40 09.9**	**+3.8**
URZ	**Urewera**	**9.47**	**202**	P	**Pn**	**09 38 20.8**	**+0.8**
	0.5nm,0.3s,baz=90,slow=11,SNR=5.2						
URZ				S	**S**	**09 40 10.5**	**+4.3**
	6.6nm,0.3s,baz=307,slow=21,SNR=18						
BKZ	**Black Stump Fm**	**10.50**	**202**	*e*PN	**Pn**	**09 38 33.2**	**-0.1**
BKZ				*e*SN	**S**	**09 40 32.6**	**+1.8**
BHHZ	**Black Hill Sta**	**10.93**	**203**	*e*PN	**Pn**	**09 38 42.0**	**+3.1**
PXZ	**Pawanui**	**11.18**	**199**	*e*PN	**Pn**	**09 38 41.1**	**-0.8**
PXZ				*e*SN	**S**	**09 40 42.5**	**-3.7**
MRZ	**Mangatainoka R**	**12.15**	**202**	*e*PN	**Pn**	**09 38 52.9**	**-1.3**
MRZ				*e*SN	**S**	**09 41 04.5**	**-4.8**
TCW	**Tory Channel**	**13.09**	**205**	*e*SN	**S**	**09 41 27.3**	**-4.3**
NNZ	**Nelson**	**13.44**	**207**	*e*PN	**Pn**	**09 39 11.4**	**+0.9**
NNZ				*e*SN	**S**	**09 41 36.1**	**-3.6**
THZ	**Tophouse**	**14.09**	**207**	*e*PN	**P**	**09 39 19.9**	**-0.3**
THZ				*e*SN	**S**	**09 41 51.3**	**-3.7**
KHZ	**Kahutara**	**14.41**	**204**	*e*PN	**P**	**09 39 23.6**	**-0.1**
STKA	**Stephens Creek**	**34.30**	**256**	P	**P**	**09 42 37.1**	**+2.3**
	1.2nm,0.8s,baz=98,slow=19,SNR=1.8						
ASAR	**Alice Springs**	**42.76**	**266**	P	**P**	**09 43 46.4**	**+1.0**
	0.3nm,0.4s,baz=103,slow=7.0,SNR=6.2						
WRA	**Warramunga Arr**	**43.66**	**271**	P	**P**	**09 43 52.0**	**-0.5**
	0.2nm,0.3s,baz=110,slow=6.4,SNR=5.8						
MJAR	**Matsushiro Arr**	**77.28**	**325**	P	**P**	**09 47 38.1**	**-1.4**
	1.8nm,0.7s,baz=158,slow=4.9,SNR=6.6						
KSRS	**Korea Array**	**83.41**	**320**	P	**P**	**09 48 11.8**	**-0.2**
	1.4nm,0.8s,baz=144,slow=6.5,SNR=5.0						
USRK	**Ussuriysk Arra**	**86.19**	**327**	P	**P**	**09 48 24.4**	**-1.4**
	1.8nm,0.7s,baz=150,slow=5.4,SNR=6.7						
FINES	**FINESS Array B**	**144.17**	**340**	PKP	**PKPab**	**09 55 16.2**	**-0.5**
	1.6nm,0.5s,baz=60,slow=3.5,SNR=30						
NB2	**NORSAR Subarra**	**147.81**	**351**	PKP	**PKPbc**	**09 55 27.2**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=14,slow=2.9						
NOA	**NORSAR Array B**	**147.81**	**351**	PKPbc	**PKPbc**	**09 55 27.4**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=15,slow=4.5,SNR=7.7						
AKASG	**Malin Array Be**	**150.34**	**323**	PKPbc	**PKPbc**	**09 55 34.4**	**-0.1**
	comp=Z,2.8nm,0.5s,baz=51,slow=3.1,SNR=7.7						
BRTR	**Keskin Array B**	**151.81**	**300**	PKPbc	**PKPbc**	**09 55 38.8**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=94,slow=1.9,SNR=5.5						
TORD	**Torodi Ar. Bea**	**163.72**	**181**	PKPab	**PKPab**	**09 56 43.1**	**+3.2**
	comp=Z,0.5nm,0.7s,baz=189,slow=3.9,SNR=4.6						

*CSEM **04** 09:52:44.5±0.2, 35°.77N×36°.52E, h2km, ML2.2, Error ellipse: s-maj=5.0km s-min=3.7km az=89.0*
*ISCJB **04** 09:52:45.1±0.7, 35°.76N±0°.04×36°.45E±0°.07, h17km, Error ellipse: s-maj=8.2km s-min=5.9km az=168.9*
*NSSC **04** 09:52:45.3±3.6, 35°.79N×36°.50E, h0km±40km, ML2.2*
*DDA **04** 09:52:45.3, 35°.83N×36°.51E, h8km, MD2.9*
ISC 04 09:52:44.9±0.9**, 35°.78N**±0°.03×**36°.49E**±0°.05**, h17**km**, n14, σ0ˢ.36**/18**, 4D, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRDH	**Warideh**	**0.28**	**193**	⇓*e*P	**Pg**	**09 52 50.3**	**-0.8**
WRDH				AML	AML	09 52 56.9	
	comp=E,210nm,0.5s						
WRDH				AML	AML	09 53 02.3	
	comp=N,398nm,0.4s						
WRDH				AML	AML	09 53 04.2	
	comp=Z,346nm,0.7s						
WRDH	**Warideh**	**0.28**	**193**	⇓*e*P	**Pg**	**09 52 50.3**	**-0.8**
	SNR=91						
YAYL	**Yayladag**	**0.40**	**309**	*i* P	**Pg**	**09 52 52.8**	**-0.3**
YAYL				*i* S	**Sg**	**09 52 59.0**	**+0.3**
YAYL	**Yayladag**	**0.40**	**309**	*i* P	**Pg**	**09 52 52.8**	**-0.3**
YAYL				*i* S	**Sg**	**09 52 59.0**	**+0.3**
KFRA	**Kufra**	**0.62**	**156**	*e*P	**Pg**	**09 52 57.2**	**0.0**
KFRA				AML	AML	09 53 16.3	
	comp=E,341nm,0.4s						
KUZU	**Kuzuini**	**1.09**	**25**	*e*P	**Pb**	**09 53 05.3**	**-0.1**
KUZU				*i* S	**Sn**	**09 53 20.3**	**+0.1**
KUZU	**Kuzuini**	**1.09**	**25**	*e*P	**Pb**	**09 53 05.3**	**-0.1**
KUZU				*i* S	**Sn**	**09 53 20.3**	**+0.1**
SLMH	**Al Salmeh**	**1.24**	**69**	*e*P	**Pg**	**09 53 08.4**	**-0.4**
SLMH				AML	AML	09 53 31.1	
	comp=N,71nm,0.4s						
HAWK	**Haweek**	**1.26**	**183**	⇓*e*P	**Pn**	**09 53 08.1**	**+0.3**
HAWK				AML	AML	09 53 27.8	
	comp=Z,27nm,0.2s						
HAWK				AML	AML	09 53 29.4	
	comp=N,39nm,0.3s						
HAWK				AML	AML	09 53 29.6	
	comp=E,30nm,0.6s						
HAWK	**Haweek**	**1.26**	**183**	⇓*e*P	**Pn**	**09 53 08.1**	**+0.3**
	SNR=57						
JHLN	**Al Jahlan**	**1.59**	**93**	*e*P	**Pb**	**09 53 13.7**	**-0.1**
JHLN				AML	AML	09 53 36.5	
	comp=N,117nm,0.5s						
JHLN				AML	AML	09 53 37.2	
	comp=Z,73nm,0.3s						
JHLN	**Al Jahlan**	**1.59**	**93**	*e*P	**Pb**	**09 53 13.7**	**-0.1**
	SNR=57						
ZALF	**Zalf**	**2.94**	**166**	*e*P	**Pb**	**09 53 37.0**	**+0.2**
ZALF				AML	AML	09 54 15.1	
	comp=N,13nm,0.6s						
ZALF				AML	AML	09 54 18.5	
	comp=E,7.3nm,0.4s						
ZALF	**Zalf**	**2.94**	**166**	*e*P	**Pb**	**09 53 37.0**	**+0.2**
	SNR=45						

*ISK **04** 10:00:47.9, 39°.16N×29°.49E, h5km, MD2.6*
*ISCJB **04** 10:00:48.8±0.6, 39°.19N±0°.03×29°.49E±0°.04, h0km, Error ellipse: s-maj=4.7km s-min=4.1km az=0.3*
*CSEM **04** 10:00:48.9±0.3, 39°.19N×29°.51E, h1km, MD2.4, Error ellipse: s-maj=5.9km s-min=4.8km az=76.0*
*DDA **04** 10:00:49.6, 39°.17N×29°.45E, h14km, MD2.4*
ISC 04 10:00:49.1±1.1**, 39°.20N**±0°.02×**29°.50E**±0°.03**, h0**km**, n18, σ1ˢ.05**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.11**	**189**	*i* P	**Pg**	**10 00 52.6**	**+1.4**
GDZ				*i* S	**Sg**	**10 00 54.9**	**+2.3**
GDZ	**Gediz**	**0.11**	**189**	*i* P	**Pg**	**10 00 52.6**	**+1.4**
GDZ				*i* S	**Sg**	**10 00 54.9**	**+2.3**
TVSB	**Tavsanli**	**0.25**	**352**	*e*PG	**Pg**	**10 00 54.2**	**+0.2**
TVSB				*e*SG	**Sg**	**10 00 58.5**	**+1.2**
TVSB	**Tavsanli**	**0.25**	**352**	*e*Pg	**Pg**	**10 00 54.2**	**+0.2**
TVSB				*e*Sg	**Sg**	**10 00 58.5**	**+1.2**
ALT	**Altintas**	**0.49**	**107**	*e*PG	**Pg**	**10 00 58.0**	**-0.5**
ALT				*e*SG	**Sg**	**10 01 05.4**	**+0.5**
ALT	**Altintas**	**0.49**	**107**	*e*Pg	**Pg**	**10 00 58.0**	**-0.5**
ALT				*e*Sg	**Sg**	**10 01 05.4**	**+0.5**
DEMI	**Demirci**	**0.63**	**256**	*i* P	**Pg**	**10 01 01.2**	**0.0**
DEMI				*i* S	**Sg**	**10 01 09.5**	**+0.1**
DEMI	**Demirci**	**0.63**	**256**	*i* P	**Pg**	**10 01 01.2**	**0.0**
DEMI				*i* S	**Sg**	**10 01 09.5**	**+0.1**
KHAL	**Karahalli**	**0.83**	**181**	*i* P	**Pg**	**10 01 05.0**	**+0.1**
KHAL				*i* S	**Sg**	**10 01 16.5**	**+0.9**
KHAL	**Karahalli**	**0.83**	**181**	*i* P	**Pg**	**10 01 05.0**	**+0.1**
KHAL				*i* S	**Sg**	**10 01 16.5**	**+0.9**
KHL	**Karahalli**	**0.87**	**179**	*e*PG	**Pg**	**10 01 04.4**	**-1.4**
KHL	**Karahalli**	**0.87**	**179**	*e*Pg	**Pg**	**10 01 04.4**	**-1.4**
DURS	**Dursunbey**	**0.89**	**297**	*i* P	**Pg**	**10 01 06.7**	**+0.5**
DURS	**Dursunbey**	**0.89**	**297**	*i* P	**Pg**	**10 01 06.7**	**+0.5**
KULA	**Kula-Manisa**	**0.95**	**224**	*e*PG	**Pg**	**10 01 06.2**	**-1.1**
KULA				*e*SG	**Sg**	**10 01 18.8**	**-0.7**
KULA	**Kula-Manisa**	**0.95**	**224**	*e*Pg	**Pg**	**10 01 06.2**	**-1.1**
KULA				*e*Sg	**Sg**	**10 01 18.8**	**-0.7**
ARMT	**Armutlu**	**1.45**	**340**	*e*PN	**Pn**	**10 01 15.9**	**-0.7**
ARMT	**Armutlu**	**1.45**	**340**	*e*Pn	**Pn**	**10 01 15.9**	**-0.7**

*ISCJB **04** 10:01:29.6±0.5, 40°.14N±0°.05×139°.5E±0°.1, h214km±6km, mb3.3/4, Error ellipse: s-maj=16.2km s-min=8.4km az=7.5*
*IDC **04** 10:01:30.5±1.6, 40°.17N×139°.34E, h207km±18km, mb3.1/4, mb1 3.2/6, mb1mx3.0/27, mbtmp3.1/6, MS2.9/1, Ms1 2.9/1, ms1mx2.4/18, Error ellipse: s-maj=33.8km s-min=16.0km az=76.0*
*JMA **04** 10:01:31.0±0.1, 40°.11N×139°.43E, h203km±1km, M3.2*
ISC 04 10:01:30.8±0.8**, 40°.16N**±0°.05×**139°.46E**±0°.09**, h206**km±7km**, n24, σ0ˢ.84**/31**, mb3.4**/4**, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIW	**Iwasaki**	**0.60**	**44**	P	**Pn**	**10 01 59.2**	**+0.2**
JIW				S	**S**	**10 02 20.7**	**-0.3**
JYW	**Yuwa**	**0.85**	**137**	P	**Pn**	**10 02 00.4**	**+0.2**
JYW				*e*S	**S**	**10 02 23.0**	**0.0**
JAH	**Hinai**	**0.90**	**88**	P	**Pn**	**10 02 00.7**	**+0.2**
JAH				S	**S**	**10 02 23.6**	**+0.1**
JRG	**Rokugo**	**1.18**	**130**	P	**Pn**	**10 02 02.4**	**-0.1**
JRG				S	**S**	**10 02 26.7**	**-0.1**
JYK	**Kaneyama**	**1.42**	**150**	P	**Pn**	**10 02 04.2**	**-0.2**
JYK				S	**S**	**10 02 30.2**	**0.0**
JOM	**Ohasama**	**1.57**	**115**	P	**Pn**	**10 02 05.6**	**0.0**
JANG	**Nango**	**1.59**	**82**	P	**Pn**	**10 02 05.9**	**+0.1**
JANG				*e*S	**S**	**10 02 33.1**	**+0.5**
JOT	**Ohata**	**1.72**	**44**	P	**Pn**	**10 02 07.7**	**+0.8**
JMK	**Ichinoseki**	**1.82**	**131**	P	**Pn**	**10 02 07.6**	**-0.3**
JMK				*e*S	**S**	**10 02 36.2**	**-0.2**
JOSM	**Okushiri--Mats**	**1.92**	**0**	P	**Pn**	**10 02 09.2**	**+0.3**
JKB	**Kayabe**	**2.10**	**34**	P	**Pn**	**10 02 11.3**	**+0.7**
JSD	**Sado**	**2.32**	**204**	P	**Pn**	**10 02 12.5**	**-0.6**
JFT	**Otama**	**2.73**	**165**	P	**Pn**	**10 02 17.9**	**+0.3**
MAT	**Matsushiro**	**3.74**	**196**	P	**Pn**	**10 02 29.3**	**-0.4**
MAT				*e*S	**S**	**10 03 18.7**	**+3.3**
MJAR	**Matsushiro Arr**	**3.74**	**196**	P	**Pn**	**10 02 29.4**	**-0.2**
	1.0nm,0.3s,baz=8.0,slow=13,SNR=12						
ASAJ	**Asahikawa**	**4.59**	**30**	P	**Pn**	**10 02 40.3**	**+0.3**
	3.3nm,0.3s,baz=228,slow=12,SNR=36						
KSRS	**Korea Array**	**9.40**	**257**	LR	LR	10 07 13.9	
	comp=Z,70nm,18.3s,baz=356,slow=37						
ZALV	**Zalesovo Beam**	**38.71**	**310**	P	**P**	**10 08 32.9**	**-1.6**
	0.4nm,0.3s,baz=84,slow=9.2,SNR=3.2						
MKAR	**Makanchi Array**	**41.22**	**299**	P	**P**	**10 08 54.7**	**-0.5**
	0.2nm,0.6s,baz=93,slow=8.5,SNR=3.3						
WRA	**Warramunga Arr**	**59.98**	**186**	P	**P**	**10 11 15.1**	**-0.4**
	1.5nm,0.4s,baz=3.1,slow=7.2,SNR=6.3						
ASAR	**Alice Springs**	**63.71**	**186**	P	**P**	**10 11 40.0**	**-0.3**
	0.2nm,0.3s,baz=0.4,slow=6.8,SNR=10						
VNA2	**Neumayer--Watz**	**144.85**	**198**	*e*P	**PKPdf**	**10 20 43.2**	**+1.4**
	baz=150,slow=2.8						
VNA3	**Neumayer Olymp**	**145.15**	**197**	*e*P	**PKPab**	**10 20 43.4**	**+0.7**
VNA1	**Neumayer--Stat**	**145.25**	**198**	*e*P	**PKPdf**	**10 20 42.3**	**-0.1**

*CSEM **04** 10:01:51.2, 34.°45N×36.°65E, h0km, ML1.8, After NSSC*
NSSC 04 10:01:52.1±2.5**, 34.°55N×36.°72E, h14**km±13km**, ML1.8, 9C-10D, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAWK	**Haweek**	**0.26**	**263**⇓	*e*P	Pg	10 01 56.7	-1.0
HAWK				*e*S	Sg	10 02 01.6	0.0
HAWK				AML	AML	10 02 04.6	
	comp=Z,358nm,0.3s						
HAWK	**Haweek**	**0.26**	**263**⇓	*e*P	Pg	10 01 56.9	-0.8
HAWK				AML	AML	10 02 04.5	
	comp=Z,358nm,0.3s						
HAWK				AML	AML	10 02 04.8	
	comp=N,638nm,0.2s						
HAWK				AML	AML	10 02 06.4	
	comp=E,398nm,0.4s						
HAWK	**Haweek**	**0.26**	**263**⇓	*e*P	Pg	10 01 56.9	-0.9
	SNR=92						
BIDA	**Albida**	**0.56**	**325**⇑	*e*P	Pb	10 02 04.7	+0.8
BIDA				*e*S	Sn	10 02 13.9	-1.3
BIDA				AML	AML	10 02 20.9	
	comp=Z,224nm,0.4s						
BIDA	**Albida**	**0.56**	**325**	*e*P	Pn	10 02 05.5	-0.4
BIDA				AML	AML	10 02 21.1	
	comp=Z,224nm,0.4s						
BIDA	**Albida**	**0.56**	**325**⇑	*e*P	Pn	10 02 05.5	-0.4
	SNR=75						
ROOS	**tl_alroos**	**0.61**	**129**	*e*P	Pb	10 02 04.5	-0.1
ROOS				AML	AML	10 02 20.3	
	comp=Z,0.7nm,0.4s						
ROOS	**tl_alroos**	**0.61**	**129**⇑	*e*P	Pb	10 02 04.6	-0.1
	SNR=91						
WRDH	**Warideh**	**0.99**	**345**⇑	*e*P	Pb	10 02 08.4	-2.7
WRDH				*e*S	Sg	10 02 24.4	+0.1
WRDH				AML	AML	10 02 27.0	
	comp=Z,75nm,0.6s						
WRDH	**Warideh**	**0.99**	**345**	*e*P	Pb	10 02 09.0	-2.2
WRDH				AML	AML	10 02 27.0	
	comp=Z,75nm,0.6s						
WRDH	**Warideh**	**0.99**	**345**⇑	*e*P	Pb	10 02 09.2	-1.9
	SNR=67						
QASN	**Qassioun**	**1.08**	**200**⇓	*e*P	Pb	10 02 06.0	-6.7
	SNR=67						
BRBR	**Barbar**	**1.30**	**209**⇑	*e*P	Pn	10 02 15.3	-0.9
BRBR				*e*S	Sn	10 02 33.5	-0.1
BRBR				AML	AML	10 02 40.0	
	comp=Z,28nm,0.4s						
BRBR	**Barbar**	**1.30**	**209**⇓	*e*P	Pn	10 02 15.7	-0.5
BRBR				AML	AML	10 02 16.0	
	comp=N,18nm,0.2s						
BRBR				AML	AML	10 02 40.0	
	comp=Z,28nm,0.4s						
BRBR				AML	AML	10 02 41.8	
	comp=E,32nm,0.4s						
BRBR				*e*		10 02 49.2	
YAYL	**Yayladag**	**1.56**	**342**	*i* P	Pg	10 02 22.2	-0.1
YAYL				*i* S	Sg	10 02 44.5	+1.8
ZALF	**Zalf**	**1.70**	**162**⇓	*e*P	Pn	10 02 21.0	-0.5
ZALF				*e*S	Sn	10 02 41.9	-1.2
ZALF				AML	AML	10 02 49.0	
	comp=Z,8.5nm,0.3s						
ZALF	**Zalf**	**1.70**	**162**⇓	*e*P	Pn	10 02 21.0	-0.5
ZALF				AML	AML	10 02 46.5	
	comp=E,14nm,0.3s						
ZALF				AML	AML	10 02 48.8	
	comp=N,13nm,0.3s						
ZALF				AML	AML	10 02 49.1	
	comp=Z,8.5nm,0.3s						
ZALF	**Zalf**	**1.70**	**162**⇓	*e*P	Pn	10 02 21.0	-0.5
	SNR=57						
SALA	**Sala**	**1.83**	**180**⇑	*e*P	Pn	10 02 22.7	-0.8
SALA				*e*S	Sn	10 02 44.4	-2.3
SALA				AML	AML	10 02 49.3	
	comp=Z,25nm,0.5s						
SALA	**Sala**	**1.83**	**180**⇑	*e*P	Pn	10 02 23.3	-0.2
SALA			⇓	*e*P	Pb	10 02 23.7	-2.0
SALA				*e*S	Sn	10 02 47.1	+0.4
SALA				AML	AML	10 02 49.3	
	comp=Z,25nm,0.5s						
SALA				AML	AML	10 02 50.3	
	comp=N,14nm,0.3s						
SALA	**Sala**	**1.83**	**180**⇓	*e*P	Pn	10 02 23.0	-0.5
	SNR=45						
SALA	**Sala**	**1.83**	**180**⇑	*e*P	Pn	10 02 23.3	-0.2
	SNR=45						
SALA				*e*S	Sn	10 02 47.1	+0.4
	comp=N,14nm,0.3s,SNR=40						
KUZU	**Kuzuini**	**2.24**	**7**	*i* P	Pb	10 02 33.3	+0.9

JMA 04 10:03:35.9±0.1**, 32.°18N×140.°66E, h34**km**, M3.8, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**1.15**	**321**	*e*S	Sb	10 04 11.1	-0.9
JHJ2	**Mitsune**	**1.17**	**323**	P	Pn	10 03 56.5	+0.6
JHJ2				S	Sb	10 04 11.8	-0.7
BSO1	**Boso 1**	**2.48**	**6**	*e*S	Sn	10 04 44.2	+2.4
BSO2	**Boso 2**	**2.57**	**2**	S	Sn	10 04 46.3	+1.8
BSO3	**Boso 3**	**2.62**	**357**	S	Sn	10 04 47.4	+1.6
JIM2	**Oshima 3**	**2.73**	**338**	P	Pn	10 04 19.3	+1.9
JIM2				S	Sn	10 04 50.3	+1.0
JOD2	**Odawara 2**	**3.34**	**337**	P	Pn	10 04 27.7	+1.9
JOD2				S	Sn	10 05 06.0	+1.7
HMMJ	**Hamamatsu 2**	**3.63**	**318**	P	Pn	10 04 31.3	+1.7
JIE	**Ise**	**3.98**	**305**	P	Pn	10 04 35.2	+0.7
JRY	**Ryogami san**	**4.10**	**340**	*e*S	Sn	10 05 25.0	+2.1

*ISCJB **04** 10:15:51.7±1.1, 67.°45N±0.°04×30.°4E±0.°2, h0km, Error ellipse: s-maj=9.0km s-min=5.9km az=1.5*
*HEL **04** 10:15:53.4±0.5, 67.°60N×30.°55E, h0km, ML1.9, Explosion*
*CSEM **04** 10:15:53.4, 67.°60N×30.°55E, h0km, ML1.9, Mining explosion. After HEL*
*IDC **04** 10:15:55.3±2.0, 67.°66N×30.°00E, h0km, mb1 3.1/4, mb1mx2.9/30, mbtmp3.1/4, ML2.1/3, Error ellipse: s-maj=24.6km s-min=9.1km az=80.0*
ISC 04 10:15:50.3±1.5**, 67.°52N**±0.°04×**30.°81E**±0.°08**, h0**km**, n22,** σ**1.s66**/31**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRF	**Varrio**	**0.51**	**297**	PG	**Pg**	**10 16 00.0**	**-0.1**
	baz=109						
VRF				SG	**Sg**	**10 16 06.2**	**-0.6**
VRF	**Varrio**	**0.51**	**297**	Pg	**Pg**	**10 16 00.0**	**-0.1**
VRF				Sg	**Sg**	**10 16 06.2**	**-0.6**
SGF	**Sodankyl**	**1.65**	**269**	PG	**Pn**	**10 16 20.4**	**-0.1**
SGF				SG	**Sb**	**10 16 42.8**	**-0.1**
SGF				MSG		10 16 42.8	
	comp=Z,14nm,0.1s						
SGF	**Sodankyl**	**1.65**	**269**	Pg	**Pn**	**10 16 20.4**	**-0.1**
SGF				Sg	**Sb**	**10 16 42.8**	**-0.1**
MSF	**Maaselka**	**1.76**	**204**	SG	**Sg**	**10 16 48.5**	**+1.6**
MSF				MSG		10 16 48.5	
	comp=Z,2.7nm,0.2s						
MSF	**Maaselka**	**1.76**	**204**	Sg	**Sg**	**10 16 48.4**	**+1.6**
RNF	**Rovaniemi**	**2.09**	**246**	SG	**Sb**	**10 16 55.2**	**-0.3**
RNF				MSG		10 16 55.2	
	comp=Z,6.4nm,0.1s						
RNF	**Rovaniemi**	**2.09**	**246**	Sg	**Sb**	**10 16 55.2**	**-0.3**
KEV	**Kevo**	**2.64**	**330**	PN	**Pn**	**10 16 36.0**	**+1.8**
KEV				SG	**Sb**	**10 17 09.9**	**-1.5**
KEV				MSG		10 17 09.9	
	comp=Z,11nm,0.2s						
KEV	**Kevo**	**2.64**	**330**	Pn	**Pn**	**10 16 35.9**	**+1.8**
KEV				Sg	**Sb**	**10 17 09.9**	**-1.5**
ARA0	**ARCESS Array S**	**2.81**	**319**	PN	**Pb**	**10 16 39.6**	**-1.7**
	baz=136						
ARA0	**ARCESS Array S**	**2.81**	**319**	Pn	**Pb**	**10 16 39.6**	**-1.7**
ARCES	**ARCESS Array B**	**2.81**	**319**	Pn	**Pn**	**10 16 38.1**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=139,slow=17,SNR=19						
ARCES				Lg	Lg	10 17 12.5	
	comp=Z,1.5nm,0.3s,baz=138,slow=28,SNR=7.9						
HEF	**Hetta**	**2.84**	**292**	PN	**Pb**	**10 16 40.5**	**-1.3**
	baz=102						
HEF				SG	**Sn**	**10 17 14.0**	**+2.3**
HEF				MSG		10 17 14.0	
	comp=Z,4.3nm,0.2s						
HEF	**Hetta**	**2.84**	**292**	Pn	**Pb**	**10 16 40.5**	**-1.3**
HEF				Sg	**Sn**	**10 17 14.0**	**+2.3**
LANU	**Lannavaara**	**3.39**	**283**	PN	**Pn**	**10 16 46.7**	**+2.2**
	baz=94						
LANU	**Lannavaara**	**3.39**	**283**	Pn	**Pn**	**10 16 46.7**	**+2.2**
KIF	**Kilpisjarvi**	**4.01**	**296**	PN	**Pn**	**10 16 53.9**	**+1.0**
KIF	**Kilpisjarvi**	**4.01**	**296**	Pn	**Pn**	**10 16 53.9**	**+1.0**
FINES	**FINESS Array B**	**6.43**	**201**	Pn	**Pn**	**10 17 28.8**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=32,slow=13,SNR=3.5						
FINES				Sn	**Sn**	**10 18 35.8**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=21,slow=24,SNR=2.5						
HFS	**Hagfors**	**10.54**	**234**	Pn	**Pn**	**10 18 22.1**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=26,slow=14,SNR=3.0						
HFS				Sn	Sn	10 20 14.0	-7.1
	comp=Z,0.1nm,0.3s,baz=26,slow=26,SNR=2.4						
NOA	**NORSAR Array B**	**10.67**	**242**	Pn	**Pn**	**10 18 24.1**	**-0.1**
	baz=47,slow=14,SNR=2.2						

IDC 04 10:19:13.9±1.6**, 4.°97N×127.°33E, h0**km**, mb3.3**/5**, mb1 3.4**/5**, mb1mx3.3**/24**, mbtmp3.3**/5**, Error ellipse: s-maj=148.7km s-min=19.4km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.70**	**165**	P	P	10 24 44.3	-1.7
	0.3nm,0.7s,baz=345,slow=11,SNR=5.1						
ASAR	**Alice Springs**	**29.18**	**168**	P	P	10 25 18.8	+1.6
	0.4nm,1.1s,baz=333,slow=7.5,SNR=3.1						
SONM	**Songino Array**	**46.33**	**341**	P	P	10 27 42.1	+0.3
	0.1nm,0.4s,baz=154,slow=7.0,SNR=2.1						
MKAR	**Makanchi Array**	**56.89**	**325**	P	P	10 29 00.7	-0.1
	0.3nm,0.5s,baz=120,slow=7.3,SNR=9.2						
KURBB	**Kurchatov Arra**	**61.03**	**327**	P	P	10 29 29.1	-0.2
	63nm,0.3s,baz=126,slow=6.6,SNR=2.0						
BVAR	**Borovoye Array**	**66.62**	**327**	P	P	10 30 05.9	-0.2
	0.6nm,0.6s,baz=140,slow=9.4,SNR=4.1						

IDC 04 10:23:48.1±3.2**, 18.°37S×71.°73W, h0**km**, mb3.5**/2**, mb1 3.5**/4**, mb1mx3.4**/19**, mbtmp3.4**/4**, ML3.2**/2**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.4**/20**, Error ellipse: s-maj=111.2km s-min=40.0km az=2.0, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.01**	**59**	Pn	Pn	10 24 50.8	-0.9
	0.4nm,0.3s,baz=269,slow=9.3,SNR=16						
SIV	**San Ignacio**	**10.45**	**79**	Pn	Pn	10 26 20.7	+1.3
	0.3nm,0.3s,baz=278,slow=14,SNR=4.3						
ATAH	**Atahualpa**	**12.92**	**329**	LR	LR	10 32 52.8	
	comp=Z,73nm,19.6s,baz=219,slow=42						
TORD	**Torodi Ar. Bea**	**78.86**	**72**	P	P	10 35 53.6	-0.2
	0.7nm,0.9s,baz=248,slow=5.5,SNR=3.5						
YKA	**Yellowknife Ar**	**87.39**	**342**	P	P	10 36 36.9	+0.1
	0.1nm,0.4s,baz=139,slow=4.7,SNR=6.7						

IDC 04 10:29:05.6±1.1**, 3.°49N×125.°52E, h0**km**, mb3.5**/5**, mb1 3.7**/5**, mb1mx3.5**/22**, mbtmp3.5**/5**, Error ellipse: s-maj=134.2km s-min=17.2km az=67.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.85**	**160**	P	P	10 34 29.7	-0.3
	0.7nm,0.6s,baz=336,slow=11,SNR=11						
ASAR	**Alice Springs**	**28.20**	**164**	P	P	10 35 00.9	+0.6
	0.2nm,0.4s,baz=342,slow=6.9,SNR=8.9						
STKA	**Stephens Creek**	**38.35**	**158**	P	P	10 36 28.0	-0.6
	3.7nm,0.9s,baz=346,slow=12,SNR=5.5						
SONM	**Songino Array**	**47.15**	**342**	P	P	10 37 38.6	-1.3
	0.1nm,0.4s,baz=156,slow=9.2,SNR=3.1						
MKAR	**Makanchi Array**	**57.07**	**326**	P	P	10 38 53.8	+0.1
	0.3nm,0.4s,baz=120,slow=7.2,SNR=8.8						
KURBB	**Kurchatov Arra**	**61.29**	**328**	P	P	10 39 23.7	+0.9
	50nm,0.3s,baz=119,slow=7.0,SNR=1.9						

*NEIC **04** 10:44:11.3±0.4, 4.°74N×127.°74E, h35km, mb4.4/9, Error ellipse: s-maj=20.6km s-min=7.7km az=79.0*
*ISCJB **04** 10:44:16.9±0.3, 4.°72N±0.°04×127.°90E±0.°06, h104km, mb4.2/30, Error ellipse: s-maj=8.8km s-min=4.5km az=164.1*
*AUST **04** 10:44:19.6, 4.°50N×127.°51E, h100km*
*IDC **04** 10:44:23.1±2.9, 4.°65N×127.°73E, h147km±26km, mb3.8/21, mb1 3.9/21, mb1mx3.8/30, mbtmp3.8/21, Error ellipse: s-maj=23.2km s-min=8.2km az=81.0*
*DJA **04** 10:44:31.6±1.9, 4°N±21°×12°8E±°, h130km±9km, M4.6/4, mB6.9/1, mb4.7/4, MLv4.6/2, Mw(mB)6.8/1, Mwp6.4/1*
ISC 04 10:44:18.8±0.4**, 4.°71N**±0.°05×**127.°84E**±0.°09**, h104**km**, n82,** σ**1.s34**/88**, mb4.2**/30**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	**2.72**	**325**	*e*P	**Pn**	**10 45 02.1**	**+1.2**
GSPH	**General Santos**	**3.18**	**296**⇓	*i*P	**Pn**	**10 45 05.7**	**-1.4**
DAV	**Davao City (W)**	**3.24**	**316**	S	**Sn**	**10 45 49.5**	**+3.7**
	44nm,0.3s,baz=159,slow=23,SNR=4.5						
BUKP	**Musuan**	**4.18**	**319**	*e*P	**Pn**	**10 45 22.2**	**+1.6**
BUKP				*e*S	**Sn**	**10 46 10.8**	**+2.3**
MNI	**Manado**	**4.41**	**223**	P	**Pn**	**10 45 24.4**	**+0.8**
PAGZ	**Pagadian**	**5.41**	**305**	*e*P	**Pn**	**10 45 37.3**	**+0.2**
KMSI	**Cibinong**	**5.63**	**223**	P	**Pn**	**10 45 41.2**	**+1.1**
SWI	**Sorong**	**6.51**	**148**	P	Pn	10 45 56.7	+4.7
	74nm,0.5s,0.3nm						
SWI	**Sorong**	**6.51**	**148**	P	Pn	10 45 56.8	+4.8
	baz=6.5,SNR=5.3						
SWI				S	**Sn**	**10 47 09.1**	**+4.2**
	baz=6.5,SNR=14						
MRSI	**Marisa**	**7.24**	**235**	P	**Pn**	**10 46 03.0**	**+1.1**
PCI	**Palu**	**9.75**	**235**	S	Sn	10 48 40.2	+17
	baz=9.4,SNR=123						
MTN	**Manton Dam**	**17.75**	**169**	P	**Pn**	**10 48 19.1**	**-0.1**
	baz=18,SNR=11						
KSM	**Kuching**	**17.79**	**260**	P	**P**	**10 48 19.4**	**+0.1**
	baz=17,SNR=4.6						
KDU	**Kakadu**	**17.89**	**165**	P	**Pn**	**10 48 22.2**	**+1.2**
	baz=18,SNR=4.0						
FITZ	**Fitzroy Crossi**	**22.77**	**185**	*e*P	**P**	**10 49 11.4**	**-1.2**
	4.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**22.77**	**185**	P	**P**	**10 49 11.9**	**-0.6**
	4.8nm,0.6s,baz=14,slow=12,SNR=23						
FITZ	**Fitzroy Crossi**	**22.77**	**185**	P	**P**	**10 49 13.3**	**+0.7**
	baz=23,SNR=10.0						
TPRI	**Tanjung Pinang**	**23.58**	**262**	P	P	10 49 26.0	+5.7
	1μm,1.0s,59μm84μm						
WRAB	**Tennant Creek**	**25.31**	**166**	*e*P	**P**	**10 49 35.4**	**-0.5**
	3.2nm,0.6s						
WRA	**Warramunga Arr**	**25.32**	**166**	P	**P**	**10 49 34.9**	**-1.1**
WRA				S	**S**	**10 53 51.0**	**-3.6**
WRA	**Warramunga Arr**	**25.32**	**166**	P	**P**	**10 49 34.9**	**-1.1**
	2.3nm,0.3s,baz=340,slow=10,SNR=59						
WRA				S	**S**	**10 53 51.0**	**-3.6**
	0.9nm,0.9s,baz=349,slow=15,SNR=4.2						
QIS	**Mount Isa**	**27.64**	**156**	P	**P**	**10 49 57.6**	**+0.7**
	baz=28,SNR=5.5						
JNU	**Nakatsue**	**28.41**	**5**	P	**P**	**10 50 04.7**	**+1.1**
JNU	**Nakatsue**	**28.41**	**5**	P	**P**	**10 50 04.7**	**+1.1**
	12nm,0.9s,baz=73,slow=3.9,SNR=4.7						
AS31	**Alice Springs**	**28.82**	**168**	*e*P	**P**	**10 50 07.0**	**-0.3**
ASAR	**Alice Springs**	**28.82**	**168**	P	**P**	**10 50 07.5**	**+0.2**
ASAR				PcP	**PcP**	**10 53 14.3**	**-0.4**
ASAR	**Alice Springs**	**28.82**	**168**	P	**P**	**10 50 07.5**	**+0.2**
	1.0nm,0.4s,baz=355,slow=7.7,SNR=36						
ASAR				PcP	**PcP**	**10 53 14.3**	**-0.4**
	0.8nm,0.4s,baz=348,slow=2.2,SNR=12						
MEEK	**Meekatharra**	**32.42**	**196**	P	**P**	**10 50 38.6**	**-0.4**
	baz=32,SNR=4.7						
KSAR	**Wonju Array Be**	**32.58**	**0**	P	**P**	**10 50 40.5**	**+0.4**
KSRS	**Korea Array**	**32.59**	**0**	P	**P**	**10 50 40.5**	**+0.3**
	3.6nm,0.6s,baz=175,slow=9.7,SNR=20						
MJAR	**Matsushiro Arr**	**33.08**	**15**	P	**P**	**10 50 44.7**	**+0.1**
MJAR	**Matsushiro Arr**	**33.08**	**15**	P	**P**	**10 50 44.7**	**+0.1**
	0.7nm,0.5s,baz=185,slow=9.9,SNR=7.3						
FORT	**Forrest**	**35.29**	**180**	*e*P	**P**	**10 51 03.8**	**0.0**
	15nm,0.6s						
FORT	**Forrest**	**35.29**	**180**	P	**P**	**10 51 03.8**	**0.0**
	baz=35,SNR=11						
MORW	**Morawa**	**35.45**	**198**	P	**P**	**10 51 04.9**	**-0.3**
	baz=35,SNR=4.0						
BLDU	**Ballidu**	**36.70**	**196**	P	**P**	**10 51 15.6**	**-0.3**
	baz=37,SNR=9.2						
KLBR	**Kellerberrin**	**37.36**	**194**	P	**P**	**10 51 21.4**	**0.0**
	baz=37,SNR=6.0						
BBOO	**Buckleboo**	**38.12**	**169**	P	**P**	**10 51 28.0**	**+0.2**
	baz=38,SNR=7.4						
STKA	**Stephens Creek**	**38.67**	**161**	P	**P**	**10 51 32.9**	**+0.5**
STKA	**Stephens Creek**	**38.67**	**161**	P	**P**	**10 51 32.9**	**+0.5**
	4.0nm,0.4s,baz=354,slow=11,SNR=7.6						
STKA	**Stephens Creek**	**38.67**	**161**	P	**P**	**10 51 33.0**	**+0.6**
	baz=39,SNR=6.6						
NWAO	**Narrogin (SRO)**	**38.76**	**194**	P	**P**	**10 51 33.4**	**+0.2**
NWAO	**Narrogin (SRO)**	**38.76**	**194**	P	**P**	**10 51 33.4**	**+0.2**
	1.7nm,0.3s,baz=35,slow=10,SNR=6.9						
USRK	**Ussuriysk Arra**	**39.50**	**5**	P	**P**	**10 51 39.8**	**+0.8**
	0.8nm,0.4s,baz=176,slow=5.3,SNR=3.2						
ARPS	**Mount Arapiles**	**43.29**	**164**	P	**P**	**10 52 11.1**	**+0.8**
	baz=43,SNR=6.3						
SONM	**Songino Array**	**46.74**	**340**	P	**P**	**10 52 36.7**	**-0.9**
SONM				PcP	**PcP**	**10 54 08.8**	**-0.6**
SONM	**Songino Array**	**46.74**	**340**	P	**P**	**10 52 36.7**	**-0.9**
	0.6nm,0.6s,baz=153,slow=7.4,SNR=7.4						
SONM				PcP	**PcP**	**10 54 08.8**	**-0.6**
	0.5nm,0.6s,baz=139,slow=2.7,SNR=4.0						
PETK	**Petropavlovsk-**	**54.11**	**22**	P	**P**	**10 53 34.4**	**+1.5**
PETK	**Petropavlovsk-**	**54.11**	**22**	P	**P**	**10 53 34.4**	**+1.5**
	4.9nm,0.6s,baz=185,slow=7.2,SNR=10						
MK31	**Makanchi Array**	**57.39**	**324**	*e*P	**P**	**10 53 56.5**	**+0.1**
MKAR	**Makanchi Array**	**57.39**	**324**	P	**P**	**10 53 56.6**	**+0.2**
MKAR	**Makanchi Array**	**57.39**	**324**	P	**P**	**10 53 56.6**	**+0.2**
	1.6nm,0.4s,baz=112,slow=7.9,SNR=54						
MKAR				pP	pP	10 54 27.2	+5.4
	1.7nm,0.5s,baz=117,slow=7.6,SNR=8.9						
TKM2	**Tokmak 2**	**59.76**	**318**	*e*P	**P**	**10 54 13.5**	**+0.4**
	1.8nm,0.6s						
ZALV	**Zalesovo Beam**	**60.23**	**332**	P	**P**	**10 54 15.0**	**-0.8**
ZALV	**Zalesovo Beam**	**60.23**	**332**	P	**P**	**10 54 15.0**	**-0.8**
	0.5nm,0.3s,baz=130,slow=4.6,SNR=5.0						
AAK	**Ala-Archa**	**60.38**	**317**	P	**P**	**10 54 17.4**	**0.0**
AAK	**Ala-Archa**	**60.38**	**317**	P	**P**	**10 54 17.4**	**0.0**
	1.1nm,0.5s,baz=164,slow=6.7,SNR=4.5						
EKS2	**Erkin-Say**	**60.88**	**317**	*e*P	**P**	**10 54 21.4**	**+0.7**
	1.8nm,0.7s						
KURK	**Kurchatov**	**61.52**	**327**	*e*P	**P**	**10 54 24.2**	**-0.5**
	5.2nm,0.9s						
KURK				*e*PcP	pP	10 54 56.7	+6.3
KURK				*e*ScP	**ScP**	**10 58 55.0**	**-2.8**
KKAR	**Karatay Array**	**63.28**	**316**	*e*P	**P**	**10 54 36.1**	**-0.5**
	2.4nm,0.8s						
TIXI	**Tiksi**	**66.86**	**0**	*e*P	**P**	**10 54 58.7**	**-0.5**
	2.9nm,0.4s						
BVAR	**Borovoye Array**	**67.11**	**326**	P	**P**	**10 55 01.1**	**0.0**
BVAR	**Borovoye Array**	**67.11**	**326**	P	**P**	**10 55 01.1**	**0.0**
	2.4nm,0.8s,baz=126,slow=7.7,SNR=11						
BVAR				pP	**PcP**	**10 55 33.7**	**+5.1**
	1.1nm,0.6s,baz=119,slow=8.6,SNR=4.1						
ABKAR	**Akbulak array**	**72.10**	**320**	*e*P	**P**	**10 55 31.1**	**-0.7**
	1.6nm,0.7s						
AKTO	**Aktyubinsk**	**73.58**	**321**	P	**P**	**10 55 40.2**	**-0.4**
AKTO	**Aktyubinsk**	**73.58**	**321**	P	**P**	**10 55 40.2**	**-0.4**
	2.1nm,0.5s,baz=105,slow=8.0,SNR=12						
ILAR	**Eielson Array**	**83.75**	**25**	P	**P**	**10 56 36.0**	**0.0**
ILAR	**Eielson Array**	**83.75**	**25**	P	**P**	**10 56 36.0**	**0.0**
	0.8nm,0.8s,baz=252,slow=6.1,SNR=12						
ARCES	**ARCESS Array B**	**89.91**	**340**	P	**P**	**10 57 04.0**	**-1.8**
ARCES	**ARCESS Array B**	**89.91**	**340**	P	**P**	**10 57 04.0**	**-1.8**
	6.4nm,1.1s,baz=90,slow=6.1,SNR=7.2						
FINES	**FINESS Array B**	**91.49**	**332**	P	**P**	**10 57 11.5**	**-1.8**
FINES	**FINESS Array B**	**91.49**	**332**	P	**P**	**10 57 11.5**	**-1.8**
	1.2nm,0.9s,baz=85,slow=4.9,SNR=8.4						
HFS	**Hagfors**	**97.66**	**333**	P	**P**	**10 57 39.5**	**-2.1**
HFS	**Hagfors**	**97.66**	**333**	P	**P**	**10 57 39.5**	**-2.1**
	0.7nm,0.5s,baz=151,slow=3.4,SNR=8.1						
YKA	**Yellowknife Ar**	**98.15**	**25**	P	**P**	**10 57 43.3**	**-0.4**
YKA	**Yellowknife Ar**	**98.15**	**25**	P	**P**	**10 57 43.3**	**-0.4**
	0.1nm,0.6s,baz=296,slow=4.2,SNR=4.5						
TXAR	**Lajitas Array**	**120.13**	**52**	PKP	**PKPdf**	**11 02 58.6**	**+0.3**
TXAR	**Lajitas Array**	**120.13**	**52**	PKP	**PKPdf**	**11 02 58.6**	**+0.3**
	0.3nm,0.7s,baz=222,slow=1.7,SNR=4.7						
TORD	**Torodi Ar. Bea**	**123.65**	**289**	PKP	**PKPdf**	**11 03 04.5**	**-0.8**
TORD	**Torodi Ar. Bea**	**123.65**	**289**	PKP	**PKPdf**	**11 03 04.5**	**-0.8**
	0.5nm,0.7s,baz=40,slow=1.9,SNR=4.4						
JTS	**JuntasAbangare**	**144.10**	**65**	PKP	**PKPdf**	**11 03 43.0**	**-0.5**
JTS	**JuntasAbangare**	**144.10**	**65**	PKP	**PKPdf**	**11 03 43.0**	**-0.5**
	4.5nm,0.7s,baz=316,slow=8.4,SNR=6.7						

*TIF **04** 10:53:54.2, 42.°78N×48.°03E, h19km±5km*
*MOS **04** 10:53:55.4±0.7, 42.°53N×47.°68E, h9km, mb4.2/1, Error ellipse: s-maj=10.9km s-min=6.7km az=133.1*
MOS Felt (II-III) at Sergokala.
*ISCJB **04** 10:53:56.6±0.6, 42.°56N±0.°03×47.°71E±0.°04, h15km±4km, Error ellipse: s-maj=6.1km s-min=3.8km az=139.2*
*CSEM **04** 10:53:56.3±0.3, 42.°54N×47.°71E, h15km, mb4.2, Error ellipse: s-maj=6.7km s-min=4.5km az=51.0*
ISC 04 10:53:55.9±0.8**, 42.°55N**±0.°02×**47.°70E**±0.°03**, h13**km±5km**, n44,** σ**0.s84**/69**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGKR	**Sergokala**	**0.09**	**200**	*i* PG	**Pg**	**10 53 58.0**	**-0.8**
SGKR	**Sergokala**	**0.09**	**200**	*i* Pg	**Pg**	**10 53 58.0**	**-0.8**
MNSR	**Manas**	**0.15**	**5**	PG	**Pg**	**10 53 59.8**	**+0.2**
MNSR				*e*S	**Sb**	**10 54 04.2**	**+0.3**
MNSR	**Manas**	**0.15**	**5**	Pg	**Pg**	**10 53 59.8**	**+0.2**
MNSR				*e*Sg	**Sb**	**10 54 04.2**	**+0.3**
URKR	**Urkarakh**	**0.39**	**188**	*i* PG	**Pg**	**10 54 04.0**	**+0.3**
URKR				*e*S	**Sb**	**10 54 11.5**	**+0.8**
URKR				pmax	pmax		
	comp=Z,1μm,0.1s						
URKR	**Urkarakh**	**0.39**	**188**	*i* Pg	**Pg**	**10 54 04.0**	**+0.3**
	comp=Z,1μm,0.1s						
URKR				*e*Sg	**Sb**	**10 54 11.5**	**+0.8**
MAK	**Makhachkala**	**0.44**	**341**	*e*PG	**Pb**	**10 54 05.5**	**-0.1**
MAK				*e*		10 54 13.0	
MAK				pmax	pmax		
	comp=Z,338nm,0.5s						
MAK				smax	smax		
	comp=N,2μm,0.6s						
MAK				smax	smax		
	comp=E,2μm,0.6s						
MAK	**Makhachkala**	**0.44**	**341**	*e*Pg	**Pb**	**10 54 05.5**	**-0.1**
	comp=E,338nm,0.5s						
MAK				*e*Sg	**Sb**	**10 54 13.0**	**+0.9**
	comp=E,2μm,0.6s						
BUJR	**Buynaksk**	**0.52**	**302**	*e*PG	**Pb**	**10 54 06.8**	**-0.2**
BUJR				*e*S	**Sn**	**10 54 16.2**	**-1.7**
BUJR				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,271nm,0.3s						
BUJR	Buynaksk	0.52	302	ePg	Pb	10 54 06.8	-0.2
	comp=Z,271nm,0.3s						
BUJR				eSg	Sn	10 54 16.2	-1.7
ARKR	Arakani	0.53	276	ePG	Pb	10 54 06.8	-0.3
ARKR				eS	Sb	10 54 16.0	+1.3
ARKR				pmax	pmax		
	comp=Z,153nm,0.2s						
ARKR	Arakani	0.53	276	ePg	Pb	10 54 06.8	-0.3
	comp=Z,153nm,0.2s						
ARKR				eSg	Sb	10 54 16.0	+1.3
KRNR	Karanay	0.65	296	i PG	Pg	10 54 09.0	+0.4
KRNR				eS	Sb	10 54 18.5	+0.2
KRNR				pmax	pmax		
	comp=Z,134nm,0.3s						
KRNR	Karanay	0.65	296	i Pg	Pg	10 54 09.0	+0.4
	comp=Z,134nm,0.3s						
KRNR				eSg	Sb	10 54 18.5	+0.2
UNCR	Uncukul	0.69	284	ePG	Pg	10 54 09.5	+0.1
UNCR				S	Sb	10 54 19.5	+0.1
UNCR	Uncukul	0.69	284	ePg	Pg	10 54 09.5	+0.1
UNCR				Sg	Sb	10 54 19.5	+0.1
DRN	Derbent	0.70	138	ePG	Pn	10 54 11.2	-0.3
DRN				eS	Sn	10 54 22.5	+0.3
DRN	Derbent	0.70	138	ePg	Pn	10 54 11.2	-0.3
DRN				eSg	Sn	10 54 22.5	+0.3
XNZR	Khunzakh	0.74	270	ePG	Pb	10 54 10.8	0.0
XNZR				eS	Sb	10 54 22.0	+1.1
XNZR				pmax	pmax		
	comp=Z,165nm,0.2s						
XNZR	Khunzakh	0.74	270	ePg	Pb	10 54 10.8	0.0
	comp=Z,165nm,0.2s						
XNZR				eSg	Sb	10 54 22.0	+1.1
DBC	Dubki	0.80	307	i PG	Pb	10 54 12.0	+0.2
DBC				i S	Sn	10 54 23.9	-1.0
DBC	Dubki	0.80	307	i Pg	Pb	10 54 12.0	+0.2
DBC				i Sg	Sn	10 54 23.9	-1.0
DLMR	Dylym	0.95	304	ePG	Pn	10 54 15.0	0.0
DLMR				eS	Sn	10 54 29.0	+0.6
DLMR				pmax	pmax		
	comp=Z,92nm,0.2s						
DLMR	Dylym	0.95	304	ePg	Pn	10 54 15.0	0.0
	comp=Z,92nm,0.2s						
DLMR				eSg	Sn	10 54 29.0	+0.6
BTLR	Botlikh	1.10	277	ePG	Pg	10 54 17.2	+0.1
BTLR				eS	Sn	10 54 33.5	+1.2
BTLR				pmax	pmax		
	comp=Z,73nm,0.3s						
BTLR	Botlikh	1.10	277	ePg	Pg	10 54 17.2	+0.1
	comp=Z,73nm,0.3s						
BTLR				eSg	Sn	10 54 33.5	+1.2
DGRG	David-gareji	2.05	239	P	Pg	10 54 34.4	-0.9
DGRG				S	Sg	10 55 04.2	+2.2
DGRG	David-gareji	2.05	239	P	Pg	10 54 34.4	-0.9
TBLG	Delisi	2.35	251	P	Pb	10 54 39.1	+0.9
TBLG				S	Sg	10 55 11.5	0.0
BTKR	Batakoyurt	2.46	291	i PN	Pn	10 54 34.7	-1.2
BTKR	Batakoyurt	2.46	291	i Pn	Pn	10 54 34.7	-1.2
KORR	Kora	2.73	283	i PN	Pn	10 54 39.8	+0.3
KORR	Kora	2.73	283	i Pn	Pn	10 54 39.8	+0.3
ZEI	Tsey	2.81	276	i PN	Pn	10 54 40.4	-0.5
ZEI	Tsey	2.81	276	i Pn	Pn	10 54 40.4	-0.5
DIGR	Digorskoe uzhe	3.06	278	i PN	Pn	10 54 45.6	+1.4
DIGR	Digorskoe uzhe	3.06	278	i Pn	Pn	10 54 45.6	+1.4
ONI	Oni	3.14	272	P	Pb	10 54 52.1	+0.4
ONI				S	Sg	10 55 36.3	-0.5
AKH	Akhalkalaki	3.34	251	P	Pg	10 54 58.9	-1.0
AKH				S	Sg	10 55 41.4	-1.7
BEYR	Belyy Ugol+	3.86	294	i PN	Pn	10 54 56.4	+1.4
BEYR	Belyy Ugol+	3.86	294	i Pn	Pn	10 54 56.4	+1.4
ANN	Anapa	7.78	290	eP	Pn	10 55 56.9	+8.1
ANN	Anapa	7.78	290	eP	Pn	10 55 56.9	+8.1
OBN	Obninsk	14.53	334	eP	Pn	10 57 20.0	-1.1
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						

IDC 04 10:58:41.6±1.6**,23°.61S×66°.95W,h176**km±18km**,mb3.4**/1**, mb1 3.6**/6**,mb1mx3.3**/20**,mbtmp3.5**/6**,Error ellipse: s-maj=28.4km s-min=14.3km az=91.0,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	7.37	351	P	Pn	11 00 29.1	+1.6
	3.3nm,0.3s,baz=177,slow=8.4,SNR=47						
LPAZ				S	Sn	11 01 48.6	-2.3
	baz=255,slow=20,SNR=2.8						
CFAA	Coronel Fontan	8.05	188	P	Pn	11 00 37.3	+1.7
	0.3nm,0.3s,baz=1.3,slow=12,SNR=37						
CFAA				S	Sn	11 02 04.0	-1.8
	0.2nm,0.3s,baz=267,slow=18,SNR=3.9						
CPUP	Villa Florida	9.14	109	P	Pn	11 00 49.0	-0.9
	0.4nm,0.3s,baz=261,slow=11,SNR=6.4						
SIV	San Ignacio	9.38	37	P	Pn	11 00 52.6	-0.7
	2.4nm,0.3s,baz=249,slow=13,SNR=36						
BDFB	Brasilia	19.50	69	P	P	11 02 56.8	+1.1
	1.1nm,0.3s,baz=243,slow=10.0,SNR=14						
TORD	Torodi Ar. Bea	76.39	69	P	P	11 10 11.4	-0.5
	0.5nm,0.4s,baz=260,slow=5.7,SNR=8.6						
MKAR	Makanchi Array	146.19	39	PKPbc	PKPbc	11 18 00.6	-0.5
	0.3nm,0.6s,baz=325,slow=1.9,SNR=3.9						

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*IDC **04** 11:01:22.8±1.9,0°.65S×133°.02E,h0km,mb3.9/3, mb1 4.0/5,mb1mx3.7/22,mbtmp3.8/5,ML3.7/2,Error ellipse: s-maj=76.1km s-min=19.0km az=78.0*
*AUST **04** 11:01:28.8,0°.98S×134°.00E,h60km*
ISC 04 11:01:27.1±1.6**,0°.83S**±0°.10×**133°.5E**±0°.2**,h29**km**,n10,** σ**2s.44**/12**,mb4.0**/3**,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	Tual	4.84	189	P	Pn	11 02 41.6	+3.5
	baz=4.8,SNR=5.4						
TLE				S	Sn	11 03 36.3	+3.1
	baz=4.8,SNR=5.0						
KDU	Kakadu	11.83	185	P	Pn	11 04 14.7	+0.7
	baz=12,SNR=10						
KDU				S	Sn	11 06 20.1	-4.9
	baz=12,SNR=5.2						
MTN	Manton Dam	12.17	191	P	Pn	11 04 17.8	-0.8
	baz=12,SNR=23						
MTN				S	Sn	11 06 31.8	-1.7
	baz=12,SNR=4.6						
PCI	Palu	13.67	270	P	P	11 04 49.4	+1.7
	baz=14,SNR=5.4						
FITZ	Fitzroy Crossi	18.83	204	P	P	11 05 43.2	-1.6
	0.1nm,0.3s,baz=29,slow=13,SNR=5.3						
FITZ	Fitzroy Crossi	18.83	204	P	P	11 05 44.3	-0.5
	baz=19,SNR=7.7						
WRA	Warramunga Arr	19.02	178	P	Pn	11 05 48.9	+1.2
	0.3nm,0.3s,baz=354,slow=11,SNR=28						
WRA				S	Sn	11 09 11.9	-8.1
	0.1nm,0.3s,baz=356,slow=24,SNR=6.8						
ASAR	Alice Springs	22.71	179	P	P	11 06 28.2	+1.4
	2.2nm,0.4s,baz=356,slow=10,SNR=46						
ASAR				S	Sn	11 10 41.4	-7.4
	0.7nm,0.9s,baz=359,slow=26,SNR=4.9						
STKA	Stephens Creek	31.81	167	P	P	11 07 50.6	+1.2
	1.3nm,0.4s,baz=346,slow=7.2,SNR=6.9						
MKAR	Makanchi Array	65.17	324	P	P	11 12 03.5	-2.2
	0.3nm,0.5s,baz=107,slow=7.6,SNR=5.3						

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*DJA **04** 11:07:07.8±3.9,22°S±10°×17°5W±°,h10km,M5.7/17, mB5.9/4,mb5.5/17,MLv5.8/1,Mw(mB)5.5/4*
*AUST **04** 11:07:10.8±1.4,22°.23S×174°.27W,h34km,Error ellipse: s-maj=1.2km s-min=0.8km az=301.0*
*ISCJB **04** 11:07:11.9±0.1,22°.51S±0°.04×174°.77W±0°.03,h34km, mb5.4/163,MS5.3/211,Error ellipse: s-maj=5.8km s-min=2.7km az=154.6*
*GCMT **04** 11:07:11.7±0.1,22°.64S×174°.14W,h12km,MW5.5, Moment Tensor Solution. s78,c131; s31,c33; Moment tensor: Scale 10^{17}Nm; M_{rr}1.68±.02; $M_{\theta\theta}$-0.37±.02; $M_{\phi\phi}$-1.32±.02; $M_{r\theta}$0.60±.06; $M_{\theta\phi}$-0.77±.02; $M_{\phi r}$0.90±.05; Best double couple: $M_0$2.00000×10^{17} NP1:ϕ_s206.00000°, δ29.00000°,λ85.00000°. NP2:ϕ_s32.00000°,δ61.00000°, λ93.00000°. Principal axes: T 1.9900, Plg74.0000°, Azm308.0000°; N 0.0600, Plg2.0000°, Azm210.0000°; P -2.0600, Plg16.0000°, Azm120.0000°; Data Used: II IU IC G CN. Surface waves: sta=111, comp=235, per= 50.*
*SZGRF **04** 11:07:11.2,21°.15S×173°.81W,h33km,mb5.6,Tonga Islands*
*MOS **04** 11:07:11.6±1.5,22°.51S×174°.70W,h33km,mb5.7/41, MS5.3/51,Error ellipse: s-maj=8.4km s-min=7.5km az=140.2*
*BJI **04** 11:07:12.0,22°.00S×174°.44W,h27km,mB6.1/41, mb5.7/53,Ms5.4/55,Ms7 5.2/52*
*NEIC **04** 11:07:13.0±0.1,22°.52S×174°.66W,h35km,mb5.5/110, MS5.4/150,MW5.5,Error ellipse: s-maj=6.6km s-min=4.3km az=151.0*
*IDC **04** 11:07:13.4±0.5,22°.51S×174°.87W,h34km±3km,mb5.0/29, mb1 5.0/31,mb1mx5.0/32,mbtmp4.9/31,ML4.1/2,MS5.1/33, Ms1 5.1/33,ms1mx5.0/48,Error ellipse: s-maj=12.8km s-min=10.6km az=157.0*
*BGS **04** 11:07:13.7±5.7,22°.52S×174°.66W,h33km,mb5.5(NEIC)*
ISC 04 11:07:13.1±0.3**,22°.54S**±0°.05×**174°.66W**±0°.04**,h35**km±1km**, h35**km**:pP-P,n1127,**σ**1s.28**/1098**,mb5.5**/160**,MS5.3**/215**, 192C-162D,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.61	53	P	Pn	11 08 25.2	-8.8
	baz=5.1,SNR=7.9						
NIUE				S	Sn	11 09 20.3	-17
	baz=5.1,SNR=3.3						
RAO	Raoul Island	7.30	203	ePn	Pn	11 08 56.5	-0.8
MSVF	Nonsavu	8.35	304	eP	Pn	11 09 15.2	+3.4
MSVF	Nonsavu	8.35	304	ePn	Pn	11 09 15.2	+3.4
MSVF	Nonsavu	8.35	304	Pn	Pn	11 09 16.0	+4.2
	3µm,1.1s,SNR=46						
AFI	Afiamalu	9.01	18	ePn	Pn	11 09 14.1	-6.7
AFI				eSn	Sn	11 10 41.8	-19
AFI				Sn	Sn	11 10 48.2	-13
AFI	Afiamalu	9.01	18	Pn	Pn	11 09 14.0	-6.7
	16nm,0.3s,baz=333,slow=3.6,SNR=11						
AFI				Sn	Sn	11 10 48.2	-13
	24nm,0.3s,baz=180,slow=21,SNR=5.6						
RAR	Rarotonga	13.88	87	ePn	Pn	11 10 17.9	-9.5
RAR	Rarotonga	13.88	87	Pn	Pn	11 10 16.8	-11
	32nm,0.3s,baz=255,slow=8.2,SNR=27						
RAR				LR	LR	11 14 09.9	
	comp=Z,9µm,18.8s,baz=287,slow=30						
OUZ	Omahuta	16.28	216	ePn	P	11 11 04.0	+2.3
	115nm,1.4s						
URZ	Urewera	17.19	202	P	P	11 11 11.3	-0.5
URZ				S	Sn	11 14 10.0	-11
URZ	Urewera	17.19	202	P	P	11 11 11.3	-0.5
	4.4nm,0.3s,baz=356,slow=4.5,SNR=41						
URZ				S	Sn	11 14 10.0	-11
	1.8nm,0.3s,baz=257,slow=19,SNR=5.7						
DZM	Mont Dzumac	17.50	268	eP	P	11 11 19.9	+4.5
	205nm,1.1s						
DZM				eLR	LR	11 15 40.8	
	8µm,21.6s						
DZM	Mont Dzumac	17.50	268	eP	P	11 11 16.2	+0.8
DZM	Mont Dzumac	17.50	268	P	Pn	11 11 13.3	-1.2
DZM	Mont Dzumac	17.50	268	P	Pn	11 11 13.3	-1.2
	0.1nm,0.3s,baz=82,slow=19,SNR=2.0						
NOUC	Port Laguerre	17.62	268	eP	P	11 11 18.6	+1.9
SNZO	South Karori	20.75	203	eP	Pn	11 11 53.4	+0.2
	224nm,1.5s						
SNZO				LR	LR		
	comp=Z,5µm,21.0s						
KHZ	Kahutara	22.14	204	eP	P	11 12 05.4	-0.3
	comp=Z,77nm,0.8s						
TBI	Tubuai	23.21	97	eP	P	11 12 14.3	-2.8
	comp=Z,660nm,1.3s						
TBI				eLQ	LQ	11 16 47.8	
	comp=Z,8µm,24.5s						
TBI				eLR	LR	11 17 40.2	
	comp=Z,11µm,28.2s,baz=271						
TBI	Tubuai	23.21	97	eP	P	11 12 14.3	-2.8
	comp=Z,660nm,1.3s						
TBI				eLQ	LQ	11 16 47.8	
PAE	Paea	24.03	83	eP	P	11 12 22.3	-2.7
	comp=Z,19nm,1.0s						
PAE	Paea	24.03	83	eP	P	11 12 22.3	-2.7
PAE	Paea	24.03	83	eP	P	11 12 22.3	-2.7
	comp=Z,19nm,1.0s						
PPT2	Papeete2	24.05	83	eP	P	11 12 22.8	-2.5
	comp=Z,149nm,1.5s						
PPT2				eLQ	LQ	11 16 53.0	
	comp=Z,11µm,25.5s						
PPT2				eLR	LR	11 17 44.5	
	comp=Z,12µm,26.5s,baz=259						
PPT	Papeete	24.06	83	LR	LR	11 19 37.5	
	comp=Z,5µm,18.9s,baz=263,slow=31						
RPZ	Rata Peaks	24.20	206	eP	P	11 12 25.5	-0.9
	comp=Z,74nm,1.0s						
RPZ	Rata Peaks	24.20	206	P	P	11 12 24.6	-1.8
	comp=Z,40nm,0.8s,baz=176,slow=0.7,SNR=13						
TIAR	Tiarei	24.27	83	eP	P	11 12 25.4	-1.9
	comp=Z,143nm,0.9s						
TIAR	Tiarei	24.27	83	eP	P	11 12 25.4	-1.9
	comp=Z,143nm,0.9s						
TVO	Taravao	24.30	83	eP	P	11 12 25.7	-1.9
	comp=Z,144nm,1.0s						
TVO	Taravao	24.30	83	eP	P	11 12 25.7	-1.9
TVO				pmax	pmax		
	comp=Z,144nm,1.0s						
TVO	Taravao	24.30	83	eP	P	11 12 25.7	-1.9
	comp=Z,144nm,1.0s						
MEH	Mehetia	25.37	84	eP	P	11 12 35.5	-1.7
	comp=Z,151nm,1.1s						
MEH	Mehetia	25.37	84	eP	P	11 12 35.5	-1.7
	comp=Z,151nm,1.1s						
ODZ	Otahua Downs	25.48	205	eP	P	11 12 39.9	+2.0
	comp=Z,46nm,1.0s						
TARA	Tarawa	26.66	331	PFAKE		11 13 00.0	+11
TARA				LR	LR		
	comp=Z,8µm,20.0s						
HNR	Honiara	27.61	294	eP	P	11 12 56.3	-1.2
	comp=Z,200nm,1.2s						
HNR				LR	LR		
	comp=Z,3µm,21.0s						
XMAS	Kiritimati	29.65	37	PFAKE		11 13 30.0	+14
XMAS				LR	LR		
	comp=Z,3µm,21.0s						
ARMA	Armidale	31.09	248	eP	P	11 13 28.4	+0.1
	comp=Z,43nm,0.9s						
ARMA	Armidale	31.09	248	P	P	11 13 29.7	+1.4
	baz=32,SNR=12						
EIDS	Eidsvold	31.39	258	eP	P	11 13 30.0	-0.9
	comp=Z,69nm,1.1s						
EIDS	Eidsvold	31.39	258	P	P	11 13 30.4	-0.4
	baz=32,SNR=5.2						
MGCD	Mangrove Creek	31.95	243	P	P	11 13 37.0	+1.3
	baz=32,SNR=10						
RMQ	Roma	33.45	256	P	P	11 13 49.0	0.0
	baz=34,SNR=30						
CNB	Canberra Magne	33.78	240	P	P	11 13 53.5	+1.6
	baz=34,SNR=9.0						
CAN	Canberra	34.07	240	eP	P	11 13 54.7	+0.4
CAN				pmax	pmax		
	comp=Z,31nm,0.9s						
CAN				MLR	MLR		
	comp=Z,7µm,20.0s						
CAN	Canberra	34.07	240	eP	P	11 13 54.7	+0.4
	comp=Z,31nm,0.9s						
CAN				LR	LR		
	comp=Z,7µm,20.0s						
MILA	Mila	34.35	237	P	P	11 13 59.3	+2.6
	baz=35,SNR=9.6						
YNG	Young	34.36	242	P	P	11 13 58.8	+1.9
	baz=35,SNR=7.2						
CMSA	Cobar Meteorol	36.27	247	P	P	11 14 12.8	-0.5
	baz=37,SNR=53						
CTA	Charters Tower	36.43	266	P	P	11 14 12.9	-1.8
CTA	Charters Tower	36.43	266	P	P	11 14 12.9	-1.8
	comp=Z,50nm,1.1s,baz=89,slow=11,SNR=26						
CTA				LR	LR	11 26 46.5	
	comp=Z,1µm,18.0s,baz=96,slow=32						
CTAO	Charters Tower	36.43	266	eP	P	11 14 13.7	-1.1
CTAO				pmax	pmax		
	comp=Z,69nm,1.2s						
CTAO				MLR	MLR		
	comp=Z,2µm,19.0s						
CTAO	Charters Tower	36.43	266	eP	P	11 14 13.7	-1.1
	comp=Z,69nm,1.2s						
CTAO				LR	LR		
	comp=Z,2µm,19.0s						
RKT	Rikitea	36.50	99	eP	P	11 14 12.8	-2.5
	comp=Z,126nm,1.2s						
RKT				eS	S	11 19 53.7	-1.7
	comp=Z,484nm,24.0s						
RKT				eLR	LR	11 23 31.4	
	comp=Z,8µm,30.2s,baz=264						
RKT	Rikitea	36.50	99	eP	P	11 14 12.8	-2.5
RKT				eS	S	11 19 53.7	-1.7
RKT				pmax	pmax		
	comp=Z,126nm,1.2s						
RKT	Rikitea	36.50	99	eP	P	11 14 12.8	-2.5
	comp=Z,126nm,1.2s						
RKT				eS	S	11 19 53.7	-1.7
TOO	Toolangi	37.31	237	P	P	11 14 24.0	+1.9
	baz=38,SNR=3.6						
MOO	Moorlands	37.40	229	P	P	11 14 26.0	+3.2
	baz=38,SNR=6.0						
TAU	Tasmania Unive	37.47	228	eP	P	11 14 24.6	+1.3
TAU				pmax	pmax		
	comp=Z,228nm,1.6s						
TAU				MLR	MLR		
	comp=Z,4µm,20.0s						
TAU	Tasmania Unive	37.47	228	eP	P	11 14 24.6	+1.3
	comp=Z,228nm,1.6s						
TAU				LR	LR		
	comp=Z,4µm,20.0s						
TAU	Tasmania Unive	37.47	228	P	P	11 14 26.0	+2.7
	comp=Z,340nm,0.7s,SNR=5.7						
QLP	Quilpie	37.49	255	P	P	11 14 22.5	-1.2
	baz=38,SNR=15						
PMG	Port Moresby	38.84	283	eP	P	11 14 33.2	-1.9
	comp=Z,129nm,1.1s						
PMG				LR	LR		
	comp=Z,2µm,19.0s						
PMG	Port Moresby	38.84	283	P	P	11 14 30.3	-4.8
	comp=Z,108nm,1.2s,comp=Z,2µmcomp=Z,0.5nm						
PMG	Port Moresby	38.84	283	P	P	11 14 33.6	-1.5
	comp=Z,108nm,1.2s,comp=Z,2µm						
PMG	Port Moresby	38.84	283	P	P	11 14 32.7	-2.4
	comp=Z,91nm,1.1s,baz=134,slow=2.1,SNR=21						
JOHN	Johnston Islan	39.35	8	PFAKE		11 14 50.0	+11
JOHN				LR	LR		
	comp=Z,5.0nm,22.0s						
PATS	Pohnpei	39.40	315	P	P	11 14 40.3	+0.5
	baz=40,SNR=3.9						
STKA	Stephens Creek	39.78	247	eP	P	11 14 42.5	-0.3
	comp=Z,8.5nm,1.3s						
STKA	Stephens Creek	39.78	247	P	P	11 14 41.8	-1.1
	comp=Z,19nm,0.8s,baz=85,slow=9.1,SNR=35						
STKA				LR	LR	11 29 56.6	
	comp=Z,6µm,20.0s,baz=78,slow=34						
STKA	Stephens Creek	39.78	247	P	P	11 14 43.0	+0.1
	baz=40,SNR=26						
ARPS	Mount Arapiles	40.04	239	P	P	11 14 45.6	+0.7
	baz=40,SNR=14						
COEN	Coen	40.83	275	eP	P	11 14 51.0	-0.8
COEN	Coen	40.83	275	P	P	11 14 51.0	-0.8
	baz=41,SNR=36						
QIS	Mount Isa	42.46	264	P	P	11 15 04.2	-0.9
	baz=43,SNR=7.9						
BBOO	Buckleboo	44.49	246	eP	P	11 15 21.0	-0.2
	comp=Z,584nm,1.0s						
BBOO	Buckleboo	44.49	246	P	P	11 15 21.0	-0.2
	baz=45,SNR=9.2						
WAKE	Wake Island	45.40	335	PFAKE		11 15 40.0	+12
WAKE				LR	LR		
	comp=Z,3µm,19.0s						
KIP	Kipapa	46.61	22	ceP	P	11 15 39.4	+1.4
KIP				pmax	pmax		
	comp=Z,94nm,1.7s						
AS31	Alice Springs	47.11	258	eP	P	11 15 40.5	-1.6
ASAR	Alice Springs	47.11	258	P	P	11 15 40.1	-2.0
ASAR				PcP	PcP	11 17 14.7	+1.0
ASAR				S	S	11 22 28.2	-4.2
ASAR	Alice Springs	47.11	258	P	P	11 15 40.1	-2.0
	comp=Z,88nm,1.0s,baz=94,slow=7.5,SNR=172						
ASAR				PcP	PcP	11 17 14.7	+1.0
	comp=Z,8.9nm,0.8s,baz=119,slow=4.0,SNR=4.3						
ASAR				S	S	11 22 28.2	-4.2
	comp=Z,1.1nm,0.9s,baz=105,slow=14,SNR=4.2						
ASAR				LR	LR	11 35 04.5	
	comp=Z,5µm,19.1s,baz=103,slow=36						
WRAB	Tennant Creek	47.42	263	eP	P	11 15 41.7	-2.8
WRAB				e		11 17 16.8	
WRAB				pmax	pmax		
	comp=Z,68nm,1.0s						
WRAB				MLR	MLR		
	comp=Z,3µm,21.0s						
WRAB	Tennant Creek	47.42	263	eP	P	11 15 41.7	-2.8
	comp=Z,68nm,1.0s						
WRAB				ePcP	PcP	11 17 16.8	+2.0
WRAB				LR	LR		
	comp=Z,3µm,21.0s						
WRAB	Tennant Creek	47.42	263	P	P	11 15 42.0	-2.5
	comp=Z,360nm,1.0s,SNR=22						
WRA	Warramunga Arr	47.43	263	P	P	11 15 42.2	-2.4
WRA				PcP	PcP	11 17 15.9	+1.1
WRA				S	S	11 22 33.2	-3.7
WRA	Warramunga Arr	47.43	263	P	P	11 15 42.2	-2.4
	comp=Z,52nm,1.0s,baz=102,slow=8.0,SNR=110						
WRA				PcP	PcP	11 17 15.9	+1.1
	comp=Z,17nm,0.9s,baz=97,slow=3.7,SNR=7.8						
WRA				S	S	11 22 33.2	-3.7
	comp=Z,2.4nm,1.1s,baz=99,slow=14,SNR=5.0						
WRA				LR	LR	11 35 14.2	
	comp=Z,3µm,20.5s,baz=85,slow=36						
JAY	Jayapura	47.63	288	P	P	11 15 44.9	-1.4
JAY	Jayapura	47.63	288	P	P	11 15 44.7	-1.6
	baz=48,SNR=10						
SMPI	Sarmi	49.64	288	P	P	11 15 59.0	-2.6
MIDW	Midway	50.53	357	PFAKE		11 16 20.0	+12
MIDW				LR	LR		
	comp=Z,3µm,21.0s						
KDU	Kakadu	51.11	272	P	P	11 16 11.3	-1.5
	baz=51,SNR=9.6						
FORT	Forrest	51.38	248	eP	P	11 16 12.9	-1.7
	comp=Z,70nm,0.6s						
FORT	Forrest	51.38	248	P	P	11 16 13.9	-0.7
	baz=52,SNR=12						
MTN	Manton Dam	52.30	271	P	P	11 16 19.7	-1.9
	baz=53,SNR=15						
BAKI	Biak	52.31	287	P	P	11 16 18.9	-2.8
	comp=Z,101nm,1.2s,comp=Z,2µm						
TLE	Tual	53.42	280	P	P	11 16 44.1	+14
	baz=54,SNR=6.6						
GUMO	Guam	53.50	308	LR	LR	11 37 33.6	
	comp=Z,616nm,19.4s,baz=92,slow=34						
FITZ	Fitzroy Crossi	55.85	263	P	P	11 16 46.0	-1.5
FITZ	Fitzroy Crossi	55.85	263	P	P	11 16 46.0	-1.5
	comp=Z,67nm,1.1s,baz=100,slow=7.3,SNR=38						
FITZ				LR	LR	11 40 22.0	
	comp=Z,3µm,19.9s,baz=97,slow=36						
FITZ	Fitzroy Crossi	55.85	263	P	P	11 16 46.6	-0.9
	baz=56,SNR=51						
SBA	Scott Base	56.08	185	eP	P	11 16 50.5	+2.3
SBA				pmax	pmax		
	comp=Z,96nm,1.4s						
SBA				MLR	MLR		
	comp=Z,2µm,20.0s						
SBA	Scott Base	56.08	185	eP	P	11 16 50.5	+2.3
	comp=Z,96nm,1.4s						
SBA				LR	LR		
	comp=Z,2µm,20.0s						
VNDA	Vanda	56.19	186	eP	P	11 16 49.0	0.0
	comp=Z,28nm,1.4s						
VNDA	Vanda	56.19	186	P	P	11 16 50.1	+1.1
	comp=Z,7.7nm,0.8s,baz=2.0,slow=6.5,SNR=36						
VNDA				LR	LR	11 37 04.6	
	comp=Z,2µm,19.6s,baz=12,slow=32						
KMBL	Kambalda	56.58	246	P	P	11 16 51.7	-0.9
	baz=57,SNR=5.8						
SWI	Sorong	56.77	285	P	P	11 16 52.8	-1.3
SWI	Sorong	56.77	285	P	P	11 16 52.8	-1.3
SWI	Sorong	56.77	285	P	P	11 16 49.1	-5.0
	baz=57,SNR=4.1						
RPN	Rapa Nui	58.88	109	PFAKE		11 17 20.0	+11
RPN				LR	LR		
	comp=Z,4µm,21.0s						
KLBR	Kellerberrin	60.03	246	P	P	11 17 16.8	0.0
	baz=60,SNR=6.4						
LBMI	Labuha	60.25	283	P	P	11 17 17.6	-0.8
NWAO	Narrogin (SRO)	60.26	244	PFAKE		11 17 30.0	+12
NWAO				LR	LR		
	comp=Z,2µm,19.0s						
MBWA	Marble Bar	60.45	258	eP	P	11 17 18.2	-1.5
	comp=Z,35nm,0.8s						
MBWA				ePcP	PcP	11 18 06.2	+1.8
MBWA				LR	LR		
	comp=Z,2µm,20.0s						
BLDU	Ballidu	61.09	247	P	P	11 17 23.1	-0.8
	baz=62,SNR=12						
MMRI	Maumere	61.94	272	P	P	11 17 29.4	-0.5

MMRI **Maumere** **61.94 272** P P 11 17 23.9 -6.0
MORW **Morawa** **61.95 248** P **P** **11 17 29.6 -0.2**
baz=62,SNR=11
CASY **Casey** **63.48 206** *e*P **P** **11 17 40.2 +1.0**
comp=Z,47nm,0.9s
CASY LR LR
comp=Z,1μm,19.0s
CBIJ **Chichi jima** **64.62 318** LR LR 11 41 41.3
comp=Z,750nm,19.7s,baz=314,slow=32
GIRL **Giralia** **65.01 255** P **P** **11 17 52.7 +2.6**
baz=65,SNR=3.7
DAV **Davao City (W)** **65.45 289** LR LR 11 41 51.4
comp=Z,656nm,19.5s,baz=147,slow=32
KAPI **Kappang** **65.56 275** P **P** **11 17 52.5 -1.3**
comp=Z,1.1nm,1.1s
KAPI LR LR
comp=Z,820nm,20.0s
KAPI **Kappang** **65.56 275** P **P** **11 17 54.5 +0.7**
comp=Z,42nm,2.1s,comp=Z,989nm
KAPI **Kappang** **65.56 275** P **P** **11 17 52.5 -1.3**
comp=Z,13nm,0.8s,baz=190,slow=3.3,SNR=6.0
QSPA **South Pole Qui** **67.54 180** *e*P **P** **11 18 06.7 +0.9**
comp=Z,131nm,1.4s
QSPA LR LR
comp=Z,3μm,20.0s
KHKI **Kahang-Kahang** **68.16 270** P P 11 18 05.2 -5.1
comp=Z,70nm,1.1s,comp=Z,1μm
IGBI **Denpasar** **68.43 269** P **P** **11 18 12.1 +0.1**
GMJI **Gumukmas** **70.20 269** P **P** **11 18 20.0 -2.9**
BLJI **Banyuglugur** **70.25 270** P P 11 18 16.3 -6.9
JHJ **Hachijo jima 2** **70.37 320** LR LR 11 43 55.4
comp=Z,409nm,18.9s,baz=288,slow=31
MIR **Mirnyy** **70.47 205** ⇓*i*P **P** **11 18 26.0 +2.3**
MIR *e* 11 18 48.0
MIR pmax pmax
comp=Z,282nm,2.3s
MYLDM **Lahad Datu** **70.86 284** P **P** **11 18 27.0 0.0**
TSM **Tawau** **71.04 283** P **P** **11 18 28.8 +0.8**
PWJI **Pagerwojo** **71.80 269** P **P** **11 18 29.9 -2.8**
SJI **Sawahan** **71.94 269** P **P** **11 18 30.7 -2.9**
SDKM **Sandakan** **72.22 284** P **P** **11 18 35.9 +0.7**
PCJI **Pacitan** **72.32 268** P **P** **11 18 34.4 -1.4**
TGY **Tagaytay City** **72.83 294** LR LR 11 50 17.6
comp=Z,4.0nm,18.8s,baz=280,slow=36
UGM **Wanagama** **73.03 268** P **P** **11 18 40.1 0.0**
baz=73,SNR=4.7
KDM **Kudat** **73.10 285** P **P** **11 18 42.1 +1.7**
KKM **Kota Kinabalu** **73.28 284** *e*P **P** **11 18 41.1 -0.5**
comp=Z,91nm,1.1s
KKM LR LR
comp=Z,640nm,22.0s
KKM **Kota Kinabalu** **73.28 284** P **P** **11 18 42.1 +0.5**
KKM **Kota Kinabalu** **73.28 284** P **P** **11 18 41.9 +0.3**
baz=74,SNR=9.4
MJAR **Matsushiro Arr** **73.70 322** P **P** **11 18 42.7 -0.8**
MJAR **Matsushiro Arr** **73.70 322** P **P** **11 18 42.7 -0.8**
comp=Z,18nm,0.8s,baz=164,slow=6.1,SNR=36
MJAR LR LR 11 47 21.6
comp=Z,545nm,21.2s,baz=110,slow=33
MAJO **Matsushiro** **73.71 322** *e*P **P** **11 18 43.1 -0.4**
MAJO pmax pmax
comp=Z,175nm,1.6s
MAJO MLR MLR
comp=Z,965nm,19.0s
MAJO **Matsushiro** **73.71 322** *e*P **P** **11 18 43.1 -0.4**
comp=Z,175nm,1.6s
MAJO LR LR
comp=Z,965nm,19.0s
MAT **Matsushiro** **73.71 322** P **P** **11 18 42.6 -0.9**
MAT S **S** **11 28 16.2 +4.2**
JOW **Kunigami** **73.86 309** P **P** **11 18 44.1 -0.5**
JOW **Kunigami** **73.86 309** P **P** **11 18 44.1 -0.5**
comp=Z,33nm,0.9s,baz=119,slow=5.1,SNR=7.7
JOW LR LR 11 44 22.5
comp=Z,2μm,21.0s,baz=95,slow=30
TGJI **Tegal** **74.70 269** P P 11 18 46.4 -3.4
BTM **Bintulu** **74.92 280** P **P** **11 18 53.3 +2.2**
ERM **Erimo** **75.15 329** *e*P **P** **11 18 51.7 0.0**
ERM pmax pmax
comp=Z,183nm,1.8s
ERM MLR MLR
comp=Z,4μm,20.0s
ERM **Erimo** **75.15 329** *e*P **P** **11 18 51.7 0.0**
comp=Z,183nm,1.8s
ERM LR LR
comp=Z,4μm,20.0s
SBUM **Sibu** **75.40 279** P **P** **11 18 54.7 +0.9**
YUK **Yuzh-Kuril'sk** **75.48 332** P **P** **11 18 52.9 -0.6**
YUK *e* 11 21 39.3
YUK *e*PPP PPP 11 23 27.2
YUK *i*S **S** **11 28 32.0 +0.6**
YUK *e*SS **SS** **11 33 26.4 +3.3**
YUK pmax pmax
comp=Z,382nm,5.8s
JNU **Nakatsue** **75.90 315** P **P** **11 18 56.0 -0.3**
comp=Z,5.7nm,1.4s
JNU **Nakatsue** **75.90 315** P **P** **11 18 56.0 -0.3**
comp=Z,35nm,1.1s,baz=124,slow=1.4,SNR=9.2
LEM **Lembang** **76.10 268** P **P** **11 18 57.3 -0.8**
XMIS **Christmas Isla** **76.61 264** P **P** **11 19 02.9 +2.2**
baz=77,SNR=4.1
KSM **Kuching** **76.77 277** *e*P **P** **11 19 01.2 -0.4**
comp=Z,86nm,1.3s
KSM LR LR
comp=Z,586nm,19.0s
KSM **Kuching** **76.77 277** P **P** **11 19 02.3 +0.7**
KSM **Kuching** **76.77 277** P **P** **11 19 02.0 +0.4**
baz=77,SNR=26
DBJI **Dramaga** **77.00 268** P **P** **11 19 00.9 -2.1**
ASAJ **Asahikawa** **77.02 330** P **P** **11 19 02.9 +0.6**
ASAJ **Asahikawa** **77.02 330** P **P** **11 19 02.9 +0.6**
comp=Z,84nm,1.1s,baz=225,slow=11,SNR=16
ASAJ LR LR 11 49 21.9
comp=Z,3μm,20.1s,baz=184,slow=33
SBC **Santa Barbara** **77.04 44** ⇓P **P** **11 19 03.9 +1.2**
baz=77
TWG **Pinlang** **77.09 301** *e*P **P** **11 19 00.7 -2.5**
comp=Z,64nm,0.8s
YULB **Yu-li** **77.21 302** *e*P **P** **11 19 02.8 -1.1**
comp=Z,20nm,1.0s
CIS **Catalina Islan** **77.25 45** ⇑P **P** **11 19 05.1 +1.2**
baz=77
NACB **Ninganchiao** **77.39 303** *e*P **P** **11 19 04.0 -0.9**
comp=Z,52nm,1.0s
FMP **Fort Macarthur** **77.51 45** ⇓P **P** **11 19 06.8 +1.6**
baz=78
SSLB **Suanglung** **77.69 302** P **P** **11 19 05.0 -1.5**
comp=Z,41nm,0.9s
TPUB **Ta-pu** **77.69 302** *e*P **P** **11 19 05.1 -1.5**
comp=Z,69nm,0.8s
YHNB **Yeheng** **77.82 303** *e*P **P** **11 19 06.9 -0.5**
comp=Z,87nm,1.4s
YHNB LR LR
comp=Z,1μm,20.0s
TATO **Taipei** **77.89 304** PFAKE 11 19 20.0 +12
TATO LR LR
comp=Z,1μm,21.0s
CGJI **Cibinong** **77.96 268** P **P** **11 19 08.8 +0.5**
PMSA **Palmer Station** **78.18 156** PFAKE 11 19 20.0 +11
PMSA LR LR
comp=Z,1μm,20.0s
BFSC **Mount Baldy Ra** **78.25 45** ⇑P **P** **11 19 10.1 +0.5**
baz=78
MONP **Monument Peak** **78.26 47** ⇓P **P** **11 19 10.3 +0.5**
baz=78
EDW2 **Edwards Air Fo** **78.42 45** ⇓P **P** **11 19 11.0 +0.5**
baz=79
ISA **Isabella** **78.59 44** *e*P **P** **11 19 10.9 -0.5**
ISA pmax pmax
comp=Z,95nm,1.7s
ISA **Isabella** **78.59 44** *e*P **P** **11 19 10.9 -0.5**
comp=Z,95nm,1.7s
ISA **Isabella** **78.59 44** ⇑P **P** **11 19 12.1 +0.8**
baz=79
PFO **Pinyon Flat Ob** **78.66 46** *e*P **P** **11 19 09.9 -1.9**
comp=Z,56nm,1.5s
PFO LR LR
comp=Z,2μm,20.0s
PFO **Pinyon Flat Ob** **78.66 46** ⇓P **P** **11 19 13.0 +1.1**
baz=79
PET **Petropavlovsk** **78.74 344** PFAKE 11 19 20.0 +8.4
PET LR LR
comp=Z,2μm,20.0s
CMB **Columbia Colle** **78.90 41** *e*P **P** **11 19 10.0 -3.0**
CMB pmax pmax
comp=Z,22nm,1.2s
CMB **Columbia Colle** **78.90 41** *e*P **P** **11 19 10.0 -3.0**
comp=Z,22nm,1.2s
PETK **Petropavlovsk-** **79.06 343** P **P** **11 19 13.6 +0.1**
PETK **Petropavlovsk-** **79.06 343** P **P** **11 19 13.6 +0.1**
PETK **Petropavlovsk-** **79.06 343** P **P** **11 19 13.6 +0.1**
comp=Z,45nm,0.7s,baz=131,slow=6.9,SNR=32
PETK LR LR 11 50 10.7
comp=Z,706nm,20.1s,baz=154,slow=33
YSS **Yuzh-Sakhalins** **79.13 332** *e*P **P** **11 19 15.8 +1.9**
YSS *e* 11 19 23.0
YSS *e**PP **pP** **11 19 25.0 +0.2**
YSS *e*S **S** **11 29 09.0 -1.8**
YSS *e*PS **pS** **11 29 26.0 +1.5**
YSS *e*PPS PPS 11 29 48.0
YSS pmax pmax
comp=Z,140nm,1.1s
YSS MLR MLR
comp=E,600nm,20.0s
YSS MLR MLR
comp=Z,1μm,20.0s
YSS MLR MLR
comp=N,400nm,17.0s
YSS **Yuzh-Sakhalins** **79.13 332** *e*P **P** **11 19 14.1 +0.1**
comp=N,190nm,1.3s
YSS LR LR
comp=Z,477nm,20.0s
BELC **Belle Mtn. Jos** **79.20 46** ⇑P **P** **11 19 14.9 0.0**
baz=79
WDC **Whiskeytown Da** **79.31 38** *e*P **P** **11 19 16.0 +0.9**
WDC pmax pmax
comp=Z,10.0nm,1.2s
WDC **Whiskeytown Da** **79.31 38** *e*P **P** **11 19 16.0 +0.9**
comp=Z,9.9nm,1.2s
GLA **Glamis** **79.44 48** ⇑P **P** **11 19 17.6 +1.5**
baz=80
GSC **Goldstone** **79.45 45** ⇑P **P** **11 19 17.4 +1.3**
baz=80
KASI **Kota Agung** **79.46 268** P **P** **11 19 16.9 +0.3**
MPMC **Manual Prospec** **79.47 44** ⇑P **P** **11 19 17.1 +0.7**
baz=80
HEC **Hector,Ludlow** **79.48 45** ⇓P **P** **11 19 16.1 -0.2**
baz=80
IRM **Iron Mountain** **79.86 47** ⇑P **P** **11 19 18.5 +0.2**
baz=80
GMRC **Granite Mounta** **79.89 46** ⇑P **P** **11 19 18.9 +0.3**
baz=80
YBH **Yreka Blue Hor** **79.99 37** *e*P **P** **11 19 18.8 -0.1**
comp=Z,41nm,1.4s
YBH **Yreka Blue Hor** **79.99 37** LR LR 11 49 36.5
comp=Z,2μm,19.1s,baz=239,slow=32
Y12C **Blythe** **80.05 47** ⇓P **P** **11 19 20.1 +0.8**
baz=80
LWLI **Liwa** **80.06 269** P **P** **11 19 18.8 -1.2**
WCN **Washoe City** **80.09 40** *e*P **P** **11 19 20.3 +0.7**
WCN pmax pmax
comp=Z,48nm,1.5s
WCN **Washoe City** **80.09 40** *e*P **P** **11 19 20.3 +0.7**
comp=Z,48nm,1.5s
GRAC **Grapevine Rang** **80.12 43** ⇑P **P** **11 19 21.0 +1.4**
baz=80
QZH **Quanzhou** **80.13 302** ⇑*i*P **P** **11 19 21.4 +1.5**
QZH S **S** **11 29 25.0 +2.6**
QZH pmax pmax
comp=Z,320nm,1.6s
QZH pmax pmax
comp=Z,1μm,6.2s
QZH LR LR
comp=N,2μm,20.7s
QZH LR LR
comp=E,2μm,19.6s
QZH LR LR
comp=Z,2μm,21.4s
214A **Organ Pipe Nat** **80.21 50** ⇑P **P** **11 19 20.6 +0.4**
baz=80
NVAR **Mina Array Bea** **80.42 42** P **P** **11 19 21.5 0.0**
NVAR pP **pP** **11 19 32.9 +0.5**
NVAR **Mina Array Bea** **80.42 42** P **P** **11 19 21.5 0.0**
comp=Z,3.3nm,0.7s,baz=224,slow=8.6,SNR=22
NVAR pP **pP** **11 19 32.9 +0.5**
comp=Z,12nm,1.0s,baz=212,slow=5.3,SNR=14
NVAR LR LR 11 49 32.6
comp=Z,1μm,18.5s,baz=118,slow=32
HUMO **Hull Mountain** **80.45 36** *e*P **P** **11 19 20.5 -0.7**
comp=Z,45nm,1.4s
KSRS **Korea Array** **80.48 317** P **P** **11 19 22.1 +0.7**
comp=Z,27nm,1.1s,baz=138,slow=5.9,SNR=50
KSRS LR LR 11 50 17.3
comp=Z,830nm,20.6s,baz=120,slow=32
KSAR **Wonju Array Be** **80.50 317** P **P** **11 19 22.1 +0.6**
NV11 **Mina Array Sit** **80.51 42** *e*P **P** **11 19 20.6 -1.3**
PDMCI **Parker Dam,Lak** **80.62 47** ⇓P **P** **11 19 24.1 +1.7**
baz=81
MAW **Mawson** **80.69 199** P **P** **11 19 24.0 +1.9**
MAW **Mawson** **80.69 199** P **P** **11 19 24.0 +1.9**
comp=Z,35nm,0.9s,baz=121,slow=7.0,SNR=24
MAW LR LR 11 53 38.9
comp=Z,2μm,18.8s,baz=118,slow=34
MAW **Mawson** **80.69 199** P **P** **11 19 23.8 +1.6**
baz=81,SNR=14
USHA **Ushuaia** **80.71 146** P **P** **11 19 22.8 +0.2**
USHA **Ushuaia** **80.71 146** P **P** **11 19 22.8 +0.2**
comp=Z,7.9nm,0.9s,baz=185,slow=3.9,SNR=3.5
TPH **Tonopah** **80.87 42** PFAKE 11 19 40.0 +16
TPH LR LR
comp=Z,2μm,19.0s
Z14A **Wintersburg** **80.91 48** ⇓P **P** **11 19 24.4 +0.5**
baz=81
Y14A **Wickenburg** **81.19 48** ⇑P **P** **11 19 25.5 0.0**
baz=81
W13A **Hualapai Mount** **81.26 46** ⇑P **P** **11 19 26.0 0.0**
baz=81
INCN **Inchon** **81.31 317** *e*P **P** **11 19 26.9 +1.0**
comp=Z,128nm,1.3s
INCN LR LR
comp=Z,640nm,20.0s
SSE **Sheshan** **81.38 309** P **P** **11 19 27.5 +1.1**
SSE pP **pP** **11 19 39.1 +1.7**
SSE S **S** **11 29 37.3 +2.1**
SSE pmax pmax
comp=Z,25nm,1.0s
SSE pmax pmax
comp=Z,320nm,6.5s
SSE LR LR
comp=N,480nm,20.0s
SSE LR LR
comp=E,470nm,20.0s
SSE LR LR
comp=Z,750nm,20.0s
MOD **Modoc** **81.45 38** *e*P **P** **11 19 25.4 -1.4**
comp=Z,261nm,2.5s
TUC **Tucson** **81.83 50** *e*P **P** **11 19 29.0 0.0**
TUC pmax pmax
comp=Z,46nm,1.5s
TUC MLR MLR
comp=Z,3μm,20.0s
TUC **Tucson** **81.83 50** *e*P **P** **11 19 29.0 0.0**
comp=Z,46nm,1.5s
TUC LR LR
comp=Z,3μm,20.0s
KSI **Kapahiang** **81.92 269** P **P** **11 19 29.0 -0.8**
R11A **Troy Canyon, C** **82.06 43** ⇑P **P** **11 19 30.0 -0.1**
baz=82
BMN **Battle Mountai** **82.32 40** *e*P **P** **11 19 31.8 +0.4**
BMN pmax pmax
comp=Z,19nm,1.2s
BMN MLR MLR
comp=Z,1μm,19.0s
BMN **Battle Mountai** **82.32 40** *e*P **P** **11 19 31.8 +0.4**
comp=Z,20nm,1.2s
BMN LR LR
comp=Z,1μm,19.0s
USRK **Ussuriysk Arra** **82.40 324** P **P** **11 19 32.3 +0.8**
comp=Z,102nm,1.1s,baz=132,slow=3.9,SNR=94
USRK LR LR 11 51 22.3
comp=Z,791nm,20.6s,baz=124,slow=32
319A **Douglas** **82.41 52** ⇑P **P** **11 19 31.4 -0.7**
baz=83
X16A **Lo Mia Camp, P** **82.53 48** ⇑P **P** **11 19 33.0 +0.3**
baz=83
MYKOM **Kota Tinggi** **82.83 275** P **P** **11 19 35.4 +0.9**
320A **Kipp Ranch, An** **82.94 52** ⇓P **P** **11 19 35.3 +0.4**
baz=83
CCUT **Cedar City** **83.01 45** *e*P **P** **11 19 35.7 +0.5**
comp=Z,56nm,1.4s
U15A **North Rim** **83.08 46** P **P** **11 19 36.4 +0.8**
baz=83,SNR=9.3
ARUT **Antelope Range** **83.10 44** *e*P **P** **11 19 36.0 +0.4**
ARUT pmax pmax
comp=Z,50nm,1.3s
ARUT **Antelope Range** **83.10 44** *e*P **P** **11 19 36.0 +0.4**
comp=Z,50nm,1.3s
WUAZ **Wupatki** **83.19 47** *e*P **P** **11 19 35.8 -0.3**
comp=Z,47nm,1.4s
WUAZ LR LR
comp=Z,1μm,19.0s
WUAZ **Wupatki** **83.19 47** ⇓P **P** **11 19 36.6 +0.6**
baz=83
FL2 **Flat Top 2** **83.20 34** P **P** **11 19 36.3 +0.6**
220A **Playas Peak, P** **83.24 52** ⇑P **P** **11 19 36.9 +0.5**
baz=83
NLWA **Neilton Lookou** **83.25 32** PFAKE 11 19 50.0 +14
NLWA LR LR
comp=Z,2μm,20.0s
TDL **Tradedollar La** **83.37 34** P **P** **11 19 37.3 +0.6**
KGM **Kluang** **83.40 275** P **P** **11 19 38.4 +0.9**
120A **U Bar Ranch, L** **83.50 51** ⇑P **P** **11 19 39.0 +1.3**
baz=84
KRJI **Kerinci** **83.55 270** P **P** **11 19 37.2 -1.2**
NJ2 **Nanjing** **83.57 308** *e*P **P** **11 19 39.4 +1.5**
NJ2 pP **pP** **11 19 50.0 +1.2**
NJ2 sP **sP** **11 19 53.4 +0.6**
NJ2 PP **PP** **11 22 52.2 +1.2**
NJ2 S **S** **11 29 57.5 -0.1**
NJ2 sS **sS** **11 30 14.0 -1.7**
NJ2 pmax pmax
comp=Z,140nm,1.0s
NJ2 pmax pmax
comp=Z,710nm,5.3s
NJ2 LR LR
comp=N,370nm,17.1s
NJ2 LR LR
comp=E,220nm,12.2s
NJ2 LR LR
comp=Z,410nm,17.8s
X18A **Snowflake** **83.62 49** ⇑P **P** **11 19 38.8 +0.5**
baz=84
ELK **Elko** **83.71 41** *e*P **P** **11 19 38.5 -0.2**
Z20A **Nine Sixteen R** **83.83 50** ⇓P **P** **11 19 39.9 +0.5**
baz=84
MDJ **Mudanjiang** **83.98 324** P **P** **11 19 41.1 +1.4**
MDJ pP **pP** **11 19 50.2 -0.4**
MDJ sP **sP** **11 19 53.5 -1.1**
MDJ S **SKKSac** **11 30 04.6 -0.6**
MDJ ScS **ScS** **11 30 14.4 +0.8**
MDJ sS **sS** **11 30 19.5 +0.2**
MDJ pmax pmax
comp=Z,130nm,1.3s
MDJ pmax pmax
comp=Z,830nm,5.0s
MDJ LR LR
comp=N,310nm,14.2s
MDJ LR LR
comp=E,480nm,15.6s
MDJ LR LR
comp=Z,850nm,13.5s
COCO **West Island** **84.06 259** PFAKE 11 19 50.0 +9.2
COCO LR LR
comp=Z,1μm,21.0s
W18A **Petrified Fore** **84.09 48** ⇓P **P** **11 19 42.0 +1.3**
baz=84
121A **Cookes Peak, D** **84.10 51** ⇑P **P** **11 19 41.5 +0.7**
baz=84
GSM **Grass Mountain** **84.16 33** P **P** **11 19 40.8 +0.1**
GSM **Grass Mountain** **84.16 33** P **P** **11 19 40.8 +0.1**
MVU **Marysvale** **84.30 44** *e*P **P** **11 19 41.8 0.0**
comp=Z,65nm,1.4s
MVU LR LR
comp=Z,1μm,19.0s
RMW **Rattlesnake Mo** **84.33 33** P **P** **11 19 41.7 +0.2**
RMW **Rattlesnake Mo** **84.33 33** P **P** **11 19 41.7 +0.2**
PGC **Sidney** **84.33 31** *e*P **P** **11 19 43.4 +2.1**
comp=Z,1.3nm,1.0s
MSU **Marysvale** **84.33 44** *e*P **P** **11 19 39.1 -2.8**
MSU pmax pmax
comp=Z,73nm,1.3s
MSU **Marysvale** **84.33 44** *e*P **P** **11 19 39.1 -2.8**
comp=Z,73nm,1.3s
222A **Williams Famil** **84.38 52** ⇓P **P** **11 19 42.2 0.0**
baz=84
Y20A **Horse Springs,** **84.40 50** ⇓P **P** **11 19 43.5 +1.2**
baz=85,SNR=6.2
QIZ **Qiongzhong** **84.52 293** P **P** **11 19 43.6 +0.6**
QIZ sP **sP** **11 19 56.6 -1.3**
QIZ S **S** **11 30 08.8 +1.1**
QIZ sS **sS** **11 30 24.8 -1.0**
QIZ SS **SS** **11 35 40.2 +0.8**
QIZ pmax pmax
comp=Z,29nm,1.6s
QIZ pmax pmax
comp=Z,330nm,6.5s
QIZ LR LR
comp=E,260nm,20.6s
QIZ LR LR
comp=Z,720nm,33.8s
PAYG **Puerto Ayora** **84.54 88** PFAKE 11 19 50.0 +6.7
PAYG LR LR
comp=Z,2μm,19.0s
Z21A **St. Cloud Mine** **84.58 51** ⇑P **P** **11 19 44.0 +0.7**
baz=85,SNR=5.7
X20A **Quemado** **84.64 49** ⇑P **P** **11 19 44.8 +1.2**
baz=85,SNR=8.4
122A **Conniff Cattle** **84.75 52** ⇑P **P** **11 19 44.7 +0.7**
baz=85
HAWA **Hanford** **84.79 35** *e*P **P** **11 19 44.0 +0.3**
comp=Z,77nm,1.4s
HAWA LR LR
comp=Z,3μm,19.0s
KTGM **Kuala Trenggan** **84.86 278** P **P** **11 19 46.0 +1.1**
P15A **Leamington** **84.87 43** ⇑P **P** **11 19 45.6 +1.1**
baz=85
DUG **Dugway** **84.89 43** *e*P **P** **11 19 44.2 -0.4**
DUG pmax pmax
comp=Z,28nm,1.4s
DUG MLR MLR
comp=Z,997nm,20.0s
DUG **Dugway** **84.89 43** *e*P **P** **11 19 44.2 -0.4**
comp=Z,28nm,1.4s
DUG LR LR
comp=Z,997nm,20.0s
DUG **Dugway** **84.89 43** ⇓P **P** **11 19 45.3 +0.8**
baz=85
Y21A **Point of Rocks** **84.95 50** ⇓P **P** **11 19 46.0 +0.9**
baz=85,SNR=5.6
W20A **Ramah** **84.95 49** P **P** **11 19 46.1 +1.0**
baz=85,SNR=12
MFID **Camas Ranch** **84.97 39** *e*P **P** **11 19 44.4 -0.4**
comp=Z,11nm,1.1s
MFID **Camas Ranch** **84.97 39** ⇓P **P** **11 19 45.6 +0.7**
baz=85
BMO **Blue Mountains** **85.02 37** *e*P **P** **11 19 44.5 -0.5**
comp=Z,38nm,1.5s
BMO LR LR
comp=Z,1μm,20.0s
Z22A **Elephant Butte** **85.06 51** ⇑P **P** **11 19 46.0 +0.3**
baz=85
X21A **Alamocita Cree** **85.09 50** ⇑P **P** **11 19 46.5 +0.6**
baz=85,SNR=7.3
Q16A **Castle Valley** **85.21 44** ⇑P **P** **11 19 47.2 +0.9**
baz=85
324A **Moseley Ranch,** **85.23 53** ⇑P **P** **11 19 46.7 +0.2**
baz=85
425A **Indio Mountain** **85.28 54** ⇑P **P** **11 19 47.4 +0.6**
baz=85
P16A **Fountain Green** **85.28 44** ⇓P **P** **11 19 47.5 +0.9**
baz=86
S18A **Hurst Farm, BI** **85.31 46** ⇓P **P** **11 19 47.5 +0.6**
baz=86
626A **Big Bend Ranch** **85.32 56** P **P** **11 19 47.2 +0.2**
baz=86,SNR=8.2
V20A **Brimhall** **85.33 48** ⇓P **P** **11 19 47.1 +0.1**
baz=86
DL2 **Dalian** **85.35 315** P **P** **11 19 47.5 +0.8**
DL2 S **S** **11 30 13.7 -1.4**
DL2 pmax pmax
comp=Z,50nm,1.2s
DL2 pmax pmax
comp=Z,270nm,3.5s
DL2 LR LR
comp=N,210nm,21.3s
DL2 LR LR
comp=E,170nm,18.6s
DL2 LR LR
comp=Z,310nm,19.0s

TMUT **Trail Mountain** 85.40 44 *e*P P 11 19 44.9 -2.5
comp=Z,22nm,1.1s
SYO **Syowa Base** 85.40 192⇑ *e*P P 11 19 45.6 -0.9
SYO **Syowa Base** 85.40 192⇓ *e*PcP P 11 19 47.5 +1.0
Y22A **Socorro** 85.41 51 ⇑P P 11 19 47.9 +0.5
baz=86
WTV **Waterville** 85.42 34 P P 11 19 47.1 +0.1
FRIM **Kepong** 85.43 275 P P 11 19 48.8 +1.1
224A **Cornudas Mount** 85.52 53 ⇓P P 11 19 48.2 +0.3
baz=86
MPU **Maple Canyon** 85.53 43 *e*P P 11 19 47.9 +0.1
comp=Z,45nm,1.4s
LAZ **Ladron** 85.53 50 *e*P P 11 19 48.3 +0.3
comp=Z,34nm,1.4s
TXAR **Lajitas Array** 85.57 56 P P 11 19 48.0 -0.2
TXAR pP pP 11 19 58.7 -0.5
TXAR **Lajitas Array** 85.57 56 P P 11 19 48.0 -0.2
comp=Z,6.2nm,1.1s,baz=211,slow=7.1,SNR=29
TXAR pP pP 11 19 58.7 -0.5
comp=Z,27nm,1.1s,baz=219,slow=5.8,SNR=31
TXAR LR LR 11 51 29.6
comp=Z,1μm,18.1s,baz=250,slow=31
325A **Bean Ranch, Si** 85.58 54 ⇓P P 11 19 48.7 +0.4
baz=86
U20A **Newcomb** 85.60 48 ⇓P P 11 19 48.3 +0.1
baz=86,SNR=6.2
Z23A **Rita Site, Whi** 85.60 51 ⇓P P 11 19 49.1 +0.8
baz=86
526A **Mary Lane Ranc** 85.60 55 ⇑P P 11 19 49.0 +0.7
baz=86,SNR=12
I12A **Atlanta** 85.60 39 ⇑P P 11 19 48.3 +0.2
baz=86
PLCA **Paso Flores** 85.61 132 P P 11 19 49.8 +1.4
PLCA **Paso Flores** 85.61 132 P P 11 19 49.8 +1.4
comp=Z,6.1nm,1.0s,baz=71,slow=22,SNR=3.4
PLCA LR LR 11 52 08.2
comp=Z,1μm,18.3s,baz=232,slow=31
X22A **Bernardo** 85.67 50 ⇓P P 11 19 48.7 0.0
baz=86
L14A **Malta** 85.68 41 ⇓P P 11 19 49.1 +0.6
baz=86
O16A **Springville** 85.72 43 ⇑P P 11 19 50.1 +1.3
baz=86
SRU **San Rafael** 85.74 45 *e*P P 11 19 49.0 +0.1
SRU **San Rafael** 85.74 45 *e*P P 11 19 49.0 +0.1
comp=Z,3μm,1.3s
SRU **San Rafael** 85.74 45 ⇓P P 11 19 49.5 +0.6
baz=86
BNM **Barren Site** 85.76 50 *e*P P 11 19 48.5 -0.8
comp=Z,130nm,1.9s
P17A **Butcher Ranch,** 85.80 44 ⇑P P 11 19 49.9 +0.7
baz=86
CN2 **Changchun** 85.82 321 ⇑P P 11 19 49.5 +0.6
CN2 *e*S S 11 30 22.6 +3.1
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,18.0s
CN2 LR LR
comp=E,500nm,18.0s
CN2 LR LR
comp=Z,500nm,18.0s
M15A **Larsen Ranch,** 85.84 42 ⇑P P 11 19 50.0 +0.7
baz=86,SNR=5.5
LPM **Los Pinos Moun** 85.84 50 *e*P P 11 19 49.9 +0.3
comp=Z,49nm,1.4s
627A **Terlingua Ranc** 85.84 56 P P 11 19 49.2 -0.3
baz=86,SNR=11
SNAA **Sanae** 85.87 177 *e*P P 11 19 49.1 +0.1
SNAA **Sanae** 85.87 177 *e*pP pP 11 20 01.5 +1.6
SNAA **Sanae** 85.87 177 P P 11 19 49.3 +0.3
comp=Z,2.4nm,1.4s
SNAA **Sanae** 85.87 177 P P 11 19 49.3 +0.3
comp=Z,3.5nm,0.8s,baz=196,slow=6.7,SNR=20
KLR **Kul'dur** 85.88 328 *e*P P 11 19 46.8 -2.3
KLR *e*S S 11 30 15.5 -4.3
KLR pmax pmax
comp=E,180nm,2.8s
KLR pmax pmax
comp=Z,520nm,2.8s
124A **Stringfield Ra** 85.88 52 ⇑P P 11 19 50.0 +0.1
baz=86
HLID **Hailey** 85.88 39 *e*P P 11 19 49.5 +0.1
comp=Z,24nm,1.3s
HLID LR LR
comp=Z,774nm,22.0s
HLID **Hailey** 85.88 39 ⇑P P 11 19 49.6 +0.1
baz=86,SNR=6.8
VNA3 **Neumayer Olymp** 85.89 175 *e*P P 11 19 49.6 +0.6
VNA3 **Neumayer Olymp** 85.89 175 *e*pP pP 11 20 01.6 +1.6
V21A **Milan** 85.91 49 ⇑P P 11 19 50.1 +0.3
baz=86
J13A **Cove Ranch, Pi** 85.92 39 ⇓P P 11 19 49.8 +0.1
baz=86,SNR=6.7
426A **McDonald Obser** 85.94 55 P P 11 19 50.1 0.0
baz=86,SNR=11
JLU **Jordanelle** 85.97 43 *e*P P 11 19 49.8 -0.3
comp=Z,23nm,1.7s
527A **Woodward Ranch** 86.00 55 ⇓P P 11 19 49.9 -0.5
baz=86,SNR=8.2
K14A **Jones Ranch, D** 86.02 41 ⇑P P 11 19 51.4 +1.3
baz=86
225A **Deer Hill, Car** 86.05 53 ⇑P P 11 19 50.7 +0.1
baz=86
MVCO **Mesa Verde** 86.05 47 PFAKE 11 20 00.0 +9.4
MVCO LR LR
comp=Z,1μm,20.0s
MVCO **Mesa Verde** 86.05 47 ⇓P P 11 19 51.2 +0.6
baz=86
GAMB **Gambell** 86.06 1 *e*P P 11 19 50.0 +0.4
comp=Z,51nm,1.0s
Y23A **Lovelace Mesa,** 86.06 51 ⇑P P 11 19 50.8 +0.2
baz=86
N16A **Rees Ranch, Co** 86.14 43 ⇓P P 11 19 51.1 +0.2
baz=86,SNR=5.6
WHN **Wuhan** 86.16 305 P P 11 19 52.1 +1.2
WHN S S 11 30 19.7 -3.6
WHN pmax pmax
comp=Z,96nm,1.2s
WHN LR LR
comp=Z,1μm,18.8s
L15A **Malad City** 86.19 41 ⇓P P 11 19 51.0 -0.1
baz=86,SNR=6.0
O17A **Robinson Place** 86.20 44 P P 11 19 51.7 +0.5
baz=86,SNR=10
P18A **Preston Nutter** 86.20 44 ⇓P P 11 19 51.2 -0.2
baz=86
H12A **Diamond D Ranc** 86.21 38 ⇓P P 11 19 51.7 +0.5
baz=86,SNR=7.1
U21A **Nageezi** 86.22 48 P P 11 19 51.5 +0.1
baz=86,SNR=8.7
628A **Black Gap, Mar** 86.24 56 P P 11 19 51.0 -0.4
baz=86,SNR=12
M16A **Huntsville** 86.26 42 ⇑P P 11 19 51.7 +0.2
baz=86
I13A **Wildhorse Cree** 86.26 39 ⇓P P 11 19 52.6 +1.2
baz=86
J14A **Carey** 86.27 40 ⇓P P 11 19 51.8 +0.4
baz=86,SNR=6.1
ANMO **Albuquerque** 86.29 50 *e*P P 11 19 51.5 -0.2
comp=Z,66nm,1.3s
ANMO **Albuquerque** 86.29 50 LR LR 11 52 53.4
comp=Z,2μm,18.5s,baz=250,slow=32
326A **Caldwell Ranch** 86.29 54 ⇑P P 11 19 51.4 -0.3
baz=86
G12A **Big Creek, Yel** 86.29 38 ⇓P P 11 19 52.1 +0.6
baz=86,SNR=6.3
VNA2 **Neumayer--Watz** 86.36 176 *e*P P 11 19 52.0 +0.7
baz=175,slow=2.4
VNA2 **Neumayer--Watz** 86.36 176 *e*pP pP 11 20 03.5 +1.2
baz=175,slow=2.4
VNA2 **Neumayer--Watz** 86.36 176 *e*PKiKP PKiKP 11 24 58.7 +0.2
baz=175,slow=2.4
WRAK **Wrangell Islan** 86.38 22 PFAKE 11 20 00.0 +8.6
WRAK LR LR
comp=Z,1μm,19.0s
MNSI **Mandailing Nat** 86.39 272 P P 11 19 51.7 -0.8
GDL2 **Guadalupe Moun** 86.44 53 P P 11 19 52.9 +0.5
comp=Z,70nm,1.1s
125A **Gardner Draw,** 86.44 53 ⇓P P 11 19 52.5 +0.1
baz=87
IPM **Ipoh** 86.46 276 *e*P P 11 19 53.1 +0.3
comp=Z,97nm,1.0s
IPM **Ipoh** 86.46 276 P P 11 19 54.1 +1.2
HWUT **Hardware Ranch** 86.47 42 *e*P P 11 19 52.3 -0.2
comp=Z,38nm,2.2s
HWUT LR LR
comp=Z,1μm,19.0s
V22A **San Miguel Ran** 86.47 49 ⇑P P 11 19 52.5 -0.1
baz=87
S20A **Disappointment** 86.47 47 ⇑P P 11 19 52.1 -0.6
baz=87
Q19A **Hogan Spring (** 86.47 45 ⇑P P 11 19 52.2 -0.2
baz=87
PV01 **Paradox Valley** 86.49 46 *e*P P 11 19 51.0 -1.7
comp=Z,3μm,1.4s
427A **Hayter Ranch,** 86.50 55 P P 11 19 52.5 -0.2
baz=87,SNR=32
Y24A **Capitan** 86.50 51 P P 11 19 52.8 0.0
baz=87,SNR=12
226B **Tecolote Peak,** 86.52 53 ⇓P P 11 19 52.9 0.0
baz=87
N17A **Moffit Pass** 86.55 43 ⇓P P 11 19 53.5 +0.5
baz=87
H13A **Challis** 86.57 39 ⇑P P 11 19 52.6 -0.3
baz=87,SNR=5.3
VNA1 **Neumayer--Stat** 86.57 175 *e*P P 11 19 53.0 +0.7
VNA1 **Neumayer--Stat** 86.57 175 *e*pP pP 11 20 05.0 +1.7
T21A **Navajo Lake** 86.59 48 ⇑P P 11 19 53.6 +0.4
baz=87
528A **Cox Ranch, San** 86.64 56 ⇓P P 11 19 54.1 +0.6
baz=87
R20A **Redvale** 86.65 46 ⇑P P 11 19 53.2 -0.3
baz=87
I14A **Mackay** 86.66 39 ⇑P P 11 19 53.9 +0.5
baz=87
O18A **Roosevelt** 86.70 44 ⇑P P 11 19 54.2 +0.6
baz=87
Z25A **Roswell** 86.70 52 ⇑P P 11 19 53.9 +0.2
baz=87
F12A **Elk City** 86.71 37 ⇑P P 11 19 53.7 +0.2
baz=87
U22A **Llaves** 86.74 48 ⇑P P 11 19 54.3 +0.3
baz=87
S21A **Coal Bank Pass** 86.77 47 ⇑P P 11 19 54.0 -0.2
baz=87,SNR=5.9
L16A **Fish Haven** 86.78 42 ⇓P P 11 19 54.0 0.0
baz=87
V23A **Ortiz Mt. (NFS** 86.89 49 ⇓P P 11 19 55.3 +0.6
baz=87
G13A **Cobalt** 86.89 38 ⇑P P 11 19 54.7 +0.3
baz=87
126A **Clayton Basin,** 86.91 53 ⇑P P 11 19 54.6 -0.1
baz=87
M17A **Scullys Gap (B** 86.95 43 ⇑P P 11 19 55.2 +0.4
baz=87
J15A **Blackfoot** 86.96 40 ⇓P P 11 19 54.8 +0.1
baz=87
428A **Kincaid Ranch,** 86.98 55 ⇑P P 11 19 55.1 0.0
baz=87,SNR=5.4
P19A **Cripple Cowboy** 87.02 45 ⇓P P 11 19 55.5 +0.2
baz=87
Y25A **Mesa, Roswell** 87.04 51 ⇓P P 11 19 55.1 -0.3
baz=87
529A **Stev Forest Ra** 87.06 56 ⇓P P 11 19 54.8 -0.6
baz=87,SNR=11
H14A **Leadore** 87.11 39 ⇑P P 11 19 56.3 +0.8
baz=87
Q20A **Ridgley Place,** 87.11 46 ⇓P P 11 19 56.4 +0.7
baz=87,SNR=5.2
KULM **Kulim** 87.12 277 *e*P P 11 19 55.9 -0.1
comp=Z,209nm,1.7s
KULM LR LR
comp=Z,379nm,22.0s
KULM **Kulim** 87.12 277 P P 11 19 57.2 +1.1
K16A **Soda Springs** 87.14 41 ⇓P P 11 19 56.5 +0.8
baz=87
W24A **Lazy 6 Ranch,** 87.17 50 ⇓P P 11 19 56.7 +0.7
baz=87
L17A **Cokeville** 87.17 42 ⇓P P 11 19 56.5 +0.6
baz=87
U23A **El Rito** 87.18 49 ⇓P P 11 19 57.0 +0.9
baz=87,SNR=6.2
328A **Wristen Ranch,** 87.20 54 ⇑P P 11 19 56.2 +0.1
baz=87
CPRX **Cap Rock** 87.20 53 *e*P P 11 19 56.0 -0.2
comp=Z,41nm,1.0s
Z26A **Caprock** 87.24 52 ⇑P P 11 19 56.1 -0.2
baz=87,SNR=6.7
NEW **Newport** 87.25 34 ⇓P P 11 19 56.0 +0.2
baz=88
NEW **Newport** 87.25 34 LR LR 11 53 30.7
comp=Z,3μm,19.2s,baz=223,slow=32
F13A **Darby** 87.25 37 ⇑P P 11 19 55.7 -0.4
baz=88
O19A **Miners Draw (B** 87.29 44 ⇓P P 11 19 56.7 +0.3
baz=88
M18A **Lyman** 87.30 43 ⇓P P 11 19 57.1 +0.6
baz=88,SNR=5.2
R21A **Cimarron** 87.30 46 ⇑P P 11 19 57.7 +1.0
baz=88
N18A **Larsen Ranch,** 87.30 43 ⇓P P 11 19 56.9 +0.3
baz=88
P20A **De Beque** 87.34 45 ⇑P P 11 19 57.2 +0.5
baz=88
X25A **Clemmons Ranch** 87.36 51 ⇓P P 11 19 56.6 -0.3
baz=88,SNR=6.6
CMIG **Matias Romero** 87.38 70 LR LR 11 50 28.3
comp=Z,1μm,19.8s,baz=194,slow=30
AHID **Auburn Hatcher** 87.40 41 *e*P P 11 19 56.7 -0.3
comp=Z,5.0nm,0.4s
AHID LR LR
comp=Z,1μm,20.0s
127A **Arkansas Junct** 87.41 53 ⇓P P 11 19 57.0 -0.2
baz=88,SNR=5.0
G14A **Jackson** 87.42 38 ⇑P P 11 19 58.3 +1.2
baz=88
C11A **Tepee Creek (N** 87.44 35 ⇑P P 11 19 57.5 +0.6
baz=88
D12A **Red Ives Forest** 87.44 36 ⇓P P 11 19 57.8 +0.8
baz=88
S22A **4UR Ranch, Cre** 87.46 47 ⇓P P 11 19 57.6 +0.1
baz=88,SNR=5.7
K17A **Gardner Place,** 87.50 41 ⇑P P 11 19 57.4 0.0
baz=88
Q21A **Lamborn Mesa,** 87.53 46 ⇓P P 11 19 57.4 -0.3
baz=88
H15A **Lima** 87.53 39 ⇓P P 11 19 58.3 +0.8
baz=88
MCMT **McKenzie Canyo** 87.53 39 P P 11 19 57.9 +0.3
comp=Z,6.3nm,1.2s
429A **Davenport Ranc** 87.54 55 ⇓P P 11 19 57.5 -0.2
baz=88,SNR=34
N19A **John Jarvie Ra** 87.57 44 ⇑P P 11 19 57.9 0.0
baz=88
RRI2 **Red Ridge** 87.59 41 *e*P P 11 19 57.6 -0.4
comp=Z,17nm,1.3s
EFI **East Falkland** 87.68 146 PFAKE 11 20 10.0 +12
EFI LR LR
comp=Z,2μm,19.0s
228A **UT Block 9, Go** 87.71 54 ⇑P P 11 19 58.8 +0.2
baz=88,SNR=5.7
E13A **Vicor** 87.72 37 ⇓P P 11 19 59.0 +0.7
baz=88
530A **J-C Ranch, Com** 87.74 56 ⇑P P 11 19 58.9 +0.2
baz=88,SNR=7.6
PSI **Prapat** 87.75 274 P P 11 19 58.5 -0.7
PSI **Prapat** 87.75 274 P P 11 19 57.3 -2.0
PSI **Prapat** 87.75 274 P P 11 19 58.5 -0.7
comp=Z,79nm,1.0s,baz=181,slow=5.2,SNR=31
PSI **Prapat** 87.75 274 P P 11 19 58.9 -0.4
baz=88,SNR=28
R22A **Saguache, Gunn** 87.76 47 ⇓P P 11 19 59.9 +1.0
baz=88,SNR=5.6
O20A **White River Ci** 87.77 45 ⇓P P 11 19 58.8 0.0
baz=88
C12B **Naegeli Ranch,** 87.78 35 ⇓P P 11 19 59.0 +0.6
baz=88
DCID1 **Drake Creek** 87.81 41 *e*P P 11 20 00.8 +1.9
comp=Z,9.5nm,1.0s
Z27A **Tatum** 87.82 53 ⇑P P 11 19 59.2 +0.1
baz=88,SNR=5.2
W25A **X Bar L Ranch,** 87.84 50 ⇑P P 11 19 59.0 -0.2
baz=88,SNR=5.9
SKAG **Skagway** 87.85 19 *e*P P 11 20 00.2 +1.8
comp=Z,115nm,1.5s
329A **Wagon Wheel Ra** 87.87 55 ⇓P P 11 19 58.9 -0.4
baz=88,SNR=7.6
G15A **Dillon** 87.94 39 ⇓P P 11 19 59.1 -0.3
baz=88,SNR=8.4
P21A **Newcastle** 87.97 46 ⇑P P 11 20 00.0 +0.2
baz=88
TNA **Tin City** 87.97 3 *e*P P 11 19 59.5 +0.6
comp=Z,92nm,1.7s
J17A **Brown Place, J** 87.97 41 ⇑P P 11 20 00.3 +0.6
baz=88
K18A **Toltan Ranch,** 87.98 42 P P 11 19 59.8 0.0
baz=88,SNR=9.6
Q22A **Crested Butte,** 87.98 46 ⇑P P 11 20 00.6 +0.6
baz=88
DLMT **Dillon** 87.99 39 *e*P P 11 19 59.0 -0.7
comp=Z,49nm,1.9s
631A **Perdido Creek** 87.99 57 ⇑P P 11 19 59.6 -0.3
baz=88,SNR=8.0
SNOW **Snow King Moun** 88.00 41 *e*P P 11 20 01.0 +1.1
comp=Z,66nm,1.7s
128A **Castleberry Fa** 88.03 53 ⇑P P 11 19 59.8 -0.3
baz=88,SNR=5.9
V25A **Rancho No Teng** 88.04 50 ⇑P P 11 20 00.9 +0.7
baz=88
MSO **Missoula** 88.08 37 P P 11 19 60.0 -0.1
comp=Z,80nm,2.5s
MSO LR LR
comp=Z,2μm,19.0s
MSO **Missoula** 88.08 37 ⇑P P 11 20 00.8 +0.8
baz=88
E14A **Clinton** 88.09 37 ⇑P P 11 20 00.4 +0.2
baz=88
SMCO **Snowmass** 88.11 46 *e*P P 11 20 00.6 -0.1
comp=Z,17nm,1.1s
L19A **Farson** 88.11 43 ⇑P P 11 19 59.8 -0.6
baz=88
430A **Baggett Ranch,** 88.11 56 ⇓P P 11 20 00.6 +0.1
baz=88
Y27A **Causey** 88.13 52 ⇑P P 11 20 00.9 +0.3
baz=88,SNR=5.6
732A **Laxson Ranch,** 88.16 58 ⇑P P 11 20 00.9 +0.2
baz=88,SNR=6.2
MOOW **Moose Ponds** 88.17 41 *e*P P 11 19 58.6 -2.1
comp=Z,76nm,2.3s
LOHW **Long Hollow** 88.17 41 *e*P P 11 20 00.1 -0.6
comp=Z,23nm,1.5s
B12A **Libby** 88.18 35 ⇓P P 11 20 00.5 +0.1
baz=88
229A **Bryant Ranch,** 88.23 54 ⇓P P 11 20 00.9 -0.1
baz=88
BSMT **Bassoo Peak** 88.23 36 *e*P P 11 20 00.1 -0.7
comp=Z,13nm,1.4s
C13A **Hot Springs** 88.24 36 ⇓P P 11 20 01.6 +0.9
baz=88
J18A **Kendall Valley** 88.31 41 ⇓P P 11 20 01.5 +0.1
baz=88
F15A **Butte** 88.32 38 ⇑P P 11 20 02.1 +0.7
baz=88
LRM **Limekiln Ridge** 88.34 38 *e*P P 11 20 02.0 +0.5
comp=Z,822nm,2.5s
BW06 **Boulder Array** 88.35 42 PFAKE 11 20 10.0 +8.4
BW06 LR LR
comp=Z,943nm,20.0s
PDAR **Pinedale Array** 88.35 42 P P 11 20 00.6 -0.9
PDAR pP pP 11 20 12.6 0.0
PDAR **Pinedale Array** 88.35 42 P P 11 20 00.6 -0.9
comp=Z,2.8nm,0.9s,baz=223,slow=3.4,SNR=12
PDAR pP pP 11 20 12.6 0.0
comp=Z,10.0nm,1.1s,baz=219,slow=3.8,SNR=16
PDAR LR LR 11 54 25.8
comp=Z,741nm,19.1s,baz=241,slow=32
TSI **Tuntungan** 88.35 274 P P 11 20 00.5 -1.4
531A **Rocksprings** 88.36 56 ⇓P P 11 20 01.2 -0.4
baz=88
QLMT **Earthquake Lak** 88.36 39 *e*P P 11 20 01.8 +0.3
comp=Z,1.1nm,1.0s
G16A **Moss Hill, Enn** 88.37 39 ⇑P P 11 20 01.9 +0.4
baz=89
R23A **Moffat** 88.37 47 ⇓P P 11 20 01.8 0.0
baz=88
H16A **Russell Place,** 88.40 40 ⇓P P 11 20 02.1 +0.4
baz=89
Z28A **Tucker Farm, M** 88.42 53 ⇓P P 11 20 02.1 +0.2
baz=89,SNR=5.6
A12A **Yaak River Ran** 88.43 34 ⇓P P 11 20 01.7 +0.2
baz=89
330A **Mertzon** 88.45 55 ⇑P P 11 20 02.1 +0.1
baz=89
P22A **Eagle** 88.46 46 ⇑P P 11 20 02.5 +0.4
baz=89
D14A **Greenough** 88.47 37 ⇑P P 11 20 02.2 +0.3
baz=89
129A **Stewart Farms,** 88.50 54 ⇓P P 11 20 02.4 +0.1
baz=89
S24A **Houchin Ranch,** 88.52 48 ⇑P P 11 20 02.5 -0.1
baz=89
CHMT **Chamberlain Mo** 88.52 37 *e*P P 11 20 01.9 -0.3
comp=Z,59nm,2.2s
M20A **Sweetwater, Wa** 88.53 44 ⇑P P 11 20 02.8 +0.4
baz=89
X27A **F and S Farms,** 88.54 51 ⇑P P 11 20 02.4 -0.1
baz=89
431A **Sonora** 88.55 56 ⇓P P 11 20 03.0 +0.5
baz=89
YMR **Madison River** 88.55 40 *e*P P 11 20 03.4 +0.9
comp=Z,1.4nm,0.5s
N21A **Black Mountain** 88.57 44 ⇓P P 11 20 02.9 +0.3
baz=89
E15A **Deer Lodge** 88.58 38 ⇑P P 11 20 02.7 +0.3
baz=89
SLMT **Seeley Lake** 88.58 37 *e*P P 11 20 02.9 +0.5
comp=Z,3.8nm,1.1s
V26A **Tequesquite Ra** 88.61 50 ⇓P P 11 20 03.1 +0.3
baz=89
H17A **Grant Village** 88.63 40 ⇓P P 11 20 03.9 +1.1
baz=89
MENT **Mentasta** 88.64 14 *e*P P 11 20 01.9 -0.3
632A **Uvalde** 88.65 57 ⇓P P 11 20 03.5 +0.5
baz=89,SNR=8.1
I18A **Diamond G Ranc** 88.70 41 ⇑P P 11 20 03.5 +0.3
baz=89
L20A **Wamsutter** 88.70 43 ⇑P P 11 20 04.0 +0.8
baz=89,SNR=5.7
BOZ **Bozeman (W)** 88.71 39 *e*P P 11 20 02.3 -0.8
BOZ pmax pmax
comp=Z,15nm,1.4s
BOZ MLR MLR
comp=Z,1μm,19.0s
BOZ **Bozeman (W)** 88.71 39 *e*P P 11 20 02.3 -0.8
comp=Z,16nm,1.4s
BOZ LR LR
comp=Z,1μm,19.0s
BOZ **Bozeman (W)** 88.71 39 ⇓P P 11 20 02.8 -0.2
baz=89
B13A **Whitefish** 88.72 35 ⇑P P 11 20 03.2 +0.3
baz=89
DLBC **Dease Lake** 88.74 22 *e*P P 11 20 03.6 +0.8
DLBC **Dease Lake** 88.74 22 LR LR 11 54 47.2
comp=Z,610nm,19.5s,baz=322,slow=32
W27A **Bowe Ranch, En** 88.77 51 ⇓P P 11 20 03.5 -0.1
baz=89
F16A **Kennard Place,** 88.79 39 ⇑P P 11 20 04.2 +0.8
baz=89
K19A **Absolon Red Bu** 88.82 42 ⇑P P 11 20 03.4 -0.3
baz=89
T25A **Trinidad** 88.82 49 ⇑P P 11 20 04.3 +0.4
baz=89
LKWY **Lake** 88.83 40 PFAKE 11 20 10.0 +6.2
LKWY LR LR
comp=Z,1μm,20.0s
532A **Rocksprings** 88.84 57 ⇑P P 11 20 04.1 +0.2
baz=89,SNR=7.8
R24A **Sanders Place,** 88.88 48 ⇑P P 11 20 04.9 +0.8
baz=89
O22A **Kremmling** 88.89 45 ⇑P P 11 20 04.5 +0.2
baz=89,SNR=7.0
Z29A **Hungry Hill Ra** 88.91 53 ⇓P P 11 20 04.1 -0.1
baz=89,SNR=5.3
U26A **Atchley Ranch,** 88.92 50 ⇑P P 11 20 04.4 0.0
baz=89
J19A **Crowheart** 88.93 42 ⇓P P 11 20 04.5 +0.3
baz=89,SNR=6.0
P23A **Jefferson** 88.96 46 ⇓P P 11 20 04.8 +0.1
baz=89
331A **San Angelo** 88.97 55 ⇑P P 11 20 04.7 +0.2
baz=89
D15A **Lincoln** 89.00 37 ⇓P P 11 20 05.0 +0.6
baz=89
G17A **Pierce Place,** 89.04 39 ⇑P P 11 20 04.7 +0.1
baz=89
K20A **Yellowstone Ra** 89.05 43 ⇑P P 11 20 05.0 +0.2
baz=89,SNR=5.3
S25A **Robets Cordova** 89.06 48 ⇓P P 11 20 05.2 +0.2
baz=89,SNR=5.3
JCT **Junction City** 89.07 56 *e*P P 11 20 04.8 -0.2

JCT pmax pmax
comp=Z,101nm,2.0s
JCT MLR MLR
comp=Z,2µm,19.0s
JCT Junction City 89.07 56 eP P 11 20 04.8 -0.2
comp=Z,101nm,2.0s
JCT LR LR
comp=Z,2µm,19.0s
JCT Junction City 89.07 56 ⇑P P 11 20 05.8 +0.8
baz=89
A13A Flathead Natio 89.08 35 ⇓P P 11 20 04.7 0.0
baz=89
SEY Seymchan 89.08 346 ⇓eP P 11 20 04.5 +0.3
M21A Separation Pea 89.11 44 ⇓P P 11 20 05.2 0.0
baz=89
DOT Dot Lake 89.19 13 eP P 11 20 04.0 -0.7
comp=Z,46nm,1.4s
HRY Holter Researc 89.20 38 eP P 11 20 07.2 +1.9
comp=Z,3.3nm,0.7s
Y29A Porterfield Fa 89.21 53 ⇓P P 11 20 06.8 +1.1
baz=89
Q24A Divide 89.22 47 ⇓P P 11 20 05.8 -0.1
baz=89
432A Menard 89.26 56 ⇓P P 11 20 05.7 -0.1
baz=89
KVTX Kingsville 89.28 60 PFAKE 11 20 20.0 +14
KVTX LR LR
comp=Z,1µm,20.0s
N22A Wattenberg Ran 89.28 45 ⇑P P 11 20 06.5 +0.5
baz=90
L21A Rawlins 89.29 43 ⇑P P 11 20 06.7 +0.7
baz=90
ISCO Idaho Springs 89.33 46 P P 11 20 05.2 -1.1
ISCO MLR MLR
comp=Z,855nm,20.0s
ISCO Idaho Springs 89.33 46 P P 11 20 05.2 -1.1
comp=Z,3.4nm,1.0s
ISCO LR LR
comp=Z,855nm,20.0s
O23A Lake Granby, G 89.33 46 ⇓P P 11 20 06.9 +0.6
baz=90,SNR=6.3
231A Bronte 89.34 55 ⇑P P 11 20 05.6 -0.6
baz=90
Z30A Sanderson Ranc 89.35 53 ⇑P P 11 20 06.1 -0.2
baz=90
B14A Marquette Ranc 89.35 36 P P 11 20 05.4 -0.6
baz=90,SNR=10
C15A Salmond Ranch, 89.38 37 ⇓P P 11 20 06.3 +0.1
baz=90
I19A Meeteetse 89.38 41 ⇑P P 11 20 07.0 +0.7
baz=90
R25A Fountain Ranch 89.40 48 ⇓P P 11 20 06.2 -0.3
baz=90,SNR=6.4
F17A Fitzpatrick Pl 89.42 39 ⇑P P 11 20 07.4 +1.0
baz=90
WALA Waterton Lakes 89.42 35 eP P 11 20 05.6 -0.6
comp=Z,1.4nm,1.4s
X29A Tulia 89.46 52 ⇑P P 11 20 07.7 +0.9
baz=90
M22A Cedar Creek Ra 89.50 44 ⇓P P 11 20 07.4 +0.4
baz=90
BJT Baijiatuau 89.52 314 eP P 11 20 07.6 +0.8
comp=Z,66nm,1.2s
BJT LR LR
comp=Z,423nm,20.0s
332A Millersview 89.53 56 ⇓P P 11 20 06.6 -0.5
baz=90
BJI Beijing 89.53 314 P P 11 20 07.7 +0.9
BJI SS SS 11 36 54.5 +2.5
BJI pmax pmax
comp=Z,67nm,2.5s
BJI pmax pmax
comp=Z,1µm,3.9s
BJI LR LR
comp=N,400nm,22.2s
BJI LR LR
comp=E,450nm,21.0s
BJI LR LR
comp=Z,570nm,30.8s
D16A Dana Ranch, Ca 89.54 38 ⇓P P 11 20 06.8 -0.1
baz=90
COLA College 89.56 11 eP P 11 20 06.2 -0.2
COLA pmax pmax
comp=Z,139nm,1.6s
COLA MLR MLR
comp=Z,2µm,21.0s
COLA College 89.56 11 eP P 11 20 06.2 -0.2
comp=Z,139nm,1.6s
COLA LR LR
comp=Z,2µm,21.0s
A14A Double T Ranch 89.63 35 P P 11 20 07.0 -0.3
baz=90,SNR=14
ILAR Eielson Array 89.64 12 P P 11 20 06.0 -0.7
ILAR pP **pP 11 20 18.1 +0.3**
ILAR Eielson Array 89.64 12 P P 11 20 06.0 -0.7
comp=Z,7.4nm,0.9s,baz=215,slow=5.0,SNR=33
ILAR pP **pP 11 20 18.1 +0.3**
comp=Z,15nm,1.0s,baz=225,slow=5.6,SNR=15
N23A Red Feather La 89.66 45 ⇑P P 11 20 07.7 -0.1
baz=90
AMTX Amarillo 89.68 52 eP P 11 20 07.0 -0.8
comp=Z,4.9nm,0.8s
AMTX LR LR
comp=Z,3µm,19.0s
B15A Bradely Ranch, 89.71 36 ⇓P P 11 20 08.7 +1.0
baz=90
S26A Kim 89.71 49 ⇓P P 11 20 08.1 +0.2
baz=90,SNR=7.7
K21A Alcova 89.72 43 ⇑P P 11 20 08.4 +0.5
baz=90
H19A Powell 89.73 41 ⇑P P 11 20 08.2 +0.3
baz=90
G18A Lazy EL Ranch, 89.73 40 ⇓P P 11 20 09.2 +1.3
baz=90
RLMT Red Lodge 89.81 40 PFAKE 11 20 20.0 +12
RLMT LR LR
comp=Z,934nm,19.0s
RLMT Red Lodge 89.81 40 ⇓P P 11 20 08.8 +0.5
baz=90
W29A Amraillo 89.82 52 ⇓P P 11 20 08.6 +0.1
baz=90
I20A Worland 89.86 41 ⇓P P 11 20 08.4 -0.1
baz=90
C16A Fuhringer Ranc 89.87 37 ⇑P P 11 20 08.3 0.0
baz=90
L22A Ellis Ranch, M 89.92 44 ⇓P P 11 20 09.7 +0.8
baz=90
F18A Big Timber 89.97 39 ⇑P P 11 20 09.6 +0.7
baz=90
J21A Lysite 89.97 42 ⇑P P 11 20 09.4 +0.3
baz=90
A15A Johnson Ranch, 90.00 36 P P 11 20 08.4 -0.5
baz=90,SNR=7.7
R26A Arlington 90.05 48 ⇓P P 11 20 09.3 -0.2
baz=90,SNR=6.7
D17A Six Diamond Ra 90.09 38 ⇓P P 11 20 09.8 +0.3
baz=90
Z31A Sharp Cattle R 90.10 54 ⇓P P 11 20 10.5 +0.8
baz=90,SNR=5.6
M23A Laramie 90.10 45 ⇑P P 11 20 10.0 +0.2
baz=90,SNR=5.9
ABTX Abilene, Hawle 90.16 55 ⇑P P 11 20 10.7 +0.7
baz=90
PHWY Pilot Hill 90.19 45 eP P 11 20 10.4 +0.1
comp=Z,6.1nm,1.0s
E18A Harlowton 90.21 39 ⇑P P 11 20 10.7 +0.6
baz=90
H20A Greybull 90.23 41 ⇑P P 11 20 10.4 +0.2
baz=90
Y31A Rekieta Farm, 90.30 53 ⇓P P 11 20 11.2 +0.6
baz=90
I21A Big Trails, Te 90.31 42 ⇓P P 11 20 11.3 +0.7
baz=90
C17A Wharram Farm, 90.32 37 P P 11 20 10.3 -0.1
baz=90,SNR=9.2
GYA Guiyang 90.36 298 ⇑iP P 11 20 12.0 +0.8
GYA pP **pP 11 20 22.6 +0.4**
GYA sP **sP 11 20 26.5 +0.3**
GYA PP **PP 11 23 48.3 +2.3**
GYA SKS **SKSac 11 30 44.1 +3.8**
GYA S **S 11 31 02.4 -1.3**
GYA SS **SS 11 37 09.3 +4.6**
GYA pmax pmax
comp=Z,40nm,1.3s
GYA pmax pmax
comp=Z,120nm,3.5s
GYA LR LR
comp=N,3µm,21.1s
GYA LR LR
comp=E,3µm,25.7s
GYA LR LR
comp=Z,6µm,23.2s
T28A Walsh 90.42 50 ⇓P P 11 20 11.4 +0.2
baz=91
L23A Garrett 90.44 44 ⇑P P 11 20 11.3 0.0
baz=91,SNR=5.9
R27A Eads 90.50 48 ⇓P P 11 20 11.5 -0.1
baz=91,SNR=6.8
Z32A Haskell 90.59 54 ⇑P P 11 20 12.6 +0.6
baz=91,SNR=5.9
A16A West Butte Ran 90.60 36 ⇑P P 11 20 11.7 0.0
baz=91
J22A Midwest 90.61 43 ⇓P P 11 20 12.6 +0.6
baz=91
D18A Linhart Farms, 90.62 38 ⇓P P 11 20 12.8 +0.9
baz=91
LCO Las Campanas 90.66 122 eP P 11 20 13.6 +0.8
comp=Z,84nm,1.6s
LCO LR LR
comp=Z,2µm,19.0s
B17A L&G Farms, Che 90.67 37 ⇑P P 11 20 12.4 +0.3
baz=91
EGAK Eagle 90.80 14 eP P 11 20 11.2 -0.9
comp=Z,220nm,1.8s
EGAK LR LR
comp=Z,2µm,20.0s
E19A Rath Farm, Rou 90.81 39 ⇓P P 11 20 13.6 +0.8
baz=91
X31A McDonald Ranch 90.81 53 ⇑P P 11 20 13.6 +0.6
baz=91
Y32A R-V Farms, Ver 90.93 53 ⇑P P 11 20 13.9 +0.4
baz=91,SNR=5.8
TIY Taiyuan 90.95 311 eP P 11 20 14.6 +0.9
TIY pP **pP 11 20 26.8 +2.1**
TIY sP **sP 11 20 32.7 +4.1**
TIY SKS **SKSac 11 30 43.8 +0.7**
TIY S **S 11 31 07.5 -1.1**
TIY pmax pmax
comp=Z,600nm,3.5s
TIY LR LR
comp=N,180nm,5.1s
TIY LR LR
comp=E,280nm,11.6s
TIY LR LR
comp=Z,440nm,20.9s
KSCO Kaye Shedlock' 90.96 48 ⇑P P 11 20 14.2 +0.5
baz=91
A17A Triple J Farms 91.09 36 ⇓P P 11 20 13.9 -0.1
baz=91
W31A Holland Ranch, 91.09 52 ⇓P P 11 20 14.4 +0.1
baz=91
EGMT Eagleton 91.10 37 eP P 11 20 13.8 -0.3
comp=Z,66nm,1.7s
EGMT LR LR
comp=Z,2µm,20.0s
EGMT Eagleton 91.10 37 ⇑P P 11 20 13.9 -0.3
baz=91
D19A Cripps Ranch, 91.13 38 ⇑P P 11 20 14.7 +0.4
baz=91
E20A Meyer Farm, Mu 91.22 39 ⇑P P 11 20 15.4 +0.7
baz=91,SNR=5.2
P27A Ficken Ranch, 91.25 47 ⇑P P 11 20 14.9 -0.2
baz=91
B18A Beardsley Farm 91.29 37 ⇑P P 11 20 15.3 +0.4
baz=92
COLD Coldfoot 91.34 9 eP P 11 20 14.1 -0.6
comp=Z,27nm,1.3s
C19A Slack Wire Ran 91.34 38 P P 11 20 15.7 +0.5
baz=92,SNR=9.2
CFAA Coronel Fontan 91.39 125 P P 11 20 15.7 -0.2
CFAA Coronel Fontan 91.39 125 P P 11 20 15.7 -0.2
comp=Z,0.7nm,0.8s,baz=265,slow=4.5,SNR=7.9
CFAA LR LR 11 52 11.3
comp=Z,113nm,20.4s,baz=238,slow=30
BILL Bilibino 91.40 353 eP P 11 20 14.9 0.0
BILL pmax pmax
comp=Z,61nm,1.7s
BILL MLR MLR
comp=Z,2µm,20.0s
BILL Bilibino 91.40 353 eP P 11 20 14.9 0.0
comp=Z,61nm,1.7s
BILL LR LR
comp=Z,2µm,20.0s
D20A Manuel Ranch, 91.52 39 ⇑P P 11 20 16.6 +0.6
baz=92,SNR=5.6
A18A Metzger Ranch, 91.54 37 P P 11 20 15.8 -0.3
baz=92,SNR=8.8
WHTX Lake Whitney 91.54 56 ⇑P P 11 20 16.0 -0.5
baz=92
WMOK Wichita Mounta 91.74 53 PFAKE 11 20 30.0 +13
WMOK LR LR
comp=Z,1µm,19.0s
B19A Brinkman Farms 91.79 37 ⇓P P 11 20 18.2 +0.9
baz=92
XAN Xi'an 91.84 306 P P 11 20 18.2 +0.4
XAN pP **pP 11 20 29.2 +0.3**
XAN sP **sP 11 20 34.7 +1.9**
XAN pmax pmax
comp=Z,35nm,1.2s
XAN pmax pmax
comp=Z,110nm,5.5s
XAN LR LR
comp=N,240nm,23.7s
XAN LR LR
comp=E,130nm,18.8s
XAN LR LR
comp=Z,200nm,18.3s
C20A Veseth Ranch, 91.93 38 ⇓P P 11 20 19.0 +1.1
baz=92,SNR=6.0
HKT Hockley 91.94 58 eP P 11 20 17.6 -0.6
HKT pmax pmax
comp=Z,52nm,1.5s
HKT Hockley 91.94 58 eP P 11 20 17.6 -0.6
comp=Z,52nm,1.5s
F22A Rosebud 91.95 41 ⇑P P 11 20 18.5 +0.4
baz=92,SNR=5.1
SRDT SRDT 91.99 285 P P 11 20 17.2 -1.7
A19A Klindworth Far 92.16 37 ⇓P P 11 20 18.7 -0.2
baz=92,SNR=9.3
D21A La Casta Ranch 92.18 39 ⇓P P 11 20 19.4 +0.3
baz=92
G23A Bible 92.19 41 ⇓P P 11 20 19.7 +0.5
baz=92,SNR=5.1
OGNE Ogallala 92.27 46 PFAKE 11 20 30.0 +10
OGNE LR LR
comp=Z,1µm,19.0s
E22A Miles City 92.47 40 ⇓P P 11 20 21.3 +0.8
baz=93
H24A Dirks Ranch, A 92.48 42 ⇓P P 11 20 20.7 +0.1
baz=93,SNR=6.5
RSSD Black Hills 92.49 43 eP P 11 20 20.3 -0.5
RSSD pmax pmax
comp=Z,27nm,1.2s
RSSD Black Hills 92.49 43 eP P 11 20 20.3 -0.5
comp=Z,27nm,1.2s
C21A Desert Coulee 92.51 39 ⇓P P 11 20 20.2 -0.4
baz=93
NNA Nana 92.54 104 PFAKE 11 20 30.0 +8.4
NNA LR LR
comp=Z,2µm,20.0s
A20A Cobblestone Ra 92.59 37 P P 11 20 21.1 +0.1
baz=93,SNR=12
D22A Cohagen 92.70 39 ⇑P P 11 20 22.1 +0.6
baz=93,SNR=5.5
TRQA Tornquist 92.72 133 PFAKE 11 20 30.0 +8.0
TRQA LR LR
comp=Z,2µm,19.0s
B21A Ellsworth Farm 92.87 38 ⇑P P 11 20 22.5 +0.3
baz=93
E23A Ismay 92.89 40 ⇑P P 11 20 23.3 +0.9
baz=93
TGUH Tegucigalpa,Un 92.93 76 PFAKE 11 20 30.0 +6.9
TGUH LR LR
comp=Z,664nm,20.0s
K27A Flueckinger Fa 92.96 45 ⇑P P 11 20 23.7 +0.8
baz=93
HHC Hu-ho-hao-te 93.00 313 eP P 11 20 23.9 +0.8
HHC pP **pP 11 20 34.1 0.0**
HHC sP **sP 11 20 39.2 +1.1**
HHC PP **PP 11 24 09.2 +2.6**
HHC SKS **SKSac 11 30 57.0 +2.4**
HHC S **S 11 31 26.6 -0.4**
HHC sS **sS 11 31 40.3 -5.0**
HHC SS **SS 11 37 43.9 +1.6**
HHC pmax pmax
comp=Z,65nm,1.2s
HHC pmax pmax
comp=Z,850nm,4.9s
HHC LR LR
comp=N,770nm,17.9s
HHC LR LR
comp=E,1µm,14.3s
HHC LR LR
comp=Z,2µm,20.2s
KMI Kunming 93.04 296 P P 11 20 23.6 -0.2
KMI pP **pP 11 20 34.5 -0.3**
KMI sP **sP 11 20 40.2 +1.4**
KMI PP **PP 11 24 06.1 -1.2**
KMI SKS **SKSac 11 30 56.8 +1.1**
KMI S **S 11 31 25.4 -2.8**
KMI sS **sS 11 31 43.5 -3.1**
KMI SS **SS 11 37 43.7 0.0**
KMI pmax pmax
comp=Z,11nm,1.0s
KMI pmax pmax
comp=Z,520nm,4.8s
KMI LR LR
comp=N,390nm,22.4s
KMI LR LR
comp=E,510nm,21.5s
KMI LR LR
comp=Z,830nm,20.6s
F24A Ekalaka 93.08 41 ⇓P P 11 20 23.0 -0.3
baz=93,SNR=5.2
C22A Vida 93.17 39 ⇑P P 11 20 23.9 +0.2
baz=93
A21A Bergtoll Ranch 93.21 38 ⇑P P 11 20 23.9 +0.2
baz=93
B22A Reddig Ranch S 93.39 39 ⇓P P 11 20 25.1 +0.4
baz=94
C23A Lambert 93.61 39 ⇓P P 11 20 26.2 +0.5
baz=94,SNR=5.3
JTS JuntasAbangare 93.61 80 eP P 11 20 26.8 +0.3
comp=Z,73nm,1.2s
JTS LR LR
comp=Z,947nm,19.0s
CM31 Chiang Mai Arr 93.72 288 eP P 11 20 29.6 +2.8
comp=Z,34nm,1.0s
CMAR Chiang Mai Arr 93.72 288 P P 11 20 27.9 +1.1
CMAR Chiang Mai Arr 93.72 288 P P 11 20 27.9 +1.1
comp=Z,25nm,0.9s,baz=120,slow=3.3,SNR=75
CMAR LR LR 11 59 09.8
comp=Z,461nm,21.9s,baz=120,slow=33
A22A Carney Farms, 93.78 38 ⇑P P 11 20 26.5 0.0
baz=94
CHTO Chiang Mai 93.85 289 eP P 11 20 28.8 +1.4
CHTO pmax pmax
comp=Z,133nm,1.6s
CHTO MLR MLR
comp=Z,567nm,22.0s
CHTO Chiang Mai 93.85 289 eP P 11 20 28.8 +1.4
comp=Z,133nm,1.6s
CHTO LR LR
comp=Z,567nm,22.0s
C24A Savage 93.92 40 ⇑P P 11 20 28.3 +1.2
baz=94,SNR=5.9
B23A Brockton 94.05 39 ⇑P P 11 20 28.1 +0.4
baz=94
A23A Redstone 94.36 38 ⇑P P 11 20 29.8 +0.8
baz=94
TEIG Tepich 94.37 70 LR LR 11 56 29.7
comp=Z,1µm,18.9s,baz=280,slow=31
CD2 Chengdu 94.50 301 P P 11 20 30.5 +0.3
CD2 pP **pP 11 20 41.1 -0.1**
CD2 sP **sP 11 20 45.0 -0.2**
CD2 PP **PP 11 24 21.2 +2.7**
CD2 SKS **SKSac 11 31 01.7 -1.4**
CD2 S **S 11 31 38.0 -2.4**
CD2 sS **sS 11 31 55.8 -3.0**
CD2 SS **SS 11 38 05.7 +1.6**
CD2 pmax pmax
comp=Z,50nm,0.7s
CD2 pmax pmax
comp=Z,390nm,4.7s
CD2 LR LR
comp=N,680nm,19.6s
CD2 LR LR
comp=E,870nm,20.6s
CD2 LR LR
comp=Z,920nm,24.1s
DGMT Dagmar 94.51 39 eP P 11 20 30.0 +0.2
comp=Z,97nm,1.1s
DGMT LR LR
comp=Z,1µm,20.0s
DGMT Dagmar 94.51 39 ⇓P P 11 20 30.0 +0.2
baz=95
A24A Westby 94.85 39 ⇓P P 11 20 31.9 +0.6
baz=95,SNR=5.7
YAK Yakutsk 95.18 337 eP P 11 20 29.5 -2.9
YAK pmax pmax
comp=Z,15nm,1.2s
YAK Yakutsk 95.18 337 PFAKE 11 20 40.0 +7.6
YAK LR LR
comp=Z,636nm,20.0s
KSU1 Kansas State U 95.19 50 PFAKE 11 20 40.0 +6.9
KSU1 LR LR
comp=Z,2µm,19.0s
MIAR Mount Ida 95.56 55 PFAKE 11 20 50.0 +15
MIAR LR LR
comp=Z,2µm,20.0s
OTAV Otavalo 95.83 92 PFAKE 11 20 50.0 +13
OTAV LR LR
comp=Z,734nm,20.0s
LZH Lanzhou 96.48 306 ⇓P P 11 20 41.5 +2.3
LZH pP **pP 11 20 52.8 +2.5**
LZH sP **sP 11 20 56.7 +2.5**
LZH PP **PP 11 24 30.8 -3.0**
LZH SKS **SKSac 11 31 17.7 +4.1**
LZH S **ScS 11 31 59.3 +1.2**
LZH sS **sS 11 32 13.1 -2.9**
LZH pmax pmax
comp=Z,29nm,1.0s
LZH pmax pmax
comp=Z,400nm,4.1s
LZH LR LR
comp=N,480nm,15.3s
LZH LR LR
comp=E,470nm,17.6s
LZH LR LR
comp=Z,750nm,19.2s
MDND Maddock 96.95 41 ⇓P P 11 20 41.1 +0.2
baz=97
VBMS Vicksburg 97.02 58 PFAKE 11 20 50.0 +8.4
VBMS LR LR
comp=Z,1µm,20.0s
YKA Yellowknife Ar 97.08 24 P P 11 20 40.6 -0.4
YKA PP PP 11 24 45.4 +7.8
YKA PKiKP **PKiKP 11 25 18.5 +1.8**
YKA PKKPbc **PKKPbc 11 37 22.6 -1.1**
YKA Yellowknife Ar 97.08 24 P P 11 20 40.6 -0.4
comp=Z,2.2nm,0.8s,baz=237,slow=4.2,SNR=45
YKA PP PP 11 24 45.4 +7.8
comp=Z,0.6nm,1.0s,baz=235,slow=7.2,SNR=3.8
YKA PKiKP **PKiKP 11 25 18.5 +1.8**
comp=Z,0.3nm,0.7s,baz=263,slow=1.9,SNR=5.1
YKA PKKPbc **PKKPbc 11 37 22.5 -1.1**
comp=Z,0.4nm,0.8s,baz=39,slow=2.7,SNR=8.0
ECSD EROS Data Cent 97.11 46 eP P 11 20 40.8 -0.9
comp=Z,50nm,1.3s
ECSD LR LR
comp=Z,828nm,20.0s
YKW3 Yellowknife Ar 97.12 24 eP P 11 20 40.5 -0.7
comp=Z,0.1nm,1.0s
BCIP Isla Barro Col 97.88 83 PFAKE 11 21 00.0 +14
BCIP LR LR
comp=Z,587nm,20.0s
LPAZ La Paz 98.42 111 P Pdif 11 20 50.5 +1.4
LPAZ La Paz 98.42 111 P Pdif 11 20 50.5 +1.4
comp=Z,1.3nm,0.8s,baz=55,slow=1.2,SNR=4.8
LPAZ LR LR 11 59 54.7
comp=Z,962nm,18.1s,baz=251,slow=32
FFC Flin Flon 98.67 34 ceP Pdif 11 20 49.7 +1.3
FFC Flin Flon 98.67 34 PFAKE 11 21 00.0 +12
FFC LR LR
comp=Z,2µm,20.0s
SCIA State Center 98.68 48 PFAKE 11 21 00.0 +11
SCIA LR LR
comp=Z,1µm,19.0s
OXF Oxford 98.73 56 PFAKE 11 21 00.0 +11
OXF LR LR
comp=Z,3µm,19.0s

ULN Ulaanbaatar 98.94 318 *e*P **P 11 20 49.4 -0.6**
comp=Z,21nm,1.4s
ULN LR LR
comp=Z,604nm,19.0s
BRAL Brewton 99.33 60 PFAKE 11 21 00.0 +8.1
BRAL LR LR
comp=Z,976nm,19.0s
SONM Songino Array 99.33 318 P **Pdif 11 20 52.2 +0.4**
SONM PP **PP 11 24 57.1 +1.7**
SONM Songino Array 99.33 318 P **Pdif 11 20 52.2 +0.4**
comp=Z,2.2nm,1.1s,baz=122,slow=3.1,SNR=10.0
SONM PP **PP 11 24 57.1 +1.7**
comp=Z,1.0nm,0.9s,baz=116,slow=6.9,SNR=3.9
SONM LR LR 12 03 52.5
comp=Z,395nm,19.7s,baz=116,slow=34
AGMN Agassiz Nation 99.42 42 *e*P **Pdif 11 20 50.5 -1.4**
comp=Z,16nm,1.4s
AGMN LR LR
comp=Z,682nm,19.0s
PLAL Pickwick Lake 99.92 56 PFAKE 11 21 10.0 +16
PLAL LR LR
comp=Z,2μm,19.0s
LRAL Lakeview Retre 100.08 58 PFAKE 11 21 10.0 +15
LRAL LR LR
comp=Z,1μm,20.0s
GTA Gaotai 100.67 308 *e*P **Pdif 11 20 59.8 +1.9**
GTA pP pP 11 21 09.6 +0.6
GTA sP sP 11 21 13.6 +0.6
GTA PP **PP 11 25 04.5 -1.3**
GTA SKS **SKSac 11 31 34.5 0.0**
GTA S **Sdif 11 32 23.9 -9.0**
GTA sS sS 11 32 42.5 -8.8
GTA pmax pmax
comp=Z,10.0nm,1.2s
GTA pmax pmax
comp=Z,120nm,5.2s
GTA LR LR
comp=N,290nm,18.5s
GTA LR LR
comp=E,390nm,25.2s
GTA LR LR
comp=Z,570nm,31.4s
HDIL Hopedale 100.95 51 PFAKE 11 21 10.0 +11
HDIL LR LR
comp=Z,3μm,20.0s
TIXI Tiksi 101.52 344 PFAKE 11 21 10.0 +9.3
TIXI LR LR
comp=Z,1μm,20.0s
EYMN Ely 102.01 43 PFAKE 11 21 10.0 +6.5
EYMN LR LR
comp=Z,1μm,19.0s
ZAK Zakamensk 102.18 320 *e*P **Pdif 11 21 03.9 -0.4**
ZAK *e* 11 25 12.9
ZAK pmax pmax
comp=Z,2.0nm,1.3s
TLY Talaya 102.42 321 *e*P Pdif 11 21 22.4 +17
TLY Talaya 102.42 321 PFAKE 11 21 20.0 +15
TLY LR LR
comp=Z,517nm,19.0s
MTDJ Mount Denham 103.15 76 PFAKE 11 21 20.0 +11
MTDJ LR LR
comp=Z,485nm,19.0s
ACSO Alum Creek Sta 105.42 53 PFAKE 11 25 40.0
ACSO LR LR
comp=Z,2μm,20.0s
AAM Ann Arbor 105.52 50 PFAKE 11 25 40.0
AAM LR LR
comp=Z,2μm,20.0s
NHSC New Hope 105.53 60 PFAKE 11 25 40.0
NHSC LR LR
comp=Z,2μm,19.0s
GLMI Grayling 105.56 48 PFAKE 11 25 40.0
GLMI LR LR
comp=Z,1μm,20.0s
GTBY Guantanamo Bay 105.87 75 PFAKE 11 25 50.0
GTBY LR LR
comp=Z,435nm,19.0s
SAML Samuel 105.99 107 PFAKE 11 25 50.0
SAML LR LR
comp=Z,1μm,20.0s
BLA Blacksburg 106.50 56 PFAKE 11 25 50.0
BLA LR LR
comp=Z,1μm,19.0s
DGAR Diego Garcia 107.93 254 PFAKE 11 25 50.0
DGAR LR LR
comp=Z,2μm,21.0s
CNNC Cliffs of the 107.94 59 PFAKE 11 25 50.0
CNNC LR LR
comp=Z,1μm,19.0s
ERPA Erie 108.10 51 PFAKE 11 25 50.0
ERPA LR LR
comp=Z,2μm,19.0s
SDDR Presa de Saban 109.00 77 PFAKE 11 25 50.0
SDDR LR LR
comp=Z,578nm,19.0s
CBN Corbin 109.09 56 PFAKE 11 25 50.0
CBN LR LR
comp=Z,1μm,20.0s
GRTK Grand Turk 109.89 74 PFAKE 11 25 50.0
GRTK LR LR
comp=Z,744nm,20.0s
WMQ Urumqi 110.61 310 PKP **PKiKP 11 25 42.3 +0.2**
WMQ sPKP 11 25 56.3
WMQ PP **PP 11 26 23.3 +4.2**
WMQ PKS **PKSdf 11 29 17.3 -1.4**
WMQ SKS **SKSdf 11 32 49.3 -2.3**
WMQ SS **SS 11 41 44.3 -1.8**
WMQ AMB AMB
comp=Z,44nm,14.0s
WMQ LR LR
comp=N,440nm,24.0s
WMQ LR LR
comp=E,470nm,24.0s
WMQ LR LR
comp=Z,790nm,26.0s
BINY Binghamton 111.02 52 PFAKE 11 25 50.0
BINY LR LR
comp=Z,2μm,19.0s
SPB Sao Paulo 111.19 128 PFAKE 11 26 00.0
SPB LR LR
comp=Z,3μm,20.0s
LONY Lake Ozonia 112.47 50 PFAKE 11 26 00.0
LONY LR LR
comp=Z,2μm,20.0s
NCB Newcomb 112.62 50 PFAKE 11 26 00.0
NCB LR LR
comp=Z,2μm,19.0s
SJG San Juan 113.38 79 PFAKE 11 26 00.0
SJG LR LR
comp=Z,473nm,20.0s
ZALV Zalesovo Beam 114.03 320 PKIKP PKPdf 11 25 46.7 -1.5
ZALV 11 26 47.8
ZALV Zalesovo Beam 114.03 320 PKiKP PKPdf 11 25 46.7 -1.5
ZALV PP **PP 11 26 47.8 +4.8**
ZALV Zalesovo Beam 114.03 320 PKiKP PKPdf 11 25 46.7 -1.5
comp=Z,1.5nm,0.7s,baz=101,slow=1.5,SNR=8.3
ZALV PP **PP 11 26 47.8 +4.8**
comp=Z,0.8nm,0.7s,baz=105,slow=5.2,SNR=3.9
RER Riviere de l'E 114.41 232 PFAKE 11 26 00.0 +10
RER LR LR
comp=Z,1μm,20.0s
MK31 Makanchi Array 114.86 312 *e*PKIKP PKPdf 11 25 49.2 -0.9
MK31 Makanchi Array 114.86 312 *e*PKPdf PKPdf 11 25 49.2 -0.9
MKAR Makanchi Array 114.86 312 PKIKP PKPdf 11 25 49.5 -0.6
MKAR 11 36 29.5
MKAR Makanchi Array 114.86 312 PKP PKPdf 11 25 49.5 -0.6
MKAR PKKPbc **PKKPbc 11 36 29.4 +1.4**
MKAR Makanchi Array 114.86 312 PKP PKPdf 11 25 49.5 -0.6
comp=Z,1.4nm,0.8s,baz=84,slow=1.4,SNR=12
MKAR PKKPbc **PKKPbc 11 36 29.4 +1.4**
comp=Z,0.6nm,1.0s,baz=236,slow=5.6,SNR=3.6
NVS Novosibirsk 115.03 321 *e*PKIKP PKPdf 11 25 59.7 +10
NVS pmax pmax
comp=Z,15nm,1.6s
NVS pmax pmax
comp=E,9.0nm,1.7s
GRGR Grenville 115.65 87 PFAKE 11 26 00.0 +7.5
GRGR LR LR
comp=Z,579nm,20.0s
FDF Fort de France 116.94 84 PFAKE 11 26 10.0 +15
FDF LR LR
comp=Z,415nm,20.0s
KURK Kurchatov 117.60 317⇑ *i*PKIKP **PKPdf 11 25 55.6 +0.4**
KURK pmax pmax
comp=Z,6.0nm,1.7s
KURK MLR MLR
comp=Z,677nm,22.0s
KURK Kurchatov 117.60 317 PFAKE 11 26 10.0 +15
KURK LR LR
comp=Z,642nm,20.0s
TKM2 Tokmak 2 119.21 308 *e*PKIKP **PKPdf 11 25 57.8 -1.0**
TKM2 MLR MLR
comp=Z,355nm,20.0s
TKM2 Tokmak 2 119.21 308 *e*PKPdf **PKPdf 11 25 57.8 -1.0**
TKM2 LR LR
comp=Z,355nm,20.0s
AAK Ala-Archa 120.00 307⇑ *i*PKIKP **PKPdf 11 26 01.2 +0.9**
AAK pmax pmax
comp=Z,11nm,1.7s
AAK MLR MLR
comp=Z,1μm,23.0s
AAK Ala-Archa 120.00 307 *e*PKPdf **PKPdf 11 26 00.1 -0.3**
AAK LR LR
comp=Z,523nm,21.0s
EKS2 Erkin-Say 120.53 307 PFAKE 11 26 10.0 +8.7
EKS2 LR LR
comp=Z,559nm,19.0s
ABPO Ambohimpanom 121.85 228 PFAKE 11 26 20.0 +15
ABPO LR LR
comp=Z,1μm,19.0s
BVAR Borovoye Array 122.64 319 PKIKP **PKPdf 11 26 04.4 -0.4**
BVAR Borovoye Array 122.64 319 PKP **PKPdf 11 26 04.4 -0.4**
BVAR Borovoye Array 122.64 319 PKP **PKPdf 11 26 04.4 -0.4**
comp=Z,2.6nm,0.7s,baz=107,slow=1.5,SNR=13
BRVK Borovoye 122.70 319 *e*PKIKP **PKPdf 11 26 04.6 -0.3**
BRVK *e* 11 27 39.1
BRVK MLR MLR
comp=Z,696nm,19.0s
BRVK Borovoye 122.70 319 *e*PKPdf **PKPdf 11 26 04.6 -0.3**
BRVK *e*PP **PP 11 27 39.1 -3.9**
BRVK LR LR
comp=Z,696nm,19.0s
KKAR Karatay Array 122.95 308 *e*PKIKP **PKPdf 11 26 05.2 -0.5**
KKAR *e* 11 27 44.2
KKAR Karatay Array 122.95 308 *e*PKPdf **PKPdf 11 26 05.2 -0.5**
KKAR *e*PP **PP 11 27 44.2 -1.0**
SUR Sutherland 123.42 196 PFAKE 11 26 20.0 +13
SUR LR LR
comp=Z,2μm,20.0s
KBS Kingsbay 123.47 358 PFAKE 11 26 20.0 +14
KBS LR LR
comp=Z,614nm,19.0s
KBL Kabul 123.59 297 *e*PKIKP **PKPdf 11 26 08.1 +0.6**
KBL Kabul 123.59 297 *e*PKPdf **PKPdf 11 26 08.1 +0.6**
SFJD Kangerlussuaq 123.63 23 PFAKE 11 26 20.0 +14
SFJD LR LR
comp=Z,720nm,19.0s
MSEY Mahe Island 124.04 247 PFAKE 11 26 20.0 +11
MSEY LR LR
comp=Z,1μm,20.0s
SUMG Summit 124.36 15 *i* P PKPdf 11 26 20.3 +12
comp=Z,13nm,1.0s
BOSA Boshof 125.64 202 PKP **PKPdf 11 26 12.2 +0.6**
BOSA Boshof 125.64 202 PKP **PKPdf 11 26 12.2 +0.6**
comp=Z,7.9nm,0.9s,baz=139,slow=2.6,SNR=7.6
SOKR Solikamsk 128.41 329 *i* PKIKP PKPdf 11 26 25.6 +10
SOKR pmax pmax
comp=Z,40nm,1.5s
SOKR MLR MLR
comp=Z,1μm,29.0s
ARU Arti 128.64 325 *i* PKIKP **PKPdf 11 26 17.0 +0.8**
ARU 11 28 22.1
ARU 11 33 20.8
ARU SP SP 11 38 28.6 +3.1
ARU MLR MLR
comp=Z,904nm,20.0s
ARU Arti 128.64 325 *e*PKPdf **PKPdf 11 26 16.2 0.0**
ARU *e*PP **PP 11 28 18.9 -3.5**
ARU LR LR
comp=Z,899nm,20.0s
SCO Scoresbysund 129.43 12 *i* P PKPdf 11 26 29.9 +13
comp=Z,9.1nm,1.2s
ABKAR Akbulak array 129.70 316 *e*PKPdf **PKPdf 11 26 18.4 0.0**
RCBR Riachuelo 130.78 120 PFAKE 11 26 30.0 +8.4
RCBR LR LR
comp=Z,2μm,19.0s
KEV Kevo 131.02 350 PFAKE 11 26 30.0 +10
KEV LR LR
comp=Z,1μm,20.0s
LVZ Lovozero 131.14 346 PFAKE 11 26 30.0 +9.3
LVZ LR LR
comp=Z,800nm,20.0s
ARCES ARCESS Array B 131.45 351 PKP **PKPdf 11 26 21.7 +0.5**
ARCES ARCESS Array B 131.45 351 PKP **PKPdf 11 26 21.7 +0.5**
comp=Z,7.0nm,0.8s,baz=48,slow=1.8,SNR=9.1
APA Apatity 131.68 346⇓ *i*PKIKP **PKPdf 11 26 24.0 +2.4**
KLMR Klimovskoe 134.97 337 *e*PKIKP **PKPdf 11 26 28.7 +0.7**
KLMR pmax pmax
comp=Z,59nm,1.5s
JOF Joensuu 136.00 343 *e*PKIKP **PKPdf 11 26 30.3 +0.5**
JOF pmax pmax
comp=Z,5.0nm,0.8s
JOF Joensuu 136.00 343 *e*pkp **PKPdf 11 26 30.3 +0.5**
comp=Z,4.7nm,0.8s
LSZ Lusaka 136.26 213 *e*PKPdf **PKPdf 11 26 32.9 +0.9**
LSZ LR LR
comp=Z,1μm,19.0s
TSUM Tsumeb 136.82 197 *e*PKPdf **PKPdf 11 26 33.6 +0.7**
TSUM LR LR
comp=Z,1μm,20.0s
KAF Kangasniemi 137.93 345 *e*PKIKP **PKPdf 11 26 31.4 -2.0**
KAF Kangasniemi 137.93 345 *e*pkp **PKPdf 11 26 31.4 -2.0**
FINES FINESS Array B 138.56 345 PKPpre PKPpre 11 26 26.7
FINES PKP **PKPdf 11 26 35.0 +0.3**
FINES FINESS Array B 138.56 345 PKhKP PKPpre 11 26 26.7
comp=Z,1.2nm,0.7s,baz=43,slow=3.4,SNR=3.6
FINES PKP **PKPdf 11 26 35.0 +0.3**
comp=Z,3.2nm,0.9s,baz=50,slow=3.0,SNR=4.4
MOS Moscow 139.14 332 *e*PKIKP **PKPdf 11 26 32.4 -3.5**
MOS *e* 11 26 46.0
MOS pmax pmax
comp=Z,62nm,0.6s
MOS MLR MLR
comp=Z,900nm,21.0s
MOS MLR MLR
comp=N,800nm,22.0s
MOS MLR MLR
comp=E,1μm,22.0s
MAK Makhachkala 139.63 310 *e*PKIKP **PKPdf 11 26 35.2 -1.9**
MAK *e* 11 29 29.8
MAK pmax pmax
comp=Z,170nm,1.2s
OBN Obninsk 140.01 332 *i* PKIKP **PKPdf 11 26 38.0 +0.6**
OBN *e* 11 26 49.5
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN MLR MLR
comp=Z,700nm,22.0s
OBN Obninsk 140.01 332 PFAKE 11 26 50.0 +13
OBN LR LR
comp=Z,807nm,19.0s
VSU Vasula 140.96 342 *i* PKIKP **PKPdf 11 26 37.7 -1.4**
KMBO Kilima Mbogo 141.01 237 PKPpre PKPpre 11 26 37.0
KMBO *e*PKPdf **PKPdf 11 26 37.1 -3.8**
KMBO *e*PP **PP 11 29 41.1 -0.5**
KMBO LR LR
comp=Z,513nm,19.0s
KMBO Kilima Mbogo 141.01 237 PKhKP PKPpre 11 26 37.0
comp=Z,2.7nm,0.8s,baz=52,slow=3.0,SNR=8.6
VSR Storozhevoye 141.20 326 *e*PKIKP **PKPdf 11 26 38.4 -1.3**
VSR pmax pmax
comp=Z,10.0nm,1.1s
VSR pmax pmax
comp=E,2.0nm,0.6s
VORD Divnogorie 141.28 326 *e*PKIKP **PKPdf 11 26 36.2 -3.7**
VORD pmax pmax
comp=E,9.0nm,0.7s
VORD pmax pmax
comp=Z,6.0nm,0.7s
VORD pmax pmax
comp=N,2.0nm,0.3s
NB2 NORSAR Subarra141.31 355 PKP PKPpre 11 26 33.1
comp=Z,29nm,1.7s,baz=17,slow=2.6
NOA NORSAR Array B141.31 355 PKPpre PKPpre 11 26 32.4
NOA PKP **PKiKP 11 26 41.4 -1.1**
NOA NORSAR Array B141.31 355 PKhKP PKPpre 11 26 32.4
comp=Z,1.9nm,0.8s,baz=3.8,slow=2.4,SNR=7.1
NOA PKP **PKiKP 11 26 41.4 -1.1**
comp=Z,3.3nm,0.9s,baz=14,slow=4.1,SNR=8.8
KBZ Khabaz 142.55 313 PKIKP PKPpre 11 26 39.3
KBZ Khabaz 142.55 313 PKhKP PKPpre 11 26 39.3
comp=Z,5.4nm,0.9s,baz=233,slow=0.8,SNR=11
KIV Kislovodsk 142.60 314 PFAKE 11 26 50.0 +7.4
KIV LR LR
comp=Z,1μm,20.0s
KONO Kongsberg 142.80 356 *e*PKHKP PKPpre 11 26 36.9
KONO MLR MLR
comp=Z,794nm,20.0s
KONO Kongsberg 142.80 356 *e*PKPdf PKPpre 11 26 36.9
KONO LR LR
comp=Z,794nm,20.0s
DYDN Diyadin 143.35 307 *i* P PKPab 11 26 39.6 -0.7
ISAL Salakas 143.57 340 *e*P PKPbc 11 26 42.0 +0.8
IIGN Ignalina 143.73 340 *e*P PKPbc 11 26 42.6 +0.9
HAKT HAKKARI 143.84 303 *i* P PKPab 11 26 41.1 -1.2
MICGM Minsk 143.87 338 *e* PKPab 11 26 41.0 -0.5
MNK Minsk 143.88 338 *e*PKIKP PKPab 11 26 41.0 -0.6
NACGM Naroch 143.92 339 *e* PKPab 11 26 40.0 -1.7
TUTA Tutak 144.04 307 *i* P **PKPab 11 26 40.4 -2.6**
BHD Baghdad 144.07 296 *ex* **PKPab 11 26 39.8 -3.1**
ARTV Artvin 144.13 310 *i* P **PKPab 11 26 43.4 +0.1**
DAGI Agillar 144.17 310 *i* P **PKPab 11 26 38.2 -5.1**
DBOC Borcka 144.26 310 *i* P **PKPab 11 26 40.4 -3.1**
KPL Plockton 144.32 10 *e*P **PKPab 11 26 42.4 -0.7**
KPL Plockton 144.32 10 P **PKPab 11 26 42.4 -0.7**
DDEM Demirkent 144.35 309 *i* P **PKPdf 11 26 46.8 +0.9**
HOMI Horasan 144.52 308 *i* P **PKPab 11 26 43.2 -1.6**
SOC Sochi 144.72 315*c i*PKIKP **PKPab 11 26 44.3 -0.7**
SOC *i* 11 26 50.3
SOC *e* 11 30 06.3
SOC pmax pmax
comp=Z,61nm,1.2s
SOC pmax pmax
comp=Z,45nm,1.1s
SOC MLR MLR
comp=Z,594nm,18.0s
SIRN S¨¨rnak 144.86 304 *i* P **PKPdf 11 26 47.4 +0.6**
ERZM Erzurum 144.96 308 *i* P PKPbc 11 26 46.8 +0.3
BNGL BINGOL 145.41 307 *i* P PKPbc 11 26 37.4 -10
KOPT Kop Dagi 145.55 309 *i* P **PKPdf 11 26 47.8 -0.4**
ANN Anapa 145.62 318 *i* PKP2 **PKPbc 11 26 47.9 -0.1**
ANN *e* 11 30 05.3
ANN pmax pmax
comp=Z,361nm,1.3s
ANN pmax pmax
comp=N,118nm,1.4s
ANN pmax pmax
comp=E,75nm,1.4s
BEST Besiri 145.63 305 *i* P **PKPab 11 26 48.8 0.0**
EAB Aberfoyle 145.64 10 *e*P **PKPdf 11 26 47.0 -0.4**
EAB Aberfoyle 145.64 10 P **PKPdf 11 26 47.0 -0.4**
SUW Suwalki 145.80 341 *e*PKP2 **PKPab 11 26 48.6 -0.1**
SUW Suwalki 145.80 341 *e*PKPbc **PKPab 11 26 48.6 -0.1**
SUW Suwalki 145.80 341 *e*PKP **PKPbc 11 26 48.3 +0.1**
MUD Monsted U'grnd 146.01 356⇑ *i*P **PKPbc 11 26 48.5 -0.3**
comp=E,39nm,1.0s
MUD *i* 11 27 01.8
EAU Auchinoon 146.10 9 *e*P **PKPbc 11 26 48.9 -0.3**
EAU Auchinoon 146.10 9 P **PKPbc 11 26 48.9 -0.3**
ESY Stoneypath 146.15 8 *e*P **PKPdf 11 26 48.3 0.0**
ESY Stoneypath 146.15 8 P **PKPdf 11 26 48.3 0.0**
MARD Mardin 146.16 304 *i* P **PKPab 11 26 51.0 +0.2**
MBAR Mbarara 146.22 230 PFAKE 11 27 00.0 +8.3
MBAR LR LR
comp=Z,986nm,21.0s
EBL Broad Law 146.23 9 *e*P **PKPbc 11 26 49.9 +0.3**
EBL Broad Law 146.23 9 P **PKPbc 11 26 49.9 +0.3**
AKASG Malin Array Be 146.28 332 PKP2 **PKPdf 11 26 48.9 +0.3**
AKASG Malin Array Be 146.28 332 PKPbc **PKPdf 11 26 48.9 +0.3**
AKASG Malin Array Be 146.28 332 PKPbc **PKPdf 11 26 48.9 +0.3**
comp=Z,29nm,0.7s,baz=41,slow=4.0,SNR=48
AK01 Malin Array Si 146.29 332 *e*PKPbc **PKPbc 11 26 49.4 -0.4**
KIEV Kiev 146.29 332 *e*PKP2 **PKPdf 11 26 48.9 +0.2**
KIEV MLR MLR
comp=Z,571nm,19.0s
KIEV Kiev 146.29 332 *e*PKPdf **PKPdf 11 26 48.9 +0.2**
KIEV LR LR
comp=Z,571nm,19.0s
AK02 Malin Array Si 146.31 332 *e*PKPbc **PKPdf 11 26 49.1 +0.4**
KELT Kelkit 146.39 309 *i* P **PKPdf 11 26 50.0 +0.5**
COP Copenhagen 146.48 353 *i* P **PKPbc 11 26 49.7 -0.5**
comp=Z,10nm,0.8s
COP
comp=Z,290nm,27.0s
DIYA Diyarbakir 146.49 305 *i* P **PKPdf 11 26 46.8 -2.8**
ESK Eskdalemuir 146.65 9 PFAKE 11 27 00.0 +8.1
ESK LR LR
comp=Z,543nm,19.0s
BSD Bornholm Skovb 146.69 350⇑ *i*P **PKPbc 11 26 50.2 -0.7**
comp=Z,20nm,0.9s
BSD
comp=Z,570nm,20.0s
GRSN GIRESUNGRSN 146.80 311 *i* P **PKPbc 11 26 51.2 -0.5**
LLD Lille Linde 146.85 353 *i* P **PKPbc 11 26 51.8 +0.5**
comp=Z,20nm,0.8s
PCAN Candelaria 147.03 53 *e*PKP PKPab 11 27 05.1 +11
SUSE Susehri 147.12 310 *i* P **PKPbc 11 26 53.2 +0.3**
ROSA Rosais 147.13 53 *e*PKP PKPab 11 27 05.3 +11
ELZG Elazig 147.16 307 *i* P **PKPab 11 26 54.4 -0.3**
KEMA Kemaliye 147.26 308 *i* P **PKPdf 11 26 46.8 -4.1**
PMAN Manadas 147.27 53 *e*PKP PKPab 11 27 05.7 +11
RGN Rugen 147.48 351 *e*PKPbc **PKPbc 11 26 53.7 +0.6**
SIM Simferopol' 147.54 320 *i* PKP2 **PKPbc 11 26 54.0 +0.4**
SIM pmax pmax
comp=Z,41nm,0.9s
SIM MLR MLR
comp=Z,600nm,20.0s
MALT Malatya 147.64 307⇓ PKP2 **PKPab 11 26 55.9 -0.6**
MALT Malatya 147.64 307 *e*PKPbc **PKPbc 11 26 54.0 -0.3**
MALT LR LR
comp=Z,570nm,19.0s
MALT Malatya 147.64 307⇓ *i*P **PKPab 11 26 55.9 -0.6**
ERBA Erbaa 147.94 312 *i* P **PKPab 11 26 56.4 -1.2**
AKCD Akcadag 148.01 307 *i* P **PKPdf 11 26 52.8 +0.7**
TOKA Tokat 148.28 311 *i* P **PKPdf 11 26 52.1 -0.3**
WME Myndd Eilian 148.33 11 *e*P **PKPdf 11 26 51.5 -0.5**
WME Myndd Eilian 148.33 11 P **PKPdf 11 26 51.5 -0.5**
BEL Belsk 148.41 342 *e*PKP **PKPbc 11 26 56.4 +0.7**
BSEG Bad Segeberg 148.43 354 *e*PKP2 **PKPbc 11 26 55.3 -0.3**
BSEG Bad Segeberg 148.43 354 *e*PKPbc **PKPbc 11 26 55.3 -0.3**
HAVZ Havza 148.48 313 *i* P **PKPdf 11 26 50.5 -2.2**
LHO Holmfirth 148.56 8 *e*P **PKPbc 11 26 55.3 -0.7**
LHO Holmfirth 148.56 8 P **PKPbc 11 26 55.3 -0.7**
GZT Gaziantep 148.59 305 *i* P **PKPdf 11 26 52.8 -0.3**
KBI1 Birley Grange 148.89 8 *e*P **PKPbc 11 26 56.5 -0.4**
KBI1 Birley Grange 148.89 8 P **PKPbc 11 26 56.5 -0.4**
PINB Pinarbasi 148.99 308 *i* P PKPdf 11 26 45.7 -8.2
FOEL Foel Wylfa 149.00 10 *e*P **PKPbc 11 26 56.6 -0.6**
FOEL Foel Wylfa 149.00 10 P **PKPbc 11 26 56.6 -0.6**
LVV L'vov 149.05 336 *e*PKP2 **PKPbc 11 26 57.0 -0.4**
LVV MLR MLR
comp=E,200nm,24.0s
LVV MLR MLR
comp=Z,400nm,24.0s
LVV MLR MLR
comp=N,400nm,21.0s
KIS Kishinev 149.12 328 *i* PKIKP **PKPbc 11 26 56.0 -1.7**
KIS *e* 11 27 00.0
KIS MLR MLR
comp=Z,700nm,22.0s
KIS MLR MLR
comp=N,400nm,23.0s
KIS MLR MLR
comp=Z,600nm,24.0s
KIS Kishinev 149.12 328 *e*PKIKP **PKPbc 11 26 56.0 -1.7**
KIS LRM MLR 12 31 42.0
comp=Z,600nm,24.0s
KUZU Kuzuini 149.15 305 *i* P **PKPbc 11 26 56.4 -1.8**
CTKT Corum 149.31 313 *i* P **PKPdf 11 26 55.6 +1.3**
RUE Ruedersdorf 149.41 350 *e*PKPbc **PKPbc 11 26 58.9 +0.7**
ANDN Andirin 149.43 306 *i* P PKPdf 11 26 45.7 -8.8
KWP Kalwaria Pacla 149.69 337 *e*PKHKP **PKPbc 11 26 56.9 -2.1**
KWP MLR MLR
comp=Z,892nm,20.0s
KWP Kalwaria Pacla 149.69 337 *e*PKPdf **PKPbc 11 26 56.9 -2.1**
KWP LR LR
comp=Z,892nm,20.0s
KWP Kalwaria Pacla 149.69 337⇑ *i*P **PKPbc 11 26 59.5 +0.5**
KWP Kalwaria Pacla 149.69 337 *e*PKP **PKPbc 11 26 58.3 -0.7**
LEOM Leova 149.77 328⇓ PKP2 **PKPbc 11 27 00.6 +1.3**
LEOM Leova 149.77 328⇓ *i*P **PKPbc 11 27 00.6 +1.3**
BALT Daday 149.81 315 *i* P **PKPbc 11 26 58.8 -1.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ILGA	Ilgaz	149.83	314	*i* P	PKPdf	11 26 53.2	-2.0
NRDL	Niedersach Rie	149.87	354	*e*PKPbc	PKPbc	11 26 58.7	-0.5
MCH1	Michaelchurch	149.89	10	*e*P	PKPdf	11 26 55.5	+1.0
MCH1	Michaelchurch	149.89	10	P	PKPdf	11 26 55.5	+1.0
AVNT	Avonos	150.06	310	*i* P	PKPbc	11 26 59.9	-0.6
PSMN	Pico do Norte,	150.08	54	*e*PKP	PKPab	11 27 12.7	+6.4
YAYL	Yayladag	150.13	304	*i* P	PKPdf	11 26 55.3	-0.3
OJC	Ojcow	150.13	341	*e*PKIKP	PKPdf	11 26 54.7	-0.3
OJC				*e*		11 27 00.1	
OJC				*e*		11 27 05.6	
OJC	Ojcow	150.13	341	*e*PKPdf	PKPdf	11 26 54.7	-0.3
OJC				*e*PKPbc	PKPbc	11 27 00.1	0.0
OJC				*e*PKPab	PKPab	11 27 05.6	-0.4
IBBN	Ibbenburen	150.22	357	*e*PKPbc	PKPbc	11 27 00.3	+0.1
BUR08	Bucovina Ar. S	150.32	332	*e*PKPbc	PKPbc	11 27 01.6	+0.8
BURAR	Bucovina Array	150.33	332	⇑*i*P	PKPbc	11 27 01.1	+0.3
TLCR		150.36	325	⇑PKIKP	PKPbc	11 27 00.4	-0.3
TLCR		150.36	325	⇑*i*P	PKPbc	11 27 00.4	-0.3
KSP	Ksiaz	150.48	346	*e*PKIKP	PKPbc	11 27 01.4	+0.6
KSP				*e*		11 27 12.4	
KSP	Ksiaz	150.48	346	*e*PKP	PKPbc	11 27 01.5	+0.6
CLZ	Clausthal	150.49	354	*e*PKIKP	PKPbc	11 27 01.3	+0.4
CLZ	Clausthal	150.49	354	*e*PKPbc	PKPbc	11 27 01.3	+0.4
BR131	Keskin Array S	150.51	312	*e*PKPdf	PKPdf	11 26 55.6	-0.5
BR131				*e*PKPbc	PKPbc	11 27 01.6	+0.1
BRTR	Keskin Array B	150.51	312	PKPbc	PKPbc	11 27 00.8	-0.7
BRTR	Keskin Array B	150.51	312	PKPbc	PKPbc	11 27 00.8	-0.7
	comp=Z,13nm,0.9s,baz=132,slow=2.9,SNR=47						
TESR		150.52	329	⇑*i*P	PKPbc	11 27 00.2	-0.9
CLL	Collm	150.67	350	⇑*i*PKIKP	PKPbc	11 27 01.4	+0.1
CLL				*i*		11 27 13.0	
CLL				pmax	pmax		
	comp=Z,81nm,1.0s						
CLL				MLR	MLR		
	comp=Z,600nm,19.4s						
CLL	Collm	150.67	350	*e*PKPbc	PKPbc	11 27 01.4	+0.1
UZH	Uzhgorod	150.68	337	*e*PKIKP	PKPbc	11 27 02.0	+0.6
UZH				*i*		11 27 11.7	
NIE	Niedzica	150.68	340	*e*PKIKP	PKPbc	11 27 02.0	+0.6
NIE	Niedzica	150.68	340	*e*PKPab	PKPbc	11 27 02.0	+0.6
GULE	Gulek	150.70	307	*i* P	PKPbc	11 27 01.5	-0.6
CFR	Carcaliu	150.72	326	PKIKP	PKPbc	11 27 02.0	+0.4
UPC	Upice	150.86	346	*e*PKIKP	PKPbc	11 27 02.8	+1.0
UPC				*e*		11 27 14.1	
UPC	Upice	150.86	346	⇑*e*PKP	PKPbc	11 27 02.8	+1.0
UPC				*e*x	x	11 27 14.1	
BRG	Berggiesshubel	150.93	349	*e*PKP	PKPbc	11 27 02.2	+0.3
	comp=Z,66nm,1.0s						
BRG				*i*		11 27 13.8	
	comp=Z,166nm,1.4s						
BRG	Berggiesshubel	150.93	349	*e*PKIKP	PKPbc	11 27 02.2	+0.3
BRG				*i*		11 27 13.9	
BRG				pmax	pmax		
	comp=Z,66nm,1.0s						
BRG	Berggiesshubel	150.93	349	*e*PKPbc	PKPbc	11 27 01.6	-0.3
DPC	Dobruska-Polom	150.94	345	*e*PKIKP	PKPbc	11 27 02.6	+0.6
DPC				*e*		11 27 14.5	
DPC				MLR	MLR		
	comp=Z,800nm,19.8s						
DPC	Dobruska-Polom	150.94	345	⇑*e*PKP	PKPbc	11 27 02.6	+0.6
DPC				*e*pPKP	pPKPbc	11 27 14.5	+1.1
DPC				AMS	AMS	12 35 10.0	
	comp=Z,800nm,19.8s						
BBAL	Bala	150.94	312	*i* P	PKPdf	11 26 47.8	-9.0
OKC	Ostrava-Krasne	150.95	343	*e*PKIKP	PKPbc	11 27 03.0	+1.0
OKC				MLR	MLR		
	comp=Z,500nm,14.5s						
OKC	Ostrava-Krasne	150.95	343	⇑*e*PKP	PKPbc	11 27 03.0	+1.0
OKC				AMS	AMS	12 43 00.0	
	comp=Z,500nm,14.5s						
VRI	Vrincioaia	150.95	328	⇑PKIKP	PKPbc	11 27 01.7	-0.5
VRI	Vrincioaia	150.95	328	⇑*i*P	PKPbc	11 27 01.7	-0.5
PLOR	Plostina	151.00	328	⇑PKIKP	PKPbc	11 27 02.9	+0.6
PLOR	Plostina	151.00	328	⇑*i*P	PKPbc	11 27 02.9	+0.6
TRPA	Tarpa	151.00	336	⇓*i*P	PKPbc	11 27 02.3	+0.1
TRPA	Tarpa	151.00	336	*e*	PKPbc	11 27 02.2	+0.1
TIRR	Tirgusor	151.06	325	⇑PKIKP	PKPdf	11 26 55.3	-1.3
TIRR	Tirgusor	151.06	325	*e*PKPbc	PKPbc	11 27 03.8	+1.4
TIRR	Tirgusor	151.06	325	⇑*i*P	PKPdf	11 26 55.3	-1.3
KRLC	Kraliky	151.08	345	*e*PKIKP	PKPbc	11 27 03.3	+0.9
KRLC				*e*		11 27 13.8	
KRLC	Kraliky	151.08	345	⇑*e*PKP	PKPbc	11 27 03.3	+0.9
KRLC				*e*pPKP	PKPab	11 27 13.8	+3.8
BUG	Bochum--Univer	151.11	358	*e*PKPbc	PKPbc	11 27 02.4	+0.1
PVCC	Panska Ves	151.14	348	*e*PKIKP	PKPbc	11 27 03.5	+1.1
PVCC				MLR	MLR		
	comp=Z,700nm,19.3s						
PVCC	Panska Ves	151.14	348	⇑*e*PKP	PKPbc	11 27 03.5	+1.1
PVCC				AMS	AMS	12 43 20.0	
	comp=Z,700nm,19.3s						
MORC	Moravsky Berou	151.16	343	PKIKP	PKPbc	11 27 03.9	+1.3
MORC	Moravsky Berou	151.16	343	*e*PKPbc	PKPbc	11 27 03.1	+0.5
MORC	Moravsky Berou	151.16	343	⇓*i*P	PKPbc	11 27 03.2	+0.6
DOPR	Dopca	151.51	330	⇓*i*P	PKPbc	11 27 04.6	+1.1
MMAI	Mount Meron Ar	151.52	298	PKPbc	PKPbc	11 27 05.0	+1.0
MMAI	Mount Meron Ar	151.52	298	PKPbc	PKPbc	11 27 05.0	+1.0
	comp=Z,21nm,0.8s,baz=69,slow=8.2,SNR=20						
MOX	Moxa	151.52	352	*e*PKIKP	PKPbc	11 27 03.5	+0.2
MOX	Moxa	151.52	352	*e*PKPbc	PKPbc	11 27 03.5	+0.2
MOX				*e*L	L	12 42 56.8	
	comp=Z,1μm,19.2s						
UBBA	Unterbreizbach	151.54	354	*e*PKPbc	PKPbc	11 27 02.9	-0.3
ISR	Istrita	151.57	327	⇓PKIKP	PKPbc	11 27 05.3	+1.6
ISR	Istrita	151.57	327	⇓*i*P	PKPbc	11 27 05.3	+1.6
MLR	Muntele Rosu	151.60	329	PKP	PKPdf	11 26 56.6	-1.0
MLR				PKPbc	PKiKP	11 27 04.2	-0.1
MLR	Muntele Rosu	151.60	329	⇑*i*P	PKPbc	11 27 05.8	+2.0
MLR	Muntele Rosu	151.60	329	PKP	PKPdf	11 26 56.6	-1.0
	comp=Z,0.4nm,0.9s,baz=152,slow=17,SNR=2.5						
MLR				PKPbc	PKiKP	11 27 04.2	-0.1
	comp=Z,4.9nm,1.0s,baz=66,slow=2.0,SNR=27						
PRA	Prague	151.61	348	⇑PKP	PKPbc	11 27 04.0	+0.5
PRA				pPKP	PKPab	11 27 16.0	+3.9
SACV	Santiago Islan	151.61	100	PFAKE		11 27 10.0	-3.2
SACV				LR	LR		
	comp=Z,654nm,20.0s						
TANN	Tannenbergstha	151.62	350	*e*PKPbc	PKPbc	11 27 03.9	+0.3
PRU	Pruhonice	151.66	347	*e*PKIKP	PKPbc	11 27 04.4	+0.7
PRU				*e*		11 27 16.7	
PRU				MLR	MLR		
	comp=Z,500nm,17.5s						
PRU	Pruhonice	151.66	347	⇑*e*PKP	PKPbc	11 27 04.4	+0.7
PRU				*e*pPKP	PKPab	11 27 16.7	+4.3
PRU				AMS	AMS	12 41 00.0	
	comp=Z,500nm,17.5s						
HENT	Hendek	151.78	316	*i* P	PKPdf	11 27 00.6	+2.7
VRAC	Vranov	151.84	344	⇑*i*P	PKPbc	11 27 04.7	+0.6
VYHS	Vyhne	151.96	341	*e*PKIKP	PKPdf	11 26 57.3	-0.6
VYHS				*e*		11 27 05.0	
VYHS				*e*		11 30 43.7	
VYHS	Vyhne	151.96	341	*e*PKP	PKPdf	11 26 57.3	-0.6
VYHS				*e*		11 27 05.0	
VYHS				*e*		11 27 16.4	
VYHS				*e*PP	PP	11 30 43.7	-1.1
MEM	Membach	151.98	359	PKPbc	PKPbc	11 27 03.5	-0.8
MEM				APKPbc		11 27 16.3	
DRGR		152.03	334	⇓PKIKP	PKPbc	11 27 05.0	+0.3
DRGR		152.03	334	⇓*i*P	PKPbc	11 27 05.0	+0.3
VOIR		152.06	330	⇓PKIKP	PKPbc	11 27 05.6	+0.8
VOIR		152.06	330	⇓*i*P	PKPbc	11 27 05.6	+0.8
SNF	Seneffe	152.07	1	PKPbc	PKPbc	11 27 05.3	+0.7
SNF				APKPbc		11 27 16.3	
KDHN	Kadinhani	152.11	311	*i* P	PKPdf	11 26 59.6	+1.0
TREC	Trest	152.12	346	*e*PKIKP	PKPbc	11 27 05.4	+0.6
TREC				MLR	MLR		
	comp=Z,1μm,19.1s						
TREC	Trest	152.12	346	⇑*e*PKP	PKPbc	11 27 05.4	+0.6
TREC				AMS	AMS	12 44 10.0	
	comp=Z,1μm,19.1s						
PSZ	Piszkesteto	152.12	339	⇓PKIKP	PKPbc	11 27 04.8	-0.1
PSZ	Piszkesteto	152.12	339	*e*PKPbc	PKPbc	11 27 06.0	+1.1
PSZ				LR	LR		
	comp=Z,1μm,20.0s						
PSZ	Piszkesteto	152.12	339	⇓*i*P	PKPbc	11 27 04.8	-0.1
PSZ	Piszkesteto	152.12	339	*e*	PKPdf	11 27 01.0	+2.8
BCLA	Clavier	152.17	0	PKPbc	PKPbc	11 27 05.2	+0.4
BCLA				E		11 27 15.8	
TNS	Taunus Mts	152.26	356	*e*PKIKP	PKPbc	11 27 04.8	-0.3
TNS	Taunus Mts	152.26	356	*e*PKPbc	PKPbc	11 27 04.8	-0.3
ARR	Arges	152.31	330	⇓*i*P	PKPbc	11 27 06.2	+0.8
ERMK	Ermenek	152.33	307	*i* P	PKPbc	11 27 03.9	-2.0
PRD	Provadia	152.44	324	*e*P	PKPbc	11 27 04.7	-0.9
DOU	Dourbes	152.49	1	PKPbc	PKPbc	11 27 05.6	+0.1
DOU				E		11 27 16.7	
SEYT	Eskypehyr	152.49	314	*i* P	PKPbc	11 27 06.4	+0.4
GRF	Grafenberg Arr	152.51	352	*e*PKIKP	PKPbc	11 27 06.1	+0.5
GRF	Grafenberg Arr	152.51	352	*e*PKPbc	PKPbc	11 27 06.1	+0.5
GRF				*e*L	L	12 40 40.8	
	comp=Z,583nm,21.0s						
BORA	Eskisehir	152.57	315	*i* P	PKPdf	11 26 55.3	-3.9
CSS	Prodhromos	152.62	303	*e*PKPbc	PKPbc	11 27 06.6	+0.2
CSS				*e*PKPab	PKPab	11 27 18.1	+1.2
CSS				LR	LR		
	comp=Z,599nm,19.0s						
LOT	Lotru	152.64	331	⇑*i*P	PKPbc	11 27 06.1	-0.1
KHC	Kasperske Hory	152.67	348	*e*PKIKP	PKPbc	11 27 06.6	+0.6
KHC				*e*		11 27 17.0	
KHC				MLR	MLR		
	comp=Z,500nm,17.0s						
KHC	Kasperske Hory	152.67	348	*e*PKPbc	PKPbc	11 27 06.6	+0.6
KHC	Kasperske Hory	152.67	348	*e*PKPDF	PKPdf	11 27 01.5	+2.5
KHC				⇑*e*PKP	PKPbc	11 27 06.6	+0.6
KHC				*e*PKPAB	PKPab	11 27 17.0	+0.3
KHC				*e*pPKP	pPKPdf	11 27 28.5	+18
KHC				AMS	AMS	12 41 50.0	
	comp=Z,500nm,17.0s						
WET	Wettzell	152.78	349	*e*PKIKP	PKPbc	11 27 06.5	+0.2
WET	Wettzell	152.78	349	*e*PKPbc	PKPbc	11 27 06.5	+0.2
BUD	Budapest	152.79	339	*e*	PKPbc	11 27 06.9	+0.6
BOLV	Bolvadin	152.82	312	*i* P	PKPbc	11 27 07.1	+0.3
RUP	Ruppelstein	152.86	358	PKIKP	PKPbc	11 27 07.2	+0.8
RUP	Ruppelstein	152.86	358	PKP	PKPbc	11 27 07.2	+0.8
BUY	Buyukada	152.89	318	*i* P	PKPdf	11 26 53.2	-6.3
GEC2	GERESS Array S	152.92	348	*e*PKIKP	PKPbc	11 27 06.5	-0.2
GEC2	GERESS Array S	152.92	348	*e*PKPbc	PKPbc	11 27 06.5	-0.2
GERES	GERESS Array B	152.92	348	PKP	PKPdf	11 27 00.0	+0.6
GERES				PKPbc	PKPbc	11 27 06.5	-0.2
GERES				pPKPbc	pPKPbc	11 27 19.6	+1.6
GERES	GERESS Array B	152.92	348	PKP	PKPdf	11 27 00.0	+0.6
	comp=Z,1.3nm,1.0s,baz=186,slow=1.3,SNR=10.0						
GERES				PKPbc	PKPbc	11 27 06.5	-0.2
	comp=Z,7.9nm,0.9s,baz=4.8,slow=1.6,SNR=29						
GERES				pPKPbc	pPKPbc	11 27 19.6	+1.6
	comp=Z,5.7nm,0.9s,baz=56,slow=3.4,SNR=7.9						
WLF	Walferdange	152.92	359	PKPbc	PKPbc	11 27 07.0	+0.5
WLF				APKPbc		11 27 17.8	
WLF	Walferdange	152.92	359	*e*PKPbc	PKPbc	11 27 06.8	+0.3
WLF	Walferdange	152.92	359	PFAKE		11 27 10.0	+3.5
WLF				LR	LR		
	comp=Z,1μm,20.0s						
GAZI	Gazipasa	152.93	306	*i* P	PKPdf	11 27 01.6	+1.9
GZR	Gura Zlata	153.12	332	⇓PKIKP	PKPbc	11 27 07.3	+0.1
GZR	Gura Zlata	153.12	332	⇓*i*P	PKPbc	11 27 07.3	+0.1
CONA	Conrad Observa	153.30	344	⇓*i*PKPdf	PKPdf	11 27 00.0	0.0
	comp=Z,18nm,1.0s						
CONA	Conrad Observa	153.30	344	⇓*i*P	PKPdf	11 27 00.0	0.0
SOP	Sopron	153.34	343	*e*	PKPbc	11 27 07.5	0.0
BZS	Buzias	153.43	334	⇑PKIKP	PKPbc	11 27 08.3	+0.6
BZS	Buzias	153.43	334	⇑*i*P	PKPbc	11 27 08.3	+0.6
LANF	Langenberg	153.54	356	PKP	PKPbc	11 27 11.3	+3.4
ISP	Isparta	153.55	311	PFAKE		11 27 10.0	+1.6
ISP				LR	LR		
	comp=Z,670nm,20.0s						
GDZ	Gediz	153.63	314	*i* P	PKPdf	11 27 01.7	+0.9
STU	Stuttgart	153.64	354	*e*PKIKP	PKPbc	11 27 09.2	+1.1
STU				*e*		11 27 20.1	
STU	Stuttgart	153.64	354	*e*PKPbc	PKPbc	11 27 08.3	+0.2
STU	Stuttgart	153.64	354	*e*PKPbc	PKPbc	11 27 09.2	+1.1
STU				*e*PKPab	PKPab	11 27 20.1	-0.6
MOA	Molln	153.75	346	⇑*i*PKiKP	PKiKP	11 27 09.4	+0.9
	comp=Z,26nm,1.6s						
MOA	Molln	153.75	346	⇑*i*P	PKiKP	11 27 09.4	+0.9
KHAL	Karahalli	153.99	313	*i* P	PKPdf	11 26 56.4	-4.9
FUR	Furstenfeldbru	153.99	351	*e*PKIKP	PKPbc	11 27 09.4	+0.5
FUR	Furstenfeldbru	153.99	351	*e*PKPbc	PKPbc	11 27 09.4	+0.5
DURS	Dursunbey	154.00	316	*i* P	PKPdf	11 27 02.8	+1.5
PKSM	Moragy	154.03	339	*e*	PKPdf	11 27 00.2	-0.7
KORT	Korkueli	154.04	309	*i* P	PKPdf	11 26 58.5	-3.0
BFO	Black Forest	154.15	355	*e*PKIKP	PKPbc	11 27 09.2	-0.1
BFO	Black Forest	154.15	355	*e*PKPbc	PKPbc	11 27 09.2	-0.1
BFO	Black Forest	154.15	355	*e*PKPbc	PKPbc	11 27 09.5	+0.2
BFO				*e*PKPab	PKPab	11 27 20.5	-2.4
BFO				LR	LR		
	comp=Z,614nm,20.0s						
DEMI	Demirci	154.16	315	*i* P	PKPdf	11 26 50.0	-12
RJOB	Jochberg	154.16	348	*e*PKPbc	PKPbc	11 27 11.2	+1.9
MPEP	Malo Peshtene	154.24	328	*e*P	PKPdf	11 27 02.5	+1.2
ECH	Echery	154.34	357	PKIKP	PKPbc	11 27 10.2	+0.5
ECH				MLR	MLR		
	comp=Z,804nm,19.0s						
ECH	Echery	154.34	357	PKP	PKPbc	11 27 10.2	+0.5
ECH				LR	LR		
	comp=Z,804nm,19.0s						
ECH	Echery	154.34	357	PKP	PKPbc	11 27 10.2	+0.5
SPAK	Spaichingen-Ko	154.34	355	PKP	PKPbc	11 27 10.0	+0.3
THEF	They Montfort	154.36	359	PKIKP	PKPbc	11 27 10.2	+0.5
THEF	They Montfort	154.36	359	PKP	PKPbc	11 27 10.2	+0.5
THEF	They Montfort	154.36	359	PKP	PKPbc	11 27 10.2	+0.5
BEHE	Becsehely	154.39	342	⇑*e*	PKPbc	11 27 14.4	+4.6
BALY	Balya	154.47	317	*i* P	PKPdf	11 26 51.0	-11
GOLH	Golhisar	154.50	311	*i* P	PKPbc	11 27 11.3	+0.9
KDZ	Kurdzhali	154.57	323	*e*P	PKPbc	11 27 11.5	+1.2
DNZL	Cakiroluk	154.63	312	*i* P	PKPdf	11 27 02.8	+0.4
KBA	Koelnbreinsper	154.68	347	⇑*i*pPKPdf	pPKPdf	11 27 13.8	+0.3
	comp=Z,20nm,1.3s						
PERS	Pernice	154.69	344	*i* PKPdf	PKPdf	11 27 01.1	-0.8
PERS				*i*		11 27 12.2	
MOF	Molkenrain	154.70	357	PKIKP	PKPbc	11 27 10.7	+0.2
MOF	Molkenrain	154.70	357	PKP	PKPbc	11 27 10.7	+0.2
MOF	Molkenrain	154.70	357	PKP	PKPbc	11 27 10.7	+0.2
AKHS	Akhisar	154.83	315	*i* P	PKPdf	11 27 00.6	-1.7
VTS	Vitosha	155.06	327	*e*P	PKPdf	11 27 00.0	-2.7
BBS	Basel-Blauen	155.07	357	PKIKP	PKPdf	11 27 10.7	+8.3
BBS	Basel-Blauen	155.07	357	PKP	PKPdf	11 27 10.7	+8.3
LOMF	Lomont	155.22	358	PKP	PKPdf	11 27 14.8	+12
TURN	Turunc	155.34	311	*i* P	PKPdf	11 26 54.2	-8.8
LJU	Ljubljana	155.39	345	*i* PKPdf	PKPdf	11 27 02.7	-0.1
LJU				*i*		11 27 13.8	
AYDN	Tasoluk	155.45	313	*i* P	PKPdf	11 26 58.5	-4.8
VOY	Vojsko	155.55	346	*e*PKPdf	PKPdf	11 27 03.1	-0.1
VOY				*e*		11 27 13.7	
JAVS	Javornik	155.64	345	*i* PKPdf	PKPdf	11 27 03.4	+0.1
JAVS				*i*		11 27 14.1	
BOJS	Bojanci	155.70	343	*e*PKPdf	PKPdf	11 27 02.8	-0.5
BOJS				*e*		11 27 40.6	
TUE	Stuetta	155.90	353	PFAKE		11 27 10.0	+6.2
TUE				LR	LR		
	comp=Z,917nm,20.0s						
LBL	Lubilhac	157.30	4	PKP	PKPdf	11 27 18.6	+13
SSB	Saint Sauveur	157.31	1	*e*PKIKP	PKPdf	11 27 07.9	+2.5
SSB				MLR	MLR		
	comp=Z,828nm,19.0s						
SSB	Saint Sauveur	157.31	1	*e*PKPdf	PKPdf	11 27 07.9	+2.5
SSB				LR	LR		
	comp=Z,828nm,19.0s						
BNI	Bardonecchia	157.52	358	*e*PKIKP	PKPdf	11 27 04.9	-0.9
BNI				*e*		11 27 17.7	
BNI				MLR	MLR		
	comp=Z,775nm,20.0s						
BNI	Bardonecchia	157.52	358	*e*PKPdf	PKPdf	11 27 04.9	-0.9
BNI				*e*PKPbc	PKPab	11 27 17.7	-20
BNI				*e*PKPab	PKPab	11 27 38.3	+0.7
BNI				LR	LR		
	comp=Z,775nm,20.0s						
TIR	Tirane	157.62	330	PFAKE		11 27 20.0	+14
TIR				LR	LR		
	comp=Z,1μm,22.0s						
VLC	Villacollemand	158.04	350	PFAKE		11 27 20.0	+14
VLC				LR	LR		
	comp=Z,1μm,22.0s						
MVO	Moncorvo	158.71	26	*e*PKPdf	PKPdf	11 27 07.1	-0.2
MVO				*e*pPKPdf	pPKPdf	11 27 19.7	+1.0
MVO	Moncorvo	158.71	26	*e*PKPab	PKPab	11 27 44.4	+1.6
MVO				*e*pPKPab	pPKPab	11 27 54.3	+0.4
MVO				*e*SS	SS	11 51 34.0	+12
MVO				A	A	12 35 34.4	
	comp=Z,978nm,20.0s						
MTE	Manteigas	159.12	29	*e*PKPdf	PKPdf	11 27 07.7	-0.1
MTE				A	A	12 35 29.8	
	comp=Z,918nm,20.0s						
MTE	Manteigas	159.12	29	PFAKE		11 27 20.0	+12
MTE				LR	LR		
	comp=Z,998nm,20.0s						
AQU	L'Aquila	159.12	343	PFAKE		11 27 20.0	+12
AQU				LR	LR		
	comp=Z,1μm,20.0s						
PTOM	Tomar	159.34	31	*e*pPKPdf	pPKPdf	11 27 20.1	+0.7
LIS	Lisbon	159.66	34	*e*P	PKPdf	11 27 08.2	-0.2
LIS				*e*PP	PP	11 31 29.2	+1.2
LIS				AMS	AMS	12 56 09.1	
	comp=E,953nm,18.6s						
LIS	Lisbon	159.66	34	*e*PKIKP	PKPdf	11 27 08.1	-0.2
LIS				*e*		11 31 29.1	
PMRV	Marv??o	159.97	30	*e*pPKPdf	pPKPdf	11 27 21.3	+1.1
PMRV	Marv??o	159.97	30	*e*PKPab	PKPab	11 27 48.0	-0.3
PMRV				*e*pPKPab	pPKPab	11 27 59.5	+0.1
PMRV				A	A	12 36 43.0	
	comp=E,894nm,18.0s						
EVO	Evora	160.38	33	*e*PKPdf	PKPdf	11 27 09.9	+0.7
EVO				*e*pPKPdf	pPKPdf	11 27 21.7	+1.1
EVO	Evora	160.38	33	*e*PKPab	PKPab	11 27 48.8	-1.3
PNCL	Nicolau / Gran	160.44	34	*e*PKPdf	PKPdf	11 27 10.0	+0.7
PNCL				*e*pPKPdf	pPKPdf	11 27 21.8	+1.1
PNCL	Nicolau / Gran	160.44	34	*e*PKPab	PKPab	11 27 48.7	-1.6
PNCL				*e*pPKPab	pPKPab	11 28 01.6	+0.2
CUC	Castrocucco	160.46	335	PFAKE		11 27 20.0	+11
CUC				LR	LR		
	comp=Z,561nm,19.0s						
TIP	Timpagrande	160.76	332	PFAKE		11 27 20.0	+10
TIP				LR	LR		
	comp=Z,975nm,20.0s						
MESJ	Messejana	160.80	34	*e*P	PKPdf	11 27 10.6	+0.8
MESJ				*e*PP	PP	11 31 35.6	+1.4
MESJ				AMS	AMS	12 50 20.8	
	comp=Z,716nm,15.5s						
MESJ	Messejana	160.80	34	*e*PP	PP	11 31 35.6	+1.4
MESJ				A	A	12 50 20.8	
	comp=Z,716nm,15.5s						
MESJ	Messejana	160.80	34	*e*PKIKP	PKPdf	11 27 10.5	+0.8
MESJ				*e*		11 31 35.5	
MORF	Marmelete	160.96	36	*e*PKPdf	PKPdf	11 27 12.7	+2.7
MORF				*e*pPKPdf	pPKPdf	11 27 22.7	+1.3
MORF	Marmelete	160.96	36	*e*PKIKP	PKPdf	11 27 09.5	-0.5
MORF				*e*		11 31 36.3	
PAB	San Pablo	161.15	24	*e*PKIKP	PKPdf	11 27 10.8	+0.7
PAB				*e*		11 27 22.7	
PAB				MLR	MLR		
	comp=Z,991nm,21.0s						
PAB	San Pablo	161.15	24	*e*PKPdf	PKPdf	11 27 10.8	+0.7
PAB				*e*pPKPdf	pPKPdf	11 27 22.7	+1.1
PAB				LR	LR		
	comp=Z,991nm,21.0s						
ESDC	Sonseca Array	161.17	23	PKP	PKPdf	11 27 10.6	+0.5
ESDC				pPKP	pPKPdf	11 27 22.1	+0.5
ESDC				PKPab	PKPab	11 27 53.4	-0.2
ESDC				pPKPab	pPKPab	11 28 04.5	-0.1
ESDC				PP	PP	11 31 44.2	+8.4
ESDC	Sonseca Array	161.17	23	PKP	PKPdf	11 27 10.6	+0.5
	comp=Z,0.7nm,0.6s,baz=350,slow=2.2,SNR=8.0						
ESDC				pPKP	pPKPdf	11 27 22.1	+0.5
	comp=Z,1.0nm,0.6s,baz=352,slow=3.0,SNR=3.2						
ESDC				PKPab	PKPab	11 27 53.4	-0.2
	comp=Z,1.6nm,0.7s,baz=322,slow=3.6,SNR=7.7						
ESDC				pPKPab	pPKPab	11 28 04.5	-0.1
	comp=Z,2.6nm,0.8s,baz=326,slow=4.4,SNR=3.5						
ESDC				PP	PP	11 31 44.2	+8.4
	comp=Z,0.2nm,0.2s,baz=334,slow=5.7,SNR=4.4						
PVAQ	Vaqueiros	161.39	34	*e*pPKPdf	pPKPdf	11 27 23.3	+1.6
PVAQ				*e*pPKPab	pPKPab	11 28 06.1	+0.5
PVAQ				A	A	12 48 40.0	
	comp=Z,832nm,20.0s						
PBDV	Barranco-do-Ve	161.40	35	*e*pPKPdf	pPKPdf	11 27 23.0	+1.2
PBDV	Barranco-do-Ve	161.40	35	*e*PKPab	PKPab	11 27 56.7	+2.1
DBIC	Dimbokro	161.41	147	PKP	PKPdf	11 27 10.7	-0.3
DBIC				*e*PKPdf	PKPdf	11 27 11.9	+0.9
DBIC	Dimbokro	161.41	147	PKP	PKPdf	11 27 10.7	-0.3
	comp=Z,5.9nm,0.8s,baz=126,slow=2.0,SNR=10.0						
CEL	Celeste	161.90	332	PFAKE		11 27 20.0	+9.1
CEL				LR	LR		
	comp=Z,906nm,20.0s						
VSL	Villasalto	162.75	349	PFAKE		11 27 20.0	+8.3
VSL				LR	LR		
	comp=Z,654nm,19.0s						
RTC	Rabat Centre	164.34	41	PFAKE		11 27 20.0	+6.7
RTC				LR	LR		
	comp=Z,1μm,19.0s						
WDD	Wield Dalam	164.50	331	PFAKE		11 27 20.0	+6.6
WDD				LR	LR		
	comp=Z,1μm,20.0s						
KEST	Kesra	166.40	346	PKPab	PKPab	11 28 17.1	+0.5
KEST	Kesra	166.40	346	PKPab	PKPab	11 28 17.1	+0.5
	comp=Z,4.0nm,1.1s,baz=222,slow=0.6,SNR=5.1						
TOA0	Torodi Ar. Sit	170.04	159	*e*PKPdf	PKPdf	11 27 16.6	-1.4
TORD	Torodi Ar. Bea	170.04	159	PKP	PKPdf	11 27 17.1	-0.9
TORD				pPKP	pPKPdf	11 27 28.8	-0.7
TORD				PKPab	PKPab	11 28 33.4	+0.4
TORD				PP	PP	11 32 28.8	+7.0
TORD	Torodi Ar. Bea	170.04	159	PKP	PKPdf	11 27 17.1	-0.9
	comp=Z,2.5nm,0.8s,baz=345,slow=0.9,SNR=15						
TORD				pPKP	pPKPdf	11 27 28.8	-0.7
	comp=Z,4.4nm,1.1s,baz=255,slow=0.3,SNR=8.9						
TORD				PKPab	PKPab	11 28 33.4	+0.4
	comp=Z,1.7nm,0.8s,baz=213,slow=3.9,SNR=3.5						
TORD				PP	PP	11 32 28.8	+7.0
	comp=Z,2.1nm,1.1s,baz=222,slow=4.1,SNR=3.8						
TAM	Tamanrasset	179.70	326	*e*PKIKP	PKPdf	11 27 21.5	+0.6
TAM				MLR	MLR		
	comp=Z,729nm,19.0s						
TAM	Tamanrasset	179.70	326	*e*PKPdf	PKPdf	11 27 21.5	+0.6
TAM				LR	LR		
	comp=Z,729nm,19.0s						

IDC 04 11:14:25.4±7.0**,6.15°S×145.41°E,h75km**±56km**,mb3.5**/2**, mb1 3.7**/4**,mb1mx3.4**/17**,mbtmp3.5**/4**,ML4.1**/1**,Error ellipse: s-maj=58.6km s-min=44.2km az=27.0,New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.67	152	P	Pn	11 15 18.3	-1.4
	0.5nm,0.3s,baz=0.0,slow=15,SNR=2.6						
PMG				S	Sn	11 16 03.0	+1.1
	2.1nm,0.3s,baz=292,slow=19,SNR=5.3						
WRA	Warramunga Arr	17.43	217	P	P	11 18 24.0	0.0
	0.8nm,0.3s,baz=45,slow=12,SNR=10						
ASAR	Alice Springs	20.64	211	P	P	11 18 57.5	-1.5
	2.8nm,0.8s,baz=46,slow=8.0,SNR=6.2						
STKA	Stephens Creek	25.84	187	P	P	11 19 50.2	+0.3
	1.3nm,0.6s,baz=31,slow=5.9,SNR=2.9						
TORD	Torodi Ar. Bea	143.60	284	PKP	PKPdf	11 33 53.8	+1.2
	1.4nm,1.1s,baz=79,slow=0.7,SNR=4.1						

IDC 04 11:28:36.7±1.9**,3.44°N×127.22°E,h0km,mb3.3**/4**, mb1 3.6**/4**,mb1mx3.3**/24**,mbtmp3.4**/4**,Error ellipse: s-maj=111.6km s-min=22.6km az=70.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.46	184	P	P	11 33 27.4	+0.5
	0.9nm,0.8s,baz=8.4,slow=11,SNR=4.2						
WRA	Warramunga Arr	24.27	164	P	P	11 33 56.0	+0.2
	0.8nm,0.4s,baz=343,slow=9.9,SNR=18						
ASAR	Alice Springs	27.72	167	P	P	11 34 26.5	-0.6
	0.3nm,0.9s,baz=336,slow=7.4,SNR=4.5						
MKAR	Makanchi Array	58.07	325	P	P	11 38 31.8	0.0
	0.2nm,0.5s,baz=119,slow=7.4,SNR=2.6						

*IDC **04** 11:29:11.9±1.2, 35.24°N×21.42°E, h0km, mb4.0/6, mb1 3.9/10, mb1mx3.6/31, mbtmp3.8/10, ML3.9/4, Error ellipse: s-maj=27.9km s-min=19.8km az=150.0*
*ATH **04** 11:29:13.6, 35.11°N×21.23°E, h39km±7km, MD3.6/23*
*CSEM **04** 11:29:15.6±0.3, 35.23°N×21.39°E, h15km, ML3.2/3, Error ellipse: s-maj=7.0km s-min=2.9km az=49.0*
*ISCJB **04** 11:29:16.0±0.8, 35.20°N±0.04°×21.33°E±0.05°, h53km±8km, mb3.8/6, Error ellipse: s-maj=8.6km s-min=4.8km az=141.3*
*THE **04** 11:29:18.2, 35.29°N×21.42°E, h59km±15km, ML3.2/3, Error ellipse: s-maj=16.1km s-min=1.4km az=49.0*
ISC 04 11:29:16.9±1.7**,35.20°N**±0.06°×**21.32°E**±0.07**,h41**km±19km**, n107,σ0.65**/135**,mb3.8**/6**,Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL	PYLOS	1.72	11	P	Pn	11 29 44.5	+0.1

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
PYL				S	Sn	11 30 04.7	-0.5
PYL	PYLOS	1.72	11	*e*PB	Pn	11 29 44.8	+0.3
PYL				*e*SN	Sn	11 30 07.2	+2.0
PYL	PYLOS	1.72	11	P	Pn	11 29 44.5	+0.1
PYL	PYLOS	1.72	11	*e*Pb	Pn	11 29 44.8	+0.3
PYL				S	Sn	11 30 04.7	-0.5
PYL				*e*Sn	Sn	11 30 07.2	+1.9
DYR	Agios Nikonas	1.76	27	P	Pn	11 29 44.7	-0.2
DYR				S	Sn	11 30 05.8	-0.4
DYR	Agios Nikonas	1.76	27	*e*PN	Pn	11 29 44.8	-0.2
DYR	Agios Nikonas	1.76	27	*e*Pn	Pn	11 29 44.8	-0.2
DYR				S	Sn	11 30 05.8	-0.4
KYTH	Kithira	1.76	52	P	Pn	11 29 45.4	+0.4
KYTH	Kithira	1.76	52	*e*PN	Pn	11 29 45.4	+0.4
KYTH	Kithira	1.76	52	P	Pn	11 29 45.4	+0.4
VLI	Veliai	2.00	40	P	Pn	11 29 48.9	+0.7
VLI				S	Sn	11 30 11.8	-0.3
VLI	Veliai	2.00	40	*e*PN	Pn	11 29 48.9	+0.7
VLI				*e*SN	Sn	11 30 13.6	+1.5
VLI	Veliai	2.00	40	P	Pn	11 29 48.9	+0.7
VLI				S	Sn	11 30 11.8	-0.3
VLI				*e*Sn	Sn	11 30 13.6	+1.5
ITM	Ithomi	2.03	14	P	Pn	11 29 48.8	+0.1
ITM	Ithomi	2.03	14	*e*PN	Pn	11 29 49.1	+0.4
ITM				*e*SN	Sn	11 30 14.0	+1.1
ITM	Ithomi	2.03	14	P	Pn	11 29 48.8	+0.1
ITM	Ithomi	2.03	14	*e*Pn	Pn	11 29 49.1	+0.4
ITM				*e*Sn	Sn	11 30 14.0	+1.1
KARN	Karanos	2.13	84	P	Pn	11 29 50.7	+0.7
KARN				S	Sn	11 30 14.7	-0.6
KARN	Karanos	2.13	84	*e*PB	Pn	11 29 50.7	+0.7
KARN	Karanos	2.13	84	P	Pn	11 29 50.7	+0.7
KARN				S	Sn	11 30 14.7	-0.6
GVD	Gavdhos	2.30	98	*e*PN	Pn	11 29 51.6	-0.7
GVD				*e*SN	Sn	11 30 20.1	+0.8
GVD	Gavdhos	2.30	98	*e*Pn	Pn	11 29 51.6	-0.7
GVD				*e*Sn	Sn	11 30 20.1	+0.8
VLX	Vlachokerasia	2.33	21	P	Pn	11 29 53.5	+0.7
VLX	Vlachokerasia	2.33	21	*e*PN	Pn	11 29 52.7	-0.1
VLX				*e*SN	Sn	11 30 21.4	+1.2
VLX	Vlachokerasia	2.33	21	*e*Pn	Pn	11 29 52.7	-0.1
VLX	Vlachokerasia	2.33	21	P	Pn	11 29 53.5	+0.7
VLX				*e*Sn	Sn	11 30 21.4	+1.2
AMT	Artemida-Makis	2.35	8	P	Pn	11 29 53.9	+0.9
AMT				S	Sn	11 30 19.9	-0.7
AMT	Artemida-Makis	2.35	8	*e*PN	Pn	11 29 53.2	+0.2
AMT				*e*SN	Sn	11 30 21.3	+0.7
AMT	Artemida-Makis	2.35	8	*e*Pn	Pn	11 29 53.2	+0.2
AMT	Artemida-Makis	2.35	8	P	Pn	11 29 53.9	+0.9
AMT				S	Sn	11 30 19.9	-0.7
AMT				*e*Sn	Sn	11 30 21.3	+0.6
VAM	Vamos	2.36	84	P	Pn	11 29 52.6	-0.6
VAM	Vamos	2.36	84	*e*PN	Pn	11 29 53.3	+0.1
VAM				*e*SN	Sn	11 30 22.1	+1.2
VAM	Vamos	2.36	84	P	Pn	11 29 52.6	-0.6
VAM	Vamos	2.36	84	*e*Pn	Pn	11 29 53.3	+0.1
VAM				*e*Sn	Sn	11 30 22.1	+1.2
DID	Didima	2.77	33	P	Pn	11 29 58.4	-0.5
DID				S	Sn	11 30 30.3	-0.8
DID	Didima	2.77	33	*e*PN	Pn	11 29 59.0	+0.1
DID				*e*SN	Sn	11 30 32.8	+1.7
DID	Didima	2.77	33	P	Pn	11 29 58.4	-0.5
DID	Didima	2.77	33	*e*Pn	Pn	11 29 59.0	+0.1
DID				S	Sn	11 30 30.3	-0.8
DID				*e*Sn	Sn	11 30 32.8	+1.7
GUR	Goura	2.85	16	P	Pn	11 30 01.0	+1.0
GUR				S	Sn	11 30 33.1	0.0
GUR	Goura	2.85	16	*e*PN	Pn	11 30 00.7	+0.7
GUR	Goura	2.85	16	*e*Pn	Pn	11 30 00.7	+0.7
GUR	Goura	2.85	16	P	Pn	11 30 01.0	+1.0
GUR				S	Sn	11 30 33.1	0.0
SIVA	Sivas	2.86	93	*e*PN	Pn	11 29 59.1	-1.0
SIVA	Sivas	2.86	93	*e*Pn	Pn	11 29 59.1	-1.0
IDI	Anoyia	2.92	87	P	Pn	11 30 00.9	0.0
IDI	Anoyia	2.92	87	*e*PN	Pn	11 30 00.9	0.0
IDI	Anoyia	2.92	87	P	Pn	11 30 00.9	0.0
KFL	Anninata	2.93	352	P	Pn	11 30 01.2	+0.1
KFL	Anninata	2.93	352	P	Pn	11 30 01.2	+0.1
VLS	Valsamata	3.03	349	P	Pn	11 30 02.3	-0.1
VLS				S	Sn	11 30 36.9	-0.5
VLS	Valsamata	3.03	349	*e*PN	Pn	11 30 02.1	-0.3
VLS	Valsamata	3.03	349	P	Pn	11 30 02.3	-0.1
VLS				S	Sn	11 30 36.9	-0.5
LAKA	Lakka	3.08	10	P	Pn	11 30 04.3	+1.2
LAKA	Lakka	3.08	10	*e*PN	Pn	11 30 03.8	+0.7
LAKA	Lakka	3.08	10	*e*Pn	Pn	11 30 03.8	+0.7
LAKA	Lakka	3.08	10	P	Pn	11 30 04.3	+1.2
NAIG	Nisos Aigina	3.09	34	*e*PN	Pn	11 30 03.3	+0.1
NAIG	Nisos Aigina	3.09	34	*e*Pn	Pn	11 30 03.3	+0.1
LTK	Loutraki	3.11	25	*e*PN	Pn	11 30 03.9	+0.4
LTK	Loutraki	3.11	25	*e*Pn	Pn	11 30 03.9	+0.4
KALE	Kalithea	3.25	11	P	Pn	11 30 06.6	+1.1
KALE	Kalithea	3.25	11	*e*PN	Pn	11 30 06.2	+0.7
KALE	Kalithea	3.25	11	*e*Pn	Pn	11 30 06.2	+0.7
KALE	Kalithea	3.25	11	P	Pn	11 30 06.6	+1.1
EFP	Efpalio	3.25	8	P	Pn	11 30 06.3	+0.8
EFP	Efpalio	3.25	8	*e*PN	Pn	11 30 06.2	+0.8
EFP	Efpalio	3.25	8	*e*Pn	Pn	11 30 06.2	+0.8
LAST	Lasithi	3.40	89	P	Pn	11 30 08.0	+0.3
LAST	Lasithi	3.40	89	*e*PN	Pn	11 30 07.9	+0.3
LAST	Lasithi	3.40	89	*e*Pn	Pn	11 30 07.9	+0.3
NPS	Neapolis	3.51	88	*e*PN	Pn	11 30 09.1	+0.1
NPS	Neapolis	3.51	88	*e*Pn	Pn	11 30 09.1	+0.1
LKD2	Lefkada island	3.62	352	P	Pn	11 30 11.0	+0.5
LKD2	Lefkada island	3.62	352	*e*PN	Pn	11 30 10.3	-0.2
LKD2	Lefkada island	3.62	352	*e*Pn	Pn	11 30 10.3	-0.2
LKD2	Lefkada island	3.62	352	P	Pn	11 30 11.0	+0.5
LKR	Lokris	3.69	21	P	Pn	11 30 11.5	+0.1
LKR	Lokris	3.69	21	*e*PN	Pn	11 30 11.6	+0.1
LKR	Lokris	3.69	21	*e*Pn	Pn	11 30 11.6	+0.1
EVR	Evrytania	3.73	6	*e*PN	Pn	11 30 12.7	+0.6
EVR	Evrytania	3.73	6	*e*Pn	Pn	11 30 12.7	+0.6
ATAL	Atalanti	3.74	21	P	Pn	11 30 12.4	+0.3
ATAL	Atalanti	3.74	21	P	Pn	11 30 12.4	+0.3
AGG	Agios Georgios	3.90	12	P	Pn	11 30 15.0	+0.7
AGG				S	Sn	11 30 58.6	-0.3
AGG	Agios Georgios	3.90	12	*e*PN	Pn	11 30 14.8	+0.5
AGG	Agios Georgios	3.90	12	*e*Pn	Pn	11 30 14.8	+0.5
AGG				S	Sn	11 30 58.6	-0.3
ZKR	Zakros	4.01	90	*e*PN	Pn	11 30 15.3	-0.6
ZKR	Zakros	4.01	90	*e*Pn	Pn	11 30 15.3	-0.6
NEO	Neokhori	4.37	20	*e*PN	Pn	11 30 20.7	-0.1
NEO	Neokhori	4.37	20	*e*Pn	Pn	11 30 20.7	-0.1
THL	Klokotos Trika	4.39	7	*e*PN	Pn	11 30 21.0	0.0
THL	Klokotos Trika	4.39	7	*e*Pn	Pn	11 30 21.0	0.0
XOR	Xorichti	4.42	19	P	Pn	11 30 21.2	-0.2
XOR	Xorichti	4.42	19	P	Pn	11 30 21.2	-0.2
KARP	Karpathos	4.78	84	*e*PN	Pn	11 30 26.6	+0.1
KARP	Karpathos	4.78	84	*e*Pn	Pn	11 30 26.6	+0.1
BRTR	Keskin Array B	10.78	62	Pn	Pn	11 31 48.2	-0.6
	0.2nm,0.3s,baz=253,slow=16,SNR=4.6						
MMAI	Mount Meron Ar	11.87	97	Pn	Pn	11 31 59.5	-4.2
	0.5nm,0.3s,baz=284,slow=12,SNR=2.5						
AKASG	Malin Array Be	16.52	18	Pn	Pn	11 33 03.8	-1.7
	2.4nm,0.3s,baz=196,slow=9.5,SNR=5.6						
KBZ	Khabaz	18.67	56	P	Pn	11 33 31.8	-0.2
	0.1nm,0.3s,baz=274,slow=6.5,SNR=4.2						
ESDC	Sonseca Array	20.54	290	P	Pn	11 33 53.8	-0.6
	0.1nm,0.3s,baz=88,slow=11,SNR=5.2						
HFS	Hagfors	25.43	351	P	P	11 34 40.4	-0.2
	0.5nm,0.5s,baz=158,slow=12,SNR=6.3						
FINES	FINESS Array B	26.44	5	P	P	11 34 48.6	-1.0
	0.8nm,0.8s,baz=170,slow=12,SNR=4.3						
TORD	Torodi Ar. Bea	28.22	224	P	P	11 35 07.4	+1.3
	0.4nm,0.6s,baz=40,slow=8.1,SNR=3.9						
ARCES	ARCESS Array B	34.47	3	P	P	11 36 00.5	0.0
	7.8nm,1.0s,baz=187,slow=9.3,SNR=6.3						
MKAR	Makanchi Array	46.37	56	P	P	11 37 39.3	+0.3
	1.2nm,0.4s,baz=270,slow=7.7,SNR=30						
ZALV	Zalesovo Beam	47.24	46	P	P	11 37 45.6	-0.1
	1.3nm,0.3s,baz=274,slow=7.4,SNR=11						

IDC 04 11:29:35.7±3.6**, 11.74S×75.23W, h49**km±36km**, mb3.0**/3**, mb1 3.5**/4**, mb1mx3.3**/21**, mbtmp3.3**/4**, ML3.8**/1**, Error ellipse: s-maj=37.3km s-min=28.3km az=154.0, Central Peru**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
NNA	Nana	1.60	261	P	Pn	11 30 00.8	-0.9
	15nm,0.3s,baz=85,slow=14,SNR=24						
NNA				S	Sn	11 30 21.5	+0.2
	15nm,0.3s,baz=342,slow=23,SNR=8.2						
ATAH	Atahualpa	5.54	325	P	Pn	11 30 56.3	+0.1
	2.6nm,0.3s,baz=123,slow=2.1,SNR=13						
TXAR	Lajitas Array	49.20	327	P	P	11 38 19.4	+0.1
	0.2nm,0.5s,baz=149,slow=7.8,SNR=6.2						
YKA	Yellowknife Ar	80.07	343	P	P	11 41 39.4	-0.5
	0.1nm,0.6s,baz=144,slow=6.7,SNR=5.8						
TORD	Torodi Ar. Bea	80.20	74	P	P	11 41 42.0	+0.3
	0.3nm,0.8s,baz=260,slow=4.5,SNR=2.4						

IDC 04 11:41:18.4±1.4**, 5.16N×127.01E, h0**km**, mb3.8**/6**, mb1 4.0**/6**, mb1mx3.6**/25**, mbtmp3.8**/6**, Error ellipse: s-maj=98.3km s-min=16.8km az=68.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	23.15	183	P	P	11 46 27.4	+0.8
	1.0nm,0.7s,baz=17,slow=11,SNR=3.4						
WRA	Warramunga Arr	25.96	164	P	P	11 46 52.6	-0.3
	3.4nm,0.4s,baz=343,slow=10,SNR=66						
ASAR	Alice Springs	29.43	167	P	P	11 47 23.6	-0.4
	0.3nm,0.5s,baz=353,slow=7.6,SNR=8.5						
STKA	Stephens Creek	39.36	160	P	P	11 48 49.6	-0.1
	1.9nm,0.7s,baz=341,slow=8.4,SNR=3.5						
MKAR	Makanchi Array	56.56	325	P	P	11 51 03.2	+0.3
	0.5nm,0.4s,baz=117,slow=7.9,SNR=13						
KURBB	Kurchatov Arra	60.70	327	P	P	11 51 31.3	-0.3
	39nm,0.6s,baz=126,slow=7.6,SNR=1.1						
AKTO	Aktyubinsk	72.73	321	P	P	11 52 48.2	-0.2
	0.5nm,0.5s,baz=84,slow=9.2,SNR=3.6						

IDC 04 11:44:39.0±2.3**, 23.37N×142.00E, h0**km**, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.3**/25**, mbtmp3.6**/4**, ML3.9**/1**, Error ellipse: s-maj=190.4km s-min=24.6km az=91.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.72	2	Pn	Pn	11 45 36.5	-1.2
	9.4nm,0.3s,baz=110,slow=23,SNR=22						
CBIJ				Sn	Sn	11 46 10.3	-12
	13nm,0.3s,baz=266,slow=23,SNR=9.9						
WRA	Warramunga Arr	43.69	190	P	P	11 52 45.5	-0.3
	0.7nm,0.8s,baz=8.5,slow=8.6,SNR=13						
ASAR	Alice Springs	47.41	190	P	P	11 53 15.1	-0.2
	0.1nm,0.4s,baz=26,slow=11,SNR=3.1						
FINES	FINESS Array B	81.21	334	P	P	11 56 57.2	+0.7
	1.5nm,1.0s,baz=71,slow=5.0,SNR=3.7						

IDC 04 11:59:32.0±0.5, 22.45S×174.79W, h0km, mb4.7/21, mb1 4.9/23, mb1mx4.8/25, mbtmp4.7/23, ML4.0/2, MS4.5/28, Ms1 4.5/28, ms1mx4.4/43, Error ellipse: s-maj=17.9km s-min=13.8km az=135.0

GCMT 04 11:59:35.7±0.2, 22.66S×174.15W, h14km, MW5.0, Moment Tensor Solution. s28,c37; s69,c109; Moment tensor: Scale 10^{16}Nm; M_{rr}3.72±.22; $M_{\theta\theta}$0.19±.15; $M_{\phi\phi}$-3.91±.15; $M_{r\theta}$1.44±.41; $M_{\theta\phi}$-0.96±.11; $M_{\phi r}$1.83±.29; Best double couple: $M_0$4.60000×10^{16} NP1:ϕ_s179.00000°, δ32.00000°, λ66.00000°. NP2:ϕ_s26.00000°, δ60.00000°, λ104.00000°. Principal axes: T 4.4800, Plg71.0000°, Azm328.0000°; N 0.1800, Plg12.0000°, Azm199.0000°; P -4.6600, Plg14.0000°, Azm105.0000°; Data Used: II IU IC CN G.

ISCJB 04 11:59:35.3±0.2, 22.58S±0.06×174.75W±0.04, h32km, mb5.1/59, MS4.7/36 Error ellipse: s-maj=8.5km s-min=4.5km az=160.1

BJI 04 11:59:36.5, 22.25S×174.34W, h36km, mB5.7/23, mb5.3/35, Ms5.2/24, Ms7 4.9/25

MOS 04 11:59:36.3±2.0, 22.50S×174.87W, h33km, mb5.3/12, Error ellipse: s-maj=12.7km s-min=10.4km az=19.5

NEIC 04 11:59:37.3±0.2, 22.54S×174.76W, h35km, mb5.2/27, Error ellipse: s-maj=8.3km s-min=5.6km az=150.0

DJA 04 11:59:40.9±6.6, 23°S±23°×17°5W±2°4, h53km±51km, M5.1/11, mB5.6/1, mb5.1/11, Mw(mB)5.1/1

ISC 04 11:59:37.0±0.4**, 22.59S**±0.07×**174.72W**±0.06**, h32**km±2km**, h32**km**:pP-P, n364, σ1.22**/387**, mb5.2**/58**, MS4.6**/36**, 73C-47D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.34	304	P	Pn	12 01 34.0	-1.8
MSVF	Nonsavu	8.34	304	Pn	Pn	12 01 34.0	-1.8
MSVF	Nonsavu	8.34	304	Pn	Pn	12 01 40.0	+4.2
	1μm,1.1s,SNR=13						
AFI	Afiamalu	9.07	18	*e*Pn	Pn	12 01 37.1	-8.8
AFI				Sn	Sn	12 03 07.2	-20
AFI				*e*Sn	Sn	12 03 07.5	-20
AFI	Afiamalu	9.07	18	Pn	Pn	12 01 36.1	-10
	7.4nm,0.3s,baz=135,slow=1.4,SNR=5.4						
AFI				Sn	Sn	12 03 07.2	-20
	9.4nm,0.3s,baz=79,slow=18,SNR=2.8						
AFI				LR	LR	12 04 40.8	
	comp=Z,691nm,19.8s,baz=196,slow=34						
RAR	Rarotonga	13.94	87	*e*Pn	Pn	12 02 42.2	-10
RAR				*e*Sn	Sn	12 04 59.6	-26
RAR				Sn	S	12 05 01.9	-45
RAR	Rarotonga	13.94	87	Pn	Pn	12 02 42.2	-10
	10nm,0.3s,baz=257,slow=8.0,SNR=18						
RAR				Sn	Sn	12 05 01.8	-24
	4.0nm,0.3s,baz=252,slow=20,SNR=4.0						
RAR				LR	LR	12 07 30.3	
	comp=Z,1μm,18.5s,baz=285,slow=34						
URZ	Urewera	17.12	202	*e*Pn	Pn	12 03 33.9	0.0
	23nm,0.9s						
URZ				S	Sn	12 06 28.7	-15
URZ				*e*Sn	S	12 06 34.1	-18
URZ	Urewera	17.12	202	P	P	12 03 35.6	+0.3
	1.6nm,0.3s,baz=4.1,slow=9.5,SNR=12						
URZ				S	Sn	12 06 28.7	-15
	0.6nm,0.3s,baz=12,slow=17,SNR=3.1						
DZM	Mont Dzumac	17.44	268	*e*P	Pn	12 03 36.4	-1.6
	81nm,1.1s						
DZM				*e*LR	LR	12 07 37.4	
	2μm,24.1s						
DZM	Mont Dzumac	17.44	268	Pn	Pn	12 03 36.5	-1.6
DZM	Mont Dzumac	17.44	268	P	Pn	12 03 36.0	-2.0
	0.1nm,0.3s,baz=308,slow=19,SNR=2.2						
TBI	Tubuai	23.26	97	*e*S	S	12 08 46.5	-5.5
	491nm,27.8s						
TBI				*e*LR	LR	12 10 04.8	
	3μm,27.5s						
PPT2	Papeete2	24.11	83	*e*S	S	12 09 03.0	-3.0
	1μm,25.8s						
PPT2				*e*LR	LR	12 10 23.3	
	3μm,26.2s						
PPT	Papeete	24.12	83	LR	LR	12 11 16.3	
	comp=Z,1μm,20.2s,baz=256,slow=29						
RPZ	Rata Peaks	24.14	206	P	P	12 04 48.5	-1.5
RPZ	Rata Peaks	24.14	206	P	P	12 04 48.5	-1.5
	10nm,0.7s,baz=19,slow=18,SNR=3.8						
HNR	Honiara	27.59	294	P	P	12 05 23.9	+2.4
ARMA	Armidale	31.02	248	*e*P	P	12 05 53.9	+1.8
	290nm,2.5s						
EIDS	Eidsvold	31.32	258	*e*P	P	12 05 55.2	+0.6
	232nm,2.7s						
CAN	Canberra	34.00	240	*e*P	P	12 06 18.1	+0.1
CAN				pmax	pmax		
	comp=Z,19nm,1.0s						
CAN	Canberra	34.00	240	*e*P	P	12 06 18.1	+0.1
	comp=Z,19nm,1.0s						
CTA	Charters Tower	36.37	266	P	P	12 06 36.8	-1.8
CTA	Charters Tower	36.37	266	P	P	12 06 36.8	-1.8
	comp=Z,7.1nm,0.6s,baz=87,slow=11,SNR=12						
CTAO	Charters Tower	36.37	266	*e*P	P	12 06 37.9	-0.6
CTAO				pmax	pmax		
	comp=Z,37nm,1.5s						
CTAO	Charters Tower	36.37	266	*e*P	P	12 06 37.9	-0.6
	comp=Z,37nm,1.5s						
RKT	Rikitea	36.55	99	*e*LR	LR	12 16 05.8	
	comp=Z,2μm,28.0s						
PMG	Port Moresby	38.80	284	*e*P	P	12 06 57.9	-1.1
PMG	Port Moresby	38.80	284	P	P	12 06 56.4	-2.6
	comp=Z,31nm,1.2s						
PMG	Port Moresby	38.80	284	P	P	12 06 56.4	-2.6
	comp=Z,28nm,1.0s,baz=155,slow=5.0,SNR=7.2						
STKA	Stephens Creek	39.71	247	*e*P	P	12 07 06.7	+0.2
STKA	Stephens Creek	39.71	247	P	P	12 07 04.7	-1.8
	comp=Z,11nm,1.1s,baz=93,slow=13,SNR=7.6						
STKA				LR	LR	12 22 00.3	
	comp=Z,1μm,18.6s,baz=48,slow=34						
COEN	Coen	40.78	275	*e*P	P	12 07 15.3	-0.3
	comp=Z,211nm,0.9s						
AS31	Alice Springs	47.05	258	*e*P	P	12 08 05.0	-1.0
ASAR	Alice Springs	47.05	258	P	P	12 08 04.7	-1.2
ASAR				S	S	12 14 53.5	-2.5
ASAR	Alice Springs	47.05	258	P	P	12 08 04.7	-1.2
	comp=Z,29nm,0.9s,baz=92,slow=8.0,SNR=93						
ASAR				S	S	12 14 53.5	-2.5
	comp=Z,0.7nm,1.0s,baz=102,slow=13,SNR=3.8						
ASAR				LR	LR	12 27 28.1	
	comp=Z,1μm,18.7s,baz=106,slow=36						
WRAB	Tennant Creek	47.36	263	*e*P	P	12 08 06.6	-1.7
WRAB				pmax	pmax		
	comp=Z,19nm,0.9s						
WRAB	Tennant Creek	47.36	263	*e*P	P	12 08 06.6	-1.7
	comp=Z,19nm,0.9s						
WRAB	Tennant Creek	47.36	263	P	P	12 08 06.0	-2.3
	comp=Z,124nm,1.0s,SNR=13						
WRA	Warramunga Arr	47.37	263	P	P	12 08 06.8	-1.6
WRA				PcP	PcP	12 09 39.8	+0.9
WRA				S	S	12 14 58.0	-2.5
WRA	Warramunga Arr	47.37	263	P	P	12 08 06.8	-1.6
	comp=Z,15nm,0.8s,baz=99,slow=8.0,SNR=70						
WRA				PcP	PcP	12 09 39.8	+0.9
	comp=Z,5.7nm,0.9s,baz=95,slow=3.9,SNR=4.8						
WRA				S	S	12 14 58.0	-2.5
	comp=Z,1.1nm,1.1s,baz=101,slow=14,SNR=4.2						
WRA				LR	LR	12 27 17.3	
	comp=Z,586nm,19.9s,baz=120,slow=35						
FITZ	Fitzroy Crossi	55.79	263	*e*P	P	12 09 10.5	-0.9
	comp=Z,20nm,1.1s						
FITZ	Fitzroy Crossi	55.79	263	LR	LR	12 32 45.4	
	comp=Z,577nm,19.3s,baz=97,slow=36						
VNDA	Vanda	56.13	186	P	P	12 09 14.7	+1.7
VNDA	Vanda	56.13	186	P	P	12 09 14.7	+1.7
	comp=Z,2.2nm,0.8s,baz=345,slow=9.4,SNR=10						
VNDA				LR	LR	12 29 18.7	
	comp=Z,414nm,19.4s,baz=352,slow=32						
NWAO	Narrogin (SRO)	60.19	244	LR	LR	12 34 56.6	
	comp=Z,690nm,18.3s,baz=265,slow=35						
MBWA	Marble Bar	60.39	258	*e*P	P	12 09 43.3	-0.3
	comp=Z,14nm,0.9s						
DAV	Davao City (W)	65.42	290	LR	LR	12 34 16.7	
	comp=Z,192nm,18.8s,baz=310,slow=32						
KAPI	Kappang	65.51	275	LR	LR	12 33 57.9	
	comp=Z,209nm,21.1s,baz=319,slow=32						
QSPA	South Pole Qui	67.49	180	*e*P	P	12 10 30.6	+0.9
	comp=Z,28nm,1.2s						
MJAR	Matsushiro Arr	73.71	322	P	P	12 11 07.2	-0.6
MJAR	Matsushiro Arr	73.71	322	P	P	12 11 07.2	-0.6
	comp=Z,4.7nm,0.6s,baz=161,slow=6.4,SNR=28						
MJAR				LR	LR	12 39 05.6	
	comp=Z,141nm,19.9s,baz=100,slow=32						
MAJO	Matsushiro	73.71	322	*e*P	P	12 11 08.4	+0.6
MAJO				pmax	pmax		
	comp=Z,40nm,1.4s						
MAJO	Matsushiro	73.71	322	*e*P	P	12 11 08.4	+0.6
	comp=Z,40nm,1.4s						
MAT	Matsushiro	73.71	322	P	P	12 11 07.0	-0.8
JOW	Kunigami	73.85	309	LR	LR	12 39 53.2	
	comp=Z,286nm,19.5s,baz=268,slow=33						
JNU	Nakatsue	75.89	315	LR	LR	12 40 50.0	
	comp=Z,162nm,18.3s,baz=327,slow=33						
KSM	Kuching	76.72	277	*e*P	P	12 11 25.5	-0.1
	comp=Z,28nm,1.0s						
KSM	Kuching	76.72	277	P	P	12 11 22.7	-2.9
	comp=Z,26nm,1.0s						
ASAJ	Asahikawa	77.03	330	P	P	12 11 26.9	+0.2
ASAJ	Asahikawa	77.03	330	P	P	12 11 26.9	+0.2
	baz=235,slow=6.3						
ASAJ				LR	LR	12 41 25.0	
	comp=Z,596nm,19.1s,baz=163,slow=33						
TPUB	Ta-pu	77.67	302	*e*P	P	12 11 29.1	-1.7
	comp=Z,25nm,0.9s						
ISA	Isabella	78.67	44	*e*P	P	12 11 37.0	+0.9
ISA				pmax	pmax		
	comp=Z,25nm,1.6s						
ISA	Isabella	78.67	44	*e*P	P	12 11 37.0	+0.9
	comp=Z,25nm,1.6s						
PETK	Petropavlovsk-	79.10	343	P	P	12 11 37.8	-0.1
PETK	Petropavlovsk-	79.10	343	P	P	12 11 37.8	-0.1
PETK	Petropavlovsk-	79.10	343	P	P	12 11 37.8	-0.1
	comp=Z,16nm,0.7s,baz=131,slow=8.0,SNR=16						
PETK				LR	LR	12 42 04.9	
	comp=Z,199nm,20.6s,baz=333,slow=32						
RRX	Edison Barstow	79.14	45	⇑P	P	12 11 40.1	+1.5
	baz=79						
YSS	Yuzh-Sakhalins	79.14	332	*e*P	P	12 11 40.0	+1.7
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	Yuzh-Sakhalins	79.14	332	*e*P	P	12 11 39.0	+0.6
	comp=Z,54nm,1.2s						
YBH	Yreka Blue Hor	80.06	37	P	P	12 11 42.9	-0.7
YBH	Yreka Blue Hor	80.06	37	P	P	12 11 42.9	-0.7
	comp=Z,5.7nm,1.1s,baz=246,slow=3.1,SNR=4.7						
KSRS	Korea Array	80.48	317	P	P	12 11 46.4	+0.6
	comp=Z,11nm,1.0s,baz=139,slow=6.2,SNR=26						
KSRS				LR	LR	12 46 21.3	
	comp=Z,182nm,18.2s,baz=103,slow=35						
NVAR	Mina Array Bea	80.50	42	P	P	12 11 45.5	-0.7
NVAR	Mina Array Bea	80.50	42	P	P	12 11 45.5	-0.7
	comp=Z,2.0nm,0.6s,baz=223,slow=8.2,SNR=12						
NVAR				LR	LR	12 40 21.8	
	comp=Z,415nm,18.1s,baz=92,slow=30						
KSAR	Wonju Array Be	80.50	317	P	P	12 11 46.4	+0.5
MAW	Mawson	80.62	199	*e*P	P	12 11 47.5	+1.3
MAW	Mawson	80.62	199	P	P	12 11 47.8	+1.7
	comp=Z,10nm,0.9s,baz=100,slow=6.4,SNR=13						
INCN	Inchon	81.31	317	*e*P	P	12 11 51.5	+1.2
USRK	Ussuriysk Arra	82.41	324	P	P	12 11 56.4	+0.6
	comp=Z,36nm,1.1s,baz=137,slow=3.1,SNR=31						
USRK				LR	LR	12 45 28.8	
	comp=Z,141nm,18.9s,baz=152,slow=34						
MYKOM	Kota Tinggi	82.78	275	P	P	12 11 56.8	-1.7
	comp=Z,44nm,1.2s						
CCUT	Cedar City	83.09	45	*e*P	P	12 11 59.9	0.0
MDJ	Mudanjiang	83.99	324	P	P	12 12 05.2	+1.2
MDJ				pP	pP	12 12 14.3	0.0
MDJ				sP	sP	12 12 17.6	-0.4
MDJ				PP	PP	12 15 17.9	-0.5
MDJ				S	SKKSac	12 22 30.0	+0.2
MDJ				sS	ScS	12 22 46.6	+8.4
MDJ				pmax	pmax		
	comp=Z,36nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,260nm,6.3s						
MDJ				LR	LR		
	comp=N,180nm,6.2s						
MDJ				LR	LR		
	comp=Z,190nm,6.2s						
MSU	Marysvale	84.41	44	*e*P	P	12 12 07.0	+0.4
MSU	Marysvale	84.41	44	*e*P	P	12 12 07.0	+0.4
BBB	Bella Bella	84.84	27	LR	LR	12 45 06.1	
	comp=Z,191nm,18.2s,baz=66,slow=32						
HAWA	Hanford	84.86	35	*e*P	P	12 12 08.5	+0.1
MFID	Camas Ranch	85.04	39	*e*P	P	12 12 08.7	-0.9
	comp=Z,18nm,1.5s						
X21A	Alamocita Cree	85.17	50	⇑P	P	12 12 10.0	-0.5
	baz=85						
324A	Moseley Ranch,	85.31	53	⇑P	P	12 12 10.7	-0.5
	baz=86						
SYO	Syowa Base	85.34	192	⇓*e*P	P	12 12 09.7	-0.8
SYO	Syowa Base	85.34	192	⇓*e*pP	pP	12 12 18.6	-2.2
DL2	Dalian	85.35	315	P	P	12 12 12.0	+1.0
DL2				pmax	pmax		
	comp=Z,20nm,1.0s						
P16A	Fountain Green	85.36	44	⇑P	P	12 12 11.8	+0.5
	baz=86						
626A	Big Bend Ranch	85.40	56	⇓P	P	12 12 11.4	-0.2
	baz=86,SNR=5.8						
V20A	Brimhall	85.40	48	⇑P	P	12 12 11.5	-0.1
	baz=86						
LAZ	Ladron	85.60	50	*e*P	P	12 12 12.6	-0.1
	comp=Z,2.6nm,1.3s						
PLCA	Paso Flores	85.62	132	P	P	12 12 13.5	+0.9
PLCA	Paso Flores	85.62	132	P	P	12 12 13.5	+0.9
	comp=Z,7.2nm,0.9s,baz=246,slow=20,SNR=3.0						
PLCA				LR	LR	12 39 48.4	
	comp=Z,386nm,21.6s,baz=72,slow=28						
TXAR	Lajitas Array	85.65	56	P	P	12 12 12.2	-0.7
TXAR	Lajitas Array	85.65	56	P	P	12 12 12.2	-0.7
	comp=Z,3.3nm,1.0s,baz=212,slow=4.4,SNR=19						
TXAR				LR	LR	12 40 54.8	

comp=Z,237nm,20.9s,baz=5.0,slow=29
325A Bean Ranch, Si 85.65 54 ⇓P **P 12 12 12.1 -0.9**
baz=86
526A Mary Lane Ranc 85.67 55 P **P 12 12 12.1 -0.9**
baz=86,SNR=6.8
I12A Atlanta 85.67 39 ⇑P **P 12 12 12.5 -0.3**
baz=86
SRU San Rafael 85.81 45 *e*P **P 12 12 13.1 -0.5**
SRU San Rafael 85.81 45 *e*P **P 12 12 13.1 -0.5**
comp=Z,437nm,1.2s
SRU San Rafael 85.81 45 ⇑P **P 12 12 13.5 -0.1**
baz=86
SNAA Sanae 85.82 177 *e*P **P 12 12 13.3 +0.3**
SNAA Sanae 85.82 177 *es*P sP 12 12 26.2 -0.9
SNAA Sanae 85.82 177 *e*P **P 12 12 13.1 0.0**
comp=Z,22nm,1.3s
CN2 Changchun 85.82 321 ⇑P **P 12 12 14.2 +1.0**
CN2 *e*pP pP 12 12 26.9 +3.3
CN2 *e*S **S 12 22 45.5 +1.4**
CN2 pmax pmax
comp=Z,30nm,1.3s
CN2 pmax pmax
comp=Z,200nm,3.0s
VNA3 Neumayer Olymp 85.84 175 *e*P **P 12 12 13.4 +0.3**
VNA3 Neumayer Olymp 85.84 175 *es*P sP 12 12 28.2 +1.1
KLR Kul'dur 85.89 328 *e*P P 12 12 09.8 -3.6
627A Terlingua Ranc 85.92 56 P **P 12 12 13.2 -1.0**
baz=86,SNR=5.7
LPM Los Pinos Moun 85.92 50 *e*P **P 12 12 13.0 -1.2**
comp=Z,18nm,1.5s
HLID Hailey 85.95 39 *e*P **P 12 12 14.1 -0.1**
HLID Hailey 85.95 39 ⇑P **P 12 12 13.8 -0.3**
baz=86
J13A Cove Ranch, Pi 86.00 40 ⇓P **P 12 12 14.3 0.0**
baz=86
426A McDonald Obser 86.01 55 ⇑P **P 12 12 14.6 -0.3**
baz=86
527A Woodward Ranch 86.08 55 P **P 12 12 14.2 -0.8**
baz=86,SNR=7.1
GAMB Gambell 86.11 1 *e*P **P 12 12 14.4 +0.3**
comp=Z,20nm,0.9s
Y23A Lovelace Mesa, 86.14 51 ⇓P **P 12 12 14.2 -1.1**
baz=86
WHN Wuhan 86.14 305 P **P 12 12 15.9 +0.8**
O17A Robinson Place 86.27 44 ⇓P **P 12 12 16.0 +0.2**
baz=86
H12A Diamond D Ranc 86.29 38 ⇓P **P 12 12 15.3 -0.4**
baz=86
U21A Nageezi 86.29 48 ⇑P **P 12 12 15.9 -0.2**
baz=86
628A Black Gap, Mar 86.31 56 P **P 12 12 15.4 -0.7**
baz=86,SNR=5.3
VNA2 Neumayer--Watz 86.32 176 *e*P **P 12 12 16.1 +0.7**
baz=203,slow=4.2
VNA2 Neumayer--Watz 86.32 176 *es*P sP 12 12 29.0 -0.4
baz=203,slow=4.2
M16A Huntsville 86.33 42 ⇑P **P 12 12 15.4 -0.7**
baz=86
J14A Carey 86.34 40 ⇓P **P 12 12 16.4 +0.4**
baz=86
IPM Ipoh 86.41 276 *e*P **P 12 12 17.8 +0.8**
comp=Z,25nm,0.8s
IPM Ipoh 86.41 276 P **P 12 12 16.1 -0.8**
comp=Z,32nm,0.9s
125A Gardner Draw, 86.52 53 ⇓P **P 12 12 16.5 -0.6**
baz=87
V22A San Miguel Ran 86.54 49 ⇓P **P 12 12 17.1 -0.2**
baz=87
427A Hayter Ranch, 86.57 55 P **P 12 12 17.1 -0.4**
baz=87,SNR=8.5
Y24A Capitan 86.58 51 ⇓P **P 12 12 17.2 -0.2**
baz=87
N17A Moffit Pass 86.62 43 ⇓P **P 12 12 17.6 0.0**
baz=87
H13A Challis 86.64 39 ⇓P **P 12 12 16.6 -0.8**
baz=87
528A Cox Ranch, San 86.71 56 ⇑P **P 12 12 17.7 -0.5**
baz=87,SNR=5.2
F12A Elk City 86.79 37 ⇑P **P 12 12 17.2 -0.9**
baz=87
S21A Coal Bank Pass 86.84 47 ⇑P **P 12 12 18.5 -0.4**
baz=87
428A Kincaid Ranch, 87.06 55 ⇓P **P 12 12 19.5 -0.3**
baz=87
Y25A Mesa, Roswell 87.11 51 ⇓P **P 12 12 19.7 -0.3**
baz=87
529A Stev Forest Ra 87.13 56 P **P 12 12 19.0 -1.1**
baz=87,SNR=5.9
H14A Leadore 87.18 39 ⇓P **P 12 12 19.4 -0.8**
baz=87
U23A El Rito 87.25 49 ⇑P **P 12 12 20.8 +0.1**
baz=87
328A Wristen Ranch, 87.27 54 ⇓P **P 12 12 20.1 -0.6**
baz=87
Z26A Caprock 87.31 52 ⇑P **P 12 12 20.2 -0.8**
baz=88
M18A Lyman 87.37 43 ⇓P **P 12 12 20.8 -0.4**
baz=88
R21A Cimarron 87.37 46 ⇑P **P 12 12 20.7 -0.6**
baz=88
P20A De Beque 87.41 45 ⇑P **P 12 12 20.9 -0.4**
baz=88
CMIG Matias Romero 87.45 70 LR LR 12 42 53.0
comp=Z,201nm,18.8s,baz=188,slow=30
127A Arkansas Junct 87.48 53 ⇑P **P 12 12 21.8 0.0**
baz=88
C11A Tepee Creek (N 87.51 35 ⇓P **P 12 12 21.4 -0.1**
baz=88
S22A 4UR Ranch, Cre 87.54 47 ⇓P **P 12 12 22.1 -0.1**
baz=88
429A Davenport Ranc 87.61 56 ⇓P **P 12 12 21.3 -1.1**
baz=88,SNR=14
PSI Prapat 87.70 274 P **P 12 12 21.7 -1.6**
comp=Z,31nm,1.1s,comp=Z,434nm
228A UT Block 9, Go 87.79 54 ⇑P **P 12 12 22.8 -0.4**
baz=88
530A J-C Ranch, Com 87.81 56 ⇓P **P 12 12 22.7 -0.7**
baz=88
W25A X Bar L Ranch, 87.92 50 ⇓P **P 12 12 23.0 -0.9**
baz=88
329A Wagon Wheel Ra 87.95 55 ⇓P **P 12 12 23.3 -0.7**
baz=88
K18A Toltan Ranch, 88.05 42 ⇑P **P 12 12 24.5 0.0**
baz=88
Q22A Crested Butte, 88.06 46 ⇓P **P 12 12 24.3 -0.4**
baz=88
631A Perdido Creek 88.06 57 ⇑P **P 12 12 23.7 -0.8**
baz=88
128A Castleberry Fa 88.10 54 ⇑P **P 12 12 23.8 -0.9**
baz=88
V25A Rancho No Teng 88.11 50 ⇑P **P 12 12 24.5 -0.4**
baz=88
E14A Clinton 88.17 37 ⇓P **P 12 12 24.3 -0.4**
baz=88
L19A Farson 88.19 43 ⇑P **P 12 12 24.7 -0.4**
baz=88
Y27A Causey 88.20 52 ⇓P **P 12 12 24.6 -0.7**
baz=88
732A Laxson Ranch, 88.23 58 ⇓P **P 12 12 24.3 -1.0**
baz=88
PDAR Pinedale Array 88.42 42 P **P 12 12 24.8 -1.4**
PDAR Pinedale Array 88.42 42 P **P 12 12 24.8 -1.4**
comp=Z,1.7nm,0.9s,baz=209,slow=2.9,SNR=8.9
531A Rocksprings 88.43 56 ⇑P **P 12 12 26.1 -0.2**
baz=89
532A Rocksprings 88.91 57 ⇑P **P 12 12 28.8 +0.2**
baz=89
R24A Sanders Place, 88.96 48 ⇓P **P 12 12 28.9 +0.1**
baz=89
O22A Kremmling 88.97 45 ⇓P **P 12 12 28.4 -0.5**
baz=89
J19A Crowheart 89.00 42 ⇓P **P 12 12 28.6 -0.2**
baz=89
SEY Seymchan 89.12 346 ⇓ *e*P **P 12 12 29.0 +0.4**
B14A Marquette Ranc 89.42 36 ⇓P **P 12 12 29.5 -1.2**
baz=90,SNR=5.1
BJI Beijing 89.53 314 P **P 12 12 33.2 +2.1**
BJI S **S 12 23 22.4 +2.8**
BJI pmax pmax
comp=Z,24nm,0.9s
BJI pmax pmax
comp=Z,390nm,10.1s
BJI LR LR
comp=N,170nm,10.8s
BJI LR LR
comp=E,220nm,11.0s
BJI LR LR
comp=Z,110nm,18.2s

D16A Dana Ranch, Ca 89.61 38 ⇑P **P 12 12 30.5 -1.0**
baz=90
COLA College 89.62 11 *e*P **P 12 12 30.3 -0.6**
COLA pmax pmax
comp=Z,13nm,1.1s
COLA College 89.62 11 *e*P **P 12 12 30.3 -0.6**
comp=Z,13nm,1.1s
A14A Double T Ranch 89.70 35 P **P 12 12 31.1 -0.8**
baz=90,SNR=5.4
ILAR Eielson Array 89.70 12 P **P 12 12 30.1 -1.3**
ILAR Eielson Array 89.70 12 P **P 12 12 30.1 -1.3**
comp=Z,5.1nm,1.0s,baz=215,slow=5.5,SNR=20
B15A Bradely Ranch, 89.78 36 ⇑P **P 12 12 33.5 +1.2**
baz=90
S26A Kim 89.78 49 ⇓P **P 12 12 31.8 -0.8**
baz=90
G18A Lazy EL Ranch, 89.81 40 ⇓P **P 12 12 33.1 +0.6**
baz=90
A15A Johnson Ranch, 90.07 36 P **P 12 12 32.5 -1.2**
baz=90,SNR=5.6
R26A Arlington 90.13 48 ⇑P **P 12 12 33.1 -1.1**
baz=90
D17A Six Diamond Ra 90.17 38 ⇓P **P 12 12 34.4 +0.2**
baz=90
GYA Guiyang 90.33 298 P **P 12 12 36.6 +1.2**
GYA pP **pP 12 12 47.2 +1.5**
GYA PP **PP 12 16 13.5 +3.4**
GYA SKS **SKSac 12 23 03.4 -1.3**
GYA S **S 12 23 26.6 -1.4**
GYA SS **SS 12 29 30.9 +2.0**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,50nm,3.0s
GYA LR LR
comp=N,350nm,20.8s
GYA LR LR
comp=E,290nm,21.8s
GYA LR LR
comp=Z,350nm,20.9s
C17A Wharram Farm, 90.39 37 P **P 12 12 34.5 -0.6**
baz=91,SNR=5.2
Z32A Haskell 90.66 54 ⇓P **P 12 12 37.1 +0.5**
baz=91
C19A Slack Wire Ran 91.42 38 P **P 12 12 39.7 -0.2**
baz=92,SNR=6.1
BILL Bilibino 91.44 353 *e*P **P 12 12 39.2 -0.2**
BILL pmax pmax
comp=Z,9.0nm,1.2s
BILL Bilibino 91.44 353 *e*P **P 12 12 39.2 -0.2**
comp=Z,8.5nm,1.2s
D20A Manuel Ranch, 91.60 39 P **P 12 12 40.6 -0.1**
baz=92,SNR=5.2
A18A Metzger Ranch, 91.61 37 P **P 12 12 39.9 -0.8**
baz=92,SNR=5.1
XAN Xi'an 91.83 306 P **P 12 12 42.7 +0.6**
XAN pP **pP 12 12 51.6 -0.8**
XAN sP **sP 12 12 55.9 -0.2**
XAN pmax pmax
comp=Z,9.0nm,1.3s
C20A Veseth Ranch, 92.00 38 ⇑P **P 12 12 42.6 0.0**
baz=92
A19A Klindworth Far 92.23 37 ⇓P **P 12 12 43.2 -0.4**
baz=92
B20A Solberg Farm, 92.38 38 ⇑P **P 12 12 44.2 -0.1**
baz=93
H24A Dirks Ranch, A 92.55 42 ⇑P **P 12 12 44.5 -0.7**
baz=93
NNA Nana 92.58 104 LR LR 12 45 00.5
comp=Z,385nm,18.1s,baz=150,slow=29
A20A Cobblestone Ra 92.66 37 P **P 12 12 45.0 -0.5**
baz=93,SNR=8.1
D22A Cohagen 92.77 39 ⇑P **P 12 12 46.4 +0.3**
baz=93
HHC Hu-ho-hao-te 93.00 313 *e*P **P 12 12 49.1 +1.7**
HHC pP **pP 12 12 59.4 +1.6**
HHC sP sP 12 13 03.4 +1.9
HHC PP **PP 12 16 34.5 +3.7**
HHC SKS **SKSac 12 23 18.1 -1.0**
HHC S **S 12 23 50.0 -1.4**
HHC sS **sS 12 24 06.1 -2.6**
HHC SS **SS 12 30 09.6 +2.8**
HHC pmax pmax
comp=Z,59nm,0.7s
HHC pmax pmax
comp=Z,630nm,7.3s
HHC LR LR
comp=N,330nm,16.2s
HHC LR LR
comp=E,420nm,16.8s
HHC LR LR
comp=Z,390nm,16.3s
KMI Kunming 93.01 296 P **P 12 12 49.7 +1.7**
KMI pP **pP 12 12 58.8 +0.5**
KMI sP sP 12 13 03.7 +1.7
KMI S **S 12 23 50.9 -1.6**
KMI pmax pmax
comp=Z,13nm,1.2s
KMI pmax pmax
comp=Z,150nm,5.7s
KMI LR LR
comp=Z,120nm,36.1s
ATAH Atahualpa 93.09 99 LR LR 12 46 03.8
comp=Z,443nm,19.1s,baz=300,slow=30
A21A Bergtoll Ranch 93.28 38 ⇑P **P 12 12 48.2 -0.2**
baz=94
JTS JuntasAbangare 93.67 80 *e*P **P 12 12 49.2 -1.7**
comp=Z,10nm,1.0s
JTS JuntasAbangare 93.67 80 LR LR 12 47 51.0
comp=Z,185nm,19.0s,baz=69,slow=31
CM31 Chiang Mai Arr 93.68 288 *e*P **P 12 12 51.3 +0.4**
comp=Z,8.2nm,0.8s
CMAR Chiang Mai Arr 93.68 288 P **P 12 12 52.2 +1.3**
CMAR Chiang Mai Arr 93.68 288 P **P 12 12 52.2 +1.3**
comp=Z,9.3nm,0.9s,baz=120,slow=2.9,SNR=40
C23A Lambert 93.68 39 ⇑P **P 12 12 50.4 +0.1**
baz=94
CHTO Chiang Mai 93.82 289 *e*P P 12 12 48.3 -3.2
CHTO pmax pmax
comp=Z,19nm,1.3s
CHTO Chiang Mai 93.82 289 *e*P P 12 12 48.3 -3.2
comp=Z,19nm,1.3s
CHTO Chiang Mai 93.82 289 P **P 12 12 49.7 -1.8**
D24A Glendive 93.85 40 ⇓P **P 12 12 50.9 -0.2**
baz=94
B23A Brockton 94.12 39 ⇑P **P 12 12 52.8 +0.5**
baz=94
TEIG Tepich 94.44 70 LR LR 12 48 53.6
comp=Z,271nm,18.4s,baz=281,slow=31
CD2 Chengdu 94.48 301 P **P 12 12 54.2 -0.2**
CD2 pP **pP 12 13 08.7 +0.2**
CD2 sP **sP 12 13 08.7 +0.2**
CD2 PP **PP 12 16 44.9 +2.3**
CD2 SKS **SKSac 12 23 25.4 -2.1**
CD2 S **S 12 24 01.7 -3.1**
CD2 sS **sS 12 24 19.5 -2.6**
CD2 SS **SS 12 30 29.4 +1.1**
CD2 pmax pmax
comp=Z,30nm,0.7s
CD2 pmax pmax
comp=Z,150nm,5.0s
CD2 LR LR
comp=N,270nm,17.2s
CD2 LR LR
comp=E,240nm,22.5s
CD2 LR LR
comp=Z,300nm,18.1s
DGMT Dagmar 94.59 39 *e*P **P 12 12 54.2 -0.2**
comp=Z,19nm,1.1s
DGMT Dagmar 94.59 39 ⇓P **P 12 12 54.7 +0.3**
baz=95
LZH Lanzhou 96.46 306 *e*P **P 12 13 06.2 +2.8**
LZH pP **pP 12 13 16.1 +2.3**
LZH sP sP 12 13 20.3 +2.8
LZH PP PP 12 17 03.1 +5.1
LZH S **ScS 12 24 24.0 +1.5**
LZH sS sS 12 24 44.3 +5.0
LZH pmax pmax
comp=Z,14nm,1.0s
LZH pmax pmax
comp=Z,150nm,5.9s
LZH LR LR
comp=N,340nm,16.0s
LZH LR LR
comp=E,280nm,18.0s
LZH LR LR

comp=Z,500nm,18.8s
YKA Yellowknife Ar 97.15 24 P **P 12 13 04.6 -1.1**
YKA Yellowknife Ar 97.15 24 P **P 12 13 04.6 -1.1**
comp=Z,1.4nm,0.9s,baz=236,slow=4.3,SNR=19
LPAZ La Paz 98.45 111 LR LR 12 52 28.2
comp=Z,182nm,18.9s,baz=340,slow=32
SONM Songino Array 99.34 318 P **Pdif 12 13 17.2 +1.1**
SONM Songino Array 99.34 318 P **Pdif 12 13 17.2 +1.1**
comp=Z,1.0nm,1.1s,baz=145,slow=3.6,SNR=3.8
GTA Gaotai 100.66 308 *e*P **Pdif 12 13 22.8 +0.7**
GTA pP pP 12 13 32.8 +0.2
GTA sP sP 12 13 36.3 0.0
GTA SKS **SKSac 12 23 57.5 -1.5**
GTA S Sdif 12 24 46.9 -10
GTA pmax pmax
comp=Z,3.0nm,1.5s
GTA pmax pmax
comp=Z,150nm,5.2s
GTA LR LR
comp=N,140nm,18.1s
GTA LR LR
comp=E,230nm,19.9s
GTA LR LR
comp=Z,260nm,13.3s
WMQ Urumqi 110.60 310 PKP 12 18 05.7
MKAR Makanchi Array 114.85 312 PKIKP PKPdf 12 18 13.7 -0.7
MKAR Makanchi Array 114.85 312 PKP PKPdf 12 18 13.7 -0.7
MKAR Makanchi Array 114.85 312 PKP PKPdf 12 18 13.7 -0.7
comp=Z,0.4nm,0.6s,baz=127,slow=1.8,SNR=5.3
KURK Kurchatov 117.60 317 *i* PKIKP **PKPdf 12 18 18.4 -1.1**
KSH Kashi 118.58 304 PKP **PKPdf 12 18 23.3 +1.4**
KSH sPKP 12 18 38.0
KSH PP PP 12 19 48.3 +8.4
KSH PKS **PKSdf 12 21 59.1 +0.4**
KSH SKS **SKSdf 12 25 30.6 -1.2**
KSH SKKS **SKKSac 12 26 36.0 -1.7**
KSH SS **SS 12 36 02.0 +6.1**
KSH AMB AMB
comp=Z,190nm,5.5s
KSH LR LR
comp=N,130nm,5.9s
KSH LR LR
comp=E,140nm,4.2s
KSH LR LR
comp=Z,320nm,5.2s
AAK Ala-Archa 119.99 307 *i* PKIKP **PKPdf 12 18 24.3 -0.3**
AAK MLR MLR
comp=Z,375nm,17.0s
BVAR Borovoye Array 122.64 319 PKIKP **PKPdf 12 18 28.5 -0.6**
BVAR Borovoye Array 122.64 319 PKP **PKPdf 12 18 28.5 -0.6**
BVAR Borovoye Array 122.64 319 PKP **PKPdf 12 18 28.5 -0.6**
comp=Z,0.6nm,0.5s,baz=129,slow=2.1,SNR=5.2
BRVK Borovoye 122.70 319 ⇑ *i* PKIKP **PKPdf 12 18 29.0 -0.2**
BRVK pmax pmax
comp=Z,4.0nm,1.7s
BRVK MLR MLR
comp=Z,214nm,19.0s
KKAR Karatay Array 122.93 308 *e*PKIKP **PKPdf 12 18 29.5 -0.5**
KKAR Karatay Array 122.93 308 *e*PKPdf **PKPdf 12 18 29.5 -0.5**
ARU Arti 128.65 325 *i* PKIKP **PKPdf 12 18 40.3 -0.2**
ARU 12 20 45.2
ARU 12 25 44.1
ARCES ARCESS Array B 131.49 351 PKP **PKPdf 12 18 44.4 -1.2**
ARCES ARCESS Array B 131.49 351 PKP **PKPdf 12 18 44.4 -1.2**
comp=Z,4.9nm,0.9s,baz=40,slow=2.1,SNR=7.1
KLMR Klimovskoe 135.00 337 *e*PKIKP PKPdf 12 19 03.3 +11
KLMR pmax pmax
comp=Z,22nm,1.5s
FINES FINESS Array B 138.60 345 PKP **PKPdf 12 18 58.5 -0.6**
FINES FINESS Array B 138.60 345 PKP **PKPdf 12 18 58.5 -0.6**
comp=Z,2.6nm,1.0s,baz=123,slow=7.0,SNR=5.1
KMBO Kilima Mbogo 140.93 237 PKPpre PKPpre 12 19 00.8
KMBO Kilima Mbogo 140.93 237 PKhKP PKPpre 12 19 00.8
comp=Z,0.7nm,0.6s,baz=99,slow=23,SNR=3.5
NOA NORSAR Array B 141.35 355 PKPpre PKPpre 12 18 59.5
NOA NORSAR Array B 141.35 355 PKhKP PKPpre 12 18 59.5
comp=Z,0.7nm,0.8s,baz=4.6,slow=2.7,SNR=3.3
KBZ Khabaz 142.54 313 PKIKP **PKPdf 12 19 05.2 -1.5**
KBZ Khabaz 142.54 313 PKP **PKPdf 12 19 05.2 -1.5**
KBZ Khabaz 142.54 313 PKP **PKPdf 12 19 05.2 -1.5**
comp=Z,0.8nm,0.3s,baz=197,slow=4.6,SNR=3.8
ANN Anapa 145.62 318 *i* PKIKP **PKPdf 12 19 11.9 -0.1**
ANN pmax pmax
comp=Z,81nm,1.0s
SUW Suwalki 145.83 341 *e*PKP2 **PKPdf 12 19 12.8 +0.7**
SUW Suwalki 145.83 341 *e*PKPbc **PKPdf 12 19 12.8 +0.7**
SUW Suwalki 145.83 341 *e*PKP **PKPdf 12 19 12.5 +0.4**
SUW *e* 12 19 24.3
AKASG Malin Array Be 146.29 332 PKP2 **PKPdf 12 19 13.5 +0.5**
AKASG Malin Array Be 146.29 332 PKPbc **PKPdf 12 19 13.5 +0.5**
AKASG Malin Array Be 146.29 332 PKPbc **PKPdf 12 19 13.5 +0.5**
comp=Z,9.2nm,0.7s,baz=39,slow=4.0,SNR=22
KIEV Kiev 146.31 332 *e*PKP2 **PKPdf 12 19 13.5 +0.5**
KIEV Kiev 146.31 332 *e*PKPbc **PKPdf 12 19 13.5 +0.5**
AK01 Malin Array Si 146.31 332 *e*PKPbc **PKPdf 12 19 13.5 +0.5**
AK02 Malin Array Si 146.34 332 *e*PKPbc **PKPdf 12 19 13.6 +0.5**
BSD Bornholm Skovb 146.73 350 *i* P **PKPdf 12 19 14.5 +0.9**
comp=Z,9.3nm,1.0s
SIM Simferopol' 147.55 320 *i* PKP2 **PKPbc 12 19 18.4 +0.5**
SIM pmax pmax
comp=Z,21nm,0.9s
SIM MLR MLR
comp=Z,500nm,19.0s
MALT Malatya 147.62 307 ⇑PKP2 **PKPbc 12 19 19.7 +1.2**
MALT Malatya 147.62 307 *e*PKPbc **PKPbc 12 19 19.7 +1.2**
MALT Malatya 147.62 307 ⇑ *i*P **PKPbc 12 19 19.7 +1.2**
BEL Belsk 148.44 342 *e*PKP **PKPbc 12 19 20.6 +0.5**
LVV L'vov 149.08 336 *e*PKP2 **PKPbc 12 19 21.8 0.0**
OJC Ojcow 150.16 341 *i* PKIKP **PKPbc 12 19 24.5 0.0**
OJC Ojcow 150.16 341 *e*PKiKP **PKPbc 12 19 24.5 0.0**
BUR08 Bucovina Ar. S 150.34 332 *e*PKPbc **PKPbc 12 19 25.6 +0.5**
BURAR Bucovina Array 150.35 332 ⇑ *i*P **PKPbc 12 19 25.3 +0.2**
TLCR 150.37 325 ⇓PKIKP **PKPbc 12 19 23.5 -1.6**
TLCR 150.37 325 ⇓ *i*P **PKPbc 12 19 23.5 -1.6**
BR131 Keskin Array S 150.50 312 *e*PKPbc **PKPbc 12 19 25.6 -0.1**
BRTR Keskin Array B 150.50 312 PKPbc **PKPbc 12 19 25.7 -0.1**
BRTR Keskin Array B 150.50 312 PKPbc **PKPbc 12 19 25.7 -0.1**
comp=Z,5.9nm,1.0s,baz=129,slow=1.8,SNR=21
KSP Ksiaz 150.52 346 *e*PKIKP **PKPbc 12 19 25.8 +0.5**
KSP *e* 12 19 36.3
KSP Ksiaz 150.52 346 *e*PKP **PKPbc 12 19 25.7 +0.5**
KSP *e* 12 19 37.5
TESR 150.53 329 ⇑ *i*P **PKPbc 12 19 27.5 +2.0**
UZH Uzhgorod 150.70 337 *e*PKIKP **PKPbc 12 19 26.4 +0.6**
UZH *i* 12 19 37.4
NIE Niedzica 150.71 340 *i* PKIKP **PKPbc 12 19 26.4 +0.6**
NIE Niedzica 150.71 340 *e*PKiKP **PKPbc 12 19 26.4 +0.6**
CLL Collm 150.71 350 ⇑ *i*PKIKP **PKPbc 12 19 25.8 +0.1**
CLL *e* 12 19 32.0
CLL *i* 12 19 37.6
CLL pmax pmax
comp=Z,31nm,1.1s
CLL pmax pmax
comp=Z,29nm,1.3s
CLL Collm 150.71 350 ⇑ *i*PKPbc **PKPbc 12 19 25.8 +0.1**
comp=Z,31nm,1.1s
CLL *e*PKPab **PKPab 12 19 32.0 -0.7**
comp=Z,29nm,1.3s
CLL *i* pPKPbc **pPKPbc 12 19 37.6 +1.3**
comp=Z,55nm,1.2s
CFR Carcaliu 150.73 326 ⇓PKIKP **PKPbc 12 19 26.3 +0.4**
CFR Carcaliu 150.73 326 ⇓ *i*P **PKPbc 12 19 26.3 +0.4**
UPC Upice 150.90 346 *e*PKIKP **PKPbc 12 19 26.7 +0.5**
UPC *e* 12 19 37.9
UPC Upice 150.90 346 ⇑ *e*PKP **PKPbc 12 19 26.7 +0.5**
UPC *ep*PKP **PKPab 12 19 37.9 +4.4**
VRI Vrincioaia 150.96 328 ⇑PKIKP **PKPbc 12 19 25.7 -0.8**
VRI Vrincioaia 150.96 328 ⇑ *i*P **PKPbc 12 19 25.6 -0.9**
BRG Berggiesshubel 150.97 349 *i* PKP **PKPbc 12 19 26.8 +0.4**
comp=Z,26nm,1.2s
BRG Berggiesshubel 150.97 349 *i* PKIKP **PKPbc 12 19 26.8 +0.4**
BRG pmax pmax
comp=Z,26nm,1.2s
DPC Dobruska-Polom 150.97 345 *e*PKIKP **PKPbc 12 19 27.1 +0.7**
DPC Dobruska-Polom 150.97 345 ⇑ *e*PKP **PKPbc 12 19 27.1 +0.7**
OKC Ostrava-Krasne 150.98 343 *e*PKIKP **PKPbc 12 19 26.4 0.0**
OKC *e* 12 19 35.1
OKC Ostrava-Krasne 150.98 343 ⇑ *e*PKP **PKPbc 12 19 26.4 0.0**
OKC *e*PKPAB **PKPab 12 19 35.1 +1.3**
PLOR Plostina 151.01 328 ⇑PKIKP **PKPab 12 19 33.2 -1.0**
PLOR Plostina 151.01 328 ⇑ *i*P **PKPab 12 19 33.2 -1.0**
TIRR Tirgusor 151.07 324 ⇑PKIKP **PKPbc 12 19 26.3 -0.4**
TIRR Tirgusor 151.07 324 *e*PKPbc **PKPbc 12 19 27.1 +0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TIRR				ePKPab	PKPab	12 19 35.4	+1.0
TIRR	Tirgusor	151.07	324	⇑iP	PKPbc	12 19 26.3	-0.4
KRLC	Kraliky	151.12	345	ePKIKP	PKPbc	12 19 27.4	+0.6
KRLC				e		12 19 38.9	
KRLC	Kraliky	151.12	345	⇑ePKP	PKPbc	12 19 27.4	+0.6
KRLC				epPKP	pPKPbc	12 19 38.9	+1.5
PVCC	Panska Ves	151.18	348	ePKIKP	PKPbc	12 19 27.4	+0.6
PVCC				e		12 19 35.0	
PVCC				e		12 19 38.4	
PVCC	Panska Ves	151.18	348	⇑ePKP	PKPbc	12 19 27.4	+0.6
PVCC				ePKPAB	PKPab	12 19 35.0	+0.4
PVCC				epPKP	pPKPbc	12 19 38.4	+0.9
MORC	Moravsky Berou	151.20	343	⇓PKIKP	PKPbc	12 19 27.3	+0.3
MORC	Moravsky Berou	151.20	343	ePKPbc	PKPbc	12 19 27.3	+0.3
MORC	Moravsky Berou	151.20	343	⇓iP	PKPbc	12 19 27.3	+0.3
MLR	Muntele Rosu	151.61	329	⇑iP	PKPbc	12 19 27.8	-0.4
PRU	Pruhonice	151.70	347	ePKIKP	PKPbc	12 19 28.2	+0.1
PRU				e		12 19 40.4	
PRU	Pruhonice	151.70	347	⇑ePKP	PKPbc	12 19 28.2	+0.1
PRU				epPKP	pPKPbc	12 19 40.4	+1.7
VRAC	Vranov	151.87	344	⇑iP	PKPbc	12 19 28.1	-0.4
VYHS	Vyhne	151.99	341	ePKIKP	PKPbc	12 19 28.9	+0.1
VYHS				e		12 19 40.5	
VYHS	Vyhne	151.99	341	ePKP	PKPbc	12 19 28.9	+0.1
VYHS				e		12 19 40.4	
MEM	Membach	152.03	359	PKPbc	PKPbc	12 19 28.5	-0.2
MEM				E		12 19 40.4	
DRGR		152.05	334	⇑PKIKP	PKPbc	12 19 28.6	-0.5
DRGR		152.05	334	⇑iP	PKPbc	12 19 28.6	-0.5
VOIR		152.08	329	⇑PKIKP	PKPdf	12 19 23.8	+1.2
VOIR		152.08	329	⇑iP	PKPdf	12 19 23.8	+1.2
SNF	Seneffe	152.12	1	PKPbc	PKPbc	12 19 29.2	+0.2
PSZ	Piszkesteto	152.15	339	ePKIKP	PKPdf	12 19 21.2	-1.4
PSZ	Piszkesteto	152.15	339	ePKPdf	PKPdf	12 19 21.1	-1.4
PSZ	Piszkesteto	152.15	339	⇑iP	PKPab	12 19 37.7	-1.2
TREC	Trest	152.15	346	ePKIKP	PKPbc	12 19 29.4	+0.3
TREC	Trest	152.15	346	⇑ePKP	PKPbc	12 19 29.4	+0.3
BCLA	Clavier	152.22	360	PKPbc	PKPbc	12 19 28.9	-0.3
BCLA				PKPab	PKPab	12 19 38.7	-0.3
ARR	Arges	152.32	330	⇑iP	PKPbc	12 19 30.5	+0.8
DOU	Dourbes	152.54	1	PKPbc	PKPbc	12 19 29.7	-0.2
DOU				E		12 19 40.0	
GRF	Grafenberg Arr	152.55	352	ePKPbc	PKPab	12 19 40.6	+0.2
KHC	Kasperske Hory	152.71	348	ePKIKP	PKPdf	12 19 22.2	-1.2
KHC				e		12 19 31.0	
KHC				e		12 19 41.9	
KHC	Kasperske Hory	152.71	348	ePKPdf	PKPdf	12 19 22.2	-1.2
KHC				ePKPbc	PKPbc	12 19 31.0	+0.6
KHC				ePKPab	PKPab	12 19 41.9	+0.8
KHC	Kasperske Hory	152.71	348	⇑ePKP	PKPbc	12 19 30.8	+0.4
KHC				ePKPAB	PKPab	12 19 41.2	+0.1
GERES	GERESS Array B	152.96	348	PKPbc	PKPbc	12 19 30.3	-0.8
GERES	GERESS Array B	152.96	348	PKPbc	PKPbc	12 19 30.3	-0.8
	comp=Z,4.2nm,1.0s,baz=48,slow=2.0,SNR=17						
WLF	Walferdange	152.97	359	PKPbc	PKPbc	12 19 31.9	+1.0
GZR	Gura Zlata	153.14	332	⇑PKIKP	PKPbc	12 19 29.3	-2.2
GZR	Gura Zlata	153.14	332	⇑iP	PKPbc	12 19 29.3	-2.2
BZS	Buzias	153.45	334	⇑PKIKP	PKPbc	12 19 31.6	-0.5
BZS	Buzias	153.45	334	⇑iP	PKPbc	12 19 31.5	-0.5
STU	Stuttgart	153.69	354	ePKIKP	PKPdf	12 19 24.6	-0.1
STU				e		12 19 33.0	
STU				e		12 19 45.2	
STU	Stuttgart	153.69	354	ePKPdf	PKPdf	12 19 24.6	-0.1
STU				ePKPbc	PKPbc	12 19 33.0	+0.5
STU				ePKPab	PKPab	12 19 45.2	-0.1
BFO	Black Forest	154.20	355	ePKIKP	PKPbc	12 19 33.6	-0.1
BFO	Black Forest	154.20	355	ePKPbc	PKPbc	12 19 33.6	-0.1
VTS	Vitosha	155.08	327	⇑PKIKP	PKPdf	12 19 21.5	-5.6
VTS	Vitosha	155.08	327	⇑iP	PKPdf	12 19 21.5	-5.6
JAVS	Javornik	155.68	345	i PKPdf	PKPdf	12 19 27.5	-0.2
BOJS	Bojanci	155.74	343	i PKPdf	PKPdf	12 19 28.0	+0.4
BOJS				i		12 19 37.7	
ESDC	Sonseca Array	161.24	23	PKP	PKPdf	12 19 35.1	+0.6
ESDC				PKPab	PKPab	12 20 16.7	-1.4
ESDC	Sonseca Array	161.24	23	PKP	PKPdf	12 19 35.1	+0.6
	comp=Z,0.1nm,0.4s,baz=51,slow=1.3,SNR=4.1						
ESDC				PKPab	PKPab	12 20 16.7	-1.4
	comp=Z,0.4nm,0.6s,baz=315,slow=4.2,SNR=4.2						
TORD	Torodi Ar. Bea	170.01	159	PKP	PKPdf	12 19 40.6	-1.7
TORD				PKPab	PKPab	12 20 59.1	+1.9
TORD				PP	PP	12 24 50.3	+4.4
TORD	Torodi Ar. Bea	170.01	159	PKP	PKPdf	12 19 40.6	-1.7
	comp=Z,0.9nm,0.9s,baz=312,slow=1.3,SNR=5.3						
TORD				PKPab	PKPab	12 20 59.1	+1.9
	comp=Z,0.9nm,0.8s,baz=217,slow=2.7,SNR=4.2						
TORD				PP	PP	12 24 50.3	+4.4
	comp=Z,0.7nm,0.9s,baz=176,slow=3.1,SNR=4.0						

IDC 04 12:27:49.5±2.0, 6°.65S×128°.61E, h0km, mb3.6/1, mb1 4.4/4, mb1mx3.8/20, mbtmp4.1/4, ML3.8/2, Error ellipse: s-maj=80.5km s-min=27.3km az=75.0

ISCJB 04 12:28:07.4±1.6, 7°.50S±0°.09×128°.5E±0°.1, h151km, mb3.4/1, Error ellipse: s-maj=19.1km s-min=12.7km az=8.6

AUST 04 12:28:08.6±0.1, 7°.51S×128°.52E, h161km±2km, Error ellipse: s-maj=3.6km s-min=1.5km az=307.0

ISC 04 12:28:07.9±2.0, 7°.5S±0°.1×128°.5E±0°.1, h151km, n9, σ1s38/11, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TLE	Tual	4.64	66	P	Pn	12 29 15.3	-1.3
	baz=4.6,SNR=3.8						
MTN	Manton Dam	5.88	154	P	Pn	12 29 35.1	+1.9
	baz=5.9,SNR=66						
MTN				S	Sn	12 30 40.8	+0.9
	baz=5.9,SNR=16						
KDU	Kakadu	6.45	143	P	Pn	12 29 42.1	+1.4
	baz=6.5,SNR=34						
KDU				S	Sn	12 30 52.1	-1.3
	baz=6.5,SNR=12						
FITZ	Fitzroy Crossi	10.86	194	Pn	Pn	12 30 38.5	-0.8
	1.1nm,0.3s,baz=17,slow=9.7,SNR=56						
FITZ				Sn	Sn	12 32 32.8	-6.7
	1.2nm,0.3s,baz=16,slow=15,SNR=9.0						
FITZ	Fitzroy Crossi	10.86	194	P	Pn	12 30 39.5	+0.2
	baz=11,SNR=28						
WRA	Warramunga Arr	13.58	156	Pn	Pn	12 31 14.5	-0.1
	0.3nm,0.3s,baz=336,slow=13,SNR=54						
WRA				Sn	Sn	12 33 38.6	-6.4
	1.3nm,0.3s,baz=330,slow=21,SNR=11						
COEN	Coen	15.78	115	P	P	12 31 42.6	-0.3
	baz=16,SNR=13						
ASAR	Alice Springs	16.86	163	P	Pn	12 31 56.9	+1.6
	2.7nm,0.3s,baz=344,slow=11,SNR=154						
ASAR				S	S	12 35 01.4	-1.3
	0.4nm,0.3s,baz=340,slow=25,SNR=6.8						
MKAR	Makanchi Array	67.86	328	P	P	12 38 45.6	-4.4
	0.4nm,0.5s,baz=128,slow=7.7,SNR=6.8						

IDC 04 12:40:47.6±4.8, 33°.40S×133°.63E, h0km, mb1 4.2/4, mb1mx3.7/17, mbtmp4.0/4, ML4.1/4, Error ellipse: s-maj=48.7km s-min=26.7km az=31.0, Near coast of South Australia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	6.89	79	Pn	Pn	12 42 29.9	-0.1
	4.3nm,0.3s,baz=259,slow=11,SNR=61						
STKA				Sn	Sn	12 43 43.8	-5.3
	6.4nm,0.3s,baz=260,slow=18,SNR=7.1						
STKA				Lg	Lg	12 44 26.2	
	8.5nm,0.3s,baz=288,slow=20,SNR=5.8						
ASAR	Alice Springs	9.70	2	Pn	Pn	12 43 10.4	+1.8
	1.6nm,0.3s,baz=183,slow=12,SNR=72						
ASAR				Sn	Sn	12 44 53.7	-4.7
	1.4nm,0.3s,baz=177,slow=22,SNR=7.4						
ASAR				Lg	Lg	12 45 55.1	
	1.4nm,0.3s,baz=180,slow=26,SNR=8.6						
WRA	Warramunga Arr	13.42	3	Pn	Pn	12 43 59.4	-0.1
	1.1nm,0.3s,baz=181,slow=13,SNR=88						
WRA				Sn	Sn	12 46 22.7	-6.8
	1.0nm,0.3s,baz=183,slow=23,SNR=5.1						
WRA				Lg	Lg	12 47 53.5	
	baz=183,slow=28,SNR=4.0						
FITZ	Fitzroy Crossi	16.84	333	Pn	Pn	12 44 43.4	-1.4
	0.2nm,0.3s,baz=165,slow=13,SNR=9.5						
FITZ				Sn	Sn	12 47 43.0	-10
	0.1nm,0.3s,baz=184,slow=8.3,SNR=2.7						

IDC 04 12:49:54.2±0.6, 49°.16S×30°.78E, h0km, mb4.2/10, mb1 4.3/11, mb1mx4.1/24, mbtmp4.2/11, ML4.0/1, MS3.9/2, Ms1 3.9/2, ms1mx3.4/29, 1D, Error ellipse: s-maj=27.7km s-min=15.8km az=70.0, South of Africa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SUR	Sutherland	18.35	332	P	Pn	12 54 09.4	-1.0
	0.6nm,0.3s,baz=141,slow=8.5,SNR=7.2						
SUR				S	Sn	12 57 18.7	-17
	0.2nm,0.3s,baz=128,slow=18,SNR=2.9						
SYO	Syowa Base	20.38	171	⇓eP	P	12 54 31.4	-0.7
BOSA	Boshof	20.95	346	P	P	12 54 38.6	-0.2
	3.8nm,0.6s,baz=191,slow=9.8,SNR=13						
LBTB	Lobatse	24.44	349	P	P	12 55 13.3	-1.4
	1.6nm,0.6s,baz=208,slow=15,SNR=4.3						
MAW	Mawson	24.51	151	LR	LR	13 02 26.8	
	comp=Z,286nm,19.9s,baz=168,slow=31						
SNAA	Sanae	27.31	202	P	P	12 55 40.6	+0.4
	0.8nm,0.8s,baz=104,slow=11,SNR=2.9						
QSPA	South Pole Qui	41.06	180	P	P	12 57 39.1	-0.1
	8.1nm,0.8s,baz=258,slow=3.3,SNR=56						
VNDA	Vanda	50.03	168	P	P	12 58 48.5	-1.2
	2.2nm,0.8s,baz=242,slow=8.0,SNR=14						
VNDA				LR	LR	13 17 33.9	
	comp=Z,134nm,19.6s,baz=247,slow=33						
TORD	Torodi Ar. Bea	67.15	329	P	P	13 00 50.0	+0.3
	0.9nm,0.7s,baz=158,slow=6.4,SNR=7.2						
CPUP	Villa Florida	69.38	253	P	P	13 01 04.1	+0.3
	1.7nm,0.6s,baz=132,slow=6.6,SNR=4.8						
STKA	Stephens Creek	78.58	126	P	P	13 01 57.4	-0.2
	4.3nm,0.7s,baz=209,slow=3.4,SNR=8.1						
ASAR	Alice Springs	80.54	115	P	P	13 02 08.9	+0.5
	4.3nm,0.7s,baz=220,slow=4.4,SNR=60						
WRA	Warramunga Arr	83.63	113	P	P	13 02 25.0	+0.3
	2.9nm,0.7s,baz=212,slow=4.0,SNR=46						
TXAR	Lajitas Array	140.27	257	PKhKP	PKPpre	13 09 19.0	
	0.2nm,0.7s,baz=106,slow=3.3,SNR=2.8						
RES	Resolute Bay	145.99	337	PKPbc	PKPab	13 09 35.5	+0.6
	1.9nm,1.0s,baz=53,slow=5.1,SNR=5.1						
ULM	Lac du Bonnet	146.09	293	PKPbc	PKPdf	13 09 34.5	+0.2
	1.8nm,0.6s,baz=47,slow=3.4,SNR=4.2						
PDAR	Pinedale Array	151.95	272	PKPbc	PKPbc	13 09 50.0	-0.9
	0.8nm,0.7s,baz=120,slow=3.4,SNR=6.4						

IDC 04 12:53:06.9±0.6, 33°.70N×82°.41E, h0km, mb4.0/18, mb1 4.2/20, mb1mx4.1/32, mbtmp4.1/20, ML3.3/2, MS3.7/5, Ms1 3.8/5, ms1mx3.2/47, Error ellipse: s-maj=17.0km s-min=12.8km az=47.0

BJI 04 12:53:07.2, 34°.81N×81°.59E, h10km, mb4.1/4, Ms4.1/5, Ms7 3.9/5

NEIC 04 12:53:08.6±0.3, 33°.69N×82°.47E, h10km, mb4.5/10, Error ellipse: s-maj=8.3km s-min=5.9km az=49.0

NDI 04 12:53:09.3±2.1, 33°.88N×82°.66E, h10km, ML3.1, mb4.5(NEIC)

ISCJB 04 12:53:10.1±0.3, 33°.74N±0°.04×82°.51E±0°.04, h33km, mb4.1/29, MS3.7/4, Error ellipse: s-maj=5.6km s-min=4.5km az=168.0

MOS 04 12:53:10.1±1.0, 33°.73N×82°.45E, h33km, mb4.5/21, Error ellipse: s-maj=11.2km s-min=6.3km az=109.1

ISC 04 12:53:11.8±0.4, 33°.71N±0°.05×82°.58E±0°.05, h35km, n99, σ1s47/109, mb4.1/29, MS3.7/4, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DDI	Dehra Dun	5.11	230	eP	Pn	12 54 28.0	+2.0
DDI				ex	x	12 55 50.0	
SMLA	Simla	5.25	242	eP	Pn	12 54 28.3	+0.5
SMLA				eS	Sn	12 55 29.6	+2.6
SMLA				AML	AML	12 55 35.7	
	comp=E,49nm,0.6s						
SMLA				AML	AML	12 55 37.9	
	comp=N,37nm,0.4s						
DHRM	DHARAMSHALA	5.47	256	eP	Pn	12 54 32.3	+1.2
DHRM				eS	Sn	12 55 33.7	+0.8
DHRM				AML	AML	12 56 17.2	
	comp=N,23nm,0.7s						
DHRM				AML	AML	12 56 19.4	
	comp=E,23nm,0.2s						
KSH	Kashi	7.86	319	Pg	Pn	12 55 05.7	+1.9
KSH				Sg	Sn	12 56 36.2	+4.6
CEP	Cherat	8.89	274	P	Pn	12 55 17.3	-0.6
CEP				S	Sn	12 56 56.0	-0.8
TKM2	Tokmak 2	10.71	331	eP	Pn	12 55 43.9	+1.1
TKM2				pmax	pmax		
	comp=Z,21nm,0.6s						
TKM2	Tokmak 2	10.71	331	ePn	Pn	12 55 43.9	+1.1
	comp=Z,21nm,0.6s						
AAK	Ala-Archa	10.95	327	P	Pn	12 55 47.3	+1.2
AAK				MLR	MLR		
	comp=Z,420nm,18.2s						
AAK	Ala-Archa	10.95	327	Pn	Pn	12 55 47.3	+1.2
AAK				Lg	Lg	12 58 57.5	
AAK	Ala-Archa	10.95	327	Pn	Pn	12 55 47.3	+1.2
	comp=Z,0.2nm,0.3s,baz=157,slow=14,SNR=8.2						
AAK				Lg	Lg	12 58 57.5	
	comp=Z,0.1nm,0.3s,baz=188,slow=15,SNR=5.5						
AAK				LR	LR	13 00 22.3	
	comp=Z,420nm,18.2s,baz=127,slow=40						
FRU	Bishkek	11.05	328	eP	Pn	12 55 50.0	+2.7
KBL	Kabul	11.25	278	eP	Pn	12 55 50.7	+0.4
KBL				e		12 57 51.1	
KBL				pmax	pmax		
	comp=Z,13nm,0.8s						
KBL	Kabul	11.25	278	ePn	Pn	12 55 50.7	+0.4
	comp=Z,13nm,0.8s						
KBL				eSn	Sn	12 57 51.1	-3.9
BHPL	Bhopal	11.37	205	eP	Pn	12 55 51.9	+0.1
BHPL				AMB	AMB	12 55 54.4	
	comp=Z,6.7nm,1.1s						
BHPL				eS	Sn	12 57 52.9	-4.7
SHL	Shillong	11.45	133	eP	Pn	12 55 54.0	+0.9
SHL				AMB	AMB	12 55 57.3	
	comp=Z,65nm,0.2s						
MK31	Makanchi Array	13.07	359	i P	Pn	12 56 14.2	-0.8
MK31				pmax	pmax		
	comp=Z,13nm,0.9s						
MK31	Makanchi Array	13.07	359	ePn	Pn	12 56 14.0	-1.0
MKAR	Makanchi Array	13.07	359	P	Pn	12 56 14.2	-0.8
MKAR	Makanchi Array	13.07	359	Pn	Pn	12 56 14.2	-0.8
MKAR				Lg	Lg	13 00 00.3	
MKAR	Makanchi Array	13.07	359	Pn	Pn	12 56 14.2	-0.8
	comp=Z,0.3nm,0.3s,baz=179,slow=12,SNR=42						
MKAR				Lg	Lg	13 00 00.3	
	comp=Z,0.1nm,0.3s,baz=183,slow=27,SNR=4.4						
GTA	Gaotai	14.97	63	eP	P	12 56 44.5	-1.5
GTA				pP	Pn	12 56 48.9	+8.0
GTA				sP		12 56 51.4	
GTA				S	S	12 59 37.2	-5.2
GTA				sS	Sn	12 59 41.9	+16
GTA				SS	SnSn	12 59 55.2	+17
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				LR	LR		
	comp=N,840nm,12.4s						
GTA				LR	LR		
	comp=E,330nm,15.2s						
GTA				LR	LR		
	comp=Z,490nm,14.3s						
KURK	Kurchatov	17.25	351	eP	Pn	12 57 09.2	-0.5
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURK	Kurchatov	17.25	351	ePn	Pn	12 57 09.2	-0.5
	comp=Z,7.8nm,1.0s						
LZH	Lanzhou	17.60	76	eP	P	12 57 19.4	+4.1
LZH				pP	pP	12 57 22.9	-1.5
LZH				PP	PnPn	12 57 34.4	+9.3
LZH				S	S	13 00 37.5	+1.1
LZH				LR	LR		
	comp=N,290nm,10.1s						
LZH				LR	LR		
	comp=E,240nm,11.9s						
LZH				LR	LR		
	comp=Z,470nm,13.2s						
ZAA0	Zalesovo Array	20.30	4	eP	P	12 57 44.8	+0.4
ZALV	Zalesovo Beam	20.30	4	P	P	12 57 45.1	+0.6
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZALV	Zalesovo Beam	20.30	4	P	P	12 57 45.0	+0.6
ZALV	Zalesovo Beam	20.30	4	P	P	12 57 45.0	+0.6
	comp=Z,2.6nm,0.6s,baz=192,slow=9.8,SNR=14						
CHTO	Chiang Mai	20.82	131	eP	P	12 57 51.2	+0.8
CHTO				pmax	pmax		
	comp=Z,49nm,1.6s						
CHTO	Chiang Mai	20.82	131	eP	P	12 57 51.1	+0.8
	comp=Z,49nm,1.6s						
CM31	Chiang Mai Arr	21.09	132	eP	P	12 57 54.0	+0.7
	comp=Z,16nm,1.0s						
CMAR	Chiang Mai Arr	21.09	132	P	P	12 57 54.3	+1.0
CMAR	Chiang Mai Arr	21.09	132	P	P	12 57 54.3	+1.0
	comp=Z,5.2nm,0.9s,baz=311,slow=11,SNR=32						
CMAR				LR	LR	13 06 25.7	
	comp=Z,76nm,18.3s,baz=170,slow=38						
NVS	Novosibirsk	21.14	1	eP	P	12 57 52.4	-1.1
NVS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NVS				pmax	pmax		
	comp=N,5.0nm,0.9s						
BVAR	Borovoye Array	21.19	339	P	P	12 57 53.1	-1.0
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR	Borovoye Array	21.19	339	P	P	12 57 53.1	-1.0
BVAR	Borovoye Array	21.19	339	P	P	12 57 53.1	-1.0
	comp=Z,1.5nm,0.8s,baz=151,slow=9.2,SNR=9.0						
BRVK	Borovoye	21.25	339	eP	P	12 57 55.0	+0.3
BRVK				pmax	pmax		
	comp=Z,16nm,1.1s						
BRVK	Borovoye	21.25	339	eP	P	12 57 55.0	+0.3
	comp=Z,16nm,1.1s						
XAN	Xi'an	21.86	82	P	P	12 58 00.7	-0.8
XAN				pP	pP	12 58 09.2	-1.6
XAN				sP	sP	12 58 14.3	-0.9
XAN				pmax	pmax		
	comp=Z,5.0nm,1.6s						
XAN				pmax	pmax		
	comp=Z,22nm,5.3s						
ZAK	Zakamensk	22.55	36	eP	P	12 58 09.3	+0.5
SONM	Songino Array	22.78	45	P	P	12 58 13.2	+1.8
SONM	Songino Array	22.78	45	P	P	12 58 13.2	+1.8
	comp=Z,2.6nm,0.9s,baz=243,slow=9.0,SNR=15						
AB31	Akbulak array	22.87	320	i P	P	12 58 10.7	-1.4
ABKAR	Akbulak array	22.87	320	eP	P	12 58 10.9	-1.1
	comp=Z,6.5nm,0.9s						
BTO	Baotou	22.87	65	eP	P	12 58 07.9	-4.4
ULN	Ulaanbaatar	23.18	45	eP	P	12 58 16.4	+1.0
	comp=Z,6.7nm,1.1s						
TLY	Talaya	23.57	34	eP	P	12 58 20.5	+1.4
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKTO	Aktyubinsk	24.57	320	P	P	12 58 27.6	-0.6
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKTO	Aktyubinsk	24.57	320	P	P	12 58 27.6	-0.6
AKTO	Aktyubinsk	24.57	320	P	P	12 58 27.6	-0.6
	comp=Z,4.1nm,0.7s,baz=110,slow=7.8,SNR=12						
KSAR	Wonju Array Be	36.77	71	P	P	13 00 17.2	+1.2
KSRS	Korea Array	36.80	71	P	P	13 00 17.2	+1.0
	comp=Z,1.1nm,0.8s,baz=281,slow=9.3,SNR=5.9						
KSRS				LR	LR	13 15 29.1	
	comp=Z,86nm,19.3s,baz=43,slow=36						
BRTR	Keskin Array B	39.30	293	P	P	13 00 37.4	-0.2
BRTR	Keskin Array B	39.30	293	P	P	13 00 37.4	-0.2
	comp=Z,0.9nm,0.9s,baz=67,slow=11,SNR=4.1						
JOF	Joensuu	43.13	329	eP	P	13 01 08.7	+0.2
JOF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
JOF	Joensuu	43.13	329	ep	P	13 01 08.7	+0.2
	comp=Z,4.1nm,0.6s						
MJAR	Matsushiro Arr	45.05	70	P	P	13 01 25.4	+1.1
MJAR	Matsushiro Arr	45.05	70	P	P	13 01 25.4	+1.1
	comp=Z,1.5nm,0.9s,baz=280,slow=10,SNR=3.5						
FINES	FINESS Array B	45.13	326	P	P	13 01 23.3	-1.2
FINES	FINESS Array B	45.13	326	P	P	13 01 23.3	-1.2
	comp=Z,1.6nm,0.6s,baz=94,slow=11,SNR=9.4						
ARCES	ARCESS Array B	47.44	336	P	P	13 01 42.3	-0.2
ARCES	ARCESS Array B	47.44	336	P	P	13 01 42.3	-0.2
	comp=Z,4.1nm,0.9s,baz=91,slow=8.5,SNR=3.3						
HFS	Hagfors	51.06	323	LR	LR	13 24 51.8	
	comp=Z,203nm,18.3s,baz=116,slow=37						
GERES	GERESS Array B	52.19	309	P	P	13 02 19.8	+0.7
GERES	GERESS Array B	52.19	309	P	P	13 02 19.8	+0.7
	comp=Z,0.6nm,0.8s,baz=69,slow=7.3,SNR=5.5						
NB2	NORSAR Subarra	52.26	324	P	P	13 02 19.3	0.0
	comp=Z,1.9nm,0.9s,baz=86,slow=7.4						
NOA	NORSAR Array B	52.26	324	P	P	13 02 18.9	-0.4
NOA	NORSAR Array B	52.26	324	P	P	13 02 18.9	-0.4
	comp=Z,2.6nm,0.8s,baz=87,slow=7.4,SNR=9.8						
NOA				LR	LR	13 24 32.5	
	comp=Z,78nm,18.5s,baz=305,slow=36						
LPG	La Plagne	57.58	306	eP	P	13 02 57.7	-0.6
LPG	La Plagne	57.58	306	eP	P	13 02 57.7	-0.6
LPG	La Plagne	57.58	306	eP	P	13 02 57.7	-0.6
LPL	La Plagne	57.58	306	eP	P	13 02 57.3	-1.0
	comp=Z,6.6nm,0.7s						
LPL	La Plagne	57.58	306	eP	P	13 02 57.3	-1.0
LPL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LPL	La Plagne	57.58	306	eP	P	13 02 57.3	-1.0
	comp=Z,6.6nm,0.7s						
MBDF	Montbardon	57.79	305	eP	P	13 02 58.6	-1.1
	comp=Z,7.6nm,1.0s						
MBDF	Montbardon	57.79	305	eP	P	13 02 58.6	-1.1
MBDF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MBDF	Montbardon	57.79	305	eP	P	13 02 58.6	-1.1
	comp=Z,7.6nm,1.0s						
SMF	Signal de Mont	59.17	308	eP	P	13 03 08.7	-0.4
	comp=Z,14nm,1.1s						
SMF	Signal de Mont	59.17	308	eP	P	13 03 08.7	-0.4
SMF				pmax	pmax		
	comp=Z,14nm,1.1s						
SMF	Signal de Mont	59.17	308	eP	P	13 03 08.7	-0.4
	comp=Z,14nm,1.1s						
SSF	Saint Saulge	59.26	309	eP	P	13 03 09.4	-0.3
	comp=Z,7.6nm,1.0s						
SSF	Saint Saulge	59.26	309	eP	P	13 03 09.4	-0.3
SSF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SSF	Saint Saulge	59.26	309	eP	P	13 03 09.4	-0.3
	comp=Z,7.6nm,1.0s						
WRA	Warramunga Arr	72.65	129	P	P	13 04 37.0	+1.0
WRA	Warramunga Arr	72.65	129	P	P	13 04 37.0	+1.0
	comp=Z,3.9nm,0.9s,baz=327,slow=5.9,SNR=16						
ASAR	Alice Springs	75.10	132	P	P	13 04 51.9	+1.5
ASAR	Alice Springs	75.10	132	P	P	13 04 51.9	+1.5
	comp=Z,2.1nm,0.8s,baz=323,slow=5.6,SNR=12						
TOA0	Torodi Ar. Sit	75.32	276	eP	P	13 04 51.2	-0.7
TORD	Torodi Ar. Bea	75.32	276	P	P	13 04 50.2	-1.6
TORD	Torodi Ar. Bea	75.32	276	P	P	13 04 50.2	-1.6
	comp=Z,3.9nm,0.8s,baz=47,slow=5.0,SNR=23						
LBTB	Lobatse	79.64	231	P	P	13 05 16.5	+0.6
LBTB	Lobatse	79.64	231	P	P	13 05 16.5	+0.6
	comp=Z,4.1nm,0.8s,baz=36,slow=5.4,SNR=5.4						
BOSA	Boshof	82.38	228	P	P	13 05 30.4	-0.1
BOSA	Boshof	82.38	228	P	P	13 05 30.4	-0.1
	comp=Z,5.5nm,0.8s,baz=40,slow=4.4,SNR=11						
YKA	Yellowknife Ar	83.14	8	P	P	13 05 33.2	-0.6
YKA	Yellowknife Ar	83.14	8	P	P	13 05 33.2	-0.6
	comp=Z,1.1nm,0.8s,baz=340,slow=5.1,SNR=16						
QSPA	South Pole Qui	123.49	180	PKP	PKPdf	13 12 06.2	+1.6
QSPA	South Pole Qui	123.49	180	PKP	PKPdf	13 12 06.1	+1.6
	comp=Z,1.2nm,0.9s,baz=253,slow=2.2,SNR=4.1						

IDC 04 12:54:58.0±2.0, 16°.26S×176°.05W, h347km±20km, mb3.5/8, mb1 3.8/9, mb1mx3.5/22, mbtmp3.6/9, Error ellipse: s-maj=31.9km s-min=13.3km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.74	61	P	Pn	12 56 14.8	0.0
	22nm,0.3s,baz=243,slow=2.3,SNR=12						
AFI				S	S	12 57 10.8	-5.9
	baz=194,slow=17,SNR=1.6						
STKA	Stephens Creek	41.40	240	P	P	13 02 11.4	-0.3
	1.9nm,0.3s,baz=84,slow=10,SNR=14						
WRA	Warramunga Arr	47.17	258	P	P	13 02 56.9	-0.4
	3.4nm,0.6s,baz=92,slow=7.2,SNR=61						
ASAR	Alice Springs	47.42	253	P	P	13 02 59.3	+0.1
	11nm,0.3s,baz=87,slow=8.0,SNR=243						
QSPA	South Pole Qui	73.79	180	P	P	13 05 55.0	0.0
	1.6nm,0.9s,baz=66,slow=2.6,SNR=7.3						
YBH	Yreka Blue Hor	75.83	38	P	P	13 06 07.3	+0.4
	1.9nm,0.8s,baz=190,slow=18,SNR=3.1						
TXAR	Lajitas Array	83.21	57	P	P	13 06 46.9	+0.3
	0.7nm,0.9s,baz=205,slow=7.6,SNR=5.1						
ILAR	Eielson Array	83.80	12	P	P	13 06 47.7	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.7nm,0.5s,baz=218,slow=5.4,SNR=5.9						
PDAR	Pinedale Array	84.61	43	P	P	13 06 52.9	-0.6
	0.5nm,0.7s,baz=176,slow=4.3,SNR=4.5						
ARCES	ARCESS Array B	125.08	351	PKP	PKPdf	13 13 15.7	-1.2
	2.8nm,0.8s,baz=45,slow=0.5,SNR=4.5						
BRTR	Keskin Array B	145.15	318	PKPbc	PKPdf	13 13 55.2	+0.2
	2.4nm,0.7s,baz=118,slow=2.7,SNR=12						
GERES	GERESS Array B	146.54	348	PKPbc	PKPbc	13 13 58.4	-0.7
	0.2nm,0.2s,baz=30,slow=2.6,SNR=4.1						

*IDC **04** 13:07:11.4±1.0, 9°.59N×126°.25E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/25, mbtmp3.7/7, Error ellipse: s-maj=67.2km s-min=20.8km az=77.0*

*ISCJB **04** 13:07:15.9±0.7, 9°.67N±0°.05×126°.66E±0°.05, h43km, mb3.7/7, Error ellipse: s-maj=7.8km s-min=6.7km az=148.0*

*MAN **04** 13:07:17, 9°.66N×126°.50E, h83km, mb4.8, ML3.7, MS3.7*

ISC 04 13:07:17.5±1.0, 9°.67N±0°.05×126°.60E±0°.09, h43km, n19, σ1.23/24, mb3.6/7, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUTP	Butuan	1.19	234	eP	Pn	13 07 36.2	-1.6
BUTP				eS	Sn	13 07 55.0	+2.2
MSLP	Maasin	1.78	285	eP	Pn	13 07 45.0	-0.7
MSLP				eS	Sn	13 08 08.3	+1.1
PLP	Palo	2.18	313	⇓eP	Pn	13 07 51.1	-0.3
PLP				eS	Sn	13 08 16.8	-0.4
CGP	Cagayan de Oro	2.23	238	⇓eP	Pn	13 07 51.5	-0.6
CGP				eS	Sn	13 08 17.1	-1.4
BUKP	Musuan	2.34	221	eP	Pn	13 07 55.1	+1.6
OCLP	Ormoc	2.39	305	eP	Pn	13 07 54.9	+0.7
LLP	Lapu-Lapu	2.67	284	eP	Pn	13 07 59.2	+1.1
LLP				eS	Sn	13 08 29.1	-0.2
TBP	Tagbilaran	2.70	271	eP	Pn	13 07 58.4	-0.1
CTBH	Cotabato--PC H	3.37	224	⇑iP	Pn	13 08 08.9	+1.2
PAGZ	Pagadian	3.66	241	eP	Pn	13 08 12.8	+1.2
GUIM	Jordan	4.06	284	eP	Pn	13 08 17.7	+0.5
RCP	Roxas	4.23	297	⇑eP	Pn	13 08 20.8	+1.3
FITZ	Fitzroy Crossi	27.61	182	P	P	13 13 01.6	+0.6
	1.3nm,0.8s,baz=11,slow=10,SNR=3.6						
WRA	Warramunga Arr	30.39	165	P	P	13 13 25.1	-0.8
	0.4nm,0.8s,baz=347,slow=9.4,SNR=3.8						
ASAR	Alice Springs	33.89	168	P	P	13 13 54.5	-1.9
	0.1nm,0.3s,baz=348,slow=7.1,SNR=2.5						
MKAR	Makanchi Array	52.70	323	P	P	13 16 26.3	-1.6
	0.3nm,0.5s,baz=121,slow=7.9,SNR=5.8						
ILAR	Eielson Array	79.84	26	P	P	13 19 23.2	+2.0
	0.6nm,1.0s,baz=262,slow=4.5,SNR=5.0						
ARCES	ARCESS Array B	84.87	340	P	P	13 19 47.9	+0.4
	5.6nm,1.0s,baz=87,slow=9.8,SNR=3.7						
FINES	FINESS Array B	86.57	332	P	P	13 19 55.6	-0.4
	0.5nm,0.4s,baz=54,slow=4.5,SNR=8.7						

*IDC **04** 13:11:51.3±1.2, 38°.31S×178°.52E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/17, mbtmp3.9/3, MS3.6/2, Ms1 3.6/2, ms1mx3.1/29, Error ellipse: s-maj=37.0km s-min=20.9km az=20.0*

*ISCJB **04** 13:11:52.4±1.0, 38°.77S±0°.03×178°.68E±0°.08, h31km±5km, mb3.8/3, MS3.6/1, Error ellipse: s-maj=10.3km s-min=5.2km az=0.1*

*WEL **04** 13:11:55.5±0.2, 38°.68S×178°.47E, h24km±1km, ML4.0/30, Error ellipse: s-maj=2.3km s-min=1.0km az=90.0*

ISC 04 13:11:52.0±1.7, 38°.74S±0°.04×178°.68E±0°.07, h17km±9km, n87, σ1.07/84, mb3.8/3, 2C-3D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.45	304	⇑P*	Pb	13 12 02.2	+0.8
PRGZ	Paritu Road	0.65	253	⇑P*	Pn	13 12 06.2	-0.2
PRGZ				eS*	Sg	13 12 13.4	0.0
MHGZ	Mahia Peninsul	0.73	235	P*	Pn	13 12 08.3	+0.7
PUZ	Puketiti	0.74	333	P*	Pb	13 12 07.2	+0.7
PUZ				eS*	Sg	13 12 16.2	-0.2
KNZ	Kokohu	0.83	250	P*	Pg	13 12 08.6	+0.3
KNZ				eS*	Sg	13 12 19.6	+0.4
MWZ	Matawai	0.99	294	⇓P*	Pb	13 12 10.2	-0.4
MWZ				S*	Sb	13 12 21.5	-1.9
MXZ	Matakaoa Point	1.21	346	PN	Pg	13 12 15.4	0.0
RAHZ	Arahi	1.26	261	PN	Pn	13 12 14.5	-0.3
URZ	Urewera	1.32	291	⇓PN	Pn	13 12 14.7	-0.9
URZ	Urewera	1.32	291	Pn	Pn	13 12 14.9	-0.7
	78nm,0.3s,baz=92,slow=7.9,SNR=642						
URZ				Sn	Sn	13 12 31.1	-1.7
	161nm,0.3s,baz=90,slow=16,SNR=19						
NMHZ	Naumai	1.50	256	PN	Pn	13 12 18.4	+0.2
CKHZ	Cape Kidnapper	1.55	233	PN	Pn	13 12 19.4	+0.6
EDRZ	Edgecumbe	1.65	292	PN	Pn	13 12 20.3	+0.1
MCHZ	McNeill Hill	1.69	245	PN	Pn	13 12 21.6	+0.8
RRRZ	Republican Roa	1.74	283	PN	Pn	13 12 21.9	+0.4
MARZ	Manawahe	1.75	295	ePN	Pn	13 12 22.3	+0.8
KAHZ	Kahuranaki	1.75	232	PN	Pn	13 12 22.2	+0.6
BKZ	Black Stump Fm	1.76	255	PN	Pn	13 12 20.7	-1.0
TARZ	Mount Tarawera	1.78	286	PN	Pn	13 12 22.2	+0.2
PRRZ	Plateau Road	1.81	277	PN	Pn	13 12 22.4	0.0
MKRZ	Makatiti	1.84	288	PN	Pn	13 12 23.8	+1.0
OPRZ	Ohinepanea	1.89	297	PN	Pn	13 12 21.9	-1.6
HRRZ	Handcock Road	1.91	280	PN	Pn	13 12 24.0	+0.2
PXZ	Pawanui	1.91	227	PN	Pn	13 12 23.5	-0.2
KARZ	Kaharoa	2.04	290	PN	Pn	13 12 25.0	-0.6
TGRZ	Tauranga	2.15	297	PN	Pn	13 12 26.9	-0.2
BHHZ	Black Hill Sta	2.17	249	⇓PN	Pn	13 12 27.4	0.0
WPHZ	Waipukurau	2.18	232	PN	Pn	13 12 27.8	+0.3
PRHZ	Porangahau	2.20	225	PN	Pn	13 12 27.4	-0.3
PNHZ	Pukenui	2.25	238	PN	Pn	13 12 28.7	+0.2
KATZ	Kakaramea	2.34	263	PN	Pn	13 12 30.4	+0.6
MOVZ	Moawhango	2.37	253	PN	Pn	13 12 30.9	+0.7
OTVZ	Oturere	2.39	259	PN	Pn	13 12 30.7	+0.3
KRVZ	Karewarewa	2.40	261	PN	Pn	13 12 30.8	+0.2
TUVZ	Tukino	2.41	256	PN	Pn	13 12 31.6	+0.8
NGZ	Ngauruhoe	2.44	259	PN	Pn	13 12 31.4	+0.3
WTVZ	West Tongariro	2.44	260	PN	Pn	13 12 31.9	+0.8
WNVZ	Wahianoa	2.47	255	PN	Pn	13 12 31.9	+0.4
TSZ	Takapari Road	2.48	237	PN	Pn	13 12 31.2	-0.4
WPVZ	Whakapapa	2.48	258	PN	Pn	13 12 32.0	+0.3
FWVZ	Far West T-bar	2.49	257	PN	Pn	13 12 32.0	+0.1
DVHZ	Dannevirke	2.49	230	PN	Pn	13 12 31.4	-0.3
TRVZ	Turoa	2.50	256	PN	Pn	13 12 32.4	+0.3
PKVZ	Pokaka	2.65	257	PN	Pn	13 12 34.7	+0.7
TOZ	Tahuroa Road	2.70	291	PN	Pn	13 12 33.6	-0.9
BFZ	Birch Farm	2.70	223	PN	Pn	13 12 33.9	-0.7
POWZ	Post Office Ro	2.79	233	PN	Pn	13 12 36.1	+0.2
HIZ	Hauiti	3.00	273	PN	Pn	13 12 39.6	+0.9
WAZ	Wanganui	3.04	249	PN	Pn	13 12 40.7	+1.4
MRZ	Mangatainoka R	3.07	230	PN	Pn	13 12 38.9	-0.7
KUZ	Kuaotunu	3.07	309	PN	Pn	13 12 39.1	-0.7
VRZ	Vera Road	3.08	262	PN	Pn	13 12 40.9	+1.1
TMWZ	Te Maipa	3.19	221	PN	Pn	13 12 40.3	-1.1
MKAZ	Moumakai	3.22	299	PN	Pn	13 12 40.9	-0.8
HOWZ	Holdsworth Sta	3.25	227	PN	Pn	13 12 41.3	-0.9
OGWZ	Otaki Gorge	3.41	231	PN	Pn	13 12 43.4	-0.9
MTW	Mount Morrison	3.43	224	PN	Pn	13 12 43.1	-1.6
TRWZ	Traveller	3.51	220	PN	Pn	13 12 44.6	-1.2
DREZ	Durham Road	3.52	261	PN	Pn	13 12 47.5	+1.6
KIW	Kapiti Island	3.59	233	PN	Pn	13 12 45.8	-1.1
NEZ	North Egmont	3.61	260	PN	Pn	13 12 49.4	+2.2
DFE	Dawson Falls	3.61	259	PN	Pn	13 12 49.6	+2.4
CAW	Cannon Point	3.65	228	PN	Pn	13 12 46.5	-1.2
PKE	Pukeiti	3.68	261	PN	Pn	13 12 49.6	+1.5
NRZ	Ngariki Road	3.74	259	PN	Pn	13 12 50.7	+1.7
MSWZ	Moikau Station	3.75	223	PN	Pn	13 12 47.0	-2.0
PLWZ	Palliser	3.86	222	PN	Pn	13 12 49.0	-1.6
TCW	Tory Channel	4.19	232	PN	Pn	13 12 53.6	-1.5
DUWZ	D'Urville Isla	4.20	239	PN	Pn	13 12 54.6	-0.7
TUWZ	Tuamarina	4.52	232	PN	Pn	13 12 57.8	-1.8
NNZ	Nelson	4.76	237	PN	Pn	13 13 00.9	-2.1
QRZ	Quartz Range	5.17	244	PN	Pn	13 13 06.0	-2.7
THZ	Tophouse	5.35	234	PN	Pn	13 13 08.9	-2.2
KHZ	Kahutara	5.37	225	PN	Pn	13 13 10.0	-1.2
DSZ	Denniston Nort	6.06	238	PN	Pn	13 13 17.8	-2.9
CTZ	Chatham Island	6.12	146	PN	Pn	13 13 26.6	+5.0
ODZ	Otahua Downs	8.69	221	PN	Pn	13 13 54.7	-2.2
TUZ	Tuapeka	9.84	220	PN	Pn	13 14 11.4	-1.1
DZM	Mont Dzumac	19.65	324	LR	LR	13 22 29.8	
	comp=Z,179nm,19.9s,baz=5.7,slow=33						
ASAR	Alice Springs	40.73	278	P	P	13 19 31.9	-0.1
	1.4nm,0.6s,baz=126,slow=8.3,SNR=30						
ASAR				LR	LR	13 34 55.3	
	comp=Z,84nm,19.1s,baz=176,slow=34						
WRA	Warramunga Arr	42.48	283	P	P	13 19 45.8	-0.5
	0.5nm,0.6s,baz=125,slow=7.0,SNR=16						
QSPA	South Pole Qui	51.39	180	P	P	13 21 00.9	+5.3
	2.9nm,0.8s,baz=28,slow=2.6,SNR=14						
VNA3	Neumayer Olymp	70.16	177	eP	P	13 23 07.9	+4.8
VNA2	Neumayer--Watz	70.55	178	eP	P	13 23 10.6	+5.1
	baz=192,slow=4.4						
ARCES	ARCESS Array B	145.98	344	PKPbc	PKPab	13 31 30.4	+0.3
	6.7nm,1.0s,baz=39,slow=3.5,SNR=6.8						
FINES	FINESS Array B	151.66	332	PKPbc	PKPbc	13 31 45.4	+1.0
	1.1nm,0.8s,baz=34,slow=5.4,SNR=2.8						
TORD	Torodi Ar. Bea	154.37	187	PKPab	PKPab	13 32 09.1	+3.3
	1.0nm,0.9s,baz=183,slow=3.5,SNR=4.5						

IDC 04 13:17:45.8±3.4, 54°.29N×87°.65E, h0km, mb1 2.7/2, mb1mx2.7/30, mbtmp2.7/2, ML2.7/2, Error ellipse: s-maj=35.2km s-min=17.8km az=13.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	1.70	260	Pg	Pb	13 18 17.7	-0.1
	1.5nm,0.3s,baz=75,slow=17,SNR=25						
ZALV				Lg	Lg	13 18 38.6	
	1.9nm,0.3s,baz=76,slow=31,SNR=10						
MKAR	Makanchi Array	8.24	207	Pn	Pn	13 19 47.5	+1.0
	0.0nm,0.3s,baz=25,slow=11,SNR=2.2						
MKAR				Lg	Lg	13 22 07.2	
	0.1nm,0.3s,baz=25,slow=31,SNR=2.8						
SONM	Songino Array	13.42	111	Pn	Pn	13 20 56.9	-0.7
	0.1nm,0.3s,baz=310,slow=14,SNR=2.7						

IDC 04 13:34:35.9±1.9, 12°.61N×144°.19E, h54km±19km, mb3.4/11, mb1 3.6/11, mb1mx3.5/26, mbtmp3.4/11, Error ellipse: s-maj=27.8km s-min=15.0km az=107.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.18	34	P	Pn	13 34 54.4	-1.7
	457nm,0.3s,baz=188,slow=2.3,SNR=311						
GUMO				S	Sn	13 35 11.4	+0.3
	849nm,0.3s,baz=295,slow=17,SNR=32						
WRA	Warramunga Arr	33.77	197	P	P	13 41 12.8	0.0
	1.5nm,0.7s,baz=19,slow=9.7,SNR=41						
ASAR	Alice Springs	37.43	196	P	P	13 41 44.3	+0.2
	0.9nm,0.7s,baz=20,slow=11,SNR=24						
CMAR	Chiang Mai Arr	43.90	284	P	P	13 42 37.0	-0.6
	0.4nm,0.5s,baz=84,slow=6.8,SNR=3.4						
SONM	Songino Array	47.16	326	P	P	13 43 02.9	-0.2
	0.4nm,0.6s,baz=132,slow=6.0,SNR=3.1						
MKAR	Makanchi Array	61.74	317	P	P	13 44 49.3	+0.4
	0.3nm,0.5s,baz=98,slow=7.6,SNR=5.7						
ZALV	Zalesovo Beam	62.04	325	P	P	13 44 50.7	0.0
	0.2nm,0.3s,baz=101,slow=7.5,SNR=2.6						
ILAR	Eielson Array	69.73	25	P	P	13 45 39.1	-0.9
	0.3nm,0.9s,baz=254,slow=5.8,SNR=8.2						
BVAR	Borovoye Array	70.29	322	P	P	13 45 44.3	+0.7
	0.8nm,0.3s,baz=109,slow=8.8,SNR=6.4						
YKA	Yellowknife Ar	84.03	27	P	P	13 46 59.9	-0.5
	0.1nm,0.3s,baz=286,slow=5.0,SNR=5.0						
NVAR	Mina Array Bea	88.05	51	P	P	13 47 21.4	+0.4
	0.7nm,0.8s,baz=262,slow=6.4,SNR=3.5						
FINES	FINESS Array B	91.77	335	P	P	13 47 36.9	-0.7
	0.4nm,0.5s,baz=67,slow=5.0,SNR=4.4						
TORD	Torodi Ar. Bea	134.86	303	PKP	PKPdf	13 53 51.6	+1.7
	0.2nm,0.4s,baz=47,slow=3.0,SNR=3.8						

IDC 04 13:39:51.0±2.5, 6°.50S×130°.16E, h0km, mb3.4/1, mb1 3.3/3, mb1mx3.1/19, mbtmp3.1/3, ML2.9/2, Error ellipse: s-maj=158.5km s-min=33.0km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.97	164	Pn	Pn	13 43 09.8	-0.6
	0.1nm,0.3s,baz=346,slow=13,SNR=3.0						
WRA				Sn	Sn	13 45 32.6	-14
	0.1nm,0.3s,baz=343,slow=22,SNR=5.9						
ASAR	Alice Springs	17.45	168	P	Pn	13 43 56.5	+0.4
	0.1nm,0.3s,baz=347,slow=9.8,SNR=7.3						
MKAR	Makanchi Array	67.89	327	P	P	13 50 51.5	0.0
	0.2nm,0.4s,baz=124,slow=7.3,SNR=4.3						

*ISCJB **04** 13:43:13.2±0.7, 32°.57N±0°.04×6°.30W±0°.04, h10km±6km, Error ellipse: s-maj=6.1km s-min=5.3km az=158.8*

*CNRM **04** 13:43:14.5, 32°.47N×6°.20W, h0km, MD3.5*

*CSEM **04** 13:43:14.1±0.3, 32°.49N×6°.19W, h5km, MD3.5, Error ellipse: s-maj=7.1km s-min=6.2km az=113.0*

*INMG **04** 13:43:15.2±1.4, 32°.26N×6°.04W, h80km±7km, ML2.6, Error ellipse: s-maj=9.5km s-min=7.3km az=177.0*

*IGIL **04** 13:43:17.0, 32°.48N×6°.12W, h15km, ML2.6*

ISC 04 13:43:13.6±1.0, 32°.49N±0°.04×6°.20W±0°.04, h12km±8km, n26, σ1.59/49, Morocco

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KIB	El Ksiba	0.16	57	iP	Pg	13 43 17.0	-0.4
KIB				iS	Sg	13 43 20.0	-0.1
TZC	Tazercounte	0.42	216	iP	Pg	13 43 21.0	-1.0
TZC				iS	Sg	13 43 28.0	+0.4
CZD	Col de Zad	1.11	61	iP	Pb	13 43 35.0	0.0
CZD				iS	Sn	13 43 51.0	+0.2
ZFT	Errachidia	1.63	106	iP	Pn	13 43 43.0	+0.7
ZFT				iS	Sg	13 44 06.0	-0.1
CIA	Chichaoua	2.36	248	iP	Pb	13 43 56.0	-0.1
CIA				iS	Sn	13 44 21.0	-0.2
PBDV	Barranco-do-Ve	4.95	344	eP	Pn	13 44 29.5	+1.6
PBDV				eS	Sn	13 45 24.4	-0.7
PBDV				A	A	13 45 29.0	
	4.4nm,0.7s						
PBDV	Barranco-do-Ve	4.95	344	eP	Pn	13 44 29.5	+1.6
PBDV				eS	Sn	13 45 24.4	-0.7
	4.4nm,0.7s						
PVAQ	Vaqueiros	5.06	346	eP	Pn	13 44 30.6	+1.3
PVAQ				eS	Sn	13 45 26.2	-1.5
PVAQ				A	A	13 45 29.6	
	5.0nm,0.3s						
PVAQ	Vaqueiros	5.06	346	eP	Pn	13 44 30.6	+1.3
PVAQ				eS	Sn	13 45 26.2	-1.5
	5.0nm,0.3s						
PFVI	Vila Bisbo	5.11	336	eP	Pn	13 44 31.7	+1.7
PFVI				eS	Sn	13 45 27.8	-1.2
PFVI	Vila Bisbo	5.11	336	eP	Pn	13 44 31.7	+1.7
PFVI				eS	Sn	13 45 27.8	-1.2
MORF	Marmelete	5.21	338	eP	Pn	13 44 33.0	+1.6
MORF				eS	Sn	13 45 31.1	-0.4
MORF				A	A	13 45 37.1	
	3.5nm,0.2s						
MORF	Marmelete	5.21	338	eP	Pn	13 44 33.0	+1.6
MORF				eS	Sn	13 45 31.1	-0.4
	3.5nm,0.2s						
PCVE	Castro Verde	5.35	344	eP	Pn	13 44 34.8	+1.5
PCVE				eS	Sn	13 45 34.0	-0.8
PCVE				A	A	13 45 42.2	
	4.0nm,0.5s						
PCVE	Castro Verde	5.35	344	eP	Pn	13 44 34.8	+1.5
PCVE				eS	Sn	13 45 34.0	-0.8
	4.0nm,0.5s						
PTEO	Sao Teotonio	5.45	338	eP	Pn	13 44 36.9	+2.2
PTEO				eS	Sn	13 45 37.1	-0.3
PTEO	Sao Teotonio	5.45	338	eP	Pn	13 44 36.9	+2.2
PTEO				eS	Sn	13 45 37.1	-0.3
MESJ	Messejana	5.59	343	eP	Pn	13 44 38.4	+1.8
MESJ				eS	Sn	13 45 36.6	-4.2
MESJ				AML	AML	13 45 43.8	
	comp=N,6.9nm,0.4s						
MESJ	Messejana	5.59	343	eP	Pn	13 44 38.4	+1.8
MESJ				eS	Sn	13 45 36.6	-4.2
MESJ	Messejana	5.59	343	eP	Pn	13 44 38.4	+1.8
PBAR	Barrancos	5.71	353	eP	Pn	13 44 40.5	+2.2
PBAR				eS	Sn	13 45 42.4	-1.4
PBAR				A	A	13 45 52.6	
	comp=N,3.7nm,0.8s						
PBAR	Barrancos	5.71	353	eP	Pn	13 44 40.5	+2.2
PNCL	Nicolau / Gran	5.92	342	eP	Pn	13 44 42.4	+1.2
PNCL				eS	Sn	13 45 48.5	-0.5
PNCL				A	A	13 45 49.5	
	comp=N,2.6nm,0.3s						
PNCL	Nicolau / Gran	5.92	342	eP	Pn	13 44 42.4	+1.2
PNCL				eS	Sn	13 45 48.5	-0.5
	comp=N,2.6nm,0.3s						
PMRV	Marv??o	6.99	352	eP	Pn	13 44 57.2	+1.3
PMRV				eS	Sn	13 46 13.1	-2.2
PMRV	Marv??o	6.99	352	eP	Pn	13 44 57.2	+1.3

IDC 04 13:45:28.6±1.3, 3°.40S×143°.66E, h0km, mb3.8/9, mb1 4.0/10, mb1mx3.9/18, mbtmp3.8/10, ML3.9/1, Error ellipse: s-maj=43.7km s-min=18.2km az=109.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.79	208	P	P	13 49 49.6	-0.1
	0.4nm,0.3s,baz=28,slow=10,SNR=15						
ASAR	Alice Springs	22.25	204	P	P	13 50 28.6	+1.3
	0.5nm,0.4s,baz=27,slow=12,SNR=22						
FITZ	Fitzroy Crossi	22.92	229	P	P	13 50 32.9	-1.5
	5.6nm,0.7s,baz=55,slow=11,SNR=22						
KSRS	Korea Array	43.20	342	P	P	13 53 31.4	0.0
	0.6nm,0.6s,baz=159,slow=9.3,SNR=4.0						
CMAR	Chiang Mai Arr	49.10	298	P	P	13 54 18.7	+0.4
	0.5nm,0.6s,baz=120,slow=5.9,SNR=3.7						
PETK	Petropavlovsk-	57.53	10	P	P	13 55 20.2	+0.5
	2.6nm,0.8s,baz=157,slow=7.8,SNR=3.7						
SONM	Songino Array	60.55	332	P	P	13 55 40.3	-0.6
	0.3nm,0.4s,baz=146,slow=7.6,SNR=3.0						
MKAR	Makanchi Array	73.39	321	P	P	13 57 03.7	+1.1
	0.6nm,0.6s,baz=101,slow=6.5,SNR=5.6						
ZALV	Zalesovo Beam	75.06	328	P	P	13 57 11.3	-0.8
	0.6nm,0.7s,baz=109,slow=4.9,SNR=4.9						
ILAR	Eielson Array	84.44	24	P	P	13 58 02.2	-0.6
	0.7nm,0.6s,baz=258,slow=5.0,SNR=16						

MAN 04 13:46:38, 9°.74N×126°.57E, h8km, mb4.5, ML3.4, MS3.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUTP	Butuan	1.21	231	eP	Pb	13 46 59.9	-1.3
MSLP	Maasin	1.73	283	eP	Pn	13 47 09.2	+0.8
MSLP				eS	Sg	13 47 34.1	+0.4
OCLP	Ormoc	2.33	304	eP	Pn	13 47 17.2	+0.6
BUKP	Musuan	2.38	219	eP	Pn	13 47 18.7	+1.3
TBP	Tagbilaran	2.67	269	eP	Pn	13 47 21.6	+0.3
CTBH	Cotabato--PC H	3.40	223	⇓iP	Pn	13 47 33.9	+2.5

IDC 04 14:00:15.4±493.0, 60°.10N×152°.27W, h0km, Error ellipse: s-maj=168.3km s-min=35.7km az=23.0, Southern Alaska

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I53US	FAIRBANKS INFR	5.21	21	i		14 26 00.0	
	baz=206,slow=342,SNR=2.0						
I56US	NEWPORT INFRAS	23.42	105	i		16 44 54.3	
	baz=320,slow=316,SNR=2.2						
I18DK	QAANAAQ INFRAS	30.91	25	i		17 05 36.5	
	baz=282,slow=334,SNR=13						
I10CA	LAC DU BONNET	32.65	82	i		17 24 10.0	
	baz=306,slow=330,SNR=1.4						

IDC 04 14:04:28.9±1.6, 3°.51N×126°.82E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/24, mbtmp3.6/5, Error ellipse: s-maj=95.8km s-min=23.0km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.50	183	P	P	14 09 19.5	0.0
	1.1nm,0.5s,baz=8.2,slow=11,SNR=6.5						
WRA	Warramunga Arr	24.45	163	P	P	14 09 49.2	-0.4
	3.9nm,0.8s,baz=343,slow=10,SNR=20						
ASAR	Alice Springs	27.88	166	P	P	14 10 20.5	-0.2
	0.3nm,0.5s,baz=349,slow=7.7,SNR=8.1						
STKA	Stephens Creek	37.89	159	P	P	14 11 48.5	+0.6
	0.5nm,0.4s,baz=348,slow=8.7,SNR=3.9						
MKAR	Makanchi Array	57.79	325	P	P	14 14 21.9	-0.2
	0.2nm,0.5s,baz=118,slow=6.5,SNR=3.2						

IDC 04 14:16:21.7±1.3, 5°.12N×127°.31E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.6/25, mbtmp3.7/8, Error ellipse: s-maj=110.1km s-min=15.8km az=71.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	23.13	184	P	P	14 21 30.8	+1.1
	0.7nm,0.5s,baz=11,slow=10,SNR=4.2						
WRA	Warramunga Arr	25.85	165	P	P	14 21 54.3	-0.8
	1.1nm,0.3s,baz=338,slow=10,SNR=15						
ASAR	Alice Springs	29.33	168	P	P	14 22 25.3	-1.0
	0.2nm,0.3s,baz=352,slow=7.9,SNR=7.5						
STKA	Stephens Creek	39.23	161	P	P	14 23 52.8	+0.9
	0.8nm,0.4s,baz=353,slow=9.7,SNR=6.8						
SONM	Songino Array	46.18	341	P	P	14 24 49.8	+1.5
	0.2nm,0.6s,baz=163,slow=10,SNR=2.1						
MKAR	Makanchi Array	56.76	324	P	P	14 26 07.2	-0.4
	0.6nm,0.4s,baz=116,slow=7.7,SNR=25						
ZALV	Zalesovo Beam	59.62	332	P	P	14 26 26.7	-0.7
	0.5nm,0.5s,baz=139,slow=7.2,SNR=3.0						
BVAR	Borovoye Array	66.48	326	P	P	14 27 12.7	-0.4
	0.4nm,0.5s,baz=116,slow=6.8,SNR=3.6						

IDC 04 14:38:18.4±2.1, 4°.87N×126°.55E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/23, mbtmp3.2/3, MS3.8/1, Ms1 3.8/1, ms1mx2.7/17, Error ellipse: s-maj=160.4km s-min=26.2km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.82	163	P	P	14 43 52.4	+0.8
	0.5nm,0.4s,baz=343,slow=10,SNR=7.6						
ASAR	Alice Springs	29.26	166	P	P	14 44 21.6	-0.8
	0.2nm,0.8s,baz=358,slow=11,SNR=3.7						
DZM	Mont Dzumac	47.34	126	LR	LR	15 06 47.7	
	comp=Z,95nm,19.1s,baz=28,slow=36						
MKAR	Makanchi Array	56.52	325	P	P	14 48 02.5	-0.1
	0.2nm,0.4s,baz=118,slow=7.6,SNR=6.4						

*ISK **04** 14:43:02.9, 39°.12N×28°.93E, h5km, MD2.7*

*ISCJB **04** 14:43:03.5±0.5, 39°.12N±0°.03×29°.00E±0°.03, h4km±6km, Error ellipse: s-maj=5.5km s-min=3.9km az=167.9*

*CSEM **04** 14:43:03.8±0.1, 39°.11N×28°.98E, h8km, MD2.8, Error ellipse: s-maj=2.7km s-min=2.5km az=2.0*

*DDA **04** 14:43:03.7, 39°.09N×29°.03E, h7km, MD2.8*

ISC 04 14:43:03.9±0.9, 39°.12N±0°.02×28°.98E±0°.02, h13km±8km, n45, σ0.57/56, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DEMI	Demirci	0.21	251	iP	Pb	14 43 09.4	-0.3
DEMI				iS	Sg	14 43 12.9	+1.1
DEMI	Demirci	0.21	251	iP	Pb	14 43 09.4	-0.3
DEMI				iS	Sg	14 43 12.9	+1.1
GDZ	Gediz	0.39	94	iP	Pg	14 43 11.3	-0.5
GDZ				iS	Sg	14 43 16.2	-0.9
GDZ	Gediz	0.39	94	iP	Pg	14 43 11.3	-0.5
GDZ				iS	Sg	14 43 16.2	-0.9
TVSB	Tavsanli	0.50	48	ePG	Pg	14 43 13.8	0.0
TVSB	Tavsanli	0.50	48	ePg	Pg	14 43 13.8	0.0
DST	Dursunbey	0.56	331	ePG	Pg	14 43 13.9	-1.0
DST	Dursunbey	0.56	331	ePg	Pg	14 43 13.9	-1.0
DURS	Dursunbey	0.62	321	iP	Pb	14 43 16.8	+0.1
DURS	Dursunbey	0.62	321	iP	Pb	14 43 16.8	+0.1
KULA	Kula-Manisa	0.65	202	ePG	Pg	14 43 15.8	-0.7
KULA				eSG	Sg	14 43 25.2	+0.1
KULA	Kula-Manisa	0.65	202	ePg	Pg	14 43 15.8	-0.7
KULA				eSg	Sg	14 43 25.2	+0.1
KHAL	Karahalli	0.85	151	iP	Pb	14 43 20.4	-0.1
KHAL				iS	Sg	14 43 31.0	-0.3
KHAL	Karahalli	0.85	151	iP	Pb	14 43 20.4	-0.1
KHAL				iS	Sg	14 43 31.0	-0.3
ALT	Altintas	0.89	94	ePG	Pb	14 43 21.1	-0.1
ALT	Altintas	0.89	94	ePg	Pb	14 43 21.1	-0.1
KHL	Karahalli	0.90	151	ePG	Pg	14 43 21.1	-0.1
KHL	Karahalli	0.90	151	ePg	Pg	14 43 21.1	-0.1

AKHS	**Akhisar**	**0.94**	**256**	*i* P	**Pb**	**14 43 22.6**	**+0.6**
AKHS				*i* S	**Sn**	**14 43 36.1**	**0.0**
AKHS	**Akhisar**	**0.94**	**256**	*i* P	**Pb**	**14 43 22.6**	**+0.6**
AKHS				*i* S	**Sn**	**14 43 36.1**	**0.0**
AKS	**Akhisar**	**0.94**	**256**	*e*PG	**Pg**	**14 43 20.8**	**-1.1**
AKS	**Akhisar**	**0.94**	**256**	*e*Pg	**Pg**	**14 43 20.8**	**-1.1**
BALY	**Balya**	**1.22**	**301**	*i* P	Pn	14 43 22.3	-4.5
CAVI	**Cavuskoy**	**1.27**	**31**	*e*PN	**Pb**	**14 43 28.0**	**+0.2**
CAVI	**Cavuskoy**	**1.27**	**31**	*e*Pn	**Pb**	**14 43 28.0**	**+0.2**
GEMT	**Gemlik**	**1.33**	**7**	*e*PN	**Pb**	**14 43 28.8**	**+0.1**
GEMT	**Gemlik**	**1.33**	**7**	*e*Pn	**Pb**	**14 43 28.8**	**+0.1**
GONE	**Gonen-Balikesi**	**1.36**	**313**	*e*PN	**Pn**	**14 43 28.7**	**+0.1**
GONE	**Gonen-Balikesi**	**1.36**	**313**	*e*Pn	**Pn**	**14 43 28.7**	**+0.1**
BORA	**Eskisehir**	**1.38**	**56**	*i* P	**Pb**	**14 43 29.4**	**-0.1**
BORA				*i* S	**Sg**	**14 43 47.6**	**-0.6**
BORA	**Eskisehir**	**1.38**	**56**	*i* P	**Pb**	**14 43 29.4**	**-0.1**
BORA				*i* S	**Sg**	**14 43 47.6**	**-0.6**
ARMT	**Armutlu**	**1.45**	**357**	*e*PN	**Pn**	**14 43 30.5**	**+0.6**
ARMT	**Armutlu**	**1.45**	**357**	*e*Pn	**Pn**	**14 43 30.5**	**+0.6**
YLV	**Yalova**	**1.48**	**12**	*e*PN	**Pn**	**14 43 30.9**	**+0.6**
YLV	**Yalova**	**1.48**	**12**	*e*Pn	**Pn**	**14 43 31.0**	**+0.6**
EDC	**Edincik**	**1.50**	**325**	*e*PN	**Pn**	**14 43 31.1**	**+0.6**
EDC	**Edincik**	**1.50**	**325**	*e*Pn	**Pn**	**14 43 31.1**	**+0.6**
ESKT	**Eskisehir**	**1.51**	**74**	*e*PN	**Pb**	**14 43 32.1**	**+0.3**
ESKT	**Eskisehir**	**1.51**	**74**	*e*Pn	**Pb**	**14 43 32.1**	**+0.3**
GULT	**Gulveren**	**1.77**	**42**	*e*PN	**Pn**	**14 43 35.3**	**+1.0**
GULT	**Gulveren**	**1.77**	**42**	*e*Pn	**Pn**	**14 43 35.3**	**+1.0**
KRBG	**Karabiga-Canak**	**1.82**	**315**	*e*PN	**Pn**	**14 43 34.9**	**0.0**
KRBG	**Karabiga-Canak**	**1.82**	**315**	*e*Pn	**Pn**	**14 43 34.9**	**0.0**
RKY	**Sarkoy-Tekirda**	**2.09**	**319**	*e*PN	**Pn**	**14 43 39.4**	**+0.7**
RKY	**Sarkoy-Tekirda**	**2.09**	**319**	*e*Pn	**Pn**	**14 43 39.4**	**+0.7**

*AUST **04** 14:48:20.9±1.8, 5°.88N×125°.58E, h28km, Error ellipse: s-maj=1.6km s-min=1.0km az=257.0*
*MAN **04** 14:48:20, 6°.13N×126°.26E, h29km, mb5.0, ML3.9, MS4.0*
*ISCJB **04** 14:48:21.4±0.6, 6°.08N±0°.03×126°.08E±0°.07, h48km±6km, mb4.1/12, MS3.3/6, Error ellipse: s-maj=11.3km s-min=4.6km az=167.2*
*IDC **04** 14:48:21.4±3.2, 6°.13N×126°.29E, h34km±23km, mb4.0/12, mb1 4.1/13, mb1mx3.9/27, mbtmp4.0/13, ML4.0/1, MS3.3/6, Ms1 3.4/6, ms1mx2.9/40, Error ellipse: s-maj=39.8km s-min=11.1km az=70.0*
*DJA **04** 14:48:21.3±0.5, 6°N±3°×12°6E±°, h10km, M4.8/5, mB5.3/4, mb5.2/5, MLv4.7/2, Mw(mB)4.7/4*
ISC 04 14:48:22.4±1.1, **6°.16N**±0°.04×**126°.24E**±0°.08, **h43**km±10km, **n55**, σ1s**15**/53, **mb4.2**/12, **MS3.3**/6, **4C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.78**	**2**	*e*P	**Pn**	**14 48 35.4**	**-1.6**
MATI				*e*S	Sn	14 48 54.3	+6.8
DAV	**Davao City (W)**	**1.11**	**324**	P	**Pn**	**14 48 40.4**	**-1.1**
DAV	**Davao City (W)**	**1.11**	**324**	Pn	**Pn**	**14 48 40.8**	**-0.7**
	263nm,0.3s,baz=145,slow=0.7,SNR=92						
DAV				Sn	**Sn**	**14 48 56.0**	**+0.3**
	637nm,0.3s,baz=234,slow=19,SNR=16						
GSPH	**General Santos**	**1.28**	**267**⇑	*i*P	Pn	14 48 38.9	-5.0
GSPH				*i* S	Sn	14 48 52.4	-7.7
KCP	**Kidapawan**	**1.41**	**306**⇑	*i*P	**Pn**	**14 48 43.7**	**-2.1**
KCP				*e*S	**Sn**	**14 49 02.2**	**-1.0**
BUKP	**Musuan**	**2.06**	**326**	*e*P	**Pn**	**14 48 54.1**	**-0.5**
CTBH	**Cotabato--PC H**	**2.24**	**298**⇑	*i*P	**Pn**	**14 48 59.5**	**+2.5**
SGSI	**Sangihe**	**2.56**	**196**	S	**Sn**	**14 49 31.9**	**+0.5**
CGP	**Cagayan de Oro**	**2.74**	**326**⇑	*e*P	**Pn**	**14 49 04.6**	**+0.7**
CGP				*e*S	**Sn**	**14 49 37.0**	**+1.1**
BUTP	**Butuan**	**2.85**	**348**	*e*P	**Pn**	**14 49 06.2**	**+0.7**
PAGZ	**Pagadian**	**3.29**	**301**	*e*P	**Pn**	**14 49 11.1**	**-0.3**
MSLP	**Maasin**	**4.17**	**341**	*e*P	**Pn**	**14 49 23.0**	**-0.6**
TBP	**Tagbilaran**	**4.22**	**326**⇓	*e*P	**Pn**	**14 49 23.8**	**-0.5**
MNI	**Manado**	**4.89**	**197**	P	**Pn**	**14 49 32.8**	**-0.7**
MNI				S	**Sn**	**14 50 26.3**	**-2.6**
TNTI	**Ternate**	**5.47**	**168**	P	**Pn**	**14 49 42.9**	**+1.4**
	170nm,0.7s,3μm						
KMSI	**Cibinong**	**5.99**	**202**	P	**Pn**	**14 49 48.4**	**-0.2**
	353nm,0.8s,4μm						
LBMI	**Labuha**	**6.87**	**169**	P	**Pn**	**14 50 02.2**	**+1.5**
	115nm,0.8s,1μm						
LUWI	**Luwuk**	**7.95**	**206**	P	**Pn**	**14 50 16.5**	**+1.0**
	176nm,0.9s,2μm						
SWI	**Sorong**	**8.60**	**144**	P	**Pn**	**14 50 27.2**	**+2.9**
SWI	**Sorong**	**8.60**	**144**	P	Pn	14 50 28.2	+3.9
	baz=8.8,SNR=4.2						
PCI	**Palu**	**9.49**	**223**	P	Pn	14 50 24.1	-13
	baz=8.9,SNR=4.3						
PCI				S	Sn	14 52 07.6	-15
	baz=8.9,SNR=4.1						
AAI	**Ambon**	**9.98**	**169**	P	**Pn**	**14 50 44.9**	**+1.6**
	baz=9.9,SNR=3.0						
KAPI	**Kappang**	**12.85**	**210**	Pn	**Pn**	**14 51 22.1**	**-0.5**
	0.8nm,0.3s,baz=48,slow=16,SNR=6.4						
MTN	**Manton Dam**	**19.50**	**166**	P	**P**	**14 52 46.5**	**+0.4**
	baz=20,SNR=16						
KDU	**Kakadu**	**19.73**	**162**	P	**P**	**14 52 49.2**	**+0.7**
	baz=20,SNR=22						
FITZ	**Fitzroy Crossi**	**24.12**	**181**	P	**P**	**14 53 33.1**	**-1.2**
	8.3nm,0.6s,baz=11,slow=7.0,SNR=35						
FITZ	**Fitzroy Crossi**	**24.12**	**181**	P	**P**	**14 53 33.5**	**-0.8**
	baz=24,SNR=30						
COEN	**Coen**	**26.12**	**140**	P	**P**	**14 53 53.0**	**+0.4**
	baz=26,SNR=4.7						
WRA	**Warramunga Arr**	**27.14**	**163**	P	**P**	**14 54 01.2**	**-0.5**
	2.8nm,0.4s,baz=342,slow=10,SNR=16						
PSI	**Prapat**	**27.43**	**264**	LR	LR	15 07 50.4	
	comp=Z,57nm,18.2s,baz=135,slow=42						
CMAR	**Chiang Mai Arr**	**29.27**	**297**	P	**P**	**14 54 21.4**	**+0.6**
	0.6nm,0.7s,baz=113,slow=7.3,SNR=4.6						
ASAR	**Alice Springs**	**30.58**	**166**	P	**P**	**14 54 32.0**	**-0.2**
	1.5nm,0.4s,baz=349,slow=7.4,SNR=50						
ASAR				PcP	**PcP**	**14 57 30.4**	**+0.1**
	1.4nm,0.8s,baz=360,slow=2.0,SNR=7.1						
ASAR				ScP	**ScP**	**15 01 09.4**	**-0.2**
	0.2nm,0.6s,baz=347,slow=3.2,SNR=3.8						
KSRS	**Korea Array**	**31.18**	**3**	LR	LR	15 08 09.1	
	comp=Z,36nm,18.8s,baz=183,slow=38						
MJAR	**Matsushiro Arr**	**32.16**	**18**	LR	LR	15 04 54.7	
	comp=Z,65nm,22.0s,baz=75,slow=31						
MEEK	**Meekatharra**	**33.43**	**192**	P	**P**	**14 54 56.0**	**-1.3**
	baz=33,SNR=7.4						
QLP	**Quilpie**	**36.93**	**153**	P	**P**	**14 55 28.0**	**+0.6**
	baz=37,SNR=4.9						
KMBL	**Kambalda**	**37.55**	**186**	P	**P**	**14 55 32.0**	**-0.5**
	baz=37,SNR=5.7						
KLBR	**Kellerberrin**	**38.41**	**192**	P	**P**	**14 55 38.9**	**-0.9**
	baz=38,SNR=4.9						
NWAO	**Narrogin (SRO)**	**39.81**	**192**	P	**P**	**14 55 51.1**	**-0.4**
	4.8nm,0.6s,baz=8.0,slow=5.1,SNR=9.3						
BBOO	**Buckleboo**	**39.87**	**167**	P	**P**	**14 55 52.5**	**+0.5**
	baz=40,SNR=21						
STKA	**Stephens Creek**	**40.57**	**160**	P	**P**	**14 55 57.8**	**0.0**
	5.0nm,0.7s,baz=340,slow=9.5,SNR=12						
STKA	**Stephens Creek**	**40.57**	**160**	P	**P**	**14 55 58.6**	**+0.8**
	baz=41,SNR=5.9						
SONM	**Songino Array**	**44.85**	**341**	P	**P**	**14 56 34.1**	**+1.6**
	0.5nm,0.7s,baz=136,slow=4.8,SNR=5.2						
SONM				PcP	**PcP**	**14 58 14.4**	**+0.6**
	0.4nm,0.6s,baz=166,slow=2.9,SNR=3.6						
ARPS	**Mount Arapiles**	**45.14**	**162**	P	**P**	**14 56 36.0**	**+1.3**
	baz=45,SNR=5.4						
LHI	**Lord Howe Isla**	**48.85**	**142**	P	**P**	**14 57 02.0**	**-1.8**
	baz=49,SNR=5.2						
MKAR	**Makanchi Array**	**55.29**	**325**	P	**P**	**14 57 52.1**	**+0.5**
	1.2nm,0.5s,baz=115,slow=7.5,SNR=21						
ZALV	**Zalesovo Beam**	**58.21**	**333**	P	**P**	**14 58 13.6**	**+1.5**
	0.6nm,0.3s,baz=106,slow=7.7,SNR=6.8						
AAK	**Ala-Archa**	**58.24**	**317**	LR	LR	15 24 45.6	
	comp=Z,26nm,19.6s,baz=91,slow=38						
AKTO	**Aktyubinsk**	**71.46**	**321**	LR	LR	15 34 42.6	
	comp=Z,32nm,19.7s,baz=146,slow=39						
ARCES	**ARCESS Array B**	**88.01**	**340**	P	**P**	**15 01 07.3**	**-0.3**
	5.4nm,1.0s,baz=66,slow=4.1,SNR=5.8						
FINES	**FINESS Array B**	**89.47**	**332**	P	**P**	**15 01 15.2**	**+0.5**
	4.1nm,1.2s,baz=90,slow=2.1,SNR=7.1						
NOA	**NORSAR Array B**	**96.40**	**334**	LR	LR	15 50 31.8	
	comp=Z,17nm,18.4s,baz=0.0,slow=39						
YKA	**Yellowknife Ar**	**97.50**	**24**	P	**P**	**15 01 49.8**	**-1.8**
	0.3nm,0.7s,baz=302,slow=4.6,SNR=9.1						
TORD	**Torodi Ar. Bea**	**121.67**	**289**	PKP	**PKPdf**	**15 07 12.0**	**-0.6**
	0.6nm,0.6s,baz=70,slow=1.4,SNR=5.6						
CFAA	**Coronel Fontan**	**151.29**	**154**	PKPbc	**PKPbc**	**15 08 12.0**	**0.0**
	0.4nm,0.6s,baz=242,slow=3.9,SNR=8.9						

IDC 04 15:01:01.5±2.4, **3°.95S**×**128°.08E**, **h0**km, **mb2.7**/1, **Error ellipse: s-maj=220.7km s-min=28.2km az=67.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.03**	**159**	P	Pn	15 05 01.5	+0.2
	baz=341,slow=12						
ASAR	**Alice Springs**	**20.39**	**165**	P	P	15 05 40.1	-0.2
	0.3nm,0.8s,baz=346,slow=10,SNR=5.6						
MKAR	**Makanchi Array**	**64.64**	**327**	P	P	15 11 41.1	0.0
	baz=122,slow=5.2						

IDC 04 15:06:58.3±0.8, **19°.74S**×**69°.52W**, **h51**km±5km, **mb3.7**/2, **mb1 3.8**/5, **mb1mx3.5**/20, **mbtmp3.7**/5, **Error ellipse: s-maj=34.0km s-min=26.6km az=121.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.67**	**21**	P	Pn	15 07 54.9	+1.5
	3.0nm,0.3s,baz=216,slow=5.2,SNR=74						
SIV	**San Ignacio**	**8.86**	**66**	P	Pn	15 09 05.1	+1.2
	1.4nm,0.3s,baz=270,slow=10,SNR=28						
CFAA	**Coronel Fontan**	**11.88**	**175**	P	Pn	15 09 45.4	+0.3
	0.1nm,0.3s,baz=5.5,slow=13,SNR=5.0						
CPUP	**Villa Florida**	**13.00**	**123**	P	P	15 10 05.3	-4.0
	0.5nm,0.3s,baz=303,slow=8.7,SNR=3.4						
TORD	**Torodi Ar. Bea**	**77.31**	**71**	P	P	15 18 47.0	-1.0
	0.7nm,0.4s,baz=253,slow=5.5,SNR=10.0						
YKA	**Yellowknife Ar**	**89.34**	**341**	P	P	15 19 48.2	-0.5
	0.2nm,0.3s,baz=135,slow=4.4,SNR=12						
YKA				pP	pP	15 20 02.4	-1.3
	0.3nm,0.4s,baz=136,slow=4.8,SNR=4.0						
ASAR	**Alice Springs**	**131.19**	**209**	PKP	PKPdf	15 26 05.4	0.0
	0.3nm,0.5s,baz=128,slow=1.6,SNR=14						
WRA	**Warramunga Arr**	**134.16**	**212**	PKP	PKPdf	15 26 11.4	+0.3
	0.3nm,0.4s,baz=160,slow=1.5,SNR=5.3						
FITZ	**Fitzroy Crossi**	**139.56**	**203**	PKP	PKPdf	15 26 22.8	+1.7
	2.0nm,1.1s,baz=136,slow=3.4,SNR=3.7						
ZALV	**Zalesovo Beam**	**140.59**	**24**	PKP	PKPdf	15 26 22.5	+0.7
	0.8nm,0.6s,baz=298,slow=3.9,SNR=5.3						
ZALV				pPKP	pPKPdf	15 26 36.7	-0.6
	1.2nm,0.7s,baz=318,slow=4.0,SNR=3.8						
MKAR	**Makanchi Array**	**144.52**	**34**	PKP	PKPab	15 26 27.4	-0.2
	0.2nm,0.6s,baz=294,slow=3.7,SNR=4.8						
MKAR				pPKP	pPKPdf	15 26 44.5	0.0
	0.4nm,0.7s,baz=357,slow=2.3,SNR=3.4						
MJAR	**Matsushiro Arr**	**150.51**	**310**	PKPbc	PKPbc	15 26 44.6	-0.1
	1.0nm,0.7s,baz=110,slow=1.6,SNR=5.7						
MJAR				pPKPbc	pPKPbc	15 26 59.7	-0.4
	1.2nm,0.7s,baz=131,slow=1.2,SNR=4.1						
SONM	**Songino Array**	**151.77**	**6**	PKPbc	PKPbc	15 26 47.7	+0.3
	0.8nm,0.7s,baz=310,slow=1.7,SNR=7.5						
SONM				pPKPbc	pPKPbc	15 27 02.9	0.0
	1.4nm,0.8s,baz=312,slow=1.4,SNR=8.9						

*IDC **04** 15:08:42.8±0.8, 5°.39N×127°.47E, h0km, mb3.8/10, mb1 4.0/10, mb1mx3.8/26, mbtmp3.9/10, Error ellipse: s-maj=58.6km s-min=14.0km az=72.0*
*MAN **04** 15:08:58, 5°.41N×126°.73E, h7km, mb4.4, ML3.2, MS3.0*
ISC 04 15:08:52.6±0.8, **5°.2N**±0°.1×**127°.0E**±0°.2, **h76**km, **n16**, σ**0s91**/14, **mb4.0**/10, **1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.92**	**338**	*e*P	**Pn**	**15 09 24.0**	**+0.7**
GSPH	**General Santos**	**2.22**	**295**⇓	*e*P	**Pn**	**15 09 26.9**	**-0.6**
DAV	**Davao City (W)**	**2.35**	**324**	Pn	**Pn**	**15 09 30.4**	**+1.2**
	22nm,0.3s,baz=68,slow=20,SNR=2.1						
DAV				Sn	**Sn**	**15 09 56.8**	**-0.4**
	30nm,0.3s,baz=261,slow=21,SNR=4.0						
BUKP	**Musuan**	**3.31**	**325**	*e*P	Pn	15 09 47.8	+5.6
BUKP				*e*S	Sn	15 10 13.1	-7.3
CTBH	**Cotabato--PC H**	**3.40**	**307**⇑	*i*P	Pn	15 09 47.9	+4.5
PAGZ	**Pagadian**	**4.46**	**307**	*e*P	Pn	15 10 02.6	+4.7
FITZ	**Fitzroy Crossi**	**23.15**	**183**	P	**P**	**15 13 53.7**	**+1.0**
	0.7nm,0.5s,baz=11,slow=11,SNR=4.7						
WRA	**Warramunga Arr**	**25.97**	**164**	P	**P**	**15 14 18.1**	**-0.3**
	3.7nm,0.5s,baz=345,slow=10,SNR=30						
ASAR	**Alice Springs**	**29.43**	**167**	P	**P**	**15 14 49.5**	**+0.3**
	0.6nm,0.6s,baz=352,slow=8.0,SNR=16						
STKA	**Stephens Creek**	**39.37**	**160**	P	**P**	**15 16 14.9**	**0.0**
	3.4nm,0.7s,baz=331,slow=5.5,SNR=14						
SONM	**Songino Array**	**46.04**	**341**	P	**P**	**15 17 08.4**	**-0.4**
	0.2nm,0.4s,baz=145,slow=5.3,SNR=3.0						
MKAR	**Makanchi Array**	**56.54**	**325**	P	**P**	**15 18 28.2**	**+1.0**
	0.9nm,0.4s,baz=114,slow=7.6,SNR=17						
ZALV	**Zalesovo Beam**	**59.44**	**333**	P	**P**	**15 18 47.4**	**+0.1**
	0.4nm,0.4s,baz=141,slow=7.3,SNR=3.0						
BVAR	**Borovoye Array**	**66.27**	**327**	P	**P**	**15 19 33.4**	**+0.6**
	1.6nm,0.7s,baz=124,slow=7.9,SNR=8.6						
AKTO	**Aktyubinsk**	**72.70**	**321**	P	**P**	**15 20 12.5**	**0.0**
	1.2nm,0.6s,baz=99,slow=9.6,SNR=7.2						
ILAR	**Eielson Array**	**83.72**	**25**	P	**P**	**15 21 11.1**	**-2.0**
	0.2nm,0.6s,baz=247,slow=5.7,SNR=5.8						

MEX 04 15:11:12.7±0.8, **18°.00N**×**99°.86W**, **h51**km±5km, **MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.24**	**108**	*e*P	Pn	15 11 19.7	-1.8
MEIG				*i* S	Sn	15 11 26.2	-1.6
ARIG	**Puente Sto Nin**	**0.54**	**301**	*e*P	Pn	15 11 22.8	-1.8
ARIG				*i* S	Sn	15 11 31.6	-1.5
CAIG	**El Cayaco**	**1.02**	**202**	*i* P	Pn	15 11 28.7	-2.1
CAIG				*i* S	Sn	15 11 42.1	-2.0
ACX	**Acapulco**	**1.12**	**180**	*i* P	Pn	15 11 30.9	-1.3
ACX				*i* S	Sn	15 11 44.0	-2.5
YAIG	**Yautepec**	**1.14**	**41**	*i* P	Pn	15 11 30.5	-2.1
YAIG				*i* S	Sn	15 11 45.4	-1.9
PPM	**Popocatepetl**	**1.58**	**48**	*i* P	Pn	15 11 36.9	-2.1
PPM				*i* S	Sn	15 11 56.7	-2.1
ZIIG	**Zihuatanejo**	**1.58**	**256**	*i* P	Pn	15 11 37.5	-0.8
ZIIG				*i* S	Sn	15 11 55.3	-2.3
UTMO	**Huajuapan**	**1.96**	**95**	*i* P	Pn	15 11 42.9	-0.9
UTMO				*i* S	Sn	15 12 04.9	-2.6
PNIG	**Pinotepa**	**2.30**	**134**	*i* P	Pn	15 11 46.9	-1.3
PNIG				*i* S	Sn	15 12 14.1	-1.3

IDC 04 15:13:44.8±1.4, **33°.68N**×**82°.20E**, **h0**km, **mb3.3**/4, **mb1 3.5**/5, **mb1mx3.2**/28, **mbtmp3.3**/5, **ML2.9**/1, **MS3.8**/1, **Ms1 3.8**/1, **ms1mx2.3**/40, **Error ellipse: s-maj=40.0km s-min=29.3km az=68.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.10**	**0**	Pn	Pn	15 16 51.3	-0.9
	0.1nm,0.3s,baz=175,slow=15,SNR=5.8						
ZALV	**Zalesovo Beam**	**20.35**	**4**	P	Pn	15 18 24.4	-0.2
	0.5nm,0.6s,baz=202,slow=11,SNR=3.3						
CMAR	**Chiang Mai Arr**	**21.31**	**131**	P	P	15 18 33.6	+0.4
	0.7nm,0.7s,baz=309,slow=9.9,SNR=7.8						
DAV	**Davao City (W)**	**48.01**	**113**	LR	LR	15 42 02.8	
	comp=Z,102nm,20.8s,baz=222,slow=35						
TORD	**Torodi Ar. Bea**	**75.00**	**276**	P	P	15 25 28.9	+0.3
	0.5nm,0.9s,baz=58,slow=4.3,SNR=3.6						
YKA	**Yellowknife Ar**	**83.21**	**8**	P	P	15 26 11.3	-1.3
	0.2nm,0.6s,baz=345,slow=5.0,SNR=5.5						

MAN 04 15:14:51, 14°.93N×**121°.60E, h1**km, **mb4.6, ML3.4, MS3.3, 1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.39**	**121**	*e*P	Pg	15 14 58.6	+0.2
PCPH	**Palayan**	**0.79**	**322**⇓	*e*P	Pg	15 15 06.6	+0.4
BALP	**Baler**	**0.81**	**359**	*e*P	Pg	15 15 07.1	+0.6
BALP				*e*S	Sn	15 15 21.2	-1.0
CAUP	**Cauayan**	**2.01**	**6**	*e*P	Pn	15 15 26.5	+0.3

*IDC **04** 15:35:12.8±1.1, 35°.65N×22°.69E, h0km, mb3.7/10, mb1 3.7/13, mb1mx3.6/32, mbtmp3.6/13, ML3.8/3, Error ellipse: s-maj=22.3km s-min=21.2km az=76.0*
*ISCJB **04** 15:35:18.7±0.5, 35°.62N±0°.04×22°.48E±0°.06, h75km±5km, mb3.4/10, Error ellipse: s-maj=9.1km s-min=3.6km az=141.8*
*CSEM **04** 15:35:19.0±0.2, 35°.58N×22°.45E, h80km, ML3.2, Error ellipse: s-maj=7.5km s-min=2.9km az=49.0*
*ATH **04** 15:35:19.2, 35°.67N×22°.61E, h84km±2km, ML3.2*
*THE **04** 15:35:20.1, 35°.66N×22°.49E, h57km±5km, ML3.3/4, Error ellipse: s-maj=6.1km s-min=0.8km az=57.0*
*HLW **04** 15:35:24.4, 35°.08N×22°.84E, h33km±23km, Md3.8, Ml3.4*
ISC 04 15:35:19.8±0.9, **35°.65N**±0°.04×**22°.53E**±0°.05, **h57**km±9km, **n163**, σ1s**21**/183, **mb3.6**/10, **1C, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.75**	**33**	P	**Pn**	**15 35 34.9**	**+0.4**
KYTH	**Kithira**	**0.75**	**33**	*e*P	**Pn**	**15 35 34.9**	**+0.4**
KYTH	**Kithira**	**0.75**	**33**	*e*P	**Pn**	**15 35 34.9**	**+0.4**
VLI	**Veliai**	**1.11**	**17**	P	**Pn**	**15 35 40.0**	**+0.8**
VLI				S	**Sn**	**15 35 53.7**	**+0.1**
VLI	**Veliai**	**1.11**	**17**	*e*P	**Pn**	**15 35 40.2**	**+1.0**
VLI	**Veliai**	**1.11**	**17**	*e*P	**Pn**	**15 35 40.2**	**+1.0**
VLI				S	**Sn**	**15 35 53.7**	**+0.1**
DYR	**Agios Nikonas**	**1.12**	**352**	P	**Pn**	**15 35 39.5**	**+0.2**
DYR				S	**Sn**	**15 35 53.3**	**-0.5**
DYR	**Agios Nikonas**	**1.12**	**352**	*e*P	**Pn**	**15 35 40.1**	**+0.8**
DYR				*e*S	**Sn**	**15 35 57.2**	**+3.4**
DYR	**Agios Nikonas**	**1.12**	**352**	*e*P	**Pn**	**15 35 40.1**	**+0.8**
DYR				*e*S	**Sn**	**15 35 57.2**	**+3.4**
KARN	**Karanos**	**1.16**	**102**	P	**Pn**	**15 35 41.1**	**+1.3**
KARN				S	**Sn**	**15 35 56.0**	**+1.3**
KARN	**Karanos**	**1.16**	**102**	*e*P	**Pn**	**15 35 41.1**	**+1.3**
KARN	**Karanos**	**1.16**	**102**	*e*P	**Pn**	**15 35 41.1**	**+1.3**
KARN				S	**Sn**	**15 35 56.0**	**+1.3**
VAM	**Vamos**	**1.38**	**100**	P	**Pn**	**15 35 43.6**	**+0.8**
VAM	**Vamos**	**1.38**	**100**	*e*P	**Pn**	**15 35 43.2**	**+0.4**
VAM	**Vamos**	**1.38**	**100**	P	**Pn**	**15 35 43.6**	**+0.8**
PYL	**PYLOS**	**1.40**	**333**	P	**Pn**	**15 35 42.1**	**-0.9**
PYL				S	**Sn**	**15 36 01.0**	**+0.6**
PYL	**PYLOS**	**1.40**	**333**	*e*P	**Pn**	**15 35 43.8**	**+0.8**
PYL				*e*S	**Sn**	**15 36 02.8**	**+2.4**
PYL	**PYLOS**	**1.40**	**333**	*e*P	**Pn**	**15 35 43.8**	**+0.8**
PYL				*e*S	**Sn**	**15 36 02.8**	**+2.4**
GVD	**Gavdhos**	**1.51**	**122**	P	**Pn**	**15 35 44.4**	**-0.1**
GVD				S	**Sn**	**15 36 05.3**	**+2.2**
GVD	**Gavdhos**	**1.51**	**122**	*e*P	**Pn**	**15 35 44.3**	**-0.2**
GVD	**Gavdhos**	**1.51**	**122**	P	**Pn**	**15 35 44.4**	**-0.1**
GVD				S	**Sn**	**15 36 05.3**	**+2.2**
ITM	**Ithomi**	**1.60**	**342**	P	**Pn**	**15 35 46.5**	**+0.7**
ITM	**Ithomi**	**1.60**	**342**	*e*P	**Pn**	**15 35 46.7**	**+0.9**
ITM	**Ithomi**	**1.60**	**342**	*e*P	**Pn**	**15 35 46.7**	**+0.9**
VLX	**Vlachokerasia**	**1.72**	**356**	P	**Pn**	**15 35 47.5**	**0.0**
VLX				S	**Sn**	**15 36 09.4**	**+1.0**
VLX	**Vlachokerasia**	**1.72**	**356**	*e*P	**Pn**	**15 35 49.1**	**+1.6**
VLX	**Vlachokerasia**	**1.72**	**356**	*e*P	**Pn**	**15 35 49.1**	**+1.6**
VLX				S	**Sn**	**15 36 09.4**	**+1.0**
DID	**Didima**	**1.94**	**17**	P	**Pn**	**15 35 51.0**	**+0.7**
DID				S	**Sn**	**15 36 14.0**	**+0.4**
DID	**Didima**	**1.94**	**17**	*e*P	**Pn**	**15 35 51.1**	**+0.7**
DID	**Didima**	**1.94**	**17**	*e*P	**Pn**	**15 35 51.1**	**+0.7**
DID				S	**Sn**	**15 36 14.0**	**+0.4**
IDI	**Anoyia**	**1.96**	**100**	P	**Pn**	**15 35 51.1**	**+0.4**
IDI	**Anoyia**	**1.96**	**100**	*e*P	**Pn**	**15 35 51.2**	**+0.5**
IDI	**Anoyia**	**1.96**	**100**	P	**Pn**	**15 35 51.1**	**+0.4**
SIVA	**Sivas**	**1.97**	**108**	P	**Pn**	**15 35 51.9**	**+1.2**
SIVA	**Sivas**	**1.97**	**108**	*e*P	**Pn**	**15 35 51.9**	**+1.2**
SIVA	**Sivas**	**1.97**	**108**	*e*P	**Pn**	**15 35 51.9**	**+1.2**
AMT	**Artemida-Makis**	**1.99**	**341**	P	**Pn**	**15 35 51.3**	**+0.2**
AMT	**Artemida-Makis**	**1.99**	**341**	*e*P	**Pn**	**15 35 52.7**	**+1.6**
AMT	**Artemida-Makis**	**1.99**	**341**	P	**Pn**	**15 35 51.3**	**+0.2**
NAIG	**Nisos Aigina**	**2.24**	**20**	*e*P	**Pn**	**15 35 55.0**	**+0.6**
NAIG	**Nisos Aigina**	**2.24**	**20**	*e*P	**Pn**	**15 35 55.0**	**+0.6**
GUR	**Goura**	**2.29**	**356**	P	**Pn**	**15 35 55.6**	**+0.4**
GUR	**Goura**	**2.29**	**356**	*e*P	**Pn**	**15 35 57.0**	**+1.8**
GUR	**Goura**	**2.29**	**356**	P	**Pn**	**15 35 55.6**	**+0.4**
LTK	**Loutraki**	**2.39**	**8**	P	**Pn**	**15 35 57.7**	**+1.1**
LTK				S	**Sn**	**15 36 25.3**	**+0.6**
LTK	**Loutraki**	**2.39**	**8**	*e*P	**Pn**	**15 35 57.7**	**+1.1**
LTK	**Loutraki**	**2.39**	**8**	*e*P	**Pn**	**15 35 57.7**	**+1.1**
LTK				S	**Sn**	**15 36 25.3**	**+0.6**
LAST	**Lasithi**	**2.46**	**101**	P	**Pn**	**15 35 58.4**	**+0.9**
LAST	**Lasithi**	**2.46**	**101**	*e*P	**Pn**	**15 35 58.3**	**+0.8**
LAST	**Lasithi**	**2.46**	**101**	*e*P	**Pn**	**15 35 58.3**	**+0.8**
ATH	**Athens Observa**	**2.50**	**22**	*e*P	**Pn**	**15 35 58.7**	**+0.7**
ATH	**Athens Observa**	**2.50**	**22**	*e*P	**Pn**	**15 35 58.7**	**+0.7**
NPS	**Neapolis**	**2.54**	**98**	*e*P	**Pn**	**15 35 59.3**	**+0.7**
NPS	**Neapolis**	**2.54**	**98**	*e*P	**Pn**	**15 35 59.3**	**+0.7**
RLS	**Riolos of Patr**	**2.55**	**341**	*e*P	**Pn**	**15 36 00.2**	**+1.6**
RLS	**Riolos of Patr**	**2.55**	**341**	*e*P	**Pn**	**15 36 00.2**	**+1.6**
PTL	**Penteli**	**2.62**	**24**	P	**Pn**	**15 36 00.1**	**+0.4**
PTL	**Penteli**	**2.62**	**24**	*e*P	**Pn**	**15 35 59.5**	**-0.2**
PTL	**Penteli**	**2.62**	**24**	P	**Pn**	**15 36 00.1**	**+0.4**
LAKA	**Lakka**	**2.62**	**350**	P	**Pn**	**15 36 00.3**	**+0.6**
LAKA	**Lakka**	**2.62**	**350**	*e*P	**Pn**	**15 36 01.3**	**+1.6**
LAKA	**Lakka**	**2.62**	**350**	P	**Pn**	**15 36 00.3**	**+0.6**
TRIZ	**Trizonia**	**2.73**	**352**	P	**Pn**	**15 36 02.1**	**+0.9**
TRIZ	**Trizonia**	**2.73**	**352**	P	**Pn**	**15 36 02.1**	**+0.9**
KALE	**Kalithea**	**2.75**	**354**	P	**Pn**	**15 36 02.5**	**+1.0**
KALE	**Kalithea**	**2.75**	**354**	P	**Pn**	**15 36 02.5**	**+1.0**
DSF	**Desfina**	**2.75**	**360**	P	**Pn**	**15 36 02.1**	**+0.6**
DSF	**Desfina**	**2.75**	**360**	P	**Pn**	**15 36 02.1**	**+0.6**
APE	**Apeiranthos**	**2.80**	**59**	P	**Pn**	**15 36 02.4**	**+0.2**
APE	**Apeiranthos**	**2.80**	**59**	*e*P	**Pn**	**15 36 02.7**	**+0.5**
APE	**Apeiranthos**	**2.80**	**59**	*e*P	**Pn**	**15 36 02.7**	**+0.5**
EFP	**Efpalio**	**2.82**	**350**	P	**Pn**	**15 36 03.6**	**+1.3**
EFP				S	**Sn**	**15 36 36.0**	**+1.0**
EFP	**Efpalio**	**2.82**	**350**	*e*P	**Pn**	**15 36 04.6**	**+2.3**
EFP	**Efpalio**	**2.82**	**350**	P	**Pn**	**15 36 03.6**	**+1.3**
EFP				S	**Sn**	**15 36 36.0**	**+1.0**
KFL	**Anninata**	**2.82**	**331**	P	**Pn**	**15 36 02.9**	**+0.5**
KFL	**Anninata**	**2.82**	**331**	P	**Pn**	**15 36 02.9**	**+0.5**
VLS	**Valsamata**	**2.96**	**329**	P	**Pn**	**15 36 03.9**	**-0.4**
VLS	**Valsamata**	**2.96**	**329**	*e*P	**Pn**	**15 36 05.9**	**+1.6**
VLS	**Valsamata**	**2.96**	**329**	P	**Pn**	**15 36 03.9**	**-0.4**
LKR	**Lokris**	**3.02**	**7**	P	**Pn**	**15 36 06.1**	**+1.0**
LKR	**Lokris**	**3.02**	**7**	*e*P	**Pn**	**15 36 06.0**	**+1.0**
LKR	**Lokris**	**3.02**	**7**	*e*P	**Pn**	**15 36 06.0**	**+1.0**
ZKR	**Zakros**	**3.06**	**99**	P	**Pn**	**15 36 06.9**	**+1.3**
ZKR	**Zakros**	**3.06**	**99**	*e*P	**Pn**	**15 36 06.6**	**+1.0**
ZKR	**Zakros**	**3.06**	**99**	*e*P	**Pn**	**15 36 06.6**	**+1.0**
ATAL	**Atalanti**	**3.06**	**7**	P	**Pn**	**15 36 06.6**	**+0.9**
ATAL	**Atalanti**	**3.06**	**7**	P	**Pn**	**15 36 06.6**	**+0.9**
EVR	**Evrytania**	**3.31**	**350**	*e*P	**Pn**	**15 36 12.2**	**+3.0**
EVR	**Evrytania**	**3.31**	**350**	*e*P	**Pn**	**15 36 12.2**	**+3.0**
AGG	**Agios Georgios**	**3.37**	**357**	P	**Pn**	**15 36 10.4**	**+0.5**
AGG				S	**Sn**	**15 36 50.2**	**+1.5**
AGG	**Agios Georgios**	**3.37**	**357**	*e*P	**Pn**	**15 36 11.8**	**+1.9**
AGG	**Agios Georgios**	**3.37**	**357**	P	**Pn**	**15 36 10.4**	**+0.5**
AGG				S	**Sn**	**15 36 50.2**	**+1.5**
LKD2	**Lefkada island**	**3.47**	**335**	P	**Pn**	**15 36 11.9**	**+0.6**
LKD2				S	**Sn**	**15 36 51.8**	**+0.6**
LKD2	**Lefkada island**	**3.47**	**335**	*e*P	**Pn**	**15 36 12.1**	**+0.8**
LKD2	**Lefkada island**	**3.47**	**335**	P	**Pn**	**15 36 11.9**	**+0.6**
LKD2				S	**Sn**	**15 36 51.8**	**+0.6**
AOS	**Alonnisos**	**3.67**	**17**	*e*P	**Pn**	**15 36 14.8**	**+0.8**
AOS	**Alonnisos**	**3.67**	**17**	*e*P	**Pn**	**15 36 14.8**	**+0.8**
NEO	**Neokhori**	**3.69**	**8**	*e*P	**Pn**	**15 36 15.4**	**+1.1**
NEO	**Neokhori**	**3.69**	**8**	*e*P	**Pn**	**15 36 15.4**	**+1.1**
XOR	**Xorichti**	**3.75**	**8**	P	**Pn**	**15 36 15.3**	**+0.2**
XOR	**Xorichti**	**3.75**	**8**	P	**Pn**	**15 36 15.3**	**+0.2**
KARP	**Karpathos**	**3.77**	**90**	*e*P	**Pn**	**15 36 14.9**	**-0.6**
KARP	**Karpathos**	**3.77**	**90**	*e*P	**Pn**	**15 36 14.9**	**-0.6**
THL	**Klokotos Trika**	**3.93**	**354**	P	**Pn**	**15 36 18.1**	**+0.6**
THL	**Klokotos Trika**	**3.93**	**354**	*e*P	**Pn**	**15 36 19.3**	**+1.8**
THL	**Klokotos Trika**	**3.93**	**354**	P	**Pn**	**15 36 18.1**	**+0.6**
JAN	**Janina**	**4.21**	**342**	*e*P	**Pn**	**15 36 22.1**	**+0.6**
JAN	**Janina**	**4.21**	**342**	*e*P	**Pn**	**15 36 22.1**	**+0.6**
IGT	**Igoumenitsa**	**4.25**	**336**	P	**Pn**	**15 36 21.3**	**-0.6**
IGT	**Igoumenitsa**	**4.25**	**336**	P	**Pn**	**15 36 21.3**	**-0.6**
LIT	**Litokhoron**	**4.44**	**360**	P	**Pn**	**15 36 25.4**	**+0.8**
LIT	**Litokhoron**	**4.44**	**360**	*e*P	**Pn**	**15 36 25.7**	**+1.1**
LIT	**Litokhoron**	**4.44**	**360**	P	**Pn**	**15 36 25.4**	**+0.8**
ARG	**Arkhangelos**	**4.58**	**81**	*e*P	**Pn**	**15 36 26.0**	**-0.4**
ARG	**Arkhangelos**	**4.58**	**81**	*e*P	**Pn**	**15 36 26.0**	**-0.4**
KEK	**Kerkira**	**4.60**	**333**	P	**Pn**	**15 36 25.6**	**-1.1**
KEK	**Kerkira**	**4.60**	**333**	P	**Pn**	**15 36 25.6**	**-1.1**
KZN	**Kozani**	**4.69**	**353**	*e*P	**Pn**	**15 36 29.2**	**+1.2**
KZN	**Kozani**	**4.69**	**353**	*e*P	**Pn**	**15 36 29.2**	**+1.2**
PLG	**Polygyros**	**4.77**	**8**	*e*P	**Pn**	**15 36 29.1**	**0.0**
PLG	**Polygyros**	**4.77**	**8**	*e*P	**Pn**	**15 36 29.1**	**0.0**
NEST	**Nestorio**	**4.90**	**347**	P	**Pn**	**15 36 32.0**	**+1.1**
NEST	**Nestorio**	**4.90**	**347**	P	**Pn**	**15 36 32.0**	**+1.1**
SOH	**Sokhos**	**5.20**	**7**	*e*P	**Pn**	**15 36 35.8**	**+0.8**
SOH	**Sokhos**	**5.20**	**7**	*e*P	**Pn**	**15 36 35.8**	**+0.8**
FNA	**Florina**	**5.21**	**350**	P	**Pn**	**15 36 35.3**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FNA	Florina	5.21	350	P	Pn	15 36 35.3	+0.2
SWA2		6.85	158	P	Pn	15 36 54.8	-2.8
	baz=158						
SWA2				AMP		15 38 00.0	
	comp=N,70µm,0.5s,logA/T=5.1,baz=158						
SWA2				S	Sn	15 38 02.9	-11
	baz=158						
BARS	Barje	7.18	356	ePn	Pn	15 37 01.3	-0.7
STON	Ston	8.12	334	ePn	Pn	15 37 10.9	-4.0
STON				Sn	Sn	15 38 34.6	-11
GRUS	Gruza	8.35	351	⇑iPn	Pn	15 37 15.9	-2.1
BRTR	Keskin Array B	9.70	62	Pn	Pn	15 37 39.7	+3.1
	comp=N,0.2nm,0.3s,baz=225,slow=14,SNR=3.6						
HFRF	Wahat Farafira	9.81	148	P	Pn	15 37 36.2	-1.9
	baz=147						
HFRF				AMP		15 39 00.0	
	comp=N,10µm,0.5s,logA/T=4.3,baz=147						
HFRF	Wahat Farafira	9.81	148	P	Pn	15 37 36.2	-1.9
MLR	Muntele Rosu	10.16	14	Pn	Pn	15 37 37.5	-5.5
	comp=N,0.0nm,0.3s,baz=180,slow=12,SNR=3.7						
NVLJ	Novalja	10.65	329	ePn	Pn	15 37 47.5	-2.1
NVLJ				Sn	Sn	15 39 35.6	-12
NVLJ	Novalja	10.65	329	ePn	Pn	15 37 47.4	-2.1
MMAI	Mount Meron Ar	10.96	100	Pn	Pn	15 37 49.1	-4.8
	comp=N,0.9nm,0.3s,baz=294,slow=11,SNR=3.7						
BOJS	Bojanci	11.29	333	i Pn	Pn	15 37 55.9	-2.3
BOJS				i Sn	Sn	15 39 54.0	-8.6
BOJS	Bojanci	11.29	333	i Pn	Pn	15 37 55.9	-2.3
VISS	Visnje	11.69	332	i Pn	Pn	15 38 02.0	-1.7
VISS				i Sn	Sn	15 40 02.6	-10
VISS	Visnje	11.69	332	i Pn	Pn	15 38 02.0	-1.7
JAVS	Javornik	12.07	331	i Pn	Pn	15 38 06.5	-2.5
JAVS				i Sn	Sn	15 40 11.2	-11
PERS	Pernice	12.31	335	i Pn	Pn	15 38 08.7	-3.5
HDK2	Wahat Dakhilah	12.59	152	P	Pn	15 38 14.6	-1.5
	baz=152						
HDK2	Wahat Dakhilah	12.59	152	P	Pn	15 38 14.6	-1.5
VYHS	Vyhne	13.12	349	ePN	Pn	15 38 22.4	-0.8
VYHS	Vyhne	13.12	349	ePn	Pn	15 38 22.4	-0.8
GERES	GERESS Array B	14.70	336	Pn	Pn	15 38 44.8	+0.4
	comp=N,0.1nm,0.3s,baz=155,slow=14,SNR=3.5						
AKASG	Malin Array Be	15.80	16	Pn	Pn	15 38 55.8	-2.6
	comp=N,0.5nm,0.3s,baz=207,slow=11,SNR=3.3						
HFS	Hagfors	25.16	350	P	P	15 40 39.1	-0.3
	comp=N,0.8nm,0.4s,baz=155,slow=12,SNR=17						
FINES	FINESS Array B	25.91	4	P	P	15 40 45.9	-0.3
	comp=N,1.5nm,0.8s,baz=172,slow=12,SNR=9.8						
NB2	NORSAR Subarra	26.42	348	P	P	15 40 50.1	-0.7
	comp=Z,0.1nm,0.4s,baz=161,slow=9.3						
NB2	NORSAR Subarra	26.42	348	P	P	15 40 50.1	-0.7
	comp=Z,0.1nm,0.4s,baz=161,slow=9.2,SNR=2.7						
NOA	NORSAR Array B	26.42	348	P	P	15 40 50.5	-0.4
	comp=Z,0.5nm,0.7s,baz=160,slow=9.9,SNR=5.4						
EKA	Eskdalemuir Ar	26.42	326	P	P	15 40 52.5	+1.7
	comp=Z,0.7nm,0.5s,baz=122,slow=9.4,SNR=3.3						
TORD	Torodi Ar. Bea	29.24	225	P	P	15 41 17.4	+1.1
	comp=Z,0.1nm,0.5s,baz=38,slow=9.6,SNR=3.5						
ARCES	ARCESS Array B	33.98	2	P	P	15 41 57.2	-0.3
	comp=Z,2.3nm,0.9s,baz=186,slow=9.8,SNR=8.3						
MKAR	Makanchi Array	45.30	57	P	P	15 43 31.7	-0.1
	comp=Z,0.6nm,0.3s,baz=268,slow=7.7,SNR=26						
ZALV	Zalesovo Beam	46.22	46	P	P	15 43 38.2	-0.7
	comp=Z,0.5nm,0.3s,baz=268,slow=8.9,SNR=4.1						
SONM	Songino Array	60.83	50	P	P	15 45 26.6	+0.4
	comp=Z,0.3nm,0.6s,baz=283,slow=6.8,SNR=4.0						
YKA	Yellowknife Ar	76.31	341	P	P	15 47 03.2	+1.0
	comp=Z,0.2nm,0.5s,baz=31,slow=5.4,SNR=5.4						
ASAR	Alice Springs	120.25	99	PKP	PKPdf	15 54 05.6	+0.9
	comp=Z,0.1nm,0.6s,baz=336,slow=2.0,SNR=2.7						

*CSEM **04** 15:36:16.5±0.5, 38°.33N×15°.20E, h114km±3km, Error ellipse: s-maj=10.5km s-min=7.7km az=104.0*

ROM 04 15:36:16.5±0.2**, 38°.29N×15°.18E, h113**km±2km**, Ml2.5**/5**, 4D, Error ellipse: s-maj=3.1km s-min=2.6km az=145.0, Sicily**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MILZ	Milazzo	0.04	120	Pg	Pn	15 36 32.1	+0.2
MILZ				Sg	Sn	15 36 43.8	+0.3
	117nm,0.4s						
MILZ	Milazzo	0.04	120	Pg	Pn	15 36 32.1	+0.2
MILZ				Sg	Sn	15 36 43.8	+0.3
	117nm,0.4s						
MSRU	Castanea	0.26	97	Pg	Pn	15 36 32.5	+0.1
MSRU				Sg	Sn	15 36 44.4	0.0
MSRU	Castanea	0.26	97	Pg	Pn	15 36 32.5	+0.1
MSRU				Sg	Sn	15 36 44.4	0.0
MMME	Mongiuffi-Meli	0.36	171	Pg	Pn	15 36 33.6	+0.6
	46nm,0.3s						
MMME	Mongiuffi-Meli	0.36	171	Pg	Pn	15 36 33.6	+0.6
	46nm,0.3s						
MSCL	Scilla	0.48	97	Pg	Pn	15 36 33.7	+0.1
MSCL				Sg	Sn	15 36 46.4	-0.1
MSCL	Scilla	0.48	97	Pg	Pn	15 36 33.7	+0.1
MSCL				Sg	Sn	15 36 46.4	-0.1
CEL	Celeste	0.56	93	Pg	Pn	15 36 34.1	0.0
CEL				Sg	Sn	15 36 47.3	-0.1
CEL	Celeste	0.56	93	Pg	Pn	15 36 34.1	0.0
CEL				Sg	Sn	15 36 47.3	-0.1
JOPP	Joppolo	0.63	60	Pg	Pn	15 36 34.8	+0.2
JOPP				Sg	Sn	15 36 48.5	+0.2
	152nm,0.6s						
JOPP	Joppolo	0.63	60	Pg	Pn	15 36 34.8	+0.2
JOPP				Sg	Sn	15 36 48.5	+0.2
	152nm,0.6s						
SOI	Samo	0.72	108	⇓iPg	Pn	15 36 35.6	+0.3
SOI				Sg	Sn	15 36 49.7	+0.3
SOI	Samo	0.72	108	⇓iPg	Pn	15 36 35.6	+0.3
SOI				Sg	Sn	15 36 49.7	+0.3
MPAZ	Palizzi	0.73	117	Pg	Pn	15 36 35.7	+0.3
MPAZ	Palizzi	0.73	117	Pg	Pn	15 36 35.7	+0.3
PLAC	Placanica	1.00	81	⇓iPg	Pn	15 36 38.4	+0.5
PLAC				Sg	Sn	15 36 54.5	+0.4
	78nm,0.6s						
PLAC	Placanica	1.00	81	⇓iPg	Pn	15 36 38.4	+0.5
PLAC				Sg	Sn	15 36 54.5	+0.4
	78nm,0.6s						
CARO	Carolei	1.26	40	Pg	Pn	15 36 40.9	+0.2
	55nm,0.6s						
CARO	Carolei	1.26	40	Pg	Pn	15 36 40.9	+0.2
	55nm,0.6s						
SIRI	Monte Sirino -	1.96	16	Pg	Pn	15 36 50.0	+0.8
SIRI	Monte Sirino -	1.96	16	Pg	Pn	15 36 50.0	+0.8
CDT	Castel del Mon	2.91	16	ePn	Pn	15 36 59.8	-1.6

*IDC **04** 15:39:34.3±0.9, 5°.35N×127°.68E, h0km, mb4.1/12, mb1 4.2/12, mb1mx4.0/26, mbtmp4.1/12, MS3.4/1, Ms1 3.4/1, ms1mx2.1/34, Error ellipse: s-maj=59.8km s-min=13.9km az=69.0*
*AUST **04** 15:39:35.2±4.6, 6°.45N×127°.98E, h88km, Error ellipse: s-maj=4.3km s-min=1.4km az=17.0*
*DJA **04** 15:39:41.3±0.7, 5°N±5°×12°7E±°, h10km, M4.6/5, mb4.9/4, mB4.9/2, MLv4.5/5, Mw(mB)4.2/2*
*MAN **04** 15:39:42, 5°.12N×127°.09E, h9km, mb4.8, ML3.7, MS3.7*
*ISCJB **04** 15:39:43.3±0.4, 5°.13N±0°.03×127°.26E±0°.05, h76km, mb4.0/12, Error ellipse: s-maj=7.7km s-min=4.2km az=156.2*

ISC 04 15:39:44.8±0.6**, 5°.13N**±0°.05×**127°.18E**±0°.07**, h76**km**, n38, σ1ˢ10**/39**, mb4.1**/12**, 1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	Mati	2.03	333	eP	Pn	15 40 16.7	-0.3
SGSI	Sangihe	2.18	229	P	Pn	15 40 18.8	-0.2
SGSI				S	Sn	15 40 45.8	+0.6
GSPH	General Santos	2.42	293	⇓iP	Pn	15 40 18.5	-3.8
DAV	Davao City (W)	2.50	321	P	Pn	15 40 20.8	-2.6
DAV	Davao City (W)	2.50	321	Pn	Pn	15 40 23.5	+0.1
	41nm,0.3s,baz=61,slow=18,SNR=2.9						
BUKP	Musuan	3.45	323	eP	Pn	15 40 37.5	+1.2
BUKP				eS	Sn	15 41 18.5	+2.4
CTBH	Cotabato--PC H	3.58	306	⇑iP	Pn	15 40 39.0	+0.9
TNTI	Ternate	4.33	178	P	Pn	15 40 49.3	+1.1
TNTI				S	Sn	15 41 38.2	+0.7
MNI	Manado	4.34	213	P	Pn	15 40 47.7	-0.7
MNI				S	Sn	15 41 35.5	-2.3
IPIL	Ipil	5.29	300	eP	Pn	15 41 03.3	+2.0
KMSI	Cibinong	5.54	215	P	Pn	15 41 04.9	+0.2
	162nm,0.7s						
LBMI	Labuha	5.74	177	P	Pn	15 41 07.8	+0.4
	38nm,0.7s,858nm0.3nm						
MRSI	Marisa	6.98	229	P	Pn	15 41 25.0	+0.6
	62nm,0.6s,876nm						
SWI	Sorong	7.21	145	P	Pn	15 41 28.7	+1.1
	baz=8.0,SNR=8.7						
SWI				S	Sn	15 42 48.1	+0.1
	baz=8.0,SNR=4.5						
LUWI	Luwuk	7.54	216	P	Pn	15 41 34.8	+2.6
PCI	Palu	9.47	231	P	Pn	15 42 11.9	+13
	baz=11,SNR=3.7						
PCI				S	Sn	15 44 24.9	+42
	baz=11,SNR=6.3						
KSM	Kuching	17.23	258	P	P	15 43 42.1	+1.0
	baz=18,SNR=7.0						
MTN	Manton Dam	18.28	168	P	P	15 43 52.1	-0.5
	baz=20,SNR=4.2						
KDU	Kakadu	18.46	163	P	P	15 43 54.3	-0.3
	baz=20,SNR=6.3						
FITZ	Fitzroy Crossi	23.13	184	P	P	15 44 43.8	-0.8
	0.8nm,0.4s,baz=26,slow=14,SNR=6.2						
FITZ	Fitzroy Crossi	23.13	184	P	P	15 44 43.9	-0.8
	baz=25,SNR=5.6						
COEN	Coen	24.73	140	P	P	15 44 60.0	+0.7
	baz=25,SNR=6.6						
WRA	Warramunga Arr	25.89	164	P	P	15 45 09.2	-0.5
	11nm,0.5s,baz=343,slow=10,SNR=82						
ASAR	Alice Springs	29.36	167	P	P	15 45 40.1	-0.7
	0.7nm,0.4s,baz=358,slow=8.2,SNR=24						
CMAR	Chiang Mai Arr	30.59	298	P	P	15 45 54.4	+2.7
	0.2nm,0.3s,baz=112,slow=9.8,SNR=3.2						
BBOO	Buckleboo	38.66	168	P	P	15 47 01.1	0.0
	baz=40,SNR=17						
USRK	Ussuriysk Arra	39.15	5	LR	LR	16 02 02.1	
	comp=Z,46nm,18.9s,baz=70,slow=35						
STKA	Stephens Creek	39.28	160	P	P	15 47 06.5	+0.2
	12nm,0.6s,baz=341,slow=8.1,SNR=37						
STKA	Stephens Creek	39.28	160	P	P	15 47 06.5	+0.2
	baz=40,SNR=31						
ARMA	Armidale	42.39	148	P	P	15 47 33.0	+0.9
	baz=43,SNR=4.0						
SONM	Songino Array	46.13	341	P	P	15 48 02.2	+0.4
	0.3nm,0.5s,baz=149,slow=7.1,SNR=3.6						
MKAR	Makanchi Array	56.68	325	P	P	15 49 20.5	+0.1
	1.0nm,0.3s,baz=115,slow=7.6,SNR=48						
ZALV	Zalesovo Beam	59.56	332	P	P	15 49 39.8	-0.5
	0.9nm,0.6s,baz=108,slow=4.8,SNR=5.6						
AKTO	Aktyubinsk	72.85	321	P	P	15 51 05.5	0.0
	0.8nm,0.4s,baz=84,slow=8.6,SNR=7.9						
ARCES	ARCESS Array B	89.30	340	P	P	15 52 31.6	-0.8
	4.1nm,1.1s,baz=78,slow=4.7,SNR=4.4						
FINES	FINESS Array B	90.82	332	P	P	15 52 38.4	-1.1
	0.8nm,0.7s,baz=94,slow=2.9,SNR=4.6						
HFS	Hagfors	97.00	332	P	P	15 53 06.9	-1.1
	0.8nm,0.7s,baz=107,slow=4.8,SNR=4.2						
TORD	Torodi Ar. Bea	122.90	289	PKP	PKPdf	15 58 32.9	-0.4
	0.5nm,0.8s,baz=70,slow=1.7,SNR=3.6						

*IDC **04** 16:13:49.6±4.5, 5°.21S×101°.76E, h0km, mb3.2/4, mb1 3.5/4, mb1mx3.3/23, mbtmp3.2/4, Error ellipse: s-maj=182.6km s-min=23.5km az=55.0*
*ISCJB **04** 16:13:51.0±1.8, 5°.63S±0°.10×101°.9E±0°.1, h29km, mb3.3/4, Error ellipse: s-maj=20.8km s-min=14.1km az=179.2*
*DJA **04** 16:14:02.7±1.6, 6°S±7°×10°3E±1°0, h12km±11km, M3.2/5, MLv3.2/5*

ISC 04 16:13:51.6±1.6**, 5°.5S**±0°.1×**101°.9E**±0°.1**, h29**km**, n9, σ1ˢ76**/8**, mb3.3**/4**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MNAI	Manna	1.60	44	P	Pb	16 14 21.1	+0.5
MNAI				S	Sn	16 14 37.9	+0.1
KSI	Kapahiang	2.01	22	P	Pb	16 14 36.6	+9.0
LWLI	Liwa	2.26	77	P	Pn	16 14 26.6	-0.6
KASI	Kota Agung	2.64	90	P	Pn	16 14 30.6	-1.7
CGJI	Cibinong	3.97	106	P	Pn	16 14 48.6	-2.0
CGJI				S	Sn	16 15 27.8	-8.5
CMAR	Chiang Mai Arr	24.01	353	P	P	16 19 04.2	+0.1
	0.5nm,0.8s,baz=184,slow=8.5,SNR=6.2						
WRA	Warramunga Arr	34.68	117	P	P	16 20 41.7	+2.6
	0.3nm,0.4s,baz=309,slow=8.5,SNR=4.2						
ASAR	Alice Springs	35.73	124	P	P	16 20 54.3	+6.1
	0.1nm,0.4s,baz=299,slow=7.8,SNR=5.0						
MKAR	Makanchi Array	54.91	344	P	P	16 23 18.6	-1.1
	0.3nm,0.7s,baz=155,slow=9.0,SNR=5.0						

IDC 04 16:23:43.1±1.3**, 4°.99N**×**126°.63E, h0**km**, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.5**/23**, mbtmp3.6**/5**, Error ellipse: s-maj=136.4km s-min=19.1km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.91	163	P	P	16 29 17.6	+0.5
	1.1nm,0.4s,baz=343,slow=10,SNR=12						
ASAR	Alice Springs	29.36	166	P	P	16 29 47.4	-0.6
	0.1nm,0.3s,baz=351,slow=7.2,SNR=3.9						
SONM	Songino Array	46.08	341	P	P	16 32 08.9	-0.1
	0.3nm,0.6s,baz=158,slow=9.6,SNR=2.9						
MKAR	Makanchi Array	56.47	325	P	P	16 33 27.4	+0.5
	1.2nm,0.5s,baz=118,slow=8.0,SNR=38						
ZALV	Zalesovo Beam	59.43	333	P	P	16 33 46.5	-0.9
	0.7nm,0.5s,baz=145,slow=5.4,SNR=4.5						

IDC 04 16:36:58.4±388.0**, 39°.68N**×**112°.64W, h0**km**, Error ellipse: s-maj=105.6km s-min=37.9km az=166.0, Utah**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I56US	NEWPORT INFRAS	9.16	341	i		17 30 00.0	
	baz=158,slow=332,SNR=0.5						
I10CA	LAC DU BONNET	15.74	43	i		18 09 40.0	
	baz=235,slow=332,SNR=0.6						
I18DK	QAANAAQ INFRAS	42.00	13	i		20 50 30.0	
	baz=231,slow=340,SNR=0.7						

CASC 04 16:41:40.1±1.3**, 13°.18N**×**89°.59W, h33**km±3km**, MD3.5, ML3.4, 2C-8D, El Salvador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNET	Serv Nac Est T	0.61	35	⇓eP	Pn	16 41 52.3	-0.2
SNET				AML	AML	16 42 07.9	
	comp=Z,1µm,0.2s						
BOQS	Boqueron	0.63	29	⇑iP	Pn	16 41 52.9	-0.1
BOQS				eS	Sn	16 42 02.8	+0.7
SBLS	San Blas	0.66	357	⇓eP	Pn	16 41 53.1	-0.2
SBLS				eS	Sb	16 42 03.5	+0.8
LFRS	El Faro	0.68	49	⇓iP	Pn	16 41 53.2	-0.2
SNJE	San Jose	0.68	359	⇓eP	Pn	16 41 53.5	-0.2
RTR	El Retiro	0.71	356	eP	Pn	16 41 53.9	-0.2
LFU	La Fuente	0.73	39	⇓eP	Pn	16 41 54.3	+0.1
LFU				eS	Sb	16 42 05.7	+1.2
LBRS	Las Brisas	0.77	44	⇓iP	Pn	16 41 54.9	+0.1
SNVI	San Vicente	0.85	59	⇓eP	Pn	16 41 55.6	-0.3
SNVI				eS	Sb	16 42 08.1	+0.1
RBDL	Robledal	0.93	354	⇓eP	Pn	16 41 57.1	0.0
IXG	Ixpaco	1.30	320	eP	Pn	16 42 02.0	-0.1
IXG				eS	Sn	16 42 19.3	+0.8
VSM	San Miguel	1.30	79	⇑eP	Pn	16 42 02.4	0.0
BLLM	Bellamira	1.34	79	eP	Pn	16 42 02.6	0.0
CAHU	Cacacuatique	1.47	66	eP	Pn	16 42 04.3	-0.2
NBG	Las Nubes	1.58	332	eP	Pn	16 42 07.4	+1.3
NBG				eS	Sn	16 42 25.9	+0.2
CNCH	Conchagua	1.71	87	eP	Pn	16 42 07.5	-0.3
FUG	Fuego 3	1.75	316	eP	Pn	16 42 09.1	+0.7
FUG				eS	Sn	16 42 29.8	+0.1
FG6		1.86	318	eP	Pn	16 42 10.4	+0.4
FG6				eS	Sn	16 42 33.4	+0.7
MRL	Marmol	1.88	357	eP	Pn	16 42 11.6	+1.5

*IDC **04** 16:47:49.3±1.1, 7°.80N×92°.14E, h0km, mb3.6/9, mb1 3.7/10, mb1mx3.5/28, mbtmp3.6/10, ML3.9/1, MS3.3/4, Ms1 3.3/4, ms1mx2.9/34, Error ellipse: s-maj=39.2km s-min=19.6km az=53.0*
*ISCJB **04** 16:47:51.3±0.8, 7°.7N±0°.1×92°.3E±0°.1, h25km, mb3.6/10, MS3.3/3, Error ellipse: s-maj=22.5km s-min=12.7km az=148.0*

ISC 04 16:47:52.9±1.1**, 7°.7N**±0°.1×**92°.2E**±0°.2**, h25**km**, n22, σ1ˢ01**/19**, mb3.7**/10**, MS3.3**/3**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	8.31	126	Pn	Pn	16 49 58.1	+6.0
	0.8nm,0.3s,baz=312,slow=17,SNR=3.9						
PSI				LR	LR	16 53 59.5	
	comp=Z,188nm,18.1s,baz=125,slow=44						
CMAR	Chiang Mai Arr	12.54	31	Pn	Pn	16 50 49.5	-0.4
	0.2nm,0.3s,baz=228,slow=14,SNR=7.1						
ODAN	Odare	19.57	347	eP	Pn	16 52 22.4	+1.7
	21nm,0.5s						
RAMN	Ramite	19.84	345	eP	Pn	16 52 24.8	+0.8
	54nm,0.5s						
TAPN	Taplejung	19.97	348	eP	Pn	16 52 28.2	+2.6
	36nm,0.6s						
PKI	Pulchoki	20.75	343	eP	Pn	16 52 34.9	0.0
	28nm,0.5s						
GUN	Gumba	20.94	344	eP	P	16 52 34.5	+0.1
KKN	Kakani	21.00	343	eP	P	16 52 36.0	+1.1
	13nm,0.5s						
KOLN	Koldanda	21.53	339	eP	P	16 52 41.0	+0.5
	29nm,0.6s						
DANN	Dangsing	22.00	340	eP	P	16 52 46.1	+0.4
	21nm,0.7s						
PYUN	Piuthan	22.05	338	eP	P	16 52 46.2	+0.1
	18nm,0.4s						
KAPI	Kappang	30.29	114	LR	LR	17 07 55.5	
	comp=Z,64nm,20.0s,baz=110,slow=40						
MKAR	Makanchi Array	39.84	349	P	P	16 55 24.1	-0.3
	1.5nm,0.7s,baz=168,slow=8.0,SNR=21						
MKAR				LR	LR	17 15 45.5	
	comp=Z,25nm,18.5s,baz=182,slow=42						
SONM	Songino Array	41.76	14	P	P	16 55 39.5	-0.8
	0.8nm,0.8s,baz=196,slow=8.2,SNR=8.5						
ZALV	Zalesovo Beam	46.47	354	P	P	16 56 16.5	-1.3
	0.4nm,0.4s,baz=171,slow=10,SNR=4.8						
ZALV				LR	LR	17 18 41.3	
	comp=Z,43nm,18.6s,baz=14,slow=40						
BVAR	Borovoye Array	48.52	343	P	P	16 56 33.9	+0.1
	0.4nm,0.5s,baz=163,slow=6.2,SNR=3.7						
WRA	Warramunga Arr	49.78	124	P	P	16 56 44.4	+0.4
	0.2nm,0.4s,baz=303,slow=8.5,SNR=2.6						
ASAR	Alice Springs	51.33	129	P	P	16 56 56.5	+0.9
	0.2nm,0.6s,baz=304,slow=7.1,SNR=6.5						
BRTR	Keskin Array B	61.05	311	P	P	16 58 04.9	-0.2
	0.4nm,0.7s,baz=111,slow=8.2,SNR=2.9						
FINES	FINESS Array B	71.94	332	P	P	16 59 13.2	-0.8
	1.4nm,0.9s,baz=103,slow=8.6,SNR=4.8						
GERES	GERESS Array B	76.64	318	P	P	16 59 42.1	+0.3
	0.1nm,0.3s,baz=112,slow=5.9,SNR=2.6						
LPG	La Plagne	81.34	315	eP	P	17 00 07.3	-0.6
	8.2nm,1.0s						

IDC 04 16:54:54.4±2.2**, 17°.58S**×**175°.14W, h237**km±22km**, mb3.5**/8**, mb1 3.7**/9**, mb1mx3.5**/21**, mbtmp3.6**/9**, Error ellipse: s-maj=21.2km s-min=14.6km az=122.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.88	42	P	Pn	16 56 07.5	-1.1
	7.3nm,0.3s,baz=26,slow=3.1,SNR=4.1						
AFI				S	S	16 57 01.4	-6.0
	38nm,0.3s,baz=42,slow=19,SNR=14						
URZ	Urewera	21.69	197	P	P	16 59 26.4	-0.1
	5.1nm,0.3s,baz=166,slow=16,SNR=16						
URZ				S	S	17 03 09.2	-0.5
	9.0nm,0.9s,baz=154,slow=18,SNR=6.4						
STKA	Stephens Creek	41.52	242	P	P	17 02 18.9	+0.1
	1.9nm,0.5s,baz=91,slow=8.1,SNR=7.8						
WRA	Warramunga Arr	47.75	259	P	P	17 03 07.6	-0.6
	4.5nm,0.5s,baz=97,slow=6.8,SNR=100						
ASAR	Alice Springs	47.87	254	P	P	17 03 08.8	-0.3
	24nm,0.6s,baz=89,slow=8.6,SNR=655						
FITZ	Fitzroy Crossi	56.15	260	P	P	17 04 09.9	0.0
	0.9nm,0.6s,baz=126,slow=12,SNR=9.9						
VNDA	Vanda	61.05	186	P	P	17 04 44.2	+1.5
	1.3nm,0.9s,baz=22,slow=5.5,SNR=5.0						
NVAR	Mina Array Bea	77.06	42	P	P	17 06 21.4	-0.4
	0.3nm,0.4s,baz=243,slow=13,SNR=4.1						
PDAR	Pinedale Array	85.00	42	P	P	17 07 03.0	-0.5
	0.5nm,0.8s,baz=220,slow=2.4,SNR=3.7						
SONM	Songino Array	95.35	318	P	P	17 07 51.7	-0.1
	0.9nm,0.9s,baz=122,slow=6.1,SNR=3.6						
BRTR	Keskin Array B	146.71	317	PKPbc	PKPbc	17 14 08.9	+0.2
	0.5nm,0.6s,baz=92,slow=3.0,SNR=4.0						

*THE **04** 16:55:35.9, 41°.48N×23°.33E, h11km±3km, ML2.0/7, Error ellipse: s-maj=3.3km s-min=0.8km az=173.0*
*CSEM **04** 16:55:36.4±0.3, 41°.45N×23°.36E, h20km, ML2.0/7, Error ellipse: s-maj=7.3km s-min=5.5km az=90.0*
*BEO **04** 16:55:37.0±1.5, 41°.50N×23°.25E, h0km, ML1.9/3*

ISC 04 16:55:35.9±1.1**, 41°.49N**±0°.02×**23°.32E**±0°.03**, h7**km±12km**, n25, σ0ˢ50**/46**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SRS	Serrai	0.43	151	P	Pg	16 55 44.2	0.0
SRS				S	Sg	16 55 50.3	+0.6
SRS	Serrai	0.43	151	P	Pg	16 55 44.2	0.0
SRS				S	Sg	16 55 50.3	+0.6
NVR	Nevrokopi	0.43	109	P	Pg	16 55 44.1	-0.2
NVR				S	Sg	16 55 50.2	+0.3
NVR	Nevrokopi	0.43	109	P	Pg	16 55 44.1	-0.2
NVR				S	Sg	16 55 50.2	+0.3
KNT	Kendrikon	0.46	224	P	Pg	16 55 44.9	+0.1
KNT				S	Sg	16 55 51.3	+0.5
KNT	Kendrikon	0.46	224	P	Pg	16 55 44.9	+0.1
KNT				S	Sg	16 55 51.3	+0.5
VAY	Valandovo	0.59	253	P	Pg	16 55 46.2	-1.1
VAY	Valandovo	0.59	253	P	Pg	16 55 46.2	-1.1
SOH	Sokhos	0.67	178	P	Pg	16 55 48.7	-0.1
SOH				S	Sg	16 55 57.6	+0.1
SOH	Sokhos	0.67	178	P	Pg	16 55 48.7	-0.1
SOH				S	Sg	16 55 57.6	+0.1
GRG	Griva	0.88	233	P	Pg	16 55 52.7	0.0
GRG				S	Sb	16 56 05.0	-0.4
GRG	Griva	0.88	233	P	Pg	16 55 52.7	0.0
GRG				S	Sb	16 56 05.0	-0.4
THE	Thessaloniki	0.90	198	P	Pg	16 55 53.1	-0.1
THE				S	Sb	16 56 05.6	-0.4
THE	Thessaloniki	0.90	198	P	Pg	16 55 53.1	-0.1
THE				S	Sb	16 56 05.6	-0.4
HORT	Hortiatis	0.91	191	P	Pg	16 55 53.2	-0.1
HORT				S	Sg	16 56 05.3	+0.2
HORT	Hortiatis	0.91	191	P	Pg	16 55 53.2	-0.1
HORT				S	Sg	16 56 05.3	+0.2
KAVA	Kavala	1.03	118	P	Pb	16 55 55.1	-0.9
KAVA	Kavala	1.03	118	P	Pb	16 55 55.1	-0.9
VTS	Vitosha	1.10	356	P	Pb	16 55 57.2	-0.2
VTS				S	Sb	16 56 11.9	-0.1
VTS	Vitosha	1.10	356	ePg	Pb	16 55 56.4	-1.0
VTS				eSg	Sb	16 56 11.5	-0.5
VTS	Vitosha	1.10	356	ePg	Pb	16 55 56.4	-1.0
VTS	Vitosha	1.10	356	P	Pb	16 55 57.2	-0.2
VTS				eSg	Sb	16 56 11.5	-0.5
VTS				S	Sb	16 56 11.9	-0.1
BARS	Barje	1.73	320	ePg	Pn	16 56 07.3	+0.8
BARS				eSg	Sb	16 56 30.6	+0.5
BARS	Barje	1.73	320	ePg	Pn	16 56 07.3	+0.8
BARS				eSg	Sb	16 56 30.6	+0.5
ZAPS	Zavoj	1.85	344	ePg	Pb	16 56 10.1	0.0
ZAPS				eSg	Sg	16 56 35.4	0.0

*ISCJB **04** 16:56:05.2±0.5, 36°.99N±0°.02×22°.16E±0°.03, h1km±4km, Error ellipse: s-maj=4.4km s-min=3.3km az=42.9*
*THE **04** 16:56:05.5, 36°.98N×22°.17E, h0km±1km, ML2.6/4, Error ellipse: s-maj=1.4km s-min=0.4km az=194.0*
*ATH **04** 16:56:05.7, 36°.99N×22°.16E, h10km±1km, MD3.1/20*
*CSEM **04** 16:56:05.6±0.2, 37°.00N×22°.16E, h0km±2km, ML2.6/4, Error ellipse: s-maj=4.4km s-min=3.2km az=67.0*

ISC 04 16:56:05.8±1.0**, 36°.99N**±0°.02×**22°.17E**±0°.02**, h3**km±10km**, n72, σ0ˢ66**/103**, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DYR	Agios Nikonas	0.27	149	P	Pg	16 56 10.5	-0.4
DYR				S	Sg	16 56 14.7	+0.3
DYR	Agios Nikonas	0.27	149	ePG	Pg	16 56 10.7	-0.2
DYR				eSG	Sg	16 56 15.3	+0.9
DYR	Agios Nikonas	0.27	149	ePg	Pg	16 56 10.7	-0.2

DYR				S	Sg	16 56 14.7	+0.3
DYR				eSg	Sg	16 56 15.3	+0.9
ITM	Ithomi	0.27	315	P	Pg	16 56 10.9	-0.1
ITM				S	Sg	16 56 15.2	+0.7
ITM	Ithomi	0.27	315	ePG	Pg	16 56 10.9	-0.1
ITM				eSG	Sg	16 56 15.1	+0.6
ITM	Ithomi	0.27	315	P	Pg	16 56 10.9	-0.1
ITM				eSg	Sg	16 56 15.1	+0.6
PYL	PYLOS	0.35	254	P	Pg	16 56 12.0	-0.6
PYL				S	Sg	16 56 18.0	+0.8
PYL	PYLOS	0.35	254	ePG	Pg	16 56 12.4	-0.2
PYL				eSB	Sg	16 56 17.9	+0.8
PYL	PYLOS	0.35	254	P	Pg	16 56 12.0	-0.6
PYL	PYLOS	0.35	254	ePg	Pg	16 56 12.4	-0.2
PYL				eSb	Sg	16 56 17.9	+0.8
VLX	Vlachokerasia	0.41	24	P	Pg	16 56 13.8	-0.1
VLX				S	Sg	16 56 20.1	+0.8
VLX	Vlachokerasia	0.41	24	ePB	Pg	16 56 13.7	-0.1
VLX				eSB	Sg	16 56 20.0	+0.8
VLX	Vlachokerasia	0.41	24	ePb	Pg	16 56 13.7	-0.1
VLX				eSb	Sg	16 56 20.0	+0.8
AMT	Artemida-Makis	0.65	326	P	Pg	16 56 18.0	-0.4
AMT				S	Sb	16 56 28.3	-1.0
AMT	Artemida-Makis	0.65	326	ePG	Pg	16 56 17.9	-0.4
AMT				eSB	Sg	16 56 27.6	+0.8
AMT	Artemida-Makis	0.65	326	P	Pg	16 56 18.0	-0.4
AMT				eSb	Sg	16 56 27.6	+0.8
AMT				S	Sb	16 56 28.3	-1.0
VLI	Veliai	0.68	114	P	Pg	16 56 18.6	-0.2
VLI				S	Sg	16 56 28.2	+0.7
VLI	Veliai	0.68	114	ePG	Pg	16 56 18.6	-0.2
VLI				eSB	Sg	16 56 28.3	+0.7
VLI	Veliai	0.68	114	P	Pg	16 56 18.6	-0.2
VLI				S	Sg	16 56 28.2	+0.7
GUR	Goura	0.95	8	P	Pg	16 56 23.7	-0.4
GUR	Goura	0.95	8	ePB	Pg	16 56 24.1	0.0
GUR				eSB	Sg	16 56 36.7	+0.2
GUR	Goura	0.95	8	P	Pg	16 56 23.7	-0.4
GUR	Goura	0.95	8	ePb	Pg	16 56 24.1	0.0
GUR				eSb	Sg	16 56 36.7	+0.2
KYTH	Kithira	1.00	135	ePN	Pg	16 56 25.0	+0.1
KYTH	Kithira	1.00	135	ePn	Pg	16 56 25.0	+0.1
DID	Didima	1.00	59	P	Pg	16 56 24.4	-0.5
DID				S	Sb	16 56 39.0	-0.3
DID	Didima	1.00	59	ePG	Pg	16 56 24.4	-0.5
DID				eSB	Sb	16 56 38.8	-0.5
DID	Didima	1.00	59	P	Pg	16 56 24.4	-0.5
DID				eSb	Sb	16 56 38.8	-0.5
RLS	Riolos of Patr	1.20	333	ePB	Pg	16 56 28.3	-0.5
RLS	Riolos of Patr	1.20	333	ePb	Pg	16 56 28.3	-0.5
LTK	Loutraki	1.21	32	P	Pg	16 56 28.6	-0.4
LTK	Loutraki	1.21	32	ePB	Pg	16 56 28.9	-0.1
LTK	Loutraki	1.21	32	ePb	Pg	16 56 28.9	-0.1
LTK	Loutraki	1.21	32	P	Pg	16 56 28.6	-0.4
LAKA	Lakka	1.25	353	P	Pg	16 56 29.0	-0.9
LAKA	Lakka	1.25	353	ePN	Pg	16 56 28.9	-0.9
LAKA	Lakka	1.25	353	ePn	Pg	16 56 28.9	-1.0
LAKA	Lakka	1.25	353	P	Pg	16 56 29.0	-0.9
NAIG	Nisos Aigina	1.30	54	ePG	Pg	16 56 29.9	-0.9
NAIG	Nisos Aigina	1.30	54	ePg	Pg	16 56 29.9	-0.9
UPR	University Cam	1.32	347	ePB	Pg	16 56 30.6	-0.6
UPR	University Cam	1.32	347	ePb	Pg	16 56 30.6	-0.6
TRIZ	Trizonia	1.37	357	P	Pg	16 56 31.1	-1.1
TRIZ	Trizonia	1.37	357	ePB	Pg	16 56 31.5	-0.7
TRIZ				eSB	Sn	16 56 50.9	+0.3
TRIZ	Trizonia	1.37	357	P	Pg	16 56 31.1	-1.1
TRIZ	Trizonia	1.37	357	ePb	Pg	16 56 31.5	-0.7
TRIZ				eSb	Sn	16 56 50.9	+0.3
KALE	Kalithea	1.40	359	P	Pn	16 56 31.2	-1.1
KALE				S	Sn	16 56 52.5	+1.2
KALE	Kalithea	1.40	359	ePB	Pn	16 56 32.1	-0.2
KALE	Kalithea	1.40	359	P	Pn	16 56 31.2	-1.1
KALE	Kalithea	1.40	359	ePb	Pn	16 56 32.1	-0.2
KALE				S	Sn	16 56 52.5	+1.2
DSF	Desfina	1.45	11	P	Pn	16 56 32.9	0.0
DSF	Desfina	1.45	11	P	Pn	16 56 32.9	0.0
EFP	Efpalio	1.45	352	P	Pn	16 56 32.6	-0.3
EFP	Efpalio	1.45	352	ePB	Pn	16 56 33.2	+0.3
EFP	Efpalio	1.45	352	P	Pn	16 56 32.6	-0.3
EFP	Efpalio	1.45	352	ePb	Pn	16 56 33.2	+0.3
PTL	Penteli	1.71	51	ePN	Pb	16 56 37.5	-0.5
PTL	Penteli	1.71	51	ePn	Pb	16 56 37.5	-0.5
VLS	Valsamata	1.72	314	ePG	Pn	16 56 37.2	+0.5
VLS	Valsamata	1.72	314	ePg	Pn	16 56 37.2	+0.5
LKR	Lokris	1.78	21	ePN	Pn	16 56 38.0	+0.5
LKR	Lokris	1.78	21	ePn	Pn	16 56 38.0	+0.5
EVR	Evrytania	1.94	352	ePG	Pb	16 56 41.4	-0.5
EVR	Evrytania	1.94	352	ePg	Pb	16 56 41.4	-0.5
AGG	Agios Georgios	2.03	4	ePG	Pb	16 56 43.1	-0.3
AGG				eSN	Sb	16 57 08.8	-0.3
AGG	Agios Georgios	2.03	4	ePg	Pb	16 56 43.1	-0.3
AGG				eSn	Sb	16 57 08.8	-0.3
VAM	Vamos	2.28	133	ePN	Pb	16 56 46.4	-1.2
VAM	Vamos	2.28	133	ePn	Pb	16 56 46.4	-1.2
AOS	Alonnisos	2.56	31	ePN	Pn	16 56 49.2	+1.0
AOS	Alonnisos	2.56	31	ePn	Pn	16 56 49.2	+1.0
THL	Klokotos Trika	2.57	357	ePN	Pn	16 56 49.8	+1.5
THL	Klokotos Trika	2.57	357	ePn	Pn	16 56 49.8	+1.5

*IDC **04** 16:58:43.9±0.7, 13°.23N×145°.91E, h0^{km}, mb4.1/19, mb1 4.2/19, mb1mx4.1/29, mbtmp4.1/19, MS3.6/9, Ms1 3.6/9, ms1mx3.3/34, Error ellipse: s-maj=18.0km s-min=16.0km az=81.0*

*ISCJB **04** 16:58:48.9±0.5, 13°.17N±0°.07×145°.82E±0°.07, h50^{km}, mb4.2/34, MS3.6/8, Error ellipse: s-maj=11.1km s-min=9.1km az=138.5*

*NEIC **04** 16:58:50.1±1.6, 13°.20N×145°.77E, h43^{km}±13^{km}, mb4.3/12, Error ellipse: s-maj=13.3km s-min=7.4km az=90.0*

ISC 04 16:58:51.0±0.7, **13°.2N**±0°.1×**145°.78E**±0°.09, **h50**^{km}, **n63**, σ0^{s}**89**/59, **mb4.2**/33, **MS3.6**/8, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.96	293	ePg	Pn	16 59 06.6	-1.6
GUMO				Sn	Sn	16 59 21.9	+1.0
GUMO	Guam	0.96	293	Pn	Pn	16 59 06.9	-1.4
	257nm,0.3s,baz=153,slow=8.7,SNR=80						
GUMO				Sn	Sn	16 59 21.9	+1.0
	552nm,0.3s,baz=342,slow=21,SNR=15						
CBIJ	Chichi jima	14.22	347	LR	LR	17 06 25.1	
	comp=Z,127nm,18.8s,baz=111,slow=32						
DAV	Davao City (W)	20.79	255	LR	LR	17 10 50.9	
	comp=Z,116nm,18.5s,baz=123,slow=35						
JOW	Kunigami	21.28	312	P	P	17 03 34.3	+1.0
JOW	Kunigami	21.28	312	P	P	17 03 34.3	+1.0
	11nm,0.7s,baz=112,slow=7.4,SNR=4.8						
JNU	Nakatsue	24.04	328	P	P	17 04 02.0	+0.5
JNU	Nakatsue	24.04	328	P	P	17 04 02.0	+0.5
	9.5nm,1.0s,baz=19,slow=2.4,SNR=4.5						
MJAR	Matsushiro Arr	24.21	345	P	P	17 04 02.5	-0.5
MJAR	Matsushiro Arr	24.21	345	P	P	17 04 02.5	-0.5
	0.9nm,0.4s,baz=134,slow=24,SNR=14						
MAJO	Matsushiro	24.21	345	eP	P	17 04 02.4	-0.6
	8.4nm,0.8s						
KSRS	Korea Array	28.93	330	P	P	17 04 46.0	+0.5
	1.2nm,0.9s,baz=144,slow=9.8,SNR=5.0						
KSRS				LR	LR	17 16 14.9	
	comp=Z,58nm,19.1s,baz=130,slow=36						
KSAR	Wonju Array Be	28.95	330	P	P	17 04 46.0	+0.4
USRK	Ussuriysk Arra	33.07	342	LR	LR	17 17 51.8	
	comp=Z,81nm,20.1s,baz=280,slow=35						
WRAB	Tennant Creek	34.80	199	eP	P	17 05 36.3	-0.8
	2.8nm,0.8s						
WRA	Warramunga Arr	34.81	199	P	P	17 05 37.1	-0.1
WRA	Warramunga Arr	34.81	199	P	P	17 05 37.1	-0.1
	1.7nm,0.8s,baz=20,slow=9.7,SNR=8.3						
FITZ	Fitzroy Crossi	36.92	213	P	P	17 05 55.5	+0.2
FITZ	Fitzroy Crossi	36.92	213	P	P	17 05 55.5	+0.2
	3.1nm,0.9s,baz=34,slow=10,SNR=5.9						
ASAR	Alice Springs	38.45	198	P	P	17 06 08.2	0.0
ASAR	Alice Springs	38.45	198	P	P	17 06 08.2	0.0
	0.7nm,0.9s,baz=17,slow=13,SNR=4.3						
CMAR	Chiang Mai Arr	45.27	283	P	P	17 07 03.6	-0.4
CMAR				PcP	PcP	17 08 45.9	+2.5
CMAR	Chiang Mai Arr	45.27	283	P	P	17 07 03.6	-0.4
	1.6nm,0.7s,baz=84,slow=5.9,SNR=14						
CMAR				PcP	PcP	17 08 45.9	+2.5
	1.0nm,0.9s,baz=132,slow=2.3,SNR=5.6						
CMAR				LR	LR	17 26 26.1	
	comp=Z,49nm,20.3s,baz=246,slow=37						
ULN	Ulaanbaatar	47.20	325	eP	P	17 07 19.1	+0.1
	1.0nm,0.7s						
SONM	Songino Array	47.55	325	P	P	17 07 21.9	+0.2
SONM	Songino Array	47.55	325	P	P	17 07 21.9	+0.2
	1.1nm,0.8s,baz=128,slow=5.7,SNR=8.5						
BILL	Bilibino	56.39	9	eP	P	17 08 26.6	-0.3
	4.0nm,0.9s						
MK31	Makanchi Array	62.38	316	eP	P	17 09 08.9	+0.2
MKAR	Makanchi Array	62.38	316	P	P	17 09 09.2	+0.6
MKAR	Makanchi Array	62.38	316	P	P	17 09 09.2	+0.6
	2.5nm,0.5s,baz=88,slow=8.5,SNR=51						
ZALV	Zalesovo Beam	62.45	324	P	P	17 09 08.6	-0.3
ZALV	Zalesovo Beam	62.45	324	P	P	17 09 08.6	-0.3
	0.4nm,0.4s,baz=123,slow=5.3,SNR=2.9						
ZALV				LR	LR	17 37 11.3	
	comp=Z,57nm,18.8s,baz=53,slow=37						
KURK	Kurchatov	65.44	320	eP	P	17 09 27.6	-1.0
	10nm,1.0s						
TKM2	Tokmak 2	66.64	311	P	P	17 09 36.2	-0.6
	1.6nm,0.8s						
AAK	Ala-Archa	67.43	311	P	P	17 09 40.5	-1.2
	5.4nm,0.8s						
AAK	Ala-Archa	67.43	311	LR	LR	17 40 24.1	
	comp=Z,45nm,18.9s,baz=219,slow=37						
EKS2	Erkin-Say	67.96	311	P	P	17 09 46.9	+1.8
	1.7nm,0.8s						
ILAR	Eielson Array	68.53	25	P	P	17 09 48.3	+0.2
ILAR	Eielson Array	68.53	25	P	P	17 09 48.3	+0.2
	0.6nm,0.4s,baz=253,slow=5.7,SNR=12						
PPT	Papeete	70.75	114	LR	LR	17 34 52.7	
	comp=Z,117nm,21.7s,baz=312,slow=31						
BVAR	Borovoye Array	70.77	322	P	P	17 10 01.5	-0.6
BVAR	Borovoye Array	70.77	322	P	P	17 10 01.5	-0.6
	1.6nm,0.5s,baz=103,slow=8.0,SNR=14						
BRVK	Borovoye	70.84	322	eP	P	17 10 01.3	-1.2
	2.4nm,0.7s						
ABKAR	Akbulak array	77.42	318	eP	P	17 10 40.9	0.0
	4.3nm,1.0s						
YKA	Yellowknife Ar	82.79	27	P	P	17 11 08.9	-0.7
YKA	Yellowknife Ar	82.79	27	P	P	17 11 08.9	-0.7
	0.4nm,0.4s,baz=284,slow=4.9,SNR=7.2						
RES	Resolute Bay	84.71	13	P	P	17 11 20.0	+0.8
	2.6nm,1.2s						
NVAR	Mina Array Bea	86.46	52	P	P	17 11 28.9	0.0
NVAR	Mina Array Bea	86.46	52	P	P	17 11 28.9	0.0
	0.2nm,0.5s,baz=304,slow=2.1,SNR=2.7						
BSMT	Bassoo Peak	86.54	42	eP	P	17 11 30.2	+1.1
	3.0nm,0.8s						
KEV	Kevo	87.15	342	ep	P	17 11 29.6	-1.7
	0.5nm,0.4s						
ARCES	ARCESS Array B	87.72	342	P	P	17 11 33.6	-0.4
ARCES	ARCESS Array B	87.72	342	P	P	17 11 33.6	-0.4
	3.4nm,0.9s,baz=64,slow=11,SNR=4.6						
JOF	Joensuu	89.01	335	ep	P	17 11 39.5	-0.8
	1.9nm,0.6s						
KBZ	Khabaz	90.06	315	P	P	17 11 45.1	-0.5
KBZ	Khabaz	90.06	315	P	P	17 11 45.1	-0.5
	1.8nm,0.9s,baz=67,slow=15,SNR=4.0						
KAF	Kangasniemi	91.43	336	ep	P	17 11 49.6	-2.0
	1.5nm,0.7s						
FINES	FINESS Array B	91.88	335	P	P	17 11 53.3	-0.4
FINES	FINESS Array B	91.88	335	P	P	17 11 53.3	-0.4
	1.4nm,0.5s,baz=68,slow=5.2,SNR=18						
NOA	NORSAR Array B	97.72	340	LR	LR	17 57 59.6	
	comp=Z,30nm,18.3s,baz=290,slow=36						
BRTR	Keskin Array B	97.97	314	P	Pdif	17 12 21.9	-0.3
BRTR	Keskin Array B	97.97	314	P	Pdif	17 12 21.9	-0.3
	1.1nm,1.0s,baz=35,slow=4.5,SNR=4.4						
DBIC	Dimbokro	144.78	302	ePKPdf	PKPdf	17 18 23.2	-0.2

*NEIC **04** 17:01:27.8±0.9, 22°.09S×178°.76W, h525^{km}±10^{km}, mb4.2/16, Error ellipse: s-maj=15.5km s-min=12.3km az=126.0*

*IDC **04** 17:01:34.0±2.2, 21°.90S×179°.21W, h574^{km}±26^{km}, mb3.4/13, mb1 3.6/13, mb1mx3.5/20, mbtmp3.4/13, Error ellipse: s-maj=21.8km s-min=10.6km az=156.0*

*SZGRF **04** 17:01:43.0, 23°.55S×176°.46W, h33^{km}, South of Fiji Islands*

ISC 04 17:01:32.0±0.5, **22°.17S**±0°.07×**178°.79W**±0°.09, **h576**^{km}, **n109**, σ1^{s}**84**/112, **mb4.0**/28, **8C-8D**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.32	325	eP	P	17 03 00.0	-6.2
	70nm,0.6s						
RAO	Raoul Island	7.10	174	eP	P	17 03 08.7	-13
AFI	Afiamalu	10.58	40	eP	P	17 03 50.5	-5.8
	106nm,0.7s						
AFI	Afiamalu	10.58	40	P	P	17 03 50.9	-5.4
	23nm,0.3s,baz=271,slow=0.8,SNR=14						
OTAZ	Otara	15.71	199	PN	P	17 04 48.9	+1.4
URZ	Urewera	16.42	191	eP	P	17 04 52.7	-1.4
	15nm,0.6s						
URZ	Urewera	16.42	191	PN	P	17 04 52.8	-1.4
URZ				SN	S	17 07 36.2	-2.6
URZ	Urewera	16.42	191	P	P	17 04 52.8	-1.4
	2.2nm,0.3s,baz=321,slow=4.2,SNR=26						
URZ				S	S	17 07 37.1	-1.7
	0.3nm,0.3s,baz=20,slow=23,SNR=5.5						
MWZ	Matawai	16.42	190	ePN	P	17 04 54.4	+0.2
MWZ				SN	S	17 07 42.0	+3.1
BKZ	Black Stump Fm	17.42	192	ePN	P	17 05 01.6	-1.7
RAR	Rarotonga	17.70	90	eP	P	17 05 01.5	-4.5
	26nm,0.6s						
RAR	Rarotonga	17.70	90	P	P	17 05 01.7	-4.3
	2.8nm,0.3s,baz=192,slow=5.4,SNR=3.9						
MRZ	Mangatainoka R	19.04	193	PN	P	17 05 17.8	-0.2
MRZ				SN	S	17 08 25.7	+4.4
SNZO	South Karori	19.86	195	eP	P	17 05 26.6	+1.3
	81nm,0.9s						
QRZ	Quartz Range	20.00	200	PN	P	17 05 27.8	+1.2
NNZ	Nelson	20.11	197	PN	P	17 05 27.9	+0.3
THZ	Tophouse	20.75	198	PN	P	17 05 34.5	+1.0
RPZ	Rata Peaks	23.08	199	eP	P	17 05 54.0	-0.2
RPZ	Rata Peaks	23.08	199	P	P	17 05 58.3	+4.1
	12nm,0.5s,baz=11,slow=3.3,SNR=4.9						
HNR	Honiara	24.02	298	eP	P	17 06 08.5	+5.6
	35nm,1.0s						
EIDS	Eidsvold	27.73	257	eP	P	17 06 34.3	-1.2
	1.8nm,0.4s						
PMG	Port Moresby	35.04	286	eP	P	17 07 35.0	-2.8
	6.3nm,0.7s						
STKA	Stephens Creek	36.42	246	eP	P	17 07 48.8	-0.2
	1.3nm,1.0s						
STKA	Stephens Creek	36.42	246	P	P	17 07 49.0	0.0
	2.8nm,0.5s,baz=89,slow=8.5,SNR=7.6						
ASAR	Alice Springs	43.44	259	P	P	17 08 44.5	-0.8
	0.7nm,0.5s,baz=91,slow=8.1,SNR=22						
ASAR				PcP	PcP	17 10 21.9	+1.5
	1.2nm,0.5s,baz=110,slow=3.9,SNR=12						
ASAR				S	S	17 14 31.1	-1.6
	1.0nm,0.7s,baz=97,slow=14,SNR=9.3						
WRAB	Tennant Creek	43.66	264	eP	P	17 08 44.9	-2.1
	1.6nm,0.7s						
WRA	Warramunga Arr	43.67	264	P	P	17 08 45.3	-1.7
	0.7nm,0.3s,baz=93,slow=8.0,SNR=15						
WRA				S	S	17 14 33.1	-2.9
	0.6nm,0.9s,baz=100,slow=15,SNR=3.3						
FITZ	Fitzroy Crossi	52.10	264	P	P	17 09 49.5	-0.2
	0.7nm,0.4s,baz=108,slow=12,SNR=7.4						
MBWA	Marble Bar	56.79	259	eP	P	17 10 21.4	-1.1
	4.4nm,0.5s						
MJAR	Matsushiro Arr	71.12	325	P	P	17 11 52.5	-0.6
	2.9nm,0.7s,baz=158,slow=5.9,SNR=18						
MAJO	Matsushiro	71.12	325	eP	P	17 11 52.3	-0.9
	3.2nm,0.6s						
KSM	Kuching	72.93	279	eP	P	17 12 03.6	-0.5
	5.1nm,0.7s						
KSRS	Korea Array	77.66	319	P	P	17 12 30.3	+0.6
	0.7nm,0.6s,baz=138,slow=5.1,SNR=4.1						
PMSA	Palmer Station	80.05	157	eP	P	17 12 40.2	-1.9
	4.2nm,0.5s						
CMB	Columbia Colle	81.18	43	P	P	17 12 50.3	+1.9
	2.8nm,0.6s						
NVAR	Mina Array Bea	82.74	44	P	P	17 12 59.2	+2.7
	2.1nm,0.6s,baz=226,slow=8.7,SNR=13						
CN2	Changchun	83.17	323	eP	P	17 12 58.3	+0.1
SNAA	Sanae	86.37	179	eP	P	17 13 15.9	+2.4
SNAA	Sanae	86.37	179	eP	P	17 13 15.5	+2.0
	1.5nm,0.7s						
VNA3	Neumayer Olymp	86.53	176	eP	P	17 13 17.0	+2.8
BJI	Beijing	86.56	316	P	P	17 13 16.5	+1.8
BJI				S	S	17 23 10.3	+6.5
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PMR	Palmer	86.81	14	eP	P	17 13 15.8	+0.5
	comp=Z,3.3nm,0.4s						
GYA	Guiyang	86.84	300	eP	P	17 13 17.0	+0.5
GYA				pP	pP	17 15 14.0	-7.0
GYA				sP	sP	17 16 05.6	-13
GYA				PP	PP	17 16 51.4	+0.9
GYA				SKS	SKSac	17 22 53.0	+3.7
GYA				S	ScS	17 23 10.9	-1.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VNA2	Neumayer--Watz	86.96	177	eP	P	17 13 19.3	+3.1
	baz=190,slow=2.5						
TXAR	Lajitas Array	88.57	58	P	P	17 13 28.2	+3.7
	comp=Z,2.4nm,0.9s,baz=216,slow=5.9,SNR=14						
KMI	Kunming	89.45	297	P	P	17 13 29.3	+0.4
KMI				pmax	pmax		
	comp=Z,4.0nm,1.9s						
CMAR	Chiang Mai Arr	89.98	290	P	P	17 13 33.0	+1.8
	comp=Z,1.1nm,0.4s,baz=140,slow=3.0,SNR=13						
COLA	College	89.99	13	P	P	17 13 30.2	+0.1
	comp=Z,2.8nm,0.6s						
HHC	Hu-ho-hao-te	89.99	315	eP	P	17 13 31.0	+0.1
HHC				pP	pP	17 15 30.7	-5.6
HHC				sP	sP	17 16 23.4	-10
HHC				PP	PP	17 17 16.5	+1.5
HHC				SKS	SKSac	17 23 09.1	+2.0
HHC				S	ScS	17 23 37.8	0.0
HHC				sS	sS	17 27 08.0	-11
HHC				SS	SS	17 29 56.2	+3.9
ILAR	Eielson Array	90.10	13	P	P	17 13 30.8	+0.2
	comp=Z,1.0nm,0.5s,baz=218,slow=5.0,SNR=20						
PDAR	Pinedale Array	90.67	44	P	P	17 13 36.3	+2.1
	comp=Z,1.5nm,0.8s,baz=234,slow=3.6,SNR=11						
YKA	Yellowknife Ar	98.33	25	P	P	17 14 09.8	+1.7
	comp=Z,0.6nm,1.0s,baz=240,slow=4.0,SNR=4.7						
ZALV	Zalesovo Beam	111.32	321	PKiKP	PKiKP	17 19 00.8	+0.1
	comp=Z,0.3nm,0.3s,baz=73,slow=1.4,SNR=4.3						
MKAR	Makanchi Array	111.80	313	PKiKP	PKiKP	17 19 02.3	+0.4
	comp=Z,0.3nm,0.4s,baz=191,slow=1.1,SNR=11						
ARU	Arti	126.14	325	ePKPdf	PKPdf	17 19 30.0	+0.9
ARCES	ARCESS Array B	130.42	349	PKP	PKPdf	17 19 38.1	+1.2
	comp=Z,3.0nm,0.6s,baz=63,slow=0.5,SNR=13						
FINES	FINESS Array B	137.15	343	PKhKP	PKPpre	17 19 42.3	
	comp=Z,2.0nm,0.9s,baz=40,slow=3.2,SNR=5.9						
FINES				PKP	PKiKP	17 19 50.3	-1.4
	comp=Z,1.3nm,0.5s,baz=52,slow=1.8,SNR=12						
NB2	NORSAR Subarra	140.54	352	PKP	PKPpre	17 19 50.6	
	comp=Z,2.2nm,1.1s,baz=16,slow=3.2						
NOA	NORSAR Array B	140.54	352	PKhKP	PKPpre	17 19 50.6	
	comp=Z,0.8nm,0.6s,baz=16,slow=4.7,SNR=10						
NOA				PKP	PKiKP	17 19 59.5	+0.8
	comp=Z,1.0nm,0.6s,baz=13,slow=4.0,SNR=5.1						
AKASG	Malin Array Be	144.09	329	PKP	PKPdf	17 20 02.0	-0.4
	comp=Z,1.6nm,0.3s,baz=42,slow=4.6,SNR=17						
SUW	Suwalki	144.12	338	ePKPdf	PKPdf	17 20 01.9	-0.5
AK02	Malin Array Si	144.13	329	ePKPdf	PKPdf	17 20 01.9	-0.6
MALT	Malatya	144.32	305	ePKPdf	PKPab	17 20 05.2	+1.3
BR131	Keskin Array S	147.38	310	ePKPbc	PKPbc	17 20 12.4	+0.4
BRTR	Keskin Array B	147.38	310	PKPbc	PKPab	17 20 12.8	-3.2
	comp=Z,2.4nm,0.7s,baz=138,slow=4.7,SNR=15						
BSEG	Bad Segeberg	147.54	350	ePKPbc	PKPab	17 20 13.5	-2.4
KWP	Kalwaria Pacla	147.76	333	ePKPbc	PKPab	17 20 13.5	-3.5
KWP	Kalwaria Pacla	147.76	333	⇑iP	PKPab	17 20 13.3	-3.7
TLCR		147.80	322	⇓iP	PKPab	17 20 14.0	-3.3
BUR08	Bucovina Ar. S	148.11	329	ePKPbc	PKPab	17 20 16.0	-2.7
BURAR	Bucovina Array	148.12	329	⇑iP	PKPab	17 20 16.1	-2.6
TESR		148.15	326	⇑iP	PKPbc	17 20 14.3	+0.7
VRI	Vrincioaia	148.53	325	⇓iP	PKPbc	17 20 13.6	-0.9
NRDL	Niedersach Rie	148.96	349	ePKPbc	PKPbc	17 20 17.0	+1.8
TRPA	Tarpa	148.98	332	⇑iP	PKPbc	17 20 17.1	+1.6
CSS	Prodhromos	149.18	302	ePKPbc	PKPbc	17 20 17.5	+1.1
MLR	Muntele Rosu	149.19	325	⇓iP	PKPbc	17 20 16.6	+0.3
CLL	Collm	149.50	345	ePKPbc	PKPbc	17 20 18.4	+1.7
CLL	Collm	149.50	345	⇓iPKPbc	PKPbc	17 20 18.2	+1.5
	comp=Z,17nm,1.1s						
CLZ	Clausthal	149.54	349	ePKPbc	PKPbc	17 20 18.8	+2.0
MORC	Moravsky Berou	149.58	339	ePKPdf	PKPbc	17 20 14.3	-2.7
MORC				ePKPbc	PKPbc	17 20 18.5	+1.5
MORC	Moravsky Berou	149.58	339	⇑iP	PKPbc	17 20 18.5	+1.5
BRG	Berggiesshubel	149.67	344	i PKP	PKPbc	17 20 18.8	+1.7
	comp=Z,8.7nm,0.7s						
BRG	Berggiesshubel	149.67	344	ePKPbc	PKPbc	17 20 19.0	+1.9
DRGR		149.90	330	⇓iP	PKPbc	17 20 18.8	+0.9
ARR	Arges	149.96	326	⇓iP	PKPbc	17 20 20.3	+2.2
PSZ	Piszkesteto	150.26	334	ePKPbc	PKPbc	17 20 19.4	+0.7
PSZ	Piszkesteto	150.26	334	⇓iP	PKPbc	17 20 19.4	+0.7
BUG	Bochum--Univer	150.40	352	ePKPbc	PKPbc	17 20 19.7	+1.0
MOX	Moxa	150.43	347	ePKPbc	PKPbc	17 20 20.7	+1.8
TANN	Tannenbergstha	150.46	345	ePKPbc	PKPbc	17 20 20.8	+1.8
UBBA	Unterbreizbach	150.59	349	ePKPbc	PKPbc	17 20 20.8	+1.7
GZR	Gura Zlata	150.88	328	⇑iP	PKPbc	17 20 20.7	+0.5
ROTZ	Rotzenmuhle	151.12	345	ePKPbc	PKPbc	17 20 22.4	+1.9
BZS	Buzias	151.28	329	⇓iP	PKPbc	17 20 22.2	+1.2
KHC	Kasperske Hory	151.36	343	ePKPbc	PKPbc	17 20 22.5	+1.4
KHC	Kasperske Hory	151.36	343	⇑ePKP	PKPbc	17 20 22.7	+1.6
GRF	Grafenberg Arr	151.41	346	ePKPbc	PKPbc	17 20 22.7	+1.5
TNS	Taunus Mts	151.43	350	ePKPbc	PKPbc	17 20 23.0	+1.8
GEC2	GERESS Array S	151.58	343	ePKPbc	PKPbc	17 20 23.3	+1.6
GERES	GERESS Array B	151.58	343	PKPbc	PKPbc	17 20 22.9	+1.2
	comp=Z,2.5nm,0.6s,baz=34,slow=2.6,SNR=21						
BCLA	Clavier	151.62	354	PKPbc	PKPbc	17 20 23.4	+1.9
PKSM	Moragy	152.14	334	⇑iP	PKPbc	17 20 23.8	+1.0
WLF	Walferdange	152.28	353	PKPbc	PKPbc	17 20 24.8	+1.8
WLF	Walferdange	152.28	353	ePKPbc	PKPbc	17 20 24.5	+1.4
WLF	Walferdange	152.28	353	ePKPbc	PKPbc	17 20 24.0	+1.0
BFO	Black Forest	153.28	349	ePKPbc	PKPbc	17 20 26.8	+1.5
ESDC	Sonseca Array	162.00	13	PKPab	PKPab	17 21 19.1	+0.8
	comp=Z,0.1nm,0.3s,baz=358,slow=4.2,SNR=4.3						
TORD	Torodi Ar. Bea	171.02	183	PKP	PKPdf	17 20 36.9	+1.3
	comp=Z,1.3nm,0.8s,baz=308,slow=0.9,SNR=8.3						
TORD				PKPab	PKPab	17 22 00.5	+1.9
	comp=Z,0.6nm,0.7s,baz=190,slow=4.4,SNR=4.6						

IDC 04 17:04:07.8±346.0, **39°.80N**×**112°.74W**, **h0**^{km}, **Error ellipse: s-maj=68.4km s-min=30.4km az=34.0**, **Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I56US	NEWPORT INFRAS	9.03	341	i		17 56 50.0	
	baz=158,slow=332,SNR=0.6						
I10CA	LAC DU BONNET	15.71	43	i		18 35 40.0	
	baz=235,slow=336,SNR=0.5						
I18DK	QAANAAQ INFRAS	41.90	13	i		21 17 40.0	
	baz=230,slow=340,SNR=0.6						

DJA 04 17:26:40.0±0.6, **8°S**±6°×**11°0E**±°, **h10**^{km}, **M3.5**/11, **MLv3.5**/11, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	Wanagama	0.13	50	P	Pg	17 26 42.8	-0.4
YOGI	Yogyakarta	0.22	326	P	Pg	17 26 44.7	+0.1
PCJI	Pacitan	0.77	105	P	Pg	17 26 54.0	-1.0
SMRI	Semarang	0.94	1	P	Pg	17 26 58.2	-0.1
BJII	Banjamegara	0.97	313	P	Pg	17 26 57.2	-1.5
SJI	Sawahan	1.36	79	P	Pn	17 27 04.1	-1.1
PWJI	Pagerwojo	1.37	91	P	Pn	17 27 03.3	-1.9
CLJI	Cilicap	1.42	281	P	Pn	17 27 05.7	-0.2
TGJI	Tegal	1.71	311	P	Pn	17 27 08.5	-1.4
KRKI	Karangkates	2.02	95	P	Pb	17 27 17.7	+0.9
CISI	Cisompet, Garu	2.62	280	P	Pn	17 27 22.5	0.0
GMJI	Gumukmas	3.01	95	P	Pn	17 27 29.8	+2.1
LEM	Lembang	3.01	293	P	Pn	17 27 30.0	+2.0

IDC 04 17:31:36.1±1.1, **8°.39S**×**158°.33E**, **h165**^{km}±8^{km}, **mb3.6**/10, **mb1 3.8**/11, **mb1mx3.6**/19, **mbtmp3.6**/11, **Error ellipse: s-maj=25.7km s-min=14.1km az=117.0**, **Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	16.48	224	P	Pn	17 35 19.3	+1.2
	0.6nm,0.3s,baz=42,slow=9.5,SNR=7.8						
WRA	Warramunga Arr	25.90	241	P	P	17 36 53.0	0.0
	0.7nm,0.3s,baz=66,slow=9.1,SNR=17						
WRA				pP	pP	17 37 28.2	+1.2
	0.9nm,0.8s,baz=66,slow=9.6,SNR=3.6						
WRA				PcP	PcP	17 40 17.1	-0.6
	0.2nm,0.4s,baz=66,slow=3.0,SNR=6.1						
ASAR	Alice Springs	27.89	234	P	P	17 37 09.6	-1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	0.3nm,0.4s,baz=64,slow=9.9,SNR=20						
ASAR				PcP	PcP	17 40 22.1	-0.3
	0.1nm,0.4s,baz=72,slow=2.4,SNR=4.9						
STKA	**Stephens Creek**	**28.08**	**211**	P	P	17 37 12.7	+0.4
	1.8nm,0.6s,baz=56,slow=12,SNR=3.4						
KSRS	**Korea Array**	**53.75**	**330**	P	P	17 40 41.7	+0.4
	2.2nm,1.0s,baz=145,slow=8.3,SNR=6.6						
VNDA	**Vanda**	**69.13**	**179**	P	P	17 42 24.2	+0.3
	0.7nm,0.7s,baz=349,slow=6.5,SNR=5.9						
SONM	**Songino Array**	**72.31**	**326**	P	P	17 42 44.5	+0.8
	3.5nm,0.7s,baz=136,slow=5.4,SNR=35						
SONM				pP	pP	17 43 22.7	-1.0
	0.8nm,0.9s,baz=142,slow=5.4,SNR=2.8						
ILAR	**Eielson Array**	**83.48**	**21**	P	P	17 43 44.0	-0.8
	1.0nm,0.9s,baz=278,slow=3.2,SNR=8.0						
MKAR	**Makanchi Array**	**86.63**	**318**	P	P	17 44 00.5	-0.5
	1.2nm,0.5s,baz=97,slow=6.4,SNR=27						
NVAR	**Mina Array Bea**	**90.00**	**51**	P	P	17 44 18.0	+0.6
	1.3nm,0.8s,baz=250,slow=7.3,SNR=9.2						
YKA	**Yellowknife Ar**	**96.02**	**28**	P	P	17 44 43.7	-0.5
	0.2nm,0.5s,baz=268,slow=5.0,SNR=5.2						
YKA				pP	pP	17 45 25.8	0.0
	0.2nm,0.8s,baz=260,slow=4.8,SNR=2.4						

IDC 04 17:44:08.9±3.0**, 46°.84N**×**152°.89E, h83**km±25km**, mb3.2**/8**, mb1 3.4**/12**, mb1mx3.2**/29**, mbtmp3.2**/12**, Error ellipse: s-maj=31.2km s-min=17.2km az=107.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.99**	**25**	P	Pn	17 45 48.5	-0.1
	0.1nm,0.3s,baz=330,slow=4.5,SNR=3.8						
ASAJ	**Asahikawa**	**7.73**	**253**	P	Pn	17 45 57.9	-0.8
	0.6nm,0.3s,baz=327,slow=30,SNR=7.1						
USRK	**Ussuriysk Arra**	**14.88**	**267**	P	Pn	17 47 34.7	+0.1
	0.2nm,0.3s,baz=72,slow=13,SNR=2.9						
MJAR	**Matsushiro Arr**	**15.02**	**232**	P	Pn	17 47 38.2	+1.7
	0.1nm,0.3s,baz=34,slow=8.0,SNR=6.6						
KSRS	**Korea Array**	**20.68**	**252**	P	P	17 48 43.4	+1.3
	0.3nm,0.4s,baz=60,slow=9.0,SNR=4.6						
MKAR	**Makanchi Array**	**46.76**	**297**	P	P	17 52 29.4	-0.3
	0.2nm,0.5s,baz=71,slow=7.0,SNR=3.9						
CMAR	**Chiang Mai Arr**	**52.24**	**256**	P	P	17 53 11.1	-0.6
	0.4nm,0.8s,baz=26,slow=6.3,SNR=3.5						
FINES	**FINESS Array B**	**63.89**	**335**	P	P	17 54 32.3	0.0
	0.8nm,0.4s,baz=32,slow=7.9,SNR=18						
NB2	**NORSAR Subarra**	**68.09**	**341**	P	P	17 54 59.6	+0.3
	comp=Z,0.5nm,0.6s,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**68.09**	**341**	P	P	17 54 59.8	+0.4
	comp=Z,0.7nm,0.6s,baz=26,slow=6.4,SNR=6.2						
WRA	**Warramunga Arr**	**68.55**	**199**	P	P	17 55 01.9	-0.7
	comp=Z,0.2nm,0.5s,baz=16,slow=6.4,SNR=3.1						
AKASG	**Malin Array Be**	**71.38**	**326**	P	P	17 55 19.6	-0.1
	comp=Z,0.6nm,0.3s,baz=32,slow=6.6,SNR=3.3						
ASAR	**Alice Springs**	**72.25**	**198**	P	P	17 55 25.8	+0.7
	comp=Z,0.3nm,0.6s,baz=12,slow=5.6,SNR=7.9						

*NEIC **04** 17:44:36.9, 62°.24N×141°.54W, h2km, ML3.1(AEIC), After AEIC.*
*PGC **04** 17:44:37.1±7.2, 62°.24N×141°.83W, h5km, ML3.6/3, 235km southwest of Dawson, Yt Central Alaska*
ISC 04 17:44:36.1±1.2**, 62°.28N**±0°.02×**141°.54W**±0°.02**, h2**km±12km**, n32,** σ1s**55**/47**, 5D, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCA3	**Beaver Creek A**	**0.79**	**352**	P	**Pg**	**17 44 52.5**	**+1.3**
BCA3				S	**Sb**	**17 45 04.8**	**+0.9**
MENT	**Mentasta**	**1.20**	**304**	ePg	**Pg**	**17 44 59.1**	**0.0**
MENT				eSg	**Sg**	**17 45 14.2**	**-0.4**
WASW	**Wrangell South**	**1.29**	**255**	P	**Pg**	**17 45 00.9**	**+0.2**
BALM	**Baldy**	**1.31**	**197**	P	**Pb**	**17 45 00.7**	**-0.7**
GLB	**Gilahina Butte**	**1.37**	**233**	P	**Pg**	**17 45 01.8**	**-0.4**
GLB				S	**Sg**	**17 45 19.3**	**-0.6**
HARP	**HAARP**	**1.69**	**276**	P	**Pb**	**17 45 07.7**	**-0.1**
HARP				S	**Sg**	**17 45 30.3**	**0.0**
DOT	**Dot Lake**	**1.79**	**321**	P	**Pb**	**17 45 09.7**	**0.0**
PAX	**Paxson**	**1.94**	**293**	P	**Pn**	**17 45 11.3**	**+1.2**
PAX				S	**Sb**	**17 45 38.1**	**+1.3**
BMRM	**Bremner River**	**1.97**	**229**	P	**Pb**	**17 45 11.8**	**-0.9**
DAWY	**Dawson**	**2.04**	**28**	P	**Pn**	**17 45 12.4**	**+1.0**
DAWY	**Dawson**	**2.04**	**28**	⇑Pn	**Pn**	**17 45 12.4**	**+1.0**
DAWY				⇑Pg	**Pg**	**17 45 15.7**	**+0.6**
DAWY				⇓Sn	**Sb**	**17 45 39.9**	**+0.3**
DAWY				⇑Sg	**Sg**	**17 45 42.9**	**+1.3**
SAMH	**Samovar Hills**	**2.19**	**170**	P	**Pb**	**17 45 15.3**	**-1.1**
KLU	**Klutina**	**2.22**	**251**	P	**Pn**	**17 45 15.1**	**+1.2**
GOAT	**Goat Mountain**	**2.29**	**223**	P	**Pn**	**17 45 15.9**	**+1.0**
DIV	**Divide**	**2.32**	**242**	ePn	**Pb**	**17 45 17.8**	**-0.9**
DIV				eSn	**Sb**	**17 45 47.8**	**-0.1**
HYT	**Haines Junctio**	**2.42**	**125**	P	**Pn**	**17 45 17.4**	**+0.6**
HYT	**Haines Junctio**	**2.42**	**125**	⇓Pn	**Pn**	**17 45 18.2**	**+1.4**
HYT				⇓Pg	**Pg**	**17 45 21.5**	**-1.0**
HYT				⇑Sg	**Sg**	**17 45 55.4**	**+1.5**
DDM	**Donnelly Dome**	**2.48**	**309**	P	**Pn**	**17 45 18.5**	**+1.0**
EGAK	**Eagle**	**2.51**	**4**	ePn	**Pn**	**17 45 19.1**	**+1.2**
VLZ	**Valdez**	**2.56**	**245**	P	**Pn**	**17 45 18.8**	**+0.3**
EYAK	**Cordova Ski Ar**	**2.67**	**231**	P	**Pn**	**17 45 21.7**	**+1.7**
DHY	**Denali Highway**	**2.81**	**289**	P	**Pn**	**17 45 23.9**	**+1.8**
PNL	**Peninsula**	**2.82**	**157**	ePn	**Pb**	**17 45 27.5**	**+0.3**
SML	**Sawmill**	**3.23**	**265**	ePn	**Pn**	**17 45 30.8**	**+3.0**
WHY	**Whitehorse**	**3.59**	**114**	⇓Pn	**Pn**	**17 45 34.5**	**+1.7**
WHY				⇑Sg	**Sg**	**17 46 31.6**	**+0.4**
PMR	**Palmer**	**3.65**	**262**	ePn	**Pn**	**17 45 33.9**	**+0.4**
COLA	**College**	**3.84**	**315**	Pn	**Pn**	**17 45 34.8**	**-1.3**
COLA				ePg	**Pg**	**17 45 49.7**	**+0.2**
SKAG	**Skagway**	**4.15**	**130**	ePn	Pb	17 45 45.2	-4.5
COLD	**Coldfoot**	**6.19**	**327**	ePn	**Pn**	**17 46 09.9**	**+1.5**
	3.6nm,0.5s						
DLBC	**Dease Lake**	**6.89**	**119**	ePn	**Pn**	**17 46 19.7**	**+1.7**
DLBC				eS	**Sb**	**17 48 03.5**	**+4.5**
DLBC	**Dease Lake**	**6.89**	**119**	⇓Sg	**Sg**	**17 48 14.1**	**-3.0**
INK	**Inuvik**	**6.92**	**26**	⇑Pn	**Pn**	**17 46 18.6**	**+0.3**
INK				⇑Sn	**Sn**	**17 47 33.8**	**-3.5**
INK				⇑Sg	**Sg**	**17 48 14.3**	**-3.5**

*ISCJB **04** 17:56:49.9±0.4, 24°.57N±0°.02×122°.18E±0°.02, h69km±5km, Error ellipse: s-maj=4.3km s-min=2.7km az=161.0*
*JMA **04** 17:56:50.1±0.2, 24°.68N×122°.20E, h74km, M2.8*
*TAP **04** 17:56:50.0, 24°.58N×122°.13E, h71km, ML3.7, C*
ISC 04 17:56:50.5±1.3**, 24°.56N**±0°.03×**122°.17E**±0°.02**, h66**km±8km**, n62,** σ0s**99**/119**, 8C-7D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.30**	**280**	⇓iP	**Pn**	**17 57 01.2**	**0.0**
	baz=277						
TWC				S	**Sn**	**17 57 09.2**	**+0.1**
	baz=277						
ENA	**Nanau**	**0.41**	**252**	⇑P	**Pn**	**17 57 02.5**	**+0.3**
	baz=242						
ENA				eS	**Sn**	**17 57 11.4**	**+0.7**
	baz=242						
ILA	**Ilan**	**0.44**	**299**	eP	**Pn**	**17 57 02.3**	**-0.1**
	baz=298						
ILA				eS	**Sn**	**17 57 11.3**	**+0.3**
	baz=298						
TWB1	**Santiao Chiao**	**0.48**	**340**	⇓iP	**Pn**	**17 57 02.4**	**-0.4**
	baz=345						
TWB1				S	**Sn**	**17 57 11.2**	**-0.6**
	baz=345						
TWE	**Neicheng**	**0.49**	**290**	⇓iP	**Pn**	**17 57 03.0**	**+0.2**
	baz=288						
TWE				eS	**Sn**	**17 57 12.2**	**+0.4**
	baz=288						
ENTT	**Nioudou**	**0.56**	**279**	⇑iP	**Pn**	**17 57 03.9**	**+0.4**
	baz=279						
ENTT				eS	**Sn**	**17 57 14.0**	**+0.8**
	baz=279						
NWF	**Wu-fen Shan**	**0.62**	**325**	⇓iP	**Pn**	**17 57 04.0**	**-0.3**
	baz=319						
NWF				S	**Sn**	**17 57 13.8**	**-0.8**
	baz=319						
TWD	**Chiawan**	**0.71**	**228**	eP	**Pn**	**17 57 04.9**	**-0.3**
	baz=217						
TWD				eS	**Sn**	**17 57 16.1**	**+0.1**
	baz=217						
NNS	**Nan Shan**	**0.74**	**261**	⇑iP	**Pn**	**17 57 05.7**	**0.0**
	baz=252						
NNS				eS	**Sn**	**17 57 16.7**	**-0.2**
	baz=252						
NSK	**Sanguang**	**0.75**	**279**	⇑iP	**Pn**	**17 57 05.8**	**+0.1**
	baz=277						
NSK				S	**Sn**	**17 57 17.0**	**-0.1**
	baz=277						
TAP1	**Taipei**	**0.76**	**309**	⇓eP	**Pn**	**17 57 05.2**	**-0.6**
	baz=318						
TAP1				eS	**Sn**	**17 57 16.3**	**-0.8**
	baz=318						
YOJ	**Yonaguni jima**	**0.77**	**97**	P	**Pn**	**17 57 06.1**	**+0.2**
YOJ				S	**Sn**	**17 57 18.1**	**+0.8**
TAP	**Taipei**	**0.77**	**309**	eP	**Pn**	**17 57 05.4**	**-0.6**
	baz=318						
TAP				eS	**Sn**	**17 57 16.5**	**-0.9**
	baz=318						
HWA	**Hwalien**	**0.77**	**222**	⇓P	**Pn**	**17 57 06.0**	**0.0**
	baz=217						
HWA				eS	**Sn**	**17 57 18.8**	**+1.4**
	baz=217						
TWS1	**Kuangyinshan**	**0.87**	**309**	⇓iP	**Pn**	**17 57 07.0**	**-0.3**
	baz=314						
TWS1				eS	**Sn**	**17 57 19.1**	**-0.5**
	baz=314						
TWY	**Chenhua**	**0.89**	**324**	eP	**Pn**	**17 57 06.5**	**-0.8**
	baz=325						
TWY				eS	**Sn**	**17 57 19.4**	**-0.4**
	baz=325						
WHF	**Hehuan Shan**	**0.92**	**244**	⇑iP	**Pn**	**17 57 08.1**	**-0.2**
	baz=240						
WHF				eS	**Sn**	**17 57 21.1**	**-0.2**
	baz=240						
TWT	**Tachien**	**0.96**	**252**	eP	**Pn**	**17 57 08.9**	**+0.5**
	baz=241						
TWT				eS	**Sn**	**17 57 22.0**	**+0.3**
	baz=241						
NCU	**National Centr**	**0.99**	**295**	i P	**Pn**	**17 57 08.6**	**0.0**
	baz=294						
NCU				S	**Sn**	**17 57 22.5**	**+0.4**
	baz=294						
ESL	**Shilin**	**1.00**	**223**	⇑P	**Pn**	**17 57 08.0**	**-0.8**
	baz=228						
ESL				eS	**Sn**	**17 57 21.4**	**-1.0**
	baz=228						
NSTT	**Nanjuang**	**1.07**	**274**	⇑iP	**Pn**	**17 57 09.6**	**-0.1**
	baz=273						
NSTT				S	**Sn**	**17 57 23.8**	**-0.2**
	baz=273						
PCYT	**Pengchaiyu**	**1.07**	**355**	eP	**Pn**	**17 57 09.5**	**-0.3**
	baz=350						
HSN	**Hsinchu**	**1.12**	**283**	P	**Pn**	**17 57 09.8**	**-0.5**
	baz=283						
HSN				eS	**Sn**	**17 57 24.4**	**-0.7**
	baz=283						
TWQ1	**Liyutan**	**1.29**	**261**	P	**Pn**	**17 57 12.7**	**+0.1**
	baz=259						
TWQ1				eS	**Sn**	**17 57 28.4**	**-0.8**
	baz=259						
NSY	**Sanyi**	**1.29**	**264**	P	**Pn**	**17 57 13.0**	**+0.4**
	baz=262						
NSY				eS	**Sn**	**17 57 29.6**	**+0.4**
	baz=262						
EHY	**Hungye**	**1.30**	**217**	eP	**Pn**	**17 57 11.4**	**-1.3**
	baz=222						
EHY				eS	**Sn**	**17 57 27.3**	**-2.1**
	baz=222						
SMLT	**Sun Moon Lake**	**1.34**	**240**	eP	**Pn**	**17 57 13.8**	**+0.5**
	baz=231						
SMLT				eS	**Sn**	**17 57 31.6**	**+1.1**
	baz=231						
TYC	**Yuchr**	**1.36**	**242**	⇑P	**Pn**	**17 57 14.1**	**+0.5**
	baz=239						
TYC				eS	**Sn**	**17 57 31.7**	**+0.9**
	baz=239						
TCU	**Taichung**	**1.42**	**254**	eP	**Pn**	**17 57 14.6**	**+0.3**
	baz=263						
TCU				eS	**Sn**	**17 57 32.9**	**+0.6**
	baz=263						
IRIF	**Iriomote-Funau**	**1.44**	**98**	P	**Pn**	**17 57 14.4**	**-0.1**
IRIF				S	**Sn**	**17 57 32.8**	**+0.2**
TWF1	**Yuli**	**1.44**	**214**	eP	**Pn**	**17 57 13.3**	**-1.2**
	baz=219						
TWF1				eS	**Sn**	**17 57 31.8**	**-0.9**
	baz=219						
WNT	**Mingjian**	**1.52**	**244**	eP	**Pn**	**17 57 16.1**	**+0.6**
	baz=253						
WNT				eS	**Sn**	**17 57 35.8**	**+1.4**
	baz=253						
HATJ	**Hateruma jima**	**1.57**	**108**	P	**Pn**	**17 57 17.0**	**+0.7**
HATJ				eS	**Sn**	**17 57 36.7**	**+0.9**
ALS	**Alishan**	**1.63**	**231**	eP	**Pn**	**17 57 18.1**	**+0.7**
	baz=220						
ALS				eS	**Sn**	**17 57 38.2**	**+0.6**
	baz=220						
CHKT	**Chengkung**	**1.63**	**207**	eP	**Pn**	**17 57 15.7**	**-1.4**
	baz=197						
CHKT				eS	**Sn**	**17 57 34.6**	**-2.5**
	baz=197						
CHN5	**Tsauling**	**1.67**	**235**	P	**Pn**	**17 57 18.5**	**+0.8**
	baz=243						
CHN5				eS	**Sn**	**17 57 39.9**	**+1.7**
	baz=243						
JKRS	**Kuro-shima**	**1.71**	**100**	P	**Pn**	**17 57 18.4**	**+0.3**
JKRS				S	**Sn**	**17 57 39.5**	**+0.5**
WGK	**Gukeng**	**1.71**	**240**	eP	**Pn**	**17 57 18.9**	**+0.8**
	baz=248						
WGK				eS	**Sn**	**17 57 40.2**	**+1.2**
	baz=248						
ELDTW	**Lidau**	**1.72**	**218**	eP	**Pn**	**17 57 17.6**	**-0.8**
	baz=215						
ELDTW				eS	**Sn**	**17 57 38.2**	**-1.4**
	baz=215						
JIJ	**Ishigaki jima**	**1.81**	**96**	P	**Pn**	**17 57 19.1**	**-0.4**
JIJ				eS	**Sn**	**17 57 40.9**	**-0.5**
CHN2	**Minshiung**	**1.86**	**237**	eP	**Pn**	**17 57 21.0**	**+0.9**
	baz=246						
CHN2				eS	**Sn**	**17 57 44.2**	**+1.6**
	baz=246						
WTCT	**Ta-ch'eng**	**1.86**	**249**	eP	**Pn**	**17 57 19.9**	**-0.3**
	baz=256						
WTCT				eS	**Sn**	**17 57 42.5**	**-0.1**
	baz=256						
CHN4	**Tsaushan**	**1.88**	**231**	eP	**Pn**	**17 57 21.2**	**+0.8**
	baz=228						
CHN4				eS	**Sn**	**17 57 44.9**	**+1.8**
	baz=228						
CHY	**Chiayi**	**1.91**	**237**	eP	**Pn**	**17 57 21.4**	**+0.5**
	baz=246						
CHY				eS	**Sn**	**17 57 44.7**	**+0.7**
	baz=246						
WTP	**Ta-pu**	**1.93**	**228**	eP	**Pn**	**17 57 21.7**	**+0.4**
	baz=225						
WTP				eS	**Sn**	**17 57 46.3**	**+1.8**
	baz=225						
TWG	**Pinlang**	**2.00**	**210**	eP	**Pn**	**17 57 21.8**	**-0.3**
	baz=202						
TWG				eS	**Sn**	**17 57 44.2**	**-1.9**
	baz=202						
WSF	**Szhu**	**2.00**	**243**	eP	**Pn**	**17 57 22.0**	**-0.1**
	baz=241						
WSF				eS	**Sn**	**17 57 46.3**	**+0.2**
	baz=241						
TWK	**Hsinying**	**2.00**	**231**	eP	**Pn**	**17 57 22.6**	**+0.4**
	baz=227						
TWK				eS	**Sn**	**17 57 47.2**	**+0.8**
	baz=227						
CHN1	**Nanshi**	**2.03**	**228**	P	**Pn**	**17 57 23.0**	**+0.5**
	baz=225						
CHN1				eS	**Sn**	**17 57 47.7**	**+0.8**
	baz=225						
CHN8	**Yiju**	**2.16**	**237**	eP	**Pn**	**17 57 24.6**	**+0.3**
	baz=233						
CHN8				eS	**Sn**	**17 57 50.5**	**+0.5**
	baz=233						
ECL	**Taimali**	**2.25**	**210**	eP	**Pn**	**17 57 24.4**	**-1.0**
	baz=203						
ECL				eS	**Sn**	**17 57 49.8**	**-2.3**
	baz=203						
SSD	**Sandimen**	**2.29**	**218**	eP	**Pn**	**17 57 27.1**	**+1.1**
	baz=226						
SSD				eS	**Sn**	**17 57 54.4**	**+1.3**
	baz=226						
JTJ	**Tarama**	**2.31**	**87**	P	**Pn**	**17 57 26.7**	**+0.5**
TWM1	**Shoushan**	**2.35**	**223**	eP	**Pn**	**17 57 28.4**	**+1.5**
	baz=220						
TWM1				eS	**Sn**	**17 57 57.0**	**+2.2**
	baz=220						
SGLT	**Jiouru**	**2.39**	**221**	eP	**Pn**	**17 57 28.6**	**+1.3**
	baz=217						
SGLT				eS	**Sn**	**17 57 58.5**	**+3.0**
	baz=217						
EAST	**Anshuo**	**2.48**	**210**	eP	**Pn**	**17 57 29.0**	**+0.3**
	baz=204						
EAST				eS	**Sn**	**17 57 55.6**	**-2.3**
	baz=204						
LAY	**Lan-yu**	**2.57**	**193**	eP	**Pn**	**17 57 28.5**	**-1.3**
	baz=195						
LAY				eS	**Sn**	**17 57 57.1**	**-2.9**
	baz=195						
PNG	**Penghu**	**2.59**	**248**	eP	**Pn**	**17 57 28.5**	**-1.6**
	baz=246						
PNG				eS	**Sn**	**17 57 58.3**	**-2.0**
	baz=246						
SCZT	**Fangliau**	**2.60**	**214**	eP	**Pn**	**17 57 30.7**	**+0.5**
	baz=223						
SCZT				eS	**Sn**	**17 58 00.8**	**+0.1**
	baz=223						
TWK1	**Hengchun**	**2.89**	**206**	eP	**Pn**	**17 57 34.6**	**+0.4**
	baz=216						
JOGS	**Gusukube**	**2.95**	**85**	P	**Pn**	**17 57 35.7**	**+0.7**
KNM	**Kinmen**	**3.41**	**268**	eP	**Pn**	**17 57 41.5**	**+0.3**
	baz=267						

IDC 04 17:57:51.7±3.0**, 17°.87S**×**178°.60W, h594**km±32km**, mb3.1**/9**, mb1 3.3**/9**, mb1mx3.1**/20**, mbtmp3.1**/9**, Error ellipse: s-maj=40.0km s-min=12.8km az=148.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.46**	**260**	P	P	18 05 11.0	-0.7
	0.8nm,0.5s,baz=94,slow=7.3,SNR=27						
WRA				PcP	PcP	18 06 41.8	-0.2
	0.3nm,0.4s,baz=82,slow=3.5,SNR=4.9						
WRA				S	S	18 11 04.0	-0.7
	0.3nm,0.7s,baz=99,slow=11,SNR=4.2						
ASAR	**Alice Springs**	**44.62**	**254**	P	P	18 05 12.9	+0.1
	5.7nm,0.5s,baz=88,slow=8.6,SNR=173						
ASAR				PcP	PcP	18 06 42.5	0.0
	0.7nm,0.5s,baz=105,slow=3.6,SNR=8.2						
ASAR				S	S	18 11 07.7	+0.6
	0.3nm,0.7s,baz=88,slow=14,SNR=4.4						
FITZ	**Fitzroy Crossi**	**52.85**	**261**	P	P	18 06 13.7	+0.1
	0.9nm,0.8s,baz=84,slow=4.5,SNR=6.7						
MJAR	**Matsushiro Arr**	**67.77**	**323**	P	P	18 07 51.4	0.0
	1.6nm,0.6s,baz=149,slow=5.4,SNR=10						
PETK	**Petropavlovsk-**	**73.60**	**345**	P	P	18 08 25.7	+0.4
	2.7nm,0.8s,baz=160,slow=6.0,SNR=3.8						
ILAR	**Eielson Array**	**85.89**	**13**	P	P	18 09 27.9	-1.3
	0.4nm,0.4s,baz=218,slow=5.1,SNR=9.4						
PDAR	**Pinedale Array**	**87.45**	**44**	P	P	18 09 36.8	-0.6
	0.5nm,0.7s,baz=242,slow=3.2,SNR=3.6						
CMAR	**Chiang Mai Arr**	**88.70**	**290**	P	P	18 09 44.5	+1.1
	0.2nm,0.4s,baz=103,slow=3.2,SNR=4.1						
YKA	**Yellowknife Ar**	**94.38**	**25**	P	P	18 10 07.7	-0.8
	0.1nm,0.6s,baz=243,slow=4.1,SNR=3.0						
MKAR	**Makanchi Array**	**108.98**	**314**	PKiKP	PKiKP	18 15 12.8	-1.8
	0.2nm,0.5s,baz=105,slow=0.8,SNR=5.3						
FINES	**FINESS Array B**	**133.10**	**344**	PKP	PKPdf	18 16 01.5	+1.3
	0.4nm,0.4s,baz=99,slow=2.5,SNR=3.8						
BRTR	**Keskin Array B**	**144.63**	**315**	PKP	PKPbc	18 16 22.4	0.0
	0.8nm,0.4s,baz=128,slow=4.0,SNR=7.9						
GERES	**GERESS Array B**	**147.53**	**345**	PKPbc	PKPbc	18 16 29.9	-0.1
	1.5nm,0.5s,baz=27,slow=2.7,SNR=18						

MEX 04 18:18:34.3±1.1**, 16°.49N**×**96°.23W, h53**km±17km**, MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.73**	**171**	i P	Pn	18 18 46.8	-1.8
HUIG				i S	Sn	18 18 57.4	-1.7
VHO	**Vista Hermosa**	**0.75**	**320**	i P	Pn	18 18 48.4	-0.7
VHO				i S	Sn	18 18 57.3	-2.6
CMIG	**Matias Romero**	**1.42**	**65**	i P	Pn	18 18 56.6	-1.2
CMIG				i S	Sn	18 19 12.9	-2.5
PNIG	**Pinotepa**	**1.82**	**267**	i P	Pn	18 19 01.6	-1.8
PNIG				i S	Sn	18 19 23.1	-2.2

*DJA **04** 18:39:06.9±1.4, 56°S±13°×2°8W±2°3, h10km, M5.7/8, mB6.1/2, mb5.7/8, Mw(mB)5.7/2*
*ISCJB **04** 18:39:16.5±2.0, 55°.99S±0°.05×27°.75W±0°.09, h89km±18km, mb5.1/50, Error ellipse: s-maj=10.3km s-min=6.7km az=42.2*
*MOS **04** 18:39:17.5±1.0, 56°.01S×27°.68W, h97km, mb5.7/10, Error ellipse: s-maj=19.7km s-min=10.5km az=102.2*
*NEIC **04** 18:39:17.2±0.2, 55°.98S×27°.73W, mb5.5/27, MW5.4, Error ellipse: s-maj=7.1km s-min=5.6km az=217.0, Moment Tensor Solution. s13 Moment tensor: Scale 10^{17}Nm; M_{rr}0.57; $M_{\theta\theta}$-1.09; $M_{\phi\phi}$0.53; $M_{r\theta}$-0.92; $M_{\theta\phi}$0.55; $M_{\phi r}$-0.63; Best double couple: $M_0$1.60000×10^{17} NP1:ϕ_s143.00000°, δ41.00000°, λ158.00000°. NP2:ϕ_s250.00000°, δ76.00000°, λ51.00000°. Principal axes: T 1.5900, Plg44.0000°, Azm121.0000°; N -0.0500, Plg37.0000°, Azm260.0000°; P -1.5300, Plg21.0000°, Azm8.0000°;*
*IDC **04** 18:39:21.4±0.8, 55°.99S×27°.79W, h120km±5km, mb4.8/24, mb1 4.8/26, mb1mx4.8/27, mbtmp4.8/26, MS4.3/20, Ms1 4.3/20, ms1mx4.2/27 Error ellipse: s-maj=11.1km s-min=8.1km az=30.0*
*GCMT **04** 18:39:22.4±0.1, 56°.08S×27°.54W, h89km±1km, MW5.5, Moment Tensor Solution. s88,c160; s12,c12; Moment tensor: Scale 10^{17}Nm; M_{rr}0.19±.03; $M_{\theta\theta}$-0.48±.03; $M_{\phi\phi}$0.29±.03; $M_{r\theta}$-1.19±.02; $M_{\theta\phi}$1.50±.03; $M_{\phi r}$-0.52±.02; Best double couple: $M_0$2.00000×10^{17} NP1:ϕ_s169.00000°, δ52.00000°, λ171.00000°. NP2:ϕ_s264.00000°, δ83.00000°, λ38.00000°. Principal axes: T 2.1500, Plg31.0000°, Azm134.0000°; N -0.2800, Plg51.0000°, Azm273.0000°; P -1.8800, Plg20.0000°, Azm31.0000°; Data Used: II IU IC G CN. Surface waves: sta= 99, comp=197, per= 50.*
ISC 04 18:39:19.1±0.3**, 56°.00S**±0°.05×**27°.95W**±0°.05**, h107**km±2km**, h106**km**:pP-P, n358,** σ1s**53**/470**, mb5.1**/46**, 43C-39D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**17.00**	**157**	ePn	**Pn**	**18 43 09.8**	**-0.1**
VNA1	**Neumayer--Stat**	**17.00**	**157**	eScP	**ScP**	**18 51 14.1**	**+0.6**
VNA1	**Neumayer--Stat**	**17.00**	**157**	ePcS	PcS	18 51 21.7	-2.7
VNA3	**Neumayer Olymp**	**17.18**	**160**	ePn	**P**	**18 43 11.4**	**-0.7**
VNA3	**Neumayer Olymp**	**17.18**	**160**	eScP	**ScP**	**18 51 14.0**	**0.0**
VNA3	**Neumayer Olymp**	**17.18**	**160**	ePcS	PcS	18 51 29.6	+4.7
VNA2	**Neumayer--Watz**	**17.40**	**157**	ePn	**P**	**18 43 14.0**	**-0.4**
	baz=314,slow=13						
VNA2	**Neumayer--Watz**	**17.40**	**157**	ePcP	**PcP**	**18 47 50.2**	**+0.7**
	baz=314,slow=13						
VNA2	**Neumayer--Watz**	**17.40**	**157**	eScP	**ScP**	**18 51 14.7**	**+0.3**
	baz=314,slow=13						
VNA2	**Neumayer--Watz**	**17.40**	**157**	ePcS	PcS	18 51 26.1	+0.8
	baz=314,slow=13						
EFI	**East Falkland**	**18.21**	**271**	eP	**Pn**	**18 43 25.6**	**+1.0**
EFI	**East Falkland**	**18.21**	**271**	eP	**Pn**	**18 43 25.6**	**+1.0**
SNAA	**Sanae**	**18.96**	**156**	ePn	**P**	**18 43 32.1**	**+0.5**
SNAA	**Sanae**	**18.96**	**156**	⇑iP	**P**	**18 43 31.7**	**+0.1**
SNAA				S	**S**	**18 47 02.0**	**+1.0**
SNAA				ScP	**ScP**	**18 51 17.3**	**-0.6**
SNAA	**Sanae**	**18.96**	**156**	P	**P**	**18 43 32.1**	**+0.5**
	baz=284,slow=14						
SNAA				S	**S**	**18 47 02.0**	**+1.0**
	0.3nm,0.3s,baz=300,slow=20,SNR=3.2						
SNAA				LR	LR	18 49 22.0	
	comp=Z,265nm,20.0s,baz=320,slow=32						
SNAA				ScP	**ScP**	**18 51 17.3**	**-0.6**
	0.2nm,0.3s,baz=342,slow=1.6,SNR=20						
PMSA	**Palmer Station**	**19.61**	**229**	P	**Pn**	**18 43 40.3**	**-0.6**
PMSA				ScP	**ScP**	**18 51 16.9**	**-2.3**
PMSA	**Palmer Station**	**19.61**	**229**	P	**Pn**	**18 43 40.3**	**-0.6**
	0.7nm,0.3s,baz=71,slow=8.2,SNR=4.7						
PMSA				LR	LR	18 48 33.8	
	comp=Z,884nm,21.6s,baz=80,slow=28						
PMSA				ScP	**ScP**	**18 51 16.9**	**-2.3**
	1.1nm,0.3s,baz=31,slow=5.9,SNR=4.7						
MAIT	**Maitri**	**22.51**	**146**	eP	P	18 43 59.0	-10
USHA	**Ushuaia**	**22.78**	**256**	P	**P**	**18 44 14.3**	**+2.1**
USHA	**Ushuaia**	**22.78**	**256**	P	**P**	**18 44 14.3**	**+2.1**
	16nm,0.7s,baz=91,slow=14,SNR=9.0						
TRQA	**Tornquist**	**28.91**	**294**	eP	**P**	**18 45 08.0**	**+0.2**
	153nm,1.6s						
TRQA				eScP	**ScP**	**18 51 43.1**	**-2.4**
PLCA	**Paso Flores**	**31.57**	**281**	P	P	18 45 35.6	+4.3
	9.4nm,0.9s						

PLCA Paso Flores 31.57 281 P P 18 45 35.9 +4.6
4.2nm,0.8s,baz=217,slow=5.1,SNR=2.9
PLCA LR LR 18 57 18.5
comp=Z,625nm,21.0s,baz=130,slow=34
SYO Syowa Base 31.89 141 ⇓*i*P **P 18 45 32.2 -1.4**
SYO Syowa Base 31.89 141 ⇓*i*pP pP 18 45 49.6 -7.8
QSPA South Pole Qui 34.25 180 P **P 18 45 56.1 +1.7**
QSPA ScP **ScP 18 52 01.1 -2.0**
QSPA South Pole Qui 34.25 180 P **P 18 45 56.1 +1.7**
285nm,1.0s,baz=198,slow=4.1,SNR=480
QSPA ScP **ScP 18 52 01.1 -2.0**
6.6nm,0.6s,baz=156,slow=1.3,SNR=6.6
QSPA LR LR 18 58 47.0
comp=Z,887nm,20.9s,baz=188,slow=34
CAM4 Nova Friburgo 35.31 336 ⇑*i*P **P 18 46 05.7 +1.7**
CAM4 *i* 18 46 10.5
CAM4 *i* 18 46 13.1
CAM4 *i* 18 46 16.3
CAM4 *i* 18 46 23.0
CAM4 *i* 18 46 26.2
CAM4 *i* 18 46 28.5
CAM4 *i* 18 46 30.8
CAM4 *i* 18 46 33.8
CAM4 *i* 18 46 36.9
CAM4 *i* 18 46 39.2
CAM4 *i* 18 46 55.2
SPB Sao Paulo 35.41 328 ⇓*i*P **P 18 46 07.1 +2.6**
168nm,1.4s
SPB *e*pP **pP 18 46 26.7 -1.9**
CPUP Villa Florida 36.46 312 P **P 18 46 14.5 +0.9**
CPUP ScP **ScP 18 52 10.3 -1.3**
CPUP Villa Florida 36.46 312 P **P 18 46 14.5 +0.9**
12nm,0.5s,baz=134,slow=7.4,SNR=32
CPUP ScP **ScP 18 52 10.3 -1.3**
9.5nm,0.6s,baz=148,slow=2.6,SNR=10
CFAA Coronel Fontan 37.15 294 P **P 18 46 19.6 +0.2**
CFAA PcP **PcP 18 48 37.9 +0.6**
CFAA ScP **ScP 18 52 11.8 -2.3**
CFAA Coronel Fontan 37.15 294 P **P 18 46 19.6 +0.2**
1.0nm,0.5s,baz=139,slow=7.2,SNR=20
CFAA PcP **PcP 18 48 37.9 +0.6**
1.9nm,0.8s,baz=222,slow=2.2,SNR=3.9
CFAA ScP **ScP 18 52 11.8 -2.3**
0.4nm,0.5s,baz=221,slow=1.5,SNR=5.3
CFAA LR LR 19 00 19.3
comp=Z,60nm,20.8s,baz=144,slow=34
MAW Mawson 40.44 144 P **P 18 46 46.9 +0.6**
MAW PcP **PcP 18 48 47.8 +0.9**
MAW ScP **ScP 18 52 26.1 0.0**
MAW Mawson 40.44 144 P **P 18 46 46.9 +0.6**
112nm,0.8s,baz=233,slow=8.8,SNR=86
MAW PcP **PcP 18 48 47.8 +0.9**
36nm,1.0s,baz=259,slow=3.9,SNR=4.6
MAW ScP **ScP 18 52 26.1 0.0**
37nm,0.9s,baz=248,slow=4.9,SNR=14
MAW LR LR 19 00 42.5
comp=Z,775nm,21.7s,baz=256,slow=32
LCO Las Campanas 40.50 294 *e*P **P 18 46 47.7 +0.1**
258nm,1.8s
LCO *e*pP **pP 18 47 08.7 -3.4**
SUR Sutherland 41.04 76 P **P 18 46 52.2 +0.3**
SUR ScP **ScP 18 52 28.9 -0.4**
SUR Sutherland 41.04 76 P **P 18 46 52.2 +0.3**
22nm,1.1s,baz=224,slow=5.8,SNR=5.8
SUR ScP **ScP 18 52 28.9 -0.4**
18nm,0.9s,baz=260,slow=3.0,SNR=8.3
BDFB Brasilia 43.11 331 P **P 18 47 10.7 +1.9**
BDFB ScP **ScP 18 52 37.7 0.0**
BDFB Brasilia 43.11 331 P **P 18 47 10.7 +1.9**
29nm,0.8s,baz=146,slow=5.2,SNR=38
BDFB ScP **ScP 18 52 37.7 0.0**
2.0nm,0.5s,baz=171,slow=9.6,SNR=3.3
BDFB LR LR 19 01 29.6
comp=Z,610nm,21.7s,baz=156,slow=31
SHEL Horse Pasture 43.42 32 *e*P **P 18 47 10.4 -0.8**
SHEL pmax pmax
comp=Z,190nm,1.0s
SHEL Horse Pasture 43.42 32 *e*P **P 18 47 10.3 -0.8**
comp=Z,190nm,1.0s
LVC Limon Verde 44.91 301 *e*P **P 18 47 24.9 +1.6**
SBA Scott Base 46.10 184 ⇑*i*P **P 18 47 33.7 +2.0**
SBA pmax pmax
comp=Z,173nm,1.2s
SBA Scott Base 46.10 184 ⇑*i*P **P 18 47 33.7 +2.0**
comp=Z,173nm,1.2s
SBA *e*ScP ScP 18 52 41.0 -7.9
BOSA Boshof 46.37 77 *e*P **P 18 47 34.0 -0.6**
comp=Z,16nm,0.9s
BOSA *e*ScP **ScP 18 52 49.4 -1.6**
BOSA ScP ScP 18 52 50.0 -1.1
BOSA Boshof 46.37 77 P **P 18 47 34.2 -0.3**
comp=Z,7.4nm,0.9s,baz=233,slow=8.9,SNR=16
BOSA ScP **ScP 18 52 50.0 -1.1**
comp=Z,15nm,1.0s,baz=216,slow=6.1,SNR=9.6
BOSA LR LR 19 03 45.6
comp=Z,377nm,18.0s,baz=224,slow=32
VNDA Vanda 46.60 183 ⇑*i*P **P 18 47 37.3 +1.6**
comp=Z,101nm,0.9s
VNDA *e*ScP **ScP 18 52 47.1 -3.9**
VNDA ScP ScP 18 52 49.9 -1.2
VNDA Vanda 46.60 183 P **P 18 47 37.6 +2.0**
comp=Z,75nm,0.8s,baz=185,slow=7.1,SNR=252
VNDA ScP **ScP 18 52 49.9 -1.2**
comp=Z,6.1nm,0.8s,baz=221,slow=2.3,SNR=5.2
SIV San Ignacio 47.24 314 P **P 18 47 41.6 +0.3**
SIV PcP **PcP 18 49 12.5 +1.6**
SIV ScP **ScP 18 52 53.6 -1.0**
SIV San Ignacio 47.24 314 P **P 18 47 41.6 +0.3**
comp=Z,8.9nm,0.7s,baz=167,slow=8.0,SNR=44
SIV PcP **PcP 18 49 12.5 +1.6**
comp=Z,6.2nm,0.7s,baz=132,slow=5.3,SNR=2.5
SIV ScP **ScP 18 52 53.6 -1.0**
comp=Z,17nm,0.9s,baz=173,slow=5.0,SNR=13
LBTB Lobatse 49.40 74 P **P 18 47 57.3 -0.6**
LBTB *e*ScP **ScP 18 53 02.9 -1.0**
LBTB Lobatse 49.40 74 P **P 18 47 57.3 -0.6**
comp=Z,16nm,0.8s,baz=231,slow=7.6,SNR=22
LBTB ScP **ScP 18 53 02.8 -1.0**
comp=Z,7.2nm,1.0s,baz=261,slow=6.8,SNR=4.8
LPAZ La Paz 50.00 306 *e*P **P 18 48 05.0 +1.8**
comp=Z,48nm,0.7s
LPAZ *e*ScP **ScP 18 53 05.4 -1.7**
LPAZ ScP ScP 18 53 05.8 -1.3
LPAZ La Paz 50.00 306 P **P 18 48 05.0 +1.8**
comp=Z,35nm,0.5s,baz=146,slow=4.5,SNR=175
LPAZ ScP **ScP 18 53 05.8 -1.3**
comp=Z,3.9nm,0.7s,baz=164,slow=2.1,SNR=5.3
LPAZ LR LR 19 08 16.0
comp=Z,280nm,18.4s,baz=147,slow=35
MIR Mirnyy 50.02 153 ⇑*i*P **P 18 48 03.0 +1.1**
MIR pmax pmax
comp=Z,252nm,1.0s
TSUM Tsumeb 50.03 62 *e*P **P 18 48 02.9 0.0**
comp=Z,24nm,1.3s
RCBR Riachuelo 50.44 350 *e*P **P 18 48 06.7 +1.0**
RCBR Riachuelo 50.44 350 LR LR 19 05 50.9
comp=Z,309nm,18.3s,baz=309,slow=32
ARE Arequipa 51.41 302 *e*P **P 18 48 15.0 +1.6**
ARE Arequipa 51.41 302 *e*P **P 18 48 15.0 +1.6**
CASY Casey 54.09 161 *e*P **P 18 48 33.3 +1.2**
comp=Z,229nm,1.0s
CASY *e*PP **PP 18 50 31.1 -3.1**
SAML Samuel 54.47 316 *e*P **P 18 48 36.1 +0.6**
comp=Z,40nm,0.8s
SAML *e*ScP **ScP 18 53 23.1 -2.6**
DRV Dumont d'Urvil 57.32 174 S S 18 56 20.0 -23
DRV L L 19 01 00.0
DRV R 19 05 00.0
NNA Nana 57.85 299 *e*P **P 18 49 00.4 +0.8**
comp=Z,124nm,1.4s
NNA *e*pP **pP 18 49 23.5 -2.1**
NNA Nana 57.85 299 P **P 18 49 00.7 +1.1**
comp=Z,13nm,0.7s,baz=88,slow=8.3,SNR=4.2
NNA LR LR 19 12 25.3
comp=Z,254nm,21.7s,baz=134,slow=34
LSZ Lusaka 58.75 70 *e*P **P 18 49 04.9 -1.1**
comp=Z,30nm,1.3s
LSZ *e* 18 49 37.3
LSZ Lusaka 58.75 70 P **P 18 49 05.6 -0.4**
comp=Z,7.3nm,0.9s,baz=205,slow=8.0,SNR=12
ATAH Atahualpa 62.80 301 P **P 18 49 36.6 +2.8**
ATAH Atahualpa 62.80 301 P **P 18 49 36.6 +2.8**
comp=Z,27nm,1.0s,baz=155,slow=5.4,SNR=15
DBIC Dimbokro 65.30 25 *e*P **P 18 49 50.1 +0.6**
comp=Z,63nm,1.1s

DBIC *e*pP pP 18 50 09.2 -6.8
DBIC Dimbokro 65.30 25 P **P 18 49 50.1 +0.6**
comp=Z,48nm,1.0s,baz=172,slow=8.3,SNR=35
DBIC LR LR 19 12 20.8
comp=Z,314nm,19.0s,baz=181,slow=30
ABPO Ambohimpanom 66.17 89 *e*P **P 18 49 55.8 +0.4**
ABPO pmax pmax
comp=Z,92nm,2.0s
ABPO Ambohimpanom 66.17 89 *e*P **P 18 49 55.8 +0.4**
comp=Z,92nm,2.0s
ABPO *e*pP pP 18 50 11.8 -10
OPO Ambohidratompo 66.51 89 P **P 18 49 58.4 +0.8**
OPO Ambohidratompo 66.51 89 P **P 18 49 58.4 +0.8**
comp=Z,9.9nm,1.0s,baz=241,slow=7.0,SNR=6.5
MRIV Mauritius Mete 70.90 98 *e*P **P 18 50 24.8 +0.2**
ROSC El Rosal 71.55 310 P **P 18 50 30.0 +1.1**
ROSC El Rosal 71.55 310 P **P 18 50 30.0 +1.1**
comp=Z,4.9nm,0.4s,baz=246,slow=10.0,SNR=5.4
ROSC LR LR 19 24 47.3
comp=Z,193nm,18.2s,baz=188,slow=38
TOA0 Torodi Ar. Sit 73.23 30 *e*P **P 18 50 39.0 +0.7**
TORD Torodi Ar. Bea 73.23 30 P **P 18 50 39.2 +1.0**
TORD pP **pP 18 51 07.3 +2.1**
TORD Torodi Ar. Bea 73.23 30 P **P 18 50 39.2 +1.0**
comp=Z,65nm,0.7s,baz=201,slow=6.5,SNR=366
TORD pP **pP 18 51 07.3 +2.1**
comp=Z,12nm,0.5s,baz=200,slow=6.5,SNR=3.4
TORD LR LR 19 17 00.9
comp=Z,215nm,20.1s,baz=200,slow=31
SDV Santo Domingo 73.68 316 *e*P **P 18 50 42.4 +1.2**
comp=Z,0.5nm,1.3s
SDV *e*pP **pP 18 51 06.0 -2.3**
KMBO Kilima Mbogo 75.42 70 P **P 18 50 52.2 +0.7**
KMBO Kilima Mbogo 75.42 70 P **P 18 50 53.0 +1.6**
comp=Z,1.8nm,0.9s,baz=205,slow=2.6,SNR=3.2
KMBO LR LR 19 21 36.3
comp=Z,252nm,18.5s,baz=96,slow=34
TBG Guadaloupe-3 76.98 327 *e*P **P 18 51 02.1 +2.3**
PHG Guadaloupe-2 77.14 327 *e*P **P 18 51 03.0 +2.2**
DOG Dongo Capester 77.15 327 *e*P **P 18 51 03.1 +2.4**
BCIP Isla Barro Col 77.80 307 *e*P **P 18 51 05.3 +0.9**
comp=Z,162nm,1.6s
SJG San Juan 80.55 323 P **P 18 51 19.6 +0.4**
SJG San Juan 80.55 323 P **P 18 51 19.6 +0.4**
comp=Z,3.1nm,0.4s,baz=116,slow=3.0,SNR=3.1
CBYP Canovanas 80.60 324 *e*P **P 18 51 20.1 +0.5**
comp=Z,38nm,1.2s
CBYP *e*pP **pP 18 51 42.9 -4.2**
JTS JuntasAbangare 81.13 303 P **P 18 51 24.3 +1.7**
JTS *e*pP **pP 18 51 47.3 -2.7**
JTS JuntasAbangare 81.13 303 P **P 18 51 24.3 +1.7**
comp=Z,17nm,0.8s,baz=319,slow=0.6,SNR=11
TAU Tasmania Unive 81.38 176 *e*P **P 18 51 23.7 +0.1**
TAU pmax pmax
comp=Z,106nm,0.9s
TAU Tasmania Unive 81.38 176 *e*P **P 18 51 23.7 +0.1**
comp=Z,106nm,0.9s
TAU Tasmania Unive 81.38 176 P **P 18 51 24.2 +0.7**
comp=Z,634nm,1.1s,SNR=8.4
SDDR Presa de Saban 83.16 319 *e*P **P 18 51 32.9 -0.1**
comp=Z,16nm,0.9s
TAM Tamanrasset 83.47 31 *e*P **P 18 51 37.4 +2.7**
TAM *e**PP **pP 18 52 01.9 -0.4**
TAM pmax pmax
comp=Z,28nm,1.4s
TAM Tamanrasset 83.47 31 *e*P **P 18 51 37.4 +2.7**
comp=Z,28nm,1.4s
TAM *e*pP **pP 18 52 01.9 -0.4**
NWAO Narrogin (SRO) 86.58 151 *e*P **P 18 51 50.0 -0.2**
comp=Z,156nm,1.4s
TBI Tubuai 86.78 232 *e*S S 19 02 32.0 +12
comp=Z,459nm,25.8s
TBI *e*LQ LQ 19 15 23.6
comp=Z,512nm,34.0s
TBI *e*LR LR 19 19 42.8
comp=Z,404nm,33.8s
BBOO Buckleboo 90.49 167 *e*P **P 18 52 08.7 0.0**
comp=Z,396nm,1.1s
BBOO *e*PP **PP 18 55 41.1 -2.6**
MDT Midelt 90.68 19 LR LR 19 30 34.9
comp=Z,135nm,18.1s,baz=243,slow=34
FORT Forrest 91.17 160 *e*P **P 18 52 12.4 +0.6**
comp=Z,56nm,0.9s
TEIG Tepich 91.33 305 *e*P **P 18 52 13.7 +1.2**
comp=Z,10nm,0.4s
TEIG *e*pP **pP 18 52 36.8 -3.6**
TEIG Tepich 91.33 305 P **P 18 52 13.7 +1.2**
comp=Z,22nm,0.6s,baz=171,slow=3.1,SNR=18
CMIG Matias Romero 91.79 298 P **P 18 52 15.9 +1.3**
CMIG Matias Romero 91.79 298 P **P 18 52 15.9 +1.3**
comp=Z,8.6nm,0.9s,baz=137,slow=2.5,SNR=14
PPT2 Papeete2 91.86 234 *e*S S 19 03 18.6 +11
comp=Z,497nm,29.5s
PPT2 *e*LR LR 19 21 52.7
comp=Z,468nm,28.5s
PPT Papeete 91.88 234 LR LR 19 22 44.8
comp=Z,299nm,21.1s,baz=179,slow=28
STKA Stephens Creek 92.02 171 *e*P **P 18 52 15.3 -0.5**
comp=Z,1.7nm,0.9s
STKA *e*PP PP 18 55 49.8 -5.9
STKA PP PP 18 55 57.9 +2.2
STKA Stephens Creek 92.02 171 P **P 18 52 15.5 -0.2**
comp=Z,4.1nm,0.4s,baz=168,slow=4.6,SNR=13
STKA PP **PP 18 55 57.9 +2.2**
comp=Z,3.2nm,0.8s,baz=174,slow=9.7,SNR=4.4
STKA LR LR 19 31 50.6
comp=Z,213nm,19.8s,baz=192,slow=34
KEST Kesra 96.74 30 P P 18 52 40.4 +3.4
KEST Kesra 96.74 30 P P 18 52 40.4 +3.4
comp=Z,1.1nm,1.1s,baz=238,slow=8.1,SNR=3.9
KEST LR LR 19 32 58.0
comp=Z,66nm,18.3s,baz=189,slow=33
ESDC Sonseca Array 97.47 18 P Pdif 18 52 42.5 +2.3
ESDC Sonseca Array 97.47 18 P Pdif 18 52 42.5 +2.3
comp=Z,1.2nm,0.4s,baz=176,slow=4.3,SNR=11
ESDC LR LR 19 30 45.3
comp=Z,151nm,20.8s,baz=200,slow=32
ESLA Sonseca Array 97.47 18 P Pdif 18 52 41.8 +1.6
comp=Z,8.0nm,1.7s
MBWA Marble Bar 98.41 150 *e*P Pdif 18 52 45.1 +0.1
comp=Z,23nm,1.2s
ASAR Alice Springs 99.16 163 P **Pdif 18 52 48.1 -0.3**
ASAR PP **PP 18 56 48.1 -3.0**
ASAR PKKP **PKKPdf 19 09 12.6 0.0**
ASAR Alice Springs 99.16 163 P **Pdif 18 52 48.1 -0.3**
comp=Z,18nm,0.9s,baz=192,slow=4.2,SNR=99
ASAR PP **PP 18 56 48.1 -3.0**
comp=Z,9.6nm,1.0s,baz=192,slow=6.3,SNR=12
ASAR PKKP **PKKPdf 19 09 12.6 0.0**
comp=Z,0.4nm,0.5s,baz=15,slow=2.3,SNR=12
AS31 Alice Springs 99.16 163 *e*P **Pdif 18 52 47.9 -0.5**
AS31 *e*PP PP 18 56 45.3 -5.8
DZM Mont Dzumac 101.28 194 *e*LR LR 19 26 18.2
comp=Z,532nm,27.9s
WRA Warramunga Arr 102.88 163 P **Pdif 18 53 04.2 -0.8**
WRA PP **PP 18 57 18.9 -0.2**
WRA PKKPbc **PKKPbc 19 09 01.6 +2.1**
WRA Warramunga Arr 102.88 163 P **Pdif 18 53 04.2 -0.8**
comp=Z,3.4nm,0.9s,baz=197,slow=4.4,SNR=6.7
WRA PP **PP 18 57 18.9 -0.2**
comp=Z,11nm,1.0s,baz=190,slow=6.2,SNR=6.6
WRA PKKPbc **PKKPbc 19 09 01.6 +2.1**
comp=Z,0.4nm,0.3s,baz=359,slow=2.9,SNR=11
WRAB Tennant Creek 102.89 163 *e*P **Pdif 18 53 04.2 -0.8**
WRAB pmax pmax
comp=Z,5.0nm,1.0s
WRAB Tennant Creek 102.89 163 *e*Pdif **Pdif 18 53 04.2 -0.8**
comp=Z,5.0nm,1.0s
MMAI Mount Meron Ar 103.71 51 PKKPbc PKKPbc 19 08 57.8 -0.1
MMAI Mount Meron Ar 103.71 51 PKKPbc PKKPbc 19 08 57.8 -0.1
comp=Z,1.3nm,0.4s,baz=230,slow=6.4,SNR=4.5
CTAO Charters Tower 104.05 174 *e*P **Pdif 18 53 09.1 -1.1**
CTAO Charters Tower 104.05 174 *e*Pdif **Pdif 18 53 09.1 -1.1**
TXAR Lajitas Array 106.39 298 PKKPbc PKKPbc 19 08 50.6 +1.0
TXAR PKKPab **PKKPab 19 09 06.2 +1.3**
TXAR Lajitas Array 106.39 298 PKKPbc PKKPbc 19 08 50.6 +1.0
comp=Z,2.1nm,1.1s,baz=328,slow=4.4,SNR=4.4
TXAR PKKPab **PKKPab 19 09 06.2 +1.3**
comp=Z,0.5nm,0.5s,baz=304,slow=5.4,SNR=5.5
BRTR Keskin Array B 108.69 46 PKKPbc PKKPbc 19 08 55.8 +13
BRTR Keskin Array B 108.69 46 PKKPbc PKKPbc 19 08 55.8 +13
comp=Z,0.6nm,0.8s,baz=46,slow=5.5,SNR=4.1
GERES GERESS Array B 110.11 28 PP PP 18 58 11.9 -1.4
GERES GERESS Array B 110.11 28 PP PP 18 58 11.9 -1.4
comp=Z,0.4nm,0.7s,baz=190,slow=6.1,SNR=3.5
VYHS Vyhne 111.22 31 *e*P Pdif 18 53 53.8 +13

VYHS Vyhne 111.22 31 PDIF Pdif 18 53 53.8 +13
CLL Collm 112.19 26 *e*PS PS 19 07 57.0 -4.6
CLL *e*SS SS 19 13 57.0 -1.4
CLL *e*(PSS) 19 14 35.0
CLL *e*SSS SSS 19 18 24.0
CLL LmV 19 40 00.0
comp=Z,100nm,21.3s
ANMO Albuquerque 112.32 300 PKKPbc PKKPbc 19 08 33.9 +3.0
ANMO Albuquerque 112.32 300 PKKPbc PKKPbc 19 08 33.9 +3.0
comp=Z,2.4nm,0.7s,baz=297,slow=2.3,SNR=7.0
EKA Eskdalemuir Ar 112.80 15 PKKPbc PKKPbc 19 08 29.7 0.0
EKA Eskdalemuir Ar 112.80 15 PKKPbc PKKPbc 19 08 29.7 0.0
comp=Z,0.3nm,0.3s,baz=352,slow=2.5,SNR=4.5
SOC Sochi 114.41 48 *e*P **Pdif 18 53 46.5 -8.9**
SOC *e* 18 58 42.8
SOC *e*PS **PS 19 08 22.6 +0.4**
SCHQ Schefferville 114.95 336 SKP **SKPdf 19 01 10.3 -0.9**
comp=Z,4.7nm,0.8s,baz=102,slow=2.5,SNR=4.6
KBZ Khabaz 115.86 50 SKP **SKPdf 19 01 11.4 -2.0**
comp=Z,1.4nm,0.9s,baz=151,slow=7.9,SNR=3.6
AKASG Malin Array Be 116.41 37 PKIKP **PKPdf 18 57 50.3 +1.3**
AKASG Malin Array Be 116.41 37 PKP **PKPdf 18 57 50.3 +1.3**
AKASG SKP 19 01 11.7
AKASG Malin Array Be 116.41 37 PKP **PKPdf 18 57 50.3 +1.3**
comp=Z,0.6nm,0.5s,baz=234,slow=3.5,SNR=3.6
AKASG SKP 19 01 11.7
comp=Z,1.4nm,0.7s,baz=231,slow=3.6,SNR=4.7
SRU San Rafael 117.60 299 ⇓P **PKPdf 18 57 52.0 +0.1**
baz=118
P18A Preston Nutter 117.87 300 ⇑P **PKPdf 18 57 53.5 +0.9**
baz=118
MSU Marysvale 117.95 298 *e*PKIKP **PKPdf 18 57 53.1 +0.4**
MSU Marysvale 117.95 298 *e*PKPdf **PKPdf 18 57 53.1 +0.4**
EDW2 Edwards Air Fo 118.12 291 ⇑P **PKPdf 18 57 53.9 +1.0**
baz=118
O17A Robinson Place 118.55 300 ⇓P **PKPdf 18 57 54.5 +0.7**
baz=119
ISA Isabella 118.97 291 ⇓P **PKPdf 18 57 56.2 +1.7**
baz=119
J22A Midwest 119.02 305 ⇑P **PKPdf 18 57 53.9 -0.6**
baz=119
H24A Dirks Ranch, A 119.19 307 ⇑P **PKPdf 18 57 54.5 -0.2**
baz=120
JLU Jordanelle 119.20 300 *e*PKPdf **PKPdf 18 57 55.8 +0.8**
M17A Scullys Gap (B 119.50 301 ⇓P **PKPdf 18 57 56.1 +0.5**
baz=120
DUG Dugway 119.56 299 *e*PKIKP **PKPdf 18 57 55.6 0.0**
DUG Dugway 119.56 299 *e*PKPdf **PKPdf 18 57 55.6 0.0**
DUG Dugway 119.56 299 ⇓P **PKPdf 18 57 56.7 +1.2**
baz=120
K19A Absolon Red Bu 119.67 303 ⇓P **PKPdf 18 57 55.9 +0.1**
baz=120
I21A Big Trails, Te 119.71 305 ⇑P **PKPdf 18 57 55.7 -0.1**
baz=120
ULM Lac du Bonnet 119.92 317 PKP **PKPdf 18 57 54.9 -0.9**
ULM SKP 19 01 19.8
ULM PKKPab **PKKPbc 19 08 05.3 +0.9**
ULM Lac du Bonnet 119.92 317 PKP **PKPdf 18 57 54.9 -0.9**
comp=Z,2.1nm,0.4s,baz=144,slow=3.3,SNR=5.0
ULM SKP 19 01 19.8
comp=Z,4.8nm,0.7s,baz=55,slow=3.0,SNR=7.5
ULM PKKPab **PKKPbc 19 08 05.3 +0.9**
comp=Z,4.2nm,1.0s,baz=211,slow=2.1,SNR=4.0
BW06 Boulder Array 119.96 303 ⇑P **PKPdf 18 57 56.4 0.0**
baz=120
PDAR Pinedale Array 119.96 303 PKP **PKPdf 18 57 55.9 -0.5**
PDAR PKKPab **PKKPab 19 08 05.5 +0.3**
PDAR Pinedale Array 119.96 303 PKP **PKPdf 18 57 55.9 -0.5**
comp=Z,0.4nm,0.4s,baz=128,slow=5.6,SNR=5.2
PDAR PKKPab **PKKPab 19 08 05.5 +0.3**
comp=Z,1.3nm,0.8s,baz=340,slow=2.3,SNR=7.3
I19A Meeteetse 120.67 304 ⇓P **PKPdf 18 57 58.4 +0.7**
baz=121
NB2 NORSAR Subarra 120.71 21 PKPdf **PKPdf 18 57 57.3 +0.3**
comp=Z,0.5nm,0.7s,baz=202,slow=1.9
NOA NORSAR Array B 120.71 21 PKP **PKPdf 18 57 56.9 -0.1**
NOA SKP 19 01 21.4
NOA PKKPbc **PKKPbc 19 08 01.7 -0.1**
NOA NORSAR Array B 120.71 21 PKP **PKPdf 18 57 56.9 -0.1**
comp=Z,0.6nm,0.5s,baz=204,slow=2.0,SNR=9.1
NOA SKP 19 01 21.4
comp=Z,1.3nm,0.8s,baz=200,slow=1.8,SNR=5.2
NOA PKKPbc **PKKPbc 19 08 01.7 -0.1**
comp=Z,0.9nm,0.7s,baz=27,slow=4.0,SNR=4.8
L15A Malad City 120.73 300 ⇓P **PKPdf 18 57 58.6 +0.8**
baz=121
I18A Diamond G Ranc 120.80 303 ⇑P **PKPdf 18 57 58.6 +0.6**
baz=121
NVAR Mina Array Bea 120.99 294 PKP **PKPdf 18 58 00.1 +1.6**
NVAR SKP 19 01 23.2
NVAR PKKPab **PKKPab 19 08 02.7 +1.5**
NVAR Mina Array Bea 120.99 294 PKP **PKPdf 18 58 00.1 +1.6**
comp=Z,2.4nm,0.9s,baz=146,slow=3.5,SNR=12
NVAR SKP 19 01 23.2
comp=Z,1.2nm,0.9s,baz=170,slow=3.2,SNR=4.0
NVAR PKKPab **PKKPab 19 08 02.7 +1.5**
comp=Z,2.2nm,1.0s,baz=307,slow=4.1,SNR=7.2
LOHW Long Hollow 121.10 303 *e*PKPdf **PKPdf 18 57 58.3 -0.3**
H19A Powell 121.15 305 ⇓P **PKPdf 18 57 59.2 +0.7**
baz=122
L14A Malta 121.17 300 ⇑P **PKPdf 18 57 59.8 +1.1**
baz=122
MOOW Moose Ponds 121.27 303 *e*PKPdf **PKPdf 18 57 58.4 -0.4**
C24A Savage 121.29 310 ⇑P **PKPdf 18 57 59.6 +1.1**
baz=122
K15A Arbon 121.32 301 ⇓P **PKPdf 18 57 59.8 +0.9**
baz=122
I17A Pilgrim Ck. 121.32 303 ⇑P **PKPdf 18 57 60.0 +1.0**
baz=122
J15A Blackfoot 121.81 301 ⇑P **PKPdf 18 58 00.4 +0.6**
baz=122
C23A Lambert 121.83 309 ⇓P **PKPdf 18 58 00.1 +0.6**
baz=122
C22A Vida 122.09 309 ⇓P **PKPdf 18 58 00.7 +0.6**
baz=122
E20A Meyer Farm, Mu 122.15 306 ⇓P **PKPdf 18 58 00.9 +0.6**
baz=122
GCMT Greycliff 122.31 305 *e*PKPdf **PKPdf 18 58 00.2 -0.4**
F18A Big Timber 122.42 305 ⇓P **PKPdf 18 58 01.3 +0.5**
baz=123
D20A Manuel Ranch, 122.59 307 ⇓P **PKPdf 18 58 01.6 +0.6**
baz=123
J13A Cove Ranch, Pi 122.65 300 ⇑P **PKPdf 18 58 02.9 +1.5**
baz=123
I14A Mackay 122.69 301 ⇑P **PKPdf 18 58 02.9 +1.4**
baz=123
F17A Fitzpatrick Pl 122.85 304 ⇑P **PKPdf 18 58 03.2 +1.4**
baz=123
G16A Moss Hill, Enn 122.88 303 ⇓P **PKPdf 18 58 03.4 +1.5**
baz=123
D19A Cripps Ranch, 122.98 307 ⇑P **PKPdf 18 58 02.2 +0.3**
baz=123
C20A Veseth Ranch, 123.00 308 ⇑P **PKPdf 18 58 02.4 +0.6**
baz=123
E18A Harlowton 123.00 305 ⇑P **PKPdf 18 58 02.8 +0.8**
baz=123
A22A Carney Farms, 123.05 310 ⇓P **PKPdf 18 58 02.7 +0.8**
baz=123
G15A Dillon 123.16 303 ⇑P **PKPdf 18 58 03.5 +1.1**
baz=124
H14A Leadore 123.17 302 ⇑P **PKPdf 18 58 03.4 +1.0**
baz=124
E17A Martinsdale 123.36 305 ⇑P **PKPdf 18 58 03.8 +1.1**
baz=124
I12A Atlanta 123.41 300 ⇓P **PKPdf 18 58 03.7 +0.7**
baz=124
C19A Slack Wire Ran 123.49 307 ⇓P **PKPdf 18 58 03.6 +0.8**
baz=124
A21A Bergtoll Ranch 123.49 309 ⇓P **PKPdf 18 58 03.5 +0.8**
baz=124
H13A Challis 123.55 301 ⇓P **PKPdf 18 58 04.4 +1.2**
baz=124
F15A Butte 123.66 303 ⇓P **PKPdf 18 58 04.0 +0.6**
baz=124
D17A Six Diamond Ra 123.80 305 ⇓P **PKPdf 18 58 04.1 +0.6**
baz=124
H12A Diamond D Ranc 123.83 301 ⇑P **PKPdf 18 58 05.0 +1.3**
baz=124
A20A Cobblestone Ra 123.84 308 ⇑P **PKPdf 18 58 04.0 +0.5**
baz=124
G13A Cobalt 123.93 302 ⇓P **PKPdf 18 58 04.3 +0.5**
baz=124
EGMT Eagleton 124.02 307 ⇓P **PKPdf 18 58 04.8 +1.0**
baz=124
D16A Dana Ranch, Ca 124.10 305 ⇓P **PKPdf 18 58 05.0 +0.9**
baz=124
C17A Wharram Farm, 124.19 306 ⇑P **PKPdf 18 58 04.7 +0.6**

baz=124
B18A Beardsley Farm 124.30 307 ⇑P **PKPdf 18 58 05.0 +0.7**
baz=125
G12A Big Creek, Yel 124.48 301 ⇑P **PKPdf 18 58 05.6 +0.7**
baz=125
F13A Darby 124.49 302 ⇑P **PKPdf 18 58 05.7 +0.8**
baz=125
FINES FINESS Array B 124.54 28 PKP **PKPdf 18 58 04.2 0.0**
FINES SKP 19 01 28.1
FINES FINESS Array B 124.54 28 PKP **PKPdf 18 58 04.2 0.0**
comp=Z,4.5nm,0.5s,baz=141,slow=1.3,SNR=62
FINES SKP 19 01 28.1
comp=Z,4.0nm,0.7s,baz=79,slow=4.1,SNR=7.9
FIA1 FINESS Array S 124.54 28 *e*PKPdf **PKPdf 18 58 04.3 +0.1**
D15A Lincoln 124.56 304 ⇑P **PKPdf 18 58 05.7 +0.7**
baz=125
B17A L&G Farms, Che 124.69 306 ⇓P **PKPdf 18 58 05.8 +0.7**
baz=125
A18A Metzger Ranch, 124.72 307 ⇓P **PKPdf 18 58 05.6 +0.5**
baz=125
C16A Fuhringer Ranc 124.76 305 ⇑P **PKPdf 18 58 05.8 +0.6**
baz=125
D14A Greenough 125.05 304 ⇑P **PKPdf 18 58 06.1 +0.2**
baz=125
MSO Missoula 125.07 303 ⇑P **PKPdf 18 58 06.3 +0.4**
baz=125
A17A Triple J Farms 125.12 307 ⇓P **PKPdf 18 58 06.3 +0.4**
baz=126
C15A Salmond Ranch, 125.14 305 ⇓P **PKPdf 18 58 06.3 +0.3**
baz=126
KAF Kangasniemi 125.16 28 *e*PKIKP **PKPdf 18 58 04.6 -0.8**
KAF pmax pmax
comp=Z,5.0nm,0.5s
KAF Kangasniemi 125.16 28 *e*pkp **PKPdf 18 58 04.6 -0.8**
comp=Z,4.6nm,0.5s
B16A M & M Farms, S 125.19 306 ⇑P **PKPdf 18 58 06.4 +0.3**
baz=126
BMO Blue Mountains 125.24 299 *e*PKIKP **PKPdf 18 58 06.7 +0.4**
BMO Blue Mountains 125.24 299 *e*PKPdf **PKPdf 18 58 06.7 +0.4**
BMO *e*SKP 19 01 30.3
CM31 Chiang Mai Arr 125.48 111 *e*PKPdf **PKPdf 18 58 07.6 +0.2**
CMAR Chiang Mai Arr 125.48 111 PKP **PKPdf 18 58 07.8 +0.4**
CMAR PP **PP 18 59 60.0 +0.3**
CMAR SKP 19 01 31.8
CMAR Chiang Mai Arr 125.48 111 PKP **PKPdf 18 58 07.8 +0.4**
comp=Z,9.9nm,0.9s,baz=233,slow=4.0,SNR=62
CMAR PP **PP 18 59 60.0 +0.3**
comp=Z,2.0nm,0.9s,baz=227,slow=6.4,SNR=4.2
CMAR SKP 19 01 31.8
comp=Z,0.4nm,0.7s,baz=226,slow=3.9,SNR=4.1
D13A Huson 125.50 303 ⇑P **PKPdf 18 58 07.3 +0.6**
baz=126
B15A Bradely Ranch, 125.51 305 ⇓P **PKPdf 18 58 06.5 -0.2**
baz=126
A16A West Butte Ran 125.53 306 ⇑P **PKPdf 18 58 07.0 +0.3**
baz=126
SWMT Swartz Lake 125.59 304 *e*PKPdf **PKPdf 18 58 06.9 0.0**
C14A Swan Lake 125.66 304 ⇑P **PKPdf 18 58 07.4 +0.4**
baz=126
YBH Yreka Blue Hor 125.70 293 PKP **PKPdf 18 58 07.5 +0.2**
YBH Yreka Blue Hor 125.70 293 PKP **PKPdf 18 58 07.5 +0.2**
comp=Z,2.8nm,0.8s,baz=97,slow=7.5,SNR=6.9
CHTO Chiang Mai 125.78 111 *e*PKIKP **PKPdf 18 58 07.7 -0.3**
CHTO Chiang Mai 125.78 111 *e*PKPdf **PKPdf 18 58 07.7 -0.3**
D12A Red Ives Fores 125.89 303 ⇑P **PKPdf 18 58 07.7 +0.2**
baz=126
C13A Hot Springs 125.98 304 ⇓P **PKPdf 18 58 08.0 +0.4**
baz=126
A15A Johnson Ranch, 126.07 306 ⇑P **PKPdf 18 58 07.8 +0.1**
baz=126
BSMT Bassoo Peak 126.20 304 *e*PKPdf **PKPdf 18 58 08.0 -0.2**
A14A Double T Ranch 126.38 305 ⇓P **PKPdf 18 58 09.0 +0.6**
baz=127
C12B Naegeli Ranch, 126.42 303 ⇓P **PKPdf 18 58 09.0 +0.6**
baz=127
B13A Whitefish 126.43 304 ⇓P **PKPdf 18 58 09.0 +0.6**
baz=127
HUMO Hull Mountain 126.46 294 *e*PKPdf **PKPdf 18 58 09.0 +0.4**
HUMO *e*pPKPdf **pPKPdf 18 58 34.9 -2.8**
JOF Joensuu 127.17 30 *e*PKIKP **PKPdf 18 58 09.1 -0.1**
JOF pmax pmax
comp=Z,4.0nm,0.5s
JOF Joensuu 127.17 30 *e*pkp **PKPdf 18 58 09.1 -0.1**
comp=Z,3.6nm,0.5s
SHL Shillong 127.41 99 *e*P **PKPdf 18 58 13.0 +1.9**
NEW Newport 127.60 303 PKP **PKPdf 18 58 10.7 +0.1**
NEW Newport 127.60 303 PKP **PKPdf 18 58 10.7 +0.1**
comp=Z,0.8nm,0.5s,baz=51,slow=3.5,SNR=4.4
AKTO Aktyubinsk 127.64 54 PKIKP **PKPdf 18 58 10.0 -0.6**
AKTO Aktyubinsk 127.64 54 PKP **PKPdf 18 58 10.0 -0.6**
AKTO SKPbc SKiKP 19 01 16.3 -21
AKTO SKP 19 01 33.8
AKTO Aktyubinsk 127.64 54 PKP **PKPdf 18 58 10.0 -0.6**
comp=Z,2.6nm,0.9s,baz=247,slow=1.8
AKTO SKPbc SKiKP 19 01 16.3 -21
comp=Z,7.1nm,1.0s,baz=211,slow=6.1,SNR=9.7
AKTO SKP 19 01 33.8
comp=Z,5.4nm,1.0s,baz=47,slow=9.6,SNR=4.9
ABKAR Akbulak array 127.69 56 *e*PKPdf **PKPdf 18 58 11.0 +0.3**
KKAR Karatay Array 128.59 68 *e*PKIKP **PKPdf 18 58 10.8 -1.8**
KKAR Karatay Array 128.59 68 *e*PKPdf **PKPdf 18 58 10.8 -1.8**
KSH Kashi 128.97 75 PKP **PKPdf 18 58 13.6 0.0**
KSH PP **PP 19 00 23.6 +0.6**
KSH PKS **PKSdf 19 01 48.0 -2.2**
KSH SKS **SKSdf 19 05 13.3 -1.8**
KSH SKKS **SKKSac 19 07 05.7 -3.1**
KSH SS **SS 19 17 30.0 -3.8**
KSH AMB AMB
comp=Z,98nm,4.4s
KSH LR LR
comp=N,100nm,7.0s
KSH LR LR
comp=E,110nm,3.7s
KSH LR LR
comp=Z,180nm,4.1s
AML Almayashu 129.59 71 P SKPab 19 01 26.6 +0.1
SNR=35
EKS2 Erkin-Say 130.00 71 *e*PKIKP **PKPdf 18 58 14.3 -1.2**
EKS2 Erkin-Say 130.00 71 *e*PKPdf **PKPdf 18 58 14.3 -1.2**
EKS2 Erkin-Say 130.00 71 P SKPab 19 01 27.6 -0.3
SNR=22
AAK Ala-Archa 130.36 71 ⇓ *i*PKIKP **PKPdf 18 58 17.0 +0.8**
AAK Ala-Archa 130.36 71 *e*PKPdf **PKPdf 18 58 15.8 -0.4**
AAK PKP **PKPdf 18 58 16.5 +0.3**
AAK SKPbc **SKPab 19 01 29.1 -0.4**
AAK Ala-Archa 130.36 71 P **SKPab 19 01 28.6 -0.9**
SNR=16
AAK Ala-Archa 130.36 71 PKP **PKPdf 18 58 16.5 +0.3**
baz=180,slow=4.0
AAK SKPbc **SKPab 19 01 29.1 -0.4**
comp=Z,15nm,0.9s,baz=207,slow=4.5,SNR=20
KZA Kyzart 130.38 72 P **SKPab 19 01 29.9 0.0**
SNR=21
KBK Karagaybulak 130.62 71 P **SKPab 19 01 30.1 -0.5**
SNR=14
CHMS Chumysh 130.75 71 P **SKPab 19 01 30.0 -1.0**
SNR=18
USP Ospenovka 130.80 70 P **SKPab 19 01 30.1 -1.1**
SNR=9.4
ULHL Ulahol 131.03 73 P **SKPab 19 01 32.0 -0.5**
SNR=24
ARCES ARCESS Array B 131.06 22 PKP **PKPdf 18 58 17.1 +0.7**
ARCES SKPbc **SKPbc 19 01 29.0 -2.0**
ARCES ARCESS Array B 131.06 22 PKP **PKPdf 18 58 17.1 +0.7**
comp=Z,3.1nm,0.5s,baz=174,slow=2.2,SNR=28
ARCES SKPbc **SKPbc 19 01 29.0 -2.0**
comp=Z,8.2nm,0.8s,baz=245,slow=2.3,SNR=8.2
ARU Arti 131.98 48 *i* PKIKP **PKPdf 18 58 18.8 +0.2**
ARU Arti 131.98 48 *e*PKPdf **PKPdf 18 58 17.4 -1.1**
KMI Kunming 132.94 110 PKP **PKPdf 18 58 22.4 +0.7**
KMI sPKP 18 58 57.3
KMI PP **PP 19 00 52.3 +3.7**
KMI AMB AMB
comp=Z,120nm,6.4s
KMI LR LR
comp=N,130nm,23.2s
KMI LR LR
comp=E,71nm,29.2s
KMI LR LR
comp=Z,150nm,27.7s
BRVK Borovoye 135.09 58 *i* PKIKP **PKPdf 18 58 25.9 +1.4**
BRVK Borovoye 135.09 58 *e*PKPdf **PKPdf 18 58 23.7 -0.8**
BVAR Borovoye Array 135.12 58 PKHKP PKPpre 18 58 13.4
BVAR 18 58 25.1
BVAR Borovoye Array 135.12 58 PKPpre PKPpre 18 58 13.4
BVAR PKP **PKPdf 18 58 25.1 +0.5**
BVAR SKPbc **SKPbc 19 01 43.9 -1.3**
BVAR Borovoye Array 135.12 58 PKhKP PKPpre 18 58 13.4
comp=Z,0.4nm,0.4s,baz=212,slow=5.1,SNR=2.8
BVAR PKP **PKPdf 18 58 25.1 +0.5**
comp=Z,1.7nm,0.6s,baz=190,slow=7.5,SNR=3.6
BVAR SKPbc **SKPbc 19 01 43.9 -1.3**
comp=Z,7.4nm,0.8s,baz=238,slow=2.8,SNR=13
YKA Yellowknife Ar 135.85 318 PKPpre PKPpre 18 58 10.8
YKA PKP **PKPdf 18 58 26.1 +0.5**
YKA PP **PP 19 01 05.8 -0.7**
YKA SKPbc **SKPbc 19 01 45.7 -1.5**
YKA PKKP **PKKPdf 19 08 05.8 -0.2**
YKA SKKPbc **SKKPbc 19 10 46.4 -1.7**
YKA Yellowknife Ar 135.85 318 PKhKP PKPpre 18 58 10.8
comp=Z,0.3nm,0.6s,baz=123,slow=3.7,SNR=6.1
YKA PKP **PKPdf 18 58 26.1 +0.5**
comp=Z,5.9nm,0.7s,baz=128,slow=2.4,SNR=50
YKA PP **PP 19 01 05.8 -0.7**
comp=Z,1.4nm,0.8s,baz=117,slow=6.4,SNR=5.9
YKA SKPbc **SKPbc 19 01 45.7 -1.5**
comp=Z,14nm,1.0s,baz=123,slow=1.9,SNR=24
YKA PKKP **PKKPdf 19 08 05.8 -0.2**
comp=Z,0.1nm,0.3s,baz=310,slow=2.3,SNR=5.2
YKA SKKPbc **SKKPbc 19 10 46.3 -1.7**
comp=Z,0.8nm,0.8s,baz=306,slow=3.6,SNR=6.2
YKW3 Yellowknife Ar 135.90 318 *e*PKPdf **PKPdf 18 58 25.7 0.0**
YKW3 *e*SKP 19 01 45.6
GYA Guiyang 136.08 113 Pdif **Pdif 18 55 31.8 -0.6**
GYA PKP **PKPdf 18 58 27.4 0.0**
GYA sP 18 59 01.5
GYA PP **PP 19 01 11.9 +3.6**
GYA PKS **PKSdf 19 02 01.6 -2.3**
GYA SKKS **SKKSac 19 07 54.4 +1.7**
GYA SS **SS 19 19 01.8 +2.2**
GYA AMB AMB
comp=Z,140nm,7.6s
GYA LR LR
comp=N,170nm,20.2s
GYA LR LR
comp=E,160nm,21.7s
GYA LR LR
comp=Z,190nm,22.5s
GYA Guiyang 136.08 113 PKP **PKPdf 18 58 27.4 0.0**
GYA sPKP 18 59 01.5
GYA PP **PP 19 01 11.9 +3.6**
GYA PKS **PKSdf 19 02 01.6 -2.3**
GYA SKKS 19 07 54.4
GYA SS **SS 19 19 01.8 +2.2**
GYA AMB AMB
comp=Z,140nm,7.6s
GYA LR LR
comp=N,170nm,20.2s
GYA LR LR
comp=E,160nm,21.7s
GYA LR LR
comp=Z,190nm,22.5s
SPITS Spitsbergen Ar 136.61 12 PKPpre PKPpre 18 58 20.9
SPITS PKP **PKiKP 18 58 29.1 +0.6**
SPITS SKPbc **SKPbc 19 01 47.8 -1.3**
SPITS Spitsbergen Ar 136.61 12 PKhKP PKPpre 18 58 20.9
comp=Z,0.8nm,0.4s,baz=114,slow=4.9,SNR=3.3
SPITS PKP **PKiKP 18 58 29.1 +0.6**
comp=Z,3.2nm,0.8s,baz=194,slow=3.2,SNR=5.7
SPITS SKPbc **SKPbc 19 01 47.8 -1.3**
comp=Z,12nm,1.0s,baz=266,slow=13,SNR=3.8
MK31 Makanchi Array 137.28 72 *e*PKHKP PKPpre 18 58 18.5
MK31 Makanchi Array 137.28 72 *e*PKPpre PKPpre 18 58 18.5
MKAR Makanchi Array 137.28 72 PKHKP PKPpre 18 58 19.4
MKAR 18 58 29.0
MKAR Makanchi Array 137.28 72 PKPpre PKPpre 18 58 19.4
MKAR PKP **PKPdf 18 58 29.0 +0.1**
MKAR SKPbc **SKPbc 19 01 50.4 -1.7**
MKAR Makanchi Array 137.28 72 PKhKP PKPpre 18 58 19.4
comp=Z,1.9nm,1.1s,baz=235,slow=4.3,SNR=12
MKAR PKP **PKPdf 18 58 29.0 +0.1**
comp=Z,1.1nm,0.6s,baz=190,slow=1.7,SNR=8.5
MKAR SKPbc **SKPbc 19 01 50.4 -1.7**
comp=Z,8.9nm,0.9s,baz=251,slow=3.7,SNR=20
RES Resolute Bay 137.66 339 *e*PKPpre PKPpre 18 58 20.6
RES *e*PKPdf **PKPdf 18 58 29.5 +0.8**
RES *e*SKP 19 01 50.3
RES SKP 19 01 51.5
RES Resolute Bay 137.66 339 SKP **SKPbc 19 01 51.5 -0.7**
comp=Z,9.0nm,0.8s,baz=145,slow=3.4,SNR=19
KURK Kurchatov 137.77 65 *i* PKIKP **PKPdf 18 58 33.1 +3.5**
CD2 Chengdu 138.08 106 PKP **PKPdf 18 58 32.1 +1.2**
CD2 sPKP 18 59 07.3
CD2 PP **PP 19 01 25.0 +4.2**
CD2 PKS **PKSdf 19 02 06.8 -0.3**
CD2 SKS **SKSdf 19 05 31.6 +0.1**
CD2 SKKS **SKKSac 19 08 04.7 +0.4**
CD2 SS **SS 19 19 25.0 +1.6**
CD2 AMB AMB
comp=Z,160nm,7.6s
CD2 LR LR
comp=N,260nm,14.1s
CD2 LR LR
comp=E,170nm,21.5s
CD2 LR LR
comp=Z,180nm,12.5s
WMQ Urumqi 138.31 79 PKP **PKPdf 18 58 32.4 +1.5**
WMQ sPKP 18 59 09.4
WMQ PP **PP 19 01 26.4 +4.1**
WMQ PKS **PKSdf 19 02 06.4 -0.6**
WMQ SKS **SKSdf 19 05 31.4 +0.1**
WMQ SKKS **SKKSac 19 08 05.4 +0.2**
WMQ SS **SS 19 19 25.4 -1.0**
WMQ AMB AMB
comp=Z,33nm,12.0s
WMQ LR LR
comp=N,120nm,25.0s
WMQ LR LR
comp=E,120nm,25.0s
WMQ LR LR
comp=Z,100nm,25.0s
DLBC Dease Lake 139.95 307 SKPbc **SKPbc 19 01 57.6 -1.6**
DLBC Dease Lake 139.95 307 SKPbc **SKPbc 19 01 57.6 -1.6**
comp=Z,12nm,0.8s,baz=206,slow=2.5,SNR=14
LZH Lanzhou 142.03 101 PKP **PKPdf 18 58 34.6 -3.5**
LZH sPKP 18 59 10.4
LZH SKKS 19 08 23.5
LZH SS **SS 19 20 08.1 -1.9**
LZH AMB AMB
comp=Z,130nm,7.0s
LZH LR LR
comp=N,180nm,14.5s
LZH LR LR
comp=E,250nm,15.8s
LZH LR LR
comp=Z,310nm,17.1s
GTA Gaotai 142.15 93 *e*PKP **PKPdf 18 58 33.4 -4.7**
GTA sPKP 18 59 11.6
GTA PKS **PKSdf 19 02 08.9 -5.0**
GTA SKS **SKSdf 19 05 34.6 -3.3**
GTA AMB AMB
comp=Z,180nm,10.4s
GTA LR LR
comp=N,97nm,15.7s
GTA LR LR
comp=E,170nm,16.1s
NVS Novosibirsk 142.40 62 *e*PKHKP PKPpre 18 58 33.7
NVS pmax pmax
comp=N,6.0nm,1.4s
NVS pmax pmax
comp=Z,29nm,1.4s
ZAA0 Zalesovo Array 142.73 64 *e*PKPpre PKPpre 18 58 34.8
ZAA0 *e*SKP 19 02 04.0
ZALV Zalesovo Beam 142.73 64 PKIKP PKPpre 18 58 35.0
ZALV Zalesovo Beam 142.73 64 PKPpre PKPpre 18 58 35.0
ZALV SKPbc **SKPbc 19 02 04.5 -1.9**
ZALV Zalesovo Beam 142.73 64 PKhKP PKPpre 18 58 35.0
comp=Z,2.0nm,0.4s,baz=243,slow=3.2,SNR=13
ZALV SKPbc **SKPbc 19 02 04.5 -1.9**
comp=Z,5.4nm,0.8s,baz=246,slow=3.0,SNR=9.0
XAN Xi'an 143.26 108 PKP PKPbc 18 58 37.6 +0.1
XAN AMB AMB
comp=Z,23nm,9.5s
WHN Wuhan 143.30 118 PKP PKPbc 18 58 37.1 -0.5
INK Inuvik 145.50 321 PKPbc **PKPab 18 58 44.1 +0.5**
INK SKPbc **SKPbc 19 02 11.4 -0.9**
INK SKKPbc **SKKPab 19 10 07.5 -0.6**
INK Inuvik 145.50 321 PKPbc **PKPab 18 58 44.1 +0.5**
comp=Z,27nm,0.7s,baz=88,slow=3.6,SNR=168
INK SKPbc **SKPbc 19 02 11.4 -0.9**
comp=Z,32nm,0.9s,baz=95,slow=1.5,SNR=16
INK SKKPbc **SKKPab 19 10 07.5 -0.6**
comp=Z,2.1nm,1.0s,baz=288,slow=6.3,SNR=3.4
NJ2 Nanjing 146.73 122 *e*PKPbc **PKPbc 18 58 47.9 -0.1**
NJ2 PKPab **PKiKP 18 58 52.1 +1.5**
NJ2 pPKP **pPKPdf 18 59 13.1 -2.2**
NJ2 sPKP 18 59 23.6
NJ2 PP 19 02 18.0 +5.3
NJ2 PKS **PKSdf 19 02 22.0 +0.6**
NJ2 AMB AMB
comp=Z,160nm,6.1s
NJ2 LR LR
comp=N,230nm,16.2s
NJ2 LR LR
comp=E,540nm,23.4s
NJ2 LR LR
comp=Z,350nm,18.5s
BTO Baotou 148.65 101 *e*PKPbc **PKPbc 18 58 53.2 +0.2**
SML Sawmill 149.66 306 *e*PKIKP **PKPdf 18 58 49.2 -0.8**
SML Sawmill 149.66 306 *e*PKPdf **PKPdf 18 58 49.1 -0.8**
SML *e*PKPbc **PKiKP 18 58 55.6 -0.1**
HHC Hu-ho-hao-te 149.67 103 *e*PKPbc **PKPdf 18 58 50.8 0.0**
HHC pPKP **pPKPdf 18 59 17.0 -3.0**
HHC sPKP 18 59 28.7
HHC PKS **PKSdf 19 02 23.2 -2.5**
HHC PP **PP 19 02 32.3 +2.1**
HHC SKS **SKSdf 19 05 47.2 -1.5**
HHC SKKS **SKKSac 19 09 10.1 -0.3**
HHC SS **SS 19 21 36.2 -0.3**
HHC AMB AMB
comp=Z,350nm,9.2s
HHC LR LR
comp=N,240nm,20.6s
HHC LR LR
comp=E,240nm,20.4s
HHC LR LR
comp=Z,220nm,20.1s
ILAR Eielson Array 149.77 312 PKP **PKPdf 18 58 47.8 -2.2**
ILAR PKPbc **PKiKP 18 58 55.6 -0.2**
ILAR pPKP **pPKPdf 18 59 21.1 +1.9**
ILAR SKPbc 19 02 20.3
ILAR Eielson Array 149.77 312 PKP **PKPdf 18 58 47.8 -2.2**
comp=Z,1.4nm,0.8s,baz=323,slow=1.1,SNR=15
ILAR PKPbc **PKiKP 18 58 55.6 -0.2**
comp=Z,39nm,0.8s,baz=132,slow=1.7,SNR=196
ILAR pPKP **pPKPdf 18 59 21.1 +1.9**
comp=Z,26nm,0.9s,baz=70,slow=2.4,SNR=5.1
ILAR SKPbc 19 02 20.3
comp=Z,8.5nm,1.0s,baz=119,slow=2.4,SNR=8.0
PMR Palmer 149.96 305 *e*PKIKP **PKPbc 18 58 56.2 +0.8**
PMR Palmer 149.96 305 *e*PKPbc **PKPbc 18 58 56.2 +0.8**
MOY Mondy 150.13 77 *e*PKP2 **PKPbc 18 58 57.0 +0.7**
MOY pmax pmax
comp=Z,59nm,2.1s
COLA College 150.19 312 *e*PKIKP **PKPbc 18 58 56.1 +0.3**
COLA College 150.19 312 *e*PKPbc **PKPbc 18 58 56.1 +0.3**
KDAK Kodiak Island 150.42 297 *e*PKPbc **PKPbc 18 58 57.7 +1.2**
KDAK Kodiak Island 150.42 297 PKPbc **PKPbc 18 58 57.8 +1.2**
comp=Z,42nm,0.6s,baz=69,slow=1.3,SNR=53
ZAK Zakamensk 150.76 80 ⇑ *e*PKIKP **PKPdf 18 58 51.4 -0.8**
ZAK pmax pmax
comp=Z,30nm,1.2s
SONM Songino Array 151.15 87 PKP **PKPdf 18 58 53.0 +0.1**
SONM PKPbc **PKPbc 18 58 59.0 +0.1**
SONM PKPab **PKPab 18 59 08.1 +1.0**
SONM pPKP **pPKPdf 18 59 25.1 +3.0**
SONM pPKPbc **pPKPbc 18 59 31.5 +3.6**
SONM Songino Array 151.15 87 PKP **PKPdf 18 58 53.0 +0.1**
comp=Z,2.5nm,1.0s,baz=264,slow=0.9,SNR=17
SONM PKPbc **PKPbc 18 58 59.0 +0.1**
comp=Z,30nm,0.6s,baz=222,slow=2.8,SNR=332
SONM PKPab **PKPab 18 59 08.1 +1.0**
comp=Z,8.8nm,0.9s,baz=266,slow=1.9,SNR=5.3
SONM pPKP **pPKPdf 18 59 25.1 +3.0**
comp=Z,7.0nm,0.5s,baz=224,slow=4.0,SNR=2.7
SONM pPKPbc **pPKPbc 18 59 31.5 +3.6**
comp=Z,4.5nm,0.5s,baz=219,slow=3.2,SNR=2.1
BJI Beijing 151.59 109 PKPbc **PKPdf 18 58 54.8 +1.2**
BJI SS SS 19 22 01.7 +4.3
BJI LR LR
comp=N,140nm,19.7s
BJI LR LR
comp=E,160nm,25.8s
BJI LR LR
comp=Z,71nm,20.8s
TLY Talaya 151.59 78 *i* PKIKP **PKPdf 18 58 51.8 -1.5**
TLY pmax pmax
comp=Z,22nm,1.0s
TLY MLR MLR
comp=Z,88nm,19.0s
TLY Talaya 151.59 78 *e*PKPbc **PKPbc 18 59 00.0 +0.4**
IRK Irkutsk 152.19 77 *e*PKIKP **PKPbc 18 59 00.8 -0.1**
IRK *e* 18 59 32.6
IRK pmax pmax
comp=Z,36nm,1.3s
KSAR Wonju Array Be 155.33 129 PKP **PKPdf 18 58 59.1 0.0**
KSAR PKPab **PKPab 18 59 25.1 +0.2**
KSRS Korea Array 155.36 129 PKP **PKPdf 18 58 59.1 0.0**
comp=Z,1.4nm,0.8s,baz=216,slow=1.5,SNR=7.6
KSRS PKPab **PKPab 18 59 25.1 +0.1**
comp=Z,8.3nm,0.9s,baz=215,slow=4.1,SNR=17
MJAR Matsushiro Arr 158.39 148 PKP **PKPdf 18 59 02.5 -0.6**
MJAR PKPab **PKPab 18 59 38.2 +0.1**
MJAR PP **PP 19 03 14.7 -3.8**
MJAR Matsushiro Arr 158.39 148 PKP **PKPdf 18 59 02.5 -0.6**
comp=Z,2.0nm,0.9s,baz=199,slow=2.1,SNR=4.1
MJAR PKPab **PKPab 18 59 38.2 +0.1**
comp=Z,16nm,0.9s,baz=200,slow=5.8,SNR=24
MJAR PP **PP 19 03 14.7 -3.8**
comp=Z,3.0nm,1.1s,baz=191,slow=8.4,SNR=4.2
CN2 Changchun 159.11 115 *e*PKP **PKPdf 18 59 03.9 +0.3**
CN2 PKPab **PKPab 18 59 40.5 -0.6**
CN2 PP PP 19 03 28.3 +5.4
CN2 SS SS 19 23 23.1 +4.6
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,200nm,21.0s
CN2 LR LR
comp=E,200nm,21.0s
CN2 LR LR
comp=Z,200nm,22.0s
MDJ Mudanjiang 161.78 119 PKP **PKPdf 18 59 06.3 -0.2**
MDJ pPKP **pPKPdf 18 59 30.6 -5.2**
MDJ sPKP 18 59 39.1
MDJ PKS **PKSdf 19 02 41.2 +1.7**
MDJ PP **PP 19 03 38.1 +1.0**
MDJ SKS **SKSdf 19 06 05.7 +4.5**
MDJ SS **SS 19 23 50.6 +4.2**
MDJ AMB AMB
comp=Z,83nm,4.7s
MDJ LR LR
comp=N,110nm,7.4s
MDJ LR LR
comp=Z,140nm,5.3s
USRK Ussuriysk Arra 162.61 124 PKPab **PKPab 18 59 55.8 -0.5**
comp=Z,9.7nm,0.9s,baz=227,slow=5.2,SNR=14
KLR Kul'dur 165.96 110 *e*PKP2 **PKPab 19 00 06.7 -4.3**
KLR pmax pmax
comp=Z,43nm,1.4s
BILL Bilibino 166.26 337 *e*PKIKP **PKPdf 18 59 06.3 -3.6**
BILL Bilibino 166.26 337 *e*PKPdf **PKPdf 18 59 06.3 -3.6**
ASAJ Asahikawa 166.66 149 PKPab **PKPab 19 00 14.6 +0.5**
ASAJ Asahikawa 166.66 149 PKPab **PKPab 19 00 14.6 +0.5**
comp=Z,17nm,1.1s,baz=228,slow=12,SNR=4.3
YSS Yuzh-Sakhalins 169.25 144 *e*PKP2 **PKPab 19 00 27.0 +1.5**
YSS pmax pmax
comp=Z,40nm,1.0s
SEY Seymchan 173.05 359 *i* PKIKP **PKPdf 18 59 11.6 -2.4**
PETK Petropavlovsk- 175.62 231 PKIKP **PKPdf 18 59 16.6 +1.4**
PETK Petropavlovsk- 175.62 231 PKP **PKPdf 18 59 16.6 +1.4**
PETK PKPab **PKPab 19 00 54.8 +1.1**
PETK Petropavlovsk- 175.62 231 PKP **PKPdf 18 59 16.6 +1.4**
comp=Z,5.2nm,0.9s,baz=103,slow=4.7,SNR=3.7
PETK PKPab **PKPab 19 00 54.8 +1.1**
comp=Z,4.6nm,0.8s,baz=167,slow=7.4,SNR=3.6

*IDC **04** 18:45:18.5± 1.3, 53.61N × 163.74W, h0km, mb4.0/16, mb1 4.1/18, mb1mx4.0/32, mbtmp3.9/18, ML3.3/2, MS3.8/2, Ms1 3.8/2, ms1mx2.9/59, Error ellipse: s-maj=33.6km s-min=15.1km az=165.0*

ISCJB ***04*** *18:45:20.3±0.5, 53°.43N±0°.05×163°.55W±0°.06, h29km, mb4.1/27, MS3.8/2, Error ellipse: s-maj=7.7km s-min=4.3km az=159.8*
NEIC ***04*** *18:45:22.2, 53°.44N×163°.63W, h19km, mb4.4/13, After AEIC.*
ISC 04 18:45:22.5±0.7**, 53°.57N**±0°.07×**163°.69W**±0°.05**, h29km, n87,** σ**0.87**/88**, mb4.2**/27**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	1.05	330	P	Pb	18 45 41.9	-0.2
WESE				S	Sb	18 45 55.5	+0.1
WESN	West Dahl Nort	1.13	333	P	Pb	18 45 43.4	-0.1
SSLW	Shishaldin Wes	1.23	348	P	Pb	18 45 44.6	-0.5
SSLW				S	Sb	18 46 03.5	+2.8
FALS	False Pass	1.30	7	P	Pn	18 45 45.2	+0.5
AKUT	Akutan	1.36	296	P	Pn	18 45 45.7	+0.3
AHB	Akutan Harbor	1.37	294	P	Pn	18 45 46.1	+0.4
ZRO	Akutan Zero	1.45	292	P	Pn	18 45 47.0	+0.2
AKLV	Akutan Long Va	1.47	295	P	Pn	18 45 47.2	+0.2
AKGG	Akutan Green G	1.50	296	P	Pn	18 45 48.0	+0.6
AKRB	Akutan Reef Bi	1.52	293	P	Pn	18 45 48.1	+0.4
DRIA	Deer Island	1.63	30	P	Pn	18 45 48.9	-0.4
UNV	Unalaska Valle	1.69	281	P	Pn	18 45 49.9	-0.2
UNV				S	Sb	18 46 12.1	-1.7
DT1	Dutton Round H	1.75	28	P	Pn	18 45 50.6	-0.2
DTNA	Dutton South F	1.79	27	P	Pn	18 45 51.5	0.0
MTBL	Makushin Table	1.82	284	P	Pn	18 45 52.8	+1.0
MREP	Makushin Rep't	1.83	279	P	Pn	18 45 52.6	+0.6
MCIR	Makushin Cirqu	1.94	283	P	Pn	18 45 54.0	+0.5
PS4A	Pavlof South-4	2.08	30	P	Pn	18 45 56.0	+0.6
OKFG	Magazine Ridge	2.53	268	P	Pn	18 46 01.5	0.0
SDPT	Sand Point	2.59	45	P	Pn	18 46 02.3	-0.1
SDPT				S	Sn	18 46 33.2	+0.3
OKSO	Okmok South	2.68	267	P	Pn	18 46 03.6	0.0
OKSP	Okmok Steeple	2.77	265	P	Pn	18 46 05.4	+0.4
VNHG	Veniaminof 1	3.73	43	P	Pn	18 46 19.4	+1.3
KDAK	Kodiak Island	7.56	52	Pn	Pn	18 47 08.6	-2.0
KDAK				Sn	Sn	18 48 27.8	-7.5
KDAK	Kodiak Island	7.56	52	Pn	Pn	18 47 08.6	-2.0
	0.8nm,0.3s,baz=174,slow=8.9,SNR=12						
KDAK				Sn	Sn	18 48 27.8	-7.5
	0.2nm,0.3s,baz=354,slow=18,SNR=4.1						
ILAR	Eielson Array	14.09	31	Pn	Pn	18 48 38.6	-1.2
ILAR	Eielson Array	14.09	31	Pn	Pn	18 48 38.6	-1.2
	0.0nm,0.3s,baz=224,slow=12,SNR=3.9						
BILL	Bilibino	20.29	327	eP	Pn	18 49 57.0	-0.6
	3.5nm,0.6s						
INK	Inuvik	20.47	32	P	P	18 49 56.6	-0.9
INK	Inuvik	20.47	32	P	P	18 49 56.6	-0.9
	1.9nm,0.9s,baz=242,slow=6.5,SNR=5.5						
PETK	Petropavlovsk-	22.87	285	P	P	18 50 24.1	+0.7
PETK	Petropavlovsk-	22.87	285	P	P	18 50 24.1	+0.7
	2.3nm,0.7s,baz=89,slow=12,SNR=6.3						
YKA	Yellowknife Ar	26.84	51	P	P	18 51 00.6	+0.5
YKA	Yellowknife Ar	26.84	51	P	P	18 51 00.5	+0.5
	1.6nm,0.9s,baz=274,slow=7.5,SNR=17						
NEW	Newport	29.41	81	P	P	18 51 27.8	+4.7
NEW	Newport	29.41	81	P	P	18 51 27.8	+4.7
	0.6nm,0.5s,baz=312,slow=12,SNR=1.8						
YBH	Yreka Blue Hor	29.62	97	LR	LR	19 02 12.3	
	comp=Z,62nm,18.3s,baz=298,slow=34						
TIXI	Tiksi	33.51	328	eP	P	18 51 56.7	-2.1
	0.9nm,0.5s						
KSRS	Korea Array	48.63	280	P	P	18 54 04.5	+1.1
	2.5nm,0.8s,baz=52,slow=7.2,SNR=12						
KSAR	Wonju Array Be	48.66	280	P	P	18 54 04.5	+0.8
TXAR	Lajitas Array	49.35	94	P	P	18 54 09.9	+0.7
TXAR	Lajitas Array	49.35	94	P	P	18 54 09.9	+0.7
	0.3nm,0.4s,baz=334,slow=3.1,SNR=3.4						
TLY	Talaya	52.35	308	P	P	18 54 30.7	-0.6
	6.4nm,0.9s						
ULN	Ulaanbaatar	53.23	303	eP	P	18 54 38.0	-0.1
	4.5nm,0.8s						
SONM	Songino Array	53.58	303	P	P	18 54 40.7	+0.1
SONM	Songino Array	53.58	303	P	P	18 54 40.7	+0.1
	2.6nm,0.8s,baz=40,slow=6.8,SNR=28						
ZALV	Zalesovo Beam	58.78	320	P	P	18 55 17.3	-0.2
ZALV				PcP	PcP	18 56 07.5	+0.6
ZALV	Zalesovo Beam	58.78	320	P	P	18 55 17.3	-0.2
	0.8nm,0.6s,baz=28,slow=6.7,SNR=6.4						
ZALV				PcP	PcP	18 56 07.5	+0.6
	0.8nm,0.7s,baz=338,slow=1.6,SNR=4.0						
KURK	Kurchatov	63.68	321	P	P	18 55 50.3	-0.3
	2.4nm,0.8s						
BVAR	Borovoye Array	64.64	327	P	P	18 55 57.3	+0.3
BVAR	Borovoye Array	64.64	327	P	P	18 55 57.3	+0.3
	2.6nm,0.7s,baz=47,slow=6.5,SNR=14						
BRVK	Borovoye	64.64	327	eP	P	18 55 56.9	0.0
	2.7nm,0.8s						
ARU	Arti	65.03	336	eP	P	18 55 59.0	-0.4
	3.5nm,1.0s						
FINES	FINESS Array B	65.07	355	P	P	18 55 59.4	-0.2
FINES	FINESS Array B	65.07	355	P	P	18 55 59.4	-0.2
	3.7nm,1.0s,baz=23,slow=10,SNR=5.7						
MK31	Makanchi Array	65.39	316	eP	P	18 55 59.3	-2.7
MKAR	Makanchi Array	65.39	316	P	P	18 56 01.1	-0.9
MKAR	Makanchi Array	65.39	316	P	P	18 56 01.1	-0.9
	0.7nm,0.7s,baz=46,slow=6.9,SNR=9.4						
NB2	NORSAR Subarra	65.67	3	P	P	18 56 03.9	+0.4
	comp=Z,0.9nm,0.7s,baz=359,slow=6.9						
NOA	NORSAR Array B	65.67	3	P	P	18 56 04.0	+0.4
NOA	NORSAR Array B	65.67	3	P	P	18 56 04.0	+0.4
	comp=Z,2.5nm,0.9s,baz=358,slow=6.6,SNR=7.2						
ABKAR	Akbulak array	71.12	331	eP	P	18 56 38.6	+0.9
	comp=Z,2.4nm,0.8s						
AAK	Ala-Archa	71.96	319	eP	P	18 56 41.8	-1.4
	comp=Z,11nm,0.9s						
KKAR	Karatay Array	73.08	322	eP	P	18 56 50.2	+0.6
	comp=Z,0.8nm,0.7s						
AKASG	Malin Array Be	75.53	352	P	P	18 57 03.6	-0.1
AKASG	Malin Array Be	75.53	352	P	P	18 57 03.6	-0.1
	comp=Z,0.4nm,0.4s,baz=11,slow=6.3,SNR=4.1						
GERES	GERESS Array B	77.94	2	P	P	18 57 18.1	+0.6
GERES	GERESS Array B	77.94	2	P	P	18 57 18.1	+0.6
	comp=Z,0.8nm,0.8s,baz=343,slow=4.2,SNR=5.6						
TAPN	Taplejung	78.60	301	eP	P	18 57 21.4	-0.4
GUN	Gumba	79.07	302	eP	P	18 57 24.3	-0.1
	comp=Z,21nm,1.0s						
KKN	Kakani	79.47	303	eP	P	18 57 27.1	+0.7
RAMN	Ramite	79.50	301	eP	P	18 57 26.7	+0.1
PKI	Pulchoki	79.59	303	eP	P	18 57 27.3	+0.1
CMAR	Chiang Mai Arr	79.63	287	P	P	18 57 27.5	+0.4
CMAR	Chiang Mai Arr	79.63	287	P	P	18 57 27.5	+0.4
	comp=Z,1.6nm,1.0s,baz=14,slow=4.7,SNR=9.8						
DMN	Daman	79.71	303	eP	P	18 57 28.6	+0.8
DANN	Dangsing	79.77	304	eP	P	18 57 28.6	+0.5
	comp=Z,29nm,0.8s						
KOLN	Koldanda	80.33	304	eP	P	18 57 31.3	+0.3
	comp=Z,12nm,1.0s						
PYUN	Piuthan	80.36	305	eP	P	18 57 30.6	-0.6
	comp=Z,48nm,1.1s						
KBZ	Khabaz	80.43	341	P	P	18 57 31.8	+0.8
KBZ	Khabaz	80.43	341	P	P	18 57 31.8	+0.8
	comp=Z,2.2nm,0.8s,baz=31,slow=1.3,SNR=7.9						
KBL	Kabul	81.09	318	P	P	18 57 33.6	-1.4
	comp=Z,5.6nm,1.1s						
BR131	Keskin Array S	85.88	347	eP	P	18 58 00.1	+0.6
	comp=Z,2.0nm,0.9s						
BRTR	Keskin Array B	85.88	347	P	P	18 57 58.9	-0.5
BRTR	Keskin Array B	85.88	347	P	P	18 57 58.9	-0.5
	comp=Z,1.3nm,0.9s,baz=66,slow=1.5,SNR=6.9						
MALT	Malatya	86.51	343	P	P	18 58 04.7	+2.2
	comp=Z,2.6nm,1.1s						
FITZ	Fitzroy Crossi	93.45	244	LR	LR	19 44 10.9	
	comp=Z,106nm,18.2s,baz=29,slow=38						

MDD ***04*** *18:52:13.3±1.6, 37°.10N×15°.38W, h30km, mb4.1/4, Error ellipse: s-maj=19.9km s-min=10.9km az=130.0, PRXIMO*
IGIL ***04*** *18:52:14.5, 37°.12N×15°.34W, h26km, ML2.5*
INMG ***04*** *18:52:17.1±2.1, 37°.09N×15°.37W, h10km, ML2.6, Error ellipse: s-maj=9.2km s-min=4.3km az=124.0*
CSEM ***04*** *18:52:19.9±0.4, 37°.47N×14°.62W, h10km, ML3.7/4, Error ellipse: s-maj=7.1km s-min=6.8km az=38.0*
ISC 04 18:52:16.3±3.7**, 37°.43N**±0°.09×**14°.9W**±0°.2**, h10km, n85,** σ**1.39**/138**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMPST	Porto Santo, M	4.51	196	eSn	Sn	18 53 54.9	-22
PMPS	Porto Santo	4.53	196	S	Sn	18 53 54.9	-23
PMAFR	Mafra	4.64	69	ePn	Pn	18 53 28.5	+2.0
PMAFR				eSn	Sn	18 54 22.2	+1.8
PMAFR				A	A	18 54 26.3	
	16nm,0.2s						
PMAFR	Mafra	4.64	69	P	Pn	18 53 27.8	+1.3
	0.9nm,0.2s,SNR=7.9						
PMAFR				S	Sn	18 54 22.0	+1.6
	12nm,0.2s,SNR=7.9						
PMAFR	Mafra	4.64	69	P	Pn	18 53 27.8	+1.3
	0.9nm,0.2s,SNR=7.9						
PMAFR	Mafra	4.64	69	ePn	Pn	18 53 28.5	+2.0
PMAFR				S	Sn	18 54 22.0	+1.6
	12nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	4.81	92	ePn	Pn	18 53 29.1	+0.3
PFVI				eSn	Sn	18 54 23.5	-1.1
PFVI	Vila Bisbo	4.81	92	P	Pn	18 53 28.9	+0.1
	2.3nm,0.2s,SNR=7.0						
PFVI				S	Sn	18 54 22.9	-1.7
	5.0nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	4.81	92	ePn	Pn	18 53 29.1	+0.3
PFVI				S	Sn	18 54 22.9	-1.7
	5.0nm,0.1s,SNR=7.9						
PFVI				eSn	Sn	18 54 23.5	-1.1
PTEO	Sao Teotonio	4.87	87	ePn	Pn	18 53 30.6	+1.0
PTEO				eSn	Sn	18 54 24.7	-1.4
PTEO				A	A	18 54 25.9	
	5.4nm,0.3s						
PTEO	Sao Teotonio	4.87	87	P	Pn	18 53 30.6	+1.0
PTEO				S	Sn	18 54 24.7	-1.4
	2.7nm,0.3s						
PTEO	Sao Teotonio	4.87	87	P	Pn	18 53 30.6	+1.0
PTEO				S	Sn	18 54 24.7	-1.4
	2.7nm,0.3s						
MORF	Marmelete	4.94	90	ePn	Pn	18 53 31.0	+0.4
MORF				eSn	Sn	18 54 26.5	-1.3
MORF				A	A	18 54 30.1	
	5.9nm,0.2s						
MORF	Marmelete	4.94	90	P	Pn	18 53 31.0	+0.4
MORF				S	Sn	18 54 26.5	-1.3
	5.9nm,0.2s						
MORF	Marmelete	4.94	90	P	Pn	18 53 31.0	+0.4
MORF				S	Sn	18 54 26.5	-1.3
	5.9nm,0.2s						
PMAR	Madeira	4.99	200	eSn	Sn	18 54 07.2	-22
PMAR	Madeira	4.99	200	S	Sn	18 54 07.2	-22
PNCL	Nicolau / Gran	5.05	80	ePn	Pn	18 53 33.1	+1.0
PNCL				eSn	Sn	18 54 29.8	-0.7
PNCL				A	A	18 54 37.2	
	3.3nm,0.1s						
PNCL	Nicolau / Gran	5.05	80	ePn	Pn	18 53 33.1	+1.0
PNCL				eSn	Sn	18 54 29.8	-0.7
	3.3nm,0.1s						
MOE	Montemor	5.25	76	eSn	Sn	18 54 32.5	-2.9
MOE	Montemor	5.25	76	S	Sn	18 54 32.5	-2.9
MOE	Montemor	5.25	76	S	Sn	18 54 32.5	-2.9
MESJ	Messejana	5.28	84	eP	Pn	18 53 35.7	+0.5
MESJ				eS	Sn	18 54 35.0	-1.0
MESJ				AML	AML	18 54 39.7	
	comp=E,5.1nm,0.1s						
MESJ	Messejana	5.28	84	eP	Pn	18 53 35.7	+0.5
MESJ				eS	Sn	18 54 35.0	-1.0
MESJ	Messejana	5.28	84	P	Pn	18 53 35.7	+0.5
MESJ				S	Sn	18 54 35.0	-1.0
MESJ	Messejana	5.28	84	eP	Pn	18 53 35.7	+0.5
MESJ				eS	Sn	18 54 35.0	-1.0
PCVE	Castro Verde	5.42	86	ePn	Pn	18 53 38.1	+1.0
PCVE				eSn	Sn	18 54 38.3	-1.2
PCVE	Castro Verde	5.42	86	P	Pn	18 53 38.1	+1.0
PCVE				S	Sn	18 54 38.3	-1.2
PCVE	Castro Verde	5.42	86	P	Pn	18 53 38.1	+1.0
PCVE				S	Sn	18 54 38.3	-1.2
PMTG	Montargil	5.46	71	ePn	Pn	18 53 39.4	+1.7
PMTG				eSn	Sn	18 54 41.1	+0.5
PMTG				A	A	18 54 46.7	
	comp=E,2.9nm,0.1s						
PMTG	Montargil	5.46	71	ePn	Pn	18 53 39.4	+1.7
PMTG				eSn	Sn	18 54 41.1	+0.5
	comp=E,2.9nm,0.1s						
EVO	Evora	5.51	76	ePn	Pn	18 53 40.1	+1.7
EVO				eSn	Sn	18 54 41.4	-0.4
EVO				A	A	18 54 49.6	
	comp=E,7.2nm,0.1s						
EVO	Evora	5.51	76	P	Pn	18 53 40.1	+1.7
EVO				S	Sn	18 54 41.4	-0.4
	comp=E,7.2nm,0.1s						
EVO	Evora	5.51	76	P	Pn	18 53 40.1	+1.7
EVO				S	Sn	18 54 41.4	-0.4
	comp=E,7.2nm,0.1s						
PBDV	Barranco-do-Ve	5.52	90	ePn	Pn	18 53 39.8	+1.3
PBDV				eSn	Sn	18 54 42.5	+0.5
PBDV				A	A	18 54 47.0	
	comp=E,2.9nm,0.3s						
PBDV	Barranco-do-Ve	5.52	90	P	Pn	18 53 39.8	+1.3
PBDV				S	Sn	18 54 42.5	+0.5
	comp=E,2.9nm,0.3s						
PBDV	Barranco-do-Ve	5.52	90	P	Pn	18 53 39.8	+1.3
PBDV				S	Sn	18 54 42.5	+0.5
	comp=E,2.9nm,0.3s						
PBEJ	Beja	5.57	82	eSn	Sn	18 54 42.9	-0.3
PBEJ	Beja	5.57	82	S	Sn	18 54 42.9	-0.3
PBEJ	Beja	5.57	82	S	Sn	18 54 42.9	-0.3
PVAQ	Vaqueiros	5.68	88	ePn	Pn	18 53 41.2	+0.5
PVAQ				eSn	Sn	18 54 45.4	-0.5
PVAQ				A	A	18 54 50.8	
	comp=E,4.8nm,0.1s						
PVAQ	Vaqueiros	5.68	88	P	Pn	18 53 41.2	+0.5
PVAQ				S	Sn	18 54 45.4	-0.5
	comp=E,4.8nm,0.1s						
PVAQ	Vaqueiros	5.68	88	P	Pn	18 53 41.2	+0.5
PVAQ				S	Sn	18 54 45.4	-0.5
	comp=E,4.8nm,0.1s						
EGRO	El Granado	5.86	87	P	Pn	18 53 43.8	+0.6
	SNR=7.9						
EGRO				S	Sn	18 54 49.1	-1.3
	comp=E,1.7nm,0.3s,SNR=7.9						
EGRO	El Granado	5.86	87	P	Pn	18 53 43.8	+0.6
	SNR=7.9						
EGRO				S	Sn	18 54 49.1	-1.3
	comp=E,1.7nm,0.3s,SNR=7.9						
PESTR	Estremoz	5.90	74	eSn	Sn	18 54 51.0	-0.4
PESTR	Estremoz	5.90	74	S	Sn	18 54 51.0	-0.4
PESTR	Estremoz	5.90	74	S	Sn	18 54 51.0	-0.4
PMRV	Marv??o	6.18	69	ePn	Pn	18 53 49.4	+1.7
PMRV				eSn	Sn	18 54 57.9	-0.5
PMRV				A	A	18 55 01.6	
	comp=E,2.4nm,0.3s						
PMRV	Marv??o	6.18	69	P	Pn	18 53 49.4	+1.7
PMRV				S	Sn	18 54 57.9	-0.5
	comp=E,2.4nm,0.3s						
PMRV	Marv??o	6.18	69	P	Pn	18 53 49.4	+1.7
PMRV				S	Sn	18 54 57.9	-0.5
	comp=E,2.4nm,0.3s						
PBAR	Barrancos	6.23	81	ePn	Pn	18 53 50.1	+1.8
PBAR				eSn	Sn	18 54 59.0	-0.5
PBAR	Barrancos	6.23	81	P	Pn	18 53 50.1	+1.8
PBAR				S	Sn	18 54 59.0	-0.5
PBAR	Barrancos	6.23	81	P	Pn	18 53 50.1	+1.8
PBAR				S	Sn	18 54 59.0	-0.5
PCBR	Castelo Branco	6.25	65	eSn	Sn	18 55 01.0	+1.0
PCBR	Castelo Branco	6.25	65	S	Sn	18 55 01.0	+1.0
PCBR	Castelo Branco	6.25	65	S	Sn	18 55 01.0	+1.0
EZAM	Zamans	6.68	43	S	Sn	18 55 09.6	-1.0
	comp=E,2.7nm,0.1s,SNR=7.9						
EZAM	Zamans	6.68	43	S	Sn	18 55 09.6	-1.0
	comp=E,2.7nm,0.1s,SNR=7.9						
POLO	Lamas de Olo	6.73	52	ePn	Pn	18 53 57.3	+2.0
POLO				eSn	Sn	18 55 11.6	-0.4
POLO	Lamas de Olo	6.73	52	ePn	Pn	18 53 57.3	+2.0
POLO				eSn	Sn	18 55 11.6	-0.4
PCAB	Cabril	6.78	49	eSn	Sn	18 55 13.4	+0.2
PCAB	Cabril	6.78	49	S	Sn	18 55 13.4	+0.2
PCAB	Cabril	6.78	49	S	Sn	18 55 13.4	+0.2
PGAV	Gavieira, Arco	6.80	46	ePn	Pn	18 53 58.0	+1.8
PGAV				eSn	Sn	18 55 11.6	-2.1
PGAV				A	A	18 55 17.3	
	comp=E,4.4nm,0.3s						
PGAV	Gavieira, Arco	6.80	46	ePn	Pn	18 53 58.0	+1.8
PGAV				eSn	Sn	18 55 11.6	-2.1
	comp=E,4.4nm,0.3s						
EMAZ	Mazaricos	7.11	37	S	Sn	18 55 17.8	-3.4
	comp=E,3.1nm,0.1s,SNR=7.9						
MVO	Moncorvo	7.12	56	ePn	Pn	18 54 02.1	+1.6
MVO				eSn	Sn	18 55 20.3	-1.2
MVO				A	A	18 55 23.4	
	comp=E,3.3nm,0.2s						
MVO	Moncorvo	7.12	56	P	Pn	18 54 01.8	+1.3
	comp=E,0.9nm,0.2s,SNR=7.9						
MVO				S	Sn	18 55 19.4	-2.1
	comp=E,3.2nm,0.2s,SNR=7.9						
MVO	Moncorvo	7.12	56	P	Pn	18 54 01.8	+1.3
	comp=E,0.9nm,0.2s,SNR=7.9						
MVO	Moncorvo	7.12	56	ePn	Pn	18 54 02.1	+1.6
MVO				S	Sn	18 55 19.4	-2.1
	comp=E,3.2nm,0.2s,SNR=7.9						
MVO				eSn	Sn	18 55 20.3	-1.2
	comp=E,3.3nm,0.2s						
ESPR	Espera	7.21	92	S	Sn	18 55 22.4	-1.1
	comp=E,3.3nm,0.2s,SNR=7.9						
ESPR	Espera	7.21	92	S	Sn	18 55 22.4	-1.1
	comp=E,3.3nm,0.2s,SNR=7.9						
EPLA	Plasencia	7.34	66	P	Pn	18 54 05.5	+1.9
	comp=E,0.2nm,0.1s,SNR=7.9						
EPLA				S	Sn	18 55 25.9	-1.0
	comp=E,1.1nm,0.1s,SNR=7.9						
EPLA	Plasencia	7.34	66	P	Pn	18 54 05.4	+1.9
	comp=E,0.2nm,0.1s,SNR=7.9						
EPLA				S	Sn	18 55 25.9	-1.0
	comp=E,1.1nm,0.1s,SNR=7.9						
PBRG	Braganca	7.63	53	ePn	Pn	18 54 10.2	+2.7
PBRG				eSn	Sn	18 55 32.3	-1.7
PBRG	Braganca	7.63	53	P	Pn	18 54 10.2	+2.7
PBRG				S	Sn	18 55 32.3	-1.7
PBRG	Braganca	7.63	53	P	Pn	18 54 10.2	+2.7
PBRG				S	Sn	18 55 32.3	-1.7
ECAL	Calabor	7.71	52	P	Pn	18 54 09.9	+1.3
	comp=E,2.0nm,0.3s,SNR=7.9						
ECAL				S	Sn	18 55 34.4	-1.6
	comp=E,2.2nm,0.3s,SNR=7.9						
ECAL	Calabor	7.71	52	P	Pn	18 54 09.9	+1.3
	comp=E,2.0nm,0.3s,SNR=7.9						
ECAL				S	Sn	18 55 34.4	-1.6
	comp=E,2.2nm,0.3s,SNR=7.9						
EPON	Pontenova	8.32	43	P	Pn	18 54 17.3	+0.4
	comp=E,1.3nm,0.4s,SNR=7.9						
EPON				S	Sn	18 55 46.5	-4.4
	comp=E,1.4nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	8.82	72	P	Pn	18 54 23.3	-0.5
	comp=E,0.6nm,0.1s,baz=51,slow=42,SNR=5.1						
ESDC				S	Sn	18 56 01.4	-1.9
	comp=E,0.6nm,0.2s,baz=261,slow=24,SNR=3.8						
ESDC	Sonseca Array	8.82	72	P	Pn	18 54 23.3	-0.5
	comp=E,0.6nm,0.1s,SNR=5.1						
ESDC				S	Sn	18 56 01.4	-1.9
	comp=E,0.6nm,0.2s,slow=24,SNR=3.8						
EARI	Arriondas	9.40	48	P	Pn	18 54 31.8	0.0
	comp=E,1.6nm,0.7s,SNR=7.9						
EARI				S	Sn	18 56 16.5	-1.1
	comp=E,2.4nm,0.6s,SNR=7.9						
EARI	Arriondas	9.40	48	P	Pn	18 54 31.8	0.0
	comp=E,1.6nm,0.7s,SNR=7.9						
EARI				S	Sn	18 56 16.5	-1.1
	comp=E,2.4nm,0.6s,SNR=7.9						

BJI ***04*** *18:59:12.0, 31°.70N×49°.44E, h12km, mB5.0/2, mb4.7/4, Ms4.6/4, Ms7 4.3/3*
CSEM ***04*** *18:59:19.7±0.1, 31°.73N×50°.24E, h10km, mb4.3/29, Ms3.9, Error ellipse: s-maj=5.4km s-min=3.3km az=8.0*
NEIC ***04*** *18:59:20.1±0.3, 31°.83N×50°.24E, h10km, mb4.4/17, ML4.0(THR), MN4.1(TEH), Error ellipse: s-maj=6.6km s-min=4.1km az=179.0*
THR ***04*** *18:59:20.2±1.2, 31°.76N×50°.39E, h15km±10km, ML4.0*
MOS ***04*** *18:59:21.6±1.3, 31°.81N×50°.22E, h33km, mb4.4/32, Error ellipse: s-maj=7.8km s-min=5.2km az=114.3*
TEH ***04*** *18:59:22.3, 31°.80N×50°.28E, h11km, ML4.1*
IDC ***04*** *18:59:22.9±3.5, 31°.90N×50°.27E, h28km±24km, mb3.8/22, mb1 3.9/28, mb1mx3.9/39, mbtmp3.8/28, ML3.6/6, MS3.2/3, Ms1 3.2/3, ms1mx2.7/43, Error ellipse: s-maj=15.6km s-min=12.0km az=167.0*
ISC 04 18:59:21.9±0.6**, 31°.80N**±0°.05×**50°.32E**±0°.03**, h24km**±4km**, n356,** σ**1.27**/373**, mb4.3**/49**, MS3.5**/5**, 12C-26D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPIR	Pirpir	1.00	29	Pg	Pn	18 59 37.3	-3.5
IPIR	Pirpir	1.00	29	⇓ePg	Pn	18 59 37.4	-3.4
IPIR				e		18 59 56.8	
	comp=Z,42μm,0.2s						
IPIR	Pirpir	1.00	29	Pg	Pn	18 59 37.3	-3.5
SHGR	Shooshtar-Gavs	1.32	284	ePg	Pb	18 59 46.2	+0.1
SHGR				AML	AML	19 00 19.3	
	comp=N,2μm,0.9s						
SHGR				AML	AML	19 00 19.5	
	comp=E,2μm,0.8s						
SHGR	Shooshtar-Gavs	1.32	284	Pg	Pb	18 59 46.0	-0.1
SHGR	Shooshtar-Gavs	1.32	284	Pg	Pb	18 59 46.0	-0.1
IGAR	Gharneh	1.58	67	ePn	Pn	18 59 46.7	-2.0
IGAR				eSg	Sb	19 00 12.5	+2.2
IGAR				e		19 00 15.4	
	comp=Z,18μm,0.3s						
IKLH	Kolahrood	1.85	35	Pg	Pn	18 59 51.2	-1.2
IKLH	Kolahrood	1.85	35	ePn	Pn	18 59 51.2	-1.2
IKLH				eSg	Sb	19 00 21.0	+3.0
IKLH				e		19 00 24.9	
	comp=Z,32μm,0.4s						
IKLH	Kolahrood	1.85	35	ePn	Pn	18 59 51.2	-1.2
IZEF	Zefreh	2.02	57	Pn	Pn	18 59 54.9	+0.2
IZEF	Zefreh	2.02	57	ePn	Pn	18 59 54.9	+0.2
IZEF				e		19 00 29.2	
	comp=Z,7μm,0.2s						
IZEF	Zefreh	2.02	57	ePn	Pn	18 59 54.9	+0.2
NASN	Na'in	2.33	64	ePn	Pn	19 00 00.1	+1.1
NASN				eSg	Sb	19 00 32.3	+0.3
NASN	Na'in	2.33	64	P	Pn	19 00 00.0	+0.9
NASN	Na'in	2.33	64	ePn	Pn	19 00 00.1	+1.1
NASN				eSg	Sb	19 00 32.3	+0.3
GHVR	GHOM	2.79	17	ePn	Pn	19 00 06.6	+1.4
GHVR				AML	AML	19 00 56.5	
	comp=N,553nm,0.1s						
GHVR	GHOM	2.79	17	Pn	Pn	19 00 06.0	+0.8
GHVR	GHOM	2.79	17	ePn	Pn	19 00 06.6	+1.4
SHI	Shiraz	2.87	138	P	Pn	19 00 08.4	+2.1
SHI	Shiraz	2.87	138	Pn	Pn	19 00 08.4	+2.1
SHI	Shiraz	2.87	138	ePn	Pn	19 00 08.4	+2.1
SHI				e		19 01 16.9	
	comp=E,8μm,0.4s						
ISFB	Sefidab	3.01	32	e		19 00 14.6	
	comp=Z,5μm,0.2s						
ISFB				⇓ePn	Pn	19 00 09.5	+1.3
IKOM	Komasi	3.34	316	ePn	Pn	19 00 14.0	+1.2
IKOM				e		19 00 32.8	
	comp=Z,5μm,0.3s						
IKOM	Komasi	3.34	316	ePn	Pn	19 00 14.0	+1.2
IVRN	Varamin	3.39	20	⇓ePn	Pn	19 00 15.0	+1.5
IVRN				e		19 00 38.8	
	comp=Z,7μm,0.4s						
IVRN	Varamin	3.39	20	⇓ePn	Pn	19 00 15.0	+1.5
KBD	Kabd	3.46	222	eP	Pn	19 00 17.1	+2.7
KBD				AML	AML	19 01 04.8	
	comp=Z,161nm,0.4s						
ICHK	Chekchek	3.50	82	Pn	Pn	19 00 16.7	+1.6
ICHK	Chekchek	3.50	82	ePn	Pn	19 00 16.7	+1.6
ICHK				e		19 01 21.0	
	comp=Z,3μm,0.3s						
ICHK	Chekchek	3.50	82	ePn	Pn	19 00 16.7	+1.6
IRAZ	Razeghan	3.61	355	Pn	Pn	19 00 17.8	+1.3
IRAZ	Razeghan	3.61	355	ePn	Pn	19 00 17.9	+1.4
IRAZ				e		19 00 28.5	
	comp=Z,5μm,0.2s						
IRAZ	Razeghan	3.61	355	Pn	Pn	19 00 17.8	+1.3
NAY	Al-Naaiem	3.68	227	eP	Pn	19 00 20.3	+3.0
NAY				AML	AML	19 01 09.9	
	comp=Z,90nm,0.5s						
IMEH	Mehriz	3.69	95	Pn	Pn	19 00 19.5	+1.8
IMEH	Mehriz	3.69	95	ePn	Pn	19 00 19.5	+1.8
IMEH				e		19 01 15.4	
	comp=Z,2μm,0.4s						
IMEH	Mehriz	3.69	95	ePn	Pn	19 00 19.5	+1.8
QRN	Al-Qurain	3.69	215	eP	Pn	19 00 19.7	+2.3
QRN				AML	AML	19 01 07.3	
	comp=Z,201nm,0.3s						
IR3	Iran Long-Peri	3.71	9	ePn	Pn	19 00 18.8	+1.0
IR3	Iran Long-Peri	3.71	9	ePn	Pn	19 00 18.8	+1.0
RDF	Al-Radifah	3.73	221	eP	Pn	19 00 21.0	+2.9
IMHD	Mahdasht	3.88	4	ePn	Pn	19 00 21.6	+1.4
IMHD				e		19 00 31.9	
	comp=Z,3μm,0.3s						
IMHD	Mahdasht	3.88	4	ePn	Pn	19 00 21.6	+1.4

IVIS Veis 3.98 314 *e*Pn **Pn** 19 00 21.8 +0.3
IVIS *e* 19 01 17.2
comp=Z,2µm,0.2s
IVIS Veis 3.98 314 *e*Pn **Pn** 19 00 21.8 +0.3
IGHG Ghaleghazi 4.03 310 *e*Pn **Pn** 19 00 21.4 -1.0
IGHG *e* 19 01 49.6
comp=Z,7µm,0.5s
IGHG Ghaleghazi 4.03 310 *e*Pn **Pn** 19 00 21.4 -1.0
SNGE Sanandaj 4.11 324 *e*Pn **Pn** 19 00 25.3 +1.8
SNGE Sanandaj 4.11 324 Pn Pn 19 00 25.0 +1.5
SNGE Sanandaj 4.11 324 Pn Pn 19 00 25.0 +1.5
THKV Tehran--Karaj 4.13 6 *e*Pn **Pn** 19 00 26.4 +2.7
THKV Tehran--Karaj 4.13 6 *e*Pn **Pn** 19 00 26.4 +2.7
CHTH Charan 4.15 9 *e*Pn **Pn** 19 00 25.1 +1.1
CHTH Charan 4.15 9 Pn **Pn** 19 00 25.0 +1.1
CHTH Charan 4.15 9 *e*Pn **Pn** 19 00 25.1 +1.1
ILIN Lien 4.19 319 *e*Pn **Pn** 19 00 25.3 +0.8
ILIN *e* 19 01 19.9
comp=Z,2µm,0.2s
ILIN Lien 4.19 319 *e*Pn **Pn** 19 00 25.3 +0.8
ILAS Lasjerd 4.19 31 *e*Pn **Pn** 19 00 26.0 +1.4
ILAS *e* 19 01 38.2
comp=Z,3µm,0.4s
ILAS Lasjerd 4.19 31 *e*Pn **Pn** 19 00 26.0 +1.4
GHIR Ghir-Karzin 4.20 146 *e*Pn **Pn** 19 00 24.5 -0.1
GHIR Ghir-Karzin 4.20 146 Pn **Pn** 19 00 24.0 -0.6
GHIR Ghir-Karzin 4.20 146 Pn **Pn** 19 00 24.0 -0.6
IFIR Firoozkooh 4.33 27 Pn **Pn** 19 00 28.7 +2.2
IFIR Firoozkooh 4.33 27 *e*Pn **Pn** 19 00 28.7 +2.2
IFIR *e* 19 00 55.1
comp=Z,854nm,0.1s
IFIR Firoozkooh 4.33 27 *e*Pn **Pn** 19 00 28.7 +2.2
IDHR Dehrash 4.38 312 Pn **Pn** 19 00 27.3 +0.2
IDHR Dehrash 4.38 312 *e*Pn **Pn** 19 00 27.3 +0.2
IDHR *e* 19 01 28.4
comp=Z,3µm,0.2s
IDHR Dehrash 4.38 312 *e*Pn **Pn** 19 00 27.3 +0.2
IBAF Bafgh 4.48 91 Pn **Pn** 19 00 30.2 +1.7
IBAF Bafgh 4.48 91 *e*Pn **Pn** 19 00 30.2 +1.7
IBAF *e* 19 00 35.1
comp=Z,978nm,0.2s
IBAF Bafgh 4.48 91 *e*Pn **Pn** 19 00 30.2 +1.7
ISHM Shahmirzad 4.70 31 Pn **Pn** 19 00 33.0 +1.4
ISHM Shahmirzad 4.70 31 *e*Pn **Pn** 19 00 33.0 +1.4
ISHM *e* 19 00 55.6
comp=Z,3µm,0.3s
ISHM Shahmirzad 4.70 31 *e*Pn **Pn** 19 00 33.0 +1.4
IANJ Anjilo 4.73 38 Pn **Pn** 19 00 32.5 +0.6
IANJ Anjilo 4.73 38 *e*Pn **Pn** 19 00 32.5 +0.6
IANJ *e* 19 02 00.1
comp=Z,1µm,0.3s
IANJ Anjilo 4.73 38 *e*Pn **Pn** 19 00 32.5 +0.6
KRBR Kerman 5.83 106 *e*Pn **Pn** 19 00 47.9 +0.8
KRBR Kerman 5.83 106 *e*Pn **Pn** 19 00 47.9 +0.8
TABS Tabas 6.02 70 *e*Pn **Pn** 19 00 50.7 +1.1
TABS Tabas 6.02 70 *e*Pn **Pn** 19 00 50.7 +1.1
ISRB Sarab 6.39 341 *e*Pn **Pn** 19 00 55.6 +0.8
ISRB *e* 19 03 07.2
comp=Z,924nm,0.5s
ISRB Sarab 6.39 341 *e*Pn **Pn** 19 00 55.6 +0.8
IBST Bostanabad 6.52 335 Pn **Pn** 19 00 57.4 +0.8
IBST Bostanabad 6.52 335 *e*Pn **Pn** 19 00 57.5 +0.8
IBST *e* 19 01 46.0
comp=Z,246nm,0.5s
IBST Bostanabad 6.52 335 Pn **Pn** 19 00 57.4 +0.8
IHRS Heris 7.03 338 Pn **Pn** 19 01 05.1 +1.5
IHRS Heris 7.03 338 *e*Pn **Pn** 19 01 05.2 +1.6
IHRS *e* 19 03 29.8
comp=Z,513nm,0.5s
IHRS Heris 7.03 338 Pn **Pn** 19 01 05.1 +1.5
ITEG Tejag 7.22 79 *e*Pn **Pn** 19 01 07.3 +1.2
ITEG *e* 19 03 21.7
comp=Z,612nm,0.5s
ITEG Tejag 7.22 79 *e*Pn **Pn** 19 01 07.3 +1.2
IKOO Kooshah 7.39 83 *e*Pn **Pn** 19 01 09.9 +1.3
IKOO *e* 19 03 31.1
comp=Z,377nm,0.5s
IKOO Kooshah 7.39 83 *e*Pn **Pn** 19 01 09.9 +1.3
IMRD Marand 7.86 333 *e*Pn **Pn** 19 01 15.6 +0.7
IMRD *e* 19 01 50.4
comp=Z,230nm,0.3s
IMRD Marand 7.86 333 *e*Pn **Pn** 19 01 15.6 +0.7
BANOM Banah 7.86 137 P **Pn** 19 01 13.2 -1.6
SNR=8.1
IMON Monand 8.02 78 *e*Pn **Pn** 19 01 18.2 +1.1
IMON *e* 19 04 03.6
comp=E,342nm,0.2s
IMON Monand 8.02 78 *e*Pn **Pn** 19 01 18.2 +1.1
ISFR Sfrayin 8.23 48 *e*Pn **Pn** 19 01 20.9 +0.9
ISFR *e* 19 01 43.7
comp=Z,324nm,0.3s
ISFR Sfrayin 8.23 48 *e*Pn **Pn** 19 01 20.9 +0.9
HATD Hatta, Dubai 8.63 142 P **Pn** 19 01 24.2 -1.2
IMOG Moghan 8.63 58 *e*Pn **Pn** 19 01 27.7 +2.1
IMOG *e* 19 01 56.5
comp=Z,250nm,0.0s
IMOG Moghan 8.63 58 *e*Pn **Pn** 19 01 27.7 +2.1
ASHO Ashiyiah 8.71 143 P **Pn** 19 01 25.6 -0.9
IMYA Miami 9.29 58 *e*Pn **Pn** 19 01 35.6 +1.1
IMYA *e* 19 02 16.9
comp=Z,94nm,0.1s
IMYA Miami 9.29 58 *e*Pn **Pn** 19 01 35.6 +1.1
MAK Makhachkala 11.36 349 *e*P **Pn** 19 02 05.2 +2.6
MAK MLR MLR
comp=Z,157nm,10.0s
ASF Jabal al Asfar 11.40 275 Pn **Pn** 19 02 01.1 -2.3
ASF Sn Sn 19 04 01.7 -8.4
ASF Lg Lg 19 05 37.4
ASF Jabal al Asfar 11.40 275 Pn **Pn** 19 02 01.1 -2.3
comp=Z,1.5nm,0.3s,baz=314,slow=9.4,SNR=9.9
ASF Sn Sn 19 04 01.7 -8.4
comp=Z,0.4nm,0.3s,baz=160,slow=19,SNR=2.6
ASF Lg Lg 19 05 37.4
comp=Z,0.3nm,0.3s,baz=120,slow=20,SNR=2.2
ASF LR LR 19 07 31.7
comp=Z,45nm,19.4s,baz=6.4,slow=43
MMAI Mount Meron Ar 12.66 279 Pn **Pn** 19 02 19.2 -1.4
MMAI Sn **Sn** 19 04 40.8 0.0
MMAI Lg Lg 19 06 14.3
MMAI Mount Meron Ar 12.66 279 Pn **Pn** 19 02 19.2 -1.4
comp=Z,0.8nm,0.3s,baz=83,slow=13,SNR=5.9
MMAI Sn **Sn** 19 04 40.8 0.0
comp=Z,0.8nm,0.3s,baz=116,slow=20,SNR=2.6
MMAI Lg Lg 19 06 14.4
baz=78,slow=40,SNR=2.2
MMAI Mount Meron Ar 12.66 279 Pn **Pn** 19 02 19.2 -1.4
MMAI Sn **Sn** 19 04 40.8 0.0
KBZ Khabaz 13.26 336 P Pn 19 02 31.9 +3.3
KBZ Khabaz 13.26 336 Pn Pn 19 02 31.9 +3.3
KBZ Khabaz 13.26 336 Pn Pn 19 02 31.9 +3.3
comp=Z,0.1nm,0.3s,baz=142,slow=14,SNR=3.6
KBZ Khabaz 13.26 336 Pn Pn 19 02 31.9 +3.3
EIL Elat 13.39 265 Pn **Pn** 19 02 31.4 +0.9
EIL Sn S 19 05 14.9 -7.2
EIL Lg Lg 19 06 38.3
EIL Elat 13.39 265 Pn **Pn** 19 02 31.4 +0.9
comp=Z,0.3nm,0.3s,baz=52,slow=12,SNR=2.8
EIL Sn S 19 05 14.9 -7.2
comp=Z,0.4nm,0.3s,baz=127,slow=18,SNR=2.5
EIL Lg Lg 19 06 38.3
baz=322,slow=17,SNR=2.2
EIL Elat 13.39 265 Pn **Pn** 19 02 31.4 +0.9
EIL Sn S 19 05 14.9 -7.2
KIV Kislovodsk 13.54 336 *e*P Pn 19 02 36.3 +3.8
KIV pmax pmax
comp=Z,28nm,1.4s
KIV Kislovodsk 13.54 336 *e*Pn Pn 19 02 36.3 +3.8
comp=Z,28nm,1.4s
KIV Kislovodsk 13.54 336 *e*Pn Pn 19 02 36.3 +3.8
comp=Z,28nm,1.4s
BR131 Keskin Array S 15.66 305 *e*Pn **P** 19 03 05.2 +0.1
comp=Z,2.3nm,0.6s
BR131 Keskin Array S 15.66 305 *e*Pn **P** 19 03 05.2 +0.1
comp=Z,2.3nm,0.6s
BRTR Keskin Array B 15.66 305 Pn **Pn** 19 03 01.2 +0.1
BRTR Keskin Array B 15.66 305 Pn **Pn** 19 03 01.2 +0.1
comp=Z,0.0nm,0.3s,baz=119,slow=9.0,SNR=5.0
BRTR Keskin Array B 15.66 305 Pn **Pn** 19 03 01.2 +0.1
KBL Kabul 15.92 75 *e*P **P** 19 03 08.3 +0.3
KBL pmax pmax
comp=Z,6.0nm,0.9s
KBL Kabul 15.92 75 *e*Pn **P** 19 03 08.3 +0.3
comp=Z,6.0nm,0.9s
KBL Kabul 15.92 75 *e*P **P** 19 03 08.3 +0.3
comp=Z,6.0nm,0.9s
ABKAR Akbulak array 18.88 20 *e*P **P** 19 03 40.2 -0.2
comp=Z,5.2nm,0.7s
ABKAR Akbulak array 18.88 20 *e*P **P** 19 03 40.2 -0.2
comp=Z,5.2nm,0.7s
AKTK Aktyubinsk 19.48 15 P **P** 19 03 46.8 -0.1
AKTO Aktyubinsk 19.48 15 P **P** 19 03 46.8 -0.1
AKTO Aktyubinsk 19.48 15 P **P** 19 03 46.8 -0.1
AKTO Aktyubinsk 19.48 15 P **P** 19 03 46.8 -0.1
comp=Z,0.4nm,0.3s,baz=212,slow=11,SNR=14
AKTO Aktyubinsk 19.48 15 P **P** 19 03 46.8 -0.1
KKAR Karatay Array 19.55 49 *e*P **Pn** 19 03 49.2 0.0
KKAR pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 19.55 49 *e*P **Pn** 19 03 49.2 0.0
comp=Z,3.8nm,0.8s
KKAR Karatay Array 19.55 49 *e*P **Pn** 19 03 49.2 0.0
comp=Z,3.8nm,0.8s
VORD Divnogorie 20.81 340 *e*P **P** 19 04 00.5 -0.9
VORD pmax pmax
comp=E,10.0nm,0.9s
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD Divnogorie 20.81 340 *e*P **P** 19 04 00.5 -0.9
comp=N,10.0nm,0.5s
VSR Storozhevoye 21.07 340 *e*P **P** 19 04 03.0 -1.2
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,7.0nm,0.7s
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 21.07 340 *e*P **P** 19 04 03.0 -1.2
TIRR Tirgusor 21.29 313 ⇑P **P** 19 04 09.3 +2.7
TIRR Tirgusor 21.29 313 ⇑*i*P **P** 19 04 09.3 +2.7
ATD Arta Tunnel 21.32 201 P **P** 19 04 09.9 +2.7
ATD Arta Tunnel 21.32 201 P **P** 19 04 09.9 +2.7
comp=Z,2.9nm,0.3s,baz=27,slow=4.5,SNR=2.3
TLCR 21.41 315 ⇓P **P** 19 04 07.6 -0.2
TLCR 21.41 315 ⇓*i*P **P** 19 04 07.6 -0.2
TLCR 21.41 315 P **P** 19 04 07.6 -0.2
IDI Anoyia 21.46 286 *e*P **P** 19 04 09.5 +0.9
comp=Z,22nm,0.8s
IDI Anoyia 21.46 286 *e*P **P** 19 04 09.5 +0.9
comp=Z,22nm,0.8s
EKS2 Erkin-Say 21.53 53 *e*P **P** 19 04 09.9 +0.5
EKS2 pmax pmax
comp=Z,5.0nm,1.0s
EKS2 Erkin-Say 21.53 53 *e*P **P** 19 04 09.8 +0.5
comp=Z,5.4nm,1.0s
EKS2 Erkin-Say 21.53 53 *e*P **P** 19 04 09.9 +0.5
comp=Z,5.4nm,1.0s
CFR Carcaliu 21.81 314 ⇑P **P** 19 04 11.5 -0.7
CFR Carcaliu 21.81 314 ⇑*i*P **P** 19 04 11.5 -0.7
CFR Carcaliu 21.81 314 P **P** 19 04 11.5 -0.7
AAK Ala-Archa 22.01 54 *i*P **P** 19 04 14.6 0.0
AAK pmax pmax
comp=Z,4.0nm,0.9s
AAK MLR MLR
comp=Z,189nm,25.0s
AAK Ala-Archa 22.01 54 P **P** 19 04 15.6 +1.0
comp=Z,0.9nm,0.9s
AAK Ala-Archa 22.01 54 P **P** 19 04 15.6 +1.0
comp=Z,1.7nm,0.8s,baz=251,slow=18,SNR=3.7
AAK LR LR 19 13 36.7
comp=Z,57nm,18.7s,baz=54,slow=39
AAK Ala-Archa 22.01 54 P **P** 19 04 15.6 +1.0
comp=Z,0.9nm,0.9s
ISR Istrita 22.77 312 ⇓P **P** 19 04 24.1 +1.5
ISR Istrita 22.77 312 ⇓*i*P **P** 19 04 24.1 +1.5
ISR Istrita 22.77 312 P **P** 19 04 24.1 +1.5
VRI Vrincioaia 23.02 314 ⇓P **P** 19 04 25.3 +0.2
VRI Vrincioaia 23.02 314 ⇓*i*P **P** 19 04 25.3 +0.2
VRI Vrincioaia 23.02 314 P **P** 19 04 25.3 +0.2
MLR Muntele Rosu 23.32 313 P **P** 19 04 29.1 +0.8
MLR Muntele Rosu 23.32 313 ⇑*i*P **P** 19 04 29.0 +0.8
MLR Muntele Rosu 23.32 313 P **P** 19 04 29.1 +0.8
comp=Z,0.7nm,0.6s,baz=190,slow=3.1,SNR=17
MLR Muntele Rosu 23.32 313 P **P** 19 04 29.1 +0.8
TESR 23.39 316 ⇑*i*P **P** 19 04 28.1 -0.7
TESR 23.39 316 ⇑*i*P **P** 19 04 28.1 -0.7
HUMR Humele 23.52 310 ⇓*i*P **P** 19 04 30.8 +0.7
HUMR Humele 23.52 310 ⇓*i*P **P** 19 04 30.8 +0.7
VOIR 23.86 312 ⇓P **P** 19 04 34.6 +1.2
VOIR 23.86 312 ⇓*i*P **P** 19 04 34.6 +1.2
VOIR 23.86 312 P **P** 19 04 34.6 +1.2
ARR Arges 24.09 312 ⇓*i*P **P** 19 04 36.3 +0.7
ARR Arges 24.09 312 ⇓*i*P **P** 19 04 36.3 +0.7
AK02 Malin Array Si 24.49 326 *e*P **P** 19 04 37.4 -1.6
AK02 Malin Array Si 24.49 326 *e*P **P** 19 04 37.4 -1.6
AK01 Malin Array Si 24.50 326 *e*P **P** 19 04 38.4 -0.8
AK01 Malin Array Si 24.50 326 *e*P **P** 19 04 38.4 -0.8
AKASG Malin Array Be 24.51 327 P **P** 19 04 38.6 -0.6
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 24.51 327 P **P** 19 04 38.6 -0.6
AKASG Malin Array Be 24.51 327 P **P** 19 04 38.6 -0.6
comp=Z,2.1nm,0.5s,baz=122,slow=7.1,SNR=8.9
AKASG Malin Array Be 24.51 327 P **P** 19 04 38.6 -0.6
comp=Z,2.0nm,0.5s
KIEV Kiev 24.51 326 *e*P **P** 19 04 37.9 -1.4
KIEV pmax pmax
comp=Z,5.0nm,0.5s
KIEV Kiev 24.51 326 *e*P **P** 19 04 37.9 -1.4
comp=Z,5.1nm,0.5s
KIEV Kiev 24.51 326 *e*P **P** 19 04 37.9 -1.4
comp=Z,5.1nm,0.5s
BURAR Bucovina Array 24.79 317 ⇑*i*P **P** 19 04 42.0 0.0
BURAR Bucovina Array 24.79 317 ⇑*i*P **P** 19 04 42.0 0.0
BUR08 Bucovina Ar. S 24.81 317 *e*P **P** 19 04 41.9 -0.3
BUR08 Bucovina Ar. S 24.81 317 *e*P **P** 19 04 41.9 -0.3
BARS Barje 25.08 304 *e*P **P** 19 04 44.2 -0.3
OBN Obninsk 25.25 341 *c i*P **P** 19 04 45.7 -0.2
OBN *e*SS **SnSn** 19 10 07.3 +5.6
OBN pmax pmax
comp=Z,20nm,0.9s
OBN Obninsk 25.25 341 *e*P **P** 19 04 44.8 -1.1
comp=Z,30nm,0.6s
OBN Obninsk 25.25 341 *i* P **P** 19 04 45.7 -0.2
comp=Z,20nm,0.9s
ARU Arti 25.29 11 *d i*P **P** 19 04 47.8 +1.6
ARU 19 05 22.2
ARU S **S** 19 09 12.3 +1.8
ARU SS **SnSn** 19 10 03.0 +0.6
ARU pmax pmax
comp=Z,8.0nm,1.2s
ARU Arti 25.29 11 P **P** 19 04 43.7 -2.5
comp=Z,6.8nm,0.8s
ARU Arti 25.29 11 *i*P **P** 19 04 47.8 +1.6
comp=Z,8.0nm,1.2s
ARU S **S** 19 09 12.3 +1.8
BOLS Boljevac 25.29 306 *e*P **P** 19 04 45.7 -0.7
GZR Gura Zlata 25.30 310 ⇓P **P** 19 04 45.9 -0.6
GZR Gura Zlata 25.30 310 ⇓*i*P **P** 19 04 45.8 -0.7
GZR Gura Zlata 25.30 310 P **P** 19 04 45.9 -0.6
MOS Moscow 25.54 343 *e*P P 19 04 41.8 -6.7
MOS pmax pmax
comp=Z,30nm,0.7s
SELS Selova 25.68 305 *e*P **P** 19 04 51.2 +1.2
BRVK Borovoye 25.69 28 *d i*P **P** 19 04 50.3 +0.4
BRVK pmax pmax
comp=Z,5.0nm,1.2s
BRVK MLR MLR
comp=Z,58nm,19.0s
BRVK Borovoye 25.69 28 *i*P **P** 19 04 50.3 +0.4
comp=Z,58nm,19.0s
BVAR Borovoye Array 25.70 29 P **P** 19 04 50.3 +0.2
BVAR pmax pmax
comp=Z,5.0nm,0.8s
BVAR pmax pmax
comp=N,1.0nm,0.6s
BVAR Borovoye Array 25.70 29 P **P** 19 04 50.3 +0.2
BVAR ScP **ScP** 19 11 57.5 -0.2
BVAR Borovoye Array 25.70 29 P **P** 19 04 50.3 +0.2
comp=N,5.2nm,0.8s,baz=222,slow=8.2,SNR=17
BVAR ScP **ScP** 19 11 57.5 -0.2
comp=N,0.5nm,0.6s,baz=225,slow=1.8,SNR=3.7
BVAR Borovoye Array 25.70 29 P **P** 19 04 50.3 +0.2
comp=N,1.0nm,0.6s
BVAR ScP **ScP** 19 11 57.5 -0.2
DRGR 25.91 313 ⇑P **P** 19 04 54.5 +2.4
DRGR 25.91 313 ⇑*i*P **P** 19 04 54.5 +2.4
BZS Buzias 26.14 310 ⇓P **P** 19 04 53.3 -0.8
BZS Buzias 26.14 310 ⇓*i*P **P** 19 04 53.3 -0.8
BZS Buzias 26.14 310 P **P** 19 04 53.3 -0.8
GRUS Gruza 26.16 306 *e*P **P** 19 04 54.7 +0.4
KOLS Kolonicke sedl 27.15 317 *e*P **P** 19 05 06.9 +3.7
KOLS pmax pmax
comp=Z,19nm,1.4s
KOLS Kolonicke sedl 27.15 317 *e*P **P** 19 05 06.9 +3.7
CRVS Cervenica-Dubn 27.61 317 *e*P **P** 19 05 11.9 +4.6
CRVS pmax pmax
comp=Z,7.0nm,1.1s
CRVS Cervenica-Dubn 27.61 317 *e*P **P** 19 05 11.9 +4.6
KURK Kurchatov 28.19 40 ⇓*e*P **P** 19 05 13.4 +1.0
KURK pmax pmax
comp=Z,7.0nm,2.5s
KURK Kurchatov 28.19 40 *e*P **P** 19 05 13.4 +1.0
comp=Z,7.0nm,2.5s
MK31 Makanchi Array 28.68 49 *e*P **P** 19 05 16.9 0.0
MK31 Makanchi Array 28.68 49 *e*P **P** 19 05 16.9 0.0
MK31 Makanchi Array 28.68 49 *e*P **P** 19 05 16.9 0.0
MKAR Makanchi Array 28.68 49 P **P** 19 05 17.2 +0.3
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 28.68 49 P **P** 19 05 17.2 +0.3
MKAR Makanchi Array 28.68 49 P **P** 19 05 17.2 +0.3
comp=Z,1.1nm,0.7s,baz=243,slow=8.6,SNR=6.5
MKAR Makanchi Array 28.68 49 P **P** 19 05 17.2 +0.3
VYHS Vyhne 29.00 314 *e*P P 19 05 23.8 +4.1
VYHS Vyhne 29.00 314 *e*P P 19 05 23.8 +4.1
KLMR Klimovskoe 29.92 349 *e*P P 19 05 21.1 -6.5
KLMR pmax pmax
comp=Z,29nm,1.5s
VSU Vasula 31.09 336 *i* P **P** 19 05 37.6 -0.4
VSU pmax pmax
comp=Z,15nm,1.3s
VSU Vasula 31.09 336 *i* P **P** 19 05 37.6 -0.4
comp=Z,15nm,1.3s
GERES GERESS Array B 32.31 313 P **P** 19 05 48.5 -0.5
GERES PcP **PcP** 19 08 36.7 +0.1
GERES GERESS Array B 32.31 313 P **P** 19 05 48.5 -0.5
comp=Z,0.3nm,0.6s,baz=106,slow=10,SNR=3.1
GERES PcP **PcP** 19 08 36.7 +0.1
comp=Z,0.2nm,0.5s,baz=93,slow=3.9,SNR=2.8
GERES GERESS Array B 32.31 313 P **P** 19 05 48.5 -0.5
NVS Novosibirsk 32.73 36 *e*P **P** 19 05 52.0 -0.4
NVS Novosibirsk 32.73 36 *e*P **P** 19 05 52.0 -0.4
ZAA0 Zalesovo Array 33.09 38 *e*P **P** 19 05 55.7 0.0
ZAA0 Zalesovo Array 33.09 38 *e*P **P** 19 05 55.7 0.0
ZALV Zalesovo Beam 33.09 38 P **P** 19 05 55.5 -0.2
ZALV pmax pmax
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 33.09 38 P **P** 19 05 55.5 -0.2
ZALV Zalesovo Beam 33.09 38 P **P** 19 05 55.5 -0.2
comp=Z,2.8nm,0.6s,baz=251,slow=9.0,SNR=10.0
ZALV Zalesovo Beam 33.09 38 P **P** 19 05 55.5 -0.2
comp=Z,3.0nm,0.6s
JOF Joensuu 33.41 344 *e*P **P** 19 05 57.4 -0.9
JOF pmax pmax
comp=Z,4.0nm,0.6s
JOF Joensuu 33.41 344 *ep* **P** 19 05 57.4 -0.9
comp=Z,3.5nm,0.6s
JOF Joensuu 33.41 344 *e*P **P** 19 05 57.4 -0.9
comp=Z,4.0nm,0.6s
CLL Collm 33.56 317 *e*P **P** 19 06 01.0 +1.2
CLL Collm 33.56 317 *e*P **P** 19 06 01.0 +1.2
CLL Collm 33.56 317 *e*P **P** 19 06 01.0 +1.2
FINES FINESS Array B 33.59 339 P **P** 19 05 59.2 -0.7
FINES PcP **PcP** 19 08 40.3 +0.5
FINES FINESS Array B 33.59 339 P **P** 19 05 59.2 -0.7
comp=Z,5.4nm,0.5s,baz=142,slow=9.6,SNR=65
FINES PcP **PcP** 19 08 40.3 +0.5
comp=Z,0.5nm,0.6s,baz=120,slow=5.5,SNR=3.1
FINES FINESS Array B 33.59 339 P **P** 19 05 59.2 -0.7
comp=Z,5.0nm,0.5s
KAF Kangasniemi 34.05 340 *e*P **P** 19 06 02.5 -1.4
KAF pmax pmax
comp=Z,3.0nm,0.6s
KAF Kangasniemi 34.05 340 *ep* **P** 19 06 02.5 -1.4
comp=Z,3.3nm,0.6s
KAF Kangasniemi 34.05 340 *e*P **P** 19 06 02.5 -1.4
comp=Z,3.0nm,0.6s
BSD Bornholm Skovb 34.11 324 ⇓*i*P **P** 19 06 03.1 -1.4
comp=Z,10.0nm,0.6s
BSD Bornholm Skovb 34.11 324 ⇓*i*P **P** 19 06 03.1 -1.4
comp=Z,10.0nm,0.6s
PGF Pioggiola 34.32 300 *e*P **P** 19 06 05.2 -1.4
PGF Pioggiola 34.32 300 *e*P **P** 19 06 05.2 -1.4
PGF Pioggiola 34.32 300 *e*P **P** 19 06 05.2 -1.4
PGF Pioggiola 34.32 300 *e*P **P** 19 06 05.2 -1.4
SBF Sospel 35.57 302 *e*P **P** 19 06 16.5 -0.8
comp=Z,19nm,0.9s
SBF Sospel 35.57 302 *e*P **P** 19 06 16.5 -0.8
SBF pmax pmax
comp=Z,19nm,0.9s
SBF Sospel 35.57 302 *e*P **P** 19 06 16.5 -0.8
comp=Z,19nm,0.9s
SBF Sospel 35.57 302 *e*P **P** 19 06 16.5 -0.8
comp=Z,19nm,0.9s
MBDF Montbardon 36.12 304 *e*P **P** 19 06 21.1 -1.1
comp=Z,6.1nm,0.7s
MBDF Montbardon 36.12 304 *e*P **P** 19 06 21.1 -1.1
MBDF pmax pmax
comp=Z,6.0nm,0.7s
MBDF Montbardon 36.12 304 *e*P **P** 19 06 21.1 -1.1
comp=Z,6.1nm,0.7s
MBDF Montbardon 36.12 304 *e*P **P** 19 06 21.1 -1.1
comp=Z,6.1nm,0.7s
LPG La Plagne 36.22 305 *e*P **P** 19 06 22.0 -1.2
comp=Z,7.5nm,0.7s
LPG La Plagne 36.22 305 *e*P **P** 19 06 22.0 -1.2
LPG pmax pmax
comp=Z,8.0nm,0.7s
LPG La Plagne 36.22 305 *e*P **P** 19 06 22.0 -1.2
comp=Z,7.5nm,0.7s
LPG La Plagne 36.22 305 *e*P **P** 19 06 22.0 -1.2
comp=Z,7.5nm,0.7s
BNI Bardonecchia 36.22 304 *e*P **P** 19 06 22.0 -1.0
BNI pmax pmax
comp=Z,4.0nm,0.7s
BNI Bardonecchia 36.22 304 *e*P **P** 19 06 22.0 -1.0
comp=Z,4.5nm,0.7s
BNI Bardonecchia 36.22 304 *e*P **P** 19 06 22.0 -1.0
comp=Z,4.5nm,0.7s
LPL La Plagne 36.24 305 *e*P **P** 19 06 22.0 -1.3
comp=Z,5.9nm,0.6s
LPL La Plagne 36.24 305 *e*P **P** 19 06 22.0 -1.3
LPL pmax pmax
comp=Z,6.0nm,0.6s
LPL La Plagne 36.24 305 *e*P **P** 19 06 22.0 -1.3
comp=Z,5.9nm,0.6s
LPL La Plagne 36.24 305 *e*P **P** 19 06 22.0 -1.3
comp=Z,5.9nm,0.6s
CABF La Chapelle 36.82 307 *e*P **P** 19 06 27.2 -0.9
comp=Z,15nm,1.0s
CABF La Chapelle 36.82 307 *e*P **P** 19 06 27.2 -0.9
CABF pmax pmax
comp=Z,15nm,1.0s
CABF La Chapelle 36.82 307 *e*P **P** 19 06 27.2 -0.9
comp=Z,15nm,1.0s
CABF La Chapelle 36.82 307 *e*P **P** 19 06 27.2 -0.9
comp=Z,15nm,1.0s
SMF Signal de Mont 38.36 306 *e*P **P** 19 06 39.4 -1.6
comp=Z,5.9nm,0.6s
SMF Signal de Mont 38.36 306 *e*P **P** 19 06 39.4 -1.6
SMF pmax pmax
comp=Z,6.0nm,0.6s
SMF Signal de Mont 38.36 306 *e*P **P** 19 06 39.4 -1.6
comp=Z,5.9nm,0.6s
SMF Signal de Mont 38.36 306 *e*P **P** 19 06 39.4 -1.6
comp=Z,5.9nm,0.6s
SSF Saint Saulge 38.64 307 *e*P **P** 19 06 41.8 -1.5
SSF Saint Saulge 38.64 307 *e*P **P** 19 06 41.8 -1.5
SSF Saint Saulge 38.64 307 *e*P **P** 19 06 41.8 -1.5
SSF Saint Saulge 38.64 307 *e*P **P** 19 06 41.8 -1.5
NB2 NORSAR Subarra 38.77 331 P **P** 19 06 42.9 -1.3
comp=Z,2.1nm,0.6s,baz=121,slow=8.6
NB2 NORSAR Subarra 38.77 331 P **P** 19 06 42.9 -1.2
comp=Z,2.1nm,0.6s,baz=121,slow=8.3,SNR=1.2
NOA NORSAR Array B 38.77 331 P **P** 19 06 43.0 -1.2
NOA NORSAR Array B 38.77 331 P **P** 19 06 43.0 -1.2
comp=Z,3.7nm,0.6s,baz=122,slow=8.3,SNR=26
NOA LR LR 19 23 55.7
comp=Z,61nm,18.7s,baz=270,slow=38
NOA NORSAR Array B 38.77 331 P **P** 19 06 43.0 -1.2
comp=Z,61nm,18.7s

KEV	Kevo	40.20	348	eP	P	19 06 56.8	+0.9
KEV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KEV	Kevo	40.20	348	ep	P	19 06 56.8	+0.9
	comp=Z,0.7nm,0.4s						
KEV	Kevo	40.20	348	eP	P	19 06 56.8	+0.9
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	40.29	347	P	P	19 06 56.5	-0.3
ARCES	ARCESS Array B	40.29	347	P	P	19 06 56.5	-0.3
	comp=Z,1.4nm,0.8s,baz=160,slow=8.7,SNR=7.2						
ARCES	ARCESS Array B	40.29	347	P	P	19 06 56.5	-0.3
	comp=Z,1.0nm,0.8s						
GTA	Gaotai	40.53	65	eP	P	19 07 00.3	+1.0
GTA				pP	pP	19 07 05.1	-1.6
GTA				sP	sP	19 07 08.0	-1.7
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA				LR	LR		
	comp=N,110nm,14.7s						
GTA				LR	LR		
	comp=E,120nm,14.7s						
GTA				LR	LR		
	comp=Z,110nm,19.0s						
MOY	Mondy	41.72	46	eP	P	19 07 10.7	+1.8
MOY	Mondy	41.72	46	eP	P	19 07 10.7	+1.8
EKA	Eskdalemuir Ar	43.95	319	P	P	19 07 26.1	-0.6
EKA	Eskdalemuir Ar	43.95	319	P	P	19 07 26.1	-0.6
	comp=Z,0.8nm,0.5s,baz=104,slow=8.0,SNR=5.0						
EKA	Eskdalemuir Ar	43.95	319	P	P	19 07 26.1	-0.6
ESDC	Sonseca Array	44.18	296	P	P	19 07 28.7	-0.3
ESDC	Sonseca Array	44.18	296	P	P	19 07 28.7	-0.3
	comp=Z,0.4nm,0.4s,baz=74,slow=8.0,SNR=9.3						
ESDC	Sonseca Array	44.18	296	P	P	19 07 28.7	-0.3
SONM	Songino Array	44.95	52	P	P	19 07 35.3	+0.2
SONM				PcP	PcP	19 09 14.9	-1.2
SONM	Songino Array	44.95	52	P	P	19 07 35.3	+0.2
	comp=Z,0.7nm,0.6s,baz=267,slow=8.5,SNR=7.4						
SONM				PcP	PcP	19 09 14.9	-1.2
	comp=Z,0.5nm,0.9s,baz=204,slow=3.2,SNR=2.6						
SONM	Songino Array	44.95	52	P	P	19 07 35.3	+0.2
	comp=Z,1.0nm,0.6s						
ULN	Ulaanbaatar	45.40	52	eP	P	19 07 38.5	-0.1
	comp=Z,2.5nm,0.9s						
ULN	Ulaanbaatar	45.40	52	eP	P	19 07 38.5	-0.1
	comp=Z,2.5nm,0.9s						
CMAR	Chiang Mai Arr	45.63	95	P	P	19 07 39.9	-0.8
CMAR				PcP	PcP	19 09 19.2	+0.4
CMAR	Chiang Mai Arr	45.63	95	P	P	19 07 39.9	-0.8
	comp=Z,0.5nm,0.6s,baz=294,slow=8.8,SNR=5.1						
CMAR				PcP	PcP	19 09 19.2	+0.4
	comp=Z,0.6nm,0.7s,baz=286,slow=5.6,SNR=4.4						
CMAR	Chiang Mai Arr	45.63	95	P	P	19 07 39.9	-0.8
CMAR	Chiang Mai Arr	45.63	95	PcP	PcP	19 09 19.2	+0.4
MDT	Midelt	45.99	287	P	P	19 07 43.9	+0.4
MDT	Midelt	45.99	287	P	P	19 07 43.9	+0.4
	comp=Z,1.3nm,0.8s,baz=36,slow=14,SNR=3.5						
MDT	Midelt	45.99	287	P	P	19 07 43.9	+0.4
TOA0	Torodi Ar. Sit	48.18	259	eP	P	19 08 00.1	-0.5
TOA0	Torodi Ar. Sit	48.18	259	eP	P	19 08 00.1	-0.5
TORD	Torodi Ar. Bea	48.18	259	P	P	19 08 00.3	-0.3
TORD				pP	pP	19 08 09.2	+1.1
TORD	Torodi Ar. Bea	48.18	259	P	P	19 08 00.3	-0.3
	comp=Z,1.5nm,0.8s,baz=55,slow=8.0,SNR=10.0						
TORD				pP	pP	19 08 09.2	+1.1
	comp=Z,3.3nm,0.9s,baz=54,slow=7.3,SNR=11						
TORD	Torodi Ar. Bea	48.18	259	P	P	19 08 00.3	-0.3
HHC	Hu-ho-hao-te	49.27	61	eP	P	19 08 07.3	-1.6
HHC				PcP	PcP	19 09 30.8	-0.7
HHC				PP	PP	19 10 00.8	-1.9
HHC				PcS	PcS	19 13 26.0	-2.1
HHC				S	S	19 15 12.1	-1.6
HHC				ScS	ScS	19 17 57.5	-2.0
HHC				pmax	pmax		
	comp=Z,25nm,0.6s						
HHC				pmax	pmax		
	comp=Z,170nm,6.4s						
HHC				LR	LR		
	comp=N,310nm,15.9s						
HHC				LR	LR		
	comp=E,360nm,16.0s						
HHC				LR	LR		
	comp=Z,240nm,15.6s						
KSAR	Wonju Array Be	62.39	61	P	P	19 09 44.5	+1.7
KSAR	Wonju Array Be	62.39	61	P	P	19 09 44.5	+1.7
KSRS	Korea Array	62.42	61	P	P	19 09 44.5	+1.6
	comp=Z,0.7nm,0.5s,baz=282,slow=6.7,SNR=4.5						
KSRS	Korea Array	62.42	61	P	P	19 09 44.6	+1.6
	comp=Z,1.0nm,0.5s						
BOSA	Boshof	64.64	204	P	P	19 09 58.6	+0.9
BOSA	Boshof	64.64	204	P	P	19 09 58.6	+0.9
	comp=Z,3.9nm,1.0s,baz=33,slow=7.7,SNR=5.2						
BOSA	Boshof	64.64	204	P	P	19 09 58.6	+0.9
SEY	Seymchan	67.36	29	⇓eP	P	19 10 15.4	+0.7
RES	Resolute Bay	71.35	351	P	P	19 10 39.6	+0.4
RES	Resolute Bay	71.35	351	P	P	19 10 39.6	+0.4
	comp=Z,1.6nm,0.8s,baz=9.1,slow=7.0,SNR=5.6						
RES	Resolute Bay	71.35	351	P	P	19 10 39.6	+0.4
SCHQ	Schefferville	78.29	328	P	P	19 11 19.1	-0.6
SCHQ	Schefferville	78.29	328	P	P	19 11 19.1	-0.6
	comp=Z,3.1nm,0.9s,baz=90,slow=8.1,SNR=4.1						
SCHQ	Schefferville	78.29	328	P	P	19 11 19.1	-0.6
YKA	Yellowknife Ar	85.25	353	P	P	19 11 55.5	-0.7
YKA	Yellowknife Ar	85.25	353	P	P	19 11 55.5	-0.7
	comp=Z,0.7nm,0.8s,baz=9.9,slow=5.5,SNR=9.3						
YKA	Yellowknife Ar	85.25	353	P	P	19 11 55.5	-0.7

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*ISCJB **04** 18:59:45.4±0.2, 43°.75N±0°.02×105°.28W±0°.03, h0km, mb4.0/3, Error ellipse: s-maj=2.9km s-min=2.2km az=166.3*

*IDC **04** 18:59:45.4±1.2, 43°.54N×105°.29W, h0km, mb3.9/3, mb1 3.8/8, mb1mx3.6/31, mbtmp3.6/8, ML3.2/4, Error ellipse: s-maj=24.6km s-min=8.7km az=154.0*

*NEIC **04** 18:59:46.4±0.4, 43°.79N×105°.19W, h0km, ML3.3, Error ellipse: s-maj=4.8km s-min=4.1km az=106.0, Suspected Mining explosion.*

NEIC 60 km [40 miles] SSE of Gillette.

ISC 04 18:59:46.2±0.6, **43°.75N**±0°.02×**105°.31W**±0°.03, **h0**km, **n127**, σ1s**09**/126, **mb4.3**/3, **38C-29D, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I23A	Meade Ranch, G	0.24	331	⇓P	Pg	18 59 52.2	+1.4
	baz=0.3,SNR=154						
I23A				⇑S	Sg	18 59 54.9	+1.1
	baz=0.3						
J23A	Dilts Ranch, B	0.39	207	⇓P	Pg	18 59 54.4	+0.7
	baz=0.5						
J23A				⇑S	Sg	18 59 59.3	+0.5
	baz=0.5						
I24A	Kuemmerle Ranc	0.50	78	⇓P	Pg	18 59 56.6	+0.8
	baz=0.4,SNR=46						
J24A	Dixon Ranch, L	0.63	132	⇓P	Pg	18 59 58.6	+0.4
	baz=0.6						
H23A	Clabaugh Cattl	0.81	355	⇑P	Pg	19 00 02.1	+0.3
	baz=0.8,SNR=33						
I22A	9 Mile Ranch,	0.86	280	⇑P	Pg	19 00 03.1	+0.3
	baz=0.9,SNR=244						
I22A				⇑S	Sg	19 00 14.5	+0.5
	baz=0.9						
J22A	Midwest	0.92	249	⇑P	Pg	19 00 03.5	-0.3
	baz=1.0						
RSSD	Black Hills	0.99	68	ePn	Pg	19 00 05.2	0.0
K23A	Bowen Ranch, D	1.02	193	⇓P	Pg	19 00 05.9	+0.1
	baz=1.1						
K24A	Anderson Ranch	1.09	161	⇑P	Pg	19 00 06.7	-0.3
	baz=1.1						
K24A				⇑S	Sg	19 00 21.8	+0.6
	baz=1.1						
H22A	Clearmont	1.13	319	⇑P	Pg	19 00 08.0	+0.2
	baz=1.2,SNR=91						
H24A	Dirks Ranch, A	1.13	28	⇑P	Pg	19 00 07.5	-0.3
	baz=1.1,SNR=323						
K22A	Casper	1.42	219	⇓P	Pn	19 00 12.4	-1.0
	baz=1.5						
I21A	Big Trails, Te	1.44	273	⇓P	Pn	19 00 12.2	-1.5
	baz=1.5						
G23A	Biddle	1.45	358	⇑Pb	Pn	19 00 13.3	-0.4
	baz=1.4,SNR=180						
H21A	Big Horn, Sher	1.53	306	⇑Pb	Pn	19 00 15.0	+0.2
	baz=1.6,SNR=114						
K25A	Mack Ranch, Ha	1.55	137	⇑Pg	Pb	19 00 15.7	-0.1
	baz=1.5,SNR=35						
J21A	Lysite	1.61	256	⇓Pb	Pn	19 00 15.4	-0.7
	baz=1.7						
G22A	Birney	1.63	335	⇑Pb	Pn	19 00 16.8	+0.6
	baz=1.6,SNR=75						
L23A	Garrett	1.66	190	⇓Pb	Pn	19 00 16.6	-0.2
	baz=1.7						
G24A	Alzada	1.70	22	⇓Pb	Pn	19 00 17.8	+0.6
	baz=1.6,SNR=49						
L24A	Wheatland	1.73	171	⇑Pb	Pn	19 00 17.9	+0.2
	baz=1.8						
K21A	Alcova	1.81	232	⇑Pb	Pn	19 00 19.2	+0.4
	baz=1.9,SNR=46						
L25A	Engebretsen Ra	1.88	148	⇑Pb	Pb	19 00 21.0	-0.4
	baz=1.9,SNR=17						
K26A	Motz Farm, Whi	1.88	123	⇑Pb	Pb	19 00 20.5	-0.8
	baz=1.8,SNR=5.8						
L22A	Ellis Ranch, M	1.91	206	⇓Pb	Pn	19 00 20.9	+0.8
	baz=2.0,SNR=13						
G21A	Lodge Grass	2.00	318	⇑Pb	Pn	19 00 22.1	+0.7
	baz=2.0,SNR=81						
I20A	Worland	2.05	276	⇑Pb	Pn	19 00 23.0	+1.0
	baz=2.1,SNR=44						
J20A	Shoshoni	2.06	260	⇓Pb	Pb	19 00 24.0	-0.5
	baz=2.1,SNR=106						
H20A	Greybull	2.07	292	⇑Pb	Pn	19 00 23.8	+1.4
	baz=2.1						
F22A	Rosebud	2.14	342	⇓P	Pn	19 00 22.9	-0.3
	baz=2.1,SNR=118						
M23A	Laramie	2.30	188	⇓Pb	Pb	19 00 27.4	-1.3
	baz=2.4,SNR=33						
M24A	Cheyenne	2.31	171	⇓Pb	Pn	19 00 27.0	+1.3
	baz=2.3,SNR=72						
L21A	Rawlins	2.34	221	⇑Pb	Pn	19 00 28.0	+1.9
	baz=2.4,SNR=20						
F21A	Absaloka Mine,	2.44	329	⇓P	Pn	19 00 27.0	-0.4
	baz=2.4,SNR=13						
PHWY	Pilot Hill	2.45	183	ePn	Pn	19 00 28.0	+0.3
K20A	Yellowstone Ra	2.48	245	⇑Pb	Pb	19 00 30.5	-1.2
	baz=2.6						
K27A	Flueckinger Fa	2.48	114	⇑Pb	Pb	19 00 29.8	-1.8
	baz=2.4,SNR=13						
M25A	Palm-Egli Farm	2.49	158	⇓Pb	Pn	19 00 29.8	+1.7
	baz=2.5,SNR=18						
M22A	Cedar Creek Ra	2.53	203	⇓Pb	Pn	19 00 30.6	+1.8
	baz=2.6,SNR=57						
G20A	Bridger	2.55	306	P	Pn	19 00 28.8	0.0
	baz=2.6,SNR=179						
M21A	Separation Pea	2.63	216	⇑Pb	Pn	19 00 32.2	+2.1
	baz=2.7,SNR=67						
I19A	Meeteetse	2.68	277	⇑P	Pn	19 00 32.2	+1.4
	baz=2.7,SNR=27						
E22A	Miles City	2.72	351	⇑P	Pn	19 00 31.2	0.0
	baz=2.7,SNR=24						
E23A	Ismay	2.75	360	⇓P	Pn	19 00 32.0	+0.5
	baz=2.7						
K19A	Absolon Red Bu	2.75	251	⇑Pb	Pb	19 00 34.9	-1.4
	baz=2.8,SNR=115						
J19A	Crowheart	2.77	261	⇑P	Pn	19 00 33.9	+2.0
	baz=2.8,SNR=43						
H19A	Powell	2.80	290	⇑P	Pn	19 00 33.5	+1.1
	baz=2.9,SNR=9.0						
F20A	Billings	2.88	316	⇓P	Pn	19 00 33.4	0.0
	baz=2.9						
E24A	Baker	2.90	14	⇑P	Pn	19 00 34.8	+1.2
	baz=2.8,SNR=48						
N23A	Red Feather La	2.90	190	⇓Pb	Pb	19 00 37.5	-1.3
	baz=3.0,SNR=20						
N22A	Wattenberg Ran	3.07	197	⇓Pb	Pb	19 00 40.9	-0.9
	baz=3.1						
RLMT	Red Lodge	3.15	297	ePn	Pn	19 00 37.9	+0.7
RLMT	Red Lodge	3.15	297	⇓P	Pn	19 00 37.9	+0.7
	baz=3.2,SNR=31						
BW06	Boulder Array	3.26	254	ePn	Pn	19 00 40.0	+1.2
BW06	Boulder Array	3.26	254	⇑P	Pn	19 00 40.1	+1.3
	baz=3.3,SNR=17						
PDAR	Pinedale Array	3.26	254	Pn	Pn	19 00 39.7	+0.9
PDAR				Lg	Lg	19 01 26.2	
PDAR	Pinedale Array	3.26	254	Pn	Pn	19 00 39.7	+0.9
	7.7nm,0.3s,baz=67,slow=16,SNR=143						
PDAR				Lg	Lg	19 01 26.2	
	17nm,0.3s,baz=75,slow=31,SNR=9.6						
H18A	Shoshone NF, C	3.27	288	⇓P	Pn	19 00 39.0	+0.1
	baz=3.3,SNR=22						
F19A	Roth Farm, Mol	3.33	310	P	Pn	19 00 40.5	+0.8
	baz=3.4,SNR=72						
L19A	Farson	3.40	242	⇑P	Pn	19 00 42.3	+1.6
	baz=3.5,SNR=15						
N21A	Black Mountain	3.41	210	⇑P	Pn	19 00 42.7	+1.8
	baz=3.5						
D23A	Lindsay	3.42	1	⇑P	Pn	19 00 41.7	+0.9
	baz=3.4,SNR=15						
G18A	Lazy EL Ranch,	3.42	299	⇓P	Pn	19 00 41.6	+0.7
	baz=3.5,SNR=97						
D22A	Cohagen	3.45	350	⇑P	Pn	19 00 41.7	+0.5
	baz=3.4,SNR=16						
D21A	La Casta Ranch	3.52	341	⇓P	Pn	19 00 42.5	+0.3
	baz=3.5						
E19A	Rath Farm, Rou	3.66	319	⇓P	Pn	19 00 44.0	-0.1
	baz=3.7,SNR=17						
OGNE	Ogallala	3.71	138	ePn	Pn	19 00 45.6	+0.8
GCMT	Greycliff	3.71	305	ePn	Pn	19 00 45.9	+0.9
LKWY	Lake	3.75	284	ePn	Pn	19 00 47.3	+1.7
F18A	Big Timber	3.81	306	⇑P	Pn	19 00 47.0	+0.9
	baz=3.8,SNR=59						
LOHW	Long Hollow	3.85	270	ePn	Pn	19 00 48.4	+1.6
D20A	Manuel Ranch,	3.89	330	⇓P	Pn	19 00 47.0	-0.3
	baz=3.9,SNR=16						
MOOW	Moose Ponds	3.94	272	ePn	Pn	19 00 49.7	+1.6
ISCO	Idaho Springs	3.96	183	ePn	Pn	19 00 49.8	+1.3
ISCO	Idaho Springs	3.96	183	⇓P	Pn	19 00 49.7	+1.3
	baz=4.0,SNR=12						
SNOW	Snow King Moun	3.97	268	ePn	Pn	19 00 51.5	+3.0
YFT	Old Faithful	4.04	282	ePn	Pn	19 00 51.8	+2.2
N19A	John Jarvie Ra	4.05	226	⇑P	Pn	19 00 50.0	+0.5
	baz=4.1,SNR=9.9						
REDW	Red Top Meadow	4.05	266	Pn	Pn	19 00 53.5	+3.9
IMW	Indian Meadow	4.08	274	ePn	Pn	19 00 52.4	+2.3
TPAW	Teton Pass	4.11	268	ePn	Pn	19 00 51.9	+1.4
YMR	Madison River	4.17	285	Pn	Pn	19 00 54.6	+3.3
DCID1	Drake Creek	4.27	270	ePn	Pn	19 00 54.4	+1.8
AHID	Auburn Hatcher	4.35	259	ePn	Pn	19 00 55.9	+2.2
RRI2	Red Ridge	4.39	267	ePn	Pn	19 00 55.1	+0.8
SMCO	Snowmass	4.74	196	Pn	Pn	19 01 03.1	+3.9
DGMT	Dagmar	4.78	9	ePn	Pn	19 01 00.6	+1.2
EGMT	Eagleton	5.28	326	ePn	Pn	19 01 06.3	-0.1
	21nm,0.4s						
HRY	Holter Researc	5.48	305	ePn	Pn	19 01 09.9	+0.8
	19nm,0.4s						
LRM	Limekiln Ridge	5.49	295	ePn	Pn	19 01 09.6	+0.1
	38nm,0.4s						
MCMT	McKenzie Canyo	5.52	284	ePn	Pn	19 01 14.2	+4.4
	3.0nm,0.4s						
DAU	Daniels Canyon	5.54	235	Pn	Pn	19 01 11.1	+0.8
	11nm,0.4s						
JLU	Jordanelle	5.54	238	ePn	Pn	19 01 10.2	+0.1
	7.2nm,0.4s						
PV04	Paradox Valley	6.00	208	ePn	Pn	19 01 17.6	+1.2
SRU	San Rafael	6.07	222	ePn	Pn	19 01 17.1	-0.3
	425nm,0.4s						
PV01	Paradox Valley	6.13	205	ePn	Pn	19 01 19.8	+1.6
	469nm,0.4s						
TMUT	Trail Mountain	6.28	227	ePn	Pn	19 01 21.4	+1.0
	17nm,0.4s						
ECSD	EROS Data Cent	6.30	87	ePn	Pn	19 01 21.0	+0.7
	7.0nm,1.3s						
CHMT	Chamberlain Mo	6.43	302	ePn	Pn	19 01 22.7	+0.4
	2.8nm,0.4s						
HLID	Hailey	6.61	271	ePn	Pn	19 01 27.0	+2.3
	2.4nm,0.4s						
DUG	Dugway	6.63	240	ePn	Pn	19 01 25.0	+0.1
	4.0nm,0.4s						
SLMT	Seeley Lake	6.73	304	ePn	Pn	19 01 26.1	-0.2
	3.1nm,0.4s						
SWMT	Swartz Lake	7.16	305	ePn	Pn	19 01 32.2	+0.1
	3.7nm,0.4s						
YBMT	Yellow Bay	7.34	307	ePn	Pn	19 01 36.0	+1.3
	5.3nm,0.4s						
MSU	Marysvale	7.37	227	ePn	Pn	19 01 35.9	+0.7
	2.7nm,0.4s						
JTMT	Jette	7.44	306	ePn	Pn	19 01 37.0	+0.9
	3.4nm,0.4s						
ELK	Elko	7.96	251	ePn	Pn	19 01 42.9	-0.4
WALA	Waterton Lakes	7.97	315	ePn	Pn	19 01 41.8	-1.5
	0.1nm,0.8s						
AGMN	Agassiz Nation	7.99	52	Pn	Pn	19 01 35.8	-7.6
	14nm,0.4s						
ARUT	Antelope Range	8.58	229	ePn	Pn	19 01 53.4	+1.7
	5.7nm,0.4s						
CCUT	Cedar City	8.71	227	ePn	Pn	19 01 54.9	+1.3
	1.7nm,0.4s						
ULM	Lac du Bonnet	9.15	41	Pn	Pn	19 01 59.2	-0.1
ULM				Pg		19 02 29.3	
ULM				Lg	Lg	19 04 29.9	
ULM	Lac du Bonnet	9.15	41	Pn	Pn	19 01 59.2	-0.1
	1.9nm,0.3s,baz=236,slow=11,SNR=8.0						
ULM				Pg		19 02 29.3	
	1.8nm,0.3s,baz=234,slow=16,SNR=6.2						
ULM				Lg	Lg	19 04 29.9	
	0.7nm,0.3s,baz=331,slow=19,SNR=2.1						
NEW	Newport	9.38	303	Pn	Pn	19 02 02.9	+0.4
NEW				Lg	Lg	19 04 38.5	
NEW	Newport	9.38	303	Pn	Pn	19 02 02.9	+0.4
	0.1nm,0.3s,baz=115,slow=14,SNR=1.9						
NEW				Lg	Lg	19 04 38.5	
	0.1nm,0.3s,baz=266,slow=19,SNR=2.4						
NVAR	Mina Array Bea	11.15	246	Pn	Pn	19 02 28.7	+1.6
NVAR	Mina Array Bea	11.15	246	Pn	Pn	19 02 28.7	+1.6
	0.1nm,0.3s,baz=56,slow=9.9,SNR=3.7						
FFC	Flin Flon	11.19	10	ePn	Pn	19 02 25.5	-1.8
	3.4nm,0.4s						
YKA	Yellowknife Ar	19.55	347	P	Pn	19 04 16.4	+0.2
YKA	Yellowknife Ar	19.55	347	P	Pn	19 04 16.4	+0.2
	0.2nm,0.3s,baz=231,slow=20,SNR=5.5						
ARCES	ARCESS Array B	61.41	18	P	P	19 10 02.6	-1.0
ARCES	ARCESS Array B	61.41	18	P	P	19 10 02.6	-1.0
	1.9nm,0.8s,baz=338,slow=6.9,SNR=4.9						
FINES	FINESS Array B	68.03	23	P	P	19 10 47.1	+0.3
FINES	FINESS Array B	68.03	23	P	P	19 10 47.1	+0.3
	1.9nm,1.0s,baz=0.0,slow=4.6,SNR=3.4						
SONM	Songino Array	84.61	339	P	P	19 12 21.9	+0.4
SONM	Songino Array	84.61	339	P	P	19 12 21.9	+0.4
	0.1nm,0.4s,baz=36,slow=3.7,SNR=3.0						

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*AUST **04** 19:08:54.1, 1°.00N×123°.00E, h60km*

*IDC **04** 19:08:58.8±0.7, 0°.59N×122°.67E, h82km±5km, mb3.7/12, mb1 3.8/14, mb1mx3.6/29, mbtmp3.7/14, Error ellipse: s-maj=24.6km s-min=11.5km az=72.0*

*ISCJB **04** 19:08:59.5±0.3, 0°.53N±0°.04×122°.64E±0°.05, h114km, mb4.0/15, Error ellipse: s-maj=7.0km s-min=5.7km az=168.4*

*DJA **04** 19:09:00.2±0.3, 1°N±3°×12°3E±°, h58km±5km, M4.5/14, mB5.1/4, mb4.5/14, MLv4.4/12, Mw(mB)4.5/4*

ISC 04 19:09:01.5±0.6, **0°.49N**±0°.05×**122°.68E**±0°.06, **h114**km, **n43**, σ1s**83**/40, **mb4.1**/15, **1D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	Marisa	0.74	269	P	Pn	19 09 14.0	-6.6
KMSI	Cibinong	1.30	86	P	Pn	19 09 24.4	-1.9
LUWI	Luwuk	1.53	176	P	Pn	19 09 26.9	-2.0
MNI	Manado	2.36	66	P	Pn	19 09 35.4	-3.9
PCI	Palu	3.16	244	S	Sn	19 10 33.0	+5.9
	baz=3.7,SNR=5.3						
KDI	Kendari	4.42	181	P	Pn	19 10 05.7	-0.9
TTSI	Tana Toraja	4.53	219	P	Pn	19 10 06.4	-1.7
TNTI	Ternate	4.70	87	P	Pn	19 10 09.4	-0.9
LBMI	Labuha	4.95	103	P	Pn	19 10 12.6	-1.2
	134nm,0.9s,1μm0.5nm						
SPSI	Sidrap Palu	5.30	213	P	Pn	19 10 17.6	-0.8
	45nm,0.5s,851nm0.2nm						
KAPI	Kappang	6.20	208	P	Pn	19 10 28.2	-2.5
	21nm,0.7s,0.1nm						
KAPI	Kappang	6.20	208	P	Pn	19 10 27.8	-2.8
	5.4nm,0.3s,baz=56,slow=4.7,SNR=12						
KAPI				S	Sn	19 11 36.3	-4.0
	baz=30,slow=20,SNR=3.5						
MYLDM	Lahad Datu	6.25	318	P	Pn	19 10 29.2	-2.2
	126nm,0.9s,4μm1.3nm						
BKSI	Bulukumba	6.31	204	P	Pn	19 10 31.1	-1.1
	24nm,0.9s,0.1nm						
CTBH	Cotabato--PC H	6.87	13	⇓iP	Pn	19 10 36.3	-3.4
KBKI	Kotabaru	7.52	240	P	Pn	19 10 46.0	-2.5
	33nm,0.7s,0.1nm						
KKM	Kota Kinabalu	8.49	311	P	Pn	19 10 59.2	-2.6
	49nm,1.4s						
MTN	Manton Dam	15.68	148	P	P	19 12 38.5	+0.6
	baz=16,SNR=19						
KDU	Kakadu	16.31	144	P	P	19 12 46.5	+1.7
	baz=17,SNR=5.1						
CGJI	Cibinong	18.36	247	P	Pn	19 13 07.9	-1.0
	15nm,0.7s						
FITZ	Fitzroy Crossi	18.71	171	P	Pn	19 13 12.2	-0.7
	0.5nm,0.3s,baz=12,slow=8.6,SNR=24						
FITZ	Fitzroy Crossi	18.71	171	P	Pn	19 13 12.4	-0.5
	baz=19,SNR=16						
MNSI	Mandailing Nat	23.10	271	P	P	19 14 02.2	+4.5
	8.9nm,0.6s						
WRA	Warramunga Arr	23.30	151	P	P	19 14 00.1	+0.5
	0.8nm,0.4s,baz=336,slow=9.0,SNR=12						
CHBT	CHBT	23.57	302	P	P	19 14 03.7	+1.8
	9.2nm,0.9s,1μm						
PHET	Kaeng Krachan	25.96	299	P	P	19 14 24.7	+1.0
	26nm,0.6s						
ASAR	Alice Springs	26.38	156	P	P	19 14 29.3	+1.9
	0.6nm,0.5s,baz=342,slow=12,SNR=23						
MEEK	Meekatharra	27.26	188	P	P	19 14 35.2	0.0
	baz=28,SNR=9.1						
CMAR	Chiang Mai Arr	29.36	309	P	P	19 14 54.8	+0.8
	1.2nm,0.7s,baz=131,slow=7.1,SNR=14						
CHTO	Chiang Mai	29.56	309	P	P	19 14 56.9	+1.1
KLBR	Kellerberrin	32.25	188	P	P	19 15 19.6	+0.3
	baz=33,SNR=8.4						
STKA	Stephens Creek	36.84	153	P	P	19 16 00.2	+1.4
	4.8nm,1.1s,baz=303,slow=20,SNR=5.2						
STKA	Stephens Creek	36.84	153	P	P	19 16 00.9	+2.1
	baz=37,SNR=4.1						
MJAR	Matsushiro Arr	38.65	20	P	P	19 16 13.0	-1.0
	3.0nm,0.8s,baz=199,slow=9.5,SNR=9.1						
MJAR				pP	pP	19 16 32.8	-7.0
	1.5nm,0.8s,baz=188,slow=9.7,SNR=3.3						
ASAJ	Asahikawa	46.92	20	P	P	19 17 20.8	+0.2
	1.6nm,0.5s,baz=238,slow=13,SNR=3.6						
SONM	Songino Array	49.23	346	P	P	19 17 38.9	+0.4
	2.0nm,0.7s,baz=162,slow=8.9,SNR=22						
SONM				pP	pP	19 17 58.9	-6.4
	0.7nm,0.8s,baz=161,slow=9.6,SNR=3.2						
SONM				sP	sP	19 18 07.9	-10
	0.8nm,0.8s,baz=155,slow=8.4,SNR=3.0						
MKAR	Makanchi Array	58.03	328	P	P	19 18 42.9	+0.3
	2.2nm,0.3s,baz=127,slow=8.4,SNR=80						
AAK	Ala-Archa	60.15	321	P	P	19 18 58.3	+0.9
	0.8nm,0.4s,baz=99,slow=6.6,SNR=7.3						
AAK				sP	sP	19 19 28.0	-10
	0.4nm,0.4s,baz=194,slow=5.6,SNR=2.4						
KBL	Kabul	60.38	310	P	P	19 18 59.5	+0.3
	baz=60,SNR=5.3						
ZALV	Zalesovo Beam	61.73	336	P	P	19 19 06.9	-0.8
	1.0nm,0.5s,baz=132,slow=8.2,SNR=8.2						
ZALV				pP	pP	19 19 28.1	-7.5
	0.6nm,0.4s,baz=7.6,slow=35,SNR=2.3						
BVAR	Borovoye Array	67.90	329	P	P	19 19 47.6	-0.1
	1.1nm,0.7s,baz=134,slow=6.4,SNR=7.0						
AKTO	Aktyubinsk	73.73	323	P	P	19 20 22.4	-0.6
	1.1nm,0.5s,baz=108,slow=8.7,SNR=8.3						
TORD	Torodi Ar. Bea	119.97	285	PKP	PKPdf	19 27 39.1	-0.6
	0.3nm,0.9s,baz=164,slow=2.2,SNR=2.4						

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*BJI **04** 19:11:01.9, 9°.35N×122°.24E, h49km, mB4.8/13, mb4.5/22, Ms4.3/13, Ms7 4.0/15*

*ISCJB **04** 19:11:02.8±0.5, 9°.47N±0°.02×122°.22E±0°.03, h48km±5km, mb4.3/50, MS3.7/9, Error ellipse: s-maj=5.0km s-min=4.1km az=179.2*

*NEIC **04** 19:11:02.3±0.3, 9°.46N×122°.24E, h35km, mb4.5/16, Error ellipse: s-maj=7.5km s-min=5.3km az=76.0*

NEIC Felt [II PIVS] at Cauayan.

*MAN **04** 19:11:02, 9°.47N×122°.08E, h33km, mb5.3, ML4.3, MS4.6*

MAN INTENSITY II - CAUAYAN NEGROS OCCIDENTAL.

*IDC **04** 19:11:03.1±0.6, 9°.53N×122°.25E, h38km±5km, mb3.9/24, mb1 4.1/26, mb1mx4.0/32, mbtmp3.9/26, ML4.6/2, MS3.5/6, Ms1 3.5/6, ms1mx3.1/39, Error ellipse: s-maj=20.2km s-min=10.0km az=66.0*

*AUST **04** 19:11:19.9, 7°.00N×121°.49E, h60km*

*DJA **04** 19:11:54.2±2.5, 8°N±9°×12°0E±2°1, h336km±19km, M4.2/10, mB4.7/3, mb4.2/10, Mw(mB)4.0/3*

ISC 04 19:11:03.3±0.4, **9°.44N**±0°.03×**122°.20E**±0°.04, **h41**km±2km, **h41**km**:pP-P, n167**, σ1s**58**/215, **mb4.4**/50, **MS3.8**/10, **6C-6D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	Tagbilaran	1.66	81	eP	Pn	19 11 31.5	+1.6
TBP				eS	Sn	19 11 48.0	-1.9
IPIL	Ipil	1.69	167	⇓iP	Pn	19 11 30.2	-0.1
IPIL				eS	Sn	19 11 50.2	-0.5
LLP	Lapu-Lapu	1.94	63	⇓eP	Pn	19 11 34.6	+0.8
LLP				eS	Sn	19 11 59.4	+2.4
PAGZ	Pagadian	1.97	144	eP	Pn	19 11 36.1	+1.8
RCP	Roxas	2.17	14	⇓eP	Pn	19 11 36.8	-0.2
RCP				eS	Sn	19 12 03.7	+1.0
CGP	Cagayan de Oro	2.65	112	⇑eP	Pn	19 11 59.8	+16
CGP				eS	Sn	19 12 19.9	+5.4
PLP	Palo	3.22	58	⇓eP	Pn	19 11 51.5	+0.1
PLP				eS	Sn	19 12 26.1	-2.6
BUKP	Musuan	3.23	119	eP	Pn	19 11 55.1	+3.5
BUTP	Butuan	3.41	98	eP	Pn	19 11 56.5	+2.5
DAV	Davao City (W)	4.09	125	P	Pn	19 11 59.1	-4.3
DAV				Pn	Pn	19 12 03.7	+0.3
DAV	Davao City (W)	4.09	125	Pn	Pn	19 12 03.7	+0.3
	32nm,0.3s,baz=241,slow=19,SNR=5.5						
DAV				LR	LR	19 14 08.5	
	comp=Z,1µm,20.0s,baz=331,slow=45						
TGY	Tagaytay City	4.79	345	Pn	Pn	19 12 12.9	-0.2
TGY				Sn	Sn	19 13 08.3	+0.8
TGY	Tagaytay City	4.79	345	Pn	Pn	19 12 12.9	-0.2
	35nm,0.3s,baz=219,slow=6.7,SNR=3.4						
TGY				Sn	Sn	19 13 08.3	+0.8
	19nm,0.3s,baz=277,slow=20,SNR=3.1						
MYLDM	Lahad Datu	5.61	221	P	Pn	19 12 26.7	+2.5
KDM	Kudat	5.88	245	P	Pn	19 12 29.0	+1.1
TSM	Tawau	6.68	220	P	Pn	19 12 48.0	+9.0
KKM	Kota Kinabalu	6.83	241	ePn	Pn	19 12 39.6	-1.5
	80nm,0.6s						
KKM				eSn	Sn	19 13 53.2	-4.4
KKM	Kota Kinabalu	6.83	241	P	Pn	19 12 41.3	+0.2
KKM	Kota Kinabalu	6.83	241	P	Pn	19 12 40.8	-0.3
	baz=5.3,SNR=7.9						
KKM				S	Sn	19 13 56.0	-1.6
	baz=5.3,SNR=6.0						
BTM	Bintulu	10.98	236	P	Pn	19 13 38.0	0.0
SBUM	Sibu	12.11	236	P	Pn	19 13 53.4	-0.1
STKI	Sintang	14.17	229	P	P	19 14 31.4	+3.2
KSM	Kuching	14.24	237	ePn	Pn	19 14 21.7	-0.7
	29nm,1.1s						
KSM	Kuching	14.24	237	P	Pn	19 14 22.0	-0.4
KSM	Kuching	14.24	237	P	P	19 14 30.0	+1.1
	20nm,1.4s						
KAPI	Kappang	14.57	190	LR	LR	19 19 45.8	
	comp=Z,120nm,19.0s,baz=205,slow=36						
QIZ	Qiongzhong	15.30	310	P	Pn	19 14 36.3	-0.2
QIZ				S	Sn	19 17 27.0	+2.1
QIZ				pmax	pmax		
	comp=Z,14nm,1.7s						
QIZ				LR	LR		
	comp=N,250nm,13.8s						
QIZ				LR	LR		
	comp=E,190nm,13.0s						
QIZ				LR	LR		
	comp=Z,410nm,15.0s						
PBKI	Pangkalan Bun	15.99	222	P	P	19 14 50.4	+1.9
KTGM	Kuala Trenggan	19.34	259	P	P	19 15 26.6	+1.1
TPRI	Tanjung Pinang	19.52	245	P	P	19 15 24.9	-2.5
PPBI	Pangkal Pinang	19.73	235	P	P	19 15 30.7	+1.1
MYKOM	Kota Tinggi	19.77	248	P	P	19 15 31.4	+1.3
MYKOM	Kota Tinggi	19.77	248	P	P	19 15 30.1	0.0
	comp=Z,23nm,1.3s						
CHBT	CHBT	19.77	281	P	Pn	19 15 32.0	+0.1
SJI	Sawahan	19.98	212	P	Pn	19 15 36.5	+2.0
KGM	Kluang	20.18	250	P	Pn	19 15 37.3	+0.6
TGJI	Tegal	20.80	219	P	Pn	19 15 45.6	+1.7
BJII	Banjamegara	20.80	217	P	Pn	19 15 45.9	+1.8
	comp=Z,136nm,1.3s						
FRIM	Kepong	21.35	255	P	P	19 15 49.6	+2.3
IPM	Ipoh	21.59	258	eP	P	19 15 51.0	+1.2
	comp=Z,22nm,0.8s						
IPM	Ipoh	21.59	258	P	P	19 15 51.6	+1.8
IPM	Ipoh	21.59	258	P	P	19 15 51.2	+1.4
	comp=Z,32nm,0.8s,comp=Z,496nm						
KULM	Kulim	21.77	261	eP	P	19 15 52.5	+0.8
	comp=Z,30nm,1.1s						
KULM	Kulim	21.77	261	P	P	19 15 53.7	+2.0
KULM	Kulim	21.77	261	P	P	19 15 53.3	+1.6
	comp=Z,24nm,1.1s						
DBJI	Dramaga	22.13	225	P	P	19 15 59.1	+3.5
GYA	Guiyang	22.43	321	eP	P	19 16 00.7	+1.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GUMO	Guam	22.58	77	LR	LR	19 23 21.5	
	comp=Z,135nm,19.3s,baz=127,slow=33						
NJ2	Nanjing	22.71	353	eP	P	19 16 00.3	-1.3
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
CGJI	Cibinong	22.91	226	P	P	19 16 05.1	+1.2
LWLI	Liwa	23.09	232	P	P	19 16 07.8	+1.9
KSI	Kapahiang	23.48	237	P	P	19 16 10.9	+1.3
	comp=Z,59nm,1.1s,comp=Z,2µm						
MTN	Manton Dam	23.85	158	P	P	19 16 13.7	+0.7
	baz=22,SNR=11						
MTN				S	S	19 20 08.3	-18
	baz=22,SNR=5.3						
PSI	Prapat	24.06	256	P	P	19 16 15.7	+0.6
PSI	Prapat	24.06	256	P	P	19 16 15.9	+0.8
	comp=Z,37nm,1.4s						
PSI	Prapat	24.06	256	P	P	19 16 15.7	+0.6
	comp=Z,15nm,0.7s,baz=65,slow=6.5,SNR=17						
PSI	Prapat	24.06	256	P	P	19 16 16.0	+0.8
	baz=23,SNR=12						
MNSI	Mandailing Nat	24.09	250	P	P	19 16 15.8	+0.5
KMI	Kunming	24.20	313	P	P	19 16 17.9	+1.4
KMI				pP	pP	19 16 26.7	-1.0
KMI				sP	sP	19 16 31.0	-1.7
KMI				PP	PnPn	19 16 51.2	+3.8
KMI				S	S	19 20 30.9	-1.5
KMI				sS	sS	19 20 47.4	-3.6
KMI				SS	SnSn	19 21 25.3	+8.3
KMI				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,60nm,3.8s						
KMI				LR	LR		
	comp=N,130nm,16.2s						
KMI				LR	LR		
	comp=E,140nm,14.3s						
KMI				LR	LR		
	comp=Z,210nm,14.3s						
TSI	Tuntungan	24.21	257	P	P	19 16 18.8	+2.5
	comp=Z,95nm,1.1s						
KDU	Kakadu	24.24	155	P	P	19 16 16.9	+0.3
	baz=22,SNR=28						
KDU				S	S	19 20 16.4	-16
	baz=22,SNR=4.2						
CM31	Chiang Mai Arr	24.26	294	eP	P	19 16 15.2	-1.6
	comp=Z,18nm,1.3s						
CMAR	Chiang Mai Arr	24.26	294	P	P	19 16 16.9	0.0
CMAR	Chiang Mai Arr	24.26	294	P	P	19 16 16.9	0.0
	comp=Z,2.1nm,0.8s,baz=124,slow=8.1,SNR=14						
CMAR				LR	LR	19 25 49.6	
	comp=Z,39nm,20.1s,baz=135,slow=36						
CMMT	Chiang Mai	24.37	295	P	P	19 16 29.9	+12
	comp=Z,5.0nm,1.4s,comp=Z,226nm						
CHTO	Chiang Mai	24.38	295	eP	P	19 16 16.9	-0.9
	comp=Z,7.5nm,1.3s						
CHTO	Chiang Mai	24.38	295	P	P	19 16 29.1	+11
CBIJ	Chichi jima	25.78	44	LR	LR	19 25 57.2	
	comp=Z,178nm,21.0s,baz=228,slow=35						
GSI	Gunungsitoli	25.80	253	P	P	19 16 30.8	-0.1
	baz=24,SNR=4.6						
CD2	Chengdu	27.41	324	P	P	19 16 46.5	+1.3
CD2				pP	pP	19 16 55.9	-0.6
CD2				sP	sP	19 16 59.9	-1.5
CD2				PP	PnPn	19 17 34.4	+3.5
CD2				PcP	PcP	19 20 05.0	+1.6
CD2				S	S	19 21 22.9	+0.1
CD2				sS	sS	19 21 38.7	-2.9
CD2				SS	SnSn	19 22 41.2	+6.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.6s						
CD2				LR	LR		
	comp=E,170nm,22.6s						
CD2				LR	LR		
	comp=Z,180nm,12.5s						
FITZ	Fitzroy Crossi	27.58	173	eP	P	19 16 46.3	-0.4
	comp=Z,3.3nm,1.0s						
FITZ	Fitzroy Crossi	27.58	173	P	P	19 16 47.1	+0.4
	comp=Z,2.8nm,0.8s,baz=5.5,slow=4.6,SNR=7.7						
FITZ	Fitzroy Crossi	27.58	173	P	P	19 16 47.1	+0.4
	baz=25,SNR=5.7						
KSAR	Wonju Array Be	28.34	10	P	P	19 16 52.6	-0.8
KSAR				pP	pP	19 17 02.9	-1.8
KSRS	Korea Array	28.36	10	P	P	19 16 52.6	-0.9
	comp=Z,0.5nm,0.6s,baz=188,slow=9.2,SNR=2.9						
KSRS				pP	pP	19 17 02.9	-2.0
	comp=Z,0.7nm,0.6s,baz=184,slow=9.4,SNR=3.3						
KSRS				LR	LR	19 28 10.1	
	comp=Z,84nm,18.6s,baz=61,slow=36						
LZH	Lanzhou	31.34	331	eP	P	19 17 23.2	+3.0
LZH				pP	pP	19 17 33.2	+1.7
LZH				sP	sP	19 17 36.4	-0.1
LZH				eS	S	19 22 33.0	+8.3
LZH				sS	sS	19 22 46.4	+2.8
LZH				SS	SnSn	19 24 15.2	+4.4
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,71nm,4.1s						
LZH				LR	LR		
	comp=N,320nm,15.2s						
LZH				LR	LR		
	comp=E,340nm,15.7s						
LZH				LR	LR		
	comp=Z,460nm,16.7s						
WRAB	Tennant Creek	31.55	158	eP	P	19 17 21.6	-0.3
	comp=Z,10nm,1.0s						
WRA	Warramunga Arr	31.55	158	P	P	19 17 21.8	-0.2
WRA				pP	pP	19 17 33.9	+0.6
WRA				PcP	PcP	19 20 14.5	+0.4
WRA	Warramunga Arr	31.55	158	P	P	19 17 21.8	-0.2
	comp=Z,5.0nm,0.7s,baz=338,slow=9.8,SNR=22						
WRA				pP	pP	19 17 33.9	+0.6
	comp=Z,1.9nm,0.7s,baz=334,slow=10,SNR=5.1						
WRA				PcP	PcP	19 20 14.5	+0.4
	comp=Z,2.0nm,0.8s,baz=342,slow=3.2,SNR=11						
HHC	Hu-ho-hao-te	32.67	345	eP	P	19 17 34.3	+2.6
HHC				pP	pP	19 17 44.9	+1.8
HHC				sP	sP	19 17 48.2	+0.2
HHC				PP	PnPn	19 18 43.4	+2.8
HHC				S	S	19 22 47.7	+2.5
HHC				sS	sS	19 23 04.0	-0.1
HHC				SS	SnSn	19 24 46.2	+3.3
HHC				pmax	pmax		
	comp=Z,31nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,5.7s						
HHC				LR	LR		
	comp=N,310nm,10.8s						
HHC				LR	LR		
	comp=E,360nm,10.3s						
HHC				LR	LR		
	comp=Z,240nm,10.1s						
AS31	Alice Springs	34.84	161	eP	P	19 17 51.1	+0.5
ASAR	Alice Springs	34.84	161	P	P	19 17 51.5	+0.9
ASAR				PcP	PcP	19 20 23.7	+0.4
ASAR	Alice Springs	34.84	161	P	P	19 17 51.5	+0.9
	comp=Z,6.6nm,0.6s,baz=342,slow=6.9,SNR=89						
ASAR				PcP	PcP	19 20 23.7	+0.4
	comp=Z,1.6nm,0.8s,baz=346,slow=2.1,SNR=8.0						
USRK	Ussuriysk Arra	35.66	12	pP	pP	19 18 05.2	-3.6
	comp=Z,1.9nm,0.6s,baz=192,slow=5.9,SNR=3.2						
GTA	Gaotai	35.92	330	eP	P	19 18 01.4	+1.5
GTA				pP	pP	19 18 11.9	+0.5
GTA				sP	sP	19 18 15.1	-1.2
GTA				S	S	19 23 38.0	+2.5
GTA				sS	sS	19 23 54.1	-0.5
GTA				SS	SnSn	19 26 01.5	-0.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,64nm,5.2s						
GTA				LR	LR		
	comp=N,140nm,16.2s						
GTA				LR	LR		
	comp=E,120nm,16.1s						
GTA				LR	LR		
	comp=Z,170nm,18.0s						
TAPN	Taplejung	37.08	303	eP	P	19 18 10.0	-0.2
GUN	Gumba	38.80	303	eP	P	19 18 24.6	-0.1
PKIN	Phulchoki	39.08	302	eP	P	19 18 25.9	-1.1
	comp=Z,1.9nm,0.4s						
KKN	Kakani	39.25	303	eP	P	19 18 28.2	-0.2
	comp=Z,12nm,0.9s						
DMN	Daman	39.33	302	eP	P	19 18 29.6	+0.5
	comp=Z,18nm,1.2s						
BLDU	Ballidu	40.18	187	P	P	19 18 29.3	-6.3
	baz=38,SNR=6.9						
ULN	Ulaanbaatar	40.38	344	P	P	19 18 37.5	+0.1
	comp=Z,4.4nm,1.3s						
SONM	Songino Array	40.53	344	P	P	19 18 38.4	-0.2
SONM	Songino Array	40.53	344	P	P	19 18 38.4	-0.2
	comp=Z,0.7nm,0.6s,baz=163,slow=8.1,SNR=3.3						
KOLN	Koldanda	40.64	302	eP	P	19 18 39.7	-0.2
	comp=Z,12nm,0.7s						
DANN	Dangsing	40.70	303	eP	P	19 18 40.0	-0.5
	comp=Z,5.9nm,0.6s						
KLBR	Kellerberrin	41.02	186	P	P	19 18 34.9	-7.8
	baz=39,SNR=6.9						
PYUN	Piuthan	41.26	302	eP	P	19 18 45.1	+0.1
	comp=Z,27nm,0.9s						
QLP	Quilpie	41.72	150	P	P	19 18 48.6	+0.2
	baz=40,SNR=8.5						
BBOO	Buckleboo	44.05	163	P	P	19 19 08.2	+1.0
	baz=42,SNR=6.6						
STKA	Stephens Creek	45.08	156	eP	P	19 19 12.9	-2.6
	comp=Z,0.8nm,0.7s						
STKA	Stephens Creek	45.08	156	P	P	19 19 16.1	+0.6
	comp=Z,2.0nm,0.5s,baz=342,slow=11,SNR=6.0						
WMQ	Urumqi	45.50	325	P	P	19 19 20.0	+1.2
WMQ				pP	pP	19 19 30.0	-0.5
WMQ				sP	sP	19 19 34.0	-1.3
WMQ				PP	PP	19 21 06.0	+0.2
WMQ				ScP	ScP	19 24 48.0	+1.2
WMQ				S	S	19 25 59.0	+1.2
WMQ				SS	ScS	19 29 13.0	+1.1
WMQ				pmax	pmax		
	comp=Z,15nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,23nm,5.0s						
WMQ				LR	LR		
	comp=N,150nm,15.0s						
WMQ				LR	LR		
	comp=E,120nm,16.0s						
WMQ				LR	LR		
	comp=Z,120nm,16.0s						
CMSA	Cobar Meteorol	46.55	152	P	P	19 19 28.6	+1.5
	baz=45,SNR=5.4						
ARMA	Armidale	48.69	146	P	P	19 19 45.3	+1.5
	baz=47,SNR=7.0						
MK31	Makanchi Array	50.33	325	eP	P	19 19 54.6	-1.5
MKAR	Makanchi Array	50.33	325	P	P	19 19 56.1	0.0
MKAR	Makanchi Array	50.33	325	P	P	19 19 56.1	0.0
	comp=Z,3.2nm,0.7s,baz=126,slow=8.2,SNR=16						
KSH	Kashi	50.86	314	P	P	19 20 02.3	+2.0
KSH				pP	pP	19 20 12.0	-0.2
KSH				sP	sP	19 20 16.0	-1.0
KSH				PcP	PcP	19 21 18.0	+1.4
KSH				PP	PP	19 21 59.0	+2.1
KSH				ScP	ScP	19 25 10.4	+0.7
KSH				PcS	PcS	19 25 14.1	-0.1
KSH				S	S	19 27 15.6	+1.7
KSH				ScS	ScS	19 29 47.1	-0.9
KSH				SS	SS	19 30 48.7	-0.3
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSH				LR	LR		
	comp=N,210nm,5.3s						
KSH				LR	LR		
	comp=E,220nm,4.5s						
KSH				LR	LR		
	comp=Z,430nm,5.6s						
ULHL	Ulahol	51.80	317	P	P	19 20 08.6	+1.2
	SNR=10						
KZA	Kyzart	52.40	317	P	P	19 20 13.7	+1.6
	SNR=6.5						
TKM2	Tokmak 2	52.52	318	P	P	19 20 13.8	+1.0
	SNR=6.2						
AAK	Ala-Archa	53.13	317	eP	P	19 20 17.3	0.0
	comp=Z,21nm,1.0s						
AAK	Ala-Archa	53.13	317	P	P	19 20 18.0	+0.7
	comp=Z,1.6nm,0.7s,baz=124,slow=6.8,SNR=7.4						
AML	Almayashu	53.48	316	P	P	19 20 21.7	+1.7
	SNR=8.5						
ZALV	Zalesovo Beam	53.50	333	P	P	19 20 18.7	-0.8
ZALV	Zalesovo Beam	53.50	333	P	P	19 20 18.7	-0.8
	comp=Z,1.2nm,0.6s,baz=140,slow=5.8,SNR=3.8						
EKS2	Erkin-Say	53.63	317	eP	P	19 20 21.9	+1.1
	comp=Z,4.4nm,1.0s						
EKS2	Erkin-Say	53.63	317	P	P	19 20 22.2	+1.3
	SNR=5.9						
KBL	Kabul	54.52	306	eP	P	19 20 27.7	+0.1
	comp=Z,5.7nm,0.9s						
KURK	Kurchatov	54.54	327	eP	P	19 20 26.8	-0.4
	comp=Z,9.9nm,1.1s						
KKAR	Karatay Array	56.02	316	eP	P	19 20 38.1	+0.1
	comp=Z,3.5nm,0.6s						
BVAR	Borovoye Array	60.11	327	P	P	19 21 06.1	-0.3
BVAR				pP	pP	19 21 17.2	-1.3
BVAR	Borovoye Array	60.11	327	P	P	19 21 06.1	-0.3
	comp=Z,0.4nm,0.5s,baz=153,slow=5.0,SNR=3.6						
BVAR				pP	pP	19 21 17.2	-1.3
	comp=Z,0.7nm,0.5s,baz=115,slow=10,SNR=4.3						
BRVK	Borovoye	60.18	327	P	P	19 21 05.2	-1.7
	comp=Z,9.9nm,1.2s						
ABKAR	Akbulak array	64.91	320	eP	P	19 21 38.1	-0.4
	comp=Z,1.3nm,0.6s						
AKTO	Aktyubinsk	66.42	321	P	P	19 21 48.0	-0.2
AKTO	Aktyubinsk	66.42	321	P	P	19 21 48.0	-0.2
	comp=Z,1.3nm,0.6s,baz=86,slow=8.1,SNR=8.2						
KBZ	Khabaz	75.82	313	P	P	19 22 45.4	+0.1
KBZ				pP	pP	19 22 57.1	-0.5
KBZ	Khabaz	75.82	313	P	P	19 22 45.4	+0.1
	comp=Z,1.8nm,0.9s,baz=214,slow=7.7,SNR=4.7						
KBZ				pP	pP	19 22 57.1	-0.5
	comp=Z,2.6nm,1.0s,baz=211,slow=2.1,SNR=4.5						
ILAR	Eielson Array	81.92	26	P	P	19 23 17.5	-0.9
ILAR	Eielson Array	81.92	26	P	P	19 23 17.5	-0.9
	comp=Z,0.3nm,0.8s,baz=254,slow=6.5,SNR=3.6						
JOF	Joensuu	82.07	332	ep	P	19 23 18.2	-1.0
	comp=Z,1.5nm,0.5s						
BR131	Keskin Array S	82.94	309	eP	P	19 23 23.2	-1.2
	comp=Z,2.2nm,0.9s						
BRTR	Keskin Array B	82.94	309	P	P	19 23 24.1	-0.3
BRTR				pP	pP	19 23 36.5	-0.5
BRTR	Keskin Array B	82.94	309	P	P	19 23 24.1	-0.3
	comp=Z,1.3nm,0.7s,baz=79,slow=3.4,SNR=9.3						
BRTR				pP	pP	19 23 36.5	-0.5
	comp=Z,1.1nm,0.7s,baz=131,slow=5.3,SNR=5.4						
ARCES	ARCESS Array B	83.56	339	P	P	19 23 27.1	+0.2
ARCES	ARCESS Array B	83.56	339	P	P	19 23 27.1	+0.2
	comp=Z,3.4nm,0.9s,baz=52,slow=6.3,SNR=4.2						
KAF	Kangasniemi	84.48	332	ep	P	19 23 30.1	-1.5
	comp=Z,1.6nm,0.5s						
AKASG	Malin Array Be	84.65	320	P	P	19 23 32.2	-0.5
AKASG	Malin Array Be	84.65	320	P	P	19 23 32.2	-0.5
	comp=Z,2.5nm,0.7s,baz=72,slow=4.6,SNR=8.7						
AK02	Malin Array Si	84.67	320	eP	P	19 23 32.3	-0.5
FINES	FINESS Array B	84.70	331	P	P	19 23 32.1	-0.6
FINES	FINESS Array B	84.70	331	P	P	19 23 32.1	-0.6
	comp=Z,2.4nm,0.5s,baz=40,slow=6.3,SNR=28						
KMBO	Kilima Mbogo	85.20	268	P	P	19 23 37.6	+1.1
KMBO	Kilima Mbogo	85.20	268	P	P	19 23 37.6	+1.1
	comp=Z,1.5nm,0.6s,baz=57,slow=9.8,SNR=6.8						
NACGM	Naroch	85.46	325	e	P	19 23 34.0	-2.6
INK	Inuvik	86.51	21	P	P	19 23 41.4	-0.2
INK	Inuvik	86.51	21	P	P	19 23 41.4	-0.2
	comp=Z,0.9nm,0.8s,baz=37,slow=4.3,SNR=3.2						
TESR		87.02	317	⇓iP	P	19 23 44.6	0.0
VRI	Vrincioaia	87.09	316	⇑iP	P	19 23 42.5	-2.4
MLR	Muntele Rosu	87.69	316	P	P	19 23 48.2	+0.2
MLR	Muntele Rosu	87.69	316	⇑iP	P	19 23 48.4	+0.4
MLR	Muntele Rosu	87.69	316	P	P	19 23 48.2	+0.2
	comp=Z,0.4nm,0.6s,baz=270,slow=5.7,SNR=5.9						
BURAR	Bucovina Array	87.77	318	⇑iP	P	19 23 47.5	-0.8
BUR08	Bucovina Ar. S	87.78	318	eP	P	19 23 47.8	-0.5
VOIR		88.32	316	⇓iP	P	19 23 56.5	+5.6
VNDA	Vanda	89.65	172	P	P	19 23 56.3	0.0
VNDA	Vanda	89.65	172	P	P	19 23 56.3	0.0
	comp=Z,0.7nm,0.8s,baz=280,slow=6.1,SNR=3.7						
SYO	Syowa Base	96.10	201	⇑eX	pP	19 24 34.8	-4.0
SYO	Syowa Base	96.10	201	⇑eX	sP	19 24 44.8	+1.3
YKA	Yellowknife Ar	96.11	23	P	P	19 24 25.6	-0.8
YKA	Yellowknife Ar	96.11	23	P	P	19 24 25.6	-0.8
	comp=Z,0.2nm,0.7s,baz=296,slow=3.4,SNR=4.5						
TXAR	Lajitas Array	121.36	47	PKP	PKPdf	19 29 53.9	+0.9
TXAR	Lajitas Array	121.36	47	PKP	PKPdf	19 29 53.9	+0.9
	comp=Z,0.3nm,0.6s,baz=41,slow=2.9,SNR=3.8						
PLCA	Paso Flores	146.85	162	PKPbc	PKPbc	19 30 41.5	-0.1
PLCA	Paso Flores	146.85	162	PKPbc	PKPbc	19 30 41.5	-0.1
	comp=Z,8.5nm,0.9s,baz=264,slow=11,SNR=4.1						

GUC 04 19:11:30.1±0.7, 28°.48S×71°.23W, h15km±6km, ML3.5, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.70	139	⇑iP	Pg	19 11 43.7	-0.5
LCO				iS	Sg	19 11 53.8	+0.1
LCO				AML	AML	19 11 57.5	
	comp=N,2µm,0.3s						
CPCH	Copiapo	1.36	35	⇑iP	Pn	19 11 53.9	-0.8
CPCH				iS	Sn	19 12 11.2	-1.3
TLL	Tololo Astrono	1.72	168	⇓iP	Pn	19 11 59.5	-0.3
TLL				iS	Sn	19 12 22.4	+0.6
TLL				AML	AML	19 12 27.2	
	comp=N,472nm,0.5s						
CMCH	Combarbala	2.69	176	eP	Pn	19 12 10.7	-2.3
CMCH				eS	Sn	19 12 44.3	-1.0
CMCH				AML	AML	19 12 55.8	
	comp=E,1µm,0.8s						

ISK ***04*** *19:11:31.9, 39°.93N×27°.34E, h4km, MD2.6*
ISCJB ***04*** *19:11:32.5±0.5, 39°.93N±0°.03×27°.33E±0°.04, h6km±5km, Error ellipse: s-maj=5.9km s-min=4.2km az=43.7*
CSEM ***04*** *19:11:32.5±0.2, 39°.92N×27°.33E, h5km, MD2.6, Error ellipse: s-maj=3.9km s-min=3.0km az=44.0*
DDA ***04*** *19:11:32.4, 39°.96N×27°.36E, h7km, MD2.5*
ISC 04 19:11:32.9±0.9, 39°.92N±0°.02×27°.34E±0°.03, h11km±8km, n32, σ0s.75/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALY	Balya	0.28	130	iP	Pg	19 11 38.4	-0.3
BALY				iS	Sg	19 11 43.0	+0.5
BALY	Balya	0.28	130	iP	Pg	19 11 38.4	-0.3
BALY				iS	Sg	19 11 43.0	+0.5
GONE	Gonen-Balikesi	0.29	65	ePG	Pg	19 11 38.4	-0.5
GONE				eSG	Sg	19 11 43.1	+0.2
GONE	Gonen-Balikesi	0.29	65	ePg	Pg	19 11 38.4	-0.5
GONE				eSg	Sg	19 11 43.1	+0.2
KRBG	Karabiga-Canak	0.47	356	ePG	Pg	19 11 41.4	-0.8
KRBG				eSG	Sg	19 11 48.7	+0.2
KRBG	Karabiga-Canak	0.47	356	ePg	Pg	19 11 41.4	-0.8
KRBG				eSg	Sg	19 11 48.7	+0.2
BALB	Balikesir	0.50	124	ePG	Pg	19 11 41.9	-0.8
BALB				eSG	Sg	19 11 50.0	+0.7
BALB	Balikesir	0.50	124	ePg	Pg	19 11 41.9	-0.8
BALB				eSg	Sg	19 11 50.1	+0.7
EDC	Edincik	0.59	43	ePG	Pb	19 11 44.7	-0.4
EDC	Edincik	0.59	43	ePg	Pb	19 11 44.7	-0.4
RKY	Sarkoy-Tekirda	0.78	351	ePG	Pg	19 11 46.8	-1.1
RKY	Sarkoy-Tekirda	0.78	351	ePg	Pg	19 11 46.8	-1.1
EZN	Ezine	0.79	263	ePG	Pg	19 11 47.9	-0.2
EZN	Ezine	0.79	263	ePg	Pg	19 11 47.9	-0.2
AYVA	Ayvalik	0.79	220	iP	Pb	19 11 48.8	+0.1
AYVA				iS	Sn	19 12 01.5	-0.2
AYVA	Ayvalik	0.79	220	iP	Pb	19 11 48.7	+0.1
AYVA				iS	Sn	19 12 01.5	-0.2
GELI	Tayfur-Gelibol	0.82	306	ePG	Pg	19 11 47.8	-0.9
GELI	Tayfur-Gelibol	0.82	306	ePg	Pg	19 11 47.8	-0.9
DURS	Dursunbey	0.93	110	iP	Pg	19 11 49.7	-1.1
DURS				iS	Sg	19 12 02.9	-0.1
DURS	Dursunbey	0.93	110	iP	Pg	19 11 49.7	-1.1
DURS				iS	Sg	19 12 02.9	-0.1
AKHS	Akhisar	1.10	160	iP	Pg	19 11 52.2	-1.9
AKHS				iS	Sg	19 12 07.6	-0.8
AKHS	Akhisar	1.10	160	iP	Pg	19 11 52.2	-1.9
AKHS				iS	Sg	19 12 07.6	-0.8
ENEZ	Enez	1.22	312	ePN	Pb	19 11 56.0	+0.1
ENEZ	Enez	1.22	312	ePn	Pb	19 11 56.0	+0.1
ARMT	Armutlu	1.33	61	ePN	Pn	19 11 57.8	+0.4

ARMT	Armutlu	1.33	61	ePn	Pn	19 11 57.8	+0.4
DEMI	Demirci	1.38	129	i P	Pb	19 11 59.1	+0.4
DEMI				i S	Sb	19 12 16.8	+0.5
DEMI	Demirci	1.38	129	i P	Pb	19 11 59.1	+0.4
DEMI				i S	Sb	19 12 16.8	+0.5
YLV	Yalova	1.69	67	ePN	Pn	19 12 03.1	+0.8
YLV	Yalova	1.69	67	ePn	Pn	19 12 03.1	+0.8
TVSB	Tavsanli	1.70	105	ePN	Pn	19 12 03.6	+1.0
TVSB	Tavsanli	1.70	105	ePn	Pn	19 12 03.6	+1.0

MAN 04 19:18:28, 15°.44N×119°.86E, h41km, mb4.0, ML2.8, MS2.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.34	8	eP	Pn	19 18 39.6	+2.8
SCZP				eS	Sn	19 18 46.5	+3.6
PCPH	Palayan	1.20	84	eP	Pn	19 18 49.1	+0.9
BALP	Baler	1.68	79	eP	Pn	19 18 56.6	+1.7
BALP				eS	Sn	19 19 17.4	+2.1

IDC 04 19:23:27.7±2.5, 0°.69S×133°.77E, h0km, mb3.0/2, mb1 3.3/4, mb1mx3.2/22, mbtmp3.1/4, ML3.3/2, Error ellipse: s-maj=100.7km s-min=25.1km az=79.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.06	204	P	Pn	19 27 52.3	-0.2
	0.1nm,0.3s,baz=38,slow=14,SNR=5.5						
WRA	Warramunga Arr	19.14	178	P	P	19 27 51.4	-1.2
	0.1nm,0.3s,baz=357,slow=12,SNR=4.0						
ASAR	Alice Springs	22.84	180	P	P	19 28 33.5	+0.8
	0.4nm,0.6s,baz=358,slow=12,SNR=6.3						
MKAR	Makanchi Array	65.22	324	P	P	19 34 10.9	-0.1
	0.1nm,0.5s,baz=112,slow=6.4,SNR=3.1						

IDC 04 19:42:37.2±0.9, 35°.61N×22°.63E, h0km, mb3.6/11, mb1 3.7/14, mb1mx3.5/32, mbtmp3.5/14, ML3.3/3, Error ellipse: s-maj=21.9km s-min=20.2km az=110.0
ATH 04 19:42:39.9, 35°.46N×22°.28E, h25km±3km, MD3.6/32, ML3.3
CSEM 04 19:42:39.6±0.3, 35°.47N×22°.30E, h2km, ML3.2/3, Error ellipse: s-maj=8.7km s-min=3.0km az=42.0
THE 04 19:42:41.5, 35°.50N×22°.33E, h9km±3km, ML3.2/3, Error ellipse: s-maj=4.3km s-min=1.3km az=217.0
ISC 04 19:42:41.7±1.4, 35°.47N±0°.04×22°.29E±0°.04, h28km±10km, n166, σ1s.16/174, mb3.4/11, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KYTH	Kithira	1.01	36	P	Pn	19 42 59.8	-0.3
KYTH	Kithira	1.01	36	ePN	Pn	19 43 00.0	-0.1
KYTH	Kithira	1.01	36	ePn	Pn	19 43 00.0	-0.1
DYR	Agios Nikonas	1.29	1	P	Pb	19 43 04.6	-0.8
DYR				S	Sb	19 43 22.8	+1.2
DYR	Agios Nikonas	1.29	1	ePN	Pb	19 43 04.6	-0.8
DYR				eSN	Sb	19 43 22.5	+0.9
DYR	Agios Nikonas	1.29	1	P	Pb	19 43 04.6	-0.8
DYR				eSn	Sb	19 43 22.5	+0.9
DYR				S	Sb	19 43 22.8	+1.2
KARN	Karanos	1.33	92	P	Pb	19 43 05.5	-0.5
KARN	Karanos	1.33	92	ePN	Pb	19 43 06.1	+0.1
KARN				eSN	Sb	19 43 23.9	+1.3
KARN	Karanos	1.33	92	P	Pb	19 43 05.5	-0.5
KARN	Karanos	1.33	92	ePn	Pb	19 43 06.1	+0.1
KARN				eSn	Sb	19 43 23.9	+1.3
VLI	Veliai	1.35	22	P	Pb	19 43 05.5	-0.8
VLI				S	Sb	19 43 24.7	+1.4
VLI	Veliai	1.35	22	ePN	Pb	19 43 05.6	-0.8
VLI				eSN	Sb	19 43 24.7	+1.4
VLI	Veliai	1.35	22	ePn	Pb	19 43 05.6	-0.8
VLI				S	Sb	19 43 24.7	+1.4
PYL	PYLOS	1.49	343	P	Pn	19 43 07.1	+0.4
PYL				S	Sb	19 43 27.2	-0.1
PYL	PYLOS	1.49	343	ePN	Pn	19 43 07.1	+0.4
PYL				eSN	Sb	19 43 26.6	-0.7
PYL	PYLOS	1.49	343	P	Pn	19 43 07.1	+0.4
PYL				eSn	Sb	19 43 26.6	-0.7
PYL				S	Sb	19 43 27.2	-0.1
VAM	Vamos	1.56	92	P	Pb	19 43 08.6	-1.3
VAM	Vamos	1.56	92	ePB	Pn	19 43 07.6	0.0
VAM	Vamos	1.56	92	ePb	Pn	19 43 07.6	0.0
VAM	Vamos	1.56	92	P	Pb	19 43 08.6	-1.3
GVD	Gavdhos	1.60	113	ePN	Pb	19 43 09.6	-1.0
GVD	Gavdhos	1.60	113	ePn	Pb	19 43 09.6	-1.0
ITM	Ithomi	1.73	350	P	Pb	19 43 11.2	-1.7
ITM	Ithomi	1.73	350	ePN	Pn	19 43 11.1	+1.1
ITM	Ithomi	1.73	350	P	Pb	19 43 11.2	-1.7
VLX	Vlachokerasia	1.90	2	P	Pb	19 43 15.1	-0.7
VLX	Vlachokerasia	1.90	2	ePN	Pb	19 43 14.4	-1.4
VLX	Vlachokerasia	1.90	2	ePn	Pb	19 43 14.4	-1.4
VLX	Vlachokerasia	1.90	2	P	Pb	19 43 15.1	-0.7
SIVA	Sivas	2.11	102	P	Pn	19 43 15.6	+0.4
SIVA	Sivas	2.11	102	ePN	Pn	19 43 15.7	+0.5
SIVA	Sivas	2.11	102	ePn	Pn	19 43 15.7	+0.5
AMT	Artemida-Makis	2.11	347	P	Pb	19 43 17.1	-2.3
AMT	Artemida-Makis	2.11	347	ePB	Pn	19 43 16.8	+1.5
AMT	Artemida-Makis	2.11	347	ePb	Pn	19 43 16.8	+1.5
AMT	Artemida-Makis	2.11	347	P	Pb	19 43 17.1	-2.3
IDI	Anoyia	2.13	94	P	Pn	19 43 16.3	+0.8
IDI	Anoyia	2.13	94	ePN	Pn	19 43 16.3	+0.8
IDI	Anoyia	2.13	94	P	Pn	19 43 16.3	+0.8
DID	Didima	2.17	20	P	Pn	19 43 16.0	-0.1
DID				S	Sn	19 43 43.4	+1.3
DID	Didima	2.17	20	ePN	Pn	19 43 16.4	+0.3
DID	Didima	2.17	20	P	Pn	19 43 16.0	-0.1
DID	Didima	2.17	20	ePn	Pn	19 43 16.4	+0.3
DID				S	Sn	19 43 43.4	+1.3
GUR	Goura	2.46	1	P	Pn	19 43 21.2	+1.0
GUR	Goura	2.46	1	ePB	Pn	19 43 21.8	+1.6
GUR	Goura	2.46	1	P	Pn	19 43 21.2	+1.0
GUR	Goura	2.46	1	ePb	Pn	19 43 21.8	+1.6
NAIG	Nisos Aigina	2.48	22	ePN	Pn	19 43 21.0	+0.7
NAIG	Nisos Aigina	2.48	22	ePn	Pn	19 43 21.0	+0.7
LTK	Loutraki	2.61	12	P	Pn	19 43 22.6	+0.5
LTK	Loutraki	2.61	12	ePN	Pn	19 43 22.5	+0.5
LTK	Loutraki	2.61	12	P	Pn	19 43 22.6	+0.5
LAST	Lasithi	2.62	96	P	Pn	19 43 23.3	+1.0
LAST	Lasithi	2.62	96	ePN	Pn	19 43 23.5	+1.2
LAST	Lasithi	2.62	96	P	Pn	19 43 23.3	+1.0
RLS	Riolos of Patr	2.67	346	P	Pn	19 43 24.8	+1.9
RLS	Riolos of Patr	2.67	346	ePB	Pn	19 43 24.8	+1.9
RLS	Riolos of Patr	2.67	346	P	Pn	19 43 24.8	+1.9
NPS	Neapolis	2.72	93	P	Pn	19 43 24.0	+0.4
NPS	Neapolis	2.72	93	ePN	Pn	19 43 23.4	-0.2
NPS	Neapolis	2.72	93	ePn	Pn	19 43 23.4	-0.2
NPS	Neapolis	2.72	93	P	Pn	19 43 24.0	+0.4
ATH	Athens Observa	2.75	24	ePN	Pn	19 43 25.1	+1.1
ATH	Athens Observa	2.75	24	ePn	Pn	19 43 25.1	+1.1
LAKA	Lakka	2.78	355	P	Pn	19 43 25.9	+1.5
LAKA	Lakka	2.78	355	ePB	Pn	19 43 26.6	+2.2
LAKA	Lakka	2.78	355	P	Pn	19 43 25.9	+1.5
LAKA	Lakka	2.78	355	ePb	Pn	19 43 26.6	+2.2
PTL	Penteli	2.87	26	P	Pn	19 43 25.3	-0.4
PTL	Penteli	2.87	26	ePN	Pn	19 43 25.5	-0.2
PTL	Penteli	2.87	26	ePn	Pn	19 43 25.5	-0.2
TRIZ	Trizonia	2.90	357	ePN	Pn	19 43 26.2	+0.2
TRIZ	Trizonia	2.90	357	ePn	Pn	19 43 26.2	+0.2
KALE	Kalithea	2.92	358	P	Pn	19 43 27.4	+1.0
KALE	Kalithea	2.92	358	ePN	Pn	19 43 27.5	+1.0
KALE	Kalithea	2.92	358	P	Pn	19 43 27.4	+1.0
DSF	Desfina	2.94	4	P	Pn	19 43 27.1	+0.4
DSF	Desfina	2.94	4	P	Pn	19 43 27.1	+0.4
EFP	Efpalio	2.97	354	P	Pn	19 43 29.3	+2.3
EFP	Efpalio	2.97	354	ePN	Pn	19 43 29.0	+2.0
EFP	Efpalio	2.97	354	ePn	Pn	19 43 29.0	+2.0
EFP	Efpalio	2.97	354	P	Pn	19 43 29.3	+2.3
VLS	Valsamata	3.03	334	P	Pn	19 43 28.8	+0.9
VLS	Valsamata	3.03	334	ePN	Pn	19 43 28.6	+0.7
VLS	Valsamata	3.03	334	P	Pn	19 43 28.8	+0.9
APE	Apeiranthos	3.06	58	ePN	Pn	19 43 29.0	+0.6
APE	Apeiranthos	3.06	58	ePn	Pn	19 43 29.0	+0.6
LKR	Lokris	3.23	10	P	Pn	19 43 31.1	+0.6
LKR	Lokris	3.23	10	ePN	Pn	19 43 31.2	+0.7
LKR	Lokris	3.23	10	ePn	Pn	19 43 31.2	+0.7
ZKR	Zakros	3.23	95	P	Pn	19 43 31.1	+0.5
ZKR	Zakros	3.23	95	ePN	Pn	19 43 32.0	+1.4
ZKR	Zakros	3.23	95	P	Pn	19 43 31.1	+0.5
ZKR	Zakros	3.23	95	ePn	Pn	19 43 32.0	+1.4
AXAR	Agios Charalam	3.31	5	P	Pn	19 43 32.8	+1.1
AXAR	Agios Charalam	3.31	5	P	Pn	19 43 32.8	+1.1
MRKA	Markates	3.39	17	P	Pn	19 43 33.1	+0.2
MRKA	Markates	3.39	17	P	Pn	19 43 33.1	+0.2
EVR	Evrytania	3.46	354	ePB	Pn	19 43 37.0	+3.1
EVR	Evrytania	3.46	354	ePb	Pn	19 43 37.0	+3.1
MAKR	Makrakomi, Fth	3.54	358	P	Pn	19 43 36.9	+2.0
MAKR	Makrakomi, Fth	3.54	358	P	Pn	19 43 36.9	+2.0
AGG	Agios Georgios	3.55	0	P	Pn	19 43 35.3	+0.3
AGG				S	Sn	19 44 17.9	+1.9
AGG	Agios Georgios	3.55	0	ePN	Pn	19 43 36.8	+1.8
AGG	Agios Georgios	3.55	0	P	Pn	19 43 35.3	+0.3
AGG	Agios Georgios	3.55	0	ePn	Pn	19 43 36.8	+1.8
AGG				S	Sn	19 44 17.9	+1.9
LKD2	Lefkada island	3.56	339	P	Pn	19 43 36.9	+1.7
LKD2	Lefkada island	3.56	339	ePN	Pn	19 43 36.2	+1.0
LKD2	Lefkada island	3.56	339	ePn	Pn	19 43 36.2	+1.0
LKD2	Lefkada island	3.56	339	P	Pn	19 43 36.9	+1.7
NEO	Neokhori	3.90	11	ePN	Pn	19 43 40.8	+0.9
NEO	Neokhori	3.90	11	ePn	Pn	19 43 40.8	+0.9
AOS	Alonnisos	3.91	18	ePN	Pn	19 43 40.4	+0.5
AOS	Alonnisos	3.91	18	ePn	Pn	19 43 40.4	+0.5
XOR	Xorichti	3.96	10	P	Pn	19 43 41.1	+0.5
XOR	Xorichti	3.96	10	P	Pn	19 43 41.1	+0.5
KARP	Karpathos	3.97	87	ePN	Pn	19 43 41.1	+0.3
KARP	Karpathos	3.97	87	ePn	Pn	19 43 41.1	+0.3
THL	Klokotos Trika	4.10	357	P	Pn	19 43 43.2	+0.8
THL	Klokotos Trika	4.10	357	ePN	Pn	19 43 43.3	+0.8
THL	Klokotos Trika	4.10	357	P	Pn	19 43 43.2	+0.8
NIS1	Nisyros Isl.	4.12	73	ePN	Pn	19 43 43.2	+0.4
NIS1	Nisyros Isl.	4.12	73	ePn	Pn	19 43 43.2	+0.4
CHOS	Chios island	4.19	45	ePN	Pn	19 43 45.8	+1.9
CHOS	Chios island	4.19	45	ePn	Pn	19 43 45.8	+1.9
JAN	Janina	4.34	345	ePN	Pn	19 43 47.0	+1.2
JAN	Janina	4.34	345	ePn	Pn	19 43 47.0	+1.2
IGT	Igoumenitsa	4.35	340	P	Pn	19 43 46.2	+0.3
IGT	Igoumenitsa	4.35	340	P	Pn	19 43 46.2	+0.3
LIT	Litokhoron	4.63	2	ePN	Pn	19 43 50.6	+0.8
LIT	Litokhoron	4.63	2	ePn	Pn	19 43 50.6	+0.8
KEK	Kerkira	4.68	336	ePN	Pn	19 43 51.3	+0.8
KEK	Kerkira	4.68	336	ePn	Pn	19 43 51.3	+0.8
KZN	Kozani	4.85	355	ePN	Pn	19 43 53.9	+1.0
KZN	Kozani	4.85	355	ePn	Pn	19 43 53.9	+1.0
PLG	Polygyros	4.98	10	ePN	Pn	19 43 53.8	-0.9
PLG	Polygyros	4.98	10	ePn	Pn	19 43 53.8	-0.9
NEST	Nestorio	5.04	349	P	Pn	19 43 57.1	+1.6
NEST	Nestorio	5.04	349	P	Pn	19 43 57.1	+1.6
FNA	Florina	5.36	353	P	Pn	19 44 00.3	+0.4
FNA	Florina	5.36	353	P	Pn	19 44 00.3	+0.4
SOH	Sokhos	5.41	9	ePN	Pn	19 44 00.8	+0.2
SOH	Sokhos	5.41	9	ePn	Pn	19 44 00.8	+0.2
NVR	Nevrokopi	6.00	11	ePN	Pn	19 44 08.7	0.0
NVR	Nevrokopi	6.00	11	ePn	Pn	19 44 08.7	0.0
CDT	Castel del Mon	7.33	322	ePn	Pn	19 44 26.9	-0.1
MS1	Monte Sant'Ang	7.97	323	ePn	Pn	19 44 35.4	-0.3
STON	Ston	8.21	336	ePn	Pn	19 44 36.3	-2.6
STON				Sn	Sn	19 45 58.4	-12
BRTR	Keskin Array B	9.95	61	Pn	Pn	19 44 59.0	-4.1
	0.1nm,0.3s,baz=249,slow=17,SNR=3.0						
BRTR				Sn	Sn	19 46 37.9	-16
	0.0nm,0.3s,baz=288,slow=15,SNR=2.6						
NVLJ	Novalja	10.71	330	i Pn	Pn	19 45 11.6	-1.6
NVLJ				Sn	Sn	19 47 01.0	-11
KOLS	Kolonicke sedl	13.46	360	ePN	Pn	19 45 49.8	-0.9
GERES	GERESS Array B	14.79	337	Pn	Pn	19 46 05.6	-3.4
	0.1nm,0.3s,baz=146,slow=14,SNR=3.1						
AKASG	Malin Array Be	16.03	16	Pn	Pn	19 46 20.0	-5.1
	0.4nm,0.3s,baz=204,slow=8.8,SNR=3.8						
HFS	Hagfors	25.30	350	P	P	19 48 04.0	-1.7
	0.8nm,0.4s,baz=156,slow=11,SNR=20						
FINES	FINESS Array B	26.11	4	P	P	19 48 10.4	-2.5
	0.8nm,0.8s,baz=166,slow=10.0,SNR=7.6						
EKA	Eskdalemuir Ar	26.46	327	P	P	19 48 17.5	+1.3
	0.7nm,0.7s,baz=127,slow=9.2,SNR=6.9						
NOA	NORSAR Array B	26.55	348	P	P	19 48 15.2	-1.9
	0.3nm,0.4s,baz=159,slow=9.8,SNR=5.1						
TORD	Torodi Ar. Bea	28.97	225	P	P	19 48 42.0	+3.0
	0.2nm,0.5s,baz=36,slow=10,SNR=2.6						
ARCES	ARCESS Array B	34.17	2	P	P	19 49 22.6	-1.6
	12nm,1.2s,baz=195,slow=6.5,SNR=6.6						
MKAR	Makanchi Array	45.56	56	P	P	19 50 56.6	-2.4
	0.5nm,0.3s,baz=268,slow=7.6,SNR=22						
MKAR				PcP	PcP	19 52 36.0	-1.3
	0.2nm,0.6s,baz=262,slow=3.7,SNR=2.1						
ZALV	Zalesovo Beam	46.48	46	P	P	19 51 03.8	-2.5
	0.7nm,0.4s,baz=267,slow=7.9,SNR=4.9						
SONM	Songino Array	61.09	50	P	P	19 52 51.3	-2.0
	0.1nm,0.4s,baz=280,slow=6.7,SNR=5.3						
YKA	Yellowknife Ar	76.41	341	P	P	19 54 28.1	-0.2
	0.2nm,0.5s,baz=32,slow=5.3,SNR=4.2						
PDAR	Pinedale Array	90.59	327	P	P	19 55 42.8	+1.0
	0.2nm,0.5s,baz=108,slow=2.0,SNR=2.2						
WRA	Warramunga Arr	118.95	95	PKP	PKPdf	20 01 25.5	-2.6
	0.3nm,0.8s,baz=303,slow=1.7,SNR=4.2						
ASAR	Alice Springs	120.41	99	PKP	PKPdf	20 01 28.8	-2.0
	0.4nm,0.9s,baz=282,slow=1.8,SNR=3.3						

CASC 04 20:01:03.3±2.2, 14°.35N×90°.48W, h2km±7km, MD2.9, 4C-6D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.13	290⇓	eP	Pg	20 01 07.8	+1.5
IXG	Ixpaco	0.17	173⇑	eP	Pg	20 01 08.1	+1.2
GCG	Guatemala City	0.24	347	eP	Pg	20 01 09.4	+1.2
NBG	Las Nubes	0.27	28⇑	eP	Pg	20 01 09.7	+0.8
FUG	Fuego 3	0.37	286⇓	eP	Pg	20 01 11.5	+0.9
FG6		0.45	298⇓	eP	Pg	20 01 12.9	+0.6
RBDL	Robledal	0.80	107	eP	Pg	20 01 19.4	+0.4
RTR	El Retiro	0.92	119⇓	iP	Pg	20 01 20.6	-0.7
SBLS	San Blas	0.97	121⇑	eP	Pg	20 01 21.5	-0.8
SNJE	San Jose	0.97	119⇓	iP	Pg	20 01 21.4	-0.8
MRL	Marmol	1.04	47⇓	eP	Pg	20 01 23.3	-0.2
MTO2	Montecristo 2	1.08	87	eP	Pg	20 01 23.3	-1.1
JAT	Jato	1.12	269⇑	eP	Pn	20 01 25.8	-0.2
BOQS	Boqueron	1.31	118	eP	Pg	20 01 27.4	-1.4
LBRS	Las Brisas	1.52	113	eP	Pn	20 01 30.4	-1.2
SNVI	San Vicente	1.75	115	eP	Pn	20 01 35.0	+0.1
CAHU	Cacacuatique	2.27	104	eP	Pn	20 01 42.2	0.0
CAHU				eS	Sb	20 02 14.1	0.0

IDC 04 20:01:40.4±9.0, 13°.97N×90°.58W, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.7/23, mbtmp3.7/6, ML4.1/1, MS3.3/3, Ms1 3.3/3, ms1mx2.9/28, Error ellipse: s-maj=184.8km s-min=51.6km az=178.0, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCG	Guatemala City	0.61	4	eS	Pg	20 01 53.0	+0.6
MRL	Marmol	1.39	38	eS	Sg	20 02 19.4	-6.0
CMIG	Matias Romero	5.18	307	Lg	Lg	20 04 19.8	
	9.1nm,0.3s,baz=0.4,slow=13,SNR=7.2						
CMIG				LR	LR	20 04 57.2	
	comp=Z,291nm,21.1s,baz=190,slow=38						
TEIG	Tepich	6.60	19	Lg	Lg	20 05 00.5	
	9.6nm,0.3s,baz=103,slow=19,SNR=3.4						
TXAR	Lajitas Array	19.51	324	P	P	20 06 09.9	+0.5
	0.1nm,0.3s,baz=145,slow=9.0,SNR=5.5						
SJG	San Juan	23.83	77	LR	LR	20 15 58.3	
	comp=Z,46nm,18.1s,baz=96,slow=36						
NVAR	Mina Array Bea	34.57	320	P	P	20 08 31.9	+0.6
	0.8nm,0.8s,baz=130,slow=8.4,SNR=2.3						
SCHQ	Schefferville	44.78	19	P	P	20 09 56.5	+0.7
	2.4nm,0.9s,baz=230,slow=14,SNR=3.3						
SCHQ				LR	LR	20 29 00.6	
	comp=Z,64nm,19.7s,baz=34,slow=37						
YKA	Yellowknife Ar	51.38	346	P	P	20 10 45.2	-1.4
	1.1nm,0.7s,baz=147,slow=7.9,SNR=9.5						
INK	Inuvik	60.86	343	P	P	20 11 53.5	-0.8
	1.7nm,1.0s,baz=128,slow=6.2,SNR=4.6						
ILAR	Eielson Array	63.41	336	P	P	20 12 11.8	+0.3
	0.5nm,1.0s,baz=134,slow=6.4,SNR=3.4						

MAN 04 20:03:30, 16°.43N×120°.46E, h77km, mb4.4, ML3.2, MS3.1, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	0.52	264	eP	Pn	20 03 44.3	+0.6
BOLP				eS	Sn	20 03 51.8	-2.0
SCZP	Santa Cruz	0.84	219	eP	Pn	20 03 49.8	+2.8
SCZP				eS	Sn	20 04 03.0	+3.5
PCPH	Palayan	1.06	145⇓	eP	Pn	20 03 51.4	+1.7
PCPH				i S	Sn	20 04 06.1	+1.8
ABRA	Dolores	1.23	11	eP	Pn	20 03 53.5	+1.7
BALP	Baler	1.28	122	eP	Pn	20 03 54.6	+2.3
BALP				eS	Sn	20 04 11.5	+2.4
CAUP	Cauayan	1.41	69	eP	Pn	20 03 57.9	+3.9

IDC 04 20:06:40.9±2.1, 0°.58S×133°.40E, h0km, mb3.7/3, mb1 3.8/5, mb1mx3.5/22, mbtmp3.7/5, ML3.6/2, Error ellipse: s-maj=79.1km s-min=25.5km az=76.0
AUST 04 20:06:42.6±0.1, 0°.51S×133°.50E, h17km±1km, Error ellipse: s-maj=4.6km s-min=1.3km az=38.0
ISC 04 20:06:49.2±2.0, 1°.1S±0°.1×133°.2E±0°.1, h29km, n11, σ2s.31/14, mb3.8/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	1.92	276	P	Pn	20 07 17.7	-2.2
	baz=2.3,SNR=65						
SWI				S	Sn	20 07 43.2	0.0
	baz=2.3,SNR=4.8						
TLE	Tual	4.55	185	P	Pn	20 08 00.7	+4.5
	baz=5.2,SNR=3.8						
TLE				S	Sb	20 09 00.1	-2.9
	baz=5.2,SNR=3.9						
KDU	Kakadu	11.56	183	P	Pn	20 09 33.2	+0.8
	baz=12,SNR=17						
KDU				S	Sn	20 11 43.5	+2.9
	baz=12,SNR=3.9						
MTN	Manton Dam	11.87	190	P	Pn	20 09 38.3	+1.7
	baz=13,SNR=13						
MTN				S	Sn	20 11 48.1	-0.1
	baz=13,SNR=9.8						
WSI	Waingapu	15.39	236	P	P	20 10 30.7	+1.9
	baz=16,SNR=4.4						
FITZ	Fitzroy Crossi	18.47	203	P	Pn	20 11 04.9	+1.7
	0.2nm,0.3s,baz=34,slow=11,SNR=10						
FITZ				S	Sn	20 14 20.5	-8.4
	0.1nm,0.3s,baz=300,slow=20,SNR=3.4						
FITZ	Fitzroy Crossi	18.47	203	P	Pn	20 11 07.2	+4.0
	baz=19,SNR=5.0						
WRA	Warramunga Arr	18.79	177	P	Pn	20 11 07.5	+0.4
	0.2nm,0.3s,baz=355,slow=11,SNR=13						
WRA				S	Sn	20 14 33.6	-3.0
	0.1nm,0.3s,baz=356,slow=22,SNR=3.4						
ASAR	Alice Springs	22.47	178	P	P	20 11 47.2	+0.9
	1.2nm,0.6s,baz=0.3,slow=10.0,SNR=18						
STKA	Stephens Creek	31.66	166	P	P	20 13 09.2	-0.9
	1.3nm,0.7s,baz=333,slow=11,SNR=3.3						
MKAR	Makanchi Array	65.17	324	P	P	20 17 22.3	-5.5
	0.6nm,0.7s,baz=109,slow=8.4,SNR=4.2						

IDC 04 20:07:05.5±1.3, 4°.76S×101°.70E, h0km, mb3.7/11, mb1 3.8/11, mb1mx3.7/24, mbtmp3.8/11, MS3.0/1, Ms1 3.0/1, ms1mx2.3/39, Error ellipse: s-maj=51.3km s-min=16.5km az=54.0
ISCJB 04 20:07:08.7±0.7, 4°.83S±0°.08×101°.64E±0°.06, h37km, mb3.8/12, Error ellipse: s-maj=12.8km s-min=7.1km az=25.6
DJA 04 20:07:10.0±1.6, 5°S±11°×10°2E±°, h20km±27km, M4.2/4, mb4.3/1, MLv4.1/4
ISC 04 20:07:11.1±0.8, 4°.75S±0°.09×101°.70E±0°.10, h37km, n20, σ0s.94/21, mb3.9/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	1.31	73	P	Pn	20 07 32.3	-0.6
MNAI				S	Sn	20 07 50.1	+1.0
KSI	Kapahiang	1.41	39	P	Pn	20 07 33.3	-0.9
LWLI	Liwa	2.37	97	P	Pn	20 07 48.4	+0.9
KASI	Kota Agung	2.89	106	P	Pn	20 07 54.3	-0.3
KASI				S	Sn	20 08 27.3	-0.9
CGJI	Cibinong	4.39	115	P	Pn	20 08 14.3	-0.9
CISI	Cisompet, Garu	6.69	115	P	Pn	20 08 45.5	-1.5
PSI	Prapat	7.99	340	LR	LR	20 12 42.8	
	comp=Z,104nm,19.1s,baz=339,slow=43						
CMAR	Chiang Mai Arr	23.21	353	P	P	20 12 14.8	-0.2
	0.2nm,0.4s,baz=178,slow=8.3,SNR=3.5						
FITZ	Fitzroy Crossi	26.91	121	P	P	20 12 51.5	+2.6
	0.9nm,0.8s,baz=284,slow=4.2,SNR=3.5						
WRA	Warramunga Arr	35.18	118	P	P	20 14 00.9	-1.0
	0.3nm,0.7s,baz=311,slow=9.1,SNR=3.0						
ASAR	Alice Springs	36.29	124	P	P	20 14 11.1	-0.4
	0.6nm,0.5s,baz=297,slow=7.5,SNR=14						
STKA	Stephens Creek	46.08	131	P	P	20 15 31.7	0.0
	0.8nm,0.5s,baz=322,slow=17,SNR=3.7						
SONM	Songino Array	52.52	4	P	P	20 16 21.3	+0.6
	1.0nm,0.6s,baz=184,slow=9.0,SNR=13						
MKAR	Makanchi Array	54.12	344	P	P	20 16 32.3	0.0
	0.8nm,0.6s,baz=149,slow=8.7,SNR=12						
USRK	Ussuriysk Arra	55.82	26	P	P	20 16 44.0	-0.6
	1.0nm,0.6s,baz=226,slow=8.3,SNR=3.9						
ZALV	Zalesovo Beam	60.17	349	P	P	20 17 14.5	-0.4
	1.4nm,0.4s,baz=163,slow=6.4,SNR=9.7						
BVAR	Borovoye Array	63.33	339	P	P	20 17 35.8	-0.5
	0.4nm,0.5s,baz=146,slow=11,SNR=4.2						
BRTR	Keskin Array B	76.42	313	P	P	20 18 57.2	0.0
	0.7nm,0.9s,baz=48,slow=1.8,SNR=3.9						
FINES	FINESS Array B	87.31	332	P	P	20 19 54.5	+0.7
	1.7nm,1.0s,baz=72,slow=6.2,SNR=3.8						
TXAR	Lajitas Array	145.73	42	PKPbc	PKPab	20 26 47.5	+0.1
	0.3nm,0.7s,baz=29,slow=2.9,SNR=4.2						

IDC 04 20:09:56.6±2.4, 3°.51N×126°.83E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/23, mbtmp3.3/3, Error ellipse: s-maj=207.8km s-min=25.8km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.45	163	P	P	20 15 16.8	-0.6
	1.0nm,0.7s,baz=342,slow=10,SNR=5.6						
ASAR	Alice Springs	27.88	166	P	P	20 15 48.9	+0.5
	0.3nm,0.9s,baz=354,slow=15,SNR=4.0						
MKAR	Makanchi Array	57.79	325	P	P	20 19 49.7	-0.1
	0.1nm,0.4s,baz=112,slow=6.4,SNR=2.2						

IDC 04 20:10:57.2±1.9, 4°.19N×127°.41E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/24, mbtmp3.5/5, Error ellipse: s-maj=103.8km s-min=25.1km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.22	184	P	P	20 15 55.5	0.0
	0.5nm,0.4s,baz=24,slow=13,SNR=4.3						
WRA	Warramunga Arr	24.93	164	P	P	20 16 21.8	-0.6
	1.9nm,0.7s,baz=344,slow=9.7,SNR=8.8						
ASAR	Alice Springs	28.40	167	P	P	20 16 54.1	+0.5
	0.1nm,0.4s,baz=344,slow=12,SNR=3.7						
STKA	Stephens Creek	38.33	160	P	P	20 18 19.7	-0.1
	1.9nm,0.8s,baz=336,slow=8.1,SNR=3.3						
MKAR	Makanchi Array	57.57	325	P	P	20 20 48.7	-0.1
	0.1nm,0.5s,baz=115,slow=7.6,SNR=4.6						

IDC 04 20:17:07.3±0.6, 1°.63N×125°.48E, h0km, mb4.1/13, mb1 4.1/14, mb1mx3.9/27, mbtmp4.0/14, ML4.1/1, MS3.3/3, Ms1 3.3/3, ms1mx2.7/37, Error ellipse: s-maj=42.5km s-min=12.0km az=72.0
ISCJB 04 20:17:13.7±0.6, 1°.72N±0°.03×125°.91E±0°.05, h65km±6km, mb4.0/16, Error ellipse: s-maj=8.1km s-min=5.5km az=173.4
DJA 04 20:17:13.7±1.2, 2°N±8°×12°6E±°, h7km±13km, M4.5/6, mb4.9/1, MLv4.4/6
AUST 04 20:17:15.7±1.8, 1°.62N×125°.87E, h69km, Error ellipse: s-maj=2.1km s-min=1.3km az=256.0
NEIC 04 20:17:17.4±2.1, 1°.63N×125°.70E, h88km±21km, mb4.3/5, Error ellipse: s-maj=23.4km s-min=7.6km az=70.0
ISC 04 20:17:15.0±1.2, 1°.72N±0°.05×125°.94E±0°.07, h62km±11km, n61, σ1s.74/70, mb4.1/16, 2D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNI	Manado	1.13	256	P	Pn	20 17 31.8	-3.0
MNI				S	Sn	20 17 47.2	-2.4
TNTI	Ternate	1.71	123	P	Pn	20 17 41.8	-0.8

KMSI Cibinong 2.26 240 P Pn 20 17 49.8 -0.3
KMSI S Sn 20 18 18.9 +2.0
LBMI Labuha 2.81 146 P Pn 20 17 57.7 +0.1
MRSI Marisa 4.18 253 P Pn 20 18 18.4 +2.1
LUWI Luwuk 4.18 229 P Pn 20 18 18.4 +2.0
LUWI S Sn 20 19 06.0 +2.0
GSPH General Santos 4.45 347⇓iP Pn 20 18 19.2 -1.0
CTBH Cotabato--PC H 5.72 343⇓iP Pn 20 18 37.9 +0.4
BUKP Musuan 6.18 352 eP Pn 20 18 46.2 +2.4
BUKP eS Sn 20 18 57.9 -55
PAGZ Pagadian 6.60 337 eP Pn 20 18 49.3 -0.2
PCI Palu 6.63 247 S Sn 20 20 01.6 -2.5
baz=6.5,SNR=6.9
IPIL Ipil 6.90 331 eP Pn 20 18 53.1 -0.5
MYLDM Lahad Datu 8.18 295 P Pn 20 19 12.8 +1.7
SPSI Sidrap Palu 8.36 228 P Pn 20 19 14.8 +1.3
KAPI Kappang 9.10 223 Pn Pn 20 19 22.6 -1.2
KAPI Sn Sn 20 20 55.5 -9.3
KAPI Kappang 9.10 223 Pn Pn 20 19 22.6 -1.2
1.0nm,0.3s,baz=38,slow=19,SNR=4.7
KAPI Sn Sn 20 20 55.5 -9.3
0.5nm,0.3s,baz=74,slow=20,SNR=1.7
KKM Kota Kinabalu 10.61 294 ePn Pn 20 19 45.6 +1.2
30nm,1.0s
MTN Manton Dam 15.36 161 P Pn 20 20 45.6 -2.5
baz=15,SNR=12
KDU Kakadu 15.71 156 P P 20 20 56.6 +1.1
baz=16,SNR=3.6
FITZ Fitzroy Crossi 19.70 181 P P 20 21 38.2 -1.2
FITZ Fitzroy Crossi 19.70 181 P P 20 21 38.2 -1.2
0.4nm,0.3s,baz=7.7,slow=7.7,SNR=18
FITZ Fitzroy Crossi 19.70 181 P P 20 21 38.5 -0.8
baz=20,SNR=12
WRAB Tennant Creek 23.04 159 eP P 20 22 14.0 -1.2
12nm,0.4s
WRA Warramunga Arr 23.05 159 P P 20 22 14.5 -0.8
WRA PcP PcP 20 26 05.4 +2.5
WRA S S 20 26 15.4 -6.1
WRA Warramunga Arr 23.05 159 P P 20 22 14.5 -0.8
11nm,0.4s,baz=341,slow=9.8,SNR=114
WRA PcP PcP 20 26 05.4 +2.5
0.2nm,0.6s,baz=324,slow=2.1,SNR=3.1
WRA S S 20 26 15.4 -6.1
0.8nm,1.0s,baz=336,slow=17,SNR=4.1
COEN Coen 23.12 133 P P 20 22 16.5 +0.5
baz=23,SNR=13
YHNB Yeheng 23.24 349 eP P 20 22 15.3 -1.9
10nm,0.8s
MBWA Marble Bar 23.53 195 eP P 20 22 18.1 -1.7
13nm,1.2s
JOW Kunigami 25.07 5 P P 20 22 34.7 +0.9
JOW Kunigami 25.07 5 P P 20 22 34.7 +0.9
12nm,0.5s,baz=209,slow=10,SNR=6.2
AS31 Alice Springs 26.39 163 eP P 20 22 45.5 -0.3
ASAR Alice Springs 26.39 163 P P 20 22 45.8 0.0
ASAR PcP PcP 20 26 11.6 +1.3
ASAR S S 20 27 25.6 +11
ASAR Alice Springs 26.39 163 P P 20 22 45.8 0.0
2.3nm,0.4s,baz=347,slow=12,SNR=52
ASAR PcP PcP 20 26 11.6 +1.3
0.5nm,0.6s,baz=346,slow=2.0,SNR=6.3
ASAR S S 20 27 25.6 +11
0.4nm,1.0s,baz=326,slow=15,SNR=4.5
MEEK Meekatharra 29.06 194 P P 20 23 09.4 -0.2
baz=29,SNR=5.5
CTA Charters Tower 29.44 138 P P 20 23 15.4 +2.3
CTA Charters Tower 29.44 138 P P 20 23 15.4 +2.3
2.9nm,0.8s,baz=297,slow=9.0,SNR=3.0
CTAO Charters Tower 29.44 138 eP P 20 23 14.6 +1.5
9.7nm,1.2s
CBIJ Chichi jima 29.66 30 LR LR 20 33 55.9
comp=Z,62nm,18.8s,baz=73,slow=34
CMAR Chiang Mai Arr 31.27 304 LR LR 20 36 05.0
comp=Z,24nm,18.1s,baz=10.0,slow=37
KLBR Kellerberrin 34.02 193 P P 20 23 53.5 +0.4
baz=34,SNR=12
KSAR Wonju Array Be 35.60 3 P P 20 24 08.3 +1.7
KSRS Korea Array 35.61 3 P P 20 24 08.3 +1.6
1.2nm,0.6s,baz=186,slow=9.5,SNR=6.9
BBOO Buckleboo 35.65 165 P P 20 24 07.3 +0.1
baz=36,SNR=6.9
STKA Stephens Creek 36.56 157 eP P 20 24 15.2 +0.2
1.0nm,0.7s
STKA Stephens Creek 36.56 157 P P 20 24 15.4 +0.5
3.3nm,0.5s,baz=336,slow=10,SNR=18
STKA Stephens Creek 36.56 157 P P 20 24 15.8 +0.8
baz=37,SNR=14
ARPS Mount Arapiles 41.05 160 P P 20 24 54.4 +1.9
baz=41,SNR=8.6
USRK Ussuriysk Arra 42.65 6 P P 20 25 06.0 +0.7
0.9nm,0.6s,baz=211,slow=6.9,SNR=4.2
SONM Songino Array 48.96 343 P P 20 25 54.2 -1.0
SONM Songino Array 48.96 343 P P 20 25 54.2 -1.0
0.3nm,0.6s,baz=141,slow=8.9,SNR=3.4
MK31 Makanchi Array 58.77 326 eP P 20 27 05.3 -1.5
MKAR Makanchi Array 58.77 326 P P 20 27 05.3 -1.5
MKAR PcP PcP 20 27 55.6 -0.3
MKAR Makanchi Array 58.77 326 P P 20 27 05.3 -1.5
0.4nm,0.4s,baz=120,slow=8.1,SNR=19
MKAR PcP PcP 20 27 55.6 -0.3
0.2nm,0.5s,baz=122,slow=5.7,SNR=2.0
MKAR LR LR 20 54 26.9
comp=Z,35nm,19.3s,baz=172,slow=38
BVAR Borovoye Array 68.58 328 P P 20 28 11.7 +0.4
BVAR Borovoye Array 68.58 328 P P 20 28 11.6 +0.4
0.3nm,0.6s,baz=159,slow=5.7,SNR=2.8
AKTO Aktyubinsk 74.74 322 P P 20 28 48.2 -0.1
AKTO Aktyubinsk 74.74 322 P P 20 28 48.2 -0.1
0.3nm,0.3s,baz=111,slow=14,SNR=3.4
VNDA Vanda 81.54 173 P P 20 29 26.2 +0.8
VNDA Vanda 81.54 173 P P 20 29 26.4 +1.0
0.6nm,0.9s,baz=332,slow=8.0,SNR=5.1
FINES FINESS Array B 93.22 332 P P 20 30 22.2 -0.3
FINES FINESS Array B 93.22 332 P P 20 30 22.2 -0.3
1.2nm,0.9s,baz=46,slow=6.0,SNR=5.0

IDC 04 20:53:23.7±1.2**, 5.°02N×127.°00E, h0km, mb3.5**/6**, mb1 3.7**/6**, mb1mx3.5**/24**, mbtmp3.5**/6**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.3**/31**, Error ellipse: s-maj=89.7km s-min=17.8km az=71.0, Mindanao**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DAV Davao City (W) 2.47 325 Pn Pg 20 54 13.6 +2.4
15nm,0.3s,baz=128,slow=19,SNR=3.4
DAV Lg Lg 20 54 45.9
33nm,0.3s,baz=106,slow=19,SNR=3.9
FITZ Fitzroy Crossi 23.02 183 P P 20 58 31.7 +1.2
1.2nm,0.8s,baz=15,slow=9.2,SNR=3.5
WRA Warramunga Arr 25.84 164 P P 20 58 56.7 -0.4
1.2nm,0.4s,baz=343,slow=10,SNR=14
ASAR Alice Springs 29.30 167 P P 20 59 27.3 -0.9
0.2nm,0.5s,baz=356,slow=8.6,SNR=4.5
CTA Charters Tower 31.32 143 LR LR 21 10 26.2
comp=Z,155nm,21.7s,baz=328,slow=33
STKA Stephens Creek 39.24 160 P P 21 00 54.1 0.0
1.4nm,0.7s,baz=353,slow=8.4,SNR=2.7
SONM Songino Array 46.17 341 P P 21 01 50.5 +0.2
0.1nm,0.4s,baz=139,slow=6.8,SNR=3.1
MKAR Makanchi Array 56.66 325 P P 21 03 08.6 -0.3
0.2nm,0.3s,baz=119,slow=7.4,SNR=11

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*CASC **04** 20:55:49.9±3.9, 14.°36N×90.°51W, h0km±10km, ML4.6, mb4.5(NEIC)*
*NEIC **04** 20:55:51.8±0.5, 14.°05N×90.°57W, h10km, mb4.5/21, MD4.7(SNET), Error ellipse: s-maj=12.4km s-min=6.7km az=217.0*
NEIC Felt [II] at Ahuachapan, El Salvador.
*IDC **04** 20:55:52.8±0.7, 14.°39N×90.°45W, h0km, mb4.1/14, mb1 4.3/17, mb1mx4.2/26, mbtmp4.1/17, ML4.3/3, MS4.1/15, Ms1 4.1/15, ms1mx3.9/42, Error ellipse: s-maj=24.1km s-min=13.3km az=57.0*
ISC 04 20:55:52.6±1.2**, 14.°33N**±0.°03×**90.°38W**±0.°03**, h0km**±7km**, n159, σ2.s08**/150**, mb4.3**/29**, MS4.1**/12**, 22C-28D, Guatemala**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
IXG Ixpaco 0.17 206 eP Pg 20 55 55.3 -0.7
IXG eS Sg 20 56 11.0 +12
PCG Pacaya 0.23 286 eP Pg 20 55 55.1 -2.0
NBG Las Nubes 0.26 6 eP Pg 20 55 57.0 -0.6
GCG Guatemala City 0.30 329⇑eP Pg 20 55 55.7 -2.7
GCG eS Sg 20 56 00.6 -1.6
GCG AML AML 20 56 02.2
comp=N,130μm,0.3s
FUG Fuego 3 0.47 285 eP Pg 20 55 58.8 -2.9
FG6 0.54 295 eP Pg 20 56 00.2 -2.9
TP2 Tecpan 2 0.77 306 eP Pg 20 56 00.3 -7.2
RTR El Retiro 0.83 121⇓iP Pg 20 56 07.8 -0.8
SNJE San Jose 0.88 121⇓iP Pg 20 56 08.5 -0.9
SBLS San Blas 0.88 124 eP Pg 20 56 08.6 -0.9
MTO2 Montecristo 2 0.98 86 eP Pg 20 56 10.2 -1.3
MTO2 eS Sn 20 56 29.8 +1.2
MRL Marmol 0.99 42 eP Pg 20 56 10.7 -0.9
BOQS Boqueron 1.22 119⇑eP Pg 20 56 14.5 -1.5
JAT Jato 1.22 270 eP Pg 20 56 13.0 -3.1
SNET Serv Nac Est T 1.28 120⇓eP Pg 20 56 15.4 -1.9
SNET eS Sn 20 56 39.4 +3.7
SNET AML AML 20 56 42.5
comp=Z,7μm,0.4s
LFU La Fuente 1.35 115 eP Pg 20 56 16.6 -2.0
LFU eS Sn 20 56 40.9 +3.4
LBRS Las Brisas 1.42 114 eP Pn 20 56 17.4 -2.3
LFRS El Faro 1.46 119 eP Pn 20 56 17.7 -2.6
SNVI San Vicente 1.65 115 eP Pn 20 56 21.0 -2.1
SNVI eS Sg 20 56 48.7 +2.9
THIG 1.92 288 P Pn 20 56 23.1 -3.4
THIG S Sn 20 56 48.9 -2.4
CAHU Cacacuatique 2.17 105 eP Pn 20 56 27.7 -2.6
CCIG Comitan 2.58 319 P Pn 20 56 36.6 +0.8
CCIG S Sb 20 57 15.5 +3.2
TGUH Tegucigalpa,Un 3.02 95 ePn Pn 20 56 39.7 -2.0
TGUH eS Sb 20 57 25.8 +1.0
TGIG 3.60 313 P Pn 20 56 50.0 +0.3
CMIG Matias Romero 5.14 303 Pn Pn 20 57 08.7 -2.1
CMIG Pg Pb 20 57 24.6 +1.2
CMIG Sn Sn 20 58 15.9 +5.0
CMIG Lg Lg 20 58 30.3
CMIG Matias Romero 5.14 303 Pn Pn 20 57 08.7 -2.1
comp=Z,3.1nm,0.3s,baz=113,slow=9.4,SNR=25
CMIG Pg Pb 20 57 24.6 +1.2
comp=Z,14nm,0.3s,baz=117,slow=13,SNR=18
CMIG Sn Sn 20 58 15.9 +5.0
comp=Z,14nm,0.3s,baz=87,slow=18,SNR=2.8
CMIG Lg Lg 20 58 30.3
comp=Z,35nm,0.3s,baz=19,slow=16,SNR=3.6
CMIG LR LR 20 59 10.0
comp=Z,3μm,19.8s,baz=118,slow=39
HUIG Huatulco 5.72 285 P Pn 20 57 14.6 -4.3
HUIG S Sn 20 58 20.6 -4.6
TEIG Tepich 6.20 19 ePn Pn 20 57 23.5 -1.9
comp=Z,495nm,0.6s
TEIG Sn Sn 20 58 34.3 -2.7
TEIG eSg Sg 20 59 08.8 -3.1
TEIG Lg Lg 20 59 10.3
TEIG Tepich 6.20 19 Pn Pn 20 57 23.8 -1.5
comp=Z,46nm,0.3s,baz=198,slow=4.1,SNR=69
TEIG Sn Sn 20 58 34.3 -2.7
comp=Z,36nm,0.3s,baz=165,slow=20,SNR=2.7
TEIG Lg Lg 20 59 10.3
comp=Z,54nm,0.3s,baz=80,slow=21,SNR=7.3
TEIG LR LR 21 00 12.6
comp=Z,2μm,18.0s,baz=96,slow=42
JTS JuntasAbangare 6.65 127 ePn Pn 20 57 27.9 -3.7
comp=Z,21nm,0.4s
JTS Sn Sb 20 59 04.8 -4.5
JTS JuntasAbangare 6.65 127 Pn Pn 20 57 31.6 -0.1
comp=Z,2.3nm,0.3s,baz=329,slow=16,SNR=7.6
JTS Sn Sb 20 59 04.8 -4.5
baz=156,slow=20,SNR=2.0
JTS LR LR 21 00 33.8
comp=Z,1μm,20.3s,baz=316,slow=42
MTDJ Mount Denham 12.92 71 Pn Pn 20 58 59.5 +1.7
comp=Z,36nm,1.0s
GTBY Guantanamo Bay 15.61 67 P P 20 59 40.7 +2.2
comp=Z,39nm,0.9s
DWPF Disney 16.04 30 P P 20 59 44.3 +1.2
comp=Z,74nm,1.3s
VBMS Vicksburg 17.81 360 ePn P 21 00 03.4 +0.7
comp=Z,48nm,0.3s
532A Rocksprings 18.01 332 ⇑P P 21 00 07.9 +2.8
baz=18,SNR=6.0
OTAV Otavalo 18.31 139 Pn P 21 00 07.8 -1.0
comp=Z,34nm,0.9s
ROSC El Rosal 18.39 119 LR LR 21 08 08.6
comp=Z,199nm,18.0s,baz=17,slow=40
SDDR Presa de Saban 18.86 73 P Pn 21 00 18.7 +3.7
comp=Z,18nm,1.1s
LRAL Lakeview Retre 18.87 9 eP Pn 21 00 17.6 +2.7
comp=Z,5.6nm,0.9s
332A Millersview 19.02 335 ⇓P Pn 21 00 19.3 +2.4
baz=19,SNR=13
331A San Angelo 19.25 333 ⇓P Pn 21 00 20.8 +1.2
baz=20,SNR=5.6
627A Terlingua Ranc 19.27 323 ⇓P Pn 21 00 21.1 +1.2
baz=19,SNR=5.5
TXAR Lajitas Array 19.34 323 P P 21 00 18.2 -1.6
TXAR Lajitas Array 19.34 323 P P 21 00 18.2 -1.6
baz=143,slow=12,SNR=1.9
231A Bronte 19.74 334 P Pn 21 00 26.7 +1.2
baz=20,SNR=6.2
626A Big Bend Ranch 19.78 322 ⇑P Pn 21 00 29.2 +3.2
baz=20,SNR=7.7
527A Woodward Ranch 19.92 324 ⇓P Pn 21 00 30.1 +2.4
baz=20,SNR=6.1
230A Sterling City 20.05 332 ⇓P Pn 21 00 29.6 +0.4
baz=20
SDV Santo Domingo 20.07 103 eP P 21 00 27.7 -0.3
comp=Z,0.5nm,0.9s
ABTX Abilene, Hawle 20.08 337 ⇓P Pn 21 00 30.0 +0.5
baz=20
329A Wagon Wheel Ra 20.12 330 ⇓P Pn 21 00 31.0 +1.0
baz=20
526A Mary Lane Ranc 20.13 323 ⇓P Pn 21 00 32.6 +2.3
baz=20,SNR=9.0
MIAR Mount Ida 20.34 352 eP P 21 00 31.5 +1.1
comp=Z,20nm,0.9s
131A Roby 20.42 335 ⇓P Pn 21 00 34.7 +1.2
baz=21
328A Wristen Ranch, 20.45 328 ⇓P Pn 21 00 35.3 +1.4
baz=21,SNR=7.4
426A McDonald Obser 20.55 325 ⇑P Pn 21 00 36.3 +1.1
baz=21
130A Snyder 20.59 334 ⇑P Pn 21 00 36.3 +0.8
baz=21
Z32A Haskell 20.62 338 P Pn 21 00 36.5 +0.6
baz=21,SNR=19
Z31A Sharp Cattle R 20.89 337 ⇑P Pn 21 00 38.6 -0.4
baz=21,SNR=9.9
228A UT Block 9, Go 20.93 330 ⇓P P 21 00 39.3 +2.2
baz=21
326A Caldwell Ranch 21.01 326 ⇓P P 21 00 40.4 +2.5
baz=21
129A Stewart Farms, 21.02 332 P P 21 00 40.6 +2.7
baz=21,SNR=7.2
LPIG La Paz 21.16 300 LR LR 21 08 50.7
comp=Z,144nm,18.4s,baz=116,slow=37
SWET Sewanee 21.18 10 eP P 21 00 41.2 +1.5
comp=Z,26nm,0.8s
425A Indio Mountain 21.18 323 ⇓P P 21 00 42.8 +2.9
baz=21
Z30A Sanderson Ranc 21.25 334 ⇓P P 21 00 42.9 +2.4
baz=22
128A Castleberry Fa 21.30 331 ⇑P P 21 00 43.3 +2.4
baz=22,SNR=13
Y31A Rekieta Farm, 21.50 337 ⇓P P 21 00 46.2 +3.1
baz=22,SNR=8.2
JSC Jenkinsville 21.51 21 eP P 21 00 45.1 +1.9
CPCT Cooper Cave 21.68 13 eP P 21 00 47.0 +2.1
WMOK Wichita Mounta 21.69 341 eP P 21 00 45.8 +0.7
comp=Z,9.6nm,0.7s
WVT Waverly 21.83 6 P P 21 00 47.6 +1.0
comp=Z,8.0nm,0.9s
324A Moseley Ranch, 21.95 323 ⇓P P 21 00 50.8 +2.7
baz=22,SNR=6.5
TKL Tuckaleechee C 22.05 14 eP P 21 00 49.2 +0.3
TKL Tuckaleechee C 22.05 14 P P 21 00 49.5 +0.5
comp=Z,17nm,1.1s,baz=224,slow=8.7,SNR=4.3
X30A Coker Ranch, T 22.16 336 ⇓P P 21 00 52.9 +2.7
baz=22
Z27A Tatum 22.21 331 ⇑P P 21 00 52.8 +1.9
baz=22,SNR=5.4
Y27A Causey 22.66 331 ⇓P P 21 00 57.0 +1.4
baz=23
124A Stringfield Ra 22.88 326 ⇑P P 21 01 00.9 +2.9
baz=23
Y25A Mesa, Roswell 23.43 329 ⇓P P 21 01 05.4 +1.7
baz=24
SJG San Juan 23.56 78 LR LR 21 10 07.3
comp=Z,473nm,18.2s,baz=267,slow=36
USIN University of 23.66 5 eP P 21 01 06.9 +1.1
comp=Z,146nm,1.3s
Z23A Rita Site, Whi 23.73 325 ⇑P P 21 01 08.9 +2.3
baz=24
Y24A Capitan 23.81 328 ⇓P P 21 01 09.0 +1.6
baz=24
WCI Wyandotte Cave 24.08 8 eP P 21 01 10.1 +0.3
comp=Z,33nm,0.8s
220A Playas Peak, P 24.11 320 ⇓P P 21 01 13.1 +2.8
baz=24
Y23A Lovelace Mesa, 24.14 327 ⇑P P 21 01 13.1 +2.5
baz=24
OLIL Olney 24.39 4 eP P 21 01 13.4 +0.8
comp=Z,15nm,0.7s
ATAH Atahualpa 24.41 150 P P 21 01 17.7 +4.2
ATAH Atahualpa 24.41 150 P P 21 01 17.7 +4.2
comp=Z,8.4nm,0.8s,baz=317,slow=5.0,SNR=4.9
ATAH LR LR 21 09 49.7
comp=Z,312nm,21.1s,baz=333,slow=34
V26A Tequesquite Ra 24.53 333 ⇑P P 21 01 16.4 +2.3
baz=25
120A U Bar Ranch, L 24.62 321 ⇓P P 21 01 17.4 +2.4
baz=25
Y22A Socorro 24.64 325 ⇑P P 21 01 17.7 +2.6
baz=25
SFIN Scholer Farm 26.11 6 P P 21 01 29.7 +1.6
baz=26,SNR=7.7
X16A Lo Mia Camp, P 27.61 320 ⇑P P 21 01 44.7 +2.7
baz=28
PDAR Pinedale Array 32.80 333 P P 21 02 28.9 +1.0
PDAR Pinedale Array 32.80 333 P P 21 02 28.9 +1.0
comp=Z,0.5nm,0.7s,baz=121,slow=7.4,SNR=4.2
PDAR LR LR 21 17 07.2
comp=Z,234nm,21.9s,baz=345,slow=39
LOHW Long Hollow 33.94 333 eP P 21 02 35.0 -2.8
comp=Z,2.3nm,0.7s
E24A Baker 34.19 343 ⇓P P 21 02 41.5 +1.7
baz=34
MDND Maddock 34.29 349 ⇓P P 21 02 42.2 +1.6
baz=35
H18A Shoshone NF, C 34.41 335 ⇑P P 21 02 43.5 +1.6
baz=35
NVAR Mina Array Bea 34.43 319 P P 21 02 39.8 -2.3
NVAR Mina Array Bea 34.43 319 P P 21 02 39.8 -2.3
comp=Z,0.2nm,0.3s,baz=126,slow=9.1,SNR=3.7
NVAR LR LR 21 19 04.3
comp=Z,604nm,18.4s,baz=38,slow=41
D21A La Casta Ranch 35.47 340 ⇑P P 21 02 52.7 +1.9
baz=36
SAML Samuel 35.53 129 eP P 21 02 49.9 -1.7
comp=Z,9.2nm,0.9s
F17A Fitzpatrick Pl 35.82 336 ⇑P P 21 02 55.6 +1.7
baz=36
MCMT McKenzie Canyo 35.89 332 eP P 21 02 51.8 -2.9
comp=Z,1.7nm,0.7s
H14A Leadore 35.96 332 ⇑P P 21 02 57.5 +2.2
baz=36
ULM Lac du Bonnet 36.10 354 P P 21 02 56.5 +0.4
ULM Lac du Bonnet 36.10 354 P P 21 02 56.5 +0.4
comp=Z,3.1nm,0.6s,baz=177,slow=7.5,SNR=4.6
ULM LR LR 21 20 13.6
comp=Z,186nm,19.0s,baz=68,slow=40
A24A Westby 36.28 345 ⇑P P 21 02 59.8 +2.1
baz=37,SNR=6.1
E16A East Helena 36.74 335 ⇓P P 21 03 03.6 +1.8
baz=37
C19A Slack Wire Ran 36.74 339 ⇑P P 21 03 04.1 +2.4
baz=37
D17A Six Diamond Ra 36.85 337 ⇑P P 21 03 04.5 +1.7
baz=37
A22A Carney Farms, 36.85 343 P P 21 03 04.5 +1.9
baz=37,SNR=5.1
LPAZ La Paz 37.53 143 P P 21 03 06.7 -2.6
comp=Z,2.2nm,0.8s
LPAZ La Paz 37.53 143 P P 21 03 11.0 +1.6
comp=Z,1.8nm,0.7s,baz=342,slow=13,SNR=6.9
LPAZ LR LR 21 19 15.0
comp=Z,292nm,20.9s,baz=352,slow=37
F12A Elk City 37.70 331 P P 21 03 10.8 +0.8
baz=38,SNR=9.2
FFC Flin Flon 41.31 350 eP P 21 03 36.7 -3.1
comp=Z,4.1nm,0.6s
SIV San Ignacio 41.79 135 P P 21 03 44.5 +0.3
SIV San Ignacio 41.79 135 P P 21 03 44.5 +0.3
comp=Z,5.8nm,1.0s,baz=312,slow=10,SNR=12
SCHQ Schefferville 44.38 19 eP P 21 04 02.7 -2.0
comp=Z,22nm,1.1s
SCHQ Schefferville 44.38 19 P P 21 04 04.0 -0.7
comp=Z,7.0nm,0.6s,baz=208,slow=7.5,SNR=14
SCHQ LR LR 21 22 33.9
comp=Z,445nm,20.6s,baz=227,slow=36
CFAA Coronel Fontan 50.37 155 P P 21 04 51.6 -0.1
CFAA Coronel Fontan 50.37 155 P P 21 04 51.6 -0.1
comp=Z,0.2nm,0.5s,baz=9.0,slow=9.8,SNR=3.8
YKA Yellowknife Ar 51.08 346 P P 21 04 55.2 -1.4
YKA Yellowknife Ar 51.08 346 P P 21 04 55.2 -1.4
comp=Z,6.3nm,0.8s,baz=145,slow=7.8,SNR=30
BDFB Brasilia 51.38 124 LR LR 21 29 55.3
comp=Z,276nm,18.8s,baz=94,slow=40
CPUP Villa Florida 51.64 141 LR LR 21 28 28.8
comp=Z,195nm,18.6s,baz=356,slow=38
RES Resolute Bay 60.40 359 eP P 21 06 02.2 -1.1
comp=Z,3.0nm,0.8s
ILAR Eielson Array 63.16 336 P P 21 06 22.6 +0.5
ILAR Eielson Array 63.16 336 P P 21 06 22.6 +0.5
comp=Z,2.0nm,1.1s,baz=108,slow=5.5,SNR=10
ILAR LR LR 21 36 20.6
comp=Z,211nm,18.6s,baz=141,slow=38
SUMG Summit 65.50 15 P P 21 06 36.1 -1.7
comp=Z,13nm,1.1s
PPT2 Papeete2 66.45 243 eS S 21 15 28.9 -7.4
comp=Z,96nm,27.2s
PPT2 eLR LR 21 26 27.7
comp=Z,293nm,30.0s
TBI Tubuai 68.85 238 eLR LR 21 27 40.5
comp=Z,234nm,34.2s
ESDC Sonseca Array 78.28 52 P P 21 07 55.1 +0.3
ESDC Sonseca Array 78.28 52 P P 21 07 55.1 +0.3
comp=Z,0.5nm,0.5s,baz=287,slow=4.6,SNR=9.7
NB2 NORSAR Subarra 83.10 29 P P 21 08 20.9 +0.7
comp=Z,0.7nm,0.6s,baz=288,slow=5.3
NOA NORSAR Array B 83.10 29 P P 21 08 20.9 +0.7
NOA NORSAR Array B 83.10 29 P P 21 08 20.9 +0.7
comp=Z,0.9nm,0.7s,baz=288,slow=5.0,SNR=5.1
ARCES ARCESS Array B 85.33 19 P P 21 08 31.2 -0.1
ARCES ARCESS Array B 85.33 19 P P 21 08 31.2 -0.1
comp=Z,6.7nm,1.0s,baz=305,slow=5.2,SNR=4.1
CLL Collm 87.09 38 eP P 21 08 41.0 +0.7
CLL L L 21 45 00.0
comp=Z,100nm,19.5s
BRG Berggiesshubel 87.80 38 ePKP P 21 08 42.0 -1.7
comp=Z,1.5nm,0.2s
KHC Kasperske Hory 88.17 40 eP P 21 08 46.5 +0.9
KHC epP PcP 21 08 51.5 +4.1
GERES GERESS Array B 88.34 40 P P 21 08 47.1 +0.6
GERES GERESS Array B 88.34 40 P P 21 08 47.1 +0.6
comp=Z,0.8nm,0.8s,baz=298,slow=2.9,SNR=5.6
FINES FINESS Array B 89.53 25 P P 21 08 52.8 +1.2
FINES FINESS Array B 89.53 25 P P 21 08 52.8 +1.2
comp=Z,1.9nm,0.9s,baz=349,slow=4.1,SNR=6.3
HHC Hu-ho-hao-te 121.45 341 ePKP PKPdf 21 14 43.6 -4.9
HHC PP PP 21 16 17.4 -1.2
HHC PKS PKSdf 21 18 19.4 -5.9
HHC SKS SKSdf 21 21 54.5 -7.6
HHC SKKS SKKSac 21 23 09.8 -11
HHC SS SS 21 32 49.0 -4.8
HHC AMB AMB
comp=Z,130nm,9.2s
HHC LR LR
comp=N,93nm,20.7s
HHC LR LR
comp=E,210nm,20.3s
HHC LR LR
comp=Z,220nm,20.6s
WRA Warramunga Arr 137.00 256 PKPpre PKPpre 21 15 13.7
WRA PKP PKPdf 21 15 18.6 +0.1
WRA Warramunga Arr 137.00 256 PKhKP PKPpre 21 15 13.7
comp=Z,0.4nm,0.8s,baz=86,slow=2.6,SNR=4.7
WRA PKP PKPdf 21 15 18.6 +0.1
comp=Z,0.6nm,0.6s,baz=83,slow=2.2,SNR=14
ASAR Alice Springs 137.26 251 PKP PKPdf 21 15 19.1 +0.2
ASAR Alice Springs 137.26 251 PKP PKPdf 21 15 19.1 +0.2
comp=Z,0.2nm,0.7s,baz=117,slow=1.0,SNR=3.1
FITZ Fitzroy Crossi 145.25 259 PKPbc PKPdf 21 15 33.3 +0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FITZ	Fitzroy Crossi	145.25	259	PKPbc	PKPdf	21 15 33.3	+0.1
	comp=Z,2.9nm,0.7s,baz=156,slow=1.1,SNR=13						
CMAR	Chiang Mai Arr	146.15	344	PKPbc	PKPdf	21 15 33.2	-1.6
CMAR	Chiang Mai Arr	146.15	344	PKPbc	PKPdf	21 15 33.2	-1.6
	comp=Z,0.4nm,0.5s,baz=338,slow=2.6,SNR=5.5						

IDC ***04*** *21:22:04.4±0.6, 14°.38N×90°.52W, $h0^{km}$, mb4.2/24, mb1 4.4/28, mb1mx4.4/34, mbtmp4.2/28, ML4.4/3, MS4.5/23, Ms1 4.5/23, ms1mx4.4/40, Error ellipse: s-maj=21.7km s-min=10.3km az=56.0*

ISCJB ***04*** *21:22:05.9±0.4, 14°.37N±0°.03×90°.43W±0°.03, $h22^{km}\pm2^{km}$, mb4.6/78, MS4.6/32, Error ellipse: s-maj=6.4km s-min=2.9km az=38.5*

NEIC ***04*** *21:22:05.8±0.4, 14°.38N×90°.41W, $h10^{km}$, mb4.9/61, Error ellipse: s-maj=9.3km s-min=5.0km az=45.0*

GCMT ***04*** *21:22:10.7±0.2, 14°.48N×90°.56W, $h19^{km}\pm1^{km}$, MW5.2, Moment Tensor Solution. s59,c90; s91,c147; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.14±.17; $M_{\theta\theta}$-5.54±.17; $M_{\phi\phi}$6.68±.19; $M_{r\theta}$-1.44±.35; $M_{\theta\phi}$-4.76±.16; $M_{\phi r}$0.41±.37; Best double couple: $M_0$7.90000×10^{16} NP1:ϕ_s26.00000°, δ78.00000°, λ-4.00000°. NP2:ϕ_s117.00000°, δ86.00000°, λ-168.00000°. Principal axes: T 8.3900, Plg5.0000°, Azm251.0000°; N -0.9800, Plg78.0000°, Azm136.0000°; P -7.4200, Plg11.0000°, Azm342.0000°; Data Used: II IU IC G CN.*

SZGRF ***04*** *21:22:14.4, 15°.32N×90°.31W, $h33^{km}$, mb5.0, MS4.7, Guatemala*

ISC 04 21:22:06.3±0.7, **14°.34N**±0°.03×**90°.44W**±0°.03, **h15**$^{km}\pm4^{km}$, **n302**, σ1**°.53**/289, **mb4.7**/78, **MS4.6**/33, **49C-46D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	0.16	186	eP	Pg	21 22 09.5	-1.1
PCG	Pacaya	0.17	289	⇓eP	Pg	21 22 09.5	-1.3
GCG	Guatemala City	0.26	339	eP	Pg	21 22 11.6	-0.6
GCG				eS	Sg	21 22 16.8	+0.7
GCG				AML	AML	21 22 19.4	
	comp=N,311μm,0.6s						
NBG	Las Nubes	0.26	19	eP	Pg	21 22 11.8	-0.4
FUG	Fuego 3	0.41	286	⇑eP	Pg	21 22 13.2	-1.5
FG6		0.48	297	⇑eP	Pg	21 22 14.7	-1.4
RBDL	Robledal	0.76	107	⇑iP	Pg	21 22 19.9	-1.4
RTR	El Retiro	0.88	120	eP	Pb	21 22 22.1	-1.4
SBLS	San Blas	0.93	122	eP	Pb	21 22 23.4	-1.0
SNJE	San Jose	0.93	120	⇓eP	Pb	21 22 22.9	-1.4
MRL	Marmol	1.02	45	eP	Pb	21 22 25.3	-0.6
MTO2	Montecristo 2	1.04	86	eP	Pb	21 22 24.8	-1.5
MTO2				eS	Sn	21 22 42.0	+0.8
JAT	Jato	1.16	269	⇑eP	Pn	21 22 27.5	-0.6
BOQS	Boqueron	1.27	118	eP	Pn	21 22 29.2	-0.6
SNET	Serv Nac Est T	1.34	119	eP	Pn	21 22 30.3	-0.3
SNET				AML	AML	21 23 10.0	
	comp=Z,7μm,0.9s						
LFU	La Fuente	1.41	114	eP	Pn	21 22 31.3	-0.3
LBRS	Las Brisas	1.48	114	eP	Pn	21 22 32.1	-0.5
LFRS	El Faro	1.51	118	eP	Pn	21 22 32.5	-0.6
SNVI	San Vicente	1.71	115	eP	Pn	21 22 36.0	+0.2
THIG		1.86	288	P	Pn	21 22 38.0	+0.3
THIG				S	Sb	21 23 04.2	+1.1
CCIG	Comitan	2.54	320	P	Pn	21 22 48.8	+1.6
CCIG				S	Sg	21 23 26.8	-1.2
TGUH	Tegucigalpa,Un	3.08	95	ePn	Pn	21 22 53.7	-0.8
TGIG		3.55	314	P	Pn	21 23 00.8	-0.2
TGIG				S	Sn	21 23 47.1	+4.3
CMIG	Matias Romero	5.08	303	Pn	Pn	21 23 21.1	-1.0
CMIG				Pg	Pb	21 23 35.9	+0.8
CMIG				Sn	Sn	21 24 21.1	+0.5
CMIG				Lg	Lg	21 24 42.0	
CMIG	Matias Romero	5.08	303	Pn	Pn	21 23 21.1	-1.0
	comp=Z,6.2nm,0.3s,baz=121,slow=8.3,SNR=26						
CMIG				Pg	Pb	21 23 35.9	+0.8
	comp=Z,56nm,0.3s,baz=119,slow=14,SNR=30						
CMIG				Sn	Sn	21 24 21.1	+0.5
	comp=Z,20nm,0.3s,baz=127,slow=15,SNR=2.0						
CMIG				Lg	Lg	21 24 42.0	
	comp=Z,17nm,0.3s,baz=235,slow=16,SNR=4.0						
TEIG	Tepich	6.21	19	ePn	Pn	21 23 37.6	0.0
TEIG				Sn	Sn	21 24 46.1	-2.2
TEIG				Lg	Lg	21 25 20.8	
TEIG	Tepich	6.21	19	Pn	Pn	21 23 37.5	0.0
	comp=Z,93nm,0.3s,baz=204,slow=1.4,SNR=186						
TEIG				Sn	Sn	21 24 46.1	-2.2
	comp=Z,24nm,0.3s,baz=287,slow=19,SNR=3.8						
TEIG				Lg	Lg	21 25 20.8	
	comp=Z,54nm,0.3s,baz=134,slow=21,SNR=7.4						
VHO	Vista Hermosa	6.64	295	P	Pn	21 23 38.0	-5.7
VHO				S	Sn	21 24 52.3	-7.1
JTS	JuntasAbangare	6.70	126	ePn	Pn	21 23 46.1	+1.8
JTS				Sn	Sn	21 25 06.0	+5.5
JTS				Lg	Lg	21 25 46.0	
JTS	JuntasAbangare	6.70	126	Pn	Pn	21 23 46.3	+2.0
	comp=Z,5.4nm,0.3s,baz=299,slow=16,SNR=18						
JTS				Sn	Sn	21 25 06.0	+5.5
	baz=324,slow=18,SNR=1.8						
JTS				Lg	Lg	21 25 46.0	
	comp=Z,0.6nm,0.3s,baz=238,slow=11,SNR=3.0						
JTS				LR	LR	21 26 57.2	
	comp=Z,2μm,19.1s,baz=318,slow=43						
PNIG	Pinotepa	7.69	286	P	Pn	21 23 50.9	-7.1
PNIG				S	Sn	21 25 14.8	-10
BCIP	Isla Barro Col	11.58	115	ePn	Pn	21 24 53.9	+2.6
	comp=Z,54nm,1.3s						
HKT	Hockley	16.32	343	ePn	Pn	21 25 53.1	-1.9
	comp=Z,192nm,2.2s						
732A	Laxson Ranch,	16.83	330	⇑P	Pn	21 26 01.9	+0.3
	baz=17,SNR=11						
632A	Uvalde	17.40	332	⇓P	P	21 26 09.4	-0.6
	baz=17						
631A	Perdido Creek	17.69	330	⇓P	P	21 26 13.0	-0.2
	baz=18,SNR=9.1						
VBMS	Vicksburg	17.80	360	ePn	P	21 26 15.7	+1.3
	comp=Z,502nm,1.8s						
532A	Rocksprings	17.98	333	⇑P	P	21 26 16.7	+0.3
	baz=18,SNR=15						
JCT	Junction City	18.23	333	eP	P	21 26 19.6	+0.4
	comp=Z,191nm,1.8s						
JCT	Junction City	18.23	333	⇓P	P	21 26 19.8	+0.6
	baz=18,SNR=7.1						
531A	Rocksprings	18.30	331	⇓P	P	21 26 20.9	+0.9
	baz=18,SNR=14						
OTAV	Otavalo	18.36	139	eP	P	21 26 22.0	+0.9
	comp=Z,113nm,1.1s						
ROSC	El Rosal	18.45	119	P	Pn	21 26 25.0	+2.9
ROSC	El Rosal	18.45	119	P	Pn	21 26 25.0	+2.9
	comp=Z,1.4nm,0.3s,baz=290,slow=22,SNR=8.4						
432A	Menard	18.57	334	⇓P	Pn	21 26 23.9	+0.7
	baz=19,SNR=12						
530A	J-C Ranch, Com	18.67	329	⇓P	P	21 26 24.2	+0.1
	baz=19,SNR=11						
WHTX	Lake Whitney	18.71	341	⇑P	Pn	21 26 25.3	+0.5
	baz=19						
431A	Sonora	18.77	332	⇑P	Pn	21 26 25.8	+0.2
	baz=19,SNR=9.7						
LRAL	Lakeview Retre	18.88	9	eP	P	21 26 24.8	-1.4
	comp=Z,28nm,1.3s						
SDDR	Presa de Saban	18.91	73	eP	P	21 26 27.2	+0.4
	comp=Z,61nm,1.3s						
628A	Black Gap, Mar	18.97	325	⇓P	Pn	21 26 27.8	-0.2
	baz=19,SNR=17						
332A	Millersview	18.99	335	⇓P	Pn	21 26 28.4	+0.1
	baz=19,SNR=32						
529A	Stev Forest Ra	19.10	327	⇓P	Pn	21 26 29.8	+0.1
	baz=19,SNR=9.5						
430A	Baggett Ranch,	19.15	331	⇓P	Pn	21 26 30.1	-0.1
	baz=19,SNR=19						
331A	San Angelo	19.22	333	⇓P	Pn	21 26 30.6	-0.4
	baz=19,SNR=17						
627A	Terlingua Ranc	19.23	324	⇓P	P	21 26 30.3	+0.1
	baz=19,SNR=22						
TXAR	Lajitas Array	19.30	323	P	P	21 26 31.1	+0.1
TXAR	Lajitas Array	19.30	323	P	P	21 26 31.1	+0.1
	comp=Z,0.8nm,0.3s,baz=146,slow=11,SNR=19						
TXAR				LR	LR	21 34 07.1	
	comp=Z,897nm,18.6s,baz=170,slow=38						
429A	Davenport Ranc	19.34	329	⇑P	Pn	21 26 33.3	+0.8
	baz=19,SNR=16						
232A	Coleman	19.40	336	⇓P	Pn	21 26 33.0	-0.1
	baz=19,SNR=6.0						
330A	Mertzon	19.64	332	⇑P	P	21 26 35.3	+0.6
	baz=20,SNR=27						
GRTK	Grand Turk	19.69	66	eP	P	21 26 35.6	+0.4
	comp=Z,575nm,1.8s						
231A	Bronte	19.71	334	⇓P	Pn	21 26 36.3	-0.6
	baz=20,SNR=13						
626A	Big Bend Ranch	19.74	322	⇑P	P	21 26 36.1	+0.3
	baz=20,SNR=16						
428A	Kincaid Ranch,	19.82	327	⇓P	P	21 26 37.4	+0.6
	baz=20,SNR=11						
527A	Woodward Ranch	19.88	324	⇑P	P	21 26 37.8	+0.4
	baz=20,SNR=27						
230A	Sterling City	20.02	333	P	P	21 26 39.1	+0.3
	baz=20,SNR=8.2						
ABTX	Abilene, Hawle	20.05	337	⇓P	Pn	21 26 40.1	-0.8
	baz=20						
329A	Wagon Wheel Ra	20.08	330	⇓P	P	21 26 40.3	+0.8
	baz=20						
526A	Mary Lane Ranc	20.08	323	⇑P	P	21 26 40.0	+0.3
	baz=20,SNR=24						
OXF	Oxford	20.11	2	eP	P	21 26 38.1	-1.6
	comp=Z,65nm,0.9s						
SDV	Santo Domingo	20.13	103	eP	P	21 26 41.3	+0.9
	comp=Z,0.9nm,1.0s						
427A	Hayter Ranch,	20.30	326	⇑P	P	21 26 42.7	+0.7
	baz=20						
131A	Roby	20.38	335	⇓P	P	21 26 43.5	+0.7
	baz=20						
229A	Bryant Ranch,	20.40	331	⇑P	P	21 26 43.7	+0.7
	baz=20						
328A	Wristen Ranch,	20.41	328	⇑P	P	21 26 43.9	+0.8
	baz=20,SNR=19						
UALR	University of	20.42	356	eP	Pn	21 26 44.9	-0.3
	comp=Z,44nm,0.9s						
426A	McDonald Obser	20.51	325	⇑P	P	21 26 44.5	+0.2
	baz=20,SNR=19						
130A	Snyder	20.56	334	⇓P	P	21 26 45.0	+0.4
	baz=21						
Z32A	Haskell	20.60	338	⇑P	P	21 26 46.0	+1.0
	baz=21,SNR=18						
Z31A	Sharp Cattle R	20.86	337	⇓P	P	21 26 48.1	+0.2
	baz=21,SNR=20						
228A	UT Block 9, Go	20.90	330	⇑P	P	21 26 48.9	+0.5
	baz=21						
326A	Caldwell Ranch	20.97	326	⇑P	P	21 26 49.8	+0.6
	baz=21,SNR=18						
129A	Stewart Farms,	20.98	332	⇑P	P	21 26 50.1	+0.9
	baz=21,SNR=8.2						
LPIG	La Paz	21.10	300	P	P	21 26 53.4	+2.8
LPIG	La Paz	21.10	300	P	P	21 26 53.4	+2.8
	comp=Z,2.7nm,0.3s,baz=158,slow=19,SNR=1.8						
LPIG				LR	LR	21 34 51.7	
	comp=Z,386nm,19.0s,baz=122,slow=36						
425A	Indio Mountain	21.14	323	⇓P	P	21 26 51.7	+0.6
	baz=21,SNR=18						
227A	Bennet, Jal	21.16	328	⇑P	P	21 26 51.8	+0.7
	baz=21						
SWET	Sewanee	21.18	10	eP	P	21 26 51.6	+0.2
	comp=Z,46nm,0.9s						
Y32A	R-V Farms, Ver	21.21	339	⇑P	P	21 26 52.6	+0.9
	baz=21						
Z30A	Sanderson Ranc	21.22	335	⇓P	P	21 26 52.6	+0.8
	baz=21,SNR=6.9						
128A	Castleberry Fa	21.26	331	P	P	21 26 52.9	+0.6
	baz=21,SNR=9.4						
Z29A	Hungry Hill Ra	21.44	333	⇓P	P	21 26 54.8	+0.6
	baz=22						
Y31A	Rekieta Farm,	21.47	337	⇓P	P	21 26 55.1	+0.7
	baz=22,SNR=13						
Y30A	Stafford Cattl	21.64	336	⇓P	P	21 26 56.9	+0.5
	baz=22						
226B	Tecolote Peak,	21.66	327	⇑P	P	21 26 57.0	+0.4
	baz=22						
WMOK	Wichita Mounta	21.66	341	eP	P	21 26 55.8	-0.8
	comp=Z,38nm,1.2s						
CPCT	Cooper Cave	21.69	13	eP	P	21 26 57.9	+1.2
WVT	Waverly	21.83	6	eP	P	21 26 56.4	-1.8
	comp=Z,22nm,1.0s						
324A	Moseley Ranch,	21.91	324	⇓P	P	21 26 59.1	-0.2
	baz=22,SNR=5.3						
Y29A	Porterfield Fa	21.94	334	⇓P	P	21 27 00.1	+0.5
	baz=22						
X31A	McDonald Ranch	21.97	339	⇑P	P	21 27 00.8	+1.0
	baz=22						
TUL1	Tulsa	22.01	348	⇑P	P	21 27 01.5	+1.3
	baz=22						
225A	Deer Hill, Car	22.04	326	⇓P	P	21 27 01.2	+0.4
	baz=22						
TKL	Tuckaleechee C	22.06	15	eP	P	21 27 02.1	+1.3
TKL				S	Sn	21 31 11.6	-2.9
TKL	Tuckaleechee C	22.06	15	P	P	21 27 02.4	+1.7
	comp=Z,9.8nm,1.0s,baz=182,slow=8.4,SNR=3.6						
TKL				S	Sn	21 31 11.6	-2.9
	comp=Z,11nm,0.8s,baz=48,slow=9.5,SNR=4.3						
X30A	Coker Ranch, T	22.13	337	⇑P	P	21 27 02.1	+0.5
	baz=22						
Z27A	Tatum	22.18	331	⇑P	P	21 27 02.0	-0.2
	baz=22						
Y28A	McKinney Farm,	22.23	333	⇓P	P	21 27 02.6	-0.1
	baz=22						
KMSC	Kings Mountain	22.28	20	⇑P	P	21 27 04.9	+1.8
	baz=22						
125A	Gardner Draw,	22.38	327	⇓P	P	21 27 04.5	+0.2
	baz=22						
224A	Cornudas Mount	22.40	325	⇓P	P	21 27 04.8	+0.2
	baz=22,SNR=10.0						
W31A	Holland Ranch,	22.46	339	⇑P	P	21 27 05.7	+0.6
	baz=22						
X29A	Tulia	22.46	335	⇑P	P	21 27 05.2	+0.1
	baz=22						
Z26A	Caprock	22.51	329	⇓P	P	21 27 06.4	+0.6
	baz=23						
Y27A	Causey	22.62	332	⇑P	P	21 27 06.9	0.0
	baz=23						
AMTX	Amarillo	22.83	336	eP	P	21 27 09.0	-0.1
	comp=Z,41nm,0.6s						
124A	Stringfield Ra	22.84	326	⇓P	P	21 27 08.6	-0.7
	baz=23,SNR=6.4						
TZTN	Tazewell	22.96	14	eP	P	21 27 10.7	+0.4
	comp=Z,80nm,1.4s						
SIUC	Southern Illin	23.31	2	eP	P	21 27 14.8	+1.0
	comp=Z,134nm,1.2s						
SJG	San Juan	23.61	78	eP	P	21 27 18.5	+1.4
	comp=Z,16nm,0.8s						
SJG	San Juan	23.61	78	P	P	21 27 19.2	+2.2
	comp=Z,13nm,0.6s,baz=277,slow=6.8,SNR=6.1						
SJG				LR	LR	21 36 00.3	
	comp=Z,2μm,21.0s,baz=264,slow=35						
USIN	University of	23.66	5	eP	P	21 27 17.3	0.0
	comp=Z,89nm,1.0s						
Y24A	Capitan	23.77	328	⇓P	P	21 27 19.2	+0.5
	baz=24,SNR=8.2						
220A	Playas Peak, P	24.07	320	⇑P	P	21 27 21.7	+0.2
	baz=24						
WCI	Wyandotte Cave	24.08	8	eP	P	21 27 21.1	-0.2
	comp=Z,52nm,0.7s						
Y23A	Lovelace Mesa,	24.10	327	⇑P	P	21 27 22.4	+0.6
	baz=24						
MTP	Monte Pirata	24.18	78	eP	P	21 27 21.7	-0.7
	comp=Z,66nm,1.1s						
W25A	X Bar L Ranch,	24.32	331	⇑P	P	21 27 24.4	+0.6
	baz=24						
OLIL	Olney	24.39	4	eP	P	21 27 28.2	+4.1
	comp=Z,31nm,0.8s						
ATAH	Atahualpa	24.45	150	P	P	21 27 27.4	+2.0
ATAH	Atahualpa	24.45	150	P	P	21 27 27.4	+2.0
	comp=Z,3.5nm,0.6s,baz=300,slow=20,SNR=2.8						
ATAH				LR	LR	21 35 51.7	
	comp=Z,833nm,18.5s,baz=337,slow=34						
BNM	Barren Site	24.57	326	eP	P	21 27 26.9	+0.7
	comp=Z,13nm,1.1s						
Y22A	Socorro	24.60	325	⇑P	P	21 27 26.9	+0.6
	baz=25						
STVI	Saint Thomas	24.77	77	eP	P	21 27 27.9	+0.1
	comp=Z,102nm,1.2s						
LENM	Lemitar	24.77	326	eP	P	21 27 28.0	+0.2
U26A	Atchley Ranch,	24.99	334	⇓P	P	21 27 30.4	+0.6
	baz=25,SNR=5.7						
LAZ	Ladron	25.04	326	eP	P	21 27 29.7	-0.6
	comp=Z,15nm,1.5s						
ANMO	Albuquerque	25.09	328	eP	P	21 27 26.9	-3.9
	comp=Z,2.1nm,0.8s						
ANMO	Albuquerque	25.09	328	P	P	21 27 30.6	-0.2
	comp=Z,1.0nm,0.5s,baz=168,slow=9.3,SNR=3.1						
KSU1	Kansas State U	25.26	349	eP	P	21 27 32.1	+0.1
	comp=Z,38nm,1.0s						
TUC	Tucson	25.79	317	eP	P	21 27 37.1	+0.2
	comp=Z,9.1nm,1.0s						
SFIN	Scholer Farm	26.11	6	⇓P	P	21 27 39.6	-0.1
	baz=26						
R27A	Eads	26.25	338	⇑P	P	21 27 41.4	+0.3
	baz=26						
X18A	Snowflake	26.73	322	⇑P	P	21 27 45.8	+0.1
	baz=27						
X16A	Lo Mia Camp, P	27.57	320	⇑P	P	21 27 53.5	+0.4
	baz=28						
P25A	Willow Gulch B	27.84	337	⇑P	P	21 27 56.5	+1.0
	baz=28						
ECSD	EROS Data Cent	29.77	351	eP	P	21 28 11.9	-0.5
	comp=Z,26nm,1.5s						
COWI	Conover	31.68	2	eP	P	21 28 28.2	-1.1
	comp=Z,16nm,1.0s						
RSSD	Black Hills	31.88	341	eP	P	21 28 32.0	+0.7
	comp=Z,3.4nm,0.8s						
H24A	Dirks Ranch, A	32.60	341	⇓P	P	21 28 37.7	+0.2
	baz=33,SNR=5.7						
BW06	Boulder Array	32.77	334	eP	P	21 28 39.3	+0.2
	comp=Z,1.6nm,0.8s						
PDAR	Pinedale Array	32.77	334	P	P	21 28 38.5	-0.6
PDAR	Pinedale Array	32.77	334	P	P	21 28 38.5	-0.6
	comp=Z,0.6nm,0.9s,baz=138,slow=5.6,SNR=3.8						
PDAR				LR	LR	21 45 34.0	
	comp=Z,549nm,19.3s,baz=151,slow=43						
EYMN	Ely	33.52	359	eP	P	21 28 44.6	-0.7
	comp=Z,34nm,1.6s						
SNOW	Snow King Moun	33.85	333	eP	P	21 28 48.8	+0.2
	comp=Z,16nm,0.8s						
LOHW	Long Hollow	33.90	333	eP	P	21 28 49.0	0.0
	comp=Z,11nm,1.4s						
TPAW	Teton Pass	33.96	333	eP	P	21 28 49.7	+0.1
	comp=Z,12nm,1.2s						
RRI2	Red Ridge	34.01	332	eP	P	21 28 49.7	-0.3
	comp=Z,9.7nm,1.3s						
MOOW	Moose Ponds	34.07	333	eP	P	21 28 50.2	-0.3
	comp=Z,4.5nm,1.1s						
AGMN	Agassiz Nation	34.16	354	eP	P	21 28 50.3	-0.6
	comp=Z,6.7nm,0.8s						
E24A	Baker	34.17	343	⇑P	P	21 28 51.9	+0.9
	baz=34,SNR=5.2						
MDND	Maddock	34.27	349	⇑P	P	21 28 52.3	+0.4
	baz=34						
H18A	Shoshone NF, C	34.38	335	⇓P	P	21 28 53.1	0.0
	baz=34						
NVAR	Mina Array Bea	34.38	319	P	P	21 28 54.2	+1.0
NVAR	Mina Array Bea	34.38	319	P	P	21 28 54.2	+1.0
	comp=Z,4.1nm,0.8s,baz=136,slow=8.0,SNR=12						
NVAR				LR	LR	21 44 55.5	
	comp=Z,2μm,18.2s,baz=229,slow=40						
RLMT	Red Lodge	34.59	336	eP	P	21 28 55.9	+1.0
	comp=Z,4.5nm,0.9s						
HLID	Hailey	35.63	330	eP	P	21 29 03.6	-0.3
	comp=Z,1.8nm,0.9s						
DGMT	Dagmar	35.88	344	eP	P	21 29 05.6	-0.2
	comp=Z,83nm,1.8s						
ULM	Lac du Bonnet	36.09	354	eP	P	21 29 10.2	+2.7
ULM	Lac du Bonnet	36.09	354	P	P	21 29 07.0	-0.5
	comp=Z,3.8nm,0.7s,baz=169,slow=9.7,SNR=5.4						
ULM				LR	LR	21 46 24.4	
	comp=Z,732nm,18.5s,baz=10.0,slow=40						
LRM	Limekiln Ridge	36.46	334	eP	P	21 29 10.9	-0.1
G13A	Cobalt	36.69	331	⇑P	P	21 29 13.9	+1.0
	baz=37						
E16A	East Helena	36.71	335	⇓P	P	21 29 13.5	+0.5
	baz=37						
C19A	Slack Wire Ran	36.72	339	⇑P	P	21 29 14.3	+1.3
	baz=37						
D17A	Six Diamond Ra	36.82	337	⇑P	P	21 29 14.2	+0.2
	baz=37						
EGMT	Eagleton	37.21	338	eP	P	21 29 18.9	+1.7
	comp=Z,28nm,1.4s						
EGMT	Eagleton	37.21	338	⇑P	P	21 29 17.8	+0.6
	baz=37						
G12A	Big Creek, Yel	37.23	330	⇓P	P	21 29 17.5	0.0
	baz=37						
LPAZ	La Paz	37.57	143	eP	P	21 29 21.1	-0.1
	comp=Z,7.5nm,0.9s						
LPAZ	La Paz	37.57	143	P	P	21 29 20.7	-0.5
	comp=Z,5.5nm,0.9s,baz=322,slow=9.4,SNR=6.2						
LPAZ				LR	LR	21 45 25.8	
	comp=Z,883nm,21.8s,baz=180,slow=37						
F12A	Elk City	37.66	331	⇑P	P	21 29 20.7	-0.4
	baz=38,SNR=8.0						
MSO	Missoula	37.89	334	⇓P	P	21 29 23.7	+0.7
	baz=38						
C15A	Salmond Ranch,	38.08	336	⇓P	P	21 29 25.5	+0.8
	baz=38						
YBH	Yreka Blue Hor	39.05	321	LR	LR	21 46 46.2	
	comp=Z,1μm,20.1s,baz=155,slow=38						
A15A	Johnson Ranch,	39.11	337	⇑P	P	21 29 32.8	-0.4
	baz=39						
A14A	Double T Ranch	39.37	336	⇓P	P	21 29 35.4	0.0
	baz=39						
C11A	Tepee Creek (N	39.68	333	⇑P	P	21 29 37.6	-0.4
	baz=40						
NEW	Newport	40.38	332	eP	P	21 29 43.4	-0.4
	comp=Z,2.2nm,0.9s						
FFC	Flin Flon	41.30	350	eP	P	21 29 50.2	-0.9
	comp=Z,48nm,1.8s						
SIV	San Ignacio	41.84	135	P	P	21 29 58.0	+2.0
SIV	San Ignacio	41.84	135	P	P	21 29 58.0	+2.0
	comp=Z,9.9nm,0.9s,baz=327,slow=8.9,SNR=24						
LVC	Limon Verde	42.35	150	eP	P	21 30 00.6	+0.2
	comp=Z,0.5nm,0.9s						
SCHQ	Schefferville	44.39	19	eP	P	21 30 17.2	+0.9
	comp=Z,32nm,0.8s						
SCHQ	Schefferville	44.39	19	P	P	21 30 17.4	+1.1
	comp=Z,4.5nm,0.6s,baz=240,slow=10,SNR=15						
SCHQ				LR	LR	21 48 45.3	
	comp=Z,1μm,20.6s,baz=44,slow=36						
RPN	Rapa Nui	45.12	204	LR	LR	21 44 19.1	
	comp=Z,373nm,19.9s,baz=27,slow=30						
LCO	Las Campanas	47.13	156	eP	P	21 30 39.1	+0.6
	comp=Z,9.1nm,0.8s						
YKA	Yellowknife Ar	51.06	346	P	P	21 31 07.5	-0.3
YKA	Yellowknife Ar	51.06	346	P	P	21 31 07.5	-0.3
	comp=Z,4.2nm,0.8s,baz=148,slow=7.7,SNR=71						
YKW3	Yellowknife Ar	51.12	346	eP	P	21 31 07.3	-1.0
	comp=Z,0.4nm,0.9s						
YKW3				ePP	PP	21 33 02.4	-2.6
BDFB	Brasilia	51.44	124	LR	LR	21 56 03.9	
	comp=Z,858nm,18.3s,baz=302,slow=40						
FRB	Frobisher Bay	51.66	12	P	P	21 31 11.7	-0.6
FRB	Frobisher Bay	51.66	12	P	P	21 31 11.7	-0.6
	comp=Z,5.9nm,0.7s,baz=212,slow=5.8,SNR=10						
CPUP	Villa Florida	51.68	141	P	P	21 31 12.9	0.0
CPUP	Villa Florida	51.68	141	P	P	21 31 12.9	0.0
	comp=Z,1.5nm,0.5s,baz=288,slow=6.6,SNR=7.0						
CPUP				LR	LR	21 54 29.9	
	comp=Z,431nm,18.9s,baz=327,slow=38						
DLBC	Dease Lake	52.98	335	P	P	21 31 23.7	+1.4
DLBC	Dease Lake	52.98	335	P	P	21 31 23.7	+1.4
	comp=Z,3.2nm,0.7s,baz=186,slow=9.5,SNR=3.3						
PLCA	Paso Flores	57.81	162	eP	P	21 31 56.3	-1.0
	comp=Z,28nm,1.4s						
PLCA	Paso Flores	57.81	162	P	P	21 31 58.8	+1.5
	comp=Z,7.3nm,0.9s,baz=349,slow=7.6,SNR=3.0						
PLCA				LR	LR	21 53 39.1	
	comp=Z,273nm,18.1s,baz=4.5,slow=33						
RES	Resolute Bay	60.40	359	eP	P	21 32 14.0	-0.6
	comp=Z,4.5nm,0.6s						
RES	Resolute Bay	60.40	359	P	P	21 32 13.7	-1.0
	comp=Z,4.4nm,0.7s,baz=187,slow=10,SNR=8.9						
INK	Inuvik	60.55	343	P	P	21 32 15.1	-0.8
INK	Inuvik	60.55	343	P	P	21 32 15.1	-0.8
	comp=Z,2.1nm,0.8s,baz=131,slow=7.0,SNR=9.9						
ILAR	Eielson Array	63.13	336	P	P	21 32 33.6	+0.3
ILAR	Eielson Array	63.13	336	P	P	21 32 33.6	+0.3
	comp=Z,2.5nm,1.1s,baz=164,slow=4.9,SNR=9.0						
ILAR				LR	LR	22 02 31.2	
	comp=Z,601nm,20.3s,baz=301,slow=38						
COLA	College	63.55	336	eP	P	21 32 36.4	+0.4
	comp=Z,4.6nm,0.7s						
SUMG	Summit	65.51	15	eP	P	21 32 50.9	+1.6
	comp=Z,16nm,0.9s						
SUMG	Summit	65.51	15	iP	P	21 32 54.5	+5.2
	comp=Z,13nm,0.9s						
PPT	Papeete	66.39	243	LR	LR	21 54 09.2	
	comp=Z,243nm,21.0s,baz=8.0,slow=29						
PPT2	Papeete2	66.40	243	eS	S	21 41 40.7	-4.8
	comp=Z,198nm,25.5s						
PPT2				eLR	LR	21 52 50.0	
	comp=Z,793nm,29.5s,baz=74						
TBI	Tubuai	68.81	238	eS	S	21 42 08.4	-5.7
	comp=Z,146nm,25.2s						
TBI				eLR	LR	21 53 57.0	
	comp=Z,500nm,30.8s,baz=63						
EVOP	Sao Brissos	75.27	53	eP	P	21 33 45.8	-3.2
	comp=Z,43nm,1.3s						

EVO	Evora	75.35	53	eP	P	21 33 45.8	-3.7
	comp=Z,43nm,1.3s						
EVO				eR			
	comp=Z,376nm,21.2s						
ROSF	Rostrenen	77.57	43	eP	P	21 33 58.9	-3.0
	comp=Z,80nm,1.4s						
ROSF	Rostrenen	77.57	43	eP	P	21 33 58.9	-3.0
	comp=Z,80nm,1.4s						
ESDC	Sonseca Array	78.32	52	P	P	21 34 05.2	-1.2
ESDC	Sonseca Array	78.32	52	P	P	21 34 05.2	-1.2
	comp=Z,0.9nm,0.6s,baz=294,slow=5.3,SNR=4.7						
FLN	La Foliniere	79.34	42	eP	P	21 34 09.0	-2.7
	comp=Z,47nm,1.2s						
FLN				eR			
	comp=Z,701nm,20.5s						
FLN	La Foliniere	79.34	42	eP	P	21 34 09.0	-2.7
	comp=Z,47nm,1.3s						
LDF	La Druitiere	79.60	42	eP	P	21 34 10.3	-2.8
	comp=Z,33nm,1.3s						
LDF	La Druitiere	79.60	42	eP	P	21 34 10.3	-2.8
	comp=Z,33nm,1.3s						
SJPF	Ste Jean	79.79	48	eP	P	21 34 10.9	-3.4
	comp=Z,32nm,1.4s						
SJPF	Ste Jean	79.79	48	eP	P	21 34 10.9	-3.4
	comp=Z,32nm,1.4s						
ETSF	Etsaut	80.30	48	eP	P	21 34 13.6	-3.5
	comp=Z,18nm,1.4s						
ETSF	Etsaut	80.30	48	eP	P	21 34 13.6	-3.5
	comp=Z,18nm,1.4s						
LFF	La Frestale	80.85	46	eP	P	21 34 17.2	-2.7
	comp=Z,26nm,1.2s						
LFF	La Frestale	80.85	46	eP	P	21 34 17.2	-2.7
	comp=Z,26nm,1.2s						
EPF	Esparros	80.93	48	eP	P	21 34 17.0	-3.5
EPF	Esparros	80.93	48	eP	P	21 34 17.0	-3.5
PMSA	Palmer Station	81.39	169	LR	LR	22 04 30.8	
	comp=Z,236nm,19.1s,baz=156,slow=31						
TCF	Toulx Ste Croi	81.59	44	eP	P	21 34 20.8	-3.1
TCF	Toulx Ste Croi	81.59	44	eP	P	21 34 20.8	-3.1
MTLF	Montolieu	82.21	47	eP	P	21 34 23.4	-3.8
	comp=Z,14nm,1.2s						
MTLF	Montolieu	82.21	47	eP	P	21 34 23.4	-3.8
	comp=Z,14nm,1.2s						
SSF	Saint Saulge	82.30	43	eP	P	21 34 24.2	-3.3
SSF	Saint Saulge	82.30	43	eP	P	21 34 24.2	-3.3
LOR	Lormes	82.49	43	eP	P	21 34 25.6	-3.0
	comp=Z,15nm,1.1s						
LOR				eR			
	comp=Z,507nm,20.0s						
LOR	Lormes	82.49	43	eP	P	21 34 25.6	-3.0
	comp=Z,15nm,1.1s						
NB2	NORSAR Subarra	83.13	29	P	P	21 34 32.2	+0.6
	comp=Z,4.8nm,1.1s,baz=288,slow=5.3						
NOA	NORSAR Array B	83.13	29	P	P	21 34 32.2	+0.6
NOA	NORSAR Array B	83.13	29	P	P	21 34 32.2	+0.6
	comp=Z,1.2nm,0.7s,baz=289,slow=5.1,SNR=5.9						
PAGF	Fort de Pagny	83.41	42	eP	P	21 34 30.9	-2.4
	comp=Z,9.1nm,1.3s						
PAGF	Fort de Pagny	83.41	42	eP	P	21 34 30.9	-2.4
	comp=Z,9.1nm,1.3s						
VIVF	Saint-Julien-l	83.59	45	eP	P	21 34 32.1	-2.3
	comp=Z,33nm,1.4s						
VIVF	Saint-Julien-l	83.59	45	eP	P	21 34 32.1	-2.3
	comp=Z,33nm,1.4s						
DBIC	Dimbokro	84.11	85	LR	LR	22 06 59.8	
	comp=Z,262nm,21.4s,baz=266,slow=32						
CABF	La Chapelle	84.13	44	eP	P	21 34 33.5	-3.6
CABF	La Chapelle	84.13	44	eP	P	21 34 33.5	-3.6
CDF	Champ du Feu	84.44	42	eP	P	21 34 36.0	-2.7
	comp=Z,8.5nm,1.0s						
CDF	Champ du Feu	84.44	42	eP	P	21 34 36.0	-2.7
	comp=Z,8.5nm,1.0s						
LPL	La Plagne	84.84	44	eP	P	21 34 37.9	-3.0
LPL	La Plagne	84.84	44	eP	P	21 34 37.9	-3.0
ARCES	ARCESS Array B	85.34	18	P	P	21 34 43.4	+0.7
ARCES	ARCESS Array B	85.34	18	P	P	21 34 43.4	+0.7
	comp=Z,4.4nm,0.9s,baz=321,slow=8.1,SNR=3.0						
ARCES				LR	LR	22 10 52.5	
	comp=Z,220nm,21.2s,baz=298,slow=34						
GRF	Grafenberg Arr	86.56	40	eP	P	21 34 54.5	+5.4
	comp=Z,21nm,1.5s						
GRF				eL	L	22 08 54.6	
	comp=Z,302nm,20.9s						
CLL	Collm	87.12	38	epP	pP	21 34 55.0	-1.7
CLL				⇓isP	sP	21 34 57.9	-0.6
	comp=Z,11nm,1.0s						
CLL				Lm	MLR	22 21 00.0	
	comp=N,100nm,22.0s						
CLL				Lm	MLR	22 21 00.0	
	comp=E,200nm,19.7s						
CLL				Lm	MLR	22 21 00.0	
	comp=Z,300nm,18.9s						
NKC	Novy Kostel	87.14	39	eP	P	21 34 55.3	+3.3
NKC				AMS	AMS	22 11 40.0	
	comp=Z,300nm,23.6s						
BRG	Berggiesshubel	87.83	38	eP	P	21 35 00.9	+5.7
	comp=Z,7.7nm,1.2s						
BRG							
	comp=N,163nm,17.0s						
BRG							
	comp=E,268nm,14.4s						
BRG							
	comp=Z,431nm,22.3s						
KHC	Kasperske Hory	88.20	40	eP	P	21 34 58.0	+0.9
	comp=Z,8.9nm,1.4s						
KHC	Kasperske Hory	88.20	40	eP	P	21 35 01.1	+4.0
KHC				AMS	AMS	22 13 10.0	
	comp=Z,300nm,14.7s						
PVCC	Panska Ves	88.32	38	eP	P	21 35 03.7	+6.1
GERES	GERESS Array B	88.38	40	P	P	21 34 58.2	+0.2
GERES	GERESS Array B	88.38	40	P	P	21 34 58.2	+0.2
	comp=Z,1.2nm,0.9s,baz=232,slow=7.4,SNR=4.9						
GERES				LR	LR	22 14 02.5	
	comp=Z,328nm,19.5s,baz=285,slow=35						
PRU	Pruhonice	88.50	39	eP	P	21 35 02.9	+4.5
PRU				AMS	AMS	22 11 40.0	
	comp=Z,300nm,18.8s						
TORD	Torodi Ar. Bea	88.83	77	P	P	21 35 02.1	+1.5
TORD	Torodi Ar. Bea	88.83	77	P	P	21 35 02.1	+1.5
	comp=Z,0.3nm,0.9s,baz=281,slow=5.7,SNR=3.3						
TORD				LR	LR	22 09 09.8	
	comp=Z,315nm,22.0s,baz=285,slow=32						
UPC	Upice	89.19	38	eP	P	21 35 05.8	+4.1
TREC	Trest	89.32	39	AMS	AMS	22 16 20.0	
	comp=Z,300nm,19.7s						
DPC	Dobruska-Polom	89.43	38	eP	P	21 35 07.8	+4.9
DPC				AMS	AMS	22 14 30.0	
	comp=Z,300nm,24.5s						
FINES	FINESS Array B	89.55	25	P	P	21 35 02.8	-0.3
FINES	FINESS Array B	89.55	25	P	P	21 35 02.8	-0.3
	comp=Z,2.6nm,1.0s,baz=288,slow=0.4,SNR=3.0						
OKC	Ostrava-Krasne	90.72	38	AMS	AMS	22 15 10.0	
	comp=Z,300nm,20.6s						
VYHS	Vyhne	91.67	39	eP	P	21 35 18.8	+5.5
CRVS	Cervenica-Dubn	93.08	38	eP	P	21 35 26.5	+6.7
KOLS	Kolonicke sedl	93.54	38	eP	P	21 35 29.0	+7.1
AKASG	Malin Array Be	96.61	34	LR	LR	22 21 37.7	
	comp=Z,249nm,18.8s,baz=275,slow=37						
HHC	Hu-ho-hao-te	121.43	341	ePKP	PKPdf	21 40 54.8	-4.9
HHC				sPKP		21 41 08.9	
HHC				PKS	PKSdf	21 44 29.8	-6.7
HHC				AMB	AMB		
	comp=Z,200nm,9.0s						
HHC				LR	LR		
	comp=N,250nm,21.2s						
HHC				LR	LR		
	comp=E,400nm,20.3s						
HHC				LR	LR		
	comp=Z,290nm,21.1s						
WMQ	Urumqi	122.10	2	PKP	PKPdf	21 40 59.8	-1.1
WMQ				PP	PP	21 42 39.8	+5.7
WMQ				PKS	PKSdf	21 44 34.8	-2.8
WMQ				SKS	SKSdf	21 48 09.8	-2.9
WMQ				SKKS	SKKSac	21 49 30.8	-3.7
WMQ				SS	SS	21 59 15.8	+4.3
WMQ				AMB	AMB		
	comp=Z,33nm,12.0s						
WMQ				LR	LR		
	comp=N,430nm,24.0s						
WMQ				LR	LR		
	comp=E,570nm,24.0s						
WMQ				LR	LR		
	comp=Z,480nm,25.0s						
KSH	Kashi	124.95	13	PKP	PKPdf	21 41 08.0	+1.4
KSH				PP	PP	21 43 00.7	+7.2
KSH				PKS	PKSdf	21 44 44.0	+0.7
KSH				SKS	SKSdf	21 48 19.4	+1.0
KSH				SKKS	SKKSac	21 49 53.8	+0.7
KSH				SS	SS	21 59 55.3	+7.4
KSH				AMB	AMB		
	comp=Z,57nm,4.6s						
KSH				LR	LR		
	comp=N,76nm,3.8s						
KSH				LR	LR		
	comp=E,77nm,4.6s						
KSH				LR	LR		
	comp=Z,520nm,17.3s						
NJ2	Nanjing	126.01	329	ePKP	PKPdf	21 41 05.2	-3.4
LZH	Lanzhou	128.06	345	ePKP	PKPdf	21 41 10.5	-2.2
CD2	Chengdu	132.99	343	PKP	PKPdf	21 41 22.2	+0.2
GYA	Guiyang	136.17	338	ePdif	Pdif	21 38 31.0	-1.7
GYA				PKP	PKPdf	21 41 27.4	-0.8
GYA				PP	PP	21 44 09.8	+3.3
GYA				PKS	PKSdf	21 45 02.0	-2.7
GYA				SKKS		21 50 58.8	
GYA				SS	SS	22 02 05.6	-0.4
GYA				AMB	AMB		
	comp=Z,110nm,7.6s						
GYA				LR	LR		
	comp=N,110nm,21.2s						
GYA				LR	LR		
	comp=E,90nm,22.7s						
GYA				LR	LR		
	comp=Z,120nm,21.5s						
WRA	Warramunga Arr	136.95	256	PKP	PKPdf	21 41 28.5	-1.0
WRA	Warramunga Arr	136.95	256	PKP	PKPdf	21 41 28.5	-1.0
	comp=Z,2.2nm,0.9s,baz=89,slow=2.4,SNR=8.2						
ASAR	Alice Springs	137.21	251	PKPpre	PKPpre	21 41 20.2	
ASAR				PKP	PKPdf	21 41 29.9	-0.1
ASAR	Alice Springs	137.21	251	PKhKP	PKPpre	21 41 20.2	
	comp=Z,0.3nm,0.7s,baz=122,slow=4.5,SNR=3.5						
ASAR				PKP	PKPdf	21 41 29.9	-0.1
	comp=Z,0.6nm,0.7s,baz=99,slow=2.9,SNR=6.4						
KMI	Kunming	138.73	342	PKP	PKPdf	21 41 32.4	-0.7
KMI				sPKP		21 41 39.1	
KMI				PP	PP	21 44 26.0	+3.5
KMI				SS	SS	22 02 36.7	+0.3
KMI				AMB	AMB		
	comp=Z,76nm,4.3s						
KMI				LR	LR		
	comp=N,240nm,20.6s						
KMI				LR	LR		
	comp=E,370nm,25.5s						
KMI				LR	LR		
	comp=Z,190nm,25.5s						
FITZ	Fitzroy Crossi	145.19	259	ePKPbc	PKPbc	21 41 42.9	-1.1
CMAR	Chiang Mai Arr	146.13	344	PKPbc	PKPdf	21 41 45.5	-0.6
CMAR	Chiang Mai Arr	146.13	344	PKPbc	PKPdf	21 41 45.5	-0.6
	comp=Z,0.3nm,0.5s,baz=342,slow=3.3,SNR=3.0						
HYB	Hyderabad	146.63	19	i PKP	PKPab	21 41 50.0	+0.6

IDC 04 21:27:38.5±2.7,14°.72S×173°.33E,h587km±23km,mb3.3/7, mb1 3.5/8,mb1mx3.2/20,mbtmp3.3/8,Error ellipse: s-maj=28.9km s-min=25.3km az=78.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.80	221	P	P	21 29 57.0	+1.9
	1.4nm,0.3s,baz=61,slow=18,SNR=9.6						
CTA	Charters Tower	26.36	254	P	P	21 32 29.5	0.0
	2.9nm,0.6s,baz=71,slow=10,SNR=3.6						
STKA	Stephens Creek	33.61	234	P	P	21 33 32.0	+0.4
	8.0nm,0.4s,baz=62,slow=8.6,SNR=44						
WRA	Warramunga Arr	37.52	256	P	P	21 34 02.9	-1.2
	8.4nm,0.6s,baz=89,slow=8.9,SNR=57						
WRA				ScP	ScP	21 38 59.1	+0.5
	0.2nm,0.3s,baz=82,slow=3.7,SNR=4.7						
ASAR	Alice Springs	38.18	250	P	P	21 34 08.9	-0.5
	28nm,0.5s,baz=80,slow=8.9,SNR=738						
ASAR				ScP	ScP	21 39 01.5	+0.3
	0.8nm,0.8s,baz=85,slow=3.9,SNR=6.9						
VNDA	Vanda	63.08	183	P	P	21 37 08.8	-0.1
	0.5nm,0.7s,baz=351,slow=5.1,SNR=3.1						
CMAR	Chiang Mai Arr	80.35	292	P	P	21 38 50.6	+0.5
	0.6nm,0.4s,baz=124,slow=4.3,SNR=7.9						
SONM	Songino Array	86.06	322	P	P	21 39 19.8	+1.8
	0.2nm,0.7s,baz=136,slow=5.2,SNR=3.4						
MKAR	Makanchi Array	101.28	316	P	Pdif	21 40 26.8	-0.5
	0.1nm,0.5s,baz=88,slow=4.8,SNR=2.9						
ARCES	ARCESS Array B	121.63	347	PKP	PKPdf	21 45 24.1	-1.6
	3.3nm,0.9s,baz=84,slow=3.5,SNR=8.2						
FINES	FINESS Array B	127.77	341	PKP	PKPdf	21 45 36.8	-0.9
	1.1nm,0.9s,baz=22,slow=2.1,SNR=4.8						
TORD	Torodi Ar. Bea	171.73	260	PKPab	PKPab	21 48 07.2	-0.7
	0.8nm,0.7s,baz=99,slow=3.5,SNR=6.3						

KRSC 04 21:37:13.4±0.6,53°.73N×160°.53E,h67km±67km,ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDLR	Sedlovina	1.08	246	P	Pn	21 37 34.4	+1.5
SDLR				i S	Sn	21 37 49.5	+2.0
MKZ	Mys Kozlova	1.09	40	P	Pn	21 37 34.1	+1.3
MKZ				i S	Sn	21 37 48.6	+1.3
SMAR	Somma	1.13	246	P	Pn	21 37 35.1	+1.4
SMAR				i S	Sn	21 37 50.2	+1.3
KRER	Koryakskii	1.15	249	P	Pn	21 37 35.4	+1.5
KRER				i S	Sn	21 37 50.9	+1.8
UGLR	Uglovaya	1.15	244	P	Pn	21 37 35.4	+1.7
UGLR				i S	Sn	21 37 51.0	+2.1
AVH	Avacha	1.17	247	P	Pn	21 37 35.7	+1.7
AVH				i S	Sn	21 37 51.5	+2.1
KOK	Koryaka	1.21	250	P	Pn	21 37 36.0	+1.4
KOK				i S	Sn	21 37 52.0	+1.5
PET	Petropavlovsk	1.33	239	eP	Pn	21 37 37.6	+1.7
PET				i S	Sn	21 37 54.7	+1.8
GNL	Ganaly	1.54	270	eP	Pn	21 37 39.5	+0.6
GNL				i S	Sn	21 37 58.3	+0.1
RUS	Russkaya	1.78	224	eP	Pn	21 37 43.4	+1.4
RUS				i S	Sn	21 38 05.1	+1.5
MTVR	Mutnovka	1.89	230	eP	Pn	21 37 45.6	+2.0
MTVR				i S	Sn	21 38 09.6	+3.0
GRL	Gorelyy	1.89	232	eP	Pn	21 37 46.1	+2.4
GRL				i S	Sn	21 38 10.3	+3.6
APC	Apacha	2.18	250	eP	Pn	21 37 49.3	+2.0
APC				i S	Sn	21 38 14.9	+1.7
ZLN	Zelenaya	2.30	4	eP	Pn	21 37 51.2	+2.1
ZLN				i S	Sn	21 38 19.2	+2.8
LGNR	Loginova	2.36	2	eP	Pn	21 37 52.6	+2.4
LGNR				i S	Sn	21 38 21.4	+3.1
CIRR	Tsirk	2.39	3	eP	Pn	21 37 52.0	+1.5
CIRR				i S	Sn	21 38 20.8	+1.9
ESO	Esso	2.44	335	eP	Pn	21 37 51.6	+0.6
KRSR	Krestovskiy	2.49	0	eP	Pn	21 37 53.5	+1.7
KLY	Klyuchi	2.59	2	eP	Pn	21 37 54.7	+1.8
KLY				i S	Sn	21 38 25.7	+2.5
MIPR	Malaya Ipel'ka	2.71	239	eP	Pn	21 37 56.5	+2.0
KBTR	Krutoberegovo	2.81	27	eP	Pn	21 37 57.3	+1.4
KBTR				i S	Sn	21 38 29.5	+0.8
KBG	Krutoberegovo	2.82	25	eP	Pn	21 37 58.5	+2.4
KBG				i S	Sn	21 38 31.0	+2.1
BDR	Baidarnaya	2.87	8	eP	Pn	21 37 59.2	+2.3
BDR				i S	Sn	21 38 32.9	+2.6
BKI	Bering	3.50	63	eP	Pn	21 38 06.8	+1.5
BKI				i S	Sn	21 38 45.7	+0.2

IDC 04 21:38:21.4±5.2,20°.15S×176°.65W,h459km±155km, mb3.4/4,mb1 3.5/6,mb1mx3.1/22,mbtmp3.4/6,Error ellipse: s-maj=107.6km s-min=33.4km az=82.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.76	38	P	P	21 40 15.4	+0.9
	4.1nm,0.3s,baz=218,slow=19,SNR=2.6						
AFI				S	S	21 41 47.0	-0.2
	2.2nm,0.3s,baz=255,slow=20,SNR=1.9						
URZ	Urewera	18.84	195	P	P	21 42 10.9	-0.7
	1.1nm,0.3s,baz=304,slow=3.6,SNR=6.0						
CTA	Charters Tower	34.79	264	P	P	21 44 32.1	-0.3
	3.3nm,0.4s,baz=91,slow=6.4,SNR=5.7						
STKA	Stephens Creek	39.08	244	P	P	21 45 08.1	+0.3
	0.7nm,0.3s,baz=86,slow=12,SNR=7.0						
ASAR	Alice Springs	45.84	256	P	P	21 46 01.3	0.0
	2.6nm,0.4s,baz=88,slow=8.0,SNR=60						
WRA	Warramunga Arr	45.91	261	P	P	21 46 01.5	-0.4
	1.5nm,0.5s,baz=97,slow=8.4,SNR=17						

IDC 04 21:39:08.8±2.2,8°.36S×129°.99E,h0km,mb3.1/1, mb1 3.2/3,mb1mx3.1/18,mbtmp3.0/3,ML3.0/2,Error ellipse: s-maj=117.2km s-min=28.7km az=68.0,Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.26	160	Pn	Pn	21 42 05.1	+0.2
	0.1nm,0.3s,baz=342,slow=14,SNR=2.8						
WRA				Sn	Sn	21 44 21.3	-1.2
	0.1nm,0.3s,baz=341,slow=22,SNR=3.3						
ASAR	Alice Springs	15.68	167	Pn	Pn	21 42 52.4	+1.1
	0.1nm,0.3s,baz=349,slow=9.4,SNR=4.8						
MKAR	Makanchi Array	69.35	327	P	P	21 50 18.3	-0.1
	0.1nm,0.6s,baz=115,slow=5.4,SNR=4.1						

IDC 04 21:39:25.7±6.0, 14°.21N×90°.22W, h0km, mb3.8/3, mb1 4.0/6, mb1mx3.7/25, mbtmp3.9/6, ML4.2/3, MS3.0/1, Ms1 3.0/1, ms1mx2.6/43, Error ellipse: s-maj=109.3km s-min=41.3km az=173.0
ISCJB 04 21:39:28.8±0.5, 14°.35N±0°.04×90°.49W±0°.03, h21km±4km, mb3.8/4, Error ellipse: s-maj=8.0km s-min=3.9km az=32.1
CASC 04 21:39:28.5±1.6, 14°.32N×90°.46W, h6km±6km, MD3.5, ML3.8
ISC 04 21:39:29.0±1.2,14°.35N±0°.04×90°.42W±0°.03,h10km±8km, n25,σ1s.27/35,mb3.9/4,4C-3D,Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	Pacaya	0.19	284⇑	eP	Pg	21 39 32.7	-0.5
NBG	Las Nubes	0.25	16⇓	eP	Pg	21 39 34.9	+0.7
GCG	Guatemala City	0.26	335	eP	Pg	21 39 34.5	0.0
GCG				eS	Sb	21 39 39.1	-1.4
FUG	Fuego 3	0.42	284	eP	Pg	21 39 36.2	-1.1
FG6		0.50	295⇑	eP	Pg	21 39 37.8	-0.9
RBDL	Robledal	0.75	108	eP	Pg	21 39 42.6	-0.9
RTR	El Retiro	0.87	121⇑	eP	Pg	21 39 45.2	-0.7
RTR				eS	Sb	21 39 58.5	+0.5
SNJE	San Jose	0.92	121	eP	Pg	21 39 45.8	-1.0
SBLS	San Blas	0.92	123	eP	Pg	21 39 45.9	-0.9
SBLS				eS	Sb	21 40 00.9	+1.4
MRL	Marmol	1.00	44⇓	eP	Pb	21 39 48.9	+0.4
MRL				eS	Sb	21 40 02.8	+1.0
MTO2	Montecristo 2	1.02	87	eP	Pg	21 39 47.8	-1.0
MTO2				eS	Sg	21 40 02.3	+0.2
JAT	Jato	1.18	269⇑	eP	Pn	21 39 50.5	-1.0
JAT				eS	Sn	21 40 09.7	+2.0
BOQS	Boqueron	1.26	119	eP	Pn	21 39 51.8	-1.0
BOQS				eS	Sb	21 40 09.9	+0.6
SNET	Serv Nac Est T	1.32	120	eP	Pn	21 39 52.6	-0.9
SNET				AML	AML	21 40 14.8	
	comp=Z,2μm,0.2s						
LFU	La Fuente	1.40	115	eP	Pn	21 39 54.0	-0.6
LBRS	Las Brisas	1.46	114⇓	iP	Pn	21 39 55.2	-0.2
LBRS				eS	Sn	21 40 15.1	+0.4
LFRS	El Faro	1.50	119	eP	Pn	21 39 55.7	-0.3
LFRS				eS	Sn	21 40 16.4	+0.7
SNVI	San Vicente	1.70	115	eP	Pn	21 39 59.2	+0.5
CMIG	Matias Romero	5.09	303	Pn	Pn	21 40 46.5	+1.2
	comp=Z,3.4nm,0.3s,baz=135,slow=10,SNR=12						
CMIG				Sn	Sn	21 41 50.8	+6.5
	comp=Z,2.9nm,0.3s,baz=260,slow=18,SNR=2.6						
CMIG				Lg	Lg	21 42 06.7	
	comp=Z,7.1nm,0.3s,baz=47,slow=19,SNR=7.5						
CMIG				LR	LR	21 42 23.9	
	comp=Z,160nm,21.4s,baz=184,slow=33						
TEIG	Tepich	6.19	19	Pn	Pn	21 41 00.5	+0.1
	comp=Z,24nm,0.3s,baz=43,slow=2.8,SNR=20						
TEIG				Sn	Sn	21 42 07.8	-3.6
	baz=119,slow=18,SNR=2.4						
TEIG				Lg	Lg	21 42 45.0	
	comp=Z,3.8nm,0.3s,baz=130,slow=19,SNR=3.6						
TXAR	Lajitas Array	19.30	323	P	P	21 43 54.2	-0.1
	comp=Z,0.1nm,0.3s,baz=146,slow=12,SNR=4.5						
SCHQ	Schefferville	44.38	19	P	P	21 47 37.5	-2.0
	comp=Z,2.2nm,1.0s,baz=217,slow=15,SNR=2.4						
YKA	Yellowknife Ar	51.05	346	P	P	21 48 29.6	-1.5
	comp=Z,0.3nm,0.4s,baz=147,slow=7.8,SNR=7.9						
RES	Resolute Bay	60.38	359	P	P	21 49 40.5	+2.5
	comp=Z,0.5nm,0.6s,baz=188,slow=7.8,SNR=3.6						
INK	Inuvik	60.55	343	P	P	21 49 40.6	+1.5
	comp=Z,1.9nm,1.0s,baz=157,slow=5.9,SNR=4.5						

NEIC 04 21:42:06.2,18°.95N×68°.73W,h104km,MD3.8(RSPR), After RSPR.,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	1.60	107	ePn	Pn	21 42 34.9	+0.9
AGPR				eS	Sn	21 42 56.4	+1.4
LSP	Las Mesas	1.74	116	ePn	Pn	21 42 36.2	+0.6
LSP				eS	Sn	21 43 00.1	+2.0
CRPR	Cabo Rojo, PR	1.80	121	ePn	Pn	21 42 35.6	-0.7
CRPR				eS	Sn	21 42 59.3	0.0
LRS	Lares	1.90	110	ePn	Pn	21 42 37.9	+0.2
LRS				eS	Sn	21 43 04.8	+3.1
OBIP	Obispado Ponce	2.21	114	ePn	Pn	21 42 41.3	-0.3
OBIP				eS	Sn	21 43 08.9	+0.2
CELP	Cerrillos	2.22	113	ePn	Pn	21 42 41.3	-0.4
CELP				eS	Sn	21 43 09.7	+0.8
SDDR	Presa de Saban	2.42	271	ePn	Pn	21 42 43.8	-0.7
SDDR				eS	Sn	21 43 14.0	+0.1
SJG	San Juan	2.58	108	ePn	Pn	21 42 45.7	-0.8
SJG				eS	Sn	21 43 14.6	-2.8
CBYP	Canovanas	2.80	104	ePn	Pn	21 42 48.5	-1.0
CBYP				eS	Sn	21 43 24.1	+1.2
MTP	Monte Pirata	3.13	105	ePn	Pn	21 42 54.4	+0.7
MTP				eS	Sn	21 43 32.2	+1.8
GRTK	Grand Turk	3.41	319	ePn	Pn	21 42 57.6	+0.2
GRTK				eS	Sn	21 43 37.6	+0.6
STVI	Saint Thomas	3.63	99	ePn	Pn	21 43 00.0	-0.4
STVI				eS	Sn	21 43 42.7	+0.3

AUST 04 21:50:45.4, 4°.82S×145°.57E, h100km
ISCJB 04 21:50:48.3±0.3, 4°.82S±0°.03×145°.52E±0°.06, h150km, mb4.3/32, Error ellipse: s-maj=8.8km s-min=4.5km az=179.9
IDC 04 21:50:50.3±2.5, 4°.90S×145°.51E, h156km±24km, mb4.1/22, mb1 4.2/25, mb1mx4.2/27, mbtmp4.1/25, MS3.4/1, Ms1 3.4/1, ms1mx2.6/33, Error ellipse: s-maj=15.8km s-min=10.2km az=84.0
NEIC 04 21:50:50.3±1.2, 4°.88S×145°.50E, h157km±12km, mb4.3/12, Error ellipse: s-maj=10.2km s-min=7.7km az=89.0
ISC 04 21:50:49.5±0.4,4°.89S±0°.05×145°.60E±0°.08,h150km,n114, σ1s.00/118,mb4.3/31,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.75	161	ePn	Pn	21 51 59.2	-0.4
PMG				eS	Sn	21 52 45.0	-9.4
PMG	Port Moresby	4.75	161	P	Pn	21 51 59.1	-0.6
	27nm,0.3s,baz=0.6,slow=4.3,SNR=73						
PMG				S	Sn	21 52 51.9	-2.5
	18nm,0.3s,baz=136,slow=23,SNR=8.7						
JAY	Jayapura	5.42	296	P	Pn	21 52 09.4	+0.8
	baz=5.4,SNR=12						
COEN	Coen	9.33	195	ePn	Pn	21 53 02.2	+1.6
	250nm,1.0s						
COEN				eS	Sn	21 54 43.9	-0.2
COEN	Coen	9.33	195	P	Pn	21 53 02.7	+2.1
	baz=9.4,SNR=13						
COEN				S	Sn	21 54 46.6	+2.5
	baz=9.4,SNR=5.2						
TLE	Tual	12.83	266	P	P	21 53 58.2	+6.5
	baz=13,SNR=3.9						
KDU	Kakadu	15.10	238	P	Pn	21 54 14.9	-0.4
	baz=15,SNR=78						
CTA	Charters Tower	15.13	178	P	P	21 54 17.1	-0.1
CTA	Charters Tower	15.13	178	P	P	21 54 17.1	-0.1
	0.2nm,0.3s,baz=2.6,slow=15,SNR=4.6						
CTAO	Charters Tower	15.13	178	ePn	Pn	21 54 16.6	+1.0
MTN	Manton Dam	16.32	240	P	Pn	21 54 29.5	-0.8
	baz=16,SNR=47						
WRAB	Tennant Creek	18.54	215	ePn	P	21 54 55.2	+0.4
	29nm,0.4s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.55	215	P	P	21 54 55.4	+0.5
WRA				S	S	21 58 17.6	-1.2
WRA	Warramunga Arr	18.55	215	P	P	21 54 55.4	+0.5
	8.0nm,0.3s,baz=42,slow=9.3,SNR=160						
WRA				S	S	21 58 17.6	-1.2
	0.2nm,0.3s,baz=48,slow=22,SNR=4.1						
EIDS	Eidsvold	21.04	166	eP	P	21 55 23.0	+1.4
	16nm,0.8s						
EIDS	Eidsvold	21.04	166	P	P	21 55 23.4	+1.8
	baz=21,SNR=6.1						
QLP	Quilpie	21.61	183	P	P	21 55 29.2	+1.4
	baz=22,SNR=27						
RMQ	Roma	21.69	172	P	P	21 55 30.9	+2.3
	baz=22,SNR=9.1						
AS31	Alice Springs	21.81	210	eP	P	21 55 30.2	+0.3
ASAR	Alice Springs	21.81	210	P	P	21 55 30.4	+0.4
ASAR				S	S	21 59 18.6	-2.6
ASAR	Alice Springs	21.81	210	P	P	21 55 30.4	+0.4
	15nm,0.3s,baz=43,slow=7.7,SNR=324						
ASAR				S	S	21 59 18.6	-2.6
	4.0nm,1.0s,baz=27,slow=21,SNR=13						
ASAR				LR	LR	22 03 49.1	
	comp=Z,91nm,19.8s,baz=0.9,slow=36						
FITZ	Fitzroy Crossi	23.52	234	P	P	21 55 45.4	-0.8
FITZ	Fitzroy Crossi	23.52	234	P	P	21 55 45.4	-0.8
	57nm,0.6s,baz=51,slow=8.9,SNR=120						
FITZ	Fitzroy Crossi	23.52	234	P	P	21 55 45.5	-0.7
	baz=24,SNR=70						
PCI	Palu	26.02	278	P	P	21 56 19.6	+11
	baz=26,SNR=3.6						
PCI				S	S	22 00 19.4	-10
	baz=26,SNR=4.7						
ARMA	Armidale	26.03	168	P	P	21 56 10.8	+1.9
	baz=26,SNR=6.8						
STKA	Stephens Creek	27.11	187	eP	P	21 56 18.4	-0.1
	0.4nm,0.3s						
STKA	Stephens Creek	27.11	187	P	P	21 56 18.8	+0.3
	2.1nm,0.3s,baz=41,slow=11,SNR=22						
STKA	Stephens Creek	27.11	187	P	P	21 56 17.2	-1.2
	baz=27,SNR=5.7						
BBOO	Buckleboo	29.18	197	eP	P	21 56 37.0	+0.2
	331nm,0.6s						
BBOO	Buckleboo	29.18	197	P	P	21 56 37.1	+0.3
	baz=29,SNR=42						
YNG	Young	29.38	175	P	P	21 56 40.2	+1.6
	baz=30,SNR=12						
FORT	Forrest	30.60	211	P	P	21 56 49.5	+0.2
	baz=31,SNR=18						
ARPS	Mount Arapiles	31.92	186	P	P	21 57 02.3	+1.4
	baz=32,SNR=6.1						
MILA	Mila	32.18	175	P	P	21 57 04.7	+1.5
	baz=32,SNR=5.7						
MEEK	Meekatharra	33.65	227	P	P	21 57 15.8	-0.3
	baz=34,SNR=21						
MORW	Morawa	36.90	226	P	P	21 57 43.3	-0.6
	baz=37,SNR=6.2						
KLBR	Kellerberrin	37.25	221	P	P	21 57 45.9	-0.9
	baz=37,SNR=11						
BLDU	Ballidu	37.35	223	P	P	21 57 46.8	-0.8
	baz=37,SNR=14						
NWAO	Narrogin (SRO)	38.45	220	P	P	21 57 55.5	-1.4
NWAO	Narrogin (SRO)	38.45	220	P	P	21 57 55.5	-1.4
	6.2nm,1.0s,baz=36,slow=12,SNR=4.0						
RKGY	Rocky Gully	39.71	218	P	P	21 58 07.5	+0.2
	baz=40,SNR=6.5						
MJAR	Matsushiro Arr	41.79	351	P	P	21 58 23.6	-0.7
MJAR	Matsushiro Arr	41.79	351	P	P	21 58 23.6	-0.7
	1.3nm,0.8s,baz=178,slow=5.9,SNR=5.1						
URZ	Urewera	43.87	144	P	P	21 58 41.6	+0.6
URZ	Urewera	43.87	144	P	P	21 58 41.6	+0.6
	3.2nm,0.8s,baz=354,slow=10,SNR=2.6						
RPZ	Rata Peaks	44.72	154	P	P	21 58 48.9	+1.2
RPZ	Rata Peaks	44.72	154	P	P	21 58 48.9	+1.2
	7.4nm,0.5s,baz=281,slow=5.2,SNR=3.9						
KSRS	Korea Array	45.23	340	P	P	21 58 51.7	-0.1
	1.0nm,0.3s,baz=157,slow=9.5,SNR=5.5						
KSAR	Wonju Array Be	45.23	340	P	P	21 58 51.7	-0.1
KULM	Kulim	46.01	282	eP	P	21 58 57.0	-1.4
	3.2nm,0.4s						
USRK	Ussuriysk Arra	50.37	347	P	P	21 59 31.8	+0.6
	4.9nm,0.7s,baz=180,slow=7.5,SNR=16						
CMAR	Chiang Mai Arr	51.50	298	P	P	21 59 40.7	+0.6
CMAR	Chiang Mai Arr	51.50	298	P	P	21 59 40.7	+0.6
	3.3nm,0.6s,baz=124,slow=6.1,SNR=30						
PETK	Petropavlovsk-	58.67	9	P	P	22 00 32.2	+1.2
PETK	Petropavlovsk-	58.67	9	P	P	22 00 32.2	+1.2
	2.2nm,0.5s,baz=177,slow=10,SNR=3.5						
FX1	Attu Island--F	62.09	19	P	P	22 00 54.9	+0.7
FX1	Attu Island--F	62.09	19	P	P	22 00 54.9	+0.7
	21nm,0.7s,baz=284,slow=17,SNR=3.4						
ULN	Ulaanbaatar	62.47	332	eP	P	22 00 57.7	+0.7
	3.9nm,1.3s						
SONM	Songino Array	62.76	331	P	P	22 00 59.4	+0.5
SONM				pP	pP	22 01 35.5	+0.9
SONM	Songino Array	62.76	331	P	P	22 00 59.4	+0.5
	0.2nm,0.3s,baz=114,slow=4.3,SNR=8.1						
SONM				pP	pP	22 01 35.5	+0.9
	0.5nm,0.7s,baz=145,slow=4.7,SNR=1.9						
TAPN	Taplejung	64.38	303	eP	P	22 01 09.8	-0.3
ODAN	Odare	64.47	303	eP	P	22 01 10.8	+0.1
	14nm,0.9s						
RAMN	Ramite	65.17	303	eP	P	22 01 15.3	+0.1
GUN	Gumba	66.09	303	eP	P	22 01 21.3	0.0
	25nm,0.7s						
PKI	Pulchoki	66.37	303	eP	P	22 01 23.0	0.0
KKN	Kakani	66.55	303	eP	P	22 01 24.1	+0.1
	15nm,0.8s						
DMN	Daman	66.64	303	eP	P	22 01 24.9	+0.3
KOLN	Koldanda	67.95	302	eP	P	22 01 32.7	-0.2
	13nm,0.8s						
DANN	Dangsing	68.00	303	eP	P	22 01 32.5	-0.8
	9.9nm,0.6s						
PYUN	Piuthan	68.57	303	eP	P	22 01 36.0	-0.7
	17nm,0.7s						
VNDA	Vanda	73.10	176	P	P	22 02 03.1	+0.3
VNDA	Vanda	73.10	176	P	P	22 02 03.1	+0.3
	0.8nm,0.6s,baz=328,slow=5.8,SNR=10						
MK31	Makanchi Array	75.75	321	eP	P	22 02 18.9	+0.1
MKAR	Makanchi Array	75.75	321	P	P	22 02 18.6	-0.1
MKAR	Makanchi Array	75.75	321	P	P	22 02 18.7	-0.1
	3.6nm,0.7s,baz=96,slow=8.5,SNR=51						
ZALV	Zalesovo Beam	77.33	328	P	P	22 02 26.5	-0.9
ZALV	Zalesovo Beam	77.33	328	P	P	22 02 26.5	-0.9
	3.8nm,0.5s						
ULHL	Ulahol	78.22	315	P	P	22 02 33.3	+0.4
	SNR=5.7						
KZA	Kyzart	78.87	314	P	P	22 02 37.4	+0.7
	SNR=24						
TKM2	Tokmak 2	78.88	315	eP	P	22 02 36.4	-0.1
	4.7nm,0.6s						
TKM2	Tokmak 2	78.88	315	P	P	22 02 36.6	+0.1
	SNR=11						
KURK	Kurchatov	79.49	323	eP	P	22 02 39.0	-0.3
	2.4nm,0.6s						
AAK	Ala-Archa	79.57	315	eP	P	22 02 39.8	-0.4
	11nm,0.8s						
AAK	Ala-Archa	79.57	315	P	P	22 02 40.2	0.0
	2.7nm,0.8s,baz=126,slow=5.8,SNR=17						
USP	Ospenovka	79.75	315	P	P	22 02 41.2	+0.2
	SNR=5.2						
AML	Almayashu	80.00	314	P	P	22 02 43.4	+0.6
	SNR=9.4						
EKS2	Erkin-Say	80.08	315	eP	P	22 02 42.8	-0.1
	4.0nm,0.8s						
EKS2	Erkin-Say	80.08	315	P	P	22 02 43.3	+0.4
	SNR=6.6						
COLA	College	84.67	23	eP	P	22 03 06.0	0.0
COLD	Coldfoot	84.78	21	eP	P	22 03 07.5	+0.9
	6.8nm,1.1s						
ILAR	Eielson Array	85.02	23	P	P	22 03 07.0	-0.9
ILAR	Eielson Array	85.02	23	P	P	22 03 07.0	-0.9
	13nm,0.7s,baz=251,slow=5.1,SNR=144						
BVAR	Borovoye Array	85.05	324	P	P	22 03 07.6	-0.7
BVAR	Borovoye Array	85.05	324	P	P	22 03 07.6	-0.7
	4.8nm,0.6s,baz=111,slow=7.2,SNR=44						
BRVK	Borovoye	85.12	324	eP	P	22 03 07.8	-0.7
	2.3nm,0.7s						
ABKAR	Akbulak array	90.83	319	eP	P	22 03 34.2	-1.7
	1.8nm,0.7s						
AKTO	Aktyubinsk	92.19	320	P	P	22 03 40.5	-1.7
AKTO	Aktyubinsk	92.19	320	P	P	22 03 40.5	-1.7
	0.4nm,0.3s,baz=108,slow=3.2,SNR=3.2						
NVAR	Mina Array Bea	97.79	52	P	Pdif	22 04 10.3	+2.0
NVAR	Mina Array Bea	97.79	52	P	Pdif	22 04 10.3	+2.0
	0.2nm,0.4s,baz=306,slow=7.7,SNR=2.5						
YKA	Yellowknife Ar	98.84	28	P	P	22 04 11.8	-0.2
YKA	Yellowknife Ar	98.84	28	P	P	22 04 11.8	-0.2
	1.0nm,0.9s,baz=275,slow=4.9,SNR=9.8						
ARCES	ARCESS Array B	104.77	342	Pdif	Pdif	22 04 37.3	-1.1
ARCES	ARCESS Array B	104.77	342	Pdiff	Pdif	22 04 37.3	-1.1
	3.5nm,0.8s,baz=51,slow=7.1,SNR=3.0						
FINES	FINESS Array B	108.06	334	Pdif	Pdif	22 04 51.3	-1.9
FINES	FINESS Array B	108.06	334	Pdiff	Pdif	22 04 51.3	-1.9
	2.9nm,1.0s,baz=92,slow=7.4,SNR=3.2						
NACGM	Naroch	110.27	327	eLR	LR	22 09 06.0	
TORD	Torodi Ar. Bea	143.46	285	PKPpre	PKPpre	22 10 03.0	
TORD	Torodi Ar. Bea	143.46	285	PKhKP	PKPpre	22 10 03.0	
	0.3nm,0.4s,baz=77,slow=3.2,SNR=11						
SIV	San Ignacio	146.43	129	PKPbc	PKPdf	22 10 12.3	-0.2
SIV				pPKPbc	pPKPbc	22 10 56.1	+2.8
SIV	San Ignacio	146.43	129	PKPbc	PKPdf	22 10 12.3	-0.2
	1.1nm,0.6s,baz=254,slow=3.9,SNR=6.9						
SIV				pPKPbc	pPKPbc	22 10 56.1	+2.8
	0.7nm,0.6s,baz=270,slow=6.1,SNR=2.8						
DBIC	Dimbokro	150.55	275	PKPbc	PKPbc	22 10 24.0	-0.7
DBIC				PKPab	PKPab	22 10 31.1	-0.8
DBIC	Dimbokro	150.55	275	PKPbc	PKPbc	22 10 24.0	-0.7
	3.1nm,0.9s,baz=54,slow=8.7,SNR=3.5						
DBIC				PKPab	PKPab	22 10 31.1	-0.8
	1.7nm,0.7s,baz=102,slow=5.7,SNR=5.6						

CASC 04 21:51:53.3±1.5, 14°.32N×90°.45W, h5km±4km, MD3.5, 2C, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	0.14	181	eP	Pg	21 51 57.2	+0.8
PCG	Pacaya	0.17	297	eP	Pg	21 51 57.4	+0.4
GCG	Guatemala City	0.28	344	eP	Pg	21 51 59.6	+0.6
GCG				eS	Sg	21 52 04.3	+1.3
NBG	Las Nubes	0.29	20	eP	Pg	21 52 00.2	+0.9
NBG				eS	Sb	21 52 05.2	-1.5
FUG	Fuego 3	0.40	289	eP	Pg	21 52 01.0	-0.3
RBDL	Robledal	0.77	105⥣	eP	Pg	21 52 08.0	-0.4
RTR	El Retiro	0.89	118⥣	eP	Pg	21 52 10.3	-0.3
RTR				eS	Sb	21 52 24.2	+0.5
SBLS	San Blas	0.93	120	eP	Pg	21 52 11.1	-0.5
SNJE	San Jose	0.93	118	eP	Pg	21 52 11.0	-0.5
SNJE				eS	Sb	21 52 24.7	-0.4
MRL	Marmol	1.05	44	eP	Pb	21 52 14.1	-0.1
MRL				eS	Sb	21 52 28.4	0.0
JAT	Jato	1.15	270	eP	Pg	21 52 15.2	-0.2
JAT				eS	Sb	21 52 31.5	+0.6
BOQS	Boqueron	1.27	117	eP	Pg	21 52 16.9	-1.2
BOQS				eS	Sn	21 52 35.4	-0.3
LFU	La Fuente	1.42	113	eP	Pn	21 52 19.0	-0.8
LBRS	Las Brisas	1.48	113	eP	Pn	21 52 20.4	-0.4
LFRS	El Faro	1.51	117	eP	Pn	21 52 20.6	-0.6
LFRS				eS	Sn	21 52 40.7	-0.8

IDC 04 21:55:54.8±2.3, 5°.16N×127°.15E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/23, mbtmp3.5/3, Error ellipse: s-maj=175.7km s-min=26.6km az=66.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.93	164	P	P	22 01 29.0	0.0
	1.4nm,0.4s,baz=344,slow=10,SNR=5.9						
ASAR	Alice Springs	29.40	167	P	P	22 02 00.1	0.0
	0.2nm,0.6s,baz=349,slow=7.3,SNR=3.1						
MKAR	Makanchi Array	56.63	325	P	P	22 05 39.7	-0.1
	0.3nm,0.5s,baz=115,slow=7.9,SNR=6.0						

*IDC **04** 22:03:15.2±0.9, 8°.09S×130°.54E, h0km, mb3.9/6, mb1 4.1/9, mb1mx3.9/21, mbtmp4.0/9, ML4.1/3, MS4.0/1, Ms1 4.0/1, ms1mx2.5/46, Error ellipse: s-maj=54.5km s-min=18.5km az=73.0*

*ISCJB **04** 22:03:18.2±0.6, 8°.32S±0°.05×130°.3E±0°.1, h33km, mb4.1/7, MS4.0/1, Error ellipse: s-maj=15.5km s-min=7.1km az=3.2*

ISC 04 22:03:20.2±0.8, 8°.30S±0°.07×130°.4E±0°.1, h35km, n14, σ1§36/14, mb3.9/7, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLE	Tual	3.50	41	P	Pn	22 04 13.0	+0.9
	baz=17,SNR=5.6						
MTN	Manton Dam	4.57	171	P	Pn	22 04 31.3	+4.4
	baz=18,SNR=56						
KDU	Kakadu	4.80	155	P	Pn	22 04 34.5	+4.5
	baz=19,SNR=226						
FITZ	Fitzroy Crossi	10.80	205	Pn	Pn	22 05 53.7	+1.3
	1.3nm,0.3s,baz=32,slow=10,SNR=23						
FITZ				Sn	Sn	22 07 51.1	-1.1
	1.4nm,0.3s,baz=238,slow=17,SNR=6.2						
WRA	Warramunga Arr	12.18	162	Pn	Pn	22 06 11.7	+0.4
	1.2nm,0.3s,baz=346,slow=13,SNR=18						
WRA				Sn	Sn	22 08 23.3	-2.6
	0.9nm,0.3s,baz=341,slow=22,SNR=4.9						
ASAR	Alice Springs	15.64	168	Pn	Pn	22 06 57.7	-0.4
	0.7nm,0.3s,baz=343,slow=8.8,SNR=34						
ASAR				Sn	Sn	22 09 50.6	+0.3
	0.2nm,0.3s,baz=0.9,slow=27,SNR=4.5						
STKA	Stephens Creek	25.66	158	P	P	22 08 49.1	+2.3
	1.4nm,0.7s,baz=321,slow=14,SNR=2.1						
URZ	Urewera	51.47	133	LR	LR	22 34 12.9	
	comp=Z,146nm,18.4s,baz=154,slow=36						
SONM	Songino Array	59.80	341	P	P	22 13 20.7	-1.3
	0.2nm,0.4s,baz=153,slow=8.1,SNR=3.1						
MKAR	Makanchi Array	69.54	327	P	P	22 14 25.6	+0.1
	2.0nm,0.5s,baz=117,slow=8.2,SNR=30						
AAK	Ala-Archa	71.80	320	P	P	22 14 40.5	+1.0
	0.8nm,0.5s,baz=120,slow=7.5,SNR=5.2						
KURBB	Kurchatov Arra	73.83	329	P	P	22 14 50.3	-0.8
	36nm,0.3s,baz=126,slow=5.0,SNR=3.2						
BVAR	Borovoye Array	79.38	328	P	P	22 15 22.4	-0.1
	0.8nm,0.8s,baz=129,slow=5.9,SNR=3.6						
ILAR	Eielson Array	94.33	25	P	P	22 16 35.0	-0.8
	0.3nm,0.6s,baz=282,slow=4.4,SNR=3.4						

*ISCJB **04** 22:03:49.7±0.8, 23°.22N±0°.03×101°.67E±0°.04, h2km±5km, mb4.2/31, MS4.0/3, Error ellipse: s-maj=5.7km s-min=4.4km az=1.9*

*BJI **04** 22:03:50.6, 23°.24N×101°.64E, h15km, mB4.7/11, mb4.3/13, ML4.6/8, Ms4.4/9, Ms7 4.2/11*

*IDC **04** 22:03:51.1±0.6, 23°.25N×101°.61E, h0km, mb4.0/18, mb1 4.1/19, mb1mx3.9/32, mbtmp4.0/19, ML3.9/1, MS4.0/3, Ms1 4.0/3, ms1mx3.3/52, Error ellipse: s-maj=18.9km s-min=13.5km az=77.0*

*PLV **04** 22:03:51.7±2.6, 23°.35N×101°.75E, h0km±20km, MD3.7*

*NEIC **04** 22:03:52.6±0.3, 23°.24N×101°.68E, h10km, mb4.3/8, Error ellipse: s-maj=8.3km s-min=5.8km az=101.0*

*MOS **04** 22:03:54.0±1.1, 23°.22N×101°.62E, h33km, mb4.6/12, Error ellipse: s-maj=12.5km s-min=7.5km az=94.6*

ISC 04 22:03:53.3±0.6, 23°.18N±0°.03×101°.61E±0°.04, h15km±3km, n97, σ1§67/117, mb4.2/31, MS3.9/3, 2C, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	Kunming	2.19	28	Pn	Pn	22 04 28.3	-1.2
KMI				Pg	Pb	22 04 31.6	-1.3
KMI				Sg	Sb	22 05 01.4	+1.4
KMI				smax	smax		
	comp=N,2μm,1.2s						
KMI				smax	smax		
	comp=E,2μm,1.1s						
KMI	Kunming	2.19	28	P	Pn	22 04 28.3	-1.2
KMI						22 05 01.4	
KMI	Kunming	2.19	28	Pn	Pn	22 04 28.3	-1.2
KMI				Pg	Pb	22 04 31.6	-1.3
KMI				Sg	Sb	22 05 01.4	+1.4
DBV	Dienbien	2.21	143	ePg	Pg	22 04 35.0	-0.7
DBV				eSg	Sg	22 05 05.8	+1.4
TGV	Tuan Giao	2.30	133	ePn	Pn	22 04 32.0	+1.2
TGV				ePg	Pg	22 04 35.9	-1.6
TGV				eSg	Sg	22 05 06.0	-1.4
SLVN	Son La	2.81	130	ePn	Pn	22 04 39.1	+1.3
SLVN				ePg	Pb	22 04 44.6	+1.3
SLVN				eSg	Sg	22 05 22.1	-1.6
MCVV	Moc Chau	3.68	129	ePn	Pn	22 04 49.9	0.0
MCVV				ePg	Pg	22 05 01.2	-2.7
MCVV				eSg	Sg	22 05 51.6	-0.1
CHTO	Chiang Mai	5.00	210	eP	Pn	22 05 08.7	+0.7
CHTO				pmax	pmax		
	comp=Z,57nm,0.8s						
CHTO	Chiang Mai	5.00	210	ePn	Pn	22 05 08.7	+0.7
	comp=Z,57nm,0.8s						
CHTO				eS	Sb	22 06 20.5	-0.3
CM31	Chiang Mai Arr	5.32	208	ePn	Pn	22 05 12.8	+0.5
	comp=Z,73nm,0.6s						
CM31				ePg	Pg	22 05 35.0	-0.2
CM31				eS	Sg	22 06 42.6	-1.4
CMAR	Chiang Mai Arr	5.32	208	Pn	Pn	22 05 13.2	+0.9
CMAR				Pg	Pg	22 05 32.7	-2.5
CMAR				Lg	Lg	22 06 40.6	
CMAR	Chiang Mai Arr	5.32	208	Pn	Pn	22 05 13.2	+0.9
	comp=Z,0.9nm,0.3s,baz=21,slow=12,SNR=5.3						
CMAR				Pg	Pg	22 05 32.7	-2.5
	comp=Z,3.6nm,0.3s,baz=30,slow=17,SNR=34						
CMAR				Lg	Lg	22 06 40.6	
	comp=Z,2.5nm,0.3s,baz=29,slow=32,SNR=8.2						
GYA	Guiyang	5.64	54	Pn	Pn	22 05 13.9	-2.8
GYA				Sn	Sn	22 06 13.6	-7.7
GYA				Sg	Sb	22 06 43.7	+4.7
GYA				smax	smax		
	comp=N,280nm,1.0s						
GYA				smax	smax		
	comp=E,190nm,1.0s						
LSA	Lhasa	11.40	307	P	Pn	22 06 39.6	+3.5
XAN	Xi'an	12.58	29	P	Pn	22 06 49.5	-2.3
XAN				pP	P	22 06 56.3	-7.1
XAN				sP		22 07 02.2	
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,15nm,6.5s						
XAN				LR	LR		
	comp=N,1μm,12.6s						
XAN				LR	LR		
	comp=E,700nm,13.4s						
XAN				LR	LR		
	comp=Z,230nm,7.4s						
LZH	Lanzhou	13.01	8	eP	Pn	22 07 00.3	+2.5
LZH				pP	P	22 07 04.2	-4.1
LZH				sP		22 07 06.8	
LZH				eS	Sn	22 09 27.4	+5.0
LZH				sS	S	22 09 33.1	-15
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,5.8s						
LZH				LR	LR		
	comp=N,640nm,8.6s						
LZH				LR	LR		
	comp=E,960nm,10.1s						
LZH				LR	LR		
	comp=Z,1μm,11.3s						
WHN	Wuhan	13.53	54	P	Pn	22 07 04.0	-0.7
WHN				S	Sn	22 09 33.6	-1.2
WHN				LR	LR		
	comp=Z,2μm,7.1s						
GTA	Gaotai	16.25	355	eP	Pn	22 07 42.8	+1.6
GTA				pP	pP	22 07 47.8	-0.6
GTA				sP	sP	22 07 50.9	+0.6
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,73nm,3.8s						
GTA				LR	LR		
	comp=N,170nm,22.3s						
GTA				LR	LR		
	comp=E,290nm,18.5s						
NACB	Ninganchiao	18.34	83	Pn	Pn	22 08 04.2	-3.0
IPM	Ipoh	18.60	182	eP	P	22 08 09.5	-0.7
	comp=E,8.2nm,0.8s						
HHC	Hu-ho-hao-te	19.51	23	eP	Pn	22 08 21.6	+0.2
HHC				sP	sP	22 08 28.5	+2.3
HHC				PP	PnPn	22 08 38.9	+4.0
HHC				S	Sn	22 11 55.4	-4.8
HHC				sS	S	22 12 01.1	+0.8
HHC				SS	SnSn	22 12 21.7	+7.1
HHC				PcP	PcP	22 12 42.0	+1.4
HHC				ScP	ScP	22 16 16.3	+0.1
HHC				PcS	PcS	22 16 18.4	+0.6
HHC				pmax	pmax		
	comp=Z,34nm,0.6s						
HHC				pmax	pmax		
	comp=Z,290nm,5.4s						
HHC				LR	LR		
	comp=Z,470nm,10.2s						
PSI	Prapat	20.42	188	P	Pn	22 08 33.9	+1.5
PSI	Prapat	20.42	188	P	Pn	22 08 33.9	+1.5
	comp=Z,23nm,1.1s,baz=340,slow=9.7,SNR=12						
HYB	Hyderabad	22.36	259	eP	P	22 08 51.5	+0.4
HYB	Hyderabad	22.36	259	eP	P	22 08 51.5	+0.4
HYB	Hyderabad	22.36	259	i P	P	22 08 51.5	+0.4
WMQ	Urumqi	23.57	334	P	P	22 09 10.6	+7.2
WMQ				pmax	pmax		
	comp=Z,20nm,1.0s						
SONM	Songino Array	24.90	8	P	P	22 09 14.9	-0.8
SONM	Songino Array	24.90	8	P	P	22 09 14.9	-0.8
	comp=Z,2.8nm,0.7s,baz=187,slow=9.3,SNR=21						
ULN	Ulaanbaatar	25.02	9	eP	P	22 09 16.2	-0.6
	comp=Z,5.1nm,0.8s						
POO	Poona	26.33	265	ex	P	22 09 30.0	+1.1
KSAR	Wonju Array Be	26.66	52	P	P	22 09 33.1	+1.5
KSRS	Korea Array	26.69	52	P	P	22 09 33.1	+1.2
	comp=Z,0.8nm,0.6s,baz=241,slow=9.6,SNR=4.1						
ZAK	Zakamensk	27.18	2	eP	P	22 09 32.0	-4.4
MK31	Makanchi Array	28.23	331	eP	P	22 09 45.4	-0.3
MK31	Makanchi Array	28.23	331	eP	P	22 09 45.4	-0.3
MKAR	Makanchi Array	28.23	331	P	P	22 09 45.7	0.0
MKAR	Makanchi Array	28.23	331	P	P	22 09 45.7	0.0
MKAR	Makanchi Array	28.23	331	P	P	22 09 45.7	0.0
	comp=Z,2.3nm,0.6s,baz=138,slow=9.6,SNR=25						
AAK	Ala-Archa	29.71	317	i P	P	22 10 01.2	+2.2
AAK				pmax	pmax		
	comp=Z,16nm,2.1s						
AAK	Ala-Archa	29.71	317	eP	P	22 09 59.8	+0.8
	comp=Z,14nm,1.1s						
AAK	Ala-Archa	29.71	317	P	P	22 09 59.5	+0.5
	comp=Z,1.0nm,0.6s,baz=100,slow=4.6,SNR=7.8						
EKS2	Erkin-Say	30.17	317	eP	P	22 10 04.7	+1.6
EKS2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
EKS2	Erkin-Say	30.17	317	eP	P	22 10 04.7	+1.6
	comp=Z,1.8nm,0.7s						
KBL	Kabul	30.56	299	eP	P	22 10 07.3	+0.6
KBL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBL	Kabul	30.56	299	eP	P	22 10 07.3	+0.6
	comp=Z,6.0nm,1.1s						
KURBB	Kurchatov Arra	32.76	333	P	P	22 10 25.7	+0.1
	comp=Z,65nm,0.3s,baz=124,slow=10,SNR=1.8						
KURBB				LR	LR	22 24 54.0	
	comp=Z,233nm,18.3s,baz=330,slow=39						
KURK	Kurchatov	32.79	333⥣	eP	P	22 10 25.2	-0.6
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	Kurchatov	32.79	333	eP	P	22 10 24.9	-1.0
	comp=Z,5.4nm,0.8s						
ZALV	Zalesovo Beam	33.23	342	P	P	22 10 29.8	+0.1
ZALV	Zalesovo Beam	33.23	342	P	P	22 10 29.8	+0.1
ZALV	Zalesovo Beam	33.23	342	P	P	22 10 29.8	+0.1
	comp=Z,0.7nm,0.3s						
BVAR	Borovoye Array	38.07	329	P	P	22 11 11.6	+0.4
BVAR						22 13 25.7	
BVAR	Borovoye Array	38.07	329	P	P	22 11 11.6	+0.4
BVAR				PcP	PcP	22 13 25.7	-0.6
BVAR	Borovoye Array	38.07	329	P	P	22 11 11.6	+0.4
	comp=Z,1.1nm,0.6s,baz=130,slow=8.5,SNR=6.2						
BVAR				PcP	PcP	22 13 25.7	-0.6
	comp=Z,0.6nm,0.8s,baz=132,slow=2.1,SNR=3.2						
BRVK	Borovoye	38.14	329	i P	P	22 11 15.2	+3.4
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ASAJ	Asahikawa	39.48	48	P	P	22 11 23.8	+0.6
ASAJ	Asahikawa	39.48	48	P	P	22 11 23.8	+0.6
	comp=Z,7.4nm,0.8s,baz=281,slow=11,SNR=4.6						
ABKAR	Akbulak array	41.75	319	eP	P	22 11 41.7	-0.1
	comp=Z,3.5nm,0.6s						
AKTO	Aktyubinsk	43.35	320	P	P	22 11 54.7	-0.2
AKTO	Aktyubinsk	43.35	320	P	P	22 11 54.7	-0.2
	comp=Z,2.5nm,0.7s,baz=96,slow=11,SNR=7.5						
ARU	Arti	45.65	328c	i P	P	22 12 14.9	+1.8
ARU						22 13 57.6	
ARU				S	S	22 18 58.0	+2.7
ARU				pmax	pmax		
	comp=Z,13nm,2.2s						
SEY	Seymchan	52.10	27	i P	P	22 13 02.1	-0.5

KIV	Kislovodsk	52.14	308	eP	P	22 13 03.4	+0.1
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIV	Kislovodsk	52.14	308	eP	P	22 13 03.4	+0.1
	comp=Z,6.8nm,0.9s						
WRA	Warramunga Arr	53.45	141	P	P	22 13 13.1	0.0
WRA	Warramunga Arr	53.45	141	P	P	22 13 13.1	0.0
	comp=Z,2.4nm,0.9s,baz=329,slow=8.0,SNR=6.3						
ANN	Anapa	55.93	309	eP	P	22 13 24.0	-6.8
ASAR	Alice Springs	56.15	144	P	P	22 13 33.2	+0.6
ASAR	Alice Springs	56.15	144	P	P	22 13 33.2	+0.6
	comp=Z,0.6nm,0.6s,baz=331,slow=7.5,SNR=4.0						
KLMR	Klimovskoe	56.49	329	eP	P	22 13 32.1	-2.4
KLMR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
OBN	Obninsk	57.08	322	i P	P	22 13 42.8	+4.0
OBN				e		22 14 32.8	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BILL	Bilibino	59.29	23	i P	P	22 13 54.6	+0.5
BILL				pmax	pmax		
	comp=Z,10.0nm,2.5s						
JOF	Joensuu	60.66	330	eP	P	22 14 02.1	-1.5
JOF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
JOF	Joensuu	60.66	330	ep	P	22 14 02.1	-1.5
	comp=Z,3.0nm,0.7s						
AKASG	Malin Array Be	61.37	316	P	P	22 14 08.6	0.0
AKASG	Malin Array Be	61.37	316	P	P	22 14 08.6	0.0
AKASG	Malin Array Be	61.37	316	P	P	22 14 08.6	0.0
	comp=Z,1.9nm,0.7s,baz=75,slow=5.8,SNR=3.5						
KIEV	Kiev	61.38	316	i P	P	22 14 08.9	+0.2
FINES	FINESS Array B	63.02	329	P	P	22 14 18.9	-0.6
FINES	FINESS Array B	63.02	329	P	P	22 14 18.9	-0.6
	comp=Z,3.4nm,0.9s,baz=100,slow=8.3,SNR=9.4						
KOLS	Kolonicke sedl	66.01	315	eP	P	22 14 44.6	+5.3
KOLS				e		22 14 50.9	
KOLS	Kolonicke sedl	66.01	315	eP	P	22 14 44.6	+5.3
KOLS				e		22 14 50.9	
SPITS	Spitsbergen Ar	66.50	347	LR	LR	22 48 13.2	
	comp=Z,127nm,18.2s,baz=20,slow=40						
VYHS	Vyhne	68.33	315	eP	P	22 14 57.8	+3.7
VYHS				e		22 15 15.5	
VYHS	Vyhne	68.33	315	eP	P	22 14 57.8	+3.7
VYHS				e		22 15 15.5	
NB2	NORSAR Subarra	70.19	329	P	P	22 15 03.5	-1.9
	comp=Z,1.0nm,0.7s,baz=78,slow=6.2						
NOA	NORSAR Array B	70.19	329	P	P	22 15 03.7	-1.7
NOA	NORSAR Array B	70.19	329	P	P	22 15 03.7	-1.7
	comp=Z,1.4nm,0.7s,baz=78,slow=6.2,SNR=8.0						
NOA				LR	LR	22 49 11.7	
	comp=Z,56nm,18.1s,baz=0.0,slow=39						
GERES	GERESS Array B	71.58	316	P	P	22 15 14.1	0.0
GERES	GERESS Array B	71.58	316	P	P	22 15 14.1	0.0
	comp=Z,0.2nm,0.6s,baz=55,slow=5.1,SNR=3.0						
ILAR	Eielson Array	77.94	24	P	P	22 15 50.0	-0.5
ILAR	Eielson Array	77.94	24	P	P	22 15 50.0	-0.5
	comp=Z,0.4nm,0.8s,baz=286,slow=4.0,SNR=3.7						
INK	Inuvik	80.34	18	P	P	22 16 02.2	-1.4
INK	Inuvik	80.34	18	P	P	22 16 02.2	-1.4
	comp=Z,2.2nm,1.0s,baz=284,slow=5.1,SNR=4.4						
YKA	Yellowknife Ar	89.89	16	P	P	22 16 49.7	-1.8
YKA	Yellowknife Ar	89.89	16	P	P	22 16 49.7	-1.8
	comp=Z,0.2nm,0.6s,baz=315,slow=4.0,SNR=4.1						

*KRSC **04** 22:05:42.3±1.3, 52°.98N×155°.04E, h539^{km}±50^{km}, ML4.6*
*MOS **04** 22:05:46.4±0.7, 53°.58N×153°.95E, h447^{km}, mb4.2/6, Error ellipse: s-maj=28.6km s-min=17.0km az=63.5*
*ISCJB **04** 22:05:47.3±0.6, 53°.5N±0°.1×154°.3E±0°.2, h459^{km}±9^{km}, mb3.2/7, Error ellipse: s-maj=28.8km s-min=13.0km az=41.6*
*IDC **04** 22:05:48.2±1.3, 53°.43N×153°.98E, h456^{km}±18^{km}, mb2.9/8, mb1 3.1/9, mb1mx2.8/28, mbtmp2.9/9, Error ellipse: s-maj=23.8km s-min=13.1km az=130.0*
ISC 04 22:05:48.1±0.8**, 53°.4N**±0°.1×**154°.5E**±0°.1**, h461**^{km}±11^{km}**, n26,** σ1^{s}.**72**/32**, mb3.2**/7**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	1.94	96	PN	P	22 06 50.3	+1.1
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK	Petropavlovsk-	1.94	96	P	P	22 06 50.3	+1.1
	comp=Z,1.5nm,0.3s,baz=253,slow=6.3,SNR=19						
GNL	Ganaly	2.08	79	eP	P	22 06 51.5	+1.4
GNL				i S	S	22 07 43.2	+2.6
KOK	Koryaka	2.48	90	eP	P	22 06 54.3	+1.8
PET	Petropavlovsk	2.52	96	ePN	P	22 06 53.6	+1.0
PET				pmax	pmax		
	comp=Z,40nm,0.6s						
KRER	Koryakskii	2.55	90	eP	P	22 06 54.6	+1.6
SMAR	Somma	2.58	91	eP	P	22 06 54.8	+1.5
RUS	Russkaya	2.60	109	PN	P	22 06 53.4	+0.2
RUS				S	S	22 07 45.3	-0.8
RUS	Russkaya	2.60	109	eP	P	22 06 53.4	+0.2
RUS				i S	S	22 07 45.3	-0.8
SPN	Mys Shipunski	3.33	92	PN	P	22 06 58.2	-0.2
SPN				S	S	22 07 52.2	-3.4
SPN	Mys Shipunski	3.33	92	eP	P	22 06 58.2	-0.2
SPN				i S	S	22 07 52.2	-3.4
MKZ	Mys Kozlova	4.43	71	PN	P	22 07 07.6	0.0
MKZ				S	S	22 08 09.5	-3.0
MKZ	Mys Kozlova	4.43	71	eP	P	22 07 07.6	0.0
MKZ				i S	S	22 08 09.5	-3.0
KBTR	Krutoberegovo	5.59	56	PN	P	22 07 18.0	-0.5
KBTR	Krutoberegovo	5.59	56	eP	P	22 07 18.0	-0.5
ERM	Erimo	13.66	218	i P	P	22 08 38.3	-6.4
MJA0	Matsu Arr-Jizo	20.30	221	eP	P	22 09 51.1	-0.4
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	Matsushiro Arr	20.31	221	P	P	22 09 51.1	-0.5
	comp=Z,3.3nm,0.7s,baz=13,slow=8.4,SNR=13						
ILAR	Eielson Array	31.01	45	P	P	22 11 27.9	+1.8
	comp=Z,0.5nm,0.8s,baz=271,slow=8.9,SNR=7.6						
RES	Resolute Bay	44.30	21	P	P	22 13 15.6	+0.7
	comp=Z,0.4nm,0.4s,baz=348,slow=6.5,SNR=6.9						
MKAR	Makanchi Array	44.97	292	P	P	22 13 18.7	-1.9
MKAR	Makanchi Array	44.97	292	P	P	22 13 18.7	-1.9
	comp=Z,0.3nm,0.8s,baz=47,slow=6.9,SNR=3.1						
YKA	Yellowknife Ar	45.20	41	P	P	22 13 23.8	+1.8
	comp=Z,0.5nm,0.6s,baz=301,slow=7.3,SNR=10						
ARCES	ARCESS Array B	51.92	340	P	P	22 14 10.6	-1.6
	comp=Z,6.0nm,1.0s,baz=39,slow=8.1,SNR=7.1						
PDAR	Pinedale Array	60.27	58	P	P	22 15 12.6	+1.7
	comp=Z,0.5nm,0.7s,baz=313,slow=1.2,SNR=3.6						
ASAR	Alice Springs	78.77	199	P	P	22 17 01.6	-0.2
	comp=Z,0.5nm,0.5s,baz=14,slow=5.2,SNR=7.9						

IDC 04 22:12:48.2±2.0**, 5°.02N**×**126°.45E, h0**^{km}**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.4**/23**, mbtmp3.6**/3**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.6**/43**, Error ellipse: s-maj=160.0km s-min=25.1km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.99	163	P	P	22 18 22.9	0.0
	2.2nm,0.4s,baz=343,slow=10,SNR=11						
ASAR	Alice Springs	29.42	166	P	P	22 18 53.6	0.0
	0.2nm,0.5s,baz=350,slow=6.9,SNR=5.1						
ASAR				LR	LR	22 32 01.5	
	comp=Z,170nm,18.9s,baz=134,slow=39						
MKAR	Makanchi Array	56.35	325	P	P	22 22 31.1	-0.1
	0.4nm,0.5s,baz=120,slow=7.9,SNR=9.7						

CASC 04 22:14:45.0±1.6**, 14°.33N**×**90°.46W, h0**^{km}±4^{km}**, MD3.5, 2D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.15	295	eP	Pg	22 14 49.8	+1.5
PCG				eS	Sg	22 14 53.0	+2.4
GCG	Guatemala City	0.27	345	eP	Pg	22 14 51.6	+1.3
GCG				eS	Sg	22 14 56.1	+2.1
NBG	Las Nubes	0.28	24	eP	Pb	22 14 52.1	-1.2
NBG				eS	Sb	22 14 57.6	-1.3
FUG	Fuego 3	0.39	288	eP	Pb	22 14 54.0	-1.0
FG6		0.47	300	eP	Pg	22 14 55.1	+0.7
RBDL	Robledal	0.78	106	⇓eP	Pg	22 15 00.4	+0.1
RTR	El Retiro	0.90	118	eP	Pg	22 15 02.6	+0.1
SBLS	San Blas	0.95	121	eP	Pg	22 15 03.7	+0.1
SNJE	San Jose	0.95	119	⇓eP	Pg	22 15 03.6	+0.1
MRL	Marmol	1.05	45	eP	Pb	22 15 06.1	-0.1
MRL				eS	Sn	22 15 21.8	-0.9
MTO2	Montecristo 2	1.07	86	eP	Pg	22 15 05.5	-0.4
MTO2				eS	Sn	22 15 23.3	-0.1
JAT	Jato	1.14	270	eP	Pn	22 15 08.0	-0.2
BOQS	Boqueron	1.29	117	eP	Pg	22 15 09.8	-0.3
BOQS				eS	Sn	22 15 29.5	+0.6
LFRS	El Faro	1.53	117	eP	Pn	22 15 13.4	-0.3
LFRS				eS	Sg	22 15 36.3	+1.7

IDC 04 22:22:27.1±1.7**, 9°.32S**×**123°.68E, h0**^{km}**, mb3.2**/1**, mb1 3.3**/4**, mb1mx3.2**/21**, mbtmp3.2**/4**, ML3.0**/3**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.2**/16**, Error ellipse: s-maj=120.4km s-min=26.3km az=62.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	5.78	317	LR	LR	22 26 19.9	
	comp=Z,78nm,18.8s,baz=87,slow=40						
FITZ	Fitzroy Crossi	8.94	168	Pn	Pn	22 24 38.5	+0.9
	0.1nm,0.3s,baz=348,slow=9.5,SNR=14						
FITZ				Sn	Sn	22 26 08.6	-10
	0.4nm,0.3s,baz=282,slow=20,SNR=11						
WRA	Warramunga Arr	14.76	137	Pn	Pn	22 25 56.4	-0.8
	0.1nm,0.3s,baz=320,slow=14,SNR=3.0						
WRA				Sn	Sn	22 28 27.5	-14
	0.2nm,0.3s,baz=301,slow=20,SNR=4.7						
ASAR	Alice Springs	17.30	147	P	Pn	22 26 29.4	-0.9
	0.0nm,0.3s,baz=314,slow=11,SNR=7.3						
ASAR				S	Sn	22 29 29.9	-14
	0.1nm,0.3s,baz=308,slow=21,SNR=5.0						
MKAR	Makanchi Array	66.93	330	P	P	22 33 21.5	+0.1
	0.2nm,0.7s,baz=134,slow=5.3,SNR=3.3						

*ISK **04** 22:23:52.6, 35°.80N×29°.75E, h2^{km}, MD3.6*
*CSEM **04** 22:23:53.8±0.3, 35°.80N×29°.76E, h2^{km}, MD3.0, Error ellipse: s-maj=6.2km s-min=4.3km az=14.0*
*ISCJB **04** 22:23:54.6±1.2, 35°.85N±0°.06×29°.77E±0°.05, h11^{km}±6^{km}, Error ellipse: s-maj=9.5km s-min=7.0km az=15.5*
*DDA **04** 22:23:57.8, 36°.04N×29°.36E, h8^{km}, MD3.0*
ISC 04 22:23:53.3±1.9**, 35°.80N**±0°.07×**29°.76E**±0°.04**, h5**^{km}±11^{km}**, n42,** σ1^{s}.**09**/52**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKAS	Kas	0.45	344	i P	Pg	22 24 02.9	+0.8
AKAS				i S	Sg	22 24 08.5	+0.5
AKAS	Kas	0.45	344	i P	Pg	22 24 02.9	+0.8
AKAS				i S	Sg	22 24 08.5	+0.5
ELL	Elmali	0.95	7	ePG	Pg	22 24 11.8	+0.2
ELL				eSG	Sb	22 24 25.7	+0.2
ELL	Elmali	0.95	7	ePg	Pg	22 24 11.8	+0.2
ELL				eSg	Sb	22 24 25.7	+0.2
FETY	Fethiye	1.00	327	ePG	Pg	22 24 12.4	-0.1
FETY	Fethiye	1.00	327	ePg	Pg	22 24 12.4	-0.1
ANTB	Antalya	1.31	33	ePN	Pg	22 24 18.8	+0.3
ANTB	Antalya	1.31	33	ePn	Pg	22 24 18.8	+0.3
TURN	Turunc	1.42	319	i P	Pn	22 24 20.6	+0.8
TURN				i S	Sg	22 24 36.1	-3.0
TURN	Turunc	1.42	319	i P	Pn	22 24 20.6	+0.8
GOLH	Golhisar	1.44	354	i P	Pn	22 24 19.7	-0.6
GOLH				i S	Sg	22 24 37.9	-1.9
GOLH	Golhisar	1.44	354	i P	Pn	22 24 19.7	-0.6
GOLH				i S	Sg	22 24 37.9	-1.9
BCK	Bucak	1.79	22	ePN	Pn	22 24 25.7	+0.7
BCK	Bucak	1.79	22	ePn	Pn	22 24 25.7	+0.7
YER	Yerkesik	1.79	319	ePN	Pn	22 24 25.3	+0.3
YER	Yerkesik	1.79	319	ePn	Pn	22 24 25.3	+0.3
DAT	Datca	2.00	298	ePN	Pn	22 24 28.4	+0.6
DAT	Datca	2.00	298	ePn	Pn	22 24 28.4	+0.6
MLSB	Milas	2.19	314	ePN	Pn	22 24 31.1	+0.7
MLSB	Milas	2.19	314	ePn	Pn	22 24 31.1	+0.7
BODT	Bodrum	2.34	303	ePN	Pn	22 24 33.4	+0.8
BODT	Bodrum	2.34	303	ePn	Pn	22 24 33.4	+0.8
AYDN	Tasoluk	2.40	321	eP	Pn	22 24 35.2	+1.9
AYDN				i S	Sn	22 25 03.0	-0.1
AYDN	Tasoluk	2.40	321	eP	Pn	22 24 35.2	+1.9
AYDN				i S	Sn	22 25 03.0	-0.1
KHL	Karahalli	2.53	356	ePN	Pn	22 24 36.0	+0.9
KHL	Karahalli	2.53	356	ePn	Pn	22 24 36.0	+0.9
LEF	Lefka	2.64	104	ePN	Pn	22 24 36.8	+0.2
LEF	Lefka	2.64	104	ePn	Pn	22 24 36.8	+0.2
SHUT	Suhut-Afyon	2.82	13	ePN	Pn	22 24 40.3	+1.1
SHUT	Suhut-Afyon	2.82	13	ePn	Pn	22 24 40.3	+1.1
KULA	Kula-Manisa	2.85	342	ePN	Pn	22 24 40.7	+1.1
KULA	Kula-Manisa	2.85	342	ePn	Pn	22 24 40.7	+1.1
KONT	Konya--Tatoy	2.99	43	ePN	Pn	22 24 43.0	+1.6
KONT	Konya--Tatoy	2.99	43	ePn	Pn	22 24 43.0	+1.6
ALT	Altintas	3.26	5	ePN	Pn	22 24 46.5	+1.2
ALT	Altintas	3.26	5	ePn	Pn	22 24 46.5	+1.2
KDHN	Kadinhani	3.30	34	i P	Pn	22 24 46.6	+0.8
KDHN				i S	Sn	22 25 23.6	-2.0
KDHN	Kadinhani	3.30	34	i P	Pn	22 24 46.6	+0.8
KIZT	Kizilcal	3.51	28	ePN	Pn	22 24 49.6	+0.9
KIZT	Kizilcal	3.51	28	ePn	Pn	22 24 49.6	+0.9
TVSB	Tavsanli	3.65	356	ePN	Pn	22 24 52.0	+1.4
TVSB	Tavsanli	3.65	356	ePn	Pn	22 24 52.0	+1.4

*ISCJB **04** 22:26:14.8±0.4, 49°.44S±0°.07×117°.1E±0°.2, h10^{km}, mb4.1/12, MS3.9/7, Error ellipse: s-maj=16.2km s-min=9.1km az=17.8*
*IDC **04** 22:26:14.7±0.7, 49°.44S×116°.95E, h0^{km}, mb4.1/10, mb1 4.3/11, mb1mx4.2/19, mbtmp4.1/11, ML2.7/1, MS4.0/8, Ms1 3.9/8, ms1mx3.6/21, Error ellipse: s-maj=35.8km s-min=15.3km az=105.0*
*NEIC **04** 22:26:16.3±0.4, 49°.49S×117°.04E, h10^{km}, mb4.6/4, Error ellipse: s-maj=17.6km s-min=8.0km az=105.0*
ISC 04 22:26:16.3±0.5**, 49°.40S**±0°.09×**117°.0E**±0°.2**, h10**^{km}**, n94,** σ0^{s}.**71**/98**, mb4.3**/12**, MS3.9**/7**, 11C-7D, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	16.46	1	ePn	P	22 30 09.6	-0.4
NWAO	Narrogin (SRO)	16.46	1	Pn	P	22 30 09.5	-0.5
	1.3nm,0.3s,baz=184,slow=13,SNR=18						
NWAO				LR	LR	22 34 49.9	
	comp=Z,552nm,21.3s,baz=182,slow=31						
FORT	Forrest	20.40	28	eP	Pn	22 30 55.7	+0.4
	12nm,0.8s						
STKA	Stephens Creek	25.43	56	P	P	22 31 43.5	-0.5
STKA	Stephens Creek	25.43	56	P	P	22 31 43.5	-0.5
	6.8nm,0.9s,baz=206,slow=6.4,SNR=6.8						
STKA				LR	LR	22 39 49.9	
	comp=Z,222nm,19.8s,baz=204,slow=32						
ASAR	Alice Springs	28.93	34	P	P	22 32 14.6	-1.0
ASAR				PcP	PcP	22 35 23.1	-1.4
ASAR	Alice Springs	28.93	34	P	P	22 32 14.6	-1.0
	1.6nm,0.9s,baz=206,slow=8.9,SNR=11						
ASAR				PcP	PcP	22 35 23.1	-1.4
	0.3nm,0.8s,baz=201,slow=1.9,SNR=4.5						
ASAR				LR	LR	22 42 53.6	
	comp=Z,378nm,18.5s,baz=145,slow=34						
AS31	Alice Springs	28.93	34	eP	P	22 32 15.6	0.0
FITZ	Fitzroy Crossi	32.00	16	P	P	22 32 43.7	+1.1
FITZ	Fitzroy Crossi	32.00	16	P	P	22 32 43.7	+1.1
	3.0nm,1.0s,baz=178,slow=11,SNR=3.9						
MAW	Mawson	32.21	216	LR	LR	22 42 24.9	
	comp=Z,267nm,20.3s,baz=131,slow=30						
WRA	Warramunga Arr	32.51	32	P	P	22 32 46.4	-0.8
WRA				PcP	PcP	22 35 32.9	-1.0
WRA	Warramunga Arr	32.51	32	P	P	22 32 46.4	-0.8
	3.6nm,0.9s,baz=203,slow=8.8,SNR=8.5						
WRA				PcP	PcP	22 35 32.9	-1.0
	0.7nm,0.7s,baz=215,slow=3.2,SNR=3.9						
WRA				LR	LR	22 45 10.3	
	comp=Z,139nm,19.8s,baz=350,slow=35						
WRAB	Tennant Creek	32.52	32	eP	P	22 32 46.3	-1.1
	4.4nm,0.8s						
VNDA	Vanda	32.90	164	P	P	22 32 50.0	-0.1
VNDA	Vanda	32.90	164	P	P	22 32 50.0	-0.1
	1.0nm,1.0s,baz=295,slow=7.1,SNR=3.0						
VNDA				LR	LR	22 44 44.7	
	comp=Z,141nm,20.0s,baz=314,slow=34						
CTA	Charters Tower	37.43	49	P	P	22 33 31.0	+1.3
CTA	Charters Tower	37.43	49	P	P	22 33 31.0	+1.3
	5.9nm,1.0s,baz=203,slow=5.3,SNR=3.2						
QSPA	South Pole Qui	40.73	180	P	P	22 33 57.2	+0.2
QSPA				PcP	PcP	22 35 58.0	-0.1
QSPA	South Pole Qui	40.73	180	P	P	22 33 57.2	+0.2
	1.0nm,0.9s,baz=25,slow=8.2,SNR=5.8						
QSPA				PcP	PcP	22 35 58.0	-0.1
	1.7nm,1.0s,baz=280,slow=1.1,SNR=4.3						
SNAA	Sanae	52.02	200	eP	P	22 35 25.8	+0.4
SNAA	Sanae	52.02	200	eP	P	22 35 23.6	-1.8
	22nm,1.3s						
SNAA	Sanae	52.02	200	P	P	22 35 23.7	-1.6
	1.8nm,1.1s,baz=141,slow=12,SNR=4.9						
VNA2	Neumayer--Watz	53.58	200	eP	P	22 35 37.3	+0.5
VNA3	Neumayer Olymp	53.83	199	eP	P	22 35 40.9	+2.2
CMAR	Chiang Mai Arr	69.43	342	P	P	22 37 24.9	+0.4
CMAR	Chiang Mai Arr	69.43	342	P	P	22 37 24.9	+0.4
	0.9nm,0.4s,baz=195,slow=6.4,SNR=6.0						
BOSA	Boshof	69.91	249	LR	LR	23 02 11.2	
	comp=Z,101nm,18.1s,baz=268,slow=31						
LSZ	Lusaka	77.78	261	eP	P	22 38 13.7	-0.3
	6.4nm,1.0s						
ODAN	Odare	80.37	333	eP	P	22 38 27.9	+0.1
	7.8nm,0.9s						
RAMN	Ramite	80.69	333	eP	P	22 38 29.5	-0.1
	18nm,1.0s						
TAPN	Taplejung	80.74	334	eP	P	22 38 30.0	+0.1
	27nm,1.1s						
PKI	Pulchoki	81.63	332	eP	P	22 38 35.2	+0.5
DMN	Daman	81.76	332	eP	P	22 38 35.9	+0.6
GUN	Gumba	81.80	333	eP	P	22 38 35.6	0.0
	72nm,1.4s						
KKN	Kakani	81.87	332	eP	P	22 38 35.6	-0.2
	20nm,1.1s						
KOLN	Koldanda	82.38	331	eP	P	22 38 38.4	-0.1
	9.1nm,0.9s						
DANN	Dangsing	82.87	331	eP	P	22 38 40.3	-0.8
	30nm,0.8s						
PYUN	Piuthan	82.89	330	eP	P	22 38 40.9	-0.2
	43nm,1.0s						
KSAR	Wonju Array Be	87.00	9	P	P	22 39 02.1	+0.8
KSRS	Korea Array	87.02	9	P	P	22 39 02.1	+0.8
	0.5nm,0.3s,baz=181,slow=6.1,SNR=5.0						
PLCA	Paso Flores	90.00	174	LR	LR	23 18 44.6	
	comp=Z,102nm,18.7s,baz=190,slow=35						
ILAR	Eielson Array	135.56	37	PKP	PKPdf	22 45 36.2	+0.9
ILAR	Eielson Array	135.56	37	PKP	PKPdf	22 45 36.2	+0.9
	0.3nm,0.7s,baz=289,slow=2.8,SNR=3.5						
NVAR	Mina Array Bea	139.55	84	PKP	PKPdf	22 45 43.4	-0.4
NVAR	Mina Array Bea	139.55	84	PKP	PKPdf	22 45 43.4	-0.4
	0.3nm,0.7s,baz=236,slow=1.0,SNR=2.7						
TXAR	Lajitas Array	143.31	108	PKP	PKPdf	22 45 51.0	+0.3
TXAR	Lajitas Array	143.31	108	PKP	PKPdf	22 45 51.0	+0.3
	0.5nm,0.9s,baz=244,slow=5.9,SNR=2.7						
HLID	Hailey	144.72	80	ePKPdf	PKPdf	22 45 52.7	-0.1
L14A	Malta	144.74	83	⇑P	PKPdf	22 45 53.6	+0.8
	baz=145,SNR=6.6						
J13A	Cove Ranch, Pi	144.79	80	⇑P	PKPdf	22 45 53.6	+0.7
	baz=145,SNR=9.3						
G12A	Big Creek, Yel	144.84	77	⇑P	PKPdf	22 45 53.0	+0.1
	baz=145,SNR=8.3						
O16A	Springville	144.94	86	⇓P	PKPdf	22 45 54.0	+0.7
	baz=145						
SRU	San Rafael	144.99	89	ePKPdf	PKPdf	22 45 53.2	-0.3
SRU	San Rafael	144.99	89	⇓P	PKPdf	22 45 53.8	+0.3
	baz=145,SNR=6.2						
NEW	Newport	145.01	71	PKPbc	PKPdf	22 45 52.8	-0.2
NEW				ePKPdf	PKPdf	22 45 52.8	-0.2
NEW	Newport	145.01	71	PKPbc	PKPdf	22 45 52.8	-0.2
	2.1nm,0.8s,baz=197,slow=6.8,SNR=3.7						
K14A	Jones Ranch, D	145.03	82	P	PKPdf	22 45 54.0	+0.6
	baz=145,SNR=5.3						
P17A	Butcher Ranch,	145.05	88	P	PKPdf	22 45 53.8	+0.2
	baz=145,SNR=8.6						
I13A	Wildhorse Cree	145.07	79	P	PKPdf	22 45 54.3	+0.8
	baz=145,SNR=15						
F12A	Elk City	145.16	76	P	PKPdf	22 45 53.7	+0.3
	baz=145,SNR=18						
J14A	Carey	145.18	80	⇓P	PKPdf	22 45 54.5	+0.9
	baz=145						
ANMO	Albuquerque	145.23	98	PKPbc	PKPbc	22 45 53.2	-0.5
ANMO				ePKPdf	PKPdf	22 45 53.9	-0.1
ANMO	Albuquerque	145.23	98	PKPbc	PKPbc	22 45 53.2	-0.5
	3.1nm,1.0s,baz=220,slow=5.5,SNR=3.0						
MVCO	Mesa Verde	145.25	93	ePKPdf	PKPdf	22 45 54.0	-0.1
H13A	Challis	145.28	78	P	PKPdf	22 45 54.6	+0.9
	baz=145,SNR=9.0						
530A	J-C Ranch, Com	145.32	109	P	PKPdf	22 45 54.8	+0.7
	baz=145,SNR=7.5						
U21A	Nageezi	145.34	95	P	PKPdf	22 45 54.9	+0.6
	baz=145,SNR=7.9						
O17A	Robinson Place	145.43	87	P	PKPab	22 45 55.6	+1.1
	baz=146,SNR=8.3						
P18A	Preston Nutter	145.45	88	⇑P	PKPab	22 45 54.6	-0.1
	baz=146,SNR=6.8						
I14A	Mackay	145.50	80	⇓P	PKPab	22 45 55.6	+1.1
	baz=146,SNR=14						
W23A	Werner Place,	145.56	98	⇑P	PKPab	22 45 55.1	0.0
	baz=146						
S20A	Disappointment	145.70	92	P	PKPab	22 45 56.0	+0.5
	baz=146,SNR=11						
Y25A	Mesa, Roswell	145.73	101	P	PKPab	22 45 55.2	-0.4
	baz=146,SNR=7.9						
PV01	Paradox Valley	145.73	92	ePKPdf	PKPab	22 45 55.2	-0.4
T21A	Navajo Lake	145.76	94	⇑P	PKPab	22 45 56.4	+0.7
	baz=146						
F13A	Darby	145.76	76	⇑P	PKPbc	22 45 54.5	-0.5
	baz=146,SNR=5.7						
Z26A	Caprock	145.77	103	⇑P	PKPdf	22 45 53.9	-1.0
	baz=146						
531A	Rocksprings	145.82	110	⇓P	PKPab	22 45 56.5	+0.5
	baz=146,SNR=18						
U22A	Llaves	145.84	96	P	PKPab	22 45 56.6	+0.6
	baz=146,SNR=6.4						
H14A	Leadore	145.87	78	⇑P	PKPab	22 45 55.9	0.0
	baz=146,SNR=7.5						
L16A	Fish Haven	145.90	84	⇑P	PKPab	22 45 56.5	+0.4
	baz=146						
S21A	Coal Bank Pass	145.97	93	P	PKPab	22 45 56.7	0.0
	baz=146,SNR=10						
431A	Sonora	146.15	109	⇓P	PKPbc	22 45 56.0	-0.5
	baz=146,SNR=6.2						
T22A	Edith	146.18	95	⇑P	PKPab	22 45 57.0	-0.4
	baz=146						
532A	Rocksprings	146.19	111	P	PKPab	22 45 57.2	-0.2
	baz=146,SNR=5.9						
128A	Castleberry Fa	146.29	105	⇓P	PKPab	22 45 57.1	-0.6
	baz=146,SNR=6.0						
SMCO	Snowmass	147.35	91	ePKPbc	PKPbc	22 46 00.3	+0.1
ISCO	Idaho Springs	148.57	91	ePKPbc	PKPbc	22 46 02.6	-0.6
YKW3	Yellowknife Ar	149.21	45	ePKPbc	PKPbc	22 46 03.5	-0.2
YKA	Yellowknife Ar	149.21	45	PKPbc	PKPbc	22 46 03.5	-0.2
YKA	Yellowknife Ar	149.21	45	PKPbc	PKPbc	22 46 03.5	-0.2
	1.7nm,0.7s,baz=278,slow=2.2,SNR=40						
RES	Resolute Bay	151.32	17	ePKPbc	PKPbc	22 46 08.1	-0.3
RES	Resolute Bay	151.32	17	PKPbc	PKPbc	22 46 08.3	-0.2
	3.1nm,0.8s,baz=246,slow=5.5,SNR=18						

*IDC **04** 22:27:54.7±1.7, 33°.96S×179°.37W, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.7/19, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=41.4km s-min=31.0km az=84.0*
*ISCJB **04** 22:27:57.2±2.1, 34°.2S±0°.1×179°.0W±0°.3, h50^{km}, mb3.6/3, Error ellipse: s-maj=41.6km s-min=11.5km az=15.3*
ISC 04 22:27:57.1±2.6**, 34°.2S**±0°.2×**178°.8W**±0°.4**, h50**^{km}**, n11,** σ0^{s}.**71**/13**, mb3.6**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.12	214	ePN	Pn	22 28 58.0	+0.6
PUZ	Puketiti	4.56	211	ePN	Pn	22 29 03.5	-0.1
PUZ				eSN	Sn	22 29 53.8	-1.5
CNGZ	Carnagh Statio	4.93	209	ePN	Pn	22 29 09.7	+1.1
MWZ	Matawai	5.10	215	ePN	Pn	22 29 11.0	-0.1
MWZ				SN	Sn	22 30 08.3	-0.4
URZ	Urewera	5.25	218	ePN	Pn	22 29 13.2	+0.2
URZ				SN	Sn	22 30 12.3	+0.1
URZ	Urewera	5.25	218	Pn	Pn	22 29 12.7	-0.3
	1.8nm,0.3s,baz=31,slow=4.5,SNR=16						
URZ				Sn	Sn	22 30 13.1	+0.9
	2.4nm,0.3s,baz=66,slow=20,SNR=5.2						
PXZ	Pawanui	6.79	210	ePN	Pn	22 29 30.6	-3.5
ASAR	Alice Springs	42.41	271	P	P	22 35 47.2	+0.2
	0.4nm,0.6s,baz=114,slow=7.8,SNR=6.6						
WRA	Warramunga Arr	43.74	277	P	P	22 35 57.8	+0.1
	2.6nm,1.2s,baz=118,slow=8.3,SNR=4.8						
QSPA	South Pole Qui	55.93	180	P	P	22 37 36.2	+6.4
	0.6nm,0.9s,baz=45,slow=6.6,SNR=5.3						
FINES	FINESS Array B	148.43	337	PKPbc	PKPab	22 47 40.2	-0.5

1.3nm,0.7s,baz=46,slow=4.2,SNR=14

*ISK **04** 22:28:44.7, 37.44N×36.24E, h5km, MD3.0*
*DDA **04** 22:28:44.4, 37.40N×36.22E, h23km, MD2.9*
*ISCJB **04** 22:28:45.8±0.5, 37.38N±0.03×36.24E±0.03, h7km±4km, Error ellipse: s-maj=4.6km s-min=4.0km az=178.9*
*CSEM **04** 22:28:45.7±0.2, 37.39N×36.23E, h5km, MD2.9, Error ellipse: s-maj=4.6km s-min=4.1km az=172.0*
ISC 04 22:28:45.4±1.0, **37.38N**±0.03×**36.25E**±0.02, **h10**km±8km, **n35**, σ**0.53**/53, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.21**	**21**	*i* P	**Pg**	**22 28 49.6**	**-0.3**
ANDN				*i* S	**Sg**	**22 28 53.2**	**+0.2**
ANDN	**Andirin**	**0.21**	**21**	*i* P	**Pg**	**22 28 49.6**	**-0.3**
ANDN				*i* S	**Sg**	**22 28 53.2**	**+0.2**
KOZT	**Kozan**	**0.35**	**286**	PG	**Pg**	**22 28 52.7**	**+0.3**
KOZT				SG	**Sb**	**22 28 58.2**	**-1.1**
KOZT	**Kozan**	**0.35**	**286**	*i* Pg	**Pg**	**22 28 52.7**	**+0.3**
KOZT				*i* Sg	**Sb**	**22 28 58.2**	**-1.1**
AYKD	**Aykdinkavak**	**0.45**	**86**	*i* P	**Pg**	**22 28 54.2**	**0.0**
AYKD				*i* S	**Sg**	**22 29 00.4**	**+0.4**
KMRS	**Kahramanmaras**	**0.53**	**76**	PG	**Pg**	**22 28 55.5**	**-0.2**
KMRS				SG	**Sb**	**22 29 04.2**	**-0.3**
KMRS	**Kahramanmaras**	**0.53**	**76**	*i* Pg	**Pg**	**22 28 55.5**	**-0.2**
KMRS				*i* Sg	**Sb**	**22 29 04.2**	**-0.3**
CEYT	**Ceyhan**	**0.55**	**227**	*e*PG	**Pb**	**22 28 57.0**	**+0.1**
CEYT	**Ceyhan**	**0.55**	**227**	*e*Pg	**Pb**	**22 28 57.1**	**+0.1**
GAZ	**Gaziantep**	**0.80**	**105**	*e*PG	**Pn**	**22 29 02.1**	**-0.6**
GAZ				*e*SG	**Sn**	**22 29 14.5**	**-0.1**
GAZ	**Gaziantep**	**0.80**	**105**	*e*Pg	**Pn**	**22 29 02.1**	**-0.6**
GAZ				*e*Sg	**Sn**	**22 29 14.5**	**-0.1**
KUZU	**Kuzuini**	**0.90**	**132**	*i* P	**Pb**	**22 29 03.1**	**+0.1**
KUZU				*i* S	**Sb**	**22 29 15.1**	**0.0**
KUZU	**Kuzuini**	**0.90**	**132**	*i* P	**Pb**	**22 29 03.1**	**+0.1**
KUZU				*i* S	**Sb**	**22 29 15.1**	**0.0**
GZT	**Gaziantep**	**1.05**	**91**	*i* P	**Pb**	**22 29 05.7**	**+0.1**
GZT				*i* S	**Sb**	**22 29 20.4**	**+0.9**
KRTS	**Karatas**	**1.07**	**221**	*e*PN	**Pn**	**22 29 06.6**	**+0.3**
KRTS	**Karatas**	**1.07**	**221**	*e*Pn	**Pn**	**22 29 06.6**	**+0.3**
PINB	**Pinarbasi**	**1.30**	**5**	*i* P	**Pn**	**22 29 09.6**	**-0.2**
PINB				*i* S	**Sb**	**22 29 27.0**	**+0.2**
PINB	**Pinarbasi**	**1.30**	**5**	*i* P	**Pn**	**22 29 09.6**	**-0.2**
PINB				*i* S	**Sb**	**22 29 27.0**	**+0.2**
YAYL	**Yayladag**	**1.35**	**185**	*i* P	**Pn**	**22 29 09.8**	**-0.6**
YAYL				*i* S	**Sn**	**22 29 28.5**	**+0.2**
YAYL	**Yayladag**	**1.35**	**185**	*i* P	**Pn**	**22 29 09.8**	**-0.6**
YAYL				*i* S	**Sn**	**22 29 28.5**	**+0.2**
NIG	**Nigde**	**1.49**	**300**	*e*PN	**Pb**	**22 29 13.1**	**-0.1**
NIG	**Nigde**	**1.49**	**300**	*e*Pn	**Pb**	**22 29 13.1**	**-0.1**
BNN	**Bunyan**	**1.50**	**348**	*e*PN	**Pb**	**22 29 13.1**	**-0.3**
BNN	**Bunyan**	**1.50**	**348**	*e*Pn	**Pb**	**22 29 13.1**	**-0.3**
DARE	**Darende-Malaty**	**1.54**	**39**	*e*PN	**Pb**	**22 29 13.9**	**0.0**
AKCD	**Akcadag**	**1.61**	**55**	*i* P	**Pn**	**22 29 14.0**	**+0.1**
AKCD				*i* S	**Sb**	**22 29 35.7**	**+0.1**
AKCD	**Akcadag**	**1.61**	**55**	*i* P	**Pn**	**22 29 14.0**	**+0.1**
AKCD				*i* S	**Sb**	**22 29 35.7**	**+0.1**
MALT	**Malatya**	**1.96**	**61**	*e*PN	**Pb**	**22 29 20.5**	**-0.7**
MALT	**Malatya**	**1.96**	**61**	*e*Pn	**Pb**	**22 29 20.5**	**-0.7**
MYA	**Malataya**	**1.96**	**61**	*e*PN	**Pb**	**22 29 20.5**	**-0.8**
MYA	**Malataya**	**1.96**	**61**	*e*Pn	**Pb**	**22 29 20.5**	**-0.8**
URFA	**Urfa**	**2.05**	**88**	*e*PN	**Pb**	**22 29 22.4**	**-0.3**
URFA	**Urfa**	**2.05**	**88**	*e*Pn	**Pb**	**22 29 22.4**	**-0.3**
ILIC	**ilic-Erzincan**	**2.75**	**41**	*e*PN	**Pn**	**22 29 31.3**	**+1.6**
ILIC	**ilic-Erzincan**	**2.75**	**41**	*e*Pn	**Pn**	**22 29 31.3**	**+1.6**

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*ISCJB **04** 22:34:24.9±1.1, 51.41N±0.05×16.05E±0.05, h0km, Error ellipse: s-maj=7.6km s-min=3.5km az=24.5*
*WAR **04** 22:34:24.9, 51.54N×16.07E*
*CSEM **04** 22:34:25.8±0.6, 51.44N×16.05E, h2km, ML2.8/6, Error ellipse: s-maj=10.3km s-min=5.1km az=20.0*
*PRU **04** 22:34:26.4, 51.45N×16.09E, h0km*
ISC 04 22:34:26.7±1.6, **51.42N**±0.08×**16.03E**±0.04, **h0**km, **n22**, σ**0.66**/39, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.60**	**164**	*e*Pg	**Pg**	**22 34 38.1**	**0.0**
KSP				*e*Sg	**Sg**	**22 34 46.8**	**+1.0**
KSP	**Ksiaz**	**0.60**	**164**	*e*Pg	**Pg**	**22 34 38.1**	**0.0**
KSP				*e*Sg	**Sg**	**22 34 46.8**	**+1.0**
UPC	**Upice**	**0.91**	**181**	*e*PG	**Pg**	**22 34 44.2**	**+0.1**
UPC	**Upice**	**0.91**	**181**	Pg	**Pg**	**22 34 44.2**	**+0.1**
DPC	**Dobruska-Polom**	**1.08**	**170**	*e*PG	**Pg**	**22 34 47.0**	**-0.4**
DPC				*e*SG	**Sg**	**22 35 01.3**	**-0.1**
	comp=Z,10nm,0.4s						
DPC	**Dobruska-Polom**	**1.08**	**170**	Pg	**Pg**	**22 34 47.0**	**-0.4**
DPC				Sg	**Sg**	**22 35 01.3**	**-0.1**
	10nm,0.4s						
PVCC	**Panska Ves**	**1.28**	**227**	*e*PG	**Pg**	**22 34 51.1**	**-0.1**
PVCC				*e*SG	**Sn**	**22 35 09.9**	**+0.2**
	comp=Z,36nm,0.2s						
PVCC	**Panska Ves**	**1.28**	**227**	Pg	**Pg**	**22 34 51.1**	**-0.1**
PVCC				Sg	**Sn**	**22 35 09.9**	**+0.2**
	36nm,0.2s						
BRG	**Berggiesshubel**	**1.42**	**248**	PG	**Pn**	**22 34 53.4**	**-0.4**
BRG				SG	**Sn**	**22 35 13.6**	**+0.4**
	15nm,0.3s						
PRU	**Pruhonice**	**1.71**	**214**	*e*PN	**Pn**	**22 34 57.0**	**-0.8**
PRU				*e*PG	**Pb**	**22 34 58.5**	**-0.5**
PRU				*e*SG	**Sg**	**22 35 22.1**	**+0.4**
	comp=Z,6.2nm,0.6s						
PRU	**Pruhonice**	**1.71**	**214**	Pn	**Pn**	**22 34 57.0**	**-0.8**
MORC	**Moravsky Berou**	**1.90**	**149**	*e*Pn	**Pn**	**22 34 59.5**	**-0.9**
MORC				*e*Sg	**Sn**	**22 35 26.0**	**+1.0**
CLL	**Collm**	**1.90**	**268**	*e*Pg	**Pb**	**22 35 02.0**	**-0.2**
CLL				*i*		22 35 05.7	
CLL				*e*Sg	**Sg**	**22 35 28.0**	**+0.2**
	comp=Z,7.0nm,0.4s						
OKC	**Ostrava-Krasne**	**2.08**	**139**	*e*SG	**Sb**	**22 35 30.9**	**-0.6**
	comp=Z,5.0nm,0.3s						
OKC	**Ostrava-Krasne**	**2.08**	**139**	Sg	**Sb**	**22 35 30.9**	**-0.6**
	comp=Z,5.0nm,0.3s						
VRAC	**Vranov**	**2.14**	**170**	*e*Pn	**Pn**	**22 35 03.8**	**+0.2**
VRAC				*e*Sg	**Sg**	**22 35 35.3**	**-0.1**
NKC	**Novy Kostel**	**2.56**	**244**	*e*PN	**Pn**	**22 35 09.3**	**-0.2**
NKC				*e*PG	**Pb**	**22 35 14.3**	**+0.8**
NKC				*e*SG	**Sg**	**22 35 50.5**	**+1.5**
	comp=Z,8.1nm,0.3s						
NKC	**Novy Kostel**	**2.56**	**244**	Pn	**Pn**	**22 35 09.3**	**-0.2**
KHC	**Kasperske Hory**	**2.78**	**216**	*e*PN	**Pn**	**22 35 12.2**	**-0.2**
KHC				*e*PG	**Pb**	**22 35 17.9**	**+0.7**
KHC				*e*SN	**Sn**	**22 35 45.0**	**-1.6**
KHC				*e*SG	**Sg**	**22 35 55.9**	**+0.1**
	comp=Z,2.7nm,0.4s						
KHC	**Kasperske Hory**	**2.78**	**216**	Pn	**Pn**	**22 35 12.2**	**-0.2**
VYHS	**Vyhne**	**3.44**	**147**	*e*SG	**Sg**	**22 36 18.1**	**+1.0**
VYHS	**Vyhne**	**3.44**	**147**	*e*Sg	**Sg**	**22 36 18.1**	**+1.0**

MAN 04 22:44:28, 15.44N×121.30E, h4km, mb3.9, ML2.7, MS2.3, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCPH	**Palayan**	**0.23**	**302**⇓	*i*P	Pg	22 44 33.9	+1.4
PCPH				*i* S	Sg	22 44 37.5	+2.1
BALP	**Baler**	**0.40**	**42**	*e*P	Pb	22 44 37.0	-0.7
BALP				*e*S	Sb	22 44 42.7	-1.5
CAUP	**Cauayan**	**1.58**	**19**	*e*P	Pn	22 44 56.3	-0.5
CAUP				*e*S	Sn	22 45 17.6	-0.1

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*IDC **04** 22:45:48.5±1.3, 14.20N×90.55W, h0km, mb3.8/6, mb1 4.1/9, mb1mx3.8/27, mbtmp3.8/9, ML4.0/3, MS3.4/1, Ms1 3.4/1, ms1mx2.4/34, Error ellipse: s-maj=27.2km s-min=21.1km az=72.0*
*ISCJB **04** 22:45:49.7±0.7, 14.30N±0.04×90.54W±0.03, h14km±4km, mb3.8/6, MS3.2/1, Error ellipse: s-maj=6.8km s-min=4.3km az=39.3*
*CASC **04** 22:45:49.2±2.4, 14.32N×90.47W, h1km±5km, MD3.8, ML3.7*
ISC 04 22:45:50.3±1.1, **14.30N**±0.03×**90.48W**±0.03, **h9**km±7km, **n28**, σ**1.04**/35, **mb3.9**/6, **5C-1D**, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.12**	**171**	*e*P	**Pg**	**22 45 53.5**	**+0.3**
PCG	**Pacaya**	**0.16**	**307**⇑	*e*P	**Pg**	**22 45 53.6**	**-0.3**
GCG	**Guatemala City**	**0.29**	**349**	*e*P	**Pg**	**22 45 56.0**	**-0.2**
GCG				*e*S	**Sg**	**22 46 00.2**	**0.0**
NBG	**Las Nubes**	**0.32**	**23**	*e*P	**Pg**	**22 45 56.6**	**-0.1**
FUG	**Fuego 3**	**0.39**	**293**⇑	*e*P	**Pg**	**22 45 57.5**	**-0.5**
FG6		**0.47**	**304**⇑	*e*P	**Pg**	**22 45 59.0**	**-0.6**
RBDL	**Robledal**	**0.79**	**103**⇑	*e*P	**Pg**	**22 46 04.6**	**-0.9**
RTR	**El Retiro**	**0.90**	**116**	*e*P	**Pg**	**22 46 06.9**	**-0.7**
RTR				*e*S	**Sb**	**22 46 21.1**	**+0.7**
SBLS	**San Blas**	**0.94**	**119**	*e*P	**Pg**	**22 46 08.2**	**-0.2**
SNJE	**San Jose**	**0.94**	**117**	*e*P	**Pg**	**22 46 07.9**	**-0.6**
MRL	**Marmol**	**1.08**	**45**	*e*P	**Pg**	**22 46 10.5**	**-0.5**
MRL				*e*S	**Sb**	**22 46 25.3**	**-0.2**
MTO2	**Montecristo 2**	**1.08**	**84**	*e*P	**Pg**	**22 46 09.7**	**-1.5**
MTO2				*e*S	**Sn**	**22 46 27.6**	**+0.3**
JAT	**Jato**	**1.13**	**271**⇑	*e*P	**Pb**	**22 46 11.9**	**-0.1**
JAT				*e*S	**Sn**	**22 46 29.5**	**+1.6**
BOQS	**Boqueron**	**1.29**	**116**⇓	*e*P	**Pn**	**22 46 13.9**	**-0.8**
BOQS				*e*S	**Sn**	**22 46 32.6**	**+0.4**
SNET	**Serv Nac Est T**	**1.35**	**117**	*e*P	**Pn**	**22 46 14.5**	**-1.0**
SNET				AML	AML	22 46 36.8	
	comp=Z,2μm,0.4s						
LBRS	**Las Brisas**	**1.50**	**112**	*e*P	**Pn**	**22 46 17.0**	**-0.5**
LFRS	**El Faro**	**1.53**	**116**	*e*P	**Pn**	**22 46 17.2**	**-0.7**
CMIG	**Matias Romero**	**5.07**	**304**	Pn	**Pn**	**22 47 05.4**	**-1.2**
	comp=Z,1.7nm,0.3s,baz=98,slow=9.0,SNR=17						
CMIG				Pg	**Pb**	**22 47 19.1**	**-0.3**
	comp=Z,7.5nm,0.3s,baz=106,slow=15,SNR=32						
CMIG				Lg	Lg	22 48 24.8	
	comp=Z,4.1nm,0.3s,baz=201,slow=19,SNR=5.4						
TEIG	**Tepich**	**6.26**	**19**	Pn	**Pn**	**22 47 24.4**	**+1.5**
	comp=Z,16nm,0.3s,baz=184,slow=4.1,SNR=59						
TEIG				Sn	**Sn**	**22 48 36.1**	**+1.4**
	comp=Z,1.0nm,0.3s,baz=221,slow=20,SNR=4.0						
TEIG				Lg	Lg	22 49 10.9	
	comp=Z,10nm,0.3s,baz=111,slow=23,SNR=4.6						
JTS	**JuntasAbangare**	**6.71**	**126**	Pn	**Pn**	**22 47 31.5**	**+2.4**
	comp=Z,0.6nm,0.3s,baz=330,slow=17,SNR=2.5						
TXAR	**Lajitas Array**	**19.31**	**323**	P	**Pn**	**22 50 17.1**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=150,slow=11,SNR=6.5						
TKL	**Tuckaleechee C**	**22.11**	**15**	P	**P**	**22 50 48.6**	**+2.5**
	comp=Z,3.8nm,0.9s,baz=161,slow=13,SNR=4.1						
SJG	**San Juan**	**23.66**	**77**	LR	LR	22 59 55.4	
	comp=Z,90nm,19.8s,baz=257,slow=36						
NVAR	**Mina Array Bea**	**34.39**	**320**	P	**P**	**22 52 39.5**	**+1.3**
	comp=Z,0.9nm,0.9s,baz=139,slow=8.7,SNR=5.3						
LPAZ	**La Paz**	**37.56**	**143**	P	**P**	**22 53 05.2**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=334,slow=3.1,SNR=4.4						
YKA	**Yellowknife Ar**	**51.09**	**346**	P	**P**	**22 54 52.4**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=146,slow=7.6,SNR=21						
RES	**Resolute Bay**	**60.43**	**359**	P	**P**	**22 55 58.8**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=214,slow=7.3,SNR=4.5						
INK	**Inuvik**	**60.58**	**343**	P	**P**	**22 56 00.1**	**-0.9**
	comp=Z,1.2nm,1.0s,baz=180,slow=11,SNR=3.9						

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*ISK **04** 22:51:05.5, 39.92N×40.77E, h5km, MD3.6*
*DDA **04** 22:51:06.2, 39.91N×40.81E, h7km, MD3.4*
*CSEM **04** 22:51:07.5±0.1, 39.99N×40.77E, h10km, MD3.4, Error ellipse: s-maj=4.5km s-min=3.3km az=2.0*
ISC 04 22:51:07.5±0.9, **39.93N**±0.02×**40.79E**±0.02, **h11**km±8km, **n75**, σ**1.16**/92, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.24**	**292**	*i* P	**Pg**	**22 51 12.2**	**-0.5**
KOPT				*i* S	**Sg**	**22 51 17.3**	**+1.1**
KOPT	**Kop Dagi**	**0.24**	**292**	*i* P	**Pg**	**22 51 12.2**	**-0.5**
KOPT				*i* S	**Sg**	**22 51 17.3**	**+1.1**
EZM	**Erzurum**	**0.44**	**93**	PG	**Pg**	**22 51 15.6**	**-0.8**
ERZM	**Erzurum**	**0.45**	**92**	*i* P	**Pg**	**22 51 15.6**	**-0.8**
ERZM				*i* S	**Sb**	**22 51 24.0**	**-0.3**
ERZM	**Erzurum**	**0.45**	**92**	*i* P	**Pg**	**22 51 15.6**	**-0.8**
ERZM				*i* S	**Sb**	**22 51 24.0**	**-0.3**
BAYT	**Ayd˜–ntepe-Bay**	**0.68**	**314**	PG	**Pg**	**22 51 19.7**	**-1.1**
BAYT				*e*SG	**Sb**	**22 51 30.2**	**-0.8**
HOMI	**Horasan**	**0.87**	**82**	*i* P	**Pg**	**22 51 22.8**	**-1.6**
HOMI				*i* S	**Sb**	**22 51 38.3**	**+1.9**
ERZN	**Erzincan**	**0.89**	**248**	*e*PG	**Pg**	**22 51 22.8**	**-1.9**
VRTB	**Varto-Mus**	**0.92**	**146**	*e*PG	**Pg**	**22 51 24.1**	**-1.3**
VRTB	**Varto-Mus**	**0.92**	**146**	*e*Pg	**Pg**	**22 51 24.1**	**-1.3**
BNGB	**Bingˆ¶l**	**0.94**	**185**	*e*PG	**Pg**	**22 51 23.5**	**-2.1**
EZC	**Erzincan**	**1.12**	**261**	*e*PN	**Pg**	**22 51 28.1**	**-0.9**
EZC	**Erzincan**	**1.12**	**261**	*e*Pn	**Pg**	**22 51 28.2**	**-0.9**
GUMT	**Gumushane**	**1.13**	**298**	*e*PN	**Pg**	**22 51 27.8**	**-1.6**
GUMT	**Gumushane**	**1.13**	**298**	*e*Pn	**Pg**	**22 51 27.8**	**-1.6**
KELT	**Kelkit**	**1.20**	**281**	*i* P	**Pg**	**22 51 28.6**	**-2.0**
KELT				*i* S	**Sn**	**22 51 47.1**	**+0.4**
KELT	**Kelkit**	**1.20**	**281**	*i* P	**Pg**	**22 51 28.6**	**-2.0**
KELT				*i* S	**Sn**	**22 51 47.1**	**+0.4**
DDEM	**Demirkent**	**1.21**	**37**	*i* P	**Pg**	**22 51 29.2**	**-1.7**
DDEM	**Demirkent**	**1.21**	**37**	*i* P	**Pg**	**22 51 29.2**	**-1.7**
PZAR	**Pazar-Rize**	**1.25**	**4**	*e*PN	**Pg**	**22 51 30.5**	**-1.2**
MACK	**Trabzon**	**1.28**	**323**	*i* P	**Pg**	**22 51 30.7**	**-1.4**
MACK	**Trabzon**	**1.28**	**323**	*i* P	**Pg**	**22 51 30.7**	**-1.4**
DBAD	**Bademkaya**	**1.29**	**32**	*i* P	**Pg**	**22 51 30.4**	**-2.0**
DBAD				*i* S	**Sg**	**22 51 48.7**	**-0.5**
DBAD	**Bademkaya**	**1.29**	**32**	*i* P	**Pg**	**22 51 30.4**	**-2.0**
DBAD				*i* S	**Sg**	**22 51 48.7**	**-0.5**
KTUT	**Trabzon**	**1.31**	**324**	*e*PN	**Pg**	**22 51 31.5**	**-1.3**
KTUT	**Trabzon**	**1.31**	**324**	*e*Pn	**Pg**	**22 51 31.5**	**-1.3**
DAGI	**Agillar**	**1.44**	**36**	*i* P	**Pn**	**22 51 33.5**	**-0.1**
DAGI				*i* S	**Sn**	**22 51 53.6**	**+1.1**
ARTV	**Artvin**	**1.53**	**34**	*e*P	**Pn**	**22 51 34.8**	**-0.2**
ARTV				*e*S	**Sg**	**22 51 58.4**	**+1.6**
ARTV	**Artvin**	**1.53**	**34**	*e*P	**Pn**	**22 51 34.8**	**-0.2**
DBOC	**Borcka**	**1.57**	**25**	*i* P	**Pn**	**22 51 35.3**	**-0.1**
DBOC				*i* S	**Sg**	**22 51 58.1**	**+0.1**
DBOC	**Borcka**	**1.57**	**25**	*i* P	**Pn**	**22 51 35.3**	**-0.1**
BCA	**Borcka**	**1.65**	**22**	*e*PN	**Pn**	**22 51 37.1**	**+0.7**
TUTA	**Tutak**	**1.65**	**108**	*i* P	**Pn**	**22 51 36.4**	**-0.2**
TUTA				*i* S	**Sg**	**22 52 00.9**	**+0.2**
TUTA	**Tutak**	**1.65**	**108**	*i* P	**Pn**	**22 51 36.4**	**-0.2**
TUTA				*i* S	**Sg**	**22 52 00.9**	**+0.2**
AGRB	**Hanur-Agry**	**1.74**	**101**	*e*PN	**Pn**	**22 51 38.7**	**+0.9**
AGRB	**Hanur-Agry**	**1.74**	**101**	*e*Pn	**Pn**	**22 51 38.7**	**+0.9**
ILIC	**ilic-Erzincan**	**1.78**	**255**	*e*PN	**Pb**	**22 51 39.2**	**-0.9**
ILIC	**ilic-Erzincan**	**1.78**	**255**	*e*Pn	**Pb**	**22 51 39.2**	**-0.9**
BTMT	**Batman**	**1.82**	**162**	*e*PN	**Pb**	**22 51 40.0**	**-0.8**
BTMT	**Batman**	**1.82**	**162**	*e*Pn	**Pb**	**22 51 40.0**	**-0.8**
TATV	**Tatvan**	**1.82**	**140**	*i* P	**Pb**	**22 51 40.4**	**-0.7**
TATV	**Tatvan**	**1.82**	**140**	*i* P	**Pb**	**22 51 40.3**	**-0.7**
ESPY	**Espiye-Giresun**	**1.86**	**303**	*e*PN	**Pn**	**22 51 39.6**	**+0.3**
ESPY	**Espiye-Giresun**	**1.86**	**303**	*e*Pn	**Pn**	**22 51 39.6**	**+0.3**
KARS	**Kars**	**1.89**	**67**	*e*PN	**Pn**	**22 51 40.3**	**+0.5**
KARS	**Kars**	**1.89**	**67**	*e*Pn	**Pn**	**22 51 40.3**	**+0.5**
KEMA	**Kemaliye**	**1.89**	**250**	*i* P	**Pb**	**22 51 41.0**	**-1.1**
KEMA				*i* S	**Sg**	**22 52 09.3**	**+1.0**
KEMA	**Kemaliye**	**1.89**	**250**	*i* P	**Pb**	**22 51 41.0**	**-1.1**
SVRC	**Sivrice-ELAZID**	**1.93**	**217**	*e*PN	**Pn**	**22 51 40.6**	**+0.2**
SVRC	**Sivrice-ELAZID**	**1.93**	**217**	*e*Pn	**Pn**	**22 51 40.6**	**+0.2**
BEST	**Besiri**	**2.07**	**169**	*e*P	**Pn**	**22 51 43.4**	**+1.1**
BEST				*e*S	**Sg**	**22 52 15.8**	**+1.8**
DIY	**Diyarbakir**	**2.07**	**192**	*e*PN	**Pn**	**22 51 42.5**	**+0.2**
DIY	**Diyarbakir**	**2.07**	**192**	*e*Pn	**Pn**	**22 51 42.5**	**+0.2**
VANB	**Van**	**2.42**	**123**	*e*PN	**Pn**	**22 51 47.8**	**+0.7**
VANB	**Van**	**2.42**	**123**	*e*Pn	**Pn**	**22 51 47.8**	**+0.7**
MYA	**Malataya**	**2.43**	**230**	*e*PN	**Pn**	**22 51 47.9**	**+0.6**
MYA	**Malataya**	**2.43**	**230**	*e*Pn	**Pn**	**22 51 47.9**	**+0.6**
MALT	**Malatya**	**2.44**	**229**	*e*PN	**Pn**	**22 51 47.5**	**+0.2**
MALT	**Malatya**	**2.44**	**229**	*e*Pn	**Pn**	**22 51 47.6**	**+0.2**
DARE	**Darende-Malaty**	**2.50**	**248**	*e*PN	**Pg**	**22 51 54.9**	**-0.6**
AKH	**Akhalkalaki**	**2.54**	**53**	P	**Pb**	**22 51 54.1**	**+0.9**
CLDR	**Caldiran**	**2.54**	**107**	*e*PN	**Pn**	**22 51 49.9**	**+1.0**
CLDR	**Caldiran**	**2.54**	**107**	*e*Pn	**Pn**	**22 51 49.9**	**+1.0**
RSDY	**Resadiye-TOKAT**	**2.69**	**281**	*e*PN	**Pn**	**22 51 51.9**	**+1.1**
RSDY	**Resadiye-TOKAT**	**2.69**	**281**	*e*Pn	**Pn**	**22 51 51.9**	**+1.1**
URFA	**Urfa**	**2.92**	**212**	*e*PN	**Pn**	**22 51 54.9**	**+0.9**
URFA	**Urfa**	**2.92**	**212**	*e*Pn	**Pn**	**22 51 54.9**	**+0.9**
GOR	**Gori**	**3.25**	**50**	P	**Pb**	**22 52 06.4**	**+1.1**
ONI	**Oni**	**3.33**	**36**	P	**Pb**	**22 52 08.1**	**+1.4**
CUKT	**Cukurca**	**3.47**	**140**	*e*PN	**Pn**	**22 52 03.3**	**+1.7**
CUKT	**Cukurca**	**3.47**	**140**	*e*Pn	**Pn**	**22 52 03.3**	**+1.7**
TBLG	**Delisi**	**3.50**	**58**	P	**Pg**	**22 52 12.4**	**-2.2**
DGRG	**David-gareji**	**3.81**	**65**	P	**Pg**	**22 52 17.4**	**-3.0**
KMRS	**Kahramanmaras**	**3.88**	**233**	*e*PN	**Pn**	**22 52 08.7**	**+1.5**
KMRS	**Kahramanmaras**	**3.88**	**233**	*e*Pn	**Pn**	**22 52 08.7**	**+1.5**

CASC 04 23:23:13.6±6.2, **14.19N**×**90.24W**, **h28**km±33km, **MD3.2**, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBG	**Las Nubes**	**0.41**	**345**	*e*P	Pn	23 23 23.9	-0.1
NBG				*e*S	Sn	23 23 30.7	-0.3
PCG	**Pacaya**	**0.41**	**300**	*e*P	Pn	23 23 23.8	-0.2
PCG				*e*S	Sb	23 23 26.4	-2.8
FUG	**Fuego 3**	**0.64**	**294**	*e*P	Pb	23 23 26.1	-0.4
FG6		**0.72**	**301**	*e*P	Pn	23 23 28.3	-0.1
FG6				*e*S	Sb	23 23 35.4	-2.6
MRL	**Marmol**	**1.02**	**31**	*e*P	Pb	23 23 40.0	+7.1
MRL				*e*S	Sb	23 23 54.1	+8.0

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*IDC **04** 23:23:19.1±2.3, 12.65N×87.19W, h0km, mb3.3/3, mb1 3.7/4, mb1mx3.4/23, mbtmp3.3/4, ML2.9/1, Error ellipse: s-maj=160.5km s-min=16.7km az=50.0*
*ISCJB **04** 23:23:20.9±1.1, 12.02N±0.09×87.9W±0.1, h35km, mb3.3/3, Error ellipse: s-maj=19.6km s-min=11.0km az=155.0*
ISC 04 23:23:22.3±1.3, **12.1N**±0.1×**87.9W**±0.1, **h35**km, **n9**, σ**0.68**/10, **mb3.3**/3, **1D**, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.19**	**2**	*e*P	**Pn**	**23 23 42.1**	**-0.5**
CNCH				*e*S	**Sn**	**23 23 57.9**	**+0.4**
BLLM	**Bellamira**	**1.40**	**345**	*e*P	**Pn**	**23 23 45.0**	**-0.4**
CAHU	**Cacacuatique**	**1.71**	**349**	*e*P	**Pn**	**23 23 50.2**	**+0.4**
LFRS	**El Faro**	**1.92**	**323**	*e*P	**Pn**	**23 23 52.5**	**-0.2**
TGUH	**Tegucigalpa,Un**	**2.05**	**16**⇓	*e*P	**Pn**	**23 23 54.3**	**0.0**
JTS	**JuntasAbangare**	**3.37**	**122**	Pn	**Pn**	**23 24 12.6**	**0.0**
	1.2nm,0.3s,baz=326,slow=16,SNR=4.7						
JTS				Lg	Lg	23 24 59.8	
	2.1nm,0.3s,baz=313,slow=19,SNR=2.9						
TXAR	**Lajitas Array**	**22.60**	**322**	P	**P**	**23 28 21.4**	**+1.3**
	1.0nm,0.7s,baz=136,slow=11,SNR=10						
PDAR	**Pinedale Array**	**35.90**	**332**	P	**P**	**23 30 19.4**	**0.0**
	0.3nm,0.8s,baz=120,slow=8.4,SNR=2.7						
YKA	**Yellowknife Ar**	**53.86**	**345**	P	**P**	**23 32 40.7**	**-0.9**
	0.2nm,0.6s,baz=148,slow=6.8,SNR=5.1						

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*ISCJB **04** 23:54:52.0±1.2, 53.19N±0.06×167.19W±0.08, h8km±9km, mb3.6/6, MS2.9/1, Error ellipse: s-maj=11.7km s-min=5.1km az=146.8*
*IDC **04** 23:54:52.5±1.4, 53.61N×167.21W, h0km, mb3.7/6, mb1 4.1/6, mb1mx3.6/29, mbtmp3.7/6, MS3.1/1, Ms1 3.1/1, ms1mx2.3/34, Error ellipse: s-maj=44.6km s-min=28.4km az=150.0*
*NEIC **04** 23:54:54.7, 53.28N×167.34W, h14km, ML3.8(AEIC), After AEIC.*
ISC 04 23:54:53.5±1.6, **53.31N**±0.09×**167.31W**±0.05, **h12**km±10km, **n26**, σ**1.01**/34, **mb3.6**/6, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**0.38**	**286**	P	**Pb**	**23 55 02.2**	**+0.1**
OKFG				S	**Sb**	**23 55 08.3**	**+0.4**
OKSO	**Okmok South**	**0.51**	**276**	P	**Pg**	**23 55 03.7**	**+0.1**
OKSO				S	**Sb**	**23 55 11.5**	**-0.4**
OKCE	**Okmok Cone E**	**0.53**	**284**	P	**Pb**	**23 55 05.0**	**+0.3**
OKSP	**Okmok Steeple**	**0.59**	**265**	P	**Pb**	**23 55 05.8**	**0.0**
MREP	**Makushin Rep't**	**0.60**	**33**	P	**Pg**	**23 55 06.2**	**+0.9**
MCIR	**Makushin Cirqu**	**0.69**	**21**	P	**Pg**	**23 55 07.5**	**+0.5**
UNV	**Unalaska Valle**	**0.72**	**41**	P	**Pg**	**23 55 07.4**	**-0.1**
UNV				S	**Sg**	**23 55 17.2**	**+0.2**
MTBL	**Makushin Table**	**0.76**	**29**	P	**Pg**	**23 55 08.4**	**+0.1**
NIKO	**Nikolski**	**0.99**	**251**	*e*Pg	**Pb**	**23 55 11.6**	**-1.0**
NIKO				*e*S	**Sb**	**23 55 25.0**	**-0.5**
AKRB	**Akutan Reef Bi**	**1.10**	**41**	P	**Pb**	**23 55 14.2**	**-0.3**
AKRB				S	**Sb**	**23 55 29.8**	**+0.9**
ZRO	**Akutan Zero**	**1.11**	**45**	P	**Pb**	**23 55 14.2**	**-0.5**
AKLV	**Akutan Long Va**	**1.18**	**43**	P	**Pn**	**23 55 15.3**	**-0.5**
AKLV				S	**Sb**	**23 55 30.4**	**-0.5**
AKGG	**Akutan Green G**	**1.19**	**41**	P	**Pn**	**23 55 15.5**	**-0.4**
AHB	**Akutan Harbor**	**1.20**	**47**	P	**Pn**	**23 55 15.2**	**-0.9**
WESE	**West Dahl East**	**1.99**	**53**	P	**Pn**	**23 55 27.0**	**0.0**
WESN	**West Dahl Nort**	**2.05**	**51**	P	**Pn**	**23 55 28.4**	**+0.7**
DTNA	**Dutton South F**	**3.49**	**56**	P	**Pn**	**23 55 48.1**	**+0.5**
SDPT	**Sand Point**	**4.49**	**60**	*e*Pn	**Pn**	**23 56 02.5**	**+1.3**
SDPT				*e*S	**Sn**	**23 56 54.5**	**+1.2**
CHGN	**Chignik**	**5.95**	**56**	*e*Pn	**Pn**	**23 56 19.9**	**-1.4**
CHGN				*e*S	**Sn**	**23 57 29.1**	**-0.2**
PETK	**Petropavlovsk-**	**20.84**	**284**	LR	LR	00 05 53.6	
	comp=Z,50nm,19.2s,baz=190,slow=32						
INK	**Inuvik**	**21.87**	**34**	P	**P**	**23 59 42.0**	**-3.7**
	1.4nm,0.5s,baz=247,slow=9.5,SNR=15						
YKA	**Yellowknife Ar**	**28.68**	**50**	P	**P**	**00 00 49.9**	**+0.1**
	0.2nm,0.4s,baz=274,slow=8.9,SNR=9.0						
YKA				PcP	**PcP**	**00 03 59.2**	**-0.7**
	0.3nm,0.8s,baz=279,slow=2.4,SNR=4.2						
NVAR	**Mina Array Bea**	**36.45**	**94**	P	**P**	**00 01 58.9**	**+0.6**
	0.3nm,0.6s,baz=307,slow=8.9,SNR=3.6						
PDAR	**Pinedale Array**	**39.01**	**82**	P	**P**	**00 02 19.9**	**0.0**
	1.2nm,0.9s,baz=316,slow=4.1,SNR=4.1						
TXAR	**Lajitas Array**	**51.50**	**91**	P	**P**	**00 03 58.9**	**0.0**
	1.1nm,0.6s,baz=304,slow=5.5,SNR=18						
WRA	**Warramunga Arr**	**88.57**	**233**	P	**P**	**00 07 48.2**	**+2.2**
	0.5nm,0.6s,baz=36,slow=5.1,SNR=3.8						

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*ISCJB **05** 00:06:50.4±0.9, 51.39N±0.04×16.03E±0.05, h0km, Error ellipse: s-maj=6.7km s-min=3.4km az=27.2*
*CSEM **05** 00:06:50.4±0.3, 51.47N×16.06E, h2km, ML2.7/9, Error ellipse: s-maj=5.6km s-min=2.8km az=31.0*
*IPEC **05** 00:06:50.7±0.3, 51.51N×16.15E, h8km±1km, ML1.5/3, Error ellipse: s-maj=1.9km s-min=0.7km az=34.0*
*PRU **05** 00:06:51.6, 51.42N×16.10E, h0km*
*WAR **05** 00:06:51.6, 51.47N×16.10E*
ISC 05 00:06:49.5±1.6, **51.55N**±0.07×**16.11E**±0.04, **h0**km, **n30**, σ**0.96**/50, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.72**	**171**	*e*Pg	**Pg**	**00 07 03.4**	**+0.2**
KSP				*e*Sg	**Sg**	**00 07 12.5**	**+0.1**
KSP	**Ksiaz**	**0.72**	**171**	*e*Pg	**Pg**	**00 07 03.4**	**+0.2**
	baz=352						
KSP				*e*Sg	**Sg**	**00 07 12.2**	**-0.2**
	baz=352						
UPC	**Upice**	**1.04**	**183**	*e*PG	**Pg**	**00 07 09.5**	**0.0**
UPC	**Upice**	**1.04**	**183**	Pg	**Pg**	**00 07 09.5**	**0.0**
DPC	**Dobruska-Polom**	**1.21**	**174**	*e*PG	**Pg**	**00 07 12.3**	**-0.3**
DPC				*e*SG	**Sg**	**00 07 27.0**	**-1.2**
	comp=Z,11nm,0.5s						
DPC	**Dobruska-Polom**	**1.21**	**174**	Pg	**Pg**	**00 07 12.3**	**-0.3**
DPC				Sg	**Sg**	**00 07 27.0**	**-1.2**
	11nm,0.5s						
PVCC	**Panska Ves**	**1.41**	**224**	*e*PG	**Pn**	**00 07 16.6**	**+0.2**
PVCC				*e*SG	**Sg**	**00 07 33.8**	**-1.0**
	comp=Z,42nm,0.2s						
PVCC	**Panska Ves**	**1.41**	**224**	*e*Pn	**Pn**	**00 07 16.7**	**+0.3**
	baz=45						
PVCC				Sg	**Sg**	**00 07 33.8**	**-1.0**
	42nm,0.2s						
BRG	**Berggiesshubel**	**1.52**	**244**	PG	**Pb**	**00 07 19.0**	**+0.5**
BRG				SG	**Sb**	**00 07 38.8**	**+0.4**
	17nm,0.3s						
BRG	**Berggiesshubel**	**1.52**	**244**	*e*Pn	**Pb**	**00 07 18.8**	**+0.3**
	baz=65						
BRG				*e*Sg	**Sg**	**00 07 38.3**	**0.0**
	baz=65						
PRU	**Pruhonice**	**1.85**	**213**	*e*PG	**Pb**	**00 07 24.0**	**-0.2**
PRU				*e*SG	**Sn**	**00 07 46.7**	**+0.1**
	comp=Z,6.8nm,0.4s						
PRU	**Pruhonice**	**1.85**	**213**	*e*Pn	**Pn**	**00 07 22.8**	**+0.3**
	baz=33						
PRU	**Pruhonice**	**1.85**	**213**	Pg	**Pb**	**00 07 24.0**	**-0.2**
PRU				Sg	**Sn**	**00 07 46.7**	**+0.1**
	6.8nm,0.4s						
CLL	**Collm**	**1.96**	**264**	*e*Pg	**Pb**	**00 07 27.0**	**+1.0**
CLL				*e*Sg	**Sg**	**00 07 53.0**	**+0.6**
CLL	**Collm**	**1.96**	**264**	*e*Pn	**Pn**	**00 07 22.9**	**-1.0**
	baz=83						
CLL	**Collm**	**1.96**	**264**	*e*Pg	**Pb**	**00 07 26.5**	**+0.5**
	baz=83						
CLL				*e*Sg	**Sg**	**00 07 53.1**	**+0.6**
	baz=83						
MORC	**Moravsky Berou**	**2.00**	**152**	*e*Pn	**Pn**	**00 07 24.1**	**-0.4**
	baz=334						
MORC				*e*Sg	**Sb**	**00 07 51.5**	**-0.5**
	3.1nm,0.2s,baz=334						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	2.15	142	eSG	Sb	00 07 56.5	+0.1
	comp=Z,6.2nm,0.5s						
OKC	Ostrava-Krasne	2.15	142	Sg	Sb	00 07 56.5	+0.1
	6.2nm,0.5s						
VRAC	Vranov	2.26	172	ePn	Pn	00 07 28.2	+0.1
	baz=353						
VRAC				eSg	Sb	00 08 00.0	+0.2
	3.0nm,0.3s,baz=353						
KRUC	Moravsky	2.50	176	ePn	Pn	00 07 31.8	+0.5
	baz=356						
KRUC	Moravsky	2.50	176	ePg	Pb	00 07 35.6	+0.4
	baz=356						
KRUC				eSg	Sb	00 08 07.5	+1.1
	2.1nm,0.3s,baz=356						
NKC	Novy Kostel	2.67	242	eSG	Sg	00 08 14.2	-0.9
	comp=Z,12nm,0.6s						
NKC	Novy Kostel	2.67	242	Sg	Sg	00 08 14.2	-0.9
	12nm,0.6s						
KHC	Kasperske Hory	2.91	215	ePN	Pn	00 07 36.9	-0.2
KHC				ePG	Pb	00 07 43.0	+0.7
KHC				eSN	Sn	00 08 10.5	-2.3
KHC				eSG	Sb	00 08 20.5	+2.0
	comp=Z,1.9nm,0.3s						
KHC	Kasperske Hory	2.91	215	ePn	Pn	00 07 37.0	-0.2
	baz=34						
KHC	Kasperske Hory	2.91	215	ePg	Pb	00 07 44.1	+1.8
	baz=34						
KHC				Sn	Sn	00 08 10.5	-2.3
KHC				Sg	Sb	00 08 20.5	+2.0
	1.9nm,0.3s						
MOX	Moxa	2.98	254	ePg	Pg	00 07 45.7	-0.8
	baz=72						
VYHS	Vyhne	3.53	149	eSG	Sb	00 08 38.0	+1.9
VYHS	Vyhne	3.53	149	eSg	Sb	00 08 38.0	+1.9

*ISCJB **05** 00:20:24.8±0.3, 53°.35N±0°.03×159°.78E±0°.06, h87km±3km, mb3.6/13, Error ellipse: s-maj=6.9km s-min=3.0km az=31.9*
*MOS **05** 00:20:24.3±0.9, 53°.36N×159°.79E, h88km, mb4.0/4, Error ellipse: s-maj=18.3km s-min=8.5km az=72.7*
*KRSC **05** 00:20:25.3±0.7, 53°.39N×159°.83E, h75km±54km, ML4.1*
*IDC **05** 00:20:27.4±1.1, 53°.54N×159°.40E, h96km±10km, mb3.2/11, mb1 3.4/11, mb1mx3.3/27, mbtmp3.2/11, Error ellipse: s-maj=22.1km s-min=16.3km az=164.0*
ISC 05 00:20:24.9±0.6**, 53°.33N**±0°.03×**159°.83E**±0°.04**, h86**km±4km**, n62,** σ1s.39/104**, mb3.5**/13**, 1C, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.26	153	PN	Pn	00 20 37.6	0.0
SPN				S	Sn	00 20 46.8	-0.1
SPN	Mys Shipunski	0.26	153	iP	Pn	00 20 37.6	0.0
SPN				iS	Sn	00 20 46.8	-0.1
SDLR	Sedlovina	0.57	265	iP	Pn	00 20 39.9	0.0
SDLR				iS	Sn	00 20 50.6	-0.4
UGLR	Uglovaya	0.61	259	iP	Pn	00 20 40.6	+0.3
UGLR				iS	Sn	00 20 52.0	+0.3
SMAR	Somma	0.62	265	iP	Pn	00 20 40.4	0.0
SMAR				iS	Sn	00 20 51.4	-0.6
AVH	Avacha	0.66	265	iP	Pn	00 20 41.0	+0.4
AVH				iS	Sn	00 20 52.5	+0.1
KOK	Koryaka	0.72	268	iP	Pn	00 20 41.5	+0.3
KOK				iS	Sn	00 20 53.2	-0.3
KII	Karymskiy	0.75	343	iP	Pn	00 20 40.8	-0.7
KII				iS	Sn	00 20 52.2	-1.8
PET	Petropavlovsk	0.77	247	PN	Pn	00 20 42.1	+0.5
PET				S	Sn	00 20 54.4	+0.2
PET	Petropavlovsk	0.77	247	iP	Pn	00 20 42.1	+0.5
PET				iS	Sn	00 20 54.4	+0.2
GNL	Ganaly	1.19	289	iP	Pn	00 20 46.2	-0.4
GNL				iS	Sn	00 21 01.3	-1.6
RUS	Russkaya	1.20	222	PN	Pn	00 20 47.0	+0.4
RUS				S	Sn	00 21 03.4	+0.5
RUS	Russkaya	1.20	222	eP	Pn	00 20 47.0	+0.4
RUS				iS	Sn	00 21 03.4	+0.5
PETK	Petropavlovsk-	1.30	261	ePN	Pn	00 20 48.1	+0.2
PETK				pmax	pmax		
	comp=Z,44nm,0.3s						
PETK	Petropavlovsk-	1.30	261	P	Pn	00 20 48.1	+0.2
	comp=Z,44nm,0.3s,baz=78,slow=17,SNR=469						
PETK				S	Sn	00 21 04.9	-0.2
	comp=Z,31nm,0.3s,baz=61,slow=24,SNR=14						
GRL	Gorelyy	1.32	235	eP	Pn	00 20 49.8	+1.6
GRL				iS	Sn	00 21 07.1	+1.4
APC	Apacha	1.66	257	iP	Pn	00 20 53.4	+1.0
APC				iS	Sn	00 21 14.2	+0.9
MKZ	Mys Kozlova	1.67	42	PN	Pn	00 20 52.3	-0.2
MKZ				S	Sn	00 21 12.1	-1.4
MKZ	Mys Kozlova	1.67	42	iP	Pn	00 20 52.3	-0.2
MKZ				iS	Sn	00 21 12.1	-1.4
TUMR	Tumrok	1.97	5	iP	Pn	00 20 57.2	+0.6
TUMR				iS	Sn	00 21 20.3	-0.4
MIPR	Malaya Ipel'ka	2.14	242	eP	Pn	00 21 00.3	+1.6
KMNR	Kamenistaya	2.45	5	eP	Pn	00 21 03.9	+1.0
BZMR	Bezymyannaya	2.64	8	eP	Pn	00 21 06.8	+1.2
BZMR				eS	Sn	00 21 37.2	+0.4
KPT	Kopyto	2.66	5	eP	Pn	00 21 06.0	+0.3
BZGR	Bezymyannyi-Gr	2.67	11	eP	Pn	00 21 07.8	+1.9
BZGR				eS	Sn	00 21 38.2	+0.9
BZWR	Bezymyannyi-We	2.67	8	P	Pn	00 21 06.9	+0.9
BZWR				iS	Sn	00 21 37.0	-0.5
ESO	Esso	2.69	346	PN	Pn	00 21 06.1	+0.1
ESO				S	Sn	00 21 36.1	-1.5
ESO	Esso	2.69	346	iP	Pn	00 21 06.1	+0.1
ESO				iS	Sn	00 21 36.1	-1.5
KOZ	Kozyrevsk	2.74	1	eP	Pn	00 21 07.8	+1.1
KOZR	Kozyr	2.75	1	PN	Pn	00 21 07.8	+1.0
ZLN	Zelenaya	2.75	11	eP	Pn	00 21 08.6	+1.6
ZLN				eS	Sn	00 21 40.7	+1.3
LGNR	Loginova	2.81	10	P	Pn	00 21 09.5	+1.6
LGNR				iS	Sn	00 21 41.4	+0.5
CIRR	Tsirk	2.84	10	eP	Pn	00 21 10.3	+2.0
CIRR				iS	Sn	00 21 43.2	+1.5
KRSR	Krestovskiy	2.93	8	P	Pn	00 21 09.6	+0.3
SRDR	Sredinnyy	3.00	359	eP	Pn	00 21 10.8	+0.6
KLY	Klyuchi	3.03	9	PN	Pn	00 21 12.1	+1.5
KLY				S	Sn	00 21 46.8	+0.9
KLY	Klyuchi	3.03	9	eP	Pn	00 21 12.1	+1.5
KLY				iS	Sn	00 21 46.8	+0.9
BDR	Baidarnaya	3.34	13	P	Pn	00 21 17.2	+2.3
BDR				iS	Sn	00 21 55.3	+1.7
KBTR	Krutoberegovo	3.37	30	PN	Pn	00 21 16.3	+1.1
KBTR				S	Sn	00 21 54.3	+0.3
KBTR	Krutoberegovo	3.37	30	eP	Pn	00 21 16.3	+1.1
KBTR				iS	Sn	00 21 54.3	+0.3
SMKR	Semkarok	3.40	15	eP	Pn	00 21 17.0	+1.4
SMKR				iS	Sn	00 21 55.6	+0.7
SRKR	Sorokina	3.42	12	eP	Pn	00 21 18.0	+2.0
SRKR				iS	Sn	00 21 57.1	+1.6
SKR	Severo-Kuril's	3.50	222	ePN	Pn	00 21 20.5	+3.5
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
BKI	Bering	4.06	60	PN	Pn	00 21 25.0	+0.4
BKI				S	Sn	00 22 07.4	-3.5
BKI	Bering	4.06	60	eP	Pn	00 21 25.0	+0.4
BKI				iS	Sn	00 22 07.4	-3.5
FX1	Attu Island--F	8.04	88	P	Pn	00 22 19.9	+1.1
	comp=Z,4.5nm,0.3s,baz=38,slow=22,SNR=9.2						
FX1				S	Sn	00 23 44.9	-3.1
	comp=Z,7.9nm,0.3s,baz=255,slow=20,SNR=8.5						
BILL	Bilibino	15.08	9⇑	eP	Pn	00 23 44.5	-8.4
BILL				eS	Sn	00 26 29.9	-8.9
BILL				pmax	pmax		
	comp=Z,5.0nm,1.9s						
ERM	Erimo	15.90	231	iP	Pn	00 24 03.0	-0.3
SONM	Songino Array	33.69	283	P	P	00 26 58.4	+0.8
	comp=Z,0.2nm,0.4s,baz=66,slow=8.1,SNR=2.8						
HHC	Hu-ho-hao-te	34.49	269	eP	P	00 27 02.2	-2.3
HHC				pP	pP	00 27 24.4	0.0
HHC				sP	sP	00 27 36.0	+1.7
HHC				PP	PnPn	00 28 19.6	-2.6
HHC				PcP	PcP	00 29 38.0	+0.3
HHC				S	S	00 32 19.8	-6.9
HHC				sS	sS	00 32 59.0	-1.9
HHC				ScP	ScP	00 33 12.4	-2.4
HHC				PcS	PcS	00 33 23.1	-1.1
HHC				SS	SnSn	00 34 34.5	-11
HHC				ScS	ScS	00 37 13.1	-4.8
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,6.4s						
HHC				LR	LR		
	comp=N,230nm,12.4s						
HHC				LR	LR		
	comp=E,230nm,12.1s						
HHC				LR	LR		
	comp=Z,240nm,12.2s						
YKA	Yellowknife Ar	43.10	43	P	P	00 28 17.6	+1.7
	comp=Z,0.1nm,0.4s,baz=298,slow=6.9,SNR=3.3						
KURK	Kurchatov	47.48	302	iP	P	00 28 50.0	-0.7
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR	Makanchi Array	47.91	295	eP	P	00 28 52.5	-1.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	47.91	295	P	P	00 28 52.5	-1.6
	comp=Z,0.5nm,0.5s,baz=55,slow=6.9,SNR=16						
NVAR	Mina Array Bea	55.81	70	P	P	00 29 56.3	+3.1
	comp=Z,0.2nm,0.4s,baz=334,slow=5.3,SNR=2.5						
PDAR	Pinedale Array	57.55	61	P	P	00 30 07.9	+2.4
	comp=Z,0.4nm,0.9s,baz=325,slow=1.8,SNR=3.7						
FINES	FINESS Array B	59.84	336	P	P	00 30 19.0	-1.7
	comp=Z,2.0nm,1.0s,baz=34,slow=14,SNR=5.7						
NOA	NORSAR Array B	63.27	344	P	P	00 30 44.1	+0.2
	comp=Z,0.6nm,0.9s,baz=17,slow=5.4,SNR=3.3						
TXAR	Lajitas Array	70.69	67	P	P	00 31 33.7	+2.2
	comp=Z,0.3nm,0.6s,baz=296,slow=3.5,SNR=5.3						
WRA	Warramunga Arr	76.23	205	P	P	00 32 05.2	+1.6
	comp=Z,0.4nm,0.4s,baz=16,slow=6.1,SNR=4.4						
BRTR	Keskin Array B	76.34	320	P	P	00 32 03.6	-0.9
	comp=Z,0.2nm,0.5s,baz=326,slow=38,SNR=2.4						
ASAR	Alice Springs	79.91	204	P	P	00 32 26.2	+2.2
	comp=Z,0.4nm,0.6s,baz=15,slow=5.2,SNR=4.4						

SKHL 05 00:30:18.4±0.6**, 48°.93N**×**131°.57E, h16**km±1km**, mb4.2**/8**, Priamurye-Northeastern China border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KLR	Kul'dur	0.32	21	ePg	Pg	00 30 24.2	-1.0
KLR				eSg	Sg	00 30 30.0	+0.1
KHBR	Khabarovsk	2.35	100	ePg	Pb	00 31 01.8	+1.4
KHBR				eSg	Sb	00 31 30.9	+1.7
GRNR	Gornyy	3.64	58	ePg	Pg	00 31 26.5	-1.7
GRNR				AMB	AMB	00 31 28.0	
	76nm,0.4s						
GRNR				eSg	Sg	00 32 14.2	-1.1
GRNR				A	A	00 32 15.2	
	230nm,0.5s						
EKMR	Ekimchan	4.24	11	ePn	Pn	00 31 22.5	+0.2
EKMR				sPn	sPn	00 31 29.7	+1.3
EKMR				ePg	Pb	00 31 35.0	+2.5
EKMR				AMB	AMB	00 31 36.3	
	16nm,0.4s						
EKMR				AMB	AMB	00 31 36.3	
	19nm,0.4s						
EKMR				AMB	AMB	00 31 36.3	
	30nm,0.4s						
EKMR				eSn	Sn	00 32 11.0	-0.4
EKMR				eSg	Sg	00 32 30.7	-3.8
EKMR				A	A	00 32 37.0	
	87nm,0.5s						
EKMR				A	A	00 32 37.0	
	140nm,0.5s						
EKMR				A	A	00 32 37.0	
	80nm,0.5s						
YASR	Yasnyy	4.92	334	ePn	Pn	00 31 30.8	-0.8
YASR				AMB	AMB	00 31 31.5	
	9.0nm,0.4s						
YASR				AMB	AMB	00 31 31.5	
	15nm,0.4s						
YASR				AMB	AMB	00 31 31.5	
	16nm,0.4s						
YASR				pPn	pPn	00 31 36.6	+1.2
YASR				ePg	Pb	00 31 47.2	+3.1
YASR				AMB	AMB	00 31 49.7	
	16nm,0.6s						
YASR				eSg	Sg	00 32 50.8	-5.4
YASR				A	A	00 32 52.0	
	63nm,0.5s						
YASR				A	A	00 32 52.0	
	70nm,0.5s						
YASR				A	A	00 32 52.0	
	33nm,0.5s						
TEY	Ternei	5.20	137	ePn	Pn	00 31 36.1	+0.7
TEY				erx	rx	00 32 56.0	
TEY				eSg	Sg	00 33 00.7	-4.5
TEY				A	A	00 33 03.0	
	83nm,0.8s						
ZEA	Zeya	5.52	332	ePn	Pn	00 31 40.6	+0.7
ZEA				erx	rx	00 31 44.2	
ZEA				pPn	pPn	00 31 47.4	+3.7
ZEA				ePg	Pb	00 31 59.0	+4.6
ZEA				AMB	AMB	00 32 02.3	
	19nm,0.6s						
ZEA				eSn	Sn	00 32 44.5	+1.5
ZEA				eSg	Sg	00 33 11.5	-4.1
ZEA				A	A	00 33 13.8	
	180nm,1.0s						
ZEA				A	A	00 33 13.8	
	90nm,1.0s						
BMKR	Bomnak	6.03	345	ePn	Pn	00 31 47.2	+0.3
BMKR				sPn	sPn	00 31 54.4	+1.4
BMKR				ePg	Pb	00 32 06.6	+3.5
BMKR				AMB	AMB	00 32 09.2	
	8.0nm,0.5s						
BMKR				AMB	AMB	00 32 09.2	
	9.0nm,0.5s						
BMKR				eSg	Sg	00 33 25.9	-6.0
BMKR				A	A	00 33 33.8	
	28nm,0.5s						
BMKR				A	A	00 33 33.8	
	66nm,0.5s						
BMKR				A	A	00 33 33.8	
	35nm,0.5s						
KROS	Kirovskiy	6.21	334	ePn	Pn	00 31 48.8	-0.5
KROS				sPn	sPn	00 31 56.3	+0.9
KROS				ePg	Pb	00 32 07.8	+1.7
KROS				AMB	AMB	00 32 08.7	
	5.0nm,0.4s						
KROS				eSn	Sn	00 33 00.5	+0.6
KROS				eSg	Sg	00 33 32.0	-5.6
KROS				A	A	00 33 34.1	
	19nm,0.5s						
KROS				A	A	00 33 34.1	
	49nm,0.5s						
KROS				A	A	00 33 34.1	
	18nm,0.5s						
NKL	Nikolayevsk	7.13	50	ePg	Pb	00 32 26.5	+4.8
NKL				AMB	AMB	00 32 31.2	
	10.0nm,0.7s						
NKL				eSg	Sg	00 34 00.5	-6.4
NKL				A	A	00 34 10.5	
	64nm,1.0s						
TUP	Tupik	9.07	312	ePn	Pn	00 32 32.4	+3.8
TUP				ePg		00 33 05.3	
TUP				AMB	AMB	00 33 10.5	
	3.0nm,0.4s						
TUP				eSg	Sn	00 35 05.2	+55
TUP				A	A	00 35 26.3	
	81nm,1.5s						

GUC 05 00:54:35.9±0.5**, 31°.96S**×**71°.45W, h30**km±1km**, MD3.5, ML2.8, 3C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.09	332⇓	iP	Pb	00 54 41.1	0.0
CHNG				iS	Sb	00 54 44.8	+0.1
CHNG				AML	AML	00 54 45.2	
	comp=E,3μm,0.2s						
CMCH	Combarbala	0.87	26⇓	iP	Pn	00 54 51.8	-0.5
CMCH				iS	Sn	00 55 04.0	-0.1
CMCH				AML	AML	00 55 09.4	
	comp=N,1μm,0.5s						
ROCH	El Roble	1.08	160⇑	iP	Pn	00 54 54.8	-0.4
ROCH				iS	Sn	00 55 09.6	+0.2
ROCH				AML	AML	00 55 13.1	
	comp=N,286nm,0.4s						
PEL	Peldehue	1.35	151⇓	iP	Pn	00 54 59.4	+0.6
PEL				iS	Sb	00 55 17.4	-0.2
PEL				AML	AML	00 55 18.8	
	comp=N,355nm,0.2s						
CLCH	Cerro Calan	1.63	152⇓	iP	Pb	00 55 04.0	-1.4
CLCH				iS	Sb	00 55 24.9	-0.7
CLCH				AML	AML	00 55 26.0	
	comp=E,199nm,0.7s						
FCH	Farellones	1.68	145⇓	iP	Pn	00 54 54.3	-9.5
FCH				iS	Sn	00 55 16.7	-7.9
FCH				AML	AML	00 55 18.5	
	comp=E,117nm,0.4s						
TLL	Tololo Astrono	1.87	17⇑	iP	Pn	00 55 07.9	+1.7
TLL				iS	Sb	00 55 32.1	-0.9
TLL				AML	AML	00 55 38.5	
	comp=N,87nm,0.7s						
LMEL	Las Melosas	2.16	151⇑	iP	Pn	00 55 11.8	+1.8
LMEL				iS	Sb	00 55 39.0	-2.1
LMEL				AML	AML	00 55 45.1	
	comp=N,113nm,0.1s						
CACH	El Canelo	2.27	162	iP	Pn	00 55 13.5	+2.0
CACH				iS	Sb	00 55 42.0	-2.2

*ISCJB **05** 01:12:32.4±0.5, 24°.78N±0°.03×122°.44E±0°.02, h2km±4km, Error ellipse: s-maj=4.8km s-min=2.7km az=3.6*
*JMA **05** 01:12:33.8±0.2, 24°.30N×122°.38E, h21km, M2.7*
*TAP **05** 01:12:33.6, 24°.81N×122°.34E, h13km, ML3.1, C*
ISC 05 01:12:32.5±1.1**, 24°.72N**±0°.03×**122°.41E**±0°.02**, h13**km±9km**, n34,** σ0s.79/64**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.48	307	iP	Pg	01 12 41.8	-0.2
	baz=303						
TWB1				S	Sg	01 12 47.4	-1.0
	baz=303						
TWC	Suao	0.52	258	P	Pb	01 12 43.1	-0.5
	baz=254						
TWC				eS	Sb	01 12 51.1	+0.1
	baz=254						
ILA	Ilan	0.60	274	eP	Pn	01 12 45.9	-0.9
	baz=265						
ILA				eS	Sb	01 12 53.2	-0.2
	baz=265						
YOJ	Yonaguni jima	0.60	115	P	Pb	01 12 45.4	+0.4
YOJ				S	Sb	01 12 53.6	+0.2
NWF	Wu-fen Shan	0.67	301	iP	Pb	01 12 46.0	-0.1
	baz=297						
NWF				S	Sg	01 12 54.4	-0.1
	baz=297						
ENA	Nanau	0.68	245	eP	Pb	01 12 46.2	+0.1
	baz=234						
ENA				eS	Sn	01 12 56.8	-1.4
	baz=234						
TWE	Neicheng	0.68	270	P	Pb	01 12 45.8	-0.4
	baz=261						
TWE				S	Sb	01 12 54.8	-0.7
	baz=261						
ENTT	Nioudou	0.77	264	P	Pb	01 12 47.8	-0.1
	baz=256						
ENTT				eS	Sb	01 12 58.6	+0.3
	baz=256						
TAP	Taipei	0.88	291	eP	Pn	01 12 51.3	+0.7
	baz=287						
TAP				eS	Sb	01 13 01.1	-0.2
	baz=287						
TWY	Chenhua	0.92	307	P	Pb	01 12 50.6	+0.2
	baz=305						
TWY				S	Sg	01 13 02.2	-0.2
	baz=305						
PCYT	Pengchaiyu	0.95	341	eP	Pg	01 12 51.2	+0.2
	baz=344						
PCYT				eS	Sb	01 13 04.4	+0.9
	baz=344						
NSK	Sanguang	0.96	267	iP	Pb	01 12 51.0	-0.1
	baz=261						
NSK				eS	Sg	01 13 02.6	-1.0
	baz=261						
TWS1	Kuangyinshan	0.98	293	eP	Pn	01 12 51.8	-0.2
	baz=289						
TWS1				eS	Sb	01 13 04.2	0.0
	baz=289						
TWD	Chiawan	0.98	229	eP	Pn	01 12 53.1	+1.1
	baz=231						
TWD				eS	Sn	01 13 07.7	+1.9
	baz=231						
NNS	Nan Shan	0.99	254	eP	Pn	01 12 52.2	0.0
	baz=235						
NNS				eS	Sn	01 13 05.5	-0.6
	baz=235						
WHF	Hehuan Shan	1.19	241	iP	Pg	01 12 55.9	+0.4
	baz=235						
WHF				eS	Sn	01 13 11.9	+0.3
	baz=235						
TWT	Tachien	1.22	248	eP	Pg	01 12 57.0	+1.0
	baz=242						
TWT				eS	Sg	01 13 13.7	+1.8
	baz=242						
IRIF	Iriomote-Funau	1.26	108	P	Pn	01 12 56.1	+0.2
IRIF				S	Sb	01 13 11.6	-0.7
NSTT	Nanjuang	1.29	266	eP	Pg	01 12 58.1	+0.8
	baz=261						
NSTT				eS	Sg	01 13 14.3	+0.3
	baz=261						
HATJ	Hateruma jima	1.43	117	P	Pn	01 12 57.4	-0.8
NSY	Sanyi	1.53	259	eP	Pg	01 13 03.6	+1.6
	baz=272						
JKRS	Kuro-shima	1.53	108	P	Pn	01 12 59.3	-0.3
JKRS				S	Sn	01 13 18.1	-1.3
TWQ1	Liyutan	1.54	256	eP	Pg	01 13 02.6	+0.5
	baz=251						
TWQ1				eS	Sg	01 13 22.6	+0.5
	baz=251						
EHY	Hungye	1.57	220	eP	Pg	01 13 03.7	+1.1
	baz=199						
EHY				eS	Sg	01 13 22.2	-0.8
	baz=199						
SMLT	Sun Moon Lake	1.61	239	eP	Pg	01 13 02.9	-0.6
	baz=242						
SMLT				eS	Sg	01 13 25.0	+0.5
	baz=242						
JIJ	Ishigaki jima	1.62	102	P	Pn	01 13 01.6	+0.8
JIJ				S	Sn	01 13 22.4	+0.9
TYC	Yuchr	1.64	240	eP	Pg	01 13 03.6	-0.3
	baz=235						
TYC				eS	Sg	01 13 25.7	+0.5
	baz=235						
TWF1	Yuli	1.70	217	eP	Pb	01 13 03.0	-0.7
	baz=212						
TWF1				eS	Sg	01 13 28.1	+0.8
	baz=212						
ALS	Alishan	1.90	231	eP	Pg	01 13 08.2	-0.8
	baz=209						
ALS				eS	Sg	01 13 32.7	-1.0
	baz=209						
CHN5	Tsauling	1.94	235	eP	Pg	01 13 08.7	-1.0
	baz=231						
CHN5				eS	Sg	01 13 33.6	-1.4
	baz=231						
JTJ	Tarama	2.09	92	P	Pb	01 13 10.0	-0.2
CHN4	Tsaushan	2.15	231	eP	Pb	01 13 10.9	-0.5
	baz=210						
CHN4				eS	Sb	01 13 39.1	+1.1
	baz=210						
TWK	Hsinying	2.28	231	eP	Pb	01 13 12.2	-1.4
	baz=211						
TWK				eS	Sb	01 13 41.8	+0.1
	baz=211						
CHN1	Nanshi	2.30	229	eP	Pb	01 13 13.8	-0.2
	baz=225						

*IDC **05** 01:13:58.7±1.6, 3°.66S×135°.73E, h0km, mb3.8/2, mb1 4.1/5, mb1mx3.7/18, mbtmp3.9/5, ML4.1/3, Error ellipse: s-maj=61.7km s-min=26.9km az=78.0*
*DJA **05** 01:14:06.7±2.4, 3°S±17°×13°5E±°, h110km±59km, M4.0/4, MLv4.0/4*
ISC 05 01:14:00.4±0.9**, 3°.56S**±0°.07×**135°.69E**±0°.08**, h22**km**, n9,** σ1s.66/10**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BAKI	Biak	2.39	10	P	Pb	01 14 42.1	-0.7
BAKI				S	Sb	01 15 10.8	-1.0
SMPI	Sarmi	3.39	63	P	Pb	01 14 59.8	-0.1
FAKI	Fak Fak	3.50	280	P	Pn	01 14 54.8	+1.3
FAKI				S	Sn	01 15 32.2	-2.1
WRA	Warramunga Arr	16.34	185	Pn	Pn	01 17 46.5	-2.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.6nm,0.3s,baz=6.7,slow=13,SNR=5.8						
WRA				Sn	Sn	01 20 36.7	-13
	1.0nm,0.3s,baz=8.0,slow=22,SNR=9.4						
FITZ	Fitzroy Crossi	17.49	214	P	Pn	01 18 02.6	-0.4
	0.4nm,0.3s,baz=29,slow=11,SNR=15						
FITZ				S	Sn	01 21 02.7	-15
	0.8nm,0.3s,baz=214,slow=13,SNR=9.2						
ASAR	Alice Springs	20.06	185	P	Pn	01 18 34.5	+0.2
	1.1nm,0.3s,baz=6.5,slow=11,SNR=77						
ASAR				S	S	01 22 06.7	-10
	0.3nm,0.3s,baz=3.0,slow=27,SNR=6.9						
STKA	Stephens Creek	28.71	170	P	P	01 19 56.4	+0.3
	1.2nm,0.4s,baz=322,slow=18,SNR=3.4						
MKAR	Makanchi Array	68.65	324	P	P	01 25 04.6	+2.5
	0.3nm,0.6s,baz=110,slow=8.8,SNR=4.3						
CPUP	Villa Florida	147.72	158	PKPbc	PKPab	01 33 45.3	-1.1
	0.3nm,0.3s,baz=174,slow=3.4,SNR=3.3						

*ISCJB **05** 01:16:48.5±0.8, 48°.99S±0°.08×124°.4E±0°.4, h13km, mb4.0/5, MS3.7/15, Error ellipse: s-maj=40.1km s-min=11.8km az=179.1*
*IDC **05** 01:16:49.2±0.9, 49°.08S×124°.92E, h0km, mb4.2/5, mb1 4.4/5, mb1mx4.0/16, mbtmp4.2/5, MS3.7/16, Ms1 3.7/16, ms1mx3.5/38, Error ellipse: s-maj=60.0km s-min=19.9km az=91.0*
*NEIC **05** 01:16:49.6±0.5, 48°.98S×124°.18E, h10km, mb4.3/3, Error ellipse: s-maj=31.3km s-min=10.5km az=90.0*
ISC 05 01:16:50.1±0.7**, 49°.0S**±0°.1×**124°.2E**±0°.3**, h13**km**, n31,** σ0s.65/18**, mb4.2**/5**, MS3.7**/15**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	16.86	339	P	Pn	01 20 46.3	+0.5
NWAO	Narrogin (SRO)	16.86	339	P	Pn	01 20 46.3	+0.5
	0.7nm,0.3s,baz=164,slow=12,SNR=5.2						
NWAO				LR	LR	01 25 31.5	
	comp=Z,537nm,21.9s,baz=340,slow=30						
FORT	Forrest	18.42	11	eP	P	01 21 05.0	0.0
	19nm,0.9s						
STKA	Stephens Creek	21.54	44	LR	LR	01 28 39.2	
	comp=Z,124nm,19.1s,baz=207,slow=33						
ASAR	Alice Springs	26.41	20	P	P	01 22 25.4	-1.0
ASAR	Alice Springs	26.41	20	P	P	01 22 25.4	-1.0
	2.5nm,0.9s,baz=189,slow=11,SNR=7.0						
FITZ	Fitzroy Crossi	30.83	3	LR	LR	01 34 00.7	
	comp=Z,143nm,21.2s,baz=187,slow=33						
VNDA	Vanda	32.03	165	eP	P	01 23 16.1	+0.3
	3.0nm,0.9s						
VNDA	Vanda	32.03	165	P	P	01 23 16.2	+0.3
	2.3nm,0.8s,baz=306,slow=8.8,SNR=12						
VNDA				LR	LR	01 35 17.6	
	comp=Z,275nm,18.3s,baz=323,slow=35						
CTA	Charters Tower	33.83	39	LR	LR	01 37 09.8	
	comp=Z,88nm,19.5s,baz=228,slow=36						
MAW	Mawson	35.30	216	LR	LR	01 35 32.9	
	comp=Z,117nm,18.4s,baz=104,slow=32						
QSPA	South Pole Qui	41.14	180	P	P	01 24 33.8	+0.1
QSPA	South Pole Qui	41.14	180	P	P	01 24 33.8	+0.1
	4.6nm,1.0s,baz=351,slow=2.8,SNR=6.9						
QSPA				LR	LR	01 40 58.0	
	comp=Z,216nm,19.7s,baz=340,slow=35						
DZM	Mont Dzumac	42.84	67	LR	LR	01 39 25.2	
	comp=Z,134nm,18.5s,baz=40,slow=32						
KAPI	Kappang	43.97	354	LR	LR	01 41 29.9	
	comp=Z,52nm,20.0s,baz=43,slow=34						
SNAA	Sanae	53.97	198	eP	P	01 26 12.7	-0.4
	7.4nm,1.1s						
SNAA	Sanae	53.97	198	P	P	01 26 12.9	-0.3
	1.4nm,1.0s,baz=142,slow=9.0,SNR=6.9						
SNAA				LR	LR	01 50 11.8	
	comp=Z,26nm,18.7s,baz=188,slow=37						
CMAR	Chiang Mai Arr	70.80	335	P	P	01 28 10.3	+4.2
CMAR	Chiang Mai Arr	70.80	335	P	P	01 28 10.3	+4.2
	0.9nm,0.4s,baz=184,slow=6.3,SNR=3.9						
SUR	Sutherland	74.21	239	LR	LR	01 54 10.8	
	comp=Z,58nm,19.3s,baz=232,slow=30						
BOSA	Boshof	74.42	244	LR	LR	01 56 24.2	
	comp=Z,35nm,19.2s,baz=338,slow=32						
LBTB	Lobatse	76.87	247	LR	LR	01 56 27.2	
	comp=Z,38nm,18.2s,baz=132,slow=31						
JNU	Nakatsue	81.96	6	LR	LR	02 06 52.8	
	comp=Z,27nm,18.1s,baz=221,slow=37						
TSUM	Tsumeb	86.09	245	LR	LR	02 02 17.6	
	comp=Z,50nm,20.7s,baz=316,slow=32						
KMBO	Kilima Mbogo	87.13	272	LR	LR	02 01 50.5	
	comp=Z,26nm,18.1s,baz=94,slow=31						
BUR08	Bucovina Ar. S	128.59	301	ePKPdf	PKPdf	01 35 55.2	-1.0
YKA	Yellowknife Ar	145.57	45	PKPbc	PKPbc	01 36 26.9	-0.1
YKA	Yellowknife Ar	145.57	45	PKPbc	PKPbc	01 36 26.9	-0.1
	0.9nm,0.8s,baz=271,slow=3.0,SNR=14						
YKW3	Yellowknife Ar	145.57	44	ePKPbc	PKPab	01 36 28.4	+1.2
RES	Resolute Bay	149.45	19	ePKPbc	PKPbc	01 36 37.9	+0.6
FFC	Flin Flon	151.35	61	ePKPbc	PKPbc	01 36 41.7	-0.7
FFC				ePKPab	PKPab	01 36 51.1	+0.4

*NIED **05** 01:29:00, 40°.20N×144°.40E, h26km, Mw4.0 Best double couple: M0 1.26000×10^15 NP1:φs147.00000°, δ85.00000°, λ-163.00000°. NP2:φs56.00000°, δ73.00000°, λ-5.00000°.*
*IDC **05** 01:29:11.5±0.7, 40°.25N×144°.58E, h0km, mb3.7/15, mb1 3.9/18, mb1mx3.9/29, mbtmp3.7/18, ML3.8/2, MS3.1/4, Ms1 3.1/4, ms1mx2.7/64, Error ellipse: s-maj=18.0km s-min=16.8km az=130.0*
*ISCJB **05** 01:29:12.8±1.1, 40°.27N±0°.02×144°.38E±0°.03, h21km±8km, mb3.9/27, MS3.5/2, Error ellipse: s-maj=4.8km s-min=3.3km az=33.4*
*JMA **05** 01:29:13.8±0.2, 40°.23N×144°.40E, h44km, M4.2*
*MOS **05** 01:29:13.9±1.3, 40°.29N×144°.64E, h33km, mb4.5/10, Error ellipse: s-maj=11.4km s-min=7.2km az=90.7*
*NEIC **05** 01:29:16.8±0.5, 40°.26N×144°.47E, mb4.4/7, Error ellipse: s-maj=10.7km s-min=8.0km az=119.0*
ISC 05 01:29:15.6±1.0**, 40°.23N**±0°.04×**144°.50E**±0°.05**, h31**km±7km**, n106,** σ1s.90/129**, mb3.9**/27**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTH	Tanohata	2.04	263	P	Pn	01 29 45.5	-2.3
JTH				S	Sn	01 30 08.5	-3.8
ERM	Erimo	2.05	331	eP	Pn	01 29 46.6	-1.3
ERM				e		01 30 09.9	
ERM	Erimo	2.05	331	ePn	Pn	01 29 46.6	-1.3
ERM				eSn	Sn	01 30 09.9	-2.6
JEM	Erimo	2.05	331	P	Pn	01 29 46.4	-1.6
JEM				eS	Sn	01 30 10.2	-2.3
MIYJ	Miyakonagasawa	2.16	253	P	Pn	01 29 47.6	-1.9
MIYJ				eS	Sn	01 30 11.8	-3.4
JANG	Nango	2.29	275	P	Pn	01 29 49.2	-2.0
JANG				eS	Sn	01 30 15.0	-3.3
JNBK	Urakawa-nobuka	2.44	328	P	Pn	01 29 52.2	-1.0
JNBK				eS	Sn	01 30 21.1	-0.8
JKZ	Kuzumaki	2.44	265	P	Pn	01 29 51.9	-1.5
JKZ				eS	Sn	01 30 19.3	-2.9
OFUJ	Ofunato	2.47	243	P	Pn	01 29 51.9	-1.8
JCH	Churui	2.53	341	P	Pn	01 29 52.7	-1.8
JCH				eS	Sn	01 30 22.1	-2.2
JOM	Ohasama	2.58	254	P	Pn	01 29 54.1	-1.1
JOM				eS	Sn	01 30 23.3	-2.3
JTM	Tenmabayashi	2.67	283	P	Pn	01 29 55.2	-1.3
JTM				eS	Sn	01 30 25.2	-2.6
JOB	Onbets	2.72	350	P	Pn	01 29 55.6	-1.5
JOB				eS	Sn	01 30 27.3	-1.6
JAK	Akkeshi	2.77	3	P	Pn	01 29 55.6	-2.2
JAK				eS	Sn	01 30 28.4	-1.7
JMK	Ichinoseki	2.84	244	P	Pn	01 29 57.1	-1.6
JMK				eS	Sn	01 30 28.1	-3.7
JOT	Ohata	2.86	295	P	Pn	01 29 57.5	-1.6
JOT				S	Sn	01 30 29.7	-2.7
JAH	Hinai	2.96	270	P	Pn	01 29 59.5	-0.9
JAH				eS	Sn	01 30 32.8	-2.0
JBT2	Biratori 2	3.01	328	P	Pn	01 30 00.5	-0.6
JBT2				eS	Sn	01 30 35.0	-1.1
JIO	Ouri	3.02	235	P	Pn	01 29 58.6	-2.6
JIO				eS	Sn	01 30 31.0	-5.3
JRG	Rokugo	3.09	256	P	Pn	01 30 01.2	-1.0
JRG				eS	Sn	01 30 35.9	-2.2
JKB	Kayabe	3.10	303	P	Pn	01 30 01.2	-1.2
JKB				eS	Sn	01 30 35.8	-2.5
JAR	Ashorobuto	3.11	350	P	Pn	01 30 00.4	-2.2
JAR				eS	Sn	01 30 35.8	-2.9
JSI2	Shiura 2	3.22	286	P	Pn	01 30 03.1	-0.9
JSI2				eS	Sn	01 30 39.1	-2.1
JFR	Furan	3.26	335	eS	Sn	01 30 39.6	-2.7
NEM2	Nemuro 2	3.27	16	P	Pn	01 30 02.1	-2.6
NEM2				eS	Sn	01 30 38.3	-4.2
JTKR	Abashiri--Toko	3.76	353	P	Pn	01 30 10.1	-1.4
JTKR				S	Sn	01 30 52.8	-1.9
YUK	Yuzh-Kuril'sk	3.94	14	iP	Pn	01 30 11.9	-1.9
YUK				iS	Sn	01 30 54.5	-4.4
YUK				pmax	pmax		
	comp=E,30nm,0.4s						
YUK				pmax	pmax		
	comp=Z,256nm,0.4s						
YUK				pmax	pmax		
	comp=Z,43μm,0.3s						
YUK				pmax	pmax		
	comp=N,57nm,0.4s						
YUK				smax	smax		
	comp=N,202nm,0.4s						
YUK				smax	smax		
	comp=E,394nm,0.4s						
JHR	Hokuryu	4.07	330	eS	Sn	01 31 02.6	+0.2
ASAJ	Asahikawa	4.13	341	Pn	Pn	01 30 16.0	-0.6
ASAJ				Sn	Sn	01 31 03.4	-0.5
ASAJ	Asahikawa	4.13	341	Pn	Pn	01 30 16.0	-0.6
	comp=E,5.1nm,0.3s,baz=196,slow=13,SNR=40						
ASAJ				Sn	Sn	01 31 03.4	-0.5
	comp=E,7.0nm,0.3s,baz=37,slow=32,SNR=8.0						
JOSM	Okushiri--Mats	4.22	298	P	Pn	01 30 16.5	-1.2
JOSM				eS	Sn	01 31 02.4	-3.5
KUR	Kuril'sk	5.58	25	eP	Pn	01 30 35.0	-1.4
KUR				eS	Sn	01 31 35.6	-3.9
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
KUR				smax	smax		
	comp=N,140nm,0.6s						
KUR				smax	smax		
	comp=E,170nm,0.7s						
MJAR	Matsushiro Arr	6.16	235	Pn	Pn	01 30 43.9	-0.6
MJAR				Sn	Sn	01 31 59.2	+5.3
MJAR	Matsushiro Arr	6.16	235	Pn	Pn	01 30 43.9	-0.6
	comp=E,1.6nm,0.3s,baz=14,slow=20,SNR=25						
MJAR				Sn	Sn	01 31 59.2	+5.3
	comp=E,0.8nm,0.3s,baz=220,slow=27,SNR=2.5						
MAJO	Matsushiro	6.16	235	eP	Pn	01 30 43.8	-0.7
MAJO				pmax	pmax		
	comp=Z,17nm,0.4s						
MAJO	Matsushiro	6.16	235	ePn	Pn	01 30 43.8	-0.7
	comp=Z,17nm,0.4s						
MAT	Matsushiro	6.16	235	P	Pn	01 30 43.8	-0.7
MAT				eS	Sn	01 31 51.9	-2.0
YSS	Yuzh-Sakhalins	6.84	350	eP	Pn	01 30 51.0	-2.7
JHJ	Hachijo jima 2	8.04	210	LR	LR	01 34 57.6	
	comp=Z,89nm,18.3s,baz=298,slow=43						
USRK	Ussuriysk Arra	10.08	297	Pn	Pn	01 31 39.3	+1.1
	comp=Z,0.3nm,0.3s,baz=100,slow=13,SNR=11						
JNU	Nakatsue	13.02	241	Pn	P	01 32 27.9	-0.7
JNU	Nakatsue	13.02	241	Pn	P	01 32 27.9	-0.7
	comp=Z,0.3nm,0.3s,baz=170,slow=23,SNR=3.5						
KSRS	Korea Array	13.22	263	Pn	P	01 32 25.4	-5.2
	comp=Z,0.4nm,0.3s,baz=66,slow=15,SNR=3.6						
KSRS				LR	LR	01 36 57.9	
	comp=Z,43nm,18.9s,baz=347,slow=35						
KSAR	Wonju Array Be	13.25	263	Pn	P	01 32 25.4	-5.6
PETK	Petropavlovsk-	15.71	31	P	Pn	01 32 50.3	-4.2
PETK	Petropavlovsk-	15.71	31	Pn	Pn	01 32 50.3	-4.2
PETK	Petropavlovsk-	15.71	31	Pn	Pn	01 32 50.3	-4.2
	comp=Z,0.1nm,0.3s,baz=202,slow=11,SNR=3.2						
YAK	Yakutsk	23.61	342	eP	P	01 34 20.0	-3.5
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
SONM	Songino Array	28.20	298	P	P	01 35 08.0	+2.5
SONM	Songino Array	28.20	298	P	P	01 35 08.0	+2.5
	comp=N,0.3nm,0.4s,baz=83,slow=9.0,SNR=3.9						
BILL	Bilibino	30.29	16	eP	P	01 35 24.0	+0.4
BILL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BILL	Bilibino	30.29	16	eP	P	01 35 24.0	+0.4
	comp=Z,2.0nm,0.5s						
ZAK	Zakamensk	30.36	303	eP	P	01 35 32.3	+7.8
ZAK				e		01 36 36.9	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s						
ZALV	Zalesovo Beam	41.64	310	P	P	01 37 01.4	+0.7
ZALV	Zalesovo Beam	41.64	310	P	P	01 37 01.4	+0.7
ZALV	Zalesovo Beam	41.64	310	P	P	01 37 01.4	+0.7
	comp=Z,0.4nm,0.4s,baz=76,slow=8.0,SNR=2.7						
MK31	Makanchi Array	44.55	300	eP	P	01 37 24.9	+0.5
MK31	Makanchi Array	44.55	300	eP	P	01 37 24.9	+0.5
MKAR	Makanchi Array	44.55	300	P	P	01 37 24.9	+0.5
MKAR	Makanchi Array	44.55	300	P	P	01 37 24.9	+0.5
MKAR	Makanchi Array	44.55	300	P	P	01 37 24.9	+0.5
	comp=Z,0.2nm,0.5s,baz=89,slow=8.6,SNR=3.3						
ILAR	Eielson Array	45.50	34	P	P	01 37 32.1	+0.4
ILAR	Eielson Array	45.50	34	P	P	01 37 32.1	+0.4
	comp=Z,1.1nm,0.8s,baz=261,slow=6.9,SNR=12						
KURK	Kurchatov	45.93	306	eP	P	01 37 37.5	+2.2
KURK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KURK	Kurchatov	45.93	306	eP	P	01 37 37.5	+2.2
	comp=Z,4.1nm,0.5s						
BVAR	Borovoye Array	50.26	311	P	P	01 38 09.9	+1.2
BVAR	Borovoye Array	50.26	311	P	P	01 38 09.9	+1.2
BVAR	Borovoye Array	50.26	311	P	P	01 38 09.9	+1.2
	comp=Z,0.3nm,0.4s,baz=81,slow=8.9,SNR=3.3						
TKM2	Tokmak 2	50.29	297	eP	P	01 38 09.7	+0.4
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TKM2	Tokmak 2	50.29	297	eP	P	01 38 09.7	+0.4
	comp=Z,2.2nm,0.7s						
BRVK	Borovoye	50.31	311	eP	P	01 38 10.6	+1.5
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRVK	Borovoye	50.31	311	eP	P	01 38 10.6	+1.5
	comp=Z,2.1nm,0.8s						
KAPI	Kappang	50.45	213	eP	P	01 38 13.0	+2.6
	comp=Z,22nm,1.3s						
ABKAR	Akbulak array	57.75	310	eP	P	01 39 04.2	+0.8
	comp=Z,1.4nm,0.6s						
ABKAR				epP	pP	01 39 15.6	+2.7
RES	Resolute Bay	58.89	15	eP	P	01 39 10.9	-0.1
	comp=Z,5.5nm,0.8s						
RES				epP	pP	01 39 19.7	-0.8
YKA	Yellowknife Ar	59.83	32	P	P	01 39 17.9	+0.3
YKA	Yellowknife Ar	59.83	32	P	P	01 39 17.9	+0.3
	comp=Z,0.4nm,0.6s,baz=301,slow=6.4,SNR=7.9						
WRA	Warramunga Arr	60.60	191	P	P	01 39 24.5	+1.2
WRA	Warramunga Arr	60.60	191	P	P	01 39 24.5	+1.2
	comp=Z,0.3nm,0.3s,baz=11,slow=7.1,SNR=5.7						
KEV	Kevo	61.31	339	eP	P	01 39 35.4	+7.8
KEV	Kevo	61.31	339	ep	P	01 39 35.4	+7.8
	comp=Z,0.4nm,0.3s						
JOF	Joensuu	64.28	332	eP	P	01 39 47.0	-0.4
JOF				pmax	pmax		
	comp=Z,1.0nm,0.6s						
JOF	Joensuu	64.28	332	ep	P	01 39 47.0	-0.4
	comp=Z,0.9nm,0.6s						
ASAR	Alice Springs	64.33	191	P	P	01 39 48.2	0.0
ASAR	Alice Springs	64.33	191	P	P	01 39 48.2	0.0
	comp=Z,0.6nm,0.8s,baz=12,slow=7.3,SNR=5.8						
KAF	Kangasniemi	66.56	333	eP	P	01 40 02.7	+0.5
KAF	Kangasniemi	66.56	333	ep	P	01 40 02.7	+0.5
	comp=Z,0.2nm,0.3s						
FINES	FINESS Array B	67.10	333	P	P	01 40 06.2	+0.5
FINES	FINESS Array B	67.10	333	P	P	01 40 06.2	+0.5
	comp=Z,1.6nm,0.6s,baz=41,slow=7.5,SNR=15						
NVAR	Mina Array Bea	71.16	55	P	P	01 40 32.9	+1.3
NVAR	Mina Array Bea	71.16	55	P	P	01 40 32.9	+1.3
	comp=Z,0.7nm,0.7s,baz=270,slow=7.4,SNR=3.6						
HFS	Hagfors	72.15	337	P	P	01 40 37.0	+0.2
HFS	Hagfors	72.15	337	P	P	01 40 37.0	+0.2
	comp=Z,1.8nm,0.6s,baz=38,slow=7.5,SNR=14						
NB2	NORSAR Subarra	72.15	338	P	P	01 40 36.7	-0.2
	comp=Z,0.7nm,0.6s,baz=39,slow=5.9						
NOA	NORSAR Array B	72.15	338	P	P	01 40 37.1	+0.2
NOA	NORSAR Array B	72.15	338	P	P	01 40 37.1	+0.2
	comp=Z,0.9nm,0.7s,baz=38,slow=5.8,SNR=5.6						
AKASG	Malin Array Be	73.22	323	P	P	01 40 43.7	+0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	73.22	323	P	P	01 40 43.6	+0.3
AKASG	Malin Array Be	73.22	323	P	P	01 40 43.7	+0.3
	comp=Z,0.6nm,0.5s,baz=42,slow=6.2,SNR=4.1						
PDAR	Pinedale Array	73.72	48	P	P	01 40 47.0	+0.3
PDAR	Pinedale Array	73.72	48	P	P	01 40 47.0	+0.3
	comp=Z,0.3nm,0.5s,baz=298,slow=3.2,SNR=3.4						
BUR08	Bucovina Ar. S	77.25	323	eP	P	01 41 07.4	+0.6
BRTR	Keskin Array B	78.51	313	LR	LR	02 16 57.2	
	comp=Z,23nm,20.8s,baz=112,slow=36						
TXAR	Lajitas Array	86.28	54	P	P	01 41 55.4	+0.8
TXAR	Lajitas Array	86.28	54	P	P	01 41 55.4	+0.8
	comp=Z,0.1nm,0.5s,baz=282,slow=0.8,SNR=3.6						
KEST	Kesra	93.88	325	LR	LR	02 32 27.0	
	comp=Z,16nm,19.0s,baz=248,slow=40						

*IDC **05** 01:35:17.9±1.3, 34°.81N×137°.66E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.3/28, mbtmp3.6/4, ML3.0/2, MS3.2/2, Ms1 3.1/2, ms1mx2.4/40, Error ellipse: s-maj=35.6km s-min=19.9km az=100.0*
*ISCJB **05** 01:35:20.3±0.9, 35°.57N±0°.06×140°.2E±0°.1, h70km, mb3.6/2, Error ellipse: s-maj=14.5km s-min=5.8km az=151.2*
*JMA **05** 01:35:20.2±0.2, 35°.66N×140°.19E, h65km±2km, M2.6*
ISC 05 01:35:20.6±1.3**, 35°.59N**±0°.06×**140°.15E**±0°.09**, h70**km**, n16,** σ0s.64/17**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCN	Nagara	0.17	167	P	Pn	01 35 31.2	+0.1
JCN				S	Sn	01 35 39.6	+0.9
BSO3	Boso 3	0.84	159	P	Pn	01 35 36.9	+0.1
JOD2	Odawara 2	0.93	250	P	Pn	01 35 38.3	+0.1
JAG	Ashikaga	1.01	326	P	Pn	01 35 38.7	-0.5
JIM2	Oshima 3	1.05	214	P	Pn	01 35 39.3	-0.4
JRY	Ryogami san	1.10	293	P	Pn	01 35 40.9	+0.5
JYN	Shimob	1.31	267	P	Pn	01 35 43.6	+0.4
JKT	Katashina	1.39	328	P	Pn	01 35 44.7	+0.6
MJAR	Matsushiro Arr	1.84	302	Pn	Pn	01 35 50.4	+0.3
	7.6nm,0.3s,baz=195,slow=5.6,SNR=56						
MJAR				Sn	Sn	01 36 13.1	+0.6
	6.1nm,0.3s,baz=128,slow=44,SNR=8.7						
MAT	Matsushiro	1.84	302	P	Pn	01 35 50.7	+0.6
MAT				S	Sn	01 36 11.9	-0.7
JHJ	Hachijo jima 2	2.48	187	Pn	Pn	01 35 59.5	+0.8
	46nm,0.3s,baz=81,slow=19,SNR=7.2						
JHJ				Sn	Sn	01 36 28.0	+0.1
	22nm,0.3s,baz=43,slow=22,SNR=4.0						
JNU	Nakatsue	8.05	255	Pn	Pn	01 36 46.8	-28
	0.2nm,0.3s,baz=16,slow=14,SNR=2.3						
ASAJ	Asahikawa	8.72	12	LR	LR	01 41 37.1	
	comp=Z,39nm,18.5s,baz=135,slow=38						
WRA	Warramunga Arr	55.50	187	P	P	01 44 48.7	+0.3
	0.5nm,0.3s,baz=0.5,slow=7.4,SNR=9.7						
ASAR	Alice Springs	59.23	187	P	P	01 45 13.3	-1.3
	0.2nm,0.7s,baz=8.0,slow=8.0,SNR=3.7						
KBZ	Khabaz	71.07	311	LR	LR	02 19 20.9	
	comp=Z,39nm,18.1s,baz=292,slow=38						

MAN 05 01:37:13, 10°.08N×127°.10E, h8km, mb4.3, ML3.1, MS2.9, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUTP	Butuan	1.83	233	eP	Pn	01 37 42.4	-2.3
MSLP	Maasin	2.20	272	eP	Pn	01 37 51.2	+1.3
MSLP				eS	Sn	01 38 11.2	-6.1
BUKP	Musuan	2.97	223	eP	Pn	01 38 01.7	+1.1
TBP	Tagbilaran	3.21	263	eP	Pn	01 38 04.5	+0.7
TBP				eS	Sn	01 38 43.9	+1.6

*ISCJB **05** 01:39:47.9±0.4, 42°.68N±0°.03×142°.12E±0°.05, h104km±3km, mb3.6/9, Error ellipse: s-maj=6.9km s-min=4.7km az=36.6*
*MOS **05** 01:39:48.4±1.1, 42°.71N×142°.04E, h111km, mb4.0/7, Error ellipse: s-maj=24.1km s-min=12.8km az=80.7*
*JMA **05** 01:39:48.2±0.1, 42°.72N×142°.13E, h105km±1km, M3.3*
JMA Felt I J1.
*IDC **05** 01:39:49.8±1.9, 42°.76N×142°.12E, h103km±10km, mb3.3/9, mb1 3.4/11, mb1mx3.2/29, mbtmp3.3/11, MS3.4/1, Ms1 3.4/1, ms1mx2.4/29, Error ellipse: s-maj=29.4km s-min=15.9km az=132.0*
ISC 05 01:39:49.0±0.7**, 42°.69N**±0°.04×**142°.10E**±0°.04**, h97**km±6km**, n34,** σ1s.08/49**, mb3.7**/9**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JBT2	Biratori 2	0.22	65	P	Pn	01 40 02.9	0.0
JBT2				eS	Sn	01 40 13.8	+0.5
JEW	Eniwo	0.50	288	P	Pn	01 40 04.4	-0.1
JEW				eS	Sn	01 40 16.2	+0.2
JFR	Furan	0.60	37	P	Pn	01 40 04.6	-0.7
JFR				eS	Sn	01 40 16.3	-1.2
JNBK	Urakawa-nobuka	0.63	130	P	Pn	01 40 05.6	+0.1
JNBK				eS	Sn	01 40 19.7	+1.8
JNB	Noboribetsu	0.81	255	P	Pn	01 40 06.9	-0.3
JNB				eS	Sn	01 40 20.7	-0.1
JAB	Ashibetsu	0.82	6	P	Pn	01 40 07.5	+0.1
JAB				eS	Sn	01 40 21.7	+0.6
JCH	Churui	0.94	94	P	Pn	01 40 07.6	-0.9
JEM	Erimo	1.03	130	P	Pn	01 40 10.4	+0.9
JHR	Hokuryu	1.09	346	P	Pn	01 40 10.5	+0.3
JHR				eS	Sn	01 40 27.3	+1.1
JKB	Kayabe	1.12	225	P	Pn	01 40 10.3	-0.2
JKB				eS	Sn	01 40 26.6	-0.2
JKK2	Kamakawa 2	1.28	22	P	Pn	01 40 12.2	-0.2
JKK2				eS	Sn	01 40 29.6	-0.5
JSK	Shakotan	1.36	300	P	Pn	01 40 13.5	+0.1
JAR	Ashorobuto	1.37	63	P	Pn	01 40 12.4	-1.1
JAR				eS	Sn	01 40 30.3	-1.7
ASAJ	Asahikawa	1.48	14	P	Pn	01 40 14.7	-0.1
	19nm,0.3s,baz=218,slow=10,SNR=106						
ASAJ				S	Sn	01 40 34.0	-0.4
	40nm,0.3s,baz=329,slow=33,SNR=26						
JOT	Ohata	1.52	211	P	Pn	01 40 15.1	-0.2
JOT				eS	Sn	01 40 35.1	-0.1
JYG	Yagishiri	1.81	345	eS	Sn	01 40 42.5	+0.8
JTKR	Abashiri--Toko	1.84	45	P	Pn	01 40 19.1	-0.3
JTKR				eS	Sn	01 40 41.5	-1.1
YUK	Yuzh-Kuril'sk	3.06	63	iPN	Pn	01 40 36.7	+1.3
YUK				iS	Sn	01 41 15.8	+4.6
YUK				pmax	pmax		
	comp=E,31nm,0.1s						
YUK				pmax	pmax		
	comp=Z,53nm,0.2s						
YUK				pmax	pmax		
	comp=N,28nm,0.1s						
YUK				pmax	pmax		
	comp=Z,9μm,0.2s						
YUK				smax	smax		
	comp=E,165nm,0.6s						
YUK				smax	smax		
	comp=N,164nm,0.7s						
YSS	Yuzh-Sakhalins	4.29	6	ePN	Pn	01 40 53.8	+1.8
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
MJAR	Matsushiro Arr	6.83	207	P	Pn	01 41 27.6	+1.0
	comp=Z,0.7nm,0.3s,baz=23,slow=13,SNR=8.7						
USRK	Ussuriysk Arra	7.50	285	P	Pn	01 41 38.1	+2.5
	comp=Z,0.2nm,0.3s,baz=90,slow=15,SNR=4.7						
MKAR	Makanchi Array	41.79	297	P	P	01 47 28.5	-0.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	41.79	297	P	P	01 47 28.5	-0.3
	comp=Z,0.7nm,0.6s,baz=80,slow=9.8,SNR=6.7						
ILAR	Eielson Array	44.51	35	P	P	01 47 51.0	+0.6
	comp=Z,0.2nm,0.6s,baz=248,slow=6.0,SNR=4.9						
BVAR	Borovoye Array	47.30	309	P	P	01 48 12.5	0.0
BVAR						01 49 41.7	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	Borovoye Array	47.30	309	P	P	01 48 12.5	0.0
	comp=Z,0.6nm,0.5s,baz=67,slow=7.8,SNR=6.3						
BVAR				PcP	PcP	01 49 41.7	-0.2
	comp=Z,0.4nm,0.4s,baz=80,slow=3.6,SNR=3.5						
AAK	Ala-Archa	48.46	294	P	P	01 48 21.6	-0.1
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK				MLR	MLR		
	comp=Z,37nm,19.2s						
AAK	Ala-Archa	48.46	294	P	P	01 48 21.6	-0.1

	comp=Z,0.5nm,0.3s,baz=154,slow=7.8,SNR=4.0						
AAK				LR	LR	02 11 55.0	
	comp=Z,37nm,19.1s,baz=118,slow=40						
YKA	Yellowknife Ar	58.70	32	P	P	01 49 35.4	-0.5
	comp=Z,0.1nm,0.3s,baz=306,slow=6.8,SNR=4.1						
FINES	FINESS Array B	64.09	331	P	P	01 50 11.1	-1.1
	comp=Z,2.1nm,0.8s,baz=45,slow=8.3,SNR=8.6						
KBZ	Khabaz	67.68	309	P	P	01 50 36.2	+0.7
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KBZ	Khabaz	67.68	309	P	P	01 50 36.2	+0.7
	comp=Z,0.5nm,0.6s,baz=61,slow=17,SNR=2.4						
HFS	Hagfors	69.17	335	P	P	01 50 43.8	-0.8
	comp=Z,0.8nm,0.5s,baz=46,slow=6.4,SNR=8.7						
NOA	NORSAR Array B	69.19	337	P	P	01 50 43.9	-0.9
	comp=Z,0.5nm,0.8s,baz=298,slow=7.7,SNR=3.5						

TRN 05 02:03:38.8, 15°.21N×60°.31W, h31^{km}, MD3.6, M3.4(FDF), **4C-11D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MVM	Montagne Vaucl	0.86	221	⇑eP	Pb	02 03 55.1	-0.1
DLPL	La Plaine	0.91	278	eP	Pb	02 03 57.1	+0.9
DLPL				eS	Sb	02 04 09.1	+1.1
FDF	Fort de France	0.94	240	⇓iP	Pn	02 03 55.9	0.0
FDF	Fort de France	0.94	240	⇓eP	Pn	02 03 55.9	0.0
FDF				⇓eS	Sn	02 04 08.0	-0.4
FDF				⇓eS	Sb	02 04 08.0	-0.8
DSTT	Stowe	0.96	273	⇓iP	Pb	02 03 58.7	+1.8
DSTT				eS	Sb	02 04 11.3	+2.1
DBCT	Belle View Cho	1.00	274	eP	Pb	02 03 59.1	+1.4
DBCT				eS	Sb	02 04 12.4	+1.8
BIM	Bigot	1.00	227	⇓eP	Pn	02 03 57.1	+0.3
BIM				⇓eS	Sb	02 04 10.4	-0.3
DFBT	Forest Bistro	1.01	272	⇓eP	Pb	02 03 59.2	+1.5
DFBT				eS	Sb	02 04 13.3	+2.6
DSHT	Scott's Head	1.03	271	⇓eP	Pb	02 03 59.1	+1.1
DSHT				eS	Sb	02 04 12.4	+1.2
DPMT	Pointe Michel	1.03	273	eP	Pb	02 03 59.2	+1.1
DPMT				eS	Sb	02 04 14.2	+2.9
DWS	Wesley	1.03	291	⇓eP	Pb	02 03 58.8	+0.7
DWS				eS	Sb	02 04 12.3	+1.1
MDN	Morne-Daniel	1.05	276	⇓eP	Pb	02 03 59.7	+1.3
MDN				eS	Sb	02 04 14.3	+2.5
DVCT	Vielle Casse P	1.13	291	eP	Pb	02 03 60.0	+0.2
DVCT				eS	Sb	02 04 14.8	+0.7
MGG	Marie-Galante	1.20	306	eP	Pn	02 04 00.1	+0.6
SLW	Petit Monier	1.33	207	⇑eP	Pn	02 04 01.7	+0.4
SLW				⇑eS	Sn	02 04 17.9	0.0
TBG	Guadaloupe-3	1.44	297	eP	Pn	02 04 03.1	+0.4
DOG	Dongo Capester	1.50	303	eP	Pn	02 04 04.6	+0.9
PHG	Guadaloupe-2	1.52	302	eP	Pb	02 04 05.5	-0.9
BCG	Bois Riant Cap	1.54	305	eP	Pn	02 04 05.1	+0.9
SLB	Belfond	1.54	207	⇑iP	Pb	02 04 06.4	-0.4
SLB				eS	Sb	02 04 26.2	+0.2
HMG	Houelmont	1.55	300	eP	Pn	02 04 05.5	+1.2
HMG				eS	Sb	02 04 25.6	-0.4
SCG	Saint Claude	1.55	302	eP	Pn	02 04 05.3	+0.9
MCLT	Moule a Chique	1.61	202	eP	Pb	02 04 07.2	-0.7
MCLT				eS	Sb	02 04 26.5	-1.4
LZG	Guadaloupe-1	1.69	304	eP	Pb	02 04 07.7	-1.5
BHS	Barnard House	2.06	203	eP	Pb	02 04 13.6	-1.9
BHS				eS	Sb	02 04 39.2	-1.4
SVV	Soufriere Volc	2.07	205	eP	Pb	02 04 13.8	-2.0
SVV				eS	Sn	02 04 38.3	+2.0
SVB	Belmont	2.13	206	eP	Pn	02 04 13.3	+1.1
SVB				eS	Sn	02 04 39.3	+1.6
FCV	Fort Charlotte	2.23	204	eS	Sn	02 04 41.4	+1.2
SKI	Saint Kitts	3.15	313	eP	Pn	02 04 28.7	+2.4
SKI				eS	Sn	02 05 04.5	+1.5
TOSP	Speyside	3.89	183	eP	Pn	02 04 38.8	+2.3
TOSP				eS	Sn	02 05 21.9	+0.8

*IDC **05** 02:10:44.5±0.9, 14°.33N×90°.37W, h0^{km}, mb4.0/10, mb1 4.3/12, mb1mx4.1/24, mbtmp4.0/12, ML4.7/3, MS4.0/24, Ms1 4.0/24, ms1mx3.8/50, Error ellipse: s-maj=23.5km s-min=15.4km az=63.0*

*BJI **05** 02:10:44.9, 14°.30N×90°.60W, h10^{km}, mB5.6/3, Ms5.1/2, Ms7 4.7/3*

*NEIC **05** 02:10:46.0±0.5, 14°.31N×90°.56W, h10^{km}, mb4.4/24, MD4.6(SNET), Error ellipse: s-maj=12.4km s-min=6.1km az=51.0*

NEIC Felt [II] at Ahuachapan, El Salvador.

*ISCJB **05** 02:10:46.2±0.4, 14°.41N±0°.03×90°.46W±0°.03, h18^{km}±3^{km}, mb4.2/30, MS4.1/25, Error ellipse: s-maj=6.4km s-min=3.2km az=38.1*

*CASC **05** 02:10:46.0±2.4, 14°.38N×90°.46W, h13^{km}±12^{km}, MD4.2, ML4.4, mb4.4(NEIC)*

ISC 05 02:10:46.6±0.8, **14°.38N**±0°.03×**90°.43W**±0°.03, **h11**^{km}±4^{km}, **n180**, σ1s**42**/178, **mb4.2**/30, **MS4.1**/25, **36C-32D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	Pacaya	0.17	274	eP	Pg	02 10 49.8	-0.7
IXG	Ixpaco	0.21	186	eP	Pb	02 10 52.8	+0.2
NBG	Las Nubes	0.22	22	eP	Pb	02 10 52.4	-0.5
GCG	Guatemala City	0.23	334	eP	Pg	02 10 50.9	-0.6
GCG				eS	Sg	02 10 55.2	+0.5
FUG	Fuego 3	0.40	280	eP	Pg	02 10 53.5	-1.1
FG6		0.47	292	eP	Pg	02 10 55.1	-0.9
RBDL	Robledal	0.77	110	eP	Pg	02 11 00.5	-1.0
RTR	El Retiro	0.90	122	eP	Pg	02 11 02.9	-1.2
SNJE	San Jose	0.95	122	eP	Pg	02 11 03.6	-1.3
SBLS	San Blas	0.95	124	eP	Pg	02 11 03.4	-1.6
MRL	Marmol	0.99	46	eP	Pg	02 11 05.9	+0.2
MTO2	Montecristo 2	1.04	89	eP	Pb	02 11 05.5	-1.3
JAT	Jato	1.17	267	eP	Pb	02 11 07.8	-1.1
BOQS	Boqueron	1.29	120	eP	Pn	02 11 09.7	-1.1
SNET	Serv Nac Est T	1.35	121	AML	AML	02 11 31.7	
	comp=Z,8μm,0.3s						
LFU	La Fuente	1.43	116	eP	Pn	02 11 11.7	-0.9
LFU				eS	Sn	02 11 31.4	0.0
LBRS	Las Brisas	1.49	115	eP	Pn	02 11 12.6	-0.9
LFRS	El Faro	1.53	119	eP	Pn	02 11 13.2	-0.8
TGUH	Tegucigalpa,Un	3.08	96	ePn	Pn	02 11 34.0	-1.2
TGUH				ePb	Pb	02 11 40.0	-1.5
TGUH				ePg	Pg	02 11 43.1	-2.6
TGUH				eSg	Sg	02 12 23.3	-2.3
CMIG	Matias Romero	5.06	303	Pn	Pn	02 12 01.2	-1.3
CMIG				Sn	Sn	02 13 02.6	+1.5
CMIG				Lg	Lg	02 13 20.6	
CMIG	Matias Romero	5.06	303	Pn	Pn	02 12 01.2	-1.3
	comp=Z,3.9nm,0.3s,baz=102,slow=10.0,SNR=36						
CMIG				Sn	Sn	02 13 02.6	+1.5
	comp=Z,16nm,0.3s,baz=77,slow=20,SNR=1.9						
CMIG				Lg	Lg	02 13 20.6	
	comp=Z,29nm,0.3s,baz=215,slow=18,SNR=3.6						
TEIG	Tepich	6.17	19	ePn	Pn	02 12 18.2	+0.5
TEIG				eSn	Sn	02 13 27.2	-1.1
TEIG				Lg	Lg	02 14 02.1	
TEIG				eSg	Sg	02 14 03.5	-1.2
TEIG	Tepich	6.17	19	Pn	Pn	02 12 17.7	+0.1
	comp=Z,66nm,0.3s,baz=200,slow=5.1,SNR=264						
TEIG				Sn	Sn	02 13 27.7	-0.6
	comp=Z,20nm,0.3s,baz=113,slow=22,SNR=5.6						
TEIG				Lg	Lg	02 14 02.1	
	comp=Z,31nm,0.3s,baz=71,slow=16,SNR=10						
JTS	JuntasAbangare	6.72	127	ePn	Pn	02 12 26.6	+1.2
JTS				Sn	Sn	02 13 47.1	+5.1
JTS	JuntasAbangare	6.72	127	Pn	Pn	02 12 27.0	+1.6
	comp=Z,5.6nm,0.3s,baz=316,slow=11,SNR=33						
JTS				Sn	Sn	02 13 47.1	+5.1
	baz=356,slow=22,SNR=1.7						
BCIP	Isla Barro Col	11.59	115	ePn	Pn	02 13 34.1	+1.9
HKT	Hockley	16.28	343	ePn	Pn	02 14 33.7	-1.5
732A	Laxson Ranch,	16.80	330	⇑P	Pn	02 14 42.1	+0.1
	baz=17,SNR=12						
632A	Uvalde	17.36	332	⇑P	Pn	02 14 49.3	+0.3
	baz=17,SNR=9.2						
631A	Perdido Creek	17.66	330	⇑P	Pn	02 14 52.9	+0.2
	baz=18						
532A	Rocksprings	17.94	332	⇑P	Pn	02 14 56.3	+0.1
	baz=18,SNR=11						
TIGA	Tifton	18.10	19	⇓P	P	02 14 58.7	+0.2
	baz=18						
JCT	Junction City	18.20	333	⇓P	P	02 14 59.6	0.0
	baz=18						
531A	Rocksprings	18.27	331	⇓P	Pn	02 15 00.2	-0.1
	baz=18,SNR=8.6						
OTAV	Otavalo	18.38	139	eP	Pn	02 15 03.2	+1.1
	comp=Z,53nm,1.2s						
ROSC	El Rosal	18.47	119	P	Pn	02 15 05.7	+2.6
ROSC	El Rosal	18.47	119	P	Pn	02 15 05.7	+2.6
	comp=Z,0.3nm,0.3s,baz=270,slow=22,SNR=3.5						
432A	Menard	18.54	334	⇓P	Pn	02 15 03.5	0.0
	baz=19,SNR=8.1						
530A	J-C Ranch, Com	18.64	329	⇑P	P	02 15 04.4	-0.1
	baz=19,SNR=12						
WHTX	Lake Whitney	18.67	341	⇓P	Pn	02 15 05.5	+0.4
	baz=19						
431A	Sonora	18.73	332	⇑P	P	02 15 05.6	+0.1
	baz=19,SNR=11						
LRAL	Lakeview Retre	18.83	9	eP	Pn	02 15 07.5	+0.5
	comp=Z,12nm,1.3s						
628A	Black Gap, Mar	18.93	325	⇑P	P	02 15 07.6	-0.2
	baz=19,SNR=13						
332A	Millersview	18.95	335	⇑P	Pn	02 15 09.1	+0.5
	baz=19,SNR=41						
529A	Stev Forest Ra	19.07	327	⇑P	Pn	02 15 10.2	+0.2
	baz=19,SNR=8.0						
430A	Baggett Ranch,	19.11	330	⇑P	P	02 15 09.9	+0.2
	baz=19,SNR=11						
331A	San Angelo	19.18	333	⇑P	Pn	02 15 11.0	-0.4
	baz=19,SNR=20						
TXAR	Lajitas Array	19.27	323	P	Pn	02 15 13.0	+0.5
TXAR	Lajitas Array	19.27	323	P	Pn	02 15 13.0	+0.5
	comp=Z,0.9nm,0.3s,baz=146,slow=9.9,SNR=62						
TXAR				LR	LR	02 24 04.5	
	comp=Z,157nm,18.2s,baz=345,slow=41						
429A	Davenport Ranc	19.30	329	⇓P	Pn	02 15 12.6	-0.2
	baz=19,SNR=15						
330A	Mertzon	19.60	332	⇑P	P	02 15 15.3	+0.3
	baz=20,SNR=13						
231A	Bronte	19.67	334	⇑P	P	02 15 16.0	+0.1
	baz=20,SNR=14						
626A	Big Bend Ranch	19.70	322	⇑P	P	02 15 16.9	+0.6
	baz=20,SNR=12						
428A	Kincaid Ranch,	19.79	327	⇓P	P	02 15 17.5	+0.3
	baz=20,SNR=5.2						
527A	Woodward Ranch	19.84	324	⇓P	P	02 15 18.1	+0.3
	baz=20,SNR=12						
230A	Sterling City	19.98	333	⇑P	P	02 15 19.2	0.0
	baz=20						
ABTX	Abilene, Hawle	20.01	337	⇑P	P	02 15 19.5	+0.1
	baz=20						
329A	Wagon Wheel Ra	20.05	330	⇑P	P	02 15 20.5	+0.5
	baz=20,SNR=5.6						
526A	Mary Lane Ranc	20.05	323	⇑P	P	02 15 19.6	-0.5
	baz=20,SNR=14						
OXF	Oxford	20.07	2	eP	Pn	02 15 21.1	-0.7
	comp=Z,44nm,1.1s						
SDV	Santo Domingo	20.14	104	ePn	Pn	02 15 27.3	+4.2
	comp=Z,0.3nm,1.0s						
MIAR	Mount Ida	20.28	352	eP	P	02 15 22.8	+0.5
	comp=Z,28nm,1.2s						
131A	Roby	20.35	335	⇑P	P	02 15 23.6	+0.4
	baz=20						
229A	Bryant Ranch,	20.36	331	⇓P	P	02 15 22.8	-0.6
	baz=20						
328A	Wristen Ranch,	20.38	328	⇑P	P	02 15 24.3	+0.8
	baz=20,SNR=20						
UALR	University of	20.38	355	eP	Pn	02 15 25.4	-0.1
	comp=Z,24nm,0.8s						
426A	McDonald Obser	20.47	325	⇓P	P	02 15 24.8	0.0
	baz=20,SNR=13						
Z32A	Haskell	20.56	338	⇑P	P	02 15 26.1	+0.7
	baz=21,SNR=12						
PLAL	Pickwick Lake	20.62	6	eP	Pn	02 15 27.9	-0.5
	comp=Z,8.0nm,0.8s						
Z31A	Sharp Cattle R	20.82	337	⇑P	P	02 15 28.2	0.0
	baz=21,SNR=22						
228A	UT Block 9, Go	20.86	330	⇓P	P	02 15 28.8	0.0
	baz=21						
326A	Caldwell Ranch	20.94	326	⇑P	P	02 15 29.5	-0.2
	baz=21,SNR=12						
129A	Stewart Farms,	20.95	332	P	P	02 15 29.8	+0.1
	baz=21,SNR=14						
LPIG	La Paz	21.09	300	LR	LR	02 23 40.2	
	comp=Z,125nm,18.4s,baz=103,slow=37						
425A	Indio Mountain	21.11	323	⇓P	P	02 15 31.5	-0.1
	baz=21,SNR=14						
SWET	Sewanee	21.14	10	eP	P	02 15 31.6	-0.1
	comp=Z,18nm,0.8s						
Y32A	R-V Farms, Ver	21.17	339	⇑P	P	02 15 32.3	+0.2
	baz=21,SNR=5.0						
Z30A	Sanderson Ranc	21.18	335	⇑P	P	02 15 32.1	-0.1
	baz=21						
128A	Castleberry Fa	21.22	331	⇑P	P	02 15 33.0	+0.3
	baz=21,SNR=12						
Z29A	Hungry Hill Ra	21.41	333	⇓P	P	02 15 34.8	+0.1
	baz=22						
Y31A	Rekieta Farm,	21.43	337	P	P	02 15 35.9	+1.0
	baz=22,SNR=20						
Y30A	Stafford Cattl	21.60	336	⇑P	P	02 15 36.6	-0.2
	baz=22						
WMOK	Wichita Mounta	21.62	341	eP	P	02 15 35.8	-1.1
	comp=Z,9.9nm,1.0s						
CPCT	Cooper Cave	21.64	13	eP	P	02 15 37.2	+0.2
Z28A	Tucker Farm, M	21.73	332	⇑P	P	02 15 37.9	-0.3
	baz=22						
WVT	Waverly	21.78	6	eP	P	02 15 38.0	-0.5
	comp=Z,11nm,0.9s						
GDL2	Guadalupe Moun	21.83	327	eP	P	02 15 37.5	-1.8
Y29A	Porterfield Fa	21.91	334	⇓P	P	02 15 40.1	+0.1
	baz=22,SNR=5.8						
X31A	McDonald Ranch	21.93	339	⇓P	P	02 15 40.8	+0.6
	baz=22						
225A	Deer Hill, Car	22.01	326	⇑P	P	02 15 41.4	+0.1
	baz=22						
MNTX	Cornudas Mount	22.01	324	eP	P	02 15 40.6	-0.5
	comp=Z,4.8nm,1.0s						
MNTX	Cornudas Mount	22.01	324	⇓P	P	02 15 41.0	-0.1
	baz=22						
TKL	Tuckaleechee C	22.02	15	eP	P	02 15 41.4	+0.3
TKL	Tuckaleechee C	22.02	15	P	P	02 15 41.2	+0.2
	comp=Z,7.1nm,1.1s,baz=184,slow=11,SNR=5.0						
TKL				LR	LR	02 25 03.2	
	comp=Z,267nm,18.1s,baz=16,slow=39						
X30A	Coker Ranch, T	22.09	337	⇑P	P	02 15 42.5	+0.5
	baz=22						
Y28A	McKinney Farm,	22.20	333	⇓P	P	02 15 42.8	-0.3
	baz=22						
224A	Cornudas Mount	22.37	324	⇓P	P	02 15 45.1	0.0
	baz=22						
Z26A	Caprock	22.48	329	⇓P	P	02 15 46.1	-0.2
	baz=22						
AMTX	Amarillo	22.80	336	eP	P	02 15 49.0	-0.6
	comp=Z,14nm,0.6s						
124A	Stringfield Ra	22.80	326	⇓P	P	02 15 49.0	-0.7
	baz=23						
Z25A	Roswell	22.86	328	⇑P	P	02 15 49.7	-0.6
	baz=23						
TZTN	Tazewell	22.91	14	eP	P	02 15 51.1	+0.5
	comp=Z,83nm,2.0s						
Z24A	Sheeppen Canyo	23.24	327	⇓P	P	02 15 53.9	-0.4
	baz=23						
SIUC	Southern Illin	23.27	2	eP	P	02 15 55.3	+1.1
	comp=Z,26nm,0.8s						
Y25A	Mesa, Roswell	23.36	329	⇓P	P	02 15 55.1	-0.3
	baz=23						
X26A	CR and CF Fran	23.44	331	⇑P	P	02 15 56.2	+0.1
	baz=24						
W27A	Bowe Ranch, En	23.53	333	⇓P	P	02 15 57.2	+0.2
	baz=24						
SJG	San Juan	23.60	78	P	P	02 16 01.9	+4.1
SJG	San Juan	23.60	78	P	P	02 16 01.8	+4.1
	comp=Z,5.7nm,0.6s,baz=14,slow=12,SNR=3.5						
SJG				LR	LR	02 24 40.0	
	comp=Z,499nm,21.2s,baz=269,slow=36						
USIN	University of	23.62	5	eP	P	02 15 57.6	-0.1
	comp=Z,124nm,1.7s						
Z23A	Rita Site, Whi	23.65	325	⇓P	P	02 15 58.3	0.0
	baz=24						
Y24A	Capitan	23.74	328	⇓P	P	02 15 58.4	-0.8
	baz=24						
121A	Cookes Peak, D	24.02	322	⇓P	P	02 16 01.0	-0.8
	baz=24						
WCI	Wyandotte Cave	24.04	8	eP	P	02 16 01.7	-0.1
	comp=Z,20nm,0.8s						
220A	Playas Peak, P	24.04	320	⇓P	P	02 16 00.6	-1.5
	baz=24						
Y23A	Lovelace Mesa,	24.07	327	⇑P	P	02 16 01.7	-0.6
	baz=24						
319A	Douglas	24.18	318	⇓P	P	02 16 03.0	-0.3
	baz=24						
W25A	X Bar L Ranch,	24.29	331	⇑P	P	02 16 04.5	+0.2
	baz=24						
OLIL	Olney	24.34	4	eP	P	02 16 04.8	+0.2
	comp=Z,41nm,1.4s						
ATAH	Atahualpa	24.49	150	P	P	02 16 09.3	+2.8
ATAH	Atahualpa	24.49	150	P	P	02 16 09.3	+2.8
	comp=Z,6.5nm,0.8s,baz=50,slow=4.9,SNR=3.0						
ATAH				LR	LR	02 24 52.0	
	comp=Z,262nm,19.4s,baz=341,slow=35						
Y22A	Socorro	24.56	325	⇑P	P	02 16 06.4	-0.4
	baz=25						
W24A	Lazy 6 Ranch,	24.74	330	⇑P	P	02 16 08.1	-0.4
	baz=25						
LAZ	Ladron	25.01	326	eP	P	02 16 10.7	-0.1
	comp=Z,7.1nm,1.6s						
TUC	Tucson	25.76	317	eP	P	02 16 16.2	-1.3
	comp=Z,8.4nm,1.3s						
R26A	Arlington	26.47	337	⇓P	P	02 16 24.0	0.0
	baz=27,SNR=5.6						
PDAR	Pinedale Array	32.73	333	P	P	02 17 19.0	-0.7
PDAR	Pinedale Array	32.73	333	P	P	02 17 19.0	-0.7
	comp=Z,0.2nm,0.4s,baz=147,slow=14,SNR=2.7						
SNOW	Snow King Moun	33.81	333	eP	P	02 17 27.4	-1.8
	comp=Z,5.0nm,0.6s						
LOHW	Long Hollow	33.87	333	eP	P	02 17 28.9	-0.7
	comp=Z,1.6nm,0.8s						
TPAW	Teton Pass	33.92	333	eP	P	02 17 29.6	-0.5
	comp=Z,2.7nm,0.9s						
MOOW	Moose Ponds	34.04	333	eP	P	02 17 30.0	-1.1
	comp=Z,1.5nm,1.0s						
NVAR	Mina Array Bea	34.35	319	P	P	02 17 34.7	+0.8
NVAR	Mina Array Bea	34.35	319	P	P	02 17 34.7	+0.8
	comp=Z,1.4nm,0.7s,baz=136,slow=8.4,SNR=8.8						
NVAR				LR	LR	02 33 26.1	
	comp=Z,397nm,19.9s,baz=230,slow=40						
H15A	Lima	35.56	332	⇓P	P	02 17 44.1	-0.1
	baz=36,SNR=22						
SAML	Samuel	35.61	129	eP	P	02 17 40.8	-3.8
	comp=Z,6.5nm,1.0s						
ULM	Lac du Bonnet	36.05	354	P	P	02 17 47.2	-0.7
ULM	Lac du Bonnet	36.05	354	P	P	02 17 47.2	-0.7
	comp=Z,2.2nm,0.6s,baz=161,slow=6.7,SNR=5.3						
ULM				LR	LR	02 35 12.7	
	comp=Z,213nm,18.8s,baz=133,slow=41						
LPAZ	La Paz	37.60	143	eP	P	02 18 02.0	-0.3
	comp=Z,1.1nm,0.6s						
LPAZ	La Paz	37.60	143	P	P	02 18 01.9	-0.4
	comp=Z,1.1nm,0.8s,baz=303,slow=8.4,SNR=3.9						
LPAZ				LR	LR	02 34 14.4	
	comp=Z,154nm,20.6s,baz=75,slow=38						
F12A	Elk City	37.63	331	⇓P	P	02 18 01.1	-0.6
	baz=38,SNR=5.3						
NEW	Newport	40.35	332	LR	LR	02 38 50.9	
	comp=Z,158nm,18.7s,baz=160,slow=42						
FFC	Flin Flon	41.25	350	eP	P	02 18 31.5	-0.2
SIV	San Ignacio	41.86	135	P	P	02 18 36.0	-1.2
SIV	San Ignacio	41.86	135	P	P	02 18 36.0	-1.2
	comp=Z,4.6nm,1.0s,baz=317,slow=8.5,SNR=8.3						
SCHQ	Schefferville	44.35	19	eP	P	02 18 57.3	+0.5
	comp=Z,41nm,1.5s						
SCHQ	Schefferville	44.35	19	P	P	02 18 57.2	+0.4
	comp=Z,6.6nm,0.7s,baz=230,slow=8.3,SNR=23						
SCHQ				LR	LR	02 37 02.8	
	comp=Z,339nm,20.1s,baz=192,slow=36						
BBB	Bella Bella	48.19	330	LR	LR	02 43 38.5	
	comp=Z,195nm,19.1s,baz=170,slow=41						
YKA	Yellowknife Ar	51.02	346	P	P	02 19 48.0	-0.4
YKA	Yellowknife Ar	51.02	346	P	P	02 19 48.0	-0.4
	comp=Z,2.7nm,0.7s,baz=148,slow=7.8,SNR=37						
BDFB	Brasilia	51.46	124	LR	LR	02 44 43.3	
	comp=Z,212nm,18.2s,baz=286,slow=40						
FRB	Frobisher Bay	51.61	12	LR	LR	02 41 03.7	
	comp=Z,165nm,19.5s,baz=211,slow=35						
CPUP	Villa Florida	51.71	141	LR	LR	02 42 49.9	
	comp=Z,108nm,18.1s,baz=186,slow=37						
PLCA	Paso Flores	57.85	162	LR	LR	02 42 50.8	
	comp=Z,96nm,19.4s,baz=1.1,slow=33						
ILAR	Eielson Array	63.10	336	P	P	02 21 15.3	+1.3
ILAR	Eielson Array	63.10	336	P	P	02 21 15.3	+1.3
	comp=Z,1.2nm,0.9s,baz=120,slow=5.4,SNR=6.4						
ILAR				LR	LR	02 51 00.3	
	comp=Z,151nm,21.6s,baz=124,slow=38						
PPT	Papeete	66.42	243	LR	LR	02 44 00.8	
	comp=Z,173nm,20.7s,baz=343,slow=30						
PPT2	Papeete2	66.43	243	eLR	LR	02 41 26.4	
	comp=Z,192nm,33.8s						
TBI	Tubuai	68.83	238	eLR	LR	02 42 33.0	
	comp=Z,118nm,32.0s						
ESDC	Sonseca Array	78.29	52	P	P	02 22 45.6	-1.4
ESDC	Sonseca Array	78.29	52	P	P	02 22 45.6	-1.4
	comp=Z,1.2nm,0.9s,baz=287,slow=5.7,SNR=8.3						
MDT	Midelt	78.89	59	LR	LR	02 53 54.1	
	comp=Z,76nm,19.0s,baz=22,slow=33						
NOA	NORSAR Array B	83.08	29	LR	LR	02 57 26.7	
	comp=Z,66nm,21.8s,baz=265,slow=34						
DBIC	Dimbokro	84.10	85	LR	LR	02 55 17.6	
	comp=Z,80nm,21.1s,baz=269,slow=32						
ARCES	ARCESS Array B	85.30	19	LR	LR	03 02 54.3	
	comp=Z,60nm,21.7s,baz=155,slow=37						
CLL	Collm	87.09	38	eP	P	02 23 33.0	+0.5
CLL				⇓ipP	pP	02 23 36.0	-0.1
	comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	88.34	40	P	P	02 23 41.8	+3.1
GERES	GERESS Array B	88.34	40	P	P	02 23 41.8	+3.1
	comp=Z,0.9nm,0.9s,baz=270,slow=1.3,SNR=6.8						
GERES				LR	LR	03 02 51.7	
	comp=Z,113nm,18.1s,baz=94,slow=35						
TORD	Torodi Ar. Bea	88.81	77	LR	LR	02 57 04.3	
	comp=Z,117nm,22.0s,baz=275,slow=31						
AKASG	Malin Array Be	96.57	34	LR	LR	03 10 17.5	
	comp=Z,57nm,18.6s,baz=355,slow=37						
HHC	Hu-ho-hao-te	121.39	341	ePKP	PKPdf	02 29 37.3	-3.3
HHC				PP	PP	02 31 10.6	+0.1
HHC				PKS	PKSdf	02 33 13.2	-4.2
HHC				SKS	SKSdf	02 36 48.0	-5.0
HHC				SKKS	SKKSac	02 38 03.2	-8.3
HHC				SS	SS	02 47 41.9	-2.3
HHC				AMB	AMB		
	comp=Z,190nm,9.4s						
HHC				LR	LR		
	comp=N,210nm,20.3s						
HHC				LR	LR		
	comp=E,260nm,20.2s						
HHC				LR	LR		
	comp=Z,170nm,20.3s						
WMQ	Urumqi	122.06	2	PKP	PKPdf	02 29 39.8	-2.0
KSH	Kashi	124.90	13	ePKP	PKPdf	02 29 48.2	+0.8
KSH				ePP	PP	02 31 41.0	+6.9
KSH				PKS	PKSdf	02 33 24.3	+0.1
KSH				SKS	SKSdf	02 36 59.2	-0.5
KSH				SS	SS	02 48 35.0	+6.4
KSH				AMB	AMB		
	comp=Z,120nm,5.3s						
KSH				LR	LR		
	comp=Z,360nm,5.2s						
GTA	Gaotai	125.64	350	ePKP	PKPdf	02 29 49.9	+1.1
LZH	Lanzhou	128.02	345	ePKP	PKPdf	02 29 51.0	-2.5
LZH				sPKP		02 29 55.7	
LZH				LR	LR		
	comp=N,110nm,18.0s						
LZH				LR	LR		
	comp=E,110nm,18.2s						
LZH				LR	LR		
	comp=Z,150nm,20.3s						
WRA	Warramunga Arr	136.96	256	PKP	PKPdf	02 30 08.6	-2.0
WRA	Warramunga Arr	136.96	256	PKP	PKPdf	02 30 08.6	-2.0
	comp=Z,0.7nm,0.5s,baz=86,slow=1.7,SNR=6.7						
ASAR	Alice Springs	137.23	251	PKPpre	PKPpre	02 29 60.0	
ASAR				PKP	PKPdf	02 30 09.8	-1.1
ASAR	Alice Springs	137.23	251	PKhKP	PKPpre	02 29 60.0	
	comp=Z,0.2nm,0.6s,baz=107,slow=3.5,SNR=2.7						
ASAR				PKP	PKPdf	02 30 09.8	-1.1
	comp=Z,0.3nm,0.6s,baz=93,slow=2.1,SNR=5.3						
FITZ	Fitzroy Crossi	145.21	259	ePKPbc	PKPbc	02 30 23.3	-1.6

CASC 05 02:23:48.9±2.6, **14°.31N**×**90°.47W, h1**^{km}±5^{km}, **MD3.7, ML3.4, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	0.14	173	eP	Pg	02 24 09.6	+18
PCG	Pacaya	0.15	302	eP	Pg	02 23 53.3	+1.1
NBG	Las Nubes	0.30	24	eP	Pg	02 23 56.1	+1.0
NBG				eS	Sg	02 24 01.2	+1.9
FUG	Fuego 3	0.38	291	eP	Pg	02 23 57.1	+0.6
FG6		0.47	302	eP	Pg	02 23 58.5	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
RBDL	**Robledal**	**0.79**	**104**	*e*P	Pg	02 24 04.3	+0.1
RTR	**El Retiro**	**0.90**	**117**	*e*P	Pg	02 24 06.5	+0.1
RTR				*e*S	Sb	02 24 20.9	+0.6
SBLS	**San Blas**	**0.95**	**120**	*e*P	Pg	02 24 07.8	+0.4
SNJE	**San Jose**	**0.95**	**118**	*e*P	Pg	02 24 07.3	-0.1
SNJE				*e*S	Sb	02 24 21.5	-0.3
MRL	**Marmol**	**1.06**	**45**	*e*P	Pb	02 24 10.0	-0.4
MRL				*e*S	Sn	02 24 27.8	+0.9
MTO2	**Montecristo 2**	**1.08**	**85**	*e*P	Pg	02 24 09.5	-0.5
JAT	**Jato**	**1.13**	**270**	*e*P	Pn	02 24 11.7	-0.2
JAT				*e*S	Sn	02 24 29.3	+1.2
BOQS	**Boqueron**	**1.29**	**116**	*e*P	Pg	02 24 13.3	-0.6
BOQS				*e*S	Sn	02 24 32.2	-0.4
SNET	**Serv Nac Est T**	**1.35**	**117**	AML	AML	02 24 37.8	
	comp=Z,666nm,0.7s						
LFU	**La Fuente**	**1.43**	**113**	*e*P	Pn	02 24 15.7	-0.5
LFU				*e*S	Sb	02 24 35.5	+0.1
LBRS	**Las Brisas**	**1.50**	**112**	*e*P	Pn	02 24 16.7	-0.5
LFRS	**El Faro**	**1.53**	**116**	*e*P	Pn	02 24 17.3	-0.3
LFRS				*e*S	Sg	02 24 38.7	+0.3

IDC 05 02:31:43.2±291.0**, 40°.69N×130°.31E, h0km, Error ellipse: s-maj=82.3km s-min=16.1km az=20.0, Sea of Japan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I45RU	**USSURIYSK INFR**	**3.72**	**19**	*i*		02 53 00.0	
	baz=200,slow=325,SNR=1.0						
I30JP	**ISUMI INFRASON**	**9.55**	**121**	*i*		03 27 50.0	
	baz=310,slow=328,SNR=0.4						
I44RU	**PETROPAVLOVSK**	**22.31**	**47**	*i*		04 45 20.0	
	baz=246,slow=332,SNR=0.7						

*ISCJB **05** 02:55:51.2±0.4, 38°.85N±0°.02×23°.62E±0°.02, h11km±3km, Error ellipse: s-maj=3.3km s-min=2.5km az=12.1*
*CSEM **05** 02:55:51.2±0.1, 38°.85N×23°.62E, h10km, ML2.9/11, Error ellipse: s-maj=2.4km s-min=1.9km az=102.0*
*ATH **05** 02:55:51.0, 38°.87N×23°.62E, h26km, MD3.3/25, ML3.5*
*THE **05** 02:55:51.6, 38°.85N×23°.61E, h7km±1km, ML2.9/11, Error ellipse: s-maj=1.0km s-min=0.5km az=263.0*
ISC 05 02:55:51.7±0.8**, 38°.85N**±0°.01×**23°.61E**±0°.02**, h12**km±6km**, n101, σ0s64**/156**, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MRKA	**Markates**	**0.15**	**188**	P	**Pg**	**02 55 55.0**	**-0.2**
MRKA				S	**Sg**	**02 55 57.6**	**-0.2**
MRKA	**Markates**	**0.15**	**188**	P	**Pg**	**02 55 55.0**	**-0.2**
MRKA				S	**Sg**	**02 55 57.6**	**-0.2**
SKIA	**Skiathos**	**0.34**	**340**	P	**Pg**	**02 55 58.5**	**0.0**
SKIA				S	**Sg**	**02 56 03.4**	**+0.4**
SKIA	**Skiathos**	**0.34**	**340**	P	**Pg**	**02 55 58.5**	**0.0**
SKIA				S	**Sg**	**02 56 03.4**	**+0.4**
AOS	**Alonnisos**	**0.38**	**33**	P	**Pg**	**02 55 59.1**	**-0.2**
AOS				S	**Sg**	**02 56 05.2**	**+0.8**
AOS	**Alonnisos**	**0.38**	**33**	*e*PB	**Pg**	**02 55 59.1**	**-0.2**
AOS				*e*SB	**Sg**	**02 56 05.1**	**+0.7**
AOS	**Alonnisos**	**0.38**	**33**	P	**Pg**	**02 55 59.1**	**-0.2**
AOS				*e*Sb	**Sg**	**02 56 05.1**	**+0.7**
ATAL	**Atalanti**	**0.49**	**251**	P	**Pg**	**02 56 00.6**	**-0.7**
ATAL				S	**Sg**	**02 56 07.5**	**-0.3**
ATAL	**Atalanti**	**0.49**	**251**	P	**Pg**	**02 56 00.6**	**-0.7**
ATAL				S	**Sg**	**02 56 07.5**	**-0.3**
LKR	**Lokris**	**0.52**	**247**	P	**Pg**	**02 56 01.2**	**-0.7**
LKR	**Lokris**	**0.52**	**247**	*e*PN	**Pg**	**02 56 01.2**	**-0.7**
LKR				*e*SN	**Sg**	**02 56 09.6**	**+0.8**
LKR	**Lokris**	**0.52**	**247**	P	**Pg**	**02 56 01.2**	**-0.7**
LKR				*e*Sn	**Sg**	**02 56 09.6**	**+0.8**
NEO	**Neokhori**	**0.55**	**326**	*e*PN	**Pg**	**02 56 02.3**	**-0.1**
NEO				*e*SN	**Sg**	**02 56 09.8**	**+0.1**
NEO	**Neokhori**	**0.55**	**326**	*e*Pn	**Pg**	**02 56 02.3**	**-0.1**
NEO				*e*Sn	**Sg**	**02 56 09.8**	**+0.1**
XOR	**Xorichti**	**0.61**	**328**	P	**Pg**	**02 56 03.3**	**-0.3**
XOR				S	**Sg**	**02 56 12.4**	**+0.7**
XOR	**Xorichti**	**0.61**	**328**	P	**Pg**	**02 56 03.3**	**-0.3**
XOR				S	**Sg**	**02 56 12.4**	**+0.7**
AXAR	**Agios Charalam**	**0.75**	**264**	P	**Pg**	**02 56 05.6**	**-0.6**
AXAR				S	**Sg**	**02 56 16.6**	**+0.5**
AXAR	**Agios Charalam**	**0.75**	**264**	P	**Pg**	**02 56 05.6**	**-0.6**
AXAR				S	**Sg**	**02 56 16.6**	**+0.5**
PTL	**Penteli**	**0.82**	**166**	P	**Pg**	**02 56 07.3**	**-0.3**
PTL				S	**Sg**	**02 56 18.8**	**+0.4**
PTL	**Penteli**	**0.82**	**166**	*e*PN	**Pg**	**02 56 07.3**	**-0.3**
PTL				*e*SN	**Sb**	**02 56 18.9**	**-0.1**
PTL	**Penteli**	**0.82**	**166**	P	**Pg**	**02 56 07.3**	**-0.3**
PTL				S	**Sg**	**02 56 18.8**	**+0.4**
ATH	**Athens Observa**	**0.88**	**175**	P	**Pg**	**02 56 08.5**	**-0.2**
ATH				S	**Sb**	**02 56 20.8**	**+0.3**
ATH	**Athens Observa**	**0.88**	**175**	*e*PN	**Pg**	**02 56 08.9**	**+0.2**
ATH				*e*SN	**Sg**	**02 56 20.5**	**+0.3**
ATH	**Athens Observa**	**0.88**	**175**	P	**Pg**	**02 56 08.5**	**-0.2**
ATH	**Athens Observa**	**0.88**	**175**	*e*Pn	**Pg**	**02 56 08.9**	**+0.2**
ATH				*e*Sn	**Sg**	**02 56 20.5**	**+0.3**
ATH				S	**Sb**	**02 56 20.8**	**+0.3**
DSF	**Desfina**	**0.96**	**243**	P	**Pg**	**02 56 08.4**	**-1.8**
DSF				S	**Sg**	**02 56 22.8**	**+0.1**
DSF	**Desfina**	**0.96**	**243**	P	**Pg**	**02 56 08.4**	**-1.8**
DSF				S	**Sg**	**02 56 22.8**	**+0.1**
LTK	**Loutraki**	**0.97**	**212**	P	**Pg**	**02 56 09.3**	**-1.1**
LTK				S	**Sn**	**02 56 24.9**	**+0.1**
LTK	**Loutraki**	**0.97**	**212**	*e*PB	**Pg**	**02 56 09.5**	**-0.9**
LTK				*e*SN	**Sn**	**02 56 24.5**	**-0.3**
LTK	**Loutraki**	**0.97**	**212**	P	**Pg**	**02 56 09.3**	**-1.1**
LTK				*e*Sn	**Sn**	**02 56 24.5**	**-0.3**
LTK				S	**Sn**	**02 56 24.9**	**+0.1**
MRMA	**Marmari**	**0.99**	**143**	P	**Pg**	**02 56 10.1**	**-0.8**
MRMA				S	**Sb**	**02 56 24.3**	**+0.5**
MRMA	**Marmari**	**0.99**	**143**	P	**Pg**	**02 56 10.1**	**-0.8**
MRMA				S	**Sb**	**02 56 24.3**	**+0.5**
AGG	**Agios Georgios**	**1.01**	**280**	P	**Pg**	**02 56 09.9**	**-1.3**
AGG				S	**Sb**	**02 56 25.2**	**+0.7**
AGG	**Agios Georgios**	**1.01**	**280**	*e*PN	**Pg**	**02 56 10.1**	**-1.1**
AGG				*e*SN	**Sb**	**02 56 25.5**	**+1.0**
AGG	**Agios Georgios**	**1.01**	**280**	P	**Pg**	**02 56 09.9**	**-1.3**
AGG				S	**Sb**	**02 56 25.2**	**+0.7**
AGG				*e*Sn	**Sb**	**02 56 25.5**	**+1.0**
PAIG	**Paliouri**	**1.07**	**3**	P	**Pb**	**02 56 11.8**	**-0.4**
PAIG				S	**Sg**	**02 56 26.8**	**+0.4**
PAIG	**Paliouri**	**1.07**	**3**	P	**Pb**	**02 56 11.8**	**-0.4**
PAIG				S	**Sg**	**02 56 26.8**	**+0.4**
NAIG	**Nisos Aigina**	**1.10**	**185**	*e*PN	**Pb**	**02 56 12.4**	**-0.1**
NAIG	**Nisos Aigina**	**1.10**	**185**	*e*Pn	**Pb**	**02 56 12.4**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.17**	**278**	P	**Pb**	**02 56 13.1**	**-0.7**
MAKR				S	**Sn**	**02 56 30.2**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.17**	**278**	P	**Pb**	**02 56 13.1**	**-0.7**
MAKR				S	**Sn**	**02 56 30.2**	**+0.6**
KALE	**Kalithea**	**1.24**	**249**	P	**Pn**	**02 56 14.2**	**-0.6**
KALE				S	**Sn**	**02 56 32.7**	**+1.2**
KALE	**Kalithea**	**1.24**	**249**	*e*PN	**Pn**	**02 56 14.3**	**-0.6**
KALE				*e*SN	**Sn**	**02 56 32.7**	**+1.2**
KALE	**Kalithea**	**1.24**	**249**	*e*Pn	**Pn**	**02 56 14.3**	**-0.6**
KALE				S	**Sn**	**02 56 32.7**	**+1.2**
TRIZ	**Trizonia**	**1.30**	**249**	P	**Pn**	**02 56 15.3**	**-0.3**
TRIZ	**Trizonia**	**1.30**	**249**	*e*PN	**Pn**	**02 56 15.0**	**-0.6**
TRIZ				*e*SN	**Sg**	**02 56 34.2**	**+0.6**
TRIZ	**Trizonia**	**1.30**	**249**	*e*Pn	**Pn**	**02 56 15.0**	**-0.6**
TRIZ	**Trizonia**	**1.30**	**249**	P	**Pn**	**02 56 15.3**	**-0.3**
TRIZ				*e*Sn	**Sg**	**02 56 34.2**	**+0.6**
GUR	**Goura**	**1.35**	**228**	P	**Pn**	**02 56 16.1**	**-0.3**
GUR				S	**Sb**	**02 56 34.6**	**+0.3**
GUR	**Goura**	**1.35**	**228**	*e*PN	**Pn**	**02 56 16.3**	**-0.1**
GUR				*e*SN	**Sb**	**02 56 34.6**	**+0.3**
GUR	**Goura**	**1.35**	**228**	*e*Pn	**Pn**	**02 56 16.3**	**-0.1**
GUR				S	**Sb**	**02 56 34.6**	**+0.3**
DID	**Didima**	**1.38**	**193**	P	**Pn**	**02 56 16.5**	**-0.2**
DID				S	**Sb**	**02 56 35.0**	**+0.2**
DID	**Didima**	**1.38**	**193**	*e*PN	**Pn**	**02 56 16.5**	**-0.2**
DID				*e*SN	**Sb**	**02 56 35.1**	**+0.2**
DID	**Didima**	**1.38**	**193**	P	**Pn**	**02 56 16.5**	**-0.2**
DID				*e*Sn	**Sb**	**02 56 35.1**	**+0.2**
EFP	**Efpalio**	**1.40**	**253**	P	**Pn**	**02 56 17.2**	**+0.2**
EFP	**Efpalio**	**1.40**	**253**	*e*PN	**Pn**	**02 56 17.3**	**+0.2**
EFP	**Efpalio**	**1.40**	**253**	P	**Pn**	**02 56 17.2**	**+0.2**
EVR	**Evrytania**	**1.41**	**273**	P	**Pn**	**02 56 17.6**	**+0.4**
EVR	**Evrytania**	**1.41**	**273**	*e*PN	**Pn**	**02 56 17.7**	**+0.5**
EVR	**Evrytania**	**1.41**	**273**	P	**Pn**	**02 56 17.6**	**+0.4**
LAKA	**Lakka**	**1.42**	**245**	P	**Pn**	**02 56 17.2**	**-0.1**
LAKA	**Lakka**	**1.42**	**245**	*e*PN	**Pn**	**02 56 17.4**	**+0.1**
LAKA	**Lakka**	**1.42**	**245**	*e*Pn	**Pn**	**02 56 17.4**	**+0.1**
THL	**Klokotos Trika**	**1.43**	**300**	P	**Pn**	**02 56 17.0**	**-0.4**
THL	**Klokotos Trika**	**1.43**	**300**	*e*PN	**Pn**	**02 56 17.2**	**-0.2**
THL	**Klokotos Trika**	**1.43**	**300**	*e*Pn	**Pn**	**02 56 17.2**	**-0.2**
OUR	**Ouranopolis**	**1.51**	**11**	P	**Pn**	**02 56 18.1**	**-0.3**
OUR	**Ouranopolis**	**1.51**	**11**	P	**Pn**	**02 56 18.1**	**-0.3**
LIT	**Litokhoron**	**1.52**	**325**	P	**Pn**	**02 56 18.1**	**-0.6**
LIT	**Litokhoron**	**1.52**	**325**	P	**Pn**	**02 56 18.1**	**-0.6**
PLG	**Polygyros**	**1.53**	**355**	P	**Pn**	**02 56 18.4**	**-0.3**
PLG	**Polygyros**	**1.53**	**355**	*e*PN	**Pn**	**02 56 18.4**	**-0.3**
PLG				*e*SN	**Sn**	**02 56 37.2**	**-1.3**
PLG	**Polygyros**	**1.53**	**355**	P	**Pn**	**02 56 18.4**	**-0.3**
PLG				*e*Sn	**Sn**	**02 56 37.2**	**-1.3**
LIA	**Limnos Island**	**1.60**	**49**	P	**Pn**	**02 56 19.2**	**-0.5**
LIA				S	**Sb**	**02 56 41.8**	**+0.4**
LIA	**Limnos Island**	**1.60**	**49**	*e*PN	**Pn**	**02 56 19.3**	**-0.5**
LIA	**Limnos Island**	**1.60**	**49**	*e*Pn	**Pn**	**02 56 19.3**	**-0.5**
LIA				S	**Sb**	**02 56 41.8**	**+0.4**
VLX	**Vlachokerasia**	**1.77**	**214**	P	**Pn**	**02 56 22.7**	**+0.6**
VLX	**Vlachokerasia**	**1.77**	**214**	*e*PN	**Pn**	**02 56 22.8**	**+0.6**
VLX	**Vlachokerasia**	**1.77**	**214**	P	**Pn**	**02 56 22.7**	**+0.6**
RLS	**Riolos of Patr**	**1.86**	**245**	P	**Pn**	**02 56 24.0**	**+0.7**
RLS	**Riolos of Patr**	**1.86**	**245**	*e*PN	**Pn**	**02 56 24.4**	**+1.1**
RLS	**Riolos of Patr**	**1.86**	**245**	P	**Pn**	**02 56 24.0**	**+0.7**
RLS	**Riolos of Patr**	**1.86**	**245**	*e*Pn	**Pn**	**02 56 24.4**	**+1.1**
AMT	**Artemida-Makis**	**2.00**	**229**	P	**Pn**	**02 56 25.8**	**+0.6**
AMT	**Artemida-Makis**	**2.00**	**229**	*e*PB	**Pn**	**02 56 26.3**	**+1.1**
AMT	**Artemida-Makis**	**2.00**	**229**	P	**Pn**	**02 56 25.8**	**+0.6**
AMT	**Artemida-Makis**	**2.00**	**229**	*e*Pb	**Pn**	**02 56 26.3**	**+1.1**
PRK	**Paraskevi**	**2.11**	**78**	*e*PN	**Pn**	**02 56 26.5**	**-0.2**
PRK	**Paraskevi**	**2.11**	**78**	*e*Pn	**Pn**	**02 56 26.5**	**-0.2**
ITM	**Ithomi**	**2.14**	**219**	P	**Pn**	**02 56 26.1**	**-1.0**
ITM	**Ithomi**	**2.14**	**219**	*e*PB	**Pn**	**02 56 28.3**	**+1.2**
ITM	**Ithomi**	**2.14**	**219**	P	**Pn**	**02 56 26.1**	**-1.0**
ITM	**Ithomi**	**2.14**	**219**	*e*Pb	**Pn**	**02 56 28.3**	**+1.2**
SRS	**Serrai**	**2.26**	**360**	P	**Pn**	**02 56 28.9**	**0.0**
SRS	**Serrai**	**2.26**	**360**	P	**Pn**	**02 56 28.9**	**0.0**
APE	**Apeiranthos**	**2.34**	**139**	*e*PN	**Pn**	**02 56 30.1**	**+0.2**
APE	**Apeiranthos**	**2.34**	**139**	*e*Pn	**Pn**	**02 56 30.1**	**+0.2**
VLS	**Valsamata**	**2.47**	**255**	*e*PB	**Pn**	**02 56 33.0**	**+1.4**
VLS	**Valsamata**	**2.47**	**255**	*e*Pb	**Pn**	**02 56 33.0**	**+1.4**
NVR	**Nevrokopi**	**2.50**	**4**	P	**Pn**	**02 56 32.0**	**-0.2**
NVR	**Nevrokopi**	**2.50**	**4**	P	**Pn**	**02 56 32.0**	**-0.2**

IDC 05 02:56:20.5±6.8**, 21°.44S×177°.79W, h311**km±63km**, mb3.1**/5**, mb1 3.3**/6**, mb1mx3.1**/19**, mbtmp3.1**/6**, Error ellipse: s-maj=31.4km s-min=22.9km az=67.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**17.33**	**194**	P	P	03 00 01.5	-0.8
	0.8nm,0.3s,baz=43,slow=8.0,SNR=5.2						
URZ				S	S	03 03 05.1	-1.2
	0.6nm,0.3s,baz=78,slow=23,SNR=7.3						
STKA	**Stephens Creek**	**37.56**	**245**	P	P	03 03 06.5	+0.6
	1.2nm,0.6s,baz=90,slow=12,SNR=3.8						
ASAR	**Alice Springs**	**44.50**	**258**	P	P	03 04 02.5	+0.3
	1.2nm,0.8s,baz=89,slow=8.3,SNR=10						
WRA	**Warramunga Arr**	**44.67**	**263**	P	P	03 04 02.7	-0.8
	0.5nm,0.4s,baz=96,slow=8.4,SNR=3.9						
VNDA	**Vanda**	**57.00**	**185**	P	P	03 05 34.5	+0.7
	0.7nm,0.7s,baz=353,slow=5.3,SNR=2.1						
ILAR	**Eielson Array**	**89.18**	**13**	P	P	03 08 40.4	-0.3
	0.2nm,0.7s,baz=219,slow=6.0,SNR=8.3						
ARCES	**ARCESS Array B**	**129.88**	**350**	PKP	PKPdf	03 14 51.9	-0.5
	4.6nm,1.0s,baz=346,slow=1.9,SNR=3.2						
AKASG	**Malin Array Be**	**143.92**	**331**	PKP	PKPbc	03 15 18.0	+0.5
	1.4nm,0.5s,baz=43,slow=4.4,SNR=5.6						
BRTR	**Keskin Array B**	**147.61**	**311**	PKPbc	PKPbc	03 15 27.8	-1.0
	0.4nm,0.5s,baz=145,slow=4.8,SNR=4.7						
GERES	**GERESS Array B**	**151.15**	**344**	PKPbc	PKPbc	03 15 36.8	-0.3
	0.4nm,0.6s,baz=40,slow=2.3,SNR=4.2						

BJI 05 03:03:04.3, 29°.40N×104°.99E, h14km**, ML3.3**/14**, Ms7 3.0**/1**, Sichuan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.84**	**325**	Pn	Pn	03 03 35.5	-0.1
CD2				Pg	Pg	03 03 39.2	-0.6
CD2				Sn	Sb	03 04 00.0	-0.9
CD2				Sg	Sg	03 04 03.5	-0.4
CD2				smax	smax		
	comp=N,460nm,0.5s						
CD2				smax	smax		
	comp=E,720nm,0.6s						
GYA	**Guiyang**	**3.28**	**153**	Pg	Pg	03 04 05.5	-1.9
GYA				Sg	Sb	03 04 40.9	-1.6
GYA				smax	smax		
	comp=N,80nm,0.7s						
GYA				smax	smax		
	comp=E,90nm,0.8s						
KMI	**Kunming**	**4.71**	**206**	P	Pg	03 04 33.3	-1.5
KMI				pmax	pmax		
	comp=Z,13nm,1.4s						
XAN	**Xi'an**	**5.71**	**35**	Pn	Pn	03 04 27.6	-1.2
XAN				Sn	Sn	03 05 28.6	-5.6
XAN				Sg	Sb	03 05 54.5	+2.3
XAN				smax	smax		
	comp=N,49nm,0.8s						
XAN				smax	smax		
	comp=E,15nm,1.0s						
LZH	**Lanzhou**	**6.74**	**352**	*e*Pg	Pg	03 05 13.0	-0.6
LZH				Sg	Sg	03 06 40.2	-0.8
LZH				smax	smax		
	comp=N,38nm,1.2s						
LZH				smax	smax		
	comp=E,46nm,1.2s						
LZH				LR	LR		
	comp=N,150nm,5.8s						
LZH				LR	LR		
	comp=E,160nm,6.0s						
LZH				LR	LR		
	comp=Z,190nm,7.2s						

MAN 05 03:11:56, 13°.25N×122°.36E, h13km**, mb4.2, ML3.0, MS2.8, 1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.31**	**77**	*e*P	Pb	03 12 04.2	+0.7
AUQP				*e*S	Sn	03 12 11.2	-1.6
BOAC	**Boac**	**0.54**	**292**	*e*P	Pb	03 12 07.8	+0.4
BOAC				*e*S	Sn	03 12 18.3	-0.1
GQP	**Guinayangan**	**0.65**	**7**	⇑*e*P	Pb	03 12 09.9	+0.6
GQP				*e*S	Sn	03 12 20.6	-0.6
OTRP	**Odiongan**	**0.95**	**200**	*e*P	Pb	03 12 14.1	-0.2
SJMP	**San Jose**	**1.44**	**237**	*e*P	Pg	03 12 23.3	-0.4
RCP	**Roxas**	**1.73**	**167**	⇓*e*P	Pn	03 12 25.0	-0.7
PVCP	**Virac**	**1.78**	**79**	*e*P	Pb	03 12 27.7	-0.8
LUBP	**Lubang**	**2.11**	**283**	*e*P	Pb	03 12 32.9	-1.3
BALP	**Baler**	**2.59**	**343**	*e*P	Pn	03 12 38.9	+1.3

IDC 05 03:13:39.4±8.7**, 10°.93N×91°.11E, h0**km**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.2**/26**, mbtmp3.4**/3**, Error ellipse: s-maj=437.3km s-min=29.8km az=60.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.52**	**350**	P	P	03 20 46.5	-0.1
	0.4nm,0.7s,baz=157,slow=6.8,SNR=4.5						
WRA	**Warramunga Arr**	**52.46**	**126**	P	P	03 22 53.9	-0.4
	0.4nm,0.5s,baz=305,slow=8.4,SNR=3.6						
ASAR	**Alice Springs**	**54.15**	**130**	P	P	03 23 07.0	+0.2
	0.4nm,0.6s,baz=304,slow=6.9,SNR=5.8						

*IDC **05** 03:22:13.9±0.8, 14°.34N×90°.64W, h0km, mb4.2/19, mb1 4.3/22, mb1mx4.2/31, mbtmp4.2/22, ML3.5/3, MS4.2/30, Ms1 4.2/30, ms1mx4.1/38, Error ellipse: s-maj=20.4km s-min=13.2km az=47.0*
*ISCJB **05** 03:22:13.6±0.5, 14°.39N±0°.03×90°.37W±0°.02, h0km±3km, mb4.5/58, MS4.3/29, Error ellipse: s-maj=6.3km s-min=2.8km az=26.1*
*CASC **05** 03:22:14.4±2.5, 14°.37N×90°.49W, h13km±8km, MD4.6, ML4.2, mb4.6(NEIC)*
*BJI **05** 03:22:14.6, 14°.30N×90°.30W, h10km, mB5.4/3, Ms5.0/4, Ms7 4.7/5*
*NEIC **05** 03:22:15.6±0.4, 14°.30N×90°.43W, h10km, mb4.6/35, Error ellipse: s-maj=10.1km s-min=6.1km az=223.0*
*GCMT **05** 03:22:18.6±0.3, 14°.39N×90°.56W, h23km±1km, MW4.9, Moment Tensor Solution. s15,c18; s71,c99; Moment tensor: Scale 10^{16}Nm; M_{rr}0.16±.15; $M_{\theta\theta}$-2.91±.13; $M_{\phi\phi}$2.76±.12; $M_{r\theta}$1.03±.17; $M_{\theta\phi}$-0.94±.10; $M_{\phi r}$-0.32±.18; Best double couple: $M_0$3.20000×10^{16} NP1:ϕ_s215.00000°, δ72.00000°, λ-4.00000°. NP2:ϕ_s306.00000°, δ86.00000°, λ-162.00000°. Principal axes: T 3.0000, Plg10.0000°, Azm79.0000°; N 0.3400, Plg71.0000°, Azm317.0000°; P -3.3300, Plg16.0000°, Azm172.0000°; Data Used: II IC IU CN G.*
ISC 05 03:22:14.2±1.1**, 14°.31N**±0°.03×**90°.45W**±0°.02**, h2**km±6km**, n253, σ1s40**/245**, mb4.6**/58**, MS4.3**/30**, 38C-39D, Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.14**	**183**	*e*P	Pg	03 22 21.4	+4.4
PCG	**Pacaya**	**0.18**	**298**	*e*P	**Pg**	**03 22 18.0**	**+0.2**
GCG	**Guatemala City**	**0.29**	**343**	*e*P	**Pg**	**03 22 19.2**	**-0.6**
GCG				*e*S	**Sg**	**03 22 24.8**	**+1.2**
NBG	**Las Nubes**	**0.29**	**19**	*e*P	**Pg**	**03 22 20.8**	**+0.9**
FUG	**Fuego 3**	**0.41**	**290**	*e*P	**Pg**	**03 22 21.7**	**-0.4**
FG6		**0.49**	**301**	*e*P	**Pg**	**03 22 23.1**	**-0.6**
TP2	**Tecpan 2**	**0.73**	**310**	*e*P	**Pg**	**03 22 28.1**	**-0.1**
RBDL	**Robledal**	**0.76**	**105**	*e*P	**Pg**	**03 22 28.7**	**-0.2**
RTR	**El Retiro**	**0.88**	**118**	*e*P	**Pg**	**03 22 31.0**	**-0.1**
SBLS	**San Blas**	**0.93**	**120**	*e*P	**Pg**	**03 22 31.7**	**-0.3**
SNJE	**San Jose**	**0.93**	**118**	*e*P	**Pg**	**03 22 31.9**	**-0.1**
MRL	**Marmol**	**1.05**	**44**	*e*P	**Pg**	**03 22 34.5**	**+0.1**
MTO2	**Montecristo 2**	**1.06**	**85**	*e*P	**Pg**	**03 22 33.7**	**-0.8**
JAT	**Jato**	**1.15**	**271**	*e*P	**Pg**	**03 22 36.0**	**-0.3**
BOQS	**Boqueron**	**1.27**	**117**	*e*P	**Pg**	**03 22 37.8**	**-0.8**
BOQS				*e*S	**Sn**	**03 22 58.2**	**+1.2**
SNET	**Serv Nac Est T**	**1.33**	**118**	AML	AML	03 23 04.0	
	comp=Z,5μm,0.8s						
LFU	**La Fuente**	**1.41**	**113**	*e*P	**Pn**	**03 22 40.0**	**-1.0**
LFU				*e*S	**Sn**	**03 23 01.1**	**+0.9**
LBRS	**Las Brisas**	**1.48**	**112**	*e*P	**Pn**	**03 22 41.2**	**-0.8**
LFRS	**El Faro**	**1.51**	**117**	*e*P	**Pn**	**03 22 40.7**	**-1.7**
THIG		**1.86**	**289**	P	**Pn**	**03 22 46.3**	**-0.8**
THIG				S	**Sb**	**03 23 12.2**	**-0.4**
CCIG	**Comitan**	**2.55**	**320**	P	**Pn**	**03 22 58.4**	**+1.5**
CCIG				S	**Sg**	**03 23 35.3**	**-1.0**
TGUH	**Tegucigalpa,Un**	**3.09**	**94**	*e*Pn	**Pn**	**03 23 02.9**	**-1.2**
TGUH				*e*Pb	**Pb**	**03 23 08.4**	**-1.5**
TGUH				*e*Pg	**Pg**	**03 23 11.3**	**-2.2**
TGUH				*e*Sn	**Sn**	**03 23 40.5**	**-1.1**
TGUH				*e*Sg	**Sg**	**03 23 51.8**	**-1.7**
TGIG		**3.56**	**314**	P	**Pn**	**03 23 10.0**	**-0.6**
TGIG				S	**Sb**	**03 24 00.5**	**-1.3**
CMIG	**Matias Romero**	**5.09**	**303**	Pn	**Pn**	**03 23 30.1**	**-1.5**
CMIG				P	Pb	03 23 32.9	-11
CMIG				Sn	**Sn**	**03 24 31.4**	**+0.4**
CMIG				S	Sb	03 24 34.5	-11
CMIG				Lg	Lg	03 24 48.8	
CMIG	**Matias Romero**	**5.09**	**303**	Pn	**Pn**	**03 23 30.1**	**-1.5**
	comp=Z,4.4nm,0.3s,baz=120,slow=9.0,SNR=46						
CMIG				Sn	**Sn**	**03 24 31.4**	**+0.4**
	comp=Z,7.5nm,0.3s,baz=71,slow=15,SNR=3.8						
CMIG				Lg	Lg	03 24 48.8	
	comp=Z,63nm,0.3s,baz=48,slow=20,SNR=13						
CMIG				LR	LR	03 25 28.9	
	comp=Z,3μm,21.6s,baz=115,slow=40						
HUIG	**Huatulco**	**5.66**	**286**	P	**Pn**	**03 23 38.2**	**-1.2**
HUIG				S	Sn	03 24 51.2	+6.1
TEIG	**Tepich**	**6.24**	**19**	*e*Pn	**Pn**	**03 23 46.9**	**-0.5**
TEIG				*e*Pg	**Pg**	**03 24 12.1**	**-1.8**
TEIG				*e*Sn	**Sn**	**03 24 58.3**	**-1.1**
TEIG				*e*Sg	Sg	03 25 28.4	-6.3
TEIG				Lg	Lg	03 25 32.4	
TEIG	**Tepich**	**6.24**	**19**	Pn	**Pn**	**03 23 46.8**	**-0.6**
	comp=Z,26nm,0.3s,baz=201,slow=11,SNR=120						
TEIG				Sn	**Sn**	**03 24 59.8**	**+0.4**
	comp=Z,16nm,0.3s,baz=28,slow=23,SNR=7.6						
TEIG				Lg	Lg	03 25 32.4	
	comp=Z,5.3nm,0.3s,baz=41,slow=20,SNR=3.2						
JTS	**JuntasAbangare**	**6.69**	**126**	*e*Pn	**Pn**	**03 23 55.0**	**+1.3**
JTS	**JuntasAbangare**	**6.69**	**126**	Pn	**Pn**	**03 23 55.5**	**+1.8**
	comp=Z,3.4nm,0.3s,baz=307,slow=21,SNR=13						
JTS				LR	LR	03 27 05.1	
	comp=Z,1μm,19.3s,baz=318,slow=42						
HKT	**Hockley**	**16.34**	**343**	*e*Pn	**P**	**03 26 07.2**	**-0.7**
	comp=Z,48nm,1.6s						
732A	**Laxson Ranch,**	**16.85**	**330**	⇑P	**P**	**03 26 13.6**	**+0.1**
	baz=17,SNR=30						
632A	**Uvalde**	**17.41**	**332**	⇓P	**P**	**03 26 19.7**	**-0.2**
	baz=18,SNR=23						
631A	**Perdido Creek**	**17.71**	**330**	⇑P	**P**	**03 26 22.9**	**-0.3**
	baz=18,SNR=18						
VBMS	**Vicksburg**	**17.83**	**360**	*e*Pn	**Pn**	**03 26 23.3**	**-0.3**
532A	**Rocksprings**	**18.00**	**333**	⇓P	**P**	**03 26 27.4**	**+1.0**
	baz=18,SNR=15						
TIGA	**Tifton**	**18.17**	**19**	⇓P	**P**	**03 26 28.4**	**+0.2**
	baz=18						
531A	**Rocksprings**	**18.32**	**331**	⇑P	**P**	**03 26 31.6**	**+1.6**
	baz=18,SNR=16						
OTAV	**Otavalo**	**18.34**	**139**	*e*P	**P**	**03 26 31.0**	**+0.4**
	comp=Z,31nm,0.9s						
ROSC	**El Rosal**	**18.45**	**119**	P	**P**	**03 26 34.0**	**+2.3**
ROSC	**El Rosal**	**18.45**	**119**	P	**P**	**03 26 34.0**	**+2.3**
	comp=Z,0.9nm,0.3s,baz=108,slow=21,SNR=5.4						
ROSC				LR	LR	03 34 18.0	
	comp=Z,246nm,20.8s,baz=28,slow=39						
432A	**Menard**	**18.59**	**334**	⇓P	**Pn**	**03 26 34.5**	**+1.4**
	baz=19,SNR=16						
530A	**J-C Ranch, Com**	**18.69**	**329**	⇑P	**Pn**	**03 26 36.0**	**+1.7**
	baz=19,SNR=26						
WHTX	**Lake Whitney**	**18.73**	**341**	⇑P	**Pn**	**03 26 35.6**	**+0.9**
	baz=19,SNR=6.2						
431A	**Sonora**	**18.79**	**332**	P	**Pn**	**03 26 36.3**	**+0.9**
	baz=19,SNR=18						
LRAL	**Lakeview Retre**	**18.90**	**9**	*e*P	**P**	**03 26 35.6**	**-0.6**
	comp=Z,40nm,1.5s						
628A	**Black Gap, Mar**	**18.98**	**325**	P	**Pn**	**03 26 39.1**	**+1.2**
	baz=19,SNR=23						
332A	**Millersview**	**19.01**	**335**	⇓P	**Pn**	**03 26 38.1**	**-0.1**
	baz=19,SNR=52						
529A	**Stev Forest Ra**	**19.12**	**327**	⇓P	**Pn**	**03 26 40.1**	**+0.7**
	baz=19,SNR=10						
430A	**Baggett Ranch,**	**19.17**	**331**	⇓P	**Pn**	**03 26 40.9**	**+0.9**
	baz=19,SNR=27						
331A	**San Angelo**	**19.24**	**333**	P	**Pn**	**03 26 41.2**	**+0.4**
	baz=19,SNR=13						
627A	**Terlingua Ranc**	**19.24**	**324**	⇓P	**Pn**	**03 26 41.4**	**+0.4**
	baz=19						
TXAR	**Lajitas Array**	**19.32**	**323**	P	**Pn**	**03 26 42.4**	**+0.5**
TXAR	**Lajitas Array**	**19.32**	**323**	P	**Pn**	**03 26 42.4**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=143,slow=10,SNR=17						
TXAR				LR	LR	03 35 33.1	
	comp=Z,266nm,19.0s,baz=180,slow=42						
429A	**Davenport Ranc**	**19.35**	**329**	⇑P	**Pn**	**03 26 43.2**	**+0.9**
	baz=19,SNR=15						
528A	**Cox Ranch, San**	**19.45**	**326**	⇑P	**Pn**	**03 26 44.4**	**+0.8**
	baz=20,SNR=10.0						
330A	**Mertzon**	**19.66**	**332**	P	**P**	**03 26 44.5**	**0.0**
	baz=20,SNR=13						
231A	**Bronte**	**19.73**	**334**	P	**P**	**03 26 45.7**	**+0.3**
	baz=20,SNR=22						
626A	**Big Bend Ranch**	**19.75**	**322**	P	**Pn**	**03 26 46.7**	**-0.4**
	baz=20,SNR=18						
428A	**Kincaid Ranch,**	**19.84**	**327**	⇓P	**Pn**	**03 26 48.5**	**+0.4**
	baz=20						
527A	**Woodward Ranch**	**19.89**	**325**	P	**Pn**	**03 26 49.2**	**+0.4**
	baz=20,SNR=22						
ABTX	**Abilene, Hawle**	**20.07**	**337**	⇑P	Pn	03 26 50.2	-0.5
	baz=20						
526A	**Mary Lane Ranc**	**20.10**	**323**	⇓P	Pn	03 26 51.1	-0.3
	baz=20,SNR=34						
329A	**Wagon Wheel Ra**	**20.10**	**330**	P	Pn	03 26 50.5	-0.8
	baz=20,SNR=11						
OXF	**Oxford**	**20.14**	**2**	*e*P	**P**	**03 26 49.7**	**0.0**
	comp=Z,61nm,1.1s						
427A	**Hayter Ranch,**	**20.32**	**326**	⇑P	Pn	03 26 52.9	-0.9
	baz=20,SNR=12						
131A	**Roby**	**20.41**	**335**	⇑P	Pn	03 26 54.5	-0.3
	baz=20,SNR=6.0						
328A	**Wristen Ranch,**	**20.43**	**328**	P	**P**	**03 26 54.0**	**+1.0**
	baz=20,SNR=54						
UALR	**University of**	**20.45**	**356**	*e*P	**P**	**03 26 53.2**	**+0.1**
	comp=Z,43nm,1.0s						

426A	McDonald Obser	20.52	325	P	P	03 26 55.1	+0.9
	baz=21,SNR=18						
130A	Snyder	20.58	334	⇑P	Pn	03 26 56.4	-0.4
	baz=21						
Z32A	Haskell	20.62	338	⇓P	P	03 26 56.0	+1.1
	baz=21,SNR=18						
Z31A	Sharp Cattle R	20.88	337	⇓P	P	03 26 57.8	0.0
	baz=21,SNR=28						
228A	UT Block 9, Go	20.91	330	⇑P	P	03 26 58.6	+0.3
	baz=21,SNR=6.6						
326A	Caldwell Ranch	20.99	326	⇑P	Pn	03 27 00.6	-1.1
	baz=21,SNR=8.6						
129A	Stewart Farms,	21.00	332	⇑P	P	03 26 60.0	+0.8
	baz=21						
LPIG	La Paz	21.11	300	LR	LR	03 35 07.9	
	comp=Z,154nm,18.0s,baz=338,slow=37						
425A	Indio Mountain	21.16	323	P	P	03 27 01.2	+0.3
	baz=21,SNR=17						
HBAR	Harrisburg	21.16	360	*e*P	P	03 27 00.2	-0.5
227A	Bennet, Jal	21.18	328	⇓P	P	03 27 02.0	+0.9
	baz=21						
SWET	Sewanee	21.21	10	*e*P	P	03 27 00.4	-1.0
	comp=Z,40nm,1.2s						
Y32A	R-V Farms, Ver	21.23	339	⇓P	P	03 27 02.4	+0.8
	baz=21,SNR=5.9						
Z30A	Sanderson Ranc	21.24	335	P	P	03 27 01.9	+0.2
	baz=21,SNR=9.5						
128A	Castleberry Fa	21.28	331	⇑P	P	03 27 03.2	+1.0
	baz=21,SNR=22						
Z29A	Hungry Hill Ra	21.46	333	⇑P	P	03 27 04.9	+0.7
	baz=22,SNR=7.4						
Y31A	Rekieta Farm,	21.49	337	⇓P	P	03 27 04.8	+0.4
	baz=22,SNR=20						
GNAR	Gosnell	21.57	1	*e*P	P	03 27 05.2	0.0
	comp=Z,488nm,0.9s						
325A	Bean Ranch, Si	21.58	324	⇓P	P	03 27 05.8	+0.3
	baz=22						
Y30A	Stafford Cattl	21.66	336	⇓P	P	03 27 06.7	+0.4
	baz=22,SNR=5.6						
CLNB	Carlsbad	21.68	328	*e*P	P	03 27 08.9	+2.3
226B	Tecolote Peak,	21.68	327	⇓P	P	03 27 07.8	+1.3
	baz=22,SNR=34						
WMOK	Wichita Mounta	21.69	341	*e*P	P	03 27 05.2	-1.3
	comp=Z,14nm,1.1s						
CPCT	Cooper Cave	21.71	13	*e*P	P	03 27 07.4	+0.6
Z28A	Tucker Farm, M	21.79	332	⇓P	P	03 27 07.2	-0.5
	baz=22,SNR=10						
WVT	Waverly	21.86	6	*e*P	P	03 27 08.5	+0.3
	comp=Z,39nm,1.3s						
GDL2	Guadalupe Moun	21.88	327	*e*P	P	03 27 09.5	+0.8
324A	Moseley Ranch,	21.93	324	⇑P	P	03 27 09.4	+0.1
	baz=22						
Y29A	Porterfield Fa	21.96	334	⇓P	P	03 27 08.6	-1.0
	baz=22,SNR=7.0						
TUL1	Tulsa	22.04	348	⇑P	P	03 27 11.7	+1.4
	baz=22						
225A	Deer Hill, Car	22.06	326	⇓P	P	03 27 11.6	+0.9
	baz=22,SNR=8.5						
MNTX	Cornudas Mount	22.06	324	*e*P	P	03 27 09.6	-0.9
	comp=Z,55nm,1.9s						
MNTX	Cornudas Mount	22.06	324	⇑P	P	03 27 10.5	0.0
	baz=22,SNR=15						
TKL	Tuckaleechee C	22.09	15	*e*P	P	03 27 10.8	0.0
TKL	Tuckaleechee C	22.09	15	P	P	03 27 13.6	+2.8
	comp=Z,14nm,1.1s,baz=187,slow=10.0,SNR=8.1						
TKL				LR	LR	03 36 47.2	
	comp=Z,463nm,18.1s,baz=192,slow=40						
X30A	Coker Ranch, T	22.15	337	⇓P	P	03 27 11.5	0.0
	baz=22,SNR=9.3						
Z27A	Tatum	22.20	331	⇑P	P	03 27 12.7	+0.6
	baz=22,SNR=12						
Y28A	McKinney Farm,	22.25	333	⇓P	P	03 27 13.0	+0.3
	baz=22						
125A	Gardner Draw,	22.39	327	⇑P	P	03 27 14.1	-0.1
	baz=22,SNR=9.3						
224A	Cornudas Mount	22.42	325	⇑P	P	03 27 14.1	-0.4
	baz=22,SNR=7.5						
X29A	Tulia	22.48	335	⇓P	P	03 27 15.9	+0.8
	baz=23						
Z26A	Caprock	22.53	329	⇓P	P	03 27 15.8	+0.1
	baz=23						
MSTX	Muleshoe	22.54	332	⇑P	P	03 27 16.2	+0.4
	baz=23						
Y27A	Causey	22.64	332	⇓P	P	03 27 17.0	+0.2
	baz=23						
X28A	Dimmitt	22.75	334	⇑P	P	03 27 18.6	+0.6
	baz=23						
124A	Stringfield Ra	22.85	326	P	P	03 27 20.2	+1.0
	baz=23,SNR=19						
AMTX	Amarillo	22.86	336	*e*P	P	03 27 20.6	+1.5
	comp=Z,18nm,0.7s						
Z25A	Roswell	22.91	328	⇓P	P	03 27 20.3	+0.6
	baz=23						
TZTN	Tazewell	22.99	14	*e*P	P	03 27 19.8	-0.5
	comp=Z,102nm,1.7s						
Z24A	Sheeppen Canyo	23.29	327	⇓P	P	03 27 23.6	-0.1
	baz=23						
SIUC	Southern Illin	23.34	2	*e*P	P	03 27 23.5	-0.4
	comp=Z,80nm,1.0s						
Y25A	Mesa, Roswell	23.41	329	⇓P	P	03 27 24.7	-0.1
	baz=24,SNR=7.7						
SJG	San Juan	23.63	78	P	P	03 27 30.7	+3.7
SJG	San Juan	23.63	78	P	P	03 27 30.7	+3.7
	comp=Z,3.1nm,0.3s,baz=349,slow=18,SNR=3.7						
SJG				LR	LR	03 36 19.8	
	comp=Z,930nm,20.9s,baz=268,slow=36						
USIN	University of	23.69	5	*e*P	P	03 27 26.9	-0.5
	comp=Z,56nm,1.0s						
221A	Mesquite Ranch	23.69	321	⇓P	P	03 27 29.1	+1.4
	baz=24						
Z23A	Rita Site, Whi	23.70	325	⇑P	P	03 27 28.2	+0.5
	baz=24						
320A	Kipp Ranch, An	23.71	319	⇑P	P	03 27 28.8	+0.9
	baz=24						
122A	Conniff Cattle	23.72	323	⇑P	P	03 27 28.8	+0.8
	baz=24						
Y24A	Capitan	23.79	328	⇓P	P	03 27 29.3	+0.7
	baz=24,SNR=9.1						
121A	Cookes Peak, D	24.06	322	⇓P	P	03 27 32.8	+1.6
	baz=24,SNR=9.8						
220A	Playas Peak, P	24.09	320	⇑P	P	03 27 32.2	+0.8
	baz=24,SNR=11						
Z22A	Elephant Butte	24.11	324	⇑P	P	03 27 33.4	+1.7
	baz=24						
WCI	Wyandotte Cave	24.11	8	*e*P	P	03 27 31.1	-0.3
	comp=Z,27nm,0.8s						
Y23A	Lovelace Mesa,	24.12	327	⇑P	P	03 27 32.8	+1.0
	baz=24,SNR=6.2						
MTP	Monte Pirata	24.19	78	*e*P	P	03 27 33.2	+0.8
	comp=Z,14nm,0.7s						
319A	Douglas	24.22	318	⇓P	P	03 27 33.8	+1.1
	baz=24						
W25A	X Bar L Ranch,	24.34	331	⇑P	P	03 27 33.9	+0.1
	baz=24,SNR=5.9						
ATAH	Atahualpa	24.43	150	P	P	03 27 39.6	+4.6
ATAH	Atahualpa	24.43	150	P	P	03 27 39.6	+4.6
	comp=Z,5.2nm,0.7s,baz=29,slow=20,SNR=3.7						
ATAH				LR	LR	03 36 20.6	
	comp=Z,555nm,19.3s,baz=337,slow=34						
V26A	Tequesquite Ra	24.52	333	⇓P	P	03 27 36.7	+1.3
	baz=25						
Z21A	St. Cloud Mine	24.55	323	⇓P	P	03 27 37.2	+1.4
	baz=25						
120A	U Bar Ranch, L	24.59	321	⇑P	P	03 27 37.0	+0.9
	baz=25						
BNM	Barren Site	24.59	326	*e*P	P	03 27 38.1	+1.9
	comp=Z,20nm,1.4s						
Y22A	Socorro	24.61	325	⇑P	P	03 27 37.4	+1.1
	baz=25						
LPM	Los Pinos Moun	24.71	327	*e*P	P	03 27 39.4	+2.2
LENM	Lemitar	24.79	326	*e*P	P	03 27 39.4	+1.5
	comp=Z,13nm,1.2s						
W24A	Lazy 6 Ranch,	24.79	330	⇓P	P	03 27 38.9	+0.9
	baz=25						
V25A	Rancho No Teng	24.93	332	⇑P	P	03 27 39.7	+0.5
	baz=25						
Z20A	Nine Sixteen R	24.95	322	⇑P	P	03 27 41.0	+1.6
	baz=25						
BLO	Bloomington	25.01	7	*e*P	P	03 27 38.7	-0.8
	comp=Z,29nm,1.1s						
LAZ	Ladron	25.06	326	*e*P	P	03 27 43.3	+2.9
	comp=Z,14nm,1.5s						
Y21A	Point of Rocks	25.06	324	⇓P	P	03 27 41.7	+1.3
	baz=25						
ANMO	Albuquerque	25.11	328	*e*P	P	03 27 42.0	+1.2
	comp=Z,22nm,1.7s						
V24A	Rampart Ranch,	25.14	331	⇓P	P	03 27 42.3	+1.2
	baz=25						
Y20A	Horse Springs,	25.39	323	⇓P	P	03 27 44.3	+0.9
	baz=26						
X21A	Alamocita Cree	25.45	325	⇑P	P	03 27 45.3	+1.4
	baz=26						
TUC	Tucson	25.80	317	*e*P	P	03 27 46.8	-0.2
	comp=Z,24nm,1.6s						
X20A	Quemado	25.91	324	⇑P	P	03 27 49.7	+1.5
	baz=26						
V21A	Milan	26.39	327	⇑P	P	03 27 53.6	+1.2
	baz=26						
ACSO	Alum Creek Sta	26.64	13	*e*P	P	03 27 54.7	+0.3
	comp=Z,14nm,1.0s						
MVCO	Mesa Verde	27.91	328	*e*P	P	03 28 09.6	+3.5
	comp=Z,18nm,1.3s						
WUAZ	Wupatki	28.27	322	*e*P	P	03 28 11.2	+1.9
	comp=Z,34nm,1.7s						
PDAR	Pinedale Array	32.79	334	P	P	03 28 50.0	+0.8
PDAR	Pinedale Array	32.79	334	P	P	03 28 50.0	+0.8
	comp=Z,0.4nm,0.7s,baz=137,slow=9.3,SNR=3.6						
PDAR				LR	LR	03 45 31.1	
	comp=Z,214nm,19.0s,baz=17,slow=43						
SNOW	Snow King Moun	33.87	333	*e*P	P	03 28 57.9	-0.8
	comp=Z,8.4nm,0.7s						
LOHW	Long Hollow	33.92	333	*e*P	P	03 29 00.7	+1.6
	comp=Z,4.2nm,1.1s						
TPAW	Teton Pass	33.98	333	*e*P	P	03 29 00.7	+1.1
	comp=Z,22nm,1.6s						
MOOW	Moose Ponds	34.09	333	*e*P	P	03 29 01.8	+1.3
	comp=Z,1.3nm,0.9s						
NVAR	Mina Array Bea	34.40	319	P	P	03 29 03.6	+0.4
NVAR	Mina Array Bea	34.40	319	P	P	03 29 03.6	+0.4
	comp=Z,1.1nm,0.8s,baz=130,slow=7.7,SNR=9.9						
NVAR				LR	LR	03 44 53.7	
	comp=Z,548nm,19.5s,baz=36,slow=40						
SAML	Samuel	35.57	129	*e*P	P	03 29 09.8	-3.6
	comp=Z,2.9nm,0.8s						
HLID	Hailey	35.65	330	*e*P	P	03 29 16.3	+2.3
	comp=Z,4.1nm,1.3s						
MCMT	McKenzie Canyo	35.87	332	*e*P	P	03 29 15.7	-0.2
	comp=Z,1.7nm,0.8s						
DGMT	Dagmar	35.91	344	*e*P	P	03 29 14.7	-1.2
	comp=Z,15nm,1.0s						
BOZ	Bozeman (W)	35.99	334	*e*P	P	03 29 18.7	+1.8
ULM	Lac du Bonnet	36.12	354	P	P	03 29 16.1	-1.5
ULM	Lac du Bonnet	36.12	354	P	P	03 29 16.1	-1.5
	comp=Z,1.7nm,0.4s,baz=238,slow=4.4,SNR=3.9						
ULM				LR	LR	03 46 41.5	
	comp=Z,300nm,19.0s,baz=68,slow=41						
LPAZ	La Paz	37.56	143	*e*P	P	03 29 29.8	-1.1
	comp=Z,1.5nm,0.7s						
LPAZ	La Paz	37.56	143	P	P	03 29 30.3	-0.7
	comp=Z,1.6nm,0.7s,baz=321,slow=10,SNR=8.3						
LPAZ				LR	LR	03 45 33.7	
	comp=Z,394nm,20.2s,baz=268,slow=37						
FFC	Flin Flon	41.32	350	*e*P	P	03 30 00.3	-1.0
	comp=Z,10nm,1.3s						
SIV	San Ignacio	41.82	135	P	P	03 30 03.9	-2.0
SIV				PcP	PcP	03 32 01.6	-0.5
SIV	San Ignacio	41.82	135	P	P	03 30 03.9	-2.0
	comp=Z,2.0nm,1.0s,baz=307,slow=10,SNR=5.3						
SIV				PcP	PcP	03 32 01.6	-0.5
	comp=Z,1.3nm,0.7s,baz=270,slow=4.2,SNR=5.1						
SCHQ	Schefferville	44.42	19	*e*P	P	03 30 26.4	-0.1
	comp=Z,16nm,1.0s						
SCHQ	Schefferville	44.42	19	P	P	03 30 26.2	-0.2
	comp=Z,12nm,0.9s,baz=228,slow=6.4,SNR=8.1						
SCHQ				LR	LR	03 48 31.6	
	comp=Z,421nm,18.7s,baz=194,slow=36						
BBB	Bella Bella	48.24	330	LR	LR	03 55 26.5	
	comp=Z,199nm,19.2s,baz=137,slow=41						
YKA	Yellowknife Ar	51.08	346	P	P	03 31 16.4	-1.5
YKA	Yellowknife Ar	51.08	346	P	P	03 31 16.4	-1.5
	comp=Z,9.6nm,1.1s,baz=147,slow=7.1,SNR=48						
YKW3	Yellowknife Ar	51.14	346	*e*P	P	03 31 17.0	-1.4
BDFB	Brasilia	51.43	124	LR	LR	03 56 02.4	
	comp=Z,306nm,18.4s,baz=116,slow=39						
CPUP	Villa Florida	51.66	141	LR	LR	03 54 18.9	
	comp=Z,165nm,20.8s,baz=146,slow=37						
FRB	Frobisher Bay	51.69	12	P	P	03 31 23.5	+1.0
FRB	Frobisher Bay	51.69	12	P	P	03 31 23.5	+1.0
	comp=Z,4.7nm,0.8s,baz=219,slow=7.8,SNR=18						
FRB				LR	LR	03 53 15.4	
	comp=Z,388nm,18.2s,baz=212,slow=36						
RKT	Rikitea	57.29	230	*e*T	T	04 32 39.4	
	comp=Z,2.1nm,0.2s						
RCBR	Riachuelo	57.68	106	*e*P	P	03 32 03.2	-3.7
	comp=Z,13nm,1.2s						
PLCA	Paso Flores	57.79	162	LR	LR	03 50 54.0	
	comp=Z,176nm,18.7s,baz=120,slow=30						
RES	Resolute Bay	60.42	359	P	P	03 32 23.4	-1.4
RES	Resolute Bay	60.42	359	P	P	03 32 23.4	-1.4
	comp=Z,2.6nm,0.7s,baz=182,slow=8.8,SNR=15						
RES				LR	LR	04 03 03.5	
	comp=Z,199nm,18.1s,baz=183,slow=41						
INK	Inuvik	60.58	343	P	P	03 32 24.3	-1.6
INK	Inuvik	60.58	343	P	P	03 32 24.3	-1.6
	comp=Z,6.1nm,1.1s,baz=142,slow=9.7,SNR=12						
INK				LR	LR	04 04 48.4	
	comp=Z,393nm,18.3s,baz=324,slow=42						
ILAR	Eielson Array	63.16	336	P	P	03 32 41.1	-2.3
ILAR	Eielson Array	63.16	336	P	P	03 32 41.1	-2.3
	comp=Z,0.4nm,0.9s,baz=224,slow=6.0,SNR=4.9						
ILAR				LR	LR	04 02 27.8	
	comp=Z,203nm,19.4s,baz=150,slow=38						
KDAK	Kodiak Island	63.25	328	LR	LR	03 58 18.2	
	comp=Z,208nm,21.2s,baz=131,slow=34						
SUMG	Summit	65.54	15	*i* P	P	03 33 01.4	+2.0
	comp=Z,7.8nm,0.9s						
PPT	Papeete	66.37	243	LR	LR	03 53 24.9	
	comp=Z,245nm,20.9s,baz=14,slow=28						
PPT2	Papeete2	66.38	243	*e*LR	LR	03 52 29.5	
	comp=Z,243nm,29.5s,baz=68						
TBI	Tubuai	68.78	238	*e*LR	LR	03 53 40.5	
	comp=Z,186nm,30.5s						
EVO	Evora	75.38	53	*e*P	P	03 33 50.7	-9.0
	comp=Z,20nm,1.3s						
EKA	Eskdalemuir Ar	76.83	36	P	P	03 34 07.6	0.0
EKA	Eskdalemuir Ar	76.83	36	P	P	03 34 07.6	0.0
	comp=Z,5.2nm,1.0s,baz=280,slow=5.0,SNR=5.7						
ROSF	Rostrenen	77.59	43	*e*P	P	03 34 03.5	-8.6
ESDC	Sonseca Array	78.34	52	P	P	03 34 16.4	-0.1
ESDC	Sonseca Array	78.34	52	P	P	03 34 16.4	-0.1
	comp=Z,1.8nm,0.8s,baz=286,slow=5.8,SNR=18						
FLN	La Foliniere	79.36	42	*e*P	P	03 34 13.6	-8.2
	comp=Z,34nm,1.4s						
SPITS	Spitsbergen Ar	79.48	12	P	P	03 34 24.0	+2.0
SPITS	Spitsbergen Ar	79.48	12	P	P	03 34 24.0	+2.0
	comp=Z,4.7nm,1.0s,baz=195,slow=6.0,SNR=3.2						
LDF	La Druitiere	79.63	42	*e*P	P	03 34 14.8	-8.5
TCF	Toulx Ste Croi	81.62	44	*e*P	P	03 34 25.7	-8.4
	comp=Z,20nm,1.4s						
MTLF	Montolieu	82.24	47	*e*P	P	03 34 27.7	-10
	comp=Z,20nm,1.5s						
SSF	Saint Saulge	82.33	43	*e*P	P	03 34 28.3	-9.4
LOR	Lormes	82.51	43	*e*P	P	03 34 30.0	-8.7
NB2	NORSAR Subarra	83.15	29	P	P	03 34 39.9	-1.9
	comp=Z,5.7nm,1.2s,baz=288,slow=5.1						
NOA	NORSAR Array B	83.15	29	P	P	03 34 42.6	+0.8
NOA	NORSAR Array B	83.15	29	P	P	03 34 42.6	+0.8
	comp=Z,1.6nm,0.9s,baz=287,slow=5.0,SNR=3.9						
NOA				LR	LR	04 08 44.9	
	comp=Z,82nm,21.2s,baz=0.0,slow=34						
DBIC	Dimbokro	84.12	85	LR	LR	04 10 06.7	
	comp=Z,116nm,19.4s,baz=267,slow=34						
CABF	La Chapelle	84.15	44	*e*P	P	03 34 38.0	-9.3
CDF	Champ du Feu	84.47	42	*e*P	P	03 34 40.5	-8.4
HFS	Hagfors	84.60	29	P	P	03 34 50.4	+1.3
HFS	Hagfors	84.60	29	P	P	03 34 50.4	+1.3
	comp=Z,3.3nm,0.9s,baz=339,slow=3.3,SNR=4.0						
ARCES	ARCESS Array B	85.37	18	LR	LR	04 09 56.0	
	comp=Z,152nm,21.9s,baz=149,slow=34						
CLL	Collm	87.15	38	*e*(P)	P	03 35 03.0	+1.0
CLL				*i* pP	PcP	03 35 04.6	+0.5
	comp=Z,4.0nm,0.8s						
BRG	Berggiesshubel	87.86	38	*e*P	P	03 35 07.7	+2.3
	comp=Z,3.5nm,1.1s						
GERES	GERESS Array B	88.40	40	P	P	03 35 10.0	+1.8
GERES	GERESS Array B	88.40	40	P	P	03 35 10.0	+1.8
	comp=Z,1.5nm,0.9s,baz=291,slow=3.7,SNR=12						
GERES				LR	LR	04 17 04.9	
	comp=Z,111nm,18.1s,baz=95,slow=37						
TORD	Torodi Ar. Bea	88.84	77	P	P	03 35 11.1	+0.4
TORD	Torodi Ar. Bea	88.84	77	P	P	03 35 11.1	+0.4
	comp=Z,0.2nm,1.1s,baz=62,slow=31,SNR=2.5						
TORD				LR	LR	04 11 46.7	
	comp=Z,121nm,19.2s,baz=275,slow=33						
FINES	FINESS Array B	89.58	25	P	P	03 35 15.1	+1.9
FINES	FINESS Array B	89.58	25	P	P	03 35 15.1	+1.9
	comp=Z,1.6nm,0.9s,baz=312,slow=6.7,SNR=4.5						
FINES				LR	LR	04 16 30.9	
	comp=Z,101nm,20.9s,baz=147,slow=36						
AKASG	Malin Array Be	96.64	34	LR	LR	04 21 37.1	
	comp=Z,118nm,20.8s,baz=270,slow=37						
BJI	Beijing	120.53	336	PKP	PKPdf	03 41 07.3	-0.6
BJI				SS	SS	03 59 01.6	-1.5
BJI				LR	LR		
	comp=N,140nm,26.9s						
BJI				LR	LR		
	comp=E,140nm,27.1s						
BJI				LR	LR		
	comp=Z,110nm,27.2s						
HHC	Hu-ho-hao-te	121.45	341	*e*PKP	PKPdf	03 41 07.2	-2.7
HHC				PP	PP	03 42 41.3	+1.3
HHC				PKS	PKSdf	03 44 43.2	-3.5
HHC				SKS	SKSdf	03 48 17.4	-5.9
HHC				SKKS	SKKSac	03 49 33.9	-8.2
HHC				SS	SS	03 59 12.8	-2.2
HHC				AMB	AMB		
	comp=Z,120nm,9.4s						
HHC				LR	LR		
	comp=N,260nm,20.7s						
HHC				LR	LR		
	comp=E,340nm,20.3s						
HHC				LR	LR		
	comp=Z,190nm,21.3s						
WMQ	Urumqi	122.13	2	PKP	PKPdf	03 41 09.8	-1.3
KSH	Kashi	124.97	13	*e*PKP	PKPdf	03 41 18.0	+1.3
KSH				PP	PP	03 43 11.1	+7.4
KSH				PKS	PKSdf	03 44 53.4	-0.1
KSH				SKS	SKSdf	03 48 29.3	-0.8
KSH				SKKS	SKKSac	03 50 02.7	-2.2
KSH				SS	SS	04 00 05.7	+6.2
KSH				LR	LR		
	comp=Z,160nm,6.2s						
GTA	Gaotai	125.71	350	*e*PKP	PKPdf	03 41 12.1	-6.0
LZH	Lanzhou	128.09	345	*e*PKP	PKPdf	03 41 23.5	+0.7
LZH				sPKP		03 41 28.1	
LZH				LR	LR		
	comp=N,110nm,17.9s						
LZH				LR	LR		
	comp=E,120nm,18.1s						
LZH				LR	LR		
	comp=Z,160nm,20.0s						
GYA	Guiyang	136.19	338	*e*Pdif	Pdif	03 38 41.0	-1.8
GYA				PKP	PKPdf	03 41 37.4	-0.9
GYA				AMB	AMB		
	comp=Z,80nm,7.9s						
WRA	Warramunga Arr	136.93	256	PKP	PKPdf	03 41 38.5	-1.2
WRA	Warramunga Arr	136.93	256	PKP	PKPdf	03 41 38.5	-1.2
	comp=Z,1.3nm,0.8s,baz=94,slow=1.1,SNR=3.1						
ASAR	Alice Springs	137.19	251	PKP	PKPdf	03 41 39.5	-0.5
ASAR	Alice Springs	137.19	251	PKP	PKPdf	03 41 39.5	-0.5
	comp=Z,0.7nm,0.9s,baz=142,slow=3.2,SNR=3.5						
KMI	Kunming	138.75	342	PKP	PKPdf	03 41 44.4	+1.2
KMI				LR	LR		
	comp=N,120nm,29.4s						
KMI				LR	LR		
	comp=E,100nm,23.9s						
KMI				LR	LR		
	comp=Z,110nm,23.0s						
FITZ	Fitzroy Crossi	145.18	259	*e*PKPbc	PKPdf	03 41 55.2	+0.8
FITZ	Fitzroy Crossi	145.18	259	PKPbc	PKPbc	03 41 52.7	-1.3
	comp=Z,3.0nm,0.8s,baz=235,slow=3.7,SNR=5.8						
MBWA	Marble Bar	150.49	252	*e*PKPbc	PKPbc	03 42 09.9	+1.4

IDC 05 03:31:46.3±0.8**, 18°.98N**×**145°.54E, h226**km±8km**, mb3.6**/10**, mb1 3.8**/13**, mb1mx3.5**/27**, mbtmp3.6**/13**, Error ellipse: s-maj=20.6km s-min=8.6km az=90.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.40	187	P	Pn	03 33 07.2	+0.7
	8.1nm,0.3s,baz=50,slow=23,SNR=4.5						
GUMO				S	S	03 34 10.7	+0.7
	20nm,0.3s,baz=172,slow=22,SNR=3.9						
CBIJ	Chichi jima	8.65	340	P	Pn	03 33 45.9	-1.8
	12nm,0.3s,baz=306,slow=23,SNR=6.1						
CBIJ				S	S	03 35 21.0	-4.4
	14nm,0.3s,baz=289,slow=23,SNR=6.4						
MJAR	Matsushiro Arr	18.64	341	P	P	03 35 46.5	-0.9
	0.3nm,0.3s,baz=174,slow=11,SNR=12						
MAT	Matsushiro	18.65	341	P	P	03 35 46.5	-0.9
KSRS	Korea Array	24.00	324	P	P	03 36 42.0	+1.5
	0.3nm,0.2s,baz=155,slow=8.4,SNR=4.3						
KSRS				pP	pP	03 37 23.8	+1.6
	1.8nm,0.8s,baz=147,slow=8.8,SNR=4.3						
PMG	Port Moresby	28.25	177	P	P	03 37 24.0	+5.2
	8.3nm,0.5s,baz=7.1,slow=9.5,SNR=7.5						
CTA	Charters Tower	38.83	179	P	P	03 38 49.4	-0.4
	2.0nm,0.6s,baz=54,slow=4.9,SNR=3.6						
WRA	Warramunga Arr	40.21	196	P	P	03 39 01.1	0.0
	7.5nm,0.6s,baz=6.8,slow=8.9,SNR=55						
FITZ	Fitzroy Crossi	41.72	209	P	P	03 39 12.7	-0.7
	7.3nm,0.8s,baz=26,slow=7.6,SNR=25						
SONM	Songino Array	42.83	321	pP	pP	03 40 11.6	+1.7
	0.9nm,0.8s,baz=128,slow=6.5,SNR=3.9						
ASAR	Alice Springs	43.88	195	P	P	03 39 30.2	-0.6
	2.8nm,0.6s,baz=17,slow=8.0,SNR=72						
DZM	Mont Dzumac	45.64	152	P	P	03 39 44.9	+0.2
	9.7nm,0.9s,baz=307,slow=17,SNR=6.9						
STKA	Stephens Creek	50.71	184	P	P	03 40 22.1	-1.0
	1.0nm,0.5s,baz=352,slow=16,SNR=2.9						
MKAR	Makanchi Array	58.16	314	P	P	03 41 17.9	+1.2
	0.1nm,0.4s,baz=99,slow=7.6,SNR=4.4						
MKAR				pP	pP	03 42 07.9	+0.6
	0.2nm,0.6s,baz=170,slow=8.6,SNR=2.8						
ILAR	Eielson Array	63.46	26	P	P	03 41 51.2	-0.7
	0.6nm,0.8s,baz=255,slow=5.8,SNR=5.5						
YKA	Yellowknife Ar	77.81	28	P	P	03 43 18.1	-0.3
	0.2nm,0.7s,baz=289,slow=5.3,SNR=4.7						
YKA				pP	pP	03 44 11.8	-0.2
	0.5nm,0.7s,baz=288,slow=5.8,SNR=5.0						
NVAR	Mina Array Bea	83.08	52	P	P	03 43 48.3	+1.1
	1.1nm,0.8s,baz=262,slow=6.3,SNR=8.6						
FINES	FINESS Array B	86.57	335	P	P	03 44 01.3	-2.5
	0.6nm,0.5s,baz=52,slow=7.1,SNR=7.1						
FINES				pP	pP	03 44 55.9	-2.6
	1.1nm,0.7s,baz=56,slow=5.1,SNR=1.8						
LPAZ	La Paz	147.83	91	PKPbc	PKPbc	03 51 05.9	-0.3
	1.0nm,0.6s,baz=184,slow=5.5,SNR=4.3						

*IDC **05** 04:27:47.8±0.8, 34°.55N×23°.41E, h0km, mb4.0/16, mb1 4.0/25, mb1mx3.9/39, mbtmp3.9/25, ML4.2/6, MS2.4/1, Ms1 2.4/1, ms1mx2.1/47, Error ellipse: s-maj=17.0km s-min=13.0km az=170.0*

*ISCJB **05** 04:27:49.0±0.6, 34°.39N±0°.02×23°.43E±0°.02, h26km±5km, mb4.0/30, Error ellipse: s-maj=3.7km s-min=2.4km az=139.8*

*CSEM **05** 04:27:50.6±0.1, 34°.44N×23°.40E, h20km, mb4.2/21, Ms2.6, Mw4.2, Error ellipse: s-maj=3.8km s-min=2.5km az=47.0*

*ATH **05** 04:27:50.9, 34°.52N×23°.29E, h28km±1km, MD3.8/16*

*MOS **05** 04:27:51.2±0.9, 34°.58N×23°.48E, h33km, mb4.3/24, Error ellipse: s-maj=7.0km s-min=3.9km az=112.8*

*NEIC **05** 04:27:52.4±1.6, 34°.47N×23°.44E, h32km±12km, mb4.2/30, Error ellipse: s-maj=7.5km s-min=3.7km az=190.0*

*THE **05** 04:27:53.7, 34°.62N×23°.38E, h13km±3km, ML4.0/3, Error ellipse: s-maj=3.9km s-min=1.1km az=171.0*

*HLW **05** 04:27:54.0, 34°.45N×23°.85E, h33km±49km, Md4.5, Ml3.8*

ISC 05 04:27:51.3±0.8**, 34°.41N**±0°.03×**23°.44E**±0°.04**, h26**km±6km**, h26**km**:pP-P, n551,** σ1s**.12**/572**, mb4.1**/30**, 12C-13D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	0.69	51	P	Pb	04 28 05.2	+0.5
GVD				S	Sn	04 28 14.6	-0.5
GVD	Gavdhos	0.69	51	*e*Pn	Pb	04 28 05.0	+0.4
GVD	Gavdhos	0.69	51	*e*PN	Pb	04 28 05.2	+0.5
GVD	Gavdhos	0.69	51	P	Pb	04 28 05.2	+0.5
GVD				S	Sn	04 28 14.6	-0.5
KARN	Karanos	1.07	21	P	Pb	04 28 11.0	-0.2
KARN				S	Sb	04 28 24.5	-0.2
KARN	Karanos	1.07	21	*e*PN	Pb	04 28 10.9	-0.2
KARN	Karanos	1.07	21	*e*Pn	Pb	04 28 10.9	-0.2
KARN				S	Sb	04 28 24.5	-0.2
VAM	Vamos	1.18	32	P	Pb	04 28 12.8	-0.2
VAM				S	Sb	04 28 27.4	-0.4
VAM	Vamos	1.18	32	P	Pb	04 28 12.8	-0.2
VAM				S	Sb	04 28 27.4	-0.4

SIVA	Sivas	1.28	61	P	Pb	04 28 15.5	+0.8
SIVA	Sivas	1.28	61	ePN	Pb	04 28 15.5	+0.8
SIVA	Sivas	1.28	61	P	Pb	04 28 15.5	+0.8
IDI	Anoyia	1.48	53	P	Pb	04 28 18.1	-0.1
IDI	Anoyia	1.48	53	ePn	Pb	04 28 18.2	-0.1
IDI	Anoyia	1.48	53	ePN	Pb	04 28 18.1	-0.1
IDI	Anoyia	1.48	53	P	Pb	04 28 18.1	-0.1
LAST	Lasithi	1.84	65	P	Pb	04 28 23.9	-0.4
LAST	Lasithi	1.84	65	ePB	Pb	04 28 23.9	-0.4
LAST	Lasithi	1.84	65	ePb	Pb	04 28 23.9	-0.4
KYTH	Kithira	1.90	350	P	Pn	04 28 22.6	+0.5
KYTH	Kithira	1.90	350	P	Pn	04 28 22.6	+0.5
NPS	Neapolis	1.98	64	P	Pb	04 28 25.7	-0.9
NPS	Neapolis	1.98	64	P	Pb	04 28 25.7	-0.9
VLI	Veliai	2.34	350	P	Pn	04 28 29.5	+1.4
VLI				S	Sn	04 28 53.8	-2.3
VLI	Veliai	2.34	350	ePB	Pn	04 28 28.7	+0.6
VLI	Veliai	2.34	350	ePb	Pn	04 28 28.7	+0.6
VLI	Veliai	2.34	350	P	Pn	04 28 29.5	+1.4
VLI				S	Sn	04 28 53.8	-2.3
LTBQ	Tobruq	2.38	170	iP	Pb	04 28 32.7	-0.7
	SNR=46						
ZKR	Zakros	2.39	72	P	Pb	04 28 31.8	-1.9
ZKR	Zakros	2.39	72	ePN	Pb	04 28 31.9	-1.8
ZKR	Zakros	2.39	72	ePn	Pb	04 28 31.9	-1.8
DYR	Agios Nikonas	2.52	339	P	Pn	04 28 31.1	+0.5
DYR	Agios Nikonas	2.52	339	ePB	Pn	04 28 31.9	+1.3
DYR	Agios Nikonas	2.52	339	P	Pn	04 28 31.1	+0.5
DYR	Agios Nikonas	2.52	339	ePb	Pn	04 28 31.9	+1.3
PYL	PYLOS	2.84	331	P	Pn	04 28 34.2	-0.8
PYL	PYLOS	2.84	331	ePN	Pn	04 28 34.2	-0.8
PYL	PYLOS	2.84	331	P	Pn	04 28 34.2	-0.8
ITM	Ithomi	3.03	336	P	Pn	04 28 37.5	-0.1
ITM	Ithomi	3.03	336	ePN	Pn	04 28 37.8	+0.2
ITM	Ithomi	3.03	336	P	Pn	04 28 37.5	-0.1
ITM	Ithomi	3.03	336	ePn	Pn	04 28 37.8	+0.2
VLX	Vlachokerasia	3.08	344	P	Pn	04 28 39.7	+1.3
VLX	Vlachokerasia	3.08	344	P	Pn	04 28 39.7	+1.3
DID	Didima	3.10	357	P	Pn	04 28 38.3	-0.3
DID	Didima	3.10	357	ePN	Pn	04 28 38.3	-0.3
DID				eSN	Sn	04 29 13.2	-1.6
DID	Didima	3.10	357	P	Pn	04 28 38.3	-0.3
DID				eSn	Sn	04 29 13.2	-1.6
APE	Apeiranthos	3.15	32	ePN	Pn	04 28 38.5	-0.8
APE	Apeiranthos	3.15	32	P	Pn	04 28 39.7	+0.4
APE				S	Sn	04 29 15.6	-0.5
APE	Apeiranthos	3.15	32	⇓P	Pn	04 28 36.2	-3.1
APE	Apeiranthos	3.15	32	⇓iP	Pn	04 28 36.2	-3.1
APE	Apeiranthos	3.15	32	P	Pn	04 28 39.7	+0.4
APE				S	Sn	04 29 15.6	-0.5
AMT	Artemida-Makis	3.42	336	P	Pn	04 28 43.8	+0.8
AMT				S	Sn	04 29 22.5	-0.2
AMT	Artemida-Makis	3.42	336	P	Pn	04 28 43.8	+0.8
AMT				S	Sn	04 29 22.5	-0.2
LTK	Loutraki	3.63	354	P	Pn	04 28 46.0	+0.2
LTK	Loutraki	3.63	354	ePN	Pn	04 28 46.0	+0.2
LTK	Loutraki	3.63	354	P	Pn	04 28 46.0	+0.2
GUR	Goura	3.63	346	P	Pn	04 28 46.8	+0.8
GUR				S	Sn	04 29 26.7	-1.4
GUR	Goura	3.63	346	ePN	Pn	04 28 46.8	+0.8
GUR				eSN	Sn	04 29 26.3	-1.8
GUR	Goura	3.63	346	P	Pn	04 28 46.8	+0.8
GUR				eSn	Sn	04 29 26.3	-1.8
GUR				S	Sn	04 29 26.7	-1.4
PTL	Penteli	3.65	5	P	Pn	04 28 45.7	-0.5
PTL	Penteli	3.65	5	ePN	Pn	04 28 45.6	-0.6
PTL	Penteli	3.65	5	P	Pn	04 28 45.7	-0.5
RLS	Riolos of Patr	3.98	337	P	Pn	04 28 50.8	+0.2
RLS				S	Sn	04 29 34.8	-1.6
RLS	Riolos of Patr	3.98	337	ePN	Pn	04 28 51.6	+1.0
RLS	Riolos of Patr	3.98	337	P	Pn	04 28 50.8	+0.2
RLS	Riolos of Patr	3.98	337	ePn	Pn	04 28 51.6	+1.0
RLS				S	Sn	04 29 34.8	-1.6
LAKA	Lakka	4.01	343	P	Pn	04 28 50.7	-0.3
LAKA	Lakka	4.01	343	ePN	Pn	04 28 51.0	0.0
LAKA	Lakka	4.01	343	P	Pn	04 28 50.7	-0.3
LAKA	Lakka	4.01	343	ePn	Pn	04 28 51.0	0.0
DSF	Desfina	4.07	350	P	Pn	04 28 51.5	-0.4
DSF	Desfina	4.07	350	P	Pn	04 28 51.5	-0.4
DAT	Datca	4.09	54	ePN	Pn	04 28 53.6	+1.4
TRIZ	Trizonia	4.10	345	P	Pn	04 28 52.1	-0.2
TRIZ	Trizonia	4.10	345	ePN	Pn	04 28 51.9	-0.4
TRIZ	Trizonia	4.10	345	ePn	Pn	04 28 51.9	-0.4
BODT	Bodrum	4.11	49	ePN	Pn	04 28 53.4	+0.9
KALE	Kalithea	4.12	346	P	Pn	04 28 52.1	-0.4
KALE	Kalithea	4.12	346	ePN	Pn	04 28 51.7	-0.8
KALE	Kalithea	4.12	346	ePn	Pn	04 28 51.7	-0.8
KALE	Kalithea	4.12	346	P	Pn	04 28 52.1	-0.4
EFP	Efpalio	4.20	343	P	Pn	04 28 54.0	+0.4
EFP	Efpalio	4.20	343	ePN	Pn	04 28 53.5	-0.1
EFP	Efpalio	4.20	343	ePn	Pn	04 28 53.5	-0.1
EFP	Efpalio	4.20	343	P	Pn	04 28 54.0	+0.4
LKR	Lokris	4.25	355	P	Pn	04 28 54.1	-0.3
LKR	Lokris	4.25	355	ePN	Pn	04 28 54.0	-0.3
LKR	Lokris	4.25	355	ePn	Pn	04 28 54.0	-0.3
MRKA	Markates	4.29	2	P	Pn	04 28 54.6	-0.4
MRKA	Markates	4.29	2	P	Pn	04 28 54.6	-0.4
AXAR	Agios Charalam	4.40	352	P	Pn	04 28 57.0	+0.6
AXAR				S	Sn	04 29 45.0	-1.8
AXAR	Agios Charalam	4.40	352	P	Pn	04 28 57.0	+0.6
AXAR				S	Sn	04 29 45.0	-1.8
VLS	Valsamata	4.41	329	P	Pn	04 28 55.2	-1.4
VLS				S	Sn	04 29 43.1	-4.0
VLS	Valsamata	4.41	329	P	Pn	04 28 55.2	-1.4
LJBD	Adjabya	4.43	219	iP	Pn	04 28 58.8	+2.0
	SNR=45						
HMAT	Matruh	4.51	136	P	Pn	04 28 58.2	+0.2
	baz=139						
HMAT				S	Sn	04 29 46.4	-3.2
	baz=139						
HMAT	Matruh	4.51	136	P	Pn	04 28 58.2	+0.2
HMAT				S	Sn	04 29 46.4	-3.2
MLSB	Milas	4.55	49	ePN	Pn	04 28 59.8	+1.3
EVR	Evrytania	4.69	344	P	Pn	04 29 02.2	+1.7
EVR	Evrytania	4.69	344	P	Pn	04 29 02.2	+1.7
AGG	Agios Georgios	4.69	349	P	Pn	04 29 00.1	-0.4
AGG				S	Sn	04 29 54.5	+0.4
AGG	Agios Georgios	4.69	349	P	Pn	04 29 00.1	-0.4
AGG				S	Sn	04 29 54.5	+0.4
MAKR	Makrakomi, Fth	4.72	347	P	Pn	04 29 01.3	+0.5
MAKR	Makrakomi, Fth	4.72	347	P	Pn	04 29 01.3	+0.5
AOS	Alonnisos	4.77	4	P	Pn	04 29 00.8	-0.7
AOS	Alonnisos	4.77	4	P	Pn	04 29 00.8	-0.7
YER	Yerkesik	4.79	54	ePN	Pn	04 29 03.2	+1.5
LKD2	Lefkada island	4.92	334	P	Pn	04 29 02.9	-0.6
LKD2	Lefkada island	4.92	334	ePN	Pn	04 29 02.8	-0.7
LKD2	Lefkada island	4.92	334	P	Pn	04 29 02.9	-0.6
XOR	Xorichti	4.96	358	P	Pn	04 29 03.4	-0.7
XOR	Xorichti	4.96	358	P	Pn	04 29 03.4	-0.7
FETY	Fethiye	5.11	63	ePN	Pn	04 29 07.8	+1.6
THL	Klokotos Trika	5.28	348	P	Pn	04 29 07.8	-0.6
THL	Klokotos Trika	5.28	348	P	Pn	04 29 07.8	-0.6
SWA2		5.42	161	P	Pn	04 29 12.8	+2.4
	baz=164						
SWA2				AMP		04 30 00.0	
	comp=E,330µm,0.4s,logA/T=5.9,baz=164						
SWA2				S	Sn	04 30 11.5	-0.5
	baz=164						
SWA2		5.42	161	P	Pn	04 29 12.8	+2.4
SWA2				S	Sn	04 30 11.5	-0.5
JAN	Janina	5.64	339	P	Pn	04 29 13.1	-0.3
JAN	Janina	5.64	339	P	Pn	04 29 13.1	-0.3
IGT	Igoumenitsa	5.69	335	P	Pn	04 29 12.3	-1.8
IGT	Igoumenitsa	5.69	335	P	Pn	04 29 12.3	-1.8
LIT	Litokhoron	5.74	353	P	Pn	04 29 14.3	-0.5
LIT	Litokhoron	5.74	353	ePN	Pn	04 29 14.3	-0.5
LIT	Litokhoron	5.74	353	P	Pn	04 29 14.3	-0.5
ELL	Elmali	5.76	64	ePN	Pn	04 29 16.8	+1.5
KULA	Kula-Manisa	5.87	44	ePN	Pn	04 29 17.6	+0.9
PLG	Polygyros	5.96	0	P	Pn	04 29 18.1	+0.3
PLG	Polygyros	5.96	0	P	Pn	04 29 18.1	+0.3
KEK	Kerkira	6.05	332	P	Pn	04 29 18.0	-1.0
KEK	Kerkira	6.05	332	P	Pn	04 29 18.0	-1.0
ANTB	Antalya	6.38	65	ePN	Pn	04 29 24.0	+0.5
BCK	Bucak	6.55	60	ePN	Pn	04 29 26.9	+0.9
FNA	Florina	6.58	346	P	Pn	04 29 26.0	-0.3
FNA	Florina	6.58	346	P	Pn	04 29 26.0	-0.3
HBRG	Burj al ‘Arab	6.62	124	P	Pn	04 29 25.6	-1.3
	baz=125						
ISP	Isparta	6.67	57	eP	Pn	04 29 25.8	-1.8
ISP	Isparta	6.67	57	ePn	Pn	04 29 25.8	-1.8
ISP	Isparta	6.67	57	eP	Pn	04 29 25.8	-1.8
SRS	Serrai	6.70	1	P	Pn	04 29 27.4	-0.6
SRS	Serrai	6.70	1	P	Pn	04 29 27.4	-0.6
KNT	Kendrikon	6.76	357	P	Pn	04 29 28.6	-0.2
KNT	Kendrikon	6.76	357	P	Pn	04 29 28.6	-0.2
TVSB	Tavsanli	6.97	42	ePN	Pn	04 29 32.2	+0.5
SHUT	Suhut-Afyon	7.06	52	ePN	Pn	04 29 33.3	+0.2
ALT	Altintas	7.08	47	ePN	Pn	04 29 33.3	0.0
TIP	Timpagrande	7.17	314	ePn	Pn	04 29 32.6	-2.0
TIP	Timpagrande	7.17	314	ePn	Pn	04 29 32.6	-2.0
MMB	Musomiste	7.18	2	P	Pn	04 29 32.5	-2.0
MMB	Musomiste	7.18	2	P	Pn	04 29 32.5	-2.0
CEL	Celeste	7.20	304	ePn	Pn	04 29 34.8	-0.2
CEL	Celeste	7.20	304	ePn	Pn	04 29 34.8	-0.2
RZN	Rozhen	7.34	7	P	Pn	04 29 36.4	-0.5
RZN	Rozhen	7.34	7	P	Pn	04 29 36.4	-0.5
KDZ	Kurdzhali	7.40	12	eP	Pn	04 29 38.8	+1.2
KDZ	Kurdzhali	7.40	12	eP	Pn	04 29 38.8	+1.2
HMYD	Mayadein	7.75	124	P	Pn	04 29 41.8	-0.7
	baz=126						
HMYD	Mayadein	7.75	124	P	Pn	04 29 41.8	-0.7
LEF	Lefka	7.81	82	ePN	Pn	04 29 43.4	+0.2
FYM	Al Fayyum	7.98	124	P	Pn	04 29 46.4	+0.8
	baz=125						
FYM	Al Fayyum	7.98	124	P	Pn	04 29 46.4	+0.8
KONT	Konya--Tatoy	8.03	61	ePN	Pn	04 29 46.4	+0.1
CSS	Prodhromos	8.16	83	ePN	Pn	04 29 48.6	+0.5
CSS	Prodhromos	8.16	83	ePn	Pn	04 29 49.9	+1.8
CSS	Prodhromos	8.16	83	ePn	Pn	04 29 49.9	+1.8
VTS	Vitosha	8.18	359	⇓P	Pn	04 29 48.1	-0.3
VTS	Vitosha	8.18	359	⇓iP	Pn	04 29 48.1	-0.3
VTS	Vitosha	8.18	359	P	Pn	04 29 50.7	+2.3
VTS	Vitosha	8.18	359	P	Pn	04 29 48.1	-0.3
CUC	Castrocucco	8.25	315	ePn	Pn	04 29 47.9	-1.4
CUC	Castrocucco	8.25	315	ePn	Pn	04 29 47.9	-1.4
LFK	Lefkose	8.34	81	ePN	Pn	04 29 50.9	+0.3
HFRF	Wahat Farafira	8.36	149	P	Pn	04 29 52.2	+1.5
	baz=151						
HFRF	Wahat Farafira	8.36	149	P	Pn	04 29 52.2	+1.5
LJFR	Jufra	8.37	233	iP	Pn	04 29 49.3	-1.7
	SNR=43						
HSAF	As Saff	8.38	123	P	Pn	04 29 51.3	+0.3
	baz=124						
HSAF	As Saff	8.38	123	P	Pn	04 29 51.3	+0.3
KOT	Kottamia	8.39	120	P	Pn	04 29 51.5	+0.2
	baz=121						
KOT				AMP		04 31 00.0	
	comp=E,70µm,0.6s,logA/T=5.1,baz=121						
KOT				S	Sn	04 31 19.3	-5.9
	baz=121						
KOT	Kottamia	8.39	120	P	Pn	04 29 51.5	+0.2
GLL	Jalalah	8.51	122	P	Pn	04 29 52.5	-0.4
	baz=124						
GLL	Jalalah	8.51	122	P	Pn	04 29 52.5	-0.4
HHAG	Hagoal	8.57	119	P	Pn	04 29 53.9	+0.2
	baz=120						
HHAG				AMP		04 31 00.0	
	comp=E,50µm,0.5s,logA/T=5.0,baz=120						
HHAG				S	Sn	04 31 24.0	-5.6
	baz=120						
HHAG	Hagoal	8.57	119	P	Pn	04 29 53.9	+0.2
EREN	Erenkoy	8.88	80	ePN	Pn	04 29 58.1	+0.2
GHAR	Gharyan	8.97	258	iP	Pn	04 29 56.9	-2.3
	SNR=43						
AMAG	Maghara	9.06	112	P	Pn	04 29 58.2	-2.2
	baz=113						
AMAG	Maghara	9.06	112	P	Pn	04 29 58.2	-2.2
SUZ		9.17	117	P	Pn	04 30 01.9	0.0
	baz=118						
SUZ		9.17	117	P	Pn	04 30 01.9	0.0
ZAF		9.28	121	P	Pn	04 30 03.8	+0.4
	baz=122						
ZAF		9.28	121	P	Pn	04 30 03.8	+0.4
MERS	Mersin	9.35	72	eP	Pn	04 30 04.5	+0.1
STON	Ston	9.57	334	ePn	Pn	04 30 01.6	-5.7
STON				Sn	Sn	04 31 39.3	-15
BR131	Keskin Array S	9.72	54	ePn	Pn	04 30 10.7	+1.1
	comp=E,3.2nm,0.8s						
BR131	Keskin Array S	9.72	54	ePn	Pn	04 30 10.6	+1.1
	comp=E,3.2nm,0.8s						
BRTR	Keskin Array B	9.72	54	Pn	Pn	04 30 10.2	+0.7
BRTR	Keskin Array B	9.72	54	Pn	Pn	04 30 10.2	+0.7
	comp=E,0.2nm,0.3s,baz=235,slow=14,SNR=13						
BRTR	Keskin Array B	9.72	54	Pn	Pn	04 30 10.2	+0.7
HNKL	Nakhl	9.98	114	P	Pn	04 30 12.5	-0.6
	baz=115						
HNKL				AMP		04 32 00.0	
	comp=N,30µm,0.5s,logA/T=4.8,baz=115						
HNKL	Nakhl	9.98	114	P	Pn	04 30 12.5	-0.6
GRB	Gharib	10.06	125	P	Pn	04 30 14.2	0.0
	baz=126						
GRB	Gharib	10.06	125	P	Pn	04 30 14.1	0.0
MMAI	Mount Meron Ar	10.06	95	Pn	Pn	04 30 14.2	0.0
MMAI				Sn	Sn	04 32 00.2	-5.9
MMAI	Mount Meron Ar	10.06	95	Pn	Pn	04 30 14.2	0.0
	comp=N,2.4nm,0.3s,baz=278,slow=12,SNR=4.7						
MMAI				Sn	Sn	04 32 00.2	-5.9
	comp=N,3.2nm,0.3s,baz=283,slow=25,SNR=4.5						
MMAI	Mount Meron Ar	10.06	95	Pn	Pn	04 30 14.2	0.0
HDK1	Dakhla	10.23	148	P	Pn	04 30 18.1	+1.6
	baz=150						
HDK1	Dakhla	10.23	148	P	Pn	04 30 18.1	+1.6
TR2		10.63	122	P	Pn	04 30 21.6	-0.4
	baz=123						
TR2		10.63	122	P	Pn	04 30 21.6	-0.4
AKRG	Al Kharijah	10.77	144	P	Pn	04 30 25.0	+1.1
	baz=145						
GTR	Jabal at Tayr	10.80	143	P	Pn	04 30 25.3	+1.1
	baz=145						
GTR	Jabal at Tayr	10.80	143	P	Pn	04 30 25.3	+1.1
EIL	Elat	10.85	113	Pn	Pn	04 30 24.7	-0.2
EIL				Sn	Sn	04 32 18.6	-6.8
EIL	Elat	10.85	113	Pn	Pn	04 30 24.7	-0.2
	comp=N,2.0nm,0.3s,baz=346,slow=18,SNR=11						
EIL				Sn	Sn	04 32 18.6	-6.8
	comp=N,1.9nm,0.3s,baz=56,slow=18,SNR=4.7						
EIL	Elat	10.85	113	Pn	Pn	04 30 24.7	-0.2
ARR	Arges	10.99	4	⇓iP	Pn	04 30 25.4	-1.4
ARR	Arges	10.99	4	⇓iP	Pn	04 30 25.4	-1.4
GZR	Gura Zlata	10.99	358	⇓P	Pn	04 30 25.7	-1.1
GZR	Gura Zlata	10.99	358	⇓iP	Pn	04 30 25.7	-1.1
GZR	Gura Zlata	10.99	358	P	Pn	04 30 25.7	-1.1
HDHB	Dhahab	11.09	118	P	Pn	04 30 28.6	+0.5
	baz=119						
HDHB	Dhahab	11.09	118	P	Pn	04 30 28.6	+0.5
HDK2	Wahat Dakhilah	11.14	153	P	Pn	04 30 30.2	+1.3
	baz=155						
HDK2	Wahat Dakhilah	11.14	153	P	Pn	04 30 30.2	+1.3
MLR	Muntele Rosu	11.24	9	Pn	Pn	04 30 30.8	+0.5
MLR	Muntele Rosu	11.24	9	⇓iP	Pn	04 30 29.1	-1.2
MLR	Muntele Rosu	11.24	9	Pn	Pn	04 30 30.8	+0.5
	baz=276,slow=17						
MLR				LR	LR	04 34 32.1	
	comp=N,20nm,19.8s,baz=192,slow=36						
MLR	Muntele Rosu	11.24	9	P	Pn	04 30 30.8	+0.5
HHRG	Al Ghardaqah	11.27	127	P	Pn	04 30 32.0	+1.4
	baz=128						
HHRG	Al Ghardaqah	11.27	127	P	Pn	04 30 32.0	+1.4
CFR	Carcaliu	11.35	17	⇑P	Pn	04 30 29.1	-2.5
CFR	Carcaliu	11.35	17	⇑iP	Pn	04 30 29.1	-2.5
CFR	Carcaliu	11.35	17	P	Pn	04 30 29.1	-2.5
ASF	Jabal al Asfar	11.48	97	Pn	Pn	04 30 34.7	+1.1
ASF	Jabal al Asfar	11.48	97	Pn	Pn	04 30 34.7	+1.1
	comp=N,0.4nm,0.3s,baz=177,slow=18,SNR=2.8						
KEST	Kesra	11.63	281	Pn	Pn	04 30 34.8	-0.8
KEST	Kesra	11.63	281	Pn	Pn	04 30 34.8	-0.8
	comp=N,0.1nm,0.3s,baz=252,slow=19,SNR=3.9						
KEST	Kesra	11.63	281	Pn	Pn	04 30 34.8	-0.8
PLOR	Plostina	11.69	11	⇓P	Pn	04 30 34.3	-2.1
PLOR	Plostina	11.69	11	⇓iP	Pn	04 30 34.3	-2.1
PLOR	Plostina	11.69	11	P	Pn	04 30 34.3	-2.1
VRI	Vrincioaia	11.72	11	⇓P	Pn	04 30 36.1	-0.7
VRI	Vrincioaia	11.72	11	⇓iP	Pn	04 30 36.1	-0.7
VRI	Vrincioaia	11.72	11	P	Pn	04 30 36.1	-0.7
NVLJ	Novalja	12.11	329	ePn	Pn	04 30 37.1	-4.9
NVLJ				Sn	Sn	04 32 40.3	-16
MALT	Malatya	12.69	68	eP	Pn	04 30 50.3	+0.1
MALT				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MALT	Malatya	12.69	68	ePn	Pn	04 30 50.3	+0.1
	comp=Z,4.5nm,1.0s						
MALT	Malatya	12.69	68	⇑iP	Pn	04 30 47.0	-3.2
MALT	Malatya	12.69	68	eP	Pn	04 30 50.3	+0.1
	comp=Z,4.0nm,1.0s						
BURAR	Bucovina Array	13.26	5	⇑iP	Pn	04 30 57.3	-0.6
BURAR	Bucovina Array	13.26	5	⇑iP	Pn	04 30 57.3	-0.6
BUR08	Bucovina Ar. S	13.29	5	ePn	Pn	04 30 59.0	+0.7
BUR08	Bucovina Ar. S	13.29	5	ePn	Pn	04 30 59.0	+0.7
PGF	Pioggiola	13.92	310	eP	Pn	04 31 06.9	0.0
	comp=Z,42nm,1.3s						
PGF	Pioggiola	13.92	310	eP	Pn	04 31 06.9	0.0
PGF				pmax	pmax		
	comp=Z,42nm,1.3s						
PGF	Pioggiola	13.92	310	eP	Pn	04 31 06.9	0.0
	comp=Z,42nm,1.3s						
VYHS	Vyhne	14.49	348	eP	P	04 31 22.2	+1.2
VYHS				e		04 33 47.3	
VYHS	Vyhne	14.49	348	eP	P	04 31 22.2	+1.2
VYHS	Vyhne	14.49	348	eSN	Sn	04 33 47.2	-7.1
VYHS	Vyhne	14.49	348	eP	P	04 31 22.2	+1.2
KOLS	Kolonicke sedl	14.54	357	eP	P	04 31 20.4	-1.2
KOLS	Kolonicke sedl	14.54	357	ePN	P	04 31 20.4	-1.2
KOLS	Kolonicke sedl	14.54	357	eP	P	04 31 20.4	-1.2
KBA	Koelnbreinsper	14.78	332	⇑iP	P	04 31 26.3	+2.0
KBA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KBA	Koelnbreinsper	14.78	332	⇑iP	P	04 31 26.3	+2.0
	comp=Z,2.5nm,0.7s						
KBA	Koelnbreinsper	14.78	332	⇑iP	P	04 31 26.3	+2.0
	comp=Z,2.5nm,0.6s						
KBA	Koelnbreinsper	14.78	332	⇑iP	P	04 31 26.3	+2.0
	comp=Z,2.5nm,0.6s						
SBF	Sospel	15.58	312	eP	Pn	04 31 25.2	-4.0
	comp=Z,18nm,1.0s						
SBF	Sospel	15.58	312	eP	Pn	04 31 25.2	-4.0
SBF				pmax	pmax		
	comp=Z,18nm,1.0s						
SBF	Sospel	15.58	312	eP	Pn	04 31 25.2	-4.0
	comp=Z,18nm,1.0s						
VRAC	Vranov	15.73	343	Pn	P	04 31 33.1	-1.6
VRAC	Vranov	15.73	343	⇑iP	P	04 31 33.2	-1.6
VRAC	Vranov	15.73	343	Pn	P	04 31 33.1	-1.6
	comp=Z,0.8nm,0.3s,baz=164,slow=9.8,SNR=7.8						
VRAC	Vranov	15.73	343	P	P	04 31 33.1	-1.6
	comp=Z,1.0nm,0.3s						
FUORN	Ofenpass-Fuorn	15.76	325	eP	P	04 31 38.8	+3.4
	comp=Z,115nm,2.8s						
OKC	Ostrava-Krasne	15.91	347	eP	P	04 31 36.3	-0.4
OKC	Ostrava-Krasne	15.91	347	eP	P	04 31 36.3	-0.4
OKC	Ostrava-Krasne	15.91	347	eP	P	04 31 36.3	-0.4
FRF	La Foret Royal	15.92	310	eP	Pn	04 31 32.0	-1.5
	comp=Z,26nm,1.3s						
FRF	La Foret Royal	15.92	310	eP	Pn	04 31 32.0	-1.5
FRF				pmax	pmax		
	comp=Z,26nm,1.3s						
FRF	La Foret Royal	15.92	310	eP	Pn	04 31 32.0	-1.5
	comp=Z,26nm,1.3s						
MORC	Moravsky Berou	15.96	346	eP	Pn	04 31 33.5	-0.5
MORC				pmax	pmax		
	comp=Z,17nm,1.8s						
MORC	Moravsky Berou	15.96	346	ePn	Pn	04 31 33.5	-0.5
	comp=Z,18nm,1.8s						
MORC	Moravsky Berou	15.96	346	⇑iP	Pn	04 31 33.6	-0.5
MORC	Moravsky Berou	15.96	346	ePn	Pn	04 31 33.5	-0.5
	comp=Z,18nm,1.8s						
TREC	Trest	16.00	341	eP	P	04 31 36.9	-0.9
TREC	Trest	16.00	341	eP	P	04 31 36.9	-0.9
TREC				epP	pP	04 31 43.7	-1.1
TREC	Trest	16.00	341	eP	P	04 31 36.9	-0.9
DAVOX	Davos/Dischmat	16.06	324	Pn	P	04 31 38.0	-0.7
DAVOX	Davos/Dischmat	16.06	324	Pn	P	04 31 37.9	-0.7
	comp=Z,0.2nm,0.3s,baz=122,slow=13,SNR=3.6						
DAVOX	Davos/Dischmat	16.06	324	P	P	04 31 37.9	-0.7
TUE	Stuetta	16.11	323	ePn	Pn	04 31 33.0	-3.1
	comp=Z,6.7nm,0.9s						
GERES	GERESS Array B	16.14	336	Pn	Pn	04 31 35.0	-1.4
GERES	GERESS Array B	16.14	336	Pn	Pn	04 31 35.0	-1.4
	comp=Z,0.4nm,0.3s,baz=153,slow=12,SNR=9.7						
GERES	GERESS Array B	16.14	336	Pn	Pn	04 31 35.0	-1.4
KHC	Kasperske Hory	16.43	337	eP	Pn	04 31 40.7	+0.7
KHC				pmax	pmax		
	comp=Z,20nm,1.2s						
KHC	Kasperske Hory	16.43	337	ePn	Pn	04 31 40.7	+0.7
	comp=Z,20nm,1.2s						
KHC	Kasperske Hory	16.43	337	eP	P	04 31 41.0	-1.5
KHC				epP	pP	04 31 49.8	+0.2
KHC	Kasperske Hory	16.43	337	eP	Pn	04 31 40.7	+0.7
	comp=Z,20nm,1.2s						
MBDF	Montbardon	16.45	314	eP	Pn	04 31 39.4	-0.9
	comp=Z,17nm,1.0s						
MBDF	Montbardon	16.45	314	eP	Pn	04 31 39.4	-0.9
MBDF				pmax	pmax		
	comp=Z,17nm,1.0s						
MBDF	Montbardon	16.45	314	eP	Pn	04 31 39.4	-0.9
	comp=Z,17nm,1.0s						
DPC	Dobruska-Polom	16.77	344	eP	P	04 31 45.9	-0.4
DPC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DPC	Dobruska-Polom	16.77	344	eP	P	04 31 45.9	-0.4
	comp=Z,8.5nm,0.9s						
DPC	Dobruska-Polom	16.77	344	eP	P	04 31 45.8	-0.4
DPC				epP	pP	04 31 52.8	-0.5
DPC	Dobruska-Polom	16.77	344	eP	P	04 31 45.9	-0.4
	comp=Z,8.5nm,0.9s						
AK02	Malin Array Si	16.78	13	ePn	Pn	04 31 43.8	-0.5
AK02	Malin Array Si	16.78	13	ePn	Pn	04 31 43.8	-0.5
AK01	Malin Array Si	16.81	13	ePn	Pn	04 31 43.1	-1.7
AK01	Malin Array Si	16.81	13	ePn	Pn	04 31 43.1	-1.7
KIEV	Kiev	16.82	13	eP	Pn	04 31 43.2	-1.6
KIEV				pmax	pmax		
	comp=Z,108nm,2.9s						
KIEV	Kiev	16.82	13	ePn	Pn	04 31 43.2	-1.6
	comp=Z,108nm,2.9s						
KIEV	Kiev	16.82	13	ePn	Pn	04 31 43.2	-1.6
	comp=Z,108nm,2.9s						
AKASG	Malin Array Be	16.82	13	P	Pn	04 31 43.6	-1.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKASG	Malin Array Be	16.82	13	Pn	Pn	04 31 43.6	-1.3
AKASG	Malin Array Be	16.82	13	Pn	Pn	04 31 43.6	-1.3
	comp=Z,1.8nm,0.3s,baz=205,slow=9.7,SNR=8.1						
AKASG	Malin Array Be	16.82	13	Pn	Pn	04 31 43.6	-1.3
PRU	Pruhonice	16.89	340	eP	Pn	04 31 46.0	+0.3
PRU	Pruhonice	16.89	340	eP	Pn	04 31 46.0	+0.3
PRU				epP	pP	04 31 53.8	-0.8
PRU	Pruhonice	16.89	340	eP	Pn	04 31 46.0	+0.3
LPG	La Plagne	16.89	316	eP	Pn	04 31 45.4	-0.7
LPG	La Plagne	16.89	316	eP	Pn	04 31 45.4	-0.7
LPG	La Plagne	16.89	316	eP	Pn	04 31 45.4	-0.7
LPG	La Plagne	16.89	316	eP	Pn	04 31 45.4	-0.7
LPL	La Plagne	16.91	316	eP	Pn	04 31 45.6	-0.7
LPL	La Plagne	16.91	316	eP	Pn	04 31 45.6	-0.7
LPL	La Plagne	16.91	316	eP	Pn	04 31 45.6	-0.7
LPL	La Plagne	16.91	316	eP	Pn	04 31 45.6	-0.7
UPC	Upice	16.98	344	eP	Pn	04 31 45.6	-1.3
UPC	Upice	16.98	344	eP	Pn	04 31 45.6	-1.3
UPC				ex	x	04 31 52.9	
ORIF	Oris-en-Rattie	17.09	313	eP	Pn	04 31 47.8	-0.5
ORIF				eR			
	comp=Z,57nm,19.2s						
ORIF	Oris-en-Rattie	17.09	313	eP	Pn	04 31 47.8	-0.5
ORIF	Oris-en-Rattie	17.09	313	eP	Pn	04 31 47.8	-0.5
ORIF	Oris-en-Rattie	17.09	313	eP	Pn	04 31 47.8	-0.5
PVCC	Panska Ves	17.37	341	eP	Pn	04 31 50.1	-1.6
PVCC	Panska Ves	17.37	341	eP	Pn	04 31 50.1	-1.6
PVCC	Panska Ves	17.37	341	eP	Pn	04 31 50.1	-1.6
KIV	Kislovodsk	17.67	52	eP	P	04 31 58.2	+1.8
KIV				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KIV	Kislovodsk	17.67	52	eP	P	04 31 58.2	+1.8
KBZ	Khabaz	17.71	53	P	P	04 31 57.0	+0.3
KBZ	Khabaz	17.71	53	P	P	04 31 57.0	+0.3
KBZ	Khabaz	17.71	53	P	P	04 31 57.0	+0.3
	comp=Z,0.3nm,0.3s,baz=284,slow=4.7,SNR=8.8						
KBZ	Khabaz	17.71	53	P	P	04 31 57.0	+0.3
GRFO	Grafenberg	17.73	333	eP	P	04 31 56.7	-0.2
GRFO				pmax	pmax		
	comp=Z,12nm,0.9s						
GRFO	Grafenberg	17.73	333	eP	P	04 31 56.7	-0.2
	comp=Z,12nm,0.9s						
GRFO	Grafenberg	17.73	333	eP	P	04 31 56.7	-0.2
	comp=Z,12nm,0.9s						
NKC	Novy Kostel	17.75	336	eP	Pn	04 31 54.3	-2.2
NKC	Novy Kostel	17.75	336	eP	Pn	04 31 54.3	-2.2
NKC	Novy Kostel	17.75	336	eP	Pn	04 31 54.3	-2.2
VIVF	Saint-Julien-l	17.79	311	eP	Pn	04 31 56.8	-0.2

	comp=Z,15nm,1.2s						
VIVF	Saint-Julien-l	17.79	311	eP	Pn	04 31 56.8	-0.2
VIVF				pmax	pmax		
	comp=Z,15nm,1.2s						
VIVF	Saint-Julien-l	17.79	311	eP	Pn	04 31 56.8	-0.2
	comp=Z,15nm,1.2s						
VIVF	Saint-Julien-l	17.79	311	eP	Pn	04 31 56.8	-0.2
	comp=Z,7.5nm,1.2s						
CABF	La Chapelle	17.92	318	eP	P	04 31 58.6	-0.5
	comp=Z,3.5nm,0.6s						
CABF	La Chapelle	17.92	318	eP	P	04 31 58.6	-0.5
CABF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CABF	La Chapelle	17.92	318	eP	P	04 31 58.6	-0.5
	comp=Z,3.5nm,0.6s						
CABF	La Chapelle	17.92	318	eP	P	04 31 58.6	-0.5
	comp=Z,1.8nm,0.6s						
LASF	Ste Croix	17.95	308	eP	P	04 31 59.1	-0.2
LASF	Ste Croix	17.95	308	eP	P	04 31 59.1	-0.2
LASF	Ste Croix	17.95	308	eP	P	04 31 59.1	-0.2
HINF	Hinteralfeld	18.27	322	eP	Pn	04 32 02.4	-0.5
HINF	Hinteralfeld	18.27	322	eP	Pn	04 32 02.4	-0.5
HINF	Hinteralfeld	18.27	322	eP	Pn	04 32 02.4	-0.5
HINF	Hinteralfeld	18.27	322	eP	Pn	04 32 02.4	-0.5
CDF	Champ du Feu	18.46	324	eP	P	04 32 04.7	-0.4
	comp=Z,5.5nm,0.9s						
CDF	Champ du Feu	18.46	324	eP	P	04 32 04.7	-0.4
CDF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CDF	Champ du Feu	18.46	324	eP	P	04 32 04.7	-0.4
	comp=Z,5.5nm,0.9s						
CDF	Champ du Feu	18.46	324	eP	P	04 32 04.7	-0.4
	comp=Z,2.8nm,0.9s						
CLL	Collm	18.51	339	eP	P	04 32 05.0	-0.5
CLL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CLL	Collm	18.51	339	eP	P	04 32 05.0	-0.5
	comp=Z,7.0nm,0.8s						
CLL				epP	pP	04 32 13.0	+0.5
CLL				e(PP)		04 32 21.0	
CLL				ePPP	PPP	04 32 26.0	
CLL				Lm	MLR	04 40 00.0	
	comp=Z,100nm,20.0s						
CLL	Collm	18.51	339	eP	P	04 32 05.0	-0.5
	comp=Z,7.0nm,0.8s						
HAU	Haudompre	18.65	322	eP	P	04 32 06.7	-0.4
HAU				eR			
	comp=Z,51nm,17.5s						
HAU	Haudompre	18.65	322	eP	P	04 32 06.7	-0.4
HAU	Haudompre	18.65	322	eP	P	04 32 06.7	-0.4
HAU	Haudompre	18.65	322	eP	P	04 32 06.7	-0.4
MTLF	Montolieu	18.74	305	eP	Pn	04 32 08.3	-0.3
MTLF	Montolieu	18.74	305	eP	Pn	04 32 08.3	-0.3
MTLF	Montolieu	18.74	305	eP	Pn	04 32 08.3	-0.3
MTLF	Montolieu	18.74	305	eP	Pn	04 32 08.3	-0.3
SMF	Signal de Mont	19.21	315	eP	Pn	04 32 14.1	-0.2
SMF	Signal de Mont	19.21	315	eP	Pn	04 32 14.1	-0.2
SMF	Signal de Mont	19.21	315	eP	Pn	04 32 14.1	-0.2
SMF	Signal de Mont	19.21	315	eP	Pn	04 32 14.1	-0.2
PAGF	Fort de Pagny	19.33	322	eP	P	04 32 14.1	-0.3
	comp=Z,9.2nm,1.5s						
PAGF	Fort de Pagny	19.33	322	eP	P	04 32 14.1	-0.3
	comp=Z,9.2nm,1.5s						
PAGF	Fort de Pagny	19.33	322	eP	P	04 32 14.1	-0.3
	comp=Z,4.6nm,1.5s						
SFTF	Sexfontaines	19.46	321	eP	P	04 32 16.1	+0.2
SFTF	Sexfontaines	19.46	321	eP	P	04 32 16.1	+0.2
SFTF	Sexfontaines	19.46	321	eP	P	04 32 16.1	+0.2
CAF	Calviac	19.47	309	eP	Pn	04 32 20.0	+2.6
	comp=Z,11nm,1.1s						
CAF	Calviac	19.47	309	eP	Pn	04 32 20.0	+2.6
CAF				pmax	pmax		
	comp=Z,11nm,1.1s						
CAF	Calviac	19.47	309	eP	Pn	04 32 20.0	+2.6
	comp=Z,11nm,1.1s						
LOR	Lormes	19.55	317	eP	Pn	04 32 17.5	-0.8
	comp=Z,12nm,1.2s						
LOR				eR			
	comp=Z,37nm,19.8s						
LOR	Lormes	19.55	317	eP	Pn	04 32 17.5	-0.8
	comp=Z,12nm,1.2s						
LOR	Lormes	19.55	317	eP	Pn	04 32 17.5	-0.8
	comp=Z,6.1nm,1.2s						
AVF	Avril sur Loir	19.57	315	eP	Pn	04 32 17.7	-0.9
AVF	Avril sur Loir	19.57	315	eP	Pn	04 32 17.7	-0.9
AVF	Avril sur Loir	19.57	315	eP	Pn	04 32 17.7	-0.9
AVF	Avril sur Loir	19.57	315	eP	Pn	04 32 17.7	-0.9
MEZF	Maizieres J'vi	19.64	321	eP	Pn	04 32 18.5	-0.8
	comp=Z,17nm,1.0s						
MEZF	Maizieres J'vi	19.64	321	eP	Pn	04 32 18.5	-0.8
	comp=Z,17nm,1.0s						
MEZF	Maizieres J'vi	19.64	321	eP	Pn	04 32 18.5	-0.8
	comp=Z,8.4nm,1.0s						
WLF	Walferdange	19.86	325	P	Pn	04 32 23.2	+1.2
	comp=Z,8.6nm,1.5s						
WLF	Walferdange	19.86	325	eP	P	04 32 19.9	-0.3
WLF				pmax	pmax		
	comp=Z,15nm,1.1s						
WLF	Walferdange	19.86	325	eP	P	04 32 19.9	-0.3
	comp=Z,15nm,1.1s						
WLF	Walferdange	19.86	325	eP	P	04 32 19.9	-0.3
	comp=Z,15nm,1.1s						
EPF	Esparros	19.93	302	eP	Pn	04 32 22.3	-0.6
EPF	Esparros	19.93	302	eP	Pn	04 32 22.3	-0.6
EPF	Esparros	19.93	302	eP	Pn	04 32 22.3	-0.6
EPF	Esparros	19.93	302	eP	Pn	04 32 22.3	-0.6
RJF	Les Rejaudoux	19.98	310	eP	P	04 32 21.8	+0.2
	comp=Z,18nm,1.3s						
RJF				eR			
	comp=Z,60nm,17.2s						
RJF	Les Rejaudoux	19.98	310	eP	P	04 32 21.8	+0.2
RJF				pmax	pmax		
	comp=Z,18nm,1.3s						
RJF	Les Rejaudoux	19.98	310	eP	P	04 32 21.8	+0.2
	comp=Z,18nm,1.3s						
RJF	Les Rejaudoux	19.98	310	eP	P	04 32 21.8	+0.2
	comp=Z,9.1nm,1.3s						
TCF	Toulx Ste Croi	20.00	313	eP	Pn	04 32 23.5	-0.2
TCF	Toulx Ste Croi	20.00	313	eP	Pn	04 32 23.5	-0.2
TCF	Toulx Ste Croi	20.00	313	eP	Pn	04 32 23.5	-0.2
TCF	Toulx Ste Croi	20.00	313	eP	Pn	04 32 23.5	-0.2
VORD	Divnogorie	20.17	30	eP	Pn	04 32 30.1	+4.6
VORD				pmax	pmax		
	comp=N,7.0nm,0.7s						
VORD				pmax	pmax		
	comp=E,9.0nm,0.7s						
VORD				pmax	pmax		
	comp=Z,4.0nm,0.7s						
VSR	Storozhevoye	20.31	29	eP	Pn	04 32 31.3	+4.1
VSR				pmax	pmax		
	comp=E,2.0nm,0.5s						
VSR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
VSR				pmax	pmax		
	comp=N,1.0nm,0.3s						
LFF	La Frestale	20.33	308	eP	Pn	04 32 26.3	-1.3
LFF	La Frestale	20.33	308	eP	Pn	04 32 26.3	-1.3
LFF	La Frestale	20.33	308	eP	Pn	04 32 26.3	-1.3
LFF	La Frestale	20.33	308	eP	Pn	04 32 26.3	-1.3
ETSF	Etsaut	20.52	302	eP	P	04 32 27.8	+0.2
ETSF	Etsaut	20.52	302	eP	P	04 32 27.8	+0.2
ETSF	Etsaut	20.52	302	eP	P	04 32 27.8	+0.2
ETSF	Etsaut	20.52	302	eP	P	04 32 27.8	+0.2
MEM	Membach	20.59	327	P	Pn	04 32 29.8	-0.7
MEM	Membach	20.59	327	P	Pn	04 32 29.8	-0.7
NACGM	Naroch	20.62	5	e	P	04 32 27.0	-1.5
GIVF	Givet	20.79	325	eP	P	04 32 30.5	+0.2
	comp=N,12nm,0.7s						
GIVF	Givet	20.79	325	eP	P	04 32 30.5	+0.2
GIVF				pmax	pmax		
	comp=Z,12nm,0.7s						
GIVF	Givet	20.79	325	eP	P	04 32 30.5	+0.2
	comp=Z,12nm,0.7s						
GIVF	Givet	20.79	325	eP	P	04 32 30.5	+0.2
	comp=Z,6.2nm,0.7s						
DOU	Dourbes	20.90	324	P	P	04 32 31.2	-0.2
	comp=Z,13nm,3.5s						
DOU	Dourbes	20.90	324	P	P	04 32 31.2	-0.2
	comp=Z,13nm,3.5s						
SJPF	Ste Jean	21.05	302	eP	P	04 32 34.0	+0.7
	comp=Z,20nm,0.9s						
SJPF	Ste Jean	21.05	302	eP	P	04 32 34.0	+0.7
SJPF				pmax	pmax		
	comp=Z,20nm,0.9s						
SJPF	Ste Jean	21.05	302	eP	P	04 32 34.0	+0.7
	comp=Z,20nm,0.9s						
SJPF	Ste Jean	21.05	302	eP	P	04 32 34.0	+0.7
	comp=Z,9.9nm,0.9s						
BAIF	Baives	21.06	324	eP	P	04 32 32.3	-0.9
	comp=Z,7.0nm,0.6s						
BAIF	Baives	21.06	324	eP	P	04 32 32.3	-0.9
BAIF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BAIF	Baives	21.06	324	eP	P	04 32 32.3	-0.9
	comp=Z,7.0nm,0.6s						
BAIF	Baives	21.06	324	eP	P	04 32 32.3	-0.9
	comp=Z,3.5nm,0.6s						
MFF	Saint Martin d	21.59	311	eP	P	04 32 39.4	+0.4
	comp=Z,6.6nm,0.7s						
MFF	Saint Martin d	21.59	311	eP	P	04 32 39.4	+0.4
MFF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MFF	Saint Martin d	21.59	311	eP	P	04 32 39.4	+0.4
	comp=Z,6.6nm,0.7s						
MFF	Saint Martin d	21.59	311	eP	P	04 32 39.4	+0.4
	comp=Z,3.3nm,0.7s						
ESDC	Sonseca Array	22.46	292	P	P	04 32 48.7	+0.3
ESDC	Sonseca Array	22.46	292	P	P	04 32 48.7	+0.3
	comp=Z,0.4nm,0.5s,baz=93,slow=11,SNR=7.4						
ESDC	Sonseca Array	22.46	292	P	P	04 32 48.7	+0.3
LDF	La Druitiere	22.52	316	eP	P	04 32 48.2	-0.7
	comp=Z,22nm,1.0s						
LDF	La Druitiere	22.52	316	eP	P	04 32 48.2	-0.7
LDF				pmax	pmax		
	comp=Z,22nm,1.0s						
LDF	La Druitiere	22.52	316	eP	P	04 32 48.2	-0.7
	comp=Z,22nm,1.0s						
LDF	La Druitiere	22.52	316	eP	P	04 32 48.2	-0.7
	comp=Z,11nm,1.0s						
OBN	Obninsk	22.63	20⇑	eP	P	04 32 54.4	+4.4
OBN				eS	S	04 36 53.9	-2.3
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
FLN	La Foliniere	22.81	316	eP	P	04 32 50.3	-1.7
FLN				eR			
	comp=Z,48nm,20.5s						
FLN	La Foliniere	22.81	316	eP	P	04 32 50.3	-1.7
FLN	La Foliniere	22.81	316	eP	P	04 32 50.3	-1.7
FLN	La Foliniere	22.81	316	eP	P	04 32 50.3	-1.7
GRR	Gorron	22.84	315	eP	P	04 32 51.7	-0.6
	comp=Z,54nm,1.5s						
GRR	Gorron	22.84	315	eP	P	04 32 51.7	-0.6
GRR				pmax	pmax		
	comp=Z,54nm,1.5s						
GRR	Gorron	22.84	315	eP	P	04 32 51.7	-0.6
	comp=Z,54nm,1.5s						
GRR	Gorron	22.84	315	eP	P	04 32 51.7	-0.6
	comp=Z,27nm,1.5s						
SGMF	Saint Gilles	23.79	313	eP	P	04 33 00.8	-0.9
SGMF	Saint Gilles	23.79	313	eP	P	04 33 00.8	-0.9
SGMF	Saint Gilles	23.79	313	eP	P	04 33 00.8	-0.9
SGMF	Saint Gilles	23.79	313	eP	P	04 33 00.8	-0.9
QUIF	Quistinic	24.01	312	eP	P	04 33 03.0	-0.8
QUIF	Quistinic	24.01	312	eP	P	04 33 03.0	-0.8
QUIF	Quistinic	24.01	312	eP	P	04 33 03.0	-0.8
QUIF	Quistinic	24.01	312	eP	P	04 33 03.0	-0.8
VSU	Vasula	24.16	4	iP	P	04 33 09.4	+4.3
VSU				pmax	pmax		
	comp=Z,52nm,3.7s						
ROSF	Rostrenen	24.25	313	eP	P	04 33 05.0	-1.1
ROSF	Rostrenen	24.25	313	eP	P	04 33 05.0	-1.1
ROSF	Rostrenen	24.25	313	eP	P	04 33 05.0	-1.1
ROSF	Rostrenen	24.25	313	eP	P	04 33 05.0	-1.1
EVO	Evora	25.56	288	eP	P	04 33 19.4	+1.4
	comp=Z,68nm,1.8s						
EVOP	Sao Brissos	25.65	288	eP	P	04 33 19.4	+0.6
EVOP	Sao Brissos	25.65	288	eP	P	04 33 19.4	+0.6
	comp=Z,68nm,1.8s						
EVOP	Sao Brissos	25.65	288	eP	P	04 33 19.4	+0.6
	comp=Z,34nm,1.8s						
HFS	Hagfors	26.52	349	P	P	04 33 26.7	+0.2
HFS	Hagfors	26.52	349	P	P	04 33 26.7	+0.2
	comp=Z,2.6nm,0.5s,baz=156,slow=11,SNR=19						
HFS	Hagfors	26.52	349	P	P	04 33 26.7	+0.2
	comp=Z,3.0nm,0.5s						
FINES	FINESS Array B	27.11	3	P	P	04 33 28.9	-2.9
FINES	FINESS Array B	27.11	3	P	P	04 33 28.9	-2.9
	comp=Z,1.4nm,0.8s,baz=146,slow=11,SNR=6.6						
NAO01	NORSAR Array S	27.67	347	eP	P	04 33 36.8	-0.1
	comp=Z,8.4nm,1.0s						
NAO01	NORSAR Array S	27.67	347	eP	P	04 33 36.8	-0.1
	comp=Z,8.4nm,1.0s						
NB2	NORSAR Subarra	27.79	347	P	P	04 33 36.1	-1.9
	comp=Z,5.5nm,1.4s,baz=156,slow=9.3						
NB2	NORSAR Subarra	27.79	347	P	P	04 33 36.1	-1.9
	comp=Z,5.5nm,1.4s,baz=156,slow=9.0,SNR=8.6						
NOA	NORSAR Array B	27.79	347	P	P	04 33 37.0	-1.0
NOA	NORSAR Array B	27.79	347	P	P	04 33 37.0	-1.0
	comp=Z,1.0nm,0.6s,baz=156,slow=8.8,SNR=14						
NOA	NORSAR Array B	27.79	347	P	P	04 33 37.0	-1.0
	comp=Z,1.0nm,0.6s						
EKA	Eskdalemuir Ar	27.87	327	P	P	04 33 38.0	-0.6
EKA	Eskdalemuir Ar	27.87	327	P	P	04 33 38.0	-0.6
	comp=Z,2.2nm,0.4s,baz=126,slow=8.2,SNR=31						
EKA	Eskdalemuir Ar	27.87	327	P	P	04 33 38.0	-0.6
	comp=Z,2.0nm,0.4s						
TOA0	Torodi Ar. Sit	28.93	228	eP	P	04 33 49.1	+0.7
TOA0	Torodi Ar. Sit	28.93	228	eP	P	04 33 49.1	+0.7
TORD	Torodi Ar. Bea	28.93	228	P	P	04 33 49.8	+1.4
TORD	Torodi Ar. Bea	28.93	228	P	P	04 33 49.8	+1.4
	comp=Z,1.1nm,0.5s,baz=34,slow=8.8,SNR=32						
TORD	Torodi Ar. Bea	28.93	228	P	P	04 33 49.8	+1.4
ARCES	ARCESS Array B	35.20	1	P	P	04 34 40.3	-2.6
ARCES	ARCESS Array B	35.20	1	P	P	04 34 40.3	-2.6
	comp=Z,2.1nm,0.8s,baz=173,slow=11,SNR=5.8						
ARCES	ARCESS Array B	35.20	1	P	P	04 34 40.3	-2.6
	comp=Z,2.0nm,0.8s						
DBIC	Dimbokro	38.00	230	eP	P	04 35 07.9	+0.6
	comp=Z,4.2nm,0.8s						
DBIC	Dimbokro	38.00	230	P	P	04 35 08.1	+0.8
	comp=Z,1.6nm,0.6s,baz=20,slow=8.5,SNR=5.7						
DBIC	Dimbokro	38.00	230	eP	P	04 35 07.9	+0.6
	comp=Z,4.2nm,0.8s						
AAK	Ala-Archa	40.26	63	P	P	04 35 27.0	+0.9
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AAK	Ala-Archa	40.26	63	P	P	04 35 27.0	+0.9
AAK	Ala-Archa	40.26	63	P	P	04 35 27.0	+0.9
	comp=Z,0.5nm,0.3s,baz=209,slow=13,SNR=3.3						
AAK	Ala-Archa	40.26	63	P	P	04 35 27.0	+0.9
	comp=Z,1.0nm,0.4s						
TKM2	Tokmak 2	41.04	62	eP	P	04 35 33.1	+0.5
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TKM2	Tokmak 2	41.04	62	eP	P	04 35 33.1	+0.5
	comp=Z,1.8nm,0.8s						
TKM2	Tokmak 2	41.04	62	eP	P	04 35 33.1	+0.5
	comp=Z,1.8nm,0.8s						
KURBB	Kurchatov Arra	42.69	50	P	P	04 35 45.1	-0.7
	comp=Z,0.7nm,0.4s,baz=290,slow=11,SNR=10						
KURK	Kurchatov	42.75	50	iP	P	04 35 51.7	+5.5
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	42.75	50	P	P	04 35 45.1	-1.1
KURK	Kurchatov	42.75	50	P	P	04 35 45.1	-1.1
MK31	Makanchi Array	45.37	56	eP	P	04 36 06.9	-0.4
MK31	Makanchi Array	45.37	56	eP	P	04 36 06.9	-0.4
MK31	Makanchi Array	45.37	56	eP	P	04 36 06.9	-0.4
MKAR	Makanchi Array	45.37	56	P	P	04 36 07.2	-0.1
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MKAR	Makanchi Array	45.37	56	eP	P	04 36 07.2	-0.1
MKAR	Makanchi Array	45.37	56	P	P	04 36 07.2	-0.1
	comp=Z,2.1nm,0.4s,baz=267,slow=7.9,SNR=57						
MKAR	Makanchi Array	45.37	56	P	P	04 36 07.2	-0.1
	comp=Z,2.0nm,0.4s						
NVS	Novosibirsk	45.62	44	eP	P	04 36 04.4	-4.7
ZALV	Zalesovo Beam	46.54	46	P	P	04 36 15.3	-1.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	46.54	46	P	P	04 36 15.2	-1.2
ZALV	Zalesovo Beam	46.54	46	P	P	04 36 15.2	-1.2
	comp=Z,1.1nm,0.4s,baz=270,slow=9.3,SNR=9.6						
ZALV	Zalesovo Beam	46.54	46	P	P	04 36 15.3	-1.2
	comp=Z,1.0nm,0.4s						
ZAK	Zakamensk	58.30	48	eP	P	04 37 44.1	+0.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZAK	Zakamensk	58.30	48	eP	P	04 37 44.1	+0.3
	comp=Z,1.0nm,1.0s						
SONM	Songino Array	61.05	50	P	P	04 38 02.7	-0.2
SONM	Songino Array	61.05	50	P	P	04 38 02.7	-0.2
	comp=Z,0.7nm,0.5s,baz=284,slow=6.7,SNR=8.0						
SONM	Songino Array	61.05	50	P	P	04 38 02.7	-0.2
	comp=Z,1.0nm,0.5s						
SCHQ	Schefferville	62.84	319	P	P	04 38 14.4	-0.2
SCHQ	Schefferville	62.84	319	P	P	04 38 14.4	-0.2
	comp=Z,0.7nm,0.4s,baz=73,slow=9.3,SNR=3.6						
SCHQ	Schefferville	62.84	319	P	P	04 38 14.4	-0.2
RES	Resolute Bay	64.03	345	eP	P	04 38 23.9	+1.8
	comp=Z,3.6nm,1.3s						
RES	Resolute Bay	64.03	345	eP	P	04 38 23.9	+1.8
	comp=Z,3.6nm,1.3s						
INK	Inuvik	76.16	351	P	P	04 39 36.4	-0.1
INK	Inuvik	76.16	351	P	P	04 39 36.4	-0.1
	comp=Z,0.2nm,0.5s,baz=63,slow=2.3,SNR=3.3						
INK	Inuvik	76.16	351	P	P	04 39 36.4	-0.1
YKA	Yellowknife Ar	77.72	341	P	P	04 39 45.2	-0.2
YKA	Yellowknife Ar	77.72	341	P	P	04 39 45.2	-0.2
	comp=Z,0.1nm,0.5s,baz=32,slow=5.7,SNR=5.3						
YKA	Yellowknife Ar	77.72	341	P	P	04 39 45.3	-0.2
KSAR	Wonju Array Be	79.84	52	P	P	04 39 58.0	+0.4
KSAR	Wonju Array Be	79.84	52	P	P	04 39 58.0	+0.4
KSRS	Korea Array	79.86	52	P	P	04 39 58.0	+0.3
	comp=Z,0.7nm,0.3s,baz=304,slow=4.7,SNR=4.9						
KSRS	Korea Array	79.86	52	P	P	04 39 58.0	+0.3
	comp=Z,1.0nm,0.3s						

IDC 05 04:28:47.0±2.4, 55°.71S×26°.01W, h0km, mb3.7/2, mb1 3.6/3, mb1mx3.4/17, mbtmp3.5/3, ML3.1/1, Error ellipse: s-maj=132.7km s-min=29.0km az=95.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	Sanae	18.79	157	P	Pn	04 33 07.8	-0.2
	0.1nm,0.3s,baz=331,slow=17,SNR=8.7						
VNDA	Vanda	46.94	182	P	P	04 37 18.6	0.0
	1.0nm,0.9s,baz=170,slow=6.8,SNR=3.8						
TORD	Torodi Ar. Bea	72.44	28	P	P	04 40 15.2	+0.3
	0.6nm,0.5s,baz=204,slow=6.3,SNR=16						
TBI	Tubuai	87.81	230	eLR	LR	04 41 04.4	
	69nm,29.0s						
PPT2	Papeete2	92.92	233	eLR	LR	04 41 43.2	
	75nm,24.5s						
SONM	Songino Array	150.04	85	PKPbc	PKPbc	04 48 37.5	-1.0
	0.4nm,0.7s,baz=233,slow=3.1,SNR=4.6						

IDC 05 04:30:45.8±2.5, 23°.25S×174°.85W, h0km, mb4.1/7, mb1 4.4/7, mb1mx4.1/21, mbtmp4.1/7, Error ellipse: s-maj=149.9km s-min=21.0km az=157.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	36.21	267	P	P	04 37 50.6	0.0
	3.6nm,0.6s,baz=117,slow=10,SNR=5.4						
ASAR	Alice Springs	46.80	259	P	P	04 39 17.1	-0.4
	1.3nm,0.8s,baz=96,slow=7.8,SNR=14						
WRA	Warramunga Arr	47.17	264	P	P	04 39 19.8	-0.7
	2.3nm,0.4s,baz=101,slow=8.4,SNR=12						
FITZ	Fitzroy Crossi	55.59	263	P	P	04 40 24.4	+0.8
	1.3nm,0.7s,baz=75,slow=6.1,SNR=4.3						
NVAR	Mina Array Bea	81.06	42	P	P	04 43 03.5	+0.5
	1.2nm,0.8s,baz=225,slow=8.2,SNR=9.6						
TXAR	Lajitas Array	86.11	56	P	P	04 43 28.7	-0.3
	0.9nm,0.9s,baz=224,slow=5.2,SNR=6.7						
ILAR	Eielson Array	90.37	12	P	P	04 43 48.0	-0.3
	0.8nm,0.9s,baz=212,slow=5.6,SNR=6.1						
BRTR	Keskin Array B	150.84	311	PKPbc	PKPbc	04 50 40.1	-0.5
	0.4nm,0.5s,baz=119,slow=2.6,SNR=5.0						

IDC 05 04:33:41.7±1.7, 5°.76N×93°.13E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.5/27, mbtmp3.7/5, Error ellipse: s-maj=64.6km s-min=29.3km az=59.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.84	24	Pn	Pn	04 37 00.1	+0.8
	baz=212,slow=12,SNR=3.1						
MKAR	Makanchi Array	41.94	349	P	P	04 41 34.5	+0.2
	1.0nm,0.6s,baz=168,slow=7.9,SNR=14						
ZALV	Zalesovo Beam	48.52	353	P	P	04 42 25.5	-0.9
	0.5nm,0.3s,baz=181,slow=5.9,SNR=5.8						
ASAR	Alice Springs	49.37	128	P	P	04 42 33.5	0.0
	0.2nm,0.5s,baz=304,slow=7.8,SNR=4.5						
GERES	GERESS Array B	78.73	319	P	P	04 45 46.5	+0.1
	0.3nm,0.5s,baz=104,slow=5.6,SNR=5.1						

CSEM 05 04:39:24.8, 28°.50N×51°.26E, h16km, ML3.1, After THR
IDC 05 04:39:27.2±2.7, 28°.73N×51°.38E, h0km, mb3.5/5, mb1 3.5/5, mb1mx3.2/27, mbtmp3.5/5, Error ellipse: s-maj=66.2km s-min=31.9km az=145.0
ISCJB 05 04:39:28.6±1.1, 28°.7N±0°.1×51°.37E±0°.09, h24km, mb3.5/5, Error ellipse: s-maj=18.2km s-min=9.4km az=23.5
ISC 05 04:39:30.0±1.2, 28°.6N±0°.1×51°.43E±0°.09, h24km, n9, σ1s.09/10, mb3.5/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	1.41	102	ePg	Pn	04 39 53.2	-1.1
GHIR				eSg	Sb	04 40 13.9	+0.7
NASN	Na'in	4.37	15	ePn	Pn	04 40 34.6	-0.6
KRBR	Kerman	4.86	72	ePn	Pn	04 40 42.1	+0.1
TABS	Tabas	7.02	43	ePn	Pn	04 41 11.4	0.0
ZALV	Zalesovo Beam	35.12	34	P	P	04 46 20.3	-1.1
	0.4nm,0.3s,baz=238,slow=6.6,SNR=2.5						
FINES	FINESS Array B	36.93	340	P	P	04 46 36.4	-0.4
	0.4nm,0.5s,baz=144,slow=8.4,SNR=7.6						
HFS	Hagfors	40.52	332	P	P	04 47 06.1	-0.8
	1.0nm,0.8s,baz=133,slow=10,SNR=6.4						
TORD	Torodi Ar. Bea	48.60	262	P	P	04 48 12.1	+0.1
	0.3nm,0.9s,baz=55,slow=8.3,SNR=3.2						
YKA	Yellowknife Ar	88.55	354	P	P	04 52 22.5	+2.1
	0.1nm,0.5s,baz=15,slow=5.7,SNR=4.0						

WEL 05 04:51:23.4±0.6, 35°.81S×178°.30E, h200km±7km, ML3.7/7, Error ellipse: s-maj=14.4km s-min=7.4km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.75	180	PN	Pn	04 51 59.5	+0.2
MXZ				SN	S	04 52 27.2	+0.2
PUZ	Puketiti	2.26	181	SN	S	04 52 35.9	-0.4
MWZ	Matawai	2.59	193	ePN	Pn	04 52 08.7	+0.4
MWZ				SN	S	04 52 43.1	+0.2
URZ	Urewera	2.62	201	ePN	Pn	04 52 08.6	+0.1
URZ				SN	S	04 52 44.2	+0.9
CNGZ	Carnagh Statio	2.67	181	ePN	Pn	04 52 09.9	+0.8
KNZ	Kokohu	3.24	189	PN	Pn	04 52 15.5	-0.3
KNZ				SN	S	04 52 56.6	+0.3
NMHZ	Naumai	3.49	199	ePN	Pn	04 52 19.4	+0.5
NMHZ				SN	S	04 53 02.8	+0.9
MCHZ	McNeill Hill	3.84	199	ePN	Pn	04 52 23.7	+0.6
CKHZ	Cape Kidnapper	3.96	194	SN	S	04 53 13.0	+0.8
BHHZ	Black Hill Sta	4.08	205	PN	Pn	04 52 25.4	-0.7
KAHZ	Kahuranaki	4.13	195	ePN	Pn	04 52 26.4	-0.4
PXZ	Pawanui	4.36	195	ePN	Pn	04 52 28.0	-1.6
PXZ				SN	S	04 53 20.3	-1.0
WPHZ	Waipukurau	4.49	198	SN	S	04 53 22.9	-1.4
BFZ	Birch Farm	5.12	198	PN	Pn	04 52 38.5	-0.7
BFZ				SN	S	04 53 37.0	-1.7
MRZ	Mangatainoka R	5.29	203	PN	Pn	04 52 39.4	-2.1
HOWZ	Holdsworth Sta	5.53	202	ePN	Pn	04 52 42.2	-2.3
OGWZ	Otaki Gorge	5.57	205	PN	Pn	04 52 43.1	-1.8
KIW	Kapiti Island	5.70	207	PN	Pn	04 52 44.5	-2.2
MTW	Mount Morrison	5.77	201	PN	Pn	04 52 45.3	-2.3
CAW	Cannon Point	5.86	205	PN	Pn	04 52 46.6	-2.2
TCW	Tory Channel	6.25	209	SN	S	04 53 59.6	-5.4
NNZ	Nelson	6.63	214	ePN	Pn	04 52 55.7	-3.0
NNZ				SN	S	04 54 10.3	-3.9
THZ	Tophouse	7.28	214	ePN	Pn	04 53 05.9	-1.4
MQZ	McQueen's Vall	9.00	207	SN	S	04 55 01.1	-9.3

ISCJB 05 04:53:45.0±0.7, 40°.40N±0°.02×25°.75E±0°.04, h6km±6km, Error ellipse: s-maj=5.3km s-min=3.8km az=151.8
THE 05 04:53:45.7, 40°.39N×25°.74E, h10km±1km, ML2.2/4, Error

ellipse: s-maj=1.5km s-min=0.7km az=25.0
*CSEM **05** 04:53:45.6±0.1, 40°.40N×25°.74E, h15km, ML2.2/4, Error ellipse: s-maj=3.6km s-min=2.8km az=66.0*
*SOF **05** 04:53:46.0, 40°.44N×25°.51E, h11km, MD2.7*
*DDA **05** 04:53:46.2, 40°.34N×25°.87E, h7km, MD2.7*
ISC 05 04:53:45.4±1.0**, 40°.38N**±0°.02×**25°.74E**±0°.03**, h14**km±9km**, n27, σ0ˢ.34**/44**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALN	**Alexandroupoli**	**0.56**	**24**	P	**Pg**	**04 53 56.1**	**-0.4**
ALN				S	**Sg**	**04 54 04.4**	**+0.4**
ALN	**Alexandroupoli**	**0.56**	**24**	P	**Pg**	**04 53 56.1**	**-0.4**
ALN				S	**Sg**	**04 54 04.4**	**+0.4**
BOZC	**Bozcaada**	**0.59**	**156**	*i* P	**Pg**	**04 53 56.9**	**-0.1**
BOZC				*i* S	**Sg**	**04 54 04.8**	**-0.1**
LIA	**Limnos Island**	**0.65**	**222**	P	**Pb**	**04 53 58.4**	**-0.1**
LIA				S	**Sb**	**04 54 07.6**	**+0.3**
LIA	**Limnos Island**	**0.65**	**222**	P	**Pb**	**04 53 58.4**	**-0.1**
LIA				S	**Sb**	**04 54 07.6**	**+0.3**
KAVA	**Kavala**	**1.12**	**304**	P	**Pb**	**04 54 06.4**	**-0.1**
KAVA				S	**Sn**	**04 54 21.8**	**+0.1**
KAVA	**Kavala**	**1.12**	**304**	P	**Pb**	**04 54 06.4**	**-0.1**
KAVA				S	**Sn**	**04 54 21.8**	**+0.1**
SIGR	**SIGRI**	**1.18**	**176**	P	**Pn**	**04 54 07.3**	**-0.1**
SIGR				S	**Sg**	**04 54 24.1**	**+0.7**
SIGR	**SIGRI**	**1.18**	**176**	P	**Pn**	**04 54 07.3**	**-0.1**
SIGR				S	**Sg**	**04 54 24.1**	**+0.7**
PRK	**Paraskevi**	**1.21**	**160**	P	**Pb**	**04 54 08.2**	**+0.2**
PRK				S	**Sg**	**04 54 24.6**	**+0.2**
PRK	**Paraskevi**	**1.21**	**160**	P	**Pb**	**04 54 08.2**	**+0.2**
PRK				S	**Sg**	**04 54 24.6**	**+0.2**
KDZ	**Kurdzhali**	**1.29**	**349**	*i* P	**Pn**	**04 54 09.2**	**+0.2**
KDZ	**Kurdzhali**	**1.29**	**349**	*i* P	**Pn**	**04 54 09.2**	**+0.2**
AYVA	**Ayvalik**	**1.30**	**145**	*i* P	**Pn**	**04 54 09.0**	**-0.1**
AYVA				*i* S	**Sb**	**04 54 25.9**	**-0.2**
AYVA	**Ayvalik**	**1.30**	**145**	*i* P	**Pn**	**04 54 09.0**	**-0.1**
AYVA				*i* S	**Sb**	**04 54 25.9**	**-0.2**
OUR	**Ouranopolis**	**1.34**	**268**	P	**Pn**	**04 54 09.2**	**-0.5**
OUR				S	**Sg**	**04 54 29.2**	**+0.4**
OUR	**Ouranopolis**	**1.34**	**268**	P	**Pn**	**04 54 09.2**	**-0.5**
OUR				S	**Sg**	**04 54 29.2**	**+0.4**
RZN	**Rozhen**	**1.52**	**330**	P	**Pn**	**04 54 12.3**	**0.0**
RZN	**Rozhen**	**1.52**	**330**	P	**Pn**	**04 54 12.3**	**0.0**
BALY	**Balya**	**1.58**	**113**	*i* P	**Pb**	**04 54 14.0**	**-0.4**
BALY				*i* S	**Sb**	**04 54 34.5**	**+0.3**
BALY	**Balya**	**1.58**	**113**	*i* P	**Pb**	**04 54 14.0**	**-0.4**
BALY				*i* S	**Sb**	**04 54 34.5**	**+0.3**
PAIG	**Paliouri**	**1.65**	**255**	P	**Pn**	**04 54 13.6**	**-0.3**
PAIG	**Paliouri**	**1.65**	**255**	P	**Pn**	**04 54 13.6**	**-0.3**
MMB	**Musomiste**	**1.94**	**309**	P	**Pn**	**04 54 17.8**	**-0.2**
MMB	**Musomiste**	**1.94**	**309**	P	**Pn**	**04 54 17.8**	**-0.2**
VTS	**Vitosha**	**2.91**	**320**	*e*P	**Pg**	**04 54 40.8**	**-0.5**
MPEP	**Malo Peshtene**	**3.32**	**334**	P	**Pn**	**04 54 37.7**	**+0.7**

*NIED **05** 04:56:00, 36°.60N×139°.20E, h17km, Mw3.3 Best double couple: Mo8.51000×10¹³ NP1:φs349.00000°, δ72.00000°, λ20.00000°. NP2:φs252.00000°, δ71.00000°, λ161.00000°.*
*IDC **05** 04:56:24.5±2.1, 36°.77N×139°.27E, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.3/25, mbtmp3.8/2, Error ellipse: s-maj=31.0km s-min=13.6km az=1.0*
*ISCJB **05** 04:56:27.2±0.7, 36°.59N±0°.04×139°.22E±0°.05, h25km±6km, mb3.9/2, Error ellipse: s-maj=7.2km s-min=6.4km az=160.1*
*JMA **05** 04:56:28.3, 36°.60N×139°.18E, h11km±1km, M3.4*
JMA Felt III J1.
ISC 05 04:56:27.6±1.0**, 36°.59N**±0°.04×**139°.18E**±0°.04**, h16**km±8km**, n10, σ0ˢ.35**/17**, 2C-3D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKT	**Katashina**	**0.18**	**18**	⇑P	**Pb**	**04 56 32.4**	**-0.3**
JKT				S	**Sg**	**04 56 35.1**	**-0.1**
JAG	**Ashikaga**	**0.28**	**127**	⇓P	**Pb**	**04 56 33.9**	**-0.4**
JAG				S	**Sg**	**04 56 37.7**	**+0.1**
JGK	**Kuni**	**0.43**	**266**	⇓P	**Pb**	**04 56 37.0**	**0.0**
JGK				S	**Sb**	**04 56 43.0**	**-0.3**
JRY	**Ryogami san**	**0.62**	**201**	⇑P	**Pg**	**04 56 39.9**	**+0.1**
JRY				S	**Sg**	**04 56 48.2**	**+0.3**
JHK	**Hiroka**	**0.67**	**349**	⇓P	**Pb**	**04 56 41.1**	**+0.2**
JHK				S	**Sb**	**04 56 49.8**	**-0.2**
MJAR	**Matsushiro Arr**	**0.78**	**267**	Pg	**Pb**	**04 56 42.3**	**-0.6**
	118nm,0.3s,baz=70,slow=17,SNR=945						
MJAR				Lg	Lg	04 56 51.8	
	88nm,0.3s,baz=69,slow=39,SNR=35						
MAT	**Matsushiro**	**0.78**	**267**	P	**Pb**	**04 56 42.8**	**-0.1**
MAT				S	**Sb**	**04 56 52.8**	**-0.5**
MAT	**Matsushiro**	**0.78**	**267**	P	**Pg**	**04 56 43.0**	**+0.1**
MAT				S	**Sb**	**04 56 53.0**	**-0.3**
WRA	**Warramunga Arr**	**56.41**	**185**	P	**P**	**05 06 08.4**	**0.0**
	2.1nm,0.9s,baz=2.3,slow=7.6,SNR=11						
ASAR	**Alice Springs**	**60.14**	**186**	P	**P**	**05 06 35.1**	**+0.6**
	0.4nm,0.7s,baz=22,slow=5.5,SNR=7.7						

*DDA **05** 05:12:34.0, 40°.88N×35°.94E, h10km, MD2.8*
*ISK **05** 05:12:33.6, 40°.93N×35°.86E, h6km, MD2.3*
*CSEM **05** 05:12:34.3±0.3, 40°.89N×35°.90E, h0km±3km, MD2.3, Error ellipse: s-maj=7.5km s-min=4.9km az=15.0*
ISC 05 05:12:34.2±0.9**, 40°.90N**±0°.04×**35°.92E**±0°.02**, h13**km±10km**, n22, σ0ˢ.66**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KVT	**Kavak**	**0.21**	**29**	*e*PG	**Pg**	**05 12 38.3**	**-0.5**
KVT				*e*SG	**Sg**	**05 12 41.6**	**-0.4**
KVT	**Kavak**	**0.21**	**29**	*e*Pg	**Pg**	**05 12 38.3**	**-0.5**
KVT				*e*Sg	**Sg**	**05 12 41.6**	**-0.4**
HAVZ	**Havza**	**0.23**	**320**	*i* P	**Pg**	**05 12 39.4**	**+0.2**
HAVZ				*i* S	**Sg**	**05 12 43.5**	**+0.9**
HAVZ	**Havza**	**0.23**	**320**	*i* P	**Pg**	**05 12 39.4**	**+0.2**
HAVZ				*i* S	**Sg**	**05 12 43.5**	**+0.9**
ERBA	**Erbaa**	**0.67**	**109**	*i* P	**Pg**	**05 12 47.0**	**-0.3**
ERBA				*i* S	**Sg**	**05 12 56.0**	**-0.2**
ERBA	**Erbaa**	**0.67**	**109**	*i* P	**Pg**	**05 12 47.0**	**-0.3**
ERBA				*i* S	**Sg**	**05 12 56.0**	**-0.2**
TOKT	**Tokat**	**0.75**	**140**	*e*PG	**Pb**	**05 12 49.7**	**+0.5**
TOKT	**Tokat**	**0.75**	**140**	*e*Pg	**Pb**	**05 12 49.7**	**+0.5**
CTKT	**Corum**	**0.90**	**252**	*i* P	**Pg**	**05 12 51.6**	**0.0**
CTKT				*i* S	**Sg**	**05 13 01.8**	**-1.6**
CTKT	**Corum**	**0.90**	**252**	*i* P	**Pg**	**05 12 51.6**	**0.0**
CTKT				*i* S	**Sg**	**05 13 01.8**	**-1.6**
DIKM	**Dikmen**	**0.90**	**327**	*e*PG	**Pg**	**05 12 50.5**	**-1.1**
DIKM	**Dikmen**	**0.90**	**327**	*e*Pg	**Pg**	**05 12 50.5**	**-1.1**
CORM	**Corum**	**1.22**	**234**	*e*PN	**Pg**	**05 12 56.9**	**-0.7**
CORM	**Corum**	**1.22**	**234**	*e*Pn	**Pg**	**05 12 56.9**	**-0.7**
YOZ	**Yozgat**	**1.34**	**200**	*e*PN	**Pg**	**05 12 59.6**	**-0.3**
YOZ	**Yozgat**	**1.34**	**200**	*e*Pn	**Pg**	**05 12 59.6**	**-0.3**
ILGA	**Ilgaz**	**1.67**	**276**	*i* P	**Pg**	**05 13 06.2**	**-0.1**
ILGA				*i* S	**Sg**	**05 13 28.5**	**+0.5**
ILGA	**Ilgaz**	**1.67**	**276**	*i* P	**Pg**	**05 13 06.2**	**-0.1**
ILGA				*i* S	**Sg**	**05 13 28.5**	**+0.5**
SUSE	**Susehri**	**1.88**	**111**	*i* P	**Pb**	**05 13 08.4**	**0.0**
SUSE				*i* S	**Sb**	**05 13 32.5**	**+0.7**
SUSE	**Susehri**	**1.88**	**111**	*i* P	**Pb**	**05 13 08.4**	**0.0**
SUSE				*i* S	**Sb**	**05 13 32.5**	**+0.7**
ELDT	**Eldivan**	**1.94**	**259**	*i* P	**Pb**	**05 13 09.3**	**-0.1**
ELDT				*i* S	**Sg**	**05 13 36.9**	**+0.4**
ELDT	**Eldivan**	**1.94**	**259**	*i* P	**Pb**	**05 13 09.3**	**-0.1**
ELDT				*i* S	**Sg**	**05 13 36.9**	**+0.4**

*IDC **05** 05:13:59.8±1.0, 9°.91N×127°.12E, h0km, mb4.0/10, mb1 4.1/11, mb1mx3.9/27, mbtmp4.0/11, ML4.4/1, MS3.5/3, Ms1 3.5/3, ms1mx2.8/35, Error ellipse: s-maj=45.3km s-min=14.9km az=75.0*
*MAN **05** 05:14:03, 9°.74N×126°.77E, h11km, mb4.7, ML3.5, MS3.5*
*ISCJB **05** 05:14:04.5±1.3, 9°.78N±0°.05×126°.87E±0°.08, h43km±12km, mb4.0/12, MS3.7/1, Error ellipse: s-maj=14.2km s-min=8.6km az=163.7*
ISC 05 05:14:07.3±2.3**, 9°.76N**±0°.06×**126°.7E**±0°.1**, h50**km±21km**, n28, σ1ˢ.73**/30**, mb4.0**/12**, 2C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.34**	**234**	*e*P	**Pn**	**05 14 27.3**	**-2.2**
BUTP				*e*S	**Sn**	**05 14 44.1**	**-2.1**
MSLP	**Maasin**	**1.87**	**282**	*e*P	**Pn**	**05 14 34.7**	**-2.2**
MSLP				*e*S	**Sn**	**05 14 56.0**	**-3.3**
CGP	**Cagayan de Oro**	**2.38**	**237**	⇑*e*P	**Pn**	**05 14 44.1**	**+0.2**
CGP				*i* S	**Sn**	**05 15 13.3**	**+1.4**
OCLP	**Ormoc**	**2.44**	**302**	*e*P	**Pn**	**05 14 44.7**	**0.0**
BUKP	**Musuan**	**2.48**	**221**	*e*P	**Pn**	**05 14 46.3**	**+1.0**
LLP	**Lapu-Lapu**	**2.77**	**282**	⇓*e*P	**Pn**	**05 14 49.4**	**+0.3**
LLP				*e*S	**Sn**	**05 15 25.5**	**+4.1**
TBP	**Tagbilaran**	**2.82**	**269**	*e*P	**Pn**	**05 14 49.4**	**-0.4**
TBP				*e*S	**Sn**	**05 15 25.5**	**+2.9**
DAV	**Davao City (W)**	**2.90**	**203**	Pn	**Pn**	**05 14 52.4**	**+1.4**
	42nm,0.3s,baz=72,slow=3.2,SNR=2.5						
DAV				LR	LR	05 16 02.8	
	comp=Z,663nm,21.2s,baz=186,slow=38						
CTBH	**Cotabato--PC H**	**3.51**	**224**	⇑*i*P	**Pn**	**05 15 00.5**	**+1.1**
PAGZ	**Pagadian**	**3.80**	**240**	*e*P	Pn	05 14 54.9	-8.5
GUIM	**Jordan**	**4.16**	**282**	*e*P	**Pn**	**05 15 08.0**	**-0.2**
RCP	**Roxas**	**4.30**	**295**	⇓*e*P	**Pn**	**05 15 09.9**	**-0.2**
PVCP	**Virac**	**4.57**	**327**	*e*P	**Pn**	**05 15 15.2**	**+1.3**
GUMO	**Guam**	**18.18**	**76**	LR	LR	05 24 11.7	
	comp=Z,137nm,18.8s,baz=70,slow=34						
FITZ	**Fitzroy Crossi**	**27.70**	**182**	P	**P**	**05 19 51.3**	**+0.4**
	3.1nm,0.7s,baz=19,slow=10,SNR=12						
CMAR	**Chiang Mai Arr**	**28.26**	**291**	P	**P**	**05 19 58.7**	**+2.6**
	0.7nm,0.3s,baz=86,slow=7.2,SNR=4.2						
WRA	**Warramunga Arr**	**30.45**	**166**	P	**P**	**05 20 15.4**	**0.0**
	0.3nm,0.4s,baz=346,slow=8.8,SNR=7.3						
ASAR	**Alice Springs**	**33.95**	**168**	P	**P**	**05 20 45.5**	**-0.6**
	0.2nm,0.3s,baz=346,slow=6.6,SNR=6.4						
SONM	**Songino Array**	**41.65**	**339**	P	**P**	**05 21 51.0**	**+0.1**
	1.1nm,0.9s,baz=157,slow=10,SNR=8.7						
NWAO	**Narrogin (SRO)**	**43.40**	**192**	P	**P**	**05 22 04.9**	**-0.2**
	3.0nm,0.5s,baz=61,slow=5.0,SNR=5.7						
STKA	**Stephens Creek**	**43.78**	**162**	P	**P**	**05 22 08.0**	**-0.2**
	1.8nm,0.6s,baz=10,slow=4.7,SNR=4.2						
MKAR	**Makanchi Array**	**52.70**	**323**	P	**P**	**05 23 16.0**	**-0.9**
	0.5nm,0.8s,baz=120,slow=7.1,SNR=7.4						
JOF	**Joensuu**	**83.85**	**333**	*e*p	**P**	**05 26 28.5**	**-2.8**
	0.6nm,0.3s						
ARCES	**ARCESS Array B**	**84.83**	**340**	P	**P**	**05 26 36.7**	**+0.5**
	6.9nm,1.1s,baz=90,slow=6.1,SNR=4.1						
KAF	**Kangasniemi**	**86.28**	**332**	*e*p	**P**	**05 26 42.6**	**-1.0**
	1.0nm,0.4s						
FINES	**FINESS Array B**	**86.55**	**332**	P	**P**	**05 26 44.4**	**-0.5**
	0.6nm,0.3s,baz=67,slow=5.1,SNR=14						
NOA	**NORSAR Array B**	**93.41**	**334**	LR	LR	06 16 12.5	
	comp=Z,26nm,18.6s,baz=25,slow=40						
TORD	**Torodi Ar. Bea**	**120.87**	**292**	PKP	**PKPdf**	**05 32 54.4**	**-0.7**
	0.2nm,0.6s,baz=74,slow=2.2,SNR=4.5						

WEL 05 05:16:57.7±0.1**, 37°.79S**×**176°.78E, h5**km**, ML3.6**/8**, 11C-2D, Error ellipse: s-maj=0.8km s-min=0.6km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.19**	**252**	⇑PG	Pg	05 17 01.5	+0.1
OPRZ				SG	Sg	05 17 04.6	+0.7
MARZ	**Manawahe**	**0.22**	**203**	⇑PG	Pg	05 17 02.3	+0.2
MARZ				SG	Sg	05 17 06.0	+1.0
EDRZ	**Edgecumbe**	**0.32**	**186**	⇑PG	Pg	05 17 04.3	+0.3
LIRZ	**Lichensteins R**	**0.38**	**235**	⇑PG	Pg	05 17 05.6	+0.5
TGRZ	**Tauranga**	**0.41**	**278**	⇑PG	Pg	05 17 06.0	+0.2
WIZ	**White Island**	**0.41**	**52**	⇓PG	Pg	05 17 06.1	+0.4
WIZ				SG	Sg	05 17 12.3	+1.2
MKRZ	**Makatiti**	**0.43**	**215**	PG	Pg	05 17 06.8	+0.7
OMRZ	**Omania**	**0.46**	**225**	⇑PG	Pg	05 17 06.8	+0.3
KARZ	**Kaharoa**	**0.48**	**241**	PG	Pg	05 17 07.5	+0.4
TARZ	**Mount Tarawera**	**0.50**	**206**	⇑PG	Pg	05 17 08.0	+0.6
URZ	**Urewera**	**0.54**	**151**	⇓PG	Pg	05 17 07.9	-0.2
RRRZ	**Republican Roa**	**0.59**	**201**	PG	Pg	05 17 09.1	0.0
UTU	**Utuhina**	**0.61**	**230**	*e*P*	Pb	05 17 10.3	-0.5
MYRZ	**Mayor Island**	**0.66**	**320**	⇑P*	Pg	05 17 10.7	+0.2
HRRZ	**Handcock Road**	**0.72**	**213**	P*	Pb	05 17 12.3	-0.5
PRRZ	**Plateau Road**	**0.77**	**203**	P*	Pg	05 17 12.6	0.0
MWZ	**Matawai**	**0.81**	**133**	⇑P*	Pg	05 17 13.2	-0.1
TOZ	**Tahuroa Road**	**1.01**	**273**	⇑P*	Pg	05 17 16.4	-0.7
RAHZ	**Arahi**	**1.15**	**168**	P*	Pg	05 17 19.1	-0.9
PUZ	**Puketiti**	**1.20**	**104**	P*	Pg	05 17 20.5	-0.4
MXZ	**Matakaoa Point**	**1.23**	**80**	*e*P*	Pg	05 17 19.9	-1.4
NMHZ	**Naumai**	**1.31**	**179**	⇑P*	Pn	05 17 21.9	-0.9
KUZ	**Kuaotunu**	**1.34**	**321**	P*	Pn	05 17 19.9	-3.2
KNZ	**Kokohu**	**1.42**	**151**	PN	Pn	05 17 23.8	-0.3
MKAZ	**Moumakai**	**1.45**	**297**	PN	Pn	05 17 21.8	-2.8
BHHZ	**Black Hill Sta**	**1.79**	**198**	*e*P*	Pb	05 17 30.6	-0.5
PXZ	**Pawanui**	**2.24**	**178**	*e*PN	Pn	05 17 33.8	-1.7

*ISCJB **05** 05:17:42.1±0.5, 24°.78N±0°.04×122°.43E±0°.02, h9km±4km, Error ellipse: s-maj=6.2km s-min=2.9km az=9.6*
*JMA **05** 05:17:43.3±0.2, 24°.92N×122°.54E, h28km, M2.4*
*TAP **05** 05:17:43.4, 24°.79N×122°.30E, h9km, ML3.1, C*
ISC 05 05:17:41.9±1.1**, 24°.76N**±0°.04×**122°.41E**±0°.03**, h13**km±9km**, n29, σ0ˢ.53**/47**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.46**	**302**	*i* P	**Pg**	**05 17 51.3**	**+0.4**
	baz=309						
TWB1				*i* S	**Sg**	**05 17 56.7**	**-0.3**
	baz=309						
TWC	**Suao**	**0.54**	**253**	*i* P	**Pg**	**05 17 52.3**	**-0.1**
	baz=255						
TWC				*e*S	**Sb**	**05 18 00.9**	**+0.2**
	baz=255						
YOJ	**Yonaguni jima**	**0.62**	**119**	P	**Pb**	**05 17 55.4**	**+0.8**
YOJ				S	**Sb**	**05 18 03.9**	**+0.7**
NWF	**Wu-fen Shan**	**0.65**	**298**	P	**Pb**	**05 17 55.6**	**+0.4**
	baz=301						
NWF				S	**Sb**	**05 18 04.2**	**0.0**
	baz=301						
TWE	**Neicheng**	**0.68**	**267**	*i* P	**Pg**	**05 17 55.0**	**-0.1**
	baz=255						
TWE				*e*S	**Sg**	**05 18 03.3**	**-0.8**
	baz=255						
ENA	**Nanau**	**0.70**	**241**	P	**Pg**	**05 17 55.4**	**0.0**
	baz=233						
ENA				*e*S	**Sb**	**05 18 05.4**	**0.0**
	baz=233						
ENTT	**Nioudou**	**0.78**	**261**	P	**Pg**	**05 17 57.0**	**-0.1**
	baz=257						
ENTT				*e*S	**Sg**	**05 18 07.0**	**-0.3**
	baz=257						
TWY	**Chenhua**	**0.90**	**305**	P	**Pn**	**05 18 00.1**	**-0.1**
	baz=308						
TWY				*e*S	**Sb**	**05 18 11.4**	**+0.2**
	baz=308						
PCYT	**Pengchaiyu**	**0.92**	**340**	*e*P	**Pn**	**05 18 00.8**	**+0.4**
	baz=358						
NSK	**Sanguang**	**0.96**	**265**	*e*P	**Pb**	**05 18 00.1**	**-0.4**
	baz=256						
NSK				*e*S	**Sb**	**05 18 11.5**	**-1.7**
	baz=256						
TWS1	**Kuangyinshan**	**0.96**	**291**	*e*P	**Pn**	**05 18 01.2**	**+0.1**
	baz=292						
NNS	**Nan Shan**	**1.00**	**251**	*e*P	**Pb**	**05 18 01.0**	**-0.2**
	baz=236						
NNS				*e*S	**Sb**	**05 18 14.5**	**+0.2**
	baz=236						
TWD	**Chiawan**	**1.01**	**228**	*e*P	**Pb**	**05 18 01.3**	**+0.1**
	baz=228						
WHF	**Hehuan Shan**	**1.21**	**240**	P	**Pn**	**05 18 05.1**	**+0.1**
	baz=234						
WHF				*e*S	**Sb**	**05 18 20.3**	**-0.4**
	baz=234						
TWT	**Tachien**	**1.24**	**246**	*e*P	**Pg**	**05 18 05.9**	**+0.2**
	baz=242						
TWT				*e*S	**Sn**	**05 18 22.0**	**+0.3**
	baz=242						
IRIF	**Iriomote-Funau**	**1.27**	**109**	P	**Pn**	**05 18 04.6**	**-0.8**
IRIF				S	**Sb**	**05 18 21.3**	**-0.7**
NSTT	**Nanjuang**	**1.29**	**264**	*e*P	**Pg**	**05 18 06.8**	**0.0**
	baz=262						
NSTT				*e*S	**Sn**	**05 18 22.8**	**+0.1**
	baz=262						
ESL	**Shilin**	**1.30**	**224**	*e*P	**Pb**	**05 18 06.4**	**+0.2**
	baz=238						
ESL				*e*S	**Sg**	**05 18 24.7**	**+0.8**
	baz=238						
HATJ	**Hateruma jima**	**1.45**	**119**	S	**Sn**	**05 18 26.2**	**-0.5**
NSY	**Sanyi**	**1.54**	**257**	*e*P	**Pg**	**05 18 12.5**	**+0.9**
	baz=276						
JKRS	**Kuro-shima**	**1.55**	**109**	P	**Pn**	**05 18 09.0**	**-0.1**
JKRS				S	**Sn**	**05 18 28.5**	**-0.5**
TWQ1	**Liyutan**	**1.55**	**255**	*e*P	**Pg**	**05 18 11.6**	**-0.1**
	baz=252						
EHY	**Hungye**	**1.60**	**219**	*e*P	**Pg**	**05 18 12.4**	**-0.3**
	baz=211						
JIJ	**Ishigaki jima**	**1.62**	**104**	P	**Pn**	**05 18 10.1**	**-0.1**
SMLT	**Sun Moon Lake**	**1.64**	**238**	*e*P	**Pb**	**05 18 12.2**	**+0.2**
	baz=234						
SMLT				*e*S	**Sb**	**05 18 33.6**	**+1.1**
	baz=234						
TYC	**Yuchr**	**1.66**	**239**	*e*P	**Pb**	**05 18 12.8**	**+0.5**
	baz=235						
TYC				*e*S	**Sb**	**05 18 33.5**	**+0.4**
	baz=235						
TWF1	**Yuli**	**1.74**	**216**	*e*P	**Pb**	**05 18 14.6**	**+1.0**
	baz=209						
CHN4	**Tsaushan**	**2.18**	**230**	*e*P	**Pb**	**05 18 20.4**	**-0.8**
	baz=207						
CHN1	**Nanshi**	**2.33**	**228**	*e*P	**Pb**	**05 18 23.8**	**0.0**
	baz=222						

CASC 05 05:27:52.4±1.8**, 14°.35N**×**90°.47W, h5**km±5km**, MD3.5, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.14**	**289**	*e*P	Pg	05 27 56.4	+0.9
GCG	**Guatemala City**	**0.24**	**346**	*e*P	Pg	05 27 58.2	+0.8
GCG				*e*S	Sg	05 28 02.1	+1.3
NBG	**Las Nubes**	**0.27**	**28**	*e*P	Pg	05 27 58.9	+0.9
NBG				*e*S	Sb	05 28 03.5	-1.7
FUG	**Fuego 3**	**0.37**	**285**	*e*P	Pg	05 28 00.3	+0.4
FG6		**0.45**	**298**	*e*P	Pg	05 28 01.8	+0.3
TP2	**Tecpan 2**	**0.68**	**309**	*e*P	Pg	05 28 06.7	+0.6
RBDL	**Robledal**	**0.80**	**107**	*e*P	Pg	05 28 07.2	-0.8
RTR	**El Retiro**	**0.92**	**119**	*e*P	Pg	05 28 09.9	-0.5
SBLS	**San Blas**	**0.97**	**121**	*e*P	Pg	05 28 10.8	-0.6
SNJE	**San Jose**	**0.97**	**120**	*e*P	Pg	05 28 10.4	-0.9
MRL	**Marmol**	**1.04**	**47**	*e*P	Pg	05 28 12.9	+0.2
MRL				*e*S	Sb	05 28 27.6	+0.3
MTO2	**Montecristo 2**	**1.08**	**87**	*e*P	Pg	05 28 12.4	-1.0
MTO2				*e*S	Sn	05 28 29.6	-0.5
JAT	**Jato**	**1.13**	**269**	*e*P	Pn	05 28 14.8	0.0
JAT				*e*S	Sn	05 28 30.4	-0.3
BOQS	**Boqueron**	**1.31**	**118**	*e*P	Pn	05 28 16.7	-1.0
BOQS				*e*S	Sn	05 28 35.5	-0.3
LFU	**La Fuente**	**1.45**	**114**	*e*P	Pn	05 28 19.1	-0.3
LBRS	**Las Brisas**	**1.52**	**113**	*e*P	Pn	05 28 19.9	-0.5
LFRS	**El Faro**	**1.55**	**118**	*e*P	Pn	05 28 20.6	-0.2

*ISCJB **05** 05:40:37.2±0.6, 37°.3N±0°.1×135°.36E±0°.09, h350km, mb2.9/5, Error ellipse: s-maj=15.4km s-min=8.6km az=23.4*
*IDC **05** 05:40:37.4±1.2, 37°.00N×135°.47E, h360km±14km, mb2.7/5, mb1 3.0/8, mb1mx2.8/29, mbtmp2.8/8, Error ellipse: s-maj=20.7km s-min=18.5km az=9.0*
*JMA **05** 05:40:37.2±0.3, 37°.00N×135°.35E, h359km±3km, M3.1*
ISC 05 05:40:37.4±0.8**, 37°.1N**±0°.1×**135°.38E**±0°.08**, h350**km**, n13, σ0ˢ.98**/16**, mb2.9**/5**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKY	**Yasaka**	**1.47**	**189**	P	**Pn**	**05 41 26.0**	**+0.5**
JGM	**Miyama**	**1.75**	**142**	P	**Pn**	**05 41 27.5**	**+0.3**
JGM				S	**S**	**05 42 07.8**	**+0.8**
MAT	**Matsushiro**	**2.33**	**103**	P	**Pn**	**05 41 31.4**	**+0.2**
MAT				*e*S	**S**	**05 42 15.3**	**+1.0**
MAT	**Matsushiro**	**2.33**	**103**	P	**Pn**	**05 41 31.7**	**+0.5**
MJAR	**Matsushiro Arr**	**2.33**	**103**	P	**Pn**	**05 41 32.1**	**+1.0**
	1.0nm,0.3s,baz=275,slow=10,SNR=18						
JAG	**Ashikaga**	**3.34**	**100**	P	**Pn**	**05 41 40.7**	**+0.9**
JAG				S	**S**	**05 42 31.3**	**+1.2**
KSRS	**Korea Array**	**5.96**	**276**	P	**Pn**	**05 42 09.1**	**+1.4**
	0.5nm,0.3s,baz=98,slow=12,SNR=22						
ASAJ	**Asahikawa**	**8.91**	**36**	P	**Pn**	**05 42 41.5**	**-0.7**
	2.4nm,0.3s,baz=218,slow=7.9,SNR=16						
SONM	**Songino Array**	**23.80**	**306**	P	**P**	**05 45 20.1**	**+0.2**
	0.3nm,0.5s,baz=115,slow=9.7,SNR=2.6						
MKAR	**Makanchi Array**	**39.98**	**301**	P	**P**	**05 47 39.8**	**+0.7**
	0.2nm,0.5s,baz=94,slow=9.9,SNR=3.1						
ILAR	**Eielson Array**	**52.03**	**32**	P	**P**	**05 49 11.5**	**-0.3**
	0.1nm,0.5s,baz=279,slow=6.3,SNR=4.1						
WRA	**Warramunga Arr**	**56.73**	**181**	P	**P**	**05 49 44.0**	**-1.7**
	0.5nm,0.5s,baz=0.3,slow=7.6,SNR=5.2						
FINES	**FINESS Array B**	**66.45**	**330**	P	**P**	**05 50 48.6**	**-1.0**
	1.2nm,0.9s,baz=61,slow=4.8,SNR=6.4						

*ISCJB **05** 06:03:26.7±0.8, 25°.24N±0°.06×127°.69E±0°.06, h27km, mb3.4/4, Error ellipse: s-maj=8.3km s-min=8.0km az=33.5*
*IDC **05** 06:03:26.9±3.7, 25°.52N×127°.40E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/26, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=80.5km s-min=29.6km az=157.0*
*JMA **05** 06:03:28.0±0.2, 25°.27N×127°.62E, h55km±4km, M3.1*
ISC 05 06:03:28.4±1.2**, 25°.26N**±0°.09×**127°.67E**±0°.06**, h27**km**, n14, σ1ˢ.42**/19**, mb3.4**/4**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.88**	**5**	P	**Pn**	**06 03 44.3**	**-0.7**
JJT2				S	**Sn**	**06 03 56.2**	**-0.7**
JKE	**Kume jima 2**	**1.33**	**323**	P	**Pn**	**06 03 50.1**	**-1.0**
JKE				S	**Sn**	**06 04 06.8**	**-1.1**
JAGN	**Aguni-jima**	**1.38**	**344**	P	**Pn**	**06 03 50.9**	**-1.0**
JAGN				S	**Sn**	**06 04 07.4**	**-1.8**
JOW	**Kunigami**	**1.66**	**19**	P	**Pn**	**06 03 55.5**	**-0.2**
JOW	**Kunigami**	**1.66**	**19**	Pn	**Pn**	**06 03 54.9**	**-0.9**
	4.0nm,0.3s,baz=98,slow=23,SNR=19						
JIH	**Iheya**	**1.79**	**9**	P	**Pn**	**06 03 57.4**	**-0.1**
JIH				S	**Sn**	**06 04 18.0**	**-1.3**
JTJ	**Tarama**	**2.76**	**258**	P	**Pn**	**06 04 10.4**	**-0.5**
JMZ	**Minamidaito 2**	**3.26**	**79**	P	**Pn**	**06 04 17.1**	**-0.6**
JMZ				S	**Sn**	**06 04 52.5**	**-3.1**
JAM	**Amami Oshima**	**3.59**	**28**	P	**Pn**	**06 04 22.3**	**+0.1**
JNU	**Nakatsue**	**8.32**	**19**	Pn	**Pn**	**06 05 28.4**	**+1.0**
	1.0nm,0.3s,baz=211,slow=5.9,SNR=10						
MKAR	**Makanchi Array**	**41.81**	**313**	P	**P**	**06 11 14.7**	**-1.0**
	0.5nm,0.5s,baz=97,slow=10,SNR=12						
KURBB	**Kurchatov Arra**	**45.21**	**317**	P	**P**	**06 11 42.0**	**-1.0**
	0.2nm,0.4s,baz=106,slow=8.8,SNR=4.5						
FINES	**FINESS Array B**	**73.45**	**331**	P	**P**	**06 15 00.4**	**+2.3**
	1.2nm,0.8s,baz=48,slow=7.6,SNR=5.3						
YKA	**Yellowknife Ar**	**79.62**	**25**	P	**P**	**06 15 34.7**	**+1.8**
	0.1nm,0.6s,baz=295,slow=5.9,SNR=4.2						

IDC 05 06:08:37.1±2.1**, 22°.28S**×**68°.87W, h0**km**, mb3.6**/2**, mb1 3.9**/4**, mb1mx3.6**/18**, mbtmp3.7**/4**, ML3.9**/2**, Error ellipse: s-maj=53.3km s-min=51.2km az=13.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.00**	**7**	Pn	Pn	06 10 09.0	+1.2
	0.7nm,0.3s,baz=194,slow=5.8,SNR=20						
SIV	**San Ignacio**	**9.66**	**51**	Pn	Pn	06 10 56.2	-1.4
	1.5nm,0.3s,baz=243,slow=15,SNR=47						
TORD	**Torodi Ar. Bea**	**77.58**	**70**	P	P	06 20 35.6	0.0
	0.5nm,0.7s,baz=254,slow=5.9,SNR=2.8						
YKA	**Yellowknife Ar**	**91.93**	**341**	P	P	06 21 45.9	-1.1
	0.2nm,0.6s,baz=137,slow=4.2,SNR=8.0						
MKAR	**Makanchi Array**	**146.23**	**37**	PKPbc	PKPbc	06 28 19.8	+0.2
	0.2nm,0.4s,baz=319,slow=2.6,SNR=3.9						

*CSEM **05** 06:20:26.7±0.4, 45°.25N×13°.32E, h19km, ML2.5/4, Error ellipse: s-maj=6.7km s-min=4.0km az=89.0*
*LJU **05** 06:20:27.1, 45°.25N×13°.40E, h1km, ML1.3*
ISC 05 06:20:26.7±2.8**, 45°.25N**±0°.05×**13°.3E**±0°.1**, h12**km±10km**, n14, σ0ˢ.19**/25**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKDS	**Skadanscina**	**0.58**	**59**	*i* Pg	**Pg**	**06 20 38.0**	**0.0**
SKDS				*i* Sg	**Sg**	**06 20 45.4**	**-0.2**
SKDS							
	comp=Z,4.0nm,0.0s						
SKDS	**Skadanscina**	**0.58**	**59**	Pg	**Pg**	**06 20 38.0**	**0.0**
SKDS				*i* Sg	**Sg**	**06 20 45.4**	**-0.2**
	comp=Z,4.0nm,0.0s						
CRNS	**Crni Vrh**	**1.06**	**38**	*i* Pg	**Pb**	**06 20 47.1**	**0.0**
CRNS				*i* Sg	**Sb**	**06 21 01.2**	**+0.2**
CRNS							

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,1.0nm,0.1s						
GBRS	**Gornja Briga**	**1.09**	**75**	*i* Pg	**Pn**	**06 20 47.9**	**0.0**
GBRS				*i* Sg	**Sn**	**06 21 02.7**	**-0.3**
	comp=Z,2.0nm,0.1s						
VISS	**Visnje**	**1.21**	**62**	*i* Pg	**Pg**	**06 20 49.9**	**0.0**
VISS				*i* Sg	**Sn**	**06 21 05.7**	**-0.1**
VISS							
	comp=Z,2.0nm,0.1s						
VISS	**Visnje**	**1.21**	**62**	*i* Pg	**Pg**	**06 20 49.9**	**0.0**
VISS				*i* Sg	**Sn**	**06 21 05.7**	**-0.1**
	comp=Z,2.0nm,0.1s						
NVLJ	**Novalja**	**1.30**	**121**	*i* Pg	**Pg**	**06 20 51.7**	**-0.1**
NVLJ				Sg	**Sg**	**06 21 08.8**	**+0.2**
NVLJ	**Novalja**	**1.30**	**121**	*i* Pg	**Pg**	**06 20 51.6**	**-0.1**
NVLJ				Sg	**Sg**	**06 21 08.8**	**+0.2**
MOZS	**Mozjanca**	**1.31**	**37**	*i* Pg	**Pg**	**06 20 51.9**	**0.0**
MOZS	**Mozjanca**	**1.31**	**37**	*i* Pg	**Pg**	**06 20 51.9**	**0.0**
PDKS	**Podkum**	**1.43**	**55**	*i* Pg	**Pg**	**06 20 53.9**	**-0.3**
PDKS				*i* Sg	**Sg**	**06 21 13.1**	**+0.2**
PDKS							
	comp=Z,1.0nm,0.1s						
PDKS	**Podkum**	**1.43**	**55**	*i* Pg	**Pg**	**06 20 53.9**	**-0.3**
PDKS				*i* Sg	**Sg**	**06 21 13.1**	**+0.2**
	comp=Z,1.0nm,0.1s						
LEGS	**Legarje**	**1.57**	**63**	*i* Pg	**Pb**	**06 20 55.8**	**0.0**
LEGS	**Legarje**	**1.57**	**63**	*i* Pg	**Pb**	**06 20 55.8**	**0.0**
LEGS				*i* Sg	**Sb**	**06 21 15.9**	**+0.3**

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*IDC **05** 06:28:27.9±0.8, 5.°19N×127.°45E, h0km, mb4.3/10, mb1 4.5/10, mb1mx4.1/24, mbtmp4.3/10, MS3.8/2, Ms1 3.8/2, ms1mx2.7/35, Error ellipse: s-maj=60.0km s-min=15.3km az=73.0*

*ISCJB **05** 06:28:36.3±1.1, 5.°06N±0.°07×127.°4E±0.°1, h82km±9km, mb4.2/13, Error ellipse: s-maj=21.0km s-min=8.6km az=152.7*

*NEIC **05** 06:28:36.3±1.2, 5.°10N×127.°41E, h64km±11km, mb4.4/6, Error ellipse: s-maj=16.3km s-min=5.6km az=69.0*

*MAN **05** 06:28:37, 5.°16N×127.°32E, h27km, mb4.9, ML3.8, MS3.9*

ISC 05 06:28:36.8±1.8, **5.°11N**±0.°09×**127.°5E**±0.°1, **h70**km±16km, **n47**, σ1**.°10**/49, **mb4.4**/13, **3C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**2.17**	**327**	*e*P	**Pn**	**06 29 10.4**	**-0.4**
MATI				*e*S	**Sn**	**06 29 32.4**	**-4.4**
GSPH	**General Santos**	**2.67**	**291**	⇑*i*P	Pn	06 29 13.5	-4.1
GSPH				*i* S	Sn	06 29 42.0	-7.1
DAV	**Davao City (W)**	**2.69**	**316**	*e*Pn	**Pn**	**06 29 16.9**	**-0.9**
DAV				Sn	**Sn**	**06 29 51.0**	**+1.7**
DAV				*e*Sn	Sn	06 29 53.7	+4.4
DAV	**Davao City (W)**	**2.69**	**316**	Pn	**Pn**	**06 29 17.7**	**-0.1**
	98nm,0.3s,baz=90,slow=2.0,SNR=7.9						
DAV				Sn	**Sn**	**06 29 51.0**	**+1.7**
	114nm,0.3s,baz=92,slow=23,SNR=7.1						
DMPH	**Davao City--Mi**	**2.75**	**315**	⇑*i*P	**Pn**	**06 29 19.5**	**+0.9**
DMPH				*i* S	**Sn**	**06 29 52.2**	**+1.4**
KCP	**Kidapawan**	**3.01**	**309**	⇓*i*P	**Pn**	**06 29 21.4**	**-0.8**
KCP				*i* S	**Sn**	**06 29 56.0**	**-1.2**
BUKP	**Musuan**	**3.63**	**319**	*e*P	**Pn**	**06 29 31.7**	**+1.1**
CTBH	**Cotabato--PC H**	**3.81**	**303**	⇑*i*P	**Pn**	**06 29 33.6**	**+0.5**
BUTP	**Butuan**	**4.24**	**335**	*e*P	**Pn**	**06 29 39.8**	**+0.8**
CGP	**Cagayan de Oro**	**4.30**	**321**	⇓*e*P	Pn	06 29 46.5	+6.7
CGP				*e*S	**Sn**	**06 30 32.1**	**+3.3**
PAGZ	**Pagadian**	**4.87**	**304**	*e*P	**Pn**	**06 29 48.6**	**+1.0**
KSM	**Kuching**	**17.49**	**259**	*e*Pn	**Pn**	**06 32 35.6**	**-0.6**
	18nm,0.9s						
FITZ	**Fitzroy Crossi**	**23.14**	**184**	*e*P	**P**	**06 33 37.2**	**0.0**
	3.7nm,0.7s						
FITZ	**Fitzroy Crossi**	**23.14**	**184**	P	**P**	**06 33 37.3**	**0.0**
	2.9nm,0.5s,baz=12,slow=8.9,SNR=25						
WRAB	**Tennant Creek**	**25.80**	**165**	*e*P	**P**	**06 34 01.4**	**-0.1**
	19nm,0.5s						
WRA	**Warramunga Arr**	**25.80**	**165**	P	**P**	**06 34 01.2**	**-0.3**
WRA	**Warramunga Arr**	**25.80**	**165**	P	**P**	**06 34 01.2**	**-0.3**
	18nm,0.5s,baz=345,slow=10,SNR=94						
AS31	**Alice Springs**	**29.29**	**168**	*e*P	**P**	**06 34 32.8**	**0.0**
ASAR	**Alice Springs**	**29.29**	**168**	P	**P**	**06 34 32.9**	**+0.1**
ASAR	**Alice Springs**	**29.29**	**168**	P	**P**	**06 34 32.9**	**+0.1**
	2.0nm,0.7s,baz=358,slow=7.7,SNR=27						
MJAR	**Matsushiro Arr**	**32.80**	**16**	LR	LR	06 49 03.9	
	comp=Z,42nm,18.3s,baz=250,slow=38						
STKA	**Stephens Creek**	**39.17**	**161**	*e*P	**P**	**06 35 58.4**	**+0.4**
	4.5nm,0.7s						
STKA	**Stephens Creek**	**39.17**	**161**	P	**P**	**06 35 58.5**	**+0.5**
	21nm,0.6s,baz=341,slow=7.6,SNR=50						
ODAN	**Odare**	**43.88**	**304**	*e*P	**P**	**06 36 35.8**	**-1.1**
	15nm,0.7s						
RAMN	**Ramite**	**44.57**	**304**	*e*P	**P**	**06 36 41.6**	**-0.9**
	12nm,0.8s						
GUN	**Gumba**	**45.52**	**305**	*e*P	**P**	**06 36 49.2**	**-0.9**
	15nm,0.6s						
KOLN	**Koldanda**	**47.35**	**303**	*e*P	**P**	**06 37 03.4**	**-0.9**
	13nm,0.6s						
DANN	**Dangsing**	**47.42**	**304**	*e*P	**P**	**06 37 03.8**	**-1.1**
	17nm,0.7s						
PYUN	**Piuthan**	**47.97**	**304**	*e*P	**P**	**06 37 08.1**	**-1.0**
	18nm,1.0s						
MK31	**Makanchi Array**	**56.85**	**324**	*e*P	**P**	**06 38 14.4**	**+0.1**
MKAR	**Makanchi Array**	**56.85**	**324**	P	**P**	**06 38 14.6**	**+0.3**
MKAR	**Makanchi Array**	**56.85**	**324**	P	**P**	**06 38 14.6**	**+0.3**
	1.8nm,0.4s,baz=117,slow=7.5,SNR=64						
ZALV	**Zalesovo Beam**	**59.70**	**332**	P	**P**	**06 38 34.4**	**+0.5**
ZALV	**Zalesovo Beam**	**59.70**	**332**	P	**P**	**06 38 34.4**	**+0.5**
	0.9nm,0.3s,baz=116,slow=6.8,SNR=4.7						
KURK	**Kurchatov**	**60.98**	**327**	*e*P	**P**	**06 38 43.1**	**+0.3**
	3.4nm,0.5s						
ABKAR	**Akbulak array**	**71.55**	**320**	*e*P	**P**	**06 39 50.3**	**-0.1**
	1.1nm,0.2s						
ILAR	**Eielson Array**	**83.55**	**25**	P	**P**	**06 40 57.5**	**+0.5**
ILAR	**Eielson Array**	**83.55**	**25**	P	**P**	**06 40 57.5**	**+0.5**
	0.2nm,0.6s,baz=262,slow=5.8,SNR=4.3						
ARCES	**ARCESS Array B**	**89.41**	**340**	P	**P**	**06 41 25.6**	**0.0**
ARCES	**ARCESS Array B**	**89.41**	**340**	P	**P**	**06 41 25.6**	**0.0**
	6.8nm,1.0s,baz=89,slow=4.9,SNR=5.8						
BRTR	**Keskin Array B**	**89.70**	**310**	P	**P**	**06 41 27.0**	**-0.7**
BRTR	**Keskin Array B**	**89.70**	**310**	P	**P**	**06 41 27.0**	**-0.7**
	0.3nm,0.4s,baz=76,slow=6.1,SNR=3.0						
FINES	**FINESS Array B**	**90.96**	**332**	P	**P**	**06 41 32.5**	**-0.4**
FINES	**FINESS Array B**	**90.96**	**332**	P	**P**	**06 41 32.5**	**-0.4**
	0.5nm,0.4s,baz=25,slow=5.0,SNR=5.4						
DLBC	**Dease Lake**	**92.19**	**31**	LR	LR	07 22 38.2	
	comp=Z,178nm,19.0s,baz=328,slow=35						
TORD	**Torodi Ar. Bea**	**123.16**	**289**	PKP	**PKPdf**	**06 47 27.0**	**+0.4**
TORD	**Torodi Ar. Bea**	**123.16**	**289**	PKP	**PKPdf**	**06 47 27.0**	**+0.4**
	0.4nm,0.6s,baz=52,slow=1.8,SNR=4.8						

IDC 05 06:30:27.5±0.9, **5.°02S**×**154.°81E, h69**km±7km, **mb3.9**/14, **mb1 4.1**/15, **mb1mx4.0**/22, **mbtmp3.9**/15, **MS3.4**/8, **Ms1 3.4**/8, **ms1mx3.2**/30, **Error ellipse: s-maj=20.5km s-min=13.8km az=126.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.76**	**240**	P	Pn	06 32 33.3	+1.8
	9.6nm,0.3s,baz=62,slow=7.8,SNR=30						
PMG				S	Sn	06 34 13.3	+4.6
	3.3nm,0.3s,baz=91,slow=19,SNR=3.3						
CTA	**Charters Tower**	**17.14**	**208**	P	P	06 34 26.0	+2.6
	1.0nm,0.3s,baz=29,slow=13,SNR=12						
CTA				LR	LR	06 40 09.1	
	comp=Z,77nm,19.8s,baz=50,slow=34						
DZM	**Mont Dzumac**	**20.35**	**147**	P	P	06 34 59.0	+0.4
	8.1nm,0.7s,baz=151,slow=22,SNR=11						
GUMO	**Guam**	**20.96**	**332**	LR	LR	06 40 49.3	
	comp=Z,65nm,20.8s,baz=70,slow=30						
WRA	**Warramunga Arr**	**24.84**	**232**	P	P	06 35 43.4	-0.4
	4.4nm,0.5s,baz=56,slow=9.7,SNR=6.3						
ASAR	**Alice Springs**	**27.39**	**225**	P	P	06 36 05.9	-0.8
	0.7nm,0.4s,baz=55,slow=8.9,SNR=6.9						
ASAR				LR	LR	06 45 32.5	
	comp=Z,73nm,19.1s,baz=350,slow=33						
STKA	**Stephens Creek**	**29.45**	**203**	LR	LR	06 48 35.0	
	comp=Z,75nm,18.1s,baz=205,slow=37						
FITZ	**Fitzroy Crossi**	**31.34**	**243**	P	P	06 36 40.6	-1.1
	1.0nm,0.3s,baz=70,slow=7.9,SNR=7.2						
FITZ				LR	LR	06 49 44.1	
	comp=Z,63nm,18.4s,baz=2.9,slow=37						
JNU	**Nakatsue**	**44.20**	**331**	P	P	06 38 29.1	-0.9
	5.3nm,0.8s,baz=75,slow=8.3,SNR=4.6						
KSRS	**Korea Array**	**49.12**	**332**	LR	LR	06 56 25.5	
	comp=Z,11nm,19.2s,baz=60,slow=32						
USRK	**Ussuriysk Arra**	**53.12**	**340**	P	P	06 39 39.2	+1.1
	2.2nm,0.8s,baz=160,slow=8.3,SNR=4.4						
PETK	**Petropavlovsk-**	**57.96**	**2**	P	P	06 40 13.8	+1.0
	3.4nm,0.8s,baz=178,slow=8.3,SNR=4.3						
PETK				pP	pP	06 40 30.1	-0.5
	1.4nm,0.6s,baz=170,slow=7.4,SNR=2.6						
CMAR	**Chiang Mai Arr**	**59.79**	**295**	P	P	06 40 26.6	+0.6
	1.7nm,0.5s,baz=121,slow=5.4,SNR=9.3						
SONM	**Songino Array**	**67.59**	**327**	P	P	06 41 17.2	+0.1
	0.5nm,0.6s,baz=145,slow=5.3,SNR=3.3						
ILAR	**Eielson Array**	**81.61**	**22**	P	P	06 42 36.8	-1.0
	1.0nm,0.7s,baz=237,slow=6.0,SNR=9.1						
ILAR				pP	pP	06 42 55.1	-1.4
	0.6nm,0.8s,baz=245,slow=6.1,SNR=3.7						
ILAR				LR	LR	07 15 04.5	
	comp=Z,83nm,19.6s,baz=339,slow=33						
MKAR	**Makanchi Array**	**81.81**	**319**	P	P	06 42 39.2	0.0
	1.2nm,0.6s,baz=93,slow=7.0,SNR=13						
ZALV	**Zalesovo Beam**	**82.45**	**326**	P	P	06 42 41.6	-0.8
	0.6nm,0.4s,baz=125,slow=6.0,SNR=3.4						
YBH	**Yreka Blue Hor**	**87.70**	**48**	LR	LR	07 13 47.1	
	comp=Z,67nm,20.3s,baz=112,slow=30						
NVAR	**Mina Array Bea**	**90.64**	**52**	P	P	06 43 24.7	+1.6
	0.9nm,1.0s,baz=252,slow=7.2,SNR=4.4						
YKA	**Yellowknife Ar**	**94.68**	**28**	P	P	06 43 41.2	+0.4
	1.0nm,0.6s,baz=266,slow=4.6,SNR=27						
YKA				pP	pP	06 44 01.3	+1.4
	0.5nm,0.8s,baz=265,slow=4.6,SNR=4.6						
GERES	**GERESS Array B**	**125.27**	**329**	PKP	PKPdf	06 49 21.0	+0.2
	0.3nm,0.5s,baz=48,slow=2.0,SNR=5.1						
BDFB	**Brasilia**	**149.47**	**133**	PKPbc	PKPbc	06 50 10.0	-0.2
	1.8nm,0.6s,baz=166,slow=3.3,SNR=4.7						
TORD	**Torodi Ar. Bea**	**152.28**	**289**	PKPbc	PKPbc	06 50 15.2	-1.4
	0.5nm,0.5s,baz=71,slow=1.7,SNR=6.8						

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*KRSC **05** 07:15:56.7±0.7, 54.°87N×165.°64E, h23km±22km, ML4.5*

*ISCJB **05** 07:15:56.3±0.4, 54.°88N±0.°03×165.°81E±0.°03, h34km±4km, mb4.3/48, MS3.7/12, Error ellipse: s-maj=4.9km s-min=3.0km az=170.8*

*BJI **05** 07:15:57.2, 54.°75N×165.°78E, h39km, mB4.8/15, mb4.6/21, Ms4.2/10, Ms7 4.0/10*

*MOS **05** 07:15:57.3±1.0, 54.°91N×165.°74E, h43km, mb4.3/22, Error ellipse: s-maj=9.6km s-min=8.5km az=61.6*

*NEIC **05** 07:15:58.7±0.3, 54.°95N×165.°73E, h35km, mb4.5/15, Error ellipse: s-maj=10.4km s-min=4.4km az=160.0*

*IDC **05** 07:16:01.6±0.8, 54.°95N×165.°79E, h63km±5km, mb3.7/20, mb1 3.9/21, mb1mx3.7/33, mbtmp3.7/21, MS3.3/9, Ms1 3.3/9, ms1mx3.0/44, Error ellipse: s-maj=19.4km s-min=10.3km az=160.0*

ISC 05 07:15:59.5±0.4, **54.°87N**±0.°04×**165.°66E**±0.°03, **h42**km±2km, **h41**km**:pP-P, n164**, σ1**.°77**/226, **mb4.3**/48, **MS3.5**/12, **20C-23D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.38**	**28**	PN	Pn	07 16 03.0	-5.9
BKI	**Bering**	**0.38**	**28**	*i* P	Pn	07 16 03.0	-5.9
BKI				*i* S	Sn	07 16 07.8	-7.6
KBTR	**Krutoberegovo**	**2.10**	**311**	PN	Pn	07 16 29.2	-3.0
KBTR				S	**Sn**	**07 16 53.4**	**-3.7**
KBTR	**Krutoberegovo**	**2.10**	**311**	*e*P	Pn	07 16 29.2	-3.0
KBTR				*i* S	**Sn**	**07 16 53.4**	**-3.7**
MKZ	**Mys Kozlova**	**2.30**	**264**	PN	**Pn**	**07 16 33.9**	**-1.0**
MKZ				S	**Sn**	**07 17 00.4**	**-1.6**
MKZ	**Mys Kozlova**	**2.30**	**264**	*i* P	**Pn**	**07 16 33.9**	**-1.0**
MKZ				*i* S	**Sn**	**07 17 00.4**	**-1.6**
SMKR	**Semkarok**	**2.93**	**308**	*e*P	**Pn**	**07 16 42.5**	**-1.1**
SMKR				*i* S	**Sn**	**07 17 16.1**	**-1.5**
ZLN	**Zelenaya**	**3.00**	**295**	*e*P	**Pn**	**07 16 44.5**	**-0.1**
ZLN				*i* S	**Sn**	**07 17 19.1**	**-0.2**
BZGR	**Bezymyannyi-Gr**	**3.03**	**293**	*e*P	**Pn**	**07 16 45.0**	**0.0**
BZGR				*i* S	**Sn**	**07 17 20.7**	**+0.6**
BDR	**Baidarnaya**	**3.04**	**306**	*e*P	**Pn**	**07 16 44.3**	**-0.9**
BDR				*i* S	**Sn**	**07 17 18.5**	**-1.9**
CIRR	**Tsirk**	**3.06**	**296**	*e*P	**Pn**	**07 16 45.7**	**+0.2**
CIRR				*i* S	**Sn**	**07 17 21.8**	**+0.8**
LGNR	**Loginova**	**3.08**	**295**	*e*P	**Pn**	**07 16 46.3**	**+0.4**
LGNR				*i* S	**Sn**	**07 17 22.7**	**+1.1**
SRKR	**Sorokina**	**3.11**	**307**	*e*P	**Pn**	**07 16 45.9**	**-0.2**
SRKR				*i* S	**Sn**	**07 17 22.5**	**+0.6**
BZMR	**Bezymyannaya**	**3.14**	**292**	*e*P	**Pn**	**07 16 46.7**	**+0.2**
BZMR				*i* S	**Sn**	**07 17 23.8**	**+1.0**
BZWR	**Bezymyannyi-We**	**3.14**	**293**	*e*P	**Pn**	**07 16 46.7**	**+0.1**
BZWR				*i* S	**Sn**	**07 17 24.2**	**+1.2**
KLY	**Klyuchi**	**3.19**	**299**	PN	**Pn**	**07 16 45.4**	**-1.7**
KLY				S	**Sn**	**07 17 20.5**	**-3.4**
KLY	**Klyuchi**	**3.19**	**299**	*e*P	**Pn**	**07 16 45.4**	**-1.7**
KLY				*i* S	**Sn**	**07 17 20.5**	**-3.4**
KRSR	**Krestovskiy**	**3.20**	**297**	P	**Pn**	**07 16 46.6**	**-0.7**
KRSR				*i* S	**Sn**	**07 17 22.8**	**-1.4**
TUMR	**Tumrok**	**3.20**	**280**	*i* P	**Pn**	**07 16 47.4**	**+0.1**
TUMR				*e*S	**Sn**	**07 17 24.4**	**+0.1**
KMNR	**Kamenistaya**	**3.23**	**288**	*e*P	**Pn**	**07 16 48.1**	**+0.4**
KMNR				*i* S	**Sn**	**07 17 26.5**	**+1.6**
KPT	**Kopyto**	**3.29**	**292**	*e*P	**Pn**	**07 16 48.5**	**-0.1**
KPT				*i* S	**Sn**	**07 17 25.8**	**-0.7**
KOZR	**Kozyr**	**3.50**	**292**	PN	**Pn**	**07 16 51.9**	**+0.6**
KOZR				S	**Sn**	**07 17 33.0**	**+1.6**
KOZ	**Kozyrevsk**	**3.51**	**292**	*e*P	**Pn**	**07 16 51.9**	**+0.4**
KOZ				*i* S	**Sn**	**07 17 33.0**	**+1.3**
SRDR	**Sredinnyy**	**3.67**	**296**	*e*P	**Pn**	**07 16 54.1**	**+0.3**
SRDR				*i* S	**Sn**	**07 17 36.2**	**+0.3**
KII	**Karymskiy**	**3.72**	**260**	*e*P	**Pn**	**07 16 54.3**	**-0.2**
SPN	**Mys Shipunski**	**3.77**	**244**	PN	**Pn**	**07 16 53.8**	**-1.3**
SPN	**Mys Shipunski**	**3.77**	**244**	*e*P	**Pn**	**07 16 53.8**	**-1.3**
SPN				*i* S	**Sn**	**07 17 35.1**	**-3.1**
ESO	**Esso**	**4.11**	**288**	PN	**Pn**	**07 16 59.7**	**-0.1**
ESO	**Esso**	**4.11**	**288**	*e*P	**Pn**	**07 16 59.7**	**-0.1**
SDLR	**Sedlovina**	**4.30**	**251**	*e*P	**Pn**	**07 17 01.9**	**-0.5**
SDLR				*i* S	**Sn**	**07 17 49.9**	**-1.4**
SMAR	**Somma**	**4.35**	**251**	*e*P	**Pn**	**07 17 02.9**	**-0.3**
SMAR				*i* S	**Sn**	**07 17 51.4**	**-1.3**
UGLR	**Uglovaya**	**4.36**	**250**	*e*P	**Pn**	**07 17 03.0**	**-0.3**
UGLR				*i* S	**Sn**	**07 17 51.1**	**-1.7**
AVH	**Avacha**	**4.38**	**251**	*e*P	**Pn**	**07 17 03.6**	**0.0**
AVH				*e*S	**Sn**	**07 17 51.5**	**-1.9**
KOK	**Koryaka**	**4.43**	**252**	*e*P	**Pn**	**07 17 04.2**	**0.0**
PET	**Petropavlovsk**	**4.53**	**249**	⇑*i*PN	**Pn**	**07 17 04.9**	**-0.6**
PET				pmax	pmax		
	comp=Z,122nm,0.6s						
PET	**Petropavlovsk**	**4.53**	**249**	*e*Pn	**Pn**	**07 17 04.8**	**-0.8**
PET				*e*Sn	**Sn**	**07 17 54.2**	**-2.7**
PET	**Petropavlovsk**	**4.53**	**249**	*e*P	**Pn**	**07 17 05.2**	**-0.3**
PET				*i* S	**Sn**	**07 17 54.5**	**-2.4**
GNL	**Ganaly**	**4.67**	**259**	*e*P	**Pn**	**07 17 08.4**	**+0.8**
GNL				*e*S	**Sn**	**07 18 01.0**	**+0.4**
FX1	**Attu Island--F**	**4.86**	**111**	*e*Pn	**Pn**	**07 17 08.9**	**-1.1**
FX1				*e*Sn	Sn	07 17 57.5	-7.5
FX1	**Attu Island--F**	**4.86**	**111**	P	**Pn**	**07 17 09.0**	**-1.1**
	comp=Z,24nm,0.3s,baz=328,slow=9.4,SNR=28						
FX1				S	Sn	07 17 56.9	-8.1
	comp=Z,12nm,0.3s,baz=224,slow=19,SNR=5.7						
RUS	**Russkaya**	**4.90**	**243**	PN	**Pn**	**07 17 10.0**	**-0.6**
RUS	**Russkaya**	**4.90**	**243**	*e*P	**Pn**	**07 17 10.0**	**-0.6**
RUS				*i* S	**Sn**	**07 18 02.8**	**-3.2**
PEA0B	**Petropavlovsk-**	**5.02**	**253**	*e*Pn	**Pn**	**07 17 12.4**	**+0.2**
PETK	**Petropavlovsk-**	**5.02**	**253**	*e*PN	**Pn**	**07 17 12.7**	**+0.5**
PETK				pmax	pmax		
	comp=Z,23nm,0.3s						
PETK	**Petropavlovsk-**	**5.02**	**253**	P	**Pn**	**07 17 12.8**	**+0.5**
	comp=Z,23nm,0.3s,baz=91,slow=18,SNR=295						
PETK				S	**Sn**	**07 18 12.7**	**+3.8**
	comp=Z,4.4nm,0.3s,baz=289,slow=18,SNR=3.7						
PETK				LR	LR	07 18 57.6	
	comp=Z,98nm,21.2s,baz=248,slow=34						
GRL	**Gorelyy**	**5.07**	**246**	*e*P	**Pn**	**07 17 13.5**	**+0.5**
GRL				*e*S	**Sn**	**07 18 09.3**	**-1.0**
PALN	**Palana**	**5.25**	**326**	P	**Pn**	**07 17 16.7**	**+1.3**
PALN				*i* S	**Sn**	**07 18 15.3**	**+0.7**
APC	**Apacha**	**5.39**	**252**	*e*P	**Pn**	**07 17 18.6**	**+1.3**
APC				*i* S	**Sn**	**07 18 18.7**	**+0.7**
TILK	**Tilichiki**	**5.60**	**2**	P	**Pn**	**07 17 22.0**	**+1.9**
MIPR	**Malaya Ipel'ka**	**5.91**	**248**	*e*P	**Pn**	**07 17 25.1**	**+0.7**
SKR	**Severo-Kuril's**	**7.14**	**238**	*e*PN	Pn	07 17 49.0	+7.7
SKR				*e*		07 19 06.6	
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
GAMB	**Gambell**	**14.52**	**43**	*e*Pn	**Pn**	**07 19 19.8**	**-2.1**
TNA	**Tin City**	**16.78**	**40**	*e*Pn	**Pn**	**07 19 49.5**	**-1.6**
	comp=Z,4.2nm,0.9s						
ASAJ	**Asahikawa**	**18.35**	**244**	*e*P	**Pn**	**07 20 11.5**	**+0.9**
	comp=Z,2.7nm,0.8s						
ASAJ	**Asahikawa**	**18.35**	**244**	P	**Pn**	**07 20 11.3**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=65,slow=14,SNR=14						
ASAJ				LR	LR	07 27 18.4	
	comp=Z,69nm,18.0s,baz=178,slow=37						
ERM	**Erimo**	**19.59**	**238**	*e*P	**P**	**07 20 23.7**	**-0.2**
ERM				pmax	pmax		
	comp=Z,17nm,0.9s						
ERM	**Erimo**	**19.59**	**238**	*e*P	**P**	**07 20 23.7**	**-0.2**
	comp=Z,17nm,0.9s						
YAK	**Yakutsk**	**19.92**	**306**	*e*P	**P**	**07 20 26.8**	**-0.5**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YAK	**Yakutsk**	**19.92**	**306**	*e*P	**P**	**07 20 26.1**	**-1.2**
	comp=Z,12nm,0.5s						
TIXI	**Tiksi**	**22.99**	**331**	*e*P	**P**	**07 20 58.9**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KDAK	**Kodiak Island**	**23.07**	**66**	*e*P	**P**	**07 20 58.4**	**-2.6**
	comp=Z,4.7nm,0.5s						
COLD	**Coldfoot**	**24.06**	**42**	*e*P	**P**	**07 21 09.4**	**-1.0**
	comp=Z,64nm,2.6s						
COLA	**College**	**24.80**	**48**	*e*P	**P**	**07 21 15.6**	**-1.5**
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
COLA	**College**	**24.80**	**48**	*e*P	**P**	**07 21 15.6**	**-1.5**
	comp=Z,7.7nm,0.8s						
MDJ	**Mudanjiang**	**25.20**	**261**	P	**P**	**07 21 21.5**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,54nm,6.5s						
ILAR	**Eielson Array**	**25.21**	**48**	P	**P**	**07 21 18.8**	**-2.0**
	comp=Z,5.3nm,0.8s,baz=255,slow=8.8,SNR=47						
ILAR				LR	LR	07 30 50.8	
	comp=Z,64nm,18.2s,baz=24,slow=35						
MJA0	**Matsu Arr-Jizo**	**26.23**	**237**	*e*P	**P**	**07 21 32.1**	**+1.7**
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAJO	**Matsushiro**	**26.25**	**237**	*e*P	**P**	**07 21 31.0**	**+0.5**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAJO	**Matsushiro**	**26.25**	**237**	*e*P	**P**	**07 21 31.0**	**+0.5**
	comp=Z,5.3nm,0.8s						
MJAR	**Matsushiro Arr**	**26.25**	**237**	P	**P**	**07 21 31.6**	**+1.1**
	comp=Z,3.0nm,0.9s,baz=24,slow=8.5,SNR=8.5						
CN2	**Changchun**	**28.06**	**264**	*e*P	**P**	**07 21 48.9**	**+2.2**
CN2				*e*pP	**pP**	**07 21 59.0**	**+1.0**
CN2				*e*S	**S**	**07 26 29.0**	**+0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,13.0s						
CN2				LR	LR		
	comp=E,600nm,13.0s						
CN2				LR	LR		
	comp=Z,900nm,15.0s						
INK	**Inuvik**	**30.43**	**40**	P	**P**	**07 22 06.6**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=285,slow=10,SNR=12						
KSRS	**Korea Array**	**30.92**	**251**	P	**P**	**07 22 13.9**	**+2.0**
	comp=Z,1.0nm,0.6s,baz=41,slow=9.5,SNR=5.0						
KSRS				LR	LR	07 34 28.5	
	comp=Z,36nm,18.3s,baz=44,slow=36						
TLY	**Talaya**	**36.16**	**291**	*e*P	**P**	**07 22 58.9**	**+1.4**
TLY				*e*		07 24 15.0	
TLY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TLY				MLR	MLR		
	comp=Z,71nm,18.0s						
ULN	**Ulaanbaatar**	**36.29**	**284**	*e*P	**P**	**07 22 59.7**	**+0.8**
	comp=Z,1.1nm,0.6s						
SONM	**Songino Array**	**36.68**	**284**	P	**P**	**07 23 03.5**	**+1.4**
	comp=Z,1.7nm,0.6s,baz=56,slow=8.1,SNR=13						
SONM				pP	pP	07 23 19.1	+5.5
	comp=Z,3.0nm,0.7s,baz=58,slow=8.6,SNR=11						
ZAK	**Zakamensk**	**37.02**	**290**	*e*P	**P**	**07 23 06.3**	**+1.4**
ZAK				*e*		07 23 21.3	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**37.93**	**271**	*e*P	**P**	**07 23 11.9**	**-0.8**
HHC				sP	**sP**	**07 23 25.3**	**-3.9**
HHC				PP	**PnPn**	**07 24 41.3**	**+0.1**
HHC				PcP	**PcP**	**07 25 28.0**	**+0.1**
HHC				S	**S**	**07 29 00.5**	**-0.9**
HHC				ScP	**ScP**	**07 29 12.5**	**+0.8**
HHC				sS	**sS**	**07 29 16.9**	**-3.7**
HHC				SS	**SnSn**	**07 31 36.4**	**-8.8**
HHC				ScS	**ScS**	**07 33 19.6**	**-1.4**
HHC				pmax	pmax		
	comp=Z,21nm,0.6s						
HHC				pmax	pmax		
	comp=Z,270nm,6.4s						
HHC				LR	LR		
	comp=N,180nm,13.6s						
HHC				LR	LR		
	comp=E,300nm,13.1s						
HHC				LR	LR		
	comp=Z,190nm,13.3s						
YKA	**Yellowknife Ar**	**39.60**	**46**	P	**P**	**07 23 25.0**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=296,slow=8.1,SNR=18						
NJ2	**Nanjing**	**39.92**	**255**	*e*P	**P**	**07 23 29.6**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RES	**Resolute Bay**	**40.41**	**24**	P	**P**	**07 23 32.1**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=307,slow=8.3,SNR=4.1						
RES				pP	**pP**	**07 23 48.5**	**+4.1**
	comp=Z,0.8nm,0.7s,baz=265,slow=11,SNR=2.8						
WHN	**Wuhan**	**43.59**	**258**	P	**P**	**07 23 58.6**	**-0.7**
LZH	**Lanzhou**	**45.60**	**272**	*e*P	**P**	**07 24 16.5**	**+1.0**
LZH				pP	**pP**	**07 24 27.0**	**-0.3**
LZH				sP	**sP**	**07 24 31.1**	**-1.1**
LZH				PP	**PP**	**07 26 03.6**	**+1.0**
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZH				pmax	pmax		
	comp=Z,53nm,6.7s						
LZH				LR	LR		
	comp=N,310nm,14.2s						
LZH				LR	LR		
	comp=E,300nm,15.0s						
LZH				LR	LR		
	comp=Z,350nm,18.0s						
GTA	**Gaotai**	**45.64**	**279**	*e*P	**P**	**07 24 17.7**	**+2.0**
GTA				pP	**pP**	**07 24 29.1**	**+1.6**
GTA				sP	**sP**	**07 24 34.2**	**+1.8**
GTA				S	**S**	**07 30 57.4**	**+2.0**
GTA				sS	**sS**	**07 31 13.6**	**-1.4**
GTA				SS	**ScS**	**07 34 13.6**	**+5.5**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,85nm,5.7s						
GTA				LR	LR		
	comp=N,63nm,13.1s						
GTA				LR	LR		
	comp=E,63nm,14.0s						
GTA				LR	LR		
	comp=Z,88nm,13.3s						
SPITS	**Spitsbergen Ar**	**45.90**	**352**	P	**P**	**07 24 16.2**	**-1.0**
	comp=Z,3.8nm,0.8s,baz=65,slow=11,SNR=5.0						
SPITS				pP	**pP**	**07 24 33.0**	**+4.0**
	comp=Z,1.6nm,0.6s,baz=19,slow=8.8,SNR=2.3						
NEW	**Newport**	**46.17**	**65**	P	**P**	**07 24 18.4**	**-1.3**
	comp=Z,1.5nm,0.7s,baz=320,slow=5.3,SNR=5.3						
A13A	**Flathead Natio**	**47.15**	**62**	⇓P	**P**	**07 24 25.9**	**-1.5**
	baz=47,SNR=7.2						
B13A	**Whitefish**	**47.47**	**63**	⇑P	**P**	**07 24 28.4**	**-1.5**
	baz=47						
BSMT	**Bassoo Peak**	**47.64**	**64**	*e*P	**P**	**07 24 30.5**	**-0.9**
JTMT	**Jette**	**47.97**	**63**	*e*P	**P**	**07 24 33.3**	**-0.5**
SWMT	**Swartz Lake**	**48.27**	**64**	*e*P	**P**	**07 24 34.6**	**-1.5**
D13A	**Huson**	**48.30**	**64**	⇓P	**P**	**07 24 34.6**	**-1.8**
	baz=48						
A16A	**West Butte Ran**	**48.57**	**61**	⇑P	**P**	**07 24 36.7**	**-1.7**
	baz=48						
D14A	**Greenough**	**48.80**	**64**	P	**P**	**07 24 39.0**	**-1.3**
	baz=48,SNR=6.6						
C15A	**Salmond Ranch,**	**48.81**	**62**	⇑P	**P**	**07 24 38.6**	**-1.8**
	baz=48						
F13A	**Darby**	**49.22**	**66**	⇓P	**P**	**07 24 41.6**	**-1.9**

baz=49
C16A Fuhringer Ranc 49.24 62 ⇓P P 07 24 41.7 -1.9
baz=49
E14A Clinton 49.25 64 ⇓P P 07 24 41.8 -1.9
baz=49
CD2 Chengdu 49.38 267 P P 07 24 44.8 +0.1
CD2 pP **pP 07 24 54.7 -1.9**
CD2 sP **sP 07 24 58.6 -2.9**
CD2 PcP **PcP 07 26 07.4 +0.7**
CD2 PP **PP 07 26 39.2 +0.4**
CD2 PcS **PcS 07 30 02.5 -0.9**
CD2 S **S 07 31 47.9 -0.6**
CD2 sS **sS 07 32 04.5 -3.8**
CD2 SS **SS 07 35 15.6 -4.6**
CD2 pmax pmax
comp=Z,10.0nm,0.4s
CD2 pmax pmax
comp=Z,70nm,4.8s
WMQ Urumqi 49.44 291 P P 07 24 46.0 +0.9
WMQ pmax pmax
comp=Z,18nm,1.0s
KURK Kurchatov 49.55 303 *c iP P 07 24 45.3 -0.4*
KURK pmax pmax
comp=Z,5.0nm,0.9s
KURK Kurchatov 49.55 303 *eP* **P 07 24 45.4 -0.4**
comp=Z,7.0nm,1.1s
KURBB Kurchatov Arra 49.65 303 P P 07 24 45.9 -0.6
comp=Z,2.7nm,0.5s,baz=55,slow=7.7,SNR=23
KURBB pP **pP 07 25 02.3 +3.9**
comp=Z,1.6nm,0.5s,baz=55,slow=7.9,SNR=5.6
E15A Deer Lodge 49.68 64 ⇑P P 07 24 45.5 -1.5
baz=49
G13A Cobalt 49.73 66 ⇑P P 07 24 45.9 -1.5
baz=50
C17A Wharram Farm, 49.85 62 ⇓P P 07 24 46.1 -2.1
baz=50
A19A Klindworth Far 50.01 59 ⇑P P 07 24 47.6 -1.8
baz=50
H13A Challis 50.07 67 ⇓P P 07 24 48.1 -1.9
baz=50
I12A Atlanta 50.12 68 ⇑P P 07 24 48.2 -2.2
baz=50
D17A Six Diamond Ra 50.21 62 ⇓P P 07 24 49.3 -1.7
baz=50
MKAR Makanchi Array 50.30 298 *eP* **P 07 24 50.4 -1.2**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 50.30 298 P P 07 24 50.8 -0.7
comp=Z,0.9nm,0.7s,baz=51,slow=7.0,SNR=8.1
MKAR pP **pP 07 25 07.0 +3.5**
comp=Z,1.3nm,0.8s,baz=50,slow=6.5,SNR=5.5
MKAR LR LR 07 46 29.8
comp=Z,35nm,18.1s,baz=355,slow=36
A20A Cobblestone Ra 50.45 59 ⇑P P 07 24 51.0 -1.7
baz=50
I13A Wildhorse Cree 50.58 67 ⇑P P 07 24 52.4 -1.6
baz=50,SNR=5.2
C19A Slack Wire Ran 50.65 60 ⇓P P 07 24 52.8 -1.4
baz=50
HLID Hailey 50.66 68 ⇓P P 07 24 52.9 -1.6
baz=50
G16A Moss Hill, Enn 50.92 65 ⇓P P 07 24 54.0 -2.4
baz=51,SNR=5.2
I14A Mackay 50.93 67 ⇑P P 07 24 54.9 -1.6
baz=51,SNR=5.6
GYA Guiyang 51.06 261 *eP* **P 07 24 58.0 +0.4**
GYA pmax pmax
comp=Z,10.0nm,1.0s
D19A Cripps Ranch, 51.12 61 ⇑P P 07 24 55.7 -2.1
baz=51
C20A Veseth Ranch, 51.19 60 ⇑P P 07 24 56.4 -1.8
baz=51
D20A Manuel Ranch, 51.54 61 ⇑P P 07 24 59.0 -1.9
baz=51
F18A Big Timber 51.54 63 ⇓P P 07 24 58.6 -2.4
baz=51
E19A Rath Farm, Rou 51.64 62 ⇓P P 07 24 59.9 -1.8
baz=51
BVAR Borovoye Array 51.81 310 P P 07 25 02.3 -0.5
BVAR *PP **pP 07 25 18.4 +3.7**
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 51.81 310 P P 07 25 02.3 -0.5
comp=Z,1.2nm,0.6s,baz=60,slow=7.8,SNR=8.0
BVAR pP **pP 07 25 18.4 +3.7**
comp=Z,0.9nm,0.5s,baz=46,slow=8.9,SNR=3.6
BRVK Borovoye 51.84 310 *d iP* **P 07 25 02.8 -0.2**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
BRVK Borovoye 51.84 310 *eP* **P 07 25 03.1 +0.1**
comp=Z,2.9nm,0.6s
K14A Jones Ranch, D 52.02 68 ⇓P P 07 25 02.5 -2.2
baz=52
NVAR Mina Array Bea 52.07 75 P P 07 25 04.7 -0.5
comp=Z,1.1nm,0.6s,baz=300,slow=7.4,SNR=14
RLMT Red Lodge 52.31 63 *eP* **P 07 25 06.3 -0.5**
comp=Z,4.5nm,0.8s
RLMT Red Lodge 52.31 63 ⇑P P 07 25 05.8 -1.0
baz=52,SNR=6.8
MOOW Moose Ponds 52.48 65 *eP* **P 07 25 07.8 -0.4**
C23A Lambert 52.52 58 ⇓P P 07 25 07.1 -1.1
baz=52
ARCES ARCESS Array B 52.57 344 P P 07 25 08.5 +0.3
comp=Z,3.4nm,0.9s,baz=34,slow=9.8,SNR=2.8
G20A Bridger 52.78 62 ⇓P P 07 25 09.5 -0.8
baz=52
L15A Malad City 52.82 68 ⇓P P 07 25 09.7 -0.9
baz=52
PDAR Pinedale Array 53.79 65 P P 07 25 17.0 -0.8
comp=Z,1.5nm,0.8s,baz=330,slow=2.3,SNR=12
KMI Kunming 54.33 263 P P 07 25 25.3 +3.4
KMI pP pP 07 25 34.7 +0.7
KMI sP sP 07 25 38.4 -0.4
KMI pmax pmax
comp=Z,15nm,0.9s
KMI pmax pmax
comp=Z,100nm,5.0s
ULM Lac du Bonnet 55.18 51 P P 07 25 26.4 -1.0
comp=Z,1.3nm,0.4s,baz=315,slow=12,SNR=2.9
TMUT Trail Mountain 55.36 69 *eP* **P 07 25 29.7 +0.4**
comp=Z,6.0nm,0.7s
CCUT Cedar City 55.44 72 *eP* **P 07 25 29.9 0.0**
comp=Z,18nm,2.0s
N20A Spence Gulch, 55.84 66 ⇓P P 07 25 31.9 -0.8
baz=56,SNR=5.7
SRU San Rafael 55.87 69 *eP* **P 07 25 32.9 +0.1**
SRU San Rafael 55.87 69 *eP* **P 07 25 32.9 +0.1**
comp=Z,252nm,0.7s
SRU San Rafael 55.87 69 ⇑P P 07 25 31.8 -1.0
baz=56,SNR=14
P19A Cripple Cowboy 56.32 68 ⇓P P 07 25 34.7 -1.4
baz=56,SNR=5.7
O20A White River Ci 56.35 67 ⇓P P 07 25 35.1 -1.2
baz=56,SNR=5.9
Q19A Hogan Spring (56.66 68 ⇓P P 07 25 37.0 -1.4
baz=56,SNR=10
O23A Lake Granby, G 57.52 65 ⇓P P 07 25 44.6 -0.1
baz=57,SNR=7.8
SMCO Snowmass 57.72 67 *eP* **P 07 25 45.7 -0.5**
comp=Z,21nm,2.3s
ISCO Idaho Springs 57.98 65 *eP* **P 07 25 48.3 +0.4**
ISCO pmax pmax
comp=Z,12nm,1.8s
ISCO Idaho Springs 57.98 65 *eP* **P 07 25 48.3 +0.4**
comp=Z,12nm,1.8s
S21A Coal Bank Pass 58.39 68 ⇑P P 07 25 49.5 -1.3
baz=58,SNR=5.1
KSH Kashi 58.70 295 P P 07 25 58.1 +5.4
KSH pP pP 07 26 08.5 +3.7
KSH sP sP 07 26 12.4 +2.7
KSH PcP **PcP 07 26 45.8 +3.6**
KSH PP PP 07 28 10.4 +8.0
KSH ScP **ScP 07 30 42.9 +3.9**
KSH PcS **PcS 07 30 47.8 +3.7**
KSH S S 07 34 00.6 +6.3
KSH sS sS 07 34 17.3 +2.9
KSH ScS **ScS 07 35 40.9 +2.0**
KSH SS SS 07 37 56.7 +10
KSH pmax pmax
comp=Z,1.0nm,0.2s
KSH pmax pmax
comp=Z,110nm,3.2s
KSH LR LR
comp=N,86nm,4.2s
KSH LR LR
comp=E,74nm,5.3s
S22A 4UR Ranch, Cre 58.85 68 ⇑P P 07 25 52.6 -1.3

baz=59,SNR=5.3
FINES FINESS Array B 59.73 339 P P 07 25 58.5 -0.8
comp=E,1.1nm,0.6s,baz=15,slow=7.9,SNR=8.5
X21A Alamocita Cree 60.78 71 ⇑P P 07 26 05.7 -1.5
baz=60,SNR=5.1
CMAR Chiang Mai Arr 61.73 262 P P 07 26 20.4 +6.8
comp=E,1.5nm,0.4s,baz=36,slow=7.8,SNR=13
CMAR LR LR 07 57 21.1
comp=E,29nm,18.5s,baz=10.0,slow=40
NOA NORSAR Array B 62.68 346 P P 07 26 18.2 -1.1
comp=E,0.8nm,0.8s,baz=17,slow=6.9,SNR=4.5
NOA pP **pP 07 26 34.7 +3.1**
comp=E,1.2nm,0.9s,baz=15,slow=6.9,SNR=2.4
TXAR Lajitas Array 66.93 72 P P 07 26 46.8 -0.8
comp=E,1.4nm,0.5s,baz=300,slow=4.4,SNR=28
TXAR LR LR 07 53 14.5
comp=E,33nm,20.6s,baz=180,slow=33
KBZ Khabaz 70.41 320 LR LR 08 03 35.3
comp=E,17nm,19.1s,baz=200,slow=40
WRA Warramunga Arr 79.17 210 P P 07 27 59.6 -0.1
comp=E,0.4nm,0.9s,baz=19,slow=5.8,SNR=3.1
TEIG Tepich 82.52 66 LR LR 08 03 02.5
comp=E,35nm,21.9s,baz=298,slow=34

ISK ***05*** *07:24:04.4, 37.˝15N×28.˝20E, h19km, MD2.6*
DDA ***05*** *07:24:06.2, 37.˝23N×28.˝33E, h7km, MD2.7*
CSEM 05 07:24:04.4±0.6, 37.˝28N×28.˝25E, h1km, MD2.7, Error ellipse: s-maj=14.0km s-min=8.6km az=17.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.15**	**169**	*e*PG	Pg	07 24 08.3	+0.9
YER	**Yerkesik**	**0.15**	**169**	*e*Pg	Pg	07 24 08.3	+0.9
MLSB	**Milas**	**0.37**	**272**	*e*PG	Pg	07 24 12.6	+0.9
MLSB				*e*SG	Sg	07 24 18.2	+1.7
MLSB	**Milas**	**0.37**	**272**	*e*Pg	Pg	07 24 12.6	+0.9
MLSB				*e*Sg	Sg	07 24 18.3	+1.7
TURN	**Turunc**	**0.50**	**145**	*i* P	Pb	07 24 15.6	-0.4
TURN				*i* S	Sg	07 24 21.9	+1.5
TURN	**Turunc**	**0.50**	**145**	*i* P	Pb	07 24 15.6	-0.4
TURN				*i* S	Sg	07 24 21.9	+1.5
DAT	**Datca**	**0.77**	**224**	*e*PG	Pg	07 24 17.7	-1.6
DAT	**Datca**	**0.77**	**224**	*e*Pg	Pg	07 24 17.7	-1.6
BODT	**Bodrum**	**0.78**	**254**	*e*PG	Pg	07 24 18.9	-0.5
BODT				*e*SG	Sg	07 24 29.3	-0.2
BODT	**Bodrum**	**0.78**	**254**	*e*Pg	Pg	07 24 18.9	-0.5
BODT				*e*Sg	Sg	07 24 29.3	-0.2
GCAM	**G?zelcaml?**	**0.91**	**298**	*i* P	Pn	07 24 26.1	+1.9
GCAM				*i* S	Sn	07 24 38.9	+0.9
FETY	**Fethiye**	**0.93**	**134**	*e*PG	Pg	07 24 21.8	-0.5
FETY	**Fethiye**	**0.93**	**134**	*e*Pg	Pg	07 24 21.8	-0.5
KULA	**Kula-Manisa**	**1.27**	**15**	*e*PN	Pn	07 24 29.9	+0.4
KULA	**Kula-Manisa**	**1.27**	**15**	*e*Pn	Pn	07 24 29.9	+0.4
ELL	**Elmali**	**1.43**	**111**	*e*PN	Pn	07 24 29.9	-1.9
ELL	**Elmali**	**1.43**	**111**	*e*Pn	Pn	07 24 29.9	-1.8

ISK 05 07:24:06.6, 37.˝82N×30.˝77E, h7km, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISP	**Isparta**	**0.19**	**270**	*e*PG	Pg	07 24 11.1	+0.4
BCK	**Bucak**	**0.39**	**201**	*e*PG	Pg	07 24 14.7	+0.4
BCK				*e*SG	Sg	07 24 20.6	+1.1
SHUT	**Suhut-Afyon**	**0.75**	**347**	*e*PG	Pg	07 24 21.5	+0.3
KHL	**Karahalli**	**1.10**	**297**	*e*PN	Pg	07 24 27.9	0.0
KONT	**Konya--Tatoy**	**1.27**	**84**	*e*PN	Pg	07 24 31.2	+0.2
KIZT	**Kizilcal**	**1.37**	**39**	*e*PN	Pb	07 24 32.7	-0.1

IDC 05 07:35:19.0±13.0, 4.˝49S×101.˝72W, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.6/17, mbtmp3.4/3, Error ellipse: s-maj=500.7km s-min=201.8km az=108.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDAR	**Pinedale Array**	**47.57**	**352**	P	P	07 43 56.6	-0.1
	0.4nm,0.6s,baz=171,slow=6.2,SNR=4.6						
YKA	**Yellowknife Ar**	**67.52**	**354**	P	P	07 46 16.7	0.0
	0.3nm,1.0s,baz=165,slow=5.9,SNR=5.0						
ILAR	**Eielson Array**	**76.64**	**342**	P	P	07 47 11.5	+0.1
	0.3nm,0.9s,baz=152,slow=5.0,SNR=4.5						

IDC ***05*** *07:40:55.8±5.2, 33.˝91N×135.˝75E, h65km±29km, mb3.1/2, mb1 3.3/5, mb1mx3.1/29, mbtmp3.3/5, ML3.4/3, Error ellipse: s-maj=96.5km s-min=28.7km az=154.0*
ISCJB ***05*** *07:40:56.0±0.5, 34.˝08N±0.˝03×135.˝59E±0.˝03, h63km±5km, mb3.2/2, Error ellipse: s-maj=5.7km s-min=4.6km az=179.2*
JMA ***05*** *07:40:56.7±0.1, 34.˝06N×135.˝59E, h61km±1km, M3.2 Broadband fault plane solution: P waves. NP1: ϕs355.00000°, δ80.00000°, λ-22.00000°. NP2:ϕs89.00000°, δ68.00000°, λ-169.00000°. Principal axes: T Plg8.0000°, Azm43.0000°; N Plg66.0000°, Azm151.0000°; P Plg23.0000°, Azm310.0000°;*
JMA Felt I J1.
ISC 05 07:40:56.9±1.0, 34.˝08N±0.˝04×135.˝59E±0.˝03, h57km±7km, n19, σ0.˝75/34, 7C-6D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWY	**Kouya**	**0.14**	**3**	⇓P	**Pn**	**07 41 06.2**	**+0.3**
JWY				S	**Sn**	**07 41 12.6**	**+0.3**
JWM	**Minabe**	**0.30**	**220**	⇑P	**Pn**	**07 41 06.6**	**-0.1**
JWM				S	**Sn**	**07 41 13.6**	**-0.1**
JWZ	**Kozaga**	**0.55**	**169**	⇓P	**Pn**	**07 41 09.1**	**-0.2**
JWZ				S	**Sn**	**07 41 18.0**	**-0.2**
JHE	**Heguri**	**0.58**	**8**	⇑P	**Pn**	**07 41 09.5**	**-0.1**
JHE				S	**Sn**	**07 41 18.6**	**-0.2**
JKN2	**Miekihoku**	**0.59**	**74**	⇑P	**Pn**	**07 41 09.5**	**-0.2**
JKN2				S	**Sn**	**07 41 18.7**	**-0.3**
JAJ2	**Tsuna**	**0.67**	**301**	⇓P	**Pn**	**07 41 10.8**	**+0.2**
JAJ2				S	**Sn**	**07 41 20.9**	**+0.2**
TSUJ	**Tsu 2**	**0.94**	**47**	⇑P	**Pn**	**07 41 13.6**	**-0.4**
TSUJ				S	**Sn**	**07 41 25.7**	**-0.9**
JIE	**Ise**	**0.98**	**71**	⇑P	**Pn**	**07 41 14.2**	**-0.4**
JIE				S	**Sn**	**07 41 27.0**	**-0.6**
JAI	**Aioi**	**0.98**	**254**	⇑P	**Pn**	**07 41 14.6**	**0.0**
JAI				S	**Sn**	**07 41 27.7**	**0.0**
JKS	**Kasai**	**1.09**	**326**	⇓P	**Pn**	**07 41 15.9**	**-0.1**
JKS				S	**Sn**	**07 41 29.8**	**-0.5**
TTO1	**TONANKAI O.B.S**	**1.10**	**114**	⇓P	**Pn**	**07 41 15.7**	**-0.1**
TTO1				S	**Sn**	**07 41 30.8**	**+0.9**
JWT	**Wachi**	**1.21**	**353**	⇑P	**Pn**	**07 41 17.5**	**-0.2**
JWT				S	**Sn**	**07 41 32.7**	**-0.4**
TTO2	**TONANKAI O.B.S**	**1.25**	**105**	⇓P	**Pn**	**07 41 17.7**	**-0.1**
TTO2				S	**Sn**	**07 41 34.6**	**+1.1**
MAT	**Matsushiro**	**3.26**	**40**	P	**Pn**	**07 41 45.2**	**-0.4**
MAT				*e*S	**Sn**	**07 42 24.8**	**+1.6**
MJAR	**Matsushiro Arr**	**3.27**	**40**	P	**Pn**	**07 41 45.4**	**-0.2**
	6.2nm,0.3s,baz=205,slow=5.4,SNR=50						
JNU	**Nakatsue**	**4.04**	**258**	P	**Pn**	**07 41 56.8**	**+0.5**
	2.0nm,0.3s,baz=53,slow=4.2,SNR=28						
JNU				S	**Sn**	**07 42 39.9**	**-2.5**
	1.2nm,0.3s,baz=355,slow=5.3,SNR=5.7						
KSRS	**Korea Array**	**7.08**	**301**	P	**Pn**	**07 42 39.6**	**+1.8**
	0.7nm,0.3s,baz=114,slow=14,SNR=11						
SONM	**Songino Array**	**25.80**	**311**	P	**P**	**07 46 22.9**	**+0.3**
	0.3nm,0.4s,baz=118,slow=8.5,SNR=3.8						
MKAR	**Makanchi Array**	**41.75**	**304**	P	**P**	**07 48 40.0**	**-0.3**
	0.2nm,0.4s,baz=90,slow=12,SNR=4.2						

NIED ***05*** *07:46:00, 36.˝30N×141.˝90E, h23km, Mw3.9 Best double couple: M08.33000×10^14 NP1:ϕs33.00000°, δ69.00000°, λ89.00000°. NP2:ϕs216.00000°, δ21.00000°, λ93.00000°.*
IDC ***05*** *07:46:06.5±0.7, 36.˝28N×141.˝83E, h0km, mb3.7/15, mb1 3.9/18, mb1mx3.8/29, mbtmp3.8/18, ML3.7/3, MS3.0/3, Ms1 3.0/3, ms1mx2.6/45, Error ellipse: s-maj=19.2km s-min=15.7km az=132.0*
JMA ***05*** *07:46:09.1±0.2, 36.˝30N×141.˝87E, h65km±5km, M3.7*
ISC 05 07:46:06.3±1.4, 36.˝23N±0.˝04×141.˝80E±0.˝06, h1km±8km, n32, σ0.˝93/37, mb3.7/16, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.92**	**236**	P	**Pn**	**07 46 27.8**	**+1.3**
CHOJ				*e*S	**Sn**	**07 46 41.5**	**+1.1**
JHO	**Hitachi**	**1.06**	**291**	P	**Pn**	**07 46 28.4**	**0.0**
JHO				*e*S	**Sn**	**07 46 44.8**	**+1.0**
ONAJ	**Iwakimizuishiy**	**1.18**	**318**	P	**Pg**	**07 46 29.6**	**+0.6**
JFK	**Kawauchi**	**1.35**	**327**	P	**Pg**	**07 46 32.3**	**0.0**
BSO1	**Boso 1**	**1.71**	**203**	P	**Pg**	**07 46 38.6**	**-0.5**
BSO1				*e*S	**Sg**	**07 47 02.3**	**+1.1**
JFT	**Otama**	**1.74**	**318**	P	**Pb**	**07 46 38.6**	**-0.5**
BSO3	**Boso 3**	**1.77**	**217**	P	**Pg**	**07 46 39.9**	**-0.3**
JAG	**Ashikaga**	**1.90**	**277**	P	**Pb**	**07 46 40.8**	**-1.1**
JAG				*e*S	**Sb**	**07 47 05.9**	**-0.2**
JFY	**Yanaizu**	**2.05**	**306**	P	**Pb**	**07 46 43.3**	**-1.1**
JFY				*e*S	**Sn**	**07 47 07.2**	**-1.0**
JRY	**Ryogami san**	**2.35**	**266**	P	**Pb**	**07 46 47.5**	**-2.1**
MJAR	**Matsushiro Arr**	**2.91**	**277**	Pn	**Pn**	**07 46 55.6**	**+1.8**
	11nm,0.3s,baz=120,slow=7.8,SNR=111						
MJAR				Sn	**Sb**	**07 47 33.8**	**-1.4**
	7.4nm,0.3s,baz=199,slow=19,SNR=5.8						
MAT	**Matsushiro**	**2.91**	**277**	P	Pb	07 46 56.3	-2.8
MAT				S	**Sn**	**07 47 30.2**	**+0.7**
JHJ	**Hachijo jima 2**	**3.52**	**209**	Pn	**Pn**	**07 47 03.4**	**+1.2**
	34nm,0.3s,baz=240,slow=20,SNR=4.4						
JHJ				Sn	**Sn**	**07 47 42.5**	**-1.9**
	34nm,0.3s,baz=73,slow=19,SNR=3.4						
ASAJ	**Asahikawa**	**7.90**	**4**	Pn	**Pn**	**07 48 01.2**	**-1.1**
	0.8nm,0.3s,baz=212,slow=13,SNR=8.1						
ASAJ				Sn	Sn	07 49 24.7	-7.7
	0.3nm,0.3s,baz=60,slow=20,SNR=2.1						
ASAJ				LR	LR	07 51 40.1	
	comp=Z,87nm,20.6s,baz=134,slow=42						
USRK	**Ussuriysk Arra**	**10.92**	**320**	Pn	Pn	07 48 49.9	+6.1
	0.4nm,0.3s,baz=136,slow=14,SNR=6.8						
USRK				LR	LR	07 52 29.3	
	comp=Z,74nm,20.2s,baz=185,slow=35						
KSRS	**Korea Array**	**11.19**	**280**	Pn	Pn	07 48 52.4	+5.0
	0.1nm,0.3s,baz=95,slow=13,SNR=7.2						
KSRS				LR	LR	07 53 12.2	
	comp=Z,92nm,18.0s,baz=80,slow=38						
SONM	**Songino Array**	**28.49**	**305**	P	**P**	**07 52 03.9**	**+0.6**
	3.3nm,0.8s,baz=103,slow=8.1,SNR=18						
CMAR	**Chiang Mai Arr**	**41.60**	**256**	P	**P**	**07 53 56.1**	**+0.1**
	0.7nm,0.4s,baz=45,slow=5.7,SNR=4.5						
ZALV	**Zalesovo Beam**	**42.68**	**313**	P	**P**	**07 54 04.2**	**-0.3**
	0.8nm,0.4s,baz=102,slow=6.2,SNR=7.3						
MKAR	**Makanchi Array**	**44.81**	**303**	P	**P**	**07 54 22.3**	**+0.5**
	2.3nm,0.8s,baz=87,slow=6.6,SNR=2.1						
ILAR	**Eielson Array**	**50.01**	**32**	P	**P**	**07 55 01.6**	**-0.4**
	0.5nm,0.8s,baz=271,slow=6.8,SNR=4.9						
INK	**Inuvik**	**54.96**	**27**	P	**P**	**07 55 39.0**	**+0.5**
	0.4nm,0.5s,baz=302,slow=4.7,SNR=6.7						
WRA	**Warramunga Arr**	**56.31**	**188**	P	**P**	**07 55 48.5**	**-0.3**
	0.3nm,0.5s,baz=6.7,slow=7.4,SNR=5.1						
ASAR	**Alice Springs**	**60.04**	**188**	P	**P**	**07 56 16.1**	**+1.2**
	0.3nm,0.8s,baz=7.8,slow=7.5,SNR=3.4						
BBB	**Bella Bella**	**62.43**	**44**	P	**P**	**07 56 30.7**	**-0.1**
	68nm,1.3s,baz=236,slow=9.3,SNR=3.5						
YKA	**Yellowknife Ar**	**64.35**	**30**	P	**P**	**07 56 43.4**	**0.0**
	0.2nm,0.6s,baz=303,slow=6.8,SNR=6.4						
FINES	**FINESS Array B**	**69.67**	**333**	P	**P**	**07 57 17.0**	**-0.2**
	1.2nm,0.8s,baz=17,slow=8.0,SNR=4.1						
AKASG	**Malin Array Be**	**75.12**	**323**	P	**P**	**07 57 49.4**	**-0.5**
	0.6nm,0.4s,baz=46,slow=6.2,SNR=3.3						
PDAR	**Pinedale Array**	**78.01**	**46**	P	**P**	**07 58 06.8**	**0.0**
	0.2nm,0.8s,baz=297,slow=4.0,SNR=2.6						
BRTR	**Keskin Array B**	**79.61**	**312**	P	**P**	**07 58 15.2**	**-0.3**
	0.2nm,0.4s,baz=45,slow=1.9,SNR=3.8						
GERES	**GERESS Array B**	**83.56**	**328**	P	**P**	**07 58 36.1**	**-0.1**
	0.3nm,0.6s,baz=35,slow=4.9,SNR=3.5						
TXAR	**Lajitas Array**	**90.37**	**53**	P	**P**	**07 59 10.0**	**+0.3**
	0.3nm,1.0s,baz=344,slow=9.7,SNR=2.4						

IDC ***05*** *07:48:31.8±0.6, 22.˝37S×174.˝80W, h0km, mb4.5/18, mb1 4.7/20, mb1mx4.7/24, mbtmp4.6/20, ML3.8/2, MS4.0/7, Ms1 4.0/7, ms1mx3.7/36, Error ellipse: s-maj=21.7km s-min=14.6km az=141.0*
ISCJB ***05*** *07:48:34.1±0.3, 22.˝47S±0.˝06×174.˝83W±0.˝06, h22km, mb4.8/48, MS4.5/11, Error ellipse: s-maj=10.6km s-min=6.9km az=140.9*
BJI ***05*** *07:48:35.9, 22.˝51S×174.˝70W, h32km, mB5.5/18, mb5.0/24, Ms5.2/15, Ms7 4.9/12*
NEIC ***05*** *07:48:37.3±0.3, 22.˝51S×174.˝74W, h35km, mb4.9/21, Error ellipse: s-maj=10.4km s-min=7.2km az=144.0*
ISC 05 07:48:36.0±0.4, 22.˝55S±0.˝07×174.˝74W±0.˝08, h22km, n137, σ1.˝91/167, mb4.8/48, MS4.6/11, 6C, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**7.26**	**203**	*e*Pn	**Pn**	**07 50 21.6**	**+0.8**
MSVF	**Nonsavu**	**8.30**	**304**	*e*Pn	Pn	07 50 40.1	+5.0
AFI	**Afiamalu**	**9.04**	**19**	Pn	Pn	07 50 41.0	-4.3
AFI				Sn	Sn	07 52 09.5	-17
AFI	**Afiamalu**	**9.04**	**19**	Pn	Pn	07 50 41.0	-4.3
	9.1nm,0.3s,baz=24,slow=19,SNR=3.8						
AFI				Sn	Sn	07 52 09.5	-17
	5.7nm,0.3s,baz=36,slow=19,SNR=2.2						
AFI				LR	LR	07 53 07.5	
	comp=Z,447nm,18.1s,baz=214,slow=31						
RAR	**Rarotonga**	**13.96**	**87**	*e*Pn	Pn	07 51 43.0	-10
RAR				Sn	Sn	07 54 03.2	-24
RAR	**Rarotonga**	**13.96**	**87**	Pn	Pn	07 51 42.6	-10
	12nm,0.3s,baz=270,slow=7.5,SNR=30						
RAR				Sn	Sn	07 54 03.2	-24
	2.9nm,0.3s,baz=90,slow=19,SNR=4.4						
RAR				LR	LR	07 56 01.7	
	comp=Z,126nm,18.9s,baz=270,slow=32						
URZ	**Urewera**	**17.15**	**202**	P	**P**	**07 52 35.5**	**-0.2**
URZ				*e*Sn	Sn	07 55 28.5	-16
URZ				S	S	07 55 28.7	-25
URZ	**Urewera**	**17.15**	**202**	P	**P**	**07 52 35.5**	**-0.2**
	2.4nm,0.3s,baz=17,slow=4.6,SNR=20						
URZ				S	Sn	07 55 28.7	-16
	0.5nm,0.3s,baz=356,slow=16,SNR=3.6						
DZM	**Mont Dzumac**	**17.42**	**268**	*e*LR	LR	07 57 05.1	
	616nm,22.0s						
TBI	**Tubuai**	**23.29**	**97**	*e*LQ	LQ	07 58 00.8	
	1μm,27.0s						
TBI				*e*LR	LR	07 58 58.7	
	1μm,27.2s,baz=276						
PPT2	**Papeete2**	**24.13**	**83**	*e*LQ	LQ	07 58 18.5	
	948nm,25.0s						
PPT2				*e*LR	LR	07 59 26.1	
	960nm,26.5s,baz=238						
PPT	**Papeete**	**24.14**	**83**	LR	LR	08 00 30.9	
	comp=Z,418nm,20.9s,baz=255,slow=30						
RPZ	**Rata Peaks**	**24.16**	**206**	P	**P**	**07 53 53.7**	**+3.2**
RPZ	**Rata Peaks**	**24.16**	**206**	P	**P**	**07 53 53.7**	**+3.2**
	8.8nm,0.7s,baz=17,slow=12,SNR=3.7						
EIDS	**Eidsvold**	**31.31**	**258**	*e*P	**P**	**07 54 53.9**	**-0.8**
	20nm,1.4s						
CTA	**Charters Tower**	**36.35**	**266**	P	**P**	**07 55 38.1**	**-0.5**
CTA	**Charters Tower**	**36.35**	**266**	P	**P**	**07 55 38.1**	**-0.5**
	3.4nm,0.4s,baz=101,slow=11,SNR=13						
CTAO	**Charters Tower**	**36.35**	**266**	*e*P	**P**	**07 55 38.0**	**-0.6**
	7.0nm,0.7s						
RKT	**Rikitea**	**36.58**	**99**	*e*LR	LR	08 04 59.9	
	654nm,29.5s						
PMG	**Port Moresby**	**38.77**	**283**	*e*P	**P**	**07 55 57.9**	**-1.1**
	38nm,1.4s						
PMG	**Port Moresby**	**38.77**	**283**	P	**P**	**07 55 58.0**	**-1.1**
	9.3nm,0.8s,baz=66,slow=7.2,SNR=7.3						
STKA	**Stephens Creek**	**39.71**	**247**	P	**P**	**07 56 06.5**	**-0.3**
STKA	**Stephens Creek**	**39.71**	**247**	P	**P**	**07 56 06.5**	**-0.3**
	3.9nm,0.6s,baz=92,slow=10,SNR=12						

STKA				LR	LR	08 11 19.4	
	comp=Z,504nm,19.4s,baz=280,slow=34						
COEN	**Coen**	**40.76**	**275**	*e*P	**P**	**07 56 14.4**	**-1.3**
	167nm,1.3s						
AS31	**Alice Springs**	**47.04**	**258**	*e*P	**P**	**07 57 03.7**	**-2.5**
ASAR	**Alice Springs**	**47.04**	**258**	P	**P**	**07 57 04.3**	**-1.8**
ASAR				S	**S**	**08 03 53.3**	**-3.8**
ASAR	**Alice Springs**	**47.04**	**258**	P	**P**	**07 57 04.3**	**-1.8**
	9.5nm,0.9s,baz=91,slow=8.3,SNR=49						
ASAR				S	**S**	**08 03 53.3**	**-3.8**
	0.3nm,0.8s,baz=101,slow=14,SNR=3.9						
ASAR				LR	LR	08 16 17.2	
	comp=Z,402nm,18.3s,baz=288,slow=35						
WRAB	**Tennant Creek**	**47.34**	**263**	*e*P	**P**	**07 57 06.3**	**-2.2**
	7.8nm,0.9s						
WRA	**Warramunga Arr**	**47.35**	**263**	P	**P**	**07 57 06.0**	**-2.6**
WRA	**Warramunga Arr**	**47.35**	**263**	P	**P**	**07 57 06.0**	**-2.6**
	7.6nm,1.1s,baz=103,slow=7.9,SNR=36						
FORT	**Forrest**	**51.31**	**248**	*e*P	**P**	**07 57 38.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**55.78**	**263**	*e*P	**P**	**07 58 10.1**	**-1.6**
FITZ	**Fitzroy Crossi**	**55.78**	**263**	P	**P**	**07 58 09.9**	**-1.7**
	9.6nm,1.1s,baz=103,slow=7.7,SNR=7.9						
SBA	**Scott Base**	**56.06**	**185**	*e*P	**P**	**07 58 14.8**	**+2.0**
	82nm,2.1s						
VNDA	**Vanda**	**56.17**	**186**	P	**P**	**07 58 15.3**	**+1.7**
VNDA	**Vanda**	**56.17**	**186**	P	**P**	**07 58 15.3**	**+1.7**
	1.9nm,1.0s,baz=354,slow=6.9,SNR=4.8						
VNDA				LR	LR	08 18 29.3	
	comp=Z,146nm,18.1s,baz=120,slow=32						
MBWA	**Marble Bar**	**60.38**	**258**	*e*P	**P**	**07 58 43.7**	**-0.2**
	3.1nm,0.5s						
QSPA	**South Pole Qui**	**67.53**	**180**	*e*P	**P**	**07 59 30.7**	**+0.4**
	14nm,1.1s						
MJAR	**Matsushiro Arr**	**73.67**	**322**	P	**P**	**08 00 07.0**	**-0.9**
MJAR	**Matsushiro Arr**	**73.67**	**322**	P	**P**	**08 00 07.0**	**-0.9**
	5.3nm,0.6s,baz=161,slow=6.4,SNR=29						
MAJO	**Matsushiro**	**73.67**	**322**	*e*P	**P**	**08 00 06.3**	**-1.7**
	112nm,2.1s						
MAT	**Matsushiro**	**73.67**	**322**	P	**P**	**08 00 07.2**	**-0.8**
KSM	**Kuching**	**76.69**	**277**	*e*P	**P**	**08 00 25.4**	**-0.5**
	15nm,1.3s						
ASAJ	**Asahikawa**	**76.99**	**330**	P	**P**	**08 00 28.7**	**+1.8**
ASAJ	**Asahikawa**	**76.99**	**330**	P	**P**	**08 00 28.7**	**+1.8**
	6.9nm,0.7s,baz=184,slow=9.5,SNR=6.0						
ISA	**Isabella**	**78.65**	**44**	*e*P	**P**	**08 00 34.7**	**-1.8**
CMB	**Columbia Colle**	**78.96**	**41**	*e*P	**P**	**08 00 37.2**	**-0.9**
PETK	**Petropavlovsk-**	**79.06**	**343**	P	**P**	**08 00 37.1**	**-1.0**
PETK	**Petropavlovsk-**	**79.06**	**343**	P	**P**	**08 00 37.1**	**-1.0**
	6.7nm,0.7s,baz=142,slow=8.7,SNR=6.8						
WCN	**Washoe City**	**80.15**	**40**	*e*P	**P**	**08 00 44.6**	**-0.1**
	15nm,1.6s						
KSRS	**Korea Array**	**80.44**	**317**	P	**P**	**08 00 46.0**	**0.0**
	2.8nm,0.8s,baz=137,slow=6.4,SNR=12						
KSAR	**Wonju Array Be**	**80.45**	**317**	P	**P**	**08 00 46.0**	**-0.1**
NVAR	**Mina Array Bea**	**80.48**	**42**	P	**P**	**08 00 45.6**	**-0.9**
NVAR	**Mina Array Bea**	**80.48**	**42**	P	**P**	**08 00 45.6**	**-0.9**
	1.8nm,0.9s,baz=221,slow=8.1,SNR=14						
MAW	**Mawson**	**80.65**	**199**	P	**P**	**08 00 47.6**	**+0.9**
MAW	**Mawson**	**80.65**	**199**	P	**P**	**08 00 47.6**	**+0.9**
	5.2nm,0.8s,baz=112,slow=4.6,SNR=7.6						
TUC	**Tucson**	**81.90**	**50**	*e*P	**P**	**08 00 53.5**	**-0.5**
USRK	**Ussuriysk Arra**	**82.37**	**324**	P	**P**	**08 00 57.1**	**+1.1**
	8.8nm,0.8s,baz=150,slow=4.2,SNR=13						
CCUT	**Cedar City**	**83.08**	**45**	*e*P	**P**	**08 00 59.2**	**-1.0**
	22nm,1.8s						
MSU	**Marysvale**	**84.39**	**44**	*e*P	**P**	**08 01 06.8**	**-0.2**
TMUT	**Trail Mountain**	**85.46**	**44**	*e*P	**P**	**08 01 11.5**	**-0.9**
	13nm,1.1s						
LAZ	**Ladron**	**85.59**	**50**	*e*P	**P**	**08 01 12.5**	**-0.6**
	6.8nm,1.5s						
TXAR	**Lajitas Array**	**85.64**	**56**	P	**P**	**08 01 12.2**	**-1.1**
TXAR	**Lajitas Array**	**85.64**	**56**	P	**P**	**08 01 12.2**	**-1.1**
	3.1nm,1.1s,baz=220,slow=5.7,SNR=18						
CN2	**Changchun**	**85.78**	**321**	*e*P	**P**	**08 01 14.0**	**+0.5**
CN2				*e*pP	**pP**	**08 01 25.5**	**+4.8**
CN2				*e*S	**S**	**08 11 44.0**	**-1.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,19.0s						
CN2				LR	LR		
	comp=E,600nm,19.0s						
CN2				LR	LR		
	comp=Z,700nm,21.0s						
SRU	**San Rafael**	**85.80**	**45**	*e*P	**P**	**08 01 11.7**	**-2.2**
	comp=Z,291nm,1.1s						
BNM	**Barren Site**	**85.83**	**50**	*e*P	**P**	**08 01 13.8**	**-0.5**
	comp=Z,6.6nm,1.4s						
SNAA	**Sanae**	**85.86**	**177**	*e*P	**P**	**08 01 13.1**	**-0.5**
	comp=Z,11nm,1.1s						
SNAA	**Sanae**	**85.86**	**177**	LR	LR	08 36 09.8	
	comp=Z,84nm,20.2s,baz=25,slow=33						
LPM	**Los Pinos Moun**	**85.91**	**50**	*e*P	**P**	**08 01 14.3**	**-0.3**
WHN	**Wuhan**	**86.10**	**305**	P	**P**	**08 01 18.0**	**+2.6**
ANMO	**Albuquerque**	**86.35**	**50**	*e*P	**P**	**08 01 16.1**	**-0.7**
IPM	**Ipoh**	**86.39**	**276**	*e*P	**P**	**08 01 17.3**	**0.0**
	comp=Z,31nm,1.3s						
GDL2	**Guadalupe Moun**	**86.50**	**53**	*e*P	**P**	**08 01 17.1**	**-0.4**
PSI	**Prapat**	**87.68**	**274**	P	**P**	**08 01 22.6**	**-1.1**
PSI	**Prapat**	**87.68**	**274**	P	**P**	**08 01 22.6**	**-1.1**
	comp=Z,10nm,0.9s,baz=161,slow=5.7,SNR=5.1						
SMCO	**Snowmass**	**88.17**	**46**	*e*P	**P**	**08 01 24.5**	**-1.2**
	comp=Z,1.8nm,1.0s						
PDAR	**Pinedale Array**	**88.41**	**42**	P	**P**	**08 01 24.9**	**-1.7**
PDAR	**Pinedale Array**	**88.41**	**42**	P	**P**	**08 01 24.9**	**-1.7**
	comp=Z,0.8nm,0.9s,baz=205,slow=5.9,SNR=5.6						
COLA	**College**	**89.59**	**11**	*e*P	**P**	**08 01 30.0**	**-1.2**
	comp=Z,25nm,1.6s						
ILAR	**Eielson Array**	**89.67**	**12**	P	**P**	**08 01 30.4**	**-1.3**
ILAR	**Eielson Array**	**89.67**	**12**	P	**P**	**08 01 30.4**	**-1.3**
	comp=Z,3.5nm,1.1s,baz=223,slow=4.9,SNR=15						
GYA	**Guiyang**	**90.30**	**299**	P	**P**	**08 01 36.0**	**+0.3**
GYA				pP	**pP**	**08 01 46.9**	**+4.0**
GYA				sP	sP	08 01 52.2	+6.7
GYA				PP	**PP**	**08 05 12.8**	**+2.7**
GYA				SKS	**SKSac**	**08 12 01.9**	**-4.1**
GYA				S	**S**	**08 12 25.5**	**-3.6**
GYA				sS	**sS**	**08 12 43.4**	**+2.2**
GYA				SS	**SS**	**08 18 30.0**	**+0.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=N,440nm,19.2s						
GYA				LR	LR		
	comp=E,390nm,20.7s						
GYA				LR	LR		
	comp=Z,420nm,19.5s						
COLD	**Coldfoot**	**91.37**	**9**	*e*P	**P**	**08 01 39.0**	**-0.6**
	comp=Z,23nm,2.0s						
XAN	**Xi'an**	**91.79**	**306**	P	**P**	**08 01 42.1**	**-0.2**
XAN				pP	**pP**	**08 01 50.8**	**+1.2**
XAN				sP	**sP**	**08 01 55.2**	**+3.0**
XAN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,14nm,5.3s						
HHC	**Hu-ho-hao-te**	**92.96**	**313**	*e*P	**P**	**08 01 48.5**	**+0.9**
HHC				sP	sP	08 02 03.7	+6.2
HHC				PP	**PP**	**08 05 34.6**	**+3.8**
HHC				SKS	**SKSac**	**08 12 17.7**	**-2.7**
HHC				S	**S**	**08 12 49.9**	**-2.7**
HHC				sS	**sS**	**08 13 08.4**	**+3.7**
HHC				SS	**SS**	**08 19 08.8**	**+1.4**
HHC				pmax	pmax		
	comp=Z,33nm,0.7s						
HHC				pmax	pmax		
	comp=Z,280nm,7.3s						
HHC				LR	LR		
	comp=N,350nm,17.5s						
HHC				LR	LR		
	comp=E,530nm,17.3s						
HHC				LR	LR		
	comp=Z,230nm,17.4s						
KMI	**Kunming**	**92.98**	**296**	P	**P**	**08 01 49.1**	**+0.8**
KMI				pP	**pP**	**08 01 57.3**	**+1.7**
KMI				sP	**sP**	**08 02 02.9**	**+4.8**
KMI				PP	**PP**	**08 05 34.2**	**+2.8**
KMI				S	**S**	**08 12 51.3**	**-2.3**
KMI				sS	**sS**	**08 13 08.0**	**+2.2**
KMI				pmax	pmax		
	comp=Z,11nm,1.5s						
KMI				pmax	pmax		
	comp=Z,100nm,3.9s						
KMI				LR	LR		
	comp=N,110nm,19.9s						
KMI				LR	LR		
	comp=E,160nm,15.6s						
CM31	**Chiang Mai Arr**	**93.65**	**288**	*e*P	**P**	**08 01 51.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**93.65**	**288**	P	**P**	**08 01 48.2**	**-3.0**
CMAR	**Chiang Mai Arr**	**93.65**	**288**	P	**P**	**08 01 48.2**	**-3.0**
	comp=E,1.4nm,0.3s,baz=107,slow=2.2,SNR=3.7						
CHTO	**Chiang Mai**	**93.78**	**289**	*e*P	**P**	**08 01 52.6**	**+0.7**
	comp=E,4.8nm,0.8s						
CD2	**Chengdu**	**94.45**	**302**	P	**P**	**08 01 54.3**	**-0.4**
CD2				pP	**pP**	**08 02 05.4**	**+3.4**
CD2				sP	**sP**	**08 02 09.5**	**+4.9**
CD2				PP	**PP**	**08 05 44.9**	**+2.3**
CD2				SKS	**SKSac**	**08 12 25.3**	**-3.6**
CD2				S	**S**	**08 13 01.3**	**-4.6**
CD2				sS	**sS**	**08 13 20.0**	**+1.9**
CD2				SS	**SS**	**08 19 28.8**	**-0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2				pmax	pmax		
	comp=Z,50nm,4.6s						
LZH	**Lanzhou**	**96.42**	**306**	*e*P	**P**	**08 02 02.5**	**-1.2**
LZH				pP	**pP**	**08 02 13.0**	**+2.0**
LZH				sP	**sP**	**08 02 17.1**	**+3.5**
LZH				PP	**PP**	**08 05 59.7**	**+1.7**
LZH				pmax	pmax		
	comp=Z,17nm,1.5s						
LZH				pmax	pmax		
	comp=Z,75nm,8.2s						
LZH				LR	LR		
	comp=N,310nm,16.8s						
LZH				LR	LR		
	comp=E,300nm,17.0s						
LZH				LR	LR		
	comp=Z,370nm,19.5s						
YKA	**Yellowknife Ar**	**97.12**	**24**	P	**P**	**08 02 04.5**	**-1.5**
YKA	**Yellowknife Ar**	**97.12**	**24**	P	**P**	**08 02 04.5**	**-1.5**
	comp=Z,0.8nm,0.9s,baz=238,slow=4.5,SNR=14						
GTA	**Gaotai**	**100.62**	**308**	P	**Pdif**	**08 02 23.7**	**+1.3**
GTA				pP	pP	08 02 34.4	+4.6
GTA				sP	sP	08 02 38.2	+5.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WMQ	**Urumqi**	**110.56**	**310**	PKP	**PKiKP**	**08 07 06.0**	**-0.9**
WMQ				PP	**PP**	**08 07 47.0**	**+3.6**
WMQ				SKS	**SKSdf**	**08 14 13.0**	**-4.7**
WMQ				SKKS	SKKSac	08 14 35.0	-10
WMQ				SS	**SS**	**08 23 06.0**	**-5.3**
WMQ				AMB	AMB		
	comp=Z,22nm,12.0s						
WMQ				LR	LR		
	comp=N,140nm,22.0s						
WMQ				LR	LR		
	comp=E,99nm,22.0s						
MKAR	**Makanchi Array**	**114.81**	**312**	PKP	PKPdf	08 07 13.3	-1.5
MKAR	**Makanchi Array**	**114.81**	**312**	PKP	PKPdf	08 07 13.3	-1.5
	comp=E,0.4nm,0.6s,baz=158,slow=0.5,SNR=4.7						
KSH	**Kashi**	**118.55**	**304**	*e*PKP	**PKPdf**	**08 07 22.2**	**-0.2**
KSH				sPKP		08 07 37.1	
KSH				PP	PP	08 08 47.2	+7.2
KSH				PKS	**PKSdf**	**08 10 58.3**	**-0.8**
KSH				SKS	**SKSdf**	**08 14 30.0**	**-3.3**
KSH				SKKS	**SKKSac**	**08 15 35.3**	**-3.7**
KSH				SS	**SS**	**08 25 01.5**	**+4.7**
KSH				AMB	AMB		
	comp=Z,220nm,6.4s						
KSH				LR	LR		
	comp=N,140nm,4.6s						
KSH				LR	LR		
	comp=E,120nm,4.0s						
KSH				LR	LR		
	comp=Z,220nm,5.4s						
KOPT	**Kop Dagi**	**145.50**	**309**	*i* P	**PKPab**	**08 08 14.2**	**+1.0**
SUW	**Suwalki**	**145.79**	**341**	*e*PKPbc	**PKPdf**	**08 08 12.6**	**+0.1**
SUW	**Suwalki**	**145.79**	**341**	*e*PKP	**PKPdf**	**08 08 12.6**	**+0.1**
MARD	**Mardin**	**146.11**	**304**	*i* P	**PKPdf**	**08 08 13.6**	**-0.2**
AKASG	**Malin Array Be**	**146.25**	**332**	PKPbc	**PKPdf**	**08 08 13.1**	**-0.3**
AKASG	**Malin Array Be**	**146.25**	**332**	PKPbc	**PKPdf**	**08 08 13.1**	**-0.3**
	comp=Z,4.5nm,0.5s,baz=40,slow=3.9,SNR=17						
AK01	**Malin Array Si**	**146.26**	**332**	*e*PKPdf	**PKPdf**	**08 08 12.6**	**-0.8**
KIEV	**Kiev**	**146.26**	**332**	*e*PKPdf	**PKPdf**	**08 08 12.2**	**-1.3**
KIEV				*e*PKPbc	**PKPbc**	**08 08 13.9**	**-0.7**
AK02	**Malin Array Si**	**146.29**	**332**	*e*PKPdf	**PKPdf**	**08 08 12.8**	**-0.7**
AK02				*e*PKPbc	**PKPbc**	**08 08 13.9**	**-0.8**
KELT	**Kelkit**	**146.34**	**309**	*i* P	**PKPab**	**08 08 16.0**	**-0.3**
KEMA	**Kemaliye**	**147.21**	**308**	*i* P	**PKPab**	**08 08 19.2**	**-0.3**
MALT	**Malatya**	**147.58**	**307**	*e*PKPbc	**PKPbc**	**08 08 19.3**	**+0.4**
GZT	**Gaziantep**	**148.54**	**305**	*i* P	**PKPbc**	**08 08 22.3**	**+0.8**
KWP	**Kalwaria Pacla**	**149.67**	**337**	*e*PKP	**PKPbc**	**08 08 25.4**	**+1.6**
BUR08	**Bucovina Ar. S**	**150.29**	**332**	*e*PKPbc	**PKPbc**	**08 08 26.3**	**+0.8**
KOLS	**Kolonicke sedl**	**150.41**	**337**	*e*PKP	**PKPbc**	**08 08 25.0**	**-0.6**
BR131	**Keskin Array S**	**150.46**	**312**	*e*PKPbc	**PKPbc**	**08 08 25.9**	**-0.3**
BRTR	**Keskin Array B**	**150.46**	**312**	PKPbc	**PKPbc**	**08 08 25.1**	**-1.1**
BRTR	**Keskin Array B**	**150.46**	**312**	PKPbc	**PKPbc**	**08 08 25.1**	**-1.1**
	comp=Z,2.4nm,0.8s,baz=130,slow=1.9,SNR=15						
KSP	**Ksiaz**	**150.48**	**346**	*e*PKP	**PKPbc**	**08 08 25.9**	**+0.2**
GULE	**Gulek**	**150.65**	**307**	*i* P	**PKPbc**	**08 08 26.8**	**+0.1**
CLL	**Collm**	**150.67**	**350**	*i* PKPbc	**PKPbc**	**08 08 25.3**	**-0.8**
	comp=Z,20nm,1.1s						
CLL				*e*		08 08 37.0	
CLL				*e*		08 08 49.0	
CLL				LmV		08 48 00.0	
	comp=Z,100nm,21.5s						
CRVS	**Cervenica-Dubn**	**150.73**	**338**	*e*PKP	**PKPbc**	**08 08 25.8**	**-0.6**
UPC	**Upice**	**150.85**	**346**	⇑*e*PKP	**PKPbc**	**08 08 27.0**	**+0.4**
BRG	**Berggiesshubel**	**150.93**	**349**	*e*PKP	**PKPbc**	**08 08 26.5**	**-0.2**
	comp=Z,14nm,1.1s						
BRG				*e*		08 12 12.0	
	comp=Z,6.5nm,1.2s						
DPC	**Dobruska-Polom**	**150.93**	**345**	⇑*e*PKP	**PKPbc**	**08 08 26.9**	**+0.1**
DPC				*e*pPKP	**PKPab**	**08 08 36.6**	**+2.5**
OKC	**Ostrava-Krasne**	**150.94**	**343**	⇑*e*PKP	**PKPbc**	**08 08 26.9**	**+0.1**
KRLC	**Kraliky**	**151.07**	**345**	⇑*e*PKP	**PKPbc**	**08 08 27.1**	**-0.1**
MORC	**Moravsky Berou**	**151.16**	**343**	*e*PKPbc	**PKPbc**	**08 08 27.4**	**0.0**
PRU	**Pruhonice**	**151.66**	**347**	⇑*e*PKP	**PKPbc**	**08 08 28.7**	**+0.2**
VYHS	**Vyhne**	**151.94**	**341**	*e*PKP	**PKPbc**	**08 08 28.8**	**-0.4**
VYHS				*e*		08 08 38.0	
KHC	**Kasperske Hory**	**152.67**	**348**	*e*PKPDF	**PKPdf**	**08 08 22.5**	**-1.3**
KHC				⇑*e*PKP	**PKPbc**	**08 08 30.5**	**-0.3**
GERES	**GERESS Array B**	**152.92**	**348**	PKPbc	**PKPbc**	**08 08 30.6**	**-0.8**
GERES	**GERESS Array B**	**152.92**	**348**	PKPbc	**PKPbc**	**08 08 30.6**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=29,slow=3.0,SNR=7.7						
WLF	**Walferdange**	**152.93**	**359**	PKPbc	**PKPbc**	**08 08 31.4**	**+0.1**
WLF				PKP		08 34 15.1	
TORD	**Torodi Ar. Bea**	**170.05**	**159**	PKPab	**PKPab**	**08 09 57.0**	**-0.8**
TORD	**Torodi Ar. Bea**	**170.05**	**159**	PKPab	**PKPab**	**08 09 57.0**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=209,slow=3.8,SNR=2.5						

*NIED **05** 08:00:00, 42.30N×143.00E, h56^{km}, Mw4.9 Best double couple: M$_0$2.57000×10^{16} NP1:φ$_s$30.00000°, δ65.00000°, λ96.00000°. NP2:φ$_s$197.00000°, δ25.00000°, λ78.00000°.*

*BJI **05** 08:00:20.1, 42.28N×143.16E, h39^{km}, mB4.9/30, mb4.8/45, Ms4.4/41, Ms7 4.1/41*

*DJA **05** 08:00:20.4±1.2, 43°N±11°×14°3E±2°0, h25^{km}, M4.8/9, mB5.4/2, mb4.8/9, Mw(mB)4.8/2*

*SZGRF **05** 08:00:21.4, 42.95N×146.09E, h53^{km}, mb4.6, MS4.2, Off southeast coast of Hokkaido, Japan*

*MOS **05** 08:00:23.3±0.9, 42.37N×142.86E, h52^{km}, mb5.1/78, Error ellipse: s-maj=7.1km s-min=4.4km az=101.5*

*ISCJB **05** 08:00:24.4±0.2, 42.28N±0.02×142.96E±0.02, h67^{km}±1^{km}, mb4.6/161, Error ellipse: s-maj=4.3km s-min=2.6km az=156.0*

*TEH **05** 08:00:25.0, 42.44N×142.84E, h49^{km}, ML4.8*

*JMA **05** 08:00:25.7±0.1, 42.32N×143.00E, h54^{km}±1^{km}, M4.8 Broadband fault plane solution: P waves. NP1: φ$_s$20.00000°, δ83.00000°, λ89.00000°. NP2:φ$_s$208.00000°, δ7.00000°, λ98.00000°. Principal axes: T Plg52.0000°, Azm289.0000°; N Plg1.0000°, Azm20.0000°; P Plg38.0000°, Azm111.0000°;*

JMA Felt III J1.

*NEIC **05** 08:00:26.1±0.4, 42.37N×142.84E, h65^{km}±3^{km}, mb4.8/88, MW4.9(NIED) Error ellipse: s-maj=4.2km s-min=3.1km az=148.0*

NEIC Recorded [3 JMA] in southern Hokkaido. Also recorded [2 JMA] in Aomori and [1 JMA] in Iwate, Honshu.

*GCMT **05** 08:00:28.0±0.4, 42.21N×143.09E, h66^{km}±2^{km}, MW4.9, Moment Tensor Solution. s32,c38; s60,c83; Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.59±.14; M$_{\theta\theta}$-0.81±.12; M$_{\phi\phi}$-1.78±.13; M$_{r\theta}$0.33±.08; M$_{\theta\phi}$-1.23±.10; M$_{\phi r}$0.87±.08; Best double couple: M$_0$2.80000×10^{16} NP1:φ$_s$219.00000°, δ36.00000°, λ97.00000°. NP2:φ$_s$30.00000°, δ55.00000°, λ85.00000°. Principal axes: T 2.7600, Plg79.0000°, Azm279.0000°; N 0.0100, Plg4.0000°, Azm33.0000°; P -2.7700, Plg10.0000°, Azm123.0000°; Data Used: II IU IC G CN.*

*IDC **05** 08:00:29.5±1.1, 42.47N×142.86E, h96^{km}±8^{km}, mb4.2/27, mb1 4.3/30, mb1mx4.3/32, mbtmp4.1/30, MS3.9/21, Ms1 3.9/21, ms1mx3.8/45 Error ellipse: s-maj=11.1km s-min=8.3km az=129.0*

ISC 05 08:00:24.8±0.3, **42.35N**±0.03×**142.90E**±0.03, **h54**^{km}±2^{km}, **h53**^{km}**:pP-P, n574,** σ**1.32**/664, **mb4.8**/161, **MS4.1**/35, **65C-75D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.13**	**237**	⇑P	**Pn**	**08 00 34.2**	**+1.1**
JNBK				*e*S	**Sn**	**08 00 41.1**	**+2.0**
JEM	**Erimo**	**0.39**	**150**	⇑P	**Pn**	**08 00 35.7**	**+0.7**
ERM	**Erimo**	**0.39**	**150**	*d i*PN	**Pn**	**08 00 35.5**	**+0.5**
ERM	**Erimo**	**0.39**	**150**	*e*Pn	**Pn**	**08 00 36.0**	**+1.0**
ERM				*e*Sn	**Sn**	**08 00 44.1**	**+1.7**
JCH	**Churui**	**0.43**	**52**	⇑P	**Pn**	**08 00 36.2**	**+0.7**
JCH				*e*S	**Sn**	**08 00 44.4**	**+1.2**
JBT2	**Biratori 2**	**0.58**	**318**	⇓P	**Pn**	**08 00 39.1**	**+1.9**
JBT2				*e*S	**Sn**	**08 00 50.3**	**+4.1**
JFR	**Furan**	**0.84**	**345**	⇓P	**Pn**	**08 00 41.7**	**+1.2**
JOB	**Onbets**	**0.89**	**51**	⇑P	**Pn**	**08 00 42.4**	**+1.3**
JOB				*e*S	**Sn**	**08 00 55.4**	**+2.4**
JAR	**Ashorobuto**	**1.14**	**34**	⇑P	**Pn**	**08 00 45.3**	**+0.8**
JAR				*e*S	**Sn**	**08 01 00.3**	**+1.1**
JEW	**Eniwo**	**1.18**	**295**	⇓P	**Pn**	**08 00 47.2**	**+2.3**
JEW				*e*S	**Sn**	**08 01 04.5**	**+4.6**
JAB	**Ashibetsu**	**1.25**	**337**	⇓P	**Pn**	**08 00 48.3**	**+2.3**
JAK	**Akkeshi**	**1.48**	**63**	⇓P	**Pn**	**08 00 49.1**	**+0.1**
JAK				*e*S	**Sn**	**08 01 08.1**	**+1.0**
ASAJ	**Asahikawa**	**1.78**	**353**	*e*Pn	**Pn**	**08 00 55.4**	**+2.3**
ASAJ				*e*Sn	**Sn**	**08 01 11.5**	**-3.1**
ASAJ				S		08 01 18.6	
ASAJ	**Asahikawa**	**1.78**	**353**	P	**Pn**	**08 00 55.4**	**+2.3**
	345nm,0.3s,baz=203,slow=14,SNR=523						
ASAJ				S	**Sn**	**08 01 18.6**	**+4.0**
	148nm,0.3s,baz=192,slow=33,SNR=8.6						
ASAJ				LR	LR	08 01 39.5	
	comp=Z,2μm,20.8s,baz=204,slow=42						
YUK	**Yuzh-Kuril'sk**	**2.74**	**51**	*i* PN	**Pn**	**08 01 06.6**	**+0.3**
YUK				*i* S	**Sn**	**08 01 38.9**	**+0.7**
YUK				pmax	pmax		
	comp=E,279nm,0.3s						
YUK				pmax	pmax		
	comp=N,579nm,0.6s						
YUK				pmax	pmax		
	comp=Z,528nm,0.6s						
YUK				smax	smax		
	comp=N,1μm,0.5s						
YUK				smax	smax		
	comp=E,2μm,0.6s						
YSS	**Yuzh-Sakhalins**	**4.60**	**359**	*i* PN	Pn	08 01 35.0	+3.2
YSS				*e*S	**Sn**	**08 02 28.0**	**+4.1**
YSS				pmax	pmax		
	comp=N,170nm,1.0s						
YSS				pmax	pmax		
	comp=Z,160nm,1.0s						
YSS				smax	smax		
	comp=E,1μm,4.0s						
YSS				MLR	MLR		
	comp=Z,900nm,10.0s						
YSS				MLR	MLR		
	comp=N,800nm,9.0s						
YSS	**Yuzh-Sakhalins**	**4.60**	**359**	*e*Pn	Pn	08 01 35.1	+3.4
KUR	**Kuril'sk**	**4.61**	**50**	⇑*i*PN	**Pn**	**08 01 34.0**	**+2.2**
KUR				*i* S	**Sn**	**08 02 28.0**	**+4.0**
KUR				pmax	pmax		
	comp=E,320nm,1.0s						
KUR				pmax	pmax		
	comp=Z,2μm,1.0s						
KUR				pmax	pmax		
	comp=N,220nm,0.7s						
KUR				smax	smax		
	comp=N,9μm,2.0s						
KUR				smax	smax		
	comp=E,3μm,2.0s						
KUR				smax	smax		
	comp=N,300nm,0.5s						
KUR				smax	smax		
	comp=E,1μm,0.5s						
MAJO	**Matsushiro**	**6.84**	**214**	*e*PN	**Pn**	**08 02 03.5**	**+1.0**
MAJO	**Matsushiro**	**6.84**	**214**	*e*Pn	**Pn**	**08 02 03.5**	**+1.0**
MAT	**Matsushiro**	**6.84**	**214**	P	**Pn**	**08 02 03.0**	**+0.5**
MAT				S	**Sn**	**08 03 21.8**	**+2.8**
MJAR	**Matsushiro Arr**	**6.84**	**214**	P	**Pn**	**08 02 04.0**	**+1.5**
MJAR	**Matsushiro Arr**	**6.84**	**214**	P	**Pn**	**08 02 04.0**	**+1.5**
	comp=E,7.1nm,0.3s,baz=58,slow=16,SNR=59						
MJAR				LR	LR	08 05 11.7	
	comp=E,570nm,21.3s,baz=15,slow=41						
USRK	**Ussuriysk Arra**	**8.16**	**287**	P	**Pn**	**08 02 23.4**	**+2.9**
	comp=E,1.7nm,0.3s,baz=88,slow=14,SNR=16						
USRK				S	Sn	08 03 58.5	+7.2
	baz=200,slow=38,SNR=2.0						
JHJ	**Hachijo jima 2**	**9.54**	**196**	P	**Pn**	**08 02 37.8**	**-1.6**
	comp=E,36nm,0.3s,baz=61,slow=24,SNR=4.8						
JHJ				S	Sn	08 04 15.1	-10
	comp=E,21nm,0.3s,baz=103,slow=22,SNR=4.9						
JHJ				LR	LR	08 07 24.4	
	comp=E,380nm,18.2s,baz=52,slow=43						
MDJ	**Mudanjiang**	**9.93**	**288**	P	**Pn**	**08 02 43.6**	**-1.2**
MDJ				S	**Sn**	**08 04 33.0**	**-1.7**
MDJ				PcP	**PcP**	**08 08 57.4**	**+4.5**
MDJ				ScP	**ScP**	**08 12 23.1**	**+2.6**
MDJ				ScS	**ScS**	**08 15 56.9**	**+1.9**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,89nm,4.0s						
MDJ				LR	LR		
	comp=N,230nm,27.8s						
MDJ				LR	LR		
	comp=E,840nm,19.6s						
MDJ				LR	LR		
	comp=Z,1μm,24.5s						
KLR	**Kul'dur**	**10.38**	**315**	*e*PN	**Pn**	**08 02 51.8**	**+1.0**
KLR				*e*		08 04 59.5	
KLR				MLR	MLR		
	comp=Z,4μm,13.0s						
SKR	**Severo-Kuril's**	**12.33**	**43**	*e*PN	Pn	08 03 21.0	+3.6
SKR				*e*		08 05 39.5	
KSRS	**Korea Array**	**12.49**	**252**	P	**Pn**	**08 03 22.3**	**+2.6**
	comp=Z,0.4nm,0.3s,baz=65,slow=12,SNR=28						
KSRS				S	Sn	08 05 46.0	+8.8
	comp=Z,1.1nm,0.3s,baz=195,slow=19,SNR=5.9						
KSRS				LR	LR	08 07 40.7	
	comp=Z,598nm,21.4s,baz=64,slow=34						
KSAR	**Wonju Array Be**	**12.53**	**252**	P	**Pn**	**08 03 22.3**	**+2.1**
KSAR				S	Sn	08 05 46.0	+8.0
CN2	**Changchun**	**12.84**	**282**	*e*P	**Pn**	**08 03 23.1**	**-1.4**
CN2				*e*sP		08 03 40.0	
CN2				*e*S	**Sn**	**08 05 40.8**	**-5.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,700nm,13.0s						
CN2				LR	LR		
	comp=E,900nm,13.0s						
CN2				LR	LR		
	comp=Z,1μm,14.0s						
JNU	**Nakatsue**	**13.23**	**230**	P	**Pn**	**08 03 29.9**	**0.0**
JNU	**Nakatsue**	**13.23**	**230**	P	**Pn**	**08 03 29.9**	**0.0**
	comp=Z,1.6nm,0.3s,baz=190,slow=22,SNR=18						
SNY	**Shenyang**	**14.36**	**274**	⇓P	**Pn**	**08 03 46.7**	**+1.7**
SNY				sP		08 03 59.7	
SNY				pmax	pmax		
	comp=Z,13nm,0.9s						
SNY				pmax	pmax		
	comp=Z,170nm,6.7s						
SNY				LR	LR		
	comp=N,270nm,13.5s						
SNY				LR	LR		

comp=E,440nm,24.7s
SNY LR LR

comp=Z,670nm,23.5s
PETK Petropavlovsk- 14.63 38 P **Pn** **08 03 47.7 -0.8**
PETK pmax pmax

comp=Z,1.0nm,0.3s
PETK MLR MLR

comp=Z,122nm,18.3s
PETK Petropavlovsk- 14.63 38 P **Pn** **08 03 47.7 -0.8**
PETK Petropavlovsk- 14.63 38 P **Pn** **08 03 47.7 -0.8**
comp=Z,0.8nm,0.3s,baz=208,slow=11,SNR=12
PETK LR LR 08 11 12.0

comp=Z,122nm,18.3s,baz=213,slow=44
CBIJ Chichi jima 15.23 182 P **Pn** **08 03 54.0 -2.4**
CBIJ S Sn 08 06 30.1 -14
CBIJ Chichi jima 15.23 182 P **Pn** **08 03 54.0 -2.4**
comp=Z,9.5nm,0.3s,baz=279,slow=23,SNR=5.8
CBIJ S Sn 08 06 30.1 -14

comp=Z,10nm,0.3s,baz=64,slow=23,SNR=5.4
JOW Kunigami 19.57 222 P **P** **08 04 48.5 +0.4**
JOW Kunigami 19.57 222 P **P** **08 04 48.5 +0.4**
comp=Z,3.6nm,0.3s,baz=85,slow=28,SNR=6.2
JOW LR LR 08 12 17.5

comp=Z,253nm,20.7s,baz=121,slow=36
BJI Beijing 20.21 272 P **P** **08 04 54.7 -0.4**
BJI S **S** **08 08 39.7 +0.8**
BJI pmax pmax

comp=Z,17nm,0.9s
BJI pmax pmax

comp=Z,140nm,4.0s
BJI LR LR

comp=N,550nm,16.5s
BJI LR LR

comp=E,440nm,19.2s
BJI LR LR

comp=Z,520nm,28.9s
YAK Yakutsk 21.23 343 *d i* P **P** **08 05 03.6 -2.2**
YAK *e* 08 05 21.8
YAK *e* S **S** **08 08 55.3 -3.3**
YAK *e* 08 09 10.2
YAK *e* SS **SnSn** **08 09 18.2 -5.6**
YAK *e* SSS SSS 08 09 33.9
YAK *e* 08 16 23.1
YAK pmax pmax

comp=Z,39nm,0.9s
YAK pmax pmax

comp=N,10.0nm,0.9s
YAK pmax pmax

comp=E,3.0nm,1.0s
YAK smax smax

comp=N,157nm,2.7s
YAK smax smax

comp=E,47nm,2.8s
YAK MLR MLR

comp=Z,290nm,22.0s
YAK MLR MLR

comp=E,224nm,18.0s
YAK MLR MLR

comp=N,138nm,20.0s
YAK Yakutsk 21.23 343 *e* P **P** **08 05 04.5 -1.4**
comp=N,42nm,0.8s
SEY Seymchan 21.36 12 *d i* P **P** **08 05 05.4 -1.8**
NJ2 Nanjing 21.67 250 *e* P **P** **08 05 11.2 +0.4**
NJ2 LR LR

comp=N,550nm,19.8s
NJ2 LR LR

comp=E,520nm,18.6s
NJ2 LR LR

comp=Z,2μm,19.9s
FX1 Attu Island--F 22.80 52 *e* P **P** **08 05 22.4 -0.3**
FX1 Attu Island--F 22.80 52 LR LR 08 12 36.6

comp=Z,289nm,20.9s,baz=79,slow=32
HHC Hu-ho-hao-te 23.42 277 *e* P **P** **08 05 28.4 -0.7**
HHC sP **sP** **08 05 45.6 -2.8**
HHC PP **PnPn** **08 06 01.2 +3.9**
HHC PcP **PcP** **08 09 16.0 +2.1**
HHC S **S** **08 09 33.6 -4.7**
HHC sS sS 08 09 53.0 -7.8
HHC SS **SnSn** **08 10 22.6 +4.9**
HHC ScP **ScP** **08 12 49.3 +2.0**
HHC PcS **PcS** **08 12 54.2 +0.9**
HHC pmax pmax

comp=Z,34nm,0.5s
HHC pmax pmax

comp=Z,310nm,5.0s
HHC LR LR

comp=N,490nm,11.6s
HHC LR LR

comp=E,790nm,11.8s
HHC LR LR

comp=Z,720nm,12.5s
WHN Wuhan 25.69 252 ⇓ P **P** **08 05 51.6 +1.9**
WHN S **S** **08 10 14.3 -0.2**
WHN LR LR

comp=Z,900nm,14.4s
ULN Ulaanbaatar 25.73 295 *e* P **P** **08 05 50.4 +0.2**
comp=Z,24nm,1.2s
ULN Ulaanbaatar 25.73 295 P **P** **08 05 51.1 +0.9**
SNR=9.6
ULN Ulaanbaatar 25.73 295 P **P** **08 05 46.9 -3.3**
comp=Z,17nm,1.8s
SONM Songino Array 26.18 295 P **P** **08 05 54.5 +0.3**
SONM Songino Array 26.18 295 P **P** **08 05 54.5 +0.3**
comp=Z,10nm,0.6s,baz=85,slow=8.0,SNR=68
SONM LR LR 08 17 11.3

comp=Z,503nm,19.8s,baz=35,slow=38
IRK Irkutsk 27.70 304 *e* P **P** **08 06 08.7 +1.0**
IRK pmax pmax

comp=Z,58nm,0.8s
XAN Xi'an 27.82 264 P **P** **08 06 08.5 -0.5**
XAN pP **pP** **08 06 18.1 -4.4**
XAN S **S** **08 10 51.9 +3.7**
XAN pmax pmax

comp=Z,2.0nm,1.0s
TLY Talaya 28.04 303 *e* P **P** **08 06 10.0 -0.8**
TLY pmax pmax

comp=Z,18nm,1.2s
TLY MLR MLR

comp=Z,380nm,21.0s
TLY Talaya 28.04 303 *e* P **P** **08 06 11.3 +0.5**
comp=Z,7.9nm,0.8s
TLY *e* PcP **PcP** **08 09 25.6 +1.4**
TLY Talaya 28.04 303 P **P** **08 06 11.8 +1.0**
SNR=7.8
ZAK Zakamensk 28.21 300 ⇑ *i* P **P** **08 06 12.5 +0.1**
ZAK pmax pmax

comp=Z,9.0nm,1.2s
BILL Bilibino 28.62 18 ⇑ *e* P **P** **08 06 16.3 +0.7**
BILL *e** PP **pP** **08 06 32.7 +3.5**
BILL *e* 08 07 12.9
BILL *i* S **S** **08 10 59.0 -1.1**
BILL pmax pmax

comp=Z,3.0nm,1.0s
BILL MLR MLR

comp=Z,100nm,15.0s
MOY Mondy 29.69 303 *e* P **P** **08 06 26.2 +0.7**
MOY pmax pmax

comp=Z,47nm,2.7s
LZH Lanzhou 30.70 271 *e* P **P** **08 06 34.0 -0.6**
LZH pP **pP** **08 06 44.5 -3.7**
LZH sP sP 08 06 48.7 -5.8
LZH PP **PnPn** **08 07 33.8 -2.1**
LZH *e* S **S** **08 11 31.5 -2.2**
LZH sS **sS** **08 11 59.1 +2.5**
LZH *e* SS **SnSn** **08 13 15.2 -0.3**
LZH pmax pmax

comp=Z,27nm,1.4s
LZH pmax pmax

comp=Z,93nm,4.8s
LZH LR LR

comp=N,350nm,12.6s
LZH LR LR

comp=E,340nm,13.0s
LZH LR LR

comp=Z,500nm,15.6s
GTA Gaotai 32.45 280 P **P** **08 06 50.9 +0.9**
GTA pP **pP** **08 07 02.6 -1.0**
GTA sP **sP** **08 07 08.1 -1.8**
GTA PcP **PcP** **08 09 37.9 +1.9**
GTA S **S** **08 12 02.1 +1.2**
GTA sS **sS** **08 12 21.6 -2.4**
GTA SS **SnSn** **08 13 58.2 +0.3**
GTA pmax pmax

comp=Z,21nm,1.2s
GTA pmax pmax

comp=Z,180nm,5.2s
GTA LR LR

comp=N,160nm,16.6s
GTA LR LR

comp=E,340nm,18.5s
GTA LR LR

comp=Z,350nm,16.4s
CD2 Chengdu 33.15 263 P **P** **08 06 56.0 0.0**
CD2 pP **pP** **08 07 09.0 -0.7**
CD2 sP **sP** **08 07 14.9 -1.1**
CD2 PP **PnPn** **08 08 07.9 +0.6**
CD2 PcP **PcP** **08 09 38.5 +0.5**
CD2 S **S** **08 12 10.5 -1.3**
CD2 sS **sS** **08 12 32.5 -2.3**
CD2 SS **SnSn** **08 14 13.3 -1.7**
CD2 pmax pmax

comp=Z,10.0nm,0.5s
CD2 pmax pmax

comp=Z,170nm,5.3s
CD2 LR LR

comp=N,330nm,13.5s
CD2 LR LR

comp=Z,240nm,24.0s
GYA Guiyang 33.55 254 *e* P **P** **08 07 00.1 +0.5**
GYA pP **pP** **08 07 12.1 -1.2**
GYA sP **sP** **08 07 19.8 +0.2**
GYA PP **PnPn** **08 08 14.4 +2.0**
GYA S **S** **08 12 17.2 -0.9**
GYA sS **sS** **08 12 41.0 -0.2**
GYA ScP **ScP** **08 13 20.8 +1.7**
GYA ScS **ScS** **08 17 19.8 -0.8**
GYA pmax pmax

comp=Z,10.0nm,0.6s
GYA pmax pmax

comp=Z,120nm,4.8s
GYA LR LR

comp=N,490nm,17.7s
GYA LR LR

comp=E,330nm,18.1s
GYA LR LR

comp=Z,440nm,17.9s
TNA Tin City 35.71 33 *e* P **P** **08 07 18.6 +0.9**
comp=Z,11nm,1.2s
QIZ Qiongzhong 36.36 240 P **P** **08 07 25.8 +2.0**
QIZ S **S** **08 13 04.4 +3.2**
QIZ LR LR

comp=N,200nm,17.4s
QIZ LR LR

comp=E,98nm,17.4s
QIZ LR LR

comp=Z,160nm,15.4s
KMI Kunming 37.16 255 P **P** **08 07 31.2 +0.4**
KMI pP **pP** **08 07 43.4 -1.2**
KMI sP **sP** **08 07 50.3 -0.5**
KMI PP **PnPn** **08 08 59.1 +2.0**
KMI S **S** **08 13 14.8 +1.0**
KMI sS **sS** **08 13 36.3 -0.7**
KMI SS **SnSn** **08 15 45.9 -6.5**
KMI pmax pmax

comp=Z,17nm,1.4s
KMI pmax pmax

comp=Z,71nm,4.4s
KMI LR LR

comp=N,200nm,22.4s
KMI LR LR

comp=E,150nm,19.2s
KMI LR LR

comp=Z,170nm,27.7s
ZALV Zalesovo Beam 39.37 308 P **P** **08 07 48.9 +0.1**
ZALV 08 09 56.0
ZALV pmax pmax

comp=Z,11nm,0.5s
ZALV Zalesovo Beam 39.37 308 P **P** **08 07 48.9 +0.1**
ZALV PcP **PcP** **08 09 56.0 -0.1**
ZALV Zalesovo Beam 39.37 308 P **P** **08 07 48.9 +0.1**
comp=Z,11nm,0.5s,baz=88,slow=8.5,SNR=54
ZALV PcP **PcP** **08 09 56.0 -0.1**

comp=Z,5.1nm,0.7s,baz=104,slow=2.4,SNR=5.4
WMQ Urumqi 39.71 292 P **P** **08 07 53.2 +1.4**
WMQ PP **PnPn** **08 09 29.2 +2.0**
WMQ PcP **PcP** **08 09 58.2 +0.7**
WMQ ScP **ScP** **08 13 42.2 +0.6**
WMQ S **S** **08 13 51.2 -0.4**
WMQ sS **sS** **08 14 18.2 +3.2**
WMQ SS **SS** **08 16 43.2 -5.3**
WMQ ScS **ScS** **08 17 53.2 -1.2**
WMQ pmax pmax

comp=Z,28nm,1.1s
WMQ pmax pmax

comp=Z,160nm,5.0s
WMQ LR LR

comp=N,300nm,16.0s
WMQ LR LR

comp=E,420nm,16.0s
WMQ LR LR

comp=Z,350nm,16.0s
NVS Novosibirsk 40.17 309 *e* P **P** **08 07 54.7 -0.7**
NVS *e* 08 08 14.4
NVS pmax pmax

comp=Z,48nm,1.8s
NVS pmax pmax

comp=E,32nm,1.7s
MK31 Makanchi Array 42.47 298 *e* P **P** **08 08 14.4 +0.1**
MK31 pmax pmax

comp=Z,9.0nm,0.5s
MK31 Makanchi Array 42.47 298 *e* P **P** **08 08 14.5 +0.1**
MK31 *e* PcP **PcP** **08 10 06.2 -0.1**
MKAR Makanchi Array 42.47 298 P **P** **08 08 14.6 +0.2**
MKAR 08 10 06.4
MKAR S **S** **08 14 27.2 -5.2**
MKAR pmax pmax

comp=Z,13nm,0.8s
MKAR MLR MLR

comp=Z,140nm,20.1s
MKAR Makanchi Array 42.47 298 *e* P **P** **08 08 14.6 +0.2**
MKAR PcP **PcP** **08 10 06.4 0.0**
MKAR S **S** **08 14 27.2 -5.2**
MKAR Makanchi Array 42.47 298 P **P** **08 08 14.6 +0.2**
comp=Z,13nm,0.8s,baz=83,slow=9.9,SNR=78
MKAR PcP **PcP** **08 10 06.4 0.0**

comp=Z,1.8nm,0.5s,baz=56,slow=2.7,SNR=5.5
MKAR S **S** **08 14 27.2 -5.2**

comp=Z,0.3nm,0.4s,baz=188,slow=2.4,SNR=6.4
MKAR LR LR 08 26 34.3

comp=Z,140nm,20.1s,baz=64,slow=37
KDAK Kodiak Island 42.47 46 P **P** **08 08 13.9 -0.2**
comp=Z,2.6nm,1.2s
KDAK Kodiak Island 42.47 46 P **P** **08 08 13.9 -0.2**
comp=Z,12nm,0.9s,baz=10,slow=12,SNR=14
KURK Kurchatov 43.73 304 *c i* P **P** **08 08 24.5 0.0**
KURK pmax pmax

comp=Z,42nm,1.0s
KURK Kurchatov 43.73 304 *e* P **P** **08 08 24.4 0.0**
comp=Z,27nm,0.8s
KURK Kurchatov 43.73 304 P **P** **08 08 24.8 +0.4**
SNR=13
PMR Palmer 43.74 40 *e* P **P** **08 08 25.0 +0.6**
PMR pmax pmax

comp=Z,5.0nm,0.7s
PMR Palmer 43.74 40 *e* P **P** **08 08 24.9 +0.6**
comp=Z,5.2nm,0.7s
CMMT Chiang Mai 43.89 251 P **P** **08 08 25.1 -1.0**
comp=Z,16nm,1.5s,comp=Z,548nm
CHTO Chiang Mai 43.89 251 *e* P **P** **08 08 26.2 +0.1**
CHTO pmax pmax

comp=Z,11nm,0.9s
CHTO Chiang Mai 43.89 251 *e* P **P** **08 08 26.2 +0.1**
comp=Z,11nm,0.9s
CHTO Chiang Mai 43.89 251 P **P** **08 08 27.6 +1.5**
SNR=6.1
CHTO Chiang Mai 43.89 251 P **P** **08 08 24.6 -1.6**
comp=Z,18nm,1.6s,comp=Z,358nm
COLA College 44.02 35 *e* P **P** **08 08 26.6 0.0**
COLA pmax pmax

comp=Z,14nm,0.8s
COLA College 44.02 35 *e* P **P** **08 08 26.6 0.0**
comp=Z,14nm,0.8s
CMAR Chiang Mai Arr 44.13 251 P **P** **08 08 28.8 +0.7**
CMAR Chiang Mai Arr 44.13 251 P **P** **08 08 28.8 +0.7**
comp=Z,4.3nm,0.8s,baz=46,slow=6.4,SNR=14
CMAR LR LR 08 27 48.8

comp=Z,128nm,19.2s,baz=44,slow=37
ILAR Eielson Array 44.44 35 P **P** **08 08 29.8 -0.2**
ILAR Eielson Array 44.44 35 P **P** **08 08 29.8 -0.2**
comp=Z,4.4nm,0.9s,baz=266,slow=6.4,SNR=38

CHBT CHBT 45.84 242 P **P** **08 08 41.5 -0.1**
comp=Z,20nm,1.0s
EGAK Eagle 46.88 35 *e* P **P** **08 08 48.8 -0.4**
comp=Z,13nm,1.0s
TAPN Taplejung 46.91 270 *e* P **P** **08 08 51.0 +0.7**
comp=Z,14nm,0.5s
ODAN Odare 47.42 270 *e* P **P** **08 08 55.1 +0.9**
comp=Z,14nm,0.4s
RAMN Ramite 47.95 270 *e* P **P** **08 08 58.5 +0.1**
comp=Z,35nm,0.5s
GUN Gumba 47.96 272 *e* P **P** **08 08 59.0 +0.5**
comp=Z,96nm,0.4s
BVA0 Borovoye Array 47.97 309 *e* P **P** **08 08 57.8 -0.1**
BVA0 pmax pmax

comp=Z,1.0nm,0.3s
BRVK Borovoye 48.02 309 *c i* P **P** **08 08 58.7 +0.4**
BRVK pmax pmax

comp=Z,37nm,1.7s
BRVK Borovoye 48.02 309 *e* P **P** **08 08 58.5 +0.2**
comp=Z,33nm,1.3s
BRVK Borovoye 48.02 309 P **P** **08 08 59.1 +0.8**
SNR=11
TKM2 Tokmak 2 48.27 295 *e* P **P** **08 09 01.3 +0.7**
TKM2 pmax pmax

comp=Z,23nm,0.9s
TKM2 Tokmak 2 48.27 295 *e* P **P** **08 09 01.3 +0.7**
comp=Z,23nm,0.9s
KKN Kakani 48.47 272 *e* P **P** **08 09 02.9 +0.6**
PKI Pulchoki 48.49 272 *e* P **P** **08 09 02.8 +0.2**
comp=Z,18nm,0.5s
PKIN Phulchoki 48.50 272 *e* P **P** **08 09 02.4 -0.2**
comp=Z,21nm,0.5s
DMN Daman 48.70 272 *e* P **P** **08 09 04.5 +0.4**
comp=Z,24nm,0.5s
FRU Bishkek 48.97 295 *e* P **P** **08 09 06.0 +0.3**
AAK Ala-Archa 49.13 295 *c i* P **P** **08 09 07.2 0.0**
AAK pmax pmax

comp=Z,32nm,1.7s
AAK Ala-Archa 49.13 295 *e* P **P** **08 09 07.2 0.0**
comp=Z,21nm,0.4s
INK Inuvik 49.16 29 P **P** **08 09 06.4 -0.3**
INK S S 08 15 58.5 -9.4
INK Inuvik 49.16 29 P **P** **08 09 06.4 -0.3**
comp=Z,2.4nm,0.3s,baz=290,slow=6.2,SNR=50
INK S S 08 15 58.5 -9.4

comp=Z,0.8nm,0.9s,baz=36,slow=18,SNR=10
DANN Dangsing 49.29 274 *e* P **P** **08 09 09.4 +0.7**
comp=Z,76nm,0.5s
KSH Kashi 49.45 291 P P 08 09 12.9 +3.3
KSH pP pP 08 09 25.3 +1.5
KSH sP sP 08 09 30.2 +0.2
KSH PcP **PcP** **08 10 34.1 +3.1**
KSH PP **PP** **08 11 07.6 +3.7**
KSH ScP **ScP** **08 14 23.3 +1.6**
KSH PcS **PcS** **08 14 28.2 +0.4**
KSH S **S** **08 16 16.4 +3.4**
KSH sS sS 08 16 38.1 +1.1
KSH ScS **ScS** **08 18 56.8 +0.2**
KSH pmax pmax

comp=Z,26nm,1.2s
KSH pmax pmax

comp=Z,260nm,3.9s
KSH LR LR

comp=N,210nm,4.5s
KSH LR LR

comp=E,140nm,6.2s
KSH LR LR

comp=Z,620nm,19.2s
EKS2 Erkin-Say 49.60 295 *e* P **P** **08 09 10.0 -0.7**
EKS2 *e* 08 10 32.3
EKS2 pmax pmax

comp=Z,6.0nm,0.6s
EKS2 Erkin-Say 49.60 295 *e* P **P** **08 09 10.0 -0.7**
comp=Z,6.1nm,0.6s
EKS2 *e* PcP **PcP** **08 10 32.3 +0.7**
KOLN Koldanda 49.73 273 *e* P **P** **08 09 12.4 +0.5**
comp=Z,32nm,0.5s
PYUN Piuthan 50.00 274 *e* P **P** **08 09 14.9 +0.9**
comp=Z,28nm,0.4s
KSM Kuching 50.09 225 *e* P **P** **08 09 15.9 +1.4**
comp=Z,15nm,1.0s
KSM Kuching 50.09 225 P **P** **08 09 12.7 -1.8**
comp=Z,17nm,1.6s
KKAR Karatay Array 51.59 297 *e* P **P** **08 09 25.4 -0.1**
KKAR Karatay Array 51.59 297 *e* P **P** **08 09 25.4 -0.1**
SOKR Solikamsk 52.89 320 *c i* P **P** **08 09 35.8 +1.0**
SOKR pmax pmax

comp=Z,20nm,1.0s
SOKR MLR MLR

comp=Z,240nm,23.0s
ARU Arti 53.22 316 *c i* P **P** **08 09 37.2 -0.1**
ARU 08 11 35.6
ARU S **S** **08 17 07.1 +2.9**
ARU pmax pmax

comp=Z,44nm,1.0s
ARU Arti 53.22 316 *e* P **P** **08 09 37.4 0.0**
comp=Z,29nm,0.8s
DLBC Dease Lake 53.79 41 LR LR 08 31 52.8
comp=Z,106nm,21.4s,baz=315,slow=35
AB31 Akbulak array 55.48 308 *e* P **P** **08 09 53.9 0.0**
AB31 pmax pmax

comp=Z,6.0nm,0.3s
ABKAR Akbulak array 55.48 308 *e* P **P** **08 09 54.1 +0.2**
SPITS Spitsbergen Ar 55.54 348 LR LR 08 33 03.9
comp=Z,115nm,21.0s,baz=10.0,slow=35
PSI Prapat 55.57 237 P **P** **08 09 54.4 -0.6**
PSI Prapat 55.57 237 P **P** **08 09 54.4 -0.6**
comp=Z,6.4nm,0.7s,baz=216,slow=15,SNR=4.2
KBS Kingsbay 55.63 350 *e* P **P** **08 09 54.7 +0.2**
KBS pmax pmax

comp=Z,52nm,2.5s
COEN Coen 56.03 180 *e* P **P** **08 09 58.9 +0.8**
comp=Z,151nm,1.1s
COEN *e* pP **pP** **08 10 14.2 +1.6**
KBL Kabul 56.70 288 *e* P **P** **08 10 01.9 -1.2**
KBL pmax pmax

comp=Z,14nm,1.1s
KBL Kabul 56.70 288 *e* P **P** **08 10 01.9 -1.2**
comp=Z,14nm,1.1s
RES Resolute Bay 57.17 16 *e* P **P** **08 10 04.7 -0.9**
comp=Z,13nm,1.0s
RES Resolute Bay 57.17 16 P **P** **08 10 04.7 -0.9**
comp=Z,5.8nm,0.4s,baz=314,slow=4.1,SNR=86
YKA Yellowknife Ar 58.67 32 P **P** **08 10 15.7 -0.4**
YKA Yellowknife Ar 58.67 32 P **P** **08 10 15.7 -0.4**
comp=Z,0.9nm,0.5s,baz=307,slow=6.7,SNR=80
KEV Kevo 58.90 339 *e* P **P** **08 10 15.9 -1.7**
KEV pmax pmax

comp=Z,7.0nm,0.7s
KEV Kevo 58.90 339 *ep* P **P** **08 10 15.9 -1.7**
comp=Z,6.5nm,0.7s
ARCES ARCESS Array B 59.45 339 P **P** **08 10 21.4 -0.1**
ARCES ARCESS Array B 59.45 339 P **P** **08 10 21.4 -0.1**
comp=Z,1.5nm,0.4s,baz=52,slow=7.9,SNR=19
ARCES LR LR 08 40 11.2

comp=Z,102nm,19.1s,baz=263,slow=40
HYB Hyderabad 59.60 266 *e* P **P** **08 10 22.5 -0.8**
HYB Hyderabad 59.60 266 *e* P **P** **08 10 22.5 -0.8**
HYB Hyderabad 59.60 266 *i* P **P** **08 10 22.5 -0.8**
KLMR Klimovskoe 59.91 327 *e* P **P** **08 10 23.1 -1.7**
KLMR pmax pmax

comp=Z,36nm,1.2s
JOF Joensuu 61.84 331 *e* P **P** **08 10 36.0 -1.8**
JOF pmax pmax

comp=Z,5.0nm,0.4s
JOF Joensuu 61.84 331 *ep* P **P** **08 10 36.0 -1.8**
comp=Z,5.2nm,0.4s
IMYA Miami 61.90 295 *e* P **P** **08 10 39.9 +1.0**
CTA Charters Tower 62.20 176 LR LR 08 36 57.6
comp=Z,366nm,18.5s,baz=336,slow=35
POO Poona 62.39 270 *e* P **P** **08 10 40.0 -2.2**
WRAB Tennant Creek 62.47 189 *e* P **P** **08 10 41.6 -0.9**
comp=Z,16nm,1.1s
WRA Warramunga Arr 62.48 189 P **P** **08 10 41.9 -0.6**
WRA Warramunga Arr 62.48 189 P **P** **08 10 41.9 -0.6**
comp=Z,4.8nm,0.9s,baz=6.9,slow=7.1,SNR=33
IMOG Moghan 62.54 295 *e* P **P** **08 10 43.8 +0.5**
IAKL Akhelmad 62.65 296 *e* P **P** **08 10 44.4 +0.3**
IKRD Kardeh 62.72 296 *e* P P 08 10 41.4 -3.1
ISHV Shirvan 62.84 297 *e* P **P** **08 10 45.1 -0.1**
ISFR Sfrayin 62.91 296 *e* P **P** **08 10 45.7 0.0**
MOS Moscow 63.70 323 *e* P P 08 10 44.4 -5.9
MOS pmax pmax

comp=Z,39nm,1.5s
KAF Kangasniemi 64.13 332 *e* P **P** **08 10 51.3 -1.7**

KAF pmax pmax
comp=Z,4.0nm,0.5s
KAF Kangasniemi 64.13 332 *ep* **P 08 10 51.3 -1.7**
comp=Z,4.2nm,0.5s
OBN Obninsk 64.56 322 ⇓*iP* **P 08 10 56.0 +0.1**
OBN *e**PP pP 08 11 18.1 +7.4
OBN *e* 08 13 15.0
OBN *eS* **S 08 19 28.4 -2.6**
OBN pmax pmax
comp=Z,46nm,2.5s
OBN MLR MLR
comp=Z,200nm,17.0s
FIA1 FINESS Array S 64.66 332 *eP* **P 08 10 55.8 -0.7**
FINES FINESS Array B 64.67 332 P **P 08 10 55.8 -0.7**
FINES FINESS Array B 64.67 332 P **P 08 10 55.8 -0.7**
comp=Z,9.5nm,0.4s,baz=53,slow=7.1,SNR=164
FINES LR LR 08 40 22.9
comp=Z,226nm,20.8s,baz=29,slow=37
SUMG Summit 65.37 0 *eP* **P 08 11 01.5 0.0**
SUMG pmax pmax
comp=Z,26nm,1.0s
SUMG Summit 65.37 0 *eP* **P 08 11 01.5 0.0**
comp=Z,26nm,1.0s
NEW Newport 65.57 46 *eP* **P 08 11 03.4 +0.7**
comp=Z,93nm,2.6s
NEW Newport 65.57 46 ⇑P **P 08 11 02.9 +0.2**
baz=65
NEW Newport 65.57 46 P **P 08 11 03.5 +0.7**
comp=Z,2.2nm,0.8s,baz=302,slow=6.0,SNR=8.1
VSR Storozhevoye 65.72 318 *eP* **P 08 11 03.1 -0.5**
VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=E,4.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s
VORD Divnogorie 65.81 318 *eP* **P 08 11 03.9 -0.2**
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD pmax pmax
comp=Z,8.0nm,0.5s
AS31 Alice Springs 66.21 189 *eP* **P 08 11 08.1 +1.2**
ASAR Alice Springs 66.21 189 P **P 08 11 06.8 -0.1**
ASAR Alice Springs 66.21 189 P **P 08 11 06.8 -0.1**
comp=Z,1.6nm,0.7s,baz=8.3,slow=7.5,SNR=18
C11A Tepee Creek (N 66.29 46 ⇑P **P 08 11 08.1 +0.7**
baz=66
A13A Flathead Natio 66.60 45 ⇓P **P 08 11 08.7 -0.7**
baz=66
ISHM Shahmirzad 66.73 298 *eP* **P 08 11 11.1 +0.5**
B13A Whitefish 66.91 45 ⇑P **P 08 11 12.1 +0.8**
baz=67,SNR=6.1
BSMT Bassoo Peak 67.07 46 *eP* **P 08 11 13.0 +0.5**
comp=Z,1.2nm,0.8s
A14A Double T Ranch 67.09 44 ⇓P **P 08 11 12.6 +0.1**
baz=67
BLMT Blacktail Moun 67.19 45 *eP* **P 08 11 14.5 +1.2**
comp=Z,8.8nm,0.9s
D12A Red Ives Fores 67.26 47 ⇓P **P 08 11 13.4 -0.2**
baz=67
C13A Hot Springs 67.29 46 ⇓P **P 08 11 13.8 0.0**
baz=67
JTMT Jette 67.40 45 *eP* **P 08 11 16.1 +1.5**
A15A Johnson Ranch, 67.44 44 ⇑P **P 08 11 14.7 0.0**
baz=67
YBMT Yellow Bay 67.47 45 *eP* **P 08 11 15.6 +0.6**
comp=Z,5.5nm,1.0s
BMO Blue Mountains 67.54 49 *eP* **P 08 11 16.3 +0.9**
comp=Z,4.5nm,0.9s
B14A Marquette Ranc 67.55 44 ⇑P **P 08 11 16.0 +0.6**
baz=67
C14A Swan Lake 67.67 45 ⇑P **P 08 11 16.6 +0.4**
baz=67
SWMT Swartz Lake 67.70 46 *eP* **P 08 11 16.7 +0.3**
D13A Huson 67.71 46 ⇓P **P 08 11 15.0 -1.4**
baz=68
B15A Bradely Ranch, 67.94 44 ⇓P **P 08 11 17.0 -0.9**
baz=68,SNR=5.6
F12A Elk City 68.12 48 ⇓P **P 08 11 17.3 -1.8**
baz=68
SLMT Seeley Lake 68.13 46 *eP* **P 08 11 19.8 +0.6**
SLMT *epP* **pP 08 11 33.1 -1.0**
MSO Missoula 68.16 46 *eP* **P 08 11 19.7 +0.5**
comp=Z,4.2nm,1.1s
MSO *epP* **pP 08 11 33.9 -0.3**
MSO Missoula 68.16 46 ⇓P **P 08 11 17.8 -1.4**
baz=68
D14A Greenough 68.23 46 ⇓P **P 08 11 18.7 -1.1**
baz=68
C15A Salmond Ranch, 68.26 45 ⇓P **P 08 11 18.1 -1.9**
baz=68,SNR=6.4
KIV Kislovodsk 68.33 310 *eP* **P 08 11 20.8 +0.5**
KIV pmax pmax
comp=Z,31nm,1.1s
KIV Kislovodsk 68.33 310 *eP* **P 08 11 21.6 +1.3**
comp=Z,92nm,1.6s
KIV Kislovodsk 68.33 310 P **P 08 11 21.9 +1.6**
SNR=6.9
KBZ Khabaz 68.34 310 P **P 08 11 20.0 -0.3**
KBZ pmax pmax
comp=Z,4.0nm,0.5s
KBZ MLR MLR
comp=Z,137nm,18.9s
KBZ Khabaz 68.34 310 P **P 08 11 20.0 -0.3**
KBZ Khabaz 68.34 310 P **P 08 11 20.0 -0.3**
comp=Z,4.3nm,0.5s,baz=74,slow=2.3,SNR=12
KBZ LR LR 08 46 34.7
comp=Z,137nm,18.9s,baz=137,slow=40
CHMT Chamberlain Mo 68.47 46 *eP* **P 08 11 21.1 -0.3**
comp=Z,2.0nm,1.0s
IMEH Mehriz 68.48 293 *eP* **P 08 11 20.6 -1.1**
A17A Triple J Farms 68.49 43 ⇑P **P 08 11 19.8 -1.5**
baz=68,SNR=6.9
FFC Flin Flon 68.64 34 *iP* **P 08 11 22.3 +0.3**
FFC Flin Flon 68.64 34 *eP* **P 08 11 22.0 0.0**
comp=Z,10nm,1.2s
C16A Fuhringer Ranc 68.69 44 ⇓P **P 08 11 20.6 -2.0**
baz=68,SNR=6.0
NACGM Naroch 68.94 326 *e* **P 08 11 21.0 -2.8**
A18A Metzger Ranch, 68.94 42 ⇓P **P 08 11 22.4 -1.6**
baz=69
H12A Diamond D Ranc 69.09 48 ⇓P **P 08 11 23.1 -2.2**
baz=69
E15A Deer Lodge 69.11 46 ⇓P **P 08 11 25.3 +0.1**
baz=69
MFID Camas Ranch 69.27 50 ⇓P **P 08 11 25.2 -1.0**
baz=69
D16A Dana Ranch, Ca 69.29 45 ⇓P **P 08 11 25.5 -0.9**
baz=69
C17A Wharram Farm, 69.31 44 ⇓P **P 08 11 25.3 -1.0**
baz=69
B18A Beardsley Farm 69.31 43 ⇓P **P 08 11 26.0 -0.4**
baz=69,SNR=6.4
HRY Holter Researc 69.35 45 *eP* **P 08 11 27.4 +0.6**
H13A Challis 69.42 48 ⇓P **P 08 11 27.4 +0.2**
baz=69
I12A Atlanta 69.42 49 ⇓P **P 08 11 25.8 -1.4**
baz=69
A19A Klindworth Far 69.48 42 ⇓P **P 08 11 26.4 -1.0**
baz=69,SNR=7.2
E16A East Helena 69.55 45 ⇓P **P 08 11 26.8 -1.2**
baz=69
F15A Butte 69.56 46 ⇑P **P 08 11 26.4 -1.7**
baz=69,SNR=6.5
EGMT Eagleton 69.57 43 *eP* **P 08 11 28.6 +0.6**
comp=Z,13nm,0.9s
LRM Limekiln Ridge 69.59 46 *eP* **P 08 11 29.2 +0.8**
NB2 NORSAR Subarra 69.73 337 P **P 08 11 28.1 -0.6**
baz=33,slow=6.5
NB2 NORSAR Subarra 69.73 337 P **P 08 11 28.1 -0.6**
comp=Z,26nm,1.2s,baz=33,slow=6.5
NOA NORSAR Array B 69.73 337 P **P 08 11 28.1 -0.6**
NOA NORSAR Array B 69.73 337 P **P 08 11 28.1 -0.6**
comp=Z,3.8nm,0.5s,baz=35,slow=6.2,SNR=25
NOA LR LR 08 45 29.4
comp=Z,88nm,20.3s,baz=25,slow=39
CMB Columbia Colle 69.92 57 *eP* **P 08 11 30.5 +0.2**
CMB pmax pmax
comp=Z,33nm,2.3s
CMB Columbia Colle 69.92 57 *eP* **P 08 11 30.5 +0.2**
comp=Z,33nm,2.3s
HLID Hailey 69.97 49 ⇓P **P 08 11 29.2 -1.4**
baz=70
G15A Dillon 70.00 47 ⇓P **P 08 11 28.9 -1.9**
baz=70,SNR=10

E17A Martinsdale 70.02 45 ⇑P **P 08 11 29.4 -1.5**
baz=70
C19A Slack Wire Ran 70.12 43 ⇓P **P 08 11 31.0 -0.4**
baz=70,SNR=7.8
BOZ Bozeman (W) 70.15 46 *eP* **P 08 11 32.5 +0.8**
BOZ pmax pmax
comp=Z,8.0nm,1.2s
BOZ Bozeman (W) 70.15 46 *eP* **P 08 11 32.5 +0.8**
comp=Z,8.1nm,1.2s
BOZ Bozeman (W) 70.15 46 ⇑P **P 08 11 30.2 -1.5**
baz=70,SNR=7.7
IPIR Pirpir 70.19 296 *eP* **P 08 11 34.3 +2.0**
G16A Moss Hill, Enn 70.33 46 ⇑P **P 08 11 31.0 -1.8**
baz=70
A21A Bergtoll Ranch 70.33 41 ⇓P **P 08 11 31.0 -1.5**
baz=70
E18A Harlowton 70.45 44 ⇓P **P 08 11 31.2 -2.2**
baz=70
F17A Fitzpatrick Pl 70.49 45 ⇑P **P 08 11 32.4 -1.3**
baz=70
D19A Cripps Ranch, 70.58 43 ⇓P **P 08 11 32.5 -1.6**
baz=70
J14A Carey 70.62 49 ⇑P **P 08 11 33.5 -1.1**
baz=70
C20A Veseth Ranch, 70.66 43 ⇓P **P 08 11 33.3 -1.3**
baz=70,SNR=8.6
ANN Anapa 70.69 313 *eP* P 08 11 26.0 -8.8
ANN pmax pmax
comp=Z,47nm,0.9s
AKASG Malin Array Be 70.81 322 P **P 08 11 34.9 -0.5**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG MLR MLR
comp=Z,135nm,19.7s
AKASG Malin Array Be 70.81 322 P **P 08 11 34.9 -0.5**
AKASG Malin Array Be 70.81 322 P **P 08 11 34.9 -0.5**
comp=Z,3.5nm,0.4s,baz=43,slow=6.4,SNR=15
AKASG LR LR 08 45 22.1
comp=Z,135nm,19.7s,baz=35,slow=38
A22A Carney Farms, 70.82 41 ⇓P **P 08 11 34.7 -0.9**
baz=71,SNR=9.0
KIEV Kiev 70.82 322 *eP* **P 08 11 34.6 -0.9**
KIEV pmax pmax
comp=Z,9.0nm,0.8s
KIEV Kiev 70.82 322 *eP* **P 08 11 34.6 -0.9**
comp=Z,9.3nm,0.8s
AK01 Malin Array Si 70.82 322 *eP* **P 08 11 34.8 -0.6**
AK02 Malin Array Si 70.82 322 *eP* **P 08 11 35.1 -0.5**
NVAR Mina Array Bea 70.95 55 P **P 08 11 36.8 +0.1**
NVAR Mina Array Bea 70.95 55 P **P 08 11 36.8 +0.1**
comp=Z,2.1nm,0.7s,baz=284,slow=6.0,SNR=22
H16A Russell Place, 70.97 47 ⇓P **P 08 11 36.1 -0.7**
baz=71
F18A Big Timber 70.99 45 ⇓P **P 08 11 36.2 -0.6**
baz=71,SNR=5.0
D20A Manuel Ranch, 71.01 43 ⇓P **P 08 11 35.9 -0.9**
baz=71,SNR=5.4
C21A Desert Coulee 71.03 42 ⇓P **P 08 11 36.2 -0.7**
baz=71
GCMT Greycliff 71.09 45 *eP* **P 08 11 38.0 +0.7**
comp=Z,4.6nm,1.0s
I16A Newdale 71.38 47 ⇑P **P 08 11 37.4 -1.8**
baz=71,SNR=5.5
E20A Meyer Farm, Mu 71.41 44 ⇑P **P 08 11 37.5 -1.7**
baz=71
F19A Roth Farm, Mol 71.42 44 ⇓P **P 08 11 37.4 -1.9**
baz=71
LKWY Lake 71.51 46 *eP* **P 08 11 41.6 +1.5**
LKWY pmax pmax
comp=Z,11nm,1.3s
LKWY Lake 71.51 46 *eP* **P 08 11 41.6 +1.5**
comp=Z,11nm,1.3s
B23A Brockton 71.63 41 ⇑P **P 08 11 40.6 +0.1**
baz=71,SNR=6.3
IMW Indian Meadow 71.67 47 *eP* **P 08 11 41.5 +0.4**
comp=Z,4.5nm,0.8s
IVIS Veis 71.69 300 *eP* **P 08 11 40.2 -0.9**
J16A Bone 71.71 48 ⇑P **P 08 11 40.1 -1.2**
baz=72
DCID1 Drake Creek 71.73 47 *eP* P 08 11 38.1 -3.2
comp=Z,7.1nm,0.8s
RLMT Red Lodge 71.74 45 ⇓P **P 08 11 40.7 -0.7**
baz=72
RRI2 Red Ridge 71.82 48 *eP* **P 08 11 43.0 +1.0**
comp=Z,9.6nm,1.0s
MOOW Moose Ponds 71.87 47 *eP* **P 08 11 43.5 +1.2**
comp=Z,72nm,2.8s
TPAW Teton Pass 71.93 47 *eP* **P 08 11 43.1 +0.5**
comp=Z,9.6nm,1.3s
ISA Isabella 72.60 58 *eP* **P 08 11 46.6 0.0**
ISA pmax pmax
comp=Z,3.0nm,0.9s
ISA Isabella 72.60 58 *eP* **P 08 11 46.6 0.0**
comp=Z,2.9nm,0.9s
ISA Isabella 72.60 58 ⇓P **P 08 11 46.4 -0.2**
baz=72
I19A Meetetse 72.62 46 ⇓P **P 08 11 46.1 -0.6**
baz=72
J18A Kendall Valley 72.62 47 ⇑P **P 08 11 46.0 -0.7**
baz=72
G21A Lodge Grass 72.75 44 ⇑P **P 08 11 46.4 -0.9**
baz=72
HWUT Hardware Ranch 72.84 49 *eP* **P 08 11 48.2 +0.2**
comp=Z,56nm,2.5s
F22A Rosebud 72.85 43 ⇓P **P 08 11 47.6 -0.2**
baz=73
MPMC Manual Prospec 72.96 57 P **P 08 11 50.1 +1.3**
baz=73,SNR=6.2
K18A Toltan Ranch, 72.99 48 ⇑P **P 08 11 48.9 -0.1**
baz=73
M16A Huntsville 73.00 49 ⇓P **P 08 11 49.1 +0.2**
baz=73
DUG Dugway 73.06 51 ⇓P **P 08 11 50.1 +0.8**
baz=73
FURC Furnace Creek, 73.08 56 P **P 08 11 50.4 +1.2**
baz=73,SNR=9.5
J19A Crowheart 73.11 47 ⇑P **P 08 11 50.4 +0.9**
baz=73
OSI Osito Adit 73.12 59 ⇑P **P 08 11 47.3 -2.3**
baz=73
BW06 Boulder Array 73.17 47 *eP* **P 08 11 50.5 +0.5**
comp=Z,8.9nm,1.4s
BW06 Boulder Array 73.17 47 ⇑P **P 08 11 50.3 +0.4**
baz=73
PDAR Pinedale Array 73.17 47 P **P 08 11 50.0 +0.1**
PDAR Pinedale Array 73.17 47 P **P 08 11 50.0 +0.1**
comp=Z,1.1nm,0.4s,baz=281,slow=0.4,SNR=15
K19A Absolon Red Bu 73.52 47 ⇑P **P 08 11 51.6 -0.4**
baz=73
KIS Kishinev 73.60 319 *eP* **P 08 11 52.0 -0.1**
KIS Kishinev 73.60 319 *eP* **P 08 11 52.0 -0.1**
I21A Big Trails, Te 73.67 45 P **P 08 11 53.5 +0.7**
baz=73,SNR=6.2
STKA Stephens Creek 73.87 181 P **P 08 11 54.4 +0.7**
STKA Stephens Creek 73.87 181 P **P 08 11 54.4 +0.7**
comp=Z,1.6nm,0.8s,baz=340,slow=8.1,SNR=2.9
GSC Goldstone 73.87 57 *eP* **P 08 11 54.3 +0.2**
GSC pmax pmax
comp=Z,40nm,2.3s
GSC Goldstone 73.87 57 *eP* **P 08 11 54.3 +0.2**
comp=Z,40nm,2.3s
TUQ Turquoise Moun 74.33 56 ⇓P **P 08 11 56.9 +0.1**
baz=74,SNR=5.3
J22A Midwest 74.37 45 ⇑P **P 08 11 57.1 +0.2**
baz=74
MALT Malatya 74.41 308 *eP* **P 08 11 58.5 +1.3**
MALT pmax pmax
comp=Z,3.0nm,0.8s
MALT Malatya 74.41 308 *eP* **P 08 11 58.5 +1.3**
comp=Z,3.2nm,0.8s
MALT Malatya 74.41 308 ⇓*iP* **P 08 11 57.8 +0.6**
H24A Dirks Ranch, A 74.44 43 ⇓P **P 08 11 56.8 -0.3**
baz=74
ULM Lac du Bonnet 74.46 35 *eP* **P 08 11 56.9 -0.2**
ULM Lac du Bonnet 74.46 35 P **P 08 11 55.8 -1.3**
comp=Z,3.6nm,0.5s,baz=307,slow=6.5,SNR=7.2
I23A Meade Ranch, G 74.52 44 ⇑P **P 08 11 56.6 -1.2**
baz=74
BUR08 Bucovina Ar. S 74.84 322 *eP* **P 08 11 59.7 +0.2**
P18A Preston Nutter 74.91 50 ⇓P **P 08 11 59.8 -0.5**
baz=75
GMRC Granite Mounta 74.92 57 ⇑P **P 08 12 01.4 +1.2**
baz=75
O19A Miners Draw (B 75.08 49 ⇓P **P 08 12 00.6 -0.5**
baz=75
SRU San Rafael 75.10 50 *eP* **P 08 12 01.2 -0.1**
SRU San Rafael 75.10 50 *eP* **P 08 12 01.2 -0.1**
comp=Z,166nm,0.7s
SRU San Rafael 75.10 50 P **P 08 12 01.9 +0.7**
baz=75,SNR=8.7
M21A Separation Pea 75.15 47 ⇑P **P 08 12 01.5 -0.1**
baz=75
KOLS Kolonicke sedl 75.19 324 *eP* **P 08 12 02.4 +1.0**
KOLS *e* 08 12 19.0
KOLS Kolonicke sedl 75.19 324 *eP* **P 08 12 02.4 +1.0**
KOLS *epP* **pP 08 12 19.0 +2.5**
N20A Spence Gulch, 75.19 48 ⇑P **P 08 12 02.2 +0.4**
baz=75
PFO Pinyon Flat Ob 75.20 58 ⇑P **P 08 12 01.0 -0.8**
baz=75
BELC Belle Mtn. Jos 75.23 57 ⇑P **P 08 12 01.9 -0.1**
baz=75
CFR Carcaliu 75.23 318 ⇓P **P 08 12 01.6 0.0**
CFR Carcaliu 75.23 318 ⇓*iP* **P 08 12 01.6 0.0**
OJC Ojcow 75.27 326 *eP* **P 08 12 02.1 +0.4**
OJC Ojcow 75.27 326 *eP* **P 08 12 01.6 -0.1**
comp=Z,13nm,0.9s
OJC Ojcow 75.27 326 *eP* **P 08 12 02.1 +0.4**
CRVS Cervenica-Dubn 75.57 324 *eP* **P 08 12 04.0 +0.5**
CRVS pmax pmax
comp=Z,51nm,2.6s
CRVS Cervenica-Dubn 75.57 324 *eP* **P 08 12 04.0 +0.5**
P19A Cripple Cowboy 75.62 49 ⇑P **P 08 12 04.2 0.0**
baz=75
N21A Black Mountain 75.65 48 ⇑P **P 08 12 05.3 +0.8**
baz=75
TRPA Tarpa 75.68 323 ⇓*iP* **P 08 12 04.7 +0.6**
O20A White River Ci 75.69 48 ⇑P **P 08 12 04.6 0.0**
baz=75
L23A Garrett 75.69 46 ⇓P **P 08 12 04.4 -0.2**
baz=75
M22A Cedar Creek Ra 75.71 47 ⇓P **P 08 12 05.2 +0.5**
baz=76
BC3 Big Chuckawall 75.80 57 ⇓P **P 08 12 04.6 -0.6**
baz=76
BSEG Bad Segeberg 75.83 333 *eP* **P 08 12 05.8 +0.9**
BSEG pmax pmax
comp=Z,9.0nm,0.8s
BSEG Bad Segeberg 75.83 333 *eP* **P 08 12 05.8 +0.9**
comp=Z,9.0nm,0.8s
U15A North Rim 75.88 54 ⇓P **P 08 12 06.5 +0.7**
baz=76
Q19A Hogan Spring (75.92 50 P **P 08 12 06.4 +0.5**
baz=76,SNR=7.0
AGMN Agassiz Nation 75.94 36 *eP* **P 08 12 04.7 -0.9**
comp=Z,9.3nm,1.2s
ISR Istrita 76.05 319 ⇓*iP* **P 08 12 07.7 +1.3**
ISR Istrita 76.05 319 ⇑*iP* **P 08 12 07.7 +1.3**
M23A Laramie 76.13 46 ⇓P **P 08 12 06.6 -0.6**
baz=76
PDMCI Parker Dam,Lak 76.18 56 ⇓P **P 08 12 08.5 +1.2**
baz=76
KSP Ksiaz 76.18 328 *eP* **P 08 12 07.2 +0.2**
BR131 Keskin Array S 76.19 311 *eP* **P 08 12 07.1 -0.3**
comp=Z,1.4nm,0.6s
BRTR Keskin Array B 76.19 311 P **P 08 12 07.5 0.0**
BRTR Keskin Array B 76.19 311 P **P 08 12 07.5 0.0**
comp=Z,2.1nm,0.7s,baz=69,slow=4.1,SNR=9.3
BRTR LR LR 08 48 15.7
comp=Z,56nm,18.8s,baz=217,slow=38
OKC Ostrava-Krasne 76.24 327 *eP* **P 08 12 08.0 +0.7**
OKC Ostrava-Krasne 76.24 327 *eP* **P 08 12 08.0 +0.7**
S18A Hurst Farm, Bl 76.37 51 ⇓P **P 08 12 07.7 -1.0**
baz=76
N23A Red Feather La 76.42 47 ⇓P **P 08 12 07.8 -1.1**
baz=76
MORC Moravsky Berou 76.53 327 ⇓P **P 08 12 10.2 +1.2**
MORC Moravsky Berou 76.53 327 *eP* **P 08 12 09.6 +0.6**
comp=Z,7.6nm,0.9s
MORC Moravsky Berou 76.53 327 ⇓*iP* **P 08 12 10.2 +1.2**
P21A Newcastle 76.55 48 ⇑P **P 08 12 08.3 -1.2**
baz=76,SNR=5.3
UPC Upice 76.56 328 *eP* **P 08 12 10.1 +1.0**
UPC Upice 76.56 328 *eP* **P 08 12 10.1 +1.0**
DPC Dobruska-Polom 76.56 328 *eP* **P 08 12 10.2 +1.0**
DPC Dobruska-Polom 76.56 328 *eP* **P 08 12 09.4 +0.2**
comp=Z,19nm,1.3s
DPC Dobruska-Polom 76.56 328 *eP* **P 08 12 10.2 +1.0**
K26A Motz Farm, Whi 76.59 44 ⇑P **P 08 12 09.6 0.0**
baz=76
KRLC Kraliky 76.60 328 *eP* **P 08 12 09.6 +0.2**
KRLC Kraliky 76.60 328 *eP* **P 08 12 09.6 +0.2**
O22A Kremmling 76.60 48 ⇑P **P 08 12 09.0 -1.0**
baz=76
M24A Cheyenne 76.61 46 ⇓P **P 08 12 07.9 -1.9**
baz=76
ARR Arges 76.78 320 ⇑*iP* **P 08 12 11.7 +1.1**
P22A Eagle 76.88 48 ⇑P **P 08 12 10.4 -1.0**
baz=77
R20A Redvale 76.95 50 ⇑P **P 08 12 11.3 -0.6**
baz=77
VYHS Vyhne 77.00 326 *eP* **P 08 12 12.2 +0.6**
VYHS *e* 08 12 34.4
VYHS pmax pmax
comp=Z,32nm,2.7s
VYHS Vyhne 77.00 326 *eP* **P 08 12 12.2 +0.6**
VYHS *ePCP* **PcP 08 12 23.4 +0.9**
VYHS *e* 08 12 34.4
WUAZ Wupatki 77.04 54 ⇑P **P 08 12 12.3 0.0**
baz=77
CLL Collm 77.05 330 ⇑*iP* **P 08 12 11.3 -0.5**
CLL *e* 08 12 28.0
CLL pmax pmax
comp=Z,11nm,0.9s
CLL Collm 77.05 330 *eP* **P 08 12 12.1 +0.3**
comp=Z,6.0nm,0.8s
CLL Collm 77.05 330 ⇑*iP* **P 08 12 11.3 -0.5**
comp=Z,11nm,0.9s
CLL *epP* **pP 08 12 28.0 +1.0**
CLL *e* 08 12 34.0
SMCO Snowmass 77.06 48 *eP* **P 08 12 13.5 +0.9**
comp=Z,5.0nm,1.0s
BRG Berggiesshubel 77.06 330 *eP* **P 08 12 12.6 +0.7**
comp=Z,4.0nm,1.1s
PVCC Panska Ves 77.10 329 *eP* **P 08 12 12.2 +0.1**
PVCC Panska Ves 77.10 329 *eP* **P 08 12 12.2 +0.1**
NRDL Niedersach Rie 77.10 333 *eP* **P 08 12 12.7 +0.7**
comp=Z,3.0nm,0.9s
R21A Cimarron 77.30 49 P **P 08 12 14.9 +1.1**
baz=77,SNR=6.2
ISCO Idaho Springs 77.37 47 *eP* **P 08 12 15.3 +1.0**
ISCO pmax pmax
comp=Z,11nm,1.5s
ISCO Idaho Springs 77.37 47 *eP* **P 08 12 15.3 +1.0**
comp=Z,11nm,1.5s
ISCO Idaho Springs 77.37 47 ⇓P **P 08 12 13.1 -1.1**
baz=77
PRU Pruhonice 77.54 329 *eP* **P 08 12 15.3 +0.7**
PRU *e* 08 12 20.7
PRU Pruhonice 77.54 329 *eP* **P 08 12 15.3 +0.7**
PRU *ePCP* **PcP 08 12 20.7 -4.0**
CLZ Clausthal 77.55 332 *eP* **P 08 12 15.3 +0.6**
CLZ pmax pmax
comp=Z,7.0nm,0.8s
CLZ Clausthal 77.55 332 *eP* **P 08 12 15.3 +0.6**
comp=Z,7.0nm,0.8s
TREC Trest 77.73 328 *eP* **P 08 12 16.5 +0.8**
TREC Trest 77.73 328 *eP* **P 08 12 16.5 +0.8**
IBBN Ibbenburen 78.05 334 *eP* **P 08 12 17.6 +0.3**
comp=Z,6.0nm,0.8s
EYMN Ely 78.07 34 *eP* **P 08 12 17.2 -0.5**
comp=Z,11nm,0.9s
MOX Moxa 78.10 331 *eP* **P 08 12 17.7 0.0**
MOX pmax pmax
comp=Z,2.0nm,0.8s
MOX MLR MLR
comp=Z,100nm,21.6s
MOX Moxa 78.10 331 *eP* **P 08 12 17.7 0.0**
comp=Z,2.0nm,0.8s
MOX *eL* L 08 48 38.4
comp=Z,113nm,21.6s
UBBA Unterbreizbach 78.53 332 *eP* **P 08 12 20.4 +0.4**
comp=Z,2.0nm,0.6s
V20A Brimhall 78.56 52 ⇑P **P 08 12 20.1 -0.7**
baz=78
KHC Kasperske Hory 78.61 329 *eP* **P 08 12 20.6 0.0**
KHC *e* 08 12 27.4
KHC *e* 08 12 38.5
KHC Kasperske Hory 78.61 329 *eP* **P 08 12 19.9 -0.7**
comp=Z,6.6nm,0.8s
KHC Kasperske Hory 78.61 329 *eP* **P 08 12 20.6 0.0**
KHC *ePCP* **PcP 08 12 27.4 -2.0**

KHC epP pP 08 12 38.5 +2.7
KHC ex x 08 12 56.5
ROTZ Rotzenmuhle 78.61 330 eP P 08 12 21.7 +1.2
comp=Z,3.0nm,0.9s
Q25A Bedland, Calha 78.74 47 ⇑P P 08 12 21.0 -0.7
baz=78
R24A Sanders Place, 78.76 48 ⇓P P 08 12 21.7 -0.1
baz=78
GEC2 GERESS Array S 78.79 329 eP P 08 12 22.2 +0.5
GEC2 pmax pmax
comp=Z,2.0nm,1.0s
GEC2 GERESS Array S 78.79 329 eP P 08 12 22.2 +0.5
comp=Z,2.0nm,1.0s
GERES GERESS Array B 78.79 329 P P 08 12 21.4 -0.3
GERES GERESS Array B 78.79 329 P P 08 12 21.4 -0.3
comp=Z,1.4nm,0.7s,baz=36,slow=5.9,SNR=13
GERES LR LR 08 54 17.2
comp=Z,113nm,18.6s,baz=60,slow=41
WET Wettzell 78.86 329 eP P 08 12 23.1 +1.1
WET pmax pmax
comp=Z,4.0nm,0.9s
WET Wettzell 78.86 329 eP P 08 12 23.1 +1.1
comp=Z,4.0nm,0.9s
BUG Bochum--Univer 78.94 334 eP P 08 12 22.8 +0.5
comp=Z,5.0nm,0.7s
GRF Grafenberg Arr 79.03 330 eP P 08 12 24.0 +1.1
GRF pmax pmax
comp=Z,7.0nm,0.8s
GRF MLR MLR
comp=Z,100nm,18.7s
GRF Grafenberg Arr 79.03 330 eP P 08 12 24.0 +1.1
comp=Z,7.0nm,0.8s
GRF eL L 08 49 41.2
comp=Z,109nm,18.7s
ECSD EROS Data Cent 79.06 40 eP P 08 12 23.0 -0.2
comp=Z,6.4nm,0.8s
U23A El Rito 79.50 50 ⇑P P 08 12 26.5 +0.6
baz=79,SNR=6.0
VTS Vitosha 79.55 319 ⇓P P 08 12 26.5 +0.5
VTS Vitosha 79.55 319 ⇓P P 08 12 26.5 +0.5
TNS Taunus Mts 79.57 332 eP P 08 12 25.7 -0.2
TNS pmax pmax
comp=Z,2.0nm,0.7s
TNS Taunus Mts 79.57 332 eP P 08 12 25.7 -0.2
comp=Z,2.0nm,0.7s
SPMN St. Paul 79.65 36 ⇑P P 08 12 25.8 -0.6
baz=79
SCHQ Schefferville 79.92 17 P P 08 12 27.0 -0.6
SCHQ Schefferville 79.92 17 P P 08 12 27.0 -0.6
comp=Z,2.4nm,0.8s,baz=360,slow=14,SNR=5.3
SCHQ LR LR 08 54 50.8
comp=Z,93nm,18.1s,baz=23,slow=41
GROS Grobnik 79.99 326 *i* P P 08 12 28.0 -0.3
PERS Pernice 80.01 326 *i* P P 08 12 28.3 0.0
RJOB Jochberg 80.04 328 eP P 08 12 29.7 +1.2
comp=Z,5.0nm,0.9s
ANMO Albuquerque 80.33 51 eP P 08 12 31.6 +1.2
comp=Z,4.1nm,1.2s
STU Stuttgart 80.53 331 eP P 08 12 31.6 +0.6
comp=Z,6.0nm,0.9s
GIVF Givet 80.89 334 eP P 08 12 32.2 -0.7
GIVF Givet 80.89 334 eP P 08 12 32.2 -0.7
GIVF Givet 80.89 334 eP P 08 12 32.2 -0.7
CEY Cerknica 81.02 326 eP P 08 12 32.9 -0.8
JAVS Javornik 81.04 327 *i* P P 08 12 32.8 -1.1
BAIF Baives 81.12 334 eP P 08 12 33.4 -0.7
comp=Z,6.4nm,0.6s
BAIF Baives 81.12 334 eP P 08 12 33.4 -0.7
BAIF pmax pmax
comp=Z,6.0nm,0.6s
BAIF Baives 81.12 334 eP P 08 12 33.4 -0.7
comp=Z,6.4nm,0.6s
BFO Black Forest 81.22 331 eP P 08 12 35.3 +0.6
BFO pmax pmax
comp=Z,2.0nm,0.8s
BFO Black Forest 81.22 331 eP P 08 12 35.3 +0.6
comp=Z,2.0nm,0.8s
CDF Champ du Feu 81.52 332 eP P 08 12 35.8 -0.6
comp=Z,7.4nm,0.8s
CDF Champ du Feu 81.52 332 eP P 08 12 35.8 -0.6
CDF pmax pmax
comp=Z,7.0nm,0.8s
CDF Champ du Feu 81.52 332 eP P 08 12 35.8 -0.6
comp=Z,7.4nm,0.8s
PAGF Fort de Pagny 81.93 333 eP P 08 12 38.1 -0.3
comp=Z,5.5nm,0.7s
PAGF Fort de Pagny 81.93 333 eP P 08 12 38.1 -0.3
comp=Z,5.5nm,0.7s
FUORN Ofenpass-Fuorn 81.94 329 eP P 08 12 39.1 +0.3
comp=Z,11nm,0.8s
HINF Hinteralfeld 82.17 332 eP P 08 12 39.4 -0.4
comp=Z,4.2nm,0.8s
HINF Hinteralfeld 82.17 332 eP P 08 12 39.4 -0.4
HINF pmax pmax
comp=Z,4.0nm,0.8s
HINF Hinteralfeld 82.17 332 eP P 08 12 39.4 -0.4
comp=Z,4.2nm,0.8s
HAU Haudompre 82.19 332 eP P 08 12 39.0 -0.8
comp=Z,5.4nm,0.8s
HAU eR
comp=Z,142nm,22.8s
HAU Haudompre 82.19 332 eP P 08 12 39.0 -0.8
HAU pmax pmax
comp=Z,5.0nm,0.8s
HAU Haudompre 82.19 332 eP P 08 12 39.0 -0.8
comp=Z,5.4nm,0.8s
MEZF Maizieres J'vi 82.20 333 eP P 08 12 39.6 -0.2
comp=Z,11nm,0.8s
MEZF Maizieres J'vi 82.20 333 eP P 08 12 39.6 -0.2
comp=Z,11nm,0.8s
TUE Stuetta 82.41 330 eP P 08 12 41.2 -0.1
comp=Z,10nm,1.3s
223A Chaparral, Ant 82.43 53 ⇑P P 08 12 41.0 -0.5
baz=82
SFTF Sexfontaines 82.46 333 eP P 08 12 40.6 -0.6
SFTF Sexfontaines 82.46 333 eP P 08 12 40.6 -0.6
SENIN Lac Senin/Sane 83.25 331 eP P 08 12 46.0 +0.4
comp=Z,3.7nm,0.8s
CABF La Chapelle 83.48 332 eP P 08 12 46.0 -0.6
CABF La Chapelle 83.48 332 eP P 08 12 46.0 -0.6
CABF La Chapelle 83.48 332 eP P 08 12 46.0 -0.6
GDL2 Guadalupe Moun 83.51 52 eP P 08 12 48.2 +1.1
LOR Lormes 83.67 333 eP P 08 12 46.7 -0.8
comp=Z,18nm,1.0s
LOR epP pP 08 13 09.8 +7.0
LOR eR
comp=Z,156nm,22.8s
LOR Lormes 83.67 333 eP P 08 12 46.7 -0.8
comp=Z,18nm,1.0s
LOR epP pP 08 13 09.8 +7.0
FLN La Foliniere 83.71 337 eP P 08 12 46.8 -0.8
comp=Z,7.2nm,0.6s
FLN epP pP 08 13 09.6 +6.7
FLN eR
comp=Z,82nm,20.8s
FLN La Foliniere 83.71 337 eP P 08 12 46.8 -0.8
FLN e*PP pP 08 13 09.6 +6.7
FLN pmax pmax
comp=Z,7.0nm,0.6s
FLN La Foliniere 83.71 337 eP P 08 12 46.8 -0.8
comp=Z,7.2nm,0.6s
FLN epP pP 08 13 09.6 +6.7
LDF La Druitiere 83.75 336 eP P 08 12 46.9 -1.0
comp=Z,4.7nm,0.6s
LDF La Druitiere 83.75 336 eP P 08 12 46.9 -1.0
LDF pmax pmax
comp=Z,5.0nm,0.6s
LDF La Druitiere 83.75 336 eP P 08 12 46.9 -1.0
comp=Z,4.7nm,0.6s
SSF Saint Saulge 83.97 333 eP P 08 12 48.3 -0.7
comp=Z,9.2nm,0.9s
SSF epP pP 08 13 11.4 +7.1
SSF Saint Saulge 83.97 333 eP P 08 12 48.3 -0.7
SSF e*PP pP 08 13 11.4 +7.1
SSF pmax pmax
comp=Z,9.0nm,0.9s
SSF Saint Saulge 83.97 333 eP P 08 12 48.3 -0.7
comp=Z,9.2nm,0.9s
SSF epP pP 08 13 11.4 +7.1
GRR Gorron 84.16 337 eP P 08 12 49.3 -0.6
comp=Z,13nm,0.7s
GRR Gorron 84.16 337 eP P 08 12 49.3 -0.6
GRR pmax pmax
comp=Z,13nm,0.6s
GRR Gorron 84.16 337 eP P 08 12 49.3 -0.6
comp=Z,13nm,0.6s
LPL La Plagne 84.19 331 eP P 08 12 50.1 -0.3
LPL La Plagne 84.19 331 eP P 08 12 50.1 -0.3
LPL La Plagne 84.19 331 eP P 08 12 50.1 -0.3
LPG La Plagne 84.19 331 eP P 08 12 50.3 -0.2
comp=Z,6.6nm,0.5s
LPG La Plagne 84.19 331 eP P 08 12 50.3 -0.2
LPG pmax pmax
comp=Z,7.0nm,0.5s
LPG La Plagne 84.19 331 eP P 08 12 50.3 -0.2
comp=Z,6.6nm,0.5s
SMF Signal de Mont 84.22 333 eP P 08 12 49.7 -0.6
comp=Z,23nm,1.1s
SMF epP pP 08 13 12.7 +7.1
SMF Signal de Mont 84.22 333 eP P 08 12 49.7 -0.6
SMF e*PP pP 08 13 12.7 +7.1
SMF pmax pmax
comp=Z,23nm,1.1s
SMF Signal de Mont 84.22 333 eP P 08 12 49.7 -0.6
comp=Z,23nm,1.1s
SMF epP pP 08 13 12.7 +7.1
AVF Avril sur Loir 84.26 333 eP P 08 12 50.0 -0.4
comp=Z,18nm,0.7s
AVF epP pP 08 13 13.0 +7.2
AVF Avril sur Loir 84.26 333 eP P 08 12 50.0 -0.4
AVF e*PP pP 08 13 13.0 +7.2
AVF pmax pmax
comp=Z,18nm,0.7s
AVF Avril sur Loir 84.26 333 eP P 08 12 50.0 -0.4
comp=Z,18nm,0.7s
AVF epP pP 08 13 13.0 +7.2
BGF Bois d'Agland 84.63 334 eP P 08 12 51.8 -0.6
BGF Bois d'Agland 84.63 334 eP P 08 12 51.8 -0.6
BGF Bois d'Agland 84.63 334 eP P 08 12 51.8 -0.6
SGMF Saint Gilles 84.77 338 eP P 08 12 52.5 -0.5
comp=Z,8.6nm,0.6s
SGMF Saint Gilles 84.77 338 eP P 08 12 52.5 -0.5
SGMF pmax pmax
comp=Z,9.0nm,0.6s
SGMF Saint Gilles 84.77 338 eP P 08 12 52.5 -0.5
comp=Z,8.6nm,0.6s
MBDF Montbardon 84.85 330 eP P 08 12 52.9 -0.8
MBDF Montbardon 84.85 330 eP P 08 12 52.9 -0.8
MBDF Montbardon 84.85 330 eP P 08 12 52.9 -0.8
ROSF Rostrenen 84.89 338 eP P 08 12 53.4 -0.2
comp=Z,12nm,0.8s
ROSF epP pP 08 13 16.6 +7.6
ROSF Rostrenen 84.89 338 eP P 08 12 53.4 -0.2
ROSF e*PP pP 08 13 16.6 +7.6
ROSF pmax pmax
comp=Z,12nm,0.8s
ROSF Rostrenen 84.89 338 eP P 08 12 53.4 -0.2
comp=Z,12nm,0.8s
ROSF epP pP 08 13 16.6 +7.6
ORIF Oris-en-Rattie 85.01 331 eP P 08 12 54.0 -0.4
comp=Z,3.7nm,0.5s
ORIF eR
comp=Z,88nm,21.0s
ORIF Oris-en-Rattie 85.01 331 eP P 08 12 54.0 -0.4
ORIF pmax pmax
comp=Z,4.0nm,0.5s
ORIF Oris-en-Rattie 85.01 331 eP P 08 12 54.0 -0.4
comp=Z,3.7nm,0.5s
TCF Toulx Ste Croi 85.07 334 eP P 08 12 54.4 -0.2
TCF epP pP 08 13 17.3 +7.3
TCF Toulx Ste Croi 85.07 334 eP P 08 12 54.4 -0.2
TCF e*PP pP 08 13 17.3 +7.3
TCF Toulx Ste Croi 85.07 334 eP P 08 12 54.4 -0.2
TCF epP pP 08 13 17.3 +7.3
QUIF Quistinic 85.24 338 eP P 08 12 54.9 -0.5
comp=Z,11nm,0.8s
QUIF Quistinic 85.24 338 eP P 08 12 54.9 -0.5
QUIF pmax pmax
comp=Z,11nm,0.8s
QUIF Quistinic 85.24 338 eP P 08 12 54.9 -0.5
comp=Z,11nm,0.8s
SBF Sospel 85.34 329 eP P 08 12 55.7 -0.3
comp=Z,18nm,0.8s
SBF Sospel 85.34 329 eP P 08 12 55.7 -0.3
SBF pmax pmax
comp=Z,19nm,0.8s
SBF Sospel 85.34 329 eP P 08 12 55.7 -0.3
comp=Z,18nm,0.8s
VIVF Saint-Julien-l 85.49 332 eP P 08 12 56.5 -0.2
comp=Z,20nm,1.0s
VIVF Saint-Julien-l 85.49 332 eP P 08 12 56.5 -0.2
VIVF pmax pmax
comp=Z,21nm,1.0s
VIVF Saint-Julien-l 85.49 332 eP P 08 12 56.5 -0.2
comp=Z,20nm,1.0s
MFF Saint Martin d 85.54 335 eP P 08 12 56.9 0.0
comp=Z,15nm,0.9s
MFF Saint Martin d 85.54 335 eP P 08 12 56.9 0.0
MFF pmax pmax
comp=Z,15nm,0.9s
MFF Saint Martin d 85.54 335 eP P 08 12 56.9 0.0
comp=Z,15nm,0.9s
428A Kincaid Ranch, 85.56 52 ⇑P P 08 12 56.0 -1.4
baz=85
FRF La Foret Royal 85.89 330 eP P 08 12 57.9 -0.8
FRF La Foret Royal 85.89 330 eP P 08 12 57.9 -0.8
FRF La Foret Royal 85.89 330 eP P 08 12 57.9 -0.8
330A Mertzon 85.93 50 ⇑P P 08 12 58.1 -1.1
baz=86
TXAR Lajitas Array 86.00 53 P P 08 13 00.1 +0.5
TXAR Lajitas Array 86.00 53 P P 08 13 00.1 +0.5
comp=Z,1.9nm,0.5s,baz=295,slow=3.5,SNR=38
LMR La Mourre 86.14 330 eP P 08 12 59.2 -0.7
comp=Z,14nm,0.7s
LMR epP pP 08 13 22.2 +6.9
LMR La Mourre 86.14 330 eP P 08 12 59.2 -0.7
LMR e*PP pP 08 13 22.2 +6.9
LMR pmax pmax
comp=Z,14nm,0.7s
LMR La Mourre 86.14 330 eP P 08 12 59.2 -0.7
comp=Z,14nm,0.7s
LMR epP pP 08 13 22.2 +6.9
RJF Les Rejaudoux 86.17 334 eP P 08 12 59.1 -1.0
comp=Z,8.5nm,1.0s
RJF eR
comp=Z,112nm,21.0s
RJF Les Rejaudoux 86.17 334 eP P 08 12 59.1 -1.0
RJF pmax pmax
comp=Z,9.0nm,1.0s
RJF Les Rejaudoux 86.17 334 eP P 08 12 59.1 -1.0
comp=Z,8.5nm,1.0s
CAF Calviac 86.32 333 eP P 08 13 01.3 +0.4
comp=Z,28nm,0.9s
CAF epP pP 08 13 24.3 +8.1
CAF Calviac 86.32 333 eP P 08 13 01.3 +0.4
CAF e*PP pP 08 13 24.3 +8.1
CAF pmax pmax
comp=Z,28nm,0.9s
CAF Calviac 86.32 333 eP P 08 13 01.3 +0.4
comp=Z,28nm,0.9s
CAF epP pP 08 13 24.3 +8.1
LASF Ste Croix 86.46 332 eP P 08 13 01.5 0.0
comp=Z,19nm,1.1s
LASF Ste Croix 86.46 332 eP P 08 13 01.5 0.0
comp=Z,19nm,1.1s
LFF La Frestale 86.75 334 eP P 08 13 03.1 +0.2
comp=Z,50nm,1.1s
LFF epP pP 08 13 26.2 +8.0
LFF La Frestale 86.75 334 eP P 08 13 03.1 +0.2
LFF e*PP pP 08 13 26.2 +8.0
LFF pmax pmax
comp=Z,50nm,1.1s
LFF La Frestale 86.75 334 eP P 08 13 03.1 +0.2
comp=Z,50nm,1.1s
LFF epP pP 08 13 26.2 +8.0
SIUC Southern Illin 87.26 39 eP P 08 13 05.7 +0.3
comp=Z,20nm,0.9s
SIUC epP pP 08 13 20.8 0.0
MTLF Montolieu 87.67 332 eP P 08 13 07.5 +0.1
MTLF Montolieu 87.67 332 eP P 08 13 07.5 +0.1
MTLF Montolieu 87.67 332 eP P 08 13 07.5 +0.1
EPF Esparros 88.58 334 eP P 08 13 11.2 -0.6
comp=Z,12nm,1.0s
EPF Esparros 88.58 334 eP P 08 13 11.2 -0.6
EPF pmax pmax
comp=Z,12nm,1.0s
EPF Esparros 88.58 334 eP P 08 13 11.2 -0.6
comp=Z,12nm,1.0s
ETSF Etsaut 88.99 334 eP P 08 13 14.1 +0.4
comp=Z,6.9nm,0.5s
ETSF Etsaut 88.99 334 eP P 08 13 14.1 +0.4
ETSF pmax pmax
comp=Z,7.0nm,0.5s
ETSF Etsaut 88.99 334 eP P 08 13 14.1 +0.4
comp=Z,6.9nm,0.5s
SJPF Ste Jean 89.01 335 eP P 08 13 12.8 -1.0
SJPF Ste Jean 89.01 335 eP P 08 13 12.8 -1.0
SJPF Ste Jean 89.01 335 eP P 08 13 12.8 -1.0
KEST Kesra 91.45 324 LR LR 08 59 17.4
comp=Z,54nm,20.0s,baz=259,slow=39
ESDC Sonseca Array 93.00 335 P P 08 13 31.6 -0.8
ESDC Sonseca Array 93.00 335 P P 08 13 31.6 -0.8
comp=Z,0.5nm,0.4s,baz=20,slow=4.6,SNR=8.0
TORD Torodi Ar. Bea 114.27 318 PKP PKPdf 08 18 57.0 -1.8
TORD PP PP 08 19 51.1 -2.7
TORD Torodi Ar. Bea 114.27 318 PKP PKPdf 08 18 57.0 -1.8
comp=Z,0.4nm,0.4s,baz=43,slow=1.7,SNR=5.6
TORD PP PP 08 19 51.1 -2.7
comp=Z,3.4nm,1.1s,baz=28,slow=8.4,SNR=12
QSPA South Pole Qui 132.09 180 ePKPdf **PKPdf 08 19 31.6 +0.4**
LPAZ La Paz 142.86 55 PKP **PKPdf 08 19 50.8 -2.5**
LPAZ La Paz 142.86 55 PKP **PKPdf 08 19 50.8 -2.5**
comp=Z,1.2nm,0.7s,baz=10,slow=7.5,SNR=4.5
SNAA Sanae 146.15 199 ePKPdf **PKPdf 08 19 57.2 +0.5**
BDFB Brasilia 151.78 23 PKPbc **PKPbc 08 20 14.5 +0.6**
BDFB PKPab **PKPab 08 20 21.7 -1.1**
BDFB Brasilia 151.78 23 PKPbc **PKPbc 08 20 14.5 +0.6**
comp=Z,4.8nm,0.7s,baz=212,slow=3.5,SNR=9.0
BDFB PKPab **PKPab 08 20 21.7 -1.1**
comp=Z,1.3nm,0.4s,baz=297,slow=3.2,SNR=4.1

IDC 05 08:11:26.5±13.0, 18.20S×177.74W, h541km±125km, mb3.0/4, mb1 3.3/4, mb1mx2.9/19, mbtmp3.0/4, Error ellipse: s-maj=105.1km s-min=33.1km az=120.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.21**	**260**	P	P	08 18 55.4	-0.4
	0.8nm,0.4s,baz=95,slow=7.2,SNR=18						
WRA				PcP	PcP	08 20 24.0	-0.4
	0.3nm,0.4s,baz=100,slow=3.5,SNR=4.2						
ASAR	**Alice Springs**	**45.33**	**254**	P	P	08 18 56.8	+0.1
	1.6nm,0.4s,baz=91,slow=8.1,SNR=38						
ASAR				PcP	PcP	08 20 24.4	-0.5
	0.3nm,0.4s,baz=102,slow=4.2,SNR=6.2						
MJAR	**Matsushiro Arr**	**68.53**	**323**	P	P	08 21 34.8	-0.3
	0.6nm,0.4s,baz=154,slow=6.0,SNR=5.2						
ILAR	**Eielson Array**	**86.03**	**13**	P	P	08 23 09.2	-0.2
	0.2nm,0.4s,baz=213,slow=5.1,SNR=8.7						
GERES	**GERESS Array B**	**148.06**	**346**	PKPbc	PKPbc	08 30 11.2	-0.2
	0.3nm,0.4s,baz=27,slow=1.1,SNR=5.5						

*IDC **05** 08:14:23.9±0.5, 22.°31S×174.°94W, h0km, mb4.7/25, mb1 4.8/27, mb1mx4.7/29, mbtmp4.6/27, ML3.8/2, MS4.4/24, Ms1 4.4/24, ms1mx4.3/38, Error ellipse: s-maj=16.5km s-min=11.3km az=147.0*

*ISCJB **05** 08:14:26.9±0.2, 22.°47S±0.°06×174.°85W±0.°04, h30km, mb4.9/75, MS4.6/30, Error ellipse: s-maj=9.0km s-min=4.6km az=155.7*

*GCMT **05** 08:14:27.3±0.3, 22.°55S×174.°21W, h14km±1km, MW5.0, Moment Tensor Solution. s34,c40; s70,c100; Moment tensor: Scale 10^16^Nm; Mrr3.12±.19; Mθθ-0.21±.12; Mφφ-2.91±.13; Mrθ 1.09±.29; Mrφ-0.83±.08; Mθφ 2.43±.28; Best double couple: M0 4.10000×10^16^ NP1:φs 190.00000°, δ25.00000°, λ80.00000°. NP2:φs 21.00000°, δ65.00000°, λ95.00000°. Principal axes: T 4.1100, Plg69.0000°, Azm300.0000°; N -0.0100, Plg4.0000°, Azm199.0000°; P -4.1100, Plg20.0000°, Azm108.0000°; Data Used: II IU G IC CN.*

*BJI **05** 08:14:27.0, 22.°11S×174.°62W, h27km, mB5.6/27, mb5.2/31, Ms5.2/24, Ms7 4.9/18*

*MOS **05** 08:14:29.8±1.3, 22.°24S×174.°93W, h33km, mb5.1/16, Error ellipse: s-maj=10.9km s-min=9.4km az=51.6*

*NEIC **05** 08:14:29.0±0.2, 22.°46S×174.°87W, h35km, mb5.0/45, Error ellipse: s-maj=9.4km s-min=5.8km az=148.0*

ISC 05 08:14:28.7±0.4, 22.°44S±0.°07×174.°80W±0.°06, h31km±2km, h31km:pP-P, n460, σ1↑09/494, mb5.1/74, MS4.6/32, 103C-102D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.19**	**304**	eP	Pn	08 16 30.0	+4.5
MSVF	**Nonsavu**	**8.19**	**304**	ePn	Pn	08 16 30.0	+4.5
MSVF	**Nonsavu**	**8.19**	**304**	Pn	Pn	08 16 30.0	+4.5
	882nm,1.1s,SNR=29						
AFI	**Afiamalu**	**8.96**	**19**	Pn	Pn	08 16 32.8	-3.3
AFI				Sn	Sn	08 18 01.2	-15
AFI				eSn	Sn	08 18 03.5	-12
AFI	**Afiamalu**	**8.96**	**19**	Pn	Pn	08 16 32.8	-3.3
	12nm,0.3s,baz=146,slow=6.1,SNR=4.1						
AFI				Sn	Sn	08 18 01.2	-15
	8.3nm,0.3s,baz=36,slow=22,SNR=3.0						
AFI				LR	LR	08 19 34.7	
	comp=Z,715nm,21.1s,baz=211,slow=35						
RAR	**Rarotonga**	**14.01**	**88**	Pn	Pn	08 17 34.3	-11
RAR				Sn	Sn	08 19 54.4	-25
RAR	**Rarotonga**	**14.01**	**88**	Pn	Pn	08 17 34.3	-11
	7.7nm,0.3s,baz=270,slow=7.5,SNR=18						
RAR				Sn	Sn	08 19 54.4	-25
	3.6nm,0.3s,baz=90,slow=24,SNR=6.2						
RAR				LR	LR	08 22 12.3	
	comp=Z,2μm,21.1s,baz=271,slow=33						
URZ	**Urewera**	**17.23**	**202**	P	**Pn**	**08 18 27.4**	**+0.4**
	5.5nm,0.7s						
URZ				eSn	Sn	08 21 16.6	-21
URZ	**Urewera**	**17.23**	**202**	P	**Pn**	**08 18 27.4**	**+0.4**
	1.6nm,0.3s,baz=310,slow=3.4,SNR=8.7						
DZM	**Mont Dzumac**	**17.37**	**268**	eLR	LR	08 22 50.9	
	1μm,21.2s						
DZM	**Mont Dzumac**	**17.37**	**268**	P	**P**	**08 18 31.3**	**+1.2**
	4.7nm,1.1s						
DZM	**Mont Dzumac**	**17.37**	**268**	P	**P**	**08 18 31.3**	**+1.2**
	0.8nm,0.3s,baz=94,slow=21,SNR=7.3						
SNZO	**South Karori**	**20.79**	**203**	eP	**P**	**08 19 06.7**	**-0.5**
	20nm,0.7s						
TBI	**Tubuai**	**23.35**	**97**	eLQ	LQ	08 23 50.1	
	1μm,26.2s						
TBI				eLR	LR	08 24 46.2	
	2μm,28.5s,baz=275						
PPT2	**Papeete2**	**24.17**	**83**	eLQ	LQ	08 24 07.3	
	2μm,25.8s						
PPT2				eLR	LR	08 25 01.2	
	2μm,27.2s,baz=258						
PPT	**Papeete**	**24.18**	**83**	P	**P**	**08 19 41.5**	**-0.9**
PPT	**Papeete**	**24.18**	**83**	P	**P**	**08 19 41.5**	**-0.9**
	61nm,0.7s,baz=174,slow=5.9,SNR=4.6						
PPT				LR	LR	08 27 03.6	
	comp=Z,1μm,19.4s,baz=264,slow=31						
RPZ	**Rata Peaks**	**24.24**	**206**	P	**P**	**08 19 43.8**	**+1.0**
RPZ	**Rata Peaks**	**24.24**	**206**	P	**P**	**08 19 43.8**	**+1.0**
	10nm,0.8s,baz=195,slow=3.0,SNR=3.9						
EIDS	**Eidsvold**	**31.28**	**258**	eP	**P**	**08 20 44.9**	**-1.1**
	19nm,1.1s						
CTAO	**Charters Tower**	**36.31**	**266**	eP	**P**	**08 21 28.4**	**-1.4**
CTAO				pmax	pmax		
	comp=Z,38nm,1.4s						
CTAO	**Charters Tower**	**36.31**	**266**	eP	**P**	**08 21 28.4**	**-1.4**
	comp=Z,38nm,1.4s						
RKT	**Rikitea**	**36.65**	**99**	eLR	LR	08 30 49.1	
	comp=Z,1μm,30.8s,baz=265						
PMG	**Port Moresby**	**38.69**	**283**	P	**P**	**08 21 48.0**	**-1.9**
	comp=Z,3.2nm,1.2s						
PMG	**Port Moresby**	**38.69**	**283**	P	P	08 21 46.5	-3.5
PMG	**Port Moresby**	**38.69**	**283**	P	**P**	**08 21 48.0**	**-1.9**
	comp=Z,28nm,0.9s,baz=138,slow=3.4,SNR=15						
STKA	**Stephens Creek**	**39.70**	**247**	eP	**P**	**08 21 57.0**	**-1.3**
	comp=Z,4.3nm,1.4s						
STKA	**Stephens Creek**	**39.70**	**247**	P	**P**	**08 21 58.0**	**-0.3**
	comp=Z,3.7nm,0.5s,baz=79,slow=11,SNR=14						
STKA				LR	LR	08 37 00.9	
	comp=Z,940nm,19.1s,baz=52,slow=34						
COEN	**Coen**	**40.70**	**275**	eP	**P**	**08 22 05.0**	**-1.7**
	comp=Z,237nm,1.0s						
AS31	**Alice Springs**	**47.01**	**258**	eP	**P**	**08 22 55.0**	**-2.4**
ASAR	**Alice Springs**	**47.01**	**258**	P	**P**	**08 22 55.3**	**-2.1**
ASAR				PcP	**PcP**	**08 24 30.9**	**+1.4**
ASAR				S	**S**	**08 29 47.8**	**+0.4**
ASAR	**Alice Springs**	**47.01**	**258**	P	**P**	**08 22 55.3**	**-2.1**
	comp=Z,24nm,0.9s,baz=91,slow=8.3,SNR=132						
ASAR				PcP	**PcP**	**08 24 30.9**	**+1.4**
	comp=Z,2.6nm,0.8s,baz=106,slow=3.2,SNR=4.2						

ASAR S **S** **08 29 47.8 +0.4**
comp=Z,0.7nm,1.0s,baz=99,slow=13,SNR=5.2
ASAR LR LR 08 42 09.4
comp=Z,629nm,19.1s,baz=101,slow=36
WRAB Tennant Creek 47.30 263 *eP* P 08 22 56.5 -3.2
WRAB pmax pmax
comp=Z,18nm,1.0s
WRAB Tennant Creek 47.30 263 *eP* P 08 22 56.5 -3.2
comp=Z,18nm,1.0s
WRAB Tennant Creek 47.30 263 P P 08 22 56.2 -3.5
comp=Z,98nm,0.9s,SNR=7.3
WRA Warramunga Arr 47.31 263 P **P** **08 22 57.1 -2.7**
WRA PcP **PcP** **08 24 30.4 -0.2**
WRA S **S** **08 29 53.2 +1.6**
WRA Warramunga Arr 47.31 263 P **P** **08 22 57.1 -2.7**
comp=Z,15nm,0.9s,baz=99,slow=8.0,SNR=72
WRA PcP **PcP** **08 24 30.4 -0.2**
comp=Z,4.7nm,1.0s,baz=100,slow=4.0,SNR=4.8
WRA S **S** **08 29 53.2 +1.6**
comp=Z,0.6nm,0.9s,baz=102,slow=12,SNR=4.5
WRA LR LR 08 42 08.6
comp=Z,403nm,20.1s,baz=90,slow=35
FORT Forrest 51.30 248 *eP* **P** **08 23 28.1 -2.0**
comp=Z,24nm,0.6s
FITZ Fitzroy Crossi 55.74 263 *eP* **P** **08 24 00.9 -1.9**
comp=Z,28nm,1.2s
FITZ Fitzroy Crossi 55.74 263 LR LR 08 48 22.2
comp=Z,438nm,18.9s,baz=95,slow=37
SBA Scott Base 56.16 185 *eP* **P** **08 24 06.4 +1.5**
SBA pmax pmax
comp=Z,55nm,1.7s
SBA Scott Base 56.16 185 *eP* **P** **08 24 06.4 +1.5**
comp=Z,55nm,1.7s
VNDA Vanda 56.27 186 *eP* **P** **08 24 06.3 +0.5**
comp=Z,24nm,1.8s
VNDA Vanda 56.27 186 P **P** **08 24 07.0 +1.2**
comp=Z,2.8nm,1.2s,baz=10,slow=8.6,SNR=2.8
VNDA LR LR 08 44 29.6
comp=Z,322nm,19.2s,baz=23,slow=32
NWAO Narrogin (SRO) 60.19 244 LR LR 08 46 28.0
comp=Z,155nm,19.5s,baz=101,slow=32
MBWA Marble Bar 60.35 258 *eP* **P** **08 24 35.0 -0.1**
comp=Z,14nm,0.9s
CBIJ Chichi jima 64.47 318 LR LR 08 51 48.6
comp=Z,225nm,19.1s,baz=139,slow=35
QSPA South Pole Qui 67.64 180 *eP* **P** **08 25 22.6 +0.2**
comp=Z,32nm,1.4s
JHJ Hachijo jima 2 70.21 321 LR LR 08 53 57.1
comp=Z,65nm,18.4s,baz=149,slow=34
MJAR Matsushiro Arr 73.55 322 P **P** **08 25 57.7 -1.0**
MJAR Matsushiro Arr 73.55 322 P **P** **08 25 57.7 -1.0**
comp=Z,5.3nm,0.6s,baz=161,slow=6.6,SNR=24
MAT Matsushiro 73.55 322 P **P** **08 25 57.0 -1.7**
JNU Nakatsue 75.74 315 *eP* **P** **08 26 10.1 -1.4**
comp=Z,9.2nm,1.3s
KSM Kuching 76.63 277 *eP* **P** **08 26 16.2 -0.7**
comp=Z,19nm,1.0s
KSM Kuching 76.63 277 P **P** **08 26 16.3 -0.7**
comp=Z,23nm,1.1s
ASAJ Asahikawa 76.87 330 P **P** **08 26 18.7 +1.1**
ASAJ Asahikawa 76.87 330 P **P** **08 26 18.7 +1.1**
comp=Z,26nm,1.0s,baz=232,slow=13,SNR=7.7
ASAJ LR LR 08 56 47.8
comp=Z,418nm,20.0s,baz=163,slow=33
SAO San Andreas Ge 77.45 41 P P 08 26 25.8 +4.8
SAO pmax pmax
comp=Z,7.0nm,1.1s
SAO San Andreas Ge 77.45 41 P P 08 26 25.8 +4.8
comp=Z,7.2nm,1.1s
PTRM Twissleman Ran 77.50 43 *eP* P 08 26 14.1 -7.3
VES Vestal, Richgr 78.33 43 ⇓P **P** **08 26 26.4 +0.5**
baz=79
EDW2 Edwards Air Fo 78.44 45 ⇓P **P** **08 26 25.9 -0.8**
baz=79
ISA Isabella 78.61 44 *eP* **P** **08 26 28.2 +0.6**
ISA pmax pmax
comp=Z,12nm,1.4s
ISA Isabella 78.61 44 *eP* **P** **08 26 28.2 +0.6**
comp=Z,12nm,1.4s
ISA Isabella 78.61 44 ⇑P **P** **08 26 27.4 -0.2**
baz=79
CMB Columbia Colle 78.91 41 *eP* **P** **08 26 29.6 +0.4**
CMB Columbia Colle 78.91 41 *eP* **P** **08 26 29.6 +0.4**
PEA0B Petropavlovsk- 78.94 344 *eP* **P** **08 26 28.4 -0.5**
PETK Petropavlovsk- 78.94 344 P **P** **08 26 28.4 -0.5**
PETK Petropavlovsk- 78.94 344 P **P** **08 26 28.4 -0.5**
PETK Petropavlovsk- 78.94 344 P **P** **08 26 28.4 -0.5**
comp=Z,19nm,0.9s,baz=108,slow=8.0,SNR=11
PETK LR LR 08 57 45.5
comp=Z,194nm,18.4s,baz=331,slow=33
YSS Yuzh-Sakhalins 78.98 332⇑ *eP* **P** **08 26 30.0 +0.8**
YSS *e* 08 26 41.0
YSS Yuzh-Sakhalins 78.98 332 *eP* **P** **08 26 29.1 -0.1**
comp=Z,22nm,0.8s
BC3 Big Chuckawall 79.39 47 ⇓P **P** **08 26 32.2 +0.2**
baz=80
GLA Glamis 79.47 48 ⇓P **P** **08 26 33.2 +0.8**
baz=80
GSC Goldstone 79.47 45 *eP* **P** **08 26 32.6 +0.2**
GSC Goldstone 79.47 45 *eP* **P** **08 26 32.6 +0.2**
MPMC Manual Prospec 79.48 44 ⇓P **P** **08 26 33.0 +0.5**
baz=80
MTUM Tungsten Hills 79.60 42 *eP* **P** **08 26 34.0 +0.9**
IRM Iron Mountain 79.89 47 ⇑P **P** **08 26 35.2 +0.6**
baz=80
GMRC Granite Mounta 79.91 46 ⇓P **P** **08 26 35.3 +0.5**
baz=80
YBH Yreka Blue Hor 79.99 37 P **P** **08 26 35.6 +0.5**
YBH Yreka Blue Hor 79.99 37 P **P** **08 26 35.6 +0.5**
comp=Z,2.9nm,1.1s,baz=174,slow=3.0,SNR=4.8
YBH LR LR 08 57 11.6
comp=Z,356nm,18.1s,baz=320,slow=32
113A Mohawk Valley, 80.03 48 ⇑P **P** **08 26 34.7 -0.6**
baz=80
WCN Washoe City 80.10 40 *eP* **P** **08 26 37.2 +1.4**
WCN pmax pmax
comp=Z,83nm,2.8s
WCN Washoe City 80.10 40 *eP* **P** **08 26 37.2 +1.4**
comp=Z,83nm,2.8s
TUQ Turquoise Moun 80.13 45 ⇑P **P** **08 26 36.5 +0.6**
baz=80
SHOC Shoshone 80.17 45 ⇑P **P** **08 26 36.5 +0.5**
baz=80
KSRS Korea Array 80.32 317 P **P** **08 26 36.1 -0.6**
comp=Z,12nm,1.1s,baz=140,slow=6.1,SNR=27
KSRS LR LR 08 59 19.6
comp=Z,116nm,18.7s,baz=304,slow=34
KSAR Wonju Array Be 80.34 317 P **P** **08 26 36.1 -0.7**
NVAR Mina Array Bea 80.43 42 P **P** **08 26 38.0 +0.4**
NVAR Mina Array Bea 80.43 42 P **P** **08 26 38.0 +0.4**
comp=Z,2.4nm,1.1s,baz=221,slow=6.7,SNR=12
HUMO Hull Mountain 80.44 36 *eP* **P** **08 26 38.4 +1.0**
comp=Z,12nm,1.2s
LDFC Landfair 80.45 46 *eP* **P** **08 26 36.5 -1.2**
comp=Z,2.1nm,0.4s
MAW Mawson 80.74 199 P **P** **08 26 39.6 +1.1**
MAW Mawson 80.74 199 P **P** **08 26 39.6 +1.1**
comp=Z,4.2nm,0.7s,baz=144,slow=7.6,SNR=9.5
MAW LR LR 09 00 54.1
comp=Z,428nm,18.3s,baz=117,slow=34
W13A Hualapai Mount 81.28 46 ⇑P **P** **08 26 42.5 +0.2**
baz=82
TUC Tucson 81.87 50 *eP* **P** **08 26 45.9 +0.6**
TUC pmax pmax
comp=Z,22nm,2.1s
TUC Tucson 81.87 50 *eP* **P** **08 26 45.9 +0.6**
comp=Z,22nm,2.1s
R11A Troy Canyon, C 82.08 43 ⇑P **P** **08 26 46.2 -0.2**
baz=82
USRK Ussuriysk Arra 82.25 324 P **P** **08 26 46.8 0.0**
comp=Z,37nm,1.0s,baz=120,slow=3.0,SNR=37
USRK LR LR 09 01 56.8
comp=Z,237nm,19.6s,baz=279,slow=35
X16A Lo Mia Camp, P 82.56 48 P **P** **08 26 49.5 +0.5**
baz=83,SNR=5.8
320A Kipp Ranch, An 82.98 52 ⇑P **P** **08 26 50.9 -0.3**
baz=83
CCUT Cedar City 83.03 45 *eP* **P** **08 26 52.0 +0.5**
comp=Z,18nm,1.7s
U15A North Rim 83.10 46 P **P** **08 26 52.5 +0.6**
baz=83,SNR=9.5
ARUT Antelope Range 83.12 44 *eP* **P** **08 26 52.1 +0.3**
ARUT pmax pmax
comp=Z,12nm,1.2s
ARUT Antelope Range 83.12 44 *eP* **P** **08 26 52.1 +0.3**
comp=Z,12nm,1.2s
WUAZ Wupatki 83.21 47 ⇑P **P** **08 26 52.5 +0.2**
baz=84
220A Playas Peak, P 83.28 52 ⇑P **P** **08 26 53.1 +0.4**
baz=84,SNR=7.6
NJ2 Nanjing 83.41 308 *eP* **P** **08 26 53.5 +0.3**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
120A U Bar Ranch, L 83.54 51 ⇑P **P** **08 26 54.8 +0.8**
baz=84
ELK Elko 83.72 41 *eP* **P** **08 26 55.4 +0.5**
comp=Z,6.5nm,1.0s
ELK *ep*P **pP** **08 27 03.6 -1.2**
MDJ Mudanjiang 83.83 324 P **P** **08 26 55.4 +0.4**
MDJ pP **pP** **08 27 05.1 +0.2**
MDJ sP **sP** **08 27 08.7 +0.2**
MDJ PP **PP** **08 30 08.2 -0.7**
MDJ S **SKKSac** **08 37 19.7 -0.8**
MDJ SS **SS** **08 42 44.9 +0.2**
MDJ pmax pmax
comp=Z,32nm,1.0s
MDJ pmax pmax
comp=Z,250nm,4.6s
MDJ LR LR
comp=N,89nm,26.6s
MDJ LR LR
comp=E,66nm,20.8s
Z20A Nine Sixteen R 83.86 51 ⇑P **P** **08 26 55.7 +0.1**
baz=84
121A Cookes Peak, D 84.14 51 ⇓P **P** **08 26 56.9 -0.2**
baz=84
MVU Marysvale 84.32 44 *eP* **P** **08 26 58.5 +0.5**
MSU Marysvale 84.35 44 *eP* **P** **08 26 58.9 +0.7**
MSU Marysvale 84.35 44 *eP* **P** **08 26 58.9 +0.7**
QIZ Qiongzhong 84.36 293 P **P** **08 26 58.3 0.0**
QIZ S **S** **08 37 22.5 -0.1**
QIZ pmax pmax
comp=Z,160nm,4.2s
QIZ LR LR
comp=E,94nm,19.2s
Y20A Horse Springs, 84.43 50 P **P** **08 26 59.5 +0.8**
baz=85,SNR=10.0
Z21A St. Cloud Mine 84.62 51 ⇓P **P** **08 27 00.1 +0.5**
baz=85,SNR=7.9
X20A Quemado 84.68 49 ⇓P **P** **08 26 59.9 0.0**
baz=85,SNR=11
BBB Bella Bella 84.74 27 LR LR 08 58 57.1
comp=E,293nm,19.5s,baz=239,slow=32
HAWA Hanford 84.78 35 *eP* **P** **08 27 00.8 +1.0**
comp=E,42nm,1.8s
122A Conniff Cattle 84.79 52 ⇓P **P** **08 27 00.5 +0.1**
baz=85
DUG Dugway 84.90 43 ⇑P **P** **08 27 00.5 -0.3**
baz=85
MFID Camas Ranch 84.97 39 *eP* **P** **08 27 01.2 +0.2**
comp=E,8.4nm,1.1s
MFID Camas Ranch 84.97 39 ⇓P **P** **08 27 01.4 +0.4**
baz=85
W20A Ramah 84.98 49 ⇑P **P** **08 27 01.6 +0.2**
baz=85,SNR=17
Y21A Point of Rocks 84.98 50 ⇑P **P** **08 27 01.8 +0.4**
baz=85,SNR=7.6
BMO Blue Mountains 85.02 37 *eP* **P** **08 27 01.1 0.0**
comp=E,20nm,1.8s
X21A Alamocita Cree 85.13 50 P **P** **08 27 02.8 +0.6**
baz=85,SNR=7.0
Q16A Castle Valley 85.23 45 ⇑P **P** **08 27 03.0 +0.4**
baz=86,SNR=6.8
324A Moseley Ranch, 85.28 53 ⇓P **P** **08 27 02.3 -0.6**
baz=86
425A Indio Mountain 85.33 54 ⇓P **P** **08 27 02.6 -0.5**
baz=86
V20A Brimhall 85.36 48 ⇓P **P** **08 27 03.5 +0.3**
baz=86
626A Big Bend Ranch 85.37 56 P **P** **08 27 02.6 -0.7**
baz=86,SNR=8.2
TMUT Trail Mountain 85.42 44 *eP* **P** **08 27 04.7 +1.1**
comp=E,20nm,1.1s
Y22A Socorro 85.45 51 ⇓P **P** **08 27 03.7 0.0**
baz=86
MNTX Cornudas Mount 85.48 53 *eP* **P** **08 27 02.1 -1.6**
comp=E,8.7nm,1.5s
MNTX Cornudas Mount 85.48 53 ⇑P **P** **08 27 03.1 -0.6**
baz=86,SNR=7.6
224A Cornudas Mount 85.56 53 ⇑P **P** **08 27 04.2 -0.1**
baz=86
LAZ Ladron 85.56 50 *eP* **P** **08 27 03.4 -0.9**
comp=E,6.6nm,1.4s
I12A Atlanta 85.61 39 ⇓P **P** **08 27 03.8 -0.5**
baz=86
325A Bean Ranch, Si 85.62 54 ⇑P **P** **08 27 04.2 -0.4**
baz=86,SNR=6.5
TXAR Lajitas Array 85.62 56 P **P** **08 27 03.7 -0.9**
TXAR Lajitas Array 85.62 56 P **P** **08 27 03.7 -0.9**
comp=E,3.5nm,1.2s,baz=212,slow=4.4,SNR=17
TXAR LR LR 08 58 55.4
comp=E,265nm,19.0s,baz=195,slow=31
Z23A Rita Site, Whi 85.64 51 ⇑P **P** **08 27 05.1 +0.5**
baz=86
526A Mary Lane Ranc 85.65 55 P **P** **08 27 04.5 -0.3**
baz=86,SNR=6.0
CN2 Changchun 85.66 321 *eP* **P** **08 27 07.0 +2.7**
CN2 *ep*P **pP** **08 27 18.3 +4.1**
CN2 *e*S **S** **08 37 37.0 +2.6**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,300nm,17.0s
CN2 LR LR
comp=E,400nm,17.0s
CN2 LR LR
comp=Z,600nm,19.0s
L14A Malta 85.69 41 ⇓P **P** **08 27 04.4 -0.3**
baz=86
KLR Kul'dur 85.72 328 *eP* P 08 27 00.0 -4.5
SRU San Rafael 85.76 45 *eP* **P** **08 27 05.6 +0.5**
SRU San Rafael 85.76 45 *eP* **P** **08 27 05.6 +0.5**
comp=Z,404nm,1.2s
SRU San Rafael 85.76 45 ⇓P **P** **08 27 05.4 +0.3**
baz=86,SNR=7.2
PLCA Paso Flores 85.77 132 LR LR 08 59 14.7
comp=Z,312nm,18.5s,baz=83,slow=31
BNM Barren Site 85.80 51 *eP* **P** **08 27 05.5 0.0**
comp=Z,34nm,2.0s
LPM Los Pinos Moun 85.88 50 *eP* **P** **08 27 06.1 +0.3**
HLID Hailey 85.89 39 *eP* **P** **08 27 06.2 +0.5**
comp=Z,4.6nm,1.2s
HLID *ep*P pP 08 27 22.8 +7.2
HLID Hailey 85.89 39 ⇑P **P** **08 27 05.3 -0.4**
baz=86
627A Terlingua Ranc 85.89 56 ⇓P **P** **08 27 04.4 -1.5**
baz=86
124A Stringfield Ra 85.92 52 ⇑P **P** **08 27 05.9 -0.3**
baz=86
J13A Cove Ranch, Pi 85.93 40 ⇑P **P** **08 27 05.4 -0.4**
baz=86
SNAA Sanae 85.97 177 *eP* **P** **08 27 05.0 -0.6**
comp=Z,19nm,1.4s
SNAA Sanae 85.97 177 P **P** **08 27 05.5 -0.1**
comp=Z,2.6nm,1.1s,baz=230,slow=5.1,SNR=6.6
426A McDonald Obser 85.99 55 ⇑P **P** **08 27 06.5 0.0**
baz=86
JLU Jordanelle 85.99 43 *eP* **P** **08 27 06.6 +0.3**
comp=Z,42nm,2.5s
WHN Wuhan 85.99 305 ⇓P **P** **08 27 07.2 +1.0**
WHN pP **pP** **08 27 15.8 -0.4**
K14A Jones Ranch, D 86.03 41 ⇑P **P** **08 27 06.0 -0.3**
baz=86
527A Woodward Ranch 86.05 55 P **P** **08 27 06.2 -0.6**
baz=86,SNR=7.9
MVCO Mesa Verde 86.08 47 ⇓P **P** **08 27 06.5 -0.3**
baz=86
225A Deer Hill, Car 86.09 53 ⇓P **P** **08 27 06.8 -0.1**
baz=86
Y23A Lovelace Mesa, 86.10 51 ⇓P **P** **08 27 07.0 +0.1**
baz=86
O17A Robinson Place 86.21 44 P **P** **08 27 07.6 +0.2**
baz=86,SNR=8.5
H12A Diamond D Ranc 86.22 38 ⇓P **P** **08 27 07.4 +0.2**
baz=86
P18A Preston Nutter 86.22 44 ⇑P **P** **08 27 05.2 -2.4**
baz=86
U21A Nageezi 86.25 48 ⇓P **P** **08 27 07.7 0.0**
baz=86,SNR=8.8
I13A Wildhorse Cree 86.27 39 ⇑P **P** **08 27 07.8 +0.2**
baz=86
J14A Carey 86.27 40 ⇑P **P** **08 27 07.6 +0.1**
baz=86
M16A Huntsville 86.27 42 ⇑P **P** **08 27 07.2 -0.5**
baz=86
628A Black Gap, Mar 86.29 56 ⇓P **P** **08 27 06.7 -1.1**
baz=86,SNR=6.7
G12A Big Creek, Yel 86.30 38 ⇓P **P** **08 27 07.3 -0.3**
baz=87
Z24A Sheeppen Canyo 86.30 52 ⇑P **P** **08 27 07.5 -0.4**
baz=86
ANMO Albuquerque 86.32 50 *eP* **P** **08 27 07.3 -0.7**
comp=Z,34nm,2.0s
IPM Ipoh 86.32 276 *eP* **P** **08 27 08.7 +0.3**
comp=Z,39nm,1.2s
GDL2 Guadalupe Moun 86.48 53 *eP* **P** **08 27 08.2 -0.5**
125A Gardner Draw, 86.48 53 P **P** **08 27 08.7 -0.1**
baz=87,SNR=5.1
Q19A Hogan Spring (86.50 45 ⇓P **P** **08 27 08.4 -0.3**
baz=87
S20A Disappointment 86.50 47 ⇑P **P** **08 27 08.7 -0.2**
baz=87
Y24A Capitan 86.54 51 ⇓P **P** **08 27 08.8 -0.3**
baz=87,SNR=8.8
427A Hayter Ranch, 86.55 55 ⇓P **P** **08 27 08.8 -0.3**
baz=87
226B Tecolote Peak, 86.57 53 ⇓P **P** **08 27 08.2 -1.0**
baz=87
N17A Moffit Pass 86.57 43 ⇑P **P** **08 27 09.2 0.0**
baz=87
H13A Challis 86.57 39 ⇑P **P** **08 27 09.4 +0.4**
baz=87
T21A Navajo Lake 86.62 48 ⇓P **P** **08 27 10.3 +0.9**
baz=87
W23A Werner Place, 86.65 50 ⇑P **P** **08 27 09.6 -0.1**
baz=87
I14A Mackay 86.67 39 ⇑P **P** **08 27 09.1 -0.4**
baz=87
R20A Redvale 86.67 46 ⇓P **P** **08 27 09.8 +0.1**
baz=87
528A Cox Ranch, San 86.69 56 P **P** **08 27 09.6 -0.3**
baz=87,SNR=6.4
F12A Elk City 86.71 37 ⇓P **P** **08 27 07.2 -2.4**
baz=87
Z25A Roswell 86.75 52 ⇓P **P** **08 27 10.1 +0.1**
baz=87,SNR=6.6
U22A Llaves 86.77 49 ⇑P **P** **08 27 10.2 0.0**
baz=87
S21A Coal Bank Pass 86.80 47 ⇓P **P** **08 27 09.8 -0.6**
baz=87
G13A Cobalt 86.89 38 ⇓P **P** **08 27 09.2 -1.4**
baz=87
V23A Ortiz Mt. (NFS 86.92 49 ⇑P **P** **08 27 10.9 -0.1**
baz=87
126A Clayton Basin, 86.95 53 ⇓P **P** **08 27 11.0 0.0**
baz=87
KULM Kulin 86.98 277 *eP* **P** **08 27 12.0 +0.5**
comp=Z,33nm,1.3s
428A Kincaid Ranch, 87.03 55 ⇑P **P** **08 27 09.4 -2.1**
baz=87
T22A Edith 87.07 48 ⇑P **P** **08 27 12.3 +0.6**
baz=87
Y25A Mesa, Roswell 87.08 52 P **P** **08 27 11.0 -0.7**
baz=87,SNR=7.7
H14A Leadore 87.11 39 ⇓P **P** **08 27 11.9 +0.2**
baz=87
Q20A Ridgley Place, 87.13 46 ⇑P **P** **08 27 10.6 -1.3**
baz=87
W24A Lazy 6 Ranch, 87.20 50 ⇑P **P** **08 27 11.5 -0.8**
baz=87
U23A El Rito 87.21 49 ⇓P **P** **08 27 12.2 -0.2**
baz=88,SNR=5.9
NEW Newport 87.24 34 P **P** **08 27 10.5 -1.5**
NEW Newport 87.24 34 P **P** **08 27 10.5 -1.5**
comp=Z,0.3nm,0.3s,baz=259,slow=5.2,SNR=3.1
NEW LR LR 09 01 15.4
comp=Z,670nm,18.7s,baz=227,slow=32
F13A Darby 87.25 38 ⇓P **P** **08 27 11.4 -0.8**
baz=88
Z26A Caprock 87.28 52 ⇓P **P** **08 27 11.9 -0.8**
baz=88
O19A Miners Draw (B 87.31 44 ⇓P **P** **08 27 12.9 +0.2**
baz=88
M18A Lyman 87.32 43 ⇑P **P** **08 27 12.1 -0.7**
baz=88
R21A Cimarron 87.33 47 ⇓P **P** **08 27 12.2 -0.7**
baz=88
C11A Tepee Creek (N 87.43 35 ⇓P **P** **08 27 13.3 +0.4**
baz=88
D12A Red Ives Fores 87.44 36 ⇑P **P** **08 27 13.1 0.0**
baz=88
S22A 4UR Ranch, Cre 87.49 47 ⇑P **P** **08 27 13.1 -0.7**
baz=88
K17A Gardner Place, 87.52 41 ⇑P **P** **08 27 13.8 +0.1**
baz=88
H15A Lima 87.54 39 ⇑P **P** **08 27 14.5 +0.8**
baz=88
V24A Rampart Ranch, 87.55 50 ⇑P **P** **08 27 14.5 +0.4**
baz=88
429A Davenport Ranc 87.59 56 ⇓P **P** **08 27 13.0 -1.1**
baz=88,SNR=9.6
PSI Prapat 87.62 274 P **P** **08 27 13.8 -1.0**
PSI Prapat 87.62 274 P **P** **08 27 13.9 -0.8**
comp=Z,38nm,1.3s,comp=Z,577nm
PSI Prapat 87.62 274 P **P** **08 27 13.8 -1.0**
comp=Z,23nm,1.0s,baz=183,slow=5.6,SNR=14
530A J-C Ranch, Com 87.79 56 ⇓P **P** **08 27 13.8 -1.3**
baz=88
I16A Newdale 87.80 40 ⇓P **P** **08 27 15.2 +0.3**
baz=88
Z27A Tatum 87.86 53 ⇓P **P** **08 27 15.0 -0.4**
baz=88
W25A X Bar L Ranch, 87.88 50 ⇑P **P** **08 27 14.7 -0.8**
baz=88,SNR=5.1
K18A Toltan Ranch, 87.99 42 ⇑P **P** **08 27 15.8 -0.2**
baz=88
Q22A Crested Butte, 88.01 46 ⇑P **P** **08 27 16.3 0.0**
baz=88
631A Perdido Creek 88.05 57 ⇓P **P** **08 27 15.9 -0.3**
baz=88
V25A Rancho No Teng 88.07 50 ⇑P **P** **08 27 16.2 -0.3**
baz=88
L19A Farson 88.13 43 ⇓P **P** **08 27 16.3 -0.3**
baz=88
SMCO Snowmass 88.13 46 *eP* **P** **08 27 16.8 -0.1**
comp=Z,4.4nm,1.1s
IMW Indian Meadow 88.14 40 *eP* **P** **08 27 15.8 -1.0**
N20A Spence Gulch, 88.15 44 ⇓P **P** **08 27 16.7 -0.1**
baz=88
Y27A Causey 88.17 52 ⇓P **P** **08 27 17.0 +0.1**
baz=88
732A Laxson Ranch, 88.21 58 ⇓P P 08 27 13.6 -3.4
baz=88
J18A Kendall Valley 88.32 41 ⇑P **P** **08 27 16.9 -0.6**
baz=89
CHBT CHBT 88.35 284 P **P** **08 27 18.8 +0.8**
BW06 Boulder Array 88.36 42 ⇓P **P** **08 27 17.7 -0.1**
baz=89
PDAR Pinedale Array 88.36 42 P **P** **08 27 17.1 -0.6**
PDAR Pinedale Array 88.36 42 P **P** **08 27 17.1 -0.6**
comp=Z,0.6nm,0.8s,baz=222,slow=5.8,SNR=5.4
PDAR LR LR 09 01 31.4
comp=Z,155nm,19.0s,baz=252,slow=32
I17A Pilgrim Ck. 88.37 41 ⇓P **P** **08 27 19.5 +1.8**
baz=89
T24A Torres, Weston 88.38 49 ⇑P **P** **08 27 17.7 -0.3**
baz=89
H16A Russell Place, 88.41 40 ⇑P **P** **08 27 17.9 0.0**
baz=89
531A Rocksprings 88.41 56 P **P** **08 27 17.4 -0.7**
baz=89,SNR=5.8
D14A Greenough 88.47 37 ⇑P **P** **08 27 15.8 -2.2**
baz=89
CHMT Chamberlain Mo 88.52 37 *eP* **P** **08 27 18.1 -0.3**
E15A Deer Lodge 88.58 38 ⇓P **P** **08 27 18.7 +0.2**
baz=89
N21A Black Mountain 88.59 44 ⇓P **P** **08 27 18.3 -0.6**
baz=89
632A Uvalde 88.70 57 ⇑P **P** **08 27 18.3 -1.1**
baz=89
B13A Whitefish 88.71 35 ⇓P **P** **08 27 20.1 +1.1**
baz=89
B13A ⇓P **PcP** **08 27 20.4 -0.2**
baz=89
BOZ Bozeman (W) 88.71 39 ⇓P **P** **08 27 18.8 -0.4**
baz=89
L20A Wamsutter 88.72 43 ⇓P **P** **08 27 19.5 +0.1**
baz=89
W27A Bowe Ranch, En 88.81 51 ⇑P **P** **08 27 20.1 +0.3**
baz=89

532A Rocksprings 88.89 57 ⇑P P 08 27 19.4 -0.9
baz=89
O22A Kremmling 88.92 45 ⇓P P 08 27 20.6 +0.1
baz=89
SEY Seymchan 88.96 346 *c iP* P 08 27 18.7 -1.0
D15A Lincoln 89.00 37 ⇑P P 08 27 21.1 +0.6
baz=89
K20A Yellowstone Ra 89.06 43 ⇓P P 08 27 21.7 +0.7
baz=89
A13A Flathead Natio 89.07 35 ⇓P P 08 27 21.4 +0.6
baz=89
S25A Robets Cordova 89.09 48 ⇓P P 08 27 21.4 +0.2
baz=89
M21A Separation Pea 89.13 44 ⇑P P 08 27 20.6 -0.8
baz=89
Q24A Divide 89.25 47 ⇑P P 08 27 21.5 -0.6
baz=90
N22A Wattenberg Ran 89.30 45 ⇓P P 08 27 22.3 +0.1
baz=90
432A Menard 89.31 56 ⇓P P 08 27 21.7 -0.6
baz=90
BJI Beijing 89.37 314 P P 08 27 23.2 +1.0
BJI SS SS 08 44 10.1 +4.0
BJI pmax pmax
comp=Z,15nm,0.9s
BJI pmax pmax
comp=Z,180nm,3.9s
BJI LR LR
comp=N,140nm,26.0s
BJI LR LR
comp=E,170nm,25.9s
D16A Dana Ranch, Ca 89.54 38 ⇓P P 08 27 22.6 -0.5
baz=90
ILAR Eielson Array 89.57 12 P P 08 27 21.3 -1.3
ILAR Eielson Array 89.57 12 P P 08 27 21.3 -1.3
comp=E,1.2nm,0.9s,baz=223,slow=5.0,SNR=9.2
A14A Double T Ranch 89.62 35 ⇓P P 08 27 23.0 -0.4
baz=90
B15A Bradely Ranch, 89.71 36 ⇑P P 08 27 24.0 +0.2
baz=90
K21A Alcova 89.73 43 ⇓P P 08 27 24.0 -0.1
baz=90
H19A Powell 89.74 41 ⇑P P 08 27 23.2 -0.8
baz=90
G18A Lazy EL Ranch, 89.74 40 ⇓P P 08 27 22.7 -1.3
baz=90
Q25A Bedland, Calha 89.83 47 ⇓P P 08 27 24.9 +0.2
baz=90
C16A Fuhringer Ranc 89.86 37 ⇑P P 08 27 24.8 +0.3
baz=90
I20A Worland 89.88 42 ⇑P P 08 27 24.7 +0.1
baz=90
GCMT Greycliff 89.94 39 P P 08 27 25.6 +0.7
comp=E,0.7nm,0.7s
F18A Big Timber 89.97 39 ⇑P P 08 27 24.6 -0.5
baz=90
J21A Lysite 89.98 42 ⇓P P 08 27 25.4 +0.1
baz=90
A15A Johnson Ranch, 90.00 36 ⇑P P 08 27 25.1 0.0
baz=90
D17A Six Diamond Ra 90.10 38 ⇑P P 08 27 25.3 -0.4
baz=90
GYA Guiyang 90.19 299 ⇓ *iP* P 08 27 27.3 +0.7
GYA pP pP 08 27 37.9 +1.3
GYA PP PP 08 31 03.6 +2.8
GYA S S 08 38 15.9 -2.8
GYA sS sS 08 38 35.0 -0.3
GYA SS SS 08 44 19.8 +1.0
GYA pmax pmax
comp=Z,20nm,1.1s
GYA pmax pmax
comp=Z,120nm,5.9s
GYA LR LR
comp=N,550nm,20.9s
GYA LR LR
comp=E,460nm,22.7s
GYA LR LR
comp=Z,580nm,21.2s
E18A Harlowton 90.22 39 ⇓P P 08 27 25.4 -0.8
baz=90
C17A Wharram Farm, 90.32 37 ⇑P P 08 27 26.2 -0.4
baz=91
F19A Roth Farm, Mol 90.40 40 ⇑P P 08 27 26.5 -0.5
baz=91
A16A West Butte Ran 90.59 36 ⇑P P 08 27 28.1 +0.2
baz=91
J22A Midwest 90.62 43 ⇓P P 08 27 28.3 +0.1
baz=91
Z32A Haskell 90.63 54 ⇓P P 08 27 28.3 -0.1
baz=91
B17A L&G Farms, Che 90.67 37 ⇓P P 08 27 28.2 +0.1
baz=91
E19A Rath Farm, Rou 90.81 39 ⇓P P 08 27 29.4 +0.5
baz=91
A17A Triple J Farms 91.08 36 ⇑P P 08 27 30.6 +0.5
baz=91
EGMT Eagleton 91.10 37 ⇓P P 08 27 30.7 +0.5
baz=91
W31A Holland Ranch, 91.13 52 ⇑P P 08 27 30.0 -0.7
baz=91
BILL Bilibino 91.29 353 ⇓ *iP* P 08 27 30.2 -0.3
BILL *e* 08 31 06.8
BILL *eS* SKSac 08 37 59.8 -0.2
BILL pmax pmax
comp=Z,3.0nm,1.2s
C19A Slack Wire Ran 91.34 38 ⇑P P 08 27 31.8 +0.5
baz=92
D20A Manuel Ranch, 91.53 39 ⇓P P 08 27 32.1 -0.1
baz=92
A18A Metzger Ranch, 91.54 37 ⇑P P 08 27 32.2 0.0
baz=92
XAN Xi'an 91.68 306 P P 08 27 33.0 -0.2
XAN pP pP 08 27 43.7 +0.5
XAN sP sP 08 27 49.8 +3.0
XAN pmax pmax
comp=Z,9.0nm,1.1s
XAN pmax pmax
comp=Z,24nm,4.8s
XAN LR LR
comp=N,180nm,9.4s
XAN LR LR
comp=E,110nm,9.4s
C20A Veseth Ranch, 91.93 38 ⇑P P 08 27 34.4 +0.4
baz=92
F22A Rosebud 91.96 41 ⇑P P 08 27 34.6 +0.4
baz=92
A19A Klindworth Far 92.16 37 ⇓P P 08 27 34.4 -0.6
baz=92
D21A La Casta Ranch 92.18 39 ⇓P P 08 27 35.4 +0.2
baz=92
K26A Motz Farm, Whi 92.37 44 ⇓P P 08 27 37.3 +1.0
baz=93
H24A Dirks Ranch, A 92.49 42 ⇓P P 08 27 36.4 -0.4
baz=93
RSSD Black Hills 92.51 43 *eP* P 08 27 36.9 -0.1
RSSD Black Hills 92.51 43 *eP* P 08 27 36.9 -0.1
C21A Desert Coulee 92.51 39 ⇑P P 08 27 37.0 +0.2
baz=93
A20A Cobblestone Ra 92.59 37 ⇑P P 08 27 36.9 -0.2
baz=93
D22A Cohagen 92.70 40 ⇓P P 08 27 37.8 +0.2
baz=93
HHC Hu-ho-hao-te 92.84 313 *eP* P 08 27 38.9 +0.4
HHC sP sP 08 27 54.0 +1.9
HHC PP PP 08 31 24.0 +2.6
HHC SKS SKSac 08 38 08.7 -1.5
HHC S S 08 38 39.9 -2.1
HHC sS sS 08 38 57.4 -1.3
HHC SS SS 08 44 58.3 +1.9
HHC pmax pmax
comp=Z,36nm,0.7s
HHC pmax pmax
comp=Z,330nm,7.1s
HHC LR LR
comp=N,200nm,17.1s
HHC LR LR
comp=E,420nm,17.4s
HHC LR LR
comp=Z,300nm,16.9s
G24A Alzada 92.86 42 ⇑P P 08 27 38.7 +0.3
baz=93
B21A Ellsworth Farm 92.87 38 ⇑P P 08 27 39.2 +0.9
baz=93
KMI Kunming 92.88 296 P P 08 27 40.8 +1.6
KMI pP pP 08 27 46.7 -2.5
KMI sP sP 08 27 50.7 -2.1
KMI SKS SKSac 08 38 12.7 +1.3
KMI S S 08 38 39.9 -3.4
KMI pmax pmax
comp=Z,14nm,1.2s
KMI pmax pmax
comp=Z,130nm,5.6s
KMI LR LR
comp=N,110nm,21.5s
KMI LR LR
comp=E,120nm,25.7s
E23A Ismay 92.89 40 ⇑P P 08 27 39.4 +0.9
baz=93
A21A Bergtoll Ranch 93.21 38 ⇑P P 08 27 40.6 +0.7
baz=94
CMAR Chiang Mai Arr 93.56 288 P P 08 27 42.8 +0.6
CMAR Chiang Mai Arr 93.56 288 P P 08 27 42.8 +0.6
comp=E,9.9nm,0.9s,baz=121,slow=3.0,SNR=44
CMAR LR LR 09 08 23.5
comp=E,63nm,19.6s,baz=80,slow=35
C23A Lambert 93.61 39 ⇓P P 08 27 42.2 +0.4
baz=94
CHTO Chiang Mai 93.70 289 *eP* P 08 27 44.1 +1.3
CHTO pmax pmax
comp=Z,31nm,1.5s
CHTO Chiang Mai 93.70 289 *eP* P 08 27 44.1 +1.3
comp=Z,30nm,1.5s
JTS JuntasAbangare 93.72 80 *eP* P 08 27 43.2 +0.2
comp=Z,13nm,1.1s
JTS *ep* P 08 27 49.8 -3.3
C24A Savage 93.93 40 ⇑P P 08 27 44.3 +1.1
baz=94
B23A Brockton 94.05 39 ⇑P P 08 27 44.7 +0.9
baz=94
CD2 Chengdu 94.34 302 P P 08 27 45.4 -0.2
CD2 pP pP 08 27 56.0 +0.4
CD2 sP sP 08 27 59.9 +0.7
CD2 PP PP 08 31 35.8 +2.5
CD2 SKS SKSac 08 38 16.5 -2.2
CD2 S S 08 38 52.3 -3.2
CD2 sS sS 08 39 10.0 -2.2
CD2 SS SS 08 45 19.1 +0.9
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,200nm,5.9s
A24A Westby 94.85 39 ⇓P P 08 27 48.3 +0.9
baz=95
INK Inuvik 95.38 14 P P 08 27 49.8 +0.4
INK Inuvik 95.38 14 P P 08 27 49.8 +0.4
comp=Z,1.0nm,0.9s,baz=218,slow=12,SNR=4.4
LZH Lanzhou 96.31 306 *eP* P 08 27 54.8 +0.2
LZH pP pP 08 28 06.0 +1.4
LZH sP sP 08 28 10.5 +2.3
LZH PP PP 08 31 51.3 +2.6
LZH SKS SKSac 08 38 27.4 -1.9
LZH *eS* S 08 39 10.2 -2.5
LZH pmax pmax
comp=Z,23nm,1.5s
LZH pmax pmax
comp=Z,100nm,7.8s
LZH LR LR
comp=N,240nm,18.3s
LZH LR LR
comp=E,270nm,19.0s
LZH LR LR
comp=Z,350nm,19.6s
YKA Yellowknife Ar 97.04 24 P P 08 27 56.5 -0.5
YKA Yellowknife Ar 97.04 24 P P 08 27 56.5 -0.5
comp=Z,0.6nm,0.8s,baz=238,slow=4.4,SNR=13
ECSD EROS Data Cent 97.13 46 *eP* P 08 27 57.5 -0.5
comp=Z,38nm,2.0s
LPAZ La Paz 98.57 112 LR LR 09 05 50.2
comp=Z,199nm,19.3s,baz=60,slow=31
SONM Songino Array 99.18 318 P Pdif 08 28 07.4 +0.2
SONM Songino Array 99.18 318 P Pdif 08 28 07.4 +0.2
comp=Z,0.2nm,0.4s,baz=117,slow=1.6,SNR=3.1
GTA Gaotai 100.51 308 *eP* Pdif 08 28 15.9 +2.6
GTA pP pP 08 28 26.4 +3.0
GTA sP sP 08 28 30.4 +3.4
GTA PP PP 08 32 26.2 +5.5
GTA SKS SKSac 08 38 51.0 +0.8
GTA S Sdif 08 39 47.3 -0.7
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,53nm,5.0s
GTA LR LR
comp=N,73nm,17.6s
GTA LR LR
comp=E,130nm,17.1s
WMQ Urumqi 110.45 310 PKP PKiKP 08 32 56.7 -1.3
HYB Hyderabad 111.47 281 *eP* Pdif 08 29 02.0 -0.4
MKAR Makanchi Array 114.70 313 PKIKP PKPdf 08 33 04.4 -1.5
MKAR Makanchi Array 114.70 313 PKiKP PKPdf 08 33 04.4 -1.5
MKAR Makanchi Array 114.70 313 PKiKP PKPdf 08 33 04.4 -1.5
comp=E,0.4nm,0.6s,baz=69,slow=0.4,SNR=6.6
KSH Kashi 118.44 304 PKP PKPdf 08 33 14.3 +0.8
KSH sPKP 08 33 28.1
KSH PP PP 08 34 38.1 +7.4
KSH PKS PKSdf 08 36 49.2 -1.1
KSH SKS SKSdf 08 40 21.2 -2.3
KSH SKKS SKKSac 08 41 26.0 -2.7
KSH SS SS 08 50 50.1 +4.1
KSH AMB AMB
comp=Z,190nm,7.5s
KSH LR LR
comp=N,180nm,5.2s
KSH LR LR
comp=E,110nm,3.6s
KSH LR LR
comp=Z,450nm,5.1s
BRVK Borovoye 122.54 320 *i* PKIKP PKPdf 08 33 20.6 -0.2
BRVK pmax pmax
comp=Z,3.0nm,1.0s
KKAR Karatay Array 122.78 308 *e*PKIKP PKPdf 08 33 20.5 -1.1
KKAR Karatay Array 122.78 308 *e*PKPdf PKPdf 08 33 20.5 -1.1
ABKAR Akbulak array 129.54 316 *e*PKPdf PKPdf 08 33 33.7 -0.6
ARCES ARCESS Array B 131.34 351 PKP PKPdf 08 33 38.1 +1.0
ARCES ARCESS Array B 131.34 351 PKP PKPdf 08 33 38.1 +1.0
comp=Z,1.0nm,0.6s,baz=90,slow=1.2,SNR=10
KLMR Klimovskoe 134.83 337 *e*PKIKP PKPdf 08 33 55.0 +11
KLMR pmax pmax
comp=Z,19nm,1.5s
FINES FINESS Array B 138.44 345 PKP PKPdf 08 33 49.4 -1.2
FINES FINESS Array B 138.44 345 PKP PKPdf 08 33 49.4 -1.2
comp=Z,0.6nm,0.5s,baz=64,slow=4.4,SNR=9.4
MAK Makhachkala 139.47 311 *i* PKIKP PKPdf 08 33 54.7 +1.7
OBN Obninsk 139.86 332 ⇑ *i*PKIKP PKPdf 08 33 53.3 0.0
OBN *e* 08 36 51.8
OBN *e*SS SS 08 55 14.1 +5.9
OBN pmax pmax
comp=Z,17nm,1.6s
OBN MLR MLR
comp=Z,100nm,19.0s
KBZ Khabaz 142.39 313 PKIKP PKPdf 08 33 59.5 +1.3
KBZ Khabaz 142.39 313 PKP PKPdf 08 33 59.5 +1.3
KBZ Khabaz 142.39 313 PKP PKPdf 08 33 59.5 +1.3
comp=Z,2.1nm,1.0s,baz=146,slow=4.8,SNR=4.4
HOMI Horasan 144.36 308 *i* P PKPab 08 34 00.0 -0.3
ERZM Erzurum 144.79 308 *i* P PKPdf 08 34 02.7 -0.3
KOPT Kop Dagi 145.39 309 *i* P PKPab 08 34 04.3 +0.2
ANN Anapa 145.46 318 *e*PKHKP PKPpre 08 34 01.3
ANN *i* 08 34 05.3
ANN *e* 08 34 14.1
ANN *e* 08 37 22.1
ANN pmax pmax
comp=Z,72nm,1.1s
ANN pmax pmax
comp=Z,55nm,0.9s
SUW Suwalki 145.67 341 *e*PKP2 PKPdf 08 34 03.5 -0.2
SUW Suwalki 145.67 341 *e*PKPbc PKPdf 08 34 03.5 -0.2
SUW Suwalki 145.67 341 *e*PKP PKPbc 08 34 03.9 -0.1
MUD Monsted U'grnd 145.90 356 *i* P PKPab 08 34 06.5 +1.4
comp=Z,15nm,1.0s
AKASG Malin Array Be 146.13 332 PKIKP PKPdf 08 34 04.2 -0.4
AKASG Malin Array Be 146.13 332 PKPbc PKPdf 08 34 04.2 -0.4
AKASG Malin Array Be 146.13 332 PKPbc PKPdf 08 34 04.2 -0.4
comp=Z,5.5nm,0.5s,baz=37,slow=4.0,SNR=17
KIEV Kiev 146.14 332 *e*PKIKP PKPdf 08 34 04.5 -0.1
KIEV Kiev 146.14 332 *e*PKPbc PKPdf 08 34 04.5 -0.1
KELT Kelkit 146.23 309 *i* P PKPbc 08 34 06.9 +0.4
SUSE Susehri 146.96 310 *i* P PKPab 08 34 09.4 -0.6
KEMA Kemaliye 147.10 308 *i* P PKPbc 08 34 09.2 +0.4
SIM Simferopol' 147.39 320 *e*PKIKP PKPbc 08 34 09.0 -0.3
SIM *e* 08 34 16.0
SIM pmax pmax
comp=Z,21nm,1.1s
MALT Malatya 147.47 307 ⇓PKP2 PKPbc 08 34 10.9 +0.9
MALT Malatya 147.47 307 *e*PKPbc PKPbc 08 34 10.5 +0.6
MALT Malatya 147.47 307 ⇓ *iP* PKPbc 08 34 10.9 +0.9
GZT Gaziantep 148.43 305 *i* P PKPbc 08 34 12.9 +0.3
PINB Pinarbasi 148.83 308 *i* P PKPbc 08 34 13.9 +0.1
ILGA Ilgaz 149.67 314 *i* P PKPbc 08 34 15.7 0.0
YAYL Yayladag 149.97 304 *i* P PKPbc 08 34 16.0 -0.5
OJC Ojcow 150.00 341 *e*PKIKP PKPdf 08 34 08.9 -2.1
OJC *i* 08 34 15.0
OJC Ojcow 150.00 341 *e*PKPdf PKPdf 08 34 08.9 -2.1
OJC *e*PKiKP PKPbc 08 34 15.0 -0.9
BUR08 Bucovina Ar. S 150.17 332 *e*PKPbc PKPbc 08 34 17.2 +0.7
BURAR Bucovina Array 150.19 332 ⇓ *i*P PKPbc 08 34 17.2 +0.6
KOLS Kolonicke sedl 150.29 337 *e*PKIKP PKPbc 08 34 16.4 -0.3
KOLS Kolonicke sedl 150.29 337 *e*PKP PKPbc 08 34 16.4 -0.3
BR131 Keskin Array S 150.35 312 *e*PKPbc PKPbc 08 34 16.7 -0.5
BRTR Keskin Array B 150.35 312 PKPbc PKPbc 08 34 16.8 -0.5
BRTR Keskin Array B 150.35 312 PKPbc PKPbc 08 34 16.8 -0.5
comp=Z,4.7nm,0.9s,baz=134,slow=3.6,SNR=16
KSP Ksiaz 150.36 346 *e*PKIKP PKPbc 08 34 16.6 -0.1
KSP Ksiaz 150.36 346 *e*PKP PKPbc 08 34 16.8 +0.1
UZH Uzhgorod 150.53 337 ⇓ *i*PKIKP PKPbc 08 34 16.4 -0.8
UZH *i* 08 34 25.4
UZH *e* 08 34 31.8
GULE Gulek 150.54 307 *i* P PKPbc 08 34 17.8 -0.1
NIE Niedzica 150.54 340 *i* PKIKP PKPbc 08 34 17.1 -0.2
NIE Niedzica 150.54 340 *e*PKiKP PKPbc 08 34 17.1 -0.2
CLL Collm 150.55 350 *e*PKIKP PKPbc 08 34 16.0 -1.2
CLL *e* 08 34 19.0
CLL *i* 08 34 28.2
CLL pmax pmax
comp=Z,14nm,1.2s
CLL Collm 150.55 350 *e*PKPbc PKPbc 08 34 16.0 -1.2
comp=Z,14nm,1.2s
CLL *e*PKiKP PKiKP 08 34 19.0 +1.1
CLL *i* pPKPbc pPKPbc 08 34 28.2 +0.8
comp=Z,30nm,1.0s
CFR Carcaliu 150.57 326 ⇓PKIKP PKPbc 08 34 16.0 -1.4
CFR Carcaliu 150.57 326 ⇓ *i*P PKPbc 08 34 16.0 -1.4
CRVS Cervenica-Dubn 150.60 338 *e*PKIKP PKPbc 08 34 16.8 -0.6
CRVS *e* 08 34 24.8
CRVS Cervenica-Dubn 150.60 338 *e*PKP PKPbc 08 34 16.8 -0.6
CRVS *e* 08 34 24.8
UPC Upice 150.73 346 *e*PKIKP PKPbc 08 34 17.7 +0.1
UPC *e* 08 34 29.2
UPC Upice 150.73 346 ⇑ *e*PKP PKPbc 08 34 17.7 +0.1
UPC *ep*PKP PKPab 08 34 29.2 +4.6
VRI Vrincioaia 150.80 328 ⇓PKIKP PKPbc 08 34 17.6 -0.4
VRI Vrincioaia 150.80 328 ⇓ *i*P PKPbc 08 34 17.6 -0.4
DPC Dobruska-Polom 150.81 345 *e*PKIKP PKPbc 08 34 18.0 +0.1
DPC *e* 08 34 28.1
DPC Dobruska-Polom 150.81 345 ⇑ *e*PKP PKPbc 08 34 18.0 +0.1
DPC *ep*PKP PKPab 08 34 28.1 +3.1
BRG Berggiesshubel 150.81 349 *e*PKP PKPbc 08 34 17.5 -0.3
comp=Z,14nm,1.3s
BRG *i* 08 34 20.9
comp=Z,13nm,1.2s
BRG *e* 08 34 28.6
comp=Z,20nm,1.0s
BRG *e* 08 37 56.5
comp=Z,4.4nm,1.2s
BRG Berggiesshubel 150.81 349 *e*PKIKP PKPbc 08 34 17.5 -0.3
BRG *i* 08 34 20.9
BRG *e* 08 34 28.6
BRG *e* 08 37 56.5
BRG pmax pmax
comp=Z,14nm,1.3s
BRG pmax pmax
comp=Z,13nm,1.2s
OKC Ostrava-Krasne 150.81 343 *e*PKIKP PKPbc 08 34 17.9 +0.1
OKC Ostrava-Krasne 150.81 343 ⇑ *e*PKP PKPbc 08 34 17.9 +0.1
KRLC Kraliky 150.95 345 *e*PKIKP PKPbc 08 34 18.4 +0.2
KRLC Kraliky 150.95 345 ⇑ *e*PKP PKPbc 08 34 18.4 +0.2
PVCC Panska Ves 151.02 348 *e*PKIKP PKPbc 08 34 18.4 +0.1
PVCC *e* 08 34 29.9
PVCC Panska Ves 151.02 348 ⇑ *e*PKP PKPbc 08 34 18.4 +0.1
PVCC *ep*PKP PKPab 08 34 29.9 +4.1
MORC Moravsky Berou 151.03 343 ⇓PKIKP PKPbc 08 34 18.4 0.0
MORC Moravsky Berou 151.03 343 *e*PKPbc PKPbc 08 34 18.3 -0.2
MORC Moravsky Berou 151.03 343 ⇓ *i*P PKPbc 08 34 18.4 0.0
MLR Muntele Rosu 151.45 329 ⇓ *i*P PKPbc 08 34 19.2 -0.4
PRU Pruhonice 151.54 347 *e*PKIKP PKPbc 08 34 19.0 -0.5
PRU *e* 08 34 29.9
PRU Pruhonice 151.54 347 ⇑ *e*PKP PKPbc 08 34 19.0 -0.5
PRU *ep*PKAB PKPab 08 34 29.9 +1.9
NKC Novy Kostel 151.68 350 *e*PKIKP PKPbc 08 34 19.8 -0.1
NKC *e* 08 34 30.4
NKC Novy Kostel 151.68 350 ⇑ *e*PKP PKPbc 08 34 19.8 -0.1
NKC *ep*PKP PKPab 08 34 30.4 +1.8
VYHS Vyhne 151.82 341 *e*PKIKP PKPbc 08 34 20.0 -0.2
VYHS *e* 08 34 28.9
VYHS Vyhne 151.82 341 *e*PKP PKPbc 08 34 20.0 -0.2
VYHS *e* 08 34 28.9
MEM Membach 151.88 359 PKPbc PKPbc 08 34 20.2 0.0
DRGR 151.88 334 ⇑PKIKP PKPbc 08 34 22.2 +1.7
DRGR 151.88 334 ⇑ *i*P PKPbc 08 34 22.2 +1.7
VOIR 151.91 329 ⇑PKIKP PKPbc 08 34 23.9 +3.3
VOIR 151.91 329 ⇑ *i*P PKPbc 08 34 23.9 +3.3
KDHN Kadinhani 151.95 311 *i* P PKPbc 08 34 20.3 -0.7
PSZ Piszkesteto 151.99 339 ⇑PKIKP PKPbc 08 34 21.4 +0.7
PSZ Piszkesteto 151.99 339 ⇑ *i*P PKPbc 08 34 21.4 +0.7
TREC Trest 151.99 346 *e*PKIKP PKPbc 08 34 22.3 +1.7
TREC Trest 151.99 346 ⇑ *e*PKP PKPbc 08 34 22.3 +1.7
BCLA Clavier 152.07 360 PKPbc PKPbc 08 34 20.3 -0.5
ARR Arges 152.16 330 ⇓ *i*P PKPbc 08 34 21.7 +0.5
ERMK Ermenek 152.17 307 *i* P PKPbc 08 34 20.8 -0.9
DOU Dourbes 152.39 1 PKPbc PKPbc 08 34 21.0 -0.4
CSS Prodhromos 152.46 303 *e*PKPbc PKPbc 08 34 22.7 +0.6
KHC Kasperske Hory 152.55 348 *e*PKIKP PKPdf 08 34 14.2 -0.7
KHC *e* 08 34 32.9
KHC Kasperske Hory 152.55 348 *e*PKPdf PKPdf 08 34 14.2 -0.7
KHC *e*PKPab PKPab 08 34 32.9 +0.6
KHC Kasperske Hory 152.55 348 ⇑ *e*PKP PKPbc 08 34 20.8 -1.1
KHC *e*PKPAB PKPab 08 34 32.6 +0.3
GAZI Gazipasa 152.77 306 *i* P PKPbc 08 34 28.0 +5.2
GERES GERESS Array B 152.80 348 PKPbc PKPbc 08 34 22.1 -0.4
GERES GERESS Array B 152.80 348 PKPbc PKPbc 08 34 22.1 -0.4
comp=Z,1.6nm,0.8s,baz=29,slow=3.0,SNR=9.5
PERS Pernice 154.56 344 *e*PKPbc PKPbc 08 34 29.1 +2.8
LJU Ljubljana 155.26 344 *e*PKPdf PKPdf 08 34 19.1 +0.3
CEY Cerknica 155.57 344 *e*PKPbc PKPdf 08 34 29.7 +10
TORD Torodi Ar. Bea 170.17 160 PKP PKPdf 08 34 35.5 +1.2
TORD PKPab PKPab 08 35 51.5 +1.8
TORD Torodi Ar. Bea 170.17 160 PKP PKPdf 08 34 35.5 +1.2
comp=Z,0.7nm,1.0s,baz=48,slow=2.1,SNR=3.2
TORD PKPab PKPab 08 35 51.5 +1.8
comp=Z,1.1nm,0.9s,baz=217,slow=3.9,SNR=3.6

ISK ***05*** *08:34:56.9, 40°.38N×27°.20E, h8km, MD2.8*
ISCJB ***05*** *08:34:57.3±0.4, 40°.38N±0°.02×27°.20E±0°.04, h4km±5km, Error ellipse: s-maj=5.1km s-min=4.2km az=176.8*
CSEM ***05*** *08:34:57.5±0.1, 40°.38N×27°.20E, h8km, MD2.8, Error ellipse: s-maj=2.1km s-min=1.9km az=47.0*
DDA ***05*** *08:34:57.4, 40°.37N×27°.21E, h7km, MD2.9*
ISC 05 08:34:57.6±0.9, **40°.38N**±0°.02×**27°.20E**±0°.02, **h8**km±7km, **n42**, σ0**s52**/54, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KRBG	**Karabiga-Canak**	**0.08**	**77**	*e*PG		**Pg**	**08 34 59.2**	**-0.4**
KRBG	**Karabiga-Canak**	**0.08**	**77**	*e*Pg		**Pg**	**08 34 59.3**	**-0.4**
RKY	**Sarkoy-Tekirda**	**0.31**	**357**	*e*PG		**Pg**	**08 35 03.7**	**-0.1**
RKY				*e*SG		**Sg**	**08 35 08.7**	**+0.7**
RKY	**Sarkoy-Tekirda**	**0.31**	**357**	*e*Pg		**Pg**	**08 35 03.7**	**-0.1**
RKY				*e*Sg		**Sg**	**08 35 08.7**	**+0.7**
LPK	**Lapseki**	**0.34**	**270**	*e*PG		**Pg**	**08 35 04.3**	**+0.1**
LPK				*e*SG		**Sg**	**08 35 09.5**	**+0.9**
LPK	**Lapseki**	**0.34**	**270**	*e*Pg		**Pg**	**08 35 04.3**	**+0.1**
LPK				*e*Sg		**Sg**	**08 35 09.5**	**+0.9**
MFT	**Murefte**	**0.42**	**9**	*e*PG		**Pg**	**08 35 05.1**	**-0.6**
MFT				*e*SG		**Sg**	**08 35 11.8**	**+0.6**
MFT	**Murefte**	**0.42**	**9**	*e*Pg		**Pg**	**08 35 05.1**	**-0.6**
MFT				*e*Sg		**Sg**	**08 35 11.9**	**+0.6**
GONE	**Gonen-Balikesi**	**0.50**	**131**	*e*PG		**Pg**	**08 35 07.1**	**-0.1**
GONE	**Gonen-Balikesi**	**0.50**	**131**	*e*Pg		**Pg**	**08 35 07.1**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.55**	**273**	*e*PG		**Pg**	**08 35 08.4**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.55**	**273**	*e*Pg		**Pg**	**08 35 08.4**	**+0.1**
BALY	**Balya**	**0.71**	**153**	*i* P		**Pg**	**08 35 11.3**	**0.0**

BALY				*i* S	Sg	08 35 20.9	+0.3
BALY	Balya	0.71	153	*i* P	Pg	08 35 11.3	0.0
BALY				*i* S	Sg	08 35 20.9	+0.3
EZN	Ezine	0.86	231	*e*PG	Pg	08 35 13.7	-0.5
EZN	Ezine	0.86	231	*e*Pg	Pg	08 35 13.7	-0.5
ENEZ	Enez	0.87	295	*e*PG	Pg	08 35 13.7	-0.7
ENEZ	Enez	0.87	295	*e*Pg	Pg	08 35 13.7	-0.7
BALB	Balikesir	0.90	144	*e*PG	Pg	08 35 14.8	-0.1
BALB	Balikesir	0.90	144	*e*Pg	Pg	08 35 14.8	-0.1
AYVA	Ayvalik	1.14	200	*i* P	Pn	08 35 19.4	-0.3
AYVA				*i* S	Sn	08 35 34.8	-0.6
AYVA	Ayvalik	1.14	200	*i* P	Pn	08 35 19.4	-0.3
AYVA				*i* S	Sn	08 35 34.8	-0.6
DURS	Dursunbey	1.25	128	*i* P	Pn	08 35 20.8	-0.6
DURS				*i* S	Sn	08 35 39.8	+1.4
DURS	Dursunbey	1.25	128	*i* P	Pn	08 35 20.8	-0.6
DURS				*i* S	Sn	08 35 39.8	+1.4
ARMT	Armutlu	1.28	81	*e*PN	Pb	08 35 21.8	-0.2
ARMT	Armutlu	1.28	81	*e*Pn	Pb	08 35 21.8	-0.2
MDNY	Mudanya-Bursa	1.29	90	*e*PN	Pb	08 35 21.8	-0.2
MDNY	Mudanya-Bursa	1.29	90	*e*Pn	Pb	08 35 21.8	-0.2
CTKS	Kestanelik-??a	1.31	49	*e*PN	Pn	08 35 21.9	-0.3
CTKS	Kestanelik-??a	1.31	49	*e*Pn	Pn	08 35 21.9	-0.3
CTYL	Yal??k??y-??at	1.38	37	*e*PN	Pn	08 35 22.8	-0.2
CTYL	Yal??k??y-??at	1.38	37	*e*Pn	Pn	08 35 22.8	-0.2
BGKT	Bogazkoy	1.44	56	*e*PN	Pn	08 35 23.6	-0.3
BGKT	Bogazkoy	1.44	56	*e*Pn	Pn	08 35 23.6	-0.3
EDRB	Edirne	1.51	347	*e*PN	Pn	08 35 24.9	0.0
EDRB	Edirne	1.51	347	*e*Pn	Pn	08 35 24.9	0.0
GEMT	Gemlik	1.52	87	*e*PN	Pn	08 35 24.9	-0.1
GEMT	Gemlik	1.52	87	*e*Pn	Pn	08 35 24.9	-0.1
YLV	Yalova	1.67	83	*e*PN	Pb	08 35 27.9	-0.7
YLV	Yalova	1.67	83	*e*Pn	Pb	08 35 27.9	-0.7
TVSB	Tavsanli	1.97	117	*e*PN	Pn	08 35 31.4	+0.1
TVSB	Tavsanli	1.97	117	*e*Pn	Pn	08 35 31.4	+0.1

IDC 05 08:54:56.5±1.3, 16°.47S×173°.40W, h0km, mb3.8/6, mb1 4.1/6, mb1mx3.8/21, mbtmp3.9/6, Error ellipse: s-maj=53.3km s-min=23.9km az=131.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.98	32	Pn	Pn	08 55 40.5	-4.7
	10nm,0.3s,baz=46,slow=12,SNR=4.8						
AFI				Sn	Sn	08 56 10.0	-12
	22nm,0.3s,baz=25,slow=21,SNR=13						
URZ	Urewera	23.26	199	P	P	09 00 05.7	+0.1
	4.6nm,0.8s,baz=346,slow=12,SNR=3.3						
STKA	Stephens Creek	43.52	241	P	P	09 03 01.5	-0.5
	3.0nm,1.0s,baz=83,slow=9.1,SNR=3.7						
WRA	Warramunga Arr	49.61	258	P	P	09 03 49.8	-0.3
	0.5nm,0.6s,baz=92,slow=6.9,SNR=11						
ASAR	Alice Springs	49.79	253	P	P	09 03 51.3	-0.2
	2.9nm,0.6s,baz=89,slow=8.4,SNR=74						
PDAR	Pinedale Array	83.05	42	P	P	09 07 24.1	-0.2
	0.4nm,0.7s,baz=196,slow=4.3,SNR=3.6						
ILAR	Eielson Array	83.48	11	P	P	09 07 25.3	-0.4
	0.2nm,0.5s,baz=229,slow=6.6,SNR=8.0						
BRTR	Keskin Array B	146.98	320	PKPbc	PKPbc	09 14 42.0	+0.4
	1.0nm,0.8s,baz=72,slow=4.0,SNR=6.6						

*ISK **05** 09:00:29.3, 37°.17N×37°.16E, h8km, MD2.9*
*ISCJB **05** 09:00:30.1±0.6, 37°.18N±0°.03×37°.20E±0°.05, h6km±5km, Error ellipse: s-maj=6.3km s-min=5.3km az=26.6*
*CSEM **05** 09:00:30.0±0.2, 37°.17N×37°.17E, h8km, MD3.0, Error ellipse: s-maj=5.1km s-min=3.8km az=125.0*
*DDA **05** 09:00:30.4, 37°.15N×37°.12E, h7km, MD3.0*
ISC 05 09:00:30.2±1.0, 37°.17N±0°.03×37°.14E±0°.03, h4km±8km, n31, σ0s.87/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.06	90	*e*PG	Pg	09 00 31.2	-0.4
GAZ	Gaziantep	0.06	90	*e*Pg	Pg	09 00 31.2	-0.4
AYKD	Aykdinkavak	0.36	313	*i* P	Pg	09 00 37.4	+0.3
AYKD				*i* S	Sg	09 00 43.6	+1.7
AYKD				*i* S	Sb	09 00 43.8	-1.4
AYKD	Aykdinkavak	0.36	313	*i* P	Pg	09 00 37.4	+0.3
AYKD				*i* S	Sb	09 00 43.8	-1.4
KMRS	Kahramanmaras	0.38	330	*e*PG	Pg	09 00 37.7	0.0
KMRS	Kahramanmaras	0.38	330	*e*Pg	Pg	09 00 37.7	0.0
GZT	Gaziantep	0.39	62	*i* P	Pg	09 00 38.2	+0.5
KUZU	Kuzuini	0.40	187	*i* P	Pg	09 00 37.9	-0.1
KUZU				*i* S	Sg	09 00 44.2	+1.0
KUZU	Kuzuini	0.40	187	*i* P	Pg	09 00 37.9	-0.1
KUZU				*i* S	Sg	09 00 44.2	+1.0
ANDN	Andirin	0.75	303	*i* P	Pb	09 00 45.9	0.0
ANDN				*i* S	Sn	09 00 59.2	-0.4
ANDN	Andirin	0.75	303	*i* P	Pb	09 00 45.9	0.0
ANDN				*i* S	Sn	09 00 59.2	-0.4
KOZT	Kozan	1.09	287	*e*PN	Pg	09 00 51.1	0.0
KOZT	Kozan	1.09	287	*e*Pn	Pg	09 00 51.1	0.0
AKCD	Akcadag	1.28	29	*i* P	Pg	09 00 55.0	+0.2
AKCD				*i* S	Sn	09 01 14.6	+1.9
AKCD	Akcadag	1.28	29	*i* P	Pg	09 00 55.0	+0.2
AKCD				*i* S	Sn	09 01 14.6	+1.9
URFA	Urfa	1.37	78	*e*PN	Pn	09 00 55.2	-0.9
URFA	Urfa	1.37	78	*e*Pn	Pn	09 00 55.2	-0.9
YAYL	Yayladag	1.41	216	*i* P	Pn	09 00 56.2	-0.5
YAYL				*i* S	Sn	09 01 16.7	+1.0
YAYL	Yayladag	1.41	216	*i* P	Pn	09 00 56.2	-0.5
YAYL				*i* S	Sn	09 01 16.7	+1.0
DARE	Darende-Malaty	1.42	11	*e*PN	Pn	09 00 56.1	-0.8
DARE	Darende-Malaty	1.42	11	*e*Pn	Pn	09 00 56.1	-0.8
MALT	Malatya	1.53	42	*e*PN	Pn	09 00 57.3	-1.1
MALT	Malatya	1.53	42	*e*Pn	Pn	09 00 57.3	-1.1
MYA	Malataya	1.54	41	*e*PN	Pn	09 00 57.7	-0.8
MYA	Malataya	1.54	41	*e*Pn	Pn	09 00 57.7	-0.8
SVRC	Sivrice-ELAZID	2.10	54	*e*PN	Pn	09 01 05.3	-1.0
SVRC	Sivrice-ELAZID	2.10	54	*e*Pn	Pn	09 01 05.3	-1.0
NIG	Nigde	2.21	296	*e*PN	Pn	09 01 07.3	-0.6
NIG	Nigde	2.21	296	*e*Pn	Pn	09 01 07.3	-0.6
ILIC	ilic-Erzincan	2.54	26	*e*PN	Pn	09 01 11.8	-0.5
ILIC	ilic-Erzincan	2.54	26	*e*Pn	Pn	09 01 11.8	-0.5

IDC 05 09:10:46.0±1.5, 14°.90S×71°.63W, h147km±14km, mb3.1/4, mb1 3.2/10, mb1mx3.2/25, mbtmp3.1/10, Error ellipse: s-maj=41.0km s-min=12.9km az=30.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.64	113	P	Pn	09 11 42.5	+0.1
	1.2nm,0.3s,baz=295,slow=9.9,SNR=29						
LPAZ				S	Sn	09 12 26.9	+0.9
	0.6nm,0.3s,baz=191,slow=22,SNR=7.6						
NNA	Nana	5.84	299	P	Pn	09 12 09.4	-1.3
	2.7nm,0.3s,baz=119,slow=11,SNR=6.3						
NNA				S	Sn	09 13 08.9	-7.9
	5.0nm,0.3s,baz=30,slow=20,SNR=14						
ATAH	Atahualpa	10.18	319	P	Pn	09 13 08.3	-0.7
	0.3nm,0.3s,baz=106,slow=8.3,SNR=3.8						
SIV	San Ignacio	10.24	97	P	Pn	09 13 08.3	-1.1
	0.3nm,0.3s,baz=285,slow=12,SNR=5.4						
CFAA	Coronel Fontan	16.92	170	P	P	09 14 33.1	-0.6
	0.0nm,0.3s,baz=349,slow=11,SNR=8.4						
CPUP	Villa Florida	17.55	133	P	P	09 14 40.1	-0.5
	0.3nm,0.3s,baz=288,slow=14,SNR=3.9						
BDFB	Brasilia	22.79	95	P	P	09 15 35.9	-0.6
	1.0nm,0.5s,baz=259,slow=10,SNR=3.6						
TXAR	Lajitas Array	53.77	325	P	P	09 19 53.8	+0.2
	0.1nm,0.5s,baz=133,slow=8.7,SNR=2.7						
TORD	Torodi Ar. Bea	77.73	73	P	P	09 22 25.9	-1.3
	0.4nm,0.4s,baz=259,slow=4.5,SNR=7.3						
YKA	Yellowknife Ar	84.14	341	P	P	09 23 00.6	+0.5
	0.5nm,0.6s,baz=136,slow=5.1,SNR=26						
SONM	Songino Array	147.12	2	PKPbc	PKPab	09 30 13.3	-0.6
	0.2nm,0.4s,baz=337,slow=3.3,SNR=3.6						

*ISK **05** 09:17:03.4, 39°.44N×28°.16E, h5km, MD2.7*
*ISCJB **05** 09:17:04.1±0.6, 39°.41N±0°.05×28°.15E±0°.04, h0km, Error ellipse: s-maj=7.4km s-min=3.8km az=27.0*
*CSEM **05** 09:17:04.4±0.2, 39°.44N×28°.16E, h1km, MD2.9, Error ellipse: s-maj=6.0km s-min=3.4km az=28.0*
*DDA **05** 09:17:04.6, 39°.46N×28°.17E, h7km, MD2.9*
ISC 05 09:17:04.2±1.0, 39°.45N±0°.03×28°.15E±0°.03, h0km, n32, σ0s.68/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.28	313	*e*PG	Pg	09 17 10.2	+0.6
BALB				*e*SG	Sb	09 17 16.0	-1.4
BALB	Balikesir	0.28	313	*e*Pg	Pg	09 17 10.2	+0.6
BALB				*e*Sg	Sb	09 17 16.0	-1.4
DURS	Dursunbey	0.30	59	*i* P	Pg	09 17 10.4	+0.5
DURS				*i* S	Sb	09 17 16.6	-1.4
DURS	Dursunbey	0.30	59	*i* P	Pg	09 17 10.4	+0.5
DURS				*i* S	Sb	09 17 16.6	-1.4
DST	Dursunbey	0.40	67	*e*PG	Pg	09 17 12.0	+0.2
DST	Dursunbey	0.40	67	*e*Pg	Pg	09 17 12.0	+0.2
BALY	Balya	0.50	306	*i* P	Pg	09 17 14.2	+0.4
BALY				*i* S	Sb	09 17 22.4	-1.4
BALY	Balya	0.50	306	*i* P	Pg	09 17 14.2	+0.4
BALY				*i* S	Sb	09 17 22.4	-1.4
ORLT	Orhaneli	0.83	44	*e*PG	Pg	09 17 20.5	+0.3
ORLT	Orhaneli	0.83	44	*e*Pg	Pg	09 17 20.5	+0.3
KULA	Kula-Manisa	1.01	156	*e*PG	Pg	09 17 23.8	+0.2
KULA	Kula-Manisa	1.01	156	*e*Pg	Pg	09 17 23.8	+0.2
TVSB	Tavsanli	1.02	89	*e*PG	Pg	09 17 24.2	+0.5
TVSB	Tavsanli	1.02	89	*e*Pg	Pg	09 17 24.2	+0.5
MDNY	Mudanya-Bursa	1.08	31	*e*PN	Pg	09 17 25.6	+0.6
MDNY	Mudanya-Bursa	1.08	31	*e*Pn	Pg	09 17 25.6	+0.6
GDZ	Gediz	1.10	109	*i* P	Pg	09 17 25.2	0.0
GDZ				*i* S	Sb	09 17 41.0	0.0
GDZ	Gediz	1.10	109	*i* P	Pg	09 17 25.2	0.0
GDZ				*i* S	Sb	09 17 41.0	0.0
KRBG	Karabiga-Canak	1.15	326	*e*PN	Pg	09 17 26.7	+0.5
KRBG	Karabiga-Canak	1.15	326	*e*Pn	Pg	09 17 26.7	+0.5
ARMT	Armutlu	1.25	26	*e*PN	Pg	09 17 28.1	0.0
ARMT	Armutlu	1.25	26	*e*Pn	Pg	09 17 28.1	0.0
GEMT	Gemlik	1.27	39	*e*PN	Pb	09 17 29.3	+0.2
GEMT	Gemlik	1.27	39	*e*Pn	Pb	09 17 29.3	+0.2
YLV	Yalova	1.46	40	*e*PN	Pn	09 17 32.1	+0.2
YLV	Yalova	1.46	40	*e*Pn	Pn	09 17 32.2	+0.2
MFT	Murefte	1.49	334	*e*PN	Pn	09 17 32.9	+0.5
MFT	Murefte	1.49	334	*e*Pn	Pn	09 17 32.9	+0.5
KHAL	Karahalli	1.50	135	*i* P	Pn	09 17 32.6	+0.1
KHAL	Karahalli	1.50	135	*i* P	Pn	09 17 32.6	+0.1
GELI	Tayfur-Gelibol	1.60	307	*e*PN	Pn	09 17 34.2	+0.5
GELI	Tayfur-Gelibol	1.60	307	*e*Pn	Pn	09 17 34.2	+0.5

*ISCJB **05** 09:20:32.8±1.3, 38°.17N±0°.09×26°.1E±0°.1, h9km±15km, Error ellipse: s-maj=20.5km s-min=5.6km az=44.4*
*CSEM **05** 09:20:32.7±0.4, 38°.22N×26°.00E, h8km, MD2.6, Error ellipse: s-maj=11.7km s-min=3.7km az=133.0*
*DDA **05** 09:20:32.6, 38°.21N×25°.99E, h6km, MD2.9*
*ISK **05** 09:20:34.5, 37°.83N×26°.48E, h5km, MD2.6*
ISC 05 09:20:32.9±2.0, 38°.21N±0°.08×26°.01E±0°.09, h10km±14km, n11, σ0s.58/20, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.49	72	*i* P	Pg	09 20 42.4	0.0
URLA				*i* S	Sg	09 20 49.9	+1.1
URLA	Izmir	0.49	72	*i* P	Pg	09 20 42.4	0.0
URLA				*i* S	Sg	09 20 49.9	+1.1
BLCB	Balcova	0.83	77	*e*PG	Pb	09 20 49.3	-0.2
BLCB				*e*SG	Sg	09 21 00.1	+0.3
BLCB	Balcova	0.83	77	*e*Pg	Pb	09 20 49.3	-0.2
BLCB				*e*Sg	Sg	09 21 00.1	+0.3
IZM	Izmir	1.00	79	*e*PG	Pg	09 20 51.7	-0.5
IZM				*e*SG	Sg	09 21 04.4	-0.9
IZM	Izmir	1.00	79	*e*Pg	Pg	09 20 51.7	-0.5
IZM				*e*Sg	Sg	09 21 04.4	-0.9
APE	Apeiranthos	1.20	199	*e*PG	Pb	09 20 55.6	-0.2
APE				*e*SG	Sn	09 21 12.4	+0.2
APE	Apeiranthos	1.20	199	*e*Pg	Pb	09 20 55.6	-0.2
APE				*e*Sg	Sn	09 21 12.4	+0.2
AYVA	Ayvalik	1.22	26	*i* P	Pn	09 20 56.1	0.0
AYVA				*i* S	Sb	09 21 11.9	-0.1
KULA	Kula-Manisa	2.11	81	*e*PN	Pn	09 21 08.8	+0.4
KULA	Kula-Manisa	2.11	81	*e*Pn	Pn	09 21 08.8	+0.4

*IDC **05** 09:22:19.9±10.0, 29°.54S×178°.73W, h327km±101km, mb2.7/2, mb1 3.0/3, mb1mx2.8/18, mbtmp2.8/3, Error ellipse: s-maj=94.9km s-min=54.2km az=13.0*
ISC 05 09:22:21.5±2.2, 29°.8S±0°.1×178°.8W±0°.3, h350km, n11, σ1s.73/12, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	8.64	196	*e*PN	P	09 24 25.2	-0.5
MWZ	Matawai	9.07	199	PN	P	09 24 30.4	-0.1
URZ	Urewera	9.12	201	PN	Pn	09 24 29.5	+0.6
URZ				SN	S	09 26 15.7	+2.6
URZ	Urewera	9.12	201	P	P	09 24 30.6	-0.5
	0.8nm,0.3s,baz=292,slow=16,SNR=20						
URZ				S	S	09 26 15.1	+2.1
	0.9nm,0.3s,baz=6.0,slow=22,SNR=8.9						
TSZ	Takapari Road	11.13	201	PN	Pn	09 24 52.0	-0.8
TCW	Tory Channel	12.73	204	SN	S	09 27 26.7	-4.8
NNZ	Nelson	13.07	207	SN	S	09 27 34.9	-3.5
MQZ	McQueen's Vall	15.50	204	SN	S	09 28 25.9	-1.1
ASAR	Alice Springs	42.46	267	P	P	09 29 44.2	+0.6
	0.2nm,0.5s,baz=102,slow=7.0,SNR=6.2						
WRA	Warramunga Arr	43.39	272	P	P	09 29 51.6	+0.6
	0.4nm,0.4s,baz=110,slow=7.7,SNR=15						
FINES	FINESS Array B	144.32	340	PKP	PKPdf	09 41 15.3	-0.2
	1.6nm,1.0s,baz=31,slow=4.4,SNR=4.1						

*NIED **05** 09:36:00, 31°.90N×131°.90E, h32km, Mw5.8 Best double couple: M0 4.88000×10^{17} NP1:φs15.00000°, δ74.00000°, λ84.00000°. NP2:φs216.00000°, δ17.00000°, λ110.00000°.*
*BJI **05** 09:36:20.4, 31°.68N×132°.17E, h26km, mB5.9/56, mb5.5/48, Ms6.0/84, Ms7 5.9/46*
*SZGRF **05** 09:36:21.0, 31°.94N×132°.19E, h41km, mb5.7, MS6.4, Southeast of Shikoku, Japan*
*IDC **05** 09:36:21.8±0.3, 31°.94N×131°.51E, h0km, mb5.1/34, mb1 5.2/37, mb1mx5.2/39, mbtmp5.1/37, ML4.1/3, MS5.5/35, Ms1 5.5/35, ms1mx5.3/48, Error ellipse: s-maj=11.9km s-min=9.9km az=91.0*
*MOS **05** 09:36:26.2±1.3, 32°.00N×131°.40E, h33km, mb5.9/111, MS5.8/30, Error ellipse: s-maj=10.5km s-min=4.9km az=115.8*
*ISCJB **05** 09:36:26.1±0.1, 32°.00N±0°.02×131°.44E±0°.02, h32km, mb5.7/343, MS5.7/196, Error ellipse: s-maj=2.5km s-min=1.8km az=146.0*
*JMA **05** 09:36:26.3±0.1, 31°.93N×131°.89E, h28km±1km, M5.6 Broadband fault plane solution: P waves. NP1: φs58.00000°, δ71.00000°, λ78.00000°. NP2:φs271.00000°, δ22.00000°, λ121.00000°. Principal axes: T Plg62.0000°, Azm310.0000°; N Plg11.0000°, Azm62.0000°; P Plg25.0000°, Azm157.0000°;*
JMA Felt IV J1.
*NEIC **05** 09:36:26.2±0.1, 32°.01N×131°.42E, h26km, mb5.8/172, ME5.3, MS5.4/117, MW5.8, MW5.7, MW5.7(NIED) Error ellipse: s-maj=4.2km s-min=3.8km az=156.0, Moment Tensor Solution. s89 Moment tensor: Scale 10^{17}Nm; Mrr2.73; Mθθ-0.87; Mφφ-1.86; Mrθ1.38; Mθφ0.46; Mφr2.94; Best double couple: M0 4.10000×10^{17} NP1:φs15.00000°, δ73.00000°, λ102.00000°. NP2:φs160.00000°, δ21.00000°, λ57.00000°. Principal axes: T 4.5500, Plg60.0000°, Azm301.0000°; N -1.2400, Plg11.0000°, Azm191.0000°; P -3.3100, Plg26.0000°, Azm95.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt at Kanoya, Kumamoto, Kurume, Miyazaki, Saiki and Shimabara. Recorded [4 JMA] in Miyazaki; [3 JMA] in Kagoshima, Kumamoto and Oita; [2 JMA] in Fukuoka, Nagasaki and Saga. Recorded [2 JMA] in Shimane and Yamaguchi and [1 JMA] in Hiroshima and Tottori, Honshu. Also recorded [2 JMA] in Ehime and Kochi, Shikoku.
*TEH **05** 09:36:28.0, 31°.97N×131°.76E, h40km, ML5.9*
*DJA **05** 09:36:28.1±2.1, 32°N±6°×13°2E±°, h40km±22km, M5.9/67, mb5.9/67, mB6.2/58, Mw(mB)5.9/58, Mwp6.1/5*
*GCMT **05** 09:36:30.9±0.1, 31°.78N×132°.06E, h34km, MW5.8, Moment Tensor Solution. s101,c209; s54,c59; Moment tensor: Scale 10^{17}Nm; Mrr4.15±.06; Mθθ-1.02±.04; Mφφ-3.14±.05; Mrθ1.98±.07; Mθφ-1.83±.04; Mφr3.28±.08; Best double couple: M0 5.70000×10^{17} NP1:φs209.00000°, δ24.00000°, λ89.00000°. NP2:φs31.00000°, δ66.00000°, λ91.00000°. Principal axes: T 5.6400, Plg69.0000°, Azm302.0000°; N 0.0300, Plg1.0000°, Azm210.0000°; P -5.6900, Plg21.0000°, Azm120.0000°; Data Used: II IU CN G IC. Surface waves: sta=105, comp=217, per= 50.*
ISC 05 09:36:26.5±0.3, 31°.90N±0°.02×131°.79E±0°.02, h30km±1km, h29km:pP-P, n1505, σ1s.66/1586, mb5.7/342, MS5.5/196, 192C-148D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTSN	Tsuno	0.42	325	⇓P	Pb	09 36 35.5	-0.3
JTSN				S	Sb	09 36 42.2	+0.2
JNAR	Kushima--Naru	0.58	230	⇓P	Pn	09 36 39.2	+0.5
JNAR				S	Sn	09 36 47.6	+0.4
JTZ	Takazaki	0.60	270	⇓P	Pn	09 36 39.2	+0.2
JTZ				S	Sn	09 36 48.7	+1.0
JKIT	Kitakata	0.78	339	⇓P	Pn	09 36 41.2	-0.3
JZO	Okuchi	1.04	284	⇑P	Pb	09 36 46.2	+0.2
JTSR	Tashiro 2	1.04	226	⇑P	Pn	09 36 45.6	+0.5
JIU2	Izumi 2	1.05	308	⇑P	Pb	09 36 46.4	+0.3
JUS	Usuki	1.16	358	⇑P	Pn	09 36 47.2	+0.4
JSU	Suzuyama	1.20	251	⇑P	Pb	09 36 48.5	-0.2
JTO	Tosashimizu	1.28	42	⇓P	Pn	09 36 46.3	-2.2
JTN	Tanegashima 3	1.42	209	⇓P	Pn	09 36 50.7	+0.3
JTN				S	Sb	09 37 10.6	+0.4
JNU	Nakatsue	1.44	328	*e*Pn	Pb	09 36 52.3	-0.5
JNU	Nakatsue	1.44	328	Pn	Pb	09 36 52.0	-0.9
	1μm,0.3s,baz=97,slow=8.7,SNR=3579						
JNU				Sn	Sb	09 37 15.4	+4.6
	2μm,0.3s,baz=200,slow=23,SNR=11						
UWA2	Uwa jima 2	1.49	28	⇑P	Pn	09 36 50.0	-1.3
JHD	Hondo	1.51	292	⇑P	Pb	09 36 53.2	-0.7
JKI	Kunimi	1.74	354	P	Pn	09 36 55.8	+1.1
JNA	Nagahama	1.75	19	⇑P	Pn	09 36 54.2	-0.7
JSJ	Shimokoshiki	1.78	263	⇑P	Pn	09 36 56.2	+0.9
NGSJ	Nagasakinomoza	1.84	294	⇑P	Pn	09 36 57.4	+1.3
JFI	Itaya	1.93	323	⇑P	Pn	09 36 58.8	+1.4
JUR	Ureshino	1.96	308	⇑P	Pn	09 36 58.9	+1.2
JKC	Kuchinoerabu	1.98	224	P	Pn	09 36 58.2	+0.2
JFA	Akaike	1.99	335	⇑P	Pn	09 36 59.3	+1.1
JKD	Kudamatsu	2.15	2	⇑P	Pn	09 37 01.1	+0.7
JTY	Toyota	2.43	346	⇑P	Pn	09 37 05.2	+0.9
JII	Iki	2.56	318	P	Pn	09 37 07.2	+1.1
JHIK	Hikimi	2.63	3	⇑P	Pn	09 37 07.6	+0.6
JFU	Fukue jima 2	2.68	287	P	Pn	09 37 08.4	+0.7
JAI	Aioi	2.93	49	⇑P	Pn	09 37 10.0	-1.1
JTU	Tsushima	3.30	323	⇑P	Pn	09 37 16.7	+0.6
JWY	Kouya	3.94	53	P	Pn	09 37 23.7	-1.4
JIE	Ise	4.81	58	P	Pn	09 37 35.7	-1.3
JAA	Atsumi	5.25	57	P	Pn	09 37 42.5	-0.4
JAO	Obara	5.67	52	P	Pn	09 37 48.4	-0.3
JKG	Kaga	5.77	40	P	Pn	09 37 52.1	+2.0
JOW	Kunigami	5.91	212	*e*Pn	Pn	09 37 51.4	-0.7
	164nm,0.8s						
JOW	Kunigami	5.91	212	Pn	Pn	09 37 51.6	-0.4
	21nm,0.3s,baz=84,slow=12,SNR=37						
JSG	Sagara	6.03	61	P	Pn	09 37 53.6	-0.1
SHZ3	Shizuoka 3	6.22	58	P	Pn	09 37 56.0	-0.4
KSRS	Korea Array	6.39	331	Pn	Pn	09 37 59.6	+1.0
	5.5nm,0.3s,baz=148,slow=14,SNR=67						
KSRS				Lg	Lg	09 39 48.4	
	5.6nm,0.3s,baz=142,slow=29,SNR=5.8						
KSRS				LR	LR	09 40 39.2	
	comp=Z,55μm,21.4s,baz=290,slow=41						
KSAR	Wonju Array Be	6.40	331	Pn	Pn	09 37 59.6	+0.9
KSAR				Lg	Lg	09 39 48.4	
JNT	Takato	6.60	51	P	Pn	09 38 01.8	+0.1
JHJ	Hachijo jima 2	6.86	78	Pn	Pn	09 38 03.8	-1.3
	107nm,0.3s,baz=227,slow=8.6,SNR=18						
JHJ				Sn	Sn	09 39 21.4	-0.8
	49nm,0.3s,baz=76,slow=17,SNR=4.8						
JHJ				LR	LR	09 40 51.8	
	comp=Z,24μm,18.9s,baz=269,slow=38						
JHJ2	Mitsune	6.89	78	P	Pn	09 38 03.8	-1.7
JOD2	Odawara 2	6.95	59	P	Pn	09 38 06.2	-0.2
INCN	Inchon	7.00	324	*e*Pn	Pn	09 38 09.4	+2.3
INCN	Inchon	7.00	324	Pn	Pn	09 38 11.3	+4.2
	SNR=17						
MAT	Matsushiro	7.05	47	P	Pn	09 38 07.3	-0.4
MAT				S	Sb	09 40 01.2	+9.3
MAT	Matsushiro	7.05	47	P	Pn	09 38 08.1	+0.4
MJAR	Matsushiro Arr	7.05	47	Pn	Pn	09 38 08.3	+0.6
MJAR				Sn	Sn	09 39 33.7	+6.9
MJAR				Lg	Lg	09 40 18.6	
MJAR	Matsushiro Arr	7.05	47	Pn	Pn	09 38 08.3	+0.6
	12nm,0.3s,baz=235,slow=14,SNR=126						
MJAR				Sn	Sn	09 39 33.7	+6.9
	baz=6.6,slow=13,SNR=4.4						
MJAR				Lg	Lg	09 40 18.6	
	baz=225,slow=29,SNR=4.3						
JRY	Ryogami san	7.20	53	P	Pn	09 38 10.6	+0.9
JAG	Ashikaga	7.79	53	P	Pn	09 38 19.2	+1.3
JHK	Hiroka	8.00	46	P	Pn	09 38 21.7	+1.0
JSD	Sado	8.10	39	P	Pn	09 38 22.6	+0.5
SSE	Sheshan	9.09	268	P	Pn	09 38 33.4	-2.3
SSE				pmax	pmax		
	comp=Z,180nm,1.0s						
SSE				pmax	pmax		
	comp=Z,2μm,10.0s						
SSE				LR	LR		
	comp=N,22μm,15.3s						
SSE				LR	LR		
	comp=E,45μm,15.3s						
SSE				LR	LR		
	comp=Z,62μm,15.2s						
CBIJ	Chichi jima	10.24	115	Pn	Pn	09 38 49.0	-2.6
CBIJ				Sn	Sn	09 40 41.2	-4.2
CBIJ	Chichi jima	10.24	115	Pn	Pn	09 38 49.0	-2.6
	comp=Z,16nm,0.3s,baz=292,slow=19,SNR=8.0						
CBIJ				Sn	Sn	09 40 41.2	-4.2
	comp=Z,17nm,0.3s,baz=297,slow=22,SNR=5.2						
CBIJ				LR	LR	09 42 17.2	
	comp=Z,19μm,19.8s,baz=289,slow=34						
DL2	Dalian	10.84	313	⇑*i*P	Pn	09 39 02.8	+3.2
DL2				sP		09 39 16.0	
DL2				S	Sn	09 41 05.3	+5.4
DL2				pmax	pmax		
	comp=Z,80nm,1.2s						
DL2				pmax	pmax		
	comp=Z,2μm,7.0s						
DL2				LR	LR		
	comp=N,23μm,14.0s						
DL2				LR	LR		
	comp=E,23μm,12.9s						
DL2				LR	LR		
	comp=Z,33μm,16.0s						
NJ2	Nanjing	10.99	274	*e*P	Pn	09 39 06.1	+4.4
NJ2				S	Sn	09 41 14.0	+10
NJ2				pmax	pmax		
	comp=Z,4μm,4.8s						
NJ2				LR	LR		
	comp=N,21μm,13.6s						
NJ2				LR	LR		
	comp=E,49μm,12.6s						
NJ2				LR	LR		
	comp=Z,61μm,13.0s						
MIYJ	Miyakonagasawa	11.18	44	P	Pn	09 39 05.6	+1.3
VLA	Vladivostok	11.20	0	⇑*i*P	Pn	09 39 08.8	+4.2
VLA				S	Sn	09 41 14.5	+5.8
VLA				pmax	pmax		
	comp=Z,117nm,1.5s						
SNY	Shenyang	11.88	329	⇑P	Pn	09 39 18.7	+4.8
SNY				pmax	pmax		
	comp=Z,150nm,2.0s						
SNY				pmax	pmax		
	comp=Z,6μm,11.8s						
SNY				LR	LR		
	comp=N,45μm,16.0s						
SNY				LR	LR		
	comp=E,30μm,17.1s						
SNY				LR	LR		
	comp=Z,64μm,18.2s						
USRK	Ussuriysk Arra	12.28	1	Pn	Pn	09 39 20.7	+1.4
	comp=Z,0.4nm,0.3s,baz=183,slow=14,SNR=18						
USRK				Sn	Sn	09 41 38.4	+3.2
	baz=193,slow=7.8,SNR=1.6						
USRK				LR	LR	09 44 00.1	
	comp=Z,35μm,18.4s,baz=312,slow=37						
MDJ	Mudanjiang	12.81	353	P	Pn	09 39 27.4	+0.8
MDJ				S	Sn	09 41 46.3	-1.8
MDJ				PcP	PcP	09 45 01.4	+0.4
MDJ				ScP	ScP	09 48 31.1	-0.9

MDJ PcS **PcS** **09 48 36.7 +1.5**
MDJ ScS **ScS** **09 52 07.2 -1.1**
MDJ pmax pmax
comp=Z,2μm,7.8s
MDJ LR LR
comp=N,19μm,18.9s
MDJ LR LR
comp=E,8μm,16.9s
MDJ LR LR
comp=Z,25μm,17.3s
CN2 Changchun 12.89 339 ⇑P Pn 09 39 31.3 +3.7
CN2 *e*pP **P** **09 39 38.0 0.0**
CN2 *e*S **Sn** **09 41 53.6 +3.6**
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,42μm,14.0s
CN2 LR LR
comp=E,42μm,14.0s
CN2 LR LR
comp=Z,58μm,15.0s
TIA Tai'an 12.90 293 ⇑P **Pn** **09 39 30.9 +3.1**
TIA S Sn 09 42 07.0 +17
TIA pmax pmax
comp=Z,150nm,1.9s
TIA pmax pmax
comp=Z,5μm,9.8s
TIA LR LR
comp=N,56μm,13.0s
TIA LR LR
comp=E,65μm,17.3s
QZH Quanzhou 13.52 242 ⇑*i*P **Pn** **09 39 39.1 +2.8**
QZH S **Sn** **09 42 10.0 +4.5**
QZH pmax pmax
comp=Z,150nm,1.0s
QZH pmax pmax
comp=Z,3μm,4.5s
QZH LR LR
comp=N,48μm,14.2s
QZH LR LR
comp=E,41μm,16.1s
QZH LR LR
comp=Z,58μm,15.2s
ERM Erimo 13.57 39 *e*P P 09 39 41.9 -3.7
ERM pmax pmax
comp=Z,89nm,0.8s
ERM Erimo 13.57 39 *e*Pn **Pn** **09 39 40.0 +3.0**
comp=Z,92nm,0.9s
ASAJ Asahikawa 14.86 32 *e*Pn **Pn** **09 39 54.2 -0.3**
comp=Z,83nm,1.5s
ASAJ Sn **Sn** **09 42 42.7 +4.6**
ASAJ Asahikawa 14.86 32 Pn **Pn** **09 39 55.1 +0.7**
comp=Z,0.5nm,0.3s,baz=227,slow=14,SNR=9.9
ASAJ Sn **Sn** **09 42 42.7 +4.6**
comp=Z,0.1nm,0.3s,baz=112,slow=16,SNR=2.0
WHN Wuhan 14.99 269 ⇑P **Pn** **09 39 55.0 -1.2**
WHN pP **P** **09 40 00.2 -1.2**
WHN sP 09 40 03.8
WHN S **Sn** **09 42 45.4 +4.2**
WHN LR LR
comp=N,14μm,8.4s
BJI Beijing 15.01 307 P **Pn** **09 39 57.7 +1.2**
BJI S **S** **09 42 52.5 -6.3**
BJI pmax pmax
comp=Z,3μm,5.8s
BJI LR LR
comp=N,31μm,14.9s
BJI LR LR
comp=E,62μm,15.2s
BJI LR LR
comp=Z,32μm,16.8s
YUK Yuzh-Kuril'sk 16.40 38*d* *i*P **P** **09 40 20.6 +3.6**
YUK *i* S **S** **09 43 26.5 -0.5**
YUK pmax pmax
comp=Z,179nm,1.3s
YUK pmax pmax
comp=E,233nm,1.5s
YUK pmax pmax
comp=N,232nm,1.7s
YUK smax smax
comp=N,3μm,2.9s
YUK smax smax
comp=E,3μm,2.7s
YUK MLR MLR
comp=N,8μm,22.0s
YUK MLR MLR
comp=E,4μm,22.0s
YUK MLR MLR
comp=Z,9μm,22.0s
TIY Taiyuan 16.91 295 *e*P **P** **09 40 22.9 +0.1**
TIY pP **pP** **09 40 28.2 -2.6**
TIY PP PP 09 40 41.7
TIY pmax pmax
comp=Z,6μm,8.1s
TIY LR LR
comp=N,17μm,10.2s
TIY LR LR
comp=E,36μm,14.0s
TIY LR LR
comp=Z,59μm,15.5s
YSS Yuzh-Sakhalins 17.23 26⇓ *e*P **Pn** **09 40 25.0 +0.2**
YSS *e*S **Sn** **09 43 34.0 -1.5**
YSS pmax pmax
comp=Z,180nm,1.4s
YSS pmax pmax
comp=N,60nm,1.0s
YSS MLR MLR
comp=Z,6μm,18.0s
YSS MLR MLR
comp=N,8μm,17.0s
KLR Kul'dur 17.31 360 *e*P **Pn** **09 40 24.0 -1.9**
KLR *e*S **S** **09 43 44.0 -1.7**
KLR pmax pmax
comp=N,260nm,1.6s
KLR pmax pmax
comp=E,140nm,1.6s
KLR pmax pmax
comp=Z,600nm,1.6s
KLR pmax pmax
comp=N,5μm,9.0s
KLR pmax pmax
comp=Z,7μm,9.0s
KLR MLR MLR
comp=Z,74μm,13.0s
HKC Hong Kong Obse 18.34 243 ⇑*i*P **Pn** **09 40 40.0 +1.2**
HKC *i* S S 09 44 20.0 +13
HHC Hu-ho-hao-te 18.54 304 ⇑P **Pn** **09 40 42.3 +1.1**
HHC sP **sP** **09 40 53.4 +0.8**
HHC PP **PnPn** **09 40 58.1 +4.9**
HHC S **Sn** **09 44 03.0 -4.6**
HHC pmax pmax
comp=Z,150nm,1.1s
HHC pmax pmax
comp=Z,10μm,5.4s
HHC LR LR
comp=N,39μm,13.0s
HHC LR LR
comp=E,78μm,13.4s
GZH Guangzhou 18.55 246 P P 09 40 35.4 -5.5
GZH S Sn 09 43 55.0 -13
GZH LR LR
comp=N,18μm,16.9s
GZH LR LR
comp=E,22μm,17.7s
UGL Uglegorsk 18.82 21 *e*P **P** **09 40 43.0 -0.7**
UGL *e*S **Sn** **09 44 09.0 -5.1**
UGL pmax pmax
comp=Z,386nm,1.4s
UGL pmax pmax
comp=N,1μm,12.0s
UGL pmax pmax
comp=E,2μm,12.0s
UGL smax smax
comp=N,2μm,8.0s
UGL smax smax
comp=E,2μm,8.0s
UGL MLR MLR
comp=N,8μm,18.0s
UGL MLR MLR
comp=E,13μm,18.0s
XAN Xi'an 19.30 283 P **P** **09 40 49.1 -0.1**
XAN pP **pP** **09 41 01.5 +4.4**
XAN sP **sP** **09 41 05.7 +4.8**
XAN pmax pmax
comp=Z,1μm,11.5s
XAN LR LR
comp=N,10μm,13.2s
XAN LR LR
comp=E,15μm,15.3s
XAN LR LR
comp=Z,18μm,14.3s
BTO Baotou 19.55 302 *e*P **Pn** **09 40 52.9 -0.4**
BTO S **Sn** **09 44 34.2 +2.3**
BTO LR LR
comp=N,11μm,14.9s
BTO LR LR
comp=E,8μm,16.9s
BTO LR LR
comp=Z,16μm,14.9s
TGY Tagaytay City 20.31 212 P Pn 09 41 02.5 +0.1
TGY S Sn 09 44 53.3 +2.8
TGY Tagaytay City 20.31 212 P Pn 09 41 02.5 +0.1
comp=Z,141nm,0.4s,baz=112,slow=7.6,SNR=18
TGY S Sn 09 44 53.3 +2.8
comp=Z,106nm,0.3s,baz=156,slow=8.3,SNR=2.2
GUMO Guam 21.82 144 *e*P **P** **09 41 15.5 -0.9**
comp=Z,2μm,1.2s
GUMO S Sn 09 45 26.8 +0.3
GUMO Guam 21.82 144 P **P** **09 41 16.8 +0.4**
comp=Z,794nm,1.2s,baz=350,slow=10,SNR=7.8
GUMO S Sn 09 45 26.8 +0.3
comp=Z,30nm,0.5s,baz=184,slow=20,SNR=1.9
GUMO LR LR 09 49 02.3
comp=Z,7μm,18.1s,baz=122,slow=35
GYA Guiyang 22.57 263 ⇑*i*P **P** **09 41 23.2 -1.5**
GYA pP **pP** **09 41 34.6 +1.9**
GYA sP **sP** **09 41 40.2 +3.7**
GYA PP **PnPn** **09 41 53.4 +4.9**
GYA PcP **PcP** **09 45 15.0 -2.4**
GYA S **S** **09 45 25.0 -5.5**
GYA sS **sS** **09 45 43.6 -0.5**
GYA SS **SnSn** **09 46 10.0 +9.4**
GYA pmax pmax
comp=Z,80nm,0.7s
GYA pmax pmax
comp=Z,2μm,7.6s
GYA LR LR
comp=N,12μm,18.8s
GYA LR LR
comp=E,14μm,15.6s
GYA LR LR
comp=Z,21μm,15.3s
LZH Lanzhou 23.51 288 ⇑P **P** **09 41 33.4 -0.8**
LZH pP **pP** **09 41 41.0 -1.5**
LZH sP **sP** **09 41 44.6 -1.6**
LZH PP **PnPn** **09 42 04.5 +3.3**
LZH S **S** **09 45 42.1 -4.1**
LZH pmax pmax
comp=Z,750nm,1.4s
LZH pmax pmax
comp=Z,4μm,5.3s
LZH LR LR
comp=N,16μm,12.5s
LZH LR LR
comp=E,25μm,12.7s
LZH LR LR
comp=Z,35μm,13.6s
QIZ Qiongzhong 23.54 242 P **P** **09 41 33.7 -0.7**
QIZ sP **sP** **09 41 42.3 -4.2**
QIZ S **S** **09 45 46.1 -0.5**
QIZ sS **sS** **09 45 56.0 -4.9**
QIZ pmax pmax
comp=Z,1μm,14.7s
QIZ LR LR
comp=N,13μm,19.2s
QIZ LR LR
comp=Z,15μm,19.2s
CD2 Chengdu 23.92 275 ⇑*i*P **P** **09 41 36.5 -1.5**
CD2 pP **pP** **09 41 44.5 -2.1**
CD2 sP **sP** **09 41 48.3 -2.0**
CD2 PP **PnPn** **09 42 09.3 +2.4**
CD2 PcP **PcP** **09 45 22.5 +2.4**
CD2 S **S** **09 45 45.7 -7.0**
CD2 PcS **PcS** **09 49 00.6 +0.8**
CD2 pmax pmax
comp=Z,790nm,1.2s
CD2 pmax pmax
comp=Z,4μm,5.3s
CD2 LR LR
comp=N,39μm,13.5s
CD2 LR LR
comp=E,50μm,13.3s
CIT Chita 24.13 332 *e*P **P** **09 41 38.9 -0.8**
CIT *e* 09 41 50.3
CIT *e* 09 42 10.7
CIT pmax pmax
comp=Z,250nm,2.5s
ULN Ulaanbaatar 24.64 317 *e*P **P** **09 41 43.7 -0.8**
comp=Z,565nm,1.3s
ULN Ulaanbaatar 24.64 317 P **P** **09 41 44.1 -0.5**
SNR=236
ULN Ulaanbaatar 24.64 317 P **P** **09 41 44.0 -0.5**
comp=Z,354nm,1.7s,comp=Z,5μmcomp=Z,10μm
SONM Songino Array 25.00 317 P **P** **09 41 46.8 -1.0**
SONM PcP **PcP** **09 45 23.5 +1.2**
SONM S S 09 46 20.5 +11
SONM Lg Lg 09 49 37.0
SONM PKKP PKKPdf 10 07 58.2 -7.8
SONM Songino Array 25.00 317 P **P** **09 41 46.8 -1.0**
comp=Z,108nm,0.9s,baz=133,slow=9.1,SNR=211
SONM PcP **PcP** **09 45 23.5 +1.2**
comp=Z,5.4nm,0.6s,baz=103,slow=1.7,SNR=9.5
SONM S S 09 46 20.5 +11
comp=Z,1.3nm,0.9s,baz=141,slow=7.7,SNR=2.3
SONM Lg Lg 09 49 37.0
comp=Z,1.8nm,1.1s,baz=116,slow=3.4,SNR=2.4
SONM PKKP PKKPdf 10 07 58.2 -7.8
comp=Z,2.2nm,1.4s,baz=209,slow=2.7,SNR=3.7
CLNS Chul'man 25.39 351 *e*P **P** **09 41 49.8 -1.3**
CLNS *e*PPP PPP 09 42 34.7
CLNS *e* 09 45 20.1
CLNS *e*S **S** **09 46 16.2 +0.5**
CLNS *e*SS SnSn 09 47 19.4 +10
CLNS pmax pmax
comp=Z,42nm,1.4s
CLNS pmax pmax
comp=N,61nm,1.8s
CLNS pmax pmax
comp=E,12nm,1.7s
CLNS smax smax
comp=N,1μm,17.4s
CLNS smax smax
comp=E,658nm,16.9s
CLNS MLR MLR
comp=N,8μm,23.0s
CLNS MLR MLR
comp=Z,9μm,22.0s
CLNS MLR MLR
comp=E,10μm,21.0s
CTBH Cotabato--PC H 25.54 198⇓ *i*P P 09 42 05.7 +13
SKR Severo-Kuril's 26.00 37 *e*P P 09 42 07.0 +10
SKR *e* 09 42 48.0
SKR *e*SS 09 47 34.0
SKR pmax pmax
comp=N,130nm,1.0s
SKR pmax pmax
comp=E,180nm,1.0s
SKR pmax pmax
comp=Z,220nm,1.0s
SKR pmax pmax
comp=Z,3μm,10.0s
SKR MLR MLR
comp=N,4μm,18.0s
SKR MLR MLR
comp=E,9μm,18.0s
SKR MLR MLR
comp=Z,9μm,18.0s
KMI Kunming 26.35 263 P **P** **09 41 58.4 -2.0**
KMI pP **pP** **09 42 07.5 -1.5**
KMI sP **sP** **09 42 12.3 -0.4**
KMI PP **PnPn** **09 42 43.2 +2.9**
KMI S **S** **09 46 31.6 -0.3**
KMI sS **sS** **09 46 48.8 +2.6**
KMI SS SnSn 09 47 46.5 +13
KMI pmax pmax
comp=Z,130nm,1.1s
KMI pmax pmax
comp=Z,970nm,9.3s
KMI LR LR
comp=N,9μm,14.9s
KMI LR LR
comp=E,18μm,14.6s
KMI LR LR
comp=Z,19μm,14.3s
GTA Gaotai 26.94 295 ⇑P **P** **09 42 04.2 -1.2**
GTA pP **pP** **09 42 11.3 -2.8**
GTA sP **sP** **09 42 14.7 -3.0**
GTA PP **PnPn** **09 42 50.5 +2.4**
GTA S **S** **09 46 39.0 -1.7**
GTA pmax pmax
comp=Z,1μm,7.4s
GTA LR LR
comp=N,18μm,16.1s
GTA LR LR
comp=E,32μm,16.9s
ZAK Zakamensk 28.06 319 *e*P **P** **09 42 13.5 -1.8**
ZAK pmax pmax
comp=Z,38nm,1.3s
PETK Petropavlovsk- 28.26 34 P **P** **09 42 18.1 +1.1**
PETK 09 45 30.2
PETK Petropavlovsk- 28.26 34 P **P** **09 42 18.1 +1.1**
PETK PcP **PcP** **09 45 30.2 +0.6**
PETK Petropavlovsk- 28.26 34 P **P** **09 42 18.1 +1.1**
comp=Z,27nm,1.0s,baz=216,slow=4.8,SNR=16
PETK PcP **PcP** **09 45 30.2 +0.6**
comp=Z,6.3nm,1.1s,baz=230,slow=3.6,SNR=2.8
IRK Irkutsk 28.53 324 *e*P **P** **09 42 19.6 +0.2**
IRK pmax pmax
comp=Z,216nm,1.7s
TLY Talaya 28.54 322*c* *i*P **P** **09 42 18.5 -1.0**
TLY *e* 09 43 07.5
TLY *e*PPP PPP 09 43 21.7
TLY pmax pmax
comp=Z,64nm,1.6s
TLY MLR MLR
comp=Z,9μm,15.0s
TLY Talaya 28.54 322 *e*P **P** **09 42 19.4 -0.1**
comp=Z,78nm,1.4s
TLY LR LR
comp=Z,9μm,22.0s
TLY Talaya 28.54 322 P **P** **09 42 19.1 -0.4**
SNR=50
TLY Talaya 28.54 322 P **P** **09 42 19.1 -0.4**
comp=Z,137nm,1.6s,SNR=13
PET Petropavlovsk 28.67 35 *e*P **P** **09 42 21.3 +0.8**
PET *e* 09 43 10.3
PET *e* 09 45 30.4
PET *e*S **S** **09 47 08.0 +0.7**
PET pmax pmax
comp=Z,1μm,18.1s
PET pmax pmax
comp=Z,107nm,1.3s
PET pmax pmax
comp=Z,67nm,1.1s
PET MLR MLR
comp=Z,7μm,20.0s
PET MLR MLR
comp=Z,5μm,19.0s
PET Petropavlovsk 28.67 35 *e*P **P** **09 42 22.1 +1.6**
comp=Z,362nm,1.7s
MYLDM Lahad Datu 29.35 208 P **P** **09 42 28.8 +1.9**
comp=Z,114nm,1.2s,comp=Z,2μm
KKM Kota Kinabalu 29.56 213 *e*P **P** **09 42 30.7 +1.8**
comp=Z,131nm,1.1s
KKM LR LR
comp=Z,4μm,20.0s
KKM Kota Kinabalu 29.56 213 P **P** **09 42 29.0 +0.1**
comp=Z,113nm,1.1s,comp=Z,2μm
MOY Mondy 29.95 320 *e*P **P** **09 42 31.5 -0.6**
MOY pmax pmax
comp=Z,45nm,2.4s
YAK Yakutsk 30.18 358 *e*P **P** **09 42 35.0 +1.2**
YAK *e**PP **pP** **09 42 45.4 +2.9**
YAK *e* 09 43 32.2
YAK *e*PPP PPP 09 43 40.3
YAK *e* 09 45 33.7
YAK *e*S **S** **09 47 32.8 +2.0**
YAK *e*SS **SnSn** **09 49 04.7 -0.6**
YAK *e*SSS SSS 09 49 24.4
YAK *e* 09 53 03.5
YAK pmax pmax
comp=Z,32nm,1.3s
YAK pmax pmax
comp=E,7.0nm,1.4s
YAK pmax pmax
comp=N,29nm,1.4s
YAK pmax pmax
comp=Z,70nm,1.3s
YAK pmax pmax
comp=N,66nm,1.4s
YAK pmax pmax
comp=E,22nm,1.4s
YAK smax smax
comp=E,225nm,3.8s
YAK smax smax
comp=N,168nm,4.2s
YAK MLR MLR
comp=Z,13μm,17.0s
YAK MLR MLR
comp=N,11μm,17.0s
YAK MLR MLR
comp=E,3μm,16.0s
MNI Manado 31.00 194 P **P** **09 42 41.7 +0.2**
comp=E,300nm,1.1s,comp=E,3μm
TNTI Ternate 31.24 189 P **P** **09 42 45.0 +1.4**
comp=E,238nm,1.2s,comp=E,3μm
KMSI Cibinong 32.02 195 P **P** **09 42 50.6 +0.1**
comp=E,328nm,1.1s,comp=E,7μm
CMMT Chiang Mai 32.28 254 P **P** **09 42 52.8 0.0**
comp=E,94nm,1.1s,comp=E,1μm
CHTO Chiang Mai 32.28 254 *e*P **P** **09 42 52.1 -0.7**
CHTO pmax pmax
comp=Z,67nm,0.8s
CHTO Chiang Mai 32.28 254 *e*P **P** **09 42 52.1 -0.7**
comp=Z,67nm,0.8s
CHTO Chiang Mai 32.28 254 P **P** **09 42 52.4 -0.4**
SNR=38
CHTO Chiang Mai 32.28 254 P **P** **09 42 52.5 -0.3**
comp=Z,104nm,1.1s,comp=Z,1μm
CMAR Chiang Mai Arr 32.46 254 P **P** **09 42 53.2 -1.2**
CMAR PcP **PcP** **09 45 42.2 +1.0**
CMAR Chiang Mai Arr 32.46 254 P **P** **09 42 53.2 -1.2**
comp=Z,12nm,0.6s,baz=51,slow=6.8,SNR=61
CMAR PcP **PcP** **09 45 42.2 +1.0**
comp=Z,15nm,1.0s,baz=29,slow=1.3,SNR=11
CMAR LR LR 09 57 34.8
comp=Z,11μm,19.6s,baz=61,slow=40
SWI Sorong 32.59 181 P P 09 42 59.3 +3.9
comp=Z,83nm,1.0s,comp=Z,2μm
MRSI Marisa 32.61 199 P **P** **09 42 55.9 +0.2**
comp=Z,60nm,1.2s,comp=Z,1μm
LBMI Labuha 32.62 188 P **P** **09 42 56.6 +0.9**
comp=Z,86nm,0.9s,comp=Z,1μm
CHBT CHBT 33.08 242 P **P** **09 42 59.8 0.0**
comp=Z,109nm,1.0s,comp=Z,4μmcomp=Z,7μm
BAKI Biak 33.16 172 P **P** **09 43 00.4 -0.1**
comp=Z,267nm,1.1s,comp=Z,4μm
SEY Seymchan 33.71 17*c* *e*P **P** **09 43 04.5 -0.3**
LUWI Luwuk 33.86 196 P P 09 43 19.4 +13
SMPI Sarmi 34.34 168 P **P** **09 43 12.1 +1.4**
comp=Z,318nm,1.2s,comp=Z,5μm
SRDT SRDT 34.57 247 P **P** **09 43 12.6 -0.1**
comp=Z,68nm,1.2s,comp=Z,3μm
SBUM Sibu 34.61 216 P **P** **09 43 14.0 +0.9**
SBUM Sibu 34.61 216 P **P** **09 43 13.6 +0.5**
comp=Z,55nm,1.4s,comp=Z,902nm
FAKI Fak Fak 34.63 179 P **P** **09 43 13.4 +0.2**
comp=Z,621nm,1.1s,comp=Z,5μm
LSA Lhasa 34.84 277 P **P** **09 43 14.7 -0.8**
LSA LR LR
comp=N,6μm,17.0s
LSA LR LR
comp=E,20μm,18.3s
SMKI Samarinda 35.01 206 P **P** **09 43 18.2 +1.7**
comp=E,166nm,1.2s
NLAI Namlea 35.23 188 P **P** **09 43 19.8 +1.4**
comp=E,46nm,1.0s,comp=E,1μm
JAY Jayapura 35.26 164 P **P** **09 43 20.0 +1.3**
comp=E,88nm,1.2s,comp=E,3μm
SHL Shillong 35.41 270⇓ *i*P **P** **09 43 19.5 -0.7**
SHL *e*S **S** **09 48 52.0 -1.3**
AAI Ambon 35.55 186 P **P** **09 43 23.3 +2.1**
comp=E,168nm,1.0s,comp=E,3μm
WMQ Urumqi 36.39 302 P **P** **09 43 27.0 -1.3**
WMQ pP **pP** **09 43 34.0 -3.0**
WMQ sP **sP** **09 43 38.0 -2.7**
WMQ PP **PnPn** **09 44 49.0 -1.8**

WMQ PcP **PcP** 09 45 54.0 +1.8
WMQ S **S** 09 49 04.0 -3.8
WMQ ScP **ScP** 09 49 37.0 +0.4
WMQ pmax pmax
comp=Z,170nm,1.2s
WMQ pmax pmax
comp=Z,420nm,5.0s
WMQ LR LR
comp=N,16µm,15.0s
WMQ LR LR
comp=E,34µm,16.0s
KSM Kuching 36.42 218 *e*P **P** **09 43 29.4 +0.7**
comp=E,140nm,1.2s
KSM Kuching 36.42 218 P **P** **09 43 29.9 +1.2**
KSM Kuching 36.42 218 P **P** **09 43 29.6 +0.9**
comp=E,98nm,1.2s,comp=E,1µm
AGT Agartala 36.54 268 *e*P P 09 43 25.0 -4.7
TTSI Tana Toraja 36.57 200 P **P** **09 43 30.6 +0.7**
comp=E,33nm,1.1s
KDI Kendari 36.71 195 P **P** **09 43 32.2 +1.1**
comp=E,132nm,1.0s,comp=E,2µm
STKI Sintang 37.03 215 P **P** **09 43 35.1 +1.2**
comp=E,59nm,1.2s
TLE Tual 37.34 178 P P 09 43 50.9 +14
SPSI Sidrap Palu 37.45 200 P **P** 09 43 49.5 +12
KTGM Kuala Trenggan 37.65 231 P **P** **09 43 40.5 +1.3**
BBSI Bau Bau 38.20 195 P P 09 43 58.2 +14
TAPN Taplejung 38.39 275 *e*P **P** **09 43 44.8 -0.9**
KAPI Kappang 38.46 200 PFAKE 09 44 00.0 +14
KAPI LR LR
comp=Z,2µm,21.0s
BKSI Bulukumba 38.65 199 P **P** **09 43 49.4 +1.9**
comp=Z,84nm,1.0s,comp=Z,1µm
BBKI Banjar Baru 38.68 208 P **P** **09 43 48.6 +0.8**
comp=Z,259nm,1.0s,comp=Z,4µm
ODAN Odare 38.81 274 *e*P **P** **09 43 47.3 -1.8**
PBKI Pangkalan Bun 39.36 213 P **P** **09 43 54.7 +1.2**
comp=Z,166nm,0.8s,comp=Z,5µm
KULM Kulim 39.37 234 *e*P **P** **09 43 53.1 -0.4**
comp=Z,258nm,1.1s
KULM LR LR
comp=Z,3µm,20.0s
KULM Kulim 39.37 234 P **P** **09 43 54.2 +0.6**
KULM Kulim 39.37 234 P **P** **09 43 54.2 +0.6**
comp=Z,227nm,1.3s,comp=Z,2µm
RAMN Ramite 39.45 275 *e*P **P** **09 43 53.1 -1.4**
comp=Z,52nm,0.6s
CAL Calcutta 39.54 267 *ex* x 09 43 57.2
IPM Ipoh 39.69 233 *e*P **P** **09 43 56.0 -0.3**
comp=Z,553nm,1.3s
IPM *e* 09 44 06.4
IPM Ipoh 39.69 233 P **P** **09 43 56.2 -0.1**
IPM Ipoh 39.69 233 P **P** **09 43 56.7 +0.4**
comp=Z,344nm,1.3s,comp=Z,3µm
GUN Gumba 39.77 276 *e*P **P** **09 43 56.5 -0.8**
comp=Z,317nm,0.5s
MYKOM Kota Tinggi 39.88 227 P **P** **09 43 59.3 +1.5**
comp=Z,44nm,1.3s,comp=Z,1µm
ZALV Zalesovo Beam 39.89 318 P **P** **09 43 55.4 -2.1**
ZALV 09 46 02.6
ZALV 09 49 49.4
ZALV Zalesovo Beam 39.89 318 P **P** **09 43 55.4 -2.1**
ZALV PcP **PcP** **09 46 02.6 -0.1**
ZALV ScP **ScP** **09 49 49.4 -0.2**
ZALV Zalesovo Beam 39.89 318 P **P** **09 43 55.4 -2.1**
comp=Z,4.7nm,0.8s,baz=105,slow=7.9,SNR=26
ZALV PcP **PcP** **09 46 02.6 -0.1**
comp=Z,4.9nm,0.5s,baz=134,slow=4.3,SNR=6.2
ZALV ScP **ScP** **09 49 49.4 -0.2**
comp=Z,2.1nm,0.7s,baz=119,slow=4.7,SNR=4.4
KGM Kluang 40.04 228 P **P** **09 43 59.8 +0.7**
DGPR DIGLIPUR 40.16 251 *e*P **P** **09 43 57.5 -2.7**
FRIM Kepong 40.21 231 P **P** **09 44 00.6 +0.1**
PKI Pulchoki 40.27 276 *e*P **P** **09 44 00.1 -1.3**
comp=Z,107nm,0.7s
PKIN Phulchoki 40.28 276 *e*P **P** **09 44 01.5 +0.1**
comp=Z,29nm,0.4s
KKN Kakani 40.31 277 *e*P **P** **09 44 00.8 -0.8**
MK31 Makanchi Array 40.39 306 *e*P **P** **09 44 00.3 -1.5**
MK31 pmax pmax
comp=Z,29nm,0.6s
MKAR Makanchi Array 40.39 306 P **P** **09 44 00.4 -1.4**
MKAR 09 46 03.3
MKAR pmax pmax
comp=Z,23nm,0.6s
MKAR MLR MLR
comp=Z,14µm,19.0s
MKAR Makanchi Array 40.39 306 *e*P **P** **09 44 00.3 -1.5**
MKAR PcP **PcP** **09 46 03.3 -1.2**
MKAR ScP **ScP** **09 49 51.5 -0.2**
MKAR Makanchi Array 40.39 306 P **P** **09 44 00.3 -1.4**
comp=Z,23nm,0.6s,baz=93,slow=9.8,SNR=201
MKAR PcP **PcP** **09 46 03.3 -1.2**
comp=Z,6.2nm,0.9s,baz=83,slow=4.5,SNR=3.3
MKAR ScP **ScP** **09 49 51.5 -0.2**
comp=Z,1.0nm,0.7s,baz=93,slow=4.8,SNR=3.3
MKAR LR LR 10 02 19.0
comp=Z,14µm,18.9s,baz=103,slow=39
DMN Daman 40.52 276 *e*P **P** **09 44 02.3 -1.0**
comp=Z,52nm,0.7s
NVS Novosibirsk 41.01 319 *e*P P 09 44 03.4 -3.3
NVS *e* 09 44 15.9
NVS *e*PPP PPP 09 45 44.5
NVS pmax pmax
comp=Z,101nm,2.0s
NVS pmax pmax
comp=N,17nm,1.7s
NVS pmax pmax
comp=E,54nm,1.7s
BOK Bokaro 41.14 271 *e*P **P** **09 44 07.0 -1.2**
BILL Bilibino 41.33 19⇓ *i*P **P** **09 44 09.7 +0.5**
BILL *i*S **S** **09 50 25.7 +4.4**
BILL pmax pmax
comp=Z,370nm,1.7s
BILL MLR MLR
comp=Z,3µm,16.0s
BILL Bilibino 41.33 19 PFAKE 09 44 20.0 +11
BILL LR LR
comp=Z,4µm,22.0s
MMRI Maumere 41.33 194 P **P** **09 44 10.0 +0.3**
comp=Z,175nm,1.1s,comp=Z,2µm
TPI Tanjungpandan 41.39 218 P **P** **09 44 11.5 +1.2**
comp=Z,72nm,1.3s,comp=Z,823nm
DANN Dangsing 41.43 278 *e*P **P** **09 44 09.9 -1.0**
comp=Z,138nm,0.7s
PPBI Pangkal Pinang 41.71 221 P **P** **09 44 14.4 +1.5**
comp=Z,175nm,1.3s,comp=Z,4µm
BWJI Bawean 41.74 209 P P 09 44 24.4 +11
KOLN Koldanda 41.74 277 *e*P **P** **09 44 12.3 -1.0**
comp=Z,36nm,0.5s
LHMI Lhok Sumawe 42.03 238 P **P** **09 44 16.7 +1.2**
comp=Z,374nm,1.2s,comp=Z,4µm
TSI Tuntungan 42.09 235 P **P** **09 44 16.2 +0.2**
comp=Z,185nm,1.2s
PYUN Piuthan 42.15 278 *e*P **P** **09 44 15.8 -0.9**
comp=Z,712nm,1.6s
KMMI Kalianget 42.30 207 P **P** **09 44 20.1 +2.4**
comp=Z,255nm,1.1s,comp=Z,2µm
BKNI Bangkinang 42.78 229 P **P** **09 44 22.3 +0.6**
comp=Z,233nm,0.9s,comp=Z,2µm
SRBI Singaraja 42.80 205 P P 09 44 31.9 +10
KHKI Kahang-Kahang 42.92 204 P **P** **09 44 22.2 -0.5**
comp=Z,290nm,1.1s,comp=Z,3µm
BSI Banda Aceh 43.05 240 P **P** **09 44 22.7 -1.2**
comp=Z,149nm,1.1s,comp=Z,1µm
KURK Kurchatov 43.11 312 *ce*P **P** **09 44 22.4 -1.5**
KURK pmax pmax
comp=Z,128nm,1.7s
KURK Kurchatov 43.11 312 *e*P **P** **09 44 21.7 -2.2**
comp=Z,209nm,1.4s
KURK *e*PcP **PcP** **09 46 12.9 -0.4**
KURK LR LR
comp=Z,27µm,19.0s
KURK Kurchatov 43.11 312 P **P** **09 44 22.6 -1.3**
SNR=48
KURK Kurchatov 43.11 312 P **P** **09 44 22.7 -1.3**
comp=Z,360nm,1.6s,SNR=30
NBBI Negara 43.27 205 P **P** **09 44 25.6 0.0**
comp=Z,567nm,1.0s,comp=Z,5µm
PMG Port Moresby 43.62 158 *e*P **P** **09 44 27.6 -0.7**
comp=Z,146nm,1.1s
PMG Port Moresby 43.62 158 P **P** **09 44 28.3 -0.1**
comp=Z,121nm,1.2s,comp=Z,2µm
PMG Port Moresby 43.62 158 P **P** **09 44 27.9 -0.4**
comp=Z,23nm,1.1s,baz=354,slow=5.8,SNR=7.4
GMJI Gumukmas 43.62 207 P P 09 44 37.8 +9.4

SMRI Semarang 43.77 211 P **P** **09 44 31.2 +1.6**
comp=Z,573nm,1.0s,comp=Z,5µm
PPI Padang Panjang 43.79 229 P **P** **09 44 30.2 +0.4**
comp=Z,102nm,1.0s
SJI Sawahan 43.81 209 P **P** **09 44 30.9 +0.9**
comp=Z,240nm,1.1s,comp=Z,4µm
KRKI Karangkates 43.91 208 P **P** **09 44 32.7 +2.0**
comp=Z,329nm,1.1s,comp=Z,17µm
PWJI Pagerwojo 44.05 209 P **P** **09 44 33.5 +1.7**
comp=Z,309nm,1.0s,comp=Z,2µm
AAA Alma-Ata 44.20 301 *i*P **P** **09 44 32.9 0.0**
AAA *i*S **S** **09 51 09.4 +5.0**
AAA pmax pmax
comp=Z,1µm,6.2s
AAA smax smax
comp=E,2µm,14.7s
AAA MLR MLR
comp=Z,25µm,20.0s
GSI Gunungsitoli 44.35 234 P **P** **09 44 33.9 -0.4**
comp=Z,524nm,1.5s,comp=Z,6µmcomp=Z,110µm
KRJI Kerinci 44.39 226 P **P** **09 44 36.1 +1.4**
comp=Z,334nm,1.0s,comp=Z,8µm
UGM Wanagama 44.50 211 *e*P **P** **09 44 35.8 +0.4**
comp=Z,1µm,1.1s
UGM Wanagama 44.50 211 P **P** **09 44 37.3 +1.9**
comp=Z,955nm,1.1s,comp=Z,8µm
YOGI Yogyakarta 44.51 211 P **P** **09 44 37.3 +1.8**
comp=Z,835nm,1.2s
ULHL Ulahol 44.80 300 P **P** **09 44 36.9 -1.0**
SNR=19
TNG Tangerang 44.81 217 P **P** **09 44 39.3 +1.4**
comp=Z,2µm,1.5s,comp=Z,27µm
BLSI Bandar Lampung 44.87 219 P **P** **09 44 39.4 +1.0**
comp=Z,257nm,1.3s
LEM Lembang 44.89 215 P **P** **09 44 40.1 +1.4**
comp=Z,1µm,1.0s,comp=Z,9µm
KSI Kapahiang 44.95 224 P **P** **09 44 39.0 -0.1**
comp=Z,244nm,0.8s
CLJI Cilicap 45.00 213 P **P** **09 44 39.4 0.0**
comp=Z,200nm,1.1s
SBJI Serang 45.03 217 P **P** **09 44 40.5 +0.8**
comp=Z,480nm,1.1s,comp=Z,14µm
DBJI Dramaga 45.09 216 P **P** **09 44 41.5 +1.4**
comp=Z,891nm,1.1s,comp=Z,10µm
TKM2 Tokmak 2 45.21 301 *e*P **P** **09 44 40.6 -0.6**
TKM2 pmax pmax
comp=Z,97nm,0.9s
TKM2 Tokmak 2 45.21 301 *e*P **P** **09 44 40.6 -0.6**
comp=Z,97nm,0.9s
TKM2 Tokmak 2 45.21 301 P **P** **09 44 40.6 -0.6**
SNR=98
LWLI Liwa 45.22 221 P **P** **09 44 41.2 -0.2**
comp=Z,219nm,0.8s,comp=Z,4µmcomp=Z,16µm
KSH Kashi 45.34 296 P **P** **09 44 44.7 +2.6**
KSH pP **pP** **09 44 54.6 +3.5**
KSH sP **sP** **09 44 58.6 +4.0**
KSH PcP **PcP** **09 46 24.1 +2.7**
KSH PP **PP** **09 46 31.0 +2.7**
KSH ScP **ScP** **09 50 12.3 +0.4**
KSH PcS **PcS** **09 50 16.3 +0.9**
KSH S **S** **09 51 22.2 +1.1**
KSH sS **sS** **09 51 38.9 +3.1**
KSH ScS **ScS** **09 54 35.9 -0.9**
KSH pmax pmax
comp=Z,1µm,12.0s
KSH LR LR
comp=N,5µm,9.9s
KSH LR LR
comp=E,5µm,8.8s
KSH LR LR
comp=Z,5µm,7.7s
KASI Kota Agung 45.40 220 P **P** **09 44 42.3 -0.3**
comp=Z,124nm,0.9s,comp=Z,1µm
CISI Cisompet, Garu 45.43 214 P **P** **09 44 41.5 -1.4**
comp=Z,348nm,1.2s,comp=Z,3µm
KZA Kyzart 45.55 300 P **P** **09 44 44.0 -0.2**
SNR=31
DDI Dehra Dun 45.64 283 *e*P **P** **09 44 42.5 -2.0**
DDI *ex* x 09 48 08.5
CGJI Cibinong 45.68 218 P **P** **09 44 43.2 -1.6**
comp=Z,147nm,1.2s,comp=Z,3µm
KBK Karagaybulak 45.72 300 P **P** **09 44 46.7 +1.6**
SNR=26
CHMS Chumysh 45.83 301 P **P** **09 44 47.1 +1.3**
SNR=21
VIS Vishakhapatnam 45.84 264 *e*P P 09 44 42.7 -3.4
VIS *ex* x 09 44 47.4
VIS AMB AMB 09 44 47.9
comp=Z,43nm,0.5s
FRU Bishkek 45.94 301 *e*P **P** **09 44 45.0 -1.7**
FRU *e* 09 46 39.0
FRU *e*S S 09 51 37.0 +7.5
FRU pmax pmax
comp=Z,130nm,1.8s
FRU MLR MLR
comp=E,14µm,18.0s
FRU MLR MLR
comp=Z,17µm,18.0s
USP Ospenovka 45.98 301 P **P** **09 44 45.9 -1.2**
SNR=27
AAK Ala-Archa 46.05 300 *i*P **P** **09 44 46.6 -1.2**
AAK Ala-Archa 46.05 300 *e*P **P** **09 44 46.2 -1.5**
comp=Z,12nm,0.6s
AAK LR LR
comp=Z,15µm,19.0s
AAK Ala-Archa 46.05 300 P **P** **09 44 47.0 -0.7**
SNR=23
AAK Ala-Archa 46.05 300 P **P** **09 44 46.8 -1.0**
SNR=19
AAK Ala-Archa 46.05 300 P **P** **09 44 46.0 -1.8**
comp=Z,128nm,1.0s,SNR=21
UCH Uchtor 46.08 300 P **P** **09 44 48.2 -0.1**
SNR=12
SMLA Simla 46.15 284 *e*P **P** **09 44 46.7 -1.7**
SMLA AMB AMB 09 45 01.6
comp=Z,52nm,0.6s
JBP Jabalpur 46.39 273 *i*x **P** **09 44 51.9 +1.5**
JBP *ex* x 09 46 33.6
DHRM DHARAMSHALA 46.56 286 *e*P P 09 44 48.8 -3.2
EKS2 Erkin-Say 46.57 301 *e*P **P** **09 44 51.1 -0.7**
EKS2 pmax pmax
comp=Z,24nm,0.9s
EKS2 Erkin-Say 46.57 301 *e*P **P** **09 44 51.1 -0.7**
comp=Z,24nm,0.9s
EKS2 Erkin-Say 46.57 301 P **P** **09 44 50.8 -1.1**
SNR=7.3
AML Almayashu 46.70 300 P **P** **09 44 52.7 -0.4**
SNR=57
NDI New Delhi 46.82 281 *ex* P 09 44 48.5 -5.3
NDI *e*S **S** **09 51 37.0 -5.4**
COEN Coen 46.88 165 *e*P **P** **09 44 54.6 +0.4**
comp=Z,796nm,0.9s
THN Thein Dam 46.99 286 *e*P P 09 44 51.5 -3.5
VOSK Vostochnaya 47.95 314 P **P** **09 45 00.0 -2.3**
VOSK pmax pmax
comp=Z,88nm,1.4s
NGP Nagpur 47.98 271 *e*P **P** **09 44 59.9 -3.0**
NGP *ex* x 09 45 14.0
comp=Z,430nm,1.3s
NGP *ex* x 09 52 18.0
BVA0 Borovoye Array 48.32 315 *i*P **P** **09 45 02.5 -2.5**
BVAR Borovoye Array 48.32 315 P **P** **09 45 02.6 -2.4**
BVAR 09 46 30.7
BVAR Borovoye Array 48.32 315 P **P** **09 45 02.6 -2.4**
BVAR PcP **PcP** **09 46 30.7 -0.7**
BVAR Borovoye Array 48.32 315 P **P** **09 45 02.6 -2.4**
comp=Z,18nm,0.6s,baz=100,slow=9.3,SNR=91
BVAR PcP **PcP** **09 46 30.7 -0.7**
comp=Z,6.2nm,0.5s,baz=115,slow=2.6,SNR=4.4
BRVK Borovoye 48.38 315*c i*P **P** **09 45 03.7 -1.8**
BRVK pmax pmax
comp=Z,126nm,1.7s
BRVK Borovoye 48.38 315 *e*P **P** **09 45 04.1 -1.4**
comp=Z,48nm,0.7s
BRVK LR LR
comp=Z,8µm,19.0s
BRVK Borovoye 48.38 315 P **P** **09 45 04.6 -0.9**
SNR=36
BRVK Borovoye 48.38 315 P **P** **09 45 04.7 -0.8**
comp=Z,334nm,1.6s,SNR=34
BHPL Bhopal 48.54 274 *e*P **P** **09 45 04.3 -2.8**
KK31 Karatay Array 48.90 302 *i*P **P** **09 45 08.8 -0.9**
KK31 pmax pmax
comp=Z,135nm,1.1s
KKAR Karatay Array 48.90 302 *e*P **P** **09 45 08.3 -1.4**
KKAR pmax pmax
comp=Z,76nm,0.9s
KKAR Karatay Array 48.90 302 *e*P **P** **09 45 08.3 -1.4**
comp=Z,76nm,0.9s
HNR Honiara 49.13 142 PFAKE 09 45 30.0 +18
HNR LR LR
comp=Z,2µm,19.0s
ZRNK Zerenda 49.15 315 P **P** **09 45 09.9 -1.6**
ZRNK pmax pmax
comp=Z,169nm,1.4s
AJM Ajmer 49.70 279 *e*P **P** **09 45 15.0 -1.1**
HYB Hyderabad 50.02 266 *e*P **P** **09 45 17.0 -1.6**
HYB *e*S **S** **09 52 24.0 -3.9**
HYB Hyderabad 50.02 266 *e*P **P** **09 45 17.0 -1.6**
HYB *e*S **S** **09 52 24.0 -3.9**
HYB Hyderabad 50.02 266 *i*P **P** **09 45 17.0 -1.6**
HYB *e*S **S** **09 52 24.0 -3.9**
LATR Latur 51.27 269 *e*P **P** **09 45 27.1 -0.8**
WRAB Tennant Creek 51.60 177 *e*P **P** **09 45 30.1 -0.1**
WRAB *e* 09 45 39.1
WRAB MLR MLR
comp=Z,3µm,19.0s
WRAB Tennant Creek 51.60 177 *e*P **P** **09 45 30.1 -0.1**
comp=Z,6µm,0.6s
WRAB *e* 09 45 39.1
WRAB LR LR
comp=Z,3µm,19.0s
WRAB Tennant Creek 51.60 177 P **P** **09 45 31.0 +0.8**
comp=Z,2µm,1.0s,SNR=14
WRA Warramunga Arr 51.60 177 P **P** **09 45 29.9 -0.4**
WRA P'P' 10 16 01.0
WRA Warramunga Arr 51.60 177 P **P** **09 45 29.9 -0.4**
comp=Z,43nm,0.9s,baz=353,slow=8.0,SNR=154
WRA PKPPKP **P'P'df** **10 16 01.0 -0.5**
comp=Z,1.1nm,1.0s,baz=132,slow=2.7,SNR=4.7
KBL Kabul 51.80 291 *e*P **P** **09 45 31.5 -0.6**
KBL pmax pmax
comp=Z,144nm,1.5s
KBL Kabul 51.80 291 *e*P **P** **09 45 31.4 -0.6**
comp=Z,144nm,1.5s
CHGN Chignik 53.11 41 *e*P **P** **09 45 41.8 +0.7**
CTA Charters Tower 53.52 163 LR LR 10 08 32.9
comp=Z,2µm,20.0s,baz=338,slow=36
CTAO Charters Tower 53.52 163 *e*P **P** **09 45 45.1 +0.6**
CTAO pmax pmax
comp=Z,198nm,0.9s
CTAO MLR MLR
comp=Z,1µm,19.0s
CTAO Charters Tower 53.52 163 *e*P **P** **09 45 45.1 +0.6**
comp=Z,198nm,0.9s
CTAO LR LR
comp=Z,1µm,19.0s
POO Poona 53.52 270 *e*P **P** **09 45 43.7 -1.0**
MBWA Marble Bar 54.01 194 *e*P **P** **09 45 49.1 +1.1**
comp=Z,67nm,0.9s
MBWA LR LR
comp=Z,657nm,20.0s
SVW2 Sparrevohn 54.34 35 *e*P P 09 45 53.9 +3.8
comp=Z,85nm,1.4s
GOA Goa 54.93 267 *e*P **P** **09 45 54.7 -0.2**
GOA AMB AMB 09 45 57.8
comp=Z,168nm,0.3s
GOA Goa 54.93 267⇑ *e*P **P** **09 45 52.8 -2.1**
GOA ⇑ *e*P **P** **09 45 52.8 -2.1**
GOA ⇑ *e*P **P** **09 45 52.8 -2.1**
GOA AMS AMS 10 20 57.0
comp=Z,1µm,17.2s
ARU Arti 55.00 320*c i*P **P** **09 45 53.0 -1.9**
ARU *e* 09 46 54.3
ARU 09 47 53.1
ARU PPP PPP 09 49 12.9
ARU S **S** **09 53 32.9 -1.9**
ARU SS **SS** **09 57 17.5 -0.7**
ARU pmax pmax
comp=Z,148nm,1.7s
ARU MLR MLR
comp=Z,11µm,16.0s
ARU Arti 55.00 320 *e*P **P** **09 45 53.0 -1.9**
comp=Z,331nm,1.0s
ARU *e* 09 46 03.1
ARU Arti 55.00 320 P **P** **09 45 53.0 -1.9**
comp=Z,439nm,1.4s,SNR=22
BHJ Bhuj 55.11 278 *e*P **P** **09 45 53.7 -2.4**
COCO West Island 55.16 223 *i*P **P** **09 45 58.7 +2.2**
COCO West Island 55.16 223 *e*P **P** **09 45 56.9 +0.4**
comp=Z,337nm,1.4s
COCO LR LR
comp=Z,1µm,19.0s
ABKAR Akbulak array 55.19 311 *e*P **P** **09 45 54.8 -1.6**
ASAR Alice Springs 55.29 178 P **P** **09 45 57.5 +0.1**
ASAR P'P' 10 15 58.2
ASAR ⇑ *e* 10 16 15.0
ASAR Alice Springs 55.29 178 P **P** **09 45 57.5 +0.1**
comp=Z,34nm,0.9s,baz=0.4,slow=5.8,SNR=155
ASAR LR LR 10 10 26.6
comp=Z,3µm,19.2s,baz=342,slow=37
ASAR PKPPKP **P'P'df** **10 15 58.2 +1.9**
comp=Z,0.8nm,0.9s,baz=84,slow=1.5,SNR=5.1
ASAR PKP2bc 10 16 15.0
comp=Z,3.1nm,1.1s,baz=145,slow=2.0,SNR=7.0
SOKR Solikamsk 55.62 323*d i*P **P** **09 45 58.6 -0.6**
SOKR 09 48 10.7
SOKR pmax pmax
comp=Z,40nm,0.9s
SOKR MLR MLR
comp=Z,26µm,18.0s
TRD Trivandrum 55.81 258 *e*P **P** **09 46 01.5 +0.2**
TRD ⇓ *ex* x 09 46 06.5
TRD AMB AMB 09 46 13.7
comp=Z,185nm,1.9s
OHAK Old Harbor 55.83 39 *e*P **P** **09 46 01.2 +0.4**
comp=Z,255nm,1.2s
OHAK *e* 09 46 11.5
KDAK Kodiak Island 56.14 39 *e*P **P** **09 46 03.8 +0.7**
comp=Z,148nm,0.8s
KDAK *e* 09 46 12.5
KDAK LR LR
comp=Z,2µm,20.0s
KDAK Kodiak Island 56.14 39 P **P** **09 46 04.8 +1.8**
comp=Z,1µm,0.9s,SNR=10
KDAK Kodiak Island 56.14 39 P **P** **09 46 03.9 +0.9**
comp=Z,82nm,1.0s,baz=337,slow=4.1,SNR=24
AKTO Aktyubinsk 56.20 312 P **P** **09 46 02.1 -1.5**
PMR Palmer 57.39 34 *e*P **P** **09 46 13.1 +1.3**
PMR *e* 09 46 22.2
PMR pmax pmax
comp=Z,247nm,1.4s
PMR Palmer 57.39 34 *e*P **P** **09 46 13.1 +1.3**
comp=Z,247nm,1.4s
PMR *e* 09 46 22.2
SEW Seward 57.44 36 *e*P **P** **09 46 14.6 +2.4**
comp=Z,282nm,1.2s
COLA College 57.56 30 PFAKE 09 46 30.0 +17
COLA LR LR
comp=Z,2µm,20.0s
ILAR Eielson Array 57.99 30 P **P** **09 46 17.4 +1.3**
ILAR ⇑ *e* 10 16 06.3
ILAR Eielson Array 57.99 30 P **P** **09 46 17.4 +1.3**
comp=Z,5.5nm,0.5s,baz=290,slow=8.2,SNR=2.1
ILAR LR LR 10 08 55.4
comp=Z,1µm,21.8s,baz=286,slow=34
ILAR PKP2bc 10 16 06.3
comp=Z,1.7nm,1.0s,baz=145,slow=1.9,SNR=7.1
IAKL Akhelmad 59.21 296 *e*P **P** **09 46 24.8 -0.5**
MNCY Minicoy 59.22 260 *ex* P 09 46 17.6 -7.7
ABKT Ailbek 59.27 298 P **P** **09 46 25.7 +0.2**
comp=Z,116nm,1.0s,SNR=5.6
IDAH Dahanechah 59.64 292 *e*P **P** **09 46 27.7 -0.6**
ISFR Sfrayin 59.64 297 *e*P **P** **09 46 26.9 -1.4**
ISHV Shirvan 59.71 298 *e*P **P** **09 46 28.2 -0.5**
EIDS Eidsvold 59.85 160 *e*P **P** **09 46 30.0 +0.7**
comp=Z,132nm,0.8s
FORT Forrest 62.44 184 *e*P **P** **09 46 47.5 +0.7**
comp=Z,434nm,0.8s
INK Inuvik 62.46 25 P **P** **09 46 47.1 +0.6**
INK Inuvik 62.46 25 P **P** **09 46 47.1 +0.6**
comp=Z,43nm,1.1s,baz=288,slow=8.1,SNR=31
INK LR LR 10 16 11.2
comp=Z,2µm,20.5s,baz=279,slow=38
DZM Mont Dzumac 63.09 144 *e*P **P** **09 46 52.7 +1.3**
comp=Z,622nm,1.0s
DZM *e*S **S** **09 55 22.3 +1.7**
comp=Z,5µm,30.3s
DZM *e*LR LR 10 05 46.3
comp=Z,3µm,23.1s
DZM Mont Dzumac 63.09 144 *e*P P 09 46 54.9 +3.5

DZM eS pP 09 47 00.9 +0.3
DZM Mont Dzumac 63.09 144 LR LR 10 11 44.0
comp=Z,2µm,20.9s,baz=249,slow=34
TMCR Tamitsa 63.37 331 eP **P** **09 46 52.3 -0.3**
TMCR pmax pmax
comp=Z,218nm,1.4s
IBAF Bafgh 63.45 292 eP **P** **09 46 52.4 -1.6**
KLMR Klimovskoe 63.77 327 eP **P** **09 46 53.8 -1.5**
KLMR e*PP **pP** **09 47 04.9 +0.3**
KLMR pmax pmax
comp=Z,131nm,1.5s
KLMR pmax pmax
comp=Z,325nm,8.4s
KLMR MLR MLR
comp=Z,26µm,18.0s
SPA0 Spitsbergen Ar 63.94 348 eP **P** **09 46 56.4 +0.1**
SPA0 eS **S** **09 55 24.1 -5.7**
SPITS Spitsbergen Ar 63.94 348 LR LR 10 16 37.7
comp=Z,6µm,19.9s,baz=85,slow=38
APA Apatity 64.02 335⇓ *i*P P 09 47 04.0 +7.1
APA *i* S S 09 55 40.0 +9.1
APA pmax pmax
comp=Z,54nm,1.2s
APA MLR MLR
comp=Z,8µm,19.0s
STKA Stephens Creek 64.11 171 eP **P** **09 46 58.7 +0.9**
comp=Z,42nm,0.9s
STKA Stephens Creek 64.11 171 P **P** **09 46 58.5 +0.7**
comp=Z,22nm,0.9s,baz=353,slow=7.4,SNR=33
STKA LR LR 10 14 54.8
comp=Z,3µm,21.2s,baz=344,slow=36
KBS Kingsbay 64.27 349 eP **P** **09 46 57.5 -0.9**
KBS eS **S** **09 55 27.8 -6.0**
KBS AMS AMS 10 17 48.6
comp=Z,3µm,16.8s
KBS Kingsbay 64.27 349 eP **P** **09 46 59.6 +1.2**
KBS Kingsbay 64.27 349 eP **P** **09 46 59.4 +1.0**
comp=Z,45nm,1.0s
KBS LR LR
comp=Z,2µm,20.0s
IMEH Mehriz 64.28 292 eP **P** **09 46 57.1 -2.4**
WBK Wadi Bani Khal 64.33 282 P **P** **09 46 59.9 +0.1**
SNR=22
BBOO Buckleboo 64.49 176 eP **P** **09 47 00.7 +0.4**
comp=Z,2µm,1.0s
BBOO e 09 47 09.6
SKAG Skagway 64.51 34 eP **P** **09 47 02.6 +2.3**
comp=Z,460nm,1.5s
SKAG e 09 47 12.6
IDMV Damavand 64.67 297 eP **P** **09 47 00.9 -1.2**
ARMA Armidale 64.77 161 eP P 09 47 05.7 +3.3
comp=Z,167nm,1.0s
SMDO Samad 64.90 282 P **P** **09 47 03.3 -0.3**
SNR=14
ISFB Sefidab 64.97 296 eP **P** **09 47 02.3 -1.5**
IVRN Varamin 65.12 297 eP **P** **09 47 01.8 -3.0**
BANOM Banah 65.13 286 P **P** **09 47 05.0 +0.1**
SNR=16
JMDO Jabal Madar 65.16 282 P **P** **09 47 04.6 -0.5**
SNR=29
MAK Makhachkala 65.21 306 eP P 09 46 59.8 -5.3
MAK e 09 47 31.1
MAK e 09 49 29.6
MAK ePPP PPP 09 50 59.3
MAK eS S 09 55 36.1 -10
MAK eSS **SS** **10 00 00.5 +1.8**
MAK pmax pmax
comp=Z,250nm,1.4s
MAK MLR MLR
comp=Z,22µm,19.0s
HOQ Hoqain 65.29 283 P **P** **09 47 05.5 -0.5**
SNR=24
KEV Kevo 65.33 338 eP **P** **09 47 04.3 -1.1**
KEV pmax pmax
comp=Z,10.0nm,0.8s
KEV Kevo 65.33 338 ep **P** **09 47 04.3 -1.1**
comp=Z,9.7nm,0.8s
IR3 Iran Long-Peri 65.47 298 eP **P** **09 47 05.3 -1.7**
IZEF Zefreh 65.47 295 eP **P** **09 47 05.8 -1.5**
ALE Alert 65.61 2 P **P** **09 47 07.0 -0.1**
comp=Z,510nm,1.2s,SNR=72
HATD Hatta, Dubai 65.73 285 P **P** **09 47 07.9 -0.8**
SNR=26
BSY Bisya 65.75 283 P **P** **09 47 08.1 -0.8**
SNR=21
ASHO Ashiyiah 65.85 285 P **P** **09 47 09.3 -0.3**
SNR=40
IKLH Kolahrood 65.88 295 eP **P** **09 47 08.2 -1.8**
ARCES ARCESS Array B 65.90 338 P **P** **09 47 08.9 -0.2**
ARCES ARCESS Array B 65.90 338 P **P** **09 47 08.9 -0.2**
comp=Z,5.3nm,0.7s,baz=68,slow=8.4,SNR=15
ARCES LR LR 10 19 56.9
comp=Z,6µm,19.1s,baz=63,slow=40
ARE0 ARCESS Array S 65.90 338 eP **P** **09 47 08.9 -0.2**
ARE0 eS **S** **09 55 50.7 -3.3**
NWAO Narrogin (SRO) 65.93 193 eP **P** **09 47 10.9 +1.3**
comp=Z,78nm,0.9s
NWAO Narrogin (SRO) 65.93 193 P **P** **09 47 10.3 +0.7**
comp=Z,48nm,1.1s,baz=6.4,slow=6.1,SNR=7.8
NWAO LR LR 10 15 20.7
comp=Z,468nm,20.7s,baz=151,slow=36
NAZ Nazwa, Dubai 66.05 285 P **P** **09 47 10.3 -0.5**
SNR=24
ARQ Araqi 66.05 283 P **P** **09 47 10.7 -0.2**
SNR=47
IRAZ Razeghan 66.32 298 eP **P** **09 47 11.8 -0.9**
MSVF Nonsavu 66.34 131 eP **P** **09 47 14.9 +2.2**
MSVF pmax pmax
comp=Z,174nm,1.1s
MSVF Nonsavu 66.34 131 eP **P** **09 47 14.9 +2.2**
comp=Z,174nm,1.1s
ASUD Al Ashush, Dub 66.47 285 P **P** **09 47 13.4 -0.1**
SNR=24
MOS Moscow 66.50 322 eP **P** **09 47 10.3 -2.8**
MOS e 09 47 21.8
MOS e 09 47 43.5
MOS eS **S** **09 55 58.4 -3.2**
MOS e 09 56 17.0
MOS e 09 57 03.6
MOS pmax pmax
comp=Z,500nm,1.9s
MOS pmax pmax
comp=Z,229nm,1.4s
MOS MLR MLR
comp=Z,20µm,16.0s
MOS MLR MLR
comp=N,8µm,17.0s
MOS MLR MLR
comp=E,16µm,17.0s
JOF Joensuu 66.62 331 eP **P** **09 47 11.0 -2.8**
JOF pmax pmax
comp=Z,9.0nm,0.5s
JOF Joensuu 66.62 331 ep **P** **09 47 11.0 -2.8**
comp=Z,9.1nm,0.5s
IPIR Pirpir 66.67 295 eP **P** **09 47 14.7 -0.3**
KTK1 Kautokeino 66.86 338 e P 09 47 01.2 -14
KTK1 eS S 09 55 59.5 -6.1
KTK1 eSS **SS** **10 00 24.7 +1.5**
KTK1 AMS AMS 10 20 58.0
comp=Z,12µm,16.3s
VOR Voronezh 67.18 318 eP **P** **09 47 16.0 -1.5**
VOR pmax pmax
comp=Z,250nm,1.6s
DGRG David-gareji 67.25 306 P **P** **09 47 16.5 -1.8**
OBN Obninsk 67.30 322⇑ eP **P** **09 47 16.3 -1.9**
OBN e 09 49 46.3
OBN *i* S **S** **09 56 14.7 +3.5**
OBN pmax pmax
comp=Z,233nm,1.9s
OBN MLR MLR
comp=Z,12µm,15.0s
OBN Obninsk 67.30 322 eP **P** **09 47 17.1 -1.2**
comp=Z,234nm,1.4s
OBN e 09 47 26.4
OBN LR LR
comp=Z,11µm,20.0s
OBN Obninsk 67.30 322 P **P** **09 47 16.1 -2.1**
comp=Z,521nm,1.6s,SNR=5.8
VSR Storozhevoye 67.40 317 eP **P** **09 47 16.9 -2.0**
VSR e*PP **pP** **09 47 27.1 -1.2**
VSR e 09 49 44.3
VSR eS **S** **09 56 07.5 -5.1**
VSR e*SS **sS** **09 56 26.7 -1.3**
VSR pmax pmax
comp=N,40nm,1.2s
VSR pmax pmax
comp=E,70nm,1.2s
VSR pmax pmax
comp=Z,90nm,1.2s
VSR pmax pmax
comp=N,40nm,1.5s
VSR pmax pmax
comp=E,50nm,1.5s
VSR pmax pmax
comp=Z,20nm,1.5s
VSR smax smax
comp=E,170nm,2.8s
VSR smax smax
comp=Z,130nm,2.8s
VSR smax smax
comp=N,30nm,1.4s
VSR MLR MLR
comp=Z,13µm,17.0s
VSR MLR MLR
comp=N,4µm,17.0s
VSR MLR MLR
comp=E,7µm,17.0s
VORD Divnogorie 67.42 317 eP **P** **09 47 17.2 -1.9**
VORD pmax pmax
comp=E,60nm,1.3s
VORD pmax pmax
comp=Z,50nm,1.3s
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD MLR MLR
comp=N,3µm,19.0s
VORD MLR MLR
comp=E,9µm,19.0s
VORD MLR MLR
comp=Z,12µm,19.0s
DLBC Dease Lake 67.44 34 P **P** **09 47 21.3 +2.1**
DLBC Dease Lake 67.44 34 P **P** **09 47 21.3 +2.1**
comp=Z,16nm,1.1s,baz=280,slow=5.9,SNR=11
DLBC LR LR 10 21 31.0
comp=Z,945nm,18.8s,baz=137,slow=40
TBLG Delisi 67.58 306 P **P** **09 47 19.0 -1.3**
TRO Tromso 67.86 340 eP **P** **09 47 21.5 0.0**
TRO eS **S** **09 56 14.5 -3.1**
KBZ Khabaz 68.03 309 P **P** **09 47 21.6 -1.4**
KBZ Khabaz 68.03 309 P **P** **09 47 21.6 -1.4**
KBZ Khabaz 68.03 309 P **P** **09 47 21.6 -1.4**
comp=Z,46nm,0.9s,baz=119,slow=4.3,SNR=57
KBZ LR LR 10 21 22.4
comp=Z,13µm,18.0s,baz=247,slow=40
KIV Kislovodsk 68.08 309*c* *i*P **P** **09 47 22.3 -1.3**
KIV *e* 09 47 47.7
KIV eS **S** **09 56 19.1 -2.2**
KIV eSS **SS** **10 00 43.8 +0.4**
KIV pmax pmax
comp=Z,102nm,0.9s
KIV pmax pmax
comp=Z,242nm,5.1s
KIV MLR MLR
comp=Z,12µm,18.0s
KIV Kislovodsk 68.08 309 eP **P** **09 47 22.2 -1.3**
comp=Z,156nm,1.0s
KIV LR LR
comp=Z,12µm,19.0s
KIV Kislovodsk 68.08 309 P **P** **09 47 22.7 -0.8**
SNR=44
KIV Kislovodsk 68.08 309 P **P** **09 47 22.5 -1.0**
comp=Z,574nm,1.1s,SNR=16
ONI Oni 68.11 307 P **P** **09 47 23.0 -0.7**
AKH Akhalkalaki 68.56 306 P **P** **09 47 25.9 -0.8**
IKOM Komasi 68.63 298 eP **P** **09 47 25.2 -2.1**
DGAR Diego Garcia 68.73 246 PFAKE 09 47 40.0 +12
DGAR LR LR
comp=Z,2µm,20.0s
KAF Kangasniemi 69.06 331 eP **P** **09 47 26.3 -2.9**
KAF pmax pmax
comp=Z,6.0nm,0.7s
KAF Kangasniemi 69.06 331 ep **P** **09 47 26.3 -2.9**
comp=Z,6.3nm,0.7s
CLDR Caldiran 69.20 304 eP **P** **09 47 30.5 -0.3**
IDHR Dehrash 69.26 299 eP **P** **09 47 29.1 -2.1**
IGHG Ghaleghazi 69.28 298 eP **P** **09 47 28.9 -2.4**
RES Resolute Bay 69.40 12 eP **P** **09 47 31.1 +0.1**
comp=Z,196nm,1.6s
RES Resolute Bay 69.40 12 P **P** **09 47 31.1 +0.1**
comp=Z,21nm,0.8s,baz=303,slow=7.0,SNR=58
RES LR LR 10 20 27.0
comp=Z,1µm,21.9s,baz=139,slow=38
FINES FINESS Array B 69.48 330 P **P** **09 47 29.6 -2.2**
FINES FINESS Array B 69.48 330 P **P** **09 47 29.6 -2.2**
comp=Z,11nm,0.5s,baz=68,slow=5.9,SNR=89
FINES LR LR 10 20 52.5
comp=Z,9µm,20.0s,baz=68,slow=38
AGRB Hanur-Agry 69.67 305 eP **P** **09 47 32.9 -0.7**
ARTV Artvin 69.73 306 *i* P **P** **09 47 33.2 -0.8**
DAGI Agillar 69.78 306 *i* P **P** **09 47 33.4 -0.7**
BCA Borcka 69.83 307 eP **P** **09 47 34.5 +0.1**
DBOC Borcka 69.84 307 *i* P **P** **09 47 33.3 -1.1**
TUTA Tutak 69.86 304 *i* P **P** **09 47 34.2 -0.7**
DBAD Bademkaya 69.96 306 *i* P **P** **09 47 34.2 -1.1**
DDEM Demirkent 69.97 306 *i* P **P** **09 47 34.3 -1.1**
HAKT HAKKARI 70.01 302 *i* P **P** **09 47 34.6 -1.3**
SOC Sochi 70.19 309 eP **P** **09 47 34.5 -2.0**
SOC e*PP **pP** **09 47 44.3 -1.5**
SOC ePPP PPP 09 51 46.9
SOC eS S 09 56 35.5 -11
SOC eSS **SS** **10 01 19.3 +3.6**
SOC pmax pmax
comp=Z,151nm,1.6s
SOC pmax pmax
comp=Z,89nm,1.4s
SOC MLR MLR
comp=Z,11µm,18.0s
HOMI Horasan 70.22 305 *i* P **P** **09 47 36.5 -0.6**
RBK Rabkut 70.63 279 P **P** **09 47 38.8 -0.9**
SNR=23
KBD Kabd 70.64 293 eP **P** **09 47 37.6 -1.8**
KBD AMb AMB 09 47 41.0
comp=Z,105nm,1.3s
QRN Al-Qurain 70.65 292 eP **P** **09 47 37.2 -2.4**
QRN AMb AMB 09 47 40.9
comp=Z,121nm,1.8s
VSU Vasula 70.66 327*c* *i*P **P** **09 47 38.8 -0.2**
VSU pmax pmax
comp=Z,88nm,1.2s
ERZM Erzurum 70.66 305 *i* P **P** **09 47 40.4 +0.6**
RDF Al-Radifah 70.86 293 eP **P** **09 47 39.1 -1.7**
RDF AMb AMB 09 47 42.4
comp=Z,167nm,1.4s
VRTB Varto-Mus 70.92 305 eP **P** **09 47 39.6 -1.7**
NAY Al-Naaiem 70.96 293 eP **P** **09 47 39.4 -2.0**
NAY AMb AMB 09 47 42.8
comp=Z,120nm,1.4s
SIRN S¨¨–rnak 70.97 303 *i* P **P** **09 47 42.3 +0.8**
ANN Anapa 71.14 311 eP P 09 47 39.0 -3.2
ANN e*PP pP 09 47 50.8 -0.8
ANN *e* 09 50 17.8
ANN ePPP PPP 09 52 01.1
ANN eS **S** **09 56 54.7 -2.3**
ANN pmax pmax
comp=Z,105nm,1.6s
ANN MLR MLR
comp=Z,8µm,20.0s
KOPT Kop Dagi 71.21 306 *i* P **P** **09 47 42.8 -0.3**
MOR8 Moi Rana 71.23 338 eP **P** **09 47 39.8 -2.7**
MOR8 AMB AMB 09 47 45.4
comp=Z,40nm,2.2s
BHD Baghdad 71.38 298 *ex* **P** **09 47 40.7 -3.2**
BHD *ex* S 09 57 06.7 +6.6
ABTO Aybut 71.46 279 P **P** **09 47 42.7 -2.0**
SNR=61
GUMT Gumushane 71.71 307 eP **P** **09 47 44.8 -1.2**
ERZN Erzincan 71.94 306 eP P 09 47 36.2 -11
KELT Kelkit 72.01 306 *i* P **P** **09 47 47.1 -0.8**
MICM Minsk 72.07 323⇓ eP **P** **09 47 46.0 -1.6**
YKA Yellowknife Ar 72.08 27 P **P** **09 47 47.8 +0.2**
YKA ⇑ *e* 10 15 26.0
YKA Yellowknife Ar 72.08 27 P **P** **09 47 47.8 +0.2**
comp=Z,17nm,1.0s,baz=301,slow=5.4,SNR=86
YKA PKP2bc 10 15 26.0
comp=Z,0.2nm,0.8s,baz=158,slow=1.5,SNR=4.3
MNK Minsk 72.09 323⇓ eP **P** **09 47 46.0 -1.8**
MNK *e* 09 48 00.0
MNK eS **S** **09 57 08.0 +0.4**
MNK pmax pmax
comp=E,280nm,1.2s
MNK pmax pmax
comp=Z,280nm,1.0s
MNK MLR MLR
comp=Z,36µm,19.0s
MNK MLR MLR
comp=E,19µm,18.0s
MARD Mardin 72.21 303 *i* P **P** **09 47 47.8 -1.2**
IZAR Zarasai 72.25 325 eP **P** **09 47 47.5 -1.3**
IZAR AMB AMB 09 48 01.5
comp=Z,51nm,1.2s
ISAL Salakas 72.40 325 eP **P** **09 47 48.3 -1.3**
ISAL AMB AMB 09 48 02.5
comp=Z,51nm,1.1s
DIYA Diyarbakir 72.41 304 *i* P **P** **09 47 49.3 -0.8**
NACGM Naroch 72.42 324 eP P 09 47 46.0 -3.7
IIGN Ignalina 72.47 325 eP **P** **09 47 48.7 -1.3**
IIGN AMB AMB 09 48 02.8
comp=Z,33nm,1.0s
SUSE Susehri 72.70 307 *i* P **P** **09 47 50.2 -1.7**
SVRC Sivrice-ELAZID 72.77 305 eP **P** **09 47 51.7 -0.7**
ILIC Ilic-Erzincan 72.79 306 eP **P** **09 47 52.0 -0.4**
KEMA Kemaliye 72.93 306 *i* P **P** **09 47 52.6 -0.7**
SIM Simferopol' 73.17 313 P P 09 48 03.0 +8.6
SIM pmax pmax
comp=Z,28nm,1.1s
AKASG Malin Array Be 73.25 320 P **P** **09 47 52.7 -2.0**
AKASG Malin Array Be 73.25 320 P **P** **09 47 52.7 -2.0**
AKASG Malin Array Be 73.25 320 P **P** **09 47 52.7 -2.0**
comp=Z,16nm,0.6s,baz=52,slow=6.1,SNR=48
AKASG LR LR 10 22 35.4
comp=Z,10µm,19.2s,baz=45,slow=38
KIEV Kiev 73.26 320 eP **P** **09 47 52.8 -2.0**
KIEV pmax pmax
comp=Z,50nm,0.7s
KIEV MLR MLR
comp=Z,13µm,19.0s
KIEV Kiev 73.26 320 eP **P** **09 47 52.8 -2.0**
comp=Z,50nm,0.7s
KIEV LR LR
comp=Z,13µm,19.0s
MALT Malatya 73.42 305 eP **P** **09 47 55.8 -0.3**
MALT Malatya 73.42 305⇑ P **P** **09 47 55.6 -0.5**
MALT Malatya 73.42 305 PFAKE 09 48 10.0 +14
MALT LR LR
comp=Z,8µm,19.0s
MALT Malatya 73.42 305⇑ *i*P **P** **09 47 55.6 -0.5**
MALT Malatya 73.42 305 eP **P** **09 47 56.3 +0.2**
ERBA Erbaa 73.46 308 *i* P **P** **09 47 55.0 -1.3**
JMIC Jan Mayen 73.60 347 eP **P** **09 47 59.4 +2.9**
JMIC eS **SKiKP** **09 57 21.4 -2.7**
JMIC Jan Mayen 73.60 347 LR LR 10 22 18.1
comp=Z,2µm,20.3s,baz=278,slow=38
KVT Kavak 73.75 308 eP **P** **09 47 57.1 -0.8**
GZT Gaziantep 74.47 304 *i* P **P** **09 48 01.1 -1.2**
TBLU Trondheim 74.47 336 eS **S** **09 57 31.4 -3.0**
TBLU AMS AMS 10 23 49.8
comp=Z,5µm,18.5s
PINB Pinarbasi 74.65 306 *i* P **P** **09 48 02.4 -1.1**
SUW Suwalki 74.67 325 eP **P** **09 48 01.7 -1.3**
SUW *e* 09 48 13.6
SUW pmax pmax
comp=Z,328nm,1.3s
SUW Suwalki 74.67 325 eP **P** **09 48 01.7 -1.3**
comp=Z,328nm,1.3s
SUW *e* 09 48 13.6
SUW Suwalki 74.67 325 eP **P** **09 48 01.2 -1.8**
SUW epP **pP** **09 48 09.1 -3.3**
SUW eSP **sP** **09 48 11.1 -4.8**
SUW ePcP **PcP** **09 48 13.8 -3.4**
SUW LMZ LR 10 24 49.3
CTKT Corum 74.80 308 *i* P **P** **09 48 02.7 -1.6**
GAZ Gaziantep 74.80 304 eP **P** **09 48 06.2 +2.0**
RAYN Ar Rayn 74.97 288 P **P** **09 48 04.5 -0.9**
comp=Z,409nm,1.2s,SNR=31
KUZU Kuzuini 75.09 304 *i* P **P** **09 48 04.7 -1.1**
CORM Corum 75.12 308 eP P 09 48 00.6 -5.4
ANDN Andirin 75.21 305 *i* P **P** **09 48 05.4 -1.2**
BALT Daday 75.28 310 *i* P **P** **09 48 06.3 -0.7**
ILGA Ilgaz 75.30 309 *i* P **P** **09 48 06.2 -1.0**
KIS Kishinev 75.36 316 eP **P** **09 48 06.0 -1.1**
KIS *e* 09 48 20.0
KIS *e* 09 51 00.0
KIS ePPP PPP 09 52 45.0
KIS eS **S** **09 57 46.0 +1.2**
KIS *e* 09 58 04.0
KIS ePS PnS 09 58 38.0 +15
KIS MLR MLR
comp=Z,10µm,17.0s
KIS MLR MLR
comp=N,5µm,15.0s
KIS MLR MLR
comp=E,6µm,19.0s
KIS MLR MLR
comp=Z,11µm,19.0s
KIS Kishinev 75.36 316 eP **P** **09 48 06.0 -1.1**
KIS Kishinev 75.36 316 ePcP **PcP** **09 48 20.0 -0.3**
KIS Kishinev 75.36 316 ePP PP 09 51 00.0 +4.3
PGC Sidney 75.53 41 eP **P** **09 48 09.3 +1.3**
comp=Z,5.5nm,1.1s
SUMG Summit 75.59 357 eP **P** **09 48 07.9 -0.6**
SUMG *e* 09 48 18.6
SUMG pmax pmax
comp=Z,386nm,1.4s
SUMG Summit 75.59 357 eP **P** **09 48 07.9 -0.6**
comp=Z,386nm,1.4s
SUMG *e* 09 48 18.6
SUMG Summit 75.59 357 *i* P **P** **09 48 08.3 -0.2**
comp=Z,101nm,1.0s
NB2 NORSAR Subarra 75.59 334 P **P** **09 48 06.5 -1.8**
baz=48,slow=5.9
NB2 NORSAR Subarra 75.59 334 P **P** **09 48 06.5 -1.8**
comp=Z,123nm,1.7s,baz=48,slow=5.9
NOA NORSAR Array B 75.59 334 P **P** **09 48 06.3 -1.9**
NOA NORSAR Array B 75.59 334 P **P** **09 48 06.3 -1.9**
comp=Z,5.1nm,0.6s,baz=49,slow=5.7,SNR=28
NOA LR LR 10 24 43.5
comp=Z,9µm,18.4s,baz=30,slow=38
KOZT Kozan 75.62 305 eP **P** **09 48 08.2 -0.6**
NC602 NORSAR Array S 75.67 334 eS **S** **09 57 45.3 -2.4**
NC602 eSS **SS** **10 02 39.4 +1.0**
TAU Tasmania Unive 75.80 168 PFAKE 09 48 20.0 +11
TAU LR LR
comp=Z,2µm,19.0s
NLWA Neilton Lookou 75.95 43 eP P 09 48 13.8 +3.2
comp=Z,218nm,1.4s
NLWA *e* 09 48 21.9
NLWA LR LR
comp=Z,870nm,19.0s
BRTR Keskin Array B 76.01 308 P **P** **09 48 09.4 -1.8**
BRTR Keskin Array B 76.01 308 P **P** **09 48 09.4 -1.8**
comp=Z,32nm,1.1s,baz=97,slow=5.0,SNR=57
BRTR LR LR 10 26 34.5
comp=Z,4µm,18.9s,baz=220,slow=40
YAYL Yayladag 76.13 304 *i* P **P** **09 48 10.4 -1.5**
KAMT Kaman 76.14 308 eP **P** **09 48 10.9 -1.0**
NIG Nigde 76.15 306 eP **P** **09 48 13.1 +1.0**
SCO Scoresbysund 76.18 351⇑ *i*P **P** **09 48 12.8 +1.5**
comp=Z,19nm,1.0s
SCO *i* S **S** **09 57 55.7 +2.7**
SCO
comp=Z,1µm,15.0s
HDW Hoodsport 76.29 42 P **P** **09 48 15.3 +2.8**
MBW Mount Baker 76.32 41 P **P** **09 48 13.6 +0.8**
CMW Cultus Mountai 76.40 41 P **P** **09 48 14.3 +1.1**
BBAL Bala 76.45 308 *i* P **P** **09 48 12.0 -1.6**
GULE Gulek 76.45 305 *i* P **P** **09 48 12.6 -1.1**
LVV L'vov 76.55 321 *i* P **P** **09 48 12.6 -1.3**
LVV *e* 09 48 25.8
LVV eS **S** **09 57 57.4 -0.4**
LVV ePS PnS 09 58 16.6 -21
LVV MLR MLR
comp=N,4µm,16.0s
LVV MLR MLR
comp=Z,8µm,16.0s
LVV MLR MLR
comp=E,6µm,15.0s
JCW Jim Creek 76.63 41 P **P** **09 48 15.7 +1.3**
CFR Carcaliu 76.72 315⇓ *i*P **P** **09 48 13.3 -1.6**
CFR Carcaliu 76.72 315⇓ *i*P **P** **09 48 13.3 -1.6**
MERS Mersin 76.83 305 eP **P** **09 48 13.4 -2.4**
TESR 76.89 317⇑ *i*P **P** **09 48 14.2 -1.6**
TIRR Tirgusor 76.93 314⇓ P **P** **09 48 15.0 -1.1**
TIRR Tirgusor 76.93 314 eP **P** **09 48 14.1 -2.0**
comp=E,17nm,1.1s

TIRR Tirgusor 76.93 314 ⇓ iP P 09 48 15.0 -1.1
BEL Belsk 77.10 324 eP P 09 48 15.7 -1.2
BEL ePcP PcP 09 48 28.1 +0.4
BEL LMZ LR 10 26 27.5
BURAR Bucovina Array 77.11 318 ⇓ iP P 09 48 16.2 -1.0
KONO Kongsberg 77.12 334 eP P 09 48 12.8 -4.0
KONO eS S 09 58 03.3 -0.3
KONO eSS SS 10 03 03.6 +3.3
KONO Kongsberg 77.12 334 PFAKE 09 48 30.0 +13
KONO LR LR
comp=Z,7μm,19.0s
VRI Vrincioaia 77.19 316 ⇑ iP P 09 48 17.1 -0.5
VRI Vrincioaia 77.19 316 ⇑ iP P 09 48 17.1 -0.5
PLOR Plostina 77.24 316 ⇑ iP P 09 48 16.6 -1.3
PLOR Plostina 77.24 316 ⇑ iP P 09 48 16.5 -1.3
HENT Hendek 77.26 310 i P P 09 48 16.0 -2.1
KWP Kalwaria Pacla 77.37 321 PFAKE 09 48 30.0 +12
KWP LR LR
comp=Z,12μm,20.0s
KWP Kalwaria Pacla 77.37 321 eP P 09 48 18.0 -0.5
KWP LMZ LR 10 26 01.7
LON Longmire 77.49 43 eP P 09 48 20.5 +1.2
LON e 09 48 29.9
LON pmax pmax
comp=Z,43nm,1.3s
LON Longmire 77.49 43 eP P 09 48 20.5 +1.2
comp=Z,43nm,1.3s
LON e 09 48 29.9
NLW Nelson Butte 77.58 41 P P 09 48 20.9 +1.0
KIZT Kizilcal 77.61 308 eP P 09 48 19.1 -1.1
LADK Ladik-KONYA 77.64 307 eP P 09 48 18.3 -2.0
KDHN Kadinhani 77.64 308 i P P 09 48 18.6 -1.8
COR Corvallis 77.79 45 eP P 09 48 22.9 +2.0
COR pmax pmax
comp=Z,499nm,1.7s
COR Corvallis 77.79 45 eP P 09 48 22.9 +2.0
comp=Z,499nm,1.7s
ETW Entiat 77.85 41 P P 09 48 21.8 +0.4
KSDI Kefar Szold 77.86 301 eP P 09 48 23.6 +2.1
BSD Bornholm Skovb 77.91 328 i P P 09 48 20.7 -0.6
comp=Z,62nm,1.0s
BSD eS S 09 58 12.2 -0.1
BSD
comp=Z,11μm,16.0s
GKP Gorka Klasztor 77.98 326 eP P 09 48 21.0 -0.8
GKP LMZ LR 10 26 33.6
KOLS Kolonicke sedl 78.00 321 eP P 09 48 20.5 -1.5
KOLS e 09 48 30.9
KOLS e 09 51 14.8
KOLS eS S 09 58 17.9 +4.3
KOLS pmax pmax
comp=Z,15nm,1.3s
KOLS MLR MLR
comp=Z,7μm,19.0s
KOLS Kolonicke sedl 78.00 321 eP P 09 48 20.5 -1.5
KOLS epP pP 09 48 30.9 -0.6
KOLS ePP PP 09 51 14.8 -3.0
KOLS eS S 09 58 17.9 +4.3
ERMK Ermenek 78.06 306 i P P 09 48 20.7 -2.1
KEBM Edson Butte 78.08 47 eP P 09 48 24.2 +1.6
comp=Z,585nm,1.4s
KEBM e 09 48 34.4
BER Bergen 78.15 336 eP P 09 48 18.8 -3.8
BER AMS AMS 10 26 15.3
comp=Z,7μm,17.6s
UZH Uzhgorod 78.16 320 ⇓ iP P 09 48 21.0 -1.9
UZH e 09 48 31.4
UZH e 09 51 21.2
UZH eS S 09 58 09.8 -5.5
UZH e 09 58 33.6
UZH ePS PnS 09 59 03.6 +5.3
UZH eSSS SSS 10 06 30.4
UZH MLR MLR
comp=N,6μm,16.0s
UZH MLR MLR
comp=E,8μm,16.0s
UZH MLR MLR
comp=Z,5μm,16.0s
TRPA Tarpa 78.31 320 ⇓ iP P 09 48 22.7 -1.0
TRPA Tarpa 78.31 320 ⇓ eP P 09 48 23.2 -0.5
BOLV Bolvadin 78.32 308 i P P 09 48 22.7 -1.5
CRVS Cervenica-Dubn 78.45 321 eP P 09 48 23.1 -1.4
CRVS e 09 48 36.2
CRVS eS S 09 58 33.5 +15
CRVS pmax pmax
comp=Z,97nm,2.3s
CRVS MLR MLR
comp=Z,5μm,19.3s
CRVS Cervenica-Dubn 78.45 321 eP P 09 48 23.1 -1.4
CRVS epP pP 09 48 36.2 +2.2
CRVS eS S 09 58 33.5 +15
VFP Flag Point 78.48 44 P P 09 48 25.6 +0.7
OJC Ojcow 78.56 323 eP P 09 48 24.0 -1.1
OJC eS S 09 58 14.5 -5.0
OJC MLR MLR
comp=Z,12μm,17.3s
OJC Ojcow 78.56 323 eP P 09 48 23.8 -1.3
comp=Z,160nm,1.1s
OJC Ojcow 78.56 323 eP P 09 48 24.0 -1.1
OJC eS S 09 58 14.5 -5.0
OJC L L 10 27 38.9
comp=Z,12μm,17.3s
COP Copenhagen 78.62 330 i P P 09 48 23.7 -1.6
comp=Z,30nm,0.8s
COP
comp=Z,5μm,15.0s
CSS Prodhromos 78.63 304 eP P 09 48 18.7 -7.0
CSS Prodhromos 78.63 304 eP P 09 48 24.2 -1.5
comp=Z,22nm,0.8s
CSS e 09 48 34.4
CSS LR LR
comp=Z,4μm,20.0s
CSS Prodhromos 78.63 304 eP P 09 48 20.7 -5.1
GAZI Gazipasa 78.68 306 i P P 09 48 23.4 -2.7
ARR Arges 78.69 317 ⇓ iP P 09 48 25.0 -1.0
ALT Altintas 78.70 309 eP P 09 48 24.5 -1.7
NIE Niedzica 78.76 322 eP P 09 48 25.7 -0.6
NIE e*PP PcP 09 48 34.2 -0.8
NIE Niedzica 78.76 322 eP P 09 48 25.7 -0.6
NIE epP PcP 09 48 34.2 -0.8
OD2 Odessa Site #2 78.88 41 P P 09 48 26.7 -0.2
TVSB Tavsanli 78.92 310 eP P 09 48 25.4 -2.0
DRGR 78.99 319 P P 09 48 26.7 -0.9
DRGR 78.99 319 ⇓ iP P 09 48 27.1 -0.5
HAWA Hanford 78.99 42 PFAKE 09 48 40.0 +12
HAWA LR LR
comp=Z,783nm,19.0s
KRMB Red Mountain 79.08 48 eP P 09 48 29.9 +1.7
comp=Z,157nm,1.5s
KRMB e 09 48 40.0
ISP Isparta 79.08 308 ⇓ P P 09 48 27.8 -0.5
ISP Isparta 79.08 308 eP P 09 48 27.0 -1.3
comp=Z,47nm,1.4s
ISP LR LR
comp=Z,4μm,19.0s
ISP Isparta 79.08 308 ⇓ iP P 09 48 27.8 -0.5
HUMO Hull Mountain 79.08 47 eP P 09 48 29.7 +1.6
comp=Z,99nm,1.5s
SZH Strazhica 79.08 314 P P 09 48 27.9 -0.2
NEW Newport 79.24 39 P P 09 48 29.7 +0.8
NEW LR LR
comp=Z,1μm,20.0s
NEW Newport 79.24 39 ⇓ P P 09 48 29.8 +0.9
baz=79
NEW Newport 79.24 39 P P 09 48 29.7 +0.8
comp=Z,24nm,1.1s,baz=313,slow=4.0,SNR=31
RAC Raciborz 79.46 323 eP P 09 48 29.6 -0.4
RAC MLR MLR
comp=Z,19μm,16.0s
MUD Monsted U'grnd 79.46 332 i P P 09 48 41.4 +12
comp=Z,33nm,1.1s
MUD
comp=Z,6μm,17.0s
KHAL Karahalli 79.47 309 i P P 09 48 28.2 -2.3
DURS Dursunbey 79.48 310 i P P 09 48 30.0 -0.4
KHMM Horse Mountain 79.54 48 eP P 09 48 32.2 +1.3
comp=Z,179nm,1.4s
KHMM e 09 48 42.6
A12A Yaak River Ran 79.62 38 P P 09 48 32.3 +1.3
baz=80,SNR=22
KORT Korkueli 79.63 307 i P P 09 48 28.7 -2.7
OKC Ostrava-Krasne 79.64 323 eP P 09 48 30.5 -0.5
OKC e*PP sP 09 48 42.6 -1.3
OKC eS SKSac 09 58 50.5 +5.0
OKC MLR MLR
comp=Z,16μm,16.0s
OKC Ostrava-Krasne 79.64 323 eP P 09 48 30.5 -0.5
OKC esP sP 09 48 42.6 -1.3
OKC ex x 09 54 55.0
OKC ex x 09 58 50.5
OKC ex x 10 04 05.4
OKC AMS AMS 10 28 10.0
comp=Z,16μm,16.0s
YBH Yreka Blue Hor 79.71 47 P P 09 48 32.8 +1.2
YBH Yreka Blue Hor 79.71 47 P P 09 48 32.8 +1.2
comp=Z,12nm,1.0s,baz=262,slow=2.2,SNR=24
GZR Gura Zlata 79.75 317 ⇑ P P 09 48 31.0 -0.8
GZR Gura Zlata 79.75 317 ⇑ iP P 09 48 31.0 -0.8
PSZ Piszkesteto 79.88 321 P P 09 48 31.9 -0.5
PSZ Piszkesteto 79.88 321 eP P 09 48 31.1 -1.3
comp=Z,67nm,1.3s
PSZ e 09 48 44.3
PSZ LR LR
comp=Z,3μm,20.0s
PSZ Piszkesteto 79.88 321 ⇓ iP P 09 48 31.6 -0.8
PSZ Piszkesteto 79.88 321 ⇑ eP P 09 48 31.4 -1.0
KSP Ksiaz 79.95 324 ⇑ eP P 09 48 31.7 -0.9
KSP e*PP pP 09 48 41.3 -0.8
KSP eS S 09 58 35.0 +0.7
KSP Ksiaz 79.95 324 eP P 09 48 31.6 -1.0
KSP epP pP 09 48 41.6 -0.5
KSP LMZ LR 10 28 24.4
C11A Tepee Creek (N 79.96 39 ⇑ P P 09 48 33.9 +1.1
baz=80
BALY Balya 79.96 311 i P P 09 48 31.1 -1.9
MORC Moravsky Berou 79.98 323 P P 09 48 32.4 -0.5
MORC Moravsky Berou 79.98 323 eP P 09 48 31.6 -1.3
comp=Z,50nm,1.1s
MORC e 09 48 44.6
MORC Moravsky Berou 79.98 323 ⇓ iP P 09 48 32.3 -0.6
GOLH Golhisar 80.03 308 i P P 09 48 32.9 -0.6
ELL Elmali 80.06 307 eP P 09 48 32.8 -0.9
VYHS Vyhne 80.10 322 eP P 09 48 32.9 -0.6
VYHS pmax pmax
comp=Z,34nm,1.4s
VYHS Vyhne 80.10 322 eP P 09 48 32.9 -0.6
VYHS epP pP 09 48 45.7 +2.7
VYHS ePP PP 09 51 36.2 +1.0
VYHS eS S 09 58 50.8 +15
RUE Ruedersdorf 80.11 327 eP P 09 48 34.3 +0.8
comp=Z,48nm,1.1s
RUE e 09 48 45.6
DNZL Cakiroluk 80.14 308 i P P 09 48 31.8 -2.4
EIL Elat 80.16 299 eP P 09 48 31.1 -3.1
KRLC Kraliky 80.18 324 eP P 09 48 33.6 -0.4
KRLC e*PP pP 09 48 43.8 +0.3
KRLC Kraliky 80.18 324 eP P 09 48 33.6 -0.4
KRLC epP pP 09 48 43.8 +0.3
DPC Dobruska-Polom 80.24 324 eP P 09 48 33.4 -0.9
DPC e*PP pP 09 48 44.4 +0.6
DPC e 09 51 38.6
DPC eS S 09 58 38.6 +1.1
DPC Dobruska-Polom 80.24 324 eP P 09 48 33.7 -0.6
DPC pmax pmax
comp=Z,64nm,1.1s
DPC Dobruska-Polom 80.24 324 eP P 09 48 33.7 -0.6
comp=Z,64nm,1.1s
DPC Dobruska-Polom 80.24 324 eP P 09 48 33.4 -0.9
DPC epP pP 09 48 44.4 +0.6
DPC ePP PP 09 51 38.6 +2.2
DPC ex x 09 54 56.3
DPC eS S 09 58 38.6 +1.1
DPC ex x 10 04 06.0
DPC AMS AMS 10 28 00.0
comp=Z,30μm,16.2s
A13A Flathead Natio 80.27 38 ⇓ P P 09 48 35.6 +1.0
baz=80
BZS Buzias 80.29 318 ⇓ P P 09 48 34.3 -0.3
BZS Buzias 80.29 318 ⇓ iP P 09 48 34.3 -0.3
UPC Upice 80.30 324 eP P 09 48 34.1 -0.4
UPC e*PP pP 09 48 44.2 +0.2
UPC Upice 80.30 324 eP P 09 48 34.1 -0.4
UPC epP pP 09 48 44.2 +0.2
KDZ Kurdzhali 80.30 313 P P 09 48 32.7 -2.0
MPEP Malo Peshtene 80.36 315 P P 09 48 33.7 -1.3
C12B Naegeli Ranch, 80.45 39 ⇓ P P 09 48 36.7 +1.2
baz=80,SNR=13
AKAS Kas 80.54 307 eP P 09 48 33.6 -2.7
B13A Whitefish 80.58 38 P P 09 48 37.5 +1.3
baz=80,SNR=52
BUD Budapest 80.61 321 eP P 09 48 36.1 -0.1
BSEG Bad Segeberg 80.70 329 eP P 09 48 35.4 -1.2
BSEG pmax pmax
comp=Z,77nm,1.4s
BSEG Bad Segeberg 80.70 329 eP P 09 48 35.4 -1.2
comp=Z,77nm,1.4s
RZN Rozhen 80.71 313 P P 09 48 36.1 -1.1
VRAC Vranov 80.76 323 ⇑ iP P 09 48 36.5 -0.6
A14A Double T Ranch 80.76 37 P P 09 48 38.0 +0.7
baz=81,SNR=61
SMOL Smolenice 80.82 322 eP P 09 48 38.1 +0.7
SMOL e 09 48 50.2
SMOL Smolenice 80.82 322 eP P 09 48 38.1 +0.7
SMOL epP pP 09 48 50.2 +3.3
BLMT Blacktail Moun 80.86 38 eP P 09 48 39.3 +1.4
BLMT e 09 48 49.3
TURN Turunc 80.88 308 i P P 09 48 38.0 +0.2
D12A Red Ives Fores 80.92 40 ⇓ P P 09 48 38.8 +0.8
baz=81
AYDN Tasoluk 80.93 309 i P P 09 48 37.1 -1.2
IZM Izmir 80.93 310 eP P 09 48 36.8 -1.5
YER Yerkesik 80.95 308 eP P 09 48 39.0 +0.6
C13A Hot Springs 80.96 39 P P 09 48 39.3 +1.1
baz=81,SNR=41
PVCC Panska Ves 81.00 325 eP P 09 48 37.9 -0.4
PVCC e*PP sP 09 48 50.3 -0.9
PVCC Panska Ves 81.00 325 eP P 09 48 37.9 -0.4
PVCC esP sP 09 48 50.3 -0.9
PVCC AMS AMS 10 28 30.0
comp=Z,23μm,16.8s
JTMT Jette 81.07 39 eP P 09 48 40.1 +1.1
JTMT e 09 48 50.4
BRG Berggiesshubel 81.08 325 i P P 09 48 37.8 -0.9
comp=Z,55nm,1.6s
BRG epP pP 09 51 41.1 -2.1
comp=Z,7.3nm,1.2s
BRG S S 09 58 45.0 -1.1
BRG SS SS 10 04 03.0 +3.0
BRG ePKPPKP P'P'df 10 15 13.4 -11
comp=Z,2.5nm,0.8s
BRG
comp=N,13μm,16.5s
BRG
comp=E,14μm,17.0s
BRG
comp=Z,27μm,16.8s
BRG Berggiesshubel 81.08 325 i P P 09 48 37.8 -0.9
BRG e 09 51 41.1
BRG S S 09 58 45.0 -1.1
BRG SS SS 10 04 03.0 +3.0
BRG pmax pmax
comp=Z,55nm,1.6s
BRG pmax pmax
comp=Z,7.0nm,1.2s
BRG MLR MLR
comp=N,13μm,16.5s
BRG MLR MLR
comp=E,14μm,17.0s
BRG MLR MLR
comp=Z,27μm,16.8s
BRG Berggiesshubel 81.08 325 eP P 09 48 37.1 -1.6
comp=Z,55nm,1.6s
MOD Modoc 81.10 46 eP P 09 48 40.5 +1.3
comp=Z,50nm,1.0s
A15A Johnson Ranch, 81.11 37 ⇑ P P 09 48 39.5 +0.5
baz=81,SNR=60
VTS Vitosha 81.11 315 P P 09 48 37.1 -2.2
BMO Blue Mountains 81.16 42 PFAKE 09 48 50.0 +11
BMO LR LR
comp=Z,793nm,21.0s
B14A Marquette Ranc 81.22 38 P P 09 48 41.2 +1.5
baz=81,SNR=14
CLL Collm 81.24 326 ⇑ iP P 09 48 38.3 -1.2
CLL i 09 48 48.6
CLL i 09 48 51.3
CLL i 09 51 47.2
CLL eS S 09 58 52.0 +4.2
CLL pmax pmax
comp=Z,109nm,1.5s
CLL pmax pmax
comp=Z,25nm,1.5s
CLL Collm 81.24 326 eP P 09 48 37.6 -1.9
comp=Z,116nm,1.6s
CLL Collm 81.24 326 ⇑ iP P 09 48 38.3 -1.2
comp=Z,109nm,1.5s
CLL i pP pP 09 48 48.6 -0.4
CLL i sP sP 09 48 51.3 -1.2
comp=Z,100nm,1.1s
CLL i PP PP 09 51 47.2 +2.6
comp=Z,25nm,1.5s
CLL esPPP 09 53 42.0
CLL esPPPP 09 55 06.0
CLL eS S 09 58 52.0 +4.2
CLL eScS ScS 09 59 06.0 +0.3
CLL esSKSac sSKSac 09 59 11.0 -1.8
CLL ePPS PPS 09 59 55.0
CLL eSS SS 10 04 12.0 +10
CLL epPKKPbc 10 07 24.0
CLL e 10 08 54.0
CLL eSSSS 10 10 06.0
TREC Trest 81.33 324 eP P 09 48 41.0 +0.9
TREC e*PP sP 09 48 52.5 -0.6
TREC MLR MLR
comp=Z,31μm,16.6s
TREC Trest 81.33 324 eP P 09 48 41.0 +0.9
TREC esP sP 09 48 52.5 -0.6
TREC AMS AMS 10 29 00.0
comp=Z,31μm,16.6s
GCAM G?zelcaml? 81.33 309 i P P 09 48 39.4 -0.9
C14A Swan Lake 81.34 38 P P 09 48 41.3 +1.0
baz=81,SNR=29
PRU Pruhonice 81.36 325 eP P 09 48 39.2 -1.0
PRU e*PP pP 09 48 49.9 +0.2
PRU e 09 51 48.7
PRU eS S 09 58 51.4 +2.4
PRU MLR MLR
comp=Z,20μm,16.5s
PRU Pruhonice 81.36 325 eP P 09 48 39.2 -1.0
PRU epP pP 09 48 49.9 +0.2
PRU ePP PP 09 51 48.7 +3.1
PRU ex x 09 55 17.5
PRU eS S 09 58 51.4 +2.4
PRU ex x 10 04 24.1
PRU AMS AMS 10 29 00.0
comp=Z,20μm,16.5s
PRA Prague 81.36 325 P P 09 48 40.0 -0.2
PRA AMS AMS 10 29 00.0
SWMT Swartz Lake 81.37 39 eP P 09 48 41.1 +0.6
comp=Z,71nm,1.2s
SWMT e 09 48 51.3
MMB Musomiste 81.38 314 P P 09 48 37.9 -2.6
D13A Huson 81.38 39 ⇑ P P 09 48 40.9 +0.4
baz=81,SNR=11
BORG Borgarnes 81.40 349 LR LR 10 26 14.8
comp=Z,2μm,20.8s,baz=1.4,slow=37
SFJD Kangerlussuaq 81.40 1 i P P 09 48 39.3 -0.8
comp=Z,26nm,0.9s
SFJD Kangerlussuaq 81.40 1 i S S 09 58 48.3 -0.5
SFJD
comp=Z,2μm,16.0s
URZ Urewera 81.57 146 LR LR 10 23 33.7
comp=Z,839nm,18.2s,baz=319,slow=35
PKSM Moragy 81.59 320 P P 09 48 40.5 -1.0
PKSM Moragy 81.59 320 ⇓ iP P 09 48 40.9 -0.6
PKSM Moragy 81.59 320 ⇑ eP P 09 48 40.0 -1.5
B15A Bradely Ranch, 81.62 37 P P 09 48 42.5 +0.7
baz=82,SNR=103
DAT Datca 81.64 308 eP P 09 48 35.1 -7.0
A16A West Butte Ran 81.71 37 ⇓ P P 09 48 42.8 +0.6
baz=82
F12A Elk City 81.77 41 P P 09 48 43.2 +0.6
baz=82,SNR=88
NRDL Niedersach Rie 81.78 328 eP P 09 48 41.6 -0.7
comp=Z,55nm,1.7s
SOP Sopron 81.80 322 ⇑ eP P 09 48 42.0 -0.6
SLMT Seeley Lake 81.80 39 eP P 09 48 43.0 +0.2
comp=Z,70nm,0.8s
SLMT e 09 48 53.5
MSO Missoula 81.82 39 PFAKE 09 49 00.0 +17
MSO LR LR
comp=Z,665nm,20.0s
MSO Missoula 81.82 39 ⇑ P P 09 48 43.1 +0.3
baz=82
OHCM Honcut 81.83 49 eP P 09 48 43.7 +0.8
D14A Greenough 81.90 39 P P 09 48 43.6 +0.3
baz=82,SNR=25
E13A Victor 81.93 40 ⇑ P P 09 48 44.8 +1.4
baz=82,SNR=9.3
C15A Salmond Ranch, 81.94 38 P P 09 48 44.5 +1.0
baz=82,SNR=64
B16A M & M Farms, S 81.99 37 P P 09 48 44.1 +0.4
baz=82,SNR=45
CONA Conrad Observa 82.01 322 i P P 09 48 43.2 -0.6
comp=Z,56nm,1.6s,SNR=20
CONA Conrad Observa 82.01 322 i P P 09 48 43.2 -0.6
comp=Z,56nm,1.6s
TANN Tannenbergstha 82.09 326 eP P 09 48 42.6 -1.5
comp=Z,35nm,1.5s
CLZ Clausthal 82.11 328 eP P 09 48 42.8 -1.4
CLZ pmax pmax
comp=Z,107nm,1.5s
CLZ Clausthal 82.11 328 eP P 09 48 42.8 -1.4
comp=Z,107nm,1.5s
G12A Big Creek, Yel 82.11 41 P P 09 48 45.2 +0.7
baz=82,SNR=26
CHMT Chamberlain Mo 82.14 39 eP P 09 48 44.9 +0.2
CHMT e 09 48 54.3
FFC Flin Flon 82.14 28 eP P 09 48 43.8 -0.4
FFC e 09 48 55.3
FFC pmax pmax
comp=Z,183nm,1.4s
FFC MLR MLR
comp=Z,1μm,20.0s
FFC Flin Flon 82.14 28 eP P 09 48 43.8 -0.4
comp=Z,183nm,1.4s
FFC e 09 48 55.2
FFC LR LR
comp=Z,1μm,20.0s
FFC Flin Flon 82.14 28 P P 09 48 44.6 +0.4
comp=Z,183nm,1.2s,SNR=21
A17A Triple J Farms 82.16 36 P P 09 48 45.0 +0.4
baz=82,SNR=58
NKC Novy Kostel 82.22 326 eP P 09 48 44.2 -0.6
NKC e*PP pP 09 48 53.9 -0.4
NKC MLR MLR
comp=Z,25μm,16.1s
NKC Novy Kostel 82.22 326 eP P 09 48 44.2 -0.6
NKC epP pP 09 48 53.9 -0.4
NKC eXS S 09 59 13.7 +16
NKC AMS AMS 10 29 10.0
comp=Z,25μm,16.1s
PLG Polygyros 82.25 313 eP P 09 48 44.2 -1.0
F13A Darby 82.25 40 ⇑ P P 09 48 45.9 +0.7
baz=82,SNR=9.8
NNZ Nelson 82.26 150 PN P 09 48 53.2 +8.5
E14A Clinton 82.32 39 P P 09 48 46.0 +0.5
baz=82,SNR=17
MOX Moxa 82.34 326 eP P 09 48 44.2 -1.2
MOX e*PP pP 09 48 56.2 +1.3
MOX pmax pmax
comp=Z,75nm,2.0s
MOX MLR MLR
comp=Z,12μm,19.9s
MOX Moxa 82.34 326 eP P 09 48 44.2 -1.2
comp=Z,75nm,2.0s
MOX epP pP 09 48 56.2 +1.3
MOX eL L 10 29 08.9
comp=Z,12μm,19.9s
C16A Fuhringer Ranc 82.37 38 ⇑ P P 09 48 45.9 +0.1
baz=82,SNR=58
KHC Kasperske Hory 82.39 324 eP P 09 48 44.7 -1.0
KHC e*PP pP 09 48 55.6 +0.4
KHC e 09 51 53.0
KHC eS S 09 59 02.9 +3.1
KHC MLR MLR
comp=Z,28μm,16.0s
KHC Kasperske Hory 82.39 324 eP P 09 48 44.9 -0.8
comp=Z,49nm,1.4s
KHC Kasperske Hory 82.39 324 eP P 09 48 44.7 -1.0
KHC epP pP 09 48 55.6 +0.4
KHC ePP PP 09 51 53.0 -1.2

KHC ex x 09 55 26.2
KHC eS **S** **09 59 02.9 +3.1**
KHC ex x 10 04 40.9
KHC AMS AMS 10 29 30.0
comp=Z,28µm,16.0s
D15A Lincoln 82.44 38 ⇑P **P** **09 48 46.4 +0.3**
baz=82,SNR=15
BEHE Becsehely 82.45 321⇑ eP **P** **09 48 45.2 -0.8**
GEC2 GERESS Array S 82.52 324 eP **P** **09 48 44.7 -1.8**
GEC2 pmax pmax
comp=Z,34nm,1.6s
GEC2 GERESS Array S 82.52 324 eP **P** **09 48 44.7 -1.8**
comp=Z,34nm,1.6s
GERES GERESS Array B 82.52 324 P **P** **09 48 45.1 -1.4**
GERES PKKPbc **PKKPbc** **10 07 12.9 +1.0**
GERES GERESS Array B 82.52 324 P **P** **09 48 45.1 -1.4**
comp=Z,2.8nm,0.6s,baz=42,slow=4.4,SNR=29
GERES PKKPbc **PKKPbc** **10 07 12.9 +1.0**
comp=Z,0.5nm,0.9s,baz=193,slow=5.5,SNR=4.9
GERES LR LR 10 29 52.6
comp=Z,22µm,18.0s,baz=47,slow=39
B17A L&G Farms, Che 82.54 37 P **P** **09 48 47.3 +0.8**
baz=82,SNR=27
KARP Karpathos 82.58 307 eP P 09 48 41.8 -5.1
A18A Metzger Ranch, 82.61 36 P **P** **09 48 47.3 +0.4**
baz=82,SNR=40
ARSA Arzberg 82.61 322⇑ iP **P** **09 48 45.7 -1.2**
comp=Z,24nm,1.4s,SNR=13
ARSA Arzberg 82.61 322⇑ iP **P** **09 48 45.7 -1.2**
comp=Z,24nm,1.4s
ROTZ Rotzenmuhle 82.64 325 eP **P** **09 48 45.9 -1.1**
comp=Z,108nm,1.5s
TUWZ Tuamarina 82.67 149 ePN P 09 48 55.4 +8.4
H12A Diamond D Ranc 82.73 41 P **P** **09 48 48.5 +0.7**
baz=83,SNR=68
WET Wettzell 82.73 325 eP **P** **09 48 46.4 -1.1**
WET pmax pmax
comp=Z,64nm,1.7s
WET Wettzell 82.73 325 eP **P** **09 48 46.4 -1.1**
comp=Z,64nm,1.7s
G13A Cobalt 82.74 41 P **P** **09 48 47.6 -0.2**
baz=83,SNR=28
KOGS Kog 82.74 321 eP **P** **09 48 46.1 -1.4**
KOGS e 09 49 04.1
F14A Wisdom 82.77 40 ⇑P **P** **09 48 48.8 +0.9**
baz=83,SNR=5.2
E15A Deer Lodge 82.77 39 P **P** **09 48 48.4 +0.5**
baz=83,SNR=31
MFID Camas Ranch 82.87 43 eP **P** **09 48 49.4 +1.0**
comp=Z,144nm,1.1s
MFID Camas Ranch 82.87 43 P **P** **09 48 49.4 +1.0**
baz=83,SNR=48
MOA Molln 82.88 323⇑ iP **P** **09 48 47.9 -0.4**
comp=Z,42nm,1.6s,SNR=18
MOA Molln 82.88 323⇑ iP **P** **09 48 47.9 -0.4**
comp=Z,42nm,1.5s
SNZO South Karori 82.91 149 PFAKE 09 49 00.0 +12
SNZO LR LR
comp=Z,937nm,22.0s
WCN Washoe City 82.94 48 eP **P** **09 48 50.4 +1.4**
WCN e 09 49 00.0
WCN pmax pmax
comp=Z,76nm,1.0s
WCN Washoe City 82.94 48 eP **P** **09 48 50.4 +1.4**
comp=Z,76nm,1.0s
WCN e 09 49 00.0
IBBN Ibbenburen 82.95 329 eP **P** **09 48 47.4 -1.1**
comp=Z,98nm,1.6s
D16A Dana Ranch, Ca 82.96 38 ⇓P **P** **09 48 49.5 +0.6**
baz=83,SNR=36
UBBA Unterbreizbach 82.97 327 eP **P** **09 48 47.4 -1.1**
comp=Z,80nm,1.6s
C17A Wharram Farm, 82.98 37 ⇑P **P** **09 48 49.1 +0.2**
baz=83,SNR=30
B18A Beardsley Farm 82.98 36 ⇑P **P** **09 48 49.7 +0.8**
baz=83,SNR=24
LIT Litokhoron 83.01 313 eP **P** **09 48 46.8 -2.3**
HRY Holter Researc 83.02 38 eP **P** **09 48 49.9 +0.7**
comp=Z,170nm,1.4s
HRY e 09 49 00.4
I12A Atlanta 83.04 42 ⇑P **P** **09 48 49.7 +0.3**
baz=83
H13A Challis 83.06 41 ⇑P **P** **09 48 50.2 +0.7**
baz=83,SNR=58
G14A Jackson 83.07 40 ⇑P **P** **09 48 49.8 +0.3**
baz=83,SNR=10
A19A Klindworth Far 83.14 35 P **P** **09 48 50.2 +0.5**
baz=83,SNR=44
GRF Grafenberg Arr 83.17 326 eP **P** **09 48 49.2 -0.5**
GRF e*PP **pP** **09 49 01.0 +1.8**
GRF pmax pmax
comp=Z,211nm,1.5s
GRF MLR MLR
comp=Z,16µm,18.9s
GRF Grafenberg Arr 83.17 326 eP **P** **09 48 49.2 -0.5**
comp=Z,211nm,1.5s
GRF epP **pP** **09 49 01.0 +1.8**
GRF eL L 10 30 05.7
comp=Z,16µm,18.9s
GRFO Grafenberg 83.17 326 eP **P** **09 48 49.2 -0.5**
GRFO pmax pmax
comp=Z,196nm,1.2s
GRFO Grafenberg 83.17 326 eP **P** **09 48 49.2 -0.5**
comp=Z,196nm,1.2s
E16A East Helena 83.22 38 P **P** **09 48 51.0 +0.8**
baz=83,SNR=47
F15A Butte 83.22 39 ⇓P **P** **09 48 50.9 +0.6**
baz=83,SNR=37
PERS Pernice 83.22 322 eP **P** **09 48 49.1 -1.0**
PERS eS **S** **09 59 05.8 -2.7**
PERS e 09 59 26.2
EGMT Eagleton 83.24 36 eP **P** **09 48 50.7 +0.5**
comp=Z,295nm,1.4s
EGMT e 09 49 00.9
EGMT LR LR
comp=Z,1µm,19.0s
EGMT Eagleton 83.24 36 ⇑P **P** **09 48 51.0 +0.8**
baz=83,SNR=39
SOKA Soboth 83.24 322⇑ iP **P** **09 48 49.3 -0.9**
comp=Z,96nm,1.4s
SOKA Soboth 83.24 322⇑ iP **P** **09 48 49.3 -0.9**
comp=Z,96nm,1.4s
LRM Limekiln Ridge 83.26 39 eP **P** **09 48 51.5 +0.9**
LRM e 09 49 02.0
CMB Columbia Colle 83.28 49 eP **P** **09 48 50.9 +0.3**
CMB pmax pmax
comp=Z,116nm,1.3s
CMB Columbia Colle 83.28 49 eP **P** **09 48 50.9 +0.3**
comp=Z,116nm,1.3s
SAO San Andreas Ge 83.32 51 eP **P** **09 48 53.0 +2.3**
SAO pmax pmax
comp=Z,67nm,1.4s
SAO San Andreas Ge 83.32 51 eP **P** **09 48 53.0 +2.3**
comp=Z,67nm,1.4s
KZN Kozani 83.33 314 eP **P** **09 48 49.9 -0.9**
D17A Six Diamond Ra 83.33 38 P **P** **09 48 51.4 +0.6**
baz=83,SNR=42
B19A Brinkman Farms 83.36 36 P **P** **09 48 51.3 +0.5**
baz=83,SNR=48
RPZ Rata Peaks 83.38 152 PN P 09 48 59.4 +8.8
RPZ Rata Peaks 83.38 152 LR LR 10 24 20.9
comp=Z,990nm,18.4s,baz=315,slow=34
ZKR Zakros 83.46 307 eP **P** **09 48 52.7 +1.2**
DLMT Dillon 83.47 40 eP **P** **09 48 52.1 +0.5**
comp=Z,185nm,1.2s
DLMT e 09 49 02.9
H14A Leadore 83.52 41 ⇑P **P** **09 48 51.6 -0.3**
baz=83,SNR=13
LKR Lokris 83.54 312 eP **P** **09 48 48.7 -3.1**
I13A Wildhorse Cree 83.54 42 ⇑P **P** **09 48 51.9 -0.1**
baz=83,SNR=73
A20A Cobblestone Ra 83.58 35 P **P** **09 48 52.1 +0.2**
baz=83,SNR=24
HLID Hailey 83.59 42 eP **P** **09 48 53.4 +1.2**
comp=Z,85nm,1.0s
HLID e 09 49 04.0
HLID LR LR
comp=Z,997nm,20.0s
HLID Hailey 83.59 42 P **P** **09 48 53.5 +1.3**
baz=84,SNR=48
OBKA Obir 83.60 322⇑ iP **P** **09 48 50.3 -1.8**
comp=Z,47nm,1.8s,SNR=11
OBKA Obir 83.60 322⇑ iP **P** **09 48 50.3 -1.8**
comp=Z,47nm,1.8s
WTSB Winterswijk 83.61 329 eP **P** **09 48 49.8 -2.0**
comp=Z,125nm,1.8s
WTSB eX 09 49 00.3
THL Klokotos Trika 83.62 313 eP **P** **09 48 49.2 -3.0**
G15A Dillon 83.65 40 ⇓P **P** **09 48 53.1 +0.6**
baz=84,SNR=70
E17A Martinsdale 83.69 38 P **P** **09 48 53.8 +1.1**
baz=84,SNR=71
RJOB Jochberg 83.70 324 eP **P** **09 48 51.9 -0.7**
comp=Z,89nm,1.6s
F16A Kennard Place, 83.72 39 P **P** **09 48 53.6 +0.8**
baz=84,SNR=24
D18A Linhart Farms, 83.76 37 P **P** **09 48 53.6 +0.7**
baz=84,SNR=21
BUG Bochum--Univer 83.77 329 eP **P** **09 48 51.2 -1.5**
comp=Z,86nm,1.6s
C19A Slack Wire Ran 83.79 36 P **P** **09 48 53.8 +0.7**
baz=84,SNR=44
BOZ Bozeman (W) 83.81 39 PFAKE 09 49 10.0 +17
BOZ LR LR
comp=Z,804nm,20.0s
BOZ Bozeman (W) 83.81 39 ⇑P **P** **09 48 54.3 +1.0**
baz=84
B20A Solberg Farm, 83.83 35 P **P** **09 48 53.5 +0.3**
baz=84,SNR=41
J13A Cove Ranch, Pi 83.83 42 ⇑P **P** **09 48 54.3 +0.9**
baz=84,SNR=79
KBA Koelnbreinsper 83.86 323 iP **P**
KBA pmax pmax
comp=Z,46nm,1.6s
KBA Koelnbreinsper 83.86 323 iP **P** **09 48 52.2 -1.3**
comp=Z,46nm,1.6s,SNR=20
KBA Koelnbreinsper 83.86 323 iP **P** **09 48 52.2 -1.3**
comp=Z,46nm,1.6s
BOJS Bojanci 83.88 321 iP **P** **09 48 52.4 -1.1**
BOJS e 09 49 07.0
BOJS eS **S** **09 59 11.0 -3.9**
BOJS e 09 59 31.1
I14A Mackay 83.91 41 P **P** **09 48 55.1 +1.2**
baz=84,SNR=82
H15A Lima 83.92 40 ⇑P **P** **09 48 54.6 +0.7**
baz=84,SNR=11
LJU Ljubljana 83.92 321 eP **P** **09 48 52.1 -1.5**
LJU eS **S** **09 59 10.0 -5.3**
LJU e 09 59 30.1
LTK Loutraki 83.92 311 eP **P** **09 48 52.9 -0.9**
G16A Moss Hill, Enn 83.99 40 ⇓P **P** **09 48 55.4 +1.2**
baz=84,SNR=18
A21A Bergtoll Ranch 83.99 34 P **P** **09 48 54.5 +0.5**
baz=84,SNR=59
MYKA Terra Mystica 84.00 322⇑ iP **P** **09 48 51.9 -2.3**
comp=Z,57nm,1.7s
MYKA Terra Mystica 84.00 322⇑ iP **P** **09 48 51.9 -2.3**
comp=Z,57nm,1.7s
TNS Taunus Mts 84.10 327 eP **P** **09 48 53.4 -1.1**
TNS pmax pmax
comp=Z,102nm,1.6s
TNS Taunus Mts 84.10 327 eP **P** **09 48 53.4 -1.1**
comp=Z,102nm,1.6s
RAR Rarotonga 84.12 119 LR LR 10 22 57.8
comp=Z,1µm,18.3s,baz=271,slow=33
E18A Harlowton 84.12 38 P **P** **09 48 55.9 +1.1**
baz=84,SNR=38
F17A Fitzpatrick Pl 84.16 38 P **P** **09 48 55.9 +0.8**
baz=84,SNR=35
FUR Furstenfeldbru 84.17 325 eP **P** **09 48 53.6 -1.3**
FUR pmax pmax
comp=Z,232nm,1.6s
FUR Furstenfeldbru 84.17 325 eP **P** **09 48 53.6 -1.3**
comp=Z,232nm,1.6s
CADS Cadrg 84.21 322 eP **P** **09 48 52.9 -2.3**
J14A Carey 84.25 42 P **P** **09 48 57.2 +1.7**
baz=84,SNR=42
IDI Anoyia 84.25 308 eP **P** **09 48 53.1 -2.5**
D19A Cripps Ranch, 84.25 37 P **P** **09 48 55.9 +0.5**
baz=84,SNR=39
VOY Vojsko 84.26 322 eP **P** **09 48 53.3 -2.2**
VOY e 09 49 06.1
C20A Veseth Ranch, 84.33 36 P **P** **09 48 56.5 +0.8**
baz=84,SNR=53
B21A Ellsworth Farm 84.33 35 P **P** **09 48 56.1 +0.4**
baz=84,SNR=34
ODZ Otahua Downs 84.34 153 eP **P** **09 48 57.0 +1.6**
comp=Z,252nm,1.0s
TOD Tromm 84.37 327 eP **P** **09 48 54.2 -1.7**
TOD Tromm 84.37 327 eP **P** **09 48 54.2 -1.7**
NVAR Mina Array Bea 84.37 48 P **P** **09 48 57.2 +0.8**
NVAR Mina Array Bea 84.37 48 P **P** **09 48 57.2 +0.8**
comp=Z,39nm,1.1s,baz=292,slow=4.8,SNR=54
GUR Goura 84.37 311 eP **P** **09 48 53.1 -3.1**
I15A Monteview 84.40 41 ⇑P **P** **09 48 57.7 +1.4**
baz=84,SNR=17
QLMT Earthquake Lak 84.44 40 eP **P** **09 48 58.4 +1.8**
QLMT e 09 49 08.1
A22A Carney Farms, 84.47 34 P **P** **09 48 56.7 +0.3**
baz=84,SNR=28
G17A Pierce Place, 84.50 39 ⇓P **P** **09 48 58.0 +1.2**
baz=84,SNR=13
ABTA Abfaltersbach 84.50 323⇑ iP **P** **09 48 54.7 -2.0**
comp=Z,48nm,1.6s,SNR=18
ABTA Abfaltersbach 84.50 323⇑ iP **P** **09 48 54.7 -2.0**
comp=Z,48nm,1.6s
MLAC Mammoth Lakes 84.51 49 ⇓P **P** **09 48 58.4 +1.3**
baz=84
WTTA Wattenberg 84.60 324 iP **P** **09 48 55.8 -1.5**
WTTA pmax pmax
comp=Z,50nm,1.5s
WTTA Wattenberg 84.60 324 iP **P** **09 48 55.8 -1.5**
comp=Z,50nm,1.5s,SNR=23
WTTA Wattenberg 84.60 324 iP **P** **09 48 55.8 -1.5**
comp=Z,50nm,1.5s
H16A Russell Place, 84.63 40 ⇓P **P** **09 48 59.0 +1.5**
baz=84
F18A Big Timber 84.66 38 P **P** **09 48 58.4 +0.8**
baz=84,SNR=48
D20A Manuel Ranch, 84.68 36 P **P** **09 48 58.4 +0.9**
baz=84,SNR=31
C21A Desert Coulee 84.70 35 P **P** **09 48 58.1 +0.5**
baz=84,SNR=21
ABH Alteburg 84.75 328 eP **P** **09 48 56.6 -1.2**
GCMT Greycliff 84.76 38 eP **P** **09 48 59.2 +1.1**
comp=Z,118nm,1.4s
GCMT e 09 49 09.1
STU Stuttgart 84.77 326 eP **P** **09 48 57.6 -0.3**
STU e 09 49 09.6
STU pmax pmax
comp=Z,82nm,1.0s
STU Stuttgart 84.77 326 eP **P** **09 48 56.2 -1.7**
comp=Z,110nm,1.6s
STU Stuttgart 84.77 326 eP **P** **09 48 57.6 -0.3**
comp=Z,82nm,1.0s
STU e 09 49 09.6
E19A Rath Farm, Rou 84.77 37 P **P** **09 48 58.9 +0.8**
baz=85,SNR=50
PTRM Twisselmann Ran 84.77 51 eP **P** **09 48 59.4 +1.2**
J15A Blackfoot 84.81 41 ⇓P **P** **09 48 59.2 +0.9**
baz=85,SNR=19
MOTA Moosalm 84.81 324⇑ iP **P** **09 48 56.7 -1.7**
MOTA pmax pmax
comp=Z,29nm,1.5s
MOTA Moosalm 84.81 324⇑ iP **P** **09 48 56.7 -1.7**
comp=Z,29nm,1.5s,SNR=7.3
MOTA Moosalm 84.81 324⇑ iP **P** **09 48 56.7 -1.7**
comp=Z,29nm,1.5s
KARN Saranos 84.83 309 eP **P** **09 48 55.4 -3.1**
MTUM Tungsten Hills 84.85 49 eP **P** **09 48 59.9 +1.1**
HGN Heimansgroeve 84.85 329 eP **P** **09 48 56.3 -1.9**
comp=Z,115nm,1.7s
HGN eX 09 49 06.7
HGN ePP **PP** **09 52 17.8 +3.7**
HGN eS **S** **09 59 19.8 -4.6**
HGN eSS SS 10 05 26.3 +31
ELK Elko 84.85 45 eP **P** **09 48 60.0 +1.2**
comp=Z,108nm,1.3s
RETA Reutte 84.89 324⇓ iPcP **P** **09 48 57.9 -0.7**
comp=Z,60nm,1.7s,SNR=23
RETA Reutte 84.89 324⇓ iP **P** **09 48 57.9 -0.7**
comp=Z,60nm,1.7s
APZ The Paps 84.90 156 PN P 09 49 08.2 +10
B22A Reddig Ranch S 84.91 35 ⇑P **P** **09 48 58.2 -0.5**
baz=85,SNR=8.0
MEM Membach 84.93 329 P **P** **09 48 57.2 -1.4**
comp=Z,28nm,1.3s
MEM XP **sP** **09 49 09.7 -2.0**
K14A Jones Ranch, D 84.93 42 P **P** **09 49 00.5 +1.4**
baz=85,SNR=49
BEBN Eben Emael 84.94 329 P **P** **09 48 59.4 +0.8**
comp=Z,18nm,1.6s
ESK Eskdalemuir 84.97 336 PFAKE 09 49 10.0 +11
ESK LR LR
comp=Z,6µm,19.0s
A23A Redstone 84.98 34 ⇓P **P** **09 48 59.3 +0.3**
baz=85,SNR=7.9
RCTC Rector, Farmer 85.03 50 P **P** **09 49 00.1 +0.7**
baz=85,SNR=10
I16A Newdale 85.03 40 ⇓P **P** **09 49 00.5 +1.0**
baz=85,SNR=51
E20A Meyer Farm, Mu 85.08 37 P **P** **09 49 00.5 +0.9**
baz=85,SNR=49
F19A Roth Farm, Mol 85.09 38 P **P** **09 49 00.7 +0.9**
baz=85,SNR=16
RUP Ruppelstein 85.11 328 eP **P** **09 48 58.1 -1.5**
RUP Ruppelstein 85.11 328 eP **P** **09 48 58.1 -1.5**
SMMC Simmler 85.11 51 ⇑P **P** **09 49 01.9 +2.0**
baz=85
G18A Lazy EL Ranch, 85.13 38 ⇑P **P** **09 49 00.1 +0.1**
baz=85,SNR=9.2
LKWY Lake 85.18 39 PFAKE 09 49 10.0 +10
LKWY LR LR
comp=Z,2µm,21.0s
H17A Grant Village 85.19 40 ⇑P **P** **09 49 03.5 +3.0**
baz=85,SNR=53
K15A Arbon 85.21 42 P **P** **09 49 02.2 +1.7**
baz=85,SNR=13
L14A Malta 85.22 43 P **P** **09 49 01.9 +1.4**
baz=85,SNR=44
FETA Feichten 85.22 324⇑ iP **P** **09 48 58.8 -1.6**
comp=Z,25nm,1.6s,SNR=8.5
FETA Feichten 85.22 324⇑ iP **P** **09 48 58.8 -1.6**
comp=Z,25nm,1.6s
TIN Tinemaha 85.24 49 ⇓P **P** **09 49 01.8 +1.2**
baz=85,SNR=7.6
D21A La Casta Ranch 85.27 36 P **P** **09 49 01.1 +0.6**
baz=85,SNR=28
LANF Langenberg 85.27 327 eP **P** **09 48 59.2 -1.2**
LANF Langenberg 85.27 327 eP **P** **09 48 59.2 -1.2**
LANF Langenberg 85.27 327 eP **P** **09 48 59.2 -1.2**
B23A Brockton 85.28 34 P **P** **09 49 01.1 +0.6**
baz=85,SNR=26
IMW Indian Meadow 85.32 40 eP **P** **09 49 02.5 +1.4**
comp=Z,138nm,1.4s
IMW e 09 49 13.0
VLS Valsamata 85.34 313 eP **P** **09 49 00.3 -0.7**
C22A Vida 85.35 35 P **P** **09 49 01.1 +0.3**
baz=85,SNR=9.7
J16A Bone 85.35 41 ⇓P **P** **09 49 02.4 +1.2**
baz=85
BCLA Clavier 85.37 329 P **P** **09 49 01.1 +0.2**
comp=Z,23nm,1.8s
BCLA AP **pP** **09 49 10.4 0.0**
BCLA XP **sP** **09 49 12.6 -1.3**
DCID1 Drake Creek 85.38 40 eP **P** **09 49 03.0 +1.7**
comp=Z,241nm,1.4s
DCID1 e 09 49 13.3
VES Vestal, Richgr 85.40 50 P **P** **09 49 01.1 -0.2**
baz=85,SNR=21
RLMT Red Lodge 85.41 38 PFAKE 09 49 10.0 +8.5
RLMT LR LR
comp=Z,2µm,21.0s
RLMT Red Lodge 85.41 38 ⇑P **P** **09 49 02.7 +1.3**
baz=85
A24A Westby 85.42 33 ⇓P **P** **09 49 01.9 +0.7**
baz=85,SNR=9.8
SPAK Spaichingen-Ko 85.43 326 eP **P** **09 48 59.6 -1.7**
DAVA Damuels 85.46 325⇑ iP **P** **09 49 00.2 -1.4**
comp=Z,89nm,1.6s,SNR=22
DAVA Damuels 85.46 325⇑ iP **P** **09 49 00.2 -1.4**
comp=Z,89nm,1.6s
RRI2 Red Ridge 85.47 41 eP **P** **09 49 02.9 +1.1**
comp=Z,201nm,1.5s
RRI2 e 09 49 13.0
PKM Peak Mountain 85.47 51 P **P** **09 49 03.4 +1.5**
baz=85,SNR=11
BFO Black Forest 85.49 326 eP **P** **09 49 00.2 -1.3**
BFO e 09 49 13.0
BFO pmax pmax
comp=Z,92nm,1.2s
BFO MLR MLR
comp=Z,6µm,21.0s
BFO Black Forest 85.49 326 eP **P** **09 48 59.8 -1.7**
comp=Z,120nm,1.6s
BFO Black Forest 85.49 326 eP **P** **09 49 00.2 -1.3**
comp=Z,92nm,1.2s
BFO e 09 49 13.0
BFO LR LR
comp=Z,6µm,21.0s
BFO Black Forest 85.49 326 P **P** **09 49 00.2 -1.3**
comp=Z,89nm,1.6s,SNR=22
H18A Shoshone NF, C 85.50 39 ⇑P **P** **09 49 02.7 +0.8**
baz=85,SNR=22
I17A Pilgrim Ck. 85.50 40 ⇑P **P** **09 49 02.6 +0.6**
baz=85,SNR=27
MOOW Moose Ponds 85.52 40 eP **P** **09 49 03.2 +1.1**
comp=Z,151nm,1.6s
MOOW e 09 49 13.8
F20A Billings 85.54 37 ⇑P **P** **09 49 02.5 +0.6**
baz=85
WLF Walferdange 85.54 328 P **P** **09 49 00.8 -0.9**
comp=Z,56nm,1.6s
WLF XP **sP** **09 49 14.6 -0.1**
WLF Walferdange 85.54 328 eP **P** **09 49 01.1 -0.6**
WLF e 09 49 13.7
WLF pmax pmax
comp=Z,31nm,0.1s
WLF MLR MLR
comp=Z,9µm,19.0s
WLF Walferdange 85.54 328 eP **P** **09 49 00.4 -1.3**
comp=Z,121nm,1.6s
WLF Walferdange 85.54 328 eP **P** **09 49 01.1 -0.6**
comp=Z,31nm,0.1s
WLF e 09 49 13.7
WLF LR LR
comp=Z,9µm,19.0s
TPAW Teton Pass 85.58 40 eP **P** **09 49 03.3 +0.9**
comp=Z,88nm,1.0s
TPAW e 09 49 14.6
E21A Keefer Ranch, 85.59 36 ⇑P **P** **09 49 03.9 +1.8**
baz=85,SNR=6.9
D22A Cohagen 85.62 35 P **P** **09 49 03.3 +1.1**
baz=85,SNR=30
C23A Lambert 85.65 35 P **P** **09 49 03.1 +0.7**
baz=86,SNR=12
DGMT Dagmar 85.65 34 eP **P** **09 49 03.2 +0.9**
comp=Z,463nm,1.7s
DGMT e 09 49 13.1
DGMT LR LR
comp=Z,1µm,20.0s
DGMT Dagmar 85.65 34 ⇑P **P** **09 49 03.0 +0.7**
baz=86,SNR=16
K16A Soda Springs 85.65 41 ⇓P **P** **09 49 03.6 +0.9**
baz=86,SNR=45
HVU Hansel Valley 85.65 43 eP **P** **09 49 04.2 +1.5**
HVU e 09 49 14.1
HVU pmax pmax
comp=Z,103nm,1.1s
HVU Hansel Valley 85.65 43 eP **P** **09 49 04.2 +1.5**
comp=Z,103nm,1.1s
HVU e 09 49 14.1
LOHW Long Hollow 85.69 40 eP **P** **09 49 03.8 +0.9**
comp=Z,48nm,1.2s
LOHW e 09 49 14.6
CWC Cottonwood Cre 85.70 49 ⇑P **P** **09 49 04.4 +1.4**
baz=86
SNOW Snow King Moun 85.70 40 eP **P** **09 49 04.3 +1.3**
comp=Z,74nm,1.2s
SNOW e 09 49 14.5
REDW Red Top Meadow 85.72 41 eP **P** **09 49 05.1 +2.1**
comp=Z,1.8nm,1.4s
REDW e 09 49 14.0
FUORN Ofenpass-Fuorn 85.73 324 eP **P** **09 49 01.8 -1.3**
comp=Z,89nm,1.1s
L15A Malad City 85.73 42 P **P** **09 49 04.0 +1.0**
baz=86,SNR=25
SNF Seneffe 85.75 329 P **P** **09 49 01.4 -1.3**
comp=Z,24nm,1.5s
SNF AP **pP** **09 49 12.0 -0.3**
J17A Brown Place, J 85.79 40 P **P** **09 49 04.7 +1.3**
baz=86,SNR=14
SBC Santa Barbara 85.81 52 ⇑P **P** **09 49 04.4 +1.1**
baz=86
GIVF Givet 85.82 329 eP **P** **09 49 01.0 -2.1**
comp=Z,80nm,1.2s
GIVF Givet 85.82 329 eP **P** **09 49 01.0 -2.1**
GIVF pmax pmax
comp=Z,80nm,1.2s

GIVF	Givet	85.82	329	eP	P	09 49 01.0	-2.1
	comp=Z,80nm,1.2s						
GRAC	Grapevine Rang	85.82	49	⇑P	P	09 49 04.6	+1.2
	baz=86,SNR=36						
H19A	Powell	85.86	39	P	P	09 49 04.9	+1.3
	baz=86,SNR=28						
G20A	Bridger	85.90	38	P	P	09 49 04.0	+0.2
	baz=86,SNR=15						
ISA	Isabella	85.91	50	eP	P	09 49 04.1	+0.2
ISA				e		09 49 13.8	
ISA				pmax	pmax		
	comp=Z,69nm,1.4s						
ISA	Isabella	85.91	50	eP	P	09 49 04.1	+0.2
	comp=Z,68nm,1.4s						
ISA				e		09 49 13.8	
ISA	Isabella	85.91	50	⇓P	P	09 49 03.8	-0.1
	baz=86,SNR=9.9						
DOU	Dourbes	85.92	329	P	P	09 49 03.1	-0.4
	comp=Z,17nm,1.6s						
CDF	Champ du Feu	85.92	327	eP	P	09 49 02.1	-1.7
	comp=Z,152nm,1.2s						
CDF	Champ du Feu	85.92	327	eP	P	09 49 02.1	-1.7
CDF				pmax	pmax		
	comp=Z,152nm,1.2s						
CDF	Champ du Feu	85.92	327	eP	P	09 49 02.1	-1.7
	comp=Z,152nm,1.2s						
LIBD	Limburg	85.96	326	eP	P	09 49 02.5	-1.3
LIBD	Limburg	85.96	326	eP	P	09 49 02.5	-1.3
FELD	Feldberg im Sc	85.96	326	eP	P	09 49 02.2	-1.8
AHID	Auburn Hatcher	85.97	41	PFAKE		09 49 20.0	+16
AHID				LR	LR		
	comp=Z,902nm,21.0s						
ARVC	Arvin	85.99	51	⇑P	P	09 49 03.6	-0.7
	baz=86,SNR=5.9						
M15A	Larsen Ranch,	86.04	43	P	P	09 49 06.0	+1.5
	baz=86,SNR=22						
F21A	Absaloka Mine,	86.05	37	⇑P	P	09 49 05.1	+0.6
	baz=86,SNR=5.1						
I18A	Diamond G Ranc	86.06	40	⇑P	P	09 49 04.5	-0.3
	baz=86,SNR=19						
K17A	Gardner Place,	86.08	41	⇓P	P	09 49 05.5	+0.8
	baz=86,SNR=5.1						
D23A	Lindsay	86.08	35	P	P	09 49 05.3	+0.8
	baz=86,SNR=33						
DAC	Darwin (Calif)	86.11	49	PFAKE		09 49 20.0	+15
DAC				LR	LR		
	comp=Z,918nm,20.0s						
BAIF	Baives	86.12	329	eP	P	09 49 02.6	-1.9
	comp=Z,72nm,1.6s						
BAIF	Baives	86.12	329	eP	P	09 49 02.6	-1.9
BAIF				pmax	pmax		
	comp=Z,72nm,1.6s						
BAIF	Baives	86.12	329	eP	P	09 49 02.6	-1.9
	comp=Z,72nm,1.6s						
ECH	Echery	86.12	327	eP	P	09 49 02.9	-1.8
ECH	Echery	86.12	327	eP	P	09 49 02.9	-1.8
ECH	Echery	86.12	327	eP	P	09 49 02.9	-1.8
R11A	Troy Canyon, C	86.12	47	P	P	09 49 05.9	+0.9
	baz=86,SNR=46						
BSC	Santa Cruz Isl	86.13	52	⇑P	P	09 49 05.8	+0.8
	baz=86						
C24A	Savage	86.20	34	⇑P	P	09 49 05.5	+0.4
	baz=86,SNR=19						
E22A	Miles City	86.22	36	P	P	09 49 05.7	+0.5
	baz=86,SNR=26						
L16A	Fish Haven	86.27	42	⇓P	P	09 49 05.5	-0.3
	baz=86,SNR=8.4						
J18A	Kendall Valley	86.27	40	P	P	09 49 06.8	+1.0
	baz=86,SNR=43						
I19A	Meeteetse	86.28	39	⇑P	P	09 49 05.4	-0.4
	baz=86,SNR=12						
TUE	Stuetta	86.29	324	eP	P	09 49 03.9	-1.9
	comp=Z,123nm,1.4s						
TUE				e		09 49 19.4	
MPMC	Manual Prospec	86.31	49	⇑P	P	09 49 06.4	+0.4
	baz=86,SNR=49						
OSI	Osito Adit	86.37	51	eP	P	09 49 07.5	+1.4
	comp=Z,75nm,1.1s						
OSI				e		09 49 17.2	
OSI	Osito Adit	86.37	51	⇑P	P	09 49 07.2	+1.0
	baz=86,SNR=8.5						
MOF	Molkenrain	86.39	326	eP	P	09 49 04.2	-1.9
MOF	Molkenrain	86.39	326	eP	P	09 49 04.2	-1.9
MOF	Molkenrain	86.39	326	eP	P	09 49 04.2	-1.9
G21A	Lodge Grass	86.42	37	⇓P	P	09 49 06.6	+0.3
	baz=86,SNR=8.8						
BLG	Laguna Peak	86.44	52	⇓P	P	09 49 07.4	+0.8
	baz=86						
HWUT	Hardware Ranch	86.46	42	PFAKE		09 49 20.0	+13
HWUT				LR	LR		
	comp=Z,922nm,20.0s						
FURC	Furnace Creek,	86.47	49	P	P	09 49 07.8	+1.3
	baz=86,SNR=26						
BBS	Basel-Blauen	86.49	326	eP	P	09 49 04.4	-2.1
BBS	Basel-Blauen	86.49	326	eP	P	09 49 04.4	-2.1
E23A	Ismay	86.50	36	P	P	09 49 07.6	+1.0
	baz=86,SNR=26						
H20A	Greybull	86.51	38	P	P	09 49 07.2	+0.5
	baz=86,SNR=46						
F22A	Rosebud	86.53	37	P	P	09 49 07.2	+0.4
	baz=86,SNR=21						
L17A	Cokeville	86.53	41	P	P	09 49 08.4	+1.3
	baz=86,SNR=17						
LRMC	Laurel Mountai	86.53	50	P	P	09 49 07.6	+0.5
	baz=86,SNR=17						
PAGF	Fort de Pagny	86.54	327	eP	P	09 49 05.1	-1.6
	comp=Z,53nm,1.4s						
PAGF	Fort de Pagny	86.54	327	eP	P	09 49 05.1	-1.6
	comp=Z,53nm,1.4s						
D24A	Glendive	86.55	35	⇑P	P	09 49 08.5	+1.7
	baz=86,SNR=19						
HINF	Hinteralfeld	86.55	326	eP	P	09 49 04.5	-2.3
	comp=Z,110nm,1.5s						
HINF	Hinteralfeld	86.55	326	eP	P	09 49 04.5	-2.3
HINF				pmax	pmax		
	comp=Z,110nm,1.5s						
HINF	Hinteralfeld	86.55	326	eP	P	09 49 04.5	-2.3
	comp=Z,110nm,1.5s						
M16A	Huntsville	86.61	42	⇑P	P	09 49 08.6	+1.1
	baz=86						
DUG	Dugway	86.64	44	eP	P	09 49 08.6	+1.1
DUG				e		09 49 19.0	
DUG				pmax	pmax		
	comp=Z,161nm,1.2s						
DUG				MLR	MLR		
	comp=Z,885nm,20.0s						
DUG	Dugway	86.64	44	eP	P	09 49 08.6	+1.1
	comp=Z,161nm,1.2s						
DUG				e		09 49 19.0	
DUG				LR	LR		
	comp=Z,885nm,20.0s						
DUG	Dugway	86.64	44	P	P	09 49 08.7	+1.1
	baz=86,SNR=46						
K18A	Toltan Ranch,	86.64	41	⇑P	P	09 49 08.8	+1.2
	baz=86,SNR=7.8						
HAU	Haudompre	86.65	327	eP	P	09 49 05.2	-2.1
	comp=Z,110nm,1.4s						
HAU				eR			
	comp=Z,9µm,18.0s						
HAU	Haudompre	86.65	327	eP	P	09 49 05.2	-2.1
HAU				pmax	pmax		
	comp=Z,110nm,1.4s						
HAU	Haudompre	86.65	327	eP	P	09 49 05.2	-2.1
	comp=Z,110nm,1.4s						
THEF	They Montfort	86.66	327	eP	P	09 49 04.4	-2.9
THEF	They Montfort	86.66	327	eP	P	09 49 04.4	-2.9
THEF	They Montfort	86.66	327	eP	P	09 49 04.4	-2.9
EDW2	Edwards Air Fo	86.69	51	⇑P	P	09 49 08.9	+1.1
	baz=87,SNR=13						
J19A	Crowheart	86.77	40	P	P	09 49 09.1	+1.0
	baz=87,SNR=37						
O15A	The Old Anders	86.79	44	⇓P	P	09 49 09.9	+1.6
	baz=87						
I20A	Worland	86.80	39	P	P	09 49 09.7	+1.5
	baz=87,SNR=17						
BW06	Boulder Array	86.82	40	eP	P	09 49 08.5	0.0
	comp=Z,130nm,1.2s						
BW06				e		09 49 19.3	
BW06				LR	LR		
	comp=Z,847nm,19.0s						
BW06	Boulder Array	86.82	40	⇓P	P	09 49 09.0	+0.5
	baz=87						
PDAR	Pinedale Array	86.82	40	P	P	09 49 08.6	+0.1
PDAR				PKKPbc	PKKPbc	10 07 02.1	+0.1
PDAR	Pinedale Array	86.82	40	P	P	09 49 08.6	+0.1
	comp=Z,10nm,0.9s,baz=292,slow=1.6,SNR=50						
PDAR				PKKPbc	PKKPbc	10 07 02.1	+0.1

	comp=Z,1.1nm,1.0s,baz=132,slow=2.2,SNR=4.9						
DECC	Green Verdugo	86.85	51	⇑P	P	09 49 09.8	+1.3
	baz=87						
MEZF	Maizieres J'vi	86.89	328	eP	P	09 49 06.8	-1.6
	comp=Z,195nm,1.3s						
MEZF	Maizieres J'vi	86.89	328	eP	P	09 49 06.8	-1.6
	comp=Z,195nm,1.3s						
G22A	Birney	86.89	37	⇓P	P	09 49 09.5	+0.9
	baz=87,SNR=11						
LOMF	Lomont	86.89	326	eP	P	09 49 04.8	-3.8
LOMF	Lomont	86.89	326	eP	P	09 49 04.8	-3.8
LOMF	Lomont	86.89	326	eP	P	09 49 04.8	-3.8
H21A	Big Horn, Sher	86.91	38	P	P	09 49 09.4	+0.6
	baz=87,SNR=12						
E24A	Baker	86.95	35	⇑P	P	09 49 09.3	+0.5
	baz=87,SNR=6.9						
AQU	L'Aquila	86.95	319	eP	P	09 49 09.4	+0.5
	comp=Z,34nm,0.8s						
AQU				LR	LR		
	comp=Z,9µm,20.0s						
AQU	L'Aquila	86.95	319	⇑iP	P	09 49 09.0	+0.1
AQU	L'Aquila	86.95	319	eP	P	09 49 06.5	-2.4
PASC	Pasadena Art C	86.99	51	eP	P	09 49 10.6	+1.4
	comp=Z,77nm,1.4s						
PASC				e		09 49 19.3	
N16A	Rees Ranch, Co	87.00	43	⇓P	P	09 49 11.6	+2.2
	baz=87,SNR=5.1						
MWC	Mount Wilson	87.04	51	eP	P	09 49 11.1	+1.5
MWC				e		09 49 20.2	
MWC				pmax	pmax		
	comp=Z,60nm,1.2s						
MWC	Mount Wilson	87.04	51	eP	P	09 49 11.1	+1.5
	comp=Z,60nm,1.2s						
MWC				e		09 49 20.2	
M17A	Scullys Gap (B	87.06	42	P	P	09 49 10.3	+0.6
	baz=87,SNR=30						
TIP	Timpagrande	87.07	315	eP	P	09 49 10.5	+1.0
	comp=Z,24nm,1.1s						
TIP				LR	LR		
	comp=Z,6µm,19.0s						
CUC	Castrocucco	87.11	316	PFAKE		09 49 20.0	+10
CUC				LR	LR		
	comp=Z,5µm,19.0s						
SFTF	Sexfontaines	87.11	328	eP	P	09 49 07.5	-2.0
	comp=Z,195nm,1.3s						
SFTF	Sexfontaines	87.11	328	eP	P	09 49 07.5	-2.0
	comp=Z,195nm,1.3s						
L18A	Fontenelle, Gr	87.11	41	P	P	09 49 10.9	+1.0
	baz=87,SNR=34						
K19A	Absolon Red Bu	87.17	40	⇓P	P	09 49 10.4	+0.2
	baz=87,SNR=5.2						
JLU	Jordanelle	87.17	43	eP	P	09 49 11.6	+1.3
	comp=Z,110nm,1.4s						
JLU				e		09 49 20.4	
SHOC	Shoshone	87.19	49	⇓P	P	09 49 11.1	+1.0
	baz=87,SNR=6.0						
GSC	Goldstone	87.21	50	eP	P	09 49 11.3	+1.0
GSC				e		09 49 21.6	
GSC				pmax	pmax		
	comp=Z,106nm,1.4s						
GSC	Goldstone	87.21	50	eP	P	09 49 11.3	+1.0
	comp=Z,106nm,1.4s						
GSC				e		09 49 21.6	
GSC	Goldstone	87.21	50	⇓P	P	09 49 11.2	+0.8
	baz=87,SNR=14						
J20A	Shoshoni	87.23	39	P	P	09 49 11.1	+0.8
	baz=87,SNR=20						
H22A	Clearmont	87.30	37	⇓P	P	09 49 09.3	-1.3
	baz=87,SNR=9.1						
N17A	Moffit Pass	87.31	42	P	P	09 49 11.8	+0.9
	baz=87,SNR=24						
I21A	Big Trails, Te	87.34	38	P	P	09 49 11.8	+0.9
	baz=87,SNR=20						
P15A	Leamington	87.35	44	P	P	09 49 12.2	+1.2
	baz=87,SNR=35						
VLC	Villacollemand	87.36	322	PFAKE		09 49 20.0	+9.2
VLC				LR	LR		
	comp=Z,10µm,19.0s						
G23A	Biddle	87.36	36	⇑P	P	09 49 11.0	+0.1
	baz=87,SNR=19						
SENIN	Lac Senin/Sane	87.37	325	eP	P	09 49 10.3	-0.8
	comp=Z,26nm,1.2s						
L19A	Farson	87.38	41	P	P	09 49 11.8	+0.7
	baz=87,SNR=34						
F24A	Ekalaka	87.39	36	⇓P	P	09 49 11.2	+0.2
	baz=87,SNR=27						
DAU	Daniels Canyon	87.41	43	eP	P	09 49 12.8	+1.3
DAU				e		09 49 23.3	
DAU				pmax	pmax		
	comp=Z,110nm,1.1s						
DAU	Daniels Canyon	87.41	43	eP	P	09 49 12.8	+1.3
	comp=Z,110nm,1.1s						
DAU				e		09 49 23.3	
M18A	Lyman	87.42	42	P	P	09 49 12.6	+1.2
	baz=87,SNR=12						
MPU	Maple Canyon	87.45	43	eP	P	09 49 12.6	+1.0
	comp=Z,145nm,1.1s						
MPU				e		09 49 22.9	
K20A	Yellowstone Ra	87.56	40	⇓P	P	09 49 12.5	+0.5
	baz=87,SNR=16						
J21A	Lysite	87.58	39	P	P	09 49 12.8	+0.7
	baz=87,SNR=50						
P16A	Fountain Green	87.69	44	P	P	09 49 14.6	+1.9
	baz=88,SNR=19						
TUQ	Turquoise Moun	87.70	49	P	P	09 49 13.9	+1.1
	baz=88,SNR=13						
I22A	9 Mile Ranch,	87.71	38	P	P	09 49 13.6	+1.0
	baz=88,SNR=22						
G24A	Alzada	87.77	36	⇑P	P	09 49 13.2	+0.4
	baz=88,SNR=19						
CABF	La Chapelle	87.78	326	eP	P	09 49 10.7	-2.1
	comp=Z,78nm,1.4s						
CABF	La Chapelle	87.78	326	eP	P	09 49 10.7	-2.1
CABF				pmax	pmax		
	comp=Z,78nm,1.4s						
CABF	La Chapelle	87.78	326	eP	P	09 49 10.7	-2.1
	comp=Z,78nm,1.4s						
ARUT	Antelope Range	87.79	46	eP	P	09 49 14.7	+1.5
ARUT				e		09 49 23.9	
ARUT				pmax	pmax		
	comp=Z,102nm,1.5s						
ARUT	Antelope Range	87.79	46	eP	P	09 49 14.7	+1.5
	comp=Z,102nm,1.5s						
ARUT				e		09 49 23.9	
O17A	Robinson Place	87.85	43	⇑P	P	09 49 14.8	+1.3
	baz=88,SNR=38						
M19A	Rock Springs	87.88	41	⇓P	P	09 49 14.3	+0.7
	baz=88,SNR=9.0						
N18A	Larsen Ranch,	87.94	42	P	P	09 49 14.9	+1.1
	baz=88,SNR=20						
ULM	Lac du Bonnet	87.97	28	P	P	09 49 13.7	+0.1
ULM	Lac du Bonnet	87.97	28	P	P	09 49 13.7	+0.1
	comp=Z,60nm,1.0s,baz=321,slow=5.3,SNR=40						
ULM				LR	LR	10 34 21.0	
	comp=Z,1µm,18.1s,baz=147,slow=40						
MURC	Murrieta	87.99	51	⇓P	P	09 49 14.8	+0.8
	baz=88,SNR=5.7						
CCUT	Cedar City	87.99	46	eP	P	09 49 15.6	+1.3
	comp=Z,39nm,1.4s						
CCUT				e		09 49 25.6	
L20A	Wamsutter	88.00	40	P	P	09 49 15.5	+1.3
	baz=88,SNR=19						
J22A	Midwest	88.04	38	⇓P	P	09 49 14.9	+0.6
	baz=88,SNR=51						
MSU	Marysvale	88.09	45	eP	P	09 49 15.9	+1.2
MSU				e		09 49 26.4	
MSU				pmax	pmax		
	comp=Z,215nm,1.4s						
MSU	Marysvale	88.09	45	eP	P	09 49 15.9	+1.2
	comp=Z,215nm,1.4s						
MSU				e		09 49 26.4	
H24A	Dirks Ranch, A	88.11	36	⇓P	P	09 49 14.7	+0.3
	baz=88,SNR=28						
TMUT	Trail Mountain	88.16	44	eP	P	09 49 16.9	+1.8
	comp=Z,95nm,1.4s						
TMUT				e		09 49 26.4	
K21A	Alcova	88.17	39	P	P	09 49 15.6	+0.7
	baz=88,SNR=51						
CEL	Celeste	88.17	315	PFAKE		09 49 20.0	+5.2
CEL				LR	LR		
	comp=Z,5µm,19.0s						
CEL	Celeste	88.17	315	eP	P	09 49 10.3	-4.5
MDND	Maddock	88.21	32	⇑P	P	09 49 16.5	+1.7
	baz=88						
O18A	Roosevelt	88.22	42	⇑P	P	09 49 15.5	+0.4
	baz=88,SNR=36						
LPL	La Plagne	88.26	325	eP	P	09 49 12.9	-2.4

	comp=Z,31nm,0.7s						
LPL	La Plagne	88.26	325	eP	P	09 49 12.9	-2.4
LPL				pmax	pmax		
	comp=Z,31nm,0.7s						
LPL	La Plagne	88.26	325	eP	P	09 49 12.9	-2.4
	comp=Z,31nm,0.7s						
LPG	La Plagne	88.26	325	eP	P	09 49 13.1	-2.3
	comp=Z,33nm,0.7s						
LPG	La Plagne	88.26	325	eP	P	09 49 13.1	-2.3
LPG				pmax	pmax		
	comp=Z,33nm,0.7s						
LPG	La Plagne	88.26	325	eP	P	09 49 13.1	-2.3
	comp=Z,33nm,0.7s						
GMRC	Granite Mounta	88.27	50	⇑P	P	09 49 16.2	+0.7
	baz=88,SNR=7.8						
N19A	John Jarvie Ra	88.28	42	⇓P	P	09 49 15.6	+0.2
	baz=88,SNR=20						
P17A	Butcher Ranch,	88.32	43	P	P	09 49 16.9	+1.3
	baz=88,SNR=24						
LOR	Lormes	88.34	327	eP	P	09 49 13.0	-2.4
	comp=Z,68nm,1.4s						
LOR				eR			
	comp=Z,6µm,19.5s						
LOR	Lormes	88.34	327	eP	P	09 49 13.0	-2.4
	comp=Z,68nm,1.4s						
Q16A	Castle Valley	88.43	44	P	P	09 49 17.6	+1.3
	baz=88,SNR=26						
M20A	Sweetwater, Wa	88.43	41	⇑P	P	09 49 17.2	+0.9
	baz=88,SNR=25						
OG35	Corcelles	88.44	326	eP	P	09 49 14.0	-1.9
LDFC	Landfair	88.44	49	eP	P	09 49 17.4	+1.1
	comp=Z,200nm,1.5s						
LDFC				e		09 49 27.0	
PFO	Pinyon Flat Ob	88.47	51	eP	P	09 49 18.6	+2.1
	comp=Z,120nm,1.5s						
PFO				e		09 49 26.9	
PFO				LR	LR		
	comp=Z,2µm,19.0s						
PFO	Pinyon Flat Ob	88.47	51	⇓P	P	09 49 17.9	+1.5
	baz=88,SNR=7.5						
P18A	Preston Nutter	88.51	43	P	P	09 49 18.0	+1.3
	baz=88,SNR=68						
BELC	Belle Mtn. Jos	88.53	50	⇓P	P	09 49 18.0	+1.3
	baz=88						
J23A	Dilts Ranch, B	88.54	38	⇑P	P	09 49 17.9	+1.3
	baz=88						
K22A	Casper	88.55	39	P	P	09 49 17.6	+0.9
	baz=88,SNR=14						
L21A	Rawlins	88.56	40	⇓P	P	09 49 17.5	+0.7
	baz=88,SNR=26						
BNI	Bardonecchia	88.61	325	eP	P	09 49 15.4	-1.5
BNI				pmax	pmax		
	comp=Z,18nm,1.0s						
BNI				MLR	MLR		
	comp=Z,18µm,19.0s						
BNI	Bardonecchia	88.61	325	eP	P	09 49 15.4	-1.5
	comp=Z,18nm,1.0s						
BNI				LR	LR		
	comp=Z,18µm,19.0s						
SSF	Saint Saulge	88.65	328	eP	P	09 49 14.6	-2.3
	comp=Z,47nm,1.2s						
SSF	Saint Saulge	88.65	328	eP	P	09 49 14.6	-2.3
SSF				pmax	pmax		
	comp=Z,47nm,1.2s						
SSF	Saint Saulge	88.65	328	eP	P	09 49 14.6	-2.3
	comp=Z,47nm,1.2s						
SRU	San Rafael	88.69	44	eP	P	09 49 18.1	+0.7
SRU				e		09 49 28.9	
SRU	San Rafael	88.69	44	eP	P	09 49 18.1	+0.7
	comp=Z,3µm,1.0s						
SRU				e		09 49 28.9	
SRU	San Rafael	88.69	44	P	P	09 49 18.3	+0.9
	baz=89,SNR=28						
I24A	Kuemmerle Ranc	88.70	37	⇓P	P	09 49 18.8	+1.5
	baz=88						
O19A	Miners Draw (B	88.71	42	P	P	09 49 18.0	+0.5
	baz=89,SNR=20						
MBDF	Montbardon	88.80	324	eP	P	09 49 14.9	-2.9
	comp=Z,60nm,1.3s						
MBDF	Montbardon	88.80	324	eP	P	09 49 14.9	-2.9
MBDF				pmax	pmax		
	comp=Z,60nm,1.3s						
MBDF	Montbardon	88.80	324	eP	P	09 49 14.9	-2.9
	comp=Z,60nm,1.3s						
M21A	Separation Pea	88.81	40	P	P	09 49 18.7	+0.7
	baz=89,SNR=18						
SMF	Signal de Mont	88.81	327	eP	P	09 49 15.2	-2.4
	comp=Z,94nm,1.2s						
SMF	Signal de Mont	88.81	327	eP	P	09 49 15.2	-2.4
SMF				pmax	pmax		
	comp=Z,94nm,1.2s						
SMF	Signal de Mont	88.81	327	eP	P	09 49 15.2	-2.4
	comp=Z,94nm,1.2s						
RSSD	Black Hills	88.81	37	eP	P	09 49 18.4	+0.4
RSSD	Black Hills	88.81	37	eP	P	09 49 18.4	+0.4
	comp=Z,273nm,1.5s						
N20A	Spence Gulch,	88.83	41	⇑P	P	09 49 18.6	+0.5
	baz=89,SNR=28						
AVF	Avril sur Loir	88.92	327	eP	P	09 49 15.9	-2.2
	comp=Z,50nm,1.1s						
AVF	Avril sur Loir	88.92	327	eP	P	09 49 15.9	-2.2
AVF				pmax	pmax		
	comp=Z,50nm,1.1s						
AVF	Avril sur Loir	88.92	327	eP	P	09 49 15.9	-2.2
	comp=Z,50nm,1.1s						
MONP	Monument Peak	88.94	51	⇑P	P	09 49 18.1	-0.7
	baz=89,SNR=6.1						
SAOF	Saorge	88.94	323	eP	P	09 49 17.8	-0.5
SAOF	Saorge	88.94	323	eP	P	09 49 17.8	-0.5
SAOF	Saorge	88.94	323	eP	P	09 49 17.8	-0.5
K23A	Bowen Ranch, D	88.95	38	P	P	09 49 19.1	+0.6
	baz=89,SNR=6.8						
IRM	Iron Mountain	88.99	50	⇑P	P	09 49 19.7	+0.9
	baz=89,SNR=6.4						
L22A	Ellis Ranch, M	89.02	39	⇓P	P	09 49 18.8	-0.2
	baz=89,SNR=20						
J24A	Dixon Ranch, L	89.05	37	⇑P	P	09 49 17.6	-1.3
	baz=89						
SBF	Sospel	89.09	323	eP	P	09 49 16.1	-2.9
	comp=Z,41nm,0.9s						
SBF	Sospel	89.09	323	eP	P	09 49 16.1	-2.9
SBF				pmax	pmax		
	comp=Z,41nm,0.9s						
SBF	Sospel	89.09	323	eP	P	09 49 16.1	-2.9
	comp=Z,41nm,0.9s						
BC3	Big Chuckawall	89.10	50	⇑P	P	09 49 18.9	-0.5
	baz=89						
ORIF	Oris-en-Rattie	89.10	325	eP	P	09 49 17.0	-2.1
	comp=Z,44nm,1.2s						
ORIF				eR			
	comp=Z,7µm,18.8s						
ORIF	Oris-en-Rattie	89.10	325	eP	P	09 49 17.0	-2.1
ORIF				pmax	pmax		
	comp=Z,44nm,1.2s						
ORIF	Oris-en-Rattie	89.10	325	eP	P	09 49 17.0	-2.1
	comp=Z,44nm,1.2s						
PGF	Pioggiola	89.20	322	eP	P	09 49 17.5	-2.2
	comp=Z,50nm,1.2s						
PGF	Pioggiola	89.20	322	eP	P	09 49 17.5	-2.2
PGF				pmax	pmax		
	comp=Z,50nm,1.2s						
PGF	Pioggiola	89.20	322	eP	P	09 49 17.5	-2.2
	comp=Z,50nm,1.2s						
W13A	Hualapai Mount	89.21	48	⇑P	P	09 49 22.0	+2.0
	baz=89,SNR=6.4						
P19A	Cripple Cowboy	89.23	42	⇓P	P	09 49 20.3	+0.3
	baz=89,SNR=40						
DVTC	Desert V Tower	89.29	51	⇓P	P	09 49 20.9	+0.7
	baz=89,SNR=6.9						
N21A	Black Mountain	89.30	41	⇓P	P	09 49 21.2	+0.9
	baz=89,SNR=15						
O20A	White River Ci	89.32	42	P	P	09 49 21.0	+0.6
	baz=89,SNR=17						
SWSC	Sam W. Stewart	89.32	51	⇓P	P	09 49 21.4	+1.1
	baz=89						
BGF	Bois d'Agland	89.33	328	eP	P	09 49 17.9	-2.2
	comp=Z,33nm,1.1s						
BGF	Bois d'Agland	89.33	328	eP	P	09 49 17.9	-2.2
BGF				pmax	pmax		
	comp=Z,33nm,1.1s						
BGF	Bois d'Agland	89.33	328	eP	P	09 49 17.9	-2.2
	comp=Z,33nm,1.1s						
L23A	Garrett	89.36	39	P	P	09 49 20.9	+0.3
	baz=89,SNR=40						
M22A	Cedar Creek Ra	89.37	40	⇓P	P	09 49 20.0	-0.7
	baz=89,SNR=20						
U15A	North Rim	89.37	47	⇑P	P	09 49 22.1	+1.3

baz=89,SNR=22
AGMN Agassiz Nation 89.49 30 eP P 09 49 20.7 -0.1
comp=Z,154nm,1.4s
AGMN e 09 49 30.5
AGMN LR LR
comp=Z,1µm,20.0s
Q19A Hogan Spring (89.53 43 P P 09 49 22.1 +0.8
baz=89,SNR=36
PDMCI Parker Dam,Lak 89.55 49 ⇓P P 09 49 22.8 +1.5
baz=90
AGO Saint Agoulin 89.58 327 eP P 09 49 21.3 +0.1
AGO Saint Agoulin 89.58 327 eP P 09 49 21.3 +0.1
Y12C Blythe 89.65 50 ⇑P P 09 49 23.9 +2.1
baz=90
P20A De Beque 89.66 42 P P 09 49 23.2 +1.2
baz=90,SNR=10
O21A Pagoda 89.70 41 ⇓P P 09 49 24.1 +1.8
baz=90,SNR=5.9
FRF La Foret Royal 89.70 324 eP P 09 49 19.2 -2.6
FRF La Foret Royal 89.70 324 eP P 09 49 19.2 -2.6
FRF La Foret Royal 89.70 324 eP P 09 49 19.2 -2.6
VIVF Saint-Julien-I 89.74 325 eP P 09 49 19.7 -2.3
comp=Z,32nm,1.0s
VIVF Saint-Julien-I 89.74 325 eP P 09 49 19.7 -2.3
VIVF pmax pmax
comp=Z,32nm,1.0s
VIVF Saint-Julien-I 89.74 325 eP P 09 49 19.7 -2.3
comp=Z,32nm,1.0s
M23A Laramie 89.80 39 P P 09 49 24.0 +1.4
baz=90,SNR=15
L24A Wheatland 89.81 39 ⇑P P 09 49 24.5 +1.9
baz=90,SNR=6.1
TCF Toulx Ste Croi 89.82 328 eP P 09 49 20.4 -2.0
comp=Z,58nm,1.1s
TCF Toulx Ste Croi 89.82 328 eP P 09 49 20.4 -2.0
TCF pmax pmax
comp=Z,58nm,1.1s
TCF Toulx Ste Croi 89.82 328 eP P 09 49 20.4 -2.0
comp=Z,58nm,1.1s
PMOR Pomariorio Ree 89.83 108 eP P 09 49 24.1 +1.4
comp=Z,311nm,1.2s
PMOR Pomariorio Ree 89.83 108 eP P 09 49 24.1 +1.4
comp=Z,311nm,1.2s
N22A Wattenberg Ran 89.86 40 ⇑P P 09 49 24.0 +1.0
baz=90,SNR=18
PYM Petit Puy Mans 89.86 327 eP P 09 49 22.4 -0.3
PYM Petit Puy Mans 89.86 327 eP P 09 49 22.4 -0.3
PYM Petit Puy Mans 89.86 327 eP P 09 49 22.4 -0.3
PPT Papeete 89.88 111 LR LR 10 28 08.7
comp=Z,890nm,18.1s,baz=0.0,slow=34
GLA Glamis 89.89 50 eP P 09 49 24.8 +1.8
GLA e 09 49 34.4
GLA pmax pmax
comp=Z,25nm,0.7s
GLA Glamis 89.89 50 eP P 09 49 24.8 +1.8
comp=Z,25nm,0.7s
GLA e 09 49 34.4
GLA Glamis 89.89 50 ⇑P P 09 49 24.7 +1.7
baz=90
PPT2 Papeete2 89.89 111 eP P 09 49 25.0 +1.9
PPT2 eSKSac SKSac 09 59 51.1 -1.0
comp=Z,749nm,28.0s
PPT2 Papeete2 89.89 111 ePS PS 10 01 26.2 +2.8
comp=Z,1µm,25.5s
PPT2 eSS SS 10 06 15.0 +2.6
comp=Z,1µm,25.0s
PPT2 eLR LR 10 18 15.1
comp=Z,2µm,22.2s,baz=296
PAE Paea 89.93 111 eP P 09 49 25.8 +2.6
comp=Z,40nm,1.3s
PAE Paea 89.93 111 eP P 09 49 25.8 +2.6
PAE pmax pmax
comp=Z,40nm,1.3s
PAE Paea 89.93 111 eP P 09 49 25.8 +2.6
comp=Z,40nm,1.3s
LMR La Mourre 89.94 323 eP P 09 49 20.3 -2.6
comp=Z,50nm,1.2s
LMR La Mourre 89.94 323 eP P 09 49 20.3 -2.6
LMR pmax pmax
comp=Z,50nm,1.2s
LMR La Mourre 89.94 323 eP P 09 49 20.3 -2.6
comp=Z,50nm,1.2s
S18A Hurst Farm, Bl 89.94 44 ⇑P P 09 49 24.2 +0.8
baz=90,SNR=21
SMRF Simiane la Rot 89.94 324 eP P 09 49 20.6 -2.4
comp=Z,93nm,1.7s
SMRF Simiane la Rot 89.94 324 eP P 09 49 20.6 -2.4
comp=Z,93nm,1.7s
K25A Mack Ranch, Ha 89.97 38 ⇑P P 09 49 24.2 +0.9
baz=90,SNR=9.1
PV10 Paradox Valley 90.04 43 eP P 09 49 25.5 +1.6
comp=Z,3µm,1.0s
PV10 e 09 49 35.3
PHWY Pilot Hill 90.05 39 eP P 09 49 24.7 +0.8
comp=Z,507nm,1.0s
PHWY e 09 49 34.7
TIAR Tiarei 90.06 111 eP P 09 49 25.3 +1.5
comp=Z,221nm,1.3s
TIAR Tiarei 90.06 111 eP P 09 49 25.3 +1.5
comp=Z,221nm,1.3s
N23A Red Feather La 90.07 40 ⇑P P 09 49 25.2 +1.2
baz=90,SNR=23
Q20A Ridgley Place, 90.08 43 P P 09 49 24.9 +1.0
baz=90,SNR=55
PV04 Paradox Valley 90.11 43 eP P 09 49 25.5 +1.4
PV04 e 09 49 35.2
LBL Lubilhac 90.14 326 eP P 09 49 22.0 -1.9
LBL Lubilhac 90.14 326 eP P 09 49 22.0 -1.9
LBL Lubilhac 90.14 326 eP P 09 49 22.0 -1.9
P21A Newcastle 90.18 42 P P 09 49 26.0 +1.6
baz=90,SNR=12
L25A Engebretsen Ra 90.25 38 ⇓P P 09 49 27.0 +2.4
baz=90,SNR=13
O22A Kremmling 90.25 41 P P 09 49 25.6 +0.7
baz=90,SNR=24
TVO Taravao 90.25 111 eP P 09 49 26.6 +1.8
comp=Z,118nm,1.0s
TVO Taravao 90.25 111 eP P 09 49 26.6 +1.8
TVO pmax pmax
comp=Z,118nm,1.0s
TVO Taravao 90.25 111 eP P 09 49 26.6 +1.8
comp=Z,118nm,1.0s
K26A Motz Farm, Whi 90.26 37 P P 09 49 25.4 +0.8
baz=90,SNR=30
M24A Cheyenne 90.28 39 ⇑P P 09 49 26.5 +1.7
baz=90,SNR=8.4
PV01 Paradox Valley 90.48 43 eP P 09 49 26.7 +0.8
comp=Z,19µm,1.3s
PV01 e 09 49 37.3
Y14A Wickenburg 90.51 49 ⇓P P 09 49 27.0 +1.1
baz=90,SNR=12
P22A Eagle 90.52 41 P P 09 49 27.4 +1.3
baz=90,SNR=57
WUAZ Wupatki 90.52 47 eP P 09 49 27.4 +1.3
comp=Z,74nm,1.3s
WUAZ e 09 49 37.3
WUAZ LR LR
comp=Z,962nm,21.0s
WUAZ Wupatki 90.52 47 ⇑P P 09 49 26.9 +0.9
baz=90,SNR=46
R20A Redvale 90.55 43 P P 09 49 27.4 +1.2
baz=90,SNR=62
WDD Wield Dalam 90.56 314 PFAKE 09 49 40.0 +14
WDD LR LR
comp=Z,2µm,20.0s
O23A Lake Granby, G 90.56 40 ⇓P P 09 49 27.8 +1.4
baz=90,SNR=18
ROSF Rostrenen 90.58 332 eP P 09 49 23.6 -2.2
comp=Z,66nm,1.2s
ROSF Rostrenen 90.58 332 eP P 09 49 23.6 -2.2
ROSF pmax pmax
comp=Z,66nm,1.2s
ROSF Rostrenen 90.58 332 eP P 09 49 23.6 -2.2
comp=Z,66nm,1.2s
Q21A Lamborn Mesa, 90.58 42 P P 09 49 27.6 +1.3
baz=90,SNR=29
MFF Saint Martin d 90.63 329 eP P 09 49 24.2 -1.9
comp=Z,200nm,1.7s
MFF Saint Martin d 90.63 329 eP P 09 49 24.2 -1.9
MFF pmax pmax
comp=Z,200nm,1.7s
MFF Saint Martin d 90.63 329 eP P 09 49 24.2 -1.9
comp=Z,200nm,1.7s
SMCO Snowmass 90.69 42 eP P 09 49 27.9 +0.9
comp=Z,100nm,1.2s
SMCO e 09 49 39.1
N24A Carr 90.70 39 ⇓P P 09 49 28.5 +1.7
baz=90,SNR=5.4
LASF Ste Croix 90.71 325 eP P 09 49 24.3 -2.3
comp=Z,38nm,1.2s
LASF Ste Croix 90.71 325 eP P 09 49 24.3 -2.3
comp=Z,38nm,1.2s
M25A Palm-Egli Farm 90.71 38 ⇓P P 09 49 29.2 +2.4
baz=90,SNR=6.8
K27A Flueckinger Fa 90.74 37 P P 09 49 27.8 +1.0
baz=91,SNR=19
113A Mohawk Valley, 90.76 50 ⇓P P 09 49 27.7 +0.8
baz=91,SNR=5.7
L26A Underwood Farm 90.79 38 ⇓P P 09 49 28.3 +1.2
baz=91,SNR=11
S20A Disappointment 90.81 43 P P 09 49 28.6 +1.2
baz=91,SNR=20
RJF Les Rejaudoux 90.89 327 eP P 09 49 25.6 -1.7
comp=Z,134nm,1.4s
RJF eR
comp=Z,7µm,18.2s
RJF Les Rejaudoux 90.89 327 eP P 09 49 25.6 -1.7
RJF pmax pmax
comp=Z,134nm,1.4s
RJF Les Rejaudoux 90.89 327 eP P 09 49 25.6 -1.7
comp=Z,134nm,1.4s
R21A Cimarron 90.91 43 P P 09 49 29.4 +1.5
baz=91,SNR=57
Z14A Wintersburg 90.92 49 ⇑P P 09 49 29.9 +2.2
baz=91
CAF Calviac 90.92 327 eP P 09 49 25.9 -1.6
comp=Z,86nm,1.3s
CAF Calviac 90.92 327 eP P 09 49 25.9 -1.6
CAF pmax pmax
comp=Z,86nm,1.3s
CAF Calviac 90.92 327 eP P 09 49 25.9 -1.6
comp=Z,86nm,1.3s
Q22A Crested Butte, 90.94 42 P P 09 49 29.6 +1.5
baz=91,SNR=66
ISCO Idaho Springs 91.02 40 eP P 09 49 29.4 +1.0
ISCO e 09 49 40.3
ISCO pmax pmax
comp=Z,109nm,1.6s
ISCO MLR MLR
comp=Z,1µm,21.0s
ISCO Idaho Springs 91.02 40 eP P 09 49 29.4 +1.0
comp=Z,109nm,1.6s
ISCO e 09 49 40.3
ISCO LR LR
comp=Z,1µm,21.0s
ISCO Idaho Springs 91.02 40 P P 09 49 29.5 +1.0
baz=91,SNR=16
BRSD Miller 91.06 34 ⇑P P 09 49 30.1 +1.9
baz=91
O24A Longmont 91.09 40 ⇓P P 09 49 28.1 -0.5
baz=91
VSL Villasalto 91.12 319 PFAKE 09 49 40.0 +11
VSL LR LR
comp=Z,3µm,19.0s
MVCO Mesa Verde 91.14 44 eP P 09 49 30.4 +1.4
comp=Z,152nm,1.3s
MVCO e 09 49 40.4
MVCO LR LR
comp=Z,926nm,20.0s
MVCO Mesa Verde 91.14 44 P P 09 49 30.5 +1.5
baz=91,SNR=21
L27A T5 Ranch, Ellis 91.15 37 ⇑P P 09 49 29.8 +1.0
baz=91,SNR=8.2
M26A McRoberts Ranc 91.17 38 ⇑P P 09 49 28.4 -0.5
baz=91
P23A Jefferson 91.19 41 ⇓P P 09 49 30.3 +1.0
baz=91,SNR=14
X16A Lo Mia Camp, P 91.19 48 P P 09 49 30.6 +1.4
baz=91,SNR=14
S21A Coal Bank Pass 91.25 43 P P 09 49 31.1 +1.5
baz=91,SNR=31
R22A Saguache, Gunn 91.46 42 ⇑P P 09 49 31.6 +1.1
baz=91,SNR=20
M27A Reverse DX Ran 91.52 38 ⇑P P 09 49 31.6 +1.2
baz=91,SNR=7.7
Q23A Hartsel 91.52 41 P P 09 49 32.5 +1.7
baz=91,SNR=5.5
LFF La Frestale 91.52 328 eP P 09 49 28.6 -1.7
comp=Z,67nm,1.1s
LFF La Frestale 91.52 328 eP P 09 49 28.6 -1.7
LFF pmax pmax
comp=Z,67nm,1.1s
LFF La Frestale 91.52 328 eP P 09 49 28.6 -1.7
comp=Z,67nm,1.1s
EYMN Ely 91.55 27 eP P 09 49 30.8 +0.4
comp=Z,145nm,1.3s
EYMN e 09 49 40.1
EYMN LR LR
comp=Z,2µm,20.0s
P24A Kohler Place, 91.60 40 ⇓P P 09 49 32.7 +1.7
baz=92,SNR=7.0
O25A Wiggins 91.61 39 ⇑P P 09 49 32.0 +1.0
baz=92,SNR=6.3
U20A Newcomb 91.69 45 ⇓P P 09 49 32.7 +1.2
baz=92,SNR=5.7
S22A 4UR Ranch, Cre 91.75 43 P P 09 49 33.4 +1.5
baz=92,SNR=26
W18A Petrified Fore 91.79 46 ⇓P P 09 49 33.5 +1.5
baz=92
T21A Navajo Lake 91.86 44 P P 09 49 34.1 +1.8
baz=92,SNR=11
Q24A Divide 91.86 41 ⇓P P 09 49 33.2 +0.9
baz=92,SNR=9.4
214A Organ Pipe Nat 91.90 50 ⇓P P 09 49 33.3 +1.0
baz=92,SNR=7.5
O26A Horse Wrangler 91.95 39 ⇓P P 09 49 32.8 +0.3
baz=92,SNR=5.6
P25A Willow Gulch B 92.01 40 ⇑P P 09 49 34.2 +1.3
baz=92,SNR=5.4
R23A Moffat 92.02 42 ⇓P P 09 49 34.9 +1.8
baz=92
X18A Snowflake 92.05 47 ⇑P P 09 49 33.8 +0.6
baz=92,SNR=9.7
V20A Brimhall 92.11 45 P P 09 49 34.8 +1.3
baz=92,SNR=12
OGNE Ogallala 92.12 38 PFAKE 09 49 50.0 +17
OGNE LR LR
comp=Z,1µm,21.0s
OGNE Ogallala 92.12 38 ⇑P P 09 49 35.1 +1.8
baz=92
SCHQ Schefferville 92.14 11 eP P 09 49 32.9 -0.1
comp=Z,44nm,1.0s
SCHQ Schefferville 92.14 11 P P 09 49 33.0 0.0
comp=Z,13nm,1.1s,baz=17,slow=4.8,SNR=7.0
SCHQ LR LR 10 33 19.3
comp=Z,3µm,20.7s,baz=348,slow=37
U21A Nageezi 92.17 44 P P 09 49 35.0 +1.2
baz=92,SNR=25
T22A Edith 92.21 43 P P 09 49 35.6 +1.7
baz=92,SNR=36
S23A Nye Farm, Mont 92.25 42 ⇓P P 09 49 36.1 +1.9
baz=92,SNR=8.7
Q25A Bedland, Calha 92.39 40 P P 09 49 36.0 +1.3
baz=92,SNR=6.4
R24A Sanders Place, 92.39 41 P P 09 49 36.0 +1.2
baz=92,SNR=22
P26A Davis Ranch, A 92.42 39 ⇓P P 09 49 36.5 +1.7
baz=92
O27A Beecher Island 92.43 38 ⇓P P 09 49 34.9 +0.2
baz=92
W20A Ramah 92.54 45 P P 09 49 36.5 +1.0
baz=92,SNR=25
V21A Milan 92.60 44 ⇓P P 09 49 36.8 +1.0
baz=92,SNR=5.9
U22A Llaves 92.67 44 P P 09 49 38.0 +1.9
baz=93,SNR=18
T23A Casias Ranch, 92.70 43 P P 09 49 37.6 +1.3
baz=93,SNR=16
ECSD EROS Data Cent 92.70 33 eP P 09 49 36.4 +0.6
comp=Z,129nm,1.8s
ECSD e 09 49 46.3
ECSD LR LR
comp=Z,2µm,20.0s
S24A Houchin Ranch, 92.75 42 P P 09 49 38.2 +1.7
baz=93,SNR=12
Q26A Hugo 92.78 40 ⇓P P 09 49 37.9 +1.5
baz=93
P27A Ficken Ranch, 92.84 39 ⇑P P 09 49 38.3 +1.6
baz=93
R25A Fountain Ranch 92.91 41 ⇑P P 09 49 37.4 +0.4
baz=93,SNR=5.4
X20A Quemado 92.93 46 P P 09 49 39.0 +1.7
baz=93,SNR=26
V22A San Miguel Ran 92.96 44 ⇑P P 09 49 38.1 +0.7
baz=93
TUC Tucson 92.98 49 eP P 09 49 38.3 +0.9
TUC pmax pmax
comp=Z,56nm,1.2s
TUC MLR MLR
comp=Z,722nm,20.0s
TUC Tucson 92.98 49 eP P 09 49 38.3 +0.9
comp=Z,56nm,1.2s
TUC LR LR
comp=Z,722nm,20.0s
W21A San Fidel 93.06 45 P P 09 49 40.3 +2.4
baz=93,SNR=11
U23A El Rito 93.09 43 P P 09 49 39.6 +1.6
baz=93,SNR=53
TBI Tubuai 93.14 115 eSKSac SKSac 10 00 10.7 +0.6
comp=Z,464nm,27.6s
TBI Tubuai 93.14 115 ePS PS 10 02 01.5 +2.4
comp=Z,1µm,26.5s
TBI eSS SS 10 07 03.0 +4.1
comp=Z,846nm,26.8s
TBI eLR LR 10 19 41.6
comp=Z,4µm,29.2s
S25A Robets Cordova 93.17 41 ⇓P P 09 49 38.5 +0.2
baz=93,SNR=7.6
SPMN St. Paul 93.21 30 ⇓P P 09 49 38.4 +0.3
baz=93
T24A Torres, Weston 93.23 42 ⇓P P 09 49 40.2 +1.5
baz=93,SNR=10
R26A Arlington 93.27 40 ⇑P P 09 49 38.9 +0.3
baz=93,SNR=6.5
X21A Alamocita Cree 93.43 46 P P 09 49 40.9 +1.3
baz=93,SNR=20
Y20A Horse Springs, 93.43 46 P P 09 49 41.5 +1.8
baz=93,SNR=24
V23A Ortiz Mt. (NFS 93.50 44 P P 09 49 42.4 +2.5
baz=93,SNR=19
T25A Trinidad 93.55 42 ⇓P P 09 49 41.0 +0.9
baz=93,SNR=9.8
U24A Moreno Valley 93.57 43 ⇓P P 09 49 42.2 +1.9
baz=93,SNR=21
R27A Eads 93.63 40 ⇑P P 09 49 41.1 +0.8
baz=94,SNR=7.3
KEST Kesra 93.76 317 P P 09 49 40.4 -0.5
KEST Kesra 93.76 317 P P 09 49 40.4 -0.5
comp=Z,1.9nm,0.9s,baz=311,slow=2.1,SNR=3.8
KEST LR LR 10 37 56.4
comp=Z,2µm,19.1s,baz=122,slow=40
Y21A Point of Rocks 93.80 46 ⇓P P 09 49 42.4 +1.1
baz=94,SNR=18
Z20A Nine Sixteen R 93.83 47 P P 09 49 42.8 +1.4
baz=94,SNR=28
LAZ Ladron 93.85 45 eP P 09 49 43.4 +1.9
comp=Z,9.9nm,1.4s
LAZ e 09 49 53.2
X22A Bernardo 93.86 45 ⇑P P 09 49 43.2 +1.7
baz=94,SNR=6.7
ANMO Albuquerque 93.89 44 eP P 09 49 42.9 +1.2
comp=Z,52nm,1.3s
ANMO ePP PP 09 53 37.7 +11
W23A Werner Place, 93.92 44 ⇓P P 09 49 43.4 +1.6
baz=94,SNR=7.8
T26A Comanche Natio 93.99 41 ⇑P P 09 49 43.7 +1.6
baz=94,SNR=6.1
V24A Rampart Ranch, 94.05 43 P P 09 49 44.2 +1.7
baz=94,SNR=37
U25A Circle Dot Ran 94.08 42 ⇑P P 09 49 44.3 +1.8
baz=94,SNR=8.1
120A U Bar Ranch, L 94.19 47 ⇓P P 09 49 45.2 +2.2
baz=94,SNR=6.2
Y22D IRIS PASSCAL I 94.21 45 ⇓P P 09 49 45.5 +2.4
baz=94
LPM Los Pinos Moun 94.22 45 eP P 09 49 45.1 +1.9
comp=Z,8.9nm,1.3s
LPM e 09 49 54.2
Z21A St. Cloud Mine 94.27 46 P P 09 49 45.2 +1.7
baz=94,SNR=18
Y22A Socorro 94.28 45 P P 09 49 45.5 +2.1
baz=94,SNR=8.6
X23A Hourglass Bar 94.30 45 ⇓P P 09 49 46.0 +2.4
baz=94,SNR=7.7
W24A Lazy 6 Ranch, 94.33 44 P P 09 49 45.2 +1.5
baz=94,SNR=16
BNM Barren Site 94.33 45 eP P 09 49 45.3 +1.5
comp=Z,13nm,0.6s
BNM e 09 49 55.1
V25A Rancho No Teng 94.35 43 P P 09 49 45.5 +1.7
baz=94,SNR=7.3
KMBO Kilima Mbogo 94.45 271 P P 09 49 44.5 -0.1
KMBO Kilima Mbogo 94.45 271 P P 09 49 44.5 -0.1
comp=Z,6.7nm,1.1s,baz=38,slow=6.3,SNR=8.7
KMBO LR LR 10 36 39.8
comp=Z,2µm,19.6s,baz=87,slow=38
319A Douglas 94.56 49 P P 09 49 46.1 +1.4
baz=94,SNR=10
220A Playas Peak, P 94.69 48 P P 09 49 46.7 +1.4
baz=95,SNR=13
121A Cookes Peak, D 94.73 47 ⇑P P 09 49 47.0 +1.5
baz=95,SNR=6.3
Z22A Elephant Butte 94.74 46 P P 09 49 46.9 +1.4
baz=95,SNR=12
Y23A Lovelace Mesa, 94.83 45 P P 09 49 47.2 +1.2
baz=95,SNR=7.1
T28A Walsh 94.85 40 ⇑P P 09 49 46.4 +0.4
baz=95,SNR=5.5
V26A Tequesquite Ra 94.86 42 ⇑P P 09 49 46.8 +0.7
baz=95,SNR=6.2
W25A X Bar L Ranch, 94.88 43 P P 09 49 47.7 +1.6
baz=95,SNR=12
320A Kipp Ranch, An 95.06 48 ⇑P P 09 49 49.4 +2.3
baz=95,SNR=7.4
Z23A Rita Site, Whi 95.18 46 ⇑P P 09 49 48.8 +1.2
baz=95
Y24A Capitan 95.20 45 ⇓P P 09 49 48.7 +1.0
baz=95,SNR=5.0
X25A Clemmons Ranch 95.24 44 ⇓P P 09 49 49.7 +1.9
baz=95
ABPO Ambohimpanom 95.40 251 PFAKE 09 50 00.0 +11
ABPO LR LR
comp=Z,2µm,22.0s
222A Williams Famil 95.44 47 ⇓P P 09 49 49.1 +0.4
baz=95,SNR=6.5
123A Bell Site, Whi 95.60 46 ⇓P P 09 49 50.4 +0.9
baz=96
Y25A Mesa, Roswell 95.65 44 ⇑P P 09 49 50.3 +0.7
baz=96,SNR=7.6
Z24A Sheeppen Canyo 95.66 45 ⇓P P 09 49 50.7 +0.9
baz=96,SNR=5.4
SCIA State Center 95.68 32 PFAKE 09 50 00.0 +11
SCIA LR LR
comp=Z,2µm,21.0s
X26A CR and CF Fran 95.72 43 P P 09 49 51.0 +1.0
baz=96,SNR=11
W27A Bowe Ranch, En 95.79 42 ⇓P P 09 49 51.5 +1.2
baz=96,SNR=16
124A Stringfield Ra 96.04 45 ⇓P P 09 49 52.6 +0.9
baz=96,SNR=7.2
X27A F and S Farms, 96.07 43 ⇓P P 09 49 52.7 +1.1
baz=96,SNR=6.1
Z25A Roswell 96.08 45 P P 09 49 53.0 +1.4
baz=96,SNR=11
KSU1 Kansas State U 96.26 36 PFAKE 09 50 00.0 +7.8
KSU1 LR LR
comp=Z,1µm,20.0s
224A Cornudas Mount 96.43 46 ⇑P P 09 49 54.0 +0.7
baz=96,SNR=7.1
Z26A Caprock 96.53 44 ⇓P P 09 49 54.4 +0.8
baz=96,SNR=8.6
125A Gardner Draw, 96.55 45 ⇓P P 09 49 54.0 +0.2
baz=96,SNR=12
Y27A Causey 96.58 43 ⇓P P 09 49 54.0 +0.1
baz=96,SNR=6.5
AMTX Amarillo 96.71 42 PFAKE 09 50 10.0 +16
AMTX LR LR
comp=Z,1µm,22.0s
GLMI Grayling 96.76 25 PFAKE 09 50 10.0 +16
GLMI LR LR
comp=Z,1µm,20.0s
MNTX Cornudas Mount 96.78 46 PFAKE 09 50 10.0 +15
MNTX LR LR
comp=Z,933nm,20.0s
MNTX Cornudas Mount 96.78 46 ⇓P P 09 49 55.5 +0.8
baz=97
225A Deer Hill, Car 96.84 46 ⇑P P 09 49 57.5 +2.3
baz=97,SNR=5.8
324A Moseley Ranch, 96.90 46 ⇑P P 09 49 56.0 +0.6
baz=97
126A Clayton Basin, 96.94 45 ⇓P P 09 49 57.4 +1.9
baz=97
Z27A Tatum 96.95 44 P P 09 49 56.4 +0.8

baz=97,SNR=12
GDL2 Guadalupe Moun 97.05 45 *e*P Pdif 09 49 58.2 +2.1
GDL2 *e* 09 50 06.8
226B Tecolote Peak, 97.26 45 ⇓P Pdif 09 49 57.2 +0.2
baz=97
325A Bean Ranch, Si 97.26 46 ⇑P Pdif 09 49 57.6 +0.4
baz=97
Z28A Tucker Farm, M 97.45 43 ⇑P Pdif 09 49 57.9 +0.1
baz=97
W31A Holland Ranch, 97.46 40 ⇓P Pdif 09 49 58.6 +0.8
baz=97
425A Indio Mountain 97.66 47 ⇑P Pdif 09 50 00.8 +1.9
baz=98,SNR=8.5
ESDC Sonseca Array 97.81 327 LR LR 10 40 31.8
comp=Z,11μm,18.5s,baz=70,slow=39
PGAV Gavieira, Arco 97.82 331 *e*S SKKSac 10 00 54.8 -8.5
PGAV *e*LQ LQ 10 25 13.9
PGAV *e*LR LR 10 29 26.8
comp=Z,4μm,20.0s
X31A McDonald Ranch 97.85 41 ⇓P Pdif 09 50 02.0 +2.5
baz=98
Z29A Hungry Hill Ra 97.87 43 ⇓P Pdif 09 50 01.4 +1.7
baz=98,SNR=5.0
326A Caldwell Ranch 97.90 46 ⇑P Pdif 09 50 00.2 +0.3
baz=98
MVO Moncorvo 97.96 330 *e*S **SKSac 10 00 42.1 +6.4**
MVO *e*LQ LQ 10 24 06.3
MVO *e*LR LR 10 28 31.8
comp=Z,6μm,16.0s
PAB San Pablo 98.09 327 PFAKE 09 50 10.0 +9.4
PAB LR LR
comp=Z,10μm,19.0s
Z30A Sanderson Ranc 98.18 42 ⇓P Pdif 09 50 01.7 +0.6
baz=98,SNR=6.8
426A McDonald Obser 98.33 46 ⇑P Pdif 09 50 02.4 +0.5
baz=98
WMOK Wichita Mounta 98.43 40 *e*P Pdif 09 50 02.6 +0.5
WMOK *e* 09 50 12.7
WMOK pmax pmax
comp=Z,9.0nm,1.3s
WMOK MLR MLR
comp=Z,906nm,20.0s
WMOK Wichita Mounta 98.43 40 *e*P Pdif 09 50 02.5 +0.4
comp=Z,9.2nm,1.3s
WMOK *e* 09 50 12.7
WMOK LR LR
comp=Z,906nm,20.0s
DRV Dumont d'Urvil 98.45 177 PP PP 09 54 01.0 -1.1
DRV S **SKSac 10 00 40.0 +3.9**
DRV SS **SS 10 08 09.0 -3.7**
HDIL Hopedale 98.50 30 PFAKE 09 50 10.0 +7.7
HDIL LR LR
comp=Z,1μm,21.0s
328A Wristen Ranch, 98.56 45 ⇓P **P 09 50 02.4 -0.4**
baz=98
427A Hayter Ranch, 98.58 46 ⇑P **P 09 50 02.1 -0.8**
baz=98,SNR=5.6
526A Mary Lane Ranc 98.72 47 ⇑P **P 09 50 02.6 -1.0**
baz=99
Z31A Sharp Cattle R 98.72 42 ⇓P **P 09 50 02.5 -0.9**
baz=99
MTE Manteigas 98.81 330 *e*S **SKSac 10 00 44.4 +4.4**
MTE *e*LQ LQ 10 24 08.3
MTE *e*LR LR 10 27 58.7
comp=Z,6μm,18.0s
MTE Manteigas 98.81 330 PFAKE 09 50 10.0 +6.3
MTE LR LR
comp=Z,6μm,20.0s
527A Woodward Ranch 98.95 46 ⇓P Pdif 09 50 05.7 +1.0
baz=99
626A Big Bend Ranch 99.04 47 ⇓P **Pdif 09 50 04.1 -0.9**
baz=99
428A Kincaid Ranch, 99.11 45 ⇓P **Pdif 09 50 07.3 +2.0**
baz=99
Z32A Haskell 99.11 41 ⇓P **Pdif 09 50 04.9 -0.3**
baz=99,SNR=7.4
CASY Casey 99.22 189 PFAKE 09 50 20.0 +15
CASY LR LR
comp=Z,725nm,20.0s
AAM Ann Arbor 99.29 26 PFAKE 09 50 20.0 +14
AAM LR LR
comp=Z,1μm,20.0s
TXAR Lajitas Array 99.49 47 P **Pdif 09 50 07.0 0.0**
TXAR PKKPbc **PKKPbc 10 06 29.8 +0.9**
TXAR Lajitas Array 99.49 47 P **Pdif 09 50 07.0 0.0**
comp=Z,1.4nm,0.8s,baz=333,slow=3.5,SNR=11
TXAR PKKPbc **PKKPbc 10 06 29.8 +0.9**
comp=Z,1.2nm,1.1s,baz=128,slow=5.5,SNR=5.2
330A Mertzon 99.52 44 ⇓P **Pdif 09 50 06.7 -0.4**
baz=99
PMRV Marv??o 99.55 329 *e*S **SKSac 10 00 44.2 +0.6**
PMRV *e*LQ LQ 10 24 35.2
PMRV *e*LR LR 10 28 33.6
comp=Z,6μm,16.0s
627A Terlingua Ranc 99.58 47 ⇓P **Pdif 09 50 08.3 +0.9**
baz=100
429A Davenport Ranc 99.65 45 ⇓P **Pdif 09 50 07.8 +0.1**
baz=100
MBAR Mbarara 99.70 275 PFAKE 09 50 20.0 +12
MBAR LR LR
comp=Z,660nm,22.0s
529A Stev Forest Ra 99.81 45 ⇓P **Pdif 09 50 09.3 +0.9**
baz=100
628A Black Gap, Mar 99.86 46 ⇑P **Pdif 09 50 08.7 +0.1**
baz=100
430A Baggett Ranch, 99.93 44 ⇓P **Pdif 09 50 10.1 +1.2**
baz=100
331A San Angelo 100.03 43 ⇓P **Pdif 09 50 09.3 0.0**
baz=100
332A Millersview 100.37 43 ⇑P **Pdif 09 50 09.8 -1.0**
baz=100
432A Menard 100.71 43 ⇓P **Pdif 09 50 14.2 +1.8**
baz=101
ERPA Erie 100.75 24 PFAKE 09 50 20.0 +7.8
ERPA LR LR
comp=Z,2μm,19.0s
NCB Newcomb 100.84 19 PFAKE 09 50 20.0 +7.4
NCB LR LR
comp=Z,2μm,21.0s
LIS Lisbon 100.90 330 *e*PP PP 09 54 19.6 -0.5
LIS AMS AMS 10 43 00.2
comp=Z,8μm,18.2s
LIS Lisbon 100.90 330 *e*PP PP 09 54 19.6 -0.5
LIS A A 10 43 00.2
comp=Z,8μm,18.2s
JCT Junction City 101.00 44 PFAKE 09 50 30.0 +16
JCT LR LR
comp=Z,971nm,19.0s
LBNH Lisbon 101.19 17 PFAKE 09 50 30.0 +16
LBNH LR LR
comp=Z,1μm,20.0s
MESJ Messejana 101.23 329 *e*PP PP 09 54 21.7 -0.9
MESJ AMS AMS 10 42 08.9
comp=Z,7μm,19.5s
MESJ Messejana 101.23 329 *e*PP PP 09 54 21.7 -0.9
MESJ A A 10 42 08.9
comp=Z,7μm,19.5s
ACSO Alum Creek Sta 101.34 26 PFAKE 09 50 30.0 +15
ACSO LR LR
comp=Z,2μm,21.0s
PVAQ Vaqueiros 101.36 328 *e*S **SKSac 10 00 58.6 +6.2**
PVAQ *e*LQ LQ 10 24 31.0
PVAQ *e*LR LR 10 30 17.9
comp=Z,8μm,16.0s
BINY Binghamton 101.96 21 PFAKE 09 50 30.0 +12
BINY LR LR
comp=Z,2μm,20.0s
OXF Oxford 103.41 34 PFAKE 09 50 40.0 +16
OXF LR LR
comp=Z,1μm,19.0s
RTC Rabat Centre 103.76 326 PFAKE 09 50 40.0 +14
RTC LR LR
comp=Z,3μm,19.0s
KVTX Kingsville 104.28 44 PFAKE 09 50 40.0 +12
KVTX LR LR
comp=Z,1μm,20.0s
RKT Rikitea 104.45 108 *e*SKSac **SKSac 10 01 07.4 +0.4**
comp=Z,579nm,29.2s
RKT *e*SP **SP 10 03 57.9 +0.3**
comp=Z,812nm,27.8s
RKT *e*SS **SS 10 09 39.1 +1.5**
comp=Z,1μm,29.0s
RKT *e*LR LR 10 24 59.2
comp=Z,2μm,25.8s,baz=307
VBMS Vicksburg 104.72 36 PFAKE 09 50 40.0 +10
VBMS LR LR
comp=Z,2μm,19.0s
BLA Blacksburg 104.94 26 PFAKE 09 50 40.0 +8.9
BLA LR LR
comp=Z,1μm,21.0s
CBN Corbin 105.14 23 PFAKE 09 55 00.0
CBN LR LR
comp=Z,2μm,21.0s
LRAL Lakeview Retre 105.76 33 PFAKE 09 55 00.0
LRAL LR LR
comp=Z,1μm,21.0s
BRAL Brewton 107.41 34 PFAKE 09 55 00.0
BRAL LR LR
comp=Z,1μm,19.0s
CNNC Cliffs of the 107.63 25 PFAKE 09 55 00.0
CNNC LR LR
comp=Z,893nm,21.0s
NHSC New Hope 108.65 28 PFAKE 09 55 00.0
NHSC LR LR
comp=Z,2μm,21.0s
PMOZ Porto Moniz, M 109.28 333 *e*LR LR 10 31 22.1
comp=Z,2μm,18.0s
VNDA Vanda 110.68 173 *e*PKiKP **PKiKP 09 54 57.5 +2.4**
VNDA PP **PP 09 55 31.4 -1.4**
VNDA *e*PP PP 09 55 33.9 +1.2
VNDA Vanda 110.68 173 PKiKP **PKiKP 09 54 56.0 +0.9**
comp=Z,2.2nm,1.0s,baz=303,slow=5.9,SNR=4.5
VNDA PP **PP 09 55 31.4 -1.4**
comp=Z,4.1nm,1.0s,baz=6.5,slow=4.0,SNR=3.2
SBA Scott Base 111.49 173 *e*PKiKP **PKiKP 09 54 59.4 +2.7**
SBA *e*PP PP 09 55 45.5 +7.0
SBA LR LR
comp=Z,1μm,21.0s
TORD Torodi Ar. Bea 114.50 305 PKiKP **PKiKP 09 55 03.4 -0.9**
TORD PP **PP 09 56 00.1 -0.4**
TORD PKKP **PKKPdf 10 06 00.3 -4.1**
TORD Torodi Ar. Bea 114.50 305 PKiKP **PKiKP 09 55 03.4 -0.9**
comp=Z,4.0nm,1.1s,baz=42,slow=0.9,SNR=13
TORD PP **PP 09 56 00.1 -0.4**
comp=Z,2.7nm,1.0s,baz=23,slow=4.0,SNR=4.6
TORD PKKP **PKKPdf 10 06 00.3 -4.1**
comp=Z,9.8nm,1.0s,baz=237,slow=3.6,SNR=3.7
TEIG Tepich 115.50 42 PFAKE 09 55 20.0 +14
TEIG LR LR
comp=Z,758nm,20.0s
LBTB Lobatse 115.87 256 *e*PKiKP **PKiKP 09 55 08.2 +1.5**
BOSA Boshof 117.60 252 PKP **PKPdf 09 55 08.0 -2.0**
BOSA PP **PP 09 56 24.7 +1.6**
BOSA Boshof 117.60 252 PKP **PKPdf 09 55 08.0 -2.0**
comp=Z,3.5nm,0.8s,baz=109,slow=16,SNR=9.7
BOSA PP **PP 09 56 24.7 +1.6**
comp=Z,7.5nm,1.0s,baz=67,slow=10,SNR=3.9
TSUM Tsumeb 120.10 265 *e*PKPdf **PKPdf 09 55 14.6 -0.5**
TSUM LR LR
comp=Z,2μm,20.0s
SYO Syowa Base 120.15 205 ⇓*e*pPKPdf pPKPdf 09 55 22.2 -1.1
TGUH Tegucigalpa,Un 120.93 45 PFAKE 09 55 30.0 +13
TGUH LR LR
comp=Z,618nm,22.0s
QSPA South Pole Qui 121.66 180 *e*PKPdf **PKPdf 09 55 16.5 0.0**
QSPA *e*PP PP 09 56 56.5 +6.7
QSPA LR LR
comp=Z,1μm,20.0s
GTBY Guantanamo Bay 122.38 30 PFAKE 09 55 30.0 +11
GTBY LR LR
comp=Z,740nm,20.0s
GRTK Grand Turk 122.53 25 PFAKE 09 55 30.0 +10
GRTK LR LR
comp=Z,1μm,19.0s
SUR Sutherland 122.54 250 PFAKE 09 55 30.0 +11
SUR LR LR
comp=Z,2μm,20.0s
MTDJ Mount Denham 122.78 34 PFAKE 09 55 30.0 +10
MTDJ LR LR
comp=Z,1μm,19.0s
DBIC Dimbokro 123.62 305 PKP **PKPdf 09 55 20.7 -1.2**
DBIC *e*PKPdf **PKiKP 09 55 21.1 -1.0**
DBIC Dimbokro 123.62 305 PKP **PKPdf 09 55 20.7 -1.2**
comp=Z,16nm,0.9s,baz=29,slow=2.2,SNR=21
LIC Lamto 124.05 305 *e*PKiKP **PKPdf 09 55 21.5 -1.2**
comp=Z,73nm,1.1s
LIC *e*R
comp=Z,3μm,21.0s
LIC Lamto 124.05 305 *e*PKPdf **PKPdf 09 55 21.5 -1.2**
SDDR Presa de Saban 124.78 27 PFAKE 09 55 40.0 +16
SDDR LR LR
comp=Z,979nm,19.0s
JTS JuntasAbangare 125.27 46 PFAKE 09 55 40.0 +15
JTS LR LR
comp=Z,636nm,20.0s
SJG San Juan 127.38 22 *e*PKPdf **PKPdf 09 55 33.0 +4.0**
SJG LR LR
comp=Z,712nm,21.0s
SACV Santiago Islan 127.77 329 PFAKE 09 55 40.0 +10
SACV LR LR
comp=Z,2μm,20.0s
ANWB Willy Bob 129.02 17 PFAKE 09 55 40.0 +7.9
ANWB LR LR
comp=Z,831nm,20.0s
BCIP Isla Barro Col 129.19 42 PFAKE 09 55 40.0 +7.5
BCIP LR LR
comp=Z,770nm,20.0s
PAYG Puerto Ayora 129.60 60 PFAKE 09 55 50.0 +17
PAYG LR LR
comp=Z,612nm,19.0s
SNAA Sanae 133.46 198 PKPpre PKPpre 09 55 32.9
SNAA Sanae 133.46 198 PKhKP PKPpre 09 55 32.9
comp=Z,1.6nm,0.9s,baz=69,slow=2.9,SNR=4.5
BBGH Gun Hill 133.91 15 PFAKE 09 55 50.0 +8.6
BBGH LR LR
comp=Z,2μm,22.0s
GRGR Grenville 134.36 19 PFAKE 09 55 50.0 +7.7
GRGR LR LR
comp=Z,2μm,22.0s
ROSC El Rosal 135.79 39 PKP **PKPdf 09 55 45.4 -0.1**
ROSC El Rosal 135.79 39 PKP **PKPdf 09 55 45.4 -0.1**
comp=Z,15nm,1.0s,baz=81,slow=23,SNR=6.6
OTAV Otavalo 137.11 48 *e*PKPdf **PKPdf 09 55 47.1 -0.9**
OTAV LR LR
comp=Z,875nm,19.0s
SHEL Horse Pasture 138.35 282 PFAKE 09 56 00.0 +10
SHEL LR LR
comp=Z,2μm,19.0s
ATAH Atahualpa 142.61 55 PKP **PKPdf 09 55 56.5 -1.4**
ATAH Atahualpa 142.61 55 PKP **PKPdf 09 55 56.5 -1.4**
comp=Z,7.3nm,0.9s,baz=305,slow=2.9
PMSA Palmer Station 145.67 168 PKPbc **PKPdf 09 56 00.7 -0.4**
PMSA Palmer Station 145.67 168 PKPbc **PKPdf 09 56 00.7 -0.4**
comp=Z,30nm,1.1s,baz=171,slow=4.3,SNR=1.8
NNA Nana 147.03 60 *e*PKPdf **PKPbc 09 56 06.3 -0.8**
NNA *e* 09 56 16.1
NNA LR LR
comp=Z,854nm,22.0s
NNA Nana 147.03 60 PKPbc **PKPbc 09 56 06.3 -0.8**
comp=Z,26nm,0.9s,baz=311,slow=5.0,SNR=8.7
RCBR Riachuelo 151.62 333 PKPbc **PKPbc 09 56 18.2 -0.5**
RCBR PKPab **PKPab 09 56 27.0 -0.2**
RCBR LR LR
comp=Z,1μm,21.0s
RCBR Riachuelo 151.62 333 PKPbc **PKPbc 09 56 18.2 -0.5**
comp=Z,62nm,1.0s,baz=32,slow=1.2,SNR=36
RCBR PKPab **PKPab 09 56 27.0 -0.2**
comp=Z,36nm,0.9s,baz=93,slow=6.5,SNR=4.8
USHA Ushuaia 152.96 154 PKPbc **PKPbc 09 56 22.6 +2.2**
USHA PKPab **PKPab 09 56 30.5 -1.1**
USHA Ushuaia 152.96 154 PKPbc **PKPbc 09 56 22.6 +2.2**
comp=Z,15nm,1.0s,baz=317,slow=4.3,SNR=4.4
USHA PKPab **PKPab 09 56 30.5 -1.1**
comp=Z,61nm,0.9s,baz=294,slow=1.1,SNR=13
SAML Samuel 153.26 35 PFAKE 09 56 30.0 -4.0
SAML LR LR
comp=Z,864nm,20.0s
LPAZ La Paz 156.14 54 PKP **PKPdf 09 56 20.4 +0.9**
LPAZ *e*PKPdf **PKPdf 09 56 21.1 +1.6**
LPAZ PKPab **PKPab 09 56 45.6 -1.5**
LPAZ La Paz 156.14 54 PKP **PKPdf 09 56 20.4 +0.9**
comp=Z,3.2nm,1.1s,baz=352,slow=5.4,SNR=8.2
LPAZ PKPab **PKPab 09 56 45.6 -1.5**
comp=Z,11nm,0.9s,baz=15,slow=6.2,SNR=8.5
EFI East Falkland 158.96 163 PFAKE 09 56 30.0 +8.9
EFI LR LR
comp=Z,963nm,19.0s
SIV San Ignacio 160.31 39 PKP **PKPdf 09 56 24.3 +0.5**
SIV PP **PP 10 00 44.9 -0.9**
SIV San Ignacio 160.31 39 PKP **PKPdf 09 56 24.3 +0.5**
comp=Z,8.4nm,1.1s,baz=88,slow=0.6,SNR=16
SIV PP **PP 10 00 44.9 -0.9**
comp=Z,7.2nm,1.2s,baz=290,slow=8.3,SNR=3.6
LCO Las Campanas 160.40 87 PFAKE 09 56 40.0 +16
LCO LR LR
comp=Z,2μm,20.0s
CFAA Coronel Fontan 162.96 94 PKPab **PKPab 09 57 16.6 +0.8**
CFAA Coronel Fontan 162.96 94 PKPab **PKPab 09 57 16.6 +0.8**
comp=Z,0.5nm,0.9s,baz=320,slow=4.9,SNR=4.0
BDFB Brasilia 163.81 359 PKP **PKPdf 09 56 28.0 +0.6**
BDFB PKPab **PKPab 09 57 18.7 -0.9**
BDFB Brasilia 163.81 359 PKP **PKPdf 09 56 28.0 +0.6**
comp=Z,5.4nm,0.9s,baz=339,slow=0.6,SNR=7.5
BDFB PKPab **PKPab 09 57 18.7 -0.9**
comp=Z,19nm,1.0s,baz=27,slow=3.7,SNR=8.3
TRQA Tornquist 167.15 122 PFAKE 09 56 40.0 +11
TRQA LR LR
comp=Z,2μm,20.0s

NIED ***05*** *09:53:00.31°.90N×131°.90E, h32km, Mw4.4 Best double couple: M0=4.58000×10^15 NP1:ϕs=10.00000°, δ66.00000°, λ77.00000°. NP2:ϕs220.00000°, δ27.00000°, λ117.00000°.*
IDC ***05*** *09:53:14.2±0.6, 32°.02N×131°.58E, h0km, mb3.9/18, mb1 4.1/20, mb1mx4.0/31, mbtmp3.9/20, ML3.4/2, Error ellipse: s-maj=19.8km s-min=15.2km az=100.0*
NEIC ***05*** *09:53:16.0±0.6, 31°.95N×131°.75E, h10km, mb4.2/1, Error ellipse: s-maj=14.8km s-min=11.3km az=97.0*
NEIC Recorded [1 JMA] in Kagoshima, Kumamoto, Miyazaki and Oita.
ISCJB ***05*** *09:53:17.1±0.8, 31°.88N±0°.04×131°.94E±0°.05, h32km±5km, mb3.8/20, Error ellipse: s-maj=7.5km s-min=6.3km az=24.9*
JMA ***05*** *09:53:18.4±0.1, 31°.94N×131°.87E, h27km±1km, M4.3 Broadband fault plane solution: P waves. NP1: ϕs31.00000°, δ80.00000°, λ81.00000°. NP2:ϕs254.00000°, δ14.00000°, λ132.00000°. Principal axes: T Plg54.0000°, Azm290.0000°; N Plg9.0000°, Azm33.0000°; P Plg34.0000°, Azm129.0000°;*
JMA Felt I J1.

ISC 05 09:53:18.3±1.3, 31°.88N±0°.04×131°.85E±0°.05, h29km±9km, n54, σ1°917/64, mb3.9/20, 2C-4D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JTSN	**Tsuno**	**0.47**	**321**	⇓P		**Pb**	**09 53 27.4**	**-0.7**
JTSN				S		**Sb**	**09 53 33.9**	**-1.0**
JNAR	**Kushima--Naru**	**0.60**	**234**	⇓P		**Pn**	**09 53 31.1**	**+0.2**
JNAR				S		**Sn**	**09 53 39.7**	**+0.1**
JTZ	**Takazaki**	**0.65**	**272**	⇓P		**Pb**	**09 53 30.9**	**-0.2**
JTZ				*e*S		**Sn**	**09 53 40.7**	**0.0**
UZO	**Okuchi**	**1.09**	**284**	⇑P		**Pb**	**09 53 38.0**	**-0.6**
JZO				*e*S		**Sn**	**09 53 54.1**	**+2.4**
JIU2	**Izumi 2**	**1.10**	**307**	P		**Pb**	**09 53 38.1**	**-0.6**
JIU2				*e*S		**Sn**	**09 53 53.0**	**+1.1**
JUS	**Usuki**	**1.18**	**356**	⇑P		**Pb**	**09 53 39.3**	**-0.8**
JUS				S		**Sn**	**09 53 53.7**	**-0.3**
JNU	**Nakatsue**	**1.48**	**327**	*e*Pn		**Pb**	**09 53 44.0**	**-1.3**
JNU				Sn		**Sb**	**09 54 05.4**	**+1.7**
JNU	**Nakatsue**	**1.48**	**327**	Pn		**Pb**	**09 53 44.2**	**-1.0**
	172nm,0.3s,baz=145,slow=6.8,SNR=107							
JNU				Sn		**Sb**	**09 54 05.4**	**+1.7**
	194nm,0.3s,baz=260,slow=19,SNR=22							
JOW	**Kunigami**	**5.92**	**213**	*e*Pn		**Pn**	**09 54 46.6**	**+2.6**
JOW				Sn		**Sn**	**09 55 49.3**	**-1.5**
JOW	**Kunigami**	**5.92**	**213**	Pn		**Pn**	**09 54 44.1**	**+0.1**
	1.9nm,0.3s,baz=63,slow=14,SNR=5.0							
JOW				Sn		**Sn**	**09 55 49.3**	**-1.5**
	2.1nm,0.3s,baz=77,slow=27,SNR=2.8							
KSRS	**Korea Array**	**6.43**	**331**	Pn		**Pn**	**09 54 52.2**	**+1.3**
	1.0nm,0.3s,baz=148,slow=14,SNR=18							
KSRS				Lg		Lg	09 56 30.8	
	0.2nm,0.3s,baz=141,slow=24,SNR=4.3							
KSAR	**Wonju Array Be**	**6.44**	**331**	Pn		**Pn**	**09 54 52.2**	**+1.2**
KSAR				Lg		Lg	09 56 30.8	
MJAR	**Matsushiro Arr**	**7.03**	**47**	Pn		**Pn**	**09 55 00.7**	**+1.5**
MJAR				Sn		**Sn**	**09 56 18.3**	**+0.2**
MJAR	**Matsushiro Arr**	**7.03**	**47**	Pn		**Pn**	**09 55 00.7**	**+1.5**
	1.0nm,0.3s,baz=241,slow=14,SNR=12							
MJAR				Sn		**Sn**	**09 56 18.3**	**+0.2**
	0.2nm,0.3s,baz=143,slow=36,SNR=2.4							
BJT	**Baijiatuan**	**15.06**	**307**	*e*P		**P**	**09 56 54.3**	**+0.4**
	18nm,0.6s							
SONM	**Songino Array**	**25.05**	**317**	P		**P**	**09 58 39.3**	**-0.7**
SONM	**Songino Array**	**25.05**	**317**	P		**P**	**09 58 39.3**	**-0.7**
	5.7nm,0.8s,baz=129,slow=10,SNR=32							
PETK	**Petropavlovsk-**	**28.25**	**34**	P		**P**	**09 59 09.4**	**+0.8**
PETK	**Petropavlovsk-**	**28.25**	**34**	P		**P**	**09 59 09.4**	**+0.8**
	0.9nm,0.4s,baz=203,slow=9.4,SNR=3.2							
MKAR	**Makanchi Array**	**40.44**	**306**	P		**P**	**10 00 52.3**	**-1.7**
MKAR	**Makanchi Array**	**40.44**	**306**	P		**P**	**10 00 52.3**	**-1.7**
	1.0nm,0.5s,baz=90,slow=11,SNR=29							
FITZ	**Fitzroy Crossi**	**50.05**	**188**	P		**P**	**10 02 12.0**	**+1.7**
FITZ	**Fitzroy Crossi**	**50.05**	**188**	P		**P**	**10 02 12.0**	**+1.7**
	0.6nm,0.6s,baz=27,slow=6.8,SNR=2.6							
WRA	**Warramunga Arr**	**51.58**	**177**	P		**P**	**10 02 22.4**	**+0.5**
WRA	**Warramunga Arr**	**51.58**	**177**	P		**P**	**10 02 22.4**	**+0.5**
	0.7nm,0.8s,baz=355,slow=8.1,SNR=9.3							
ABKAR	**Akbulak array**	**55.24**	**311**	*e*P		**P**	**10 02 47.0**	**-1.5**
	2.0nm,0.7s							
ASAR	**Alice Springs**	**55.27**	**178**	P		**P**	**10 02 50.3**	**+1.4**
ASAR	**Alice Springs**	**55.27**	**178**	P		**P**	**10 02 50.3**	**+1.4**
	0.3nm,0.7s,baz=15,slow=10,SNR=4.5							
ILAR	**Eielson Array**	**57.98**	**30**	P		**P**	**10 03 08.0**	**+0.3**
ILAR	**Eielson Array**	**57.98**	**30**	P		**P**	**10 03 08.0**	**+0.3**
	0.3nm,0.6s,baz=255,slow=6.3,SNR=7.9							
JOF	**Joemuu**	**66.66**	**331**	*e*p		P	10 04 02.8	-3.1
	1.0nm,0.5s							
KBZ	**Khabaz**	**68.08**	**309**	P		**P**	**10 04 14.4**	**-0.7**
KBZ	**Khabaz**	**68.08**	**309**	P		**P**	**10 04 14.4**	**-0.7**
	1.8nm,0.8s,baz=190,slow=0.8,SNR=5.7							
RES	**Resolute Bay**	**69.40**	**12**	P		**P**	**10 04 22.8**	**-0.1**
RES	**Resolute Bay**	**69.40**	**12**	P		**P**	**10 04 22.8**	**-0.1**
	0.9nm,0.7s,baz=304,slow=5.0,SNR=5.7							
FINES	**FINESS Array B**	**69.52**	**330**	P		**P**	**10 04 21.9**	**-1.9**
FINES	**FINESS Array B**	**69.52**	**330**	P		**P**	**10 04 21.9**	**-1.9**
	1.3nm,0.5s,baz=61,slow=6.5,SNR=18							
YKA	**Yellowknife Ar**	**72.08**	**27**	P		**P**	**10 04 39.7**	**+0.3**
YKA	**Yellowknife Ar**	**72.08**	**27**	P		**P**	**10 04 39.7**	**+0.3**
	0.7nm,0.9s,baz=303,slow=5.4,SNR=12							
NOA	**NORSAR Array B**	**75.63**	**334**	P		**P**	**10 04 58.9**	**-1.4**
NOA	**NORSAR Array B**	**75.63**	**334**	P		**P**	**10 04 58.9**	**-1.4**
	1.5nm,1.0s,baz=54,slow=6.9,SNR=2.8							
BRTR	**Keskin Array B**	**76.06**	**308**	P		**P**	**10 05 02.2**	**-1.0**
BRTR	**Keskin Array B**	**76.06**	**308**	P		**P**	**10 05 02.2**	**-1.0**
	0.7nm,0.8s,baz=115,slow=4.4,SNR=5.6							
CLL	**Collm**	**81.28**	**326**	⇓*i*sP		sP	10 05 40.9	-3.4
	comp=Z,9.0nm,1.2s							
GERES	**GERESS Array B**	**82.56**	**324**	P		**P**	**10 05 38.1**	**-0.4**
GERES	**GERESS Array B**	**82.56**	**324**	P		**P**	**10 05 38.1**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=24,slow=7.5,SNR=2.1							
FRB	**Frobisher Bay**	**83.33**	**9**	P		**P**	**10 05 41.4**	**-0.6**
FRB	**Frobisher Bay**	**83.33**	**9**	P		**P**	**10 05 41.4**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=296,slow=5.1,SNR=8.5							
NVAR	**Mina Array Bea**	**84.35**	**48**	P		**P**	**10 05 49.7**	**+1.7**
NVAR	**Mina Array Bea**	**84.35**	**48**	P		**P**	**10 05 49.7**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=308,slow=4.4,SNR=3.1							
PDAR	**Pinedale Array**	**86.80**	**40**	P		**P**	**10 06 01.1**	**+0.9**
PDAR	**Pinedale Array**	**86.80**	**40**	P		**P**	**10 06 01.1**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=324,slow=4.5,SNR=3.2							
ULM	**Lac du Bonnet**	**87.96**	**28**	P		**P**	**10 06 06.3**	**+1.1**
ULM	**Lac du Bonnet**	**87.96**	**28**	P		**P**	**10 06 06.3**	**+1.1**
	comp=Z,2.6nm,0.9s,baz=353,slow=5.6,SNR=2.7							

ISCJB ***05*** *10:02:24.8±0.6, 39°.64N±0°.03×26°.47E±0°.04, h3km±6km, Error ellipse: s-maj=6.2km s-min=4.6km az=147.6*
CSEM ***05*** *10:02:24.9±0.3, 39°.64N×26°.44E, h5km, MD2.8, Error ellipse: s-maj=6.7km s-min=3.7km az=67.0*
DDA ***05*** *10:02:24.4, 39°.62N×26°.45E, h7km, MD2.9*
ISK ***05*** *10:02:24.9, 39°.67N×26°.47E, h5km, MD2.8*

ISC 05 10:02:25.2±1.2, 39°.64N±0°.03×26°.47E±0°.04, h3km±14km, n35, σ0°843/46, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EZN	**Ezine**	**0.22**	**329**	*e*PG		**Pg**	**10 02 29.4**	**-0.1**
EZN	**Ezine**	**0.22**	**329**	*e*Pg		**Pg**	**10 02 29.4**	**-0.1**
AYVA	**Ayvalik**	**0.37**	**153**	*i*P		**Pg**	**10 02 32.0**	**-0.4**
AYVA				*i*S		**Sg**	**10 02 37.3**	**+0.1**
AYVA	**Ayvalik**	**0.37**	**153**	*i*P		**Pg**	**10 02 32.0**	**-0.4**
AYVA				*i*S		**Sg**	**10 02 37.3**	**+0.1**

BOZC	Bozcaada	0.38	302	i P	Pg	10 02 32.4	-0.2
BOZC				i S	Sg	10 02 37.7	+0.2
GELI	Tayfur-Gelibol	0.76	0	ePG	Pg	10 02 39.5	-0.3
GELI				eSG	Sg	10 02 50.1	+0.4
GELI	Tayfur-Gelibol	0.76	0	ePg	Pg	10 02 39.5	-0.3
GELI				eSg	Sg	10 02 50.1	+0.4
LPK	Lapseki	0.77	17	ePG	Pg	10 02 40.0	0.0
LPK				eSG	Sg	10 02 50.3	+0.4
LPK	Lapseki	0.77	17	ePg	Pg	10 02 40.0	0.0
LPK				eSg	Sg	10 02 50.3	+0.4
BALY	Balya	0.89	83	i P	Pg	10 02 42.4	0.0
BALY				i S	Sb	10 02 55.1	-0.6
BALY	Balya	0.89	83	i P	Pg	10 02 42.4	0.0
BALY				i S	Sb	10 02 55.1	-0.6
KRBG	Karabiga-Canak	0.99	40	ePG	Pg	10 02 43.7	-0.5
KRBG				eSG	Sb	10 02 57.8	-0.6
KRBG	Karabiga-Canak	0.99	40	ePg	Pg	10 02 43.7	-0.5
KRBG				eSg	Sb	10 02 57.8	-0.6
GONE	Gonen-Balikesi	1.02	66	ePG	Pg	10 02 44.6	-0.2
GONE	Gonen-Balikesi	1.02	66	ePg	Pg	10 02 44.6	-0.2
BALB	Balikesir	1.09	89	ePN	Pg	10 02 46.0	-0.1
BALB	Balikesir	1.09	89	ePn	Pg	10 02 46.0	-0.1
ENEZ	Enez	1.12	348	ePN	Pg	10 02 46.2	-0.6
ENEZ	Enez	1.12	348	ePn	Pg	10 02 46.2	-0.6
RKY	Sarkoy-Tekirda	1.18	27	ePN	Pg	10 02 47.1	-0.8
RKY	Sarkoy-Tekirda	1.18	27	ePn	Pg	10 02 47.1	-0.8
MFT	Murefte	1.30	28	ePN	Pg	10 02 49.9	-0.4
MFT	Murefte	1.30	28	ePn	Pg	10 02 49.9	-0.4
IZM	Izmir	1.38	153	ePN	Pg	10 02 51.6	-0.2
IZM	Izmir	1.38	153	ePn	Pg	10 02 51.6	-0.2
DST	Dursunbey	1.66	90	ePN	Pn	10 02 55.6	+0.3
DST	Dursunbey	1.66	90	ePn	Pn	10 02 55.6	+0.3
ARMT	Armutlu	2.06	62	ePN	Pn	10 03 01.2	+0.5
ARMT	Armutlu	2.06	62	ePn	Pn	10 03 01.2	+0.5
EDRB	Edirne	2.22	5	ePN	Pn	10 03 03.3	+0.4
EDRB	Edirne	2.22	5	ePn	Pn	10 03 03.3	+0.4
TVSB	Tavsanli	2.32	94	ePN	Pn	10 03 04.9	+0.5
TVSB	Tavsanli	2.32	94	ePn	Pn	10 03 04.9	+0.5
YLV	Yalova	2.41	66	ePN	Pn	10 03 06.2	+0.6
YLV	Yalova	2.41	66	ePn	Pn	10 03 06.2	+0.6

*DDA **05** 10:12:07.1, 39°.01N×25°.86E, h7km, MD3.2*
*ISCJB **05** 10:12:09.0±0.6, 38°.94N±0°.03×26°.02E±0°.06, h7km±5km, Error ellipse: s-maj=7.7km s-min=4.1km az=165.2*
*THE **05** 10:12:08.9, 38°.93N×26°.01E, h2km±1km, ML2.7/4, Error ellipse: s-maj=1.8km s-min=0.4km az=119.0*
*CSEM **05** 10:12:09.0±0.2, 38°.95N×25°.97E, h10km, ML2.7/4, Error ellipse: s-maj=5.0km s-min=2.6km az=73.0*
*ISK **05** 10:12:09.4, 39°.00N×26°.03E, h12km, MD3.1*
ISC 05 10:12:08.5±1.2, **38°.95N**±0°.04×**25°.99E**±0°.04, **h9**km±12km, **n40**, σ**0s.79**/52, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.28	339	P	Pb	10 12 14.8	-0.9
SIGR				S	Sb	10 12 19.7	-0.8
SIGR	SIGRI	0.28	339	P	Pb	10 12 14.8	-0.9
SIGR				S	Sb	10 12 19.7	-0.8
PRK	Paraskevi	0.37	37	P	Pb	10 12 16.1	-1.1
PRK				S	Sb	10 12 22.0	-1.1
PRK	Paraskevi	0.37	37	P	Pb	10 12 16.1	-1.1
PRK				S	Sb	10 12 22.0	-1.1
CHOS	Chios island	0.57	175	P	Pg	10 12 19.7	+0.3
CHOS				S	Sg	10 12 27.1	+0.3
CHOS	Chios island	0.57	175	P	Pg	10 12 19.7	+0.3
CHOS				S	Sg	10 12 27.1	+0.3
URLA	Izmir	0.76	141	i P	Pg	10 12 23.1	0.0
URLA				i S	Sn	10 12 36.4	-0.6
URLA	Izmir	0.76	141	i P	Pg	10 12 23.1	0.0
URLA				i S	Sn	10 12 36.4	-0.6
EZN	Ezine	0.91	17	ePG	Pb	10 12 26.4	-0.1
EZN				eSG	Sb	10 12 38.8	+0.1
EZN	Ezine	0.91	17	ePg	Pb	10 12 26.4	-0.1
EZN				eSg	Sb	10 12 38.8	+0.1
BLCB	Balcova	1.00	124	ePG	Pn	10 12 29.0	+0.3
BLCB	Balcova	1.00	124	ePg	Pn	10 12 29.0	+0.3
LIA	Limnos Island	1.13	327	P	Pn	10 12 30.6	+0.1
LIA				S	Sn	10 12 47.4	+1.2
LIA	Limnos Island	1.13	327	P	Pn	10 12 30.6	+0.1
LIA				S	Sn	10 12 47.4	+1.2
IZM	Izmir	1.14	119	ePN	Pn	10 12 31.7	+1.0
IZM	Izmir	1.14	119	ePn	Pn	10 12 31.7	+1.0
GELI	Tayfur-Gelibol	1.49	14	ePN	Pb	10 12 36.0	-0.4
GELI	Tayfur-Gelibol	1.49	14	ePn	Pb	10 12 36.0	-0.4
LPK	Lapseki	1.54	23	ePN	Pb	10 12 36.6	-0.6
LPK	Lapseki	1.54	23	ePn	Pb	10 12 36.6	-0.6
BALB	Balikesir	1.62	64	ePN	Pn	10 12 37.2	0.0
BALB	Balikesir	1.62	64	ePn	Pn	10 12 37.3	0.0
GONE	Gonen-Balikesi	1.71	50	ePN	Pn	10 12 39.0	+0.5
GONE	Gonen-Balikesi	1.71	50	ePn	Pn	10 12 39.0	+0.5
KRBG	Karabiga-Canak	1.76	35	ePN	Pn	10 12 39.7	+0.6
KRBG	Karabiga-Canak	1.76	35	ePn	Pn	10 12 39.7	+0.6
ENEZ	Enez	1.79	4	ePN	Pb	10 12 40.2	-1.2
ENEZ	Enez	1.79	4	ePn	Pb	10 12 40.2	-1.2
RKY	Sarkoy-Tekirda	1.96	27	ePN	Pn	10 12 42.7	+0.7
RKY	Sarkoy-Tekirda	1.96	27	ePn	Pn	10 12 42.7	+0.7
EDC	Edincik	2.01	46	ePN	Pn	10 12 43.2	+0.6
EDC	Edincik	2.01	46	ePn	Pn	10 12 43.2	+0.6
DURS	Dursunbey	2.04	71	eP	Pn	10 12 43.7	+0.7
DURS	Dursunbey	2.04	71	eP	Pn	10 12 43.7	+0.7
DST	Dursunbey	2.15	71	ePN	Pn	10 12 45.6	+1.1
DST	Dursunbey	2.15	71	ePn	Pn	10 12 45.6	+1.1
ARMT	Armutlu	2.74	53	ePN	Pn	10 12 54.1	+1.4
ARMT	Armutlu	2.74	53	ePn	Pn	10 12 54.1	+1.4
TVSB	Tavsanli	2.75	78	ePN	Pn	10 12 53.7	+0.9
TVSB	Tavsanli	2.75	78	ePn	Pn	10 12 53.7	+0.9

IDC 05 10:38:34.9±1.6, **7°.38S**×**156°.24E**, **h0**km, **mb3.8**/8, **mb1 4.0**/8, **mb1mx3.8**/18, **mbtmp3.8**/8, **Error ellipse: s-maj=57.7km s-min=25.0km az=128.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.64	237	P	P	10 43 58.3	+0.9
	1.7nm,0.6s,baz=64,slow=10.0,SNR=24						
ASAR	Alice Springs	26.86	230	P	P	10 44 16.9	-0.8
	0.2nm,0.5s,baz=66,slow=9.4,SNR=4.8						
CMAR	Chiang Mai Arr	62.06	295	P	P	10 48 58.5	+0.6
	0.8nm,0.9s,baz=126,slow=5.3,SNR=4.1						
SONM	Songino Array	70.33	327	P	P	10 49 50.3	-0.4
	0.2nm,0.3s,baz=134,slow=7.9,SNR=5.5						
ILAR	Eielson Array	83.28	21	P	P	10 51 03.5	+0.2
	0.2nm,0.8s,baz=253,slow=5.6,SNR=3.0						
MKAR	Makanchi Array	84.51	318	P	P	10 51 10.2	+0.2
	6.2nm,0.7s,baz=103,slow=6.0,SNR=64						
ZALV	Zalesovo Beam	85.19	326	P	P	10 51 12.4	-0.7
	1.2nm,0.5s,baz=104,slow=6.3,SNR=5.9						
YKA	Yellowknife Ar	96.10	28	P	P	10 52 04.8	+0.6
	0.1nm,0.5s,baz=264,slow=4.8,SNR=6.3						
TORD	Torodi Ar. Bea	154.32	285	PKPbc	PKPbc	10 58 37.4	-1.0
	0.4nm,0.8s,baz=72,slow=3.8,SNR=1.9						

NNC 05 11:20:12.0±4.3, **53°.80N**×**86°.84E**, **h0**km, **mb3.6**, **mpv3.0**, **3C-7D**, **Error ellipse: s-maj=35.4km s-min=21.5km az=62.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	5.92	242	⇓Pn	Pn	11 21 42.4	+1.5
	3.2nm,1.2s						
KURK				⇓Sn	Sn	11 22 53.7	+4.4
	1.2nm,0.7s						
KURK				⇓Lg	Lg	11 23 24.3	
	6.1nm,1.0s						
MK31	Makanchi Array	7.60	204	⇓Pn	Pn	11 22 06.9	+3.0
	0.2nm,0.5s,baz=28,slow=14,SNR=17						
MK31				⇓Sn	Sn	11 23 36.2	+5.4
	0.3nm,0.5s,baz=30,slow=27,SNR=4.8						
MK31				⇑Lg	Lg	11 24 14.8	
	2.4nm,0.8s,baz=25,slow=33,SNR=5.2						
VOSK	Vostochnaya	9.57	270	⇑Pn	Pn	11 22 30.0	-0.9
	2.0nm,0.5s						
VOSK				⇓Sn	Sn	11 24 16.4	-2.7
	2.2nm,0.8s						
ZRNK	Zerenda	10.69	273	⇓Pn	Pn	11 22 47.2	+0.9
	1.4nm,0.6s						
ZRNK				⇑Sn	Sn	11 24 43.3	-3.3
	1.9nm,1.2s						

*IDC **05** 11:38:32.5±0.8, 2°.35S×152°.78E, h0km, mb3.9/10, mb1 4.1/10, mb1mx4.0/17, mbtmp3.9/10, MS3.4/1, Ms1 3.4/1, ms1mx3.0/23, Error ellipse: s-maj=34.5km s-min=17.5km az=104.0*
*ISCJB **05** 11:38:36.1±0.6, 2°.23S±0°.06×152°.69E±0°.07, h33km, mb3.8/11, Error ellipse: s-maj=9.9km s-min=8.7km az=164.8*
*NEIC **05** 11:38:38.5±0.7, 2°.27S×152°.53E, h35km, mb4.2/1, Error ellipse: s-maj=19.3km s-min=13.3km az=95.0*
ISC 05 11:38:38.6±0.6, **2°.15S**±0°.07×**152°.72E**±0°.09, **h35**km, **n30**, σ**1s.76**/34, **mb4.0**/11, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	9.08	217	ePn	Pn	11 40 49.8	+2.5
	39nm,0.8s						
PMG				Sn	Sn	11 42 30.3	+1.9
PMG	Port Moresby	9.08	217	Pn	Pn	11 40 48.6	+1.4
	0.4nm,0.3s,baz=20,slow=9.6,SNR=13						
PMG				Sn	Sn	11 42 30.3	+1.9
	0.2nm,0.3s,baz=29,slow=23,SNR=1.5						
HNR	Honiara	10.20	135	ePn	Pn	11 41 04.1	+1.6
	93nm,0.7s						
HNR				eSn	Sn	11 42 56.3	+0.6
GUMO	Guam	17.47	334	LR	LR	11 47 37.3	
	comp=Z,135nm,20.1s,baz=81,slow=31						
CTA	Charters Tower	18.91	199	P	Pn	11 42 57.3	+0.1
CTA	Charters Tower	18.91	199	P	Pn	11 42 57.3	+0.1
	0.1nm,0.3s,baz=24,slow=14,SNR=3.0						
WRAB	Tennant Creek	25.19	224	eP	P	11 43 58.4	-2.7
	4.9nm,0.6s						
WRA	Warramunga Arr	25.20	224	P	P	11 43 58.4	-2.8
WRA	Warramunga Arr	25.20	224	P	P	11 43 58.4	-2.8
	3.2nm,0.8s,baz=47,slow=9.3,SNR=49						
AS31	Alice Springs	28.09	219	eP	P	11 44 24.3	-3.0
ASAR	Alice Springs	28.09	219	P	P	11 44 24.4	-2.8
ASAR				PcP	PcP	11 47 41.8	+0.5
ASAR	Alice Springs	28.09	219	P	P	11 44 24.4	-2.8
	0.7nm,0.7s,baz=60,slow=8.9,SNR=14						
ASAR				PcP	PcP	11 47 41.8	+0.5
	0.5nm,0.7s,baz=60,slow=2.5,SNR=6.0						
STKA	Stephens Creek	31.37	198	P	P	11 44 53.0	-3.1
STKA	Stephens Creek	31.37	198	P	P	11 44 53.0	-3.1
	3.3nm,0.9s,baz=359,slow=16,SNR=4.0						
PETK	Petropavlovsk-	55.22	4	P	P	11 48 08.8	+0.8
PETK	Petropavlovsk-	55.22	4	P	P	11 48 08.8	+0.8
	1.0nm,0.6s,baz=173,slow=7.1,SNR=4.7						
CMAR	Chiang Mai Arr	56.72	294	P	P	11 48 20.8	+1.5
CMAR	Chiang Mai Arr	56.72	294	P	P	11 48 20.8	+1.5
	1.1nm,0.7s,baz=108,slow=5.2,SNR=7.6						
SONM	Songino Array	64.06	327	P	P	11 49 09.6	+0.5
SONM	Songino Array	64.06	327	P	P	11 49 09.6	+0.5
	0.2nm,0.5s,baz=121,slow=3.2,SNR=3.5						
VNDA	Vanda	75.46	178	P	P	11 50 18.0	-0.6
VNDA	Vanda	75.46	178	P	P	11 50 18.0	-0.6
	1.7nm,0.9s,baz=326,slow=5.4,SNR=8.9						
MKAR	Makanchi Array	78.30	319	P	P	11 50 35.3	+0.2
MKAR	Makanchi Array	78.30	319	P	P	11 50 35.3	+0.2
	0.3nm,0.6s,baz=120,slow=8.5,SNR=4.0						
ILAR	Eielson Array	79.75	22	P	P	11 50 41.9	-0.8
ILAR	Eielson Array	79.75	22	P	P	11 50 41.9	-0.8
	0.7nm,0.9s,baz=246,slow=6.2,SNR=13						
YKA	Yellowknife Ar	93.14	28	P	P	11 51 49.3	+0.5
YKA	Yellowknife Ar	93.14	28	P	P	11 51 49.3	+0.5
	0.3nm,0.8s,baz=264,slow=4.2,SNR=5.3						
TORD	Torodi Ar. Bea	149.32	292	PKPbc	PKPbc	11 58 24.0	-0.8
TORD	Torodi Ar. Bea	149.32	292	PKPbc	PKPbc	11 58 24.0	-0.8
	0.5nm,0.4s,baz=66,slow=2.0,SNR=9.8						

*IDC **05** 11:42:42.4±3.2, 35°.66N×70°.76E, h0km, mb4.0/2, mb1 3.8/4, mb1mx3.3/29, mbtmp3.8/4, ML3.4/2, Error ellipse: s-maj=86.2km s-min=27.8km az=138.0*
*ISCJB **05** 11:42:55.3±0.8, 36°.28N±0°.04×70°.6E±0°.1, h102km, mb3.6/1, Error ellipse: s-maj=16.4km s-min=6.1km az=175.9*
ISC 05 11:42:56.7±1.0, **36°.26N**±0°.08×**70°.6E**±0°.2, **h102**km, **n15**, σ**0s.68**/16, **1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.65	156	⇓P	Pn	11 43 38.2	+0.2
CEP				S	Sn	11 44 10.0	+0.4
CHCP	Chirah Chowk	3.38	139	P	Pn	11 43 48.8	+1.2
THW	Thamme Wali	3.58	165	P	Pn	11 43 50.1	-0.1
AML	Almayashu	6.33	21	P	Pn	11 44 27.8	-0.1
	SNR=82						
KZA	Kyzart	6.84	30	P	Pn	11 44 34.4	-0.3
	SNR=16						
EKS2	Erkin-Say	6.85	20	P	Pn	11 44 34.9	+0.3
	SNR=13						
AAK	Ala-Archa	7.04	24	P	Pn	11 44 37.8	+0.6
	SNR=7.3						
ULHL	Ulahol	7.40	34	P	Pn	11 44 42.0	-0.2
	SNR=9.2						
CHMS	Chumysh	7.45	24	P	Pn	11 44 43.2	+0.5
	SNR=7.0						
USP	Ospenovka	7.61	22	P	Pn	11 44 45.0	+0.2
	SNR=13						
TKM2	Tokmak 2	7.69	28	P	Pn	11 44 46.1	+0.1
	SNR=22						
MKAR	Makanchi Array	13.67	36	Pn	Pn	11 46 04.7	-1.4
	0.1nm,0.3s,baz=216,slow=14,SNR=5.9						
AKTO	Aktyubinsk	16.84	331	P	Pn	11 46 46.9	+0.8
	0.3nm,0.3s,baz=145,slow=13,SNR=14						
ZALV	Zalesovo Beam	20.27	25	P	P	11 47 24.0	+0.2
	5.4nm,0.4s,baz=213,slow=11,SNR=38						
TORD	Torodi Ar. Bea	65.40	269	P	P	11 53 27.9	-0.9
	0.5nm,0.5s,baz=51,slow=5.4,SNR=13						

*ISCJB **05** 11:44:09.8±0.8, 51°.46N±0°.04×16°.08E±0°.04, h0km, Error ellipse: s-maj=5.8km s-min=2.9km az=20.1*
*IPEC **05** 11:44:10.2±0.3, 51°.56N×16°.22E, h1km±1km, ML1.8/3, Error ellipse: s-maj=2.1km s-min=0.7km az=29.0*
*WAR **05** 11:44:10.3, 51°.58N×15°.99E*
*CSEM **05** 11:44:11.0±0.3, 51°.48N×16°.09E, h2km, ML3.0/9, Error ellipse: s-maj=5.5km s-min=2.8km az=19.0*
*PRU **05** 11:44:12.0, 51°.46N×16°.11E, h0km*
ISC 05 11:44:10.0±1.1, **51°.58N**±0°.05×**16°.13E**±0°.03, **h0**km, **n31**, σ**0s.70**/58, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.74	172	ePg	Pg	11 44 24.6	+0.4
KSP				eSg	Sg	11 44 33.8	0.0
KSP	Ksiaz	0.74	172	ePg	Pg	11 44 24.5	+0.4
	baz=356						
KSP				eSg	Sg	11 44 33.3	-0.5
	baz=356						
UPC	Upice	1.07	184	ePG	Pg	11 44 30.3	-0.2
UPC	Upice	1.07	184	Pg	Pg	11 44 30.3	-0.2
DPC	Dobruska-Polom	1.23	174	ePG	Pg	11 44 33.5	-0.1
DPC				eSG	Sg	11 44 48.5	-1.1
	comp=Z,18nm,0.6s						
DPC	Dobruska-Polom	1.23	174	Pg	Pg	11 44 33.5	-0.1
DPC				Sg	Sg	11 44 48.5	-1.1
	18nm,0.6s						
PVCC	Panska Ves	1.44	224	ePG	Pg	11 44 37.6	+0.1
PVCC				eSG	Sg	11 44 55.9	-0.2
	comp=Z,72nm,0.2s						
PVCC	Panska Ves	1.44	224	Pg	Pg	11 44 37.6	+0.1
PVCC				Sg	Sg	11 44 55.9	-0.2
	72nm,0.2s						
BRG	Berggiesshubel	1.54	244	PG	Pb	11 44 39.4	0.0
BRG				SG	Sg	11 45 00.3	+0.8
	37nm,0.4s						
BRG	Berggiesshubel	1.54	244	ePn	Pb	11 44 39.5	0.0
	baz=64						
BRG				eSg	Sg	11 44 59.9	+0.4
	baz=64						
KRLC	Kraliky	1.56	164	ePG	Pn	11 44 39.4	+0.4
KRLC				eSG	Sn	11 44 58.5	-1.4
KRLC	Kraliky	1.56	164	Pg	Pn	11 44 39.4	+0.4
KRLC				Sg	Sn	11 44 58.5	-1.4
PRU	Pruhonice	1.88	213	ePG	Pb	11 44 45.0	-0.2
PRU				eSG	Sn	11 45 08.5	+0.7
	comp=Z,12nm,0.3s						
PRU	Pruhonice	1.88	213	Pg	Pb	11 44 45.0	-0.2
PRU				Sg	Sn	11 45 08.5	+0.7
	12nm,0.3s						
CLL	Collm	1.97	263	i Pn	Pn	11 44 43.9	-0.7
CLL				ePg	Pb	11 44 47.0	+0.2
CLL				i		11 44 51.0	
CLL				i Sg	Sg	11 45 13.7	+0.3
	comp=Z,10.0nm,0.6s						
CLL	Collm	1.97	263	ePn	Pn	11 44 43.9	-0.7
	baz=82						
CLL				eSg	Sg	11 45 13.1	-0.2
	baz=82						
MORC	Moravsky Berou	2.01	153	ePn	Pn	11 44 44.6	-0.7
	baz=335						
MORC				eSg	Sn	11 45 11.9	+0.8
	comp=Z,6.2nm,0.3s,baz=335						
OKC	Ostrava-Krasne	2.16	143	eSG	Sb	11 45 17.3	0.0
	comp=Z,14nm,0.5s						
OKC	Ostrava-Krasne	2.16	143	Sg	Sb	11 45 17.3	0.0
	comp=Z,14nm,0.5s						
VRAC	Vranov	2.29	172	ePn	Pn	11 44 49.5	+0.5
	baz=354						
VRAC				eSg	Sb	11 45 21.0	0.0
	comp=Z,5.6nm,0.2s,baz=354						
TREC	Trest	2.32	190	ePN	Pn	11 44 50.3	+0.9
TREC	Trest	2.32	190	Pn	Pn	11 44 50.3	+0.9
KRUC	Moravsky	2.52	176	ePg	Pb	11 44 56.7	+0.6
	baz=358						
KRUC				eSg	Sb	11 45 27.5	-0.2
	comp=Z,2.6nm,0.2s,baz=358						
NKC	Novy Kostel	2.69	241	ePN	Pn	11 44 55.0	+0.5
NKC				ePG	Pg	11 45 01.2	-0.3
NKC				eSG	Sg	11 45 35.9	-0.4
	comp=Z,24nm,0.3s						
NKC	Novy Kostel	2.69	241	ePn	Pn	11 44 55.0	+0.5
	baz=59						
OJC	Ojcow	2.69	119	ePg	Pg	11 45 02.0	+0.5
OJC				eSg	Sg	11 45 37.2	+0.8
OJC	Ojcow	2.69	119	ePg	Pg	11 45 02.0	+0.5
OJC				eSg	Sg	11 45 37.2	+0.8
KHC	Kasperske Hory	2.94	215	ePN	Pn	11 44 57.8	-0.2
KHC				ePG	Pb	11 45 03.9	+0.6
KHC				eSN	Sn	11 45 32.3	-1.7
KHC				eSG	Sb	11 45 41.9	+2.1
	comp=Z,4.6nm,0.2s						
KHC	Kasperske Hory	2.94	215	Pn	Pn	11 44 57.8	-0.2
MOX	Moxa	2.99	254	ePg	Pg	11 45 06.8	-0.5
	baz=71						
MOX				eSg	Sg	11 45 45.7	-0.4
	baz=71						
NIE	Niedzica	3.44	127	eP	Pg	11 45 15.0	-0.8
NIE				eS	Sg	11 45 59.0	-1.3

IDC 05 11:47:11.2±4.0, **4°.02S**×**131°.26E**, **h0**km, **mb3.4**/1, **mb1 3.5**/3, **mb1mx3.2**/18, **mbtmp3.3**/3, **MS3.4**/1, **Ms1 3.6**/1, **ms1mx3.0**/13, **Error ellipse: s-maj=278.3km s-min=30.8km az=72.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.11	170	Pn	Pn	11 50 58.6	-0.6
	0.1nm,0.3s,baz=351,slow=12,SNR=8.6						
WRA				Sn	Sn	11 53 45.9	-13
	0.1nm,0.3s,baz=341,slow=23,SNR=4.7						
ASAR	Alice Springs	19.70	173	P	P	11 51 42.5	+0.2
	0.2nm,0.3s,baz=348,slow=11,SNR=20						
CMAR	Chiang Mai Arr	38.89	306	LR	LR	12 12 45.7	
	comp=Z,53nm,18.1s,baz=270,slow=40						
MKAR	Makanchi Array	66.46	326	P	P	11 58 02.6	0.0
	0.3nm,0.6s,baz=122,slow=7.8,SNR=3.9						

IDC 05 11:48:30.5±1.2, **56°.54N**×**34°.42W**, **h0**km, **mb3.5**/8, **mb1 3.6**/8, **mb1mx3.4**/32, **mbtmp3.5**/8, **Error ellipse: s-maj=38.4km s-min=20.1km az=17.0, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKA	Yellowknife Ar	38.62	313	P	P	11 55 55.6	+0.7
	0.1nm,0.7s,baz=57,slow=9.1,SNR=3.3						
BRTR	Keskin Array B	46.40	81	P	P	11 57 00.4	+1.8
	0.3nm,0.5s,baz=330,slow=8.7,SNR=3.3						
PDAR	Pinedale Array	48.09	287	P	P	11 57 11.6	-0.3
	0.2nm,0.6s,baz=34,slow=9.8,SNR=2.5						
ILAR	Eielson Array	48.58	328	P	P	11 57 14.8	-0.2
	0.5nm,0.7s,baz=36,slow=6.6,SNR=7.1						
AKTO	Aktyubinsk	51.32	55	P	P	11 57 35.9	-0.1
	0.4nm,0.5s,baz=327,slow=13,SNR=3.8						
TORD	Torodi Ar. Bea	51.39	133	P	P	11 57 36.2	-0.7
	0.7nm,0.8s,baz=336,slow=7.1,SNR=6.3						
BVAR	Borovoye Array	54.69	46	P	P	11 58 00.4	-0.5
	0.9nm,0.8s,baz=334,slow=8.8,SNR=4.8						
MKAR	Makanchi Array	64.29	43	P	P	11 59 06.0	-1.3
	0.2nm,0.7s,baz=341,slow=5.5,SNR=5.0						
ASAR	Alice Springs	146.07	19	PKPbc	PKPdf	12 08 10.8	-0.5
	0.4nm,0.8s,baz=336,slow=2.0,SNR=4.3						

*CSEM **05** 12:22:26.7±0.6, 41°.23N×36°.02E, h26km±1km, MD2.6, Error ellipse: s-maj=16.9km s-min=5.5km az=8.0*
*ISK **05** 12:22:27.0, 41°.21N×35°.89E, h22km, MD2.1*
*DDA **05** 12:22:28.9, 40°.90N×35°.95E, h10km, MD2.6*
ISC 05 12:22:26.2±3.2, **41°.3N**±0°.2×**36°.04E**±0°.06, **h30**km±7km, **n12**, σ**0s.56**/22, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KVT	Kavak	0.18	179	ePG	Pb	12 22 32.5	+0.2
KVT				eSG	Sb	12 22 36.1	-0.2
KVT	Kavak	0.18	179	ePg	Pb	12 22 32.5	+0.2
KVT				eSg	Sb	12 22 36.1	-0.2
HAVZ	Havza	0.31	233	i P	Pb	12 22 34.0	+0.2
HAVZ				i S	Sb	12 22 38.3	-0.6
HAVZ	Havza	0.31	233	i P	Pb	12 22 34.0	+0.2
HAVZ				i S	Sb	12 22 38.3	-0.6
ERBA	Erbaa	0.79	137	i P	Pb	12 22 41.5	0.0
ERBA				i S	Sb	12 22 51.0	-0.8
ERBA	Erbaa	0.79	137	i P	Pb	12 22 41.5	0.0
ERBA				i S	Sb	12 22 51.0	-0.8
CTKT	Corum	1.14	237	i P	Pn	12 22 46.6	+0.3
CTKT				i S	Sn	12 23 00.6	-0.4
CTKT	Corum	1.14	237	i P	Pn	12 22 46.6	+0.3
CTKT				i S	Sn	12 23 00.6	-0.4
CORM	Corum	1.52	225	ePN	Pn	12 22 51.6	+0.1
CORM				eSN	Sn	12 23 10.2	-0.2
CORM	Corum	1.52	225	ePn	Pn	12 22 51.6	+0.1
CORM				eSn	Sn	12 23 10.2	-0.2
YOZ	Yozgat	1.71	199	ePN	Pn	12 22 55.2	+1.1
YOZ	Yozgat	1.71	199	ePn	Pn	12 22 55.2	+1.1

*MDD **05** 12:46:31.9±1.6, 37°.08N×12°.42W, h0km, mb4.2/5, Error ellipse: s-maj=14.0km s-min=11.4km az=65.0, PRXIMO*
*IGIL **05** 12:46:31.0, 37°.09N×12°.55W, h0km, ML2.5*
*INMG **05** 12:46:33.5±1.1, 36°.92N×12°.79W, h10km, ML2.5, Error ellipse: s-maj=5.3km s-min=3.9km az=87.0*
*CSEM **05** 12:46:34.7±0.4, 37°.23N×12°.21W, h10km, ML3.4/26, Error ellipse: s-maj=6.9km s-min=5.7km az=70.0*
ISC 05 12:46:28.9±3.1, **37°.11N**±0°.09×**12°.6W**±0°.1, **h10**km, **n94**, σ**1s.89**/166, **1C, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.98	88	ePn	Pn	12 47 17.3	+1.1
PFVI				eSn	Sn	12 47 50.7	-1.3
PFVI	Vila Bisbo	2.98	88	⇑Pn	Pn	12 47 17.3	+1.1
	10nm,0.1s,SNR=18						
PFVI				Sn	Sn	12 47 50.5	-1.5
	23nm,0.1s,SNR=10.0						
PFVI	Vila Bisbo	2.98	88	Pn	Pn	12 47 17.3	+1.1
	10nm,0.1s,SNR=18						
PFVI				eSn	Sn	12 47 50.7	-1.3
PTEO	Sao Teotonio	3.08	81	ePn	Pn	12 47 19.1	+1.4
PTEO				eSn	Sn	12 47 53.8	-0.8
PTEO				A	A	12 47 55.2	
	11nm,0.8s						
PTEO	Sao Teotonio	3.08	81	Pn	Pn	12 47 19.1	+1.4
PTEO				Sn	Sn	12 47 53.8	-0.8
	5.7nm,0.8s						
PTEO	Sao Teotonio	3.08	81	Pn	Pn	12 47 19.1	+1.4
PTEO				eSn	Sn	12 47 53.8	-0.8
	11nm,0.8s						
MORF	Marmelete	3.12	85	ePn	Pn	12 47 19.5	+1.3
MORF				eSn	Sn	12 47 54.1	-1.5
MORF				A	A	12 47 58.2	
	9.9nm,0.3s						
MORF	Marmelete	3.12	85	Pn	Pn	12 47 19.5	+1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MORF				Sn	Sn	12 47 54.1	-1.5
	9.9nm,0.3s						
MORF	Marmelete	3.12	85	Pn	Pn	12 47 19.5	+1.3
MORF				eSn	Sn	12 47 54.1	-1.5
	9.9nm,0.3s						
PMAFR	Mafra	3.17	53	ePn	Pn	12 47 22.0	+3.1
PMAFR				eSn	Sn	12 47 57.5	+0.6
PMAFR				A	A	12 47 59.9	
	22nm,0.2s						
PMAFR	Mafra	3.17	53	Pn	Pn	12 47 21.8	+2.8
	3.0nm,0.2s,SNR=7.9						
PMAFR				Sn	Sn	12 47 57.4	+0.5
	20nm,0.1s,SNR=18						
PMAFR	Mafra	3.17	53	Pn	Pn	12 47 21.8	+2.8
	3.0nm,0.2s,SNR=7.9						
PMAFR				eSn	Sn	12 47 57.5	+0.6
	22nm,0.2s						
PNCL	Nicolau / Gran	3.35	71	ePn	Pn	12 47 23.0	+1.7
PNCL				eSn	Sn	12 48 00.5	-0.6
PNCL				A	A	12 48 06.3	
	9.9nm,0.3s						
PNCL	Nicolau / Gran	3.35	71	ePn	Pn	12 47 23.0	+1.7
PNCL				eSn	Sn	12 48 00.5	-0.6
	9.9nm,0.3s						
MESJ	Messejana	3.52	77	eP	Pn	12 47 25.2	+1.5
MESJ				eS	Sn	12 48 04.4	-1.0
MESJ				AML	AML	12 48 08.4	
	comp=N,10nm,0.2s						
MESJ	Messejana	3.52	77	eP	Pn	12 47 25.2	+1.5
MESJ				eS	Sn	12 48 04.4	-1.0
MESJ	Messejana	3.52	77	Pn	Pn	12 47 25.2	+1.5
MESJ				Sn	Sn	12 48 04.4	-1.0
MESJ	Messejana	3.52	77	eP	Pn	12 47 25.2	+1.5
MESJ				eS	Sn	12 48 04.4	-1.0
PCVE	Castro Verde	3.63	80	ePn	Pn	12 47 26.9	+1.7
PCVE				eSn	Sn	12 48 06.9	-1.3
PCVE				A	A	12 48 12.1	
	comp=N,3.0nm,0.2s						
PCVE	Castro Verde	3.63	80	Pn	Pn	12 47 26.9	+1.7
PCVE				Sn	Sn	12 48 06.9	-1.3
	comp=N,3.0nm,0.2s						
PCVE	Castro Verde	3.63	80	Pn	Pn	12 47 26.9	+1.7
PCVE				eSn	Sn	12 48 06.9	-1.3
	comp=N,3.0nm,0.2s						
PBDV	Barranco-do-Ve	3.69	86	ePn	Pn	12 47 27.9	+1.8
PBDV				eSn	Sn	12 48 08.6	-1.1
PBDV				A	A	12 48 16.1	
	comp=N,4.4nm,0.4s						
PBDV	Barranco-do-Ve	3.69	86	Pn	Pn	12 47 27.9	+1.8
PBDV				Sn	Sn	12 48 08.6	-1.1
	comp=N,4.4nm,0.4s						
PBDV	Barranco-do-Ve	3.69	86	Pn	Pn	12 47 27.9	+1.8
PBDV				eSn	Sn	12 48 08.6	-1.1
	comp=N,4.4nm,0.4s						
ALMR	Almeirim	3.74	56	eS	Sn	12 48 10.9	0.0
ALMR				AML	AML	12 48 11.9	
	comp=N,17nm,0.1s						
ALMR	Almeirim	3.74	56	Sn	Sn	12 48 10.9	0.0
ALMR	Almeirim	3.74	56	eS	Sn	12 48 10.9	0.0
PBEJ	Beja	3.83	75	ePn	Pn	12 47 30.0	+2.0
PBEJ				eSn	Sn	12 48 12.0	-1.1
PBEJ				A	A	12 48 17.5	
	comp=N,6.4nm,0.2s						
PBEJ	Beja	3.83	75	Pn	Pn	12 47 30.0	+2.0
PBEJ				Sn	Sn	12 48 12.0	-1.1
	comp=N,3.2nm,0.2s						
PBEJ	Beja	3.83	75	Pn	Pn	12 47 30.0	+2.0
PBEJ				eSn	Sn	12 48 12.0	-1.1
	comp=N,6.4nm,0.2s						
EVO	Evora	3.87	67	ePn	Pn	12 47 30.3	+1.9
EVO				eSn	Sn	12 48 13.2	-0.7
EVO				A	A	12 48 18.4	
	comp=N,17nm,0.1s						
EVO	Evora	3.87	67	Pn	Pn	12 47 30.3	+1.9
EVO				Sn	Sn	12 48 13.2	-0.7
	comp=N,17nm,0.1s						
EVO	Evora	3.87	67	Pn	Pn	12 47 30.3	+1.9
EVO				eSn	Sn	12 48 13.2	-0.7
	comp=N,17nm,0.1s						
PVAQ	Vaqueiros	3.87	84	ePn	Pn	12 47 30.1	+1.6
PVAQ				eSn	Sn	12 48 12.3	-1.7
PVAQ				A	A	12 48 17.4	
	comp=N,9.2nm,0.1s						
PVAQ	Vaqueiros	3.87	84	Pn	Pn	12 47 30.1	+1.6
PVAQ				Sn	Sn	12 48 12.3	-1.7
	comp=N,9.2nm,0.1s						
PVAQ	Vaqueiros	3.87	84	Pn	Pn	12 47 30.1	+1.6
PVAQ				eSn	Sn	12 48 12.3	-1.7
	comp=N,9.2nm,0.1s						
PMTG	Montargil	3.94	59	ePn	Pn	12 47 31.5	+2.1
PMTG				eSn	Sn	12 48 15.6	0.0
PMTG				A	A	12 48 17.0	
	comp=N,7.2nm,0.1s						
PMTG	Montargil	3.94	59	ePn	Pn	12 47 31.5	+2.1
PMTG				eSn	Sn	12 48 15.6	0.0
	comp=N,7.2nm,0.1s						
EGRO	El Granado	4.06	82	Pn	Pn	12 47 32.5	+1.3
	comp=N,1.2nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	12 48 16.8	-2.0
	comp=N,0.9nm,0.1s,SNR=7.9						
EGRO	El Granado	4.06	82	Pn	Pn	12 47 32.5	+1.3
	comp=N,1.2nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	12 48 16.8	-2.0
	comp=N,0.9nm,0.1s,SNR=7.9						
PTOM	Tomar	4.11	51	eSn	Sn	12 48 20.4	+0.5
PTOM				A	A	12 48 22.8	
	comp=N,12nm,0.1s						
PTOM	Tomar	4.11	51	Sn	Sn	12 48 20.4	+0.5
	comp=N,5.8nm,0.1s						
PTOM	Tomar	4.11	51	eSn	Sn	12 48 20.4	+0.5
	comp=N,12nm,0.1s						
PESTR	Estremoz	4.30	64	ePn	Pn	12 47 37.5	+3.1
PESTR				eSn	Sn	12 48 23.8	-0.7
PESTR				A	A	12 48 26.0	
	comp=N,4.2nm,0.2s						
PESTR	Estremoz	4.30	64	Pn	Pn	12 47 37.5	+3.1
PESTR				Sn	Sn	12 48 23.8	-0.7
	comp=N,2.1nm,0.2s						
PESTR	Estremoz	4.30	64	Pn	Pn	12 47 37.5	+3.1
PESTR				eSn	Sn	12 48 23.8	-0.7
	comp=N,4.2nm,0.2s						
PBAR	Barrancos	4.50	75	ePn	Pn	12 47 39.5	+2.3
PBAR				eSn	Sn	12 48 27.8	-1.8
PBAR	Barrancos	4.50	75	Pn	Pn	12 47 39.5	+2.3
PBAR				Sn	Sn	12 48 27.8	-1.8
PBAR	Barrancos	4.50	75	Pn	Pn	12 47 39.5	+2.3
PBAR				Sn	Sn	12 48 27.8	-1.8
PMRV	Marv??o	4.68	59	ePn	Pn	12 47 41.5	+1.9
PMRV				eSn	Sn	12 48 32.9	-1.0
PMRV				A	A	12 48 34.0	
	comp=N,7.8nm,0.2s						
PMRV	Marv??o	4.68	59	Pn	Pn	12 47 41.5	+1.9
PMRV				Sn	Sn	12 48 32.9	-1.0
	comp=N,7.8nm,0.2s						
PMRV	Marv??o	4.68	59	Pn	Pn	12 47 41.5	+1.9
PMRV				eSn	Sn	12 48 32.9	-1.0
	comp=N,7.8nm,0.2s						
PCBR	Castelo Branco	4.83	54	eSn	Sn	12 48 36.5	-1.1
PCBR				A	A	12 48 38.6	
	comp=N,2.9nm,0.2s						
PCBR	Castelo Branco	4.83	54	Sn	Sn	12 48 36.5	-1.1
	comp=N,1.4nm,0.2s						
PCBR	Castelo Branco	4.83	54	eSn	Sn	12 48 36.5	-1.1
	comp=N,2.9nm,0.2s						
MTE	Manteigas	5.11	48	eSn	Sn	12 48 44.5	-0.2
MTE				A	A	12 48 47.2	
	comp=N,6.0nm,0.1s						
MTE	Manteigas	5.11	48	Sn	Sn	12 48 44.5	-0.2
	comp=N,3.0nm,0.1s						
MTE	Manteigas	5.11	48	eSn	Sn	12 48 44.5	-0.2
	comp=N,6.0nm,0.1s						
PVIS	Viseu	5.12	44	ePn	Pn	12 47 47.9	+2.2
PVIS				eSn	Sn	12 48 43.2	-1.6
PVIS				A	A	12 48 46.8	
	comp=N,10nm,0.1s						
PVIS	Viseu	5.12	44	Pn	Pn	12 47 47.9	+2.2
PVIS				Sn	Sn	12 48 43.2	-1.6
	comp=N,5.1nm,0.1s						
PVIS	Viseu	5.12	44	Pn	Pn	12 47 47.9	+2.2
PVIS				eSn	Sn	12 48 43.2	-1.6
	comp=N,10nm,0.1s						
ESPR	Espera	5.37	91	Pn	Pn	12 47 50.7	+1.7
	comp=N,5.0nm,0.2s,SNR=18						
ESPR				Sn	Sn	12 48 49.7	-1.2
	comp=N,2.6nm,0.2s						
ESPR	Espera	5.37	91	Pn	Pn	12 47 50.7	+1.7
	comp=N,5.0nm,0.2s,SNR=18						
ESPR				Sn	Sn	12 48 49.7	-1.2
	comp=N,2.6nm,0.2s						
PVRL	Vila Real	5.61	41	eSn	Sn	12 48 55.1	-1.8
PVRL	Vila Real	5.61	41	Sn	Sn	12 48 55.1	-1.8
PVRL	Vila Real	5.61	41	Sn	Sn	12 48 55.1	-1.8
POLO	Lamas de Olo	5.64	39	ePn	Pn	12 47 55.4	+2.5
POLO				eSn	Sn	12 48 55.4	-2.4
POLO	Lamas de Olo	5.64	39	ePn	Pn	12 47 55.4	+2.5
POLO				eSn	Sn	12 48 55.4	-2.4
PCAB	Cabril	5.78	36	ePn	Pn	12 47 57.1	+2.3
PCAB				eSn	Sn	12 48 59.0	-2.2
PCAB				A	A	12 49 06.9	
	comp=N,5.3nm,0.3s						
PCAB	Cabril	5.78	36	Pn	Pn	12 47 57.1	+2.3
PCAB				Sn	Sn	12 48 59.0	-2.2
	comp=N,2.7nm,0.3s						
PCAB	Cabril	5.78	36	Pn	Pn	12 47 57.1	+2.3
PCAB				eSn	Sn	12 48 59.0	-2.2
	comp=N,5.3nm,0.3s						
EPLA	Plasencia	5.87	58	Pn	Pn	12 47 57.8	+1.8
	comp=N,0.5nm,0.2s,SNR=7.9						
EPLA				Sn	Sn	12 49 01.8	-1.5
	comp=N,5.0nm,0.1s,SNR=10.0						
EPLA	Plasencia	5.87	58	Pn	Pn	12 47 57.8	+1.8
	comp=N,0.5nm,0.2s,SNR=7.9						
EPLA				Sn	Sn	12 49 01.8	-1.5
	comp=N,5.0nm,0.1s,SNR=10.0						
PGAV	Gavieira, Arco	5.87	33	ePn	Pn	12 47 58.0	+1.9
PGAV				eSn	Sn	12 49 01.2	-2.4
PGAV	Gavieira, Arco	5.87	33	ePn	Pn	12 47 58.0	+1.9
MVO	Moncorvo	5.90	45	ePn	Pn	12 48 00.0	+3.5
MVO				eSn	Sn	12 49 01.6	-2.7
MVO				A	A	12 49 03.9	
	comp=N,5.4nm,0.2s						
MVO	Moncorvo	5.90	45	Pn	Pn	12 47 59.2	+2.7
	comp=N,0.6nm,0.1s,SNR=7.9						
MVO				Sn	Sn	12 49 01.6	-2.7
	comp=N,1.7nm,0.1s,SNR=12						
MVO	Moncorvo	5.90	45	Pn	Pn	12 47 59.2	+2.7
	comp=N,0.6nm,0.1s,SNR=7.9						
MVO				eSn	Sn	12 49 01.6	-2.7
	comp=N,5.4nm,0.2s						
EMAZ	Mazaricos	6.45	24	Pn	Pn	12 48 04.4	+0.5
	comp=N,0.9nm,0.1s,SNR=7.9						
EMAZ				Sn	Sn	12 49 12.1	-5.5
	comp=N,1.5nm,0.1s,SNR=5.2						
PBRG	Braganca	6.50	42	eSn	Sn	12 49 16.5	-2.4
PBRG	Braganca	6.50	42	Sn	Sn	12 49 16.5	-2.4
PBRG	Braganca	6.50	42	Sn	Sn	12 49 16.5	-2.4
ECAL	Calabor	6.60	41	Pn	Pn	12 48 08.6	+2.6
	comp=N,1.0nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	12 49 19.6	-1.7
	comp=N,2.1nm,0.2s,SNR=7.9						
ECAL	Calabor	6.60	41	Pn	Pn	12 48 08.6	+2.6
	comp=N,1.0nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	12 49 19.6	-1.7
	comp=N,2.1nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	7.22	67	Pn	Pn	12 48 15.6	+1.1
	comp=N,0.2nm,0.2s,baz=252,slow=13,SNR=4.8						
ESDC				Sn	Sn	12 49 33.2	-3.3
	comp=N,0.3nm,0.2s,baz=254,slow=23,SNR=7.1						
ESDC	Sonseca Array	7.22	67	Pn	Pn	12 48 15.6	+1.1
	comp=N,0.2nm,0.2s,baz=252,slow=13,SNR=4.8						
ESDC				Sn	Sn	12 49 33.2	-3.3
	comp=N,0.3nm,0.2s,slow=23,SNR=7.1						
GUD	Guadarrama	7.44	59	Sn	Sn	12 49 38.7	-3.5
	comp=N,1.1nm,0.3s,SNR=7.9						
GUD	Guadarrama	7.44	59	Sn	Sn	12 49 38.7	-3.5
	comp=N,1.1nm,0.3s,SNR=7.9						
EPON	Pontenova	7.46	32	Pn	Pn	12 48 18.8	+1.0
	comp=N,0.3nm,0.1s,SNR=7.9						
EPON				Sn	Sn	12 49 39.9	-2.6
	comp=N,0.1nm,0.1s,SNR=7.9						
EPON	Pontenova	7.46	32	Pn	Pn	12 48 18.8	+1.0
	comp=N,0.3nm,0.1s,SNR=7.9						
EPON				Sn	Sn	12 49 39.9	-2.6
	comp=N,0.1nm,0.1s,SNR=7.9						
EQES	Quesada	7.57	82	Pn	Pn	12 48 19.9	+0.4
	comp=N,0.4nm,0.2s,SNR=7.9						
EQES				Sn	Sn	12 49 44.1	-1.2
	comp=N,0.6nm,0.2s,SNR=7.9						
EQES	Quesada	7.57	82	Pn	Pn	12 48 19.9	+0.4
	comp=N,0.4nm,0.2s,SNR=7.9						
EQES				Sn	Sn	12 49 44.2	-1.2
	comp=N,0.6nm,0.2s,SNR=7.9						
ETOR	Torete	8.98	62	Pn	Pn	12 48 41.7	+3.0
	comp=N,1.3nm,0.2s,SNR=7.9						
ETOR				Sn	Sn	12 50 15.7	-4.2
	comp=N,1.0nm,0.1s,SNR=7.9						
ETOR	Torete	8.98	62	Pn	Pn	12 48 41.7	+3.0
	comp=N,1.3nm,0.2s,SNR=7.9						
ETOR				Sn	Sn	12 50 15.7	-4.2
	comp=N,1.0nm,0.1s,SNR=7.9						

*BJI **05** 12:56:11.7, 5°.24S×68°.41E, h10km, mB5.5/54, mb5.1/55, Ms5.4/66, Ms7 5.2/60*

*ISCJB **05** 12:56:12.5±0.9, 5°.25S±0°.03×68°.53E±0°.02, h8km±5km, mb5.2/250, MS5.1/205, Error ellipse: s-maj=5.2km s-min=4.0km az=163.2*

*IDC **05** 12:56:12.7±0.4, 5°.25S×68°.59E, h0km, mb4.9/36, mb1 5.0/36, mb1mx5.0/37, mbtmp4.9/36, MS5.0/40, Ms1 5.0/40, ms1mx5.0/46, Error ellipse: s-maj=12.8km s-min=10.7km az=31.0*

*NEIC **05** 12:56:14.5±0.1, 5°.26S×68°.55E, h10km, mb5.4/128, MS5.3/123, MW5.6, Error ellipse: s-maj=4.8km s-min=3.6km az=208.0*

*MOS **05** 12:56:14.5±2.5, 5°.30S×68°.60E, h10km, mb5.6/106, MS5.0/46, Error ellipse: s-maj=10.3km s-min=4.0km az=120.0*

*GCMT **05** 12:56:17.7±0.1, 5°.36S×68°.59E, h12km, MW5.6, Moment Tensor Solution. s77,c114; s52,c57; Moment tensor: Scale 10^{17}Nm; M_{rr}-2.55±.03; $M_{\theta\theta}$1.52±.03; $M_{\phi\phi}$1.03±.03; $M_{r\theta}$1.10±.08; $M_{\theta\phi}$-1.34±.02; $M_{\phi r}$-0.25±.09; Best double couple: $M_0$2.80000×10^{17} NP1:ϕ_s140.00000°, δ35.00000°, λ-73.00000°. NP2:ϕ_s299.00000°, δ56.00000°, λ-102.00000°. Principal axes: T 2.8300, Plg11.0000°, Azm38.0000°; N 0.0000, Plg10.0000°, Azm306.0000°; P -2.8300, Plg75.0000°, Azm174.0000°; Data Used: II IU IC G CN. Surface waves: sta=112, comp=225, per= 50.*

*DJA **05** 12:56:19.8±2.1, 5°S±5°×6°9E±°, h32km±16km, M5.3/33, mB5.7/20, mb5.2/33, MLv5.7/1, Mw(mB)5.3/20*

*SZGRF **05** 12:56:26.7, 3°.94S×66°.90E, h10km, mb5.0, MS4.3, South Indian Ocean*

ISC 05 12:56:15.4±0.3**, 5°.16S**±0°.04×**68°.52E**±0°.04**, h14**km±1km**, h13**km**:pP-P, n1287, σ1§21**/1274**, mb5.3**/250**, MS5.2**/205**, 161C-169D, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	Diego Garcia	4.51	120	eP	Pn	12 57 18.0	-5.3
DGAR	Diego Garcia	4.51	120	ePn	Pn	12 57 18.0	-5.3
DGAR	Diego Garcia	4.51	120	P	Pn	12 57 18.7	-4.6
	SNR=12						
DGAR	Diego Garcia	4.51	120	Pn	Pn	12 57 18.0	-5.3
	9μm,0.5s,SNR=39						
KAAM	Kaadhehdhoo	7.18	39	P	Pn	12 58 00.8	+0.7
	658nm,1.2s,9μm1.8nm						
HMDM	Hanimaadhoo	12.74	21	P	P	12 59 37.4	+10
MSEY	Mahe Island	13.00	272	ePn	Pn	12 59 20.9	+1.0
MSEY	Mahe Island	13.00	272	P	Pn	12 59 24.3	+4.3
	SNR=11						
MSEY	Mahe Island	13.00	272	Pn	Pn	12 59 23.4	+3.4
	1μm,0.8s,SNR=10						
MNCY	Minicoy	14.08	19	eP	P	12 59 39.7	-2.7
MNCY				AMB	AMB	12 59 45.5	
	comp=Z,214nm,2.3s						
TRD	Trivandrum	15.97	32	eP	Pn	12 59 59.0	-0.9
TRD				⇑ex	x	13 00 07.4	
TRD				ex	x	13 03 17.4	
MRIV	Mauritius Mete	18.47	214	eP	Pn	13 00 31.9	+0.7
GOA	Goa	21.18	14	⇓iP	P	13 01 00.5	-0.1
GOA				i x	x	13 05 05.4	
POO	Poona	24.12	12	eP	P	13 01 30.4	-0.7
POO				AMB	AMB	13 01 42.1	
	comp=Z,67nm,1.5s						
HYB	Hyderabad	24.53	24	eP	P	13 01 34.0	-0.8
HYB				eS	S	13 05 58.0	+2.8
HYB	Hyderabad	24.53	24	eP	P	13 01 34.0	-0.8
HYB				eS	S	13 05 58.0	+2.8
HYB	Hyderabad	24.53	24	i P	P	13 01 34.0	-0.8
	comp=Z,100nm,1.0s						
HYB				eS	S	13 05 58.0	+2.8
HYB	Hyderabad	24.53	24	eP	P	13 01 34.5	-0.3
HYB				AMB	AMB	13 01 36.4	
	comp=Z,68nm,1.1s						
OPO	Ambohidratompo	24.72	236	P	P	13 01 36.0	-0.8
OPO	Ambohidratompo	24.72	236	P	P	13 01 36.0	-0.8
	comp=Z,4.6nm,0.9s,baz=67,slow=13,SNR=2.6						
OPO				LR	LR	13 09 00.9	
	comp=Z,13μm,20.0s,baz=60,slow=31						
ABPO	Ambohimpanom	24.91	235	eP	P	13 01 39.2	+0.6
ABPO				pmax	pmax		
	comp=Z,69nm,1.2s						
ABPO				MLR	MLR		
	comp=Z,11μm,20.0s						
ABPO	Ambohimpanom	24.91	235	eP	P	13 01 39.1	+0.6
	comp=Z,69nm,1.2s						
ABPO				LR	LR		
	comp=Z,11μm,20.0s						
ABTO	Aybut	26.95	326	P	P	13 02 02.0	+5.2
	SNR=7.4						
COCO	West Island	28.83	106	PFAKE		13 02 20.0	+6.4
COCO				LR	LR		
	comp=Z,3μm,21.0s						
BHPL	Bhopal	29.54	17	eP	P	13 02 22.3	+2.5
BHPL				AMB	AMB	13 02 30.4	
	comp=Z,53nm,1.2s						
SMDO	Samad	29.85	340	P	P	13 02 25.5	+2.8
	SNR=5.7						
BSY	Bisya	29.86	339	P	P	13 02 25.5	+2.8
	SNR=6.4						
JBP	Jabalpur	30.30	21	⇑iP	P	13 02 26.3	-0.2
JBP				i x	x	13 02 28.9	
	comp=Z,44nm,0.9s						
JBP				ex	x	13 07 25.5	
DGPR	DIGLIPUR	30.33	53	eP	P	13 02 26.2	-0.7
HOQ	Hoqain	30.59	339	P	P	13 02 32.1	+3.0
	SNR=12						
ARQ	Araqi	30.65	338	P	P	13 02 33.3	+3.7
	SNR=5.6						
PSI	Prapat	31.39	76	P	P	13 02 49.2	+13
PSI	Prapat	31.39	76	LR	LR	13 13 48.0	
	comp=Z,7μm,18.9s,baz=265,slow=34						
KMBO	Kilima Mbogo	31.47	276	eP	P	13 02 38.8	+1.5
KMBO	Kilima Mbogo	31.47	276	eP	P	13 02 38.4	+1.1
	comp=Z,42nm,1.5s						
KMBO	Kilima Mbogo	31.47	276	P	P	13 02 38.8	+1.5
	SNR=9.2						
KMBO	Kilima Mbogo	31.47	276	P	P	13 02 38.6	+1.3
	comp=Z,4.9nm,0.8s,baz=95,slow=10.0,SNR=15						
KMBO				LR	LR	13 12 48.5	
	comp=Z,4μm,21.8s,baz=94,slow=32						
MNSI	Mandailing Nat	31.58	80	P	P	13 02 50.9	+13
ASHO	Ashiyiah	32.05	338	P	P	13 02 44.4	+2.4
	SNR=21						
HATD	Hatta, Dubai	32.15	339	P	P	13 02 45.4	+2.6
	SNR=15						
NAZ	Nazwa, Dubai	32.47	338	P	P	13 02 48.8	+3.1
	SNR=10						
BANOM	Banah	33.09	340	P	P	13 02 54.5	+3.3
	SNR=5.2						
BOK	Bokaro	33.40	30	eP	P	13 02 52.6	-1.2
BOK				AMB	AMB	13 02 58.6	
	comp=Z,23nm,0.8s						
CAL	Calcutta	33.67	34	eP	P	13 03 00.8	+4.7
CAL				eS	S	13 08 27.0	+8.2
KULM	Kulim	33.73	73	eP	P	13 02 57.9	+1.1
	comp=Z,52nm,1.4s						
KULM	Kulim	33.73	73	P	P	13 02 59.1	+2.3
	comp=Z,36nm,1.4s,comp=Z,918nm						
IPM	Ipoh	33.85	74	eP	P	13 02 58.7	+0.8
	comp=Z,38nm,1.2s						
IPM	Ipoh	33.85	74	P	P	13 03 00.4	+2.5
	comp=Z,31nm,1.4s,comp=Z,707nm						
NDI	New Delhi	34.67	14	eP	P	13 03 03.0	-1.8
KOLN	Koldanda	35.83	23	eP	P	13 03 15.8	+0.8
PYUN	Piuthan	35.89	22	eP	P	13 03 16.1	+0.5
	comp=Z,163nm,0.9s						
MYKOM	Kota Tinggi	35.96	80	P	P	13 03 20.0	+3.9
	comp=Z,32nm,1.3s,comp=Z,776nm						
SRDT	SRDT	36.02	57	P	P	13 03 29.4	+13
RAYN	Ar Rayn	36.30	323	P	P	13 03 20.8	+1.9
	comp=Z,69nm,1.2s,SNR=6.3						
DMN	Daman	36.30	25	eP	P	13 03 20.0	+0.9
	comp=Z,218nm,0.9s						
PKI	Pulchoki	36.40	26	eP	P	13 03 20.6	+0.5
	comp=Z,48nm,0.7s						
RAMN	Ramite	36.40	28	eP	P	13 03 21.1	+1.1
	comp=Z,193nm,1.2s						
DANN	Dangsing	36.41	23	eP	P	13 03 20.6	+0.5
	comp=Z,156nm,1.0s						
DDI	Dehra Dun	36.45	14	eP	P	13 03 20.0	-0.1
KKN	Kakani	36.54	25	eP	P	13 03 21.9	+0.8
	comp=Z,139nm,0.9s						
ODAN	Odare	36.70	29	eP	P	13 03 23.4	+0.9
	comp=Z,115nm,1.0s						
GUN	Gumba	36.90	26	eP	P	13 03 25.2	+0.9
	comp=Z,225nm,0.9s						
SMLA	Simla	37.02	12	eP	P	13 03 24.9	0.0
TAPN	Taplejung	37.27	29	eP	P	13 03 28.2	+0.8
	comp=Z,127nm,1.0s						
SDNR	Sundarnagar	37.34	12	ex	P	13 03 31.0	+3.4
DHRM	DHARAMSHALA	37.93	11	eP	P	13 03 32.6	-0.3
DHRM				AMB	AMB	13 03 44.0	
	comp=Z,184nm,0.0s						
MBAR	Mbarara	37.99	276	LR	LR	13 17 05.9	
	comp=Z,2μm,20.2s,baz=104,slow=33						
THN	Thein Dam	38.01	10	eP	P	13 03 32.5	-0.7
CHBT	CHBT	38.02	62	P	P	13 03 34.5	+0.9
	comp=Z,70nm,0.9s,comp=Z,2μm						
SHL	Shillong	38.05	36	⇑iP	P	13 03 35.0	+1.1
SHL				ex	x	13 08 51.0	
CM31	Chiang Mai Arr	38.09	51	eP	P	13 03 34.7	+0.6
	comp=Z,31nm,1.1s						
CMAR	Chiang Mai Arr	38.09	51	P	P	13 03 34.2	+0.1
CMAR				PcP	PcP	13 05 49.5	+0.2
CMAR	Chiang Mai Arr	38.09	51	P	P	13 03 34.2	+0.1
	comp=Z,22nm,1.1s,baz=243,slow=8.9,SNR=67						
CMAR				PcP	PcP	13 05 49.5	+0.2
	comp=Z,4.0nm,0.9s,baz=242,slow=4.8,SNR=6.6						
CMAR				LR	LR	13 17 17.7	
	comp=Z,2μm,20.5s,baz=225,slow=33						
CHTO	Chiang Mai	38.29	51	eP	P	13 03 35.9	+0.1
CHTO				pmax	pmax		
	comp=Z,49nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,2μm,22.0s						
CHTO	Chiang Mai	38.29	51	eP	P	13 03 35.9	+0.1
	comp=Z,49nm,1.1s						
CHTO				LR	LR		
	comp=Z,2μm,22.0s						
CHTO	Chiang Mai	38.29	51	P	P	13 03 36.8	+1.0
	SNR=25						
CHTO	Chiang Mai	38.29	51	P	P	13 03 35.9	+0.1
	comp=Z,40nm,0.7s,comp=Z,1μm						
CMMT	Chiang Mai	38.29	51	P	P	13 03 36.5	+0.6
	comp=Z,48nm,1.1s,comp=Z,1μm						
QRN	Al-Qurain	39.11	331	eP	P	13 03 43.0	+0.5
QRN				AMb	AMB	13 03 47.4	
	comp=Z,130nm,1.7s						
RDF	Al-Radifah	39.44	330	eP	P	13 03 45.6	+0.3
RDF				AMb	AMB	13 03 49.5	
	comp=Z,67nm,1.7s						
KBL	Kabul	39.49	1	eP	P	13 03 48.3	+2.4
KBL				pmax	pmax		
	comp=Z,135nm,1.6s						
KBL	Kabul	39.49	1	eP	P	13 03 48.3	+2.4
	comp=Z,135nm,1.6s						
KBD	Kabd	39.58	331	eP	P	13 03 47.3	+0.9
KBD				AMb	AMB	13 03 51.5	
	comp=Z,58nm,1.4s						
NAY	Al-Naaiem	39.86	330	eP	P	13 03 47.9	-0.9
NAY				AMb	AMB	13 03 53.6	
	comp=Z,45nm,1.7s						
UMR	Umm Al-Rimmam	39.88	331	eP	P	13 03 49.5	+0.5
UMR				AMb	AMB	13 03 53.8	
	comp=Z,83nm,1.8s						
TGJI	Tegal	40.41	95	P	P	13 03 56.5	+2.9
	comp=Z,38nm,1.6s						
LSZ	Lusaka	40.87	253	eP	P	13 03 57.1	-0.4
LSZ	Lusaka	40.87	253	eP	P	13 03 57.4	-0.2
	comp=Z,182nm,2.4s						
LSZ	Lusaka	40.87	253	LR	LR	13 18 00.0	
	comp=Z,3μm,21.9s,baz=132,slow=32						

LSA Lhasa 40.91 31 P P 13 03 58.7 +0.7
LSA S S 13 10 04.2 -5.6
LSA LR LR
comp=N,3µm,17.4s
LSA LR LR
comp=E,3µm,21.2s
KSM Kuching 42.26 82 eP P 13 04 09.2 +0.4
comp=E,30nm,1.1s
KSM Kuching 42.26 82 P P 13 04 11.0 +2.1
comp=E,54nm,1.8s,comp=E,1µm
SLR Silverton 43.58 238⇓iP P 13 04 19.0 -0.7
SLR AMB AMB 13 04 21.3
comp=Z,71nm,3.3s
ERPM east rand prop 43.84 237 eP P 13 04 20.7 -1.0
ERPM AMB AMB 13 04 22.9
comp=Z,49nm,3.2s
SBUM Sibu 44.31 81 P P 13 04 25.7 +0.3
comp=Z,38nm,1.7s,comp=Z,902nm
BHD Baghdad 44.55 331 ex P 13 04 25.0 -2.0
BHD ex S 13 11 00.0 -2.3
KSD Kokstad 44.60 231 eP P 13 04 26.6 -1.1
KSD AMB AMB 13 04 29.6
comp=Z,98nm,3.7s
PRYS Parys 44.78 237⇓iP P 13 04 27.8 -1.5
PRYS AMB AMB 13 04 29.7
comp=Z,26nm,1.6s
KMI Kunming 44.86 46 P P 13 04 29.9 0.0
KMI pP pP 13 04 38.5 +4.2
KMI sP sP 13 04 43.7 +7.7
KMI PP PP 13 06 17.0 +2.1
KMI S S 13 11 08.2 +0.6
KMI sS sS 13 11 24.3 +10
KMI SS ScS 13 14 23.1 -4.8
KMI pmax pmax
comp=Z,9.0nm,1.2s
KMI pmax pmax
comp=Z,380nm,6.6s
KMI LR LR
comp=N,1µm,25.5s
KMI LR LR
comp=E,600nm,28.4s
KMI LR LR
comp=Z,2µm,33.1s
KSH Kashi 44.98 8 P P 13 04 27.6 -2.9
KSH pP pP 13 04 32.5 -2.4
KSH sP sP 13 04 34.5 -2.1
KSH PcP PcP 13 06 09.6 -2.0
KSH PP PP 13 06 13.5 -2.4
KSH ScP ScP 13 10 01.7 -2.3
KSH PcS PcS 13 10 02.7 -2.7
KSH S S 13 11 03.6 -5.2
KSH sS sS 13 11 11.5 -4.4
KSH SS ScS 13 14 16.4 -11
KSH pmax pmax
comp=Z,43nm,1.1s
KSH LR LR
comp=N,2µm,16.2s
KSH LR LR
comp=E,2µm,14.3s
KSH LR LR
comp=Z,8µm,21.8s
SEK Senekal 45.09 235 eP P 13 04 31.1 -0.6
SEK AMB AMB 13 04 33.3
comp=Z,84nm,3.7s
LBTB Lobatse 45.63 240 eP P 13 04 35.5 -0.4
LBTB AMB AMB 13 04 37.6
comp=Z,49nm,3.5s
LBTB Lobatse 45.63 240 eP P 13 04 35.8 -0.1
comp=Z,30nm,1.4s
LBTB Lobatse 45.63 240 LR LR 13 21 38.1
comp=Z,5µm,18.6s,baz=79,slow=33
BOSA Boshof 47.13 235⇓iP P 13 04 46.9 -0.8
BOSA AMB AMB 13 04 49.1
comp=Z,37nm,1.1s
BOSA Boshof 47.13 235 eP P 13 04 47.0 -0.7
comp=Z,54nm,0.9s
BOSA PcP PcP 13 06 19.6 +0.1
BOSA Boshof 47.13 235 P P 13 04 46.9 -0.8
comp=Z,29nm,0.7s,baz=70,slow=9.3,SNR=67
BOSA PcP PcP 13 06 19.6 +0.1
comp=Z,4.6nm,0.7s,baz=76,slow=3.1,SNR=3.9
BOSA LR LR 13 21 27.4
comp=Z,5µm,21.7s,baz=64,slow=32
QIZ Qiongzhong 47.26 58 P P 13 04 48.7 0.0
QIZ sP sP 13 04 53.6 -1.1
QIZ PP PP 13 06 39.2 -0.7
QIZ S S 13 11 43.0 +1.1
QIZ LR LR
comp=N,890nm,17.5s
QIZ LR LR
comp=E,620nm,18.7s
QIZ LR LR
comp=Z,2µm,16.9s
EIL Elat 47.29 319 LR LR 13 22 09.8
comp=Z,761nm,19.5s,baz=328,slow=33
AML Almayashu 47.30 5 P P 13 04 49.8 +0.7
SNR=42
KZA Kyzart 47.41 7 P P 13 04 51.5 +1.5
SNR=141
ULHL Ulahol 47.70 8 P P 13 04 53.0 +1.1
SNR=32
EKS2 Erkin-Say 47.84 5 eP P 13 04 54.5 +1.6
EKS2 pmax pmax
comp=Z,120nm,1.5s
EKS2 Erkin-Say 47.84 5 eP P 13 04 54.5 +1.6
comp=Z,120nm,1.5s
EKS2 Erkin-Say 47.84 5 P P 13 04 55.1 +2.2
SNR=22
AAK Ala-Archa 47.88 6c iP P 13 04 54.7 +1.4
AAK pmax pmax
comp=Z,133nm,1.6s
AAK Ala-Archa 47.88 6 eP P 13 04 54.5 +1.2
comp=Z,183nm,1.0s
AAK Ala-Archa 47.88 6 P P 13 04 55.0 +1.8
SNR=24
AAK Ala-Archa 47.88 6 P P 13 04 54.9 +1.6
SNR=25
AAK Ala-Archa 47.88 6 P P 13 04 54.5 +1.2
comp=Z,218nm,1.1s,SNR=21
AAK Ala-Archa 47.88 6 LR LR 13 23 35.8
comp=Z,2µm,21.7s,baz=191,slow=34
KBK Karagaybulak 47.95 6 P P 13 04 55.5 +1.6
SNR=15
GRM Grahamstown 48.05 229⇓iP P 13 04 54.6 -0.1
GRM AMB AMB 13 05 02.4
comp=Z,77nm,7.0s
KK31 Karatay Array 48.07 2 iP P 13 04 56.4 +1.8
KK31 pmax pmax
comp=Z,48nm,1.4s
KKAR Karatay Array 48.07 2 eP P 13 04 56.0 +1.4
KKAR pmax pmax
comp=Z,15nm,1.0s
KKAR Karatay Array 48.07 2 eP P 13 04 56.0 +1.4
comp=Z,15nm,1.0s
FRU Bishkek 48.09 6 eP P 13 04 56.0 +1.3
FRU eS S 13 11 53.0 0.0
FRU pmax pmax
comp=Z,180nm,2.0s
TKM2 Tokmak 2 48.28 7 iP P 13 04 57.2 +0.7
TKM2 Tokmak 2 48.28 7 eP P 13 04 57.0 +0.6
comp=Z,60nm,1.2s
TKM2 Tokmak 2 48.28 7 P P 13 04 57.2 +0.7
SNR=42
HAKT HAKKARI 48.38 334 iP P 13 04 59.2 +1.8
GYA Guiyang 48.50 48 P P 13 05 01.0 +2.7
GYA PcP PcP 13 06 25.6 +1.2
GYA PP PP 13 06 53.4 +2.1
GYA ScP ScP 13 10 20.9 +1.9
GYA S S 13 12 02.8 +3.3
GYA SS SS 13 15 27.4 -2.3
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,540nm,17.8s
GYA LR LR
comp=E,480nm,18.6s
GYA LR LR
comp=Z,510nm,17.3s
USP Ospenovka 48.51 6 P P 13 05 00.2 +2.2
SNR=14
AAA Alma-Ata 48.81 8 iP P 13 05 02.5 +2.2
AAA iS S 13 12 06.8 +3.7
AAA pmax pmax
comp=Z,1µm,3.8s
AAA smax smax
comp=E,3µm,12.6s
AAA MLR MLR
comp=Z,2µm,16.0s
KKM Kota Kinabalu 48.90 77 eP P 13 05 02.4 +0.8
comp=Z,42nm,1.1s
KKM LR LR
comp=Z,2µm,22.0s
CD2 Chengdu 49.19 41 ⇑P P 13 05 04.5 +1.0
CD2 pP pP 13 05 14.4 +6.5
CD2 PcP PcP 13 06 27.3 +0.6
CD2 PP PP 13 06 58.8 +1.4
CD2 ScP ScP 13 10 18.5 -3.3
CD2 PcS PcS 13 10 22.3 -0.9
CD2 S S 13 12 07.4 -1.6
CD2 sS sS 13 12 24.0 +7.8
CD2 SS SS 13 15 35.0 -5.6
CD2 pmax pmax
comp=Z,70nm,0.8s
CD2 pmax pmax
comp=Z,510nm,6.5s
CD2 LR LR
comp=N,2µm,22.0s
CD2 LR LR
comp=E,2µm,19.6s
CD2 LR LR
comp=Z,3µm,22.9s
MARD Mardin 49.54 331 iP P 13 05 08.0 +1.9
BUFB Buffelsbos 49.73 229 eP P 13 05 07.1 -0.4
BUFB AMB AMB 13 05 07.9
comp=Z,86nm,3.3s
TUTA Tutak 50.29 334 iP P 13 05 14.9 +2.9
DGRG David-gareji 50.98 338 P P 13 05 18.1 +1.3
YAYL Yayladag 51.01 326 iP P 13 05 19.0 +1.7
KAPI Kappang 51.02 92 PFAKE 13 05 30.0 +12
KAPI LR LR
comp=Z,2µm,20.0s
GZT Gaziantep 51.20 328 iP P 13 05 21.1 +2.4
ERZM Erzurum 51.35 333 iP P 13 05 23.3 +3.4
TBLG Delisi 51.47 337 P P 13 05 20.3 -0.2
MALT Malatya 51.48 330 eP P 13 05 22.9 +2.1
MALT pmax pmax
comp=Z,28nm,1.2s
MALT MLR MLR
comp=Z,1µm,21.0s
MALT Malatya 51.48 330 eP P 13 05 22.9 +2.1
comp=Z,28nm,1.2s
MALT LR LR
comp=Z,1µm,21.0s
TSUM Tsumeb 51.51 250 eP P 13 05 21.1 -0.3
TSUM Tsumeb 51.51 250 PFAKE 13 05 30.0 +8.6
TSUM LR LR
comp=Z,2µm,20.0s
MAK Makhachkala 51.55 340 eP P 13 05 18.8 -2.2
MAK eS S 13 12 38.5 -2.7
MAK pmax pmax
comp=Z,205nm,1.5s
MAK MLR MLR
comp=Z,891nm,19.0s
AYKD Aykdinkavak 51.64 328 iP P 13 05 23.6 +1.7
AKH Akhalkalaki 51.69 336 P P 13 05 24.6 +2.3
AKCD Akcadag 51.72 329 iP P 13 05 24.9 +2.3
WMQ Urumqi 51.74 18 P P 13 05 23.0 +0.5
WMQ pP pP 13 05 28.0 +1.1
WMQ sP sP 13 05 31.0 +2.4
WMQ PP PP 13 07 21.0 +0.6
WMQ ScP ScP 13 10 32.0 -0.4
WMQ S S 13 12 44.0 0.0
WMQ ScS ScS 13 15 10.0 -2.6
WMQ SS SS 13 16 18.0 -2.8
WMQ pmax pmax
comp=Z,47nm,1.2s
WMQ pmax pmax
comp=Z,760nm,5.0s
WMQ LR LR
comp=N,5µm,18.0s
WMQ LR LR
comp=E,3µm,18.0s
WMQ LR LR
comp=Z,4µm,18.0s
KOPT Kop Dagi 51.83 333 iP P 13 05 24.2 +0.7
CSS Prodhromos 51.86 323 P P 13 05 24.4 +0.9
CSS Prodhromos 51.86 323 eP P 13 05 26.1 +2.6
comp=Z,26nm,1.2s
CSS LR LR
comp=Z,859nm,19.0s
ANDN Andirin 52.01 328 iP P 13 05 26.6 +1.9
DAGI Agillar 52.06 335 iP P 13 05 26.3 +1.2
SUR Sutherland 52.07 233⇓iP P 13 05 25.0 -0.4
SUR AMB AMB 13 05 27.6
comp=Z,41nm,3.5s
SUR Sutherland 52.07 233 eP P 13 05 24.8 -0.6
comp=Z,45nm,1.1s
SUR Sutherland 52.07 233 P P 13 05 25.2 -0.2
comp=Z,189nm,1.1s,SNR=5.7
SUR Sutherland 52.07 233 LR LR 13 23 46.9
comp=Z,3µm,21.6s,baz=63,slow=32
MBWA Marble Bar 52.09 113 eP P 13 05 24.8 -0.7
comp=Z,69nm,1.7s
MBWA LR LR
comp=Z,2µm,20.0s
DBAD Bademkaya 52.11 334 iP P 13 05 26.9 +1.5
ARTV Artvin 52.15 335 iP P 13 05 28.4 +2.6
KEMA Kemaliye 52.19 331 iP P 13 05 29.0 +3.0
DBOC Borcka 52.39 335 iP P 13 05 29.9 +2.5
KELT Kelkit 52.51 332 iP P 13 05 31.2 +2.7
CVNA Calvinia 52.60 234 eP P 13 05 26.3 -3.0
CVNA AMB AMB 13 05 31.1
comp=Z,58nm,3.7s
GULE Gulek 52.65 326 iP P 13 05 31.3 +1.7
ONI Oni 52.70 337 P P 13 05 30.2 +0.5
LZH Lanzhou 52.71 36 ⇑P P 13 05 29.8 -0.2
LZH pP pP 13 05 33.1 -1.3
LZH sP sP 13 05 34.5 -1.6
LZH PP PP 13 07 31.0 +1.6
LZH S S 13 12 57.1 -0.7
LZH SS SS 13 16 34.2 -2.5
LZH pmax pmax
comp=Z,73nm,1.4s
LZH pmax pmax
comp=Z,550nm,8.2s
LZH LR LR
comp=N,1µm,14.5s
LZH LR LR
comp=E,1µm,15.0s
LZH LR LR
comp=Z,4µm,19.6s
PINB Pinarbasi 52.79 329 iP P 13 05 32.2 +1.5
GTA Gaotai 52.93 30 ⇑P P 13 05 31.6 +0.1
GTA pP pP 13 05 36.1 +0.2
GTA sP sP 13 05 38.7 +1.1
GTA PP PP 13 07 33.5 +2.2
GTA S S 13 13 00.9 +0.3
GTA sS sS 13 13 08.2 +0.4
GTA SS SS 13 16 39.3 -0.6
GTA pmax pmax
comp=Z,13nm,1.4s
GTA pmax pmax
comp=Z,380nm,4.3s
GTA LR LR
comp=N,3µm,19.2s
GTA LR LR
comp=E,2µm,17.8s
GTA LR LR
comp=Z,4µm,19.7s
NWAO Narrogin (SRO) 53.06 128 LR LR 13 22 50.7
comp=Z,527nm,18.8s,baz=113,slow=30
SUSE Susehri 53.06 331 iP P 13 05 33.6 +1.1
MK31 Makanchi Array 53.15 12 iP P 13 05 32.0 -0.9
MK31 pmax pmax
comp=Z,22nm,0.7s
MK31 Makanchi Array 53.15 12 eP P 13 05 32.3 -0.6
MKAR Makanchi Array 53.15 12 eP P 13 05 32.5 -0.4
MKAR 13 06 41.3
MKAR Makanchi Array 53.15 12 eP P 13 05 32.5 -0.4
MKAR PcP PcP 13 06 41.3 +0.3
MKAR Makanchi Array 53.15 12 P P 13 05 32.4 -0.4
comp=Z,16nm,0.7s,baz=198,slow=7.4,SNR=122
MKAR PcP PcP 13 06 41.3 +0.3
comp=Z,14nm,1.0s,baz=198,slow=4.0,SNR=5.3
MKAR LR LR 13 29 23.2
comp=Z,2µm,18.7s,baz=192,slow=37
ERMK Ermenek 53.26 324 iP P 13 05 35.8 +1.7
GAZI Gazipasa 53.33 323 iP P 13 05 32.5 -1.9
CER Ceres 53.61 232 eP P 13 05 35.8 -0.8
CER AMB AMB 13 05 42.0
comp=Z,19nm,3.4s
ELIM Elim 53.70 230 eP P 13 05 34.7 -2.6
ELIM AMB AMB 13 05 45.4
comp=Z,12µm,25.3s
KBZ Khabaz 53.88 337 P P 13 05 39.3 +1.1
KBZ Khabaz 53.88 337 P P 13 05 39.3 +1.1
KBZ Khabaz 53.88 337 P P 13 05 39.3 +1.1
comp=Z,52nm,0.9s,baz=150,slow=7.3,SNR=83
KOMG Komaggas 53.94 237⇓iP P 13 05 38.7 -0.3
KOMG AMB AMB 13 05 41.2
comp=Z,57nm,1.4s
ERBA Erbaa 54.13 330 iP P 13 05 40.6 +0.4
KIV Kislovodsk 54.15 337 eP P 13 05 40.2 -0.2
KIV e 13 06 47.5
KIV eS S 13 13 15.4 -1.6
KIV eSSS SSS 13 19 01.9
KIV pmax pmax
comp=Z,28nm,1.1s
KIV MLR MLR
comp=Z,485nm,17.0s
KIV Kislovodsk 54.15 337 eP P 13 05 42.2 +1.8
comp=Z,29nm,1.0s
KIV LR LR
comp=Z,578nm,19.0s
KIV Kislovodsk 54.15 337 P P 13 05 43.4 +3.1
SNR=8.7
KIV Kislovodsk 54.15 337 P P 13 05 42.9 +2.5
comp=Z,149nm,1.1s,SNR=5.8
XAN Xi'an 54.55 41 P P 13 05 42.1 -1.3
XAN sP sP 13 05 52.3 +2.8
XAN S S 13 13 19.1 -3.5
XAN pmax pmax
comp=Z,11nm,1.2s
XAN pmax pmax
comp=Z,95nm,7.7s
XAN LR LR
comp=N,1µm,19.3s
XAN LR LR
comp=E,170nm,21.1s
XAN LR LR
comp=Z,690nm,19.3s
AB31 Akbulak array 54.70 353 iP P 13 05 45.0 +0.8
AB31 pmax pmax
comp=Z,49nm,1.0s
ABKAR Akbulak array 54.70 353 eP P 13 05 44.5 +0.3
comp=Z,25nm,0.9s
KDHN Kadinhani 55.01 325 iP P 13 05 47.4 +0.6
KORT Korkueli 55.02 323 iP P 13 05 47.5 +0.7
BR131 Keskin Array S 55.02 327 eP P 13 05 47.5 +0.7
comp=Z,11nm,0.9s
BRTR Keskin Array B 55.02 327 P P 13 05 47.4 +0.6
BRTR PcP PcP 13 06 48.8 +0.4
BRTR Keskin Array B 55.02 327 P P 13 05 47.4 +0.6
comp=Z,14nm,1.0s,baz=144,slow=8.9,SNR=67
BRTR PcP PcP 13 06 48.8 +0.4
comp=Z,4.2nm,0.8s,baz=142,slow=5.8,SNR=3.6
BRTR LR LR 13 28 20.4
comp=Z,550nm,21.2s,baz=258,slow=35
SOC Sochi 55.05 335 eP P 13 05 46.3 -0.5
SOC eSS SS 13 17 08.6 -4.4
SOC eSSS SSS 13 19 15.5
SOC pmax pmax
comp=Z,143nm,2.8s
SOC pmax pmax
comp=Z,30nm,1.1s
SOC MLR MLR
comp=Z,589nm,13.0s
CTKT Corum 55.07 329 iP P 13 05 48.7 +1.5
BBAL Bala 55.17 327 iP P 13 05 48.7 +0.8
ISP Isparta 55.46 324 eP P 13 05 49.9 -0.1
ISP pmax pmax
comp=Z,24nm,1.0s
ISP MLR MLR
comp=Z,493nm,22.0s
ISP Isparta 55.46 324 eP P 13 05 49.9 -0.1
comp=Z,24nm,1.0s
ISP LR LR
comp=Z,493nm,22.0s
GOLH Golhisar 55.65 323 iP P 13 05 51.8 +0.5
ELDT Eldivan 55.68 328 iP P 13 05 52.6 +1.0
BOLV Bolvadin 55.81 325 iP P 13 05 53.6 +1.0
ILGA Ilgaz 55.94 329 iP P 13 05 53.9 +0.4
TURN Turunc 56.00 322 iP P 13 05 55.0 +1.3
KURBB Kurchatov Arra 56.23 8 LR LR 13 30 22.7
comp=Z,1µm,19.6s,baz=175,slow=36
DNZL Cakiroluk 56.25 323 iP P 13 05 55.5 -0.2
KURK Kurchatov 56.33 8c iP P 13 05 55.9 +0.1
KURK pmax pmax
comp=Z,49nm,1.2s
KURK Kurchatov 56.33 8 eP P 13 05 55.4 -0.4
comp=Z,48nm,1.0s
KURK Kurchatov 56.33 8 P P 13 05 56.2 +0.4
SNR=17
KURK Kurchatov 56.33 8 P P 13 05 55.9 +0.1
comp=Z,209nm,0.9s,SNR=8.2
WHN Wuhan 56.39 48 ⇓P P 13 05 57.7 +1.1
WHN S S 13 13 50.1 +2.9
WHN LR LR
comp=N,2µm,19.8s
WHN LR LR
comp=E,4µm,17.8s
WHN LR LR
comp=Z,4µm,18.0s
KHAL Karahalli 56.43 324 iP P 13 05 56.9 -0.1
BALT Daday 56.46 329 iP P 13 05 57.7 +0.5
GDZ Gediz 56.91 324 iP P 13 06 01.0 +0.6
AYDN Tasoluk 56.94 322 iP P 13 06 02.2 +1.7
ANN Anapa 57.01 334 eP P 13 06 03.1 +2.4
ANN e*PP pP 13 06 11.3 +6.1
ANN e 13 08 08.9
ANN eS S 13 13 56.8 +2.0
ANN pmax pmax
comp=Z,45nm,1.0s
ANN MLR MLR
comp=Z,375nm,15.0s
QZH Quanzhou 57.12 56⇑iP P 13 06 03.0 +1.0
QZH S S 13 13 52.0 -5.1
QZH pmax pmax
comp=Z,800nm,9.8s
QZH LR LR
comp=N,2µm,14.0s
QZH LR LR
comp=E,2µm,14.0s
QZH LR LR
comp=Z,2µm,14.6s
FITZ Fitzroy Crossi 57.19 108 eP P 13 06 01.6 -1.0
comp=Z,11nm,0.8s
HENT Hendek 57.28 327 iP P 13 06 03.0 +0.1
GCAM G?zelcaml? 57.37 322 iP P 13 06 04.3 +0.9
IDI Anoyia 57.42 318 eP P 13 06 04.6 +0.6
comp=Z,33nm,1.0s
AKHS Akhisar 57.76 323 iP P 13 06 06.9 +0.7
DURS Dursunbey 57.83 324 iP P 13 06 07.1 +0.3
BVA0 Borovoye Array 57.99 1 iP P 13 06 07.8 +0.3
BVAR Borovoye Array 57.99 1 P P 13 06 07.9 +0.4
BVAR Borovoye Array 57.99 1 P P 13 06 07.9 +0.4
BVAR Borovoye Array 57.99 1 P P 13 06 07.9 +0.4
comp=Z,19nm,1.0s,baz=176,slow=8.5,SNR=50
BVAR LR LR 13 30 38.6
comp=Z,2µm,21.7s,baz=186,slow=36
BRVK Borovoye 58.02 1 eP P 13 06 09.2 +1.5
BRVK pmax pmax
comp=Z,40nm,1.2s
BRVK Borovoye 58.02 1 eP P 13 06 08.5 +0.8
comp=Z,37nm,1.0s
BRVK LR LR
comp=Z,2µm,21.0s
BRVK Borovoye 58.02 1 P P 13 06 08.5 +0.8
SNR=18
BRVK Borovoye 58.02 1 P P 13 06 08.2 +0.5
comp=Z,211nm,0.9s,SNR=12
URLA Izmir 58.17 322 iP P 13 06 10.1 +0.9
TPUB Ta-pu 58.18 59 eP P 13 06 12.1 +2.6
DAV Davao City (W) 58.23 78 PFAKE 13 06 20.0 +10
DAV LR LR
comp=Z,2µm,22.0s
TWG Pinlang 58.38 59 eP P 13 06 13.1 +2.2
comp=Z,304nm,1.4s
BALY Balya 58.43 324 iP P 13 06 11.5 +0.6
CHOS Chios island 58.52 322 P P 13 06 12.9 +1.2
SIM Simferopol' 58.62 332c iP P 13 06 13.0 +0.9
SIM ePPP PPP 13 09 56.0
SIM eS S 13 14 17.0 +0.9

SIM pmax pmax
comp=Z,16nm,0.9s
NACB Ninganchiao 59.33 58 *e*P **P 13 06 18.9 +1.5**
comp=Z,34nm,1.1s
BTO Baotou 59.34 36 *e*P **P 13 06 16.7 -0.6**
TATO Taipei 59.55 57 PFAKE 13 06 30.0 +11
TATO LR LR
comp=Z,995nm,20.0s
DID Didima 59.79 319 P **P 13 06 19.7 -0.7**
ALN Alexandroupoli 60.09 324 P **P 13 06 23.0 +0.7**
LTK Loutraki 60.26 320 P **P 13 06 22.7 -0.9**
HHC Hu-ho-hao-te 60.40 37 *e*P **P 13 06 25.4 +0.8**
HHC sP **sP 13 06 31.1 +0.3**
HHC PcP **PcP 13 07 09.4 -0.1**
HHC PP **PP 13 08 41.1 +3.1**
HHC ScP **ScP 13 11 08.2 -2.4**
HHC PcS **PcS 13 11 10.4 -1.6**
HHC S **S 13 14 40.2 +0.8**
HHC sS **sS 13 14 46.9 +0.2**
HHC ScS SKKSac 13 16 11.5 -3.7
HHC SS **SS 13 18 38.8 +1.3**
HHC pmax pmax
comp=Z,82nm,0.7s
HHC pmax pmax
comp=Z,960nm,6.6s
HHC LR LR
comp=N,2μm,16.6s
HHC LR LR
comp=E,2μm,15.4s
HHC LR LR
comp=Z,2μm,16.7s
ZALV Zalesovo Beam 60.46 11 P **P 13 06 24.0 -0.6**
ZALV Zalesovo Beam 60.46 11 P **P 13 06 24.0 -0.6**
ZALV Zalesovo Beam 60.46 11 P **P 13 06 24.0 -0.6**
comp=Z,35nm,0.7s,baz=208,slow=6.7,SNR=119
NJ2 Nanjing 60.48 49 *e*P **P 13 06 26.6 +1.4**
NJ2 pP **pP 13 06 28.4 -1.3**
NJ2 sP **sP 13 06 29.5 -1.8**
NJ2 PP **PP 13 08 38.3 -0.4**
NJ2 S **S 13 14 43.0 +2.5**
NJ2 sS sS 13 14 55.0 +7.1
NJ2 pmax pmax
comp=Z,40nm,0.9s
NJ2 pmax pmax
comp=Z,310nm,5.8s
NJ2 LR LR
comp=N,2μm,19.4s
NJ2 LR LR
comp=E,3μm,18.4s
NJ2 LR LR
comp=Z,2μm,17.2s
VRHR Novokhopersk 60.61 341 *e*P **P 13 06 26.2 +0.5**
VRHR pmax pmax
comp=N,9.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,20nm,0.7s
VRHR MLR MLR
comp=N,260nm,17.0s
VRHR MLR MLR
comp=E,640nm,17.0s
VRHR MLR MLR
comp=Z,810nm,17.0s
GUR Goura 60.62 319 P **P 13 06 24.6 -1.6**
JMB Yambol 60.78 325 P **P 13 06 28.2 +1.1**
LAKA Lakka 61.03 319 P **P 13 06 29.5 +0.6**
NVS Novosibirsk 61.03 10⇑*i*P **P 13 06 27.7 -0.8**
NVS *i* 13 08 46.0
NVS *e* 13 16 18.6
NVS pmax pmax
comp=E,27nm,2.0s
NVS pmax pmax
comp=Z,164nm,2.0s
NVS pmax pmax
comp=N,63nm,1.8s
NVS pmax pmax
comp=Z,131nm,3.3s
NVS pmax pmax
comp=N,53nm,2.9s
NVS pmax pmax
comp=E,22nm,2.4s
KAVA Kavala 61.06 323 P **P 13 06 29.4 +0.4**
TIRR Tirgusor 61.11 328 P **P 13 06 29.5 +0.3**
TIRR Tirgusor 61.11 328 *e*P **P 13 06 29.3 0.0**
comp=E,154nm,2.3s
TIRR Tirgusor 61.11 328⇓*i*P **P 13 06 29.2 0.0**
EFP Efpalio 61.18 319 P **P 13 06 26.8 -3.0**
AGG Agios Georgios 61.24 320 P **P 13 06 28.8 -1.5**
VORD Divnogorie 61.29 339 *e*P **P 13 06 30.3 0.0**
VORD pmax pmax
comp=N,60nm,0.9s
VORD pmax pmax
comp=E,20nm,0.9s
VORD pmax pmax
comp=Z,30nm,0.9s
VORD MLR MLR
comp=N,290nm,19.0s
VORD MLR MLR
comp=E,860nm,19.0s
VORD MLR MLR
comp=Z,730nm,19.0s
TIA Tai'an 61.31 44 P **P 13 06 31.3 +0.5**
TIA S **S 13 14 48.3 -2.7**
TIA pmax pmax
comp=Z,30nm,0.9s
TIA LR LR
comp=N,1μm,18.6s
TIA LR LR
comp=E,2μm,14.7s
TIA LR LR
comp=Z,2μm,17.6s
FORT Forrest 61.31 122 *e*P **P 13 06 28.1 -2.9**
comp=Z,25nm,0.9s
RZN Rozhen 61.37 324 P **P 13 06 30.3 -1.0**
EVR Evrytania 61.52 320 P **P 13 06 31.5 -0.8**
VSR Storozhevoye 61.54 339 *e*P **P 13 06 32.0 0.0**
VSR pmax pmax
comp=N,30nm,1.0s
VSR pmax pmax
comp=E,20nm,1.0s
VSR pmax pmax
comp=Z,30nm,1.0s
PLD Plovdiv 61.63 324 P **P 13 06 33.0 +0.2**
SZH Strazhica 61.66 326 P **P 13 06 32.9 -0.1**
NVR Nevrokopi 61.67 323 P **P 13 06 33.3 +0.2**
HORT Hortiatis 61.68 322 P P 13 06 26.4 -6.9
CFR Carcaliu 61.74 329⇑P **P 13 06 33.8 +0.3**
CFR Carcaliu 61.74 329⇑*i*P **P 13 06 33.8 +0.3**
THL Klokotos Trika 61.75 320 P **P 13 06 31.6 -2.1**
LIT Litokhoron 61.76 321 P P 13 06 25.6 -8.2
SSE Sheshan 61.82 51 P **P 13 06 34.3 0.0**
SSE PP **PP 13 08 50.5 -0.1**
SSE S **S 13 14 59.7 +2.1**
SSE SS **SS 13 19 04.5 +4.6**
SSE pmax pmax
comp=Z,27nm,1.1s
SSE pmax pmax
comp=Z,240nm,7.3s
SSE LR LR
comp=N,1μm,18.7s
SSE LR LR
comp=E,1μm,18.7s
SSE LR LR
comp=Z,2μm,18.4s
MMB Musomiste 61.89 323 P **P 13 06 33.9 -0.7**
ARU Arti 61.92 354*c i*P **P 13 06 35.2 +0.7**
ARU 13 07 14.5
ARU 13 08 50.1
ARU S **S 13 14 59.2 +1.3**
ARU SSS SSS 13 21 40.6
ARU pmax pmax
comp=Z,64nm,1.0s
ARU MLR MLR
comp=Z,798nm,18.0s
ARU Arti 61.92 354 *e*P **P 13 06 35.0 +0.5**
comp=Z,59nm,1.0s
ARU Arti 61.92 354 P **P 13 06 35.6 +1.1**
comp=Z,318nm,1.0s,SNR=15
KZN Kozani 62.33 321 P **P 13 06 35.3 -2.4**
SONM Songino Array 62.38 28 P **P 13 06 38.5 +0.6**
SONM Songino Array 62.38 28 P **P 13 06 38.5 +0.6**
comp=Z,33nm,1.0s,baz=220,slow=4.7,SNR=130
SONM LR LR 13 33 36.4
comp=Z,5μm,19.7s,baz=215,slow=36

KKB Krupnik 62.44 323 P **P 13 06 37.6 -0.7**
MAW Mawson 62.46 182 *e*P **P 13 06 37.3 -0.6**
comp=Z,10.0nm,1.1s
MAW Mawson 62.46 182 P **P 13 06 37.2 -0.6**
comp=Z,43nm,1.1s,baz=356,slow=13,SNR=21
MAW LR LR 13 27 38.6
comp=Z,2μm,19.1s,baz=354,slow=30
ISR Istrita 62.54 328⇓P **P 13 06 40.6 +1.7**
ISR Istrita 62.54 328⇓*i*P **P 13 06 40.6 +1.7**
KIS Kishinev 62.65 331 *e*P **P 13 06 37.0 -2.6**
KIS *e* 13 15 07.0
KIS MLR MLR
comp=Z,400nm,17.0s
KIS MLR MLR
comp=Z,400nm,20.0s
KIS Kishinev 62.65 331 *e*P **P 13 06 37.0 -2.6**
KIS Kishinev 62.65 331 *e*PP PP 13 08 40.0 -18
KIS LRM MLR 13 36 20.0
comp=Z,400nm,20.0s
ULN Ulaanbaatar 62.71 28 *e*P **P 13 06 40.1 -0.1**
comp=Z,20nm,1.1s
ULN LR LR
comp=Z,3μm,21.0s
ULN Ulaanbaatar 62.71 28 P **P 13 06 40.8 +0.7**
SNR=15
ULN Ulaanbaatar 62.71 28 P **P 13 06 40.6 +0.5**
comp=Z,21nm,1.2s,comp=Z,559nm
BJT Baijiatuau 62.74 40 PFAKE 13 06 50.0 +10
BJT LR LR
comp=Z,1μm,20.0s
BJI Beijing 62.76 40 P **P 13 06 41.6 +1.2**
BJI S S 13 15 01.1 -7.9
BJI SS **SS 13 19 15.8 +1.6**
BJI pmax pmax
comp=Z,20nm,1.1s
BJI pmax pmax
comp=Z,420nm,6.5s
BJI LR LR
comp=N,1μm,18.4s
BJI LR LR
comp=E,1μm,19.0s
BJI LR LR
comp=Z,1μm,23.5s
VTS Vitosha 62.80 324 P **P 13 06 41.0 +0.2**
VTS Vitosha 62.80 324⇓P **P 13 06 41.1 +0.2**
VTS Vitosha 62.80 324⇓*i*P **P 13 06 41.1 +0.2**
VTS Vitosha 62.80 324 P **P 13 06 41.0 +0.2**
IGT Igoumenitsa 62.81 320 P P 13 06 30.7 -10
NEST Nestorio 62.85 321 P **P 13 06 41.5 +0.3**
FNA Florina 62.85 321 P **P 13 06 39.8 -1.3**
ZAK Zakamensk 62.92 24 *e*P **P 13 06 41.6 +0.1**
ZAK pmax pmax
comp=Z,9.0nm,1.6s
VRI Vrincioaia 62.94 328⇑P **P 13 06 42.5 +1.0**
VRI Vrincioaia 62.94 328⇑*i*P **P 13 06 42.5 +1.0**
MPEP Malo Peshtene 62.96 325 P **P 13 06 40.2 -1.5**
PLOR Plostina 62.97 328⇓P **P 13 06 42.6 +0.8**
PLOR Plostina 62.97 328⇓*i*P **P 13 06 42.6 +0.8**
BIA Bitola 63.02 321 *e*P **P 13 06 43.7 +1.4**
MOY Mondy 63.04 22 *e*P **P 13 06 44.3 +2.1**
MOY pmax pmax
comp=Z,45nm,3.9s
MLR Muntele Rosu 63.10 328 P **P 13 06 43.4 +0.6**
MLR Muntele Rosu 63.10 328 P **P 13 06 43.4 +0.6**
comp=Z,3.0nm,1.0s,baz=149,slow=5.9,SNR=15
TESR 63.41 329⇓*i*P **P 13 06 44.5 -0.1**
SKO Skopje 63.50 322 *e*P **P 13 06 45.7 +0.4**
DOPR Doppa 63.71 328⇓*i*P **P 13 06 46.8 +0.2**
ARR Arges 63.73 327⇑*i*P **P 13 06 46.5 -0.3**
PHP Peshkopia 63.94 322 P **P 13 06 46.9 -1.4**
TLY Talaya 64.07 23 *e*P **P 13 06 49.1 +0.2**
TLY pmax pmax
comp=Z,11nm,1.0s
TLY MLR MLR
comp=Z,2μm,17.0s
TLY Talaya 64.07 23 *e*P **P 13 06 49.8 +0.9**
comp=Z,129nm,2.1s
TLY LR LR
comp=Z,2μm,19.0s
TLY Talaya 64.07 23 P **P 13 06 50.6 +1.6**
SNR=13
TLY Talaya 64.07 23 P **P 13 06 49.3 +0.4**
comp=Z,68nm,0.9s,SNR=5.2
TIR Tirane 64.11 321 *e*P **P 13 06 50.4 +1.0**
TIR pmax pmax
comp=Z,116nm,1.1s
TIR Tirane 64.11 321 *e*P **P 13 06 50.4 +1.0**
comp=Z,116nm,1.1s
IRK Irkutsk 64.75 23 *e*P **P 13 06 55.8 +2.5**
IRK pmax pmax
comp=Z,68nm,2.5s
BUR08 Bucovina Ar. S 64.90 329 *e*P **P 13 06 54.5 0.0**
WDD Wield Dalam 64.95 314 PFAKE 13 07 10.0 +15
WDD LR LR
comp=Z,422nm,20.0s
TIP Timpagrande 64.98 318 PFAKE 13 07 10.0 +15
TIP LR LR
comp=Z,260nm,20.0s
AK02 Malin Array Si 65.06 334 *e*P **P 13 06 54.6 -0.8**
AK01 Malin Array Si 65.09 334 *e*P **P 13 06 55.0 -0.6**
AKASG Malin Array Be 65.09 334 P **P 13 06 54.6 -0.9**
AKASG Malin Array Be 65.09 334 P **P 13 06 54.6 -0.9**
AKASG Malin Array Be 65.09 334 P **P 13 06 54.6 -0.9**
comp=Z,12nm,0.7s,baz=132,slow=5.8,SNR=21
KIEV Kiev 65.09 334 *e*P **P 13 06 54.8 -0.7**
KIEV pmax pmax
comp=Z,24nm,1.0s
KIEV MLR MLR
comp=Z,891nm,19.0s
KIEV Kiev 65.09 334 *e*P **P 13 06 54.8 -0.7**
comp=Z,24nm,1.0s
KIEV LR LR
comp=Z,891nm,19.0s
CEL Celeste 65.11 316 PFAKE 13 07 10.0 +14
CEL LR LR
comp=Z,274nm,22.0s
SOKR Solikamsk 65.20 353*c i*P **P 13 06 58.3 +2.3**
SOKR S **S 13 15 35.0 -3.6**
SOKR SSS SSS 13 22 55.7
SOKR pmax pmax
comp=Z,50nm,0.8s
SOKR MLR MLR
comp=Z,890nm,23.0s
ASAR Alice Springs 65.42 114 P **P 13 06 56.6 -1.7**
ASAR Alice Springs 65.42 114 P **P 13 06 56.6 -1.7**
comp=Z,10nm,0.8s,baz=281,slow=6.1,SNR=100
ASAR LR LR 13 32 29.7
comp=Z,773nm,20.2s,baz=286,slow=33
AS31 Alice Springs 65.42 114 *e*P **P 13 06 56.8 -1.6**
WRA Warramunga Arr 65.54 109 P **P 13 06 57.8 -1.4**
WRA Warramunga Arr 65.54 109 P **P 13 06 57.8 -1.4**
comp=Z,32nm,0.9s,baz=284,slow=6.3,SNR=170
WRA LR LR 13 31 41.0
comp=Z,924nm,20.4s,baz=290,slow=32
BZS Buzias 65.55 326⇓P **P 13 06 58.6 -0.1**
BZS Buzias 65.55 326⇓*i*P **P 13 06 58.5 -0.1**
WRAB Tennant Creek 65.55 109 *e*P **P 13 06 58.1 -1.1**
WRAB pmax pmax
comp=Z,43nm,0.9s
WRAB MLR MLR
comp=Z,1μm,22.0s
WRAB Tennant Creek 65.55 109 *e*P **P 13 06 58.1 -1.1**
comp=Z,42nm,0.9s
WRAB LR LR
comp=Z,1μm,22.0s
WRAB Tennant Creek 65.55 109 P **P 13 06 58.2 -1.0**
comp=Z,261nm,0.9s,SNR=16
DIVS Divibare 65.59 324 P **P 13 06 59.1 0.0**
OBN Obninsk 65.64 341⇑*e*P **P 13 06 59.4 +0.4**
OBN *e* 13 09 22.3
OBN *i* S **S 13 15 43.4 -0.8**
OBN pmax pmax
comp=Z,62nm,1.7s
OBN MLR MLR
comp=Z,700nm,21.0s
OBN Obninsk 65.64 341 *e*P **P 13 06 59.5 +0.4**
comp=Z,28nm,0.8s
OBN LR LR
comp=Z,680nm,20.0s
DL2 Dalian 65.76 43⇑P **P 13 06 59.2 -0.9**
DL2 S **S 13 15 46.9 +0.6**
DL2 pmax pmax
comp=Z,10.0nm,0.9s
DL2 pmax pmax
comp=Z,170nm,6.0s

DL2 LR LR
comp=N,570nm,19.7s
DL2 LR LR
comp=E,230nm,18.4s
DL2 LR LR
comp=Z,570nm,19.7s
MOS Moscow 65.81 341 *e*P P 13 06 56.7 -3.4
MOS pmax pmax
comp=Z,79nm,1.0s
MOS pmax pmax
comp=Z,300nm,2.0s
CUC Castrocucco 66.02 318 *e*P **P 13 07 01.9 +0.1**
comp=Z,12nm,0.9s
CUC LR LR
comp=Z,206nm,20.0s
SYO Syowa Base 66.58 191⇓*e*X **P 13 07 02.7 -2.1**
TRPA Tarpa 66.59 328⇓*i*P **P 13 07 05.9 +0.7**
TRPA Tarpa 66.59 328 *e*P **P 13 07 05.2 0.0**
LVV L'vov 66.91 330 *e*P **P 13 07 06.4 -0.9**
LVV MLR MLR
comp=Z,500nm,19.0s
LVV MLR MLR
comp=N,100nm,21.0s
LVV MLR MLR
comp=E,500nm,18.0s
UZH Uzhgorod 67.03 329⇓*i*P **P 13 07 08.0 -0.1**
UZH *e* 13 07 36.6
UZH *e* 13 09 40.6
UZH *e*PPP PPP 13 11 21.6
UZH *e*S **S 13 15 58.0 -3.3**
UZH *e*PS **PnS 13 16 23.6 +0.4**
UZH *e* 13 17 02.0
UZH *e*SS SS 13 20 31.8 +11
KOLS Kolonicke sedl 67.23 329 *e*P **P 13 07 10.0 +0.6**
KOLS pmax pmax
comp=Z,38nm,1.6s
KOLS Kolonicke sedl 67.23 329 *e*P **P 13 07 10.0 +0.6**
KWP Kalwaria Pacla 67.45 330 PFAKE 13 07 20.0 +9.3
KWP LR LR
comp=Z,615nm,19.0s
KWP Kalwaria Pacla 67.45 330 *e*P **P 13 07 10.9 +0.2**
TAM Tamanrasset 67.48 297 *e*P **P 13 07 13.2 +1.5**
TAM pmax pmax
comp=Z,24nm,1.5s
TAM Tamanrasset 67.48 297 *e*P **P 13 07 13.2 +1.5**
comp=Z,24nm,1.5s
PKSM Moragy 67.58 325⇓P **P 13 07 11.8 +0.2**
PKSM Moragy 67.58 325⇓*i*P **P 13 07 11.8 +0.2**
PKSM Moragy 67.58 325⇑*e*P **P 13 07 11.9 +0.3**
CRVS Cervenica-Dubn 67.63 329 *e*P **P 13 07 11.9 0.0**
CRVS pmax pmax
comp=Z,20nm,1.0s
CRVS Cervenica-Dubn 67.63 329 *e*P **P 13 07 11.9 0.0**
PSZ Piszkesteto 67.87 327 *e*P **P 13 07 12.5 -1.0**
PSZ pmax pmax
comp=Z,12nm,1.1s
PSZ MLR MLR
comp=Z,443nm,21.0s
PSZ Piszkesteto 67.87 327 *e*P **P 13 07 12.5 -1.0**
comp=Z,12nm,1.1s
PSZ LR LR
comp=Z,443nm,21.0s
PSZ Piszkesteto 67.87 327⇑*e*P **P 13 07 12.2 -1.3**
BUD Budapest 68.09 326 *e*P **P 13 07 14.4 -0.4**
MICGM Minsk 68.39 336 *e* P 13 07 26.0 +9.5
MNK Minsk 68.41 336 *e*P P 13 07 26.0 +9.4
NIE Niedzica 68.54 328 *e*P **P 13 07 17.7 0.0**
NIE Niedzica 68.54 328 *e*P **P 13 07 17.7 0.0**
CIT Chita 68.61 28 *e*P **P 13 07 19.2 +1.1**
INCN Inchon 68.63 46 PFAKE 13 07 30.0 +12
INCN LR LR
comp=Z,2μm,20.0s
KEST Kesra 68.69 311 *e*P **P 13 07 20.8 +1.8**
KEST Kesra 68.69 311 P **P 13 07 20.2 +1.3**
comp=Z,2.4nm,0.9s,baz=317,slow=2.8,SNR=6.2
KEST LR LR 13 38 36.1
comp=Z,229nm,18.4s,baz=261,slow=37
AQU L'Aquila 68.76 319 PFAKE 13 07 30.0 +11
AQU LR LR
comp=Z,430nm,20.0s
VYHS Vyhne 68.78 327 *e*P **P 13 07 18.6 -0.5**
VYHS pmax pmax
comp=Z,13nm,1.1s
VYHS Vyhne 68.78 327 *e*P **P 13 07 18.6 -0.5**
TOA0 Torodi Ar. Sit 68.80 286 *e*P **P 13 07 19.8 -0.1**
TORD Torodi Ar. Bea 68.80 286 P **P 13 07 19.9 0.0**
TORD Torodi Ar. Bea 68.80 286 P **P 13 07 19.9 0.0**
comp=Z,13nm,1.2s,baz=104,slow=6.2,SNR=31
TORD LR LR 13 38 24.9
comp=Z,871nm,18.2s,baz=100,slow=37
NACGM Naroch 69.12 336 *e* **P 13 07 18.0 -3.1**
BOJS Bojanci 69.18 323 *e*P **P 13 07 21.5 -0.1**
BOJS *e*S **S 13 16 28.0 +0.7**
OJC Ojcow 69.29 329 *e*P **P 13 07 21.7 -0.6**
OJC pmax pmax
comp=Z,9.0nm,0.8s
OJC Ojcow 69.29 329 *e*P **P 13 07 21.7 -0.6**
comp=Z,8.9nm,0.8s
OJC Ojcow 69.29 329 *e*P P 13 07 19.0 -3.3
KSAR Wonju Array Be 69.52 47 P **P 13 07 23.4 -0.6**
KSRS Korea Array 69.56 47 P **P 13 07 23.4 -0.8**
comp=Z,3.2nm,0.8s,baz=258,slow=7.7,SNR=14
KSRS LR LR 13 38 45.3
comp=Z,2μm,19.5s,baz=246,slow=37
SMOL Smolenice 69.56 326 *e*P **P 13 07 23.6 -0.4**
SMOL Smolenice 69.56 326 *e*P **P 13 07 23.6 -0.4**
KLMR Klimovskoe 69.60 345 *e*P **P 13 07 23.5 -0.4**
KLMR pmax pmax
comp=Z,132nm,1.4s
KLMR MLR MLR
comp=Z,2μm,21.0s
IIGN Ignalina 69.67 336 *e*P **P 13 07 24.9 +0.5**
IIGN AMB AMB 13 07 28.7
comp=Z,8.3nm,1.4s
BEL Belsk 69.78 331 *e*P **P 13 07 26.4 +1.2**
PERS Pernice 69.85 324 *i* P **P 13 07 25.7 -0.2**
ISAL Salakas 69.86 336 *e*P **P 13 07 26.1 +0.5**
ISAL AMB AMB 13 07 28.1
comp=Z,8.7nm,1.0s
LJU Ljubljana 69.89 323 *e*P **P 13 07 26.2 +0.1**
LJU *e*S **S 13 16 34.8 -0.8**
SOKA Soboth 69.92 324⇓*i*P **P 13 07 26.3 -0.1**
comp=Z,23nm,1.6s
SOKA Soboth 69.92 324⇓*i*P **P 13 07 26.3 -0.1**
comp=Z,23nm,1.6s
OKC Ostrava-Krasne 69.93 328 *e*P **P 13 07 25.4 -0.8**
OKC MLR MLR
comp=Z,400nm,19.7s
OKC Ostrava-Krasne 69.93 328 *e*P **P 13 07 25.4 -0.8**
OKC AMS AMS 13 36 50.0
comp=Z,400nm,19.7s
IZAR Zarasai 69.94 336 *e*P **P 13 07 26.6 +0.5**
IZAR AMB AMB 13 07 28.6
comp=Z,9.4nm,1.0s
ARSA Arzberg 69.94 325⇑*i*P **P 13 07 26.7 +0.3**
comp=Z,29nm,1.5s,SNR=14
ARSA Arzberg 69.94 325⇑*i*P **P 13 07 26.7 +0.3**
comp=Z,29nm,1.5s
SUW Suwalki 70.06 333 *e*P **P 13 07 25.9 -1.0**
CONA Conrad Observa 70.11 325 *i* P **P 13 07 27.0 -0.5**
comp=Z,34nm,1.3s,SNR=17
CONA Conrad Observa 70.11 325 *i* P **P 13 07 27.0 -0.5**
comp=Z,34nm,1.3s
OBKA Obir 70.12 324⇓*i*P **P 13 07 27.5 -0.1**
comp=Z,21nm,1.3s,SNR=6.7
OBKA Obir 70.12 324⇓*i*P **P 13 07 27.4 -0.1**
comp=Z,21nm,1.3s
JNU Nakatsue 70.17 52 *e*P **P 13 07 29.6 +1.4**
comp=Z,7.3nm,1.1s
JNU Nakatsue 70.17 52 P **P 13 07 28.6 +0.5**
comp=Z,13nm,1.0s,baz=27,slow=4.5,SNR=5.4
JNU LR LR 13 40 48.0
comp=Z,1μm,18.2s,baz=248,slow=38
VSL Villasalto 70.20 315 *e*P **P 13 07 28.5 +0.4**
comp=Z,34nm,1.1s
VSL LR LR
comp=Z,230nm,20.0s
MORC Moravsky Berou 70.21 328⇑P **P 13 07 27.7 -0.3**
MORC Moravsky Berou 70.21 328 *e*P **P 13 07 27.5 -0.5**
comp=Z,10nm,1.0s
MORC Moravsky Berou 70.21 328⇑*i*P **P 13 07 27.7 -0.3**
VRAC Vranov 70.46 327 P **P 13 07 29.0 -0.5**
VRAC Vranov 70.46 327 P **P 13 07 29.0 -0.5**
comp=Z,2.8nm,0.8s,baz=134,slow=8.4,SNR=9.7
CADS Cadrg 70.46 323 *i* P **P 13 07 28.8 -0.8**

CN2 Changchun 70.62 40 *e*P P 13 07 33.8 +3.3
CN2 *es*P sP 13 07 40.0 +3.3
CN2 *e*S **S** **13 16 46.9 +2.8**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,19.0s
CN2 LR LR
comp=E,300nm,19.0s
CN2 LR LR
comp=Z,300nm,21.0s
KRLC Kraliky 70.79 328 *e*P **P** **13 07 30.8 -0.7**
KRLC Kraliky 70.79 328 *e*P **P** **13 07 30.8 -0.7**
MOA Molln 70.98 325 *i* P **P** **13 07 32.5 -0.2**
comp=Z,17nm,0.9s,SNR=12
MOA Molln 70.98 325 *i* P **P** **13 07 32.5 -0.2**
comp=Z,17nm,0.9s
TREC Trest 71.06 326 *e*P **P** **13 07 32.5 -0.6**
TREC MLR MLR
comp=Z,500nm,17.4s
TREC Trest 71.06 326 *e*P **P** **13 07 32.5 -0.6**
TREC AMS AMS 13 42 10.0
comp=Z,500nm,17.4s
KBA Koelnbreinsper 71.12 324⇓ *i*P **P** **13 07 33.3 -0.5**
KBA pmax pmax
comp=Z,19nm,1.6s
KBA Koelnbreinsper 71.12 324⇓ *i*P **P** **13 07 33.3 -0.5**
comp=Z,19nm,1.6s
KBA Koelnbreinsper 71.12 324⇓ *i*P **P** **13 07 33.2 -0.5**
comp=Z,19nm,1.6s
DPC Dobruska-Polom 71.19 328 *e*P **P** **13 07 34.1 +0.1**
DPC pmax pmax
comp=Z,19nm,1.2s
DPC Dobruska-Polom 71.19 328 *e*P **P** **13 07 34.1 +0.1**
comp=Z,19nm,1.2s
DPC Dobruska-Polom 71.19 328 *e*P **P** **13 07 34.0 +0.1**
DPC AMS AMS 13 37 20.0
comp=Z,600nm,28.3s
UPC Upice 71.44 328 *e*P **P** **13 07 35.4 0.0**
UPC Upice 71.44 328 *e*P **P** **13 07 35.4 0.0**
ABTA Abfaltersbach 71.45 323⇓ *i*P **P** **13 07 35.9 +0.2**
comp=Z,22nm,0.8s,SNR=19
ABTA Abfaltersbach 71.45 323⇓ *i*P **P** **13 07 35.9 +0.2**
comp=Z,22nm,0.8s
KSP Ksiaz 71.47 328⇑ *e*P **P** **13 07 35.8 +0.2**
KSP *e**PP **pP** **13 07 38.1 -2.0**
KSP Ksiaz 71.47 328 *e*P **P** **13 07 35.8 +0.2**
VLC Villacollemand 71.55 320 PFAKE 13 07 50.0 +14
VLC LR LR
comp=Z,269nm,20.0s
VSU Vasula 71.68 338*c* *i*P **P** **13 07 37.1 +0.5**
VSU pmax pmax
comp=Z,41nm,1.0s
PGF Pioggiola 71.75 318 *e*P **P** **13 07 36.8 -0.8**
comp=Z,85nm,1.6s
PGF Pioggiola 71.75 318 *e*P **P** **13 07 36.8 -0.8**
PGF pmax pmax
comp=Z,85nm,1.6s
PGF Pioggiola 71.75 318 *e*P **P** **13 07 36.8 -0.8**
comp=Z,85nm,1.6s
RJOB Jochberg 71.78 324 *e*P **P** **13 07 37.3 -0.3**
comp=Z,8.0nm,0.8s
GEC2 GERESS Array S 71.82 325 *e*P **P** **13 07 37.0 -0.8**
GEC2 GERESS Array S 71.82 325 *e*P **P** **13 07 37.0 -0.8**
comp=Z,2.0nm,0.9s
GERES GERESS Array B 71.82 325 P **P** **13 07 36.8 -1.1**
GERES GERESS Array B 71.82 325 P **P** **13 07 36.8 -1.1**
comp=Z,2.1nm,0.8s,baz=128,slow=6.4,SNR=15
PRU Pruhonice 71.95 327 *e*P **P** **13 07 38.0 -0.5**
PRU MLR MLR
comp=Z,600nm,25.8s
PRU Pruhonice 71.95 327 *e*P **P** **13 07 38.0 -0.5**
PRU AMS AMS 13 38 50.0
comp=Z,600nm,25.8s
KHC Kasperske Hory 72.03 326 *e*P **P** **13 07 37.9 -1.2**
KHC pmax pmax
comp=Z,136nm,2.9s
KHC Kasperske Hory 72.03 326 *e*P **P** **13 07 37.9 -1.2**
comp=Z,136nm,2.9s
KHC Kasperske Hory 72.03 326 *e*P **P** **13 07 37.9 -1.2**
KHC AMS AMS 13 38 10.0
comp=Z,400nm,24.7s
PVCC Panska Ves 72.22 327 *e*P **P** **13 07 40.0 -0.1**
PVCC MLR MLR
comp=Z,400nm,17.2s
PVCC Panska Ves 72.22 327 *e*P **P** **13 07 40.0 -0.1**
PVCC AMS AMS 13 39 50.0
comp=Z,400nm,17.2s
WTTA Wattenberg 72.23 323 *i* P **P** **13 07 40.0 -0.4**
WTTA pmax pmax
comp=Z,26nm,0.8s
WTTA Wattenberg 72.23 323 *i* P **P** **13 07 40.0 -0.4**
comp=Z,26nm,0.8s,SNR=26
WTTA Wattenberg 72.23 323 *i* P **P** **13 07 40.0 -0.4**
comp=Z,26nm,0.8s
WATA Walderalm 72.30 323⇑ *i*P **P** **13 07 40.2 -0.6**
WATA pmax pmax
comp=Z,21nm,0.9s
WATA Walderalm 72.30 323⇑ *i*P **P** **13 07 40.2 -0.6**
comp=Z,21nm,0.9s,SNR=16
WATA Walderalm 72.30 323⇑ *i*P **P** **13 07 40.2 -0.6**
comp=Z,21nm,0.9s
WET Wettzell 72.44 325 *e*P **P** **13 07 42.6 +1.1**
WET Wettzell 72.44 325 *e*P **P** **13 07 42.6 +1.1**
comp=Z,4.0nm,1.0s
MOTA Moosalm 72.59 323⇓ *i*P **P** **13 07 42.0 -0.5**
MOTA pmax pmax
comp=Z,35nm,0.8s
MOTA Moosalm 72.59 323⇓ *i*P **P** **13 07 42.0 -0.5**
comp=Z,35nm,0.8s,SNR=31
MOTA Moosalm 72.59 323⇓ *i*P **P** **13 07 42.0 -0.5**
comp=Z,35nm,0.8s
FETA Feichten 72.66 323 *i* P **P** **13 07 43.2 +0.2**
comp=Z,30nm,0.9s,SNR=21
FETA Feichten 72.66 323 *i* P **P** **13 07 43.2 +0.2**
comp=Z,30nm,0.9s
BRG Berggiesshubel 72.74 327 *i* P **P** **13 07 43.6 +0.4**
comp=Z,9.0nm,0.9s
BRG *e*PP PP 13 10 32.6 +7.4
comp=Z,7.2nm,1.5s
BRG
comp=N,194nm,17.6s
BRG
comp=E,347nm,16.4s
BRG
comp=Z,580nm,16.5s
BRG Berggiesshubel 72.74 327 *i* P **P** **13 07 43.6 +0.4**
BRG *e* 13 10 32.6
BRG pmax pmax
comp=Z,9.0nm,0.9s
BRG pmax pmax
comp=Z,7.0nm,1.5s
BRG MLR MLR
comp=N,194nm,17.6s
BRG MLR MLR
comp=E,347nm,16.4s
BRG MLR MLR
comp=Z,580nm,16.5s
BRG Berggiesshubel 72.74 327 *e*P **P** **13 07 43.4 +0.2**
comp=Z,7.0nm,0.8s
FUORN Ofenpass-Fuorn 72.75 322 *e*P **P** **13 07 44.0 +0.3**
comp=Z,47nm,0.9s
TMCR Tamitsa 72.80 347 *e*P **P** **13 07 42.8 -0.4**
TMCR pmax pmax
comp=Z,59nm,1.2s
RETA Reutte 72.86 323 *i* P **P** **13 07 43.8 -0.2**
comp=Z,18nm,0.7s,SNR=18
RETA Reutte 72.86 323 *i* P **P** **13 07 43.8 -0.2**
comp=Z,18nm,0.7s
FUR Furstenfeldbru 72.88 324 *e*P **P** **13 07 44.0 -0.1**
FUR pmax pmax
comp=Z,46nm,0.8s
FUR Furstenfeldbru 72.88 324 *e*P **P** **13 07 44.0 -0.1**
comp=Z,46nm,0.8s
STKA Stephens Creek 72.93 122 *e*P **P** **13 07 43.4 -1.4**
comp=Z,2.0nm,0.8s
STKA Stephens Creek 72.93 122 P **P** **13 07 43.3 -1.4**
comp=Z,11nm,1.0s,baz=290,slow=5.1,SNR=7.8
STKA LR LR 13 36 54.5
comp=Z,623nm,18.4s,baz=269,slow=34
DAVOX Davos/Dischmat 73.06 322 P **P** **13 07 45.4 0.0**
DAVOX Davos/Dischmat 73.06 322 P **P** **13 07 45.4 0.0**
comp=Z,24nm,0.7s,baz=113,slow=7.7,SNR=45
ROTZ Rotzenmuhle 73.13 326 *e*P **P** **13 07 45.5 0.0**
comp=Z,7.0nm,0.9s
NKC Novy Kostel 73.23 326 *e*P **P** **13 07 46.5 +0.4**
NKC MLR MLR
comp=Z,400nm,25.4s
NKC Novy Kostel 73.23 326 *e*P **P** **13 07 46.5 +0.4**
NKC AMS AMS 13 39 00.0
comp=Z,400nm,25.4s
TUE Stuetta 73.25 322 *e*P **P** **13 07 46.0 -0.5**
comp=Z,29nm,1.0s
DAVA Damuels 73.29 323 *i* P **P** **13 07 47.0 +0.2**
comp=Z,69nm,0.8s,SNR=35
DAVA Damuels 73.29 323 *i* P **P** **13 07 47.0 +0.2**
comp=Z,69nm,0.8s
SAOF Saorge 73.31 319 *e*P **P** **13 07 46.8 0.0**
SAOF Saorge 73.31 319 *e*P **P** **13 07 46.8 0.0**
SAOF Saorge 73.31 319 *e*P **P** **13 07 46.8 0.0**
TANN Tannenbergstha 73.31 326 *e*P **P** **13 07 47.9 +1.2**
comp=Z,3.0nm,1.0s
SBF Sospel 73.34 319 *e*P **P** **13 07 46.8 -0.2**
comp=Z,50nm,0.9s
SBF Sospel 73.34 319 *e*P **P** **13 07 46.8 -0.2**
SBF pmax pmax
comp=Z,50nm,0.9s
SBF Sospel 73.34 319 *e*P **P** **13 07 46.8 -0.2**
comp=Z,50nm,0.9s
CLL Collm 73.48 327⇓ *i*P **P** **13 07 47.9 +0.4**
CLL *i* 13 07 55.3
CLL *e*S **S** **13 17 11.0 -5.7**
CLL pmax pmax
comp=Z,123nm,2.1s
CLL MLR MLR
comp=Z,400nm,19.8s
CLL Collm 73.48 327 *e*P **P** **13 07 48.1 +0.6**
comp=Z,15nm,1.0s
CLL Collm 73.48 327⇓ *i*P **P** **13 07 47.9 +0.4**
comp=Z,123nm,2.1s
CLL *i* 13 07 55.3
CLL *e*PP PP 13 10 39.0 +7.5
CLL *e*PPP PPP 13 12 30.0
CLL *e*S **S** **13 17 15.0 -1.7**
CLL *e*PS **PnS** **13 17 49.0 -0.5**
CLL *e*SS SS 13 21 48.0 -12
CLL *e* 13 26 06.0
CLL *e*SSSS 13 27 14.0
CLL LmH 13 43 00.0
comp=N,400nm,21.8s
CLL LmH 13 43 00.0
comp=E,200nm,20.5s
CLL LmV 13 44 00.0
comp=Z,400nm,19.8s
SHEL Horse Pasture 73.48 255 PFAKE 13 08 00.0 +12
SHEL LR LR
comp=Z,3µm,20.0s
JOF Joensuu 73.52 343 *e*P **P** **13 07 45.8 -1.7**
JOF pmax pmax
comp=Z,46nm,0.8s
JOF Joensuu 73.52 343 *e*p **P** **13 07 45.8 -1.7**
comp=Z,46nm,0.8s
TOUF Mont Tournerai 73.53 319 *e*P **P** **13 07 48.6 +0.4**
TOUF Mont Tournerai 73.53 319 *e*P **P** **13 07 48.6 +0.4**
TOUF Mont Tournerai 73.53 319 *e*P **P** **13 07 48.6 +0.4**
MVIF Mont Vial 73.54 319 *e*P **P** **13 07 48.3 0.0**
MVIF Mont Vial 73.54 319 *e*P **P** **13 07 48.3 0.0**
MVIF Mont Vial 73.54 319 *e*P **P** **13 07 48.3 0.0**
GRF Grafenberg Arr 73.65 325 *e*P **P** **13 07 48.7 +0.1**
GRF pmax pmax
comp=Z,49nm,0.9s
GRF MLR MLR
comp=Z,200nm,21.7s
GRF Grafenberg Arr 73.65 325 *e*P **P** **13 07 48.7 +0.1**
comp=Z,49nm,0.9s
GRF *e*L L 13 41 03.7
comp=Z,208nm,21.7s
MDJ Mudanjiang 73.65 41 P **P** **13 07 49.7 +1.0**
MDJ pP **pP** **13 07 52.8 -0.4**
MDJ sP **sP** **13 07 54.4 -0.5**
MDJ PcP **PcP** **13 08 05.5 +1.0**
MDJ PP **PP** **13 10 34.8 +1.7**
MDJ S **S** **13 17 21.2 +2.3**
MDJ ScS **ScS** **13 17 59.5 +1.7**
MDJ SS **SS** **13 22 07.4 +4.9**
MDJ pmax pmax
comp=Z,30nm,1.0s
MDJ pmax pmax
comp=Z,350nm,4.9s
MDJ LR LR
comp=N,460nm,34.2s
MDJ LR LR
comp=E,350nm,35.7s
MDJ LR LR
comp=Z,850nm,20.8s
CALN Calern 73.66 318 *e*P **P** **13 07 49.3 +0.4**
CALN Calern 73.66 318 *e*P **P** **13 07 49.3 +0.4**
CALN Calern 73.66 318 *e*P **P** **13 07 49.3 +0.4**
FRF La Foret Royal 73.74 318 *e*P **P** **13 07 49.3 0.0**
comp=Z,96nm,1.4s
FRF La Foret Royal 73.74 318 *e*P **P** **13 07 49.3 0.0**
FRF pmax pmax
comp=Z,96nm,1.4s
FRF La Foret Royal 73.74 318 *e*P **P** **13 07 49.3 0.0**
comp=Z,96nm,1.4s
LMR La Mourre 73.74 318 *e*P **P** **13 07 49.2 0.0**
comp=Z,73nm,1.3s
LMR La Mourre 73.74 318 *e*P **P** **13 07 49.2 0.0**
LMR pmax pmax
comp=Z,73nm,1.3s
LMR La Mourre 73.74 318 *e*P **P** **13 07 49.2 0.0**
comp=Z,73nm,1.3s
MOX Moxa 73.90 326 *e*P **P** **13 07 50.5 +0.5**
MOX pmax pmax
comp=Z,12nm,0.8s
MOX Moxa 73.90 326 *e*P **P** **13 07 50.5 +0.5**
comp=Z,12nm,0.8s
MOX *e*L L 13 36 57.8
comp=Z,140nm,20.8s
COEN Coen 73.90 103 *e*P **P** **13 07 49.3 -1.5**
comp=Z,109nm,1.3s
SURF Saint Ours 74.00 319 *e*P **P** **13 07 51.9 +0.9**
SURF Saint Ours 74.00 319 *e*P **P** **13 07 51.9 +0.9**
FIA1 FINESS Array S 74.05 340 *e*P **P** **13 07 50.4 -0.2**
FINES FINESS Array B 74.05 340 P **P** **13 07 50.7 +0.1**
FINES FINESS Array B 74.05 340 P **P** **13 07 50.7 +0.1**
comp=Z,22nm,0.9s,baz=125,slow=7.3,SNR=35
FINES LR LR 13 42 22.8
comp=Z,663nm,21.7s,baz=120,slow=37
MBDF Montbardon 74.13 319 *e*P **P** **13 07 52.1 +0.4**
comp=Z,38nm,1.1s
MBDF Montbardon 74.13 319 *e*P **P** **13 07 52.1 +0.4**
MBDF pmax pmax
comp=Z,38nm,1.1s
MBDF Montbardon 74.13 319 *e*P **P** **13 07 52.1 +0.4**
comp=Z,38nm,1.1s
DBIC Dimbokro 74.17 278⇓ *i*P **P** **13 07 51.1 -1.3**
DBIC Dimbokro 74.17 278 *e*P **P** **13 07 52.2 -0.2**
comp=Z,25nm,0.8s
DBIC Dimbokro 74.17 278 P **P** **13 07 52.1 -0.3**
comp=Z,22nm,0.7s,baz=83,slow=7.0,SNR=41
DBIC LR LR 13 39 36.6
comp=Z,697nm,20.0s,baz=82,slow=35
LIC Lamto 74.28 278⇓ *i*P **P** **13 07 52.8 -0.2**
comp=Z,46nm,0.7s
LIC *e*R
comp=Z,832nm,20.0s
LIC Lamto 74.28 278⇓ *i*P **P** **13 07 52.8 -0.2**
comp=Z,46nm,0.7s
BNI Bardonecchia 74.33 320 *e*P **P** **13 07 51.3 -1.5**
BNI pmax pmax
comp=Z,30nm,1.2s
BNI MLR MLR
comp=Z,224nm,20.0s
BNI Bardonecchia 74.33 320 *e*P **P** **13 07 51.3 -1.5**
comp=Z,30nm,1.2s
BNI LR LR
comp=Z,224nm,20.0s
STU Stuttgart 74.39 324 *e*P **P** **13 07 53.3 +0.4**
STU pmax pmax
comp=Z,52nm,1.1s
STU Stuttgart 74.39 324 *e*P **P** **13 07 52.9 0.0**
comp=Z,30nm,0.9s
STU Stuttgart 74.39 324 *e*P **P** **13 07 53.2 +0.4**
comp=Z,52nm,1.1s
OG25 Le Caire 74.44 319 *e*P **P** **13 07 53.9 +0.4**
OG25 Le Caire 74.44 319 *e*P **P** **13 07 53.9 +0.4**
KAF Kangasniemi 74.45 341 *e*P **P** **13 07 52.3 -0.7**
KAF pmax pmax
comp=Z,29nm,0.7s
KAF Kangasniemi 74.45 341 *ep* **P** **13 07 52.3 -0.7**
comp=Z,29nm,0.7s
LPG La Plagne 74.46 320 *e*P **P** **13 07 53.0 -0.8**
comp=Z,74nm,1.0s
LPG La Plagne 74.46 320 *e*P **P** **13 07 53.0 -0.8**
LPG pmax pmax
comp=Z,74nm,1.0s
LPG La Plagne 74.46 320 *e*P **P** **13 07 53.0 -0.8**
comp=Z,74nm,1.0s
SENIN Lac Senin/Sane 74.48 321 *e*P **P** **13 07 53.6 -0.1**
comp=Z,46nm,0.8s
LPL La Plagne 74.48 320 *e*P **P** **13 07 53.1 -0.7**
comp=Z,82nm,1.2s
LPL La Plagne 74.48 320 *e*P **P** **13 07 53.1 -0.7**
LPL pmax pmax
comp=Z,82nm,1.2s
LPL La Plagne 74.48 320 *e*P **P** **13 07 53.1 -0.7**
comp=Z,82nm,1.2s
SMRF Simiane la Rot 74.62 318 *e*P **P** **13 07 55.0 +0.6**
comp=Z,84nm,1.4s
SMRF Simiane la Rot 74.62 318 *e*P **P** **13 07 55.0 +0.6**
comp=Z,84nm,1.4s
FELD Feldberg im Sc 74.69 323 *e*P **P** **13 07 54.7 -0.2**
BFO Black Forest 74.70 323 *e*P **P** **13 07 55.2 +0.4**
BFO pmax pmax
comp=Z,7.0nm,0.8s
BFO Black Forest 74.70 323 *e*P **P** **13 07 55.2 +0.4**
comp=Z,7.0nm,0.8s
BFO Black Forest 74.70 323 *e*P **P** **13 07 54.9 +0.1**
comp=Z,24nm,1.0s
BFO LR LR
comp=Z,312nm,20.0s
BFO Black Forest 74.70 323 P **P** **13 07 54.7 -0.1**
comp=Z,123nm,1.2s,SNR=9.8
GDM Grand'Maison 74.75 320 *e*P **P** **13 07 54.6 -0.7**
GDM Grand'Maison 74.75 320 *e*P **P** **13 07 54.6 -0.7**
ORIF Oris-en-Rattie 74.79 319 *e*P **P** **13 07 55.5 0.0**
comp=Z,33nm,0.9s
ORIF *e*R
comp=Z,305nm,20.8s
ORIF Oris-en-Rattie 74.79 319 *e*P **P** **13 07 55.5 0.0**
ORIF pmax pmax
comp=Z,33nm,0.9s
ORIF Oris-en-Rattie 74.79 319 *e*P **P** **13 07 55.5 0.0**
comp=Z,33nm,0.9s
BBS Basel-Blauen 74.82 322 *e*P **P** **13 07 55.5 0.0**
BBS Basel-Blauen 74.82 322 *e*P **P** **13 07 55.5 0.0**
UBBA Unterbreizbach 74.88 326 *e*P **P** **13 07 56.5 +0.9**
comp=Z,3.0nm,0.9s
GRN Grenoble 75.01 319 *e*P **P** **13 07 57.4 +0.7**
GRN Grenoble 75.01 319 *e*P **P** **13 07 57.4 +0.7**
GRN Grenoble 75.01 319 *e*P **P** **13 07 57.4 +0.7**
USRK Ussuriysk Arra 75.06 42 P **P** **13 07 56.3 -0.6**
comp=Z,8.1nm,0.9s,baz=245,slow=6.9,SNR=10.0
USRK LR LR 13 42 42.4
comp=Z,1000nm,18.5s,baz=240,slow=37
CLZ Clausthal 75.17 327 *e*P **P** **13 07 58.2 +0.8**
CLZ pmax pmax
comp=Z,17nm,0.9s
CLZ Clausthal 75.17 327 *e*P **P** **13 07 58.2 +0.8**
comp=Z,17nm,0.9s
LOMF Lomont 75.19 322 *e*P **P** **13 07 59.6 +1.9**
LOMF Lomont 75.19 322 *e*P **P** **13 07 59.6 +1.9**
LOMF Lomont 75.19 322 *e*P **P** **13 07 59.6 +1.9**
MOF Molkenrain 75.21 322 *e*P **P** **13 07 59.6 +1.8**
MOF Molkenrain 75.21 322 *e*P **P** **13 07 59.6 +1.8**
MOF Molkenrain 75.21 322 *e*P **P** **13 07 59.6 +1.8**
CABF La Chapelle 75.34 321 *e*P **P** **13 07 58.8 +0.2**
comp=Z,113nm,1.4s
CABF La Chapelle 75.34 321 *e*P **P** **13 07 58.8 +0.2**
CABF pmax pmax
comp=Z,113nm,1.4s
CABF La Chapelle 75.34 321 *e*P **P** **13 07 58.8 +0.2**
comp=Z,113nm,1.4s
ECH Echery 75.35 323 *e*P **P** **13 07 58.3 -0.3**
ECH pmax pmax
comp=Z,14nm,0.8s
ECH Echery 75.35 323 *e*P **P** **13 07 58.3 -0.3**
comp=Z,14nm,0.8s
ECH Echery 75.35 323 *e*P **P** **13 07 58.6 0.0**
CDF Champ du Feu 75.37 323 *e*P **P** **13 07 58.4 -0.3**
comp=Z,91nm,1.3s
CDF Champ du Feu 75.37 323 *e*P **P** **13 07 58.4 -0.3**
CDF pmax pmax
comp=Z,91nm,1.3s
CDF Champ du Feu 75.37 323 *e*P **P** **13 07 58.4 -0.3**
comp=Z,91nm,1.3s
HINF Hinteralfeld 75.37 322 *e*P **P** **13 07 58.0 -0.7**
comp=Z,37nm,1.2s
HINF Hinteralfeld 75.37 322 *e*P **P** **13 07 58.0 -0.7**
HINF pmax pmax
comp=Z,37nm,1.2s
HINF Hinteralfeld 75.37 322 *e*P **P** **13 07 58.0 -0.7**
comp=Z,37nm,1.2s
OG35 Corcelles 75.44 320 *e*P **P** **13 07 59.3 +0.1**
TNS Taunus Mts 75.48 325 *e*P **P** **13 07 59.9 +0.6**
TNS pmax pmax
comp=Z,25nm,1.0s
TNS Taunus Mts 75.48 325 *e*P **P** **13 07 59.9 +0.6**
comp=Z,25nm,1.0s
VIVF Saint-Julien-l 75.56 319 *e*P **P** **13 08 00.0 +0.2**
comp=Z,72nm,1.3s
VIVF Saint-Julien-l 75.56 319 *e*P **P** **13 08 00.0 +0.2**
VIVF pmax pmax
comp=Z,73nm,1.3s
VIVF Saint-Julien-l 75.56 319 *e*P **P** **13 08 00.0 +0.2**
comp=Z,72nm,1.3s
NRDL Niedersach Rie 75.62 327 *e*P **P** **13 08 00.8 +0.9**
comp=Z,13nm,0.9s
HAU Haudompre 75.76 322 *e*P **P** **13 08 00.2 -0.7**
comp=Z,19nm,1.0s
HAU *e*R
comp=Z,278nm,20.2s
HAU Haudompre 75.76 322 *e*P **P** **13 08 00.2 -0.7**
HAU pmax pmax
comp=Z,19nm,1.0s
HAU Haudompre 75.76 322 *e*P **P** **13 08 00.2 -0.7**
comp=Z,19nm,1.0s
LASF Ste Croix 75.80 318 *e*P **P** **13 08 02.0 +0.8**
comp=Z,165nm,1.6s
LASF Ste Croix 75.80 318 *e*P **P** **13 08 02.0 +0.8**
comp=Z,165nm,1.6s
SSB Saint Sauveur 75.80 319 *e*P **P** **13 08 01.6 +0.4**
SSB pmax pmax
comp=Z,31nm,0.8s
SSB Saint Sauveur 75.80 319 *e*P **P** **13 08 01.6 +0.4**
comp=Z,31nm,0.8s
SSB Saint Sauveur 75.80 319 *e*P **P** **13 08 01.6 +0.4**
RUP Ruppelstein 76.05 324 *e*P **P** **13 08 01.6 -1.0**
RUP Ruppelstein 76.05 324 *e*P **P** **13 08 01.6 -1.0**
THEF They Montfort 76.07 322 *e*P **P** **13 08 02.7 +0.1**
THEF They Montfort 76.07 322 *e*P **P** **13 08 02.7 +0.1**
THEF They Montfort 76.07 322 *e*P **P** **13 08 02.7 +0.1**
BSEG Bad Segeberg 76.22 329 *e*P **P** **13 08 03.7 +0.4**
BSEG pmax pmax
comp=Z,8.0nm,0.8s
BSEG Bad Segeberg 76.22 329 *e*P **P** **13 08 03.7 +0.4**
comp=Z,8.0nm,0.8s
PAGF Fort de Pagny 76.36 323 *e*P **P** **13 08 04.2 -0.1**
comp=Z,19nm,1.4s
PAGF Fort de Pagny 76.36 323 *e*P **P** **13 08 04.2 -0.1**
comp=Z,19nm,1.4s
WLF Walferdange 76.57 324 P **P** **13 08 06.0 +0.5**
comp=Z,24nm,2.0s
WLF Walferdange 76.57 324 *e*P **P** **13 08 05.8 +0.4**
WLF pmax pmax
comp=Z,16nm,0.9s
WLF MLR MLR
comp=Z,412nm,22.0s
WLF Walferdange 76.57 324 *e*P **P** **13 08 05.8 +0.4**
comp=Z,9.0nm,0.8s
WLF Walferdange 76.57 324 *e*P **P** **13 08 05.8 +0.4**
comp=Z,16nm,0.9s
WLF LR LR
comp=Z,412nm,22.0s
LBL Lubilhac 76.63 319 *e*P **P** **13 08 06.9 +0.9**
LBL Lubilhac 76.63 319 *e*P **P** **13 08 06.9 +0.9**
LBL Lubilhac 76.63 319 *e*P **P** **13 08 06.9 +0.9**
SFTF Sexfontaines 76.64 322 *e*P **P** **13 08 05.9 0.0**
comp=Z,106nm,1.2s
SFTF Sexfontaines 76.64 322 *e*P **P** **13 08 05.9 0.0**
comp=Z,106nm,1.2s
MTLF Montolieu 76.65 317 *e*P **P** **13 08 06.6 +0.6**
comp=Z,123nm,1.6s
MTLF Montolieu 76.65 317 *e*P **P** **13 08 06.6 +0.6**
MTLF pmax pmax

comp=Z,123nm,1.6s
MTLF Montolieu 76.65 317 *e*P **P 13 08 06.6 +0.6**
comp=Z,123nm,1.6s
BUG Bochum--Univer 76.69 326 *e*P **P 13 08 06.8 +0.8**
comp=Z,18nm,0.9s
CTA Charters Tower 76.74 109 P **P 13 08 06.2 -0.8**
CTA Charters Tower 76.74 109 P **P 13 08 06.2 -0.8**
comp=Z,21nm,1.0s,baz=272,slow=6.3,SNR=16
CTA LR LR 13 40 34.3
comp=Z,744nm,19.8s,baz=275,slow=35
CTAO Charters Tower 76.74 109 *e*P **P 13 08 05.8 -1.3**
CTAO pmax pmax
comp=Z,34nm,1.1s
CTAO MLR MLR
comp=Z,959nm,20.0s
CTAO Charters Tower 76.74 109 *e*P **P 13 08 05.8 -1.3**
comp=Z,34nm,1.1s
CTAO LR LR
comp=Z,959nm,20.0s
MEZF Maizieres J'vi 76.75 322 *e*P **P 13 08 06.6 +0.1**
comp=Z,133nm,1.6s
MEZF Maizieres J'vi 76.75 322 *e*P **P 13 08 06.6 +0.1**
comp=Z,133nm,1.6s
SMF Signal de Mont 76.78 320 *e*P **P 13 08 06.4 -0.3**
comp=Z,66nm,1.4s
SMF Signal de Mont 76.78 320 *e*P **P 13 08 06.4 -0.3**
SMF pmax pmax
comp=Z,66nm,1.4s
SMF Signal de Mont 76.78 320 *e*P **P 13 08 06.4 -0.3**
comp=Z,66nm,1.4s
CLNS Chul'man 76.79 28 *e*P **P 13 08 08.7 +2.1**
CLNS pmax pmax
comp=Z,14nm,0.9s
CLNS pmax pmax
comp=N,6.0nm,0.8s
CLNS pmax pmax
comp=E,22nm,0.8s
CLNS MLR MLR
comp=Z,439nm,17.0s
CLNS MLR MLR
comp=N,1μm,18.0s
CLNS MLR MLR
comp=E,1μm,17.0s
IBBN Ibbenburen 76.81 327 *e*P **P 13 08 08.3 +1.6**
comp=Z,12nm,0.9s
KLR Kul'dur 76.90 37 *e*P P 13 08 03.7 -3.6
KLR *e*SS SS 13 22 58.0 +6.3
MAT Matsushiro 76.97 51 P **S 13 08 07.3 -0.7**
MAT S **S 13 17 53.6 -2.6**
MJAR Matsushiro Arr 76.97 51 P **P 13 08 07.5 -0.5**
MJAR Matsushiro Arr 76.97 51 P **P 13 08 07.5 -0.5**
comp=Z,3.8nm,0.9s,baz=252,slow=7.4,SNR=12
MJAR LR LR 13 43 45.7
comp=Z,1μm,18.6s,baz=255,slow=37
PYM Petit Puy Mans 76.98 319 *e*P **P 13 08 09.0 +1.1**
PYM Petit Puy Mans 76.98 319 *e*P **P 13 08 09.0 +1.1**
PYM Petit Puy Mans 76.98 319 *e*P **P 13 08 09.0 +1.1**
LOR Lormes 77.00 321 *e*P **P 13 08 07.9 -0.1**
comp=Z,58nm,1.2s
LOR *e*R
comp=Z,326nm,18.0s
LOR Lormes 77.00 321 *e*P **P 13 08 07.9 -0.1**
comp=Z,58nm,1.2s
AGO Saint Agoulin 77.01 319 *e*P **P 13 08 08.7 +0.7**
AGO Saint Agoulin 77.01 319 *e*P **P 13 08 08.7 +0.7**
AVF Avril sur Loir 77.14 320 *e*P **P 13 08 08.5 -0.2**
comp=Z,46nm,1.5s
AVF Avril sur Loir 77.14 320 *e*P **P 13 08 08.5 -0.2**
AVF pmax pmax
comp=Z,46nm,1.5s
AVF Avril sur Loir 77.14 320 *e*P **P 13 08 08.5 -0.2**
comp=Z,46nm,1.5s
SSF Saint Saulge 77.15 321 *e*P **P 13 08 08.8 0.0**
comp=Z,46nm,0.9s
SSF Saint Saulge 77.15 321 *e*P **P 13 08 08.8 0.0**
SSF pmax pmax
comp=Z,46nm,0.9s
SSF Saint Saulge 77.15 321 *e*P **P 13 08 08.8 0.0**
comp=Z,46nm,0.9s
JHJ Hachijo jima 2 77.30 55 LR LR 13 42 01.0
comp=Z,682nm,18.4s,baz=291,slow=36
CAF Calviac 77.30 318 *e*P **P 13 08 10.6 +0.9**
comp=Z,47nm,1.3s
CAF Calviac 77.30 318 *e*P **P 13 08 10.6 +0.9**
CAF pmax pmax
comp=Z,47nm,1.3s
CAF Calviac 77.30 318 *e*P **P 13 08 10.6 +0.9**
comp=Z,47nm,1.3s
BGF Bois d'Agland 77.38 320 *e*P **P 13 08 10.6 +0.5**
comp=Z,66nm,0.9s
BGF Bois d'Agland 77.38 320 *e*P **P 13 08 10.6 +0.5**
BGF pmax pmax
comp=Z,66nm,0.9s
BGF Bois d'Agland 77.38 320 *e*P **P 13 08 10.6 +0.5**
comp=Z,66nm,0.9s
BCLA Clavier 77.38 324 P **P 13 08 10.9 +0.9**
comp=Z,19nm,1.9s
GIVF Givet 77.53 324 *e*P **P 13 08 11.1 +0.3**
comp=Z,78nm,1.5s
GIVF Givet 77.53 324 *e*P **P 13 08 11.1 +0.3**
GIVF pmax pmax
comp=Z,79nm,1.5s
GIVF Givet 77.53 324 *e*P **P 13 08 11.1 +0.3**
comp=Z,78nm,1.5s
TCF Toulx Ste Croi 77.69 319 *e*P **P 13 08 12.3 +0.4**
comp=Z,19nm,1.0s
TCF Toulx Ste Croi 77.69 319 *e*P **P 13 08 12.3 +0.4**
TCF pmax pmax
comp=Z,19nm,1.0s
TCF Toulx Ste Croi 77.69 319 *e*P **P 13 08 12.3 +0.4**
comp=Z,19nm,1.0s
RESF Ens 77.76 316 *e*P **P 13 08 13.8 +1.3**
RESF Ens 77.76 316 *e*P **P 13 08 13.8 +1.3**
RJF Les Rejaudoux 77.80 318 *e*P **P 13 08 13.3 +0.8**
comp=Z,72nm,1.2s
RJF *e*R
comp=Z,362nm,20.0s
RJF Les Rejaudoux 77.80 318 *e*P **P 13 08 13.3 +0.8**
RJF pmax pmax
comp=Z,72nm,1.2s
RJF Les Rejaudoux 77.80 318 *e*P **P 13 08 13.3 +0.8**
comp=Z,72nm,1.2s
EPF Esparros 77.83 316 *e*P **P 13 08 13.4 +0.6**
comp=Z,33nm,1.3s
EPF Esparros 77.83 316 *e*P **P 13 08 13.4 +0.6**
EPF pmax pmax
comp=Z,33nm,1.3s
EPF Esparros 77.83 316 *e*P **P 13 08 13.4 +0.6**
comp=Z,33nm,1.3s
BAIF Baives 77.88 324 *e*P **P 13 08 13.2 +0.4**
comp=Z,159nm,1.6s
BAIF Baives 77.88 324 *e*P **P 13 08 13.2 +0.4**
BAIF pmax pmax
comp=Z,159nm,1.6s
BAIF Baives 77.88 324 *e*P **P 13 08 13.2 +0.4**
comp=Z,159nm,1.6s
HFS Hagfors 77.89 335 P **P 13 08 12.7 +0.1**
HFS Hagfors 77.89 335 P **P 13 08 12.7 +0.1**
comp=Z,42nm,0.8s,baz=133,slow=8.1,SNR=58
CBIJ Chichi jima 77.92 61 LR LR 13 44 36.2
comp=Z,516nm,18.6s,baz=118,slow=37
PMG Port Moresby 77.99 98 *e*P **P 13 08 13.5 -0.6**
comp=Z,126nm,1.7s
PMG LR LR
comp=Z,677nm,20.0s
PMG Port Moresby 77.99 98 P **P 13 08 13.7 -0.4**
comp=Z,39nm,0.8s,comp=Z,739nm
PMG Port Moresby 77.99 98 P **P 13 08 13.5 -0.6**
comp=Z,21nm,0.9s,baz=274,slow=3.1,SNR=10
DRV Dumont d'Urvil 78.00 157 PP PP 13 11 09.0 -0.1
DRV S S 13 17 54.0 -12
GUMO Guam 78.01 75 LR LR 13 39 33.4
comp=Z,566nm,18.5s,baz=265,slow=33
MUD Monsted U'grnd 78.02 331 *i* P **P 13 08 14.6 +1.3**
comp=Z,31nm,0.9s
LABF Labassere 78.03 316 *e*P **P 13 08 15.3 +1.5**
LABF Labassere 78.03 316 *e*P **P 13 08 15.3 +1.5**
LFF La Frestale 78.19 318 *e*P **P 13 08 15.6 +1.0**
comp=Z,48nm,0.8s
LFF La Frestale 78.19 318 *e*P **P 13 08 15.6 +1.0**
LFF pmax pmax
comp=Z,48nm,0.8s
LFF La Frestale 78.19 318 *e*P **P 13 08 15.6 +1.0**
comp=Z,48nm,0.8s
ETSF Etsaut 78.42 316 *e*P **P 13 08 17.1 +1.1**
comp=Z,57nm,1.0s
ETSF Etsaut 78.42 316 *e*P **P 13 08 17.1 +1.1**
ETSF pmax pmax
comp=Z,57nm,1.0s
ETSF Etsaut 78.42 316 *e*P **P 13 08 17.1 +1.1**
comp=Z,57nm,1.0s
LARF Larrau 78.76 316 *e*P **P 13 08 19.3 +1.4**
LARF Larrau 78.76 316 *e*P **P 13 08 19.3 +1.4**
SJPF Ste Jean 78.95 316 *e*P **P 13 08 20.1 +1.2**
comp=Z,95nm,1.1s
SJPF Ste Jean 78.95 316 *e*P **P 13 08 20.1 +1.2**
SJPF pmax pmax
comp=Z,95nm,1.1s
SJPF Ste Jean 78.95 316 *e*P **P 13 08 20.1 +1.2**
comp=Z,95nm,1.1s
SNAA Sanae 79.31 198 *e*P **P 13 08 20.3 -0.1**
SNAA Sanae 79.31 198 *e*P **P 13 08 19.8 -0.6**
comp=Z,72nm,1.8s
MFF Saint Martin d 79.33 319 *e*P **P 13 08 21.4 +0.6**
comp=Z,71nm,1.4s
MFF Saint Martin d 79.33 319 *e*P **P 13 08 21.4 +0.6**
MFF pmax pmax
comp=Z,71nm,1.4s
MFF Saint Martin d 79.33 319 *e*P **P 13 08 21.4 +0.6**
comp=Z,71nm,1.4s
KONO Kongsberg 79.39 334 *e*P **P 13 08 21.6 +0.7**
KONO pmax pmax
comp=Z,61nm,1.1s
KONO Kongsberg 79.39 334 *e*P **P 13 08 21.6 +0.7**
comp=Z,61nm,1.1s
NB2 NORSAR Subarra 79.41 335 P **P 13 08 20.8 -0.2**
baz=113,slow=5.9
NB2 NORSAR Subarra 79.41 335 P **P 13 08 20.8 -0.2**
comp=Z,22nm,1.1s,baz=113,slow=5.9
NOA NORSAR Array B 79.41 335 P **P 13 08 20.9 -0.2**
NOA NORSAR Array B 79.41 335 P **P 13 08 20.9 -0.2**
comp=Z,13nm,1.0s,baz=111,slow=5.6,SNR=14
NOA LR LR 13 45 58.9
comp=Z,329nm,18.8s,baz=110,slow=38
KEV Kevo 79.87 346 *e*P **P 13 08 22.8 -0.5**
KEV pmax pmax
comp=Z,9.0nm,0.8s
KEV Kevo 79.87 346 PFAKE 13 08 40.0 +17
KEV LR LR
comp=Z,2μm,22.0s
KEV Kevo 79.87 346 *e*p **P 13 08 22.8 -0.5**
comp=Z,9.2nm,0.8s
ESDC Sonseca Array 79.95 312 P **P 13 08 24.8 +0.3**
ESDC Sonseca Array 79.95 312 P **P 13 08 24.8 +0.3**
comp=Z,11nm,0.8s,baz=92,slow=4.4,SNR=99
ESDC LR LR 13 45 42.1
comp=Z,197nm,19.5s,baz=140,slow=37
ESLA Sonseca Array 79.95 312 *e*P **P 13 08 24.9 +0.5**
comp=Z,3.4nm,0.9s
LDF La Druitiere 79.98 321 *e*P **P 13 08 24.5 +0.2**
comp=Z,107nm,1.5s
LDF La Druitiere 79.98 321 *e*P **P 13 08 24.5 +0.2**
LDF pmax pmax
comp=Z,107nm,1.5s
LDF La Druitiere 79.98 321 *e*P **P 13 08 24.5 +0.2**
comp=Z,107nm,1.5s
ARCES ARCESS Array B 80.07 346 P **P 13 08 25.2 +0.8**
ARCES ARCESS Array B 80.07 346 P **P 13 08 25.2 +0.8**
comp=Z,18nm,0.8s,baz=137,slow=3.2,SNR=17
ARCES LR LR 13 44 23.6
comp=Z,1μm,21.6s,baz=129,slow=36
PAB San Pablo 80.20 311 *e*P **P 13 08 26.6 +0.7**
PAB pmax pmax
comp=Z,33nm,1.2s
PAB MLR MLR
comp=Z,435nm,21.0s
PAB San Pablo 80.20 311 *e*P **P 13 08 26.6 +0.7**
comp=Z,32nm,1.2s
PAB LR LR
comp=Z,435nm,21.0s
FLN La Foliniere 80.26 321 *e*P **P 13 08 26.0 +0.2**
comp=Z,24nm,0.9s
FLN *e*R
comp=Z,428nm,20.0s
FLN La Foliniere 80.26 321 *e*P **P 13 08 26.0 +0.2**
FLN pmax pmax
comp=Z,24nm,0.9s
FLN La Foliniere 80.26 321 *e*P **P 13 08 26.0 +0.2**
comp=Z,24nm,0.9s
GRR Gorron 80.37 321 *e*P **P 13 08 26.7 +0.3**
comp=Z,45nm,1.1s
GRR Gorron 80.37 321 *e*P **P 13 08 26.7 +0.3**
GRR pmax pmax
comp=Z,45nm,1.1s
GRR Gorron 80.37 321 *e*P **P 13 08 26.7 +0.3**
comp=Z,45nm,1.1s
RTC Rabat Centre 80.84 305 PFAKE 13 08 40.0 +11
RTC LR LR
comp=Z,601nm,19.0s
EIDS Eidsvold 81.10 115 *e*P **P 13 08 33.2 +2.3**
comp=Z,75nm,2.0s
SGMF Saint Gilles 81.41 320 *e*P **P 13 08 32.3 +0.3**
comp=Z,123nm,1.4s
SGMF Saint Gilles 81.41 320 *e*P **P 13 08 32.3 +0.3**
SGMF pmax pmax
comp=Z,123nm,1.4s
SGMF Saint Gilles 81.41 320 *e*P **P 13 08 32.3 +0.3**
comp=Z,123nm,1.4s
YAK Yakutsk 81.51 25 *e*P **P 13 08 31.6 -0.5**
YAK *e* 13 08 37.4
YAK *e*PPP PPP 13 13 27.0
YAK *e*S S 13 18 36.5 -6.8
YAK *e* 13 18 51.6
YAK pmax pmax
comp=Z,16nm,1.0s
YAK pmax pmax
comp=E,6.0nm,1.5s
YAK pmax pmax
comp=N,4.0nm,1.5s
YAK smax smax
comp=E,231nm,5.0s
YAK smax smax
comp=N,112nm,4.4s
YAK MLR MLR
comp=Z,2μm,21.0s
YAK MLR MLR
comp=N,1μm,17.0s
YAK MLR MLR
comp=E,852nm,19.0s
YAK Yakutsk 81.51 25 *e*P **P 13 08 31.7 -0.5**
YAK comp=E,14nm,0.7s LR LR
comp=Z,1μm,19.0s
QUIF Quistinic 81.69 320 *e*P **P 13 08 33.6 +0.1**
comp=Z,36nm,1.1s
QUIF Quistinic 81.69 320 *e*P **P 13 08 33.6 +0.1**
QUIF pmax pmax
comp=Z,36nm,1.1s
QUIF Quistinic 81.69 320 *e*P **P 13 08 33.6 +0.1**
comp=Z,36nm,1.1s
ROSF Rostrenen 81.89 320 *e*P **P 13 08 34.7 +0.2**
comp=Z,41nm,1.2s
ROSF Rostrenen 81.89 320 *e*P **P 13 08 34.7 +0.2**
ROSF pmax pmax
comp=Z,41nm,1.2s
ROSF Rostrenen 81.89 320 *e*P **P 13 08 34.7 +0.2**
comp=Z,41nm,1.2s
ASAJ Asahikawa 82.25 44 LR LR 13 44 55.8
comp=Z,1μm,20.6s,baz=353,slow=36
PMRV Marv??o 82.46 311 *e*P **P 13 08 38.4 +0.6**
comp=Z,45nm,1.5s
PMRV A A 13 50 12.0
comp=Z,461nm,18.0s
PESTR Estremoz 82.48 310 *e*P **P 13 08 38.6 +0.7**
comp=Z,32nm,1.4s
PBEJ Beja 82.51 309 *e*P **P 13 08 38.9 +0.9**
comp=Z,18nm,1.4s
PCVE Castro Verde 82.56 309 *e*P **P 13 08 39.0 +0.7**
comp=Z,33nm,1.5s
MVO Moncorvo 82.58 312 *e*P **P 13 08 39.5 +1.1**
comp=Z,33nm,1.5s
MVO A A 13 51 00.5
comp=Z,303nm,18.0s
PCBR Castelo Branco 82.61 311 *e*P **P 13 08 39.3 +0.8**
comp=Z,32nm,1.5s
EVO Evora 82.73 310 *e*P **P 13 08 39.4 +0.2**
comp=Z,24nm,0.9s
EVO *e*R
comp=Z,493nm,20.2s
EVO Evora 82.73 310 *e*P **P 13 08 40.2 +1.0**
comp=Z,28nm,1.4s
MESJ Messejana 82.74 309 *e*P **P 13 08 39.6 +0.3**
MESJ AMb AMB 13 09 03.8
comp=Z,30nm,1.6s
MESJ *e*S **S 13 18 59.2 +2.1**
MESJ Messejana 82.74 309 *e*P **P 13 08 39.6 +0.3**
comp=Z,30nm,1.6s
MESJ *e*S **S 13 18 59.2 +2.1**
MESJ Messejana 82.74 309 *e*P **P 13 08 39.5 +0.3**
MESJ *e*S **S 13 18 59.1 +2.1**
MTE Manteigas 82.79 312 *e*P **P 13 08 40.6 +1.1**
comp=Z,35nm,1.3s
MTE A A 13 48 28.5
comp=Z,367nm,18.0s
MTE Manteigas 82.79 312 *e*P **P 13 08 40.4 +0.9**
comp=Z,20nm,1.1s
MTE LR LR
comp=Z,533nm,20.0s
EVOP Sao Brissos 82.81 310 *e*P **P 13 08 39.4 -0.2**
EVOP pmax pmax
comp=Z,24nm,0.9s
EVOP Sao Brissos 82.81 310 *e*P **P 13 08 39.4 -0.2**
comp=Z,24nm,0.9s
MORF Marmelete 82.97 308 *e*P **P 13 08 40.7 +0.2**
MORF *e*S **S 13 19 00.4 +0.9**
PMTG Montargil 83.01 310 *e*P **P 13 08 40.1 -0.5**
comp=Z,41nm,1.5s
PNCL Nicolau / Gran 83.04 309 *e*P **P 13 08 41.8 +1.0**
PFVI Vila Bisbo 83.07 308 *e*P **P 13 08 41.1 +0.1**
PTEO Sao Teotonio 83.07 309 *e*P **P 13 08 42.3 +1.3**
YSS Yuzh-Sakhalins 83.09 42 *e*P **P 13 08 40.5 -0.3**
YSS pmax pmax
comp=Z,30nm,1.0s
YSS MLR MLR
comp=Z,2μm,19.0s
YSS MLR MLR
comp=E,1μm,20.0s
YSS Yuzh-Sakhalins 83.09 42 *e*P **P 13 08 40.2 -0.6**
comp=E,29nm,0.9s
YSS LR LR
comp=Z,431nm,20.0s
PVRL Vila Real 83.11 312 *e*P **P 13 08 42.3 +1.1**
comp=Z,34nm,1.5s
PVIS Viseu 83.12 312 *e*P **P 13 08 41.7 +0.5**
comp=Z,40nm,1.4s
POLO Lamas de Olo 83.19 313 *e*P **P 13 08 43.0 +1.4**
PCAB Cabril 83.44 313 *e*P **P 13 08 44.6 +1.8**
comp=Z,37nm,1.7s
LIS Lisbon 83.64 310 *e*P **P 13 08 44.1 +0.3**
LIS AMb AMB 13 08 55.6
comp=Z,97nm,1.2s
LIS *e*S **S 13 19 05.8 -0.3**
LIS Lisbon 83.64 310 *e*P **P 13 08 44.1 +0.3**
comp=Z,97nm,1.2s
LIS *e*S **S 13 19 05.8 -0.3**
LIS Lisbon 83.64 310 *e*P **P 13 08 44.1 +0.3**
LIS *e*S **S 13 19 05.7 -0.3**
PMAFR Mafra 83.79 310 *e*P **P 13 08 45.9 +1.2**
EKA Eskdalemuir Ar 83.94 327 P **P 13 08 44.8 -0.3**
EKA Eskdalemuir Ar 83.94 327 P **P 13 08 44.8 -0.3**
comp=Z,8.8nm,1.0s,baz=114,slow=6.6,SNR=9.8
YUK Yuzh-Kuril'sk 84.52 45*c* *i*P **P 13 08 45.2 -3.0**
YUK *i* PPP PPP 13 14 00.9
YUK *i* S S 13 19 05.0 -10
YUK pmax pmax
comp=Z,248nm,1.4s
YUK pmax pmax
comp=E,216nm,1.0s
YUK pmax pmax
comp=N,340nm,1.6s
YUK pmax pmax
comp=Z,150nm,15.1s
YUK MLR MLR
comp=E,498nm,23.0s
YUK MLR MLR
comp=N,376nm,23.0s
YUK MLR MLR
comp=Z,1μm,23.0s
QSPA South Pole Qui 84.86 180 *e*P **P 13 08 49.3 -0.4**
comp=Z,621nm,2.8s
QSPA LR LR
comp=Z,2μm,19.0s
VNDA Vanda 85.72 167 *e*P **P 13 08 53.7 0.0**
comp=Z,4.0nm,0.8s
VNDA Vanda 85.72 167 P **P 13 08 53.5 -0.1**
comp=Z,6.3nm,1.1s,baz=285,slow=6.1,SNR=18
VNDA LR LR 13 43 37.6
comp=Z,1μm,18.5s,baz=263,slow=33
SBA Scott Base 86.73 168 *e*P **P 13 08 59.4 +0.8**
SBA pmax pmax
comp=Z,81nm,1.8s
SBA MLR MLR
comp=Z,726nm,20.0s
SBA Scott Base 86.73 168 *e*P **P 13 08 59.4 +0.8**
comp=Z,81nm,1.8s
SBA LR LR
comp=Z,726nm,20.0s
SPITS Spitsbergen Ar 87.79 351 P **P 13 09 04.6 +1.0**
SPITS Spitsbergen Ar 87.79 351 P **P 13 09 04.6 +1.0**
comp=Z,20nm,0.9s,baz=134,slow=8.4,SNR=9.6
KBS Kingsbay 88.95 351 PFAKE 13 09 20.0 +11
KBS LR LR
comp=Z,494nm,19.0s
HNR Honiara 90.57 99 PFAKE 13 09 30.0 +12
HNR LR LR
comp=Z,664nm,19.0s
SEY Seymchan 91.76 27 *e*P **P 13 09 22.1 -0.4**
SACV Santiago Islan 93.36 285 PFAKE 13 09 40.0 +9.0
SACV LR LR
comp=Z,738nm,19.0s
PETK Petropavlovsk- 93.59 37 LR LR 13 53 54.9
comp=Z,836nm,19.4s,baz=262,slow=37
PET Petropavlovsk 94.17 37 PFAKE 13 09 40.0 +6.2
PET LR LR
comp=Z,2μm,20.0s
DZM Mont Dzumac 95.39 113 *e*SS SS 13 27 28.4 +4.0
comp=Z,326nm,29.9s
DZM *e*LR LR 13 40 24.8
comp=Z,2μm,21.8s
DZM Mont Dzumac 95.39 113 LR LR 13 49 34.5
comp=Z,1μm,21.2s,baz=251,slow=34
BILL Bilibino 97.66 22 *e*P **P 13 09 49.5 +0.1**
BILL *e* 13 13 49.5
BILL *i* PS **PS 13 22 40.1 +1.4**
BILL pmax pmax
comp=Z,6.0nm,1.0s
BILL MLR MLR
comp=Z,2μm,18.0s
BILL Bilibino 97.66 22 *e*P **P 13 09 49.2 -0.3**
comp=Z,6.3nm,1.1s
BILL LR LR
comp=Z,2μm,20.0s
PMSA Palmer Station 102.00 199 PFAKE 13 10 20.0 +11
PMSA LR LR
comp=Z,1μm,19.0s
RCBR Riachuelo 103.75 263 PFAKE 13 10 30.0 +12
RCBR LR LR
comp=Z,984nm,20.0s
TARA Tarawa 104.47 90 PFAKE 13 10 30.0 +9.0
TARA LR LR
comp=Z,2μm,20.0s
SFJD Kangerlussuaq 105.83 339 PFAKE 13 14 50.0
SFJD LR LR
comp=Z,727nm,20.0s
EFI East Falkland 107.44 212 PFAKE 13 14 50.0
EFI LR LR
comp=Z,2μm,22.0s
COLA College 115.04 16 PFAKE 13 15 10.0 +14
COLA LR LR
comp=Z,1μm,21.0s
ILAR Eielson Array 115.38 16 PKP **PKPdf 13 14 54.4 -2.1**
ILAR PP PP 13 15 48.4 -8.8
ILAR Eielson Array 115.38 16 PKP **PKPdf 13 14 54.4 -2.1**
comp=Z,1.1nm,0.9s,baz=328,slow=3.2,SNR=7.8
ILAR PP PP 13 15 48.4 -8.8
comp=Z,1.9nm,1.1s,baz=313,slow=6.2,SNR=4.5
TRQA Tornquist 117.11 222 PFAKE 13 15 10.0 +9.3
TRQA LR LR
comp=Z,809nm,19.0s
KDAK Kodiak Island 118.52 24 PFAKE 13 15 10.0 +7.3
KDAK LR LR
comp=Z,2μm,20.0s
YKW3 Yellowknife Ar 122.68 2 *e*PKPdf **PKPdf 13 15 09.0 -1.5**
YKA Yellowknife Ar 122.74 2 PKP **PKPdf 13 15 09.5 -1.2**
YKA PP **PP 13 16 49.4 +1.6**
YKA PKKPab **PKKPab 13 25 03.1 -0.9**
YKA Yellowknife Ar 122.74 2 PKP **PKPdf 13 15 09.5 -1.2**
comp=Z,5.6nm,0.8s,baz=349,slow=2.3,SNR=104
YKA PP **PP 13 16 49.3 +1.6**
comp=Z,4.4nm,1.1s,baz=352,slow=7.2,SNR=12

YKA PKKPab **PKKPab** **13 25 03.1 -0.9**
comp=Z,1.8nm,0.7s,baz=168,slow=3.2,SNR=9.0
LCO Las Campanas 128.13 227 PFAKE 13 15 30.0 +7.6
LCO LR LR
comp=Z,811nm,19.0s
SAML Samuel 129.85 254 *e*PKPdf **PKPdf** **13 15 26.1 +0.4**
SAML LR LR
comp=Z,1μm,20.0s
ANWB Willy Bob 129.88 289 PFAKE 13 15 40.0 +14
ANWB LR LR
comp=Z,584nm,21.0s
FFC Flin Flon 129.99 353 *i* PKIKP **PKPdf** **13 15 24.8 0.0**
FFC Flin Flon 129.99 353 *e*PKPdf **PKPdf** **13 15 24.1 -0.6**
FFC LR LR
comp=Z,723nm,19.0s
GRGR Grenville 130.31 281 PFAKE 13 15 40.0 +13
GRGR LR LR
comp=Z,497nm,19.0s
BINY Binghamton 131.48 325 PFAKE 13 15 40.0 +12
BINY LR LR
comp=Z,728nm,20.0s
LPAZ La Paz 132.12 243 PKP **PKPdf** **13 15 30.2 -0.4**
LPAZ *e*PKPdf **PKiKP** **13 15 30.9 -0.9**
LPAZ La Paz 132.12 243 PKP **PKPdf** **13 15 30.2 -0.4**
comp=Z,7.3nm,1.1s,baz=72,slow=3.2,SNR=10
ULM Lac du Bonnet 133.18 346 PKP **PKPdf** **13 15 30.4 -0.6**
ULM Lac du Bonnet 133.18 346 PKP **PKPdf** **13 15 30.4 -0.6**
comp=Z,1.9nm,0.6s,baz=32,slow=2.7,SNR=3.9
TBI Tubuai 133.34 129 *e*SS SS 13 35 43.5 +0.4
comp=Z,89nm,30.0s
TBI *e*LR LR 13 57 57.4
comp=Z,247nm,24.2s
ERPA Erie 133.75 327 PFAKE 13 15 40.0 +7.7
ERPA LR LR
comp=Z,658nm,19.0s
SJG San Juan 133.91 290 PFAKE 13 15 40.0 +6.8
SJG LR LR
comp=Z,427nm,20.0s
GLMI Grayling 134.03 333 PFAKE 13 15 40.0 +7.2
GLMI LR LR
comp=Z,626nm,20.0s
EYMN Ely 134.06 341 *e*PKPdf **PKPdf** **13 15 32.2 -0.5**
EYMN LR LR
comp=Z,728nm,21.0s
CBN Corbin 134.81 321 PFAKE 13 15 50.0 +16
CBN LR LR
comp=Z,530nm,21.0s
AGMN Agassiz Nation 134.99 345 *e*PKPdf **PKPdf** **13 15 34.4 0.0**
AGMN LR LR
comp=Z,668nm,22.0s
AAM Ann Arbor 135.51 330 PFAKE 13 15 50.0 +14
AAM LR LR
comp=Z,506nm,20.0s
A24A Westby 135.93 353 ⇑P **PKPdf** **13 15 36.8 +0.5**
baz=136
A22A Carney Farms, 136.07 355 ⇑P **PKPdf** **13 15 36.4 -0.1**
baz=136
PPT2 Papeete2 136.12 122 *e*SS SS 13 36 20.7 +3.4
comp=Z,179nm,30.2s
PPT2 *e*LR LR 13 59 19.2
comp=Z,521nm,24.2s
A21A Bergtoll Ranch 136.15 356 ⇑P **PKPdf** **13 15 37.0 +0.3**
baz=136
A12A Yaak River Ran 136.24 4 ⇑P **PKPdf** **13 15 36.9 0.0**
baz=136
A14A Double T Ranch 136.31 2 ⇓P **PKPdf** **13 15 36.6 -0.4**
baz=136,SNR=5.6
A15A Johnson Ranch, 136.33 1 ⇓P **PKPdf** **13 15 37.0 0.0**
baz=136
A19A Klindworth Far 136.33 357 ⇑P **PKPdf** **13 15 36.4 -0.6**
baz=136
A20A Cobblestone Ra 136.33 357 ⇑P **PKPdf** **13 15 37.0 0.0**
baz=136
A17A Triple J Farms 136.37 359 ⇑P **PKPdf** **13 15 37.2 +0.1**
baz=136
A16A West Butte Ran 136.37 0 ⇓P **PKPdf** **13 15 37.4 +0.2**
baz=136
A18A Metzger Ranch, 136.38 358 ⇑P **PKPdf** **13 15 36.9 -0.1**
baz=136
DGMT Dagmar 136.40 353 PFAKE 13 15 50.0 +13
DGMT LR LR
comp=Z,855nm,19.0s
DGMT Dagmar 136.40 353 ⇑P **PKPdf** **13 15 37.7 +0.6**
baz=136
NLWA Neilton Lookou 136.60 12 PFAKE 13 15 50.0 +12
NLWA LR LR
comp=Z,679nm,22.0s
ACSO Alum Creek Sta 136.68 328 *e*PKPdf **PKPdf** **13 15 37.6 -0.3**
ACSO LR LR
comp=Z,638nm,21.0s
NEW Newport 136.78 6 PFAKE 13 15 50.0 +12
NEW LR LR
comp=Z,680nm,21.0s
B19A Brinkman Farms 136.81 358 ⇑P **PKPdf** **13 15 38.2 +0.3**
baz=137
B13A Whitefish 136.87 3 ⇑P **PKPdf** **13 15 38.4 +0.4**
baz=137
CNNC Cliffs of the 136.93 318 PFAKE 13 15 50.0 +12
CNNC LR LR
comp=Z,622nm,20.0s
B14A Marquette Ranc 136.93 2 P **PKPdf** **13 15 38.2 0.0**
baz=137,SNR=8.3
B15A Bradely Ranch, 137.00 1 P **PKPdf** **13 15 38.0 -0.3**
baz=137,SNR=7.0
B17A L&G Farms, Che 137.02 359 ⇓P **PKPdf** **13 15 38.7 +0.4**
baz=137
C23A Lambert 137.17 354 ⇓P **PKPdf** **13 15 39.2 +0.7**
baz=137
EGMT Eagleton 137.27 358 *e*PKPdf **PKPdf** **13 15 39.1 +0.3**
EGMT LR LR
comp=Z,697nm,19.0s
EGMT Eagleton 137.27 358 ⇑P **PKPdf** **13 15 39.3 +0.5**
baz=137
C22A Vida 137.30 354 ⇑P **PKPdf** **13 15 38.9 +0.1**
baz=137
BLA Blacksburg 137.30 323 PFAKE 13 15 50.0 +11
BLA LR LR
comp=Z,476nm,20.0s
C21A Desert Coulee 137.32 356 ⇓P **PKPdf** **13 15 38.7 -0.2**
baz=137
BSMT Bassoo Peak 137.37 3 *e*PKPdf **PKPdf** **13 15 39.0 -0.2**
C20A Veseth Ranch, 137.50 357 ⇑P **PKPdf** **13 15 39.0 -0.2**
baz=137
JTMT Jette 137.50 3 *e*PKPdf **PKPdf** **13 15 40.7 +1.4**
C14A Swan Lake 137.50 2 ⇑P **PKPdf** **13 15 38.6 -0.6**
baz=137
C16A Fuhringer Ranc 137.52 0 P **PKPdf** **13 15 39.0 -0.2**
baz=138,SNR=6.7
C15A Salmond Ranch, 137.53 1 ⇓P **PKPdf** **13 15 39.4 0.0**
baz=138
C19A Slack Wire Ran 137.53 358 ⇓P **PKPdf** **13 15 39.7 +0.4**
baz=138
GRTK Grand Turk 137.68 296 PFAKE 13 15 50.0 +10
GRTK LR LR
comp=Z,562nm,20.0s
C17A Wharram Farm, 137.68 359 ⇑P **PKPdf** **13 15 39.9 +0.3**
baz=138,SNR=6.5
SWMT Swartz Lake 137.75 3 *e*PKPdf **PKPdf** **13 15 39.1 -0.6**
D22A Cohagen 137.92 355 ⇓P **PKPdf** **13 15 40.5 +0.5**
baz=138
SLMT Seeley Lake 138.04 2 *e*PKPdf **PKPdf** **13 15 41.9 +1.6**
D21A La Casta Ranch 138.07 355 ⇓P **PKPdf** **13 15 40.8 +0.5**
baz=138
D19A Cripps Ranch, 138.09 357 ⇓P **PKPdf** **13 15 40.6 +0.2**
baz=138
D12A Red Ives Fores 138.13 4 ⇓P **PKPdf** **13 15 39.8 -0.7**
baz=138
D14A Greenough 138.20 2 ⇑P **PKPdf** **13 15 40.5 -0.2**
baz=138
D15A Lincoln 138.27 1 ⇓P **PKPdf** **13 15 39.7 -1.0**
baz=138
D16A Dana Ranch, Ca 138.29 0 ⇓P **PKPdf** **13 15 40.3 -0.4**
baz=138,SNR=5.1
HAWA Hanford 138.34 8 PFAKE 13 15 50.0 +9.3
HAWA LR LR
comp=Z,582nm,20.0s
CHMT Chamberlain Mo 138.38 2 *e*PKPdf **PKPdf** **13 15 40.3 -0.7**
MSO Missoula 138.44 3 PFAKE 13 15 50.0 +9.0
MSO LR LR
comp=Z,531nm,22.0s
MSO Missoula 138.44 3 ⇑P **PKPdf** **13 15 40.4 -0.6**
baz=138,SNR=6.3
SDDR Presa de Saban 138.49 293 PFAKE 13 15 50.0 +8.2
SDDR LR LR
comp=Z,440nm,20.0s
HRY Holter Researc 138.61 0 *e*PKPdf **PKPdf** **13 15 41.3 -0.1**

E20A Meyer Farm, Mu 138.71 356 ⇑P **PKPdf** **13 15 41.4 -0.1**
baz=139
E18A Harlowton 138.73 358 ⇓P **PKPdf** **13 15 42.1 +0.5**
baz=139
E16A East Helena 138.78 0 ⇓P **PKPdf** **13 15 41.7 0.0**
baz=139,SNR=8.0
E13A Victor 138.81 3 ⇓P **PKPdf** **13 15 39.7 -2.0**
baz=139
F19A Roth Farm, Mol 139.41 357 ⇑P **PKPdf** **13 15 43.3 +0.5**
baz=139
ECSD EROS Data Cent 139.41 343 PFAKE 13 15 50.0 +7.2
ECSD LR LR
comp=Z,625nm,19.0s
HDIL Hopedale 139.51 334 PFAKE 13 15 50.0 +7.0
HDIL LR LR
comp=Z,642nm,19.0s
TZTN Tazewell 139.61 324 *e*PKPdf **PKPdf** **13 15 43.4 +0.1**
BOZ Bozeman (W) 139.67 0 PFAKE 13 16 00.0 +17
BOZ LR LR
comp=Z,410nm,20.0s
NHSC New Hope 139.72 318 PFAKE 13 16 00.0 +16
NHSC LR LR
comp=Z,592nm,21.0s
G22A Birney 139.84 354 ⇑P **PKPdf** **13 15 42.0 -1.7**
baz=140
DLMT Dillon 139.94 1 *e*PKPdf **PKPdf** **13 15 44.6 +0.8**
SCIA State Center 139.95 339 PFAKE 13 16 00.0 +16
SCIA LR LR
comp=Z,946nm,22.0s
G20A Bridger 140.00 356 ⇑P **PKPdf** **13 15 43.5 -0.5**
baz=140
G14A Jackson 140.04 2 ⇓P **PKPdf** **13 15 43.2 -0.9**
baz=140
H24A Dirks Ranch, A 140.11 352 ⇓P **PKPdf** **13 15 43.3 -0.8**
baz=140
BMO Blue Mountains 140.14 6 PFAKE 13 16 00.0 +16
BMO LR LR
comp=Z,468nm,19.0s
G15A Dillon 140.14 1 ⇓P **PKPdf** **13 15 44.1 -0.2**
baz=140
RLMT Red Lodge 140.15 358 *e*PKPdf **PKPdf** **13 15 46.2 +1.9**
RLMT LR LR
comp=Z,798nm,20.0s
G13A Cobalt 140.15 3 ⇑P **PKPdf** **13 15 43.9 -0.4**
baz=140
H19A Powell 140.59 357 ⇑P **PKPdf** **13 15 45.4 +0.4**
baz=140
H18A Shoshone NF, C 140.61 358 ⇑P **PKPdf** **13 15 46.2 +1.0**
baz=141,SNR=13
H16A Russell Place, 140.61 360 ⇓P **PKPdf** **13 15 45.4 +0.2**
baz=141
RSSD Black Hills 140.65 352 *e*PKIKP **PKPdf** **13 15 41.4 -3.9**
RSSD Black Hills 140.65 352 *e*PKPdf **PKPdf** **13 15 41.4 -3.9**
H12A Diamond D Ranc 140.66 4 ⇑P **PKPdf** **13 15 45.0 -0.2**
baz=141
H13A Challis 140.68 3 ⇑P **PKPdf** **13 15 44.4 -0.9**
baz=141
LKWY Lake 140.74 359 PFAKE 13 16 00.0 +14
LKWY LR LR
comp=Z,961nm,22.0s
I22A 9 Mile Ranch, 141.18 354 ⇓P **PKPdf** **13 15 45.2 -0.9**
baz=141
I20A Worland 141.26 356 ⇓P **PKPdf** **13 15 44.9 -1.4**
baz=141
I21A Big Trails, Te 141.33 355 ⇓P **PKPdf** **13 15 46.3 -0.2**
baz=141
HUMO Hull Mountain 141.34 14 *e*PKPdf **PKPdf** **13 15 47.0 +0.7**
I17A Pilgrim Ck. 141.39 359 ⇑P **PKPdf** **13 15 48.6 +1.9**
baz=141
IMW Indian Meadow 141.42 359 *e*PKPdf **PKPdf** **13 15 47.0 +0.2**
J24A Dixon Ranch, L 141.51 352 ⇑P **PKPdf** **13 15 46.5 -0.3**
baz=142
MOOW Moose Ponds 141.56 359 *e*PKPdf **PKPdf** **13 15 46.7 -0.2**
NNA Nana 141.57 243 PFAKE 13 16 00.0 +12
NNA LR LR
comp=Z,1μm,20.0s
HLID Hailey 141.67 3 *e*PKP **PKPdf** **13 15 42.2 -4.9**
HLID LR LR
comp=Z,818nm,21.0s
LOHW Long Hollow 141.70 359 *e*PKPdf **PKPdf** **13 15 47.5 +0.3**
GTBY Guantanamo Bay 141.70 296 PFAKE 13 16 00.0 +12
GTBY LR LR
comp=Z,525nm,19.0s
MFID Camas Ranch 141.71 5 *e*PKPdf **PKPdf** **13 15 45.5 -1.6**
MFID Camas Ranch 141.71 5 ⇑P **PKPdf** **13 15 45.7 -1.4**
baz=142
DCID1 Drake Creek 141.72 360 *e*PKPdf **PKPdf** **13 15 48.0 +0.8**
J21A Lysite 141.81 355 ⇑P **PKPdf** **13 15 44.6 -2.7**
baz=142
TPAW Teton Pass 141.82 359 *e*PKPdf **PKPdf** **13 15 47.6 +0.1**
J13A Cove Ranch, Pi 141.85 3 ⇑P **PKPdf** **13 15 45.6 -1.8**
baz=142
J20A Shoshoni 141.85 356 ⇓P **PKPdf** **13 15 43.8 -3.6**
baz=142,SNR=6.6
SNOW Snow King Moun 141.85 359 *e*PKPdf **PKPdf** **13 15 48.2 +0.6**
J17A Brown Place, J 141.95 359 ⇑P **PKPdf** **13 15 45.1 -2.5**
baz=142,SNR=7.9
J14A Carey 141.95 2 ⇑P **PKPdf** **13 15 45.1 -2.5**
baz=142,SNR=5.8
RRI2 Red Ridge 141.97 360 *e*PKPdf **PKPdf** **13 15 46.4 -1.4**
J19A Crowheart 141.99 357 ⇓P **PKPdf** **13 15 44.8 -2.9**
baz=142
K23A Bowen Ranch, D 142.20 353 ⇑P **PKPdf** **13 15 47.0 -1.1**
baz=142
WVT Waverly 142.28 328 *e*PKHKP PKPpre 13 15 42.5
WVT Waverly 142.28 328 *e*PKP PKPpre 13 15 42.5
K22A Casper 142.41 354 ⇑P **PKPdf** **13 15 47.6 -0.8**
baz=142
K19A Absolon Red Bu 142.42 357 ⇑P **PKPdf** **13 15 48.1 -0.4**
baz=142
K16A Soda Springs 142.49 0 P **PKPdf** **13 15 46.1 -2.5**
baz=142,SNR=7.5
K21A Alcova 142.50 355 ⇓P **PKPdf** **13 15 45.5 -3.1**
baz=142
BW06 Boulder Array 142.51 358 PFAKE 13 16 00.0 +11
BW06 LR LR
comp=Z,713nm,19.0s
BW06 Boulder Array 142.51 358 ⇑P **PKPdf** **13 15 46.2 -2.5**
baz=142,SNR=8.5
PDAR Pinedale Array 142.51 358 PKP **PKPdf** **13 15 46.0 -2.7**
PDAR Pinedale Array 142.51 358 PKP **PKPdf** **13 15 46.0 -2.7**
comp=Z,6.7nm,0.9s,baz=27,slow=2.2,SNR=13
AHID Auburn Hatcher 142.55 360 PFAKE 13 16 00.0 +11
AHID LR LR
comp=Z,594nm,20.0s
K20A Yellowstone Ra 142.56 356 ⇑P **PKPdf** **13 15 46.2 -2.5**
baz=142
K15A Arbon 142.62 1 ⇓P **PKPdf** **13 15 46.6 -2.2**
baz=143,SNR=6.1
L22A Ellis Ranch, M 143.01 354 ⇓P PKPbc 13 15 47.1 +0.8
baz=143
L19A Farson 143.17 357 ⇓P PKPbc 13 15 48.1 +1.4
baz=143
L21A Rawlins 143.17 355 ⇓P PKPbc 13 15 48.3 +1.6
baz=143
L20A Wamsutter 143.20 356 ⇑P **PKPdf** **13 15 48.9 -1.0**
baz=143
L17A Cokeville 143.21 359 ⇓P **PKPdf** **13 15 50.4 +0.5**
baz=143
L14A Malta 143.25 2 ⇓P **PKPdf** **13 15 49.3 -0.6**
baz=143
PLAL Pickwick Lake 143.28 327 PFAKE 13 16 00.0 +10
PLAL LR LR
comp=Z,537nm,21.0s
L16A Fish Haven 143.30 360 ⇓P **PKPdf** **13 15 49.2 -0.9**
baz=143
L15A Malad City 143.31 1 ⇓P **PKPdf** **13 15 49.1 -0.9**
baz=143
L18A Fontenelle, Gr 143.37 358 ⇓P **PKPdf** **13 15 49.5 -0.7**
baz=143
OGNE Ogallala 143.38 348 PFAKE 13 16 00.0 +10
OGNE LR LR
comp=Z,718nm,20.0s
M23A Laramie 143.48 353 ⇑P PKPbc 13 15 48.5 +0.9
baz=143
HVU Hansel Valley 143.52 2 *e*PKIKP PKPbc 13 15 49.0 +1.4
HVU Hansel Valley 143.52 2 *e*PKPdf PKPbc 13 15 49.0 +1.4
M21A Separation Pea 143.52 355 ⇓P PKPbc 13 15 48.1 +0.4
baz=144
PHWY Pilot Hill 143.61 352 *e*PKPdf PKPab 13 15 47.3 0.0
KSU1 Kansas State U 143.62 340 *e*PKPdf PKPab 13 15 47.1 +0.2
KSU1 LR LR
comp=Z,717nm,19.0s
M22A Cedar Creek Ra 143.65 354 ⇓P PKPbc 13 15 49.4 +1.3
baz=144
M20A Sweetwater, Wa 143.71 356 ⇓P PKPbc 13 15 49.5 +1.2
baz=144,SNR=11
HWUT Hardware Ranch 143.71 0 *e*PKPdf PKPbc 13 15 48.9 +0.7
HWUT LR LR
comp=Z,516nm,22.0s
RKT Rikitea 143.71 142 *e*LR LR 14 02 43.4
comp=Z,563nm,25.0s
M17A Scullys Gap (B 143.84 359 P PKPbc 13 15 49.4 +0.8
baz=144,SNR=13
KIPM Iron Peak 143.85 16 *e*PKPdf PKPbc 13 15 49.3 +0.8
M18A Lyman 143.87 358 ⇓P PKPbc 13 15 49.6 +0.9
baz=144
N24A Carr 144.00 351 ⇑P PKPbc 13 15 49.9 +0.8
baz=144
M16A Huntsville 144.00 0 ⇓P PKPbc 13 15 50.0 +0.9
baz=144
N23A Red Feather La 144.08 353 ⇓P PKPbc 13 15 50.4 +1.0
baz=144
LRAL Lakeview Retre 144.09 324 *e*PKPdf PKPbc 13 15 49.2 -0.1
LRAL LR LR
comp=Z,555nm,20.0s
N22A Wattenberg Ran 144.23 353 P PKPbc 13 15 50.6 +0.7
baz=144,SNR=8.8
N18A Larsen Ranch, 144.30 358 P PKPbc 13 15 50.5 +0.4
baz=144,SNR=23
OXF Oxford 144.35 328 *e*PKIKP **PKPab** **13 15 49.6 -0.2**
OXF MLR MLR
comp=Z,585nm,20.0s
OXF Oxford 144.35 328 *e*PKPdf **PKPab** **13 15 49.6 -0.2**
OXF LR LR
comp=Z,585nm,20.0s
N19A John Jarvie Ra 144.36 357 P PKPbc 13 15 50.4 +0.2
baz=144,SNR=17
N20A Spence Gulch, 144.37 356 ⇑P **PKPdf** **13 15 51.5 -0.5**
baz=144
N17A Moffit Pass 144.37 359 P PKPbc 13 15 51.2 +0.8
baz=144,SNR=29
N21A Black Mountain 144.38 355 ⇓P PKPbc 13 15 50.9 +0.6
baz=144,SNR=43
MTDJ Mount Denham 144.40 294 PFAKE 13 16 00.0 +7.5
MTDJ LR LR
comp=Z,381nm,20.0s
ELK Elko 144.41 5 *e*PKPdf PKPbc 13 15 50.8 +0.3
N16A Rees Ranch, Co 144.43 360 ⇑P **PKPdf** **13 15 51.9 -0.2**
baz=144,SNR=8.2
BMN Battle Mountai 144.51 8 *e*PKIKP PKPbc 13 15 51.3 +0.6
BMN Battle Mountai 144.51 8 *e*PKPdf PKPbc 13 15 51.3 +0.7
JLU Jordanelle 144.71 360 *e*PKPdf **PKPdf** **13 15 52.1 -0.5**
O24A Longmont 144.72 351 ⇑P **PKPdf** **13 15 52.2 -0.3**
baz=145
HOPS Hopland 144.72 16 *e*PKPdf **PKPdf** **13 15 52.1 -0.2**
O23A Lake Granby, G 144.75 353 P **PKPdf** **13 15 52.3 -0.5**
baz=145,SNR=38
P27A Ficken Ranch, 144.82 348 ⇓P PKPbc 13 15 51.8 +0.2
baz=145
O22A Kremmling 144.87 353 ⇓P PKPbc 13 15 52.4 +0.4
baz=145,SNR=50
DAU Daniels Canyon 144.90 360 *e*PKIKP **PKPdf** **13 15 53.1 0.0**
DAU Daniels Canyon 144.90 360 *e*PKPdf **PKPdf** **13 15 53.1 0.0**
O21A Pagoda 144.91 355 P **PKPdf** **13 15 52.7 -0.3**
baz=145,SNR=7.9
O19A Miners Draw (B 144.95 357 ⇑P PKPbc 13 15 52.5 +0.4
baz=145,SNR=28
P26A Davis Ranch, A 144.97 349 ⇑P **PKPdf** **13 15 53.2 +0.2**
baz=145
O15A The Old Anders 145.02 1 ⇑P **PKPdf** **13 15 53.8 +0.7**
baz=145
O18A Roosevelt 145.03 358 P **PKPdf** **13 15 53.2 +0.2**
baz=145,SNR=23
O20A White River Ci 145.06 356 P **PKPab** **13 15 52.8 +0.3**
baz=145,SNR=57
DUG Dugway 145.10 2 *e*PKIKP **PKPdf** **13 15 53.1 -0.1**
DUG MLR MLR
comp=Z,625nm,19.0s
DUG Dugway 145.10 2 *e*PKPdf **PKPdf** **13 15 53.1 -0.1**
DUG LR LR
comp=Z,625nm,19.0s
DUG Dugway 145.10 2 ⇓P **PKPdf** **13 15 53.8 +0.6**
baz=145
O16A Springville 145.11 0 ⇓P **PKPdf** **13 15 53.8 +0.5**
baz=145
ISCO Idaho Springs 145.11 352 *e*PKP2 **PKPbc** **13 15 52.8 0.0**
ISCO MLR MLR
comp=Z,523nm,22.0s
ISCO Idaho Springs 145.11 352 *e*PKPdf **PKPbc** **13 15 52.8 0.0**
ISCO LR LR
comp=Z,523nm,22.0s
ISCO Idaho Springs 145.11 352 P **PKPab** **13 15 53.1 +0.2**
baz=145,SNR=36
O17A Robinson Place 145.12 359 P **PKPdf** **13 15 53.6 +0.3**
baz=145,SNR=103
P25A Willow Gulch B 145.17 350 ⇑P **PKPdf** **13 15 53.9 +0.5**
baz=145
WCN Washoe City 145.20 11 *e*PKIKP **PKPdf** **13 15 53.6 +0.2**
WCN Washoe City 145.20 11 *e*PKPdf **PKPdf** **13 15 53.6 +0.2**
P24A Kohler Place, 145.29 351 ⇓P **PKPdf** **13 15 54.4 +0.8**
baz=145
MPU Maple Canyon 145.30 0 *e*PKPdf **PKPab** **13 15 53.5 +0.1**
KSCO Kaye Shedlock' 145.36 348 ⇓P **PKPab** **13 15 53.6 0.0**
baz=145
P22A Eagle 145.46 354 P **PKPab** **13 15 54.5 +0.5**
baz=145,SNR=69
BRAL Brewton 145.53 321 PFAKE 13 16 10.0 +16
BRAL LR LR
comp=Z,823nm,21.0s
P23A Jefferson 145.56 352 P **PKPab** **13 15 55.2 +0.6**
baz=146,SNR=56
MCCM Marconi Confer 145.57 16 *e*PKPdf **PKPab** **13 15 54.7 +0.5**
P21A Newcastle 145.60 354 P **PKPab** **13 15 54.9 +0.4**
baz=146,SNR=70
P19A Cripple Cowboy 145.61 357 P **PKPab** **13 15 54.8 +0.2**
baz=146,SNR=50
UALR University of 145.62 331 *e*PKPdf **PKPbc** **13 15 54.2 +0.1**
Q26A Hugo 145.62 349 ⇑P **PKPab** **13 15 55.2 +0.6**
baz=146
P18A Preston Nutter 145.67 358 P **PKPab** **13 15 54.9 -0.1**
baz=146,SNR=28
P20A De Beque 145.70 356 P **PKPab** **13 15 55.0 +0.2**
baz=146,SNR=11
P16A Fountain Green 145.71 0 P **PKPab** **13 15 55.7 +0.8**
baz=146,SNR=21
P15A Leamington 145.74 1 ⇑P **PKPab** **13 15 55.9 +1.0**
baz=146
Q25A Bedland, Calha 145.76 350 ⇑P **PKPdf** **13 15 54.6 +0.2**
baz=146
P17A Butcher Ranch, 145.84 359 P **PKPab** **13 15 55.2 -0.1**
baz=146,SNR=22
Q24A Divide 145.86 351 P **PKPbc** **13 15 55.3 0.0**
baz=146,SNR=66
SMCO Snowmass 145.89 354 *e*PKPdf **PKPbc** **13 15 55.6 +0.1**
TMUT Trail Mountain 146.02 360 *e*PKPbc **PKPab** **13 15 56.5 +0.3**
Q23A Hartsel 146.02 352 P **PKPab** **13 15 56.1 -0.1**
baz=146,SNR=27
R27A Eads 146.09 348 ⇓P **PKPab** **13 15 56.8 +0.5**
baz=146
TUL1 Tulsa 146.16 337 ⇓P **PKPbc** **13 15 55.5 -0.4**
baz=146
SRU San Rafael 146.19 359 *e*PKP2 **PKPbc** **13 15 55.9 -0.2**
SRU San Rafael 146.19 359 *e*PKPdf **PKPbc** **13 15 55.9 -0.2**
SRU San Rafael 146.19 359 P **PKPbc** **13 15 56.2 +0.1**
baz=146,SNR=22
Q22A Crested Butte, 146.20 354 P **PKPab** **13 15 56.9 0.0**
baz=146,SNR=96
R26A Arlington 146.21 349 ⇓P **PKPab** **13 15 57.0 +0.3**
baz=146
Q20A Ridgley Place, 146.24 356 P **PKPbc** **13 15 56.0 -0.3**
baz=146,SNR=12
CMB Columbia Colle 146.29 13 *e*PKP2 **PKPbc** **13 15 56.5 +0.3**
CMB Columbia Colle 146.29 13 *e*PKPbc **PKPbc** **13 15 56.5 +0.3**
Q21A Lamborn Mesa, 146.29 354 P **PKPab** **13 15 57.1 0.0**
baz=146,SNR=31
Q19A Hogan Spring (146.30 357 ⇑P **PKPbc** **13 15 56.6 +0.2**
baz=146,SNR=48
NVAR Mina Array Bea 146.31 10 PKPbc **PKPbc** **13 15 56.6 +0.1**
NVAR Mina Array Bea 146.31 10 PKPbc **PKPbc** **13 15 56.6 +0.1**
comp=Z,52nm,1.1s,baz=354,slow=1.8,SNR=87
NV11 Mina Array Sit 146.33 9 *e*PKPbc **PKPbc** **13 15 56.4 -0.1**
Q16A Castle Valley 146.40 360 P **PKPab** **13 15 57.4 -0.2**
baz=146,SNR=61
T31A Randall Ranch, 146.43 343 ⇓P **PKPbc** **13 15 57.0 +0.3**
baz=146
R25A Fountain Ranch 146.52 350 ⇑P **PKPbc** **13 15 57.1 +0.1**
baz=146
R24A Sanders Place, 146.57 351 ⇑P **PKPbc** **13 15 57.3 0.0**
baz=146,SNR=22
OTAV Otavalo 146.66 263 *e*PKPbc **PKPdf** **13 15 57.7 +0.7**
OTAV LR LR
comp=Z,2μm,20.0s

VBMS Vicksburg 146.69 326 *e*PKPbc PKPab 13 15 58.5 -0.1
VBMS LR LR
comp=Z,559nm,20.0s
R23A Moffat 146.72 352 ⇑P PKPab 13 15 58.8 -0.2
baz=147
R21A Cimarron 146.75 354 P PKPbc 13 15 58.4 +0.5
baz=147,SNR=46
R11A Troy Canyon, C 146.75 6 ⇓P PKPbc 13 15 57.6 -0.1
baz=147
MSU Marysvale 146.79 1 *e*PKP2 PKPab 13 15 58.8 -0.3
MSU Marysvale 146.79 1 *e*PKPbc PKPab 13 15 58.8 -0.3
MVU Marysvale 146.80 1 *e*PKPbc PKPab 13 15 58.9 -0.3
R22A Saguache, Gunn 146.80 353 P PKPbc 13 15 57.3 -0.8
baz=147,SNR=66
TPH Tonopah 146.82 8 PFAKE 13 16 10.0 +11
TPH LR LR
comp=Z,567nm,19.0s
PV04 Paradox Valley 146.84 356 *e*PKPdf PKPdf 13 15 56.5 +0.2
S26A Kim 146.87 348 ⇓P PKPbc 13 15 57.2 -0.8
baz=147
MLAC Mammoth Lakes 146.99 11 ⇓P PKPbc 13 15 59.1 +0.5
baz=147
R20A Redvale 147.00 356 P PKPbc 13 15 57.9 -0.7
baz=147,SNR=29
S25A Robets Cordova 147.02 350 ⇓P PKPdf 13 15 56.9 +0.3
baz=147,SNR=34
T28A Walsh 147.06 346 ⇑P PKPbc 13 15 57.8 -0.7
baz=147
PV01 Paradox Valley 147.07 356 *e*PKPbc PKPbc 13 15 59.1 +0.4
S24A Houchin Ranch, 147.17 351 ⇓P PKPdf 13 15 57.9 +0.9
baz=147,SNR=48
S23A Nye Farm, Mont 147.22 352 ⇓P PKPbc 13 15 58.6 -0.7
baz=147,SNR=12
SAO San Andreas Ge 147.25 15 *e*PKP2 PKPbc 13 15 59.4 +0.4
SAO San Andreas Ge 147.25 15 *e*PKPbc PKPbc 13 15 59.4 +0.4
T27A Campo 147.25 347 ⇑P PKPbc 13 15 58.3 -0.8
baz=147
S22A 4UR Ranch, Cre 147.29 353 ⇓P PKPdf 13 15 58.1 +0.9
baz=147,SNR=16
T26A Comanche Natio 147.33 348 ⇑P PKPbc 13 16 00.2 +0.8
baz=147
S20A Disappointment 147.36 355 P PKPdf 13 15 58.0 +0.7
baz=147,SNR=74
ARUT Antelope Range 147.47 3 *e*PKP2 PKPbc 13 16 00.1 +0.3
ARUT Antelope Range 147.47 3 *e*PKPbc PKPbc 13 16 00.1 +0.3
S21A Coal Bank Pass 147.47 355 P PKPdf 13 15 57.6 +0.1
baz=147,SNR=107
T25A Trinidad 147.52 349 ⇑P PKPbc 13 15 58.9 -1.1
baz=148,SNR=30
S18A Hurst Farm, Bl 147.59 358 ⇓P PKPbc 13 15 59.2 -1.1
baz=148,SNR=32
TIN Tinemaha 147.66 10 ⇑P PKPbc 13 16 01.1 +0.8
baz=148
T24A Torres, Weston 147.70 350 ⇑P PKPbc 13 15 59.5 -1.1
baz=148,SNR=50
CCUT Cedar City 147.72 3 *e*PKPbc PKPbc 13 16 01.0 +0.5
T23A Casias Ranch, 147.88 352 ⇑P PKPbc 13 16 00.7 -0.4
baz=148,SNR=14
MVCO Mesa Verde 147.98 356 *e*PKPdf PKPdf 13 15 58.5 +0.2
MVCO *e*PKPbc PKPbc 13 16 01.1 -0.2
MVCO LR LR
comp=Z,505nm,19.0s
MVCO Mesa Verde 147.98 356 ⇓P PKPdf 13 15 59.8 +1.5
baz=148,SNR=14
T22A Edith 148.02 353 P PKPdf 13 15 59.4 +1.1
baz=148,SNR=51
U26A Atchley Ranch, 148.11 348 ⇑P PKPbc 13 16 00.5 -1.2
baz=148,SNR=20
T21A Navajo Lake 148.11 354 ⇓P PKPdf 13 15 59.9 +1.5
baz=148,SNR=8.8
RCTC Rector, Farmer 148.19 12 ⇓P PKPdf 13 15 59.8 +1.5
baz=148
U25A Circle Dot Ran 148.24 349 P PKPdf 13 15 59.5 +0.8
baz=148,SNR=67
W31A Holland Ranch, 148.28 342 ⇑P PKPbc 13 16 01.9 +0.1
baz=148
WMOK Wichita Mounta 148.31 340 *e*PKIKP PKPdf 13 15 58.4 -0.2
WMOK *e* 13 16 02.1
WMOK MLR MLR
comp=Z,541nm,20.0s
WMOK Wichita Mounta 148.31 340 *e*PKPdf PKPdf 13 15 58.4 -0.2
WMOK *e*PKPbc PKPbc 13 16 02.1 +0.2
WMOK LR LR
comp=Z,541nm,20.0s
BCIP Isla Barro Col 148.36 279 *e*PKPdf PKPdf 13 15 59.9 +0.7
BCIP *e*PKPbc PKPbc 13 16 03.4 +0.8
BCIP LR LR
comp=Z,557nm,22.0s
U24A Moreno Valley 148.38 350 ⇑P PKPbc 13 16 03.1 +0.7
baz=148,SNR=9.6
V28A Channing 148.38 346 ⇑P PKPdf 13 15 59.9 +1.1
baz=148
FURC Furnace Creek, 148.45 8 ⇓P PKPbc 13 16 00.9 -1.2
baz=148
DAC Darwin (Calif) 148.53 9 PFAKE 13 16 10.0 +4.0
DAC LR LR
comp=Z,1µm,21.0s
U23A El Rito 148.60 352 P PKPdf 13 15 54.4 -4.9
baz=149,SNR=6.3
U22A Llaves 148.64 353 ⇑P PKPdf 13 16 00.7 +1.3
baz=149,SNR=16
VES Vestal, Richgr 148.68 12 ⇓P PKPbc 13 16 01.9 -0.9
baz=149
U21A Nageezi 148.68 354 ⇑P PKPdf 13 16 00.9 +1.5
baz=149,SNR=39
V26A Tequesquite Ra 148.70 348 P PKPbc 13 16 02.6 -0.5
baz=149,SNR=24
MPMC Manual Prospec 148.76 9 ⇓P PKPdf 13 16 00.7 +1.2
baz=149
X31A McDonald Ranch 148.80 341 ⇑P PKPdf 13 15 60.0 +0.6
baz=149
U20A Newcomb 148.81 355 ⇓P PKPdf 13 16 01.0 +1.4
baz=149,SNR=7.1
V25A Rancho No Teng 148.82 349 P PKPdf 13 16 00.3 +0.7
baz=149,SNR=64
W29A Amraillo 148.83 344 ⇑P PKPdf 13 16 00.8 +1.2
baz=149
U15A North Rim 148.87 1 ⇑P PKPdf 13 16 01.3 +1.5
baz=149
ISA Isabella 148.97 11 *e*PKP2 PKPbc 13 16 03.7 0.0
ISA Isabella 148.97 11 *e*PKPbc PKPbc 13 16 03.7 0.0
RFTA Plano 149.04 335 *e*PKPbc PKPbc 13 16 04.1 +0.3
V24A Rampart Ranch, 149.05 350 ⇓P PKPdf 13 16 01.3 +1.2
baz=149,SNR=31
AMTX Amarillo 149.06 344 *e*PKPdf PKPdf 13 15 59.8 -0.1
AMTX *e*PKPbc PKPbc 13 16 04.1 +0.1
AMTX LR LR
comp=Z,778nm,22.0s
AMTX Amarillo 149.06 344 ⇑P PKPdf 13 15 59.8 -0.1
baz=149
SHOC Shoshone 149.09 8 ⇓P PKPdf 13 15 59.2 -0.6
baz=149
V23A Ortiz Mt. (NFS 149.17 352 ⇑P PKPdf 13 16 00.9 +0.7
baz=149,SNR=12
Y32A R-V Farms, Ver 149.20 340 ⇓P PKPdf 13 16 02.0 +1.9
baz=149
W27A Bowe Ranch, En 149.24 346 ⇓P PKPdf 13 16 01.0 +0.8
baz=149,SNR=14
X30A Coker Ranch, T 149.25 343 ⇓P PKPbc 13 16 02.4 -2.0
baz=149
LRMC Laurel Mountai 149.29 10 ⇑P PKPdf 13 16 01.3 +1.0
baz=149
V20A Brimhall 149.38 355 P PKPdf 13 16 01.4 +0.9
baz=149,SNR=25
W25A X Bar L Ranch, 149.39 349 ⇓P PKPdf 13 16 01.4 +0.9
baz=149,SNR=22
ARVC Arvin 149.42 12 ⇑P PKPdf 13 16 01.8 +1.4
baz=149
PKM Peak Mountain 149.42 14 ⇓P PKPdf 13 16 02.5 +1.9
baz=149
X29A Tulia 149.48 344 ⇑P PKPdf 13 16 01.4 +0.8
baz=149,SNR=14
Y31A Rekieta Farm, 149.50 341 ⇑P PKPdf 13 15 59.6 -1.0
baz=150
X28A Dimmitt 149.55 345 ⇓P PKPdf 13 16 02.1 +1.4
baz=150,SNR=5.9
W24A Lazy 6 Ranch, 149.57 350 ⇓P PKPdf 13 16 02.1 +1.3
baz=150,SNR=16
TUQ Turquoise Moun 149.59 7 ⇓P PKPbc 13 16 06.4 +1.1
baz=150
GSC Goldstone 149.60 9 *e*PKHKP PKPpre 13 16 01.9
GSC *e* 13 16 06.3
GSC Goldstone 149.60 9 *e*PKPdf PKPdf 13 16 01.9 +1.2
GSC *e*PKPbc PKiKP 13 16 06.3 -0.1
GSC Goldstone 149.60 9 ⇑P PKPdf 13 16 02.4 +1.7
baz=150
X27A F and S Farms, 149.65 346 P PKPbc 13 16 05.8 +0.3
baz=150,SNR=8.7
W23A Werner Place, 149.74 351 ⇑P PKPdf 13 16 02.5 +1.3
baz=150
WUAZ Wupatki 149.79 360 *e*PKPdf PKPdf 13 16 02.1 +1.0
WUAZ *e*PKPbc PKiKP 13 16 06.6 -0.2
WUAZ LR LR
comp=Z,538nm,19.0s
WUAZ Wupatki 149.79 360 ⇓P PKPdf 13 16 02.7 +1.6
baz=150
EDW2 Edwards Air Fo 149.82 11 ⇓P PKPdf 13 16 01.5 +0.4
baz=150
Z32A Haskell 149.85 340 ⇑P PKPbc 13 16 06.3 +0.4
baz=150
X26A CR and CF Fran 149.90 347 ⇓P PKPdf 13 16 02.4 +1.0
baz=150,SNR=13
OSI Osito Adit 149.93 12 *e*PKPbc PKPbc 13 16 06.9 +0.8
OSI Osito Adit 149.93 12 ⇑P PKPdf 13 16 03.0 +1.8
baz=150
ANMO Albuquerque 150.00 352 *e*PKPdf PKPdf 13 16 02.0 +0.5
ANMO *e*PKPbc PKPbc 13 16 06.7 +0.3
ANMO LR LR
comp=Z,707nm,20.0s
Y29A Porterfield Fa 150.02 344 ⇓P PKPbc 13 16 04.2 -2.1
baz=150,SNR=10
LDFC Landfair 150.04 6 *e*PKPbc PKPbc 13 16 07.5 +1.1
W20A Ramah 150.05 355 ⇓P PKPdf 13 16 02.2 +0.6
baz=150,SNR=16
Z31A Sharp Cattle R 150.06 341 P PKPdf 13 16 01.9 +0.5
baz=150,SNR=41
W13A Hualapai Mount 150.12 4 ⇑P PKPdf 13 16 03.9 +2.1
baz=150
Y28A McKinney Farm, 150.14 344 ⇑P PKPdf 13 16 02.7 +1.0
baz=150,SNR=20
HEC Hector,Ludlow 150.14 8 ⇓P PKPdf 13 16 03.5 +1.9
baz=150
W18A Petrified Fore 150.15 357 ⇑P PKPbc 13 16 04.8 -2.0
baz=150
MSTX Muleshoe 150.21 345 ⇓P PKPbc 13 16 04.4 -2.5
baz=150,SNR=18
WHTX Lake Whitney 150.25 335 ⇓P PKPbc 13 16 07.0 +0.2
baz=150
GMRC Granite Mounta 150.27 7 ⇓P PKPdf 13 16 03.9 +2.0
baz=150
DECC Green Verdugo 150.37 12 ⇑P PKPbc 13 16 05.9 -1.3
baz=150
Y27A Causey 150.39 346 ⇓P PKPdf 13 16 03.0 +0.9
baz=150,SNR=26
NEE2 Needles Airpor 150.40 5 ⇓P PKPbc 13 16 07.7 +0.5
baz=150
Z30A Sanderson Ranc 150.40 342 ⇓P PKPdf 13 16 02.1 +0.1
baz=150,SNR=10.0
MWC Mount Wilson 150.44 11 *e*PKIKP PKPbc 13 16 07.8 +0.3
MWC Mount Wilson 150.44 11 *e*PKPbc PKPbc 13 16 07.8 +0.3
PASC Pasadena Art C 150.47 11 *e*PKPbc PKPbc 13 16 07.7 +0.3
BFSC Mount Baldy Ra 150.50 10 ⇓P PKPdf 13 16 03.5 +1.2
baz=150
X22A Bernardo 150.51 352 ⇑P PKPdf 13 16 03.6 +1.3
baz=150,SNR=5.8
Y26A Elida 150.51 347 ⇑P PKPdf 13 16 04.7 +2.4
baz=150
ABTX Abilene, Hawle 150.52 339 ⇑P PKPdf 13 16 03.7 +1.5
baz=150,SNR=13
Z29A Hungry Hill Ra 150.60 343 ⇑P PKPdf 13 16 03.4 +1.1
baz=151,SNR=15
LAZ Ladron 150.63 353 *e*PKPbc PKPbc 13 16 09.1 +1.1
X20A Quemado 150.63 355 ⇓P PKPdf 13 16 04.4 +1.8
baz=151
LPM Los Pinos Moun 150.65 352 *e*PKPbc PKPbc 13 16 07.8 -0.2
X21A Alamocita Cree 150.66 354 ⇓P PKPdf 13 16 04.3 +1.7
baz=151,SNR=19
Y25A Mesa, Roswell 150.69 348 ⇓P PKPdf 13 16 02.4 -0.1
baz=151,SNR=14
131A Roby 150.73 341 ⇑P PKPdf 13 16 03.5 +1.0
baz=151,SNR=11
X18A Snowflake 150.74 357 ⇓P PKPdf 13 16 03.7 +1.0
baz=151
Z28A Tucker Farm, M 150.76 344 ⇓P PKPdf 13 16 02.2 -0.4
baz=151,SNR=9.0
BNM Barren Site 150.81 352 *e*PKPdf PKPdf 13 16 03.7 +0.8
BNM *e*PKPbc PKPbc 13 16 08.1 -0.3
Y24A Capitan 150.83 350 ⇓P PKPdf 13 16 03.8 +0.9
baz=151,SNR=15
LENM Lemitar 150.84 352 *e*PKPdf PKPdf 13 16 03.8 +0.9
LENM *e*PKPbc PKiKP 13 16 08.9 -0.2
X16A Lo Mia Camp, P 150.89 360 ⇓P PKPdf 13 16 05.2 +2.2
baz=151
PDMCI Parker Dam,Lak 150.90 5 ⇑P PKPbc 13 16 09.0 +0.7
baz=151
Y22D IRIS PASSCAL I 150.92 352 ⇑P PKPbc 13 16 09.2 +0.6
baz=151
Y23A Lovelace Mesa, 150.93 351 P PKPdf 13 16 04.1 +1.1
baz=151,SNR=17
Z27A Tatum 150.95 346 P PKPbc 13 16 08.6 -0.1
baz=151,SNR=30
130A Snyder 150.99 341 P PKPbc 13 16 08.6 0.0
baz=151,SNR=14
BELC Belle Mtn. Jos 151.00 8 ⇓P PKPdf 13 16 04.8 +1.8
baz=151
Y22A Socorro 151.06 352 P PKPdf 13 16 04.5 +1.3
baz=151,SNR=29
Y21A Point of Rocks 151.08 353 ⇑P PKPdf 13 16 05.1 +1.8
baz=151,SNR=7.3
Z26A Caprock 151.17 347 ⇑P PKPdf 13 16 03.7 +0.4
baz=151,SNR=16
232A Coleman 151.19 339 ⇑P PKPdf 13 16 04.9 +1.6
baz=151,SNR=14
MURC Murrieta 151.21 10 ⇑P PKPdf 13 16 04.8 +1.6
baz=151
129A Stewart Farms, 151.23 343 ⇑P PKPdf 13 16 03.9 +0.5
baz=151,SNR=7.5
Y20A Horse Springs, 151.25 355 ⇓P PKPdf 13 16 04.6 +1.0
baz=151,SNR=12
HKT Hockley 151.26 331 *e*PKIKP PKPbc 13 16 09.8 +0.6
HKT Hockley 151.26 331 *e*PKPbc PKPbc 13 16 09.8 +0.6
PFO Pinyon Flat Ob 151.32 9 *e*PKPdf PKPdf 13 16 04.2 +0.6
PFO *e*PKPbc PKiKP 13 16 10.7 +0.7
PFO LR LR
comp=Z,1µm,21.0s
PFO Pinyon Flat Ob 151.32 9 ⇓P PKPdf 13 16 04.5 +1.0
baz=151
Z25A Roswell 151.32 348 P PKPdf 13 16 04.4 +0.9
baz=151,SNR=22
Y14A Wickenburg 151.33 3 ⇑P PKPdf 13 16 04.9 +1.4
baz=151
CPRX Cap Rock 151.38 347 *e*PKPbc PKPbc 13 16 09.5 -0.2
231A Bronte 151.38 340 ⇑P PKPdf 13 16 01.9 -1.6
baz=151,SNR=7.9
Z24A Sheeppen Canyo 151.40 349 ⇑P PKPdf 13 16 05.4 +1.6
baz=151,SNR=8.6
BC3 Big Chuckawall 151.41 7 ⇓P PKPdf 13 16 05.8 +2.1
baz=151
Y12C Blythe 151.41 5 ⇓P PKPdf 13 16 05.6 +2.1
baz=151
128A Castleberry Fa 151.41 344 ⇓P PKPdf 13 16 04.7 +1.1
baz=151,SNR=12
127A Arkansas Junct 151.59 345 ⇑P PKPdf 13 16 06.8 +2.9
baz=152,SNR=6.5
Z23A Rita Site, Whi 151.62 351 ⇓P PKPbc 13 16 08.4 -1.8
baz=152,SNR=6.4
332A Millersview 151.68 338 ⇑P PKPdf 13 16 04.7 +0.7
baz=152,SNR=13
230A Sterling City 151.69 341 ⇑P PKPdf 13 16 04.5 +0.4
baz=152,SNR=6.3
Z22A Elephant Butte 151.73 352 ⇑P PKPdf 13 16 04.9 +0.7
baz=152
Z21A St. Cloud Mine 151.77 353 ⇑P PKPdf 13 16 05.9 +1.6
baz=152
126A Clayton Basin, 151.78 347 ⇑P PKPdf 13 16 06.7 +2.5
baz=152,SNR=6.2
229A Bryant Ranch, 151.83 342 ⇓P PKPdf 13 16 04.9 +0.6
baz=152,SNR=8.7
Z14A Wintersburg 151.91 3 ⇓P PKPdf 13 16 03.7 -0.6
baz=152
125A Gardner Draw, 151.91 348 ⇓P PKPdf 13 16 04.0 -0.5
baz=152,SNR=9.7
228A UT Block 9, Go 151.92 344 ⇑P PKPdf 13 16 04.9 +0.5
baz=152,SNR=7.5
331A San Angelo 151.99 340 ⇑P PKPdf 13 16 04.5 0.0
baz=152,SNR=26
124A Stringfield Ra 152.03 349 ⇑P PKPdf 13 16 05.2 +0.4
baz=152,SNR=15
Z20A Nine Sixteen R 152.06 355 ⇓P PKPdf 13 16 05.5 +0.8
baz=152
SWSC Sam W. Stewart 152.07 8 ⇓P PKPdf 13 16 05.7 +1.2
baz=152
CLNB Carlsbad 152.11 346 *e*PKPbc PKPbc 13 16 11.6 +0.3
CLNB *e*PKPab PKPab 13 16 21.9 +1.3
330A Mertzon 152.16 341 P PKPdf 13 16 04.9 +0.1
baz=152,SNR=15
432A Menard 152.16 338 ⇓P PKPdf 13 16 04.2 -0.6
baz=152,SNR=13
BAR Barrett 152.19 9 *e*PKPbc PKPbc 13 16 11.6 +0.2
122A Conniff Cattle 152.28 352 ⇑P PKPdf 13 16 06.8 +1.8
baz=152,SNR=9.7
GDL2 Guadalupe Moun 152.29 347 *e*PKPdf PKPdf 13 16 04.6 -0.4
GDL2 *e*PKPbc PKPbc 13 16 11.1 -0.6
329A Wagon Wheel Ra 152.33 342 ⇓P PKPdf 13 16 04.2 -0.8
baz=152
226B Tecolote Peak, 152.36 347 ⇓P PKPdf 13 16 04.8 -0.3
baz=152,SNR=8.9
113A Mohawk Valley, 152.45 4 ⇑P PKPdf 13 16 06.6 +1.5
baz=152
225A Deer Hill, Car 152.47 348 ⇑P PKPdf 13 16 05.9 +0.6
baz=152,SNR=10
JCT Junction City 152.51 338 *e*PKIKP PKPdf 13 16 05.2 -0.1
JCT *e* 13 16 12.1
JCT MLR MLR
comp=Z,584nm,22.0s
JCT Junction City 152.51 338 *e*PKPdf PKPdf 13 16 05.2 -0.1
JCT *e*PKPbc PKPbc 13 16 12.1 -0.1
JCT LR LR
comp=Z,584nm,22.0s
JCT Junction City 152.51 338 ⇓P PKPdf 13 16 05.7 +0.4
baz=152,SNR=11
121A Cookes Peak, D 152.55 353 ⇓P PKPdf 13 16 04.7 -0.7
baz=152
120A U Bar Ranch, L 152.62 355 ⇑P PKPdf 13 16 06.9 +1.4
baz=153
431A Sonora 152.62 339 ⇑P PKPdf 13 16 04.5 -0.9
baz=153,SNR=8.2
224A Cornudas Mount 152.65 349 ⇓P PKPdf 13 16 06.5 +0.9
baz=153,SNR=6.7
328A Wristen Ranch, 152.67 344 ⇓P PKPdf 13 16 05.2 -0.4
baz=153,SNR=11
430A Baggett Ranch, 152.75 340 P PKPdf 13 16 06.1 +0.5
baz=153,SNR=5.8
532A Rocksprings 152.87 338 ⇓P PKPdf 13 16 06.2 +0.4
baz=153
TEIG Tepich 152.92 306 PFAKE 13 16 20.0 -4.4
TEIG LR LR
comp=Z,535nm,21.0s
TUC Tucson 152.98 359 *e*PKIKP PKPdf 13 16 06.8 +0.8
TUC *e* 13 16 13.7
TUC MLR MLR
comp=Z,672nm,19.0s
TUC Tucson 152.98 359 *e*PKPdf PKPdf 13 16 06.8 +0.8
TUC *e*PKPbc PKiKP 13 16 13.7 +0.3
TUC LR LR
comp=Z,672nm,19.0s
MNTX Cornudas Mount 152.99 348 *e*PKPdf PKPdf 13 16 06.2 +0.3
MNTX *e*PKPbc PKiKP 13 16 13.9 +0.5
MNTX LR LR
comp=Z,540nm,22.0s
MNTX Cornudas Mount 152.99 348 ⇓P PKPdf 13 16 06.5 +0.6
baz=153
326A Caldwell Ranch 153.04 346 ⇑P PKPdf 13 16 06.8 +0.6
baz=153
531A Rocksprings 153.07 339 ⇑P PKPdf 13 16 07.4 +1.3
baz=153
429A Davenport Ranc 153.11 341 P PKPdf 13 16 06.4 +0.2
baz=153,SNR=11
325A Bean Ranch, Si 153.22 348 ⇑P PKPdf 13 16 07.3 +0.8
baz=153
JTS JuntasAbangare 153.23 283 PFAKE 13 16 20.0 +5.8
JTS LR LR
comp=Z,906nm,20.0s
220A Playas Peak, P 153.25 354 ⇓P PKPdf 13 16 07.9 +1.5
baz=153
428A Kincaid Ranch, 153.25 343 ⇑P PKPdf 13 16 07.6 +1.2
baz=153,SNR=9.3
324A Moseley Ranch, 153.25 349 ⇓P PKPdf 13 16 07.2 +0.7
baz=153
214A Organ Pipe Nat 153.31 3 ⇑P PKPdf 13 16 07.2 +0.8
baz=153
427A Hayter Ranch, 153.34 344 ⇑P PKPdf 13 16 07.5 +0.9
baz=153,SNR=6.9
530A J-C Ranch, Com 153.37 340 ⇓P PKPdf 13 16 07.4 +0.9
baz=153,SNR=9.4
632A Uvalde 153.38 337 ⇑P PKPdf 13 16 07.3 +0.7
baz=153,SNR=18
426A McDonald Obser 153.67 345 ⇑P PKPdf 13 16 08.2 +1.0
baz=154
529A Stev Forest Ra 153.68 342 ⇑P PKPdf 13 16 07.7 +0.7
baz=154,SNR=5.9
631A Perdido Creek 153.76 338 ⇑P PKPdf 13 16 05.5 -1.5
baz=154
425A Indio Mountain 153.79 347 ⇓P PKPdf 13 16 07.7 +0.4
baz=154
320A Kipp Ranch, An 153.81 354 ⇓P PKPdf 13 16 08.7 +1.4
baz=154
528A Cox Ranch, San 153.81 343 ⇑P PKPdf 13 16 07.3 0.0
baz=154
319A Douglas 153.84 356 ⇓P PKPdf 13 16 08.8 +1.5
baz=154
527A Woodward Ranch 154.06 344 ⇑P PKPdf 13 16 08.7 +1.0
baz=154,SNR=9.2
KVTX Kingsville 154.25 331 PFAKE 13 16 20.0 +4.0
KVTX LR LR
comp=Z,653nm,21.0s
526A Mary Lane Ranc 154.27 345 ⇓P PKPdf 13 16 09.1 +1.1
baz=154
628A Black Gap, Mar 154.48 342 ⇓P PKPdf 13 16 08.6 +0.5
baz=154
TGUH Tegucigalpa,Un 154.57 292 *e*PKPbc PKPbc 13 16 17.1 +0.2
TGUH LR LR
comp=Z,640nm,20.0s
627A Terlingua Ranc 154.65 343 ⇑P PKPdf 13 16 09.1 +0.6
baz=155
626A Big Bend Ranch 154.76 345 ⇓P PKPdf 13 16 09.1 +0.5
baz=155
TXAR Lajitas Array 154.84 344 PKP PKPdf 13 16 08.6 -0.1
TXAR Lajitas Array 154.84 344 PKP PKPdf 13 16 08.6 -0.1
comp=Z,1.7nm,0.8s,baz=27,slow=1.0,SNR=8.7
PAYG Puerto Ayora 158.05 255 PFAKE 13 16 20.0 +6.8
PAYG LR LR
comp=Z,594nm,20.0s

IDC ***05*** *12:57:43.2±1.9, 29°.23S×176°.79W, h0km, mb3.8/4, mb1 4.0/6, mb1mx3.8/21, mbtmp4.0/6, ML3.7/2, Error ellipse: s-maj=49.7km s-min=31.6km az=134.0*

ISC 05 12:57:46.4±1.8**, 29°.4S**±0°.1×**176°.8W**±0°.3**, h21km, n9, σ0s.75**/10**, mb3.9**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	10.22	208	Pn	Pn	13 00 11.6	-0.2
	0.2nm,0.3s,baz=162,slow=16,SNR=4.6						
URZ				Sn	Sn	13 02 05.4	-0.3
	1.1nm,0.3s,baz=340,slow=24,SNR=11						
RPZ	Rata Peaks	17.31	211	P	P	13 01 48.7	+0.7
	1.0nm,0.3s,baz=356,slow=17,SNR=5.2						
CTA	Charters Tower	34.70	277	P	P	13 04 35.0	+0.1
	2.6nm,0.7s,baz=100,slow=13,SNR=5.0						
STKA	Stephens Creek	35.75	255	P	P	13 04 44.8	+0.9
	0.7nm,0.4s,baz=97,slow=10.0,SNR=5.8						
ASAR	Alice Springs	44.23	265	P	P	13 05 53.6	-0.8
	0.5nm,0.6s,baz=104,slow=7.3,SNR=16						
WRA	Warramunga Arr	45.13	270	P	P	13 06 01.1	-0.5
	0.7nm,0.6s,baz=109,slow=6.3,SNR=15						
FINES	FINESS Array B	144.52	341	PKP	PKPab	13 17 18.6	-0.3
	2.0nm,0.9s,baz=60,slow=1.4,SNR=6.1						
NOA	NORSAR Array B	147.88	353	PKPbc	PKPbc	13 17 30.2	+0.9
	0.9nm,0.8s,baz=14,slow=4.5,SNR=3.1						
HFS	Hagfors	148.43	350	PKPbc	PKPbc	13 17 29.9	-0.8
	1.5nm,0.7s,baz=29,slow=3.3,SNR=5.0						

IDC 05 13:05:17.5±1.2**, 5°.27S**×**68°.65E, h0km, mb3.9**/10**, mb1 4.0**/10**, mb1mx3.8**/27**, mbtmp3.9**/10**, Error ellipse: s-maj=40.4km s-min=20.3km az=41.0, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	38.06	51	P	P	13 12 38.8	+0.7
	0.3nm,0.4s,baz=247,slow=8.8,SNR=6.0						
MKAR	Makanchi Array	53.23	12	P	P	13 14 36.7	-1.1
	0.1nm,0.3s,baz=183,slow=6.2,SNR=5.5						
KBZ	Khabaz	54.03	337	P	P	13 14 43.6	0.0
	3.0nm,0.9s,baz=170,slow=5.4,SNR=6.7						
BRTR	Keskin Array B	55.18	327	P	P	13 14 52.0	-0.3
	0.5nm,0.6s,baz=153,slow=11,SNR=3.9						
ZALV	Zalesovo Beam	60.55	11	P	P	13 15 28.8	-0.7

	1.2nm,0.6s,baz=197,slow=7.6,SNR=6.3						
SONM	**Songino Array**	**62.41**	**28**	P	P	13 15 43.0	+0.5
	0.7nm,0.7s,baz=220,slow=6.5,SNR=6.5						
ASAR	**Alice Springs**	**65.25**	**114**	P	P	13 16 01.5	-0.1
	0.6nm,0.7s,baz=276,slow=6.0,SNR=11						
WRA	**Warramunga Arr**	**65.38**	**109**	P	P	13 16 02.1	-0.3
	1.8nm,0.8s,baz=283,slow=6.3,SNR=14						
HFS	**Hagfors**	**78.04**	**335**	P	P	13 17 18.0	+0.2
	3.1nm,0.7s,baz=131,slow=7.9,SNR=5.7						
ESDC	**Sonseca Array**	**80.11**	**312**	P	P	13 17 30.0	+0.2
	0.4nm,0.6s,baz=96,slow=4.6,SNR=5.9						
NVAR	**Mina Array Bea**	**146.40**	**10**	PKPbc	PKPbc	13 25 01.4	+0.2
	0.9nm,0.7s,baz=357,slow=3.1,SNR=7.3						

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*BJI **05** 13:14:44.4, 5°.69S×68°.32E, h5km, mB5.2/12, mb4.6/25, Ms4.9/16, Ms7 4.6/12*

*ISCJB **05** 13:14:48.9±0.5, 5°.35S±0°.08×68°.56E±0°.05, h13km, mb4.6/57, MS4.6/6, Error ellipse: s-maj=11.7km s-min=7.8km az=176.3*

*IDC **05** 13:14:48.7±0.7, 5°.33S×68°.51E, h0km, mb4.2/17, mb1 4.4/17, mb1mx4.1/29, mbtmp4.2/17, Error ellipse: s-maj=22.2km s-min=16.3km az=36.0*

*MOS **05** 13:14:50.3±2.0, 5°.30S×68°.60E, h10km, mb5.0/23, Error ellipse: s-maj=12.0km s-min=6.9km az=111.2*

*NEIC **05** 13:14:50.2±0.3, 5°.37S×68°.60E, h10km, mb4.9/22, Error ellipse: s-maj=9.1km s-min=6.4km az=210.0*

ISC 05 13:14:51.0±0.5, **5°.27S**±0°.09×**68°.57E**±0°.08, **h13km, n222,** σ**1s.14**/258, **mb4.8**/57, **MS4.6**/6, **17C-26D, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**4.41**	**119**	*e*P	Pn	13 15 53.4	-4.3
DGAR	**Diego Garcia**	**4.41**	**119**	*e*Pn	Pn	13 15 53.4	-4.3
HYB	**Hyderabad**	**24.61**	**23**	*e*P	**P**	**13 20 12.0**	**+0.7**
HYB	**Hyderabad**	**24.61**	**23**	*e*P	**P**	**13 20 12.0**	**+0.7**
HYB	**Hyderabad**	**24.61**	**23**	*i* P	**P**	**13 20 12.0**	**+0.7**
CMAR	**Chiang Mai Arr**	**38.12**	**51**	P	**P**	**13 22 10.7**	**+0.6**
CMAR	**Chiang Mai Arr**	**38.12**	**51**	P	**P**	**13 22 10.7**	**+0.6**
	2.2nm,0.9s,baz=243,slow=9.9,SNR=20						
CHTO	**Chiang Mai**	**38.32**	**51**	*e*P	**P**	**13 22 12.3**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CHTO	**Chiang Mai**	**38.32**	**51**	*e*P	**P**	**13 22 12.3**	**+0.5**
	comp=Z,7.2nm,1.1s						
KMI	**Kunming**	**44.90**	**46**	P	**P**	**13 23 06.6**	**+0.6**
KMI				pP	**pP**	**13 23 09.7**	**-0.4**
KMI				sP	**sP**	**13 23 11.3**	**-0.4**
KMI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KMI				pmax	pmax		
	comp=Z,160nm,4.4s						
KSH	**Kashi**	**45.09**	**8**	P	**P**	**13 23 04.4**	**-2.7**
KSH				pP	**pP**	**13 23 08.2**	**-3.0**
KSH				sP	**sP**	**13 23 11.2**	**-1.6**
KSH				PcP	**PcP**	**13 24 45.6**	**-2.1**
KSH				PP	**PP**	**13 24 50.5**	**-2.2**
KSH				ScP	**ScP**	**13 28 36.7**	**-3.5**
KSH				PcS	**PcS**	**13 28 37.7**	**-3.9**
KSH				S	**S**	**13 29 41.6**	**-4.5**
KSH				sS	**sS**	**13 29 49.5**	**-3.3**
KSH				SS	ScS	13 32 54.4	-10
KSH				pmax	pmax		
	comp=Z,15nm,1.0s						
KSH				LR	LR		
	comp=E,220nm,4.7s						
KSH				LR	LR		
	comp=Z,380nm,8.7s						
BOSA	**Boshof**	**47.11**	**235**	P	**P**	**13 23 23.8**	**+0.5**
BOSA	**Boshof**	**47.11**	**235**	P	**P**	**13 23 23.8**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=37,slow=11,SNR=3.4						
AAK	**Ala-Archa**	**47.98**	**6**	*e*P	**P**	**13 23 31.5**	**+1.7**
AAK				pmax	pmax		
	comp=Z,26nm,1.7s						
AAK	**Ala-Archa**	**47.98**	**6**	*e*P	**P**	**13 23 31.3**	**+1.5**
	comp=Z,29nm,1.1s						
AAK	**Ala-Archa**	**47.98**	**6**	P	**P**	**13 23 31.0**	**+1.2**
	comp=Z,3.9nm,0.9s,baz=183,slow=8.6,SNR=12						
KKAR	**Karatay Array**	**48.18**	**2**	*e*P	**P**	**13 23 32.1**	**+0.9**
KKAR	**Karatay Array**	**48.18**	**2**	*e*P	**P**	**13 23 32.0**	**+0.9**
TKM2	**Tokmak 2**	**48.39**	**7**	*e*P	**P**	**13 23 33.9**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TKM2	**Tokmak 2**	**48.39**	**7**	*e*P	**P**	**13 23 33.9**	**+0.9**
	comp=Z,4.8nm,0.8s						
GYA	**Guiyang**	**48.54**	**48**	*e*P	**P**	**13 23 34.9**	**+0.5**
GYA				PP	**PP**	**13 25 28.0**	**+0.7**
GYA				ScP	**ScP**	**13 28 55.2**	**+0.2**
GYA				S	**S**	**13 30 35.4**	**-0.5**
GYA				SS	**SS**	**13 34 01.2**	**-4.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,490nm,17.6s						
GYA				LR	LR		
	comp=E,410nm,18.0s						
GYA				LR	LR		
	comp=Z,480nm,17.8s						
CD2	**Chengdu**	**49.24**	**41**	P	**P**	**13 23 40.8**	**+1.2**
CD2				pP	**pP**	**13 23 45.3**	**+1.6**
CD2				sP	**sP**	**13 23 47.8**	**+2.5**
CD2				PP	**PP**	**13 25 35.4**	**+1.8**
CD2				PcS	**PcS**	**13 28 58.6**	**-0.6**
CD2				S	**S**	**13 30 46.5**	**+1.0**
CD2				sS	**sS**	**13 30 53.6**	**+1.3**
CD2				SS	**SS**	**13 34 14.1**	**-3.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,210nm,6.0s						
CD2				LR	LR		
	comp=N,630nm,13.7s						
CD2				LR	LR		
	comp=E,420nm,13.2s						
CD2				LR	LR		
	comp=Z,550nm,20.8s						
WMQ	**Urumqi**	**51.83**	**18**	P	**P**	**13 24 00.7**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH	**Lanzhou**	**52.77**	**36**	*e*P	**P**	**13 24 07.0**	**+0.8**
LZH				pP	**pP**	**13 24 10.3**	**0.0**
LZH				sP	**sP**	**13 24 11.6**	**-0.3**
LZH				pmax	pmax		
	comp=Z,16nm,1.5s						
LZH				pmax	pmax		
	comp=Z,74nm,7.6s						
LZH				LR	LR		
	comp=N,450nm,14.2s						
LZH				LR	LR		
	comp=E,500nm,14.8s						
LZH				LR	LR		
	comp=Z,670nm,19.0s						
GTA	**Gaotai**	**53.00**	**30**	*e*P	**P**	**13 24 08.7**	**+0.9**
GTA				pP	**pP**	**13 24 13.1**	**+1.2**
GTA				sP	**sP**	**13 24 15.7**	**+2.2**
GTA				S	**S**	**13 31 38.0**	**+0.7**
GTA				sS	**sS**	**13 31 45.2**	**+1.0**
GTA				SS	**SS**	**13 35 16.1**	**-0.7**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,480nm,4.0s						
GTA				LR	LR		
	comp=N,200nm,14.0s						
GTA				LR	LR		
	comp=E,210nm,14.3s						
MK31	**Makanchi Array**	**53.25**	**12**	*e*P	**P**	**13 24 08.9**	**-0.5**
MK31	**Makanchi Array**	**53.25**	**12**	*e*P	**P**	**13 24 08.8**	**-0.5**
MKAR	**Makanchi Array**	**53.25**	**12**	*e*P	**P**	**13 24 09.2**	**-0.1**
MKAR						13 25 16.9	
MKAR	**Makanchi Array**	**53.25**	**12**	*e*P	**P**	**13 24 09.2**	**-0.1**
MKAR				PcP	**PcP**	**13 25 16.9**	**-0.2**
MKAR	**Makanchi Array**	**53.25**	**12**	P	**P**	**13 24 08.1**	**-1.2**
	comp=E,1.6nm,0.7s,baz=194,slow=7.8,SNR=23						
MKAR				PcP	**PcP**	**13 25 16.9**	**-0.2**
	comp=E,1.4nm,0.8s,baz=226,slow=3.4,SNR=6.7						
KBZ	**Khabaz**	**54.00**	**337**	P	**P**	**13 24 15.6**	**+0.7**
KBZ	**Khabaz**	**54.00**	**337**	P	**P**	**13 24 15.6**	**+0.7**
KBZ	**Khabaz**	**54.00**	**337**	P	**P**	**13 24 15.6**	**+0.7**
	comp=E,8.3nm,0.9s,baz=160,slow=4.5,SNR=20						
KIV	**Kislovodsk**	**54.27**	**337**	*e*P	**P**	**13 24 14.5**	**-2.5**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ABKAR	**Akbulak array**	**54.82**	**353**	*e*P	**P**	**13 24 21.0**	**+0.2**
	comp=Z,7.1nm,1.1s						
BRTR	**Keskin Array B**	**55.14**	**327**	P	**P**	**13 24 23.8**	**+0.3**
BRTR	**Keskin Array B**	**55.14**	**327**	P	**P**	**13 24 23.8**	**+0.3**
	comp=Z,4.0nm,1.1s,baz=150,slow=9.7,SNR=17						
KURK	**Kurchatov**	**56.43**	**8**	*e*P	**P**	**13 24 32.1**	**-0.1**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	**Kurchatov**	**56.43**	**8**	*e*P	**P**	**13 24 32.2**	**-0.1**
	comp=Z,6.7nm,0.9s						
ANN	**Anapa**	**57.13**	**334**	*e*P	P	13 24 41.9	+4.6
ANN				pmax	pmax		
	comp=Z,49nm,1.0s						
BVAR	**Borovoye Array**	**58.10**	**1**	P	**P**	**13 24 44.5**	**+0.5**
BVAR	**Borovoye Array**	**58.10**	**1**	P	**P**	**13 24 44.5**	**+0.5**
BVAR	**Borovoye Array**	**58.10**	**1**	P	**P**	**13 24 44.5**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=162,slow=5.7,SNR=8.9						
BRVK	**Borovoye**	**58.13**	**1**	*e*P	**P**	**13 24 44.8**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**58.13**	**1**	*e*P	**P**	**13 24 44.5**	**+0.3**
	comp=Z,4.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**60.46**	**36**	*e*P	**P**	**13 25 01.5**	**+0.7**
HHC				sP	**sP**	**13 25 07.1**	**+0.6**
HHC				PcP	**PcP**	**13 25 45.7**	**+0.2**
HHC				PP	**PP**	**13 27 17.3**	**+3.1**
HHC				ScP	**ScP**	**13 29 44.9**	**-1.8**
HHC				PcS	**PcS**	**13 29 46.8**	**-1.2**
HHC				S	**S**	**13 33 16.1**	**+0.1**
HHC				ScS	SKKSac	13 34 47.7	-3.8
HHC				SS	**SS**	**13 37 15.2**	**+1.0**
HHC				pmax	pmax		
	comp=Z,29nm,0.7s						
HHC				pmax	pmax		
	comp=Z,460nm,6.5s						
HHC				LR	LR		
	comp=N,550nm,16.0s						
HHC				LR	LR		
	comp=E,440nm,16.5s						
HHC				LR	LR		
	comp=Z,350nm,16.9s						
NJ2	**Nanjing**	**60.52**	**49**	*e*P	**P**	**13 25 00.5**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZALV	**Zalesovo Beam**	**60.56**	**11**	P	**P**	**13 25 00.5**	**-0.6**
ZALV	**Zalesovo Beam**	**60.56**	**11**	P	**P**	**13 25 00.5**	**-0.6**
ZALV	**Zalesovo Beam**	**60.56**	**11**	P	**P**	**13 25 00.5**	**-0.6**
	comp=Z,6.0nm,0.8s,baz=200,slow=7.0,SNR=30						
NVS	**Novosibirsk**	**61.13**	**10**	*e*P	**P**	**13 25 04.0**	**-0.9**
NVS				pmax	pmax		
	comp=Z,46nm,3.5s						
NVS				pmax	pmax		
	comp=N,13nm,2.3s						
ARU	**Arti**	**62.04**	**354**	*d i*P	**P**	**13 25 11.2**	**+0.2**
ARU						13 27 25.2	
ARU				S	**S**	**13 33 36.3**	**+1.1**
ARU				SS	**SS**	**13 37 44.6**	**+6.5**
ARU				pmax	pmax		
	comp=Z,16nm,1.7s						
ARU	**Arti**	**62.04**	**354**	*e*P	**P**	**13 25 10.3**	**-0.6**
	comp=Z,10nm,1.1s						
SONM	**Songino Array**	**62.45**	**28**	P	**P**	**13 25 15.0**	**+0.9**
SONM	**Songino Array**	**62.45**	**28**	P	**P**	**13 25 15.0**	**+0.9**
	comp=Z,3.5nm,0.8s,baz=220,slow=6.9,SNR=31						
BJI	**Beijing**	**62.81**	**40**	P	**P**	**13 25 16.5**	**0.0**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
VRI	**Vrincioaia**	**63.06**	**328**	⇓P	**P**	**13 25 18.9**	**+0.8**
VRI	**Vrincioaia**	**63.06**	**328**	⇓*i*P	**P**	**13 25 18.9**	**+0.8**
PLOR	**Plostina**	**63.09**	**328**	⇑P	**P**	**13 25 19.4**	**+1.1**
PLOR	**Plostina**	**63.09**	**328**	⇑*i*P	**P**	**13 25 19.4**	**+1.1**
MLR	**Muntele Rosu**	**63.22**	**328**	⇓*i*P	**P**	**13 25 21.0**	**+1.7**
TESR		**63.53**	**329**	⇑*i*P	**P**	**13 25 21.3**	**+0.1**
ARR	**Arges**	**63.84**	**327**	⇑*i*P	**P**	**13 25 23.2**	**-0.2**
AKASG	**Malin Array Be**	**65.21**	**334**	P	**P**	**13 25 30.9**	**-1.1**
AKASG	**Malin Array Be**	**65.21**	**334**	P	**P**	**13 25 30.9**	**-1.1**
AKASG	**Malin Array Be**	**65.21**	**334**	P	**P**	**13 25 30.9**	**-1.1**
	comp=Z,2.4nm,0.7s,baz=129,slow=5.9,SNR=5.0						
KIEV	**Kiev**	**65.21**	**334**	*e*P	**P**	**13 25 31.7**	**-0.4**
KIEV				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KIEV	**Kiev**	**65.21**	**334**	*e*P	**P**	**13 25 31.7**	**-0.4**
	comp=Z,4.5nm,1.2s						
ASAR	**Alice Springs**	**65.33**	**114**	P	**P**	**13 25 33.0**	**-0.5**
ASAR	**Alice Springs**	**65.33**	**114**	P	**P**	**13 25 33.0**	**-0.5**
	comp=Z,2.1nm,0.8s,baz=279,slow=6.2,SNR=30						
WRA	**Warramunga Arr**	**65.45**	**109**	P	**P**	**13 25 34.2**	**-0.1**
WRA	**Warramunga Arr**	**65.45**	**109**	P	**P**	**13 25 34.2**	**-0.1**
	comp=Z,6.1nm,0.8s,baz=284,slow=6.3,SNR=51						
WRAB	**Tennant Creek**	**65.47**	**109**	*e*P	**P**	**13 25 34.3**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,12nm,1.2s						
WRAB	**Tennant Creek**	**65.47**	**109**	*e*P	**P**	**13 25 34.3**	**-0.1**
	comp=Z,12nm,1.2s						
OBN	**Obninsk**	**65.76**	**340**	⇑*e*P	**P**	**13 25 35.8**	**+0.3**
OBN				*e*S	S	13 34 15.4	-6.1
OBN				pmax	pmax		
	comp=Z,22nm,2.5s						
KOLS	**Kolonicke sedl**	**67.35**	**329**	*e*P	**P**	**13 25 46.6**	**+0.7**
KOLS	**Kolonicke sedl**	**67.35**	**329**	*e*P	**P**	**13 25 46.6**	**+0.7**
CRVS	**Cervenica-Dubn**	**67.75**	**329**	*e*P	**P**	**13 25 51.0**	**+2.6**
CRVS	**Cervenica-Dubn**	**67.75**	**329**	*e*P	**P**	**13 25 51.0**	**+2.6**
TORD	**Torodi Ar. Bea**	**68.88**	**286**	P	**P**	**13 25 54.8**	**-1.3**
TORD	**Torodi Ar. Bea**	**68.88**	**286**	P	**P**	**13 25 54.8**	**-1.3**
	comp=Z,1.1nm,1.2s,baz=99,slow=4.6,SNR=4.2						
VYHS	**Vyhne**	**68.90**	**327**	*e*P	**P**	**13 25 55.5**	**-0.1**
VYHS				pmax	pmax		
	comp=Z,13nm,2.0s						
VYHS	**Vyhne**	**68.90**	**327**	*e*P	**P**	**13 25 55.5**	**-0.1**
KLMR	**Klimovskoe**	**69.72**	**345**	*e*P	**P**	**13 25 59.8**	**-0.6**
KLMR				pmax	pmax		
	comp=Z,45nm,1.8s						
CN2	**Changchun**	**70.67**	**40**	*e*P	**P**	**13 26 07.9**	**+1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSU	**Vasula**	**71.80**	**338**	*e*P	**P**	**13 26 12.5**	**-0.6**
VSU				pmax	pmax		
	comp=Z,12nm,1.2s						
FUORN	**Ofenpass-Fuorn**	**72.87**	**322**	*e*P	**P**	**13 26 21.1**	**+0.9**
	comp=Z,8.4nm,0.9s						
CLL	**Collm**	**73.60**	**327**	*i* P	**P**	**13 26 24.4**	**+0.4**
CLL				*e*		13 26 31.0	
CLL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CLL				MLR	MLR		
	comp=Z,200nm,19.0s						
CLL	**Collm**	**73.60**	**327**	*i* P	**P**	**13 26 24.4**	**+0.4**
	comp=Z,8.0nm,1.1s						
CLL				*e*		13 26 31.0	
CLL				*e*		13 26 45.0	
CLL				LmV		13 57 00.0	
	comp=Z,200nm,19.0s						
MDJ	**Mudanjiang**	**73.70**	**41**	P	**P**	**13 26 23.1**	**-1.6**
MDJ				pmax	pmax		
	comp=Z,8.0nm,2.4s						
MDJ				pmax	pmax		
	comp=Z,240nm,12.2s						
GRFO	**Grafenberg**	**73.77**	**325**	*e*P	**P**	**13 26 24.8**	**-0.2**
GRFO				pmax	pmax		
	comp=Z,12nm,1.0s						
GRFO	**Grafenberg**	**73.77**	**325**	*e*P	**P**	**13 26 24.8**	**-0.2**
	comp=Z,12nm,1.0s						
FINES	**FINESS Array B**	**74.17**	**340**	P	**P**	**13 26 26.4**	**-0.6**
FINES	**FINESS Array B**	**74.17**	**340**	P	**P**	**13 26 26.4**	**-0.6**
	comp=Z,2.3nm,0.7s,baz=111,slow=7.6,SNR=6.3						
MBDF	**Montbardon**	**74.25**	**319**	*e*P	**P**	**13 26 28.4**	**+0.3**
MBDF	**Montbardon**	**74.25**	**319**	*e*P	**P**	**13 26 28.4**	**+0.3**
MBDF	**Montbardon**	**74.25**	**319**	*e*P	**P**	**13 26 28.4**	**+0.3**
SENIN	**Lac Senin/Sane**	**74.59**	**321**	*e*P	**P**	**13 26 30.6**	**+0.4**
	comp=Z,7.8nm,1.0s						
SMRF	**Simiane la Rot**	**74.73**	**318**	*e*P	**P**	**13 26 31.3**	**+0.5**
	comp=Z,25nm,1.3s						
SMRF	**Simiane la Rot**	**74.73**	**318**	*e*P	**P**	**13 26 31.3**	**+0.5**
	comp=Z,25nm,1.3s						
ORIF	**Oris-en-Rattie**	**74.91**	**319**	*e*P	**P**	**13 26 31.3**	**-0.6**
ORIF	**Oris-en-Rattie**	**74.91**	**319**	*e*P	**P**	**13 26 31.3**	**-0.6**
ORIF	**Oris-en-Rattie**	**74.91**	**319**	*e*P	**P**	**13 26 31.3**	**-0.6**
CABF	**La Chapelle**	**75.46**	**321**	*e*P	**P**	**13 26 35.0**	**0.0**
	comp=Z,41nm,1.6s						
CABF	**La Chapelle**	**75.46**	**321**	*e*P	**P**	**13 26 35.0**	**0.0**
CABF				pmax	pmax		
	comp=Z,41nm,1.6s						
CABF	**La Chapelle**	**75.46**	**321**	*e*P	**P**	**13 26 35.0**	**0.0**
	comp=Z,41nm,1.6s						
VIVF	**Saint-Julien-l**	**75.67**	**319**	*e*P	**P**	**13 26 36.4**	**+0.2**
VIVF	**Saint-Julien-l**	**75.67**	**319**	*e*P	**P**	**13 26 36.4**	**+0.2**
VIVF	**Saint-Julien-l**	**75.67**	**319**	*e*P	**P**	**13 26 36.4**	**+0.2**
SFTF	**Sexfontaines**	**76.76**	**322**	*e*P	**P**	**13 26 42.2**	**-0.1**
SFTF	**Sexfontaines**	**76.76**	**322**	*e*P	**P**	**13 26 42.2**	**-0.1**
MTLF	**Montolieu**	**76.76**	**317**	*e*P	**P**	**13 26 43.2**	**+0.8**
	comp=Z,17nm,1.4s						
MTLF	**Montolieu**	**76.76**	**317**	*e*P	**P**	**13 26 43.2**	**+0.8**
MTLF				pmax	pmax		
	comp=Z,17nm,1.4s						
MTLF	**Montolieu**	**76.76**	**317**	*e*P	**P**	**13 26 43.2**	**+0.8**
	comp=Z,17nm,1.4s						
MEZF	**Maizieres J'vi**	**76.87**	**322**	*e*P	**P**	**13 26 42.8**	**-0.1**
MEZF	**Maizieres J'vi**	**76.87**	**322**	*e*P	**P**	**13 26 42.8**	**-0.1**
LOR	**Lormes**	**77.12**	**321**	*e*P	**P**	**13 26 44.3**	**-0.1**
	comp=Z,11nm,1.2s						
LOR	**Lormes**	**77.12**	**321**	*e*P	**P**	**13 26 44.3**	**-0.1**
	comp=Z,11nm,1.2s						
SSF	**Saint Saulge**	**77.27**	**321**	*e*P	**P**	**13 26 45.1**	**-0.1**
	comp=Z,8.5nm,1.0s						
SSF	**Saint Saulge**	**77.27**	**321**	*e*P	**P**	**13 26 45.1**	**-0.1**
SSF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SSF	**Saint Saulge**	**77.27**	**321**	*e*P	**P**	**13 26 45.1**	**-0.1**
	comp=Z,8.5nm,1.0s						
BGF	**Bois d'Agland**	**77.50**	**320**	*e*P	**P**	**13 26 46.8**	**+0.3**
	comp=Z,26nm,1.2s						
BGF	**Bois d'Agland**	**77.50**	**320**	*e*P	**P**	**13 26 46.8**	**+0.3**
BGF				pmax	pmax		
	comp=Z,27nm,1.2s						
BGF	**Bois d'Agland**	**77.50**	**320**	*e*P	**P**	**13 26 46.8**	**+0.3**
	comp=Z,26nm,1.2s						
RJF	**Les Rejaudoux**	**77.92**	**318**	*e*P	**P**	**13 26 49.5**	**+0.7**
	comp=Z,36nm,1.6s						
RJF	**Les Rejaudoux**	**77.92**	**318**	*e*P	**P**	**13 26 49.5**	**+0.7**
RJF				pmax	pmax		
	comp=Z,36nm,1.6s						
RJF	**Les Rejaudoux**	**77.92**	**318**	*e*P	**P**	**13 26 49.5**	**+0.7**
	comp=Z,36nm,1.6s						
PMG	**Port Moresby**	**77.92**	**98**	P	**P**	**13 26 50.0**	**+0.4**
PMG	**Port Moresby**	**77.92**	**98**	P	**P**	**13 26 50.0**	**+0.4**
	comp=Z,9.2nm,1.1s,baz=299,slow=5.2,SNR=4.8						
BAIF	**Baives**	**78.00**	**324**	*e*P	**P**	**13 26 49.6**	**+0.4**
BAIF	**Baives**	**78.00**	**324**	*e*P	**P**	**13 26 49.6**	**+0.4**
BAIF	**Baives**	**78.00**	**324**	*e*P	**P**	**13 26 49.6**	**+0.4**
LFF	**La Frestale**	**78.31**	**318**	*e*P	**P**	**13 26 51.8**	**+0.8**
	comp=Z,20nm,1.1s						
LFF	**La Frestale**	**78.31**	**318**	*e*P	**P**	**13 26 51.8**	**+0.8**
LFF				pmax	pmax		
	comp=Z,20nm,1.0s						
LFF	**La Frestale**	**78.31**	**318**	*e*P	**P**	**13 26 51.8**	**+0.8**
	comp=Z,20nm,1.0s						
SJPF	**Ste Jean**	**79.06**	**316**	*e*P	**P**	**13 26 56.3**	**+1.1**
	comp=Z,40nm,1.2s						
SJPF	**Ste Jean**	**79.06**	**316**	*e*P	**P**	**13 26 56.3**	**+1.1**
SJPF				pmax	pmax		
	comp=Z,40nm,1.2s						
SJPF	**Ste Jean**	**79.06**	**316**	*e*P	**P**	**13 26 56.3**	**+1.1**
	comp=Z,40nm,1.2s						
NB2	**NORSAR Subarra**	**79.53**	**335**	P	**P**	**13 26 58.2**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=126,slow=4.8						
NOA	**NORSAR Array B**	**79.53**	**335**	P	**P**	**13 26 57.7**	**+0.3**
NOA	**NORSAR Array B**	**79.53**	**335**	P	**P**	**13 26 57.7**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=138,slow=3.0,SNR=3.9						
ESDC	**Sonseca Array**	**80.06**	**312**	P	**P**	**13 26 59.9**	**-0.9**
ESDC	**Sonseca Array**	**80.06**	**312**	P	**P**	**13 26 59.9**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=104,slow=4.1,SNR=10						
GRR	**Gorron**	**80.49**	**321**	*e*P	**P**	**13 27 02.8**	**0.0**
	comp=Z,17nm,1.0s						
GRR	**Gorron**	**80.49**	**321**	*e*P	**P**	**13 27 02.8**	**0.0**
GRR				pmax	pmax		
	comp=Z,17nm,1.0s						
GRR	**Gorron**	**80.49**	**321**	*e*P	**P**	**13 27 02.8**	**0.0**
	comp=Z,17nm,1.0s						
SEY	**Seymchan**	**91.84**	**27**	*e*P	**P**	**13 27 57.9**	**-0.7**
YKA	**Yellowknife Ar**	**122.85**	**2**	PKP	**PKPdf**	**13 33 45.2**	**-1.5**
YKA				PP	**PP**	**13 35 25.7**	**+1.5**
YKA	**Yellowknife Ar**	**122.85**	**2**	PKP	**PKPdf**	**13 33 45.2**	**-1.5**
	comp=Z,0.6nm,0.8s,baz=345,slow=2.7,SNR=6.2						
YKA				PP	**PP**	**13 35 25.7**	**+1.5**
	comp=Z,1.0nm,1.2s,baz=354,slow=7.1,SNR=5.5						
PDAR	**Pinedale Array**	**142.62**	**358**	PKP	**PKPdf**	**13 34 24.0**	**-0.6**
PDAR	**Pinedale Array**	**142.62**	**358**	PKP	**PKPdf**	**13 34 24.0**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=20,slow=1.1,SNR=3.9						
N20A	**Spence Gulch,**	**144.48**	**356**	⇓P	**PKPdf**	**13 34 27.8**	**-0.1**
	baz=144						
N17A	**Moffit Pass**	**144.48**	**359**	⇑P	PKPbc	13 34 26.9	+0.4
	baz=144						
N21A	**Black Mountain**	**144.49**	**355**	⇓P	**PKPdf**	**13 34 27.5**	**-0.5**
	baz=144						
ELK	**Elko**	**144.52**	**5**	*e*PKPdf	PKPbc	13 34 27.3	+0.7
O22A	**Kremmling**	**144.99**	**353**	⇓P	**PKPdf**	**13 34 28.8**	**-0.1**
	baz=145						
DAU	**Daniels Canyon**	**145.01**	**360**	*e*PKIKP	**PKPdf**	**13 34 29.4**	**+0.4**
DAU	**Daniels Canyon**	**145.01**	**360**	*e*PKPdf	**PKPdf**	**13 34 29.4**	**+0.4**
O19A	**Miners Draw (B**	**145.07**	**357**	⇓P	**PKPdf**	**13 34 28.9**	**0.0**
	baz=145						
P26A	**Davis Ranch, A**	**145.09**	**349**	⇓P	**PKPdf**	**13 34 29.5**	**+0.6**
	baz=145						
O15A	**The Old Anders**	**145.13**	**1**	⇓P	**PKPdf**	**13 34 28.8**	**-0.2**
	baz=145						
O20A	**White River Ci**	**145.17**	**356**	P	**PKPdf**	**13 34 29.5**	**+0.4**
	baz=145,SNR=6.4						
DUG	**Dugway**	**145.21**	**2**	*e*PKIKP	**PKPdf**	**13 34 29.7**	**+0.6**
DUG	**Dugway**	**145.21**	**2**	*e*PKPdf	**PKPdf**	**13 34 29.7**	**+0.6**
DUG	**Dugway**	**145.21**	**2**	P	**PKPdf**	**13 34 30.1**	**+1.0**
	baz=145,SNR=21						
O16A	**Springville**	**145.22**	**0**	⇓P	**PKPdf**	**13 34 30.1**	**+0.9**
	baz=145						
O17A	**Robinson Place**	**145.22**	**359**	P	**PKPdf**	**13 34 30.4**	**+1.2**
	baz=145,SNR=10						
ISCO	**Idaho Springs**	**145.23**	**352**	*e*PKIKP	**PKPdf**	**13 34 29.3**	**-0.1**
ISCO	**Idaho Springs**	**145.23**	**352**	*e*PKPdf	**PKPdf**	**13 34 29.3**	**-0.1**
ISCO	**Idaho Springs**	**145.23**	**352**	⇓P	**PKPdf**	**13 34 29.6**	**+0.2**
	baz=145						
P22A	**Eagle**	**145.57**	**354**	P	**PKPab**	**13 34 31.1**	**+1.0**
	baz=146,SNR=9.8						
P23A	**Jefferson**	**145.68**	**352**	P	**PKPab**	**13 34 31.8**	**+1.0**
	baz=146,SNR=7.1						
P21A	**Newcastle**	**145.71**	**355**	P	**PKPab**	**13 34 31.4**	**+0.6**
	baz=146,SNR=8.5						
P19A	**Cripple Cowboy**	**145.72**	**357**	P	**PKPab**	**13 34 31.1**	**+0.3**
	baz=146,SNR=7.4						
P18A	**Preston Nutter**	**145.78**	**358**	⇓P	**PKPab**	**13 34 31.4**	**+0.3**
	baz=146,SNR=6.3						
P20A	**De Beque**	**145.81**	**356**	⇓P	**PKPab**	**13 34 31.9**	**+0.9**
	baz=146						
P15A	**Leamington**	**145.85**	**1**	⇑P	**PKPab**	**13 34 31.9**	**+0.8**
	baz=146						
SMCO	**Snowmass**	**146.01**	**354**	*e*PKPbc	**PKPab**	**13 34 32.4**	**+0.3**
R27A	**Eads**	**146.21**	**348**	⇑P	**PKPbc**	**13 34 32.1**	**+0.3**
	baz=146,SNR=6.6						
SRU	**San Rafael**	**146.30**	**359**	*e*PKP2	**PKPbc**	**13 34 32.4**	**+0.2**
SRU	**San Rafael**	**146.30**	**359**	*e*PKPbc	**PKPbc**	**13 34 32.4**	**+0.2**
SRU	**San Rafael**	**146.30**	**359**	⇓P	**PKPbc**	**13 34 31.9**	**-0.3**
	baz=146						
Q22A	**Crested Butte,**	**146.31**	**354**	P	**PKPab**	**13 34 33.6**	**+0.6**
	baz=146,SNR=11						
NVAR	**Mina Array Bea**	**146.41**	**10**	PKPbc	**PKPab**	**13 34 33.2**	**-0.2**
NVAR	**Mina Array Bea**	**146.41**	**10**	PKPbc	**PKPab**	**13 34 33.2**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=349,slow=1.8,SNR=16						
Q19A	**Hogan Spring (**	**146.41**	**357**	⇑P	**PKPab**	**13 34 33.1**	**-0.1**
	baz=146,SNR=6.4						
Q16A	**Castle Valley**	**146.51**	**360**	P	**PKPab**	**13 34 33.8**	**+0.1**
	baz=146,SNR=7.0						
R25A	**Fountain Ranch**	**146.63**	**350**	⇑P	**PKPbc**	**13 34 33.3**	**+0.2**
	baz=147,SNR=5.5						
OTAV	**Otavalo**	**146.69**	**262**	*e*PKPbc	**PKPbc**	**13 34 35.0**	**+0.5**
R23A	**Moffat**	**146.84**	**352**	⇓P	**PKPbc**	**13 34 34.4**	**+0.5**
	baz=147						
R11A	**Troy Canyon, C**	**146.86**	**6**	⇓P	**PKPab**	**13 34 34.8**	**-0.3**
	baz=147						
R21A	**Cimarron**	**146.87**	**354**	⇑P	**PKPbc**	**13 34 34.1**	**+0.2**
	baz=147,SNR=5.9						
MSU	**Marysvale**	**146.90**	**1**	*e*PKP2	**PKPab**	**13 34 34.8**	**-0.5**
MSU	**Marysvale**	**146.90**	**1**	*e*PKPbc	**PKPab**	**13 34 34.8**	**-0.5**
R22A	**Saguache, Gunn**	**146.92**	**353**	P	**PKPab**	**13 34 35.5**	**0.0**
	baz=147,SNR=6.7						
PV04	**Paradox Valley**	**146.95**	**356**	*e*PKPbc	**PKPbc**	**13 34 34.5**	**+0.5**
S26A	**Kim**	**146.99**	**348**	⇓P	**PKPbc**	**13 34 34.5**	**+0.3**
	baz=147,SNR=6.9						
R20A	**Redvale**	**147.12**	**356**	⇑P	**PKPbc**	**13 34 34.7**	**+0.1**
	baz=147						
S25A	**Robets Cordova**	**147.13**	**350**	⇑P	**PKPbc**	**13 34 34.5**	**-0.1**

	baz=147						
S24A	Houchin Ranch,	147.28	351	P	PKPbc	13 34 36.0	+0.8
	baz=147,SNR=6.4						
S22A	4UR Ranch, Cre	147.40	353	⇑P	PKPbc	13 34 35.3	-0.2
	baz=147						
MTUM	Tungsten Hills	147.41	11	ePKPab	PKPab	13 34 37.0	-0.2
S20A	Disappointment	147.47	355	⇑P	PKPbc	13 34 35.5	-0.2
	baz=147,SNR=7.5						
S21A	Coal Bank Pass	147.59	355	⇓P	PKPbc	13 34 35.7	-0.4
	baz=148,SNR=8.7						
T25A	Trinidad	147.64	349	⇓P	PKPbc	13 34 36.8	+0.7
	baz=148						
S18A	Hurst Farm, Bl	147.71	358	⇓P	PKPbc	13 34 36.2	-0.1
	baz=148						
T24A	Torres, Weston	147.81	350	P	PKPab	13 34 38.2	-0.8
	baz=148,SNR=7.1						
CCUT	Cedar City	147.82	3	ePKPbc	PKPbc	13 34 36.4	-0.2
MVCO	Mesa Verde	148.10	356	⇓P	PKPbc	13 34 37.4	0.0
	baz=148						
T22A	Edith	148.14	353	P	PKPbc	13 34 38.8	+1.3
	baz=148,SNR=6.1						
T21A	Navajo Lake	148.23	354	⇓P	PKPbc	13 34 39.0	+1.3
	baz=148						
U26A	Atchley Ranch,	148.23	348	⇓P	PKPbc	13 34 37.8	+0.1
	baz=148						
U25A	Circle Dot Ran	148.35	349	P	PKPbc	13 34 39.2	+1.2
	baz=148,SNR=12						
U21A	Nageezi	148.80	354	⇓P	PKPbc	13 34 37.7	-1.4
	baz=149						
MPMC	Manual Prospec	148.86	10	⇓P	PKPdf	13 34 37.2	+1.8
	baz=149						
V25A	Rancho No Teng	148.94	349	⇑P	PKPbc	13 34 39.1	-0.4
	baz=149						
U15A	North Rim	148.98	1	⇑P	PKPdf	13 34 37.5	+1.8
	baz=149						
GSC	Goldstone	149.71	9	ePKP2	PKPbc	13 34 42.7	+1.4
GSC	Goldstone	149.71	9	ePKPbc	PKPbc	13 34 42.7	+1.4
MNTX	Cornudas Mount	153.10	349	ePKPbc	PKPbc	13 34 49.7	+0.5
TXAR	Lajitas Array	154.96	344	PKPab	PKPab	13 35 09.1	+0.6
TXAR	Lajitas Array	154.96	344	PKPab	PKPab	13 35 09.1	+0.6
	comp=Z,1.5nm,0.8s,baz=24,slow=3.4,SNR=7.3						

OTT 05 13:19:47.3±0.1, 64°42N×91°14W, h18km, MN3.5/25, 1C-2D, 122km northeast from Chesterfield Inlet, Nu Boothia Ungava Seismic Zone., Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NUNN	Nunuq Camp, NU	0.80	2	⇓PG	Pb	13 20 02.3	-0.4
NUNN				SG	Sb	13 20 12.7	-0.5
NUNN				Trac		13 20 16.1	
	comp=Z,199nm,0.1s						
SEDN	First Sedna Si	1.17	182	⇓PG	Pb	13 20 09.1	+0.2
SEDN				SG	Sn	13 20 24.1	-0.1
SEDN				Trac		13 20 26.2	
	comp=Z,265nm,0.1s						
JOSN	Second Sedna S	1.27	188	⇑PG	Pb	13 20 10.7	0.0
JOSN				SG	Sn	13 20 27.1	+0.4
JOSN				Trac		13 20 29.0	
	comp=Z,359nm,0.1s						
WAGN	Wager Bay	1.64	25	PN	Pn	13 20 15.6	+0.5
WAGN				PG	Pb	13 20 16.7	-0.1
WAGN				SN	Sb	13 20 36.9	-0.2
WAGN				SG	Sg	13 20 38.2	-1.7
WAGN				Trac		13 20 38.9	
	comp=Z,159nm,0.1s						
YBKN	Baker Lake, Hu	2.12	270	PN	Pn	13 20 22.2	+0.5
YBKN				PG	Pb	13 20 25.4	+0.3
YBKN				SN	Sn	13 20 47.1	-0.4
YBKN				SG	Sb	13 20 52.6	+1.6
YBKN				Trac		13 20 55.3	
	comp=Z,96nm,0.2s						
BULN	Bullion Camp,	2.16	338	PN	Pn	13 20 22.3	0.0
BULN				PG	Pb	13 20 26.6	+0.8
BULN				SN	Sn	13 20 47.5	-1.1
BULN				SG	Sb	13 20 53.1	+0.9
BULN				Trac		13 20 57.0	
	comp=Z,26nm,0.1s						
QILN	Qililugaq Expl	3.00	39	PN	Pn	13 20 32.9	-0.9
QILN				PG	Pb	13 20 39.4	-0.7
QILN				SN	Sn	13 21 08.1	-1.2
QILN				SG	Sb	13 21 17.4	+1.2
QILN				Trac		13 21 25.9	
	comp=Z,102nm,0.4s						
STLN	Stellar Camp,	3.01	346	PN	Pn	13 20 34.1	+0.2
STLN				PG	Pg	13 20 43.2	-1.7
STLN				SN	Sn	13 21 09.6	+0.1
STLN				SG	Sb	13 21 18.9	+2.4
STLN				Trac		13 21 27.1	
	comp=Z,24nm,0.1s						
ARVN	Arviat, NU	3.60	203	PN	Pn	13 20 42.0	-0.1
ARVN				PG	Pb	13 20 51.6	+1.3
ARVN				SN	Sn	13 21 21.4	-2.6
ARVN				LG	Lg	13 21 38.3	
ARVN				Trac		13 21 43.8	
	comp=Z,68nm,0.2s						
KUGN	Kugaaruk Camp,	3.72	6	PN	Pn	13 20 43.7	0.0
KUGN				PG	Pb	13 20 49.7	-2.7
KUGN				SN	Sn	13 21 25.2	-1.7
KUGN				LG	Lg	13 21 38.5	
KUGN				Trac		13 21 42.6	
	comp=Z,64nm,0.4s						
SRLN	Sarcpa Lake, N	5.20	34	PN	Pn	13 21 03.5	-0.5
SRLN				SN	Sn	13 22 00.0	-3.4
SRLN				LG	Lg	13 22 25.4	
SRLN				Trac		13 22 38.6	
	comp=Z,45nm,0.5s						
FCC	Fort Churchill	5.84	195	PN	Pn	13 21 13.4	+0.5
FCC				SN	Sn	13 22 14.4	-5.0
FCC				LG	Lg	13 22 47.4	
FCC				Trac		13 22 54.9	
	comp=Z,35nm,0.3s						
ILON	Igloolik, Nuna	6.17	32	PN	Pn	13 21 16.5	-0.9
ILON				SN	Sn	13 22 21.7	-5.7
ILON				LG	Lg	13 22 53.4	
ILON				Trac		13 23 03.0	
	comp=Z,29nm,0.3s						
IVKQ	Ivujivik	6.27	103	PN	Pn	13 21 16.6	-2.1
IVKQ				SN	Sn	13 22 23.9	-5.8
IVKQ				LG	Lg	13 22 58.8	
IVKQ				Trac		13 23 05.9	
	comp=Z,24nm,0.2s						
AKVQ	Akulivik	6.98	115	PN	Pn	13 21 27.0	-1.4
AKVQ				SN	Sn	13 22 41.7	-5.5
AKVQ				LG	Lg	13 23 19.0	
AKVQ				Trac		13 23 26.1	
	comp=Z,16nm,0.3s						
GDLN	Gardenia Lake,	7.13	257	PN	Pn	13 21 28.2	-2.3
GDLN				SN	Sn	13 22 42.7	-8.3
GDLN				LG	Lg	13 23 25.6	
CB31	Cambridge Bay	7.26	317	PN	Pn	13 21 31.2	-1.1
CB31				SN	Sn	13 22 46.5	-7.5
CB31				LG	Lg	13 23 30.4	
CB31				Trac		13 23 32.5	
	comp=Z,31nm,0.5s						
WHFN	White Fish Lak	7.37	263	PN	Pn	13 21 32.1	-1.8
WHFN				SN	Sn	13 22 49.9	-7.2
WHFN				LG	Lg	13 23 34.4	
COKN	Cook Lake	7.87	270	PN	Pn	13 21 39.1	-1.6
COKN				SN	Sn	13 23 01.5	-7.7
COKN				LG	Lg	13 23 50.6	
INUQ	Inukjuak	8.63	128	PN	Pn	13 21 49.1	-1.9
INUQ				SN	Sn	13 23 22.6	-5.2
INUQ				LG	Lg	13 24 11.8	
INUQ				Trac		13 24 16.5	
	comp=Z,25nm,0.5s						
JERN	Jeri Cho Mine,	8.68	290	PN	Pn	13 21 50.5	-1.3
JERN				SN	Sn	13 23 21.2	-7.9
JERN				LG	Lg	13 24 12.5	
JERN				Trac		13 24 29.2	
	comp=Z,22nm,0.7s						
FRB	Frobisher Bay	9.90	84	PN	Pn	13 22 05.8	-2.6
FRB				SN	Sn	13 23 49.8	-9.1
FRB				LG	Lg	13 24 47.1	
FRB				Trac		13 25 02.8	
	comp=Z,24nm,0.7s						
ILKN	Indian Lake	10.39	280	PN	Pn	13 22 13.4	-1.8
ILKN				SN	Sn	13 23 59.6	-11
ILKN				LG	Lg	13 25 07.4	
ILKN				Trac		13 25 12.8	
	comp=Z,78nm,1.0s						
RES	Resolute Bay	10.40	354	PN	Pn	13 22 10.0	-5.2
RES				SN	Sn	13 24 02.8	-8.3
RES				LG	Lg	13 25 02.1	
RES				Trac		13 25 09.7	
	comp=Z,44nm,1.6s						
YKW3	Yellowknife Ar	10.63	271	PN	Pn	13 22 15.3	-3.2
YKW3				SN	Sn	13 24 05.1	-12
YKW3				LG	Lg	13 25 13.8	
YKW3				Trac		13 25 23.9	
	comp=Z,8.8nm,0.4s						
CTLN	Castor Lake	10.73	281	PN	Pn	13 22 17.4	-2.5
CTLN				SN	Sn	13 24 09.1	-10
FFC	Flin Flon	11.14	214	PN	Pn	13 22 24.4	-1.1
FFC				SN	Sn	13 24 17.9	-12
FFC				LG	Lg	13 25 30.3	
FFC				Trac		13 25 39.5	
	comp=Z,18nm,0.6s						
GALN	Gameti Lake	11.35	280	PN	Pn	13 22 25.9	-2.4
GALN				SN	Sn	13 24 21.4	-13
KUQ	Kuujjuuaa	12.58	110	SN	Sn	13 24 52.6	-12
KUQ				LG	Lg	13 26 10.9	
KUQ				Trac		13 26 25.1	
	comp=Z,3.9nm,0.2s						
WEMQ	Wemindji, Queb	13.25	143	PN	Pn	13 22 50.2	-4.0
WEMQ				SN	Sn	13 25 07.9	-13
WEMQ				LG	Lg	13 26 28.9	
LG4Q	La Grande 4	13.87	133	PN	Pn	13 22 55.8	-6.8
LG4Q				SN	Sn	13 25 21.3	-15
LG4Q				LG	Lg	13 26 50.0	
LG4Q				Trac		13 27 07.4	
	comp=Z,8.6nm,0.4s						
NANO	Nakina Ontario	14.27	169	PN	Pn	13 23 03.5	-4.8
NANO				SN	Sn	13 25 32.0	-14
YOSQ	Ashton Mining	15.12	131	PN	Pn	13 23 14.2	-5.6
YOSQ				SN	Sn	13 25 51.6	-15
YOSQ				LG	Lg	13 27 27.3	
YOSQ				Trac		13 27 40.7	
	comp=Z,11nm,0.6s						
SCHQ	Schefferville	15.49	117	PN	Pn	13 23 18.6	-5.9
SCHQ				SN	Sn	13 26 02.2	-13
SCHQ				LG	Lg	13 27 38.9	

MEX 05 13:19:48.6±0.7, 14°99N×93°34W, h23km±39km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.04	94	i P	Pn	13 20 04.6	-3.1
THIG				i S	Sb	13 20 17.3	-3.8
CCIG	Comitan	1.73	42	eP	Pn	13 20 15.1	-2.4
CCIG				i S	Sn	13 20 35.0	-4.0
TGIG		1.79	7	i P	Pn	13 20 15.3	-2.9
TGIG				i S	Sn	13 20 36.8	-3.5
CMIG	Matias Romero	2.57	325	eP	Pn	13 20 27.3	-1.5
CMIG				i S	Sn	13 20 55.8	-3.5
HUIG	Huatulco	2.78	287	i P	Pn	13 20 29.9	-1.9
HUIG				i S	Sn	13 21 01.2	-3.5
PNIG	Pinotepa	4.82	287	i P	Pn	13 20 58.8	-1.0
PNIG				i S	Sn	13 21 51.7	-3.4

IDC 05 13:25:28.0±18.0, 4°87S×69°44E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.2/26, mbtmp3.3/3, Error ellipse: s-maj=600.1km s-min=41.3km az=65.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	52.68	11	P	P	13 34 44.2	-0.1
	0.1nm,0.4s,baz=198,slow=7.3,SNR=3.5						
ASAR	Alice Springs	64.69	114	P	P	13 36 08.2	-0.2
	0.3nm,0.9s,baz=278,slow=5.8,SNR=5.0						
WRA	Warramunga Arr	64.77	110	P	P	13 36 09.1	+0.2
	0.2nm,0.7s,baz=284,slow=6.1,SNR=5.3						

ISK 05 13:36:05.7, 39°06N×27°62E, h13km, MD2.7
CSEM 05 13:36:05.9±0.3, 39°06N×27°62E, h17km±4km, MD2.7, Error ellipse: s-maj=5.8km s-min=3.6km az=114.0
ISC 05 13:36:06.1±1.1, 39°07N±0°03×27°61E±0°05, h14km±8km, n14, σ0s47/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.24	139	i P	Pg	13 36 11.2	-0.2
AKHS				i S	Sb	13 36 17.6	+1.2
AKHS	Akhisar	0.24	139	i P	Pg	13 36 11.2	-0.2
AKHS				i S	Sb	13 36 17.6	+1.2
AKS	Akhisar	0.24	139	ePG	Pg	13 36 11.1	-0.2
AKS				eSG	Sg	13 36 15.1	+0.2
AKS	Akhisar	0.24	139	ePg	Pg	13 36 11.1	-0.2
AKS				eSg	Sg	13 36 15.1	+0.2
IZM	Izmir	0.72	202	ePG	Pb	13 36 20.1	-0.3
IZM				eSG	Sb	13 36 30.6	+0.5
IZM	Izmir	0.72	202	ePg	Pb	13 36 20.1	-0.3
IZM				eSg	Sb	13 36 30.6	+0.5
BLCB	Balcova	0.81	213	ePG	Pb	13 36 21.8	-0.1
BLCB	Balcova	0.81	213	ePg	Pb	13 36 21.8	-0.1
DST	Dursunbey	0.95	55	ePG	Pg	13 36 24.3	-0.2
DST				eSG	Sn	13 36 37.9	-0.5
DST	Dursunbey	0.95	55	ePg	Pg	13 36 24.3	-0.2
DST				eSg	Sn	13 36 37.9	-0.5
GONE	Gonen-Balikesi	0.98	3	ePG	Pg	13 36 25.0	-0.1
GONE				eSG	Sn	13 36 39.1	0.0
GONE	Gonen-Balikesi	0.98	3	ePg	Pg	13 36 25.0	-0.1
GONE				eSg	Sn	13 36 39.1	0.0
KULA	Kula-Manisa	0.99	123	ePG	Pg	13 36 24.9	-0.3
KULA				eSG	Sn	13 36 38.9	-0.5
KULA	Kula-Manisa	0.99	123	ePg	Pg	13 36 24.9	-0.3
KULA				eSg	Sn	13 36 38.9	-0.5

ISK 05 13:36:20.9, 37°03N×28°18E, h30km, MD2.3
ISCJB 05 13:36:21.8±1.0, 37°02N±0°06×28°15E±0°06, h28km±12km, Error ellipse: s-maj=10.4km s-min=8.5km az=171.1
CSEM 05 13:36:21.6±0.4, 37°02N×28°16E, h25km±6km, MD2.3, Error ellipse: s-maj=10.0km s-min=8.0km az=171.0
ISC 05 13:36:20.9±1.2, 37°01N±0°05×28°15E±0°04, h25km±9km, n14, σ0s96/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.17	40	ePG	Pb	13 36 27.1	+0.7
YER	Yerkesik	0.17	40	ePg	Pb	13 36 27.1	+0.7
MLSB	Milas	0.41	314	ePG	Pb	13 36 30.5	+0.7
MLSB				eSG	Sn	13 36 37.9	-0.3
MLSB	Milas	0.41	314	ePg	Pb	13 36 30.5	+0.7
MLSB				eSg	Sn	13 36 37.9	-0.3
DAT	Datca	0.54	239	ePG	Pn	13 36 33.3	+0.3
DAT	Datca	0.54	239	ePg	Pn	13 36 33.3	+0.3
BODT	Bodrum	0.67	275	ePG	Pb	13 36 34.9	+0.8
BODT	Bodrum	0.67	275	ePg	Pb	13 36 34.9	+0.8
AYDN	Tasoluk	0.69	342	i P	Pb	13 36 34.5	+0.1
AYDN				i S	Sb	13 36 41.6	-1.9
AYDN	Tasoluk	0.69	342	i P	Pb	13 36 34.5	+0.1
AYDN				i S	Sb	13 36 41.6	-1.9
FETY	Fethiye	0.84	116	ePG	Pb	13 36 36.5	-0.4
FETY	Fethiye	0.84	116	ePg	Pb	13 36 36.5	-0.4
DNZL	Cakiroluk	0.99	46	i P	Pb	13 36 40.2	+0.7
DNZL				i S	Sn	13 36 53.8	+1.2
DNZL	Cakiroluk	0.99	46	i P	Pb	13 36 40.2	+0.7
DNZL				i S	Sn	13 36 53.8	+1.2

DJA 05 13:40:00.8±1.1, 1°N±8°×12°7E±°, h10km, M4.4/4, mb4.5/1, MLv4.3/4
IDC 05 13:40:02.0±4.0, 0°81N×127°00E, h30km±29km, mb3.7/6, mb1 4.0/9, mb1mx3.7/24, mbtmp3.9/9, ML4.1/3, MS3.5/1, Ms1 3.5/1, ms1mx2.8/34, Error ellipse: s-maj=42.2km s-min=13.7km az=79.0
ISCJB 05 13:40:02.7±0.6, 0°93N±0°05×127°02E±0°05, h59km±6km, mb3.9/6, Error ellipse: s-maj=9.2km s-min=6.7km az=37.7
ISC 05 13:40:03.7±1.0, 0°87N±0°06×126°97E±0°05, h49km±10km, n17, σ2s23/24, mb4.0/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.41	103	P	Pn	13 40 13.3	-0.5
TNTI				S	Sn	13 40 21.7	+0.7
LBMI	Labuha	1.59	160	P	Pn	13 40 29.2	-0.2
LBMI				S	Sn	13 40 51.8	+3.0
MNI	Manado	2.20	285	P	Pn	13 40 36.3	-1.5
KMSI	Cibinong	3.00	264	P	Pn	13 40 49.0	+0.2
KMSI				S	Sn	13 41 26.2	+2.7
LUWI	Luwuk	4.60	246	P	Pn	13 41 14.0	+3.2
LUWI				S	Sn	13 42 08.1	+5.1
AAI	Ambon	4.69	165	P	Pn	13 41 13.0	+1.1
AAI				S	Sn	13 42 07.8	+2.7
MRSI	Marisa	5.04	266	P	Pn	13 41 17.7	+0.9
DAV	Davao City (W)	6.32	347	Pn	Pn	13 41 35.2	+0.9
	29nm,0.3s,baz=9.8,slow=17,SNR=1.9						
SPSI	Sidrap Palu	8.65	236	P	Pn	13 42 05.7	-0.6
KAPI	Kappang	9.28	231	Pn	Pn	13 42 12.0	-2.9
	1.5nm,0.3s,baz=63,slow=6.8,SNR=7.7						
KAPI				Sn	Sn	13 43 53.6	-4.4
	1.3nm,0.3s,baz=142,slow=19,SNR=4.6						
KAPI				LR	LR	13 46 11.2	
	comp=Z,295nm,18.3s,baz=256,slow=40						
FITZ	Fitzroy Crossi	18.89	184	P	P	13 44 19.6	-0.7
	0.2nm,0.3s,baz=7.9,slow=11,SNR=6.6						
WRA	Warramunga Arr	21.91	161	P	P	13 44 52.4	-0.6
	2.1nm,0.4s,baz=337,slow=11,SNR=57						
WRA				S	S	13 48 49.2	-3.2
	1.7nm,0.9s,baz=332,slow=22,SNR=6.7						
ASAR	Alice Springs	25.30	165	P	P	13 45 25.6	-0.3
	2.4nm,0.3s,baz=341,slow=10.0,SNR=138						
ASAR				S	S	13 49 50.2	+1.4
	0.8nm,0.8s,baz=350,slow=21,SNR=4.2						
STKA	Stephens Creek	35.39	158	P	P	13 46 54.3	-0.7
	2.1nm,0.9s,baz=334,slow=7.3,SNR=2.4						
MJAR	Matsushiro Arr	36.99	15	P	P	13 47 08.0	-0.6
	0.6nm,0.5s,baz=194,slow=9.3,SNR=4.5						
SONM	Songino Array	50.07	342	P	P	13 48 54.8	+0.9
	0.8nm,0.9s,baz=165,slow=7.7,SNR=7.7						
MKAR	Makanchi Array	60.04	326	P	P	13 50 06.6	+0.9
	1.0nm,0.7s,baz=122,slow=8.7,SNR=16						

MEX 05 13:51:21.0±1.0, 16°87N×95°41W, h111km±9km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.55	67	eP	Pn	13 51 37.4	-1.0
CMIG				i S	Sn	13 51 49.0	-2.4
VHO	Vista Hermosa	1.28	279	i P	Pn	13 51 45.2	-0.4
VHO				i S	Sn	13 52 02.6	-1.7
HUIG	Huatulco	1.29	212	i P	Pn	13 51 44.3	-1.2
HUIG				i S	Sn	13 52 02.5	-1.5
TGIG		2.19	92	i P	Pn	13 51 54.7	-1.8
TGIG				i S	Sn	13 52 22.2	-1.7
UTMO	Huajuapan	2.48	293	i P	Pn	13 51 59.0	-1.5
UTMO				i S	Sn	13 52 29.0	-1.8
PNIG	Pinotepa	2.65	260	i P	Pn	13 52 00.6	-1.9
PNIG				i S	Sn	13 52 32.2	-2.2
CCIG	Comitan	3.19	100	i P	Pn	13 52 09.2	-0.6
CCIG				i S	Sn	13 52 46.2	-1.3

IDC 05 14:15:47.1±2.0, 8°18S×130°54E, h0km, mb3.6/1, mb1 3.8/4, mb1mx3.4/19, mbtmp3.6/4, ML3.5/3, Error ellipse: s-maj=66.6km s-min=24.1km az=76.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.95	205	Pn	Pn	14 18 25.7	+0.5
	0.6nm,0.3s,baz=30,slow=12,SNR=26						
FITZ				Sn	Sn	14 20 20.7	-7.9
	0.1nm,0.3s,baz=144,slow=19,SNR=3.2						
WRA	Warramunga Arr	12.26	163	Pn	Pn	14 18 44.1	+1.0
	0.2nm,0.3s,baz=347,slow=13,SNR=16						
WRA				Sn	Sn	14 20 59.1	-1.7
	0.3nm,0.3s,baz=340,slow=22,SNR=5.4						
ASAR	Alice Springs	15.74	169	Pn	Pn	14 19 30.6	+0.3
	0.1nm,0.3s,baz=346,slow=12,SNR=18						
ASAR				Sn	Sn	14 22 24.6	-1.0
	0.1nm,0.3s,baz=344,slow=26,SNR=3.2						
MKAR	Makanchi Array	69.50	327	P	P	14 26 57.5	-0.1
	0.4nm,0.5s,baz=122,slow=8.0,SNR=6.9						

IDC 05 14:23:43.9±1.8, 39°20N×23°70E, h0km, mb3.0/2, mb1 3.2/5, mb1mx3.1/29, mbtmp3.0/5, ML3.2/3, Error ellipse: s-maj=31.0km s-min=21.9km az=124.0
ISCJB 05 14:23:45.0±0.4, 39°54N±0°01×23°44E±0°02, h12km±3km, mb3.0/2, Error ellipse: s-maj=2.8km s-min=2.1km az=18.0
ATH 05 14:23:44.9, 39°53N×23°45E, h27km, MD3.4/29, ML3.4
THE 05 14:23:45.5, 39°55N×23°46E, h10km, ML3.6/12, Error ellipse: s-maj=0.8km s-min=0.4km az=126.0
CSEM 05 14:23:45.4±0.1, 39°54N×23°45E, h15km, ML3.6/12, Error ellipse: s-maj=3.1km s-min=2.1km az=104.0
SKO 05 14:23:47.7, 39°65N×23°38E, h22km, M2.7, ML3.1
ISC 05 14:23:45.7±0.9, 39°54N±0°01×23°44E±0°02, h14km±6km, n208, σ0s85/239, 5C-9D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XOR	Xorichti	0.26	228	P	Pg	14 23 50.6	-0.7
XOR				S	Sg	14 23 55.2	+0.2
XOR	Xorichti	0.26	228	P	Pg	14 23 50.6	-0.7
XOR				S	Sg	14 23 55.2	+0.2
NEO	Neokhori	0.29	216	ePB	Pg	14 23 51.3	-0.5
NEO	Neokhori	0.29	216	ePb	Pg	14 23 51.3	-0.5
SKIA	Skiathos	0.38	177	P	Pg	14 23 53.0	-0.3
SKIA				S	Sg	14 23 58.8	+0.4
SKIA	Skiathos	0.38	177	P	Pg	14 23 53.0	-0.3
SKIA				S	Sg	14 23 58.8	+0.4
PAIG	Paliouri	0.42	25	P	Pg	14 23 54.4	+0.2
PAIG				S	Sb	14 24 00.8	-0.5
PAIG	Paliouri	0.42	25	P	Pg	14 23 54.4	+0.2
PAIG				S	Sb	14 24 00.8	-0.5
AOS	Alonnisos	0.50	138	P	Pg	14 23 55.1	-0.5
AOS				S	Sg	14 24 01.8	-0.5
AOS	Alonnisos	0.50	138	ePB	Pg	14 23 55.2	-0.4
AOS				eSB	Sg	14 24 02.9	+0.6
AOS	Alonnisos	0.50	138	ePb	Pg	14 23 55.2	-0.4
AOS				S	Sg	14 24 01.8	-0.5
AOS				eSb	Sg	14 24 02.9	+0.6
PLG	Polygyros	0.83	0	P	Pg	14 24 01.0	-0.8
PLG				S	Sg	14 24 12.6	-0.1
PLG	Polygyros	0.83	0	ePN	Pg	14 24 01.3	-0.5
PLG				eSN	Sg	14 24 12.8	+0.1
PLG	Polygyros	0.83	0	P	Pg	14 24 01.0	-0.8
PLG	Polygyros	0.83	0	ePn	Pg	14 24 01.3	-0.5
PLG				S	Sg	14 24 12.6	-0.1
MRKA	Markates	0.84	172	P	Pg	14 24 01.6	-0.4
MRKA				S	Sb	14 24 13.6	+0.3
MRKA	Markates	0.84	172	P	Pg	14 24 01.6	-0.4
MRKA				S	Sb	14 24 13.6	+0.3
OUR	Ouranopolis	0.89	28	P	Pg	14 24 02.8	-0.1
OUR				S	Sb	14 24 15.8	+1.1
OUR	Ouranopolis	0.89	28	P	Pg	14 24 02.8	-0.1
OUR				S	Sb	14 24 15.8	+1.1
ATAL	Atalanti	0.91	201	P	Pg	14 24 02.7	-0.6
ATAL				S	Sb	14 24 15.4	+0.2
ATAL	Atalanti	0.91	201	P	Pg	14 24 02.7	-0.6
ATAL				S	Sb	14 24 15.4	+0.2
LIT	Litokhoron	0.92	307	P	Pg	14 24 02.8	-0.7
LIT				S	Sn	14 24 16.7	-0.6
LIT	Litokhoron	0.92	307	ePN	Pg	14 24 02.8	-0.7
LIT				eSN	Sb	14 24 16.0	+0.4
LIT	Litokhoron	0.92	307	P	Pg	14 24 02.8	-0.7
LIT				eSn	Sb	14 24 16.0	+0.4
LIT				S	Sn	14 24 16.7	-0.6
LKR	Lokris	0.96	201	P	Pg	14 24 03.5	-0.6
LKR	Lokris	0.96	201	ePN	Pg	14 24 03.5	-0.6
LKR				eSN	Sb	14 24 16.8	+0.3
LKR	Lokris	0.96	201	P	Pg	14 24 03.5	-0.6
LKR				eSn	Sb	14 24 16.8	+0.3
AXAR	Agios Charalam	0.99	218	P	Pb	14 24 03.9	-0.7
AXAR				S	Sn	14 24 19.1	+0.2
AXAR	Agios Charalam	0.99	218	P	Pb	14 24 03.9	-0.7
AXAR				S	Sn	14 24 19.1	+0.2
AGG	Agios Georgios	1.01	239	P	Pb	14 24 04.2	-0.7
AGG				S	Sn	14 24 20.2	+0.7
AGG	Agios Georgios	1.01	239	ePN	Pb	14 24 04.2	-0.7
AGG				eSN	Sb	14 24 18.8	+0.7
AGG	Agios Georgios	1.01	239	P	Pb	14 24 04.2	-0.7
AGG				eSn	Sb	14 24 18.8	+0.7
AGG				S	Sn	14 24 20.2	+0.7
HORT	Hortiatis	1.08	346	P	Pb	14 24 05.5	-0.8
HORT				S	Sg	14 24 20.8	0.0
HORT	Hortiatis	1.08	346	P	Pb	14 24 05.5	-0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HORT				S	Sg	14 24 20.8	0.0
THL	Klokotos Trika	1.10	272	P	Pb	14 24 05.4	-1.1
THL	Klokotos Trika	1.10	272	ePN	Pb	14 24 05.5	-1.1
THL	Klokotos Trika	1.10	272	P	Pb	14 24 05.4	-1.1
MAKR	Makrakomi, Fth	1.15	243	P	Pb	14 24 06.9	-0.4
MAKR	Makrakomi, Fth	1.15	243	P	Pb	14 24 06.9	-0.4
THE	Thessaloniki	1.15	342	P	Pb	14 24 06.2	-1.1
THE	Thessaloniki	1.15	342	P	Pb	14 24 06.2	-1.1
SOH	Sokhos	1.28	357	P	Pn	14 24 08.6	-0.6
SOH				S	Sg	14 24 26.8	-0.1
SOH	Sokhos	1.28	357	ePN	Pn	14 24 08.6	-0.6
SOH				eSN	Sg	14 24 27.1	+0.2
SOH	Sokhos	1.28	357	P	Pn	14 24 08.6	-0.6
SOH				S	Sg	14 24 26.8	-0.1
SOH				eSn	Sg	14 24 27.1	+0.2
DSF	Desfina	1.34	213	P	Pn	14 24 08.9	-1.1
DSF				S	Sg	14 24 28.8	0.0
DSF	Desfina	1.34	213	P	Pn	14 24 08.9	-1.1
DSF				S	Sg	14 24 28.8	0.0
LIA	Limnos Island	1.39	75	P	Pn	14 24 09.2	-1.4
LIA	Limnos Island	1.39	75	ePB	Pn	14 24 09.6	-1.0
LIA				eSN	Sb	14 24 29.5	+0.5
LIA	Limnos Island	1.39	75	P	Pn	14 24 09.2	-1.4
LIA	Limnos Island	1.39	75	ePb	Pn	14 24 09.6	-1.0
LIA				eSn	Sb	14 24 29.5	+0.5
EVR	Evrytania	1.42	244	P	Pn	14 24 10.9	-0.2
EVR	Evrytania	1.42	244	ePN	Pn	14 24 11.0	-0.2
EVR	Evrytania	1.42	244	P	Pn	14 24 10.9	-0.2
KZN	Kozani	1.49	301	P	Pn	14 24 11.7	-0.5
KZN	Kozani	1.49	301	ePN	Pn	14 24 11.7	-0.5
KZN	Kozani	1.49	301	P	Pn	14 24 11.7	-0.5
PTL	Penteli	1.53	167	P	Pn	14 24 11.9	-0.6
PTL	Penteli	1.53	167	ePN	Pn	14 24 12.0	-0.6
PTL	Penteli	1.53	167	ePn	Pn	14 24 12.0	-0.6
KALE	Kalithea	1.54	222	P	Pn	14 24 12.3	-0.4
KALE	Kalithea	1.54	222	ePN	Pn	14 24 12.4	-0.3
KALE	Kalithea	1.54	222	P	Pn	14 24 12.3	-0.4
LTK	Loutraki	1.56	194	P	Pn	14 24 12.2	-0.8
LTK	Loutraki	1.56	194	ePB	Pn	14 24 12.3	-0.8
LTK	Loutraki	1.56	194	P	Pn	14 24 12.2	-0.8
SRS	Serrai	1.58	4	P	Pn	14 24 12.6	-0.6
SRS	Serrai	1.58	4	P	Pn	14 24 12.6	-0.6
ATH	Athens Observa	1.58	172	P	Pn	14 24 12.8	-0.5
ATH				S	Sb	14 24 34.5	-0.1
ATH	Athens Observa	1.58	172	ePN	Pn	14 24 12.8	-0.5
ATH	Athens Observa	1.58	172	P	Pn	14 24 12.8	-0.5
ATH				S	Sb	14 24 34.5	-0.1
TRIZ	Trizonia	1.59	223	P	Pn	14 24 13.2	-0.2
TRIZ	Trizonia	1.59	223	ePN	Pn	14 24 13.2	-0.2
TRIZ	Trizonia	1.59	223	P	Pn	14 24 13.2	-0.2
GRG	Griva	1.62	331	P	Pn	14 24 13.3	-0.6
GRG	Griva	1.62	331	P	Pn	14 24 13.3	-0.6
EFP	Efpalio	1.64	228	P	Pn	14 24 13.9	-0.1
EFP	Efpalio	1.64	228	ePN	Pn	14 24 14.4	+0.4
EFP	Efpalio	1.64	228	P	Pn	14 24 13.9	-0.1
EFP	Efpalio	1.64	228	ePn	Pn	14 24 14.4	+0.4
KAVA	Kavala	1.67	29	P	Pn	14 24 13.2	-1.3
KAVA				S	Sn	14 24 35.5	-0.2
KAVA	Kavala	1.67	29	P	Pn	14 24 13.2	-1.3
KAVA				S	Sn	14 24 35.5	-0.2
KNT	Kendrikon	1.67	346	P	Pn	14 24 14.4	-0.1
KNT	Kendrikon	1.67	346	P	Pn	14 24 14.4	-0.1
PSA1	Psathopyrgos	1.72	225	ePB	Pn	14 24 14.7	-0.5
MEV	Metsovon	1.73	279	P	Pn	14 24 15.6	+0.2
MEV	Metsovon	1.73	279	P	Pn	14 24 15.6	+0.2
LAKA	Lakka	1.73	222	P	Pn	14 24 15.5	+0.1
LAKA	Lakka	1.73	222	ePN	Pn	14 24 15.5	+0.1
LAKA	Lakka	1.73	222	P	Pn	14 24 15.5	+0.1
NAIG	Nisos Aigina	1.78	179	ePB	Pn	14 24 15.4	-0.7
NAIG	Nisos Aigina	1.78	179	ePb	Pn	14 24 15.4	-0.7
GUR	Goura	1.82	209	P	Pn	14 24 16.1	-0.6
GUR	Goura	1.82	209	ePN	Pn	14 24 16.3	-0.4
GUR	Goura	1.82	209	ePn	Pn	14 24 16.3	-0.4
NVR	Nevrokopi	1.83	10	P	Pn	14 24 16.2	-0.6
NVR	Nevrokopi	1.83	10	ePB	Pn	14 24 16.0	-0.8
NVR	Nevrokopi	1.83	10	P	Pn	14 24 16.2	-0.6
VAY	Valandovo	1.90	340	P	Pn	14 24 17.3	-0.3
VAY	Valandovo	1.90	340	ePn	Pn	14 24 17.6	-0.1
VAY				eSg	Sb	14 24 44.4	+0.8
VAY				eLg	Lg	14 24 46.7	
	comp=N,182nm,0.9s						
VAY				eLg	Lg	14 24 50.4	
	comp=E,198nm,0.7s						
VAY	Valandovo	1.90	340	P	Pn	14 24 17.3	-0.3
VAY	Valandovo	1.90	340	ePn	Pn	14 24 18.0	+0.4
VAY				eSg	Sb	14 24 44.9	+1.3
VAY				eLg	Lg	14 24 50.8	
	comp=E,198nm,0.7s						
SIGR	SIGRI	1.90	99	P	Pn	14 24 17.5	-0.1
SIGR	SIGRI	1.90	99	P	Pn	14 24 17.5	-0.1
JAN	Janina	2.00	274	ePB	Pn	14 24 20.0	+0.8
JAN	Janina	2.00	274	ePb	Pn	14 24 20.0	+0.8
FNA	Florina	2.01	309	P	Pn	14 24 18.9	-0.4
FNA	Florina	2.01	309	P	Pn	14 24 18.9	-0.4
NEST	Nestorio	2.03	296	P	Pn	14 24 20.2	+0.6
NEST	Nestorio	2.03	296	P	Pn	14 24 20.2	+0.6
DID	Didima	2.04	185	P	Pn	14 24 18.7	-0.9
DID	Didima	2.04	185	ePN	Pn	14 24 18.9	-0.7
DID	Didima	2.04	185	ePn	Pn	14 24 18.9	-0.7
RLS	Riolos of Patr	2.14	227	ePB	Pn	14 24 22.1	+1.1
RLS	Riolos of Patr	2.14	227	ePb	Pn	14 24 22.1	+1.1
PRK	Paraskevi	2.21	97	P	Pn	14 24 21.6	-0.4
PRK	Paraskevi	2.21	97	ePN	Pn	14 24 22.1	+0.1
PRK	Paraskevi	2.21	97	P	Pn	14 24 21.6	-0.4
PRK	Paraskevi	2.21	97	ePn	Pn	14 24 22.1	+0.1
EZN	Ezine	2.24	82	ePN	Pn	14 24 23.2	+0.8
LKD2	Lefkada island	2.29	252	P	Pn	14 24 24.1	+1.0
LKD2	Lefkada island	2.29	252	P	Pn	14 24 24.1	+1.0
VLX	Vlachokerasia	2.33	201	P	Pn	14 24 23.6	0.0
VLX	Vlachokerasia	2.33	201	ePN	Pn	14 24 23.7	+0.1
VLX	Vlachokerasia	2.33	201	P	Pn	14 24 23.6	0.0
CHOS	Chios island	2.34	119	P	Pn	14 24 23.5	-0.3
CHOS	Chios island	2.34	119	ePN	Pn	14 24 23.5	-0.3
CHOS	Chios island	2.34	119	P	Pn	14 24 23.5	-0.3
ENEZ	Enez	2.40	59	ePN	Pn	14 24 24.7	+0.2
IGT	Igoumenitsa	2.41	271	P	Pn	14 24 23.9	-0.7
IGT	Igoumenitsa	2.41	271	P	Pn	14 24 23.9	-0.7
ALN	Alexandroupoli	2.41	55	P	Pn	14 24 23.6	-1.1
ALN	Alexandroupoli	2.41	55	ePN	Pn	14 24 22.8	-1.9
ALN	Alexandroupoli	2.41	55	ePn	Pn	14 24 22.8	-1.9
ALN	Alexandroupoli	2.41	55	P	Pn	14 24 23.6	-1.1
AMT	Artemida-Makis	2.42	215	P	Pn	14 24 24.6	-0.3
AMT	Artemida-Makis	2.42	215	ePB	Pn	14 24 26.4	+1.5
AMT	Artemida-Makis	2.42	215	P	Pn	14 24 24.6	-0.3
AMT	Artemida-Makis	2.42	215	ePb	Pn	14 24 26.4	+1.5
GELI	Tayfur-Gelibol	2.48	69	ePN	Pn	14 24 26.2	+0.6
KFL	Anninata	2.52	236	P	Pn	14 24 27.7	+1.5
KFL	Anninata	2.52	236	P	Pn	14 24 27.7	+1.5
VLS	Valsamata	2.61	239	P	Pn	14 24 28.9	+1.4
VLS	Valsamata	2.61	239	P	Pn	14 24 28.9	+1.4
ITM	Ithomi	2.64	207	P	Pn	14 24 28.6	+0.7
ITM	Ithomi	2.64	207	ePB	Pn	14 24 29.4	+1.5
ITM	Ithomi	2.64	207	P	Pn	14 24 28.6	+0.7
ITM	Ithomi	2.64	207	ePb	Pn	14 24 29.4	+1.5
LPK	Lapseki	2.68	71	ePN	Pn	14 24 29.1	+0.7
KEK	Kerkira	2.82	275	P	Pn	14 24 30.1	-0.2
KEK	Kerkira	2.82	275	P	Pn	14 24 30.1	-0.2
VLI	Veliai	2.85	188	P	Pn	14 24 30.3	-0.4
VLI	Veliai	2.85	188	ePN	Pn	14 24 30.5	-0.2
VLI	Veliai	2.85	188	P	Pn	14 24 30.3	-0.4
DYR	Agios Nikonas	2.91	198	P	Pn	14 24 31.7	+0.1
DYR	Agios Nikonas	2.91	198	ePB	Pn	14 24 32.8	+1.2
DYR	Agios Nikonas	2.91	198	P	Pn	14 24 31.7	+0.1
DYR	Agios Nikonas	2.91	198	ePb	Pn	14 24 32.8	+1.2
PYL	PYLOS	2.96	207	ePB	Pn	14 24 34.0	+1.7
PYL	PYLOS	2.96	207	ePb	Pn	14 24 34.0	+1.7
APE	Apeiranthos	2.97	146	ePN	Pn	14 24 31.8	-0.5
APE	Apeiranthos	2.97	146	⇓iP	Sn	14 25 06.4	-1.4
APE	Apeiranthos	2.97	146	ePN	Pn	14 24 31.9	-0.5
APE	Apeiranthos	2.97	146	ePn	Pn	14 24 31.9	-0.5
VTS	Vitosha	3.05	357	P	Pn	14 24 33.2	-0.4
VTS	Vitosha	3.05	357	⇓iP	Pn	14 24 29.9	-3.7
VTS	Vitosha	3.05	357	P	Pn	14 24 33.2	-0.4
KRBG	Karabiga-Canak	3.08	73	ePN	Pn	14 24 35.4	+1.5
IZM	Izmir	3.19	110	ePN	Pn	14 24 36.4	+0.9
MFT	Murefte	3.19	66	ePN	Pn	14 24 37.0	+1.5
KYTH	Kithira	3.27	186	ePN	Pn	14 24 37.0	+0.4
KYTH	Kithira	3.27	186	ePn	Pn	14 24 37.0	+0.4
GONE	Gonen-Balikesi	3.31	80	ePN	Pn	14 24 38.0	+1.0
BALB	Balikesir	3.43	87	ePN	Pn	14 24 39.7	+1.0
BODT	Bodrum	3.92	128	ePN	Pn	14 24 46.1	+0.6
KULA	Kula-Manisa	4.19	103	ePN	Pn	14 24 50.5	+1.2
CTKS	Kestanelik-??a	4.22	65	ePN	Pn	14 24 51.0	+1.5
TVSB	Tavsanli	4.66	89	ePN	Pn	14 24 56.6	+1.0
YLV	Yalova	4.66	75	eP	Pn	14 24 58.5	+2.7
LAST	Lasithi	4.67	159	ePN	Pn	14 24 57.8	+2.0
LAST	Lasithi	4.67	159	ePn	Pn	14 24 57.8	+2.0
GZR	Gura Zlata	5.87	355	⇑iP	Pn	14 25 13.4	+1.2
GZR	Gura Zlata	5.87	355	⇑iP	Pn	14 25 13.4	+1.2
ARR	Arges	5.89	8	⇓iP	Pn	14 25 12.4	-0.1
ARR	Arges	5.89	8	⇓iP	Pn	14 25 12.4	-0.1
VOIR		6.01	11	⇑iP	Pn	14 25 03.3	-11
BZS	Buzias	6.22	348	⇑iP	Pn	14 25 08.0	-9.0
MLR	Muntele Rosu	6.22	16	⇓iP	Pn	14 25 18.5	+1.3
MLR	Muntele Rosu	6.22	16	Pn	Pn	14 25 20.8	+3.5
	comp=E,0.2nm,0.3s,baz=270,slow=13,SNR=6.7						
MLR	Muntele Rosu	6.22	16	⇓iP	Pn	14 25 18.5	+1.3
CFR	Carcaliu	6.62	30	⇑iP	Pn	14 25 19.1	-3.3
PLOR	Plostina	6.73	19	⇓iP	Pn	14 25 26.4	+2.3
VRI	Vrincioaia	6.77	20	⇓iP	Pn	14 25 26.0	+1.5
VRI	Vrincioaia	6.77	20	⇓iP	Pn	14 25 26.0	+1.5
BRTR	Keskin Array B	7.87	85	Pn	Pn	14 25 39.0	-0.9
	comp=E,0.2nm,0.3s,baz=264,slow=12,SNR=5.0						
GERES	GERESS Array B	11.62	326	Pn	Pn	14 26 37.9	+6.8
	comp=E,0.1nm,0.3s,baz=156,slow=15,SNR=2.2						
CMAH	Djebel Manchou	12.96	262	P	Pn	14 26 26.2	-23
CMAH	Djebel Manchou	12.96	262	P	Pn	14 26 26.2	-23
ABSA	Djebel Ababsia	13.02	261	P	Pn	14 26 32.2	-18
ABSA	Djebel Ababsia	13.02	261	P	Pn	14 26 32.2	-18
CAEH	'Ain El Ouahch	13.35	263	P	Pn	14 26 29.8	-25
CAEH	'Ain El Ouahch	13.35	263	P	Pn	14 26 29.8	-25
CKFL	Kef-Lekhel	13.56	262	P	Pn	14 26 33.8	-24
CKFL	Kef-Lekhel	13.56	262	P	Pn	14 26 33.8	-24
CASM	Ain Smara	13.78	262	P	Pn	14 26 37.0	-24
CASM	Ain Smara	13.78	262	P	Pn	14 26 37.0	-24
BHD	Baghdad	17.96	104	ex	Pn	14 27 49.5	-5.5
BHD				ex	Sn	14 31 11.5	-3.5
ESDC	Sonseca Array	21.09	279	P	P	14 28 32.3	+2.6
	comp=E,0.1nm,0.3s,baz=75,slow=10,SNR=3.4						
TORD	Torodi Ar. Bea	32.55	222	P	P	14 30 15.5	-0.9
	comp=E,0.3nm,0.6s,baz=31,slow=7.5,SNR=4.3						

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*IDC **05** 14:46:02.3±0.6, 4°.82S×153°.50E, h0km, mb4.2/18, mb1 4.3/20, mb1mx4.2/25, mbtmp4.2/20, ML3.6/2, MS3.5/5, Ms1 3.5/5, ms1mx3.1/29, Error ellipse: s-maj=18.8km s-min=12.3km az=100.0*

*ISCJB **05** 14:46:08.5±0.4, 4°.91S±0°.05×153°.38E±0°.07, h56km, mb4.3/27, MS3.4/4, Error ellipse: s-maj=10.2km s-min=7.1km az=4.7*

*NEIC **05** 14:46:10.7±1.1, 4°.90S×153°.37E, h63km±10km, mb4.5/11, Error ellipse: s-maj=8.4km s-min=7.6km az=86.0*

ISC 05 14:46:10.1±0.4**, 4°.90S**±0°.07×**153°.32E**±0°.08**, h56**km**, n76, σ0s.98**/78**, mb4.3**/27**, MS3.4**/4**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.57	233	Pn	Pn	14 47 58.6	+0.6
PMG				eS	Sn	14 49 19.1	-3.3
PMG				Sn	Sn	14 49 21.8	-0.7
PMG	Port Moresby	7.57	233	Pn	Pn	14 47 58.6	+0.6
	3.9nm,0.3s,baz=42,slow=14,SNR=37						
PMG				Sn	Sn	14 49 21.8	-0.7
	6.8nm,0.3s,baz=25,slow=19,SNR=6.1						
HNR	Honiara	7.97	125	eP	Pn	14 48 04.0	+0.6
	137nm,0.8s						
COEN	Coen	13.45	227	eP	Pn	14 49 19.2	+0.9
CTA	Charters Tower	16.59	204	Pn	Pn	14 49 59.3	+0.3
CTA	Charters Tower	16.59	204	Pn	Pn	14 49 59.3	+0.3
	0.1nm,0.3s,baz=19,slow=12,SNR=4.3						
CTA				LR	LR	14 55 10.8	
	comp=Z,84nm,19.6s,baz=47,slow=33						
CTAO	Charters Tower	16.59	204	P	Pn	14 49 58.4	-0.7
GUMO	Guam	20.20	336	LR	LR	14 56 49.6	
	comp=Z,125nm,20.1s,baz=200,slow=32						
EIDS	Eidsvold	20.46	186	eP	P	14 50 43.6	+0.4
DZM	Mont Dzumac	21.28	145	eP	P	14 50 51.5	-0.7
DZM	Mont Dzumac	21.28	145	eP	P	14 50 52.2	0.0
	12nm,0.4s						
DZM	Mont Dzumac	21.28	145	P	P	14 50 52.2	0.0
	20nm,0.4s,baz=302,slow=13,SNR=25						
WRAB	Tennant Creek	23.75	229	eP	P	14 51 17.7	+0.1
	8.1nm,0.6s						
WRA	Warramunga Arr	23.77	229	P	P	14 51 17.9	+0.2
WRA				PcP	PcP	14 55 00.8	+0.4
WRA				S	S	14 55 38.5	+9.1
WRA	Warramunga Arr	23.77	229	P	P	14 51 17.9	+0.2
	2.4nm,0.5s,baz=53,slow=9.3,SNR=21						
WRA				PcP	PcP	14 55 00.8	+0.4
	1.9nm,0.7s,baz=58,slow=2.7,SNR=6.8						
WRA				S	S	14 55 38.4	+9.1
	1.3nm,0.8s,baz=45,slow=16,SNR=3.7						
WRA				LR	LR	14 59 18.8	
	comp=Z,80nm,18.5s,baz=100,slow=33						
AS31	Alice Springs	26.42	223	eP	P	14 51 43.7	+1.9
ASAR	Alice Springs	26.43	223	P	P	14 51 41.5	-0.4
ASAR				PcP	PcP	14 55 07.1	+0.8
ASAR	Alice Springs	26.43	223	P	P	14 51 41.5	-0.4
	0.9nm,0.5s,baz=57,slow=9.3,SNR=11						
ASAR				PcP	PcP	14 55 07.1	+0.8
	1.5nm,0.7s,baz=60,slow=2.6,SNR=8.2						
STKA	Stephens Creek	29.00	201	P	P	14 52 05.0	+0.3
STKA	Stephens Creek	29.00	201	P	P	14 52 05.0	+0.3
	2.7nm,0.9s,baz=15,slow=12,SNR=2.5						
STKA				LR	LR	15 02 55.3	
	comp=Z,140nm,18.1s,baz=217,slow=35						
FITZ	Fitzroy Crossi	30.07	242	eP	P	14 52 13.4	-0.9
	5.6nm,0.7s						
FITZ	Fitzroy Crossi	30.07	242	P	P	14 52 14.1	-0.2
	3.6nm,0.4s,baz=63,slow=9.9,SNR=8.7						
FITZ				LR	LR	15 05 57.8	
	comp=Z,104nm,18.9s,baz=10,slow=40						
URZ	Urewera	39.64	150	eP	P	14 53 37.5	+0.9
URZ	Urewera	39.64	150	P	P	14 53 36.9	+0.4
	3.3nm,0.5s,baz=152,slow=20,SNR=5.2						
STKI	Sintang	42.08	276	P	P	14 54 03.6	+6.6
	21nm,0.5s,5μm						
MJAR	Matsushiro Arr	43.58	342	P	P	14 54 08.4	-0.4
MJAR	Matsushiro Arr	43.58	342	P	P	14 54 08.4	-0.4
	0.4nm,0.4s,baz=165,slow=7.9,SNR=4.2						
KSRS	Korea Array	48.32	333	P	P	14 54 46.5	+0.4
	1.2nm,0.7s,baz=146,slow=6.5,SNR=6.6						
KSAR	Wonju Array Be	48.33	333	P	P	14 54 46.5	+0.3
PETK	Petropavlovsk-	57.91	3	P	P	14 55 56.8	+0.5
PETK	Petropavlovsk-	57.91	3	P	P	14 55 56.8	+0.5
	0.9nm,0.6s,baz=176,slow=8.9,SNR=7.9						
CMAR	Chiang Mai Arr	58.39	295	P	P	14 56 02.5	+2.2
CMAR	Chiang Mai Arr	58.39	295	P	P	14 56 02.5	+2.2
	0.8nm,0.8s,baz=126,slow=5.5,SNR=7.2						
ULN	Ulaanbaatar	66.35	328	eP	P	14 56 53.6	+0.4
	1.9nm,0.9s						
SONM	Songino Array	66.69	328	P	P	14 56 56.2	+0.8
SONM	Songino Array	66.69	328	P	P	14 56 56.2	+0.8
	1.1nm,0.8s,baz=145,slow=6.0,SNR=9.2						
VNDA	Vanda	72.71	178	eP	P	14 57 32.4	+0.6
VNDA	Vanda	72.71	178	P	P	14 57 32.3	+0.6
	2.5nm,0.8s,baz=327,slow=7.1,SNR=14						
SBA	Scott Base	73.25	177	eP	P	14 57 33.4	-1.5
	10nm,1.3s						
MK31	Makanchi Array	80.74	319	eP	P	14 58 18.2	+0.6
MKAR	Makanchi Array	80.74	319	P	P	14 58 18.2	+0.6
MKAR	Makanchi Array	80.74	319	P	P	14 58 18.2	+0.6
	3.8nm,1.0s,baz=94,slow=7.9,SNR=22						
ZALV	Zalesovo Beam	81.52	326	P	P	14 58 21.3	-0.2
ZALV	Zalesovo Beam	81.52	326	P	P	14 58 21.3	-0.2
	3.8nm,0.6s,baz=110,slow=6.1,SNR=23						
COLA	College	81.75	22	eP	P	14 58 20.7	-1.8
ILAR	Eielson Array	82.06	22	P	P	14 58 21.9	-2.2
ILAR	Eielson Array	82.06	22	P	P	14 58 21.9	-2.2
	0.7nm,1.0s,baz=247,slow=6.1,SNR=5.8						
KURK	Kurchatov	84.17	322	eP	P	14 58 35.4	+0.1
	9.4nm,1.0s						
TKM2	Tokmak 2	84.37	314	eP	P	14 58 36.4	-0.4
	3.4nm,0.7s						
TKM2	Tokmak 2	84.37	314	P	P	14 58 38.1	+1.3
	SNR=7.1						
KZA	Kyzart	84.45	313	P	P	14 58 39.6	+2.1
	SNR=5.1						
QSPA	South Pole Qui	85.06	180	eP	P	14 58 40.0	+0.2
	7.9nm,0.5s						
AAK	Ala-Archa	85.11	313	eP	P	14 58 41.5	+1.1
	10nm,0.6s						
AAK	Ala-Archa	85.11	313	P	P	14 58 41.8	+1.4
	SNR=5.2						
AAK	Ala-Archa	85.11	313	P	P	14 58 41.6	+1.1
	2.6nm,0.6s,baz=106,slow=8.6,SNR=16						
USP	Ospenovka	85.23	314	P	P	14 58 42.1	+1.2
	SNR=6.1						
AML	Almayashu	85.60	313	P	P	14 58 44.3	+1.1
	SNR=6.9						
KKAR	Karatay Array	88.07	313	P	P	14 58 54.7	-0.1
	0.8nm,0.7s						
BVAR	Borovoye Array	89.63	323	P	P	14 59 01.2	-0.6
BVAR	Borovoye Array	89.63	323	P	P	14 59 01.2	-0.6
	2.8nm,0.6s,baz=101,slow=6.0,SNR=21						
BRVK	Borovoye	89.70	323	eP	P	14 59 01.4	-0.7
	2.4nm,0.7s						
YKA	Yellowknife Ar	95.28	28	P	P	14 59 26.6	-1.1
YKA	Yellowknife Ar	95.28	28	P	P	14 59 26.6	-1.1
	0.1nm,0.6s,baz=276,slow=5.1,SNR=3.3						
ABKAR	Akbulak array	95.89	319	eP	P	14 59 29.8	-1.0
AKASG	Malin Array Be	114.88	325	PKP	PKPdf	15 04 44.0	-0.7
AKASG	Malin Array Be	114.88	325	PKP	PKPdf	15 04 43.9	-0.7
	1.5nm,0.6s,baz=66,slow=1.5,SNR=6.5						
BRTR	Keskin Array B	115.75	312	PKP	PKPdf	15 04 46.3	-0.6
BRTR	Keskin Array B	115.75	312	PKP	PKPdf	15 04 46.3	-0.6
	0.3nm,0.4s,baz=64,slow=3.3,SNR=2.4						
CLL	Collm	123.19	331	i PKPdf	PKPdf	15 05 00.9	+0.3
	comp=Z,4.0nm,0.8s						
GERES	GERESS Array B	124.41	329	PKP	PKPdf	15 05 03.6	+0.4
GERES	GERESS Array B	124.41	329	PKP	PKPdf	15 05 03.6	+0.4
	comp=Z,1.5nm,0.6s,baz=54,slow=1.7,SNR=14						
BDFB	Brasilia	150.63	134	PKPbc	PKPbc	15 05 56.1	-0.9
BDFB	Brasilia	150.63	134	PKPbc	PKPbc	15 05 56.1	-0.9
	comp=Z,1.7nm,0.5s,baz=225,slow=2.9,SNR=4.5						
TOA0	Torodi Ar. Sit	150.83	288	ePKPbc	PKPbc	15 05 57.3	-0.1
TORD	Torodi Ar. Bea	150.83	288	PKPbc	PKPbc	15 05 57.3	-0.1
TORD	Torodi Ar. Bea	150.83	288	PKPbc	PKPbc	15 05 57.3	-0.1
	comp=Z,3.7nm,0.4s,baz=79,slow=1.7,SNR=3.6						

IDC 05 14:46:45.4±2.2**, 6°.83S**×**130°.21E, h0**km**, mb3.3**/1**, mb1 3.5**/4**, mb1mx3.3**/20**, mbtmp3.3**/4**, ML3.5**/2**, Error ellipse: s-maj=83.9km s-min=24.9km az=75.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.06	201	Pn	Pn	14 49 38.1	-0.5
	0.3nm,0.3s,baz=24,slow=13,SNR=9.8						
FITZ				Sn	Sn	14 51 49.9	-4.0
	0.1nm,0.3s,baz=25,slow=14,SNR=3.3						
WRA	Warramunga Arr	13.64	163	Pn	Pn	14 49 59.3	-0.9
	0.2nm,0.3s,baz=347,slow=14,SNR=13						
WRA				Sn	Sn	14 52 32.6	0.0
	baz=353,slow=22,SNR=2.7						
ASAR	Alice Springs	17.11	168	Pn	P	14 50 47.2	-0.8
	0.1nm,0.3s,baz=346,slow=12,SNR=13						
ASAR				Sn	Sn	14 54 00.1	+2.8
	0.0nm,0.3s,baz=356,slow=29,SNR=3.2						
MKAR	Makanchi Array	68.20	327	P	P	14 57 47.8	0.0
	0.1nm,0.5s,baz=118,slow=7.6,SNR=4.3						

IDC 05 14:54:58.3±2.6**, 0°.31S**×**131°.86E, h0**km**, mb3.6**/2**, mb1 3.7**/4**, mb1mx3.4**/22**, mbtmp3.5**/4**, ML3.7**/2**, Error ellipse: s-maj=127.1km s-min=19.7km az=76.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.62	171	P	Pn	14 55 43.5	+1.5
FITZ	Fitzroy Crossi	18.71	199	Pn	P	14 59 17.2	-1.3
	0.1nm,0.3s,baz=22,slow=11,SNR=3.7						
FITZ				Sn	Sn	15 02 33.4	-15
	0.1nm,0.3s,baz=37,slow=20,SNR=2.3						
WRA	Warramunga Arr	19.67	173	P	P	14 59 27.8	-1.2
	0.3nm,0.3s,baz=352,slow=12,SNR=17						
WRA				S	S	15 02 55.6	-16
	0.1nm,0.3s,baz=350,slow=25,SNR=4.7						
ASAR	Alice Springs	23.31	175	P	P	15 00 07.7	-0.4
	1.8nm,0.6s,baz=353,slow=7.8,SNR=62						
ASAR				S	S	15 04 23.8	+2.0
	0.3nm,0.8s,baz=2.1,slow=28,SNR=2.8						
MKAR	Makanchi Array	63.78	324	P	P	15 05 32.7	+0.5
	0.3nm,0.6s,baz=117,slow=8.0,SNR=5.2						

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*ISCJB **05** 15:13:49.4±0.5, 35°.53N±0°.03×140°.13E±0°.05, h77km±3km, mb3.7/7, Error ellipse: s-maj=7.7km s-min=4.5km az=147.3*

*JMA **05** 15:13:49.7±0.2, 35°.59N×140°.14E, h70km±2km, M3.3 Broadband fault plane solution: P waves. NP1: φs10.00000°, δ85.00000°, λ103.00000°. NP2: φs119.00000°, δ14.00000°, λ19.00000°. Principal axes: T Plg48.0000°, Azm294.0000°; N Plg13.0000°, Azm189.0000°; P Plg39.0000°, Azm88.0000°;*

*IDC **05** 15:13:51.1±2.2, 35°.49N×140°.10E, h75km±17km, mb3.4/7, mb1 3.5/10, mb1mx3.3/28, mbtmp3.5/10, MS2.7/1, Ms1 2.7/1, ms1mx2.2/28 Error ellipse: s-maj=32.0km s-min=6.6km az=67.0*

ISC 05 15:13:50.5±0.8**, 35°.51N**±0°.04×**140°.11E**±0°.05**, h70**km±6km**, n24, σ1s.19**/39**, mb3.7**/7**, 2C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	Nagara	0.12	141	⇑P	Pn	15 14 00.8	+0.1
JCN				S	Sn	15 14 09.3	+1.1
TOK	Tokyo	0.34	302	⇓P	Pn	15 14 01.7	-0.2
TOK				S	Sn	15 14 10.8	+0.6
BSO3	Boso 3	0.78	155	⇑P	Pn	15 14 06.2	+0.2
BSO3				S	Sn	15 14 19.3	+1.9
JOD2	Odawara 2	0.87	254	⇓P	Pn	15 14 07.4	0.0
JOD2				S	Sn	15 14 19.8	-0.1
JIM2	Oshima 3	0.97	215	P	Pn	15 14 08.3	-0.3
JIM2				eS	Sn	15 14 22.2	+0.2
JAG	Ashikaga	1.06	330	⇓P	Pn	15 14 08.6	-1.1
JAG				eS	Sn	15 14 22.7	-1.4
JRY	Ryogami san	1.11	298	⇓P	Pn	15 14 10.4	0.0
JRY				S	Sn	15 14 25.8	+0.6
BSO1	Boso 1	1.11	140	P	Pn	15 14 09.6	-0.2
BSO1				eS	Sn	15 14 25.2	+0.9
JYN	Shimob	1.28	270	⇓P	Pn	15 14 12.7	+0.1
JYN				eS	Sn	15 14 29.1	-0.1
JIZS	Izushimoda	1.28	232	⇓P	Pn	15 14 12.8	+0.2
JIZS				S	Sn	15 14 29.3	+0.2
JKT	Katashina	1.44	331	P	Pn	15 14 13.8	-0.9
JKT				eS	Sn	15 14 31.2	-1.7
MJAR	Matsushiro Arr	1.86	304	P	Pn	15 14 19.8	-0.4
	22nm,0.3s,baz=139,slow=15,SNR=297						
MJAR				S	Sn	15 14 43.2	+0.5
	20nm,0.3s,baz=49,slow=24,SNR=8.6						
MAT	Matsushiro	1.86	304	P	Pn	15 14 20.3	+0.1
MAT				S	Sn	15 14 42.1	-0.7
JHJ	Hachijo jima 2	2.40	187	P	Pn	15 14 27.9	+0.3
	54nm,0.3s,baz=18,slow=17,SNR=18						
JHJ				S	Sn	15 14 56.7	+0.8
	80nm,0.3s,baz=270,slow=20,SNR=10						
JNU	Nakatsue	8.00	255	P	Pn	15 15 44.9	+0.8
	0.4nm,0.3s,baz=223,slow=8.4,SNR=5.0						
CBIJ	Chichi jima	8.57	168	P	Pn	15 15 49.3	-2.6
	11nm,0.3s,baz=288,slow=19,SNR=6.9						
CBIJ				S	Sn	15 17 22.6	-4.4
	5.5nm,0.3s,baz=284,slow=19,SNR=3.4						
KSRS	Korea Array	10.01	285	P	Pn	15 16 13.8	+2.4
	0.1nm,0.3s,baz=93,slow=14,SNR=7.7						
KSRS				LR	LR	15 19 56.4	
	comp=Z,43nm,21.6s,baz=105,slow=36						
SONM	Songino Array	27.81	307	P	P	15 19 32.5	-0.6
	0.5nm,0.7s,baz=108,slow=8.5,SNR=4.9						
ZALV	Zalesovo Beam	42.18	314	P	P	15 21 36.2	+0.1
	0.5nm,0.4s,baz=111,slow=7.9,SNR=5.1						
MKAR	Makanchi Array	44.05	303	P	P	15 21 51.7	+0.3
	1.2nm,0.7s,baz=88,slow=9.2,SNR=15						
ILAR	Eielson Array	51.34	32	P	P	15 22 48.2	+0.8
	0.3nm,0.9s,baz=262,slow=6.3,SNR=3.9						
WRA	Warramunga Arr	55.42	187	P	P	15 23 17.4	-0.3
	1.5nm,0.5s,baz=2.4,slow=7.6,SNR=26						
ASAR	Alice Springs	59.14	187	P	P	15 23 44.1	+0.1
	0.2nm,0.3s,baz=2.0,slow=6.7,SNR=16						
FINES	FINESS Array B	69.67	332	P	P	15 24 51.5	-0.8
	1.8nm,0.8s,baz=48,slow=6.2,SNR=5.0						

PGC 05 16:02:28.9±1.8**, 50°.42N**×**130°.11W, h10**km**, ML2.9**/10,

Mw3.5,3D,192km west of Pt. Hardy, Bc Vancouver Island Region,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	Holberg	1.28	79	⇑P	Pn	16 02 50.7	-2.2
HOLB				⇓S	Sb	16 03 06.1	-3.6
BPBC	Brooks Peninsu	1.52	99	⇑Pn	Pn	16 02 53.5	-2.8
PHC	Port Hardy	1.73	79	⇑Pn	Pn	16 02 57.3	-1.7
PHC				⇓Sn	Sn	16 03 17.0	-4.1
MAYB	Maynard	1.88	89	Pn	Pn	16 02 59.1	-2.2
EDB	Eliza Dome	2.00	105	⇑Pn	Pn	16 03 00.3	-2.4
EDB				⇑Sn	Sn	16 03 23.1	-4.6
BBB	Bella Bella	2.17	35	Pn	Pn	16 03 03.5	-1.5
BBB				⇑Sn	Sn	16 03 27.3	-4.5
WOSB	Woss	2.28	95	⇓Pn	Pn	16 03 05.2	-1.5
BNB	Barry Inlet	2.39	335	⇑Pn	Pn	16 03 06.7	-1.5
BNB				⇑Sn	Sn	16 03 34.3	-3.4
GDR	Gold River	2.70	102	Pn	Pn	16 03 10.6	-1.8
MOBC	Moresby Island	2.96	338	⇑Pn	Pn	16 03 13.8	-2.3
MOBC				⇑Sn	Sn	16 03 48.2	-3.5
BTB	Buttle Lake	3.11	106	⇑Pn	Pn	16 03 16.8	-1.4
OZB	Mount Ozzard	3.33	114	⇑Pn	Pn	16 03 19.4	-1.7

DDA ***05*** *16:05:13.0,39°.17N×29°.45E,h14km,MD2.8*
CSEM ***05*** *16:05:13.4±0.1,39°.18N×29°.47E,h1km,MD2.8,Error ellipse: s-maj=1.8km s-min=1.8km az=83.0*
ISK ***05*** *16:05:13.0,39°.18N×29°.48E,h5km,MD2.8*
ISC 05 16:05:13.7±0.8,**39°.17N**±0°.02×**29°.48E**±0°.02,**h10**km±6km, **n52**,σ**0s.73**/76,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	Gediz	0.08	181	iP	Pg	16 05 16.3	0.0
GDZ				iS	Sg	16 05 18.3	+0.2
GDZ	Gediz	0.08	181	iP	Pg	16 05 16.3	0.0
GDZ				iS	Sg	16 05 18.3	+0.2
TVSB	Tavsanli	0.28	357	ePG	Pg	16 05 18.9	-0.5
TVSB				eSG	Sg	16 05 22.8	-0.4
TVSB	Tavsanli	0.28	357	ePg	Pg	16 05 18.9	-0.5
TVSB				eSg	Sg	16 05 22.8	-0.4
ALT	Altintas	0.50	103	ePG	Pg	16 05 23.4	-0.1
ALT				eSG	Sg	16 05 30.9	+0.8
ALT	Altintas	0.50	103	ePg	Pg	16 05 23.4	-0.1
ALT				eSg	Sg	16 05 31.0	+0.8
DEMI	Demirci	0.61	258	iP	Pg	16 05 25.1	-0.5
DEMI				iS	Sg	16 05 32.7	-0.9
DEMI	Demirci	0.61	258	iP	Pg	16 05 25.1	-0.5
DEMI				iS	Sg	16 05 32.7	-0.9
KHAL	Karahalli	0.80	179	iP	Pg	16 05 29.0	-0.1
KHAL				iS	Sg	16 05 38.5	-1.1
KHAL	Karahalli	0.80	179	iP	Pg	16 05 29.0	-0.1
KHAL				iS	Sg	16 05 38.5	-1.1
KHL	Karahalli	0.85	178	ePG	Pg	16 05 29.6	-0.4
KHL	Karahalli	0.85	178	ePg	Pg	16 05 29.6	-0.4
DURS	Dursunbey	0.89	299	iP	Pg	16 05 30.7	-0.2
DURS				iS	Sb	16 05 43.5	+0.3
DURS	Dursunbey	0.89	299	iP	Pg	16 05 30.7	-0.2
DURS				iS	Sb	16 05 43.5	+0.3
KULA	Kula-Manisa	0.92	225	ePG	Pg	16 05 30.5	-0.9
KULA	Kula-Manisa	0.92	225	ePg	Pg	16 05 30.5	-0.9
ORLT	Orhaneli	0.98	333	ePG	Pg	16 05 32.6	-0.1
ORLT				eSG	Sb	16 05 46.3	+0.4
ORLT	Orhaneli	0.98	333	ePg	Pg	16 05 32.6	-0.1
ORLT				eSg	Sb	16 05 46.3	+0.4
BORA	Eskisehir	1.03	46	iP	Pb	16 05 33.3	-0.4
BORA				iS	Sg	16 05 46.5	-0.5
BORA	Eskisehir	1.03	46	iP	Pb	16 05 33.3	-0.4
BORA				iS	Sg	16 05 46.5	-0.5
CAVI	Cavuskoy	1.07	15	ePG	Pb	16 05 33.0	-1.2
CAVI	Cavuskoy	1.07	15	ePg	Pb	16 05 33.0	-1.2
BOLV	Bolvadin	1.23	111	iP	Pg	16 05 37.5	+0.2
BOLV				iS	Sb	16 05 50.1	-3.0
BOLV	Bolvadin	1.23	111	iP	Pg	16 05 37.5	+0.2
MDNY	Mudanya-Bursa	1.28	339	ePN	Pb	16 05 37.9	0.0
MDNY	Mudanya-Bursa	1.28	339	ePn	Pb	16 05 37.9	0.0
GEMT	Gemlik	1.28	350	ePN	Pb	16 05 37.8	-0.1
GEMT				eSN	Sg	16 05 56.0	+1.0
GEMT	Gemlik	1.28	350	ePn	Pb	16 05 37.8	-0.1
GEMT				eSn	Sg	16 05 56.0	+1.0
BALB	Balikesir	1.33	291	ePN	Pb	16 05 38.7	+0.1
BALB	Balikesir	1.33	291	ePn	Pb	16 05 38.7	+0.1
AKHS	Akhisar	1.33	258	iP	Pb	16 05 38.8	+0.1
AKHS				iS	Sb	16 05 54.7	-1.2
AKHS	Akhisar	1.33	258	iP	Pb	16 05 38.8	+0.1
AKHS				iS	Sb	16 05 54.7	-1.2
AKS	Akhisar	1.33	258	ePN	Pb	16 05 38.8	+0.1
AKS	Akhisar	1.33	258	ePn	Pb	16 05 38.8	+0.1
YLV	Yalova	1.40	357	ePN	Pb	16 05 39.8	-0.1
YLV	Yalova	1.40	357	ePn	Pb	16 05 39.8	-0.1
ARMT	Armutlu	1.47	341	ePN	Pb	16 05 41.0	-0.2
ARMT	Armutlu	1.47	341	ePn	Pb	16 05 41.0	-0.2
GULT	Gulveren	1.49	32	ePN	Pb	16 05 41.1	-0.4
GULT	Gulveren	1.49	32	ePn	Pb	16 05 41.1	-0.4
DNZL	Cakiroluk	1.52	193	iP	Pb	16 05 42.4	+0.4
DNZL				iS	Sg	16 06 04.8	+2.3
DNZL	Cakiroluk	1.52	193	iP	Pb	16 05 42.4	+0.4
BALY	Balya	1.55	292	iP	Pb	16 05 41.8	-0.7
BALY				iS	Sb	16 06 02.6	+0.4
BALY	Balya	1.55	292	iP	Pb	16 05 41.8	-0.7
BALY				iS	Sb	16 06 02.6	+0.4
SVRH	Sivrihisar-ESK	1.61	79	ePN	Pb	16 05 42.9	-0.6
SVRH	Sivrihisar-ESK	1.61	79	ePn	Pb	16 05 42.9	-0.6
GONE	Gonen-Balikesi	1.64	303	ePN	Pb	16 05 43.2	-0.8
GONE	Gonen-Balikesi	1.64	303	ePn	Pb	16 05 43.2	-0.8
MDUB	Mudurnu	1.85	45	ePN	Pn	16 05 46.3	+0.7
MDUB	Mudurnu	1.85	45	ePn	Pn	16 05 46.3	+0.7
KIZT	Kizilcal	1.89	98	ePN	Pn	16 05 47.1	+1.0
KIZT	Kizilcal	1.89	98	ePn	Pn	16 05 47.1	+1.0

IDC ***05*** *16:17:27.8±0.7,36°.44N×21°.92E,h0km,mb3.8/17, mb1 3.9/22,mb1mx3.9/36,mbtmp3.8/22,ML3.5/5,MS3.4/15, Ms1 3.4/15,ms1mx3.1/51,Error ellipse: s-maj=17.0km s-min=13.5km az=153.0*
ATH ***05*** *16:17:28.9,36°.36N×21°.63E,h6km±2km,MD3.5/23,ML3.9*
THE ***05*** *16:17:32.5,36°.51N×21°.84E,h0km±3km,ML4.1/3,Error ellipse: s-maj=3.5km s-min=0.9km az=214.0*
CSEM ***05*** *16:17:33.5±0.2,36°.44N×21°.77E,h20km,ML4.1/3,Mw3.9, Error ellipse: s-maj=4.5km s-min=3.8km az=44.0*
ISC 05 16:17:31.0±0.8,**36°.44N**±0°.03×**21°.78E**±0°.03,**h9**km±5km, **n271**,σ**1s.49**/254,**mb4.1**/21,**MS3.2**/14,**3C-7D,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.46	356	P	Pg	16 17 39.0	-0.9
PYL				S	Sg	16 17 46.4	+0.5
PYL	PYLOS	0.46	356	ePB	Pg	16 17 39.0	-0.9
PYL				eSB	Sg	16 17 46.6	+0.7
PYL	PYLOS	0.46	356	ePb	Pg	16 17 39.0	-0.9
PYL				eSb	Sg	16 17 46.6	+0.7
DYR	Agios Nikonas	0.55	54	P	Pg	16 17 41.0	-0.7
DYR				S	Sg	16 17 48.1	-0.8
DYR	Agios Nikonas	0.55	54	ePB	Pg	16 17 41.4	-0.3
DYR				eSB	Sb	16 17 52.3	+1.4
DYR	Agios Nikonas	0.55	54	ePb	Pg	16 17 41.4	-0.3
DYR				eSb	Sb	16 17 52.3	+1.4
ITM	Ithomi	0.75	9	P	Pg	16 17 44.6	-0.8
ITM				S	Sg	16 17 54.6	-0.5
ITM	Ithomi	0.75	9	ePB	Pg	16 17 45.0	-0.4
ITM				eSB	Sb	16 17 56.6	0.0
ITM	Ithomi	0.75	9	ePb	Pg	16 17 45.0	-0.4
ITM				eSb	Sb	16 17 56.6	0.0
VLI	Veliai	0.97	73	P	Pg	16 17 49.9	+0.2
VLI				S	Sb	16 18 03.3	+0.3
VLI	Veliai	0.97	73	ePB	Pb	16 17 50.2	+0.2
VLI				eSB	Sn	16 18 06.2	+1.4
VLI	Veliai	0.97	73	P	Pg	16 17 49.9	+0.2
VLI	Veliai	0.97	73	ePb	Pb	16 17 50.2	+0.2
VLI				S	Sb	16 18 03.3	+0.3
VLI				eSb	Sn	16 18 06.2	+1.4
KYTH	Kithira	1.03	99	P	Pg	16 17 51.3	+0.5
KYTH	Kithira	1.03	99	ePB	Pg	16 17 51.2	+0.5
KYTH	Kithira	1.03	99	P	Pg	16 17 51.3	+0.5
VLX	Vlachokerasia	1.04	27	P	Pg	16 17 50.5	-0.6
VLX				S	Sb	16 18 05.2	0.0
VLX	Vlachokerasia	1.04	27	ePN	Pg	16 17 50.5	-0.6
VLX				eSB	Sn	16 18 07.7	+0.9
VLX	Vlachokerasia	1.04	27	P	Pg	16 17 50.5	-0.6
VLX				S	Sb	16 18 05.2	0.0
VLX				eSb	Sn	16 18 07.7	+0.9
AMT	Artemida-Makis	1.09	357	P	Pg	16 17 51.0	-1.0
AMT				S	Sb	16 18 06.9	+0.4
AMT	Artemida-Makis	1.09	357	ePB	Pg	16 17 51.0	-1.0
AMT				eSB	Sb	16 18 06.9	+0.4
AMT	Artemida-Makis	1.09	357	ePb	Pg	16 17 51.0	-1.0
AMT				S	Sb	16 18 06.9	+0.4
GUR	Goura	1.56	17	P	Pn	16 17 59.2	+0.2
GUR				S	Sn	16 18 21.1	+1.6
GUR	Goura	1.56	17	ePG	Pn	16 17 59.4	+0.4
GUR	Goura	1.56	17	ePg	Pn	16 17 59.4	+0.4
GUR				S	Sn	16 18 21.1	+1.6
DID	Didima	1.58	47	P	Pn	16 18 00.2	+0.9
DID	Didima	1.58	47	ePG	Pn	16 18 00.4	+1.1
DID	Didima	1.58	47	ePg	Pn	16 18 00.4	+1.1
RLS	Riolos of Patr	1.63	351	P	Pn	16 18 00.6	+0.7
RLS	Riolos of Patr	1.63	351	ePN	Pn	16 18 00.9	+1.0
RLS	Riolos of Patr	1.63	351	P	Pn	16 18 00.6	+0.7
RLS	Riolos of Patr	1.63	351	ePn	Pn	16 18 00.9	+1.0
LAKA	Lakka	1.80	5	P	Pn	16 18 03.7	+1.4
LAKA	Lakka	1.80	5	ePN	Pn	16 18 03.8	+1.4
LAKA	Lakka	1.80	5	P	Pn	16 18 03.7	+1.4
UPR	University Cam	1.84	0	P	Pn	16 18 04.6	+1.8
UPR	University Cam	1.84	0	ePG	Pb	16 18 05.4	+0.6
UPR	University Cam	1.84	0	P	Pn	16 18 04.6	+1.8
UPR	University Cam	1.84	0	ePg	Pb	16 18 05.4	+0.6
LTK	Loutraki	1.84	31	P	Pn	16 18 03.8	+0.9
LTK	Loutraki	1.84	31	ePN	Pn	16 18 04.2	+1.3
LTK	Loutraki	1.84	31	P	Pn	16 18 03.8	+0.9
LTK	Loutraki	1.84	31	ePn	Pn	16 18 04.2	+1.3
KFL	Anninata	1.84	335	P	Pn	16 18 04.3	+1.4
KFL	Anninata	1.84	335	P	Pn	16 18 04.3	+1.4
PSA1	Psathopyrgos	1.88	3	ePG	Pb	16 18 05.7	+0.1
TRIZ	Trizonia	1.94	7	ePG	Pb	16 18 06.6	+0.1
TRIZ	Trizonia	1.94	7	ePg	Pb	16 18 06.6	+0.1
KALE	Kalithea	1.97	8	P	Pn	16 18 05.7	+1.1
KALE	Kalithea	1.97	8	ePG	Pb	16 18 07.0	-0.1
KALE	Kalithea	1.97	8	P	Pn	16 18 05.7	+1.1
KALE	Kalithea	1.97	8	ePg	Pb	16 18 07.0	-0.1
VLS	Valsamata	1.98	332	P	Pn	16 18 06.0	+1.3
VLS	Valsamata	1.98	332	ePG	Pn	16 18 06.0	+1.3
VLS	Valsamata	1.98	332	P	Pn	16 18 06.0	+1.3
EFP	Efpalio	1.98	3	P	Pn	16 18 06.4	+1.6
EFP	Efpalio	1.98	3	ePG	Pb	16 18 07.3	0.0
EFP	Efpalio	1.98	3	P	Pn	16 18 06.4	+1.6
EFP	Efpalio	1.98	3	ePg	Pb	16 18 07.3	0.0
KARN	Karanos	2.02	120	P	Pn	16 18 07.3	+2.0
KARN	Karanos	2.02	120	P	Pn	16 18 07.3	+2.0
DSF	Desfina	2.06	17	P	Pn	16 18 06.1	+0.3
DSF	Desfina	2.06	17	P	Pn	16 18 06.1	+0.3
ATH	Athens Observa	2.17	45	ePN	Pb	16 18 10.6	+0.1
ATH	Athens Observa	2.17	45	ePn	Pb	16 18 10.6	+0.1
VAM	Vamos	2.22	117	P	Pn	16 18 08.9	+0.9
VAM	Vamos	2.22	117	ePN	Pn	16 18 09.7	+1.7
VAM	Vamos	2.22	117	P	Pn	16 18 08.9	+0.9
VAM	Vamos	2.22	117	ePn	Pn	16 18 09.7	+1.7
PTL	Penteli	2.31	45	P	Pn	16 18 09.8	+0.5
PTL	Penteli	2.31	45	ePB	Pn	16 18 10.6	+1.3
PTL	Penteli	2.31	45	P	Pn	16 18 09.8	+0.5
PTL	Penteli	2.31	45	ePb	Pn	16 18 10.6	+1.3
LKR	Lokris	2.41	23	P	Pn	16 18 11.1	+0.5
LKR	Lokris	2.41	23	ePB	Pn	16 18 11.1	+0.5
LKR	Lokris	2.41	23	P	Pn	16 18 11.1	+0.5
ATAL	Atalanti	2.46	23	P	Pn	16 18 11.8	+0.5
ATAL	Atalanti	2.46	23	P	Pn	16 18 11.8	+0.5
EVR	Evrytania	2.47	1	P	Pn	16 18 12.9	+1.3
EVR	Evrytania	2.47	1	ePN	Pb	16 18 14.6	-1.1
EVR	Evrytania	2.47	1	P	Pn	16 18 12.9	+1.3
EVR	Evrytania	2.47	1	ePn	Pb	16 18 14.6	-1.1
LKD2	Lefkada island	2.51	340	P	Pn	16 18 14.5	+2.5
LKD2	Lefkada island	2.51	340	ePG	Pn	16 18 14.6	+2.5
LKD2	Lefkada island	2.51	340	P	Pn	16 18 14.5	+2.5
AGG	Agios Georgios	2.61	9	P	Pn	16 18 14.8	+1.3
AGG	Agios Georgios	2.61	9	ePN	Pn	16 18 16.2	+2.7
AGG	Agios Georgios	2.61	9	P	Pn	16 18 14.8	+1.3
AGG	Agios Georgios	2.61	9	ePn	Pn	16 18 16.2	+2.7
MRKA	Markates	2.68	32	P	Pn	16 18 14.8	+0.4
MRKA	Markates	2.68	32	P	Pn	16 18 14.8	+0.4
SIVA	Sivas	2.85	119	P	Pn	16 18 19.0	+2.4
SIVA	Sivas	2.85	119	P	Pn	16 18 19.0	+2.4
SKIA	Skiathos	3.03	26	P	Pn	16 18 19.4	+0.2
SKIA	Skiathos	3.03	26	P	Pn	16 18 19.4	+0.2
APE	Apeiranthos	3.08	77	P	Pn	16 18 20.9	+1.0
APE	Apeiranthos	3.08	77	ePN	Pn	16 18 21.1	+1.2
APE	Apeiranthos	3.08	77	ePn	Pn	16 18 21.1	+1.2
NEO	Neokhori	3.08	21	ePN	Pn	16 18 20.5	+0.6
NEO	Neokhori	3.08	21	ePn	Pn	16 18 20.5	+0.6
THL	Klokotos Trika	3.12	3	P	Pn	16 18 22.5	+2.1
THL	Klokotos Trika	3.12	3	ePN	Pn	16 18 22.3	+1.9
THL	Klokotos Trika	3.12	3	ePn	Pn	16 18 22.3	+1.9
XOR	Xorichti	3.13	21	P	Pn	16 18 20.9	+0.4
XOR	Xorichti	3.13	21	P	Pn	16 18 20.9	+0.4
AOS	Alonnisos	3.19	31	P	Pn	16 18 21.2	-0.2
AOS	Alonnisos	3.19	31	P	Pn	16 18 21.2	-0.2
LAST	Lasithi	3.27	112	P	Pn	16 18 24.1	+1.6
LAST	Lasithi	3.27	112	ePB	Pn	16 18 25.2	+2.7
LAST	Lasithi	3.27	112	P	Pn	16 18 24.1	+1.6
LAST	Lasithi	3.27	112	ePb	Pn	16 18 25.2	+2.7
IGT	Igoumenitsa	3.29	340	P	Pn	16 18 22.9	+0.1
IGT	Igoumenitsa	3.29	340	P	Pn	16 18 22.9	+0.1
JAN	Janina	3.29	347	ePN	Pn	16 18 24.0	+1.2
JAN	Janina	3.29	347	ePn	Pn	16 18 24.0	+1.2
NPS	Neapolis	3.33	110	ePN	Pn	16 18 24.8	+1.5
NPS	Neapolis	3.33	110	ePn	Pn	16 18 24.8	+1.5
KEK	Kerkira	3.62	335	ePN	Pn	16 18 27.9	+0.6
KEK	Kerkira	3.62	335	ePn	Pn	16 18 27.9	+0.6
LIT	Litokhoron	3.70	8	P	Pn	16 18 30.3	+1.9
LIT	Litokhoron	3.70	8	ePN	Pn	16 18 30.5	+2.1
LIT	Litokhoron	3.70	8	P	Pn	16 18 30.3	+1.9
KZN	Kozani	3.86	360	P	Pn	16 18 32.4	+1.8
KZN	Kozani	3.86	360	ePN	Pn	16 18 32.4	+1.8
KZN	Kozani	3.86	360	P	Pn	16 18 32.4	+1.8
CHOS	Chios island	3.92	59	ePN	Pn	16 18 32.5	+1.0
CHOS	Chios island	3.92	59	ePn	Pn	16 18 32.5	+1.0
NEST	Nestorio	4.01	352	P	Pn	16 18 34.5	+1.8
NEST	Nestorio	4.01	352	P	Pn	16 18 34.5	+1.8
PLG	Polygyros	4.14	18	ePN	Pn	16 18 36.1	+1.7
PLG	Polygyros	4.14	18	ePn	Pn	16 18 36.1	+1.7
FNA	Florina	4.35	356	P	Pn	16 18 38.6	+1.3
FNA	Florina	4.35	356	P	Pn	16 18 38.6	+1.3
LIA	Limnos Island	4.37	37	ePN	Pn	16 18 38.9	+1.3
LIA	Limnos Island	4.37	37	ePn	Pn	16 18 38.9	+1.3
KARP	Karpathos	4.46	100	ePN	Pn	16 18 40.5	+1.7
KARP	Karpathos	4.46	100	ePn	Pn	16 18 40.5	+1.7
GRG	Griva	4.54	6	P	Pn	16 18 41.2	+1.3
GRG	Griva	4.54	6	P	Pn	16 18 41.2	+1.3
SOH	Sokhos	4.54	15	ePN	Pn	16 18 42.2	+2.2
SOH	Sokhos	4.54	15	ePn	Pn	16 18 42.2	+2.2
LTBQ	Tobruq	4.72	157	iP	Pn	16 18 43.9	+1.5
	SNR=23						
LTBQ				eS	Sn	16 19 36.2	-1.1
	SNR=23						
KNT	Kendrikon	4.79	10	P	Pn	16 18 45.0	+1.6
KNT	Kendrikon	4.79	10	P	Pn	16 18 45.0	+1.6
SRS	Serrai	4.88	16	P	Pn	16 18 45.4	+0.8
SRS	Serrai	4.88	16	P	Pn	16 18 45.4	+0.8
VAY	Valandovo	4.91	7	ePn	Pn	16 18 46.0	+1.0
VAY	Valandovo	4.91	7	ePn	Pn	16 18 46.4	+1.4
NVR	Nevrokopi	5.16	18	ePN	Pn	16 18 51.3	+2.8
NVR	Nevrokopi	5.16	18	ePn	Pn	16 18 51.3	+2.8
MMB	Musomiste	5.36	16	P	Pn	16 18 53.4	+2.2
MMB	Musomiste	5.36	16	P	Pn	16 18 53.4	+2.2
LJBD	Adjabya	5.67	194	iP	Pn	16 18 58.4	+3.0
	SNR=23						
LJBD				eS	Sn	16 20 00.0	-0.7
	SNR=23						
RZN	Rozhen	5.72	23	P	Pn	16 18 58.3	+2.1
RZN	Rozhen	5.72	23	P	Pn	16 18 58.3	+2.1
VTS	Vitosha	6.24	10	⇓iP	Pn	16 19 06.8	+3.4
VTS	Vitosha	6.24	10	P	Pn	16 19 06.2	+2.8
VTS	Vitosha	6.24	10	P	Pn	16 19 06.2	+2.8
PGB	Panagyurishte	6.37	16	eP	Pn	16 18 59.5	-5.7
MPEP	Malo Peshtene	7.07	12	eP	Pn	16 19 18.6	+4.0
STON	Ston	7.15	335	ePn	Pn	16 19 13.6	-2.2
STON				Sn	Sn	16 20 31.4	-5.7
SZH	Strazhica	7.53	24	eP	Pn	16 19 08.8	-12
GZR	Gura Zlata	8.97	5	⇓iP	Pn	16 19 44.2	+3.4
GZR	Gura Zlata	8.97	5	⇓iP	Pn	16 19 44.2	+3.4
ARR	Arges	9.18	13	⇑iP	Pn	16 19 42.0	-1.6
MLR	Muntele Rosu	9.57	18	⇑iP	Pn	16 19 51.5	+2.4
MLR	Muntele Rosu	9.57	18	Pn	Pn	16 19 51.3	+2.2
	0.0nm,0.3s,baz=145,slow=18,SNR=3.2						
MLR	Muntele Rosu	9.57	18	⇑iP	Pn	16 19 51.5	+2.4
NVLJ	Novalja	9.66	329	ePn	Pn	16 19 49.0	-1.3
NVLJ				Sn	Sn	16 21 31.9	-7.0
BRTR	Keskin Array B	9.91	67	Pn	Pn	16 19 57.5	+3.7
	0.1nm,0.3s,baz=249,slow=13,SNR=7.6						
KEST	Kesra	10.09	270	Pn	Pn	16 19 55.7	-0.4
	0.1nm,0.3s,baz=111,slow=14,SNR=6.0						
KEST				Sn	Sn	16 21 47.1	-2.4
	0.0nm,0.3s,baz=53,slow=20,SNR=3.8						
PLOR	Plostina	10.09	20	⇓iP	Pn	16 19 59.1	+3.0
PLOR	Plostina	10.09	20	⇓iP	Pn	16 19 59.1	+3.0
VRI	Vrincioaia	10.13	20	⇓iP	Pn	16 19 59.5	+2.9
VRI	Vrincioaia	10.13	20	⇓iP	Pn	16 19 59.5	+2.9
PGF	Pioggiola	11.60	306	eP	Pn	16 20 19.3	+2.5
	20nm,1.2s						
PGF	Pioggiola	11.60	306	eP	Pn	16 20 19.3	+2.5
	9.9nm,1.2s						
MMAI	Mount Meron Ar	11.72	103	Pn	Pn	16 20 14.2	-4.2
	0.1nm,0.3s,baz=281,slow=15,SNR=1.9						
MMAI				Sn	Sn	16 22 21.8	-7.7
	1.3nm,0.3s,baz=308,slow=24,SNR=3.3						
VYHS	Vyhne	12.24	351	ePN	Pn	16 20 25.0	-0.5
VYHS	Vyhne	12.24	351	eSN	Sn	16 22 37.4	-4.6
VYHS	Vyhne	12.24	351	ePn	Pn	16 20 25.0	-0.5
KOLS	Kolonicke sedl	12.49	2	ePN	Pn	16 20 34.4	+5.5
EIL	Elat	12.94	118	Sn	Sn	16 22 52.9	-6.4
	0.5nm,0.3s,baz=323,slow=20,SNR=4.0						
SBF	Sospel	13.23	308	eP	Pn	16 20 41.8	+2.7
SBF	Sospel	13.23	308	eP	Pn	16 20 41.8	+2.7
FRF	La Foret Royal	13.60	306	eP	Pn	16 20 46.1	+2.1
	22nm,1.3s						
FRF	La Foret Royal	13.60	306	eP	Pn	16 20 46.1	+2.1
	11nm,1.3s						
GERES	GERESS Array B	13.74	337	Pn	Pn	16 20 45.6	-0.3
	0.1nm,0.3s,baz=151,slow=12,SNR=3.7						
GERES				Sn	Sn	16 23 08.2	-11
	0.1nm,0.3s,baz=155,slow=24,SNR=3.7						
MBDF	Montbardon	14.07	311	eP	Pn	16 20 52.4	+1.7
	8.3nm,0.9s						
LPG	La Plagne	14.50	313	eP	Pn	16 20 59.5	+2.9
	8.2nm,1.1s						
AKASG	Malin Array Be	15.23	18	Pn	Pn	16 21 01.3	-4.8
	0.6nm,0.3s,baz=208,slow=12,SNR=3.7						
VIVF	Saint-Julien-l	15.45	308	eP	Pn	16 21 10.1	+1.0
CABF	La Chapelle	15.51	316	eP	Pn	16 21 11.0	+1.1
HINF	Hinteralfeld	15.84	320	eP	Pn	16 21 17.5	+3.4
	7.3nm,0.7s						
HINF	Hinteralfeld	15.84	320	eP	Pn	16 21 17.5	+3.4
	3.7nm,0.7s						
CDF	Champ du Feu	16.02	323	eP	Pn	16 21 18.3	+1.7
	5.5nm,0.7s						
HAU	Haudompre	16.22	320	eP	Pn	16 21 21.5	+2.5
HAU				eR			
	104nm,18.2s						
HAU	Haudompre	16.22	320	eP	Pn	16 21 21.5	+2.5
SMF	Signal de Mont	16.82	313	eP	Pn	16 21 27.4	+0.7
	5.2nm,0.8s						
SFTF	Sexfontaines	17.03	319	eP	Pn	16 21 30.9	+1.6
SFTF	Sexfontaines	17.03	319	eP	Pn	16 21 30.9	+1.6
LOR	Lormes	17.14	315	eP	Pn	16 21 32.0	+1.3
LOR				eR			
	103nm,17.8s						
LOR	Lormes	17.14	315	eP	Pn	16 21 32.0	+1.3
CAF	Calviac	17.16	306	eP	Pn	16 21 31.0	0.0
AVF	Avril sur Loir	17.19	313	eP	Pn	16 21 32.6	+1.3
	3.8nm,0.8s						
AVF	Avril sur Loir	17.19	313	eP	Pn	16 21 32.6	+1.3
	1.9nm,0.8s						
MEZF	Maizieres J'vi	17.20	320	eP	Pn	16 21 34.2	+2.7
	13nm,0.9s						
MEZF	Maizieres J'vi	17.20	320	eP	Pn	16 21 34.2	+2.7
	6.7nm,0.9s						
SSF	Saint Saulge	17.23	314	eP	Pn	16 21 33.4	+1.5
SSF	Saint Saulge	17.23	314	eP	Pn	16 21 33.4	+1.5
KBZ	Khabaz	17.70	59	Pn	Pn	16 21 36.2	-1.4
	0.1nm,0.3s,baz=249,slow=19,SNR=2.5						
KBZ				LR	LR	16 30 31.0	
	comp=Z,83nm,19.1s,baz=243,slow=44						
ETSF	Etsaut	18.34	297	eP	Pn	16 21 45.5	-0.2
	8.0nm,0.9s						
ETSF	Etsaut	18.34	297	eP	Pn	16 21 45.5	-0.2
	4.0nm,0.9s						
GIVF	Givet	18.35	323	eP	Pn	16 21 47.0	+1.4
GIVF	Givet	18.35	323	eP	Pn	16 21 47.0	+1.4
BAIF	Baives	18.62	322	eP	P	16 21 50.2	+1.6
BAIF	Baives	18.62	322	eP	P	16 21 50.2	+1.6
SJPF	Ste Jean	18.86	298	eP	P	16 21 51.8	+0.4
	12nm,0.7s						
SJPF	Ste Jean	18.86	298	eP	P	16 21 51.8	+0.4
	6.1nm,0.7s						
MFF	Saint Martin d	19.24	309	eP	P	16 21 56.9	+1.4
	16nm,1.3s						
MFF	Saint Martin d	19.24	309	eP	P	16 21 56.9	+1.4
	8.1nm,1.3s						
LDF	La Druitiere	20.12	314	eP	P	16 22 03.7	-1.4
	16nm,1.1s						
FLN	La Foliniere	20.41	314	eP	P	16 22 07.4	-0.8
FLN				eR			
	98nm,19.8s						
FLN	La Foliniere	20.41	314	eP	P	16 22 07.4	-0.8
GRR	Gorron	20.45	313	eP	P	16 22 10.4	+1.7
	14nm,1.0s						
GRR	Gorron	20.45	313	eP	P	16 22 10.4	+1.7
	6.8nm,1.0s						
ESDC	Sonseca Array	20.50	287	P	P	16 22 07.4	-2.0
	0.7nm,0.7s,baz=85,slow=11,SNR=9.5						
ESDC				LR	LR	16 30 23.6	
	comp=Z,45nm,19.1s,baz=175,slow=38						
QUIF	Quistinic	21.65	310	eP	P	16 22 22.4	+0.8
QUIF	Quistinic	21.65	310	eP	P	16 22 22.4	+0.8
ROSF	Rostrenen	21.89	311	eP	P	16 22 24.3	+0.2
ROSF	Rostrenen	21.89	311	eP	P	16 22 24.3	+0.2
MDT	Midelt	21.99	268	P	P	16 22 24.6	-1.0
	1.3nm,0.6s,baz=91,slow=13,SNR=5.1						
MDT				LR	LR	16 32 51.9	
	comp=Z,54nm,18.7s,baz=120,slow=42						
MIB	Mutribah	22.37	100	eP	P	16 22 27.5	-2.0
MIB				AMb	AMB	16 22 31.9	
	comp=Z,22nm,0.9s						
NAY	Al-Naaiem	22.52	101	eP	P	16 22 29.1	-2.1
NAY				AMb	AMB	16 22 33.1	
	comp=Z,12nm,1.3s						
RDF	Al-Radifah	22.91	102	eP	P	16 22 33.0	-2.2
HFS	Hagfors	24.27	350	P	P	16 22 45.9	-2.4
	comp=Z,2.5nm,0.4s,baz=156,slow=11,SNR=30						
HFS				LR	LR	16 33 54.9	
	comp=Z,63nm,18.1s,baz=148,slow=41						
FINES	FINESS Array B	25.17	5	P	P	16 22 54.9	-1.5
	comp=Z,2.9nm,0.6s,baz=152,slow=10,SNR=20						
FINES				LR	LR	16 33 09.1	
	comp=Z,76nm,20.5s,baz=319,slow=37						
EKA	Eskdalemuir Ar	25.42	326	P	P	16 22 57.0	-1.7
	comp=Z,1.8nm,0.6s,baz=128,slow=8.9,SNR=9.2						
NB2	NORSAR Subarra	25.52	348	P	P	16 22 58.3	-1.3
	comp=Z,0.9nm,0.5s,baz=153,slow=10						
NB2	NORSAR Subarra	25.52	348	P	P	16 22 58.3	-1.3
	comp=Z,0.9nm,0.5s,SNR=9.4						
NOA	NORSAR Array B	25.52	348	P	P	16 22 58.1	-1.5
	comp=Z,1.0nm,0.6s,baz=156,slow=9.2,SNR=8.9						
NOA				LR	LR	16 33 10.1	
	comp=Z,56nm,20.9s,baz=225,slow=37						
KAF	Kangasniemi	25.85	5	ep	P	16 23 00.5	-2.1
	comp=Z,3.7nm,0.7s						
JOF	Joensuu	27.15	10	ep	P	16 23 11.3	-3.0
	comp=Z,1.5nm,0.5s						
TORD	Torodi Ar. Bea	29.38	223	P	P	16 23 34.2	-0.4
	comp=Z,2.0nm,0.6s,baz=31,slow=9.0,SNR=19						
TORD				LR	LR	16 35 19.3	
	comp=Z,45nm,18.3s,baz=30,slow=36						
AKTO	Aktyubinsk	29.47	50	LR	LR	16 38 02.4	
	comp=Z,38nm,20.9s,baz=269,slow=42						
ARCES	ARCESS Array B	33.21	2	P	P	16 24 07.0	-0.9
	comp=Z,3.5nm,0.7s,baz=188,slow=7.4,SNR=9.5						
ARCES				LR	LR	16 38 29.2	
	comp=Z,70nm,18.2s,baz=197,slow=38						
BVAR	Borovoye Array	37.50	48	P	P	16 24 43.7	-1.2
	comp=Z,0.7nm,0.6s,baz=260,slow=8.3,SNR=5.0						
BVAR				LR	LR	16 43 38.2	
	comp=Z,46nm,21.9s,baz=351,slow=42						
DBIC	Dimbokro	38.35	226	P	P	16 24 51.7	-0.8
	comp=Z,2.9nm,0.7s,baz=21,slow=8.8,SNR=6.6						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC				LR	LR	16 41 52.4	
	comp=Z,46nm,18.8s,baz=232,slow=38						
LIC	Lamto	38.81	226	eP	P	16 24 50.5	-5.8
	comp=Z,7.5nm,0.7s						
MKAR	Makanchi Array	45.38	57	P	P	16 25 47.8	-1.9
	comp=Z,0.9nm,0.4s,baz=270,slow=7.6,SNR=32						
ZALV	Zalesovo Beam	46.12	47	P	P	16 25 52.8	-2.6
	comp=Z,0.9nm,0.3s,baz=274,slow=8.2,SNR=5.5						
PYUN	Piuthan	51.67	81	eP	P	16 26 36.9	-1.8
	comp=Z,17nm,0.8s						
DANN	Dangsing	52.17	80	eP	P	16 26 40.9	-1.6
	comp=Z,22nm,0.6s						
KOLN	Koldanda	52.30	81	eP	P	16 26 41.7	-1.6
	comp=Z,5.5nm,0.6s						
DMN	Daman	53.57	80	eP	P	16 26 51.6	-1.2
	comp=Z,14nm,0.7s						
KKN	Kakani	53.63	80	eP	P	16 26 51.6	-1.6
GUN	Gumba	54.05	80	eP	P	16 26 55.2	-1.2
RAMN	Ramite	55.05	80	eP	P	16 27 01.5	-2.1
	comp=Z,20nm,1.1s						
ODAN	Odare	55.72	80	eP	P	16 27 06.8	-1.6
TAPN	Taplejung	55.75	79	eP	P	16 27 06.5	-2.2
SONM	Songino Array	60.79	50	P	P	16 27 40.4	-3.1
	comp=Z,0.1nm,0.5s,baz=286,slow=7.1,SNR=3.0						
LBTB	Lobatse	61.23	176	LR	LR	16 56 57.9	
	comp=Z,64nm,18.6s,baz=106,slow=39						
BOSA	Boshof	64.79	177	LR	LR	16 58 14.4	
	comp=Z,67nm,19.6s,baz=352,slow=38						
SUR	Sutherland	68.47	181	LR	LR	17 01 26.2	
	comp=Z,63nm,19.0s,baz=74,slow=38						
CMAR	Chiang Mai Arr	69.14	82	P	P	16 28 34.7	-3.3
	comp=Z,0.6nm,0.7s,baz=306,slow=8.5,SNR=6.9						
YKA	Yellowknife Ar	75.36	341	P	P	16 29 13.1	-1.4
	comp=Z,0.3nm,0.5s,baz=32,slow=5.2,SNR=10.0						
ILAR	Eielson Array	78.73	355	P	P	16 29 32.2	-1.2
	comp=Z,0.2nm,0.6s,baz=357,slow=2.7,SNR=3.7						
KSRS	Korea Array	79.65	51	P	P	16 29 36.1	-2.8
	comp=Z,1.2nm,0.5s,baz=307,slow=4.6,SNR=12						
BDFB	Brasilia	83.69	245	LR	LR	17 07 37.9	
	comp=Z,68nm,18.2s,baz=343,slow=36						
WRA	Warramunga Arr	119.44	94	PKP	PKPdf	16 36 18.6	-2.8
	comp=Z,0.4nm,0.8s,baz=319,slow=1.3,SNR=4.3						
ASAR	Alice Springs	120.97	98	PKP	PKPdf	16 36 22.1	-2.2
	comp=Z,0.3nm,0.6s,baz=314,slow=1.8,SNR=7.6						

IDC 05 16:33:10.7±1.8, 56°.59N×34°.20W, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.3/32, mbtmp3.7/4, MS3.2/2, Ms1 3.1/2, ms1mx2.6/36, Error ellipse: s-maj=55.2km s-min=31.5km az=53.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	Schefferville	18.38	278	LR	LR	16 42 41.5	
	comp=Z,96nm,20.1s,baz=30,slow=31						
GERES	GERESS Array B	29.50	85	LR	LR	16 48 41.5	
	comp=Z,35nm,21.3s,baz=79,slow=32						
ILAR	Eielson Array	48.61	328	P	P	16 41 55.5	+0.1
	0.6nm,0.9s,baz=37,slow=7.3,SNR=7.4						
TORD	Torodi Ar. Bea	51.33	133	P	P	16 42 16.6	0.0
	1.1nm,0.9s,baz=341,slow=7.6,SNR=7.1						
BVAR	Borovoye Array	54.57	46	P	P	16 42 40.3	+0.1
	1.1nm,0.8s,baz=318,slow=6.0,SNR=7.5						
MKAR	Makanchi Array	64.17	43	P	P	16 43 46.4	-0.2
	0.5nm,0.8s,baz=325,slow=6.2,SNR=4.9						
ASAR	Alice Springs	145.98	20	PKPbc	PKPdf	16 52 50.8	-0.5
	0.5nm,0.8s,baz=357,slow=1.9,SNR=5.2						

IDC 05 16:44:02.1±9.8, 39°.38N×141°.47E, h0km, mb3.8/4, mb1 3.7/5, mb1mx3.4/26, mbtmp3.7/5, ML2.8/1, Error ellipse: s-maj=188.3km s-min=41.8km az=100.0

ISCJB 05 16:44:06.4±0.8, 38°.81N±0°.04×141°.69E±0°.09, h80km±4km, mb3.7/4, Error ellipse: s-maj=11.5km s-min=6.1km az=17.7

JMA 05 16:44:08.0, 38°.79N×141°.61E, h73km±1km, M3.4 Broadband fault plane solution: P waves. NP1: φs200.00000°, δ76.00000°, λ70.00000°. NP2: φs76.00000°, δ24.00000°, λ143.00000°. Principal axes: T Plg55.0000°, Azm85.0000°; N Plg19.0000°, Azm205.0000°; P Plg28.0000°, Azm306.0000°;

JMA Felt I J1.

ISC 05 16:44:07.1±1.1, 38°.80N±0°.04×141°.72E±0°.08, h76km±7km, n17, σ0s.70/29, mb3.8/4, 6C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.28	351	⇑P	Pn	16 44 19.6	+0.8
OFUJ				S	Sn	16 44 27.9	+0.5
JMK	Ichinoseki	0.42	291	P	Pn	16 44 19.8	+0.1
JMK				S	Sn	16 44 28.4	-0.7
JIO	Ouri	0.45	220	⇑P	Pn	16 44 20.2	+0.2
JIO				S	Sn	16 44 28.8	-0.7
JOM	Ohasama	0.75	334	⇑P	Pn	16 44 23.5	+0.5
JOM				S	Sn	16 44 34.7	0.0
JOU	Okura	0.94	243	⇑P	Pn	16 44 25.1	-0.1
JOU				S	Sn	16 44 38.0	-0.6
JRG	Rokugo	1.04	305	⇑P	Pn	16 44 26.5	+0.2
JRG				S	Sn	16 44 40.2	-0.5
JYK	Kaneyama	1.07	277	P	Pn	16 44 26.7	-0.1
JYK				eS	Sn	16 44 40.9	-0.6
JMM	Marumori	1.19	218	⇑P	Pn	16 44 27.9	-0.3
JMM				S	Sn	16 44 42.6	-1.4
JYS	Shirataka	1.42	247	P	Pn	16 44 31.5	+0.2
JYS				S	Sn	16 44 49.3	-0.2
JFK	Kawauchi	1.58	205	P	Pn	16 44 33.6	+0.2
JFK				S	Sn	16 44 52.6	-0.6
JYA	Atsumi	1.59	263	P	Pn	16 44 33.5	+0.1
JYA				S	Sn	16 44 52.8	-0.5
MJAR	Matsushiro Arr	3.59	232	Pn	Pn	16 45 02.1	+1.8
	0.7nm,0.3s,baz=38,slow=11,SNR=20						
ASAJ	Asahikawa	5.35	7	Pn	Pn	16 45 24.3	-0.1
	0.7nm,0.3s,baz=198,slow=20,SNR=7.7						
ASAJ				Sn	Sn	16 46 23.0	-1.6
	0.2nm,0.3s,baz=149,slow=5.9,SNR=2.5						
SONM	Songino Array	27.04	301	P	P	16 49 42.1	-0.1
	0.2nm,0.5s,baz=106,slow=9.4,SNR=2.8						
ZALV	Zalesovo Beam	40.93	311	P	P	16 51 41.5	-0.3
	1.1nm,0.6s,baz=82,slow=7.1,SNR=7.2						
MKAR	Makanchi Array	43.41	301	P	P	16 52 02.9	+0.7
	7.9nm,0.8s,baz=86,slow=9.9,SNR=72						
BVAR	Borovoye Array	49.58	311	P	P	16 52 50.1	-0.2
	0.4nm,0.5s,baz=79,slow=7.5,SNR=3.1						

IDC 05 16:44:18.2±4.7, 22°.02S×173°.90W, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/21, mbtmp3.8/4, Error ellipse: s-maj=213.3km s-min=33.5km az=149.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	37.17	265	P	P	16 51 31.4	+0.3
	10.0nm,1.1s,baz=89,slow=7.3,SNR=6.6						
ASAR	Alice Springs	47.91	257	P	P	16 52 58.4	-0.3
	0.3nm,0.5s,baz=94,slow=8.7,SNR=14						
WRA	Warramunga Arr	48.19	262	P	P	16 53 00.6	-0.2
	1.1nm,0.5s,baz=101,slow=8.3,SNR=26						
ILAR	Eielson Array	89.00	11	P	P	16 57 14.5	+0.1
	0.2nm,0.9s,baz=190,slow=4.6,SNR=2.5						
BRTR	Keskin Array B	150.68	313	PKPbc	PKPbc	17 04 12.1	-0.6
	0.2nm,0.6s,baz=52,slow=3.8,SNR=2.5						

IDC 05 16:47:02.5±0.5, 31°.82N×104°.23E, h0km, mb4.2/29, mb1 4.3/31, mb1mx4.3/36, mbtmp4.2/31, ML3.8/2, MS3.8/21, Ms1 3.9/21, ms1mx3.6/51, Error ellipse: s-maj=14.4km s-min=10.8km az=52.0

ISCJB 05 16:47:03.4±0.2, 31°.80N±0°.02×104°.22E±0°.03, h15km, mb4.5/70, MS3.8/23, Error ellipse: s-maj=4.2km s-min=3.1km az=16.6

BJI 05 16:47:03.9, 31°.86N×104°.26E, h9km, mB4.6/13, mb4.5/22, ML4.5/18, Ms4.5/25, Ms7 4.3/23

DJA 05 16:47:03.9±0.4, 32°N±4°×10°4E±°, h10km, M4.6/9, mB5.5/1, mb4.6/9, Mw(mB)5.0/1

MOS 05 16:47:08.2±2.5, 31°.80N×104°.30E, h33km, mb4.9/34, MS4.0/5, Error ellipse: s-maj=8.9km s-min=4.8km az=107.0

NEIC 05 16:47:08.2±0.5, 31°.81N×104°.30E, h37km±5km, mb4.7/29, Error ellipse: s-maj=4.9km s-min=3.5km az=76.0

ISC 05 16:47:05.3±0.3, 31°.82N±0°.03×104°.19E±0°.04, h15km, n253, σ1s.16/261, mb4.6/70, MS3.9/23, 9C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.98	202	Pg	Pb	16 47 23.6	-0.4
CD2				Sg	Sn	16 47 37.8	-0.4
CD2				smax	smax		
	comp=N,15µm,0.7s						
CD2				smax	smax		
	comp=E,18µm,0.7s						
LZH	Lanzhou	4.27	356	Pn	Pn	16 48 12.3	+2.4
LZH				Sn	Sn	16 49 01.0	+1.5
LZH				Sg	Sg	16 49 20.4	-1.9
LZH				smax	smax		
	comp=N,1µm,1.1s						
LZH				smax	smax		
	comp=E,1µm,1.0s						
LZH				LR	LR		
	comp=N,10µm,8.0s						
LZH				LR	LR		
	comp=E,9µm,7.8s						
LZH				LR	LR		
	comp=Z,9µm,8.5s						
LZH	Lanzhou	4.27	356	P	Pn	16 48 12.3	+2.4
LZH						16 49 01.0	
LZH	Lanzhou	4.27	356	Pn	Pn	16 48 12.3	+2.4
LZH				Pg	Pg	16 48 24.8	-2.2
LZH				Sn	Sn	16 49 01.0	+1.5
LZH				Sg	Sg	16 49 20.4	-1.9
XAN	Xi'an	4.55	60	Pn	Pn	16 48 13.3	-0.4
XAN				Sn	Sn	16 49 01.9	-4.4
XAN				Sg	Sb	16 49 20.9	+1.3
XAN				smax	smax		
	comp=N,900nm,0.8s						
XAN				smax	smax		
	comp=E,620nm,0.6s						
KMI	Kunming	6.79	191	Pn	Pn	16 48 45.8	+1.2
KMI				Sn	Sn	16 50 01.4	-0.4
KMI				smax	smax		
	comp=N,140nm,1.6s						
KMI				smax	smax		
	comp=E,130nm,1.6s						
KMI				LR	LR		
	comp=N,3µm,9.0s						
KMI				LR	LR		
	comp=E,2µm,7.5s						
KMI				LR	LR		
	comp=Z,2µm,11.6s						
KMI	Kunming	6.79	191	P	Pn	16 48 45.8	+1.2
KMI						16 50 01.4	
KMI	Kunming	6.79	191	Pn	Pn	16 48 45.8	+1.2
KMI				Sn	Sn	16 50 01.4	-0.4
GTA	Gaotai	8.37	336	⇓P	Pn	16 49 07.5	+1.3
GTA				pP	pP	16 49 10.8	
GTA				sP	sP	16 49 13.5	
GTA				S	Sn	16 50 41.8	+1.3
GTA				sS	sS	16 50 46.8	
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,52nm,4.5s						
GTA				LR	LR		
	comp=N,3µm,9.7s						
GTA				LR	LR		
	comp=E,2µm,11.4s						
GTA				LR	LR		
	comp=Z,3µm,10.5s						
WHN	Wuhan	8.79	96	P	Pn	16 49 12.5	+0.6
WHN				pP		16 49 15.9	
WHN				S	Sn	16 50 47.0	-3.7
WHN				LR	LR		
	comp=Z,3µm,6.1s						
BTO	Baotou	9.95	27	eP	Pn	16 49 27.9	+0.1
LSA	Lhasa	11.42	263	P	Pn	16 49 51.0	+2.7
LSA				LR	LR		
	comp=N,680nm,15.8s						
LSA				LR	LR		
	comp=E,330nm,11.8s						
TIA	Tai'an	11.59	64	P	Pn	16 49 53.2	+3.0
TIA				LR	LR		
	comp=N,670nm,11.7s						
TIA				LR	LR		
	comp=E,530nm,8.8s						
TIA				LR	LR		
	comp=Z,540nm,8.3s						
GZH	Guangzhou	11.90	135	P	Pn	16 49 50.9	-3.5
GZH				S	Sn	16 51 53.6	-13
GZH				LR	LR		
	comp=N,980nm,10.2s						
GZH				LR	LR		
	comp=E,1µm,11.0s						
NJ2	Nanjing	12.46	85	eP	Pn	16 50 05.1	+3.1
NJ2				S	Sn	16 52 26.0	+5.4
NJ2				pmax	pmax		
	comp=Z,40nm,0.5s						
NJ2				LR	LR		
	comp=N,360nm,11.8s						
NJ2				LR	LR		
	comp=E,2µm,13.6s						
NJ2				LR	LR		
	comp=Z,150nm,11.5s						
SHL	Shillong	12.47	243	eP	Pn	16 50 03.0	+0.6
QIZ	Qiongzhong	13.71	157	P	P	16 50 28.1	+0.2
QIZ				S	S	16 53 05.4	-8.7
QIZ				LR	LR		
	comp=N,1µm,6.9s						
QIZ				LR	LR		
	comp=Z,2µm,7.1s						
CHTO	Chiang Mai	13.79	201	eP	Pn	16 50 21.1	+0.8
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CHTO	Chiang Mai	13.79	201	eP	Pn	16 50 21.1	+0.8
	comp=Z,9.9nm,0.6s						
CHTO	Chiang Mai	13.79	201	P	Pn	16 50 17.2	-3.1
	comp=Z,21nm,0.8s						
CMMT	Chiang Mai	13.79	201	P	Pn	16 50 17.5	-2.8
CM31	Chiang Mai Arr	14.12	201	eP	Pn	16 50 26.7	+1.8
	comp=Z,23nm,0.6s						
CMAR	Chiang Mai Arr	14.12	201	Pn	Pn	16 50 25.9	+1.0
CMAR				Lg	Lg	16 54 32.6	
CMAR	Chiang Mai Arr	14.12	201	Pn	Pn	16 50 25.9	+1.0
	comp=Z,0.2nm,0.3s,baz=9.9,slow=10,SNR=30						
CMAR				Lg	Lg	16 54 32.6	
	comp=Z,0.0nm,0.3s,baz=7.1,slow=30,SNR=2.8						
CMAR				LR	LR	16 56 43.2	
	comp=Z,143nm,20.3s,baz=20,slow=41						
SSE	Sheshan	14.53	88	P	Pn	16 50 33.5	+3.2
SSE				S	Sn	16 53 15.4	+4.3
SSE				pmax	pmax		
	comp=Z,12nm,1.0s						
SSE				pmax	pmax		
	comp=Z,83nm,6.0s						
SSE				LR	LR		
	comp=N,1µm,13.7s						
SSE				LR	LR		
	comp=E,400nm,13.7s						
SSE				LR	LR		
	comp=Z,750nm,9.2s						
TAPN	Taplejung	15.01	257	eP	Pn	16 50 37.5	+0.3
ODAN	Odare	15.46	256	eP	Pn	16 50 41.5	-1.6
	comp=Z,66nm,1.1s						
RAMN	Ramite	16.08	257	eP	Pn	16 50 50.2	-0.9
SONM	Songino Array	16.09	5	Pn	Pn	16 50 50.2	-0.7
SONM				Lg	Lg	16 55 31.7	
SONM	Songino Array	16.09	5	Pn	Pn	16 50 50.2	-0.7
	comp=Z,0.2nm,0.3s,baz=188,slow=11,SNR=40						
SONM				Lg	Lg	16 55 31.7	
	comp=Z,0.1nm,0.3s,baz=192,slow=28,SNR=2.9						
SONM				LR	LR	16 57 37.1	
	comp=Z,781nm,18.1s,baz=183,slow=40						
ULN	Ulaanbaatar	16.18	7	eP	Pn	16 50 51.1	-1.0
	comp=Z,11nm,1.0s						
ULN	Ulaanbaatar	16.18	7	P	Pn	16 50 48.9	-3.2
	comp=Z,14nm,1.5s						
GUN	Gumba	16.36	261	eP	Pn	16 50 54.5	-0.2
	comp=Z,61nm,0.8s						
PKI	Pulchoki	16.86	260	eP	Pn	16 50 59.5	-1.6
PKIN	Phulchoki	16.87	260	eP	Pn	16 51 00.1	-1.0
KKN	Kakani	16.90	261	eP	Pn	16 51 01.1	-0.4
DMN	Daman	17.10	261	eP	Pn	16 51 02.8	-1.3
	comp=Z,74nm,1.0s						
WMQ	Urumqi	17.67	317	P	Pn	16 51 10.8	0.0
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
SRDT	SRDT	18.00	196	P	P	16 51 15.4	0.0
DANN	Dangsing	18.02	264	eP	Pn	16 51 14.1	-1.4
KOLN	Koldanda	18.32	263	eP	Pn	16 51 17.5	-1.6
	comp=Z,33nm,0.9s						
ZAK	Zakamensk	18.56	358	⇑iP	Pn	16 51 21.9	+0.1
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
PYUN	Piuthan	18.74	264	eP	P	16 51 22.9	-0.9
	comp=Z,110nm,1.0s						
CHBT	CHBT	19.05	186	P	P	16 51 27.2	+0.2
TLY	Talaya	19.85	359	eP	Pn	16 51 36.4	-0.8
TLY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TLY				MLR	MLR		
	comp=Z,530nm,11.0s						
TLY	Talaya	19.85	359	eP	Pn	16 51 37.8	+0.6
	comp=Z,36nm,1.6s						
MOY	Mondy	19.97	354	eP	Pn	16 51 39.2	+0.5
MOY				pmax	pmax		
	comp=Z,40nm,2.1s						
KSAR	Wonju Array Be	20.27	67	P	P	16 51 40.2	0.0
KSAR				Lg	Lg	16 57 41.0	
KSRS	Korea Array	20.30	67	P	P	16 51 40.2	-0.3
	comp=Z,6.9nm,0.8s,baz=256,slow=10,SNR=22						
KSRS				Lg	Lg	16 57 41.0	
	comp=Z,0.6nm,1.0s,baz=276,slow=35,SNR=2.5						
KSRS				LR	LR	16 59 27.3	
	comp=Z,74nm,18.1s,baz=149,slow=37						
IRK	Irkutsk	20.41	0	eP	Pn	16 51 43.1	-0.7
IRK				pmax	pmax		
	comp=Z,63nm,1.9s						
CIT	Chita	21.32	16	eP	P	16 51 52.2	+0.7
CIT				e		16 52 08.0	
CIT				pmax	pmax		
	comp=Z,59nm,1.6s						
DDI	Dehra Dun	22.42	273	ex	P	16 52 05.0	+1.4
MKAR	Makanchi Array	22.50	318	P	P	16 52 05.4	+1.3
MKAR	Makanchi Array	22.50	318	P	P	16 52 05.4	+1.3
MKAR	Makanchi Array	22.50	318	P	P	16 52 05.4	+1.3
	comp=Z,7.6nm,0.8s,baz=92,slow=8.1,SNR=73						
MKAR				LR	LR	17 01 51.8	
	comp=Z,465nm,19.7s,baz=154,slow=40						
JNU	Nakatsue	22.54	80	LR	LR	17 01 55.2	
	comp=Z,93nm,21.8s,baz=294,slow=40						
MDJ	Mudanjiang	23.59	50	P	P	16 52 18.6	+3.3
MDJ				pmax	pmax		
	comp=Z,27nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,75nm,4.2s						
USRK	Ussuriysk Arra	25.03	52	P	P	16 52 29.3	+0.7
	comp=Z,8.4nm,0.7s,baz=256,slow=12,SNR=9.1						
TKM2	Tokmak 2	25.17	304	eP	P	16 52 32.2	+2.0
TKM2				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TKM2	Tokmak 2	25.17	304	eP	P	16 52 32.2	+2.0
	comp=Z,7.7nm,1.1s						
AAK	Ala-Archa	25.87	303	eP	P	16 52 40.0	+3.4
AAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
AAK	Ala-Archa	25.87	303	eP	P	16 52 38.0	+1.4
	comp=Z,39nm,1.3s						
AAK	Ala-Archa	25.87	303	P	P	16 52 35.0	-1.5
	comp=Z,0.3nm,0.3s,baz=79,slow=18,SNR=2.3						
AAK				LR	LR	17 04 50.7	
	comp=Z,217nm,21.0s,baz=324,slow=41						
ZALV	Zalesovo Beam	26.11	334	P	P	16 52 38.5	+0.1
ZALV	Zalesovo Beam	26.11	334	P	P	16 52 38.5	+0.1
ZALV	Zalesovo Beam	26.11	334	P	P	16 52 38.5	+0.1
	comp=Z,4.7nm,0.7s,baz=129,slow=9.4,SNR=26						
KURBB	Kurchatov Arra	26.72	322	LR	LR	17 04 09.6	
	comp=Z,292nm,19.8s,baz=110,slow=38						
KURK	Kurchatov	26.72	322	eP	P	16 52 45.1	+1.2
KURK				pmax	pmax		
	comp=Z,13nm,1.2s						
KURK	Kurchatov	26.72	322	eP	P	16 52 45.0	+1.0
	comp=Z,10nm,1.0s						
KLR	Kul'dur	27.01	42	eP	P	16 52 46.0	-0.5
KLR				pmax	pmax		
	comp=E,28nm,1.6s						
KLR				pmax	pmax		
	comp=Z,40nm,1.6s						
MJAR	Matsushiro Arr	28.44	71	P	P	16 52 58.0	-1.6
MJAR	Matsushiro Arr	28.44	71	P	P	16 52 58.0	-1.6
	comp=Z,0.5nm,0.6s,baz=279,slow=11,SNR=4.0						
PSI	Prapat	29.29	191	P	P	16 53 06.7	-0.6
PSI	Prapat	29.29	191	P	P	16 53 06.7	-0.6
	comp=Z,2.2nm,0.5s,baz=274,slow=20,SNR=4.6						
PSI				LR	LR	17 05 29.2	
	comp=Z,189nm,19.6s,baz=177,slow=38						
JHJ	Hachijo jima 2	29.97	78	LR	LR	17 06 16.4	
	comp=Z,122nm,18.5s,baz=15,slow=38						
SBUM	Sibu	30.18	164	P	P	16 53 12.8	-2.2
	comp=Z,10nm,1.4s						
DAV	Davao City (W)	31.69	136	LR	LR	17 07 25.3	
	comp=Z,137nm,20.7s,baz=272,slow=39						
BVAR	Borovoye Array	32.28	321	P	P	16 53 33.5	+0.2
BVAR						16 56 20.7	
BVAR	Borovoye Array	32.28	321	P	P	16 53 33.5	+0.2
BVAR				PcP	PcP	16 56 20.7	-0.5
BVAR	Borovoye Array	32.28	321	P	P	16 53 33.5	+0.2
	comp=Z,1.0nm,0.5s,baz=108,slow=9.5,SNR=6.3						
BVAR				PcP	PcP	16 56 20.7	-0.5
	comp=Z,0.9nm,0.8s,baz=116,slow=3.4,SNR=3.8						
BRVK	Borovoye	32.35	321	eP	P	16 53 35.1	+1.2
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BRVK	Borovoye	32.35	321	eP	P	16 53 35.0	+1.1
	comp=Z,7.9nm,1.3s						
YAK	Yakutsk	34.41	21	eP	P	16 53 51.4	-0.3
YAK				e*PP	pP	16 54 02.4	+6.1
YAK				ePPP	PPP	16 55 13.5	
YAK				e		16 56 29.9	
YAK				eS	S	16 59 17.5	-1.4
YAK				eSS	SnSn	17 01 27.8	-1.4
YAK				e		17 04 10.9	
YAK				pmax	pmax		
	comp=Z,11nm,1.0s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				smax	smax		
	comp=N,102nm,3.8s						
YAK				MLR	MLR		
	comp=Z,225nm,13.0s						
YAK				MLR	MLR		
	comp=N,136nm,11.0s						
YAK				MLR	MLR		
	comp=E,75nm,13.0s						
ABKAR	Akbulak array	37.26	311	eP	P	16 54 16.7	+0.4
	comp=E,1.6nm,0.7s						
AKTO	Aktyubinsk	38.71	312	P	P	16 54 28.2	-0.3
AKTO	Aktyubinsk	38.71	312	P	P	16 54 28.2	-0.3
AKTO	Aktyubinsk	38.71	312	P	P	16 54 28.2	-0.3
	comp=E,0.9nm,0.4s,baz=83,slow=14,SNR=4.6						
KAPI	Kappang	39.52	155	LR	LR	17 12 23.7	
	comp=E,44nm,18.1s,baz=117,slow=38						
ARU	Arti	39.92	322c	iP	P	16 54 39.4	+0.9
ARU				S	S	17 00 41.2	-1.6
ARU				SS	SS	17 03 29.0	-10
ARU				pmax	pmax		
	comp=Z,19nm,1.2s						
ARU	Arti	39.92	322	eP	P	16 54 39.1	+0.6
	comp=Z,11nm,0.8s						
SEY	Seymchan	43.43	30	eP	P	16 55 10.5	+3.3
PETK	Petropavlovsk-	43.63	45	P	P	16 55 08.3	-0.6
PETK	Petropavlovsk-	43.63	45	P	P	16 55 08.3	-0.6
PETK	Petropavlovsk-	43.63	45	P	P	16 55 08.3	-0.6
	comp=Z,5.1nm,0.8s,baz=212,slow=5.3,SNR=8.3						
PETK				LR	LR	17 15 45.5	
	comp=Z,74nm,20.1s,baz=105,slow=40						
MIB	Mutribah	48.39	283	eP	P	16 55 47.6	+0.8
MIB				AMb	AMB	16 55 58.4	
	comp=Z,16nm,0.9s						
RDF	Al-Radifah	48.48	282	eP	P	16 55 48.7	+1.1
RDF				AMb	AMB	16 56 00.8	
	comp=Z,24nm,1.2s						
NAY	Al-Naaiem	48.64	283	eP	P	16 55 49.3	+0.6
NAY				AMb	AMB	16 55 50.4	
	comp=Z,13nm,1.0s						
KBZ	Khabaz	48.87	302	P	P	16 55 50.8	+0.6
KBZ	Khabaz	48.87	302	P	P	16 55 50.8	+0.6
KBZ	Khabaz	48.87	302	P	P	16 55 50.8	+0.6
	comp=Z,1.9nm,0.9s,baz=49,slow=11,SNR=4.1						
KBZ				LR	LR	17 19 30.6	
	comp=Z,110nm,18.7s,baz=290,slow=40						
KIV	Kislovodsk	48.99	303	eP	P	16 55 51.6	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV				MLR	MLR		
	comp=Z,72nm,17.0s						
KIV	**Kislovodsk**	**48.99**	**303**	eP	**P**	**16 55 51.2**	**-0.1**
	comp=Z,7.1nm,1.0s						
VRHR	**Novokhopersk**	**49.12**	**312**	eP	**P**	**16 55 53.3**	**+1.2**
VRHR				pmax	pmax		
	comp=N,5.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BILL	**Bilibino**	**50.50**	**26**	⇑eP	**P**	**16 56 05.3**	**+3.0**
BILL				e		16 57 58.8	
BILL				eS	**S**	**17 03 14.1**	**-1.3**
BILL				eSS	SS	17 06 39.5	-9.5
BILL				pmax	pmax		
	comp=Z,9.0nm,1.7s						
BILL				MLR	MLR		
	comp=Z,200nm,13.0s						
BILL	**Bilibino**	**50.50**	**26**	eP	**P**	**16 56 01.7**	**-0.7**
	comp=Z,24nm,1.5s						
KLMR	**Klimovskoe**	**50.52**	**325**	eP	**P**	**16 56 02.4**	**-0.2**
KLMR				pmax	pmax		
	comp=Z,39nm,1.5s						
VORD	**Divnogorie**	**50.59**	**312**	eP	**P**	**16 56 03.5**	**+0.2**
VORD				pmax	pmax		
	comp=N,3.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,9.0nm,0.6s						
VORD				pmax	pmax		
	comp=Z,7.0nm,0.6s						
VSR	**Storozhevoye**	**50.66**	**313**	eP	**P**	**16 56 03.8**	**0.0**
VSR				pmax	pmax		
	comp=N,4.0nm,0.9s						
VSR				pmax	pmax		
	comp=E,8.0nm,0.9s						
VSR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OBN	**Obninsk**	**52.00**	**318**	⇓eP	**P**	**16 56 14.1**	**+0.3**
OBN				e		16 58 11.3	
OBN				eS	**S**	**17 03 34.2**	**-2.3**
OBN				pmax	pmax		
	comp=Z,23nm,1.7s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
FITZ	**Fitzroy Crossi**	**53.73**	**154**	eP	**P**	**16 56 26.4**	**-0.5**
	comp=Z,7.5nm,1.0s						
JOF	**Joensuu**	**54.47**	**327**	eP	**P**	**16 56 32.1**	**+0.3**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
JOF	**Joensuu**	**54.47**	**327**	ep	**P**	**16 56 32.1**	**+0.3**
	comp=Z,2.7nm,0.6s						
BR131	**Keskin Array S**	**56.46**	**299**	eP	**P**	**16 56 46.8**	**+0.1**
	comp=Z,1.6nm,0.7s						
BRTR	**Keskin Array B**	**56.46**	**299**	P	**P**	**16 56 46.1**	**-0.6**
BRTR	**Keskin Array B**	**56.46**	**299**	P	**P**	**16 56 46.1**	**-0.6**
	comp=Z,1.7nm,0.9s,baz=105,slow=5.4,SNR=11						
ARCES	**ARCESS Array B**	**56.64**	**336**	P	**P**	**16 56 47.3**	**-0.1**
ARCES	**ARCESS Array B**	**56.64**	**336**	P	**P**	**16 56 47.3**	**-0.1**
	comp=Z,8.1nm,1.0s,baz=76,slow=8.0,SNR=6.6						
ARCES				LR	LR	17 21 14.0	
	comp=Z,66nm,19.3s,baz=5.2,slow=36						
KAF	**Kangasniemi**	**56.84**	**327**	eP	**P**	**16 56 48.2**	**-0.6**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KAF	**Kangasniemi**	**56.84**	**327**	ep	**P**	**16 56 48.2**	**-0.6**
	comp=Z,2.9nm,0.6s						
AKASG	**Malin Array Be**	**56.95**	**313**	P	**P**	**16 56 49.5**	**-0.3**
AKASG	**Malin Array Be**	**56.95**	**313**	P	**P**	**16 56 49.5**	**-0.3**
AKASG	**Malin Array Be**	**56.95**	**313**	P	**P**	**16 56 49.5**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=68,slow=7.6,SNR=6.0						
AKASG				LR	LR	17 22 47.0	
	comp=Z,223nm,20.0s,baz=90,slow=38						
AK02	**Malin Array Si**	**56.97**	**313**	eP	**P**	**16 56 49.3**	**-0.6**
FINES	**FINESS Array B**	**57.02**	**326**	P	**P**	**16 56 50.4**	**+0.3**
FINES	**FINESS Array B**	**57.02**	**326**	P	**P**	**16 56 50.4**	**+0.3**
	comp=Z,3.2nm,0.4s,baz=92,slow=7.8,SNR=55						
FINES				LR	LR	17 22 57.2	
	comp=Z,144nm,18.1s,baz=317,slow=38						
PMG	**Port Moresby**	**58.03**	**128**	P	**P**	**16 56 58.0**	**+0.1**
PMG	**Port Moresby**	**58.03**	**128**	P	**P**	**16 56 58.0**	**+0.1**
	comp=Z,5.0nm,0.8s,baz=347,slow=6.1,SNR=3.6						
WRAB	**Tennant Creek**	**59.02**	**147**	eP	**P**	**16 57 04.4**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WRAB	**Tennant Creek**	**59.02**	**147**	eP	**P**	**16 57 04.4**	**-0.3**
	comp=Z,9.2nm,0.6s						
WRA	**Warramunga Arr**	**59.02**	**147**	P	**P**	**16 57 04.6**	**-0.1**
WRA	**Warramunga Arr**	**59.02**	**147**	P	**P**	**16 57 04.6**	**-0.1**
	comp=Z,8.3nm,0.6s,baz=339,slow=7.5,SNR=47						
ISP	**Isparta**	**59.34**	**298**	P	**P**	**16 57 07.1**	**+0.1**
ISP				pmax	pmax		
	comp=Z,11nm,0.8s						
ISP	**Isparta**	**59.34**	**298**	P	**P**	**16 57 07.1**	**+0.1**
	comp=Z,11nm,0.8s						
AS31	**Alice Springs**	**62.06**	**149**	eP	**P**	**16 57 25.2**	**-0.2**
ASAR	**Alice Springs**	**62.06**	**149**	P	**P**	**16 57 25.2**	**-0.2**
ASAR	**Alice Springs**	**62.06**	**149**	P	**P**	**16 57 25.2**	**-0.2**
	comp=Z,3.2nm,0.7s,baz=337,slow=6.7,SNR=44						
CRVS	**Cervenica-Dubn**	**62.27**	**312**	eP	**P**	**16 57 29.0**	**+2.4**
CRVS	**Cervenica-Dubn**	**62.27**	**312**	eP	**P**	**16 57 29.0**	**+2.4**
VYHS	**Vyhne**	**64.05**	**312**	eP	P	16 57 42.8	+4.4
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.9s						
VYHS	**Vyhne**	**64.05**	**312**	eP	P	16 57 42.8	+4.4
NB2	**NORSAR Subarra**	**64.10**	**327**	P	**P**	**16 57 37.7**	**-0.8**
	comp=Z,1.6nm,0.5s,baz=74,slow=6.9						
NOA	**NORSAR Array B**	**64.10**	**327**	P	**P**	**16 57 37.5**	**-1.0**
NOA	**NORSAR Array B**	**64.10**	**327**	P	**P**	**16 57 37.5**	**-1.0**
	comp=Z,2.1nm,0.6s,baz=73,slow=6.8,SNR=10.0						
NOA				LR	LR	17 27 25.9	
	comp=Z,99nm,18.6s,baz=20,slow=38						
CTA	**Charters Tower**	**65.49**	**136**	P	**P**	**16 57 47.1**	**-0.9**
CTA	**Charters Tower**	**65.49**	**136**	P	**P**	**16 57 47.1**	**-0.9**
	comp=Z,1.6nm,0.5s,baz=280,slow=6.1,SNR=3.1						
BRG	**Berggiesshubel**	**66.20**	**316**	eP	**P**	**16 57 52.4**	**+0.1**
	comp=Z,5.7nm,1.3s						
BRG	**Berggiesshubel**	**66.20**	**316**	eP	**P**	**16 57 52.4**	**+0.1**
BRG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
CLL	**Collm**	**66.59**	**317**	eP	**P**	**16 57 55.0**	**+0.2**
CLL				pmax	pmax		
	comp=Z,30nm,2.3s						
CLL	**Collm**	**66.59**	**317**	eP	**P**	**16 57 55.0**	**+0.2**
	comp=Z,30nm,2.3s						
COLD	**Coldfoot**	**66.79**	**24**	eP	**P**	**16 57 56.1**	**+0.3**
	comp=Z,4.9nm,0.9s						
GERES	**GERESS Array B**	**67.10**	**314**	P	**P**	**16 57 58.4**	**+0.1**
GERES	**GERESS Array B**	**67.10**	**314**	P	**P**	**16 57 58.4**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=77,slow=5.9,SNR=8.8						
GERES				LR	LR	17 29 01.3	
	comp=Z,244nm,19.8s,baz=304,slow=38						
ILAR	**Eielson Array**	**69.16**	**26**	P	**P**	**16 58 08.8**	**-1.9**
ILAR	**Eielson Array**	**69.16**	**26**	P	**P**	**16 58 08.8**	**-1.9**
	comp=Z,1.4nm,1.0s,baz=297,slow=4.7,SNR=8.8						
KDAK	**Kodiak Island**	**70.20**	**34**	P	**P**	**16 58 16.8**	**-0.4**
KDAK	**Kodiak Island**	**70.20**	**34**	P	**P**	**16 58 16.8**	**-0.4**
	comp=Z,3.7nm,0.8s,baz=319,slow=14,SNR=4.2						
KMBO	**Kilima Mbogo**	**71.15**	**256**	eP	**P**	**16 58 24.6**	**+0.6**
	comp=Z,5.4nm,1.0s						
KMBO	**Kilima Mbogo**	**71.15**	**256**	P	**P**	**16 58 23.8**	**-0.2**
	comp=Z,3.9nm,1.0s,baz=51,slow=7.0,SNR=9.5						
CDF	**Champ du Feu**	**71.16**	**316**	eP	**P**	**16 58 23.4**	**0.0**
CDF	**Champ du Feu**	**71.16**	**316**	eP	**P**	**16 58 23.4**	**0.0**
CDF	**Champ du Feu**	**71.16**	**316**	eP	**P**	**16 58 23.4**	**0.0**
GIVF	**Givet**	**71.81**	**318**	eP	**P**	**16 58 27.5**	**+0.3**
GIVF	**Givet**	**71.81**	**318**	eP	**P**	**16 58 27.5**	**+0.3**
GIVF	**Givet**	**71.81**	**318**	eP	**P**	**16 58 27.5**	**+0.3**
PAGF	**Fort de Pagny**	**72.01**	**316**	eP	**P**	**16 58 28.9**	**+0.5**
	comp=Z,1.3nm,0.7s						
PAGF	**Fort de Pagny**	**72.01**	**316**	eP	**P**	**16 58 28.9**	**+0.5**
	comp=Z,1.3nm,0.7s						
BAIF	**Baives**	**72.18**	**318**	eP	**P**	**16 58 29.8**	**+0.4**
BAIF	**Baives**	**72.18**	**318**	eP	**P**	**16 58 29.8**	**+0.4**
BAIF	**Baives**	**72.18**	**318**	eP	**P**	**16 58 29.8**	**+0.4**
STKA	**Stephens Creek**	**72.57**	**147**	P	**P**	**16 58 31.2**	**-0.5**
STKA	**Stephens Creek**	**72.57**	**147**	P	**P**	**16 58 31.2**	**-0.5**
	comp=Z,2.6nm,0.6s,baz=332,slow=5.8,SNR=6.6						
CABF	**La Chapelle**	**72.70**	**314**	eP	**P**	**16 58 33.6**	**+0.9**
CABF	**La Chapelle**	**72.70**	**314**	eP	**P**	**16 58 33.6**	**+0.9**
CABF	**La Chapelle**	**72.70**	**314**	eP	**P**	**16 58 33.6**	**+0.9**
PGF	**Pioggiola**	**72.75**	**310**	eP	**P**	**16 58 33.6**	**+0.5**
	comp=Z,52nm,1.2s						
PGF	**Pioggiola**	**72.75**	**310**	eP	**P**	**16 58 33.6**	**+0.5**
PGF	**Pioggiola**	**72.75**	**310**	eP	**P**	**16 58 33.6**	**+0.5**
	comp=Z,52nm,1.2s						
LPG	**La Plagne**	**72.82**	**313**	⇑iP	**P**	**16 58 34.3**	**+0.7**
	comp=Z,20nm,0.8s						
LPG	**La Plagne**	**72.82**	**313**	⇑iP	**P**	**16 58 34.3**	**+0.7**
LPG				pmax	pmax		
	comp=Z,21nm,0.8s						
LPG	**La Plagne**	**72.82**	**313**	⇑iP	**P**	**16 58 34.3**	**+0.7**
	comp=Z,20nm,0.8s						
LPL	**La Plagne**	**72.82**	**313**	⇑iP	**P**	**16 58 34.2**	**+0.6**
	comp=Z,15nm,0.8s						
LPL	**La Plagne**	**72.82**	**313**	⇑iP	**P**	**16 58 34.2**	**+0.6**
LPL				pmax	pmax		
	comp=Z,15nm,0.8s						
LPL	**La Plagne**	**72.82**	**313**	⇑iP	**P**	**16 58 34.2**	**+0.6**
	comp=Z,15nm,0.8s						
SBF	**Sospel**	**73.15**	**311**	eP	**P**	**16 58 35.5**	**+0.1**
	comp=Z,16nm,0.9s						
SBF	**Sospel**	**73.15**	**311**	eP	**P**	**16 58 35.5**	**+0.1**
SBF				pmax	pmax		
	comp=Z,16nm,0.9s						
SBF	**Sospel**	**73.15**	**311**	eP	**P**	**16 58 35.5**	**+0.1**
	comp=Z,16nm,0.9s						
MBDF	**Montbardon**	**73.17**	**312**	eP	**P**	**16 58 35.6**	**0.0**
	comp=Z,14nm,1.2s						
MBDF	**Montbardon**	**73.17**	**312**	eP	**P**	**16 58 35.6**	**0.0**
MBDF				pmax	pmax		
	comp=Z,14nm,1.2s						
MBDF	**Montbardon**	**73.17**	**312**	eP	**P**	**16 58 35.6**	**0.0**
	comp=Z,14nm,1.2s						
ORIF	**Oris-en-Rattie**	**73.63**	**313**	eP	**P**	**16 58 38.6**	**+0.4**
ORIF				eR			
	comp=Z,297nm,18.2s						
ORIF	**Oris-en-Rattie**	**73.63**	**313**	eP	**P**	**16 58 38.6**	**+0.4**
ORIF	**Oris-en-Rattie**	**73.63**	**313**	eP	**P**	**16 58 38.6**	**+0.4**
FRF	**La Foret Royal**	**73.80**	**311**	eP	**P**	**16 58 39.2**	**+0.1**
FRF	**La Foret Royal**	**73.80**	**311**	eP	**P**	**16 58 39.2**	**+0.1**
FRF	**La Foret Royal**	**73.80**	**311**	eP	**P**	**16 58 39.2**	**+0.1**
LMR	**La Mourre**	**74.00**	**311**	eP	**P**	**16 58 40.3**	**+0.1**
LMR	**La Mourre**	**74.00**	**311**	eP	**P**	**16 58 40.3**	**+0.1**
LMR	**La Mourre**	**74.00**	**311**	eP	**P**	**16 58 40.3**	**+0.1**
SMF	**Signal de Mont**	**74.04**	**315**	eP	**P**	**16 58 40.4**	**-0.1**
	comp=Z,12nm,0.9s						
SMF	**Signal de Mont**	**74.04**	**315**	eP	**P**	**16 58 40.4**	**-0.1**
SMF				pmax	pmax		
	comp=Z,12nm,0.9s						
SMF	**Signal de Mont**	**74.04**	**315**	eP	**P**	**16 58 40.4**	**-0.1**
	comp=Z,12nm,0.9s						
AVF	**Avril sur Loir**	**74.26**	**315**	eP	**P**	**16 58 41.7**	**0.0**
	comp=Z,15nm,1.2s						
AVF	**Avril sur Loir**	**74.26**	**315**	eP	**P**	**16 58 41.7**	**0.0**
AVF				pmax	pmax		
	comp=Z,15nm,1.2s						
AVF	**Avril sur Loir**	**74.26**	**315**	eP	**P**	**16 58 41.7**	**0.0**
	comp=Z,15nm,1.2s						
SMRF	**Simiane la Rot**	**74.28**	**312**	eP	**P**	**16 58 42.3**	**+0.3**
SMRF	**Simiane la Rot**	**74.28**	**312**	eP	**P**	**16 58 42.3**	**+0.3**
VIVF	**Saint-Julien-l**	**74.41**	**313**	eP	**P**	**16 58 42.8**	**+0.1**
	comp=Z,11nm,1.1s						
VIVF	**Saint-Julien-l**	**74.41**	**313**	eP	**P**	**16 58 42.8**	**+0.1**
VIVF				pmax	pmax		
	comp=Z,11nm,1.1s						
VIVF	**Saint-Julien-l**	**74.41**	**313**	eP	**P**	**16 58 42.8**	**+0.1**
	comp=Z,11nm,1.1s						
TCF	**Toulx Ste Croi**	**75.20**	**315**	eP	**P**	**16 58 47.4**	**+0.2**
	comp=Z,9.1nm,1.0s						
TCF	**Toulx Ste Croi**	**75.20**	**315**	eP	**P**	**16 58 47.4**	**+0.2**
TCF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TCF	**Toulx Ste Croi**	**75.20**	**315**	eP	**P**	**16 58 47.4**	**+0.2**
	comp=Z,9.1nm,1.0s						
LASF	**Ste Croix**	**75.31**	**313**	eP	**P**	**16 58 48.3**	**+0.4**
	comp=Z,12nm,1.1s						
LASF	**Ste Croix**	**75.31**	**313**	eP	**P**	**16 58 48.3**	**+0.4**
	comp=Z,12nm,1.1s						
LDF	**La Druitiere**	**75.37**	**318**	eP	**P**	**16 58 47.9**	**-0.2**
	comp=Z,6.3nm,0.9s						
LDF	**La Druitiere**	**75.37**	**318**	eP	**P**	**16 58 47.9**	**-0.2**
LDF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LDF	**La Druitiere**	**75.37**	**318**	eP	**P**	**16 58 47.9**	**-0.2**
	comp=Z,6.3nm,0.9s						
GRR	**Gorron**	**75.89**	**318**	eP	**P**	**16 58 51.3**	**+0.2**
	comp=Z,15nm,1.0s						
GRR	**Gorron**	**75.89**	**318**	eP	**P**	**16 58 51.3**	**+0.2**
GRR				pmax	pmax		
	comp=Z,15nm,1.0s						
GRR	**Gorron**	**75.89**	**318**	eP	**P**	**16 58 51.3**	**+0.2**
	comp=Z,15nm,1.0s						
CAF	**Calviac**	**75.98**	**314**	eP	**P**	**16 58 52.4**	**+0.6**
CAF	**Calviac**	**75.98**	**314**	eP	**P**	**16 58 52.4**	**+0.6**
CAF	**Calviac**	**75.98**	**314**	eP	**P**	**16 58 52.4**	**+0.6**
RJF	**Les Rejaudoux**	**76.12**	**315**	eP	**P**	**16 58 53.3**	**+0.8**
RJF				eR			
	comp=Z,129nm,19.5s						
RJF	**Les Rejaudoux**	**76.12**	**315**	eP	**P**	**16 58 53.3**	**+0.8**
RJF	**Les Rejaudoux**	**76.12**	**315**	eP	**P**	**16 58 53.3**	**+0.8**
MFF	**Saint Martin d**	**76.43**	**317**	eP	**P**	**16 58 54.5**	**+0.3**
MFF	**Saint Martin d**	**76.43**	**317**	eP	**P**	**16 58 54.5**	**+0.3**
MFF	**Saint Martin d**	**76.43**	**317**	eP	**P**	**16 58 54.5**	**+0.3**
MTLF	**Montolieu**	**76.70**	**313**	eP	**P**	**16 58 56.0**	**+0.1**
MTLF	**Montolieu**	**76.70**	**313**	eP	**P**	**16 58 56.0**	**+0.1**
MTLF	**Montolieu**	**76.70**	**313**	eP	**P**	**16 58 56.0**	**+0.1**
SGMF	**Saint Gilles**	**76.92**	**319**	eP	**P**	**16 58 57.5**	**+0.6**
SGMF	**Saint Gilles**	**76.92**	**319**	eP	**P**	**16 58 57.5**	**+0.6**
SGMF	**Saint Gilles**	**76.92**	**319**	eP	**P**	**16 58 57.5**	**+0.6**
EPF	**Esparros**	**78.04**	**313**	eP	**P**	**16 59 03.0**	**-0.4**
EPF	**Esparros**	**78.04**	**313**	eP	**P**	**16 59 03.0**	**-0.4**
EPF	**Esparros**	**78.04**	**313**	eP	**P**	**16 59 03.0**	**-0.4**
SJPF	**Ste Jean**	**78.96**	**314**	eP	**P**	**16 59 08.6**	**+0.2**
SJPF	**Ste Jean**	**78.96**	**314**	eP	**P**	**16 59 08.6**	**+0.2**
SJPF	**Ste Jean**	**78.96**	**314**	eP	**P**	**16 59 08.6**	**+0.2**
SFJD	**Kangerlussuaq**	**79.65**	**350**	LR	LR	17 36 54.8	
	comp=Z,86nm,19.0s,baz=16,slow=38						
DZM	**Mont Dzumac**	**80.12**	**124**	LR	LR	17 32 08.1	
	comp=Z,103nm,18.4s,baz=194,slow=34						
YKA	**Yellowknife Ar**	**80.99**	**17**	P	**P**	**16 59 18.6**	**-0.4**
YKA	**Yellowknife Ar**	**80.99**	**17**	P	**P**	**16 59 18.6**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=329,slow=5.3,SNR=36						
ESDC	**Sonseca Array**	**82.59**	**312**	P	**P**	**16 59 27.9**	**-0.1**
ESDC	**Sonseca Array**	**82.59**	**312**	P	**P**	**16 59 27.9**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=28,slow=5.1,SNR=4.8						
ESDC				LR	LR	17 39 08.2	
	comp=Z,82nm,18.6s,baz=345,slow=38						
FFC	**Flin Flon**	**90.91**	**15**	iP	P	17 00 12.0	+3.8
SCHQ	**Schefferville**	**93.36**	**355**	P	**P**	**17 00 18.9**	**-0.7**
SCHQ	**Schefferville**	**93.36**	**355**	P	**P**	**17 00 18.9**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=3.0,slow=4.4,SNR=3.8						
TORD	**Torodi Ar. Bea**	**93.49**	**288**	P	**P**	**17 00 20.5**	**-0.4**
TORD	**Torodi Ar. Bea**	**93.49**	**288**	P	**P**	**17 00 20.5**	**-0.4**
	comp=Z,1.0nm,1.0s,baz=63,slow=3.7,SNR=4.6						
OTAV	**Otavalo**	**148.02**	**5**	ePKPbc	**PKPbc**	**17 06 52.1**	**+0.7**

GUC 05 17:09:56.5±0.6**, 32°58S×72°05W, h26**km±2km**, MD3.5, ML3.1, 1C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.56**	**142**	iP	Pb	17 10 07.3	-0.5
IHA				iS	Sb	17 10 15.5	0.0
CHNG	**Los Chungos**	**0.84**	**34**	eP	Pb	17 10 11.8	-0.6
CHNG				iS	Sb	17 10 23.0	-0.2
ROCH	**El Roble**	**0.96**	**114**	⇓iP	Pn	17 10 13.7	-0.8
ROCH				iS	Sn	17 10 27.5	0.0
ROCH				AML	AML	17 10 29.4	
	comp=N,812nm,0.3s						
PEL	**Peldehue**	**1.28**	**116**	⇑iP	Pn	17 10 19.1	+0.4
PEL				iS	Sn	17 10 35.5	+0.4
PEL				AML	AML	17 10 40.1	
	comp=N,1μm,0.2s						
LNV	**Longovilo**	**1.47**	**159**	eP	Pn	17 10 21.4	+0.1
LNV				iS	Sb	17 10 40.8	-0.7
CLCH	**Cerro Calan**	**1.51**	**123**	⇓iP	Pn	17 10 22.7	+0.8
CLCH				iS	Sb	17 10 42.2	-0.6
CLCH				AML	AML	17 10 45.7	
	comp=E,279nm,0.4s						
CLCH				AML	AML	17 10 45.8	
	comp=E,397nm,0.5s						
ANTU	**Antumapu**	**1.54**	**130**	AML	AML	17 10 48.6	
	comp=E,258nm,0.4s						
FCH	**Farellones**	**1.66**	**117**	AML	AML	17 10 47.3	
	comp=N,344nm,0.3s						
CMCH	**Combarbala**	**1.66**	**33**	iP	Pn	17 10 24.9	+0.8
CMCH				iS	Sb	17 10 46.5	-0.7
CMCH				AML	AML	17 10 50.4	
	comp=E,809nm,0.7s						
CACH	**El Canelo**	**1.95**	**142**	iP	Pb	17 10 30.1	-1.5
CACH				iS	Sb	17 10 55.7	0.0
LMEL	**Las Melosas**	**2.00**	**130**	eP	Pn	17 10 30.4	+1.6
LMEL				iS	Sb	17 10 55.6	-1.4
LMEL				AML	AML	17 11 02.5	
	comp=N,280nm,0.2s						
TLL	**Tololo Astrono**	**2.63**	**24**	iP	Pn	17 10 38.9	+1.3
TLL				iS	Sn	17 11 11.4	+2.5
TLL				AML	AML	17 11 28.0	
	comp=N,115nm,0.6s						
LCO	**Las Campanas**	**3.74**	**18**	AML	AML	17 12 00.9	
	comp=E,24nm,0.3s						

IDC 05 17:12:43.7±4.4**, 4°42S×154°76E, h426**km±47km**, mb2.8**/3**, mb1 3.0**/5**, mb1mx2.7**/20**, mbtmp2.9**/5**, Error ellipse: s-maj=85.1km s-min=29.9km az=125.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**9.02**	**236**	P	P	17 14 51.1	+0.9
	1.3nm,0.3s,baz=52,slow=12,SNR=8.1						
CTA	**Charters Tower**	**17.64**	**207**	P	P	17 16 22.9	-0.7
	0.2nm,0.3s,baz=22,slow=11,SNR=3.4						
WRA	**Warramunga Arr**	**25.17**	**230**	P	P	17 17 33.1	-0.1
	0.3nm,0.4s,baz=54,slow=9.4,SNR=5.6						
ASAR	**Alice Springs**	**27.76**	**224**	P	P	17 17 56.4	+0.1
	0.4nm,0.3s,baz=55,slow=9.1,SNR=29						
ILAR	**Eielson Array**	**81.08**	**22**	P	P	17 24 12.6	0.0
	0.2nm,0.7s,baz=241,slow=4.8,SNR=8.0						
TORD	**Torodi Ar. Bea**	**152.03**	**290**	PKPbc	PKPbc	17 31 50.6	0.0
	0.2nm,0.3s,baz=68,slow=3.8,SNR=3.7						

MEX 05 17:28:20.5±0.9**, 16°18N×98°24W, h5**km**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.24**	**27**	eP	Pg	17 28 24.2	-1.1
PNIG				iS	Sg	17 28 28.6	0.0
UTMO	**Huajuapan**	**1.70**	**14**	eP	Pn	17 28 47.9	-3.2
UTMO				iS	Sn	17 29 09.4	-4.0
VHO	**Vista Hermosa**	**1.70**	**58**	iP	Pn	17 28 48.2	-2.9
VHO				iS	Sn	17 29 08.4	-5.0
CAIG	**El Cayaco**	**2.13**	**294**	eP	Pn	17 28 53.5	-3.3
CAIG				iS	Sn	17 29 19.3	-4.2
MEIG	**Mezcala**	**2.18**	**323**	iP	Pn	17 28 54.2	-3.4
MEIG				iS	Sn	17 29 20.2	-4.9

*IDC **05** 17:37:51.3±0.6, 19°32N×65°10W, h0km, mb3.9/14, mb1 4.1/14, mb1mx3.9/30, mbtmp3.9/14, MS3.3/10, Ms1 3.3/10, ms1mx3.0/42, Error ellipse: s-maj=20.2km s-min=13.0km az=53.0*

*ISCJB **05** 17:37:54.4±1.1, 19°33N±0°03×65°14W±0°03, h22km±8km, mb4.1/22, MS3.3/9, Error ellipse: s-maj=5.9km s-min=5.0km az=14.4*

*NEIC **05** 17:37:57.0, 19°33N×65°10W, h30km, mb4.4/7, MD4.5(RSPR), After RSPR.*

ISC 05 17:37:52.7±1.0**, 19°32N**±0°04×**65°19W**±0°03**, h5**km±6km**, n176, σ1s19**/181**, mb4.0**/22**, MS3.4**/9**, 55C-48D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**0.98**	**167**	⇓eP	**Pb**	**17 38 12.7**	**+0.4**
STVI				eS	**Sb**	**17 38 25.2**	**-0.3**
STVI	**Saint Thomas**	**0.98**	**167**	⇓eP	**Pb**	**17 38 12.7**	**+0.4**
STVI	**Saint Thomas**	**0.98**	**167**	⇑eP	**Pb**	**17 38 13.0**	**+0.8**
STVI				eS	**Sb**	**17 38 25.2**	**-0.3**
TBVI	**Tortola**	**1.04**	**149**	⇓eP	**Pb**	**17 38 13.3**	**0.0**
TBVI	**Tortola**	**1.04**	**149**	⇓eP	**Pb**	**17 38 13.3**	**0.0**
CBYP	**Canovanas**	**1.22**	**212**	⇑eP	**Pg**	**17 38 16.7**	**+0.6**
CBYP	**Canovanas**	**1.22**	**212**	⇓eP	**Pg**	**17 38 16.5**	**+0.4**
CBYP	**Canovanas**	**1.22**	**212**	⇑eP	**Pg**	**17 38 16.7**	**+0.6**
MTP	**Monte Pirata**	**1.26**	**196**	⇓eP	**Pb**	**17 38 17.5**	**+0.6**
MTP				eS	**Sb**	**17 38 33.9**	**+0.4**
MTP	**Monte Pirata**	**1.26**	**196**	⇓eP	**Pb**	**17 38 17.5**	**+0.6**
MTP				eS	**Sb**	**17 38 33.9**	**+0.4**
HUMP	**Col San Antoni**	**1.33**	**208**	⇑eP	**Pn**	**17 38 18.2**	**+0.4**
HUMP	**Col San Antoni**	**1.33**	**208**	⇑eP	**Pn**	**17 38 18.2**	**+0.4**
HUMP	**Col San Antoni**	**1.33**	**208**	⇓eP	**Pg**	**17 38 18.9**	**+0.7**
CPD	**Cerro la Pandu**	**1.45**	**209**	⇓eP	**Pn**	**17 38 19.9**	**+0.3**
CPD				eS	**Sb**	**17 38 38.6**	**-0.3**
CPD	**Cerro la Pandu**	**1.45**	**209**	⇓eP	**Pn**	**17 38 19.9**	**+0.3**
CPD				eS	**Sb**	**17 38 38.6**	**-0.3**
SJG	**San Juan**	**1.51**	**217**	⇓eP	**Pn**	**17 38 20.8**	**+0.4**
SJG				eS	**Sn**	**17 38 39.4**	**-0.9**
SJG				Sn	**Sn**	**17 38 39.9**	**-0.5**
SJG	**San Juan**	**1.51**	**217**	⇓eP	**Pn**	**17 38 20.6**	**+0.3**
SJG	**San Juan**	**1.51**	**217**	⇓eP	**Pn**	**17 38 20.8**	**+0.4**
SJG				eS	**Sn**	**17 38 39.4**	**-0.9**
SJG	**San Juan**	**1.51**	**217**	Pn	**Pn**	**17 38 20.3**	**0.0**
	40nm,0.3s,baz=62,slow=11,SNR=52						
SJG				Sn	**Sn**	**17 38 39.8**	**-0.5**
	94nm,0.3s,baz=108,slow=20,SNR=16						
CDVI	**St. Croix**	**1.61**	**166**	ePn	**Pg**	**17 38 23.7**	**+0.1**
AOPR	**Arecibo Observ**	**1.77**	**237**	⇓eP	**Pn**	**17 38 25.2**	**+1.2**
AOPR	**Arecibo Observ**	**1.77**	**237**	⇓eP	**Pn**	**17 38 25.2**	**+1.2**
AOPR	**Arecibo Observ**	**1.77**	**237**	⇑eP	**Pn**	**17 38 25.6**	**+1.5**
CELP	**Cerrillos**	**1.81**	**227**	ePn	**Pn**	**17 38 25.6**	**+1.1**
CELP	**Cerrillos**	**1.81**	**227**	⇓eP	**Pn**	**17 38 25.6**	**+1.1**
OBIP	**Obispado Ponce**	**1.85**	**227**	⇓eP	**Pn**	**17 38 26.2**	**+1.2**
OBIP				eS	**Sn**	**17 38 49.1**	**+0.3**
OBIP	**Obispado Ponce**	**1.85**	**227**	⇓eP	**Pn**	**17 38 26.2**	**+1.2**
OBIP				eS	**Sn**	**17 38 49.6**	**+0.8**
LRS	**Lares**	**1.87**	**237**	⇑eP	**Pn**	**17 38 26.5**	**+1.0**
LRS	**Lares**	**1.87**	**237**	⇑eP	**Pn**	**17 38 26.5**	**+1.0**
AGPR	**Aguadilla, PR**	**2.01**	**245**	ePn	**Pn**	**17 38 28.2**	**+0.9**
AGPR	**Aguadilla, PR**	**2.01**	**245**	⇑eP	**Pn**	**17 38 28.5**	**+1.2**
GBPR	**Guanica, Bosqu**	**2.09**	**231**	⇑eP	**Pn**	**17 38 30.0**	**+1.7**
GBPR	**Guanica, Bosqu**	**2.09**	**231**	⇑eP	**Pn**	**17 38 30.0**	**+1.7**
LSP	**Las Mesas**	**2.13**	**238**	ePn	**Pn**	**17 38 30.3**	**+1.4**
LSP	**Las Mesas**	**2.13**	**238**	⇑eP	**Pn**	**17 38 30.4**	**+1.4**
CRPR	**Cabo Rojo, PR**	**2.24**	**235**	⇓eP	**Pn**	**17 38 32.5**	**+2.1**
CRPR	**Cabo Rojo, PR**	**2.24**	**235**	⇓eP	**Pn**	**17 38 32.5**	**+2.1**
SABA	**Saba**	**2.50**	**132**	⇑eP	**Pn**	**17 38 34.4**	**+0.4**
SABA	**Saba**	**2.50**	**132**	⇑eP	**Pn**	**17 38 34.4**	**+0.4**
SKI	**Saint Kitts**	**3.05**	**130**	eP	**Pn**	**17 38 42.9**	**+1.3**
SKI				eS	**Sn**	**17 39 20.6**	**+2.1**
DR12	**Loma Pena Alta**	**4.00**	**263**	⇑eP	**Pn**	**17 38 56.0**	**+1.2**
LZG	**Guadaloupe-1**	**4.53**	**134**	⇑iP	**Pn**	**17 39 03.2**	**+1.3**
SEG	**Port Louis**	**4.55**	**129**	eP	**Pn**	**17 39 02.1**	**-0.1**
SCG	**Saint Claude**	**4.67**	**134**	eP	**Pn**	**17 39 05.5**	**+1.5**
BCG	**Bois Riant Cap**	**4.68**	**133**	eP	**Pn**	**17 39 05.4**	**+1.4**
HMG	**Houelmont**	**4.69**	**134**	eP	**Pn**	**17 39 06.3**	**+2.0**
PHG	**Guadaloupe-2**	**4.71**	**134**	eP	**Pn**	**17 39 06.7**	**+2.1**
SDDR	**Presa de Saban**	**5.78**	**268**	⇓eP	**Pn**	**17 39 21.6**	**+2.4**
	15nm,0.6s						
SDDR	**Presa de Saban**	**5.78**	**268**	⇓eP	**Pn**	**17 39 21.6**	**+2.4**
GRTK	**Grand Turk**	**5.99**	**292**	ePn	**Pn**	**17 39 22.4**	**+0.4**
ROSC	**El Rosal**	**16.91**	**213**	LR	LR	17 48 41.6	
	comp=Z,107nm,21.3s,baz=6.1,slow=38						
JTS	**JuntasAbangare**	**21.09**	**248**	LR	LR	17 50 00.7	
	comp=Z,22nm,21.0s,baz=22,slow=34						
OTAV	**Otavalo**	**22.99**	**216**	eP	**P**	**17 43 00.1**	**+1.1**
	19nm,0.8s						
TKL	**Tuckaleechee C**	**23.11**	**319**	P	**P**	**17 42 59.4**	**-0.2**
TKL	**Tuckaleechee C**	**23.11**	**319**	P	**P**	**17 42 59.4**	**-0.2**
	2.6nm,0.7s,baz=122,slow=8.7,SNR=4.9						
TKL				LR	LR	17 52 40.2	
	comp=Z,57nm,18.6s,baz=57,slow=38						
ATAH	**Atahualpa**	**29.33**	**208**	LR	LR	17 56 37.2	
	comp=Z,103nm,20.3s,baz=231,slow=38						
Z30A	**Sanderson Ranc**	**34.91**	**301**	⇓P	**P**	**17 44 46.0**	**+0.5**
	baz=35						
529A	**Stev Forest Ra**	**35.18**	**295**	⇓P	**P**	**17 44 48.2**	**+0.4**
	baz=35						
SIV	**San Ignacio**	**35.32**	**173**	P	**P**	**17 44 47.3**	**-1.7**
SIV	**San Ignacio**	**35.32**	**173**	P	**P**	**17 44 47.3**	**-1.7**
	0.8nm,0.5s,baz=9.4,slow=13,SNR=5.2						
LPAZ	**La Paz**	**35.50**	**185**	P	**P**	**17 44 51.0**	**-0.2**
LPAZ	**La Paz**	**35.50**	**185**	P	**P**	**17 44 51.0**	**-0.2**
	0.7nm,0.6s,baz=89,slow=0.7,SNR=4.0						
628A	**Black Gap, Mar**	**35.66**	**294**	⇑P	**P**	**17 44 53.2**	**+1.2**
	baz=36,SNR=6.9						
428A	**Kincaid Ranch,**	**35.67**	**296**	⇑P	**P**	**17 44 53.0**	**+0.8**
	baz=36,SNR=6.0						
627A	**Terlingua Ranc**	**36.09**	**294**	⇓P	**P**	**17 44 56.8**	**+1.0**
	baz=36						

427A	**Hayter Ranch,**	**36.30**	**296**	⇓P	**P**	**17 44 58.2**	**+0.6**
	baz=36						
TXAR	**Lajitas Array**	**36.31**	**293**	P	**P**	**17 44 58.9**	**+1.3**
TXAR	**Lajitas Array**	**36.31**	**293**	P	**P**	**17 44 58.9**	**+1.3**
	1.7nm,0.8s,baz=119,slow=10,SNR=13						
TXAR				LR	LR	18 01 08.3	
	comp=Z,46nm,21.8s,baz=185,slow=38						
527A	**Woodward Ranch**	**36.37**	**295**	⇑P	**P**	**17 44 58.7**	**+0.5**
	baz=36						
Y27A	**Causey**	**36.70**	**301**	⇑P	**P**	**17 45 01.3**	**+0.3**
	baz=37						
526A	**Mary Lane Ranc**	**36.77**	**295**	⇑P	**P**	**17 45 02.2**	**+0.6**
	baz=37						
426A	**McDonald Obser**	**36.81**	**296**	⇓P	**P**	**17 45 02.4**	**+0.4**
	baz=37						
425A	**Indio Mountain**	**37.64**	**296**	⇓P	**P**	**17 45 09.8**	**+0.9**
	baz=38						
V26A	**Tequesquite Ra**	**37.68**	**304**	⇑P	**P**	**17 45 10.5**	**+1.3**
	baz=38						
325A	**Bean Ranch, Si**	**37.71**	**297**	⇓P	**P**	**17 45 10.8**	**+1.2**
	baz=38						
KSCO	**Kaye Shedlock'**	**37.78**	**309**	⇑P	**P**	**17 45 11.3**	**+1.2**
	baz=38						
U26A	**Atchley Ranch,**	**37.80**	**305**	⇓P	**P**	**17 45 11.8**	**+1.4**
	baz=38						
T26A	**Comanche Natio**	**37.91**	**306**	⇑P	**P**	**17 45 11.7**	**+0.5**
	baz=38						
MNTX	**Cornudas Mount**	**38.11**	**297**	⇓P	**P**	**17 45 13.6**	**+0.8**
	baz=38						
RCBR	**Riachuelo**	**38.16**	**128**	P	**P**	**17 45 13.7**	**+0.4**
RCBR	**Riachuelo**	**38.16**	**128**	P	**P**	**17 45 13.7**	**+0.4**
	1.7nm,0.6s,baz=303,slow=13,SNR=3.1						
U25A	**Circle Dot Ran**	**38.32**	**305**	⇓P	**P**	**17 45 15.9**	**+1.1**
	baz=38,SNR=6.8						
V25A	**Rancho No Teng**	**38.34**	**304**	⇑P	**P**	**17 45 16.0**	**+1.1**
	baz=38,SNR=5.5						
T25A	**Trinidad**	**38.53**	**306**	P	**P**	**17 45 18.3**	**+1.8**
	baz=39,SNR=6.1						
BDFB	**Brasilia**	**38.63**	**153**	LR	LR	17 59 49.0	
	comp=Z,51nm,19.4s,baz=356,slow=34						
S25A	**Robets Cordova**	**38.70**	**307**	⇑P	**P**	**17 45 19.3**	**+1.4**
	baz=39,SNR=5.7						
ULM	**Lac du Bonnet**	**39.33**	**329**	P	**P**	**17 45 21.8**	**-1.0**
ULM	**Lac du Bonnet**	**39.33**	**329**	P	**P**	**17 45 21.8**	**-1.0**
	2.9nm,0.7s,baz=156,slow=5.3,SNR=7.0						
R24A	**Sanders Place,**	**39.37**	**307**	⇑P	**P**	**17 45 24.9**	**+1.3**
	baz=39,SNR=7.6						
U22A	**Llaves**	**40.23**	**304**	⇑P	**P**	**17 45 32.2**	**+1.4**
	baz=40,SNR=5.7						
T22A	**Edith**	**40.42**	**305**	P	**P**	**17 45 34.5**	**+2.2**
	baz=40,SNR=5.1						
S22A	**4UR Ranch, Cre**	**40.55**	**306**	⇓P	**P**	**17 45 34.8**	**+1.4**
	baz=41						
U21A	**Nageezi**	**40.87**	**304**	⇑P	**P**	**17 45 37.5**	**+1.5**
	baz=41,SNR=6.9						
Q22A	**Crested Butte,**	**40.91**	**307**	⇑P	**P**	**17 45 37.2**	**+0.8**
	baz=41						
P22A	**Eagle**	**41.01**	**309**	⇑P	**P**	**17 45 38.2**	**+1.0**
	baz=41						
S21A	**Coal Bank Pass**	**41.26**	**305**	⇑P	**P**	**17 45 40.7**	**+1.4**
	baz=41						
P21A	**Newcastle**	**41.50**	**308**	P	**P**	**17 45 43.0**	**+1.9**
	baz=42,SNR=5.7						
Q20A	**Ridgley Place,**	**41.97**	**307**	⇑P	**P**	**17 45 45.6**	**+0.6**
	baz=42						
PV01	**Paradox Valley**	**41.98**	**306**	*e*P	**P**	**17 45 47.2**	**+2.1**
	254nm,0.9s						
M21A	**Separation Pea**	**42.07**	**311**	⇓P	**P**	**17 45 47.0**	**+1.2**
	baz=42						
O20A	**White River Ci**	**42.26**	**309**	⇑P	**P**	**17 45 48.2**	**+0.9**
	baz=42						
K21A	**Alcova**	**42.33**	**313**	⇑P	**P**	**17 45 49.6**	**+1.7**
	baz=42,SNR=8.6						
S18A	**Hurst Farm, Bl**	**42.97**	**305**	⇓P	**P**	**17 45 54.4**	**+1.2**
	baz=43						
N19A	**John Jarvie Ra**	**43.16**	**310**	⇓P	**P**	**17 45 55.3**	**+0.7**
	baz=43,SNR=6.0						
P18A	**Preston Nutter**	**43.61**	**308**	⇑P	**P**	**17 45 59.7**	**+1.3**
	baz=44						
J19A	**Crowheart**	**43.79**	**313**	P	**P**	**17 46 01.1**	**+1.4**
	baz=44,SNR=8.4						
BW06	**Boulder Array**	**43.98**	**312**	P	**P**	**17 46 02.4**	**+1.1**
	baz=44,SNR=6.8						
PDAR	**Pinedale Array**	**43.98**	**312**	P	**P**	**17 46 02.0**	**+0.8**
PDAR	**Pinedale Array**	**43.98**	**312**	P	**P**	**17 46 02.0**	**+0.8**
	3.6nm,0.9s,baz=116,slow=9.7,SNR=26						
O17A	**Robinson Place**	**44.12**	**308**	⇓P	**P**	**17 46 04.2**	**+1.8**
	baz=44,SNR=8.9						
K18A	**Toltan Ranch,**	**44.28**	**312**	⇑P	**P**	**17 46 04.0**	**+0.3**
	baz=44						
M17A	**Scullys Gap (B**	**44.40**	**310**	⇓P	**P**	**17 46 05.5**	**+0.9**
	baz=44						
J18A	**Kendall Valley**	**44.44**	**313**	P	**P**	**17 46 06.2**	**+1.2**
	baz=44,SNR=6.1						
I18A	**Diamond G Ranc**	**44.45**	**313**	⇑P	**P**	**17 46 06.2**	**+1.1**
	baz=44,SNR=8.6						
FRB	**Frobisher Bay**	**44.46**	**358**	P	**P**	**17 46 04.5**	**0.0**
FRB	**Frobisher Bay**	**44.46**	**358**	P	**P**	**17 46 04.5**	**0.0**
	1.1nm,0.7s,baz=176,slow=8.5,SNR=3.1						
H18A	**Shoshone NF, C**	**44.67**	**315**	⇑P	**P**	**17 46 07.1**	**+0.3**
	baz=45						
K17A	**Gardner Place,**	**44.93**	**312**	P	**P**	**17 46 10.2**	**+1.3**
	baz=45,SNR=5.6						
J17A	**Brown Place, J**	**44.97**	**313**	P	**P**	**17 46 10.9**	**+1.8**
	baz=45,SNR=8.0						
I17A	**Pilgrim Ck.**	**45.05**	**313**	⇑P	**P**	**17 46 10.4**	**+0.7**
	baz=45						
M16A	**Huntsville**	**45.05**	**310**	⇑P	**P**	**17 46 10.1**	**+0.3**
	baz=45						
M16A				⇑P	**pP**	**17 46 10.3**	**-1.2**
	baz=45						
M16A				⇑P	**pP**	**17 46 10.3**	**-1.2**
	baz=45						
L16A	**Fish Haven**	**45.09**	**311**	P	**P**	**17 46 11.2**	**+1.1**
	baz=45,SNR=12						
MOOW	**Moose Ponds**	**45.11**	**313**	*e*P	**P**	**17 46 11.3**	**+1.0**
	3.9nm,0.8s						
TPAW	**Teton Pass**	**45.17**	**313**	*e*P	**P**	**17 46 11.9**	**+1.0**
	2.9nm,0.7s						
RRI2	**Red Ridge**	**45.39**	**312**	*e*P	**P**	**17 46 13.4**	**+0.9**
	2.4nm,0.7s						
K16A	**Soda Springs**	**45.43**	**312**	P	**P**	**17 46 14.5**	**+1.7**
	baz=46,SNR=6.0						
J16A	**Bone**	**45.57**	**312**	⇓P	**P**	**17 46 14.8**	**+0.9**
	baz=46						
I16A	**Newdale**	**45.66**	**313**	⇑P	**P**	**17 46 15.9**	**+1.3**
	baz=46						
DUG	**Dugway**	**45.66**	**308**	⇑P	**P**	**17 46 16.1**	**+1.5**
	baz=46						
H16A	**Russell Place,**	**45.75**	**314**	⇑P	**P**	**17 46 16.7**	**+1.4**
	baz=46						
F17A	**Fitzpatrick Pl**	**45.75**	**316**	⇑P	**P**	**17 46 16.8**	**+1.5**
	baz=46						
L15A	**Malad City**	**45.78**	**310**	P	**P**	**17 46 16.5**	**+1.0**
	baz=46,SNR=8.1						
QLMT	**Earthquake Lak**	**45.91**	**314**	*e*P	**P**	**17 46 19.2**	**+2.6**
	0.3nm,0.5s						
J15A	**Blackfoot**	**46.18**	**312**	⇓P	**P**	**17 46 20.3**	**+1.7**
	baz=46,SNR=5.7						
L14A	**Malta**	**46.40**	**310**	⇓P	**P**	**17 46 21.1**	**+0.7**
	baz=46						
C17A	**Wharram Farm,**	**46.43**	**318**	⇓P	**P**	**17 46 21.9**	**+1.4**
	baz=46						
K14A	**Jones Ranch, D**	**46.48**	**311**	⇑P	**P**	**17 46 22.4**	**+1.3**
	baz=46						
J14A	**Carey**	**46.92**	**312**	P	**P**	**17 46 26.6**	**+2.1**
	baz=47,SNR=20						
I14A	**Mackay**	**47.04**	**313**	P	**P**	**17 46 27.6**	**+2.1**
	baz=47,SNR=11						
H14A	**Leadore**	**47.17**	**313**	P	**P**	**17 46 28.6**	**+2.2**
	baz=47,SNR=6.5						
D15A	**Lincoln**	**47.34**	**317**	⇓P	**P**	**17 46 29.2**	**+1.5**
	baz=47						
J13A	**Cove Ranch, Pi**	**47.40**	**312**	P	**P**	**17 46 30.2**	**+2.0**
	baz=47,SNR=8.1						
I13A	**Wildhorse Cree**	**47.50**	**312**	⇓P	**P**	**17 46 29.2**	**+0.1**
	baz=48,SNR=6.4						
H13A	**Challis**	**47.76**	**313**	P	**P**	**17 46 32.5**	**+1.5**
	baz=48,SNR=5.9						
G13A	**Cobalt**	**47.89**	**314**	⇓P	**P**	**17 46 31.4**	**-0.6**
	baz=48						
D14A	**Greenough**	**47.99**	**317**	⇑P	**P**	**17 46 32.6**	**-0.1**
	baz=48						
F13A	**Darby**	**48.15**	**315**	⇓P	**P**	**17 46 33.3**	**-0.7**
	baz=48						
H12A	**Diamond D Ranc**	**48.17**	**313**	⇓P	**P**	**17 46 34.0**	**-0.3**
	baz=48						
I12A	**Atlanta**	**48.18**	**312**	⇓P	**P**	**17 46 35.2**	**+0.9**
	baz=48						
C14A	**Swan Lake**	**48.37**	**317**	⇑P	**P**	**17 46 37.2**	**+1.6**
	baz=48						
MFID	**Camas Ranch**	**48.58**	**311**	*e*P	**P**	**17 46 38.5**	**+1.2**
	3.4nm,0.8s						
MFID	**Camas Ranch**	**48.58**	**311**	⇑P	**P**	**17 46 37.8**	**+0.4**
	baz=49						
D13A	**Huson**	**48.62**	**316**	⇑P	**P**	**17 46 38.5**	**+1.0**
	baz=49						
G12A	**Big Creek, Yel**	**48.65**	**314**	⇑P	**P**	**17 46 39.0**	**+1.2**
	baz=49						
F12A	**Elk City**	**48.76**	**314**	⇑P	**P**	**17 46 39.3**	**+0.6**
	baz=49						
NVAR	**Mina Array Bea**	**49.56**	**304**	P	**P**	**17 46 46.3**	**+1.3**
NVAR	**Mina Array Bea**	**49.56**	**304**	P	**P**	**17 46 46.3**	**+1.3**
	0.7nm,0.6s,baz=70,slow=8.5,SNR=5.3						
C11A	**Tepee Creek (N**	**50.00**	**317**	⇑P	**P**	**17 46 48.5**	**+0.4**
	baz=50						
NEW	**Newport**	**50.68**	**317**	*e*P	**P**	**17 46 53.8**	**+0.6**
	6.1nm,0.8s						
NEW	**Newport**	**50.68**	**317**	P	**P**	**17 46 54.1**	**+1.0**
	baz=51,SNR=7.1						
YKA	**Yellowknife Ar**	**54.80**	**334**	P	**P**	**17 47 22.8**	**-0.5**
YKA	**Yellowknife Ar**	**54.80**	**334**	P	**P**	**17 47 22.8**	**-0.5**
	0.6nm,0.6s,baz=112,slow=7.4,SNR=9.9						
RES	**Resolute Bay**	**57.66**	**351**	LR	LR	18 12 18.7	
	comp=Z,44nm,20.1s,baz=100,slow=36						
DBIC	**Dimbokro**	**59.85**	**93**	P	**P**	**17 47 58.5**	**-1.2**
DBIC	**Dimbokro**	**59.85**	**93**	P	**P**	**17 47 58.5**	**-1.2**
	1.4nm,0.7s,baz=223,slow=4.2,SNR=3.6						
TORD	**Torodi Ar. Bea**	**64.18**	**84**	P	**P**	**17 48 28.1**	**-0.8**
TORD	**Torodi Ar. Bea**	**64.18**	**84**	P	**P**	**17 48 28.1**	**-0.8**
	0.5nm,0.6s,baz=289,slow=7.3,SNR=5.0						
INK	**Inuvik**	**64.22**	**337**	P	P	17 48 25.9	-2.4
INK	**Inuvik**	**64.22**	**337**	P	P	17 48 25.9	-2.4
	0.9nm,0.8s,baz=106,slow=11,SNR=5.3						
NOA	**NORSAR Array B**	**66.72**	**31**	LR	LR	18 14 20.9	
	comp=Z,28nm,18.4s,baz=55,slow=33						
GERES	**GERESS Array B**	**68.46**	**44**	LR	LR	18 12 36.1	
	comp=Z,24nm,19.0s,baz=272,slow=30						
ILAR	**Eielson Array**	**69.18**	**333**	P	**P**	**17 48 58.8**	**-1.2**
ILAR	**Eielson Array**	**69.18**	**333**	P	**P**	**17 48 58.8**	**-1.2**
	0.7nm,0.7s,baz=106,slow=4.0,SNR=16						
VRAC	**Vranov**	**70.31**	**43**	LR	LR	18 17 15.1	
	comp=Z,33nm,19.6s,baz=72,slow=34						
ASAR	**Alice Springs**	**161.72**	**253**	PKPab	**PKPab**	**17 58 38.2**	**-2.7**
ASAR	**Alice Springs**	**161.72**	**253**	PKPab	**PKPab**	**17 58 38.2**	**-2.7**
	0.7nm,0.8s,baz=114,slow=4.2,SNR=6.2						

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*ISCJB **05** 17:38:18.8±0.6, 36.°33N±0.°02×21.°70E±0.°02, h4km±3km, mb4.2/34, MS3.4/15, Error ellipse: s-maj=3.5km s-min=3.2km az=3.5*

*MOS **05** 17:38:19.2±1.6, 35.°60N×21.°80E, h33km, mb4.5/21, Error ellipse: s-maj=8.9km s-min=4.8km az=107.0*

*IDC **05** 17:38:19.2±0.7, 36.°53N×21.°80E, h0km, mb4.0/15, mb1 4.0/21, mb1mx3.9/35, mbtmp3.9/21, ML3.4/6, MS3.3/15, Ms1 3.3/15, ms1mx3.1/50, Error ellipse: s-maj=16.5km s-min=14.0km az=147.0*

*CSEM **05** 17:38:20.9±0.2, 36.°40N×21.°67E, h5km, mb4.2/27, Ms3.0, Mw4.0, Error ellipse: s-maj=4.7km s-min=4.3km az=23.0*

*ATH **05** 17:38:21.3, 36.°42N×21.°69E, h13km±2km, MD3.6/31, ML4.0*

*THE **05** 17:38:23.6, 36.°53N×21.°85E, h0km±2km, ML4.1/5, Error ellipse: s-maj=3.1km s-min=1.0km az=215.0*

ISC 05 17:38:20.9±1.1**, 36.°40N**±0.°03×**21.°74E**±0.°03**, h11**km±6km**, n378, σ1.°40**/376**, mb4.3**/34**, MS3.3**/15**, 5C-11D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.49**	**1**	P	**Pg**	**17 38 30.2**	**-0.3**
PYL				S	**Sg**	**17 38 37.2**	**+0.1**
PYL	**PYLOS**	**0.49**	**1**	*e*PB	**Pg**	**17 38 30.3**	**-0.3**
PYL				*e*SB	**Sb**	**17 38 37.8**	**-1.0**
PYL	**PYLOS**	**0.49**	**1**	*e*Pb	**Pg**	**17 38 30.3**	**-0.3**
PYL				S	**Sg**	**17 38 37.2**	**+0.1**
PYL				*e*Sb	**Sb**	**17 38 37.8**	**-1.0**
DYR	**Agios Nikonas**	**0.60**	**53**	P	**Pg**	**17 38 32.2**	**-0.4**
DYR				S	**Sg**	**17 38 39.9**	**-0.6**
DYR	**Agios Nikonas**	**0.60**	**53**	*e*PB	**Pg**	**17 38 32.4**	**-0.2**
DYR				*e*SB	**Sb**	**17 38 42.2**	**+0.3**
DYR	**Agios Nikonas**	**0.60**	**53**	P	**Pg**	**17 38 32.2**	**-0.4**
DYR				S	**Sb**	**17 38 41.5**	**-0.4**
DYR				*e*Sb	**Sb**	**17 38 42.2**	**+0.3**
ITM	**Ithomi**	**0.79**	**11**	P	**Pg**	**17 38 35.3**	**-0.9**
ITM				S	**Sg**	**17 38 45.9**	**-0.7**
ITM	**Ithomi**	**0.79**	**11**	*e*PG	**Pg**	**17 38 36.1**	**-0.1**
ITM				*e*SB	**Sb**	**17 38 47.6**	**+0.2**
ITM	**Ithomi**	**0.79**	**11**	P	**Pg**	**17 38 35.5**	**-0.7**
ITM	**Ithomi**	**0.79**	**11**	*e*Pg	**Pg**	**17 38 36.1**	**-0.1**
ITM				S	**Sg**	**17 38 46.7**	**+0.1**
ITM				*e*Sb	**Sb**	**17 38 47.6**	**+0.2**
VLI	**Veliai**	**1.02**	**72**	P	**Pn**	**17 38 41.2**	**+0.1**
VLI				S	**Sg**	**17 38 54.4**	**+0.7**
VLI	**Veliai**	**1.02**	**72**	*e*PB	**Pn**	**17 38 41.2**	**+0.1**
VLI				*e*SB	**Sn**	**17 38 56.5**	**+1.2**
VLI	**Veliai**	**1.02**	**72**	P	**Pb**	**17 38 40.5**	**0.0**
VLI	**Veliai**	**1.02**	**72**	*e*Pb	**Pn**	**17 38 41.2**	**+0.1**
VLI				S	**Sn**	**17 38 56.1**	**+0.8**
VLI				*e*Sb	**Sn**	**17 38 56.5**	**+1.2**
KYTH	**Kithira**	**1.06**	**96**	P	**Pn**	**17 38 42.3**	**+0.7**
KYTH	**Kithira**	**1.06**	**96**	*e*PN	**Pn**	**17 38 42.5**	**+0.9**
KYTH	**Kithira**	**1.06**	**96**	P	**Pn**	**17 38 42.3**	**+0.7**
VLX	**Vlachokerasia**	**1.10**	**28**	P	**Pb**	**17 38 41.1**	**-0.8**
VLX				S	**Sb**	**17 38 55.2**	**-1.0**
VLX	**Vlachokerasia**	**1.10**	**28**	*e*PG	**Pb**	**17 38 41.7**	**-0.2**
VLX				*e*SB	**Sn**	**17 38 57.3**	**-0.1**
VLX	**Vlachokerasia**	**1.10**	**28**	P	**Pb**	**17 38 41.1**	**-0.8**
VLX	**Vlachokerasia**	**1.10**	**28**	*e*Pg	**Pb**	**17 38 41.7**	**-0.2**
VLX				S	**Sb**	**17 38 55.2**	**-1.0**
VLX				*e*Sb	**Sn**	**17 38 57.3**	**-0.1**
AMT	**Artemida-Makis**	**1.13**	**359**	P	**Pb**	**17 38 42.3**	**-0.2**
AMT	**Artemida-Makis**	**1.13**	**359**	*e*PN	**Pb**	**17 38 42.2**	**-0.2**
AMT				*e*SB	**Sn**	**17 38 58.0**	**-0.2**
AMT	**Artemida-Makis**	**1.13**	**359**	P	**Pb**	**17 38 42.0**	**-0.4**
AMT				S	**Sn**	**17 38 57.9**	**-0.2**
GUR	**Goura**	**1.61**	**17**	P	**Pn**	**17 38 49.8**	**+0.5**
GUR				S	**Sb**	**17 39 10.7**	**-0.2**
GUR	**Goura**	**1.61**	**17**	*e*PG	**Pb**	**17 38 50.5**	**-0.1**
GUR	**Goura**	**1.61**	**17**	P	**Pn**	**17 38 49.9**	**+0.6**
GUR	**Goura**	**1.61**	**17**	*e*Pg	**Pb**	**17 38 50.5**	**-0.1**
GUR				S	**Sg**	**17 39 14.0**	**+1.4**
DID	**Didima**	**1.63**	**47**	P	**Pb**	**17 38 50.8**	**-0.2**
DID				S	**Sb**	**17 39 11.3**	**-0.3**
DID	**Didima**	**1.63**	**47**	*e*PG	**Pb**	**17 38 51.6**	**+0.6**
DID	**Didima**	**1.63**	**47**	P	**Pb**	**17 38 51.0**	**0.0**
DID	**Didima**	**1.63**	**47**	*e*Pg	**Pb**	**17 38 51.6**	**+0.6**
DID				S	**Sg**	**17 39 13.1**	**-0.3**
RLS	**Riolos of Patr**	**1.67**	**353**	P	**Pb**	**17 38 51.7**	**+0.1**
RLS	**Riolos of Patr**	**1.67**	**353**	*e*PG	**Pb**	**17 38 51.9**	**+0.3**
RLS	**Riolos of Patr**	**1.67**	**353**	P	**Pb**	**17 38 51.7**	**+0.1**
LAKA	**Lakka**	**1.85**	**6**	P	**Pb**	**17 38 54.7**	**+0.1**
LAKA	**Lakka**	**1.85**	**6**	*e*PN	**Pb**	**17 38 54.8**	**+0.1**
LAKA	**Lakka**	**1.85**	**6**	P	**Pb**	**17 38 54.4**	**-0.2**
LAKA	**Lakka**	**1.85**	**6**	*e*Pn	**Pb**	**17 38 54.8**	**+0.1**
LAKA				S	**Sg**	**17 39 21.0**	**+0.8**
KFL	**Anninata**	**1.87**	**336**	P	**Pb**	**17 38 55.3**	**+0.4**
KFL	**Anninata**	**1.87**	**336**	P	**Pb**	**17 38 55.3**	**+0.4**
UPR	**University Cam**	**1.88**	**1**	P	**Pb**	**17 38 55.9**	**+0.7**
UPR	**University Cam**	**1.88**	**1**	*e*PG	**Pg**	**17 38 56.6**	**-0.3**
UPR	**University Cam**	**1.88**	**1**	P	**Pb**	**17 38 55.3**	**+0.1**
UPR	**University Cam**	**1.88**	**1**	*e*Pg	**Pg**	**17 38 56.6**	**-0.3**
UPR				S	**Sg**	**17 39 20.2**	**-1.1**
LTK	**Loutraki**	**1.89**	**31**	P	**Pb**	**17 38 54.8**	**-0.6**
LTK	**Loutraki**	**1.89**	**31**	*e*PN	**Pb**	**17 38 54.8**	**-0.6**
LTK	**Loutraki**	**1.89**	**31**	P	**Pb**	**17 38 54.6**	**-0.8**
LTK				S	**Sg**	**17 39 23.4**	**+1.6**
PSA1	**Psathopyrgos**	**1.93**	**3**	*e*PG	**Pb**	**17 38 56.8**	**+0.9**
NAIG	**Nisos Aigina**	**1.95**	**45**	*e*PN	**Pb**	**17 38 56.8**	**+0.4**
NAIG	**Nisos Aigina**	**1.95**	**45**	*e*Pn	**Pb**	**17 38 56.8**	**+0.4**
TRIZ	**Trizonia**	**1.98**	**8**	P	**Pb**	**17 38 57.0**	**+0.1**
TRIZ	**Trizonia**	**1.98**	**8**	*e*PG	**Pb**	**17 38 57.5**	**+0.6**
TRIZ	**Trizonia**	**1.98**	**8**	P	**Pb**	**17 38 57.0**	**+0.1**
TRIZ	**Trizonia**	**1.98**	**8**	*e*Pg	**Pb**	**17 38 57.5**	**+0.6**
VLS	**Valsamata**	**2.00**	**333**	P	**Pb**	**17 38 56.3**	**-0.8**
VLS	**Valsamata**	**2.00**	**333**	*e*PN	**Pb**	**17 38 56.6**	**-0.6**
VLS	**Valsamata**	**2.00**	**333**	P	**Pb**	**17 38 56.3**	**-0.8**
VLS	**Valsamata**	**2.00**	**333**	*e*Pn	**Pb**	**17 38 56.6**	**-0.6**
KALE	**Kalithea**	**2.01**	**9**	P	**Pb**	**17 38 56.7**	**-0.8**
KALE	**Kalithea**	**2.01**	**9**	*e*PG	**Pb**	**17 38 57.8**	**+0.3**
KALE	**Kalithea**	**2.01**	**9**	P	**Pb**	**17 38 57.3**	**-0.2**
KALE	**Kalithea**	**2.01**	**9**	*e*Pg	**Pb**	**17 38 57.8**	**+0.3**
KALE				S	**Sg**	**17 39 24.4**	**-1.2**
EFP	**Efpalio**	**2.03**	**4**	P	**Pb**	**17 38 56.6**	**-1.1**
EFP	**Efpalio**	**2.03**	**4**	*e*PG	**Pb**	**17 38 58.3**	**+0.6**
EFP	**Efpalio**	**2.03**	**4**	P	**Pb**	**17 38 57.3**	**-0.4**
EFP	**Efpalio**	**2.03**	**4**	*e*Pg	**Pb**	**17 38 58.3**	**+0.6**
EFP				S	**Sg**	**17 39 25.3**	**-0.7**
DSF	**Desfina**	**2.10**	**17**	P	**Pn**	**17 38 57.5**	**+1.5**
DSF	**Desfina**	**2.10**	**17**	P	**Pn**	**17 38 57.3**	**+1.3**
ATH	**Athens Observa**	**2.23**	**45**	P	**Pb**	**17 38 59.8**	**-1.3**
ATH	**Athens Observa**	**2.23**	**45**	*e*PN	**Pb**	**17 39 00.7**	**-0.4**
ATH	**Athens Observa**	**2.23**	**45**	P	**Pb**	**17 38 59.8**	**-1.3**
ATH	**Athens Observa**	**2.23**	**45**	*e*Pn	**Pb**	**17 39 00.7**	**-0.4**
VAM	**Vamos**	**2.23**	**116**	P	**Pb**	**17 39 01.0**	**-0.2**
VAM	**Vamos**	**2.23**	**116**	*e*PN	**Pb**	**17 39 01.4**	**+0.2**
VAM	**Vamos**	**2.23**	**116**	P	**Pb**	**17 39 01.0**	**-0.2**
VAM	**Vamos**	**2.23**	**116**	*e*Pn	**Pb**	**17 39 01.4**	**+0.2**
PTL	**Penteli**	**2.37**	**45**	P	**Pn**	**17 39 00.8**	**+1.2**
PTL	**Penteli**	**2.37**	**45**	*e*PB	**Pn**	**17 39 01.5**	**+1.9**
PTL	**Penteli**	**2.37**	**45**	P	**Pn**	**17 39 00.8**	**+1.2**
PTL	**Penteli**	**2.37**	**45**	*e*Pb	**Pn**	**17 39 01.5**	**+1.9**
LKR	**Lokris**	**2.46**	**24**	P	**Pn**	**17 39 02.1**	**+1.2**
LKR	**Lokris**	**2.46**	**24**	*e*PB	**Pn**	**17 39 02.2**	**+1.3**
LKR	**Lokris**	**2.46**	**24**	*e*Pb	**Pn**	**17 39 02.2**	**+1.3**
AXAR	**Agios Charalam**	**2.47**	**17**	P	**Pn**	**17 39 02.9**	**+1.8**
AXAR	**Agios Charalam**	**2.47**	**17**	P	**Pn**	**17 39 02.9**	**+1.8**
ATAL	**Atalanti**	**2.51**	**24**	P	**Pn**	**17 39 02.8**	**+1.3**
ATAL	**Atalanti**	**2.51**	**24**	P	**Pn**	**17 39 02.8**	**+1.3**
EVR	**Evrytania**	**2.51**	**1**	*e*PG	**Pb**	**17 39 06.9**	**+0.9**
EVR	**Evrytania**	**2.51**	**1**	*e*Pg	**Pb**	**17 39 06.9**	**+0.9**
LKD2	**Lefkada island**	**2.53**	**341**	P	**Pb**	**17 39 04.9**	**-1.4**
LKD2	**Lefkada island**	**2.53**	**341**	*e*PN	**Pb**	**17 39 05.6**	**-0.7**
LKD2	**Lefkada island**	**2.53**	**341**	P	**Pb**	**17 39 04.9**	**-1.4**
LKD2	**Lefkada island**	**2.53**	**341**	*e*Pn	**Pb**	**17 39 05.6**	**-0.7**
AGG	**Agios Georgios**	**2.66**	**10**	P	**Pn**	**17 39 05.5**	**+1.8**
AGG	**Agios Georgios**	**2.66**	**10**	*e*PB	**Pn**	**17 39 05.5**	**+1.8**
AGG	**Agios Georgios**	**2.66**	**10**	P	**Pn**	**17 39 05.5**	**+1.8**
MRMA	**Marmari**	**2.68**	**51**	P	**Pn**	**17 39 05.6**	**+1.7**
MRMA	**Marmari**	**2.68**	**51**	P	**Pn**	**17 39 05.6**	**+1.7**
MRKA	**Markates**	**2.73**	**32**	P	**Pn**	**17 39 06.0**	**+1.4**
MRKA	**Markates**	**2.73**	**32**	P	**Pn**	**17 39 06.0**	**+1.4**
IDI	**Anoyia**	**2.79**	**112**	P	**Pb**	**17 39 09.0**	**-1.8**
IDI	**Anoyia**	**2.79**	**112**	*e*PN	**Pb**	**17 39 08.8**	**-2.0**
IDI	**Anoyia**	**2.79**	**112**	P	**Pb**	**17 39 09.0**	**-1.8**
SKIA	**Skiathos**	**3.08**	**26**	P	**Pn**	**17 39 10.5**	**+1.0**
SKIA	**Skiathos**	**3.08**	**26**	P	**Pn**	**17 39 10.5**	**+1.0**
APE	**Apeiranthos**	**3.12**	**77**	P	**Pn**	**17 39 11.8**	**+1.8**
APE	**Apeiranthos**	**3.12**	**77**	⇓*i*P	**Pn**	**17 39 12.1**	**+2.1**
APE	**Apeiranthos**	**3.12**	**77**	*e*PN	**Pn**	**17 39 12.1**	**+2.1**
APE	**Apeiranthos**	**3.12**	**77**	P	**Pn**	**17 39 11.8**	**+1.8**
APE	**Apeiranthos**	**3.12**	**77**	*e*Pn	**Pn**	**17 39 12.1**	**+2.1**
NEO	**Neokhori**	**3.13**	**22**	*e*PN	**Pn**	**17 39 11.3**	**+1.2**
NEO	**Neokhori**	**3.13**	**22**	*e*Pn	**Pn**	**17 39 11.3**	**+1.2**
THL	**Klokotos Trika**	**3.17**	**4**	P	**Pn**	**17 39 13.2**	**+2.7**
THL	**Klokotos Trika**	**3.17**	**4**	*e*PN	**Pn**	**17 39 13.3**	**+2.7**
THL	**Klokotos Trika**	**3.17**	**4**	P	**Pn**	**17 39 13.2**	**+2.7**
XOR	**Xorichti**	**3.18**	**21**	P	**Pn**	**17 39 11.8**	**+1.0**
XOR	**Xorichti**	**3.18**	**21**	P	**Pn**	**17 39 11.8**	**+1.0**
AOS	**Alonnisos**	**3.25**	**31**	P	**Pn**	**17 39 12.4**	**+0.7**
AOS	**Alonnisos**	**3.25**	**31**	*e*PN	**Pn**	**17 39 12.3**	**+0.6**
AOS	**Alonnisos**	**3.25**	**31**	P	**Pn**	**17 39 12.4**	**+0.7**
IGT	**Igoumenitsa**	**3.32**	**341**	P	**Pn**	**17 39 14.1**	**+1.4**
IGT	**Igoumenitsa**	**3.32**	**341**	P	**Pn**	**17 39 14.1**	**+1.4**
JAN	**Janina**	**3.33**	**348**	*e*PN	**Pn**	**17 39 15.4**	**+2.6**
JAN	**Janina**	**3.33**	**348**	*e*Pn	**Pn**	**17 39 15.4**	**+2.6**
NPS	**Neapolis**	**3.35**	**109**	*e*PB	**Pb**	**17 39 18.0**	**-2.2**
KEK	**Kerkira**	**3.64**	**336**	*e*PN	**Pn**	**17 39 18.4**	**+1.3**
KEK	**Kerkira**	**3.64**	**336**	*e*Pn	**Pn**	**17 39 18.4**	**+1.3**
LIT	**Litokhoron**	**3.74**	**9**	P	**Pn**	**17 39 21.2**	**+2.7**
LIT	**Litokhoron**	**3.74**	**9**	*e*PN	**Pn**	**17 39 21.4**	**+2.9**
LIT	**Litokhoron**	**3.74**	**9**	P	**Pn**	**17 39 21.2**	**+2.7**
PAIG	**Paliouri**	**3.84**	**23**	P	**Pn**	**17 39 20.7**	**+0.9**
PAIG	**Paliouri**	**3.84**	**23**	P	**Pn**	**17 39 20.7**	**+0.9**
KZN	**Kozani**	**3.90**	**0**	P	**Pn**	**17 39 23.5**	**+2.7**
KZN	**Kozani**	**3.90**	**0**	*e*PN	Pn	17 39 24.0	+3.2
KZN	**Kozani**	**3.90**	**0**	P	**Pn**	**17 39 23.5**	**+2.7**
KZN	**Kozani**	**3.90**	**0**	*e*Pn	Pn	17 39 24.0	+3.2
CHOS	**Chios island**	**3.97**	**59**	P	**Pn**	**17 39 23.1**	**+1.4**
CHOS	**Chios island**	**3.97**	**59**	*e*PN	**Pn**	**17 39 23.5**	**+1.8**
CHOS	**Chios island**	**3.97**	**59**	P	**Pn**	**17 39 23.1**	**+1.4**
CHOS	**Chios island**	**3.97**	**59**	*e*Pn	**Pn**	**17 39 23.5**	**+1.8**
NEST	**Nestorio**	**4.04**	**353**	P	**Pn**	**17 39 25.6**	**+2.9**
NEST	**Nestorio**	**4.04**	**353**	P	**Pn**	**17 39 25.6**	**+2.9**
PLG	**Polygyros**	**4.19**	**18**	P	**Pn**	**17 39 25.9**	**+1.2**
PLG	**Polygyros**	**4.19**	**18**	P	**Pn**	**17 39 25.9**	**+1.2**
OUR	**Ouranopolis**	**4.31**	**24**	P	**Pn**	**17 39 27.3**	**+1.1**
OUR	**Ouranopolis**	**4.31**	**24**	P	**Pn**	**17 39 27.3**	**+1.1**
HORT	**Hortiatis**	**4.33**	**14**	P	**Pn**	**17 39 28.0**	**+1.4**
HORT	**Hortiatis**	**4.33**	**14**	P	**Pn**	**17 39 28.0**	**+1.4**
URLA	**Izmir**	**4.34**	**62**	*i*P	**Pn**	**17 39 28.9**	**+2.2**
URLA	**Izmir**	**4.34**	**62**	*i*P	**Pn**	**17 39 28.9**	**+2.2**
FNA	**Florina**	**4.38**	**356**	P	**Pn**	**17 39 29.2**	**+1.8**
FNA	**Florina**	**4.38**	**356**	P	**Pn**	**17 39 29.2**	**+1.8**
KARP	**Karpathos**	**4.48**	**99**	*e*PN	**Pn**	**17 39 31.5**	**+2.8**
KARP	**Karpathos**	**4.48**	**99**	*e*Pn	**Pn**	**17 39 31.5**	**+2.8**
LTBQ	**Tobruq**	**4.70**	**157**	*i*P	Pn	17 39 36.0	+4.4
	SNR=36						
LTBQ				*e*S	**Sn**	**17 40 28.8**	**+2.7**
	SNR=36						
KNT	**Kendrikon**	**4.84**	**10**	P	**Pn**	**17 39 36.2**	**+2.6**
KNT	**Kendrikon**	**4.84**	**10**	P	**Pn**	**17 39 36.2**	**+2.6**
SRS	**Serrai**	**4.93**	**17**	P	**Pn**	**17 39 36.2**	**+1.4**
SRS	**Serrai**	**4.93**	**17**	P	**Pn**	**17 39 36.2**	**+1.4**
VAY	**Valandovo**	**4.96**	**7**	*e*Pn	**Pn**	**17 39 35.1**	**-0.1**
VAY	**Valandovo**	**4.96**	**7**	*e*Pn	**Pn**	**17 39 35.5**	**+0.3**
AYDN	**Tasoluk**	**5.07**	**74**	*i*P	**Pn**	**17 39 39.3**	**+2.4**
AYDN	**Tasoluk**	**5.07**	**74**	*i*P	**Pn**	**17 39 39.3**	**+2.4**
NVR	**Nevrokopi**	**5.21**	**18**	P	**Pn**	**17 39 41.0**	**+2.2**
NVR	**Nevrokopi**	**5.21**	**18**	P	**Pn**	**17 39 41.0**	**+2.2**
MMB	**Musomiste**	**5.41**	**16**	*i*P	**Pn**	**17 39 44.4**	**+3.0**
MMB	**Musomiste**	**5.41**	**16**	*i*P	**Pn**	**17 39 44.4**	**+3.0**
TURN	**Turunc**	**5.54**	**83**	*i*P	Pn	17 39 39.1	-4.1
KKB	**Krupnik**	**5.56**	**10**	P	**Pn**	**17 39 45.6**	**+2.1**
KKB	**Krupnik**	**5.56**	**10**	P	**Pn**	**17 39 45.6**	**+2.1**
LJBD	**Adjabya**	**5.62**	**194**	*i*P	**Pn**	**17 39 46.0**	**+1.7**
	SNR=36						
LJBD				*e*S	**Sn**	**17 40 48.3**	**-0.6**
	SNR=36						
BALY	**Balya**	**5.71**	**53**	*i*P	**Pn**	**17 39 48.1**	**+2.4**
BALY	**Balya**	**5.71**	**53**	*i*P	**Pn**	**17 39 48.1**	**+2.4**
RZN	**Rozhen**	**5.77**	**23**	P	Pn	17 39 50.2	+3.7
RZN	**Rozhen**	**5.77**	**23**	P	Pn	17 39 50.2	+3.7
DNZL	**Cakiroluk**	**5.99**	**75**	*i*P	Pn	17 39 54.5	+5.0
VTS	**Vitosha**	**6.29**	**10**	⇓P	**Pn**	**17 39 55.8**	**+2.2**
VTS	**Vitosha**	**6.29**	**10**	⇓*i*P	**Pn**	**17 39 55.8**	**+2.2**
VTS	**Vitosha**	**6.29**	**10**	P	Pn	17 39 58.2	+4.6
VTS	**Vitosha**	**6.29**	**10**	P	**Pn**	**17 39 55.8**	**+2.2**
CDT	**Castel del Mon**	**6.33**	**319**	*e*Pn	**Pn**	**17 39 54.6**	**+0.5**
CDT				*e*Sn	**Sn**	**17 41 04.7**	**-1.6**
GOLH	**Golhisar**	**6.33**	**80**	*i*P	Pn	17 39 59.2	+4.9
AKAS	**Kas**	**6.36**	**89**	*i*P	**Pn**	**17 39 52.9**	**-1.6**
GDZ	**Gediz**	**6.70**	**64**	*i*P	**Pn**	**17 40 02.2**	**+2.9**
GDZ	**Gediz**	**6.70**	**64**	*i*P	**Pn**	**17 40 02.2**	**+2.9**
KORT	**Korkueli**	**6.95**	**83**	*i*P	Pn	17 40 09.3	+6.6
MS1	**Monte Sant'Ang**	**6.95**	**321**	*e*Pn	Pn	17 40 06.3	+3.6
STON	**Ston**	**7.17**	**336**	*e*Pn	**Pn**	**17 40 03.1**	**-2.5**
STON				Sn	**Sn**	**17 41 21.9**	**-5.0**
KDHN	**Kadinhani**	**8.52**	**73**	*i*P	Pn	17 40 28.8	+4.6
AQU	**L'Aquila**	**8.77**	**315**	⇑*i*P	**Pn**	**17 40 30.0**	**+2.4**
AQU	**L'Aquila**	**8.77**	**315**	P	**Pn**	**17 40 30.0**	**+2.4**
GZR	**Gura Zlata**	**9.02**	**5**	⇓P	**Pn**	**17 40 32.3**	**+1.3**
GZR	**Gura Zlata**	**9.02**	**5**	⇓*i*P	**Pn**	**17 40 32.3**	**+1.3**
GZR	**Gura Zlata**	**9.02**	**5**	P	**Pn**	**17 40 32.3**	**+1.3**
BZS	**Buzias**	**9.21**	**359**	⇑P	**Pn**	**17 40 35.5**	**+2.0**
BZS	**Buzias**	**9.21**	**359**	⇑*i*P	**Pn**	**17 40 35.5**	**+2.0**
BZS	**Buzias**	**9.21**	**359**	P	**Pn**	**17 40 35.5**	**+2.0**
ARR	**Arges**	**9.22**	**13**	⇓*i*P	**Pn**	**17 40 32.0**	**-1.8**
MLR	**Muntele Rosu**	**9.62**	**18**	Pn	**Pn**	**17 40 38.1**	**-1.2**
	0.0nm,0.3s,baz=194,slow=8.3,SNR=2.8						
MLR				LR	LR	17 44 36.6	
	comp=Z,43nm,21.5s,baz=38,slow=40						
NVLJ	**Novalja**	**9.68**	**329**	*e*Pn	**Pn**	**17 40 40.3**	**+0.3**
NVLJ				Sn	Sn	17 42 19.7	-8.9
NVLJ	**Novalja**	**9.68**	**329**	*e*Pn	**Pn**	**17 40 40.2**	**+0.3**
BRTR	**Keskin Array B**	**9.96**	**67**	Pn	Pn	17 40 47.6	+3.7
	0.1nm,0.3s,baz=249,slow=12,SNR=8.3						
BRTR	**Keskin Array B**	**9.96**	**67**	P	Pn	17 40 47.7	+3.7
KEST	**Kesra**	**10.05**	**270**	Pn	**Pn**	**17 40 46.0**	**+0.8**

0.1nm,0.3s,baz=138,slow=5.7,SNR=6.2
KEST Sn **Sn** **17 42 38.9 +0.9**
0.1nm,0.3s,baz=53,slow=20,SNR=3.1
PLOR Plostina 10.14 20 ⇓P Pn 17 40 51.8 +5.5
PLOR Plostina 10.14 20⇓*i*P Pn 17 40 51.8 +5.5
VRI Vrincioaia 10.18 20 ⇓P Pn 17 40 51.5 +4.7
VRI Vrincioaia 10.18 20⇓*i*P Pn 17 40 51.5 +4.7
PGF Pioggiola 11.59 306 *e*P Pn 17 41 11.0 +4.7
14nm,1.0s
MMAI Mount Meron Ar 11.74 103 Pn **Pn** **17 41 08.0 -0.4**
0.7nm,0.3s,baz=291,slow=13,SNR=3.0
MMAI Sn **Sn** **17 43 17.9 -1.6**
1.2nm,0.3s,baz=285,slow=36,SNR=3.5
VYHS Vyhne 12.27 351 *e*P **Pn** **17 41 16.6 +1.1**
VYHS Vyhne 12.27 351 *e*PN **Pn** **17 41 16.6 +1.1**
VYHS Vyhne 12.27 351 *e*SN Sn 17 43 25.8 -6.4
VYHS Vyhne 12.27 351 *e*P **Pn** **17 41 16.6 +1.1**
CRVS Cervenica-Dubn 12.50 359 *e*P **Pn** **17 41 19.7 +1.2**
CRVS Cervenica-Dubn 12.50 359 *e*PN **Pn** **17 41 19.7 +1.2**
CRVS *e* 17 41 36.1
CRVS Cervenica-Dubn 12.50 359 *e*P **Pn** **17 41 19.7 +1.2**
KOLS Kolonicke sedl 12.53 2 *e*P P 17 41 25.9 -4.8
KOLS Kolonicke sedl 12.53 2 *e*PN P 17 41 25.9 -4.8
EIL Elat 12.95 117 Sn **Sn** **17 43 44.0 -5.0**
0.6nm,0.3s,baz=312,slow=18,SNR=5.1
SBF Sospel 13.23 309 *e*P Pn 17 41 32.6 +4.0
17nm,1.0s
SBF Sospel 13.23 309 *e*P Pn 17 41 32.6 +4.0
8.4nm,1.0s
FRF La Foret Royal 13.59 306 *e*P Pn 17 41 38.0 +4.5
23nm,1.3s
FRF La Foret Royal 13.59 306 *e*P Pn 17 41 38.0 +4.5
12nm,1.3s
DAVOX Davos/Dischmat 13.63 323 Sn **Sn** **17 44 00.9 -4.8**
0.2nm,0.3s,baz=173,slow=19,SNR=5.5
GERES GERESS Array B 13.76 337 Pn **Pn** **17 41 34.9 -0.9**
0.2nm,0.3s,baz=162,slow=14,SNR=6.5
KHC Kasperske Hory 14.05 337 *e*P Pn 17 41 29.5 -10
KHC Kasperske Hory 14.05 337 *e*P Pn 17 41 29.5 -10
KHC *e*x x 17 41 49.5
KHC *e*x x 17 42 03.0
MBDF Montbardon 14.07 311 *e*P P 17 41 44.7 -3.4
23nm,1.3s
LPG La Plagne 14.50 313 *e*P **P** **17 41 51.5 -1.4**
LPG La Plagne 14.50 313 *e*P **P** **17 41 51.5 -1.4**
AKASG Malin Array Be 15.28 18 P **Pn** **17 41 53.9 -2.4**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 15.28 18 Pn **Pn** **17 41 53.9 -2.4**
comp=Z,0.5nm,0.3s,baz=208,slow=12,SNR=4.8
VIVF Saint-Julien-l 15.44 308 *e*P **P** **17 42 01.0 -2.1**
VIVF Saint-Julien-l 15.44 308 *e*P **P** **17 42 01.0 -2.1**
CABF La Chapelle 15.51 316 *e*P **P** **17 42 03.4 -0.5**
CABF La Chapelle 15.51 316 *e*P **P** **17 42 03.4 -0.5**
CDF Champ du Feu 16.03 323 *e*P **P** **17 42 11.3 +1.6**
CDF Champ du Feu 16.03 323 *e*P **P** **17 42 11.3 +1.6**
CLL Collm 16.16 340 *e*P **P** **17 42 11.0 0.0**
CLL Collm 16.16 340 *e*(PP) **P** **17 42 11.0 0.0**
CLL *i* 17 42 24.7
CLL LmH 17 47 00.0
comp=N,300nm,20.0s
CLL LmH 17 47 00.0
comp=E,400nm,20.6s
CLL Collm 16.16 340 *e*P **P** **17 42 11.0 0.0**
MTLF Montolieu 16.49 301 *e*P **P** **17 42 14.0 -0.7**
comp=E,4.7nm,0.8s
MTLF Montolieu 16.49 301 *e*P **P** **17 42 14.0 -0.7**
comp=E,2.3nm,0.8s
SMF Signal de Mont 16.82 313 *e*P **Pn** **17 42 17.1 +0.8**
comp=E,25nm,1.5s
SMF Signal de Mont 16.82 313 *e*P **Pn** **17 42 17.1 +0.8**
comp=E,12nm,1.5s
SFTF Sexfontaines 17.04 319 *e*P **Pn** **17 42 19.1 +0.2**
SFTF Sexfontaines 17.04 319 *e*P **Pn** **17 42 19.1 +0.2**
LOR Lormes 17.14 315 *e*P **Pn** **17 42 20.1 -0.2**
comp=E,17nm,1.3s
LOR *e*R
comp=E,125nm,17.5s
LOR Lormes 17.14 315 *e*P **Pn** **17 42 20.1 -0.2**
comp=E,8.5nm,1.3s
CAF Calviac 17.15 306 *e*P **P** **17 42 23.5 +1.4**
CAF Calviac 17.15 306 *e*P **P** **17 42 23.5 +1.4**
MEZF Maizieres J'vi 17.21 320 *e*P **P** **17 42 25.9 +3.3**
SSF Saint Saulge 17.24 314 *e*P **P** **17 42 25.5 +2.5**
SSF Saint Saulge 17.24 314 *e*P **P** **17 42 25.5 +2.5**
BGF Bois d'Agland 17.37 312 *e*P **Pn** **17 42 23.5 +0.3**
BGF Bois d'Agland 17.37 312 *e*P **Pn** **17 42 23.5 +0.3**
TCF Toulx Ste Croi 17.64 310 *e*P **Pn** **17 42 26.9 +0.5**
comp=E,33nm,1.6s
TCF Toulx Ste Croi 17.64 310 *e*P **Pn** **17 42 26.9 +0.5**
comp=E,17nm,1.6s
SUW Suwalki 17.64 3 *e*P **Pn** **17 42 25.4 -1.0**
SUW Suwalki 17.64 3 *e*P **Pn** **17 42 25.4 -1.0**
RJF Les Rejaudoux 17.66 306 *e*P **P** **17 42 27.6 0.0**
comp=E,23nm,1.3s
RJF *e*R
comp=E,151nm,17.5s
RJF Les Rejaudoux 17.66 306 *e*P **P** **17 42 27.6 0.0**
comp=E,12nm,1.3s
KIV Kislovodsk 17.67 58 *e*P **P** **17 42 28.4 +0.5**
KIV *e*S **Sn** **17 45 47.6 +3.9**
KIV pmax pmax
comp=Z,5.0nm,0.9s
KIV Kislovodsk 17.67 58 *e*P **P** **17 42 28.4 +0.5**
comp=Z,5.0nm,0.9s
KIV *e*S **Sn** **17 45 47.6 +3.9**
KBZ Khabaz 17.75 59 P **P** **17 42 28.9 +0.3**
KBZ Khabaz 17.75 59 Pn **P** **17 42 28.9 +0.3**
comp=Z,0.2nm,0.3s,baz=277,slow=9.9,SNR=12
KBZ LR LR 17 51 21.6
comp=Z,82nm,18.2s,baz=246,slow=44
KBZ Khabaz 17.75 59 P **P** **17 42 28.9 +0.3**
ONI Oni 17.84 63 P P 17 42 35.2 +5.4
ETSF Etsaut 18.33 298 *e*P **P** **17 42 37.7 +2.6**
ETSF Etsaut 18.33 298 *e*P **P** **17 42 37.7 +2.6**
SJPF Ste Jean 18.85 298 *e*P **Pn** **17 42 43.5 +2.2**
comp=Z,20nm,1.0s
DGRG David-gareji 19.05 67 P **Pn** **17 42 45.3 +1.5**
DGRG David-gareji 19.05 67 P **Pn** **17 42 45.3 +1.5**
MFF Saint Martin d 19.24 309 *e*P **Pn** **17 42 48.9 +2.9**
comp=Z,17nm,1.2s
VSR Storozhevoye 19.36 35 *e*P **P** **17 42 46.2 0.0**
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,2.0nm,0.6s
VSR pmax pmax
comp=Z,7.0nm,0.6s
VSR Storozhevoye 19.36 35 *e*P **P** **17 42 46.2 0.0**
LDF La Druitiere 20.12 314 *e*P Pn 17 42 56.2 -0.3
comp=Z,24nm,1.1s
LDF La Druitiere 20.12 314 *e*P Pn 17 42 56.2 -0.3
comp=Z,12nm,1.1s
FLN La Foliniere 20.41 314 *e*P Pn 17 43 00.2 +0.3
FLN *e*R
comp=Z,108nm,19.8s
FLN La Foliniere 20.41 314 *e*P Pn 17 43 00.2 +0.3
VRHR Novokhopersk 20.45 38 *e*P **P** **17 42 58.9 +0.8**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,20nm,0.7s
VRHR Novokhopersk 20.45 38 *e*P **P** **17 42 58.9 +0.8**
ESDC Sonseca Array 20.48 287 P **P** **17 42 57.8 -0.9**
comp=Z,1.3nm,0.8s,baz=82,slow=11,SNR=8.9
OBN Obninsk 21.30 24⇑*i*P **P** **17 43 06.1 -1.2**
OBN pmax pmax
comp=Z,43nm,2.5s
OBN MLR MLR
comp=Z,100nm,15.0s
OBN Obninsk 21.30 24 *i* P **P** **17 43 06.1 -1.2**
comp=Z,100nm,15.0s
SGMF Saint Gilles 21.41 311 *e*P **P** **17 43 09.4 +0.8**
SGMF Saint Gilles 21.41 311 *e*P **P** **17 43 09.4 +0.8**
QUIF Quistinic 21.65 310 *e*P **P** **17 43 12.7 +1.6**
comp=Z,72nm,1.6s
QUIF Quistinic 21.65 310 *e*P **P** **17 43 12.7 +1.6**
comp=Z,36nm,1.6s
ROSF Rostrenen 21.89 311 *e*P **P** **17 43 15.5 +1.9**
ROSF Rostrenen 21.89 311 *e*P **P** **17 43 15.5 +1.9**
MDT Midelt 21.96 268 LR LR 17 53 36.5
comp=Z,55nm,18.1s,baz=45,slow=42
VSU Vasula 22.32 7 *e*P **P** **17 43 17.7 -0.4**
VSU pmax pmax
comp=Z,19nm,1.0s
VSU Vasula 22.32 7 *e*P **P** **17 43 17.7 -0.4**
comp=Z,19nm,1.0s
MIB Mutribah 22.40 100 *e*P **P** **17 43 19.0 -0.3**
MIB AMb AMB 17 43 22.4
comp=Z,34nm,0.9s
MIB Mutribah 22.40 100 *e*P **P** **17 43 19.0 -0.3**
NAY Al-Naaiem 22.55 101 *e*P **P** **17 43 20.8 -0.2**
NAY AMb AMB 17 43 22.7
comp=Z,18nm,0.6s
NAY Al-Naaiem 22.55 101 *e*P **P** **17 43 20.8 -0.2**
comp=Z,18nm,0.6s
PUL Pulkovo 24.03 11 *e*P **P** **17 43 36.1 +0.6**
PUL pmax pmax
comp=Z,35nm,0.8s
PUL Pulkovo 24.03 11 *e*P **P** **17 43 36.1 +0.6**
comp=Z,35nm,0.8s
HFS Hagfors 24.31 350 P **P** **17 43 36.7 -1.4**
comp=Z,3.2nm,0.4s,baz=160,slow=11,SNR=38
HFS LR LR 17 53 54.1
comp=Z,67nm,18.1s,baz=125,slow=39
HFS Hagfors 24.31 350 P **P** **17 43 36.7 -1.4**
comp=Z,67nm,18.1s
FINES FINESS Array B 25.21 5 P **P** **17 43 45.9 -0.3**
comp=Z,3.4nm,0.6s,baz=165,slow=10,SNR=26
FINES LR LR 17 54 39.7
comp=Z,91nm,20.3s,baz=316,slow=39
FINES FINESS Array B 25.21 5 P **P** **17 43 45.9 -0.3**
comp=Z,91nm,20.3s
EKA Eskdalemuir Ar 25.44 326 P **P** **17 43 48.6 +0.2**
comp=Z,1.3nm,0.6s,baz=126,slow=8.6,SNR=6.9
EKA Eskdalemuir Ar 25.44 326 P **P** **17 43 48.6 +0.2**
comp=Z,1.0nm,0.6s
NB2 NORSAR Subarra 25.55 348 P **P** **17 43 49.7 +0.3**
comp=Z,1.1nm,0.5s,baz=158,slow=10
NB2 NORSAR Subarra 25.55 348 P **P** **17 43 49.7 +0.3**
comp=Z,1.1nm,0.5s,baz=158,slow=10,SNR=6.5
NOA NORSAR Array B 25.55 348 P **P** **17 43 49.3 -0.1**
comp=Z,2.0nm,0.7s,baz=161,slow=9.3,SNR=6.1
NOA LR LR 17 54 11.1
comp=Z,52nm,19.5s,baz=195,slow=37
NOA NORSAR Array B 25.55 348 P **P** **17 43 49.3 -0.1**
comp=Z,52nm,19.5s
KAF Kangasniemi 25.89 5 *e*P **P** **17 43 51.3 -1.1**
KAF pmax pmax
comp=Z,6.0nm,0.8s
KAF Kangasniemi 25.89 5 *e*p **P** **17 43 51.3 -1.1**
comp=Z,6.3nm,0.8s
KAF Kangasniemi 25.89 5 *e*P **P** **17 43 51.3 -1.1**
comp=Z,6.0nm,0.8s
KLMR Klimovskoe 26.96 19 *e*P **P** **17 44 00.7 -1.4**
KLMR pmax pmax
comp=Z,29nm,1.6s
JOF Joensuu 27.20 10 *e*P **P** **17 44 03.5 -0.7**
JOF pmax pmax
comp=Z,2.0nm,0.6s
JOF Joensuu 27.20 10 *e*p **P** **17 44 03.5 -0.7**
comp=Z,1.5nm,0.6s
JOF Joensuu 27.20 10 *e*P **P** **17 44 03.5 -0.7**
comp=Z,2.0nm,0.6s
TORD Torodi Ar. Bea 29.32 223 P **P** **17 44 25.7 +2.1**
comp=Z,1.6nm,0.6s,baz=31,slow=8.8,SNR=15
TORD LR LR 17 57 41.5
comp=Z,62nm,19.4s,baz=150,slow=40
AKTO Aktyubinsk 29.52 50 LR LR 17 58 40.9
comp=Z,43nm,20.4s,baz=356,slow=42
ARU Arti 31.78 39*d i*P **P** **17 44 43.6 -1.3**
ARU S **S** **17 49 55.0 +0.3**
ARU pmax pmax
comp=Z,15nm,1.7s
SOKR Solikamsk 32.35 33 *e*P **P** **17 44 47.8 -2.1**
SOKR pmax pmax
comp=Z,10.0nm,1.1s
ARCES ARCESS Array B 33.26 2 P **P** **17 44 57.1 -0.5**
comp=Z,3.4nm,0.8s,baz=196,slow=8.2,SNR=8.7
ARCES LR LR 17 59 06.1
comp=Z,74nm,18.1s,baz=209,slow=38
ARCES ARCESS Array B 33.26 2 P **P** **17 44 57.2 -0.5**
comp=Z,74nm,18.1s
KEV Kevo 33.54 3 *e*P **P** **17 44 59.3 -0.8**
KEV pmax pmax
comp=Z,1.0nm,0.4s
KEV Kevo 33.54 3 *e*p **P** **17 44 59.3 -0.8**
comp=Z,0.6nm,0.4s
KEV Kevo 33.54 3 *e*P **P** **17 44 59.3 -0.8**
comp=Z,1.0nm,0.4s
BRVK Borovoye 37.49 48 *e*P **P** **17 45 34.0 -0.3**
BRVK pmax pmax
comp=Z,10.0nm,2.5s
BRVK Borovoye 37.49 48 *e*P **P** **17 45 34.0 -0.3**
comp=Z,10.0nm,2.5s
DBIC Dimbokro 38.30 226 P **P** **17 45 42.5 +1.0**
comp=Z,3.1nm,0.7s,baz=18,slow=8.9,SNR=7.1
DBIC Dimbokro 38.30 226 P **P** **17 45 42.5 +1.0**
comp=Z,3.0nm,0.7s
LIC Lamto 38.76 226 *e*P **P** **17 45 45.3 -0.1**
comp=Z,10nm,0.7s
LIC Lamto 38.76 226 *e*P **P** **17 45 45.3 -0.1**
comp=Z,5.2nm,0.7s
AAK Ala-Archa 40.62 64 *e*P **P** **17 46 01.4 +0.5**
AAK pmax pmax
comp=Z,10.0nm,0.8s
AAK Ala-Archa 40.62 64 LR LR 18 07 19.0
comp=Z,37nm,18.3s,baz=82,slow=43
AAK Ala-Archa 40.62 64 *e*P **P** **17 46 01.4 +0.5**
comp=Z,10.0nm,0.8s
SPITS Spitsbergen Ar 41.95 358 LR LR 18 05 59.1
comp=Z,47nm,18.5s,baz=200,slow=40
KURBB Kurchatov Arra 42.53 52 LR LR 18 08 11.6
comp=Z,26nm,18.9s,baz=75,slow=42
KURK Kurchatov 42.58 52 *e*P **P** **17 46 17.9 +1.3**
KURK pmax pmax
comp=Z,3.0nm,1.2s
KURK Kurchatov 42.58 52 *e*P **P** **17 46 17.9 +1.3**
comp=Z,3.0nm,1.2s
NVS Novosibirsk 45.20 46 *e*P **P** **17 46 37.6 0.0**
NVS pmax pmax
comp=Z,39nm,2.7s
NVS pmax pmax
comp=N,23nm,3.2s
NVS Novosibirsk 45.20 46 *e*P **P** **17 46 37.6 0.0**
comp=N,23nm,3.2s
MKAR Makanchi Array 45.43 57 P **P** **17 46 38.8 -0.8**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 45.43 57 P **P** **17 46 38.8 -0.8**
comp=Z,1.1nm,0.5s,baz=267,slow=8.1,SNR=24
MKAR Makanchi Array 45.43 57 P **P** **17 46 38.8 -0.8**
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 46.17 47 P **P** **17 46 44.1 -1.2**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 46.17 47 P **P** **17 46 44.1 -1.2**
comp=Z,1.0nm,0.3s,baz=276,slow=8.5,SNR=8.3
ZALV Zalesovo Beam 46.17 47 P **P** **17 46 44.1 -1.2**
comp=Z,1.0nm,0.3s
SFJD Kangerlussuaq 50.25 331 LR LR 18 07 52.5
comp=Z,52nm,19.0s,baz=348,slow=35
PYUN Piuthan 51.71 81 *e*P **P** **17 47 28.3 -0.1**
comp=Z,23nm,0.8s
DANN Dangsing 52.22 80 *e*P **P** **17 47 32.3 0.0**
comp=Z,41nm,0.8s
KOLN Koldanda 52.34 81 *e*P **P** **17 47 32.9 -0.2**
DMN Daman 53.61 80 *e*P **P** **17 47 42.2 -0.3**
comp=Z,23nm,0.9s
KKN Kakani 53.67 80 *e*P **P** **17 47 42.5 -0.4**
PKIN Phulchoki 53.85 80 *e*P **P** **17 47 44.5 +0.2**
PKI Pulchoki 53.87 80 *e*P **P** **17 47 44.2 -0.3**
GUN Gumba 54.09 79 *e*P **P** **17 47 45.7 -0.5**
RAMN Ramite 55.09 80 *e*P **P** **17 47 52.7 -0.6**
comp=Z,21nm,0.8s
SCHQ Schefferville 60.42 318 P **P** **17 48 29.2 -0.9**
comp=Z,2.4nm,0.7s,baz=73,slow=8.7,SNR=6.1
SONM Songino Array 60.84 50 P **P** **17 48 32.2 -1.1**
comp=Z,0.3nm,0.6s,baz=292,slow=7.6,SNR=5.2
SONM Songino Array 60.84 50 P **P** **17 48 32.2 -1.1**
TIXI Tiksi 60.98 20 *e*P **P** **17 48 34.5 +0.9**
TIXI pmax pmax
comp=Z,2.0nm,0.8s
TIXI Tiksi 60.98 20 *e*P **P** **17 48 34.5 +0.9**
comp=Z,2.0nm,0.8s
BOSA Boshof 64.75 177 LR LR 18 21 45.8
comp=Z,44nm,18.0s,baz=173,slow=40
YAK Yakutsk 66.18 29 *e*P **P** **17 49 07.7 -0.3**
YAK pmax pmax
comp=Z,5.0nm,0.6s
YAK Yakutsk 66.18 29 *e*P **P** **17 49 07.7 -0.3**
comp=Z,5.0nm,0.6s
RCBR Riachuelo 68.28 245 LR LR 18 18 37.9
comp=Z,50nm,20.4s,baz=233,slow=35
CMAR Chiang Mai Arr 69.18 82 P **P** **17 49 26.9 -0.8**
comp=Z,1.0nm,0.8s,baz=306,slow=8.0,SNR=13
CMAR Chiang Mai Arr 69.18 82 P **P** **17 49 26.9 -0.8**
comp=Z,1.0nm,0.8s
BILL Bilibino 72.53 13⇑*e*P **P** **17 49 47.7 +0.5**
BILL *e* 17 52 32.0
BILL pmax pmax
comp=Z,1.0nm,1.2s
BILL MLR MLR
comp=Z,100nm,18.0s
BILL Bilibino 72.53 13 *e*P **P** **17 49 47.7 +0.5**
comp=Z,1.0nm,1.2s
YKA Yellowknife Ar 75.39 341 P **P** **17 50 02.5 -1.5**
comp=Z,0.2nm,0.6s,baz=32,slow=5.2,SNR=7.1
KSRS Korea Array 79.70 51 P **P** **17 50 28.5 -0.1**
comp=Z,2.4nm,0.6s,baz=310,slow=4.5,SNR=16
KSRS Korea Array 79.70 51 P **P** **17 50 28.5 -0.1**
comp=Z,2.0nm,0.6s
YSS Yuzh-Sakhalins 81.63 36 *e*P **P** **17 50 40.3 +1.5**
YSS Yuzh-Sakhalins 81.63 36 *e*P **P** **17 50 40.3 +1.5**
ASAR Alice Springs 121.00 98 PKP **PKPdf** **17 57 14.1 +0.4**
comp=Z,0.1nm,0.3s,baz=312,slow=1.6,SNR=5.3

IDC ***05*** *17:47:20.4±1.8, 37°.20S×177°.22E, h0km, mb4.1/2, mb1 4.3/2, mb1mx3.8/16, mbtmp4.1/2, Error ellipse: s-maj=47.0km s-min=19.9km az=76.0*
ISCJB ***05*** *17:47:21.4±0.3, 39°.54S±0°.02×177°.19E±0°.04, h33km, mb3.9/3, Error ellipse: s-maj=4.5km s-min=2.7km az=18.5*
WEL ***05*** *17:47:22.6±0.1, 39°.48S×177°.15E, h25km, ML4.2/53, Error ellipse: s-maj=1.0km s-min=0.6km az=90.0*
WEL Felt in the Hawke''s Bay region, maximum reported intensity MM 5.
NEIC ***05*** *17:47:22.7, 39°.48S×177°.15E, h26km, mb4.0/1, ML4.2(WEL), After WEL.*
NEIC Felt at Greenmeadows, Mahor, Napier, Onekawa and Taradale.
ISC 05 17:47:21.9±0.8**, 39°.47S**±0°.02×**177°.09E**±0°.03**, h33km, n200,** σ**1§03**/204**, mb4.0**/3**, 16C-15D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CKHZ	**Cape Kidnapper**	**0.19**	**184**	⇑P*	**Pb**	**17 47 29.5**	**+1.0**
CKHZ	**Cape Kidnapper**	**0.19**	**184**	P*	**Pb**	**17 47 29.5**	**+1.0**
CKHZ				S*	**Sb**	**17 47 35.2**	**+2.4**
MCHZ	**McNeill Hill**	**0.31**	**275**	⇓P*	**Pb**	**17 47 29.9**	**+0.1**
MCHZ				S*	**Sn**	**17 47 35.8**	**+0.6**
MCHZ	**McNeill Hill**	**0.31**	**275**	P*	**Pb**	**17 47 29.9**	**+0.1**
KAHZ	**Kahuranaki**	**0.37**	**207**	P*	**Pn**	**17 47 32.4**	**+1.4**
KAHZ	**Kahuranaki**	**0.37**	**207**	P*	**Pn**	**17 47 32.4**	**+1.4**
NMHZ	**Naumai**	**0.43**	**329**	⇓P*	**Pb**	**17 47 31.3**	**-0.3**
NMHZ				S*	**Sb**	**17 47 38.1**	**-0.1**
NMHZ	**Naumai**	**0.43**	**329**	P*	**Pb**	**17 47 31.3**	**-0.3**
NMHZ				S*	**Sb**	**17 47 38.1**	**-0.1**
RAHZ	**Arahi**	**0.55**	**359**	⇓P*	**Pb**	**17 47 33.4**	**+0.1**
RAHZ	**Arahi**	**0.55**	**359**	P*	**Pb**	**17 47 33.4**	**+0.1**
BKZ	**Black Stump Fm**	**0.56**	**303**	P*	**Pb**	**17 47 33.1**	**-0.3**
BKZ	**Black Stump Fm**	**0.56**	**303**	P*	**Pb**	**17 47 33.1**	**-0.3**
PXZ	**Pawanui**	**0.59**	**198**	⇑P*	**Pn**	**17 47 35.1**	**+1.2**
PXZ	**Pawanui**	**0.59**	**198**	P*	**Pn**	**17 47 35.1**	**+1.2**
KNZ	**Kokohu**	**0.64**	**45**	⇑P*	**Pb**	**17 47 35.2**	**+0.6**
KNZ	**Kokohu**	**0.64**	**45**	P*	**Pb**	**17 47 35.2**	**+0.6**
MHGZ	**Mahia Peninsul**	**0.70**	**64**	P*	**Pb**	**17 47 36.4**	**+0.6**
MHGZ	**Mahia Peninsul**	**0.70**	**64**	P*	**Pb**	**17 47 36.4**	**+0.6**
WPHZ	**Waipukurau**	**0.78**	**220**	⇓P*	**Pb**	**17 47 38.0**	**+0.9**
WPHZ	**Waipukurau**	**0.78**	**220**	P*	**Pb**	**17 47 38.0**	**+0.9**
BHHZ	**Black Hill Sta**	**0.80**	**268**	⇓P*	**Pb**	**17 47 37.6**	**+0.2**
BHHZ	**Black Hill Sta**	**0.80**	**268**	Pn	**Pb**	**17 47 37.6**	**+0.2**
PRGZ	**Paritu Road**	**0.82**	**49**	P*	**Pb**	**17 47 37.8**	**0.0**
PRGZ	**Paritu Road**	**0.82**	**49**	P*	**Pb**	**17 47 37.8**	**0.0**
PNHZ	**Pukenui**	**0.82**	**237**	⇑PN	**Pb**	**17 47 38.4**	**+0.6**
PNHZ	**Pukenui**	**0.82**	**237**	Pn	**Pb**	**17 47 38.4**	**+0.6**
PRHZ	**Porangahau**	**0.87**	**204**	PN	**Pb**	**17 47 38.8**	**+0.2**
PRHZ	**Porangahau**	**0.87**	**204**	Pn	**Pb**	**17 47 38.8**	**+0.2**
HATZ	**Hinemaiaia**	**0.97**	**306**	⇓PN	**Pb**	**17 47 40.4**	**+0.1**
HATZ	**Hinemaiaia**	**0.97**	**306**	Pn	**Pb**	**17 47 40.4**	**+0.1**
MOVZ	**Moawhango**	**1.04**	**273**	⇓PN	**Pb**	**17 47 41.8**	**+0.3**
MOVZ	**Moawhango**	**1.04**	**273**	Pn	**Pb**	**17 47 41.8**	**+0.3**
TSZ	**Takapari Road**	**1.05**	**236**	PN	**Pb**	**17 47 41.3**	**-0.3**
TSZ	**Takapari Road**	**1.05**	**236**	Pn	**Pb**	**17 47 41.3**	**-0.3**
ALRZ	**Allen Road**	**1.08**	**327**	PN	**Pb**	**17 47 41.7**	**-0.3**
RITZ	**Rihia Road**	**1.08**	**297**	⇑PN	**Pb**	**17 47 42.5**	**+0.4**
RITZ	**Rihia Road**	**1.08**	**297**	Pn	**Pb**	**17 47 42.5**	**+0.4**
DVHZ	**Dannevirke**	**1.09**	**220**	⇑PN	**Pb**	**17 47 42.0**	**-0.4**
DVHZ	**Dannevirke**	**1.09**	**220**	Pn	**Pb**	**17 47 42.0**	**-0.4**
PRRZ	**Plateau Road**	**1.11**	**330**	⇓PN	**Pb**	**17 47 42.4**	**-0.3**
PRRZ	**Plateau Road**	**1.11**	**330**	Pn	**Pb**	**17 47 42.4**	**-0.3**
TUVZ	**Tukino**	**1.13**	**280**	⇑PN	**Pb**	**17 47 43.5**	**+0.4**
TUVZ	**Tukino**	**1.13**	**280**	Pn	**Pb**	**17 47 43.5**	**+0.4**
OTVZ	**Oturere**	**1.15**	**285**	⇑PN	**Pb**	**17 47 43.6**	**+0.2**
OTVZ	**Oturere**	**1.15**	**285**	Pn	**Pb**	**17 47 43.6**	**+0.2**
WNVZ	**Wahianoa**	**1.17**	**276**	⇑PN	**Pb**	**17 47 43.8**	**+0.2**
WNVZ	**Wahianoa**	**1.17**	**276**	Pn	**Pb**	**17 47 43.8**	**+0.2**
MWZ	**Matawai**	**1.18**	**17**	PN	**Pn**	**17 47 42.6**	**+0.4**
MWZ	**Matawai**	**1.18**	**17**	Pn	**Pn**	**17 47 42.6**	**+0.4**
KRVZ	**Karewarewa**	**1.19**	**288**	PN	**Pb**	**17 47 43.8**	**-0.2**
KRVZ	**Karewarewa**	**1.19**	**288**	Pn	**Pb**	**17 47 43.8**	**-0.2**
RATZ	**Rangitukua**	**1.19**	**300**	PN	**Pb**	**17 47 43.7**	**-0.3**
RATZ	**Rangitukua**	**1.19**	**300**	Pn	**Pb**	**17 47 43.7**	**-0.3**
KATZ	**Kakaramea**	**1.19**	**294**	⇓PN	**Pb**	**17 47 44.0**	**-0.1**
KATZ	**Kakaramea**	**1.19**	**294**	Pn	**Pb**	**17 47 44.0**	**-0.1**
WHTZ	**Whakaora**	**1.19**	**312**	⇓PN	**Pb**	**17 47 43.9**	**-0.1**
WHTZ	**Whakaora**	**1.19**	**312**	Pn	**Pb**	**17 47 43.9**	**-0.1**
NGZ	**Ngauruhoe**	**1.20**	**284**	⇑PN	**Pb**	**17 47 44.1**	**0.0**
NGZ	**Ngauruhoe**	**1.20**	**284**	Pn	**Pb**	**17 47 44.1**	**0.0**
DRZ	**Dome Shelter**	**1.20**	**279**	⇑PN	**Pb**	**17 47 44.5**	**+0.1**
DRZ	**Dome Shelter**	**1.20**	**279**	Pn	**Pb**	**17 47 44.5**	**+0.1**
URZ	**Urewera**	**1.21**	**1**	PN	**Pn**	**17 47 43.0**	**+0.5**
URZ	**Urewera**	**1.21**	**1**	*e*P	**Pn**	**17 47 43.1**	**+0.7**
URZ				Sn	**Sb**	**17 47 59.3**	**-0.2**
URZ	**Urewera**	**1.21**	**1**	Pn	**Pn**	**17 47 43.2**	**+0.7**
	167nm,0.3s,baz=293,slow=11,SNR=467						
URZ				Sn	**Sb**	**17 47 59.3**	**-0.2**
	141nm,0.3s,baz=49,slow=19,SNR=22						
TRVZ	**Turoa**	**1.21**	**278**	⇑PN	**Pb**	**17 47 44.3**	**-0.1**
TRVZ	**Turoa**	**1.21**	**278**	Pn	**Pb**	**17 47 44.4**	**-0.1**
FWVZ	**Far West T-bar**	**1.21**	**280**	PN	**Pb**	**17 47 44.0**	**-0.5**
FWVZ	**Far West T-bar**	**1.21**	**280**	Pn	**Pb**	**17 47 44.0**	**-0.5**
RRRZ	**Republican Roa**	**1.22**	**338**	⇓PN	**Pb**	**17 47 43.8**	**-0.6**
RRRZ	**Republican Roa**	**1.22**	**338**	Pn	**Pb**	**17 47 43.8**	**-0.6**
WTVZ	**West Tongariro**	**1.22**	**286**	PN	**Pb**	**17 47 44.4**	**-0.1**
WTVZ	**West Tongariro**	**1.22**	**286**	Pn	**Pb**	**17 47 44.4**	**-0.1**
WPVZ	**Whakapapa**	**1.23**	**282**	⇓PN	**Pb**	**17 47 44.5**	**-0.2**
WPVZ	**Whakapapa**	**1.23**	**282**	Pn	**Pb**	**17 47 44.5**	**-0.2**
HRRZ	**Handcock Road**	**1.25**	**329**	⇓PN	**Pb**	**17 47 44.2**	**-0.8**
HRRZ	**Handcock Road**	**1.25**	**329**	Pn	**Pb**	**17 47 44.2**	**-0.8**
MTVZ	**Mangateitei**	**1.26**	**273**	⇑PN	**Pb**	**17 47 44.9**	**-0.3**
MTVZ	**Mangateitei**	**1.26**	**273**	Pn	**Pb**	**17 47 44.9**	**-0.3**
WATZ	**Wairara**	**1.30**	**305**	⇑PN	**Pn**	**17 47 44.7**	**+0.9**
WATZ	**Wairara**	**1.30**	**305**	Pn	**Pn**	**17 47 44.8**	**+0.9**
CNGZ	**Carnagh Statio**	**1.31**	**42**	PN	**Pn**	**17 47 44.3**	**+0.4**
CNGZ	**Carnagh Statio**	**1.31**	**42**	Pn	**Pn**	**17 47 44.3**	**+0.4**
TARZ	**Mount Tarawera**	**1.31**	**339**	PN	**Pn**	**17 47 45.1**	**+1.0**
TARZ	**Mount Tarawera**	**1.31**	**339**	Pn	**Pn**	**17 47 45.1**	**+1.0**
TWVZ	**Taurewa**	**1.35**	**287**	⇑PN	**Pn**	**17 47 45.5**	**+1.1**
TWVZ	**Taurewa**	**1.35**	**287**	Pn	**Pn**	**17 47 45.5**	**+1.1**
PKVZ	**Pokaka**	**1.37**	**277**	⇑PN	**Pb**	**17 47 46.3**	**-0.7**
PKVZ	**Pokaka**	**1.37**	**277**	Pn	**Pb**	**17 47 46.3**	**-0.7**
BFZ	**Birch Farm**	**1.37**	**208**	PN	**Pn**	**17 47 45.1**	**+0.3**
BFZ	**Birch Farm**	**1.37**	**208**	Pn	**Pn**	**17 47 45.1**	**+0.3**
POWZ	**Post Office Ro**	**1.38**	**227**	PN	**Pn**	**17 47 45.9**	**+1.1**
POWZ	**Post Office Ro**	**1.38**	**227**	Pn	**Pn**	**17 47 45.9**	**+1.1**
EDRZ	**Edgecumbe**	**1.39**	**348**	PN	**Pn**	**17 47 46.1**	**+1.1**
EDRZ	**Edgecumbe**	**1.39**	**348**	Pn	**Pn**	**17 47 46.1**	**+1.1**
MKRZ	**Makatiti**	**1.42**	**340**	PN	**Pb**	**17 47 47.2**	**-0.6**
MKRZ	**Makatiti**	**1.42**	**340**	Pn	**Pb**	**17 47 47.2**	**-0.6**
UTU	**Utuhina**	**1.47**	**331**	⇓PN	**Pb**	**17 47 47.5**	**-1.2**
UTU	**Utuhina**	**1.47**	**331**	Pn	**Pb**	**17 47 47.5**	**-1.2**
OMRZ	**Omania**	**1.47**	**337**	PN	**Pn**	**17 47 46.9**	**+0.8**
OMRZ	**Omania**	**1.47**	**337**	Pn	**Pn**	**17 47 47.0**	**+0.8**
MARZ	**Manawahe**	**1.52**	**347**	PN	**Pn**	**17 47 47.8**	**+1.0**
MARZ	**Manawahe**	**1.52**	**347**	Pn	**Pn**	**17 47 47.8**	**+1.0**
KARZ	**Kaharoa**	**1.59**	**335**	PN	**Pn**	**17 47 48.5**	**+0.7**
KARZ	**Kaharoa**	**1.59**	**335**	Pn	**Pn**	**17 47 48.5**	**+0.7**
TIWZ	**Tintock**	**1.60**	**215**	PN	**Pn**	**17 47 48.7**	**+0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TIWZ	Tintock	1.60	215	Pn	Pn	17 47 48.7	+0.7
WAZ	Wanganui	1.65	259	PN	Pb	17 47 51.0	-0.8
WAZ	Wanganui	1.65	259	Pn	Pb	17 47 51.0	-0.8
MRZ	Mangatainoka R	1.66	224	PN	Pn	17 47 49.0	+0.2
MRZ	Mangatainoka R	1.66	224	Pn	Pn	17 47 49.0	+0.2
PUZ	Puketiti	1.67	33	PN	Pn	17 47 47.4	-1.4
PUZ	Puketiti	1.67	33	Pn	Pn	17 47 47.5	-1.4
OPRZ	Ohinepanea	1.68	345	PN	Pn	17 47 49.8	+0.8
OPRZ	Ohinepanea	1.68	345	Pn	Pn	17 47 49.8	+0.8
VRZ	Vera Road	1.84	280	PN	Pn	17 47 52.6	+1.3
VRZ	Vera Road	1.84	280	Pn	Pn	17 47 52.6	+1.3
HOWZ	Holdsworth Sta	1.87	220	PN	Pn	17 47 51.9	+0.2
HOWZ	Holdsworth Sta	1.87	220	Pn	Pn	17 47 51.9	+0.2
TMWZ	Te Maipa	1.88	209	PN	Pn	17 47 51.6	-0.1
TMWZ	Te Maipa	1.88	209	Pn	Pn	17 47 51.6	-0.1
HIZ	Hauiti	1.99	298	PN	Pn	17 47 54.3	+1.1
HIZ	Hauiti	1.99	298	Pn	Pn	17 47 54.3	+1.1
OGWZ	Otaki Gorge	2.00	227	PN	Pn	17 47 53.6	+0.3
OGWZ	Otaki Gorge	2.00	227	Pn	Pn	17 47 53.6	+0.3
MTW	Mount Morrison	2.08	215	PN	Pn	17 47 54.1	-0.4
MTW	Mount Morrison	2.08	215	Pn	Pn	17 47 54.1	-0.4
RAEZ	Rainy Point	2.10	274	PN	Pn	17 47 56.8	+2.0
RAEZ	Rainy Point	2.10	274	Pn	Pn	17 47 56.8	+2.0
MXZ	Matakaoa Point	2.13	27	PN	Pn	17 47 55.9	+0.8
MXZ	Matakaoa Point	2.13	27	Pn	Pn	17 47 56.0	+0.8
TOZ	Tahuroa Road	2.14	324	PN	Pn	17 47 55.9	+0.7
TOZ	Tahuroa Road	2.14	324	Pn	Pn	17 47 55.9	+0.7
KIW	Kapiti Island	2.18	230	PN	Pn	17 47 56.1	+0.3
KIW	Kapiti Island	2.18	230	Pn	Pn	17 47 56.1	+0.3
MHEZ	Mangahewa	2.19	279	PN	Pn	17 47 58.3	+2.3
MHEZ	Mangahewa	2.19	279	Pn	Pn	17 47 58.3	+2.3
TRWZ	Traveller	2.21	209	PN	Pn	17 47 55.2	-1.0
TRWZ	Traveller	2.21	209	Pn	Pn	17 47 55.2	-1.0
CAW	Cannon Point	2.25	223	PN	Pn	17 47 56.6	-0.2
CAW	Cannon Point	2.25	223	Pn	Pn	17 47 56.6	-0.2
DREZ	Durham Road	2.26	276	PN	Pb	17 47 59.6	-2.4
DREZ	Durham Road	2.26	276	Pn	Pb	17 47 59.6	-2.4
PAWZ	Paruwai Farm	2.30	213	PN	Pn	17 47 57.1	-0.3
PAWZ	Paruwai Farm	2.30	213	Pn	Pn	17 47 57.1	-0.3
DFE	Dawson Falls	2.32	273	PN	Pn	17 48 00.2	+2.3
DFE	Dawson Falls	2.32	273	Pn	Pn	17 48 00.2	+2.3
NEZ	North Egmont	2.33	274	⇓PN	Pn	17 48 00.8	+2.7
NEZ	North Egmont	2.33	274	Pn	Pn	17 48 00.8	+2.7
MSWZ	Moikau Station	2.40	215	PN	Pn	17 47 58.3	-0.6
MSWZ	Moikau Station	2.40	215	Pn	Pn	17 47 58.3	-0.6
PKE	Pukeiti	2.42	276	PN	Pn	17 48 01.6	+2.4
PKE	Pukeiti	2.42	276	Pn	Pn	17 48 01.6	+2.4
NRZ	Ngariki Road	2.45	272	PN	Pn	17 48 01.8	+2.2
NRZ	Ngariki Road	2.45	272	Pn	Pn	17 48 01.8	+2.2
NWEZ	Newall Road	2.51	273	PN	Pb	17 48 04.0	-2.3
NWEZ	Newall Road	2.51	273	Pn	Pb	17 48 04.0	-2.3
PLWZ	Palliser	2.52	213	PN	Pn	17 47 58.8	-1.8
PLWZ	Palliser	2.52	213	Pn	Pn	17 47 58.8	-1.8
SNZO	South Karori	2.59	224	PN	Pn	17 48 00.8	-0.7
SNZO	South Karori	2.59	224	eP	Pn	17 48 01.3	-0.1
TCW	Tory Channel	2.77	230	PN	Pn	17 48 03.3	-0.6
TCW	Tory Channel	2.77	230	Pn	Pn	17 48 03.3	-0.6
DUWZ	D'Urville Isla	2.77	240	PN	Pn	17 48 04.0	-0.1
DUWZ	D'Urville Isla	2.77	240	Pn	Pn	17 48 04.0	-0.1
MKAZ	Moumakai	2.80	327	PN	Pn	17 48 05.4	+1.0
MKAZ	Moumakai	2.80	327	Pn	Pn	17 48 05.4	+1.0
TUWZ	Tuamarina	3.10	230	PN	Pn	17 48 07.4	-1.1
TUWZ	Tuamarina	3.10	230	Pn	Pn	17 48 07.5	-1.1
BSWZ	Blackbirch Sta	3.32	227	PN	Pn	17 48 10.6	-1.0
BSWZ	Blackbirch Sta	3.32	227	Pn	Pn	17 48 10.6	-1.0
NNZ	Nelson	3.33	237	PN	Pn	17 48 11.2	-0.5
NNZ	Nelson	3.33	237	Pn	Pn	17 48 11.2	-0.5
QRZ	Quartz Range	3.75	247	PN	Pn	17 48 16.4	-1.0
QRZ	Quartz Range	3.75	247	Pn	Pn	17 48 16.4	-1.0
THZ	Tophouse	3.93	233	PN	Pn	17 48 18.7	-1.3
THZ	Tophouse	3.93	233	Pn	Pn	17 48 18.7	-1.3
KHZ	Kahutara	3.99	221	PN	Pn	17 48 18.8	-1.9
KHZ	Kahutara	3.99	221	eP	Pn	17 48 20.6	-0.1
LTZ	Lake Taylor	4.92	226	PN	Pn	17 48 31.6	-2.0
LTZ	Lake Taylor	4.92	226	Pn	Pn	17 48 31.6	-2.0
OUZ	Omahuta	5.07	326	eP	Pn	17 48 37.5	+1.9
MQZ	McQueen's Vall	5.39	217	PN	Pn	17 48 37.8	-2.1
MQZ	McQueen's Vall	5.39	217	Pn	Pn	17 48 37.8	-2.1
RPZ	Rata Peaks	6.20	225	P	Pn	17 48 50.5	-0.6
CTZ	Chatham Island	6.35	134	PN	Pn	17 48 54.0	+0.8
CTZ	Chatham Island	6.35	134	Pn	Pn	17 48 54.0	+0.8
ODZ	Otahua Downs	7.34	219	PN	Pn	17 49 04.2	-2.6
ODZ	Otahua Downs	7.34	219	Pn	Pn	17 49 04.2	-2.6
AS31	Alice Springs	39.63	280	eP	P	17 54 50.9	+0.3
ASAR	Alice Springs	39.63	280	P	P	17 54 51.0	+0.4
ASAR	Alice Springs	39.63	280	P	P	17 54 51.0	+0.4
	2.3nm,0.8s,baz=129,slow=9.1,SNR=33						
WRAB	Tennant Creek	41.46	285	eP	P	17 55 05.6	-0.2
	1.5nm,0.5s						
WRA	Warramunga Arr	41.47	285	P	P	17 55 06.1	+0.3
WRA	Warramunga Arr	41.47	285	P	P	17 55 06.1	+0.3
	2.1nm,0.6s,baz=128,slow=7.1,SNR=9.2						
ARCES	ARCESS Array B	146.32	342	PKP	PKPdf	18 06 57.3	+0.6
ARCES	ARCESS Array B	146.32	342	PKP	PKPdf	18 06 57.3	+0.6
	4.3nm,0.9s,baz=18,slow=3.8,SNR=2.7						
FINES	FINESS Array B	151.72	331	PKPbc	PKPbc	18 07 11.6	-0.4
FINES	FINESS Array B	151.72	331	PKPbc	PKPbc	18 07 11.6	-0.4
	1.4nm,1.0s,baz=34,slow=3.5,SNR=2.0						
TORD	Torodi Ar. Bea	153.47	190	PKPab	PKPab	18 07 40.5	+11
TORD	Torodi Ar. Bea	153.47	190	PKPab	PKPab	18 07 40.5	+11
	0.2nm,0.6s,baz=158,slow=5.3,SNR=3.7						

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*NIED **05** 17:50:00, 39°.10N×141°.00E, h5km, Mw3.7 Best double couple: M0 3.76000×10^14 NP1:φs 9.00000°, δ68.00000°, λ91.00000°. NP2:φs 187.00000°, δ22.00000°, λ88.00000°.*
*IDC **05** 17:50:02.9±1.2, 39°.16N×141°.23E, h0km, mb3.5/6, mb1 3.7/8, mb1mx3.5/27, mbtmp3.5/8, ML3.2/2, Error ellipse: s-maj=28.3km s-min=22.0km az=80.0*
*ISCJB **05** 17:50:04.4±0.6, 39°.18N±0°.04×141°.12E±0°.06, h16km, mb3.6/6, Error ellipse: s-maj=7.3km s-min=5.1km az=162.2*
*JMA **05** 17:50:05.4, 39°.12N×140°.97E, h8km±1km, M3.9*
JMA Felt II J1.
ISC 05 17:50:05.4±0.8, 39°.12N±0°.04×141°.01E±0°.05, h16km, n15, σ1s.21/18, mb3.6/6, 3C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.23	136	⇓P	Pb	17 50 10.3	-0.9
JMK				S	Sb	17 50 14.2	-0.9
JRG	Rokugo	0.41	314	⇑P	Pg	17 50 13.1	-0.5
JOM	Ohasama	0.42	31	P	Pb	17 50 13.7	-0.7
JYK	Kaneyama	0.55	249	⇑P	Pg	17 50 15.4	-0.8
JIO	Ouri	0.71	158	⇓P	Pg	17 50 18.8	-0.5
JIO				S	Sb	17 50 28.8	-0.1
JOU	Okura	0.80	200	⇑P	Pb	17 50 20.6	-0.3
JOU				S	Sb	17 50 31.3	-0.1
MAT	Matsushiro	3.40	222	P	Pn	17 50 59.9	+2.2
MAT				eS	Sb	17 51 43.2	-3.1
MJAR	Matsushiro Arr	3.40	222	Pn	Pn	17 50 59.2	+1.5
	0.9nm,0.3s,baz=29,slow=14,SNR=23						
KSRS	Korea Array	10.42	265	Pn	Pn	17 52 38.5	+4.4
	0.5nm,0.3s,baz=75,slow=14,SNR=22						
KSRS				Sn	Sn	17 54 37.4	+6.8
	0.2nm,0.3s,baz=79,slow=24,SNR=4.2						
ZALV	Zalesovo Beam	40.30	311	P	P	17 57 42.7	+1.1
	0.6nm,0.7s,baz=91,slow=7.4,SNR=4.3						
MKAR	Makanchi Array	42.77	300	P	P	17 58 02.5	+0.5
	0.4nm,0.7s,baz=82,slow=10.0,SNR=5.4						
ILAR	Eielson Array	47.92	33	P	P	17 58 42.1	-0.4
	0.3nm,0.9s,baz=265,slow=5.8,SNR=3.2						
BVAR	Borovoye Array	48.95	311	P	P	17 58 50.5	-0.2
	0.4nm,0.5s,baz=68,slow=9.4,SNR=3.2						
WRA	Warramunga Arr	59.08	187	P	P	18 00 05.2	+0.3
	0.5nm,0.5s,baz=5.3,slow=7.2,SNR=9.9						
ASAR	Alice Springs	62.81	187	P	P	18 00 30.8	+0.6
	0.7nm,0.8s,baz=4.2,slow=4.7,SNR=7.3						

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*ATH **05** 17:53:37.6, 36°.41N×21°.72E, h5km±4km, MD3.5/10, ML3.1*
*CSEM **05** 17:53:38.9±0.6, 36°.44N×21°.76E, h2km, ML3.3/3, Error ellipse: s-maj=9.8km s-min=6.1km az=36.0*
*THE **05** 17:53:40.7, 36°.53N×21°.85E, h0km±4km, ML3.3/3, Error ellipse: s-maj=5.3km s-min=1.0km az=212.0*
ISC 05 17:53:38.6±2.0, 36°.44N±0°.07×21°.74E±0°.05, h1km±13km, n57, σ0s.67/89, Southern Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.46	0	P	Pg	17 53 47.1	-0.3
PYL				S	Sg	17 53 53.9	+0.5
PYL	PYLOS	0.46	0	ePG	Pg	17 53 47.0	-0.3
PYL				eSB	Sg	17 53 54.5	+1.1
PYL	PYLOS	0.46	0	P	Pg	17 53 47.1	-0.3
PYL				S	Sg	17 53 53.9	+0.5
PYL				eSb	Sg	17 53 54.5	+1.1
DYR	Agios Nikonas	0.58	56	P	Pg	17 53 49.1	-0.7
DYR				S	Sg	17 53 56.9	-0.4
DYR	Agios Nikonas	0.58	56	ePG	Pg	17 53 49.0	-0.7
DYR				eSB	Sg	17 53 58.3	+1.0
DYR	Agios Nikonas	0.58	56	P	Pg	17 53 49.2	-0.5
DYR				S	Sg	17 53 57.6	+0.3
DYR				eSb	Sg	17 53 58.3	+1.0
ITM	Ithomi	0.76	12	P	Pg	17 53 52.5	-0.7
ITM				S	Sg	17 54 02.5	-0.5
ITM	Ithomi	0.76	12	ePB	Pg	17 53 52.9	-0.3
ITM				eSB	Sg	17 54 04.6	+1.6
ITM	Ithomi	0.76	12	P	Pg	17 53 52.5	-0.7
ITM	Ithomi	0.76	12	ePb	Pg	17 53 52.9	-0.3
ITM				S	Sg	17 54 03.1	+0.1
ITM				eSb	Sg	17 54 04.6	+1.6
VLI	Veliai	1.01	73	P	Pg	17 53 57.9	0.0
VLI				S	Sg	17 54 10.4	-0.6
VLI	Veliai	1.01	73	ePN	Pg	17 53 58.0	0.0
VLI				eSB	Sg	17 54 11.5	+0.5
VLI	Veliai	1.01	73	P	Pg	17 53 57.9	0.0
VLI				S	Sg	17 54 10.4	-0.6
VLI				eSb	Sg	17 54 11.5	+0.5
KYTH	Kithira	1.06	98	P	Pg	17 53 59.0	0.0
KYTH	Kithira	1.06	98	ePB	Pg	17 53 58.8	-0.2
KYTH	Kithira	1.06	98	ePb	Pg	17 53 58.8	-0.2
VLX	Vlachokerasia	1.06	29	P	Pg	17 53 58.5	-0.5
VLX				S	Sg	17 54 12.3	-0.6
VLX	Vlachokerasia	1.06	29	ePN	Pg	17 53 58.3	-0.7
VLX				eSB	Sb	17 54 14.3	-0.1
VLX	Vlachokerasia	1.06	29	P	Pg	17 53 58.5	-0.5
VLX				S	Sg	17 54 13.6	+0.7
VLX				eSb	Sb	17 54 14.3	-0.1
AMT	Artemida-Makis	1.09	359	P	Pg	17 53 58.9	-0.7
AMT				S	Sg	17 54 14.5	+0.7
AMT	Artemida-Makis	1.09	359	ePG	Pg	17 53 58.5	-1.1
AMT				eSB	Sb	17 54 15.1	-0.1
AMT	Artemida-Makis	1.09	359	ePg	Pg	17 53 58.5	-1.1
AMT	Artemida-Makis	1.09	359	P	Pg	17 53 58.9	-0.7
AMT				S	Sg	17 54 14.5	+0.7
AMT				eSb	Sb	17 54 15.1	-0.1
GUR	Goura	1.57	18	P	Pn	17 54 07.4	-0.4
GUR	Goura	1.57	18	ePG	Pn	17 54 07.5	-0.4
GUR	Goura	1.57	18	P	Pn	17 54 07.4	-0.4
GUR				S	Sg	17 54 30.3	+1.1
DID	Didima	1.61	48	P	Pn	17 54 07.8	-0.4
DID	Didima	1.61	48	ePG	Pn	17 54 08.2	0.0
DID				eSB	Sg	17 54 32.0	+1.7
DID	Didima	1.61	48	P	Pn	17 54 07.8	-0.4
DID	Didima	1.61	48	ePg	Pn	17 54 08.2	0.0
DID				S	Sg	17 54 31.6	+1.3
DID				eSb	Sg	17 54 32.0	+1.7
RLS	Riolos of Patr	1.63	352	ePB	Pb	17 54 09.5	-0.1
RLS	Riolos of Patr	1.63	352	ePb	Pb	17 54 09.5	-0.1
LAKA	Lakka	1.81	6	P	Pn	17 54 11.7	+0.7
LAKA	Lakka	1.81	6	ePG	Pb	17 54 12.1	-0.5
LAKA	Lakka	1.81	6	P	Pn	17 54 11.4	+0.4
LAKA	Lakka	1.81	6	ePg	Pb	17 54 12.1	-0.5
LAKA				S	Sg	17 54 37.0	+0.2
LTK	Loutraki	1.86	31	P	Pn	17 54 11.9	+0.2
LTK	Loutraki	1.86	31	ePN	Pb	17 54 13.2	-0.3
LTK	Loutraki	1.86	31	P	Pn	17 54 11.9	+0.2
LTK	Loutraki	1.86	31	ePn	Pb	17 54 13.3	-0.3
LTK				S	Sb	17 54 37.5	+0.2
NAIG	Nisos Aigina	1.92	46	ePN	Pb	17 54 14.8	+0.3
NAIG	Nisos Aigina	1.92	46	ePn	Pb	17 54 14.8	+0.3
TRIZ	Trizonia	1.94	8	P	Pn	17 54 12.9	+0.1
TRIZ	Trizonia	1.94	8	P	Pn	17 54 12.9	+0.1
KALE	Kalithea	1.98	9	P	Pn	17 54 14.1	+0.8
KALE	Kalithea	1.98	9	ePN	Pb	17 54 15.3	-0.2
KALE	Kalithea	1.98	9	P	Pn	17 54 14.1	+0.8
KALE	Kalithea	1.98	9	ePn	Pb	17 54 15.3	-0.2
KALE				S	Sb	17 54 40.4	-0.3
EFP	Efpalio	1.99	4	ePN	Pb	17 54 15.1	-0.6
EFP	Efpalio	1.99	4	P	Pn	17 54 14.4	+0.9
EFP	Efpalio	1.99	4	ePn	Pb	17 54 15.1	-0.6
EFP				S	Sb	17 54 40.9	-0.1
DSF	Desfina	2.07	17	P	Pn	17 54 14.9	+0.3
DSF	Desfina	2.07	17	P	Pn	17 54 14.9	+0.3
ATH	Athens Observa	2.20	45	ePN	Pb	17 54 18.3	-1.0
ATH	Athens Observa	2.20	45	ePn	Pb	17 54 18.3	-1.0
AGG	Agios Georgios	2.62	10	P	Pn	17 54 22.8	+0.6
AGG	Agios Georgios	2.62	10	P	Pn	17 54 22.8	+0.6

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*ISCJB **05** 18:01:22.8±0.5, 6°.76N±0°.05×72°.98W±0°.06, h166km, mb3.8/9, Error ellipse: s-maj=9.8km s-min=5.2km az=42.2*
*IDC **05** 18:01:23.8±2.4, 6°.71N×73°.05W, h159km±22km, mb3.6/9, mb1 3.8/10, mb1mx3.5/24, mbtmp3.6/10, Error ellipse: s-maj=34.9km s-min=12.7km az=60.0*
*FUNV **05** 18:01:23.1, 6°.64N×73°.13W, h158km, MW4.2*
ISC 05 18:01:24.0±0.7, 6°.76N±0°.07×72°.98W±0°.08, h166km, n31, σ0s.98/37, mb3.8/9, 7D, Northern Colombia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.28	31	⇓iP	Pn	18 01 52.7	-0.3
CAPV				eS	Sn	18 02 13.6	-1.7
ROSC	El Rosal	2.32	215	P	Pn	18 02 04.2	-0.1
	41nm,0.3s,baz=78,slow=8.9,SNR=91						
ROSC				S	Sn	18 02 32.8	-2.5
	92nm,0.3s,baz=106,slow=19,SNR=11						
SOCV	Socops	2.59	54	⇓iP	Pn	18 02 07.4	+0.3
SOCV				eS	Sn	18 02 39.5	-1.1
VIGV	El Vigia	2.61	38	⇓eP	Pn	18 02 07.3	-0.1
VIGV				eS	Sn	18 02 40.4	-0.6
QARV	Quebrada Arrib	4.20	35	eP	Pn	18 02 27.9	+0.5
SANV	Sanarito	4.36	51	eP	Pn	18 02 29.1	-0.4
CURV	Curarigua	4.40	43	eP	Pn	18 02 29.6	-0.4
DABV	Dabajuro	4.74	29	eP	Pn	18 02 34.0	-0.3
TEPV	Terepaima	4.92	49	⇓iP	Pn	18 02 36.4	-0.3
SIQV	Siquisique	4.97	39	⇓eP	Pn	18 02 36.7	-0.8
BAUV	El Baul	5.35	66	eP	Pn	18 02 41.4	-1.0
MAPV	Macapo	5.42	55	⇓iP	Pn	18 02 42.8	-0.4
IMOV	Isla Los Monje	5.93	20	⇓eP	Pn	18 02 48.6	-1.3
MONV	Montecano	5.95	30	eP	Pn	18 02 49.2	-1.1
TURV	Turiamo	6.26	54	eP	Pn	18 02 54.3	-0.1
MERV	Las Mercedes	7.06	69	eP	Pn	18 03 04.1	-0.9
BIRV	Birongo	7.59	60	eP	Pn	18 03 10.9	-1.2
CUPV	Cœpira	7.83	65	eP	Pn	18 03 14.1	-1.2
PCRV	Puerto La Cruz	8.92	67	eP	Pn	18 03 28.9	-0.8
LPAZ	La Paz	23.40	168	P	P	18 06 18.8	0.0
	2.6nm,0.7s,baz=330,slow=7.3,SNR=9.6						
SIV	San Ignacio	25.49	153	P	P	18 06 36.9	-0.3
	2.5nm,1.0s,baz=333,slow=12,SNR=7.0						
BDFB	Brasilia	33.27	132	P	P	18 07 47.0	+0.9
	3.3nm,0.6s,baz=299,slow=11,SNR=6.3						
TXAR	Lajitas Array	36.61	312	P	P	18 08 14.8	+0.2
	1.2nm,0.6s,baz=133,slow=9.4,SNR=8.2						
ULM	Lac du Bonnet	47.39	340	P	P	18 09 41.2	-0.2
	3.2nm,0.5s,baz=151,slow=7.7,SNR=6.0						
PDAR	Pinedale Array	48.21	324	P	P	18 09 48.9	+0.8
	1.0nm,0.6s,baz=126,slow=10,SNR=2.9						
NVAR	Mina Array Bea	51.63	315	P	P	18 10 13.6	-0.4
	0.7nm,0.6s,baz=137,slow=7.1,SNR=4.2						
YKA	Yellowknife Ar	63.37	340	P	P	18 11 36.1	+0.7
	1.7nm,0.5s,baz=133,slow=6.7,SNR=64						
YKA				pP	PcP	18 12 12.5	+1.7
	0.9nm,0.6s,baz=132,slow=7.0,SNR=5.1						
ILAR	Eielson Array	77.08	335	P	P	18 12 59.5	+0.8
	0.4nm,0.7s,baz=109,slow=3.5,SNR=5.6						
ILAR				pP	pP	18 13 36.8	-2.4
	0.3nm,0.8s,baz=118,slow=4.4,SNR=2.6						
MKAR	Makanchi Array	122.33	20	PKP	PKPdf	18 20 00.2	+0.6
	0.1nm,0.6s,baz=339,slow=2.8,SNR=2.7						
ASAR	Alice Springs	149.19	234	PKPbc	PKPbc	18 20 54.1	+0.3
	1.5nm,0.8s,baz=119,slow=3.0,SNR=12						
WRA	Warramunga Arr	150.43	241	PKPbc	PKPbc	18 20 57.3	+0.4
	0.7nm,0.5s,baz=115,slow=1.2,SNR=7.6						

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*IDC **05** 18:11:05.0±0.8, 3°.79N×126°.56E, h0km, mb3.7/9, mb1 3.8/9, mb1mx3.7/24, mbtmp3.7/9, MS3.3/3, Ms1 3.3/3, ms1mx2.8/34, Error ellipse: s-maj=41.5km s-min=16.2km az=75.0*
*ISCJB **05** 18:11:08.6±0.7, 3°.71N±0°.08×126°.7E±0°.1, h36km, mb3.7/9, MS3.2/3, Error ellipse: s-maj=22.9km s-min=7.0km az=157.0*
*MAN **05** 18:11:17, 4°.31N×126°.72E, h58km, mb5.0, ML3.9, MS4.0*
ISC 05 18:11:10.3±0.9, 3°.78N±0°.09×126°.8E±0°.1, h36km, n16, σ1s.94/17, mb3.8/9, MS3.2/3, 2C, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSPH	General Santos	2.93	321	⇑iP	Pn	18 11 55.1	+0.7
GSPH				eS	Sn	18 12 27.8	-0.7
MATI	Mati	3.19	350	eP	Pn	18 11 59.0	+1.1
MATI				eS	Sn	18 12 30.6	-4.1
CTBH	Cotabato--PC H	4.25	324	⇑iP	Pn	18 12 14.2	+1.7
BUKP	Musuan	4.42	337	eP	Pn	18 12 17.0	+2.2
BUKP				eS	Sn	18 13 07.9	+2.8
GUMO	Guam	20.34	60	LR	LR	18 22 04.4	
	comp=Z,82nm,20.7s,baz=202,slow=32						
FITZ	Fitzroy Crossi	21.77	183	P	P	18 15 59.3	+0.3
	0.7nm,0.3s,baz=354,slow=11,SNR=10						
JOW	Kunigami	22.97	3	LR	LR	18 24 02.1	
	comp=Z,78nm,19.4s,baz=128,slow=34						
WRA	Warramunga Arr	24.72	163	P	P	18 16 29.2	+0.9
	1.7nm,0.6s,baz=342,slow=11,SNR=8.9						
ASAR	Alice Springs	28.15	166	P	P	18 16 59.2	-0.1
	0.2nm,0.3s,baz=342,slow=7.2,SNR=12						
CMAR	Chiang Mai Arr	30.89	300	P	P	18 17 23.0	-0.7
	0.4nm,0.8s,baz=100,slow=6.4,SNR=3.0						
KSRS	Korea Array	33.53	2	P	P	18 17 47.4	+0.9
	0.5nm,0.4s,baz=180,slow=9.8,SNR=4.6						
MJAR	Matsushiro Arr	34.26	16	LR	LR	18 31 32.5	
	comp=Z,55nm,20.5s,baz=15,slow=36						
SONM	Songino Array	47.27	341	P	P	18 19 39.3	-0.9
	0.3nm,0.4s,baz=148,slow=9.4,SNR=5.0						
PETK	Petropavlovsk-	55.36	22	P	P	18 20 41.6	+1.1
	0.9nm,0.7s,baz=222,slow=3.7,SNR=4.1						
MKAR	Makanchi Array	57.55	325	P	P	18 20 54.8	-1.4
	0.4nm,0.4s,baz=117,slow=7.6,SNR=13						
MKAR				ScP	ScP	18 25 49.6	+2.8
	0.2nm,0.6s,baz=111,slow=3.8,SNR=3.1						
FINES	FINESS Array B	91.81	332	P	P	18 24 12.4	-1.9
	2.2nm,1.0s,baz=83,slow=3.5,SNR=4.1						

IDC 05 18:33:36.1±1.8, 38°.06N×104°.16E, h0km, mb3.1/1, mb1 3.3/3, mb1mx3.0/28, mbtmp3.1/3, ML2.7/2, Error ellipse: s-maj=66.0km s-min=31.8km az=63.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM	Songino Array	9.90	9	Pn	Pn	18 35 59.9	-0.1
	0.0nm,0.3s,baz=184,slow=12,SNR=2.7						
MKAR	Makanchi Array	18.30	305	P	Pn	18 37 51.3	-0.2
	0.1nm,0.3s,baz=108,slow=12,SNR=11						
WRA	Warramunga Arr	64.29	148	P	P	18 44 13.4	0.0
	0.2nm,0.4s,baz=338,slow=7.2,SNR=4.9						

IDC 05 18:43:03.1±20.0, 22°.75S×66°.49W, h280km±130km, mb2.9/3, mb1 3.2/6, mb1mx3.0/18, mbtmp3.0/6, Error ellipse: s-maj=281.3km s-min=24.3km az=17.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	6.61	346	P	Pn	18 44 40.1	-0.2
	0.4nm,0.3s,baz=153,slow=8.0,SNR=12						
LPAZ				S	S	18 46 04.7	+6.2
	0.1nm,0.3s,baz=218,slow=20,SNR=3.9						
SIV	San Ignacio	8.44	38	P	Pn	18 45 02.6	+0.4
	0.8nm,0.3s,baz=222,slow=13,SNR=17						
BDFB	Brasilia	18.81	71	P	P	18 47 02.6	-0.4
	0.2nm,0.3s,baz=231,slow=13,SNR=5.3						
TORD	Torodi Ar. Bea	75.68	69	P	P	18 54 18.1	-0.3
	0.5nm,0.9s,baz=246,slow=4.7,SNR=2.3						
PDAR	Pinedale Array	76.32	329	P	P	18 54 21.4	-0.2
	0.1nm,0.3s,baz=155,slow=4.9,SNR=3.3						
YKA	Yellowknife Ar	93.12	340	P	P	18 55 44.6	-0.3
	0.1nm,0.5s,baz=135,slow=4.5,SNR=6.1						
MKAR	Makanchi Array	145.26	39	PKPbc	PKPab	19 02 08.2	-0.1
	0.2nm,0.5s,baz=311,slow=2.4,SNR=3.7						

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*KRSC **05** 18:55:28.6±2.7, 51°.67N×153°.52E, h481km±40km, ML4.6*
*ISCJB **05** 18:55:31.4±0.4, 52°.03N±0°.07×152°.83E±0°.09, h426km, mb3.3/12, Error ellipse: s-maj=11.2km s-min=5.3km az=145.1*
*MOS **05** 18:55:31.0±0.6, 52°.11N×152°.81E, h429km, mb4.5/5, Error ellipse: s-maj=26.3km s-min=11.0km az=57.1*
*IDC **05** 18:55:32.3±0.9, 52°.10N×152°.77E, h426km±10km, mb3.1/11, mb1 3.3/13, mb1mx3.0/28, mbtmp3.0/13, Error ellipse: s-maj=22.6km s-min=10.0km az=140.0*
ISC 05 18:55:32.2±0.6, 52°.02N±0°.09×153°.11E±0°.09, h426km, n48, σ1s.89/60, mb3.4/12, 1C, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	2.26	82	eP	P	18 56 33.2	+1.2
APC	Apacha	2.64	68	eP	P	18 56 35.7	+1.2
APC				S	S	18 57 24.6	-0.6
PETK	Petropavlovsk-	3.00	67	ePN	P	18 56 38.4	+1.1
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PETK	Petropavlovsk-	3.00	67	P	P	18 56 38.4	+1.1
	comp=Z,2.9nm,0.3s,baz=248,slow=7.3,SNR=50						
PETK				S	S	18 57 33.4	+3.1
	baz=269,slow=14,SNR=1.9						
GRL	Gorelyy	3.09	78	P	P	18 56 39.6	+1.5
RUS	Russkaya	3.35	81	PN	P	18 56 41.3	+1.3
RUS				S	S	18 57 34.1	-1.1
RUS	Russkaya	3.35	81	eP	P	18 56 41.3	+1.3
RUS				eS	S	18 57 34.1	-1.1
GNL	Ganaly	3.38	58	eP	P	18 56 41.5	+1.2
PET	Petropavlovsk	3.53	71	ePN	P	18 56 43.5	+2.1
PET				eS	S	18 57 40.5	+2.5
PET				pmax	pmax		
	comp=Z,65nm,0.5s						
PET				smax	smax		
	comp=E,54nm,0.5s						
PET	Petropavlovsk	3.53	71	eP	P	18 56 43.6	+2.1
PET				eS	S	18 57 38.0	0.0
KOK	Koryaka	3.60	67	eP	P	18 56 44.3	+2.1
AVH	Avacha	3.65	68	eP	P	18 56 45.1	+2.5
UGLR	Uglovaya	3.68	69	eP	P	18 56 45.5	+2.6
SMAR	Somma	3.68	68	eP	P	18 56 45.1	+2.0
SDLR	Sedlovina	3.74	68	eP	P	18 56 45.6	+2.2
SDLR				eS	S	18 57 41.4	-0.1
SPN	Mys Shipunski	4.35	73	PN	P	18 56 48.9	0.0
SPN	Mys Shipunski	4.35	73	P	P	18 56 48.9	0.0
SPN				eS	S	18 57 47.0	-4.6
ESO	Esso	5.12	38	PN	P	18 56 58.6	+2.3
ESO	Esso	5.12	38	eP	P	18 56 58.6	+2.3
TUMR	Tumrok	5.31	49	i P	P	18 57 01.3	+3.0
TUMR				eS	S	18 58 08.4	-0.5
KMNR	Kamenistaya	5.64	46	eP	P	18 57 04.7	+3.0
MKZ	Mys Kozlova	5.76	60	PN	P	18 57 03.3	+0.5
MKZ				S	S	18 58 12.2	-4.9
MKZ	Mys Kozlova	5.76	60	eP	P	18 57 03.3	+0.5
MKZ				eS	S	18 58 12.2	-4.9
SRDR	Sredinnyy	5.80	39	P	P	18 57 05.2	+1.9
BZGR	Bezymyannyi-Gr	5.95	46	P	P	18 57 07.5	+2.5
LGNR	Loginova	6.04	45	P	P	18 57 06.5	+0.4
ZLN	Zelenaya	6.05	45	P	P	18 57 07.3	+1.3
KRSR	Krestovskiy	6.07	43	P	P	18 57 08.3	+2.1
KLY	Klyuchi	6.17	43	S	S	18 58 24.5	-0.5
KBTR	Krutoberegovo	7.08	50	PN	P	18 57 17.0	-0.2
KBTR				S	S	18 58 35.7	-7.3
KBTR	Krutoberegovo	7.08	50	eP	P	18 57 17.0	-0.2
KBTR				S	S	18 58 35.7	-7.3
ERM	Erimo	12.08	218	ePN	P	18 58 12.1	-0.1
BILL	Bilibino	17.29	17	⇑iP	P	18 59 06.8	-1.1
BILL				eS	S	19 02 06.0	-0.1
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MJA0	Matsu Arr-Jizo	18.72	220	eP	P	18 59 24.9	+1.9
MJAR	Matsushiro Arr	18.73	220	P	P	18 59 21.2	-1.9
	comp=Z,0.3nm,0.3s,baz=22,slow=9.5,SNR=5.6						
KSRS	Korea Array	22.91	240	P	P	19 00 00.7	-0.6
	comp=Z,0.8nm,0.5s,baz=40,slow=9.3,SNR=6.0						
ILAR	Eielson Array	32.57	44	P	P	19 01 26.4	+0.6
	comp=Z,0.8nm,0.6s,baz=270,slow=4.7,SNR=21						

KURK	**Kurchatov**	**44.61**	**299**	*e*P	**P**	**19 03 03.0**	**-1.4**
KURK				pmax	pmax		
	comp=Z,3.0nm,2.5s						
MKAR	**Makanchi Array**	**44.71**	**293**	P	**P**	**19 03 03.8**	**-1.5**
MKAR	**Makanchi Array**	**44.71**	**293**	P	**P**	**19 03 03.8**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=54,slow=7.2,SNR=7.2						
RES	**Resolute Bay**	**45.86**	**20**	P	**P**	**19 03 13.0**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=306,slow=6.6,SNR=5.7						
YKA	**Yellowknife Ar**	**46.77**	**40**	P	**P**	**19 03 21.2**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=302,slow=7.3,SNR=22						
CMAR	**Chiang Mai Arr**	**53.79**	**253**	P	**P**	**19 04 12.2**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=28,slow=5.8,SNR=6.0						
NVAR	**Mina Array Bea**	**60.09**	**65**	P	**P**	**19 04 58.2**	**+1.5**
	comp=Z,1.1nm,0.7s,baz=309,slow=7.1,SNR=4.4						
PDAR	**Pinedale Array**	**61.72**	**56**	P	**P**	**19 05 08.5**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=334,slow=2.1,SNR=13						
WRA	**Warramunga Arr**	**73.51**	**198**	P	**P**	**19 06 19.8**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=16,slow=6.2,SNR=7.3						
TXAR	**Lajitas Array**	**74.94**	**62**	P	**P**	**19 06 29.6**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=294,slow=4.1,SNR=8.0						
ASAR	**Alice Springs**	**77.22**	**198**	P	**P**	**19 06 41.4**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=14,slow=5.0,SNR=20						

KRSC 05 19:00:30.9±1.5**, 53.95N×168.87E, h20**km±20km**, ML3.9, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	**2.10**	**308**	P	Pb	19 01 06.7	-1.6
BKI				*e*S	Sb	19 01 32.9	-1.0
KBTR	**Krutoberegovo**	**4.15**	**305**	P	Pn	19 01 34.5	+1.5
MKZ	**Mys Kozlova**	**4.23**	**281**	P	Pn	19 01 36.7	+2.6
MKZ				S	Sn	19 02 23.9	+1.0
SPN	**Mys Shipunski**	**5.35**	**264**	S	Sn	19 02 50.6	+0.2
SDLR	**Sedlovina**	**5.98**	**268**	P	Pn	19 02 02.1	+3.7
UGLR	**Uglovaya**	**6.03**	**267**	P	Pn	19 02 02.2	+3.2
SMAR	**Somma**	**6.03**	**268**	P	Pn	19 02 02.2	+3.0
AVH	**Avacha**	**6.07**	**268**	P	Pn	19 02 02.7	+3.2
GNL	**Ganaly**	**6.48**	**272**	P	Pn	19 02 08.8	+3.6

IDC 05 19:32:14.8±6.0**, 20.23S×68.33E, h0**km**, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.5**/25**, mbtmp3.8**/4**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.6**/53**, Error ellipse: s-maj=158.1km s-min=38.2km az=67.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**38.48**	**271**	LR	LR	19 52 58.9	
	comp=Z,50nm,18.8s,baz=289,slow=32						
CMAR	**Chiang Mai Arr**	**48.78**	**40**	P	P	19 41 01.6	-0.3
	1.5nm,0.7s,baz=234,slow=8.5,SNR=16						
ASAR	**Alice Springs**	**60.44**	**106**	P	P	19 42 26.5	-0.2
	0.5nm,0.7s,baz=266,slow=6.3,SNR=9.1						
WRA	**Warramunga Arr**	**61.59**	**102**	P	P	19 42 34.6	+0.1
	0.5nm,0.7s,baz=258,slow=6.0,SNR=3.0						
SONM	**Songino Array**	**75.87**	**25**	P	P	19 44 03.2	+0.2
	1.2nm,0.9s,baz=217,slow=5.6,SNR=9.8						

*ISCJB **05** 19:37:54.0±0.7, 50.28N±0.04×114.83W±0.08, h5km, mb2.7/1, Error ellipse: s-maj=7.4km s-min=5.8km az=177.4*

*IDC **05** 19:37:54.5±1.0, 50.17N×115.15W, h0km, mb2.8/2, mb1 3.4/5, mb1mx3.2/31, mbtmp3.1/5, ML3.5/3, Error ellipse: s-maj=18.9km s-min=7.1km az=111.0*

ISC 05 19:37:55.7±1.5**, 50.21N**±0.07×**114.88W**±0.06**, h5**km**, n30,** σ**0.68**/31**, 9C-19D, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
A13A	**Flathead Natio**	**1.31**	**166**	⇓S	**Sb**	**19 38 38.1**	**+0.1**
	baz=1.3						
A12A	**Yaak River Ran**	**1.37**	**202**	⇑S	**Sn**	**19 38 41.1**	**+1.1**
	baz=1.3						
A14A	**Double T Ranch**	**1.56**	**142**	⇓P	**Pn**	**19 38 22.9**	**-1.3**
	baz=1.5,SNR=35						
B13A	**Whitefish**	**1.85**	**171**	⇑P	**Pn**	**19 38 27.6**	**-0.6**
	baz=1.8						
A15A	**Johnson Ranch,**	**1.86**	**130**	⇑P	**Pn**	**19 38 27.8**	**-0.6**
	baz=1.8,SNR=35						
A15A				⇓S	**Sn**	**19 38 52.1**	**-0.3**
	baz=1.8						
B14A	**Marquette Ranc**	**2.12**	**150**	⇓P	**Pn**	**19 38 31.8**	**-0.2**
	baz=2.1,SNR=44						
B14A				⇓S	**Sn**	**19 38 58.7**	**-0.1**
	baz=2.1						
B15A	**Bradely Ranch,**	**2.43**	**140**	⇓P	**Pn**	**19 38 36.1**	**-0.1**
	baz=2.4,SNR=62						
NEW	**Newport**	**2.43**	**218**	Pn	**Pn**	**19 38 35.2**	**-1.0**
	1.5nm,0.3s,baz=37,slow=18,SNR=17						
NEW				Lg	Lg	19 39 05.9	
	5.5nm,0.3s,baz=45,slow=20,SNR=8.4						
A16A	**West Butte Ran**	**2.48**	**119**	⇓P	**Pn**	**19 38 36.6**	**-0.3**
	baz=2.4						
C11A	**Tepee Creek (N**	**2.53**	**201**	⇓P	**Pn**	**19 38 37.0**	**-0.5**
	baz=2.5						
C13A	**Hot Springs**	**2.54**	**175**	⇑Sb	**Sb**	**19 39 13.4**	**+0.2**
	baz=2.5						
C14A	**Swan Lake**	**2.55**	**162**	⇓P	**Pn**	**19 38 37.1**	**-0.8**
	baz=2.5						
C14A				⇓Sb	**Sb**	**19 39 13.6**	**-0.1**
	baz=2.5						
C15A	**Salmond Ranch,**	**2.86**	**147**	⇓P	**Pn**	**19 38 41.8**	**-0.3**
	baz=2.8,SNR=53						
C16A	**Fuhringer Ranc**	**3.17**	**138**	⇓P	**Pn**	**19 38 46.0**	**-0.4**
	baz=3.1,SNR=54						
D14A	**Greenough**	**3.26**	**163**	⇓P	**Pn**	**19 38 46.5**	**-1.1**
	baz=3.2						
D15A	**Lincoln**	**3.53**	**153**	⇑P	**Pn**	**19 38 51.3**	**-0.1**
	baz=3.5,SNR=26						
C17A	**Wharram Farm,**	**3.74**	**132**	⇑P	**Pn**	**19 38 53.7**	**-0.5**
	baz=3.7,SNR=15						
E13A	**Victor**	**3.79**	**173**	⇓P	**Pn**	**19 38 54.4**	**-0.6**
	baz=3.7						
D16A	**Dana Ranch, Ca**	**3.87**	**144**	⇑P	**Pn**	**19 38 55.4**	**-0.6**
	baz=3.8,SNR=34						
E15A	**Deer Lodge**	**4.07**	**158**	⇓P	**Pn**	**19 38 58.3**	**-0.4**
	baz=4.0						
D17A	**Six Diamond Ra**	**4.13**	**136**	⇓P	**Pn**	**19 38 58.9**	**-0.7**
	baz=4.1,SNR=20						
A19A	**Klindworth Far**	**4.20**	**105**	⇓P	**Pn**	**19 39 00.1**	**-0.3**
	baz=4.1						
D18A	**Linhart Farms,**	**4.51**	**130**	⇓P	**Pn**	**19 39 04.5**	**-0.3**
	baz=4.4						
C19A	**Slack Wire Ran**	**4.57**	**121**	⇓P	**Pn**	**19 39 05.6**	**+0.1**
	baz=4.5						
F15A	**Butte**	**4.65**	**159**	⇑P	**Pn**	**19 39 06.0**	**-0.8**
	baz=4.6,SNR=6.0						
A20A	**Cobblestone Ra**	**4.72**	**104**	⇑P	**Pn**	**19 39 07.0**	**-0.7**
	baz=4.6						
PDAR	**Pinedale Array**	**8.29**	**152**	Pn	**Pn**	**19 39 58.4**	**+1.5**
	0.1nm,0.3s,baz=4.5,slow=13,SNR=5.1						
YKA	**Yellowknife Ar**	**12.32**	**1**	Pn	Pn	19 40 47.0	-4.6
	0.4nm,0.3s,baz=181,slow=13,SNR=48						
YKA				Sn	Sn	19 42 58.7	-10
	0.2nm,0.3s,baz=177,slow=22,SNR=6.8						
YKA				Lg	Lg	19 44 16.6	
	0.0nm,0.3s,baz=183,slow=28,SNR=4.1						
INK	**Inuvik**	**20.34**	**340**	P	Pn	19 42 33.5	-0.9
	0.5nm,0.7s,baz=146,slow=10,SNR=3.2						
ILAR	**Eielson Array**	**22.21**	**323**	P	**P**	**19 42 53.1**	**+0.5**
	0.2nm,0.6s,baz=104,slow=9.4,SNR=3.0						

*IDC **05** 19:38:57.4±1.2, 34.08N×70.10E, h0km, mb3.9/11, mb1 4.0/15, mb1mx3.8/33, mbtmp3.9/15, ML3.7/4, MS3.4/6, Ms1 3.4/6, ms1mx2.7/53, Error ellipse: s-maj=33.0km s-min=16.4km az=121.0*

*ISCJB **05** 19:39:00.4±0.5, 34.08N±0.04×69.96E±0.05, h33km, mb3.8/11, MS3.3/6, Error ellipse: s-maj=7.0km s-min=3.7km az=142.6*

*NNC **05** 19:39:00.9±1.8, 34.30N×69.62E, h0km, mb3.7, mpv4.1, Error ellipse: s-maj=17.7km s-min=11.3km az=33.0*

ISC 05 19:39:03.0±0.7**, 34.09N**±0.06×**69.85E**±0.06**, h35**km**, n48,** σ**1.60**/48**, mb3.7**/11**, MS3.1**/6**, 5C-7D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**1.73**	**98**	⇓P	**Pn**	**19 39 30.0**	**-0.7**
CEP				S	**Sn**	**19 39 54.0**	**+2.4**
CHCP	**Chirah Chowk**	**2.87**	**98**	P	**Pn**	**19 39 47.7**	**+1.4**
DHRM	**DHARAMSHALA**	**5.71**	**107**	*e*P	**Pn**	**19 40 25.6**	**+0.1**
DHRM				*e*S	**Sn**	**19 41 30.1**	**+0.2**
DHRM				AML	AML	19 41 32.3	
	comp=E,333nm,0.2s						
DHRM				AML	AML	19 41 33.3	
	comp=N,268nm,0.3s						
SMLA	**Simla**	**6.84**	**114**	*i* P	**Pn**	**19 40 40.7**	**-0.1**
SMLA				*i* S	**Sn**	**19 41 57.5**	**0.0**
SMLA				*i* S		19 41 57.7	
SMLA				⇓		19 42 00.6	
	comp=E,862nm,0.4s						
SMLA						19 42 01.6	
	comp=N,1μm,0.4s						
DDI	**Dehra Dun**	**7.90**	**116**	*e*P	**Pn**	**19 40 55.6**	**+0.2**
DDI				*e*S	**Sn**	**19 42 23.1**	**-0.5**
DDI				AML	AML	19 42 29.9	
	comp=E,200nm,0.1s						
DDI				AML	AML	19 42 30.2	
	comp=N,165nm,0.3s						
AML	**Almayashu**	**8.57**	**20**	P	**Pn**	**19 41 06.0**	**+1.0**
	SNR=10.0						
KK31	**Karatay Array**	**9.01**	**3**	⇓P	**Pn**	**19 41 10.7**	**+0.1**
	comp=N,2.6nm,0.3s,baz=186,slow=13,SNR=151						
KK31				⇑S	**Sn**	**19 42 50.5**	**-0.3**
	comp=N,6.3nm,0.5s,baz=189,slow=21,SNR=5.5						
EKS2	**Erkin-Say**	**9.09**	**19**	P	**Pn**	**19 41 12.7**	**+0.9**
	SNR=9.1						
AAK	**Ala-Archa**	**9.27**	**22**	P	**Pn**	**19 41 17.3**	**+3.1**
	SNR=10						
AAK	**Ala-Archa**	**9.27**	**22**	Pn	**Pn**	**19 41 15.1**	**+0.8**
	comp=N,1.1nm,0.3s,baz=184,slow=7.6,SNR=26						
AAK				Sn	**Sn**	**19 42 56.6**	**-0.8**
	comp=N,0.4nm,0.3s,baz=192,slow=13,SNR=3.5						
CHMS	**Chumysh**	**9.68**	**22**	P	**Pn**	**19 41 20.7**	**+1.0**
	SNR=7.2						
TKM2	**Tokmak 2**	**9.89**	**25**	⇓P	**Pn**	**19 41 24.5**	**+1.7**
	comp=N,4.5nm,0.8s						
TKM2				⇑S	**Sn**	**19 43 16.0**	**+3.3**
	comp=N,6.0nm,1.4s						
TKM2	**Tokmak 2**	**9.89**	**25**	P	**Pn**	**19 41 25.1**	**+2.3**
	SNR=6.8						
BHPL	**Bhopal**	**12.69**	**146**	*e*P	**Pn**	**19 41 58.0**	**-2.9**
BHPL				*e*S	Sn	19 44 13.5	-7.5
BHPL				AML	AML	19 44 41.6	
	comp=N,7.8nm,0.5s						
BHPL				AML	AML	19 44 42.4	
	comp=E,8.7nm,0.8s						
PYUN	**Piuthan**	**12.74**	**114**	*e*P	Pn	19 41 58.4	-3.4
	comp=E,12nm,0.3s						
DANN	**Dangsing**	**13.20**	**112**	*e*P	**Pn**	**19 42 05.6**	**-2.6**
	comp=E,9.2nm,0.3s						
KOLN	**Koldanda**	**13.37**	**114**	*e*P	**Pn**	**19 42 08.2**	**-2.3**
	comp=E,7.7nm,0.5s						
DMN	**Daman**	**14.60**	**112**	*e*P	Pn	19 42 22.6	-4.7
	comp=E,10nm,0.4s						
KKN	**Kakani**	**14.65**	**111**	*e*P	Pn	19 42 22.9	-5.0
	comp=E,15nm,0.5s						
PKIN	**Phulchoki**	**14.84**	**112**	*e*P	Pn	19 42 26.2	-4.3
	comp=E,15nm,0.4s						
PKI	**Pulchoki**	**14.86**	**112**	*e*P	Pn	19 42 26.0	-4.7
	comp=E,15nm,0.5s						
GUN	**Gumba**	**15.06**	**110**	*e*P	**Pn**	**19 42 30.3**	**-3.1**
	comp=E,12nm,0.4s						
MK31	**Makanchi Array**	**15.80**	**33**	P	**Pn**	**19 42 41.6**	**-1.1**
	comp=E,2.8nm,0.7s,baz=210,slow=12,SNR=46						
MKAR	**Makanchi Array**	**15.80**	**33**	Pn	**Pn**	**19 42 40.3**	**-2.4**
	comp=E,0.1nm,0.3s,baz=217,slow=14,SNR=8.5						
TAPN	**Taplejung**	**16.75**	**109**	*e*P	Pn	19 42 49.9	-5.3
	comp=E,5.9nm,0.4s						
AB31	**Akbulak array**	**16.84**	**337**	P	**Pn**	**19 42 55.0**	**-0.9**
	comp=E,1.0nm,0.4s,baz=152,slow=12,SNR=32						
AB31				⇓S	**Sn**	**19 45 58.3**	**-3.4**
	comp=E,1.0nm,0.7s,baz=154,slow=24,SNR=3.3						
KURK	**Kurchatov**	**17.81**	**18**	⇑P	**Pn**	**19 43 07.3**	**-0.5**
	comp=E,0.4nm,0.5s						
AKTO	**Aktyubinsk**	**18.49**	**336**	⇓P	**P**	**19 43 15.7**	**-0.1**
	comp=E,0.8nm,0.8s						
AKTO				⇑S	**Sn**	**19 46 40.5**	**-1.2**
	comp=E,0.3nm,0.8s						
AKTO	**Aktyubinsk**	**18.49**	**336**	P	**P**	**19 43 15.3**	**-0.5**
	comp=E,0.4nm,0.3s,baz=150,slow=12,SNR=18						
AKTO				S	**Sn**	**19 46 39.3**	**-2.4**
	comp=E,0.1nm,0.3s,baz=136,slow=12,SNR=2.8						
VOSK	**Vostochnaya**	**18.64**	**2**	⇑P	**P**	**19 43 16.3**	**-1.2**
	comp=E,4.1nm,0.8s						
ZRNK	**Zerenda**	**18.86**	**358**	⇓P	**P**	**19 43 20.4**	**+0.5**
	comp=E,2.1nm,0.6s						
BVA0	**Borovoye Array**	**18.93**	**1**	P	**P**	**19 43 20.9**	**+0.3**
	comp=E,0.4nm,0.6s,baz=186,slow=15,SNR=23						
BVAR	**Borovoye Array**	**18.93**	**1**	P	**P**	**19 43 20.2**	**-0.4**
	comp=E,0.5nm,0.3s,baz=172,slow=12,SNR=19						
ZALV	**Zalesovo Beam**	**22.49**	**24**	P	**P**	**19 43 56.9**	**-2.2**
	comp=E,1.8nm,0.4s,baz=210,slow=7.9,SNR=18						
BRTR	**Keskin Array B**	**29.36**	**292**	P	**P**	**19 45 04.5**	**+1.7**
	comp=E,0.7nm,0.7s,baz=117,slow=10,SNR=6.9						
EIL	**Elat**	**29.87**	**271**	LR	LR	19 59 00.2	
	comp=E,27nm,20.1s,baz=75,slow=40						
MLR	**Muntele Rosu**	**35.20**	**302**	LR	LR	20 03 36.6	
	comp=E,5.7nm,19.0s,baz=182,slow=42						
FINES	**FINESS Array B**	**38.99**	**328**	P	**P**	**19 46 26.3**	**+0.8**
	comp=E,1.2nm,0.9s,baz=98,slow=7.9,SNR=5.4						
FINES				LR	LR	20 03 45.2	
	comp=E,35nm,19.9s,baz=196,slow=38						
ARCES	**ARCESS Array B**	**43.03**	**339**	P	**P**	**19 47 00.0**	**+1.3**
	comp=E,5.6nm,1.0s,baz=117,slow=12,SNR=5.9						
NOA	**NORSAR Array B**	**45.76**	**325**	P	**P**	**19 47 21.1**	**+0.4**
	comp=E,0.6nm,0.6s,baz=99,slow=8.0,SNR=2.8						
NOA				LR	LR	20 09 20.5	
	comp=E,21nm,19.1s,baz=90,slow=40						
MJAR	**Matsushiro Arr**	**54.74**	**66**	LR	LR	20 12 22.6	
	comp=E,186nm,21.8s,baz=200,slow=37						
JHJ	**Hachijo jima 2**	**57.15**	**70**	LR	LR	20 13 30.4	
	comp=E,315nm,20.9s,baz=245,slow=36						
TORD	**Torodi Ar. Bea**	**64.73**	**269**	P	**P**	**19 49 37.7**	**-0.3**
	comp=E,0.4nm,0.6s,baz=51,slow=6.1,SNR=6.6						
LBTB	**Lobatse**	**72.26**	**222**	P	**P**	**19 50 26.0**	**+1.1**
	comp=E,1.6nm,0.7s,baz=84,slow=4.7,SNR=6.2						
BOSA	**Boshof**	**75.30**	**220**	P	**P**	**19 50 44.2**	**+1.5**
	comp=E,2.7nm,1.0s,baz=52,slow=0.7,SNR=4.0						
INK	**Inuvik**	**76.42**	**9**	P	**P**	**19 50 48.1**	**-0.3**
	comp=E,0.6nm,0.6s,baz=7.3,slow=6.0,SNR=6.6						
ILAR	**Eielson Array**	**77.34**	**15**	P	**P**	**19 50 53.0**	**-0.6**
	comp=E,0.5nm,0.9s,baz=327,slow=5.2,SNR=4.7						
YKA	**Yellowknife Ar**	**83.68**	**2**	P	**P**	**19 51 27.1**	**-0.5**
	comp=E,0.3nm,0.7s,baz=350,slow=5.3,SNR=8.5						

*BJI **05** 19:45:16.7, 10.24S×124.61E, h5km, mB5.4/36, mb5.1/50, Ms4.9/46, Ms7 4.6/45*

*IDC **05** 19:45:25.5±0.4, 9.22S×124.21E, h0km, mb4.8/25, ML4.5/4, MS4.7/19, Ms1 4.7/19, ms1mx4.4/35, Error ellipse: s-maj=17.1km s-min=11.1km az=76.0*

*ISCJB **05** 19:45:27.3±0.8, 9.42S±0.03×124.16E±0.03, h24km±5km, mb5.2/101, MS4.8/128, Error ellipse: s-maj=4.8km s-min=4.2km az=179.7*

*MOS **05** 19:45:27.0±1.8, 9.30S×124.20E, h33km, mb5.6/29, MS4.8/16, Error ellipse: s-maj=10.1km s-min=5.5km az=120.5*

*NEIC **05** 19:45:27.0±0.1, 9.28S×124.16E, h10km, mb5.4/27, MS4.9/97, Error ellipse: s-maj=5.3km s-min=3.8km az=55.0*

*GCMT **05** 19:45:30.7±0.2, 9.40S×124.17E, h12km, MW5.1, Moment Tensor Solution. s34,c40; s72,c120; Moment tensor: Scale 10^16Nm; Mrr-3.62±.15; Mθθ-1.78±.12; Mφφ5.40±.14; Mrθ2.42±.40; Mθφ2.84±.11; Mφr2.87±.36; Best double couple: M0 6.40000×10^16 NP1:φs349.00000°, δ35.00000°, λ-137.00000°. NP2:φs221.00000°, δ67.00000°, λ-63.00000°. Principal axes: T 7.5100, Plg18.0000°, Azm292.0000°; N -2.1500, Plg24.0000°, Azm30.0000°; P -5.3600, Plg59.0000°, Azm169.0000°; Data Used: II IU IC G CN.*

*DJA **05** 19:45:31.0±0.7, 9°S±2°×12°4E±°, h20km±7km, M5.1/85, mb5.2/85, mB5.6/62, MLv5.2/9, Mw(mB)5.1/62*

ISC 05 19:45:27.9±0.3**, 9.43S**±0.03×**124.19E**±0.04**, h17**km±1km**, h16**km**:pP-P, n704,** σ**1.56**/693**, mb5.3**/101**, MS4.8**/128**, 64C-57D, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	**Maumere**	**2.08**	**292**	P	**Pn**	**19 46 01.1**	**-1.1**
WSI	**Waingapu**	**3.85**	**266**	P	**Pn**	**19 46 29.2**	**+2.7**
BBSI	**Bau Bau**	**4.23**	**338**	P	**Pn**	**19 46 32.0**	**+0.2**
KDI	**Kendari**	**5.65**	**344**	P	**Pn**	**19 46 50.6**	**-0.7**
	245nm,0.9s,3μm1.0nm						
BKSI	**Bulukumba**	**5.74**	**315**	P	**Pn**	**19 46 52.2**	**-0.3**
	253nm,0.8s,3μm0.9nm						
KAPI	**Kappang**	**6.21**	**315**	*e*Pn	**Pn**	**19 46 55.9**	**-3.1**
	388nm,1.3s						
KAPI	**Kappang**	**6.21**	**315**	Pn	**Pn**	**19 46 59.8**	**+0.8**
	488nm,2.1s,SNR=14						
KAPI	**Kappang**	**6.21**	**315**	Pn	**Pn**	**19 46 58.1**	**-0.9**
	1.6nm,0.3s,baz=145,slow=11,SNR=14						
KAPI				LR	LR	19 49 31.6	
	comp=Z,13μm,19.7s,baz=134,slow=40						
AAI	**Ambon**	**6.95**	**35**	P	Pn	19 47 13.8	+4.6
	145nm,1.0s,2μm0.5nm						
BNDI	**Bandanaira**	**7.47**	**50**	P	**Pn**	**19 47 18.2**	**+1.9**
	305nm,1.5s,5μm1.2nm						
MSAI	**Masohi**	**7.66**	**38**	P	Pn	19 47 22.8	+3.9
	41nm,1.0s,519nm0.1nm						
TTSI	**Tana Toraja**	**7.69**	**325**	P	**Pn**	**19 47 21.2**	**+2.0**
MTNI	**Mataram**	**7.96**	**275**	P	**Pn**	**19 47 20.0**	**-3.0**
	540nm,0.6s,7μm2.7nm						
LUWI	**Luwuk**	**8.45**	**350**	P	**Pn**	**19 47 29.8**	**+0.1**
	640nm,1.3s,6μm						
KHKI	**Kahang-Kahang**	**8.55**	**276**	P	**Pn**	**19 47 30.3**	**-0.8**
	84nm,1.3s,2μm						
FITZ	**Fitzroy Crossi**	**8.74**	**171**	*e*Pn	**Pn**	**19 47 33.8**	**+0.1**
FITZ	**Fitzroy Crossi**	**8.74**	**171**	Pn	**Pn**	**19 47 34.3**	**+0.6**
	5.5nm,0.3s,baz=6.1,slow=8.8,SNR=161						
FITZ				Sn	**Sn**	**19 49 08.3**	**-3.5**
	4.6nm,0.3s,baz=74,slow=20,SNR=5.5						
FITZ				LR	LR	19 51 41.7	
	comp=Z,3μm,20.7s,baz=354,slow=42						
IGBI	**Denpasar**	**8.95**	**273**	P	**Pn**	**19 47 35.6**	**-1.0**
	153nm,0.9s						
SRBI	**Singaraja**	**8.97**	**278**	P	**Pn**	**19 47 37.5**	**+0.6**
	92nm,1.2s,2μm						
TLE	**Tual**	**9.27**	**67**	P	**Pn**	**19 47 43.6**	**+2.6**
	395nm,0.7s,4μm						
LBMI	**Labuha**	**9.33**	**21**	P	**Pn**	**19 47 44.3**	**+2.5**
	166nm,1.4s,3μm						
NBBI	**Negara**	**9.52**	**276**	P	**Pn**	**19 47 46.2**	**+1.8**
	173nm,2.4s,4μm						
BYJI	**Banyuwangi**	**9.80**	**276**	P	**Pn**	**19 47 49.2**	**+1.0**
	142nm,1.4s						
KBKI	**Kotabaru**	**10.03**	**307**	P	**Pn**	**19 47 51.7**	**+0.3**
	65nm,1.7s,2μm						
MRSI	**Marisa**	**10.09**	**347**	P	**Pn**	**19 47 52.9**	**+0.7**
	73nm,2.6s,1μm						
FAKI	**Fak Fak**	**10.29**	**52**	P	**Pn**	**19 47 57.9**	**+2.9**
	177nm,1.7s,2μm						
BLJI	**Banyuglugur**	**10.61**	**278**	P	**Pn**	**19 47 59.9**	**+0.5**
	48nm,0.8s,1μm						
TNTI	**Ternate**	**10.61**	**17**	P	**Pn**	**19 48 02.2**	**+2.8**
	153nm,1.2s,3μm						
GMJI	**Gumukmas**	**10.68**	**275**	P	**Pn**	**19 48 01.8**	**+1.4**
	77nm,1.1s						
MNI	**Manado**	**10.82**	**3**	P	**Pn**	**19 48 04.0**	**+1.8**
	216nm,2.0s,4μm						
BBKI	**Banjar Baru**	**11.02**	**302**	P	Pn	19 48 08.6	+3.6
	174nm,2.2s,5μm						
SWI	**Sorong**	**11.04**	**40**	P	**Pn**	**19 48 08.1**	**+2.9**
	64nm,1.1s,1μm						
SMKI	**Samarinda**	**11.31**	**322**	P	Pn	19 48 12.6	+3.6
	95nm,1.0s,2μm						
KRKI	**Karangkates**	**11.67**	**275**	P	**Pn**	**19 48 15.6**	**+1.7**
	180nm,0.6s,14μm						
PWJI	**Pagerwojo**	**12.32**	**276**	P	**Pn**	**19 48 22.9**	**+0.1**
	62nm,1.1s						
SJI	**Sawahan**	**12.40**	**277**	P	**Pn**	**19 48 25.6**	**+1.6**
	170nm,2.4s,3μm						
MBWA	**Marble Bar**	**12.43**	**200**	*e*Pn	**Pn**	**19 48 24.9**	**+0.6**
TBJI	**Tambak Boyo**	**12.49**	**281**	P	**P**	**19 48 33.9**	**-2.9**
PCJI	**Pacitan**	**12.92**	**274**	P	**Pn**	**19 48 33.3**	**+2.3**
	149nm,1.2s						
UGM	**Wanagama**	**13.60**	**275**	*e*Pn	**Pn**	**19 48 39.8**	**-0.5**
UGM	**Wanagama**	**13.60**	**275**	P	**Pn**	**19 48 41.7**	**+1.4**
	208nm,1.9s						
SMRI	**Semarang**	**13.81**	**279**	P	**Pn**	**19 48 45.6**	**+2.4**
	144nm,1.1s						
PBKI	**Pangkalan Bun**	**14.12**	**297**	P	**Pn**	**19 48 49.7**	**+2.2**
	106nm,1.8s,2μm						
WRA	**Warramunga Arr**	**14.33**	**138**	Pn	Pn	19 48 46.5	-3.8
WRA				Sn	Sn	19 51 20.0	-9.0
WRA	**Warramunga Arr**	**14.33**	**138**	Pn	Pn	19 48 46.5	-3.8
	4.3nm,0.3s,baz=311,slow=14,SNR=145						
WRA				Sn	Sn	19 51 20.0	-9.0
	1.7nm,0.3s,baz=314,slow=22,SNR=12						
WRA				LR	LR	19 55 26.9	
	comp=Z,4μm,18.9s,baz=320,slow=42						
WRAB	**Tennant Creek**	**14.33**	**138**	*e*P	**Pn**	**19 48 47.3**	**-3.0**
WRAB	**Tennant Creek**	**14.33**	**138**	*e*Pn	**Pn**	**19 48 47.2**	**-3.0**
WRAB	**Tennant Creek**	**14.33**	**138**	Pn	Pn	19 48 47.0	-3.3
	872nm,1.2s,SNR=70						
BAKI	**Biak**	**14.40**	**56**	P	**Pn**	**19 48 52.2**	**+0.9**
	246nm,1.1s,3μm						
BJII	**Banjamegara**	**14.48**	**277**	P	**P**	**19 48 57.4**	**-1.6**
	117nm,1.6s,2μm						
TSM	**Tawau**	**15.02**	**335**	P	**P**	**19 49 09.6**	**+4.6**
TGJI	**Tegal**	**15.13**	**279**	P	**Pn**	**19 48 57.7**	**-3.5**
	66nm,1.2s						
WAMI	**Wamena**	**15.43**	**70**	P	**P**	**19 49 10.4**	**+0.8**
	403nm,0.9s,4μm						
MYLDM	**Lahad Datu**	**15.58**	**338**	P	**P**	**19 49 14.7**	**+3.5**
MYLDM	**Lahad Datu**	**15.58**	**338**	P	**P**	**19 49 10.7**	**-0.5**
	147nm,1.9s,5μm						
STKI	**Sintang**	**15.79**	**306**	P	**Pn**	**19 49 11.4**	**+1.7**
	51nm,1.8s,2μm						
MMPI	**Merauke**	**16.02**	**88**	P	**P**	**19 49 17.1**	**+1.0**
	306nm,1.0s						
CISI	**Cisompet, Garu**	**16.30**	**275**	P	**Pn**	**19 49 12.8**	**-3.6**
	259nm,1.9s,4μm						
MATI	**Mati**	**16.39**	**7**	*e*P	**P**	**19 49 21.9**	**+1.6**
MATI				*e*S	Px	19 50 00.0	
DAV	**Davao City (W)**	**16.45**	**5**	P	**P**	**19 49 21.6**	**+0.8**
	174nm,1.6s,4μm						
DAV	**Davao City (W)**	**16.45**	**5**	LR	LR	19 57 38.6	
	comp=Z,891nm,18.2s,baz=203,slow=45						
SDKM	**Sandakan**	**16.51**	**335**	P	**P**	**19 49 22.9**	**+1.3**
CTBH	**Cotabato--PC H**	**16.54**	**0**	⇑*i*P	**Pn**	**19 49 20.2**	**+0.9**
LEM	**Lembang**	**16.61**	**278**	P	Pn	19 49 14.2	-6.2
	188nm,0.8s,3μm						
BTM	**Bintulu**	**16.73**	**318**	P	**P**	**19 49 24.3**	**+0.3**
SBUM	**Sibu**	**16.78**	**314**	P	**P**	**19 49 25.2**	**+0.7**
SBUM	**Sibu**	**16.78**	**314**	P	**Pn**	**19 49 22.9**	**+0.5**
	52nm,1.4s,1μm						
AS31	**Alice Springs**	**16.93**	**148**	*e*Pn	**Pn**	**19 49 21.9**	**-2.4**
ASAR	**Alice Springs**	**16.93**	**148**	P	**Pn**	**19 49 22.0**	**-2.3**
ASAR				S	**Sn**	**19 52 27.1**	**-5.2**
ASAR	**Alice Springs**	**16.93**	**148**	P	**Pn**	**19 49 22.0**	**-2.3**
	1.3nm,0.3s,baz=327,slow=12,SNR=92						
ASAR				S	**Sn**	**19 52 27.1**	**-5.2**
	baz=312,slow=21						
ASAR				LR	LR	19 56 36.9	
	comp=Z,3μm,20.7s,baz=319,slow=39						
PAGZ	**Pagadian**	**17.18**	**357**	*e*P	**P**	**19 49 31.8**	**+2.8**
BUKP	**Musuan**	**17.21**	**3**	*e*P	**P**	**19 49 31.4**	**+2.0**
KKM	**Kota Kinabalu**	**17.30**	**332**	*e*Pn	**P**	**19 49 29.8**	**-0.6**
	113nm,0.9s						
KKM	**Kota Kinabalu**	**17.30**	**332**	P	**P**	**19 49 32.9**	**+2.5**
KKM	**Kota Kinabalu**	**17.30**	**332**	P	**P**	**19 49 31.0**	**+0.6**
	162nm,0.9s,3μm						
DBJI	**Dramaga**	**17.51**	**278**	P	**P**	**19 49 32.1**	**-0.5**
	204nm,1.1s,3μm						
KSM	**Kuching**	**17.57**	**307**	*e*Pn	**Pn**	**19 49 31.6**	**-0.6**
	74nm,1.2s						
KSM	**Kuching**	**17.57**	**307**	P	**Pn**	**19 49 31.7**	**-0.6**
KSM	**Kuching**	**17.57**	**307**	P	**Pn**	**19 49 32.5**	**+0.3**
	64nm,1.3s,1μm						
TNG	**Tangerang**	**17.68**	**279**	P	**P**	**19 49 34.4**	**-0.1**
	1μm,0.4s						
TPI	**Tanjungpandan**	**17.72**	**291**	P	**Pn**	**19 49 33.8**	**-0.4**
	21nm,1.1s,609nm						
JAY	**Jayapura**	**17.79**	**68**	P	**P**	**19 49 36.7**	**+0.9**
	139nm,2.2s,4μm						
KDM	**Kudat**	**17.81**	**335**	P	**P**	**19 49 39.2**	**+3.3**
SBJI	**Serang**	**18.19**	**279**	P	**P**	**19 49 40.2**	**0.0**
	147nm,1.7s,3μm						
XMIS	**Christmas Isla**	**18.29**	**265**	*e*Pn	**P**	**19 49 41.2**	**-0.1**
	1μm,1.3s						
CGJI	**Cibinong**	**18.53**	**277**	P	**Pn**	**19 49 44.8**	**+0.7**
	179nm,1.3s,3μm						
COEN	**Coen**	**19.12**	**105**	*e*Pn	**Pn**	**19 49 52.8**	**+1.5**
	396nm,0.8s						
BLSI	**Bandar Lampung**	**19.21**	**281**	P	P	19 49 44.7	-6.7
	82nm,0.6s						
PPBI	**Pangkal Pinang**	**19.35**	**291**	P	**P**	**19 49 52.7**	**-0.2**
	37nm,2.0s,631nm						
LWLI	**Liwa**	**20.44**	**281**	P	**P**	**19 50 03.1**	**-1.9**
	130nm,1.7s,2μm						

FORT Forrest 21.55 171 *e*P **P** **19 50 17.2 +0.6**
193nm,0.9s
KSI Kapahiang 22.20 284 P **P** **19 50 24.6 +0.7**
100nm,0.8s
PMG Port Moresby 22.66 92 *e*P **P** **19 50 30.5 +1.8**
155nm,1.3s
PMG LR LR
comp=Z,3μm,20.0s
PMG Port Moresby 22.66 92 P **P** **19 50 30.8 +2.1**
comp=Z,92nm,1.1s,comp=Z,2μm
PMG Port Moresby 22.66 92 P **P** **19 50 32.5 +3.9**
comp=Z,17nm,0.8s,baz=294,slow=6.1,SNR=6.7
BTDF Bukit Timah Da 22.99 297 P **P** **19 50 32.4 +0.3**
comp=Z,74nm,1.4s,comp=Z,1μm
MYKOM Kota Tinggi 23.13 298 P **P** **19 50 34.0 +0.5**
MYKOM Kota Tinggi 23.13 298 P **P** **19 50 33.9 +0.4**
comp=Z,101nm,2.3s,comp=Z,3μm
RGRI Rengat 23.55 291 P **P** **19 50 36.0 -1.8**
comp=Z,116nm,1.1s,comp=Z,23μm
TGY Tagaytay City 23.60 352 P **P** **19 50 36.4 -1.9**
TGY Tagaytay City 23.60 352 P **P** **19 50 36.4 -1.9**
baz=188,slow=7.1
KGM Kluang 23.70 298 P **P** **19 50 39.5 +0.3**
KRJI Kerinci 23.75 286 P **P** **19 50 38.5 -1.3**
comp=Z,106nm,1.0s,comp=Z,2μm
CTA Charters Tower 23.79 119 P **P** **19 50 40.5 +0.5**
CTA Charters Tower 23.79 119 P **P** **19 50 40.5 +0.5**
comp=Z,35nm,0.9s,baz=292,slow=10,SNR=17
CTA LR LR 20 01 14.1
comp=Z,3μm,19.0s,baz=303,slow=40
CTAO Charters Tower 23.79 119 *e*P **P** **19 50 40.7 +0.6**
CTAO pmax pmax
comp=Z,172nm,1.4s
CTAO MLR MLR
comp=Z,3μm,19.0s
CTAO Charters Tower 23.79 119 *e*P **P** **19 50 40.7 +0.6**
comp=Z,172nm,1.4s
CTAO LR LR
comp=Z,3μm,19.0s
SDSI Sungai Dareh 24.17 289 P **P** **19 50 46.0 +2.3**
comp=Z,2μm,0.8s
NWAO Narrogin (SRO) 24.25 194 P **P** **19 50 45.9 +1.6**
NWAO Narrogin (SRO) 24.25 194 P **P** **19 50 45.9 +1.6**
comp=Z,16nm,0.8s,baz=353,slow=9.6,SNR=5.9
NWAO LR LR 20 02 02.9
comp=Z,3μm,19.0s,baz=14,slow=41
BKNI Bangkinang 25.00 292 P **P** **19 50 50.1 -1.2**
comp=Z,145nm,1.6s,comp=Z,2μm
PPI Padang Panjang 25.30 289 P **P** **19 50 54.2 +0.2**
comp=Z,30nm,1.1s
KTGM Kuala Trenggan 25.60 304 P **P** **19 50 57.2 +0.5**
BBOO Buckleboo 25.72 156 *e*P **P** **19 50 59.4 +1.8**
comp=Z,1μm,1.0s
FRIM Kepong 25.77 298 P **P** **19 50 58.1 -0.2**
MNSI Mandailing Nat 26.53 291 P **P** **19 51 01.3 -3.8**
comp=Z,36nm,0.9s
IPM Ipoh 26.91 300 *e*P **P** **19 51 07.9 -0.6**
comp=Z,29nm,1.3s
IPM Ipoh 26.91 300 P **P** **19 51 07.9 -0.6**
IPM Ipoh 26.91 300 P **P** **19 51 07.7 -0.8**
comp=Z,22nm,1.6s,comp=Z,506nm
COCO West Island 27.01 262 *i* P P 19 51 15.0 +5.6
COCO West Island 27.01 262 *e*P **P** **19 51 09.8 +0.5**
comp=Z,369nm,1.4s
COCO LR LR
comp=Z,2μm,22.0s
COCO West Island 27.01 262 P **P** **19 51 11.9 +2.5**
comp=Z,197nm,1.7s
STKA Stephens Creek 27.56 147 *e*P **P** **19 51 15.9 +1.7**
STKA Stephens Creek 27.56 147 P **P** **19 51 15.6 +1.4**
baz=315,slow=9.7
STKA LR LR 20 03 32.8
comp=Z,3μm,18.5s,baz=317,slow=39
PSI Prapat 27.95 295 P **P** **19 51 15.6 -2.5**
PSI Prapat 27.95 295 P **P** **19 51 14.3 -3.8**
comp=Z,17nm,1.8s,comp=Z,598nm
PSI Prapat 27.95 295 P **P** **19 51 15.6 -2.5**
comp=Z,5.9nm,0.8s,baz=190,slow=4.0,SNR=7.5
PSI LR LR 20 04 37.7
comp=Z,2μm,18.1s,baz=138,slow=41
CHBT CHBT 30.94 315 P **P** **19 51 44.8 +0.5**
comp=Z,30nm,1.6s,comp=Z,884nm
QIZ Qiongzhong 31.62 333 P **P** **19 51 50.1 -0.2**
QIZ S **S** **19 56 58.8 0.0**
QIZ LR LR
comp=N,570nm,19.7s
QIZ LR LR
comp=Z,920nm,20.6s
SRDT SRDT 34.30 313 P **P** **19 52 15.0 +1.2**
comp=Z,61nm,1.9s
HNR Honiara 35.26 93 PFAKE 19 52 30.0 +7.8
HNR LR LR
comp=Z,2μm,20.0s
CM31 Chiang Mai Arr 37.26 318 *e*Pn **P** **19 52 38.0 -1.2**
comp=Z,13nm,0.8s
CMAR Chiang Mai Arr 37.26 318 P **P** **19 52 39.0 -0.2**
CMAR PcP **PcP** **19 54 59.2 +0.4**
CMAR ScP **ScP** **19 58 47.5 +2.0**
CMAR Chiang Mai Arr 37.26 318 P **P** **19 52 39.0 -0.2**
comp=Z,12nm,0.7s,baz=145,slow=6.8,SNR=92
CMAR PcP **PcP** **19 54 59.2 +0.4**
comp=Z,3.9nm,0.8s,baz=178,slow=2.5,SNR=8.5
CMAR ScP **ScP** **19 58 47.5 +2.0**
comp=Z,1.5nm,0.9s,baz=172,slow=3.4,SNR=5.9
CMAR LR LR 20 10 25.4
comp=Z,1μm,18.7s,baz=140,slow=40
CHTO Chiang Mai 37.52 318 *e*P **P** **19 52 41.4 +0.1**
CHTO pmax pmax
comp=Z,102nm,1.5s
CHTO MLR MLR
comp=Z,1μm,19.0s
CHTO Chiang Mai 37.52 318 *e*P **P** **19 52 41.4 +0.1**
comp=Z,102nm,1.5s
CHTO LR LR
comp=Z,1μm,19.0s
CHTO Chiang Mai 37.52 318 P **P** **19 52 41.9 +0.6**
SNR=26
CHTO Chiang Mai 37.52 318 P **P** **19 52 41.5 +0.1**
DGPR DIGLIPUR 38.31 305 AMB AMB 19 52 44.7
comp=Z,27nm,6.3s
DGPR *e*P **P** **19 52 47.7 -0.4**
TAU Tasmania Unive 39.01 153 PFAKE 19 53 10.0 +16
TAU LR LR
comp=Z,2μm,19.0s
GYA Guiyang 39.53 335⇑ *i*P **P** **19 53 01.0 +2.7**
GYA PP **PnPn** **19 54 34.5 +2.3**
GYA PcP **PcP** **19 55 05.0 -0.8**
GYA ScP **ScP** **19 58 55.0 +0.9**
GYA S **S** **19 59 02.3 +2.0**
GYA pmax pmax
comp=Z,40nm,0.8s
GYA pmax pmax
comp=Z,130nm,4.9s
GYA LR LR
comp=N,790nm,17.0s
GYA LR LR
comp=E,610nm,17.8s
GYA LR LR
comp=Z,880nm,17.4s
KMI Kunming 40.20 329 P **P** **19 53 04.6 +0.5**
KMI pP **pP** **19 53 08.4 -0.8**
KMI sP **sP** **19 53 09.9 -1.4**
KMI PP **PnPn** **19 54 42.1 +1.7**
KMI S **S** **19 59 11.8 +1.1**
KMI pmax pmax
comp=Z,9.0nm,1.7s
KMI pmax pmax
comp=Z,300nm,4.5s
KMI LR LR
comp=N,320nm,26.5s
KMI LR LR
comp=E,190nm,18.4s
KMI LR LR
comp=Z,420nm,22.9s
SSE Sheshan 40.39 356 P **P** **19 53 06.8 +1.6**
SSE sP **sP** **19 53 11.3 -1.1**
SSE S **S** **19 59 15.0 +2.1**
SSE SS **SS** **20 02 14.3 +2.0**
SSE pmax pmax
comp=Z,13nm,0.7s
SSE pmax pmax
comp=Z,120nm,6.1s
SSE LR LR
comp=N,130nm,19.5s
SSE LR LR
comp=E,220nm,19.5s
SSE LR LR
comp=Z,230nm,11.7s
WHN Wuhan 40.85 347⇑ *i*P **P** **19 53 09.4 +0.4**
WHN pP **pP** **19 53 15.9 +1.7**
WHN PP **PnPn** **19 54 50.5 +2.8**
WHN S **S** **19 59 22.8 +3.1**
WHN pmax pmax
comp=Z,45nm,1.2s
WHN LR LR
comp=Z,810nm,21.2s
NJ2 Nanjing 41.56 353 *e*P **P** **19 53 15.2 +0.4**
NJ2 pmax pmax
comp=Z,20nm,0.9s
DZM Mont Dzumac 42.42 112 *e*S **S** **19 59 42.2 -1.4**
comp=Z,488nm,31.7s
DZM *e*LR LR 20 05 23.8
comp=Z,1μm,22.7s
DZM Mont Dzumac 42.42 112 LR LR 20 11 42.3
comp=Z,856nm,18.9s,baz=295,slow=37
JNU Nakatsue 42.79 8 *e*P **P** **19 53 24.5 -0.4**
comp=Z,18nm,1.6s
CD2 Chengdu 44.64 335 P **P** **19 53 41.6 +1.7**
CD2 pP **pP** **19 53 46.1 +1.0**
CD2 sP **sP** **19 53 48.6 +1.4**
CD2 PcP **PP** **19 55 23.5 -0.9**
CD2 PP **PcP** **19 55 27.5 +4.9**
CD2 PcS **PcS** **19 59 15.8 -0.3**
CD2 S **S** **20 00 19.0 +3.3**
CD2 sS **sS** **20 00 26.0 +1.8**
CD2 SS **SS** **20 03 31.7 -4.6**
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,160nm,5.2s
CD2 LR LR
comp=N,580nm,21.5s
CD2 LR LR
comp=E,480nm,19.1s
CD2 LR LR
comp=Z,570nm,24.5s
AGT Agartala 46.18 316 *ex* P **19 53 59.0 +6.9**
AGT *ex* x 19 54 26.0
INCN Inchon 46.72 3 PFAKE 19 54 10.0 +14
INCN LR LR
comp=Z,310nm,22.0s
KSAR Wonju Array Be 46.75 4 P **P** **19 53 55.8 -0.6**
KSRS Korea Array 46.76 4 P **P** **19 53 55.8 -0.7**
comp=Z,2.5nm,0.7s,baz=174,slow=8.0,SNR=10.0
KSRS LR LR 20 12 21.2
comp=Z,188nm,20.4s,baz=175,slow=35
MAT Matsushiro 47.59 15 P **P** **19 54 00.8 -2.2**
MAT *e*S S 20 00 42.8 -15
MJAR Matsushiro Arr 47.59 15 P **P** **19 54 01.0 -2.0**
MJAR Matsushiro Arr 47.59 15 P **P** **19 54 01.0 -2.0**
comp=Z,6.1nm,0.7s,baz=194,slow=9.6,SNR=34
LZH Lanzhou 49.16 338 ⇑P **P** **19 54 15.5 +0.2**
LZH pP **pP** **19 54 18.7 -1.9**
LZH sP **sP** **19 54 20.3 -2.3**
LZH PP **PP** **19 56 09.6 +0.3**
LZH S **S** **20 01 19.1 -1.2**
LZH pmax pmax
comp=Z,110nm,1.5s
LZH pmax pmax
comp=Z,510nm,4.1s
LZH LR LR
comp=N,600nm,14.0s
LZH LR LR
comp=E,610nm,14.2s
LZH LR LR
comp=Z,920nm,16.5s
TARA Tarawa 49.70 80 PFAKE 19 54 30.0 +10
TARA LR LR
comp=Z,2μm,22.0s
BJT Baijiatuau 49.75 352 PFAKE 19 54 30.0 +10
BJT LR LR
comp=Z,280nm,21.0s
BJI Beijing 49.77 352 P **P** **19 54 17.9 -1.8**
BJI S **S** **20 01 30.8 +2.4**
BJI SS **SS** **20 05 06.0 +4.7**
BJI pmax pmax
comp=Z,10.0nm,0.7s
BJI pmax pmax
comp=Z,290nm,4.5s
BJI LR LR
comp=N,380nm,19.3s
BJI LR LR
comp=E,290nm,11.5s
BJI LR LR
comp=Z,220nm,23.0s
BOK Bokaro 49.91 312 *e*P **P** **19 54 21.1 0.0**
BOK AMB AMB 19 54 21.3
comp=Z,51nm,3.5s
LSA Lhasa 50.25 322 P **P** **19 54 24.1 0.0**
ODAN Odare 50.76 316 *e*P **P** **19 54 26.4 -1.3**
TAPN Taplejung 50.86 317 *e*P **P** **19 54 27.6 -0.9**
comp=Z,219nm,1.0s
DGAR Diego Garcia 51.19 268 PFAKE 19 54 40.0 +9.1
DGAR LR LR
comp=Z,576nm,19.0s
RAMN Ramite 51.35 316 *e*P **P** **19 54 31.1 -1.1**
comp=Z,143nm,0.6s
HHC Hu-ho-hao-te 51.37 348 *e*P **P** **19 54 32.0 +0.1**
HHC sP **sP** **19 54 37.7 -1.5**
HHC PcP **PcP** **19 55 46.5 0.0**
HHC PP **PP** **19 56 30.6 +1.4**
HHC ScP **ScP** **19 59 41.4 -1.2**
HHC PcS **PcS** **19 59 42.4 -1.9**
HHC S **S** **20 01 50.4 -0.3**
HHC ScS **ScS** **20 04 18.9 -3.0**
HHC pmax pmax
comp=Z,36nm,0.7s
HHC pmax pmax
comp=Z,360nm,6.6s
HHC LR LR
comp=N,590nm,16.3s
HHC LR LR
comp=E,540nm,16.4s
HHC LR LR
comp=Z,510nm,16.5s
HYB Hyderabad 52.40 301 *i* P P 19 54 36.5 -3.4
HYB Hyderabad 52.40 301 *e*P **P** **19 54 36.9 -3.0**
GUN Gumba 52.46 316 *e*P **P** **19 54 39.3 -1.3**
comp=Z,197nm,1.0s
PKI Pulchoki 52.57 316 *e*P **P** **19 54 39.9 -1.4**
comp=Z,70nm,0.6s
PKIN Phulchoki 52.58 316 *e*P **P** **19 54 40.5 -0.9**
comp=Z,30nm,0.5s
VLA Vladivostok 52.76 7⇑ *e*P P 19 54 38.6 -3.5
VLA 19 55 48.5
VLA *e* 19 56 39.7
VLA S **S** **20 02 07.0 -2.6**
VLA pmax pmax
comp=Z,25nm,1.1s
KKN Kakani 52.79 316 *e*P **P** **19 54 41.2 -1.7**
DMN Daman 52.80 315 *e*P **P** **19 54 41.3 -1.7**
CN2 Changchun 52.99 1 *e*P **P** **19 54 46.0 +2.3**
CN2 *e*pP **pP** **19 54 53.0 +4.0**
CN2 *e*S **S** **20 02 14.0 +1.4**
CN2 pmax pmax
comp=Z,20nm,0.7s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,600nm,15.0s
CN2 LR LR
comp=E,700nm,15.0s
CN2 LR LR
comp=Z,900nm,17.0s
RPZ Rata Peaks 53.04 139 *e*P P 19 54 51.5 +7.2
comp=Z,47nm,1.0s
GTA Gaotai 53.61 337 ⇑P **P** **19 54 48.5 -0.1**
GTA pP **pP** **19 54 53.0 -0.8**
GTA sP **sP** **19 54 55.6 -0.3**
GTA S **S** **20 02 22.1 +0.6**
GTA SS **SKiKP** **20 06 03.2 -0.4**
GTA pmax pmax
comp=Z,14nm,1.8s
GTA pmax pmax
comp=Z,220nm,6.4s
GTA LR LR
comp=N,190nm,17.6s
GTA LR LR
comp=E,340nm,17.1s
GTA LR LR
comp=Z,250nm,18.5s
USRK Ussuriysk Arra 53.84 7 P **P** **19 54 48.7 -1.2**
comp=Z,8.1nm,0.9s,baz=201,slow=8.5,SNR=14
KOLN Koldanda 53.95 315 *e*P **P** **19 54 49.8 -1.6**
comp=Z,72nm,0.8s
MDJ Mudanjiang 54.01 5 P **P** **19 54 50.4 -0.8**
MDJ pP **pP** **19 54 53.6 -2.9**
MDJ sP **sP** **19 54 54.8 -3.7**
MDJ PcP **PcP** **19 55 55.5 -0.7**
MDJ PP **PP** **19 56 51.2 -1.7**
MDJ ScP **ScP** **19 59 53.0 -0.8**
MDJ PcS **PcS** **19 59 54.4 -1.0**
MDJ S **S** **20 02 31.0 +4.5**
MDJ ScS **ScS** **20 04 40.2 +0.2**
MDJ SS **SS** **20 06 11.0 +2.6**
MDJ pmax pmax
comp=Z,54nm,1.1s
MDJ pmax pmax
comp=Z,250nm,4.1s
MDJ LR LR
comp=N,140nm,25.5s
MDJ LR LR
comp=E,74nm,29.5s
MDJ LR LR
comp=Z,160nm,23.6s
KHZ Kahutara 54.17 136 *e*P **P** **19 54 54.0 +1.4**
comp=Z,351nm,2.3s
DANN Dangsing 54.19 315 *e*P **P** **19 54 51.8 -1.5**
comp=Z,196nm,0.5s
SNZO South Karori 54.57 134 PFAKE 19 55 10.0 +15
SNZO LR LR
comp=Z,1μm,19.0s
PYUN Piuthan 54.58 314 *e*P **P** **19 54 54.0 -2.0**
comp=Z,403nm,1.3s
GOA Goa 55.70 296 *e*P P 19 55 00.5 -3.5
GOA AMB AMB 19 55 02.4
comp=Z,32nm,2.1s
ASAJ Asahikawa 55.84 16 P **P** **19 55 04.0 -0.6**
ASAJ Asahikawa 55.84 16 P **P** **19 55 04.0 -0.6**
comp=Z,17nm,0.9s,baz=236,slow=10,SNR=5.2
YUK Yuzh-Kuril'sk 56.73 19 *i* P P 19 55 04.5 -6.3
YUK *i* 19 57 15.7
YUK *i* S S 20 02 51.6 -11
YUK *i* SS **SS** **20 06 45.3 -5.9**
YUK pmax pmax
comp=Z,47nm,5.2s
YUK pmax pmax
comp=N,154nm,1.4s
YUK pmax pmax
comp=E,239nm,1.4s
YUK pmax pmax
comp=Z,442nm,1.4s
KLR Kul'dur 58.78 6 *e*P P 19 55 20.0 -5.2
ULN Ulaanbaatar 59.03 347 *e*P **P** **19 55 26.5 -0.7**
ULN LR LR
comp=Z,258nm,19.0s
ULN Ulaanbaatar 59.03 347 P **P** **19 55 27.0 -0.2**
SNR=12
SONM Songino Array 59.16 346 P **P** **19 55 27.0 -1.0**
SONM Songino Array 59.16 346 P **P** **19 55 27.0 -1.0**
comp=Z,7.8nm,0.6s,baz=166,slow=7.9,SNR=102
DDI Dehra Dun 59.37 314 *ex* P 19 55 26.5 -3.3
DDI *e*P **P** **19 55 28.6 -1.1**
DDI AMB AMB 19 55 28.9
comp=Z,136nm,2.9s
SMLA Simla 60.46 314 *e*P **P** **19 55 36.4 -0.6**
SMLA *e*P **P** **19 55 36.5 -0.6**
SMLA AMB AMB 19 55 37.4
comp=Z,148nm,1.3s
DHRM DHARAMSHALA 61.69 314 *e*P **P** **19 55 44.3 -1.5**
DHRM AMB AMB 19 55 45.8
comp=Z,156nm,1.8s
CIT Chita 61.88 353 *e*P **P** **19 55 43.5 -2.9**
CIT pmax pmax
comp=Z,60nm,2.6s
THN Thein Dam 62.21 314 *e*P P 19 55 45.6 -3.3
ZAK Zakamensk 62.29 345⇓ *i*P **P** **19 55 48.3 -0.9**
ZAK pmax pmax
comp=Z,7.0nm,1.2s
WMQ Urumqi 62.49 331 P **P** **19 55 51.0 +0.3**
WMQ sP **sP** **19 55 58.0 -0.1**
WMQ PcP **PcP** **19 56 30.0 +0.1**
WMQ PP **PP** **19 58 10.0 +1.5**
WMQ ScP **ScP** **20 00 31.0 -0.5**
WMQ S **S** **20 04 16.0 -1.5**
WMQ ScS **SKSac** **20 05 39.0 -3.5**
WMQ pmax pmax
comp=Z,35nm,1.0s
WMQ pmax pmax
comp=Z,290nm,5.0s
WMQ LR LR
comp=N,630nm,20.0s
WMQ LR LR
comp=E,420nm,20.0s
WMQ LR LR
comp=Z,490nm,20.0s
AFI Afiamalu 62.72 101 LR LR 20 19 42.3
comp=Z,372nm,19.2s,baz=291,slow=33
TLY Talaya 63.39 346 *e*P **P** **19 55 54.1 -2.4**
TLY pmax pmax
comp=Z,9.0nm,0.9s
TLY Talaya 63.39 346 *e*P **P** **19 55 56.6 +0.1**
TLY LR LR
comp=Z,230nm,20.0s
TLY Talaya 63.39 346 P **P** **19 55 56.9 +0.4**
SNR=7.8
IRK Irkutsk 63.77 346 *e*P **P** **19 55 57.7 -1.2**
IRK pmax pmax
comp=Z,32nm,2.6s
MOY Mondy 64.06 344 *e*P **P** **19 56 01.0 0.0**
MOY pmax pmax
comp=Z,54nm,2.9s
NIL Nilore 64.60 314 PFAKE 19 56 20.0 +15
NIL LR LR
comp=Z,18nm,20.0s
CLNS Chul'man 66.03 0 *e*P **P** **19 56 14.0 +0.4**
CLNS pmax pmax
comp=Z,18nm,1.3s
CLNS pmax pmax
comp=N,16nm,1.3s
CLNS pmax pmax
comp=E,8.0nm,1.2s
KSH Kashi 66.08 321 P **P** **19 56 14.0 -0.4**
KSH pP **pP** **19 56 19.3 -0.5**
KSH sP **sP** **19 56 21.7 -0.1**
KSH PP **PP** **19 58 42.9 +2.7**
KSH ScP 20 00 45.8
KSH PcS 20 00 48.3
KSH S **S** **20 05 01.1 -1.2**
KSH ScS **SKSac** **20 06 07.2 -2.9**
KSH SS **SS** **20 09 21.5 +3.2**
KSH pmax pmax
comp=Z,150nm,1.4s
KSH LR LR
comp=N,150nm,5.1s
KSH LR LR
comp=E,200nm,4.8s
KSH LR LR
comp=Z,480nm,11.3s
MK31 Makanchi Array 67.27 330 *e*P **P** **19 56 20.6 -1.2**
MK31 Makanchi Array 67.27 330 *e*P **P** **19 56 20.6 -1.2**
MKAR Makanchi Array 67.27 330 *e*P **P** **19 56 20.7 -1.1**
MKAR Makanchi Array 67.27 330 *e*P **P** **19 56 20.6 -1.1**
MKAR Makanchi Array 67.27 330 P **P** **19 56 20.6 -1.1**
comp=Z,12nm,0.6s,baz=135,slow=7.7,SNR=160
ULHL Ulahol 67.56 323 P **P** **19 56 24.0 +0.1**
SNR=5.8
KZA Kyzart 68.05 323 P **P** **19 56 27.4 +0.1**
SNR=17
KBL Kabul 68.06 313 *e*P **P** **19 56 25.9 -1.3**
KBL pmax pmax
comp=Z,35nm,0.9s
KBL Kabul 68.06 313 *e*P **P** **19 56 25.9 -1.3**
comp=Z,35nm,0.9s
MSEY Mahe Island 68.27 269 *e*P **P** **19 56 27.9 -0.9**
comp=Z,215nm,1.8s
MSEY Mahe Island 68.27 269 P **P** **19 56 30.9 +2.2**
SNR=5.4
TKM2 Tokmak 2 68.35 324 *i* P **P** **19 56 27.7 -1.1**
TKM2 Tokmak 2 68.35 324 *e*P **P** **19 56 28.1 -0.8**
TKM2 Tokmak 2 68.35 324 P **P** **19 56 27.8 -1.1**
SNR=23
PETK Petropavlovsk- 68.52 21 P **P** **19 56 28.5 -1.0**
PETK Petropavlovsk- 68.52 21 P **P** **19 56 28.4 -1.0**
PETK Petropavlovsk- 68.52 21 P **P** **19 56 28.4 -1.0**
comp=Z,5.6nm,0.6s,baz=194,slow=7.3,SNR=9.1

Code	Station	Dist	Az	Phase	Phase ID	Time	Res
KBK	Karagaybulak	68.57	323	P	P	19 56 30.6	+0.4
	SNR=20						
AAK	Ala-Archa	68.83	323	i P	P	19 56 31.8	0.0
AAK	Ala-Archa	68.83	323	eP	P	19 56 30.4	-1.4
AAK				LR	LR		
	comp=Z,442nm,21.0s						
AAK	Ala-Archa	68.83	323	P	P	19 56 32.0	+0.2
	SNR=25						
AAK	Ala-Archa	68.83	323	P	P	19 56 31.8	0.0
	SNR=26						
AAK	Ala-Archa	68.83	323	P	P	19 56 31.0	-0.8
	comp=Z,142nm,0.8s,SNR=27						
AAK	Ala-Archa	68.83	323	P	P	19 56 31.1	-0.7
	comp=Z,13nm,0.8s,baz=120,slow=5.2,SNR=45						
FRU	Bishkek	68.87	323	i P	P	19 56 31.0	-0.9
FRU				pmax	pmax		
	comp=Z,200nm,2.5s						
CHMS	Chumysh	68.89	323	P	P	19 56 31.6	-0.4
	SNR=5.7						
AML	Almayashu	69.02	322	P	P	19 56 33.2	-0.1
	SNR=34						
USP	Ospenovka	69.20	323	P	P	19 56 33.9	-0.1
	SNR=16						
EKS2	Erkin-Say	69.27	323	eP	P	19 56 34.6	+0.1
EKS2	Erkin-Say	69.27	323	eP	P	19 56 34.6	+0.1
EKS2	Erkin-Say	69.27	323	P	P	19 56 34.9	+0.4
	SNR=18						
JOHN	Johnston Islan	70.50	69	PFAKE		19 56 50.0	+7.6
JOHN				LR	LR		
	comp=Z,5.0nm,20.0s						
MAW	Mawson	70.62	201	eP	P	19 56 42.9	+0.7
	comp=Z,8.8nm,1.4s						
MAW	Mawson	70.62	201	P	P	19 56 43.8	+1.6
	comp=Z,7.7nm,0.7s,baz=69,slow=9.0,SNR=6.3						
MAW				LR	LR	20 26 21.9	
	comp=Z,406nm,18.0s,baz=62,slow=35						
VNDA	Vanda	70.81	172	eP	P	19 56 45.4	+2.1
VNDA	Vanda	70.81	172	P	P	19 56 44.7	+1.5
	comp=Z,12nm,1.2s,baz=344,slow=6.2,SNR=12						
VNDA				LR	LR	20 27 57.1	
	comp=Z,1µm,18.1s,baz=330,slow=36						
ZALV	Zalesovo Beam	71.36	337	P	P	19 56 44.4	-2.5
ZALV	Zalesovo Beam	71.36	337	P	P	19 56 44.4	-2.5
ZALV	Zalesovo Beam	71.36	337	P	P	19 56 44.4	-2.5
	comp=Z,11nm,0.6s,baz=128,slow=4.1,SNR=67						
YAK	Yakutsk	71.36	3	d iP	P	19 56 44.9	-1.8
YAK				e*PP	pP	19 56 54.2	+2.1
YAK				e		19 57 06.1	
YAK				e		19 59 23.4	
YAK				ePPP	PPP	20 01 02.8	
YAK				eS	S	20 06 00.0	-3.8
YAK				e		20 06 49.0	
YAK				pmax	pmax		
	comp=Z,22nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,14nm,1.1s						
YAK				pmax	pmax		
	comp=Z,113nm,3.6s						
YAK				pmax	pmax		
	comp=N,20nm,1.7s						
YAK				pmax	pmax		
	comp=E,62nm,4.1s						
YAK				smax	smax		
	comp=E,85nm,11.0s						
YAK				smax	smax		
	comp=N,36nm,9.6s						
YAK				MLR	MLR		
	comp=Z,110nm,18.0s						
YAK				MLR	MLR		
	comp=E,83nm,18.0s						
YAK				MLR	MLR		
	comp=N,111nm,19.0s						
YAK	Yakutsk	71.36	3	eP	P	19 56 43.5	-3.1
	comp=N,81nm,1.3s						
YAK				LR	LR		
	comp=Z,169nm,19.0s						
KKAR	Karatay Array	71.50	322	eP	P	19 56 47.1	-0.9
KKAR	Karatay Array	71.50	322	eP	P	19 56 47.1	-0.9
KURK	Kurchatov	71.73	331	d iP	P	19 56 48.2	-0.9
KURK				pmax	pmax		
	comp=Z,41nm,1.2s						
KURK	Kurchatov	71.73	331	eP	P	19 56 47.4	-1.8
	comp=Z,42nm,1.2s						
KURK				LR	LR		
	comp=Z,586nm,20.0s						
KURK	Kurchatov	71.73	331	P	P	19 56 48.6	-0.5
	SNR=18						
KURK	Kurchatov	71.73	331	P	P	19 56 48.9	-0.2
	comp=Z,154nm,1.1s,SNR=24						
SBA	Scott Base	71.76	171	eP	P	19 56 52.1	+3.1
SBA				pmax	pmax		
	comp=Z,230nm,2.5s						
SBA				MLR	MLR		
	comp=Z,756nm,19.0s						
SBA	Scott Base	71.76	171	eP	P	19 56 52.0	+3.1
	comp=Z,230nm,2.5s						
SBA				LR	LR		
	comp=Z,756nm,19.0s						
SMDO	Samad	72.29	298	P	P	19 56 52.9	-0.3
	SNR=7.4						
NVS	Novosibirsk	72.65	337	⇑ iP	P	19 56 52.7	-1.8
NVS				i S	S	20 06 11.4	-7.4
NVS				pmax	pmax		
	comp=N,40nm,2.5s						
NVS				pmax	pmax		
	comp=E,43nm,2.5s						
NVS				pmax	pmax		
	comp=Z,96nm,2.5s						
NVS				smax	smax		
	comp=N,6.0nm,1.6s						
NVS				smax	smax		
	comp=E,21nm,1.7s						
BSY	Bisya	72.94	297	P	P	19 56 57.4	+0.4
	SNR=6.3						
HOQ	Hoqain	73.10	298	P	P	19 56 57.9	0.0
	SNR=9.6						
HATD	Hatta, Dubai	74.51	299	P	P	19 57 06.5	+0.3
	SNR=8.0						
ASHO	Ashiyiah	74.53	299	P	P	19 57 06.4	+0.1
	SNR=7.1						
ABPO	Ambohimpanom	74.74	253	eP	P	19 57 07.3	-0.6
ABPO				pmax	pmax		
	comp=Z,60nm,1.6s						
ABPO				MLR	MLR		
	comp=Z,541nm,19.0s						
ABPO	Ambohimpanom	74.74	253	eP	P	19 57 07.3	-0.6
	comp=Z,60nm,1.6s						
ABPO				LR	LR		
	comp=Z,541nm,19.0s						
OPO	Ambohidratompo	74.81	253	P	P	19 57 10.3	+2.0
OPO	Ambohidratompo	74.81	253	P	P	19 57 10.3	+2.0
	comp=Z,10.0nm,0.8s,baz=100,slow=6.1,SNR=15						
ABTO	Aybut	74.92	291	P	P	19 57 08.5	-0.2
	SNR=14						
SEY	Seymchan	75.34	13	eP	P	19 57 10.4	+0.3
BVAR	Borovoye Array	77.16	330	P	P	19 57 19.6	-1.1
BVAR	Borovoye Array	77.16	330	P	P	19 57 19.6	-1.1
BVAR	Borovoye Array	77.16	330	P	P	19 57 19.6	-1.1
	comp=Z,8.5nm,1.0s,baz=126,slow=7.5,SNR=38						
BRVK	Borovoye	77.23	330	eP	P	19 57 20.6	-0.5
BRVK				pmax	pmax		
	comp=Z,69nm,2.5s						
BRVK	Borovoye	77.23	330	eP	P	19 57 20.8	-0.3
	comp=Z,53nm,1.5s						
BRVK				LR	LR		
	comp=Z,502nm,21.0s						
BRVK	Borovoye	77.23	330	P	P	19 57 21.0	-0.1
	SNR=16						
BRVK	Borovoye	77.23	330	P	P	19 57 20.6	-0.5
	comp=Z,100nm,1.6s,SNR=12						
ABKT	Ailbek	77.48	312	P	P	19 57 23.9	+1.0
	comp=Z,68nm,1.2s,SNR=6.2						
SYO	Syowa Base	79.32	201	⇓ eP	P	19 57 34.4	+2.0
SYO	Syowa Base	79.32	201	⇓ ePcP	PcP	19 57 45.0	+4.4
ABKAR	Akbulak array	80.91	323	eP	P	19 57 40.7	-0.6
AKTO	Aktyubinsk	82.54	324	P	P	19 57 49.3	-0.6
AKTO	Aktyubinsk	82.54	324	P	P	19 57 49.3	-0.6
AKTO	Aktyubinsk	82.54	324	P	P	19 57 49.3	-0.6
	comp=Z,25nm,0.8s,baz=110,slow=6.2,SNR=72						
QRN	Al-Qurain	82.66	301	eP	P	19 57 51.0	0.0
QRN				AMb	AMB	19 57 51.8	
	comp=Z,112nm,1.3s						
BILL	Bilibino	82.84	15	⇓ eP	P	19 57 51.2	+0.1
BILL				e		20 01 03.5	
BILL				eS	S	20 08 07.7	-0.8
BILL				pmax	pmax		
	comp=Z,13nm,2.5s						
BILL	Bilibino	82.84	15	PFAKE		19 58 00.0	+8.9
BILL				LR	LR		
	comp=Z,216nm,19.0s						
KBD	Kabd	82.96	301	eP	P	19 57 52.2	-0.4
KBD				AMb	AMB	19 57 55.4	
	comp=Z,44nm,1.4s						
TBI	Tubuai	83.00	112	eS	S	20 08 06.9	-5.1
	comp=Z,58nm,27.8s						
TBI				eSS	SS	20 13 37.2	+1.6
	comp=Z,126nm,32.0s						
TBI				eLR	LR	20 24 04.5	
	comp=Z,533nm,35.0s						
RDF	Al-Radifah	83.02	301	eP	P	19 57 52.9	0.0
RDF				AMb	AMB	19 57 53.9	
	comp=Z,111nm,1.3s						
NAY	Al-Naaiem	83.36	301	eP	P	19 57 54.3	-0.4
NAY				AMb	AMB	19 57 55.3	
	comp=Z,50nm,0.9s						
MIB	Mutribah	83.42	302	eP	P	19 57 54.4	-0.6
MIB				AMb	AMB	19 57 55.7	
	comp=Z,82nm,1.3s						
RAYN	Ar Rayn	83.51	295	P	P	19 57 56.0	+0.4
	comp=Z,199nm,0.9s,SNR=29						
PPT2	Papeete2	83.64	107	eLR	LR	20 24 22.0	
	comp=Z,552nm,26.8s						
ARU	Arti	84.79	329	d iP	P	19 57 59.4	-1.9
ARU						20 01 11.9	
ARU				S	S	20 08 23.2	-5.3
ARU				SS	SS	20 14 03.1	+2.2
ARU				pmax	pmax		
	comp=Z,72nm,2.5s						
ARU	Arti	84.79	329	eP	P	19 58 00.0	-1.3
ARU	Arti	84.79	329	P	P	19 58 00.3	-1.0
	comp=Z,86nm,1.0s,SNR=8.4						
BHD	Baghdad	86.71	304	ex	P	19 58 05.0	-6.4
BHD				ex	SKSac	20 08 35.0	-2.9
MAK	Makhachkala	86.77	314	eP	P	19 58 10.8	-0.6
MAK				e		20 01 28.9	
MAK				eS	SKSac	20 08 36.7	-1.1
MAK				pmax	pmax		
	comp=Z,61nm,0.9s						
MAK				MLR	MLR		
	comp=Z,599nm,16.0s						
KMBO	Kilima Mbogo	86.80	269	eP	P	19 58 12.9	+0.3
	comp=Z,50nm,1.2s						
KMBO	Kilima Mbogo	86.80	269	P	P	19 58 14.4	+1.8
	SNR=20						
KMBO	Kilima Mbogo	86.80	269	P	P	19 58 13.1	+0.5
	comp=Z,28nm,1.1s,baz=49,slow=5.9,SNR=38						
KMBO				LR	LR	20 34 29.1	
	comp=Z,251nm,18.0s,baz=96,slow=34						
SOKR	Solikamsk	86.97	332	c iP	P	19 58 12.0	0.0
SOKR				pmax	pmax		
	comp=Z,20nm,1.0s						
SOKR				MLR	MLR		
	comp=Z,1µm,20.0s						
DGRG	David-gareji	87.91	312	P	P	19 58 18.2	+1.1
TBLG	Delisi	88.44	313	P	P	19 58 19.7	+0.1
AKH	Akhalkalaki	89.27	312	P	P	19 58 24.6	+0.9
ONI	Oni	89.57	313	P	P	19 58 24.9	0.0
KBZ	Khabaz	90.22	314	P	P	19 58 26.7	-1.1
KBZ	Khabaz	90.22	314	P	P	19 58 26.7	-1.1
KBZ	Khabaz	90.22	314	P	P	19 58 26.7	-1.1
	baz=136,slow=6.5						
DAGI	Agillar	90.36	311	i P	P	19 58 29.0	+0.3
ARTV	Artvin	90.37	312	i P	P	19 58 29.0	+0.1
KIV	Kislovodsk	90.42	314	eP	P	19 58 27.7	-1.2
KIV				e		20 08 58.6	
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV	Kislovodsk	90.42	314	PFAKE		19 58 40.0	+11
KIV				LR	LR		
	comp=Z,254nm,20.0s						
DBAD	Bademkaya	90.51	311	i P	P	19 58 29.6	+0.2
KOPT	Kop Dagi	91.20	310	i P	P	19 58 33.5	+0.7
SNAA	Sanae	91.93	195	eP	P	19 58 37.5	+2.1
KELT	Kelkit	92.16	310	i P	P	19 58 37.4	+0.2
MALT	Malatya	92.47	308	eP	P	19 58 37.8	-0.8
MALT				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MALT				MLR	MLR		
	comp=Z,563nm,20.0s						
MALT	Malatya	92.47	308	eP	P	19 58 37.8	-0.8
	comp=Z,8.3nm,1.0s						
MALT				LR	LR		
	comp=Z,563nm,20.0s						
VRHR	Novokhopersk	92.63	321	eP	P	19 58 36.9	-1.9
VRHR				pmax	pmax		
	comp=N,9.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ASF	Jabal al Asfar	92.68	302	P	P	19 58 39.1	-0.5
ASF	Jabal al Asfar	92.68	302	P	P	19 58 39.1	-0.5
	comp=Z,1.7nm,0.7s,baz=124,slow=3.6,SNR=8.2						
ASF				LR	LR	20 43 35.9	
	comp=Z,330nm,19.7s,baz=155,slow=38						
SUSE	Susehri	92.97	310	i P	P	19 58 40.8	-0.1
LSZ	Lusaka	93.27	254	eP	P	19 58 44.0	+1.2
	comp=Z,27nm,1.1s						
LSZ				LR	LR		
	comp=Z,274nm,20.0s						
BOSA	Boshof	93.28	240	P	P	19 58 43.0	+0.4
BOSA	Boshof	93.28	240	P	P	19 58 43.0	+0.4
	comp=Z,4.9nm,1.0s,baz=95,slow=10,SNR=4.4						
BOSA				LR	LR	20 34 49.0	
	comp=Z,329nm,20.5s,baz=94,slow=32						
LBTB	Lobatse	93.75	244	eP	P	19 58 46.6	+1.8
YAYL	Yayladag	93.93	306	i P	P	19 58 44.8	-0.6
EIL	Elat	93.94	299	LR	LR	20 44 42.0	
	comp=Z,351nm,18.8s,baz=343,slow=38						
VORD	Divnogorie	94.05	321	eP	P	19 58 43.9	-1.4
VORD				pmax	pmax		
	comp=N,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,5.0nm,0.6s						
VORD				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MMAI	Mount Meron Ar	94.06	303	P	P	19 58 46.0	+0.1
MMAI	Mount Meron Ar	94.06	303	P	P	19 58 46.0	+0.1
	comp=Z,5.4nm,0.8s,baz=76,slow=7.0,SNR=6.6						
VSR	Storozhevoye	94.17	321	eP	P	19 58 44.6	-1.3
VSR				pmax	pmax		
	comp=N,5.0nm,0.9s						
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR				pmax	pmax		
	comp=E,3.0nm,0.4s						
ANN	Anapa	94.28	315	eP	P	19 58 48.4	+1.9
ANN				pmax	pmax		
	comp=Z,32nm,1.3s						
KDAK	Kodiak Island	94.30	32	PFAKE		19 59 00.0	+14
KDAK				LR	LR		
	comp=Z,383nm,20.0s						
GULE	Gulek	95.17	307	i P	P	19 58 50.7	-0.3
KLMR	Klimovskoe	95.57	331	eP	P	19 58 49.4	-2.7
KLMR				e		20 02 40.1	
KLMR				pmax	pmax		
	comp=Z,19nm,1.4s						
MOS	Moscow	95.78	325	eP	P	19 58 49.0	-4.2
MOS				e		20 02 44.7	
MOS				pmax	pmax		
	comp=Z,15nm,0.8s						
CSS	Prodhromos	96.03	304	PFAKE		19 59 10.0	+15
CSS				LR	LR		
	comp=Z,367nm,19.0s						
SUR	Sutherland	96.11	236	PFAKE		19 59 10.0	+14
SUR				LR	LR		
	comp=Z,631nm,21.0s						
OBN	Obninsk	96.30	325	⇑ eP	P	19 58 54.5	-1.0
OBN				eS	SKSac	20 09 32.8	+1.5
OBN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
OBN	Obninsk	96.30	325	eP	P	19 58 54.7	-0.8
	comp=Z,77nm,1.7s						
OBN				LR	LR		
	comp=Z,1µm,19.0s						
BR131	Keskin Array S	96.37	309	eP	P	19 58 52.3	-4.2
	comp=Z,4.2nm,1.1s						
BRTR	Keskin Array B	96.37	309	P	P	19 58 54.4	-2.1
BRTR	Keskin Array B	96.37	309	P	P	19 58 54.4	-2.1
	comp=Z,2.0nm,0.8s,baz=130,slow=5.2,SNR=13						
COLA	College	97.59	25	PFAKE		19 59 10.0	+8.8
COLA				LR	LR		
	comp=Z,197nm,19.0s						
ILAR	Eielson Array	97.99	26	P	P	19 59 00.3	-2.7
ILAR	Eielson Array	97.99	26	P	P	19 59 00.3	-2.7
	comp=Z,0.5nm,0.8s,baz=302,slow=4.7,SNR=7.0						
LVZ	Lovozero	98.49	338	PFAKE		19 59 20.0	+15
LVZ				LR	LR		
	comp=Z,1µm,20.0s						
ISP	Isparta	98.59	307	PFAKE		19 59 20.0	+14
ISP				LR	LR		
	comp=Z,288nm,20.0s						
AKASG	Malin Array Be	100.36	320	P	Pdif	19 59 10.7	-3.2
AKASG	Malin Array Be	100.36	320	P	Pdif	19 59 10.7	-3.2
AKASG	Malin Array Be	100.36	320	P	Pdif	19 59 10.7	-3.2
	comp=Z,1.2nm,0.6s,baz=80,slow=4.7,SNR=8.2						
KIEV	Kiev	100.38	320	PFAKE		19 59 20.0	+6.1
KIEV				LR	LR		
	comp=Z,230nm,21.0s						
FINES	FINESS Array B	102.10	331	PKiKP	PKiKP	20 03 44.0	+0.4
FINES	FINESS Array B	102.10	331	PKiKP	PKiKP	20 03 44.0	+0.4
	comp=Z,1.2nm,0.9s,baz=119,slow=6.7,SNR=4.5						
TSUM	Tsumeb	102.32	248	PFAKE		19 59 40.0	+16
TSUM				LR	LR		
	comp=Z,408nm,22.0s						
KOLS	Kolonicke sedl	104.88	318	eP	Pdif	19 59 34.0	0.0
KOLS	Kolonicke sedl	104.88	318	PDIF	Pdif	19 59 34.0	0.0
CRVS	Cervenica-Dubn	105.41	318	eP	Pdif	19 59 39.8	+3.4
CRVS	Cervenica-Dubn	105.41	318	PDIF	Pdif	19 59 39.8	+3.4
PMSA	Palmer Station	105.75	176	PFAKE		20 04 00.0	
PMSA				LR	LR		
	comp=Z,404nm,19.0s						
PSZ	Piszkesteto	106.52	317	PFAKE		20 04 00.0	
PSZ				LR	LR		
	comp=Z,427nm,20.0s						
TIR	Tirane	106.91	310	PFAKE		20 04 00.0	
TIR				LR	LR		
	comp=Z,207nm,20.0s						
VYHS	Vyhne	107.18	318	eP	Pdif	19 59 49.7	+5.4
VYHS	Vyhne	107.18	318	PDIF	Pdif	19 59 49.7	+5.4
TIP	Timpagrande	109.40	308	PFAKE		20 04 10.0	
TIP				LR	LR		
	comp=Z,273nm,21.0s						
CUC	Castrocucco	110.07	309	PFAKE		20 04 10.0	
CUC				LR	LR		
	comp=Z,142nm,20.0s						
CEL	Celeste	110.13	307	PFAKE		20 04 10.0	
CEL				LR	LR		
	comp=Z,170nm,22.0s						
GERES	GERESS Array B	110.51	319	PKiKP	PKiKP	20 03 59.9	+0.1
GERES				PKKPab	PKKPab	20 15 08.7	-1.1
GERES	GERESS Array B	110.51	319	PKiKP	PKiKP	20 03 59.9	+0.1
	comp=Z,0.4nm,0.6s,baz=132,slow=2.9,SNR=3.6						
GERES				PKKPab	PKKPab	20 15 08.7	-1.1
	baz=267,slow=3.8						
CLL	Collm	110.52	321	ePP	PP	20 04 29.0	-6.4
CLL				ePS	PS	20 14 12.0	+6.2
CLL				ePPS	PPS	20 15 06.0	
CLL				LmV		20 55 00.0	
	comp=Z,200nm,20.5s						
WDD	Wield Dalam	111.39	305	PFAKE		20 04 10.0	
WDD				LR	LR		
	comp=Z,285nm,20.0s						
AQU	L'Aquila	111.64	312	PFAKE		20 04 10.0	
AQU				LR	LR		
	comp=Z,200nm,21.0s						
YKA	Yellowknife Ar	112.42	25	PKiKP	PKiKP	20 04 02.5	-0.4
YKA				PKKPbc	PKKPbc	20 14 53.6	-1.4
YKA	Yellowknife Ar	112.42	25	PKiKP	PKiKP	20 04 02.4	-0.4
	comp=Z,0.8nm,0.6s,baz=298,slow=1.7,SNR=16						
YKA				PKKPbc	PKKPbc	20 14 53.6	-1.4
	comp=Z,0.6nm,0.8s,baz=107,slow=4.0,SNR=8.4						
VLC	Villacollemand	113.55	314	PFAKE		20 04 20.0	
VLC				LR	LR		
	comp=Z,204nm,19.0s						
BFO	Black Forest	114.11	319	PFAKE		20 04 20.0	+13
BFO				LR	LR		
	comp=Z,229nm,21.0s						
CDF	Champ du Feu	114.77	319	ePKIKP	PKPdf	20 04 08.1	+0.2
CDF	Champ du Feu	114.77	319	ePKIKP	PKPdf	20 04 08.1	+0.2
CDF	Champ du Feu	114.77	319	ePKPdf	PKPdf	20 04 08.1	+0.2
VSL	Villasalto	115.06	309	PFAKE		20 04 20.0	+11
VSL				LR	LR		
	comp=Z,110nm,19.0s						
WLF	Walferdange	115.16	321	PFAKE		20 04 20.0	+12
WLF				LR	LR		
	comp=Z,252nm,19.0s						
HINF	Hinteralfeld	115.19	319	ePKIKP	PKPdf	20 04 08.0	-0.7
	comp=Z,4.8nm,0.6s						
HINF	Hinteralfeld	115.19	319	ePKIKP	PKPdf	20 04 08.0	-0.7
HINF	Hinteralfeld	115.19	319	ePKPdf	PKPdf	20 04 08.0	-0.7
HAU	Haudompre	115.47	319	ePKIKP	PKPdf	20 04 08.9	-0.3
HAU	Haudompre	115.47	319	ePKIKP	PKPdf	20 04 08.9	-0.3
HAU	Haudompre	115.47	319	ePKPdf	PKPdf	20 04 08.9	-0.3
PAGF	Fort de Pagny	115.73	320	ePKIKP	PKPdf	20 04 10.7	+1.1
	comp=Z,1.7nm,0.7s						
PAGF	Fort de Pagny	115.73	320	ePKPdf	PKPdf	20 04 10.7	+1.1
LPG	La Plagne	115.81	316	ePKIKP	PKPdf	20 04 10.2	-0.1
LPG	La Plagne	115.81	316	ePKIKP	PKPdf	20 04 10.2	-0.1
LPG	La Plagne	115.81	316	ePKPdf	PKPdf	20 04 10.2	-0.1
LPL	La Plagne	115.82	316	ePKIKP	PKPdf	20 04 10.0	-0.2
LPL	La Plagne	115.82	316	ePKIKP	PKPdf	20 04 10.0	-0.2
LPL	La Plagne	115.82	316	ePKPdf	PKPdf	20 04 10.0	-0.2
GIVF	Givet	115.86	321	ePKIKP	PKPdf	20 04 09.9	+0.1
GIVF	Givet	115.86	321	ePKIKP	PKPdf	20 04 09.9	+0.1
GIVF	Givet	115.86	321	ePKPdf	PKPdf	20 04 09.9	+0.1
BNI	Bardonecchia	115.97	316	PFAKE		20 04 20.0	+10
BNI				LR	LR		
	comp=Z,228nm,19.0s						
CABF	La Chapelle	116.00	317	ePKIKP	PKPdf	20 04 10.3	0.0
CABF	La Chapelle	116.00	317	ePKIKP	PKPdf	20 04 10.3	0.0
CABF	La Chapelle	116.00	317	ePKPdf	PKPdf	20 04 10.3	0.0
MEZF	Maizieres J'vi	116.17	320	ePKIKP	PKPdf	20 04 11.2	+0.7
MEZF	Maizieres J'vi	116.17	320	ePKPdf	PKPdf	20 04 11.2	+0.7
BAIF	Baives	116.25	322	ePKIKP	PKPdf	20 04 10.7	+0.1
	comp=Z,5.7nm,0.9s						
BAIF	Baives	116.25	322	ePKIKP	PKPdf	20 04 10.7	+0.1
BAIF	Baives	116.25	322	ePKPdf	PKPdf	20 04 10.7	+0.1
SFTF	Sexfontaines	116.26	319	ePKIKP	PKPdf	20 04 11.5	+0.8
SFTF	Sexfontaines	116.26	319	ePKPdf	PKPdf	20 04 11.5	+0.8
FRF	La Foret Royal	116.32	314	ePKIKP	PKPdf	20 04 10.8	-0.1
FRF	La Foret Royal	116.32	314	ePKIKP	PKPdf	20 04 10.8	-0.1
FRF	La Foret Royal	116.32	314	ePKPdf	PKPdf	20 04 10.8	-0.1
ORIF	Oris-en-Rattie	116.55	316	ePKIKP	PKPdf	20 04 11.1	-0.4
ORIF	Oris-en-Rattie	116.55	316	ePKIKP	PKPdf	20 04 11.1	-0.4
ORIF	Oris-en-Rattie	116.55	316	ePKPdf	PKPdf	20 04 11.1	-0.4
BMO	Blue Mountains	116.70	44	PFAKE		20 04 20.0	+8.2
BMO				LR	LR		
	comp=Z,271nm,20.0s						
SMRF	Simiane la Rot	116.99	315	ePKIKP	PKPdf	20 04 12.3	0.0
SMRF	Simiane la Rot	116.99	315	ePKPdf	PKPdf	20 04 12.3	0.0
LOR	Lormes	117.29	319	ePKIKP	PKPdf	20 04 12.5	-0.2
	comp=Z,12nm,1.1s						
LOR	Lormes	117.29	319	ePKPdf	PKPdf	20 04 12.5	-0.2
NVAR	Mina Array Bea	117.30	52	PKP	PKPdf	20 04 13.8	+0.5
NVAR	Mina Array Bea	117.30	52	PKP	PKPdf	20 04 13.8	+0.5
	comp=Z,1.2nm,0.7s,baz=273,slow=3.3,SNR=5.8						
VIVF	Saint-Julien-l	117.40	316	ePKIKP	PKPdf	20 04 12.8	-0.2
VIVF	Saint-Julien-l	117.40	316	ePKIKP	PKPdf	20 04 12.8	-0.2
VIVF	Saint-Julien-l	117.40	316	ePKPdf	PKPdf	20 04 12.8	-0.2
A13A	Flathead Natio	117.47	39	⇑P	PKPdf	20 04 14.0	+0.9
	baz=117						
SMF	Signal de Mont	117.48	318	ePKIKP	PKPdf	20 04 13.5	+0.4
SMF	Signal de Mont	117.48	318	ePKIKP	PKPdf	20 04 13.5	+0.4
SMF	Signal de Mont	117.48	318	ePKPdf	PKPdf	20 04 13.5	+0.4
BSMT	Bassoo Peak	117.56	41	ePKPdf	PKPdf	20 04 13.4	-0.1
SSF	Saint Saulge	117.58	318	ePKIKP	PKPdf	20 04 13.2	-0.1
	comp=Z,5.6nm,0.7s						
SSF	Saint Saulge	117.58	318	ePKIKP	PKPdf	20 04 13.2	-0.1
SSF	Saint Saulge	117.58	318	ePKPdf	PKPdf	20 04 13.2	-0.1
AVF	Avril sur Loir	117.76	318	ePKIKP	PKPdf	20 04 13.1	-0.5
AVF	Avril sur Loir	117.76	318	ePKIKP	PKPdf	20 04 13.1	-0.5
AVF	Avril sur Loir	117.76	318	ePKPdf	PKPdf	20 04 13.1	-0.5
G12A	Big Creek, Yel	117.98	44	⇓P	PKPdf	20 04 15.3	+1.0
	baz=118						
EDW2	Edwards Air Fo	118.11	56	⇑P	PKPdf	20 04 15.1	+0.3
	baz=118						
BGF	Bois d'Agland	118.16	318	ePKIKP	PKPdf	20 04 14.4	0.0
	comp=Z,16nm,0.7s						
BGF	Bois d'Agland	118.16	318	ePKIKP	PKPdf	20 04 14.4	0.0
BGF	Bois d'Agland	118.16	318	ePKPdf	PKPdf	20 04 14.4	0.0
LASF	Ste Croix	118.16	315	ePKIKP	PKPdf	20 04 14.6	+0.1

comp=Z,13nm,1.2s
LASF Ste Croix 118.16 315 ePKPdf PKPdf 20 04 14.6 +0.1
TPH Tonopah 118.20 52 PFAKE 20 04 30.0 +15
TPH LR LR
comp=Z,451nm,20.0s
DAC Darwin (Calif) 118.22 54 PFAKE 20 04 30.0 +15
DAC LR LR
comp=Z,488nm,20.0s
EKA Eskdalemuir Ar 118.40 329 PKP PKPdf 20 04 13.8 -0.8
EKA Eskdalemuir Ar 118.40 329 PKP PKPdf 20 04 13.8 -0.8
comp=Z,0.7nm,0.6s,baz=28,slow=3.8,SNR=5.4
MSO Missoula 118.42 42 ⇓P PKPdf 20 04 15.6 +0.5
baz=118
I12A Atlanta 118.47 45 ⇓P PKPdf 20 04 16.0 +0.7
baz=118
D14A Greenough 118.63 41 ⇓P PKPdf 20 04 15.7 +0.2
baz=118
TCF Toulx Ste Croi 118.66 318 ePKIKP PKPdf 20 04 15.3 -0.1
TCF Toulx Ste Croi 118.66 318 ePKIKP PKPdf 20 04 15.3 -0.1
TCF Toulx Ste Croi 118.66 318 ePKPdf PKPdf 20 04 15.3 -0.1
B15A Bradely Ranch, 118.83 40 ⇑P PKPdf 20 04 16.0 +0.3
baz=119
CHMT Chamberlain Mo 118.85 41 ePKPdf PKPdf 20 04 16.3 +0.3
C15A Salmond Ranch, 118.98 40 ⇓P PKPdf 20 04 16.6 +0.5
baz=119
GSC Goldstone 119.01 55 ⇓P PKPdf 20 04 18.4 +1.9
baz=119
HLID Hailey 119.04 45 ePKPdf PKPdf 20 04 16.9 +0.5
HLID LR LR
comp=Z,162nm,20.0s
HLID Hailey 119.04 45 ⇓P PKPdf 20 04 18.0 +1.5
baz=119
I13A Wildhorse Cree 119.15 45 ⇑P PKPdf 20 04 18.4 +1.8
baz=119
CAF Calviac 119.16 316 ePKIKP PKPdf 20 04 16.7 +0.3
CAF Calviac 119.16 316 ePKIKP PKPdf 20 04 16.7 +0.3
CAF Calviac 119.16 316 ePKPdf PKPdf 20 04 16.7 +0.3
J13A Cove Ranch, Pi 119.25 45 ⇑P PKPdf 20 04 18.0 +1.2
baz=119
LDF La Druitiere 119.40 321 ePKIKP PKPdf 20 04 16.4 -0.3
LDF La Druitiere 119.40 321 ePKIKP PKPdf 20 04 16.4 -0.3
LDF La Druitiere 119.40 321 ePKPdf PKPdf 20 04 16.4 -0.3
R11A Troy Canyon, C 119.41 51 ⇑P PKPdf 20 04 18.6 +1.3
baz=119
RJF Les Rejaudoux 119.42 317 ePKIKP PKPdf 20 04 17.0 +0.1
RJF Les Rejaudoux 119.42 317 ePKIKP PKPdf 20 04 17.0 +0.1
RJF Les Rejaudoux 119.42 317 ePKPdf PKPdf 20 04 17.0 +0.1
H14A Leadore 119.47 44 ⇓P PKPdf 20 04 18.5 +1.3
baz=119
MTLF Montolieu 119.50 315 ePKIKP PKPdf 20 04 17.4 +0.3
comp=Z,5.2nm,1.0s
MTLF Montolieu 119.50 315 ePKIKP PKPdf 20 04 17.4 +0.3
MTLF Montolieu 119.50 315 ePKPdf PKPdf 20 04 17.4 +0.3
PFO Pinyon Flat Ob 119.56 57 ⇑P PKPdf 20 04 18.7 +1.0
baz=120
FLN La Foliniere 119.57 321 ePKIKP PKPdf 20 04 16.7 -0.3
FLN La Foliniere 119.57 321 ePKIKP PKPdf 20 04 16.7 -0.3
FLN La Foliniere 119.57 321 ePKPdf PKPdf 20 04 16.7 -0.3
I14A Mackay 119.61 45 ⇑P PKPdf 20 04 18.8 +1.3
baz=120
J14A Carey 119.73 45 ⇑P PKPdf 20 04 19.0 +1.3
baz=120
A17A Triple J Farms 119.77 38 ⇓P PKPdf 20 04 18.7 +1.2
baz=120
BELC Belle Mtn. Jos 119.87 56 ⇓P PKPdf 20 04 20.1 +1.9
baz=120
GRR Gorron 119.93 321 ePKIKP PKPdf 20 04 17.4 -0.3
comp=Z,16nm,1.1s
GRR Gorron 119.93 321 ePKIKP PKPdf 20 04 17.4 -0.3
GRR Gorron 119.93 321 ePKPdf PKPdf 20 04 17.4 -0.3
TAM Tamanrasset 119.97 291 ePKIKP PKPdf 20 04 18.1 -0.7
TAM Tamanrasset 119.97 291 ePKPdf PKPdf 20 04 18.1 -0.7
LFF La Frestale 120.06 317 ePKIKP PKPdf 20 04 18.4 +0.3
comp=Z,8.2nm,0.7s
LFF La Frestale 120.06 317 ePKIKP PKPdf 20 04 18.4 +0.3
LFF La Frestale 120.06 317 ePKPdf PKPdf 20 04 18.4 +0.3
MFF Saint Martin d 120.11 319 ePKIKP PKPdf 20 04 17.9 -0.2
comp=Z,15nm,1.0s
MFF Saint Martin d 120.11 319 ePKIKP PKPdf 20 04 17.9 -0.2
MFF Saint Martin d 120.11 319 ePKPdf PKPdf 20 04 17.9 -0.2
C17A Wharram Farm, 120.20 40 ⇑P PKPdf 20 04 19.2 +0.8
baz=120
BOZ Bozeman (W) 120.32 42 PFAKE 20 04 30.0 +11
BOZ LR LR
comp=Z,147nm,19.0s
D17A Six Diamond Ra 120.42 40 ⇑P PKPdf 20 04 19.4 +0.5
baz=120
J15A Blackfoot 120.47 45 ⇑P PKPdf 20 04 20.9 +1.8
baz=120
B18A Beardsley Farm 120.54 39 ⇑P PKPdf 20 04 19.6 +0.6
baz=120
IRM Iron Mountain 120.54 56 ⇑P PKPdf 20 04 21.0 +1.6
baz=120
K15A Arbon 120.61 46 ⇓P PKPdf 20 04 20.4 +1.0
baz=120
EGMT Eagleton 120.69 39 ePKPdf PKPdf 20 04 19.3 0.0
EGMT LR LR
comp=Z,349nm,20.0s
EGMT Eagleton 120.69 39 ⇓P PKPdf 20 04 20.4 +1.1
baz=121
EPF Esparros 120.91 315 ePKIKP PKPdf 20 04 20.3 +0.4
EPF Esparros 120.91 315 ePKIKP PKPdf 20 04 20.3 +0.4
EPF Esparros 120.91 315 ePKPdf PKPdf 20 04 20.3 +0.4
I16A Newdale 120.98 44 ⇑P PKPdf 20 04 21.1 +1.0
baz=121
M15A Larsen Ranch, 121.01 47 ⇑P PKPdf 20 04 20.9 +0.7
baz=121
SGMF Saint Gilles 121.04 321 ePKIKP PKPdf 20 04 19.5 -0.3
comp=Z,6.8nm,0.8s
SGMF Saint Gilles 121.04 321 ePKIKP PKPdf 20 04 19.5 -0.3
SGMF Saint Gilles 121.04 321 ePKPdf PKPdf 20 04 19.5 -0.3
DUG Dugway 121.08 49 PFAKE 20 04 30.0 +10
DUG LR LR
comp=Z,260nm,19.0s
DUG Dugway 121.08 49 ⇓P PKPdf 20 04 21.2 +0.8
baz=121
K16A Soda Springs 121.22 45 ⇓P PKPdf 20 04 22.0 +1.3
baz=121
RRI2 Red Ridge 121.26 45 ePKPdf PKPdf 20 04 21.4 +0.6
IMW Indian Meadow 121.35 44 ePKPdf PKPdf 20 04 20.7 -0.3
ROSF Rostrenen 121.44 322 ePKIKP PKPdf 20 04 20.6 0.0
ROSF Rostrenen 121.44 322 ePKIKP PKPdf 20 04 20.6 0.0
ROSF Rostrenen 121.44 322 ePKPdf PKPdf 20 04 20.6 0.0
TPAW Teton Pass 121.47 44 ePKPdf PKPdf 20 04 22.1 +0.9
QUIF Quistinic 121.54 321 ePKIKP PKPdf 20 04 20.4 -0.4
comp=Z,7.5nm,0.9s
QUIF Quistinic 121.54 321 ePKIKP PKPdf 20 04 20.4 -0.4
QUIF Quistinic 121.54 321 ePKPdf PKPdf 20 04 20.4 -0.4
ETSF Etsaut 121.58 315 ePKIKP PKPdf 20 04 21.6 +0.4
ETSF Etsaut 121.58 315 ePKIKP PKPdf 20 04 21.6 +0.4
ETSF Etsaut 121.58 315 ePKPdf PKPdf 20 04 21.6 +0.4
L16A Fish Haven 121.58 46 ⇑P PKPdf 20 04 22.5 +1.1
baz=122
AHID Auburn Hatcher 121.59 45 PFAKE 20 04 30.0 +8.6
AHID LR LR
comp=Z,232nm,20.0s
B20A Solberg Farm, 121.60 38 ⇑P PKPdf 20 04 21.9 +0.9
baz=122
HWUT Hardware Ranch 121.60 47 PFAKE 20 04 30.0 +8.6
HWUT LR LR
comp=Z,210nm,20.0s
SNOW Snow King Moun 121.61 44 ePKPdf PKPdf 20 04 22.8 +1.3
LOHW Long Hollow 121.67 44 ePKPdf PKPdf 20 04 22.7 +1.2
J17A Brown Place, J 121.67 45 ⇑P PKPdf 20 04 22.6 +1.1
baz=122
C20A Veseth Ranch, 121.90 39 ⇑P PKPdf 20 04 22.6 +1.0
baz=122
FFC Flin Flon 121.93 30 *i* PKIKP PKPdf 20 04 22.5 +1.1
FFC Flin Flon 121.93 30 PFAKE 20 04 30.0 +8.6
FFC LR LR
comp=Z,325nm,21.0s
SJPF Ste Jean 121.97 315 ePKIKP PKPdf 20 04 22.3 +0.5
SJPF Ste Jean 121.97 315 ePKIKP PKPdf 20 04 22.3 +0.5
SJPF Ste Jean 121.97 315 ePKPdf PKPdf 20 04 22.3 +0.5
MSU Marysvale 121.98 50 ePKIKP PKPdf 20 04 21.7 -0.6
MSU Marysvale 121.98 50 ePKPdf PKPdf 20 04 21.7 -0.6
RLMT Red Lodge 122.06 42 PFAKE 20 04 30.0 +7.8
RLMT LR LR
comp=Z,212nm,19.0s
M17A Scullys Gap (B 122.29 47 ⇓P PKPdf 20 04 23.2 +0.4
baz=122
K18A Toltan Ranch, 122.37 45 ⇑P PKPdf 20 04 23.7 +0.8
baz=122
U15A North Rim 122.39 53 ⇑P PKPdf 20 04 24.7 +1.5
baz=122
SFJD Kangerlussuaq 122.40 358 PFAKE 20 04 30.0 +8.1
SFJD LR LR
comp=Z,329nm,19.0s
A22A Carney Farms, 122.63 37 ⇑P PKPdf 20 04 23.6 +0.6
baz=122
BW06 Boulder Array 122.67 45 PFAKE 20 04 40.0 +17
BW06 LR LR
comp=Z,303nm,19.0s
PDAR Pinedale Array 122.67 45 PKKPbc PKKPbc 20 14 18.7 +0.6
PDAR Pinedale Array 122.67 45 PKKPbc PKKPbc 20 14 18.7 +0.6
comp=Z,0.5nm,0.6s,baz=123,slow=5.5,SNR=3.6
SRU San Rafael 123.07 49 ePKIKP PKPdf 20 04 24.5 +0.2
SRU San Rafael 123.07 49 ePKPdf PKPdf 20 04 24.4 +0.2
SRU San Rafael 123.07 49 ⇓P PKPdf 20 04 25.2 +0.9
baz=123
TOA0 Torodi Ar. Sit 123.58 280 ePKPdf PKPdf 20 04 26.1 +0.4
TORD Torodi Ar. Bea 123.58 280 PKP PKPdf 20 04 26.3 +0.6
TORD Torodi Ar. Bea 123.58 280 PKP PKPdf 20 04 26.3 +0.6
comp=Z,9.3nm,0.8s,baz=76,slow=1.5,SNR=44
O20A White River Ci 124.45 47 ⇓P PKPdf 20 04 28.3 +1.4
baz=124
TUC Tucson 124.48 57 PFAKE 20 04 40.0 +13
TUC LR LR
comp=Z,447nm,19.0s
P20A De Beque 124.54 48 ⇓P PKPdf 20 04 28.6 +1.5
baz=124
N21A Black Mountain 124.77 47 ⇑P PKPdf 20 04 28.8 +1.2
baz=125
Q20A Ridgley Place, 124.78 49 ⇑P PKPdf 20 04 29.1 +1.5
baz=125
PV01 Paradox Valley 124.81 50 ePKPdf PKPdf 20 04 29.3 +1.6
ESDC Sonseca Array 125.02 312 PKP PKPdf 20 04 28.5 +0.7
ESDC Sonseca Array 125.02 312 PKP PKPdf 20 04 28.5 +0.7
comp=Z,1.6nm,0.8s,baz=34,slow=2.4,SNR=11
MVCO Mesa Verde 125.13 51 PFAKE 20 04 40.0 +12
MVCO LR LR
comp=Z,273nm,20.0s
MVCO Mesa Verde 125.13 51 ⇑P PKPdf 20 04 29.7 +1.3
baz=125
PAB San Pablo 125.35 312 ePKIKP PKPdf 20 04 28.3 -0.2
PAB MLR MLR
comp=Z,100nm,21.0s
PAB San Pablo 125.35 312 ePKPdf PKPdf 20 04 28.3 -0.2
PAB LR LR
comp=Z,100nm,21.0s
S21A Coal Bank Pass 125.54 50 ⇓P PKPdf 20 04 31.1 +1.9
baz=126
W20A Ramah 125.69 53 ⇓P PKPdf 20 04 31.1 +1.6
baz=126
319A Douglas 125.92 58 ⇑P PKPdf 20 04 31.9 +1.9
baz=126
T21A Navajo Lake 125.93 51 ⇓P PKPdf 20 04 31.7 +1.8
baz=126
U21A Nageezi 126.00 52 ⇑P PKPdf 20 04 32.0 +1.9
baz=126
Y20A Horse Springs, 126.09 55 ⇓P PKPdf 20 04 32.5 +2.2
baz=126
O23A Lake Granby, G 126.10 47 ⇓P PKPdf 20 04 31.5 +1.2
baz=126
Z20A Nine Sixteen R 126.11 56 ⇓P PKPdf 20 04 31.8 +1.6
baz=126
R22A Saguache, Gunn 126.15 49 ⇑P PKPdf 20 04 32.4 +2.0
baz=126
120A U Bar Ranch, L 126.20 57 ⇓P PKPdf 20 04 33.1 +2.6
baz=126
X21A Alamocita Cree 126.43 54 ⇓P PKPdf 20 04 33.0 +2.0
baz=126
220A Playas Peak, P 126.43 57 ⇓P PKPdf 20 04 32.7 +1.8
baz=126
ISCO Idaho Springs 126.46 47 ePKIKP PKPdf 20 04 31.4 +0.4
ISCO MLR MLR
comp=Z,173nm,19.0s
ISCO Idaho Springs 126.46 47 ePKPdf PKPdf 20 04 31.4 +0.4
ISCO LR LR
comp=Z,173nm,19.0s
ISCO Idaho Springs 126.46 47 ⇓P PKPdf 20 04 31.9 +0.9
baz=126
320A Kipp Ranch, An 126.56 58 ⇓P PKPdf 20 04 33.2 +2.0
baz=126
Q23A Hartsel 126.61 48 ⇓P PKPdf 20 04 33.2 +1.9
baz=126
MVO Moncorvo 126.70 315 ePKPdf PKPdf 20 04 33.6 +2.6
POLO Lamas de Olo 127.15 315 ePKPdf PKPdf 20 04 33.5 +1.6
Y22A Socorro 127.22 54 ⇓P PKPdf 20 04 34.1 +1.7
baz=127
MTE Manteigas 127.35 314 PFAKE 20 04 40.0 +7.7
MTE LR LR
comp=Z,188nm,21.0s
ANMO Albuquerque 127.35 53 ePKPdf PKPdf 20 04 33.1 +0.4
Z22A Elephant Butte 127.40 55 ⇓P PKPdf 20 04 34.6 +1.9
baz=127
BNM Barren Site 127.44 54 ePKPdf PKPdf 20 04 33.2 +0.3
PCBR Castelo Branco 127.51 314 ePKPdf PKPdf 20 04 34.0 +1.5
ULM Lac du Bonnet 127.56 31 PKP PKPdf 20 04 31.3 -1.0
ULM Lac du Bonnet 127.56 31 PKP PKPdf 20 04 31.3 -1.0
comp=Z,3.7nm,0.8s,baz=296,slow=4.1,SNR=6.1
Y23A Lovelace Mesa, 127.95 54 ⇑P PKPdf 20 04 35.0 +1.1
baz=128
Z23A Rita Site, Whi 127.99 55 ⇑P PKPdf 20 04 35.3 +1.4
baz=128
V24A Rampart Ranch, 128.05 52 ⇓P PKPdf 20 04 35.9 +1.9
baz=128
S25A Robets Cordova 128.07 49 ⇑P PKPdf 20 04 35.9 +2.0
baz=128
W24A Lazy 6 Ranch, 128.10 52 ⇓P PKPdf 20 04 35.8 +1.7
baz=128
T25A Trinidad 128.26 50 ⇑P PKPdf 20 04 35.3 +1.0
baz=128
Y24A Capitan 128.45 54 ⇑P PKPdf 20 04 35.9 +1.1
baz=128
U25A Circle Dot Ran 128.50 51 ⇑P PKPdf 20 04 36.3 +1.5
baz=128
V25A Rancho No Teng 128.52 51 ⇓P PKPdf 20 04 36.7 +1.9
baz=128
OGNE Ogallala 128.56 44 PFAKE 20 04 50.0 +15
OGNE LR LR
comp=Z,351nm,21.0s
Z24A Sheeppen Canyo 128.67 55 ⇓P PKPdf 20 04 37.9 +2.7
baz=129
124A Stringfield Ra 128.77 55 ⇑P PKPdf 20 04 37.4 +1.9
baz=129
S26A Kim 128.80 49 ⇓P PKPdf 20 04 37.2 +1.9
baz=129
W25A X Bar L Ranch, 128.84 52 ⇑P PKPdf 20 04 37.5 +2.1
baz=129
T26A Comanche Natio 128.86 49 ⇑P PKPdf 20 04 37.1 +1.7
baz=129
RTC Rabat Centre 128.97 306 PFAKE 20 04 50.0 +15
RTC LR LR
comp=Z,194nm,22.0s
Y25A Mesa, Roswell 129.04 54 ⇑P PKPdf 20 04 37.8 +2.0
baz=129
324A Moseley Ranch, 129.06 57 ⇓P PKPdf 20 04 38.0 +2.1
baz=129
MNTX Cornudas Mount 129.09 57 ⇑P PKPdf 20 04 38.0 +2.2
baz=129
Z25A Roswell 129.21 55 ⇓P PKPdf 20 04 38.5 +2.3
baz=129
125A Gardner Draw, 129.43 55 ⇑P PKPdf 20 04 38.8 +2.2
baz=129
225A Deer Hill, Car 129.44 56 ⇑P PKPdf 20 04 38.5 +1.8
baz=129
325A Bean Ranch, Si 129.51 57 ⇓P PKPdf 20 04 38.5 +1.7
baz=129
DBIC Dimbokro 129.51 271 ePKPdf PKPdf 20 04 36.6 -0.4
DBIC PKP PKPdf 20 04 37.5 +0.5
DBIC Dimbokro 129.51 271 PKP PKPdf 20 04 37.5 +0.5
comp=Z,14nm,1.0s,baz=103,slow=2.5,SNR=16
LIC Lamto 129.63 270 ePKIKP PKPdf 20 04 38.5 +1.2
comp=Z,54nm,1.1s
LIC Lamto 129.63 270 ePKPdf PKPdf 20 04 38.5 +1.2
425A Indio Mountain 129.64 58 ⇓P PKPdf 20 04 39.7 +2.7
baz=130
226B Tecolote Peak, 129.98 56 ⇑P PKPdf 20 04 39.4 +1.8
baz=130
T28A Walsh 129.99 49 ⇓P PKPdf 20 04 38.8 +1.3
baz=130
326A Caldwell Ranch 130.34 57 ⇑P PKPdf 20 04 39.8 +1.5
baz=130
Z27A Tatum 130.40 54 ⇓P PKPdf 20 04 40.1 +1.7
baz=130
MSTX Muleshoe 130.55 53 ⇑P PKPdf 20 04 40.3 +1.6
baz=130
526A Mary Lane Ranc 130.57 58 ⇑P PKPdf 20 04 39.9 +1.0
baz=130
626A Big Bend Ranch 130.65 59 ⇓P PKPdf 20 04 40.6 +1.6
baz=131
ECSD EROS Data Cent 130.80 39 ePKPdf PKPdf 20 04 38.7 0.0
ECSD LR LR
comp=Z,395nm,19.0s
527A Woodward Ranch 130.95 58 ⇓P PKPdf 20 04 41.3 +1.7
baz=131
TXAR Lajitas Array 131.10 59 PKP PKPdf 20 04 39.7 -0.1
TXAR SKPbc SKPab 20 08 05.3 +1.2
TXAR Lajitas Array 131.10 59 PKP PKPdf 20 04 39.7 -0.1
comp=Z,1.2nm,0.7s,baz=203,slow=2.7,SNR=8.5
TXAR SKPbc SKPab 20 08 05.3 +1.2
comp=Z,5.6nm,1.1s,baz=277,slow=2.1,SNR=15
AMTX Amarillo 131.10 52 PFAKE 20 04 50.0 +10
AMTX LR LR
comp=Z,338nm,19.0s
328A Wristen Ranch, 131.29 56 ⇑P PKPdf 20 04 41.9 +1.8
baz=131
627A Terlingua Ranc 131.31 59 ⇑P PKPdf 20 04 42.1 +1.9
baz=131
428A Kincaid Ranch, 131.57 57 ⇑P PKPdf 20 04 42.2 +1.5
baz=132
628A Black Gap, Mar 131.72 59 ⇓P PKPdf 20 04 43.0 +2.1
baz=132
529A Stev Forest Ra 132.12 58 ⇓P PKPdf 20 04 42.5 +0.9
baz=132
330A Mertzon 132.62 56 ⇑P PKPdf 20 04 43.4 +0.8
baz=132
KSU1 Kansas State U 133.11 44 PFAKE 20 04 50.0 +6.8
KSU1 LR LR
comp=Z,345nm,21.0s
331A San Angelo 133.26 56 ⇑P PKPdf 20 04 45.3 +1.5
baz=133
431A Sonora 133.30 57 ⇓P PKPdf 20 04 45.0 +1.2
baz=133
WMOK Wichita Mounta 133.38 51 PFAKE 20 05 00.0 +16
WMOK LR LR
comp=Z,274nm,19.0s
531A Rocksprings 133.50 57 ⇑P PKPdf 20 04 46.4 +2.1
baz=133
COWI Conover 133.67 32 PFAKE 20 05 00.0 +16
COWI LR LR
comp=Z,461nm,19.0s
SCHQ Schefferville 133.87 9 PKP PKPdf 20 04 44.5 +0.3
SCHQ SKPbc SKPab 20 08 14.2 -0.9
SCHQ Schefferville 133.87 9 PKP PKPdf 20 04 44.5 +0.3
comp=Z,2.3nm,0.7s,baz=1.6,slow=2.5,SNR=6.9
SCHQ SKPbc SKPab 20 08 14.2 -0.9
baz=69,slow=14
SCIA State Center 133.89 39 PFAKE 20 05 00.0 +15
SCIA LR LR
comp=Z,375nm,19.0s
JCT Junction City 134.02 56 ePKIKP PKPdf 20 04 46.4 +1.2
JCT MLR MLR
comp=Z,139nm,19.0s
JCT Junction City 134.02 56 ePKPdf PKPdf 20 04 46.4 +1.2
JCT LR LR
comp=Z,139nm,19.0s
JCT Junction City 134.02 56 ⇓P PKPdf 20 04 46.8 +1.6
baz=134
532A Rocksprings 134.04 57 ⇑P PKPdf 20 04 47.0 +1.8
baz=134
732A Laxson Ranch, 134.38 59 ⇑P PKPdf 20 04 47.1 +1.3
baz=134
GLMI Grayling 136.85 30 PFAKE 20 05 00.0 +10
GLMI LR LR
comp=Z,559nm,22.0s
HDIL Hopedale 137.09 38 PFAKE 20 05 00.0 +9.4
HDIL LR LR
comp=Z,474nm,19.0s
MIAR Mount Ida 137.37 48 PFAKE 20 05 00.0 +8.7
MIAR LR LR
comp=Z,235nm,19.0s
WCI Wyandotte Cave 140.35 39 ePKIKP PKPdf 20 04 55.8 -0.8
WCI Wyandotte Cave 140.35 39 ePKPdf PKPdf 20 04 55.8 -0.8
OXF Oxford 140.39 46 PFAKE 20 05 10.0 +13
OXF LR LR
comp=Z,518nm,19.0s
VBMS Vicksburg 140.70 50 PFAKE 20 05 10.0 +13
VBMS LR LR
comp=Z,475nm,21.0s
ACSO Alum Creek Sta 140.96 34 ePKPdf PKPdf 20 04 57.7 0.0
PLAL Pickwick Lake 141.07 44 PFAKE 20 05 10.0 +12
PLAL LR LR
comp=Z,408nm,21.0s
ERPA Erie 141.12 29 PFAKE 20 05 10.0 +12
ERPA LR LR
comp=Z,427nm,21.0s
NCB Newcomb 142.04 22 PFAKE 20 05 10.0 +10
NCB LR LR
comp=Z,249nm,20.0s
LBNH Lisbon 142.60 19 PFAKE 20 05 10.0 +10
LBNH LR LR
comp=Z,504nm,20.0s
BINY Binghamton 142.85 25 PFAKE 20 05 10.0 +9.0
BINY LR LR
comp=Z,277nm,19.0s
LRAL Lakeview Retre 142.87 46 ePKPdf PKPdf 20 04 58.2 -3.1
LRAL LR LR
comp=Z,164nm,20.0s
TKL Tuckaleechee C 143.53 40 ePKPdf PKPdf 20 05 01.8 -0.6
BRAL Brewton 143.87 49 PFAKE 20 05 10.0 +6.9
BRAL LR LR
comp=Z,440nm,20.0s
CPUP Villa Florida 144.43 178 PKP PKPdf 20 05 04.1 -0.1
CPUP Villa Florida 144.43 178 PKP PKPdf 20 05 04.1 -0.1
comp=Z,10nm,0.7s,baz=165,slow=1.8,SNR=22
BLA Blacksburg 144.50 35 ePKIKP PKPdf 20 05 03.8 -0.3
BLA MLR MLR
comp=Z,340nm,21.0s
BLA Blacksburg 144.50 35 ePKPdf PKPdf 20 05 03.8 -0.3
BLA LR LR
comp=Z,340nm,21.0s
KMSC Kings Mountain 145.38 38 ⇑P PKPbc 20 05 05.5 +0.1
baz=145
CBN Corbin 145.40 31 PFAKE 20 05 20.0 +14
CBN LR LR
comp=Z,276nm,19.0s
TIGA Tifton 146.16 46 ⇓P PKPbc 20 05 08.2 +0.2
baz=146
TEIG Tepich 146.89 67 ePKPdf PKPdf 20 05 08.5 0.0
TEIG LR LR
comp=Z,283nm,20.0s
CNNC Cliffs of the 147.34 35 PFAKE 20 05 20.0 +6.9
CNNC LR LR
comp=Z,996nm,22.0s
NHSC New Hope 147.44 40 PFAKE 20 05 20.0 +6.5
NHSC LR LR
comp=Z,325nm,19.0s
SACV Santiago Islan 148.07 283 PFAKE 20 05 20.0 +3.4
SACV LR LR
comp=Z,392nm,21.0s
TGUH Tegucigalpa,Un 148.87 78 ePKPbc PKPbc 20 05 16.8 +1.0
TGUH LR LR
comp=Z,206nm,20.0s
NNA Nana 150.17 135 ePKPbc PKPbc 20 05 19.9 +0.7
NNA ePKPab PKPab 20 05 25.8 +0.7
JTS JuntasAbangare 151.28 86 ePKPdf PKPdf 20 05 15.9 +0.1
JTS ePKPbc PKiKP 20 05 22.2 -0.1
JTS LR LR
comp=Z,200nm,20.0s
LPAZ La Paz 151.69 154 ePKPdf PKPdf 20 05 15.3 -1.8
LPAZ PKP PKPdf 20 05 19.7 +2.5
LPAZ ePKPbc PKiKP 20 05 24.5 +0.7
LPAZ PKPbc PKiKP 20 05 25.4 +1.6
LPAZ La Paz 151.69 154 PKP PKPdf 20 05 19.7 +2.5
baz=194,slow=4.4
LPAZ PKPbc PKiKP 20 05 25.4 +1.6
comp=Z,9.5nm,0.9s,baz=170,slow=1.8,SNR=15
BDFB Brasilia 153.92 197 PKPbc PKPbc 20 05 27.7 0.0
BDFB Brasilia 153.92 197 PKPbc PKPbc 20 05 27.7 0.0
baz=211,slow=5.9
RCBR Riachuelo 155.04 233 PFAKE 20 05 30.0 +8.7
RCBR LR LR
comp=Z,383nm,22.0s
OTAV Otavalo 155.68 111 ePKPdf PKPdf 20 05 23.1 +0.3
OTAV LR LR
comp=Z,231nm,20.0s
BCIP Isla Barro Col 156.28 89 PFAKE 20 05 30.0 +7.1
BCIP LR LR
comp=Z,268nm,21.0s
MTDJ Mount Denham 157.18 65 PFAKE 20 05 40.0 -15
MTDJ LR LR
comp=Z,143nm,19.0s
GTBY Guantanamo Bay 158.63 59 PFAKE 20 05 40.0 +14
GTBY LR LR
comp=Z,214nm,19.0s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAML	Samuel	160.32	158	ePKPdf	PKPdf	20 05 28.1	+0.2
SAML				LR	LR		
	comp=Z,258nm,21.0s						
GRTK	Grand Turk	160.98	49	PFAKE		20 05 40.0	+12
GRTK				LR	LR		
	comp=Z,282nm,19.0s						
SDDR	Presa de Saban	162.25	56	PFAKE		20 05 40.0	+10
SDDR				LR	LR		
	comp=Z,185nm,20.0s						
SDV	Santo Domingo	165.35	91	PFAKE		20 05 40.0	+7.0
SDV				LR	LR		
	comp=Z,1.0nm,21.0s						
SJG	San Juan	166.76	48	PFAKE		20 05 40.0	+6.3
SJG				LR	LR		
	comp=Z,207nm,22.0s						
GRGR	Grenville	173.66	64	PFAKE		20 05 50.0	+12
GRGR				LR	LR		
	comp=Z,186nm,19.0s						

*ISCJB **05** 20:01:24.3±0.5, 42°.70N±0°.03×1°.72W±0°.04, h13km±3km, Error ellipse: s-maj=5.0km s-min=4.4km az=149.8*
*CSEM **05** 20:01:24.7±0.2, 42°.69N×1°.70W, h10km, ML1.9/10, Error ellipse: s-maj=4.3km s-min=3.7km az=131.0*
*STR **05** 20:01:24.2±0.1, 42°.66N×1°.78W, h2km, Ml1.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **05** 20:01:25.9±0.1, 42°.72N×1°.70W, h2km, Md2.4/2, Ml1.9/5, Error ellipse: s-maj=2.0km s-min=1.8km az=155.0*
*MDD **05** 20:01:25.5±0.4, 42°.68N×1°.71W, h0km, mbLg1.5/10, Error ellipse: s-maj=3.4km s-min=2.8km az=143.0, PRXIMO*
ISC 05 20:01:25.8±1.0, 42°.70N±0°.03×1°.70W±0°.03, h13km±7km, n60, σ1s.22/84, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUNC	Unciti	0.16	69	Pg	Pg	20 01 28.4	-1.2
	48nm,0.3s,SNR=36						
IUNC				Lg	Lg	20 01 30.7	
	18nm,0.1s,SNR=5.0						
IUNC	Unciti	0.16	69	Pg	Pg	20 01 28.5	-1.2
	48nm,0.3s,SNR=36						
IUNC				Lg	Lg	20 01 30.7	
	18nm,0.1s,SNR=5.0						
IPRE	Itoiz	0.28	67	Pg	Pg	20 01 31.6	0.0
	2.3nm,0.1s,SNR=13						
IPRE				Lg	Lg	20 01 35.0	
	6.3nm,0.1s,SNR=17						
IPRE	Itoiz	0.28	67	Pg	Pg	20 01 31.6	0.0
	2.3nm,0.1s,SNR=13						
IPRE				Lg	Lg	20 01 35.0	
	6.3nm,0.1s,SNR=17						
IEPA	Eparoz	0.33	76	Pg	Pg	20 01 32.8	+0.2
	0.6nm,0.1s,SNR=7.9						
IEPA				Lg	Lg	20 01 36.6	
	2.4nm,0.1s,SNR=7.9						
IEPA	Eparoz	0.33	76	Pg	Pg	20 01 32.8	+0.2
	0.6nm,0.1s,SNR=7.9						
IEPA				Lg	Lg	20 01 36.6	
	2.4nm,0.1s,SNR=7.9						
EORO	Oroz-Betelu	0.35	56	Pg	Pg	20 01 32.5	-0.4
	5.2nm,0.3s,SNR=22						
EORO				Lg	Lg	20 01 37.4	
	1.6nm,0.1s,SNR=5.0						
EORO	Oroz-Betelu	0.35	56	Pg	Pg	20 01 32.5	-0.4
	5.2nm,0.3s,SNR=22						
EORO				Lg	Lg	20 01 37.3	
	1.6nm,0.1s,SNR=5.0						
IELO	Elcoad	0.37	67	Pg	Pg	20 01 32.5	-0.8
	2.1nm,0.2s,SNR=7.9						
IELO				Lg	Lg	20 01 38.0	
	1.1nm,0.1s,SNR=7.9						
IELO	Elcoad	0.37	67	Pg	Pg	20 01 32.5	-0.8
	2.1nm,0.2s,SNR=7.9						
IELO				Lg	Lg	20 01 38.0	
	1.1nm,0.1s,SNR=7.9						
ELIZ	Elizondo	0.48	15	Pg	Pg	20 01 34.3	-1.0
	11nm,0.2s,SNR=30						
ELIZ				Lg	Lg	20 01 42.6	
	34nm,0.2s,SNR=24						
ELIZ	Elizondo	0.48	15	Pg	Pg	20 01 34.3	-1.0
	11nm,0.2s,SNR=30						
ELIZ				Lg	Lg	20 01 42.6	
	34nm,0.2s,SNR=24						
SJPF	Ste Jean	0.54	40	ePg	Pg	20 01 35.6	-0.9
SJPF				eSg	Sg	20 01 43.6	-0.1
	14nm,0.3s						
SJPF	Ste Jean	0.54	40	Pg	Pg	20 01 35.6	-0.9
SJPF				eSg	Sg	20 01 43.6	-0.1
	6.8nm,0.3s						
LARF	Larrau	0.62	57	Pg	Pg	20 01 37.3	-0.7
LARF				Sg	Sg	20 01 46.9	+0.6
LARF	Larrau	0.62	57	Pg	Pg	20 01 37.3	-0.7
LARF				Sg	Sg	20 01 46.9	+0.6
LARF				Lg	Lg	20 01 46.9	
OSSF	Osses	0.64	30	Pg	Pg	20 01 37.4	-1.0
OSSF				Sg	Sg	20 01 47.3	+0.4
OSSF	Osses	0.64	30	Pg	Pg	20 01 37.4	-1.0
OSSF				Sg	Sg	20 01 47.3	+0.4
OSSF				Lg	Lg	20 01 47.3	
ETSF	Etsaut	0.86	76	ePg	Pg	20 01 42.1	-0.5
ETSF				eSn	Sb	20 01 56.3	+2.0
	3.2nm,0.2s						
ETSF	Etsaut	0.86	76	Pg	Pg	20 01 42.1	-0.5
ETSF				eSn	Sb	20 01 56.3	+2.0
	1.6nm,0.2s						
ESAC	San Caprasio	1.34	136	Pg	Pg	20 01 50.9	-0.7
	13nm,0.3s,SNR=12						
ESAC				Lg	Lg	20 02 08.5	
	2.3nm,0.1s,SNR=5.0						
ESAC	San Caprasio	1.34	136	Pg	Pg	20 01 50.9	-0.7
	13nm,0.3s,SNR=12						
ESAC				Lg	Lg	20 02 08.5	
	2.3nm,0.1s,SNR=5.0						
ELAN	Lanestosa	1.38	293	Pg	Pn	20 01 50.7	-0.1
	3.4nm,0.2s,SNR=41						
ELAN				Lg	Lg	20 02 09.3	
	0.4nm,0.1s,SNR=6.4						
ELAN	Lanestosa	1.38	293	Pg	Pn	20 01 50.7	-0.1
	3.4nm,0.2s,SNR=41						
ELAN				Lg	Lg	20 02 09.3	
	0.4nm,0.1s,SNR=6.4						
EPF	Esparros	1.54	77	ePg	Pn	20 01 54.4	+1.3
EPF				eSg	Sn	20 02 14.5	+1.6
	3.6nm,0.2s						
EPF	Esparros	1.54	77	Pg	Pn	20 01 54.4	+1.3
EPF				eSg	Sn	20 02 14.5	+1.6
	1.8nm,0.2s						
ETOR	Torete	1.90	188	Pg	Pn	20 01 59.4	+1.4
	5.7nm,0.3s,SNR=15						
ETOR				Lg	Lg	20 02 25.2	
	4.0nm,0.1s,SNR=5.7						
ETOR	Torete	1.90	188	Pg	Pn	20 01 59.4	+1.4
	5.7nm,0.3s,SNR=15						
ETOR				Lg	Lg	20 02 25.2	
	4.0nm,0.1s,SNR=5.7						
CSOR	Sort	2.12	98	Pg	Pb	20 02 04.0	-0.2
	0.0nm,0.1s,SNR=7.9						
CSOR				Lg	Lg	20 02 33.0	
	0.5nm,0.2s,SNR=7.9						
CSOR	Sort	2.12	98	Pg	Pb	20 02 04.0	-0.2
	SNR=7.9						
CSOR				Lg	Lg	20 02 33.0	
	0.5nm,0.2s,SNR=7.9						
ERTA	Horta de San J	2.31	138	Pn	Pn	20 02 03.9	+0.3
	0.0nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	20 02 32.3	+0.3
	0.8nm,0.1s,SNR=7.9						
ERTA				Lg	Lg	20 02 37.9	
	0.7nm,0.2s,SNR=7.9						
ERTA	Horta de San J	2.31	138	Pn	Pn	20 02 03.9	+0.3
	SNR=7.9						
ERTA				Sn	Sn	20 02 32.3	+0.3
	0.8nm,0.1s,SNR=7.9						
ERTA				Lg	Lg	20 02 37.9	
	0.7nm,0.2s,SNR=7.9						
EPOB	Poblet	2.47	122	Pn	Pn	20 02 05.3	-0.6
	0.1nm,0.1s,SNR=7.9						
EPOB				Pg	Pb	20 02 10.0	-0.1
	0.2nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	20 02 34.9	-1.1
	0.5nm,0.2s,SNR=7.9						
EPOB				Lg	Lg	20 02 41.4	
	0.2nm,0.1s,SNR=7.9						
EPOB	Poblet	2.47	122	Pn	Pn	20 02 05.3	-0.6
	0.1nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	2.51	158	Sn	Sn	20 02 36.7	-0.4
	0.1nm,0.0s,SNR=7.9						
EMOS				Lg	Lg	20 02 46.2	
	0.2nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	2.51	158	Sn	Sn	20 02 36.7	-0.4
	0.1nm,0.0s,SNR=7.9						
EMOS				Lg	Lg	20 02 46.2	
	0.2nm,0.1s,SNR=7.9						
EARI	Arriondas	2.64	284	Pn	Pn	20 02 08.5	+0.3
	1.0nm,0.5s,SNR=7.9						
EARI				Sn	Sn	20 02 39.6	-0.6
	0.1nm,0.2s,SNR=7.9						
EARI				Lg	Lg	20 02 49.3	
	SNR=7.9						
EARI	Arriondas	2.64	284	Pn	Pn	20 02 08.5	+0.3
	1.0nm,0.5s,SNR=7.9						
EARI				Sn	Sn	20 02 39.6	-0.6
	0.1nm,0.2s,SNR=7.9						
EARI				Lg	Lg	20 02 49.3	
	SNR=7.9						
CLLI	Llivia	2.72	93	Pn	Pn	20 02 10.1	+0.7
	0.1nm,0.1s,SNR=7.9						
CLLI				Lg	Lg	20 02 53.2	
	7.1nm,0.9s,SNR=5.8						
CLLI	Llivia	2.72	93	Pn	Pn	20 02 10.1	+0.7
	0.1nm,0.1s,SNR=7.9						
CLLI				Lg	Lg	20 02 53.2	
	7.1nm,0.9s,SNR=5.8						
GUD	Guadarrama	2.76	223	Pn	Pn	20 02 09.8	-0.1
	0.0nm,0.1s,SNR=7.9						
GUD				Sn	Sn	20 02 42.0	-1.1
	0.0nm,0.1s,SNR=7.9						
GUD				Lg	Lg	20 02 50.3	
	5.0nm,0.9s,SNR=5.5						
GUD	Guadarrama	2.76	223	Pn	Pn	20 02 09.8	-0.1
	SNR=7.9						
GUD				Sn	Sn	20 02 42.0	-1.1
	SNR=7.9						
GUD				Lg	Lg	20 02 50.3	
	5.0nm,0.9s,SNR=5.5						
LFF	La Frestale	2.85	37	eP	Pn	20 02 12.8	+1.7
LFF				eSn	Sn	20 02 43.0	-2.3
	1.2nm,0.3s						
LFF	La Frestale	2.85	37	eP	Pn	20 02 12.8	+1.7
LFF				eSn	Sn	20 02 43.0	-2.3
	0.6nm,0.3s						
MTLF	Montolieu	2.94	76	ePn	Pn	20 02 11.7	-0.7
MTLF	Montolieu	2.94	76	ePg	Pb	20 02 19.7	+1.5
MTLF				eSg	Sg	20 02 58.6	-1.8
	0.5nm,0.3s						
MTLF	Montolieu	2.94	76	Pn	Pn	20 02 11.7	-0.7
MTLF	Montolieu	2.94	76	Pg	Pb	20 02 19.7	+1.5
MTLF				eSg	Sg	20 02 58.6	-1.8
	0.2nm,0.3s						
CFON	Fontmartina	3.21	106	Pn	Pn	20 02 15.9	-0.2
	0.6nm,0.1s,SNR=7.9						
CFON	Fontmartina	3.21	106	Pn	Pn	20 02 15.9	-0.2
	0.6nm,0.1s,SNR=7.9						
RJF	Les Rejaudoux	3.49	41	ePn	Pn	20 02 19.4	-0.4
RJF				eSn	Sn	20 02 58.9	-2.1
	0.5nm,0.2s						
RJF	Les Rejaudoux	3.49	41	Pn	Pn	20 02 19.4	-0.4
RJF				eSn	Sn	20 02 58.9	-2.1
	0.2nm,0.2s						
MFF	Saint Martin d	4.06	15	ePn	Pn	20 02 26.6	-1.0
MFF	Saint Martin d	4.06	15	ePg	Pb	20 02 40.2	+3.0
MFF	Saint Martin d	4.06	15	ePn	Pn	20 02 26.6	-1.0
MFF	Saint Martin d	4.06	15	ePg	Pb	20 02 40.2	+3.0
LASF	Ste Croix	4.28	69	ePn	Pn	20 02 29.7	-1.0
LASF	Ste Croix	4.28	69	ePg	Pg	20 02 44.9	-2.9
LASF	Ste Croix	4.28	69	ePn	Pn	20 02 29.7	-1.0
LASF	Ste Croix	4.28	69	ePg	Pg	20 02 44.9	-2.9

*IDC **05** 20:11:48.0±0.9, 21°.36N×121°.68E, h0km, mb3.7/9, mb1 3.9/10, mb1mx3.7/24, mbtmp3.7/10, ML3.7/1, Error ellipse: s-maj=33.7km s-min=18.7km az=75.0*
*TAP **05** 20:11:49.8, 21°.60N×121°.91E, h30km, ML4.1, D*
*ISCJB **05** 20:11:50.0±0.8, 21°.67N±0°.04×121°.94E±0°.02, h12km±5km, mb3.6/9, Error ellipse: s-maj=6.8km s-min=3.6km az=176.6*
*JMA **05** 20:11:52.4±0.3, 21°.62N×121°.98E, h70km, M3.9*
ISC 05 20:11:50.4±1.8, 21°.80N±0°.05×121°.86E±0°.04, h0km±10km, n69, σ1s.07/92, mb3.8/9, 3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.37	310	⇓iP	Pb	20 12 00.9	+1.0
	baz=323						
LAY				iS	Sb	20 12 08.9	+2.6
	baz=323						
TSEB	Hengchuen, Pin	0.90	277	eP	Pb	20 12 08.4	-0.4
	baz=287						
TSEB				eS	Sn	20 12 22.8	-1.1
	baz=287						
TWK1	Hengchun	0.99	279	eP	Pg	20 12 08.8	-0.6
	baz=289						
TWK1				eS	Sb	20 12 23.0	-1.0
	baz=289						
TAW	Tawu	1.05	302	eP	Pb	20 12 11.3	-0.2
	baz=309						
TAW				S	Sn	20 12 26.1	-1.7
	baz=309						
HEN	Hengchun	1.06	281	eP	Pb	20 12 11.0	-0.6
	baz=302						
HEN				eS	Sb	20 12 24.7	-1.3
	baz=302						
EAST	Anshuo	1.10	302	eP	Pg	20 12 11.1	-0.5
	baz=309						
EAST				eS	Sb	20 12 26.4	-1.0
	baz=309						
ECL	Taimali	1.16	314	⇓P	Pg	20 12 12.4	-0.1
	baz=319						
ECL				eS	Sb	20 12 28.4	-0.4
	baz=319						
TTN	Taitung	1.16	325	eP	Pg	20 12 11.2	-1.5
	baz=338						
TWG	Pinlang	1.25	325	eP	Pg	20 12 14.4	-0.1
	baz=314						
TWG				eS	Sn	20 12 32.0	-0.7
	baz=314						
SCZT	Fangliau	1.28	297	eP	Pg	20 12 14.3	-0.8
	baz=315						
CHKT	Chengkung	1.37	341	P	Pn	20 12 15.7	-1.1
	baz=351						
CHKT				S	Sb	20 12 34.8	-0.2
	baz=351						
SSD	Sandimen	1.48	310	eP	Pn	20 12 17.6	-0.6
	baz=315						
TWP	Hsiaoliuchiu	1.49	292	eP	Pg	20 12 19.4	+0.4
	baz=312						
SGLT	Jiouru	1.57	306	eP	Pg	20 12 21.7	+1.2
	baz=311						
ELDTW	Lidau	1.59	331	eP	Pn	20 12 19.4	-0.5
	baz=322						
TWF1	Yuli	1.63	342	⇓P	Pn	20 12 19.7	-0.7
	baz=350						
TWF1				eS	Sn	20 12 41.5	-0.5
	baz=350						
TWM1	Shoushan	1.68	308	eP	Pg	20 12 23.2	+0.7
	baz=312						
EHY	Hungye	1.77	344	eP	Pn	20 12 22.0	-0.3
	baz=351						
WTP	Ta-pu	1.84	322	eP	Pb	20 12 25.1	+0.1
	baz=325						
WTP				eS	Sg	20 12 50.6	+0.9
	baz=325						
CHN1	Nanshi	1.85	319	eP	Pb	20 12 25.1	0.0
	baz=322						
CHN1				eS	Sg	20 12 50.7	+0.8
	baz=322						
CHN3	Shinhua	1.88	313	eP	Pg	20 12 26.0	-0.5
	baz=317						
CHN3				eS	Sg	20 12 53.7	+2.9
	baz=317						
TWK	Hsinying	1.93	319	eP	Pb	20 12 26.7	+0.1
	baz=323						
CHN4	Tsaushan	1.94	323	eP	Pb	20 12 26.6	-0.1
	baz=326						
CHN4				eS	Sg	20 12 52.9	+0.2
	baz=326						
ALS	Alishan	1.96	330	eP	Pb	20 12 26.5	-0.7
	baz=333						
ALS				eS	Sg	20 12 53.8	+0.3
	baz=333						
ESL	Shilin	2.04	349	eP	Pn	20 12 25.1	-0.9
CHN5	Tsauling	2.10	329	eP	Pb	20 12 29.0	-0.4
	baz=331						
CHN5				eS	Sg	20 12 57.5	-0.3
	baz=331						
CHN2	Minshiung	2.15	324	eP	Pb	20 12 29.1	-1.1
	baz=311						
CHY	Chiayi	2.15	322	eP	Pb	20 12 29.1	-1.1
	baz=310						
CHN8	Yiju	2.17	316	eP	Pn	20 12 28.2	+0.5
	baz=319						
WGK	Gukeng	2.23	328	eP	Pb	20 12 30.1	-1.4
	baz=330						
SMLT	Sun Moon Lake	2.25	337	eP	Pn	20 12 30.5	+1.5
	baz=348						
SMLT				eS	Sb	20 13 00.8	+0.2
	baz=348						
TWD	Chiawan	2.28	354	eP	Pn	20 12 28.0	-1.4
	baz=3.0						
TYC	Yuchr	2.29	336	P	Pb	20 12 32.0	-0.6
	baz=346						
WNT	Mingjian	2.34	333	eP	Pb	20 12 33.1	-0.3
	baz=320						
WHF	Hehuan Shan	2.40	347	eP	Pn	20 12 31.1	-0.2
	baz=358						
TWT	Tachien	2.52	346	eP	Pn	20 12 34.0	+1.2
	baz=355						
TCU	Taichung	2.58	335	eP	Pb	20 12 36.0	-1.5
	baz=322						
ENA	Nanau	2.62	358	eP	Pn	20 12 33.9	0.0
	baz=5.0						
NNS	Nan Shan	2.67	350	eP	Pn	20 12 36.2	+1.5
	baz=1.0						
TWQ1	Liyutan	2.73	339	eP	Pb	20 12 38.4	-1.7
	baz=328						
TWQ1				eS	Sb	20 13 14.1	0.0
	baz=328						
PNG	Penghu	2.76	310	eP	Pn	20 12 35.5	-0.4
	baz=313						
NSY	Sanyi	2.79	339	eP	Pb	20 12 39.4	-1.9
	baz=328						
TWC	Suao	2.80	360	eP	Pn	20 12 35.8	-0.6
	baz=360						
ENTT	Nioudou	2.84	355	eP	Pn	20 12 38.4	+1.4
	baz=355						
YOJ	Yonaguni jima	2.85	22	P	Pn	20 12 38.4	+1.2
YOJ				S	Sn	20 13 13.6	+1.3
HATJ	Hateruma jima	2.88	38	P	Pn	20 12 38.0	+0.5
HATJ				S	Sn	20 13 12.6	-0.2
NSK	Sanguang	2.90	351	eP	Pn	20 12 38.9	+1.0
	baz=1.0						
TWE	Neicheng	2.91	357	eP	Pn	20 12 38.2	+0.2
	baz=357						
NSTT	Nanjuang	2.93	345	eP	Pb	20 12 41.0	-2.5
	baz=330						
NSTT				eS	Sb	20 13 19.0	-0.8
	baz=330						
IRIF	Iriomote-Funau	3.06	34	P	Pn	20 12 40.5	+0.5
IRIF				eS	Sn	20 13 16.8	-0.4
JKRS	Kuro-shima	3.13	39	P	Pn	20 12 41.8	+0.8
JKRS				S	Sn	20 13 18.9	-0.2
TWB1	Santiao Chiao	3.20	2	eP	Pn	20 12 42.1	+0.2
	baz=2.0						
NWF	Wu-fen Shan	3.26	359	eP	Pn	20 12 45.5	+2.7
	baz=359						
NWF				eS	Sn	20 13 24.2	+1.8
	baz=359						
JIJ	Ishigaki jima	3.31	39	P	Pn	20 12 43.6	+0.2
JIJ				S	Sn	20 13 21.8	-1.6
JTJ	Tarama	3.85	42	P	Pn	20 12 51.6	+0.7
JTJ				S	Sn	20 13 36.1	-0.8
KNM	Kinmen	4.09	310	eP	Pn	20 12 55.8	+1.6
	baz=311						
JMJ	Miyako jima 2	4.36	46	eS	Sn	20 13 48.8	-0.5
JOGS	Gusukube	4.40	47	eS	Sn	20 13 49.8	-0.5
KSRS	Korea Array	16.46	17	Pn	P	20 15 44.1	-1.4
	0.3nm,0.3s,baz=197,slow=11,SNR=8.3						
MJAR	Matsushiro Arr	20.44	40	P	Pn	20 16 32.3	+0.8
	2.9nm,0.8s,baz=230,slow=12,SNR=7.8						
CMAR	Chiang Mai Arr	21.77	265	P	P	20 16 44.2	+0.4
	1.3nm,0.9s,baz=73,slow=9.3,SNR=7.4						
USRK	Ussuriysk Arra	23.87	18	P	P	20 17 07.0	+1.6
	1.9nm,0.8s,baz=202,slow=10,SNR=5.4						
SONM	Songino Array	28.80	338	P	P	20 17 49.4	-0.8
	0.3nm,0.6s,baz=151,slow=9.2,SNR=4.5						
MKAR	Makanchi Array	40.49	318	P	P	20 19 31.1	+0.2
	2.2nm,0.8s,baz=110,slow=10,SNR=12						
ZALV	Zalesovo Beam	42.58	328	P	P	20 19 46.9	-1.1
	2.5nm,0.6s,baz=113,slow=8.2,SNR=10						
WRA	Warramunga Arr	43.24	163	P	P	20 19 47.4	-6.3
	1.4nm,0.8s,baz=345,slow=9.0,SNR=4.9						
ASAR	Alice Springs	46.69	165	P	P	20 20 15.8	-5.3
	0.7nm,0.8s,baz=345,slow=7.2,SNR=6.2						
FINES	FINESS Array B	73.81	330	P	P	20 23 26.7	+0.2
	1.6nm,0.8s,baz=72,slow=6.2,SNR=4.3						
YKA	Yellowknife Ar	84.92	23	P	P	20 24 28.5	+1.5
	0.1nm,0.4s,baz=316,slow=4.8,SNR=5.8						

*CSEM **05** 20:19:35.2, 37°.86N×27°.56E, h7km, MD2.7, After DDA*
DDA 05 20:19:35.2, 37°.86N×27°.56E, h7km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.30	238	i P	Pg	20 19 41.2	+0.1
GCAM				i S	Sg	20 19 45.1	-0.1
GCAM	G?zelcaml?	0.30	238	i P	Pg	20 19 41.2	0.0
GCAM				i S	Sg	20 19 45.1	-0.1
AYDN	Tasoluk	0.32	128	i P	Pg	20 19 42.2	+0.6
AYDN				i S	Sg	20 19 46.1	+0.2
AYDN	Tasoluk	0.32	128	i P	Pg	20 19 42.2	+0.6
AYDN				i S	Sg	20 19 46.1	+0.1
AKHS	Akhisar	1.04	11	i P	Pb	20 19 55.4	-0.1
AKHS				i S	Sg	20 20 08.3	-0.4
AKHS	Akhisar	1.04	11	i P	Pb	20 19 55.4	-0.1
AKHS				i S	Sg	20 20 08.3	-0.4
DNZL	Cakiroluk	1.19	98	i P	Pn	20 19 58.5	0.0
DNZL				i S	Sn	20 20 15.5	+0.4
DNZL	Cakiroluk	1.19	98	i P	Pn	20 19 58.5	0.0
DNZL				i S	Sn	20 20 15.5	+0.3
DEMI	Demirci	1.49	37	i P	Pg	20 20 03.9	0.0
DEMI				i S	Sn	20 20 21.4	-0.9
DEMI	Demirci	1.49	37	i P	Pg	20 20 03.9	0.0
DEMI				i S	Sn	20 20 21.4	-0.9

*IDC **05** 20:20:49.9±0.5, 44°.28N×11°.93E, h0km, mb4.4/23, mb1 4.6/31, mb1mx4.5/36, mbtmp4.4/31, ML4.4/7, MS4.1/24, Ms1 4.1/24, ms1mx3.9/49, Error ellipse: s-maj=11.3km s-min=9.2km az=121.0*
*BJI **05** 20:20:49.1, 44°.63N×11°.71E, h8km, mB5.1/20, mb4.8/38, Ms4.9/16, Ms7 4.6/17*
*GEN **05** 20:20:50.6, 43°.94N×12°.24E, h5km, ML4.7*
*ISCJB **05** 20:20:51.8±0.2, 44°.302N±0°.009×12°.04E±0°.01, h19km±1km, mb4.5/80, MS4.2/25, Error ellipse: s-maj=1.5km s-min=1.2km az=9.5*
*MOS **05** 20:20:51.9±1.0, 44°.34N×11°.96E, h26km, mb4.9/25, MS4.0/25, Error ellipse: s-maj=3.2km s-min=2.5km az=83.7*
*PDG **05** 20:20:52.6±1.0, 44°.33N×11°.99E, h26km±1km, ML4.8/9, Error ellipse: s-maj=0.6km s-min=1.0km az=0.0*
*CRAAG **05** 20:20:52.4, 44°.33N×11°.98E, Mw4.8*
*ZUR **05** 20:20:52.9, 44°.44N×11°.76E, h4km±11km, ML4.5/8*
*LDG **05** 20:20:52.3±0.1, 44°.36N×12°.11E, h20km, Ml4.7/28, Error ellipse: s-maj=2.3km s-min=1.7km az=31.0*
*PRU **05** 20:20:53.6, 44°.36N×11°.93E, h20km, M4.6*
*ROM **05** 20:20:53.3±0.1, 44°.23N×11°.91E, h24km±1km, Ml4.6/51, Error ellipse: s-maj=2.2km s-min=1.5km az=43.0*
*TIR **05** 20:20:53.5±4.1, 42°.84N×12°.80E, h0km±499km*
*NEIC **05** 20:20:53.0, 44°.24N×12°.00E, h28km, mb4.6/36, ML4.7(LDG), ML4.5(ZUR), ML4.7(VIE), MW4.8(ROM), After ROM.*
NEIC Felt [V] at Savignano sul Rubicone and Solarolo; [IV] at Bellaria-Igea Marina, Castel Bolognese, Castrocaro Terme, Cervia, Cesena, Faenza, Forli, Forlimpopoli, Imola, Pesaro, Ravenna and Rimini; [III] at Ancona, Arezzo, Bologna, Fano, Ferrara, Florence, Lugo, Padova, Trieste and Venice. Felt in much of Emilia Romagna, Marche, Toscana, Umbria and Veneto and in parts of Lazio, Liguria, Lombardia and Trentino-Alto Adige. Also felt at Ljubljana, Slovenia.
*VIE **05** 20:20:53.9±1.2, 44°.41N×12°.03E, h12km±9km, mb4.0/18,*

ML4.7/19,Ms4.6/1,Error ellipse: s-maj=8.0km s-min=4.1km az=170.0

*CSEM **05** 20:20:53.1±0.1,44°.31N×11°.98E,h20km,mb4.7/29,Ms4.8, Mw4.8,Error ellipse: s-maj=1.6km s-min=1.3km az=2.0*

*STR **05** 20:20:55.4±0.5,44°.43N×11°.65E,h10km,Ml4.8,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*DJA **05** 20:21:01.7±7.7,44°N±16°×1°2E±4°2,h76km±54km,M4.6/8, mB4.7/2,mb4.6/8,Mw(mB)3.9/2*

ISC 05 20:20:53.1±0.4**,44°.24N**±0°.01×**11°.98E**±0°.01**,h20km**±1km**, h19km:pP-P,n1463,σ1.39**/1677**,mb4.6**/81**,MS4.2**/25**, 119C-208D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRSN	Barisano	0.08	58	P	Pg	20 20 58.3	+1.4
BRSN	Barisano	0.08	58	⇓iPg	Pg	20 20 58.3	+1.4
	1.0nm,0.2s						
BRSN	Barisano	0.08	58	⇓iPg	Pg	20 20 58.3	+1.4
	1.0nm,0.2s						
FAEN	Faenza	0.09	303	Pg	Pg	20 20 57.6	+0.7
FAEN				Sg	Sg	20 21 01.5	+2.0
FAEN	Faenza	0.09	303	ePg	Pg	20 20 57.6	+0.7
FAEN				Sg	Sg	20 21 01.5	+2.0
SFI	Santa Sofia	0.35	196	P	Pg	20 21 00.5	-0.2
SFI				S	Sb	20 21 06.0	+0.1
SFI	Santa Sofia	0.35	196	P	Pg	20 21 00.5	-0.2
SFI				S	Sb	20 21 06.0	+0.1
SFI	Santa Sofia	0.35	196	⇓Pg	Pg	20 21 00.5	-0.2
SFI				Sg	Sg	20 21 05.7	-0.1
	102µm,0.8s						
SFI	Santa Sofia	0.35	196	P	Pg	20 21 00.5	-0.2
SFI				Sg	Sg	20 21 05.7	-0.1
	102µm,0.8s						
SFI				S	Sb	20 21 06.0	+0.1
CMPO	Campotto Po	0.36	340	Pg	Pb	20 21 01.3	+0.3
	352µm,1.8s						
CMPO	Campotto Po	0.36	340	Pg	Pb	20 21 01.3	+0.3
	352µm,1.8s						
BLLA	Bellaria	0.37	105	Pg	Pn	20 21 02.3	-1.0
	112µm,0.5s						
BLLA	Bellaria	0.37	105	Pg	Pn	20 21 02.3	-1.0
	112µm,0.5s						
MTRZ	Monterenzio	0.39	290	⇓Pg	Pb	20 21 01.7	+0.2
	34µm,0.5s						
MTRZ	Monterenzio	0.39	290	⇓Pg	Pb	20 21 01.7	+0.2
	34µm,0.5s						
VMG	Vicchio	0.42	228	P	Pg	20 21 01.0	-0.9
VMG	Vicchio	0.42	228	Pg	Pg	20 21 01.3	-0.6
VMG	Vicchio	0.42	228	P	Pg	20 21 01.0	-0.9
VMG	Vicchio	0.42	228	ePg	Pg	20 21 01.3	-0.6
RSM	Repubblica di	0.46	132	P	Pn	20 21 03.9	-0.8
RSM				S	Sn	20 21 13.5	+1.2
RSM	Repubblica di	0.46	132	P	Pn	20 21 03.9	-0.8
RSM				S	Sn	20 21 13.5	+1.2
RSM	Repubblica di	0.46	132	Pg	Pb	20 21 03.6	+1.0
	23µm,1.5s						
RSM	Repubblica di	0.46	132	Pg	Pb	20 21 03.6	+1.0
	23µm,1.5s						
RSM	Repubblica di	0.46	132	P	Pn	20 21 03.9	-0.8
RSM				S	Sn	20 21 13.5	+1.2
ASQU	Asqua	0.47	197	⇓Pg	Pg	20 21 02.4	-0.3
	86µm,1.2s						
ASQU	Asqua	0.47	197	⇓Pg	Pg	20 21 02.4	-0.3
	86µm,1.2s						
SEI	Scarperia	0.49	248	P	Pg	20 21 02.1	-1.0
SEI	Scarperia	0.49	248	⇑iPg	Pg	20 21 02.1	-1.0
	1µm,0.3s						
SEI	Scarperia	0.49	248	P	Pg	20 21 02.1	-1.0
FIU	Minerbio Fiu	0.53	319	P	Pg	20 21 04.1	+0.3
FIU				S	Sn	20 21 14.6	+0.6
FIU	Minerbio Fiu	0.53	319	⇓Pg	Pg	20 21 04.5	+0.7
	200µm,1.6s						
FIU	Minerbio Fiu	0.53	319	P	Pg	20 21 04.1	+0.3
FIU	Minerbio Fiu	0.53	319	⇓Pg	Pg	20 21 04.5	+0.7
	200µm,1.6s						
FNVD	Fontana Vidola	0.62	263	Pg	Pb	20 21 04.5	-0.8
FNVD	Fontana Vidola	0.62	263	ePg	Pb	20 21 04.5	-0.8
PARC	Parchiule	0.62	162	P	Pg	20 21 05.4	-0.1
PARC				S	Sn	20 21 16.9	+0.6
PARC	Parchiule	0.62	162	Pg	Pg	20 21 05.4	-0.1
	35µm,0.8s						
PARC	Parchiule	0.62	162	Pg	Pg	20 21 05.4	-0.1
	35µm,0.8s						
PARC				S	Sn	20 21 16.9	+0.6
CRE	Caprese Michel	0.62	182	P	Pb	20 21 05.2	-0.2
CRE				S	Sn	20 21 16.3	-0.1
CRE	Caprese Michel	0.62	182	P	Pb	20 21 05.2	-0.2
CRE				S	Sn	20 21 16.3	-0.1
CRE	Caprese Michel	0.62	182	⇓Pg	Pb	20 21 05.2	-0.2
	16µm,0.6s						
CRE	Caprese Michel	0.62	182	P	Pb	20 21 05.2	-0.2
CRE				S	Sn	20 21 16.3	-0.1
PESA	Pesaro	0.69	116	Pg	Pn	20 21 07.9	+0.1
	50µm,0.4s						
PESA	Pesaro	0.69	116	Pg	Pn	20 21 07.9	+0.1
	50µm,0.4s						
ZCCA	Zocca	0.73	279	P	Pn	20 21 08.1	-0.3
ZCCA	Zocca	0.73	279	⇑ePg	Pg	20 21 08.0	+0.5
	6µm,0.4s						
ZCCA	Zocca	0.73	279	⇑ePg	Pg	20 21 08.0	+0.5
	6µm,0.4s						
BADI	Badiali	0.76	165	Pg	Pg	20 21 07.8	-0.2
BADI	Badiali	0.76	165	Pg	Pg	20 21 07.8	-0.2
FSSB	Fossombrone	0.80	133	P	Pg	20 21 08.5	-0.2
FSSB	Fossombrone	0.80	133	Pg	Pg	20 21 08.9	+0.2
FSSB	Fossombrone	0.80	133	P	Pg	20 21 08.5	-0.2
FSSB	Fossombrone	0.80	133	Pg	Pg	20 21 08.9	+0.2
ADRI	Adria, Italy	0.80	2	⇓ePg	Pg	20 21 09.0	+0.2
ADRI				eSg	Sn	20 21 21.9	+1.3
ADRI	Adria, Italy	0.80	2	⇓ePg	Pg	20 21 09.0	+0.2
RAVA	Ravarino	0.80	310	P	Pn	20 21 09.5	+0.1
RAVA				S	Sn	20 21 23.0	+2.3
RAVA	Ravarino	0.80	310	Pg	Pn	20 21 09.5	+0.1
	62µm,0.7s						
RAVA	Ravarino	0.80	310	Pg	Pn	20 21 09.5	+0.1
	62µm,0.7s						
CDCA	Citt' di Caste	0.80	167	Pg	Pg	20 21 08.7	-0.2
	40µm,0.8s						
CDCA	Citt' di Caste	0.80	167	Pg	Pg	20 21 08.7	-0.2
	40µm,0.8s						
PIEI	Pieia	0.81	150	Pg	Pb	20 21 08.7	+0.1
	40µm,0.7s						
PIEI	Pieia	0.81	150	Pg	Pb	20 21 08.7	+0.1
	40µm,0.7s						
PZZT	Monte Pizzetto	0.81	263	Pg	Pb	20 21 07.9	-0.8
PZZT	Monte Pizzetto	0.81	263	ePg	Pb	20 21 07.9	-0.8
CRMI	Carmignano	0.86	239	Pg	Pb	20 21 08.6	-0.8
	16µm,0.9s						
CRMI	Carmignano	0.86	239	Pg	Pb	20 21 08.6	-0.8
	16µm,0.9s						
CAFI	Castiglion Fio	0.91	181	⇓ePg	Pb	20 21 10.2	-0.1
	22µm,0.6s						
CAFI	Castiglion Fio	0.91	181	⇓ePg	Pb	20 21 10.2	-0.1
	22µm,0.6s						
CSNT	Castellina Chi	0.92	213	Pg	Pb	20 21 09.9	-0.5
	14µm,0.5s						
CSNT	Castellina Chi	0.92	213	Pg	Pb	20 21 09.9	-0.5
	14µm,0.5s						
BDI	Bagni Di Lucca	1.01	260	P	Pn	20 21 12.4	+0.1
BDI				S	Sg	20 21 27.3	+1.1
BDI	Bagni Di Lucca	1.01	260	P	Pn	20 21 12.4	+0.1
BDI				S	Sg	20 21 27.3	+1.1
BDI	Bagni Di Lucca	1.01	260	Pg	Pb	20 21 11.6	-0.4
BDI	Bagni Di Lucca	1.01	260	Pg	Pb	20 21 11.6	-0.4
BDI	Bagni Di Lucca	1.01	260	P	Pn	20 21 12.4	+0.1
BDI				S	Sg	20 21 27.3	+1.1
ARVD	Arcevia	1.02	137	⇓ePg	Pg	20 21 12.6	-0.3
	45µm,1.2s						
ARVD	Arcevia	1.02	137	⇓ePg	Pg	20 21 12.6	-0.3
	45µm,1.2s						
SENI	Senigallia	1.05	120	Pg	Pg	20 21 14.4	+0.8
	33µm,0.8s						
SENI	Senigallia	1.05	120	Pg	Pg	20 21 14.4	+0.8
	33µm,0.8s						
MURB	Monte Urbino	1.05	158	Pg	Pn	20 21 13.2	+0.3
	111µm,1.3s						
MURB	Monte Urbino	1.05	158	Pg	Pn	20 21 13.2	+0.3
	111µm,1.3s						
NOVE	Novellara	1.06	302	P	Pn	20 21 13.1	+0.2
NOVE				S	Sg	20 21 28.8	+1.0
NOVE	Novellara	1.06	302	Pg	Pn	20 21 13.4	+0.5
	21µm,0.6s						
NOVE	Novellara	1.06	302	P	Pn	20 21 13.1	+0.2
NOVE	Novellara	1.06	302	Pg	Pn	20 21 13.4	+0.5
	21µm,0.6s						
NOVE				S	Sg	20 21 28.8	+1.0
SBPO	S.Benedetto Po	1.11	317	Pg	Pb	20 21 13.8	+0.2
	47µm,1.0s						
SBPO	S.Benedetto Po	1.11	317	Pg	Pb	20 21 13.8	+0.2
	47µm,1.0s						
MAIM	Mastiano	1.12	254	P	Pn	20 21 13.0	-0.7
MAIM				S	Sg	20 21 29.6	0.0
MAIM	Mastiano	1.12	254	⇓ePg	Pn	20 21 12.9	-0.8
	4µm,0.4s						
MAIM	Mastiano	1.12	254	⇓ePg	Pn	20 21 12.9	-0.8
	4µm,0.4s						
MAIM	Mastiano	1.12	254	P	Pn	20 21 13.3	-0.4
MAIM				S	Sn	20 21 28.9	+0.3
ERBM	Eremo	1.14	280	P	Pg	20 21 16.0	+0.8
ERBM				S	Sg	20 21 32.9	+2.7
ERBM	Eremo	1.14	280	Pg	Pg	20 21 15.0	-0.2
	22µm,1.6s						
ERBM	Eremo	1.14	280	Pg	Pg	20 21 15.0	-0.2
	22µm,1.6s						
ERBM	Eremo	1.14	280	P	Pg	20 21 16.0	+0.8
VLC	Villacollemand	1.15	266	ePg	Pb	20 21 14.5	+0.1
VLC				eSg	Sn	20 21 29.3	0.0
VLC	Villacollemand	1.15	266	Pg	Pb	20 21 14.9	+0.5
	10µm,1.0s						
VLC	Villacollemand	1.15	266	ePg	Pb	20 21 14.5	+0.1
VLC				eSg	Sn	20 21 29.3	0.0
PII	Pisa	1.17	244	P	Pn	20 21 13.6	-0.8
PII	Pisa	1.17	244	P	Pn	20 21 13.6	-0.8
PII	Pisa	1.17	244	⇓Pg	Pn	20 21 13.7	-0.8
PII	Pisa	1.17	244	P	Pn	20 21 13.6	-0.8
SNTG	Esanatoglia	1.21	144	Pg	Pb	20 21 15.7	+0.4
SNTG	Esanatoglia	1.21	144	Pg	Pb	20 21 15.7	+0.4
CING	Cingoli	1.23	134	Pg	Pg	20 21 16.7	-0.3
	22µm,1.0s						
CING	Cingoli	1.23	134	Pg	Pg	20 21 16.7	-0.3
	22µm,1.0s						
ASSB	Assisi San Ben	1.30	157	Pg	Pb	20 21 17.0	+0.1
	21µm,1.0s						
ASSB	Assisi San Ben	1.30	157	Pg	Pb	20 21 17.0	+0.1
	21µm,1.0s						
GRFL	Gerfalco	1.31	214	Pg	Pn	20 21 15.8	-0.6
GRFL	Gerfalco	1.31	214	Pg	Pn	20 21 15.8	-0.6
MGAB	Montegabbione	1.33	176	Pg	Pn	20 21 16.9	+0.2
MGAB	Montegabbione	1.33	176	Pg	Pn	20 21 16.9	+0.2
AOI	Ancona	1.36	120	⇑ePn	Pb	20 21 18.1	+0.1
	17µm,0.7s						
AOI	Ancona	1.36	120	⇑ePn	Pb	20 21 18.1	+0.1
	17µm,0.7s						
SACS	San Casciano d	1.39	182	⇓ePg	Pn	20 21 17.8	+0.3
	8µm,0.7s						
GRAM	Graiana	1.40	281	P	Pb	20 21 19.2	+0.6
CESI	CESI - Serrava	1.41	151	⇓ePn	Pb	20 21 19.3	+0.5
	6µm,1.0s						
CESI	CESI - Serrava	1.41	151	⇓ePn	Pb	20 21 19.3	+0.5
	6µm,1.0s						
ARCI	Arcidosso	1.44	195	⇓ePg	Pn	20 21 17.8	-0.4
	6µm,0.8s						
ARCI	Arcidosso	1.44	195	⇓ePg	Pn	20 21 17.8	-0.4
	6µm,0.8s						
FDMO	Fiordimonte	1.45	146	Pn	Pb	20 21 19.7	+0.2
	20µm,1.1s						
FDMO	Fiordimonte	1.45	146	Pn	Pb	20 21 19.7	+0.2
	20µm,1.1s						
CODM	Codolo	1.54	276	P	Pb	20 21 21.1	+0.1
CODM				S	Sb	20 21 41.5	+1.5
MTLO	Montello	1.57	3	⇓ePg	Pn	20 21 18.9	-1.1
MTLO	Montello	1.57	3	⇓ePg	Pn	20 21 18.9	-1.1
NRCA	Norcia	1.63	149	Pn	Pb	20 21 22.4	-0.2
NRCA	Norcia	1.63	149	Pn	Pb	20 21 22.4	-0.2
LATE	Laterza	1.63	185	Pn	Pn	20 21 21.4	+0.6
	1µm,1.1s						
LATE	Laterza	1.63	185	Pn	Pn	20 21 21.4	+0.6
	1µm,1.1s						
CGRP	Cima Grappa	1.64	356	⇓ePg	Pn	20 21 18.8	-2.3
CGRP				eSg	Sn	20 21 39.3	-2.5
CGRP	Cima Grappa	1.64	356	P	Pn	20 21 18.8	-2.3
CGRP				S	Sn	20 21 39.0	-2.8
CGRP	Cima Grappa	1.64	356	ePg	Pn	20 21 18.8	-2.3
CGRP				S	Sn	20 21 39.0	-2.8
CGRP				eSg	Sn	20 21 39.3	-2.5
BALD	Monte Baldo	1.66	331	⇓ePg	Pn	20 21 20.2	-1.2
BALD				eSg	Sn	20 21 40.2	-2.0
BALD	Monte Baldo	1.66	331	ePg	Pn	20 21 20.2	-1.2
BALD				eSg	Sn	20 21 40.2	-2.0
GROG	Isola di Gorgo	1.72	242	Pn	Pn	20 21 21.2	-0.7
GROG	Isola di Gorgo	1.72	242	Pn	Pn	20 21 21.2	-0.7
SALO	Salr	1.72	324	Pn	Pn	20 21 21.4	-0.6
	18µm,0.8s						
SALO	Salr	1.72	324	Pn	Pn	20 21 21.4	-0.6
	18µm,0.8s						
DDS	Dosso del Somm	1.73	341	⇓ePn	Pn	20 21 21.1	-1.2
DDS				eSn	Sn	20 21 43.3	-0.7
DDS	Dosso del Somm	1.73	341	⇓ePn	Pn	20 21 21.1	-1.2
DDS				eSn	Sn	20 21 43.3	-0.7
VARN	Col Varnada, M	1.75	3	⇓ePn	Pn	20 21 20.8	-1.7
VARN	Col Varnada, M	1.75	3	⇓ePn	Pn	20 21 20.8	-1.7
SC2M	Scurtabo	1.76	276	P	Pb	20 21 24.5	-0.3
SC2M				S	Sb	20 21 46.8	+0.3
CAE	Caneva	1.79	10	⇓ePn	Pn	20 21 21.8	-1.3
CAE	Caneva	1.79	10	⇓ePn	Pn	20 21 21.8	-1.3
OFFI	Offida	1.80	136	Pn	Pb	20 21 25.0	-0.4
	33µm,0.7s						
OFFI	Offida	1.80	136	Pn	Pb	20 21 25.0	-0.4
	33µm,0.7s						
CTI	Castel Tesino	1.82	353	P	Pn	20 21 22.5	-1.0
CTI	Castel Tesino	1.82	353	P	Pn	20 21 22.4	-1.0
CTI	Castel Tesino	1.82	353	⇓ePn	Pn	20 21 22.5	-1.0
	436nm,0.2s						
CTI	Castel Tesino	1.82	353	⇓ePn	Pn	20 21 22.5	-1.0
	436nm,0.2s						
POLC	Polcenigo	1.82	11	⇓ePn	Pn	20 21 22.4	-1.0
POLC				eSn	Sn	20 21 46.2	+0.3
TLI	Talmassons	1.86	25	⇓iPn	Pn	20 21 22.9	-1.0
TLI	Talmassons	1.86	25	⇓iPn	Pn	20 21 22.9	-1.0
PANI	Panarotta	1.87	345	⇓ePn	Pn	20 21 23.1	-1.1
PANI	Panarotta	1.87	345	⇓ePn	Pn	20 21 23.1	-1.1
MAON	Monte Argentar	1.92	199	⇓ePn	Pn	20 21 24.6	-0.1
	3µm,1.2s						
MAON	Monte Argentar	1.92	199	⇓ePn	Pn	20 21 24.6	-0.1
	3µm,1.2s						
MNS	Montasola	1.93	164	Pn	Pn	20 21 25.8	+1.0
	5µm,0.8s						
MNS	Montasola	1.93	164	Pn	Pn	20 21 25.8	+1.0
	5µm,0.8s						
TRI	Trieste	1.94	40	⇓ePn	Pn	20 21 23.6	-1.3
TRI				eSn	Sn	20 21 47.1	-1.6
TRI	Trieste	1.94	40	eP	Pn	20 21 23.7	-1.3
TRI				e		20 21 46.9	
TRI	Trieste	1.94	40	ePn	Pn	20 21 23.6	-1.3
TRI				eSn	Sn	20 21 46.9	-1.9
TRI	Trieste	1.94	40	⇓ePn	Pn	20 21 23.6	-1.3
	10µm,0.5s						
TRI	Trieste	1.94	40	eP	Pn	20 21 23.7	-1.3
TRI				eSn	Sn	20 21 47.1	-1.6
SKDS	Skadanscina	1.95	47	iPn	Pn	20 21 23.9	-1.2
SKDS							
	comp=Z,10µm,0.4s						
SKDS	Skadanscina	1.95	47	iPn	Pn	20 21 23.9	-1.2
	comp=Z,10µm,0.4s						
RNI	Roncone	1.98	332	⇓ePn	Pn	20 21 24.6	-1.1
RNI	Roncone	1.98	332	⇓ePn	Pn	20 21 24.6	-1.1
FAU	Forcella Aurin	1.99	0	⇓ePn	Pn	20 21 24.2	-1.6
FAU	Forcella Aurin	1.99	0	⇓ePn	Pn	20 21 24.2	-1.6
TERO	Teramo	2.00	143	Pn	Pn	20 21 26.9	+1.0
	comp=Z,9µm,0.7s						
TERO	Teramo	2.00	143	Pn	Pn	20 21 26.9	+1.0
	comp=Z,9µm,0.7s						
AGOR	Agordo	2.04	1	ePn	Pn	20 21 25.2	-1.2
AGOR	Agordo	2.04	1	Pn	Pn	20 21 25.3	-1.2
	comp=Z,4µm,0.4s						
SABO	M.te Sabotino	2.08	33	⇓ePn	Pn	20 21 26.2	-0.8
SABO	M.te Sabotino	2.08	33	⇓ePn	Pn	20 21 26.2	-0.8
	comp=Z,22µm,0.6s						
SABO	M.te Sabotino	2.08	33	⇓ePn	Pn	20 21 26.2	-0.8
	comp=Z,22µm,0.6s						
CIMO	Cimolais	2.09	9	⇓ePn	Pn	20 21 25.7	-1.5
CIMO	Cimolais	2.09	9	⇓ePn	Pn	20 21 25.7	-1.5
NVLJ	Novalja	2.10	80	iPn	Pn	20 21 27.3	+0.2
NVLJ				Sn	Sn	20 21 51.2	-1.4
MPRI	Monte Prat	2.12	19	⇓ePn	Pn	20 21 26.9	-0.7
MPRI	Monte Prat	2.12	19	⇓ePn	Pn	20 21 26.9	-0.7
COLI	Coloredo	2.13	27	⇓ePn	Pn	20 21 26.8	-0.9
COLI	Coloredo	2.13	27	⇓ePn	Pn	20 21 26.8	-0.9
KNDS	Knezji Dol	2.14	52	iPn	Pn	20 21 27.0	-0.8
KNDS				iPg	Pb	20 21 32.4	+1.2
KNDS				iSn	Sn	20 21 53.2	-0.6
KNDS							
	comp=Z,16µm,0.7s						
KNDS	Knezji Dol	2.14	52	iPn	Pn	20 21 27.0	-0.8
AQU	L'Aquila	2.15	151	ePn	Pb	20 21 30.3	-1.2
AQU				eSn	Sb	20 21 57.6	-0.2
AQU	L'Aquila	2.15	151	⇑iP	Pb	20 21 30.5	-1.0
AQU	L'Aquila	2.15	151	Pn	Pb	20 21 30.4	-1.0
	comp=Z,21µm,1.3s						
AQU	L'Aquila	2.15	151	eP	Pb	20 21 30.3	-1.2
AQU				eS	Sb	20 21 57.6	-0.2
GENL	Genova Univers	2.17	275	P	Pb	20 21 32.0	+0.3
TOLF	Tolfa	2.18	180	⇓ePn	Pn	20 21 28.9	+0.6
	comp=Z,2µm,1.0s						
TOLF	Tolfa	2.18	180	⇓ePn	Pn	20 21 28.9	+0.6
	comp=Z,2µm,1.0s						
BAD	Bernadia	2.19	24	⇓ePn	Pn	20 21 27.4	-1.0
BAD				eSn	Sn	20 21 54.2	-0.8
BAD	Bernadia	2.19	24	⇓ePn	Pn	20 21 27.4	-1.0
BAD				eSn	Sn	20 21 54.2	-0.8
VINO	Villanova	2.21	24	⇑ePn	Pn	20 21 27.3	-1.6
VINO	Villanova	2.21	24	Pn	Pn	20 21 27.7	-1.1
VINO	Villanova	2.21	24	Pn	Pn	20 21 27.7	-1.1
JAVS	Javornik	2.22	41	iPn	Pn	20 21 27.7	-1.2
JAVS				eSn	Sn	20 21 54.9	-0.9
JAVS							
	comp=Z,16µm,1.0s						
JAVS	Javornik	2.22	41	iPn	Pn	20 21 27.7	-1.2
JAVS				eSn	Sn	20 21 54.9	-0.9
	comp=Z,16µm,1.0s						
BOO	Bordano	2.22	20	⇓iPn	Pn	20 21 27.9	-1.0
BOO	Bordano	2.22	20	⇓iPn	Pn	20 21 27.9	-1.0
MDI	Monti di Nese	2.22	314	Pn	Pn	20 21 27.7	-1.3
	comp=Z,3µm,0.7s						
MDI	Monti di Nese	2.22	314	Pn	Pn	20 21 27.7	-1.3
	comp=Z,3µm,0.7s						
VOJS	Vojsko	2.24	36	iPn	Pn	20 21 28.1	-1.1
VOJS				iSn	Sn	20 21 55.6	-0.8
VOJS							
	comp=Z,5µm,0.5s						
VOJS	Vojsko	2.24	36	iPn	Pn	20 21 28.1	-1.1
VOJS				iSn	Sn	20 21 55.6	-0.8
	comp=Z,5µm,0.5s						
DRE	Drenchia	2.26	31	⇓ePn	Pn	20 21 28.5	-1.0
DRE				eSn	Sn	20 21 56.1	-0.7
DRE	Drenchia	2.26	31	⇓ePn	Pn	20 21 28.5	-1.0
DRE				eSn	Sn	20 21 56.1	-0.7
KOSI	Kohlern	2.26	349	⇑ePn	Pn	20 21 28.9	-0.7
ROBS	Robic	2.28	28	iPn	Pn	20 21 28.6	-1.0
ROBS				eSn	Sn	20 21 56.6	-0.5
ROBS	Robic	2.28	28	iPn	Pn	20 21 28.6	-1.0
ROBS				eSn	Sn	20 21 56.6	-0.5
FUSE	Fusea	2.29	18	⇑ePn	Pn	20 21 28.4	-1.4
FUSE	Fusea	2.29	18	⇑ePn	Pn	20 21 28.4	-1.4
CEY	Cerknica	2.29	48	iPn	Pn	20 21 28.7	-1.2
CEY							
	comp=Z,13µm,0.7s						
CEY	Cerknica	2.29	48	iPn	Pn	20 21 28.7	-1.2
	comp=Z,13µm,0.7s						
FAGN	Fagnano	2.30	149	⇑ePn	Pn	20 21 31.6	+1.6
	comp=Z,8µm,0.7s						
FAGN	Fagnano	2.30	149	⇑ePn	Pn	20 21 31.6	+1.6
	comp=Z,8µm,0.7s						
APPI	Appiano	2.30	347	Pn	Pn	20 21 29.5	-0.5
	comp=Z,4µm,0.4s						
APPI	Appiano	2.30	347	Pn	Pn	20 21 29.5	-0.5
	comp=Z,4µm,0.4s						
BOSI	Bozen	2.30	349	⇓ePn	Pn	20 21 30.0	0.0
BOSI	Bozen	2.30	349	⇓ePn	Pn	20 21 30.0	0.0
CSMI	Casera Mimoias	2.32	12	⇓ePn	Pn	20 21 29.6	-0.8
CSMI	Casera Mimoias	2.32	12	⇓ePn	Pn	20 21 29.6	-0.8
CADS	Cadrg	2.34	31	iSn	Sn	20 21 57.8	-1.0
CADS	Cadrg	2.34	31	iSn	Sn	20 21 57.8	-1.0
PTCC	Patocco-Chiusa	2.37	24	P	Pn	20 21 29.8	-1.2
PTCC	Patocco-Chiusa	2.37	24	⇓ePn	Pn	20 21 29.8	-1.2
	comp=Z,5µm,0.6s						
PTCC	Patocco-Chiusa	2.37	24	⇓ePn	Pn	20 21 29.8	-1.2
	comp=Z,5µm,0.6s						
GBRS	Gornja Briga	2.39	56	iPn	Pn	20 21 30.9	-0.3
GBRS				iSn	Sn	20 21 59.3	-0.7
	comp=Z,3µm,0.4s						
CERT	Cerreto	2.41	162	⇓ePn	Pn	20 21 32.7	+1.2
	comp=Z,7µm,0.9s						
CERT	Cerreto	2.41	162	⇓ePn	Pn	20 21 32.7	+1.2
	comp=Z,7µm,0.9s						
ZOU	Zoufplan	2.42	16	⇑ePn	Pn	20 21 30.6	-1.2
FVI	Forni Avoltri	2.42	13	P	Pn	20 21 31.0	-0.8
FVI	Forni Avoltri	2.42	13	P	Pn	20 21 30.9	-0.8
FVI	Forni Avoltri	2.42	13	Pn	Pn	20 21 30.9	-0.8
	comp=Z,7µm,0.6s						
FVI	Forni Avoltri	2.42	13	Pn	Pn	20 21 30.9	-0.8
	comp=Z,7µm,0.6s						
CRNS	Crni Vrh	2.45	40	iPn	Pn	20 21 31.1	-0.9
CRNS				iSn	Sn	20 22 01.0	-0.4
CRNS							
	comp=Z,7µm,0.5s						
PLRO	Paularo	2.45	19	⇓ePn	Pn	20 21 31.3	-0.9
PLRO	Paularo	2.45	19	⇓ePn	Pn	20 21 31.3	-0.9
PCP	Piancastagn	2.48	278	P	Pn	20 21 32.7	+0.2
PCP				S	Sn	20 21 59.2	-3.0
LSR	Lussari	2.49	25	⇓ePn	Pn	20 21 31.7	-1.0
LSR	Lussari	2.49	25	⇓ePn	Pn	20 21 31.7	-1.0
BRMO	Bormio	2.50	334	Pn	Pn	20 21 32.9	0.0
	comp=Z,2µm,0.8s						
BRMO	Bormio	2.50	334	Pn	Pn	20 21 32.9	0.0
	comp=Z,2µm,0.8s						
GORS	Gorjuse	2.52	34	iPn	Pn	20 21 32.0	-1.0
GORS				iSn	Sn	20 22 02.5	-0.7
GORS							
	comp=Z,6µm,0.8s						
GORS	Gorjuse	2.52	34	iPn	Pn	20 21 32.0	-1.0
GORS				iSn	Sn	20 22 02.5	-0.7
	comp=Z,6µm,0.8s						
ABSI	Aberstueckl	2.53	350	⇓ePn	Pn	20 21 32.8	-0.5
ABTA	Abfaltersbach	2.53	8	ePn	Pn	20 21 33.0	-0.2
	SNR=684						
ABTA	Abfaltersbach	2.53	8	ePn	Pn	20 21 33.0	-0.2
ABTA	Abfaltersbach	2.53	8	Pn	Pn	20 21 33.0	-0.2
	SNR=684						
ACOM	Acomizza, Ital	2.55	25	⇓ePn	Pn	20 21 32.6	-0.8
ACOM	Acomizza, Ital	2.55	25	⇓ePn	Pn	20 21 32.7	-0.8
LJU	Ljubljana	2.55	44	iPn	Pn	20 21 33.0	-0.4
LJU				iSn	Sn	20 22 03.5	-0.3
LJU				eSg	Sg	20 22 15.9	+0.8
LJU							
	comp=Z,4µm,0.4s						
LJU	Ljubljana	2.55	44	iPn	Pn	20 21 33.0	-0.4
LJU				iSn	Sn	20 22 03.5	-0.3
LJU				eSg	Sg	20 22 15.9	+0.8
	comp=Z,4µm,0.4s						
MOSI	Grossmontoni	2.58	338	⇓ePn	Pn	20 21 34.5	+0.5
BOJS	Bojanci	2.65	60	iPn	Pn	20 21 34.5	-0.2
BOJS							
	comp=Z,7µm,0.7s						
BOJS	Bojanci	2.65	60	iPn	Pn	20 21 34.5	-0.2
	comp=Z,7µm,0.7s						
MYKA	Terra Mystica	2.66	26	⇑iPn	Pn	20 21 34.3	-0.6
MYKA				⇓iSn	Sn	20 22 05.6	-1.1
MYKA	Terra Mystica	2.66	26	⇑iPn	Pn	20 21 34.3	-0.6
MYKA				iSn	Sn	20 22 05.6	-1.1
MYKA	Terra Mystica	2.66	26	Pn	Pn	20 21 34.3	-0.6
MYKA				Sn	Sn	20 22 05.6	-1.1
FUORN	Ofenpass-Fuorn	2.67	334	eP	Pn	20 21 35.1	-0.2
	comp=Z,6µm,0.8s						
FUORN	Ofenpass-Fuorn	2.67	334	eP	Pn	20 21 35.1	-0.2
FUORN	Ofenpass-Fuorn	2.67	334	eP	Pn	20 21 35.1	-0.2
	comp=Z,6µm,0.8s						
MUGIO	Muggio	2.67	310	eP	Pn	20 21 33.6	-1.6
	comp=Z,4µm,0.5s						
MUGIO	Muggio	2.67	310	eP	Pn	20 21 33.6	-1.6
MUGIO	Muggio	2.67	310	eP	Pn	20 21 33.6	-1.6
	comp=Z,4µm,0.5s						
RISI	Rein	2.71	1	⇑ePn	Pn	20 21 35.6	-0.1
ROSI	Rosskopf	2.72	352	⇑ePn	Pn	20 21 35.5	-0.4
PGF	Pioggiola	2.75	233	ePn	Pn	20 21 35.9	-0.4
PGF				eSn	Sn	20 22 08.8	-0.2
	comp=Z,2µm,0.3s						
PGF	Pioggiola	2.75	233	eP	Pn	20 21 35.9	-0.4
PGF				e		20 22 08.8	
PGF	Pioggiola	2.75	233	ePn	Pn	20 21 35.9	-0.4
PGF				eSn	Sn	20 22 08.8	-0.2

PGF	Pioggiola	2.75	233	*e*Pn	Pn	20 21 35.9	-0.4
PGF				*e*Sn	Sn	20 22 08.8	-0.2
	comp=Z,783nm,0.3s						
RORO	Rocca Rossa	2.82	269	P	Pn	20 21 37.6	+0.5
VDL	Val di Lei	2.87	322	*e*P	Pn	20 21 37.4	-0.5
VDL	Val di Lei	2.87	322	*e*Pn	Pn	20 21 37.4	-0.5
	comp=Z,3µm,0.7s						
VDL	Val di Lei	2.87	322	*e*P	Pn	20 21 37.4	-0.5
OBKA	Obir	2.90	38	⇓*e*Pn	Pn	20 21 38.0	-0.3
	SNR=188						
OBKA				⇓*i*Sn	Sb	20 22 18.4	-0.9
OBKA	Obir	2.90	38	⇓*e*Pn	Pn	20 21 38.0	-0.3
OBKA				*i* Sn	Sb	20 22 18.4	-0.9
OBKA	Obir	2.90	38	Pn	Pn	20 21 38.0	-0.3
	SNR=188						
TUE	Stuetta	2.90	321	*e*Pn	Pn	20 21 38.1	-0.3
TUE				*e*Sn	Sn	20 22 11.5	-1.3
TUE	Stuetta	2.90	321	*e*Pn	Pn	20 21 38.1	-0.3
TUE				*e*Sn	Sn	20 22 11.5	-1.3
FETA	Feichten	2.92	343	⇑*e*Pn	Pn	20 21 38.5	0.0
	SNR=692						
FETA				⇓*i*Sn	Sn	20 22 12.9	-0.2
FETA	Feichten	2.92	343	⇑*e*Pn	Pn	20 21 38.5	0.0
FETA				*i* Sn	Sn	20 22 12.9	-0.2
FETA	Feichten	2.92	343	Pn	Pn	20 21 38.5	0.0
	SNR=692						
FETA				Sn	Sn	20 22 12.9	-0.2
CRES	Cresnjev	2.93	56	*i* Pn	Pn	20 21 38.4	-0.2
CRES							
	comp=Z,8µm,0.8s						
CRES	Cresnjev	2.93	56	*i* Pn	Pn	20 21 38.4	-0.2
	comp=Z,8µm,0.8s						
DAVOX	Davos/Dischmat	2.94	331	*e*Pn	Pn	20 21 39.1	+0.2
	comp=Z,4µm,0.9s						
DAVOX	Davos/Dischmat	2.94	331	*e*Pn	Pn	20 21 39.1	+0.2
DAVOX				Pg	Pg	20 21 47.6	-1.9
DAVOX				Sn	Sn	20 22 14.8	+1.1
DAVOX				Lg	Lg	20 22 28.1	
DAVOX	Davos/Dischmat	2.94	331	Pn	Pn	20 21 39.8	+0.9
	comp=Z,93nm,0.3s,baz=156,slow=13,SNR=580						
DAVOX				Pg	Pg	20 21 47.6	-1.9
	comp=Z,102nm,0.3s,baz=181,slow=23,SNR=17						
DAVOX				Sn	Sn	20 22 14.8	+1.1
	comp=Z,217nm,0.3s,baz=298,slow=23,SNR=9.1						
DAVOX				Lg	Lg	20 22 28.1	
	comp=Z,171nm,0.3s,baz=347,slow=20,SNR=4.4						
DAVOX				LR	LR	20 23 06.6	
	comp=Z,3µm,21.9s,baz=139,slow=47						
DAVOX	Davos/Dischmat	2.94	331	*e*Pn	Pn	20 21 39.1	+0.2
	comp=Z,4µm,0.9s						
DAVOX	Davos/Dischmat	2.94	331	P	Pn	20 21 39.8	+0.9
	comp=Z,93nm,0.3s						
DAVOX	Davos/Dischmat	2.94	331	Pg	Pg	20 21 47.6	-1.9
DAVOX				S	Sn	20 22 14.8	+1.1
	comp=Z,3µm,21.9s						
IMI	Imperia	2.96	265	P	Pn	20 21 39.4	+0.3
KBA	Koelnbreinsper	2.99	18	*e*P	Pn	20 21 39.7	0.0
KBA				*i*		20 22 13.7	
KBA	Koelnbreinsper	2.99	18	*e*Pn	Pn	20 21 39.7	0.0
	SNR=274						
KBA				⇓*i*Sn	Sn	20 22 13.7	-1.4
KBA	Koelnbreinsper	2.99	18	*e*Pn	Pn	20 21 39.6	0.0
KBA				*i* Sn	Sn	20 22 13.7	-1.4
KBA	Koelnbreinsper	2.99	18	Pn	Pn	20 21 39.7	0.0
	SNR=274						
KBA				Sn	Sn	20 22 13.7	-1.4
CESS	Cesta pri Krsk	3.01	54	*i* Pn	Pn	20 21 39.3	-0.5
CESS							
	comp=Z,11µm,0.8s						
CESS	Cesta pri Krsk	3.01	54	*i* Pn	Pn	20 21 39.3	-0.5
	comp=Z,11µm,0.8s						
WTTA	Wattenberg	3.03	356	⇑*e*P	Pn	20 21 40.5	+0.3
WTTA				*i*		20 22 14.8	
WTTA	Wattenberg	3.03	356	⇑*i*Pn	Pn	20 21 40.5	+0.3
	SNR=406						
WTTA				⇓*i*Sn	Sn	20 22 14.8	-1.2
WTTA	Wattenberg	3.03	356	⇑*e*Pn	Pn	20 21 40.5	+0.3
WTTA				*i* Sn	Sn	20 22 14.8	-1.2
WTTA	Wattenberg	3.03	356	Pn	Pn	20 21 40.5	+0.3
	SNR=406						
WTTA				Sn	Sn	20 22 14.8	-1.2
GCIS	Gornji Cirnik	3.05	57	*i* Pn	Pn	20 21 40.0	-0.3
GCIS							
	comp=Z,8µm,1.2s						
GCIS	Gornji Cirnik	3.05	57	*i* Pn	Pn	20 21 40.0	-0.3
	comp=Z,8µm,1.2s						
WATA	Walderalm	3.11	355	*e*P	Pn	20 21 42.3	+1.1
WATA	Walderalm	3.11	355	*i* Pn	Pn	20 21 42.3	+1.1
	SNR=292						
WATA	Walderalm	3.11	355	*e*Pn	Pn	20 21 42.3	+1.1
WATA	Walderalm	3.11	355	Pn	Pn	20 21 42.3	+1.1
	SNR=292						
DOBS	Dobrina	3.12	51	*i* Pn	Pn	20 21 40.4	-0.8
DOBS							
	comp=Z,8µm,1.1s						
DOBS	Dobrina	3.12	51	*i* Pn	Pn	20 21 40.4	-0.8
	comp=Z,8µm,1.1s						
GOLS	Golise	3.13	54	*i* Pn	Pn	20 21 40.9	-0.5
GOLS							
	comp=Z,7µm,0.9s						
GOLS	Golise	3.13	54	*i* Pn	Pn	20 21 40.8	-0.5
	comp=Z,7µm,0.9s						
MOTA	Moosalm	3.16	349	⇓*e*P	Pn	20 21 42.6	+0.6
MOTA	Moosalm	3.16	349	⇓*i*Pn	Pn	20 21 42.6	+0.6
	SNR=602						
MOTA	Moosalm	3.16	349	⇓*e*Pn	Pn	20 21 42.6	+0.6
MOTA	Moosalm	3.16	349	Pn	Pn	20 21 42.6	+0.6
	SNR=602						
SAOF	Saorge	3.20	267	P	Pn	20 21 43.3	+1.0
SAOF						20 22 21.2	
SAOF	Saorge	3.20	267	P	Pn	20 21 43.3	+1.0
SAOF				Sn	Sn	20 22 21.2	+1.3
SAOF	Saorge	3.20	267	P	Pn	20 21 43.3	+1.0
SAOF				S	Sn	20 22 21.2	+1.3
SAOF	Saorge	3.20	267	P	Pn	20 21 43.3	+1.0
SAOF				S	Sn	20 22 21.2	+1.3
FUSIO	Fusio	3.22	315	*e*Pn	Pn	20 21 41.5	-1.2
	comp=Z,3µm,0.7s						
FUSIO	Fusio	3.22	315	*e*P	Pn	20 21 41.5	-1.2
FUSIO	Fusio	3.22	315	*e*Pn	Pn	20 21 41.5	-1.2
	comp=Z,3µm,0.7s						
SOKA	Soboth	3.25	40	⇑*i*Pn	Pn	20 21 42.6	-0.4
SOKA				⇑*i*Sn	Sn	20 22 20.1	-1.1
SOKA	Soboth	3.25	40	⇑*i*Pn	Pn	20 21 42.6	-0.4
SOKA				*i* Sn	Sn	20 22 20.1	-1.1
SOKA	Soboth	3.25	40	Pn	Pn	20 21 42.6	-0.4
SOKA				Sn	Sn	20 22 20.1	-1.1
TRAV	Traversella	3.27	294	P	Pn	20 21 43.2	-0.1
AUTN	L'Aution	3.29	267	P	Pn	20 21 44.5	+0.8
AUTN						20 22 22.4	
AUTN	L'Aution	3.29	267	P	Pn	20 21 44.5	+0.8
AUTN				Sn	Sn	20 22 22.4	0.0
AUTN	L'Aution	3.29	267	P	Pn	20 21 44.5	+0.8
AUTN				S	Sn	20 22 22.4	0.0
AUTN	L'Aution	3.29	267	P	Pn	20 21 44.5	+0.8
AUTN				S	Sn	20 22 22.4	0.0
OSPF	L'Ospedale	3.29	219	P	Pn	20 21 45.6	+1.9
OSPF	L'Ospedale	3.29	219	P	Pn	20 21 45.6	+1.9
OSPF	L'Ospedale	3.29	219	P	Pn	20 21 45.6	+1.9
SBF	Sospel	3.30	265	*e*Pn	Pn	20 21 43.3	-0.4
	SNR=1.0						
SBF				*e*Sn	Sn	20 22 19.6	-2.8
	comp=Z,955nm,0.4s,SNR=1.0						
SBF	Sospel	3.30	265	*e*P	Pn	20 21 43.3	-0.4
SBF				*e*		20 22 19.6	
SBF	Sospel	3.30	265	*e*Pn	Pn	20 21 43.3	-0.4
SBF				*e*Sn	Sn	20 22 19.6	-2.8
SBF	Sospel	3.30	265	*e*Pn	Pn	20 21 43.3	-0.4
	SNR=1.0						
SBF				*e*Sn	Sn	20 22 19.6	-2.8
	comp=Z,478nm,0.4s,SNR=1.0						
STV	Sant Anna di V	3.34	272	P	Pn	20 21 44.0	-0.4
PLONS	Plons/SG	3.35	328	*e*Pn	Pn	20 21 45.2	+0.8
	comp=Z,2µm,0.5s						
PLONS	Plons/SG	3.35	328	*e*Pn	Pn	20 21 45.2	+0.8
PLONS	Plons/SG	3.35	328	*e*Pn	Pn	20 21 45.2	+0.8
	comp=Z,2µm,0.5s						
RETA	Reutte	3.36	346	⇓*i*Pn	Pn	20 21 45.2	+0.7
	SNR=341						
RETA				⇓*i*Sn	Sn	20 22 23.1	-0.7
RETA	Reutte	3.36	346	⇓*i*Pn	Pn	20 21 45.2	+0.7
RETA				*i* Sn	Sn	20 22 23.1	-0.7
RETA	Reutte	3.36	346	Pn	Pn	20 21 45.2	+0.7
	SNR=341						
RETA				Sn	Sn	20 22 23.1	-0.7
SISC	Sisak	3.36	67	*e*Pn	Pn	20 21 45.5	+1.1
SISC	Sisak	3.36	67	*e*Pn	Pn	20 21 45.5	+1.1
REVF	Revere	3.37	263	P	Pn	20 21 45.1	+0.4
REVF	Revere	3.37	263	P	Pn	20 21 45.1	+0.4
REVF	Revere	3.37	263	P	Pn	20 21 45.1	+0.4
REVF	Revere	3.37	263	P	Pn	20 21 45.1	+0.4
DAVA	Damuels	3.38	335	*i* Pn	Pn	20 21 46.1	+1.1
	SNR=369						
DAVA				⇓*i*Sn	Sn	20 22 24.1	-0.5
DAVA	Damuels	3.38	335	*i* Pn	Pn	20 21 46.1	+1.1
DAVA				*i* Sn	Sn	20 22 24.1	-0.5
DAVA	Damuels	3.38	335	Pn	Pn	20 21 46.1	+1.1
	SNR=369						
DAVA				Sn	Sn	20 22 24.1	-0.5
TOUF	Mont Tournerai	3.42	268	P	Pn	20 21 46.1	+0.6
TOUF	Mont Tournerai	3.42	268	P	Pn	20 21 46.1	+0.6
TOUF	Mont Tournerai	3.42	268	P	Pn	20 21 46.1	+0.6
TOUF	Mont Tournerai	3.42	268	P	Pn	20 21 46.1	+0.6
RSP	Reno Superiore	3.48	287	P	Pn	20 21 44.1	-2.2
MVIF	Mont Vial	3.50	266	P	Pn	20 21 47.6	+1.1
MVIF	Mont Vial	3.50	266	P	Pn	20 21 47.6	+1.1
MVIF	Mont Vial	3.50	266	P	Pn	20 21 47.6	+1.1
MVIF	Mont Vial	3.50	266	P	Pn	20 21 47.6	+1.1
RJOB	Jochberg	3.54	9	*e*Pn	Pn	20 21 47.6	+0.5
RJOB				*e*Sg	Sg	20 22 45.6	-1.3
MUO	Muotathal	3.60	320	*e*P	Pn	20 21 47.7	-0.3
	comp=Z,3µm,0.4s						
MUO	Muotathal	3.60	320	*e*P	Pn	20 21 47.7	-0.3
MUO	Muotathal	3.60	320	*e*P	Pn	20 21 47.7	-0.3
	comp=Z,3µm,0.4s						
BNALP	Bannalp	3.63	318	*e*P	Pn	20 21 48.0	-0.3
	comp=Z,2µm,0.3s						
BNALP	Bannalp	3.63	318	*e*P	Pn	20 21 47.8	-0.5
BNALP	Bannalp	3.63	318	*e*P	Pn	20 21 47.8	-0.5
OG22	Abries	3.65	281	P	Pn	20 21 47.7	-0.9
OG22	Abries	3.65	281	P	Pn	20 21 47.7	-0.9
OG22	Abries	3.65	281	P	Pn	20 21 47.7	-0.9
CALN	Calern	3.71	264	P	Pn	20 21 49.8	+0.4
CALN	Calern	3.71	264	P	Pn	20 21 49.8	+0.4
CALN	Calern	3.71	264	P	Pn	20 21 49.8	+0.4
CALN	Calern	3.71	264	P	Pn	20 21 49.8	+0.4
MBDF	Montbardon	3.76	279	*e*Pn	Pn	20 21 49.4	-0.7
	SNR=1.0						
MBDF				*e*Sn	Sn	20 22 29.4	-4.5
	comp=Z,311nm,0.4s,SNR=1.0						
MBDF	Montbardon	3.76	279	*e*P	Pn	20 21 49.4	-0.7
MBDF				*e*		20 22 29.4	
MBDF	Montbardon	3.76	279	*e*Pn	Pn	20 21 49.4	-0.7
MBDF				*e*Sn	Sn	20 22 29.4	-4.5
MBDF	Montbardon	3.76	279	*e*Pn	Pn	20 21 49.4	-0.7
	SNR=1.0						
MBDF				*e*Sn	Sn	20 22 29.4	-4.5
	comp=Z,155nm,0.4s,SNR=1.0						
BNI	Bardonecchia	3.87	284	*e*P	Pn	20 21 51.6	0.0
BNI				*e*		20 22 35.8	
BNI	Bardonecchia	3.87	284	*e*Pn	Pn	20 21 51.6	0.0
BNI				*e*Sn	Sn	20 22 35.8	-0.8
BNI	Bardonecchia	3.87	284	*e*P	Pn	20 21 51.6	0.0
BNI				*e*S	Sn	20 22 35.8	-0.8
ARSA	Arzberg	3.90	38	⇓*i*Pn	Pn	20 21 51.2	-0.8
	SNR=113						
ARSA				⇓*i*Sn	Sn	20 22 35.7	-1.5
ARSA	Arzberg	3.90	38	⇓*i*Pn	Pn	20 21 51.2	-0.8
ARSA				*i* Sn	Sn	20 22 35.7	-1.5
ARSA	Arzberg	3.90	38	Pn	Pn	20 21 51.2	-0.8
	SNR=113						
ARSA				Sn	Sn	20 22 35.7	-1.5
FRF	La Foret Royal	3.91	262	*e*Pn	Pn	20 21 51.9	-0.2
	SNR=1.0						
FRF				*e*Sn	Sn	20 22 34.2	-3.3
	comp=Z,270nm,0.2s,SNR=1.0						
FRF	La Foret Royal	3.91	262	*e*P	Pn	20 21 51.9	-0.2
FRF				*e*		20 22 34.2	
FRF	La Foret Royal	3.91	262	*e*Pn	Pn	20 21 51.9	-0.2
FRF				*e*Sn	Sn	20 22 34.2	-3.3
FRF	La Foret Royal	3.91	262	*e*Pn	Pn	20 21 51.9	-0.2
	SNR=1.0						
FRF				*e*Sn	Sn	20 22 34.2	-3.3
	comp=Z,135nm,0.2s,SNR=1.0						
LPG	La Plagne	3.92	290	*e*Pn	Pn	20 21 51.2	-1.3
	SNR=1.0						
LPG				*e*Sn	Sn	20 22 33.9	-4.2
	comp=Z,440nm,0.4s,SNR=1.0						
LPG	La Plagne	3.92	290	*e*P	Pn	20 21 51.2	-1.3
LPG				*e*		20 22 33.9	
LPG	La Plagne	3.92	290	*e*Pn	Pn	20 21 51.2	-1.3
LPG				*e*Sn	Sn	20 22 33.9	-4.2
LPG	La Plagne	3.92	290	*e*Pn	Pn	20 21 51.2	-1.3
	SNR=1.0						
LPG				*e*Sn	Sn	20 22 33.9	-4.2
	comp=Z,220nm,0.4s,SNR=1.0						
LPL	La Plagne	3.94	291	*e*Pn	Pn	20 21 51.1	-1.6
	SNR=1.0						
LPL				*e*Sn	Sn	20 22 33.9	-4.6
	comp=Z,349nm,0.3s,SNR=1.0						
LPL	La Plagne	3.94	291	*e*P	Pn	20 21 51.1	-1.6
LPL				*e*		20 22 33.9	
LPL	La Plagne	3.94	291	*e*Pn	Pn	20 21 51.1	-1.6
LPL				*e*Sn	Sn	20 22 33.9	-4.6
LPL	La Plagne	3.94	291	*e*Pn	Pn	20 21 51.1	-1.6
	SNR=1.0						
LPL				*e*Sn	Sn	20 22 33.9	-4.6
	comp=Z,174nm,0.3s,SNR=1.0						
MOA	Molln	3.94	23	⇓*i*Pn	Pn	20 21 52.6	0.0
	SNR=118						
MOA				⇑*i*Sn	Sn	20 22 37.5	-0.7
MOA	Molln	3.94	23	⇓*i*Pn	Pn	20 21 52.6	0.0
MOA				*i* Sn	Sn	20 22 37.5	-0.7
MOA	Molln	3.94	23	Pn	Pn	20 21 52.6	0.0
	SNR=118						
MOA				Sn	Sn	20 22 37.5	-0.7
FUR	Furstenfeldbru	3.96	353	*e*P	Pn	20 21 53.0	+0.3
FUR	Furstenfeldbru	3.96	353	*e*Pn	Pn	20 21 53.0	+0.3
FUR				*e*Sg	Sg	20 22 58.6	-1.5
FUR	Furstenfeldbru	3.96	353	*e*P	Pn	20 21 53.0	+0.3
BEHE	Becsehely	4.05	55	⇑*e*	Pn	20 21 53.0	-1.0
LMR	La Mourre	4.06	259	*e*Pn	Pn	20 21 53.9	-0.3
	SNR=1.0						
LMR				*e*Sn	Sn	20 22 37.4	-3.8
	comp=Z,222nm,0.3s,SNR=1.0						
LMR	La Mourre	4.06	259	*e*P	Pn	20 21 53.9	-0.3
LMR				*e*		20 22 37.4	
LMR	La Mourre	4.06	259	*e*Pn	Pn	20 21 53.9	-0.3
LMR				*e*Sn	Sn	20 22 37.4	-3.8
LMR	La Mourre	4.06	259	*e*Pn	Pn	20 21 53.9	-0.3
	SNR=1.0						
LMR				*e*Sn	Sn	20 22 37.4	-3.8
	comp=Z,111nm,0.3s,SNR=1.0						
RSL	Roselend	4.07	293	P	Pn	20 21 55.7	+1.3
RSL	Roselend	4.07	293	P	Pn	20 21 55.7	+1.3
RSL	Roselend	4.07	293	P	Pn	20 21 55.7	+1.3
RSL	Roselend	4.07	293	P	Pn	20 21 55.7	+1.3
OG25	Le Caire	4.24	274	P	Pn	20 21 58.3	+1.6
OG25	Le Caire	4.24	274	P	Pn	20 21 58.3	+1.6
OG25	Le Caire	4.24	274	P	Pn	20 21 58.3	+1.6
STON	Ston	4.38	106	*e*Pn	Pn	20 21 58.1	-0.4
STON				Sn	Sn	20 22 46.8	-2.1
STON	Ston	4.38	106	*e*Pn	Pn	20 21 58.1	-0.4
STON				Sn	Sn	20 22 46.7	-2.1
ORIF	Oris-en-Rattie	4.41	281	*e*P	Pn	20 22 00.2	+1.2
ORIF				*e*Sn	Sn	20 22 45.0	-4.9
	comp=Z,293nm,0.4s,SNR=1.0						
ORIF	Oris-en-Rattie	4.41	281	*e*P	Pn	20 22 00.2	+1.2
ORIF				*e*		20 22 45.0	
ORIF	Oris-en-Rattie	4.41	281	*e*P	Pn	20 22 00.2	+1.2
ORIF				*e*Sn	Sn	20 22 45.0	-4.9
ORIF	Oris-en-Rattie	4.41	281	*e*P	Pn	20 22 00.2	+1.2
ORIF				*e*Sn	Sn	20 22 45.0	-4.9
	comp=Z,147nm,0.4s,SNR=1.0						
SPAK	Spaichingen-Ko	4.45	331	P	Pn	20 21 58.9	-0.7
SPAK	Spaichingen-Ko	4.45	331	P	Pn	20 21 58.9	-0.7
CDT	Castel del Mon	4.47	133	*e*Pn	Pn	20 21 59.5	-0.3
CDT				*e*Sn	Sn	20 22 48.3	-3.0
BBS	Basel-Blauen	4.49	317	P	Pn	20 21 59.1	-1.0
BBS	Basel-Blauen	4.49	317	P	Pn	20 21 59.1	-1.0
BBS	Basel-Blauen	4.49	317	P	Pn	20 21 59.1	-1.0
FELD	Feldberg im Sc	4.57	324	P	Pn	20 22 00.4	-0.9
FELD	Feldberg im Sc	4.57	324	P	Pn	20 22 00.4	-0.9
CONA	Conrad Observa	4.57	35	*i* Pn	Pn	20 22 00.7	-0.5
	SNR=264						
CONA				⇓*i*Sn	Sn	20 22 52.7	-1.1
CONA	Conrad Observa	4.57	35	*i* Pn	Pn	20 22 00.7	-0.5
CONA				*i* Sn	Sn	20 22 52.7	-1.1
CONA	Conrad Observa	4.57	35	Pn	Pn	20 22 00.7	-0.5
	SNR=264						
CONA				Sn	Sn	20 22 52.7	-1.1
SMRF	Simiane la Rot	4.62	269	*e*Pn	Pn	20 22 02.4	+0.5
	SNR=1.0						
SMRF				*e*Sn	Sn	20 22 51.5	-3.5
	comp=Z,128nm,0.4s,SNR=1.0						
SMRF	Simiane la Rot	4.62	269	*e*Pn	Pn	20 22 02.4	+0.5
SMRF				*e*Sn	Sn	20 22 51.5	-3.5
SMRF	Simiane la Rot	4.62	269	*e*Pn	Pn	20 22 02.4	+0.5
	SNR=1.0						
SMRF				*e*Sn	Sn	20 22 51.5	-3.5
	comp=Z,64nm,0.4s,SNR=1.0						
SOP	Sopron	4.69	41	⇑*e*Pn	Pn	20 22 02.1	-0.7
SOP	Sopron	4.69	41	⇑*e*P	Pn	20 22 02.1	-0.7
GEC2	GERESS Array S	4.76	14	*e*P	Pn	20 22 02.5	-1.3
GEC2	GERESS Array S	4.76	14	*e*Pn	Pn	20 22 02.5	-1.3
GEC2				*e*Sg	Sg	20 23 27.5	+1.8
GEC2	GERESS Array S	4.76	14	*e*P	Pn	20 22 02.5	-1.3
GERES	GERESS Array B	4.76	14	Pn	Pn	20 22 02.4	-1.4
GERES				Pg	Pg	20 22 21.2	-3.0
GERES				Sn	Sn	20 22 56.4	-2.0
GERES				Lg	Lg	20 23 19.8	
GERES	GERESS Array B	4.76	14	Pn	Pn	20 22 02.4	-1.4
	comp=Z,27nm,0.3s,baz=191,slow=14,SNR=773						
GERES				Pg	Pg	20 22 21.2	-3.0
	comp=Z,35nm,0.3s,baz=195,slow=15,SNR=19						
GERES				Sn	Sn	20 22 56.4	-2.0
	comp=Z,74nm,0.3s,baz=180,slow=17,SNR=11						
GERES				Lg	Lg	20 23 19.8	
	comp=Z,51nm,0.3s,baz=186,slow=28,SNR=6.0						
GERES				LR	LR	20 24 18.0	
	comp=Z,2µm,21.2s,baz=220,slow=44						
GERES	GERESS Array B	4.76	14	P	Pn	20 22 02.4	-1.3
GERES	GERESS Array B	4.76	14	Pg	Pg	20 22 21.2	-3.0
GERES				S	Sn	20 22 56.4	-2.0
LOMF	Lomont	4.76	313	P	Pn	20 22 02.7	-1.1
LOMF	Lomont	4.76	313	P	Pn	20 22 02.7	-1.1
LOMF	Lomont	4.76	313	P	Pn	20 22 02.7	-1.1
LOMF	Lomont	4.76	313	P	Pn	20 22 02.7	-1.1
CABF	La Chapelle	4.78	302	*e*Pn	Pn	20 22 03.5	-0.6
	SNR=1.0						
CABF				*e*Sn	Sn	20 22 53.1	-5.8
	comp=Z,232nm,0.5s,SNR=1.0						
CABF	La Chapelle	4.78	302	*e*P	Pn	20 22 03.5	-0.6
CABF				*e*		20 22 53.1	
CABF	La Chapelle	4.78	302	*e*Pn	Pn	20 22 03.5	-0.6
CABF				*e*Sn	Sn	20 22 53.1	-5.8
CABF	La Chapelle	4.78	302	*e*Pn	Pn	20 22 03.5	-0.6
	SNR=1.0						
CABF				*e*Sn	Sn	20 22 53.1	-5.8
	comp=Z,116nm,0.5s,SNR=1.0						
BAI	Bari	4.78	129	*e*Pn	Pn	20 22 03.8	-0.2
OG26	St.-Nazaire-De	4.80	276	P	Pn	20 22 04.8	+0.5
OG26	St.-Nazaire-De	4.80	276	P	Pn	20 22 04.8	+0.5
OCF	Saint Nazaire	4.80	276	P	Pn	20 22 04.8	+0.5
OCF	Saint Nazaire	4.80	276	P	Pn	20 22 04.8	+0.5
BFO	Black Forest	4.81	330	*e*P	Pn	20 22 04.1	-0.3
BFO	Black Forest	4.81	330	*e*Pn	Pn	20 22 04.1	-0.3
BFO	Black Forest	4.81	330	*e*Pn	Pn	20 22 03.8	-0.6
BFO				*e*Sn	Sn	20 22 57.5	-2.1
BFO	Black Forest	4.81	330	*e*Pn	Pn	20 22 03.8	-0.6
BFO	Black Forest	4.81	330	*e*P	Pn	20 22 04.1	-0.3
BFO				*e*Sn	Sn	20 22 57.5	-2.1
OG35	Corcelles	4.88	294	P	Pn	20 22 05.3	-0.2
STU	Stuttgart	4.92	338	*e*P	Pn	20 22 05.8	-0.2
STU	Stuttgart	4.92	338	*e*Pn	Pn	20 22 05.8	-0.2
STU	Stuttgart	4.92	338	*e*Pn	Pn	20 22 04.6	-1.4
STU	Stuttgart	4.92	338	*e*Pn	Pn	20 22 04.6	-1.4
STU	Stuttgart	4.92	338	*e*P	Pn	20 22 05.8	-0.2
MOF	Molkenrain	4.94	319	P	Pn	20 22 05.6	-0.7
MOF	Molkenrain	4.94	319	P	Pn	20 22 05.6	-0.7
MOF	Molkenrain	4.94	319	P	Pn	20 22 05.6	-0.7
MOF	Molkenrain	4.94	319	P	Pn	20 22 05.6	-0.7
WET	Wettzell	4.94	7	*e*P	Pn	20 22 04.8	-1.5
WET	Wettzell	4.94	7	*e*Pn	Pn	20 22 04.8	-1.5
WET	Wettzell	4.94	7	*e*P	Pn	20 22 04.8	-1.5
BRY	Bratogost	4.95	103	⇑*i*Pn	Pn	20 22 07.1	+0.6
BRY				*e*Sn	Sn	20 23 02.3	-0.9
BRY	Bratogost	4.95	103	⇑*i*Pn	Pn	20 22 07.1	+0.6
BRY				*e*Sn	Sn	20 23 02.3	-0.9
LIBD	Limburg	4.95	324	P	Pn	20 22 06.1	-0.3
LIBD	Limburg	4.95	324	P	Pn	20 22 06.1	-0.3
LIBD	Limburg	4.95	324	P	Pn	20 22 06.1	-0.3
KHC	Kasperske Hory	5.01	12	*e*P	Pn	20 22 05.9	-1.4
KHC				*e*		20 23 00.4	
KHC				smax	smax		
	comp=N,1µm,1.1s						
KHC				MLR	MLR		
	comp=Z,5µm,11.9s						
KHC	Kasperske Hory	5.01	12	*e*Pn	Pn	20 22 05.7	-1.5
KHC				*e*Sn	Sn	20 23 02.7	-1.9
KHC	Kasperske Hory	5.01	12	*e*PN	Pn	20 22 05.9	-1.4
KHC				*e*x	x	20 22 17.5	
KHC				*e*x	x	20 22 28.0	
KHC				*e*SN	Sn	20 23 00.4	-4.2
KHC				*e*SG	Sg	20 23 29.1	-4.9
	comp=Z,1µm,1.1s						
KHC				AMS	AMS	20 24 20.0	
	comp=Z,5µm,11.9s						
KHC	Kasperske Hory	5.01	12	Pn	Pn	20 22 05.9	-1.4
KHC				*e*Sn	Sn	20 23 02.7	-1.9
KHC				Sg	Sg	20 23 29.1	-4.9
	comp=Z,1µm,1.1s						
PKS9	Tamasi	5.02	60	⇓*e*	Pn	20 22 05.9	-1.4
PKS9	Tamasi	5.02	60	⇓*e*P	Pn	20 22 05.9	-1.4
HINF	Hinteralfeld	5.05	317	*e*Pn	Pn	20 22 06.4	-1.4
	SNR=1.0						
HINF				*e*Sn	Sn	20 22 58.4	-7.2
	comp=Z,311nm,0.4s,SNR=1.0						
HINF	Hinteralfeld	5.05	317	*e*P	Pn	20 22 06.4	-1.4
HINF				*e*		20 22 58.4	
HINF	Hinteralfeld	5.05	317	*e*Pn	Pn	20 22 06.4	-1.4
HINF				*e*Sn	Sn	20 22 58.4	-7.2
HINF	Hinteralfeld	5.05	317	*e*Pn	Pn	20 22 06.4	-1.4
	SNR=1.0						
HCY	Herceg Novi	5.08	108	⇓*i*Pn	Pn	20 22 08.6	+0.5
HCY				*e*Sn	Sn	20 23 05.6	-0.6
HCY	Herceg Novi	5.08	108	⇓*i*Pn	Pn	20 22 08.6	+0.5
HCY				*e*Sn	Sn	20 23 05.6	-0.6
PKSM	Moragy	5.10	65	⇑P	Pn	20 22 07.5	-0.9
PKSM	Moragy	5.10	65	⇑*i*P	Pn	20 22 07.5	-0.9
PKSM	Moragy	5.10	65	⇑*e*	Pn	20 22 07.2	-1.2
PKSM	Moragy	5.10	65	P	Pn	20 22 07.5	-0.9
CUC	Castrocucco	5.11	145	*e*Pn	Pn	20 22 09.7	+1.0
CUC	Castrocucco	5.11	145	*e*Pn	Pn	20 22 09.7	+1.0
VSL	Villasalto	5.12	203	*e*Pn	Pn	20 22 11.0	+2.2
VSL				*e*Sn	Sn	20 23 11.6	+4.2
VSL	Villasalto	5.12	203	*e*Pn	Pn	20 22 11.0	+2.2
VSL				*e*Sn	Sn	20 23 11.6	+4.2
UPM	Unac-Piva	5.12	99	⇓*i*Pn	Pn	20 22 10.1	+1.1
UPM				*e*Sn	Sn	20 23 06.9	-0.7
UPM	Unac-Piva	5.12	99	⇓*i*Pn	Pn	20 22 10.1	+1.1
UPM				*e*Sn	Sn	20 23 06.9	-0.7
ECH	Echery	5.20	322	*e*P	Pn	20 22 08.7	-1.1
ECH				*e*		20 23 05.2	
ECH	Echery	5.20	322	*e*Pn	Pn	20 22 08.7	-1.1
ECH				*e*Sn	Sn	20 23 05.2	-3.9
ECH	Echery	5.20	322	P	Pn	20 22 09.0	-0.7
ECH	Echery	5.20	322	*e*P	Pn	20 22 08.7	-1.1
ECH				*e*S	Sn	20 23 05.2	-3.9
PKST	Tˆ's	5.20	52	⇑*e*Pn	Pn	20 22 08.3	-1.5
PKST	Tˆ's	5.20	52	⇑*e*P	Pn	20 22 08.3	-1.5
VIVF	Saint-Julien-l	5.26	279	*e*Pn	Pn	20 22 09.8	-0.8
	SNR=1.0						
VIVF				*e*Sn	Sn	20 23 05.5	-5.2
	comp=Z,147nm,0.4s						
VIVF	Saint-Julien-l	5.26	279	*e*P	Pn	20 22 09.8	-0.8
VIVF				*e*		20 23 05.5	
VIVF	Saint-Julien-l	5.26	279	*e*Pn	Pn	20 22 09.8	-0.8
VIVF				*e*Sn	Sn	20 23 05.5	-5.2
VIVF	Saint-Julien-l	5.26	279	*e*Pn	Pn	20 22 09.8	-0.8
	SNR=1.0						
VIVF				*e*Sn	Sn	20 23 05.5	-5.2
	comp=Z,73nm,0.4s						
CDF	Champ du Feu	5.29	324	*e*P	Pn	20 22 10.1	-1.0
CDF				*e*Sn	Sn	20 23 01.7	-10
	comp=Z,159nm,0.2s,SNR=1.0						
CDF	Champ du Feu	5.29	324	*e*P	Pn	20 22 10.1	-1.0
CDF				*e*		20 23 01.7	
CDF	Champ du Feu	5.29	324	*e*P	Pn	20 22 10.1	-1.0

CDF eSn Sn 20 23 01.7 -10
CDF Champ du Feu 5.29 324 eP **Pn 20 22 10.1 -1.0**
NKY Niksic 5.29 103‖ iPn **Pn 20 22 11.5 +0.3**
NKY eSn **Sn 20 23 11.0 -0.7**
NKY Niksic 5.29 103‖ iPn **Pn 20 22 11.5 +0.3**
NKY eSn **Sn 20 23 11.0 -0.7**
SSB Saint Sauveur 5.40 284 eP **Pn 20 22 11.5 -1.1**
SSB Saint Sauveur 5.40 284 ePn **Pn 20 22 11.5 -1.1**
SSB Saint Sauveur 5.40 284 P **Pn 20 22 11.5 -1.1**
SSB Saint Sauveur 5.40 284 P **Pn 20 22 11.5 -1.1**
BUM Brajici-Budva 5.41 109⇑ iPn **Pn 20 22 13.1 +0.4**
BUM eSn **Sn 20 23 13.3 -1.1**
BUM Brajici-Budva 5.41 109⇑ iPn **Pn 20 22 13.1 +0.4**
BUM eSn **Sn 20 23 13.3 -1.1**
HAU Haudompre 5.43 316 ePn **Pn 20 22 11.7 -1.3**
SNR=1.0
HAU eSn Sn 20 23 07.7 -7.2
comp=Z,668nm,0.4s,SNR=1.0
HAU Haudompre 5.43 316 eP **Pn 20 22 11.7 -1.3**
HAU e 20 23 07.7
HAU Haudompre 5.43 316 ePn **Pn 20 22 11.7 -1.3**
HAU eSn Sn 20 23 07.7 -7.2
HAU Haudompre 5.43 316 ePn **Pn 20 22 11.7 -1.3**
SNR=1.0
PLE Pljevlja 5.44 97⇑ iPn **Pn 20 22 14.6 +1.4**
PLE eSn **Sn 20 23 13.4 -1.9**
PLE Pljevlja 5.44 97⇑ iPn **Pn 20 22 14.6 +1.4**
PLE eSn **Sn 20 23 13.4 -1.9**
GRA1 Grafenberg Arr 5.48 355 eP **Pn 20 22 12.1 -1.5**
GRF Grafenberg Arr 5.48 355 eP **Pn 20 22 12.1 -1.5**
GRF Grafenberg Arr 5.48 355 ePn **Pn 20 22 12.1 -1.5**
GRF eSg **Sg 20 23 50.1 +1.3**
PKSG 5.48 53‖ ePn **Pn 20 22 12.5 -1.1**
ROTZ Rotzenmuhle 5.53 2 ePn **Pn 20 22 12.4 -1.9**
LANF Langenberg 5.54 330 P **Pn 20 22 13.8 -0.7**
LANF Langenberg 5.54 330 P **Pn 20 22 13.8 -0.7**
LANF Langenberg 5.54 330 P **Pn 20 22 13.8 -0.7**
LANF Langenberg 5.54 330 P **Pn 20 22 13.8 -0.7**
PKS2 Kecel 5.57 64 ePn **Pn 20 22 13.5 -1.4**
TREC Trest 5.60 24 eP **Pn 20 22 13.9 -1.4**
TREC MLR MLR
comp=Z,6µm,12.7s
TREC Trest 5.60 24 ePN **Pn 20 22 13.9 -1.4**
TREC AMS AMS 20 24 40.0
comp=Z,6µm,12.7s
TREC Trest 5.60 24 Pn **Pn 20 22 13.9 -1.4**
PDG Podgorica 5.61 106‖ iPn **Pn 20 22 15.9 +0.5**
PDG eSn **Sn 20 23 18.1 -1.1**
TTG Podgorica 5.61 106‖ iPn **Pn 20 22 15.9 +0.5**
TTG eSn **Sn 20 23 18.1 -1.1**
SMOL Smolenice 5.70 39 eP **Pn 20 22 16.1 -0.5**
SMOL Smolenice 5.70 39 ePN **Pn 20 22 16.1 -0.5**
SMOL Smolenice 5.70 39 eP **Pn 20 22 16.1 -0.5**
KTD Kalmit 5.74 334 P **Pn 20 22 16.5 -0.8**
KTD Kalmit 5.74 334 P **Pn 20 22 16.5 -0.8**
KTD Kalmit 5.74 334 P **Pn 20 22 16.5 -0.8**
THEF They Montfort 5.76 316 P **Pn 20 22 16.5 -1.0**
THEF They Montfort 5.76 316 P **Pn 20 22 16.5 -1.0**
THEF They Montfort 5.76 316 P **Pn 20 22 16.5 -1.0**
THEF They Montfort 5.76 316 P **Pn 20 22 16.5 -1.0**
PKS7 Kunszentmiklos 5.76 58⇑ ePn **Pn 20 22 14.4 -3.1**
DIVS Divibare 5.76 89 P **Pn 20 22 17.1 -0.5**
ULC Ulcinj 5.79 111⇑ iPn **Pn 20 22 18.1 +0.2**
ULC eSn **Sn 20 23 22.7 -0.9**
ULC Ulcinj 5.79 111⇑ iPn **Pn 20 22 18.1 +0.2**
ULC eSn **Sn 20 23 22.7 -0.9**
TOD Tromm 5.79 339 P **Pn 20 22 16.9 -1.0**
TOD Tromm 5.79 339 P **Pn 20 22 16.9 -1.0**
TOD Tromm 5.79 339 P **Pn 20 22 16.9 -1.0**
LASF Ste Croix 5.85 271 ePn **Pn 20 22 18.3 -0.4**
LASF eSn **Sn 20 23 20.6 -4.6**
comp=Z,71nm,0.5s
LASF Ste Croix 5.85 271 ePn **Pn 20 22 18.3 -0.4**
LASF eSn **Sn 20 23 20.6 -4.6**
LASF Ste Croix 5.85 271 ePn **Pn 20 22 18.3 -0.4**
BUD Budapest 5.89 54 ePn **Pn 20 22 21.9 +2.6**
BEY Berane 5.91 101 ePn **Pn 20 22 21.1 +1.4**
BEY eSn **Sn 20 23 26.1 -0.7**
IVA Berane 5.91 101 ePn **Pn 20 22 21.1 +1.4**
IVA eSn **Sn 20 23 26.1 -0.7**
VRAC Vranov 5.98 30 Pn **Pn 20 22 19.2 -1.3**
VRAC Sn **Sn 20 23 23.9 -4.4**
VRAC Lg Lg 20 24 04.3
VRAC Vranov 5.98 30‖ iP **Pn 20 22 19.5 -1.0**
VRAC Vranov 5.98 30 Pn **Pn 20 22 19.2 -1.3**
comp=Z,5.3nm,0.3s,baz=226,slow=13,SNR=22
VRAC Sn **Sn 20 23 23.9 -4.4**
comp=Z,24nm,0.3s,baz=193,slow=15,SNR=6.9
VRAC Lg Lg 20 24 04.3
comp=Z,13nm,0.3s,baz=106,slow=20,SNR=3.6
VRAC LR LR 20 25 04.9
comp=Z,2µm,21.9s,baz=216,slow=43
VRAC Vranov 5.98 30 P **Pn 20 22 19.2 -1.3**
NKC Novy Kostel 6.00 3 eP **Pn 20 22 18.9 -1.9**
NKC e 20 23 23.4
NKC MLR MLR
comp=Z,3µm,15.2s
NKC Novy Kostel 6.00 3 ePN **Pn 20 22 18.9 -1.9**
NKC eSN **Sn 20 23 23.4 -5.6**
NKC AMS AMS 20 24 50.0
comp=Z,3µm,15.2s
NKC Novy Kostel 6.00 3 Pn **Pn 20 22 18.9 -1.9**
PRU Pruhonice 6.01 16 eP **Pn 20 22 19.1 -1.8**
PRU e 20 23 24.9
PRU MLR MLR
comp=Z,5µm,11.5s
PRU Pruhonice 6.01 16 ePN **Pn 20 22 19.1 -1.8**
PRU eSN **Sn 20 23 24.9 -4.2**
PRU AMS AMS 20 25 00.0
comp=Z,5µm,11.5s
PRU Pruhonice 6.01 16 Pn **Pn 20 22 19.1 -1.8**
COLF Collangettes 6.02 285 P **Pn 20 22 19.9 -1.3**
COLF Collangettes 6.02 285 P **Pn 20 22 19.9 -1.3**
COLF Collangettes 6.02 285 P **Pn 20 22 19.9 -1.3**
PVY Plav 6.04 103⇑ iPn **Pn 20 22 23.3 +1.8**
PVY eSn **Sn 20 23 28.9 -1.2**
PAGF Fort de Pagny 6.11 317 ePn **Pn 20 22 21.2 -1.1**
baz=140
PAGF eSn Sn 20 23 23.7 -7.8
comp=Z,104nm,0.7s
PAGF Fort de Pagny 6.11 317 ePn **Pn 20 22 21.2 -1.1**
PAGF eSn Sn 20 23 23.7 -7.8
PAGF Fort de Pagny 6.11 317 ePn **Pn 20 22 21.2 -1.1**
baz=140
TANN Tannenbergstha 6.18 3 ePn **Pn 20 22 22.3 -1.1**
TANN eSg **Sg 20 24 12.8 +1.3**
BCI Bajram Curri 6.19 105 i PN **Pn 20 22 25.7 +2.3**
BCI i SN **Sn 20 23 35.0 +1.3**
BCI Bajram Curri 6.19 105 i Pn **Pn 20 22 25.7 +2.3**
SNR=4.0
BCI i Sn **Sn 20 23 35.0 +1.3**
SNR=4.0
PUK Puka 6.19 108 i PN **Pn 20 22 24.7 +1.2**
PUK i SN **Sn 20 23 32.9 -0.8**
PUK Puka 6.19 108 i Pn **Pn 20 22 24.7 +1.2**
SNR=4.0
PUK i Sn **Sn 20 23 32.9 -0.8**
SNR=4.0
TIP Timpagrande 6.19 143 ePn **Pn 20 22 23.6 +0.1**
TIP eSn **Sn 20 23 37.7 +3.9**
TIP Timpagrande 6.19 143 ePn **Pn 20 22 23.6 +0.1**
SMF Signal de Mont 6.21 296 ePn **Pn 20 22 22.5 -1.2**
SNR=1.0
SMF eSn Sn 20 23 27.3 -6.8
comp=Z,170nm,0.3s,SNR=1.0
SMF Signal de Mont 6.21 296 eP **Pn 20 22 22.5 -1.2**
SMF e 20 23 27.3
SMF Signal de Mont 6.21 296 ePn **Pn 20 22 22.5 -1.2**
SMF eSn Sn 20 23 27.3 -6.8
SMF Signal de Mont 6.21 296 ePn **Pn 20 22 22.5 -1.2**
SNR=1.0
SFTF Sexfontaines 6.24 312 ePn **Pn 20 22 23.1 -0.9**
baz=129
SFTF eSn Sn 20 23 28.3 -6.4
comp=Z,96nm,0.2s
SFTF Sexfontaines 6.24 312 ePn **Pn 20 22 23.1 -0.9**
SFTF eSn Sn 20 23 28.3 -6.4
SFTF Sexfontaines 6.24 312 ePn **Pn 20 22 23.1 -0.9**
baz=129
LBL Lubilhac 6.30 282 P **Pn 20 22 24.2 -0.8**
LBL Lubilhac 6.30 282 P **Pn 20 22 24.2 -0.8**
LBL Lubilhac 6.30 282 P **Pn 20 22 24.2 -0.8**
VYHS Vyhne 6.37 46 eP **Pn 20 22 24.7 -1.2**
VYHS MLR MLR
comp=Z,200nm,1.3s
VYHS Vyhne 6.37 46 ePN **Pn 20 22 24.7 -1.2**
VYHS ePG **Pg 20 22 52.6 -2.4**
VYHS Vyhne 6.37 46 eP **Pn 20 22 24.7 -1.2**
comp=Z,200nm,1.3s
ABH Alteburg 6.40 333 P **Pn 20 22 25.9 -0.4**
ABH Alteburg 6.40 333 P **Pn 20 22 25.9 -0.4**
MEZF Maizieres J'vi 6.41 314 ePn **Pn 20 22 25.7 -0.7**
baz=132,SNR=1.0
MEZF eSn Sn 20 23 31.0 -8.0
comp=Z,146nm,0.5s,SNR=1.0
MEZF Maizieres J'vi 6.41 314 ePn **Pn 20 22 25.7 -0.7**
MEZF eSn Sn 20 23 31.0 -8.0
MEZF Maizieres J'vi 6.41 314 ePn **Pn 20 22 25.7 -0.7**
baz=132,SNR=1.0
MOX Moxa 6.41 358 eP **Pn 20 22 24.4 -2.0**
MOX Moxa 6.41 358 ePn **Pn 20 22 24.4 -2.0**
MOX eSg **Sg 20 24 21.6 +2.9**
MOX Moxa 6.41 358 eP **Pn 20 22 24.4 -2.0**
RUP Ruppelstein 6.42 330 P **Pn 20 22 26.3 -0.2**
RUP Ruppelstein 6.42 330 P **Pn 20 22 26.3 -0.2**
RUP Ruppelstein 6.42 330 P **Pn 20 22 26.3 -0.2**
LOR Lormes 6.44 301 ePn **Pn 20 22 25.7 -1.1**
baz=119,SNR=1.0
LOR eSn Sn 20 23 32.9 -6.8
comp=Z,149nm,0.4s,SNR=1.0
LOR Lormes 6.44 301 ePn **Pn 20 22 25.7 -1.1**
LOR eSn Sn 20 23 32.9 -6.8
LOR Lormes 6.44 301 ePn **Pn 20 22 25.7 -1.1**
baz=119,SNR=1.0
TNS Taunus Mts 6.45 339 eP **Pn 20 22 26.7 -0.3**
TNS Taunus Mts 6.45 339 ePn **Pn 20 22 26.7 -0.3**
TNS Taunus Mts 6.45 339 eP **Pn 20 22 26.7 -0.3**
TIR Tirane 6.48 114 i PN **Pn 20 22 26.7 -0.7**
TIR i SN **Sn 20 23 35.7 -5.0**
TIR Tirane 6.48 114 P **Pn 20 22 27.7 +0.3**
TIR Tirane 6.48 114 eP **Pn 20 22 25.4 -2.0**
TIR e 20 23 37.7
TIR Tirane 6.48 114 ePn **Pn 20 22 25.4 -2.0**
TIR eSn **Sn 20 23 37.7 -3.0**
TIR Tirane 6.48 114 eP **Pn 20 22 27.2 -0.2**
TIR Tirane 6.48 114 eP **Pn 20 22 25.4 -2.0**
TIR Tirane 6.48 114 i Pn **Pn 20 22 26.7 -0.7**
SNR=4.0
TIR i Sn **Sn 20 23 35.7 -5.0**
SNR=4.0
AGO Saint Agoulin 6.51 289 P **Pn 20 22 27.1 -0.8**
AGO Saint Agoulin 6.51 289 P **Pn 20 22 27.1 -0.8**
AGO Saint Agoulin 6.51 289 P **Pn 20 22 27.1 -0.8**
PVCC Panska Ves 6.53 15 eP **Pn 20 22 26.5 -1.5**
PVCC MLR MLR
comp=Z,5µm,15.0s
PVCC Panska Ves 6.53 15 ePN **Pn 20 22 26.5 -1.5**
PVCC AMS AMS 20 25 20.0
comp=Z,5µm,15.0s
PVCC Panska Ves 6.53 15 Pn **Pn 20 22 26.5 -1.5**
PYM Petit Puy Mans 6.54 286 P **Pn 20 22 27.3 -1.0**
PYM Petit Puy Mans 6.54 286 P **Pn 20 22 27.3 -1.0**
PYM Petit Puy Mans 6.54 286 P **Pn 20 22 27.3 -1.0**
PYM Petit Puy Mans 6.54 286 P **Pn 20 22 27.3 -1.0**
SSF Saint Saulge 6.57 298 ePn **Pn 20 22 27.3 -1.4**
SNR=1.0
SSF eSn Sn 20 23 36.1 -6.9
comp=Z,241nm,0.4s,SNR=1.0
SSF Saint Saulge 6.57 298 eP **Pn 20 22 27.3 -1.4**
SSF e 20 23 36.1
SSF Saint Saulge 6.57 298 ePn **Pn 20 22 27.3 -1.4**
SSF eSn Sn 20 23 36.1 -6.9
SSF Saint Saulge 6.57 298 ePn **Pn 20 22 27.3 -1.4**
SNR=1.0
AVF Avril sur Loir 6.58 296 ePn **Pn 20 22 27.7 -1.0**
SNR=1.0
AVF eSn Sn 20 23 35.6 -7.4
comp=Z,159nm,0.7s,SNR=1.0
AVF Avril sur Loir 6.58 296 eP **Pn 20 22 27.7 -1.0**
AVF e 20 23 35.6
AVF Avril sur Loir 6.58 296 ePn **Pn 20 22 27.7 -1.0**
AVF eSn Sn 20 23 35.6 -7.4
AVF Avril sur Loir 6.58 296 ePn **Pn 20 22 27.7 -1.0**
SNR=1.0
PSZ Piszkesteto 6.62 53 P **Pn 20 22 29.5 +0.2**
PSZ Piszkesteto 6.62 53 ePn **Pn 20 22 27.9 -1.4**
PSZ eSn Sn 20 23 37.5 -6.7
PSZ Piszkesteto 6.62 53⇑ iP **Pn 20 22 29.3 0.0**
PSZ Piszkesteto 6.62 53 ePn **Pn 20 22 29.3 0.0**
PSZ Piszkesteto 6.62 53 ePn **Pn 20 22 27.9 -1.4**
PSZ Piszkesteto 6.62 53 P **Pn 20 22 29.5 +0.2**
CEL Celeste 6.66 152 ePn **Pn 20 22 29.3 -0.7**
CEL Celeste 6.66 152 ePn **Pn 20 22 29.3 -0.7**
PHP Peshkopia 6.71 109 i PN **Pn 20 22 30.6 0.0**
PHP i SN **Sn 20 23 45.8 -0.7**
PHP Peshkopia 6.71 109 P **Pn 20 22 31.6 +1.0**
PHP Peshkopia 6.71 109 i Pn **Pn 20 22 30.6 0.0**
SNR=4.0
PHP i Sn **Sn 20 23 45.8 -0.7**
SNR=4.0
MORC Moravsky Berou 6.72 33 P **Pn 20 22 29.9 -0.7**
MORC Moravsky Berou 6.72 33 ePn **Pn 20 22 29.1 -1.6**
MORC eSn **Sn 20 23 41.6 -5.0**
MORC Moravsky Berou 6.72 33‖ iP **Pn 20 22 29.8 -0.8**
MORC Moravsky Berou 6.72 33 ePn **Pn 20 22 29.1 -1.6**
MORC Moravsky Berou 6.72 33 P **Pn 20 22 29.9 -0.7**
UBBA Unterbreizbach 6.72 349 ePn **Pn 20 22 29.5 -1.0**
WLF Walferdange 6.73 326 PN **Pn 20 22 30.5 -0.4**
WLF SN **Sn 20 23 42.6 -4.3**
comp=N,60nm,0.0s
WLF Walferdange 6.73 326 eP **Pn 20 22 30.4 -0.4**
WLF e 20 23 37.0
WLF Walferdange 6.73 326 ePn **Pn 20 22 31.1 +0.3**
WLF Walferdange 6.73 326 ePn **Pn 20 22 30.4 -0.4**
WLF eSn Sn 20 23 37.0 -10
WLF Walferdange 6.73 326 eP **Pn 20 22 30.4 -0.4**
BRG Berggiesshubel 6.77 11 PN **Pn 20 22 29.4 -1.9**
BRG i 20 23 02.4
BRG i 20 23 44.4
BRG i 20 24 33.5
comp=N,512nm,1.0s
BRG
comp=N,3µm,16.0s
BRG
comp=E,2µm,10.6s
BRG
comp=Z,5µm,11.4s
BRG Berggiesshubel 6.77 11 P **Pn 20 22 29.4 -1.9**
BRG i 20 23 44.4
BRG MLR MLR
comp=N,3µm,16.0s
BRG MLR MLR
comp=E,2µm,10.6s
BRG MLR MLR
comp=Z,5µm,11.4s
BRG Berggiesshubel 6.77 11 ePn **Pn 20 22 30.3 -1.0**
BRG Berggiesshubel 6.77 11 P **Pn 20 22 29.4 -1.9**
BRG i S **Sn 20 23 44.4 -3.3**
comp=Z,5µm,11.4s
DPC Dobruska-Polom 6.79 24 eP **Pn 20 22 29.2 -2.4**
DPC MLR MLR
comp=Z,4µm,14.0s
DPC Dobruska-Polom 6.79 24 ePN **Pn 20 22 29.2 -2.4**
DPC AMS AMS 20 25 30.0
comp=Z,4µm,14.0s
DPC Dobruska-Polom 6.79 24 Pn **Pn 20 22 29.2 -2.4**
BGF Bois d'Agland 6.83 293 ePn **Pn 20 22 30.6 -1.6**
SNR=1.0
BGF Bois d'Agland 6.83 293 eP **Pn 20 22 30.6 -1.6**
BGF Bois d'Agland 6.83 293 ePn **Pn 20 22 30.6 -1.6**
BGF Bois d'Agland 6.83 293 ePn **Pn 20 22 30.6 -1.6**
SNR=1.0
SJAF Saint Jean de 6.86 258 P **Pn 20 22 32.4 -0.2**
SJAF Saint Jean de 6.86 258 P **Pn 20 22 32.4 -0.2**
SJAF Saint Jean de 6.86 258 P **Pn 20 22 32.4 -0.2**
BZS Buzias 6.98 75‖ P **Pn 20 22 35.4 +1.2**
BZS Buzias 6.98 75‖ iP **Pn 20 22 35.4 +1.2**
BZS Buzias 6.98 75 P **Pn 20 22 35.4 +1.2**
LRDF Laroque-de-Fa 6.98 263 P **Pn 20 22 33.9 -0.3**
LRDF Laroque-de-Fa 6.98 263 P **Pn 20 22 33.9 -0.3**
LRDF Laroque-de-Fa 6.98 263 P **Pn 20 22 33.9 -0.3**
OKC Ostrava-Krasne 7.00 35 eP **Pn 20 22 34.0 -0.5**
OKC MLR MLR
comp=Z,2µm,11.3s
OKC Ostrava-Krasne 7.00 35 ePN **Pn 20 22 34.0 -0.5**
OKC AMS AMS 20 26 00.0
comp=Z,2µm,11.3s
OKC Ostrava-Krasne 7.00 35 Pn **Pn 20 22 34.0 -0.5**
FILF Fillols 7.06 260 P **Pn 20 22 36.8 +1.3**
FILF Fillols 7.06 260 P **Pn 20 22 36.8 +1.3**
FILF Fillols 7.06 260 P **Pn 20 22 36.8 +1.3**
CLL Collm 7.10 5 eP **Pn 20 22 34.0 -1.9**
CLL Collm 7.10 5 ePn **Pn 20 22 34.2 -1.7**
CLL Collm 7.10 5 ePn **Pn 20 22 34.0 -1.9**
CLL ePg **Pg 20 23 11.0 +2.0**
CLL e 20 24 08.0
CLL eSb1 20 24 20.0
CLL eSb2 20 24 30.0
CLL eSg **Sg 20 24 45.0 +4.1**
comp=Z,804nm,1.1s
CLL Collm 7.10 5 eP **Pn 20 22 34.0 -1.9**
CAF Calviac 7.11 279 ePn **Pn 20 22 35.1 -1.0**
SNR=1.0
CAF Calviac 7.11 279 eP **Pn 20 22 35.1 -1.0**
CAF Calviac 7.11 279 ePn **Pn 20 22 35.1 -1.0**
CAF Calviac 7.11 279 ePn **Pn 20 22 35.1 -1.0**
SNR=1.0
MTLF Montolieu 7.12 266 ePn **Pn 20 22 36.4 +0.2**
SNR=1.0
MTLF eSn **Sn 20 23 51.4 -5.1**
comp=Z,63nm,0.5s
MTLF Montolieu 7.12 266 eP **Pn 20 22 36.4 +0.2**
MTLF e 20 23 51.4
MTLF Montolieu 7.12 266 ePn **Pn 20 22 36.4 +0.2**
MTLF eSn **Sn 20 23 51.4 -5.1**
MTLF Montolieu 7.12 266 ePn **Pn 20 22 36.4 +0.2**
SNR=1.0
TCF Toulx Ste Croi 7.19 290 ePn **Pn 20 22 35.6 -1.6**
SNR=1.0
TCF eSn Sn 20 23 51.7 -6.6
comp=Z,140nm,0.4s
TCF Toulx Ste Croi 7.19 290 eP **Pn 20 22 35.6 -1.6**
TCF e 20 23 51.7
TCF Toulx Ste Croi 7.19 290 ePn **Pn 20 22 35.6 -1.6**
TCF eSn Sn 20 23 51.7 -6.6
TCF Toulx Ste Croi 7.19 290 ePn **Pn 20 22 35.6 -1.6**
SNR=1.0
RAC Raciborz 7.21 34 eP **Pn 20 22 37.7 +0.3**
RAC Raciborz 7.21 34 eP **Pn 20 22 37.7 +0.3**
KSP Ksiaz 7.22 22‖ eP **Pn 20 22 35.4 -2.1**
KSP e 20 24 03.1
KSP Ksiaz 7.22 22 ePn **Pn 20 22 35.5 -2.1**
KSP eSn **Sn 20 24 04.4 +5.5**
KSP Ksiaz 7.22 22 ePg **Pb 20 23 04.4 +6.7**
KSP eSn **Sn 20 23 53.8 -5.1**
KSP Ksiaz 7.22 22 eP **Pn 20 22 35.4 -2.1**
SKO Skopje 7.29 105 P **Pn 20 22 40.2 +1.8**
SKO Skopje 7.29 105 i Pn **Pn 20 22 40.0 +1.6**
SKO Skopje 7.29 105 i Pn **Pn 20 22 40.4 +2.0**
CARF Carcanieres 7.34 261 P **Pn 20 22 39.1 -0.2**
CARF Carcanieres 7.34 261 P **Pn 20 22 39.1 -0.2**
CARF Carcanieres 7.34 261 P **Pn 20 22 39.1 -0.2**
KEK Kerkira 7.37 125 P **Pn 20 22 39.4 -0.3**
KEK Kerkira 7.37 125 eP **Pn 20 22 39.6 -0.1**
CFON Fontmartina 7.42 254 Pn **Pn 20 22 41.7 +1.3**
comp=Z,23nm,0.5s,SNR=40
CFON Lg Lg 20 24 01.7
comp=Z,16nm,0.3s,SNR=5.9
CLLI Llivia 7.50 260 Pn **Pn 20 22 42.9 +1.4**
comp=Z,15nm,0.3s,SNR=82
CLLI Lg Lg 20 24 04.2
comp=Z,22nm,0.6s,SNR=6.3
RJF Les Rejaudoux 7.52 282 ePn **Pn 20 22 41.5 -0.2**
SNR=1.0
RJF Les Rejaudoux 7.52 282 eP **Pn 20 22 41.5 -0.2**
RJF Les Rejaudoux 7.52 282 ePn **Pn 20 22 41.5 -0.2**
RJF Les Rejaudoux 7.52 282 ePn **Pn 20 22 41.5 -0.2**
SNR=1.0
MEM Membach 7.55 330 PN **Pn 20 22 41.0 -0.9**
MEM SN **Sn 20 24 02.4 -4.5**
comp=E,69nm,0.0s
BIA Bitola 7.61 112 i Pn **Pn 20 22 42.4 -0.5**
BIA Bitola 7.61 112 i Pn **Pn 20 22 42.3 -0.5**
GIVF Givet 7.62 323 eP **Pn 20 22 43.1 +0.1**
GIVF Givet 7.62 323 eP **Pn 20 22 43.1 +0.1**
GIVF Givet 7.62 323 eP **Pn 20 22 43.1 +0.1**
GIVF Givet 7.62 323 eP **Pn 20 22 43.1 +0.1**
BCLA Clavier 7.66 326 PN **Pn 20 22 44.0 +0.4**
BCLA SN Sn 20 24 03.5 -6.3
comp=E,41nm,0.0s
CLZ Clausthal 7.68 353 eP **Pn 20 22 42.9 -1.0**
CLZ Clausthal 7.68 353 ePn **Pn 20 22 42.9 -1.0**
CLZ Clausthal 7.68 353 eP **Pn 20 22 42.9 -1.0**
HGN Heimansgroeve 7.70 330 eP **Pn 20 22 44.5 +0.4**
comp=E,24nm,0.2s
HGN eS Sb 20 24 56.2 +19
HGN eL L 20 26 06.6
comp=E,2µm,18.1s
NIE Niedzica 7.71 45 eP **Pn 20 22 44.5 +0.2**
NIE e 20 24 06.3
NIE Niedzica 7.71 45 ePn **Pn 20 22 44.5 +0.2**
NIE eSn **Sn 20 24 06.3 -4.7**
NIE Niedzica 7.71 45 eP **Pn 20 22 44.5 +0.2**
DOU Dourbes 7.72 322 PN **Pn 20 22 44.7 +0.3**
DOU SN **Sn 20 24 07.5 -3.6**
comp=N,39nm,0.0s
NEST Nestorio 7.73 117 P **Pn 20 22 45.2 +0.6**
FNA Florina 7.75 113 eP **Pn 20 22 45.7 +0.8**
GZR Gura Zlata 7.76 78⇑ iP **Pn 20 22 46.0 +0.9**
IGT Igoumenitsa 7.81 124 P **Pn 20 22 45.7 +0.1**
BEBN Eben Emael 7.82 329 PN **Pn 20 22 46.9 +1.2**
BAIF Baives 7.87 320 eP **Pn 20 22 46.0 -0.4**
BAIF Baives 7.87 320 eP **Pn 20 22 46.0 -0.4**
BAIF Baives 7.87 320 eP **Pn 20 22 46.0 -0.4**
BAIF Baives 7.87 320 eP **Pn 20 22 46.0 -0.4**
BUG Bochum--Univer 7.87 338 eP **Pn 20 22 47.2 +0.8**
BUG Bochum--Univer 7.87 338 ePn **Pn 20 22 47.2 +0.8**
BUG Bochum--Univer 7.87 338 eP **Pn 20 22 47.2 +0.8**
DEV Deva 7.91 74‖ P **Pn 20 22 48.6 +1.7**
DEV Deva 7.91 74‖ iP **Pn 20 22 48.6 +1.7**
DEV Deva 7.91 74 P **Pn 20 22 48.6 +1.7**
DRGR 7.96 68 P **Pn 20 22 48.5 +0.8**
DRGR 7.96 68‖ iP **Pn 20 22 48.4 +0.8**
DRGR 7.96 68 P **Pn 20 22 48.5 +0.8**
EMIR Miracle 8.00 257 Pn **Pn 20 22 50.2 +1.9**
comp=N,13nm,0.6s,SNR=15
OJC Ojcow 8.00 39 eP **Pn 20 22 47.6 -0.6**
OJC Ojcow 8.00 39 ePn **Pn 20 22 47.6 -0.6**
OJC Ojcow 8.00 39 eP **Pn 20 22 47.6 -0.6**
MLS Moulis 8.01 265 P **Pn 20 22 49.4 +1.1**
MLS Moulis 8.01 265 P **Pn 20 22 49.4 +1.1**
MLS Moulis 8.01 265 P **Pn 20 22 49.4 +1.1**
CRVS Cervenica-Dubn 8.02 51 eP **Pn 20 22 48.0 -0.5**
CRVS MLR MLR
comp=Z,200nm,1.6s
CRVS Cervenica-Dubn 8.02 51 ePN **Pn 20 22 48.0 -0.5**
CRVS Cervenica-Dubn 8.02 51 eP **Pn 20 22 48.0 -0.5**
comp=Z,200nm,1.6s
JAN Janina 8.04 122 P **Pn 20 22 49.8 +1.0**
JAN Janina 8.04 122 eP **Pn 20 22 49.5 +0.7**
LFF La Frestale 8.05 279 ePn **Pn 20 22 48.6 -0.4**
SNR=1.0
LFF eSn Sn 20 24 11.7 -7.7
comp=Z,19nm,0.4s,SNR=1.0
LFF La Frestale 8.05 279 eP **Pn 20 22 48.6 -0.4**
LFF e 20 24 11.7
LFF La Frestale 8.05 279 ePn **Pn 20 22 48.6 -0.4**
LFF eSn Sn 20 24 11.7 -7.7
LFF La Frestale 8.05 279 ePn **Pn 20 22 48.6 -0.4**
SNR=1.0
CSOR Sort 8.13 260 Pn Pn 20 22 53.2 +3.1
comp=Z,11nm,0.4s,SNR=35
CSOR Lg Lg 20 24 23.9
comp=Z,17nm,0.5s,SNR=5.9
SNF Seneffe 8.16 323 PN **Pn 20 22 50.9 +0.6**
MEV Metsovon 8.20 120 P **Pn 20 22 53.0 +1.9**
KZN Kozani 8.25 115 P **Pn 20 22 53.0 +1.2**
KZN Kozani 8.25 115 eP **Pn 20 22 53.3 +1.5**
TRPA Tarpa 8.29 58‖ iP **Pn 20 22 52.9 +0.7**
VAY Valandovo 8.32 107 P **Pn 20 22 52.2 -0.4**
VAY Valandovo 8.32 107 i Pn **Pn 20 22 52.2 -0.4**
VAY Valandovo 8.32 107 i Pn **Pn 20 22 52.6 0.0**
VTS Vitosha 8.34 98 P **Pn 20 22 53.7 +0.7**
VTS Vitosha 8.34 98‖ P **Pn 20 22 53.2 +0.2**
VTS Vitosha 8.34 98‖ iP **Pn 20 22 53.2 +0.2**
VTS Vitosha 8.34 98 P **Pn 20 22 53.2 +0.2**

NRDL	Niedersach Rie	8.35	352	ePn	Pn	20 22 52.6	-0.3
GRG	Griva	8.36	110	P	Pn	20 22 52.8	-0.4
CMAH	Djebel Manchou	8.36	206	P	Pn	20 22 56.5	+3.2
CMAH	Djebel Manchou	8.36	206	P	Pn	20 22 56.5	+3.2
UZH	Uzhgorod	8.37	55	eP	Pn	20 22 52.4	-0.8
UZH				eS	Sn	20 24 26.6	-0.4
UZH				MLR	MLR		
	comp=Z,900nm,1.0s						
UZH				MLR	MLR		
	comp=N,2µm,10.0s						
UZH				MLR	MLR		
	comp=E,2µm,10.0s						
UZH	Uzhgorod	8.37	55	eP	Pn	20 22 52.4	-0.8
UZH				eS	Sn	20 24 26.6	-0.4
	comp=E,900nm,1.0s						
CAEH	'Ain El Ouahch	8.41	209	P	Pn	20 23 03.0	+9.1
CAEH	'Ain El Ouahch	8.41	209	P	Pn	20 23 03.0	+9.1
WTSB	Winterswijk	8.47	338	eP	Pn	20 22 54.9	+0.3
	comp=E,7.3nm,0.1s						
WTSB				eS	Sb	20 25 33.2	+34
LKD2	Lefkada island	8.49	127	P	Pn	20 22 54.7	-0.2
LKD2	Lefkada island	8.49	127	eP	Pn	20 22 55.4	+0.5
KOLS	Kolonicke sedl	8.50	53	eP	Pn	20 22 56.3	+1.2
KOLS				MLR	MLR		
	comp=Z,100nm,1.1s						
KOLS	Kolonicke sedl	8.50	53	ePN	Pn	20 22 56.3	+1.2
KOLS	Kolonicke sedl	8.50	53	eP	Pn	20 22 56.3	+1.2
	comp=Z,100nm,1.1s						
EPOB	Poblet	8.52	254	Pn	Pn	20 22 57.6	+2.2
	comp=Z,5.8nm,0.8s,SNR=8.6						
EPOB				Lg	Lg	20 24 29.5	
	comp=Z,6.4nm,0.5s						
EPF	Esparros	8.53	266	ePn	Pn	20 22 56.2	+0.6
	SNR=1.0						
EPF	Esparros	8.53	266	eP	Pn	20 22 56.2	+0.6
EPF	Esparros	8.53	266	ePn	Pn	20 22 56.2	+0.6
EPF	Esparros	8.53	266	ePn	Pn	20 22 56.2	+0.6
	SNR=1.0						
IBBN	Ibbenburen	8.55	342	ePn	Pn	20 22 56.8	+1.1
RESF	Ens	8.58	264	P	Pn	20 22 58.3	+2.0
RESF	Ens	8.58	264	P	Pn	20 22 58.3	+2.0
RESF	Ens	8.58	264	P	Pn	20 22 58.3	+2.0
KNT	Kendrikon	8.61	107	P	Pn	20 22 56.5	-0.1
ABSA	Djebel Ababsia	8.67	205	P	Pn	20 23 02.0	+4.5
ABSA	Djebel Ababsia	8.67	205	P	Pn	20 23 02.0	+4.5
LABF	Labassere	8.72	266	P	Pn	20 22 56.4	-1.7
LABF	Labassere	8.72	266	P	Pn	20 22 58.3	+0.2
LABF	Labassere	8.72	266	P	Pn	20 22 58.3	+0.2
KEST	Kesra	8.74	194	Pn	Pn	20 23 04.2	+5.8
KEST	Kesra	8.74	194	Pn	Pn	20 23 04.2	+5.8
	comp=Z,2.4nm,0.3s,baz=309,slow=4.3,SNR=119						
KEST				LR	LR	20 26 41.8	
	comp=Z,584nm,20.2s,baz=209,slow=40						
VIEF	Viey	8.79	265	P	Pn	20 22 59.7	+0.6
VIEF	Viey	8.79	265	P	Pn	20 22 59.7	+0.6
VIEF	Viey	8.79	265	P	Pn	20 22 59.7	+0.6
THL	Klokotos Trika	8.82	119	P	Pn	20 22 59.7	+0.2
THL	Klokotos Trika	8.82	119	eP	Pn	20 22 59.6	+0.1
LIT	Litokhoron	8.83	114	P	Pn	20 23 01.5	+1.8
LIT	Litokhoron	8.83	114	eP	Pn	20 22 59.4	-0.3
LIT	Litokhoron	8.83	114	eP	Pn	20 23 00.0	+0.3
MFF	Saint Martin d	8.85	290	ePn	Pn	20 22 58.4	-1.5
	SNR=1.0						
MFF	Saint Martin d	8.85	290	eP	Pn	20 22 58.4	-1.5
MFF	Saint Martin d	8.85	290	ePn	Pn	20 22 58.4	-1.5
MFF	Saint Martin d	8.85	290	ePn	Pn	20 22 58.4	-1.5
	SNR=1.0						
VLS	Valsamata	8.87	130	P	Pn	20 22 59.9	-0.3
VLS	Valsamata	8.87	130	eP	Pn	20 23 00.5	+0.3
THE	Thessaloniki	8.89	110	P	Pn	20 23 01.2	+0.8
THE	Thessaloniki	8.89	110	eP	Pn	20 23 00.4	0.0
MDB	Medias	8.96	73	⇓P	Pn	20 23 01.7	+0.3
MDB	Medias	8.96	73	⇓iP	Pn	20 23 01.7	+0.3
MDB	Medias	8.96	73	P	Pn	20 23 01.7	+0.3
HORT	Hortiatis	8.99	110	P	Pn	20 23 01.8	-0.2
HORT	Hortiatis	8.99	110	eP	Pn	20 23 01.7	-0.2
KFL	Anninata	9.03	130	P	Pn	20 23 02.3	-0.1
REYF	Montagne du Re	9.05	267	P	Pn	20 23 05.1	+2.4
REYF	Montagne du Re	9.05	267	P	Pn	20 23 05.1	+2.4
SOH	Sokhos	9.06	108	eP	Pn	20 23 02.8	-0.1
ARR	Arges	9.07	78	⇓iP	Pn	20 23 05.1	+2.2
EVR	Evrytania	9.08	122	P	Pn	20 23 03.9	+0.7
EVR	Evrytania	9.08	122	eP	Pn	20 23 03.8	+0.6
KWP	Kalwaria Pacla	9.10	50	⇓P	Pn	20 23 04.3	+1.0
KWP	Kalwaria Pacla	9.10	50	ePn	Pn	20 23 00.6	-2.7
KWP	Kalwaria Pacla	9.10	50	⇓iP	Pn	20 23 04.3	+1.0
KWP	Kalwaria Pacla	9.10	50	eP	Pn	20 23 04.4	+1.1
KWP	Kalwaria Pacla	9.10	50	ePn	Pn	20 23 00.6	-2.7
KWP	Kalwaria Pacla	9.10	50	P	Pn	20 23 04.3	+1.0
SRS	Serrai	9.11	106	P	Pn	20 23 03.3	-0.1
SRS	Serrai	9.11	106	eP	Pn	20 23 03.8	+0.4
ERTA	Horta de San J	9.19	253	Pn	Pn	20 23 07.6	+3.0
	comp=Z,8.3nm,0.9s,SNR=7.6						
ERTA				Lg	Lg	20 24 46.6	
	comp=Z,8.1nm,0.8s						
NVR	Nevrokopi	9.20	104	P	Pn	20 23 05.4	+0.7
NVR	Nevrokopi	9.20	104	eP	Pn	20 23 05.1	+0.4
ETSF	Etsaut	9.20	266	ePn	Pn	20 23 03.5	-1.3
ETSF	Etsaut	9.20	266	eP	Pn	20 23 08.0	+3.2
ETSF	Etsaut	9.20	266	eP	Pn	20 23 03.5	-1.3
ETSF	Etsaut	9.20	266	ePn	Pn	20 23 03.5	-1.3
ETSF	Etsaut	9.20	266	ePn	Pn	20 23 03.5	-1.3
HUMR	Humele	9.32	84	⇑iP	Pn	20 23 07.1	+0.8
PLG	Polygyros	9.33	111	P	Pn	20 23 06.0	-0.5
PLG	Polygyros	9.33	111	eP	Pn	20 23 06.0	-0.5
AGG	Agios Georgios	9.34	120	P	Pn	20 23 06.4	-0.2
AGG	Agios Georgios	9.34	120	eP	Pn	20 23 06.6	0.0
VOIR		9.36	78	⇑P	Pn	20 23 08.9	+1.9
VOIR		9.36	78	⇑iP	Pn	20 23 08.9	+1.9
VOIR		9.36	78	P	Pn	20 23 08.9	+1.9
LDF	La Druitiere	9.42	302	ePn	Pn	20 23 06.2	-1.5
	SNR=1.0						
LDF	La Druitiere	9.42	302	eP	Pn	20 23 06.2	-1.5
LDF	La Druitiere	9.42	302	ePn	Pn	20 23 06.2	-1.5
LDF	La Druitiere	9.42	302	ePn	Pn	20 23 06.2	-1.5
	SNR=1.0						
RLS	Riolos of Patr	9.45	128	P	Pn	20 23 08.8	+0.7
RLS	Riolos of Patr	9.45	128	eP	Pn	20 23 09.4	+1.3
EFP	Efpalio	9.46	124	P	Pn	20 23 09.0	+0.8
EFP	Efpalio	9.46	124	eP	Pn	20 23 08.7	+0.5
ESAC	San Caprasio	9.47	259	Pn	Pn	20 23 12.1	+3.7
	comp=Z,11nm,0.3s,SNR=9.7						
EIBI	Ibiza	9.51	240	Pn	Pn	20 23 12.5	+3.5
	comp=Z,21nm,0.4s,SNR=18						
BEL	Belsk	9.62	35	eP	Pn	20 23 10.5	+0.2
KALE	Kalithea	9.62	124	P	Pn	20 23 12.0	+1.5
KALE	Kalithea	9.62	124	eP	Pn	20 23 13.2	+2.7
LAKA	Lakka	9.62	125	eP	Pn	20 23 12.6	+2.1
SJPF	Ste Jean	9.64	268	ePn	Pn	20 23 11.7	+1.0
	SNR=1.0						
SJPF	Ste Jean	9.64	268	eP	Pn	20 23 11.7	+1.0
SJPF	Ste Jean	9.64	268	ePn	Pn	20 23 11.7	+1.0
SJPF	Ste Jean	9.64	268	ePn	Pn	20 23 11.7	+1.0
	SNR=1.0						
GKP	Gorka Klasztor	9.68	19	eP	Pn	20 23 10.3	-0.8
IELO	Elcoad	9.70	266	Pn	Pn	20 23 16.6	+5.0
	comp=Z,1.7nm,0.3s,SNR=7.9						
FLN	La Foliniere	9.71	302	ePn	Pn	20 23 09.9	-1.7
	baz=116,SNR=1.0						
FLN	La Foliniere	9.71	302	eP	Pn	20 23 09.9	-1.7
FLN	La Foliniere	9.71	302	ePn	Pn	20 23 09.9	-1.7
FLN	La Foliniere	9.71	302	ePn	Pn	20 23 09.9	-1.7
	baz=116,SNR=1.0						
IEPA	Eparoz	9.74	266	Pn	Pn	20 23 17.7	+5.6
	comp=Z,5.7nm,0.4s,SNR=7.9						
EORO	Oroz-Betelu	9.74	267	Pn	Pn	20 23 18.2	+6.0
	comp=Z,22nm,0.9s,SNR=8.3						
BSEG	Bad Segeberg	9.76	354	eP	Pn	20 23 11.2	-1.1
BSEG	Bad Segeberg	9.76	354	ePn	Pn	20 23 11.2	-1.1
BSEG	Bad Segeberg	9.76	354	eP	Pn	20 23 11.2	-1.1
GRR	Gorron	9.80	300	ePn	Pn	20 23 10.4	-2.5
	SNR=1.0						
GRR	Gorron	9.80	300	eP	Pn	20 23 10.4	-2.5
GRR	Gorron	9.80	300	ePn	Pn	20 23 10.4	-2.5
GRR	Gorron	9.80	300	ePn	Pn	20 23 10.4	-2.5
	SNR=1.0						
BUR08	Bucovina Ar. S	9.82	65	ePn	Pn	20 23 11.5	-1.7
BUR08	Bucovina Ar. S	9.82	65	ePn	Pn	20 23 11.5	-1.7
BURAR	Bucovina Array	9.82	65	⇑iP	Pn	20 23 14.9	+1.6
ELIZ	Elizondo	9.85	268	Pn	Pn	20 23 16.0	+2.5
	comp=Z,4.7nm,0.3s,SNR=10						
IUNC	Unciti	9.91	266	Pn	Pn	20 23 18.7	+4.3
	comp=Z,8.4nm,0.5s,SNR=6.8						
LVV	L'vov	9.94	52	eP	Pn	20 23 17.7	+3.0
LVV				eS	Sn	20 25 09.6	+4.0
LVV				MLR	MLR		
	comp=Z,500nm,9.5s						
AMT	Artemida-Makis	9.95	129	eP	Pn	20 23 20.7	+5.6
LKR	Lokris	9.98	120	eP	Pn	20 23 15.0	-0.3
MLR	Muntele Rosu	10.00	78	Pn	Pn	20 23 17.6	+1.9
MLR	Muntele Rosu	10.00	78	⇓iP	Pn	20 23 17.8	+2.1
MLR	Muntele Rosu	10.00	78	Pn	Pn	20 23 17.6	+1.9
	baz=153,slow=9.0						
MLR	Muntele Rosu	10.00	78	Pn	Pn	20 23 17.6	+1.9
EMOS	Mosqueruela	10.00	252	Pn	Pn	20 23 18.3	+2.4
	comp=Z,16nm,0.9s,SNR=7.9						
GUR	Goura	10.04	125	eP	Pn	20 23 18.1	+1.8
ITM	Ithomi	10.33	130	eP	Pn	20 23 24.6	+4.4
ISR	Istrita	10.41	80	⇑P	Pn	20 23 22.9	+1.6
ISR	Istrita	10.41	80	⇑iP	Pn	20 23 22.9	+1.6
ISR	Istrita	10.41	80	P	Pn	20 23 22.9	+1.6
PYL	PYLOS	10.43	131	eP	Pn	20 23 22.5	+0.9
VLX	Vlachokerasia	10.45	128	eP	Pn	20 23 24.4	+2.5
PLOR	Plostina	10.51	76	⇓P	Pn	20 23 24.4	+1.8
PLOR	Plostina	10.51	76	⇓iP	Pn	20 23 24.4	+1.8
PLOR	Plostina	10.51	76	P	Pn	20 23 24.4	+1.8
VRI	Vrincioaia	10.56	76	P	Pn	20 23 25.3	+1.9
VRI	Vrincioaia	10.56	76	⇑iP	Pn	20 23 25.2	+1.9
VRI	Vrincioaia	10.56	76	P	Pn	20 23 25.3	+1.9
TESR		10.57	72	⇓iP	Pn	20 23 24.8	+1.4
EBEN	Beniarda	10.70	243	Pn	Pn	20 23 28.0	+2.8
	comp=Z,14nm,0.7s,SNR=22						
SGMF	Saint Gilles	10.84	297	ePn	Pn	20 23 24.8	-2.2
	SNR=1.0						
SGMF	Saint Gilles	10.84	297	eP	Pn	20 23 24.8	-2.2
SGMF	Saint Gilles	10.84	297	ePn	Pn	20 23 24.8	-2.2
SGMF	Saint Gilles	10.84	297	ePn	Pn	20 23 24.8	-2.2
	SNR=1.0						
DID	Didima	10.85	124	eP	Pn	20 23 31.5	+4.1
DYR	Agios Nikonas	10.85	130	eP	Pn	20 23 28.7	+1.3
ALN	Alexandroupoli	10.90	103	P	Pn	20 23 28.7	+0.8
ALN	Alexandroupoli	10.90	103	eP	Pn	20 23 28.6	+0.7
ALN	Alexandroupoli	10.90	103	eP	Pn	20 23 28.7	+0.8
ETOR	Torete	10.91	257	Pn	Pn	20 23 30.8	+2.6
	comp=Z,9.1nm,0.4s,SNR=9.3						
BSD	Bornholm Skovb	11.05	9	iP	Pn	20 23 27.7	-2.2
BSD				iS	Sn	20 25 24.0	-8.7
GHRR		11.05	75	⇓iP	Pn	20 23 32.0	+2.0
QUIF	Quistinic	11.14	295	ePn	Pn	20 23 28.2	-3.0
	SNR=1.0						
QUIF	Quistinic	11.14	295	eP	Pn	20 23 28.2	-3.0
QUIF	Quistinic	11.14	295	ePn	Pn	20 23 28.2	-3.0
QUIF	Quistinic	11.14	295	ePn	Pn	20 23 28.2	-3.0
	SNR=1.0						
ROSF	Rostrenen	11.32	297	ePn	Pn	20 23 31.3	-2.4
	SNR=1.0						
ROSF	Rostrenen	11.32	297	eP	Pn	20 23 31.3	-2.4
ROSF	Rostrenen	11.32	297	ePn	Pn	20 23 31.3	-2.4
ROSF	Rostrenen	11.32	297	ePn	Pn	20 23 31.3	-2.4
	SNR=1.0						
ETOB	Tobarra	11.59	246	Pn	Pn	20 23 39.3	+1.9
	comp=Z,3.7nm,0.4s,SNR=11						
TIRR	Tirgusor	11.77	83	P	Pn	20 23 41.1	+1.3
TIRR	Tirgusor	11.77	83	ePn	Pn	20 23 38.0	-1.9
TIRR	Tirgusor	11.77	83	⇓iP	Pn	20 23 40.5	+0.7
TIRR	Tirgusor	11.77	83	ePn	Pn	20 23 38.0	-1.9
TIRR	Tirgusor	11.77	83	P	Pn	20 23 41.1	+1.3
PRK	Paraskevi	11.78	110	eP	Pn	20 23 41.0	+1.0
EMUR	La Murta	11.85	242	Pn	Pn	20 23 43.5	+2.5
	comp=Z,3.1nm,0.3s,SNR=14						
TLCR		12.02	80	⇓P	Pn	20 23 43.9	+0.7
TLCR		12.02	80	⇓iP	Pn	20 23 43.9	+0.7
TLCR		12.02	80	P	Pn	20 23 43.9	+0.7
KIS	Kishinev	12.11	71	eP	Pn	20 23 44.0	-0.5
KIS				MLR	MLR		
	comp=Z,1µm,13.0s						
KIS				MLR	MLR		
	comp=Z,1µm,13.0s						
KIS	Kishinev	12.11	71	eP	Pn	20 23 44.0	-0.5
KIS				LRM	MLR	20 29 18.0	
	comp=Z,1µm,13.0s						
KIS	Kishinev	12.11	71	eP	Pn	20 23 44.0	-0.5
	comp=Z,1µm,13.0s						
SUW	Suwalki	12.21	33	eP	Pn	20 23 43.9	-1.9
SUW	Suwalki	12.21	33	ePn	Pn	20 23 43.9	-1.9
SUW	Suwalki	12.21	33	eP	Pn	20 23 47.9	+2.1
SUW	Suwalki	12.21	33	eP	Pn	20 23 43.9	-1.9
MUD	Monsted U'grnd	12.36	353	iP	Pn	20 23 47.5	-0.3
MUD	Monsted U'grnd	12.36	353	iP	Pn	20 23 46.5	-1.3
	SNR=46						
ESDC	Sonseca Array	12.71	254	Pn	Pn	20 23 53.2	+0.4
ESDC	Sonseca Array	12.71	254	Pn	Pn	20 23 53.2	+0.4
	comp=Z,0.6nm,0.3s,baz=67,slow=13,SNR=13						
ESDC				LR	LR	20 28 46.4	
	comp=Z,639nm,20.2s,baz=75,slow=38						
ESDC	Sonseca Array	12.71	254	Pn	Pn	20 23 53.2	+0.4
ESLA	Sonseca Array	12.71	254	ePn	Pn	20 23 51.0	-1.8
ESLA	Sonseca Array	12.71	254	ePn	Pn	20 23 51.0	-1.8
PAB	San Pablo	13.04	255	eP	Pn	20 23 56.0	-1.2
PAB	San Pablo	13.04	255	ePn	Pn	20 23 56.0	-1.2
PAB	San Pablo	13.04	255	eP	Pn	20 23 56.0	-1.2
AK02	Malin Array Si	13.29	55	ePn	Pn	20 23 58.1	-2.5
AK02	Malin Array Si	13.29	55	ePn	Pn	20 23 58.1	-2.5
KIEV	Kiev	13.31	55	eP	Pn	20 23 58.4	-2.4
KIEV	Kiev	13.31	55	ePn	Pn	20 23 58.4	-2.4
KIEV	Kiev	13.31	55	eP	Pn	20 23 58.4	-2.4
AK01	Malin Array Si	13.31	55	ePn	Pn	20 23 58.3	-2.5
AK01	Malin Array Si	13.31	55	ePn	Pn	20 23 58.3	-2.5
AKASG	Malin Array Be	13.32	55	P	Pn	20 24 00.3	-0.7
AKASG	Malin Array Be	13.32	55	Pn	Pn	20 24 00.2	-0.7
AKASG	Malin Array Be	13.32	55	Pn	Pn	20 24 00.2	-0.7
	comp=Z,0.3nm,0.3s,baz=243,slow=13,SNR=12						
AKASG	Malin Array Be	13.32	55	P	Pn	20 24 00.3	-0.7
MVO	Moncorvo	14.31	264	eP	P	20 24 23.6	+1.9
MVO				eLR	LR	20 28 41.0	
	comp=Z,790nm,18.0s						
MVO	Moncorvo	14.31	264	eP	P	20 24 23.6	+1.9
NACGM	Naroch	14.32	37	e	Pn	20 24 11.0	-3.6
IIGN	Ignalina	14.39	34	eP	Pn	20 24 15.2	-0.5
ISAL	Salakas	14.51	34	eP	Pn	20 24 16.9	-0.3
MNK	Minsk	14.53	39	eP	P	20 24 28.0	+4.1
MICGM	Minsk	14.55	40	e	P	20 24 28.0	+3.9
IZAR	Zarasai	14.69	33	eP	Pn	20 24 19.0	-0.6
EKA	Eskdalemuir Ar	14.75	324	Pn	Pn	20 24 18.3	-2.2
EKA	Eskdalemuir Ar	14.75	324	Pn	Pn	20 24 18.3	-2.2
	baz=138,slow=14,SNR=32						
EKA	Eskdalemuir Ar	14.75	324	Pn	Pn	20 24 18.3	-2.2
POLO	Lamas de Olo	14.79	266	eP	P	20 24 29.8	+2.7
MTE	Manteigas	14.94	262	eP	P	20 24 30.0	+1.3
MTE				eLR	LR	20 28 55.4	
	comp=Z,927nm,18.0s						
MTE	Manteigas	14.94	262	eP	P	20 24 30.0	+1.3
PGAV	Gavieira, Arco	14.96	268	eLR	LR	20 28 47.4	
	comp=Z,926nm,19.0s						
PCBR	Castelo Branco	15.11	260	eP	P	20 24 30.7	+0.3
PCBR	Castelo Branco	15.11	260	eP	P	20 24 30.7	+0.3
PMRV	Marv??o	15.21	258	eP	Pn	20 24 28.8	+2.0
PMRV				eLR	LR	20 28 55.2	
	comp=Z,597nm,18.0s						
PMRV	Marv??o	15.21	258	eP	Pn	20 24 28.8	+2.0
ISP	Isparta	15.38	108	⇑P	P	20 24 31.4	-2.2
ISP	Isparta	15.38	108	ePn	Pn	20 24 28.0	-1.1
	comp=Z,54nm,1.3s						
ISP	Isparta	15.38	108	⇑iP	P	20 24 31.4	-2.2
ISP	Isparta	15.38	108	ePn	Pn	20 24 28.0	-1.1
	comp=Z,54nm,1.3s						
ISP	Isparta	15.38	108	P	P	20 24 31.4	-2.2
PESTR	Estremoz	15.59	257	eP	P	20 24 36.9	+1.0
PESTR	Estremoz	15.59	257	eP	P	20 24 36.9	+1.0
SIM	Simferopol'	15.78	80	P	P	20 24 40.0	+2.1
SIM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SIM				MLR	MLR		
	comp=Z,1µm,15.1s						
SIM	Simferopol'	15.78	80	P	P	20 24 40.0	+2.1
	comp=Z,1µm,15.1s						
HFS	Hagfors	15.95	3	Pn	P	20 24 38.5	-1.2
HFS	Hagfors	15.95	3	Pn	P	20 24 38.5	-1.2
	comp=Z,0.6nm,0.3s,baz=179,slow=12,SNR=18						
HFS				LR	LR	20 31 29.8	
	comp=Z,682nm,20.2s,baz=185,slow=40						
HFS	Hagfors	15.95	3	P	P	20 24 38.5	-1.2
PVAQ	Vaqueiros	16.38	252	eLR	LR	20 29 10.4	
	comp=Z,422nm,16.0s						
BR131	Keskin Array S	16.71	98	ePn	Pn	20 24 46.0	-0.2
	comp=Z,34nm,1.2s						
BR131	Keskin Array S	16.71	98	ePn	Pn	20 24 46.0	-0.2
	comp=Z,34nm,1.2s						
BRTR	Keskin Array B	16.71	98	Pn	Pn	20 24 47.0	+0.8
BRTR				PcP	PcP	20 29 33.3	-1.3
BRTR	Keskin Array B	16.71	98	Pn	Pn	20 24 47.0	+0.8
	comp=Z,0.2nm,0.3s,baz=297,slow=9.4,SNR=43						
BRTR				PcP	PcP	20 29 33.3	-1.3
	comp=Z,0.0nm,0.3s,baz=322,slow=1.2,SNR=4.9						
BRTR	Keskin Array B	16.71	98	P	Pn	20 24 47.0	+0.8
BRTR	Keskin Array B	16.71	98	PcP	PcP	20 29 33.3	-1.3
LIS	Lisbon	16.75	258	eP	Pn	20 24 47.2	+0.7
LIS				AMb	AMB	20 25 10.3	
	comp=Z,79nm,1.3s						
LIS	Lisbon	16.75	258	eP	Pn	20 24 47.2	+0.7
	comp=Z,79nm,1.3s						
LIS	Lisbon	16.75	258	eP	Pn	20 24 47.2	+0.7
LIS	Lisbon	16.75	258	eP	Pn	20 24 47.2	+0.7
	comp=Z,79nm,1.3s						
NB2	NORSAR Subarra	16.83	359	P	P	20 24 49.5	0.0
	comp=Z,35nm,1.1s,baz=178,slow=11						
NB2	NORSAR Subarra	16.83	359	P	P	20 24 49.5	0.0
	comp=Z,35nm,1.1s,baz=178,slow=11,SNR=3.0						
NOA	NORSAR Array B	16.83	359	Pn	P	20 24 49.8	+0.3
NOA	NORSAR Array B	16.83	359	Pn	P	20 24 49.8	+0.3
	comp=Z,0.5nm,0.3s,baz=178,slow=11,SNR=33						
NOA				LR	LR	20 32 05.6	
	comp=Z,424nm,20.4s,baz=180,slow=40						
NOA	NORSAR Array B	16.83	359	P	P	20 24 49.8	+0.3
VSU	Vasula	16.90	27	eP	Pn	20 24 47.5	-0.7
VSU				pmax	pmax		
	comp=Z,104nm,1.0s						
VSU	Vasula	16.90	27	eP	Pn	20 24 47.5	-0.7
	comp=Z,104nm,1.0s						
MORF	Marmelete	17.07	253	eP	Pn	20 24 50.5	-0.1
MORF	Marmelete	17.07	253	eP	Pn	20 24 50.5	-0.1
MDT	Midelt	17.25	234	P	P	20 24 54.9	+0.6
MDT	Midelt	17.25	234	P	P	20 24 54.9	+0.6
	comp=Z,0.1nm,0.3s,baz=59,slow=10.0,SNR=8.1						
MDT				LR	LR	20 31 06.7	
	comp=Z,354nm,19.2s,baz=179,slow=36						
MDT	Midelt	17.25	234	P	P	20 24 54.9	+0.6
ANN	Anapa	18.14	79	eP	Pn	20 25 00.8	-3.0
ANN				eS	Sn	20 28 21.5	-4.1
ANN				pmax	pmax		
	comp=Z,56nm,1.5s						
ANN				MLR	MLR		
	comp=Z,471nm,16.0s						
CSS	Prodhromos	18.84	112	eP	Pn	20 25 12.4	+0.1
	comp=Z,13nm,0.8s						
CSS	Prodhromos	18.84	112	eP	Pn	20 25 12.4	+0.1
	comp=Z,13nm,0.8s						
PUL	Pulkovo	19.10	29	eP	P	20 25 14.8	+0.4
PUL				pmax	pmax		
	comp=Z,72nm,1.2s						
PUL	Pulkovo	19.10	29	eP	P	20 25 14.8	+0.4
	comp=Z,72nm,1.2s						
FINES	FINESS Array B	19.14	21	P	P	20 25 14.6	-0.3
FINES	FINESS Array B	19.14	21	P	P	20 25 14.6	-0.3
	comp=Z,1.1nm,0.3s,baz=194,slow=8.5,SNR=48						
FINES				LR	LR	20 33 31.2	
	comp=Z,1µm,20.8s,baz=22,slow=40						
FINES	FINESS Array B	19.14	21	P	P	20 25 14.6	-0.3
FIA1	FINESS Array S	19.14	21	eP	P	20 25 13.8	-1.1
FIA1	FINESS Array S	19.14	21	eP	P	20 25 13.8	-1.1
OBN	Obninsk	19.17	47	⇓eP	P	20 25 12.8	-2.3
OBN				iS	Sn	20 28 48.5	-1.6
OBN				pmax	pmax		
	comp=Z,18nm,1.0s						
OBN				MLR	MLR		
	comp=Z,1µm,17.0s						
OBN	Obninsk	19.17	47	eP	P	20 25 12.8	-2.3
	comp=Z,1µm,17.0s						
VSR	Storozhevoye	19.50	59	eP	P	20 25 17.6	-1.2
VSR				pmax	pmax		
	comp=N,10.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,20nm,0.8s						
VSR				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR				MLR	MLR		
	comp=E,460nm,14.0s						
VSR				MLR	MLR		
	comp=Z,800nm,14.0s						
VSR				MLR	MLR		
	comp=N,150nm,12.0s						
VSR	Storozhevoye	19.50	59	eP	P	20 25 17.6	-1.2
	comp=N,150nm,12.0s						
VOR	Voronezh	19.62	58	P	P	20 25 18.0	-2.1
VOR				pmax	pmax		
	comp=Z,250nm,1.0s						
VOR	Voronezh	19.62	58	P	P	20 25 18.0	-2.1
	comp=Z,250nm,1.0s						
KAF	Kangasniemi	19.77	20	eP	P	20 25 19.9	-1.8
KAF				pmax	pmax		
	comp=Z,13nm,0.7s						
KAF	Kangasniemi	19.77	20	ep	P	20 25 19.9	-1.8
	comp=Z,13nm,0.7s						
KAF	Kangasniemi	19.77	20	eP	P	20 25 19.9	-1.8
	comp=Z,13nm,0.7s						
SOC	Sochi	19.96	82	eP	P	20 25 22.9	-1.1
SOC				e		20 25 35.3	
SOC				e		20 29 07.0	
SOC				pmax	pmax		
	comp=Z,88nm,0.9s						
SOC				MLR	MLR		
	comp=Z,281nm,12.0s						
SOC	Sochi	19.96	82	eP	P	20 25 22.9	-1.1
	comp=Z,88nm,0.9s						
MOS	Moscow	19.97	46	eP	P	20 25 23.8	-0.2
MOS				pmax	pmax		
	comp=Z,51nm,1.1s						
MOS				MLR	MLR		
	comp=N,600nm,17.0s						
MOS				MLR	MLR		
	comp=E,1µm,17.0s						
MOS				MLR	MLR		
	comp=Z,1µm,17.0s						
MOS	Moscow	19.97	46	eP	P	20 25 23.8	-0.2
	comp=Z,51nm,1.1s						
MALT	Malatya	20.69	97	P	Pn	20 25 34.1	-0.4
MALT	Malatya	20.69	97	eP	P	20 25 31.5	-0.5
	comp=Z,27nm,1.1s						
MALT	Malatya	20.69	97	eP	P	20 25 31.5	-0.5
	comp=Z,27nm,1.1s						
VRHR	Novokhopersk	21.01	60	eP	P	20 25 34.9	-0.3
VRHR				pmax	pmax		
	comp=N,10.0nm,0.8s						
VRHR				pmax	pmax		
	comp=E,20nm,0.8s						
VRHR				pmax	pmax		
	comp=Z,30nm,0.8s						
VRHR				MLR	MLR		
	comp=N,110nm,12.0s						
VRHR				MLR	MLR		
	comp=E,390nm,12.0s						
VRHR				MLR	MLR		
	comp=Z,530nm,12.0s						
VRHR	Novokhopersk	21.01	60	eP	P	20 25 34.9	-0.3
MMAI	Mount Meron Ar	21.38	114	P	P	20 25 40.1	+0.6
MMAI	Mount Meron Ar	21.38	114	P	P	20 25 40.1	+0.6
	comp=Z,13nm,0.9s,baz=308,slow=10,SNR=12						
JOF	Joensuu	21.78	24	eP	P	20 25 42.1	-1.3
JOF				pmax	pmax		
	comp=Z,12nm,0.8s						
JOF	Joensuu	21.78	24	ep	P	20 25 42.1	-1.3
	comp=Z,12nm,0.8s						
JOF	Joensuu	21.78	24	eP	P	20 25 42.1	-1.3
	comp=Z,12nm,0.8s						
KIV	Kislovodsk	22.00	80	eP	P	20 25 45.9	-0.1
KIV				eS	S	20 29 49.0	+1.1
KIV				pmax	pmax		
	comp=Z,81nm,1.0s						
KIV				MLR	MLR		
	comp=Z,187nm,14.0s						
KIV	Kislovodsk	22.00	80	eP	P	20 25 44.5	-1.6
	comp=Z,137nm,1.4s						
KIV	Kislovodsk	22.00	80	P	P	20 25 47.1	+1.0
	SNR=32						
TAM	Tamanrasset	22.05	196	eP	P	20 25 46.3	-0.5
TAM				pmax	pmax		
	comp=Z,27nm,1.4s						
TAM	Tamanrasset	22.05	196	eP	P	20 25 46.3	-0.5
	comp=Z,27nm,1.4s						
KBZ	Khabaz	22.19	80	P	P	20 25 49.2	+1.2
KBZ	Khabaz	22.19	80	P	P	20 25 49.2	+1.2
KBZ	Khabaz	22.19	80	P	P	20 25 49.2	+1.2

comp=Z,26nm,0.9s,baz=319,slow=9.2,SNR=56
KBZ LR LR 20 36 10.3
comp=Z,226nm,18.1s,baz=330,slow=41
ONI Oni 22.85 83 P **P** **20 25 57.1 +2.0**
ONI Oni 22.85 83 P **P** **20 25 57.1 +2.0**
ASF Jabal al Asfar 22.89 113 P **P** **20 25 58.6 +3.0**
ASF Jabal al Asfar 22.89 113 P **P** **20 25 58.6 +3.0**
comp=Z,25nm,0.9s,baz=163,slow=5.9,SNR=32
AKH Akhalkalaki 23.21 86 P **P** **20 26 01.1 +2.1**
AKH Akhalkalaki 23.21 86 P **P** **20 26 01.1 +2.1**
EIL Elat 23.31 121 P **P** **20 26 00.7 +0.9**
EIL Elat 23.31 121 P **P** **20 26 00.7 +0.9**
comp=Z,12nm,0.9s,baz=305,slow=5.9,SNR=11
KLMR Klimovskoe 23.33 35 *e*P **P** **20 25 59.1 -0.6**
KLMR S S 20 30 00.2 -11
KLMR pmax pmax
comp=Z,88nm,1.5s
KLMR MLR MLR
comp=Z,690nm,14.0s
TBLG Delisi 24.01 85 P **P** **20 26 07.7 +1.2**
TBLG Delisi 24.01 85 P **P** **20 26 07.7 +1.2**
DGRG David-gareji 24.55 85 P **P** **20 26 14.3 +2.8**
TMCR Tamitsa 24.78 27 *e*P **P** **20 26 15.3 +2.0**
TMCR pmax pmax
comp=Z,32nm,1.1s
ARCES ARCESS Array B 26.28 11 P **P** **20 26 26.2 -0.6**
ARCES ARCESS Array B 26.28 11 P **P** **20 26 26.2 -0.6**
comp=Z,4.5nm,0.9s,baz=173,slow=10,SNR=8.4
ARCES LR LR 20 37 41.6
comp=Z,570nm,18.7s,baz=230,slow=38
KEV Kevo 26.69 12 *e*P **P** **20 26 33.9 +3.4**
KEV pmax pmax
comp=Z,1.0nm,0.4s
KEV Kevo 26.69 12 *e*p **P** **20 26 33.9 +3.4**
comp=Z,1.0nm,0.4s
BORG Borgarnes 27.66 330 LR LR 20 38 31.5
comp=Z,235nm,20.5s,baz=90,slow=38
JMIC Jan Mayen 28.65 346 LR LR 20 37 14.3
comp=Z,183nm,19.1s,baz=93,slow=34
MIB Mutribah 31.43 105 *e*P **P** **20 27 13.7 +0.7**
MIB AMb AMB 20 27 15.0
comp=Z,46nm,1.1s
MIB Mutribah 31.43 105 *e*P **P** **20 27 13.7 +0.7**
comp=Z,46nm,1.1s
ARU Arti 31.51 51*c i*P **P** **20 27 12.5 -1.0**
ARU 20 28 17.7
ARU S **S** **20 32 19.5 -1.0**
ARU SS **SnSn** **20 34 00.8 -4.8**
ARU pmax pmax
comp=Z,18nm,1.2s
ARU MLR MLR
comp=Z,423nm,16.0s
ARU Arti 31.51 51 *e*P **P** **20 27 11.2 -2.3**
comp=Z,5.4nm,0.6s
NAY Al-Naaiem 31.70 106 *e*P **P** **20 27 15.5 +0.1**
NAY AMb AMB 20 27 17.0
comp=Z,11nm,1.1s
NAY Al-Naaiem 31.70 106 *e*P **P** **20 27 15.5 +0.1**
comp=Z,11nm,1.1s
UMR Umm Al-Rimmam 31.84 105 *e*P **P** **20 27 17.2 +0.6**
UMR AMb AMB 20 27 18.6
comp=Z,46nm,1.2s
UMR Umm Al-Rimmam 31.84 105 *e*P **P** **20 27 17.2 +0.6**
comp=Z,46nm,1.2s
TORD Torodi Ar. Bea 32.22 199 P **P** **20 27 18.2 -1.9**
TORD Torodi Ar. Bea 32.22 199 P **P** **20 27 18.2 -1.9**
comp=Z,4.4nm,0.6s,baz=11,slow=9.1,SNR=25
ABKAR Akbulak array 32.80 64 *e*P **P** **20 27 22.6 -2.3**
comp=Z,2.7nm,0.6s
KBS Kingsbay 34.80 360*ce*P **P** **20 27 43.1 +1.1**
KBS pmax pmax
comp=Z,13nm,2.5s
BBTS Babate 38.17 228 LR LR 20 44 16.7
comp=Z,296nm,19.3s,baz=19,slow=37
BRVK Borovoye 38.53 56*c i*P **P** **20 28 14.3 +0.3**
BRVK pmax pmax
comp=Z,23nm,1.6s
BRVK Borovoye 38.53 56 *e*P **P** **20 28 12.4 -1.6**
comp=Z,36nm,1.6s
BRVK Borovoye 38.53 56 P **P** **20 28 15.2 +1.3**
SNR=6.5
SFJD Kangerlussuaq 39.71 327 LR LR 20 46 05.4
comp=Z,234nm,18.0s,baz=72,slow=38
ASUD Al Ashush, Dub 40.20 105 P **P** **20 28 28.9 +0.7**
NAZ Nazwa, Dubai 40.20 104 P **P** **20 28 29.0 +0.8**
DBIC Dimbokro 40.22 206 P **P** **20 28 26.9 -1.5**
DBIC Dimbokro 40.22 206 P **P** **20 28 26.9 -1.5**
comp=Z,1.6nm,0.6s,baz=356,slow=10,SNR=6.7
FAQ Al Faqa, Dubai 40.31 104 P **P** **20 28 29.2 +0.1**
HATD Hatta, Dubai 40.63 104 P **P** **20 28 31.8 0.0**
ASHO Ashiyiah 40.67 104 P **P** **20 28 32.2 0.0**
SNR=9.0
KKAR Karatay Array 41.57 70 *e*P **P** **20 28 39.0 -0.4**
KKAR pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 41.57 70 *e*P **P** **20 28 39.0 -0.4**
comp=Z,3.7nm,0.8s
ARQ Araqi 41.86 105 P **P** **20 28 42.7 +0.7**
SNR=6.1
HOQ Hoqain 42.25 104 P **P** **20 28 45.7 +0.6**
SNR=7.3
SMDO Samad 43.11 104 P **P** **20 28 52.3 +0.1**
SNR=7.8
JMDO Jabal Madar 43.60 105 P **P** **20 28 56.1 0.0**
SNR=7.0
EKS2 Erkin-Say 43.95 70 *e*P **P** **20 28 58.0 -0.8**
EKS2 pmax pmax
comp=Z,32nm,1.4s
EKS2 Erkin-Say 43.95 70 *e*P **P** **20 28 58.0 -0.8**
comp=Z,32nm,1.4s
KURK Kurchatov 44.12 57*c i*P **P** **20 28 59.4 -0.5**
KURK pmax pmax
comp=Z,12nm,0.9s
KURK Kurchatov 44.12 57 *e*P **P** **20 28 58.0 -1.9**
comp=Z,14nm,1.2s
KURK Kurchatov 44.12 57 P **P** **20 28 59.8 -0.1**
SNR=5.8
AAK Ala-Archa 44.44 69*c i*P **P** **20 29 03.6 +0.8**
AAK pmax pmax
comp=Z,54nm,1.8s
AAK Ala-Archa 44.44 69 *e*P **P** **20 29 01.1 -1.7**
comp=Z,76nm,1.3s
AAK Ala-Archa 44.44 69 P **P** **20 29 03.0 +0.2**
SNR=7.8
NVS Novosibirsk 45.51 50 *i*P **P** **20 29 10.8 -0.1**
NVS pmax pmax
comp=Z,17nm,1.2s
NVS pmax pmax
comp=N,4.0nm,1.0s
NVS pmax pmax
comp=E,12nm,1.3s
NVS Novosibirsk 45.51 50 *i*P **P** **20 29 10.8 -0.1**
comp=E,4.0nm,1.0s
ZALV Zalesovo Beam 46.67 51 P **P** **20 29 20.1 0.0**
ZALV 20 31 10.0
ZALV Zalesovo Beam 46.67 51 P **P** **20 29 20.1 0.0**
ZALV PP **PP** **20 31 10.0 +0.3**
ZALV Zalesovo Beam 46.67 51 P **P** **20 29 20.1 0.0**
comp=E,6.4nm,0.9s,baz=285,slow=8.6,SNR=28
ZALV PP **PP** **20 31 10.0 +0.3**
comp=E,2.3nm,0.8s,baz=299,slow=9.7,SNR=4.0
ZALV Zalesovo Beam 46.67 51 P **P** **20 29 20.1 0.0**
ZALV Zalesovo Beam 46.67 51 PP PP 20 31 10.0 +0.3
KSH Kashi 46.81 72 P **P** **20 29 21.7 +0.2**
KSH PcP **PcP** **20 30 56.3 +1.9**
KSH PP **PP** **20 31 12.0 +0.5**
KSH PcS **PcS** **20 34 49.4 0.0**
KSH S **S** **20 36 11.0 +0.2**
KSH ScS **ScS** **20 39 15.3 +0.2**
KSH SS SS 20 39 29.7 -7.4
KSH pmax pmax
comp=Z,21nm,1.1s
KSH LR LR
comp=E,150nm,5.7s
KSH LR LR
comp=Z,210nm,5.0s
MK31 Makanchi Array 47.81 61 *e*P **P** **20 29 26.8 -2.3**
MK31 Makanchi Array 47.81 61 *e*P **P** **20 29 26.8 -2.3**
MK31 Makanchi Array 47.81 61 *e*P **P** **20 29 26.8 -2.3**
MKAR Makanchi Array 47.81 61 P **P** **20 29 29.5 +0.4**
MKAR Makanchi Array 47.81 61 P **P** **20 29 29.4 +0.4**
MKAR Makanchi Array 47.81 61 P **P** **20 29 29.4 +0.4**
comp=Z,12nm,0.8s,baz=289,slow=5.9,SNR=108
MKAR LR LR 20 51 27.2
comp=Z,342nm,19.7s,baz=100,slow=38

MKAR Makanchi Array 47.81 61 P **P** **20 29 29.5 +0.4**
SCHQ Schefferville 49.63 312 P **P** **20 29 42.4 -0.6**
SCHQ Schefferville 49.63 312 P **P** **20 29 42.4 -0.6**
comp=Z,2.3nm,0.7s,baz=48,slow=5.4,SNR=5.4
SCHQ Schefferville 49.63 312 P **P** **20 29 42.3 -0.6**
RES Resolute Bay 52.06 341 LR LR 20 54 06.7
comp=Z,154nm,18.1s,baz=32,slow=38
WMQ Urumqi 52.55 62 P **P** **20 30 05.0 -0.1**
WMQ PcP **PcP** **20 31 16.0 +0.8**
WMQ PP **PP** **20 32 05.0 +1.2**
WMQ ScP **ScP** **20 35 12.0 +0.7**
WMQ S **S** **20 37 31.0 +0.2**
WMQ ScS **ScS** **20 39 53.0 -0.8**
WMQ SS **SS** **20 41 07.0 -1.6**
WMQ pmax pmax
comp=Z,18nm,1.0s
WMQ pmax pmax
comp=Z,220nm,6.0s
WMQ LR LR
comp=N,350nm,18.0s
WMQ LR LR
comp=E,380nm,18.0s
WMQ LR LR
comp=Z,220nm,16.0s
MOY Mondy 56.52 48 *e*P **P** **20 30 34.7 +0.8**
MOY Mondy 56.52 48 *e*P **P** **20 30 34.7 +0.8**
PYUN Piuthan 57.83 81 *e*P **P** **20 30 43.6 0.0**
comp=Z,98nm,1.0s
TLY Talaya 57.92 47 *e*P **P** **20 30 43.1 -0.6**
TLY pmax pmax
comp=Z,15nm,0.8s
TLY MLR MLR
comp=Z,391nm,17.0s
TLY Talaya 57.92 47 *e*P **P** **20 30 42.2 -1.4**
comp=Z,7.4nm,0.8s
TLY Talaya 57.92 47 *e*P **P** **20 30 43.1 -0.6**
comp=Z,391nm,17.0s
DANN Dangsing 58.23 80 *e*P **P** **20 30 45.8 -0.7**
ZAK Zakamensk 58.42 49 *e*P **P** **20 30 47.1 -0.2**
ZAK pmax pmax
comp=Z,3.0nm,1.5s
ZAK Zakamensk 58.42 49 *e*P **P** **20 30 47.1 -0.2**
comp=Z,3.0nm,1.5s
KOLN Koldanda 58.46 81 *e*P **P** **20 30 47.5 -0.5**
DMN Daman 59.62 80 *e*P **P** **20 30 56.0 -0.1**
comp=Z,61nm,1.2s
KKN Kakani 59.64 80 *e*P **P** **20 30 55.0 -1.2**
comp=Z,27nm,1.0s
PKIN Phulchoki 59.85 80 *e*P **P** **20 30 57.3 -0.4**
PKI Pulchoki 59.86 80 *e*P **P** **20 30 57.4 -0.5**
GUN Gumba 59.99 79 *e*P **P** **20 30 58.6 -0.2**
comp=Z,93nm,0.9s
RAMN Ramite 61.08 80 *e*P **P** **20 31 05.5 -0.6**
comp=Z,58nm,1.0s
SADO Sadowa 61.45 306 LR LR 20 55 19.4
comp=Z,213nm,19.6s,baz=94,slow=34
SONM Songino Array 61.54 50 P **P** **20 31 09.5 +0.7**
SONM Songino Array 61.54 50 P **P** **20 31 09.5 +0.7**
comp=Z,7.5nm,0.9s,baz=294,slow=8.5,SNR=61
SONM LR LR 21 00 58.5
comp=Z,320nm,19.0s,baz=278,slow=39
SONM Songino Array 61.54 50 P **P** **20 31 09.5 +0.7**
TAPN Taplejung 61.62 78 *e*P **P** **20 31 09.5 -0.3**
comp=Z,73nm,1.0s
ODAN Odare 61.69 79 *e*P **P** **20 31 09.9 -0.3**
comp=Z,69nm,1.1s
ULN Ulaanbaatar 61.88 50 *e*P **P** **20 31 09.2 -1.9**
comp=Z,20nm,1.5s
ULN Ulaanbaatar 61.88 50 P **P** **20 31 12.2 +1.1**
SNR=7.1
ULN Ulaanbaatar 61.88 50 P **P** **20 31 11.6 +0.5**
comp=Z,8.5nm,1.6s
ULN Ulaanbaatar 61.88 50 *e*P **P** **20 31 09.2 -1.9**
comp=Z,20nm,1.5s
GTA Gaotai 62.57 61 ⇑P **P** **20 31 16.0 +0.2**
GTA pP **pP** **20 31 19.5 -2.6**
GTA sP **sP** **20 31 22.1 -2.4**
GTA S **S** **20 39 44.6 +2.0**
GTA sS **sS** **20 39 52.2 -0.8**
GTA SS **SS** **20 43 51.6 +5.3**
GTA pmax pmax
comp=Z,9.0nm,1.1s
GTA pmax pmax
comp=Z,230nm,4.3s
GTA LR LR
comp=N,110nm,17.1s
GTA LR LR
comp=E,74nm,16.1s
GTA LR LR
comp=Z,140nm,15.7s
LSA Lhasa 62.60 74 P **P** **20 31 16.0 -0.5**
YAK Yakutsk 62.89 28 *e*P **P** **20 31 16.6 -0.8**
YAK *e**PP **pP** **20 31 24.8 +1.1**
YAK *e* 20 31 54.7
YAK *e* 20 33 34.8
YAK *e*S **S** **20 39 46.5 +0.8**
YAK *e* 20 41 03.8
YAK pmax pmax
comp=Z,14nm,0.9s
YAK pmax pmax
comp=N,9.0nm,1.3s
YAK pmax pmax
comp=E,9.0nm,1.5s
YAK pmax pmax
comp=Z,77nm,3.4s
YAK pmax pmax
comp=N,62nm,3.2s
YAK pmax pmax
comp=E,61nm,2.8s
YAK smax smax
comp=N,160nm,5.1s
YAK smax smax
comp=E,131nm,3.9s
YAK MLR MLR
comp=Z,236nm,15.0s
YAK MLR MLR
comp=N,143nm,16.0s
YAK MLR MLR
comp=E,170nm,17.0s
YAK Yakutsk 62.89 28 *e*P **P** **20 31 16.6 -0.8**
comp=E,9.0nm,1.3s
YKW3 Yellowknife Ar 65.31 336 *e*P **P** **20 31 31.6 -1.7**
comp=E,0.3nm,1.0s
YKW3 Yellowknife Ar 65.31 336 *e*P **P** **20 31 31.6 -1.7**
comp=E,0.3nm,1.0s
YKA Yellowknife Ar 65.36 336 P **P** **20 31 33.8 +0.2**
YKA Yellowknife Ar 65.36 336 P **P** **20 31 33.7 +0.2**
comp=E,7.6nm,0.7s,baz=42,slow=6.2,SNR=164
YKA Yellowknife Ar 65.36 336 P **P** **20 31 33.8 +0.2**
SHL Shillong 65.66 77 *e*P **P** **20 31 37.0 +0.7**
BILL Bilibino 66.38 10⇑*e*P **P** **20 31 39.9 -0.2**
BILL *e* 20 34 05.8
BILL *e*S **S** **20 40 29.9 +1.3**
BILL pmax pmax
comp=Z,5.0nm,1.0s
FFC Flin Flon 66.61 325 *i*P **P** **20 31 42.7 +1.0**
ULM Lac du Bonnet 66.94 318 P **P** **20 31 43.2 -0.8**
ULM Lac du Bonnet 66.94 318 P **P** **20 31 43.2 -0.8**
comp=Z,3.5nm,0.7s,baz=55,slow=7.3,SNR=7.4
ULM Lac du Bonnet 66.94 318 P **P** **20 31 43.2 -0.8**
LZH Lanzhou 67.12 61 *e*P **P** **20 31 46.5 +1.0**
LZH pP **pP** **20 31 49.7 -2.2**
LZH sP **sP** **20 31 51.2 -3.1**
LZH PP **PP** **20 34 15.6 +2.5**
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,70nm,7.5s
LZH LR LR
comp=N,410nm,14.5s
LZH LR LR
comp=E,430nm,14.7s
LZH LR LR
comp=Z,500nm,18.5s
COLD Coldfoot 68.03 353 *e*P **P** **20 31 49.5 -1.1**
comp=Z,2.9nm,0.9s
COLD Coldfoot 68.03 353 *e*P **P** **20 31 49.5 -1.1**
comp=Z,2.9nm,0.9s
SEY Seymchan 68.60 18*d i*P **P** **20 31 54.7 +0.5**
HHC Hu-ho-hao-te 68.76 53 *e*P **P** **20 31 56.7 +1.0**
HHC PcP **PcP** **20 32 21.9 +1.6**
HHC PP **PP** **20 34 29.9 +2.7**
HHC PcS 20 36 25.2
HHC S **S** **20 40 58.5 +0.3**
HHC ScS **SKSac** **20 41 53.9 -0.2**

HHC SS **SS** **20 45 23.1 +0.8**
HHC pmax pmax
comp=Z,34nm,0.7s
HHC pmax pmax
comp=Z,220nm,6.5s
HHC LR LR
comp=N,280nm,16.7s
HHC LR LR
comp=E,270nm,16.9s
HHC LR LR
comp=Z,340nm,16.4s
TKL Tuckaleechee C 69.83 300 LR LR 21 01 01.0
comp=Z,146nm,19.2s,baz=260,slow=35
ILAR Eielson Array 70.07 351 P **P** **20 32 04.3 +1.0**
ILAR Eielson Array 70.07 351 P **P** **20 32 04.3 +1.0**
comp=Z,2.7nm,0.8s,baz=9.1,slow=6.4,SNR=34
ILAR Eielson Array 70.07 351 P **P** **20 32 04.3 +1.0**
DOT Dot Lake 70.79 349 *e*P **P** **20 32 07.3 -0.4**
comp=Z,2.1nm,1.0s
DOT Dot Lake 70.79 349 *e*P **P** **20 32 07.3 -0.4**
comp=Z,2.1nm,1.0s
XAN Xi'an 71.62 60 P **P** **20 32 13.9 +0.6**
XAN pP **pP** **20 32 22.0 +2.3**
XAN sP **sP** **20 32 25.8 +3.7**
XAN pmax pmax
comp=Z,6.0nm,1.2s
ECSD EROS Data Cent 71.77 314 *e*P P 20 32 10.1 -3.9
comp=Z,21nm,1.4s
A22A Carney Farms, 72.44 322 ⇑P **P** **20 32 17.3 -0.7**
baz=72,SNR=5.6
B22A Reddig Ranch S 73.00 322 ⇓P **P** **20 32 20.8 -0.5**
baz=73
C23A Lambert 73.00 321 ⇑P **P** **20 32 21.8 +0.5**
baz=73
KLR Kul'dur 73.08 36 *e*P **P** **20 32 18.8 -2.8**
SML Sawmill 73.11 350 *e*P **P** **20 32 20.1 -1.6**
SML pmax pmax
comp=Z,3.0nm,0.8s
SML Sawmill 73.11 350 *e*P **P** **20 32 20.1 -1.6**
comp=Z,3.2nm,0.8s
SML Sawmill 73.11 350 *e*P **P** **20 32 20.1 -1.6**
comp=Z,3.2nm,0.8s
A20A Cobblestone Ra 73.40 323 ⇓P **P** **20 32 23.8 +0.2**
baz=73,SNR=6.0
KMI Kunming 73.45 71 P **P** **20 32 24.0 -0.5**
KMI pmax pmax
comp=Z,7.0nm,1.7s
BOSA Boshof 73.51 168 LR LR 21 08 28.3
comp=Z,130nm,20.2s,baz=99,slow=39
A19A Klindworth Far 73.71 324 ⇑P **P** **20 32 25.7 +0.2**
baz=73
B20A Solberg Farm, 73.78 323 ⇓P **P** **20 32 26.3 +0.5**
baz=74,SNR=5.3
F24A Ekalaka 74.12 319 ⇓P **P** **20 32 28.4 +0.4**
baz=74
C20A Veseth Ranch, 74.32 323 P **P** **20 32 30.4 +1.3**
baz=74,SNR=11
D21A La Casta Ranch 74.37 322 P **P** **20 32 30.8 +1.4**
baz=74,SNR=7.2
E22A Miles City 74.37 321 ⇓P **P** **20 32 30.0 +0.6**
baz=74
G24A Alzada 74.49 319 ⇓P **P** **20 32 30.6 +0.5**
baz=74
B18A Beardsley Farm 74.56 324 ⇑P **P** **20 32 31.1 +0.6**
baz=74,SNR=8.1
C19A Slack Wire Ran 74.76 323 ⇓P **P** **20 32 32.8 +1.2**
baz=74,SNR=8.9
EGMT Eagleton 74.84 324 *e*P **P** **20 32 32.0 -0.1**
comp=Z,26nm,1.1s
EGMT Eagleton 74.84 324 ⇓P **P** **20 32 32.5 +0.4**
baz=74,SNR=6.9
EGMT Eagleton 74.84 324 *e*P **P** **20 32 32.0 -0.1**
comp=Z,26nm,1.1s
D20A Manuel Ranch, 74.86 322 P **P** **20 32 32.8 +0.6**
baz=75,SNR=18
CHTO Chiang Mai 74.99 78 *e*P **P** **20 32 32.2 -1.1**
CHTO pmax pmax
comp=Z,16nm,1.1s
CHTO Chiang Mai 74.99 78 *e*P **P** **20 32 32.2 -1.1**
comp=Z,16nm,1.1s
CHTO Chiang Mai 74.99 78 P **P** **20 32 33.9 +0.6**
SNR=5.2
CHTO Chiang Mai 74.99 78 P **P** **20 32 33.4 +0.1**
comp=Z,17nm,1.1s
CHTO Chiang Mai 74.99 78 *e*P **P** **20 32 32.2 -1.1**
comp=Z,16nm,1.1s
CMMT Chiang Mai 75.00 78 P **P** **20 32 33.9 +0.6**
B17A L&G Farms, Che 75.07 324 P **P** **20 32 34.0 +0.7**
baz=75,SNR=7.4
GYA Guiyang 75.20 68 *e*P **P** **20 32 35.0 +0.5**
GYA pmax pmax
comp=Z,10.0nm,0.8s
RSSD Black Hills 75.21 318 *e*P **P** **20 32 32.7 -1.8**
RSSD pmax pmax
comp=Z,1.0nm,0.6s
RSSD Black Hills 75.21 318 *e*P **P** **20 32 32.7 -1.8**
comp=Z,1.2nm,0.6s
RSSD Black Hills 75.21 318 *e*P **P** **20 32 32.7 -1.8**
comp=Z,1.2nm,0.6s
CM31 Chiang Mai Arr 75.23 79 *e*P **P** **20 32 34.3 -0.4**
comp=Z,4.1nm,0.7s
CM31 Chiang Mai Arr 75.23 79 *e*P **P** **20 32 34.3 -0.4**
comp=Z,4.1nm,0.7s
CMAR Chiang Mai Arr 75.23 79 P **P** **20 32 34.9 +0.2**
CMAR Chiang Mai Arr 75.23 79 P **P** **20 32 34.9 +0.2**
comp=Z,6.8nm,0.9s,baz=304,slow=7.5,SNR=54
CMAR Chiang Mai Arr 75.23 79 P **P** **20 32 34.8 +0.2**
E20A Meyer Farm, Mu 75.30 322 ⇑P **P** **20 32 35.5 +0.8**
baz=75
A15A Johnson Ranch, 75.32 326 ⇓P **P** **20 32 35.4 +0.5**
baz=75,SNR=8.3
D18A Linhart Farms, 75.50 323 ⇓P **P** **20 32 37.3 +1.4**
baz=75,SNR=5.3
C17A Wharram Farm, 75.57 324 ⇑P **P** **20 32 37.3 +1.0**
baz=75,SNR=16
MDJ Mudanjiang 75.60 41 P **P** **20 32 36.7 +0.3**
MDJ pmax pmax
comp=Z,8.0nm,1.2s
MDJ pmax pmax
comp=Z,150nm,4.1s
A14A Double T Ranch 75.60 326 P **P** **20 32 37.5 +0.9**
baz=75,SNR=29
WALA Waterton Lakes 75.73 327 *e*P **P** **20 32 35.8 -1.5**
comp=Z,0.4nm,1.1s
WALA Waterton Lakes 75.73 327 *e*P **P** **20 32 35.8 -1.5**
comp=Z,0.4nm,1.1s
B15A Bradely Ranch, 75.78 325 ⇓P **P** **20 32 37.7 +0.1**
baz=76,SNR=7.8
D17A Six Diamond Ra 75.91 324 ⇓P **P** **20 32 39.3 +1.0**
baz=76,SNR=8.2
B14A Marquette Ranc 76.03 326 ⇑P **P** **20 32 39.1 +0.1**
baz=76,SNR=9.6
E18A Harlowton 76.04 323 ⇓P **P** **20 32 40.3 +1.2**
baz=76,SNR=5.9
J24A Dixon Ranch, L 76.10 318 ⇑P **P** **20 32 40.3 +0.8**
baz=76
F19A Roth Farm, Mol 76.17 322 P **P** **20 32 40.2 +0.4**
baz=76,SNR=11
G20A Bridger 76.33 321 P **P** **20 32 41.1 +0.3**
baz=76,SNR=11
D16A Dana Ranch, Ca 76.37 324 ⇑P **P** **20 32 41.7 +0.8**
baz=76
F18A Big Timber 76.47 322 ⇓P **P** **20 32 42.7 +1.2**
baz=76,SNR=6.7
B13A Whitefish 76.50 327 P **P** **20 32 42.7 +1.2**
baz=76,SNR=6.2
E17A Martinsdale 76.53 323 ⇑P **P** **20 32 42.6 +0.7**
baz=76
I22A 9 Mile Ranch, 76.54 319 P **P** **20 32 42.5 +0.5**
baz=76,SNR=9.0
C14A Swan Lake 76.70 326 ⇓P **P** **20 32 43.4 +0.6**
baz=76,SNR=8.0
HRY Holter Researc 76.75 324 *e*P **P** **20 32 42.0 -1.1**
comp=Z,2.1nm,0.6s
HRY Holter Researc 76.75 324 *e*P **P** **20 32 42.0 -1.1**
comp=Z,2.1nm,0.6s
E16A East Helena 76.82 324 ⇓P **P** **20 32 44.2 +0.7**
baz=76
J22A Midwest 76.91 319 ⇑P **P** **20 32 43.7 -0.3**
baz=77
JTMT Jette 76.93 326 *e*P **P** **20 32 43.0 -1.1**
comp=Z,13nm,1.4s
JTMT Jette 76.93 326 *e*P **P** **20 32 43.0 -1.1**
comp=Z,13nm,1.4s
I21A Big Trails, Te 76.98 320 ⇓P **P** **20 32 44.6 +0.1**
baz=77,SNR=9.3
SWMT Swartz Lake 77.01 326 *e*P **P** **20 32 44.3 -0.2**
comp=Z,3.1nm,0.9s

SWMT **Swartz Lake** 77.01 326 *e*P P 20 32 44.3 -0.2
comp=Z,3.1nm,0.9s
USRK **Ussuriysk Arra** 77.03 40 P P 20 32 44.3 -0.2
comp=Z,3.5nm,1.0s,baz=298,slow=4.1,SNR=6.5
USRK LR LR 21 11 33.9
comp=Z,103nm,21.5s,baz=134,slow=40
BSMT **Bassoo Peak** 77.05 326 *e*P P 20 32 44.5 -0.3
comp=Z,6.1nm,1.2s
BSMT **Bassoo Peak** 77.05 326 *e*P P 20 32 44.5 -0.3
comp=Z,6.1nm,1.2s
H19A **Powell** 77.10 321 ⇑P P 20 32 46.5 +1.4
baz=77
C13A **Hot Springs** 77.10 326 ⇑P P 20 32 46.2 +1.3
baz=77,SNR=8.5
L24A **Wheatland** 77.20 317 ⇓P P 20 32 45.5 -0.2
baz=77
I20A **Worland** 77.27 320 ⇓P P 20 32 46.5 +0.5
baz=77
E15A **Deer Lodge** 77.31 324 ⇓P P 20 32 47.2 +0.9
baz=77,SNR=7.1
H18A **Shoshone NF, C** 77.40 322 P P 20 32 47.6 +0.7
baz=77,SNR=6.9
J21A **Lysite** 77.41 319 ⇓P P 20 32 47.8 +0.8
baz=77,SNR=6.9
C12B **Naegeli Ranch,** 77.44 327 ⇓P P 20 32 48.0 +1.2
baz=77
BOZ **Bozeman (W)** 77.50 323 ⇓P P 20 32 48.8 +1.5
baz=77,SNR=8.5
K22A **Casper** 77.51 318 ⇓P P 20 32 47.7 +0.2
baz=77
D13A **Huson** 77.53 326 ⇑P P 20 32 48.4 +1.1
baz=77,SNR=7.3
M24A **Cheyenne** 77.58 317 ⇑P P 20 32 48.9 +1.0
baz=77
I19A **Meeteetse** 77.59 321 ⇓P P 20 32 48.7 +0.7
baz=77,SNR=5.6
C11A **Tepee Creek (N** 77.63 327 ⇓P P 20 32 48.8 +0.9
baz=77
J20A **Shoshoni** 77.70 320 ⇓P P 20 32 49.1 +0.6
baz=77,SNR=6.2
D12A **Red Ives Fores** 77.92 326 P P 20 32 50.5 +0.9
baz=78,SNR=8.8
H17A **Grant Village** 78.03 322 ⇓P P 20 32 50.8 +0.3
baz=78,SNR=5.1
H16A **Russell Place,** 78.08 322 ⇓P P 20 32 51.4 +0.7
baz=78
I18A **Diamond G Ranc** 78.23 321 ⇑P P 20 32 53.2 +1.6
baz=78
G15A **Dillon** 78.25 323 P P 20 32 53.0 +1.4
baz=78,SNR=5.5
I17A **Pilgrim Ck.** 78.40 322 ⇓P P 20 32 53.5 +1.1
baz=78
F13A **Darby** 78.53 325 P P 20 32 54.0 +1.0
baz=78,SNR=8.1
LOHW **Long Hollow** 78.65 321 *e*P P 20 32 52.7 -1.2
comp=Z,6.3nm,1.3s
LOHW **Long Hollow** 78.65 321 *e*P P 20 32 52.7 -1.2
comp=Z,6.3nm,1.3s
PETK **Petropavlovsk-** 78.66 20 P P 20 32 53.5 0.0
PETK **Petropavlovsk-** 78.66 20 P P 20 32 53.5 0.0
PETK **Petropavlovsk-** 78.66 20 P P 20 32 53.5 0.0
comp=Z,3.6nm,0.8s,baz=90,slow=1.5,SNR=5.3
PETK LR LR 21 12 38.6
comp=Z,132nm,18.6s,baz=162,slow=40
PETK **Petropavlovsk-** 78.66 20 P P 20 32 53.5 0.0
MCMT **McKenzie Canyo** 78.67 323 *e*P P 20 32 53.5 -0.5
comp=Z,2.0nm,1.1s
MCMT **McKenzie Canyo** 78.67 323 *e*P P 20 32 53.5 -0.5
comp=Z,2.0nm,1.1s
J18A **Kendall Valley** 78.70 321 ⇓P P 20 32 54.8 +0.6
baz=78,SNR=6.3
I16A **Newdale** 78.84 322 ⇓P P 20 32 55.8 +0.9
baz=78,SNR=8.5
PDAR **Pinedale Array** 78.84 320 P P 20 32 54.5 -0.4
PDAR **Pinedale Array** 78.84 320 P P 20 32 54.5 -0.4
comp=Z,1.5nm,0.7s,baz=59,slow=5.7,SNR=13
PDAR **Pinedale Array** 78.84 320 P P 20 32 54.5 -0.4
N22A **Wattenberg Ran** 78.89 317 ⇑P P 20 32 56.1 +0.8
baz=79
J17A **Brown Place, J** 78.90 321 ⇓P P 20 32 55.5 +0.3
baz=79,SNR=5.5
F12A **Elk City** 78.93 325 ⇓P P 20 32 55.8 +0.5
baz=79
R27A **Eads** 78.93 313 ⇓P P 20 32 55.6 +0.2
baz=79
NJ2 **Nanjing** 79.05 56 *e*P P 20 32 56.3 +0.4
NJ2 pmax pmax
comp=Z,20nm,0.5s
G13A **Cobalt** 79.05 324 ⇑P P 20 32 56.8 +0.8
baz=79
H14A **Leadore** 79.06 324 ⇓P P 20 32 57.1 +1.0
baz=79
O23A **Lake Granby, G** 79.07 316 ⇑P P 20 32 57.1 +0.8
baz=79
K18A **Toltan Ranch,** 79.16 320 ⇑P P 20 32 56.8 +0.1
baz=79
RRI2 **Red Ridge** 79.18 322 *e*P P 20 32 55.3 -1.6
comp=Z,11nm,1.2s
RRI2 **Red Ridge** 79.18 322 *e*P P 20 32 55.3 -1.6
comp=Z,11nm,1.2s
ISCO **Idaho Springs** 79.23 316 *e*P P 20 32 56.3 -0.9
ISCO pmax pmax
comp=Z,11nm,1.3s
ISCO **Idaho Springs** 79.23 316 *e*P P 20 32 56.3 -0.9
comp=Z,11nm,1.3s
ISCO **Idaho Springs** 79.23 316 ⇓P P 20 32 58.4 +1.2
baz=79,SNR=6.8
ISCO **Idaho Springs** 79.23 316 *e*P P 20 32 56.3 -0.9
comp=Z,11nm,1.3s
L19A **Farson** 79.27 320 ⇑P P 20 32 57.5 +0.3
baz=79
J16A **Bone** 79.37 322 ⇓P P 20 32 58.1 +0.3
baz=79
O22A **Kremmling** 79.42 317 ⇓P P 20 32 59.0 +0.8
baz=79
N21A **Black Mountain** 79.44 318 ⇓P P 20 32 59.0 +0.7
baz=79,SNR=7.6
G12A **Big Creek, Yel** 79.47 325 ⇓P P 20 32 59.0 +0.7
baz=79
H13A **Challis** 79.48 324 ⇑P P 20 32 58.7 +0.4
baz=79
J15A **Blackfoot** 79.63 322 ⇑P P 20 32 59.3 +0.1
baz=79,SNR=7.3
Q24A **Divide** 79.64 315 ⇓P P 20 33 00.5 +1.0
baz=79
I14A **Mackay** 79.65 323 ⇑P P 20 33 00.9 +1.6
baz=79,SNR=18
P23A **Jefferson** 79.67 316 ⇑P P 20 33 00.5 +0.8
baz=79,SNR=7.1
K16A **Soda Springs** 79.71 321 ⇓P P 20 32 59.7 +0.1
baz=79
L18A **Fontenelle, Gr** 79.72 320 ⇑P P 20 33 01.0 +1.3
baz=79
N20A **Spence Gulch,** 79.74 318 P P 20 33 01.2 +1.4
baz=80,SNR=10
H12A **Diamond D Ranc** 79.75 324 P P 20 33 01.2 +1.4
baz=79,SNR=5.7
S26A **Kim** 79.78 313 ⇑P P 20 33 01.8 +1.7
baz=80
R25A **Fountain Ranch** 79.81 314 ⇓P P 20 33 01.0 +0.8
baz=80
I13A **Wildhorse Cree** 79.95 324 ⇑P P 20 33 02.4 +1.5
baz=80,SNR=19
P22A **Eagle** 79.96 317 ⇓P P 20 33 02.3 +1.2
baz=80
X31A **McDonald Ranch** 80.11 309 ⇑P P 20 33 02.5 +0.7
baz=80
N19A **John Jarvie Ra** 80.12 319 ⇓P P 20 33 02.2 +0.4
baz=80
KSAR **Wonju Array Be** 80.16 47 P P 20 33 02.4 +0.5
KSAR **Wonju Array Be** 80.16 47 P P 20 33 02.3 +0.5
KSRS **Korea Array** 80.17 47 P P 20 33 02.4 +0.5
comp=Z,3.1nm,0.9s,baz=331,slow=4.5,SNR=12
J14A **Carey** 80.17 323 ⇓P P 20 33 02.5 +0.4
baz=80
R24A **Sanders Place,** 80.17 315 ⇑P P 20 33 03.5 +1.3
baz=80
K15A **Arbon** 80.25 322 ⇑P P 20 33 02.9 +0.4
baz=80,SNR=6.1
S25A **Robets Cordova** 80.26 314 P P 20 33 03.8 +1.1
baz=80,SNR=8.1
O20A **White River Ci** 80.27 318 ⇓P P 20 33 03.5 +0.8
baz=80,SNR=5.7
L16A **Fish Haven** 80.29 321 ⇑P P 20 33 03.8 +1.0
baz=80,SNR=5.2
P21A **Newcastle** 80.35 317 ⇑P P 20 33 03.5 +0.3
baz=80
HLID **Hailey** 80.36 324 ⇓P P 20 33 04.6 +1.5
baz=80,SNR=5.9
M17A **Scullys Gap (B** 80.37 320 ⇓P P 20 33 04.0 +0.7
baz=80
J13A **Cove Ranch, Pi** 80.39 323 ⇓P P 20 33 03.5 +0.3
baz=80,SNR=8.7
I12A **Atlanta** 80.48 324 ⇑P P 20 33 03.9 +0.1
baz=80
BMO **Blue Mountains** 80.50 326 *e*P P 20 33 01.7 -2.1
comp=Z,13nm,1.1s
BMO *e*PcP PcP 20 33 11.4 +0.7
BMO **Blue Mountains** 80.50 326 *e*P P 20 33 01.7 -2.1
comp=Z,13nm,1.1s
O19A **Miners Draw (B** 80.56 318 ⇑P P 20 33 05.5 +1.3
baz=80
R23A **Moffat** 80.57 315 ⇑P P 20 33 04.6 +0.2
baz=80
Q22A **Crested Butte,** 80.60 316 ⇓P P 20 33 05.8 +1.1
baz=80,SNR=6.5
T25A **Trinidad** 80.64 313 ⇑P P 20 33 05.8 +1.1
baz=80
K14A **Jones Ranch, D** 80.64 322 ⇓P P 20 33 06.1 +1.5
baz=80
HWUT **Hardware Ranch** 80.67 321 *e*P P 20 33 03.0 -1.8
comp=Z,12nm,1.0s
HWUT *e*PcP PcP 20 33 13.5 +1.9
HWUT **Hardware Ranch** 80.67 321 *e*P P 20 33 03.0 -1.8
comp=Z,12nm,1.0s
L15A **Malad City** 80.73 321 ⇑P P 20 33 05.5 +0.4
baz=80
X30A **Coker Ranch, T** 80.75 310 ⇓P P 20 33 05.1 -0.1
baz=80
Y31A **Rekieta Farm,** 80.76 309 ⇑P P 20 33 04.9 -0.4
baz=80
BDFB **Brasilia** 80.79 238 P P 20 33 05.0 -0.6
BDFB **Brasilia** 80.79 238 P P 20 33 05.0 -0.6
comp=Z,1.4nm,0.5s,baz=66,slow=8.3,SNR=3.2
BDFB **Brasilia** 80.79 238 P P 20 33 05.0 -0.6
Z32A **Haskell** 80.80 308 ⇑P P 20 33 05.5 0.0
baz=81
P20A **De Beque** 80.83 317 ⇓P P 20 33 06.2 +0.5
baz=81
M16A **Huntsville** 80.93 321 ⇓P P 20 33 07.3 +1.1
baz=81
P19A **Cripple Cowboy** 81.02 318 ⇑P P 20 33 06.6 -0.1
baz=81
T24A **Torres, Weston** 81.02 314 ⇓P P 20 33 07.1 +0.2
baz=81
MFID **Camas Ranch** 81.08 324 ⇓P P 20 33 08.1 +1.2
baz=81
L14A **Malta** 81.08 322 ⇑P P 20 33 08.2 +1.2
baz=81
M15A **Larsen Ranch,** 81.19 321 ⇓P P 20 33 08.6 +1.0
baz=81
U25A **Circle Dot Ran** 81.19 313 P P 20 33 08.9 +1.1
baz=81,SNR=14
S22A **4UR Ranch, Cre** 81.42 315 ⇑P P 20 33 10.0 +1.0
baz=81
W27A **Bowe Ranch, En** 81.49 311 ⇓P P 20 33 09.2 0.0
baz=81
T22A **Edith** 82.02 315 P P 20 33 13.4 +1.2
baz=82,SNR=5.3
W25A **X Bar L Ranch,** 82.12 312 ⇑P P 20 33 13.3 +0.7
baz=82
DUG **Dugway** 82.37 321 *e*P P 20 33 13.4 -0.4
DUG *e* 20 33 19.5
DUG pmax pmax
comp=Z,4.0nm,0.9s
DUG **Dugway** 82.37 321 *e*P P 20 33 13.4 -0.4
comp=Z,4.0nm,0.9s
DUG *e*PcP PcP 20 33 19.5 +0.5
DUG **Dugway** 82.37 321 ⇓P P 20 33 14.1 +0.3
baz=82
DUG **Dugway** 82.37 321 *e*P P 20 33 13.4 -0.4
comp=Z,4.0nm,0.9s
332A **Millersview** 82.37 307 ⇓P P 20 33 13.4 -0.4
baz=82
Y27A **Causey** 82.43 311 ⇑P P 20 33 14.2 0.0
baz=82
U22A **Llaves** 82.48 315 ⇑P P 20 33 14.8 +0.3
baz=82
W24A **Lazy 6 Ranch,** 82.63 313 ⇑P P 20 33 14.7 -0.6
baz=82
X25A **Clemmons Ranch** 82.75 312 ⇑P P 20 33 16.7 +0.9
baz=82
Z26A **Caprock** 83.33 311 ⇓P P 20 33 19.2 +0.3
baz=83,SNR=5.7
MSU **Marysvale** 83.42 319 *e*P P 20 33 17.8 -1.6
MSU pmax pmax
comp=Z,8.0nm,1.3s
MSU **Marysvale** 83.42 319 *e*P P 20 33 17.8 -1.6
comp=Z,7.9nm,1.3s
MSU **Marysvale** 83.42 319 *e*P P 20 33 17.8 -1.6
comp=Z,7.9nm,1.3s
V20A **Brimhall** 83.75 315 ⇑P P 20 33 20.7 -0.4
baz=84,SNR=5.1
BNM **Barren Site** 84.08 313 *e*P P 20 33 22.5 -0.3
comp=Z,6.0nm,1.2s
BNM **Barren Site** 84.08 313 *e*P P 20 33 22.5 -0.3
comp=Z,6.0nm,1.2s
125A **Gardner Draw,** 84.17 311 P P 20 33 23.8 +0.6
baz=84,SNR=5.5
226B **Tecolote Peak,** 84.34 310 P P 20 33 25.1 +1.1
baz=84,SNR=6.2
X21A **Alamocita Cree** 84.46 314 ⇑P P 20 33 26.4 +1.6
baz=84,SNR=9.0
Z23A **Rita Site, Whi** 84.56 312 ⇑P P 20 33 26.7 +1.6
baz=84,SNR=6.6
529A **Stev Forest Ra** 84.73 307 ⇓P P 20 33 26.7 +0.8
baz=84
Y21A **Point of Rocks** 84.74 314 ⇓P P 20 33 27.7 +1.5
baz=84,SNR=6.6
X20A **Quemado** 84.75 314 ⇓P P 20 33 26.2 0.0
baz=84,SNR=5.3
Z22A **Elephant Butte** 84.95 313 ⇓P P 20 33 28.3 +1.1
baz=85,SNR=8.5
R11A **Troy Canyon, C** 85.12 321 ⇑P P 20 33 28.8 +0.9
baz=85,SNR=6.3
U15A **North Rim** 85.14 318 ⇑P P 20 33 28.8 +0.5
baz=85,SNR=7.3
426A **McDonald Obser** 85.34 309 ⇓P P 20 33 30.4 +1.2
baz=85,SNR=10
527A **Woward Ranch** 85.50 308 ⇑P P 20 33 30.6 +0.6
baz=85
324A **Moseley Ranch,** 85.55 310 ⇓P P 20 33 30.3 +0.2
baz=85
628A **Black Gap, Mar** 85.59 307 P P 20 33 31.6 +1.4
baz=85,SNR=6.2
PSI **Prapat** 85.87 90 P P 20 33 31.4 -0.5
PSI **Prapat** 85.87 90 P P 20 33 31.4 -0.5
comp=Z,5.4nm,0.6s,baz=315,slow=5.6,SNR=9.2
627A **Terlingua Ranc** 85.90 308 ⇑P P 20 33 33.2 +1.4
baz=86
Z20A **Nine Sixteen R** 85.92 314 ⇓P P 20 33 32.7 +0.7
baz=86
MJAR **Matsushiro Arr** 85.98 41 P P 20 33 31.8 -0.3
MJAR **Matsushiro Arr** 85.98 41 P P 20 33 31.8 -0.3
comp=Z,4.5nm,1.0s,baz=313,slow=4.7,SNR=13
MJAR LR LR 21 16 45.9
comp=Z,164nm,18.9s,baz=345,slow=39
MJAR **Matsushiro Arr** 85.98 41 P P 20 33 31.8 -0.3
TXAR **Lajitas Array** 86.14 308 P P 20 33 34.1 +1.0
TXAR **Lajitas Array** 86.14 308 P P 20 33 34.1 +1.0
comp=Z,3.1nm,0.9s,baz=57,slow=4.6,SNR=16
TXAR **Lajitas Array** 86.14 308 P P 20 33 34.1 +1.0
626A **Big Bend Ranch** 86.24 308 ⇑P P 20 33 35.3 +1.7
baz=86
NVAR **Mina Array Bea** 86.25 323 P P 20 33 35.1 +1.5
NVAR **Mina Array Bea** 86.25 323 P P 20 33 35.1 +1.5
comp=Z,1.3nm,0.7s,baz=101,slow=7.7,SNR=3.8
WRA **Warramunga Arr** 126.70 82 PKP PKPdf 20 39 54.4 -1.0
WRA **Warramunga Arr** 126.70 82 PKP PKPdf 20 39 54.4 -1.0
comp=Z,1.4nm,1.1s,baz=320,slow=1.6,SNR=5.8
WRA **Warramunga Arr** 126.70 82 PKIKP PKPdf 20 39 54.3 -1.0
ASAR **Alice Springs** 128.76 86 PKP PKPdf 20 39 58.5 -0.7
ASAR **Alice Springs** 128.76 86 PKP PKPdf 20 39 58.5 -0.7
comp=Z,0.7nm,0.7s,baz=320,slow=1.4,SNR=11
ASAR **Alice Springs** 128.76 86 PKIKP PKPdf 20 39 58.5 -0.7
VNDA **Vanda** 144.47 169 PKP PKPab 20 40 24.5 -0.4
VNDA **Vanda** 144.47 169 PKP PKPab 20 40 24.5 -0.4
comp=Z,1.5nm,1.0s,baz=289,slow=5.3,SNR=4.2

*ISCJB **05** 20:24:12.3±0.7, 10°.85N±0°.03×67°.03W±0°.02, h5km±5km, mb3.7/6, MS3.9/5, Error ellipse: s-maj=4.3km s-min=3.7km az=7.2*
*IDC **05** 20:24:13.1±0.9, 10°.97N×66°.89W, h0km, mb3.7/6,*
mb1 4.0/7, mb1mx3.7/27, mbtmp3.9/7, ML3.6/1, MS3.2/4, Ms1 3.2/4, ms1mx2.9/49, Error ellipse: s-maj=27.2km s-min=22.7km az=8.0
*NEIC **05** 20:24:13.6±0.8, 10°.76N×66°.84W, h10km, mb4.3/2, MW4.3(CAR), Error ellipse: s-maj=14.8km s-min=8.8km az=109.0*
NEIC Felt [IV] at Caraballeda, Caracas, La Guaira, Los Teques, Maiquetia, Petare and San Antonio de los Altos; [III] at Baruta, Chacao, El Hatillo, Los Dos Caminos and Maracay; [II] at El Cafetal, La Victoria and Valencia. Also felt at Altagracia de Orituco, Carrizal, El Limon, Guarenas, Guatire and Puerto Cabello.
*FUNV **05** 20:24:14.8, 10°.73N×67°.03W, h3km, MW4.3*
*BJI **05** 20:24:15.5, 10°.80N×66°.60W, h10km, Ms5.0/2, Ms7 4.7/2*
ISC 05 20:24:13.8±1.0, 10°.84N±0°.03×66°.99W±0°.02, h10km±6km, n58,σ1°81/75, mb3.6/6, MS3.6/5, 5C-9D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FDCV	**FORTIN DE LA C**	0.30	173	⇓*i*P		**Pg**	**Pb**	**20 24 19.9**	**-0.1**
FDCV				*e*S		**Sg**	**Sb**	**20 24 21.9**	**-2.1**
LLAV	**El Llanito**	0.41	154	⇓*i*P		**Pg**	**Pb**	**20 24 21.9**	**-0.1**
LLAV				*e*S		**Sg**	**Sb**	**20 24 26.1**	**-1.3**
FUNV	**FUNVISIS**	0.41	154	⇓*i*P		**Pg**	**Pb**	**20 24 21.9**	**-0.1**
FUNV				*e*S		**Sg**	**Sb**	**20 24 26.0**	**-1.3**
BIRV	**Birongo**	0.80	117	⇓*i*P		**Pb**	**Pb**	**20 24 30.3**	**+0.4**
BIRV				*e*S		**Sb**	**Sb**	**20 24 40.7**	**0.0**
TURV	**Turiamo**	0.92	245	⇑*e*P		**Pg**	**Pb**	**20 24 30.4**	**-1.2**
TURV				*e*S		**Sg**	**Sb**	**20 24 41.7**	**-1.9**
ORCV	**Isla La Orchil**	1.24	39	⇑*i*P		**Pg**	**Pb**	**20 24 39.2**	**+1.4**
CUPV	**Cœpira**	1.42	123	⇓*i*P		**Pg**	**Pb**	**20 24 41.2**	**+0.2**
CUPV				*e*S		**Sg**	**Sb**	**20 24 59.6**	**+0.1**
MERV	**Las Mercedes**	1.72	157	⇓*e*P		**Pn**	**Pb**	**20 24 43.5**	**-0.5**
MERV				*e*S		**Sn**	**Sb**	**20 25 06.1**	**+0.1**
MAPV	**Macapo**	1.76	235	⇑*e*P		**Pn**	**Pb**	**20 24 44.9**	**+0.5**
MAPV				*e*S		**Sn**	**Sb**	**20 25 07.0**	**+0.1**
JACV	**Jacura**	1.82	278	⇓*e*P		**Pb**	**Pb**	**20 24 47.1**	**-0.2**
JACV				*e*S		**Sb**	**Sb**	**20 25 10.3**	**0.0**
BAUV	**El Baul**	2.15	209	⇑*e*P		**Pn**	**Pb**	**20 24 48.1**	**-1.8**
TEPV	**Terepaima**	2.33	248	*e*P		**Pn**	**Pb**	**20 24 52.0**	**-0.4**
TEPV				*e*S		**Sn**	**Sb**	**20 25 20.3**	**-0.9**
PCRV	**Puerto La Cruz**	2.41	106	⇑*e*P		**Pb**	**Pb**	**20 24 55.7**	**-1.6**
PCRV				*e*S		**Sb**	**Sb**	**20 25 25.1**	**-2.1**
SIQV	**Siquisique**	2.77	266	⇓*e*P		**Pn**	**Pb**	**20 24 58.0**	**-0.5**
SANV	**Sanarito**	2.84	242	*e*P		**Pn**	**Pb**	**20 24 59.0**	**-0.4**
CURV	**Curarigua**	3.04	255	*e*P		**Pn**	**Pb**	**20 25 01.9**	**-0.2**
MONV	**Montecano**	3.12	291	⇓*e*P		**Pn**	**Pb**	**20 25 03.4**	**+0.1**
QARV	**Quebrada Arrib**	3.53	260	*e*P		**Pn**	**Pb**	**20 25 08.6**	**-0.3**
DABV	**Dabajuro**	3.58	272	*e*P		**Pn**	**Pb**	**20 25 09.7**	**+0.1**
CRUV	**Carupano**	3.69	92	*e*P		**Pn**	**Pb**	**20 25 13.5**	**+2.4**
ORIV	**Oritupano**	3.94	116	*e*P		**Pn**	**Pb**	**20 25 15.5**	**+0.9**
SDV	**Santo Domingo**	4.08	242	*e*Pn		**Pn**	**Pb**	**20 25 17.2**	**+0.6**
SDV				*e*Sn		**Sb**	**Sb**	**20 26 18.2**	**+2.7**
IMOV	**Isla Los Monje**	4.12	292	*e*P		**Pn**	**Pb**	**20 25 17.3**	**+0.4**
ELOV	**Elorza**	4.54	213	*e*P		**Pn**	**Pb**	**20 25 22.2**	**-0.5**
SOCV	**Socops**	4.58	237	*e*P		**Pn**	**Pb**	**20 25 22.6**	**-0.7**
VIGV	**El Vigia**	4.75	246	*e*P		**Pn**	**Pb**	**20 25 25.3**	**-0.3**
GURV	**El Guri**	4.92	128	*e*P		**Pn**	**Pb**	**20 25 27.2**	**-0.8**
GRGR	**Grenville**	5.39	76	*e*Pn		**Pn**	**Pb**	**20 25 31.9**	**-2.5**
PAYV	**Puerto Ayacuch**	5.43	187	*e*P		**Pn**	**Pb**	**20 25 33.1**	**-1.9**
RIOV	**Rio Grande**	5.80	118	*e*P		**Pn**	**Pb**	**20 25 39.8**	**-0.3**
CAPV	**Capacho**	6.03	241	*e*P		**Pn**	**Pb**	**20 25 42.1**	**-1.3**
FDF	**Fort de France**	6.89	55	*e*P		**Pn**	**Pb**	**20 25 55.5**	**+0.5**
CRPR	**Cabo Rojo, PR**	7.12	359	*e*Pn		**Pn**	**Pb**	**20 25 57.6**	**-0.6**
	14nm,0.4s								
CELP	**Cerrillos**	7.20	3	*e*Pn		**Pn**		**20 25 59.2**	**-0.1**
SJG	**San Juan**	7.28	6	*e*Pn		**Pn**		**20 26 00.2**	**-0.1**
SJG				*e*Sn		**Sn**		**20 27 17.9**	**-5.1**
SJG	**San Juan**	7.28	6	Pn		**Pn**		**20 26 02.7**	**+2.4**
	16nm,0.3s,baz=177,slow=13,SNR=34								
SJG				Sn		**Sn**	**Sb**	**20 27 17.7**	**-5.3**
	52nm,0.3s,baz=318,slow=18,SNR=28								
SJG				LR		LR		20 28 39.8	
	comp=Z,81nm,20.9s,baz=321,slow=37								
LSP	**Las Mesas**	7.29	359	*e*Pn		**Pn**	**Pb**	**20 26 00.8**	**+0.2**
LSP				*e*Sn		**Sn**	**Sb**	**20 27 20.8**	**-2.7**
HUMP	**Col San Antoni**	7.34	9	*e*Pn		**Pn**	**Pb**	**20 26 03.6**	**+2.4**
LRS	**Lares**	7.41	1	*e*Pn		**Pn**	**Pb**	**20 26 02.6**	**+0.4**
AOPR	**Arecibo Observ**	7.47	2	*e*Pn		Pn		20 26 06.5	+3.5
AOPR				*e*Sn		**Sn**	**Sb**	**20 27 25.2**	**-2.6**
SDDR	**Presa de Saban**	9.10	333	*e*Pn		**Pn**	**Pb**	**20 26 26.2**	**+0.8**
SDDR				*e*Sn		Sn		20 28 00.4	-7.6
ROSC	**El Rosal**	9.39	231	Pn		**Pn**	**Pb**	**20 26 31.0**	**+1.3**
	11nm,0.3s,baz=303,slow=5.2,SNR=19								
ROSC				Sn		**Sn**	**Sb**	**20 28 10.7**	**-5.0**
	1.6nm,0.3s,baz=272,slow=22,SNR=1.8								
BCIP	**Isla Barro Col**	12.76	264	*e*Pn		Pn		20 27 10.9	-4.6
OTAV	**Otavalo**	15.51	228	*e*Pn		**Pn**	**Pb**	**20 27 53.9**	**+0.5**
	91nm,1.5s								
SAML	**Samuel**	20.02	169	*e*P		**P**	**Pb**	**20 28 45.6**	**-1.5**
	3.1nm,0.7s								
SAML				*e*S		Sn		20 32 34.9	+0.6
ATAH	**Atahualpa**	21.16	213	P		**P**	**Pb**	**20 29 03.3**	**+3.4**
	10nm,0.8s,baz=38,slow=8.5,SNR=3.7								
CMIG	**Matias Romero**	27.75	286	LR		LR		20 41 16.3	
	comp=Z,66nm,21.0s,baz=5.5,slow=37								
RCBR	**Riachuelo**	35.10	117	P		**P**	**Pb**	**20 31 09.0**	**+1.2**
	4.9nm,0.6s,baz=290,slow=7.5,SNR=8.7								
TXAR	**Lajitas Array**	38.83	304	P		**P**	**Pb**	**20 31 40.5**	**+1.0**
	0.2nm,0.6s,baz=114,slow=8.0,SNR=2.3								
ANMO	**Albuquerque**	43.15	310	LR		LR		20 51 26.6	
	comp=Z,85nm,21.5s,baz=103,slow=38								
LPIG	**La Paz**	43.19	294	LR		LR		20 51 56.3	
	comp=Z,20nm,20.0s,baz=94,slow=38								
YKA	**Yellowknife Ar**	61.77	337	P		**P**	**Pb**	**20 34 32.9**	**+0.3**
	0.1nm,0.4s,baz=117,slow=6.9,SNR=3.0								
TORD	**Torodi Ar. Bea**	67.04	80	P		**P**	**Pb**	**20 35 06.3**	**-1.6**
	0.6nm,0.7s,baz=285,slow=5.8,SNR=4.5								
GERES	**GERESS Array B**	75.80	42	P		**P**	**Pb**	**20 36 01.8**	**+1.4**
	0.2nm,0.6s,baz=280,slow=5.9,SNR=2.4								
WMQ	**Urumqi**	120.92	21	PKP		**PKPdf**		**20 43 08.7**	**+1.7**
HHC	**Hu-ho-hao-te**	128.55	1	*e*PKP		**PKPdf**		**20 43 21.4**	**-0.4**
HHC				PP		**PP**		**20 45 29.6**	**+4.0**
HHC				PKS		**PKSdf**		**20 46 57.2**	**-1.3**
HHC				SKS		**SKSdf**		**20 50 31.8**	**-2.2**
HHC				SKKS		**SKKSac**		**20 52 21.6**	**-3.2**
HHC				SS		**SS**		**21 02 43.0**	**+1.4**
HHC				LR		LR			
	comp=N,130nm,20.0s								
HHC				LR		LR			
	comp=E,94nm,20.4s								
HHC				LR		LR			
	comp=Z,190nm,21.7s								
LZH	**Lanzhou**	132.53	10	*e*PKP		**PKPdf**		**20 43 32.5**	**+2.9**
LZH				sPKP				20 43 37.0	
LZH				LR		LR			
	comp=N,100nm,18.0s								
LZH				LR		LR			
	comp=E,100nm,17.8s								
LZH				LR		LR			
	comp=Z,150nm,20.1s								
CMAR	**Chiang Mai Arr**	147.75	26	PKPbc		**PKPdf**		**20 43 58.1**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=316,slow=5.0,SNR=2.5								

*ISCJB **05** 20:48:20.5±0.3, 44°.29N±0°.03×11°.78E±0°.03, h31km±3km, Error ellipse: s-maj=4.3km s-min=3.6km az=18.3*
*CSEM **05** 20:48:20.9±0.1, 44°.25N×11°.85E, h20km, ML2.6/6, Error ellipse: s-maj=3.9km s-min=2.8km az=55.0*
*ROM **05** 20:48:21.5±0.1, 44°.20N×11°.90E, h21km±3km, Md2.3/14, Ml2.2/13, Error ellipse: s-maj=2.3km s-min=2.2km az=59.0*
*LDG **05** 20:48:22.9±0.6, 44°.35N×11°.87E, h20km, Ml2.8/12, Error ellipse: s-maj=11.3km s-min=6.5km az=102.0*
ISC 05 20:48:20.4±0.9, 44°.29N±0°.02×11°.88E±0°.02, h30km±5km, n99,σ1°37/123, 6C-3D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FAEN	**Faenza**	0.01	289	⇑*i*Pg		**Pg**	**Pb**	**20 48 24.9**	**-0.5**
FAEN				Sg		**Sg**	**Sb**	**20 48 29.5**	**+0.8**
FAEN	**Faenza**	0.01	289	⇑*i*Pg		**Pg**	**Pb**	**20 48 24.9**	**-0.5**
FAEN				Sg		**Sg**	**Sb**	**20 48 29.5**	**+0.8**
BRSN	**Barisano**	0.14	91	Pg		**Pg**	**Pb**	**20 48 25.6**	**-0.4**
	1.0nm,0.2s								
BRSN	**Barisano**	0.14	91	Pg		**Pg**	**Pb**	**20 48 25.6**	**-0.4**
	1.0nm,0.2s								
CMPO	**Campotto Po**	0.30	349	Pg		**Pn**	**Pb**	**20 48 29.6**	**+0.8**
	258nm,0.8s								
CMPO	**Campotto Po**	0.30	349	Pg		**Pn**	**Pb**	**20 48 29.6**	**+0.8**
	258nm,0.8s								

MTRZ	**Monterenzio**	**0.31**	**287**	Pg	**Pn**	**20 48 29.1**	**+0.1**
	186nm,0.4s						
MTRZ	**Monterenzio**	**0.31**	**287**	Pg	**Pn**	**20 48 29.1**	**+0.1**
	186nm,0.4s						
SFI	**Santa Sofia**	**0.38**	**184**	⇓*i*Pg	**Pb**	**20 48 27.9**	**-1.2**
SFI				Sg	**Sb**	**20 48 34.3**	**-0.6**
SFI	**Santa Sofia**	**0.38**	**184**	⇓*i*Pg	**Pb**	**20 48 27.9**	**-1.2**
SFI				Sg	**Sb**	**20 48 34.3**	**-0.6**
VMG	**Vicchio**	**0.41**	**217**	Pg	**Pb**	**20 48 28.8**	**-0.6**
VMG				Sg	**Sb**	**20 48 35.7**	**+0.2**
VMG	**Vicchio**	**0.41**	**217**	Pg	**Pb**	**20 48 28.8**	**-0.6**
VMG				Sg	**Sb**	**20 48 35.7**	**+0.2**
SEI	**Scarperia**	**0.45**	**239**	Pg	**Pb**	**20 48 29.6**	**-0.4**
SEI	**Scarperia**	**0.45**	**239**	Pg	**Pb**	**20 48 29.6**	**-0.4**
FIU	**Minerbio Fiu**	**0.45**	**322**	Pg	**Pn**	**20 48 32.5**	**+1.6**
	254nm,0.4s						
FIU	**Minerbio Fiu**	**0.45**	**322**	Pg	**Pn**	**20 48 32.5**	**+1.6**
	254nm,0.4s						
ASQU	**Asqua**	**0.50**	**188**	Pg	**Pb**	**20 48 29.7**	**-1.1**
ASQU				Sg	**Sb**	**20 48 37.4**	**-0.5**
	146nm,0.3s						
ASQU	**Asqua**	**0.50**	**188**	Pg	**Pb**	**20 48 29.7**	**-1.1**
ASQU				Sg	**Sb**	**20 48 37.4**	**-0.5**
	146nm,0.3s						
RSM	**Repubblica di**	**0.54**	**131**	Pg	**Pb**	**20 48 31.7**	**+0.1**
	1.0nm,0.2s						
RSM	**Repubblica di**	**0.54**	**131**	Pg	**Pb**	**20 48 31.7**	**+0.1**
	1.0nm,0.2s						
CRE	**Caprese Michel**	**0.67**	**176**	Pg	**Pb**	**20 48 32.7**	**-1.0**
	72nm,0.5s						
CRE	**Caprese Michel**	**0.67**	**176**	Pg	**Pb**	**20 48 32.7**	**-1.0**
	72nm,0.5s						
PARC	**Parchiule**	**0.69**	**158**	Pg	**Pb**	**20 48 33.1**	**-0.9**
	95nm,0.4s						
PARC	**Parchiule**	**0.69**	**158**	Pg	**Pb**	**20 48 33.1**	**-0.9**
	95nm,0.4s						
RAVA	**Ravarino**	**0.72**	**311**	⇑*i*Pg	**Pn**	**20 48 37.4**	**+2.8**
PESA	**Pesaro**	**0.77**	**116**	Pg	**Pn**	**20 48 36.1**	**+0.8**
	89nm,0.3s						
PESA	**Pesaro**	**0.77**	**116**	Pg	**Pn**	**20 48 36.1**	**+0.8**
	89nm,0.3s						
CRMI	**Carmignano**	**0.83**	**233**	Pg	**Pn**	**20 48 36.9**	**+0.8**
	38nm,0.6s						
CRMI	**Carmignano**	**0.83**	**233**	Pg	**Pn**	**20 48 36.9**	**+0.8**
	38nm,0.6s						
FSSB	**Fossombrone**	**0.88**	**132**	Pg	**Pb**	**20 48 37.8**	**+0.7**
	140nm,0.4s						
FSSB	**Fossombrone**	**0.88**	**132**	Pg	**Pb**	**20 48 37.8**	**+0.7**
	140nm,0.4s						
PIEI	**Pieia**	**0.89**	**148**	Pg	**Pn**	**20 48 36.6**	**-0.3**
	84nm,0.5s						
PIEI	**Pieia**	**0.89**	**148**	Pg	**Pn**	**20 48 36.6**	**-0.3**
	84nm,0.5s						
CSNT	**Castellina Chi**	**0.92**	**208**	Pg	**Pb**	**20 48 38.2**	**+0.3**
	67nm,0.7s						
CSNT	**Castellina Chi**	**0.92**	**208**	Pg	**Pb**	**20 48 38.2**	**+0.3**
	67nm,0.7s						
CAFI	**Castiglion Fio**	**0.96**	**176**	Pg	**Pn**	**20 48 38.0**	**+0.1**
	81nm,0.7s						
CAFI	**Castiglion Fio**	**0.96**	**176**	Pg	**Pn**	**20 48 38.0**	**+0.1**
	81nm,0.7s						
MAIM	**Mastiano**	**1.07**	**250**	Pg	**Pb**	**20 48 41.2**	**+0.8**
	20nm,0.3s						
MAIM	**Mastiano**	**1.07**	**250**	Pg	**Pb**	**20 48 41.2**	**+0.8**
	20nm,0.3s						
ARVD	**Arcevia**	**1.10**	**136**	Pg	**Pb**	**20 48 41.0**	**+0.2**
	890nm,1.0s						
ARVD	**Arcevia**	**1.10**	**136**	Pg	**Pb**	**20 48 41.0**	**+0.2**
	890nm,1.0s						
PII	**Pisa**	**1.13**	**241**	Pg	**Pb**	**20 48 41.2**	**-0.2**
	27nm,0.2s						
PII	**Pisa**	**1.13**	**241**	Pg	**Pb**	**20 48 41.2**	**-0.2**
	27nm,0.2s						
SNTG	**Esanatoglia**	**1.28**	**143**	Pg	**Pn**	**20 48 43.6**	**+1.2**
SNTG	**Esanatoglia**	**1.28**	**143**	Pg	**Pn**	**20 48 43.6**	**+1.2**
CING	**Cingoli**	**1.32**	**133**	Pg	**Pn**	**20 48 44.3**	**+1.5**
	2μm,0.6s						
CING	**Cingoli**	**1.32**	**133**	Pg	**Pn**	**20 48 44.3**	**+1.5**
	2μm,0.6s						
ASSB	**Assisi San Ben**	**1.37**	**155**	Pg	**Pb**	**20 48 45.4**	**0.0**
	3μm,0.3s						
ASSB	**Assisi San Ben**	**1.37**	**155**	Pg	**Pb**	**20 48 45.4**	**0.0**
	3μm,0.3s						
MGAB	**Montegabbione**	**1.39**	**173**	Pg	**Pn**	**20 48 45.1**	**+1.3**
	3μm,0.6s						
MGAB	**Montegabbione**	**1.39**	**173**	Pg	**Pn**	**20 48 45.1**	**+1.3**
	3μm,0.6s						
VOY	**Vojsko**	**2.25**	**38**	*e*Pn	**Pn**	**20 48 55.2**	**-0.5**
VOY				*e*Sn	**Sn**	**20 49 22.9**	**+0.4**
VOY	**Vojsko**	**2.25**	**38**	Pn	**Pn**	**20 48 55.2**	**-0.5**
VOY				*e*Sn	**Sn**	**20 49 22.9**	**+0.4**
LJU	**Ljubljana**	**2.56**	**46**	*e*Pn	**Pb**	**20 49 03.8**	**-1.9**
PGF	**Pioggiola**	**2.73**	**231**	*e*Pn	**Pn**	**20 49 03.2**	**+0.9**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**20 49 36.0**	**+1.7**
	4.7nm,0.3s,SNR=1.0						
PGF	**Pioggiola**	**2.73**	**231**	*e*Pn	**Pn**	**20 49 03.2**	**+0.9**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**20 49 36.0**	**+1.7**
	2.3nm,0.3s,SNR=1.0						
WTTA	**Wattenberg**	**2.98**	**357**	⇑*e*Pn	**Pn**	**20 49 08.2**	**+2.4**
	SNR=12						
WTTA	**Wattenberg**	**2.98**	**357**	Pn	**Pn**	**20 49 08.2**	**+2.4**
	SNR=12						
WATA	**Walderalm**	**3.06**	**356**	⇑*i*Pn	**Pn**	**20 49 09.2**	**+2.3**
WATA	**Walderalm**	**3.06**	**356**	Pn	**Pn**	**20 49 09.2**	**+2.3**
MOTA	**Moosalm**	**3.11**	**350**	⇑*i*Pn	**Pn**	**20 49 10.1**	**+2.5**
MOTA	**Moosalm**	**3.11**	**350**	Pn	**Pn**	**20 49 10.1**	**+2.5**
SBF	**Sospel**	**3.23**	**264**	*e*Pn	**Pn**	**20 49 11.4**	**+2.2**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**20 49 46.5**	**-0.3**
	4.3nm,0.3s,SNR=1.0						
SBF	**Sospel**	**3.23**	**264**	*e*Pn	**Pn**	**20 49 11.4**	**+2.2**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**20 49 46.5**	**-0.3**
	2.2nm,0.3s,SNR=1.0						
DAVA	**Damuels**	**3.31**	**336**	⇓*i*Pn	**Pn**	**20 49 13.4**	**+3.0**
DAVA	**Damuels**	**3.31**	**336**	Pn	**Pn**	**20 49 13.4**	**+3.0**
MBDF	**Montbardon**	**3.68**	**279**	*e*Pn	**Pn**	**20 49 16.7**	**+1.2**
MBDF				*e*Sn	**Sn**	**20 49 55.9**	**-2.1**
	2.1nm,0.3s						
MBDF	**Montbardon**	**3.68**	**279**	*e*Pn	**Pn**	**20 49 16.7**	**+1.2**
MBDF				*e*Sn	**Sn**	**20 49 55.9**	**-2.1**
	1.0nm,0.3s						
LPG	**La Plagne**	**3.84**	**290**	*e*Pn	**Pn**	**20 49 18.2**	**+0.4**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**20 50 00.4**	**-1.7**
	1.5nm,0.3s,SNR=1.0						
LPG	**La Plagne**	**3.84**	**290**	*e*Pn	**Pn**	**20 49 18.2**	**+0.4**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**20 50 00.4**	**-1.7**
	0.8nm,0.3s,SNR=1.0						
FRF	**La Foret Royal**	**3.85**	**261**	*e*Sn	**Sn**	**20 50 01.7**	**-0.2**
	1.6nm,0.2s						
FRF	**La Foret Royal**	**3.85**	**261**	*e*Sn	**Sn**	**20 50 01.7**	**-0.2**
	0.8nm,0.2s						
LMR	**La Mourre**	**4.01**	**258**	*e*Sn	**Sn**	**20 50 04.7**	**-1.0**
	0.8nm,0.1s						
LMR	**La Mourre**	**4.01**	**258**	*e*Sn	**Sn**	**20 50 04.7**	**-1.0**
	0.4nm,0.1s						
CABF	**La Chapelle**	**4.69**	**302**	*e*Pn	**Pn**	**20 49 30.8**	**+1.5**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**20 50 20.5**	**-2.3**
	1.0nm,0.3s,SNR=1.0						
CABF	**La Chapelle**	**4.69**	**302**	*e*Pn	**Pn**	**20 49 30.8**	**+1.5**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**20 50 20.5**	**-2.3**
	0.5nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**4.97**	**317**	*e*Pn	**Pn**	**20 49 33.5**	**+0.4**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**20 50 25.9**	**-3.6**
	5.8nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**4.97**	**317**	*e*Pn	**Pn**	**20 49 33.5**	**+0.4**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**5.18**	**279**	*e*Pn	**Pn**	**20 49 37.2**	**+1.2**
VIVF				*e*Sn	**Sn**	**20 50 34.0**	**-0.8**
	15nm,0.6s,SNR=1.0						
VIVF	**Saint-Julien-l**	**5.18**	**279**	*e*Pn	**Pn**	**20 49 37.2**	**+1.2**
VIVF				*e*Sn	**Sn**	**20 50 34.0**	**-0.8**
	7.4nm,0.6s,SNR=1.0						
CDF	**Champ du Feu**	**5.21**	**324**	*e*P	**Pn**	**20 49 37.4**	**+1.0**
	SNR=1.0						
CDF				*e*Sn	Sn	20 50 28.0	-7.6
	2.7nm,0.2s,SNR=1.0						
CDF	**Champ du Feu**	**5.21**	**324**	*e*P	**Pn**	**20 49 37.4**	**+1.0**
	SNR=1.0						
HAU	**Haudompre**	**5.35**	**316**	*e*Pn	**Pn**	**20 49 39.0**	**+0.8**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**20 50 34.8**	**-4.0**
	6.1nm,0.3s,SNR=1.0						
HAU	**Haudompre**	**5.35**	**316**	*e*Pn	**Pn**	**20 49 39.0**	**+0.8**
	SNR=1.0						
PAGF	**Fort de Pagny**	**6.03**	**317**	*e*Pn	**Pn**	**20 49 48.3**	**+0.8**
PAGF	**Fort de Pagny**	**6.03**	**317**	*e*Pn	**Pn**	**20 49 48.3**	**+0.8**
SFTF	**Sexfontaines**	**6.15**	**312**	*e*Pn	**Pn**	**20 49 50.5**	**+1.2**
	baz=131						
SFTF	**Sexfontaines**	**6.15**	**312**	*e*Pn	**Pn**	**20 49 50.5**	**+1.2**
	baz=131						
MEZF	**Maizieres J'vi**	**6.33**	**314**	*e*Sn	**Sn**	**20 50 59.6**	**-3.3**
	8.5nm,0.6s,SNR=1.0						
LOR	**Lormes**	**6.35**	**301**	*e*Pn	**Pn**	**20 49 52.7**	**+0.7**
	baz=124,SNR=1.0						
LOR	**Lormes**	**6.35**	**301**	*e*Pn	**Pn**	**20 49 52.7**	**+0.7**
	baz=124,SNR=1.0						
AVF	**Avril sur Loir**	**6.49**	**296**	*e*Pn	**Pn**	**20 49 54.8**	**+0.9**
	SNR=1.0						
AVF	**Avril sur Loir**	**6.49**	**296**	*e*Pn	**Pn**	**20 49 54.8**	**+0.9**
	SNR=1.0						
BGF	**Bois d'Agland**	**6.75**	**293**	*e*Pn	**Pn**	**20 49 58.0**	**+0.5**
	SNR=1.0						
BGF	**Bois d'Agland**	**6.75**	**293**	*e*Pn	**Pn**	**20 49 58.0**	**+0.5**
	SNR=1.0						
GIVF	**Givet**	**7.54**	**323**	*e*P	**Pn**	**20 50 10.6**	**+2.3**
	SNR=1.0						
GIVF	**Givet**	**7.54**	**323**	*e*P	**Pn**	**20 50 10.6**	**+2.3**
	SNR=1.0						
BAIF	**Baives**	**7.79**	**321**	*e*P	**Pn**	**20 50 13.2**	**+1.6**
BAIF	**Baives**	**7.79**	**321**	*e*P	**Pn**	**20 50 13.2**	**+1.6**

*BJI **05** 20:48:53.4, 42°.40N×13°.40E, h10km, mB4.6/1, mb4.3/3, Ms4.7/2, Ms7 4.2/2*
*CSEM **05** 20:48:54.9±0.1, 42°.32N×13°.33E, h2km, mb4.2/11, ML4.3/6, Mw4.2, Error ellipse: s-maj=2.4km s-min=1.9km az=17.0*
*BEO **05** 20:48:54.6±1.0, 42°.23N×13°.06E, h20km±37km, ML4.2/9*
*ISCJB **05** 20:48:54.4±0.2, 42°.34N±0°.01×13°.34E±0°.01, h13km±1km, mb4.0/18, MS3.9/6, Error ellipse: s-maj=2.0km s-min=1.6km az=20.8*
*IDC **05** 20:48:54.7±1.0, 42°.43N×13°.28E, h0km, mb3.6/9, mb1 3.8/13, mb1mx3.7/31, mbtmp3.6/13, ML3.7/3, MS3.6/4, Ms1 3.6/4, ms1mx2.9/45, Error ellipse: s-maj=17.3km s-min=14.3km az=96.0*
*ROM **05** 20:48:54.4±0.1, 42°.33N×13°.38E, h10km, Ml3.9/21, Error ellipse: s-maj=1.0km s-min=0.9km az=85.0*
*NEIC **05** 20:48:54.0, 42°.33N×13°.37E, h8km, mb4.0/6, ML4.1(STR), ML4.0(VIE), MW4.2(ROM), After ROM.*
NEIC Felt [IV] at L'Aquila and Scoppito and [II] at Cassino, Pomezia, Rieti, Rocca di Papa, Rome, Sulmona and Terni.
*MOS **05** 20:48:54.1±1.1, 42°.33N×13°.34E, h13km, mb4.2/14, Error ellipse: s-maj=5.7km s-min=4.3km az=81.7*
*PDG **05** 20:48:55.5±0.7, 42°.34N×13°.38E, h8km±1km, ML3.8/7, Error ellipse: s-maj=1.3km s-min=1.1km az=90.0*
*LDG **05** 20:48:55.1±0.2, 42°.35N×13°.47E, h2km, Ml3.6/8, Error ellipse: s-maj=5.9km s-min=3.3km az=15.0*
*STR **05** 20:48:56.2±0.0, 42°.36N×13°.37E, h10km, Ml3.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*PRU **05** 20:48:57.7, 42°.59N×13°.35E, h0km, M4.5*
ISC 05 20:48:55.9±0.5, **42°.34N**±0°.01×**13°.37E**±0°.01, **h12**km±2km, **n416**, σ1^s.**50**/521, **mb4.0**/18, **MS3.8**/6, **73C-26D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.03**	**62**	*e*Pg	**Pg**	**20 48 56.2**	**-2.0**
AQU				*e*Sg	**Sg**	**20 48 58.4**	**-1.3**
AQU	**L'Aquila**	**0.03**	**62**	Pg	**Pg**	**20 48 56.8**	**-1.3**
AQU				Sg	**Sg**	**20 48 58.0**	**-1.7**
AQU	**L'Aquila**	**0.03**	**62**	Pg	**Pg**	**20 48 56.8**	**-1.3**
AQU				Sg	**Sg**	**20 48 58.0**	**-1.7**
FAGN	**Fagnano**	**0.18**	**114**	Pg	**Pg**	**20 48 58.7**	**-1.2**
FAGN				Sg	**Sg**	**20 49 02.0**	**-0.7**
FAGN	**Fagnano**	**0.18**	**114**	Pg	**Pg**	**20 48 58.7**	**-1.2**
FAGN				Sg	**Sg**	**20 49 02.0**	**-0.7**
FIAM	**Fiamignano**	**0.20**	**249**	P	**Pg**	**20 48 59.5**	**-0.8**
FIAM				S	**Sg**	**20 49 03.0**	**-0.2**
FIAM	**Fiamignano**	**0.20**	**249**	⇑Pg	**Pg**	**20 48 59.5**	**-0.8**
FIAM				Sg	**Sg**	**20 49 03.1**	**-0.2**
	32μm,0.6s						
FIAM	**Fiamignano**	**0.20**	**249**	⇑Pg	**Pg**	**20 48 59.5**	**-0.8**
FIAM				S	**Sg**	**20 49 03.0**	**-0.2**
CAMP	**Campotosto**	**0.20**	**9**	⇑Pg	**Pg**	**20 48 59.2**	**-1.1**
CAMP				Sg	**Sg**	**20 49 02.5**	**-0.9**
	7μm,0.4s						
CAMP	**Campotosto**	**0.20**	**9**	⇑Pg	**Pg**	**20 48 59.2**	**-1.1**
CAMP				Sg	**Sg**	**20 49 02.5**	**-0.9**
	7μm,0.4s						
PTQR	**Pietraquaria**	**0.32**	**175**	P	**Pg**	**20 49 01.1**	**-1.2**
PTQR	**Pietraquaria**	**0.32**	**175**	⇑*i*Pg	**Pg**	**20 49 01.2**	**-1.2**
PTQR	**Pietraquaria**	**0.32**	**175**	⇑*i*Pg	**Pg**	**20 49 01.2**	**-1.2**
TERO	**Teramo**	**0.33**	**32**	P	**Pg**	**20 49 01.0**	**-1.7**
TERO				S	**Sg**	**20 49 07.4**	**+0.2**
TERO	**Teramo**	**0.33**	**32**	⇑Pg	**Pg**	**20 49 01.0**	**-1.7**
TERO				Sg	**Sg**	**20 49 07.4**	**+0.2**
TERO	**Teramo**	**0.33**	**32**	⇑Pg	**Pg**	**20 49 01.0**	**-1.7**
TERO				Sg	**Sg**	**20 49 07.4**	**+0.2**
VCEL	**Villa Celiera**	**0.36**	**81**	Pg	**Pg**	**20 49 01.6**	**-1.5**
VCEL				Sg	**Sg**	**20 49 07.1**	**-0.8**
	39μm,0.9s						
VCEL	**Villa Celiera**	**0.36**	**81**	Pg	**Pg**	**20 49 01.6**	**-1.5**
VCEL				Sg	**Sg**	**20 49 07.1**	**-0.8**
	39μm,0.9s						
CERT	**Cerreto**	**0.48**	**216**	P	**Pg**	**20 49 04.1**	**-1.3**
CERT				S	**Sg**	**20 49 11.7**	**-0.1**
CERT	**Cerreto**	**0.48**	**216**	⇑*i*Pg	**Pg**	**20 49 04.1**	**-1.3**
CERT				Sg	**Sg**	**20 49 11.7**	**-0.1**
	10μm,0.4s						
CERT	**Cerreto**	**0.48**	**216**	⇑*i*Pg	**Pg**	**20 49 04.1**	**-1.3**
CERT				Sg	**Sg**	**20 49 11.7**	**-0.1**
	10μm,0.4s						
VVLD	**Villa Vallelon**	**0.51**	**158**	P	**Pg**	**20 49 04.2**	**-1.6**
VVLD				S	**Sb**	**20 49 14.0**	**-0.2**
VVLD	**Villa Vallelon**	**0.51**	**158**	Pg	**Pg**	**20 49 04.2**	**-1.6**
VVLD				Sg	**Sg**	**20 49 12.0**	**-0.6**
	7μm,0.5s						
VVLD	**Villa Vallelon**	**0.51**	**158**	Pg	**Pg**	**20 49 04.2**	**-1.6**
VVLD				Sg	**Sg**	**20 49 12.0**	**-0.6**
	7μm,0.5s						
VVLD				S	**Sb**	**20 49 14.0**	**-0.2**
MNS	**Montasola**	**0.51**	**275**	P	**Pg**	**20 49 04.6**	**-1.3**
MNS	**Montasola**	**0.51**	**275**	P	**Pg**	**20 49 04.6**	**-1.3**
MNS	**Montasola**	**0.51**	**275**	⇑Pg	**Pg**	**20 49 04.6**	**-1.3**
	5μm,0.5s						
MNS	**Montasola**	**0.51**	**275**	⇑Pg	**Pg**	**20 49 04.6**	**-1.3**
	5μm,0.5s						
INTR	**Introdacqua**	**0.52**	**129**	P	**Pg**	**20 49 04.5**	**-1.6**
INTR				S	**Sg**	**20 49 12.6**	**-0.3**
INTR	**Introdacqua**	**0.52**	**129**	Pg	**Pg**	**20 49 04.4**	**-1.6**
INTR				Sg	**Sg**	**20 49 12.6**	**-0.3**
	10μm,0.7s						
INTR	**Introdacqua**	**0.52**	**129**	Pg	**Pg**	**20 49 04.4**	**-1.6**
INTR				Sg	**Sg**	**20 49 12.6**	**-0.3**
	10μm,0.7s						
NRCA	**Norcia**	**0.53**	**340**	P	**Pg**	**20 49 04.8**	**-1.5**
NRCA	**Norcia**	**0.53**	**340**	⇑*i*Pg	**Pg**	**20 49 04.8**	**-1.5**
NRCA	**Norcia**	**0.53**	**340**	⇑*i*Pg	**Pg**	**20 49 04.8**	**-1.5**
GUAR	**Guarcino**	**0.55**	**184**	P	**Pg**	**20 49 05.0**	**-1.6**
GUAR				S	**Sb**	**20 49 16.2**	**+0.8**
GUAR	**Guarcino**	**0.55**	**184**	Pg	**Pg**	**20 49 05.0**	**-1.6**
	5μm,0.7s						
GUAR	**Guarcino**	**0.55**	**184**	Pg	**Pg**	**20 49 05.0**	**-1.6**
	5μm,0.7s						
GUAR				S	**Sb**	**20 49 16.2**	**+0.8**
MTCE	**Montecelio**	**0.56**	**236**	P	**Pg**	**20 49 05.5**	**-1.4**
MTCE				S	**Sg**	**20 49 14.3**	**+0.1**
MTCE	**Montecelio**	**0.56**	**236**	⇑*i*Pg	**Pg**	**20 49 05.5**	**-1.4**
MTCE				Sg	**Sg**	**20 49 14.0**	**-0.3**
MTCE	**Montecelio**	**0.56**	**236**	⇑*i*Pg	**Pg**	**20 49 05.5**	**-1.4**
MTCE				Sg	**Sg**	**20 49 14.0**	**-0.3**
MTCE				S	**Sg**	**20 49 14.4**	**+0.1**
TRTR	**Tortoreto Alta**	**0.62**	**41**	Pn	**Pg**	**20 49 07.3**	**-0.7**
TRTR	**Tortoreto Alta**	**0.62**	**41**	Pn	**Pg**	**20 49 07.3**	**-0.7**
OFFI	**Offida**	**0.64**	**22**	P	**Pg**	**20 49 07.5**	**-0.9**
OFFI				S	**Sb**	**20 49 19.2**	**+1.1**
OFFI	**Offida**	**0.64**	**22**	⇑Pn	**Pg**	**20 49 07.5**	**-0.9**
OFFI	**Offida**	**0.64**	**22**	⇑Pn	**Pg**	**20 49 07.5**	**-0.9**
OFFI				S	**Sb**	**20 49 19.2**	**+1.1**
POFI	**Posta Fibreno**	**0.67**	**157**	Pn	**Pg**	**20 49 06.9**	**-2.1**
POFI	**Posta Fibreno**	**0.67**	**157**	Pn	**Pg**	**20 49 06.9**	**-2.1**
LPEL	**Lama dei Pelig**	**0.68**	**115**	Pg	**Pg**	**20 49 06.8**	**-2.2**
LPEL				Sg	**Sg**	**20 49 17.3**	**-0.6**
	4μm,0.5s						
LPEL	**Lama dei Pelig**	**0.68**	**115**	Pg	**Pg**	**20 49 06.8**	**-2.2**
LPEL				Sg	**Sg**	**20 49 17.3**	**-0.6**
	4μm,0.5s						
SDI	**San Donato**	**0.71**	**152**	P	**Pg**	**20 49 07.7**	**-2.0**
SDI				S	**Sg**	**20 49 18.3**	**-0.8**
SDI	**San Donato**	**0.71**	**152**	P	**Pg**	**20 49 07.7**	**-2.0**
SDI				S	**Sg**	**20 49 18.3**	**-0.8**
SDI	**San Donato**	**0.71**	**152**	Pn	**Pg**	**20 49 07.7**	**-2.0**
SDI				Sn	**Sg**	**20 49 18.2**	**-0.8**
SDI	**San Donato**	**0.71**	**152**	Pn	**Pg**	**20 49 07.7**	**-2.0**
SDI				Sn	**Sg**	**20 49 18.2**	**-0.8**
RMP	**Rome, Mte Porz**	**0.72**	**223**	Pn	**Pg**	**20 49 08.3**	**-1.6**
RMP	**Rome, Mte Porz**	**0.72**	**223**	Pn	**Pg**	**20 49 08.3**	**-1.6**
FDMO	**Fiordimonte**	**0.73**	**344**	P	**Pg**	**20 49 08.2**	**-1.8**
FDMO				S	**Sg**	**20 49 19.6**	**0.0**
FDMO	**Fiordimonte**	**0.73**	**344**	⇑Pn	**Pg**	**20 49 08.2**	**-1.8**
FDMO				Sn	**Sg**	**20 49 19.6**	**0.0**
	3μm,0.4s						
FDMO	**Fiordimonte**	**0.73**	**344**	⇑Pn	**Pg**	**20 49 08.2**	**-1.8**
FDMO				S	**Sg**	**20 49 19.5**	**0.0**
CAFR	**Castel Frentan**	**0.74**	**98**	Pn	**Pg**	**20 49 08.7**	**-1.5**
CESI	**CESI - Serrava**	**0.75**	**333**	P	**Pg**	**20 49 08.8**	**-1.7**
CESI				S	**Sb**	**20 49 20.9**	**-0.3**
CESI	**CESI - Serrava**	**0.75**	**333**	Pn	**Pg**	**20 49 08.7**	**-1.7**
	1μm,0.5s						
CESI	**CESI - Serrava**	**0.75**	**333**	P	**Pg**	**20 49 08.8**	**-1.7**
CESI				S	**Sb**	**20 49 20.9**	**-0.3**
RDP	**Rocca di Papa**	**0.76**	**220**	Pn	**Pg**	**20 49 08.9**	**-1.6**
RDP	**Rocca di Papa**	**0.76**	**220**	Pn	**Pg**	**20 49 08.9**	**-1.6**
GIUL	**Giuliano Di Ro**	**0.79**	**186**	Pn	**Pg**	**20 49 09.0**	**-2.1**
	4μm,1.0s						
GUMA	**Gualdo di Mace**	**0.84**	**30**	Pn	Pg	20 49 08.4	-3.7
RNI2	**Rionero Sannit**	**0.87**	**137**	Pn	**Pg**	**20 49 10.7**	**-2.0**
ASSB	**Assisi San Ben**	**0.88**	**324**	Pn	**Pg**	**20 49 11.5**	**-1.3**
	3μm,0.3s						
CERA	**Filignano**	**0.89**	**146**	Pn	**Pg**	**20 49 10.5**	**-2.6**
	5μm,1.0s						
MIDA	**Miranda**	**0.96**	**136**	Pn	**Pg**	**20 49 11.8**	**-2.7**
	3μm,1.0s						
CING	**Cingoli**	**1.04**	**353**	Pn	**Pb**	**20 49 14.2**	**-1.8**
	2μm,0.6s						
MGAB	**Montegabbione**	**1.09**	**302**	Pn	**Pb**	**20 49 15.9**	**-0.8**
	3μm,0.6s						
MGAB	**Montegabbione**	**1.09**	**302**	Pn	**Pb**	**20 49 15.9**	**-0.8**
	3μm,0.6s						
MURB	**Monte Urbino**	**1.11**	**326**	Pn	**Pb**	**20 49 15.9**	**-1.3**
	1μm,0.3s						
MURB	**Monte Urbino**	**1.11**	**326**	Pn	**Pb**	**20 49 15.9**	**-1.3**
	1μm,0.3s						
SACS	**San Casciano d**	**1.19**	**296**	Pn	**Pn**	**20 49 17.4**	**-1.1**
ARVD	**Arcevia**	**1.20**	**345**	Pn	**Pn**	**20 49 16.9**	**-1.7**
	890nm,1.0s						
ARVD	**Arcevia**	**1.20**	**345**	Pn	**Pn**	**20 49 16.9**	**-1.7**
	890nm,1.0s						
BSSO	**Busso**	**1.21**	**130**	Pn	**Pn**	**20 49 16.8**	**-2.0**
BSSO	**Busso**	**1.21**	**130**	Pn	**Pn**	**20 49 16.8**	**-2.0**
AOI	**Ancona**	**1.22**	**8**	Pn	**Pn**	**20 49 17.4**	**-1.6**
AOI	**Ancona**	**1.22**	**8**	Pn	**Pn**	**20 49 17.4**	**-1.6**
PIEI	**Pieia**	**1.34**	**333**	Pn	**Pn**	**20 49 20.3**	**-0.3**
	84nm,0.5s						
PIEI	**Pieia**	**1.34**	**333**	Pn	**Pn**	**20 49 20.3**	**-0.3**
	84nm,0.5s						
FSSB	**Fossombrone**	**1.42**	**343**	Pn	**Pn**	**20 49 20.9**	**-0.7**
	140nm,0.4s						
FSSB	**Fossombrone**	**1.42**	**343**	Pn	**Pn**	**20 49 20.9**	**-0.7**
	140nm,0.4s						
CAFI	**Castiglion Fio**	**1.43**	**314**	Pn	**Pn**	**20 49 21.7**	**-0.1**
	81nm,0.7s						
CAFI	**Castiglion Fio**	**1.43**	**314**	Pn	**Pn**	**20 49 21.7**	**-0.1**
	81nm,0.7s						
BADI	**Badiali**	**1.43**	**325**	Pn	**Pb**	**20 49 22.3**	**-0.3**
	164nm,0.6s						
BADI	**Badiali**	**1.43**	**325**	Pn	**Pb**	**20 49 22.3**	**-0.3**
	164nm,0.6s						
PARC	**Parchiule**	**1.55**	**328**	Pn	**Pn**	**20 49 24.0**	**+0.6**
	95nm,0.4s						
PARC	**Parchiule**	**1.55**	**328**	Pn	**Pn**	**20 49 24.0**	**+0.6**
	95nm,0.4s						
MAON	**Monte Argentar**	**1.66**	**274**	Pn	**Pn**	**20 49 24.1**	**-0.8**
MAON	**Monte Argentar**	**1.66**	**274**	Pn	**Pn**	**20 49 24.1**	**-0.8**
CSNT	**Castellina Chi**	**1.90**	**307**	Pn	**Pn**	**20 49 28.9**	**+0.7**
	67nm,0.7s						
CSNT	**Castellina Chi**	**1.90**	**307**	Pn	**Pn**	**20 49 28.9**	**+0.7**
	67nm,0.7s						
NVLJ	**Novalja**	**2.48**	**26**	*e*Pn	**Pn**	**20 49 36.4**	**+0.2**
NVLJ				Sn	**Sn**	**20 50 06.4**	**+0.1**
NVLJ	**Novalja**	**2.48**	**26**	*e*Pn	**Pn**	**20 49 36.3**	**+0.2**
NVLJ				Sn	**Sn**	**20 50 06.4**	**+0.1**
CDT	**Castel del Mon**	**2.51**	**119**	*e*Pn	**Pn**	**20 49 37.3**	**+0.6**
CDT				*e*Sn	**Sn**	**20 50 09.4**	**+2.1**
MAIM	**Mastiano**	**2.63**	**308**	Pn	**Pn**	**20 49 39.2**	**+1.0**
	20nm,0.3s						
MAIM	**Mastiano**	**2.63**	**308**	P	**Pn**	**20 49 39.0**	**+0.8**
BAI	**Bari**	**2.90**	**114**	*e*Pn	**Pn**	**20 49 42.7**	**+0.7**
BAI				*e*Sn	**Sn**	**20 50 19.1**	**+2.3**
CUC	**Castrocucco**	**2.99**	**141**	*e*Pn	**Pn**	**20 49 42.6**	**-0.6**
CUC				*e*Sn	**Sn**	**20 50 17.1**	**-1.9**
CUC	**Castrocucco**	**2.99**	**141**	*e*Pn	**Pn**	**20 49 42.6**	**-0.6**
CUC				*e*Sn	**Sn**	**20 50 17.1**	**-1.9**
GRAM	**Graiana**	**3.23**	**313**	P	**Pn**	**20 49 47.7**	**+1.2**
PGF	**Pioggiola**	**3.24**	**275**	*e*Pn	**Pn**	**20 49 46.6**	**-0.1**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**20 50 23.9**	**-1.4**
	50nm,0.6s						
PGF	**Pioggiola**	**3.24**	**275**	*e*Pn	**Pn**	**20 49 46.6**	**-0.1**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**20 50 23.9**	**-1.4**
	25nm,0.6s						
STON	**Ston**	**3.24**	**79**	*e*Pn	**Pn**	**20 49 46.5**	**-0.2**
STON				Sn	**Sn**	**20 50 25.1**	**-0.1**
STON	**Ston**	**3.24**	**79**	*e*Pn	**Pn**	**20 49 46.4**	**-0.2**
STON				Sn	**Sn**	**20 50 25.1**	**-0.1**
CODM	**Codolo**	**3.28**	**310**	P	**Pn**	**20 49 48.2**	**+0.9**
TRI	**Trieste**	**3.38**	**5**	*e*P	**Pn**	**20 49 47.5**	**-1.1**
TRI				*e*		20 50 27.1	
TRI	**Trieste**	**3.38**	**5**	*e*Pn	**Pn**	**20 49 47.5**	**-1.1**
TRI				*e*Sn	**Sn**	**20 50 27.1**	**-1.5**
TRI	**Trieste**	**3.38**	**5**	*e*P	**Pn**	**20 49 47.5**	**-1.1**
TRI				*e*S	**Sn**	**20 50 27.1**	**-1.5**
BOJS	**Bojanci**	**3.44**	**23**	⇓*i*Pn	**Pn**	**20 49 49.7**	**+0.2**
BOJS	**Bojanci**	**3.44**	**23**	⇓*i*Pn	**Pn**	**20 49 49.7**	**+0.2**
BLY	**Banja Luka**	**3.67**	**48**	*e*Pn	**Pn**	**20 49 54.1**	**+1.5**
BLY	**Banja Luka**	**3.67**	**48**	*e*Pn	**Pn**	**20 49 54.1**	**+1.5**
BRY	**Bratogost**	**3.86**	**80**	⇑*i*Pn	**Pn**	**20 49 56.0**	**+0.7**
BRY				*e*Sn	**Sn**	**20 50 42.2**	**+1.5**
BRY	**Bratogost**	**3.86**	**80**	⇑*i*Pn	**Pn**	**20 49 56.0**	**+0.7**
BRY				*e*Sn	**Sn**	**20 50 42.2**	**+1.5**
SALO	**Salr**	**3.87**	**329**	Pn	**Pn**	**20 49 56.2**	**+0.9**
SALO	**Salr**	**3.87**	**329**	Pn	**Pn**	**20 49 56.2**	**+0.9**
CTI	**Castel Tesino**	**3.91**	**342**	Pn	**Pn**	**20 49 56.3**	**+0.4**
CTI	**Castel Tesino**	**3.91**	**342**	Pn	**Pn**	**20 49 56.3**	**+0.4**
VINO	**Villanova**	**3.92**	**359**	Pn	**Pn**	**20 49 56.3**	**+0.3**
VINO	**Villanova**	**3.92**	**359**	Pn	**Pn**	**20 49 56.3**	**+0.3**
TIP	**Timpagrande**	**4.08**	**140**	*e*Pn	**Pn**	**20 49 55.9**	**-2.4**
TIP	**Timpagrande**	**4.08**	**140**	*e*Pn	**Pn**	**20 49 55.8**	**-2.4**
VSL	**Villasalto**	**4.15**	**228**	*e*Pn	**Pn**	**20 49 58.4**	**-0.8**
VSL				*e*Sn	**Sn**	**20 50 48.5**	**+0.9**
VSL	**Villasalto**	**4.15**	**228**	*e*Pn	**Pn**	**20 49 58.3**	**-0.8**
VSL				*e*Sn	**Sn**	**20 50 48.5**	**+0.9**
UPM	**Unac-Piva**	**4.17**	**76**	⇓*i*Pn	**Pn**	**20 50 00.4**	**+0.8**
UPM				*e*Sn	**Sn**	**20 50 50.8**	**+2.4**
UPM	**Unac-Piva**	**4.17**	**76**	⇓*i*Pn	**Pn**	**20 50 00.4**	**+0.8**
UPM				*e*Sn	**Sn**	**20 50 50.8**	**+2.4**
NKY	**Niksic**	**4.18**	**82**	*e*Pn	**Pn**	**20 50 00.5**	**+0.8**
NKY				*e*Sn	**Sn**	**20 50 50.4**	**+1.8**
NKY	**Niksic**	**4.18**	**82**	*e*Pn	**Pn**	**20 50 00.5**	**+0.8**
NKY				*e*Sn	**Sn**	**20 50 50.4**	**+1.8**
PDG	**Podgorica**	**4.36**	**87**	⇓*i*Pn	**Pn**	**20 50 03.1**	**+1.0**
PDG				*e*Sn	**Sn**	**20 50 53.4**	**+0.5**
PDG	**Podgorica**	**4.36**	**87**	⇑*i*Pn	**Pn**	**20 50 03.1**	**+1.0**
PDG				*e*Sn	**Sn**	**20 50 53.4**	**+0.5**
TTG	**Podgorica**	**4.36**	**87**	⇑*i*Pn	**Pn**	**20 50 03.1**	**+1.0**
TTG				*e*Sn	**Sn**	**20 50 54.8**	**+1.9**
ULC	**Ulcinj**	**4.39**	**93**	⇑*i*Pn	**Pn**	**20 50 03.2**	**+0.8**
ULC				*e*Sn	**Sn**	**20 50 55.6**	**+2.1**
ULC	**Ulcinj**	**4.39**	**93**	*e*Sn	**Sn**	**20 50 55.6**	**+2.1**
ULC	**Ulcinj**	**4.39**	**93**	⇑*i*Pn	**Pn**	**20 50 03.2**	**+0.8**
ABTA	**Abfaltersbach**	**4.45**	**352**	⇑*i*Pn	**Pn**	**20 50 04.1**	**+0.7**
	SNR=11						

ABTA **Abfaltersbach** 4.45 352 ⇑*i*Pn Pn **20 50 04.1 +0.7**
ABTA **Abfaltersbach** 4.45 352 Pn Pn **20 50 04.1 +0.7**
SNR=11
SOKA **Soboth** 4.50 15 ⇑*i*Pn Pn **20 50 05.8 +1.8**
SOKA **Soboth** 4.50 15 ⇑*i*Pn Pn **20 50 05.8 +1.8**
SOKA **Soboth** 4.50 15 Pn Pn **20 50 05.8 +1.8**
CEL **Celeste** 4.51 154 *e*Pn Pn **20 50 02.8 -1.3**
CEL **Celeste** 4.51 154 *e*Pn Pn **20 50 02.8 -1.3**
PLE **Pljevlja** 4.54 75 ⇑*i*Pn Pn **20 50 06.0 +1.4**
PLE *e*Sn Sn **20 50 58.5 +1.1**
PLE **Pljevlja** 4.54 75 ⇑*i*Pn Pn **20 50 06.0 +1.4**
PLE *e*Sn Sn **20 50 58.5 +1.1**
SAOF **Saorge** 4.56 293 P Pn **20 50 05.6 +0.8**
SAOF **Saorge** 4.56 293 P Pn **20 50 05.6 +0.8**
SAOF **Saorge** 4.56 293 P Pn **20 50 05.6 +0.8**
SAOF **Saorge** 4.56 293 P Pn **20 50 05.6 +0.8**
SBF **Sospel** 4.60 291 *e*Pn Pn **20 50 05.4 0.0**
SNR=1.0
SBF *e*Sn Sn **20 50 56.0 -2.8**
13nm,0.3s
SBF **Sospel** 4.60 291 *e*Pn Pn **20 50 05.4 0.0**
SNR=1.0
SBF *e*Sn Sn **20 50 56.0 -2.8**
6.4nm,0.3s
REVF **Revere** 4.61 290 P Pn **20 50 05.6 0.0**
REVF **Revere** 4.61 290 P Pn **20 50 05.6 0.0**
REVF **Revere** 4.61 290 P Pn **20 50 05.6 0.0**
REVF **Revere** 4.61 290 P Pn **20 50 05.6 0.0**
AUTN **L'Aution** 4.65 293 P Pn **20 50 06.8 +0.6**
AUTN **L'Aution** 4.65 293 P Pn **20 50 06.8 +0.6**
AUTN **L'Aution** 4.65 293 P Pn **20 50 06.8 +0.6**
AUTN **L'Aution** 4.65 293 P Pn **20 50 06.8 +0.6**
TOUF **Mont Tournerai** 4.78 293 P Pn **20 50 08.6 +0.7**
TOUF **Mont Tournerai** 4.78 293 P Pn **20 50 08.6 +0.7**
TOUF **Mont Tournerai** 4.78 293 P Pn **20 50 08.6 +0.7**
TOUF **Mont Tournerai** 4.78 293 P Pn **20 50 08.6 +0.7**
MVIF **Mont Vial** 4.81 291 P Pn **20 50 08.9 +0.6**
MVIF **Mont Vial** 4.81 291 P Pn **20 50 08.9 +0.6**
MVIF **Mont Vial** 4.81 291 P Pn **20 50 08.9 +0.6**
MVIF **Mont Vial** 4.81 291 P Pn **20 50 08.9 +0.6**
BEY **Berane** 4.85 82 *e*Pn Pn **20 50 09.9 +1.1**
BEY *e*Sn Sn **20 51 06.8 +1.9**
IVA **Berane** 4.85 82 *e*Pn Pn **20 50 09.9 +1.1**
IVA *e*Sn Sn **20 51 06.8 +1.9**
PUK **Puka** 4.86 91 *i* PN Pn **20 50 10.1 +1.1**
PUK *i* SN Sn **20 51 06.0 +0.8**
PUK **Puka** 4.86 91 *i* Sn Sn **20 51 06.0 +0.8**
PUK **Puka** 4.86 91 *i* Pn Pn **20 50 10.1 +1.1**
PVY **Plav** 4.88 85 *e*Pn Pn **20 50 10.7 +1.3**
PVY *e*Sn Sn **20 51 08.0 +2.1**
PVY **Plav** 4.88 85 *e*Pn Pn **20 50 10.7 +1.3**
PVY *e*Sn Sn **20 51 08.0 +2.1**
SJES **Sjenica** 4.95 77 *e*Pn Pn **20 50 10.9 +0.7**
CALN **Calern** 4.95 289 P Pn **20 50 10.7 +0.4**
CALN **Calern** 4.95 289 P Pn **20 50 10.7 +0.4**
CALN **Calern** 4.95 289 P Pn **20 50 10.7 +0.4**
CALN **Calern** 4.95 289 P Pn **20 50 10.7 +0.4**
TIR **Tirane** 4.96 99 *i* PN Pn **20 50 10.4 +1.2**
TIR *i* SN Sn **20 51 04.4 -3.1**
TIR **Tirane** 4.96 99 *e*P Pn **20 50 08.6 -1.6**
TIR *e* 20 51 05.5
TIR **Tirane** 4.96 99 *e*Pn Pn **20 50 08.6 -1.6**
TIR *e*Sn Sn **20 51 05.5 -2.0**
TIR **Tirane** 4.96 99 *e*P Pn **20 50 08.6 -1.6**
TIR **Tirane** 4.96 99 *i* Pn Pn **20 50 11.4 +1.2**
TIR *i* Sn Sn **20 51 04.4 -3.1**
TIR *e*S Sn **20 51 05.5 -2.0**
BCI **Bajram Curri** 4.97 87 *i* PN Pn **20 50 11.4 +1.0**
BCI *i* SN Sn **20 51 07.8 0.0**
BCI **Bajram Curri** 4.97 87 *i* Pn Pn **20 50 11.4 +1.0**
BCI *i* Sn Sn **20 51 07.8 0.0**
TUE **Stuetta** 5.04 327 *e*Pn Pn **20 50 10.6 -0.9**
TUE *e*Sn Sn **20 51 08.4 -1.3**
TUE **Stuetta** 5.04 327 *e*Pn Pn **20 50 10.6 -0.9**
TUE *e*Sn Sn **20 51 08.4 -1.3**
WTTA **Wattenberg** 5.08 347 ⇑*i*P Pn **20 50 14.4 +2.4**
WTTA **Wattenberg** 5.08 347 ⇑*i*Pn Pn **20 50 14.4 +2.4**
WTTA **Wattenberg** 5.08 347 ⇑*i*Pn Pn **20 50 14.4 +2.4**
WTTA **Wattenberg** 5.08 347 *i* P Pn **20 50 14.4 +2.4**
FRF **La Foret Royal** 5.08 286 *e*Pn Pn **20 50 11.5 -0.4**
FRF *e*Sn Sn **20 51 07.3 -3.2**
11nm,0.5s
FRF **La Foret Royal** 5.08 286 *e*Pn Pn **20 50 11.5 -0.4**
FRF *e*Sn Sn **20 51 07.3 -3.2**
5.3nm,0.5s
DAVOX **Davos/Dischmat** 5.09 332 Pn Pn **20 50 14.1 +1.8**
6.8nm,0.3s,baz=152,slow=17,SNR=11
DAVOX Sn Sn **20 51 11.1 +0.1**
1.7nm,0.3s,baz=294,slow=23,SNR=5.9
DAVOX **Davos/Dischmat** 5.09 332 P Pn **20 50 14.1 +1.8**
7.0nm,0.3s
DAVOX S Sn **20 51 11.1 +0.1**
2.0nm,0.3s
IVAS **Ivanjica** 5.13 74 ⇑*i*Pn Pn **20 50 13.6 +0.9**
IVAS *e*Sn Sn **20 51 11.7 -0.2**
IVAS **Ivanjica** 5.13 74 ⇑*i*Pn Pn **20 50 13.6 +0.9**
IVAS *e*Sn Sn **20 51 11.7 -0.2**
LMR **La Mourre** 5.14 283 *e*Pn Pn **20 50 12.2 -0.5**
LMR **La Mourre** 5.14 283 *e*Pn Pn **20 50 12.2 -0.5**
DIVS **Divibare** 5.15 68 ⇑*i*Pn Pn **20 50 12.9 -0.1**
DIVS **Divibare** 5.15 68 ⇑*i*Pn Pn **20 50 12.9 -0.1**
WATA **Walderalm** 5.16 346 ⇑*i*P Pn **20 50 15.0 +1.9**
WATA **Walderalm** 5.16 346 ⇑*i*Pn Pn **20 50 15.0 +1.9**
SNR=8.4
WATA **Walderalm** 5.16 346 ⇑*i*Pn Pn **20 50 15.0 +1.9**
WATA **Walderalm** 5.16 346 *i* P Pn **20 50 15.0 +1.9**
PHP **Peshkopia** 5.31 95 *i* PN Pn **20 50 15.8 +0.6**
PHP *i* SN Sn **20 51 19.8 +3.5**
PHP **Peshkopia** 5.31 95 *i* Pn Pn **20 50 15.8 +0.6**
PHP *i* Sn Sn **20 51 19.8 +3.5**
MBDF **Montbardon** 5.35 299 *e*P Pn **20 50 17.6 +1.8**
MBDF **Montbardon** 5.35 299 *e*P Pn **20 50 17.6 +1.8**
RJOB **Jochberg** 5.41 356 *e*Pn Pn **20 50 18.0 +1.4**
RJOB *e*Sn Sn **20 51 20.0 +1.2**
PKSM **Moragy** 5.42 43 ⇓*i*P Pn 20 50 21.0 +4.5
RETA **Reutte** 5.47 341 ⇑*i*Pn Pn **20 50 19.2 +1.9**
SNR=6.9
RETA **Reutte** 5.47 341 ⇑*i*Pn Pn **20 50 19.2 +1.9**
RETA **Reutte** 5.47 341 Pn Pn **20 50 19.2 +1.9**
SNR=6.9
TRUS **Trudelj** 5.47 68 ⇓*i*Pn Pn **20 50 16.5 -0.8**
TRUS *e*Sn Sn **20 51 21.8 +1.6**
DAVA **Damuels** 5.53 335 ⇑*i*Pn Pn **20 50 20.3 +2.0**
DAVA **Damuels** 5.53 335 ⇑*i*Pn Pn **20 50 20.3 +2.0**
DAVA **Damuels** 5.53 335 Pn Pn **20 50 20.3 +2.0**
MOA **Molln** 5.55 6 ⇑*i*Pn Pn **20 50 19.0 +0.6**
MOA **Molln** 5.55 6 ⇑*i*Pn Pn **20 50 19.0 +0.6**
MOA **Molln** 5.55 6 Pn Pn **20 50 19.0 +0.6**
BNI **Bardonecchia** 5.55 301 *e*P Pn **20 50 18.1 -0.5**
BNI *e* 20 51 21.7
BNI **Bardonecchia** 5.55 301 *e*Pn Pn **20 50 18.1 -0.5**
BNI *e*Sn Sn **20 51 21.7 -0.7**
GRUS **Gruza** 5.60 71 ⇓*i*Pn Pn **20 50 19.6 +0.6**
GRUS *e*Sn Sn **20 51 24.6 +1.3**
LPG **La Plagne** 5.72 306 *e*Pn Pn **20 50 19.7 -1.4**
LPG **La Plagne** 5.72 306 *e*P Pn **20 50 23.7 +2.6**
SNR=1.0
LPG *e*Sn Sn **20 51 23.1 -3.7**
14nm,0.6s
LPL **La Plagne** 5.75 306 *e*Pn Pn **20 50 20.2 -1.1**
LPL **La Plagne** 5.75 306 *e*P Pn **20 50 24.4 +3.1**
SELS **Selova** 5.77 79 ⇑*i*Pn Pn **20 50 22.4 +0.9**
SELN **Lac Senin/Sane** 5.92 315 *e*Pn Pn **20 50 26.2 +2.5**
SMRF **Simiane la Rot** 5.93 289 *e*P Pn **20 50 26.1 +1.5**
ORIF **Oris-en-Rattie** 6.01 298 *e*P Pn 20 50 28.0 +3.2
SKO **Skopje** 6.01 91 *e*Pn Pn **20 50 26.5 +1.7**
SVIS **Svilajnac** 6.04 69 ⇓*i*Pn Pn **20 50 24.9 -0.2**
BARS **Barje** 6.26 83 ⇓*i*Pn Pn **20 50 28.7 +0.6**
GEC2 **GERESS Array S** 6.51 2 *e*P Pn **20 50 30.6 -1.1**
GEC2 *e* 20 51 44.1
GEC2 **GERESS Array S** 6.51 2 *e*Pn Pn **20 50 30.6 -1.1**
GEC2 *e*Sn Sn **20 51 44.1 -1.8**
GERES **GERESS Array B** 6.51 2 Pn Pn **20 50 31.3 -0.4**
0.9nm,0.3s,baz=177,slow=13,SNR=12
GERES Sn Sn **20 51 43.8 -2.1**
2.6nm,0.3s,baz=177,slow=25,SNR=8.1
FELD **Feldberg im Sc** 6.71 327 P Pn **20 50 34.0 -0.4**
CABF **La Chapelle** 6.73 312 *e*Pn Pn **20 50 33.5 -1.2**
SNR=1.0
VIVF **Saint-Julien-l** 6.79 295 *e*Pn Pn **20 50 34.8 -0.7**
BZS **Buzias** 6.79 58 ⇑*i*P Pn **20 50 37.5 +2.1**
BZS **Buzias** 6.79 58 ⇑*i*P Pn **20 50 37.5 +2.1**
KHC **Kasperske Hory** 6.79 1 *e*P Pn 20 50 29.5 -6.0
KHC *e* 20 51 49.5
KHC **Kasperske Hory** 6.79 1 *e*Pn Pn 20 50 29.5 -6.0
KHC *e*Sn Sn **20 51 49.5 -3.3**
KHC **Kasperske Hory** 6.79 1 *e*PN Pn 20 50 29.5 -6.0
KHC *ex* x 20 50 37.5
KHC *ex* x 20 50 49.0
KHC *e*SN Sn **20 51 49.0 -3.8**
KHC AMS AMS 20 53 40.0
comp=Z,300nm,14.8s
WET **Wettzell** 6.81 357 *e*P Pn **20 50 35.7 -0.1**
WET *e* 20 51 48.4
WET **Wettzell** 6.81 357 *e*Pn Pn **20 50 35.7 -0.1**
WET *e*Sn Sn **20 51 48.4 -4.9**
ZAPS **Zavoj** 6.88 79 ⇑*i*Pn Pn **20 50 38.3 +1.6**
BFO **Black Forest** 6.96 331 *e*P Pn **20 50 38.0 +0.2**
BFO **Black Forest** 6.96 331 *e*Pn Pn **20 50 38.0 +0.2**
BFO **Black Forest** 6.96 331 *e*Pn Pn **20 50 36.2 -1.5**
SSB **Saint Sauveur** 7.03 298 *e*P Pn **20 50 37.0 -1.7**
SSB *e* 20 51 55.4
SSB pmax pmax
comp=Z,5.0nm,0.6s
SSB **Saint Sauveur** 7.03 298 *e*Pn Pn **20 50 37.0 -1.7**
comp=Z,5.2nm,0.6s
SSB *e*Sn Sn **20 51 55.4 -3.1**
TREC **Trest** 7.11 11 *e*P Pn **20 50 38.8 -1.0**
TREC *e* 20 51 56.3
TREC **Trest** 7.11 11 *e*PN Pn **20 50 38.8 -1.0**
TREC *e*SN Sn **20 51 56.3 -4.3**
HINF **Hinteralfeld** 7.16 322 *e*Pn Pn **20 50 39.1 -1.4**
SNR=1.0
HINF *e*Sn Sn **20 51 56.8 -4.9**
comp=Z,12nm,0.4s
LASF **Ste Croix** 7.16 287 *e*Pn Pn **20 50 39.9 -0.6**
VYHS **Vyhne** 7.26 30 *e*P Pn **20 50 42.0 +0.2**
VYHS *e* 20 51 58.1
VYHS **Vyhne** 7.26 30 *e*PN Pn **20 50 42.0 +0.2**
VYHS *e*SN Sn 20 51 58.1 -6.1
VTS **Vitosha** 7.28 85 ⇓*i*P Pn **20 50 43.7 +1.4**
VTS **Vitosha** 7.28 85 ⇓*i*P Pn **20 50 43.7 +1.4**
VTS **Vitosha** 7.28 85 *i* P Pn **20 50 43.0 +0.7**
VTS **Vitosha** 7.28 85 *i* P Pn **20 50 43.0 +0.7**
KEST **Kesra** 7.30 207 *e*Pn Pn **20 50 43.4 +0.9**
KEST **Kesra** 7.30 207 Pn Pn 20 50 46.6 +4.1
comp=Z,1.1nm,0.3s,baz=305,slow=2.5,SNR=54
ECH **Echery** 7.33 325 P Pn **20 50 42.3 -0.5**
ECH pmax pmax
comp=Z,7.0nm,0.3s
ECH **Echery** 7.33 325 P Pn **20 50 42.3 -0.5**
comp=Z,6.6nm,0.3s
ECH **Echery** 7.33 325 P Pn **20 50 42.3 -0.5**
VRAC **Vranov** 7.33 17 Pn Pn 20 50 47.0 +4.3
comp=Z,0.4nm,0.3s,baz=212,slow=8.4,SNR=2.6
CDF **Champ du Feu** 7.43 327 *e*Pn Pn **20 50 42.8 -1.5**
SNR=1.0
CDF *e*Sn Sn **20 52 03.1 -5.4**
comp=Z,8.7nm,0.4s
GZR **Gura Zlata** 7.46 63 ⇓P Pn **20 50 45.1 +0.5**
GZR **Gura Zlata** 7.46 63 ⇓*i*P Pn **20 50 45.1 +0.5**
GZR **Gura Zlata** 7.46 63 ⇓*i*P Pn **20 50 45.1 +0.5**
ROTZ **Rotzenmuhle** 7.47 354 *e*Pn Pn 20 50 39.2 -5.6
ROTZ *e*Sn Sn **20 52 04.3 -5.1**
GRF **Grafenberg Arr** 7.50 349 *e*P Pn **20 50 45.0 -0.2**
GRF **Grafenberg Arr** 7.50 349 *e*Pn Pn **20 50 45.0 -0.2**
HAU **Haudompre** 7.53 321 *e*Pn Pn **20 50 44.3 -1.2**
SNR=1.0
HAU *e*Sn Sn **20 52 05.4 -5.4**
comp=Z,19nm,0.4s
PRU **Pruhonice** 7.69 6 AMS AMS 20 52 50.0
comp=Z,300nm,25.1s
MMB **Musomiste** 7.76 92 *i* P Pn **20 50 49.8 +1.0**
MMB **Musomiste** 7.76 92 *i* P Pn **20 50 49.8 +1.0**
THEF **They Montfort** 7.85 321 P Pn **20 50 49.6 -0.4**
THEF **They Montfort** 7.85 321 P Pn **20 50 49.6 -0.4**
THEF **They Montfort** 7.85 321 P Pn **20 50 49.6 -0.4**
LBL **Lubilhac** 7.87 295 P Pn **20 50 50.7 +0.4**
LBL **Lubilhac** 7.87 295 P Pn **20 50 50.7 +0.4**
LBL **Lubilhac** 7.87 295 P Pn **20 50 50.7 +0.4**
MORC **Moravsky Berou** 7.99 20 *e*P Pn **20 50 50.0 -1.8**
MORC **Moravsky Berou** 7.99 20 *e*Pn Pn **20 50 50.0 -1.8**
MORC **Moravsky Berou** 7.99 20 ⇑*i*Pn Pn 20 50 48.5 -3.3
PGB **Panagyurishte** 7.99 85 *i* P Pn **20 50 52.8 +0.8**
PGB **Panagyurishte** 7.99 85 *i* P Pn **20 50 52.8 +0.8**
DRGR 8.02 53 ⇑P Pn **20 50 53.8 +1.5**
DRGR 8.02 53 ⇑*i*Pn Pn **20 50 53.8 +1.5**
DRGR 8.02 53 ⇑*i*Pn Pn **20 50 53.8 +1.5**
SMF **Signal de Mont** 8.05 306 *e*Pn Pn **20 50 52.4 -0.3**
LOT **Lotru** 8.13 64 ⇓*i*P Pn **20 50 55.2 +1.3**
LOT **Lotru** 8.13 64 ⇓*i*P Pn **20 50 55.2 +1.3**
PYM **Petit Puy Mans** 8.20 298 P Pn **20 50 56.0 +1.1**
PYM **Petit Puy Mans** 8.20 298 P Pn **20 50 56.0 +1.1**
PYM **Petit Puy Mans** 8.20 298 P Pn **20 50 56.0 +1.1**
PAGF **Fort de Pagny** 8.21 322 *e*Pn Pn **20 50 54.0 -0.9**
AGO **Saint Agoulin** 8.24 300 P Pn **20 50 56.5 +1.2**
AGO **Saint Agoulin** 8.24 300 P Pn **20 50 56.5 +1.2**
MTLF **Montolieu** 8.25 281 *e*Pn Pn **20 50 54.2 -1.3**
DPC **Dobruska-Polom** 8.27 13 AMS AMS 20 54 10.0
comp=Z,400nm,17.0s
LOR **Lormes** 8.36 309 *e*Pn Pn **20 50 55.9 -1.1**
SNR=1.0
LOR *e*Sn Sn 20 52 25.0 -6.3
comp=Z,5.4nm,0.5s
MOX **Moxa** 8.39 352 *e*P Pn **20 50 56.8 -0.6**
MOX **Moxa** 8.39 352 *e*Pn Pn **20 50 56.8 -0.6**
AVF **Avril sur Loir** 8.42 305 *e*Pn Pn **20 50 57.0 -0.7**
SNR=1.0
RZN **Rozhen** 8.48 91 *i* P Pn **20 51 00.9 +2.2**
RZN **Rozhen** 8.48 91 *i* P Pn **20 51 00.9 +2.2**
BRG **Berggiesshubel** 8.55 2 PN Pn **20 51 02.0 +2.5**
BRG *i* 20 52 44.5
BRG *i* 20 53 35.3
comp=Z,13nm,1.5s
BRG
comp=N,240nm,24.2s
BRG
comp=E,254nm,16.7s
BRG
comp=Z,186nm,15.0s
BRG **Berggiesshubel** 8.55 2 P Pn **20 51 02.0 +2.5**
BRG *i* 20 52 44.5
BRG MLR MLR
comp=N,240nm,24.2s
BRG MLR MLR
comp=E,254nm,16.7s
BRG MLR MLR
comp=Z,186nm,15.0s
BRG **Berggiesshubel** 8.55 2 *e*Pn Pn **20 50 57.3 -2.2**
CAF **Calviac** 8.59 291 *e*Pn Pn **20 50 59.4 -0.8**
BGF **Bois d'Agland** 8.62 303 *e*Pn Pn **20 50 59.8 -0.8**
SNR=1.0
CRVS **Cervenica-Dubn** 8.67 38 *e*P Pn **20 51 03.0 +1.8**
CRVS **Cervenica-Dubn** 8.67 38 *e*PN Pn **20 51 03.0 +1.8**
ARR **Arges** 8.69 66 ⇑*i*P Pn **20 51 03.4 +1.9**
ARR **Arges** 8.69 66 ⇑*i*P Pn **20 51 03.4 +1.9**
PVL **Pavlikeni** 8.85 80 *i* P Pn **20 51 04.8 +1.2**
PVL **Pavlikeni** 8.85 80 *i* P Pn **20 51 04.8 +1.2**
CLL **Collm** 8.97 359 *e*P Pn **20 51 08.0 +2.7**
CLL *e* 20 52 41.0
CLL **Collm** 8.97 359 *e*Pn Pn **20 51 08.0 +2.7**
CLL *e*Sn Sn **20 52 41.0 -5.3**
CLL *e*Sg Sg 20 53 52.0 +8.3
VOIR 8.99 66 ⇑P Pn **20 51 07.3 +1.7**
VOIR 8.99 66 ⇑*i*P Pn **20 51 07.3 +1.7**
VOIR 8.99 66 ⇑*i*P Pn **20 51 07.3 +1.7**
RJF **Les Rejaudoux** 9.06 293 *e*Pn Pn **20 51 05.8 -0.8**
KOLS **Kolonicke sedl** 9.07 40 *e*P Pn 20 51 10.3 +3.6
KOLS **Kolonicke sedl** 9.07 40 *e*PN Pn 20 51 10.3 +3.6
MLR **Muntele Rosu** 9.61 67 ⇑*i*P Pn **20 51 16.0 +1.8**
MLR **Muntele Rosu** 9.61 67 Pn Pn **20 51 16.6 +2.4**
baz=270,slow=6.1
MLR **Muntele Rosu** 9.61 67 ⇑*i*P Pn **20 51 16.0 +1.8**
KWP **Kalwaria Pacla** 9.76 38 ⇓P Pn **20 51 16.2 0.0**
KWP **Kalwaria Pacla** 9.76 38 *e*Pn Pn **20 51 14.0 -2.2**
comp=Z,14nm,1.1s
KWP *e*Sn Sn **20 53 06.0 +0.3**
KWP **Kalwaria Pacla** 9.76 38 ⇓*i*P Pn **20 51 16.2 0.0**
KWP **Kalwaria Pacla** 9.76 38 *e*P Pn 20 51 21.0 +4.8
KWP **Kalwaria Pacla** 9.76 38 ⇓*i*P Pn **20 51 16.2 0.0**
KWP *e*Sn Sn **20 53 06.0 +0.3**
BUR08 **Bucovina Ar. S** 9.92 54 *e*Pn Pn **20 51 15.2 -3.2**
PLOR **Plostina** 10.18 65 ⇑P Pn **20 51 23.4 +1.5**
PLOR **Plostina** 10.18 65 ⇑*i*P Pn **20 51 23.4 +1.5**
PLOR **Plostina** 10.18 65 ⇑*i*P Pn **20 51 23.4 +1.5**
VRI **Vrincioaia** 10.24 65 ⇓P Pn **20 51 24.2 +1.5**
VRI **Vrincioaia** 10.24 65 ⇓*i*P Pn **20 51 24.2 +1.5**
VRI **Vrincioaia** 10.24 65 ⇓*i*P Pn **20 51 24.2 +1.5**
TESR 10.38 62 ⇓*i*P Pn **20 51 26.1 +1.6**
TESR 10.38 62 ⇓*i*P Pn **20 51 26.1 +1.6**
CFR **Carcaliu** 11.05 70 ⇑P Pn **20 51 35.0 +1.2**
CFR **Carcaliu** 11.05 70 ⇑*i*P Pn **20 51 35.0 +1.2**
CFR **Carcaliu** 11.05 70 ⇑*i*P Pn **20 51 35.0 +1.2**
ESDC **Sonseca Array** 13.36 264 Pn Pn **20 52 04.1 -1.3**
comp=Z,0.1nm,0.3s,baz=62,slow=14,SNR=5.6
BRTR **Keskin Array B** 15.52 93 Pn P **20 52 41.5 +2.3**
baz=298,slow=8.1,SNR=3.7
EKA **Eskdalemuir Ar** 16.89 326 Pn P **20 52 54.5 +0.4**
baz=134,slow=14,SNR=4.1
EKA **Eskdalemuir Ar** 16.89 326 P P **20 52 54.5 +0.4**
MDT **Midelt** 17.10 242 P P **20 52 57.0 +0.3**
comp=Z,0.1nm,0.3s,baz=52,slow=1.8,SNR=4.2
VSR **Storozhevoye** 19.69 54 *e*P Pn 20 53 31.3 +5.0
VSR pmax pmax
comp=N,3.0nm,0.7s
VSR pmax pmax
comp=E,3.0nm,0.7s
VSR pmax pmax
comp=Z,5.0nm,0.7s
OBN **Obninsk** 19.82 42 ⇑*e*P Pn **20 53 27.6 -0.2**
OBN pmax pmax
comp=Z,3.0nm,1.0s
OBN MLR MLR
comp=Z,100nm,16.0s
OBN **Obninsk** 19.82 42 *e*P Pn **20 53 27.6 -0.2**
comp=Z,100nm,16.0s
TAM **Tamanrasset** 20.56 201 *e*P P **20 53 34.2 -0.5**
TAM pmax pmax
comp=Z,2.0nm,0.8s
TAM **Tamanrasset** 20.56 201 *e*P P **20 53 34.2 -0.5**
comp=Z,1.7nm,0.8s
TAM **Tamanrasset** 20.56 201 *e*P P **20 53 34.2 -0.5**
comp=Z,1.7nm,0.8s
FINES **FINESS Array B** 20.61 17 P P **20 53 34.8 +0.1**
comp=Z,6.6nm,0.9s,baz=196,slow=9.8,SNR=12
FINES **FINESS Array B** 20.61 17 P P **20 53 34.8 +0.1**
comp=Z,7.0nm,0.9s
VRHR **Novokhopersk** 21.15 56 *e*P P **20 53 43.2 +2.4**
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR pmax pmax
comp=Z,9.0nm,0.9s
VRHR pmax pmax
comp=N,3.0nm,0.4s
VRHR **Novokhopersk** 21.15 56 *e*P P **20 53 43.2 +2.4**
comp=N,3.0nm,0.4s
KIV **Kislovodsk** 21.41 76 *e*P P **20 53 44.6 +0.9**
KIV pmax pmax
comp=Z,14nm,1.1s
KIV **Kislovodsk** 21.41 76 *e*P P **20 53 39.9 -3.7**
comp=Z,21nm,1.3s
KIV **Kislovodsk** 21.41 76 *e*P P **20 53 44.6 +0.9**
comp=Z,14nm,1.1s
KBZ **Khabaz** 21.59 76 P P **20 53 46.9 +1.5**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KBZ **Khabaz** 21.59 76 P P **20 53 46.9 +1.5**
comp=Z,5.0nm,0.9s,baz=290,slow=6.6,SNR=8.8
KBZ **Khabaz** 21.59 76 P P **20 53 46.9 +1.5**
comp=Z,5.0nm,0.9s
KLMR **Klimovskoe** 24.37 32 *e*P P **20 54 12.1 -1.5**
KLMR pmax pmax
comp=Z,29nm,1.8s
TORD **Torodi Ar. Bea** 30.80 203 P P **20 55 13.3 +1.7**
comp=Z,0.8nm,0.8s,baz=22,slow=8.0,SNR=5.1
AKTK **Aktyubinsk** 31.44 60 P P **20 55 18.2 +1.2**
AKTO **Aktyubinsk** 31.44 60 P P **20 55 18.2 +1.2**
AKTO **Aktyubinsk** 31.44 60 P P **20 55 18.2 +1.2**
comp=Z,0.3nm,0.3s,baz=277,slow=8.1,SNR=2.3
ARU **Arti** 31.98 48 *c i*P P **20 55 22.4 +0.7**
ARU 20 56 26.8
ARU S S **21 00 35.7 +2.9**
ARU SS SnSn **21 02 21.6 +0.1**
ARU pmax pmax
comp=Z,9.0nm,1.2s
ARU **Arti** 31.98 48 *e*P P **20 55 20.4 -1.2**
comp=Z,6.2nm,1.0s
ARU **Arti** 31.98 48 *i* P P **20 55 22.4 +0.7**
comp=Z,9.0nm,1.2s
BRVK **Borovoye** 38.80 54 *ce*P P **20 56 21.6 +1.2**
BRVK pmax pmax
comp=Z,2.0nm,0.7s
BRVK **Borovoye** 38.80 54 *e*P P **20 56 18.7 -1.7**
comp=Z,1.7nm,0.7s
BRVK **Borovoye** 38.80 54 *e*P P **20 56 21.6 +1.2**
comp=Z,2.0nm,0.7s
BVAR **Borovoye Array** 38.87 54 LR LR 21 13 54.8
comp=Z,55nm,19.9s,baz=79,slow=39
KKAR **Karatay Array** 41.28 69 *e*P P **20 56 38.7 -2.4**
KKAR pmax pmax
comp=Z,1.0nm,0.6s
KKAR **Karatay Array** 41.28 69 *e*P P **20 56 38.7 -2.4**
comp=Z,0.6nm,0.6s
EKS2 **Erkin-Say** 43.69 68 *e*P P **20 56 59.4 -1.4**
EKS2 pmax pmax
comp=Z,4.0nm,1.1s
EKS2 **Erkin-Say** 43.69 68 *e*P P **20 56 59.4 -1.4**
comp=Z,4.2nm,1.1s
EKS2 **Erkin-Say** 43.69 68 *e*P P **20 56 59.4 -1.4**
comp=Z,4.2nm,1.1s
AAK **Ala-Archa** 44.19 68 *e*P P **20 57 04.8 -0.1**
AAK pmax pmax
comp=Z,5.0nm,1.7s
AAK **Ala-Archa** 44.19 68 LR LR 21 18 36.1
comp=Z,62nm,18.5s,baz=316,slow=40
AAK **Ala-Archa** 44.19 68 *e*P P **20 57 04.8 -0.1**
comp=Z,5.0nm,1.7s
KURK **Kurchatov** 44.33 56 *d i*P P **20 57 06.5 +0.8**
KURK pmax pmax
comp=Z,4.0nm,1.7s
KURK **Kurchatov** 44.33 56 *i* P P **20 57 06.5 +0.8**
comp=Z,4.0nm,1.7s
ZALV **Zalesovo Beam** 47.10 50 P P **20 57 27.5 0.0**
ZALV pmax pmax
comp=Z,2.0nm,1.1s
ZALV MLR MLR
comp=Z,84nm,18.4s
ZALV **Zalesovo Beam** 47.10 50 P P **20 57 27.5 0.0**
comp=Z,1.6nm,1.1s,baz=297,slow=7.5,SNR=5.0
ZALV LR LR 21 19 22.5
comp=Z,84nm,18.4s,baz=249,slow=39
ZALV **Zalesovo Beam** 47.10 50 P P **20 57 27.5 0.0**
comp=Z,84nm,18.4s
MKAR **Makanchi Array** 47.88 60 P P **20 57 33.9 +0.2**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR **Makanchi Array** 47.88 60 P P **20 57 33.9 +0.2**
comp=Z,0.6nm,0.6s,baz=281,slow=7.6,SNR=9.1
MKAR **Makanchi Array** 47.88 60 P P **20 57 33.9 +0.2**
comp=Z,1.0nm,0.6s
SONM **Songino Array** 62.00 50 P P **20 59 16.3 +0.3**
comp=Z,0.9nm,1.0s,baz=288,slow=6.7,SNR=7.4
SONM LR LR 21 28 15.6
comp=Z,64nm,18.4s,baz=165,slow=38
SONM **Songino Array** 62.00 50 P P **20 59 16.3 +0.3**
comp=Z,64nm,18.5s
LZH **Lanzhou** 67.14 62 *e*P P **20 59 51.5 +1.7**
LZH pP pP **20 59 54.7 +1.1**
LZH sP sP **20 59 56.3 +1.3**
LZH pmax pmax
comp=Z,15nm,1.3s
LZH pmax pmax
comp=Z,52nm,7.2s
LZH LR LR
comp=N,160nm,15.3s
LZH LR LR
comp=E,140nm,16.0s
LZH LR LR
comp=Z,180nm,19.2s
YKA **Yellowknife Ar** 67.51 337 P P **20 59 51.7 +0.2**
comp=Z,0.3nm,0.8s,baz=36,slow=5.9,SNR=4.9
YKA **Yellowknife Ar** 67.51 337 P P **20 59 51.7 +0.2**
HHC **Hu-ho-hao-te** 69.08 53 *e*P P **21 00 02.1 +0.2**
HHC sP sP **21 00 09.0 +2.0**
HHC PcP PcP **21 00 26.7 +0.8**
HHC PP PP **21 02 36.3 +2.3**
HHC ScP 21 04 28.5
HHC PcS 21 04 30.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HHC				S	S	21 09 03.8	-3.2
HHC				sS	sS	21 09 11.8	-1.4
HHC				ScS	SKSac	21 09 58.4	-3.3
HHC				SS	SS	21 13 30.7	-1.5
HHC				LR	LR		
	comp=N,140nm,16.5s						
HHC				LR	LR		
	comp=E,190nm,16.3s						
HHC				LR	LR		
	comp=Z,94nm,16.6s						
CMAR	Chiang Mai Arr	74.61	79	P	P	21 00 34.3	-0.9
	comp=Z,0.2nm,0.4s,baz=294,slow=6.8,SNR=3.6						
CMAR	Chiang Mai Arr	74.61	79	P	P	21 00 34.3	-0.9
WHN	Wuhan	77.44	60	P	P	21 00 51.1	-0.1
NJ2	Nanjing	79.27	56	eP	P	21 01 00.4	-0.9

*IDC **05** 20:51:36.9±1.1, 38°.53S×178°.41E, h0km, mb4.1/5, mb1 4.2/5, mb1mx3.9/18, mbtmp4.1/5, MS3.8/5, Ms1 3.8/5, ms1mx3.5/23, Error ellipse: s-maj=61.0km s-min=21.2km az=14.0*
*WEL **05** 20:51:40.3±0.2, 38°.67S×178°.48E, h27km±1km, ML4.2/48, Error ellipse: s-maj=2.6km s-min=0.9km az=90.0*
WEL Felt from Gisborne to Hawke''s Bay, maximum reported intensity MM 4.
*NEIC **05** 20:51:40.4, 38°.67S×178°.46E, h27km, mb4.1/2, ML4.2(WEL), After WEL.*
NEIC Felt [IV] at Gisborne.
ISC 05 20:51:36.8±1.6, **38°.71S**±0°.04×**178°.40E**±0°.07, **h6**km±8km, **n180**, σ1s**24**/167, **mb4.1**/7, **MS3.8**/4, **4C-4D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.27	325	P*	Pg	20 51 47.1	+4.9
CNGZ	Carnagh Statio	0.27	325	P*	Pg	20 51 47.1	+4.9
PRGZ	Paritu Road	0.46	242	⇑P*	Pn	20 51 51.2	+1.2
PRGZ				S*		20 52 00.1	
PRGZ	Paritu Road	0.46	242	P*	Pn	20 51 51.2	+1.2
MHGZ	Mahia Peninsul	0.59	221	⇓P*	Pn	20 51 53.1	+1.4
MHGZ	Mahia Peninsul	0.59	221	P*	Pn	20 51 53.1	+1.4
PUZ	Puketiti	0.65	350	⇓P*	Pn	20 51 52.0	-0.5
PUZ				S*	Sb	20 52 02.2	+2.4
PUZ	Puketiti	0.65	350	P*	Pn	20 51 52.0	-0.5
KNZ	Kokohu	0.65	241	P*	Pn	20 51 53.4	+0.8
KNZ				S*	Sn	20 52 04.6	+1.5
KNZ	Kokohu	0.65	241	P*	Pn	20 51 53.4	+0.8
MWZ	Matawai	0.78	298	⇑PN	Pn	20 51 55.2	+0.7
MWZ				SN	Sn	20 52 06.5	0.0
MWZ	Matawai	0.78	298	Pn	Pn	20 51 55.2	+0.7
MWZ				Sn	Sn	20 52 06.7	+0.2
RAHZ	Arahi	1.05	258	PN	Pn	20 51 59.6	+1.4
RAHZ	Arahi	1.05	258	Pn	Pn	20 51 59.6	+1.4
URZ	Urewera	1.11	293	⇑PN	Pn	20 51 59.9	+1.0
URZ	Urewera	1.11	293	Pn	Pn	20 51 59.9	+1.0
URZ				Sn	Sn	20 52 14.6	0.0
URZ	Urewera	1.11	293	Pn	Pn	20 51 59.8	+1.0
	124nm,0.3s,baz=130,slow=4.1,SNR=454						
URZ				Sn	Sn	20 52 14.6	0.0
	476nm,0.3s,baz=92,slow=13,SNR=15						
MXZ	Matakaoa Point	1.15	356	⇑PN	Pn	20 52 00.2	+0.8
MXZ	Matakaoa Point	1.15	356	Pn	Pn	20 52 00.2	+0.8
NMHZ	Naumai	1.30	252	PN	Pg	20 52 03.1	+1.3
NMHZ	Naumai	1.30	252	Pn	Pg	20 52 03.1	+1.3
CKHZ	Cape Kidnapper	1.40	227	PN	Pb	20 52 04.1	+0.7
CKHZ	Cape Kidnapper	1.40	227	Pn	Pb	20 52 04.1	+0.7
EDRZ	Edgecumbe	1.44	294	PN	Pg	20 52 05.5	+1.1
EDRZ	Edgecumbe	1.44	294	Pn	Pg	20 52 05.5	+1.1
MCHZ	McNeill Hill	1.52	241	PN	Pb	20 52 06.1	+0.7
MCHZ	McNeill Hill	1.52	241	Pn	Pb	20 52 06.1	+0.7
RRRZ	Republican Roa	1.53	283	PN	Pg	20 52 07.0	+0.9
RRRZ	Republican Roa	1.53	283	Pn	Pg	20 52 07.0	+0.9
MARZ	Manawahe	1.54	297	PN	Pg	20 52 07.2	+0.9
MARZ	Manawahe	1.54	297	Pn	Pg	20 52 07.2	+0.9
BKZ	Black Stump Fm	1.56	252	PN	Pb	20 52 06.4	+0.2
BKZ	Black Stump Fm	1.56	252	Pn	Pb	20 52 06.4	+0.2
TARZ	Mount Tarawera	1.56	287	PN	Pg	20 52 07.3	+0.5
TARZ	Mount Tarawera	1.56	287	Pn	Pg	20 52 07.3	+0.5
KAHZ	Kahuranaki	1.61	227	PN	Pn	20 52 07.2	+1.4
KAHZ	Kahuranaki	1.61	227	Pn	Pn	20 52 07.2	+1.4
ALRZ	Allen Road	1.62	275	PN	Pg	20 52 07.9	0.0
ALRZ	Allen Road	1.62	275	Pn	Pg	20 52 07.9	0.0
MKRZ	Makatiti	1.62	290	PN	Pg	20 52 08.7	+0.8
MKRZ	Makatiti	1.62	290	Pn	Pg	20 52 08.7	+0.8
HRRZ	Handcock Road	1.69	280	PN	Pg	20 52 10.2	+0.9
HRRZ	Handcock Road	1.69	280	Pn	Pg	20 52 10.7	+1.4
OPRZ	Ohinepanea	1.69	300	PN	Pg	20 52 07.8	-1.4
OMRZ	Omania	1.71	290	PN	Pg	20 52 08.4	-1.2
OMRZ	Omania	1.71	290	Pn	Pg	20 52 09.3	-0.3
PXZ	Pawanui	1.78	222	⇓PN	Pn	20 52 08.3	+0.1
PXZ	Pawanui	1.78	222	Pn	Pn	20 52 08.3	+0.1
HATZ	Hinemaiaia	1.81	264	Pn	Pg	20 52 18.6	+6.9
TGRZ	Tauranga	1.95	299	Pn	Pg	20 52 13.1	-1.1
BHHZ	Black Hill Sta	1.98	246	PN	Pn	20 52 12.1	+1.1
BHHZ	Black Hill Sta	1.98	246	Pn	Pn	20 52 12.1	+1.1
RITZ	Rihia Road	2.01	262	Pn	Pb	20 52 14.0	+0.3
WPHZ	Waipukurau	2.04	228	⇓PN	Pn	20 52 12.5	+0.8
WPHZ	Waipukurau	2.04	228	Pn	Pn	20 52 12.5	+0.8
RATZ	Rangitukua	2.06	265	Pn	Pg	20 52 20.7	+4.3
PRHZ	Porangahau	2.07	221	PN	Pn	20 52 12.3	+0.1
PRHZ	Porangahau	2.07	221	Pn	Pn	20 52 12.3	+0.1
WATZ	Wairara	2.09	269	PN	Pg	20 52 16.3	-0.6
WATZ	Wairara	2.09	269	Pn	Pg	20 52 16.3	-0.6
PNHZ	Pukenui	2.09	234	PN	Pn	20 52 12.9	+0.4
PNHZ	Pukenui	2.09	234	Pn	Pn	20 52 12.9	+0.4
MOVZ	Moawhango	2.18	251	PN	Pb	20 52 15.5	-1.2
MOVZ	Moawhango	2.18	251	Pn	Pb	20 52 15.5	-1.2
OTVZ	Oturere	2.18	257	PN	Pb	20 52 15.6	-1.2
OTVZ	Oturere	2.18	257	Pn	Pb	20 52 15.6	-1.2
KRVZ	Karewarewa	2.19	259	PN	Pb	20 52 15.8	-1.1
KRVZ	Karewarewa	2.19	259	Pn	Pb	20 52 15.8	-1.1
TUVZ	Tukino	2.21	255	PN	Pb	20 52 16.3	-1.1
TUVZ	Tukino	2.21	255	Pn	Pb	20 52 16.3	-1.1
WTVZ	West Tongariro	2.23	259	PN	Pb	20 52 16.5	-1.1
WTVZ	West Tongariro	2.23	259	Pn	Pb	20 52 16.5	-1.1
NGZ	Ngauruhoe	2.23	257	PN	Pb	20 52 16.2	-1.5
NGZ	Ngauruhoe	2.23	257	Pn	Pb	20 52 16.2	-1.5
WNVZ	Wahianoa	2.27	253	PN	Pb	20 52 16.9	-1.5
WNVZ	Wahianoa	2.27	253	Pn	Pb	20 52 16.9	-1.5
WPVZ	Whakapapa	2.28	257	PN	Pb	20 52 16.8	-1.7
WPVZ	Whakapapa	2.28	257	Pn	Pb	20 52 16.8	-1.7
FWVZ	Far West T-bar	2.29	255	PN	Pb	20 52 17.0	-1.7
FWVZ	Far West T-bar	2.29	255	Pn	Pb	20 52 17.0	-1.7
TRVZ	Turoa	2.30	254	PN	Pb	20 52 17.2	-1.7
TRVZ	Turoa	2.30	254	Pn	Pb	20 52 17.2	-1.7
TSZ	Takapari Road	2.32	234	PN	Pn	20 52 15.7	+0.1
TSZ	Takapari Road	2.32	234	Pn	Pn	20 52 15.7	+0.1
TWVZ	Taurewa	2.34	260	PN	Pb	20 52 18.1	-1.5
TWVZ	Taurewa	2.34	260	Pn	Pb	20 52 18.1	-1.5
DVHZ	Dannevirke	2.35	227	PN	Pn	20 52 16.1	+0.1
DVHZ	Dannevirke	2.35	227	Pn	Pn	20 52 16.1	+0.1
MTVZ	Mangateitei	2.38	253	PN	Pb	20 52 19.1	-1.1
MTVZ	Mangateitei	2.38	253	Pn	Pb	20 52 19.1	-1.1
PKVZ	Pokaka	2.45	255	PN	Pb	20 52 19.4	-1.9
PKVZ	Pokaka	2.45	255	Pn	Pb	20 52 19.4	-1.9
BFZ	Birch Farm	2.58	220	PN	Pn	20 52 18.9	-0.3
BFZ	Birch Farm	2.58	220	Pn	Pn	20 52 18.8	-0.3
POWZ	Post Office Ro	2.64	230	PN	Pn	20 52 21.0	+1.0
POWZ	Post Office Ro	2.64	230	Pn	Pn	20 52 21.0	+1.0
TIWZ	Tintock	2.83	222	Pn	Pn	20 52 22.5	-0.2
WAZ	Wanganui	2.85	247	PN	Pb	20 52 25.6	-2.6
WAZ	Wanganui	2.85	247	Pn	Pb	20 52 25.6	-2.6
VRZ	Vera Road	2.87	261	Pn	Pb	20 52 25.7	-2.8
KUZ	Kuaotunu	2.89	312	Pn	Pb	20 52 24.6	-4.2
MRZ	Mangatainoka R	2.92	227	PN	Pn	20 52 23.4	-0.5
MRZ	Mangatainoka R	2.92	227	Pn	Pn	20 52 23.4	-0.5
MKAZ	Moumakai	3.02	301	Pn	Pb	20 52 26.4	-4.6
TMWZ	Te Maipa	3.08	218	PN	Pn	20 52 24.7	-1.4
TMWZ	Te Maipa	3.08	218	Pn	Pn	20 52 24.7	-1.4
HOWZ	Holdsworth Sta	3.12	225	PN	Pn	20 52 25.8	-0.8
HOWZ	Holdsworth Sta	3.12	225	Pn	Pn	20 52 25.8	-0.8
RAEZ	Rainy Point	3.18	258	PN	Pb	20 52 30.2	-3.5
RAEZ	Rainy Point	3.18	258	Pn	Pb	20 52 30.2	-3.5
OGWZ	Otaki Gorge	3.26	229	PN	Pn	20 52 28.3	-0.2
OGWZ	Otaki Gorge	3.26	229	Pn	Pn	20 52 28.3	-0.2
MTW	Mount Morrison	3.31	221	PN	Pn	20 52 28.0	-1.2
MTW	Mount Morrison	3.31	221	Pn	Pn	20 52 28.0	-1.2
TRWZ	Traveller	3.40	217	PN	Pn	20 52 29.1	-1.3
TRWZ	Traveller	3.40	217	Pn	Pn	20 52 29.1	-1.3
NEZ	North Egmont	3.40	259	PN	Pb	20 52 33.8	-3.8
NEZ	North Egmont	3.40	259	Pn	Pb	20 52 33.8	-3.8
DFE	Dawson Falls	3.41	258	PN	Pn	20 52 33.4	+2.8
DFE	Dawson Falls	3.41	258	Pn	Pn	20 52 33.4	+2.8
KIW	Kapiti Island	3.44	230	PN	Pn	20 52 30.6	-0.4
KIW	Kapiti Island	3.44	230	Pn	Pn	20 52 30.6	-0.4
PKE	Pukeiti	3.48	261	Pn	Pn	20 52 34.2	+2.6
CAW	Cannon Point	3.51	226	PN	Pn	20 52 31.3	-0.6
CAW	Cannon Point	3.51	226	Pn	Pn	20 52 31.3	-0.6
PAWZ	Paruwai Farm	3.51	220	PN	Pn	20 52 30.4	-1.6
PAWZ	Paruwai Farm	3.51	220	Pn	Pn	20 52 30.4	-1.6
NRZ	Ngariki Road	3.54	258	Pn	Pn	20 52 35.3	+3.0
MSWZ	Moikau Station	3.63	221	PN	Pn	20 52 31.9	-1.7
MSWZ	Moikau Station	3.63	221	Pn	Pn	20 52 31.9	-1.7
PLWZ	Palliser	3.74	219	PN	Pn	20 52 33.4	-1.7
PLWZ	Palliser	3.74	219	Pn	Pn	20 52 33.4	-1.7
SNZO	South Karori	3.85	226	PN	Pn	20 52 35.5	-1.0
SNZO	South Karori	3.85	226	Pn	Pn	20 52 35.5	-1.0
DUWZ	D'Urville Isla	4.04	237	PN	Pn	20 52 39.0	-0.2
DUWZ	D'Urville Isla	4.04	237	Pn	Pn	20 52 39.0	-0.2
TCW	Tory Channel	4.04	230	PN	Pn	20 52 38.2	-0.9
TUWZ	Tuamarina	4.37	230	Pn	Pn	20 52 42.5	-1.3
BSWZ	Blackbirch Sta	4.58	228	Pn	Pn	20 52 45.3	-1.4
NNZ	Nelson	4.60	235	PN	Pn	20 52 46.1	-0.8
NNZ	Nelson	4.60	235	Pn	Pn	20 52 46.1	-0.8
QRZ	Quartz Range	5.00	243	PN	Pn	20 52 50.8	-1.6
QRZ	Quartz Range	5.00	243	Pn	Pn	20 52 50.8	-1.6
THZ	Tophouse	5.20	232	PN	Pn	20 52 53.5	-1.7
THZ	Tophouse	5.20	232	Pn	Pn	20 52 53.5	-1.7
KHZ	Kahutara	5.24	223	Pn	Pn	20 52 53.7	-2.0
DSZ	Denniston Nort	5.89	237	Pn	Pn	20 53 02.8	-1.9
CTZ	Chatham Island	6.27	145	ePN	Pn	20 53 11.1	+1.3
CTZ	Chatham Island	6.27	145	Pn	Pn	20 53 11.3	+1.5
MQZ	McQueen's Vall	6.61	219	Pn	Pn	20 53 12.6	-1.9
LBZ	Lake Benmore	8.37	225	Pn	Pn	20 53 30.4	-8.3
ODZ	Otahua Downs	8.57	220	PN	Pn	20 53 38.9	-2.6
ODZ	Otahua Downs	8.57	220	Pn	Pn	20 53 38.9	-2.6
DZM	Mont Dzumac	19.50	325	LR	LR	21 02 17.4	
	comp=Z,286nm,19.1s,baz=210,slow=33						
STKA	Stephens Creek	30.66	271	P	P	20 57 53.5	+1.5
STKA	Stephens Creek	30.66	271	P	P	20 57 53.5	+1.5
	2.7nm,0.8s,baz=49,slow=9.2,SNR=2.9						
STKA				LR	LR	21 08 16.9	
	comp=Z,142nm,19.1s,baz=25,slow=33						
CTA	Charters Tower	33.36	295	P	P	20 58 16.1	+0.1
CTA	Charters Tower	33.36	295	P	P	20 58 16.1	+0.1
	1.3nm,0.4s,baz=141,slow=13,SNR=2.7						
CTAO	Charters Tower	33.36	295	P	P	20 58 16.0	+0.1
	2.4nm,0.9s						
COEN	Coen	39.67	299	eP	P	20 59 10.6	+0.7
	77nm,1.1s						
AS31	Alice Springs	40.51	278	eP	P	20 59 16.8	0.0
ASAR	Alice Springs	40.51	278	P	P	20 59 16.9	+0.1
ASAR	Alice Springs	40.51	278	P	P	20 59 16.9	+0.1
	1.7nm,0.7s,baz=122,slow=8.0,SNR=40						
ASAR				LR	LR	21 17 19.7	
	comp=Z,193nm,18.7s,baz=210,slow=38						
WRAB	Tennant Creek	42.26	283	eP	P	20 59 32.3	+1.1
	2.1nm,0.6s						
WRA	Warramunga Arr	42.27	283	P	P	20 59 31.0	-0.2
WRA	Warramunga Arr	42.27	283	P	P	20 59 31.0	-0.2
	1.4nm,0.5s,baz=121,slow=7.4,SNR=35						
FITZ	Fitzroy Crossi	50.01	279	P	P	21 00 33.1	+0.9
FITZ	Fitzroy Crossi	50.01	279	P	P	21 00 33.1	+0.9
	1.2nm,0.5s,baz=174,slow=9.9,SNR=10.0						
KSRS	Korea Array	88.91	322	LR	LR	21 41 10.6	
	comp=Z,39nm,18.1s,baz=135,slow=34						
CMAR	Chiang Mai Arr	93.45	291	LR	LR	21 51 43.2	
	comp=Z,19nm,18.2s,baz=337,slow=39						
ARCES	ARCESS Array B	145.89	343	PKPbc	PKPab	21 11 16.5	0.0
ARCES	ARCESS Array B	145.89	343	PKPbc	PKPab	21 11 16.5	0.0
	1.7nm,0.5s,baz=65,slow=3.2,SNR=21						
MMAI	Mount Meron Ar	149.62	271	PKPbc	PKPab	21 11 29.0	-3.6
MMAI	Mount Meron Ar	149.62	271	PKPbc	PKPab	21 11 29.0	-3.6
	0.8nm,0.5s,baz=72,slow=8.0,SNR=3.9						
FINES	FINESS Array B	151.54	332	PKPbc	PKPbc	21 11 30.8	-0.1
FINES	FINESS Array B	151.54	332	PKPbc	PKPbc	21 11 30.8	-0.1
	3.1nm,1.0s,baz=46,slow=5.5,SNR=7.1						
BRTR	Keskin Array B	152.78	283	PKP	PKPdf	21 11 27.7	+0.2
BRTR				PKPbc	PKiKP	21 11 34.8	-0.1
BRTR				PKPab	PKPab	21 11 43.2	-2.4
BRTR	Keskin Array B	152.78	283	PKP	PKPdf	21 11 27.7	+0.2
	0.5nm,0.9s,baz=232,slow=7.1,SNR=2.9						
BRTR				PKPbc	PKiKP	21 11 34.8	-0.1
	0.3nm,0.4s,baz=157,slow=5.0,SNR=5.5						
BRTR				PKPab	PKPab	21 11 43.2	-2.4
	0.8nm,0.8s,baz=211,slow=1.4,SNR=5.0						
TORD	Torodi Ar. Bea	154.37	187	PKPab	PKPab	21 11 54.0	+1.5
TORD	Torodi Ar. Bea	154.37	187	PKPab	PKPab	21 11 54.0	+1.5
	0.9nm,0.9s,baz=120,slow=1.2,SNR=4.2						

WEL 05 20:52:58.6±0.5, **38°.63S**×**178°.41E**, **h28**km±3km, **ML3.9**/5, **Error ellipse: s-maj=5.7km s-min=2.0km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.21	312	P*	Pb	20 53 04.5	-0.2
PRGZ	Paritu Road	0.51	234	P*	Pb	20 53 08.6	-0.5
PRGZ				S*	Sn	20 53 17.8	-0.1
PUZ	Puketiti	0.57	348	P*	Pb	20 53 09.6	-0.5
PUZ				S*	Sb	20 53 18.6	+0.7
MHGZ	Mahia Peninsul	0.65	217	P*	Pb	20 53 11.5	-0.1
KNZ	Kokohu	0.69	236	P*	Pb	20 53 11.8	-0.3
MWZ	Matawai	0.75	293	P*	Pb	20 53 12.4	-0.8
MWZ				S*	Sn	20 53 23.9	-0.1
MXZ	Matakaoa Point	1.07	356	PN	Pn	20 53 17.9	+0.2

*IDC **05** 20:55:23.9±2.4, 38°.80S×178°.35E, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.7/16, mbtmp3.8/2, Error ellipse: s-maj=89.5km s-min=33.2km az=26.0*
*WEL **05** 20:55:23.2±0.4, 38°.82S×178°.81E, h5km, ML4.0/18, Error ellipse: s-maj=3.4km s-min=2.5km az=90.0*
ISC 05 20:55:23.2±2.0, **38°.79S**±0°.04×**178°.59E**±0°.08, **h2**km±11km, **n40**, σ0s**83**/45, **1C, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRGZ	Paritu Road	0.56	256	⇑P*	Pn	20 55 38.7	+0.4
PRGZ				S*	Sn	20 55 48.5	+0.3
MHGZ	Mahia Peninsul	0.64	235	P*	Pn	20 55 40.8	+1.5
KNZ	Kokohu	0.75	252	P*	Pn	20 55 40.9	+0.2
KNZ				S*	Sn	20 55 52.3	-0.4
RAHZ	Arahi	1.18	263	PN	Pn	20 55 47.0	+0.3
MXZ	Matakaoa Point	1.24	350	P*	Pg	20 55 47.6	+0.6
MXZ				S*	Sn	20 56 05.2	+0.3
URZ	Urewera	1.27	294	Pn	Pb	20 55 48.0	+0.2
	62nm,0.3s,baz=158,slow=2.4,SNR=8.3						
URZ				Sn	Sg	20 56 02.0	-2.0
	157nm,0.3s,baz=135,slow=7.5,SNR=12						
NMHZ	Naumai	1.42	257	PN	Pg	20 55 50.9	+0.5
NMHZ				SN	Sg	20 56 08.7	-0.2
CKHZ	Cape Kidnapper	1.46	233	PN	Pg	20 55 51.6	+0.4
MCHZ	McNeill Hill	1.61	245	PN	Pb	20 55 53.7	+0.1
KAHZ	Kahuranaki	1.66	232	PN	Pb	20 55 54.7	+0.2
BKZ	Black Stump Fm	1.67	256	PN	Pb	20 55 54.4	-0.4
RRRZ	Republican Roa	1.68	285	PN	Pn	20 55 54.1	+0.4
MARZ	Manawahe	1.70	297	PN	Pn	20 55 54.8	+0.9
TARZ	Mount Tarawera	1.72	288	PN	Pn	20 55 54.7	+0.5
OPRZ	Ohinepanea	1.85	300	PN	Pn	20 55 55.3	-0.7
WPHZ	Waipukurau	2.09	232	PN	Pb	20 56 01.9	0.0
PRHZ	Porangahau	2.11	225	PN	Pn	20 56 00.5	+1.0
PNHZ	Pukenui	2.16	238	PN	Pn	20 56 01.1	+0.8
MOVZ	Moawhango	2.29	253	PN	Pn	20 56 03.1	+1.1
OTVZ	Oturere	2.31	260	PN	Pn	20 56 03.3	+0.9
KRVZ	Karewarewa	2.32	261	PN	Pn	20 56 03.4	+1.0
TUVZ	Tukino	2.33	257	PN	Pn	20 56 03.8	+1.1
NGZ	Ngauruhoe	2.36	260	PN	Pn	20 56 03.9	+0.9
WNVZ	Wahianoa	2.39	256	PN	Pn	20 56 04.5	+1.0
TSZ	Takapari Road	2.40	237	PN	Pn	20 56 03.9	+0.5
DVHZ	Dannevirke	2.40	230	PN	Pn	20 56 04.2	+0.7
WPVZ	Whakapapa	2.40	259	PN	Pn	20 56 04.5	+0.9
POWZ	Post Office Ro	2.70	233	PN	Pn	20 56 08.5	+0.8
TIWZ	Tintock	2.88	225	PN	Pn	20 56 10.2	+0.2
MRZ	Mangatainoka R	2.98	230	PN	Pn	20 56 12.1	+0.6
TMWZ	Te Maipa	3.11	221	PN	Pn	20 56 13.1	-0.1
HOWZ	Holdsworth Sta	3.17	227	PN	Pn	20 56 13.7	-0.3
MTW	Mount Morrison	3.35	224	PN	Pn	20 56 15.6	-0.9
KIW	Kapiti Island	3.51	233	PN	Pn	20 56 18.6	-0.1
DFE	Dawson Falls	3.53	260	PN	Pn	20 56 20.6	+1.5
PKE	Pukeiti	3.60	262	PN	Pn	20 56 21.7	+1.6
MSWZ	Moikau Station	3.66	223	PN	Pn	20 56 19.9	-1.0
ASAR	Alice Springs	40.67	278	P	P	21 03 04.3	-0.7
	2.0nm,0.7s,baz=123,slow=8.0,SNR=18						
WRA	Warramunga Arr	42.42	283	P	P	21 03 18.5	-0.9
	0.3nm,0.5s,baz=125,slow=6.9,SNR=6.0						
ARCES	ARCESS Array B	146.01	343	PKPbc	PKPbc	21 15 03.7	+0.3
	4.4nm,0.9s,baz=67,slow=4.1,SNR=3.9						

*IDC **05** 21:03:54.6±2.6, 37°.93S×178°.34E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.9/15, mbtmp3.8/3, Error ellipse: s-maj=101.9km s-min=23.2km az=154.0*
*WEL **05** 21:03:57.6±0.3, 38°.69S×178°.41E, h54km±4km, ML4.1/12, Error ellipse: s-maj=4.0km s-min=1.8km az=90.0*
ISC 05 21:03:52.5±2.1, **38°.77S**±0°.04×**178°.60E**±0°.07, **h6**km±12km, **n73**, σ1s**12**/77, **mb3.8**/3, **4C-4D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.42	312	⇑PN	Pn	21 04 03.7	-1.3
PRGZ	Paritu Road	0.58	254	⇓PN	Pn	21 04 07.8	+0.5
PRGZ				SN	Sn	21 04 17.5	+0.3
MHGZ	Mahia Peninsul	0.67	234	⇓PN	Pn	21 04 09.7	+1.3
KNZ	Kokohu	0.77	251	PN	Pn	21 04 10.3	+0.5
KNZ				SN	Sn	21 04 21.1	-0.5
MWZ	Matawai	0.95	297	PN	Pn	21 04 11.8	-0.5
MWZ				SN	Sb	21 04 22.7	-1.4
RAHZ	Arahi	1.19	262	PN	Pg	21 04 16.0	+0.7
MXZ	Matakaoa Point	1.23	349	⇓PN	Pb	21 04 16.9	+0.8
MXZ				SN	Sn	21 04 32.8	-0.1
URZ	Urewera	1.28	293	PN	Pb	21 04 16.7	-0.1
URZ	Urewera	1.28	293	Pn	Pg	21 04 17.1	+0.2
	59nm,0.3s,baz=155,slow=3.0,SNR=272						
URZ				Sn	Sb	21 04 31.0	-2.5
	221nm,0.3s,baz=98,slow=19,SNR=22						
NMHZ	Naumai	1.44	256	PN	Pb	21 04 19.5	-0.2
CKHZ	Cape Kidnapper	1.48	233	PN	Pb	21 04 20.4	0.0
MCHZ	McNeill Hill	1.63	245	⇑PN	Pb	21 04 22.8	-0.1
KAHZ	Kahuranaki	1.69	232	PN	Pn	21 04 23.4	+0.9
BKZ	Black Stump Fm	1.69	256	PN	Pn	21 04 23.1	+0.5
MARZ	Manawahe	1.71	297	PN	Pb	21 04 23.9	-0.3
TARZ	Mount Tarawera	1.73	287	PN	Pb	21 04 24.2	-0.5
ALRZ	Allen Road	1.78	276	PN	Pn	21 04 23.9	+0.2
PXZ	Pawanui	1.85	226	PN	Pn	21 04 25.0	+0.4
OPRZ	Ohinepanea	1.86	299	PN	Pn	21 04 23.1	-1.7
BHHZ	Black Hill Sta	2.10	249	PN	Pn	21 04 28.7	+0.4
WPHZ	Waipukurau	2.12	232	PN	Pn	21 04 28.8	+0.4
PRHZ	Porangahau	2.13	225	PN	Pn	21 04 28.7	+0.1
PNHZ	Pukenui	2.19	238	PN	Pn	21 04 29.6	+0.2
MOVZ	Moawhango	2.31	253	PN	Pn	21 04 32.0	+0.9
OTVZ	Oturere	2.32	259	PN	Pn	21 04 32.3	+0.9
KRVZ	Karewarewa	2.33	261	PN	Pn	21 04 32.4	+0.9
TUVZ	Tukino	2.35	257	⇓PN	Pn	21 04 32.9	+1.1
NGZ	Ngauruhoe	2.37	259	PN	Pn	21 04 32.8	+0.7
WTVZ	West Tongariro	2.38	261	PN	Pn	21 04 33.2	+1.2
WNVZ	Wahianoa	2.41	256	PN	Pn	21 04 33.5	+1.0
TSZ	Takapari Road	2.42	237	⇑PN	Pn	21 04 32.3	-0.2
WPVZ	Whakapapa	2.42	259	PN	Pn	21 04 33.6	+0.9
DVHZ	Dannevirke	2.43	230	PN	Pn	21 04 32.6	-0.1
FWVZ	Far West T-bar	2.43	257	PN	Pn	21 04 33.6	+0.8
TRVZ	Turoa	2.44	256	PN	Pn	21 04 33.8	+0.8
TWVZ	Taurewa	2.49	262	PN	Pn	21 04 34.3	+0.8
MTVZ	Mangateitei	2.51	255	PN	Pn	21 04 35.0	+1.1
PKVZ	Pokaka	2.59	257	PN	Pn	21 04 36.0	+1.1
BFZ	Birch Farm	2.64	223	PN	Pn	21 04 35.4	-0.1
POWZ	Post Office Ro	2.73	233	PN	Pn	21 04 37.8	+1.0
TIWZ	Tintock	2.90	225	PN	Pn	21 04 38.8	-0.4
WAZ	Wanganui	2.98	250	PN	Pn	21 04 42.1	+2.0
MRZ	Mangatainoka R	3.00	230	PN	Pn	21 04 40.3	-0.3
VRZ	Vera Road	3.02	262	PN	Pn	21 04 41.8	+1.0
TMWZ	Te Maipa	3.13	221	PN	Pn	21 04 41.1	-1.2
HOWZ	Holdsworth Sta	3.19	227	PN	Pn	21 04 42.3	-0.8
OGWZ	Otaki Gorge	3.34	231	PN	Pn	21 04 44.6	-0.6
MTW	Mount Morrison	3.37	224	PN	Pn	21 04 44.2	-1.5
TRWZ	Traveller	3.45	219	PN	Pn	21 04 45.2	-1.5
KIW	Kapiti Island	3.53	233	PN	Pn	21 04 47.3	-0.5
NEZ	North Egmont	3.55	260	PN	Pn	21 04 50.5	+2.4
DFE	Dawson Falls	3.55	260	PN	Pn	21 04 50.6	+2.5
CAW	Cannon Point	3.58	228	PN	Pn	21 04 47.6	-0.9
PKE	Pukeiti	3.62	262	PN	Pn	21 04 50.7	+1.6
NRZ	Ngariki Road	3.68	260	PN	Pn	21 04 52.1	+2.3
MSWZ	Moikau Station	3.69	223	PN	Pn	21 04 48.2	-1.8
PLWZ	Palliser	3.79	221	PN	Pn	21 04 50.5	-1.0
TCW	Tory Channel	4.12	232	PN	Pn	21 04 54.7	-1.2
DUWZ	D'Urville Isla	4.14	239	PN	Pn	21 04 55.4	-0.8
TUWZ	Tuamarina	4.45	232	PN	Pn	21 04 59.4	-1.1
BSWZ	Blackbirch Sta	4.66	229	ePN	Pn	21 05 01.6	-1.7
NNZ	Nelson	4.70	237	PN	Pn	21 05 03.1	-0.7
QRZ	Quartz Range	5.11	244	PN	Pn	21 05 07.3	-2.2
THZ	Tophouse	5.29	234	PN	Pn	21 05 10.2	-1.8
KHZ	Kahutara	5.30	225	PN	Pn	21 05 13.6	+1.5
CTZ	Chatham Island	6.13	146	⇑PN	Pn	21 05 28.5	+5.0
ODZ	Otahua Downs	8.63	221	PN	Pn	21 05 55.9	-1.9
ASAR	Alice Springs	40.68	278	P	P	21 11 33.8	+0.1
	1.6nm,0.7s,baz=122,slow=8.0,SNR=20						
WRA	Warramunga Arr	42.43	283	P	P	21 11 47.6	-0.5
	0.8nm,0.8s,baz=120,slow=7.5,SNR=9.8						
CMAR	Chiang Mai Arr	93.62	291	P	P	21 17 10.8	+1.0
	0.4nm,0.5s,baz=156,slow=3.0,SNR=4.3						
ARCES	ARCESS Array B	145.99	343	PKPbc	PKPab	21 23 32.9	+0.4
	3.1nm,0.8s,baz=13,slow=2.6,SNR=10						
FINES	FINESS Array B	151.66	332	PKPbc	PKPbc	21 23 47.2	+0.5
	2.5nm,1.0s,baz=22,slow=7.7,SNR=3.8						
BRTR	Keskin Array B	152.95	283	PKPbc	PKPbc	21 23 51.4	+0.8
	0.3nm,0.8s,baz=160,slow=3.9,SNR=3.7						

*ISCJB **05** 21:07:32.8±1.0, 39°.03N±0°.03×19°.78E±0°.06, h4km±6km, Error ellipse: s-maj=8.3km s-min=4.3km az=164.4*
*CSEM **05** 21:07:34.0±0.5, 39°.01N×19°.83E, h8km, ML2.3/5, Error ellipse: s-maj=12.5km s-min=5.0km az=77.0*
*ATH **05** 21:07:34.3, 39°.01N×19°.92E, h18km±1km, MD3.1/6*
*THE **05** 21:07:35.0, 39°.04N×19°.93E, h0km±3km, ML2.3/5, Error ellipse: s-maj=3.6km s-min=0.9km az=262.0*
*SKO **05** 21:07:36.5, 39°.00N×20°.31E, h0km*
ISC 05 21:07:34.3±1.2, **39°.02N**±0°.02×**19°.90E**±0°.04, **h7**km±10km, **n46**, σ0s**80**/67, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.61	33	P	Pg	21 07 44.9	-1.2
IGT				S	Sg	21 07 54.3	+0.2
IGT	Igoumenitsa	0.61	33	P	Pg	21 07 44.9	-1.2
IGT				S	Sg	21 07 54.3	+0.2
LKD2	Lefkada island	0.63	111	P	Pg	21 07 45.2	-1.3
LKD2				S	Sb	21 07 57.0	+0.1
LKD2	Lefkada island	0.63	111	P	Pg	21 07 45.2	-1.3
LKD2				S	Sb	21 07 57.0	+0.1
KEK	Kerkira	0.70	353	P	Pg	21 07 48.1	+0.3
KEK				S	Sg	21 07 57.9	+1.1
KEK	Kerkira	0.70	353	ePN	Pg	21 07 48.1	+0.3
KEK	Kerkira	0.70	353	P	Pg	21 07 48.1	+0.3
KEK				S	Sg	21 07 57.9	+1.1
JAN	Janina	0.97	49	P	Pg	21 07 52.1	-0.9
JAN				S	Sb	21 08 07.3	+0.7
JAN	Janina	0.97	49	ePN	Pg	21 07 52.5	-0.5
JAN	Janina	0.97	49	ePn	Pg	21 07 52.5	-0.5
JAN				S	Sb	21 08 07.3	+0.7
VLS	Valsamata	1.00	147	P	Pb	21 07 54.4	+0.4
VLS				S	Sn	21 08 08.7	-0.5
VLS	Valsamata	1.00	147	ePN	Pg	21 07 53.1	-0.4
VLS				eSN	Sb	21 08 07.6	+0.2
VLS	Valsamata	1.00	147	ePn	Pg	21 07 53.1	-0.4
VLS	Valsamata	1.00	147	P	Pb	21 07 54.4	+0.4
VLS				eSn	Sb	21 08 07.6	+0.2
VLS				S	Sn	21 08 08.7	-0.5
KFL	Anninata	1.15	142	P	Pb	21 07 56.6	+0.1
KFL				S	Sn	21 08 13.7	+1.0
KFL	Anninata	1.15	142	P	Pb	21 07 56.6	+0.1
KFL				S	Sn	21 08 13.7	+1.0
MEV	Metsovon	1.28	53	P	Pg	21 07 58.9	0.0
MEV	Metsovon	1.28	53	P	Pg	21 07 58.9	0.0
EVR	Evrytania	1.49	93	ePN	Pb	21 08 02.5	+0.1
EVR				eSN	Sg	21 08 22.2	0.0
EVR	Evrytania	1.49	93	ePn	Pb	21 08 02.5	+0.1
EVR				eSn	Sg	21 08 22.2	0.0
RLS	Riolos of Patr	1.56	128	P	Pn	21 08 03.0	+0.5
RLS				S	Sg	21 08 24.9	+0.5

RLS	Riolos of Patr	1.56	128	ePN	Pn	21 08 02.7	+0.2
RLS	Riolos of Patr	1.56	128	ePn	Pn	21 08 02.7	+0.2
RLS	Riolos of Patr	1.56	128	P	Pn	21 08 03.0	+0.5
RLS				S	Sg	21 08 24.9	+0.5
NEST	Nestorio	1.65	32	P	Pn	21 08 04.9	+1.1
NEST	Nestorio	1.65	32	P	Pn	21 08 04.9	+1.1
EFP	Efpalio	1.68	110	ePN	Pb	21 08 05.0	-0.5
EFP	Efpalio	1.68	110	ePn	Pb	21 08 05.0	-0.5
THL	Klokotos Trika	1.73	71	P	Pn	21 08 05.6	+0.8
THL				S	Sb	21 08 28.1	-0.2
THL	Klokotos Trika	1.73	71	ePN	Pn	21 08 05.6	+0.8
THL	Klokotos Trika	1.73	71	P	Pn	21 08 05.6	+0.8
THL				S	Sb	21 08 28.1	-0.2
LAKA	Lakka	1.80	115	ePN	Pn	21 08 06.8	+0.9
LAKA	Lakka	1.80	115	ePn	Pn	21 08 06.8	+0.9
AGG	Agios Georgios	1.89	89	ePN	Pn	21 08 08.1	+1.0
AGG	Agios Georgios	1.89	89	ePn	Pn	21 08 08.1	+1.0
AMT	Artemida-Makis	2.06	136	ePB	Pn	21 08 09.6	+0.2
AMT	Artemida-Makis	2.06	136	ePb	Pn	21 08 09.6	+0.2
FNA	Florina	2.09	32	P	Pn	21 08 10.4	+0.5
FNA	Florina	2.09	32	P	Pn	21 08 10.4	+0.5
BIA	Bitola	2.27	28	ePn	Pn	21 08 13.6	+1.1
BIA	Bitola	2.27	28	ePn	Pn	21 08 13.5	+1.1
PYL	PYLOS	2.57	145	ePN	Pn	21 08 16.8	+0.4
PYL	PYLOS	2.57	145	ePn	Pn	21 08 16.8	+0.4
VAY	Valandovo	3.08	41	ePn	Pn	21 08 23.3	0.0
VAY	Valandovo	3.08	41	ePn	Pn	21 08 23.8	+0.5
STON	Ston	4.19	337	ePn	Pn	21 08 37.4	-1.3
STON				Sn	Sn	21 09 24.6	-3.3

IDC 05 21:09:29.9±5.5, 36.°19N×71.°54E, h196km±50km, mb3.0/4, mb1 2.9/8, mb1mx2.8/31, mbtmp2.9/8, Error ellipse: s-maj=59.5km s-min=33.7km az=147.0
NNC 05 21:09:36.9±6.3, 37.°38N×70.°92E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=48.8km s-min=46.0km az=36.0
ISC 05 21:09:35.7±1.8, 36.°9N±0.°1×71.°1E±0.°1, h188km, n18, σ0.s89/21, mb3.4/3, 4C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.60	20	P	Pn	21 10 58.4	+0.5
	SNR=78						
UCH	Uchtor	5.95	25	P	Sn	21 12 09.7	-1.2
	SNR=11						
EKS2	Erkin-Say	6.12	19	P	Pn	21 11 05.0	+0.7
	SNR=8.9						
KK31	Karatay Array	6.21	356	⇑Pn	Pn	21 11 06.2	+0.7
	3.1nm,0.5s,baz=170,slow=12,SNR=120						
KK31				Sn	Sn	21 12 16.0	-0.4
	3.3nm,0.3s,baz=172,slow=23,SNR=11						
AAK	Ala-Archa	6.30	24	P	Pn	21 11 07.5	+0.7
	SNR=8.0						
AAK	Ala-Archa	6.30	24	P	Pn	21 11 07.5	+0.7
	1.0nm,0.3s,baz=186,slow=5.4,SNR=31						
AAK				S	Sn	21 12 18.8	0.0
	1.0nm,0.3s,baz=311,slow=22,SNR=42						
KBK	Karagaybulak	6.47	26	P	Pn	21 11 10.3	+1.2
	SNR=8.4						
TKM2	Tokmak 2	6.94	29	⇑Pn	Pn	21 11 15.0	-0.2
	3.5nm,0.6s						
TKM2				⇓Sn	Sn	21 12 34.4	+0.4
	4.4nm,0.8s						
TKM2	Tokmak 2	6.94	29	P	Pn	21 11 15.3	+0.1
	SNR=14						
MKAR	Makanchi Array	12.93	37	P	Pn	21 12 31.8	-0.7
	0.1nm,0.3s,baz=221,slow=15,SNR=3.0						
AB31	Akbulak array	14.76	330	⇑Pn	P	21 12 57.5	+1.0
	1.1nm,0.6s,baz=146,slow=13,SNR=18						
AB31				⇑Sn	S	21 15 39.6	-0.9
	0.3nm,0.5s						
BVAR	Borovoye Array	16.13	359	P	Pn	21 13 12.5	+0.6
	0.2nm,0.3s,baz=147,slow=12,SNR=6.0						
AKTO	Aktyubinsk	16.46	329	P	Pn	21 13 16.6	+0.6
	0.2nm,0.3s,baz=140,slow=11,SNR=4.1						
ZALV	Zalesovo Beam	19.53	25	P	P	21 13 48.7	+0.2
	0.4nm,0.3s,baz=228,slow=10,SNR=4.7						
BRTR	Keskin Array B	29.37	287	P	P	21 15 21.6	+0.3
	0.3nm,0.7s,baz=116,slow=6.6,SNR=3.2						
NB2	NORSAR Subarra	44.10	323	P	P	21 17 23.1	-1.8
	comp=Z,0.5nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.10	323	P	P	21 17 23.4	-1.5
	comp=Z,0.7nm,0.6s,baz=96,slow=8.0,SNR=3.7						
TORD	Torodi Ar. Bea	65.79	268	P	P	21 19 56.0	-4.9
	comp=Z,0.4nm,0.6s,baz=47,slow=6.1,SNR=9.0						

ISCJB 05 21:09:38.6±0.4, 44.°28N±0.°04×12.°01E±0.°05, h25km±5km, Error ellipse: s-maj=6.0km s-min=5.7km az=146.7
CSEM 05 21:09:38.8±0.1, 44.°26N×11.°99E, h26km±1km, ML2.5/4, Error ellipse: s-maj=4.5km s-min=3.5km az=100.0
ROM 05 21:09:38.7±0.2, 44.°24N×11.°97E, h29km±2km, Md2.4/14, Ml1.9/8, Error ellipse: s-maj=3.0km s-min=2.2km az=92.0
ISC 05 21:09:38.8±0.9, 44.°24N±0.°03×11.°94E±0.°03, h28km±5km, n43, σ0.s70/57, 3C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAEN	Faenza	0.07	316	⇑iPg	Pb	21 09 43.4	-0.3
FAEN				Sg	Sb	21 09 48.0	+1.0
FAEN	Faenza	0.07	316	⇑iPg	Pb	21 09 43.4	-0.3
FAEN				Sg	Sb	21 09 48.0	+1.0
BRSN	Barisano	0.11	66	Pg	Pb	21 09 44.0	+0.1
	1.0nm,0.2s						
BRSN	Barisano	0.11	66	Pg	Pb	21 09 44.0	+0.1
	1.0nm,0.2s						
SFI	Santa Sofia	0.34	192	Pg	Pb	21 09 46.4	-0.3
SFI				Sg	Sn	21 09 52.9	-1.0
	190nm,0.4s						
SFI	Santa Sofia	0.34	192	Pg	Pb	21 09 46.4	-0.3
SFI				Sg	Sn	21 09 52.9	-1.0
	190nm,0.4s						
CMPO	Campotto Po	0.35	344	Pg	Pn	21 09 47.1	-1.0
	125nm,0.9s						
CMPO	Campotto Po	0.35	344	Pg	Pn	21 09 47.1	-1.0
	125nm,0.9s						
MTRZ	Monterenzio	0.37	292	Pg	Pn	21 09 47.8	-0.5
	49nm,0.3s						
MTRZ	Monterenzio	0.37	292	Pg	Pn	21 09 47.8	-0.5
	49nm,0.3s						
VMG	Vicchio	0.40	226	Pg	Pb	21 09 47.2	-0.4
VMG				Sg	Sn	21 09 54.3	-1.0
	43nm,0.2s						
VMG	Vicchio	0.40	226	Pg	Pb	21 09 47.2	-0.4
VMG				Sg	Sn	21 09 54.3	-1.0
	43nm,0.2s						
ASQU	Asqua	0.46	194	Pg	Pb	21 09 48.2	-0.3
ASQU				Sg	Sn	21 09 56.1	-0.7
	66nm,0.3s						
ASQU	Asqua	0.46	194	Pg	Pb	21 09 48.2	-0.3
ASQU				Sg	Sn	21 09 56.1	-0.7
	66nm,0.3s						
SEI	Scarperia	0.46	246	Pg	Pb	21 09 48.3	-0.2
SEI				Sg	Sn	21 09 56.7	-0.2
	106nm,0.3s						
SEI	Scarperia	0.46	246	Pg	Pb	21 09 48.3	-0.2
SEI				Sg	Sn	21 09 56.7	-0.2
	106nm,0.3s						
FNVD	Fontana Vidola	0.59	263	Pg	Pn	21 09 50.9	-0.6
FNVD	Fontana Vidola	0.59	263	Pg	Pn	21 09 50.9	-0.6
PARC	Parchiule	0.63	160	Pg	Pn	21 09 51.5	-0.4
	30nm,0.5s						
PARC	Parchiule	0.63	160	Pg	Pn	21 09 51.5	-0.4
	30nm,0.5s						
PIEI	Pieia	0.82	149	Pg	Pn	21 09 55.1	+0.5
	23nm,0.4s						
PIEI	Pieia	0.82	149	Pg	Pn	21 09 55.1	+0.5
	23nm,0.4s						
CRMI	Carmignano	0.83	238	Pg	Pb	21 09 55.6	+0.9
CRMI	Carmignano	0.83	238	Pg	Pb	21 09 55.6	+0.9
CAFI	Castiglion Fio	0.91	179	Pg	Pb	21 09 56.2	+0.2
CAFI	Castiglion Fio	0.91	179	Pg	Pb	21 09 56.2	+0.2
BDI	Bagni Di Lucca	0.98	260	Pg	Pb	21 09 59.0	+1.7
	17nm,0.6s						
BDI	Bagni Di Lucca	0.98	260	Pg	Pb	21 09 59.0	+1.7
	17nm,0.6s						
PII	Pisa	1.15	244	Pg	Pb	21 10 00.6	+0.6
	10.0nm,0.2s						
PII	Pisa	1.15	244	Pg	Pb	21 10 00.6	+0.6
	10.0nm,0.2s						
CGRP	Cima Grappa	1.64	357	⇓ePg	Pn	21 10 04.7	-1.3
CGRP	Cima Grappa	1.64	357	ePg	Pn	21 10 04.7	-1.3
DDS	Dosso del Somm	1.73	342	ePg	Pn	21 10 06.9	-0.2
DDS	Dosso del Somm	1.73	342	ePg	Pn	21 10 06.9	-0.2
CTI	Castel Tesino	1.82	354	Pg	Pn	21 10 08.2	-0.1
	15nm,0.4s						
CTI	Castel Tesino	1.82	354	Pg	Pn	21 10 08.2	-0.1
	15nm,0.4s						
PANI	Panarotta	1.86	346	⇓ePg	Pn	21 10 09.1	+0.1
PANI	Panarotta	1.86	346	ePg	Pn	21 10 09.1	+0.1
NVLJ	Novalja	2.12	80	iPn	Pn	21 10 12.6	+0.2
NVLJ				Sn	Sn	21 10 38.0	+0.1
NVLJ	Novalja	2.12	80	iPn	Pn	21 10 12.5	+0.2
NVLJ				Sn	Sn	21 10 37.9	+0.1
VINO	Villanova	2.23	25	⇑ePn	Pn	21 10 13.4	-0.5
VINO				Sn	Sn	21 10 39.6	-0.8
VINO	Villanova	2.23	25	ePn	Pn	21 10 13.4	-0.5
VINO				Sn	Sn	21 10 39.6	-0.8
ABSI	Aberstueckl	2.53	350	ePn	Pn	21 10 18.6	+0.5

MAN 05 21:12:23, 15.°34N×119.°98E, h18km, mb4.3, ML3.2, MS3.0, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.43	351	eP	Pn	21 12 33.6	-0.8
SCZP				eS	Sn	21 12 42.0	+0.1
BOLP	Bolinao	1.03	357	eP	Pb	21 12 41.9	-0.5
BOLP				eS	Sg	21 12 58.1	+1.4
PCPH	Palayan	1.10	78	⇑eP	Pb	21 12 42.9	-0.6
BALP	Baler	1.59	75	eP	Pn	21 12 50.6	+0.3
BALP				eS	Sb	21 13 11.9	+0.2
LUBP	Lubang	1.62	171	eP	Pn	21 12 51.2	+0.5

IDC 05 21:30:39.6±1.2, 35.°55N×143.°14E, h0km, mb3.5/6, mb1 3.7/8, mb1mx3.6/27, mbtmp3.6/8, ML3.0/2, Error ellipse: s-maj=27.3km s-min=22.7km az=152.0
JMA 05 21:30:42.8±0.2, 35.°70N×142.°95E, h89km, M3.3
ISCJB 05 21:30:44.0±0.7, 35.°70N±0.°04×142.°91E±0.°06, h59km, mb3.5/6, Error ellipse: s-maj=7.0km s-min=5.0km az=14.4
ISC 05 21:30:46.1±1.0, 35.°67N±0.°04×142.°94E±0.°07, h59km, n22, σ2.s15/32, mb3.5/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.70	272	P	Pn	21 31 11.5	-1.9
CHOJ				S	Sn	21 31 33.2	-0.9
BSO1	Boso 1	1.90	238	P	Pn	21 31 13.9	-1.8
BSO1				eS	Sn	21 31 38.6	+0.3
JHO	Hitachi	2.14	297	P	Pn	21 31 16.9	-2.5
JHO				S	Sn	21 31 42.9	-1.9
JFT	Otama	2.79	312	P	Pn	21 31 26.5	-1.9
JFT				S	Sn	21 31 59.1	-1.8
JAG	Ashikaga	2.92	286	P	Pn	21 31 28.3	-1.9
JAG				S	Sn	21 32 01.1	-3.0
JOD2	Odawara 2	3.17	264	P	Pn	21 31 31.7	-1.9
JOD2				S	Sn	21 32 08.6	-1.6
JRY	Ryogami san	3.30	277	P	Pn	21 31 35.2	-0.1
JMK	Ichinoseki	3.55	338	P	Pn	21 31 35.9	-2.8
JMK				eS	Sn	21 32 16.9	-2.5
JYN	Shimob	3.59	269	P	Pn	21 31 38.5	-0.8
JHJ2	Mitsune	3.63	226	P	Pn	21 31 37.5	-2.4
JHJ2				S	Sn	21 32 19.0	-2.5
JHJ	Hachijo jima 2	3.65	227	Pn	Pn	21 31 38.0	-2.1
	1.3nm,0.3s,baz=305,slow=12,SNR=2.2						
JHJ				Sn	Sn	21 32 17.6	-4.3
	73nm,0.3s,baz=36,slow=21,SNR=7.6						
JYK	Kaneyama	3.84	328	P	Pn	21 31 42.0	-0.7
JYK				S	Sn	21 32 25.2	-1.4
MJAR	Matsushiro Arr	3.93	284	Pn	Pn	21 31 43.8	-0.2
	2.7nm,0.3s,baz=78,slow=6.4,SNR=26						
MJAR				Sn	Sn	21 32 32.3	+3.5
	1.5nm,0.3s,baz=184,slow=16,SNR=5.4						
MAT	Matsushiro	3.93	284	P	Pn	21 31 44.5	+0.5
MAT				eS	Sn	21 32 30.0	+1.2
JOM	Ohasama	4.02	341	P	Pn	21 31 42.8	-2.3
JOM				S	Sn	21 32 27.4	-3.5
ASAJ	Asahikawa	8.44	358	Pn	Pn	21 32 41.7	-4.0
	0.5nm,0.3s,baz=209,slow=3.3,SNR=6.3						
SONM	Songino Array	29.57	306	P	P	21 36 48.7	+3.3
	0.4nm,0.7s,baz=102,slow=7.7,SNR=4.5						
ZALV	Zalesovo Beam	43.74	313	P	P	21 38 47.3	+1.9
	0.7nm,0.5s,baz=104,slow=7.9,SNR=4.3						
MKAR	Makanchi Array	45.89	303	P	P	21 39 05.2	+2.6
	0.7nm,0.9s,baz=90,slow=9.7,SNR=5.1						
ILAR	Eielson Array	49.99	32	P	P	21 39 35.5	+1.4
	0.5nm,0.8s,baz=265,slow=6.0,SNR=5.6						
WRA	Warramunga Arr	55.91	190	P	P	21 40 18.5	+0.5
	0.3nm,0.7s,baz=9.3,slow=7.1,SNR=4.8						
YKA	Yellowknife Ar	64.36	30	P	P	21 41 17.0	+1.6
	0.3nm,0.8s,baz=300,slow=6.9,SNR=6.4						

IDC 05 21:35:48.6±0.8, 19.°32S×175.°00W, h0km, mb4.1/10, mb1 4.4/10, mb1mx4.2/19, mbtmp4.1/10, Error ellipse: s-maj=33.0km s-min=22.4km az=140.0
NEIC 05 21:35:54.1±0.4, 19.°33S×175.°05W, h35km, mb4.4/4, Error ellipse: s-maj=13.6km s-min=8.0km az=154.0
ISCJB 05 21:36:02.6±0.6, 19.°6S±0.°1×174.°85W±0.°09, h133km, mb3.8/13, Error ellipse: s-maj=20.0km s-min=11.0km az=162.0
ISC 05 21:36:04.2±0.6, 19.°5S±0.°1×174.°78W±0.°09, h133km, n46, σ1.s35/43, mb4.0/13, 1C-1D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	6.27	28	Pn	Pn	21 37 24.4	-10
AFI				Sn	Sn	21 38 28.1	-17
AFI	Afiamalu	6.27	28	Pn	Pn	21 37 24.4	-10
	3.2nm,0.3s,baz=170,slow=23,SNR=2.0						
AFI				Sn	Sn	21 38 28.1	-17
	7.1nm,0.3s,baz=26,slow=23,SNR=4.5						
RAR	Rarotonga	14.18	99	Pn	Pn	21 39 16.9	-2.2
RAR	Rarotonga	14.18	99	Pn	Pn	21 39 16.9	-2.2
	1.6nm,0.3s,baz=270,slow=7.1,SNR=6.8						
DZM	Mont Dzumac	17.74	258	ePn	Pn	21 40 03.3	+0.2
	20nm,0.7s						
DZM	Mont Dzumac	17.74	258	P	Pn	21 40 03.7	+0.7
	1.6nm,0.3s,baz=90,slow=15,SNR=13						
CTAO	Charters Tower	36.61	262	eP	P	21 42 56.7	-1.1
	9.0nm,0.6s						
STKA	Stephens Creek	40.94	244	eP	P	21 43 32.1	-1.6
	0.5nm,0.9s						
STKA	Stephens Creek	40.94	244	P	P	21 43 34.9	+1.1
	1.2nm,0.7s,baz=72,slow=9.6,SNR=2.9						
AS31	Alice Springs	47.69	255	eP	P	21 44 26.3	-1.4
ASAR	Alice Springs	47.69	255	P	P	21 44 26.1	-1.6
ASAR	Alice Springs	47.69	255	P	P	21 44 26.1	-1.6
	5.3nm,0.6s,baz=94,slow=7.5,SNR=38						
WRAB	Tennant Creek	47.73	260	eP	P	21 44 26.0	-2.0
	4.0nm,0.8s						
WRA	Warramunga Arr	47.74	260	P	P	21 44 25.8	-2.3
WRA	Warramunga Arr	47.74	260	P	P	21 44 25.8	-2.3
	2.4nm,0.6s,baz=95,slow=7.4,SNR=18						
VNDA	Vanda	59.17	186	eP	P	21 45 52.6	+2.1
	2.0nm,1.0s						
VNDA	Vanda	59.17	186	P	P	21 45 52.9	+2.3
	1.6nm,0.9s,baz=22,slow=5.2,SNR=5.1						
MJAR	Matsushiro Arr	71.27	322	P	P	21 47 08.5	-0.7
MJAR	Matsushiro Arr	71.27	322	P	P	21 47 08.5	-0.7
	1.9nm,0.8s,baz=165,slow=6.9,SNR=9.1						
PETK	Petropavlovsk-	76.15	343	P	P	21 47 37.6	+0.4
PETK	Petropavlovsk-	76.15	343	P	P	21 47 37.6	+0.4
	3.5nm,1.0s,baz=105,slow=9.3,SNR=3.5						
KSRS	Korea Array	78.20	317	P	P	21 47 50.2	+1.2
	0.9nm,0.6s,baz=127,slow=5.4,SNR=4.4						
KSAR	Wonju Array Be	78.22	317	P	P	21 47 50.2	+1.1
NVAR	Mina Array Bea	78.25	42	P	P	21 47 51.5	+1.9
NVAR	Mina Array Bea	78.25	42	P	P	21 47 51.5	+1.9
	0.9nm,0.7s,baz=224,slow=8.3,SNR=4.6						
TXAR	Lajitas Array	83.99	56	P	P	21 48 21.4	+1.4
TXAR	Lajitas Array	83.99	56	P	P	21 48 21.4	+1.4
	0.4nm,0.7s,baz=218,slow=5.9,SNR=3.8						
COLA	College	86.63	11	P	P	21 48 32.3	+0.2
ILAR	Eielson Array	86.72	12	P	P	21 48 32.6	0.0
ILAR	Eielson Array	86.72	12	P	P	21 48 32.6	0.0
	0.9nm,1.0s,baz=246,slow=5.1,SNR=6.0						
YKA	Yellowknife Ar	94.38	24	P	P	21 49 08.9	+0.5
YKA	Yellowknife Ar	94.38	24	P	P	21 49 08.9	+0.5
	0.4nm,0.8s,baz=246,slow=5.0,SNR=6.9						
ARCES	ARCESS Array B	128.46	351	PKP	PKPdf	21 54 55.1	+0.5
ARCES	ARCESS Array B	128.46	351	PKP	PKPdf	21 54 55.1	+0.5
	8.3nm,1.1s,baz=53,slow=6.2,SNR=4.7						
FINES	FINESS Array B	135.62	346	PKP	PKPdf	21 55 09.2	+0.9
FINES	FINESS Array B	135.62	346	PKP	PKPdf	21 55 09.2	+0.9
	1.7nm,0.8s,baz=15,slow=7.9,SNR=5.4						
CLL	Collm	147.68	351	⇓iPKPbc	PKPab	21 55 33.8	-1.7
	comp=Z,5.0nm,0.7s						
CLL				iPKPab	PKiKP	21 55 35.4	+0.5
BRG	Berggiesshubel	147.95	350	eP	PKPab	21 55 34.7	-1.9
	comp=Z,2.9nm,0.7s						
BRG	Berggiesshubel	147.95	350	iP	PKPab	21 55 34.7	-1.9
	comp=Z,3.8nm,0.5s						
BRTR	Keskin Array B	148.34	316	PKPbc	PKPbc	21 55 35.0	-0.2
BRTR	Keskin Array B	148.34	316	PKPbc	PKPbc	21 55 35.1	-0.2
	comp=Z,1.3nm,0.8s,baz=142,slow=6.3,SNR=9.4						
KHC	Kasperske Hory	149.70	349	⇑ePKP	PKPbc	21 55 39.0	+0.8
MMAI	Mount Meron Ar	149.90	303	PKPbc	PKPbc	21 55 40.5	+1.2
MMAI	Mount Meron Ar	149.90	303	PKPbc	PKPbc	21 55 40.5	+1.2
	comp=Z,1.6nm,0.5s,baz=67,slow=6.4,SNR=6.3						
GERES	GERESS Array B	149.95	349	PKPbc	PKPbc	21 55 39.8	+0.8
GERES	GERESS Array B	149.95	349	PKPbc	PKPbc	21 55 39.8	+0.8
	comp=Z,1.2nm,0.7s,baz=33,slow=3.2,SNR=11						

CSEM 05 21:38:41.4±0.5, 36.°37N×21.°67E, h3km, ML1.8/1, Error ellipse: s-maj=8.5km s-min=5.0km az=50.0
ATH 05 21:38:41.1, 36.°36N×21.°60E, h22km±2km, MD2.9/7
THE 05 21:38:44.4, 36.°50N×21.°78E, h0km±3km, ML1.8/1, Error ellipse: s-maj=3.9km s-min=1.0km az=216.0
ISC 05 21:38:42.2±2.2, 36.°40N±0.°07×21.°70E±0.°06, h4km±10km, n32, σ0.s45/54, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL	PYLOS	0.50	4	P	Pg	21 38 51.7	-0.1
PYL				S	Sg	21 38 59.0	+0.7
PYL	PYLOS	0.50	4	ePN	Pg	21 38 51.9	+0.1
PYL				eSN	Sb	21 39 00.4	-0.8
PYL	PYLOS	0.50	4	P	Pg	21 38 51.7	-0.1
PYL				S	Sg	21 38 59.0	+0.7
PYL				eSn	Sb	21 39 00.4	-0.8
DYR	Agios Nikonas	0.63	54	P	Pg	21 38 53.8	-0.5
DYR				S	Sg	21 39 02.0	-0.4
DYR	Agios Nikonas	0.63	54	ePN	Pg	21 38 54.9	+0.6
DYR	Agios Nikonas	0.63	54	P	Pg	21 38 53.8	-0.5
DYR	Agios Nikonas	0.63	54	ePn	Pg	21 38 54.9	+0.6
DYR				S	Sg	21 39 02.0	-0.4
ITM	Ithomi	0.80	13	P	Pg	21 38 57.5	-0.1
ITM				S	Sg	21 39 07.8	-0.3
ITM	Ithomi	0.80	13	ePN	Pg	21 38 57.7	+0.1
ITM				eSN	Sb	21 39 09.8	-0.1
ITM	Ithomi	0.80	13	P	Pg	21 38 57.5	-0.1
ITM				S	Sg	21 39 07.8	-0.3
ITM				eSn	Sb	21 39 09.8	-0.1
VLI	Veliai	1.05	72	P	Pb	21 39 03.0	+0.1
VLI				S	Sb	21 39 17.2	+0.3
VLI	Veliai	1.05	72	ePN	Pb	21 39 02.7	-0.2
VLI				eSN	Sn	21 39 18.8	+0.1
VLI	Veliai	1.05	72	ePn	Pb	21 39 02.7	-0.2
VLI	Veliai	1.05	72	P	Pb	21 39 03.0	+0.1
VLI				S	Sb	21 39 17.2	+0.3
VLI				eSn	Sn	21 39 18.8	+0.1
KYTH	Kithira	1.08	96	P	Pn	21 39 03.8	-0.4
KYTH	Kithira	1.08	96	ePN	Pb	21 39 03.6	+0.1
KYTH	Kithira	1.08	96	ePn	Pb	21 39 03.6	+0.1
VLX	Vlachokerasia	1.11	29	P	Pg	21 39 03.1	-0.5
VLX				S	Sg	21 39 17.8	-0.3
VLX	Vlachokerasia	1.11	29	ePN	Pg	21 39 03.3	-0.3
VLX	Vlachokerasia	1.11	29	P	Pg	21 39 03.1	-0.5
VLX				S	Sg	21 39 17.8	-0.3
AMT	Artemida-Makis	1.13	0	P	Pg	21 39 03.4	-0.6
AMT				S	Sg	21 39 19.2	+0.5
AMT	Artemida-Makis	1.13	0	ePN	Pg	21 39 03.8	-0.2
AMT				eSN	Sb	21 39 19.8	+0.3
AMT	Artemida-Makis	1.13	0	P	Pg	21 39 03.4	-0.6
AMT	Artemida-Makis	1.13	0	ePn	Pg	21 39 03.8	-0.2
AMT				S	Sg	21 39 19.2	+0.5
AMT				eSn	Sb	21 39 19.8	+0.3
GUR	Goura	1.62	18	P	Pn	21 39 12.0	+0.4
GUR				S	Sn	21 39 32.7	-0.3
GUR	Goura	1.62	18	P	Pn	21 39 12.0	+0.4
GUR				S	Sn	21 39 32.7	-0.3
DID	Didima	1.66	48	P	Pb	21 39 13.2	-0.1
DID	Didima	1.66	48	P	Pb	21 39 13.2	-0.1
RLS	Riolos of Patr	1.67	354	ePN	Pn	21 39 11.7	-0.5
RLS	Riolos of Patr	1.67	354	ePn	Pn	21 39 11.7	-0.5
AGG	Agios Georgios	2.67	11	P	Pn	21 39 27.1	+1.1
AGG	Agios Georgios	2.67	11	P	Pn	21 39 27.1	+1.1

DDA 05 21:40:37.7, 39.°66N×26.°47E, h3km, MD2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZC	Bozcaada	0.37	300	iP	Pg	21 40 45.1	+0.2
BOZC				iS	Sg	21 40 50.1	+0.3
AYVA	Ayvalik	0.39	154	iP	Pg	21 40 44.8	-0.4
AYVA				iS	Sg	21 40 49.8	-0.4
AYVA	Ayvalik	0.39	154	iS	Sg	21 40 49.8	-0.4
BALY	Balya	0.89	84	iP	Pg	21 40 55.1	+0.2
BALY				iS	Sb	21 41 07.5	-0.7

IDC 05 21:49:10.8±1.2, 34.°79N×6.°81E, h0km, mb3.5/7, mb1 3.6/9, mb1mx3.4/32, mbtmp3.5/9, ML3.9/2, MS2.9/1, Ms1 2.9/1, ms1mx2.2/41, Error ellipse: s-maj=29.0km s-min=21.9km az=133.0
ISCJB 05 21:49:11.6±0.3, 34.°96N±0.°03×6.°63E±0.°04, h10km, mb3.4/7, Error ellipse: s-maj=5.0km s-min=3.8km az=33.9
CRAAG 05 21:49:12.3, 34.°83N×6.°50E, Ml3.8
NEIC 05 21:49:15.9±0.5, 34.°78N×6.°65E, h39km±8km, MG4.5(MDD), Error ellipse: s-maj=6.7km s-min=4.8km az=207.0
CSEM 05 21:49:16.1±0.2, 34.°98N×6.°78E, h30km, ML3.8, Error ellipse: s-maj=7.2km s-min=4.8km az=24.0
LDG 05 21:49:20.0±0.4, 35.°21N×6.°19E, h30km, Ml3.4/8, Error ellipse: s-maj=8.5km s-min=4.7km az=144.0
ISC 05 21:49:13.3±0.3, 35.°01N±0.°02×6.°64E±0.°02, h10km, n144, σ1.s55/114, mb3.6/7, 5C-3D, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CASM	Ain Smara	1.25	354	P	Pn	21 49 37.0	0.0
CASM	Ain Smara	1.25	354	P	Pn	21 49 37.0	0.0
CKFL	Kef-Lekhel	1.39	3	P	Pg	21 49 41.0	+1.0
CKFL	Kef-Lekhel	1.39	3	P	Pg	21 49 41.0	+1.0
ABSA	Djebel Ababsia	1.44	28	P	Pn	21 49 40.0	+0.5
ABSA	Djebel Ababsia	1.44	28	P	Pn	21 49 40.0	+0.5
OAR	Oum El Arais	1.52	108	⇑iP	Pn	21 49 40.0	-0.6
OAR	Oum El Arais	1.52	108	⇑iP	Pn	21 49 40.0	-0.6
SET	Setif	1.56	320	P	Pn	21 49 41.0	-0.2
SET	Setif	1.56	320	P	Pn	21 49 41.0	-0.2
CMAH	Djebel Manchou	1.73	21	P	Pn	21 49 43.0	-0.6
CMAH	Djebel Manchou	1.73	21	P	Pn	21 49 43.0	-0.6
CAEH	'Ain El Ouahch	1.78	5	P	Pn	21 49 42.0	-2.1
SYA	Sidi Yaiche	1.80	98	⇑iP	Pn	21 49 44.0	-0.5
SYA	Sidi Yaiche	1.80	98	⇑iP	Pn	21 49 44.0	-0.5
KEST	Kesra	2.33	71	ePn	Pb	21 49 54.6	-0.8
KEST				eS	Sg	21 50 30.8	+2.7
KEST	Kesra	2.33	71	Pn	Pn	21 49 53.7	+2.0
	1.1nm,0.3s,baz=231,slow=3.8,SNR=71						
KEST				Sn	Sg	21 50 29.1	+1.0
	2.8nm,0.3s,baz=358,slow=22,SNR=6.2						
KEST	Kesra	2.33	71	ePn	Pb	21 49 54.6	-0.8
MEDT	Meda	2.85	107	⇑iP	Pb	21 50 05.0	+0.7
SGNT	Sidi Gnaou	2.99	116	⇓iP	Pg	21 50 10.0	-0.7
EMHD	Djebel Mahouad	3.23	293	P	Pn	21 50 08.5	+4.3
EMHD	Djebel Mahouad	3.23	293	P	Pn	21 50 08.5	+4.3
MART	Mareth	3.31	115	⇓iP	Pn	21 50 03.5	-1.7
MART	Mareth	3.31	115	⇓iP	Pn	21 50 03.5	-1.7
ABA	Alger-Bouzarea	3.43	302	P	Pg	21 50 25.0	+6.0
EBNR	Beni Rached	4.35	289	P	Pn	21 50 24.0	+4.4
EBNR	Beni Rached	4.35	289	P	Pn	21 50 24.0	+4.4
ETRT	Tiaret	4.39	276	P	Pn	21 50 18.0	-2.1
ECHA	Ech Chlef	4.45	286	P	Pn	21 50 23.0	+2.2
ECHA	Ech Chlef	4.45	286	P	Pn	21 50 23.0	+2.2
EANR	'Ain N'Sour	4.62	283	P	Pn	21 50 19.0	-4.2
OKGL	Djebel Kef Gue	5.00	284	P	Pn	21 50 27.8	-0.6
OKGL				S	Sn	21 51 25.5	-0.7
OKGL	Djebel Kef Gue	5.00	284	P	Pn	21 50 27.8	-0.6
	8.3nm,0.2s,SNR=7.9						
OKGL				S	Sn	21 51 25.5	-0.7
	41nm,0.4s,SNR=7.9						
LGHD	Ghdames	5.51	154	iP	Pn	21 50 35.0	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	SNR=130						
LGHD				eS	Sn	21 51 36.7	-2.3
	SNR=130						
EIBI	Ibiza	5.83	315	P	Pn	21 50 41.6	+1.7
EIBI				S	Sn	21 51 45.0	-1.8
EIBI	Ibiza	5.83	315	P	Pn	21 50 41.6	+1.7
	39nm,0.4s,SNR=29						
GHAR	Gharyan	6.10	116	i P	Pn	21 50 44.0	+0.4
	SNR=125						
EBEN	Beniarda	6.62	306	P	Pn	21 50 52.8	+2.0
EBEN				S	Sn	21 52 05.1	-1.2
EBEN	Beniarda	6.62	306	P	Pn	21 50 52.8	+2.0
	4.1nm,0.8s,SNR=11						
AFON	Font Roja	6.82	304	P	Pn	21 50 56.3	+2.8
	1.8nm,0.4s,SNR=7.9						
EMUR	La Murta	6.95	296	P	Pn	21 50 54.2	-1.1
EMUR				S	Sn	21 52 08.9	-5.6
ETOB	Tobarra	7.50	301	P	Pn	21 51 02.8	0.0
ETOB				S	Sn	21 52 24.9	-3.1
ETOB	Tobarra	7.50	301	P	Pn	21 51 02.8	0.0
	1.6nm,0.3s,SNR=9.6						
CFON	Fontmartina	7.51	335	P	Pn	21 51 04.5	+1.6
CFON				S	Sn	21 52 25.9	-2.2
CFON	Fontmartina	7.51	335	P	Pn	21 51 04.5	+1.6
	3.1nm,0.2s,SNR=7.9						
ECHE	Chera	7.59	309	P	Pn	21 51 05.9	+1.8
ECHE	Chera	7.59	309	P	Pn	21 51 05.9	+1.8
	3.8nm,0.3s,SNR=6.6						
EPOB	Poblet	7.70	327	P	Pn	21 51 06.8	+1.3
EPOB				S	Sn	21 52 29.4	-3.5
EPOB	Poblet	7.70	327	P	Pn	21 51 06.8	+1.3
	2.0nm,0.2s,SNR=10						
ERTA	Horta de San J	7.75	322	P	Pn	21 51 08.8	+2.6
ERTA				S	Sn	21 52 30.6	-3.4
ERTA	Horta de San J	7.75	322	P	Pn	21 51 08.8	+2.6
	1.9nm,0.3s,SNR=6.0						
PGF	Pioggiola	7.75	13	ePn	Pn	21 51 07.4	+1.1
PGF				eSn	Sn	21 52 28.9	-5.2
	3.2nm,0.5s						
PGF	Pioggiola	7.75	13	ePn	Pn	21 51 07.4	+1.1
EMOS	Mosqueruela	7.77	316	P	Pn	21 51 08.8	+2.2
EMOS				S	Sn	21 52 31.1	-3.6
EMOS	Mosqueruela	7.77	316	P	Pn	21 51 08.8	+2.2
	4.6nm,0.5s,SNR=8.0						
EHUE	Huescar	7.95	293	P	Pn	21 51 11.3	+2.3
EHUE	Huescar	7.95	293	P	Pn	21 51 11.3	+2.3
	1.4nm,0.3s,SNR=7.9						
EBER	Berja	7.95	286	P	Pn	21 51 07.4	-1.7
EBER				S	Sn	21 52 32.3	-7.0
EMIR	Miracle	7.97	331	P	Pn	21 51 10.6	+1.3
EMIR				S	Sn	21 52 37.0	-2.6
EMIR	Miracle	7.97	331	P	Pn	21 51 10.6	+1.3
	7.3nm,0.2s,SNR=20						
CLLI	Llivia	8.30	335	P	Pn	21 51 15.8	+1.9
CLLI	Llivia	8.30	335	P	Pn	21 51 15.8	+1.9
	4.7nm,0.4s,SNR=18						
EQES	Quesada	8.31	292	P	Pn	21 51 15.9	+1.9
EQES				S	Sn	21 52 45.4	-2.5
EQES	Quesada	8.31	292	P	Pn	21 51 15.9	+1.9
	2.4nm,0.4s,SNR=13						
LMR	La Mourre	8.31	359	ePn	Pn	21 51 13.3	-0.6
LMR				eSn	Sn	21 52 39.8	-8.0
	3.0nm,0.4s						
LMR	La Mourre	8.31	359	ePn	Pn	21 51 13.3	-0.6
EQUE	Quentar	8.45	288	P	Pn	21 51 17.8	+2.0
	2.9nm,0.4s,SNR=4.6						
EGUA	Guajares	8.48	285	P	Pn	21 51 16.9	+0.7
EGUA	Guajares	8.48	285	P	Pn	21 51 16.9	+0.7
	3.7nm,0.4s,SNR=7.9						
CSOR	Sort	8.52	331	P	Pn	21 51 19.2	+2.4
CSOR				S	Sn	21 52 53.9	+0.8
CSOR	Sort	8.52	331	P	Pn	21 51 19.2	+2.4
	2.6nm,0.3s,SNR=12						
CSOR				S	Sn	21 52 53.9	+0.8
	4.1nm,0.5s,SNR=7.9						
FRF	La Foret Royal	8.54	0	ePn	Pn	21 51 16.7	-0.3
FRF				eSn	Sn	21 52 44.8	-8.6
	2.8nm,0.4s						
FRF	La Foret Royal	8.54	0	ePn	Pn	21 51 16.7	-0.3
ERON	Agron	8.70	286	P	Pn	21 51 20.9	+1.6
ERON	Agron	8.70	286	P	Pn	21 51 20.9	+1.6
	1.6nm,0.4s,SNR=7.9						
ESAC	San Caprasio	8.72	322	P	Pn	21 51 21.9	+2.4
ESAC				S	Sn	21 52 55.6	-2.3
ESAC	San Caprasio	8.72	322	P	Pn	21 51 21.9	+2.4
	17nm,0.3s,SNR=7.8						
SBF	Sospel	8.86	4	ePn	Pn	21 51 22.1	+0.6
SBF				eSn	Sn	21 52 54.1	-7.4
	8.4nm,0.6s						
SBF	Sospel	8.86	4	ePn	Pn	21 51 22.1	+0.6
ETOR	Torete	8.99	313	P	Pn	21 51 27.6	+4.4
	4.0nm,0.5s,SNR=6.0						
ELOJ	Sierra Loja	8.99	287	P	Pn	21 51 24.9	+1.5
ELOJ	Sierra Loja	8.99	287	P	Pn	21 51 24.9	+1.5
	0.9nm,0.2s,SNR=5.3						
SMRF	Simiane la Rot	8.99	355	ePn	Pn	21 51 22.5	-0.8
SMRF	Simiane la Rot	8.99	355	ePn	Pn	21 51 22.5	-0.8
MTLF	Montolieu	9.00	339	ePn	Pn	21 51 21.2	-2.1
MTLF				eSn	Sn	21 52 52.2	-13
	1.9nm,0.5s						
LASF	Ste Croix	9.31	348	ePn	Pn	21 51 26.4	-1.1
LASF				eSn	Sn	21 53 00.2	-12
	4.1nm,0.5s						
EPF	Esparros	9.39	330	eP	Pn	21 51 31.0	+2.3
EPF				eSn	Sn	21 53 00.9	-13
	5.2nm,0.6s						
EPF	Esparros	9.39	330	eP	Pn	21 51 31.0	+2.3
MDT	Midelt	9.60	260	Pn	Pn	21 51 31.6	-0.2
MDT	Midelt	9.60	260	Pn	Pn	21 51 31.6	-0.2
	0.2nm,0.3s,baz=79,slow=19,SNR=11						
MDT				LR	LR	21 56 02.9	
	comp=Z,72nm,18.6s,baz=89,slow=42						
MDT	Midelt	9.60	260	Pn	Pn	21 51 31.6	-0.2
ESDC	Sonseca Array	9.64	302	Pn	Pn	21 51 34.5	+2.4
ESDC	Sonseca Array	9.64	302	Pn	Pn	21 51 34.5	+2.4
	0.7nm,0.3s,baz=106,slow=14,SNR=13						
ESDC	Sonseca Array	9.64	302	P	Pn	21 51 33.8	+1.7
	0.7nm,0.1s,slow=14,SNR=5.7						
ESDC	Sonseca Array	9.64	302	Pn	Pn	21 51 34.5	+2.4
ESLA	Sonseca Array	9.64	302	ePn	Pn	21 51 34.5	+2.3
ESLA	Sonseca Array	9.64	302	ePn	Pn	21 51 34.5	+2.3
ETSF	Etsaut	9.66	327	eP	Pn	21 51 35.0	+2.5
ETSF	Etsaut	9.66	327	eP	Pn	21 51 35.0	+2.5
IEPA	Eparoz	9.90	324	P	Pn	21 51 39.0	+3.3
	0.9nm,0.2s,SNR=7.9						
IELO	Elcoad	9.94	324	P	Pn	21 51 38.8	+2.6
	1.4nm,0.2s,SNR=7.9						
VIVF	Saint-Julien-l	9.95	352	ePn	Pn	21 51 35.1	-1.3
VIVF				eSn	Sn	21 53 17.7	-10
	1.4nm,0.4s						
EORO	Oroz-Betelu	10.01	324	P	Pn	21 51 40.1	+2.9
	2.7nm,0.3s,SNR=11						
SJPF	Ste Jean	10.14	325	ePn	Pn	21 51 35.5	-3.4
SJPF	Ste Jean	10.14	325	eP	Pn	21 51 41.5	+2.6
SJPF	Ste Jean	10.14	325	eP	Pn	21 51 41.5	+2.6
GUD	Guadarrama	10.22	307	P	Pn	21 51 43.7	+3.5
GUD	Guadarrama	10.22	307	P	Pn	21 51 43.7	+3.5
	1.2nm,0.4s,SNR=7.9						
ELIZ	Elizondo	10.32	325	P	Pn	21 51 44.5	+3.1
ELIZ	Elizondo	10.32	325	P	Pn	21 51 44.5	+3.1
	2.1nm,0.2s,SNR=11						
CAF	Calviac	10.51	342	ePn	Pn	21 51 41.6	-2.4
CAF	Calviac	10.51	342	eP	Pn	21 51 47.2	+3.2
CAF	Calviac	10.51	342	eP	Pn	21 51 47.2	+3.2
ELAN	Lanestosa	11.33	319	P	Pn	21 51 57.8	+2.6
ELAN	Lanestosa	11.33	319	P	Pn	21 51 57.8	+2.6
	0.7nm,0.3s,SNR=7.9						
TAM	Tamanrasset	12.21	185	ePn	Pn	21 52 03.9	-3.6
TAM				eS	Sn	21 54 24.9	+1.1
EARI	Arriondas	12.37	316	P	Pn	21 52 12.9	+3.5
EARI	Arriondas	12.37	316	P	Pn	21 52 12.9	+3.5
	2.9nm,0.6s,SNR=8.8						
ECAL	Calabor	12.55	307	P	Pn	21 52 15.1	+3.1
ECAL	Calabor	12.55	307	P	Pn	21 52 15.1	+3.1
	2.8nm,0.4s,SNR=6.4						
GERES	GERESS Array B	14.78	19	Pn	P	21 52 47.1	-1.4
GERES	GERESS Array B	14.78	19	Pn	P	21 52 47.1	-1.4
	0.1nm,0.3s,baz=191,slow=13,SNR=3.9						
ROSF	Rostrenen	15.22	334	eP	Pn	21 52 50.7	+2.5
EKA	Eskdalemuir Ar	21.43	345	P	P	21 54 01.5	+0.2
EKA	Eskdalemuir Ar	21.43	345	P	P	21 54 01.5	+0.2
	0.4nm,0.5s,baz=152,slow=11,SNR=4.1						
EKA	Eskdalemuir Ar	21.43	345	P	P	21 54 01.5	+0.2
TOA0	Torodi Ar. Sit	22.22	193	eP	P	21 54 06.7	-3.4
TORD	Torodi Ar. Bea	22.22	193	P	P	21 54 06.6	-3.5
TORD	Torodi Ar. Bea	22.22	193	P	P	21 54 06.6	-3.5
	1.8nm,0.5s,baz=9.6,slow=11,SNR=9.9						
AKASG	Malin Array Be	22.67	39	P	P	21 54 14.3	-0.4
AKASG	Malin Array Be	22.67	39	P	P	21 54 14.3	-0.4
	0.4nm,0.4s,baz=234,slow=9.0,SNR=2.8						
AKASG	Malin Array Be	22.67	39	P	P	21 54 14.3	-0.4
FINES	FINESS Array B	29.21	19	P	P	21 55 14.4	-0.4
FINES	FINESS Array B	29.21	19	P	P	21 55 14.4	-0.4
	1.5nm,0.8s,baz=222,slow=5.1,SNR=4.0						
FINES	FINESS Array B	29.21	19	P	P	21 55 14.4	-0.4
ZALV	Zalesovo Beam	55.94	44	P	P	21 58 51.5	+0.1
ZALV	Zalesovo Beam	55.94	44	P	P	21 58 51.5	+0.1
	0.5nm,0.5s,baz=269,slow=7.7,SNR=3.6						
ZALV	Zalesovo Beam	55.94	44	P	P	21 58 51.5	+0.1
MKAR	Makanchi Array	56.31	53	P	P	21 58 53.2	-1.0
MKAR	Makanchi Array	56.31	53	P	P	21 58 53.2	-1.0
	0.4nm,0.6s,baz=288,slow=6.1,SNR=6.3						
MKAR	Makanchi Array	56.31	53	P	P	21 58 53.2	-1.0
YKA	Yellowknife Ar	72.05	335	P	P	22 00 38.6	+1.4
YKA	Yellowknife Ar	72.05	335	P	P	22 00 38.6	+1.4
	0.1nm,0.5s,baz=51,slow=6.8,SNR=2.8						
YKA	Yellowknife Ar	72.05	335	P	P	22 00 38.6	+1.4

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*IDC **05** 22:00:56.8±2.8, 8°.51S×112°.56E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/21, mbtmp3.5/4, Error ellipse: s-maj=160.2km s-min=22.2km az=49.0*
*ISCJB **05** 22:00:57.9±1.0, 9°.52S±0°.09×111°.71E±0°.09, h33km, mb3.5/4, Error ellipse: s-maj=15.8km s-min=9.1km az=44.0*
*DJA **05** 22:00:59.5±1.0, 9°S±9°×11°2E±°, h50km, M3.5/7, MLv3.5/7*
ISC 05 22:00:59.7±1.3, **9°.4S**±0°.1×**111°.73E**±0°.07, **h35**km, **n11**, σ**1ˢ64**/12, **mb3.5**/4, **South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCJI	Pacitan	1.35	336	P	Pn	22 01 21.1	-0.9
PCJI				S	Sn	22 01 40.8	+2.1
PWJI	Pagerwojo	1.40	3	P	Pn	22 01 22.3	-0.5
SJI	Sawahan	1.69	1	P	Pn	22 01 26.5	-0.3
UGM	Wanagama	1.93	322	P	Pn	22 01 29.4	-0.6
GMJI	Gumukmas	2.05	56	P	Pn	22 01 29.7	-1.9
BLJI	Banyuglugur	2.49	48	P	Pn	22 01 40.3	+2.6
CISI	Cisompet, Garu	4.30	295	P	Pn	22 02 03.6	+0.9
WRA	Warramunga Arr	24.20	118	P	P	22 06 12.7	-0.5
	0.8nm,0.7s,baz=293,slow=12,SNR=6.2						
ASAR	Alice Springs	25.48	126	P	P	22 06 26.6	+1.8
	0.5nm,0.6s,baz=306,slow=9.1,SNR=6.7						
MKAR	Makanchi Array	61.83	337	P	P	22 11 13.9	-1.3
	0.4nm,0.5s,baz=150,slow=7.7,SNR=8.9						
ZALV	Zalesovo Beam	67.12	343	P	P	22 11 48.2	-1.4
	0.3nm,0.4s,baz=144,slow=5.2,SNR=2.7						

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*ISCJB **05** 22:02:58.4±0.5, 44°.25N±0°.04×11°.97E±0°.06, h31km±6km, Error ellipse: s-maj=7.2km s-min=6.0km az=135.4*
*CSEM **05** 22:02:58.6±0.2, 44°.24N×11°.93E, h30km, MD2.5, Error ellipse: s-maj=5.5km s-min=3.6km az=100.0*
*ROM **05** 22:02:58.2±0.2, 44°.24N×11°.96E, h29km±2km, Md2.3/11, Ml1.8/4, Error ellipse: s-maj=3.0km s-min=1.9km az=115.0*
ISC 05 22:02:58.7±0.7, **44°.23N**±0°.03×**11°.91E**±0°.03, **h28**km±5km, **n33**, σ**0ˢ90**/47, **6C-2D**, **Northern Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAEN	Faenza	0.06	340	Pg	Pb	22 03 03.1	-0.4
FAEN				Sg	Sb	22 03 07.6	+0.8
FAEN	Faenza	0.06	340	ePg	Pb	22 03 03.1	-0.4
FAEN				eSg	Sb	22 03 07.6	+0.8
BRSN	Barisano	0.13	67	Pg	Pb	22 03 03.8	-0.2
	1.0nm,0.2s						
BRSN	Barisano	0.13	67	Pg	Pb	22 03 03.8	-0.2
	1.0nm,0.2s						
SFI	Santa Sofia	0.33	187	Pg	Pb	22 03 06.0	-0.4
SFI				Sg	Sb	22 03 12.2	+0.6
SFI	Santa Sofia	0.33	187	ePg	Pb	22 03 06.0	-0.4
SFI				eSg	Sb	22 03 12.2	+0.6
MTRZ	Monterenzio	0.35	295	Pg	Pn	22 03 07.3	-0.6
	68nm,0.3s						
MTRZ	Monterenzio	0.35	295	Pg	Pn	22 03 07.3	-0.6
	68nm,0.3s						
VMG	Vicchio	0.38	224	Pg	Pb	22 03 06.9	-0.2
VMG				Sg	Sn	22 03 13.9	-0.7
VMG	Vicchio	0.38	224	ePg	Pb	22 03 06.9	-0.2
VMG				eSg	Sn	22 03 13.9	-0.7
SEI	Scarperia	0.43	246	Pg	Pb	22 03 07.8	-0.2
SEI				Sg	Sn	22 03 15.9	-0.1
SEI	Scarperia	0.43	246	ePg	Pb	22 03 07.8	-0.2
SEI				eSg	Sn	22 03 15.9	-0.1
ASQU	Asqua	0.44	191	Pg	Pb	22 03 08.0	-0.1
ASQU				Sg	Sb	22 03 15.6	+1.0
ASQU	Asqua	0.44	191	ePg	Pb	22 03 08.0	-0.1
ASQU				eSg	Sb	22 03 15.6	+1.0
PARC	Parchiule	0.63	157	Pg	Pb	22 03 11.3	+0.1
	35nm,0.5s						
PARC	Parchiule	0.63	157	Pg	Pb	22 03 11.3	+0.1
	35nm,0.5s						
CRMI	Carmignano	0.81	237	Pg	Pb	22 03 15.1	+1.0
	19nm,0.5s						
CRMI	Carmignano	0.81	237	Pg	Pb	22 03 15.1	+1.0
	19nm,0.5s						
ADRI	Adria, Italy	0.81	6	⇑ePg	Pb	22 03 14.6	+0.4
ADRI				eSg	Sn	22 03 27.1	+1.8
ADRI	Adria, Italy	0.81	6	⇑ePg	Pb	22 03 14.6	+0.4
ADRI				eSg	Sn	22 03 27.1	+1.8
PIEI	Pieia	0.83	147	Pg	Pb	22 03 14.8	+0.2
	27nm,0.5s						
PIEI	Pieia	0.83	147	Pg	Pb	22 03 14.8	+0.2
	27nm,0.5s						
TEOL	Teolo	1.14	352	⇑ePg	Pn	22 03 15.3	-3.5
TEOL	Teolo	1.14	352	ePg	Pn	22 03 15.3	-3.5
CGRP	Cima Grappa	1.65	357	⇓ePg	Pn	22 03 24.3	-1.6
CGRP				eSg	Sn	22 03 43.8	-2.5
CGRP	Cima Grappa	1.65	357	⇓ePg	Pn	22 03 24.3	-1.6
CGRP				eSg	Sn	22 03 43.8	-2.5
DDS	Dosso del Somm	1.73	343	⇑ePg	Pn	22 03 26.9	-0.1
DDS	Dosso del Somm	1.73	343	⇑ePg	Pn	22 03 26.9	-0.1
CTI	Castel Tesino	1.82	354	Pg	Pn	22 03 28.0	-0.3
CTI	Castel Tesino	1.82	354	ePg	Pn	22 03 28.0	-0.3
NVLJ	Novalja	2.15	80	i Pn	Pn	22 03 32.4	-0.3
NVLJ				Sn	Sn	22 03 58.0	-0.4
NVLJ	Novalja	2.15	80	i Pn	Pn	22 03 32.3	-0.3
NVLJ				Sn	Sn	22 03 57.9	-0.4
KOSI	Kohlern	2.26	351	⇑ePn	Pn	22 03 34.9	+0.6

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*ISCJB **05** 22:08:38.2±1.1, 3°.9S±0°.1×100°.23E±0°.09, h29km, mb4.1/6, Error ellipse: s-maj=18.8km s-min=7.3km az=40.1*
*IDC **05** 22:08:41.1±3.2, 3°.25S×100°.76E, h0km, mb4.0/6, mb1 4.0/7, mb1mx3.8/25, mbtmp4.0/7, ML3.1/1, Error ellipse: s-maj=73.3km s-min=41.4km az=40.0*
*DJA **05** 22:08:47.5±1.9, 2°S±5°×10°3E±°, h23km±25km, M4.5/6, mb4.7/1, MLv4.4/6*
ISC 05 22:08:41.3±1.2, **3°.7S**±0°.1×**100°.3E**±0°.1, **h29**km, **n15**, σ**1ˢ54**/17, **mb4.2**/6, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRJI	Kerinci	1.96	35	P	Pn	22 09 11.9	-0.8
KSI	Kapahiang	2.25	88	P	Pb	22 09 20.2	-1.0
KSI				S	Sn	22 09 46.0	+2.6
PPI	Padang Panjang	3.24	1	P	Pn	22 09 31.2	+1.1
LWLI	Liwa	3.92	109	P	Pn	22 09 40.9	+1.2
KASI	Kota Agung	4.51	114	P	Pn	22 09 48.0	+0.3
KASI				S	Sn	22 10 37.8	-1.5
CGJI	Cibinong	6.06	119	P	Pn	22 10 08.6	-0.3
PSI	Prapat	6.62	348	Pn	Pn	22 10 14.7	-2.2
	0.5nm,0.3s,baz=327,slow=24,SNR=8.8						
CISI	Cisompet, Garu	8.36	117	P	Pn	22 10 40.2	-0.4
CISI				S	Sn	22 12 05.2	-8.9
CMAR	Chiang Mai Arr	22.07	356	P	P	22 13 32.5	-1.7
	1.8nm,0.6s,baz=186,slow=8.9,SNR=13						
KSRS	Korea Array	48.32	30	P	P	22 17 20.4	+0.2
	2.2nm,0.7s,baz=224,slow=6.9,SNR=9.0						
SONM	Songino Array	51.61	5	P	P	22 17 46.5	+1.4
	3.0nm,0.8s,baz=190,slow=8.7,SNR=25						
MKAR	Makanchi Array	52.76	344	P	P	22 17 55.1	+1.5
	1.4nm,0.6s,baz=150,slow=8.9,SNR=18						
MJAR	Matsushiro Arr	53.39	38	P	P	22 17 56.6	-1.9
	0.4nm,0.4s,baz=219,slow=11,SNR=4.5						
ZALV	Zalesovo Beam	58.91	349	P	P	22 18 38.6	+1.2
	3.0nm,0.9s,baz=155,slow=4.6,SNR=14						
TXAR	Lajitas Array	145.83	39	PKPbc	PKPab	22 28 20.7	+1.7
	1.4nm,0.5s,baz=305,slow=2.6,SNR=12						

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*DDA **05** 22:08:58.6, 39°.61N×26°.42E, h26km, MD2.9*
*ISCJB **05** 22:08:59.5±0.6, 39°.61N±0°.02×26°.45E±0°.04, h3km±5km, Error ellipse: s-maj=5.1km s-min=3.6km az=155.5*
*CSEM **05** 22:08:59.5±0.2, 39°.61N×26°.43E, h2km, MD2.9, Error ellipse: s-maj=5.2km s-min=2.9km az=76.0*
*ISK **05** 22:08:59.4, 39°.65N×26°.46E, h3km, MD2.9*
ISC 05 22:08:60.0±0.9, **39°.61N**±0°.02×**26°.43E**±0°.03, **h9**km±9km, **n65**, σ**0ˢ87**/86, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EZN	Ezine	0.23	338	ePG	Pg	22 09 04.6	-0.1
EZN				eSG	Sg	22 09 08.0	+0.2
EZN	Ezine	0.23	338	ePg	Pg	22 09 04.6	-0.1
EZN				eSg	Sg	22 09 08.0	+0.2
AYVA	Ayvalik	0.36	147	i P	Pg	22 09 07.0	-0.2
AYVA				i S	Sg	22 09 12.1	+0.1
AYVA	Ayvalik	0.36	147	i P	Pg	22 09 07.0	-0.2
AYVA				i S	Sg	22 09 12.1	+0.1
BOZC	Bozcaada	0.37	308	i P	Pg	22 09 07.1	-0.2
BOZC				i S	Sg	22 09 12.6	+0.3
GELI	Tayfur-Gelibol	0.78	2	ePG	Pg	22 09 14.6	-0.5
GELI				eSG	Sb	22 09 25.7	-0.8
GELI	Tayfur-Gelibol	0.78	2	ePg	Pg	22 09 14.6	-0.5
GELI				eSg	Sb	22 09 25.7	-0.8
LPK	Lapseki	0.80	18	ePG	Pg	22 09 14.9	-0.5
LPK	Lapseki	0.80	18	ePg	Pg	22 09 14.9	-0.5
BALY	Balya	0.92	82	i P	Pg	22 09 17.4	-0.4
BALY				i S	Sg	22 09 29.9	+0.1
BALY	Balya	0.92	82	i P	Pg	22 09 17.4	-0.4
BALY				i S	Sg	22 09 29.9	+0.1
KRBG	Karabiga-Canak	1.02	40	ePG	Pg	22 09 18.7	-0.9
KRBG	Karabiga-Canak	1.02	40	ePg	Pg	22 09 18.7	-0.9
GONE	Gonen-Balikesi	1.06	65	ePG	Pg	22 09 19.3	-1.0
GONE				eSG	Sb	22 09 34.6	+0.3
GONE	Gonen-Balikesi	1.06	65	ePg	Pg	22 09 19.3	-1.0
GONE				eSg	Sb	22 09 34.6	+0.3
BALB	Balikesir	1.12	88	ePN	Pb	22 09 21.1	-0.3
BALB				eSN	Sb	22 09 37.0	+0.9
BALB	Balikesir	1.12	88	ePn	Pb	22 09 21.1	-0.3
BALB				eSn	Sb	22 09 37.0	+0.9
ENEZ	Enez	1.14	349	ePN	Pb	22 09 21.6	-0.3
ENEZ	Enez	1.14	349	ePn	Pb	22 09 21.6	-0.3
RKY	Sarkoy-Tekirda	1.22	28	ePN	Pg	22 09 22.5	-0.8
RKY	Sarkoy-Tekirda	1.22	28	ePn	Pg	22 09 22.5	-0.8
SART	Tekirdag	1.22	28	i P	Pg	22 09 21.2	-2.2
SART				i S	Sb	22 09 39.0	-0.1
SART	Tekirdag	1.22	28	i P	Pg	22 09 21.2	-2.2
SART				i S	Sb	22 09 39.0	-0.1
URLA	Izmir	1.26	174	i P	Pg	22 09 22.3	-1.8
URLA				i S	Sg	22 09 38.6	-1.9
URLA	Izmir	1.26	174	i P	Pg	22 09 22.3	-1.8
URLA				i S	Sg	22 09 38.6	-1.9
AKHS	Akhisar	1.30	124	i P	Pg	22 09 23.4	-1.5
AKHS				i S	Sb	22 09 41.5	+0.2
AKHS	Akhisar	1.30	124	i P	Pg	22 09 23.4	-1.5
AKHS				i S	Sb	22 09 41.5	+0.2
AKS	Akhisar	1.30	124	ePN	Pb	22 09 24.9	+0.4
AKS	Akhisar	1.30	124	ePn	Pb	22 09 24.9	+0.4
BLCB	Balcova	1.31	159	ePN	Pb	22 09 25.5	+0.7
BLCB	Balcova	1.31	159	ePn	Pb	22 09 25.5	+0.7
EDC	Edincik	1.32	56	ePN	Pg	22 09 24.7	-0.7
EDC	Edincik	1.32	56	ePn	Pg	22 09 24.7	-0.7
MFT	Murefte	1.34	29	ePN	Pb	22 09 25.3	0.0
MFT	Murefte	1.34	29	ePn	Pb	22 09 25.3	0.0
BNT	Bandirma	1.36	57	ePN	Pn	22 09 24.7	-0.5
BNT	Bandirma	1.36	57	ePn	Pn	22 09 24.7	-0.5
IZM	Izmir	1.38	152	ePN	Pg	22 09 26.4	0.0
IZM	Izmir	1.38	152	ePn	Pg	22 09 26.4	0.0
DURS	Dursunbey	1.58	90	i P	Pb	22 09 29.4	+0.1
DURS				i S	Sn	22 09 49.0	+0.3
DURS	Dursunbey	1.58	90	i P	Pb	22 09 29.4	+0.1
DURS				i S	Sn	22 09 49.0	+0.3
DST	Dursunbey	1.69	90	ePN	Pn	22 09 30.4	+0.8
DST	Dursunbey	1.69	90	ePn	Pn	22 09 30.5	+0.8
CRLT	Corlu	1.81	33	ePN	Pb	22 09 32.7	-0.6
CRLT	Corlu	1.81	33	ePn	Pb	22 09 32.7	-0.6
DEMI	Demirci	1.86	107	i P	Pn	22 09 32.0	-0.1
DEMI	Demirci	1.86	107	i P	Pn	22 09 32.0	-0.1
ORLT	Orhaneli	1.94	76	ePN	Pn	22 09 34.0	+0.9
ORLT	Orhaneli	1.94	76	ePn	Pn	22 09 34.1	+0.9
KULA	Kula-Manisa	2.05	122	ePN	Pn	22 09 36.0	+1.3
KULA	Kula-Manisa	2.05	122	ePn	Pn	22 09 36.0	+1.3
ARMT	Armutlu	2.09	62	ePN	Pn	22 09 36.1	+0.9
ARMT	Armutlu	2.09	62	ePn	Pn	22 09 36.1	+0.9
EDRB	Edirne	2.24	6	ePN	Pn	22 09 38.4	+1.1
EDRB	Edirne	2.24	6	ePn	Pn	22 09 38.4	+1.1
CTKS	Kestanelik-??a	2.27	44	ePN	Pn	22 09 38.6	+1.1
CTKS	Kestanelik-??a	2.27	44	ePn	Pn	22 09 38.6	+1.1
GEMT	Gemlik	2.27	68	ePN	Pn	22 09 38.5	+0.9
GEMT	Gemlik	2.27	68	ePn	Pn	22 09 38.5	+0.9
TVSB	Tavsanli	2.35	93	ePN	Pn	22 09 39.9	+1.1
TVSB	Tavsanli	2.35	93	ePn	Pn	22 09 39.9	+1.1
BGKT	Bogazkoy	2.38	48	ePN	Pn	22 09 40.1	+1.0
BGKT	Bogazkoy	2.38	48	ePn	Pn	22 09 40.1	+1.0
YLV	Yalova	2.45	66	ePN	Pn	22 09 41.1	+1.0
YLV	Yalova	2.45	66	ePn	Pn	22 09 41.2	+1.0

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*ISCJB **05** 22:10:22.9±0.3, 44°.26N±0°.03×11°.97E±0°.05, h28km±4km, Error ellipse: s-maj=5.4km s-min=5.0km az=7.8*
*CSEM **05** 22:10:23.3±0.2, 44°.24N×11°.93E, h26km±2km, MD2.7, Error ellipse: s-maj=5.2km s-min=4.1km az=90.0*
*PRU **05** 22:10:23.3, 44°.41N×12°.07E, h0km*
*ROM **05** 22:10:23.8±0.2, 44°.20N×11°.91E, h22km±3km, Md2.3/18, Ml1.8/9, Error ellipse: s-maj=2.9km s-min=2.4km az=121.0*
ISC 05 22:10:22.8±0.9, **44°.25N**±0°.03×**11°.95E**±0°.03, **h29**km±5km, **n56**, σ**0ˢ85**/68, **8C-10D**, **Northern Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAEN	Faenza	0.06	307	⇑iPg	Pb	22 10 27.4	-0.3
FAEN				Sg	Sb	22 10 31.9	+0.8
FAEN	Faenza	0.06	307	⇑iPg	Pb	22 10 27.4	-0.3
FAEN				eSg	Sb	22 10 31.9	+0.8
BRSN	Barisano	0.10	72	⇑iPg	Pb	22 10 28.1	+0.2
	1.0nm,0.2s						
BRSN	Barisano	0.10	72	⇑iPg	Pb	22 10 28.1	+0.2
	1.0nm,0.2s						
CMPO	Campotto Po	0.34	343	Pg	Pn	22 10 31.9	+0.1
	203nm,1.3s						
CMPO	Campotto Po	0.34	343	Pg	Pn	22 10 31.9	+0.1
	203nm,1.3s						
SFI	Santa Sofia	0.35	192	⇓iPg	Pb	22 10 30.3	-0.6
SFI				Sg	Sb	22 10 35.4	-1.0
	147nm,0.3s						
SFI	Santa Sofia	0.35	192	⇓iPg	Pb	22 10 30.3	-0.6
SFI				eSg	Sb	22 10 35.4	-1.0
MTRZ	Monterenzio	0.36	290	Pg	Pb	22 10 31.5	+0.4
	94nm,0.4s						
MTRZ	Monterenzio	0.36	290	Pg	Pb	22 10 31.5	+0.4
	94nm,0.4s						
VMG	Vicchio	0.41	225	⇓iPg	Pb	22 10 31.0	-0.7
VMG				Sg	Sb	22 10 37.7	-0.1
	42nm,0.2s						
VMG	Vicchio	0.41	225	⇓iPg	Pb	22 10 31.0	-0.7
VMG				eSg	Sb	22 10 37.7	-0.1
SEI	Scarperia	0.47	245	Pg	Pb	22 10 31.8	-0.8
SEI				Sg	Sb	22 10 39.0	-0.4
	113nm,0.3s						
SEI	Scarperia	0.47	245	ePg	Pb	22 10 31.8	-0.8
SEI				eSg	Sb	22 10 39.0	-0.4
RSM	Repubblica di	0.49	131	Pg	Pn	22 10 34.9	+1.1
	1.0nm,0.2s						
RSM	Repubblica di	0.49	131	Pg	Pn	22 10 34.9	+1.1
	1.0nm,0.2s						
FIU	Minerbio Fiu	0.51	320	Pg	Pn	22 10 35.6	+1.6
FIU	Minerbio Fiu	0.51	320	ePg	Pn	22 10 35.6	+1.6
FNVD	Fontana Vidola	0.60	262	Pg	Pb	22 10 34.4	-0.4
FNVD	Fontana Vidola	0.60	262	Pg	Pb	22 10 34.4	-0.4
PARC	Parchiule	0.64	161	Pg	Pb	22 10 35.4	-0.1
	37nm,0.5s						
PARC	Parchiule	0.64	161	Pg	Pb	22 10 35.4	-0.1
	37nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BADI	Badiali	0.77	164	Pg	Pn	22 10 38.2	+0.5
	39nm,0.5s						
BADI	Badiali	0.77	164	Pg	Pn	22 10 38.2	+0.5
	39nm,0.5s						
ADRI	Adria, Italy	0.79	4	ePg	Pn	22 10 38.8	+0.9
ADRI	Adria, Italy	0.79	4	ePg	Pn	22 10 38.8	+0.9
PIEI	Pieia	0.83	149	Pg	Pn	22 10 39.7	+1.1
	17nm,0.6s						
PIEI	Pieia	0.83	149	Pg	Pn	22 10 39.7	+1.1
	17nm,0.6s						
CRMI	Carmignano	0.84	237	Pg	Pn	22 10 39.2	+0.5
CRMI	Carmignano	0.84	237	Pg	Pn	22 10 39.2	+0.5
CSNT	Castellina Chi	0.91	211	Pg	Pb	22 10 40.5	+0.5
	22nm,0.7s						
CSNT	Castellina Chi	0.91	211	Pg	Pb	22 10 40.5	+0.5
	22nm,0.7s						
CAFI	Castiglion Fio	0.92	179	Pg	Pb	22 10 40.2	0.0
	28nm,0.5s						
CAFI	Castiglion Fio	0.92	179	Pg	Pb	22 10 40.2	0.0
	28nm,0.5s						
BDI	Bagni Di Lucca	0.99	259	Pg	Pb	22 10 42.7	+1.4
	22nm,0.6s						
BDI	Bagni Di Lucca	0.99	259	Pg	Pb	22 10 42.7	+1.4
	22nm,0.6s						
PII	Pisa	1.15	243	Pg	Pb	22 10 44.5	+0.4
	18nm,0.4s						
PII	Pisa	1.15	243	Pg	Pb	22 10 44.5	+0.4
	18nm,0.4s						
CGRP	Cima Grappa	1.63	356⇓	ePg	Pn	22 10 48.5	-1.2
CGRP				eSg	Sn	22 11 08.7	-1.1
CGRP	Cima Grappa	1.63	356	ePg	Pn	22 10 48.5	-1.2
CGRP				eSg	Sn	22 11 08.7	-1.1
DDS	Dosso del Somm	1.71	342⇓	ePg	Pn	22 10 50.7	-0.1
DDS	Dosso del Somm	1.71	342⇓	ePg	Pn	22 10 50.7	-0.1
PANI	Panarotta	1.85	346⇑	ePg	Pn	22 10 53.0	+0.3
PANI	Panarotta	1.85	346⇑	ePg	Pn	22 10 53.0	+0.3
NVLJ	Novalja	2.12	81	i Pn	Pn	22 10 56.7	+0.5
NVLJ				Sn	Sn	22 11 21.9	+0.3
NVLJ	Novalja	2.12	81	i Pn	Pn	22 10 56.7	+0.5
NVLJ				Sn	Sn	22 11 21.8	+0.3
VINO	Villanova	2.21	25⇓	ePn	Pn	22 10 57.5	-0.1
VINO	Villanova	2.21	25⇓	ePn	Pn	22 10 57.5	-0.1
ZOU	Zoufplan	2.42	17⇑	ePn	Pn	22 11 00.8	+0.3
ABSI	Aberstueckl	2.52	350⇑	ePn	Pn	22 11 02.6	+0.8
ACOM	Acomizza, Ital	2.55	25	ePn	Pn	22 11 03.1	+0.8
ACOM	Acomizza, Ital	2.55	25	ePn	Pn	22 11 03.1	+0.8
MOSI	Grossmontoni	2.56	338	ePn	Pn	22 11 04.5	+2.0
RISI	Rein	2.70	2⇓	ePn	Pn	22 11 05.9	+1.5
KHC	Kasperske Hory	5.01	12	eSN	Sn	22 12 31.1	-1.7
KHC	Kasperske Hory	5.01	12	Sn	Sn	22 12 31.1	-1.7

*IDC **05** 22:11:11.9±0.6, 9°.23S×124°.13E, h0^{km}, mb4.5/14, mb1 4.6/15, mb1mx4.5/19, mbtmp4.5/15, ML4.3/1, MS4.0/15, Ms1 4.0/15, ms1mx3.7/34, Error ellipse: s-maj=25.3km s-min=15.3km az=65.0*

*ISCJB **05** 22:11:13.9±0.6, 9°.45S±0°.03×124°.22E±0°.04, h33^{km}±6^{km}, mb4.7/44, MS4.0/18, Error ellipse: s-maj=7.4km s-min=5.0km az=153.2*

*BJI **05** 22:11:15.0, 9°.40S×124°.00E, h35^{km}, mB5.0/24, mb4.8/34, Ms4.6/18, Ms7 4.3/19*

*NEIC **05** 22:11:17.2±0.2, 9°.35S×124°.04E, h35^{km}, mb4.7/21, Error ellipse: s-maj=10.3km s-min=5.8km az=58.0*

NEIC Felt at Kupang.

*DJA **05** 22:11:20.1±0.5, 10°S±3°×12°4E±°, h41^{km}±8^{km}, M5.1/25, mB5.2/6, mb4.9/25, MLv5.5/1, Mw(mB)4.6/6*

ISC 05 22:11:17.6±0.3, **9°.40S**±0°.04×**124°.08E**±0°.05, **h35**^{km}±3^{km}, **n149**, σ1s.**67**/179, **mb4.8**/44, **MS4.0**/18, **1D**, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	1.97	292	P	Pn	22 11 47.4	-1.0
BBSI	Bau Bau	4.16	339	P	Pn	22 12 18.2	-0.4
KDI	Kendari	5.60	345	P	Pn	22 12 38.5	+0.2
BKSI	Bulukumba	5.64	316	P	Pn	22 12 39.4	+0.5
KAPI	Kappang	6.11	315	ePn	Pn	22 12 44.6	-0.8
	42nm,0.8s						
KAPI				eSn	Sn	22 13 52.3	-2.0
KAPI	Kappang	6.11	315	Pn	Pn	22 12 46.1	+0.6
	2.4nm,0.3s,baz=160,slow=14,SNR=9.8						
KAPI				LR	LR	22 15 17.3	
	comp=Z,2µm,19.7s,baz=135,slow=41						
TTSI	Tana Toraja	7.60	326	P	Pn	22 13 10.4	+4.5
	66nm,1.1s,3µm						
LUWI	Luwuk	8.40	351	P	Pn	22 13 17.7	+0.8
FITZ	Fitzroy Crossi	8.78	170	Pn	Pn	22 13 20.5	-1.7
FITZ				Sn	Sn	22 14 53.6	-6.4
FITZ	Fitzroy Crossi	8.78	170	Pn	Pn	22 13 20.5	-1.7
	2.7nm,0.3s,baz=9.0,slow=8.6,SNR=40						
FITZ				Sn	Sn	22 14 53.6	-6.4
	3.2nm,0.3s,baz=86,slow=5.8,SNR=4.1						
FITZ				LR	LR	22 17 27.1	
	comp=Z,465nm,20.6s,baz=354,slow=42						
LBMI	Labuha	9.35	22	P	Pn	22 13 36.0	+6.2
	54nm,1.4s,1µm						
TLE	Tual	9.36	67	P	Pn	22 13 27.1	-3.0
	184nm,0.9s						
FAKI	Fak Fak	10.36	52	P	Pn	22 13 42.8	-1.0
	50nm,1.2s						
BBKI	Banjar Baru	10.91	302	P	Pn	22 13 55.5	+4.3
	50nm,1.1s						
SWI	Sorong	11.09	41	P	Pn	22 13 57.2	+3.5
	30nm,1.0s						
MBWA	Marble Bar	12.42	199	ePn	Pn	22 14 11.4	-0.5
MBWA				eSn	Sn	22 16 29.4	+0.2
WRA	Warramunga Arr	14.43	138	Pn	Pn	22 14 32.4	-7.0
WRA				Sn	Sn	22 17 05.5	-13
WRA	Warramunga Arr	14.43	138	Pn	Pn	22 14 32.4	-7.0
	2.9nm,0.3s,baz=312,slow=14,SNR=66						
WRA				Sn	Sn	22 17 05.5	-13
	1.2nm,0.3s,baz=312,slow=23,SNR=11						
WRA				LR	LR	22 21 12.2	
	comp=Z,639nm,18.8s,baz=315,slow=41						
WRAB	Tennant Creek	14.43	138	ePn	Pn	22 14 33.2	-6.2
WRAB				eSn	Sn	22 17 13.7	-4.6
BAKI	Biak	14.48	56	P	Pn	22 14 39.5	-0.6
	130nm,1.1s						
MYLDM	Lahad Datu	15.51	339	P	P	22 14 59.5	+1.7
	46nm,1.4s,997nm						
WAMI	Wamena	15.53	70	P	P	22 15 02.4	+4.4
STKI	Sintang	15.68	306	P	P	22 15 07.3	+7.7
CISI	Cisompet, Garu	16.19	275	P	P	22 15 08.8	+3.4
	77nm,0.9s						
LEM	Lembang	16.50	278	P	P	22 15 12.5	+3.6
	69nm,0.7s						
AS31	Alice Springs	17.02	148	ePn	Pn	22 15 07.5	-5.4
AS31				eSn	Sn	22 18 09.6	-12
ASAR	Alice Springs	17.02	148	P	Pn	22 15 07.8	-5.2
ASAR				S	Sn	22 18 10.3	-11
ASAR	Alice Springs	17.02	148	P	Pn	22 15 07.8	-5.2
	1.5nm,0.3s,baz=320,slow=12,SNR=62						
ASAR				S	Sn	22 18 10.3	-11
	0.5nm,0.3s,baz=310,slow=21,SNR=6.0						
ASAR				LR	LR	22 22 22.6	
	comp=Z,452nm,20.6s,baz=319,slow=39						
KKM	Kota Kinabalu	17.23	333	ePn	Pn	22 15 14.5	-1.2
	36nm,0.6s						
KKM	Kota Kinabalu	17.23	333	P	P	22 15 21.6	+4.7
	52nm,0.8s,681nm						
KSM	Kuching	17.46	308	ePn	Pn	22 15 17.6	-0.8
	32nm,1.4s						
KSM	Kuching	17.46	308	P	P	22 15 21.9	+2.5
	21nm,2.3s						
SKJI	Sukabumi	17.50	276	P	P	22 15 22.9	+3.0
	114nm,1.0s						
JAY	Jayapura	17.89	69	P	Pn	22 15 23.6	-0.2
	63nm,1.2s						
CGJI	Cibinong	18.41	277	P	Pn	22 15 31.3	+1.1
	62nm,0.7s						
COEN	Coen	19.24	105	eP	P	22 15 38.9	-0.1
	119nm,0.8s						
KASI	Kota Agung	19.79	280	P	Pn	22 15 45.9	-0.9
	102nm,0.9s,842nm						
FORT	Forrest	21.59	171	eP	P	22 16 04.0	-0.4
	76nm,0.8s						
FORT				eS	Sn	22 20 13.4	+2.0
PMG	Port Moresby	22.77	92	eP	P	22 16 17.2	0.0
	17nm,0.8s						
PMG	Port Moresby	22.77	92	P	P	22 16 23.9	+6.7
PMG	Port Moresby	22.77	92	P	P	22 16 21.8	+4.6
	16nm,0.7s,baz=267,slow=7.4,SNR=10.0						
CTA	Charters Tower	23.90	119	P	P	22 16 28.2	-0.1
CTA	Charters Tower	23.90	119	P	P	22 16 28.2	-0.1
	18nm,0.8s,baz=288,slow=13,SNR=7.0						
CTA				LR	LR	22 26 59.6	
	comp=Z,478nm,18.8s,baz=279,slow=40						
CTAO	Charters Tower	23.90	119	eP	P	22 16 28.6	+0.3
	22nm,0.9s						
NWAO	Narrogin (SRO)	24.25	194	LR	LR	22 27 39.4	
	comp=Z,396nm,19.3s,baz=14,slow=40						
STKA	Stephens Creek	27.65	147	eP	P	22 17 02.7	+0.6
STKA				PP	PnPn	22 17 53.0	+4.5
STKA	Stephens Creek	27.65	147	P	P	22 17 02.3	+0.2
	11nm,0.8s,baz=310,slow=10,SNR=10						
STKA				PP	PnPn	22 17 53.0	+4.5
	11nm,0.9s,baz=328,slow=16,SNR=3.0						
STKA				LR	LR	22 29 27.0	
	comp=Z,466nm,18.4s,baz=225,slow=39						
PSI	Prapat	27.84	295	LR	LR	22 29 30.4	
	comp=Z,384nm,18.8s,baz=134,slow=40						
QIZ	Qiongzhong	31.54	334	P	P	22 17 37.2	+0.5
QIZ				S	S	22 22 42.6	-0.5
QIZ				LR	LR		
	comp=Z,210nm,21.8s						
CM31	Chiang Mai Arr	37.17	318	eP	P	22 18 24.8	-0.6
	comp=Z,3.4nm,0.3s						
CMAR	Chiang Mai Arr	37.17	318	P	P	22 18 25.2	-0.2
CMAR				PcP	PcP	22 20 45.3	+0.1
CMAR	Chiang Mai Arr	37.17	318	P	P	22 18 25.2	-0.2
	comp=Z,5.3nm,0.7s,baz=144,slow=7.0,SNR=43						
CMAR				PcP	PcP	22 20 45.3	+0.1
	comp=Z,2.4nm,0.8s,baz=182,slow=2.5,SNR=5.9						
CMAR				LR	LR	22 36 11.2	
	comp=Z,192nm,19.1s,baz=306,slow=40						
CMMT	Chiang Mai	37.42	319	P	P	22 18 29.0	+1.4
	comp=Z,11nm,1.0s						
CHTO	Chiang Mai	37.42	319	eP	P	22 18 26.8	-0.8
	comp=Z,20nm,1.4s						
CHTO	Chiang Mai	37.42	319	P	P	22 18 29.4	+1.8
GYA	Guiyang	39.45	335	eP	P	22 18 46.3	+1.6
GYA				pP	pP	22 18 55.8	+0.8
GYA				sP	sP	22 19 01.2	+2.0
GYA				PP	PnPn	22 20 22.0	+3.2
GYA				PcP	PcP	22 20 53.6	+1.3
GYA				ScP	ScP	22 24 38.1	-0.4
GYA				S	S	22 24 46.9	+2.3
GYA				sS	sS	22 25 03.4	+1.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=N,390nm,17.4s						
GYA				LR	LR		
	comp=E,210nm,17.5s						
GYA				LR	LR		
	comp=Z,380nm,17.0s						
KMI	Kunming	40.12	329	P	P	22 18 50.1	-0.3
KMI				pP	pP	22 18 59.7	-1.0
KMI				sP	sP	22 19 03.6	-1.4
KMI				PP	PnPn	22 20 27.3	+0.4
KMI				S	S	22 24 55.3	+0.5
KMI				sS	sS	22 25 11.2	-0.6
KMI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,97nm,6.9s						
KMI				LR	LR		
	comp=N,120nm,20.3s						
KMI				LR	LR		
	comp=E,170nm,22.6s						
KMI				LR	LR		
	comp=Z,86nm,20.8s						
NJ2	Nanjing	41.52	353	eP	P	22 19 02.7	+1.2
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2	Chengdu	44.57	335	P	P	22 19 28.0	+1.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,120nm,4.6s						
KSAR	Wonju Array Be	46.73	4	P	P	22 19 41.7	-1.5
KSRS	Korea Array	46.74	4	P	P	22 19 41.7	-1.6
	comp=Z,1.1nm,0.6s,baz=178,slow=9.3,SNR=5.6						
SHL	Shillong	46.80	319	eP	P	22 19 44.0	-0.2
MAT	Matsushiro	47.59	15	P	P	22 19 47.3	-2.7
MJAR	Matsushiro Arr	47.59	15	P	P	22 19 47.5	-2.5
MJAR	Matsushiro Arr	47.59	15	P	P	22 19 47.5	-2.5
	comp=Z,4.2nm,0.9s,baz=195,slow=9.4,SNR=10						
LZH	Lanzhou	49.09	338	eP	P	22 20 01.0	-0.8
LZH				sP	sP	22 20 15.6	-0.9
LZH				PP	PP	22 21 55.2	-0.6
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,76nm,6.4s						
LZH				LR	LR		
	comp=N,400nm,13.9s						
LZH				LR	LR		
	comp=E,410nm,14.3s						
LZH				LR	LR		
	comp=Z,470nm,18.2s						
LSA	Lhasa	50.16	322	P	P	22 20 09.5	-0.9
ODAN	Odare	50.66	316	eP	P	22 20 12.7	-1.2
	comp=Z,40nm,1.0s						
TAPN	Taplejung	50.76	317	eP	P	22 20 13.4	-1.4
	comp=Z,69nm,1.0s						
RAMN	Ramite	51.25	316	eP	P	22 20 17.8	-0.6
	comp=Z,98nm,0.9s						
HHC	Hu-ho-hao-te	51.31	348	eP	P	22 20 20.5	+2.1
HHC				sP	sP	22 20 34.0	+0.8
HHC				PcP	PcP	22 21 35.1	+2.0
HHC				PP	PP	22 22 18.7	+2.9
HHC				ScP	ScP	22 25 26.8	-0.3
HHC				PcS	PcS	22 25 31.0	+0.2
HHC				S	S	22 27 37.1	+1.8
HHC				sS	sS	22 27 54.3	+1.6
HHC				ScS	ScS	22 30 05.3	-1.0
HHC				SS	SS	22 31 10.9	-0.6
HHC				pmax	pmax		
	comp=Z,17nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,6.5s						
HHC				LR	LR		
	comp=N,220nm,16.3s						
HHC				LR	LR		
	comp=E,280nm,16.4s						
HHC				LR	LR		
	comp=Z,240nm,16.6s						
GUN	Gumba	52.36	316	eP	P	22 20 25.5	-1.3
	comp=Z,55nm,0.8s						
PKI	Pulchoki	52.47	316	eP	P	22 20 26.2	-1.4
	comp=Z,24nm,0.5s						
PKIN	Phulchoki	52.48	316	eP	P	22 20 26.4	-1.2
	comp=Z,9.3nm,0.5s						
KKN	Kakani	52.69	316	eP	P	22 20 27.8	-1.3
	comp=Z,28nm,0.9s						
DMN	Daman	52.70	315	eP	P	22 20 28.9	-0.3
GTA	Gaotai	53.53	337	eP	P	22 20 34.9	-0.1
GTA				S	S	22 28 06.2	+0.4
GTA				SS	SS	22 31 45.9	-0.8
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,93nm,4.3s						
GTA				LR	LR		
	comp=N,67nm,15.9s						
GTA				LR	LR		
	comp=E,67nm,16.6s						
GTA				LR	LR		
	comp=Z,96nm,15.4s						
USRK	Ussuriysk Arra	53.83	7	P	P	22 20 34.8	-2.0
	comp=Z,5.5nm,0.8s,baz=172,slow=6.5,SNR=5.8						
KOLN	Koldanda	53.85	315	eP	P	22 20 36.1	-1.5
	comp=Z,33nm,0.8s						
MDJ	Mudanjiang	53.99	5	P	P	22 20 36.8	-1.2
MDJ				pmax	pmax		
	comp=Z,22nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,110nm,4.1s						
DANN	Dangsing	54.09	315	eP	P	22 20 37.7	-1.8
	comp=Z,59nm,0.5s						
PYUN	Piuthan	54.48	314	eP	P	22 20 41.1	-1.1
	comp=Z,75nm,1.0s						
ULN	Ulaanbaatar	58.98	347	eP	P	22 21 13.0	-0.7
	comp=Z,5.6nm,0.9s						
SONM	Songino Array	59.10	346	P	P	22 21 13.5	-1.0
SONM	Songino Array	59.10	346	P	P	22 21 13.5	-1.0
	comp=Z,4.4nm,0.6s,baz=165,slow=8.1,SNR=42						
WMQ	Urumqi	62.41	331	P	P	22 21 36.0	-1.1
WMQ				pP	pP	22 21 46.0	-1.9
WMQ				sP	sP	22 21 50.0	-2.0
WMQ				PcP	PcP	22 22 15.0	-1.3
WMQ				PP	PP	22 23 55.0	+0.2
WMQ				ScP	ScP	22 26 13.0	-2.8
WMQ				S	S	22 29 59.0	-2.7
WMQ				ScS	SKSac	22 31 22.0	-4.8
WMQ				SS	SS	22 34 05.0	-1.1
WMQ				pmax	pmax		
	comp=Z,14nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,35nm,5.0s						
WMQ				LR	LR		
	comp=N,87nm,20.0s						
WMQ				LR	LR		
	comp=E,68nm,20.0s						
WMQ				LR	LR		
	comp=Z,86nm,20.0s						
TLY	Talaya	63.34	346	eP	P	22 21 42.3	-0.6
	comp=Z,3.7nm,0.8s						
KSH	Kashi	65.99	321	P	P	22 22 00.1	-0.6
KSH				pP	pP	22 22 10.5	-1.1
KSH				sP	sP	22 22 18.4	+2.7
KSH				PcP	PcP	22 22 34.6	+3.4
KSH				PP	PP	22 24 28.7	+2.3
KSH				ScP		22 26 29.2	
KSH				PcS		22 26 33.1	
KSH				S	S	22 30 45.8	-0.4
KSH				sS	sS	22 31 02.2	-1.9
KSH				ScS	SKSac	22 31 49.9	-4.4
KSH				SS	SS	22 35 05.6	+3.4
KSH				pmax	pmax		
	comp=Z,21nm,0.8s						
KSH				LR	LR		
	comp=N,160nm,4.1s						
KSH				LR	LR		
	comp=E,170nm,5.8s						
KSH				LR	LR		
	comp=Z,240nm,6.1s						
MK31	Makanchi Array	67.19	330	eP	P	22 22 06.4	-1.7
MKAR	Makanchi Array	67.19	330	eP	P	22 22 06.8	-1.4
MKAR	Makanchi Array	67.19	330	P	P	22 22 06.7	-1.4
	comp=Z,7.4nm,0.7s,baz=136,slow=7.3,SNR=89						
KBL	Kabul	67.96	313	eP	P	22 22 12.0	-1.5
	comp=Z,10nm,0.8s						
TKM2	Tokmak 2	68.26	324	eP	P	22 22 14.2	-1.0
	comp=Z,5.4nm,0.8s						
PETK	Petropavlovsk-	68.53	21	P	P	22 22 15.6	-0.8
PETK	Petropavlovsk-	68.53	21	P	P	22 22 15.6	-0.8
	comp=Z,3.5nm,0.7s,baz=194,slow=5.6,SNR=4.7						
AAK	Ala-Archa	68.74	323	eP	P	22 22 16.9	-1.2
	comp=Z,31nm,0.8s						
AAK	Ala-Archa	68.74	323	LR	LR	22 57 39.8	
	comp=Z,59nm,21.7s,baz=127,slow=41						
EKS2	Erkin-Say	69.18	323	eP	P	22 22 20.5	-0.3
	comp=Z,7.5nm,0.9s						
MAW	Mawson	70.61	201	LR	LR	22 51 49.4	
	comp=Z,103nm,18.6s,baz=164,slow=34						
VNDA	Vanda	70.85	172	eP	P	22 22 30.2	-0.1
	comp=Z,77nm,2.9s						
VNDA	Vanda	70.85	172	LR	LR	22 53 50.6	
	comp=Z,154nm,19.2s,baz=329,slow=36						
ZALV	Zalesovo Beam	71.29	337	P	P	22 22 30.7	-2.6
ZALV	Zalesovo Beam	71.29	337	P	P	22 22 30.7	-2.6
	comp=Z,5.0nm,0.8s,baz=132,slow=4.4,SNR=27						
KKAR	Karatay Array	71.41	322	eP	P	22 22 33.0	-1.3
	comp=Z,5.1nm,1.1s						
KURK	Kurchatov	71.65	331	eP	P	22 22 33.6	-1.9
	comp=Z,14nm,1.3s						
BRVK	Borovoye	77.15	330	eP	P	22 23 06.1	-1.4
	comp=Z,5.5nm,1.0s						
SYO	Syowa Base	79.31	201⇓	eP	P	22 23 19.0	-0.2
ABKAR	Akbulak array	80.82	323	eP	P	22 23 26.4	-1.2
RDF	Al-Radifah	82.91	301	eP	P	22 23 38.3	-0.8
RDF				AMb	AMB	22 23 39.5	
	comp=Z,36nm,0.9s						
UMR	Umm Al-Rimmam	82.93	301	eP	P	22 23 38.3	-0.9
NAY	Al-Naaiem	83.25	301	eP	P	22 23 39.8	-1.1
NAY				AMb	AMB	22 23 41.0	
	comp=Z,26nm,0.8s						
MIB	Mutribah	83.31	302	eP	P	22 23 40.1	-1.1
MIB				AMb	AMB	22 23 41.3	
	comp=Z,27nm,0.9s						
ARU	Arti	84.70	329	eP	P	22 23 46.1	-1.6
	comp=Z,5.1nm,0.8s						
KMBO	Kilima Mbogo	86.69	269	eP	P	22 23 59.3	+0.4
	comp=Z,6.5nm,1.0s						
KMBO	Kilima Mbogo	86.69	269	P	P	22 23 59.5	+0.7
	comp=Z,5.4nm,0.9s,baz=52,slow=8.8,SNR=13						
KMBO				LR	LR	22 59 19.4	
	comp=Z,57nm,18.1s,baz=95,slow=33						
DGRG	David-gareji	87.81	312	P	P	22 24 04.1	+0.7
TBLG	Delisi	88.34	313	P	P	22 24 05.5	-0.4
KBZ	Khabaz	90.12	314	P	P	22 24 12.9	-1.1
KBZ	Khabaz	90.12	314	P	P	22 24 12.9	-1.1
	comp=Z,2.1nm,0.8s,baz=347,slow=3.5,SNR=5.6						
SNAA	Sanae	91.93	195	eP	P	22 24 22.9	+0.7
	comp=Z,6.6nm,0.8s						
LSZ	Lusaka	93.17	254	eP	P	22 24 31.4	+2.3
LSZ	Lusaka	93.17	254	P	P	22 24 30.4	+1.4
	comp=Z,3.0nm,0.7s,baz=84,slow=7.3,SNR=7.3						
BOSA	Boshof	93.20	240	LR	LR	23 00 12.9	
	comp=Z,62nm,19.4s,baz=268,slow=32						
BRTR	Keskin Array B	96.26	309	P	P	22 24 40.8	-2.0
BRTR	Keskin Array B	96.26	309	P	P	22 24 40.8	-2.0
	comp=Z,0.8nm,0.7s,baz=132,slow=6.1,SNR=7.8						
BRTR				LR	LR	23 14 14.8	
	comp=Z,21nm,18.3s,baz=266,slow=39						
ILAR	Eielson Array	98.02	26	PP	PP	22 28 49.5	+0.5
ILAR	Eielson Array	98.02	26	PP	PP	22 28 49.5	+0.5
	comp=Z,0.6nm,1.1s,baz=236,slow=8.5,SNR=4.1						
YKA	Yellowknife Ar	112.45	25	PKiKP	PKiKP	22 29 48.8	-0.8
YKA	Yellowknife Ar	112.45	25	PKiKP	PKiKP	22 29 48.8	-0.8
	comp=Z,0.2nm,0.3s,baz=288,slow=1.1,SNR=4.3						
NVAR	Mina Array Bea	117.37	52	PKP	PKPdf	22 29 60.0	-0.1
NVAR	Mina Array Bea	117.37	52	PKP	PKPdf	22 29 60.0	-0.1
	comp=Z,0.4nm,0.4s,baz=248,slow=4.8,SNR=2.8						
HLID	Hailey	119.10	45	ePKPdf	PKPdf	22 30 04.7	+1.5
DUG	Dugway	121.14	49	ePKPdf	PKPdf	22 30 08.5	+1.3
SRU	San Rafael	123.13	49	ePKPdf	PKPdf	22 30 12.0	+0.9
TORD	Torodi Ar. Bea	123.47	280	PKP	PKPdf	22 30 11.7	-0.5
TORD	Torodi Ar. Bea	123.47	280	PKP	PKPdf	22 30 11.7	-0.5
	comp=Z,3.9nm,0.8s,baz=68,slow=1.9,SNR=28						
ESDC	Sonseca Array	124.92	312	PKP	PKPdf	22 30 13.4	-1.0
ESDC	Sonseca Array	124.92	312	PKP	PKPdf	22 30 13.4	-1.0
	comp=Z,0.5nm,0.7s,baz=42,slow=2.1,SNR=6.0						
DBIC	Dimbokro	129.40	271	PKP	PKPdf	22 30 24.4	+0.9
DBIC				ePKPdf	PKiKP	22 30 24.8	+0.5
DBIC	Dimbokro	129.40	271	PKP	PKPdf	22 30 24.4	+0.9
	comp=Z,4.0nm,0.8s,baz=91,slow=1.3,SNR=8.4						
TXAR	Lajitas Array	131.18	59	PKP	PKPdf	22 30 28.6	+1.9
TXAR	Lajitas Array	131.18	59	PKP	PKPdf	22 30 28.6	+1.9
	comp=Z,0.6nm,0.7s,baz=348,slow=2.1,SNR=4.0						
JCT	Junction City	134.10	56	ePKPdf	PKPdf	22 30 33.8	+1.7
CPUP	Villa Florida	144.46	178	PKP	PKPdf	22 30 50.4	-0.6
CPUP	Villa Florida	144.46	178	PKP	PKPdf	22 30 50.4	-0.6
	comp=Z,4.4nm,0.6s,baz=166,slow=2.8,SNR=20						
JTS	JuntasAbangare	151.39	86	ePKPdf	PKPdf	22 31 01.8	-0.9
JTS				PKPbc	PKPbc	22 31 08.8	0.0
JTS	JuntasAbangare	151.39	86	PKPbc	PKPbc	22 31 08.8	0.0
	comp=Z,8.6nm,0.8s,baz=299,slow=7.0,SNR=6.6						
LPAZ	La Paz	151.76	155	PKPbc	PKPbc	22 31 10.2	-0.1
LPAZ	La Paz	151.76	155	PKPbc	PKPbc	22 31 10.2	-0.1
	comp=Z,3.3nm,1.0s,baz=54,slow=4.0,SNR=8.3						

*GEN **05** 22:13:43.8, 44°.12N×12°.24E, h16^{km}, ML2.2*

*CSEM **05** 22:13:45.8±0.1, 44°.24N×11°.96E, h30^{km}, ML2.4/7, Error ellipse: s-maj=3.9km s-min=2.6km az=93.0*

*ISCJB **05** 22:13:45.7±0.3, 44°.25N±0°.02×11°.90E±0°.04, h33^{km}±6^{km}, Error ellipse: s-maj=4.3km s-min=3.3km az=16.2*

*ROM **05** 22:13:45.5±0.3, 44°.25N×11°.93E, h29^{km}±2^{km}, Md2.5/15, Ml2.2/11, Error ellipse: s-maj=2.5km s-min=2.0km az=175.0*

*PRU **05** 22:13:46.3, 44°.44N×12°.11E, h0^{km}*

*LDG **05** 22:13:47.1±0.2, 44°.20N×11°.87E, h10^{km}, Ml2.6/8, Error ellipse: s-maj=6.2km s-min=4.5km az=40.0*

ISC 05 22:13:45.6±0.9, **44°.25N**±0°.02×**11°.94E**±0°.02, **h29**^{km}±5^{km}, **n82**, σ1s.**10**/121, **9C-21D**, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAEN	Faenza	0.06	312⇑	iPg	Pb	22 13 50.2	-0.4

FAEN				Sg	Sb	22 13 54.8	+0.9
FAEN	**Faenza**	**0.06**	**312**	⇑*i*Pg	**Pb**	**22 13 50.2**	**-0.4**
FAEN				*e*Sg	**Sb**	**22 13 54.8**	**+0.9**
BRSN	**Barisano**	**0.10**	**70**	Pg	**Pn**	**22 13 50.8**	**-0.6**
	1.0nm,0.1s						
BRSN	**Barisano**	**0.10**	**70**	*e*Pg	**Pn**	**22 13 50.8**	**-0.6**
SFI	**Santa Sofia**	**0.35**	**191**	⇓*i*Pg	**Pb**	**22 13 53.1**	**-0.6**
SFI				Sg	**Sn**	**22 13 59.7**	**-1.1**
	401nm,0.4s						
SFI	**Santa Sofia**	**0.35**	**191**	⇓*i*Pg	**Pb**	**22 13 53.1**	**-0.6**
SFI				*e*Sg	**Sn**	**22 13 59.7**	**-1.1**
MTRZ	**Monterenzio**	**0.36**	**291**	⇓*i*Pg	**Pn**	**22 13 54.3**	**-0.7**
	198nm,0.4s						
MTRZ	**Monterenzio**	**0.36**	**291**	⇓*i*Pg	**Pn**	**22 13 54.3**	**-0.7**
VMG	**Vicchio**	**0.41**	**225**	Pg	**Pb**	**22 13 53.9**	**-0.6**
VMG				Sg	**Sn**	**22 14 00.9**	**-1.3**
	240nm,0.4s						
VMG	**Vicchio**	**0.41**	**225**	*e*Pg	**Pb**	**22 13 53.9**	**-0.6**
VMG				*e*Sg	**Sn**	**22 14 00.9**	**-1.3**
SEI	**Scarperia**	**0.46**	**246**	Pg	**Pb**	**22 13 54.9**	**-0.5**
SEI				Sg	**Sn**	**22 14 03.1**	**-0.6**
	238nm,0.2s						
SEI	**Scarperia**	**0.46**	**246**	*e*Pg	**Pb**	**22 13 54.9**	**-0.5**
SEI				*e*Sg	**Sn**	**22 14 03.1**	**-0.6**
ASQU	**Asqua**	**0.46**	**194**	⇓Pg	**Pb**	**22 13 54.9**	**-0.6**
ASQU				Sg	**Sn**	**22 14 02.7**	**-1.0**
	191nm,0.5s						
ASQU	**Asqua**	**0.46**	**194**	⇓*e*Pg	**Pb**	**22 13 54.9**	**-0.6**
ASQU				*e*Sg	**Sn**	**22 14 02.7**	**-1.0**
RSM	**Repubblica di**	**0.48**	**131**	Pg	**Pn**	**22 13 56.3**	**-0.4**
	1.0nm,0.4s						
RSM	**Repubblica di**	**0.48**	**131**	*e*Pg	**Pn**	**22 13 56.3**	**-0.4**
CRE	**Caprese Michel**	**0.63**	**179**	Pg	**Pn**	**22 13 57.9**	**-0.8**
CRE				Sg	**Sn**	**22 14 07.8**	**0.0**
	65nm,0.5s						
CRE	**Caprese Michel**	**0.63**	**179**	*e*Pg	**Pn**	**22 13 57.9**	**-0.8**
CRE				Sg	**Sn**	**22 14 07.8**	**0.0**
	65nm,0.5s						
PARC	**Parchiule**	**0.64**	**160**	Pg	**Pn**	**22 13 58.2**	**-0.6**
	79nm,0.4s						
PARC	**Parchiule**	**0.64**	**160**	Pg	**Pn**	**22 13 58.2**	**-0.6**
	79nm,0.4s						
BADI	**Badiali**	**0.77**	**163**	Pg	**Pb**	**22 14 00.5**	**0.0**
	146nm,0.6s						
BADI	**Badiali**	**0.77**	**163**	Pg	**Pb**	**22 14 00.5**	**0.0**
	146nm,0.6s						
ADRI	**Adria, Italy**	**0.79**	**4**	⇓*e*Pg	**Pb**	**22 14 01.5**	**+0.7**
ADRI				*e*Sg	**Sb**	**22 14 14.3**	**+3.1**
ADRI	**Adria, Italy**	**0.79**	**4**	⇓*e*Pg	**Pb**	**22 14 01.5**	**+0.7**
ADRI				*e*Sg	**Sb**	**22 14 14.3**	**+3.1**
FSSB	**Fossombrone**	**0.82**	**132**	Pg	**Pb**	**22 14 02.2**	**+0.9**
	125nm,0.3s						
FSSB	**Fossombrone**	**0.82**	**132**	Pg	**Pb**	**22 14 02.2**	**+0.9**
	125nm,0.3s						
PIEI	**Pieia**	**0.83**	**149**	Pg	**Pb**	**22 14 01.5**	**0.0**
	78nm,0.6s						
PIEI	**Pieia**	**0.83**	**149**	Pg	**Pb**	**22 14 01.5**	**0.0**
	78nm,0.6s						
CRMI	**Carmignano**	**0.84**	**237**	Pg	**Pb**	**22 14 02.0**	**+0.4**
	36nm,0.5s						
CRMI	**Carmignano**	**0.84**	**237**	Pg	**Pb**	**22 14 02.0**	**+0.4**
	36nm,0.5s						
CSNT	**Castellina Chi**	**0.91**	**211**	Pg	**Pb**	**22 14 03.3**	**+0.5**
	51nm,0.5s						
CSNT	**Castellina Chi**	**0.91**	**211**	Pg	**Pb**	**22 14 03.3**	**+0.5**
	51nm,0.5s						
CAFI	**Castiglion Fio**	**0.92**	**179**	Pg	**Pb**	**22 14 02.9**	**-0.1**
	85nm,0.8s						
CAFI	**Castiglion Fio**	**0.92**	**179**	Pg	**Pb**	**22 14 02.9**	**-0.1**
	85nm,0.8s						
MAIM	**Mastiano**	**1.10**	**253**	P	**Pb**	**22 14 06.0**	**0.0**
MAIM				S	**Sb**	**22 14 20.8**	**+0.9**
TEOL	**Teolo**	**1.13**	**350**	⇓*e*Pg	**Pn**	**22 14 05.3**	**-0.2**
TEOL				*e*Sg	**Sb**	**22 14 21.2**	**+0.4**
TEOL	**Teolo**	**1.13**	**350**	⇓*e*Pg	**Pn**	**22 14 05.3**	**-0.2**
TEOL				*e*Sg	**Sb**	**22 14 21.2**	**+0.4**
CGRP	**Cima Grappa**	**1.64**	**357**	⇓*i*Pg	**Pn**	**22 14 11.2**	**-1.4**
CGRP				*i* Sg	**Sn**	**22 14 31.2**	**-1.6**
CGRP	**Cima Grappa**	**1.64**	**357**	⇓*i*Pg	**Pn**	**22 14 11.2**	**-1.4**
CGRP				*i* Sg	**Sn**	**22 14 31.2**	**-1.6**
BALD	**Monte Baldo**	**1.64**	**331**	⇓*e*Pg	**Pn**	**22 14 12.7**	**0.0**
BALD				*e*Sg	**Sn**	**22 14 32.8**	**-0.2**
BALD	**Monte Baldo**	**1.64**	**331**	⇓*e*Pg	**Pn**	**22 14 12.7**	**0.0**
BALD				*e*Sg	**Sn**	**22 14 32.8**	**-0.2**
DDS	**Dosso del Somm**	**1.72**	**342**	⇓*e*Pg	**Pn**	**22 14 13.6**	**-0.1**
DDS	**Dosso del Somm**	**1.72**	**342**	⇓*e*Pg	**Pn**	**22 14 13.6**	**-0.1**
VARN	**Col Varnada, M**	**1.75**	**4**	*e*Pg	**Pn**	**22 14 13.2**	**-0.9**
VARN	**Col Varnada, M**	**1.75**	**4**	*e*Pg	**Pn**	**22 14 13.2**	**-0.9**
PANI	**Panarotta**	**1.86**	**346**	⇑*e*Pn	**Pn**	**22 14 15.9**	**+0.2**
PANI	**Panarotta**	**1.86**	**346**	⇑*e*Pn	**Pn**	**22 14 15.9**	**+0.2**
MLNI	**Malnisio**	**1.96**	**14**	⇓*e*Pn	**Pn**	**22 14 16.6**	**-0.5**
MLNI	**Malnisio**	**1.96**	**14**	⇓*e*Pn	**Pn**	**22 14 16.5**	**-0.5**
RNI	**Roncone**	**1.96**	**333**	*e*Pn	**Pn**	**22 14 17.4**	**+0.3**
RNI	**Roncone**	**1.96**	**333**	*e*Pn	**Pn**	**22 14 17.4**	**+0.3**
NVLJ	**Novalja**	**2.12**	**80**	*i* Pn	**Pn**	**22 14 19.6**	**+0.5**
NVLJ				Sn	**Sn**	**22 14 44.4**	**-0.1**
VINO	**Villanova**	**2.22**	**25**	⇓*e*Pn	**Pn**	**22 14 20.2**	**-0.3**
VINO	**Villanova**	**2.22**	**25**	⇓*e*Pn	**Pn**	**22 14 20.2**	**-0.3**
KOSI	**Kohlern**	**2.25**	**350**	*e*Pn	**Pn**	**22 14 21.8**	**+0.7**
ZOU	**Zoufplan**	**2.42**	**17**	⇑*e*Pn	**Pn**	**22 14 23.5**	**0.0**
ABSI	**Aberstueckl**	**2.52**	**350**	⇓*e*Pn	**Pn**	**22 14 25.3**	**+0.5**
ACOM	**Acomizza, Ital**	**2.55**	**25**	⇑*e*Pn	**Pn**	**22 14 25.9**	**+0.6**
ACOM	**Acomizza, Ital**	**2.55**	**25**	⇑*e*Pn	**Pn**	**22 14 25.9**	**+0.6**
MOSI	**Grossmontoni**	**2.56**	**338**	⇑*e*Pn	**Pn**	**22 14 27.1**	**+1.7**
RISI	**Rein**	**2.70**	**2**	*e*Pn	**Pn**	**22 14 28.6**	**+1.3**
ROSI	**Rosskopf**	**2.71**	**352**	⇑*e*Pn	**Pn**	**22 14 28.5**	**+1.1**
PGF	**Pioggiola**	**2.73**	**233**	*e*Pn	**Pn**	**22 14 28.0**	**+0.3**
PGF				*e*Sn	**Sn**	**22 14 59.1**	**-0.7**
	4.2nm,0.3s						
PGF	**Pioggiola**	**2.73**	**233**	*e*Pn	**Pn**	**22 14 28.0**	**+0.3**
PGF				*e*Sn	**Sn**	**22 14 59.1**	**-0.7**
	2.1nm,0.3s						
SBF	**Sospel**	**3.27**	**265**	*e*Pn	**Pn**	**22 14 36.9**	**+1.9**
SBF				*e*Sn	**Sn**	**22 15 12.4**	**-0.6**
	4.1nm,0.3s						
SBF	**Sospel**	**3.27**	**265**	*e*Pn	**Pn**	**22 14 36.9**	**+1.9**
SBF				*e*Sn	**Sn**	**22 15 12.4**	**-0.6**
	2.0nm,0.3s						
FRF	**La Foret Royal**	**3.89**	**262**	*e*Pn	**Pn**	**22 14 44.3**	**+0.9**
FRF				*e*Sn	**Sn**	**22 15 26.7**	**-1.4**
	2.2nm,0.4s						
FRF	**La Foret Royal**	**3.89**	**262**	*e*Pn	**Pn**	**22 14 44.3**	**+0.9**
FRF				*e*Sn	**Sn**	**22 15 26.7**	**-1.4**
	1.1nm,0.4s						
LPG	**La Plagne**	**3.90**	**291**	*e*Pn	**Pn**	**22 14 44.8**	**+1.0**
LPG				*e*Sn	**Sn**	**22 15 28.2**	**-0.5**
	2.3nm,0.4s						
LPG	**La Plagne**	**3.90**	**291**	*e*Pn	**Pn**	**22 14 44.8**	**+1.0**
LPG				*e*Sn	**Sn**	**22 15 28.2**	**-0.5**
	1.1nm,0.4s						
LMR	**La Mourre**	**4.04**	**259**	*e*Pn	**Pn**	**22 14 46.2**	**+0.7**
LMR				*e*Sn	**Sn**	**22 15 29.9**	**-1.9**
	1.2nm,0.3s						
LMR	**La Mourre**	**4.04**	**259**	*e*Pn	**Pn**	**22 14 46.2**	**+0.7**
LMR				*e*Sn	**Sn**	**22 15 29.9**	**-1.9**
	0.6nm,0.3s						
CABF	**La Chapelle**	**4.75**	**302**	*e*Pn	**Pn**	**22 14 56.5**	**+1.2**
CABF	**La Chapelle**	**4.75**	**302**	*e*Pn	**Pn**	**22 14 56.5**	**+1.2**
KHC	**Kasperske Hory**	**5.01**	**12**	*e*PN	**Pn**	**22 14 57.9**	**-1.0**
KHC				*e*x	x	22 15 52.9	
KHC	**Kasperske Hory**	**5.01**	**12**	Pn	**Pn**	**22 14 57.9**	**-1.0**
KHC				Sn	**Sn**	**22 15 52.9**	**-3.0**
HINF	**Hinteralfeld**	**5.03**	**317**	*e*Pn	**Pn**	**22 15 00.3**	**+1.2**
HINF				*e*Sn	**Sn**	**22 15 53.7**	**-2.6**
	4.0nm,0.3s						
HINF	**Hinteralfeld**	**5.03**	**317**	*e*Pn	**Pn**	**22 15 00.3**	**+1.2**
HINF				*e*Sn	**Sn**	**22 15 53.7**	**-2.6**
	2.0nm,0.3s						
CDF	**Champ du Feu**	**5.27**	**324**	*e*Pn	**Pn**	**22 15 02.3**	**-0.2**
CDF				*e*Sn	**Sn**	**22 15 59.9**	**-2.4**
	1.4nm,0.3s						
CDF	**Champ du Feu**	**5.27**	**324**	*e*Pn	**Pn**	**22 15 02.3**	**-0.2**
CDF				*e*Sn	**Sn**	**22 15 59.9**	**-2.4**
	0.7nm,0.3s						
HAU	**Haudompre**	**5.41**	**316**	*e*Pn	**Pn**	**22 15 04.8**	**+0.5**
HAU				*e*Sn	**Sn**	**22 16 02.8**	**-2.7**
	4.3nm,0.3s						
HAU	**Haudompre**	**5.41**	**316**	*e*Pn	**Pn**	**22 15 04.8**	**+0.5**
HAU				*e*Sn	**Sn**	**22 16 02.8**	**-2.7**
	2.2nm,0.3s						

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*CSEM **05** 22:15:01.9±0.3, 44°.25N×12°.09E, h20km, ML2.5/4, Error ellipse: s-maj=8.6km s-min=5.5km az=153.0*
*ISCJB **05** 22:15:02.1±0.7, 44°.25N±0°.06×12°.07E±0°.06, h26km±5km, Error ellipse: s-maj=10.8km s-min=6.8km az=153.7*
*ROM **05** 22:15:03.0±0.4, 44°.22N×11°.97E, h24km±3km, Md2.3/1, Ml1.9/2, Error ellipse: s-maj=5.9km s-min=4.2km az=102.0*
ISC 05 22:15:02.5±1.0**, 44°.25N**±0°.05×**12°.05E**±0°.04**, h27**km±7km**, n18, σ0s.80**/32**, 2C-4D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAEN	**Faenza**	**0.14**	**289**	⇑*i*Pg	**Pb**	**22 15 07.3**	**-0.4**
FAEN				Sg	**Sb**	**22 15 11.8**	**+0.6**
FAEN	**Faenza**	**0.14**	**289**	⇑*i*Pg	**Pb**	**22 15 07.3**	**-0.4**
FAEN				Sg	**Sb**	**22 15 11.8**	**+0.6**
SFI	**Santa Sofia**	**0.37**	**204**	⇓Pg	**Pb**	**22 15 10.3**	**-0.5**
SFI				Sg	**Sb**	**22 15 16.5**	**+0.1**
	150nm,0.4s						
SFI	**Santa Sofia**	**0.37**	**204**	⇓Pg	**Pb**	**22 15 10.3**	**-0.5**
SFI				Sg	**Sb**	**22 15 16.5**	**+0.1**
	150nm,0.4s						
VMG	**Vicchio**	**0.47**	**232**	Pg	**Pb**	**22 15 11.0**	**-1.2**
VMG				Sg	**Sb**	**22 15 18.0**	**-0.8**
	82nm,0.5s						
VMG	**Vicchio**	**0.47**	**232**	Pg	**Pb**	**22 15 11.0**	**-1.2**
VMG				Sg	**Sb**	**22 15 18.0**	**-0.8**
	82nm,0.5s						
ASQU	**Asqua**	**0.49**	**203**	⇓Pg	**Pb**	**22 15 12.0**	**-0.6**
ASQU				Sg	**Sb**	**22 15 19.9**	**+0.4**
	57nm,0.3s						
ASQU	**Asqua**	**0.49**	**203**	⇓Pg	**Pb**	**22 15 12.0**	**-0.6**
ASQU				Sg	**Sb**	**22 15 19.9**	**+0.4**
	57nm,0.3s						
SEI	**Scarperia**	**0.54**	**249**	Pg	**Pb**	**22 15 11.9**	**-1.5**
SEI				Sg	**Sb**	**22 15 20.1**	**-0.8**
	52nm,0.2s						
SEI	**Scarperia**	**0.54**	**249**	Pg	**Pb**	**22 15 11.9**	**-1.5**
SEI				Sg	**Sb**	**22 15 20.1**	**-0.8**
	52nm,0.2s						
CSNT	**Castellina Chi**	**0.95**	**216**	Pg	**Pn**	**22 15 20.7**	**+0.7**
CSNT	**Castellina Chi**	**0.95**	**216**	Pg	**Pn**	**22 15 20.7**	**+0.7**
BDI	**Bagni Di Lucca**	**1.06**	**261**	Pg	**Pb**	**22 15 22.2**	**-0.1**
BDI	**Bagni Di Lucca**	**1.06**	**261**	Pg	**Pb**	**22 15 22.2**	**-0.1**
PII	**Pisa**	**1.22**	**245**	Pg	**Pn**	**22 15 24.3**	**+0.6**
PII				Sg	**Sb**	**22 15 40.6**	**+0.4**
PII	**Pisa**	**1.22**	**245**	Pg	**Pn**	**22 15 24.3**	**+0.6**
PII				Sg	**Sb**	**22 15 40.6**	**+0.4**
NVLJ	**Novalja**	**2.04**	**80**	*i* Pn	**Pn**	**22 15 34.2**	**-0.8**
NVLJ				Sn	**Sn**	**22 16 00.7**	**+1.1**
NVLJ	**Novalja**	**2.04**	**80**	*i* Pn	**Pn**	**22 15 34.2**	**-0.8**
NVLJ				Sn	**Sn**	**22 16 00.6**	**+1.1**

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*IDC **05** 22:18:51.6±4.1, 14°.19N×90°.57W, h0km, mb3.9/3, mb1 4.1/6, mb1mx3.7/25, mbtmp3.9/6, ML4.2/3, MS3.1/3, Ms1 3.1/3, ms1mx2.7/35, Error ellipse: s-maj=76.2km s-min=25.5km az=12.0*
*ISCJB **05** 22:18:53.8±0.5, 14°.34N±0°.04×90°.51W±0°.03, h21km±4km, mb4.0/3, MS3.0/1, Error ellipse: s-maj=7.5km s-min=3.9km az=34.5*
*CASC **05** 22:18:53.7±2.0, 14°.33N×90°.49W, h12km±5km, MD4.1, ML3.9*
ISC 05 22:18:53.6±1.1**, 14°.31N**±0°.04×**90°.49W**±0°.03**, h11**km±8km**, n25, σ0s.76**/33**, mb4.0**/3**, 1C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.14**	**167**	*e*P	**Pb**	**22 18 57.9**	**-0.4**
PCG	**Pacaya**	**0.14**	**305**	*e*P	**Pb**	**22 18 57.6**	**-0.9**
GCG	**Guatemala City**	**0.28**	**351**	*e*P	**Pg**	**22 18 59.6**	**+0.2**
GCG				*e*S	**Sg**	**22 19 03.6**	**+0.3**
NBG	**Las Nubes**	**0.31**	**26**	*e*P	**Pg**	**22 19 00.2**	**+0.3**
FUG	**Fuego 3**	**0.37**	**292**	*e*P	**Pb**	**22 19 01.3**	**-1.0**
FG6		**0.46**	**303**	⇑*e*P	**Pb**	**22 19 02.9**	**-0.9**
TP2	**Tecpan 2**	**0.70**	**312**	*e*P	**Pb**	**22 19 07.6**	**-0.4**
RTR	**El Retiro**	**0.91**	**117**	*e*P	**Pb**	**22 19 11.1**	**-0.5**
RTR				*e*S	**Sg**	**22 19 22.8**	**-0.3**
SBLS	**San Blas**	**0.96**	**119**	*e*P	**Pb**	**22 19 12.2**	**-0.2**
SBLS				*e*S	**Sb**	**22 19 25.0**	**-0.1**
SNJE	**San Jose**	**0.96**	**117**	*e*P	**Pg**	**22 19 11.7**	**-0.4**
SNJE				*e*S	**Sb**	**22 19 25.3**	**+0.2**
MRL	**Marmol**	**1.08**	**46**	*e*P	**Pb**	**22 19 13.9**	**-0.4**
MRL				*e*S	**Sb**	**22 19 28.0**	**-0.5**
MTO2	**Montecristo 2**	**1.09**	**85**	*e*P	**Pb**	**22 19 13.5**	**-1.2**
MTO2				*e*S	**Sn**	**22 19 30.6**	**+0.3**
JAT	**Jato**	**1.11**	**271**	*e*P	**Pn**	**22 19 15.6**	**+0.5**
BOQS	**Boqueron**	**1.30**	**116**	*e*P	**Pb**	**22 19 17.8**	**-0.4**
BOQS				*e*S	**Sn**	**22 19 35.2**	**-0.2**
SNET	**Serv Nac Est T**	**1.37**	**117**	*e*P	**Pb**	**22 19 18.5**	**-0.7**
SNET				*e*S	**Sn**	**22 19 35.7**	**-1.1**
SNET				AML	AML	22 19 39.8	
	comp=Z,2μm,0.5s						
LFRS	**El Faro**	**1.54**	**116**	*e*P	**Pn**	**22 19 21.1**	**+0.1**
LFRS				*e*S	**Sb**	**22 19 42.0**	**+0.2**
CAHU	**Cacacuatique**	**2.27**	**103**	*e*P	**Pn**	**22 19 30.8**	**-0.5**
CMIG	**Matias Romero**	**5.06**	**304**	Pn	**Pn**	**22 20 08.8**	**-0.6**
	comp=Z,4.4nm,0.3s,baz=120,slow=8.8,SNR=23						
CMIG				Pg	Pb	22 20 24.9	+2.8
	comp=Z,11nm,0.3s,baz=122,slow=13,SNR=17						
CMIG				Lg	Lg	22 21 31.8	
	comp=Z,14nm,0.3s,baz=42,slow=21,SNR=9.3						
CMIG				LR	LR	22 22 06.7	
	comp=Z,262nm,18.8s,baz=169,slow=38						
TEIG	**Tepich**	**6.25**	**19**	Pn	**Pn**	**22 20 26.5**	**+0.8**
	comp=Z,20nm,0.3s,baz=139,slow=0.8,SNR=89						
TEIG				Sn	**Sn**	**22 21 35.1**	**-2.1**
	comp=Z,14nm,0.3s,baz=255,slow=22,SNR=8.6						
TEIG				Lg	Lg	22 22 09.5	
	comp=Z,6.8nm,0.3s,baz=255,slow=21,SNR=3.4						
JTS	**JuntasAbangare**	**6.72**	**126**	LR	LR	22 23 42.8	
	comp=Z,84nm,19.1s,baz=253,slow=43						
TXAR	**Lajitas Array**	**19.29**	**323**	P	**Pn**	**22 23 20.1**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=143,slow=13,SNR=4.5						
SJG	**San Juan**	**23.67**	**78**	LR	LR	22 32 37.0	
	comp=Z,50nm,18.6s,baz=92,slow=35						
SCHQ	**Schefferville**	**44.43**	**19**	P	**P**	**22 27 06.2**	**+1.8**
	comp=Z,2.0nm,0.8s,baz=210,slow=8.1,SNR=3.4						
YKA	**Yellowknife Ar**	**51.07**	**346**	P	**P**	**22 27 55.7**	**0.0**
	comp=Z,1.2nm,0.7s,baz=144,slow=7.3,SNR=20						
INK	**Inuvik**	**60.56**	**343**	P	**P**	**22 29 03.5**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=131,slow=6.8,SNR=6.1						

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*IDC **05** 22:24:34.4±2.7, 8°.06S×113°.09E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/21, mbtmp3.5/3, Error ellipse: s-maj=162.4km s-min=26.7km az=49.0*
*ISCJB **05** 22:24:38.7±0.7, 8°.04S±0°.08×113°.11E±0°.05, h10km, mb3.6/3, Error ellipse: s-maj=11.6km s-min=6.2km az=13.6*
*DJA **05** 22:24:40.7±0.3, 8°S±5°×11°3E±°, h10km, M3.5/9, MLv3.5/9*
ISC 05 22:24:36.1±0.9**, 8°.0S**±0°.1×**113°.13E**±0°.04**, h10**km**, n12, σ1s.28**/11**, mb3.6**/3**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**0.40**	**128**	P	**Pb**	**22 24 44.3**	**-0.9**
GMJI				S	**Sb**	**22 24 53.1**	**+1.7**
BLJI	**Banyuglugur**	**0.54**	**59**	P	**Pn**	**22 24 49.3**	**-0.6**
KMMI	**Kalianget**	**1.28**	**41**	P	Pg	22 25 03.3	+2.6
PWJI	**Pagerwojo**	**1.31**	**270**	P	Pg	22 25 03.1	+1.8
SJI	**Sawahan**	**1.38**	**282**	P	**Pg**	**22 25 03.1**	**+0.5**
SJI				S	Sg	22 25 27.7	+7.2
NBBI	**Negara**	**1.52**	**103**	P	Pg	22 25 11.7	+6.5
PCJI	**Pacitan**	**1.94**	**265**	P	**Pg**	**22 25 12.6**	**-0.7**
SRBI	**Singaraja**	**2.07**	**92**	P	**Pg**	**22 25 14.7**	**-1.1**
SRBI				S	**Sg**	**22 25 45.1**	**+2.5**
KHKI	**Kahang-Kahang**	**2.48**	**98**	P	**Pb**	**22 25 20.6**	**-0.2**
WRA	**Warramunga Arr**	**23.71**	**122**	P	**P**	**22 29 47.6**	**-0.9**
	0.9nm,0.5s,baz=298,slow=11,SNR=6.4						
ASAR	**Alice Springs**	**25.27**	**130**	P	**P**	**22 30 03.1**	**+0.4**
	1.2nm,0.5s,baz=304,slow=9.0,SNR=22						
MKAR	**Makanchi Array**	**61.09**	**336**	P	**P**	**22 34 50.4**	**0.0**
	0.2nm,0.5s,baz=147,slow=7.8,SNR=4.9						

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*CSEM **05** 22:30:10.8±0.1, 47°.33N×10°.87E, h5km, ML2.0/7, Error ellipse: s-maj=2.3km s-min=1.9km az=174.0*
*ROM **05** 22:30:10.9±0.4, 47°.32N×10°.91E, h10km, Md2.0/4, Ml1.4/2, Error ellipse: s-maj=4.3km s-min=1.7km az=157.0*
*VIE **05** 22:30:10.4±0.1, 47°.34N×10°.87E, h8km±1km, mb1.3/6, ML2.1/10, Error ellipse: s-maj=0.9km s-min=0.7km az=173.0 7 km SSW of Lermoos*
*BGR **05** 22:30:12.2±0.3, 47°.36N×10°.84E, h10km, ML1.8/8, Error ellipse: s-maj=4.4km s-min=2.2km az=177.0*
*LDG **05** 22:30:14.7±0.9, 47°.54N×11°.69E, h10km, Ml2.5/7, Error ellipse: s-maj=23.2km s-min=16.5km az=29.0*
ISC 05 22:30:11.0±0.9**, 47°.34N**±0°.02×**10°.85E**±0°.01**, h5**km±8km**, n57, σ0s.81**/99**, 7C-9D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RETA	**Reutte**	**0.16**	**337**	⇓*i*Pg	**Pg**	**22 30 14.0**	**-0.2**
	21nm,0.1s						
RETA				⇓*i*Sg	**Sg**	**22 30 16.4**	**0.0**
	28nm,0.1s						
RETA	**Reutte**	**0.16**	**337**	Pg	**Pg**	**22 30 14.0**	**-0.2**
	21nm,0.1s						
RETA				Sg	**Sg**	**22 30 16.4**	**0.0**
	28nm,0.1s						
MOTA	**Moosalm**	**0.17**	**89**	⇑*i*Pg	**Pg**	**22 30 14.2**	**-0.2**
	28nm,0.2s						
MOTA				⇑*i*Sg	**Sg**	**22 30 16.5**	**-0.2**
	85nm,0.1s						
MOTA	**Moosalm**	**0.17**	**89**	Pg	**Pg**	**22 30 14.2**	**-0.2**
	28nm,0.2s						
MOTA				Sg	**Sg**	**22 30 16.5**	**-0.2**
	85nm,0.1s						
SQTA	**Sankt Quirin**	**0.27**	**116**	⇓*i*Pg	**Pg**	**22 30 16.1**	**-0.2**
SQTA	**Sankt Quirin**	**0.27**	**116**	Pg	**Pg**	**22 30 16.1**	**-0.2**
FETA	**Feichten**	**0.33**	**195**	⇓*i*Pg	**Pg**	**22 30 17.5**	**+0.1**
	1.5nm,0.0s						
FETA				⇑*i*Sg	**Sg**	**22 30 22.0**	**+0.2**
	14nm,0.1s						
FETA	**Feichten**	**0.33**	**195**	Pg	**Pg**	**22 30 17.5**	**+0.1**
	1.5nm,0.0s						
FETA				Sg	**Sg**	**22 30 22.0**	**+0.2**
	14nm,0.1s						
OBER	**Oberstdorf**	**0.39**	**280**	*e*Pg	**Pg**	**22 30 18.7**	**+0.3**
OBER				*e*Sg	**Sg**	**22 30 25.0**	**+1.5**
OBER	**Oberstdorf**	**0.39**	**280**	Pg	**Pg**	**22 30 18.7**	**+0.3**
WATA	**Walderalm**	**0.49**	**90**	⇑*i*Pg	**Pg**	**22 30 20.0**	**-0.5**
	2.3nm,0.1s						
WATA				⇓*i*Sg	**Sg**	**22 30 26.8**	**-0.1**
	5.5nm,0.1s						
WATA	**Walderalm**	**0.49**	**90**	Pg	**Pg**	**22 30 20.0**	**-0.5**
	2.3nm,0.1s						
WATA				Sg	**Sg**	**22 30 26.8**	**-0.1**
	5.5nm,0.1s						
WTTA	**Wattenberg**	**0.54**	**98**	*e*Pg	**Pg**	**22 30 21.8**	**+0.4**
WTTA				*e*Sg	**Sg**	**22 30 28.6**	**+0.2**
WTTA	**Wattenberg**	**0.54**	**98**	⇓*i*Pg	**Pg**	**22 30 20.6**	**-0.8**
	2.9nm,0.1s						
WTTA				⇑*i*Sg	**Sg**	**22 30 28.6**	**+0.2**
	3.7nm,0.1s						
WTTA	**Wattenberg**	**0.54**	**98**	Pg	**Pg**	**22 30 20.7**	**-0.6**
WTTA				Sg	**Sg**	**22 30 28.6**	**+0.2**
	17nm,0.7s						
WTTA	**Wattenberg**	**0.54**	**98**	Pg	**Pg**	**22 30 20.7**	**-0.6**
WTTA				Sg	**Sg**	**22 30 28.6**	**+0.2**
	17nm,0.7s						
ROSI	**Rosskopf**	**0.56**	**137**	Pg	**Pg**	**22 30 21.4**	**-0.4**
ROSI				Sg	**Sg**	**22 30 29.1**	**0.0**
	28nm,0.3s						
ROSI	**Rosskopf**	**0.56**	**137**	Pg	**Pg**	**22 30 21.4**	**-0.4**
ROSI				Sg	**Sg**	**22 30 29.1**	**0.0**
	28nm,0.3s						
DAVA	**Damuels**	**0.66**	**266**	*e*Pg	**Pg**	**22 30 24.2**	**+0.4**
DAVA				*e*Sg	**Sg**	**22 30 33.2**	**+0.8**
DAVA	**Damuels**	**0.66**	**266**	⇑*i*Pg	**Pg**	**22 30 23.6**	**-0.1**
	4.4nm,0.1s						
DAVA				⇓*i*Sg	**Sg**	**22 30 33.0**	**+0.6**
	17nm,0.2s						
DAVA	**Damuels**	**0.66**	**266**	Pg	**Pg**	**22 30 23.6**	**-0.1**
	4.4nm,0.1s						
DAVA				Sg	**Sg**	**22 30 33.0**	**+0.6**
	17nm,0.2s						
MOSI	**Grossmontoni**	**0.75**	**196**	Pg	**Pg**	**22 30 25.4**	**0.0**
MOSI				Sg	**Sg**	**22 30 35.5**	**+0.3**
MOSI	**Grossmontoni**	**0.75**	**196**	Pg	**Pg**	**22 30 25.4**	**0.0**
MOSI				Sg	**Sg**	**22 30 35.5**	**+0.3**
FUORN	**Ofenpass-Fuorn**	**0.83**	**209**	Pg	**Pg**	**22 30 26.7**	**-0.1**
FUORN				Sg	**Sb**	**22 30 39.2**	**-0.2**
FUORN	**Ofenpass-Fuorn**	**0.83**	**209**	Pg	**Pg**	**22 30 26.7**	**-0.1**
FUORN				Sg	**Sb**	**22 30 39.2**	**-0.2**
FUR	**Furstenfeldbru**	**0.87**	**19**	*e*Pg	**Pb**	**22 30 28.9**	**+0.3**
FUR				*e*Sg	**Sb**	**22 30 40.7**	**+0.1**
FUR	**Furstenfeldbru**	**0.87**	**19**	Pg	**Pb**	**22 30 28.9**	**+0.3**
RJOB	**Jochberg**	**1.38**	**73**	*e*Pg	**Pg**	**22 30 38.2**	**+0.9**
RJOB				*e*Sg	**Sg**	**22 30 57.1**	**+2.0**
RJOB	**Jochberg**	**1.38**	**73**	Pg	**Pg**	**22 30 38.2**	**+0.9**
RJOB				Sg	**Sg**	**22 30 57.1**	**+2.0**
KBA	**Koelnbreinsper**	**1.72**	**98**	*e*Pg	**Pg**	**22 30 44.2**	**+0.3**
KBA				*e*Sg	**Sg**	**22 31 08.5**	**+2.3**
KBA	**Koelnbreinsper**	**1.72**	**98**	⇑*i*Pn	**Pn**	**22 30 40.6**	**-1.1**
KBA				⇓*i*Pg	**Pb**	**22 30 43.2**	**+0.1**
	1.9nm,0.1s						
KBA				⇓*i*Sn	**Sn**	**22 31 03.6**	**-0.4**
KBA	**Koelnbreinsper**	**1.72**	**98**	Pn	**Pn**	**22 30 40.6**	**-1.1**
KBA	**Koelnbreinsper**	**1.72**	**98**	Pg	**Pb**	**22 30 43.2**	**+0.1**
	1.9nm,0.1s						
KBA				Sn	**Sn**	**22 31 03.6**	**-0.4**
KBA				Sg	**Sg**	**22 31 08.5**	**+2.3**
BFO	**Black Forest**	**1.97**	**301**	*e*Pn	**Pn**	**22 30 45.2**	**+0.3**
BFO				*e*Pg	**Pg**	**22 30 49.5**	**+0.8**
BFO				*e*Sg	**Sg**	**22 31 13.8**	**-0.3**
BFO	**Black Forest**	**1.97**	**301**	Pn	**Pn**	**22 30 45.2**	**+0.3**
WET	**Wettzell**	**2.26**	**36**	*e*Pn	**Pn**	**22 30 48.5**	**-0.4**
WET				*e*Sg	**Sg**	**22 31 21.6**	**-1.8**
WET	**Wettzell**	**2.26**	**36**	Pn	**Pn**	**22 30 48.5**	**-0.4**
WET				Sg	**Sg**	**22 31 21.6**	**-1.8**
MOA	**Molln**	**2.37**	**76**	*e*Sg	**Sg**	**22 31 28.1**	**+1.2**
MOA	**Molln**	**2.37**	**76**	Sg	**Sg**	**22 31 28.1**	**+1.2**
GRF	**Grafenberg Arr**	**2.37**	**6**	*e*Sg	**Sg**	**22 31 26.5**	**-0.4**
GEC2	**GERESS Array S**	**2.43**	**51**	*e*Sg	**Sg**	**22 31 28.0**	**-1.1**
GEC2	**GERESS Array S**	**2.43**	**51**	Sg	**Sg**	**22 31 28.0**	**-1.1**
KHC	**Kasperske Hory**	**2.56**	**44**	*e*PN	Pn	22 30 48.5	-4.5
KHC				*e*x	x	22 31 00.0	
KHC				*e*x	x	22 31 23.5	
KHC				*e*SN	**Sg**	**22 31 32.5**	**-0.5**
CDF	**Champ du Feu**	**2.63**	**295**	*e*Pn	**Pg**	**22 31 01.4**	**0.0**
CDF				*e*Sn	**Sg**	**22 31 35.1**	**-0.5**
	7.1nm,0.5s						
CDF	**Champ du Feu**	**2.63**	**295**	*e*Pn	**Pg**	**22 31 01.4**	**0.0**
CDF				*e*Sn	**Sg**	**22 31 35.1**	**-0.5**
	3.5nm,0.5s						
HINF	**Hinteralfeld**	**2.75**	**281**	*e*Pn	**Pg**	**22 31 03.8**	**+0.2**
HINF				*e*Sn	**Sg**	**22 31 39.0**	**-0.2**
	2.4nm,0.2s						
HINF	**Hinteralfeld**	**2.75**	**281**	*e*Pn	**Pg**	**22 31 03.8**	**+0.2**
HINF				*e*Sn	**Sg**	**22 31 39.0**	**-0.2**
	1.2nm,0.2s						
HAU	**Haudompre**	**3.12**	**284**	*e*Sn	**Sg**	**22 31 49.9**	**-1.1**
	4.5nm,0.3s						
HAU	**Haudompre**	**3.12**	**284**	*e*Sn	**Sg**	**22 31 49.9**	**-1.1**
	2.2nm,0.3s						
TANN	**Tannenbergstha**	**3.25**	**18**	*e*Sg	**Sg**	**22 31 54.9**	**-0.5**
TANN	**Tannenbergstha**	**3.25**	**18**	Sg	**Sg**	**22 31 54.9**	**-0.5**
CABF	**La Chapelle**	**3.34**	**259**	*e*Pn	**Pg**	**22 31 13.7**	**-1.3**
CABF				*e*Sn	**Sg**	**22 31 57.1**	**-1.2**
	0.7nm,0.3s						
CABF	**La Chapelle**	**3.34**	**259**	*e*Pn	**Pg**	**22 31 13.7**	**-1.3**
CABF				*e*Sn	**Sg**	**22 31 57.1**	**-1.2**
	0.3nm,0.3s						
MOX	**Moxa**	**3.34**	**8**	*e*Sg	**Sg**	**22 31 58.2**	**-0.1**
MOX	**Moxa**	**3.34**	**8**	Sg	**Sg**	**22 31 58.2**	**-0.1**
PAGF	**Fort de Pagny**	**3.65**	**291**	*e*Pn	**Pb**	**22 31 16.0**	**0.0**
PAGF				*e*Sn	**Sb**	**22 32 02.7**	**+2.2**
	0.8nm,0.3s						
PAGF	**Fort de Pagny**	**3.65**	**291**	*e*Pn	**Pb**	**22 31 16.0**	**0.0**
PAGF				*e*Sn	**Sb**	**22 32 02.7**	**+2.2**
	0.4nm,0.3s						

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*IDC **05** 22:33:19.8±1.5, 3°.28S×135°.70E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.7/16, mbtmp3.7/5, MS3.9/2, Ms1 3.9/2, ms1mx2.9/31, Error ellipse: s-maj=76.6km s-min=29.9km az=83.0*
ISC 05 22:33:21.6±1.2**, 3°.62S**±0°.09×**135°.4E**±0°.2**, h22**km**, n17, σ2s.43**/10**, mb3.6**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.26**	**184**	Pn	**Pn**	**22 37 08.2**	**-0.5**
	0.2nm,0.3s,baz=2.5,slow=13,SNR=3.6						
WRA				Sn	**Sn**	**22 40 04.8**	**-3.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	0.2nm,0.3s,baz=13,slow=23,SNR=3.9						
FITZ	**Fitzroy Crossi**	**17.27**	**213**	P	**P**	**22 37 23.5**	**+0.6**
	0.1nm,0.3s,baz=32,slow=14,SNR=4.5						
FITZ				S	**Sn**	**22 40 31.1**	**-2.1**
	0.2nm,0.3s,baz=143,slow=16,SNR=3.1						
ASAR	**Alice Springs**	**19.98**	**184**	P	**Pn**	**22 37 57.7**	**+3.3**
	12nm,0.8s,baz=8.3,slow=11,SNR=80						
AFI	**Afiamalu**	**53.09**	**105**	LR	LR	23 04 12.0	
	comp=Z,102nm,18.1s,baz=219,slow=35						
TAPN	**Taplejung**	**55.32**	**307**	*e*P	P	22 42 49.6	-4.7
	4.2nm,0.6s						
RAMN	**Ramite**	**56.04**	**306**	*e*P	**P**	**22 42 56.7**	**-2.7**
	12nm,0.6s						
GUN	**Gumba**	**57.02**	**307**	*e*P	P	22 42 55.6	-11
	4.6nm,0.5s						
SONM	**Songino Array**	**57.20**	**337**	P	**P**	**22 43 07.1**	**0.0**
	0.2nm,0.7s,baz=146,slow=5.7,SNR=2.4						
KKN	**Kakani**	**57.46**	**306**	*e*P	P	22 42 59.8	-10
	6.5nm,0.6s						
DMN	**Daman**	**57.52**	**306**	*e*P	P	22 43 01.5	-8.4
	12nm,0.6s						
KOLN	**Koldanda**	**58.81**	**306**	*e*P	P	22 43 07.9	-11
DANN	**Dangsing**	**58.91**	**306**	*e*P	P	22 43 04.8	-15
	11nm,0.6s						
PYUN	**Piuthan**	**59.43**	**306**	*e*P	P	22 43 10.2	-13
MKAR	**Makanchi Array**	**68.52**	**324**	P	**P**	**22 44 24.4**	**+2.0**
	0.2nm,0.3s,baz=116,slow=8.2,SNR=7.3						
ZALV	**Zalesovo Beam**	**71.09**	**331**	P	**P**	**22 44 38.0**	**-0.1**
	0.2nm,0.4s,baz=128,slow=9.6,SNR=3.5						
KDAK	**Kodiak Island**	**83.57**	**31**	LR	LR	23 16 00.5	
	comp=Z,73nm,20.3s,baz=161,slow=31						
ILAR	**Eielson Array**	**88.03**	**25**	P	**P**	**22 46 09.8**	**-0.1**
	0.2nm,0.4s,baz=268,slow=4.4,SNR=5.3						

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*ISCJB **05** 22:33:29.0±0.8, 46°.6N±0°.1×152°.7E±0°.1, h52km, mb3.7/12, MS4.1/1, Error ellipse: s-maj=20.7km s-min=5.7km az=139.5*
*IDC **05** 22:33:34.6±2.8, 46°.81N×152°.50E, h81km±24km, mb3.4/11, mb1 3.6/14, mb1mx3.4/28, mbtmp3.4/14, MS2.7/1, Ms1 2.7/1, ms1mx2.2/28, Error ellipse: s-maj=28.9km s-min=16.0km az=139.0*
*MOS **05** 22:33:35.5±1.6, 46°.61N×152°.26E, h109km, mb4.0/7, Error ellipse: s-maj=18.6km s-min=11.6km az=61.1*
ISC 05 22:33:30.6±0.9**, 46°.5N**±0°.1×**152°.7E**±0°.1**, h52km, n40, σ1§81**/43**, mb3.7**/12**, 1C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.62**	**251**	PN	**Pn**	**22 34 25.6**	**+1.5**
KUR				S	**Sn**	**22 35 08.0**	**+2.4**
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR				smax	smax		
	comp=E,300nm,0.8s						
KUR				smax	smax		
	comp=N,150nm,0.5s						
NEM2	**Nemuro 2**	**5.87**	**240**	P	**Pn**	**22 34 54.5**	**-0.4**
NEM2				*e*S	**Sn**	**22 35 59.4**	**-1.4**
JRA	**Rausu**	**5.95**	**247**	P	**Pn**	**22 34 59.1**	**+3.0**
JNK	**Nakash**	**6.38**	**245**	P	**Pn**	**22 35 03.7**	**+1.8**
JNK				*e*S	**Sn**	**22 36 15.1**	**+1.7**
JAK	**Akkeshi**	**6.71**	**241**	P	**Pn**	**22 35 06.3**	**-0.1**
JAK				*e*S	**Sn**	**22 36 19.1**	**-2.3**
JTKR	**Abashiri--Toko**	**6.72**	**251**	P	**Pn**	**22 35 09.3**	**+2.7**
JMP	**Maruseppu**	**7.06**	**252**	P	**Pn**	**22 35 13.4**	**+2.1**
JAR	**Ashorobuto**	**7.12**	**246**	P	**Pn**	**22 35 14.1**	**+2.0**
JOB	**Onbets**	**7.29**	**243**	P	**Pn**	**22 35 15.4**	**+1.0**
JOB				*e*S	**Sn**	**22 36 34.2**	**-1.4**
PETK	**Petropavlovsk-**	**7.33**	**24**	*e*PN	Pn	22 35 24.8	+10
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**7.33**	**24**	P	**Pn**	**22 35 16.6**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=185,slow=16,SNR=3.3						
JKK2	**Kamakawa 2**	**7.52**	**253**	P	**Pn**	**22 35 20.7**	**+3.1**
ASAJ	**Asahikawa**	**7.52**	**255**	P	Pn	22 35 21.1	+3.5
	comp=Z,0.7nm,0.3s,baz=110,slow=21,SNR=4.6						
ASAJ				LR	LR	22 38 27.2	
	comp=Z,52nm,19.0s,baz=337,slow=39						
PET	**Petropavlovsk**	**7.55**	**28**	*e*PN	Pn	22 35 26.1	+8.2
JCH	**Churui**	**7.74**	**243**	P	**Pn**	**22 35 21.1**	**+0.6**
JCH				*e*S	**Sn**	**22 36 44.2**	**-2.5**
JEM	**Erimo**	**8.20**	**240**	P	**Pn**	**22 35 28.5**	**+1.6**
ERM	**Erimo**	**8.20**	**240**	*e*PN	**Pn**	**22 35 28.3**	**+1.4**
JBT2	**Biratori 2**	**8.27**	**247**	P	**Pn**	**22 35 29.6**	**+1.7**
JKB	**Kayabe**	**9.58**	**245**	P	**Pn**	**22 35 46.0**	**+0.2**
JKB				*e*S	**Sn**	**22 37 27.5**	**-4.4**
JTM	**Tenmabayashi**	**10.20**	**240**	P	**Pn**	**22 35 52.6**	**-1.6**
JIO	**Ouri**	**11.63**	**230**	*e*S	Sn	22 38 11.6	-10
MJAR	**Matsushiro Arr**	**14.72**	**232**	P	**P**	**22 37 02.8**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=31,slow=8.1,SNR=5.9						
USRK	**Ussuriysk Arra**	**14.74**	**268**	P	**Pn**	**22 36 55.9**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=76,slow=11,SNR=2.4						
KSRS	**Korea Array**	**20.46**	**253**	P	Pn	22 38 05.7	-0.7
	comp=Z,1.6nm,0.8s,baz=57,slow=11,SNR=3.3						
ILAR	**Eielson Array**	**36.89**	**38**	P	**P**	**22 40 33.6**	**-0.2**
	comp=Z,0.2nm,0.8s,baz=198,slow=18,SNR=4.4						
ZALV	**Zalesovo Beam**	**42.51**	**306**	P	**P**	**22 41 18.4**	**-2.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**42.51**	**306**	P	**P**	**22 41 18.4**	**-2.1**
	comp=Z,0.6nm,0.4s,baz=67,slow=7.6,SNR=5.5						
MKAR	**Makanchi Array**	**46.79**	**297**	*e*P	**P**	**22 41 53.7**	**-1.1**
MKAR	**Makanchi Array**	**46.79**	**297**	P	**P**	**22 41 53.0**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=65,slow=6.3,SNR=12						
MKAR				PcP	**PcP**	**22 43 27.0**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=62,slow=3.8,SNR=4.7						
BRVK	**Borovoye**	**50.82**	**309**	*e*P	**P**	**22 42 23.9**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**51.27**	**36**	P	**P**	**22 42 28.7**	**0.0**
	comp=Z,0.1nm,0.4s,baz=294,slow=7.2,SNR=3.5						
CMAR	**Chiang Mai Arr**	**52.05**	**256**	P	**P**	**22 42 36.7**	**+1.6**
	comp=Z,0.6nm,0.4s,baz=30,slow=7.7,SNR=4.8						
FINES	**FINESS Array B**	**64.11**	**335**	P	**P**	**22 43 57.6**	**-1.3**
	comp=Z,1.2nm,0.4s,baz=35,slow=7.7,SNR=19						
OBN	**Obninsk**	**65.33**	**325**	⇑*e*P	**P**	**22 44 05.5**	**-1.3**
OBN				*e*S	S	22 52 37.5	-9.0
OBN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s						
NB2	**NORSAR Subarra**	**68.34**	**341**	P	**P**	**22 44 25.1**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**68.34**	**341**	P	**P**	**22 44 24.8**	**-1.2**
	comp=Z,1.5nm,0.8s,baz=28,slow=6.4,SNR=7.5						
ASAR	**Alice Springs**	**71.92**	**198**	P	**P**	**22 44 49.6**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=11,slow=6.3,SNR=4.8						
BRTR	**Keskin Array B**	**78.35**	**317**	P	**P**	**22 45 25.5**	**+0.1**
	comp=Z,0.7nm,0.9s,baz=99,slow=6.4,SNR=5.3						
GERES	**GERESS Array B**	**78.53**	**334**	P	**P**	**22 45 25.6**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=44,slow=5.9,SNR=4.1						
TORD	**Torodi Ar. Bea**	**115.13**	**329**	PKP	**PKPdf**	**22 52 05.3**	**-1.0**
	comp=Z,0.2nm,0.9s,baz=32,slow=3.4,SNR=2.5						

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*CSEM **05** 22:38:57.7±1.5, 49°.82N×18°.55E, h1km, Error ellipse: s-maj=25.8km s-min=19.4km az=86.0*
PRU 05 22:38:59.4, 49°.82N×18°.50E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.23**	**275**	*e*PG	Pg	22 39 03.7	-0.1
OKC				*e*SG	Sg	22 39 05.5	-1.3
OKC	**Ostrava-Krasne**	**0.23**	**275**	Pg	Pg	22 39 03.7	-0.1
OKC				Sg	Sg	22 39 05.5	-1.3
VRAC	**Vranov**	**1.34**	**248**	*e*Pg	Pg	22 39 23.7	-1.5
VRAC				*e*Sg	Sg	22 39 42.0	-0.6
DPC	**Dobruska-Polom**	**1.50**	**292**	*e*PG	Pn	22 39 26.6	-1.1
DPC				*e*SG	Sg	22 39 47.2	-0.6
DPC	**Dobruska-Polom**	**1.50**	**292**	Pg	Pn	22 39 26.6	-1.1
DPC				Sg	Sg	22 39 47.2	-0.6

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*ISCJB **05** 22:39:41.7±0.2, 42°.35N±0°.01×13°.38E±0°.02, h8km±2km, mb3.3/4, Error ellipse: s-maj=2.6km s-min=2.1km az=30.1*
*LDG **05** 22:39:41.8±0.1, 42°.34N×13°.35E, h2km, Ml3.3/7, Error ellipse: s-maj=3.4km s-min=2.4km az=55.0*
*ROM **05** 22:39:41.8±0.1, 42°.33N×13°.39E, h10km±1km, Ml3.5/38, Error ellipse: s-maj=1.2km s-min=1.0km az=51.0*
*BEO **05** 22:39:41.3±0.9, 42°.33N×13°.17E, h1km±26km, ML3.4/6*
*CSEM **05** 22:39:42.2±0.1, 42°.33N×13°.35E, h2km, ML3.9/12, Error ellipse: s-maj=2.6km s-min=2.1km az=39.0*
*IDC **05** 22:39:42.6±1.1, 42°.51N×13°.29E, h0km, mb3.3/5, mb1 3.5/8, mb1mx3.4/29, mbtmp3.3/8, ML3.5/3, Error ellipse: s-maj=28.3km s-min=13.5km az=99.0*
*PRU **05** 22:39:43.0, 42°.37N×13°.52E, h0km*
ISC 05 22:39:42.8±0.7**, 42°.34N**±0°.02×**13°.38E**±0°.02**, h8km**±4km**, n221, σ1§34**/262**, mb3.3**/4**, 29C-21D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.02**	**52**	⇓*i*Pg	**Pg**	**22 39 44.1**	**-0.4**
AQU				Sg	**Sg**	**22 39 45.2**	**-0.5**
	94µm,0.3s						
AQU	**L'Aquila**	**0.02**	**52**	⇓*i*Pg	**Pg**	**22 39 44.1**	**-0.4**
AQU				Sg	**Sg**	**22 39 45.2**	**-0.5**
	94µm,0.3s						
FAGN	**Fagnano**	**0.17**	**115**	⇑Pg	**Pg**	**22 39 46.0**	**-0.4**
FAGN				Sg	**Sg**	**22 39 49.6**	**+0.7**
	37µm,0.4s						
FAGN	**Fagnano**	**0.17**	**115**	⇑Pg	**Pg**	**22 39 46.0**	**-0.4**
FAGN				Sg	**Sg**	**22 39 49.6**	**+0.7**
	37µm,0.4s						
FIAM	**Fiamignano**	**0.20**	**250**	⇑*i*Pg	**Pg**	**22 39 46.9**	**-0.2**
FIAM				Sg	**Sg**	**22 39 50.5**	**+0.6**
	12µm,0.8s						
FIAM	**Fiamignano**	**0.20**	**250**	⇑*i*Pg	**Pg**	**22 39 46.9**	**-0.2**
FIAM				Sg	**Sg**	**22 39 50.5**	**+0.6**
	12µm,0.8s						
PTQR	**Pietraquaria**	**0.32**	**177**	Pg	**Pg**	**22 39 48.6**	**-0.5**
PTQR	**Pietraquaria**	**0.32**	**177**	Pg	**Pg**	**22 39 48.6**	**-0.5**
TERO	**Teramo**	**0.33**	**31**	⇑Pg	**Pg**	**22 39 48.3**	**-1.1**
TERO				Sg	**Sg**	**22 39 53.2**	**-0.6**
	6µm,0.5s						
TERO	**Teramo**	**0.33**	**31**	⇑Pg	**Pg**	**22 39 48.3**	**-1.1**
TERO				Sg	**Sg**	**22 39 53.2**	**-0.6**
	6µm,0.5s						
VCEL	**Villa Celiera**	**0.35**	**81**	⇑Pg	**Pg**	**22 39 48.9**	**-0.9**
VCEL				Sg	**Sg**	**22 39 55.2**	**+0.8**
	7µm,0.6s						
VCEL	**Villa Celiera**	**0.35**	**81**	⇑Pg	**Pg**	**22 39 48.9**	**-0.9**
VCEL				Sg	**Sg**	**22 39 55.2**	**+0.8**
	7µm,0.6s						
CERT	**Cerreto**	**0.49**	**217**	⇑Pg	**Pg**	**22 39 51.5**	**-0.8**
CERT				Sg	**Sg**	**22 39 59.0**	**+0.3**
	5µm,0.5s						
CERT	**Cerreto**	**0.49**	**217**	⇑Pg	**Pg**	**22 39 51.5**	**-0.8**
CERT				Sg	**Sg**	**22 39 59.0**	**+0.3**
	5µm,0.5s						
VVLD	**Villa Vallelon**	**0.50**	**159**	Pg	**Pg**	**22 39 51.5**	**-1.1**
VVLD				Sg	**Sg**	**22 39 58.7**	**-0.5**
	2µm,0.6s						
VVLD	**Villa Vallelon**	**0.50**	**159**	Pg	**Pg**	**22 39 51.5**	**-1.1**
VVLD				Sg	**Sg**	**22 39 58.7**	**-0.5**
	2µm,0.6s						
INTR	**Introdacqua**	**0.51**	**130**	Pg	**Pg**	**22 39 51.6**	**-1.2**
INTR				Sg	**Sg**	**22 39 59.6**	**+0.1**
	3µm,0.7s						
INTR	**Introdacqua**	**0.51**	**130**	Pg	**Pg**	**22 39 51.6**	**-1.2**
INTR				Sg	**Sg**	**22 39 59.6**	**+0.1**
	3µm,0.7s						
MNS	**Montasola**	**0.52**	**275**	⇑Pg	**Pg**	**22 39 52.0**	**-0.9**
	2µm,0.7s						
MNS	**Montasola**	**0.52**	**275**	⇑Pg	**Pg**	**22 39 52.0**	**-0.9**
	2µm,0.7s						
NRCA	**Norcia**	**0.53**	**339**	Pg	**Pg**	**22 39 52.2**	**-1.0**
NRCA				Sg	**Sg**	**22 40 00.7**	**+0.5**
	3µm,0.2s						
NRCA	**Norcia**	**0.53**	**339**	Pg	**Pg**	**22 39 52.2**	**-1.0**
NRCA				Sg	**Sg**	**22 40 00.7**	**+0.5**
	3µm,0.2s						
GUAR	**Guarcino**	**0.55**	**185**	Pg	**Pg**	**22 39 52.4**	**-1.0**
	2µm,0.7s						
GUAR	**Guarcino**	**0.55**	**185**	Pg	**Pg**	**22 39 52.4**	**-1.0**
	2µm,0.7s						
MTCE	**Montecelio**	**0.57**	**236**	⇑*i*Pg	**Pg**	**22 39 53.0**	**-0.8**
MTCE				Sg	**Sg**	**22 40 02.1**	**+0.9**
	884nm,0.6s						
MTCE	**Montecelio**	**0.57**	**236**	⇑*i*Pg	**Pg**	**22 39 53.0**	**-0.8**
MTCE				Sg	**Sg**	**22 40 02.1**	**+0.9**
	884nm,0.6s						
TRTR	**Tortoreto Alta**	**0.61**	**40**	Pg	**Pg**	**22 39 54.8**	**+0.1**
	8µm,0.9s						
TRTR	**Tortoreto Alta**	**0.61**	**40**	Pg	**Pg**	**22 39 54.8**	**+0.1**
	8µm,0.9s						
OFFI	**Offida**	**0.64**	**21**	Pg	**Pg**	**22 39 54.9**	**-0.3**
	7µm,0.6s						
OFFI	**Offida**	**0.64**	**21**	Pg	**Pg**	**22 39 54.9**	**-0.3**
	7µm,0.6s						
LPEL	**Lama dei Pelig**	**0.67**	**116**	Pg	**Pg**	**22 39 54.1**	**-1.6**
LPEL				Sg	**Sg**	**22 40 04.8**	**+0.4**
	870nm,0.5s						
LPEL	**Lama dei Pelig**	**0.67**	**116**	Pg	**Pg**	**22 39 54.1**	**-1.6**
LPEL				Sg	**Sg**	**22 40 04.8**	**+0.4**
	870nm,0.5s						
POFI	**Posta Fibreno**	**0.67**	**158**	Pg	**Pg**	**22 39 54.5**	**-1.3**
	616nm,0.9s						
POFI	**Posta Fibreno**	**0.67**	**158**	Pg	**Pg**	**22 39 54.5**	**-1.3**
	616nm,0.9s						
SDI	**San Donato**	**0.71**	**153**	Pg	**Pg**	**22 39 55.0**	**-1.5**
	254nm,0.2s						
SDI	**San Donato**	**0.71**	**153**	Pg	**Pg**	**22 39 55.0**	**-1.5**
	254nm,0.2s						
RMP	**Rome, Mte Porz**	**0.73**	**224**	Pg	**Pg**	**22 39 55.7**	**-1.2**
	2µm,0.6s						
RMP	**Rome, Mte Porz**	**0.73**	**224**	Pg	**Pg**	**22 39 55.7**	**-1.2**
	2µm,0.6s						
CAFR	**Castel Frentan**	**0.73**	**98**	Pg	**Pg**	**22 39 56.0**	**-0.9**
	1µm,0.3s						
CAFR	**Castel Frentan**	**0.73**	**98**	Pg	**Pg**	**22 39 56.0**	**-0.9**
	1µm,0.3s						
FDMO	**Fiordimonte**	**0.73**	**343**	Pg	**Pg**	**22 39 55.6**	**-1.3**
	2µm,0.5s						
FDMO	**Fiordimonte**	**0.73**	**343**	Pg	**Pg**	**22 39 55.6**	**-1.3**
	2µm,0.5s						
RDP	**Rocca di Papa**	**0.76**	**220**	Pg	**Pg**	**22 39 56.4**	**-1.1**
	3µm,0.5s						
RDP	**Rocca di Papa**	**0.76**	**220**	Pg	**Pg**	**22 39 56.4**	**-1.1**
	3µm,0.5s						
GIUL	**Giuliano Di Ro**	**0.79**	**187**	Pg	**Pg**	**22 39 56.9**	**-1.0**
	892nm,0.7s						
GIUL	**Giuliano Di Ro**	**0.79**	**187**	Pg	**Pg**	**22 39 56.9**	**-1.0**
	892nm,0.7s						
RNI2	**Rionero Sannit**	**0.86**	**137**	Pg	**Pg**	**22 39 57.8**	**-1.6**
RNI2	**Rionero Sannit**	**0.86**	**137**	Pg	**Pg**	**22 39 57.8**	**-1.6**
ASSB	**Assisi San Ben**	**0.88**	**323**	Pg	**Pg**	**22 39 58.5**	**-1.3**
	1µm,0.4s						
ASSB	**Assisi San Ben**	**0.88**	**323**	Pg	**Pg**	**22 39 58.5**	**-1.3**
	1µm,0.4s						
CERA	**Filignano**	**0.88**	**147**	Pg	**Pg**	**22 39 57.8**	**-2.0**
	1µm,0.7s						
CERA	**Filignano**	**0.88**	**147**	Pg	**Pg**	**22 39 57.8**	**-2.0**
	1µm,0.7s						
SNTG	**Esanatoglia**	**0.97**	**341**	Pg	**Pg**	**22 40 00.1**	**-1.4**
	360nm,0.4s						
SNTG	**Esanatoglia**	**0.97**	**341**	Pg	**Pg**	**22 40 00.1**	**-1.4**
	360nm,0.4s						
CING	**Cingoli**	**1.04**	**353**	Pg	**Pg**	**22 40 01.3**	**-1.6**
	1µm,0.8s						
CING	**Cingoli**	**1.04**	**353**	Pg	**Pg**	**22 40 01.3**	**-1.6**
	1µm,0.8s						
TRIV	**Trivento**	**1.04**	**123**	Pg	**Pg**	**22 40 01.7**	**-1.2**
	574nm,0.9s						
TRIV	**Trivento**	**1.04**	**123**	Pg	**Pg**	**22 40 01.7**	**-1.2**
	574nm,0.9s						
MURB	**Monte Urbino**	**1.12**	**326**	Pg	**Pg**	**22 40 03.0**	**-1.3**
	2µm,0.3s						
MURB	**Monte Urbino**	**1.12**	**326**	Pg	**Pg**	**22 40 03.0**	**-1.3**
	2µm,0.3s						
SACS	**San Casciano d**	**1.20**	**296**	Pn	**Pb**	**22 40 04.7**	**-1.1**
	970nm,0.7s						
ARVD	**Arcevia**	**1.20**	**345**	Pg	**Pb**	**22 40 04.3**	**-1.5**
	632nm,0.6s						
ARVD	**Arcevia**	**1.20**	**345**	Pg	**Pb**	**22 40 04.3**	**-1.5**
	632nm,0.6s						
BSSO	**Busso**	**1.21**	**131**	Pg	**Pb**	**22 40 04.2**	**-1.7**
	823nm,1.3s						
BSSO	**Busso**	**1.21**	**131**	Pg	**Pb**	**22 40 04.2**	**-1.7**
	823nm,1.3s						
SGG	**Gregorio Mates**	**1.21**	**141**	Pg	**Pb**	**22 40 04.6**	**-1.4**
	338nm,0.9s						
SGG	**Gregorio Mates**	**1.21**	**141**	Pg	**Pb**	**22 40 04.6**	**-1.4**
	338nm,0.9s						
AOI	**Ancona**	**1.22**	**8**	Pn	**Pn**	**22 40 04.8**	**-1.4**
	877nm,0.9s						
AOI	**Ancona**	**1.22**	**8**	Pn	**Pn**	**22 40 04.8**	**-1.4**
	877nm,0.9s						
MODR	**Mondragone**	**1.25**	**162**	Pn	**Pn**	**22 40 05.4**	**-1.2**
	112nm,1.0s						
MODR	**Mondragone**	**1.25**	**162**	Pn	**Pn**	**22 40 05.4**	**-1.2**
	112nm,1.0s						
PTRJ	**Pietraroja**	**1.30**	**138**	Pn	**Pn**	**22 40 05.6**	**-1.7**
	986nm,0.9s						
PTRJ	**Pietraroja**	**1.30**	**138**	Pn	**Pn**	**22 40 05.6**	**-1.7**
	986nm,0.9s						
PIEI	**Pieia**	**1.35**	**333**	Pn	**Pn**	**22 40 06.9**	**-1.0**
	337nm,0.5s						
PIEI	**Pieia**	**1.35**	**333**	Pn	**Pn**	**22 40 06.9**	**-1.0**
	337nm,0.5s						
CAFI	**Castiglion Fio**	**1.43**	**314**	Pn	**Pn**	**22 40 09.1**	**0.0**
	266nm,0.7s						
CAFI	**Castiglion Fio**	**1.43**	**314**	Pn	**Pn**	**22 40 09.1**	**0.0**
	266nm,0.7s						
PARC	**Parchiule**	**1.55**	**328**	Pn	**Pn**	**22 40 10.9**	**+0.1**
	531nm,0.7s						
PARC	**Parchiule**	**1.55**	**328**	Pn	**Pn**	**22 40 10.9**	**+0.1**
	531nm,0.7s						
SGRT	**San Giovanni R**	**1.86**	**108**	Pn	**Pn**	**22 40 15.3**	**+0.3**
	254nm,1.1s						
SGRT	**San Giovanni R**	**1.86**	**108**	Pn	**Pn**	**22 40 15.3**	**+0.3**
	254nm,1.1s						
ASQU	**Asqua**	**1.86**	**322**	Pn	**Pn**	**22 40 15.0**	**-0.1**
	225nm,0.9s						
ASQU	**Asqua**	**1.86**	**322**	Pn	**Pn**	**22 40 15.0**	**-0.1**
	225nm,0.9s						
CASP	**Castiglione de**	**1.91**	**285**	Pn	**Pn**	**22 40 15.4**	**-0.2**
	96nm,1.0s						
CASP	**Castiglione de**	**1.91**	**285**	Pn	**Pn**	**22 40 15.4**	**-0.2**
	96nm,1.0s						
SFI	**Santa Sofia**	**1.92**	**325**	Pn	**Pn**	**22 40 16.0**	**+0.1**
	177nm,0.8s						
SFI	**Santa Sofia**	**1.92**	**325**	Pn	**Pn**	**22 40 16.0**	**+0.1**
	177nm,0.8s						
MSAG	**Monte S. Angel**	**1.99**	**108**	Pn	**Pn**	**22 40 17.6**	**+0.8**
MSAG	**Monte S. Angel**	**1.99**	**108**	Pn	**Pn**	**22 40 17.6**	**+0.8**
MS1	**Monte Sant'Ang**	**2.01**	**107**	*e*Sn	**Sg**	**22 40 48.6**	**+1.1**
MCRV	**Calabrutti - M**	**2.06**	**139**	Pn	**Pn**	**22 40 18.2**	**+0.5**
	39nm,0.8s						
MCRV	**Calabrutti - M**	**2.06**	**139**	Pn	**Pn**	**22 40 18.2**	**+0.5**
	39nm,0.8s						
CRMI	**Carmignano**	**2.28**	**310**	Pn	**Pn**	**22 40 21.9**	**+1.1**
	69nm,0.9s						
CRMI	**Carmignano**	**2.28**	**310**	Pn	**Pn**	**22 40 21.9**	**+1.1**
	69nm,0.9s						
NVLJ	**Novalja**	**2.48**	**26**	*e*Pn	**Pn**	**22 40 23.1**	**-0.3**
NVLJ				Sn	**Sn**	**22 40 53.3**	**-0.4**
NVLJ	**Novalja**	**2.48**	**26**	*e*Pn	**Pn**	**22 40 23.1**	**-0.3**
NVLJ				Sn	**Sn**	**22 40 53.3**	**-0.4**
CDT	**Castel del Mon**	**2.51**	**119**	*e*Pn	**Pn**	**22 40 24.3**	**+0.4**
CDT				*e*Sn	**Sn**	**22 40 56.8**	**+2.2**
MAIM	**Mastiano**	**2.63**	**308**	P	**Pn**	**22 40 26.0**	**+0.4**
BDI	**Bagni Di Lucca**	**2.66**	**311**	Pn	**Pn**	**22 40 26.4**	**+0.3**
	159nm,1.3s						
BDI	**Bagni Di Lucca**	**2.66**	**311**	Pn	**Pn**	**22 40 26.4**	**+0.3**
	159nm,1.3s						
BAI	**Bari**	**2.90**	**114**	*e*Pn	**Pn**	**22 40 30.0**	**+0.8**
STON	**Ston**	**3.24**	**79**	*e*Pn	**Pn**	**22 40 33.6**	**-0.3**
STON				Sn	**Sn**	**22 41 11.9**	**-0.6**
STON	**Ston**	**3.24**	**79**	*e*Pn	**Pn**	**22 40 33.5**	**-0.3**
STON				Sn	**Sn**	**22 41 11.9**	**-0.6**
SKDS	**Skadanscina**	**3.24**	**8**	*i* Pn	**Pn**	**22 40 33.5**	**-0.4**
SKDS				*e*Sn	**Sn**	**22 41 13.0**	**+0.3**
SKDS							
	comp=Z,33nm,0.4s						
SKDS	**Skadanscina**	**3.24**	**8**	Pn	**Pn**	**22 40 33.5**	**-0.4**
SKDS				*e*Sn	**Sn**	**22 41 13.0**	**+0.3**
	comp=Z,33nm,0.4s						
PGF	**Pioggiola**	**3.25**	**275**	*e*P	**Pn**	**22 40 34.4**	**+0.3**
PGF				*e*Sn	**Sn**	**22 41 09.0**	**-3.9**
	comp=Z,9.9nm,0.5s						
PGF	**Pioggiola**	**3.25**	**275**	*e*P	**Pn**	**22 40 34.4**	**+0.3**
PGF				*e*Sn	**Sn**	**22 41 09.0**	**-3.9**
	comp=Z,4.9nm,0.5s						
BOJS	**Bojanci**	**3.44**	**23**	⇑*i*Pn	**Pn**	**22 40 37.2**	**+0.5**
BOJS				*e*Sn	**Sn**	**22 41 18.1**	**+0.5**
BOJS	**Bojanci**	**3.44**	**23**	⇑*i*Pn	**Pn**	**22 40 37.2**	**+0.5**
BOJS				*e*Sn	**Sn**	**22 41 18.1**	**+0.5**
SC2M	**Scurtabo**	**3.48**	**308**	P	**Pn**	**22 40 37.6**	**+0.3**
BLY	**Banja Luka**	**3.67**	**48**	*e*Pn	**Pn**	**22 40 41.0**	**+1.2**
BLY	**Banja Luka**	**3.67**	**48**	*e*Pn	**Pn**	**22 40 41.0**	**+1.2**
VOY	**Vojsko**	**3.71**	**6**	*e*Pn	**Pn**	**22 40 40.3**	**-0.2**
VOY				*e*		22 40 44.0	
VOY				*e*Sn	**Sn**	**22 41 24.8**	**+0.4**
VOY	**Vojsko**	**3.71**	**6**	*e*Pn	**Pn**	**22 40 40.3**	**-0.2**
VOY				*e*Sn	**Sn**	**22 41 24.8**	**+0.4**
CGRP	**Cima Grappa**	**3.72**	**343**	Pn	**Pn**	**22 40 39.8**	**-0.9**
	comp=Z,98nm,0.6s						
CGRP	**Cima Grappa**	**3.72**	**343**	Pn	**Pn**	**22 40 39.8**	**-0.9**
	comp=Z,98nm,0.6s						
SALO	**Salr**	**3.87**	**329**	Pn	**Pn**	**22 40 43.5**	**+0.9**
	comp=Z,103nm,0.8s						
SALO	**Salr**	**3.87**	**329**	Pn	**Pn**	**22 40 43.5**	**+0.9**
	comp=Z,103nm,0.8s						
CADS	**Cadrg**	**3.90**	**4**	*i* Pn	**Pn**	**22 40 42.6**	**-0.4**
CADS	**Cadrg**	**3.90**	**4**	*i* Pn	**Pn**	**22 40 42.6**	**-0.4**
CTI	**Castel Tesino**	**3.91**	**342**	Pn	**Pn**	**22 40 43.9**	**+0.7**
	comp=Z,52nm,0.5s						
CTI	**Castel Tesino**	**3.91**	**342**	Pn	**Pn**	**22 40 43.9**	**+0.7**
	comp=Z,52nm,0.5s						
VINO	**Villanova**	**3.92**	**359**	Pn	**Pn**	**22 40 42.8**	**-0.5**
	comp=Z,60nm,0.6s						
VINO	**Villanova**	**3.92**	**359**	Pn	**Pn**	**22 40 42.8**	**-0.5**
	comp=Z,60nm,0.6s						
PCP	**Piancastagn**	**4.15**	**304**	P	**Pn**	**22 40 45.0**	**-1.5**
OBKA	**Obir**	**4.25**	**11**	⇑*i*Pn	**Pn**	**22 40 48.2**	**+0.3**
OBKA	**Obir**	**4.25**	**11**	Pn	**Pn**	**22 40 48.2**	**+0.3**
MYKA	**Terra Mystica**	**4.29**	**2**	⇑*i*Pn	**Pn**	**22 40 49.1**	**+0.6**
MYKA	**Terra Mystica**	**4.29**	**2**	Pn	**Pn**	**22 40 49.1**	**+0.6**
PDG	**Podgorica**	**4.36**	**87**	*e*Pn	**Pn**	**22 40 50.0**	**+0.8**
PDG				*e*Sn	**Sn**	**22 41 42.4**	**+2.3**
PDG	**Podgorica**	**4.36**	**87**	*e*Pn	**Pn**	**22 40 50.0**	**+0.8**
PDG				*e*Sn	**Sn**	**22 41 42.4**	**+2.3**
ABTA	**Abfaltersbach**	**4.45**	**352**	⇓*i*Pn	**Pn**	**22 40 51.2**	**+0.6**
	SNR=31						
ABTA	**Abfaltersbach**	**4.45**	**352**	Pn	**Pn**	**22 40 51.2**	**+0.6**
	SNR=31						
SAOF	**Saorge**	**4.56**	**293**	P	**Pn**	**22 40 52.9**	**+0.7**
SAOF	**Saorge**	**4.56**	**293**	P	**Pn**	**22 40 52.9**	**+0.7**
SBF	**Sospel**	**4.61**	**291**	*e*Pn	**Pn**	**22 40 52.2**	**-0.6**
SBF				*e*Sn	**Sn**	**22 41 41.3**	**-5.2**
	comp=Z,13nm,0.6s						
SBF	**Sospel**	**4.61**	**291**	*e*Pn	**Pn**	**22 40 52.2**	**-0.6**
AUTN	**L'Aution**	**4.66**	**293**	P	**Pn**	**22 40 55.2**	**+1.6**
AUTN	**L'Aution**	**4.66**	**293**	P	**Pn**	**22 40 55.2**	**+1.6**
BBLS	**Lazići**	**4.67**	**69**	*e*Pn	**Pn**	**22 40 54.6**	**+1.0**
BBLS	**Lazići**	**4.67**	**69**	*e*Pn	**Pn**	**22 40 54.6**	**+1.0**
KBA	**Koelnbreinsper**	**4.74**	**360**	⇑*i*Pn	**Pn**	**22 40 55.0**	**+0.3**
	SNR=6.2						
KBA	**Koelnbreinsper**	**4.74**	**360**	Pn	**Pn**	**22 40 55.0**	**+0.3**
	SNR=6.2						
CALN	**Calern**	**4.96**	**289**	P	**Pn**	**22 40 58.5**	**+0.8**
CALN	**Calern**	**4.96**	**289**	P	**Pn**	**22 40 58.5**	**+0.8**
FETA	**Feichten**	**5.05**	**339**	⇓*i*Pn	**Pn**	**22 41 00.6**	**+1.7**
FETA	**Feichten**	**5.05**	**339**	Pn	**Pn**	**22 41 00.6**	**+1.7**
WTTA	**Wattenberg**	**5.08**	**346**	⇓*i*Pn	**Pn**	**22 40 59.9**	**+0.5**
	SNR=10.0						
WTTA	**Wattenberg**	**5.08**	**346**	Pn	**Pn**	**22 40 59.9**	**+0.5**
	SNR=10.0						
IVAS	**Ivanjica**	**5.12**	**74**	*i* Pn	**Pn**	**22 41 00.6**	**+0.7**
IVAS	**Ivanjica**	**5.12**	**74**	*i* Pn	**Pn**	**22 41 00.6**	**+0.7**
DIVS	**Divibare**	**5.14**	**68**	*e*Pn	**Pn**	**22 41 00.8**	**+0.6**
DIVS	**Divibare**	**5.14**	**68**	*e*Pn	**Pn**	**22 41 00.8**	**+0.6**
MOTA	**Moosalm**	**5.26**	**343**	⇑*i*Pn	**Pn**	**22 41 03.8**	**+2.0**
	SNR=7.2						
MOTA	**Moosalm**	**5.26**	**343**	Pn	**Pn**	**22 41 03.8**	**+2.0**
	SNR=7.2						
MBDF	**Montbardon**	**5.36**	**299**	*e*P	**Pn**	**22 41 04.9**	**+1.7**
MBDF	**Montbardon**	**5.36**	**299**	*e*P	**Pn**	**22 41 04.9**	**+1.7**
TRUS	**Trudelj**	**5.47**	**67**	*e*Pn	**Pn**	**22 41 03.9**	**-0.6**
TRUS	**Trudelj**	**5.47**	**67**	*e*Pn	**Pn**	**22 41 03.9**	**-0.6**
GRUS	**Gruza**	**5.59**	**71**	⇓*i*Pn	**Pn**	**22 41 06.5**	**+0.3**
GRUS				*e*Sn	**Sn**	**22 42 12.1**	**+1.5**
GRUS	**Gruza**	**5.59**	**71**	⇓*i*Pn	**Pn**	**22 41 06.5**	**+0.3**
GRUS				*e*Sn	**Sn**	**22 42 12.1**	**+1.5**
LPG	**La Plagne**	**5.73**	**306**	*e*P	**Pn**	**22 41 09.7**	**+1.3**
LPG				*e*Sn	Sn	22 42 07.8	-6.7
	comp=Z,5.8nm,0.6s						
LPG	**La Plagne**	**5.73**	**306**	*e*P	**Pn**	**22 41 09.7**	**+1.3**
LPL	**La Plagne**	**5.75**	**306**	*e*Sn	Sn	22 42 08.8	-6.1
	comp=Z,3.3nm,0.4s						
SELS	**Selova**	**5.77**	**79**	*e*Pn	**Pn**	**22 41 08.9**	**+0.2**
SELS	**Selova**	**5.77**	**79**	*e*Pn	**Pn**	**22 41 08.9**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMRF	Simiane la Rot	5.94	289	eP	Pn	22 41 12.5	+1.5
SMRF	Simiane la Rot	5.94	289	eP	Pn	22 41 12.5	+1.5
ORIF	Oris-en-Rattie	6.02	298	eP	Pn	22 41 14.1	+1.9
ORIF	Oris-en-Rattie	6.02	298	eP	Pn	22 41 14.1	+1.9
BARS	Barje	6.25	83	⇓iPn	Pn	22 41 16.0	+0.7
BARS				eSn	Sn	22 42 26.7	-0.1
BARS	Barje	6.25	83	⇓iPn	Pn	22 41 16.0	+0.7
BARS				eSn	Sn	22 42 26.7	-0.1
GERES	GERESS Array B	6.51	2	Pn	Pn	22 41 18.6	-0.3
	comp=Z,0.4nm,0.3s,baz=172,slow=13,SNR=14						
GERES				Sn	Sn	22 42 29.1	-4.3
	comp=Z,1.4nm,0.3s,baz=194,slow=33,SNR=9.8						
FELD	Feldberg im Sc	6.71	327	P	Pn	22 41 20.5	-1.3
CABF	La Chapelle	6.74	312	ePn	Pn	22 41 20.9	-1.2
CABF	La Chapelle	6.74	312	ePn	Pn	22 41 20.9	-1.2
BZS	Buzias	6.79	58	⇑iP	Pn	22 41 25.1	+2.5
BZS	Buzias	6.79	58	⇑iP	Pn	22 41 25.1	+2.5
KHC	Kasperske Hory	6.79	1	ePN	Pn	22 41 23.0	+0.2
KHC				ex	x	22 41 42.5	
KHC				eSN	Sn	22 42 35.7	-4.6
KHC	Kasperske Hory	6.79	1	Pn	Pn	22 41 23.0	+0.2
VIVF	Saint-Julien-l	6.80	295	eP	Pn	22 41 24.5	+1.6
VIVF	Saint-Julien-l	6.80	295	eP	Pn	22 41 24.5	+1.6
LOMF	Lomont	6.84	319	P	Pn	22 41 23.2	-0.2
LOMF	Lomont	6.84	319	P	Pn	22 41 23.2	-0.2
ZAPS	Zavoj	6.87	79	⇓ePn	Pn	22 41 25.7	+1.8
ZAPS				eSn	Sn	22 42 41.4	-0.8
HINF	Hinteralfeld	7.16	322	ePn	Pn	22 41 25.6	-2.2
HINF				eSn	Sn	22 42 42.2	-7.1
	comp=Z,14nm,0.6s						
HINF	Hinteralfeld	7.16	322	ePn	Pn	22 41 25.6	-2.2
VYHS	Vyhne	7.25	30	ePN	Pn	22 41 30.1	+1.1
VYHS				eSN	Sn	22 42 46.0	-5.5
VYHS	Vyhne	7.25	30	ePn	Pn	22 41 30.1	+1.1
VTS	Vitosha	7.28	85	⇑iP	Pn	22 41 30.8	+1.3
VTS	Vitosha	7.28	85	⇑iP	Pn	22 41 30.8	+1.3
KEST	Kesra	7.30	207	Pn	Pn	22 41 34.0	+4.2
	comp=Z,0.6nm,0.3s,baz=337,slow=2.7,SNR=41						
CDF	Champ du Feu	7.44	327	ePn	Pn	22 41 30.4	-1.2
CDF				eSn	Sn	22 42 48.7	-7.4
	comp=Z,5.1nm,0.4s						
CDF	Champ du Feu	7.44	327	ePn	Pn	22 41 30.4	-1.2
GZR	Gura Zlata	7.45	63	⇓iP	Pn	22 41 33.5	+1.7
GZR	Gura Zlata	7.45	63	⇓iP	Pn	22 41 33.5	+1.7
HAU	Haudompre	7.53	321	ePn	Pn	22 41 30.9	-2.0
HAU				eSn	Sn	22 42 51.4	-7.0
	comp=Z,12nm,0.5s						
HAU	Haudompre	7.53	321	ePn	Pn	22 41 30.9	-2.0
NKC	Novy Kostel	7.92	356	eSN	Sn	22 43 05.2	-2.8
DRGR		8.01	53	⇓iP	Pn	22 41 42.4	+2.9
DRGR		8.01	53	⇓iP	Pn	22 41 42.4	+2.9
LOT	Lotru	8.12	64	⇓iP	Pn	22 41 43.8	+2.7
LOT	Lotru	8.12	64	⇓iP	Pn	22 41 43.8	+2.7
ARR	Arges	8.68	66	⇓iP	Pn	22 41 50.8	+2.1
ARR	Arges	8.68	66	⇓iP	Pn	22 41 50.8	+2.1
CLL	Collm	8.98	358	eSn	Sn	22 43 22.0	-12
CLL				eSg	Sg	22 44 39.0	+8.3
MLR	Muntele Rosu	9.60	67	⇓iP	Pn	22 42 03.0	+1.6
MLR	Muntele Rosu	9.60	67	⇓iP	Pn	22 42 03.0	+1.6
KWP	Kalwaria Pacla	9.76	38	⇑iP	Pn	22 42 08.1	+4.7
BURAR	Bucovina Array	9.91	54	⇓iP	Pn	22 42 09.2	+3.7
PLOR	Plostina	10.17	65	⇑iP	Pn	22 42 10.8	+1.7
PLOR	Plostina	10.17	65	⇑iP	Pn	22 42 10.8	+1.7
CFR	Carcaliu	11.05	70	⇑iP	Pn	22 42 22.4	+1.4
CFR	Carcaliu	11.05	70	⇑iP	Pn	22 42 22.4	+1.4
ESDC	Sonseca Array	13.37	264	Pn	Pn	22 42 52.4	-0.4
	comp=Z,0.1nm,0.3s,baz=61,slow=15,SNR=3.8						
FINES	FINESS Array B	20.60	17	P	P	22 44 21.3	-0.8
	comp=Z,2.1nm,1.0s,baz=212,slow=4.9,SNR=3.0						
KBZ	Khabaz	21.58	76	P	P	22 44 33.9	+1.2
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KBZ	Khabaz	21.58	76	P	P	22 44 33.9	+1.2
	comp=Z,1.2nm,0.9s,baz=278,slow=7.1,SNR=4.0						
TORD	Torodi Ar. Bea	30.80	203	P	P	22 46 00.4	+1.4
	comp=Z,0.3nm,0.8s,baz=18,slow=9.3,SNR=3.0						
MKAR	Makanchi Array	47.87	60	P	P	22 48 21.5	+0.5
	comp=Z,0.2nm,0.6s,baz=290,slow=6.8,SNR=3.7						
SONM	Songino Array	61.99	50	P	P	22 50 04.4	+1.0
	comp=Z,0.2nm,0.8s,baz=302,slow=3.2,SNR=3.6						

IDC 05 22:43:03.5±1.0**, 1°44N×122°34E, h0**km**, mb3.4**/5**, mb1 3.6**/6**, mb1mx3.5**/24**, mbtmp3.5**/6**, ML3.8**/1**, Error ellipse: s-maj=123.8km s-min=18.1km az=68.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.69	171	P	P	22 47 34.1	-0.4
	0.2nm,0.3s,baz=20,slow=8.8,SNR=4.5						
WRA	Warramunga Arr	24.29	152	P	P	22 48 21.9	-1.0
	0.9nm,0.6s,baz=330,slow=10,SNR=5.0						
ASAR	Alice Springs	27.37	156	P	P	22 48 52.0	+1.2
	0.4nm,0.7s,baz=345,slow=14,SNR=4.8						
SONM	Songino Array	48.24	346	P	P	22 51 47.2	+0.9
	0.5nm,0.8s,baz=157,slow=9.5,SNR=5.5						
MKAR	Makanchi Array	57.05	328	P	P	22 52 50.9	-0.6
	0.2nm,0.6s,baz=126,slow=9.0,SNR=3.3						
ZALV	Zalesovo Beam	60.74	336	P	P	22 53 16.4	-0.5
	0.4nm,0.7s,baz=125,slow=7.2,SNR=3.0						

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*ISCJB **05** 22:56:43.9±0.4, 42°98N±0°03×13°68E±0°05, h26km±4km, Error ellipse: s-maj=6.2km s-min=4.2km az=154.4*
*CSEM **05** 22:56:43.9±0.2, 42°99N×13°61E, h19km, ML2.6/7, Error ellipse: s-maj=4.2km s-min=2.4km az=66.0*
*ROM **05** 22:56:44.1±0.2, 42°96N×13°60E, h25km±3km, Md2.8/20, Ml2.3/18, Error ellipse: s-maj=2.7km s-min=1.4km az=60.0*
ISC 05 22:56:43.9±0.9**, 42°99N**±0°03×**13°63E**±0°03**, h25**km±5km**, n46, σ0°68**/62**, 2C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OFFI	Offida	0.07	140	⇑Pg	Pb	22 56 48.2	-0.1
OFFI				Sg	Sb	22 56 52.2	+0.9
	6μm,0.5s						
OFFI	Offida	0.07	140	⇑Pg	Pb	22 56 48.2	-0.1
OFFI				Sg	Sb	22 56 52.2	+0.9
	6μm,0.5s						
TRTR	Tortoreto Alta	0.28	130	⇓iPg	Pb	22 56 50.9	+0.4
	426nm,0.5s						
TRTR	Tortoreto Alta	0.28	130	⇓iPg	Pb	22 56 50.9	+0.4
	426nm,0.5s						
TERO	Teramo	0.36	183	Pg	Pb	22 56 51.3	-0.6
TERO				Sg	Sb	22 56 57.3	-0.1
	101nm,0.4s						
TERO	Teramo	0.36	183	Pg	Pb	22 56 51.3	-0.6
TERO				Sg	Sb	22 56 57.3	-0.1
	101nm,0.4s						
FDMO	Fiordimonte	0.40	277	Pg	Pb	22 56 52.1	-0.3
FDMO				Sg	Sb	22 56 59.0	+0.7
	116nm,0.3s						
FDMO	Fiordimonte	0.40	277	Pg	Pb	22 56 52.1	-0.3
FDMO				Sg	Sb	22 56 59.0	+0.7
	116nm,0.3s						
NRCA	Norcia	0.41	248	Pg	Pb	22 56 52.3	-0.3
	44nm,0.4s						
NRCA	Norcia	0.41	248	Pg	Pb	22 56 52.3	-0.3
	44nm,0.4s						
CAMP	Campotosto	0.48	200	Pg	Pb	22 56 53.1	-0.7
CAMP	Campotosto	0.48	200	Pg	Pb	22 56 53.1	-0.7
CING	Cingoli	0.50	321	Pg	Pb	22 56 53.9	-0.2
CING				Sg	Sn	22 57 02.7	-0.7
	68nm,0.3s						
CING	Cingoli	0.50	321	Pg	Pb	22 56 53.9	-0.2
CING				Sg	Sn	22 57 02.7	-0.7
	68nm,0.3s						
AOI	Ancona	0.56	358	Pg	Pb	22 56 55.2	0.0
AOI				Sg	Sn	22 57 05.1	+0.2
	99nm,0.4s						
AOI	Ancona	0.56	358	Pg	Pb	22 56 55.2	0.0
AOI				Sg	Sn	22 57 05.1	+0.2
	99nm,0.4s						
SNTG	Esanatoglia	0.57	298	Pg	Pb	22 56 55.0	-0.3
SNTG				Sg	Sn	22 57 04.3	-0.8
	53nm,0.2s						
SNTG	Esanatoglia	0.57	298	Pg	Pb	22 56 55.0	-0.3
SNTG				Sg	Sn	22 57 04.3	-0.8
	53nm,0.2s						
VCEL	Villa Celiera	0.61	165	Pg	Pb	22 56 55.9	-0.2
	85nm,0.4s						
VCEL	Villa Celiera	0.61	165	Pg	Pb	22 56 55.9	-0.2
	85nm,0.4s						
ASSB	Assisi San Ben	0.71	275	Pg	Pb	22 56 57.4	-0.3
	83nm,0.3s						
ASSB	Assisi San Ben	0.71	275	Pg	Pb	22 56 57.4	-0.3
	83nm,0.3s						
ARVD	Arcevia	0.71	316	Pg	Pb	22 56 57.6	-0.1
ARVD				Sg	Sn	22 57 08.9	+0.2
	54nm,0.6s						
ARVD	Arcevia	0.71	316	Pg	Pb	22 56 57.6	-0.1
ARVD				Sg	Sn	22 57 08.9	+0.2
	54nm,0.6s						
FAGN	Fagnano	0.72	182	Pg	Pb	22 56 58.1	+0.2
	126nm,0.3s						
FAGN	Fagnano	0.72	182	Pg	Pb	22 56 58.1	+0.2
	126nm,0.3s						
MURB	Monte Urbino	0.85	289	Pg	Pn	22 57 00.3	-0.1
	136nm,0.3s						
MURB	Monte Urbino	0.85	289	Pg	Pn	22 57 00.3	-0.1
	136nm,0.3s						
MNS	Montasola	0.92	229	Pg	Pn	22 57 01.2	-0.1
	76nm,0.8s						
MNS	Montasola	0.92	229	Pg	Pn	22 57 01.2	-0.1
	76nm,0.8s						
PIEI	Pieia	0.97	305	Pg	Pn	22 57 01.7	-0.3
	39nm,0.3s						
PIEI	Pieia	0.97	305	Pg	Pn	22 57 01.7	-0.3
	39nm,0.3s						
INTR	Introdacqua	1.00	168	Pg	Pb	22 57 03.4	+0.9
	60nm,0.4s						
INTR	Introdacqua	1.00	168	Pg	Pb	22 57 03.4	+0.9
	60nm,0.4s						
PESA	Pesaro	1.11	329	Pg	Pb	22 57 05.5	+1.1
	48nm,0.4s						
PESA	Pesaro	1.11	329	Pg	Pb	22 57 05.5	+1.1
	48nm,0.4s						
VVLD	Villa Vallelon	1.12	180	Pg	Pb	22 57 05.8	+1.2
	46nm,0.5s						
VVLD	Villa Vallelon	1.12	180	Pg	Pb	22 57 05.8	+1.2
	46nm,0.5s						
BADI	Badiali	1.14	298	Pg	Pb	22 57 05.3	+0.4
	35nm,0.5s						
BADI	Badiali	1.14	298	Pg	Pb	22 57 05.3	+0.4
	35nm,0.5s						
CERT	Cerreto	1.14	205	Pg	Pb	22 57 06.5	+1.5
	72nm,0.5s						
CERT	Cerreto	1.14	205	Pg	Pb	22 57 06.5	+1.5
	72nm,0.5s						
NVLJ	Novalja	1.81	29	ePn	Pn	22 57 13.1	-0.4
NVLJ				Sn	Sn	22 57 35.5	-0.2
NVLJ	Novalja	1.81	29	ePn	Pn	22 57 13.1	-0.4
NVLJ				Sn	Sn	22 57 35.5	-0.2
STON	Ston	2.99	91	Sn	Sn	22 58 03.1	-1.7
STON	Ston	2.99	91	Sn	Sn	22 58 03.1	-1.7

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*IDC **05** 23:19:50.6±2.4, 55°81N×152°65W, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.4/28, mbtmp3.4/7, ML3.0/2, Error ellipse: s-maj=51.1km s-min=23.7km az=139.0*
*NEIC **05** 23:19:55.8, 56°27N×152°56W, h25km, ML2.9(AEIC), After AEIC.*
ISC 05 23:19:58.5±1.5**, 56°4N**±0°1×**152°50W**±0°09**, h35**km**, n16, σ0°87**/19**, mb3.8**/4**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.91	332	P	Pn	23 20 13.1	-1.7
OHAK				S	Sn	23 20 26.9	+0.3
KDAK	Kodiak Island	1.37	358	P	Pn	23 20 20.2	-0.7
KDAK				S	Sn	23 20 38.7	+0.8
KDAK	Kodiak Island	1.37	358	Pn	Pn	23 20 20.3	-0.7
	5.6nm,0.3s,baz=200,slow=7.3,SNR=93						
KDAK				Sn	Sn	23 20 50.0	+12
	4.6nm,0.3s,baz=357,slow=19,SNR=5.9						
KABR	Katmai Barrier	2.17	323	P	Pn	23 20 30.9	-1.3
KAKN	Katmai Knife C	2.34	325	P	Pn	23 20 33.8	-0.6
FOSS	Fourpeaked Sta	2.47	345	P	Pn	23 20 35.9	-0.3
OPT	Oil Point	3.26	354	P	Pn	23 20 47.0	-0.1
HOM	Homer	3.28	8	P	Pn	23 20 45.8	-1.4
BRLK	Bradley Lake	3.46	14	P	Pn	23 20 49.0	-0.9
ILAR	Eielson Array	8.82	16	Pn	Pn	23 22 02.6	-0.6
	0.1nm,0.3s,baz=205,slow=14,SNR=12						
ILAR				Sn	Sn	23 23 41.2	0.0
	0.1nm,0.3s,baz=231,slow=7.7,SNR=6.4						
INK	Inuvik	14.72	28	Pn	P	23 23 29.2	-0.2
	0.0nm,0.3s,baz=258,slow=12,SNR=2.8						
YKA	Yellowknife Ar	19.96	57	P	Pn	23 24 28.4	-0.7
	0.3nm,0.8s,baz=269,slow=9.9,SNR=4.3						
SONM	Songino Array	57.16	308	P	P	23 29 41.7	+0.2
	0.7nm,0.7s,baz=57,slow=5.0,SNR=7.3						
ZALV	Zalesovo Beam	60.44	325	P	P	23 30 04.5	+0.5
	0.2nm,0.3s,baz=55,slow=7.6,SNR=3.0						
FINES	FINESS Array B	62.47	1	P	P	23 30 18.8	+1.2
	2.5nm,1.0s,baz=17,slow=15,SNR=2.7						
MKAR	Makanchi Array	67.42	323	P	P	23 30 50.1	+0.1
	0.2nm,0.5s,baz=42,slow=6.3,SNR=3.6						

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*ISK **05** 23:38:29.4, 40°87N×36°16E, h16km, MD2.6*
*DDA **05** 23:38:30.4, 40°84N×35°90E, h7km, MD2.6*
*ISCJB **05** 23:38:31.3±0.7, 40°87N±0°05×35°95E±0°07, h3km±14km, Error ellipse: s-maj=12.0km s-min=4.7km az=137.4*
*CSEM **05** 23:38:31.3±0.2, 40°88N×35°93E, h5km, MD2.6, Error ellipse: s-maj=4.6km s-min=3.4km az=50.0*
ISC 05 23:38:30.9±1.1**, 40°87N**±0°04×**35°98E**±0°04**, h5**km±11km**, n12, σ0°43**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KVT	Kavak	0.22	13	ePG	Pg	23 38 35.0	-0.2
KVT				eSG	Sg	23 38 38.6	+0.5
KVT	Kavak	0.22	13	ePg	Pg	23 38 35.0	-0.2
KVT				eSg	Sg	23 38 38.6	+0.5
HAVZ	Havza	0.29	316	i P	Pg	23 38 36.3	-0.1
HAVZ				i S	Sg	23 38 40.3	0.0
HAVZ	Havza	0.29	316	i P	Pg	23 38 36.3	-0.1
HAVZ				i S	Sg	23 38 40.3	0.0
ERBA	Erbaa	0.62	107	i P	Pb	23 38 44.0	-0.1
ERBA				i S	Sb	23 38 53.1	0.0
ERBA	Erbaa	0.62	107	i P	Pb	23 38 44.0	-0.1
ERBA				i S	Sb	23 38 53.1	0.0
TOKA	Tokat	0.66	145	i P	Pb	23 38 45.2	+0.3
TOKA				i S	Sb	23 38 53.4	-1.0
TOKA	Tokat	0.66	145	i P	Pb	23 38 45.2	+0.3
TOKA				i S	Sb	23 38 53.4	-1.0
DIKM	Dikmen	0.95	325	ePG	Pb	23 38 49.7	-0.1
DIKM				eSG	Sn	23 39 05.2	+0.4
DIKM	Dikmen	0.95	325	ePg	Pb	23 38 49.7	-0.1
CORM	Corum	1.24	237	ePN	Pg	23 38 54.6	0.0
CORM				eSN	Sn	23 39 12.5	+0.4
CORM	Corum	1.24	237	ePn	Pg	23 38 54.6	0.0
CORM				eSn	Sn	23 39 12.5	+0.4

NNC 05 23:42:39.8±3.7**, 37°36N×70°58E, h0**km**, mb3.7, mpv3.6, 1C-2D, Error ellipse: s-maj=31.8km s-min=27.4km az=80.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.74	360	Pn	Pn	23 44 09.3	+3.1
	3.3nm,0.6s,baz=193,slow=12,SNR=41						
KK31				Sn	Sn	23 45 19.2	+6.5
	1.1nm,0.3s,baz=188,slow=25,SNR=7.7						
TKM2	Tokmak 2	6.75	33	⇓Pn	Pn	23 44 19.7	-0.7
	3.2nm,0.7s						
TKM2				⇑Sn	Sn	23 45 39.1	+0.9
	1.9nm,1.0s						
AB31	Akbulak array	14.17	330	⇓Pn	Pn	23 46 00.4	-1.2
	0.1nm,0.3s,baz=161,slow=11,SNR=11						

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*NIED **05** 23:49:00, 29°90N×141°30E, h32km, Mw4.6 Best double couple: M₀8.02000×10^15 NP1:φs171.00000°, δ66.00000°, λ91.00000°. NP2:φs349.00000°, δ24.00000°, λ88.00000°.*
*IDC **05** 23:49:53.4±0.6, 29°73N×140°19E, h0km, mb4.1/21, mb1 4.3/22, mb1mx4.3/27, mbtmp4.1/22, ML4.4/1, MS3.5/18, Ms1 3.5/18, ms1mx3.3/47, Error ellipse: s-maj=19.5km s-min=16.0km az=64.0*
*ISCJB **05** 23:49:54.6±1.9, 29°60N±0°04×140°01E±0°04, h15km±11km, mb4.5/58, MS3.8/17, Error ellipse: s-maj=7.4km s-min=5.1km az=138.1*
*MOS **05** 23:49:56.6±1.0, 29°69N×140°18E, h33km, mb4.9/14, Error ellipse: s-maj=14.4km s-min=6.8km az=111.6*
*NEIC **05** 23:49:56.0±2.3, 29°72N×140°25E, h17km±14km, mb4.6/8, MW4.5(NIED), Error ellipse: s-maj=7.2km s-min=5.6km az=54.0*
*JMA **05** 23:49:58.5±0.1, 29°95N×141°29E, h69km, M4.3*
*BJI **05** 23:50:22.6, 30°44N×140°01E, h250km, mB4.9/11, mb4.3/20*
ISC 05 23:49:53.6±0.9**, 29°67N**±0°06×**140°20E**±0°08**, h3**km±5km**, n360, σ0°96**/356**, mb4.5**/58**, MS3.7**/17**, 118C-102D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.10	145	Pn	Pn	23 50 44.4	+0.9
CBIJ				Sn	Sn	23 51 21.4	+0.4
CBIJ	Chichi jima	3.10	145	P	Pn	23 50 44.1	+0.7
CBIJ				eS	Sn	23 51 19.0	-2.0
CBIJ	Chichi jima	3.10	145	Pn	Pn	23 50 44.4	+0.9
	46nm,0.3s,baz=283,slow=20,SNR=23						
CBIJ				Sn	Sn	23 51 21.4	+0.4
	149nm,0.3s,baz=299,slow=23,SNR=14						
CBIJ				LR	LR	23 51 29.3	
	comp=Z,147nm,19.5s,baz=329,slow=30						
JHCJ	Hachijojimakas	3.41	354	P	Pn	23 50 49.1	+1.4
JHJ2	Mitsune	3.45	355	P	Pn	23 50 51.3	+3.1
JHHJ	Haha-jima-NKT	3.50	150	P	Pn	23 50 49.4	+0.6
JHHJ				eS	Sn	23 51 29.4	-1.3
BSO1	Boso 1	5.01	7	P	Pn	23 51 09.6	+0.4
JWZ	Kozaga	5.43	316	P	Pb	23 51 27.1	-1.9
JIE	Ise	5.56	329	P	Pn	23 51 25.1	+7.8
JOD2	Odawara 2	5.66	351	P	Pn	23 51 21.1	+2.5
JRY	Ryogami san	6.42	351	P	Pn	23 51 30.6	+1.5
MJAR	Matsushiro Arr	7.05	347	Pn	Pn	23 51 41.9	+4.2
MJAR	Matsushiro Arr	7.05	347	Pn	Pn	23 51 41.9	+4.2
	0.8nm,0.3s,baz=191,slow=24,SNR=14						
MJAR				LR	LR	23 53 49.1	
	comp=Z,137nm,21.8s,baz=155,slow=34						
MAT	Matsushiro	7.05	347	P	Pn	23 51 41.3	+3.5
MAT				eS	Sn	23 53 01.9	+3.4
MAT	Matsushiro	7.05	347	P	Pn	23 51 42.0	+4.2
JNU	Nakatsue	8.68	296	ePn	Pn	23 52 00.9	+0.8
JNU	Nakatsue	8.68	296	LR	LR	23 55 12.2	
	comp=Z,512nm,18.8s,baz=105,slow=37						
JOW	Kunigami	10.89	258	LR	LR	23 56 46.6	
	comp=Z,453nm,18.3s,baz=152,slow=38						
KSRS	Korea Array	12.84	310	Pn	Pn	23 52 59.5	+2.5
	0.2nm,0.3s,baz=116,slow=13,SNR=3.1						
KSRS				LR	LR	23 57 29.2	
	comp=Z,47nm,20.3s,baz=120,slow=36						
KSAR	Wonju Array Be	12.86	310	Pn	Pn	23 52 59.5	+2.2
INCN	Inchon	13.73	308	ePn	Pn	23 53 09.2	+0.1
ASAJ	Asahikawa	14.54	7	eP	Pn	23 53 19.3	-1.0
	52nm,1.6s						
USRK	Ussuriysk Arra	15.90	338	Pn	P	23 53 41.0	-1.0
	0.1nm,0.3s,baz=140,slow=46,SNR=3.1						
USRK				LR	LR	23 59 24.3	
	comp=Z,192nm,19.3s,baz=139,slow=36						
GUMO	Guam	16.58	164	LR	LR	23 59 04.5	
	comp=Z,176nm,20.4s,baz=76,slow=33						
YSS	Yuzh-Sakhalins	17.37	6	eP	Pn	23 53 57.2	+0.3
DL2	Dalian	17.88	306	⇑P	P	23 54 09.9	+6.0
DL2				pmax	pmax		
	comp=Z,30nm,1.2s						
DL2				pmax	pmax		
	comp=Z,210nm,6.7s						
DL2				LR	LR		
	comp=N,260nm,13.9s						
DL2				LR	LR		
	comp=E,120nm,15.0s						
DL2				LR	LR		
	comp=Z,220nm,14.2s						
KLR	Kul'dur	20.57	344	eP	P	23 54 30.2	-3.2
WHN	Wuhan	22.37	279	⇓P	P	23 54 59.9	+7.0
WHN				LR	LR		
	comp=Z,500nm,11.7s						
HHC	Hu-ho-hao-te	25.80	303	eP	P	23 55 25.4	-0.6
HHC				PcP	PcP	23 58 55.4	-0.2
HHC				PcS	PcS	00 02 35.0	-1.4
HHC				pmax	pmax		
	comp=Z,31nm,0.5s						
HHC				pmax	pmax		
	comp=Z,280nm,5.4s						
HHC				LR	LR		
	comp=N,480nm,10.1s						
HHC				LR	LR		
	comp=E,610nm,11.0s						
HHC				LR	LR		
	comp=Z,500nm,11.0s						
DAV	Davao City (W)	26.36	214	LR	LR	00 03 27.0	
	comp=Z,218nm,21.2s,baz=12,slow=31						
PETK	Petropavlovsk-	26.70	24	LR	LR	00 04 40.4	
	comp=Z,82nm,20.3s,baz=42,slow=33						
XAN	Xi'an	26.87	287	P	P	23 55 38.1	+2.5
XAN				pmax	pmax		
	comp=Z,6.0nm,1.5s						
LZH	Lanzhou	31.07	291	eP	P	23 56 10.5	-2.7
LZH				pP	pP	23 56 13.8	-0.3
LZH				sP	sP	23 56 15.2	+0.7
LZH				PP	PP	23 57 34.0	+11
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,63nm,6.5s						
LZH				LR	LR		
	comp=N,270nm,14.2s						
LZH				LR	LR		
	comp=E,280nm,14.0s						
LZH				LR	LR		
	comp=Z,290nm,18.5s						
ULN	Ulaanbaatar	31.27	315	eP	P	23 56 14.8	+0.1
	comp=Z,1.7nm,0.6s						
SONM	Songino Array	31.66	314	P	P	23 56 19.4	+1.2
SONM				PcP	PcP	23 59 10.8	+0.7
SONM	Songino Array	31.66	314	P	P	23 56 19.4	+1.2
	comp=Z,1.5nm,1.0s,baz=115,slow=3.8,SNR=4.0						
SONM				PcP	PcP	23 59 10.8	+0.7
	comp=Z,0.5nm,0.7s,baz=122,slow=5.9,SNR=2.5						
YAK	Yakutsk	33.10	351	eP	P	23 56 27.6	-2.8
YAK				pmax	pmax		
	comp=Z,32nm,1.1s						
YAK				pmax	pmax		
	comp=N,18nm,1.4s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.6s						
YAK	Yakutsk	33.10	351	eP	P	23 56 29.9	-0.4
	comp=E,27nm,0.6s						
FX1	Attu Island--F	33.46	37	LR	LR	00 06 45.5	
	comp=E,143nm,21.1s,baz=56,slow=30						
KMI	Kunming	33.47	271	P	P	23 56 39.8	+5.4
KMI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SEY	Seymchan	34.20	10	ceP	P	23 56 40.0	0.0
ZAK	Zakamensk	34.53	317	eP	P	23 56 41.9	-1.3
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
TLY	Talaya	34.85	320	eP	P	23 56 42.2	-3.6
TLY				e		00 04 29.1	
TLY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,80nm,17.0s						
CHTO	Chiang Mai	38.96	263	eP	P	23 57 22.7	+1.5
CHTO				pmax	pmax		
	comp=Z,13nm,1.1s						
CHTO	Chiang Mai	38.96	263	eP	P	23 57 22.7	+1.5
	comp=Z,13nm,1.1s						
CMAR	Chiang Mai Arr	39.10	263	P	P	23 57 25.6	+3.2
CMAR	Chiang Mai Arr	39.10	263	P	P	23 57 25.6	+3.2
	comp=Z,0.8nm,0.3s,baz=60,slow=7.5,SNR=9.4						
CMAR				LR	LR	00 13 50.9	
	comp=Z,154nm,19.2s,baz=122,slow=37						
KAPI	Kappang	39.68	213	P	P	23 57 32.3	+5.2
KAPI	Kappang	39.68	213	P	P	23 57 32.3	+5.2
	comp=Z,5.4nm,0.7s,baz=11,slow=6.0,SNR=3.8						
BILL	Bilibino	41.38	14	⇑eP	P	23 57 40.2	-0.4
BILL				pmax	pmax		
	comp=Z,23nm,2.5s						
TIXI	Tiksi	42.49	355	eP	P	23 57 49.6	0.0
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZALV	Zalesovo Beam	46.41	318	P	P	23 58 21.1	-0.1
ZALV						23 59 55.6	
ZALV	Zalesovo Beam	46.41	318	P	P	23 58 21.1	-0.1
ZALV				PcP	PcP	23 59 55.6	-0.5
ZALV	Zalesovo Beam	46.41	318	P	P	23 58 21.1	-0.1

comp=Z,0.8nm,0.8s,baz=62,slow=7.0,SNR=5.4
ZALV PcP **PcP** **23 59 55.6 -0.5**
comp=Z,1.8nm,0.8s,baz=107,slow=3.2,SNR=6.3
ZALV LR LR 00 17 44.3
comp=Z,35nm,18.2s,baz=64,slow=36
MK31 Makanchi Array 47.51 308 *eP* **P** **23 58 29.7 -0.3**
MK31 Makanchi Array 47.51 308 *eP* **P** **23 58 29.7 -0.3**
MKAR Makanchi Array 47.51 308 P **P** **23 58 30.2 +0.2**
MKAR 00 00 00.8
MKAR Makanchi Array 47.51 308 P **P** **23 58 30.1 +0.2**
MKAR PcP **PcP** **00 00 00.8 +0.7**
MKAR Makanchi Array 47.51 308 P **P** **23 58 30.1 +0.2**
comp=Z,1.0nm,0.9s,baz=90,slow=9.7,SNR=6.0
MKAR PcP **PcP** **00 00 00.8 +0.7**
comp=Z,0.7nm,0.8s,baz=77,slow=6.4,SNR=2.9
MKAR LR LR 00 18 39.0
comp=Z,38nm,20.0s,baz=350,slow=36
TNA Tin City 47.83 26 *eP* **P** **23 58 31.7 -0.4**
comp=Z,7.0nm,1.2s
WRAB Tennant Creek 49.64 187 *eP* **P** **23 58 46.6 +0.1**
WRAB pmax pmax
comp=Z,12nm,1.1s
WRAB Tennant Creek 49.64 187 *eP* **P** **23 58 46.6 +0.1**
comp=Z,12nm,1.1s
WRA Warramunga Arr 49.65 187 P **P** **23 58 47.2 +0.6**
WRA Warramunga Arr 49.65 187 P **P** **23 58 47.2 +0.6**
comp=Z,4.2nm,1.0s,baz=7.1,slow=8.2,SNR=9.3
KURK Kurchatov 49.95 313 *eP* **P** **23 58 51.0 +2.4**
KURK pmax pmax
comp=Z,5.0nm,1.2s
KURK Kurchatov 49.95 313 *eP* **P** **23 58 48.5 -0.1**
comp=Z,5.1nm,1.2s
KURK *e*PcP **PcP** **00 00 08.6 -0.2**
ASAR Alice Springs 53.37 187 P **P** **23 59 14.9 +0.4**
ASAR Alice Springs 53.37 187 P **P** **23 59 14.9 +0.4**
comp=Z,3.0nm,1.1s,baz=3.0,slow=6.6,SNR=10
KDAK Kodiak Island 53.39 38 P **P** **23 59 14.1 -0.1**
KDAK Kodiak Island 53.39 38 P **P** **23 59 14.1 -0.1**
comp=Z,9.5nm,0.9s,baz=270,slow=4.0,SNR=4.8
BRVK Borovoye 55.04 316 *eP* P 23 59 30.1 +3.7
BRVK pmax pmax
comp=Z,2.0nm,0.8s
BRVK Borovoye 55.04 316 *eP* **P** **23 59 25.8 -0.6**
comp=Z,3.6nm,1.1s
BRVK *e*PcP **PcP** **00 00 27.9 0.0**
ILAR Eielson Array 56.32 29 P **P** **23 59 34.8 -0.6**
ILAR Eielson Array 56.32 29 P **P** **23 59 34.8 -0.6**
comp=Z,1.8nm,0.9s,baz=264,slow=6.3,SNR=15
BMRM Bremner River 57.42 34 *eP* **P** **23 59 43.2 -0.2**
comp=Z,8.2nm,1.1s
ARU Arti 61.33 321 *d iP* **P** **00 00 09.7 -0.6**
ARU 00 02 22.0
ARU S S 00 08 24.6 -6.7
ARU pmax pmax
comp=Z,18nm,2.5s
AKTO Aktyubinsk 62.98 315 P **P** **00 00 21.5 0.0**
AKTO Aktyubinsk 62.98 315 P **P** **00 00 21.5 0.0**
AKTO Aktyubinsk 62.98 315 P **P** **00 00 21.5 0.0**
comp=Z,1.3nm,0.7s,baz=78,slow=13,SNR=7.5
SPITS Spitsbergen Ar 67.54 349 P **P** **00 00 51.3 +0.6**
SPITS Spitsbergen Ar 67.54 349 P **P** **00 00 51.3 +0.6**
comp=Z,5.3nm,0.9s,baz=127,slow=15,SNR=3.1
KBS Kingsbay 67.73 351 *eP* **P** **00 00 51.9 +0.1**
KBS pmax pmax
comp=Z,12nm,1.2s
KLMR Klimovskoe 69.48 329 *eP* **P** **00 01 01.6 -1.4**
KLMR pmax pmax
comp=Z,28nm,1.9s
ARCES ARCESS Array B 70.54 340 P **P** **00 01 09.8 +0.4**
ARCES ARCESS Array B 70.54 340 P **P** **00 01 09.8 +0.4**
comp=Z,4.9nm,1.0s,baz=76,slow=7.5,SNR=3.8
ARCES LR LR 00 35 13.5
comp=Z,68nm,19.4s,baz=89,slow=39
YKA Yellowknife Ar 70.71 28 P **P** **00 01 09.8 -0.8**
YKA Yellowknife Ar 70.71 28 P **P** **00 01 09.8 -0.8**
comp=Z,1.2nm,0.9s,baz=294,slow=6.0,SNR=14
JOF Joensuu 72.01 333 *eP* **P** **00 01 16.6 -1.8**
JOF pmax pmax
comp=Z,4.0nm,0.7s
JOF Joensuu 72.01 333 *ep* **P** **00 01 16.6 -1.8**
comp=Z,4.4nm,0.7s
VRHR Novokhopersk 72.52 319 *eP* **P** **00 01 20.6 -1.0**
VRHR pmax pmax
comp=N,7.0nm,0.7s
VRHR pmax pmax
comp=E,5.0nm,0.7s
VRHR pmax pmax
comp=Z,5.0nm,0.7s
OBN Obninsk 73.43 324 *ll iP* **P** **00 01 27.7 +0.8**
OBN *e*S S 00 10 45.1 -12
OBN pmax pmax
comp=Z,15nm,1.7s
OBN MLR MLR
comp=Z,100nm,16.0s
VSR Storozhevoye 73.85 320 *eP* **P** **00 01 29.6 +0.1**
VSR pmax pmax
comp=N,3.0nm,0.9s
VSR pmax pmax
comp=E,7.0nm,0.9s
VSR pmax pmax
comp=Z,8.0nm,0.9s
VORD Divnogorie 73.90 320 *eP* P 00 01 33.7 +3.9
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,20nm,0.7s
VORD pmax pmax
comp=Z,7.0nm,0.7s
KAF Kangasniemi 74.40 333 *eP* **P** **00 01 31.4 -1.1**
KAF pmax pmax
comp=Z,4.0nm,0.8s
KAF Kangasniemi 74.40 333 *ep* **P** **00 01 31.4 -1.1**
comp=Z,3.9nm,0.8s
FINES FINESS Array B 74.87 333 P **P** **00 01 34.6 -0.6**
FINES FINESS Array B 74.87 333 P **P** **00 01 34.6 -0.6**
comp=Z,6.3nm,0.9s,baz=57,slow=5.1,SNR=14
KBZ Khabaz 74.99 312 P **P** **00 01 35.9 -0.4**
KBZ Khabaz 74.99 312 P **P** **00 01 35.9 -0.4**
KBZ Khabaz 74.99 312 P **P** **00 01 35.9 -0.4**
comp=Z,2.6nm,0.8s,baz=24,slow=5.7,SNR=11
KIV Kislovodsk 75.02 312 *eP* **P** **00 01 37.7 +1.1**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,28nm,19.0s
NEW Newport 76.18 42 ⇓P **P** **00 01 44.1 +0.9**
baz=76
C11A Tepee Creek (N 76.90 42 ⇓P **P** **00 01 47.9 +0.7**
baz=77
C12B Naegeli Ranch, 77.42 42 ⇓P **P** **00 01 51.4 +1.3**
baz=77
B13A Whitefish 77.67 41 ⇓P **P** **00 01 52.4 +0.9**
baz=77
D12A Red Ives Fores 77.82 43 ⇑P **P** **00 01 53.0 +0.5**
baz=78
A14A Double T Ranch 77.95 40 ⇑P **P** **00 01 53.7 +0.5**
baz=78
C13A Hot Springs 77.96 42 ⇑P **P** **00 01 54.5 +1.3**
baz=78
D13A Huson 78.33 42 ⇓P **P** **00 01 56.1 +0.8**
baz=78
A15A Johnson Ranch, 78.33 40 ⇑P **P** **00 01 55.6 +0.3**
baz=78
B14A Marquette Ranc 78.35 41 ⇓P **P** **00 01 56.2 +0.8**
baz=78,SNR=7.9
C14A Swan Lake 78.39 41 ⇑P **P** **00 01 56.3 +0.7**
baz=78
F12A Elk City 78.54 44 ⇑P **P** **00 01 57.0 +0.5**
baz=78,SNR=10
MSO Missoula 78.77 42 ⇑P **P** **00 01 58.1 +0.4**
baz=78
B15A Bradely Ranch, 78.78 41 ⇓P **P** **00 01 58.1 +0.3**
baz=78,SNR=11
G12A Big Creek, Yel 78.82 44 ⇑P **P** **00 01 59.0 +0.8**
baz=78
E13A Victor 78.83 43 ⇑P **P** **00 01 58.7 +0.6**
baz=78
D14A Greenough 78.89 42 ⇓P **P** **00 01 59.0 +0.5**
baz=79
A16A West Butte Ran 78.98 40 ⇓P **P** **00 01 59.4 +0.5**
baz=79
C15A Salmond Ranch, 79.04 41 ⇑P **P** **00 02 00.2 +0.9**
baz=79,SNR=11
F13A Darby 79.08 43 ⇑P **P** **00 01 59.9 +0.4**
baz=79
B16A M & M Farms, S 79.21 40 ⇑P **P** **00 02 00.5 +0.4**
baz=79
E14A Clinton 79.25 43 ⇑P **P** **00 02 00.8 +0.4**
baz=79
MFID Camas Ranch 79.39 46 ⇓P **P** **00 02 01.9 +0.7**
baz=79
H12A Diamond D Ranc 79.41 45 ⇑P **P** **00 02 01.7 +0.3**
baz=79
A17A Triple J Farms 79.48 39 ⇑P **P** **00 02 02.0 +0.4**
baz=79,SNR=5.4
G13A Cobalt 79.50 44 ⇓P **P** **00 02 02.2 +0.4**
baz=79
AKASG Malin Array Be 79.52 323 P **P** **00 02 00.9 -0.7**
AKASG Malin Array Be 79.52 323 P **P** **00 02 00.9 -0.7**
AKASG Malin Array Be 79.52 323 P **P** **00 02 00.9 -0.7**
comp=Z,1.8nm,0.6s,baz=52,slow=6.4,SNR=8.2
C16A Fuhringer Ranc 79.52 41 ⇑P **P** **00 02 02.1 +0.3**
baz=79,SNR=9.0
I12A Atlanta 79.63 45 ⇑P **P** **00 02 03.3 +0.7**
baz=79
E15A Deer Lodge 79.74 42 ⇑P **P** **00 02 03.4 +0.2**
baz=80
H13A Challis 79.77 44 ⇑P **P** **00 02 04.2 +0.9**
baz=80,SNR=8.8
B17A L&G Farms, Che 79.78 40 ⇑P **P** **00 02 03.5 +0.3**
baz=80
A18A Metzger Ranch, 79.97 39 ⇑P **P** **00 02 04.2 +0.1**
baz=80,SNR=6.3
D16A Dana Ranch, Ca 80.05 41 ⇓P **P** **00 02 04.9 +0.2**
baz=80
F15A Butte 80.14 43 ⇑P **P** **00 02 06.1 +0.7**
baz=80,SNR=14
C17A Wharram Farm, 80.17 40 ⇑P **P** **00 02 05.2 -0.1**
baz=80
I13A Wildhorse Cree 80.19 45 ⇓P **P** **00 02 06.7 +1.0**
baz=80,SNR=6.1
HLID Hailey 80.19 45 ⇑P **P** **00 02 07.0 +1.3**
baz=80
E16A East Helena 80.25 42 ⇑P **P** **00 02 06.6 +0.8**
baz=80,SNR=7.1
NVAR Mina Array Bea 80.29 51 P **P** **00 02 07.5 +1.2**
NVAR Mina Array Bea 80.29 51 P **P** **00 02 07.5 +1.2**
comp=Z,2.1nm,0.8s,baz=303,slow=6.9,SNR=8.5
B18A Beardsley Farm 80.30 39 ⇓P **P** **00 02 06.9 +0.9**
baz=80
HFS Hagfors 80.37 336 P **P** **00 02 05.6 -0.5**
HFS Hagfors 80.37 336 P **P** **00 02 05.6 -0.5**
comp=Z,4.2nm,0.9s,baz=64,slow=6.8,SNR=6.0
J13A Cove Ranch, Pi 80.43 45 ⇑P **P** **00 02 08.1 +1.2**
baz=80
FFC Flin Flon 80.47 31 *ce*P **P** **00 02 07.1 +0.4**
D17A Six Diamond Ra 80.47 41 ⇓P **P** **00 02 07.7 +0.6**
baz=80,SNR=12
G15A Dillon 80.51 43 ⇑P **P** **00 02 07.8 +0.5**
baz=80
EGMT Eagleton 80.52 40 ⇓P **P** **00 02 07.5 +0.3**
baz=80
SUW Suwalki 80.55 328 *eP* **P** **00 02 07.1 0.0**
A19A Klindworth Far 80.56 39 ⇓P **P** **00 02 07.8 +0.4**
baz=80,SNR=6.6
NB2 NORSAR Subarra 80.58 337 P **P** **00 02 07.2 0.0**
comp=Z,1.3nm,0.8s,baz=43,slow=5.3
NOA NORSAR Array B 80.58 337 P **P** **00 02 07.6 +0.4**
NOA NORSAR Array B 80.58 337 P **P** **00 02 07.6 +0.4**
comp=Z,3.2nm,0.9s,baz=44,slow=5.5,SNR=6.3
NOA LR LR 00 39 27.2
comp=Z,33nm,18.1s,baz=290,slow=37
I14A Mackay 80.59 45 ⇓P **P** **00 02 09.8 +2.0**
baz=80,SNR=18
F16A Kennard Place, 80.68 42 ⇑P **P** **00 02 09.1 +1.0**
baz=80
H15A Lima 80.71 44 ⇑P **P** **00 02 09.1 +0.6**
baz=80
BOZ Bozeman (W) 80.76 42 ⇑P **P** **00 02 09.4 +0.8**
baz=80
E17A Martinsdale 80.76 41 ⇓P **P** **00 02 09.7 +1.0**
baz=81,SNR=8.7
J14A Carey 80.87 45 ⇓P **P** **00 02 11.2 +1.9**
baz=81,SNR=7.3
G16A Moss Hill, Enn 80.88 43 ⇓P **P** **00 02 10.0 +0.7**
baz=81
D18A Linhart Farms, 80.95 40 ⇑P **P** **00 02 10.2 +0.7**
baz=81
A20A Cobblestone Ra 81.03 38 ⇓P **P** **00 02 10.0 +0.1**
baz=81
VES Vestal, Richgr 81.05 54 ⇑P **P** **00 02 10.9 +0.8**
baz=81
C19A Slack Wire Ran 81.07 40 ⇑P **P** **00 02 10.7 +0.6**
baz=81,SNR=9.5
F17A Fitzpatrick Pl 81.18 42 ⇑P **P** **00 02 11.7 +0.9**
baz=81
E18A Harlowton 81.24 41 ⇓P **P** **00 02 12.2 +1.0**
baz=81,SNR=7.1
G17A Pierce Place, 81.46 42 ⇑P **P** **00 02 13.2 +0.9**
baz=81
D19A Cripps Ranch, 81.49 40 ⇑P **P** **00 02 12.9 +0.5**
baz=81
J15A Blackfoot 81.50 45 ⇓P **P** **00 02 13.9 +1.3**
baz=81
H16A Russell Place, 81.50 43 ⇓P **P** **00 02 14.0 +1.3**
baz=81,SNR=5.8
K14A Jones Ranch, D 81.50 46 ⇑P **P** **00 02 13.7 +1.1**
baz=81
A21A Bergtoll Ranch 81.50 38 ⇑P **P** **00 02 12.7 +0.3**
baz=81,SNR=6.6
C20A Veseth Ranch, 81.66 39 ⇑P **P** **00 02 14.1 +0.8**
baz=81,SNR=5.8
F18A Big Timber 81.73 42 ⇑P **P** **00 02 14.4 +0.7**
baz=81,SNR=5.0
I16A Newdale 81.81 44 ⇑P **P** **00 02 16.2 +1.9**
baz=82,SNR=6.4
E19A Rath Farm, Rou 81.94 41 ⇑P **P** **00 02 15.6 +0.8**
baz=82,SNR=8.1
D20A Manuel Ranch, 81.95 40 ⇑P **P** **00 02 15.7 +0.9**
baz=82,SNR=5.2
A22A Carney Farms, 82.04 37 ⇓P **P** **00 02 15.0 -0.2**
baz=82,SNR=8.7
MPMC Manual Prospec 82.05 53 ⇓P **P** **00 02 16.9 +1.2**
baz=82
H17A Grant Village 82.07 43 ⇑P **P** **00 02 18.1 +2.3**
baz=82,SNR=7.5
C21A Desert Coulee 82.09 39 ⇓P **P** **00 02 16.1 +0.6**
baz=82
R11A Troy Canyon, C 82.17 50 ⇓P **P** **00 02 17.6 +1.4**
baz=82
F19A Roth Farm, Mol 82.20 41 ⇑P **P** **00 02 17.2 +1.0**
baz=82
FURC Furnace Creek, 82.28 52 ⇑P **P** **00 02 18.1 +1.5**
baz=82
L15A Malad City 82.29 46 ⇓P **P** **00 02 17.3 +0.5**
baz=82
E20A Meyer Farm, Mu 82.29 40 ⇑P **P** **00 02 17.2 +0.6**
baz=82
EDW2 Edwards Air Fo 82.30 54 ⇑P **P** **00 02 18.0 +1.1**
baz=82
K16A Soda Springs 82.33 45 ⇑P **P** **00 02 18.8 +1.8**
baz=82,SNR=7.4
I17A Pilgrim Ck. 82.34 44 ⇓P **P** **00 02 18.7 +1.6**
baz=82
RLMT Red Lodge 82.43 42 ⇑P **P** **00 02 18.6 +1.1**
baz=82,SNR=7.1
H18A Shoshone NF, C 82.45 43 ⇑P **P** **00 02 19.1 +1.4**
baz=82,SNR=6.4
M15A Larsen Ranch, 82.54 46 ⇓P **P** **00 02 19.1 +1.0**
baz=82
D21A La Casta Ranch 82.60 39 ⇓P **P** **00 02 18.8 +0.6**
baz=82
B23A Brockton 82.85 38 ⇓P **P** **00 02 19.9 +0.4**
baz=82
H19A Powell 82.85 42 ⇓P **P** **00 02 20.8 +1.2**
baz=83
BFSC Mount Baldy Ra 82.87 55 ⇓P **P** **00 02 20.6 +0.7**
baz=83
L16A Fish Haven 82.87 45 ⇓P **P** **00 02 21.0 +1.1**
baz=83
GSC Goldstone 82.92 53 ⇓P **P** **00 02 21.3 +1.2**
baz=83
BRTR Keskin Array B 82.98 312 P **P** **00 02 20.6 +0.1**
BRTR Keskin Array B 82.98 312 P **P** **00 02 20.6 +0.1**
comp=Z,2.7nm,1.0s,baz=83,slow=4.0,SNR=12
BRTR LR LR 00 38 55.6
comp=Z,18nm,21.0s,baz=220,slow=36
G20A Bridger 82.98 41 ⇓P **P** **00 02 21.1 +0.7**
baz=83
D22A Cohagen 83.00 39 ⇓P **P** **00 02 21.3 +1.0**
baz=83
DUG Dugway 83.00 48 ⇑P **P** **00 02 21.6 +1.1**
baz=83
J18A Kendall Valley 83.07 44 ⇑P **P** **00 02 21.9 +0.9**
baz=83
M16A Huntsville 83.14 46 ⇓P **P** **00 02 22.2 +0.9**
baz=83
C23A Lambert 83.14 38 ⇓P **P** **00 02 21.3 +0.3**
baz=83
L17A Cokeville 83.17 45 ⇓P **P** **00 02 22.5 +1.1**
baz=83
I19A Meeteetse 83.21 43 ⇓P **P** **00 02 22.4 +0.7**
baz=83
TUQ Turquoise Moun 83.46 53 ⇑P **P** **00 02 24.1 +1.2**
baz=83
HEC Hector,Ludlow 83.50 54 ⇓P **P** **00 02 24.3 +1.2**
baz=83
KWP Kalwaria Pacla 83.52 325 *eP* **P** **00 02 23.5 +0.7**
H20A Greybull 83.53 42 ⇓P **P** **00 02 23.9 +0.8**
baz=83
BW06 Boulder Array 83.60 44 ⇑P **P** **00 02 23.8 +0.2**
baz=83
PDAR Pinedale Array 83.60 44 P **P** **00 02 23.6 -0.1**
PDAR Pinedale Array 83.60 44 P **P** **00 02 23.6 -0.1**
comp=Z,1.1nm,0.8s,baz=270,slow=3.0,SNR=8.0
J19A Crowheart 83.62 43 ⇓P **P** **00 02 24.7 +1.0**
baz=83
M17A Scullys Gap (B 83.65 46 ⇓P **P** **00 02 24.4 +0.4**
baz=83
P15A Leamington 83.69 48 ⇓P **P** **00 02 25.2 +1.1**
baz=83
C24A Savage 83.72 38 ⇑P **P** **00 02 24.5 +0.6**
baz=83
F22A Rosebud 83.77 40 ⇓P **P** **00 02 24.3 +0.1**
baz=84
I20A Worland 83.77 42 ⇑P **P** **00 02 25.6 +1.2**
baz=84,SNR=7.4
L18A Fontenelle, Gr 83.79 45 ⇓P **P** **00 02 25.4 +0.8**
baz=84
N17A Moffit Pass 83.84 46 ⇑P **P** **00 02 25.9 +0.9**
baz=84
GMRC Granite Mounta 83.99 53 ⇑P **P** **00 02 26.9 +1.2**
baz=84
K19A Absolon Red Bu 84.00 44 ⇑P **P** **00 02 26.1 +0.4**
baz=84
H21A Big Horn, Sher 84.01 41 ⇓P **P** **00 02 26.5 +0.9**
baz=84
D24A Glendive 84.03 38 ⇓P **P** **00 02 26.1 +0.5**
baz=84
PFO Pinyon Flat Ob 84.05 55 ⇓P **P** **00 02 27.0 +1.0**
baz=84
M18A Lyman 84.05 45 ⇓P **P** **00 02 27.0 +1.0**
baz=84
G22A Birney 84.08 41 ⇑P **P** **00 02 26.6 +0.6**
baz=84
L19A Farson 84.10 45 ⇓P **P** **00 02 27.2 +0.9**
baz=84
J20A Shoshoni 84.14 43 ⇓P **P** **00 02 27.4 +1.0**
baz=84
BELC Belle Mtn. Jos 84.17 54 ⇓P **P** **00 02 27.5 +0.9**
baz=84
KOLS Kolonicke sedl 84.18 324 *eP* **P** **00 02 26.1 -0.1**
KOLS Kolonicke sedl 84.18 324 *eP* **P** **00 02 26.1 -0.1**
O17A Robinson Place 84.33 47 ⇑P **P** **00 02 28.6 +1.2**
baz=84
I21A Big Trails, Te 84.34 42 ⇓P **P** **00 02 28.2 +0.8**
baz=84
K20A Yellowstone Ra 84.40 44 ⇓P **P** **00 02 28.2 +0.5**
baz=84
MONP Monument Peak 84.45 55 ⇑P **P** **00 02 29.2 +1.0**
baz=84
J21A Lysite 84.53 43 ⇑P **P** **00 02 28.8 +0.4**
baz=84
N18A Larsen Ranch, 84.55 46 ⇑P **P** **00 02 29.1 +0.6**
baz=84
G23A Biddle 84.61 40 ⇓P **P** **00 02 29.0 +0.5**
baz=84
IRM Iron Mountain 84.68 54 ⇑P **P** **00 02 30.3 +1.2**
baz=84
P17A Butcher Ranch, 84.73 47 ⇓P **P** **00 02 30.8 +1.4**
baz=84
BC3 Big Chuckawall 84.73 54 ⇑P **P** **00 02 30.5 +1.0**
baz=84
O18A Roosevelt 84.75 46 ⇓P **P** **00 02 31.3 +1.8**
baz=84
Q16A Castle Valley 84.76 48 ⇓P **P** **00 02 31.0 +1.4**
baz=84
I22A 9 Mile Ranch, 84.77 42 ⇓P **P** **00 02 30.1 +0.7**
baz=84
L20A Wamsutter 84.78 44 ⇓P **P** **00 02 30.4 +0.8**
baz=84
N19A John Jarvie Ra 84.91 45 ⇓P **P** **00 02 30.6 +0.3**
baz=85
P18A Preston Nutter 84.96 47 ⇓P **P** **00 02 31.6 +0.8**
baz=85
W13A Hualapai Mount 85.05 52 ⇓P **P** **00 02 32.0 +0.9**
baz=85
J22A Midwest 85.06 42 ⇓P **P** **00 02 31.1 +0.1**
baz=85
K21A Alcova 85.06 43 ⇓P **P** **00 02 31.6 +0.5**
baz=85
SRU San Rafael 85.07 47 ⇑P **P** **00 02 31.8 +0.7**
baz=85
M20A Sweetwater, Wa 85.17 45 ⇑P **P** **00 02 32.7 +1.0**
baz=85
Y12C Blythe 85.34 54 ⇑P **P** **00 02 33.7 +1.3**
baz=85
H24A Dirks Ranch, A 85.35 40 ⇑P **P** **00 02 33.0 +0.7**
baz=85
L21A Rawlins 85.39 44 ⇑P **P** **00 02 33.4 +0.7**
baz=85
U15A North Rim 85.41 50 ⇓P **P** **00 02 33.6 +0.5**
baz=85
M21A Separation Pea 85.60 44 ⇑P **P** **00 02 34.3 +0.4**
baz=85
P19A Cripple Cowboy 85.75 46 ⇑P **P** **00 02 35.0 +0.4**
baz=86
L22A Ellis Ranch, M 85.91 43 ⇓P **P** **00 02 35.8 +0.5**
baz=86
O20A White River Ci 85.93 46 ⇓P **P** **00 02 36.0 +0.6**
baz=86
Q19A Hogan Spring (85.97 47 ⇓P **P** **00 02 36.5 +1.0**
baz=86
N21A Black Mountain 86.00 45 ⇑P **P** **00 02 36.6 +0.7**
baz=86
M22A Cedar Creek Ra 86.19 44 ⇑P **P** **00 02 37.7 +1.0**
baz=86
VYHS Vyhne 86.19 325 *eP* **P** **00 02 36.6 +0.3**
VYHS Vyhne 86.19 325 *eP* **P** **00 02 36.6 +0.3**
S18A Hurst Farm, Bl 86.22 48 ⇑P **P** **00 02 37.9 +0.9**
baz=86
L23A Garrett 86.29 43 ⇓P **P** **00 02 37.8 +0.6**
baz=86
Y14A Wickenburg 86.29 53 ⇑P **P** **00 02 38.4 +1.2**
baz=86
WUAZ Wupatki 86.53 51 ⇓P **P** **00 02 39.6 +1.2**
baz=86
Q20A Ridgley Place, 86.58 47 ⇓P **P** **00 02 39.4 +0.7**
baz=86
N22A Wattenberg Ran 86.63 44 ⇑P **P** **00 02 39.5 +0.5**
baz=86
P21A Newcastle 86.78 46 ⇓P **P** **00 02 41.1 +1.4**
baz=86
N23A Red Feather La 86.88 44 ⇑P **P** **00 02 40.9 +0.7**
baz=87
PV01 Paradox Valley 86.89 47 *eP* **P** **00 02 39.7 -0.6**
comp=Z,434nm,1.2s
CLL Collm 86.96 330 *eP* **P** **00 02 40.0 0.0**
CLL Collm 86.96 330 *eP* **P** **00 02 40.0 0.0**
O22A Kremmling 86.96 45 ⇑P **P** **00 02 41.2 +0.6**
baz=87
R20A Redvale 86.97 47 ⇑P **P** **00 02 41.7 +1.1**
baz=87
X16A Lo Mia Camp, P 87.11 52 ⇑P **P** **00 02 42.9 +1.6**
baz=87
P22A Eagle 87.17 45 ⇓P **P** **00 02 42.4 +0.8**
baz=87
O23A Lake Granby, G 87.31 45 ⇑P **P** **00 02 42.7 +0.3**
baz=87
Q22A Crested Butte, 87.51 46 ⇑P **P** **00 02 44.3 +0.9**
baz=87
214A Organ Pipe Nat 87.52 54 ⇓P **P** **00 02 45.0 +1.8**
baz=87
S21A Coal Bank Pass 87.66 47 ⇑P **P** **00 02 44.6 +0.6**
baz=87
GERES GERESS Array B 88.41 328 P **P** **00 02 47.0 -0.2**
GERES GERESS Array B 88.41 328 P **P** **00 02 47.0 -0.2**
comp=Z,0.3nm,0.6s,baz=53,slow=7.0,SNR=3.8
GERES LR LR 00 46 09.6
comp=Z,57nm,19.3s,baz=71,slow=38
R24A Sanders Place, 89.02 46 ⇓P **P** **00 02 51.7 +1.3**
baz=89

S24A	**Houchin Ranch,**	**89.31**	**46**	⇓P	**P**	**00 02 52.8**	**+0.9**
	baz=89						
Y20A	**Horse Springs,**	**89.48**	**51**	⇑P	**P**	**00 02 54.1**	**+1.4**
	baz=89						
T24A	**Torres, Weston**	**89.76**	**47**	⇓P	**P**	**00 02 54.8**	**+0.8**
	baz=90						
Z20A	**Nine Sixteen R**	**89.80**	**51**	⇓P	**P**	**00 02 55.4**	**+1.3**
	baz=90						
Y21A	**Point of Rocks**	**89.89**	**50**	⇑P	**P**	**00 02 55.8**	**+1.2**
	baz=90						
Z21A	**St. Cloud Mine**	**90.31**	**51**	⇓P	**P**	**00 02 58.1**	**+1.6**
	baz=90						
U25A	**Circle Dot Ran**	**90.58**	**47**	⇑P	**P**	**00 02 58.7**	**+1.0**
	baz=90						
W24A	**Lazy 6 Ranch,**	**90.67**	**48**	⇓P	**P**	**00 02 59.2**	**+1.0**
	baz=90						
V25A	**Rancho No Teng**	**90.79**	**47**	⇑P	**P**	**00 02 59.7**	**+1.0**
	baz=90						
Z22A	**Elephant Butte**	**90.81**	**51**	⇑P	**P**	**00 02 59.9**	**+1.1**
	baz=90						
U26A	**Atchley Ranch,**	**91.00**	**46**	⇑P	**P**	**00 03 00.3**	**+0.6**
	baz=91						
Y23A	**Lovelace Mesa,**	**91.02**	**50**	⇑P	**P**	**00 02 60.0**	**+0.2**
	baz=91						
W25A	**X Bar L Ranch,**	**91.27**	**48**	⇑P	**P**	**00 03 01.6**	**+0.7**
	baz=91						
Z23A	**Rita Site, Whi**	**91.30**	**50**	⇑P	**P**	**00 03 02.0**	**+1.0**
	baz=91						
V26A	**Tequesquite Ra**	**91.35**	**47**	⇓P	**P**	**00 03 01.6**	**+0.4**
	baz=91						
Y24A	**Capitan**	**91.43**	**49**	⇓P	**P**	**00 03 02.0**	**+0.3**
	baz=91						
BAIF	**Baives**	**91.54**	**333**	*e*P	**P**	**00 03 01.7**	**+0.1**
	comp=Z,34nm,1.6s						
X25A	**Clemmons Ranch**	**91.57**	**48**	⇓P	**P**	**00 03 03.0**	**+0.7**
	baz=91						
CDF	**Champ du Feu**	**91.58**	**331**	*e*P	**P**	**00 03 01.6**	**-0.4**
	comp=Z,18nm,1.4s						
DAVOX	**Davos/Dischmat**	**91.68**	**328**	LR	LR	00 50 19.5	
	comp=Z,34nm,19.0s,baz=250,slow=40						
Y25A	**Mesa, Roswell**	**91.92**	**49**	⇑P	**P**	**00 03 04.3**	**+0.4**
	baz=92						
X26A	**CR and CF Fran**	**92.11**	**48**	⇓P	**P**	**00 03 05.7**	**+0.9**
	baz=92						
124A	**Stringfield Ra**	**92.16**	**50**	⇑P	**P**	**00 03 06.0**	**+0.8**
	baz=92						
W27A	**Bowe Ranch, En**	**92.27**	**47**	⇓P	**P**	**00 03 06.3**	**+0.9**
	baz=92						
224A	**Cornudas Mount**	**92.49**	**51**	⇑P	**P**	**00 03 07.8**	**+1.2**
	baz=92						
125A	**Gardner Draw,**	**92.72**	**50**	⇑P	**P**	**00 03 08.6**	**+1.0**
	baz=92						
Z26A	**Caprock**	**92.79**	**49**	⇑P	**P**	**00 03 08.6**	**+0.7**
	baz=92						
324A	**Moseley Ranch,**	**92.90**	**51**	⇓P	**P**	**00 03 09.4**	**+0.9**
	baz=93						
Y27A	**Causey**	**92.94**	**48**	⇑P	**P**	**00 03 09.3**	**+0.7**
	baz=93						
126A	**Clayton Basin,**	**93.15**	**50**	⇑P	**P**	**00 03 10.2**	**+0.6**
	baz=93						
Z27A	**Tatum**	**93.26**	**49**	⇑P	**P**	**00 03 10.7**	**+0.6**
	baz=93						
325A	**Bean Ranch, Si**	**93.29**	**51**	⇓P	**P**	**00 03 11.1**	**+0.8**
	baz=93						
226B	**Tecolote Peak,**	**93.40**	**50**	⇓P	**P**	**00 03 11.5**	**+0.8**
	baz=93						
Y28A	**McKinney Farm,**	**93.52**	**48**	⇑P	**P**	**00 03 11.6**	**+0.4**
	baz=93						
X29A	**Tulia**	**93.52**	**47**	⇑P	**P**	**00 03 11.7**	**+0.5**
	baz=93						
425A	**Indio Mountain**	**93.64**	**52**	⇓P	**P**	**00 03 13.0**	**+1.2**
	baz=93						
Z28A	**Tucker Farm, M**	**93.82**	**48**	⇑P	**P**	**00 03 12.6**	**0.0**
	baz=94						
LOR	**Lormes**	**93.91**	**332**	*e*P	**P**	**00 03 12.0**	**-0.6**
	comp=Z,8.3nm,1.1s						
LPG	**La Plagne**	**94.06**	**329**	*e*P	**P**	**00 03 13.2**	**-0.5**
SSF	**Saint Saulge**	**94.22**	**332**	*e*P	**P**	**00 03 13.3**	**-0.7**
	comp=Z,12nm,1.2s						
Z29A	**Hungry Hill Ra**	**94.28**	**48**	⇓P	**P**	**00 03 15.2**	**+0.5**
	baz=94						
426A	**McDonald Obser**	**94.36**	**51**	⇑P	**P**	**00 03 16.2**	**+0.9**
	baz=94						
FLN	**La Foliniere**	**94.37**	**335**	*e*P	**P**	**00 03 14.4**	**-0.3**
LDF	**La Druitiere**	**94.38**	**335**	*e*P	**P**	**00 03 14.1**	**-0.6**
	comp=Z,37nm,1.5s						
228A	**UT Block 9, Go**	**94.42**	**49**	⇑P	**P**	**00 03 16.2**	**+0.8**
	baz=94						
AVF	**Avril sur Loir**	**94.50**	**332**	*e*P	**P**	**00 03 14.9**	**-0.4**
	comp=Z,18nm,1.2s						
526A	**Mary Lane Ranc**	**94.69**	**52**	⇓P	**P**	**00 03 18.0**	**+1.2**
	baz=94						
GRR	**Gorron**	**94.82**	**335**	*e*P	**P**	**00 03 16.5**	**-0.3**
	comp=Z,16nm,1.0s						
626A	**Big Bend Ranch**	**94.98**	**52**	⇑P	**P**	**00 03 19.0**	**+1.0**
	baz=95						
428A	**Kincaid Ranch,**	**95.23**	**50**	⇑P	**P**	**00 03 20.1**	**+1.0**
	baz=95						
TXAR	**Lajitas Array**	**95.43**	**52**	P	**P**	**00 03 21.1**	**+1.1**
TXAR	**Lajitas Array**	**95.43**	**52**	P	**P**	**00 03 21.1**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=311,slow=4.6,SNR=6.4						
627A	**Terlingua Ranc**	**95.55**	**52**	⇓P	**P**	**00 03 21.8**	**+1.1**
	baz=95						
FRF	**La Foret Royal**	**95.61**	**328**	*e*P	**P**	**00 03 20.0**	**-0.5**
	comp=Z,20nm,1.4s						
Z32A	**Haskell**	**95.67**	**47**	⇑P	**P**	**00 03 22.1**	**+1.1**
	baz=95						
429A	**Davenport Ranc**	**95.82**	**50**	⇑P	**P**	**00 03 22.5**	**+0.7**
	baz=96						
LMR	**La Mourre**	**95.85**	**328**	*e*P	**P**	**00 03 20.7**	**-0.8**
529A	**Stev Forest Ra**	**95.92**	**51**	⇑P	**P**	**00 03 23.3**	**+1.0**
	baz=96						
MFF	**Saint Martin d**	**96.05**	**334**	*e*P	**P**	**00 03 22.2**	**-0.2**
SFIN	**Scholer Farm**	**97.65**	**35**	⇑P	**P**	**00 03 29.3**	**-0.4**
	baz=97						
TORD	**Torodi Ar. Bea**	**121.58**	**311**	PKP	**PKPdf**	**00 08 48.2**	**-1.2**
TORD	**Torodi Ar. Bea**	**121.58**	**311**	PKP	**PKPdf**	**00 08 48.2**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=46,slow=1.6,SNR=5.2						
SAML	**Samuel**	**149.92**	**51**	PKPdf	**PKPdf**	**00 09 41.2**	**0.0**
SAML				PKPbc	**PKPbc**	**00 09 46.1**	**+0.1**
LPAZ	**La Paz**	**150.81**	**69**	PKPbc	**PKPbc**	**00 09 49.3**	**+0.4**
LPAZ	**La Paz**	**150.81**	**69**	PKPbc	**PKPbc**	**00 09 49.3**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=252,slow=3.0,SNR=6.5						

WEL 05 23:56:00.2±0.3**, 38°.67S×178°.47E, h28**km±1km**, ML3.8**/17**,**
3C-4D, Error ellipse: s-maj=3.2km s-min=1.5km az=90.0,
Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	**Carnagh Statio**	**0.27**	**312**	⇑P*	Pb	23 56 06.5	-0.7
PRGZ	**Paritu Road**	**0.52**	**241**	⇑P*	Pb	23 56 10.6	-0.4
PRGZ				S*	Sn	23 56 20.2	+0.3
PUZ	**Puketiti**	**0.62**	**344**	P*	Pb	23 56 11.7	-0.8
PUZ				S*	Sb	23 56 21.4	+0.4
MHGZ	**Mahia Peninsul**	**0.65**	**222**	⇓P*	Pb	23 56 12.5	-0.6
KNZ	**Kokohu**	**0.71**	**240**	P*	Pb	23 56 13.1	-1.0
KNZ				S*	Sn	23 56 24.1	-0.3
MWZ	**Matawai**	**0.81**	**294**	PN	Pn	23 56 14.3	-1.5
MWZ				SN	Sb	23 56 25.9	-0.5
RAHZ	**Arahi**	**1.11**	**257**	⇓PN	Pn	23 56 19.1	-0.7
MXZ	**Matakaoa Point**	**1.11**	**353**	⇓PN	Pn	23 56 19.7	-0.1
URZ	**Urewera**	**1.14**	**291**	⇓PN	Pn	23 56 19.6	-0.7
NMHZ	**Naumai**	**1.36**	**251**	PN	Pn	23 56 22.8	-0.7
CKHZ	**Cape Kidnapper**	**1.47**	**227**	PN	Pn	23 56 23.3	-1.4
RRRZ	**Republican Roa**	**1.57**	**281**	PN	Pn	23 56 26.8	+0.6
MCHZ	**McNeill Hill**	**1.58**	**240**	PN	Pn	23 56 25.7	-0.7
TARZ	**Mount Tarawera**	**1.60**	**285**	PN	Pn	23 56 26.7	0.0
BKZ	**Black Stump Fm**	**1.62**	**251**	PN	Pn	23 56 26.2	-0.7
KAHZ	**Kahuranaki**	**1.67**	**227**	PN	Pn	23 56 26.3	-1.3
OPRZ	**Ohinepanea**	**1.71**	**298**	PN	Pn	23 56 27.4	-0.8
PXZ	**Pawanui**	**1.84**	**222**	PN	Pn	23 56 27.9	-2.0
BHHZ	**Black Hill Sta**	**2.04**	**246**	PN	Pn	23 56 31.7	-1.1
WPHZ	**Waipukurau**	**2.10**	**228**	PN	Pn	23 56 32.0	-1.6
PRHZ	**Porangahau**	**2.13**	**221**	PN	Pn	23 56 31.7	-2.3
PNHZ	**Pukenui**	**2.15**	**234**	PN	Pn	23 56 32.7	-1.6
MOVZ	**Moawhango**	**2.24**	**250**	PN	Pn	23 56 35.6	+0.1
OTVZ	**Oturere**	**2.24**	**256**	PN	Pn	23 56 35.6	0.0
KRVZ	**Karewarewa**	**2.25**	**258**	PN	Pn	23 56 35.3	-0.4
TUVZ	**Tukino**	**2.27**	**254**	PN	Pn	23 56 35.8	-0.3
WNVZ	**Wahianoa**	**2.33**	**253**	PN	Pn	23 56 36.2	-0.6
WPVZ	**Whakapapa**	**2.34**	**256**	PN	Pn	23 56 36.6	-0.3
FWVZ	**Far West T-bar**	**2.35**	**255**	PN	Pn	23 56 36.7	-0.5
TSZ	**Takapari Road**	**2.39**	**234**	⇑PN	Pn	23 56 35.7	-1.8
DVHZ	**Dannevirke**	**2.41**	**227**	PN	Pn	23 56 35.8	-2.0
POWZ	**Post Office Ro**	**2.71**	**230**	PN	Pn	23 56 40.8	-1.0
WAZ	**Wanganui**	**2.91**	**247**	PN	Pn	23 56 45.3	+0.6
MRZ	**Mangatainoka R**	**2.99**	**227**	PN	Pn	23 56 43.1	-2.6
TMWZ	**Te Maipa**	**3.14**	**218**	PN	Pn	23 56 44.8	-3.1
HOWZ	**Holdsworth Sta**	**3.18**	**225**	PN	Pn	23 56 45.3	-3.2
OGWZ	**Otaki Gorge**	**3.33**	**229**	PN	Pn	23 56 48.8	-1.6
MTW	**Mount Morrison**	**3.37**	**222**	PN	Pn	23 56 47.2	-3.8
KIW	**Kapiti Island**	**3.51**	**230**	PN	Pn	23 56 50.4	-2.5
PKE	**Pukeiti**	**3.53**	**260**	PN	Pn	23 56 54.4	+1.2
CTZ	**Chatham Island**	**6.27**	**145**	PN	Pn	23 57 31.0	+0.2

*ISCJB **06** 00:02:17.3±1.8, 39°.27N±0°.05×26°.0E±0°.1, h4km±14km,*
Error ellipse: s-maj=15.8km s-min=8.1km az=3.9
*CSEM **06** 00:02:17.3±0.5, 39°.27N×25°.97E, h2km, MD2.6, Error*
ellipse: s-maj=13.3km s-min=5.3km az=84.0
*ISK **06** 00:02:19.0, 39°.35N×26°.02E, h13km, MD2.6*
*DDA **06** 00:02:22.3, 39°.10N×26°.55E, h28km, MD3.0*
ISC 06 00:02:17.8±1.7**, 39°.29N**±0°.04×**26°.0E**±0°.1**, h15**km±11km**,**
n18, σ**0s85**/24**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZN	**Ezine**	**0.61**	**28**	*e*PG	**Pg**	**00 02 29.9**	**+0.1**
EZN				*e*SG	**Sg**	**00 02 37.8**	**-0.2**
EZN	**Ezine**	**0.61**	**28**	*e*Pg	**Pg**	**00 02 29.9**	**+0.1**
EZN				*e*Sg	**Sg**	**00 02 37.8**	**-0.2**
URLA	**Izmir**	**1.05**	**151**	*i* P	**Pb**	**00 02 36.5**	**-1.3**
URLA				*i* S	**Sb**	**00 02 50.7**	**-0.7**
URLA	**Izmir**	**1.05**	**151**	*i* P	**Pb**	**00 02 36.5**	**-1.3**
URLA				*i* S	**Sb**	**00 02 50.7**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.18**	**20**	*e*PN	**Pn**	**00 02 40.4**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.18**	**20**	*e*Pn	**Pn**	**00 02 40.4**	**+0.6**
BLCB	**Balcova**	**1.24**	**136**	*e*PN	**Pg**	**00 02 42.8**	**+1.1**
BLCB	**Balcova**	**1.24**	**136**	*e*Pn	**Pg**	**00 02 42.8**	**+1.1**
BALY	**Balya**	**1.37**	**70**	*i* P	**Pn**	**00 02 42.4**	**-0.1**
BALY				*i* S	**Sn**	**00 03 00.7**	**+0.3**
BALY	**Balya**	**1.37**	**70**	*i* P	**Pn**	**00 02 42.4**	**-0.1**
BALY				*i* S	**Sn**	**00 03 00.7**	**+0.3**
ENEZ	**Enez**	**1.46**	**6**	*e*PN	**Pn**	**00 02 44.7**	**+1.0**
ENEZ	**Enez**	**1.46**	**6**	*e*Pn	**Pn**	**00 02 44.7**	**+1.0**
KRBG	**Karabiga-Canak**	**1.52**	**43**	*e*PN	**Pn**	**00 02 45.2**	**+0.7**
KRBG	**Karabiga-Canak**	**1.52**	**43**	*e*Pn	**Pn**	**00 02 45.2**	**+0.7**
BALB	**Balikesir**	**1.54**	**76**	*e*PN	**Pn**	**00 02 45.7**	**+1.0**
BALB	**Balikesir**	**1.54**	**76**	*e*Pn	**Pn**	**00 02 45.7**	**+1.0**
GONE	**Gonen-Balikesi**	**1.54**	**60**	*e*PN	**Pn**	**00 02 45.6**	**+0.8**
GONE	**Gonen-Balikesi**	**1.54**	**60**	*e*Pn	**Pn**	**00 02 45.6**	**+0.8**

*AUST **06** 00:01:52.8±4.5, 7°.54N×123°.14E, h106km, Error ellipse:*
s-maj=3.6km s-min=1.4km az=240.0
*ISCJB **06** 00:02:33.2±0.3, 7°.29N±0°.05×123°.84E±0°.07, h600km,*
mb3.9/28, Error ellipse: s-maj=10.0km s-min=5.9km
az=161.6
*IDC **06** 00:02:34.6±0.5, 7°.28N×123°.83E, h603km±5km, mb3.3/26,*
mb1 3.4/27, mb1mx3.4/34, mbtmp3.3/27, Error ellipse:
s-maj=12.6km s-min=6.5km az=76.0
ISC 06 00:02:34.4±0.4**, 7°.30N**±0°.06×**123°.8E**±0°.1**, h600**km**, n47,**
σ**0s84**/57**, mb4.0**/28**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.76**	**97**	P	**P**	**00 03 48.5**	**+0.7**
	50nm,0.3s,baz=76,slow=20,SNR=3.2						
DAV				S	**S**	**00 04 48.0**	**+0.6**
	43nm,0.3s,baz=328,slow=10,SNR=3.1						
TGY	**Tagaytay City**	**7.33**	**338**	P	**P**	**00 04 27.4**	**-0.1**
	34nm,0.3s,baz=33,slow=2.2,SNR=6.4						
TGY				S	**S**	**00 06 00.4**	**+0.3**
	47nm,0.3s,baz=265,slow=8.5,SNR=2.8						
JOW	**Kunigami**	**19.89**	**12**	P	**P**	**00 06 27.6**	**+0.5**
	2.6nm,0.3s,baz=192,slow=9.3,SNR=4.5						
KDU	**Kakadu**	**21.63**	**157**	P	**P**	**00 06 42.9**	**0.0**
	baz=22,SNR=4.3						
PSI	**Prapat**	**25.19**	**261**	P	**P**	**00 07 15.2**	**+0.6**
	2.6nm,0.5s,baz=349,slow=7.4,SNR=3.5						
FITZ	**Fitzroy Crossi**	**25.30**	**176**	P	**P**	**00 07 15.7**	**+0.3**
	1.3nm,0.3s,baz=3.8,slow=9.0,SNR=30						
FITZ	**Fitzroy Crossi**	**25.30**	**176**	P	**P**	**00 07 15.6**	**+0.3**
	baz=26,SNR=11						
CMAR	**Chiang Mai Arr**	**26.63**	**297**	P	**P**	**00 07 27.9**	**+0.9**
	4.2nm,0.6s,baz=106,slow=6.9,SNR=26						
COEN	**Coen**	**28.55**	**138**	P	**P**	**00 07 43.5**	**-0.3**
	baz=29,SNR=18						
WRA	**Warramunga Arr**	**28.98**	**159**	P	**P**	**00 07 47.3**	**-0.2**
	9.2nm,0.6s,baz=335,slow=9.9,SNR=36						
WRA				PcP	**PcP**	**00 10 36.0**	**-0.3**
	0.6nm,0.7s,baz=336,slow=2.7,SNR=4.6						
WRA				S	**S**	**00 11 54.9**	**-2.9**
	1.0nm,0.8s,baz=337,slow=15,SNR=5.5						
WRA				ScP	**ScP**	**00 13 21.0**	**-0.9**
	1.4nm,0.7s,baz=343,slow=3.3,SNR=5.9						
KSRS	**Korea Array**	**30.25**	**6**	P	**P**	**00 07 59.0**	**+0.9**
	0.8nm,0.4s,baz=182,slow=9.6,SNR=3.9						
MAT	**Matsushiro**	**31.94**	**22**	P	**P**	**00 08 11.2**	**-1.3**
MJAR	**Matsushiro Arr**	**31.94**	**22**	P	**P**	**00 08 11.7**	**-0.8**
	5.0nm,0.7s,baz=195,slow=10.0,SNR=12						
ASAR	**Alice Springs**	**32.31**	**163**	P	**P**	**00 08 16.8**	**+0.9**
	5.3nm,0.3s,baz=343,slow=7.0,SNR=104						
ASAR				PcP	**PcP**	**00 10 45.1**	**-0.3**
	0.9nm,0.5s,baz=346,slow=2.7,SNR=8.0						
ASAR				S	**S**	**00 12 48.8**	**+0.1**
	3.1nm,0.8s,baz=348,slow=20,SNR=21						
MEEK	**Meekatharra**	**34.11**	**188**	P	**P**	**00 08 31.2**	**+0.3**
	baz=34,SNR=3.2						
MORW	**Morawa**	**36.92**	**191**	P	**P**	**00 08 54.4**	**+0.3**
	baz=37,SNR=3.8						
USRK	**Ussuriysk Arra**	**37.45**	**10**	P	**P**	**00 08 58.9**	**+0.8**
	1.7nm,0.5s,baz=203,slow=5.0,SNR=4.5						
TAPN	**Taplejung**	**39.60**	**305**	*e*P	**P**	**00 09 16.6**	**+0.5**
	5.5nm,0.4s						
ODAN	**Odare**	**39.67**	**304**	*e*P	**P**	**00 09 17.0**	**+0.4**
	12nm,0.7s						
ASAJ	**Asahikawa**	**40.18**	**21**	P	**P**	**00 09 20.6**	**+0.5**
	4.6nm,0.4s,baz=247,slow=30,SNR=4.9						
RAMN	**Ramite**	**40.36**	**304**	*e*P	**P**	**00 09 22.6**	**+0.5**
	9.8nm,0.7s						
GUN	**Gumba**	**41.31**	**304**	*e*P	**P**	**00 09 30.1**	**+0.3**
	7.4nm,0.5s						
BBOO	**Buckleboo**	**41.55**	**164**	P	**P**	**00 09 31.9**	**+0.9**
	baz=42,SNR=20						
STKA	**Stephens Creek**	**42.49**	**157**	P	**P**	**00 09 39.3**	**+0.9**
	2.2nm,0.4s,baz=343,slow=10,SNR=7.2						
SONM	**Songino Array**	**43.04**	**343**	P	**P**	**00 09 43.0**	**+0.4**
	0.9nm,0.5s,baz=157,slow=8.4,SNR=12						
SONM				PcP	**PcP**	**00 11 18.2**	**-0.5**
	0.2nm,0.5s,baz=165,slow=5.6,SNR=3.7						
KOLN	**Koldanda**	**43.14**	**303**	*e*P	**P**	**00 09 44.3**	**+0.4**
	11nm,0.3s						
DANN	**Dangsing**	**43.22**	**304**	*e*P	**P**	**00 09 44.7**	**+0.2**
	13nm,0.5s						
PYUN	**Piuthan**	**43.76**	**303**	*e*P	**P**	**00 09 49.2**	**+0.5**
	5.4nm,0.4s						
MKAR	**Makanchi Array**	**52.99**	**325**	P	**P**	**00 10 56.7**	**+0.3**
	2.0nm,0.4s,baz=118,slow=7.4,SNR=79						
MKAR				PcP	**PcP**	**00 11 54.5**	**-0.5**
	0.6nm,0.5s,baz=105,slow=4.6,SNR=6.1						
MKAR				ScP	**ScP**	**00 14 53.6**	**-2.2**
	0.4nm,0.8s,baz=110,slow=5.7,SNR=4.2						
PETK	**Petropavlovsk-**	**53.33**	**25**	P	**P**	**00 10 59.5**	**+0.8**
	3.7nm,0.7s,baz=194,slow=5.5,SNR=7.2						
ZALV	**Zalesovo Beam**	**56.12**	**333**	P	**P**	**00 11 17.2**	**-0.8**
	0.9nm,0.4s,baz=124,slow=6.5,SNR=7.8						
FX1	**Attu Island--F**	**60.53**	**32**	P	**P**	**00 11 48.2**	**+0.6**
	12nm,0.8s,baz=114,slow=20,SNR=2.8						
AKTO	**Aktyubinsk**	**69.08**	**321**	P	**P**	**00 12 41.5**	**+0.2**
	2.5nm,0.5s,baz=90,slow=12,SNR=12						
KDAK	**Kodiak Island**	**80.46**	**33**	P	**P**	**00 13 45.1**	**+0.5**
	2.1nm,0.6s,baz=259,slow=8.2,SNR=7.0						
ILAR	**Eielson Array**	**83.15**	**26**	P	**P**	**00 13 57.4**	**-0.8**
	0.8nm,0.6s,baz=238,slow=5.1,SNR=15						
ASF	**Jabal al Asfar**	**83.57**	**302**	P	**P**	**00 14 01.6**	**+0.5**
	0.9nm,0.3s,baz=320,slow=3.4,SNR=3.4						
JOF	**Joensuu**	**84.70**	**333**	*e*p	**P**	**00 14 04.6**	**-1.2**
	2.8nm,0.5s						
BRTR	**Keskin Array B**	**85.53**	**309**	P	**P**	**00 14 09.4**	**-1.1**
	0.4nm,0.6s,baz=108,slow=4.0,SNR=5.0						
ARCES	**ARCESS Array B**	**86.12**	**340**	P	**P**	**00 14 11.5**	**-1.0**
	2.7nm,0.8s,baz=78,slow=5.0,SNR=5.5						
SPITS	**Spitsbergen Ar**	**86.44**	**349**	P	**P**	**00 14 13.5**	**-0.4**
	2.0nm,0.6s,baz=157,slow=16,SNR=3.7						
KAF	**Kangasniemi**	**87.11**	**332**	*e*p	**P**	**00 14 15.3**	**-2.0**
	1.3nm,0.5s						
VNDA	**Vanda**	**87.31**	**172**	P	**P**	**00 14 18.2**	**+0.3**
	0.6nm,0.6s,baz=327,slow=3.2,SNR=3.8						
FINES	**FINESS Array B**	**87.34**	**332**	P	**P**	**00 14 17.5**	**-0.9**
	1.7nm,0.6s,baz=62,slow=5.4,SNR=12						
INK	**Inuvik**	**87.92**	**21**	P	**P**	**00 14 21.0**	**+0.1**
	0.9nm,0.7s,baz=18,slow=3.2,SNR=4.9						
YKA	**Yellowknife Ar**	**97.44**	**24**	P	**P**	**00 15 04.5**	**0.0**
	0.2nm,0.8s,baz=294,slow=4.4,SNR=3.1						
SCHQ	**Schefferville**	**117.46**	**7**	PKP	**PKPdf**	**00 20 12.7**	**-0.1**
	1.5nm,0.8s,baz=43,slow=18,SNR=4.5						
TORD	**Torodi Ar. Bea**	**119.04**	**289**	PKP	**PKPdf**	**00 20 16.1**	**-0.8**
	0.3nm,0.4s,baz=66,slow=2.2,SNR=8.8						

*IDC **06** 00:15:08.5±0.8, 9°.14S×124°.23E, h0km, mb4.2/9,*
mb1 4.3/9, mb1mx4.1/19, mbtmp4.2/9, MS3.8/14,
Ms1 3.8/14, ms1mx3.5/38, Error ellipse: s-maj=40.3km
s-min=18.9km az=55.0
*AUST **06** 00:15:08.7±8.2, 9°.49S×124°.07E, h2km, Error ellipse:*
s-maj=1.4km s-min=1.1km az=351.0
*ISCJB **06** 00:15:12.4±0.3, 9°.62S±0°.04×124°.17E±0°.06, h66km,*
mb4.2/16, Error ellipse: s-maj=9.3km s-min=4.4km
az=146.2
*DJA **06** 00:15:13.7±0.4, 10°S±5°×12°4E±°, h114km±19km, M4.4/7,*
mB5.0/2, mb4.6/7, MLv4.3/5, Mw(mB)4.3/2
*NEIC **06** 00:15:13.5±1.1, 9°.39S×124°.04E, h40km±11km, mb4.5/11,*
Error ellipse: s-maj=14.4km s-min=7.0km az=49.0
ISC 06 00:15:15.5±0.4**, 9°.61S**±0°.06×**124°.11E**±0°.06**, h66**km**, n76,**
σ**2s11**/62**, mb4.2**/16**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**2.08**	**298**	P	Pn	00 15 44.7	-3.6
WSI	**Waingapu**	**3.75**	**269**	P	Pn	00 16 06.2	-4.8
	baz=3.7,SNR=5.4						
KDI	**Kendari**	**5.81**	**345**	P	Pn	00 16 33.8	-5.4
	27nm,0.9s,0.1nm						
BKSI	**Bulukumba**	**5.81**	**317**	P	Pn	00 16 35.0	-4.2
	35nm,1.0s,0.1nm						
KAPI	**Kappang**	**6.29**	**316**	Pn	Pn	00 16 42.1	-3.6
KAPI	**Kappang**	**6.29**	**316**	Pn	Pn	00 16 42.1	-3.6
	0.2nm,0.3s,baz=131,slow=12,SNR=2.9						
KAPI				LR	LR	00 19 14.7	
	comp=Z,1µm,19.9s,baz=132,slow=41						
NLAI	**Namlea**	**7.00**	**25**	P	**Pn**	**00 16 55.3**	**-0.1**
	31nm,0.7s,2µm0.1nm						
MTN	**Manton Dam**	**7.60**	**116**	P	**Pn**	**00 17 01.3**	**-2.4**
	baz=7.7,SNR=83						
MTNI	**Mataram**	**7.90**	**276**	P	Pn	00 17 02.3	-5.4
	113nm,0.6s,1µm0.6nm						
FITZ	**Fitzroy Crossi**	**8.57**	**170**	Pn	**Pn**	**00 17 16.8**	**-0.1**
FITZ				Sn	**Sn**	**00 18 51.0**	**-1.1**
FITZ	**Fitzroy Crossi**	**8.57**	**170**	Pn	**Pn**	**00 17 16.8**	**-0.1**
	1.9nm,0.3s,baz=10,slow=11,SNR=36						
FITZ				Sn	**Sn**	**00 18 51.0**	**-1.1**
	1.4nm,0.3s,baz=141,slow=5.6,SNR=8.4						
FITZ				LR	LR	00 21 32.3	
	comp=Z,412nm,18.8s,baz=354,slow=43						
FITZ	**Fitzroy Crossi**	**8.57**	**170**	P	**Pn**	**00 17 16.8**	**-0.1**
	baz=8.7,SNR=51						
KDU	**Kakadu**	**8.76**	**111**	P	**Pn**	**00 17 16.5**	**-3.0**
	baz=8.8,SNR=17						
TLE	**Tual**	**9.42**	**66**	P	**Pn**	**00 17 27.8**	**-0.8**
	91nm,1.0s						
TLE	**Tual**	**9.42**	**66**	P	**Pn**	**00 17 26.6**	**-2.0**
	baz=9.4,SNR=3.8						
PCI	**Palu**	**9.64**	**334**	S	Sn	00 18 52.2	-26
	baz=9.6,SNR=9.6						
WRA	**Warramunga Arr**	**14.25**	**137**	Pn	Pn	00 18 29.0	-5.2
WRA				Sn	Sn	00 21 02.7	-8.2
WRA	**Warramunga Arr**	**14.25**	**137**	Pn	Pn	00 18 29.0	-5.2
	1.4nm,0.3s,baz=312,slow=15,SNR=31						
WRA				Sn	Sn	00 21 02.7	-8.2
	0.6nm,0.3s,baz=312,slow=24,SNR=7.5						
WRA				LR	LR	00 25 09.0	
	comp=Z,414nm,18.6s,baz=315,slow=41						
WRAB	**Tennant Creek**	**14.25**	**137**	*e*Pn	Pn	00 18 29.6	-4.6
	25nm,0.8s						
WRAB				*e*Sn	Sn	00 20 59.9	-11
LEM	**Lembang**	**16.55**	**278**	S	**S**	**00 22 17.4**	**+2.2**
	baz=16,SNR=10						
AS31	**Alice Springs**	**16.82**	**147**	*e*Pn	**Pn**	**00 19 05.0**	**-1.9**
AS31				*e*Sn	**Sn**	**00 22 08.8**	**-4.4**
ASAR	**Alice Springs**	**16.82**	**147**	P	**Pn**	**00 19 05.3**	**-1.6**
ASAR				S	**Sn**	**00 22 08.1**	**-5.1**
ASAR	**Alice Springs**	**16.82**	**147**	P	**Pn**	**00 19 05.3**	**-1.6**
	0.4nm,0.3s,baz=324,slow=13,SNR=37						
ASAR				S	**Sn**	**00 22 08.1**	**-5.1**
	0.2nm,0.3s,baz=324,slow=22,SNR=5.2						
ASAR				LR	LR	00 26 28.1	
	comp=Z,375nm,18.6s,baz=322,slow=40						
JAY	**Jayapura**	**17.94**	**68**	P	**P**	**00 19 16.7**	**-3.8**
	baz=18,SNR=3.3						
QIS	**Mount Isa**	**18.48**	**128**	P	**Pn**	**00 19 30.2**	**+3.0**
	baz=19,SNR=5.1						
COEN	**Coen**	**19.16**	**105**	*e*P	**Pn**	**00 19 35.0**	**-0.3**
	90nm,1.0s						
COEN	**Coen**	**19.16**	**105**	P	**Pn**	**00 19 35.7**	**+0.4**
	baz=19,SNR=8.2						
FORT	**Forrest**	**21.38**	**171**	*e*P	**P**	**00 20 00.5**	**+2.8**
	27nm,0.8s						
PMG	**Port Moresby**	**22.74**	**91**	*e*P	**P**	**00 20 13.9**	**+1.5**
	9.6nm,0.8s						
PMG	**Port Moresby**	**22.74**	**91**	P	**P**	**00 20 15.3**	**+2.8**
	7.2nm,0.6s,baz=290,slow=11,SNR=4.9						
CTA	**Charters Tower**	**23.77**	**118**	P	**P**	**00 20 24.6**	**+2.3**
CTA	**Charters Tower**	**23.77**	**118**	P	**P**	**00 20 24.6**	**+2.3**
	5.8nm,0.8s,baz=275,slow=11,SNR=5.2						
CTA				LR	LR	00 30 55.8	
	comp=Z,324nm,18.2s,baz=277,slow=40						
CTAO	**Charters Tower**	**23.77**	**118**	*e*P	**P**	**00 20 24.8**	**+2.5**
	16nm,1.1s						
NWAO	**Narrogin (SRO)**	**24.05**	**194**	LR	LR	00 31 45.1	
	comp=Z,265nm,19.9s,baz=9.2,slow=41						
QLP	**Quilpie**	**25.45**	**134**	P	**P**	**00 20 41.1**	**+3.7**
	baz=26,SNR=6.8						
STKA	**Stephens Creek**	**27.45**	**146**	*e*P	**P**	**00 20 57.9**	**+2.5**
	1.6nm,1.0s						
STKA	**Stephens Creek**	**27.45**	**146**	P	**P**	**00 20 59.1**	**+3.6**
	4.4nm,0.9s,baz=315,slow=11,SNR=4.7						
STKA				LR	LR	00 33 15.0	
	comp=Z,397nm,19.5s,baz=347,slow=39						
PSI	**Prapat**	**27.95**	**295**	LR	LR	00 33 26.8	
	comp=Z,218nm,19.1s,baz=142,slow=40						
GSI	**Gunungsitoli**	**28.56**	**291**	S	S	00 26 18.9	+30
	baz=28,SNR=8.1						
CMAR	**Chiang Mai Arr**	**37.34**	**318**	P	**P**	**00 22 22.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**37.34**	**318**	P	**P**	**00 22 22.3**	**+0.3**
	1.0nm,0.3s,baz=137,slow=6.7,SNR=8.8						
CMAR				LR	LR	00 40 07.9	
	comp=Z,113nm,19.6s,baz=146,slow=40						
KSRS	**Korea Array**	**46.96**	**4**	LR	LR	00 46 35.1	
	comp=Z,29nm,18.8s,baz=170,slow=41						
MJAR	**Matsushiro Arr**	**47.79**	**15**	P	**P**	**00 23 44.6**	**-1.8**
MJAR	**Matsushiro Arr**	**47.79**	**15**	P	**P**	**00 23 44.6**	**-1.8**
	0.7nm,0.3s,baz=198,slow=10,SNR=4.3						
TAPN	**Taplejung**	**50.93**	**317**	*e*P	**P**	**00 24 10.3**	**-0.6**
	32nm,1.0s						
RAMN	**Ramite**	**51.43**	**316**	*e*P	**P**	**00 24 14.0**	**-0.5**
	24nm,0.7s						
GUN	**Gumba**	**52.53**	**316**	*e*P	**P**	**00 24 21.2**	**-1.6**
	29nm,1.0s						
PKI	**Pulchoki**	**52.64**	**316**	*e*P	**P**	**00 24 23.5**	**-0.1**
KOLN	**Koldanda**	**54.02**	**315**	*e*P	**P**	**00 24 32.7**	**-0.9**
	13nm,0.9s						
DANN	**Dangsing**	**54.26**	**315**	*e*P	**P**	**00 24 34.5**	**-1.0**
	20nm,0.5s						
PYUN	**Piuthan**	**54.65**	**315**	*e*P	**P**	**00 24 37.8**	**-0.4**
	42nm,1.2s						
ULN	**Ulaanbaatar**	**59.19**	**347**	*e*P	**P**	**00 25 09.3**	**-0.6**
	1.5nm,0.7s						
SONM	**Songino Array**	**59.32**	**346**	P	**P**	**00 25 10.0**	**-0.7**
SONM	**Songino Array**	**59.32**	**346**	P	**P**	**00 25 10.0**	**-0.7**
	1.0nm,0.6s,baz=164,slow=7.5,SNR=11						
MK31	**Makanchi Array**	**67.39**	**330**	*e*P	**P**	**00 26 02.8**	**-1.2**
MKAR	**Makanchi Array**	**67.39**	**330**	P	**P**	**00 26 02.7**	**-1.3**
MKAR	**Makanchi Array**	**67.39**	**330**	P	**P**	**00 26 02.7**	**-1.3**
	1.9nm,0.7s,baz=136,slow=7.9,SNR=28						
KBL	**Kabul**	**68.13**	**313**	*e*P	**P**	**00 26 08.2**	**-0.8**
	4.0nm,0.8s						
AAK	**Ala-Archa**	**68.92**	**323**	*e*P	**P**	**00 26 13.0**	**-0.9**
	8.6nm,0.8s						
AAK	**Ala-Archa**	**68.92**	**323**	LR	LR	01 01 48.0	
	comp=Z,53nm,21.3s,baz=136,slow=41						
VNDA	**Vanda**	**70.64**	**172**	LR	LR	00 56 33.7	
	comp=Z,128nm,18.3s,baz=142,slow=35						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ZALV	Zalesovo Beam	71.50	337	P	P	00 26 27.2	-1.9
ZALV	Zalesovo Beam	71.50	337	P	P	00 26 27.2	-1.9
	4.5nm,1.1s,baz=114,slow=3.6,SNR=8.5						
KURBB	Kurchatov Arra	71.83	331	LR	LR	01 03 01.9	
	comp=Z,51nm,20.3s,baz=115,slow=40						
KURK	Kurchatov	71.85	332	eP	P	00 26 30.4	-0.9
	3.8nm,1.1s						
ABKAR	Akbulak array	81.01	323	eP	P	00 27 22.4	-0.8
	2.5nm,0.9s						
AKTO	Aktyubinsk	82.64	324	P	P	00 27 31.2	-0.5
AKTO	Aktyubinsk	82.64	324	P	P	00 27 31.2	-0.5
	2.6nm,0.7s,baz=93,slow=5.2,SNR=8.5						
AKTO				LR	LR	01 07 19.3	
	comp=Z,34nm,20.9s,baz=133,slow=38						
KMBO	Kilima Mbogo	86.71	269	eP	P	00 27 54.0	+0.6
	19nm,1.9s						
KMBO	Kilima Mbogo	86.71	269	P	P	00 27 56.7	+3.4
	2.4nm,0.9s,baz=128,slow=4.5,SNR=5.2						
TORD	Torodi Ar. Bea	123.53	279	PKP	PKPdf	00 34 08.9	+2.4
TORD	Torodi Ar. Bea	123.53	279	PKP	PKPdf	00 34 08.9	+2.4
	1.1nm,0.7s,baz=78,slow=1.7,SNR=8.7						
DBIC	Dimbokro	129.43	271	PKP	PKPdf	00 34 20.6	+2.8
DBIC	Dimbokro	129.43	271	PKP	PKPdf	00 34 20.6	+2.8
	1.6nm,0.9s,baz=135,slow=5.7,SNR=3.2						
CPUP	Villa Florida	144.24	178	PKP	PKPdf	00 34 46.6	+1.9
CPUP	Villa Florida	144.24	178	PKP	PKPdf	00 34 46.6	+1.9
	1.0nm,0.5s,baz=208,slow=5.5,SNR=4.4						

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*IDC **06** 00:26:30.8±1.6, 9°.88S×80°.08W, h0km, mb3.9/3, mb1 4.0/6, mb1mx3.8/23, mbtmp4.0/6, ML4.0/3, MS3.7/10, Ms1 3.7/10, ms1mx3.4/34, Error ellipse: s-maj=26.1km s-min=18.6km az=69.0*

*NEIC **06** 00:26:36.6±1.2, 9°.79S×79°.75W, h35km, mb4.1/2, Error ellipse: s-maj=25.5km s-min=11.6km az=72.0*

ISC 06 00:26:34.9±1.1**, 9°.79S**±0°.06×**79°.9W**±0°.1**, h22km, n26, σ1ˢ95**/23**, mb3.9**/4**, MS3.8**/7**, Off coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	3.02	29	Pn	Pn	00 27 23.2	+1.4
ATAH				Sn	Sb	00 28 01.9	-2.8
ATAH				Lg	Lg	00 28 12.7	
ATAH	Atahualpa	3.02	29	Pn	Pn	00 27 23.2	+1.4
	17nm,0.3s,baz=212,slow=2.5,SNR=47						
ATAH				Sn	Sb	00 28 01.9	-2.8
	23nm,0.3s,baz=123,slow=23,SNR=7.9						
ATAH				LR	LR	00 28 08.1	
	comp=Z,420nm,19.1s,baz=204,slow=30						
ATAH				Lg	Lg	00 28 12.7	
	21nm,0.3s,baz=97,slow=19,SNR=9.2						
NNA	Nana	3.69	127	Pn	Pn	00 27 30.0	-0.7
NNA				Sn	Sn	00 28 13.7	+0.1
NNA				Lg	Lg	00 28 33.1	
NNA	Nana	3.69	127	Pn	Pn	00 27 30.0	-0.7
	12nm,0.3s,baz=308,slow=13,SNR=27						
NNA				Sn	Sn	00 28 13.7	+0.1
	14nm,0.3s,baz=8.7,slow=21,SNR=4.0						
NNA				Lg	Lg	00 28 33.1	
	16nm,0.3s,baz=126,slow=20,SNR=6.4						
NNA				LR	LR	00 29 01.8	
	comp=Z,384nm,19.4s,baz=312,slow=40						
OTAV	Otavalo	10.06	8	ePn	Pn	00 28 58.2	-0.3
OTAV				eSn	Sn	00 30 51.3	+0.2
LPAZ	La Paz	13.13	121	Pn	Pn	00 29 45.9	+5.1
LPAZ	La Paz	13.13	121	Pn	Pn	00 29 45.9	+5.1
	0.1nm,0.3s,baz=303,slow=6.4,SNR=3.0						
LPAZ				LR	LR	00 34 35.7	
	comp=Z,229nm,18.8s,baz=122,slow=37						
SAML	Samuel	16.49	88	ePn	Pn	00 30 22.4	-2.6
	3.6nm,0.7s						
SAML				eSn	Sn	00 33 32.5	+5.0
SIV	San Ignacio	19.33	111	P	P	00 30 59.4	+0.5
SIV	San Ignacio	19.33	111	P	P	00 30 59.4	+0.5
	0.1nm,0.3s,baz=294,slow=14,SNR=12						
SIV				LR	LR	00 38 18.7	
	comp=Z,106nm,20.0s,slow=36						
LCO	Las Campanas	20.97	157	P	P	00 31 15.4	-1.5
CFAA	Coronel Fontan	24.25	155	P	P	00 31 53.4	+3.0
CFAA	Coronel Fontan	24.25	155	P	P	00 31 53.4	+3.0
	0.1nm,0.4s,baz=339,slow=1.5,SNR=3.5						
CFAA				LR	LR	00 40 14.4	
	comp=Z,12nm,19.4s,baz=152,slow=34						
CPUP	Villa Florida	26.94	131	LR	LR	00 44 23.1	
	comp=Z,132nm,19.2s,baz=138,slow=40						
BDFB	Brasilia	31.59	104	LR	LR	00 46 00.6	
	comp=Z,215nm,19.9s,baz=320,slow=37						
RPN	Rapa Nui	32.70	234	LR	LR	00 42 32.1	
	comp=Z,173nm,21.6s,baz=34,slow=30						
PPT	Papeete	67.86	255	LR	LR	01 00 24.3	
	comp=Z,169nm,20.1s,baz=219,slow=30						
DBIC	Dimbokro	76.49	81	eP	P	00 38 24.2	+0.4
	4.6nm,0.9s						
DBIC	Dimbokro	76.49	81	P	P	00 38 25.2	+1.4
	3.4nm,1.0s,baz=264,slow=10,SNR=3.3						
DBIC				LR	LR	01 12 33.3	
	comp=Z,76nm,20.4s,baz=204,slow=36						
YKA	Yellowknife Ar	76.91	344	P	P	00 38 25.1	0.0
YKA	Yellowknife Ar	76.91	344	P	P	00 38 25.1	0.0
	0.5nm,0.8s,baz=140,slow=6.5,SNR=4.8						
SFJD	Kangerlussuaq	79.48	11	LR	LR	01 11 39.7	
	comp=Z,46nm,18.1s,baz=217,slow=34						
TORD	Torodi Ar. Bea	84.11	76	P	P	00 39 04.8	0.0
TORD	Torodi Ar. Bea	84.11	76	P	P	00 39 04.8	0.0
	1.0nm,0.8s,baz=269,slow=5.1,SNR=4.8						
SONM	Songino Array	141.71	353	PKPpre	PKPpre	00 46 01.0	
SONM	Songino Array	141.71	353	PKhKP	PKPpre	00 46 01.0	
	0.4nm,0.9s,baz=27,slow=3.5,SNR=4.1						

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*ISCJB **06** 00:26:41.1±0.7, 10°.85N±0°.02×69°.70W±0°.02, h3km±4km, mb4.2/39, MS4.7/2, Error ellipse: s-maj=3.8km s-min=3.1km az=167.6*

*BJI **06** 00:26:41.1, 10°.80N×69°.70W, h5km, mB5.4/5, Ms5.1/2, Ms7 4.7/2*

*IDC **06** 00:26:42.2±0.6, 10°.91N×69°.76W, h0km, mb4.0/15, mb1 4.3/17, mb1mx4.1/28, mbtmp4.1/17, MS2.8/1, Ms1 2.8/1, ms1mx2.3/37, Error ellipse: s-maj=18.1km s-min=14.9km az=46.0*

*NEIC **06** 00:26:43.1, 10°.77N×69°.72W, h2km, mb4.6/20, MW4.0(CAR), After CAR.*

NEIC Felt at Coro and in Lara.

*FUNV **06** 00:26:43.2, 10°.77N×69°.72W, h3km, MW4.2*

ISC 06 00:26:42.6±1.2**, 10°.80N**±0°.03×**69°.70W**±0°.03**, h5km**±7km**, n125, σ1ˢ38**/138**, mb4.4**/39**, 8C-3D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIQV	Siquisique	0.19	215	⇑iP	Pg	00 26 45.5	-0.9
SIQV				eS	Sg	00 26 48.3	-0.6
CURV	Curarigua	0.83	198	⇑eP	Pg	00 26 57.3	-1.3
CURV				eS	Sg	00 27 09.4	+0.1
JACV	Jacura	0.90	72	⇑eP	Pb	00 27 01.6	+0.9
JACV				eS	Sb	00 27 14.1	+1.1
DABV	Dabajuro	0.93	277	⇑eP	Pg	00 27 00.5	0.0
DABV				eS	Sb	00 27 13.2	-0.7
TEPV	Terepaima	0.97	149	⇓eP	Pg	00 27 00.9	-0.4
TEPV				eS	Sg	00 27 14.6	+0.6
QARV	Quebrada Arrib	1.01	234	⇑iP	Pb	00 27 02.4	-0.2
MONV	Montecano	1.18	347	⇓iP	Pg	00 27 05.1	-0.1
MONV				eS	Sb	00 27 22.3	+1.3
SANV	Sanarito	1.30	173	⇓eP	Pg	00 27 06.6	-1.1
SANV				eS	Sb	00 27 24.7	-0.1
MAPV	Macapo	1.56	128	eP	Pn	00 27 11.3	+0.3
MAPV				eS	Sn	00 27 32.3	+0.7
TURV	Turiamo	1.86	101	eS	Sn	00 27 38.7	-0.3
IMOV	Isla Los Monje	1.94	323	eP	Pn	00 27 15.9	-0.4
IMOV				eS	Sn	00 27 41.0	-0.1
SDV	Santo Domingo	2.12	206	ePn	Pn	00 27 19.8	+1.0
SDV				eSn	Sn	00 27 46.5	+0.9
BAUV	El Baul	2.47	138	eP	Pn	00 27 23.9	+0.4
BAUV				eS	Sn	00 27 53.0	-1.0
VIGV	El Vigia	2.55	220	⇑iP	Pn	00 27 24.9	+0.2
SOCV	Socops	2.75	205	eP	Pn	00 27 26.8	-0.7
FUNV	FUNVISIS	2.86	96	eP	Pn	00 27 28.9	-0.1
BIRV	Birongo	3.38	95	eP	Pn	00 27 35.1	-1.0
MERV	Las Mercedes	3.69	114	eP	Pn	00 27 40.4	+0.1
ELOV	Elorza	3.79	177	⇑eP	Pn	00 27 41.5	-0.1
CAPV	Capacho	3.90	222	⇑eP	Pn	00 27 43.1	-0.3
CUPV	Cœpira	3.92	101	eP	Pn	00 27 43.1	-0.4
PCRV	Puerto La Cruz	5.02	97	eP	Pn	00 27 59.2	+0.6
CRUV	Carupano	6.35	91	eP	Pn	00 28 16.7	-0.3
ROSC	El Rosal	7.48	218	Pn	Pn	00 28 34.3	+1.5
ROSC				Sn	Sn	00 30 01.5	+3.1
ROSC	El Rosal	7.48	218	Pn	Pn	00 28 34.3	+1.5
	9.6nm,0.3s,baz=104,slow=19,SNR=32						
ROSC				Sn	Sn	00 30 01.5	+3.1
	1.4nm,0.3s,baz=90,slow=20,SNR=2.4						
CRPR	Cabo Rojo, PR	7.58	19	ePn	Pn	00 28 34.6	+0.8
CRPR				Sn	Sn	00 29 54.8	-5.5
CELP	Cerrillos	7.83	22	ePn	Pn	00 28 37.3	0.0
CELP				eSn	Sn	00 30 02.9	-3.6
LRS	Lares	7.94	20	ePn	Pn	00 28 40.0	+1.3
LRS				eSn	Sn	00 30 05.2	-3.9
GRGR	Grenville	7.99	80	ePn	Pn	00 28 39.7	+0.1
AOPR	Arecibo Observ	8.02	20	ePn	Pn	00 28 41.1	+1.2
SJG	San Juan	8.04	25	ePn	Pn	00 28 38.7	-1.3
SJG				eSn	Sn	00 30 00.6	-11
SJG	San Juan	8.04	25	Pn	Pn	00 28 39.2	-0.8
	7.5nm,0.3s,baz=203,slow=13,SNR=16						
SJG				Sn	Sn	00 29 59.3	-12
	5.2nm,0.3s,baz=6.8,slow=17,SNR=3.6						
SJG				LR	LR	00 31 47.5	
	comp=Z,72nm,19.9s,baz=271,slow=38						
HUMP	Col San Antoni	8.19	27	ePn	Pn	00 28 43.9	+1.7
SDDR	Presa de Saban	8.27	349	ePn	Pn	00 28 44.0	+0.6
SDDR				eSn	Sn	00 30 18.5	+1.2
MTP	Monte Pirata	8.29	28	ePn	Pn	00 28 43.8	+0.3
	38nm,0.7s						
MTP				eSn	Sn	00 30 14.8	-2.8
CBYP	Canovanas	8.30	26	ePn	Pn	00 28 43.5	-0.2
	17nm,0.6s						
CBYP				eSn	Sn	00 30 06.7	-11
STVI	Saint Thomas	8.79	31	ePn	Pn	00 28 50.5	0.0
STVI				eSn	Sn	00 30 18.6	-11
BCIP	Isla Barro Col	10.12	262	Pn	Pn	00 29 08.8	+0.1
GTBY	Guantanamo Bay	10.46	331	ePn	Pn	00 29 14.9	+1.5
LPAZ	La Paz	26.96	177	P	P	00 32 26.9	+0.9
LPAZ	La Paz	26.96	177	P	P	00 32 26.9	+0.9
	2.2nm,0.6s,baz=357,slow=4.2,SNR=7.6						
TKL	Tuckaleechee C	27.85	335	P	P	00 32 33.2	+0.1
TKL	Tuckaleechee C	27.85	335	P	P	00 32 33.2	+0.1
	1.3nm,0.6s,baz=176,slow=16,SNR=2.6						
LVC	Limon Verde	33.22	179	eP	P	00 33 21.6	+0.7
	0.3nm,0.7s						
TXAR	Lajitas Array	36.65	305	P	P	00 33 51.1	+0.6
TXAR	Lajitas Array	36.65	305	P	P	00 33 51.1	+0.6
	0.6nm,0.4s,baz=114,slow=8.5,SNR=9.7						
RCBR	Riachuelo	37.48	115	P	P	00 34 00.2	+2.6
RCBR	Riachuelo	37.48	115	P	P	00 34 00.2	+2.6
	3.3nm,0.9s,baz=282,slow=10,SNR=4.9						
AGMN	Agassiz Nation	43.33	335	eP	P	00 34 45.0	-0.5
	8.1nm,0.8s						
SCHQ	Schefferville	43.98	2	P	P	00 34 50.6	-0.1
SCHQ	Schefferville	43.98	2	P	P	00 34 50.6	-0.1
	4.4nm,0.6s,baz=186,slow=8.5,SNR=11						
PV01	Paradox Valley	44.13	315	eP	P	00 34 53.6	+1.1
	207nm,0.7s						
ULM	Lac du Bonnet	44.86	336	P	P	00 34 56.2	-1.6
ULM	Lac du Bonnet	44.86	336	P	P	00 34 56.2	-1.6
	1.9nm,0.5s,baz=142,slow=8.4,SNR=4.4						
PDAR	Pinedale Array	47.05	320	P	P	00 35 14.5	-1.0
PDAR	Pinedale Array	47.05	320	P	P	00 35 14.5	-1.0
	1.3nm,1.0s,baz=128,slow=10,SNR=4.3						
LDFC	Landfair	47.76	308	P	P	00 35 22.1	+1.0
	13nm,0.4s						
HWUT	Hardware Ranch	47.79	317	eP	P	00 35 20.9	-0.3
	2.6nm,0.7s						
HWUT				ePcP	PcP	00 36 50.9	+0.6
LOHW	Long Hollow	48.14	320	eP	P	00 35 23.2	-0.7
	2.8nm,0.7s						
TPAW	Teton Pass	48.29	320	eP	P	00 35 25.0	-0.2
	4.5nm,0.6s						
RRI2	Red Ridge	48.46	320	eP	P	00 35 26.6	+0.1
	4.2nm,0.6s						
QLMT	Earthquake Lak	49.26	321	eP	P	00 35 33.6	+0.9
	0.6nm,0.8s						
MCMT	McKenzie Canyo	50.14	321	eP	P	00 35 39.3	0.0
	1.2nm,0.7s						
FFC	Flin Flon	50.69	336	eP	P	00 35 42.7	-0.3
	3.4nm,0.8s						
NVAR	Mina Array Bea	51.28	311	P	P	00 35 47.8	-0.2
NVAR	Mina Array Bea	51.28	311	P	P	00 35 47.8	-0.2
	0.4nm,0.3s,baz=115,slow=8.1,SNR=3.2						
YKA	Yellowknife Ar	60.79	338	P	P	00 36 54.2	-1.2
YKA	Yellowknife Ar	60.79	338	P	P	00 36 54.2	-1.2
	2.7nm,0.8s,baz=121,slow=7.0,SNR=22						
YKW3	Yellowknife Ar	60.83	338	eP	P	00 36 54.3	-1.3
	0.1nm,0.8s						
EVOP	Sao Brissos	61.16	52	eP	P	00 37 00.9	+2.6
	12nm,1.1s						
EVO	Evora	61.25	52	eP	P	00 37 00.9	+2.0
	12nm,1.1s						
DBIC	Dimbokro	64.13	88	P	P	00 37 19.4	+0.8
DBIC	Dimbokro	64.13	88	P	P	00 37 19.4	+0.8
	1.7nm,0.5s,baz=270,slow=7.5,SNR=9.8						
ESDC	Sonseca Array	64.53	51	P	P	00 37 23.0	+2.1
ESDC	Sonseca Array	64.53	51	P	P	00 37 23.0	+2.1
	0.2nm,0.4s,baz=278,slow=7.8,SNR=5.1						
MFF	Saint Martin d	68.19	44	eP	P	00 37 46.5	+2.4
	18nm,1.2s						
MFF	Saint Martin d	68.19	44	eP	P	00 37 46.5	+2.4
	18nm,1.2s						
LFF	La Frestale	68.61	46	eP	P	00 37 47.5	+0.7
LFF	La Frestale	68.61	46	eP	P	00 37 47.5	+0.7
RJF	Les Rejaudoux	69.19	46	eP	P	00 37 52.4	+2.0
	4.6nm,0.8s						
RJF	Les Rejaudoux	69.19	46	eP	P	00 37 52.4	+2.0
	4.6nm,0.8s						
MTLF	Montolieu	69.52	48	eP	P	00 37 52.7	+0.2
	3.2nm,0.7s						
MTLF	Montolieu	69.52	48	eP	P	00 37 52.7	+0.2
	3.2nm,0.7s						
TORD	Torodi Ar. Bea	69.67	80	P	P	00 37 52.9	-0.9
TORD	Torodi Ar. Bea	69.67	80	P	P	00 37 52.9	-0.9
	0.7nm,0.4s,baz=287,slow=6.7,SNR=24						
SMF	Signal de Mont	70.92	44	eP	P	00 38 02.7	+1.7
	4.7nm,0.8s						
SMF	Signal de Mont	70.92	44	eP	P	00 38 02.7	+1.7
	4.7nm,0.8s						
LOR	Lormes	70.99	44	eP	P	00 38 02.8	+1.4
	5.1nm,0.8s						
LOR	Lormes	70.99	44	eP	P	00 38 02.8	+1.4
	5.1nm,0.8s						
VIVF	Saint-Julien-l	71.39	46	eP	P	00 38 05.9	+2.0
	9.5nm,1.2s						
VIVF	Saint-Julien-l	71.39	46	eP	P	00 38 05.9	+2.0
	9.5nm,1.2s						
ORIF	Oris-en-Rattie	72.25	46	eP	P	00 38 10.8	+1.6
	4.6nm,0.8s						
ORIF	Oris-en-Rattie	72.25	46	eP	P	00 38 10.8	+1.6
	4.6nm,0.8s						
PAGF	Fort de Pagny	72.33	42	eP	P	00 38 11.0	+1.5
	2.3nm,0.8s						
PAGF	Fort de Pagny	72.33	42	eP	P	00 38 11.0	+1.5
	2.3nm,0.8s						
LPL	La Plagne	72.87	46	eP	P	00 38 14.6	+1.6
	4.4nm,0.7s						
LPL	La Plagne	72.87	46	eP	P	00 38 14.6	+1.6
	4.4nm,0.7s						
MBDF	Montbardon	72.87	46	eP	P	00 38 14.6	+1.6
MBDF	Montbardon	72.87	46	eP	P	00 38 14.6	+1.6
LPG	La Plagne	72.88	46	eP	P	00 38 14.4	+1.2
	4.9nm,0.8s						
LPG	La Plagne	72.88	46	eP	P	00 38 14.4	+1.2
	4.9nm,0.8s						
ILAR	Eielson Array	74.83	334	P	P	00 38 22.6	-1.3
ILAR	Eielson Array	74.83	334	P	P	00 38 22.6	-1.3
	0.8nm,0.8s,baz=96,slow=4.9,SNR=11						
GERES	GERESS Array B	77.62	42	P	P	00 38 40.4	+0.2
GERES	GERESS Array B	77.62	42	P	P	00 38 40.4	+0.2
	0.9nm,0.6s,baz=269,slow=4.9,SNR=12						
FINES	FINESS Array B	83.35	29	P	P	00 39 10.6	+0.1
FINES	FINESS Array B	83.35	29	P	P	00 39 10.6	+0.1
	2.7nm,1.1s,baz=263,slow=5.5,SNR=7.5						
VNA3	Neumayer Olymp	91.00	164	eP	P	00 39 45.5	-1.9
VNA2	Neumayer--Watz	91.48	163	eP	P	00 39 45.9	-3.7
MKAR	Makanchi Array	117.43	21	PKP	PKPdf	00 45 29.8	+0.1
MKAR	Makanchi Array	117.43	21	PKP	PKPdf	00 45 29.8	+0.1
	0.1nm,0.4s,baz=271,slow=2.6,SNR=3.0						
WMQ	Urumqi	121.87	19	PKP	PKPdf	00 45 35.3	-3.1
MDJ	Mudanjiang	122.14	344	PKP	PKPdf	00 45 36.8	-2.0
MDJ				AMB	AMB		
	comp=Z,62nm,4.1s						
CN2	Changchun	123.93	347	ePKP	PKPdf	00 45 39.4	-2.8
HHC	Hu-ho-hao-te	128.59	359	ePKP	PKPdf	00 45 46.2	-5.2
HHC				PP	PP	00 47 55.7	+0.4
HHC				PKS	PKSdf	00 49 21.9	-6.2
HHC				AMB	AMB		
	comp=Z,120nm,9.1s						
HHC				LR	LR		
	comp=N,130nm,20.7s						
HHC				LR	LR		
	comp=E,180nm,20.3s						
HHC				LR	LR		
	comp=Z,120nm,20.3s						
LZH	Lanzhou	132.97	7	ePKP	PKPdf	00 45 58.0	-1.9
LZH				LR	LR		
	comp=N,120nm,18.0s						
LZH				LR	LR		
	comp=E,120nm,18.1s						
LZH				LR	LR		
	comp=Z,170nm,20.0s						
CD2	Chengdu	138.05	8	PKP	PKPdf	00 46 05.0	-4.4
CTA	Charters Tower	144.21	251	PKP	PKPbc	00 46 20.2	+1.5
CTA	Charters Tower	144.21	251	PKP	PKPbc	00 46 20.2	+1.5
	comp=Z,2.3nm,0.7s,baz=71,slow=2.2,SNR=2.8						
STKA	Stephens Creek	144.31	229	PKP	PKPbc	00 46 20.2	+1.5
STKA	Stephens Creek	144.31	229	PKP	PKPbc	00 46 20.2	+1.5
	comp=Z,1.2nm,0.7s,baz=88,slow=19,SNR=1.8						
CMAR	Chiang Mai Arr	148.84	21	PKPbc	PKPbc	00 46 32.2	-0.1
CMAR	Chiang Mai Arr	148.84	21	PKPbc	PKPbc	00 46 32.2	-0.1
	comp=Z,0.8nm,0.3s,baz=326,slow=4.4,SNR=3.8						
ASAR	Alice Springs	154.14	237	PKPbc	PKPbc	00 46 45.1	+0.6
ASAR	Alice Springs	154.14	237	PKPbc	PKPbc	00 46 45.1	+0.6
	comp=Z,1.2nm,0.8s,baz=147,slow=2.2,SNR=4.6						

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*SKO **06** 00:31:27.3, 41°.38N×18°.98E, h0km, M2.5, ML2.9*

*CSEM **06** 00:31:28.7±0.2, 41°.44N×19°.12E, h5km, ML2.6, Error ellipse: s-maj=4.3km s-min=2.3km az=65.0*

*ISCJB **06** 00:31:28.5±0.5, 41°.45N±0°.02×19°.10E±0°.03, h8km±3km, Error ellipse: s-maj=4.5km s-min=2.5km az=155.2*

*TIR **06** 00:31:28.8±6.9, 41°.58N×19°.32E, h0km±203km*

*THE **06** 00:31:30.1, 41°.46N×19°.17E, h12km±3km, ML2.7/4, Error ellipse: s-maj=5.3km s-min=1.8km az=305.0*

*PDG **06** 00:31:30.7±0.2, 41°.54N×19°.18E, h11km, ML2.9/8, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

*BEO **06** 00:31:33.2±0.6, 41°.59N×19°.40E, h5km±2km, ML2.6/9*

ISC 06 00:31:28.8±1.1**, 41°.44N**±0°.02×**19°.11E**±0°.02**, h9km**±9km**, n106, σ0ˢ88**/161**, 12C-11D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	Ulcinj	0.53	11	⇓iPg	Pg	00 31 38.9	-0.2
ULC				eSg	Sg	00 31 46.1	0.0
ULC	Ulcinj	0.53	11	⇓iPg	Pg	00 31 38.9	-0.2
ULC				eSg	Sg	00 31 46.1	0.0
TIR	Tirane	0.57	99	i PG	Pg	00 31 40.3	+0.4
TIR				i SG	Sb	00 31 49.7	+0.4
TIR	Tirane	0.57	99	P	Pg	00 31 39.7	-0.2
TIR	Tirane	0.57	99	⇑iPg	Pg	00 31 40.0	+0.1
TIR				eSg	Sg	00 31 47.6	+0.2
TIR	Tirane	0.57	99	P	Pg	00 31 39.7	-0.2
TIR	Tirane	0.57	99	⇑iPg	Pg	00 31 40.0	+0.1
TIR				eSg	Sg	00 31 47.6	+0.2
PUK	Puka	0.84	44	i PG	Pg	00 31 44.3	-0.6
PUK				i SG	Sn	00 31 58.7	-0.7
PUK	Puka	0.84	44	i Pg	Pg	00 31 44.3	-0.6
	SNR=9.0						
PUK				i Sg	Sn	00 31 58.7	-0.7
	SNR=9.0						
BUM	Brajici-Budva	0.87	349	⇑iPg	Pg	00 31 45.5	-0.1
BUM				eSg	Sb	00 31 58.1	+0.1
BUM	Brajici-Budva	0.87	349	⇑iPg	Pg	00 31 45.5	-0.1
BUM				eSg	Sb	00 31 58.1	+0.1
PDG	Podgorica	0.99	6	⇑iPg	Pg	00 31 47.5	-0.4
PDG				eSg	Sg	00 32 01.0	+0.2
PDG	Podgorica	0.99	6	⇑iPg	Pg	00 31 47.5	-0.4
PDG				eSg	Sg	00 32 01.0	+0.2
TTG	Podgorica	0.99	6	⇓iPg	Pg	00 31 47.4	-0.4
TTG				eSg	Sb	00 32 01.7	+0.3
VLO	Vlora	1.01	163	i PG	Sg	00 32 00.8	-0.6
VLO	Vlora	1.01	163	P	Pn	00 31 49.8	+0.6
VLO				S	Sn	00 32 04.5	+1.0
VLO	Vlora	1.01	163	P	Pn	00 31 49.8	+0.6
VLO				S	Sn	00 32 04.5	+1.0
PHP	Peshkopia	1.03	76	i PG	Pg	00 31 47.5	-1.0
PHP				i SG	Sn	00 32 04.6	+0.6
PHP	Peshkopia	1.03	76	P	Pg	00 31 47.4	-1.0
PHP	Peshkopia	1.03	76	i Pg	Pg	00 31 47.5	-1.0
	SNR=9.0						
PHP				i Sg	Sn	00 32 04.6	+0.6
	SNR=9.0						
HCY	Herceg Novi	1.11	336	⇓iPg	Pg	00 31 50.1	+0.1
HCY				eSg	Sn	00 32 06.4	+0.5
HCY	Herceg Novi	1.11	336	⇓iPg	Pg	00 31 50.1	+0.1
HCY				eSg	Sn	00 32 06.4	+0.5
BCI	Bajram Curri	1.17	37	i PG	Pb	00 31 49.6	-1.6
BCI				i SG	Sn	00 32 10.1	+2.6
BCI	Bajram Curri	1.17	37	i Pg	Pb	00 31 49.6	-1.6
	SNR=9.0						
BCI				i Sg	Sn	00 32 10.1	+2.6
	SNR=9.0						
PVY	Plav	1.31	28	⇑iPg	Pn	00 31 53.4	-0.1
PVY				eSg	Sg	00 32 12.6	+1.5
PVY	Plav	1.31	28	⇑iPg	Pn	00 31 53.4	-0.1
PVY				eSg	Sg	00 32 12.6	+1.5
NKY	Niksic	1.37	356	⇓iPg	Pn	00 31 54.4	+0.1
NKY				eSg	Sg	00 32 14.5	+1.5
NKY	Niksic	1.37	356	⇓iPg	Pn	00 31 54.4	+0.1
NKY				eSg	Sg	00 32 14.5	+1.5
BRY	Bratogost	1.52	344	⇑iPg	Pb	00 31 57.1	-0.1
BRY				eSg	Sg	00 32 19.0	+1.3
BRY	Bratogost	1.52	344	⇑iPg	Pb	00 31 57.1	-0.1
BRY				eSg	Sg	00 32 19.0	+1.3
BEY	Berane	1.54	22	⇓iPg	Pb	00 31 57.8	+0.2
BEY				eSg	Sg	00 32 19.0	+0.6
IVA	Berane	1.54	22	⇓iPg	Pb	00 31 57.8	+0.2
IVA				eSg	Sg	00 32 19.0	+0.6
LSK	Leskovik	1.71	138	i PG	Pg	00 32 06.0	+4.3
LSK	Leskovik	1.71	138	i Pg	Pg	00 32 06.0	+4.3
	SNR=9.0						
BIA	Bitola	1.72	103	P	Pn	00 31 58.9	-0.1
BIA				S	Sn	00 32 21.3	+0.2
BIA	Bitola	1.72	103	ePn	Pn	00 31 58.8	-0.2
BIA	Bitola	1.72	103	P	Pn	00 31 58.9	-0.1
BIA				S	Sn	00 32 21.3	+0.2
UPM	Unac-Piva	1.77	355	⇓iPn	Pb	00 32 01.1	-0.4
UPM				eSn	Sb	00 32 24.9	+1.0
UPM	Unac-Piva	1.77	355	⇓iPn	Pb	00 32 01.1	-0.4
UPM				eSn	Sb	00 32 24.9	+1.0
STON	Ston	1.77	324	ePn	Pn	00 31 59.5	-0.2
STON				Sn	Sn	00 32 21.9	-0.4
STON	Ston	1.77	324	ePn	Pn	00 31 59.4	-0.2
STON				Sn	Sn	00 32 21.9	-0.4
NEST	Nestorio	1.79	124	P	Pn	00 32 00.7	+0.7
NEST				S	Sn	00 32 22.5	-0.4
NEST	Nestorio	1.79	124	eP	Pb	00 32 01.1	-0.7
NEST	Nestorio	1.79	124	P	Pn	00 32 00.7	+0.7
NEST				S	Sn	00 32 22.5	-0.4
KEK	Kerkira	1.80	163	P	Pn	00 32 00.9	+0.8
KEK	Kerkira	1.80	163	eP	Pg	00 32 03.6	+0.2
KEK	Kerkira	1.80	163	P	Pn	00 32 00.9	+0.8
SKO	Skopje	1.82	72	ePn	Pb	00 32 02.8	+0.5
SKO				eSg	Sb	00 32 25.3	0.0
SKO				eLg	Lg	00 32 26.0	
	comp=N,98nm,0.5s						
SKO				eLg	Lg	00 32 26.3	
	comp=E,59nm,0.5s						
SKO	Skopje	1.82	72	ePn	Pn	00 32 01.2	+0.9
SKO				eSg	Sb	00 32 25.8	+0.5
SKO				eLg	Lg	00 32 26.8	
	comp=E,59nm,0.5s						
FNA	Florina	1.83	110	P	Pn	00 32 00.7	+0.2
FNA				S	Sn	00 32 23.8	-0.1
FNA	Florina	1.83	110	eP	Pn	00 32 00.8	+0.2
FNA	Florina	1.83	110	P	Pn	00 32 00.7	+0.2
FNA				S	Sn	00 32 23.8	-0.1
PLE	Pljevlja	1.90	6	⇑iPn	Pb	00 32 02.9	-0.8
PLE				eSn	Sb	00 32 28.1	+0.5
PLE	Pljevlja	1.90	6	⇑iPn	Pb	00 32 02.9	-0.8
PLE				eSn	Sb	00 32 28.1	+0.5
SJES	Sjenica	1.93	19	ePn	Pb	00 32 04.1	-0.1
SJES				eSg	Sb	00 32 27.7	-0.7
SJES	Sjenica	1.93	19	ePn	Pb	00 32 04.1	-0.1
IGT	Igoumenitsa	2.12	154	P	Pn	00 32 04.6	+0.2
IGT				S	Sn	00 32 31.8	+0.9
IGT	Igoumenitsa	2.12	154	eP	Pb	00 32 06.4	-1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
IGT	Igoumenitsa	2.12	154	P	Pn	00 32 04.6	+0.2
IGT				S	Sn	00 32 31.8	+0.9
JAN	Janina	2.22	143	P	Pn	00 32 06.6	+0.8
JAN				S	Sn	00 32 33.4	0.0
JAN	Janina	2.22	143	eP	Pg	00 32 11.2	-0.1
JAN	Janina	2.22	143	P	Pn	00 32 06.6	+0.8
JAN				S	Sn	00 32 33.4	0.0
IVAS	Ivanjica	2.27	19	ePn	Pn	00 32 07.4	+0.9
IVAS				eSn	Sn	00 32 34.2	-0.5
IVAS	Ivanjica	2.27	19	ePn	Pn	00 32 07.4	+0.9
IVAS				eSn	Sn	00 32 34.2	-0.5
KZN	Kozani	2.31	118	P	Pn	00 32 07.8	+0.7
KZN	Kozani	2.31	118	P	Pn	00 32 07.8	+0.7
SELS	Selova	2.32	39	ePn	Pn	00 32 07.6	+0.4
BBLS	Lazići	2.43	5	ePn	Pb	00 32 11.8	-1.0
BBLS				eSn	Sn	00 32 39.1	+0.4
BARS	Barje	2.44	55	ePn	Pb	00 32 11.1	-1.7
BARS				eSn	Sn	00 32 37.7	-1.0
GRG	Griva	2.53	100	P	Pn	00 32 10.1	0.0
GRG	Griva	2.53	100	eP	Pn	00 32 09.9	-0.2
GRG	Griva	2.53	100	P	Pn	00 32 10.1	0.0
GRUS	Gruza	2.72	25	ePn	Pb	00 32 16.1	-1.5
GRUS				eSn	Sn	00 32 45.4	-0.2
DIVS	Divibare	2.73	13	ePn	Pn	00 32 15.1	+2.2
DIVS				eSn	Sn	00 32 46.8	+0.6
DIVS	Divibare	2.73	13	ePn	Pn	00 32 15.1	+2.2
DIVS				eSn	Sn	00 32 46.8	+0.6
KNT	Kendrikon	2.87	94	P	Pn	00 32 14.7	0.0
KNT	Kendrikon	2.87	94	P	Pn	00 32 14.7	0.0
LIT	Litokhoron	2.89	116	eP	Pb	00 32 20.3	-0.3
THL	Klokotos Trika	2.90	129	P	Pn	00 32 15.5	+0.4
THL	Klokotos Trika	2.90	129	eP	Pn	00 32 16.3	+1.2
THL	Klokotos Trika	2.90	129	P	Pn	00 32 15.5	+0.4
LKD2	Lefkada island	2.90	155	P	Pn	00 32 14.9	-0.3
LKD2				S	Sn	00 32 50.1	-0.1
LKD2	Lefkada island	2.90	155	P	Pn	00 32 14.9	-0.3
LKD2				S	Sn	00 32 50.1	-0.1
TRUS	Trudelj	2.94	18	ePn	Pb	00 32 18.6	-2.8
ZAPS	Zavoj	3.19	54	ePn	Pn	00 32 20.9	+1.8
ZAPS				eSn	Sn	00 32 55.1	-2.2
ZAPS	Zavoj	3.19	54	ePn	Pn	00 32 20.9	+1.8
ZAPS				eSn	Sn	00 32 55.1	-2.2
SOH	Sokhos	3.26	100	eP	Pn	00 32 20.5	+0.3
SRS	Serrai	3.39	94	eP	Pn	00 32 21.7	-0.2
AGG	Agios Georgios	3.45	133	eP	Pn	00 32 24.6	+1.9
VLS	Valsamata	3.45	160	P	Pn	00 32 21.9	-0.9
VLS	Valsamata	3.45	160	P	Pn	00 32 21.9	-0.9
PLG	Polygyros	3.45	107	eP	Pb	00 32 26.7	-3.4
NVR	Nevrokopi	3.58	90	P	Pn	00 32 24.7	+0.3
NVR	Nevrokopi	3.58	90	eP	Pn	00 32 24.8	+0.3
NVR	Nevrokopi	3.58	90	P	Pn	00 32 24.7	+0.3
EFP	Efpalio	3.70	144	eP	Pn	00 32 28.3	+2.2
AMT	Artemida-Makis	4.39	152	eP	Pn	00 32 40.5	+4.8
NVLJ	Novalja	4.41	317	i Pn	Pn	00 32 35.8	-0.1
NVLJ				Sn	Sn	00 33 25.1	-2.2
NVLJ	Novalja	4.41	317	i Pn	Pn	00 32 35.7	-0.1
NVLJ				Sn	Sn	00 33 25.0	-2.2
PYL	PYLOS	4.98	155	eP	Pn	00 32 47.2	+3.5
CRES	Cresnjev	5.12	330	i Pn	Pn	00 32 45.5	-0.2
CRES	Cresnjev	5.12	330	Pn	Pn	00 32 45.5	-0.2
CEY	Cerknica	5.48	323	i Pn	Pn	00 32 50.8	+0.2
CEY	Cerknica	5.48	323	i Pn	Pn	00 32 50.8	+0.2
PDKS	Podkum	5.50	329	i Pn	Pn	00 32 50.6	-0.2
PDKS	Podkum	5.50	329	i Pn	Pn	00 32 50.6	-0.2

*IDC **06** 00:36:27.3±1.1, 9°.14S×124°.87E, h0km, mb4.0/5, mb1 4.2/8, mb1mx3.9/22, mbtmp4.1/8, ML4.2/3, MS3.1/3, Ms1 3.2/3, ms1mx2.7/33, Error ellipse: s-maj=69.1km s-min=20.5km az=70.0*

*AUST **06** 00:37:04.6±99.0, 12°.98S×125°.99E, h15km±1km, Error ellipse: s-maj=3.3km s-min=1.0km az=24.0*

ISC 06 00:36:32.3±0.8**, 9°.3S**±0°.1×**124°.9E**±0°.2**, h33km, n17, σ1§24**/12**, mb4.0**/5**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	4.53	265	P	Sn	00 38 40.8	+11
	baz=6.5,SNR=3.4						
MTN	Manton Dam	7.08	120	P	Pn	00 38 21.6	+7.8
	baz=5.0,SNR=45						
KDU	Kakadu	8.19	115	P	Pn	00 38 37.8	+8.9
	baz=6.3,SNR=11						
FITZ	Fitzroy Crossi	8.78	175	Pn	Pn	00 38 37.1	0.0
	1.8nm,0.3s,baz=9.4,slow=11,SNR=33						
FITZ				Sn	Sn	00 40 13.1	-1.9
	1.2nm,0.3s,baz=141,slow=9.2,SNR=5.6						
FITZ				LR	LR	00 42 35.1	
	comp=Z,68nm,19.4s,baz=154,slow=41						
PCI	Palu	9.73	329	P	Sn	00 40 14.5	-24
	baz=14,SNR=13						
WRA	Warramunga Arr	13.99	140	Pn	Pn	00 39 48.5	+0.2
	1.2nm,0.3s,baz=312,slow=14,SNR=20						
WRA				Sn	Sn	00 42 21.8	-0.7
	0.5nm,0.3s,baz=310,slow=23,SNR=6.1						
ASAR	Alice Springs	16.70	150	Pn	Pn	00 40 24.8	+0.9
	0.8nm,0.3s,baz=323,slow=12,SNR=22						
ASAR				LR	LR	00 47 46.7	
	comp=Z,99nm,18.6s,baz=80,slow=40						
QIS	Mount Isa	18.09	130	P	Pn	00 40 36.3	-5.0
	baz=15,SNR=4.8						
COEN	Coen	18.51	106	P	Pn	00 40 56.3	+10
	baz=17,SNR=5.3						
CMAR	Chiang Mai Arr	37.62	317	LR	LR	01 03 25.3	
	comp=Z,26nm,18.3s,baz=237,slow=43						
SONM	Songino Array	59.20	346	P	P	00 46 30.5	+0.2
	0.5nm,0.6s,baz=164,slow=7.9,SNR=5.2						
MKAR	Makanchi Array	67.50	330	P	P	00 47 23.9	-1.2
	0.9nm,0.7s,baz=133,slow=8.1,SNR=14						
QSPA	South Pole Qui	80.69	180	P	P	00 48 43.4	+1.4
	1.8nm,1.1s,baz=275,slow=9.2,SNR=2.6						
AKTO	Aktyubinsk	82.84	324	P	P	00 48 51.9	-1.5
	0.7nm,0.5s,baz=104,slow=8.3,SNR=9.5						
KMBO	Kilima Mbogo	87.47	269	P	P	00 49 19.2	+1.5
	1.5nm,1.0s,baz=52,slow=7.7,SNR=4.8						
TORD	Torodi Ar. Bea	124.22	280	PKP	PKPdf	00 55 28.1	-0.6
	0.3nm,0.6s,baz=57,slow=2.0,SNR=5.1						
CPUP	Villa Florida	144.52	177	PKP	PKPdf	00 56 07.0	+0.9
	0.2nm,0.3s,baz=156,slow=6.4,SNR=3.2						

*CSEM **06** 00:36:32.0, 42°.35N×13°.38E, h10km, MD2.4/20, After ROM*

ROM 06 00:36:32.0±0.1**, 42°.35N×13°.38E, h10km**±1km**, Md2.4**/20**, Ml1.8**/13**, 2C, Error ellipse: s-maj=1.6km s-min=1.3km az=47.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.02	64	Pg	Pg	00 36 34.2	+0.3
AQU	L'Aquila	0.02	64	Pg	Pg	00 36 34.2	+0.3
FAGN	Fagnano	0.17	118	Pg	Pg	00 36 36.3	+0.5
FAGN				Sg	Sg	00 36 39.5	+1.1
	973nm,0.3s						
FAGN	Fagnano	0.17	118	Pg	Pg	00 36 36.3	+0.5
FAGN				Sg	Sg	00 36 39.5	+1.1
	973nm,0.3s						
FIAM	Fiamignano	0.21	248	⇑iPg	Pg	00 36 37.1	+0.6
FIAM				Sg	Sg	00 36 40.7	+1.1
	120nm,0.4s						
FIAM	Fiamignano	0.21	248	⇑iPg	Pg	00 36 37.1	+0.6
FIAM				Sg	Sg	00 36 40.7	+1.1
	120nm,0.4s						
TERO	Teramo	0.32	31	Pg	Pg	00 36 38.5	-0.1
TERO				Sg	Sg	00 36 43.2	+0.2
	78nm,0.3s						
TERO	Teramo	0.32	31	Pg	Pg	00 36 38.5	-0.1
TERO				Sg	Sg	00 36 43.2	+0.2
	78nm,0.3s						
PTQR	Pietraquaria	0.32	177	Pg	Pg	00 36 38.9	+0.3
PTQR				Sg	Sg	00 36 43.8	+0.8
	14nm,0.2s						
PTQR	Pietraquaria	0.32	177	Pg	Pg	00 36 38.9	+0.3
PTQR				Sg	Sg	00 36 43.8	+0.8
	14nm,0.2s						
VCEL	Villa Celiera	0.34	82	Pg	Pg	00 36 39.4	+0.3
	204nm,0.3s						
VCEL	Villa Celiera	0.34	82	Pg	Pg	00 36 39.4	+0.3
	204nm,0.3s						
CERT	Cerreto	0.49	217	Pg	Pg	00 36 41.8	0.0
	80nm,0.5s						
CERT	Cerreto	0.49	217	Pg	Pg	00 36 41.8	0.0
	80nm,0.5s						
VVLD	Villa Vallelon	0.51	159	Pg	Pb	00 36 42.8	-0.3
	36nm,0.7s						
VVLD	Villa Vallelon	0.51	159	Pg	Pb	00 36 42.8	-0.3
	36nm,0.7s						
INTR	Introdacqua	0.51	130	Pg	Pg	00 36 42.1	0.0
INTR				Sg	Sb	00 36 50.4	-0.4
	58nm,0.3s						
INTR	Introdacqua	0.51	130	Pg	Pg	00 36 42.1	0.0
INTR				Sg	Sb	00 36 50.4	-0.4
	58nm,0.3s						
MNS	Montasola	0.52	275	Pg	Pg	00 36 42.3	+0.1
	22nm,0.3s						
MNS	Montasola	0.52	275	Pg	Pg	00 36 42.3	+0.1
	22nm,0.3s						
NRCA	Norcia	0.53	338	Pg	Pg	00 36 42.4	0.0
NRCA				Sg	Sb	00 36 50.5	-0.7
	111nm,0.1s						
NRCA	Norcia	0.53	338	Pg	Pg	00 36 42.4	0.0
NRCA				Sg	Sb	00 36 50.5	-0.7
	111nm,0.1s						
GUAR	Guarcino	0.55	185	Pg	Pg	00 36 43.0	+0.1
	22nm,0.3s						
GUAR	Guarcino	0.55	185	Pg	Pg	00 36 43.0	+0.1
	22nm,0.3s						
OFFI	Offida	0.63	21	Pg	Pb	00 36 45.3	+0.2
	105nm,0.4s						
OFFI	Offida	0.63	21	Pg	Pb	00 36 45.3	+0.2
	105nm,0.4s						
LPEL	Lama dei Pelig	0.67	116	Pg	Pg	00 36 44.8	-0.2
LPEL				Sg	Sb	00 36 55.1	-0.1
	30nm,0.3s						
LPEL	Lama dei Pelig	0.67	116	Pg	Pg	00 36 44.8	-0.2
LPEL				Sg	Sb	00 36 55.1	-0.1
	30nm,0.3s						
SDI	San Donato	0.71	153	Pg	Pg	00 36 45.7	-0.2
	7.0nm,0.2s						
SDI	San Donato	0.71	153	Pg	Pg	00 36 45.7	-0.2
	7.0nm,0.2s						
FDMO	Fiordimonte	0.72	343	Pg	Pg	00 36 45.7	-0.4
	16nm,0.2s						
FDMO	Fiordimonte	0.72	343	Pg	Pg	00 36 45.7	-0.4
	16nm,0.2s						
CESI	CESI - Serrava	0.75	332	Pg	Pg	00 36 46.4	-0.2
CESI	CESI - Serrava	0.75	332	Pg	Pg	00 36 46.4	-0.2
GIUL	Giuliano Di Ro	0.79	187	Pg	Pb	00 36 48.2	+0.3
GIUL	Giuliano Di Ro	0.79	187	Pg	Pb	00 36 48.2	+0.3
ASSB	Assisi San Ben	0.88	323	Pg	Pb	00 36 49.6	+0.2
ASSB	Assisi San Ben	0.88	323	Pg	Pb	00 36 49.6	+0.2
CING	Cingoli	1.04	353	Pg	Pg	00 36 51.9	-0.2
CING	Cingoli	1.04	353	Pg	Pg	00 36 51.9	-0.2

IDC 06 00:39:21.9±3.8**, 8°.39S×124°.13E, h214km**±41km**, mb3.2**/2**, mb1 3.6**/5**, mb1mx3.2**/22**, mbtmp3.4**/5**, Error ellipse: s-maj=57.4km s-min=16.4km az=55.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.77	172	P	Pn	00 41 36.8	-1.2
	0.2nm,0.3s,baz=244,slow=21,SNR=1.0						
FITZ				S	S	00 43 19.2	-8.5
	1.4nm,0.3s,baz=141,slow=8.2,SNR=7.2						
WRA	Warramunga Arr	15.15	140	P	P	00 42 45.9	+0.1
	2.2nm,0.3s,baz=316,slow=12,SNR=11						
WRA				S	S	00 45 20.9	-12
	0.3nm,0.3s,baz=314,slow=24,SNR=1.4						
ASAR	Alice Springs	17.85	149	P	Pn	00 43 16.5	-1.1
	0.8nm,0.3s,baz=329,slow=12,SNR=17						
ASAR				S	S	00 46 29.7	+0.4
	0.2nm,0.3s,baz=316,slow=22,SNR=1.6						
CTA	Charters Tower	24.36	121	P	P	00 44 20.1	-0.6
	1.1nm,0.3s,baz=256,slow=12,SNR=2.8						
MKAR	Makanchi Array	66.35	330	P	P	00 49 47.8	0.0
	0.3nm,0.7s,baz=134,slow=8.7,SNR=3.4						

*IDC **06** 00:40:57.5±0.8, 38°.37S×178°.45E, h0km, mb4.2/5, mb1 4.3/6, mb1mx4.1/19, mbtmp4.2/6, ML3.9/1, MS3.8/3, Ms1 3.8/3, ms1mx3.2/23, Error ellipse: s-maj=30.4km s-min=17.5km az=21.0*

*WEL **06** 00:40:59.4±0.4, 38°.68S×178°.64E, h29km±1km, ML4.4/49, Error ellipse: s-maj=3.5km s-min=1.4km az=90.0*

WEL Felt from Gisborne to Hawke''s Bay, maximum reported intensity MM 4.

*NEIC **06** 00:41:00.7, 38°.67S×178°.45E, h24km, ML4.4(WEL), After WEL.*

NEIC Felt at Gisborne.

ISC 06 00:40:58.6±3.2**, 38°.69S**±0°.03×**178°.55E**±0°.06**, h13km**±19km**, n101, σ1§13**/101**, mb4.1**/5**, 4C-4D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.33	307	⇑P*	Pb	00 41 07.4	+1.0
CNGZ				S*	Sn	00 41 14.9	-0.8
PRGZ	Paritu Road	0.57	245	⇓P*	Pb	00 41 11.3	+0.9
PRGZ				S*	Sn	00 41 21.7	0.0
PUZ	Puketiti	0.65	340	P*	Pb	00 41 12.6	+0.7
PUZ				S*	Sn	00 41 22.7	-1.0
MHGZ	Mahia Peninsul	0.68	227	⇓PN	Pb	00 41 13.3	+1.0
MHGZ				SN	Sn	00 41 25.2	+0.7
KNZ	Kokohu	0.76	244	PN	Pb	00 41 13.9	+0.3
KNZ				SN	Sn	00 41 25.3	-0.9
MWZ	Matawai	0.87	293	PN	Pb	00 41 14.9	-0.7
MWZ				SN	Sb	00 41 27.4	+0.2
MXZ	Matakaoa Point	1.14	350	PN	Pn	00 41 20.2	0.0
MXZ				SN	Sb	00 41 33.2	-1.5
RAHZ	Arahi	1.16	258	PN	Pn	00 41 19.9	-0.7
URZ	Urewera	1.20	290	PN	Pn	00 41 20.3	-0.8
URZ	Urewera	1.20	290	Pn	Pn	00 41 20.3	-0.8
URZ				Sn	Sb	00 41 35.9	-0.8
URZ	Urewera	1.20	290	Pn	Pn	00 41 20.3	-0.8
	278nm,0.3s,baz=174,slow=2.3,SNR=822						
URZ				Sn	Sb	00 41 35.9	-0.8
	750nm,0.3s,baz=85,slow=16,SNR=16						
NMHZ	Naumai	1.42	253	PN	Pn	00 41 23.6	-0.6
CKHZ	Cape Kidnapper	1.50	229	PN	Pn	00 41 24.6	-0.6
EDRZ	Edgecumbe	1.53	292	PN	Pn	00 41 25.2	-0.5
MCHZ	McNeill Hill	1.62	242	⇑PN	Pn	00 41 26.5	-0.4
MARZ	Manawahe	1.63	295	PN	Pn	00 41 26.7	-0.3
RRRZ	Republican Roa	1.63	282	PN	Pn	00 41 27.0	0.0
TARZ	Mount Tarawera	1.66	285	⇓PN	Pn	00 41 27.9	+0.4
BKZ	Black Stump Fm	1.67	253	PN	Pn	00 41 26.9	-0.7
PRRZ	Plateau Road	1.70	276	PN	Pn	00 41 28.8	+1.0
KAHZ	Kahuranaki	1.71	229	PN	Pn	00 41 27.3	-0.8
MKRZ	Makatiti	1.72	288	PN	Pn	00 41 28.7	+0.5
ALRZ	Allen Road	1.73	273	PN	Pn	00 41 28.1	-0.3
OPRZ	Ohinepanea	1.78	298	⇑PN	Pn	00 41 28.3	-0.7
HRRZ	Handcock Road	1.80	279	PN	Pn	00 41 29.7	+0.4
PXZ	Pawanui	1.87	224	PN	Pn	00 41 28.7	-1.6
KARZ	Kaharoa	1.93	289	PN	Pn	00 41 30.7	-0.3
BHHZ	Black Hill Sta	2.09	247	PN	Pn	00 41 32.5	-0.9
RITZ	Rihia Road	2.12	261	PN	Pn	00 41 33.8	+0.1
WPHZ	Waipukurau	2.13	229	PN	Pn	00 41 33.0	-0.9
PRHZ	Porangahau	2.16	223	PN	Pn	00 41 32.6	-1.7
RATZ	Rangitukua	2.18	264	PN	Pn	00 41 34.6	+0.1
PNHZ	Pukenui	2.19	235	PN	Pn	00 41 33.4	-1.4
WATZ	Wairara	2.20	269	PN	Pn	00 41 34.8	-0.1
MOVZ	Moawhango	2.29	251	PN	Pn	00 41 36.4	+0.2
OTVZ	Oturere	2.30	257	PN	Pn	00 41 36.1	-0.2
KRVZ	Karewarewa	2.30	259	PN	Pn	00 41 36.0	-0.3
TUVZ	Tukino	2.33	255	PN	Pn	00 41 36.7	0.0
WTVZ	West Tongariro	2.35	259	PN	Pn	00 41 37.4	+0.5
NGZ	Ngauruhoe	2.35	257	PN	Pn	00 41 36.8	-0.2
WNVZ	Wahianoa	2.38	253	PN	Pn	00 41 37.2	-0.3
WPVZ	Whakapapa	2.40	257	PN	Pn	00 41 37.4	-0.2
FWVZ	Far West T-bar	2.40	255	PN	Pn	00 41 37.6	-0.2
TRVZ	Turoa	2.41	254	⇓PN	Pn	00 41 37.8	-0.1
TSZ	Takapari Road	2.43	235	⇑PN	Pn	00 41 36.3	-1.6
DVHZ	Dannevirke	2.45	228	PN	Pn	00 41 36.6	-1.6
TWVZ	Taurewa	2.46	260	PN	Pn	00 41 38.2	-0.2
MTVZ	Mangateitei	2.49	253	PN	Pn	00 41 39.1	+0.2
PKVZ	Pokaka	2.56	255	PN	Pn	00 41 40.0	+0.1
TOZ	Tahuroa Road	2.58	291	PN	Pn	00 41 39.4	-0.6
BFZ	Birch Farm	2.67	221	PN	Pn	00 41 39.2	-2.1
POWZ	Post Office Ro	2.74	231	PN	Pn	00 41 41.7	-0.6
HIZ	Hauiti	2.90	272	PN	Pn	00 41 44.5	+0.2
VRZ	Vera Road	2.99	260	PN	Pn	00 41 45.7	+0.1
MRZ	Mangatainoka R	3.02	228	PN	Pn	00 41 44.0	-2.1
MKAZ	Moumakai	3.10	299	PN	Pn	00 41 46.7	-0.5
HOWZ	Holdsworth Sta	3.21	226	PN	Pn	00 41 46.5	-2.2
MTW	Mount Morrison	3.40	222	PN	Pn	00 41 48.3	-3.0
KIW	Kapiti Island	3.54	231	PN	Pn	00 41 51.2	-2.1
PAWZ	Paruwai Farm	3.60	221	PN	Pn	00 41 50.8	-3.3
PLWZ	Palliser	3.83	220	PN	Pn	00 41 54.0	-3.2
SNZO	South Karori	3.94	227	ePn	Pn	00 41 54.9	-3.8
TUWZ	Tuamarina	4.47	231	PN	Pn	00 42 03.4	-2.6
THZ	Tophouse	5.30	233	PN	Pn	00 42 13.7	-3.8
RPZ	Rata Peaks	7.56	226	Pn	Pn	00 42 50.5	+2.1
RPZ				Sn	Sn	00 44 06.6	-7.3
RPZ	Rata Peaks	7.56	226	Pn	Pn	00 42 50.5	+2.1
	1.9nm,0.3s,baz=242,slow=12,SNR=3.2						
RPZ				Sn	Sn	00 44 06.6	-7.3
	6.8nm,0.3s,baz=20,slow=20,SNR=14						
DZM	Mont Dzumac	19.54	324	eLR	LR	00 49 58.4	
	195nm,21.7s						
DZM	Mont Dzumac	19.54	324	LR	LR	00 51 57.6	
	comp=Z,221nm,19.0s,baz=198,slow=34						
STKA	Stephens Creek	30.77	271	eP	P	00 47 13.9	+0.2
	0.8nm,0.8s						
STKA	Stephens Creek	30.77	271	P	P	00 47 14.5	+0.8
	2.6nm,0.8s,baz=104,slow=14,SNR=2.4						
STKA				LR	LR	00 58 31.3	
	comp=Z,177nm,19.1s,baz=164,slow=34						
TBI	Tubuai	31.20	70	eLR	LR	00 55 18.9	
	121nm,26.5s						
CTA	Charters Tower	33.45	294	P	P	00 47 36.7	-0.7
CTA	Charters Tower	33.45	294	P	P	00 47 36.7	-0.7
	2.1nm,0.5s,baz=135,slow=11,SNR=2.8						
CTAO	Charters Tower	33.45	294	eP	P	00 47 36.6	-0.7
PPT2	Papeete2	34.83	62	eLR	LR	00 57 03.5	
	129nm,27.0s						
ASAR	Alice Springs	40.62	278	P	P	00 48 37.6	-0.8
ASAR	Alice Springs	40.62	278	P	P	00 48 37.6	-0.8
	3.0nm,0.7s,baz=118,slow=7.6,SNR=16						
ASAR				LR	LR	01 06 56.3	
	comp=Z,142nm,18.1s,baz=172,slow=38						
WRAB	Tennant Creek	42.36	283	eP	P	00 48 52.2	-0.4
WRA	Warramunga Arr	42.37	283	P	P	00 48 51.5	-1.2
WRA	Warramunga Arr	42.37	283	P	P	00 48 51.4	-1.2
	1.1nm,0.6s,baz=125,slow=7.3,SNR=4.9						
QSPA	South Pole Qui	51.44	180	P	P	00 50 07.0	+3.8
	7.9nm,1.0s,baz=47,slow=4.3,SNR=16						
VNA3	Neumayer Olymp	70.22	177	eP	P	00 52 13.1	+2.4
VNA3	Neumayer Olymp	70.22	177	e	pP	00 52 20.2	+5.2
VNA3	Neumayer Olymp	70.22	177	e	PcP	00 52 30.6	-1.8
VNA2	Neumayer--Watz	70.61	178	eP	P	00 52 16.1	+3.0
VNA2	Neumayer--Watz	70.61	178	e	pP	00 52 24.0	+6.6
VNA2	Neumayer--Watz	70.61	178	e	PcP	00 52 29.2	-4.9
MKAR	Makanchi Array	120.72	307	PKP	PKPdf	00 59 50.0	+0.2
MKAR	Makanchi Array	120.72	307	PKP	PKPdf	00 59 50.0	+0.2
	0.3nm,0.7s,baz=140,slow=3.2,SNR=3.0						
ARCES	ARCESS Array B	145.90	343	PKPbc	PKPab	01 00 37.1	0.0
ARCES	ARCESS Array B	145.90	343	PKPbc	PKPab	01 00 37.1	0.0
	1.5nm,0.6s,baz=54,slow=2.0,SNR=17						
DBIC	Dimbokro	147.98	174	PKPbc	PKPab	01 00 45.8	-0.8
DBIC	Dimbokro	147.98	174	PKPbc	PKPab	01 00 45.8	-0.8
	2.9nm,0.9s,baz=187,slow=5.9,SNR=4.6						
MMAI	Mount Meron Ar	149.73	271	PKPbc	PKPbc	01 00 50.0	+1.8
MMAI	Mount Meron Ar	149.73	271	PKPbc	PKPbc	01 00 49.9	+1.8
	1.6nm,0.7s,baz=92,slow=4.3,SNR=2.4						
FINES	FINESS Array B	151.57	332	PKPbc	PKPbc	01 00 51.0	-0.4
FINES	FINESS Array B	151.57	332	PKPbc	PKPbc	01 00 51.0	-0.4
	2.2nm,0.9s,baz=46,slow=6.0,SNR=5.2						
BRTR	Keskin Array B	152.89	283	PKPbc	PKPbc	01 00 55.2	-0.2
BRTR	Keskin Array B	152.89	283	PKPbc	PKPbc	01 00 55.2	-0.2
	0.7nm,0.8s,baz=146,slow=3.3,SNR=6.5						
TORD	Torodi Ar. Bea	154.41	187	PKP	PKPdf	01 00 52.2	+1.3
TORD				PKPbc	PKiKP	01 01 00.8	+1.5
TORD				PKPab	PKPab	01 01 14.3	+1.1
TORD	Torodi Ar. Bea	154.41	187	PKP	PKPdf	01 00 52.2	+1.3
	0.5nm,1.1s,baz=146,slow=2.8,SNR=2.4						
TORD				PKPbc	PKiKP	01 01 00.7	+1.5
	0.6nm,0.8s,baz=153,slow=2.0,SNR=3.2						
TORD				PKPab	PKPab	01 01 14.3	+1.1
	1.5nm,0.9s,baz=176,slow=3.2,SNR=7.1						

*ISCJB **06** 00:47:16.7±0.5, 39°.56N±0°.02×23°.39E±0°.04, h8km±4km, Error ellipse: s-maj=4.7km s-min=3.0km az=15.2*

*ATH **06** 00:47:16.6, 39°.54N×23°.43E, h19km±4km, MD2.9/4*

*CSEM **06** 00:47:16.8±0.1, 39°.55N×23°.39E, h8km, ML2.7/6, Error ellipse: s-maj=3.2km s-min=1.9km az=105.0*

*THE **06** 00:47:17.2, 39°.55N×23°.40E, h5km±1km, ML2.7/6, Error ellipse: s-maj=1.0km s-min=0.3km az=95.0*

*SKO **06** 00:47:18.4, 41°.53N×23°.67E, h0km*

ISC 06 00:47:16.8±0.9**, 39°.55N**±0°.02×**23°.42E**±0°.02**, h11km**±8km**, n60, σ0§62**/84**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XOR	Xorichti	0.26	223	P	Pg	00 47 22.0	-0.1
XOR				S	Sg	00 47 25.1	-0.5
XOR	Xorichti	0.26	223	P	Pg	00 47 22.0	-0.1
XOR				S	Sg	00 47 25.1	-0.5
NEO	Neokhori	0.29	212	ePB	Pg	00 47 22.7	+0.1
NEO	Neokhori	0.29	212	ePb	Pg	00 47 22.7	+0.1
SKIA	Skiathos	0.39	174	P	Pg	00 47 24.5	0.0
SKIA				S	Sg	00 47 29.9	+0.3
SKIA	Skiathos	0.39	174	P	Pg	00 47 24.5	0.0
SKIA				S	Sg	00 47 29.9	+0.3
PAIG	Paliouri	0.42	28	P	Pb	00 47 25.9	-0.4
PAIG				S	Sb	00 47 32.7	0.0
PAIG	Paliouri	0.42	28	P	Pb	00 47 25.9	-0.4
PAIG				S	Sb	00 47 32.7	0.0
AOS	Alonnisos	0.52	137	P	Pg	00 47 26.7	-0.3
AOS				S	Sg	00 47 34.6	+0.7
AOS	Alonnisos	0.52	137	P	Pg	00 47 26.7	-0.3
AOS				S	Sg	00 47 34.6	+0.7
PLG	Polygyros	0.82	1	P	Pg	00 47 32.6	-0.1
PLG				S	Sb	00 47 44.6	+0.5
PLG	Polygyros	0.82	1	ePN	Pg	00 47 32.5	-0.1
PLG				eSN	Sg	00 47 43.6	+0.2
PLG	Polygyros	0.82	1	P	Pg	00 47 32.6	-0.1
PLG				eSn	Sg	00 47 43.6	+0.2
PLG				S	Sb	00 47 44.6	+0.5
MRKA	Markates	0.86	171	P	Pg	00 47 33.2	-0.1
MRKA				S	Sb	00 47 45.7	+0.6
MRKA	Markates	0.86	171	P	Pg	00 47 33.2	-0.1
MRKA				S	Sb	00 47 45.7	+0.6
OUR	Ouranopolis	0.89	29	P	Pb	00 47 34.5	+0.2
OUR	Ouranopolis	0.89	29	P	Pb	00 47 34.5	+0.2
ATAL	Atalanti	0.91	200	P	Pg	00 47 34.4	0.0
ATAL	Atalanti	0.91	200	P	Pg	00 47 34.4	0.0
LKR	Lokris	0.96	200	P	Pg	00 47 35.1	-0.1
LKR				S	Sn	00 47 49.2	-0.5
LKR	Lokris	0.96	200	ePN	Pg	00 47 34.7	-0.5
LKR	Lokris	0.96	200	ePn	Pg	00 47 34.7	-0.5
LKR	Lokris	0.96	200	P	Pg	00 47 35.1	-0.1
LKR				S	Sn	00 47 49.2	-0.5
AXAR	Agios Charalam	0.98	217	P	Pg	00 47 35.5	-0.2
AXAR	Agios Charalam	0.98	217	P	Pg	00 47 35.5	-0.2
AGG	Agios Georgios	1.00	238	P	Pg	00 47 35.6	-0.3
AGG				S	Sb	00 47 49.4	+0.2
AGG	Agios Georgios	1.00	238	ePN	Pg	00 47 35.7	-0.2
AGG	Agios Georgios	1.00	238	P	Pg	00 47 35.6	-0.3
AGG				S	Sb	00 47 49.4	+0.2
HORT	Hortiatis	1.07	347	P	Pb	00 47 37.2	-0.2
HORT	Hortiatis	1.07	347	P	Pb	00 47 37.2	-0.2
THL	Klokotos Trika	1.08	271	P	Pb	00 47 37.1	-0.4
THL	Klokotos Trika	1.08	271	ePN	Pb	00 47 37.2	-0.3
THL				eSN	Sn	00 47 52.7	-0.2
THL	Klokotos Trika	1.08	271	P	Pb	00 47 37.1	-0.4
THL				eSn	Sn	00 47 52.7	-0.2
THE	Thessaloniki	1.13	342	P	Pb	00 47 38.4	+0.1
THE	Thessaloniki	1.13	342	P	Pb	00 47 38.4	+0.1
MAKR	Makrakomi, Fth	1.13	242	P	Pb	00 47 38.4	0.0
MAKR	Makrakomi, Fth	1.13	242	P	Pb	00 47 38.4	0.0
SOH	Sokhos	1.27	358	ePN	Pn	00 47 40.4	-0.1
SOH	Sokhos	1.27	358	ePn	Pn	00 47 40.4	-0.1
DSF	Desfina	1.33	212	P	Pn	00 47 41.0	-0.4
DSF				S	Sg	00 48 00.4	+0.7
DSF	Desfina	1.33	212	P	Pn	00 47 41.0	-0.4
DSF				S	Sg	00 48 00.4	+0.7
EVR	Evrytania	1.40	244	P	Pn	00 47 42.6	+0.3
EVR	Evrytania	1.40	244	ePN	Pb	00 47 43.3	+0.3
EVR	Evrytania	1.40	244	P	Pn	00 47 42.6	+0.3
EVR	Evrytania	1.40	244	ePn	Pb	00 47 43.3	+0.3
LIA	Limnos Island	1.40	75	ePN	Pn	00 47 42.6	+0.3
LIA				eSN	Sg	00 48 02.7	+0.7
LIA	Limnos Island	1.40	75	ePn	Pn	00 47 42.6	+0.3
LIA				eSn	Sg	00 48 02.7	+0.7
KALE	Kalithea	1.53	221	P	Pn	00 47 44.3	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KALE	Kalithea	1.53	221	P	Pn	00 47 44.3	+0.3
TRIZ	Trizonia	1.58	222	P	Pn	00 47 44.8	+0.1
TRIZ	Trizonia	1.58	222	P	Pn	00 47 44.8	+0.1
GRG	Griva	1.60	331	P	Pn	00 47 44.8	-0.3
GRG	Griva	1.60	331	P	Pn	00 47 44.8	-0.3
EFP	Efpalio	1.63	227	P	Pn	00 47 45.5	+0.2
EFP	Efpalio	1.63	227	P	Pn	00 47 45.5	+0.2
VAY	Valandovo	1.88	340	ePn	Pn	00 47 42.9	-5.9
VAY				eSg	Sg	00 48 19.1	+1.9
MMB	Musomiste	2.05	7	P	Pg	00 47 58.0	+2.0
KDZ	Kurdzhali	2.59	35	iP	Pn	00 47 56.0	-2.6
KDZ	Kurdzhali	2.59	35	iP	Pn	00 47 56.0	-2.6
VTS	Vitosha	3.04	357	P	Pg	00 48 14.0	-1.0

IDC 06 01:32:17.3±38.0**,6°.34N**×**127°.39E,h0km,mb3.8**/3**, mb1 3.9**/3**,mb1mx3.6**/23**,mbtmp3.8**/3**,Error ellipse: s-maj=637.4km s-min=178.5km az=161.0,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.00	165	P	P	01 38 01.1	-0.1
	1.3nm,0.5s,baz=345,slow=10,SNR=5.8						
ASAR	Alice Springs	30.50	168	P	P	01 38 32.7	+0.3
	0.2nm,0.3s,baz=353,slow=7.6,SNR=4.3						
STKA	Stephens Creek	40.35	161	P	P	01 39 56.5	-0.4
	1.2nm,0.4s,baz=321,slow=7.2,SNR=6.3						

*BGS **06** 01:32:37.1±3.0,41°.70N×12°.67E,h10km,mb5.6,MS5.8*
*MDD **06** 01:32:38.4±2.4,42°.43N×13°.79E,h0km,mb6.2/49,Error ellipse: s-maj=35.6km s-min=21.2km az=19.0*
*BJI **06** 01:32:38.0,42°.45N×12°.89E,h10km,mB6.3/57,mb5.8/68, Ms6.8/75,Ms7 6.6/71*
*ISCJB **06** 01:32:39.5±0.2,42°.380N±0°.007×13°.367E±0°.007, h2km±1km,mb5.8/362,MS6.2/228,Error ellipse: s-maj=1.2km s-min=0.8km az=18.8*
*PDA **06** 01:32:39.0,42°.33N×13°.33E,h9km,Mw6.3*
*LDG **06** 01:32:39.8±0.1,42°.38N×13°.45E,h2km,Ml5.6/19,ms5.8/3, Error ellipse: s-maj=3.9km s-min=2.9km az=33.0*
*NEIC **06** 01:32:39.0,42°.33N×13°.33E,h9km,mb5.9/238,ME6.3, MS6.2/148,MW6.3,MW6.2,ML6.3(STR),ML6.2(PDG), MW6.2(USGS),MW6.2(USGS),MW6.3(ROM) Broadband fault plane solution: P waves. NP1:φs220.00000°, δ65.00000°,λ-30.00000°. NP2:φs324.00000°,δ63.00000°, λ-152.00000°. Principal axes: T Plg1.0000°, Azm272.0000°; N Plg0.0000°, Azm0.0000°; P Plg38.0000°, Azm181.0000°; Moment Tensor Solution. s99 Moment tensor: Scale 10^{18} Nm; Mrr-2.34; Mθθ0.92; Mφφ1.42; Mrθ-1.72; Mθφ-0.81; Mφr-0.60; Best double couple: Mo2.80000×10^{18} NP1:φs113.00000°,δ60.00000°, λ-118.00000°. NP2:φs340.00000°,δ40.00000°, λ-51.00000°. Principal axes: T 2.1200, Plg10.0000°, Azm222.0000°; N 1.1200, Plg23.0000°, Azm128.0000°; P -3.2500, Plg63.0000°, Azm335.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism. After ROM.*
NEIC At least 295 people killed, 1,000 injured, 55,000 homeless, 15,000 buildings damaged or destroyed and landslides in the L'Aquila area. Felt [VII] at L'Aquila; [VI] at Corfinio and San Demetrio ne' Vestini; [V] at Avezzano, Chieti, Pescara, Rieti, San Benedetto del Tronto, Sulmona and Teramo; [IV] at Amelia, Ancona, Ascoli Piceno, Castelfrentano, Fiumicino, Fondi, Francavilla al Mare, Frosinone, Guidonia, Isernia, Lanciano, Latina, Macerata, Montesilvano, Naples, Osimo, Pesaro, Rome and Terni. Felt throughout central Italy and as far north as Florence, Milan and Venice and as far south as Bari and Salerno. Also felt in San Marino and at Vienna, Austria; Tirana, Albania; Knin, Croatia; Nuremberg, Germany; San Gwann, Malta; Celje, Slovenia; Zurich, Switzerland and Podgorica, Montenegro.
*BEO **06** 01:32:39.3±0.6,42°.25N×13°.15E,h1km±12km,ML6.5/2*
*STR **06** 01:32:39.4±0.8,42°.28N×13°.57E,h5km,Ml5.8,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*PRU **06** 01:32:39.6,42°.25N×13°.53E,h0km,M5.9,Damaging Earthquake In Aquila, 287 Victims*
*IGIL **06** 01:32:40.4,42°.38N×13°.32E,h2km,mb5.7*
*PDG **06** 01:32:40.4±1.0,42°.40N×13°.37E,h6km±1km,MD6.2/7, ML6.2/7,Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
*ROM **06** 01:32:40.4±0.1,42°.34N×13°.38E,h8km,Ml5.9/69,Error ellipse: s-maj=1.1km s-min=0.9km az=59.0*
*CSEM **06** 01:32:40.9±0.0,42°.37N×13°.33E,h2km,mb5.9/99,Ms6.1, Mw6.2,Error ellipse: s-maj=1.3km s-min=1.1km az=19.0*
*IDC **06** 01:32:40.7±0.3,42°.46N×13°.28E,h0km,mb5.4/37, mb1 5.5/48,mb1mx5.5/48,mbtmp5.4/48,ML4.8/8,MS6.2/42, Ms1 6.2/42,ms1mx6.1/47,Error ellipse: s-maj=9.3km s-min=7.0km az=104.0*
*MOS **06** 01:32:40.7±1.1,42°.43N×13°.32E,h14km,mb6.0/98, MS6.2/79,Error ellipse: s-maj=10.8km s-min=6.9km az=104.1*
*CRAAG **06** 01:32:41.4,42°.38N×13°.32E,Mw6.3*
*TIR **06** 01:32:41.9,42°.67N×14°.15E,h0km*
*NIC **06** 01:32:41.4±1.0,42°.38N×13°.32E,h2km,Earthquake Central Italy 7 km NW LAquila.*
*TEH **06** 01:32:42.0,42°.42N×13°.40E,h10km,ML6.3*
*SFS **06** 01:32:42.0,42°.62N×13°.39E,h10km,ML6.3*
*THE **06** 01:32:43.7,42°.37N×13°.77E,h1km±12km,ML6.5/14,Error ellipse: s-maj=20.5km s-min=1.4km az=284.0*
*GEN **06** 01:32:43.6,42°.33N×13°.33E,h9km,ML5.8*
*GCMT **06** 01:32:49.2±0.1,42°.29N×13°.35E,h12km,MW6.3,Moment Tensor Solution. s112,c270; s99,c179; Moment tensor: Scale 10^{18}Nm; Mrr-3.30±.02; Mθθ1.43±.02; Mφφ1.87±.02; Mrθ-1.43±.04; Mθφ-1.77±.01; Mφr-0.27±.04; Best double couple: Mo3.70000×10^{18} NP1:φs336.00000°,δ42.00000°, λ-62.00000°. NP2:φs120.00000°,δ54.00000°, λ-113.00000°. Principal axes: T 3.5200, Plg7.0000°, Azm226.0000°; N 0.2800, Plg18.0000°, Azm134.0000°; P -3.8000, Plg70.0000°, Azm335.0000°; Data Used: II IU CN IC G. Mantle waves from 103 sta. Surface waves: sta=124, comp=305, per= 50.*

ISC 06 01:32:42.6±0.2**,42°.37N**±0°.01×**13°.32E**±0°.01**,h14km**±1km**, h14km:pP-P,n3403,**σ**1s.37**/3731**,mb5.9**/361**,MS6.2**/229**, 485C-345D,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	105	ePg	Pg	01 32 42.4	-3.1
AQU	L'Aquila	0.06	105⇓	ePg	Pg	01 32 42.4	-3.1
AQU				Sg	Sg	01 32 43.1	-4.3
AQU	L'Aquila	0.06	105⇓	ePg	Pg	01 32 42.4	-3.1
AQU				Sg	Sg	01 32 43.1	-4.3
CAMP	Campotosto	0.18	22	ePg	Pg	01 32 44.8	-2.2
CAMP				Sg	Sg	01 32 48.6	-1.3
FIAM	Fiamignano	0.18	236	ePg	Pg	01 32 45.1	-1.9
FIAM				Sg	Sg	01 32 49.1	-0.8
FAGN	Fagnano	0.22	118⇑	ePg	Pg	01 32 44.6	-3.0
FAGN				Sg	Sg	01 32 46.6	-4.3
FAGN	Fagnano	0.22	118⇑	ePg	Pg	01 32 44.6	-3.0
FAGN				Sg	Sg	01 32 46.6	-4.3
TERO	Teramo	0.33	40	P	Pg	01 32 46.8	-2.6
TERO	Teramo	0.33	40⇑	ePg	Pg	01 32 47.3	-2.1
TERO				Sg	Sg	01 32 52.4	-1.6
TERO	Teramo	0.33	40	P	Pg	01 32 46.8	-2.6
TERO	Teramo	0.33	40⇑	ePg	Pg	01 32 47.3	-2.1
TERO				Sg	Sg	01 32 52.4	-1.6
PTQR	Pietraquaria	0.35	170	P	Pg	01 32 46.8	-3.0
PTQR	Pietraquaria	0.35	170⇑	iPg	Pg	01 32 46.9	-3.0
PTQR	Pietraquaria	0.35	170⇑	iPg	Pg	01 32 46.9	-3.0
VCEL	Villa Celiera	0.39	86⇑	ePg	Pg	01 32 48.1	-2.4
VCEL				Sg	Sg	01 32 53.1	-2.7
VCEL	Villa Celiera	0.39	86⇑	ePg	Pg	01 32 48.1	-2.4
VCEL				Sg	Sg	01 32 53.1	-2.7
GAVE	Gavelli	0.45	316	Pg	Pg	01 32 51.5	-0.1
GAVE	Gavelli	0.45	316	Pg	Pg	01 32 51.5	-0.1
MNS	Montasola	0.47	272	P	Pg	01 32 50.8	-1.2
MNS	Montasola	0.47	272	P	Pg	01 32 50.8	-1.2
MNS	Montasola	0.47	272⇑	ePg	Pg	01 32 50.8	-1.2
MNS				Sg	Sg	01 32 57.8	-0.6
MNS	Montasola	0.47	272⇑	ePg	Pg	01 32 50.8	-1.2
MNS				Sg	Sg	01 32 57.8	-0.6
NRCA	Norcia	0.49	342	P	Pg	01 32 50.9	-1.5
NRCA				S	Sg	01 32 59.4	+0.5
NRCA	Norcia	0.49	342	Pg	Pg	01 32 50.8	-1.5
NRCA				Sg	Sg	01 32 59.3	+0.4
NRCA	Norcia	0.49	342	Pg	Pg	01 32 50.8	-1.5
NRCA				Sg	Sg	01 32 59.3	+0.4
CERT	Cerreto	0.49	211	P	Pg	01 32 50.5	-1.8
CERT				S	Sg	01 32 55.9	-3.1
CERT	Cerreto	0.49	211⇑	ePg	Pg	01 32 50.2	-2.1
CERT	Cerreto	0.49	211⇑	ePg	Pg	01 32 50.2	-2.1
CERT	Cerreto	0.49	211	P	Pg	01 32 50.5	-1.8
CERT				S	Sg	01 32 55.8	-3.1
VVLD	Villa Vallelon	0.55	156	P	Pg	01 32 51.7	-1.7
VVLD				S	Sb	01 33 02.8	+1.0
VVLD	Villa Vallelon	0.55	156	Pg	Pg	01 32 50.9	-2.5
VVLD	Villa Vallelon	0.55	156	Pg	Pg	01 32 50.9	-2.5
VVLD	Villa Vallelon	0.55	156	P	Pg	01 32 51.7	-1.7
VVLD				S	Sb	01 33 02.8	+1.0
MTCE	Montecelio	0.55	231	P	Pg	01 32 50.7	-2.8
MTCE	Montecelio	0.55	231⇑	ePg	Pg	01 32 51.6	-1.9
MTCE	Montecelio	0.55	231	P	Pg	01 32 50.7	-2.8
MTCE	Montecelio	0.55	231⇑	ePg	Pg	01 32 51.6	-1.9
INTR	Introdacqua	0.56	129	P	Pg	01 32 50.6	-3.1
INTR				S	Sg	01 32 59.7	-1.6
INTR	Introdacqua	0.56	129	Pg	Pg	01 32 51.0	-2.7
INTR				Sg	Sg	01 32 59.6	-1.6
INTR	Introdacqua	0.56	129	P	Pg	01 32 50.6	-3.1
INTR	Introdacqua	0.56	129	Pg	Pg	01 32 51.0	-2.7
INTR				S	Sg	01 32 59.7	-1.6
GUAR	Guarcino	0.57	180⇑	ePg	Pg	01 32 51.6	-2.3
GUAR	Guarcino	0.57	180⇑	ePg	Pg	01 32 51.6	-2.3
CESX	Cesi	0.60	294	P	Pg	01 32 52.6	-1.7
CESX				S	Sn	01 33 09.6	+3.4
CESX	Cesi	0.60	294⇓	ePg	Pg	01 32 53.0	-1.3
CESX	Cesi	0.60	294	P	Pg	01 32 52.6	-1.7
CESX	Cesi	0.60	294⇓	ePg	Pg	01 32 53.0	-1.3
CESX				S	Sn	01 33 09.6	+3.4
TRTR	Tortoreto Alta	0.62	45⇑	ePg	Pg	01 32 53.4	-1.4
TRTR	Tortoreto Alta	0.62	45⇑	ePg	Pg	01 32 53.4	-1.4
OFFI	Offida	0.63	25	P	Pg	01 32 53.7	-1.3
OFFI				S	Sb	01 33 04.6	+0.6
OFFI	Offida	0.63	25	Pg	Pg	01 32 53.6	-1.3
OFFI	Offida	0.63	25	Pg	Pg	01 32 53.6	-1.3
OFFI				S	Sb	01 33 04.6	+0.6
FDMO	Fiordimonte	0.69	346	P	Pg	01 32 54.4	-1.6
FDMO	Fiordimonte	0.69	346⇑	ePg	Pg	01 32 54.3	-1.8
FDMO	Fiordimonte	0.69	346	P	Pg	01 32 54.4	-1.6
CESI	CESI - Serrava	0.70	334	P	Pg	01 32 54.3	-2.1
CESI	CESI - Serrava	0.70	334	Pg	Pg	01 32 54.4	-2.0
	295μm,1.1s						
CESI	CESI - Serrava	0.70	334	Pg	Pg	01 32 54.4	-2.0
	295μm,1.1s						
POFI	Posta Fibreno	0.71	156	Pg	Pg	01 32 53.4	-3.2
POFI	Posta Fibreno	0.71	156	Pg	Pg	01 32 53.4	-3.2
LPEL	Lama dei Pelig	0.72	116	Pg	Pg	01 32 53.2	-3.4
LPEL	Lama dei Pelig	0.72	116	Pg	Pg	01 32 53.2	-3.4
RMP	Rome, Mte Porz	0.72	220⇑	ePg	Pg	01 32 54.6	-2.1
RMP	Rome, Mte Porz	0.72	220⇑	ePg	Pg	01 32 54.6	-2.1
SDI	San Donato	0.76	151	P	Pg	01 32 53.7	-3.6
SDI	San Donato	0.76	151	P	Pg	01 32 53.7	-3.6
SDI	San Donato	0.76	151	Pg	Pg	01 32 53.5	-3.8
SDI	San Donato	0.76	151	Pg	Pg	01 32 53.5	-3.8
RDP	Rocca di Papa	0.76	216	P	Pg	01 32 54.6	-2.8
RDP	Rocca di Papa	0.76	216	P	Pg	01 32 54.6	-2.8
RDP	Rocca di Papa	0.76	216⇑	ePg	Pg	01 32 55.3	-2.1
RDP	Rocca di Papa	0.76	216	P	Pg	01 32 54.6	-2.8
RDP	Rocca di Papa	0.76	216⇑	ePg	Pg	01 32 55.3	-2.1
MA9	Marino	0.78	220⇑	ePg	Pg	01 32 55.2	-2.5
MA9	Marino	0.78	220⇑	ePg	Pg	01 32 55.2	-2.5
CAFR	Castel Frentan	0.78	100	Pg	Pg	01 32 54.5	-3.2
CAFR	Castel Frentan	0.78	100	Pg	Pg	01 32 54.5	-3.2
ROM9	Roma	0.81	228⇑	ePg	Pg	01 32 56.4	-1.9
ROM9	Roma	0.81	228⇑	ePg	Pg	01 32 56.4	-1.9
GIUL	Giuliano Di Ro	0.81	183	Pg	Pg	01 32 55.5	-2.9
GIUL	Giuliano Di Ro	0.81	183	Pg	Pg	01 32 55.5	-2.9
GUMA	Gualdo di Mace	0.83	33⇑	ePg	Pg	01 32 54.6	-4.1
GUMA	Gualdo di Mace	0.83	33⇑	ePg	Pg	01 32 54.6	-4.1
ASSB	Assisi San Ben	0.83	324	Pg	Pg	01 32 56.9	-1.8
ASSB	Assisi San Ben	0.83	324	Pg	Pg	01 32 56.9	-1.8
LAV9	Lanuvio	0.83	214	Pg	Pg	01 32 55.7	-3.0
LAV9	Lanuvio	0.83	214	Pg	Pg	01 32 55.7	-3.0
SNTG	Esanatoglia	0.93	343	P	Pb	01 32 57.9	-2.6
SNTG	Esanatoglia	0.93	343⇑	ePg	Pb	01 32 57.9	-2.6
SNTG	Esanatoglia	0.93	343⇑	ePg	Pb	01 32 57.9	-2.6
CERA	Filignano	0.93	146	Pg	Pb	01 32 57.1	-3.5
CERA	Filignano	0.93	146	Pg	Pb	01 32 57.1	-3.5
MIDA	Miranda	1.01	136	P	Pb	01 32 56.8	-5.1
MIDA	Miranda	1.01	136⇑	ePg	Pb	01 32 58.3	-3.6
MIDA	Miranda	1.01	136	P	Pb	01 32 56.8	-5.1
MIDA	Miranda	1.01	136⇑	ePg	Pb	01 32 58.3	-3.6
CING	Cingoli	1.01	355⇑	ePg	Pb	01 32 59.7	-2.2
	409μm,1.4s						
CING	Cingoli	1.01	355⇑	ePg	Pb	01 32 59.7	-2.2
	409μm,1.4s						
TOLF	Tolfa	1.03	253⇑	ePg	Pb	01 33 00.5	-1.7
	199μm,1.0s						
TOLF	Tolfa	1.03	253⇑	ePg	Pb	01 33 00.5	-1.7
	199μm,1.0s						
MGAB	Montegabbione	1.04	302	Pg	Pb	01 33 01.3	-1.2
MGAB	Montegabbione	1.04	302	Pg	Pb	01 33 01.3	-1.2
MURB	Monte Urbino	1.07	327⇑	ePg	Pb	01 33 01.6	-1.3
MURB	Monte Urbino	1.07	327⇑	ePg	Pb	01 33 01.6	-1.3
FRES	Fresagrandinar	1.08	111	Pg	Pb	01 32 59.6	-3.5
FRES	Fresagrandinar	1.08	111	Pg	Pb	01 32 59.6	-3.5
SACS	San Casciano d	1.15	295⇑	ePn	Pn	01 33 03.0	-1.3
LATE	Laterza	1.15	283⇑	ePn	Pn	01 33 03.2	-1.1
	45μm,1.3s						
LATE	Laterza	1.15	283⇑	ePn	Pn	01 33 03.2	-1.1
	45μm,1.3s						
ARVD	Arcevia	1.16	346⇑	ePn	Pn	01 33 02.8	-1.7
	810μm,1.7s						
ARVD	Arcevia	1.16	346⇑	ePn	Pn	01 33 02.8	-1.7
	810μm,1.7s						
VAGA	Valle Agricola	1.17	144	Pg	Pn	01 33 02.3	-2.4
VAGA	Valle Agricola	1.17	144	Pg	Pn	01 33 02.3	-2.4
AOI	Ancona	1.20	10	Pn	Pn	01 33 02.7	-2.3
AOI	Ancona	1.20	10	Pn	Pn	01 33 02.7	-2.3
BSSO	Busso	1.26	130	Pn	Pn	01 33 03.1	-2.8
BSSO	Busso	1.26	130	Pn	Pn	01 33 03.1	-2.8
SGG	Gregorio Mates	1.26	141	Pn	Pn	01 33 03.4	-2.5
SGG	Gregorio Mates	1.26	141	Pn	Pn	01 33 03.4	-2.5
MODR	Mondragone	1.29	161⇑	ePn	Pn	01 33 05.0	-1.3
	349μm,1.6s						
MODR	Mondragone	1.29	161⇑	ePn	Pn	01 33 05.0	-1.3
	349μm,1.6s						
PIEI	Pieia	1.30	334	Pn	Pn	01 33 04.7	-1.7
	539μm,1.8s						
PIEI	Pieia	1.30	334	Pn	Pn	01 33 04.7	-1.7
	539μm,1.8s						
CDCA	Citt' di Caste	1.35	324	Pn	Pn	01 33 06.5	-0.5
	326μm,1.1s						
CDCA	Citt' di Caste	1.35	324	Pn	Pn	01 33 06.5	-0.5
	326μm,1.1s						
FSSB	Fossombrone	1.38	343	Pn	Pn	01 33 06.7	-0.8
	203μm,0.6s						
FSSB	Fossombrone	1.38	343	Pn	Pn	01 33 06.7	-0.8
	203μm,0.6s						
CAFI	Castiglion Fio	1.38	314	Pn	Pn	01 33 07.1	-0.4
	111μm,0.8s						
CAFI	Castiglion Fio	1.38	314	Pn	Pn	01 33 07.1	-0.4
	111μm,0.8s						
BADI	Badiali	1.39	326	Pn	Pn	01 33 07.5	-0.1
	535μm,1.4s						
BADI	Badiali	1.39	326	Pn	Pn	01 33 07.5	-0.1
	535μm,1.4s						
ARCI	Arcidosso	1.44	290⇑	ePn	Pn	01 33 08.2	-0.2
	299μm,2.5s						
ARCI	Arcidosso	1.44	290⇑	ePn	Pn	01 33 08.2	-0.2
	299μm,2.5s						
PARC	Parchiule	1.50	329⇓	ePn	Pn	01 33 09.8	+0.6
	773μm,1.8s						
PARC	Parchiule	1.50	329⇓	ePn	Pn	01 33 09.8	+0.6
	773μm,1.8s						
VENT	Ventotene	1.58	177	Pn	Pn	01 33 08.6	-1.5
	572μm,1.5s						
VENT	Ventotene	1.58	177	Pn	Pn	01 33 08.6	-1.5
	572μm,1.5s						
MAON	Monte Argentar	1.62	273⇑	ePn	Pn	01 33 09.6	-1.2
	115μm,1.5s						
MAON	Monte Argentar	1.62	273⇑	ePn	Pn	01 33 09.6	-1.2
	115μm,1.5s						
RSM	Repubblica di	1.68	338	Pn	Pb	01 33 13.0	-0.4
	1135μm,3.8s						
RSM	Repubblica di	1.68	338	Pn	Pb	01 33 13.0	-0.4
	1135μm,3.8s						
ASQU	Asqua	1.81	322⇓	ePn	Pn	01 33 13.1	-0.4
	227μm,1.7s						
ASQU	Asqua	1.81	322⇓	ePn	Pn	01 33 13.1	-0.4
	227μm,1.7s						
CSNT	Castellina Chi	1.85	307	Pn	Pn	01 33 14.3	+0.3
	310μm,2.9s						
CSNT	Castellina Chi	1.85	307	Pn	Pn	01 33 14.3	+0.3
	310μm,2.9s						
SFI	Santa Sofia	1.88	325	Pn	Pn	01 33 14.1	-0.2
	382μm,2.2s						
SFI	Santa Sofia	1.88	325	Pn	Pn	01 33 14.1	-0.2
	382μm,2.2s						
SGRT	San Giovanni R	1.91	108⇑	ePn	Pn	01 33 13.7	-1.1
	238μm,0.9s						
SGRT	San Giovanni R	1.91	108⇑	ePn	Pn	01 33 13.7	-1.1
	238μm,0.9s						
CAFE	Carife	1.96	132	Pn	Pn	01 33 15.7	+0.1
	574μm,2.3s						
CAFE	Carife	1.96	132	Pn	Pn	01 33 15.7	+0.1
	574μm,2.3s						
SGTA	Sant Agata di	1.97	128	Pn	Pn	01 33 15.9	+0.3
	441μm,1.4s						
SGTA	Sant Agata di	1.97	128	Pn	Pn	01 33 15.9	+0.3
	441μm,1.4s						
MCRV	Calabrutti - M	2.11	138	Pn	Pn	01 33 16.5	-1.1
	490μm,2.5s						
MCRV	Calabrutti - M	2.11	138	Pn	Pn	01 33 16.5	-1.1
	490μm,2.5s						
CRMI	Carmignano	2.23	310⇓	ePn	Pn	01 33 19.8	+0.6
	836μm,5.2s						
CRMI	Carmignano	2.23	310⇓	ePn	Pn	01 33 19.8	+0.6
	836μm,5.2s						
MRLC	Muro Lucano	2.29	134	Pn	Pn	01 33 20.2	+0.2
	199μm,1.4s						
MRLC	Muro Lucano	2.29	134	Pn	Pn	01 33 20.2	+0.2
	199μm,1.4s						
MTRZ	Monterenzio	2.42	327	Pn	Pn	01 33 23.5	+1.7
	167μm,1.1s						
MTRZ	Monterenzio	2.42	327	Pn	Pn	01 33 23.5	+1.7
	167μm,1.1s						
PALZ	Palazzo San Ge	2.44	125⇑	ePn	Pn	01 33 22.0	0.0
	458μm,1.2s						
PALZ	Palazzo San Ge	2.44	125⇑	ePn	Pn	01 33 22.0	0.0
	458μm,1.2s						
NVLJ	Novalja	2.47	27	iPn	Pn	01 33 21.8	-0.6
NVLJ				Sn	Sn	01 33 51.1	-1.2
CMPO	Campotto Po	2.47	334	Pn	Pn	01 33 24.4	+2.0
	174μm,1.1s						
CMPO	Campotto Po	2.47	334	Pn	Pn	01 33 24.4	+2.0
	174μm,1.1s						
MRVN	Minervino Murg	2.52	120⇑	ePn	Pn	01 33 22.4	-0.8
	77μm,1.1s						
MRVN	Minervino Murg	2.52	120⇑	ePn	Pn	01 33 22.4	-0.8
	77μm,1.1s						
ACER	Acerenza	2.52	128⇑	ePn	Pn	01 33 23.1	-0.1
	220μm,1.1s						
ACER	Acerenza	2.52	128⇑	ePn	Pn	01 33 23.1	-0.1
	220μm,1.1s						
PZUN	Potenza	2.54	132	Pn	Pn	01 33 23.8	+0.4
	273μm,1.6s						
PZUN	Potenza	2.54	132	Pn	Pn	01 33 23.8	+0.4
	273μm,1.6s						
CDT	Castel del Mon	2.56	119	ePn	Pn	01 33 22.6	-1.1
MAIM	Mastiano	2.58	308⇓	ePn	Pn	01 33 24.8	+0.8
	240μm,3.5s						
MAIM	Mastiano	2.58	308	P	Pn	01 33 24.5	+0.5
MAIM	Mastiano	2.58	308⇓	ePn	Pn	01 33 24.8	+0.8
	240μm,3.5s						
ZCCA	Zocca	2.62	320	Pn	Pn	01 33 26.5	+2.0
	2255μm,4.9s						
ZCCA	Zocca	2.62	320	Pn	Pn	01 33 26.5	+2.0
	2255μm,4.9s						
BULG	Bulgheria - Ca	2.77	145	Pn	Pn	01 33 26.3	-0.3
	269μm,2.0s						
BULG	Bulgheria - Ca	2.77	145	Pn	Pn	01 33 26.3	-0.3
	269μm,2.0s						
MCEL	Monticello	2.77	137	Pn	Pn	01 33 26.8	+0.2
	764μm,3.5s						
MCEL	Monticello	2.77	137	Pn	Pn	01 33 26.8	+0.2
	764μm,3.5s						
MTSN	Montesano sull	2.79	138	Pn	Pn	01 33 27.1	+0.2
	207μm,1.5s						
MTSN	Montesano sull	2.79	138	Pn	Pn	01 33 27.1	+0.2
	207μm,1.5s						
VLC	Villacollemand	2.79	311	ePn	Pn	01 33 27.2	+0.3
VLC				ePg	Pb	01 33 33.5	+1.3
VLC				eSg	Sb	01 34 08.1	+1.8
VLC	Villacollemand	2.79	311	ePn	Pn	01 33 27.2	+0.3
ADRI	Adria, Italy	2.83	341⇑	ePn	Pn	01 33 28.6	+1.2
ADRI	Adria, Italy	2.83	341⇑	ePn	Pn	01 33 28.5	+1.2
AMUR	Altamura	2.86	120⇑	ePn	Pn	01 33 27.4	-0.5
	70μm,1.1s						
AMUR	Altamura	2.86	120⇑	ePn	Pn	01 33 27.4	-0.5
	70μm,1.1s						
SIRI	Monte Sirino -	2.91	138	Pn	Pn	01 33 28.8	+0.2
	124μm,1.5s						
SIRI	Monte Sirino -	2.91	138	Pn	Pn	01 33 28.8	+0.2
	124μm,1.5s						
MIGL	Miglionico	2.94	126	Pn	Pn	01 33 28.8	0.0
	361μm,1.3s						
MIGL	Miglionico	2.94	126	Pn	Pn	01 33 28.8	0.0
	361μm,1.3s						
ERBM	Eremo	2.95	315	Pn	Pn	01 33 30.7	+1.6
	199μm,2.0s						
ERBM	Eremo	2.95	315	Pn	Pn	01 33 30.7	+1.6
	199μm,2.0s						
BAI	Bari	2.95	114	ePn	Pn	01 33 27.8	-1.2
CUC	Castrocucco	3.03	141	ePn	Pn	01 33 30.2	0.0
CUC				eSn	Sn	01 34 02.1	-4.2
CUC	Castrocucco	3.03	141	ePn	Pn	01 33 30.2	0.0
CUC				eSn	Sn	01 34 02.1	-4.2
MATE	Matera	3.07	123	Pn	Pn	01 33 29.9	-0.7
	203μm,2.1s						
MATE	Matera	3.07	123	Pn	Pn	01 33 29.9	-0.7
	203μm,2.1s						
NOVE	Novellara	3.08	323⇓	ePn	Pn	01 33 33.5	+2.8
NOVE	Novellara	3.08	323⇓	ePn	Pn	01 33 33.5	+2.8
CRAC	Craco	3.08	129	Pn	Pn	01 33 31.2	+0.3
	751μm,2.5s						
CRAC	Craco	3.08	129	Pn	Pn	01 33 31.2	+0.3
	751μm,2.5s						
OSPF	L'Ospedale	3.15	258	P	Pn	01 33 30.8	-1.1
OSPF	L'Ospedale	3.15	258	P	Pn	01 33 30.8	-1.1
OSPF	L'Ospedale	3.15	258	P	Pn	01 33 30.8	-1.1
GRAM	Graiana	3.18	313	P	Pn	01 33 33.5	+1.2
SBPO	S.Benedetto Po	3.19	328⇓	ePn	Pn	01 33 34.5	+2.1
SBPO	S.Benedetto Po	3.19	328⇓	ePn	Pn	01 33 34.5	+2.1
PGF	Pioggiola	3.20	275	ePn	Pn	01 33 32.9	+0.3
	SNR=1.0						
PGF				eSn	Sn	01 34 13.0	+2.4
	6μm,0.9s						
PGF	Pioggiola	3.20	275	eP	Pn	01 33 32.9	+0.3
PGF				e		01 34 13.0	
PGF	Pioggiola	3.20	275	ePn	Pn	01 33 32.9	+0.3
PGF				eSn	Sn	01 34 13.0	+2.4
PGF	Pioggiola	3.20	275	ePn	Pn	01 33 32.9	+0.3
	SNR=1.0						
PGF				eSn	Sn	01 34 13.0	+2.4
	3μm,0.9s						
SKDS	Skadanscina	3.21	9	iPn	Pn	01 33 32.0	-0.7
SKDS				eSn	Sn	01 34 08.1	-2.7
SKDS	Skadanscina	3.21	9	Pn	Pn	01 33 32.0	-0.7
SKDS				eSn	Sn	01 34 08.1	-2.7
NOCI	Noci	3.22	118⇑	ePn	Pn	01 33 32.4	-0.4
	92μm,1.3s						
NOCI	Noci	3.22	118⇑	ePn	Pn	01 33 32.4	-0.4
	92μm,1.3s						
CODM	Codolo	3.24	310	P	Pn	01 33 34.0	+1.0
KNDS	Knezji Dol	3.25	13	iPn	Pn	01 33 32.8	-0.4
KNDS				eSn	Sn	01 34 13.7	+2.0
KNDS							
	comp=Z,98μm,1.7s						
KNDS	Knezji Dol	3.25	13	iPn	Pn	01 33 32.8	-0.4
KNDS				eSn	Sn	01 34 13.7	+2.0
	comp=Z,98μm,1.7s						
STON	Ston	3.27	80	iPn	Pn	01 33 32.2	-1.2
STON				Sn	Sn	01 34 12.0	-0.1
STON	Ston	3.27	80	iPn	Pn	01 33 32.2	-1.2
STON				Sn	Sn	01 34 12.0	-0.1
ORI	Oriolo Calabro	3.30	133	Pn	Pn	01 33 34.6	+0.7
	comp=Z,105μm,1.7s						
ORI	Oriolo Calabro	3.30	133	Pn	Pn	01 33 34.6	+0.7

comp=Z,105µm,1.7s
GBRS Gornja Briga 3.34 18⇑ *i*Pn **Pn 01 33 34.2 -0.2**
GBRS *e*Sn **Sn 01 34 15.1 +1.2**
comp=Z,220µm,2.5s
TRI Trieste 3.35 5⇑ *e*Pn **Pn 01 33 32.9 -1.6**
TRI Trieste 3.35 5 *e*P **Pn 01 33 33.0 -1.6**
TRI Trieste 3.35 5 *e*Pn **Pn 01 33 33.0 -1.6**
TRI *e*Pg **Pb 01 33 40.3 -1.5**
TRI Trieste 3.35 5 *e*Pn **Pn 01 33 33.0 -1.6**
MSSA Maissana 3.39 306⇓ *e*Pn **Pn 01 33 36.3 +1.2**
comp=Z,146µm,3.5s
MSSA Maissana 3.39 306⇓ *e*Pn **Pn 01 33 36.3 +1.2**
comp=Z,146µm,3.5s
SC2M Scurtabo 3.43 308 Pn **Pn 01 33 36.8 +1.2**
comp=Z,23µm,1.2s
SC2M Scurtabo 3.43 308 Pn **Pn 01 33 36.8 +1.2**
comp=Z,23µm,1.2s
BOJS Bojanci 3.43 23⇑ *i*Pn **Pn 01 33 35.4 -0.2**
BOJS *i* Sn **Sb 01 34 20.4 -4.2**
BOJS
comp=Z,59µm,5.3s
BOJS Bojanci 3.43 23 *e*Pn **Pn 01 33 35.4 -0.2**
BOJS *e*Sn **Sn 01 34 18.8 +2.7**
BOJS Bojanci 3.43 23⇑ *i*Pn **Pn 01 33 35.4 -0.2**
BOJS *e*Sn **Sn 01 34 18.8 +2.7**
CEY Cerknica 3.46 13⇑ *i*Pn **Pn 01 33 35.4 -0.7**
CEY Cerknica 3.46 13⇑ *i*Pn **Pn 01 33 35.4 -0.7**
MTLO Montello 3.55 346 *e*Pn **Pn 01 33 37.0 -0.3**
MTLO Montello 3.55 346 *e*Pn **Pn 01 33 37.0 -0.3**
TLI Talmassons 3.55 358⇓ *e*Pn **Pn 01 33 36.5 -0.8**
TLI Talmassons 3.55 358⇓ *e*Pn **Pn 01 33 36.5 -0.8**
JAVS Javornik 3.56 8 *i*Pn **Pn 01 33 36.7 -0.9**
JAVS *e*Sn **Sn 01 34 18.8 -0.7**
JAVS
comp=Z,53µm,3.5s
JAVS Javornik 3.56 8 *i*Pn **Pn 01 33 36.7 -0.9**
JAVS *e*Sn **Sn 01 34 18.8 -0.7**
comp=Z,153µm,3.5s
VISS Visnje 3.60 17⇑ *i*Pn **Pn 01 33 37.5 -0.5**
VISS
comp=Z,40µm,3.3s
VISS Visnje 3.60 17⇑ *i*Pn **Pn 01 33 37.5 -0.5**
comp=Z,240µm,3.3s
CGRP Cima Grappa 3.68 343⇑ *e*Pn **Pn 01 33 37.3 -1.9**
CGRP Cima Grappa 3.68 343 Pn **Pn 01 33 38.3 -0.9**
comp=Z,45µm,1.0s
CGRP Cima Grappa 3.68 343 Pn **Pn 01 33 38.3 -0.9**
comp=Z,45µm,1.0s
BLY Banja Luka 3.68 48⇑ *i*Pn **Pn 01 33 39.5 +0.4**
BLY *e*Sn **Sn 01 34 26.1 +3.9**
BLY Banja Luka 3.68 48⇑ *i*Pn **Pn 01 33 39.5 +0.4**
BLY *e*Sn **Sn 01 34 26.1 +3.9**
VOJS Vojsko 3.68 6⇑ *i*Pn **Pn 01 33 38.5 -0.7**
VOJS *i* Sn **Sn 01 34 21.4 -1.1**
VOJS
comp=Z,77µm,3.1s
VOJS Vojsko 3.68 6⇑ *i*Pn **Pn 01 33 38.5 -0.7**
VOJS *i* Sn **Sn 01 34 21.4 -1.1**
comp=Z,177µm,3.1s
CAE Caneva 3.69 350⇑ *e*Pn **Pn 01 33 38.4 -0.9**
CAE Caneva 3.69 350⇑ *e*Pn **Pn 01 33 38.4 -0.9**
POLC Polcenigo 3.70 351 Pn **Pn 01 33 39.3 -0.1**
comp=Z,46µm,0.9s
VARN Col Varnada, M 3.73 347⇑ *e*Pn **Pn 01 33 38.4 -1.4**
VARN Col Varnada, M 3.73 347⇑ *e*Pn **Pn 01 33 38.4 -1.4**
COLI Coloredo 3.76 1⇑ *e*Pn **Pn 01 33 39.0 -1.2**
COLI Coloredo 3.76 1⇑ *e*Pn **Pn 01 33 39.0 -1.2**
GENL Genova Univers 3.77 304 P **Pn 01 33 41.0 +0.8**
BALD Monte Baldo 3.77 332⇓ *e*Pn **Pn 01 33 40.2 -0.3**
BALD Monte Baldo 3.77 332⇓ *e*Pn **Pn 01 33 40.2 -0.3**
CRNS Crni Vrh 3.77 10⇑ *i*Pn **Pn 01 33 40.2 -0.2**
CRNS *e*Sn **Sn 01 34 25.9 +1.4**
CRNS
comp=Z,53µm,3.4s
LJU Ljubljana 3.77 13 *i* Pn **Pn 01 33 40.4 0.0**
LJU *e*Pg **Pg 01 33 53.3 -1.6**
LJU *e*Sn **Sn 01 34 24.6 0.0**
LJU *e* 01 34 38.7
LJU
comp=Z,55µm,2.2s
LJU Ljubljana 3.77 13 *i* Pn **Pn 01 33 40.3 0.0**
LJU Ljubljana 3.77 13 *e*Pg **Pg 01 33 53.3 -1.6**
LJU *e*Sn **Sn 01 34 24.6 0.0**
comp=Z,155µm,2.2s
CRES Cresnjev 3.78 23 *i* Pn **Pn 01 33 40.3 -0.2**
CRES *e*Sn **Sb 01 34 30.5 -4.3**
CRES
comp=Z,73µm,6.3s
CRES Cresnjev 3.78 23 *i* Pn **Pn 01 33 40.3 -0.2**
SISC Sisak 3.80 34 *i* Pn **Pn 01 33 41.0 +0.3**
SISC Sn **Sn 01 34 26.1 +0.8**
SISC Sisak 3.80 34 *i* Pn **Pn 01 33 41.0 +0.3**
SISC Sn **Sn 01 34 26.1 +0.8**
DRE Drenchia 3.81 3⇑ *e*Pn **Pn 01 33 39.5 -1.4**
DRE Drenchia 3.81 3⇑ *e*Pn **Pn 01 33 39.5 -1.4**
MLNI Malnisio 3.81 353⇑ *e*Pn **Pn 01 33 40.2 -0.8**
MLNI Malnisio 3.81 353⇑ *e*Pn **Pn 01 33 40.2 -0.8**
SALO Salr 3.82 329 Pn **Pn 01 33 41.5 +0.4**
comp=Z,55µm,1.2s
SALO Salr 3.82 329 Pn **Pn 01 33 41.5 +0.4**
comp=Z,55µm,1.2s
HCY Herceg Novi 3.83 87⇓ *i*Pn **Pn 01 33 40.5 -0.7**
HCY *e*Sn **Sn 01 34 27.2 +1.2**
HCY Herceg Novi 3.83 87 ⇓P **Pn 01 33 40.4 -0.7**
HCY S **Sn 01 34 25.9 -0.1**
HCY Herceg Novi 3.83 87 ⇓P **Pn 01 33 40.4 -0.8**
HCY S **Sn 01 34 25.9 -0.1**
HCY Herceg Novi 3.83 87⇓ *i*Pn **Pn 01 33 40.5 -0.8**
HCY S **Sn 01 34 25.9 -0.1**
HCY *e*Sn **Sn 01 34 27.2 +1.2**
BUA Buia 3.85 358 Pn **Pn 01 33 40.8 -0.6**
BUA Buia 3.85 358 Pn **Pn 01 33 40.8 -0.6**
LEGS Legarje 3.86 21 *i* Pn **Pn 01 33 41.3 -0.2**
LEGS Legarje 3.86 21 *i* Pn **Pn 01 33 41.3 -0.2**
VNDS Vrh nad Dolski 3.86 14⇑ *i*Pn **Pn 01 33 41.4 -0.2**
VNDS *i* Sn **Sn 01 34 27.6 +0.9**
VNDS
comp=Z,16µm,3.9s
BAD Bernadia 3.87 359⇑ *e*Pn **Pn 01 33 40.2 -1.4**
BAD Bernadia 3.87 359⇑ *e*Pn **Pn 01 33 40.2 -1.4**
CTI Castel Tesino 3.87 342 Pn **Pn 01 33 42.1 +0.3**
comp=Z,42µm,1.4s
CTI Castel Tesino 3.87 342 Pn **Pn 01 33 42.1 +0.3**
comp=Z,42µm,1.4s
CADS Cadrg 3.87 4 *i* Pn **Pn 01 33 40.4 -1.3**
CADS *e*Sn **Sn 01 34 29.9 +2.9**
CADS
comp=Z,96µm,3.0s
CADS Cadrg 3.87 4 *i* Pn **Pn 01 33 40.4 -1.3**
CADS *e*Sn **Sn 01 34 29.9 +2.9**
comp=Z,96µm,3.0s
GCIS Gornji Cirnik 3.87 25 *i* Pn **Pn 01 33 41.4 -0.3**
GCIS Gornji Cirnik 3.87 25 *i* Pn **Pn 01 33 41.4 -0.3**
ROBS Robic 3.88 2 *i* Pn **Pn 01 33 41.2 -0.6**
ROBS
comp=Z,79µm,2.4s
ROBS Robic 3.88 2 *i* Pn **Pn 01 33 41.2 -0.6**
comp=Z,79µm,2.4s
MPRI Monte Prat 3.88 357⇑ *e*Pn **Pn 01 33 41.0 -0.9**
MPRI Monte Prat 3.88 357⇑ *e*Pn **Pn 01 33 41.0 -0.9**
PDKS Podkum 3.88 18 *i* Pn **Pn 01 33 41.8 -0.1**
PDKS *e*Sn **Sn 01 34 29.7 +2.4**
PDKS
comp=Z,86µm,2.0s
PDKS Podkum 3.88 18 *i* Pn **Pn 01 33 41.8 -0.1**
PDKS *e*Sn **Sn 01 34 29.7 +2.4**
comp=Z,186µm,2.0s
VINO Villanova 3.89 360⇑ *e*Pn **Pn 01 33 40.6 -1.3**
VINO Villanova 3.89 360 Pn **Pn 01 33 40.9 -1.0**
comp=Z,55µm,1.5s
VINO Villanova 3.89 360 Pn **Pn 01 33 40.9 -1.0**
comp=Z,55µm,1.5s
BRY Bratogost 3.89 80⇑ *i*Pn **Pn 01 33 41.7 -0.4**
BRY Bratogost 3.89 80 ⇑P **Pn 01 33 40.9 -1.1**
BRY S **Sn 01 34 27.5 -0.1**
BRY Bratogost 3.89 80 ⇑P **Pn 01 33 40.9 -1.1**
BRY S **Sn 01 34 27.5 -0.1**
BRY Bratogost 3.89 80 P **Pn 01 33 40.9 -1.1**
BRY Bratogost 3.89 80⇑ *i*Pn **Pn 01 33 41.7 -0.4**
BRY S **Sn 01 34 27.5 -0.1**
CESS Cesta pri Krsk 3.92 22⇑ *i*Pn **Pn 01 33 42.1 -0.3**
CESS *e*(Sb) **Sb 01 34 34.2 -4.5**
CESS *e*Sg **Sb 01 34 43.0 +4.3**
CESS
comp=Z,70µm,2.4s
CESS Cesta pri Krsk 3.92 22⇑ *i*Pn **Pn 01 33 42.1 -0.3**
CESS *e*Sg **Sb 01 34 43.0 +4.3**
comp=Z,170µm,2.4s
IFIL Filicudi I Eol 3.92 166 Pn **Pn 01 33 43.2 +0.8**
comp=Z,680µm,7.7s
IFIL Filicudi I Eol 3.92 166 Pn **Pn 01 33 43.2 +0.8**
comp=Z,680µm,7.7s
PANI Panarotta 3.95 339⇓ *e*Pn **Pn 01 33 42.8 -0.2**
PANI Panarotta 3.95 339⇓ *e*Pn **Pn 01 33 42.8 -0.2**
CSO Casso 3.97 350 *e*Pn **Pn 01 33 42.3 -0.8**
CSO Casso 3.97 350 *e*Pn **Pn 01 33 42.3 -0.8**
GORS Gorjuse 3.98 7 *i* Pn **Pn 01 33 42.6 -0.6**
GORS *e*Sn **Sn 01 34 29.8 +0.1**
GORS
comp=Z,50µm,1.5s
GORS Gorjuse 3.98 7 *i* Pn **Pn 01 33 42.6 -0.6**
GORS *e*Sn **Sn 01 34 29.8 +0.1**
comp=Z,50µm,1.5s
FAU Forcella Aurin 3.98 346 *e*Pn **Pn 01 33 43.1 -0.2**
FAU Forcella Aurin 3.98 346 *e*Pn **Pn 01 33 43.1 -0.2**
CIMO Cimolais 3.99 351⇑ *e*Pn **Pn 01 33 42.2 -1.1**
CIMO Cimolais 3.99 351⇑ *e*Pn **Pn 01 33 42.2 -1.1**
GOLS Golise 4.00 24 *i* Pn **Pn 01 33 43.1 -0.4**
GOLS
comp=Z,71µm,4.6s
GOLS Golise 4.00 24 *i* Pn **Pn 01 33 43.1 -0.4**
comp=Z,371µm,4.6s
MOZS Mozjanca 4.00 11 *i* Pn **Pn 01 33 43.5 -0.1**
MOZS *e*Sn **Sn 01 34 32.4 +2.1**
MOZS
comp=Z,26µm,4.3s
MOZS Mozjanca 4.00 11 *i* Pn **Pn 01 33 43.5 -0.1**
MOZS *e*Sn **Sn 01 34 32.4 +2.1**
comp=Z,326µm,4.3s
AGOR Agordo 4.02 347 *e*Pn **Pn 01 33 43.5 -0.3**
AGOR Agordo 4.02 347 Pn **Pn 01 33 43.8 +0.1**
comp=Z,23µm,1.1s
FUSE Fusea 4.05 357⇑ *e*Pn **Pn 01 33 42.9 -1.3**
FUSE Fusea 4.05 357⇑ *e*Pn **Pn 01 33 42.9 -1.3**
DOBS Dobrina 4.08 21 *i* Pn **Pn 01 33 44.3 -0.3**
DOBS
comp=Z,8µm,4.7s
DOBS Dobrina 4.08 21 *i* Pn **Pn 01 33 44.3 -0.3**
comp=Z,308µm,4.7s
RNI Roncone 4.09 333⇓ *e*Pn **Pn 01 33 44.7 -0.1**
RNI Roncone 4.09 333⇓ *e*Pn **Pn 01 33 44.7 -0.1**
PCP Piancastagn 4.10 304 P **Pn 01 33 45.6 +0.7**
LSR Lussari 4.11 2⇑ *e*Pn **Pn 01 33 43.8 -1.3**
LSR Lussari 4.11 2⇑ *e*Pn **Pn 01 33 43.8 -1.3**
TIP Timpagrande 4.12 140 *e*Pn **Pn 01 33 47.2 +2.0**
TIP *e*Pg **Pb** 01 33 57.8 +2.8
TIP Timpagrande 4.12 140 *e*Pn **Pn 01 33 47.2 +2.0**
BUM Brajici-Budva 4.13 89⇓ *i*Pn **Pn 01 33 45.2 -0.2**
BUM Brajici-Budva 4.13 89⇓ *i*Pn **Pn 01 33 45.2 -0.2**
VSL Villasalto 4.14 227⇑ *e*Pn **Pn 01 33 44.2 -1.2**
VSL Villasalto 4.14 227⇑ *e*Pn **Pn 01 33 44.2 -1.2**
CSMI Casera Mimoias 4.17 354⇑ *e*Pn **Pn 01 33 45.1 -0.8**
CSMI Casera Mimoias 4.17 354⇑ *e*Pn **Pn 01 33 45.1 -0.8**
ACOM Acomizza, Ital 4.18 2⇑ *e*Pn **Pn 01 33 45.1 -1.0**
ACOM Acomizza, Ital 4.18 2 Pn **Pn 01 33 45.6 -0.5**
comp=Z,36µm,1.1s
ACOM Acomizza, Ital 4.18 2 Pn **Pn 01 33 45.6 -0.5**
comp=Z,36µm,1.1s
PLRO Paularo 4.18 358 *e*Pn **Pn 01 33 46.3 +0.2**
PLRO Paularo 4.18 358 *e*Pn **Pn 01 33 46.3 +0.2**
ZOU Zoufplan 4.19 357⇑ *e*Pn **Pn 01 33 45.2 -1.1**
UPM Unac-Piva 4.20 77⇓ *i*Pn **Pn 01 33 46.6 +0.3**
UPM Unac-Piva 4.20 77⇓ *i*Pn **Pn 01 33 46.6 +0.3**
NKY Niksic 4.21 82⇓ *i*Pn **Pn 01 33 46.2 -0.3**
NKY *e*Sn **Sn 01 34 36.1 +0.6**
NKY Niksic 4.21 82 ⇓P **Pn 01 33 46.1 -0.3**
NKY S **Sn 01 34 35.3 -0.2**
NKY Niksic 4.21 82 ⇓P **Pn 01 33 46.1 -0.3**
NKY S **Sn 01 34 35.3 -0.2**
NKY Niksic 4.21 82⇓ *i*Pn **Pn 01 33 46.2 -0.3**
NKY S **Sn 01 34 35.3 -0.2**
NKY *e*Sn **Sn 01 34 36.1 +0.6**
RORO Rocca Rossa 4.21 296 P **Pn 01 33 46.9 +0.5**
OBKA Obir 4.23 12⇑ *i*Pn **Pn 01 33 45.9 -0.9**
SNR=1114
OBKA Obir 4.23 12 Pn **Pn 01 33 45.9 -0.9**
SNR=1000
AFL Alpe Faloria 4.24 349 *e*Pn **Pn 01 33 47.0 0.0**
AFL Alpe Faloria 4.24 349 *e*Pn **Pn 01 33 47.0 0.0**
FVI Forni Avoltri 4.24 355⇑ *e*Pn **Pn 01 33 46.8 -0.1**
comp=Z,33µm,1.8s
FVI Forni Avoltri 4.24 355⇑ *e*Pn **Pn 01 33 46.8 -0.1**
comp=Z,33µm,1.8s
GRI Girifalco 4.26 145 Pn **Pn 01 33 47.8 +0.7**
comp=Z,491µm,5.4s
GRI Girifalco 4.26 145 Pn **Pn 01 33 47.8 +0.7**
comp=Z,491µm,5.4s
IMI Imperia 4.26 293 P **Pn 01 33 47.3 +0.2**
MYKA Terra Mystica 4.27 3⇑ *i*Pn **Pn 01 33 46.9 -0.3**
MYKA ⇑*i*Sn **Sn 01 34 37.4 +0.6**
MYKA Terra Mystica 4.27 3⇑ *i*Pn **Pn 01 33 46.9 -0.3**
MYKA *i* Sn **Sn 01 34 37.4 +0.6**
MYKA Terra Mystica 4.27 3 Pn **Pn 01 33 46.9 -0.3**
MYKA Sn **Sn 01 34 37.4 +0.6**
MDI Monti di Nese 4.28 324 Pn **Pn 01 33 47.5 0.0**
comp=Z,41µm,2.2s
MDI Monti di Nese 4.28 324 Pn **Pn 01 33 47.5 0.0**
comp=Z,41µm,2.2s
KOSI Kohlern 4.32 342⇓ *e*Pn **Pn 01 33 48.4 +0.4**
BOSI Bozen 4.37 342 *e*Pn **Pn 01 33 49.4 +0.9**
APPI Appiano 4.37 341 Pn **Pn 01 33 49.6 +0.9**
comp=Z,25µm,1.3s
APPI Appiano 4.37 341 Pn **Pn 01 33 49.6 +0.9**
comp=Z,25µm,1.3s
ROTM Rocchetta Tana 4.38 306 P **Pn 01 33 51.1 +2.5**
GROS Grobnik 4.38 20 *i* Pn **Pn 01 33 48.0 -0.7**
GROS Grobnik 4.38 20 *i* Pn **Pn 01 33 48.0 -0.7**
PDG Podgorica 4.40 87⇑ *i*Pn **Pn 01 33 49.1 +0.1**
PDG *e*Sn **Sn 01 34 40.2 +0.4**
PDG Podgorica 4.40 87⇑ *e*Pn **Pn 01 33 49.0 +0.1**
comp=Z,134µm,1.9s
PDG Podgorica 4.40 87⇑ *e*Pn **Pn 01 33 49.0 +0.1**
comp=Z,134µm,1.9s
PDG *e*Sn **Sn 01 34 40.2 +0.4**
TTG Podgorica 4.40 87⇑ *i*Pn **Pn 01 33 48.7 -0.2**
TTG *e*Sn **Sn 01 34 40.8 +0.9**
TTG Podgorica 4.40 87 ⇓P **Pn 01 33 48.7 -0.2**
TTG S **Sn 01 34 40.3 +0.4**
TTG Podgorica 4.40 87 ⇓P **Pn 01 33 48.7 -0.2**
TTG S **Sn 01 34 40.3 +0.4**
TTG Podgorica 4.40 87 P **Pn 01 33 48.7 -0.2**
TTG S **Sn 01 34 40.3 +0.4**
ABTA Abfaltersbach 4.42 353 *i* Pn **Pn 01 33 49.2 0.0**
SNR=2746
ABTA ⇑*i*Sn **Sn 01 34 41.7 +1.2**
ABTA Abfaltersbach 4.42 353 *i* Pn **Pn 01 33 49.2 0.0**
ABTA *i* Sn **Sn 01 34 41.7 +1.2**
ABTA Abfaltersbach 4.42 353 Pn **Pn 01 33 49.2 0.0**
SNR=1000
ABTA Sn **Sn 01 34 41.7 +1.2**
ULC Ulcinj 4.42 93⇑ *i*Pn **Pn 01 33 48.6 -0.7**
ULC *e*Sn **Sn 01 34 41.6 +1.0**
ULC Ulcinj 4.42 93 ⇑P **Pn 01 33 48.6 -0.7**
ULC S **Sn 01 34 41.1 +0.5**
ULC Ulcinj 4.42 93 ⇑P **Pn 01 33 48.6 -0.7**
ULC S **Sn 01 34 41.1 +0.5**
ULC Ulcinj 4.42 93⇑ *i*Pn **Pn 01 33 48.6 -0.7**
ULC S **Sn 01 34 41.1 +0.5**
ULC *e*Sn **Sn 01 34 41.6 +1.0**
PERS Pernice 4.46 16⇑ *i*Pn **Pn 01 33 49.3 -0.5**
PERS
comp=Z,25µm,5.1s
PERS Pernice 4.46 16⇑ *i*Pn **Pn 01 33 49.3 -0.5**
comp=Z,225µm,5.1s
BISS Bistriski jare 4.47 16 *i* Pn **Pn 01 33 49.4 -0.5**
BISS Bistriski jare 4.47 16 *i* Pn **Pn 01 33 49.4 -0.5**
SOKA Soboth 4.48 15⇓ *i*Pn **Pn 01 33 49.4 -0.7**
SOKA Soboth 4.48 15⇓ *i*Pn **Pn 01 33 49.4 -0.7**
SOKA Soboth 4.48 15 Pn **Pn 01 33 49.4 -0.7**
SCTE Santa Cesarea 4.51 119⇑ *e*Pn **Pn 01 33 50.3 -0.2**
comp=Z,91µm,1.4s
SCTE Santa Cesarea 4.51 119⇑ *e*Pn **Pn 01 33 50.3 -0.2**
comp=Z,91µm,1.4s
SAOF Saorge 4.51 293 P **Pn 01 33 51.6 +1.0**
SAOF Saorge 4.51 293 P **Pn 01 33 51.6 +1.0**
SAOF Saorge 4.51 293 P **Pn 01 33 51.6 +1.0**
CEL Celeste 4.55 154 *e*Pn **Pn 01 33 51.7 +0.6**
CEL *e*Pg **Pb 01 34 01.6 -0.7**
CEL Celeste 4.55 154 Pn **Pn 01 33 51.3 +0.2**
comp=Z,438µm,5.7s
CEL Celeste 4.55 154 Pn **Pn 01 33 51.3 +0.2**
comp=Z,438µm,5.7s
SBF Sospel 4.56 291 *e*Pn **Pn 01 33 51.3 +0.1**
SBF *e*Sn **Sn 01 34 41.3 -2.7**
comp=Z,6µm,0.8s
SBF Sospel 4.56 291 *e*P **Pn 01 33 51.3 +0.1**
SBF *e* 01 34 41.3
SBF Sospel 4.56 291 *e*Pn **Pn 01 33 51.3 +0.1**
SBF *e*Sn **Sn 01 34 41.3 -2.7**
SBF Sospel 4.56 291 *e*Pn **Pn 01 33 51.3 +0.1**
SBF *e*Sn **Sn 01 34 41.3 -2.7**
comp=Z,3µm,0.8s
PLE Pljevlja 4.56 76⇑ *i*Pn **Pn 01 33 51.9 +0.6**
PLE *e*Sn **Sn 01 34 44.9 +0.7**
PLE Pljevlja 4.56 76⇑ *i*Pn **Pn 01 33 51.9 +0.6**
PLE *e*Sn **Sn 01 34 44.9 +0.7**
REVF Revere 4.57 289 P **Pn 01 33 51.9 +0.5**
REVF Revere 4.57 289 P **Pn 01 33 51.9 +0.5**
REVF Revere 4.57 289 P **Pn 01 33 51.9 +0.5**
REVF Revere 4.57 289 P **Pn 01 33 51.9 +0.5**
PLAC Placanica 4.58 148 Pn **Pn 01 33 52.1 +0.6**
comp=Z,1314µm,10.0s
PLAC Placanica 4.58 148 Pn **Pn 01 33 52.1 +0.6**
comp=Z,1314µm,10.0s
ABSI Aberstueckl 4.59 343 Pn **Pn 01 33 52.7 +1.0**
comp=Z,28µm,0.6s
ABSI Aberstueckl 4.59 343 Pn **Pn 01 33 52.7 +1.0**
comp=Z,28µm,0.6s
KOGS Kog 4.59 26 *i* Pn **Pn 01 33 50.5 -1.0**
KOGS *e*Sn **Sn 01 34 48.8 +4.3**
KOGS
comp=Z,3µm,3.8s
KOGS Kog 4.59 26 *i* Pn **Pn 01 33 50.5 -1.0**
KOGS *e*Sn **Sn 01 34 48.8 +4.3**
comp=Z,303µm,3.8s
AUTN L'Aution 4.60 293 P **Pn 01 33 52.7 +0.7**
AUTN S Sn 01 34 52.6 +7.3
AUTN L'Aution 4.60 293 P **Pn 01 33 52.7 +0.7**
AUTN S Sn 01 34 52.6 +7.3
AUTN L'Aution 4.60 293 P **Pn 01 33 52.7 +0.7**
AUTN S Sn 01 34 52.6 +7.3
AUTN L'Aution 4.60 293 P **Pn 01 33 52.7 +0.7**
BRMO Bormio 4.62 334 Pn **Pn 01 33 53.1 +1.1**
comp=Z,14µm,1.5s
BRMO Bormio 4.62 334 Pn **Pn 01 33 53.1 +1.1**
comp=Z,14µm,1.5s
RISI Rein 4.66 349⇑ *e*Pn **Pn 01 33 53.0 +0.3**
MOSI Grossmontoni 4.69 336⇓ *e*Pn **Pn 01 33 54.1 +1.0**
BBLS Lazići 4.70 69 *e*Pn **Pn 01 33 53.3 +0.2**
BBLS *e*Sn **Sn 01 34 49.3 +1.8**
BBLS Lazići 4.70 69 *e*Pn **Pn 01 33 53.3 +0.2**
BBLS *e*Sn **Sn 01 34 49.3 +1.8**
KBA Koelnbreinsper 4.71 0⇑ *i*P **Pn 01 33 53.0 -0.4**
KBA *i* 01 34 49.5
KBA Koelnbreinsper 4.71 0⇑ *i*Pn **Pn 01 33 53.0 -0.4**
SNR=988
KBA ⇓*i*Sn **Sn 01 34 49.5 +1.7**
KBA Koelnbreinsper 4.71 0⇑ *i*Pn **Pn 01 33 53.0 -0.4**
KBA *i* Sn **Sn 01 34 49.5 +1.7**
KBA Koelnbreinsper 4.71 0 Pn **Pn 01 33 53.0 -0.4**
SNR=988
KBA Sn **Sn 01 34 49.5 +1.7**
TOUF Mont Tournerai 4.73 292 P **Pn 01 33 55.0 +1.3**
TOUF Mont Tournerai 4.73 292 P **Pn 01 33 55.0 +1.3**
TOUF Mont Tournerai 4.73 292 P **Pn 01 33 55.0 +1.3**
TOUF Mont Tournerai 4.73 292 P **Pn 01 33 55.0 +1.3**
ROSI Rosskopf 4.76 344⇑ *e*Pn **Pn 01 33 54.5 +0.5**
STV Sant Anna di V 4.76 295 P **Pn 01 33 55.3 +1.3**
MVIF Mont Vial 4.76 291 P **Pn 01 33 54.8 +0.7**
MVIF Mont Vial 4.76 291 P **Pn 01 33 54.8 +0.7**
MVIF Mont Vial 4.76 291 P **Pn 01 33 54.8 +0.7**
MVIF Mont Vial 4.76 291 P **Pn 01 33 54.8 +0.7**
SOI Samo 4.78 153 Pn **Pn 01 33 54.9 +0.8**
comp=Z,556µm,9.3s
SOI Samo 4.78 153 Pn **Pn 01 33 54.9 +0.8**
comp=Z,556µm,9.3s
FUORN Ofenpass-Fuorn 4.78 334 *e*Pn **Pn 01 33 55.2 +0.8**
FUORN *e*Sn **Sn 01 34 52.7 +3.0**
FUORN Ofenpass-Fuorn 4.78 334 *e*Pn **Pn 01 33 55.2 +0.8**
FUORN *e*Sn **Sn 01 34 52.7 +3.0**
BEHE Becsehely 4.79 30 *e*pPn **Pn 01 33 55.4 +1.1**
BEY Berane 4.88 82⇓ *i*Pn **Pn 01 33 56.3 +0.7**
BEY *e*Sn **Sn 01 34 51.4 -0.5**
IVA Berane 4.88 82⇓ *i*Pn **Pn 01 33 56.3 +0.7**
IVA *e*Sn **Sn 01 34 51.4 -0.5**
PUK Puka 4.89 92 *i* PN **Pn 01 33 56.6 +0.8**
PUK *i* SN **Sn 01 34 54.7 +2.4**
PUK Puka 4.89 92 *i* Pn **Pn 01 33 56.6 +0.8**
PUK *i* Sn **Sn 01 34 54.7 +2.4**
CALN Calern 4.91 289 P **Pn 01 33 56.7 +0.6**
CALN Calern 4.91 289 P **Pn 01 33 56.7 +0.6**
CALN Calern 4.91 289 P **Pn 01 33 56.7 +0.6**
CALN Calern 4.91 289 P **Pn 01 33 56.7 +0.6**
DOI San Damiano 4.91 298 Pn **Pn 01 33 57.5 +1.5**
comp=Z,114µm,5.2s
DOI San Damiano 4.91 298 Pn **Pn 01 33 57.5 +1.5**
comp=Z,114µm,5.2s
PVY Plav 4.92 85⇑ *i*Pn **Pn 01 33 57.1 +0.9**
PVY *e*Sn **Sn 01 34 53.1 +0.2**
PVY Plav 4.92 85 ⇓P **Pn 01 33 56.9 +0.7**
PVY S **Sn 01 34 52.0 -0.9**
SJES Sjenica 4.97 77⇑ *i*Pn **Pn 01 33 57.1 +0.1**
SJES *e*Sn **Sn 01 34 54.8 +0.5**
SJES *e*Sn **Sn 01 34 55.7 +1.4**
TUE Stuetta 4.99 327 *e*Pn **Pn 01 33 58.1 +0.9**
TUE *e*Sn **Sn 01 34 53.8 -1.1**
TUE Stuetta 4.99 327 Pn **Pn 01 33 58.0 +0.7**
comp=Z,15µm,1.7s
TUE Stuetta 4.99 327 Pn **Pn 01 33 58.0 +0.7**
comp=Z,15µm,1.7s
TUE *e*Sn **Sn 01 34 53.8 -1.1**
TIR Tirane 4.99 100 *i* PN **Pn 01 33 56.2 -0.9**
TIR *i* SN **Sn 01 34 56.7 +2.1**
TIR Tirane 4.99 100 P **Pn 01 33 57.0 -0.1**
TIR S **Sn 01 34 52.6 -2.0**
TIR Tirane 4.99 100 *e*P **Pn 01 33 56.8 -0.3**
TIR *e* 01 34 51.1
TIR Tirane 4.99 100 *e*Pn **Pn 01 33 56.8 -0.3**
TIR *e*Sn **Sn 01 34 51.1 -3.5**
TIR Tirane 4.99 100 *e*P **Pn 01 33 56.4 -0.7**
TIR Tirane 4.99 100⇑ *i*Pn **Pn 01 33 57.0 -0.1**
TIR *e*Sn **Sn 01 34 52.9 -1.7**
TIR Tirane 4.99 100 *i* Pn **Pn 01 33 56.2 -0.9**
TIR Tirane 4.99 100 *e*P **Pn 01 33 56.8 -0.3**
TIR *e*Sn **Sn 01 34 51.1 -3.5**
PZZ Stroppo 5.00 297 Pn **Pn 01 33 58.4 +1.1**
comp=Z,168µm,6.8s
PZZ Stroppo 5.00 297 P **Pn 01 33 58.3 +1.0**
BCI Bajram Curri 5.00 88 *i* PN **Pn 01 33 58.5 +1.3**
BCI *i* SN **Sn 01 34 58.1 +3.3**
BCI Bajram Curri 5.00 88 *i* Pn **Pn 01 33 58.5 +1.3**
BCI *i* Sn **Sn 01 34 58.1 +3.3**
FETA Feichten 5.00 339⇓ *i*Pn **Pn 01 33 58.2 +0.8**
SNR=1439
FETA ⇑*i*Sn **Sn 01 34 56.2 +1.1**
FETA Feichten 5.00 339⇓ *i*Pn **Pn 01 33 58.2 +0.8**
FETA *i* Sn **Sn 01 34 56.2 +1.1**
FETA Feichten 5.00 339 Pn **Pn 01 33 58.2 +0.8**
SNR=1000
FETA Sn **Sn 01 34 56.2 +1.1**
TEKS Tekeris 5.02 62⇓ *i*Pn **Pn 01 33 56.5 -1.0**
TEKS Tekeris 5.02 62⇓ *i*Pn **Pn 01 33 56.5 -1.0**
VLO Vlora 5.02 110 *i* PN **Pn 01 34 10.1 -0.1**
VLO Vlora 5.02 110 P **Pn 01 33 57.8 +0.4**
VLO S **Sn 01 34 51.3 -3.9**
VLO Vlora 5.02 110 P **Pn 01 33 57.8 +0.4**
VLO S **Sn 01 34 51.3 -3.9**
WTTA Wattenberg 5.04 347⇑ *i*P **Pn 01 33 59.0 +1.1**
WTTA Wattenberg 5.04 347⇑ *i*Pn **Pn 01 33 59.0 +1.1**
SNR=1431
WTTA Wattenberg 5.04 347⇑ *i*Pn **Pn 01 33 59.0 +1.1**
WTTA Wattenberg 5.04 347 Pn **Pn 01 33 59.0 +1.1**
SNR=1000
FRF La Foret Royal 5.04 286 *e*Pn **Pn 01 33 57.5 -0.2**
SNR=1.0
FRF *e*Sn **Sn 01 34 52.4 -3.3**

comp=Z,945nm,0.8s
FRF La Foret Royal 5.04 286 *e*P **Pn 01 33 57.5 -0.2**
FRF *e* 01 34 52.4
FRF La Foret Royal 5.04 286 *e*Pn **Pn 01 33 57.5 -0.2**
FRF *e*Sn **Sn 01 34 52.4 -3.3**
FRF La Foret Royal 5.04 286 *e*Pn **Pn 01 33 57.5 -0.2**
SNR=1.0
FRF *e*Sn **Sn 01 34 52.4 -3.3**
comp=Z,472nm,0.8s
DAVOX Davos/Dischmat 5.05 332 Pn **Pn 01 33 59.1 +1.1**
DAVOX Sn **Sn 01 34 59.1 +2.9**
DAVOX Davos/Dischmat 5.05 332 Pn **Pn 01 33 59.1 +1.1**
DAVOX Sn **Sn 01 34 59.1 +2.9**
comp=Z,181nm,0.3s,baz=318,slow=16,SNR=4.3
DAVOX Davos/Dischmat 5.05 332 Pn **Pn 01 33 59.1 +1.1**
DAVOX Sn **Sn 01 34 59.1 +2.9**
LMR La Mourre 5.10 283 *e*Pn **Pn 01 33 58.1 -0.4**
SNR=1.0
LMR *e*Sn **Sn 01 34 53.9 -3.3**
comp=Z,1µm,0.8s
LMR La Mourre 5.10 283 *e*P **Pn 01 33 58.1 -0.4**
LMR *e* 01 34 53.9
LMR La Mourre 5.10 283 *e*Pn **Pn 01 33 58.1 -0.4**
LMR *e*Sn **Sn 01 34 53.9 -3.3**
LMR La Mourre 5.10 283 *e*Pn **Pn 01 33 58.1 -0.4**
SNR=1.0
LMR *e*Sn **Sn 01 34 53.9 -3.3**
comp=Z,634nm,0.8s
TRAV Traversella 5.10 310 P **Pn 01 33 57.9 -0.8**
WATA Walderalm 5.12 347⇑*i*P **Pn 01 33 59.8 +0.8**
WATA Walderalm 5.12 347⇑*i*Pn **Pn 01 33 59.8 +0.8**
SNR=579
WATA Walderalm 5.12 347⇑*i*Pn **Pn 01 33 59.8 +0.8**
WATA Walderalm 5.12 347 Pn **Pn 01 33 59.8 +0.8**
SNR=579
ARSA Arzberg 5.13 17⇓*i*Pn **Pn 01 33 57.9 -1.0**
SNR=564
ARSA ⇓*i*Sn **Sn 01 34 57.8 -0.1**
ARSA Arzberg 5.13 17⇓*i*Pn **Pn 01 33 58.0 -1.0**
ARSA *i* Sn **Sn 01 34 57.8 -0.1**
ARSA Arzberg 5.13 17⇑*i*Pn **Pn 01 33 58.3 -0.7**
ARSA Arzberg 5.13 17 Pn **Pn 01 33 57.9 -1.0**
SNR=564
ARSA Sn **Sn 01 34 57.8 -0.1**
IVAS Ivanjica 5.16 74⇑*i*Pn **Pn 01 33 59.4 0.0**
IVAS *e*Sn **Sn 01 35 00.2 +1.5**
IVAS Ivanjica 5.16 74⇑*i*Pn **Pn 01 33 59.4 0.0**
IVAS *e*Sn **Sn 01 35 00.2 +1.5**
DIVS Divibare 5.17 68 P **Pn 01 33 59.0 -0.7**
DIVS S **Sn 01 34 56.9 -2.2**
DIVS Divibare 5.17 68⇑*i*Pn **Pn 01 33 59.3 -0.4**
DIVS *e*Sn **Sn 01 34 57.9 -1.2**
DIVS Divibare 5.17 68 P **Pn 01 33 59.0 -0.7**
DIVS Divibare 5.17 68⇑*i*Pn **Pn 01 33 59.3 -0.4**
DIVS S **Sn 01 34 56.9 -2.2**
DIVS *e*Sn **Sn 01 34 57.9 -1.2**
RSP Reno Superiore 5.19 304 P **Pn 01 33 59.6 -0.3**
MOTA Moosalm 5.22 343⇓*i*P **Pn 01 34 01.0 +0.7**
MOTA *i* 01 35 02.4
MOTA Moosalm 5.22 343⇓*i*Pn **Pn 01 34 01.0 +0.7**
SNR=1628
MOTA ⇑*i*Sn **Sn 01 35 02.4 +2.0**
MOTA Moosalm 5.22 343⇓*i*Pn **Pn 01 34 01.0 +0.7**
MOTA *i* Sn **Sn 01 35 02.4 +2.0**
MOTA Moosalm 5.22 343 Pn **Pn 01 34 01.0 +0.7**
SNR=1000
MOTA Sn **Sn 01 35 02.4 +2.0**
MBDF Montbardon 5.31 299 *e*P **Pn 01 34 03.4 +1.8**
SNR=1.0
MBDF Montbardon 5.31 299 *e*P **Pn 01 34 03.4 +1.8**
MBDF Montbardon 5.31 299 *e*P **Pn 01 34 03.4 +1.8**
MBDF Montbardon 5.31 299 *e*P **Pn 01 34 03.4 +1.8**
SNR=1.0
PHP Peshkopia 5.35 95 *i* PN **Pn 01 34 03.3 +1.2**
PHP *i* SN **Sn 01 35 00.2 -3.3**
PHP Peshkopia 5.35 95 P **Pn 01 34 02.4 +0.3**
PHP Peshkopia 5.35 95 P **Pn 01 34 02.4 +0.3**
PHP Peshkopia 5.35 95 *i* Pn **Pn 01 34 03.3 +1.2**
PHP *i* Sn **Sn 01 35 00.2 -3.3**
RJOB Jochberg 5.38 356 *e*Pn **Pn 01 34 02.9 +0.4**
PKSM Moragy 5.42 43⇑*i*P **Pn 01 34 01.5 -1.4**
PKSM Moragy 5.42 43⇑*i*Pn **Pn 01 34 01.7 -1.2**
PKSM Moragy 5.42 43 *e*pPn **Pn 01 34 03.7 +0.8**
PKSM Moragy 5.42 43⇑*i*P **Pn 01 34 01.5 -1.4**
RETA Reutte 5.43 341⇓*i*Pn **Pn 01 34 04.5 +1.3**
SNR=1731
RETA Reutte 5.43 341⇓*i*Pn **Pn 01 34 04.5 +1.3**
RETA Reutte 5.43 341 Pn **Pn 01 34 04.5 +1.3**
SNR=1000
DAVA Damuels 5.49 335⇑*i*Pn **Pn 01 34 05.3 +1.2**
SNR=1039
DAVA ⇑*i*Sn **Sn 01 35 08.4 +1.4**
DAVA Damuels 5.49 335⇑*i*Pn **Pn 01 34 05.3 +1.2**
DAVA *i* Sn **Sn 01 35 08.4 +1.4**
DAVA Damuels 5.49 335 Pn **Pn 01 34 05.3 +1.2**
SNR=1000
DAVA Sn **Sn 01 35 08.4 +1.4**
TRUS Trudelj 5.49 68⇑*i*Pn **Pn 01 34 02.6 -1.4**
TRUS *e*Sn **Sn 01 35 07.7 +0.7**
BNI Bardonecchia 5.51 301 *e*P **Pn 01 34 06.1 +1.8**
BNI Bardonecchia 5.51 301 *e*Pn **Pn 01 34 06.1 +1.8**
BNI Bardonecchia 5.51 301 *e*Pn **Pn 01 34 06.1 +1.8**
PKS9 Tamasi 5.51 38 *e*Pn **Pn 01 34 03.4 -0.8**
MOA Molln 5.52 7⇑*i*Pn **Pn 01 34 04.0 -0.4**
SNR=972
MOA ⇓*i*Sn **Sn 01 35 08.2 +0.6**
MOA Molln 5.52 7⇑*i*Pn **Pn 01 34 04.0 -0.4**
MOA *i* Sn **Sn 01 35 08.2 +0.6**
MOA Molln 5.52 7 Pn **Pn 01 34 04.0 -0.4**
SNR=972
MOA Sn **Sn 01 35 08.2 +0.6**
KEK Kerkira 5.57 116 P **Pn 01 34 04.8 -0.3**
KEK S **Sn 01 35 07.0 -1.9**
KEK Kerkira 5.57 116 *e*P **Pn 01 34 04.8 -0.3**
KEK Kerkira 5.57 116⇑*e*Pn **Pn 01 34 05.2 +0.1**
comp=Z,18µm,1.5s
KEK Kerkira 5.57 116⇑*e*Pn **Pn 01 34 05.2 +0.1**
comp=Z,18µm,1.5s
GRUS Gruza 5.62 72⇑*i*Pn **Pn 01 34 05.6 -0.1**
GRUS *e*Sn **Sn 01 35 10.7 +0.7**
GRUS *e*Sn **Sn 01 35 10.8 +0.7**
LPG La Plagne 5.68 306 *e*P **Pn 01 34 09.2 +2.4**
SNR=1.0
LPG *e*Sn **Sn 01 35 08.3 -3.6**
comp=Z,4µm,0.9s
LPG La Plagne 5.68 306 *e*P **Pn 01 34 09.2 +2.4**
LPG *e* 01 35 08.3
LPG La Plagne 5.68 306 *e*P **Pn 01 34 09.2 +2.4**
LPG *e*Sn **Sn 01 35 08.3 -3.6**
LPL La Plagne 5.70 306 *e*P **Pn 01 34 09.4 +2.4**
SNR=1.0
LPL *e*Sn **Sn 01 35 07.5 -4.9**
comp=Z,2µm,0.7s
LPL La Plagne 5.70 306 *e*P **Pn 01 34 09.4 +2.4**
LPL *e* 01 35 07.5
LPL La Plagne 5.70 306 *e*P **Pn 01 34 09.4 +2.4**
LPL *e*Sn **Sn 01 35 07.5 -4.9**
BEO Beograd 5.74 62 *e*Pn **Pn 01 34 06.1 -1.2**
SOP Sopron 5.79 22 *e*Pn **Pn 01 34 07.3 -0.7**
SELS Selova 5.80 79⇓*i*Pn **Pn 01 34 07.7 -0.5**
SELS *e*Sn **Sn 01 35 13.3 -1.3**
SELS *e*Sn **Sn 01 35 15.6 +1.0**
CONA Conrad Observa 5.84 17⇑*i*Pn **Pn 01 34 07.8 -1.0**
SNR=1134
CONA ⇑*i*Sn **Sn 01 35 15.5 -0.1**
CONA Conrad Observa 5.84 17⇑*i*Pn **Pn 01 34 07.8 -1.0**
CONA *i* Sn **Sn 01 35 15.5 -0.1**
CONA Conrad Observa 5.84 17 Pn **Pn 01 34 07.8 -1.0**
SNR=1000
CONA Sn **Sn 01 35 15.5 -0.1**
SENIN Lac Senin/Sane 5.88 315 *e*Pn **Pn 01 34 10.2 +0.7**
SENIN Lac Senin/Sane 5.88 315 *e*Pn **Pn 01 34 10.2 +0.7**
SMRF Simiane la Rot 5.89 288 *e*P **Pn 01 34 10.7 +1.3**
SNR=1.0
SMRF Simiane la Rot 5.89 288 *e*P **Pn 01 34 10.7 +1.3**
PKS2 Kecel 5.90 44 *e*pPn **Pn 01 34 11.1 +1.6**
LSK Leskovik 5.92 110 *i* PN **Pn 01 34 10.4 +0.5**
PKST T''s 5.93 33 *e*pPn **Pn 01 34 10.1 +0.1**
ORIF Oris-en-Rattie 5.97 298 *e*P Pn 01 34 13.9 +3.3
SNR=1.0
ORIF *e*Sn **Sn 01 35 14.9 -3.9**
comp=Z,6µm,1.1s
ORIF *e*R
comp=Z,215µm,23.8s
ORIF Oris-en-Rattie 5.97 298 *e*P Pn 01 34 13.9 +3.3
ORIF *e* 01 35 14.9
ORIF Oris-en-Rattie 5.97 298 *e*P Pn 01 34 13.9 +3.3
ORIF *e*Sn **Sn 01 35 14.9 -3.9**
FUR Furstenfeldbru 5.97 347 *e*P **Pn 01 34 11.1 +0.5**
FUR Furstenfeldbru 5.97 347 *e*Pn **Pn 01 34 11.1 +0.5**
IGT Igoumenitsa 6.02 116 P **Pn 01 34 11.4 +0.2**
IGT S **Sn 01 35 19.6 -0.3**
SKO Skopje 6.05 91 P **Pn 01 34 12.5 +0.8**
SKO Skopje 6.05 91 *e*Pn **Pn 01 34 12.6 +1.0**
SKO *e*Sn Sn 01 34 58.0 -23
SKO *e*Lg Lg 01 35 25.1
comp=N,46µm,2.1s
SKO *e*Sg Sb 01 35 25.4 -15
SKO *e*Lg Lg 01 35 26.1
comp=E,17µm,1.0s
SKO Skopje 6.05 91 *e*Pn **Pn 01 34 12.4 +0.8**
SKO *e*Sn **Sn 01 35 18.9 -1.7**
SKO Skopje 6.05 91 *e*Pn **Pn 01 34 13.1 +1.5**
SKO *e*Sn Sn 01 34 58.4 -22
SKO *e*Sg Sb 01 35 25.8 -14
SKO *e*Lg Lg 01 35 26.5
comp=E,17µm,1.0s
SVIS Svilajnac 6.06 69⇑*i*Pn **Pn 01 34 10.9 -0.9**
SVIS *e*Sn **Sn 01 35 20.9 0.0**
NEST Nestorio 6.13 106 P **Pn 01 34 13.4 +0.5**
NEST S **Sn 01 35 22.5 -0.3**
BIA Bitola 6.14 100 P **Pn 01 34 12.3 -0.7**
BIA Bitola 6.14 100 *i* Pn **Pn 01 34 12.7 -0.2**
BIA Bitola 6.14 100 *i* Pn **Pn 01 34 12.7 -0.2**
PKS6 Bocsa 6.15 44 *e*pPn **Pn 01 34 14.4 +1.4**
PKSG 6.18 34 *e*pPn **Pn 01 34 14.6 +1.2**
FNA Florina 6.25 102 P **Pn 01 34 13.4 -1.0**
FNA S **Sn 01 35 23.3 -2.3**
FNA Florina 6.25 102 *e*P **Pn 01 34 13.8 -0.6**
PKS7 Kunszentmiklos 6.26 40 *e*pPn **Pn 01 34 15.6 +1.1**
BARS Barje 6.29 83⇓*i*Pn **Pn 01 34 14.6 -0.3**
BARS *e*Sn **Sn 01 35 24.2 -2.3**
JAN Janina 6.31 113 P **Pn 01 34 15.6 +0.3**
JAN S **Sn 01 35 26.3 -0.8**
JAN Janina 6.31 113 *e*P **Pn 01 34 15.5 +0.3**
GEC2 GERESS Array S 6.48 2 *e*Pn **Pn 01 34 16.3 -1.3**
GEC2 GERESS Array S 6.48 2 *e*Pn **Pn 01 34 16.3 -1.3**
GERES GERESS Array B 6.48 2 Pn **Pn 01 34 16.3 -1.3**
GERES Sn **Sn 01 35 28.9 -2.5**
GERES GERESS Array B 6.48 2 Pn **Pn 01 34 16.3 -1.3**
comp=E,29nm,0.3s,baz=181,slow=11,SNR=444
GERES Sn **Sn 01 35 28.9 -2.5**
comp=E,120nm,0.3s,baz=187,slow=21,SNR=4.5
GERES GERESS Array B 6.48 2 Pn **Pn 01 34 16.3 -1.3**
GERES Sn **Sn 01 35 28.9 -2.5**
BOLS Boljevac 6.49 74⇑*i*Pn **Pn 01 34 15.7 -1.9**
BOLS *e*Sn **Sn 01 35 29.8 -1.6**
PKSN Nyarlorinc 6.50 44 *e*pPn **Pn 01 34 20.8 +3.0**
BUD Budapest 6.52 36 *e*pPn **Pn 01 34 18.4 +0.8**
BBS Basel-Blauen 6.55 323 P **Pn 01 34 18.4 -0.2**
BBS Basel-Blauen 6.55 323 P **Pn 01 34 18.4 -0.2**
WDD Wield Dalam 6.56 171 *e*Pn **Pn 01 34 19.1 +0.5**
comp=E,788nm,0.8s
WDD Wield Dalam 6.56 171 *e*Pn **Pn 01 34 19.1 +0.5**
comp=E,788nm,0.8s
SPAK Spaichingen-Ko 6.56 332 P **Pn 01 34 18.6 -0.1**
TIM Timisoara 6.61 57 P **Pn 01 34 21.4 +2.1**
TIM Timisoara 6.61 57⇓*i*P **Pn 01 34 21.4 +2.1**
TIM Timisoara 6.61 57⇓*i*P **Pn 01 34 21.4 +2.1**
LKD2 Lefkada island 6.63 120 P **Pn 01 34 19.7 0.0**
LKD2 S **Sn 01 35 33.0 -2.1**
FELD Feldberg im Sc 6.67 328 P **Pn 01 34 19.7 -0.5**
OG3S Corcelles 6.67 306 P **Pn 01 34 21.0 +0.8**
CABF La Chapelle 6.69 312 *e*Pn **Pn 01 34 20.8 +0.4**
SNR=1.0
CABF La Chapelle 6.69 312 *e*P **Pn 01 34 20.8 +0.4**
CABF La Chapelle 6.69 312 *e*Pn **Pn 01 34 20.8 +0.4**
KZN Kozani 6.69 105 P **Pn 01 34 20.2 -0.3**
KZN Kozani 6.69 105 *e*P **Pn 01 34 20.0 -0.5**
VIVF Saint-Julien-l 6.75 295 *e*Pn **Pn 01 34 22.7 +1.4**
SNR=1.0
VIVF Saint-Julien-l 6.75 295 *e*P **Pn 01 34 22.7 +1.4**
VIVF Saint-Julien-l 6.75 295 *e*Pn **Pn 01 34 22.7 +1.4**
KHC Kasperske Hory 6.76 1 *e*P **Pn 01 34 20.2 -1.3**
KHC *e* 01 35 35.6
KHC Kasperske Hory 6.76 1 *e*Pn **Pn 01 34 20.2 -1.3**
KHC *e*Sn **Sn 01 35 35.6 -2.7**
KHC Kasperske Hory 6.76 1⇑*e*PN **Pn 01 34 20.2 -1.3**
KHC *ex* x 01 34 36.5
KHC *e*SN **Sn 01 35 36.3 -2.0**
KHC AMS AMS 01 37 10.0
comp=E,216µm,13.2s
KHC Kasperske Hory 6.76 1 Pn **Pn 01 34 20.2 -1.3**
KHC *e*Sn **Sn 01 35 35.6 -2.7**
WET Wettzell 6.78 358 *e*P **Pn 01 34 20.7 -1.0**
WET Wettzell 6.78 358 *e*Pn **Pn 01 34 20.7 -1.0**
LOMF Lomont 6.79 319 P **Pn 01 34 21.8 0.0**
LOMF Lomont 6.79 319 P **Pn 01 34 21.8 0.0**
LOMF Lomont 6.79 319 P **Pn 01 34 21.8 0.0**
SMOL Smolenice 6.79 24 *e*P **Pn 01 34 21.1 -0.7**
SMOL Smolenice 6.79 24 *e*PN **Pn 01 34 21.1 -0.7**
BZS Buzias 6.81 59⇓P **Pn 01 34 23.5 +1.5**
BZS Buzias 6.81 59⇓*i*P **Pn 01 34 23.5 +1.5**
BZS Buzias 6.81 59⇑*i*Pn **Pn 01 34 20.8 -1.2**
BZS Buzias 6.81 59⇓*i*P **Pn 01 34 23.5 +1.5**
ZAPS Zavoj 6.91 79⇑*i*Pn **Pn 01 34 23.9 +0.4**
ZAPS *e*Sn **Sn 01 35 38.8 -3.0**
BFO Black Forest 6.92 331 *e*P **Pn 01 34 22.6 -1.0**
BFO Black Forest 6.92 331 *e*Pn **Pn 01 34 22.6 -1.0**
BFO Black Forest 6.92 331 *e*Pn **Pn 01 34 22.5 -1.1**
BFO Black Forest 6.92 331 *e*Pn **Pn 01 34 22.5 -1.0**
GRG Griva 6.95 99 P **Pn 01 34 23.1 -0.9**
GRG S **Sn 01 35 40.4 -2.4**
GRG Griva 6.95 99 *e*P **Pn 01 34 22.8 -1.2**
VLS Valsamata 6.96 125 P **Pn 01 34 24.1 0.0**
VLS S **Sn 01 35 42.8 -0.3**
VLS Valsamata 6.96 125 *e*P Pn 01 34 20.5 -3.6
SSB Saint Sauveur 6.98 298 *e*P **Pn 01 34 26.0 +1.5**
SSB pmax pmax
comp=Z,1µm,1.1s
SSB Saint Sauveur 6.98 298 *e*Pn **Pn 01 34 25.9 +1.5**
comp=Z,1µm,1.1s
SSB Saint Sauveur 6.98 298 P **Pn 01 34 26.2 +1.7**
SSB Saint Sauveur 6.98 298 *e*Pn **Pn 01 34 26.0 +1.5**
comp=Z,1µm,1.1s
VAY Valandovo 6.99 96 P **Pn 01 34 23.4 -1.1**
VAY Valandovo 6.99 96 *i* Pn **Pn 01 34 23.4 -1.1**
VAY *e*Sn Sn 01 35 22.5 -21
VAY *e*Lg Lg 01 35 42.6
comp=N,14µm,0.9s
VAY *e*Lg Lg 01 35 45.1
comp=E,30µm,1.9s
VAY Valandovo 6.99 96 *i* Pn **Pn 01 34 23.9 -0.6**
VAY *e*Sn Sn 01 35 23.0 -21
VAY *e*Lg Lg 01 35 45.6
comp=E,30µm,1.9s
MOF Molkenrain 7.01 324 P **Pn 01 34 24.3 -0.6**
MOF Molkenrain 7.01 324 P **Pn 01 34 24.3 -0.6**
MOF Molkenrain 7.01 324 P **Pn 01 34 24.3 -0.6**
STU Stuttgart 7.03 337 *e*P **Pn 01 34 25.5 +0.5**
STU Stuttgart 7.03 337 *e*Pn **Pn 01 34 25.5 +0.5**
STU Stuttgart 7.03 337 *e*Pn **Pn 01 34 24.5 -0.5**
STU *e*Pg **Pb 01 34 45.6 +1.3**
STU Stuttgart 7.03 337 *e*Pn **Pn 01 34 24.5 -0.5**
LIBD Limburg 7.05 327 P **Pn 01 34 24.7 -0.6**
LIBD S Sn 01 35 53.1 +8.0
LIBD Limburg 7.05 327 P **Pn 01 34 24.7 -0.6**
LIBD S Sn 01 35 53.1 +8.0
DJES Djerdap 7.07 68 *e*Pn **Pn 01 34 24.3 -1.4**
DJES *e*Sn **Sn 01 35 44.2 -1.6**
TREC Trest 7.09 12 *e*P **Pn 01 34 24.6 -1.3**
TREC MLR MLR
comp=Z,390µm,14.2s
TREC Trest 7.09 12⇑*e*PN **Pn 01 34 24.6 -1.3**
TREC AMS AMS 01 37 30.0
comp=Z,390µm,14.2s
TREC Trest 7.09 12 Pn **Pn 01 34 24.6 -1.3**
HINF Hinteralfeld 7.11 322 *e*Pn **Pn 01 34 25.3 -0.9**
SNR=1.0
HINF *e*Sn **Sn 01 35 41.8 -5.0**
comp=Z,3µm,0.8s
HINF Hinteralfeld 7.11 322 *e*P **Pn 01 34 25.3 -0.9**
HINF *e* 01 35 41.8
HINF Hinteralfeld 7.11 322 *e*Pn **Pn 01 34 25.3 -0.9**
HINF *e*Sn **Sn 01 35 41.8 -5.0**
LASF Ste Croix 7.12 287 *e*Pn **Pn 01 34 26.2 -0.1**
SNR=1.0
LASF Ste Croix 7.12 287 *e*Pn **Pn 01 34 26.2 -0.1**
KFL Anninata 7.12 124 P **Pn 01 34 27.3 +0.9**
THL Klokotos Trika 7.15 110 P **Pn 01 34 26.6 -0.1**
THL S **Sn 01 35 47.0 -0.8**
RMGR Halanga-Turnu 7.19 68⇓*i*P **Pn 01 34 28.1 +0.9**
PSZ Piszkesteto 7.24 38⇑P **Pn 01 34 29.1 +1.1**
PSZ Piszkesteto 7.24 38 *e*Pn **Pn 01 34 26.4 -1.6**
PSZ Piszkesteto 7.24 38⇑*i*P **Pn 01 34 29.1 +1.1**
PSZ Piszkesteto 7.24 38 *e*pPn **Pn 01 34 28.4 +0.4**
PSZ Piszkesteto 7.24 38 *e*Pn **Pn 01 34 26.4 -1.6**
PSZ Piszkesteto 7.24 38⇑*i*P **Pn 01 34 29.1 +1.1**
VYHS Vyhne 7.25 30 *e*P **Pn 01 34 27.2 -0.9**
VYHS *e* 01 35 48.7
VYHS MLR MLR
comp=Z,28µm,3.1s
VYHS Vyhne 7.25 30 *e*PN **Pn 01 34 27.2 -0.9**
VYHS *e*SN **Sn 01 35 48.6 -1.5**
VYHS *e* 01 36 54.5
KNT Kendrikon 7.26 96 P **Pn 01 34 27.1 -1.2**
KNT S **Sn 01 35 49.8 -0.7**
MAHO Mahon 7.27 253 *i* P **Pn 01 34 27.2 -1.1**
MAHO *i* S **Sn 01 35 50.6 0.0**
LIT Litokhoron 7.28 105 P **Pn 01 34 27.3 -1.2**
LIT S **Sn 01 35 50.0 -0.8**
LIT Litokhoron 7.28 105 *e*P **Pn 01 34 27.9 -0.6**
ECH Echery 7.28 326 *e*P **Pn 01 34 26.8 -1.7**
ECH *e* 01 35 50.8
ECH pmax pmax
comp=Z,994nm,0.8s
ECH Echery 7.28 326 *e*Pn **Pn 01 34 26.8 -1.7**
comp=Z,994nm,0.8s
ECH *e*Sn **Sn 01 35 50.8 -0.2**
ECH Echery 7.28 326 P **Pn 01 34 27.7 -0.8**
ECH Echery 7.28 326 *e*Pn **Pn 01 34 26.8 -1.7**
comp=Z,994nm,0.8s
ECH *e*Sn **Sn 01 35 50.8 -0.2**
VRAC Vranov 7.30 17 Pn **Pn 01 34 27.8 -1.1**
VRAC Sn **Sn 01 35 52.0 +0.4**
VRAC Vranov 7.30 17⇓*i*P **Pn 01 34 29.4 +0.5**
VRAC Vranov 7.30 17 Pn **Pn 01 34 27.8 -1.1**
comp=Z,14nm,0.3s,baz=204,slow=16,SNR=67
VRAC Sn **Sn 01 35 52.0 +0.4**
comp=Z,21nm,0.3s,baz=284,slow=16,SNR=1.9
VRAC LR LR 01 37 34.1
comp=Z,203µm,19.7s,baz=206,slow=41
VRAC Vranov 7.30 17 Pn **Pn 01 34 27.8 -1.1**
VRAC Vranov 7.30 17⇓*i*P **Pn 01 34 29.4 +0.5**
VRAC Sn **Sn 01 35 52.0 +0.4**
KEST Kesra 7.31 206 *e*Pn **Pn 01 34 32.0 +2.9**
KEST Sn **Sn 01 35 54.4 +2.5**
VTS Vitosha 7.32 85 P **Pn 01 34 29.2 +0.1**
VTS S **Sn 01 35 49.8 -2.2**
VTS Vitosha 7.32 85⇑P **Pn 01 34 29.3 +0.1**
VTS Vitosha 7.32 85⇑*i*P **Pn 01 34 29.3 +0.1**
VTS Vitosha 7.32 85⇑*i*Pn **Pn 01 34 29.4 +0.3**
VTS *e*Sn **Sn 01 35 50.3 -1.7**
VTS Vitosha 7.32 85⇑*i*P **Pn 01 34 29.3 +0.1**
EVR Evrytania 7.32 115 P **Pn 01 34 30.1 +0.9**
EVR S **Sn 01 35 51.1 -0.9**
EVR Evrytania 7.32 115 *e*P **Pn 01 34 30.0 +0.9**
CMAH Djebel Manchou 7.33 220 P **Pn 01 34 31.0 +1.8**
CMAH Djebel Manchou 7.33 220 P **Pn 01 34 31.0 +1.8**
STR Strasbourg 7.34 330 P **Pn 01 34 29.2 0.0**
STR Strasbourg 7.34 330 P **Pn 01 34 29.2 0.0**
STR Strasbourg 7.34 330 P **Pn 01 34 29.2 0.0**
CDF Champ du Feu 7.39 327 *e*Pn **Pn 01 34 29.0 -1.0**
SNR=1.0
CDF *e*Sn **Sn 01 35 48.8 -4.9**
comp=Z,1µm,0.6s
CDF Champ du Feu 7.39 327 *e*P **Pn 01 34 29.0 -1.0**
CDF *e* 01 35 48.8
CDF Champ du Feu 7.39 327 *e*Pn **Pn 01 34 29.0 -1.0**
CDF *e*Sn **Sn 01 35 48.8 -4.9**
ROTZ Rotzenmuhle 7.44 354 *e*Pn **Pn 01 34 29.7 -1.0**
THE Thessaloniki 7.45 100 P **Pn 01 34 29.2 -1.6**
GRF Grafenberg Arr 7.47 349 *e*P **Pn 01 34 29.8 -1.3**
GRF Grafenberg Arr 7.47 349 *e*Pn **Pn 01 34 29.8 -1.3**
HAU Haudompre 7.48 321 *e*Pn **Pn 01 34 30.7 -0.6**
SNR=1.0
HAU *e*Sn Sn 01 35 49.4 -6.5
comp=Z,5µm,0.9s
HAU *e*R
comp=Z,60µm,18.5s
HAU Haudompre 7.48 321 *e*P **Pn 01 34 30.7 -0.6**
HAU *e* 01 35 49.4
HAU Haudompre 7.48 321 *e*Pn **Pn 01 34 30.7 -0.6**
HAU *e*Sn Sn 01 35 49.4 -6.5
MAKR Makrakomi, Fth 7.49 114 P **Pn 01 34 32.3 +0.9**
CAEH 'Ain El Ouahch 7.49 224 P **Pn 01 34 31.0 -0.4**
CAEH 'Ain El Ouahch 7.49 224 P **Pn 01 34 31.0 -0.4**
HORT Hortiatis 7.55 100 P **Pn 01 34 30.4 -2.0**
HORT S **Sn 01 35 57.0 -0.8**
RLS Riolos of Patr 7.58 122 P **Pn 01 34 33.0 +0.4**
RLS S **Sn 01 35 57.5 -0.7**
ABSA Djebel Ababsia 7.58 219 P **Pn 01 34 34.0 +1.2**
ABSA Djebel Ababsia 7.58 219 P **Pn 01 34 34.0 +1.2**
AGG Agios Georgios 7.62 113 P **Pn 01 34 33.4 +0.2**
AGG S **Sn 01 35 57.1 -2.2**
AGG Agios Georgios 7.62 113 *e*P **Pn 01 34 33.8 +0.6**
EFP Efpalio 7.64 118 P **Pn 01 34 33.9 +0.4**
EFP S **Sn 01 35 59.6 -0.3**
UPR University Cam 7.65 119 P **Pn 01 34 35.0 +1.4**
UPR S **Sn 01 36 00.3 +0.3**
LANF Langenberg 7.65 332 P **Pn 01 34 33.2 -0.4**
LANF Langenberg 7.65 332 P **Pn 01 34 33.2 -0.4**
LANF Langenberg 7.65 332 P **Pn 01 34 33.2 -0.4**
PRU Pruhonice 7.67 6⇑*e*PN **Pn 01 34 32.0 -1.8**
PRU *e*SN **Sn 01 35 58.7 -1.7**
PRU AMS AMS 01 37 40.0
comp=Z,188µm,14.0s
PRU Pruhonice 7.67 6 Pn **Pn 01 34 32.0 -1.8**
PRU Sn **Sn 01 35 58.7 -1.7**
SOH Sokhos 7.68 98 P **Pn 01 34 32.7 -1.3**
SOH S **Sn 01 35 58.8 -2.0**
SOH Sokhos 7.68 98 *e*P **Pn 01 34 33.0 -1.0**
SJAF Saint Jean de 7.72 274 P **Pn 01 34 32.9 -1.7**
SJAF Saint Jean de 7.72 274 P **Pn 01 34 32.9 -1.7**
DEV Deva 7.74 60 P **Pn 01 34 35.3 +0.5**
DEV Deva 7.74 60⇑*i*P **Pn 01 34 35.7 +0.9**
DEV Deva 7.74 60⇑*i*P **Pn 01 34 35.7 +0.9**
PRA Prague 7.74 5⇑PN **Pn 01 34 33.0 -1.8**
PRA *ex* x 01 35 09.0
SRS Serrai 7.78 96 P **Pn 01 34 34.2 -1.3**
TRIZ Trizonia 7.79 118 P **Pn 01 34 36.6 +1.1**
TRIZ S **Sn 01 36 01.9 -1.5**
THEF They Montfort 7.81 321 P **Pn 01 34 35.1 -0.7**
THEF They Montfort 7.81 321 P **Pn 01 34 35.1 -0.7**
THEF They Montfort 7.81 321 P **Pn 01 34 35.1 -0.7**
LIKS Likavka 7.81 29 *e*P Pn 01 34 39.9 +4.1
LIKS Likavka 7.81 29 *e*PN Pn 01 34 39.8 +4.0
KALE Kalithea 7.82 118 P **Pn 01 34 38.0 +2.0**
KALE S **Sn 01 36 04.6 +0.3**
KALE Kalithea 7.82 118 *e*P **Pg 01 35 11.8 -0.4**
LBL Lubilhac 7.83 295 P **Pn 01 34 38.4 +2.3**
LBL Lubilhac 7.83 295 P **Pn 01 34 38.4 +2.3**
LBL Lubilhac 7.83 295 P **Pn 01 34 38.4 +2.3**
CKFL Kef-Lekhel 7.85 223 P **Pn 01 34 36.0 -0.5**
CKFL Kef-Lekhel 7.85 223 P **Pn 01 34 36.0 -0.5**
KTD Kalmit 7.85 334 P **Pn 01 34 36.6 +0.2**
KTD Kalmit 7.85 334 P **Pn 01 34 36.6 +0.2**
PLG Polygyros 7.87 101 P **Pn 01 34 35.5 -1.2**
PLG S **Sn 01 36 02.6 -3.0**
PLG Polygyros 7.87 101 *e*P **Pn 01 34 36.0 -0.7**
CRAR CRAIOVA 7.89 72⇑P **Pn 01 34 37.2 +0.4**
CRAR CRAIOVA 7.89 72⇑*i*P **Pn 01 34 37.2 +0.4**
CRAR CRAIOVA 7.89 72⇑*i*P **Pn 01 34 37.2 +0.4**
NKC Novy Kostel 7.89 356⇑*e*PN **Pn 01 34 35.1 -1.8**
NKC *e*SN **Sn 01 36 04.6 -1.3**
NKC AMS AMS 01 38 00.0
comp=Z,188µm,15.0s
NKC Novy Kostel 7.89 356 Pn **Pn 01 34 35.1 -1.8**
NKC Sn **Sn 01 36 04.6 -1.3**

TOD	Tromm	7.89	338	P	Pn	01 34 36.8	-0.1
TOD	Tromm	7.89	338	P	Pn	01 34 36.8	-0.1
NVR	Nevrokopi	7.94	94	P	Pn	01 34 36.8	-0.8
FILF	Fillols	7.96	275	P	Pn	01 34 37.8	-0.1
MORC	Moravsky Berou	7.97	20	⇑P	Pn	01 34 38.3	+0.3
MORC	Moravsky Berou	7.97	20	ePn	Pn	01 34 37.5	-0.5
MORC	Moravsky Berou	7.97	20⇑	iP	Pn	01 34 38.3	+0.3
MORC	Moravsky Berou	7.97	20	ePn	Pn	01 34 37.5	-0.5
MORC	Moravsky Berou	7.97	20⇑	iP	Pn	01 34 38.3	+0.3
AXAR	Agios Charalam	7.97	114	P	Pn	01 34 38.3	+0.3
LRDF	Laroque-de-Fa	7.97	278	P	Pn	01 34 37.2	-0.8
SMF	Signal de Mont	8.01	305	ePn	Pn	01 34 38.4	-0.1
	SNR=1.0						
SMF				eSn	Sn	01 36 03.0	-5.8
	comp=Z,2μm,0.8s						
SMF	Signal de Mont	8.01	305	eP	Pn	01 34 38.4	-0.1
SMF				e		01 36 03.0	
SMF	Signal de Mont	8.01	305	ePn	Pn	01 34 38.4	-0.1
SMF				eSn	Sn	01 36 03.0	-5.8
AMT	Artemida-Makis	8.05	124	P	Pn	01 34 39.4	+0.3
AMT				S	Sn	01 36 09.9	-0.1
XOR	Xorichti	8.06	109	P	Pn	01 34 39.4	+0.1
XOR				S	Sn	01 36 08.8	-1.4
XOR	Xorichti	8.06	109	eP	Pg	01 35 17.3	+0.4
DSF	Desfina	8.06	116	P	Pn	01 34 40.1	+0.8
DSF				S	Sn	01 36 09.6	-0.7
TANN	Tannenbergstha	8.07	356	ePn	Pn	01 34 38.3	-1.1
CASM	Ain Smara	8.07	223	P	Pn	01 34 40.0	+0.5
CASM	Ain Smara	8.07	223	P	Pn	01 34 40.0	+0.5
CFON	Fontmartina	8.12	269	P	Pn	01 34 38.9	-1.3
	comp=Z,1μm,1.7s,SNR=130						
CFON				S	Sn	01 36 11.9	+0.1
	comp=Z,470nm,0.9s,SNR=5.6						
CFON	Fontmartina	8.12	269	P	Pn	01 34 38.9	-1.3
	comp=Z,1μm,1.7s,SNR=130						
CFON				S	Sn	01 36 11.9	+0.1
	comp=Z,470nm,0.9s,SNR=5.6						
CFON	Fontmartina	8.12	269	P	Pn	01 34 38.9	-1.3
	comp=Z,1μm,1.7s,SNR=130						
CFON				S	Sn	01 36 11.9	+0.1
	comp=Z,470nm,0.9s,SNR=5.6						
LOT	Lotru	8.15	64⇓	iP	Pn	01 34 41.3	+0.8
PYM	Petit Puy Mans	8.16	298	P	Pn	01 34 41.7	+1.1
PYM	Petit Puy Mans	8.16	298	P	Pn	01 34 41.7	+1.1
PYM	Petit Puy Mans	8.16	298	P	Pn	01 34 41.7	+1.1
PAGF	Fort de Pagny	8.17	322	ePn	Pn	01 34 40.3	-0.4
	baz=143						
PAGF	Fort de Pagny	8.17	322	ePn	Pn	01 34 40.3	-0.4
OKC	Ostrava-Krasne	8.19	23⇑	ePN	Pn	01 34 40.4	-0.5
OKC				AMS	AMS	01 38 50.0	
	comp=Z,305μm,13.6s						
OKC	Ostrava-Krasne	8.19	23	Pn	Pn	01 34 40.4	-0.5
PAIG	Paliouri	8.19	104	P	Pn	01 34 40.5	-0.5
PAIG				S	Sn	01 36 11.5	-1.8
PAIG	Paliouri	8.19	104	eP	Pn	01 34 39.9	-1.1
AGO	Saint Agoulin	8.19	300	P	Pn	01 34 41.7	+0.7
AGO	Saint Agoulin	8.19	300	P	Pn	01 34 41.7	+0.7
GUR	Goura	8.21	120	P	Pn	01 34 42.3	+1.0
GUR				S	Sn	01 36 11.6	-2.3
GUR	Goura	8.21	120	eP	Pg	01 35 32.5	+13
PVCC	Panska Ves	8.21	6⇑	ePN	Pn	01 34 38.9	-2.3
PVCC				AMS	AMS	01 38 00.0	
	comp=Z,158μm,11.8s						
PVCC	Panska Ves	8.21	6	Pn	Pn	01 34 38.9	-2.3
MTLF	Montolieu	8.21	281	ePn	Pn	01 34 40.9	-0.4
	SNR=1.0						
MTLF	Montolieu	8.21	281	eP	Pn	01 34 40.9	-0.4
MTLF	Montolieu	8.21	281	ePn	Pn	01 34 40.9	-0.4
DPC	Dobruska-Polom	8.25	14	eP	Pn	01 34 40.2	-1.6
DPC	Dobruska-Polom	8.25	14	ePn	Pn	01 34 40.2	-1.6
DPC	Dobruska-Polom	8.25	14	ePN	Pn	01 34 40.0	-1.8
DPC				AMS	AMS	01 38 10.0	
	comp=Z,392μm,14.6s						
DPC	Dobruska-Polom	8.25	14	ePn	Pn	01 34 40.2	-1.6
ATAL	Atalanti	8.25	113	P	Pn	01 34 42.7	+0.9
ATAL				S	Sn	01 36 15.9	+1.1
SFTF	Sexfontaines	8.25	318	ePn	Pn	01 34 41.2	-0.6
	baz=136						
SFTF				eSn	Sn	01 36 07.8	-7.0
	comp=Z,7μm,1.5s						
SFTF	Sexfontaines	8.25	318	ePn	Pn	01 34 41.2	-0.6
SFTF				eSn	Sn	01 36 07.8	-7.0
LKR	Lokris	8.26	114	P	Pn	01 34 41.8	-0.1
LKR	Lokris	8.26	114	eP	Pg	01 35 20.3	-0.3
OUR	Ouranopolis	8.28	101	P	Pn	01 34 41.6	-0.5
OUR				S	Sn	01 36 13.4	-2.0
CARF	Carcanieres	8.29	276	P	Pn	01 34 41.1	-1.4
LOR	Lormes	8.32	309	ePn	Pn	01 34 42.1	-0.6
	baz=125,SNR=1.0						
LOR				eSn	Sn	01 36 11.5	-4.9
	comp=Z,476nm,0.6s						
LOR				eR			
	comp=Z,83μm,24.2s						
LOR	Lormes	8.32	309	ePn	Pn	01 34 42.1	-0.6
LOR				eSn	Sn	01 36 11.5	-4.9
SKIA	Skiathos	8.34	109	P	Pn	01 34 43.2	+0.2
SKIA				S	Sn	01 36 16.6	-0.4
UPC	Upice	8.35	12⇑	ePN	Pn	01 34 41.7	-1.5
UPC	Upice	8.35	12	Pn	Pn	01 34 41.7	-1.5
MOX	Moxa	8.36	353	eP	Pn	01 34 42.1	-1.2
MOX	Moxa	8.36	353	ePn	Pn	01 34 42.1	-1.2
AVF	Avril sur Loir	8.37	305	ePn	Pn	01 34 43.0	-0.5
AVF	Avril sur Loir	8.37	305	eP	Pn	01 34 43.0	-0.5
AVF	Avril sur Loir	8.37	305	ePn	Pn	01 34 43.0	-0.5
CLLI	Llivia	8.39	275	P	Pn	01 34 43.3	-0.6
	comp=Z,1μm,1.1s,SNR=318						
CLLI				S	Sn	01 36 17.4	-1.1
	comp=Z,233nm,0.9s						
CLLI	Llivia	8.39	275	P	Pn	01 34 43.3	-0.6
	comp=Z,1μm,1.1s,SNR=318						
CLLI				S	Sn	01 36 17.4	-1.1
	comp=Z,233nm,0.9s						
CLLI	Llivia	8.39	275	P	Pn	01 34 43.3	-0.6
	comp=Z,1μm,1.1s,SNR=318						
CLLI				S	Sn	01 36 17.4	-1.1
	comp=Z,233nm,0.9s						
ITM	Ithomi	8.41	125	P	Pn	01 34 43.8	-0.3
ITM				S	Sn	01 36 17.5	-1.3
ITM	Ithomi	8.41	125	eP	Pn	01 34 45.1	+1.0
SSF	Saint Saulge	8.41	307	ePn	Pn	01 34 43.5	-0.5
	SNR=1.0						
SSF	Saint Saulge	8.41	307	eP	Pn	01 34 43.5	-0.5
SSF	Saint Saulge	8.41	307	ePn	Pn	01 34 43.5	-0.5
RAC	Raciborz	8.42	22	eP	Pn	01 34 44.4	+0.3
RAC				MLR	MLR		
	comp=Z,277μm,12.0s						
MEZF	Maizieres J'vi	8.45	319	ePn	Pn	01 34 44.1	-0.4
	baz=131,SNR=1.0						
MEZF				eSn	Sn	01 36 14.2	-5.3
	comp=Z,861nm,0.8s,SNR=1.0						
MEZF	Maizieres J'vi	8.45	319	ePn	Pn	01 34 44.1	-0.4
MEZF				eSn	Sn	01 36 14.2	-5.3
PLD	Plovdiv	8.45	88	P	Pn	01 34 44.9	+0.3
PYL	PYLOS	8.49	127	P	Pn	01 34 44.4	-0.7
PYL				S	Sn	01 36 19.7	-1.0
PYL	PYLOS	8.49	127	eP	Pg	01 35 39.1	+14
KAVA	Kavala	8.49	96	P	Pn	01 34 44.0	-1.1
KAVA				S	Sn	01 36 17.8	-2.9
BRG	Berggiesshubel	8.52	3	PN	Pn	01 34 43.0	-2.5
	comp=Z,28nm,0.9s						
BRG				i		01 34 47.0	
BRG				i		01 34 56.5	
BRG				i		01 36 21.9	
BRG				i		01 37 26.5	
	comp=Z,3μm,1.4s						
BRG							
	comp=N,163μm,9.8s						
BRG							
	comp=E,496μm,18.5s						
BRG							
	comp=Z,210μm,15.7s						
BRG	Berggiesshubel	8.52	3	P	Pn	01 34 43.0	-2.5
BRG				i		01 36 21.9	
BRG				pmax	pmax		
	comp=Z,28nm,0.9s						
BRG				MLR	MLR		
	comp=N,163μm,9.8s						
BRG				MLR	MLR		
	comp=E,496μm,18.5s						
BRG				MLR	MLR		
	comp=Z,210μm,15.7s						
BRG	Berggiesshubel	8.52	3	ePn	Pn	01 34 44.1	-1.3
RUP	Ruppelstein	8.53	331	P	Pn	01 34 46.3	+0.7
RUP	Ruppelstein	8.53	331	P	Pn	01 34 46.3	+0.7
TNS	Taunus Mts	8.54	338	eP	Pn	01 34 46.5	+0.6
TNS	Taunus Mts	8.54	338	ePn	Pn	01 34 46.5	+0.6
CAF	Calviac	8.55	291	eP	Pn	01 34 47.1	+1.1
	SNR=1.0						
CAF				eSn	Sn	01 36 16.3	-5.9
	comp=Z,533nm,1.1s						
CAF	Calviac	8.55	291	eP	Pn	01 34 47.1	+1.1
CAF				e		01 36 16.3	
CAF	Calviac	8.55	291	eP	Pn	01 34 47.1	+1.1
CAF				eSn	Sn	01 36 16.3	-5.9
LTK	Loutraki	8.56	117	P	Pn	01 34 46.5	+0.3
LTK	Loutraki	8.56	117	eP	Pg	01 35 24.9	-1.6
NIE	Niedzica	8.57	32	eP	Pn	01 34 46.4	+0.2
NIE				e		01 36 27.9	
NIE	Niedzica	8.57	32	eP	Pn	01 34 46.4	+0.2
NIE				eSn	Sn	01 36 27.9	+5.3
VLX	Vlachokerasia	8.57	123	P	Pn	01 34 48.1	+1.8
VLX				S	Sn	01 36 21.5	-1.3
VLX	Vlachokerasia	8.57	123	eP	Pg	01 35 39.2	+12
BGF	Bois d'Agland	8.58	303	ePn	Pn	01 34 46.4	+0.1
	SNR=1.0						
BGF				eSn	Sn	01 36 17.4	-5.4
	comp=Z,384nm,0.6s,SNR=1.0						
BGF	Bois d'Agland	8.58	303	eP	Pn	01 34 46.4	+0.1
BGF				e		01 36 17.4	
BGF	Bois d'Agland	8.58	303	ePn	Pn	01 34 46.4	+0.1
BGF				eSn	Sn	01 36 17.4	-5.4
AOS	Alonnisos	8.63	108	P	Pn	01 34 46.5	-0.5
AOS				S	Sn	01 36 22.8	-1.3
AOS	Alonnisos	8.63	108	eP	Pg	01 35 29.7	+2.0
MRKA	Markates	8.63	112	P	Pn	01 34 48.2	+1.1
CRVS	Cervenica-Dubn	8.67	38	eP	Pn	01 34 47.6	+0.1
CRVS				MLR	MLR		
	comp=Z,343μm,10.4s						
CRVS	Cervenica-Dubn	8.67	38	ePN	Pn	01 34 47.6	+0.1
CRVS				e		01 37 24.1	
TRPA	Tarpa	8.68	45⇓	iP	Pn	01 34 49.0	+1.3
TRPA	Tarpa	8.68	45⇑	ePn	Pn	01 34 48.6	+0.9
TRPA	Tarpa	8.68	45⇓	iP	Pn	01 34 49.0	+1.3
SET	Setif	8.70	227	P	Pn	01 34 41.0	-7.0
SET	Setif	8.70	227	P	Pn	01 34 41.0	-7.0
ARR	Arges	8.71	66⇓	iP	Pn	01 34 49.4	+1.3
KSP	Ksiaz	8.72	13⇑	eP	Pn	01 34 46.7	-1.5
KSP				e		01 36 21.5	
KSP	Ksiaz	8.72	13	eP	Pn	01 34 46.7	-1.5
KSP				eSn	Sn	01 36 21.7	-4.5
HUMR	Humele	8.75	72⇓	iP	Pn	01 34 48.7	0.0
UBBA	Unterbreizbach	8.75	346	ePn	Pn	01 34 48.0	-0.6
EMIR	Miracle	8.78	271	P	Pn	01 34 49.4	+0.3
	comp=Z,2μm,1.8s,SNR=74						
EMIR				S	Sn	01 36 27.5	-0.3
	SNR=7.9						
EMIR	Miracle	8.78	271	P	Pn	01 34 49.4	+0.3
	comp=Z,2μm,1.8s,SNR=74						
EMIR				S	Sn	01 36 27.5	-0.3
	SNR=7.9						
EMIR	Miracle	8.78	271	P	Pn	01 34 49.4	+0.3
	comp=Z,2μm,1.8s,SNR=74						
EMIR				S	Sn	01 36 27.5	-0.3
	SNR=7.9						
MDB	Medias	8.79	61	⇓P	Pn	01 34 50.7	+1.5
MDB	Medias	8.79	61⇓	iP	Pn	01 34 50.7	+1.5
MDB	Medias	8.79	61⇓	iP	Pn	01 34 50.7	+1.5
WLF	Walferdange	8.83	328	PN	Pn	01 34 50.1	+0.3
WLF				SN	Sn	01 36 34.8	+5.7
	comp=E,468nm,0.0s						
WLF	Walferdange	8.83	328	eP	Pn	01 34 49.9	+0.1
WLF				pmax	pmax		
	comp=Z,707nm,0.9s						
WLF	Walferdange	8.83	328	ePn	Pn	01 34 49.6	-0.2
WLF	Walferdange	8.83	328	ePn	Pn	01 34 49.9	+0.1
	comp=Z,707nm,0.9s						
WLF	Walferdange	8.83	328	Pn	Pn	01 34 50.0	+0.3
TCF	Toulx Ste Croi	8.87	300	ePn	Pn	01 34 50.6	+0.2
	SNR=1.0						
TCF	Toulx Ste Croi	8.87	300	eP	Pn	01 34 50.6	+0.2
TCF	Toulx Ste Croi	8.87	300	ePn	Pn	01 34 50.6	+0.2
UZH	Uzhgorod	8.88	42	eP	Pn	01 34 49.8	-0.6
UZH				eS	Sn	01 36 28.8	-1.4
UZH				MLR	MLR		
	comp=N,215μm,12.0s						
UZH				MLR	MLR		
	comp=E,295μm,12.0s						
UZH				MLR	MLR		
	comp=Z,138μm,12.0s						
ZIMR		8.92	78	⇓P	Pn	01 34 51.6	+0.6
ZIMR		8.92	78⇓	iP	Pn	01 34 51.6	+0.6
ZIMR		8.92	78⇓	iP	Pn	01 34 51.6	+0.6
DYR	Agios Nikonas	8.93	126	P	Pn	01 34 51.3	+0.1
DYR	Agios Nikonas	8.93	126	eP	Pg	01 35 43.2	+10
CLL	Collm	8.94	359	eP	Pn	01 34 51.0	-0.3
CLL				MLR	MLR		
	comp=Z,147μm,18.1s						
CLL	Collm	8.94	359	ePn	Pn	01 34 51.0	-0.3
CLL	Collm	8.94	359	ePn	Pn	01 34 51.0	-0.3
CLL				eSn	Sn	01 36 22.0	-10
CLL				eSb	Sg	01 37 10.0	-19
CLL				eSg	Sg	01 37 37.0	+7.6
	comp=Z,4μm,1.3s						
CLL				eSglp		01 37 46.0	
	comp=E,484μm,22.6s						
CLL				L	L	01 38 18.0	
	comp=Z,147μm,18.1s						
CLL				Lmax		01 39 00.0	
RJF	Les Rejaudoux	9.02	293	eP	Pn	01 34 54.4	+2.0
	SNR=1.0						
RJF				eR			
	comp=Z,126μm,32.5s						
RJF	Les Rejaudoux	9.02	293	eP	Pn	01 34 54.4	+2.0
RJF	Les Rejaudoux	9.02	293	ePn	Pn	01 34 54.4	+2.0
CSOR	Sort	9.02	274	P	Pn	01 34 52.8	+0.3
	comp=Z,2μm,1.1s,SNR=164						
CSOR				S	Sn	01 36 33.9	0.0
	comp=Z,586nm,1.5s						
CSOR	Sort	9.02	274	P	Pn	01 34 52.8	+0.3
	comp=Z,2μm,1.1s,SNR=164						
CSOR				S	Sn	01 36 33.9	0.0
	comp=Z,586nm,1.5s						
CSOR	Sort	9.02	274	P	Pn	01 34 52.8	+0.3
	comp=Z,2μm,1.1s,SNR=164						
CSOR				S	Sn	01 36 33.9	0.0
	comp=Z,586nm,1.5s						
MLS	Moulis	9.03	278	P	Pn	01 34 52.3	-0.2
MLS	Moulis	9.03	278	P	Pn	01 34 52.3	-0.2
DID	Didima	9.03	119	P	Pn	01 34 52.8	+0.2
DID	Didima	9.03	119	eP	Pn	01 35 32.0	+39
OJC	Ojcow	9.04	27	eP	Pn	01 34 52.8	+0.2
OJC				e		01 36 36.8	
OJC	Ojcow	9.04	27	ePn	Pn	01 34 53.9	+1.3
OJC	Ojcow	9.04	27	eP	Pn	01 34 52.8	+0.2
OJC				epP		01 34 57.3	
OJC				eSn	Sn	01 36 36.8	+2.7
OJC				L	L	01 39 12.9	
	comp=Z,629μm,12.9s						
OJC	Ojcow	9.04	27	ePn	Pn	01 34 53.9	+1.3
NAIG	Nisos Aigina	9.05	117	eP	Pn	01 34 54.1	+1.3
KOLS	Kolonicke sedl	9.07	41	eP	Pn	01 34 53.6	+0.5
KOLS				MLR	MLR		
	comp=Z,22μm,3.0s						
KOLS	Kolonicke sedl	9.07	41	ePN	Pn	01 34 53.6	+0.5
KOLS				e		01 37 36.8	
ATH	Athens Observa	9.09	115	P	Pn	01 34 54.0	+0.7
ATH	Athens Observa	9.09	115	eP	Pn	01 34 51.5	-1.8
PTL	Penteli	9.15	115	P	Pn	01 34 54.3	+0.1
PTL	Penteli	9.15	115	eP	Pn	01 35 01.7	+7.5
EPOB	Poblet	9.19	268	P	Pn	01 34 54.6	-0.2
	comp=Z,2μm,2.5s,SNR=57						
EPOB				S	Sn	01 36 37.2	-0.9
	comp=Z,133nm,0.6s						
EPOB	Poblet	9.19	268	P	Pn	01 34 54.6	-0.2
	comp=Z,2μm,2.5s,SNR=57						
EPOB				S	Sn	01 36 37.2	-0.9
	comp=Z,133nm,0.6s						
EPOB	Poblet	9.19	268	P	Pn	01 34 54.6	-0.2
	comp=Z,2μm,2.5s,SNR=57						
EPOB				S	Sn	01 36 37.2	-0.9
	comp=Z,133nm,0.6s						
RDO	Rodhopi	9.21	94	eP	Pn	01 34 54.5	-0.5
LIA	Limnos Island	9.29	101	P	Pn	01 34 55.1	-0.9
VLI	Veliai	9.33	124	P	Pn	01 34 57.8	+1.2
VLI	Veliai	9.33	124	eP	Pn	01 34 58.0	+1.4
CIOR	Ciorogarla	9.38	73⇑	iP	Pn	01 34 58.4	+1.2
DOPR	Dopca	9.39	63⇑	iP	Pn	01 34 59.3	+1.9
BUC1	Bucharest	9.47	74	P	Pn	01 34 59.9	+1.4
BUC1	Bucharest	9.47	74⇑	iP	Pn	01 35 00.3	+1.8
BUC1	Bucharest	9.47	74⇑	iP	Pn	01 35 00.3	+1.8
LFF	La Frestale	9.47	290	eP	Pn	01 35 00.4	+1.8
LFF	La Frestale	9.47	290	eP	Pn	01 35 00.4	+1.8
LFF	La Frestale	9.47	290	eP	Pn	01 35 00.4	+1.8
MRMA	Marmari	9.49	113	P	Pn	01 34 59.1	+0.2
INCR	INCERC-Sediu C	9.57	73⇓	iP	Pn	01 34 59.9	0.0
EPF	Esparros	9.58	278	ePn	Pn	01 34 58.8	-1.3
	SNR=1.0						
EPF				eSn	Sn	01 36 41.3	-6.3
	comp=Z,186nm,0.9s						
EPF	Esparros	9.58	278	eP	Pn	01 34 58.8	-1.3
EPF				e		01 36 41.3	
EPF	Esparros	9.58	278	ePn	Pn	01 34 58.8	-1.3
EPF				eSn	Sn	01 36 41.3	-6.3
RESF	Ens	9.59	277	P	Pn	01 35 01.2	+0.9
RESF	Ens	9.59	277	P	Pn	01 35 01.2	+0.9
ALAS	Alassa	9.61	189	iP	Pn	01 35 04.6	+4.2
	SNR=46						
ALAS				eS	Sn	01 36 55.8	+7.7
	SNR=48						
SECR		9.61	70⇓	iP	Pn	01 35 02.0	+1.5
MLR	Muntele Rosu	9.63	67	Pn	Pn	01 35 01.7	+0.9
MLR	Muntele Rosu	9.63	67	Pn	Pn	01 35 01.7	+0.9
	baz=263,slow=8.1						
MLR	Muntele Rosu	9.63	67	Pn	Pn	01 35 01.7	+0.9
ALN	Alexandroupoli	9.64	95	P	Pn	01 34 59.5	-1.4
ALN	Alexandroupoli	9.64	95	eP	Pn	01 35 00.7	-0.2
ALN	Alexandroupoli	9.64	95	eP	Pn	01 35 46.0	+45
MEM	Membach	9.66	331	PN	Pn	01 35 01.4	+0.4
MEM				SN	Sn	01 36 49.2	-0.1
	comp=N,295nm,0.0s						
KYTH	Kithira	9.67	126	eP	Pn	01 35 03.5	+2.1
SULR		9.68	72⇓	iP	Pn	01 34 59.2	-2.1
ABA	Alger-Bouzarea	9.69	238	P	Pn	01 35 03.0	+1.4
ABA	Alger-Bouzarea	9.69	238	P	Pn	01 35 03.0	+1.4
EIBI	Ibiza	9.69	254	P	Pn	01 35 02.7	+1.2
	comp=N,4μm,2.0s,SNR=96						
EIBI				S	Sn	01 36 48.5	-1.6
	comp=N,319nm,1.2s						
EIBI	Ibiza	9.69	254	P	Pn	01 35 02.7	+1.2
	comp=N,4μm,2.0s,SNR=96						
EIBI				S	Sn	01 36 48.5	-1.6
	comp=N,319nm,1.2s						
EIBI	Ibiza	9.69	254	P	Pn	01 35 02.7	+1.2
	comp=N,4μm,2.0s,SNR=96						
EIBI				S	Sn	01 36 48.5	-1.6
	comp=N,319nm,1.2s						
GIVF	Givet	9.71	326	ePn	Pn	01 35 02.0	+0.2
	SNR=1.0						
GIVF				eSn	Sn	01 36 43.1	-7.5
	comp=N,2μm,1.1s						
GIVF	Givet	9.71	326	eP	Pn	01 35 02.0	+0.2
GIVF				e		01 36 43.1	
GIVF	Givet	9.71	326	ePn	Pn	01 35 02.0	+0.2
GIVF				eSn	Sn	01 36 43.1	-7.5
KWP	Kalwaria Pacla	9.76	39	eP	Pn	01 35 06.1	+3.6
KWP				pmax	pmax		
	comp=Z,3μm,1.1s						
KWP	Kalwaria Pacla	9.76	39	ePn	Pn	01 35 06.1	+3.6
	comp=Z,3μm,1.1s						
KWP	Kalwaria Pacla	9.76	39⇑	iP	Pn	01 35 05.5	+3.0
KWP	Kalwaria Pacla	9.76	39	eP	Pn	01 35 06.7	+4.2
KWP				eSn	Sn	01 37 01.4	+10
KWP	Kalwaria Pacla	9.76	39	ePn	Pn	01 35 06.1	+3.6
	comp=Z,3μm,1.1s						
BCLA	Clavier	9.77	328	PN	Pn	01 35 03.6	+1.1
BCLA				SN	Sn	01 36 54.3	+2.4
	comp=N,184nm,0.0s						
LABF	Labassere	9.78	278	P	Pn	01 35 01.4	-1.4
DOU	Dourbes	9.80	325	PN	Pn	01 35 02.2	-0.9
DOU				SN	Sn	01 36 57.4	+4.6
	comp=E,214nm,0.0s						
HGN	Heimansgroeve	9.81	331	eP	Pn	01 35 04.0	+0.9
	comp=E,227nm,1.1s						
HGN				eS	Sn	01 36 55.9	+2.9
JMB	Yambol	9.81	85	P	Pn	01 35 02.9	-0.3
VIEF	Viey	9.82	277	P	Pn	01 35 04.9	+1.5
VIEF	Viey	9.82	277	P	Pn	01 35 04.9	+1.5
ERTA	Horta de San J	9.82	266	P	Pn	01 35 03.1	-0.3
	comp=E,4μm,3.9s,SNR=37						
ERTA				S	Sn	01 36 52.4	-1.0
	comp=E,629nm,1.6s						
ERTA	Horta de San J	9.82	266	P	Pn	01 35 03.1	-0.3
	comp=E,4μm,3.9s,SNR=37						
ERTA				S	Sn	01 36 52.4	-1.0
	comp=E,629nm,1.6s						
ERTA	Horta de San J	9.82	266	P	Pn	01 35 03.1	-0.3
	comp=E,4μm,3.9s,SNR=37						
ERTA				S	Sn	01 36 52.4	-1.0
	comp=E,629nm,1.6s						
BURAR	Bucovina Array	9.92	54	⇑P	Pn	01 35 06.6	+1.8
BURAR	Bucovina Array	9.92	54⇑	iP	Pn	01 35 06.6	+1.8
BUR08	Bucovina Ar. S	9.93	54	ePn	Pn	01 35 06.2	+1.3
BUR08	Bucovina Ar. S	9.93	54	ePn	Pn	01 35 06.2	+1.3
BEBN	Eben Emael	9.93	331	PN	Pn	01 35 06.6	+1.8
BEBN				SN	Sn	01 36 54.5	-1.4
	comp=N,100nm,0.0s						
BOZC	Bozcaada	9.94	100	iP	Pn	01 35 01.1	-3.9
BAIF	Baives	9.94	324	ePn	Pn	01 35 04.3	-0.7
	SNR=1.0						
BAIF				eSn	Sn	01 36 49.4	-6.9
	comp=N,1μm,1.1s						
BAIF	Baives	9.94	324	eP	Pn	01 35 04.3	-0.7
BAIF				e		01 36 49.4	
BAIF	Baives	9.94	324	ePn	Pn	01 35 04.3	-0.7
BAIF				eSn	Sn	01 36 49.4	-6.9
ISR	Istrita	9.96	70	⇑P	Pn	01 35 07.2	+1.9
ISR	Istrita	9.96	70⇑	iP	Pn	01 35 07.2	+1.9
ISR	Istrita	9.96	70⇑	iP	Pn	01 35 07.2	+1.9
BUG	Bochum--Univer	9.97	338	eP	Pn	01 35 08.6	+3.3
BUG	Bochum--Univer	9.97	338	ePn	Pn	01 35 08.6	+3.3
EDRB	Edirne	9.99	88	eP	Pn	01 35 07.1	+1.4
SIGR	SIGRI	10.02	104	P	Pn	01 35 04.8	-1.2
GELI	Tayfur-Gelibol	10.08	97	eP	Pn	01 35 07.5	+0.6
REYF	Montagne du Re	10.12	279	P	Pn	01 35 08.7	+1.2
REYF	Montagne du Re	10.12	279	P	Pn	01 35 08.7	+1.2
EMHD	Djebel Mahouad	10.12	236	P	Pn	01 35 09.0	+1.4
EMHD	Djebel Mahouad	10.12	236	P	Pn	01 35 09.0	+1.4
RUE	Ruedersdorf	10.12	2	ePn	Pn	01 35 07.4	+0.1
	comp=N,351nm,1.0s						
RUE				eSn	Sn	01 37 00.5	-0.1
RUE				eLg	Lg	01 38 15.9	
RUE	Ruedersdorf	10.12	2	ePn	Pn	01 35 07.4	+0.1
	comp=N,351nm,1.0s						
RUE				eSn	Sn	01 37 00.5	-0.1
LMSR	Misrath	10.13	172	iP	Pn	01 35 10.8	+3.2
	SNR=46						
EZN	Ezine	10.14	100	eP	Pn	01 35 10.1	+2.4
PLOR	Plostina	10.20	66	⇑P	Pn	01 35 09.3	+0.7
PLOR	Plostina	10.20	66⇑	iP	Pn	01 35 09.3	+0.7
PLOR	Plostina	10.20	66⇑	iP	Pn	01 35 09.3	+0.7
PGOR	Pogoanele	10.23	71⇓	iP	Pn	01 35 09.9	+1.0
GHAR	Gharyan	10.23	181	iP	Pn	01 35 12.6	+3.5
	SNR=46						
GHAR				eS	Sn	01 37 10.6	+7.0
	SNR=48						
ETSF	Etsaut	10.24	278	ePn	Pn	01 35 10.0	+0.8
ETSF	Etsaut	10.24	278	ePn	Pn	01 35 10.0	+0.8
ETSF	Etsaut	10.24	278	ePn	Pn	01 35 10.0	+0.8
SNF	Seneffe	10.25	326	PN	Pn	01 35 09.7	+0.5
VRI	Vrincioaia	10.26	66	P	Pn	01 35 10.0	+0.7
VRI	Vrincioaia	10.26	66⇓	iP	Pn	01 35 10.3	+1.0
VRI	Vrincioaia	10.26	66⇓	iP	Pn	01 35 10.3	+1.0
ESAC	San Caprasio	10.28	271	P	Pn	01 35 10.7	+1.0
	comp=N,6μm,3.2s,SNR=30						
ESAC				S	Sn	01 37 02.0	-2.7
	comp=N,756nm,1.0s,SNR=7.9						
ESAC	San Caprasio	10.28	271	P	Pn	01 35 10.7	+1.0
	comp=N,6μm,3.2s,SNR=30						
ESAC				S	Sn	01 37 02.0	-2.7
	comp=N,756nm,1.0s,SNR=7.9						
ESAC	San Caprasio	10.28	271	P	Pn	01 35 10.7	+1.0
	comp=N,6μm,3.2s,SNR=30						
ESAC				S	Sn	01 37 02.0	-2.7
	comp=N,756nm,1.0s,SNR=7.9						
LPK	Lapseki	10.30	97	eP	Pn	01 35 08.8	-1.1
PRK	Paraskevi	10.30	103	P	Pn	01 35 08.7	-1.2
PRK	Paraskevi	10.30	103	eP	Pn	01 35 09.5	-0.4
GRER		10.31	68⇓	iP	Pn	01 35 12.4	+2.4
NRDL	Niedersach Rie	10.36	349	ePn	Pn	01 35 11.5	+0.9
TESR		10.39	62⇓	iP	Pn	01 35 13.2	+2.1

AMRR Amara 10.43 73 P Pn 01 35 12.3 +0.6
AMRR Amara 10.43 73⇓iP Pn 01 35 12.9 +1.2
AMRR Amara 10.43 73⇓iP Pn 01 35 12.9 +1.2
PRAR RASCA 10.43 57⇑iP Pn 01 35 13.9 +2.2
CHOS Chios island 10.50 108 P Pn 01 35 11.9 -0.8
CHOS Chios island 10.50 108 eP Pn 01 35 13.3 +0.6
CHOS Chios island 10.50 108 eP Pn 01 35 58.1 +45
MFF Saint Martin d 10.51 298 eP Pn 01 35 15.7 +3.0
MFF Saint Martin d 10.51 298 eP Pn 01 35 15.7 +3.0
MFF Saint Martin d 10.51 298 eP Pn 01 35 15.7 +3.0
ORDF Ordiarp 10.51 279 P Pn 01 35 12.5 -0.3
ORDF Ordiarp 10.51 279 P Pn 01 35 12.5 -0.3
LVV L'vov 10.52 41 eP Pn 01 35 16.2 +3.3
LVV eS Sn 01 37 18.4 +8.0
LVV MLR MLR
comp=N,85μm,10.0s
LVV MLR MLR
comp=E,96μm,10.0s
LVV MLR MLR
comp=Z,90μm,10.0s
RKY Sarkoy-Tekirda 10.53 95 eP Pn 01 35 15.1 +2.0
SART Tekirdag 10.53 95 iP Pn 01 35 11.7 -1.4
SART Tekirdag 10.53 95 iP Pn 01 35 11.7 -1.4
LARF Larrau 10.55 278 P Pn 01 35 14.7 +1.3
EMOS Mosqueruela 10.56 264 P Pn 01 35 13.3 -0.4
comp=Z,2μm,3.0s,SNR=24
EMOS S Sn 01 37 09.0 -2.8
comp=Z,179nm,0.9s,SNR=7.9
EMOS Mosqueruela 10.56 264 P Pn 01 35 13.3 -0.4
comp=Z,2μm,3.0s,SNR=24
EMOS S Sn 01 37 09.0 -2.8
comp=Z,179nm,0.9s,SNR=7.9
EMOS Mosqueruela 10.56 264 P Pn 01 35 13.3 -0.4
comp=Z,2μm,3.0s,SNR=24
EMOS S Sn 01 37 09.0 -2.8
comp=Z,179nm,0.9s,SNR=7.9
PETR 10.56 67⇓iP Pn 01 35 15.0 +1.6
WTSB Winterswijk 10.57 337 eP Pn 01 35 14.5 +0.9
comp=Z,89nm,0.8s
WTSB eS Sn 01 37 27.1 +15
MFT Murefte 10.58 94 eP Pn 01 35 15.5 +1.6
AYVA Ayvalik 10.58 102 iP Pn 01 35 12.8 -1.0
AYVA Ayvalik 10.58 102 iP Pn 01 35 12.8 -1.0
IBBN Ibbenburen 10.63 341 ePn Pn 01 35 17.3 +2.9
KRBG Karabiga-Canak 10.69 96 eP Pn 01 35 16.7 +1.5
TKR Tekirdag 10.73 93 eP Pn 01 35 16.7 +1.0
SJPF Ste Jean 10.73 279 ePn Pn 01 35 15.6 -0.2
SJPF Ste Jean 10.73 279 eP Pn 01 35 15.6 -0.2
SJPF Ste Jean 10.73 279 ePn Pn 01 35 15.6 -0.2
IELO Elcoad 10.74 277 P Pn 01 35 17.1 +1.0
comp=Z,2μm,2.8s,SNR=7.9
IELO S Sn 01 37 15.4 -0.7
comp=Z,197nm,1.2s,SNR=7.9
IELO Elcoad 10.74 277 P Pn 01 35 17.1 +1.0
comp=Z,2μm,2.8s,SNR=7.9
IELO S Sn 01 37 15.4 -0.7
comp=Z,197nm,1.2s,SNR=7.9
IELO Elcoad 10.74 277 P Pn 01 35 17.0 +1.0
comp=Z,2μm,2.8s,SNR=7.9
IELO S Sn 01 37 15.4 -0.7
comp=Z,197nm,1.2s,SNR=7.9
BEL Belsk 10.75 26 eP Pn 01 35 18.6 +2.6
BEL eS Sn 01 37 28.7 +13
OSSF Osses 10.75 280 P Pn 01 35 15.6 -0.5
OSSF Osses 10.75 280 P Pn 01 35 15.6 -0.5
GHRR 10.76 65⇑iP Pn 01 35 19.1 +2.9
IEPA Eparoz 10.77 277 P Pn 01 35 17.7 +1.3
comp=Z,2μm,2.6s,SNR=7.9
IEPA S Sn 01 37 15.9 -0.8
comp=Z,216nm,1.2s,SNR=7.9
IEPA Eparoz 10.77 277 P Pn 01 35 17.7 +1.3
comp=Z,2μm,2.6s,SNR=7.9
IEPA S Sn 01 37 15.9 -0.8
comp=Z,216nm,1.2s,SNR=7.9
IEPA Eparoz 10.77 277 P Pn 01 35 17.7 +1.3
comp=Z,2μm,2.6s,SNR=7.9
IEPA S Sn 01 37 15.9 -0.8
comp=Z,216nm,1.2s,SNR=7.9
APE Apeiranthos 10.79 115 eP Pn 01 35 18.1 +1.4
APE Apeiranthos 10.79 115 P Pn 01 35 16.8 +0.1
APE Apeiranthos 10.79 115 ⇑P Pn 01 35 18.3 +1.6
APE Apeiranthos 10.79 115⇑iP Pn 01 35 18.3 +1.6
APE Apeiranthos 10.79 115 eP Pn 01 35 15.3 -1.4
APE Apeiranthos 10.79 115⇑iP Pn 01 35 18.3 +1.6
EORO Oroz-Betelu 10.79 278 P Pn 01 35 18.1 +1.4
comp=Z,2μm,2.4s,SNR=37
EORO S Sn 01 37 16.3 -1.0
comp=Z,192nm,1.1s,SNR=7.9
EORO Oroz-Betelu 10.79 278 P Pn 01 35 18.1 +1.4
comp=Z,2μm,2.4s,SNR=37
EORO S Sn 01 37 16.3 -1.0
comp=Z,192nm,1.1s,SNR=7.9
EORO Oroz-Betelu 10.79 278 P Pn 01 35 18.1 +1.4
comp=Z,2μm,2.4s,SNR=37
EORO S Sn 01 37 16.3 -1.0
comp=Z,192nm,1.1s,SNR=7.9
IPRE Itoiz 10.83 277 P Pn 01 35 19.2 +2.0
comp=Z,132nm,1.0s,SNR=45
IPRE Itoiz 10.83 277 P Pn 01 35 19.2 +2.0
comp=Z,132nm,1.0s,SNR=45
IPRE Itoiz 10.83 277 P Pn 01 35 19.2 +2.0
comp=Z,132nm,1.0s,SNR=45
CRLT Corlu 10.85 92 eP Pn 01 35 16.3 -1.1
URLA Izmir 10.89 107 iP Pn 01 35 17.1 -1.0
URLA Izmir 10.89 107 iP Pn 01 35 17.1 -1.0
CVD Cernavoda 10.89 75 ⇑P Pn 01 35 18.8 +0.8
CVD Cernavoda 10.89 75⇑iP Pn 01 35 18.8 +0.8
CVD Cernavoda 10.89 75⇑iP Pn 01 35 18.8 +0.8
EBEN Beniarda 10.94 255 P Pn 01 35 20.4 +1.7
comp=Z,1μm,2.2s,SNR=101
EBEN Beniarda 10.94 255 P Pn 01 35 20.4 +1.7
comp=Z,1μm,2.2s,SNR=101
EBEN Beniarda 10.94 255 P Pn 01 35 20.4 +1.7
comp=Z,1μm,2.2s,SNR=101
IUNC Unciti 10.94 277 P Pn 01 35 20.5 +1.8
comp=Z,175nm,1.1s,SNR=36
IUNC Unciti 10.94 277 P Pn 01 35 20.5 +1.8
comp=Z,175nm,1.1s,SNR=36
IUNC Unciti 10.94 277 P Pn 01 35 20.5 +1.8
comp=Z,175nm,1.1s,SNR=36
ELIZ Elizondo 10.95 279 P Pn 01 35 20.2 +1.4
comp=Z,600nm,1.5s,SNR=43
ELIZ Elizondo 10.95 279 P Pn 01 35 20.2 +1.4
comp=Z,600nm,1.5s,SNR=43
ELIZ Elizondo 10.95 279 P Pn 01 35 20.2 +1.4
comp=Z,600nm,1.5s,SNR=43
EBNR Beni Rached 10.96 240 P Pn 01 35 18.9 -0.1
EBNR Beni Rached 10.96 240 P Pn 01 35 18.9 -0.1
VAM Vamos 10.96 126 P Pn 01 35 22.1 +3.1
VAM Vamos 10.96 126 eP Pn 01 35 18.2 -0.8
GONE Gonen-Balikesi 11.07 97 eP Pn 01 35 21.9 +1.4
CFR Carcaliu 11.08 70⇓iP Pn 01 35 19.9 -0.6
CFR Carcaliu 11.08 70⇓iP Pn 01 35 19.9 -0.6
CFR Carcaliu 11.08 70⇓iP Pn 01 35 19.9 -0.6
BALY Balya 11.12 99 iP Pn 01 35 18.1 -3.0
BALY Balya 11.12 99 iP Pn 01 35 18.1 -3.0
EDC Edincik 11.12 96 eP Pn 01 35 21.5 +0.4
ECHA Ech Chlef 11.15 240 P Pn 01 35 22.0 +0.5
ECHA Ech Chlef 11.15 240 P Pn 01 35 22.0 +0.5
ECHE Chera 11.15 260 P Pn 01 35 22.0 +0.4
comp=Z,130nm,0.8s,SNR=30
ECHE Chera 11.15 260 P Pn 01 35 22.0 +0.4
comp=Z,130nm,0.8s,SNR=30
ECHE Chera 11.15 260 P Pn 01 35 22.0 +0.4
comp=Z,130nm,0.8s,SNR=30
BNT Bandirma 11.16 95 eP Pn 01 35 21.1 -0.6
SLVT Silivri 11.18 91 eP Pn 01 35 24.3 +2.4
TIRR Tirgusor 11.18 74 ⇑P Pn 01 35 21.5 -0.4
TIRR Tirgusor 11.18 74 ePn Pn 01 35 20.5 -1.4
TIRR Tirgusor 11.18 74⇑iP Pn 01 35 21.5 -0.4
TIRR Tirgusor 11.18 74⇑iP Pn 01 35 21.5 -0.4
TIRR Tirgusor 11.18 74 ePn Pn 01 35 20.5 -1.4
TIRR Tirgusor 11.18 74⇑iP Pn 01 35 21.5 -0.4
AFON Font Roja 11.18 255 P Pn 01 35 22.7 +0.6
comp=Z,906nm,1.2s,SNR=7.9
AFON S Sn 01 37 25.2 -1.7
comp=Z,288nm,1.1s,SNR=7.9
AFON Font Roja 11.18 255 P Pn 01 35 22.7 +0.6
comp=Z,906nm,1.2s,SNR=7.9
AFON S Sn 01 37 25.2 -1.7
comp=Z,288nm,1.1s,SNR=7.9
AFON Font Roja 11.18 255 P Pn 01 35 22.7 +0.6
comp=Z,906nm,1.2s,SNR=7.9
AFON S Sn 01 37 25.2 -1.7
comp=Z,288nm,1.1s,SNR=7.9
CTYL Yal??k??y-??at 11.19 90 eP Pn 01 35 24.7 +2.6

IAS Iasi 11.21 60 P Pn 01 35 23.4 +1.1
IAS Iasi 11.21 60⇑iP Pn 01 35 24.3 +2.0
IAS Iasi 11.21 60⇑iP Pn 01 35 24.3 +2.0
MANR Mangalia 11.26 77⇓iP Pn 01 35 23.2 +0.2
LDF La Druitiere 11.30 308 ePn Pn 01 35 22.1 -1.4
LDF La Druitiere 11.30 308 eP Pn 01 35 22.1 -1.4
LDF La Druitiere 11.30 308 ePn Pn 01 35 22.1 -1.4
EFOR EFORIE 11.31 76⇓iP Pn 01 35 24.4 +0.8
BALB Balikesir 11.34 99 eP Pn 01 35 25.1 +1.0
IZM Izmir 11.35 106 eP Pn 01 35 25.1 +0.8
CTKS Kestanelik-??a 11.40 91 eP Pn 01 35 27.9 +3.0
LEOM Leova 11.43 64 P Pn 01 35 26.3 +0.9
LEOM Leova 11.43 64⇓iP Pn 01 35 26.6 +1.2
LEOM Leova 11.43 64⇓iP Pn 01 35 26.6 +1.2
EANR 'Ain N'Sour 11.44 240 P Pn 01 35 26.0 +0.4
EANR 'Ain N'Sour 11.44 240 P Pn 01 35 26.0 +0.4
IDI Anoyia 11.46 124 P Pn 01 35 26.3 +0.5
IDI Anoyia 11.46 124 ePn Pn 01 35 25.4 -0.5
IDI eSn Sn 01 37 27.0 -6.6
IDI Anoyia 11.46 124 eP Pn 01 35 25.3 -0.5
IDI Anoyia 11.46 124 ePn Pn 01 35 25.4 -0.5
IDI eSn Sn 01 37 27.0 -6.6
TLCR 11.55 71 P Pn 01 35 27.1 +0.1
TLCR 11.55 71⇑iP Pn 01 35 26.8 -0.2
TLCR 11.55 71⇑iP Pn 01 35 26.8 -0.2
AKS Akhisar 11.55 103 eP Pn 01 35 28.7 +1.6
AKHS Akhisar 11.55 103 iP Pn 01 35 26.7 -0.4
AKHS Akhisar 11.55 103 iP Pn 01 35 26.7 -0.4
LSRT Sirt 11.58 166 iP Pn 01 35 30.3 +2.9
SNR=46
FLN La Foliniere 11.59 308 ePn Pn 01 35 26.5 -1.0
baz=123
FLN eR
comp=Z,62μm,16.9s
FLN La Foliniere 11.59 308 eP Pn 01 35 26.5 -1.0
FLN La Foliniere 11.59 308 ePn Pn 01 35 26.5 -1.0
BGKT Bogazkoy 11.60 91 eP Pn 01 35 29.9 +2.1
ETOR Torete 11.62 267 P Pn 01 35 27.5 -0.5
comp=Z,1μm,3.0s,SNR=64
ETOR S Sn 01 37 36.7 -0.9
comp=Z,492nm,2.4s
ETOR Torete 11.62 267 P Pn 01 35 27.5 -0.5
comp=Z,1μm,3.0s,SNR=64
ETOR S Sn 01 37 36.7 -0.9
comp=Z,492nm,2.4s
ETOR Torete 11.62 267 P Pn 01 35 27.5 -0.5
comp=Z,1μm,3.0s,SNR=64
ETOR S Sn 01 37 36.7 -0.9
comp=Z,492nm,2.4s
GRR Gorron 11.64 306 ePn Pn 01 35 26.5 -1.7
GRR Gorron 11.64 306 eP Pn 01 35 26.5 -1.7
GRR Gorron 11.64 306 ePn Pn 01 35 26.5 -1.7
GCAM G?zelcaml? 11.64 109 iP Pn 01 35 29.9 +1.7
GCAM G?zelcaml? 11.64 109 iP Pn 01 35 29.9 +1.7
ETRT Tiaret 11.67 237 P Pn 01 35 30.5 +1.7
ETRT Tiaret 11.67 237 P Pn 01 35 30.5 +1.7
OKGL Djebel Kef Gue 11.69 241 P Pn 01 35 29.6 +0.6
comp=Z,5μm,2.2s,SNR=7.9
OKGL Djebel Kef Gue 11.69 241 P Pn 01 35 29.6 +0.6
comp=Z,5μm,2.2s,SNR=7.9
OKGL Djebel Kef Gue 11.69 241 P Pn 01 35 31.0 +2.1
OKGL Djebel Kef Gue 11.69 241 P Pn 01 35 31.0 +2.1
BSEG Bad Segeberg 11.74 351 eP Pn 01 35 30.4 +0.8
BSEG Bad Segeberg 11.74 351 ePn Pn 01 35 30.4 +0.8
ARMT Armutlu 11.80 94 eP Pn 01 35 31.9 +1.5
ISK Istanbul-Kandi 11.84 91 eP Pn 01 35 32.7 +1.7
MDNY Mudanya-Bursa 11.87 94 eP Pn 01 35 33.1 +1.7
DST Dursunbey 11.89 98 eP Pn 01 35 31.1 -0.6
ETOB Tobarra 11.91 257 P Pn 01 35 32.8 +0.8
comp=Z,979nm,2.3s,SNR=40
ETOB Tobarra 11.91 257 P Pn 01 35 32.8 +0.8
comp=Z,979nm,2.3s,SNR=40
ETOB Tobarra 11.91 257 P Pn 01 35 32.8 +0.8
comp=Z,979nm,2.3s,SNR=40
NPS Neapolis 11.92 122 P Pn 01 35 32.8 +0.7
NPS Neapolis 11.92 122 eP Pn 01 35 34.3 +2.2
BUY Buyukada 11.93 92 iP Pn 01 35 28.8 -3.3
OJGS Djebel Guires 11.94 239 P Pn 01 35 36.0 +3.5
OJGS Djebel Guires 11.94 239 P Pn 01 35 36.0 +3.5
KIS Kishinev 11.96 62⇑iP Pn 01 35 31.5 -1.1
KIS iS Sn 01 37 48.0 +2.3
KIS pmax pmax
comp=N,2μm,2.0s
KIS pmax pmax
comp=E,6μm,2.0s
KIS pmax pmax
comp=Z,5μm,2.0s
KIS pmax pmax
comp=N,7μm,2.0s
KIS pmax pmax
comp=E,15μm,2.0s
KIS pmax pmax
comp=Z,9μm,2.0s
KIS MLR MLR
comp=Z,280μm,12.0s
KIS Kishinev 11.96 62⇑iP Pn 01 35 31.5 -1.1
comp=Z,5μm,2.0s
KIS Kishinev 11.96 62 iPP Pn 01 35 43.0 +10
KIS iS Sn 01 37 48.0 +2.3
KIS iLi 01 38 14.0
KIS iLQ LQ 01 39 00.0
KIS LRM MLR 01 41 14.0
comp=Z,280μm,12.0s
KIS Kishinev 11.96 62⇑iP Pn 01 35 34.1 +1.5
KIS Kishinev 11.96 62⇑iP Pn 01 35 31.5 -1.1
comp=Z,5μm,2.0s
KIS iS Sn 01 37 48.0 +2.3
ORLT Orhaneli 11.96 96 eP Pn 01 35 32.5 -0.2
CART Cartagena 11.98 251 iP Pn 01 35 31.7 -1.1
CART eS Sn 01 37 53.2 +7.0
BODT Bodrum 12.00 112 eP Pn 01 35 33.6 +0.3
EMUR La Murta 12.03 253 P Pn 01 35 35.4 +1.8
comp=Z,2μm,3.5s,SNR=31
EMUR La Murta 12.03 253 P Pn 01 35 35.4 +1.8
comp=Z,2μm,3.5s,SNR=31
EMUR La Murta 12.03 253 P Pn 01 35 35.4 +1.8
comp=Z,2μm,3.5s,SNR=31
GEMT Gemlik 12.08 94 eP Pn 01 35 35.5 +1.3
ELSH Elham, Standar 12.11 321 eP Pn 01 35 33.0 -1.5
ELSH AMB AMB 01 35 39.4
comp=Z,542nm,3.0s
ELSH e 01 38 30.5
ELSH AMS AMS 01 41 17.0
comp=Z,82μm,14.6s
ELSH Elham, Standar 12.11 321 P Pn 01 35 33.0 -1.5
ELSH AMB AMB 01 35 39.4
comp=Z,542nm,3.0s
ELSH 01 38 30.5
ELSH AMS AMS 01 41 17.0
comp=Z,82μm,14.6s
ELSH Elham, Standar 12.11 321 eP Pn 01 35 33.0 -1.5
AYDN Tasoluk 12.11 108 iP Pn 01 35 34.2 -0.6
AYDN Tasoluk 12.11 108 iP Pn 01 35 34.2 -0.6
DEMI Demirci 12.15 101 iP Pn 01 35 35.2 -0.1
DEMI Demirci 12.15 101 iP Pn 01 35 35.2 -0.1
OJBR Djebel Berber 12.15 240 P Pn 01 35 35.0 -0.3
OJBR Djebel Berber 12.15 240 P Pn 01 35 35.0 -0.3
NIS1 Nisyros Isl. 12.15 114 P Pn 01 35 36.5 +1.2
YLV Yalova 12.18 93 eP Pn 01 35 37.1 +1.4
RGN Rugen 12.19 0 ePn Pn 01 35 35.3 -0.3
comp=Z,663nm,1.0s
RGN Rugen 12.19 0 ePn Pn 01 35 35.3 -0.3
comp=Z,663nm,1.0s
MLSB Milas 12.21 110 eP Pn 01 35 37.1 +1.0
SILT Sile 12.25 90 eP Pn 01 35 38.7 +2.0
KULA Kula-Manisa 12.31 103 eP Pn 01 35 38.7 +1.2
ELAN Lanestosa 12.34 280 P Pn 01 35 39.6 +1.8
comp=Z,1μm,2.1s,SNR=27
ELAN Lanestosa 12.34 280 P Pn 01 35 39.6 +1.8
comp=Z,1μm,2.1s,SNR=27
ELAN Lanestosa 12.34 280 P Pn 01 35 39.6 +1.8
comp=Z,1μm,2.1s,SNR=27
HRT Hereke 12.34 92 eP Pn 01 35 37.3 -0.6
DAT Datca 12.36 112 eP Pn 01 35 43.1 +4.9
LSHF Shwairf 12.38 176 iP Pn 01 35 42.3 +3.8
SNR=45
TVSB Tavsanli 12.56 98 eP Pn 01 35 41.9 +1.0
EVIA Vianos 12.61 258 P Pn 01 35 41.5 0.0
comp=Z,129nm,1.2s,SNR=32
EVIA Vianos 12.61 258 P Pn 01 35 41.5 0.0
comp=Z,129nm,1.2s,SNR=32
EVIA Vianos 12.61 258 P Pn 01 35 41.5 0.0
comp=Z,129nm,1.2s,SNR=32
SGMF Saint Gilles 12.62 303 ePn Pn 01 35 38.5 -3.1

SGMF Saint Gilles 12.62 303 eP Pn 01 35 38.5 -3.1
SGMF Saint Gilles 12.62 303 ePn Pn 01 35 38.5 -3.1
YER Yerkesik 12.64 109 eP Pn 01 35 46.3 +4.2
USTO Oran 12.65 243 P Pn 01 35 46.0 +4.0
GDZ Gediz 12.69 100 iP Pn 01 35 41.6 -1.1
GDZ Gediz 12.69 100 iP Pn 01 35 41.6 -1.1
LJBD Adjabya 12.69 152 iP Pn 01 35 45.5 +2.8
SNR=45
LGHD Ghdames 12.72 195 iP Pn 01 35 45.6 +2.5
SNR=45
LGHD eS Sn 01 38 19.8 +15
SNR=48
KARP Karpathos 12.74 118 eP Pn 01 35 42.1 -1.2
JSA Saint Aubin 12.77 308 eP Pn 01 35 40.2 -3.4
JSA AMB AMB 01 35 51.0
comp=Z,132nm,1.8s
JSA AMS AMS 01 40 47.3
comp=Z,59μm,14.1s
JSA Saint Aubin 12.77 308 P Pn 01 35 40.2 -3.4
JSA AMB AMB 01 35 51.0
comp=Z,132nm,1.8s
JSA AMS AMS 01 40 47.3
comp=Z,59μm,14.1s
JSA Saint Aubin 12.77 308 eP Pn 01 35 40.2 -3.4
BSD Bornholm Skovb 12.80 4 iP Pn 01 35 44.6 +0.6
comp=Z,71nm,0.7s
BSD
comp=Z,96μm,13.0s
BSD Bornholm Skovb 12.80 4 iP Pn 01 35 44.7 +0.7
comp=Z,413nm,1.1s,SNR=45
SPNC Sapanca-Adapaz 12.85 92 eP Pn 01 35 42.3 -2.4
QUIF Quistinic 12.88 301 ePn Pn 01 35 41.9 -3.3
SNR=1.0
QUIF Quistinic 12.88 301 eP Pn 01 35 41.9 -3.3
QUIF Quistinic 12.88 301 ePn Pn 01 35 41.9 -3.3
DENT Denizli 12.89 106 eP Pn 01 35 47.8 +2.4
DNZL Cakiroluk 12.93 106 iP Pn 01 35 45.9 -0.1
DNZL Cakiroluk 12.93 106 iP Pn 01 35 45.9 -0.1
KHAL Karahalli 12.96 103 iP Pn 01 35 43.8 -2.7
KHAL Karahalli 12.96 103 iP Pn 01 35 43.8 -2.7
LLD Lille Linde 12.99 357 iP Pn 01 35 47.9 +1.3
comp=Z,413nm,1.1s
LLD
comp=Z,46μm,14.0s
EHUE Huescar 13.00 255 P Pn 01 35 47.6 +0.6
comp=Z,163nm,1.2s,SNR=7.9
EHUE Huescar 13.00 255 P Pn 01 35 47.6 +0.6
comp=Z,163nm,1.2s,SNR=7.9
EHUE Huescar 13.00 255 P Pn 01 35 47.6 +0.6
comp=Z,163nm,1.2s,SNR=7.9
KHL Karahalli 13.00 103 eP Pn 01 35 48.6 +1.7
ARG Arkhangelos 13.01 113 eP Pn 01 35 49.3 +2.4
GULT Gulveren 13.06 93 eP Pn 01 35 49.0 +1.3
AEU East Anglia Un 13.09 326 eP Pn 01 35 48.2 +0.3
AEU East Anglia Un 13.09 326 P Pn 01 35 48.2 +0.3
AEU East Anglia Un 13.09 326 eP Pn 01 35 48.2 +0.3
ROSF Rostrenen 13.10 303 ePn Pn 01 35 41.5 -6.6
SNR=1.0
ROSF Rostrenen 13.10 303 eP Pn 01 35 41.5 -6.6
ROSF Rostrenen 13.10 303 ePn Pn 01 35 41.5 -6.6
ENIJ Nijar 13.11 251 P Pn 01 35 49.5 +1.1
comp=Z,438nm,1.3s,SNR=7.9
ENIJ Nijar 13.11 251 P Pn 01 35 49.5 +1.1
comp=Z,438nm,1.3s,SNR=7.9
ENIJ Nijar 13.11 251 P Pn 01 35 49.5 +1.1
comp=Z,438nm,1.3s,SNR=7.9
BORA Eskisehir 13.16 95 iP Pn 01 35 47.0 -2.1
BORA Eskisehir 13.16 95 iP Pn 01 35 47.0 -2.1
ALT Altintas 13.18 99 eP Pn 01 35 49.9 +0.7
GUD Guadarrama 13.21 268 P Pn 01 35 49.7 -0.2
comp=Z,364nm,1.0s,SNR=63
GUD S Sn 01 38 14.2 -2.4
comp=Z,45nm,1.1s
GUD Guadarrama 13.21 268 P Pn 01 35 49.7 -0.2
comp=Z,364nm,1.0s,SNR=63
GUD S Sn 01 38 14.2 -2.4
comp=Z,45nm,1.1s
GUD Guadarrama 13.21 268 P Pn 01 35 49.7 -0.2
comp=Z,364nm,1.0s,SNR=63
GUD S Sn 01 38 14.2 -2.4
comp=Z,45nm,1.1s
HENT Hendek 13.25 91 iP Pn 01 35 49.1 -1.2
HENT Hendek 13.25 91 iP Pn 01 35 49.1 -1.2
LTBQ Tobruq 13.31 137 iP Pn 01 35 50.8 -0.2
SNR=45
ESDC Sonseca Array 13.33 264 P Pn 01 35 50.6 -0.7
comp=Z,33nm,0.9s,baz=73,slow=14,SNR=58
ESDC Sonseca Array 13.33 264 Pn Pn 01 35 47.6 -3.7
ESDC PKKKP 02 12 12.7
ESDC Sonseca Array 13.33 264 P Pn 01 35 50.6 -0.7
comp=Z,33nm,0.9s,baz=73,slow=14,SNR=58
ESDC Sonseca Array 13.33 264 Pn Pn 01 35 47.7 -3.7
comp=Z,1.3nm,0.3s,baz=71,slow=12,SNR=66
ESDC LR LR 01 41 05.0
comp=Z,62μm,18.3s,baz=70,slow=38
ESDC P3KP 02 12 12.7
comp=Z,0.2nm,0.3s,baz=219,slow=1.9,SNR=4.7
ESDC Sonseca Array 13.33 264 Pn Pn 01 35 47.7 -3.7
ESDC Sonseca Array 13.33 264 P Pn 01 35 50.6 -0.7
comp=Z,33nm,0.9s,SNR=58
ESLA Sonseca Array 13.33 264 ePn Pn 01 35 48.5 -2.8
comp=Z,81nm,1.2s
ESLA Sonseca Array 13.33 264 ePn Pn 01 35 48.5 -2.8
comp=Z,81nm,1.2s
COP Copenhagen 13.34 358 iP Pn 01 35 51.9 +0.6
comp=Z,127nm,1.1s
COP
comp=Z,52μm,15.0s
COP Copenhagen 13.34 358 iP Pn 01 35 51.9 +0.6
comp=Z,128nm,1.1s
EQES Quesada 13.35 255 P Pn 01 35 52.1 +0.4
comp=Z,3μm,3.0s,SNR=39
EQES Quesada 13.35 255 P Pn 01 35 52.1 +0.4
comp=Z,3μm,3.0s,SNR=39
EQES Quesada 13.35 255 P Pn 01 35 52.1 +0.4
comp=Z,3μm,3.0s,SNR=39
SUW Suwalki 13.36 26 eP Pn 01 35 52.2 +0.5
SUW Suwalki 13.36 26 ePn Pn 01 35 52.2 +0.5
SUW Suwalki 13.36 26 eP Pn 01 35 51.9 +0.2
SUW eSS S 01 38 39.7 -4.2
SUW Suwalki 13.36 26 ePn Pn 01 35 52.2 +0.5
WOL Wolverton 13.36 317 eP Pn 01 35 49.0 -2.7
WOL AMB AMB 01 35 53.8
comp=Z,813nm,1.4s
WOL AMS AMS 01 42 48.9
comp=Z,70μm,12.0s
WOL Wolverton 13.36 317 P Pn 01 35 49.0 -2.7
WOL AMB AMB 01 35 53.8
comp=Z,813nm,1.4s
WOL AMS AMS 01 42 48.9
comp=Z,70μm,12.0s
LJFR Jufra 13.39 171 eP Pn 01 35 55.3 +3.0
SNR=45
SKP1 Kophill 13.41 319 eP Pn 01 35 50.3 -2.0
SKP1 Kophill 13.41 319 P Pn 01 35 50.3 -2.0
SKP1 Kophill 13.41 319 eP Pn 01 35 50.3 -2.0
FETY Fethiye 13.45 110 eP Pn 01 35 55.9 +2.9
GOLH Golhisar 13.49 107 iP Pn 01 35 50.2 -3.5
MDUB Mudurnu 13.55 92 eP Pn 01 35 54.4 -0.1
ESKT Eskisehir 13.56 96 eP Pn 01 35 55.8 +1.3
SEYT Eskypehyr 13.56 96 iP Pn 01 35 51.2 -3.3
KDZE Karadeniz Ereo 13.56 88 eP Pn 01 35 53.9 -0.6
EBER Berja 13.63 252 P Pn 01 35 56.5 +0.9
comp=Z,5μm,3.7s,SNR=70
EBER Berja 13.63 252 P Pn 01 35 56.5 +0.9
comp=Z,5μm,3.7s,SNR=70
EBER Berja 13.63 252 P Pn 01 35 56.5 +0.9
comp=Z,5μm,3.7s,SNR=70
EARI Arriondas 13.63 280 P Pn 01 35 55.9 +0.4
comp=Z,606nm,2.1s,SNR=14
EARI Arriondas 13.63 280 P Pn 01 35 55.9 +0.4
comp=Z,606nm,2.1s,SNR=14
EARI Arriondas 13.63 280 P Pn 01 35 55.9 +0.4
comp=Z,606nm,2.1s,SNR=14
PAB San Pablo 13.65 264 eP Pn 01 35 52.5 -3.3
PAB San Pablo 13.65 264 ePn Pn 01 35 52.5 -3.3
PAB San Pablo 13.65 264 ePn Pn 01 35 52.5 -3.3
SHUT Suhut-Afyon 13.66 100 eP Pn 01 35 55.8 -0.1
AK02 Malin Array Si 13.70 47 ePn Pn 01 35 55.6 -0.8
AK02 Malin Array Si 13.70 47 ePn Pn 01 35 55.6 -0.8
KIEV Kiev 13.72 47 eP Pn 01 35 55.0 -1.6
KIEV Kiev 13.72 47 ePn Pn 01 35 55.0 -1.6
KIEV Kiev 13.72 47 ePn Pn 01 35 55.0 -1.6
AK01 Malin Array Si 13.72 47 ePn Pn 01 35 55.3 -1.3
AK01 Malin Array Si 13.72 47 ePn Pn 01 35 55.3 -1.3

AKASG **Malin Array Be** 13.74 47 P Pn 01 35 54.9 -1.9
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG MLR MLR
comp=Z,191µm,18.4s
AKASG **Malin Array Be** 13.74 47 Pn Pn 01 35 54.9 -1.9
AKASG *e* 02 11 41.5
AKASG **Malin Array Be** 13.74 47 Pn Pn 01 35 54.9 -1.9
comp=Z,1.7nm,0.3s,baz=238,slow=13,SNR=74
AKASG LR LR 01 41 56.0
comp=Z,191µm,18.4s,baz=230,slow=41
AKASG P3KPbc 02 11 41.5
comp=Z,0.3nm,0.3s,baz=344,slow=4.5,SNR=4.1
AKASG **Malin Array Be** 13.74 47 Pn Pn 01 35 54.9 -1.9
SWN1 **Swindon** 13.77 317 *e*P Pn 01 35 56.1 -1.2
SWN1 AMB AMB 01 35 59.5
comp=Z,495nm,1.6s
SWN1 AMS AMS 01 43 09.0
comp=Z,67µm,11.7s
SWN1 **Swindon** 13.77 317 P Pn 01 35 56.1 -1.2
SWN1 AMB AMB 01 35 59.5
comp=Z,495nm,1.6s
SWN1 AMS AMS 01 43 09.0
comp=Z,67µm,11.7s
SWN1 **Swindon** 13.77 317 *e*P Pn 01 35 56.1 -1.2
EQUE **Quentar** 13.88 254 P Pn 01 36 00.2 +1.3
comp=Z,5µm,2.9s,SNR=50
EQUE **Quentar** 13.88 254 P Pn 01 36 00.2 +1.3
comp=Z,5µm,2.9s,SNR=50
EQUE **Quentar** 13.88 254 P Pn 01 36 00.2 +1.3
comp=Z,5µm,2.9s,SNR=50
BOLV **Bolvadin** 13.89 99 *i* P Pn 01 35 59.8 +0.6
BOLV **Bolvadin** 13.89 99 *i* P Pn 01 35 59.8 +0.6
ISP **Isparta** 13.93 103 *e*P Pn 01 36 00.1 +0.5
ISP **Isparta** 13.93 103 P Pn 01 36 01.1 +1.5
ISP **Isparta** 13.93 103 *e*P Pn 01 35 59.2 -0.4
ISP **Isparta** 13.93 103 *e*Pn Pn 01 35 59.2 -0.4
ISP **Isparta** 13.93 103 ‖ *i*P Pn 01 36 00.7 +1.1
ISP **Isparta** 13.93 103 *e*P Pn 01 36 01.3 +1.7
ISP **Isparta** 13.93 103 *e*Pn Pn 01 35 59.2 -0.4
ISP **Isparta** 13.93 103 ‖ *i*P Pn 01 36 00.7 +1.1
ECOG **Cogollos-Vega** 13.93 254 P Pn 01 36 01.2 +1.5
comp=Z,153nm,1.2s,SNR=36
ECOG **Cogollos-Vega** 13.93 254 P Pn 01 36 01.2 +1.5
comp=Z,153nm,1.2s,SNR=36
ECOG **Cogollos-Vega** 13.93 254 P Pn 01 36 01.2 +1.5
comp=Z,153nm,1.2s,SNR=36
ELL **Elmali** 13.97 108 *e*P Pn 01 36 02.2 +2.0
AKAS **Kas** 14.01 111 *i* P Pn 01 35 52.3 -8.5
KSL **Kastellorizon** 14.04 111 *e*P P 01 36 06.9 -2.0
SSW **Stow on the Wo** 14.07 318 *e*P Pn 01 36 00.1 -1.2
SSW **Stow on the Wo** 14.07 318 P Pn 01 36 00.1 -1.2
SSW **Stow on the Wo** 14.07 318 *e*P Pn 01 36 00.1 -1.2
SVRH **Sivrihisar-ESK** 14.07 96 *e*P Pn 01 36 01.4 -0.1
BCK **Bucak** 14.13 105 *e*P Pn 01 36 04.5 +2.2
EGUA **Guajares** 14.14 253 P Pn 01 36 02.4 0.0
comp=Z,2µm,1.6s,SNR=7.9
EGUA **Guajares** 14.14 253 P Pn 01 36 02.4 0.0
comp=Z,2µm,1.6s,SNR=7.9
EGUA **Guajares** 14.14 253 P Pn 01 36 02.4 0.0
comp=Z,2µm,1.6s,SNR=7.9
KORT **Korkueli** 14.16 107 *i* P Pn 01 36 03.0 +0.1
KORT **Korkueli** 14.16 107 *i* P Pn 01 36 03.0 +0.1
LZLA **Zalla** 14.21 165 *i* P Pn 01 36 07.0 +3.6
SNR=45
ERON **Agron** 14.22 254 P Pn 01 36 04.7 +1.0
comp=Z,2µm,2.5s,SNR=7.9
ERON **Agron** 14.22 254 P Pn 01 36 04.7 +1.0
comp=Z,2µm,2.5s,SNR=7.9
ERON **Agron** 14.22 254 P Pn 01 36 04.7 +1.0
comp=Z,2µm,2.5s,SNR=7.9
ELUQ **Luque** 14.31 256 P Pn 01 36 04.8 -0.1
comp=Z,425nm,1.8s,SNR=7.9
ELUQ **Luque** 14.31 256 P Pn 01 36 04.8 -0.1
comp=Z,425nm,1.8s,SNR=7.9
ELUQ **Luque** 14.31 256 P Pn 01 36 04.8 -0.1
comp=Z,425nm,1.8s,SNR=7.9
MUD **Monsted U'grnd** 14.35 351 *i* P Pn 01 36 06.0 +0.9
comp=Z,60nm,0.8s
MUD
comp=Z,89µm,14.0s
MUD **Monsted U'grnd** 14.35 351 *i* P Pn 01 36 06.1 +0.9
comp=Z,60nm,0.9s,SNR=45
DYA **Yadsworthy** 14.35 310 *e*P Pn 01 36 01.9 -3.4
DYA AMB AMB 01 36 12.8
comp=Z,246nm,1.6s
DYA AMS AMS 01 41 47.1
comp=Z,36µm,16.9s
DYA **Yadsworthy** 14.35 310 P Pn 01 36 01.9 -3.4
DYA AMB AMB 01 36 12.8
comp=Z,246nm,1.6s
DYA AMS AMS 01 41 47.1
comp=Z,36µm,16.9s
DYA **Yadsworthy** 14.35 310 *e*P Pn 01 36 01.9 -3.4
ELOJ **Sierra Loja** 14.41 255 P Pn 01 36 07.1 +0.9
comp=Z,294nm,1.5s,SNR=13
ELOJ **Sierra Loja** 14.41 255 P Pn 01 36 07.1 +0.9
comp=Z,294nm,1.5s,SNR=13
ELOJ **Sierra Loja** 14.41 255 P Pn 01 36 07.1 +0.9
comp=Z,294nm,1.5s,SNR=13
ANTB **Antalya** 14.43 107 *e*P Pn 01 36 08.2 +1.9
SAFT **Safranbolu** 14.49 88 *e*P Pn 01 36 07.2 -0.1
EMLI **Melilla** 14.50 246 P Pn 01 36 08.1 +0.8
comp=Z,3µm,2.6s,SNR=13
EMEL **Melilla** 14.51 246 P Pn 01 36 08.1 +0.7
comp=Z,3µm,2.6s,SNR=13
EMEL **Melilla** 14.51 246 P Pn 01 36 08.1 +0.7
comp=Z,3µm,2.6s,SNR=13
KIZT **Kizilcal** 14.52 98 *e*P Pn 01 36 08.6 +0.9
HEX **Exmoor** 14.59 312 *e*P Pn 01 36 07.0 -1.4
HEX **Exmoor** 14.59 312 P Pn 01 36 07.0 -1.4
HEX **Exmoor** 14.59 312 *e*P Pn 01 36 07.0 -1.4
MCH1 **Michaelchurch** 14.66 317 *e*P Pn 01 36 04.9 -4.5
MCH1 AMB AMB 01 36 12.0
comp=Z,127nm,3.3s
MCH1 AMS AMS 01 43 01.9
comp=Z,75µm,12.3s
MCH1 **Michaelchurch** 14.66 317 P Pn 01 36 04.9 -4.5
MCH1 AMB AMB 01 36 12.0
comp=Z,127nm,3.3s
MCH1 AMS AMS 01 43 01.9
comp=Z,75µm,12.3s
LUJL **Ujela** 14.71 151 *i* P Pn 01 36 11.9 +1.6
SNR=45
KBI1 **Birley Grange** 14.73 323 *e*P Pn 01 36 06.7 -3.7
KBI1 **Birley Grange** 14.73 323 P Pn 01 36 06.7 -3.7
EMAL **Malaga-Limoner** 14.78 254 *i* P Pn 01 36 11.0 -0.2
EMAL *i* S Sn 01 38 59.6 +4.9
EPLA **Plasencia** 14.78 268 P Pn 01 36 11.0 -0.2
comp=Z,2µm,3.0s,SNR=26
EPLA **Plasencia** 14.78 268 P Pn 01 36 11.0 -0.2
comp=Z,2µm,3.0s,SNR=26
EPLA **Plasencia** 14.78 268 P Pn 01 36 11.0 -0.2
comp=Z,2µm,3.0s,SNR=26
KDHN **Kadinhani** 14.82 99 *i* P Pn 01 36 11.5 -0.2
LOD **Lodumlu** 14.86 93 *e*P Pn 01 36 11.6 -0.7
ECAL **Calabor** 14.88 275 P Pn 01 36 12.3 -0.3
comp=Z,670nm,1.9s,SNR=22
ECAL **Calabor** 14.88 275 P Pn 01 36 12.3 -0.3
comp=Z,670nm,1.9s,SNR=22
HLM1 **Long Mynd** 14.90 318 *e*P Pn 01 36 09.3 -3.4
HLM1 **Long Mynd** 14.90 318 P Pn 01 36 09.3 -3.4
HLM1 **Long Mynd** 14.90 318 *e*P Pn 01 36 09.4 -3.4
PBRG **Braganca** 14.91 275 *e*P Pn 01 36 12.6 -0.3
comp=Z,560nm,1.3s
PBRG **Braganca** 14.91 275 *e*P Pn 01 36 12.6 -0.3
comp=Z,560nm,1.3s
HTL **Hartland** 14.93 311 AMB AMB 01 36 23.6
comp=Z,261nm,1.1s
HTL AMS AMS 01 43 33.5
comp=Z,40µm,17.6s
HTL **Hartland** 14.93 311 AMB AMB 01 36 23.6
comp=Z,261nm,1.1s
HTL AMS AMS 01 43 33.5
comp=Z,40µm,17.6s
EPON **Pontenova** 15.05 281 P Pn 01 36 15.7 +1.0
comp=Z,908nm,2.3s,SNR=6.0
EPON **Pontenova** 15.05 281 P Pn 01 36 15.7 +1.0
comp=Z,908nm,2.3s,SNR=6.0
LHO **Holmfirth** 15.07 323 *e*P Pn 01 36 12.6 -2.4
LHO **Holmfirth** 15.07 323 P Pn 01 36 12.6 -2.4
ERUA **La Rua** 15.12 277 P Pn 01 36 17.4 +1.7
comp=Z,190nm,2.1s,SNR=7.9
ERUA **La Rua** 15.12 277 P Pn 01 36 17.4 +1.7
comp=Z,190nm,2.1s,SNR=7.9
ERUA **La Rua** 15.12 277 P Pn 01 36 17.4 +1.7
comp=Z,190nm,2.1s,SNR=7.9
ELDT **Eldivan** 15.20 90 *i* P Pn 01 36 12.6 -4.3
KONT **Konya--Tatoy** 15.21 101 *e*P Pn 01 36 17.4 +0.5
AFSR **Af˙ar-Bala (A** 15.22 94 *e*P Pn 01 36 17.4 +0.4
BBAL **Bala** 15.23 94 *i* P Pn 01 36 15.8 -1.5
MVO **Moncorvo** 15.23 272 *e*P Pn 01 36 13.0 -4.3
comp=Z,759nm,1.8s
MVO *e*LR LR 01 39 26.5
comp=Z,55µm,16.0s
MVO **Moncorvo** 15.23 272 *e*P Pn 01 36 13.0 -4.3
comp=Z,759nm,1.8s
SIM **Simferopol'** 15.27 73 *c*eP Pn 01 36 14.1 -3.5
SIM *e*S Sn 01 38 59.3 -7.2
SIM pmax pmax
comp=Z,325nm,0.9s
SIM MLR MLR
comp=Z,95µm,17.0s
FOEL **Foel Wylfa** 15.28 319 *e*P Pn 01 36 16.4 -1.4
FOEL AMB AMB 01 36 23.8
comp=Z,213nm,1.3s
FOEL AMS AMS 01 43 15.7
comp=Z,49µm,15.9s
FOEL **Foel Wylfa** 15.28 319 P Pn 01 36 16.4 -1.4
FOEL AMB AMB 01 36 23.8
comp=Z,213nm,1.3s
FOEL AMS AMS 01 43 15.7
comp=Z,49µm,15.9s
ILGA **Ilgaz** 15.29 88 *i* P Pn 01 36 14.7 -3.5
CANT **Cankiri** 15.32 90 *e*P Pn 01 36 19.8 +1.4
NACGM **Naroch** 15.34 31 *e*P Pn 01 36 13.0 -5.5
BZK **Bozkurt** 15.35 85 *e*P Pn 01 36 17.8 -0.9
KAST **KASTAMONU** 15.37 86 *i* P Pn 01 36 15.8 -3.2
LIJA **Lijar** 15.41 255 *i* P Pn 01 36 20.2 +0.5
MNK **Minsk** 15.45 33 *c i*P Pn 01 36 17.0 -3.0
MNK *e*S Sn 01 39 04.0 -6.8
MNK pmax pmax
comp=N,3µm,1.2s
MNK pmax pmax
comp=E,2µm,1.2s
MNK pmax pmax
comp=Z,2µm,1.0s
MNK pmax pmax
comp=Z,33µm,4.0s
MNK smax smax
comp=N,20µm,14.0s
MNK smax smax
comp=E,32µm,16.0s
MNK MLR MLR
comp=E,192µm,10.0s
MNK MLR MLR
comp=N,195µm,10.0s
MNK MLR MLR
comp=Z,156µm,8.0s
REAL **Reales** 15.47 254 *e*P P 01 36 25.4 +0.5
MICGM **Minsk** 15.47 33 ‖ *i*P Pn 01 36 17.0 -3.2
IIGN **Ignalina** 15.48 29 *e*P Pn 01 36 19.6 -0.8
IIGN AMB AMB 01 36 27.8
comp=Z,843nm,1.2s
IIGN *e*S S 01 39 22.0 -5.3
IIGN **Ignalina** 15.48 29 *e*P Pn 01 36 20.6 +0.2
IIGN AMB AMB 01 36 27.8
comp=Z,830nm,1.2s
IIGN **Ignalina** 15.48 29 *e*P Pn 01 36 19.6 -0.8
comp=Z,843nm,1.2s,SNR=56
IIGN *e*S S 01 39 22.0 -5.3
SNR=56
TOS **Tosya** 15.52 88 *e*P Pn 01 36 22.6 +1.5
BR131 **Keskin Array S** 15.56 93 *e*Pn Pn 01 36 20.9 -0.7
comp=Z,183nm,1.0s
BR131 **Keskin Array S** 15.56 93 *e*Pn Pn 01 36 20.9 -0.7
comp=Z,183nm,1.0s
BRTR **Keskin Array B** 15.56 93 Pn Pn 01 36 20.8 -0.7
BRTR PcP PcP 01 41 26.5 +3.1
BRTR ScP ScP 01 44 59.9 +2.9
BRTR PKKKP 02 11 57.8
BRTR **Keskin Array B** 15.56 93 Pn Pn 01 36 20.8 -0.7
comp=Z,0.7nm,0.3s,baz=277,slow=12,SNR=60
BRTR PcP PcP 01 41 26.5 +3.1
comp=Z,0.1nm,0.3s,baz=268,slow=0.5,SNR=3.5
BRTR LR LR 01 42 38.8
comp=Z,50µm,21.6s,baz=284,slow=38
BRTR ScP ScP 01 44 59.9 +2.9
comp=Z,0.0nm,0.3s,baz=250,slow=2.9,SNR=3.0
BRTR P3KP 02 11 57.8
comp=Z,0.0nm,0.3s,baz=256,slow=2.0,SNR=4.1
BRTR **Keskin Array B** 15.56 93 Pn Pn 01 36 20.8 -0.7
ISAL **Salakas** 15.62 28 *e*P Pn 01 36 21.1 -1.1
ISAL AMB AMB 01 36 29.2
comp=Z,510nm,1.3s
ISAL *e*S S 01 39 25.0 -5.2
ISAL **Salakas** 15.62 28 *e*P Pn 01 36 22.1 -0.1
ISAL AMB AMB 01 36 29.3
comp=Z,519nm,1.2s
ISAL **Salakas** 15.62 28 *e*P Pn 01 36 21.1 -1.1
comp=Z,510nm,1.3s,SNR=56
ISAL *e*S S 01 39 25.0 -5.2
SNR=56
EJIF **Jimena Fronter** 15.67 254 P Pn 01 36 24.5 +1.6
comp=Z,160nm,1.2s,SNR=7.9
EJIF **Jimena Fronter** 15.67 254 P Pn 01 36 24.5 +1.6
comp=Z,160nm,1.2s,SNR=7.9
EJIF **Jimena Fronter** 15.67 254 P Pn 01 36 24.5 +1.6
comp=Z,160nm,1.2s,SNR=7.9
KAMT **Kaman** 15.71 94 *e*P Pn 01 36 24.2 +0.6
PVRL **Vila Real** 15.72 273 *e*P Pn 01 36 22.2 -1.4
comp=Z,651nm,1.6s
PVRL **Vila Real** 15.72 273 *e*P Pn 01 36 22.2 -1.4
comp=Z,651nm,1.6s
ESPR **Espera** 15.75 256 P Pn 01 36 24.2 +0.2
comp=Z,4µm,3.4s,SNR=29
ESPR **Espera** 15.75 256 P Pn 01 36 24.2 +0.2
comp=Z,4µm,3.4s,SNR=29
ESPR **Espera** 15.75 256 P Pn 01 36 24.2 +0.2
comp=Z,4µm,3.4s,SNR=29
POLO **Lamas de Olo** 15.76 273 *e*P Pn 01 36 23.2 -1.0
comp=Z,306nm,1.4s
POLO **Lamas de Olo** 15.76 273 *e*P Pn 01 36 23.2 -1.0
comp=Z,306nm,1.4s
MTE **Manteigas** 15.78 270 *e*P Pn 01 36 22.9 -1.5
comp=Z,526nm,1.3s
MTE *e*LR LR 01 39 37.0
comp=Z,88µm,20.0s
MTE **Manteigas** 15.78 270 *e*Pn Pn 01 36 21.6 -2.8
comp=Z,386nm,1.2s
MTE **Manteigas** 15.78 270 *e*Pn Pn 01 36 21.6 -2.8
comp=Z,386nm,1.2s
MTE **Manteigas** 15.78 270 *e*P Pn 01 36 22.9 -1.5
comp=Z,526nm,1.3s
IZAR **Zarasai** 15.81 28 *e*P Pn 01 36 23.5 -1.0
IZAR AMB AMB 01 36 31.5
comp=Z,641nm,1.2s
IZAR *e*S S 01 39 29.1 -4.8
IZAR **Zarasai** 15.81 28 *e*P Pn 01 36 24.3 -0.3
IZAR AMB AMB 01 36 31.5
comp=Z,645nm,1.2s
WPM1 **Penmaenmawr** 15.84 319 *e*P Pn 01 36 21.8 -3.3
WPM1 **Penmaenmawr** 15.84 319 P Pn 01 36 21.8 -3.3
WPM1 **Penmaenmawr** 15.84 319 *e*P Pn 01 36 21.8 -3.3
ECEU **Ceuta** 15.87 252 P Pn 01 36 26.8 +1.3
comp=Z,3µm,2.4s,SNR=7.9
ECEU **Ceuta** 15.87 252 P Pn 01 36 26.8 +1.3
comp=Z,3µm,2.4s,SNR=7.9
ECEU **Ceuta** 15.87 252 P Pn 01 36 26.8 +1.3
comp=Z,3µm,2.4s,SNR=7.9
PCAB **Cabril** 15.87 275 *e*P Pn 01 36 26.7 +1.1
comp=Z,658nm,1.5s
PCAB **Cabril** 15.87 275 *e*P Pn 01 36 26.7 +1.1
comp=Z,658nm,1.5s
PCBR **Castelo Branco** 15.88 268 *e*P Pn 01 36 21.1 -4.5
comp=Z,485nm,1.4s
PCBR **Castelo Branco** 15.88 268 *e*P Pn 01 36 21.1 -4.5
comp=Z,485nm,1.4s
YLL **Llanberis** 15.90 319 *e*P Pn 01 36 22.3 -3.6
YLL **Llanberis** 15.90 319 P Pn 01 36 22.3 -3.6
GAZI **Gazipasa** 15.92 106 *i* P Pn 01 36 23.3 -2.9
PMRV **Marv??o** 15.93 266 *e*P Pn 01 36 23.5 -2.8
comp=Z,367nm,1.8s
PMRV *e*LR LR 01 39 40.5
comp=Z,45µm,18.0s
PMRV **Marv??o** 15.93 266 *e*P Pn 01 36 23.5 -2.8
comp=Z,367nm,1.8s
YRE **Yr Eifl** 15.94 318 *e*P Pn 01 36 23.0 -3.3
YRE **Yr Eifl** 15.94 318 P Pn 01 36 23.0 -3.3
YRE **Yr Eifl** 15.94 318 *e*P Pn 01 36 23.0 -3.3
SULT **Sultanhani-AKS** 15.96 98 *e*P Pn 01 36 28.2 +1.4
PVIS **Viseu** 15.97 271 *e*P Pn 01 36 23.9 -2.9
comp=Z,747nm,1.4s
PVIS **Viseu** 15.97 271 *e*P Pn 01 36 23.9 -2.9
comp=Z,747nm,1.4s
BYBT **Boyabat** 15.99 86 *e*P Pn 01 36 26.3 -0.7
PGAV **Gavieira, Arco** 16.01 276 *e*P Pn 01 36 27.8 +0.4
comp=Z,1µm,1.4s
PGAV *e*LR LR 01 39 48.5
comp=Z,99µm,18.0s
PGAV **Gavieira, Arco** 16.01 276 *e*P Pn 01 36 27.8 +0.4
comp=Z,1µm,1.4s
PBAR **Barrancos** 16.09 262 *e*P Pn 01 36 27.0 -1.3
comp=Z,794nm,1.5s
PBAR **Barrancos** 16.09 262 *e*P Pn 01 36 27.0 -1.3
comp=Z,794nm,1.5s
WLF1 **Llynfaes** 16.10 319 *e*P Pn 01 36 27.1 -1.3
WLF1 AMB AMB 01 36 31.7
comp=Z,107nm,1.7s
WLF1 *e* 01 39 30.2
WLF1 AMS AMS 01 43 42.5
comp=Z,39µm,15.5s
WLF1 **Llynfaes** 16.10 319 P Pn 01 36 27.1 -1.3
WLF1 AMB AMB 01 36 31.7
comp=Z,107nm,1.7s
WLF1 01 39 30.2
WLF1 AMS AMS 01 43 42.5
comp=Z,39µm,15.5s
STS **Santiago** 16.10 279 P Pn 01 36 29.8 +1.3
comp=Z,325nm,1.2s,SNR=11
STS **Santiago** 16.10 279 P Pn 01 36 29.8 +1.3
comp=Z,325nm,1.2s,SNR=11
STS **Santiago** 16.10 279 P Pn 01 36 29.8 +1.3
comp=Z,325nm,1.2s,SNR=11
WME **Myndd Eilian** 16.12 319 *e*P Pn 01 36 24.2 -4.4
WME **Myndd Eilian** 16.12 319 P Pn 01 36 24.2 -4.4
CNIL **Conil** 16.12 255 *e*P P 01 36 39.5 +7.5
ERMK **Ermenek** 16.16 104 *i* P Pn 01 36 25.4 -4.0
YRC **Rhoscolyn** 16.16 318 *e*P Pn 01 36 25.1 -4.0
YRC **Rhoscolyn** 16.16 318 P Pn 01 36 25.1 -4.0
YRC **Rhoscolyn** 16.16 318 *e*P Pn 01 36 25.1 -4.0
CORM **Corum** 16.17 91 *e*P P 01 36 31.4 -1.2
CTKT **Corum** 16.18 89 *i* P Pn 01 36 27.5 -2.1
LUMB **Murzuk** 16.23 175 *i* P P 01 36 32.3 -1.0
SNR=42
PESTR **Estremoz** 16.25 265 *e*P Pn 01 36 28.2 -2.2
comp=Z,484nm,1.2s
PESTR **Estremoz** 16.25 265 *e*P Pn 01 36 28.2 -2.2
comp=Z,484nm,1.2s
EZAM **Zamans** 16.30 277 P P 01 36 35.5 +1.6
comp=Z,288nm,1.2s,SNR=7.9
EZAM **Zamans** 16.30 277 P P 01 36 35.5 +1.6
comp=Z,288nm,1.2s,SNR=7.9
EZAM **Zamans** 16.30 277 P P 01 36 35.5 +1.6
comp=Z,288nm,1.2s,SNR=7.9
KESW **Keswick, Cumbr** 16.32 324 *e*P Pn 01 36 29.9 -1.2
KESW AMB AMB 01 36 40.8
comp=Z,339nm,1.3s
KESW *e* 01 39 33.0
KESW AMS AMS 01 43 29.4
comp=Z,31µm,11.3s
KESW **Keswick, Cumbr** 16.32 324 P Pn 01 36 29.9 -1.2
KESW AMB AMB 01 36 40.8
comp=Z,339nm,1.3s
KESW 01 39 33.0
KESW AMS AMS 01 43 29.4
comp=Z,31µm,11.3s
DIKM **Dikmen** 16.32 85 *e*P Pn 01 36 30.4 -0.9
EMAZ **Mazaricos** 16.41 280 P P 01 36 35.3 +0.2
comp=Z,2µm,3.1s,SNR=11
EMAZ **Mazaricos** 16.41 280 P P 01 36 35.3 +0.2
comp=Z,2µm,3.1s,SNR=11
SNART **Snartemo** 16.44 349 *e*P P 01 36 34.9 -0.5
SNART AMB AMB 01 36 41.4
comp=Z,364nm,1.6s
AKMC **Akamas** 16.53 110 P Pn 01 36 34.0 0.0
AKMC **Akamas** 16.53 110 P Pn 01 36 34.0 0.0
PPCY **Paphos** 16.62 110 P Pn 01 36 34.5 -0.6
PPCY **Paphos** 16.62 110 P Pn 01 36 34.5 -0.6
PTOM **Tomar** 16.63 268 *e*P Pn 01 36 35.3 +0.1
comp=Z,903nm,1.6s
PTOM **Tomar** 16.63 268 *e*P Pn 01 36 35.3 +0.1
comp=Z,903nm,1.6s
ALFC **Alevga** 16.65 109 P Pn 01 36 34.6 -1.0
comp=Z,27nm,1.7s
ALFC **Alevga** 16.65 109 P Pn 01 36 34.6 -1.0
comp=Z,27nm,1.7s
PMTG **Montargil** 16.66 266 *e*P Pn 01 36 33.0 -2.5
comp=Z,1µm,1.4s
PMTG **Montargil** 16.66 266 *e*P Pn 01 36 33.0 -2.5
comp=Z,1µm,1.4s
EVO **Evora** 16.68 264 *e*P Pn 01 36 35.5 -0.3
comp=Z,448nm,1.3s
EVO *e*R
comp=Z,131µm,30.0s
EVO **Evora** 16.68 264 *e*P Pn 01 36 33.9 -1.9
comp=Z,342nm,1.4s
EVO **Evora** 16.68 264 *e*P Pn 01 36 33.9 -1.9
comp=Z,342nm,1.4s
PBEJ **Beja** 16.75 262 *e*P Pn 01 36 36.0 -0.7
comp=Z,266nm,1.7s
PBEJ **Beja** 16.75 262 *e*P Pn 01 36 36.0 -0.7
comp=Z,266nm,1.7s
EVOP **Sao Brissos** 16.76 264 *e*P Pn 01 36 35.5 -1.3
EVOP pmax pmax
comp=Z,448nm,1.3s
EVOP **Sao Brissos** 16.76 264 *e*P Pn 01 36 35.5 -1.3
comp=Z,448nm,1.3s
HAVZ **Havza** 16.77 87 *i* P Pn 01 36 34.0 -3.1
NIG **Nigde** 16.80 98 *e*P P 01 36 39.4 -0.3
YOZ **Yozgat** 16.82 92 *e*P P 01 36 39.4 -0.5
AKDN **Akdeniz- K¨–br** 16.84 108 *e*P P 01 36 40.6 +0.6
EKA **Eskdalemuir Ar** 16.85 326 Pn Pn 01 36 36.8 -1.0
EKA Sn Sn 01 39 47.6 +3.0
EKA **Eskdalemuir Ar** 16.85 326 Pn Pn 01 36 36.8 -1.0
baz=135,slow=14,SNR=26
EKA Sn Sn 01 39 47.6 +3.0
baz=143,slow=17,SNR=3.3
EKA LR LR 01 44 03.3
comp=Z,16µm,18.4s,baz=130,slow=41
EKA **Eskdalemuir Ar** 16.85 326 Pn Pn 01 36 36.8 -1.0
EKA Sn Sn 01 39 47.6 +3.0
ESK **Eskdalemuir** 16.86 326 *e*P P 01 36 39.3 -0.7
ESK pmax pmax
comp=Z,628nm,1.6s
ESK **Eskdalemuir** 16.86 326 *e*Pn P 01 36 39.3 -0.7
comp=Z,628nm,1.6s
ESK **Eskdalemuir** 16.86 326 *e*Pn P 01 36 39.3 -0.7
comp=Z,628nm,1.6s
GCD **Castle Douglas** 16.87 324 *e*P Pn 01 36 38.9 +0.8
GCD **Castle Douglas** 16.87 324 P Pn 01 36 38.9 +0.8
GCD **Castle Douglas** 16.87 324 *e*P Pn 01 36 38.9 +0.8
LEF **Lefka** 16.88 109 *e*P Pn 01 36 35.5 -2.8
PVAQ **Vaqueiros** 16.88 260 *e*P Pn 01 36 37.5 -0.9
comp=Z,562nm,1.3s
PVAQ *e*LR LR 01 40 00.5
comp=Z,64µm,20.0s
PVAQ **Vaqueiros** 16.88 260 *e*P Pn 01 36 37.5 -0.9
comp=Z,562nm,1.3s
ALMR **Almeirim** 16.89 266 *e*P Pn 01 36 38.7 +0.2
ALMR **Almeirim** 16.89 266 *e*P Pn 01 36 38.7 +0.2
ALMR **Almeirim** 16.89 266 *e*P Pn 01 36 38.7 +0.2
KVT **Kavak** 17.01 87 *e*P P 01 36 42.2 +0.3
PCVE **Castro Verde** 17.02 261 *e*P Pn 01 36 39.2 -1.0
comp=Z,446nm,1.6s
PCVE **Castro Verde** 17.02 261 *e*P Pn 01 36 39.2 -1.0
comp=Z,446nm,1.6s
ESY **Stoneypath** 17.04 328 *e*P Pn 01 36 39.4 -0.8
ESY **Stoneypath** 17.04 328 P Pn 01 36 39.4 -0.8
SZAC **Souni-Zanaja** 17.06 110 P Pn 01 36 41.3 +0.6
SZAC **Souni-Zanaja** 17.06 110 P Pn 01 36 41.3 +0.6
MESJ **Messejana** 17.08 262 *e*P Pn 01 36 40.0 -0.8
MESJ AMb AMB 01 36 55.5
comp=Z,264nm,1.7s
MESJ *e*S Sn 01 39 52.7 +2.2
MESJ **Messejana** 17.08 262 *e*P Pn 01 36 40.0 -0.8
comp=Z,264nm,1.7s
MESJ *e*S Sn 01 39 52.7 +2.2
MESJ **Messejana** 17.08 262 *e*P Pn 01 36 40.0 -0.8
MESJ *e*S Sn 01 39 52.6 +2.2
MESJ **Messejana** 17.08 262 *e*P Pn 01 36 40.0 -0.8
comp=Z,264nm,1.7s
MESJ *e*S Sn 01 39 52.7 +2.2
MAMC **Mammari** 17.08 108 P Pn 01 36 40.3 -0.6
MAMC **Mammari** 17.08 108 P Pn 01 36 40.3 -0.6
MDT **Midelt** 17.09 242 P Pn 01 36 40.8 -0.3
MDT **Midelt** 17.09 242 P Pn 01 36 40.8 -0.3

comp=Z,0.1nm,0.3s,baz=61,slow=14,SNR=25
MDT LR LR 01 43 00.4
comp=Z,24µm,18.4s,baz=41,slow=36
MDT Midelt 17.09 242 P **Pn 01 36 40.8 -0.3**
PBDV Barranco-do-Ve 17.10 260 *e*P **Pn 01 36 40.5 -0.7**
comp=Z,612nm,1.4s
PBDV Barranco-do-Ve 17.10 260 *e*P **Pn 01 36 40.5 -0.7**
comp=Z,612nm,1.4s
EBL Broad Law 17.11 327 *e*P **Pn 01 36 41.5 +0.4**
EBL Broad Law 17.11 327 P **Pn 01 36 41.5 +0.4**
EBL Broad Law 17.11 327 *e*P **Pn 01 36 41.5 +0.4**
PNCL Nicolau / Gran 17.20 263 *e*P **Pn 01 36 41.0 -1.4**
comp=Z,296nm,2.3s
PNCL Nicolau / Gran 17.20 263 *e*P **Pn 01 36 41.0 -1.4**
comp=Z,296nm,2.3s
GAL1 Galloway 17.21 323 *e*P **Pn 01 36 40.4 -2.0**
GAL1 AMB AMB 01 36 48.6
comp=Z,173nm,2.6s
GAL1 AMS AMS 01 44 06.6
comp=Z,48µm,14.6s
GAL1 Galloway 17.21 323 P **Pn 01 36 40.4 -2.0**
GAL1 AMB AMB 01 36 48.6
comp=Z,173nm,2.6s
GAL1 AMS AMS 01 44 06.6
comp=Z,48µm,14.6s
MERS Mersin 17.22 102 *e*P **P 01 36 43.8 -0.5**
GULE Gulek 17.23 100 *i* P **Pn 01 36 41.4 -1.6**
LFK Lefkose 17.25 108 *e*P **Pn 01 36 42.4 -0.7**
CSS Prodhromos 17.27 109 P **Pn 01 36 42.5 -0.8**
comp=Z,32nm,1.6s
CSS Prodhromos 17.27 109 *e*P **Pn 01 36 42.1 -1.1**
CSS Prodhromos 17.27 109 P **Pn 01 36 41.6 -1.7**
CSS Prodhromos 17.27 109 *e*Pn **Pn 01 36 42.2 -1.1**
comp=Z,1µm,1.4s
CSS *e*Sn **Sn 01 39 53.1 -2.0**
CSS Prodhromos 17.27 109 *e*P **Pn 01 36 42.1 -1.1**
CSS Prodhromos 17.27 109 *e*Pn **Pn 01 36 42.2 -1.1**
comp=Z,1µm,1.4s
CSS Prodhromos 17.27 109 P **Pn 01 36 42.5 -0.8**
comp=Z,32nm,1.6s
CSS *e*Sn **Sn 01 39 53.1 -2.0**
EDI Edinburgh 17.27 327 *e*P **Pn 01 36 41.8 -1.3**
EDI AMB AMB 01 36 50.7
comp=Z,348nm,1.5s
EDI *e* 01 39 54.2
EDI AMS AMS 01 46 21.2
comp=Z,27µm,12.3s
EDI Edinburgh 17.27 327 P **Pn 01 36 41.8 -1.3**
EDI AMB AMB 01 36 50.7
comp=Z,348nm,1.5s
EDI 01 39 54.2
EDI AMS AMS 01 46 21.2
comp=Z,27µm,12.3s
EAU Auchinoon 17.32 327 *e*P **Pn 01 36 43.4 -0.4**
EAU Auchinoon 17.32 327 P **Pn 01 36 43.4 -0.4**
EAU Auchinoon 17.32 327 *e*P **Pn 01 36 43.4 -0.4**
AKIN Ak¯nc¯lar- K 17.34 108 *e*P **P 01 36 47.0 +1.5**
GMM Mts of Mourne 17.40 320 *e*P **Pn 01 36 43.5 -1.3**
GMM Mts of Mourne 17.40 320 P **Pn 01 36 43.5 -1.3**
BNN Bunyan 17.45 94 *e*P **P 01 36 47.8 +0.9**
LIS Lisbon 17.45 265 *e*P **Pn 01 36 43.8 -1.7**
LIS AMb AMB 01 36 55.8
comp=Z,421nm,1.5s
LIS *e*S **Sn 01 40 01.4 +1.9**
LIS Lisbon 17.45 265 *e*P **Pn 01 36 43.8 -1.7**
comp=Z,421nm,1.5s
LIS *e*S **Sn 01 40 01.4 +1.9**
LIS Lisbon 17.45 265 *e*P **Pn 01 36 43.8 -1.7**
LIS *e*S **Sn 01 40 01.4 +1.9**
LIS Lisbon 17.45 265 *e*P **Pn 01 36 43.8 -1.7**
comp=Z,421nm,1.5s
LIS *e*S **Sn 01 40 01.4 +1.9**
KONO Kongsberg 17.45 354 *e*P **Pn 01 36 45.2 -0.2**
KONO AMB AMB 01 36 52.8
comp=Z,915nm,1.6s
KONO *e*S **S 01 40 06.0 -1.5**
KONO AMS AMS 01 44 33.8
comp=Z,85µm,14.0s
KONO Kongsberg 17.45 354 *e*P **Pn 01 36 45.3 -0.2**
KONO pmax pmax
comp=Z,1µm,1.5s
KONO Kongsberg 17.45 354 *e*Pn **Pn 01 36 45.3 -0.1**
comp=Z,1µm,1.5s
KONO Kongsberg 17.45 354 *e*P **Pn 01 36 45.2 -0.2**
comp=Z,915nm,1.6s,SNR=40
KONO *e*S **S 01 40 05.9 -1.5**
SNR=47
PMAFR Mafra 17.47 266 *e*P **Pn 01 36 44.1 -1.7**
comp=Z,412nm,1.3s
PMAFR Mafra 17.47 266 *e*P **Pn 01 36 44.1 -1.7**
comp=Z,412nm,1.3s
TOKA Tokat 17.50 89 *i* P **P 01 36 46.8 -0.5**
TOKA Tokat 17.50 89 *i* P **P 01 36 46.8 -0.5**
TOKT Tokat 17.55 89 *e*P **P 01 36 50.8 +2.9**
PTEO Sao Teotonio 17.56 261 *e*P **P 01 36 48.7 +0.8**
comp=Z,745nm,1.6s
PTEO Sao Teotonio 17.56 261 *e*P **P 01 36 48.7 +0.8**
comp=Z,745nm,1.6s
EREN Erenkoy 17.58 106 *e*P **P 01 36 47.8 -0.3**
BLS5 Blasjo 17.60 348 *e*P **Pn 01 36 47.7 +0.5**
BLS5 AMB AMB 01 36 57.3
comp=Z,253nm,1.2s
BLS5 *e*S **S 01 40 14.4 +4.0**
BLS5 Blasjo 17.60 348 *e*P **Pn 01 36 47.7 +0.5**
comp=Z,253nm,1.2s,SNR=40
MORF Marmelete 17.60 261 *e*P **Pn 01 36 45.7 -1.7**
comp=Z,541nm,1.6s
MORF Marmelete 17.60 261 *e*P **Pn 01 36 45.5 -1.9**
MORF *e*S **Sn 01 40 04.8 +1.6**
MORF Marmelete 17.60 261 *e*P **Pn 01 36 45.7 -1.7**
comp=Z,541nm,1.6s
ERBA Erbaa 17.62 88 *i* P **Pn 01 36 45.7 -2.0**
ANN Anapa 17.62 74*c* *i*P Pn 01 36 42.5 -5.1
ANN *e*S Sn 01 39 54.4 -9.2
ANN pmax pmax
comp=Z,2µm,1.4s
ANN pmax pmax
comp=N,469nm,1.5s
ANN pmax pmax
comp=E,528nm,1.5s
ANN pmax pmax
comp=Z,7µm,6.8s
ANN MLR MLR
comp=N,26µm,14.0s
ANN MLR MLR
comp=E,87µm,14.0s
ANN MLR MLR
comp=Z,68µm,14.0s
PGBU Glenifferbraes 17.73 325 *e*P **Pn 01 36 47.2 -1.6**
PGBU AMB AMB 01 36 56.7
comp=Z,208nm,2.4s
PGBU *e* 01 40 18.9
PGBU AMS AMS 01 45 13.3
comp=Z,28µm,14.0s
PGBU Glenifferbraes 17.73 325 P **Pn 01 36 47.2 -1.6**
PGBU AMB AMB 01 36 56.7
comp=Z,208nm,2.4s
PGBU 01 40 18.9
PGBU AMS AMS 01 45 13.3
comp=Z,28µm,14.0s
PGBU Glenifferbraes 17.73 325 *e*P **Pn 01 36 47.2 -1.6**
PHNC Paralimni 17.74 108 P **P 01 36 51.0 +1.1**
comp=Z,29nm,1.1s
PHNC Paralimni 17.74 108 P **P 01 36 51.0 +1.1**
comp=Z,29nm,1.1s
HFS Hagfors 17.79 1 P **Pn 01 36 49.1 -0.5**
HFS Hagfors 17.79 1 P **Pn 01 36 49.1 -0.5**
comp=Z,0.9nm,0.3s,baz=171,slow=10,SNR=34
HFS LR LR 01 44 41.0
comp=Z,78µm,18.5s,baz=182,slow=41
HFS Hagfors 17.79 1 P **Pn 01 36 49.1 -0.5**
PFVI Vila Bisbo 17.80 260 *e*P **Pn 01 36 49.1 -0.7**
comp=Z,172nm,1.6s
PFVI Vila Bisbo 17.80 260 *e*P **Pn 01 36 49.1 -0.7**
comp=Z,172nm,1.6s
PMSU Muirshiel 17.86 325 *e*P **Pn 01 36 50.1 -0.3**
PMSU Muirshiel 17.86 325 P **Pn 01 36 50.1 -0.3**
PMSU Muirshiel 17.86 325 *e*P **Pn 01 36 50.1 -0.3**
RTC Rabat Centre 17.90 249 *e*Pn **P 01 36 53.4 +1.7**
comp=Z,519nm,1.0s
RTC Rabat Centre 17.90 249 *e*Pn **P 01 36 53.4 +1.7**
comp=Z,519nm,1.0s
PINB Pinarbasi 17.92 94 *i* P **P 01 36 53.2 +1.0**
PINB Pinarbasi 17.92 94 *i* P **P 01 36 53.2 +1.0**
EAB Aberfoyle 17.92 327 *e*P **P 01 36 51.8 +0.1**
EAB Aberfoyle 17.92 327 *e*P **P 01 36 51.8 +0.1**
KOZT Kozan 17.92 98 *e*P **P 01 36 53.1 +1.2**
KRTS Karatas 17.97 101 *e*P **P 01 36 54.0 +1.6**
ODD1 Odda 18.04 349 *e*P **Pn 01 36 52.5 -0.2**
ODD1 AMB AMB 01 37 02.9
comp=Z,996nm,1.7s
ODD1 *e*S **S 01 40 17.6 -1.9**
ODD1 AMS AMS 01 45 31.0
comp=Z,92µm,15.6s
ODD1 Odda 18.04 349 *e*P **Pn 01 36 52.5 -0.2**
comp=Z,996nm,1.7s,SNR=40
CEYT Ceyhan 18.05 100 *e*P **P 01 36 54.8 +1.4**
RSDY Resadiye-TOKAT 18.11 88 *e*P **P 01 36 56.5 +2.4**
MME1 Meikle Cairn 18.20 331 *e*P **Pn 01 36 54.3 -0.4**
MME1 Meikle Cairn 18.20 331 P **Pn 01 36 54.3 -0.4**
MME1 Meikle Cairn 18.20 331 *e*P **Pn 01 36 54.3 -0.4**
ANDN Andirin 18.27 97 *i* P **Pn 01 36 54.2 -1.5**
ANDN Andirin 18.27 97 *i* P **Pn 01 36 54.2 -1.5**
NC602 NORSAR Array S 18.42 357 *e*P **P 01 36 57.2 -0.1**
NC602 NORSAR Array S 18.42 357 *e*P **P 01 36 57.2 -0.1**
SNR=40
MCD Coleburn Disti 18.50 331 *e*P **P 01 36 57.9 -0.3**
MCD Coleburn Disti 18.50 331 P **P 01 36 57.9 -0.3**
MCD Coleburn Disti 18.50 331 *e*P **P 01 36 57.9 -0.3**
NAO01 NORSAR Array S 18.56 356 *e*P **P 01 36 58.9 +0.1**
comp=Z,234nm,0.8s
NAO01 NORSAR Array S 18.56 356 *e*P **P 01 36 58.9 +0.1**
comp=Z,234nm,0.8s
VAL Valentia 18.59 309 *e*P **P 01 36 56.0 -3.1**
VAL Valentia 18.59 309 ǁ *i*S **S 01 40 33.9 +3.3**
EGD Espegrend 18.60 347 *e*P **Pn 01 37 02.1 +2.7**
AYKD Aykdinkavak 18.67 98 *i* P **P 01 36 58.5 -1.7**
GRSN GIRESUNGRSN 18.69 86 *i* P **Pn 01 37 01.7 +1.0**
GRSN GIRESUNGRSN 18.69 86 *i* P **Pn 01 37 01.7 +1.0**
BER Bergen 18.69 348 *e*P **P 01 37 00.0 -0.1**
BER AMB AMB 01 37 09.0
comp=Z,283nm,1.5s
BER *e*S **Sn 01 40 30.8 +1.7**
BER AMS AMS 01 46 05.2
comp=Z,84µm,12.8s
BER Bergen 18.69 348 *e*P **P 01 37 00.0 -0.1**
comp=Z,283nm,1.5s,SNR=35
KMRS Kahramanmaras 18.70 97 *e*P **Pn 01 37 02.8 +1.8**
RUND Rundenannen 18.71 348 *e*P **Pn 01 37 02.6 +1.8**
RUND AMB AMB 01 37 08.2
comp=Z,276nm,1.6s
HTY Hatay 18.72 102 *e*P **Pn 01 37 02.1 +1.1**
YAYL Yayladag 18.73 102 *i* P **P 01 37 00.6 -0.4**
YAYL Yayladag 18.73 102 *i* P **P 01 37 00.6 -0.4**
NB2 NORSAR Subarra 18.74 357 P **P 01 37 00.1 -0.7**
comp=Z,256nm,0.8s,baz=175,slow=12
NB2 NORSAR Subarra 18.74 357 P **P 01 37 00.1 -0.7**
comp=Z,256nm,0.8s,SNR=62
NOA NORSAR Array B 18.74 357 P **P 01 37 00.4 -0.4**
NOA NORSAR Array B 18.74 357 P **P 01 37 00.4 -0.4**
comp=Z,0.3nm,0.3s,baz=176,slow=11,SNR=26
NOA LR LR 01 45 10.6
comp=Z,57µm,18.5s,baz=180,slow=40
NOA NORSAR Array B 18.74 357 P **P 01 37 00.4 -0.4**
DARE Darende-Malaty 18.75 94 *e*P **Pn 01 37 03.6 +2.0**
ASK Askoy 18.80 347 *e*P **Pn 01 37 02.4 +0.4**
ASK AMB AMB 01 37 16.3
comp=Z,424nm,1.8s
SUSE Susehri 18.81 88 *i* P **P 01 37 01.7 -0.1**
SUSE Susehri 18.81 88 *i* P **P 01 37 01.7 -0.1**
MDO Dochfour 18.81 329 *e*P **P 01 37 01.4 -0.1**
MDO Dochfour 18.81 329 P **P 01 37 01.4 -0.1**
MDO Dochfour 18.81 329 *e*P **P 01 37 01.4 -0.1**
ESPY Espiye-Giresun 19.03 86 *e*P **Pn 01 37 06.7 +1.9**
GAZ Gaziantep 19.06 98 *e*P **Pn 01 37 07.8 +2.5**
MVH1 Achvaich 19.09 331 *e*P **P 01 37 01.6 -3.1**
MVH1 Achvaich 19.09 331 P **P 01 37 01.6 -3.1**
KUZU Kuzuini 19.12 99 *i* P **P 01 37 04.9 -0.3**
KUZU Kuzuini 19.12 99 *i* P **P 01 37 04.9 -0.3**
AKCD Akcadag 19.17 94 *i* P **P 01 37 04.9 -0.9**
AKCD Akcadag 19.17 94 *i* P **P 01 37 04.9 -0.9**
KAC Achnashellach 19.21 328 *e*P **P 01 37 02.8 -3.1**
KAC Achnashellach 19.21 328 P **P 01 37 02.8 -3.1**
KPL Plockton 19.24 328 *e*P **P 01 37 05.0 -1.2**
KPL AMB AMB 01 37 14.1
comp=Z,696nm,3.6s
KPL *e* 01 40 36.0
KPL AMS AMS 01 46 11.6
comp=Z,36µm,14.7s
KPL Plockton 19.24 328 P **P 01 37 05.0 -1.2**
KPL AMB AMB 01 37 14.1
comp=Z,696nm,3.6s
KPL 01 40 36.0
KPL AMS AMS 01 46 11.6
comp=Z,36µm,14.7s
KPL Plockton 19.24 328 *e*P **P 01 37 05.0 -1.2**
GZT Gaziantep 19.25 97 *i* P **Pn 01 37 08.1 +0.5**
KEMA Kemaliye 19.28 91 *i* P **P 01 37 06.0 -1.0**
KEMA Kemaliye 19.28 91 *i* P **P 01 37 06.0 -1.0**
ILIC ilic-Erzincan 19.28 90 *e*P **Pn 01 37 09.7 +1.6**
HYA Hoyanger 19.31 350 *e*P **Pn 01 37 08.3 +0.3**
HYA *e*S **S 01 40 46.3 +1.4**
SOC Sochi 19.33 77*c* *i*P **Pn 01 37 08.6 +0.2**
SOC *i* 01 40 45.6
SOC pmax pmax
comp=E,517nm,0.9s
SOC pmax pmax
comp=Z,405nm,0.9s
SOC pmax pmax
comp=N,154nm,0.9s
SOC smax smax
comp=E,8µm,10.1s
SOC smax smax
comp=N,10µm,8.1s
SOC MLR MLR
comp=E,10µm,16.0s
SOC MLR MLR
comp=Z,84µm,16.0s
SOC MLR MLR
comp=N,32µm,16.0s
BHL Bhannes 19.46 108 *e*P **P 01 37 09.2 +0.3**
HWQ Hawqa 19.47 107 *e*P **Pn 01 37 10.0 -0.3**
MYA Malataya 19.53 94 *e*P **Pn 01 37 11.8 +0.8**
MALT Malatya 19.54 94 *e*P **Pn 01 37 11.9 +0.8**
MALT Malatya 19.54 94 ⇑P **Pn 01 37 11.6 +0.5**
MALT Malatya 19.54 94 *e*P **Pn 01 37 11.1 0.0**
comp=N,781nm,1.4s
MALT Malatya 19.54 94 ⇑ *i*P **Pn 01 37 11.6 +0.5**
MALT Malatya 19.54 94 ⇑ *i*P **Pn 01 37 11.6 +0.5**
KELT Kelkit 19.60 88 *i* P **Pn 01 37 12.4 +0.4**
KELT Kelkit 19.60 88 *i* P **Pn 01 37 12.4 +0.4**
GUMT Gumushane 19.69 87 *e*P **Pn 01 37 13.5 +0.5**
VSR Storozhevoye 19.70 54 *e*P **P 01 37 10.2 -1.1**
VSR *e*S **S 01 40 50.6 -2.4**
VSR pmax pmax
comp=N,190nm,0.8s
VSR pmax pmax
comp=E,620nm,0.8s
VSR pmax pmax
comp=Z,360nm,0.8s
VSR smax smax
comp=N,2µm,2.8s
VSR smax smax
comp=E,4µm,2.8s
VSR smax smax
comp=Z,5µm,2.8s
VSR MLR MLR
comp=E,184µm,19.0s
VSR MLR MLR
comp=Z,284µm,19.0s
VSR MLR MLR
comp=N,47µm,15.0s
VORD Divnogorie 19.71 55 *e*P **P 01 37 11.2 -0.2**
VORD *e*S **S 01 40 51.8 -1.3**
VORD pmax pmax
comp=N,100nm,0.9s
VORD pmax pmax
comp=E,350nm,0.9s
VORD pmax pmax
comp=Z,230nm,0.9s
VORD smax smax
comp=N,5µm,3.2s
VORD smax smax
comp=E,4µm,3.2s
VORD smax smax
comp=Z,9µm,3.2s
VORD MLR MLR
comp=N,51µm,17.0s
VORD MLR MLR
comp=E,156µm,17.0s
VORD MLR MLR
comp=Z,124µm,17.0s
MMAI Mount Meron Ar 19.77 111 P **Pn 01 37 13.2 -0.6**
MMAI Mount Meron Ar 19.77 111 P **Pn 01 37 13.2 -0.6**
comp=Z,6.4nm,0.3s,baz=313,slow=9.3,SNR=73
MMAI Mount Meron Ar 19.77 111 P **Pn 01 37 13.2 -0.6**
KTUT Trabzon 19.78 85 *e*P **Pn 01 37 15.3 +1.5**
MACK Trabzon 19.79 85 *i* P **Pn 01 37 13.5 -0.5**
MACK Trabzon 19.79 85 *i* P **Pn 01 37 13.5 -0.5**
RCY Rachaya 19.80 109 *e*P **P 01 37 13.3 +0.6**
OBN Obninsk 19.82 42*c* *i*P **P 01 37 11.0 -1.6**
OBN pmax pmax
comp=Z,691nm,1.4s
OBN pmax pmax
comp=Z,23µm,3.8s
OBN MLR MLR
comp=Z,96µm,13.0s
OBN Obninsk 19.82 42 *e*P **P 01 37 10.7 -2.0**
comp=Z,838nm,1.0s
OBN Obninsk 19.82 42 P **P 01 37 10.2 -2.4**
comp=Z,4µm,0.9s,SNR=68
OBN Obninsk 19.82 42 *e*P **P 01 37 10.6 -2.0**
comp=Z,838nm,1.0s
DOMB Dombas 19.87 354 *e*P **Pn 01 37 17.7 +2.9**
DOMB AMB AMB 01 37 27.4
comp=Z,236nm,1.7s
VOR Voronezh 19.87 53⇑ *i*P **P 01 37 12.0 -1.2**
VOR *e*S **S 01 40 51.0 -5.4**
VOR pmax pmax
comp=Z,6µm,2.4s
LRW Lerwick 19.89 338 *e*P **P 01 37 13.7 +0.5**
LRW AMB AMB 01 37 21.2
comp=Z,620nm,4.7s
LRW *e* 01 40 50.2
LRW AMS AMS 01 47 38.8
comp=Z,99µm,15.7s
LRW Lerwick 19.89 338 P **P 01 37 13.7 +0.5**
LRW AMB AMB 01 37 21.2
comp=Z,620nm,4.7s
LRW 01 40 50.2
LRW AMS AMS 01 47 38.8
comp=Z,99µm,15.7s
LRW Lerwick 19.89 338 *e*P **P 01 37 13.7 +0.5**
LKFR Kufra 19.93 153 *i* P **Pn 01 37 15.5 -0.2**
SNR=35
ERZN Erzincan 20.10 89 *e*P Pn 01 37 19.1 +1.3
URFA Urfa 20.14 96 *e*P Pn 01 37 17.3 -1.0
SVRC Sivrice-ELAZID 20.17 93 *e*P Pn 01 37 19.1 +0.4
BAYT Ayd¯¬ntepe-Bay 20.20 87 *e*P Pn 01 37 18.5 -0.5
PUL Pulkovo 20.32 25*c* *i*P **P 01 37 18.3 +0.3**
PUL pmax pmax
comp=Z,1µm,1.2s
PUL MLR MLR
comp=Z,148µm,15.0s
MOL Molde 20.52 352 *e*P Pn 01 37 22.2 -0.2
MOL AMB AMB 01 37 34.1
comp=Z,713nm,1.6s
MOL *e*S **S 01 41 08.9 -0.2**
MOL AMS AMS 01 46 29.3
comp=Z,68µm,17.1s
MOL Molde 20.52 352 *e*P Pn 01 37 22.2 -0.1
comp=Z,713nm,1.6s,SNR=34
MOL *e*S **S 01 41 08.9 -0.2**
SNR=37
KOPT Kop Dagi 20.56 87 *i* P **P 01 37 22.0 +0.9**
KOPT Kop Dagi 20.56 87 *i* P **P 01 37 22.0 +0.9**
PZAR Pazar-Rize 20.57 84 *e*P Pn 01 37 22.5 -0.6
TAM Tamanrasset 20.58 201 *e*P Pn 01 37 23.5 0.0
TAM pmax pmax
comp=Z,621nm,1.1s
TAM MLR MLR
comp=Z,56µm,19.0s
TAM Tamanrasset 20.58 201 *e*P Pn 01 37 23.5 -0.1
comp=Z,621nm,1.1s
TAM LR LR
comp=Z,56µm,19.0s
TAM Tamanrasset 20.58 201 *e*P Pn 01 37 23.5 0.0
comp=Z,621nm,1.1s
FINES FINESS Array B 20.59 18 P **P 01 37 20.5 -0.4**
FINES *e* 02 11 31.7
FINES FINESS Array B 20.59 18 P **P 01 37 20.5 -0.4**
comp=Z,478nm,1.0s,baz=198,slow=8.7,SNR=167
FINES LR LR 01 46 25.5
comp=Z,132µm,20.2s,baz=211,slow=40
FINES P3KPbc 02 11 31.7
comp=Z,7.5nm,1.0s,baz=5.7,slow=3.8,SNR=7.6
FINES FINESS Array B 20.59 18 P **P 01 37 20.5 -0.4**
FIA1 FINESS Array S 20.59 18 *e*P **P 01 37 20.6 -0.3**
FIA1 FINESS Array S 20.59 18 *e*P **P 01 37 20.6 -0.3**
MOS Moscow 20.66 41 *e*P **P 01 37 20.2 -1.5**
MOS *e* 01 37 39.4
MOS *e*S **S 01 41 09.8 -2.1**
MOS *e*SS **SnSn 01 41 30.5 -0.7**
MOS pmax pmax
comp=Z,2µm,1.2s
MOS pmax pmax
comp=E,1µm,1.4s
MOS pmax pmax
comp=Z,27µm,3.6s
MOS pmax pmax
comp=E,28µm,3.7s
MOS pmax pmax
comp=N,15µm,3.8s
MOS smax smax
comp=N,8µm,4.6s
MOS smax smax
comp=E,6µm,3.6s
MOS MLR MLR
comp=E,73µm,11.0s
MOS MLR MLR
comp=Z,78µm,11.0s
MOS MLR MLR
comp=N,28µm,9.0s
DIYA Diyarbakir 20.93 93 *i* P **P 01 37 24.1 -0.7**
DIYA Diyarbakir 20.93 93 *i* P **P 01 37 24.1 -0.7**
BNGB Bing¶ǁ 20.99 90 *e*P Pn 01 37 27.7 -0.5
TBLU Trondheim 21.00 356 *e*P P 01 37 17.8 -7.5
TBLU *e*S **S 01 41 12.9 -5.6**
TBLU AMS AMS 01 46 56.4
comp=Z,61µm,14.8s
BCA Borcka 21.05 83 *e*P **P 01 37 27.0 +0.9**
DBOC Borcka 21.10 83 *i* P **P 01 37 25.2 -1.5**
DBOC Borcka 21.10 83 *i* P **P 01 37 25.2 -1.5**
VRHR Novokhopersk 21.16 56 P **P 01 37 28.0 +0.8**
VRHR *e*S **S 01 41 24.6 +2.5**
VRHR pmax pmax
comp=N,120nm,0.8s
VRHR pmax pmax
comp=E,280nm,0.8s
VRHR pmax pmax
comp=Z,440nm,0.8s
VRHR smax smax
comp=E,6µm,2.2s
VRHR smax smax
comp=Z,2µm,2.2s
VRHR smax smax
comp=N,630nm,1.1s
VRHR MLR MLR
comp=N,44µm,19.0s
VRHR MLR MLR
comp=E,115µm,19.0s
VRHR MLR MLR
comp=Z,132µm,19.0s
DBAD Bademkaya 21.20 84 *i* P **P 01 37 27.3 -0.4**
DBAD Bademkaya 21.20 84 *i* P **P 01 37 27.3 -0.4**
EZM Erzurum 21.23 87 *e*P **P 01 37 31.3 +3.0**
ERZM Erzurum 21.23 87 *i* P **P 01 37 29.5 +1.2**
ERZM Erzurum 21.23 87 *i* P **P 01 37 29.5 +1.2**
KAF Kangasniemi 21.23 17 *e*P **P 01 37 26.7 -1.1**
KAF pmax pmax
comp=Z,193nm,0.6s
KAF Kangasniemi 21.23 17 *e*p **P 01 37 26.7 -1.1**
comp=Z,193nm,0.6s
DDEM Demirkent 21.27 84 *i* P **P 01 37 27.3 -1.2**
DDEM Demirkent 21.27 84 *i* P **P 01 37 27.3 -1.2**
ASF Jabal al Asfar 21.28 111 P **P 01 37 29.7 +0.9**
ASF Jabal al Asfar 21.28 111 P **P 01 37 29.7 +0.9**
comp=Z,35nm,0.9s,baz=166,slow=2.7,SNR=42
ASF LR LR 01 47 05.8
comp=Z,26µm,18.3s,baz=347,slow=40
ARTV Artvin 21.33 83 *i* P **P 01 37 30.5 +1.2**
ARTV Artvin 21.33 83 *i* P **P 01 37 30.5 +1.2**
DAGI Agillar 21.34 84 *i* P **P 01 37 27.3 -2.0**

BNGL BINGOL 21.35 90 *i* P P 01 37 19.9 -10
KIV Kislovodsk 21.43 76*c i*P **P** **01 37 30.9 +0.6**
KIV *e*S **S** **01 41 28.2 +0.5**
KIV pmax pmax
comp=Z,652nm,3.4s
KIV pmax pmax
comp=Z,2µm,1.1s
KIV MLR MLR
comp=Z,30µm,14.0s
KIV Kislovodsk 21.43 76 *e*P **P** **01 37 30.7 +0.4**
comp=Z,3µm,1.3s
KIV LR LR
comp=Z,54µm,22.0s
KIV Kislovodsk 21.43 76 P **P** **01 37 31.4 +1.1**
SNR=685
KIV Kislovodsk 21.43 76 P **P** **01 37 31.2 +0.9**
comp=Z,8µm,1.4s
KIV Kislovodsk 21.43 76 *e*P **P** **01 37 30.7 +0.4**
comp=Z,3µm,1.3s
VRTB Varto-Mus 21.51 89 *e*P **P** **01 37 34.3 +3.1**
EIL Elat 21.53 119 P **P** **01 37 31.6 +0.3**
EIL Elat 21.53 119 P **P** **01 37 31.6 +0.3**
comp=Z,342nm,1.2s,baz=327,slow=7.4,SNR=50
EIL Elat 21.53 119 P **P** **01 37 31.6 +0.3**
HOMI Horasan 21.59 87 *i* P **P** **01 37 32.7 +0.5**
KBZ Khabaz 21.61 76 P **P** **01 37 33.4 +1.4**
KBZ pmax pmax
comp=Z,701nm,1.1s
KBZ Khabaz 21.61 76 P **P** **01 37 33.4 +1.4**
KBZ Khabaz 21.61 76 P **P** **01 37 33.4 +1.4**
comp=Z,701nm,1.1s,baz=291,slow=8.9,SNR=369
KBZ Khabaz 21.61 76 P **P** **01 37 33.4 +1.4**
MARD Mardin 21.64 94 *i* P **P** **01 37 31.6 -0.9**
BEST Besiri 21.79 92 *i* P **P** **01 37 36.9 +2.8**
BTMT Batman 21.85 92 *e*P **P** **01 37 36.1 +1.4**
ONI Oni 22.18 79 P **P** **01 37 40.5 +2.2**
ONI S **S** **01 41 44.5 +2.5**
NSS Namsos 22.21 358 *e*P **P** **01 37 38.1 -0.2**
NSS AMB AMB 01 37 58.3
comp=Z,402nm,1.3s
NSS *e*S **S** **01 41 42.8 +0.5**
NSS AMS AMS 01 47 18.7
comp=Z,34µm,14.1s
NSS Namsos 22.21 358 *e*P **P** **01 37 38.1 -0.2**
NSS comp=Z,402nm,1.3s,SNR=34
NSS *e*S **S** **01 41 42.8 +0.5**
SNR=36
KARS Kars 22.31 84 *e*P **P** **01 37 43.8 +4.0**
TATV Tatvan 22.32 90 *i* P **P** **01 37 41.2 +1.3**
TATV Tatvan 22.32 90 *i* P **P** **01 37 41.2 +1.3**
AKH Akhalkalaki 22.43 82 P **P** **01 37 43.7 +2.5**
AKH S **S** **01 41 51.9 +4.8**
TUTA Tutak 22.45 88 *i* P **P** **01 37 41.2 -0.1**
TUTA Tutak 22.45 88 *i* P **P** **01 37 41.2 -0.1**
AGRB Hanur-Agry 22.53 87 *e*P **P** **01 37 43.7 +1.5**
GOR Gori 22.76 81 P **P** **01 37 46.2 +1.7**
SIRN S¨¨rnak 22.78 93 *i* P **P** **01 37 45.5 +0.8**
SIRN S¨¨rnak 22.78 93 *i* P **P** **01 37 45.5 +0.8**
GEVA Gevas 22.97 90 *i* P **P** **01 37 44.4 -2.4**
GEVA Gevas 22.97 90 *i* P **P** **01 37 44.4 -2.4**
DYDN Diyadin 23.05 87 *i* P **P** **01 37 44.4 -3.3**
VANT Van 23.09 90 *e*P **P** **01 37 50.9 +2.9**
KZR Kazreti 23.12 82 P **P** **01 37 51.9 +3.8**
SOFL Sornfelli, Far 23.12 335 *e*P **P** **01 37 47.3 -0.8**
SOFL AMB AMB 01 37 59.6
comp=Z,1µm,1.4s
SOFL *e* 01 41 53.0
SOFL AMS AMS 01 50 17.6
comp=Z,69µm,16.1s
SOFL Sornfelli, Far 23.12 335 P **P** **01 37 47.3 -0.8**
SOFL AMB AMB 01 37 59.6
comp=Z,1µm,1.4s
SOFL 01 41 53.0
SOFL AMS AMS 01 50 17.6
comp=Z,69µm,16.1s
SOFL Sornfelli, Far 23.12 335 *e*P **P** **01 37 47.3 -0.8**
JOF Joensuu 23.14 21 *e*P **P** **01 37 47.3 -0.8**
JOF pmax pmax
comp=Z,184nm,0.6s
JOF Joensuu 23.14 21 *e*p **P** **01 37 47.3 -0.8**
comp=Z,184nm,0.6s
JOF Joensuu 23.14 21 *e*P **P** **01 37 47.3 -0.8**
comp=Z,184nm,0.6s
TVAN Van 23.16 89 *i* P **P** **01 37 48.7 -0.1**
TVAN Van 23.16 89 *i* P **P** **01 37 48.7 -0.1**
TBLG Delisi 23.28 81 P **P** **01 37 52.6 +2.8**
TBLG S **S** **01 42 03.9 +2.3**
CLDR Caldiran 23.34 88 *e*P **P** **01 37 52.9 +2.3**
SARR Saratov 23.48 56*ce*P **P** **01 37 51.5 -0.1**
SARR *i*S **S** **01 42 05.8 +1.2**
SARR pmax pmax
comp=Z,3µm,1.1s
HAKT HAKKARI 23.71 91 *i* P **P** **01 37 54.0 -0.3**
HAKT HAKKARI 23.71 91 *i* P **P** **01 37 54.0 -0.3**
CUKT Cukurca 23.75 92 *e*P **P** **01 37 52.9 -1.7**
DGRG David-gareji 23.80 81 P **P** **01 37 56.8 +1.9**
DGRG S S 01 42 19.6 +10
MOR8 Moi Rana 23.86 1 *e*P **P** **01 37 56.1 +0.9**
MOR8 AMB AMB 01 38 08.2
comp=Z,633nm,1.6s
MOR8 Moi Rana 23.86 1 *e*P **P** **01 37 56.1 +0.9**
comp=Z,633nm,1.6s,SNR=28
STOK Stokkvaagen 24.01 360 *e*P **P** **01 37 57.7 +1.1**
STOK AMB AMB 01 38 10.4
comp=Z,924nm,1.6s
STOK *e*S **S** **01 42 15.9 +3.0**
STOK AMS AMS 01 48 18.0
comp=Z,73µm,16.3s
FLOS Flostrand 24.02 0 *e*P **P** **01 37 58.1 +1.5**
FLOS AMB AMB 01 38 10.7
comp=Z,1µm,1.8s
KONS Konsvik 24.18 360 *e*P **P** **01 37 58.8 +0.6**
KONS AMB AMB 01 38 11.1
comp=Z,426nm,1.7s
KLMR Klimovskoe 24.36 32*d i*P **P** **01 37 59.3 -0.5**
KLMR *e*S **S** **01 42 18.7 +0.2**
KLMR pmax pmax
comp=Z,3µm,4.1s
KLMR pmax pmax
comp=Z,2µm,1.5s
KLMR MLR MLR
comp=Z,139µm,15.0s
NAX Nakhchivan 24.50 87 P **P** **01 38 02.8 +1.3**
SNR=526
GANJ Ganja 24.69 83 P **P** **01 38 04.8 +1.7**
SNR=762
GANJ S S 01 42 38.0 +14
IMRD Marand 24.80 88 *e*P **P** **01 38 04.9 +0.6**
IMRD Marand 24.80 88 *e*P **P** **01 38 04.9 +0.6**
MAK Makhachkala 25.05 77 *e*P **P** **01 38 07.0 +0.8**
MAK *e* 01 38 38.1
MAK *e* 01 41 39.6
MAK *e*S **S** **01 42 33.2 +3.3**
MAK *e*SSS SSS 01 43 31.6
MAK pmax pmax
comp=Z,2µm,0.9s
MAK pmax pmax
comp=Z,13µm,2.5s
MAK pmax pmax
comp=N,2µm,0.9s
MAK pmax pmax
comp=E,2µm,1.3s
MAK smax smax
comp=E,57µm,9.4s
MAK smax smax
comp=N,55µm,10.9s
MAK MLR MLR
comp=N,213µm,19.0s
MAK MLR MLR
comp=Z,214µm,19.0s
MAK MLR MLR
comp=E,157µm,17.0s
PMPST Porto Santo, M 25.12 258 *e*P **P** **01 38 08.1 +1.1**
comp=E,726nm,1.6s
PMPST Porto Santo, M 25.12 258 *e*P **P** **01 38 08.1 +1.1**
comp=E,726nm,1.6s
PMPS Porto Santo 25.13 258 *e*P **P** **01 38 08.6 +1.6**
comp=E,852nm,1.6s
PMPS Porto Santo 25.13 258 *e*P **P** **01 38 08.6 +1.6**
comp=E,852nm,1.6s
ITBZ Tabriz 25.28 88 *e*P **P** **01 38 09.1 +0.4**
ITBZ Tabriz 25.28 88 *e*P **P** **01 38 09.1 +0.4**
IAZR Azarshahr 25.35 90 *e*P **P** **01 38 11.5 +2.1**
IAZR Azarshahr 25.35 90 *e*P **P** **01 38 11.5 +2.1**

BRDA Brd 25.43 83 P **P** **01 38 12.3 +2.6**
SNR=181
BRDA S S 01 42 54.1 +18
IFTB Fath-abad 25.54 89 *e*P **P** **01 38 12.5 +1.4**
IFTB Fath-abad 25.54 89 *e*P **P** **01 38 12.5 +1.4**
STEI Steigen 25.64 2 *e*P **P** **01 38 14.2 +2.9**
STEI AMB AMB 01 38 26.2
comp=Z,652nm,1.7s
PMAR Madeira 25.72 258 *e*P **P** **01 38 15.0 +2.4**
comp=Z,2µm,1.5s
PMAR Madeira 25.72 258 *e*P **P** **01 38 15.0 +2.4**
comp=Z,2µm,1.5s
FUL Funchal 25.74 258 *e*P **P** **01 38 14.8 +2.2**
comp=Z,796nm,1.7s
LOF Lofoten 25.82 0 *e*P P 01 38 06.6 -6.4
LOF AMB AMB 01 38 18.9
comp=Z,877nm,1.9s
PMOZ Porto Moniz, M 25.87 258 *e*P **P** **01 38 17.1 +3.1**
comp=Z,1µm,1.3s
PMOZ *e*LR LR 01 42 47.6
comp=Z,25µm,18.0s
PMOZ Porto Moniz, M 25.87 258 *e*P **P** **01 38 17.1 +3.1**
comp=Z,1µm,1.3s
IHRS Heris 25.92 88 *e*P **P** **01 38 14.7 +0.2**
IHRS Heris 25.92 88 *e*P **P** **01 38 14.7 +0.2**
CFUE Fuerteventura 25.94 247 P **P** **01 38 15.6 +1.1**
comp=Z,2µm,3.0s,SNR=7.9
CFUE Fuerteventura 25.94 247 P **P** **01 38 15.6 +1.1**
comp=Z,2µm,3.0s,SNR=7.9
IML Ismayilli 26.02 82 P **P** **01 38 16.2 +1.0**
SNR=13
IML S S 01 43 08.7 +23
IBST Bostanabad 26.02 89 *e*P **P** **01 38 15.4 0.0**
IBST Bostanabad 26.02 89 *e*P **P** **01 38 15.4 0.0**
TMCR Tamitsa 26.04 25 *i*P **P** **01 38 15.1 +0.1**
TMCR *e*S **S** **01 42 45.1 -0.1**
TMCR pmax pmax
comp=Z,1µm,1.5s
BHD Baghdad 26.05 100 *i* x **P** **01 38 15.7 +0.3**
BHD *i* x **S** **01 42 48.5 +2.6**
CFTV Fuerteventura 26.19 247 P **P** **01 38 17.0 +0.3**
comp=Z,194nm,1.4s,SNR=9.2
CFTV Fuerteventura 26.19 247 P **P** **01 38 17.0 +0.3**
comp=Z,194nm,1.4s,SNR=9.2
PQL Pirkuli 26.32 81 P **P** **01 38 18.9 +0.9**
SNR=123
PQL S S 01 43 14.8 +24
SIZA Siyzn 26.47 81 P **P** **01 38 20.9 +1.6**
SNR=5.6
SIZA S S 01 43 16.4 +24
ISRB Sarab 26.55 88 *e*P **P** **01 38 20.2 0.0**
ISRB Sarab 26.55 88 *e*P **P** **01 38 20.2 0.0**
GLBA Ciilabad 26.62 85 P **P** **01 38 21.9 +1.4**
SNR=40
ALIB Äli-Bayra 26.86 83 P **P** **01 38 25.7 +3.1**
SNR=143
ALIB S S 01 43 31.8 +33
LKRN Lenkeran, Azer 27.07 86 P **P** **01 38 25.6 +1.0**
SNR=168
LKRN S S 01 43 18.7 +17
IGHG Ghaleghazi 27.15 96 *e*P **P** **01 38 25.6 -0.1**
IGHG Ghaleghazi 27.15 96 *e*P **P** **01 38 25.6 -0.1**
KTK1 Kautokeino 27.21 8 *e*P **P** **01 38 25.2 -0.3**
KTK1 AMB AMB 01 38 35.9
comp=Z,638nm,1.9s
KTK1 AMS AMS 01 50 08.9
comp=Z,127µm,15.1s
KTK1 Kautokeino 27.21 8 *e*P **P** **01 38 25.2 -0.3**
comp=Z,638nm,1.9s,SNR=28
GOBA Gobu 27.26 82 P **P** **01 38 29.6 +3.3**
SNR=29
GOBA S S 01 43 34.9 +30
IVIS Veis 27.27 96 *e*P **P** **01 38 26.7 +0.1**
IVIS Veis 27.27 96 *e*P **P** **01 38 26.7 +0.1**
NDR Nardaran 27.40 81 P **P** **01 38 29.9 +2.4**
SNR=45
TRO Tromso 27.48 4 *e*P **P** **01 38 30.4 +2.5**
TRO AMB AMB 01 38 42.7
comp=Z,622nm,1.8s
TRO *e*S **S** **01 43 03.8 -4.1**
TRO AMS AMS 01 50 26.1
comp=Z,46µm,12.8s
TRO Tromso 27.48 4 *e*P **P** **01 38 30.4 +2.5**
comp=Z,622nm,1.8s,SNR=28
APA Apatity 27.49 17 *i*P **P** **01 38 29.6 +1.6**
APA *i*S **S** **01 43 06.0 -2.0**
APA pmax pmax
comp=Z,462nm,1.2s
APA MLR MLR
comp=Z,149µm,12.0s
IKOM Komasi 27.92 96 *e*P **P** **01 38 32.6 +0.2**
IKOM Komasi 27.92 96 *e*P **P** **01 38 32.6 +0.2**
ARCES ARCESS Array B 27.96 9 P **P** **01 38 31.8 -0.4**
ARCES PcP **PcP** **01 41 49.5 +2.5**
ARCES PKiKP **PKiKP** **01 49 22.8 +0.2**
ARCES ARCESS Array B 27.96 9 P **P** **01 38 31.8 -0.4**
comp=Z,46nm,0.7s,baz=198,slow=8.5,SNR=37
ARCES PcP **PcP** **01 41 49.6 +2.5**
comp=Z,25nm,0.9s,baz=222,slow=2.4,SNR=4.8
ARCES PKiKP **PKiKP** **01 49 22.8 +0.2**
comp=Z,4.2nm,0.9s,baz=147,slow=2.9,SNR=3.8
ARCES LR LR 01 51 13.1
comp=Z,39µm,18.5s,baz=201,slow=40
ARCES ARCESS Array B 27.96 9 P **P** **01 38 31.8 -0.4**
ARCES ARCESS Array B 27.96 9 PcP **PcP** **01 41 49.5 +2.5**
ARE0 ARCESS Array S 27.96 9 *e*P **P** **01 38 31.7 -0.6**
ARE0 ARCESS Array S 27.96 9 *e*P **P** **01 38 31.6 -0.7**
ARE0 ARCESS Array S 27.96 9 *e*P **P** **01 38 31.7 -0.6**
SNR=28
LVZ Lovozero 28.03 17*de*P **P** **01 38 32.6 -0.3**
LVZ pmax pmax
comp=Z,331nm,1.3s
LVZ MLR MLR
comp=Z,113µm,13.0s
LVZ Lovozero 28.03 17 *e*P **P** **01 38 31.5 -1.4**
comp=Z,435nm,1.2s
LVZ LR LR
comp=Z,102µm,21.0s
LVZ Lovozero 28.03 17 *e*P **P** **01 38 31.5 -1.4**
comp=Z,435nm,1.2s
CCAN Las Canadas 28.04 249 P **P** **01 38 35.3 +1.6**
comp=Z,23nm,0.8s,SNR=7.7
CCAN Las Canadas 28.04 249 P **P** **01 38 35.3 +1.6**
comp=Z,23nm,0.8s,SNR=7.7
KEV Kevo 28.35 10 *e*P **P** **01 38 36.6 +0.9**
KEV pmax pmax
comp=Z,31nm,0.8s
KEV Kevo 28.35 10 *e*P **P** **01 38 33.9 -1.8**
comp=Z,160nm,1.1s
KEV LR LR
comp=Z,67µm,20.0s
KEV Kevo 28.35 10 *e*p **P** **01 38 36.6 +0.9**
comp=Z,30nm,0.8s
KEV Kevo 28.35 10 *e*P **P** **01 38 36.6 +0.9**
comp=Z,30nm,0.8s
IRAZ Razeghan 29.17 92 *e*P **P** **01 38 44.6 +1.0**
IRAZ Razeghan 29.17 92 *e*P **P** **01 38 44.6 +1.0**
BORG Borgarnes 29.77 331 P **P** **01 38 50.8 +2.5**
BORG Borgarnes 29.77 331 P **P** **01 38 50.8 +2.5**
comp=Z,11nm,0.8s,baz=249,slow=8.6,SNR=3.4
BORG LR LR 01 51 02.7
comp=Z,21µm,21.7s,baz=130,slow=37
BORG Borgarnes 29.77 331 P **P** **01 38 50.8 +2.5**
PSMN Pico do Norte, 29.84 273 *e*P **P** **01 38 49.5 +0.2**
comp=Z,583nm,1.8s
PSMN *e*S S 01 43 55.4 +10
PSMN *e*LQ LQ 01 45 01.2
PSMN *e*LR LR 01 47 09.6
comp=Z,11µm,21.0s
PSMN Pico do Norte, 29.84 273 *e*P **P** **01 38 49.5 +0.2**
comp=Z,583nm,1.8s
PSMN *e*S S 01 43 55.4 +10
PSMA Santa Maria 29.89 273 *e*P **P** **01 38 50.8 +1.1**
comp=Z,2µm,2.3s
CMLA Cha da Macela 29.90 274 *e*P **P** **01 38 49.0 -0.8**
comp=Z,398nm,1.8s
CMLA *e*S S 01 43 55.4 +8.8
CMLA *e*LQ LQ 01 45 20.0
CMLA *e*LR LR 01 47 08.6
comp=Z,8µm,18.8s
CMLA Cha da Macela 29.90 274 PFAKE 01 39 00.0 +10
CMLA LR LR
comp=Z,30µm,20.0s
CMLA Cha da Macela 29.90 274 *e*P **P** **01 38 49.0 -0.8**
comp=Z,398nm,1.8s

CMLA *e*S S 01 43 55.4 +8.8
PDA Ponta Delgada 30.01 274 *e*P **P** **01 38 51.9 +1.1**
comp=Z,559nm,1.8s
PDA Ponta Delgada 30.01 274 *e*P **P** **01 38 51.9 +1.1**
comp=Z,559nm,1.8s
MIB Mutribah 30.02 104 *e*P **P** **01 38 50.8 -0.1**
MIB AMb AMB 01 39 00.1
comp=Z,402nm,1.2s
MIB Mutribah 30.02 104 *e*P **P** **01 38 50.8 -0.1**
comp=Z,402nm,1.2s
PSET Sete Cidades 30.02 275 *e*P **P** **01 38 52.6 +1.6**
comp=Z,564nm,1.9s
PSET *e*S S 01 43 59.2 +11
PSET *e*LQ LQ 01 45 37.7
PSET *e*LR LR 01 46 52.9
comp=Z,18µm,19.2s
PSET Sete Cidades 30.02 275 *e*P **P** **01 38 52.6 +1.6**
comp=Z,564nm,1.9s
PSET *e*S S 01 43 59.2 +11
NAY Al-Naaiem 30.26 105 *e*P **P** **01 38 52.8 -0.3**
NAY AMb AMB 01 38 57.3
comp=Z,47nm,1.4s
NAY Al-Naaiem 30.26 105 *e*P **P** **01 38 52.8 -0.3**
comp=Z,47nm,1.4s
UMR Umm Al-Rimmam 30.43 104 *e*P **P** **01 38 55.0 +0.5**
UMR AMb AMB 01 39 03.6
comp=Z,254nm,1.6s
UMR Umm Al-Rimmam 30.43 104 *e*P **P** **01 38 55.0 +0.5**
comp=Z,254nm,1.6s
KBD Kabd 30.62 104 *e*P **P** **01 38 56.3 0.0**
KBD AMb AMB 01 39 05.2
comp=Z,89nm,1.2s
KBD Kabd 30.62 104 *e*P **P** **01 38 56.3 0.0**
comp=Z,89nm,1.2s
RDF Al-Radifah 30.66 105 *e*P **P** **01 38 56.7 0.0**
RDF AMb AMB 01 39 05.9
comp=Z,258nm,1.4s
RDF Al-Radifah 30.66 105 *e*P **P** **01 38 56.7 0.0**
comp=Z,258nm,1.4s
IVRN Varamin 30.67 91 *e*P **P** **01 38 58.0 +1.2**
IVRN Varamin 30.67 91 *e*P **P** **01 38 58.0 +1.2**
JMIC Jan Mayen 30.70 346 *e*P **P** **01 38 58.2 +1.7**
JMIC *e*S **S** **01 43 58.9 +0.4**
JMIC AMS AMS 01 52 02.8
comp=Z,17µm,18.1s
JMIC Jan Mayen 30.70 346 *e*P **P** **01 38 58.2 +1.7**
SNR=27
JMIC *e*S **S** **01 43 58.9 +0.4**
SNR=28
TOA0 Torodi Ar. Sit 30.81 203 *e*P **P** **01 38 57.9 -0.2**
TOA0 Torodi Ar. Sit 30.81 203 *e*P **P** **01 38 57.9 -0.2**
TORD Torodi Ar. Bea 30.81 203 P **P** **01 38 58.8 +0.7**
TORD PcP **PcP** **01 41 57.9 +2.7**
TORD Torodi Ar. Bea 30.81 203 P **P** **01 38 58.8 +0.7**
comp=Z,70nm,0.6s,baz=16,slow=8.5,SNR=106
TORD PcP **PcP** **01 41 57.9 +2.7**
comp=Z,18nm,0.9s,baz=327,slow=2.5,SNR=5.9
TORD LR LR 01 52 16.5
comp=Z,42µm,18.3s,baz=10.0,slow=38
TORD Torodi Ar. Bea 30.81 203 P **P** **01 38 58.8 +0.7**
ADH Angra Heroismo 30.85 277 *e*P **P** **01 38 58.8 +0.6**
comp=Z,378nm,1.6s
ADH Angra Heroismo 30.85 277 *e*P **P** **01 38 58.8 +0.6**
comp=Z,378nm,1.6s
IPIR Pirpir 31.11 96 *e*P **P** **01 39 02.2 +1.3**
IPIR Pirpir 31.11 96 *e*P **P** **01 39 02.2 +1.3**
PGRA Graciosa 31.27 278 *e*P **P** **01 39 03.9 +2.0**
comp=Z,534nm,1.6s
PGRA *e*S S 01 44 14.6 +6.6
PGRA *e*LQ LQ 01 46 03.3
PGRA *e*LR LR 01 47 26.3
comp=Z,10µm,21.7s
PGRA *e*LR LR 01 47 27.9
comp=Z,10µm,21.7s
PGRA Graciosa 31.27 278 *e*P **P** **01 39 03.9 +2.0**
comp=Z,534nm,1.6s
IKLH Kolahrood 31.32 94 *e*P **P** **01 39 04.0 +1.3**
IKLH Kolahrood 31.32 94 *e*P **P** **01 39 04.0 +1.3**
ISFB Sefidab 31.33 92 *e*P **P** **01 39 03.0 +0.4**
ISFB Sefidab 31.33 92 *e*P **P** **01 39 03.0 +0.4**
ILAS Lasjerd 31.42 89 *e*P **P** **01 39 03.8 +0.2**
ILAS Lasjerd 31.42 89 *e*P **P** **01 39 03.8 +0.2**
AKTO Aktyubinsk 31.45 60 P **P** **01 39 02.7 -0.7**
AKTO pmax pmax
comp=Z,34nm,1.2s
PMAN Manadas 31.48 277 *e*P **P** **01 39 04.8 +1.0**
comp=Z,584nm,1.5s
PMAN Manadas 31.48 277 *e*P **P** **01 39 04.8 +1.0**
comp=Z,584nm,1.5s
ROSA Rosais 31.57 278 *e*P **P** **01 39 05.3 +0.8**
comp=Z,382nm,1.3s
ROSA *e*S S 01 44 22.3 +10
ROSA *e*LQ LQ 01 46 18.5
ROSA *e*LR LR 01 47 52.5
comp=Z,18µm,18.6s
ROSA Rosais 31.57 278 *e*P **P** **01 39 05.3 +0.8**
comp=Z,382nm,1.3s
SOKR Solikamsk 31.60 42*d i*P **P** **01 39 04.6 0.0**
SOKR S **S** **01 44 09.6 -3.1**
SOKR pmax pmax
comp=Z,480nm,1.8s
SOKR MLR MLR
comp=Z,88µm,18.0s
PICO Pico 31.78 277 *e*P **P** **01 39 05.1 -1.4**
PICO Pico 31.78 277 *e*P **P** **01 39 05.1 -1.4**
PCAN Candelaria 31.83 277 *e*P **P** **01 39 08.2 +1.3**
comp=Z,415nm,2.0s
PCAN Candelaria 31.83 277 *e*P **P** **01 39 08.2 +1.3**
comp=Z,415nm,2.0s
PCED Cedros 31.93 278 *e*P **P** **01 39 08.4 +0.6**
comp=Z,391nm,1.4s
PCED Cedros 31.93 278 *e*P **P** **01 39 08.4 +0.6**
comp=Z,391nm,1.4s
CALA Caldeira 31.95 278 *e*P **P** **01 39 09.0 +1.0**
CALA Caldeira 31.95 278 *e*P **P** **01 39 09.0 +1.0**
ARU Arti 31.99 48*c i*P **P** **01 39 07.5 -0.5**
ARU 01 40 10.8
ARU 01 41 55.6
ARU S **S** **01 44 19.8 +0.9**
ARU SS **SnSn** **01 46 08.2 +0.4**
ARU SSS SSS 01 46 29.5
ARU 01 49 30.2
ARU pmax pmax
comp=Z,814nm,1.2s
ARU pmax pmax
comp=Z,2µm,6.9s
ARU MLR MLR
comp=Z,130µm,16.0s
ARU Arti 31.99 48 *e*P **P** **01 39 07.1 -0.9**
comp=Z,2µm,1.4s
ARU LR LR
comp=Z,134µm,19.0s
ARU Arti 31.99 48 P **P** **01 39 07.6 -0.5**
comp=Z,5µm,1.3s
ARU Arti 31.99 48 *e*P **P** **01 39 07.1 -0.9**
comp=Z,2µm,1.4s
IZEF Zefreh 32.07 94 *e*P **P** **01 39 09.2 -0.1**
IZEF Zefreh 32.07 94 *e*P **P** **01 39 09.2 -0.1**
IANJ Anjilo 32.09 89 *e*P **P** **01 39 09.6 +0.1**
IANJ Anjilo 32.09 89 *e*P **P** **01 39 09.6 +0.1**
IGAR Gharneh 32.09 95 *e*P **P** **01 39 10.0 +0.5**
BJO Bjornoya 32.34 3 *e*P **P** **01 39 12.0 +1.1**
BJO AMS AMS 01 51 42.0
comp=Z,29µm,20.5s
BJO Bjornoya 32.34 3 *e*P **P** **01 39 12.0 +1.1**
SNR=27
RAYN Ar Rayn 32.63 115 P **P** **01 39 15.9 +1.8**
comp=Z,355nm,1.1s,SNR=24
AB31 Akbulak array 32.78 62 *i* P **P** **01 39 14.9 -0.2**
AB31 pmax pmax
comp=Z,139nm,1.0s
ABKAR Akbulak array 32.78 62 *e*P **P** **01 39 14.5 -0.6**
comp=Z,70nm,0.9s
ABKAR Akbulak array 32.78 62 *e*P **P** **01 39 14.5 -0.6**
comp=Z,70nm,0.9s
SCO Scoresbysund 33.31 339 *i* P **P** **01 39 21.1 +1.7**
comp=Z,29nm,0.9s
SCO
comp=Z,24µm,21.0s
SCO Scoresbysund 33.31 339 *i* P **P** **01 39 21.2 +1.8**
comp=Z,29nm,0.9s,SNR=27
ABKT Ailbek 34.23 82 P **P** **01 39 28.1 +0.2**
comp=Z,3µm,1.3s
HSP Hornsund 34.76 1 *e*P **P** **01 39 33.1 +1.2**
IKRD Kardeh 34.96 84 *e*P P 01 39 41.8 +7.3

IKRD Kardeh 34.96 84 *e*P P 01 39 41.8 +7.3
IPAY Payeh 35.45 84 *e*P **P** **01 39 39.5 +0.9**
IPAY Payeh 35.45 84 *e*P **P** **01 39 39.5 +0.9**
IMOG Moghan 35.84 84 *e*P **P** **01 39 42.9 +0.8**
IMOG Moghan 35.84 84 *e*P **P** **01 39 42.9 +0.8**
ISRO Mashad 35.85 84 *e*P **P** **01 39 42.3 +0.3**
ISRO Mashad 35.85 84 *e*P **P** **01 39 42.3 +0.3**
SPA0 Spitsbergen Ar 35.94 1 *e*P **P** **01 39 42.4 +0.2**
SPA0 Spitsbergen Ar 35.94 1 *e*P **P** **01 39 42.4 +0.2**
SNR=27
IMYA Miami 36.30 84 *e*P **P** **01 39 47.1 +1.2**
IMYA Miami 36.30 84 *e*P **P** **01 39 47.1 +1.2**
KBS Kingsbay 36.68 360 *e*pP **P** **01 39 48.9 +0.5**
KBS AMB AMB 01 40 02.6
KBS comp=Z,324nm,1.6s
KBS *e*S **S** **01 45 29.4 -1.4**
KBS AMS AMS 01 54 48.4
comp=Z,27µm,20.4s
KBS Kingsbay 36.68 360 *d i*P **P** **01 39 49.7 +1.4**
KBS pmax pmax
comp=Z,103nm,1.7s
KBS Kingsbay 36.68 360 *e*P **P** **01 39 49.5 +1.1**
KBS comp=Z,652nm,2.0s
LR LR
comp=Z,31µm,20.0s
KBS Kingsbay 36.68 360 ⇓*i*P **P** **01 39 49.8 +1.4**
KBS comp=Z,42nm,0.9s,SNR=26
i S **S** **01 45 34.1 +3.3**
SNR=27
ITEG Tejag 36.82 90 *e*P **P** **01 39 51.4 +1.0**
ITEG Tejag 36.82 90 *e*P **P** **01 39 51.4 +1.0**
BBTS Babate 37.73 232 LR LR 01 55 24.9
comp=Z,30µm,21.1s,baz=218,slow=36
DESE Dese 38.69 136 *e*P P 01 40 09.6 +3.2
DESE *e*S S 01 46 13.1 +10
BANOM Banah 38.73 101 ⇓P **P** **01 40 06.2 -0.2**
SNR=16
BANOM Banah 38.73 101 P **P** **01 40 06.2 -0.2**
SNR=16
ASUD Al Ashush, Dub 38.80 104 P **P** **01 40 08.4 +1.5**
SNR=15
ASUD Al Ashush, Dub 38.80 104 P **P** **01 40 07.5 +0.6**
BRVK Borovoye 38.81 54 *d i*P **P** **01 40 07.4 +0.7**
BRVK pmax pmax
comp=Z,506nm,1.7s
BRVK MLR MLR
comp=Z,111µm,17.0s
BRVK Borovoye 38.81 54 *e*P **P** **01 40 07.0 +0.2**
comp=Z,642nm,1.3s
BRVK LR LR
comp=Z,87µm,21.0s
BRVK Borovoye 38.81 54 P **P** **01 40 07.9 +1.1**
SNR=373
BRVK Borovoye 38.81 54 *e*P **P** **01 40 06.9 +0.2**
comp=Z,642nm,1.3s
NAZ Nazwa, Dubai 38.82 103 ⇓P **P** **01 40 07.2 +0.1**
SNR=42
NAZ Nazwa, Dubai 38.82 103 P **P** **01 40 07.0 -0.1**
BVA0 Borovoye Array 38.88 54 *i* P **P** **01 40 07.9 +0.6**
BVA0 pmax pmax
comp=Z,93nm,1.5s
BVAR Borovoye Array 38.88 54 P **P** **01 40 07.7 +0.4**
BVAR 01 41 36.0
BVAR pmax pmax
comp=Z,89nm,0.8s
BVAR pmax pmax
comp=Z,22nm,0.7s
BVAR Borovoye Array 38.88 54 P **P** **01 40 07.7 +0.4**
BVAR PP **PP** **01 41 36.0 -0.2**
BVAR Borovoye Array 38.88 54 P **P** **01 40 07.7 +0.4**
comp=Z,89nm,0.8s,baz=250,slow=6.3,SNR=154
BVAR PP **PP** **01 41 36.0 -0.2**
comp=Z,22nm,0.7s,baz=279,slow=10,SNR=2.4
BVAR Borovoye Array 38.88 54 P **P** **01 40 07.7 +0.4**
SUMG Summit 38.89 338 *e*P **P** **01 40 09.1 +1.5**
SUMG pmax pmax
comp=Z,197nm,1.4s
SUMG Summit 38.89 338 *e*P **P** **01 40 09.1 +1.5**
comp=Z,197nm,1.4s
SUMG Summit 38.89 338 ⇓*i*P **P** **01 40 08.5 +1.0**
comp=Z,52nm,0.9s
SUMG
comp=Z,18µm,17.0s
SUMG Summit 38.89 338 ⇓*i*P **P** **01 40 08.6 +1.0**
comp=Z,52nm,0.9s,SNR=26
FAQ Al Faqa, Dubai 38.91 103 P **P** **01 40 07.7 -0.2**
DBIC Dimbokro 39.03 209 ⇓*i*P **P** **01 40 09.3 +0.4**
DBIC Dimbokro 39.03 209 *e*P **P** **01 40 09.2 +0.4**
comp=Z,337nm,1.2s
DBIC Dimbokro 39.03 209 P **P** **01 40 09.2 +0.4**
comp=Z,46nm,0.6s,baz=6.8,slow=9.7,SNR=38
DBIC LR LR 01 57 19.4
comp=Z,20µm,19.9s,baz=360,slow=38
DBIC Dimbokro 39.03 209 *e*P **P** **01 40 09.2 +0.4**
comp=Z,337nm,1.2s
HATD Hatta, Dubai 39.26 103 P **P** **01 40 10.9 +0.2**
SNR=46
HATD Hatta, Dubai 39.26 103 P **P** **01 40 10.6 -0.2**
ASHO Ashiyiah 39.29 103 P **P** **01 40 11.0 -0.1**
SNR=41
ASHO Ashiyiah 39.29 103 P **P** **01 40 11.0 -0.1**
SNR=41
LIC Lamto 39.50 209 ⇓*i*P **P** **01 40 13.2 +0.4**
comp=Z,452nm,0.9s,baz=21
LIC *e*R
comp=Z,62µm,23.8s
LIC Lamto 39.50 209 ⇓*i*P **P** **01 40 13.2 +0.4**
comp=Z,452nm,0.9s
ATD Arta Tunnel 40.07 131 LR LR 01 59 35.4
comp=Z,6µm,19.5s,baz=328,slow=40
ARQ Araqi 40.45 104 ⇓P **P** **01 40 21.3 +0.6**
SNR=80
ARQ Araqi 40.45 104 P **P** **01 40 21.3 +0.6**
SNR=80
HOQ Hoqain 40.87 103 ⇑P **P** **01 40 24.3 +0.2**
SNR=48
HOQ Hoqain 40.87 103 P **P** **01 40 24.3 +0.2**
SNR=48
KK31 Karatay Array 41.30 69 *i* P **P** **01 40 28.5 +0.9**
KK31 pmax pmax
comp=Z,306nm,0.9s
KKAR Karatay Array 41.30 69 *e*P **P** **01 40 27.7 +0.1**
KKAR pmax pmax
comp=Z,265nm,0.9s
KKAR Karatay Array 41.30 69 *e*P **P** **01 40 27.7 +0.1**
comp=Z,265nm,0.9s
KKAR Karatay Array 41.30 69 *e*P **P** **01 40 27.7 +0.1**
comp=Z,265nm,0.9s
BSY Bisya 41.30 104 P **P** **01 40 28.0 +0.2**
SNR=50
BSYO Bisya 41.34 104 P **P** **01 40 28.0 -0.1**
SNR=50
MUKL Al Mukalla 41.44 121 *e*P **P** **01 40 30.1 +1.2**
SMDO Samad 41.72 103 P **P** **01 40 31.3 0.0**
SNR=140
SMDO Samad 41.72 103 P **P** **01 40 31.3 0.0**
SNR=140
SFJD Kangerlussuaq 41.81 328 *e*P **P** **01 40 31.0 -0.3**
comp=Z,276nm,1.2s
SFJD Kangerlussuaq 41.81 328 *i* P **P** **01 40 31.1 -0.3**
comp=Z,101nm,1.0s
SFJD *i* S **S** **01 46 50.6 +2.5**
SFJD
comp=Z,27µm,14.0s
SFJD Kangerlussuaq 41.81 328 LR LR 01 59 39.3
comp=Z,25µm,18.2s,baz=88,slow=39
SFJD Kangerlussuaq 41.81 328 *i* P **P** **01 40 31.1 -0.3**
comp=Z,102nm,1.0s,SNR=25
SFJD *i* S **S** **01 46 50.6 +2.5**
SNR=27
SACV Santiago Islan 41.85 240 *e*P **P** **01 40 29.4 -2.8**
comp=Z,92nm,1.1s
SACV LR LR
comp=Z,11µm,21.0s
ABTO Aybut 42.15 114 P **P** **01 40 35.8 +1.0**
SNR=58
ABTO Aybut 42.15 114 P **P** **01 40 35.8 +1.0**
SNR=58
JMDO Jabal Madar 42.19 104 P **P** **01 40 35.1 +0.1**
SNR=67
JMDO Jabal Madar 42.19 104 P **P** **01 40 35.1 +0.1**
SNR=67
RBK Rabkut 42.66 113 P **P** **01 40 39.3 +0.4**
SNR=51
RBK Rabkut 42.66 113 P **P** **01 40 39.3 +0.4**
SNR=51

WBK Wadi Bani Khal 42.66 103 ⇑P **P** **01 40 39.5 +0.6**
SNR=45
WBK Wadi Bani Khal 42.66 103 P **P** **01 40 39.5 +0.6**
SNR=45
KBL Kabul 43.66 81 *e*P **P** **01 40 48.0 +1.0**
KBL pmax pmax
comp=Z,153nm,1.1s
KBL Kabul 43.66 81 *e*P **P** **01 40 48.0 +1.0**
comp=Z,152nm,1.1s
KBL Kabul 43.66 81 *e*P **P** **01 40 48.0 +1.0**
comp=Z,152nm,1.1s
EKS2 Erkin-Say 43.71 68 *e*P **P** **01 40 48.4 +1.2**
EKS2 pmax pmax
comp=Z,1µm,1.3s
EKS2 MLR MLR
comp=Z,83µm,19.0s
EKS2 Erkin-Say 43.71 68 *e*P **P** **01 40 48.4 +1.2**
comp=Z,1µm,1.3s
EKS2 LR LR
comp=Z,83µm,19.0s
EKS2 Erkin-Say 43.71 68 P **P** **01 40 48.5 +1.2**
SNR=378
EKS2 Erkin-Say 43.71 68 *e*P **P** **01 40 48.4 +1.2**
comp=Z,1µm,1.3s
AML Almayashu 43.84 69 *i* P **P** **01 40 49.5 +0.8**
AML Almayashu 43.84 69 P **P** **01 40 49.5 +0.8**
SNR=115
USP Ospenovka 43.99 67 *i* P **P** **01 40 49.6 +0.2**
USP Ospenovka 43.99 67 P **P** **01 40 49.6 +0.2**
SNR=62
AAK Ala-Archa 44.21 68 *e*P **P** **01 40 52.1 +0.7**
AAK MLR MLR
comp=Z,67µm,19.0s
AAK Ala-Archa 44.21 68 *e*P **P** **01 40 52.1 +0.7**
comp=Z,3µm,1.3s
AAK LR LR
comp=Z,67µm,19.0s
AAK Ala-Archa 44.21 68 P **P** **01 40 53.0 +1.6**
SNR=395
AAK Ala-Archa 44.21 68 P **P** **01 40 52.7 +1.3**
SNR=215
AAK Ala-Archa 44.21 68 P **P** **01 40 52.6 +1.3**
comp=Z,150nm,1.1s,baz=262,slow=7.9,SNR=126
AAK Ala-Archa 44.21 68 *e*P **P** **01 40 52.1 +0.7**
comp=Z,3µm,1.3s
FRU Bishkek 44.22 68 ⇓*i*P **P** **01 40 52.0 +0.7**
FRU *i* 01 42 40.0
FRU *i* 01 43 12.0
FRU *i* S **S** **01 47 28.0 +3.8**
FRU *e* 01 50 45.0
FRU pmax pmax
comp=Z,2µm,1.8s
FRU MLR MLR
comp=N,55µm,17.0s
FRU MLR MLR
comp=Z,43µm,17.0s
CHMS Chumysh 44.26 67 *i* P **P** **01 40 52.9 +1.4**
CHMS Chumysh 44.26 67 P **P** **01 40 52.9 +1.4**
SNR=45
KURBB Kurchatov Arra 44.31 56 P **P** **01 40 51.6 -0.2**
comp=Z,106nm,1.2s,baz=289,slow=8.4,SNR=142
KURBB PP **PP** **01 42 34.6 -0.3**
comp=Z,31nm,1.1s,baz=287,slow=11,SNR=5.1
KURK Kurchatov 44.34 56 *d i*P **P** **01 40 51.9 -0.1**
KURK pmax pmax
comp=Z,360nm,1.7s
KURK MLR MLR
comp=Z,67µm,17.0s
KURK Kurchatov 44.34 56 *e*P **P** **01 40 52.0 -0.1**
comp=Z,501nm,1.4s
KURK *e*PP **PcP** **01 42 35.8 -0.1**
KURK LR LR
comp=Z,62µm,20.0s
KURK Kurchatov 44.34 56 P **P** **01 40 52.4 +0.3**
SNR=182
KURK Kurchatov 44.34 56 *e*P **P** **01 40 52.0 -0.1**
comp=Z,501nm,1.4s
UCH Uchtor 44.37 69 *i* P **P** **01 40 55.9 +2.9**
UCH Uchtor 44.37 69 P **P** **01 40 56.0 +2.9**
SNR=9.4
KBK Karagaybulak 44.51 68 *i* P **P** **01 40 55.1 +1.3**
KBK Karagaybulak 44.51 68 P **P** **01 40 55.1 +1.3**
SNR=27
TKM2 Tokmak 2 44.86 67 *i* P **P** **01 40 57.1 +0.5**
TKM2 Tokmak 2 44.86 67 *e*P **P** **01 40 56.9 +0.3**
comp=Z,155nm,1.2s
TKM2 LR LR
comp=Z,33µm,20.0s
TKM2 Tokmak 2 44.86 67 P **P** **01 40 57.1 +0.5**
SNR=48
TKM2 Tokmak 2 44.86 67 *e*P **P** **01 40 56.9 +0.3**
comp=Z,155nm,1.2s
KZA Kyzart 44.94 68 *i* P **P** **01 40 59.3 +1.9**
KZA Kyzart 44.94 68 P **P** **01 40 59.3 +1.9**
SNR=196
ULHL Ulahol 45.55 68 *i* P **P** **01 41 03.3 +1.2**
ULHL Ulahol 45.55 68 P **P** **01 41 03.3 +1.2**
SNR=66
MBAR Mbarara 45.57 155 *e*P **P** **01 41 03.8 +1.4**
AAA Alma-Ata 45.65 66 *i* P **P** **01 41 05.1 +2.4**
AAA *i* S S 01 47 54.1 +9.2
AAA MLR MLR
comp=Z,46µm,12.0s
NVS Novosibirsk 45.98 49 ⇓*i*P **P** **01 41 05.8 +0.8**
NVS *i* 01 42 53.0
NVS *i* S **S** **01 47 51.2 +2.0**
NVS *e* 01 51 02.8
NVS pmax pmax
comp=E,278nm,1.6s
NVS pmax pmax
comp=Z,1µm,1.6s
NVS pmax pmax
comp=N,97nm,1.8s
NVS pmax pmax
comp=E,555nm,2.5s
NVS pmax pmax
comp=Z,2µm,2.5s
NVS pmax pmax
comp=N,157nm,2.3s
NVS smax smax
comp=N,258nm,2.5s
NVS smax smax
comp=E,442nm,2.7s
ALE Alert 46.39 350 P **P** **01 41 08.5 +0.6**
comp=E,358nm,1.3s,SNR=13
KSH Kashi 46.46 71 P **P** **01 41 09.3 +0.1**
KSH pP **pP** **01 41 14.1 +0.5**
KSH sP **sP** **01 41 16.2 +0.9**
KSH PcP **PcP** **01 42 45.1 +1.4**
KSH PP **PP** **01 42 58.0 -0.2**
KSH ScP **ScP** **01 46 37.0 +0.4**
KSH PcS **PcS** **01 46 38.5 +0.1**
KSH S **S** **01 47 54.6 -2.2**
KSH ScS **ScS** **01 51 02.0 -2.0**
KSH SS SS 01 51 13.8 -8.6
KSH pmax pmax
comp=Z,530nm,1.8s
KSH pmax pmax
comp=Z,3µm,4.0s
KSH LR LR
comp=N,15µm,11.0s
KSH LR LR
comp=E,8µm,11.5s
KSH LR LR
comp=Z,24µm,14.6s
ZALV Zalesovo Beam 47.11 50 P **P** **01 41 13.9 0.0**
ZALV 01 43 02.5
ZALV pmax pmax
comp=Z,51nm,0.7s
ZALV pmax pmax
comp=Z,20nm,0.8s
ZALV MLR MLR
comp=Z,131µm,18.1s
ZALV Zalesovo Beam 47.11 50 P **P** **01 41 13.9 0.0**
ZALV PP **PP** **01 43 02.5 -1.9**
ZALV Zalesovo Beam 47.11 50 P **P** **01 41 13.9 0.0**
comp=Z,51nm,0.7s,baz=286,slow=5.7,SNR=87
ZALV PP **PP** **01 43 02.5 -1.9**
comp=Z,20nm,0.8s,baz=288,slow=12,SNR=2.5
ZALV LR LR 02 03 13.1
comp=Z,131µm,18.1s,baz=284,slow=39
ZALV Zalesovo Beam 47.11 50 P **P** **01 41 13.9 0.0**
NIL Nilore 47.15 80 PFAKE 01 41 20.0 +5.4
NIL LR LR
comp=Z,25nm,21.0s
MK31 Makanchi Array 47.89 60 *e*P **P** **01 41 19.6 -0.6**

MK31 Makanchi Array 47.89 60 *e*P **P** **01 41 19.6 -0.6**
MK31 Makanchi Array 47.89 60 *e*P **P** **01 41 19.5 -0.6**
MKAR Makanchi Array 47.89 60 P **P** **01 41 20.3 +0.2**
MKAR pmax pmax
comp=Z,76nm,0.5s
MKAR MLR MLR
comp=Z,41µm,19.5s
MKAR Makanchi Array 47.89 60 P **P** **01 41 20.3 +0.2**
MKAR P'P' 02 12 37.8
MKAR Makanchi Array 47.89 60 P **P** **01 41 20.3 +0.2**
comp=Z,76nm,0.5s,baz=288,slow=6.5,SNR=265
MKAR LR LR 02 03 32.0
comp=Z,41µm,19.5s,baz=284,slow=39
MKAR PKPPKP **P'P'df** **02 12 37.8 +0.3**
comp=Z,0.8nm,1.0s,baz=108,slow=3.2,SNR=3.8
MKAR Makanchi Array 47.89 60 P **P** **01 41 20.3 +0.2**
DRLN Deer Lake 48.18 304 *e*P **P** **01 41 21.4 -0.9**
comp=Z,168nm,1.0s
DRLN Deer Lake 48.18 304 *e*P **P** **01 41 21.4 -0.9**
comp=Z,168nm,1.0s
KMBO Kilima Mbogo 48.39 147 *e*P P 01 41 27.6 +3.1
KMBO Kilima Mbogo 48.39 147 *e*P **P** **01 41 25.6 +1.2**
comp=Z,106nm,1.3s
KMBO Kilima Mbogo 48.39 147 P **P** **01 41 26.3 +1.8**
SNR=31
KMBO Kilima Mbogo 48.39 147 P **P** **01 41 25.3 +0.8**
comp=Z,48nm,1.2s,baz=348,slow=9.7,SNR=27
KMBO LR LR 02 03 48.1
comp=Z,14µm,20.6s,baz=328,slow=38
KMBO Kilima Mbogo 48.39 147 P **P** **01 41 26.3 +1.8**
SNR=31
THN Thein Dam 49.55 80 *ex* P **01 41 32.5 -0.5**
DHRM DHARAMSHALA 50.07 80 *e*P P 01 41 33.5 -3.8
DHRM AMB AMB 01 41 45.8
comp=Z,741nm,0.4s
BHJ Bhuj 50.10 94 *e*P P 01 41 33.5 -3.8
BHJ AMB AMB 01 41 46.6
comp=Z,561nm,4.2s
SDNR Sundarnagar 50.95 80 *ex* **P** **01 41 45.0 +1.4**
SMLA Simla 51.28 81 *i* P **P** **01 41 45.9 -0.1**
SMLA AMb AMB 01 41 56.6
comp=Z,925nm,0.7s
SMLA *i* x x 01 48 53.2
SCHQ Schefferville 51.61 313 *e*P **P** **01 41 47.2 -1.1**
comp=Z,92nm,0.8s
SCHQ Schefferville 51.61 313 P **P** **01 41 47.2 -1.1**
comp=Z,39nm,0.6s,baz=71,slow=10,SNR=43
SCHQ LR LR 02 01 44.2
comp=Z,11µm,19.6s,baz=64,slow=34
SCHQ Schefferville 51.61 313 *e*P **P** **01 41 47.2 -1.1**
comp=Z,92nm,0.8s
WMQ Urumqi 52.57 61 P **P** **01 41 57.0 +1.3**
WMQ sP **sP** **01 42 04.0 +2.1**
WMQ PcP **PcP** **01 43 07.0 +1.2**
WMQ PP **PP** **01 43 57.0 +2.6**
WMQ ScP **ScP** **01 47 03.0 +0.5**
WMQ S **S** **01 49 21.0 -1.2**
WMQ ScS **ScS** **01 51 43.0 -2.1**
WMQ SS **SS** **01 52 57.0 -3.0**
WMQ pmax pmax
comp=Z,240nm,1.2s
WMQ pmax pmax
comp=Z,5µm,5.0s
WMQ LR LR
comp=N,74µm,17.0s
WMQ LR LR
comp=E,62µm,16.0s
WMQ LR LR
comp=Z,46µm,16.0s
NDI New Delhi 52.62 83 *e*P P 01 41 52.5 -3.6
NDI *e*S **S** **01 49 19.0 -4.0**
RES Resolute Bay 54.15 342 *e*P **P** **01 42 07.1 +0.4**
comp=Z,96nm,1.5s
RES Resolute Bay 54.15 342 P **P** **01 42 06.9 +0.3**
comp=Z,4.8nm,0.9s,baz=34,slow=7.7,SNR=14
RES LR LR 02 06 05.9
comp=Z,13µm,19.4s,baz=64,slow=37
RES Resolute Bay 54.15 342 *e*P **P** **01 42 07.1 +0.4**
comp=Z,96nm,1.5s
PQI Presque Isle 55.68 304 *e*P **P** **01 42 16.4 -1.8**
comp=Z,103nm,0.9s
BHPL Bhopal 55.87 89 *e*P P 01 42 16.5 -3.4
BHPL AMB AMB 01 42 28.2
comp=Z,210nm,4.3s
POO Poona 56.08 95 *e*P P 01 42 16.8 -4.7
POO ⇑*i*P pP 01 42 18.0 -8.0
comp=Z,636nm,1.2s
POO AMB AMB 01 42 28.1
comp=Z,218nm,1.8s
EMMW East Machias 56.26 302 *e*P P 01 42 19.3 -3.1
comp=Z,892nm,1.8s
MOY Mondy 57.04 48 *e*P **P** **01 42 29.0 +1.0**
MOY pmax pmax
comp=Z,257nm,2.6s
KAD Karad 57.10 96 *e*P **P** **01 42 27.4 -1.3**
PYUN Piuthan 57.18 80 *e*P **P** **01 42 28.9 -0.5**
comp=Z,4µm,1.4s
DANN Dangsing 57.60 80 *e*P **P** **01 42 32.1 -0.4**
comp=Z,2µm,1.4s
JBP Jabalpur 57.80 87 ⇓*i*P **P** **01 42 31.5 -2.1**
JBP *ex* x 01 50 13.8
KOLN Koldanda 57.81 80 *e*P **P** **01 42 33.1 -0.7**
comp=Z,1µm,1.5s
GOA Goa 58.00 98 AMB AMB 01 42 41.6
comp=Z,145nm,4.2s
GOA *i* S **S** **01 50 33.0 -2.2**
NGP Nagpur 58.32 89 *e*P **P** **01 42 34.8 -2.5**
NGP *e*S **S** **01 50 36.8 -2.5**
TLY Talaya 58.48 47 *d i*P **P** **01 42 39.1 +1.1**
TLY *e* 01 43 30.1
TLY *e* 01 44 47.8
TLY *e*PPP PPP 01 46 08.5
TLY *e*S **S** **01 50 40.7 0.0**
TLY *e*SS **SS** **01 54 29.7 -2.8**
TLY *e*SSS SSS 01 56 48.2
TLY MLR MLR
comp=Z,41µm,17.0s
TLY Talaya 58.48 47 *e*P **P** **01 42 38.7 +0.7**
comp=Z,540nm,1.5s
TLY *e*PP **PP** **01 44 44.0 -3.0**
TLY LR LR
comp=Z,56µm,21.0s
TLY Talaya 58.48 47 P **P** **01 42 39.7 +1.8**
SNR=126
TLY Talaya 58.48 47 P **P** **01 42 39.1 +1.1**
comp=Z,1µm,1.5s,SNR=46
TLY Talaya 58.48 47 *e*P **P** **01 42 38.7 +0.7**
comp=Z,540nm,1.5s
IRK Irkutsk 58.54 46 *e*P **P** **01 42 38.3 0.0**
IRK *e* 01 44 51.0
IRK *e* 01 46 11.7
IRK *e*S **S** **01 50 43.3 +1.9**
IRK pmax pmax
comp=Z,2µm,2.2s
ZAK Zakamensk 58.93 48 *e*P **P** **01 42 41.9 +0.7**
ZAK pmax pmax
comp=Z,80nm,2.0s
LSZ Lusaka 58.97 163 *e*P **P** **01 42 41.9 +0.2**
LSZ Lusaka 58.97 163 *e*P **P** **01 42 42.0 +0.2**
comp=Z,150nm,1.1s
LSZ LR LR
comp=Z,14µm,20.0s
LSZ Lusaka 58.97 163 P P 01 42 45.0 +3.2
SNR=34
LSZ Lusaka 58.97 163 *e*P **P** **01 42 42.0 +0.2**
comp=Z,150nm,1.1s
DMN Daman 59.00 80 *e*P **P** **01 42 41.7 -0.5**
comp=Z,2µm,1.6s
KKN Kakani 59.02 79 *e*P **P** **01 42 41.5 -0.8**
PKIN Phulchoki 59.23 79 *e*P **P** **01 42 43.2 -0.6**
PKI Pulchoki 59.24 79 *e*P **P** **01 42 43.1 -0.9**
LBNH Lisbon 59.27 304 *e*P **P** **01 42 44.2 +0.6**
LBNH pmax pmax
comp=Z,121nm,1.2s
LBNH MLR MLR
comp=Z,13µm,19.0s
LBNH Lisbon 59.27 304 *e*P **P** **01 42 44.1 +0.6**
comp=Z,121nm,1.2s
LBNH LR LR
comp=Z,13µm,19.0s
LBNH Lisbon 59.27 304 *e*P **P** **01 42 44.2 +0.6**
comp=Z,121nm,1.2s
GUN Gumba 59.39 79 *e*P **P** **01 42 44.4 -0.6**
comp=Z,1µm,1.3s
FFD Franklin Falls 59.50 303 *e*P **P** **01 42 45.8 +0.7**
comp=Z,603nm,1.5s

FFD **Franklin Falls** 59.50 303 *e*P **P** 01 42 45.8 +0.7
comp=Z,603nm,1.5s
HNH **Hanover** 59.77 303 *e*P **P** 01 42 46.2 -0.8
HNH **Hanover** 59.77 303 *e*P **P** 01 42 46.2 -0.8
WES **Weston** 59.85 301 *e*P **P** 01 42 47.8 +0.3
WES pmax pmax
comp=Z,133nm,1.1s
WES **Weston** 59.85 301 *e*P **P** 01 42 47.8 +0.3
comp=Z,133nm,1.1s
WES **Weston** 59.85 301 *e*P **P** 01 42 47.8 +0.3
comp=Z,133nm,1.1s
HRV **Adam Dziewonsk** 59.94 302 *e*P **P** 01 42 47.4 -0.7
HRV pmax pmax
comp=Z,83nm,1.3s
HRV **Adam Dziewonsk** 59.94 302 *e*P **P** 01 42 47.4 -0.7
comp=Z,83nm,1.3s
HRV **Adam Dziewonsk** 59.94 302 *e*P **P** 01 42 47.4 -0.7
comp=Z,83nm,1.3s
MDV **Middlebury** 60.17 304 *e*P **P** 01 42 50.4 +0.7
MDV **Middlebury** 60.17 304 *e*P **P** 01 42 50.4 +0.7
BRYW **Bryant College** 60.23 301 *e*P **P** 01 42 50.2 0.0
comp=Z,238nm,1.3s
BRYW **Bryant College** 60.23 301 *e*P **P** 01 42 50.2 0.0
comp=Z,238nm,1.3s
HYB **Hyderabad** 60.26 93 *e*P P 01 42 47.5 -3.2
HYB *e*S **S** **01 51 04.0 -0.5**
HYB **Hyderabad** 60.26 93 *e*P P 01 42 47.5 -3.2
HYB *e*S **S** **01 51 04.0 -0.5**
HYB **Hyderabad** 60.26 93⇓ *i*P P 01 42 47.5 -3.2
comp=Z,170nm,1.0s
HYB *e* 01 43 03.0
HYB *e*PP **PP** **01 45 08.0 +4.5**
HYB *e*PPP PPP 01 46 10.0
HYB *e*S **S** **01 51 00.0 -4.5**
HYB *e*SS **SS** **01 55 08.0 +6.2**
HYB *e* 01 58 02.0
HYB LR LR 02 05 00.0
comp=Z,13nm,16.0s
HYB **Hyderabad** 60.26 93 *e*P **P** **01 42 48.6 -2.1**
HYB AMB AMB 01 42 57.9
comp=Z,175nm,1.5s
HYB **Hyderabad** 60.26 93 *e*P P 01 42 47.5 -3.2
HYB *e*S **S** **01 51 04.0 -0.5**
MSEY **Mahe Island** 60.45 130 *e*P **P** **01 42 51.8 -0.2**
comp=Z,272nm,1.4s
MSEY LR LR
comp=Z,6µm,20.0s
MSEY **Mahe Island** 60.45 130 P P 01 42 59.1 +7.1
SNR=16
MSEY **Mahe Island** 60.45 130 *e*P **P** **01 42 51.8 -0.2**
comp=Z,272nm,1.4s
RAMN **Ramite** 60.46 79 *e*P **P** **01 42 51.1 -1.2**
comp=Z,627nm,1.1s
QUA2 **Belchertown** 60.56 302 *e*P **P** **01 42 52.6 +0.2**
comp=Z,338nm,1.3s
QUA2 **Belchertown** 60.56 302 *e*P **P** **01 42 52.6 +0.2**
comp=Z,338nm,1.3s
SHEL **Horse Pasture** 60.64 201 PFAKE 01 43 00.0 +6.8
SHEL LR LR
comp=Z,19µm,22.0s
MSNY **Massena** 60.67 306 *e*P **P** **01 42 52.6 -0.5**
comp=Z,839nm,1.1s
MSNY **Massena** 60.67 306 *e*P **P** **01 42 52.6 -0.5**
comp=Z,839nm,1.1s
LONY **Lake Ozonia** 60.70 305 *e*P **P** **01 42 53.6 +0.2**
comp=Z,161nm,1.4s
LONY LR LR
comp=Z,12µm,19.0s
LONY **Lake Ozonia** 60.70 305 *e*P **P** **01 42 53.6 +0.2**
comp=Z,161nm,1.4s
BBSR **BB Station** 60.79 288 PFAKE 01 43 00.0 +5.9
BBSR LR LR
comp=Z,11µm,22.0s
ACCN **Adirondack Com** 60.79 303 *e*P **P** **01 42 54.8 +0.8**
comp=Z,74nm,0.8s
ACCN **Adirondack Com** 60.79 303 *e*P **P** **01 42 54.8 +0.8**
comp=Z,74nm,0.8s
NCB **Newcomb** 60.82 304 *e*P **P** **01 42 54.9 +0.6**
NCB LR LR
comp=Z,10µm,20.0s
NCB **Newcomb** 60.82 304 *e*P **P** **01 42 54.9 +0.6**
TAPN **Taplejung** 61.04 78 *e*P **P** **01 42 55.6 -0.7**
comp=Z,2µm,1.6s
ODAN **Odare** 61.09 79 *e*P **P** **01 42 55.6 -1.0**
comp=Z,1µm,1.5s
TSUM **Tsumeb** 61.39 175 *e*P **P** **01 42 58.2 -0.1**
TSUM **Tsumeb** 61.39 175 *e*P **P** **01 42 57.6 -0.6**
comp=Z,115nm,1.4s
TSUM LR LR
comp=Z,28µm,19.0s
TSUM **Tsumeb** 61.39 175 *e*P **P** **01 42 57.7 -0.6**
comp=Z,115nm,1.4s
YLE **Yale** 61.44 301 *e*P **P** **01 42 58.6 +0.2**
comp=Z,703nm,1.6s
YLE **Yale** 61.44 301 *e*P **P** **01 42 58.6 +0.2**
comp=Z,703nm,1.6s
BOK **Bokaro** 61.79 83 *e*P **P** **01 43 00.0 -1.0**
BOK AMB AMB 01 43 04.8
comp=Z,306nm,4.3s
SONM **Songino Array** 62.01 50 P **P** **01 43 03.0 +0.7**
SONM PP **PP** **01 45 19.0 +0.6**
SONM P'P' 02 12 12.4
SONM ⇑ *e* 02 12 19.6
SONM **Songino Array** 62.01 50 P **P** **01 43 03.0 +0.7**
comp=Z,131nm,1.0s,baz=293,slow=8.5,SNR=230
SONM PP **PP** **01 45 19.0 +0.6**
comp=Z,13nm,1.1s,baz=302,slow=10,SNR=2.4
SONM LR LR 02 12 05.7
comp=Z,86µm,19.5s,baz=301,slow=38
SONM PKPPKP **P'P'df** **02 12 12.4 -4.9**
comp=Z,0.6nm,0.8s,baz=132,slow=2.2,SNR=5.1
SONM PKP2bc 02 12 19.6
comp=Z,1.6nm,1.1s,baz=165,slow=2.7,SNR=6.0
SONM **Songino Array** 62.01 50 P **P** **01 43 03.0 +0.7**
SONM **Songino Array** 62.01 50 PP PP 01 45 19.0 +0.6
LSA **Lhasa** 62.17 74 P **P** **01 43 04.1 0.0**
LSA sP **sP** **01 43 08.4 -1.9**
LSA PP **PP** **01 45 23.0 +2.4**
LSA LR LR
comp=E,21µm,21.6s
LSA LR LR
comp=Z,33µm,23.8s
PAL **Palisades** 62.23 301 *e*P **P** **01 43 02.3 -1.4**
PAL pmax pmax
comp=Z,296nm,2.0s
PAL **Palisades** 62.23 301 *e*P **P** **01 43 02.3 -1.4**
comp=Z,296nm,2.0s
PAL **Palisades** 62.23 301 *e*P **P** **01 43 02.3 -1.4**
comp=Z,296nm,2.0s
MNCY **Minicoy** 62.24 105 *e*P P 01 43 00.2 -3.8
MNCY AMB AMB 01 43 13.0
comp=Z,194nm,0.4s
ULN **Ulaanbaatar** 62.36 49 *e*P **P** **01 43 04.3 -0.4**
comp=Z,306nm,1.4s
ULN LR LR
comp=Z,69nm,19.0s
ULN **Ulaanbaatar** 62.36 49 P **P** **01 43 05.7 +1.0**
SNR=114
ULN **Ulaanbaatar** 62.36 49 P **P** **01 43 05.8 +1.0**
comp=Z,166nm,1.5s,comp=Z,3µmcomp=Z,11µm
ULN **Ulaanbaatar** 62.36 49 *e*P **P** **01 43 04.3 -0.4**
comp=Z,306nm,1.4s
CPNY **Central Park** 62.38 301 *e*P **P** **01 43 04.4 -0.3**
comp=Z,196nm,1.3s
CPNY **Central Park** 62.38 301 *e*P **P** **01 43 04.4 -0.3**
comp=Z,196nm,1.3s
GTA **Gaotai** 62.63 61 ⇓P **P** **01 43 07.3 +0.6**
GTA pP **pP** **01 43 12.0 +0.8**
GTA sP **sP** **01 43 14.4 +1.5**
GTA PP **PP** **01 45 27.5 +3.4**
GTA S **S** **01 51 36.4 +1.9**
GTA sS **sS** **01 51 44.7 +2.8**
GTA SS **SS** **01 55 44.6 +6.3**
GTA pmax pmax
comp=Z,35nm,1.8s
GTA pmax pmax
comp=Z,2µm,7.4s
GTA LR LR
comp=N,30µm,19.5s
GTA LR LR
comp=E,34µm,19.2s
GTA LR LR
comp=Z,56µm,19.9s
BINY **Binghamton** 62.87 303 *e*P **P** **01 43 08.2 +0.2**
comp=Z,73nm,1.1s
BINY LR LR
comp=Z,14µm,22.0s
BINY **Binghamton** 62.87 303 *e*P **P** **01 43 08.2 +0.2**
comp=Z,73nm,1.1s
HMDM **Hanimaadhoo** 63.37 106 P **P** **01 43 11.9 +0.2**
comp=Z,404nm,1.2s,comp=Z,6µm
CIT **Chita** 63.48 43 *e*P **P** **01 43 12.2 +0.3**
CIT *e* 01 43 46.1
CIT *e* 01 45 40.7
CIT pmax pmax
comp=Z,370nm,1.6s
VIS **Vishakhapatnam** 63.60 90 *e*P **P** **01 43 12.2 -1.0**
VIS AMB AMB 01 43 22.6
comp=Z,198nm,3.5s
VIS *e*S **S** **01 51 45.3 -1.4**
YAK **Yakutsk** 64.09 28*d* *i*P **P** **01 43 15.5 -0.2**
YAK *e**PP **pP** **01 43 21.5 +1.3**
YAK *e* 01 43 50.1
YAK *e* 01 45 39.1
YAK *i* PPP PPP 01 47 11.0
YAK *i* S **S** **01 51 50.5 -1.0**
YAK *e**SS sS 01 52 15.8 +17
YAK *e* 01 53 03.7
YAK *e*SSS SSS 01 58 46.0
YAK pmax pmax
comp=Z,166nm,1.0s
YAK pmax pmax
comp=Z,224nm,2.5s
YAK pmax pmax
comp=N,265nm,2.5s
YAK pmax pmax
comp=E,262nm,2.7s
YAK smax smax
comp=E,2µm,7.4s
YAK smax smax
comp=N,713nm,6.0s
YAK MLR MLR
comp=Z,44µm,19.0s
YAK **Yakutsk** 64.09 28 *e*P **P** **01 43 15.7 0.0**
comp=Z,342nm,1.0s
YAK LR LR
comp=Z,24µm,19.0s
YAK **Yakutsk** 64.09 28 *e*P **P** **01 43 15.7 0.0**
comp=Z,342nm,1.0s
MVL **Millersville** 64.33 302 *e*P **P** **01 43 18.4 +0.7**
comp=Z,408nm,1.9s
MVL **Millersville** 64.33 302 *e*P **P** **01 43 18.4 +0.7**
comp=Z,408nm,1.9s
CAL **Calcutta** 64.34 82 *ex* **P** **01 43 16.4 -1.5**
CAL ⇑ *i*x x 01 43 19.5
CAL *e*S **S** **01 51 55.3 -0.5**
TRD **Trivandrum** 64.90 102 *e*P **P** **01 43 20.2 -1.5**
TRD AMB AMB 01 43 30.0
comp=Z,122nm,6.5s
SSPA **Standing Stone** 64.93 303 *e*P **P** **01 43 21.8 +0.2**
comp=Z,266nm,1.4s
SSPA **Standing Stone** 64.93 303 *e*P **P** **01 43 21.8 +0.2**
comp=Z,266nm,1.4s
SDMD **Soldier's Deli** 64.98 301 *e*P **P** **01 43 22.4 +0.5**
comp=Z,117nm,1.4s
SDMD **Soldier's Deli** 64.98 301 *e*P **P** **01 43 22.4 +0.5**
comp=Z,117nm,1.4s
SHL **Shillong** 65.11 77 *e*P **P** **01 43 21.2 -2.0**
ERPA **Erie** 65.37 305 *e*P **P** **01 43 25.0 +0.6**
comp=Z,113nm,0.7s
ERPA LR LR
comp=Z,12µm,20.0s
ERPA **Erie** 65.37 305 *e*P **P** **01 43 25.0 +0.6**
comp=Z,113nm,0.7s
RCBR **Riachuelo** 65.55 236 *e*P **P** **01 43 26.7 +0.8**
comp=Z,218nm,1.4s
RCBR LR LR
comp=Z,9µm,22.0s
RCBR **Riachuelo** 65.55 236 *e*P **P** **01 43 26.7 +0.8**
comp=Z,218nm,1.4s
CLNS **Chul'man** 65.72 34 *e*P **P** **01 43 27.3 +0.8**
CLNS *e**PP **pP** **01 43 35.7 +4.6**
CLNS *e* 01 43 57.0
CLNS *e* 01 45 52.0
CLNS *e*PPP PPP 01 47 27.2
CLNS *e*S **S** **01 52 10.9 -1.0**
CLNS *e*SSS SSS 01 59 14.7
CLNS pmax pmax
comp=Z,54nm,1.4s
CLNS pmax pmax
comp=E,37nm,1.1s
CLNS pmax pmax
comp=Z,45nm,1.2s
CLNS pmax pmax
comp=E,32nm,1.2s
CLNS pmax pmax
comp=N,45nm,1.1s
CLNS smax smax
comp=N,746nm,12.8s
CLNS smax smax
comp=E,2µm,12.2s
CLNS MLR MLR
comp=Z,34µm,14.0s
CLNS MLR MLR
comp=N,41µm,14.0s
CLNS MLR MLR
comp=E,27µm,15.0s
ALLY **Alegheny Colle** 65.73 305 *e*P **P** **01 43 26.8 0.0**
comp=E,119nm,0.8s
ALLY **Alegheny Colle** 65.73 305 *e*P **P** **01 43 26.8 0.0**
comp=E,119nm,0.8s
CBN **Corbin** 66.02 300 *e*P **P** **01 43 28.6 0.0**
comp=E,259nm,1.5s
CBN LR LR
comp=Z,11µm,19.0s
CBN **Corbin** 66.02 300 *e*P **P** **01 43 28.6 0.0**
comp=Z,259nm,1.5s
MSNA **Messina** 66.22 163⇓ *i*P **P** **01 43 30.4 +0.4**
MSNA AMB AMB 01 43 37.0
comp=Z,198nm,1.3s
GLMI **Grayling** 66.49 310 *e*P **P** **01 43 32.1 +0.5**
comp=Z,175nm,0.9s
GLMI LR LR
comp=Z,13µm,21.0s
GLMI **Grayling** 66.49 310 *e*P **P** **01 43 32.1 +0.5**
comp=Z,175nm,0.9s
JSRW **J. Sargeant Re** 66.64 300 *e*P **P** **01 43 32.8 +0.2**
JSRW **J. Sargeant Re** 66.64 300 *e*P **P** **01 43 32.8 +0.2**
INK **Inuvik** 66.88 347 P **P** **01 43 33.1 -0.5**
INK **Inuvik** 66.88 347 P **P** **01 43 33.1 -0.5**
comp=Z,11nm,0.5s,baz=19,slow=7.2,SNR=13
INK **Inuvik** 66.88 347 P **P** **01 43 33.1 -0.5**
IMP **Imphal** 67.06 77 *e*P **P** **01 43 33.0 -2.6**
IMP *ex* x 01 46 06.0
LZH **Lanzhou** 67.15 62 ⇓P **P** **01 43 36.9 +0.7**
LZH pP **pP** **01 43 40.2 -0.6**
LZH sP **sP** **01 43 41.6 -0.9**
LZH PP **PP** **01 46 06.0 +2.2**
LZH S **S** **01 52 28.1 -2.1**
LZH SS **SS** **01 56 49.3 +0.5**
LZH pmax pmax
comp=Z,310nm,1.1s
LZH pmax pmax
comp=Z,3µm,7.8s
LZH LR LR
comp=N,37µm,15.2s
LZH LR LR
comp=E,18µm,16.4s
LZH LR LR
comp=Z,43µm,17.8s
ANWB **Willy Bob** 67.41 274 PFAKE 01 43 50.0 +12
ANWB LR LR
comp=Z,6µm,20.0s
YKW3 **Yellowknife Ar** 67.42 337 *e*P **P** **01 43 37.0 -0.2**
comp=Z,2.8nm,1.1s
YKW3 **Yellowknife Ar** 67.42 337 *e*P **P** **01 43 37.0 -0.2**
comp=Z,2.8nm,1.1s
AAM **Ann Arbor** 67.45 307 *e*P **P** **01 43 38.5 +0.8**
AAM pmax pmax
comp=Z,92nm,0.9s
AAM MLR MLR
comp=Z,16µm,20.0s
AAM **Ann Arbor** 67.45 307 *e*P **P** **01 43 38.5 +0.8**
comp=Z,92nm,0.9s
AAM LR LR
comp=Z,16µm,20.0s
AAM **Ann Arbor** 67.45 307 *e*P **P** **01 43 38.5 +0.8**
comp=Z,92nm,0.9s
YKA **Yellowknife Ar** 67.47 337 P **P** **01 43 37.4 -0.1**
YKA P'P' 02 12 02.5
YKA **Yellowknife Ar** 67.47 337 P **P** **01 43 37.4 -0.1**
comp=Z,19nm,0.6s,baz=41,slow=5.8,SNR=183
YKA PKPPKP P'P'df 02 12 02.4 -6.5
comp=Z,2.9nm,1.1s,baz=209,slow=2.7,SNR=14
YKA **Yellowknife Ar** 67.47 337 P **P** **01 43 37.4 -0.1**
KAAM **Kaadhehdhoo** 67.67 111 P **P** **01 43 38.4 -1.1**
SEG **Port Louis** 68.00 272 *e*P **P** **01 43 42.6 +1.1**
LBTB **Lobatse** 68.00 168⇓ *i*P **P** **01 43 41.5 +0.2**
LBTB AMB AMB 01 43 48.0
comp=Z,200nm,1.4s
LBTB **Lobatse** 68.00 168 *e*P **P** **01 43 41.2 -0.1**
comp=Z,130nm,0.9s
LBTB *e*PP **PP** **01 46 08.3 -3.4**
LBTB **Lobatse** 68.00 168 *e*P **P** **01 43 41.2 -0.1**
comp=Z,130nm,0.9s
BILL **Bilibino** 68.05 11*d* *i*P **P** **01 43 41.3 +0.2**
BILL *i* 01 43 50.5
BILL *i* 01 44 07.4
BILL *e* 01 46 11.0
BILL *i*S **S** **01 52 43.2 +3.6**
BILL *i*SS SS 01 57 09.3 +8.6
BILL pmax pmax
comp=Z,800nm,3.6s
BILL **Bilibino** 68.05 11 *e*P **P** **01 43 41.3 +0.2**
comp=Z,169nm,1.3s
BILL LR LR
comp=Z,17µm,20.0s
BILL **Bilibino** 68.05 11 *e*P **P** **01 43 41.3 +0.2**
comp=Z,169nm,1.3s
CNNC **Cliffs of the** 68.11 298 *e*P **P** **01 43 42.6 +0.7**
CNNC LR LR
comp=Z,9µm,19.0s
CNNC **Cliffs of the** 68.11 298 *e*P **P** **01 43 42.6 +0.7**
OPO **Ambohidratompo** 68.22 145 P **P** **01 43 45.3 +2.4**
OPO **Ambohidratompo** 68.22 145 P **P** **01 43 45.3 +2.4**
comp=Z,19nm,1.0s,baz=321,slow=5.1,SNR=9.2
OPO **Ambohidratompo** 68.22 145 P **P** **01 43 45.3 +2.4**
COWI **Conover** 68.22 313 *e*P **P** **01 43 42.4 -0.2**
comp=Z,276nm,1.4s
COWI LR LR
comp=Z,12µm,21.0s
COWI **Conover** 68.22 313 *e*P **P** **01 43 42.4 -0.2**
comp=Z,276nm,1.4s
ACSO **Alum Creek Sta** 68.30 305 *e*P **P** **01 43 43.5 +0.3**
comp=Z,248nm,1.1s
ACSO LR LR
comp=Z,10µm,21.0s
ACSO **Alum Creek Sta** 68.30 305 *e*P **P** **01 43 43.5 +0.3**
comp=Z,248nm,1.1s
EYMN **Ely** 68.31 316 *e*P **P** **01 43 42.8 -0.2**
comp=Z,318nm,1.5s
EYMN LR LR
comp=Z,13µm,19.0s
EYMN **Ely** 68.31 316 *e*P **P** **01 43 42.8 -0.2**
comp=Z,318nm,1.5s
BTO **Baotou** 68.32 54 *e*P **P** **01 43 42.7 -0.7**
PHG **Guadaloupe-2** 68.35 272 *e*P P 01 43 48.4 +4.5
LZG **Guadaloupe-1** 68.36 272 *e*P **P** **01 43 44.9 +1.1**
BLA **Blacksburg** 68.55 301 *e*P **P** **01 43 44.6 -0.2**
BLA pmax pmax
comp=Z,88nm,1.0s
BLA MLR MLR
comp=Z,13µm,20.0s
BLA **Blacksburg** 68.55 301 *e*P **P** **01 43 44.6 -0.2**
comp=Z,88nm,1.0s
BLA LR LR
comp=Z,13µm,20.0s
BLA **Blacksburg** 68.55 301 *e*P **P** **01 43 44.6 -0.2**
comp=Z,88nm,1.0s
ABPO **Ambohimpanom** 68.63 145 PFAKE 01 43 50.0 +4.5
ABPO LR LR
comp=Z,8µm,19.0s
BBGH **Gun Hill** 68.64 268 PFAKE 01 43 50.0 +4.4
BBGH LR LR
comp=Z,7µm,21.0s
FFC **Flin Flon** 68.70 326*ce*P **P** **01 43 45.6 +0.2**
FFC **Flin Flon** 68.70 326 *e*P **P** **01 43 45.3 -0.1**
comp=Z,136nm,1.1s
FFC LR LR
comp=Z,19µm,21.0s
FFC **Flin Flon** 68.70 326 *e*P **P** **01 43 45.3 -0.1**
comp=Z,136nm,1.1s
FDF **Fort de France** 68.80 271 PFAKE 01 44 00.0 +13
FDF LR LR
comp=Z,6µm,22.0s
ULM **Lac du Bonnet** 69.00 320 P **P** **01 43 46.9 -0.4**
ULM P'P' 02 12 00.8
ULM **Lac du Bonnet** 69.00 320 P **P** **01 43 46.9 -0.4**
comp=Z,69nm,0.7s,baz=55,slow=7.4,SNR=33
ULM PKPPKP **P'P'df** **02 12 00.8 -4.9**
comp=Z,1.0nm,0.3s,baz=89,slow=2.7,SNR=3.2
ULM LR LR 02 15 34.1
comp=Z,17µm,18.6s,baz=53,slow=37
ULM **Lac du Bonnet** 69.00 320 P **P** **01 43 46.9 -0.4**
KSR **Koster** 69.03 167 *e*P **P** **01 43 48.0 +0.2**
KSR AMB AMB 01 43 54.4
comp=Z,66nm,1.1s
HHC **Hu-ho-hao-te** 69.09 53 *e*P **P** **01 43 48.3 +0.1**
HHC sP **sP** **01 43 56.1 +1.6**
HHC PcP **PcP** **01 44 12.8 +0.6**
HHC PP **PP** **01 46 22.2 +1.8**
HHC PcS 01 48 16.4
HHC S **S** **01 52 50.8 -2.3**
HHC ScS **SKSac** **01 53 44.8 -2.9**
HHC SS **SS** **01 57 16.5 -1.9**
HHC pmax pmax
comp=Z,240nm,1.0s
HHC pmax pmax
comp=Z,5µm,6.7s
HHC LR LR
comp=N,43µm,17.2s
HHC LR LR
comp=E,29µm,16.2s
SLR **Silverton** 69.16 166 *e*P **P** **01 43 49.1 +0.5**
SLR AMB AMB 01 43 55.5
comp=Z,214nm,1.1s
STVI **Saint Thomas** 69.32 276 *e*P **P** **01 43 48.7 -1.0**
comp=Z,76nm,1.4s
STVI **Saint Thomas** 69.32 276 *e*P **P** **01 43 48.7 -1.0**
comp=Z,76nm,1.4s
KLOF **Kloof** 69.64 166 *e*P **P** **01 43 51.7 +0.1**
KLOF AMB AMB 01 43 58.3
comp=Z,177nm,1.1s
ERPM **east rand prop** 69.75 166⇓ *i*P **P** **01 43 52.1 -0.1**
ERPM AMB AMB 01 43 58.4
comp=Z,180nm,1.0s
MTP **Monte Pirata** 69.92 276 *e*P **P** **01 43 55.0 +1.5**
comp=Z,160nm,1.4s
MTP **Monte Pirata** 69.92 276 *e*P **P** **01 43 55.0 +1.5**
comp=Z,160nm,1.4s
COLD **Coldfoot** 70.01 353 *e*P **P** **01 43 53.9 +0.6**
comp=Z,76nm,1.2s
COLD **Coldfoot** 70.01 353 *e*P **P** **01 43 53.9 +0.6**
comp=Z,76nm,1.2s
CBYP **Canovanas** 70.03 277 *e*P **P** **01 43 53.6 -0.6**
comp=Z,97nm,1.3s
CBYP **Canovanas** 70.03 277 *e*P **P** **01 43 53.6 -0.6**
comp=Z,97nm,1.3s
SEY **Seymchan** 70.06 19*d* *i*P **P** **01 43 54.5 +0.9**
PRYS **Parys** 70.16 167 *e*P **P** **01 43 54.5 -0.3**
PRYS AMB AMB 01 44 00.9
comp=Z,92nm,1.3s
CD2 **Chengdu** 70.22 66 ⇓P **P** **01 43 55.8 +0.5**
CD2 pP **pP** **01 44 00.5 +0.6**
CD2 sP **sP** **01 44 02.8 +1.2**
CD2 PcP **PcP** **01 44 18.2 +1.1**
CD2 PP **PP** **01 46 32.4 +2.0**
CD2 S **S** **01 53 04.8 -1.8**
CD2 SKS **SKSac** **01 53 52.7 -3.8**
CD2 SS **SS** **01 57 35.3 -0.9**
CD2 pmax pmax
comp=Z,310nm,1.4s
CD2 pmax pmax
comp=Z,3µm,7.8s
CD2 LR LR
comp=N,18µm,16.2s
CD2 LR LR
comp=E,22µm,19.1s
CD2 LR LR
comp=Z,22µm,19.2s
AGMN **Agassiz Nation** 70.29 318 *e*P **P** **01 43 54.9 -0.4**
comp=Z,86nm,1.2s
AGMN LR LR
comp=Z,11µm,20.0s
AGMN **Agassiz Nation** 70.29 318 *e*P **P** **01 43 54.9 -0.4**
comp=Z,86nm,1.2s
SJG **San Juan** 70.35 277 *e*P **P** **01 43 56.5 +0.4**
comp=Z,88nm,1.4s

SJG LR LR
comp=Z,7μm,21.0s
SJG San Juan 70.35 277 *e*P **P 01 43 56.5 +0.4**
comp=Z,88nm,1.4s
KMSC Kings Mountain 70.40 300 ⇑P **P 01 43 56.1 -0.1**
baz=70
KMSC ⇑S **S 01 53 09.9 +1.5**
baz=70
KMSC ⇑S **S 01 53 09.9 +1.5**
baz=70
KMSC ⇑S **S 01 53 09.9 +1.5**
baz=70
CNG Changalane 70.51 162 *e*P **P 01 43 56.5 -0.2**
SFIN Scholer Farm 70.67 307 ⇓P **P 01 43 57.1 -0.7**
baz=70,SNR=15
SFIN ⇓S **S 01 53 11.4 0.0**
baz=70
SFIN ⇓S **S 01 53 11.4 0.0**
baz=70
SFIN ⇓S **S 01 53 11.4 0.0**
baz=70
CELP Cerrillos 70.69 277 *e*P **P 01 43 57.0 -1.2**
CELP Cerrillos 70.69 277 *e*P **P 01 43 57.0 -1.2**
OBIP Obispado Ponce 70.73 277 *e*P **P 01 43 56.2 -2.2**
comp=Z,108nm,1.2s
OBIP Obispado Ponce 70.73 277 *e*P **P 01 43 56.2 -2.2**
comp=Z,108nm,1.2s
LRS Lares 70.75 277 *e*P **P 01 43 58.1 -0.5**
LRS Lares 70.75 277 *e*P **P 01 43 58.1 -0.5**
SPMN St. Paul 70.75 314 ⇑P **P 01 43 58.1 -0.1**
baz=70
GRGR Grenville 70.84 269 PFAKE 01 44 10.0 +11
GRGR LR LR
comp=Z,2μm,21.0s
JSC Jenkinsville 70.88 299 *e*P **P 01 43 59.4 +0.2**
JSC Jenkinsville 70.88 299 *e*P **P 01 43 59.4 +0.2**
JSC Jenkinsville 70.88 299 *e*P **P 01 43 59.4 +0.2**
NHSC New Hope 70.91 298 *e*P **P 01 43 59.8 +0.5**
comp=Z,769nm,1.4s
NHSC LR LR
comp=Z,9μm,20.0s
NHSC New Hope 70.91 298 *e*P **P 01 43 59.8 +0.5**
comp=Z,769nm,1.4s
TZTN Tazewell 70.93 302 *e*P **P 01 43 59.0 -0.5**
comp=Z,263nm,1.6s
TZTN Tazewell 70.93 302 *e*P **P 01 43 59.0 -0.5**
comp=Z,263nm,1.6s
BLO Bloomington 71.10 306 *e*P **P 01 43 59.8 -0.6**
BLO pmax pmax
comp=Z,250nm,1.3s
BLO Bloomington 71.10 306 *e*P **P 01 43 59.8 -0.6**
comp=Z,250nm,1.3s
BLO Bloomington 71.10 306 *e*P **P 01 43 59.8 -0.6**
comp=Z,250nm,1.3s
CRPR Cabo Rojo, PR 71.12 277 *e*P **P 01 44 01.4 +0.6**
comp=Z,116nm,1.5s
CRPR Cabo Rojo, PR 71.12 277 *e*P **P 01 44 01.4 +0.6**
comp=Z,116nm,1.5s
EGAK Eagle 71.33 349 *e*P **P 01 44 01.7 +0.4**
comp=Z,83nm,1.1s
EGAK LR LR
comp=Z,7μm,19.0s
EGAK Eagle 71.33 349 *e*P **P 01 44 01.7 +0.4**
comp=Z,83nm,1.1s
POGA Pongola 71.42 163 *e*P **P 01 44 03.2 +0.9**
POGA AMB AMB 01 44 09.2
comp=Z,149nm,1.3s
BOSA Boshof 71.48 169 ⇓*i*P **P 01 44 02.4 -0.3**
BOSA AMB AMB 01 44 09.0
comp=Z,287nm,1.1s
BOSA Boshof 71.48 169 *e*P **P 01 44 02.5 -0.3**
comp=Z,363nm,1.1s
BOSA *e*PP **PP 01 46 38.0 -3.9**
BOSA Boshof 71.48 169 P **P 01 44 02.5 -0.3**
comp=Z,282nm,1.2s,baz=353,slow=8.0,SNR=42
BOSA LR LR 02 19 30.6
comp=Z,18μm,18.5s,baz=355,slow=39
BOSA Boshof 71.48 169 *e*P **P 01 44 02.5 -0.3**
comp=Z,363nm,1.1s
WCI Wyandotte Cave 71.56 305 *e*P **P 01 44 02.2 -1.1**
WCI pmax pmax
comp=Z,71nm,0.7s
WCI Wyandotte Cave 71.56 305 *e*P **P 01 44 02.2 -1.1**
comp=Z,71nm,0.7s
WCI Wyandotte Cave 71.56 305 *e*P **P 01 44 02.2 -1.1**
comp=Z,71nm,0.7s
SEK Senekal 71.57 167 ⇓*i*P **P 01 44 02.6 -0.7**
SEK AMB AMB 01 44 09.7
comp=Z,166nm,1.0s
TIY Taiyuan 71.58 56 *e*P **P 01 44 03.2 -0.3**
TIY sP **sP 01 44 10.8 +1.0**
TIY S **S 01 53 22.7 +0.4**
TIY SKS **SKSac 01 54 00.9 -5.7**
TIY pmax pmax
comp=Z,2μm,6.5s
TIY LR LR
comp=N,16μm,14.3s
TIY LR LR
comp=E,41μm,15.1s
TIY LR LR
comp=Z,45μm,15.3s
TKL Tuckaleechee C 71.63 302 *e*P **P 01 44 02.8 -0.9**
TKL Tuckaleechee C 71.63 302 *e*P **P 01 44 02.8 -0.9**
XAN Xi'an 71.70 61 P **P 01 44 03.7 -0.5**
XAN S **S 01 53 21.8 -1.8**
XAN LR LR
comp=N,11μm,21.3s
XAN LR LR
comp=E,4μm,23.4s
XAN LR LR
comp=Z,8μm,17.0s
XAN Xi'an 71.70 61 P **P 01 44 04.5 +0.3**
XAN sP **sP 01 44 10.6 +0.1**
XAN PcP **PcP 01 44 24.0 +0.8**
XAN PP **PP 01 46 44.7 +1.8**
XAN S **S 01 53 21.5 -2.1**
XAN ScS **SKSac 01 54 07.0 -0.5**
XAN pmax pmax
comp=Z,52nm,1.3s
XAN pmax pmax
comp=Z,540nm,12.3s
XAN LR LR
comp=N,8μm,15.6s
XAN LR LR
comp=E,6μm,17.5s
XAN LR LR
comp=Z,18μm,18.3s
HDIL Hopedale 71.85 309 *e*P **P 01 44 04.8 -0.1**
comp=Z,90nm,0.8s
HDIL LR LR
comp=Z,13μm,21.0s
HDIL Hopedale 71.85 309 *e*P **P 01 44 04.8 -0.1**
comp=Z,89nm,0.8s
GRTK Grand Turk 71.85 283 *e*P **P 01 44 03.8 -1.3**
comp=Z,283nm,1.6s
GRTK LR LR
comp=Z,6μm,21.0s
GRTK Grand Turk 71.85 283 *e*P **P 01 44 03.8 -1.3**
comp=Z,283nm,1.6s
KOMG Komaggas 71.91 176 *e*P **P 01 44 07.2 +2.0**
KOMG AMB AMB 01 44 11.5
comp=Z,100nm,1.5s
ILAR Eielson Array 72.07 351 P **P 01 44 06.1 +0.3**
ILAR P'P'ab 02 11 45.3
ILAR P'P' 02 11 55.3
ILAR Eielson Array 72.07 351 P **P 01 44 06.1 +0.3**
comp=Z,9.2nm,0.7s,baz=8.3,slow=5.4,SNR=60
ILAR PKP2ab 02 11 45.3
comp=Z,0.7nm,0.9s,baz=206,slow=2.2,SNR=4.3
ILAR PKPPKP P'P'df 02 11 55.3 -5.9
comp=Z,2.2nm,1.2s,baz=196,slow=3.4,SNR=4.6
ILAR LR LR 02 20 02.7
comp=Z,4μm,19.4s,baz=172,slow=40
ILAR Eielson Array 72.07 351 P **P 01 44 06.1 +0.3**
COLA College 72.08 352 *e*P **P 01 44 05.9 +0.1**
COLA pmax pmax
comp=Z,133nm,1.6s
COLA MLR MLR
comp=Z,7μm,22.0s
COLA College 72.08 352 *e*P **P 01 44 05.9 +0.1**
comp=Z,133nm,1.6s
COLA LR LR
comp=Z,7μm,22.0s
COLA College 72.08 352 *e*P **P 01 44 05.9 +0.1**
comp=Z,133nm,1.6s
CPCT Cooper Cave 72.23 302 *e*P **P 01 44 06.5 -0.7**

CPCT Cooper Cave 72.23 302 *e*P **P 01 44 06.6 -0.7**
BJI Beijing 72.32 52 P **P 01 44 08.1 +0.4**
BJI PP PP 01 46 55.2 +7.2
BJI S **S 01 53 30.4 0.0**
BJI pmax pmax
comp=Z,72nm,1.8s
BJI pmax pmax
comp=Z,1μm,3.2s
BJI LR LR
comp=N,63μm,18.7s
BJI LR LR
comp=E,44μm,17.8s
BJI LR LR
comp=Z,53μm,19.4s
OLIL Olney 72.32 306 *e*P **P 01 44 07.0 -0.8**
comp=Z,289nm,1.3s
OLIL Olney 72.32 306 *e*P **P 01 44 07.0 -0.8**
comp=Z,289nm,1.3s
BJT Baijiatuau 72.33 52 *e*P **P 01 44 08.6 +0.8**
comp=Z,439nm,1.5s
BJT LR LR
comp=Z,70μm,20.0s
BJT Baijiatuau 72.33 52 *e*P **P 01 44 08.6 +0.8**
comp=Z,439nm,1.5s
TNA Tin City 72.40 1 *e*P **P 01 44 09.1 +1.4**
comp=Z,48nm,0.9s
TNA Tin City 72.40 1 *e*P **P 01 44 09.1 +1.4**
comp=Z,48nm,0.9s
MDND Maddock 72.43 319 ⇑P **P 01 44 08.1 -0.2**
baz=72
USIN University of 72.56 306 *e*P **P 01 44 08.6 -0.6**
comp=Z,371nm,1.1s
USIN University of 72.56 306 *e*P **P 01 44 08.6 -0.6**
comp=Z,371nm,1.1s
DOT Dot Lake 72.81 350 *e*P **P 01 44 11.4 +1.1**
comp=Z,94nm,1.3s
DOT Dot Lake 72.81 350 *e*P **P 01 44 11.4 +1.1**
comp=Z,94nm,1.3s
DGAR Diego Garcia 73.08 117 PFAKE 01 44 20.0 +7.5
DGAR LR LR
comp=Z,6μm,20.0s
KMI Kunming 73.12 71 P **P 01 44 12.3 -0.7**
KMI pP **pP 01 44 22.2 +4.6**
KMI PP **PP 01 46 58.7 +3.1**
KMI S **S 01 53 39.4 -1.1**
KMI SS **SS 01 58 22.5 +1.3**
KMI pmax pmax
comp=Z,130nm,1.6s
KMI pmax pmax
comp=Z,2μm,6.9s
KMI LR LR
comp=N,14μm,19.5s
KMI LR LR
comp=E,20μm,19.5s
KMI LR LR
comp=Z,20μm,28.1s
SCIA State Center 73.18 312 *e*P **P 01 44 12.2 -0.7**
comp=Z,84nm,0.9s
SCIA LR LR
comp=Z,13μm,22.0s
SCIA State Center 73.18 312 *e*P **P 01 44 12.1 -0.7**
comp=Z,84nm,0.9s
SWET Sewanee 73.27 302 *e*P **P 01 44 12.6 -0.9**
comp=Z,80nm,1.2s
SWET Sewanee 73.27 302 *e*P **P 01 44 12.6 -0.9**
comp=Z,80nm,1.2s
SDDR Presa de Saban 73.56 281 *e*P **P 01 44 16.4 +0.9**
comp=Z,285nm,1.2s
SDDR LR LR
comp=Z,7μm,20.0s
SDDR Presa de Saban 73.56 281 *e*P **P 01 44 16.4 +0.9**
comp=Z,285nm,1.2s
PAX Paxson 73.64 350 *e*P **P 01 44 15.7 +0.4**
PAX pmax pmax
comp=Z,145nm,1.6s
PAX Paxson 73.64 350 *e*P **P 01 44 15.7 +0.4**
comp=Z,145nm,1.6s
PAX Paxson 73.64 350 *e*P **P 01 44 15.7 +0.4**
comp=Z,145nm,1.6s
SLM Saint Louis 73.65 307 *e*P **P 01 44 15.4 -0.2**
SLM pmax pmax
comp=Z,400nm,1.4s
SLM Saint Louis 73.65 307 *e*P **P 01 44 15.4 -0.2**
comp=Z,400nm,1.4s
SLM Saint Louis 73.65 307 *e*P **P 01 44 15.4 -0.2**
comp=Z,400nm,1.4s
SIUC Southern Illin 73.65 306 *e*P **P 01 44 15.1 -0.6**
comp=Z,243nm,1.3s
SIUC Southern Illin 73.65 306 *e*P **P 01 44 15.1 -0.6**
comp=Z,243nm,1.3s
A24A Westby 73.72 322 ⇓P **P 01 44 16.5 +0.6**
baz=74,SNR=81
CVNA Calvinia 73.73 174 *e*P **P 01 44 16.2 +0.2**
CVNA AMB AMB 01 44 22.4
comp=Z,149nm,1.4s
ECSD EROS Data Cent 73.78 315 *e*P **P 01 44 15.9 -0.4**
comp=Z,184nm,1.2s
ECSD LR LR
comp=Z,10μm,22.0s
ECSD EROS Data Cent 73.78 315 *e*P **P 01 44 15.9 -0.4**
comp=Z,184nm,1.2s
WVT Waverly 73.85 304 *e*P **P 01 44 15.4 -1.4**
WVT pmax pmax
comp=Z,186nm,1.3s
WVT Waverly 73.85 304 *e*P **P 01 44 15.4 -1.4**
comp=Z,186nm,1.3s
WVT Waverly 73.85 304 *e*P **P 01 44 15.4 -1.4**
comp=Z,186nm,1.3s
KLR Kul'dur 73.99 37 *e*P P 01 44 14.1 -3.3
KLR *e*S **SKiKP 01 53 46.5 +1.3**
KLR pmax pmax
comp=E,100nm,1.6s
KLR pmax pmax
comp=Z,320nm,1.6s
KLR pmax pmax
comp=E,800nm,12.5s
KLR pmax pmax
comp=Z,6μm,12.5s
KSD Kokstad 74.05 166 *e*P **P 01 44 18.4 +0.4**
KSD AMB AMB 01 44 22.7
comp=Z,153nm,1.4s
A23A Redstone 74.09 323 ⇓P **P 01 44 18.7 +0.6**
baz=74
GAMB Gambell 74.12 2 *e*P **P 01 44 19.6 +1.7**
comp=Z,73nm,1.3s
GAMB Gambell 74.12 2 *e*P **P 01 44 19.6 +1.7**
comp=Z,73nm,1.3s
DGMT Dagmar 74.14 322 *e*P **P 01 44 19.6 +1.2**
comp=Z,544nm,1.5s
DGMT LR LR
comp=Z,13μm,19.0s
DGMT Dagmar 74.14 322 ⇑P **P 01 44 18.9 +0.5**
baz=74,SNR=19
DGMT Dagmar 74.14 322 *e*P **P 01 44 19.6 +1.2**
comp=Z,544nm,1.5s
TIGA Titon 74.20 298 ⇑P **P 01 44 18.9 0.0**
baz=74
RER Riviere de l'E 74.36 139 PFAKE 01 44 30.0 +10
RER LR LR
comp=Z,6μm,20.0s
CHTO Chiang Mai 74.41 79 *e*P **P 01 44 19.6 -0.8**
CHTO pmax pmax
comp=Z,151nm,1.3s
CHTO MLR MLR
comp=Z,13μm,20.0s
CHTO Chiang Mai 74.41 79 *e*P **P 01 44 19.6 -0.8**
comp=Z,151nm,1.3s
CHTO LR LR
comp=Z,13μm,20.0s
CHTO Chiang Mai 74.41 79 P **P 01 44 19.6 -0.8**
SNR=76
CHTO Chiang Mai 74.41 79 P **P 01 44 19.4 -1.0**
comp=Z,155nm,1.7s,comp=Z,3μmcomp=Z,9μm
CHTO Chiang Mai 74.41 79 *e*P **P 01 44 19.6 -0.8**
comp=Z,151nm,1.3s
CMMT Chiang Mai 74.41 79 P **P 01 44 20.2 -0.2**
BRSD Miller 74.50 317 ⇑P **P 01 44 20.3 -0.2**
baz=74
B23A Brockton 74.50 323 ⇓P **P 01 44 21.2 +0.7**
baz=74,SNR=30
A22A Carney Farms, 74.52 323 ⇓P **P 01 44 21.2 +0.6**
baz=74,SNR=41
CM31 Chiang Mai Arr 74.64 79 *e*P **P 01 44 21.2 -0.5**
comp=Z,78nm,1.0s
CM31 Chiang Mai Arr 74.64 79 *e*P **P 01 44 21.2 -0.5**
comp=Z,78nm,1.0s
CMAR Chiang Mai Arr 74.64 79 P **P 01 44 21.2 -0.5**

CMAR Chiang Mai Arr 74.64 79 P **P 01 44 21.2 -0.5**
comp=Z,26nm,0.7s,baz=307,slow=7.3,SNR=56
CMAR LR LR 02 24 42.4
comp=Z,11μm,20.0s,baz=292,slow=42
CMAR Chiang Mai Arr 74.64 79 P **P 01 44 21.2 -0.5**
PARMO Parma 74.67 306 *e*P **P 01 44 21.3 -0.3**
PARMO Parma 74.67 306 *e*P **P 01 44 21.3 -0.3**
SUR Sutherland 74.70 173 *e*P **P 01 44 21.7 -0.1**
SUR AMB AMB 01 44 29.3
comp=Z,90nm,3.7s
SUR Sutherland 74.70 173 *e*P **P 01 44 21.8 -0.1**
comp=Z,114nm,1.1s
SUR *e*PP **PP 01 47 06.7 -2.6**
SUR LR LR
comp=Z,21μm,21.0s
SUR Sutherland 74.70 173 P P 01 44 25.1 +3.3
SNR=6.9
SUR Sutherland 74.70 173 *e*P **P 01 44 21.8 0.0**
comp=Z,114nm,1.1s
PLAL Pickwick Lake 74.75 303 *e*P P 01 44 28.2 +6.0
comp=Z,308nm,1.3s
PLAL LR LR
comp=Z,16μm,22.0s
CN2 Changchun 74.87 44 ⇓P **P 01 44 23.1 +0.5**
CN2 *e*sP **sP 01 44 30.1 +1.1**
CN2 PP **PP 01 47 11.7 +2.1**
CN2 *e*S **S 01 54 01.0 +1.8**
CN2 pmax pmax
comp=Z,20nm,1.1s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,24μm,17.0s
CN2 LR LR
comp=E,21μm,17.0s
CN2 LR LR
comp=Z,35μm,16.0s
DWPF Disney 74.90 294 *e*P **P 01 44 23.4 +0.4**
comp=Z,246nm,1.5s
DWPF Disney 74.90 294 *e*P **P 01 44 23.4 +0.4**
comp=Z,246nm,1.5s
C24A Savage 74.93 322 ⇑P **P 01 44 23.5 +0.5**
baz=75,SNR=20
A21A Bergtoll Ranch 74.97 324 ⇑P **P 01 44 23.3 +0.1**
baz=75,SNR=37
GYA Guiyang 75.00 68 ⇓*i*P **P 01 44 23.5 -0.4**
GYA PcP **PcP 01 44 35.0 -2.6**
GYA PP **PP 01 47 10.4 -1.0**
GYA S **S 01 53 58.7 -2.7**
GYA SS **SS 01 58 47.4 -2.1**
GYA pmax pmax
comp=Z,130nm,1.2s
GYA pmax pmax
comp=Z,2μm,11.2s
GYA LR LR
comp=N,12μm,22.1s
GYA LR LR
comp=E,10μm,20.5s
GYA LR LR
comp=Z,21μm,22.1s
DLBC Dease Lake 75.03 341 *e*P **P 01 44 24.9 +1.5**
DLBC Dease Lake 75.03 341 *e*P **P 01 44 24.9 +1.5**
B22A Reddig Ranch S 75.07 323 ⇑P **P 01 44 24.5 +0.7**
baz=75,SNR=16
C23A Lambert 75.08 322 ⇑P **P 01 44 24.6 +0.7**
baz=75,SNR=50
SML Sawmill 75.12 351 *e*P **P 01 44 24.5 +0.7**
SML pmax pmax
comp=Z,77nm,1.4s
SML Sawmill 75.12 351 *e*P **P 01 44 24.5 +0.7**
comp=Z,77nm,1.4s
SML Sawmill 75.12 351 *e*P **P 01 44 24.5 +0.7**
comp=Z,77nm,1.4s
D24A Glendive 75.19 321 ⇑P **P 01 44 25.2 +0.7**
baz=75,SNR=22
SNY Shenyang 75.27 46 ⇓P **P 01 44 25.2 +0.3**
SNY S **S 01 54 08.4 +4.8**
SNY SS SS 01 58 59.6 +7.2
SNY pmax pmax
comp=Z,100nm,1.5s
SNY pmax pmax
comp=Z,3μm,10.4s
SNY LR LR
comp=N,33μm,13.5s
SNY LR LR
comp=E,36μm,15.9s
SNY LR LR
comp=Z,38μm,17.7s
SKAG Skagway 75.28 344 *e*P **P 01 44 25.5 +0.8**
comp=Z,150nm,1.2s
SKAG Skagway 75.28 344 *e*P **P 01 44 25.5 +0.8**
comp=Z,150nm,1.2s
GNAR Gosnell 75.29 305 *e*P **P 01 44 24.5 -0.7**
comp=Z,5μm,1.2s
GNAR Gosnell 75.29 305 *e*P **P 01 44 24.5 -0.7**
comp=Z,5μm,1.2s
LRAL Lakeview Retre 75.36 301 *e*P **P 01 44 24.9 -0.7**
comp=Z,217nm,1.3s
LRAL LR LR
comp=Z,12μm,20.0s
LRAL Lakeview Retre 75.36 301 *e*P **P 01 44 24.9 -0.7**
comp=Z,217nm,1.3s
TIA Tai'an 75.41 54 ⇓P **P 01 44 26.0 +0.1**
TIA S **S 01 54 04.7 -0.7**
TIA pmax pmax
comp=Z,140nm,1.2s
TIA pmax pmax
comp=Z,3μm,11.3s
TIA LR LR
comp=N,27μm,20.2s
TIA LR LR
comp=E,50μm,21.4s
TIA LR LR
comp=Z,69μm,22.6s
PMR Palmer 75.42 351 *e*P **P 01 44 26.0 +0.6**
PMR pmax pmax
comp=Z,62nm,0.9s
PMR Palmer 75.42 351 *e*P **P 01 44 26.0 +0.6**
comp=Z,62nm,0.9s
PMR Palmer 75.42 351 *e*P **P 01 44 26.0 +0.6**
comp=Z,62nm,0.9s
B21A Ellsworth Farm 75.43 324 ⇓P **P 01 44 26.3 +0.5**
baz=75
C22A Vida 75.44 323 ⇓P **P 01 44 26.8 +0.8**
baz=75,SNR=25
BMRM Bremner River 75.45 349 *e*P **P 01 44 26.8 +1.0**
comp=Z,493nm,1.4s
BMRM Bremner River 75.45 349 *e*P **P 01 44 26.8 +1.0**
comp=Z,493nm,1.4s
DIV Divide 75.46 350 *e*P **P 01 44 27.8 +2.0**
comp=Z,47nm,0.8s
DIV Divide 75.46 350 *e*P **P 01 44 27.8 +2.0**
comp=Z,47nm,0.8s
A20A Cobblestone Ra 75.49 324 ⇑P **P 01 44 26.8 +0.5**
baz=75,SNR=76
D23A Lindsay 75.55 322 ⇑P **P 01 44 27.7 +1.1**
baz=75,SNR=19
SOE Somerset East 75.56 169 *e*P **P 01 44 27.1 +0.5**
SOE AMB AMB 01 44 33.8
comp=Z,190nm,1.2s
CER Ceres 75.56 175 *e*P **P 01 44 24.9 -1.6**
CER AMB AMB 01 44 44.5
comp=Z,40nm,3.4s
E24A Baker 75.59 321 ⇓P **P 01 44 27.4 +0.6**
baz=75,SNR=13
GTBY Guantanamo Bay 75.72 284 *e*P **P 01 44 28.8 +0.9**
comp=Z,172nm,1.4s
GTBY LR LR
comp=Z,7μm,20.0s
GTBY Guantanamo Bay 75.72 284 *e*P **P 01 44 28.8 +0.9**
comp=Z,172nm,1.4s
A19A Klindworth Far 75.80 325 ⇓P **P 01 44 28.4 +0.4**
baz=76,SNR=33
PNL Peninsula 75.86 346 *e*P **P 01 44 29.3 +1.2**
comp=Z,194nm,0.9s
PNL Peninsula 75.86 346 *e*P **P 01 44 29.3 +1.2**
comp=Z,194nm,0.9s
B20A Solberg Farm, 75.86 324 ⇓P **P 01 44 28.8 +0.4**
baz=76,SNR=16
OXF Oxford 75.89 304 *e*P **P 01 44 27.5 -1.1**
OXF pmax pmax
comp=Z,604nm,1.3s
OXF MLR MLR
comp=Z,14μm,20.0s
OXF Oxford 75.89 304 *e*P **P 01 44 27.5 -1.1**
comp=Z,604nm,1.3s
OXF LR LR

comp=Z,14µm,20.0s
OXF Oxford 75.89 304 *e*P **P 01 44 27.5 -1.1**
comp=Z,604nm,1.3s
C21A Desert Coulee 75.92 323 ⇑P **P 01 44 29.1 +0.4**
baz=76,SNR=29
HBAR Harrisburg 75.95 305 *e*P **P 01 44 28.9 -0.1**
HBAR Harrisburg 75.95 305 *e*P **P 01 44 28.9 -0.1**
RC01 Rabbit Creek A 75.97 352 *e*P **P 01 44 28.8 +0.1**
comp=Z,122nm,1.0s
RC01 Rabbit Creek A 75.97 352 *e*P **P 01 44 28.8 +0.1**
comp=Z,122nm,1.0s
D22A Cohagen 76.02 322 ⇓P **P 01 44 30.2 +1.0**
baz=76,SNR=43
E23A Ismay 76.10 321 ⇓P **P 01 44 30.5 +0.7**
baz=76
F24A Ekalaka 76.18 320 ⇓P **P 01 44 30.8 +0.6**
baz=76
BGNE Belgrade 76.21 314 ⇓P **P 01 44 30.0 -0.4**
baz=76,SNR=32
DL2 Dalian 76.21 50 ⇑P **P 01 44 31.3 +0.9**
DL2 PP **PP 01 47 24.8 +3.8**
DL2 S **S 01 54 15.7 +1.6**
DL2 SS SS 01 59 15.1 +8.3
DL2 pmax pmax
comp=Z,100nm,1.5s
DL2 pmax pmax
comp=Z,1µm,9.6s
DL2 LR LR
comp=N,19µm,15.7s
DL2 LR LR
comp=E,16µm,15.6s
DL2 LR LR
comp=Z,31µm,16.6s
B19A Brinkman Farms 76.25 325 ⇓P **P 01 44 31.2 +0.7**
baz=76,SNR=16
A18A Metzger Ranch, 76.28 325 ⇓P **P 01 44 31.5 +0.8**
baz=76,SNR=60
GRM Grahamstown 76.28 169 *e*P **P 01 44 31.5 +0.9**
GRM AMB AMB 01 44 37.9
comp=Z,217nm,1.2s
MDJ Mudanjiang 76.37 41 P **P 01 44 30.2 -1.0**
MDJ PP **PP 01 47 20.3 -1.9**
MDJ S **S 01 54 17.7 +2.0**
MDJ ScS **ScS 01 54 46.0 -0.2**
MDJ SS **SS 01 59 12.2 +3.3**
MDJ pmax pmax
comp=Z,1µm,10.4s
MDJ LR LR
comp=Z,101µm,16.3s
C20A Veseth Ranch, 76.41 324 ⇑P **P 01 44 32.5 +1.1**
baz=76,SNR=154
E22A Miles City 76.44 322 ⇓P **P 01 44 32.1 +0.5**
baz=76,SNR=24
D21A La Casta Ranch 76.45 323 ⇑P **P 01 44 32.6 +0.9**
baz=76,SNR=48
G24A Alzada 76.55 320 ⇓P **P 01 44 32.6 +0.2**
baz=76,SNR=27
A17A Triple J Farms 76.61 326 ⇓P **P 01 44 33.0 +0.4**
baz=76,SNR=57
B18A Beardsley Farm 76.65 325 ⇑P **P 01 44 33.8 +0.9**
baz=76,SNR=30
BRAL Brewton 76.72 300 PFAKE 01 44 40.0 +6.6
BRAL LR LR
comp=Z,7µm,19.0s
ELIM Elim 76.82 175 *e*P **P 01 44 34.6 +0.9**
ELIM AMB AMB 01 44 37.7
comp=Z,6µm,6.5s
C19A Slack Wire Ran 76.85 324 ⇓P **P 01 44 34.4 +0.4**
baz=77,SNR=121
BUFB Buffelsbos 76.87 170 *e*P **P 01 44 35.1 +1.2**
BUFB AMB AMB 01 44 41.1
comp=Z,210nm,1.1s
E21A Keefer Ranch, 76.88 322 ⇑P **P 01 44 35.0 +0.8**
baz=77
SEW Seward 76.91 351 *e*P P 01 44 37.3 +3.4
comp=Z,100nm,1.1s
EGMT Eagleton 76.93 325 *e*P **P 01 44 35.2 +0.8**
comp=Z,286nm,1.1s
EGMT LR LR
comp=Z,8µm,20.0s
EGMT Eagleton 76.93 325 ⇓P **P 01 44 35.2 +0.8**
baz=77,SNR=107
EGMT Eagleton 76.93 325 *e*P **P 01 44 35.2 +0.8**
comp=Z,286nm,1.1s
D20A Manuel Ranch, 76.94 323 ⇑P **P 01 44 35.3 +0.8**
baz=77,SNR=84
A16A West Butte Ran 76.98 326 ⇓P **P 01 44 34.7 -0.1**
baz=77
KSU1 Kansas State U 76.98 311 *e*P **P 01 44 34.0 -0.8**
comp=Z,655nm,1.5s
KSU1 LR LR
comp=Z,9µm,21.0s
KSU1 Kansas State U 76.98 311 *e*P **P 01 44 34.0 -0.8**
comp=Z,655nm,1.5s
H24A Dirks Ranch, A 77.04 320 ⇑P **P 01 44 34.6 -0.6**
baz=77,SNR=28
F22A Rosebud 77.08 321 ⇓P **P 01 44 35.6 +0.3**
baz=77,SNR=20
G23A Biddle 77.10 320 ⇑P **P 01 44 35.4 -0.1**
baz=77,SNR=37
B17A L&G Farms, Che 77.16 325 ⇓P **P 01 44 36.1 +0.4**
baz=77,SNR=97
D19A Cripps Ranch, 77.21 324 ⇓P **P 01 44 36.4 +0.4**
baz=77,SNR=45
RSSD Black Hills 77.26 319 *e*P **P 01 44 36.7 +0.1**
RSSD pmax pmax
comp=Z,87nm,1.4s
RSSD Black Hills 77.26 319 *e*P **P 01 44 36.6 +0.1**
comp=Z,87nm,1.4s
RSSD Black Hills 77.26 319 *e*P **P 01 44 36.7 +0.1**
comp=Z,87nm,1.4s
E20A Meyer Farm, Mu 77.38 323 ⇑P **P 01 44 37.2 +0.2**
baz=77,SNR=28
WRAK Wrangell Islan 77.40 341 *e*P **P 01 44 37.9 +1.1**
comp=Z,132nm,1.2s
WRAK LR LR
comp=Z,8µm,19.0s
WRAK Wrangell Islan 77.40 341 *e*P **P 01 44 37.8 +1.1**
comp=Z,132nm,1.2s
K27A Flueckinger Fa 77.40 317 ⇓P **P 01 44 37.7 +0.5**
baz=77,SNR=18
SRDT SRDT 77.41 82 P **P 01 44 36.2 -1.3**
A15A Johnson Ranch, 77.42 327 ⇑P **P 01 44 37.2 0.0**
baz=77,SNR=98
F21A Absaloka Mine, 77.44 322 ⇓P **P 01 44 37.7 +0.3**
baz=77
B16A M & M Farms, S 77.45 326 ⇓P **P 01 44 37.7 +0.4**
baz=77,SNR=44
WHN Wuhan 77.46 60 ⇓P **P 01 44 37.2 -0.4**
WHN sP sP 01 44 50.5 +6.6
WHN PP **PP 01 47 33.8 +2.1**
WHN S **S 01 54 29.4 +1.4**
WHN LR LR
comp=N,5µm,10.3s
WHN LR LR
comp=E,42µm,15.7s
WHN LR LR
comp=Z,52µm,18.3s
UALR University of 77.49 306 *e*P **P 01 44 37.7 0.0**
comp=Z,167nm,1.4s
UALR University of 77.49 306 *e*P **P 01 44 37.7 0.0**
comp=Z,167nm,1.4s
G22A Birney 77.51 321 ⇓P **P 01 44 37.8 0.0**
baz=77,SNR=18
H23A Clabaugh Cattl 77.59 320 ⇑P **P 01 44 37.8 -0.5**
baz=77
D18A Linhart Farms, 77.59 324 ⇑P **P 01 44 39.0 +0.9**
baz=77,SNR=32
C17A Wharram Farm, 77.66 325 ⇓P **P 01 44 38.9 +0.4**
baz=77,SNR=113
A14A Double T Ranch 77.70 327 ⇑P **P 01 44 39.4 +0.5**
baz=77,SNR=221
E19A Rath Farm, Rou 77.71 323 ⇑P **P 01 44 39.4 +0.5**
baz=77,SNR=56
I24A Kuemmerle Ranc 77.74 319 ⇑P **P 01 44 39.5 +0.4**
baz=78
WALA Waterton Lakes 77.83 328 *e*P **P 01 44 39.4 -0.1**
comp=Z,8.7nm,1.5s
WALA Waterton Lakes 77.83 328 *e*P **P 01 44 39.4 -0.1**
comp=Z,8.7nm,1.5s
USRK Ussuriysk Arra 77.84 40 P **P 01 44 39.5 +0.1**
comp=Z,28nm,0.9s,baz=288,slow=4.9,SNR=39
USRK LR LR 02 22 25.2
comp=Z,36µm,20.6s,baz=328,slow=38
B15A Bradely Ranch, 77.88 326 ⇑P **P 01 44 39.8 0.0**
baz=78,SNR=69
K26A Motz Farm, Whi 77.88 318 ⇑P **P 01 44 39.6 -0.3**
baz=78
L27A T5 Ranch, Ells 77.90 317 ⇓P **P 01 44 40.8 +0.8**
baz=78
F20A Billings 77.93 322 ⇑P **P 01 44 40.6 +0.5**
baz=78,SNR=5.8
G21A Lodge Grass 77.93 322 ⇓P **P 01 44 40.3 +0.1**
baz=76,SNR=23
C16A Fuhringer Ranc 77.94 326 ⇓P **P 01 44 40.1 0.0**
baz=78,SNR=39
D17A Six Diamond Ra 78.00 325 ⇓P **P 01 44 41.4 +0.8**
baz=78,SNR=86
H22A Clearmont 78.01 321 ⇓P **P 01 44 40.5 -0.1**
baz=78
I23A Meade Ranch, G 78.06 320 ⇓P **P 01 44 41.0 0.0**
baz=78
VBMS Vicksburg 78.11 303 *e*P **P 01 44 41.0 -0.1**
comp=Z,324nm,1.2s
VBMS LR LR
comp=Z,15µm,20.0s
VBMS Vicksburg 78.11 303 *e*P **P 01 44 41.0 -0.1**
comp=Z,324nm,1.2s
E18A Harlowton 78.12 324 ⇓P **P 01 44 42.3 +1.1**
baz=78,SNR=71
A13A Flathead Natio 78.13 328 ⇑P **P 01 44 41.4 +0.2**
baz=78
B14A Marquette Ranc 78.13 327 ⇑P **P 01 44 41.3 0.0**
baz=78,SNR=25
J24A Dixon Ranch, L 78.15 319 ⇓P **P 01 44 41.8 +0.4**
baz=78
F19A Roth Farm, Mol 78.24 323 ⇑P **P 01 44 42.6 +0.8**
baz=78,SNR=84
K25A Mack Ranch, Ha 78.29 318 ⇓P **P 01 44 42.5 +0.3**
baz=78
H21A Big Horn, Sher 78.31 321 ⇓P **P 01 44 42.3 0.0**
baz=78,SNR=16
L26A Underwood Farm 78.32 317 ⇓P **P 01 44 42.9 +0.6**
baz=78
C15A Salmond Ranch, 78.32 326 ⇑P **P 01 44 41.9 -0.5**
baz=78,SNR=23
M27A Reverse DX Ran 78.34 316 ⇑P **P 01 44 43.2 +0.7**
baz=78
MIAR Mount Ida 78.39 306 *e*P **P 01 44 42.9 +0.2**
MIAR pmax pmax
comp=Z,267nm,1.4s
MIAR MLR MLR
comp=Z,18µm,21.0s
MIAR Mount Ida 78.39 306 *e*P **P 01 44 42.9 +0.2**
comp=Z,267nm,1.4s
MIAR LR LR
comp=Z,18µm,21.0s
MIAR Mount Ida 78.39 306 *e*P **P 01 44 42.9 +0.2**
comp=Z,267nm,1.4s
G20A Bridger 78.40 322 ⇑P **P 01 44 43.2 +0.5**
baz=78,SNR=50
D16A Dana Ranch, Ca 78.47 325 ⇑P **P 01 44 43.3 +0.2**
baz=78,SNR=60
J23A Dilts Ranch, B 78.53 319 ⇓P **P 01 44 43.8 +0.3**
baz=78
F18A Big Timber 78.55 323 ⇑P **P 01 44 44.3 +0.7**
baz=78,SNR=60
MTDJ Mount Denham 78.57 284 *e*P **P 01 44 45.8 +1.8**
comp=Z,322nm,1.7s
MTDJ LR LR
comp=Z,9µm,21.0s
MTDJ Mount Denham 78.57 284 *e*P **P 01 44 45.8 +1.8**
comp=Z,322nm,1.7s
OGNE Ogallala 78.58 316 *e*P **P 01 44 44.7 +0.9**
comp=Z,241nm,1.4s
OGNE LR LR
comp=Z,8µm,20.0s
OGNE Ogallala 78.58 316 ⇑P **P 01 44 44.2 +0.4**
baz=78,SNR=13
OGNE Ogallala 78.58 316 *e*P **P 01 44 44.7 +0.9**
comp=Z,241nm,1.4s
VLA Vladivostok 78.59 41 *d*iP **P 01 44 42.9 -0.8**
VLA *i* 01 44 51.3
VLA *e* 01 47 39.8
VLA *i* S **S 01 54 39.1 -0.7**
VLA pmax pmax
comp=Z,204nm,1.6s
B13A Whitefish 78.60 327 ⇑P **P 01 44 44.5 +0.7**
baz=78,SNR=63
I22A 9 Mile Ranch, 78.60 320 ⇓P **P 01 44 44.2 +0.3**
baz=78,SNR=50
GCMT Greycliff 78.61 323 *e*P **P 01 44 44.7 +0.8**
comp=Z,70nm,1.2s
GCMT Greycliff 78.61 323 *e*P **P 01 44 44.7 +0.8**
comp=Z,70nm,1.2s
A12A Yaak River Ran 78.61 328 ⇑P **P 01 44 44.0 +0.2**
baz=78
E17A Martinsdale 78.61 324 ⇑P **P 01 44 44.8 +0.8**
baz=78,SNR=60
K24A Arverson Ranch 78.67 318 ⇓P **P 01 44 44.4 0.0**
baz=78
L25A Engebretsen Ra 78.67 318 ⇑P **P 01 44 44.9 +0.5**
baz=78
PHET Kaeng Krachan 78.72 83 P **P 01 44 44.9 +0.1**
TUL1 Tulsa 78.75 309 ⇑P **P 01 44 44.2 -0.5**
baz=78
M26A McRoberts Ranc 78.77 317 ⇓P **P 01 44 45.9 +1.1**
baz=78
C14A Swan Lake 78.79 327 ⇓P **P 01 44 45.1 +0.2**
baz=78
YBMT Yellow Bay 78.83 327 *e*P **P 01 44 45.2 +0.1**
comp=Z,260nm,1.7s
YBMT Yellow Bay 78.83 327 *e*P **P 01 44 45.2 +0.1**
comp=Z,260nm,1.7s
HRY Holter Researc 78.84 325 *e*P **P 01 44 45.7 +0.6**
comp=Z,102nm,1.2s
HRY Holter Researc 78.84 325 *e*P **P 01 44 45.7 +0.6**
comp=Z,102nm,1.2s
BLMT Blacktail Moun 78.85 327 *e*P **P 01 44 45.8 +0.5**
comp=Z,332nm,1.5s
BLMT Blacktail Moun 78.85 327 *e*P **P 01 44 45.8 +0.5**
comp=Z,332nm,1.5s
H20A Greybull 78.86 321 ⇓P **P 01 44 45.4 +0.1**
baz=79,SNR=33
D15A Lincoln 78.87 326 ⇓P **P 01 44 45.4 0.0**
baz=79,SNR=25
E16A East Helena 78.91 325 ⇑P **P 01 44 46.2 +0.7**
baz=79,SNR=47
G18A Lazy EL Ranch, 78.93 323 ⇓P **P 01 44 45.8 +0.1**
baz=79,SNR=18
N27A Anderson Farm, 78.94 316 ⇑P **P 01 44 46.2 +0.4**
baz=79,SNR=12
RLMT Red Lodge 78.95 323 *e*P **P 01 44 46.9 +1.0**
comp=Z,195nm,1.5s
RLMT LR LR
comp=Z,17µm,20.0s
RLMT Red Lodge 78.95 323 ⇓P **P 01 44 46.3 +0.4**
baz=79,SNR=62
RLMT Red Lodge 78.95 323 *e*P **P 01 44 46.9 +1.0**
comp=Z,195nm,1.5s
F17A Fitzpatrick Pl 78.96 324 ⇑P **P 01 44 46.7 +0.8**
baz=79,SNR=38
J22A Midwest 78.96 320 ⇓P **P 01 44 45.5 -0.4**
baz=79,SNR=25
B12A Libby 78.97 328 ⇑P **P 01 44 46.2 +0.5**
baz=79,SNR=17
JTMT Jette 79.03 327 *e*P **P 01 44 46.8 +0.6**
comp=Z,390nm,1.6s
JTMT Jette 79.03 327 *e*P **P 01 44 46.8 +0.6**
comp=Z,390nm,1.6s
I21A Big Trails, Te 79.05 321 ⇑P **P 01 44 46.1 -0.3**
baz=79,SNR=60
K23A Bowen Ranch, D 79.05 319 ⇑P **P 01 44 46.3 -0.1**
baz=79,SNR=12
SWMT Swartz Lake 79.10 327 *e*P **P 01 44 47.0 +0.4**
comp=Z,95nm,1.2s
SWMT Swartz Lake 79.10 327 *e*P **P 01 44 47.0 +0.4**
comp=Z,95nm,1.2s
SLMT Seeley Lake 79.11 326 *e*P **P 01 44 46.7 0.0**
comp=Z,88nm,1.2s
SLMT Seeley Lake 79.11 326 *e*P **P 01 44 46.7 0.0**
comp=Z,88nm,1.2s
BSMT Bassoo Peak 79.15 327 *e*P **P 01 44 47.6 +0.7**
comp=Z,76nm,1.0s
BSMT Bassoo Peak 79.15 327 *e*P **P 01 44 47.6 +0.7**
comp=Z,76nm,1.0s
H19A Powell 79.17 322 ⇑P **P 01 44 47.9 +0.8**
baz=79,SNR=55
C13A Hot Springs 79.20 327 ⇓P **P 01 44 47.9 +0.9**
baz=79,SNR=107
L24A Wheatland 79.24 318 ⇓P **P 01 44 47.5 0.0**
baz=79
D14A Greenough 79.24 326 ⇓P **P 01 44 47.2 -0.2**
baz=79,SNR=38
M25A Palm-Egli Farm 79.25 317 ⇑P **P 01 44 48.5 +0.9**
baz=79,SNR=13
CHMT Chamberlain Mo 79.27 326 *e*P **P 01 44 47.9 +0.2**
comp=Z,101nm,1.4s
CHMT Chamberlain Mo 79.27 326 *e*P **P 01 44 47.9 +0.2**
comp=Z,101nm,1.4s
NJ2 Nanjing 79.28 56 *e*P **P 01 44 48.2 +0.6**
NJ2 pP **pP 01 44 53.0 +0.7**
NJ2 sP sP 01 45 00.9 +7.0
NJ2 S **S 01 54 49.0 +1.5**
NJ2 sS **SKSac 01 55 01.5 -1.9**
NJ2 pmax pmax
comp=Z,140nm,1.0s
NJ2 pmax pmax
comp=Z,3µm,10.1s
NJ2 LR LR
comp=N,17µm,16.8s
NJ2 LR LR
comp=E,15µm,17.7s
NJ2 LR LR
comp=Z,29µm,18.6s
N26A Koester Ranch, 79.28 316 ⇓P **P 01 44 48.4 +0.7**
baz=79,SNR=10
I20A Worland 79.33 321 ⇑P **P 01 44 48.2 +0.3**
baz=79,SNR=28
O27A Beecher Island 79.37 315 ⇓P **P 01 44 48.7 +0.6**
baz=79,SNR=19
E15A Deer Lodge 79.41 325 ⇑P **P 01 44 48.8 +0.5**
baz=79,SNR=82
G17A Pierce Place, 79.45 324 ⇓P **P 01 44 49.9 +1.3**
baz=79,SNR=23
J21A Lysite 79.47 320 ⇓P **P 01 44 48.6 -0.2**
baz=79,SNR=18
H18A Shoshone NF, C 79.47 323 ⇑P **P 01 44 49.5 +0.7**
baz=79,SNR=66
F16A Kennard Place, 79.48 324 ⇑P **P 01 44 49.4 +0.7**
baz=79,SNR=42
KDAK Kodiak Island 79.52 352 *e*P **P 01 44 49.4 +1.0**
comp=Z,239nm,1.3s
KDAK LR LR
comp=Z,7µm,19.0s
KDAK Kodiak Island 79.52 352 P **P 01 44 49.4 +1.0**
comp=Z,52nm,0.6s,baz=37,slow=6.6,SNR=28
KDAK Kodiak Island 79.52 352 *e*P **P 01 44 49.4 +1.0**
comp=Z,239nm,1.3s
C12B Naegeli Ranch, 79.54 328 ⇑P **P 01 44 49.6 +0.8**
baz=79,SNR=22
K22A Casper 79.56 319 ⇑P **P 01 44 48.7 -0.5**
baz=79,SNR=32
L23A Garrett 79.56 319 ⇑P **P 01 44 49.4 0.0**
baz=79,SNR=16
BOZ Bozeman (W) 79.59 324 *e*P **P 01 44 50.4 +1.1**
BOZ pmax pmax
comp=Z,112nm,1.3s
BOZ MLR MLR
comp=Z,11µm,19.0s
BOZ Bozeman (W) 79.59 324 *e*P **P 01 44 50.4 +1.1**
comp=Z,112nm,1.3s
BOZ LR LR
comp=Z,11µm,19.0s
BOZ Bozeman (W) 79.59 324 ⇑P **P 01 44 50.3 +1.1**
baz=79,SNR=89
BOZ Bozeman (W) 79.59 324 *e*P **P 01 44 50.3 +1.0**
comp=Z,112nm,1.3s
M24A Cheyenne 79.61 318 ⇓P **P 01 44 50.5 +1.0**
baz=79,SNR=19
SDV Santo Domingo 79.62 273 *e*P **P 01 44 51.1 +1.2**
comp=Z,1.2nm,1.0s
SDV LR LR
comp=Z,1.0nm,21.0s
SDV Santo Domingo 79.62 273 *e*P **P 01 44 51.1 +1.2**
comp=Z,1.1nm,1.0s
D13A Huson 79.62 327 ⇓P **P 01 44 49.7 +0.4**
baz=79,SNR=85
MSO Missoula 79.62 326 *e*P **P 01 44 49.8 +0.4**
comp=Z,108nm,1.4s
MSO LR LR
comp=Z,11µm,19.0s
MSO Missoula 79.62 326 ⇓P **P 01 44 49.8 +0.4**
baz=79,SNR=35
MSO Missoula 79.62 326 *e*P **P 01 44 49.8 +0.4**
comp=Z,108nm,1.4s
I19A Meeteetse 79.67 322 ⇓P **P 01 44 50.3 +0.5**
baz=79,SNR=28
NEW Newport 79.73 329 *e*P **P 01 44 50.2 +0.3**
comp=Z,139nm,1.4s
NEW LR LR
comp=Z,15µm,19.0s
NEW Newport 79.73 329 ⇑P **P 01 44 50.4 +0.5**
baz=79,SNR=62
NEW Newport 79.73 329 *e*P **P 01 44 50.2 +0.3**
comp=Z,139nm,1.4s
N25A Grover 79.73 317 ⇓P **P 01 44 51.3 +1.1**
baz=80
C11A Tepee Creek (N 79.74 328 ⇓P **P 01 44 50.5 +0.5**
baz=80
O26A Horse Wrangler 79.76 316 ⇑P **P 01 44 50.9 +0.6**
baz=80
J20A Shoshoni 79.77 321 ⇑P **P 01 44 50.7 +0.4**
baz=80,SNR=43
E14A Clinton 79.77 326 ⇑P **P 01 44 50.7 +0.4**
baz=80
LRM Limekiln Ridge 79.80 325 *e*P **P 01 44 51.4 +0.7**
comp=Z,593nm,1.1s
LRM Limekiln Ridge 79.80 325 *e*P **P 01 44 51.3 +0.7**
comp=Z,593nm,1.1s
F15A Butte 79.81 325 ⇓P **P 01 44 51.3 +0.7**
baz=80,SNR=19
P27A Ficken Ranch, 79.88 315 ⇑P **P 01 44 51.6 +0.6**
baz=80,SNR=13
LKWY Lake 79.89 323 *e*P **P 01 44 53.3 +2.2**
LKWY pmax pmax
comp=Z,122nm,1.2s
LKWY MLR MLR
comp=Z,24µm,21.0s
LKWY Lake 79.89 323 *e*P **P 01 44 53.3 +2.2**
comp=Z,122nm,1.2s
LKWY LR LR
comp=Z,24µm,21.0s
LKWY Lake 79.89 323 *e*P **P 01 44 53.3 +2.2**
comp=Z,122nm,1.2s
K21A Alcova 79.92 320 ⇓P **P 01 44 50.8 -0.5**
baz=80,SNR=15
L22A Ellis Ranch, M 79.98 319 ⇑P **P 01 44 51.8 +0.2**
baz=80,SNR=19
G16A Moss Hill, Enn 79.99 324 ⇑P **P 01 44 52.5 +1.0**
baz=80,SNR=103
INCN Inchon 80.01 48 *e*P **P 01 44 52.4 +0.8**
comp=Z,281nm,1.4s
INCN LR LR
comp=Z,37µm,22.0s
INCN Inchon 80.01 48 P **P 01 44 52.8 +1.2**
SNR=13
INCN Inchon 80.01 48 *e*P **P 01 44 52.4 +0.8**
comp=Z,281nm,1.4s
D12A Red Ives Fores 80.02 327 ⇓P **P 01 44 52.0 +0.5**
baz=80
E13A Victor 80.04 326 ⇓P **P 01 44 52.0 +0.3**
baz=80,SNR=45
PHWY Pilot Hill 80.06 318 *e*P **P 01 44 52.8 +0.7**
comp=Z,72nm,1.0s
PHWY Pilot Hill 80.06 318 *e*P **P 01 44 52.8 +0.7**
comp=Z,72nm,1.0s
M23A Laramie 80.06 318 ⇑P **P 01 44 52.3 +0.3**
baz=80
YMR Madison River 80.06 323 *e*P **P 01 44 53.3 +1.3**
comp=Z,168nm,1.3s
YMR Madison River 80.06 323 *e*P **P 01 44 53.3 +1.3**
comp=Z,168nm,1.3s
PEA0B Petropavlovsk- 80.07 21 *e*P **P 01 44 51.2 -0.4**
PEA0B Petropavlovsk- 80.07 21 *e*P **P 01 44 51.2 -0.4**
PETK Petropavlovsk- 80.07 21 P **P 01 44 51.5 0.0**
PETK 01 47 55.8
PETK pmax pmax
comp=Z,39nm,1.0s
PETK pmax pmax
comp=Z,12nm,1.0s
PETK Petropavlovsk- 80.07 21 P **P 01 44 51.5 0.0**
PETK PP **PP 01 47 55.8 +3.1**
PETK PKKPbc **PKKPbc 02 03 36.7 +1.9**
PETK Petropavlovsk- 80.07 21 P **P 01 44 51.5 0.0**
comp=Z,39nm,1.0s,baz=22,slow=1.6,SNR=14
PETK PP **PP 01 47 55.8 +3.1**
comp=Z,12nm,1.0s,baz=349,slow=1.5,SNR=3.8
PETK PKKPbc **PKKPbc 02 03 36.7 +1.9**
comp=Z,1.7nm,0.5s,baz=142,slow=5.3,SNR=5.1
PETK LR LR 02 25 20.7
comp=Z,18µm,19.3s,baz=329,slow=40
PETK Petropavlovsk- 80.07 21 P **P 01 44 51.5 0.0**

PETK Petropavlovsk- 80.07 21 PP PP 01 47 55.8 +3.0
H17A Grant Village 80.10 323 ⇓P P 01 44 54.3 +2.0
baz=80,SNR=48
N24A Carr 80.12 317 ⇑P P 01 44 53.4 +1.1
baz=80,SNR=17
OHAK Old Harbor 80.14 353 eP P 01 44 51.2 -0.6
comp=Z,105nm,1.1s
OHAK ePP PP 01 47 48.5 -4.7
OHAK Old Harbor 80.14 353 eP P 01 44 51.2 -0.6
comp=Z,105nm,1.1s
QLMT Earthquake Lak 80.14 324 eP P 01 44 53.5 +1.1
comp=Z,18nm,1.3s
QLMT Earthquake Lak 80.14 324 eP P 01 44 53.5 +1.1
comp=Z,18nm,1.3s
H16A Russell Place, 80.16 323 ⇑P P 01 44 53.7 +1.2
baz=80,SNR=81
YFT Old Faithful 80.18 323 eP P 01 44 55.2 +2.6
comp=Z,331nm,1.7s
YFT Old Faithful 80.18 323 eP P 01 44 55.2 +2.6
comp=Z,331nm,1.7s
F14A Wisdom 80.20 325 ⇓P P 01 44 53.4 +0.7
baz=80,SNR=17
DLMT Dillon 80.23 325 eP P 01 44 53.9 +1.1
comp=Z,222nm,1.4s
DLMT Dillon 80.23 325 eP P 01 44 53.8 +1.1
comp=Z,222nm,1.4s
O25A Wiggins 80.27 316 ⇑P P 01 44 53.4 +0.3
baz=80
P26A Davis Ranch, A 80.28 316 ⇓P P 01 44 53.8 +0.7
baz=80,SNR=20
J19A Crowheart 80.29 321 ⇓P P 01 44 53.7 +0.6
baz=80,SNR=22
I18A Diamond G Ranc 80.30 322 ⇑P P 01 44 54.4 +1.1
baz=80,SNR=24
KSCO Kaye Shedlock' 80.31 315 ⇑P P 01 44 54.0 +0.7
baz=80,SNR=16
G15A Dillon 80.34 324 ⇓P P 01 44 54.4 +1.0
baz=80,SNR=49
PET Petropavlovsk 80.39 20 eP P 01 44 52.9 -0.3
PET e 01 45 01.8
PET e 01 47 57.8
PET eS S 01 54 55.1 -3.4
PET ePS PnS 01 55 47.1 +3.6
PET ePPS PPS 01 55 55.8
PET pmax pmax
comp=Z,1μm,5.7s
PET pmax pmax
comp=Z,64nm,1.4s
PET pmax pmax
comp=Z,2μm,9.3s
PET pmax pmax
comp=Z,800nm,6.3s
PET pmax pmax
comp=Z,1μm,8.7s
PET MLR MLR
comp=Z,24μm,20.0s
PET MLR MLR
comp=Z,20μm,20.0s
PET Petropavlovsk 80.39 20 eP P 01 44 57.1 +3.8
comp=Z,228nm,1.5s
PET LR LR
comp=Z,22μm,20.0s
BSI Banda Aceh 80.40 91 P P 01 44 52.4 -1.5
YSS Yuzh-Sakhalins 80.41 32 ⇓ iP P 01 44 55.2 +1.8
YSS i *SP sP 01 44 59.0 -0.8
YSS e 01 47 56.0
YSS eS S 01 55 00.0 +1.1
YSS ePS PnS 01 55 44.0 0.0
YSS ePPS PPS 01 56 06.0
YSS pmax pmax
comp=Z,250nm,1.2s
YSS smax smax
comp=N,2μm,12.0s
YSS smax smax
comp=E,2μm,12.0s
YSS Yuzh-Sakhalins 80.41 32 eP P 01 44 53.7 +0.3
comp=E,487nm,0.9s
YSS LR LR
comp=Z,25μm,19.0s
YSS Yuzh-Sakhalins 80.41 32 eP P 01 44 53.7 +0.3
comp=Z,487nm,0.9s
K20A Yellowstone Ra 80.42 320 ⇓P P 01 44 53.7 -0.2
baz=80,SNR=15
I17A Pilgrim Ck. 80.47 323 ⇑P P 01 44 56.1 +1.8
baz=80,SNR=31
L21A Rawlins 80.49 319 ⇑P P 01 44 54.5 +0.2
baz=80,SNR=27
K19A Absolon Red Bu 80.53 321 ⇓P P 01 44 53.7 -0.8
baz=80,SNR=37
M22A Cedar Creek Ra 80.54 319 ⇑P P 01 44 55.0 +0.4
baz=80,SNR=28
N23A Red Feather La 80.60 318 ⇑P P 01 44 55.9 +0.9
baz=80,SNR=50
F13A Darby 80.62 326 ⇓P P 01 44 55.4 +0.5
baz=80,SNR=80
BDFB Brasilia 80.64 239 P P 01 44 56.0 +0.8
BDFB Brasilia 80.64 239 P P 01 44 56.0 +0.8
comp=Z,33nm,0.7s,baz=55,slow=5.2,SNR=41
BDFB LR LR 02 21 38.7
comp=Z,8μm,19.4s,baz=37,slow=36
BDFB Brasilia 80.64 239 P P 01 44 56.0 +0.8
IMW Indian Meadow 80.66 323 eP P 01 44 56.8 +1.5
comp=Z,300nm,1.7s
IMW Indian Meadow 80.66 323 eP P 01 44 56.8 +1.5
comp=Z,300nm,1.7s
MOOW Moose Ponds 80.69 323 eP P 01 44 56.5 +1.1
comp=Z,102nm,1.5s
MOOW Moose Ponds 80.69 323 eP P 01 44 56.5 +1.1
comp=Z,102nm,1.5s
G14A Jackson 80.69 325 ⇑P P 01 44 56.1 +0.7
baz=80,SNR=26
KSAR Wonju Array Be 80.72 47 P P 01 44 55.9 +0.6
KSAR Wonju Array Be 80.72 47 P P 01 44 55.9 +0.6
LOHW Long Hollow 80.73 322 eP P 01 44 56.6 +1.0
comp=Z,112nm,1.6s
LOHW Long Hollow 80.73 322 eP P 01 44 56.6 +1.0
comp=Z,112nm,1.6s
KSRS Korea Array 80.73 47 P P 01 44 55.9 +0.6
comp=Z,52nm,1.1s,baz=323,slow=4.8,SNR=58
KSRS LR LR 02 25 31.0
comp=Z,31μm,19.3s,baz=315,slow=39
P25A Willow Gulch B 80.74 316 ⇓P P 01 44 56.9 +1.3
baz=80,SNR=42
O24A Longmont 80.75 317 ⇑P P 01 44 56.6 +0.9
baz=80,SNR=40
M21A Separation Pea 80.76 319 ⇑P P 01 44 55.6 -0.2
baz=80,SNR=15
MCMT McKenzie Canyo 80.76 324 eP P 01 44 56.7 +0.9
comp=Z,43nm,1.2s
MCMT McKenzie Canyo 80.76 324 eP P 01 44 56.7 +0.9
comp=Z,43nm,1.2s
J18A Kendall Valley 80.78 322 ⇑P P 01 44 56.6 +0.7
baz=80,SNR=95
CHBT CHBT 80.81 81 P P 01 44 56.1 0.0
H15A Lima 80.84 324 ⇓P P 01 44 57.5 +1.4
baz=81,SNR=21
Q26A Hugo 80.84 315 ⇓P P 01 44 57.1 +0.9
baz=81
BW06 Boulder Array 80.91 321 eP P 01 44 56.2 -0.4
comp=Z,57nm,1.3s
BW06 LR LR
comp=Z,13μm,20.0s
BW06 Boulder Array 80.91 321 ⇑P P 01 44 56.2 -0.4
baz=81,SNR=34
BW06 Boulder Array 80.91 321 eP P 01 44 56.2 -0.4
comp=Z,57nm,1.3s
PDAR Pinedale Array 80.91 321 P P 01 44 56.3 -0.3
PDAR P'P' 02 11 39.2
PDAR Pinedale Array 80.91 321 P P 01 44 56.3 -0.3
comp=Z,10nm,0.7s,baz=53,slow=4.6,SNR=51
PDAR PKPPKP P'P'df 02 11 39.2 -5.4
comp=Z,0.4nm,0.6s,baz=116,slow=3.4,SNR=3.8
PDAR LR LR 02 22 44.3
comp=Z,11μm,18.3s,baz=44,slow=37
PDAR Pinedale Array 80.91 321 P P 01 44 56.3 -0.3
SNOW Snow King Moun 80.91 322 eP P 01 44 57.7 +1.1
comp=Z,168nm,1.7s
SNOW Snow King Moun 80.91 322 eP P 01 44 57.7 +1.1
comp=Z,168nm,1.7s
I16A Newdale 80.92 323 ⇑P P 01 44 58.2 +1.6
baz=81,SNR=70
L20A Wamsutter 80.92 320 ⇓P P 01 44 57.0 +0.4
baz=81,SNR=28
N22A Wattenberg Ran 80.93 318 ⇓P P 01 44 57.5 +0.7
baz=81,SNR=52
R27A Eads 80.93 314 ⇓P P 01 44 57.1 +0.5
baz=81,SNR=36

J17A Brown Place, J 80.97 322 ⇓P P 01 44 57.7 +0.9
baz=81,SNR=37
TPAW Teton Pass 80.98 322 eP P 01 44 58.2 +1.2
comp=Z,205nm,1.7s
TPAW Teton Pass 80.98 322 eP P 01 44 58.2 +1.2
comp=Z,205nm,1.7s
DCID1 Drake Creek 81.00 323 eP P 01 44 56.6 -0.4
comp=Z,206nm,1.4s
DCID1 Drake Creek 81.00 323 eP P 01 44 56.6 -0.4
comp=Z,206nm,1.4s
F12A Elk City 81.03 326 ⇓P P 01 44 57.1 0.0
baz=81,SNR=52
REDW Red Top Meadow 81.04 322 eP P 01 44 59.1 +1.8
comp=Z,3.1nm,1.5s
REDW Red Top Meadow 81.04 322 eP P 01 44 59.1 +1.8
comp=Z,3.1nm,1.5s
OD2 Odessa Site #2 81.05 329 P P 01 44 57.4 +0.3
OD2 Odessa Site #2 81.05 329 P P 01 44 57.3 +0.3
SAW Saint Andrews 81.05 330 P P 01 44 58.2 +1.2
SAW Saint Andrews 81.05 330 P P 01 44 58.2 +1.2
NLW Nelson Butte 81.08 331 P P 01 44 57.6 +0.3
NLW Nelson Butte 81.08 331 P P 01 44 57.6 +0.3
O23A Lake Granby, G 81.11 317 ⇑P P 01 44 58.7 +1.0
baz=81,SNR=62
P24A Kohler Place, 81.12 316 ⇑P P 01 44 58.6 +0.9
baz=81
G13A Cobalt 81.14 325 ⇑P P 01 44 58.2 +0.5
baz=81,SNR=56
H14A Leadore 81.15 325 ⇑P P 01 44 58.8 +1.0
baz=81,SNR=20
Q25A Bedland, Calha 81.23 316 ⇑P P 01 44 58.9 +0.6
baz=81,SNR=12
K18A Toltan Ranch, 81.23 321 ⇓P P 01 44 58.7 +0.4
baz=81,SNR=37
M20A Sweetwater, Wa 81.25 320 ⇑P P 01 44 59.1 +0.8
baz=81,SNR=46
RRI2 Red Ridge 81.26 323 eP P 01 44 59.7 +1.2
comp=Z,302nm,1.7s
RRI2 Red Ridge 81.26 323 eP P 01 44 59.7 +1.2
comp=Z,302nm,1.7s
I15A Monteview 81.26 324 ⇑P P 01 45 00.1 +1.8
baz=81,SNR=20
ISCO Idaho Springs 81.26 317 eP P 01 44 59.5 +0.9
ISCO pmax pmax
comp=Z,47nm,0.8s
ISCO MLR MLR
comp=Z,11μm,20.0s
ISCO Idaho Springs 81.26 317 eP P 01 44 59.5 +0.9
comp=Z,47nm,0.8s
ISCO LR LR
comp=Z,11μm,20.0s
ISCO Idaho Springs 81.26 317 ⇑P P 01 44 59.4 +0.9
baz=81,SNR=74
ISCO Idaho Springs 81.26 317 eP P 01 44 59.5 +0.9
comp=Z,47nm,0.8s
R26A Arlington 81.27 315 ⇑P P 01 44 59.0 +0.6
baz=81,SNR=31
WMOK Wichita Mounta 81.30 309 eP P 01 44 58.6 +0.1
WMOK pmax pmax
comp=Z,146nm,1.4s
WMOK MLR MLR
comp=Z,6μm,21.0s
WMOK Wichita Mounta 81.30 309 eP P 01 44 58.6 +0.1
comp=Z,146nm,1.4s
WMOK LR LR
comp=Z,6μm,21.0s
WMOK Wichita Mounta 81.30 309 eP P 01 44 58.6 +0.1
comp=Z,146nm,1.4s
RFTA Plano 81.31 307 eP P 01 44 57.8 -0.8
RFTA Plano 81.31 307 eP P 01 44 57.8 -0.8
L19A Farson 81.33 321 ⇓P P 01 44 58.8 0.0
baz=81,SNR=29
SSE Sheshan 81.37 56 P P 01 44 58.3 -0.6
SSE sP sP 01 45 02.2 -3.0
SSE PP PP 01 48 08.6 +4.3
SSE S S 01 55 09.3 -0.2
SSE SS SS 02 00 26.5 +1.8
SSE pmax pmax
comp=Z,81nm,1.2s
SSE pmax pmax
comp=Z,2μm,8.6s
SSE LR LR
comp=N,20μm,15.5s
SSE LR LR
comp=E,12μm,15.7s
SSE LR LR
comp=Z,26μm,16.3s
T28A Walsh 81.42 313 ⇑P P 01 44 59.8 +0.5
baz=81,SNR=24
S27A Las Animas 81.43 314 ⇓P P 01 45 00.0 +0.7
baz=81
CHGN Chignik 81.45 355 eP P 01 45 01.0 +2.2
CHGN Chignik 81.45 355 eP P 01 45 01.0 +2.2
O22A Kremmling 81.46 318 ⇓P P 01 45 00.2 +0.6
baz=81,SNR=102
N21A Black Mountain 81.48 319 ⇓P P 01 45 00.4 +0.8
baz=81,SNR=110
K17A Gardner Place, 81.55 322 ⇓P P 01 45 00.3 +0.4
baz=81
G12A Big Creek, Yel 81.57 326 ⇓P P 01 45 00.1 +0.1
baz=81
H13A Challis 81.57 325 ⇓P P 01 45 00.6 +0.7
baz=81,SNR=54
AHID Auburn Hatcher 81.62 322 eP P 01 45 00.7 +0.4
comp=Z,258nm,1.6s
AHID LR LR
comp=Z,13μm,20.0s
AHID Auburn Hatcher 81.62 322 eP P 01 45 00.7 +0.4
comp=Z,258nm,1.6s
W31A Holland Ranch, 81.64 310 ⇓P P 01 45 01.0 +0.7
baz=81,SNR=15
Q24A Divide 81.66 316 ⇓P P 01 45 01.3 +0.6
baz=81,SNR=20
PGC Sidney 81.69 333 eP P 01 45 00.5 +0.3
comp=Z,6.9nm,1.0s
PGC Sidney 81.69 333 eP P 01 45 00.5 +0.3
comp=Z,6.9nm,1.0s
M19A Rock Springs 81.70 320 ⇓P P 01 45 01.3 +0.5
baz=81,SNR=10
P23A Jefferson 81.70 317 ⇓P P 01 45 02.0 +1.0
baz=82,SNR=54
J15A Blackfoot 81.71 323 ⇑P P 01 45 02.4 +1.7
baz=81,SNR=58
I14A Mackay 81.74 324 ⇓P P 01 45 02.5 +1.6
baz=82,SNR=117
GZH Guangzhou 81.78 66 P P 01 45 01.7 +0.5
GZH PP PP 01 48 10.8 +2.9
GZH S S 01 55 16.1 +2.2
GZH LR LR
comp=N,12μm,17.9s
GZH LR LR
comp=E,12μm,16.6s
GZH LR LR
comp=Z,22μm,19.3s
S26A Kim 81.78 314 ⇑P P 01 45 01.8 +0.6
baz=82,SNR=28
L18A Fontenelle, Gr 81.78 321 ⇑P P 01 45 01.6 +0.4
baz=82,SNR=45
K16A Soda Springs 81.79 322 ⇑P P 01 45 02.1 +0.9
baz=82,SNR=36
T27A Campo 81.80 313 ⇑P P 01 45 01.9 +0.6
baz=82
SKR Severo-Kuril's 81.80 23 eP P 01 44 51.0 -10
SKR S S 01 55 15.0 +1.7
SKR eSS SS 02 00 31.0 +1.2
SKR pmax pmax
comp=Z,640nm,1.5s
SKR pmax pmax
comp=N,2μm,12.0s
SKR pmax pmax
comp=Z,3μm,12.0s
SKR smax smax
comp=E,3μm,14.0s
R25A Fountain Ranch 81.82 315 ⇓P P 01 45 01.8 +0.4
baz=82,SNR=37
H12A Diamond D Ranc 81.84 325 ⇑P P 01 45 01.5 +0.1
baz=82,SNR=96
O21A Pagoda 81.88 318 ⇑P P 01 45 02.3 +0.5
baz=82
P22A Eagle 81.99 318 ⇑P P 01 45 02.8 +0.4
baz=82,SNR=40
W30A Crocket Farms 82.00 311 ⇑P P 01 45 02.9 +0.6
baz=82
V29A Stinnett 82.02 312 ⇓P P 01 45 03.0 +0.6
baz=82
L17A Cokeville 82.04 322 ⇓P P 01 45 02.5 0.0
baz=82

I13A Wildhorse Cree 82.04 325 ⇓P P 01 45 03.8 +1.3
baz=82,SNR=112
Q23A Hartsel 82.05 317 ⇓P P 01 45 03.2 +0.4
baz=82,SNR=18
X31A McDonald Ranch 82.06 310 ⇑P P 01 45 03.0 +0.4
baz=82,SNR=25
QIZ Qiongzhong 82.07 72 P P 01 45 01.5 -1.3
QIZ sP sP 01 45 06.2 -2.9
QIZ PP PP 01 48 08.9 -1.5
QIZ S S 01 55 15.4 -1.7
QIZ pmax pmax
comp=Z,2μm,9.0s
QIZ LR LR
comp=N,10μm,17.7s
QIZ LR LR
comp=Z,17μm,17.7s
T26A Comanche Natio 82.18 314 ⇓P P 01 45 04.2 +0.9
baz=82,SNR=27
N19A John Jarvie Ra 82.18 320 ⇓P P 01 45 03.5 +0.2
baz=82,SNR=44
R24A Sanders Place, 82.19 316 ⇑P P 01 45 04.4 +1.0
baz=82,SNR=44
M18A Lyman 82.19 321 ⇓P P 01 45 03.5 +0.1
baz=82,SNR=20
HAWA Hanford 82.20 329 eP P 01 45 03.5 +0.5
comp=Z,166nm,1.4s
HAWA LR LR
comp=Z,12μm,20.0s
HAWA Hanford 82.20 329 eP P 01 45 03.5 +0.5
comp=Z,166nm,1.4s
Y32A R-V Farms, Ver 82.21 309 ⇓P P 01 45 03.9 +0.6
baz=82,SNR=16
J14A Carey 82.25 324 ⇓P P 01 45 05.1 +1.5
baz=82,SNR=28
S25A Robets Cordova 82.26 315 ⇓P P 01 45 04.8 +1.0
baz=82,SNR=77
O20A White River Ci 82.31 319 ⇑P P 01 45 04.3 +0.3
baz=82,SNR=89
K15A Arbon 82.33 323 ⇓P P 01 45 04.9 +0.9
baz=82,SNR=42
N18A Larsen Ranch, 82.35 320 ⇓P P 01 45 04.5 +0.3
baz=82,SNR=52
L16A Fish Haven 82.36 322 ⇑P P 01 45 04.6 +0.4
baz=82,SNR=68
P21A Newcastle 82.39 318 ⇑P P 01 45 05.0 +0.5
baz=82,SNR=24
HDW Hoodsport 82.41 332 P P 01 45 05.6 +1.3
HDW Hoodsport 82.41 332 P P 01 45 05.6 +1.3
SMCO Snowmass 82.42 317 eP P 01 45 04.8 0.0
comp=Z,72nm,1.2s
SMCO Snowmass 82.42 317 eP P 01 45 04.8 0.0
comp=Z,72nm,1.2s
M17A Scullys Gap (B 82.43 321 ⇑P P 01 45 04.9 +0.2
baz=82,SNR=23
HLID Hailey 82.45 325 eP P 01 45 05.4 +0.8
comp=Z,50nm,1.3s
HLID LR LR
comp=Z,11μm,19.0s
HLID Hailey 82.45 325 ⇓P P 01 45 05.4 +0.8
baz=82,SNR=29
HLID Hailey 82.45 325 eP P 01 45 05.4 +0.8
comp=Z,50nm,1.3s
J13A Cove Ranch, Pi 82.48 324 ⇑P P 01 45 05.9 +1.2
baz=82,SNR=61
V28A Channing 82.49 312 ⇑P P 01 45 05.1 +0.2
baz=82
WHTX Lake Whitney 82.49 307 ⇑P P 01 45 04.6 -0.2
baz=82
SDPT Sand Point 82.51 356 eP P 01 45 05.4 +1.0
comp=Z,97nm,0.8s
SDPT Sand Point 82.51 356 eP P 01 45 05.4 +1.0
comp=Z,97nm,0.8s
I12A Atlanta 82.57 325 ⇓P P 01 45 05.6 +0.4
baz=82,SNR=52
R23A Moffat 82.59 316 ⇓P P 01 45 06.1 +0.5
baz=82,SNR=59
BMO Blue Mountains 82.60 327 eP P 01 45 05.3 0.0
BMO pmax pmax
comp=Z,253nm,1.2s
BMO MLR MLR
comp=Z,9μm,19.0s
BMO Blue Mountains 82.60 327 eP P 01 45 05.3 0.0
comp=Z,253nm,1.2s
BMO LR LR
comp=Z,9μm,19.0s
BMO Blue Mountains 82.60 327 eP P 01 45 05.3 0.0
comp=Z,253nm,1.2s
RCS Mount Rainier- 82.61 331 P P 01 45 06.4 +0.8
RCS Mount Rainier- 82.61 331 P P 01 45 06.4 +0.8
O19A Miners Draw (B 82.62 319 ⇑P P 01 45 06.0 +0.5
baz=82,SNR=70
Q22A Crested Butte, 82.63 317 ⇓P P 01 45 06.5 +0.7
baz=82,SNR=103
W29A Amarillo 82.64 311 ⇓P P 01 45 05.7 +0.1
baz=82
T25A Trinidad 82.64 315 ⇑P P 01 45 06.6 +0.9
baz=82,SNR=36
ASAJ Asahikawa 82.65 34 eP P 01 45 05.2 -0.2
comp=Z,118nm,1.4s
ASAJ Asahikawa 82.65 34 eP P 01 45 05.2 -0.2
comp=Z,118nm,1.4s
TRW Toppenish Ridg 82.66 330 P P 01 45 06.7 +1.2
TRW Toppenish Ridg 82.66 330 P P 01 45 06.7 +1.2
S24A Houchin Ranch, 82.68 315 ⇓P P 01 45 06.5 +0.4
baz=82,SNR=28
WPW White Pass 82.69 331 P P 01 45 06.5 +0.8
WPW White Pass 82.69 331 P P 01 45 06.5 +0.8
X30A Coker Ranch, T 82.70 311 ⇑P P 01 45 06.5 +0.5
baz=82,SNR=38
Y31A Rekieta Farm, 82.70 310 ⇑P P 01 45 06.5 +0.6
baz=82,SNR=21
K14A Jones Ranch, D 82.72 323 ⇑P P 01 45 07.3 +1.3
baz=82,SNR=51
Z32A Haskell 82.73 309 ⇑P P 01 45 06.3 +0.2
baz=82,SNR=42
LON Longmire 82.74 331 eP P 01 45 06.0 +0.1
LON pmax pmax
comp=Z,239nm,1.6s
LON Longmire 82.74 331 eP P 01 45 06.0 +0.1
comp=Z,239nm,1.6s
LON Longmire 82.74 331 eP P 01 45 06.0 +0.1
comp=Z,239nm,1.6s
HWUT Hardware Ranch 82.74 322 eP P 01 45 06.5 +0.3
comp=Z,315nm,1.4s
HWUT LR LR
comp=Z,15μm,19.0s
HWUT Hardware Ranch 82.74 322 eP P 01 45 06.5 +0.3
comp=Z,315nm,1.4s
L15A Malad City 82.80 322 ⇑P P 01 45 06.7 +0.2
baz=82,SNR=28
AMTX Amarillo 82.83 311 eP P 01 45 07.0 +0.3
comp=Z,116nm,1.7s
AMTX LR LR
comp=Z,11μm,21.0s
AMTX Amarillo 82.83 311 ⇑P P 01 45 06.6 0.0
baz=83
AMTX Amarillo 82.83 311 eP P 01 45 07.0 +0.3
comp=Z,116nm,1.7s
U26A Atchley Ranch, 82.84 314 ⇓P P 01 45 07.1 +0.3
baz=83,SNR=47
W28A Vega 82.85 312 ⇑P P 01 45 06.9 +0.2
baz=83
HKC Hong Kong Obse 82.87 66 i P P 01 45 04.0 -2.9
HKC S S 01 55 24.0 -1.2
P20A De Beque 82.88 318 ⇑P P 01 45 07.0 +0.1
baz=83,SNR=17
NLWA Neilton Lookou 82.92 332 eP P 01 45 08.1 +1.3
comp=Z,167nm,1.3s
NLWA LR LR
comp=Z,21μm,21.0s
NLWA Neilton Lookou 82.92 332 eP P 01 45 08.1 +1.3
comp=Z,167nm,1.3s
N17A Moffit Pass 82.93 321 ⇓P P 01 45 07.2 -0.1
baz=83,SNR=50
HKT Hockley 82.96 304 eP P 01 45 07.0 -0.2
HKT pmax pmax
comp=Z,188nm,1.8s
HKT Hockley 82.96 304 eP P 01 45 07.0 -0.2
comp=Z,188nm,1.8s
HKT Hockley 82.96 304 eP P 01 45 07.0 -0.2
comp=Z,188nm,1.8s
Q21A Lamborn Mesa, 82.98 318 ⇑P P 01 45 08.5 +1.0
baz=83,SNR=21
M16A Huntsville 83.00 322 ⇑P P 01 45 08.0 +0.4
baz=83
T24A Torres, Weston 83.03 315 ⇓P P 01 45 09.0 +1.1
baz=83,SNR=61

R22A **Saguache, Gunn** 83.03 317 ⇑P P 01 45 08.9 +0.9
baz=83,SNR=52
S23A **Nye Farm, Mont** 83.04 316 ⇓P P 01 45 08.6 +0.7
baz=83,SNR=10.0
P19A **Cripple Cowboy** 83.06 319 ⇓P P 01 45 08.1 +0.1
baz=83,SNR=58
O18A **Roosevelt** 83.07 320 ⇓P P 01 45 08.0 +0.1
baz=83,SNR=14
Z31A **Sharp Cattle R** 83.11 309 ⇓P P 01 45 08.5 +0.4
baz=83,SNR=28
Y30A **Stafford Cattl** 83.13 310 ⇓P P 01 45 08.2 0.0
baz=83
HVU **Hansel Valley** 83.16 323 eP P 01 45 08.9 +0.6
HVU pmax pmax
comp=Z,103nm,1.3s
HVU **Hansel Valley** 83.16 323 eP P 01 45 08.9 +0.6
comp=Z,103nm,1.3s
HVU **Hansel Valley** 83.16 323 eP P 01 45 08.9 +0.6
comp=Z,103nm,1.3s
L14A **Malta** 83.16 323 ⇑P P 01 45 09.0 +0.7
baz=83
X29A **Tulia** 83.16 311 ⇑P P 01 45 08.6 +0.2
baz=83
MFID **Camas Ranch** 83.17 325 eP P 01 45 09.0 +0.7
comp=Z,146nm,1.3s
MFID **Camas Ranch** 83.17 325 ⇑P P 01 45 08.9 +0.6
baz=83,SNR=73
MFID **Camas Ranch** 83.17 325 eP P 01 45 09.0 +0.7
comp=Z,146nm,1.3s
U25A **Circle Dot Ran** 83.19 314 ⇓P P 01 45 09.7 +1.0
baz=83,SNR=95
Q20A **Ridgley Place,** 83.25 318 ⇓P P 01 45 08.8 0.0
baz=83,SNR=49
N16A **Rees Ranch, Co** 83.25 321 ⇑P P 01 45 09.3 +0.4
baz=83,SNR=15
M15A **Larsen Ranch,** 83.26 322 ⇑P P 01 45 09.4 +0.6
baz=83,SNR=40
V26A **Tequesquite Ra** 83.31 313 ⇑P P 01 45 09.4 +0.2
baz=83,SNR=39
ABTX **Abilene, Hawle** 83.32 309 ⇓P P 01 45 09.4 +0.2
baz=83,SNR=17
R21A **Cimarron** 83.33 317 ⇓P P 01 45 10.0 +0.6
baz=83,SNR=31
X28A **Dimmitt** 83.39 311 ⇑P P 01 45 09.7 +0.2
baz=83,SNR=12
S22A **4UR Ranch, Cre** 83.44 316 ⇑P P 01 45 10.5 +0.5
baz=83
W27A **Bowe Ranch, En** 83.46 312 ⇑P P 01 45 10.3 +0.4
baz=83,SNR=24
O17A **Robinson Place** 83.47 320 ⇓P P 01 45 10.4 +0.4
baz=83,SNR=45
JLU **Jordanelle** 83.48 321 eP P 01 45 10.4 +0.3
comp=Z,79nm,1.1s
JLU **Jordanelle** 83.48 321 eP P 01 45 10.4 +0.3
comp=Z,79nm,1.1s
DAU **Daniels Canyon** 83.54 321 eP P 01 45 10.8 +0.3
DAU pmax pmax
comp=Z,103nm,1.4s
DAU **Daniels Canyon** 83.54 321 eP P 01 45 10.8 +0.3
comp=Z,102nm,1.4s
DAU **Daniels Canyon** 83.54 321 eP P 01 45 10.8 +0.3
comp=Z,102nm,1.4s
FX1 **Attu Island--F** 83.54 12 eP P 01 45 10.0 +0.2
FX1 **Attu Island--F** 83.54 12 P P 01 45 10.1 +0.2
comp=Z,89nm,0.6s,baz=189,slow=15,SNR=20
FX1 **Attu Island--F** 83.54 12 eP P 01 45 10.0 +0.2
T23A **Casias Ranch,** 83.57 315 ⇓P P 01 45 11.6 +0.9
baz=83,SNR=36
Y29A **Porterfield Fa** 83.58 311 ⇓P P 01 45 10.5 0.0
baz=83
VTHM **Trough** 83.60 329 P P 01 45 11.6 +1.2
VTHM **Trough** 83.60 329 P P 01 45 11.6 +1.2
U24A **Moreno Valley** 83.65 315 ⇓P P 01 45 12.5 +1.4
baz=83,SNR=26
P18A **Preston Nutter** 83.68 320 ⇓P P 01 45 11.4 +0.2
baz=83,SNR=70
Z30A **Sanderson Ranc** 83.69 310 ⇑P P 01 45 10.9 -0.2
baz=84
131A **Roby** 83.72 309 ⇑P P 01 45 11.6 +0.4
baz=84
V25A **Rancho No Teng** 83.72 314 ⇑P P 01 45 11.7 +0.3
baz=84,SNR=31
Q19A **Hogan Spring (** 83.73 319 ⇑P P 01 45 11.3 0.0
baz=84,SNR=34
X27A **F and S Farms,** 83.79 312 ⇑P P 01 45 11.7 0.0
baz=84
232A **Coleman** 83.86 308 ⇓P P 01 45 12.4 +0.5
baz=84,SNR=14
Y28A **McKinney Farm,** 83.86 311 ⇑P P 01 45 12.2 +0.2
baz=84,SNR=45
R20A **Redvale** 83.88 318 ⇓P P 01 45 12.6 +0.4
baz=84,SNR=53
PV04 **Paradox Valley** 83.99 318 eP P 01 45 12.9 +0.3
PV04 **Paradox Valley** 83.99 318 eP P 01 45 12.9 +0.3
S21A **Coal Bank Pass** 83.99 317 ⇓P P 01 45 13.4 +0.6
baz=84,SNR=86
QZH **Quanzhou** 84.01 62 i⇓P P 01 45 11.0 -1.7
QZH S S 01 55 29.0 -7.6
QZH pmax pmax
comp=Z,420nm,1.9s
QZH pmax pmax
comp=Z,4μm,10.1s
QZH LR LR
comp=N,12μm,12.8s
QZH LR LR
comp=E,22μm,15.5s
QZH LR LR
comp=Z,22μm,17.4s
PV01 **Paradox Valley** 84.02 318 eP P 01 45 13.1 +0.2
PV01 **Paradox Valley** 84.02 318 eP P 01 45 13.1 +0.2
MPU **Maple Canyon** 84.03 321 eP P 01 45 13.5 +0.6
comp=Z,36nm,1.0s
MPU **Maple Canyon** 84.03 321 eP P 01 45 13.5 +0.6
comp=Z,36nm,1.0s
T22A **Edith** 84.03 316 ⇑P P 01 45 13.9 +0.9
baz=84,SNR=85
P17A **Butcher Ranch,** 84.04 320 ⇑P P 01 45 12.5 -0.4
baz=84
Z29A **Hungry Hill Ra** 84.04 310 ⇑P P 01 45 12.9 0.0
baz=84,SNR=28
YUK **Yuzh-Kuril'sk** 84.05 32 i P P 01 45 08.3 -4.3
YUK i S S 01 55 29.1 -7.3
YUK pmax pmax
comp=Z,1μm,11.3s
YUK MLR MLR
comp=N,15μm,20.0s
YUK MLR MLR
comp=E,7μm,20.0s
YUK MLR MLR
comp=Z,37μm,20.0s
130A **Snyder** 84.10 309 ⇓P P 01 45 13.7 +0.5
baz=84,SNR=7.7
W25A **X Bar L Ranch,** 84.11 313 ⇑P P 01 45 14.0 +0.7
baz=84,SNR=59
MSTX **Muleshoe** 84.11 311 ⇓P P 01 45 13.3 +0.1
baz=84,SNR=16
S20A **Disappointment** 84.15 317 ⇑P P 01 45 14.2 +0.6
baz=84,SNR=38
V24A **Rampart Ranch,** 84.16 314 ⇓P P 01 45 14.7 +1.1
baz=84,SNR=44
U23A **El Rito** 84.19 315 ⇑P P 01 45 14.9 +1.1
baz=84,SNR=39
O15A **The Old Anders** 84.21 321 ⇑P P 01 45 14.2 +0.4
baz=84,SNR=24
231A **Bronte** 84.21 308 ⇑P P 01 45 14.6 +0.8
baz=84,SNR=26
SRU **San Rafael** 84.22 319 eP P 01 45 13.6 -0.2
SRU **San Rafael** 84.22 319 eP P 01 45 13.6 -0.2
SRU **San Rafael** 84.22 319 ⇓P P 01 45 13.8 -0.1
baz=84,SNR=92
SRU **San Rafael** 84.22 319 eP P 01 45 13.6 -0.2
X26A **CR and CF Fran** 84.25 312 ⇓P P 01 45 14.3 +0.2
baz=84,SNR=20
332A **Millersview** 84.28 308 ⇓P P 01 45 14.4 +0.4
baz=84,SNR=34
P16A **Fountain Green** 84.36 321 ⇑P P 01 45 15.1 +0.5
baz=84,SNR=19
T21A **Navajo Lake** 84.38 316 ⇑P P 01 45 15.3 +0.6
baz=84,SNR=21
Y27A **Causey** 84.39 312 ⇑P P 01 45 14.8 0.0
baz=84
TMUT **Trail Mountain** 84.40 320 eP P 01 45 15.1 +0.2
comp=Z,89nm,1.1s
TMUT **Trail Mountain** 84.40 320 eP P 01 45 15.1 +0.2
comp=Z,89nm,1.1s
Z28A **Tucker Farm, M** 84.40 311 ⇓P P 01 45 15.0 +0.2
baz=84,SNR=28

DUG **Dugway** 84.44 322 eP P 01 45 15.2 +0.3
DUG pmax pmax
comp=Z,98nm,1.3s
DUG MLR MLR
comp=Z,14μm,19.0s
DUG **Dugway** 84.44 322 eP P 01 45 15.2 +0.3
comp=Z,98nm,1.3s
DUG LR LR
comp=Z,14μm,19.0s
DUG **Dugway** 84.44 322 ⇑P P 01 45 15.2 +0.3
baz=84,SNR=41
DUG **Dugway** 84.44 322 eP P 01 45 15.2 +0.3
comp=Z,98nm,1.3s
U22A **Llaves** 84.50 316 ⇓P P 01 45 16.4 +1.1
baz=84,SNR=35
KULM **Kulim** 84.50 88 eP P 01 45 15.0 -0.4
comp=Z,191nm,1.5s
KULM LR LR
comp=Z,6μm,19.0s
KULM **Kulim** 84.50 88 P P 01 45 15.7 +0.3
comp=Z,101nm,1.6s,comp=Z,2μm
KULM **Kulim** 84.50 88 eP P 01 45 15.0 -0.4
comp=Z,191nm,1.5s
129A **Stewart Farms,** 84.59 310 ⇑P P 01 45 16.0 +0.3
baz=84,SNR=17
ERM **Erimo** 84.61 35 c iP P 01 45 15.2 -0.3
ERM pmax pmax
comp=Z,195nm,1.7s
ERM **Erimo** 84.61 35 eP P 01 45 16.5 +1.0
comp=Z,246nm,1.3s
ERM LR LR
comp=Z,42μm,20.0s
ERM **Erimo** 84.61 35 eP P 01 45 16.5 +1.0
comp=Z,246nm,1.3s
W24A **Lazy 6 Ranch,** 84.62 314 ⇓P P 01 45 16.8 +0.9
baz=84,SNR=63
V23A **Ortiz Mt. (NFS** 84.63 315 ⇑P P 01 45 17.4 +1.3
baz=84,SNR=26
432A **Menard** 84.68 307 ⇑P P 01 45 16.6 +0.5
baz=84,SNR=38
Q16A **Castle Valley** 84.68 320 ⇑P P 01 45 16.4 +0.2
baz=84,SNR=43
P15A **Leamington** 84.69 321 ⇓P P 01 45 16.4 +0.2
baz=84,SNR=24
MVCO **Mesa Verde** 84.70 317 eP P 01 45 16.8 +0.4
MVCO comp=Z,84nm,1.1s
MVCO LR LR
comp=Z,14μm,20.0s
MVCO **Mesa Verde** 84.70 317 ⇑P P 01 45 16.8 +0.4
baz=84,SNR=35
MVCO **Mesa Verde** 84.70 317 eP P 01 45 16.8 +0.4
comp=Z,84nm,1.1s
230A **Sterling City** 84.71 309 ⇓P P 01 45 16.8 +0.5
baz=84,SNR=17
Y26A **Elida** 84.73 312 ⇑P P 01 45 16.8 +0.4
baz=84,SNR=20
331A **San Angelo** 84.73 308 ⇑P P 01 45 17.2 +0.8
baz=84,SNR=41
X25A **Clemmons Ranch** 84.73 313 ⇓P P 01 45 17.0 +0.5
baz=84,SNR=30
TEIG **Tepich** 84.78 293 eP P 01 45 16.7 0.0
comp=Z,370nm,1.5s
TEIG LR LR
comp=Z,6μm,19.0s
TEIG **Tepich** 84.78 293 eP P 01 45 16.7 0.0
comp=Z,370nm,1.5s
Z27A **Tatum** 84.84 311 ⇑P P 01 45 17.1 0.0
baz=85,SNR=28
U21A **Nageezi** 84.87 316 ⇓P P 01 45 17.4 +0.2
baz=85,SNR=49
PSI **Prapat** 84.88 91 P P 01 45 16.6 -0.8
PSI **Prapat** 84.88 91 P P 01 45 16.4 -1.0
comp=Z,130nm,1.0s,comp=Z,3μm
PSI **Prapat** 84.88 91 P P 01 45 16.6 -0.8
comp=Z,59nm,0.7s,baz=298,slow=6.3,SNR=30
128A **Castleberry Fa** 84.95 310 ⇑P P 01 45 17.8 +0.2
baz=85,SNR=55
JCT **Junction City** 84.97 307 eP P 01 45 18.1 +0.5
JCT pmax pmax
comp=Z,314nm,1.6s
JCT MLR MLR
comp=Z,8μm,20.0s
JCT **Junction City** 84.97 307 eP P 01 45 18.1 +0.5
comp=Z,314nm,1.6s
JCT LR LR
comp=Z,8μm,20.0s
JCT **Junction City** 84.97 307 ⇓P P 01 45 18.1 +0.5
baz=85,SNR=38
JCT **Junction City** 84.97 307 eP P 01 45 18.0 +0.5
comp=Z,314nm,1.6s
ROSC **El Rosal** 85.02 272 P P 01 45 18.6 +0.1
ROSC **El Rosal** 85.02 272 P P 01 45 18.6 +0.1
comp=Z,8.9nm,0.5s,baz=111,slow=1.8,SNR=12
ROSC LR LR 02 19 12.1
comp=Z,10μm,21.7s,baz=13,slow=33
ROSC **El Rosal** 85.02 272 P P 01 45 18.6 +0.1
229A **Bryant Ranch,** 85.05 309 ⇑P P 01 45 18.7 +0.6
baz=85,SNR=19
W23A **Werner Place,** 85.05 314 ⇓P P 01 45 18.8 +0.6
baz=85,SNR=24
S18A **Hurst Farm, Bl** 85.07 318 ⇑P P 01 45 18.1 -0.1
baz=85,SNR=34
ELK **Elko** 85.09 323 eP P 01 45 19.4 +1.2
ELK **Elko** 85.09 323 eP P 01 45 19.5 +1.2
330A **Mertzon** 85.10 309 ⇑P P 01 45 18.8 +0.5
baz=85,SNR=37
X24A **Lazy VL Ranch,** 85.12 313 ⇓P P 01 45 19.3 +0.8
baz=85,SNR=15
COR **Corvallis** 85.13 330 eP P 01 45 19.3 +1.2
COR pmax pmax
comp=Z,186nm,1.5s
COR **Corvallis** 85.13 330 eP P 01 45 19.3 +1.2
comp=Z,186nm,1.5s
COR **Corvallis** 85.13 330 eP P 01 45 19.3 +1.2
comp=Z,186nm,1.5s
Y25A **Mesa, Roswell** 85.20 313 ⇓P P 01 45 19.0 +0.1
baz=85,SNR=43
532A **Rocksprings** 85.29 307 ⇑P P 01 45 19.7 +0.5
baz=85,SNR=58
431A **Sonora** 85.30 308 ⇑P P 01 45 20.1 +0.8
baz=85,SNR=71
Z26A **Caprock** 85.30 312 ⇓P P 01 45 19.9 +0.5
baz=85,SNR=99
IPM **Ipoh** 85.32 88 eP P 01 45 18.0 -1.5
comp=Z,119nm,1.3s
IPM **Ipoh** 85.32 88 P P 01 45 18.4 -1.1
IPM **Ipoh** 85.32 88 P P 01 45 18.2 -1.3
comp=Z,72nm,1.1s,comp=Z,2μm
IPM **Ipoh** 85.32 88 eP P 01 45 18.0 -1.5
comp=Z,119nm,1.3s
V21A **Milan** 85.34 316 ⇓P P 01 45 19.7 +0.1
baz=85
U20A **Newcomb** 85.36 317 ⇓P P 01 45 20.5 +0.9
baz=85
ANMO **Albuquerque** 85.38 314 eP P 01 45 20.4 +0.6
comp=Z,66nm,1.5s
ANMO LR LR
comp=Z,10μm,20.0s
ANMO **Albuquerque** 85.38 314 eP P 01 45 20.4 +0.6
comp=Z,66nm,1.5s
228A **UT Block 9, Go** 85.38 310 ⇓P P 01 45 19.6 -0.1
baz=85,SNR=17
127A **Arkansas Junct** 85.40 311 ⇓P P 01 45 20.0 +0.2
baz=85,SNR=10.0
CPRX **Cap Rock** 85.42 311 eP P 01 45 21.0 +1.1
comp=Z,137nm,1.2s
CPRX **Cap Rock** 85.42 311 eP P 01 45 21.0 +1.1
comp=Z,137nm,1.2s
MSU **Marysvale** 85.48 320 eP P 01 45 20.5 +0.2
MSU pmax pmax
comp=Z,71nm,1.3s
MSU **Marysvale** 85.48 320 eP P 01 45 20.5 +0.2
comp=Z,71nm,1.3s
MSU **Marysvale** 85.48 320 eP P 01 45 20.5 +0.2
comp=Z,71nm,1.3s
W22A **Albuquerque** 85.50 315 ⇑P P 01 45 20.9 +0.5
baz=85
329A **Wagon Wheel Ra** 85.50 309 ⇑P P 01 45 20.8 +0.5
baz=85,SNR=55
MVU **Marysvale** 85.50 320 eP P 01 45 21.0 +0.6
comp=Z,119nm,1.5s
MVU LR LR
comp=Z,8μm,19.0s
MVU **Marysvale** 85.50 320 eP P 01 45 21.0 +0.6
comp=Z,119nm,1.5s
X23A **Hourglass Bar** 85.52 314 ⇓P P 01 45 21.5 +1.0
baz=85
JNU **Nakatsue** 85.56 48 eP P 01 45 20.7 +0.2
comp=Z,131nm,1.4s
JNU **Nakatsue** 85.56 48 P P 01 45 20.2 -0.3
comp=Z,59nm,0.9s,baz=6.3,slow=1.6,SNR=15
JNU LR LR 02 28 40.5
comp=Z,24μm,19.3s,baz=302,slow=39
JNU **Nakatsue** 85.56 48 eP P 01 45 20.7 +0.2
comp=Z,131nm,1.4s
430A **Baggett Ranch,** 85.59 308 ⇓P P 01 45 21.6 +0.9
baz=85,SNR=72
Y24A **Capitan** 85.61 313 ⇓P P 01 45 21.6 +0.7
baz=85,SNR=41
531A **Rocksprings** 85.64 307 ⇓P P 01 45 21.4 +0.5
baz=85,SNR=69
632A **Uvalde** 85.67 306 ⇑P P 01 45 21.3 +0.3
baz=86,SNR=36
Z25A **Roswell** 85.70 312 ⇑P P 01 45 22.1 +0.8
baz=86,SNR=55
V20A **Brimhall** 85.77 316 ⇓P P 01 45 21.9 +0.2
baz=86,SNR=30
126A **Clayton Basin,** 85.79 311 ⇓P P 01 45 22.3 +0.6
baz=86,SNR=24
227A **Bennet, Jal** 85.86 310 ⇑P P 01 45 22.8 +0.7
baz=86,SNR=15
TATO **Taipei** 85.86 60 PFAKE 01 45 30.0 +8.0
TATO LR LR
comp=Z,8μm,19.0s
W21A **San Fidel** 85.88 315 ⇑P P 01 45 22.9 +0.6
baz=86
Y23A **Lovelace Mesa,** 85.94 313 ⇓P P 01 45 23.2 +0.7
baz=86,SNR=26
KVTX **Kingsville** 85.94 304 PFAKE 01 45 30.0 +7.6
KVTX LR LR
comp=Z,17μm,19.0s
LPM **Los Pinos Moun** 85.96 314 eP P 01 45 23.7 +1.0
comp=Z,54nm,1.5s
LPM **Los Pinos Moun** 85.96 314 eP P 01 45 23.7 +1.0
comp=Z,54nm,1.5s
YHNB **Yeheng** 86.00 60 eP P 01 45 23.8 +0.9
comp=Z,100nm,1.0s
YHNB LR LR
comp=Z,15μm,19.0s
YHNB **Yeheng** 86.00 60 eP P 01 45 23.8 +0.9
comp=Z,100nm,1.0s
X22A **Bernardo** 86.01 314 ⇑P P 01 45 23.9 +1.0
baz=86
Z24A **Sheeppen Canyo** 86.02 313 ⇓P P 01 45 23.9 +0.9
baz=86,SNR=24
328A **Wristen Ranch,** 86.05 310 ⇑P P 01 45 23.3 +0.3
baz=86,SNR=53
BNM **Barren Site** 86.08 314 eP P 01 45 24.3 +1.0
comp=Z,76nm,1.5s
BNM **Barren Site** 86.08 314 eP P 01 45 24.3 +1.0
comp=Z,76nm,1.5s
429A **Davenport Ranc** 86.09 309 ⇑P P 01 45 23.5 +0.3
baz=86,SNR=33
530A **J-C Ranch, Com** 86.11 308 ⇑P P 01 45 23.9 +0.6
baz=86,SNR=55
125A **Gardner Draw,** 86.14 312 ⇑P P 01 45 23.4 -0.1
baz=86,SNR=48
SAML **Samuel** 86.15 254 eP P 01 45 23.8 +0.3
comp=Z,305nm,1.4s
SAML LR LR
comp=Z,5μm,20.0s
SAML **Samuel** 86.15 254 eP P 01 45 23.8 +0.3
comp=Z,305nm,1.4s
LAZ **Ladron** 86.16 314 eP P 01 45 24.3 +0.7
comp=Z,48nm,1.6s
LAZ **Ladron** 86.16 314 eP P 01 45 24.3 +0.7
comp=Z,48nm,1.6s
631A **Perdido Creek** 86.21 307 ⇓P P 01 45 23.9 +0.2
baz=86,SNR=43
BMN **Battle Mountai** 86.21 324 eP P 01 45 23.4 -0.4
BMN pmax pmax
comp=Z,42nm,1.4s
BMN MLR MLR
comp=Z,9μm,21.0s
BMN **Battle Mountai** 86.21 324 eP P 01 45 23.4 -0.4
comp=Z,42nm,1.4s
BMN LR LR
comp=Z,9μm,21.0s
BMN **Battle Mountai** 86.21 324 eP P 01 45 23.4 -0.4
comp=Z,42nm,1.4s
BCIP **Isla Barro Col** 86.22 279 eP P 01 45 23.2 -0.7
comp=Z,476nm,1.6s
BCIP LR LR
comp=Z,3μm,22.0s
BCIP **Isla Barro Col** 86.22 279 eP P 01 45 23.2 -0.7
comp=Z,476nm,1.6s
LENM **Lemitar** 86.25 314 eP P 01 45 24.3 +0.2
comp=Z,25nm,1.2s
LENM **Lemitar** 86.25 314 eP P 01 45 24.3 +0.2
comp=Z,25nm,1.2s
MOD **Modoc** 86.27 327 eP P 01 45 24.5 +0.5
comp=Z,59nm,1.0s
MOD **Modoc** 86.27 327 eP P 01 45 24.5 +0.5
comp=Z,59nm,1.0s
SPB **Sao Paulo** 86.28 233 eP P 01 45 25.5 +1.6
comp=Z,122nm,1.4s
SPB LR LR
comp=Z,8μm,20.0s
SPB **Sao Paulo** 86.28 233 eP P 01 45 25.5 +1.6
comp=Z,122nm,1.4s
Y22D **IRIS PASSCAL I** 86.29 314 ⇓P P 01 45 25.1 +0.8
baz=86
226B **Tecolote Peak,** 86.30 311 ⇓P P 01 45 24.6 +0.3
baz=86,SNR=47
KTGM **Kuala Trenggan** 86.31 86 P P 01 45 24.6 +0.2
W20A **Ramah** 86.31 316 ⇑P P 01 45 24.8 +0.3
baz=86,SNR=21
GDL2 **Guadalupe Moun** 86.32 311 eP P 01 45 25.0 +0.6
comp=Z,71nm,0.9s
GDL2 **Guadalupe Moun** 86.32 311 eP P 01 45 25.0 +0.6
comp=Z,71nm,0.9s
732A **Laxson Ranch,** 86.34 306 ⇓P P 01 45 25.0 +0.6
baz=86
SSLB **Suanglung** 86.35 61 eP P 01 45 28.7 +4.2
comp=Z,204nm,1.4s
Y22A **Socorro** 86.42 314 ⇑P P 01 45 25.2 +0.3
baz=86
327A **Balmorhea Ranc** 86.45 310 ⇓P P 01 45 25.2 +0.3
baz=86
428A **Kincaid Ranch,** 86.47 309 ⇑P P 01 45 25.8 +0.7
baz=86,SNR=16
TPUB **Ta-pu** 86.48 62 eP P 01 45 25.4 +0.2
comp=Z,192nm,1.5s
Z23A **Rita Site, Whi** 86.54 313 ⇓P P 01 45 26.0 +0.5
baz=86,SNR=35
124A **Stringfield Ra** 86.55 312 ⇑P P 01 45 25.5 -0.1
baz=86,SNR=35
FRIM **Kepong** 86.59 89 P P 01 45 25.4 -0.4
225A **Deer Hill, Car** 86.64 311 ⇓P P 01 45 25.9 -0.2
baz=86,SNR=10
529A **Stev Forest Ra** 86.65 308 ⇓P P 01 45 26.7 +0.8
baz=86,SNR=75
ARUT **Antelope Range** 86.66 321 eP P 01 45 26.0 0.0
ARUT pmax pmax
comp=Z,108nm,1.7s
ARUT **Antelope Range** 86.66 321 eP P 01 45 26.0 0.0
comp=Z,108nm,1.7s
ARUT **Antelope Range** 86.66 321 eP P 01 45 26.0 0.0
comp=Z,108nm,1.7s
MNSI **Mandailing Nat** 86.70 92 P P 01 45 26.6 +0.3
HUMO **Hull Mountain** 86.70 329 eP P 01 45 26.1 +0.1
comp=Z,110nm,1.4s
HUMO **Hull Mountain** 86.70 329 eP P 01 45 26.0 +0.1
comp=Z,110nm,1.4s
Y21A **Point of Rocks** 86.74 314 ⇑P P 01 45 27.3 +0.7
baz=86
MAJO **Matsushiro** 86.75 41 eP P 01 45 25.3 -1.0
MAJO pmax pmax
comp=Z,129nm,1.3s
MAJO MLR MLR
comp=Z,46μm,19.0s
MAJO **Matsushiro** 86.75 41 eP P 01 45 25.3 -1.0
comp=Z,129nm,1.3s
MAJO LR LR
comp=Z,46μm,19.0s
MAJO **Matsushiro** 86.75 41 eP P 01 45 25.3 -1.0
comp=Z,129nm,1.3s
MAT **Matsushiro** 86.75 41 P P 01 45 25.5 -0.8
MAT S S 01 56 03.6 +0.2
MJAR **Matsushiro Arr** 86.75 41 P P 01 45 25.5 -0.8
MJAR **Matsushiro Arr** 86.75 41 P P 01 45 25.5 -0.8
comp=Z,10nm,0.8s,baz=308,slow=5.3,SNR=31
MJAR LR LR 02 28 32.2
comp=Z,40μm,18.7s,baz=320,slow=39
MJAR **Matsushiro Arr** 86.75 41 P P 01 45 25.5 -0.8
X20A **Quemado** 86.76 315 ⇑P P 01 45 27.2 +0.6

baz=86
326A **Caldwell Ranch** 86.77 310 ⇑P P 01 45 27.1 +0.6
baz=86,SNR=34
427A **Hayter Ranch,** 86.79 310 ⇓P P 01 45 27.1 +0.5
baz=87,SNR=40
CCUT **Cedar City** 86.81 320 *e*P P 01 45 27.6 +0.8
comp=Z,24nm,1.1s
CCUT **Cedar City** 86.81 320 *e*P P 01 45 27.6 +0.8
comp=Z,24nm,1.1s
YULB **Yu-li** 86.85 61 *e*P P 01 45 27.4 +0.4
comp=Z,108nm,1.4s
YULB **Yu-li** 86.85 61 *e*P P 01 45 27.4 +0.4
comp=Z,108nm,1.4s
Z22A **Elephant Butte** 86.94 314 ⇓P P 01 45 27.9 +0.5
baz=87,SNR=41
528A **Cox Ranch, San** 86.95 309 ⇑P P 01 45 27.7 +0.2
baz=87,SNR=60
W18A **Petrified Fore** 86.95 317 ⇑P P 01 45 27.6 +0.1
baz=87
KEBM **Edson Butte** 86.99 330 *e*P P 01 45 28.1 +0.7
comp=Z,150nm,1.4s
KEBM **Edson Butte** 86.99 330 *e*P P 01 45 28.1 +0.7
comp=Z,150nm,1.4s
123A **Bell Site, Whi** 87.04 313 ⇑P P 01 45 28.5 +0.6
baz=87
224A **Cornudas Mount** 87.06 312 ⇑P P 01 45 28.3 +0.2
baz=87,SNR=17
Y20A **Horse Springs,** 87.19 315 ⇓P P 01 45 29.0 +0.2
baz=87,SNR=18
U15A **North Rim** 87.19 319 ⇑P P 01 45 28.5 -0.3
baz=87,SNR=22
R11A **Troy Canyon, C** 87.19 322 ⇓P P 01 45 29.0 +0.4
baz=87
MNTX **Cornudas Mount** 87.26 312 *e*P P 01 45 28.5 -0.3
comp=Z,57nm,1.5s
MNTX LR LR
comp=Z,5µm,22.0s
MNTX **Cornudas Mount** 87.26 312 ⇑P P 01 45 28.8 -0.1
baz=87,SNR=34
MNTX **Cornudas Mount** 87.26 312 *e*P P 01 45 28.5 -0.3
comp=Z,57nm,1.5s
Z21A **St. Cloud Mine** 87.28 314 ⇑P P 01 45 29.8 +0.6
baz=87,SNR=13
426A **McDonald Obser** 87.28 310 ⇑P P 01 45 29.8 +0.6
baz=87,SNR=50
325A **Bean Ranch, Si** 87.28 311 ⇓P P 01 45 28.7 -0.5
baz=87
YBH **Yreka Blue Hor** 87.36 329 *e*P P 01 45 28.6 -0.6
comp=Z,41nm,1.3s
YBH **Yreka Blue Hor** 87.36 329 *e*P P 01 45 28.6 -0.6
comp=Z,41nm,1.3s
122A **Conniff Cattle** 87.39 313 ⇓P P 01 45 30.2 +0.6
baz=87
527A **Woodward Ranch** 87.43 309 ⇓P P 01 45 30.6 +0.7
baz=87
WUAZ **Wupatki** 87.46 318 *e*P P 01 45 29.9 -0.1
comp=Z,80nm,1.4s
WUAZ LR LR
comp=Z,13µm,20.0s
WUAZ **Wupatki** 87.46 318 ⇑P P 01 45 30.3 +0.4
baz=87,SNR=22
WUAZ **Wupatki** 87.46 318 *e*P P 01 45 29.9 -0.1
comp=Z,80nm,1.4s
628A **Black Gap, Mar** 87.51 308 ⇑P P 01 45 30.9 +0.8
baz=87,SNR=38
324A **Moseley Ranch,** 87.51 311 ⇑P P 01 45 29.9 -0.4
baz=87,SNR=32
KBO **Bosley Butte** 87.52 330 *e*P P 01 45 31.2 +1.2
comp=Z,123nm,1.5s
KBO **Bosley Butte** 87.52 330 *e*P P 01 45 31.2 +1.2
comp=Z,123nm,1.5s
X18A **Snowflake** 87.52 316 ⇑P P 01 45 30.3 0.0
baz=87
223A **Chaparral, Ant** 87.61 312 ⇑P P 01 45 31.7 +1.0
baz=87
425A **Indio Mountain** 87.73 311 ⇑P P 01 45 30.7 -0.6
baz=88
526A **Mary Lane Ranc** 87.77 310 ⇓P P 01 45 32.2 +0.7
baz=88,SNR=20
627A **Terlingua Ranc** 87.82 309 ⇑P P 01 45 32.3 +0.6
baz=88
222A **Williams Famil** 87.90 313 ⇑P P 01 45 32.9 +0.9
baz=88
Z20A **Nine Sixteen R** 87.92 315 ⇑P P 01 45 32.9 +0.7
baz=88,SNR=24
121A **Cookes Peak, D** 87.94 314 ⇑P P 01 45 32.7 +0.4
baz=88,SNR=12
KRMB **Red Mountain** 88.00 329 *e*P P 01 45 33.0 +0.7
comp=Z,68nm,1.3s
KRMB **Red Mountain** 88.00 329 *e*P P 01 45 33.0 +0.7
comp=Z,68nm,1.3s
TXAR **Lajitas Array** 88.07 309 P P 01 45 33.5 +0.6
TXAR PKKPab PKKPbc 02 03 24.6 +8.7
TXAR **Lajitas Array** 88.07 309 P P 01 45 33.5 +0.6
comp=Z,5.5nm,0.6s,baz=73,slow=3.3,SNR=38
TXAR PKKPab PKKPbc 02 03 24.6 +8.7
comp=Z,1.0nm,0.9s,baz=190,slow=5.0,SNR=4.3
TXAR LR LR 02 23 39.8
comp=Z,8µm,21.9s,baz=0.0,slow=35
TXAR **Lajitas Array** 88.07 309 P P 01 45 33.5 +0.6
BKNI **Bangkinang** 88.09 91 P P 01 45 34.3 +1.3
PPI **Padang Panjang** 88.14 92 P P 01 45 32.3 -0.9
TPH **Tonopah** 88.16 323 PFAKE 01 45 40.0 +6.7
TPH LR LR
comp=Z,13µm,19.0s
626A **Big Bend Ranch** 88.18 309 ⇑P P 01 45 34.0 +0.6
baz=88,SNR=16
WCN **Washoe City** 88.23 325 *e*P P 01 45 33.6 0.0
WCN pmax pmax
comp=Z,52nm,1.4s
WCN **Washoe City** 88.23 325 *e*P P 01 45 33.6 0.0
comp=Z,52nm,1.4s
WCN **Washoe City** 88.23 325 *e*P P 01 45 33.6 0.0
comp=Z,52nm,1.4s
NV11 **Mina Array Sit** 88.27 324 *e*P P 01 45 33.6 -0.1
NV11 **Mina Array Sit** 88.27 324 *e*P P 01 45 33.6 -0.1
WDC **Whiskeytown Da** 88.28 328 *e*P P 01 45 31.6 -1.9
WDC pmax pmax
comp=Z,17nm,1.0s
WDC **Whiskeytown Da** 88.28 328 *e*P P 01 45 31.6 -1.9
comp=Z,17nm,1.0s
TGUH **Tegucigalpa,Un** 88.29 287 *e*P P 01 45 33.4 -0.5
comp=Z,123nm,1.4s
TGUH LR LR
comp=Z,11µm,21.0s
TGUH **Tegucigalpa,Un** 88.29 287 *e*P P 01 45 33.4 -0.5
comp=Z,123nm,1.4s
221A **Mesquite Ranch** 88.34 313 ⇑P P 01 45 34.9 +0.7
baz=88
NVAR **Mina Array Bea** 88.34 324 P P 01 45 34.2 0.0
NVAR PKKPab PKKPbc 02 03 24.2 +8.5
NVAR **Mina Array Bea** 88.34 324 P P 01 45 34.2 0.0
comp=Z,4.6nm,0.7s,baz=50,slow=4.8,SNR=17
NVAR PKKPab PKKPbc 02 03 24.2 +8.5
comp=Z,1.9nm,0.8s,baz=185,slow=5.0,SNR=5.7
NVAR LR LR 02 26 23.9
comp=Z,12µm,18.4s,baz=236,slow=37
NVAR **Mina Array Bea** 88.34 324 P P 01 45 34.2 0.0
X16A **Lo Mia Camp, P** 88.37 317 ⇑P P 01 45 34.5 +0.2
baz=88
120A **U Bar Ranch, L** 88.38 314 ⇓P P 01 45 34.6 +0.2
baz=88
KHMM **Horse Mountain** 88.49 329 *e*P P 01 45 35.3 +0.6
comp=Z,57nm,1.0s
KHMM **Horse Mountain** 88.49 329 *e*P P 01 45 35.3 +0.6
comp=Z,57nm,1.0s
KGM **Kluang** 88.66 89 P P 01 45 34.7 -1.0
JOW **Kunigami** 88.73 54 *e*P P 01 45 34.1 -1.8
comp=Z,168nm,1.6s
JOW **Kunigami** 88.73 54 P P 01 45 35.8 -0.2
comp=Z,46nm,0.8s,baz=321,slow=10,SNR=7.3
JOW LR LR 02 29 07.4
comp=Z,41µm,19.4s,baz=143,slow=38
JOW **Kunigami** 88.73 54 *e*P P 01 45 34.1 -1.8
comp=Z,168nm,1.6s
220A **Playas Peak, P** 88.82 314 ⇑P P 01 45 36.8 +0.3
baz=89,SNR=9.4
W13A **Hualapai Mount** 89.03 319 ⇓P P 01 45 37.7 +0.3
baz=89,SNR=19
GRAC **Grapevine Rang** 89.11 323 ⇓P P 01 45 38.3 +0.7
baz=89
JTS **JuntasAbangare** 89.18 283 *e*P P 01 45 37.6 -0.6
comp=Z,14nm,1.0s
JTS LR LR
comp=Z,8µm,20.0s
JTS **JuntasAbangare** 89.18 283 *e*P P 01 45 37.6 -0.6
comp=Z,14nm,1.0s
MYKOM **Kota Tinggi** 89.20 88 P P 01 45 38.2 0.0
MYKOM **Kota Tinggi** 89.20 88 P P 01 45 38.5 +0.3
MLAC **Mammoth Lakes** 89.23 324 ⇑P P 01 45 38.6 +0.2
baz=89
320A **Kipp Ranch, An** 89.26 313 ⇓P P 01 45 39.1 +0.6
baz=89,SNR=26
KIPM **Iron Peak** 89.31 328 *e*P P 01 45 38.5 -0.1
comp=Z,90nm,1.1s
KIPM **Iron Peak** 89.31 328 *e*P P 01 45 38.5 -0.1
comp=Z,90nm,1.1s
FURC **Furnace Creek,** 89.31 322 ⇑P P 01 45 39.1 +0.7
baz=89
BTDF **Bukit Timah Da** 89.43 89 P P 01 45 38.6 -0.7
TIN **Tinemaha** 89.45 323 ⇑P P 01 45 39.6 +0.4
baz=89
KCPM **Cahto Peak** 89.45 328 *e*P P 01 45 39.2 0.0
comp=Z,54nm,1.2s
KCPM **Cahto Peak** 89.45 328 *e*P P 01 45 39.2 0.0
comp=Z,54nm,1.2s
RGRI **Rengat** 89.50 91 P P 01 45 40.1 +0.4
SHOC **Shoshone** 89.52 321 ⇓P P 01 45 39.8 +0.4
baz=89
Y14A **Wickenburg** 89.53 318 ⇑P P 01 45 40.0 +0.4
baz=89,SNR=12
CMB **Columbia Colle** 89.56 325 *e*P P 01 45 40.0 +0.3
CMB pmax pmax
comp=Z,39nm,1.3s
CMB **Columbia Colle** 89.56 325 *e*P P 01 45 40.0 +0.3
comp=Z,39nm,1.3s
CMB **Columbia Colle** 89.56 325 *e*P P 01 45 40.0 +0.3
comp=Z,39nm,1.3s
319A **Douglas** 89.63 314 ⇓P P 01 45 40.7 +0.5
baz=89,SNR=15
LDFC **Landfair** 89.64 320 *e*P P 01 45 41.2 +1.0
comp=Z,76nm,1.2s
LDFC **Landfair** 89.64 320 *e*P P 01 45 41.2 +1.0
comp=Z,76nm,1.2s
NEE2 **Needles Airpor** 89.65 320 ⇑P P 01 45 40.4 +0.3
baz=89
TUC **Tucson** 89.69 315 *e*P P 01 45 40.7 +0.2
TUC pmax pmax
comp=Z,88nm,1.4s
TUC MLR MLR
comp=Z,17µm,22.0s
TUC **Tucson** 89.69 315 *e*P P 01 45 40.7 +0.2
comp=Z,88nm,1.4s
TUC LR LR
comp=Z,17µm,22.0s
TUC **Tucson** 89.69 315 *e*P P 01 45 40.7 +0.2
comp=Z,88nm,1.4s
TUQ **Turquoise Moun** 89.73 321 ⇑P P 01 45 40.9 +0.2
baz=90
PDMCI **Parker Dam,Lak** 89.80 319 ⇓P P 01 45 41.6 +0.8
baz=90,SNR=18
DAC **Darwin (Calif)** 89.81 322 PFAKE 01 45 50.0 +8.9
DAC LR LR
comp=Z,12µm,19.0s
HOPS **Hopland** 89.85 327 *e*P P 01 45 41.2 +0.3
comp=Z,134nm,1.3s
HOPS **Hopland** 89.85 327 *e*P P 01 45 41.2 +0.3
comp=Z,134nm,1.3s
CWC **Cottonwood Cre** 89.89 323 ⇑P P 01 45 41.7 +0.3
baz=90
MPMC **Manual Prospec** 89.94 322 ⇓P P 01 45 41.9 +0.3
baz=90,SNR=15
Z14A **Wintersburg** 89.96 318 ⇑P P 01 45 42.0 +0.5
baz=90,SNR=10
KRJI **Kerinci** 90.02 93 P P 01 45 42.5 +0.3
GMRC **Granite Mounta** 90.14 320 ⇑P P 01 45 43.1 +0.6
baz=90,SNR=10
GSC **Goldstone** 90.25 321 *e*P P 01 45 43.4 +0.4
GSC pmax pmax
comp=Z,22nm,1.2s
GSC **Goldstone** 90.25 321 *e*P P 01 45 43.4 +0.4
comp=Z,22nm,1.2s
GSC **Goldstone** 90.25 321 ⇓P P 01 45 43.2 +0.1
baz=90,SNR=14
GSC **Goldstone** 90.25 321 *e*P P 01 45 43.4 +0.4
comp=Z,22nm,1.2s
JHJ **Hachijo jima 2** 90.26 42 LR LR 02 30 46.6
comp=Z,33µm,20.2s,baz=26,slow=39
IRM **Iron Mountain** 90.40 320 ⇑P P 01 45 44.2 +0.5
baz=90,SNR=26
HEC **Hector,Ludlow** 90.42 321 ⇓P P 01 45 44.1 +0.3
baz=90
Y12C **Blythe** 90.43 319 ⇓P P 01 45 44.4 +0.7
baz=90,SNR=11
LRMC **Laurel Mountai** 90.51 322 ⇑P P 01 45 44.2 -0.1
baz=90
RRX **Edison Barstow** 90.69 321 ⇑P P 01 45 45.3 +0.4
baz=90
ISA **Isabella** 90.71 323 *e*P P 01 45 45.5 +0.4
ISA pmax pmax
comp=Z,62nm,1.4s
ISA **Isabella** 90.71 323 *e*P P 01 45 45.5 +0.4
comp=Z,62nm,1.4s
ISA **Isabella** 90.71 323 ⇑P P 01 45 45.5 +0.4
baz=90,SNR=10
ISA **Isabella** 90.71 323 *e*P P 01 45 45.5 +0.4
comp=Z,62nm,1.4s
VES **Vestal, Richgr** 90.84 323 ⇓P P 01 45 46.1 +0.5
baz=91
113A **Mohawk Valley,** 90.85 318 ⇓P P 01 45 45.9 +0.2
baz=91,SNR=15
BELC **Belle Mtn. Jos** 90.94 320 ⇓P P 01 45 46.8 +0.5
baz=91,SNR=14
BC3 **Big Chuckawall** 90.96 319 ⇑P P 01 45 46.7 +0.4
baz=91,SNR=15
214A **Organ Pipe Nat** 91.02 317 ⇑P P 01 45 46.5 -0.1
baz=91
EDW2 **Edwards Air Fo** 91.14 322 ⇓P P 01 45 47.6 +0.4
baz=91,SNR=6.1
GLA **Glamis** 91.14 319 *e*P P 01 45 47.2 +0.1
GLA pmax pmax
comp=Z,40nm,1.3s
GLA **Glamis** 91.14 319 *e*P P 01 45 47.2 +0.1
comp=Z,40nm,1.3s
GLA **Glamis** 91.14 319 ⇓P P 01 45 47.5 +0.4
baz=91,SNR=11
GLA **Glamis** 91.14 319 *e*P P 01 45 47.2 +0.1
comp=Z,40nm,1.3s
OTAV **Otavalo** 91.15 271 *e*P P 01 45 47.9 0.0
comp=Z,362nm,1.4s
OTAV LR LR
comp=Z,7µm,22.0s
OTAV **Otavalo** 91.15 271 *e*P P 01 45 47.9 0.0
comp=Z,362nm,1.4s
PFO **Pinyon Flat Ob** 91.47 320 *e*P P 01 45 47.9 -0.9
comp=Z,39nm,1.0s
PFO LR LR
comp=Z,14µm,19.0s
PFO **Pinyon Flat Ob** 91.47 320 ⇓P P 01 45 49.1 +0.4
baz=91,SNR=20
PFO **Pinyon Flat Ob** 91.47 320 *e*P P 01 45 47.9 -0.9
comp=Z,39nm,1.0s
BFSC **Mount Baldy Ra** 91.52 321 ⇓P P 01 45 49.1 +0.1
baz=91
OSI **Osito Adit** 91.70 322 *e*P P 01 45 51.3 +1.6
comp=Z,30nm,1.0s
OSI **Osito Adit** 91.70 322 *e*P P 01 45 51.3 +1.6
comp=Z,30nm,1.0s
SWSC **Sam W. Stewart** 91.70 319 ⇑P P 01 45 50.1 +0.4
baz=91
MURC **Murrieta** 91.83 321 ⇑P P 01 45 50.9 +0.6
baz=92,SNR=8.9
PKM **Peak Mountain** 91.95 323 ⇑P P 01 45 51.5 +0.5
baz=92,SNR=6.4
MONP **Monument Peak** 92.05 320 ⇑P P 01 45 52.2 +0.6
baz=92,SNR=15
DVTC **Desert V Tower** 92.08 319 ⇑P P 01 45 52.1 +0.6
baz=92
BAR **Barrett** 92.34 320 *e*P P 01 45 52.6 -0.1
comp=Z,36nm,1.2s
BAR **Barrett** 92.34 320 *e*P P 01 45 52.6 -0.1
comp=Z,36nm,1.2s
CIS **Catalina Islan** 92.56 321 ⇑P P 01 45 53.9 +0.2
baz=92
COCO **West Island** 93.39 103 PFAKE 01 46 10.0 +12
COCO LR LR
comp=Z,5µm,19.0s
KSM **Kuching** 94.19 84 PFAKE 01 46 10.0 +8.6
KSM LR LR
comp=Z,8µm,22.0s
KSM **Kuching** 94.19 84 P P 01 46 01.5 +0.1
KSM **Kuching** 94.19 84 P P 01 46 01.3 -0.1
CPUP **Villa Florida** 94.35 238 P P 01 46 02.5 +0.8
CPUP **Villa Florida** 94.35 238 P P 01 46 02.5 +0.8
comp=Z,0.8nm,0.6s,baz=0.0,slow=6.1,SNR=2.8
CPUP LR LR 02 31 14.7
comp=Z,9µm,19.4s,baz=29,slow=37
CPUP **Villa Florida** 94.35 238 P P 01 46 02.5 +0.8
LPAZ **La Paz** 94.67 252 *e*P P 01 46 02.8 -1.4
comp=Z,21nm,1.1s
LPAZ *e*PP PP 01 49 50.9 -1.8
LPAZ **La Paz** 94.67 252 P P 01 46 03.3 -0.9
comp=Z,12nm,0.9s,baz=40,slow=8.5,SNR=15
LPAZ PP PP 01 49 51.4 -1.2
comp=Z,8.4nm,1.3s,baz=53,slow=9.7,SNR=6.3
LPAZ LR LR 02 24 53.5
comp=Z,4µm,20.6s,baz=44,slow=33
LPAZ **La Paz** 94.67 252 *e*P P 01 46 02.8 -1.4
comp=Z,21nm,1.1s
SBUM **Sibu** 94.94 82 P P 01 46 04.2 -0.7
BTM **Bintulu** 95.06 81 P P 01 46 15.5 +10
KKM **Kota Kinabalu** 95.41 77 PFAKE 01 46 20.0 +13
KKM LR LR
comp=Z,12µm,22.0s
CBIJ **Chichi jima** 96.33 44 PP PP 01 50 04.1 +0.3
CBIJ **Chichi jima** 96.33 44 PP PP 01 50 04.1 +0.3
comp=Z,35nm,0.2s,baz=278,slow=23,SNR=11
CBIJ LR LR 02 34 08.7
comp=Z,11µm,19.3s,baz=150,slow=38
CBIJ **Chichi jima** 96.33 44 PP PP 01 50 04.1 +0.3
ARE **Arequipa** 97.17 254 *e*P P 01 46 14.0 -1.2
ARE **Arequipa** 97.17 254 *e*P P 01 46 14.0 -1.2
ARE **Arequipa** 97.17 254 *e*P P 01 46 14.0 -1.2
MYLDM **Lahad Datu** 97.65 76 P Pdif 01 46 28.6 +11
TSM **Tawau** 97.80 77 P Pdif 01 46 30.2 +12
NNA **Nana** 98.08 261 *e*P P 01 46 18.6 -0.5
comp=Z,22nm,1.0s
NNA LR LR
comp=Z,7µm,22.0s
NNA **Nana** 98.08 261 *e*P P 01 46 18.6 -0.5
comp=Z,22nm,1.0s
LVC **Limon Verde** 99.45 248 *e*P Pdif 01 46 25.8 +0.6
comp=Z,2.8nm,1.4s
LVC LR LR
comp=Z,150nm,22.0s
LVC **Limon Verde** 99.45 248 *e*P Pdif 01 46 25.8 +0.6
comp=Z,2.8nm,1.4s
PAYG **Puerto Ayora** 100.50 279 PFAKE 01 46 40.0 +10
PAYG LR LR
comp=Z,2µm,22.0s
DAV **Davao City (W)** 101.33 70 PFAKE 01 46 40.0 +6.4
DAV LR LR
comp=Z,12µm,19.0s
PAF **Port-aux-Franc** 104.08 146 PFAKE 01 46 50.0 +5.2
PAF LR LR
comp=Z,7µm,20.0s
LCO **Las Campanas** 104.85 244 PFAKE 01 47 00.0 +11
LCO LR LR
comp=Z,8µm,20.0s
TRQA **Tornquist** 105.29 232 PFAKE 01 51 10.0
TRQA LR LR
comp=Z,6µm,22.0s
KAPI **Kappang** 105.49 83 *e*Pdif Pdif 01 46 47.9 -4.2
comp=Z,53nm,1.7s
KAPI PP PP 01 51 13.6 -0.4
KAPI LR LR
comp=Z,4µm,22.0s
KAPI **Kappang** 105.49 83 PP PP 01 51 13.6 -0.4
comp=Z,15nm,1.1s,baz=56,slow=3.0,SNR=3.8
GUMO **Guam** 108.73 50 PFAKE 01 51 20.0
GUMO LR LR
comp=Z,8µm,20.0s
MIDW **Midway** 109.08 10 PFAKE 01 51 20.0
MIDW LR LR
comp=Z,6µm,19.0s
PLCA **Paso Flores** 112.11 235 *e*PKP 01 51 15.2
EFI **East Falkland** 112.21 220 PFAKE 01 51 30.0
EFI LR LR
comp=Z,9µm,22.0s
WAKE **Wake Island** 113.90 28 PFAKE 01 51 30.0
WAKE LR LR
comp=Z,12µm,21.0s
VNA2 **Neumayer--Watz** 113.97 187 *e*P Pdif 01 47 27.6 -0.7
baz=1.2,slow=3.7
VNA2 **Neumayer--Watz** 113.97 187 *e*PKiKP PKiKP 01 51 15.1 -4.7
baz=1.2,slow=3.7
VNA2 **Neumayer--Watz** 113.97 187 *e*PP PP 01 52 15.4 +0.7
baz=1.2,slow=3.7
VNA2 **Neumayer--Watz** 113.97 187 *e*PKKP PKKPbc 02 02 03.7 +0.9
baz=1.2,slow=3.7
SNAA **Sanae** 114.31 186 *e*PKiKP PKPdf 01 51 16.4 -4.1
SNAA **Sanae** 114.31 186 *e*PP PP 01 52 17.6 +0.4
SNAA **Sanae** 114.31 186 *e*PKP PKPdf 01 51 17.2 -3.3
SNAA *e*PP PP 01 52 13.2 -4.0
SNAA PP PP 01 52 18.2 +1.0
SNAA **Sanae** 114.31 186 PKP PKPdf 01 51 22.2 +1.7
comp=Z,0.9nm,0.9s,baz=180,slow=3.0,SNR=4.6
SNAA PP PP 01 52 18.2 +1.0
comp=Z,9.6nm,1.2s,baz=354,slow=12,SNR=3.6
VNA3 **Neumayer Olymp** 114.50 188 *e*PKiKP PKPdf 01 51 16.1 -4.7
VNA3 **Neumayer Olymp** 114.50 188 *e*PP PP 01 52 17.1 -1.3
VNA3 **Neumayer Olymp** 114.50 188 *e*PKKP 02 02 03.9
MBWA **Marble Bar** 115.87 96 PFAKE 01 51 30.0 +5.0
MBWA LR LR
comp=Z,4µm,22.0s
KIP **Kipapa** 116.03 351 PFAKE 01 51 30.0 +4.6
KIP LR LR
comp=Z,6µm,22.0s
POHA **Pohakuloa** 117.33 348 PFAKE 01 51 40.0 +12
POHA LR LR
comp=Z,6µm,21.0s
FITZ **Fitzroy Crossi** 118.36 89 PKP PKPdf 01 51 29.5 -0.3
FITZ PP PP 01 52 42.3 -4.0
FITZ **Fitzroy Crossi** 118.36 89 PKP PKPdf 01 51 29.5 -0.3
comp=Z,12nm,1.0s,baz=327,slow=1.4,SNR=21
FITZ PP PP 01 52 42.3 -4.0
comp=Z,8.4nm,1.1s,baz=332,slow=8.4,SNR=5.3
FITZ **Fitzroy Crossi** 118.36 89 PKIKP PKPdf 01 51 29.5 -0.3
NWAO **Narrogin (SRO)** 120.87 108 PKP PKPdf 01 51 35.9 +1.6
NWAO LR LR
comp=Z,4µm,20.0s
NWAO **Narrogin (SRO)** 120.87 108 PKP PKPdf 01 51 35.9 +1.6
comp=Z,6.9nm,0.5s,baz=298,slow=1.5,SNR=7.6
NWAO **Narrogin (SRO)** 120.87 108 PKIKP PKPdf 01 51 35.9 +1.6
JOHN **Johnston Islan** 121.14 3 PFAKE 01 51 40.0 +4.7
JOHN LR LR
comp=Z,3.0nm,20.0s
PMSA **Palmer Station** 122.49 210 PFAKE 01 51 50.0 +14
PMSA LR LR
comp=Z,6µm,21.0s
WRA **Warramunga Arr** 125.94 85 PKP PKPdf 01 51 43.9 -0.5
WRA PP PP 01 53 33.6 -4.2
WRA SKKPbc SKKPbc 02 05 16.2 +9.1
WRA **Warramunga Arr** 125.94 85 PKP PKPdf 01 51 43.9 -0.5
comp=Z,4.4nm,0.6s,baz=300,slow=2.1,SNR=17
WRA PP PP 01 53 33.6 -4.2
comp=Z,6.6nm,1.1s,baz=311,slow=6.0,SNR=4.5
WRA SKKPbc SKKPbc 02 05 16.2 +9.1
comp=Z,2.8nm,1.0s,baz=130,slow=3.7,SNR=5.6
WRA **Warramunga Arr** 125.94 85 PKIKP PKPdf 01 51 43.9 -0.5
WRAB **Tennant Creek** 125.94 85 *e*PKIKP PKPdf 01 51 44.0 -0.4
WRAB MLR MLR
comp=Z,5µm,21.0s
WRAB **Tennant Creek** 125.94 85 *e*PKPdf PKPdf 01 51 44.0 -0.4
WRAB LR LR
comp=Z,5µm,21.0s
WRAB **Tennant Creek** 125.94 85 *e*PKIKP PKPdf 01 51 44.0 -0.4
FORT **Forrest** 127.50 100 *e*PKPdf PKPdf 01 51 46.2 -0.8
FORT **Forrest** 127.50 100 *e*PKIKP PKPdf 01 51 46.2 -0.8
AS31 **Alice Springs** 127.86 89 *e*PKPdf PKPdf 01 51 48.2 +0.2
AS31 **Alice Springs** 127.86 89 *e*PKIKP PKPdf 01 51 48.2 +0.2
ASAR **Alice Springs** 127.86 89 PKPpre PKPpre 01 51 32.1
ASAR PKP PKPdf 01 51 47.0 -1.0
ASAR PP PP 01 53 48.9 -1.6
ASAR **Alice Springs** 127.86 89 PKhKP PKPpre 01 51 32.1
comp=Z,0.3nm,0.6s,baz=309,slow=3.3,SNR=2.8
ASAR PKP PKPdf 01 51 47.0 -1.0
comp=Z,6.3nm,0.5s,baz=312,slow=1.5,SNR=38
ASAR PP PP 01 53 48.9 -1.6
comp=Z,3.1nm,0.9s,baz=307,slow=5.5,SNR=4.3
PMG **Port Moresby** 127.99 65 *e*PKPdf PKPdf 01 51 48.0 -0.5
PMG LR LR
comp=Z,5µm,22.0s
PMG **Port Moresby** 127.99 65 PKP PKPdf 01 51 50.1 +1.7
PMG **Port Moresby** 127.99 65 PKP PKPdf 01 51 47.9 -0.5
comp=Z,8.3nm,0.6s,baz=333,slow=2.3,SNR=5.0
PMG **Port Moresby** 127.99 65 *e*PKIKP PKPdf 01 51 48.0 -0.5
COEN **Coen** 128.46 72 *e*PKPdf PKPdf 01 51 48.8 -0.5
COEN **Coen** 128.46 72 *e*PKIKP PKPdf 01 51 48.8 -0.5
CASY **Casey** 130.67 148 PFAKE 01 52 00.0 +8.1
CASY LR LR

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,6µm,21.0s						
RPN	Rapa Nui	131.37	269	PFAKE		01 52 00.0	+5.5
RPN				LR	LR		
	comp=Z,3µm,22.0s						
QSPA	South Pole Qui	132.23	180	ePKPdf	PKPdf	01 51 54.2	-0.7
QSPA				LR	LR		
	comp=Z,6µm,19.0s						
QSPA	South Pole Qui	132.23	180	ePKIKP	PKPdf	01 51 54.2	-0.7
TARA	Tarawa	132.74	28	PFAKE		01 52 10.0	+12
TARA				LR	LR		
	comp=Z,7µm,19.0s						
CTA	Charters Tower	134.72	76	PKPpre	PKPpre	01 51 54.8	
CTA				PKP	PKiKP	01 52 04.1	+1.6
CTA	Charters Tower	134.72	76	PKhKP	PKPpre	01 51 54.8	
	comp=Z,4.1nm,0.9s,baz=309,slow=3.0,SNR=3.6						
CTA				PKP	PKiKP	01 52 04.1	+1.6
	comp=Z,29nm,0.9s,baz=291,slow=3.1,SNR=10						
CTAO	Charters Tower	134.72	76	ePKIKP	PKPdf	01 52 02.1	+1.0
CTAO				MLR	MLR		
	comp=Z,4µm,21.0s						
CTAO	Charters Tower	134.72	76	ePKPdf	PKPdf	01 52 02.0	+1.0
CTAO				LR	LR		
	comp=Z,4µm,21.0s						
CTAO	Charters Tower	134.72	76	ePKIKP	PKPdf	01 52 02.0	+1.0
XMAS	Kiritimati	135.01	347	PFAKE		01 52 10.0	+8.2
XMAS				LR	LR		
	comp=Z,7µm,19.0s						
HNR	Honiara	136.05	51	PFAKE		01 52 10.0	+6.3
HNR				LR	LR		
	comp=Z,6µm,20.0s						
STKA	Stephens Creek	138.02	93	PKPpre	PKPpre	01 51 56.9	
STKA				ePKPdf	PKPdf	01 52 02.5	-4.3
STKA				PKP	PKiKP	01 52 09.4	+0.6
STKA	Stephens Creek	138.02	93	PKhKP	PKPpre	01 51 56.9	
	comp=Z,1.0nm,0.4s,baz=358,slow=2.2,SNR=5.8						
STKA				PKP	PKiKP	01 52 09.4	+0.6
	comp=Z,15nm,0.9s,baz=1.6,slow=2.7,SNR=9.3						
DRV	Dumont d'Urvil	142.40	148	PP	PP	01 56 06.0	+45
VNDA	Vanda	142.45	169	PKPpre	PKPpre	01 52 09.6	
VNDA				ePKPdf	PKPdf	01 52 11.1	-2.4
VNDA	Vanda	142.45	169	PKhKP	PKPpre	01 52 09.6	
	comp=Z,2.1nm,0.6s,baz=286,slow=3.1,SNR=13						
SBA	Scott Base	142.81	171	ePKIKP	PKPdf	01 52 12.2	-1.9
SBA				e		01 55 21.1	
SBA				MLR	MLR		
	comp=Z,5µm,20.0s						
SBA	Scott Base	142.81	171	ePKPdf	PKPdf	01 52 12.2	-1.9
SBA				ePP	PP	01 55 21.1	-2.5
SBA				LR	LR		
	comp=Z,5µm,20.0s						
ARMA	Armidale	144.72	84	ePKPdf	PKPbc	01 52 18.4	+0.4
ARMA	Armidale	144.72	84	ePKIKP	PKPbc	01 52 18.4	+0.5
CAN	Canberra	145.09	93	ePKIKP	PKPdf	01 52 21.4	+2.0
CAN				MLR	MLR		
	comp=Z,5µm,20.0s						
CAN	Canberra	145.09	93	ePKPbc	PKPdf	01 52 21.4	+2.0
CAN				LR	LR		
	comp=Z,5µm,20.0s						
TAU	Tasmania Unive	146.48	107	ePKP2	PKPdf	01 52 22.1	+0.7
TAU				MLR	MLR		
	comp=Z,5µm,21.0s						
TAU	Tasmania Unive	146.48	107	ePKPbc	PKPdf	01 52 22.1	+0.7
TAU				LR	LR		
	comp=Z,5µm,21.0s						
TAU	Tasmania Unive	146.48	107	ePKPbc	PKPdf	01 52 22.1	+0.7
RKT	Rikitea	147.41	296	ePKPbc	PKPdf	01 52 21.5	-2.1
	comp=Z,334nm,1.4s						
RKT				eSS	SS	02 14 56.3	+1.9
	comp=Z,2µm,31.2s						
RKT				eLR	LR	02 41 11.4	
	comp=Z,5µm,31.0s						
RKT	Rikitea	147.41	296	ePKIKP	PKPdf	01 52 21.5	-2.1
RKT	Rikitea	147.41	296	ePKPbc	PKPdf	01 52 21.5	-2.1
PMOR	Pomariorio Ree	148.29	324	ePKPbc	PKPdf	01 52 25.0	-0.2
	comp=Z,414nm,1.4s						
PMOR	Pomariorio Ree	148.29	324	ePKPbc	PKPdf	01 52 25.0	-0.2
VAH	Vaihoa	148.38	323	ePKPbc	PKPdf	01 52 25.2	-0.2
	comp=Z,494nm,1.4s						
VAH	Vaihoa	148.38	323	ePKPbc	PKPdf	01 52 25.2	-0.2
NOUC	Port Laguerre	149.70	57	eP	PKPbc	01 52 33.4	+1.3
DZM	Mont Dzumac	149.77	56	ePKPbc	PKPdf	01 52 28.4	+0.8
	comp=Z,1µm,24.4s						
DZM				eLR	LR	02 41 59.8	
	comp=Z,11µm,21.9s						
DZM	Mont Dzumac	149.77	56	eP	PKPbc	01 52 32.9	+0.5
DZM	Mont Dzumac	149.77	56	ePKPbc	PKPbc	01 52 31.6	-0.7
DZM				ePKPab	PKPab	01 52 37.3	-0.4
DZM	Mont Dzumac	149.77	56	PKPbc	PKPbc	01 52 32.2	-0.2
	comp=Z,62nm,1.0s,baz=94,slow=9.9,SNR=15						
DZM	Mont Dzumac	149.77	56	ePKPbc	PKPbc	01 52 31.6	-0.7
MEH	Mehetia	150.89	321	ePKPbc	PKPdf	01 52 30.8	+1.4
	comp=Z,184nm,1.1s						
MEH	Mehetia	150.89	321	ePKPbc	PKPdf	01 52 30.8	+1.4
PPT	Papeete	151.29	324	PKPbc	PKPbc	01 52 35.0	-1.0
PPT	Papeete	151.29	324	PKPbc	PKPbc	01 52 35.0	-1.0
	comp=Z,26nm,0.8s,baz=40,slow=22,SNR=2.2						
PPT	Papeete	151.29	324	PKPbc	PKPbc	01 52 35.0	-1.0
AFI	Afiamalu	151.30	10	ePKPbc	PKPbc	01 52 34.8	-1.4
AFI				ePKPab	PKPab	01 52 40.7	-3.4
AFI				LR	LR		
	comp=Z,4µm,20.0s						
AFI	Afiamalu	151.30	10	PKPbc	PKPbc	01 52 34.9	-1.2
	comp=Z,12nm,0.3s,baz=292,slow=5.4,SNR=2.7						
AFI	Afiamalu	151.30	10	ePKPbc	PKPbc	01 52 34.8	-1.4
PPT2	Papeete2	151.31	324	ePKPbc	PKPdf	01 52 32.6	+2.5
	comp=Z,235nm,1.4s						
PPT2				eSS	SS	02 15 42.6	+5.6
	comp=Z,2µm,26.0s						
PPT2				eLR	LR	02 43 05.6	
	comp=Z,6µm,22.5s						
TVO	Taravao	151.34	323	ePKPbc	PKPdf	01 52 32.6	+2.5
	comp=Z,519nm,1.4s						
TVO	Taravao	151.34	323	ePKIKP	PKPdf	01 52 32.6	+2.5
TVO	Taravao	151.34	323	ePKPbc	PKPdf	01 52 32.6	+2.5
PAE	Paea	151.38	324	ePKPbc	PKPdf	01 52 32.4	+2.3
	comp=Z,30nm,1.3s						
PAE	Paea	151.38	324	ePKIKP	PKPdf	01 52 32.4	+2.3
PAE	Paea	151.38	324	ePKPbc	PKPdf	01 52 32.4	+2.3
MSVF	Nonsavu	152.21	33	ePKIKP	PKPbc	01 52 38.7	+0.6
MSVF				MLR	MLR		
	comp=Z,7µm,20.0s						
MSVF	Nonsavu	152.21	33	ePKPbc	PKPbc	01 52 38.7	+0.6
MSVF				LR	LR		
	comp=Z,7µm,20.0s						
MSVF	Nonsavu	152.21	33	ePKPbc	PKPbc	01 52 38.7	+0.6
TBI	Tubuai	156.23	318	eSS	SS	02 16 29.4	-1.4
	comp=Z,3µm,27.0s						
TBI				eLR	LR	02 45 23.1	
	comp=Z,7µm,27.0s						
RAR	Rarotonga	158.12	342	PKP	PKPdf	01 52 41.1	+1.8
RAR				LR	LR		
	comp=Z,6µm,21.0s						
RAR	Rarotonga	158.12	342	PKP	PKPdf	01 52 41.1	+1.8
	comp=Z,26nm,1.1s,baz=270,slow=8.7,SNR=3.1						
RAR	Rarotonga	158.12	342	PKIKP	PKPdf	01 52 41.1	+1.8
RPZ	Rata Peaks	163.67	102	PKPab	PKPab	01 53 37.1	+0.4
RPZ	Rata Peaks	163.67	102	PKPab	PKPab	01 53 37.1	+0.4
RPZ	Rata Peaks	163.67	102	PKPab	PKPab	01 53 37.1	+0.4
RAO	Raoul Island	164.07	38	PFAKE		01 52 50.0	+4.6
RAO				LR	LR		
	comp=Z,9µm,22.0s						
SNZO	South Karori	166.08	92	PFAKE		01 52 50.0	+3.3
SNZO				LR	LR		
	comp=Z,7µm,21.0s						

*ISCJB **06** 01:36:29.2±0.3, 42°.35N±0°.02×13°.32E±0°.03, h11km±2km, mb4.6/18, Error ellipse: s-maj=3.6km s-min=2.9km az=179.2*

*CSEM **06** 01:36:29.7±0.1, 42°.35N×13°.33E, h5km, mb4.8/4, Error ellipse: s-maj=3.2km s-min=2.5km az=80.0*

*IDC **06** 01:36:29.5±0.7, 42°.44N×13°.13E, h0km, mb4.6/16, mb1 4.7/22, mb1mx4.6/37, mbtmp4.6/22, ML4.1/5, Error ellipse: s-maj=14.5km s-min=12.0km az=92.0*

*ROM **06** 01:36:29.1±0.1, 42°.35N×13°.35E, h10km, Ml4.7/3, Error ellipse: s-maj=1.4km s-min=1.0km az=74.0*

*NEIC **06** 01:36:30.5±0.4, 42°.41N×13°.22E, h5km, mb4.8/4, Error ellipse: s-maj=7.9km s-min=7.3km az=156.0*

ISC 06 01:36:30.4±0.7**, 42°.37N**±0°.02×**13°.35E**±0°.02**, h7**km±4km**, n139, σ1s.30**/170**, mb4.6**/18**, 2C, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	107	ePg	Pg	01 36 31.4	-0.6
AQU				eSg	Sg	01 36 34.1	+0.9
AQU	L'Aquila	0.04	107	Pg	Pg	01 36 31.5	-0.5
AQU				Sg	Sg	01 36 32.9	-0.2
AQU	L'Aquila	0.04	107	ePg	Pg	01 36 31.4	-0.6
AQU				Sg	Sg	01 36 32.9	-0.2
CAMP	Campotosto	0.17	15	⇑iPg	Pg	01 36 33.6	-0.5
CAMP				Sg	Sg	01 36 36.7	+0.1
CAMP	Campotosto	0.17	15	⇑iPg	Pg	01 36 33.6	-0.5
CAMP				Sg	Sg	01 36 36.7	+0.1
FIAM	Fiamignano	0.20	240	Pg	Pg	01 36 33.9	-0.5
FIAM	Fiamignano	0.20	240	Pg	Pg	01 36 33.9	-0.5
FAGN	Fagnano	0.20	120	Pg	Pg	01 36 34.2	-0.3
FAGN				Sg	Sg	01 36 37.7	+0.5
FAGN	Fagnano	0.20	120	Pg	Pg	01 36 34.2	-0.3
FAGN				Sg	Sg	01 36 37.7	+0.5
TERO	Teramo	0.32	36	Pg	Pg	01 36 35.7	-1.0
TERO				Sg	Sb	01 36 41.4	-2.4
TERO	Teramo	0.32	36	Pg	Pg	01 36 35.7	-1.0
TERO				Sg	Sb	01 36 41.4	-2.4
PTQR	Pietraquaria	0.35	174	Pg	Pg	01 36 36.3	-0.9
PTQR	Pietraquaria	0.35	174	Pg	Pg	01 36 36.3	-0.9
VCEL	Villa Celiera	0.36	85	Pg	Pg	01 36 37.1	-0.5
VCEL	Villa Celiera	0.36	85	Pg	Pg	01 36 37.1	-0.5
GAVE	Gavelli	0.47	314	Pg	Pb	01 36 39.6	-1.4
GAVE	Gavelli	0.47	314	Pg	Pb	01 36 39.6	-1.4
MNS	Montasola	0.50	272	Pg	Pg	01 36 38.8	-1.2
MNS	Montasola	0.50	272	Pg	Pg	01 36 38.8	-1.2
CERT	Cerreto	0.50	213	Pg	Pg	01 36 38.8	-1.2
CERT				Sg	Sg	01 36 46.1	-0.5
CERT	Cerreto	0.50	213	Pg	Pg	01 36 38.8	-1.2
CERT				Sg	Sg	01 36 46.1	-0.5
NRCA	Norcia	0.50	340	Pg	Pg	01 36 39.5	-0.6
NRCA				Sg	Sb	01 36 47.1	-1.9
NRCA	Norcia	0.50	340	Pg	Pg	01 36 39.5	-0.6
NRCA				Sg	Sb	01 36 47.1	-1.9
VVLD	Villa Vallelon	0.54	158	Pg	Pg	01 36 39.4	-1.3
VVLD	Villa Vallelon	0.54	158	Pg	Pg	01 36 39.4	-1.3
INTR	Introdacqua	0.54	130	Pg	Pg	01 36 39.7	-1.2
INTR				Sg	Sg	01 36 48.4	+0.4
INTR	Introdacqua	0.54	130	Pg	Pg	01 36 39.7	-1.2
INTR				Sg	Sg	01 36 48.4	+0.4
MTCE	Montecelio	0.57	233	Pg	Pg	01 36 40.2	-1.1
MTCE	Montecelio	0.57	233	Pg	Pg	01 36 40.2	-1.1
GUAR	Guarcino	0.57	183	Pg	Pg	01 36 40.4	-1.0
GUAR				Sg	Sg	01 36 47.9	-1.0
GUAR	Guarcino	0.57	183	Pg	Pg	01 36 40.4	-1.0
GUAR				Sg	Sg	01 36 47.9	-1.0
OFFI	Offida	0.62	23	Pg	Pb	01 36 42.4	-1.2
OFFI	Offida	0.62	23	Pg	Pb	01 36 42.4	-1.2
FDMO	Fiordimonte	0.70	344	Pg	Pg	01 36 42.9	-0.9
FDMO	Fiordimonte	0.70	344	Pg	Pg	01 36 42.9	-0.9
LPEL	Lama dei Pelig	0.70	117	Pg	Pg	01 36 42.4	-1.4
LPEL				Sg	Sg	01 36 53.5	+0.6
LPEL	Lama dei Pelig	0.70	117	Pg	Pg	01 36 42.4	-1.4
LPEL				Sg	Sg	01 36 53.5	+0.6
POFI	Posta Fibreno	0.70	157	Pg	Pg	01 36 43.1	-0.8
POFI	Posta Fibreno	0.70	157	Pg	Pg	01 36 43.1	-0.8
CESI	CESI - Serrava	0.72	333	Pg	Pg	01 36 43.3	-0.9
CESI	CESI - Serrava	0.72	333	Pg	Pg	01 36 43.3	-0.9
SDI	San Donato	0.74	152	Pg	Pg	01 36 43.1	-1.5
SDI	San Donato	0.74	152	Pg	Pg	01 36 43.1	-1.5
GIUL	Giuliano Di Ro	0.81	185	Pg	Pg	01 36 45.2	-0.8
GIUL	Giuliano Di Ro	0.81	185	Pg	Pg	01 36 45.2	-0.8
ASSB	Assisi San Ben	0.85	323	Pg	Pg	01 36 46.0	-0.7
ASSB	Assisi San Ben	0.85	323	Pg	Pg	01 36 46.0	-0.7
MIDA	Miranda	0.99	137	Pg	Pg	01 36 47.0	-2.4
MIDA	Miranda	0.99	137	Pg	Pg	01 36 47.0	-2.4
CING	Cingoli	1.01	354	Pg	Pg	01 36 48.9	-1.0
CING	Cingoli	1.01	354	Pg	Pg	01 36 48.9	-1.0
NVLJ	Novalja	2.46	26	ePn	Pn	01 37 10.2	-0.6
NVLJ				Sn	Sn	01 37 39.7	-1.5
NVLJ	Novalja	2.46	26	ePn	Pn	01 37 10.2	-0.6
NVLJ				Sn	Sn	01 37 39.6	-1.5
STON	Ston	3.25	80	ePn	Pn	01 37 21.6	-0.1
STON				Sn	Sn	01 37 59.5	-1.1
STON	Ston	3.25	80	ePn	Pn	01 37 21.6	-0.1
STON				Sn	Sn	01 37 59.5	-1.1
SISC	Sisak	3.79	34	ePn	Pn	01 37 30.6	+1.4
SISC	Sisak	3.79	34	ePn	Pn	01 37 30.6	+1.4
VSL	Villasalto	4.16	228	ePn	Pn	01 37 33.1	-1.1
VSL	Villasalto	4.16	228	ePn	Pn	01 37 33.1	-1.1
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	01 37 48.8	+2.0
DAVOX				Sn	Sn	01 38 49.0	+3.4
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	01 37 48.8	+2.0
	14nm,0.3s,baz=182,slow=20,SNR=0.8						
DAVOX				Sn	Sn	01 38 49.0	+3.4
	9.1nm,0.3s,baz=338,slow=20,SNR=2.2						
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	01 37 48.8	+2.0
DAVOX				Sn	Sn	01 38 49.0	+3.4
GERES	GERESS Array B	6.48	2	Pn	Pn	01 38 05.9	-0.3
GERES				Sn	Sn	01 39 18.7	-1.8
GERES	GERESS Array B	6.48	2	Pn	Pn	01 38 05.9	-0.3
	baz=155,slow=10,SNR=1.1						
GERES				Sn	Sn	01 39 18.7	-1.8
	15nm,0.3s,baz=176,slow=24,SNR=7.5						
GERES	GERESS Array B	6.48	2	Pn	Pn	01 38 05.9	-0.3
GERES				Sn	Sn	01 39 18.7	-1.8
VRAC	Vranov	7.30	17	Pn	Pn	01 38 17.4	0.0
VRAC	Vranov	7.30	17	Pn	Pn	01 38 17.4	0.0
	baz=165,slow=12,SNR=1.4						
VRAC	Vranov	7.30	17	Pn	Pn	01 38 17.4	0.0
KEST	Kesra	7.32	206	Pn	Pn	01 38 20.6	+2.9
KEST				Sn	Sn	01 39 42.3	+1.2
KEST	Kesra	7.32	206	Pn	Pn	01 38 20.6	+2.9
	8.4nm,0.3s,baz=297,slow=4.6,SNR=7.9						
KEST				Sn	Sn	01 39 42.3	+1.2
	baz=199,slow=18,SNR=1.9						
MLR	Muntele Rosu	9.61	67	Pn	Pn	01 38 51.9	+2.8
MLR	Muntele Rosu	9.61	67	Pn	Pn	01 38 51.9	+2.8
	0.6nm,0.3s,baz=318,slow=22,SNR=0.8						
ESDC	Sonseca Array	13.35	264	Pn	Pn	01 39 39.1	-1.1
ESDC	Sonseca Array	13.35	264	Pn	Pn	01 39 39.1	-1.1
	0.5nm,0.3s,baz=61,slow=13,SNR=3.1						
ESDC	Sonseca Array	13.35	264	Pn	Pn	01 39 39.1	-1.1
BRTR	Keskin Array B	15.53	93	Pn	P	01 40 13.2	-1.2
BRTR	Keskin Array B	15.53	93	Pn	P	01 40 13.1	-1.2
	0.1nm,0.3s,baz=288,slow=12,SNR=2.1						
EKA	Eskdalemuir Ar	16.86	326	Pn	Pn	01 40 27.0	+0.3
EKA	Eskdalemuir Ar	16.86	326	Pn	Pn	01 40 27.0	+0.3
	baz=132,slow=13,SNR=2.8						
EKA	Eskdalemuir Ar	16.86	326	Pn	Pn	01 40 27.0	+0.3
NOA	NORSAR Array B	18.75	357	P	P	01 40 48.2	-1.4
NOA	NORSAR Array B	18.75	357	P	P	01 40 48.2	-1.4
	0.3nm,0.3s,baz=176,slow=11,SNR=2.3						
NOA	NORSAR Array B	18.75	357	P	P	01 40 48.2	-1.4
FINES	FINESS Array B	20.58	18	P	P	01 41 09.2	-0.3
FINES	FINESS Array B	20.58	18	P	P	01 41 09.3	-0.3
	20nm,0.7s,baz=192,slow=8.4,SNR=4.1						
FINES	FINESS Array B	20.58	18	P	P	01 41 09.2	-0.3
EIL	Elat	21.51	119	P	P	01 41 23.3	+3.5
EIL	Elat	21.51	119	P	P	01 41 23.3	+3.5
	52nm,0.8s,baz=215,slow=24,SNR=3.4						
KBZ	Khabaz	21.59	76	P	P	01 41 22.8	+2.3
KBZ	Khabaz	21.59	76	P	P	01 41 22.8	+2.3
	17nm,0.8s,baz=291,slow=15,SNR=1.2						
KBZ	Khabaz	21.59	76	P	P	01 41 22.8	+2.3
TORD	Torodi Ar. Bea	30.82	203	P	P	01 42 47.6	+0.7
TORD	Torodi Ar. Bea	30.82	203	P	P	01 42 47.6	+0.7
	6.0nm,0.7s,baz=21,slow=7.5,SNR=7.1						
TORD	Torodi Ar. Bea	30.82	203	P	P	01 42 47.6	+0.7
BRVK	Borovoye	38.80	54	eP	P	01 43 55.6	+0.2
	29nm,1.0s						
BRVK	Borovoye	38.80	54	eP	P	01 43 55.6	+0.2
	29nm,1.0s						
BVAR	Borovoye Array	38.87	54	P	P	01 43 58.2	+2.2
BVAR	Borovoye Array	38.87	54	P	P	01 43 58.2	+2.2
	9.4nm,0.9s,baz=262,slow=11,SNR=2.3						
BVAR	Borovoye Array	38.87	54	P	P	01 43 58.2	+2.2
DBIC	Dimbokro	39.03	210	P	P	01 43 57.4	-0.3
	6.5nm,0.7s						
DBIC	Dimbokro	39.03	210	P	P	01 43 57.4	-0.3
	6.5nm,0.7s						
AAK	Ala-Archa	44.19	68	P	P	01 44 41.3	+1.3
AAK	Ala-Archa	44.19	68	P	P	01 44 41.3	+1.3
	23nm,1.3s,baz=304,slow=11,SNR=1.2						
AAK	Ala-Archa	44.19	68	P	P	01 44 41.3	+1.3
KURK	Kurchatov	44.33	56	P	P	01 44 41.9	+1.1
	24nm,1.0s						
KURK	Kurchatov	44.33	56	P	P	01 44 41.9	+1.1
	24nm,1.0s						
ZALV	Zalesovo Beam	47.10	50	P	P	01 45 03.4	+0.8
ZALV	Zalesovo Beam	47.10	50	P	P	01 45 03.4	+0.8
	2.8nm,0.6s,baz=291,slow=9.3,SNR=0.8						
ZALV	Zalesovo Beam	47.10	50	P	P	01 45 03.4	+0.8
MK31	Makanchi Array	47.87	60	eP	P	01 45 08.2	-0.6
MK31	Makanchi Array	47.87	60	eP	P	01 45 08.2	-0.6
MKAR	Makanchi Array	47.87	60	P	P	01 45 08.7	-0.1
MKAR	Makanchi Array	47.87	60	P	P	01 45 08.7	-0.1
	5.7nm,0.7s,baz=289,slow=7.5,SNR=5.4						
MKAR	Makanchi Array	47.87	60	P	P	01 45 08.7	-0.1
SCHQ	Schefferville	51.63	313	P	P	01 45 36.2	-1.1
SCHQ	Schefferville	51.63	313	P	P	01 45 36.2	-1.1
	6.0nm,0.9s,baz=137,slow=18,SNR=1.8						
SCHQ	Schefferville	51.63	313	P	P	01 45 36.2	-1.1
INK	Inuvik	66.89	347	P	P	01 47 23.0	+0.5
INK	Inuvik	66.89	347	P	P	01 47 23.0	+0.5
	5.7nm,1.1s,baz=36,slow=6.7,SNR=2.7						
INK	Inuvik	66.89	347	P	P	01 47 23.0	+0.5
YKA	Yellowknife Ar	67.48	337	P	P	01 47 25.9	-0.5
YKA	Yellowknife Ar	67.48	337	P	P	01 47 25.9	-0.5
	1.9nm,0.8s,baz=33,slow=6.9,SNR=4.7						
YKA	Yellowknife Ar	67.48	337	P	P	01 47 25.9	-0.5
ULM	Lac du Bonnet	69.02	320	P	P	01 47 35.5	-0.7
ULM	Lac du Bonnet	69.02	320	P	P	01 47 35.5	-0.7
	3.7nm,0.6s,baz=302,slow=16,SNR=3.2						
ULM	Lac du Bonnet	69.02	320	P	P	01 47 35.5	-0.7
BOSA	Boshof	71.48	169	eP	P	01 47 50.6	-0.9
	5.8nm,0.8s						
BOSA	Boshof	71.48	169	P	P	01 47 51.2	-0.3
	9.7nm,1.0s,baz=62,slow=6.4,SNR=6.2						
BOSA	Boshof	71.48	169	eP	P	01 47 50.6	-0.9
	5.8nm,0.8s						
USRK	Ussuriysk Arra	77.83	40	P	P	01 48 29.0	+0.8
	3.2nm,0.9s,baz=309,slow=4.0,SNR=2.9						
PDAR	Pinedale Array	80.92	321	P	P	01 48 44.9	-0.7
PDAR	Pinedale Array	80.92	321	P	P	01 48 44.9	-0.7
	3.1nm,1.0s,baz=58,slow=5.8,SNR=3.4						
PDAR	Pinedale Array	80.92	321	P	P	01 48 44.9	-0.7
FX1	Attu Island--F	83.54	12	P	P	01 48 58.6	-0.1
FX1	Attu Island--F	83.54	12	P	P	01 48 58.6	-0.1
	19nm,0.8s,baz=108,slow=22,SNR=2.7						
FX1	Attu Island--F	83.54	12	P	P	01 48 58.6	-0.1
WRA	Warramunga Arr	125.92	85	PKP	PKPdf	01 55 33.3	0.0
WRA	Warramunga Arr	125.92	85	PKP	PKPdf	01 55 33.3	0.0
	0.4nm,0.3s,baz=302,slow=2.0,SNR=4.7						
WRA	Warramunga Arr	125.92	85	PKIKP	PKPdf	01 55 33.3	0.0

*IDC **06** 01:36:31.6±1.6, 8°.95S×112°.08E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.7/22, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=105.8km s-min=21.7km az=43.0*

*ISCJB **06** 01:36:34.5±0.9, 9°.48S±0°.09×111°.66E±0°.09, h40km, mb3.8/4, Error ellipse: s-maj=16.3km s-min=9.9km az=43.8*

*DJA **06** 01:36:34.1±2.6, 9°S±40°×11°2E±°, h124km±34km, M3.6/8, MLv3.6/8*

ISC 06 01:36:35.9±1.1**, 9°.5S**±0°.1×**111°.70E**±0°.08**, h40**km**, n13, σ1s.72**/12**, mb3.8**/4**, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCJI	Pacitan	1.39	338	P	Pn	01 37 01.4	+2.6
PWJI	Pagerwojo	1.46	4	P	Pn	01 36 58.9	-0.9
KRKI	Karangkates	1.52	30	P	Pn	01 37 04.2	+3.6
SJI	Sawahan	1.75	2	P	Pn	01 37 03.2	-0.6
UGM	Wanagama	1.95	323	P	Pn	01 37 03.9	-2.7
GMJI	Gumukmas	2.11	55	P	Pn	01 37 08.0	-0.7
BLJI	Banyuglugur	2.56	47	P	Pn	01 37 15.0	+0.1
BJII	Banjamegara	2.91	317	P	Pn	01 37 19.4	-0.4
FITZ	Fitzroy Crossi	16.01	124	Pn	Pn	01 40 16.6	-1.8
	0.1nm,0.3s,baz=320,slow=9.8,SNR=3.7						
WRA	Warramunga Arr	24.21	118	P	P	01 41 49.3	+0.3
	1.3nm,0.6s,baz=292,slow=12,SNR=6.9						
ASAR	Alice Springs	25.47	126	P	P	01 42 02.9	+2.3
	1.0nm,0.7s,baz=302,slow=9.3,SNR=12						
MKAR	Makanchi Array	61.87	338	P	P	01 46 50.4	-0.7
	2.4nm,0.9s,baz=152,slow=7.1,SNR=4.1						
BRTR	Keskin Array B	86.95	311	P	P	01 49 18.4	+1.2
	0.9nm,0.9s,baz=113,slow=1.1,SNR=3.3						

*CSEM **06** 01:38:47.4, 42°.37N×13°.33E, h9km, After ROM*

ROM 06 01:38:47.4±0.1**, 42°.37N×13°.33E, h9**km±1km**, Ml3.6**/2**, Error ellipse: s-maj=1.6km s-min=1.3km az=129.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	101	Pg	Pg	01 38 49.9	+0.5
AQU				Sg	Sg	01 38 51.2	+0.4
AQU	L'Aquila	0.06	101	Pg	Pg	01 38 49.9	+0.5
AQU				Sg	Sg	01 38 51.2	+0.4
CAMP	Campotosto	0.18	20	Pg	Pg	01 38 51.8	+0.4
CAMP				Sg	Sg	01 38 54.9	+0.8
CAMP	Campotosto	0.18	20	Pg	Pg	01 38 51.8	+0.4
CAMP				Sg	Sg	01 38 54.9	+0.8
FIAM	Fiamignano	0.18	238	Pg	Pg	01 38 52.1	+0.7
FIAM				Sg	Sg	01 38 55.3	+1.2
FIAM	Fiamignano	0.18	238	Pg	Pg	01 38 52.1	+0.7
FIAM				Sg	Sg	01 38 55.3	+1.2
FAGN	Fagnano	0.21	117	Pg	Pg	01 38 52.2	+0.3
FAGN				Sg	Sg	01 38 56.1	+1.2
FAGN	Fagnano	0.21	117	Pg	Pg	01 38 52.2	+0.3
FAGN				Sg	Sg	01 38 56.1	+1.2
TERO	Teramo	0.33	38	Pg	Pg	01 38 54.0	0.0
TERO				Sg	Sb	01 38 59.9	-1.1
TERO	Teramo	0.33	38	Pg	Pg	01 38 54.0	0.0
TERO				Sg	Sb	01 38 59.9	-1.1
PTQR	Pietraquaria	0.35	171	Pg	Pb	01 38 55.3	-0.6
PTQR				Sg	Sg	01 38 59.9	+0.8
PTQR	Pietraquaria	0.35	171	Pg	Pb	01 38 55.3	-0.6
PTQR				Sg	Sg	01 38 59.9	+0.8
VCEL	Villa Celiera	0.38	85	Pg	Pb	01 38 56.1	-0.4
VCEL				Sg	Sb	01 39 02.7	0.0
VCEL	Villa Celiera	0.38	85	Pg	Pb	01 38 56.1	-0.4
VCEL				Sg	Sb	01 39 02.7	0.0
CERT	Cerreto	0.49	212	Pg	Pg	01 38 57.1	+0.1
CERT	Cerreto	0.49	212	Pg	Pg	01 38 57.1	+0.1
NRCA	Norcia	0.49	342	Pg	Pg	01 38 57.6	+0.4
NRCA	Norcia	0.49	342	Pg	Pg	01 38 57.6	+0.4
INTR	Introdacqua	0.56	129	Pg	Pg	01 38 58.8	+0.5
INTR	Introdacqua	0.56	129	Pg	Pg	01 38 58.8	+0.5
OFFI	Offida	0.63	25	Pg	Pb	01 39 00.5	-0.1
OFFI	Offida	0.63	25	Pg	Pb	01 39 00.5	-0.1
LPEL	Lama dei Pelig	0.71	116	Pg	Pg	01 39 01.5	+0.3
LPEL	Lama dei Pelig	0.71	116	Pg	Pg	01 39 01.5	+0.3

*CSEM **06** 01:40:50.6, 42°.42N×13°.40E, h11km, After ROM*

*ROM **06** 01:40:50.6±0.1, 42°.42N×13°.40E, h11km±1km, Ml4.1/7, Error ellipse: s-maj=2.1km s-min=1.5km az=87.0*

*ISCJB **06** 01:40:51.6±0.4, 42°.40N±0°.02×13°.41E±0°.03, h3km±4km, mb4.0/2, Error ellipse: s-maj=4.4km s-min=3.6km az=163.3*

*IDC **06** 01:40:53.2±1.3, 42°.32N×13°.56E, h0km, mb4.0/3, mb1 4.0/6, mb1mx3.8/29, mbtmp4.0/6, ML3.4/3, Error ellipse: s-maj=38.9km s-min=14.1km az=97.0*

ISC 06 01:40:51.4±0.9**, 42°.41N**±0°.02×**13°.41E**±0°.02**, h11**km±5km**, n34, σ0s.80**/47**, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	183	Pg	Pg	01 40 53.6	-0.1
AQU				Sg	Sg	01 40 55.1	-0.2
AQU	L'Aquila	0.06	183	Pg	Pg	01 40 53.6	-0.1
AQU				Sg	Sg	01 40 55.1	-0.2
CAMP	Campotosto	0.12	1	Pg	Pg	01 40 53.7	-0.8
CAMP				Sg	Sg	01 40 56.9	+0.1
CAMP	Campotosto	0.12	1	Pg	Pg	01 40 53.7	-0.8
CAMP				Sg	Sg	01 40 56.9	+0.1
FAGN	Fagnano	0.20	138	Pg	Pg	01 40 55.9	+0.3
FAGN				Sg	Sg	01 40 59.1	+0.6
FAGN	Fagnano	0.20	138	Pg	Pg	01 40 55.9	+0.3
FAGN				Sg	Sg	01 40 59.1	+0.6
TERO	Teramo	0.26	35	Pg	Pg	01 40 55.9	-0.7
TERO				Sg	Sg	01 41 00.2	0.0
TERO	Teramo	0.26	35	Pg	Pg	01 40 55.9	-0.7
TERO				Sg	Sg	01 41 00.2	0.0
FIAM	Fiamignano	0.26	236	Pg	Pg	01 40 56.6	-0.1
FIAM				Sg	Sg	01 41 01.0	+0.7
FIAM	Fiamignano	0.26	236	Pg	Pg	01 40 56.6	-0.1
FIAM				Sg	Sg	01 41 01.0	+0.7

VCEL	Villa Celiera	0.32	93	Pg	Pg	01 40 57.7	-0.2
VCEL				Sg	Sg	01 41 02.8	+0.6
VCEL	Villa Celiera	0.32	93	Pg	Pg	01 40 57.7	-0.2
VCEL				Sg	Sg	01 41 02.8	+0.6
PTQR	Pietraquaria	0.39	181	Pg	Pg	01 40 58.0	-1.1
PTQR	Pietraquaria	0.39	181	Pg	Pg	01 40 58.0	-1.1
NRCA	Norcia	0.47	333	Pg	Pg	01 41 00.1	-0.5
NRCA				Sg	Sg	01 41 07.5	+0.6
NRCA	Norcia	0.47	333	Pg	Pg	01 41 00.1	-0.5
NRCA				Sg	Sg	01 41 07.5	+0.6
MNS	Montasola	0.54	267	Pg	Pb	01 41 02.3	-0.5
MNS	Montasola	0.54	267	Pg	Pb	01 41 02.3	-0.5
INTR	Introdacqua	0.55	137	Pg	Pg	01 41 01.6	-0.4
INTR				Sg	Sb	01 41 09.7	-1.2
INTR	Introdacqua	0.55	137	Pg	Pg	01 41 01.6	-0.4
INTR				Sg	Sb	01 41 09.7	-1.2
CERT	Cerreto	0.56	214	Pg	Pg	01 41 00.9	-1.4
CERT	Cerreto	0.56	214	Pg	Pg	01 41 00.9	-1.4
VVLD	Villa Vallelon	0.56	163	Pg	Pg	01 41 01.7	-0.7
VVLD	Villa Vallelon	0.56	163	Pg	Pg	01 41 01.7	-0.7
LPEL	Lama dei Pelig	0.68	122	Pg	Pb	01 41 04.6	-0.7
LPEL				Sg	Sb	01 41 14.3	-0.5
LPEL	Lama dei Pelig	0.68	122	Pg	Pb	01 41 04.6	-0.7
LPEL				Sg	Sb	01 41 14.3	-0.5
SDI	San Donato	0.77	157	Pg	Pg	01 41 04.9	-1.2
SDI	San Donato	0.77	157	Pg	Pg	01 41 04.9	-1.2
DAVOX	Davos/Dischmat	5.04	331	Pn	Pn	01 42 13.1	+6.1
	2.2nm,0.3s,baz=158,slow=18,SNR=4.3						
GERES	GERESS Array B	6.44	2	Pn	Pn	01 42 30.4	+4.3
	0.3nm,0.3s,baz=176,slow=16,SNR=2.7						
GERES				Sn	Sn	01 43 46.2	+6.6
	1.0nm,0.3s,baz=180,slow=18,SNR=3.6						
KEST	Kesra	7.38	207	Pn	Pn	01 42 43.5	+4.4
	1.2nm,0.3s,baz=316,slow=6.6,SNR=11						
FINES	FINESS Array B	20.53	17	P	Pn	01 45 33.4	+1.9
	5.4nm,0.9s,baz=172,slow=11,SNR=2.7						
TORD	Torodi Ar. Bea	30.88	203	P	P	01 47 10.2	+2.4
	2.4nm,0.9s,baz=17,slow=8.2,SNR=4.9						
MKAR	Makanchi Array	47.81	60	P	P	01 49 32.5	+3.8
	1.8nm,1.0s,baz=274,slow=7.1,SNR=5.1						

*CSEM **06** 01:41:32.6, 42.°38N×13.°32E, h8km, After ROM*
ROM 06 01:41:32.6±0.1**, 42.°38N×13.°32E, h8**km±1km**, Ml4.0**/2,
Error ellipse: s-maj=1.8km s-min=1.6km az=112.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	111	Pg	Pg	01 41 35.0	+0.3
AQU				Sg	Sg	01 41 36.5	+0.4
AQU	L'Aquila	0.07	111	Pg	Pg	01 41 35.0	+0.3
AQU				Sg	Sg	01 41 36.5	+0.4
CAMP	Campotosto	0.17	23	Pg	Pg	01 41 36.9	+0.5
CAMP				Sg	Sg	01 41 40.1	+1.1
CAMP	Campotosto	0.17	23	Pg	Pg	01 41 36.9	+0.5
CAMP				Sg	Sg	01 41 40.1	+1.1
FIAM	Fiamignano	0.18	234	Pg	Pg	01 41 37.4	+0.8
FIAM				Sg	Sg	01 41 40.4	+1.1
FIAM	Fiamignano	0.18	234	Pg	Pg	01 41 37.4	+0.8
FIAM				Sg	Sg	01 41 40.4	+1.1
FAGN	Fagnano	0.23	119	Pg	Pg	01 41 38.4	+1.1
FAGN	Fagnano	0.23	119	Pg	Pg	01 41 38.4	+1.1
TERO	Teramo	0.32	41	Pg	Pg	01 41 38.9	-0.2
TERO				Sg	Sb	01 41 45.2	-0.9
TERO	Teramo	0.32	41	Pg	Pg	01 41 38.9	-0.2
TERO				Sg	Sb	01 41 45.2	-0.9
PTQR	Pietraquaria	0.36	170	Pg	Pg	01 41 40.5	+0.7
PTQR	Pietraquaria	0.36	170	Pg	Pg	01 41 40.5	+0.7
VCEL	Villa Celiera	0.39	87	Pg	Pg	01 41 41.1	+0.7
VCEL	Villa Celiera	0.39	87	Pg	Pg	01 41 41.1	+0.7
MNS	Montasola	0.47	271	Pg	Pg	01 41 42.2	+0.3
MNS	Montasola	0.47	271	Pg	Pg	01 41 42.2	+0.3
NRCA	Norcia	0.48	342	Pg	Pg	01 41 42.5	+0.4
NRCA				Sg	Sb	01 41 50.5	-0.2
NRCA	Norcia	0.48	342	Pg	Pg	01 41 42.5	+0.4
NRCA				Sg	Sb	01 41 50.5	-0.2
CERT	Cerreto	0.50	210	Pg	Pg	01 41 42.3	0.0
CERT	Cerreto	0.50	210	Pg	Pg	01 41 42.3	0.0
VVLD	Villa Vallelon	0.55	156	Pg	Pb	01 41 45.1	+0.4
VVLD	Villa Vallelon	0.55	156	Pg	Pb	01 41 45.1	+0.4
INTR	Introdacqua	0.57	130	Pg	Pb	01 41 44.5	-0.4
INTR	Introdacqua	0.57	130	Pg	Pb	01 41 44.5	-0.4
OFFI	Offida	0.62	26	Pg	Pb	01 41 45.8	+0.1
OFFI	Offida	0.62	26	Pg	Pb	01 41 45.8	+0.1
FDMO	Fiordimonte	0.68	346	Pg	Pg	01 41 46.2	+0.4
FDMO	Fiordimonte	0.68	346	Pg	Pg	01 41 46.2	+0.4
CESI	CESI - Serrava	0.70	334	Pg	Pg	01 41 46.4	+0.2
CESI	CESI - Serrava	0.70	334	Pg	Pg	01 41 46.4	+0.2
LPEL	Lama dei Pelig	0.72	117	Pg	Pg	01 41 46.5	-0.1
LPEL	Lama dei Pelig	0.72	117	Pg	Pg	01 41 46.5	-0.1
SDI	San Donato	0.76	151	Pg	Pb	01 41 48.1	0.0
SDI	San Donato	0.76	151	Pg	Pb	01 41 48.1	0.0

*CSEM **06** 01:41:37.7, 42.°36N×13.°46E, h9km, After ROM*
ROM 06 01:41:37.7±0.1**, 42.°36N×13.°46E, h9**km±1km**, Ml4.3**/2,
Error ellipse: s-maj=2.0km s-min=1.5km az=93.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	256	Pg	Pg	01 41 39.7	+0.2
AQU				Sg	Sg	01 41 40.9	+0.1
AQU	L'Aquila	0.04	256	Pg	Pg	01 41 39.7	+0.2
AQU				Sg	Sg	01 41 40.9	+0.1
FAGN	Fagnano	0.14	136	Pg	Pg	01 41 41.5	+0.7
FAGN				Sg	Sg	01 41 44.3	+1.3
FAGN	Fagnano	0.14	136	Pg	Pg	01 41 41.5	+0.7
FAGN				Sg	Sg	01 41 44.3	+1.3
CAMP	Campotosto	0.17	349	Pg	Pg	01 41 41.2	-0.4
CAMP				Sg	Sg	01 41 45.8	+1.6
CAMP	Campotosto	0.17	349	Pg	Pg	01 41 41.2	-0.4
CAMP				Sg	Sg	01 41 45.8	+1.6
FIAM	Fiamignano	0.27	249	Pg	Pg	01 41 43.4	+0.2
FIAM				Sg	Sb	01 41 49.3	-0.4
FIAM	Fiamignano	0.27	249	Pg	Pg	01 41 43.4	+0.2
FIAM				Sg	Sb	01 41 49.3	-0.4
TERO	Teramo	0.28	23	Pg	Pg	01 41 43.8	+0.4
TERO				Sg	Sb	01 41 49.4	-0.6
TERO	Teramo	0.28	23	Pg	Pg	01 41 43.8	+0.4
TERO				Sg	Sb	01 41 49.4	-0.6
PTQR	Pietraquaria	0.34	187	Pg	Pg	01 41 44.7	+0.1
PTQR	Pietraquaria	0.34	187	Pg	Pg	01 41 44.7	+0.1
NRCA	Norcia	0.53	332	Pg	Pg	01 41 48.2	0.0
NRCA				Sg	Sb	01 41 56.8	-0.5
NRCA	Norcia	0.53	332	Pg	Pg	01 41 48.2	0.0
NRCA				Sg	Sb	01 41 56.8	-0.5
CERT	Cerreto	0.54	221	Pg	Pg	01 41 48.9	+0.5
CERT				Sg	Sb	01 41 57.2	-0.3
CERT	Cerreto	0.54	221	Pg	Pg	01 41 48.9	+0.5
CERT				Sg	Sb	01 41 57.2	-0.3
MNS	Montasola	0.57	272	Pg	Pb	01 41 49.5	-0.5
MNS	Montasola	0.57	272	Pg	Pb	01 41 49.5	-0.5
SDI	San Donato	0.71	158	Pg	Pg	01 41 51.2	-0.2
SDI	San Donato	0.71	158	Pg	Pg	01 41 51.2	-0.2

*ISCJB **06** 01:42:50.0±0.3, 42.°31N±0.°02×13.°43E±0.°03, h13km±2km, mb3.9/7, Error ellipse: s-maj=4.2km s-min=3.5km az=139.5*
*ROM **06** 01:42:49.9±0.1, 42.°30N×13.°43E, h10km±1km, Ml4.2/5, Error ellipse: s-maj=1.8km s-min=1.2km az=61.0*
*CSEM **06** 01:42:50.4±0.1, 42.°30N×13.°45E, h5km, ML3.4/7, Error ellipse: s-maj=3.4km s-min=2.6km az=42.0*
*IDC **06** 01:42:50.6±0.8, 42.°43N×13.°40E, h0km, mb3.9/8, mb1 3.9/13, mb1mx3.8/32, mbtmp3.8/13, ML3.6/5, Error ellipse: s-maj=18.3km s-min=11.6km az=100.0*
*LDG **06** 01:42:53.9±0.6, 42.°41N×13.°31E, h2km, Ml3.4/7, Error ellipse: s-maj=11.8km s-min=7.6km az=110.0*
ISC 06 01:42:51.0±0.7**, 42.°32N**±0.°02×**13.°43E**±0.°02**, h10**km±4km**,**
n81, σ1.§63/106**, mb4.0**/7**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	330	Pg	Pg	01 42 52.5	-0.5
AQU				Sg	Sg	01 42 54.0	-0.4
AQU	L'Aquila	0.04	330	Pg	Pg	01 42 52.5	-0.5
AQU				Sg	Sg	01 42 54.0	-0.4
FAGN	Fagnano	0.13	115	Pg	Pg	01 42 53.6	-0.4
FAGN				Sg	Sg	01 42 56.1	0.0
FAGN	Fagnano	0.13	115	Pg	Pg	01 42 53.6	-0.4
FAGN				Sg	Sg	01 42 56.1	0.0
CAMP	Campotosto	0.22	356	Pg	Pg	01 42 55.1	-0.5
CAMP				Sg	Sg	01 42 59.5	+0.8
CAMP	Campotosto	0.22	356	Pg	Pg	01 42 55.1	-0.5
CAMP				Sg	Sg	01 42 59.5	+0.8
FIAM	Fiamignano	0.24	258	Pg	Pg	01 42 55.9	0.0
FIAM	Fiamignano	0.24	258	Pg	Pg	01 42 55.9	0.0
PTQR	Pietraquaria	0.30	184	Pg	Pg	01 42 56.1	-0.9
PTQR	Pietraquaria	0.30	184	Pg	Pg	01 42 56.1	-0.9
VCEL	Villa Celiera	0.31	76	Pg	Pg	01 42 56.2	-1.1
VCEL	Villa Celiera	0.31	76	Pg	Pg	01 42 56.2	-1.1
TERO	Teramo	0.33	23	Pg	Pg	01 42 57.7	+0.1
TERO				Sg	Sb	01 43 02.9	-1.6
TERO	Teramo	0.33	23	Pg	Pg	01 42 57.7	+0.1
TERO				Sg	Sb	01 43 02.9	-1.6
INTR	Introdacqua	0.47	131	Pg	Pg	01 42 59.1	-1.1
INTR				Sg	Sg	01 43 06.7	+0.4
INTR	Introdacqua	0.47	131	Pg	Pg	01 42 59.1	-1.1
INTR				Sg	Sg	01 43 06.7	+0.4
VVLD	Villa Vallelon	0.47	162	Pg	Pg	01 42 58.8	-1.4
VVLD	Villa Vallelon	0.47	162	Pg	Pg	01 42 58.8	-1.4
CERT	Cerreto	0.50	222	Pg	Pg	01 43 00.1	-0.6
CERT	Cerreto	0.50	222	Pg	Pg	01 43 00.1	-0.6
MNS	Montasola	0.56	277	Pg	Pg	01 43 00.8	-1.1
MNS	Montasola	0.56	277	Pg	Pg	01 43 00.8	-1.1
NRCA	Norcia	0.56	336	Pg	Pg	01 43 01.0	-1.0
NRCA				Sg	Sg	01 43 10.0	+0.5
NRCA	Norcia	0.56	336	Pg	Pg	01 43 01.0	-1.0
NRCA				Sg	Sg	01 43 10.0	+0.5
LPEL	Lama dei Pelig	0.62	116	Pg	Pg	01 43 01.7	-1.4
LPEL	Lama dei Pelig	0.62	116	Pg	Pg	01 43 01.7	-1.4
OFFI	Offida	0.65	17	Pg	Pb	01 43 03.9	-0.5
OFFI	Offida	0.65	17	Pg	Pb	01 43 03.9	-0.5
SDI	San Donato	0.67	155	Pg	Pg	01 43 02.4	-1.6
SDI	San Donato	0.67	155	Pg	Pg	01 43 02.4	-1.6
FDMO	Fiordimonte	0.76	341	Pg	Pg	01 43 04.7	-1.0
FDMO	Fiordimonte	0.76	341	Pg	Pg	01 43 04.7	-1.0
CESI	CESI - Serrava	0.79	331	Pg	Pg	01 43 05.5	-0.7
CESI	CESI - Serrava	0.79	331	Pg	Pg	01 43 05.5	-0.7
NVLJ	Novalja	2.48	25	ePn	Pn	01 43 31.2	-0.2
NVLJ				Sn	Sn	01 44 01.8	+0.1
STON	Ston	3.20	79	ePn	Pn	01 43 40.8	-0.7
STON				Sn	Sn	01 44 19.3	-0.4
STON	Ston	3.20	79	ePn	Pn	01 43 40.7	-0.7
STON				Sn	Sn	01 44 19.2	-0.4
PGF	Pioggiola	3.29	275	ePn	Pn	01 43 43.4	+0.7
PGF				eSn	Sn	01 44 23.4	+1.4
	25nm,0.5s						
PGF	Pioggiola	3.29	275	ePn	Pn	01 43 43.4	+0.7
PGF				eSn	Sn	01 44 23.4	+1.4
	12nm,0.5s						
SBF	Sospel	4.65	291	ePn	Pn	01 44 01.7	+0.2
SBF				eSn	Sn	01 44 51.6	-4.0
	22nm,0.6s						
SBF	Sospel	4.65	291	ePn	Pn	01 44 01.7	+0.2
SBF				eSn	Sn	01 44 51.6	-4.0
	11nm,0.6s						
DAVOX	Davos/Dischmat	5.13	332	Pn	Pn	01 44 10.9	+2.8
	5.6nm,0.3s,baz=329,slow=13,SNR=5.8						
DAVOX				Sn	Sn	01 45 06.0	-1.6
	1.3nm,0.3s,baz=330,slow=10,SNR=1.4						
FRF	La Foret Royal	5.13	286	ePn	Pn	01 44 08.3	+0.3
FRF	La Foret Royal	5.13	286	ePn	Pn	01 44 08.3	+0.3
LMR	La Mourre	5.19	284	ePn	Pn	01 44 08.5	-0.2
LMR				eSn	Sn	01 45 04.6	-4.1
	5.9nm,0.5s						
LMR	La Mourre	5.19	284	ePn	Pn	01 44 08.5	-0.2
LMR				eSn	Sn	01 45 04.6	-4.1
	3.0nm,0.5s						
MBDF	Montbardon	5.41	299	eP	Pn	01 44 13.9	+2.0
MBDF	Montbardon	5.41	299	eP	Pn	01 44 13.9	+2.0
SMRF	Simiane la Rot	5.98	289	eP	Pn	01 44 21.2	+1.5
SMRF	Simiane la Rot	5.98	289	eP	Pn	01 44 21.2	+1.5
ORIF	Oris-en-Rattie	6.07	298	eP	Pn	01 44 24.3	+3.4
	SNR=1.0						
GERES	GERESS Array B	6.53	2	Pn	Pn	01 44 27.0	-0.2
	2.4nm,0.3s,baz=181,slow=12,SNR=5.0						
GERES				Sn	Sn	01 45 39.8	-2.1
	1.4nm,0.3s,baz=185,slow=22,SNR=5.0						
CABF	La Chapelle	6.78	312	ePn	Pn	01 44 31.1	+0.4
	SNR=1.0						
CABF	La Chapelle	6.78	312	ePn	Pn	01 44 31.1	+0.4
	SNR=1.0						
VIVF	Saint-Julien-l	6.85	295	ePn	Pn	01 44 33.5	+2.0
	SNR=1.0						
VIVF	Saint-Julien-l	6.85	295	ePn	Pn	01 44 33.5	+2.0
	SNR=1.0						
HINF	Hinteralfeld	7.20	322	ePn	Pn	01 44 35.7	-0.7
	SNR=1.0						
HINF				eSn	Sn	01 45 52.6	-5.7
	13nm,0.5s						
HINF	Hinteralfeld	7.20	322	ePn	Pn	01 44 35.7	-0.7
	SNR=1.0						
KEST	Kesra	7.30	207	Pn	Pn	01 44 42.0	+4.2
	0.7nm,0.3s,baz=316,slow=3.4,SNR=5.3						
VRAC	Vranov	7.33	16	Pn	Pn	01 44 38.4	+0.2
	0.5nm,0.3s,baz=177,slow=11,SNR=2.7						
VRAC				Sn	Sn	01 46 05.0	+3.6
	0.3nm,0.3s,baz=120,slow=16,SNR=2.0						
CDF	Champ du Feu	7.47	327	ePn	Pn	01 44 39.7	-0.5
	SNR=1.0						
CDF				eSn	Sn	01 45 59.3	-5.8
	5.4nm,0.4s						
CDF	Champ du Feu	7.47	327	ePn	Pn	01 44 39.7	-0.5
	SNR=1.0						
HAU	Haudompre	7.57	321	ePn	Pn	01 44 41.0	-0.5
	SNR=1.0						
HAU				eSn	Sn	01 46 00.0	-7.4
	11nm,0.4s						
HAU	Haudompre	7.57	321	ePn	Pn	01 44 41.0	-0.5
	SNR=1.0						
SMF	Signal de Mont	8.11	306	ePn	Pn	01 44 49.2	+0.4
	SNR=1.0						
SMF	Signal de Mont	8.11	306	ePn	Pn	01 44 49.2	+0.4
	SNR=1.0						
MTLF	Montolieu	8.30	281	ePn	Pn	01 44 51.3	-0.2
	SNR=1.0						
MTLF	Montolieu	8.30	281	ePn	Pn	01 44 51.3	-0.2
	SNR=1.0						
LOR	Lormes	8.41	309	ePn	Pn	01 44 52.9	-0.1
	SNR=1.0						
LOR				eSn	Sn	01 46 22.3	-5.7
	3.7nm,0.4s						
LOR	Lormes	8.41	309	ePn	Pn	01 44 52.9	-0.1
	SNR=1.0						
MLR	Muntele Rosu	9.57	66	Pn	Pn	01 45 11.4	+2.3
	0.1nm,0.3s,baz=124,slow=16,SNR=2.8						
EKA	Eskdalemuir Ar	16.94	326	Pn	P	01 46 50.3	+0.4
	baz=142,slow=14,SNR=3.0						
NOA	NORSAR Array B	18.80	357	P	Pn	01 47 11.3	+0.4
	0.0nm,0.3s,baz=176,slow=11,SNR=3.0						
FINES	FINESS Array B	20.61	17	P	P	01 47 30.1	-0.1
	2.4nm,0.6s,baz=187,slow=8.3,SNR=3.5						
TORD	Torodi Ar. Bea	30.80	203	P	P	01 49 08.1	+1.1
	0.8nm,0.8s,baz=8.8,slow=10,SNR=5.7						
MKAR	Makanchi Array	47.84	60	P	P	01 51 28.9	0.0
	1.1nm,0.6s,baz=282,slow=7.5,SNR=6.0						
SCHQ	Schefferville	51.71	313	P	P	01 51 58.4	+0.2
	1.3nm,0.7s,baz=76,slow=17,SNR=2.6						
SONM	Songino Array	61.98	50	P	P	01 53 11.3	+0.1
	0.5nm,0.7s,baz=292,slow=8.9,SNR=2.7						
YKA	Yellowknife Ar	67.55	337	P	P	01 53 48.0	+0.9
	0.3nm,0.7s,baz=41,slow=6.1,SNR=3.7						
BOSA	Boshof	71.42	169	P	P	01 54 12.7	+1.3
	2.5nm,0.9s,baz=252,slow=22,SNR=2.7						
KDAK	Kodiak Island	79.58	352	P	P	01 54 59.8	+1.9
	3.3nm,0.9s,baz=331,slow=13,SNR=2.8						

*CSEM **06** 01:44:35.2, 42.°30N×13.°37E, h8km, After ROM*
ROM 06 01:44:35.2±0.2**, 42.°30N×13.°37E, h8**km±2km**, Ml3.7**/4,
Error ellipse: s-maj=3.1km s-min=2.5km az=47.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	24	Pg	Pg	01 44 37.8	+0.6
AQU				Sg	Sg	01 44 39.0	+0.4
AQU	L'Aquila	0.06	24	Pg	Pg	01 44 37.8	+0.6
AQU				Sg	Sg	01 44 39.0	+0.4
FAGN	Fagnano	0.16	102	Pg	Pg	01 44 38.9	+0.1
FAGN				Sg	Sg	01 44 42.4	+1.2
FAGN	Fagnano	0.16	102	Pg	Pg	01 44 38.9	+0.1
FAGN				Sg	Sg	01 44 42.4	+1.2
FIAM	Fiamignano	0.19	260	Pg	Pg	01 44 39.1	-0.2
FIAM				Sg	Sg	01 44 44.6	+2.6
FIAM	Fiamignano	0.19	260	Pg	Pg	01 44 39.1	-0.2
FIAM				Sg	Sg	01 44 44.6	+2.6
CAMP	Campotosto	0.24	7	Pg	Pg	01 44 40.9	+0.7
CAMP				Sg	Sg	01 44 43.8	+0.2
CAMP	Campotosto	0.24	7	Pg	Pg	01 44 40.9	+0.7
CAMP				Sg	Sg	01 44 43.8	+0.2
PTQR	Pietraquaria	0.28	175	Pg	Pb	01 44 41.9	-0.7
PTQR	Pietraquaria	0.28	175	Pg	Pb	01 44 41.9	-0.7
VCEL	Villa Celiera	0.36	75	Pg	Pg	01 44 42.5	0.0
VCEL	Villa Celiera	0.36	75	Pg	Pg	01 44 42.5	0.0
VVLD	Villa Vallelon	0.47	156	Pg	Pg	01 44 44.3	-0.2
VVLD	Villa Vallelon	0.47	156	Pg	Pg	01 44 44.3	-0.2
INTR	Introdacqua	0.49	126	Pg	Pg	01 44 45.4	+0.5
INTR	Introdacqua	0.49	126	Pg	Pg	01 44 45.4	+0.5
MNS	Montasola	0.52	280	Pg	Pg	01 44 44.9	-0.4
MNS	Montasola	0.52	280	Pg	Pg	01 44 44.9	-0.4
NRCA	Norcia	0.56	341	Pg	Pb	01 44 47.4	-0.1
NRCA				Sg	Sb	01 44 55.0	-0.8
NRCA	Norcia	0.56	341	Pg	Pb	01 44 47.4	-0.1
NRCA				Sg	Sb	01 44 55.0	-0.8
LPEL	Lama dei Pelig	0.66	112	Pg	Pb	01 44 49.2	+0.2
LPEL	Lama dei Pelig	0.66	112	Pg	Pb	01 44 49.2	+0.2
OFFI	Offida	0.68	20	Pg	Pb	01 44 49.5	+0.2
OFFI	Offida	0.68	20	Pg	Pb	01 44 49.5	+0.2
SDI	San Donato	0.68	151	Pg	Pb	01 44 49.4	+0.1
SDI	San Donato	0.68	151	Pg	Pb	01 44 49.4	+0.1

*ISCJB **06** 01:59:10.6±0.5, 3.°07S±0.°03×130.°08E±0.°06, h25km, mb3.8/7, Error ellipse: s-maj=8.2km s-min=5.0km az=1.1*
*DJA **06** 01:59:10.1±3.1, 3°S±13°×13°0E±°, h150km±66km, M3.9/7, MLv3.9/7*
*AUST **06** 01:59:12.6, 2.°99S×130.°01E, h35km*
*IDC **06** 01:59:17.1±3.8, 3.°16S×130.°10E, h75km±33km, mb3.6/8, mb1 3.8/10, mb1mx3.6/23, mbtmp3.7/10, Error ellipse: s-maj=37.9km s-min=11.3km az=70.0*
ISC 06 01:59:12.0±0.6**, 3.°03S**±0.°05×**130.°16E**±0.°06**, h25**km**, n26,**
σ1.§59/30**, mb4.0**/7**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.50	190	P	Pb	01 59 39.6	+0.3
AAI	Ambon	2.07	252	P	Pb	01 59 47.8	-1.1
AAI	Ambon	2.07	252	P	Pn	01 59 46.0	+0.8
	baz=1.9,SNR=12						
FAKI	Fak Fak	2.09	87	P	Pn	01 59 46.8	+1.4
SWI	Sorong	2.42	27	P	Pn	01 59 50.8	+0.8
SWI	Sorong	2.42	27	P	Pn	01 59 50.9	+0.9
	baz=2.5,SNR=7.3						
SWI				S	Sn	02 00 21.2	+2.4
	baz=2.5,SNR=6.8						
NLAI	Namlea	3.06	266	P	Pn	01 59 59.8	+0.9
LBMI	Labuha	3.57	312	P	Pn	02 00 03.7	-2.1
MTN	Manton Dam	9.80	174	P	Pn	02 01 33.8	+2.4
	baz=9.9,SNR=5.4						
MTN				S	Sn	02 03 21.2	+0.5
	baz=9.9,SNR=4.2						
KDU	Kakadu	9.86	167	P	Pn	02 01 32.6	+0.3
	baz=10.0,SNR=12						
PCI	Palu	10.53	281	S	Sn	02 03 29.6	-9.2
	baz=10,SNR=7.1						
KAPI	Kappang	10.57	259	P	Pn	02 01 44.1	+2.1
	0.4nm,0.3s,baz=221,slow=8.0,SNR=4.1						
FITZ	Fitzroy Crossi	15.62	196	P	Pn	02 02 51.9	+1.2
	0.3nm,0.3s,baz=29,slow=13,SNR=8.0						
FITZ				S	Sn	02 05 42.3	-0.7
	0.1nm,0.3s,baz=115,slow=19,SNR=2.9						
FITZ	Fitzroy Crossi	15.62	196	P	Pn	02 02 52.5	+1.8
	baz=16,SNR=3.2						
COEN	Coen	16.82	131	P	P	02 03 09.5	+1.5
	baz=17,SNR=4.8						
WRA	Warramunga Arr	17.30	167	P	Pn	02 03 08.4	-3.5
	0.2nm,0.3s,baz=345,slow=13,SNR=2.6						
WRA				S	Sn	02 06 22.9	-0.9
	0.3nm,0.3s,baz=345,slow=21,SNR=3.1						
ASAR	Alice Springs	20.83	170	P	P	02 03 51.1	-0.8
	6.6nm,0.5s,baz=349,slow=10,SNR=109						
ASAR				S	S	02 07 39.6	-3.7
	1.2nm,0.8s,baz=350,slow=18,SNR=5.6						
CTA	Charters Tower	23.11	138	P	P	02 04 16.9	+0.7
	1.7nm,0.6s,baz=322,slow=17,SNR=2.9						
STKA	Stephens Creek	30.64	161	P	P	02 05 23.4	-1.1
	1.0nm,0.4s,baz=327,slow=12,SNR=4.1						
CMAR	Chiang Mai Arr	37.43	306	P	P	02 06 24.0	+0.5
	0.7nm,0.3s,baz=134,slow=8.9,SNR=4.1						
SONM	Songino Array	54.76	341	P	P	02 08 39.9	+0.2
	0.2nm,0.4s,baz=152,slow=6.5,SNR=5.4						
MKAR	Makanchi Array	65.03	326	P	P	02 09 50.0	-0.2
	0.6nm,0.3s,baz=118,slow=7.8,SNR=19						
ZALV	Zalesovo Beam	68.13	333	P	P	02 10 09.1	-0.7
	0.8nm,0.6s,baz=114,slow=7.0,SNR=5.1						
VNDA	Vanda	76.34	173	P	P	02 10 57.8	-0.7
	0.3nm,0.6s,baz=334,slow=5.7,SNR=2.6						
TORD	Torodi Ar. Bea	128.10	284	PKP	PKPdf	02 18 16.0	-1.1
	0.3nm,0.8s,baz=66,slow=2.0,SNR=2.7						
CPUP	Villa Florida	149.93	166	PKPbc	PKPdf	02 18 57.5	+1.4
	0.2nm,0.3s,baz=105,slow=14,SNR=2.7						

*CSEM **06** 02:13:51.3, 42.°34N×13.°46E, h11km, After ROM*
ROM 06 02:13:51.3±0.1**, 42.°34N×13.°46E, h11**km±1km**, Ml3.1**/2,
Error ellipse: s-maj=2.0km s-min=1.5km az=63.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	284	Pg	Pg	02 13 53.5	+0.1
AQU				Sg	Sg	02 13 54.8	-0.2
AQU	L'Aquila	0.04	284	Pg	Pg	02 13 53.5	+0.1
AQU				Sg	Sg	02 13 54.8	-0.2
FAGN	Fagnano	0.12	129	Pg	Pb	02 13 56.2	+0.4
FAGN				Sg	Sg	02 13 57.5	+0.9
FAGN	Fagnano	0.12	129	Pg	Pb	02 13 56.2	+0.4
FAGN				Sg	Sg	02 13 57.5	+0.9
CAMP	Campotosto	0.20	350	Pg	Pg	02 13 56.3	+0.6
CAMP				Sg	Sg	02 13 59.6	+0.9
CAMP	Campotosto	0.20	350	Pg	Pg	02 13 56.3	+0.6
CAMP				Sg	Sg	02 13 59.6	+0.9
FIAM	Fiamignano	0.26	253	Pg	Pb	02 13 57.7	-0.5
FIAM				Sg	Sb	02 14 01.9	-1.0
FIAM	Fiamignano	0.26	253	Pg	Pb	02 13 57.7	-0.5
FIAM				Sg	Sb	02 14 01.9	-1.0
VCEL	Villa Celiera	0.29	80	Pg	Pg	02 13 58.0	+0.6
VCEL	Villa Celiera	0.29	80	Pg	Pg	02 13 58.0	+0.6
TERO	Teramo	0.30	22	Pg	Pg	02 13 57.6	+0.1
TERO				Sg	Sg	02 14 02.3	+0.7
TERO	Teramo	0.30	22	Pg	Pg	02 13 57.6	+0.1
TERO				Sg	Sg	02 14 02.3	+0.7
PTQR	Pietraquaria	0.32	187	Pg	Pg	02 13 58.6	+0.6
PTQR				Sg	Sg	02 14 03.1	+0.7
PTQR	Pietraquaria	0.32	187	Pg	Pg	02 13 58.6	+0.6
PTQR				Sg	Sg	02 14 03.1	+0.7
INTR	Introdacqua	0.47	135	Pg	Pg	02 14 00.6	-0.1
INTR				Sg	Sg	02 14 07.4	+0.4
INTR	Introdacqua	0.47	135	Pg	Pg	02 14 00.6	-0.1
INTR				Sg	Sg	02 14 07.4	+0.4
VVLD	Villa Vallelon	0.49	165	Pg	Pg	02 14 00.6	-0.4
VVLD	Villa Vallelon	0.49	165	Pg	Pg	02 14 00.6	-0.4
CERT	Cerreto	0.53	222	Pg	Pg	02 14 02.0	+0.3
CERT	Cerreto	0.53	222	Pg	Pg	02 14 02.0	+0.3
NRCA	Norcia	0.55	333	Pg	Pg	02 14 02.3	+0.1
NRCA				Sg	Sb	02 14 11.0	-0.2
NRCA	Norcia	0.55	333	Pg	Pg	02 14 02.3	+0.1
NRCA				Sg	Sb	02 14 11.0	-0.2
LPEL	Lama dei Pelig	0.62	119	Pg	Pg	02 14 03.4	0.0
LPEL				Sg	Sb	02 14 12.8	-0.2
LPEL	Lama dei Pelig	0.62	119	Pg	Pg	02 14 03.4	0.0
LPEL				Sg	Sb	02 14 12.8	-0.2

*ROM **06** 02:14:10.9±0.1, 42.°33N×13.°46E, h8km±1km, Ml3.3/6, Error ellipse: s-maj=1.8km s-min=1.3km az=56.0*
*ISCJB **06** 02:14:11.4±0.3, 42.°34N±0.°02×13.°47E±0.°03, h9km±2km, mb3.2/2, Error ellipse: s-maj=4.3km s-min=3.1km az=141.2*
*IDC **06** 02:14:11.9±1.5, 42.°41N×13.°31E, h0km, mb3.1/2, mb1 3.2/4, mb1mx3.1/28, mbtmp3.0/4, ML3.0/2, Error*

ellipse: s-maj=24.6km s-min=15.8km az=91.0
*CSEM **06** 02:14:11.8±0.1, 42°.32N×13°.47E, h2km, ML2.7/5, Error ellipse: s-maj=2.9km s-min=2.2km az=45.0*
*LDG **06** 02:14:15.8±1.2, 42°.43N×13°.34E, h2km, Ml2.7/5, Error ellipse: s-maj=25.2km s-min=14.7km az=131.0*
ISC 06 02:14:12.1±0.8, **42°.33N**±0°.02×**13°.46E**±0°.02, **h6**km±5km, **n54**, σ1s.**42**/79, **2C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	297	⇑iPg	Pg	02 14 13.1	-0.4
AQU				Sg	Sg	02 14 14.4	-0.1
AQU	L'Aquila	0.05	297	⇑iPg	Pg	02 14 13.1	-0.4
AQU				Sg	Sg	02 14 14.4	-0.1
FAGN	Fagnano	0.12	126	Pg	Pg	02 14 14.2	-0.3
FAGN				Sg	Sg	02 14 16.2	+0.1
FAGN	Fagnano	0.12	126	Pg	Pg	02 14 14.2	-0.3
FAGN				Sg	Sg	02 14 16.2	+0.1
CAMP	Campotosto	0.21	350	Pg	Pg	02 14 15.5	-0.7
CAMP				Sg	Sg	02 14 19.6	+0.7
CAMP	Campotosto	0.21	350	Pg	Pg	02 14 15.5	-0.7
CAMP				Sg	Sg	02 14 19.6	+0.7
FIAM	Fiamignano	0.26	256	Pg	Pg	02 14 16.9	-0.3
FIAM				Sg	Sg	02 14 21.3	+0.7
FIAM	Fiamignano	0.26	256	Pg	Pg	02 14 16.9	-0.3
FIAM				Sg	Sg	02 14 21.3	+0.7
VCEL	Villa Celiera	0.29	78	Pg	Pg	02 14 17.5	-0.3
VCEL	Villa Celiera	0.29	78	Pg	Pg	02 14 17.5	-0.3
TERO	Teramo	0.31	20	Pg	Pg	02 14 17.5	-0.6
TERO				Sg	Sg	02 14 22.3	+0.1
TERO	Teramo	0.31	20	Pg	Pg	02 14 17.5	-0.6
TERO				Sg	Sg	02 14 22.3	+0.1
PTQR	Pietraquaria	0.31	188	Pg	Pg	02 14 17.4	-0.8
PTQR	Pietraquaria	0.31	188	Pg	Pg	02 14 17.4	-0.8
INTR	Introdacqua	0.46	134	Pg	Pg	02 14 20.0	-1.0
INTR				Sg	Sg	02 14 27.1	+0.1
INTR	Introdacqua	0.46	134	Pg	Pg	02 14 20.0	-1.0
INTR				Sg	Sg	02 14 27.1	+0.1
GUAR	Guarcino	0.55	191	Pg	Pg	02 14 22.9	+0.3
GUAR	Guarcino	0.55	191	Pg	Pg	02 14 22.9	+0.3
NRCA	Norcia	0.56	333	Pg	Pg	02 14 22.1	-0.8
NRCA				Sg	Sg	02 14 30.9	+0.7
	758nm,0.2s						
NRCA	Norcia	0.56	333	Pg	Pg	02 14 22.1	-0.8
NRCA				Sg	Sg	02 14 30.9	+0.7
	758nm,0.2s						
TRTR	Tortoreto Alta	0.58	35	Pg	Pb	02 14 24.0	-0.7
	2µm,0.5s						
TRTR	Tortoreto Alta	0.58	35	Pg	Pb	02 14 24.0	-0.7
	2µm,0.5s						
LPEL	Lama dei Pelig	0.61	118	Pg	Pg	02 14 23.1	-0.7
LPEL				Sg	Sg	02 14 32.1	+0.4
	2µm,0.8s						
LPEL	Lama dei Pelig	0.61	118	Pg	Pg	02 14 23.1	-0.7
LPEL				Sg	Sg	02 14 32.1	+0.4
	2µm,0.8s						
MTCE	Montecelio	0.61	240	Pg	Pg	02 14 23.8	-0.1
	568nm,0.5s						
MTCE	Montecelio	0.61	240	Pg	Pg	02 14 23.8	-0.1
	568nm,0.5s						
OFFI	Offida	0.62	16	Pg	Pg	02 14 24.5	+0.4
	3µm,0.6s						
OFFI	Offida	0.62	16	Pg	Pg	02 14 24.5	+0.4
	3µm,0.6s						
POFI	Posta Fibreno	0.64	163	Pg	Pg	02 14 23.8	-0.6
POFI	Posta Fibreno	0.64	163	Pg	Pg	02 14 23.8	-0.6
CAFR	Castel Frentan	0.67	99	Pg	Pg	02 14 24.7	-0.2
	1µm,0.4s						
CAFR	Castel Frentan	0.67	99	Pg	Pg	02 14 24.7	-0.2
	1µm,0.4s						
MIDA	Miranda	0.91	139	Pg	Pg	02 14 28.2	-1.3
MIDA				Sg	Sg	02 14 41.8	+0.5
MIDA	Miranda	0.91	139	Pg	Pg	02 14 28.2	-1.3
MIDA				Sg	Sg	02 14 41.8	+0.5
PGF	Pioggiola	3.31	275	ePn	Pn	02 15 05.3	+0.8
PGF				eSn	Sn	02 15 45.6	+1.4
	2.7nm,0.4s						
PGF	Pioggiola	3.31	275	ePn	Pn	02 15 05.3	+0.8
PGF				eSn	Sn	02 15 45.6	+1.4
	1.4nm,0.4s						
SBF	Sospel	4.67	291	ePn	Pn	02 15 23.7	+0.5
SBF				eSn	Sn	02 16 13.7	-4.0
	1.6nm,0.3s						
SBF	Sospel	4.67	291	ePn	Pn	02 15 23.7	+0.5
SBF				eSn	Sn	02 16 13.7	-4.0
	0.8nm,0.3s						
DAVOX	Davos/Dischmat	5.13	331	Pn	Pn	02 15 32.8	+3.2
	0.6nm,0.3s,baz=161,slow=18,SNR=6.9						
DAVOX				Sn	Sn	02 16 31.8	+2.5
	0.1nm,0.3s,baz=339,slow=23,SNR=1.4						
FRF	La Foret Royal	5.15	286	ePn	Pn	02 15 29.7	0.0
FRF				eSn	Sn	02 16 25.1	-4.3
	0.5nm,0.3s						
FRF	La Foret Royal	5.15	286	ePn	Pn	02 15 29.7	0.0
FRF				eSn	Sn	02 16 25.1	-4.3
	0.2nm,0.3s						
LMR	La Mourre	5.21	283	ePn	Pn	02 15 30.7	+0.2
LMR	La Mourre	5.21	283	ePn	Pn	02 15 30.7	+0.2
MBDF	Montbardon	5.42	298	eP	Pn	02 15 35.7	+2.2
MBDF	Montbardon	5.42	298	eP	Pn	02 15 35.7	+2.2
GERES	GERESS Array B	6.51	1	Pn	Pn	02 15 48.3	-0.3
	0.2nm,0.3s,baz=181,slow=12,SNR=7.4						
GERES				Sn	Sn	02 17 02.7	-0.6
	0.4nm,0.3s,baz=182,slow=23,SNR=4.7						
KEST	Kesra	7.33	207	Pn	Pn	02 16 03.6	+3.9
	0.2nm,0.3s,baz=172,slow=1.5,SNR=12						
CDF	Champ du Feu	7.47	327	ePn	Pn	02 16 01.0	-0.7
CDF				eSn	Sn	02 17 21.2	-5.6
	2.6nm,0.5s						
CDF	Champ du Feu	7.47	327	ePn	Pn	02 16 01.0	-0.7
HAU	Haudompre	7.57	321	ePn	Pn	02 16 02.9	-0.1
HAU				eSn	Sn	02 17 21.4	-7.8
	3.2nm,0.5s						
HAU	Haudompre	7.57	321	ePn	Pn	02 16 02.9	-0.1
MLR	Muntele Rosu	9.55	66	Pn	Pn	02 16 33.1	+2.9
	0.0nm,0.3s,baz=326,slow=23,SNR=6.8						
TORD	Torodi Ar. Bea	30.82	203	P	P	02 20 30.2	+1.4
	0.2nm,0.9s,baz=14,slow=8.8,SNR=2.7						
MKAR	Makanchi Array	47.82	60	P	P	02 22 50.7	+0.4
	0.3nm,0.7s,baz=282,slow=7.2,SNR=2.6						

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*CSEM **06** 02:19:14.4±0.2, 42°.26N×13°.49E, h8km, ML2.7/5, Error ellipse: s-maj=3.7km s-min=2.9km az=41.0*
ROM 06 02:19:13.7±0.1, **42°.27N×13°.48E, h9**km±1km, **Ml2.9**/8, **Error ellipse: s-maj=1.8km s-min=1.3km az=26.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.07	90	Pg	Pg	02 19 16.4	+0.4
FAGN				Sg	Sg	02 19 18.1	+0.5
FAGN	Fagnano	0.07	90	Pg	Pg	02 19 16.4	+0.4
FAGN				Sg	Sg	02 19 18.1	+0.5
AQU	L'Aquila	0.11	325	Pg	Pg	02 19 16.2	-0.2
AQU				Sg	Sg	02 19 18.9	+0.5
AQU	L'Aquila	0.11	325	Pg	Pg	02 19 16.2	-0.2
AQU				Sg	Sg	02 19 18.9	+0.5
FIAM	Fiamignano	0.27	271	Pg	Pb	02 19 20.3	-0.6
FIAM				Sg	Sb	02 19 24.8	-0.9
FIAM	Fiamignano	0.27	271	Pg	Pb	02 19 20.3	-0.6
FIAM				Sg	Sb	02 19 24.8	-0.9
CAMP	Campotosto	0.28	348	Pg	Pg	02 19 20.1	+0.6
CAMP				Sg	Sb	02 19 24.9	-1.0
CAMP	Campotosto	0.28	348	Pg	Pg	02 19 20.1	+0.6
CAMP				Sg	Sb	02 19 24.9	-1.0
VCEL	Villa Celiera	0.29	64	Pg	Pb	02 19 20.7	-0.6
VCEL	Villa Celiera	0.29	64	Pg	Pb	02 19 20.7	-0.6
TERO	Teramo	0.37	14	Pg	Pb	02 19 22.5	0.0
TERO				Sg	Sg	02 19 26.9	+0.9
	982nm,0.4s						
TERO	Teramo	0.37	14	Pg	Pb	02 19 22.5	0.0
TERO				Sg	Sg	02 19 26.9	+0.9
	982nm,0.4s						
INTR	Introdacqua	0.40	129	Pg	Pg	02 19 22.1	+0.3
INTR				Sg	Sb	02 19 28.5	-1.0
INTR	Introdacqua	0.40	129	Pg	Pg	02 19 22.1	+0.3
INTR				Sg	Sb	02 19 28.5	-1.0
VVLD	Villa Vallelon	0.41	165	Pg	Pg	02 19 22.1	+0.2
VVLD	Villa Vallelon	0.41	165	Pg	Pg	02 19 22.1	+0.2
GUAR	Guarcino	0.49	195	Pg	Pb	02 19 24.7	+0.2
GUAR	Guarcino	0.49	195	Pg	Pb	02 19 24.7	+0.2
LPEL	Lama dei Pelig	0.56	113	Pg	Pg	02 19 24.9	+0.1
LPEL				Sg	Sb	02 19 33.2	-0.8
LPEL	Lama dei Pelig	0.56	113	Pg	Pg	02 19 24.9	+0.1
LPEL				Sg	Sb	02 19 33.2	-0.8
MTCE	Montecelio	0.60	246	Pg	Pg	02 19 25.4	0.0
	187nm,0.3s						
MTCE	Montecelio	0.60	246	Pg	Pg	02 19 25.4	0.0
	187nm,0.3s						

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*ROM **06** 02:19:20.4±0.1, 42°.30N×13°.48E, h9km±1km, Ml2.6/2, Error ellipse: s-maj=2.2km s-min=1.5km az=50.0*
*CSEM **06** 02:19:21.2±0.1, 42°.30N×13°.49E, h5km, ML2.5/5, Error ellipse: s-maj=3.4km s-min=2.4km az=54.0*
*LDG **06** 02:19:22.1±0.4, 42°.31N×13°.56E, h2km, Ml2.5/5, Error ellipse: s-maj=12.3km s-min=8.5km az=35.0*
ISC 06 02:19:21.0±0.8, **42°.31N**±0°.02×**13°.48E**±0°.02, **h10**km±5km, **n48**, σ1s.**23**/68, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	310	Pg	Pg	02 19 23.2	-0.1
AQU				Sg	Sg	02 19 24.6	-0.4
AQU	L'Aquila	0.07	310	Pg	Pg	02 19 23.2	-0.1
AQU				Sg	Sg	02 19 24.6	-0.4
FAGN	Fagnano	0.09	117	Pg	Pg	02 19 23.4	-0.1
FAGN				Sg	Sg	02 19 25.0	-0.3
FAGN	Fagnano	0.09	117	Pg	Pg	02 19 23.4	-0.1
FAGN				Sg	Sg	02 19 25.0	-0.3
CAMP	Campotosto	0.24	347	Pg	Pg	02 19 26.0	+0.1
CAMP				Sg	Sg	02 19 30.0	+0.8
CAMP	Campotosto	0.24	347	Pg	Pg	02 19 26.0	+0.1
CAMP				Sg	Sg	02 19 30.0	+0.8
FIAM	Fiamignano	0.27	262	Pg	Pb	02 19 28.4	+0.3
FIAM				Sg	Sg	02 19 31.0	+0.8
FIAM	Fiamignano	0.27	262	Pg	Pb	02 19 28.4	+0.3
FIAM				Sg	Sg	02 19 31.0	+0.8
PTQR	Pietraquaria	0.29	192	Pg	Pg	02 19 27.0	+0.1
PTQR				Sg	Sg	02 19 31.1	+0.3
PTQR	Pietraquaria	0.29	192	Pg	Pg	02 19 27.0	+0.1
PTQR				Sg	Sg	02 19 31.1	+0.3
TERO	Teramo	0.33	16	Pg	Pg	02 19 27.4	-0.2
TERO				Sg	Sg	02 19 32.5	+0.4
	982nm,0.4s						
TERO	Teramo	0.33	16	Pg	Pg	02 19 27.4	-0.2
TERO				Sg	Sg	02 19 32.5	+0.4
	982nm,0.4s						
INTR	Introdacqua	0.43	133	Pg	Pg	02 19 29.5	0.0
INTR				Sg	Sg	02 19 36.1	+0.9
INTR	Introdacqua	0.43	133	Pg	Pg	02 19 29.5	0.0
INTR				Sg	Sg	02 19 36.1	+0.9
VVLD	Villa Vallelon	0.45	166	Pg	Pg	02 19 29.3	-0.5
VVLD	Villa Vallelon	0.45	166	Pg	Pg	02 19 29.3	-0.5
CERT	Cerreto	0.51	226	Pg	Pg	02 19 30.3	-0.7
CERT	Cerreto	0.51	226	Pg	Pg	02 19 30.3	-0.7
LPEL	Lama dei Pelig	0.58	116	Pg	Pg	02 19 31.9	-0.5
LPEL				Sg	Sg	02 19 40.9	+0.8
LPEL	Lama dei Pelig	0.58	116	Pg	Pg	02 19 31.9	-0.5
LPEL				Sg	Sg	02 19 40.9	+0.8
NRCA	Norcia	0.59	333	Pg	Pg	02 19 32.4	-0.1
NRCA				Sg	Sg	02 19 42.0	+1.7
NRCA	Norcia	0.59	333	Pg	Pg	02 19 32.4	-0.1
NRCA				Sg	Sg	02 19 42.0	+1.7
MTCE	Montecelio	0.62	243	Pg	Pg	02 19 32.4	-0.5
	187nm,0.3s						
MTCE	Montecelio	0.62	243	Pg	Pg	02 19 32.4	-0.5
	187nm,0.3s						
SDI	San Donato	0.65	157	Pg	Pg	02 19 34.2	+0.7
SDI	San Donato	0.65	157	Pg	Pg	02 19 34.2	+0.7
OFFI	Offida	0.65	14	Pg	Pb	02 19 34.5	+0.1
OFFI	Offida	0.65	14	Pg	Pb	02 19 34.5	+0.1
MIDA	Miranda	0.88	139	Pg	Pg	02 19 36.9	-1.1
MIDA	Miranda	0.88	139	Pg	Pg	02 19 36.9	-1.1
PGF	Pioggiola	3.33	276	ePn	Pn	02 20 14.5	+1.3
PGF				eSn	Sn	02 20 54.5	+1.7
	2.5nm,0.4s						
PGF	Pioggiola	3.33	276	ePn	Pn	02 20 14.5	+1.3
PGF				eSn	Sn	02 20 54.5	+1.7
	1.2nm,0.4s						
SBF	Sospel	4.69	291	ePn	Pn	02 20 32.9	+1.0
SBF				eSn	Sn	02 21 23.0	-3.5
	0.7nm,0.3s						
SBF	Sospel	4.69	291	eSn	Sn	02 21 23.0	-3.5
	0.3nm,0.3s						
SBF	Sospel	4.69	291	ePn	Pn	02 20 32.9	+1.0
FRF	La Foret Royal	5.17	286	ePn	Pn	02 20 39.6	+1.1
FRF				eSn	Sn	02 21 34.2	-4.0
	0.8nm,0.3s						
FRF	La Foret Royal	5.17	286	eSn	Sn	02 21 34.2	-4.0
	0.4nm,0.3s						
FRF	La Foret Royal	5.17	286	ePn	Pn	02 20 39.6	+1.1
LMR	La Mourre	5.23	284	ePn	Pn	02 20 39.7	+0.5
LMR	La Mourre	5.23	284	ePn	Pn	02 20 39.7	+0.5
SMRF	Simiane la Rot	6.02	289	eP	Pn	02 20 52.1	+2.0
SMRF	Simiane la Rot	6.02	289	eP	Pn	02 20 52.1	+2.0
CDF	Champ du Feu	7.51	327	ePn	Pn	02 21 10.4	-0.2
CDF				eSn	Sn	02 22 30.2	-5.6
	0.6nm,0.3s						
CDF	Champ du Feu	7.51	327	eSn	Sn	02 22 30.2	-5.6
	0.3nm,0.3s						
CDF	Champ du Feu	7.51	327	ePn	Pn	02 21 10.4	-0.2
HAU	Haudompre	7.61	321	ePn	Pn	02 21 12.9	+1.0
HAU				eSn	Sn	02 22 31.2	-6.9
	2.1nm,0.4s						
HAU	Haudompre	7.61	321	eSn	Sn	02 22 31.2	-6.9
	1.0nm,0.4s						
HAU	Haudompre	7.61	321	ePn	Pn	02 21 12.9	+1.0

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*CSEM **06** 02:22:28.4, 42°.30N×13°.45E, h10km, After ROM*
ROM 06 02:22:28.4±0.1, **42°.30N×13°.45E, h10**km±1km, **Ml2.6**/4, **Error ellipse: s-maj=1.8km s-min=1.3km az=58.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	327	Pg	Pg	02 22 30.8	+0.2
AQU				Sg	Sg	02 22 32.1	-0.1
AQU	L'Aquila	0.06	327	Pg	Pg	02 22 30.8	+0.2
AQU				Sg	Sg	02 22 32.1	-0.1
FAGN	Fagnano	0.11	110	Pg	Pg	02 22 31.7	+0.5
FAGN				Sg	Sg	02 22 33.9	+0.7
FAGN	Fagnano	0.11	110	Pg	Pg	02 22 31.7	+0.5
FAGN				Sg	Sg	02 22 33.9	+0.7
CAMP	Campotosto	0.23	353	Pg	Pg	02 22 34.4	+1.0
CAMP				Sg	Sg	02 22 38.3	+1.5
CAMP	Campotosto	0.23	353	Pg	Pg	02 22 34.4	+1.0
CAMP				Sg	Sg	02 22 38.3	+1.5
FIAM	Fiamignano	0.25	262	Pg	Pg	02 22 34.5	+0.9
FIAM	Fiamignano	0.25	262	Pg	Pg	02 22 34.5	+0.9
PTQR	Pietraquaria	0.28	187	Pg	Pg	02 22 34.8	+0.6
PTQR				Sg	Sb	02 22 40.1	-0.5
PTQR	Pietraquaria	0.28	187	Pg	Pg	02 22 34.8	+0.6
PTQR				Sg	Sb	02 22 40.1	-0.5
TERO	Teramo	0.34	20	Pg	Pg	02 22 35.4	+0.1
TERO				Sg	Sg	02 22 40.4	+0.5
TERO	Teramo	0.34	20	Pg	Pg	02 22 35.4	+0.1
TERO				Sg	Sg	02 22 40.4	+0.5
INTR	Introdacqua	0.45	130	Pg	Pg	02 22 37.5	+0.2
INTR				Sg	Sb	02 22 44.7	-0.7
	1µm,0.3s						
INTR	Introdacqua	0.45	130	Pg	Pg	02 22 37.5	+0.2
INTR				Sg	Sb	02 22 44.7	-0.7
	1µm,0.3s						
VVLD	Villa Vallelon	0.45	163	Pg	Pg	02 22 37.5	+0.1
VVLD				Sg	Sg	02 22 44.4	+1.0
	319nm,0.3s						
VVLD	Villa Vallelon	0.45	163	Pg	Pg	02 22 37.5	+0.1
VVLD				Sg	Sg	02 22 44.4	+1.0
	319nm,0.3s						
CERT	Cerreto	0.49	225	Pg	Pg	02 22 38.7	+0.6
CERT	Cerreto	0.49	225	Pg	Pg	02 22 38.7	+0.6
NRCA	Norcia	0.58	335	Pg	Pg	02 22 40.0	+0.1
NRCA	Norcia	0.58	335	Pg	Pg	02 22 40.0	+0.1
MTCE	Montecelio	0.59	242	Pg	Pg	02 22 40.0	0.0
	159nm,0.4s						
MTCE	Montecelio	0.59	242	Pg	Pg	02 22 40.0	0.0
	159nm,0.4s						
LPEL	Lama dei Pelig	0.60	115	Pg	Pg	02 22 40.1	-0.1
LPEL				Sg	Sb	02 22 49.4	-0.4
	337nm,0.5s						
LPEL	Lama dei Pelig	0.60	115	Pg	Pg	02 22 40.1	-0.1
LPEL				Sg	Sb	02 22 49.4	-0.4
	337nm,0.5s						
TRTR	Tortoreto Alta	0.61	34	Pg	Pb	02 22 41.4	+0.2
TRTR	Tortoreto Alta	0.61	34	Pg	Pb	02 22 41.4	+0.2
OFFI	Offida	0.66	16	Pg	Pb	02 22 42.1	+0.1
OFFI	Offida	0.66	16	Pg	Pb	02 22 42.1	+0.1

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*IDC **06** 02:25:45.9±1.1, 42°.50N×13°.44E, h0km, mb3.5/7, mb1 3.6/12, mb1mx3.5/32, mbtmp3.5/12, ML3.5/5, MS3.8/1, Ms1 3.8/1, ms1mx3.5/44, Error ellipse: s-maj=19.2km s-min=12.8km az=89.0*
*CSEM **06** 02:25:45.5±0.1, 42°.40N×13°.34E, h2km, ML3.2, Error ellipse: s-maj=2.4km s-min=2.0km az=59.0*
*ROM **06** 02:25:45.1±0.1, 42°.40N×13°.36E, h8km±1km, Ml3.4/27, Error ellipse: s-maj=1.6km s-min=1.3km az=66.0*
*ISCJB **06** 02:25:45.1±0.2, 42°.41N±0°.02×13°.34E±0°.02, h10km±2km, mb3.6/6, Error ellipse: s-maj=3.1km s-min=2.8km az=138.6*
*LDG **06** 02:25:48.1±0.2, 42°.37N×13°.28E, h2km, Ml3.2/7, Error ellipse: s-maj=5.9km s-min=3.8km az=53.0*
*PRU **06** 02:25:48.9, 42°.41N×13°.58E, h17km*
ISC 06 02:25:45.5±0.7, **42°.40N**±0°.02×**13°.34E**±0°.02, **h10**km±4km, **n125**, σ1s.**27**/153, **mb3.7**/6, **9C-1D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	132	⇑iPg	Pg	02 25 47.3	-0.3
AQU				Sg	Sg	02 25 48.6	-0.6
AQU	L'Aquila	0.06	132	⇑iPg	Pg	02 25 47.3	-0.3
AQU				Sg	Sg	02 25 48.6	-0.6
CAMP	Campotosto	0.15	20	⇑iPg	Pg	02 25 49.0	+0.1
CAMP				Sg	Sg	02 25 51.6	+0.3
CAMP	Campotosto	0.15	20	⇑iPg	Pg	02 25 49.0	+0.1
CAMP				Sg	Sg	02 25 51.6	+0.3
FIAM	Fiamignano	0.21	232	⇑iPg	Pg	02 25 50.1	+0.2
FIAM				Sg	Sg	02 25 53.6	+0.8
FIAM	Fiamignano	0.21	232	⇑iPg	Pg	02 25 50.1	+0.2
FIAM				Sg	Sg	02 25 53.6	+0.8
FAGN	Fagnano	0.22	125	Pg	Pg	02 25 50.2	+0.1
FAGN				Sg	Sg	02 25 53.8	+0.6
FAGN	Fagnano	0.22	125	Pg	Pg	02 25 50.2	+0.1
FAGN				Sg	Sg	02 25 53.8	+0.6
TERO	Teramo	0.30	41	Pg	Pg	02 25 51.2	-0.3
TERO				Sg	Sg	02 25 55.8	+0.2
TERO	Teramo	0.30	41	Pg	Pg	02 25 51.2	-0.3
TERO				Sg	Sg	02 25 55.8	+0.2
VCEL	Villa Celiera	0.37	90	Pg	Pb	02 25 53.0	-1.3
VCEL	Villa Celiera	0.37	90	Pg	Pb	02 25 53.0	-1.3
PTQR	Pietraquaria	0.38	173	Pg	Pg	02 25 52.7	-0.2
PTQR	Pietraquaria	0.38	173	Pg	Pg	02 25 52.7	-0.2
GAVE	Gavelli	0.44	312	Pg	Pb	02 25 54.6	-0.9
GAVE	Gavelli	0.44	312	Pg	Pb	02 25 54.6	-0.9
NRCA	Norcia	0.47	339	Pg	Pg	02 25 54.4	-0.3
NRCA				Sg	Sb	02 26 01.7	-1.3
	3µm,0.2s						
NRCA	Norcia	0.47	339	Pg	Pg	02 25 54.4	-0.3
NRCA				Sg	Sb	02 26 01.7	-1.3
	3µm,0.2s						
MNS	Montasola	0.49	269	Pg	Pg	02 25 54.8	-0.2
MNS	Montasola	0.49	269	Pg	Pg	02 25 54.8	-0.2
CERT	Cerreto	0.52	211	Pg	Pg	02 25 55.2	-0.4
CERT	Cerreto	0.52	211	Pg	Pg	02 25 55.2	-0.4
VVLD	Villa Vallelon	0.56	158	Pg	Pb	02 25 56.8	-0.8
	2µm,0.6s						
VVLD	Villa Vallelon	0.56	158	Pg	Pb	02 25 56.8	-0.8
	2µm,0.6s						
INTR	Introdacqua	0.57	132	Pg	Pg	02 25 56.1	-0.4
INTR				Sg	Sb	02 26 04.7	-1.1
	3µm,0.5s						
INTR	Introdacqua	0.57	132	Pg	Pg	02 25 56.1	-0.4
INTR				Sg	Sb	02 26 04.7	-1.1
	3µm,0.5s						
MTCE	Montecelio	0.58	230	Pg	Pg	02 25 56.3	-0.4
	1µm,0.7s						
MTCE	Montecelio	0.58	230	Pg	Pg	02 25 56.3	-0.4
	1µm,0.7s						
TRTR	Tortoreto Alta	0.59	46	Pg	Pb	02 25 57.8	-0.2
	9µm,0.6s						
TRTR	Tortoreto Alta	0.59	46	Pg	Pb	02 25 57.8	-0.2
	9µm,0.6s						
OFFI	Offida	0.60	25	Pg	Pb	02 25 57.8	-0.3
	22µm,0.6s						
OFFI	Offida	0.60	25	Pg	Pb	02 25 57.8	-0.3
	22µm,0.6s						
GUAR	Guarcino	0.60	182	Pg	Pb	02 25 58.3	+0.1
	1µm,0.5s						
GUAR	Guarcino	0.60	182	Pg	Pb	02 25 58.3	+0.1
	1µm,0.5s						
CESI	CESI - Serrava	0.69	332	Pg	Pg	02 25 58.4	-0.4
CESI				Sg	Sb	02 26 09.1	-0.2
	887nm,0.7s						
CESI	CESI - Serrava	0.69	332	Pg	Pg	02 25 58.4	-0.4
CESI				Sg	Sb	02 26 09.1	-0.2
	887nm,0.7s						
LPEL	Lama dei Pelig	0.72	119	Pg	Pg	02 25 58.9	-0.4
LPEL				Sg	Sb	02 26 09.7	-0.4
	2µm,0.8s						
LPEL	Lama dei Pelig	0.72	119	Pg	Pg	02 25 58.9	-0.4
LPEL				Sg	Sb	02 26 09.7	-0.4
	2µm,0.8s						
POFI	Posta Fibreno	0.73	158	Pg	Pn	02 26 01.1	-0.9
	896nm,0.8s						
POFI	Posta Fibreno	0.73	158	Pg	Pn	02 26 01.1	-0.9
	896nm,0.8s						
RMP	Rome, Mte Porz	0.75	219	Pg	Pb	02 26 00.5	-0.2
	2µm,0.6s						
RMP	Rome, Mte Porz	0.75	219	Pg	Pb	02 26 00.5	-0.2
	2µm,0.6s						
CAFR	Castel Frentan	0.77	102	Pg	Pg	02 25 59.3	-1.0
	3µm,0.8s						
CAFR	Castel Frentan	0.77	102	Pg	Pg	02 25 59.3	-1.0
	3µm,0.8s						
RDP	Rocca di Papa	0.79	216	Pg	Pb	02 26 01.1	-0.3
	3µm,0.5s						
RDP	Rocca di Papa	0.79	216	Pg	Pb	02 26 01.1	-0.3
	3µm,0.5s						
GIUL	Giuliano Di Ro	0.84	184	Pg	Pb	02 26 01.9	-0.3
	776nm,0.7s						
GIUL	Giuliano Di Ro	0.84	184	Pg	Pb	02 26 01.9	-0.3
	776nm,0.7s						
MIDA	Miranda	1.01	138	Pg	Pg	02 26 03.5	-1.5
	736nm,0.6s						
MIDA	Miranda	1.01	138	Pg	Pg	02 26 03.5	-1.5
	736nm,0.6s						
TOLF	Tolfa	1.05	252	Pg	Pn	02 26 06.1	-0.2
	615nm,0.6s						
TOLF	Tolfa	1.05	252	Pg	Pn	02 26 06.1	-0.2
	615nm,0.6s						
MURB	Monte Urbino	1.05	326	Pg	Pg	02 26 05.2	-0.6
	2µm,0.3s						
MURB	Monte Urbino	1.05	326	Pg	Pg	02 26 05.2	-0.6
	2µm,0.3s						
ARVD	Arcevia	1.14	345	Pg	Pg	02 26 06.2	-1.2
	2µm,0.9s						
ARVD	Arcevia	1.14	345	Pg	Pg	02 26 06.2	-1.2
	2µm,0.9s						
SACS	San Casciano d	1.15	294	Pg	Pb	02 26 07.4	-0.1
	551nm,0.7s						
LATE	Laterza	1.16	281	Pg	Pn	02 26 07.8	0.0
	115nm,0.6s						
LATE	Laterza	1.16	281	Pg	Pn	02 26 07.8	0.0
	115nm,0.6s						
AOI	Ancona	1.17	9	Pg	Pg	02 26 07.1	-0.9
	752nm,0.7s						
AOI	Ancona	1.17	9	Pg	Pg	02 26 07.1	-0.9
	752nm,0.7s						
PIEI	Pieia	1.28	333	Pg	Pn	02 26 09.4	-0.2
	480nm,0.8s						
PIEI	Pieia	1.28	333	Pg	Pn	02 26 09.4	-0.2
	480nm,0.8s						
MODR	Mondragone	1.31	162	Pg	Pg	02 26 10.5	-0.2
	180nm,1.4s						
MODR	Mondragone	1.31	162	Pg	Pg	02 26 10.5	-0.2
	180nm,1.4s						
BADI	Badiali	1.37	325	Pn	Pg	02 26 11.8	-0.1
	691nm,0.8s						
BADI	Badiali	1.37	325	Pn	Pg	02 26 11.8	-0.1
	691nm,0.8s						
CAFI	Castiglion Fio	1.38	313	Pn	Pg	02 26 11.6	-0.3
	474nm,0.8s						
CAFI	Castiglion Fio	1.38	313	Pn	Pg	02 26 11.6	-0.3
	474nm,0.8s						
ARCI	Arcidosso	1.45	289	Pn	Pb	02 26 12.6	-0.1
	94nm,0.7s						

ARCI	Arcidosso	1.45	289	Pn	Pb	02 26 12.6	-0.1
	94nm,0.7s						
PARC	Parchiule	1.49	328	Pn	Pg	02 26 13.9	-0.2
	399nm,0.6s						
PARC	Parchiule	1.49	328	Pn	Pg	02 26 13.9	-0.2
	399nm,0.6s						
MAON	Monte Argentar	1.64	272	Pn	Pn	02 26 14.8	+0.4
	466nm,1.3s						
MAON	Monte Argentar	1.64	272	Pn	Pn	02 26 14.8	+0.4
	466nm,1.3s						
NVLJ	Novalja	2.44	27	ePn	Pn	02 26 25.6	+0.2
NVLJ				Sn	Sn	02 26 56.6	+1.4
NVLJ	Novalja	2.44	27	ePn	Pn	02 26 25.6	+0.2
NVLJ				Sn	Sn	02 26 56.6	+1.4
PGF	Pioggiola	3.21	274	ePn	Pn	02 26 37.0	+0.8
PGF				eSn	Sn	02 27 17.3	+2.7
	16nm,0.6s						
PGF	Pioggiola	3.21	274	ePn	Pn	02 26 37.0	+0.8
PGF				eSn	Sn	02 27 17.3	+2.7
	8.2nm,0.6s						
STON	Ston	3.25	80	ePn	Pn	02 26 38.6	+1.9
STON				Sn	Sn	02 27 17.2	+1.8
STON	Ston	3.25	80	ePn	Pn	02 26 38.5	+1.9
STON				Sn	Sn	02 27 17.1	+1.8
ABTA	Abfaltersbach	4.39	353	⇑iPn	Pn	02 26 53.5	+1.1
	SNR=8.0						
ABTA	Abfaltersbach	4.39	353	Pn	Pn	02 26 53.5	+1.1
	SNR=8.0						
SBF	Sospel	4.56	291	ePn	Pn	02 26 55.9	+1.2
SBF				eSn	Sn	02 27 45.6	-2.2
	21nm,0.8s						
SBF	Sospel	4.56	291	ePn	Pn	02 26 55.9	+1.2
SBF				eSn	Sn	02 27 45.6	-2.2
	11nm,0.8s						
DAVOX	Davos/Dischmat	5.03	332	Pn	Pn	02 27 03.7	+2.4
	2.2nm,0.3s,baz=149,slow=20,SNR=17						
DAVOX				Sn	Sn	02 28 00.4	+0.9
	1.4nm,0.3s,baz=331,slow=21,SNR=1.5						
FRF	La Foret Royal	5.05	286	ePn	Pn	02 27 01.5	+0.2
FRF				eSn	Sn	02 27 56.9	-2.7
	6.0nm,0.7s						
FRF	La Foret Royal	5.05	286	ePn	Pn	02 27 01.5	+0.2
FRF				eSn	Sn	02 27 56.9	-2.7
	3.0nm,0.7s						
WATA	Walderalm	5.10	346	⇑iPn	Pn	02 27 05.6	+3.5
	SNR=8.8						
WATA	Walderalm	5.10	346	Pn	Pn	02 27 05.6	+3.5
	SNR=8.8						
LMR	La Mourre	5.11	283	ePn	Pn	02 27 02.2	+0.1
LMR	La Mourre	5.11	283	ePn	Pn	02 27 02.2	+0.1
MBDF	Montbardon	5.31	298	eP	Pn	02 27 07.7	+2.7
MBDF	Montbardon	5.31	298	eP	Pn	02 27 07.7	+2.7
DAVA	Damuels	5.47	334	⇑iPn	Pn	02 27 08.9	+1.6
	SNR=5.7						
DAVA	Damuels	5.47	334	Pn	Pn	02 27 08.9	+1.6
	SNR=5.7						
LPG	La Plagne	5.68	305	eP	Pn	02 27 13.4	+3.2
LPG				eSn	Sn	02 28 12.4	-3.2
	3.5nm,0.5s						
LPG	La Plagne	5.68	305	eP	Pn	02 27 13.4	+3.2
CONA	Conrad Observa	5.81	17	⇓iPn	Pn	02 27 12.3	+0.5
CONA	Conrad Observa	5.81	17	Pn	Pn	02 27 12.3	+0.5
SMRF	Simiane la Rot	5.89	288	eP	Pn	02 27 14.7	+1.8
SMRF	Simiane la Rot	5.89	288	eP	Pn	02 27 14.7	+1.8
GERES	GERESS Array B	6.46	2	Pn	Pn	02 27 20.8	+0.1
	0.7nm,0.3s,baz=174,slow=15,SNR=12						
GERES				Sn	Sn	02 28 33.5	-1.0
	1.5nm,0.3s,baz=170,slow=24,SNR=7.4						
CABF	La Chapelle	6.68	312	ePn	Pn	02 27 25.2	+1.4
CABF	La Chapelle	6.68	312	ePn	Pn	02 27 25.2	+1.4
KHC	Kasperske Hory	6.74	1	ePN	Pn	02 27 25.4	+0.9
KHC				ex	x	02 28 39.6	
KHC	Kasperske Hory	6.74	1	Pn	Pn	02 27 25.4	+0.9
HINF	Hinteralfeld	7.10	322	ePn	Pn	02 27 29.0	-0.5
HINF				eSn	Sn	02 28 46.6	-3.7
	4.9nm,0.3s						
HINF	Hinteralfeld	7.10	322	ePn	Pn	02 27 29.0	-0.5
VRAC	Vranov	7.28	17	Pn	Pn	02 27 33.4	+1.5
	0.5nm,0.3s,baz=207,slow=14,SNR=3.8						
KEST	Kesra	7.34	206	Pn	Pn	02 27 38.1	+5.2
	0.2nm,0.3s,baz=334,slow=16,SNR=11						
CDF	Champ du Feu	7.37	327	ePn	Pn	02 27 33.5	+0.2
CDF				eSn	Sn	02 28 52.8	-4.3
	4.1nm,0.4s						
CDF	Champ du Feu	7.37	327	ePn	Pn	02 27 33.5	+0.2
HAU	Haudompre	7.47	321	ePn	Pn	02 27 34.6	0.0
HAU				eSn	Sn	02 28 53.8	-5.6
	13nm,0.5s						
HAU	Haudompre	7.47	321	ePn	Pn	02 27 34.6	0.0
MLR	Muntele Rosu	9.61	67	Pn	Pn	02 28 05.1	+1.2
	0.1nm,0.3s,baz=285,slow=16,SNR=6.3						
MLR				LR	LR	02 31 20.7	
	comp=Z,527nm,20.4s,baz=326,slow=35						
ESDC	Sonseca Array	13.34	264	Pn	Pn	02 28 52.6	-2.4
	0.1nm,0.3s,baz=70,slow=11,SNR=3.1						
BRTR	Keskin Array B	15.54	93	Pn	P	02 29 28.4	-0.8
	0.0nm,0.3s,baz=284,slow=12,SNR=2.1						
FINES	FINESS Array B	20.56	18	P	Pn	02 30 25.0	-1.2
	2.3nm,0.9s,baz=198,slow=12,SNR=4.0						
KBZ	Khabaz	21.59	76	P	P	02 30 37.9	+2.6
	2.7nm,0.9s,baz=274,slow=12,SNR=11						
TORD	Torodi Ar. Bea	30.84	203	P	P	02 32 04.1	+2.2
	0.5nm,0.8s,baz=9.8,slow=9.4,SNR=10						
BVAR	Borovoye Array	38.85	54	P	P	02 33 09.5	-1.1
	0.3nm,0.7s,baz=274,slow=7.1,SNR=2.4						
ZALV	Zalesovo Beam	47.08	50	P	P	02 34 18.7	+1.4
	0.4nm,0.4s,baz=318,slow=5.8,SNR=2.4						
MKAR	Makanchi Array	47.86	60	P	P	02 34 23.2	-0.3
	0.4nm,0.6s,baz=296,slow=6.7,SNR=8.7						
SONM	Songino Array	61.98	50	P	P	02 36 08.0	+2.2
	0.7nm,1.0s,baz=293,slow=8.1,SNR=3.9						

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*CSEM **06** 02:27:15.3, 42°.39N×13°.33E, h9km, After ROM*

ROM 06 02:27:15.3±0.1, 42°.39N×13°.33E, h9km±1km, Ml2.7/3, Error ellipse: s-maj=2.2km s-min=1.9km az=133.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	123	Pg	Pg	02 27 17.7	+0.3
AQU				Sg	Sg	02 27 19.0	+0.1
AQU	L'Aquila	0.07	123	Pg	Pg	02 27 17.7	+0.3
AQU				Sg	Sg	02 27 19.0	+0.1
CAMP	Campotosto	0.16	23	Pg	Pg	02 27 19.4	+0.5
CAMP				Sg	Sg	02 27 22.3	+0.9
CAMP	Campotosto	0.16	23	Pg	Pg	02 27 19.4	+0.5
CAMP				Sg	Sg	02 27 22.3	+0.9
FIAM	Fiamignano	0.20	232	Pg	Pg	02 27 20.0	+0.5
FIAM				Sg	Sg	02 27 23.2	+0.8
FIAM	Fiamignano	0.20	232	Pg	Pg	02 27 20.0	+0.5
FIAM				Sg	Sg	02 27 23.2	+0.8
FAGN	Fagnano	0.23	123	Pg	Pg	02 27 21.0	+1.0
FAGN	Fagnano	0.23	123	Pg	Pg	02 27 21.0	+1.0
TERO	Teramo	0.31	41	Pg	Pg	02 27 21.7	+0.1
TERO				Sg	Sg	02 27 26.5	+0.7
TERO	Teramo	0.31	41	Pg	Pg	02 27 21.7	+0.1
TERO				Sg	Sg	02 27 26.5	+0.7
NRCA	Norcia	0.47	341	Pg	Pb	02 27 25.5	-0.4
NRCA				Sg	Sb	02 27 32.4	-0.7
NRCA	Norcia	0.47	341	Pg	Pb	02 27 25.5	-0.4
NRCA				Sg	Sb	02 27 32.4	-0.7
INTR	Introdacqua	0.57	131	Pg	Pg	02 27 27.0	+0.5
INTR	Introdacqua	0.57	131	Pg	Pg	02 27 27.0	+0.5
OFFI	Offida	0.61	26	Pg	Pb	02 27 28.2	+0.1
OFFI	Offida	0.61	26	Pg	Pb	02 27 28.2	+0.1
LPEL	Lama dei Pelig	0.72	118	Pg	Pb	02 27 30.6	+0.4
LPEL				Sg	Sb	02 27 39.8	-0.5
LPEL	Lama dei Pelig	0.72	118	Pg	Pb	02 27 30.6	+0.4
LPEL				Sg	Sb	02 27 39.8	-0.5

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*STR **06** 02:27:35.0±2.8, 41°.87N×14°.42E, h10km, Ml3.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*ISCJB **06** 02:27:45.9±0.2, 42°.40N±0°.01×13°.28E±0°.01, h9km±1km, mb3.9/22, MS4.4/1, Error ellipse: s-maj=2.2km s-min=1.7km az=18.1*
*NEIC **06** 02:27:46.0, 42°.37N×13°.34E, h10km, mb4.2/4, ML4.0(PDG), ML3.9(ROM), After ROM.*
NEIC Felt [III] at Rome. Also felt at Foligno.
*IDC **06** 02:27:46.6±0.7, 42°.47N×13°.30E, h0km, mb3.8/13, mb1 3.9/23, mb1mx3.9/39, mbtmp3.8/23, ML3.7/9, MS4.5/1, Ms1 4.5/1, ms1mx3.5/63, Error ellipse: s-maj=12.6km s-min=10.4km az=122.0*
*LDG **06** 02:27:46.7±0.1, 42°.36N×13°.30E, h2km, Ml3.8/10, Error ellipse: s-maj=3.8km s-min=2.8km az=38.0*
*MOS **06** 02:27:46.2±1.0, 42°.48N×13°.29E, h10km, mb4.2/18, Error ellipse: s-maj=5.3km s-min=4.2km az=74.3*
*ROM **06** 02:27:46.3±0.1, 42°.37N×13°.32E, h8km±1km, Ml3.9/42, Error ellipse: s-maj=1.3km s-min=1.2km az=34.0*
*CSEM **06** 02:27:47.0±0.1, 42°.38N×13°.27E, h5km, mb4.1/13, ML4.2/9, Error ellipse: s-maj=2.1km s-min=1.7km az=20.0*
*PRU **06** 02:27:47.4, 42°.44N×13°.43E, h0km, M4.2*
*PDG **06** 02:27:47.8±1.6, 42°.41N×13°.29E, h8km±1km, ML3.9/8, Error ellipse: s-maj=1.3km s-min=1.7km az=0.0*

ISC 06 02:27:47.4±0.7, 42°.39N±0°.02×13°.30E±0°.01, h8km±4km, n502, σ1s.34/604, mb4.0/22, 44C-27D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.08	112	ePg	Pg	02 27 48.7	-0.9
AQU				eS	Sg	02 27 50.8	-0.3
AQU	L'Aquila	0.08	112	Pg	Pg	02 27 48.8	-0.7
AQU				Sg	Sg	02 27 50.2	-0.8
AQU	L'Aquila	0.08	112	Pg	Pg	02 27 48.8	-0.7
AQU				Sg	Sg	02 27 50.2	-0.8
AQU				eS		02 27 50.8	
CAMP	Campotosto	0.17	28	⇑iPg	Pg	02 27 50.4	-0.6
CAMP				Sg	Sg	02 27 53.6	+0.1
CAMP	Campotosto	0.17	28	⇑iPg	Pg	02 27 50.4	-0.6
CAMP				Sg	Sg	02 27 53.6	+0.1
FIAM	Fiamignano	0.18	229	P	Pg	02 27 50.7	-0.3
FIAM				S	Sg	02 27 54.1	+0.4
FIAM	Fiamignano	0.18	229	⇑iPg	Pg	02 27 50.8	-0.3
FIAM				Sg	Sg	02 27 53.8	+0.2
FIAM	Fiamignano	0.18	229	⇑iPg	Pg	02 27 50.8	-0.3
FIAM				Sg	Sg	02 27 53.8	+0.2
FIAM				S		02 27 54.1	
FAGN	Fagnano	0.24	119	Pg	Pg	02 27 51.6	-0.6
FAGN				Sg	Sg	02 27 55.5	0.0
FAGN	Fagnano	0.24	119	Pg	Pg	02 27 51.6	-0.6
FAGN				Sg	Sg	02 27 55.5	0.0
TERO	Teramo	0.33	43	Pg	Pg	02 27 52.6	-1.2
TERO	Teramo	0.33	43	Pg	Pg	02 27 52.6	-1.2
PTQR	Pietraquaria	0.37	168	Pg	Pg	02 27 53.5	-1.1
PTQR	Pietraquaria	0.37	168	Pg	Pg	02 27 53.5	-1.1
GAVE	Gavelli	0.43	316	Pg	Pb	02 27 57.0	-0.3
GAVE	Gavelli	0.43	316	Pg	Pb	02 27 57.0	-0.3
MNS	Montasola	0.46	270	⇑iPg	Pg	02 27 55.5	-0.8
MNS	Montasola	0.46	270	⇑iPg	Pg	02 27 55.5	-0.8
NRCA	Norcia	0.47	343	P	Pg	02 27 55.8	-0.7
NRCA				S	Sg	02 28 03.8	+1.1
NRCA	Norcia	0.47	343	Pg	Pg	02 27 55.8	-0.7
NRCA				Sg	Sg	02 28 03.7	+1.1
	18µm,0.2s						
NRCA	Norcia	0.47	343	Pg	Pg	02 27 55.8	-0.7
NRCA				Sg	Sg	02 28 03.7	+1.1
	18µm,0.2s						
CERT	Cerreto	0.50	209	⇑iPg	Pg	02 27 55.7	-1.3
CERT				Sg	Sg	02 28 02.8	-0.7
CERT	Cerreto	0.50	209	⇑iPg	Pg	02 27 55.7	-1.3
CERT				Sg	Sg	02 28 02.8	-0.7
MTCE	Montecelio	0.55	229	P	Pg	02 27 56.9	-1.1
MTCE				S	Sb	02 28 06.4	-0.9
MTCE	Montecelio	0.55	229	⇑ePg	Pg	02 27 57.0	-1.0
MTCE				Sg	Sg	02 28 05.4	+0.2
	6µm,0.5s						
MTCE	Montecelio	0.55	229	⇑ePg	Pg	02 27 57.0	-1.0
MTCE				Sg	Sg	02 28 05.4	+0.2
	6µm,0.5s						
MTCE				S	Sb	02 28 06.4	-0.9
VVLD	Villa Vallelon	0.57	155	Pg	Pg	02 27 56.6	-1.7
VVLD				Sg	Sg	02 28 06.2	+0.4
	8µm,0.7s						
VVLD	Villa Vallelon	0.57	155	Pg	Pg	02 27 56.6	-1.7
VVLD				Sg	Sg	02 28 06.2	+0.4
	8µm,0.7s						
INTR	Introdacqua	0.58	130	P	Pg	02 27 57.2	-1.5
INTR				S	Sg	02 28 06.6	+0.3
INTR	Introdacqua	0.58	130	⇑iPg	Pg	02 27 57.2	-1.5
INTR				Sg	Sg	02 28 06.5	+0.2
	11µm,0.7s						
INTR	Introdacqua	0.58	130	⇑iPg	Pg	02 27 57.2	-1.5
INTR				Sg	Sg	02 28 06.5	+0.2
	11µm,0.7s						
GUAR	Guarcino	0.59	179	P	Pg	02 27 58.3	-0.5
GUAR	Guarcino	0.59	179	Pg	Pg	02 27 58.7	-0.1
	7µm,0.7s						
GUAR	Guarcino	0.59	179	P	Pg	02 27 58.3	-0.5
GUAR	Guarcino	0.59	179	Pg	Pg	02 27 58.7	-0.1
	7µm,0.7s						
OFFI	Offida	0.62	27	P	Pg	02 27 58.8	-0.6
OFFI	Offida	0.62	27	⇑iPg	Pg	02 27 59.0	-0.3
	54µm,0.7s						
OFFI	Offida	0.62	27	⇑iPg	Pg	02 27 59.0	-0.3
	54µm,0.7s						
TRTR	Tortoreto Alta	0.62	47	Pg	Pg	02 27 59.1	-0.2
	91µm,1.0s						
TRTR	Tortoreto Alta	0.62	47	Pg	Pg	02 27 59.1	-0.2
	91µm,1.0s						
CESI	CESI - Serrava	0.69	335	P	Pg	02 27 59.5	-1.1
CESI				S	Sb	02 28 11.2	-0.1
CESI	CESI - Serrava	0.69	335	Pg	Pg	02 27 59.6	-1.1
CESI				Sg	Sb	02 28 11.1	-0.2
	5µm,0.5s						
CESI	CESI - Serrava	0.69	335	P	Pg	02 27 59.5	-1.1
CESI				Sg	Sb	02 28 11.1	-0.2
	5µm,0.5s						
RMP	Rome, Mte Porz	0.73	218	Pg	Pg	02 27 59.8	-1.5
	4µm,0.5s						
RMP	Rome, Mte Porz	0.73	218	Pg	Pg	02 27 59.8	-1.5
	4µm,0.5s						
POFI	Posta Fibreno	0.73	155	Pg	Pg	02 28 00.3	-1.2
	2µm,0.6s						
POFI	Posta Fibreno	0.73	155	Pg	Pg	02 28 00.3	-1.2
	2µm,0.6s						
LPEL	Lama dei Pelig	0.74	117	Pg	Pg	02 27 59.5	-2.1
LPEL				Sg	Sg	02 28 10.9	-0.3
	6µm,0.8s						
LPEL	Lama dei Pelig	0.74	117	Pg	Pg	02 27 59.5	-2.1
LPEL				Sg	Sg	02 28 10.9	-0.3
	6µm,0.8s						
RDP	Rocca di Papa	0.76	215	Pg	Pg	02 28 00.7	-1.3
	18µm,0.8s						
RDP	Rocca di Papa	0.76	215	Pg	Pg	02 28 00.7	-1.3
	18µm,0.8s						
MA9	Marino	0.78	218	P	Pg	02 28 02.1	-0.2
MA9	Marino	0.78	218	Pg	Pg	02 28 01.5	-0.8
	13µm,0.6s						
MA9	Marino	0.78	218	Pg	Pg	02 28 01.5	-0.8
	13µm,0.6s						
MA9	Marino	0.78	218	P	Pg	02 28 02.1	-0.2
CAFR	Castel Frentan	0.79	101	Pg	Pg	02 28 01.2	-1.4
	11µm,0.7s						
CAFR	Castel Frentan	0.79	101	Pg	Pg	02 28 01.2	-1.4
	11µm,0.7s						
ROM9	Roma	0.81	227	Pg	Pg	02 28 02.3	-0.6
ROM9	Roma	0.81	227	Pg	Pg	02 28 02.3	-0.6
RNI2	Rionero Sannit	0.93	137	Pg	Pg	02 28 04.1	-1.2
	4µm,0.8s						
RNI2	Rionero Sannit	0.93	137	Pg	Pg	02 28 04.1	-1.2
	4µm,0.8s						
CERA	Filignano	0.95	146	Pg	Pg	02 28 03.9	-1.7
	5µm,0.9s						
CERA	Filignano	0.95	146	Pg	Pg	02 28 03.9	-1.7
	5µm,0.9s						
TOLF	Tolfa	1.02	252	Pg	Pg	02 28 05.9	-1.0
	3µm,0.6s						
TOLF	Tolfa	1.02	252	Pg	Pg	02 28 05.9	-1.0
	3µm,0.6s						
MIDA	Miranda	1.03	136	P	Pg	02 28 04.6	-2.5
MIDA	Miranda	1.03	136	Pg	Pg	02 28 04.8	-2.3
	6µm,1.6s						
MIDA	Miranda	1.03	136	Pg	Pg	02 28 04.8	-2.3
	6µm,1.6s						
MURB	Monte Urbino	1.05	327	Pg	Pg	02 28 06.3	-1.2
	14µm,0.6s						
MURB	Monte Urbino	1.05	327	Pg	Pg	02 28 06.3	-1.2
	14µm,0.6s						
FRES	Fresagrandinar	1.10	112	Pg	Pg	02 28 06.3	-2.1
	6µm,0.9s						
FRES	Fresagrandinar	1.10	112	Pg	Pg	02 28 06.3	-2.1
	6µm,0.9s						
SACS	San Casciano d	1.13	295	Pg	Pg	02 28 08.7	-0.3
	3µm,0.7s						
LATE	Laterza	1.13	282	Pg	Pg	02 28 08.1	-0.9
	692nm,0.7s						
LATE	Laterza	1.13	282	Pg	Pg	02 28 08.1	-0.9
	692nm,0.7s						
ARVD	Arcevia	1.14	347	Pg	Pg	02 28 07.5	-1.8
	5µm,0.7s						
ARVD	Arcevia	1.14	347	Pg	Pg	02 28 07.5	-1.8
	5µm,0.7s						
AOI	Ancona	1.19	11	Pg	Pb	02 28 08.1	-2.0
	5µm,0.7s						
AOI	Ancona	1.19	11	Pg	Pb	02 28 08.1	-2.0
	5µm,0.7s						
PIEI	Pieia	1.28	334	Pg	Pn	02 28 10.4	-1.2
	2µm,0.6s						
PIEI	Pieia	1.28	334	Pg	Pn	02 28 10.4	-1.2
	2µm,0.6s						
SGG	Gregorio Mates	1.28	141	Pg	Pn	02 28 11.0	-0.7
	1µm,0.8s						
SGG	Gregorio Mates	1.28	141	Pg	Pn	02 28 11.0	-0.7
	1µm,0.8s						
MODR	Mondragone	1.31	161	Pg	Pn	02 28 10.7	-1.3
	380nm,0.8s						
MODR	Mondragone	1.31	161	Pg	Pn	02 28 10.7	-1.3
	380nm,0.8s						
SENI	Senigallia	1.32	358	Pg	Pn	02 28 11.9	-0.2
	5µm,0.8s						
SENI	Senigallia	1.32	358	Pg	Pn	02 28 11.9	-0.2
	5µm,0.8s						
CAFI	Castiglion Fio	1.36	314	Pn	Pb	02 28 13.0	-0.1
	2µm,0.6s						
CAFI	Castiglion Fio	1.36	314	Pn	Pb	02 28 13.0	-0.1
	2µm,0.6s						
FSSB	Fossombrone	1.36	344	Pg	Pn	02 28 11.5	-1.2
	6µm,0.5s						
FSSB	Fossombrone	1.36	344	Pg	Pn	02 28 11.5	-1.2
	6µm,0.5s						
BADI	Badiali	1.36	326	Pg	Pn	02 28 12.4	-0.4
	3µm,0.8s						
BADI	Badiali	1.36	326	Pg	Pn	02 28 12.4	-0.4
	3µm,0.8s						
PARC	Parchiule	1.48	329	Pn	Pn	02 28 14.1	-0.3
	3µm,0.7s						
PARC	Parchiule	1.48	329	Pn	Pn	02 28 14.1	-0.3
	3µm,0.7s						
PESA	Pesaro	1.59	348	Pn	Pn	02 28 16.3	+0.5
	3µm,0.7s						
PESA	Pesaro	1.59	348	Pn	Pn	02 28 16.3	+0.5
	3µm,0.7s						
MAON	Monte Argentar	1.61	272	Pn	Pn	02 28 15.5	-0.5
	906nm,0.9s						
MAON	Monte Argentar	1.61	272	Pn	Pn	02 28 15.5	-0.5
	906nm,0.9s						
ASQU	Asqua	1.79	322	Pn	Pn	02 28 18.9	+0.2
	1µm,1.0s						
ASQU	Asqua	1.79	322	Pn	Pn	02 28 18.9	+0.2
	1µm,1.0s						
CSNT	Castellina Chi	1.83	307	Pn	Pn	02 28 19.3	+0.1
	431nm,0.7s						
CSNT	Castellina Chi	1.83	307	Pn	Pn	02 28 19.3	+0.1
	431nm,0.7s						
CASP	Castiglione de	1.84	284	Pn	Pn	02 28 18.5	-0.8
	479nm,0.7s						
CASP	Castiglione de	1.84	284	Pn	Pn	02 28 18.5	-0.8
	479nm,0.7s						
SFI	Santa Sofia	1.85	325	Pn	Pn	02 28 19.9	+0.4
	1µm,0.9s						
SFI	Santa Sofia	1.85	325	Pn	Pn	02 28 19.9	+0.4
	1µm,0.9s						
SGRT	San Giovanni R	1.93	108	Pn	Pn	02 28 20.5	0.0
	338nm,0.6s						
SGRT	San Giovanni R	1.93	108	Pn	Pn	02 28 20.5	0.0
	338nm,0.6s						
MSAG	Monte S. Angel	2.06	108	Pn	Pn	02 28 23.2	+0.9
	800nm,0.7s						
MSAG	Monte S. Angel	2.06	108	Pn	Pn	02 28 23.2	+0.9
	800nm,0.7s						
CRMI	Carmignano	2.21	310	Pn	Pn	02 28 25.5	+1.1
	348nm,0.9s						
CRMI	Carmignano	2.21	310	Pn	Pn	02 28 25.5	+1.1
	348nm,0.9s						
NVLJ	Novalja	2.46	27	ePn	Pn	02 28 27.2	-0.5
NVLJ				Sn	Sn	02 28 58.1	+0.2
NVLJ	Novalja	2.46	27	ePn	Pn	02 28 27.2	-0.5
NVLJ				Sn	Sn	02 28 58.1	+0.2
MAIM	Mastiano	2.56	308	P	Pn	02 28 29.2	0.0
BDI	Bagni Di Lucca	2.59	311	Pn	Pn	02 28 30.0	+0.3
	237nm,0.5s						
BDI	Bagni Di Lucca	2.59	311	Pn	Pn	02 28 30.0	+0.3
	237nm,0.5s						
VLC	Villacollemand	2.77	311	ePn	Pn	02 28 32.1	0.0
VLC				ePg	Pg	02 28 40.4	-0.1
VLC				Sn	Sn	02 29 05.4	-0.4
VLC	Villacollemand	2.77	311	ePn	Pn	02 28 32.1	0.0
CUC	Castrocucco	3.05	141	ePn	Pn	02 28 37.0	+1.0
CUC				ePg	Pg	02 28 48.4	+2.6
CUC				S	Sb	02 29 18.9	-0.5
CUC	Castrocucco	3.05	141	ePn	Pn	02 28 37.0	+1.0
OSPF	L'Ospedale	3.15	258	P	Pn	02 28 35.9	-1.4
OSPF	L'Ospedale	3.15	258	P	Pn	02 28 35.9	-1.4
OSPF	L'Ospedale	3.15	258	P	Pn	02 28 35.9	-1.4
GRAM	Graiana	3.16	313	P	Pn	02 28 38.7	+1.2
PGF	Pioggiola	3.19	274	ePn	Pn	02 28 38.3	+0.4
	SNR=1.0						
PGF				eSn	Sn	02 29 18.8	+2.7
	154nm,0.6s						
PGF	Pioggiola	3.19	274	ePn	Pn	02 28 38.3	+0.4
	SNR=1.0						
PGF				eSn	Sn	02 29 18.8	+2.7
	77nm,0.6s						
SKDS	Skadanscina	3.20	9	i Pn	Pn	02 28 37.2	-0.8
SKDS	Skadanscina	3.20	9	Pn	Pn	02 28 37.2	-0.8
CODM	Codolo	3.22	310	P	Pn	02 28 39.1	+0.9
KNDS	Knezji Dol	3.24	14	i Pn	Pn	02 28 38.0	-0.5
KNDS	Knezji Dol	3.24	14	i Pn	Pn	02 28 38.0	-0.5
STON	Ston	3.28	80	ePn	Pn	02 28 39.0	0.0
STON				Sn	Sn	02 29 18.4	0.0
STON	Ston	3.28	80	ePn	Pn	02 28 39.0	0.0
STON				Sn	Sn	02 29 18.3	0.0
TRI	Trieste	3.34	6	eP	Pn	02 28 38.9	-1.0
TRI	Trieste	3.34	6	ePn	Pn	02 28 38.9	-1.0
TRI				ePg	Pg	02 28 51.5	+0.1
TRI				eS	Sg	02 29 34.6	0.0
TRI	Trieste	3.34	6	eP	Pn	02 28 38.9	-1.0
SC2M	Scurtabo	3.41	308	P	Pn	02 28 41.9	+1.1
JAVS	Javornik	3.55	9	i Pn	Pn	02 28 41.9	-1.0
JAVS	Javornik	3.55	9	i Pn	Pn	02 28 41.9	-1.0
HCY	Herceg Novi	3.85	87	⇑iPn	Pn	02 28 48.2	+1.4
HCY				eSn	Sn	02 29 35.5	+3.3
HCY	Herceg Novi	3.85	87	⇑P	Pn	02 28 48.3	+1.4
HCY				S	Sn	02 29 36.3	+4.1
HCY	Herceg Novi	3.85	87	⇑P	Pn	02 28 48.3	+1.4
HCY				S	Sn	02 29 36.3	+4.1
HCY	Herceg Novi	3.85	87	⇑iPn	Pn	02 28 48.2	+1.4
HCY				eSn	Sn	02 29 35.5	+3.3
HCY				S	Sn	02 29 36.3	+4.1
BRY	Bratogost	3.90	81	⇓iPn	Pn	02 28 47.5	-0.2
BRY				eSn	Sn	02 29 32.6	-1.1
BRY	Bratogost	3.90	81	⇓P	Pn	02 28 48.9	+1.2
BRY				S	Sn	02 29 36.5	+2.8
BRY	Bratogost	3.90	81	⇓P	Pn	02 28 48.9	+1.2
BRY				S	Sn	02 29 36.5	+2.8
BRY	Bratogost	3.90	81	⇓iPn	Pn	02 28 47.5	-0.2
BRY	Bratogost	3.90	81	P	Pn	02 28 48.9	+1.2
BRY				eSn	Sn	02 29 32.6	-1.1
BRY				S	Sn	02 29 36.5	+2.8
TIP	Timpagrande	4.14	140	ePn	Pn	02 28 52.5	+1.5
TIP	Timpagrande	4.14	140	ePn	Pn	02 28 52.5	+1.5
VSL	Villasalto	4.14	227	ePn	Pn	02 28 50.2	-0.7
VSL				eSn	Sn	02 29 41.3	+1.8
VSL	Villasalto	4.14	227	ePn	Pn	02 28 50.2	-0.7
VSL				eSn	Sn	02 29 41.3	+1.8
BUM	Brajici-Budva	4.15	89	⇓iPn	Pn	02 28 51.6	+0.6
BUM				eSn	Sn	02 29 41.2	+1.5
BUM	Brajici-Budva	4.15	89	⇓iPn	Pn	02 28 51.6	+0.6
BUM				eSn	Sn	02 29 41.2	+1.5
UPM	Unac-Piva	4.21	77	⇑iPn	Pn	02 28 53.1	+1.2
UPM				eSn	Sn	02 29 43.5	+2.2
UPM	Unac-Piva	4.21	77	⇑iPn	Pn	02 28 53.1	+1.2
UPM				eSn	Sn	02 29 43.5	+2.2
NKY	Niksic	4.22	82	⇑iPn	Pn	02 28 53.8	+1.7
NKY				eSn	Sn	02 29 44.4	+2.7
NKY	Niksic	4.22	82	⇑P	Pn	02 28 54.1	+2.0
NKY				S	Sn	02 29 44.3	+2.6
NKY	Niksic	4.22	82	⇑P	Pn	02 28 54.1	+2.0

NKY S Sn 02 29 44.3 +2.6
NKY Niksic 4.22 82⇑ *i*Pn Pn 02 28 53.8 +1.7
NKY Niksic 4.22 82 P Pn 02 28 54.1 +2.0
NKY S Sn 02 29 44.3 +2.6
ABTA Abfaltersbach 4.40 353⇓ *i*Pn Pn 02 28 55.0 +0.5
SNR=10
ABTA Abfaltersbach 4.40 353 Pn Pn 02 28 55.0 +0.5
SNR=10
PDG Podgorica 4.41 87⇓ *i*Pn Pn 02 28 55.4 +0.8
PDG *e*Sn Sn 02 29 45.9 -0.2
TTG Podgorica 4.41 87⇓ *i*Pn Pn 02 28 55.4 +0.8
TTG *e*Sn Sn 02 29 45.9 -0.2
ULC Ulcinj 4.44 93⇓ *i*Pn Pn 02 28 55.1 +0.1
ULC *e*Sn Sn 02 29 47.0 +0.2
ULC Ulcinj 4.44 93⇓ *i*Pn Pn 02 28 55.1 +0.1
ULC *e*Sn Sn 02 29 47.0 +0.2
SBF Sospel 4.54 291 *e*Pn Pn 02 28 56.7 +0.3
SNR=1.0
SBF *e*Sn Sn 02 29 47.7 -1.7
69nm,0.6s
SBF Sospel 4.54 291 *e*Pn Pn 02 28 56.7 +0.3
SNR=1.0
SBF *e*Sn Sn 02 29 47.7 -1.7
34nm,0.6s
CEL Celeste 4.57 153 *e*Pn Pn 02 28 58.3 +1.4
CEL Celeste 4.57 153 *e*Pn Pn 02 28 58.3 +1.4
PLE Pljevlja 4.58 76⇑ *i*Pn Pn 02 28 58.7 +1.7
PLE *e*Sn Sn 02 29 53.9 +3.5
PLE Pljevlja 4.58 76⇑ *i*Pn Pn 02 28 58.7 +1.7
PLE *e*Sn Sn 02 29 53.9 +3.5
AUTN L'Aution 4.58 293 P Pn 02 28 57.5 +0.3
AUTN L'Aution 4.58 293 P Pn 02 28 57.5 +0.3
AUTN L'Aution 4.58 293 P Pn 02 28 57.5 +0.3
AUTN L'Aution 4.58 293 P Pn 02 28 57.5 +0.3
TOUF Mont Tournerai 4.71 292 P Pn 02 28 59.1 +0.2
TOUF Mont Tournerai 4.71 292 P Pn 02 28 59.1 +0.2
TOUF Mont Tournerai 4.71 292 P Pn 02 28 59.1 +0.2
TOUF Mont Tournerai 4.71 292 P Pn 02 28 59.1 +0.2
MVIF Mont Vial 4.75 291 P Pn 02 28 59.8 +0.5
MVIF Mont Vial 4.75 291 P Pn 02 28 59.8 +0.5
MVIF Mont Vial 4.75 291 P Pn 02 28 59.8 +0.5
MVIF Mont Vial 4.75 291 P Pn 02 28 59.8 +0.5
BEY Berane 4.89 82⇑ *i*Pn Pn 02 29 03.0 +1.8
BEY *e*Sn Sn 02 30 00.8 +2.7
IVA Berane 4.89 82⇑ *i*Pn Pn 02 29 03.0 +1.8
IVA *e*Sn Sn 02 30 00.8 +2.7
CALN Calern 4.89 288 P Pn 02 29 01.5 +0.2
CALN Calern 4.89 288 P Pn 02 29 01.5 +0.2
CALN Calern 4.89 288 P Pn 02 29 01.5 +0.2
CALN Calern 4.89 288 P Pn 02 29 01.5 +0.2
PVY Plav 4.93 85⇑ *i*Pn Pn 02 29 03.5 +1.7
PVY *e*Sn Sn 02 30 01.9 +2.8
TUE Stuetta 4.97 327 *e*Pn Pn 02 29 02.3 -0.2
TUE Sn Sn 02 29 58.4 -1.8
TUE Stuetta 4.97 327 *e*Pn Pn 02 29 02.3 -0.2
TUE Sn Sn 02 29 58.4 -1.8
TIR Tirane 5.01 100 *e*P Pn 02 29 02.7 -0.1
TIR *e* 02 29 58.7
TIR Tirane 5.01 100 *e*Pn Pn 02 29 02.7 -0.1
TIR *e*Sn Sn 02 29 58.7 -2.2
TIR Tirane 5.01 100 *e*P Pn 02 29 02.7 -0.1
TIR *e*S Sn 02 29 58.7 -2.2
FRF La Foret Royal 5.02 286 *e*Pn Pn 02 29 02.8 -0.2
SNR=1.0
FRF *e*Sn Sn 02 29 58.4 -2.8
19nm,0.7s
FRF La Foret Royal 5.02 286 *e*Pn Pn 02 29 02.8 -0.2
SNR=1.0
FRF *e*Sn Sn 02 29 58.4 -2.8
9.4nm,0.7s
DAVOX Davos/Dischmat 5.03 332 Pn Pn 02 29 05.0 +1.7
DAVOX Sn Sn 02 30 03.5 +1.9
DAVOX Davos/Dischmat 5.03 332 Pn Pn 02 29 05.0 +1.7
5.0nm,0.3s,baz=171,slow=13,SNR=15
DAVOX Sn Sn 02 30 03.5 +1.9
5.9nm,0.3s,baz=105,slow=23,SNR=5.5
DAVOX Davos/Dischmat 5.03 332 Pn Pn 02 29 04.9 +1.7
DAVOX S Sn 02 30 03.5 +1.9
6.0nm,0.3s
LMR La Mourre 5.08 283 *e*Pn Pn 02 29 03.0 -0.8
SNR=1.0
LMR *e*Sn Sn 02 29 59.8 -2.8
27nm,0.5s
LMR La Mourre 5.08 283 *e*Pn Pn 02 29 03.0 -0.8
SNR=1.0
LMR *e*Sn Sn 02 29 59.8 -2.8
13nm,0.5s
WATA Walderalm 5.10 347⇑ *i*Pn Pn 02 29 05.9 +1.7
SNR=12
WATA Walderalm 5.10 347 Pn Pn 02 29 05.9 +1.7
SNR=12
MOTA Moosalm 5.20 343⇓ *i*Pn Pn 02 29 07.2 +1.6
SNR=9.9
MOTA Moosalm 5.20 343 Pn Pn 02 29 07.2 +1.6
SNR=9.9
MBDF Montbardon 5.29 298 *e*Pn Pn 02 29 06.6 -0.2
SNR=1.0
MBDF Montbardon 5.29 298 *e*Pn Pn 02 29 06.6 -0.2
SNR=1.0
RETA Reutte 5.41 341⇑ *i*Pn Pn 02 29 10.1 +1.7
SNR=6.7
RETA Reutte 5.41 341 Pn Pn 02 29 10.1 +1.7
SNR=6.7
DAVA Damuels 5.47 335⇑ *i*Pn Pn 02 29 11.2 +1.9
SNR=8.3
DAVA Damuels 5.47 335 Pn Pn 02 29 11.2 +1.9
SNR=8.3
BNI Bardonecchia 5.49 301 *e*P Pn 02 29 10.3 +0.7
BNI pmax pmax
comp=Z,24nm,0.8s
BNI Bardonecchia 5.49 301 *e*Pn Pn 02 29 10.2 +0.7
comp=Z,24nm,0.8s
BNI Bardonecchia 5.49 301 *e*Pn Pn 02 29 10.2 +0.7
comp=Z,24nm,0.8s
LPG La Plagne 5.66 306 *e*Pn Pn 02 29 12.3 +0.3
LPG La Plagne 5.66 306 *e*Pn Pn 02 29 12.3 +0.3
LPL La Plagne 5.68 306 *e*Pn Pn 02 29 13.0 +0.8
SNR=1.0
LPL *e*Sn Sn 02 30 14.1 -3.6
comp=Z,22nm,0.5s
LPL La Plagne 5.68 306 *e*Pn Pn 02 29 13.0 +0.8
SNR=1.0
CONA Conrad Observa 5.83 17⇑ *i*Pn Pn 02 29 13.1 -1.1
CONA Conrad Observa 5.83 17 Pn Pn 02 29 13.1 -1.1
SMRF Simiane la Rot 5.87 288 *e*P Pn 02 29 15.8 +1.2
SNR=1.0
SMRF Simiane la Rot 5.87 288 *e*P Pn 02 29 15.8 +1.2
SNR=1.0
ORIF Oris-en-Rattie 5.95 298 *e*P Pn 02 29 19.0 +3.2
SKO Skopje 6.06 91 *e*Pn Pn 02 29 09.7 -7.6
SKO *e*Sg Sn 02 30 12.9 -14
BIA Bitola 6.16 100 *e*Pn Pn 02 29 18.4 -0.2
BIA *e*Sg Sn 02 30 24.4 -4.9
BIA Bitola 6.16 100 *e*Pn Pn 02 29 18.4 -0.2
GERES GERESS Array B 6.47 2 Pn Pn 02 29 21.9 -1.0
GERES Sn Sn 02 30 35.6 -1.3
GERES GERESS Array B 6.47 2 Pn Pn 02 29 21.9 -1.0
comp=Z,1.0nm,0.3s,baz=189,slow=12,SNR=16
GERES Sn Sn 02 30 35.6 -1.3
comp=Z,6.5nm,0.3s,baz=199,slow=28,SNR=13
GERES GERESS Array B 6.47 2 P Pn 02 29 21.9 -1.0
comp=Z,1.0nm,0.3s
GERES S Sn 02 30 35.6 -1.3
comp=Z,7.0nm,0.3s
BBS Basel-Blauen 6.53 323 P Pn 02 29 23.6 -0.2
BBS Basel-Blauen 6.53 323 P Pn 02 29 23.6 -0.2
BBS Basel-Blauen 6.53 323 P Pn 02 29 23.6 -0.2
FELD Feldberg im Sc 6.64 328 P Pn 02 29 25.2 -0.2
FELD Feldberg im Sc 6.64 328 P Pn 02 29 25.2 -0.2
CABF La Chapelle 6.67 312 *e*Pn Pn 02 29 26.5 +0.9
SNR=1.0
CABF La Chapelle 6.67 312 *e*Pn Pn 02 29 26.5 +0.9
SNR=1.0
VIVF Saint-Julien-l 6.73 294 *e*Pn Pn 02 29 27.5 +1.0
SNR=1.0
VIVF Saint-Julien-l 6.73 294 *e*Pn Pn 02 29 27.5 +1.0
SNR=1.0
KHC Kasperske Hory 6.75 2 *e*PN Pn 02 29 25.3 -1.4
KHC *e*SN Sn 02 30 39.6 -4.2
KHC Kasperske Hory 6.75 2 Pn Pn 02 29 25.3 -1.4
SMOL Smolenice 6.78 24 *e*P Pn 02 29 27.7 +0.6
SMOL *e* 02 30 44.2
SMOL Smolenice 6.78 24 *e*PN Pn 02 29 27.7 +0.6
SMOL *e*SN Sn 02 30 44.2 -0.3
SMOL Smolenice 6.78 24 *e*P Pn 02 29 27.7 +0.6
SMOL *e*S Sn 02 30 44.2 -0.3
BZS Buzias 6.81 59 ⇓P Pn 02 29 29.3 +1.8
BZS Buzias 6.81 59⇓ *i*P Pn 02 29 29.3 +1.8
BZS Buzias 6.81 59 P Pn 02 29 29.3 +1.8
BFO Black Forest 6.90 331 *e*P Pn 02 29 28.9 +0.1
BFO *e* 02 30 45.7
BFO pmax pmax
comp=Z,18nm,0.8s
BFO Black Forest 6.90 331 *e*Pn Pn 02 29 28.9 +0.1
comp=Z,18nm,0.8s
BFO *e*Sn Sn 02 30 45.7 -1.7
BFO Black Forest 6.90 331 *e*P Pn 02 29 28.9 +0.1
comp=Z,18nm,0.8s
BFO *e*S Sn 02 30 45.7 -1.7
SSB Saint Sauveur 6.96 298 *e*P Pn 02 29 29.9 +0.2
SSB pmax pmax
comp=Z,15nm,0.8s
SSB Saint Sauveur 6.96 298 *e*Pn Pn 02 29 29.9 +0.2
comp=Z,15nm,0.8s
SSB Saint Sauveur 6.96 298 *e*P Pn 02 29 29.9 +0.2
comp=Z,15nm,0.8s
MOF Molkenrain 6.99 324 P Pn 02 29 29.4 -0.7
MOF Molkenrain 6.99 324 P Pn 02 29 29.4 -0.7
MOF Molkenrain 6.99 324 P Pn 02 29 29.4 -0.7
MOF Molkenrain 6.99 324 P Pn 02 29 29.4 -0.7
VAY Valandovo 7.00 96 *e*Pn Pn 02 29 29.7 -0.4
VAY *e*Sg Sn 02 30 40.9 -9.1
VAY Valandovo 7.00 96 *e*Pn Pn 02 29 30.2 0.0
STU Stuttgart 7.00 337 P Pn 02 29 30.2 0.0
STU pmax pmax
comp=Z,11nm,0.6s
STU Stuttgart 7.00 337 Pn Pn 02 29 30.2 0.0
comp=Z,11nm,0.6s
STU Stuttgart 7.00 337 P Pn 02 29 30.2 0.0
comp=Z,11nm,0.6s
TREC Trest 7.08 12 *e*P Pn 02 29 30.0 -1.2
TREC Trest 7.08 12 *e*PN Pn 02 29 30.0 -1.2
TREC Trest 7.08 12 Pn Pn 02 29 30.0 -1.2
HINF Hinteralfeld 7.09 322 *e*Pn Pn 02 29 31.1 -0.3
SNR=1.0
HINF *e*Sn Sn 02 30 47.6 -4.6
comp=Z,16nm,0.4s
HINF Hinteralfeld 7.09 322 *e*Pn Pn 02 29 31.1 -0.3
SNR=1.0
LASF Ste Croix 7.10 287 *e*Pn Pn 02 29 31.0 -0.6
SNR=1.0
LASF Ste Croix 7.10 287 *e*Pn Pn 02 29 31.0 -0.6
SNR=1.0
VYHS Vyhne 7.24 31 *e*P Pn 02 29 33.6 +0.1
VYHS *e* 02 30 53.2
VYHS Vyhne 7.24 31 *e*PN Pn 02 29 33.6 +0.1
VYHS *e*SN Sn 02 30 53.2 -2.7
VYHS Vyhne 7.24 31 *e*P Pn 02 29 33.6 +0.1
ECH Echery 7.26 326 *e*P Pn 02 29 32.9 -0.8
ECH pmax pmax
comp=Z,14nm,0.6s
ECH Echery 7.26 326 *e*Pn Pn 02 29 32.9 -0.8
comp=Z,14nm,0.6s
ECH Echery 7.26 326 P Pn 02 29 32.9 -0.8
ECH Echery 7.26 326 P Pn 02 29 32.9 -0.8
KKB Krupnik 7.29 91 *i*P Pn 02 29 34.9 +0.7
KKB Krupnik 7.29 91 *i*P Pn 02 29 34.9 +0.7
VRAC Vranov 7.29 17 Pn Pn 02 29 33.6 -0.6
VRAC Sn Sn 02 30 55.2 -1.9
VRAC Vranov 7.29 17⇓ *i*P Pn 02 29 33.3 -0.9
VRAC Vranov 7.29 17 Pn Pn 02 29 33.6 -0.6
comp=Z,0.7nm,0.3s,baz=211,slow=13,SNR=4.5
VRAC Sn Sn 02 30 55.2 -1.9
comp=Z,1.0nm,0.3s,baz=315,slow=21,SNR=1.9
VRAC Vranov 7.29 17⇓ *i*P Pn 02 29 33.3 -0.9
VRAC Vranov 7.29 17 Pn Pn 02 29 33.6 -0.6
VRAC S Sn 02 30 55.2 -1.9
comp=Z,1.0nm,0.3s
KEST Kesra 7.32 206 *e*Pn Pn 02 29 38.9 +4.3
KEST Sn Sn 02 30 59.9 +1.9
KEST Kesra 7.32 206 Pn Pn 02 29 37.4 +2.7
comp=Z,1.0nm,0.3s,baz=332,slow=8.9,SNR=32
KEST Sn Sn 02 30 59.9 +1.9
baz=328,slow=19,SNR=1.6
KEST Kesra 7.32 206 Sn Sn 02 30 59.9 +1.9
VTS Vitosha 7.33 85 ⇓P Pn 02 29 35.4 +0.6
VTS Vitosha 7.33 85⇓ *i*P Pn 02 29 35.4 +0.6
VTS Vitosha 7.33 85 *i*P Pn 02 29 35.3 +0.5
VTS Vitosha 7.33 85 *i*P Pn 02 29 35.3 +0.5
CDF Champ du Feu 7.37 327 *e*Pn Pn 02 29 34.5 -0.8
SNR=1.0
CDF *e*Sn Sn 02 30 54.5 -4.5
comp=Z,18nm,0.5s
CDF Champ du Feu 7.37 327 *e*Pn Pn 02 29 34.5 -0.8
SNR=1.0
HAU Haudompre 7.46 321 *e*Pn Pn 02 29 35.9 -0.6
SNR=1.0
HAU *e*Sn Sn 02 30 54.3 -7.0
comp=Z,36nm,0.5s
HAU Haudompre 7.46 321 *e*Pn Pn 02 29 35.9 -0.6
SNR=1.0
PRU Pruhonice 7.65 6 *e*SN Sn 02 31 00.0 -5.9
SJAF Saint Jean de 7.71 274 P Pn 02 29 38.0 -1.9
SJAF Saint Jean de 7.71 274 P Pn 02 29 38.0 -1.9
SJAF Saint Jean de 7.71 274 P Pn 02 29 38.0 -1.9
THEF They Montfort 7.79 321 P Pn 02 29 40.3 -0.7
THEF They Montfort 7.79 321 P Pn 02 29 40.3 -0.7
THEF They Montfort 7.79 321 P Pn 02 29 40.3 -0.7
THEF They Montfort 7.79 321 P Pn 02 29 40.3 -0.7
LBL Lubilhac 7.81 295 P Pn 02 29 41.7 +0.4
LBL Lubilhac 7.81 295 P Pn 02 29 41.7 +0.4
LBL Lubilhac 7.81 295 P Pn 02 29 41.7 +0.4
LBL Lubilhac 7.81 295 P Pn 02 29 41.7 +0.4
NKC Novy Kostel 7.87 356 *e*SN Sn 02 31 06.8 -4.6
FILF Fillols 7.94 275 P Pn 02 29 43.2 +0.1
FILF Fillols 7.94 275 P Pn 02 29 43.2 +0.1
FILF Fillols 7.94 275 P Pn 02 29 43.2 +0.1
LRDF Laroque-de-Fa 7.95 278 P Pn 02 29 42.2 -1.0
LRDF Laroque-de-Fa 7.95 278 P Pn 02 29 42.2 -1.0
LRDF Laroque-de-Fa 7.95 278 P Pn 02 29 42.2 -1.0
MORC Moravsky Berou 7.96 20 *e*P Pn 02 29 43.9 +0.6
MORC pmax pmax
comp=Z,13nm,0.8s
MORC Moravsky Berou 7.96 20 *e*Pn Pn 02 29 43.9 +0.6
comp=Z,13nm,0.8s
MORC Moravsky Berou 7.96 20⇑ *i*P Pn 02 29 43.4 +0.1
MORC Moravsky Berou 7.96 20⇑ *i*P Pn 02 29 43.4 +0.1
MORC Moravsky Berou 7.96 20 *e*Pn Pn 02 29 45.0 +1.7
SMF Signal de Mont 7.99 305 *e*Pn Pn 02 29 44.5 +0.8
SNR=1.0
SMF Signal de Mont 7.99 305 *e*Pn Pn 02 29 44.5 +0.8
SNR=1.0
PGB Panagyurishte 8.04 85 *i*P Pn 02 29 45.4 +1.0
PGB Panagyurishte 8.04 85 *i*P Pn 02 29 45.4 +1.0
PYM Petit Puy Mans 8.14 298 P Pn 02 29 46.5 +0.7
PYM Petit Puy Mans 8.14 298 P Pn 02 29 46.5 +0.7
PYM Petit Puy Mans 8.14 298 P Pn 02 29 46.5 +0.7
PYM Petit Puy Mans 8.14 298 P Pn 02 29 46.5 +0.7
PAGF Fort de Pagny 8.15 322 *e*Pn Pn 02 29 45.3 -0.6
PAGF Fort de Pagny 8.15 322 *e*Pn Pn 02 29 45.3 -0.6
LOT Lotru 8.15 64⇑ *i*P Pn 02 29 48.3 +2.2
LOT Lotru 8.15 64⇑ *i*P Pn 02 29 48.3 +2.2
AGO Saint Agoulin 8.17 300 P Pn 02 29 47.8 +1.6
AGO Saint Agoulin 8.17 300 P Pn 02 29 47.8 +1.6
AGO Saint Agoulin 8.17 300 P Pn 02 29 47.8 +1.6
MTLF Montolieu 8.20 280 *e*Pn Pn 02 29 46.0 -0.6
SNR=1.0
MTLF Montolieu 8.20 280 *e*Pn Pn 02 29 46.0 -0.6
SNR=1.0
LOR Lormes 8.30 309 *e*Pn Pn 02 29 47.9 0.0
SNR=1.0
LOR *e*Sn Sn 02 31 17.4 -4.4
comp=Z,12nm,0.5s
LOR Lormes 8.30 309 *e*Pn Pn 02 29 47.9 0.0
SNR=1.0
SSF Saint Saulge 8.39 307 *e*Pn Pn 02 29 49.2 -0.1
SNR=1.0
SSF Saint Saulge 8.39 307 *e*Pn Pn 02 29 49.2 -0.1
SNR=1.0
MEZF Maizieres J'vi 8.43 319 *e*Pn Pn 02 29 49.8 +0.1
SNR=1.0
MEZF Maizieres J'vi 8.43 319 *e*Pn Pn 02 29 49.8 +0.1
SNR=1.0
RZN Rozhen 8.53 91 *i*P Pn 02 29 52.6 +1.3
RZN Rozhen 8.53 91 *i*P Pn 02 29 52.6 +1.3
CAF Calviac 8.53 291 *e*P Pn 02 29 52.1 +0.9
CAF Calviac 8.53 291 *e*P Pn 02 29 52.1 +0.9
BGF Bois d'Agland 8.56 303 *e*Pn Pn 02 29 52.2 +0.7
SNR=1.0
BGF Bois d'Agland 8.56 303 *e*Pn Pn 02 29 52.2 +0.7
SNR=1.0
CRVS Cervenica-Dubn 8.66 38 *e*P Pn 02 29 52.2 -0.8
CRVS Cervenica-Dubn 8.66 38 *e*PN Pn 02 29 52.2 -0.8
CRVS *e*PG Sn 02 31 29.0 -1.9
CRVS *e*SG Sn 02 31 31.7 +0.8
CRVS Cervenica-Dubn 8.66 38 *e*P Pn 02 29 52.2 -0.8
CRVS *e*Sg Sn 02 31 31.7 +0.8
TRPA Tarpa 8.68 45⇓ *i*P Pn 02 29 54.8 +1.6
TRPA Tarpa 8.68 45⇓ *i*P Pn 02 29 54.8 +1.6
KSP Ksiaz 8.71 13 *e*P Pn 02 29 52.9 -0.6
KSP *e* 02 31 27.3
KSP Ksiaz 8.71 13 *e*P Pn 02 29 52.9 -0.6
ARR Arges 8.71 66⇓ *i*P Pn 02 29 55.4 +1.7
ARR Arges 8.71 66⇓ *i*P Pn 02 29 55.4 +1.7
TCF Toulx Ste Croi 8.85 300 *e*Sn Sn 02 31 31.8 -3.7
comp=Z,4.5nm,0.6s,SNR=1.0
UZH Uzhgorod 8.88 42 *e*P Pn 02 29 56.2 +0.3
UZH Uzhgorod 8.88 42 *e*P Pn 02 29 56.2 +0.3
CLL Collm 8.93 359 *e*P Pn 02 29 53.0 -3.6
CLL *e* 02 31 31.0
CLL Collm 8.93 359 *e*Pn Pn 02 29 53.0 -3.6
CLL *e*Sn Sn 02 31 31.0 -6.3
CLL *e*Sg **Sg 02 32 36.0 +2.3**
MLS Moulis 9.01 278 P Pn 02 29 57.5 -0.3
MLS Moulis 9.01 278 P Pn 02 29 57.5 -0.3
MLS Moulis 9.01 278 P Pn 02 29 57.5 -0.3
KOLS Kolonicke sedl 9.07 41 *e*SN Sn 02 31 39.5 -1.3
KOLS Kolonicke sedl 9.07 41 *e*Sn Sn 02 31 39.5 -1.3
LFF La Frestale 9.46 290 *e*P Pn 02 30 05.2 +1.4
SNR=1.0
LFF La Frestale 9.46 290 *e*P Pn 02 30 05.2 +1.4
SNR=1.0
EPF Esparros 9.56 278 *e*Pn Pn 02 30 04.6 -0.8
EPF Esparros 9.56 278 *e*Pn Pn 02 30 04.6 -0.8
MLR Muntele Rosu 9.64 67 Pn Pn 02 30 08.2 +1.8
MLR Sn Sn 02 31 52.7 -2.2
MLR Muntele Rosu 9.64 67 Pn Pn 02 30 08.2 +1.8
comp=Z,0.1nm,0.3s,baz=266,slow=8.6,SNR=7.0
MLR Sn Sn 02 31 52.7 -2.2
comp=Z,0.1nm,0.3s,baz=102,slow=18,SNR=3.9
MLR Muntele Rosu 9.64 67 P Pn 02 30 08.2 +1.8
KWP Kalwaria Pacla 9.76 39 *e*P Pn 02 30 08.7 +0.7
KWP pmax pmax
comp=Z,29nm,1.0s
KWP Kalwaria Pacla 9.76 39 *e*Pn Pn 02 30 08.7 +0.7
comp=Z,29nm,1.0s
KWP Kalwaria Pacla 9.76 39⇑ *i*P Pn 02 30 12.2 +4.3
KWP Kalwaria Pacla 9.76 39 *e*P Pn 02 30 12.3 +4.3
KWP Kalwaria Pacla 9.76 39 *e*P Pn 02 30 08.7 +0.7
comp=Z,29nm,1.0s
BUR08 Bucovina Ar. S 9.93 54 *e*Pn Pn 02 30 11.4 +1.0
BUR08 Bucovina Ar. S 9.93 54 *e*Pn Pn 02 30 11.4 +1.0
ISR Istrita 9.96 70⇑ *i*P Pn 02 30 12.4 +1.5
ISR Istrita 9.96 70⇑ *i*P Pn 02 30 12.4 +1.5
ISR Istrita 9.96 70 P Pn 02 30 12.4 +1.5
PLOR Plostina 10.21 66⇑ *i*P Pn 02 30 15.3 +1.2
PLOR Plostina 10.21 66⇑ *i*P Pn 02 30 15.3 +1.2
PLOR Plostina 10.21 66 P Pn 02 30 15.3 +1.2
VRI Vrincioaia 10.26 66 ⇓P Pn 02 30 16.1 +1.2
VRI Vrincioaia 10.26 66⇓ *i*P Pn 02 30 16.1 +1.2
VRI Vrincioaia 10.26 66 P Pn 02 30 16.1 +1.2
CFR Carcaliu 11.09 70 ⇓P Pn 02 30 26.2 +0.1
CFR Carcaliu 11.09 70⇓ *i*P Pn 02 30 26.2 +0.1
CFR Carcaliu 11.09 70 P Pn 02 30 26.2 +0.1
TLCR 11.56 71 ⇑P Pn 02 30 33.7 +1.1
TLCR 11.56 71⇑ *i*P Pn 02 30 33.7 +1.1
TLCR 11.56 71 P Pn 02 30 33.7 +1.1
ESDC Sonseca Array 13.31 264 Pn Pn 02 30 55.9 -0.8
ESDC Sonseca Array 13.31 264 Pn Pn 02 30 55.9 -0.8
comp=Z,0.3nm,0.3s,baz=74,slow=15,SNR=6.2
ESDC Sonseca Array 13.31 264 Pn Pn 02 30 55.9 -0.8
SUW Suwalki 13.35 26 *e*P Pn 02 30 58.1 +1.1
SUW Suwalki 13.35 26 *e*P Pn 02 30 58.1 +1.1
KIEV Kiev 13.72 47 *e*P Pn 02 31 04.6 +2.5
KIEV Kiev 13.72 47 *e*P Pn 02 31 04.6 +2.5
AKASG Malin Array Be 13.74 47 P Pn 02 31 02.7 +0.4
AKASG Malin Array Be 13.74 47 Pn Pn 02 31 02.7 +0.4
AKASG Malin Array Be 13.74 47 Pn Pn 02 31 02.7 +0.4
comp=Z,0.4nm,0.3s,baz=233,slow=13,SNR=4.1
AKASG Malin Array Be 13.74 47 P Pn 02 31 02.7 +0.4
BRTR Keskin Array B 15.57 93 Pn Pn 02 31 27.4 +0.1
BRTR Keskin Array B 15.57 93 Pn Pn 02 31 27.4 +0.1
comp=Z,0.0nm,0.3s,baz=281,slow=10.0,SNR=3.7
BRTR Keskin Array B 15.57 93 Pn Pn 02 31 27.4 +0.1
EKA Eskdalemuir Ar 16.83 326 Pn Pn 02 31 43.4 +0.3
EKA Eskdalemuir Ar 16.83 326 Pn Pn 02 31 43.4 +0.3
baz=130,slow=12,SNR=4.1
EKA Eskdalemuir Ar 16.83 326 P Pn 02 31 43.4 +0.3
HFS Hagfors 17.77 1 P Pn 02 31 54.3 -0.6
HFS Hagfors 17.77 1 P Pn 02 31 54.3 -0.6
comp=Z,0.1nm,0.3s,baz=174,slow=14,SNR=3.1
HFS Hagfors 17.77 1 P Pn 02 31 54.3 -0.6
VSU Vasula 18.17 23 *e*P P 02 32 01.1 +1.0
VSU pmax pmax
comp=Z,24nm,1.3s
VSU Vasula 18.17 23 *e*P P 02 32 01.1 +1.0
comp=Z,24nm,1.3s
NB2 NORSAR Subarra 18.73 357 P P 02 32 05.9 -0.3
comp=Z,8.7nm,1.2s,baz=175,slow=12
NB2 NORSAR Subarra 18.73 357 P P 02 32 05.9 -0.3
comp=Z,8.7nm,1.2s,baz=175,slow=11,SNR=5.1
NOA NORSAR Array B 18.73 357 P P 02 32 06.4 +0.1
NOA NORSAR Array B 18.73 357 P P 02 32 06.4 +0.1
comp=Z,0.2nm,0.3s,baz=175,slow=12,SNR=4.9
NOA NORSAR Array B 18.73 357 P P 02 32 06.4 +0.1
SOC Sochi 19.34 77 *e*P Pn 02 32 16.0 +1.9
SOC *e* 02 35 50.7
SOC pmax pmax
comp=Z,5.0nm,0.6s
SOC Sochi 19.34 77 *e*P Pn 02 32 16.0 +1.9
comp=Z,5.0nm,0.6s
MALT Malatya 19.55 94 P Pn 02 32 16.7 -0.1
MALT pmax pmax
comp=Z,5.0nm,1.1s
MALT Malatya 19.55 94 P Pn 02 32 16.7 -0.1
comp=Z,5.5nm,1.1s
MALT Malatya 19.55 94 P Pn 02 32 16.7 -0.1
comp=Z,5.0nm,1.1s
VSR Storozhevoye 19.70 54 *e*P P 02 32 17.6 +0.6
VSR pmax pmax
comp=E,6.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR Storozhevoye 19.70 54 *e*P P 02 32 17.6 +0.6
comp=N,2.0nm,0.4s
VORD Divnogorie 19.71 55 *e*P Pn 02 32 19.8 +1.3
VORD pmax pmax
comp=N,7.0nm,0.4s
VORD pmax pmax
comp=E,3.0nm,0.4s
VORD pmax pmax
comp=Z,10.0nm,0.4s
VORD Divnogorie 19.71 55 *e*P Pn 02 32 19.8 +1.3
OBN Obninsk 19.82 42 *e*P P 02 32 16.6 -1.6
OBN pmax pmax
comp=Z,9.0nm,1.0s
OBN Obninsk 19.82 42 *e*P P 02 32 16.6 -1.6
comp=Z,9.0nm,1.0s
FINES FINESS Array B 20.58 18 P P 02 32 26.1 -0.2
FINES FINESS Array B 20.58 18 P P 02 32 26.1 -0.2
comp=Z,6.1nm,0.8s,baz=192,slow=11,SNR=11
FINES FINESS Array B 20.58 18 P P 02 32 26.1 -0.2
comp=Z,6.0nm,0.8s
VRHR Novokhopersk 21.17 56 *e*P P 02 32 36.1 +3.3
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR pmax pmax
comp=Z,10.0nm,0.9s
VRHR Novokhopersk 21.17 56 *e*P P 02 32 36.1 +3.3
KAF Kangasniemi 21.22 17 *e*P P 02 32 31.5 -1.8
KAF pmax pmax
comp=Z,4.0nm,0.8s
KAF Kangasniemi 21.22 17 *e*p P 02 32 31.5 -1.8
comp=Z,3.5nm,0.8s
KAF Kangasniemi 21.22 17 *e*P P 02 32 31.5 -1.8
comp=Z,4.0nm,0.8s
KIV Kislovodsk 21.44 76 *e*P P 02 32 36.9 +0.9
KIV pmax pmax

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,13nm,1.1s						
KIV	**Kislovodsk**	**21.44**	**76**	*e*P	**P**	**02 32 36.9**	**+0.9**
	comp=Z,13nm,1.1s						
KBZ	**Khabaz**	**21.62**	**76**	P	**P**	**02 32 38.6**	**+0.9**
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBZ	**Khabaz**	**21.62**	**76**	P	**P**	**02 32 38.6**	**+0.9**
KBZ	**Khabaz**	**21.62**	**76**	P	**P**	**02 32 38.6**	**+0.9**
	comp=Z,6.3nm,0.8s,baz=280,slow=11,SNR=16						
KBZ	**Khabaz**	**21.62**	**76**	P	**P**	**02 32 38.6**	**+0.9**
	comp=Z,6.0nm,0.8s						
JOF	**Joensuu**	**23.13**	**21**	*e*P	**P**	**02 32 52.2**	**-1.4**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
JOF	**Joensuu**	**23.13**	**21**	*e*p	**P**	**02 32 52.2**	**-1.4**
	comp=Z,2.5nm,0.6s						
JOF	**Joensuu**	**23.13**	**21**	*e*P	**P**	**02 32 52.2**	**-1.4**
	comp=Z,2.5nm,0.6s						
KLMR	**Klimovskoe**	**24.35**	**32**	*e*P	**P**	**02 33 04.1**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,20nm,1.3s						
KLMR	**Klimovskoe**	**24.35**	**32**	*e*P	**P**	**02 33 04.1**	**-1.4**
	comp=Z,20nm,1.3s						
BHD	**Baghdad**	**26.06**	**100**	*e*x	**P**	**02 33 19.0**	**-2.2**
ARCES	**ARCESS Array B**	**27.94**	**9**	P	**P**	**02 33 38.9**	**+1.0**
ARCES	**ARCESS Array B**	**27.94**	**9**	P	**P**	**02 33 38.9**	**+1.0**
	comp=Z,3.5nm,1.0s,baz=203,slow=8.8,SNR=2.9						
ARCES	**ARCESS Array B**	**27.94**	**9**	P	**P**	**02 33 38.9**	**+1.0**
	comp=Z,4.0nm,1.0s						
JMIC	**Jan Mayen**	**30.68**	**346**	LR	LR	02 44 32.0	
	comp=Z,845nm,20.7s,baz=258,slow=33						
TORD	**Torodi Ar. Bea**	**30.82**	**202**	P	**P**	**02 34 04.1**	**+0.3**
TORD	**Torodi Ar. Bea**	**30.82**	**202**	P	**P**	**02 34 04.1**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=18,slow=8.7,SNR=16						
TORD	**Torodi Ar. Bea**	**30.82**	**202**	P	**P**	**02 34 04.1**	**+0.3**
AKTK	**Aktyubinsk**	**31.46**	**60**	P	**P**	**02 34 07.9**	**-1.2**
	comp=Z,1.0nm,0.9s						
AKTO	**Aktyubinsk**	**31.46**	**60**	P	**P**	**02 34 07.9**	**-1.2**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKTO	**Aktyubinsk**	**31.46**	**60**	P	**P**	**02 34 07.9**	**-1.2**
AKTO	**Aktyubinsk**	**31.46**	**60**	P	**P**	**02 34 07.9**	**-1.2**
	comp=Z,1.3nm,0.9s,baz=287,slow=8.0,SNR=5.0						
AKTO	**Aktyubinsk**	**31.46**	**60**	P	**P**	**02 34 07.9**	**-1.2**
ARU	**Arti**	**31.99**	**48**	*d i*P	**P**	**02 34 13.0**	**-0.7**
ARU						02 35 13.4	
ARU				S	**S**	**02 39 24.7**	**-0.5**
ARU				pmax	pmax		
	comp=Z,12nm,1.2s						
ARU	**Arti**	**31.99**	**48**	*e*P	**P**	**02 34 13.1**	**-0.7**
	comp=Z,9.7nm,0.9s						
ARU	**Arti**	**31.99**	**48**	*i* P	**P**	**02 34 13.0**	**-0.7**
	comp=Z,12nm,1.2s						
ARU				S	**S**	**02 39 24.7**	**-0.5**
BRVK	**Borovoye**	**38.82**	**54**	*e*P	**P**	**02 35 13.4**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRVK	**Borovoye**	**38.82**	**54**	*e*P	**P**	**02 35 13.4**	**+0.9**
	comp=Z,4.0nm,1.0s						
BVAR	**Borovoye Array**	**38.88**	**54**	P	**P**	**02 35 11.5**	**-1.5**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	**Borovoye Array**	**38.88**	**54**	P	**P**	**02 35 11.5**	**-1.5**
BVAR	**Borovoye Array**	**38.88**	**54**	P	**P**	**02 35 11.5**	**-1.5**
	comp=Z,1.8nm,0.9s,baz=268,slow=7.2,SNR=11						
KKAR	**Karatay Array**	**41.31**	**69**	*e*P	**P**	**02 35 33.7**	**+0.4**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KKAR	**Karatay Array**	**41.31**	**69**	*e*P	**P**	**02 35 33.7**	**+0.4**
	comp=Z,0.7nm,0.5s						
KKAR	**Karatay Array**	**41.31**	**69**	*e*P	**P**	**02 35 33.7**	**+0.4**
	comp=Z,1.0nm,0.5s						
AAK	**Ala-Archa**	**44.22**	**68**	*e*P	**P**	**02 35 58.9**	**+1.8**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AAK	**Ala-Archa**	**44.22**	**68**	*e*P	**P**	**02 35 57.8**	**+0.7**
	comp=Z,17nm,1.4s						
AAK	**Ala-Archa**	**44.22**	**68**	*e*P	**P**	**02 35 58.9**	**+1.8**
	comp=Z,5.0nm,1.0s						
NVS	**Novosibirsk**	**45.98**	**49**	*e*P	**P**	**02 36 08.4**	**-2.3**
ZALV	**Zalesovo Beam**	**47.11**	**50**	P	**P**	**02 36 19.0**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**47.11**	**50**	P	**P**	**02 36 19.0**	**-0.6**
ZALV	**Zalesovo Beam**	**47.11**	**50**	P	**P**	**02 36 19.0**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=289,slow=9.0,SNR=6.2						
ZALV	**Zalesovo Beam**	**47.11**	**50**	P	**P**	**02 36 19.0**	**-0.6**
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**47.89**	**60**	P	**P**	**02 36 25.9**	**0.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**47.89**	**60**	P	**P**	**02 36 25.9**	**0.0**
MKAR	**Makanchi Array**	**47.89**	**60**	P	**P**	**02 36 25.9**	**0.0**
	comp=Z,1.3nm,0.6s,baz=285,slow=7.0,SNR=17						
MKAR	**Makanchi Array**	**47.89**	**60**	P	**P**	**02 36 25.9**	**0.0**
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**62.01**	**50**	P	**P**	**02 38 08.4**	**+0.3**
SONM	**Songino Array**	**62.01**	**50**	P	**P**	**02 38 08.4**	**+0.3**
	comp=Z,1.9nm,1.0s,baz=292,slow=7.8,SNR=11						
INK	**Inuvik**	**66.86**	**347**	P	**P**	**02 38 37.8**	**-1.4**
INK	**Inuvik**	**66.86**	**347**	P	**P**	**02 38 37.8**	**-1.4**
	comp=Z,1.0nm,1.0s,baz=30,slow=8.1,SNR=2.8						
YKA	**Yellowknife Ar**	**67.45**	**337**	P	**P**	**02 38 42.8**	**-0.4**
YKA	**Yellowknife Ar**	**67.45**	**337**	P	**P**	**02 38 42.7**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=41,slow=5.7,SNR=8.1						
ILAR	**Eielson Array**	**72.06**	**351**	P	**P**	**02 39 12.3**	**+0.8**
ILAR	**Eielson Array**	**72.06**	**351**	P	**P**	**02 39 12.3**	**+0.8**
	comp=Z,0.4nm,1.0s,baz=9.8,slow=5.9,SNR=3.8						
PDAR	**Pinedale Array**	**80.89**	**321**	P	**P**	**02 40 04.1**	**+1.9**
PDAR	**Pinedale Array**	**80.89**	**321**	P	**P**	**02 40 04.1**	**+1.9**
	comp=Z,0.3nm,0.5s,baz=46,slow=5.2,SNR=2.8						

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*ISCJB **06** 02:30:40.8±0.3, 42.°38N±0.°02×13.°33E±0.°03, h13^{km}±3^{km}, mb3.0/1, Error ellipse: s-maj=3.8km s-min=3.2km az=13.4*
*ROM **06** 02:30:40.9±0.1, 42.°38N×13.°34E, h9^{km}±1^{km}, Ml3.0/16, Error ellipse: s-maj=1.7km s-min=1.4km az=100.0*
*IDC **06** 02:30:40.8±1.7, 42.°41N×13.°73E, h0^{km}, mb3.1/1, mb1 3.4/6, mb1mx3.3/31, mbtmp3.3/6, ML3.4/4, Error ellipse: s-maj=45.3km s-min=14.7km az=104.0*
*CSEM **06** 02:30:41.0±0.1, 42.°38N×13.°31E, h10^{km}, Error ellipse: s-maj=2.5km s-min=2.2km az=108.0*
ISC 06 02:30:41.4±0.8**, 42.°39N**±0.°02×**13.°33E**±0.°02**, h9**^{km}±5^{km}**, n62, σ0^{s}67**/82**, 6C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**121**	⇓*i*Pg	**Pg**	**02 30 43.2**	**-0.3**
AQU				Sg	**Sg**	**02 30 44.7**	**-0.3**
AQU	**L'Aquila**	**0.06**	**121**	⇓*i*Pg	**Pg**	**02 30 43.2**	**-0.3**
AQU				Sg	**Sg**	**02 30 44.7**	**-0.3**
CAMP	**Campotosto**	**0.16**	**21**	⇑*i*Pg	**Pg**	**02 30 44.9**	**-0.1**
CAMP				Sg	**Sg**	**02 30 47.9**	**+0.5**
	34μm,0.4s						
CAMP	**Campotosto**	**0.16**	**21**	⇑*i*Pg	**Pg**	**02 30 44.9**	**-0.1**
CAMP				Sg	**Sg**	**02 30 47.9**	**+0.5**
	34μm,0.4s						
FIAM	**Fiamignano**	**0.20**	**234**	Pg	**Pg**	**02 30 45.3**	**-0.2**
FIAM				Sg	**Sg**	**02 30 50.0**	**+1.6**
FIAM	**Fiamignano**	**0.20**	**234**	Pg	**Pg**	**02 30 45.3**	**-0.2**
FIAM				Sg	**Sg**	**02 30 50.0**	**+1.6**
FAGN	**Fagnano**	**0.22**	**122**	Pg	**Pg**	**02 30 46.0**	**0.0**
FAGN				Sg	**Sg**	**02 30 49.6**	**+0.5**
FAGN	**Fagnano**	**0.22**	**122**	Pg	**Pg**	**02 30 46.0**	**0.0**
FAGN				Sg	**Sg**	**02 30 49.6**	**+0.5**
TERO	**Teramo**	**0.31**	**40**	⇑*i*Pg	**Pg**	**02 30 47.1**	**-0.5**
TERO				Sg	**Sg**	**02 30 52.6**	**+0.8**
TERO	**Teramo**	**0.31**	**40**	⇑*i*Pg	**Pg**	**02 30 47.1**	**-0.5**
TERO				Sg	**Sg**	**02 30 52.6**	**+0.8**
PTQR	**Pietraquaria**	**0.37**	**172**	Pg	**Pg**	**02 30 48.1**	**-0.6**
PTQR	**Pietraquaria**	**0.37**	**172**	Pg	**Pg**	**02 30 48.1**	**-0.6**
NRCA	**Norcia**	**0.48**	**340**	Pg	**Pg**	**02 30 50.6**	**-0.1**
NRCA				Sg	**Sb**	**02 30 58.2**	**-0.9**
NRCA	**Norcia**	**0.48**	**340**	Pg	**Pg**	**02 30 50.6**	**-0.1**
NRCA				Sg	**Sb**	**02 30 58.2**	**-0.9**
CERT	**Cerreto**	**0.51**	**211**	⇑*i*Pg	**Pg**	**02 30 50.4**	**-0.9**
CERT				Sg	**Sg**	**02 30 57.8**	**-0.1**
CERT	**Cerreto**	**0.51**	**211**	⇑*i*Pg	**Pg**	**02 30 50.4**	**-0.9**
CERT				Sg	**Sg**	**02 30 57.8**	**-0.1**
VVLD	**Villa Vallelon**	**0.56**	**157**	Pg	**Pg**	**02 30 52.0**	**-0.2**
	908nm,0.5s						
VVLD	**Villa Vallelon**	**0.56**	**157**	Pg	**Pg**	**02 30 52.0**	**-0.2**
	908nm,0.5s						
INTR	**Introdacqua**	**0.57**	**131**	Pg	**Pg**	**02 30 52.1**	**-0.3**
INTR				Sg	**Sg**	**02 31 00.5**	**+0.7**
	1μm,0.3s						
INTR	**Introdacqua**	**0.57**	**131**	Pg	**Pg**	**02 30 52.1**	**-0.3**
INTR				Sg	**Sg**	**02 31 00.5**	**+0.7**
	1μm,0.3s						
MTCE	**Montecelio**	**0.57**	**231**	Pg	**Pg**	**02 30 51.5**	**-0.9**
	368nm,0.4s						
MTCE	**Montecelio**	**0.57**	**231**	Pg	**Pg**	**02 30 51.5**	**-0.9**
	368nm,0.4s						
GUAR	**Guarcino**	**0.59**	**181**	Pg	**Pg**	**02 30 53.1**	**+0.3**
	1μm,0.5s						
GUAR	**Guarcino**	**0.59**	**181**	Pg	**Pg**	**02 30 53.1**	**+0.3**
	1μm,0.5s						
TRTR	**Tortoreto Alta**	**0.60**	**45**	Pg	**Pb**	**02 30 53.6**	**-0.5**
	7μm,1.0s						
TRTR	**Tortoreto Alta**	**0.60**	**45**	Pg	**Pb**	**02 30 53.6**	**-0.5**
	7μm,1.0s						
OFFI	**Offida**	**0.61**	**25**	Pg	**Pb**	**02 30 53.5**	**-0.7**
	4μm,0.7s						
OFFI	**Offida**	**0.61**	**25**	Pg	**Pb**	**02 30 53.5**	**-0.7**
	4μm,0.7s						
CESI	**CESI - Serrava**	**0.69**	**333**	Pg	**Pg**	**02 30 53.9**	**-0.9**
	426nm,0.5s						
CESI	**CESI - Serrava**	**0.69**	**333**	Pg	**Pg**	**02 30 53.9**	**-0.9**
	426nm,0.5s						
LPEL	**Lama dei Pelig**	**0.72**	**118**	Pg	**Pg**	**02 30 54.4**	**-0.8**
LPEL				Sg	**Sb**	**02 31 05.3**	**-0.7**
LPEL	**Lama dei Pelig**	**0.72**	**118**	Pg	**Pg**	**02 30 54.4**	**-0.8**
LPEL				Sg	**Sb**	**02 31 05.3**	**-0.7**
RMP	**Rome, Mte Porz**	**0.74**	**219**	Pg	**Pg**	**02 30 55.4**	**-0.3**
	2μm,1.2s						
RMP	**Rome, Mte Porz**	**0.74**	**219**	Pg	**Pg**	**02 30 55.4**	**-0.3**
	2μm,1.2s						
CAFR	**Castel Frentan**	**0.77**	**101**	Pg	**Pg**	**02 30 55.7**	**-0.5**
	1μm,0.5s						
CAFR	**Castel Frentan**	**0.77**	**101**	Pg	**Pg**	**02 30 55.7**	**-0.5**
	1μm,0.5s						
RDP	**Rocca di Papa**	**0.78**	**216**	Pg	**Pg**	**02 30 55.9**	**-0.5**
	2μm,0.5s						
RDP	**Rocca di Papa**	**0.78**	**216**	Pg	**Pg**	**02 30 55.9**	**-0.5**
	2μm,0.5s						
GIUL	**Giuliano Di Ro**	**0.83**	**184**	Pg	**Pg**	**02 30 56.8**	**-0.5**
GIUL	**Giuliano Di Ro**	**0.83**	**184**	Pg	**Pg**	**02 30 56.8**	**-0.5**
CERA	**Filignano**	**0.94**	**147**	Pg	**Pb**	**02 30 59.6**	**-0.3**
	456nm,0.7s						
CERA	**Filignano**	**0.94**	**147**	Pg	**Pb**	**02 30 59.6**	**-0.3**
	456nm,0.7s						
TOLF	**Tolfa**	**1.04**	**252**	Pg	**Pb**	**02 31 00.8**	**-0.7**
	197nm,0.6s						
TOLF	**Tolfa**	**1.04**	**252**	Pg	**Pb**	**02 31 00.8**	**-0.7**
	197nm,0.6s						
LATE	**Laterza**	**1.15**	**282**	Pg	**Pg**	**02 31 04.0**	**+0.5**
	31nm,0.4s						
LATE	**Laterza**	**1.15**	**282**	Pg	**Pg**	**02 31 04.0**	**+0.5**
	31nm,0.4s						
AOI	**Ancona**	**1.18**	**10**	Pg	**Pn**	**02 31 03.1**	**-1.0**
	250nm,0.5s						
AOI	**Ancona**	**1.18**	**10**	Pg	**Pn**	**02 31 03.1**	**-1.0**
	250nm,0.5s						
BADI	**Badiali**	**1.38**	**325**	Pg	**Pg**	**02 31 07.6**	**-0.3**
	104nm,0.5s						
BADI	**Badiali**	**1.38**	**325**	Pg	**Pg**	**02 31 07.6**	**-0.3**
	104nm,0.5s						
MAON	**Monte Argentar**	**1.63**	**272**	Pg	**Pn**	**02 31 09.9**	**-0.3**
	167nm,0.8s						
MAON	**Monte Argentar**	**1.63**	**272**	Pg	**Pn**	**02 31 09.9**	**-0.3**
	167nm,0.8s						
NVLJ	**Novalja**	**2.45**	**27**	*e*Pn	**Pn**	**02 31 21.8**	**+0.3**
NVLJ				Sn	**Sn**	**02 31 52.6**	**+1.1**
NVLJ	**Novalja**	**2.45**	**27**	*e*Pn	**Pn**	**02 31 21.8**	**+0.3**
NVLJ				Sn	**Sn**	**02 31 52.5**	**+1.1**
STON	**Ston**	**3.26**	**80**	*e*Pn	**Pn**	**02 31 33.4**	**+0.8**
STON				Sn	**Sn**	**02 32 10.6**	**-0.9**
STON	**Ston**	**3.26**	**80**	*e*Pn	**Pn**	**02 31 33.4**	**+0.8**
STON				Sn	**Sn**	**02 32 10.6**	**-0.9**
DAVOX	**Davos/Dischmat**	**5.04**	**332**	Pn	Pn	02 31 60.0	+2.7
	0.5nm,0.3s,baz=117,slow=20,SNR=1.1						
GERES	**GERESS Array B**	**6.47**	**2**	Pn	**Pn**	**02 32 17.5**	**+0.7**
	baz=186,slow=14,SNR=1.2						
GERES				Sn	**Sn**	**02 33 30.4**	**-0.2**
	0.8nm,0.3s,baz=174,slow=21,SNR=4.4						
VRAC	**Vranov**	**7.29**	**17**	Pn	**Pn**	**02 32 28.8**	**+0.8**
	0.3nm,0.3s,baz=111,slow=23,SNR=1.9						
KEST	**Kesra**	**7.33**	**206**	Pn	Pn	02 32 32.8	+4.1
	0.1nm,0.3s,baz=114,slow=18,SNR=2.5						
ESDC	**Sonseca Array**	**13.34**	**264**	Pn	Pn	02 33 55.0	+4.2
	0.1nm,0.3s,baz=224,slow=50,SNR=1.1						
TORD	**Torodi Ar. Bea**	**30.83**	**203**	P	**P**	**02 36 59.0**	**+1.3**
	0.2nm,0.8s,baz=16,slow=8.0,SNR=1.4						

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*JMA **06** 02:31:19.9±0.1, 39.°19N×142.°39E, h33^{km}±1^{km}, M4.4 Broadband fault plane solution: P waves. NP1: φs42.00000°, δ69.00000°, λ91.00000°. NP2:φs219.00000°, δ21.00000°, λ88.00000°. Principal axes: T Plg66.0000°, Azm313.0000°; N Plg1.0000°, Azm221.0000°; P Plg24.0000°, Azm131.0000°;*
JMA Felt II J1.
*NEIC **06** 02:31:19.9, 39.°19N×142.°39E, h33^{km}, mb4.5/2, After JMA.*
NEIC Recorded [2 JMA] in Aomori, Iwate and Miyagi.
*ISCJB **06** 02:31:20.8±0.8, 39.°19N±0.°04×142.°32E±0.°08, h41^{km}±6^{km}, mb3.9/19, Error ellipse: s-maj=10.5km s-min=5.4km az=18.3*
*IDC **06** 02:31:25.5±2.5, 39.°10N×142.°24E, h71^{km}±23^{km}, mb3.5/15, mb1 3.7/20, mb1mx3.6/32, mbtmp3.5/20, Error ellipse: s-maj=17.4km s-min=15.3km az=107.0*
ISC 06 02:31:20.9±1.5**, 39.°21N**±0.°04×**142.°31E**±0.°07**, h25**^{km}±10^{km}**, n39, σ1^{s}40**/47**, mb4.0**/19**, 1C-7D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.52**	**256**	⇓P	**Pb**	**02 31 31.3**	**-0.1**
OFUJ				*e*S	**Sn**	**02 31 39.1**	**-1.6**
MIYJ	**Miyakonagasawa**	**0.53**	**314**	⇓P	**Pb**	**02 31 31.4**	**-0.3**
MIYJ				*e*S	**Sb**	**02 31 39.4**	**+0.5**
JTH	**Tanohata**	**0.81**	**335**	⇓P	**Pb**	**02 31 35.0**	**-1.3**
JTH				S	**Sb**	**02 31 46.6**	**-0.2**
JOM	**Ohasama**	**0.83**	**289**	⇓P	**Pb**	**02 31 36.4**	**-0.4**
JOM				S	**Sn**	**02 31 48.2**	**-0.4**
JMK	**Ichinoseki**	**0.89**	**254**	⇓P	**Pb**	**02 31 36.9**	**-0.8**
JMK				*e*S	**Sn**	**02 31 49.3**	**-0.6**
JIO	**Ouri**	**1.07**	**225**	⇑P	**Pn**	**02 31 38.7**	**-1.5**
JIO				S	**Sb**	**02 31 52.0**	**-2.2**
JKZ	**Kuzumaki**	**1.08**	**316**	⇓P	**Pn**	**02 31 40.3**	**-0.3**
JKZ				*e*S	**Sn**	**02 31 55.2**	**+0.4**
JANG	**Nango**	**1.31**	**332**	⇓P	**Pn**	**02 31 43.0**	**-0.7**
JANG				S	**Sn**	**02 32 00.4**	**0.0**
JRG	**Rokugo**	**1.32**	**279**	P	**Pb**	**02 31 44.0**	**-1.0**
ERM	**Erimo**	**2.88**	**13**	*e*Pn	**Pn**	**02 32 05.2**	**+0.1**
ERM				*e*S	**Sb**	**02 32 45.7**	**-0.6**
MJAR	**Matsushiro Arr**	**4.20**	**232**	P	**Pn**	**02 32 25.1**	**+1.8**
	4.9nm,0.3s,baz=39,slow=12,SNR=68						
MAJO	**Matsushiro**	**4.20**	**232**	*e*Pn	**Pn**	**02 32 24.9**	**+1.5**
MAT	**Matsushiro**	**4.20**	**232**	P	**Pn**	**02 32 24.9**	**+1.5**
MAT				*e*S	**Sn**	**02 33 16.3**	**+4.7**
ASAJ	**Asahikawa**	**4.91**	**2**	*e*Pn	**Pn**	**02 32 34.3**	**+1.3**
ASAJ				*e*S	**Sn**	**02 33 27.4**	**-1.6**
ASAJ	**Asahikawa**	**4.91**	**2**	P	**Pn**	**02 32 34.4**	**+1.3**
	13nm,0.3s,baz=217,slow=10.0,SNR=35						
ASAJ				S	Sn	02 33 37.1	+8.1
	10nm,0.3s,baz=29,slow=30,SNR=4.9						
USRK	**Ussuriysk Arra**	**9.18**	**306**	P	**Pn**	**02 33 34.8**	**+3.1**
	0.4nm,0.3s,baz=123,slow=15,SNR=9.4						
JNU	**Nakatsue**	**11.05**	**240**	P	**Pn**	**02 33 59.5**	**+2.0**
	0.2nm,0.3s,baz=40,slow=16,SNR=2.2						
KSRS	**Korea Array**	**11.44**	**266**	P	Pn	02 34 06.8	+4.1
	0.4nm,0.3s,baz=80,slow=14,SNR=7.2						
PETK	**Petropavlovsk-**	**17.46**	**32**	P	**P**	**02 35 25.7**	**+2.1**
	0.6nm,0.3s,baz=255,slow=9.7,SNR=6.8						
SONM	**Songino Array**	**27.23**	**300**	P	**P**	**02 37 02.8**	**-0.1**
	0.3nm,0.2s,baz=120,slow=9.5,SNR=4.3						
ZALV	**Zalesovo Beam**	**41.01**	**311**	P	**P**	**02 39 01.2**	**-0.4**
	1.3nm,0.4s,baz=94,slow=8.2,SNR=8.0						
MK31	**Makanchi Array**	**43.60**	**300**	*e*P	**P**	**02 39 22.4**	**-0.6**
MKAR	**Makanchi Array**	**43.60**	**300**	P	**P**	**02 39 22.0**	**-0.9**
	0.5nm,0.3s,baz=87,slow=8.9,SNR=12						
KDAK	**Kodiak Island**	**45.02**	**43**	P	P	02 39 39.1	+5.0
	2.0nm,0.6s,baz=293,slow=7.7,SNR=3.1						
KURK	**Kurchatov**	**45.18**	**307**	*e*P	**P**	**02 39 33.5**	**-1.9**
	5.8nm,0.8s						
ILAR	**Eielson Array**	**47.28**	**33**	P	**P**	**02 39 52.2**	**+0.4**
	0.8nm,0.6s,baz=264,slow=5.8,SNR=19						
BVAR	**Borovoye Array**	**49.66**	**311**	P	**P**	**02 40 09.8**	**-0.4**
	1.2nm,0.6s,baz=78,slow=8.8,SNR=7.0						
BVAR				PcP	PcP	02 41 40.1	+8.8
	1.0nm,0.5s,baz=61,slow=3.6,SNR=4.1						
INK	**Inuvik**	**52.13**	**28**	P	**P**	**02 40 29.4**	**+0.8**
	0.7nm,0.8s,baz=282,slow=5.0,SNR=3.7						
ABKAR	**Akbulak array**	**57.10**	**309**	*e*P	**P**	**02 41 04.3**	**-0.7**
	2.3nm,0.5s						
AKTO	**Aktyubinsk**	**57.76**	**311**	P	**P**	**02 41 10.1**	**+0.5**
	0.9nm,0.6s,baz=72,slow=6.4,SNR=4.7						
WRA	**Warramunga Arr**	**59.31**	**189**	P	**P**	**02 41 18.9**	**-1.8**
	1.3nm,0.5s,baz=8.4,slow=7.4,SNR=11						
YKA	**Yellowknife Ar**	**61.58**	**31**	P	**P**	**02 41 36.1**	**+0.5**
	0.2nm,0.5s,baz=300,slow=6.6,SNR=4.4						
KEV	**Kevo**	**61.66**	**339**	*e*p	P	02 41 41.3	+5.2
	7.8nm,0.8s						
ARCES	**ARCESS Array B**	**62.22**	**339**	P	**P**	**02 41 39.9**	**0.0**
	4.1nm,1.0s,baz=52,slow=5.8,SNR=3.0						
ASAR	**Alice Springs**	**63.04**	**189**	P	**P**	**02 41 44.6**	**-1.3**
	1.1nm,0.8s,baz=7.7,slow=6.9,SNR=8.9						
AKASG	**Malin Array Be**	**73.01**	**322**	P	**P**	**02 42 47.0**	**-1.3**
	1.5nm,0.7s,baz=63,slow=4.7,SNR=2.7						
NVAR	**Mina Array Bea**	**73.13**	**54**	P	**P**	**02 42 50.1**	**+0.6**
	0.3nm,0.5s,baz=280,slow=5.4,SNR=2.9						
PDAR	**Pinedale Array**	**75.64**	**46**	P	**P**	**02 43 02.8**	**-1.3**
	0.4nm,0.9s,baz=336,slow=2.0,SNR=2.8						
BRTR	**Keskin Array B**	**77.94**	**312**	P	**P**	**02 43 17.2**	**+0.2**
	0.3nm,0.6s,baz=74,slow=3.9,SNR=3.4						

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*ISCJB **06** 02:31:32.5±0.3, 42.°38N±0.°02×13.°32E±0.°03, h14^{km}±2^{km}, mb3.6/5, Error ellipse: s-maj=3.6km s-min=3.4km az=29.6*
*ROM **06** 02:31:32.7±0.1, 42.°36N×13.°35E, h9^{km}±1^{km}, Ml3.4/9, Error ellipse: s-maj=1.9km s-min=1.8km az=116.0*
*IDC **06** 02:31:33.0±1.2, 42.°45N×13.°07E, h0^{km}, mb3.6/6, mb1 3.7/10, mb1mx3.6/31, mbtmp3.5/10, ML3.4/4, Error ellipse: s-maj=18.9km s-min=15.0km az=97.0*
*CSEM **06** 02:31:33.1±0.1, 42.°37N×13.°35E, h8^{km}, ML3.3/7, Error ellipse: s-maj=2.8km s-min=2.4km az=22.0*
*LDG **06** 02:31:36.1±0.2, 42.°37N×13.°18E, h2^{km}, Ml3.3/7, Error ellipse: s-maj=6.5km s-min=3.7km az=34.0*
ISC 06 02:31:33.3±0.8**, 42.°38N**±0.°02×**13.°32E**±0.°02**, h8**^{km}±5^{km}**, n85, σ1^{s}51**/112**, mb3.6**/5**, 4C, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**111**	Pg	**Pg**	**02 31 34.8**	**-0.4**
AQU				Sg	**Sg**	**02 31 36.3**	**-0.3**
AQU	**L'Aquila**	**0.07**	**111**	Pg	**Pg**	**02 31 34.8**	**-0.4**
AQU				Sg	**Sg**	**02 31 36.3**	**-0.3**
CAMP	**Campotosto**	**0.17**	**23**	⇑*i*Pg	**Pg**	**02 31 36.7**	**-0.2**
CAMP				Sg	**Sg**	**02 31 39.7**	**+0.3**
CAMP	**Campotosto**	**0.17**	**23**	⇑*i*Pg	**Pg**	**02 31 36.7**	**-0.2**
CAMP				Sg	**Sg**	**02 31 39.7**	**+0.3**
FIAM	**Fiamignano**	**0.18**	**234**	Pg	**Pg**	**02 31 37.8**	**+0.7**
FIAM				Sg	**Sg**	**02 31 40.3**	**+0.6**
FIAM	**Fiamignano**	**0.18**	**234**	Pg	**Pg**	**02 31 37.8**	**+0.7**
FIAM				Sg	**Sg**	**02 31 40.3**	**+0.6**
FAGN	**Fagnano**	**0.23**	**119**	Pg	**Pg**	**02 31 37.6**	**-0.3**
FAGN				Sg	**Sg**	**02 31 41.6**	**+0.7**
FAGN	**Fagnano**	**0.23**	**119**	Pg	**Pg**	**02 31 37.6**	**-0.3**
FAGN				Sg	**Sg**	**02 31 41.6**	**+0.7**
TERO	**Teramo**	**0.32**	**41**	Pg	**Pg**	**02 31 38.8**	**-0.9**
TERO				Sg	**Sg**	**02 31 44.8**	**+0.8**
TERO	**Teramo**	**0.32**	**41**	Pg	**Pg**	**02 31 38.8**	**-0.9**
TERO				Sg	**Sg**	**02 31 44.8**	**+0.8**
PTQR	**Pietraquaria**	**0.36**	**170**	Pg	**Pg**	**02 31 40.2**	**-0.2**
PTQR	**Pietraquaria**	**0.36**	**170**	Pg	**Pg**	**02 31 40.2**	**-0.2**
VCEL	**Villa Celiera**	**0.39**	**87**	Pg	**Pg**	**02 31 40.5**	**-0.4**
VCEL	**Villa Celiera**	**0.39**	**87**	Pg	**Pg**	**02 31 40.5**	**-0.4**
MNS	**Montasola**	**0.47**	**271**	Pg	**Pb**	**02 31 43.6**	**-0.3**
MNS	**Montasola**	**0.47**	**271**	Pg	**Pb**	**02 31 43.6**	**-0.3**
NRCA	**Norcia**	**0.48**	**342**	Pg	**Pg**	**02 31 42.4**	**-0.3**
NRCA				Sg	**Sb**	**02 31 50.4**	**-1.0**
NRCA	**Norcia**	**0.48**	**342**	Pg	**Pg**	**02 31 42.4**	**-0.3**
NRCA				Sg	**Sb**	**02 31 50.4**	**-1.0**
CERT	**Cerreto**	**0.50**	**210**	⇑*i*Pg	**Pg**	**02 31 42.1**	**-0.8**
CERT				Sg	**Sg**	**02 31 49.4**	**0.0**
CERT	**Cerreto**	**0.50**	**210**	⇑*i*Pg	**Pg**	**02 31 42.1**	**-0.8**
CERT				Sg	**Sg**	**02 31 49.4**	**0.0**
INTR	**Introdacqua**	**0.57**	**130**	Pg	**Pg**	**02 31 43.9**	**-0.4**
INTR	**Introdacqua**	**0.57**	**130**	Pg	**Pg**	**02 31 43.9**	**-0.4**
TRTR	**Tortoreto Alta**	**0.61**	**45**	Pg	**Pg**	**02 31 45.3**	**+0.1**
	26μm,1.0s						
TRTR	**Tortoreto Alta**	**0.61**	**45**	Pg	**Pg**	**02 31 45.3**	**+0.1**
	26μm,1.0s						
OFFI	**Offida**	**0.62**	**26**	Pg	**Pg**	**02 31 45.2**	**-0.1**
OFFI	**Offida**	**0.62**	**26**	Pg	**Pg**	**02 31 45.2**	**-0.1**
CESI	**CESI - Serrava**	**0.70**	**334**	Pg	**Pg**	**02 31 46.4**	**-0.4**
	1μm,0.5s						
CESI	**CESI - Serrava**	**0.70**	**334**	Pg	**Pg**	**02 31 46.4**	**-0.4**
	1μm,0.5s						
LPEL	**Lama dei Pelig**	**0.72**	**117**	Pg	**Pg**	**02 31 46.4**	**-0.8**
LPEL				Sg	**Sg**	**02 31 56.9**	**+0.3**
	4μm,1.1s						
LPEL	**Lama dei Pelig**	**0.72**	**117**	Pg	**Pg**	**02 31 46.4**	**-0.8**
LPEL				Sg	**Sg**	**02 31 56.9**	**+0.3**
	4μm,1.1s						
CAFR	**Castel Frentan**	**0.78**	**101**	Pg	**Pg**	**02 31 47.5**	**-0.8**
CAFR	**Castel Frentan**	**0.78**	**101**	Pg	**Pg**	**02 31 47.5**	**-0.8**
TOLF	**Tolfa**	**1.03**	**253**	Pg	**Pg**	**02 31 53.1**	**+0.1**
	772nm,0.4s						
TOLF	**Tolfa**	**1.03**	**253**	Pg	**Pg**	**02 31 53.1**	**+0.1**
	772nm,0.4s						
LATE	**Laterza**	**1.15**	**282**	Pg	**Pb**	**02 31 55.5**	**+0.1**
	148nm,0.6s						
LATE	**Laterza**	**1.15**	**282**	Pg	**Pb**	**02 31 55.5**	**+0.1**
	148nm,0.6s						
ARVD	**Arcevia**	**1.15**	**346**	Pg	**Pg**	**02 31 55.0**	**-0.5**
	971nm,0.8s						
ARVD	**Arcevia**	**1.15**	**346**	Pg	**Pg**	**02 31 55.0**	**-0.5**
	971nm,0.8s						
AOI	**Ancona**	**1.19**	**10**	Pg	**Pb**	**02 31 56.0**	**-0.2**
	2μm,1.1s						
AOI	**Ancona**	**1.19**	**10**	Pg	**Pb**	**02 31 56.0**	**-0.2**
	2μm,1.1s						
PIEI	**Pieia**	**1.29**	**334**	Pg	**Pg**	**02 31 58.6**	**+0.5**
PIEI	**Pieia**	**1.29**	**334**	Pg	**Pg**	**02 31 58.6**	**+0.5**
CAFI	**Castiglion Fio**	**1.38**	**314**	Pg	**Pg**	**02 32 00.2**	**+0.5**
CAFI	**Castiglion Fio**	**1.38**	**314**	Pg	**Pg**	**02 32 00.2**	**+0.5**
BADI	**Badiali**	**1.38**	**325**	Pg	**Pg**	**02 32 00.6**	**+0.8**
BADI	**Badiali**	**1.38**	**325**	Pg	**Pg**	**02 32 00.6**	**+0.8**
ARCI	**Arcidosso**	**1.44**	**290**	Pg	**Pb**	**02 32 00.5**	**0.0**
	459nm,1.4s						
ARCI	**Arcidosso**	**1.44**	**290**	Pg	**Pb**	**02 32 00.5**	**0.0**
	459nm,1.4s						
MAON	**Monte Argentar**	**1.62**	**273**	Pg	**Pn**	**02 32 01.7**	**-0.5**
	282nm,0.8s						
CASP	**Castiglione de**	**1.86**	**284**	Pg	**Pn**	**02 32 05.2**	**-0.3**
	316nm,1.4s						
PGF	**Pioggiola**	**3.20**	**275**	*e*Pn	**Pn**	**02 32 24.2**	**+0.2**
PGF				*e*Sn	**Sn**	**02 33 04.2**	**+1.8**
	18nm,0.5s						
PGF	**Pioggiola**	**3.20**	**275**	*e*Pn	**Pn**	**02 32 24.2**	**+0.2**
PGF				*e*Sn	**Sn**	**02 33 04.2**	**+1.8**
	8.9nm,0.5s						
SBF	**Sospel**	**4.55**	**291**	*e*Pn	**Pn**	**02 32 42.9**	**+0.3**
SBF				*e*Sn	**Sn**	**02 33 32.4**	**-3.4**
	10nm,0.5s						
SBF	**Sospel**	**4.55**	**291**	*e*Pn	**Pn**	**02 32 42.9**	**+0.3**
SBF				*e*Sn	**Sn**	**02 33 32.4**	**-3.4**
	5.1nm,0.5s						
FRF	**La Foret Royal**	**5.04**	**286**	*e*Pn	**Pn**	**02 32 48.9**	**-0.3**
FRF	**La Foret Royal**	**5.04**	**286**	*e*Pn	**Pn**	**02 32 48.9**	**-0.3**
DAVOX	**Davos/Dischmat**	**5.04**	**332**	Pn	**Pn**	**02 32 51.6**	**+2.2**
	1.0nm,0.3s,baz=147,slow=17,SNR=5.1						
DAVOX				Sn	**Sn**	**02 33 51.5**	**+3.6**
	1.6nm,0.3s,baz=87,slow=22,SNR=2.4						
LMR	**La Mourre**	**5.10**	**283**	*e*Pn	**Pn**	**02 32 49.5**	**-0.5**
LMR				*e*Sn	**Sn**	**02 33 45.4**	**-3.6**
	4.2nm,0.4s						
LMR	**La Mourre**	**5.10**	**283**	*e*Pn	**Pn**	**02 32 49.5**	**-0.5**
LMR				*e*Sn	**Sn**	**02 33 45.4**	**-3.6**
	2.1nm,0.4s						
MBDF	**Montbardon**	**5.31**	**298**	*e*P	**Pn**	**02 32 54.5**	**+1.5**
MBDF	**Montbardon**	**5.31**	**298**	*e*P	**Pn**	**02 32 54.5**	**+1.5**
LPL	**La Plagne**	**5.70**	**306**	*e*P	**Pn**	**02 33 00.7**	**+2.3**
LPL				*e*Sn	**Sn**	**02 33 58.6**	**-5.5**
	8.5nm,0.7s						
LPL	**La Plagne**	**5.70**	**306**	*e*P	**Pn**	**02 33 00.7**	**+2.3**
SMRF	**Simiane la Rot**	**5.88**	**288**	*e*P	**Pn**	**02 33 02.0**	**+1.2**
SMRF	**Simiane la Rot**	**5.88**	**288**	*e*P	**Pn**	**02 33 02.0**	**+1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GERES	GERESS Array B	6.47	2	Pn	Pn	02 33 09.4	+0.4
	0.2nm,0.3s,baz=180,slow=13,SNR=3.7						
GERES				Sn	Sn	02 34 21.9	-1.2
	2.0nm,0.3s,baz=173,slow=25,SNR=6.7						
VIVF	Saint-Julien-l	6.75	294	ePn	Pn	02 33 13.6	+0.9
VIVF	Saint-Julien-l	6.75	294	ePn	Pn	02 33 13.6	+0.9
KHC	Kasperske Hory	6.76	1	ePN	Pn	02 33 13.5	+0.7
KHC				ex	x	02 33 21.5	
KHC				eSN	Sn	02 34 29.0	-1.0
HINF	Hinteralfeld	7.11	322	ePn	Pn	02 33 16.8	-0.8
HINF				eSn	Sn	02 34 33.1	-5.4
	9.7nm,0.5s						
HINF	Hinteralfeld	7.11	322	ePn	Pn	02 33 16.8	-0.8
KEST	Kesra	7.32	206	Pn	Pn	02 33 24.8	+4.2
	0.4nm,0.3s,baz=309,slow=4.0,SNR=13						
KEST				Sn	Sn	02 34 44.3	+0.3
	baz=319,slow=22,SNR=2.3						
CDF	Champ du Feu	7.38	327	ePn	Pn	02 33 20.3	-1.1
CDF				eSn	Sn	02 34 39.9	-5.5
	5.1nm,0.5s						
CDF	Champ du Feu	7.38	327	ePn	Pn	02 33 20.3	-1.1
HAU	Haudompre	7.47	321	ePn	Pn	02 33 21.8	-0.9
HAU				eSn	Sn	02 34 41.0	-6.6
	12nm,0.5s						
HAU	Haudompre	7.47	321	ePn	Pn	02 33 21.8	-0.9
MLR	Muntele Rosu	9.63	67	Pn	Pn	02 33 55.9	+3.7
	0.1nm,0.3s,baz=146,slow=15,SNR=3.5						
ESDC	Sonseca Array	13.33	264	Pn	Pn	02 34 42.0	-0.8
	0.2nm,0.3s,baz=68,slow=14,SNR=5.2						
ESDC				Sn	Sn	02 37 07.3	-3.8
	0.1nm,0.3s,baz=71,slow=38,SNR=2.8						
BRTR	Keskin Array B	15.56	93	Pn	P	02 35 16.0	-1.5
	0.0nm,0.3s,baz=273,slow=11,SNR=3.0						
FINES	FINESS Array B	20.58	18	P	Pn	02 36 14.4	-0.2
	3.4nm,0.9s,baz=204,slow=10.0,SNR=3.6						
KBZ	Khabaz	21.61	76	P	P	02 36 27.7	+4.1
	3.0nm,1.0s,baz=304,slow=10.0,SNR=4.6						
TORD	Torodi Ar. Bea	30.82	203	P	P	02 37 50.9	+1.2
	0.4nm,0.6s,baz=17,slow=9.4,SNR=7.3						
BVAR	Borovoye Array	38.88	54	P	P	02 39 00.1	+1.1
	0.6nm,0.8s,baz=270,slow=7.2,SNR=3.4						
MKAR	Makanchi Array	47.89	60	P	P	02 40 12.3	+0.6
	0.7nm,0.6s,baz=288,slow=7.6,SNR=4.3						
SONM	Songino Array	62.00	50	P	P	02 41 54.7	+0.7
	0.6nm,0.9s,baz=287,slow=6.9,SNR=4.1						

*STR **06** 02:36:55.2±3.6, 41°.96N×14°.27E, h10km, Ml4.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BJI **06** 02:36:59.8, 42°.51N×12°.61E, h6km, mB5.7/11, mb4.8/29, Ms5.1/12, Ms7 4.9/12*
*TIR **06** 02:37:02.7, 41°.87N×13°.95E, h0km*
*ISCJB **06** 02:37:03.4±0.2, 42°.45N±0°.01×13°.33E±0°.01, h3km±1km, mb4.5/64, MS5.0/6, Error ellipse: s-maj=1.8km s-min=1.2km az=21.4*
*THE **06** 02:37:03.2, 42°.60N×13°.31E, h0km±24km, ML5.0/4, Error ellipse: s-maj=38.5km s-min=3.0km az=284.0*
*MOS **06** 02:37:03.9±1.0, 42°.46N×13°.32E, h10km, mb4.7/30, MS4.4/16, Error ellipse: s-maj=3.5km s-min=2.5km az=99.5*
*NEIC **06** 02:37:04.0, 42°.37N×13°.34E, h10km, mb4.9/17, ML4.9(STR), ML4.8(PDG), ML4.6(LDG), MW4.9(USGS), MW5.1(ROM), After ROM.*
NEIC Felt [VI] at L'Aquila; [V] at Rieti and Teramo; [IV] at Ascoli Piceno, Avezzano, Chieti, Pescara, Roseto degli Abruzzi, Sulmona and Tivoli; [III] at Ancona, Foligno, Rome and Terni. Felt throughout central Italy and as far as Cesena and Naples.
*CSEM **06** 02:37:04.5±0.1, 42°.40N×13°.30E, h2km, mb4.6/33, ML5.0/8, Mw4.9, Error ellipse: s-maj=1.8km s-min=1.3km az=23.0*
*ROM **06** 02:37:04.2±0.1, 42°.36N×13°.33E, h9km±1km, Ml4.6/64, Error ellipse: s-maj=1.1km s-min=1.0km az=42.0*
*IDC **06** 02:37:04.2±0.4, 42°.47N×13°.21E, h0km, mb4.3/32, mb1 4.4/42, mb1mx4.4/45, mbtmp4.3/42, ML4.3/8, MS4.2/6, Ms1 4.2/6, ms1mx3.9/55, Error ellipse: s-maj=9.9km s-min=8.0km az=108.0*
*LDG **06** 02:37:04.2±0.1, 42°.42N×13°.33E, h2km, Ml4.6/13, Error ellipse: s-maj=3.6km s-min=2.4km az=40.0*
*PRU **06** 02:37:05.1, 42°.42N×13°.52E, h0km, M4.9*
*PDG **06** 02:37:05.2±1.1, 42°.43N×13°.32E, h9km±1km, ML4.6/9, Error ellipse: s-maj=0.8km s-min=1.0km az=0.0*
*BEO **06** 02:37:05.3±0.7, 42°.47N×13°.31E, h1km±15km, ML4.8/1*
*TEH **06** 02:37:06.0, 42°.51N×13°.40E, h10km, ML4.8*
*GEN **06** 02:37:07.2, 42°.37N×13°.34E, h10km, ML4.6*
ISC 06 02:37:06.0±0.3**, 42°.39N**±0°.01×**13°.31E**±0°.01**, h15**km±1km**, h14**km**:pP-P, n1443, σ1s.37**/1649**, mb4.6**/64**, MS4.9**/7**, 264C-150D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.08	114	ePg	Pg	02 37 06.5	-2.6
AQU	L'Aquila	0.08	114	Pg	Pg	02 37 06.9	-2.2
AQU				Sg	Sg	02 37 08.3	-2.8
AQU	L'Aquila	0.08	114	eP	Pg	02 37 06.5	-2.6
AQU				Sg	Sg	02 37 08.3	-2.8
CAMP	Campotosto	0.17	27	⇑iPg	Pg	02 37 08.6	-1.7
CAMP				Sg	Sg	02 37 11.5	-1.6
CAMP	Campotosto	0.17	27	⇑iPg	Pg	02 37 08.6	-1.7
CAMP				Sg	Sg	02 37 11.5	-1.6
FIAM	Fiamignano	0.18	230	P	Pg	02 37 09.0	-1.4
FIAM				S	Sg	02 37 11.9	-1.5
FIAM	Fiamignano	0.18	230	Pg	Pg	02 37 09.0	-1.4
FIAM				Sg	Sg	02 37 11.9	-1.5
FIAM	Fiamignano	0.18	230	Pg	Pg	02 37 09.0	-1.4
FIAM				Sg	Sg	02 37 11.9	-1.5
FAGN	Fagnano	0.24	120	⇑ePg	Pg	02 37 09.2	-2.1
FAGN				Sg	Sg	02 37 12.7	-2.2
FAGN	Fagnano	0.24	120	⇑ePg	Pg	02 37 09.2	-2.1
FAGN				Sg	Sg	02 37 12.7	-2.2
TERO	Teramo	0.32	43	P	Pg	02 37 10.7	-2.1
TERO				S	Sg	02 37 15.3	-2.1
TERO	Teramo	0.32	43	Pg	Pg	02 37 10.7	-2.1
TERO	Teramo	0.32	43	Pg	Pg	02 37 10.7	-2.1
TERO				S	Sg	02 37 15.3	-2.1
PTQR	Pietraquaria	0.37	169	⇓iPg	Pg	02 37 11.1	-2.5
PTQR	Pietraquaria	0.37	169	⇓iPg	Pg	02 37 11.1	-2.5
VCEL	Villa Celiera	0.40	89	⇑ePg	Pg	02 37 11.8	-2.3
VCEL				Sg	Sg	02 37 19.2	-0.4
VCEL	Villa Celiera	0.40	89	⇑ePg	Pg	02 37 11.8	-2.3
VCEL				Sg	Sg	02 37 19.2	-0.4
GAVE	Gavelli	0.43	315	Pg	Pg	02 37 14.0	-0.7
GAVE	Gavelli	0.43	315	Pg	Pg	02 37 14.0	-0.7
MNS	Montasola	0.46	270	⇑iPg	Pg	02 37 13.7	-1.5
MNS	Montasola	0.46	270	⇑iPg	Pg	02 37 13.7	-1.5
NRCA	Norcia	0.47	343	P	Pg	02 37 13.8	-1.6
NRCA				S	Sg	02 37 21.6	-0.2
NRCA	Norcia	0.47	343	Pg	Pg	02 37 13.8	-1.6
NRCA				Sg	Sg	02 37 21.6	-0.2
	50µm,0.2s						
NRCA	Norcia	0.47	343	Pg	Pg	02 37 13.8	-1.6
NRCA				Sg	Sg	02 37 21.6	-0.2
	50µm,0.2s						
CERT	Cerreto	0.50	209	⇑ePg	Pg	02 37 14.0	-1.9
CERT	Cerreto	0.50	209	⇑ePg	Pg	02 37 14.0	-1.9
MTCE	Montecelio	0.55	229	P	Pg	02 37 15.1	-1.8
MTCE	Montecelio	0.55	229	⇑iPg	Pg	02 37 15.1	-1.8
MTCE				Sg	Sg	02 37 23.7	-0.6
	51µm,1.0s						
MTCE	Montecelio	0.55	229	⇑iPg	Pg	02 37 15.1	-1.8
MTCE				Sg	Sg	02 37 23.7	-0.6
	51µm,1.0s						
VVLD	Villa Vallelon	0.57	155	P	Pg	02 37 14.8	-2.4
VVLD	Villa Vallelon	0.57	155	Pg	Pg	02 37 14.6	-2.6
VVLD				Sg	Sg	02 37 22.9	-1.9
	111µm,1.8s						
VVLD	Villa Vallelon	0.57	155	P	Pg	02 37 14.8	-2.4
VVLD				Sg	Sg	02 37 22.9	-1.9
	111µm,1.8s						
INTR	Introdacqua	0.58	130	P	Pg	02 37 15.0	-2.5
INTR	Introdacqua	0.58	130	⇑ePg	Pg	02 37 15.0	-2.5
	64µm,0.9s						
INTR	Introdacqua	0.58	130	⇑ePg	Pg	02 37 15.0	-2.5
	64µm,0.9s						
GUAR	Guarcino	0.59	179	P	Pg	02 37 15.3	-2.4
GUAR	Guarcino	0.59	179	Pg	Pg	02 37 15.2	-2.4
	22µm,0.5s						
GUAR	Guarcino	0.59	179	P	Pg	02 37 15.3	-2.4
OFFI	Offida	0.62	27	P	Pg	02 37 16.9	-1.2
OFFI	Offida	0.62	27	⇑iPg	Pg	02 37 16.9	-1.2
	201µm,0.7s						
OFFI	Offida	0.62	27	⇑iPg	Pg	02 37 16.9	-1.2
	201µm,0.7s						
TRTR	Tortoreto Alta	0.62	47	⇑ePg	Pg	02 37 17.0	-1.1
TRTR	Tortoreto Alta	0.62	47	⇑ePg	Pg	02 37 17.0	-1.1
CESI	CESI - Serrava	0.69	335	P	Pg	02 37 17.6	-1.8
CESI				S	Sb	02 37 29.3	+0.2
CESI	CESI - Serrava	0.69	335	⇑ePg	Pg	02 37 17.8	-1.6
CESI				Sg	Sb	02 37 29.5	+0.4
	44µm,0.8s						
CESI	CESI - Serrava	0.69	335	P	Pg	02 37 17.6	-1.8
CESI				Sg	Sb	02 37 29.5	+0.4
	44µm,0.8s						
RMP	Rome, Mte Porz	0.73	218	⇑ePg	Pg	02 37 18.1	-2.1
	26µm,0.5s						
RMP	Rome, Mte Porz	0.73	218	⇑ePg	Pg	02 37 18.1	-2.1
	26µm,0.5s						
POFI	Posta Fibreno	0.73	155	Pg	Pg	02 37 17.5	-2.8
	13µm,0.7s						
POFI	Posta Fibreno	0.73	155	Pg	Pg	02 37 17.5	-2.8
	13µm,0.7s						
LPEL	Lama dei Pelig	0.73	117	⇑ePg	Pg	02 37 17.4	-3.0
LPEL				Sg	Sg	02 37 28.8	-1.3
	21µm,0.6s						
LPEL	Lama dei Pelig	0.73	117	⇑ePg	Pg	02 37 17.4	-3.0
LPEL				Sg	Sg	02 37 28.8	-1.3
	21µm,0.6s						
RDP	Rocca di Papa	0.77	215	P	Pg	02 37 18.7	-2.2
RDP	Rocca di Papa	0.77	215	P	Pg	02 37 18.7	-2.2
RDP	Rocca di Papa	0.77	215	⇑ePg	Pg	02 37 18.8	-2.2
	844nm,0.4s						
RDP	Rocca di Papa	0.77	215	⇑ePg	Pg	02 37 18.8	-2.2
	844nm,0.4s						
SDI	San Donato	0.77	151	Pg	Pg	02 37 18.5	-2.6
SDI	San Donato	0.77	151	Pg	Pg	02 37 18.5	-2.6
MA9	Marino	0.78	218	Pg	Pg	02 37 18.9	-2.3
	31µm,0.5s						
MA9	Marino	0.78	218	Pg	Pg	02 37 18.9	-2.3
	31µm,0.5s						
CAFR	Castel Frentan	0.79	101	⇑ePg	Pg	02 37 19.0	-2.4
CAFR	Castel Frentan	0.79	101	⇑ePg	Pg	02 37 19.0	-2.4
ROM9	Roma	0.81	227	⇑ePg	Pg	02 37 19.7	-2.0
	81µm,0.8s						
ROM9	Roma	0.81	227	⇑ePg	Pg	02 37 19.7	-2.0
	81µm,0.8s						
GIUL	Giuliano Di Ro	0.83	183	Pg	Pg	02 37 19.3	-2.8
GIUL	Giuliano Di Ro	0.83	183	Pg	Pg	02 37 19.3	-2.8
RNI2	Rionero Sannit	0.93	137	Pg	Pb	02 37 21.2	-2.7
RNI2	Rionero Sannit	0.93	137	Pg	Pb	02 37 21.2	-2.7
CERA	Filignano	0.95	146	Pg	Pb	02 37 22.2	-2.1
	17µm,0.7s						
CERA	Filignano	0.95	146	Pg	Pb	02 37 22.2	-2.1
	17µm,0.7s						
TOLF	Tolfa	1.02	252	Pg	Pb	02 37 23.4	-2.0
TOLF	Tolfa	1.02	252	Pg	Pb	02 37 23.4	-2.0
MIDA	Miranda	1.03	136	Pg	Pb	02 37 22.4	-3.2
	20µm,1.2s						
MIDA	Miranda	1.03	136	Pg	Pb	02 37 22.4	-3.2
	20µm,1.2s						
MURB	Monte Urbino	1.05	327	⇑ePg	Pb	02 37 24.3	-1.6
	199µm,1.4s						
MURB	Monte Urbino	1.05	327	⇑ePg	Pb	02 37 24.3	-1.6
	199µm,1.4s						
FRES	Fresagrandinar	1.09	112	Pg	Pb	02 37 23.6	-3.1
	18µm,0.8s						
FRES	Fresagrandinar	1.09	112	Pg	Pb	02 37 23.6	-3.1
	18µm,0.8s						
SACS	San Casciano d	1.13	295	Pg	Pb	02 37 25.9	-1.4
	38µm,0.8s						
LATE	Laterza	1.13	282	Pg	Pb	02 37 25.9	-1.5
	9µm,1.1s						
LATE	Laterza	1.13	282	Pg	Pb	02 37 25.9	-1.5
	9µm,1.1s						
ARVD	Arcevia	1.14	347	⇑ePg	Pb	02 37 25.7	-1.8
	53µm,1.3s						
ARVD	Arcevia	1.14	347	⇑ePg	Pb	02 37 25.7	-1.8
	53µm,1.3s						
AOI	Ancona	1.18	11	⇑ePg	Pn	02 37 26.2	-1.9
	69µm,1.3s						
AOI	Ancona	1.18	11	⇑ePg	Pn	02 37 26.2	-1.9
	69µm,1.3s						
PIEI	Pieia	1.28	334	Pg	Pn	02 37 28.1	-1.4
	19µm,0.8s						
PIEI	Pieia	1.28	334	Pg	Pn	02 37 28.1	-1.4
	19µm,0.8s						
MODR	Mondragone	1.31	161	⇑ePg	Pn	02 37 28.9	-1.0
	4µm,1.4s						
MODR	Mondragone	1.31	161	⇑ePg	Pn	02 37 28.9	-1.0
	4µm,1.4s						
SENI	Senigallia	1.32	358	Pn	Pn	02 37 29.6	-0.3
	35µm,0.9s						
SENI	Senigallia	1.32	358	Pn	Pn	02 37 29.6	-0.3
	35µm,0.9s						
CDCA	Citt' di Caste	1.33	324	Pn	Pb	02 37 30.4	-0.3
	59µm,1.1s						
CDCA	Citt' di Caste	1.33	324	Pn	Pb	02 37 30.4	-0.3
	59µm,1.1s						
FSSB	Fossombrone	1.36	344	Pn	Pn	02 37 29.7	-0.9
	35µm,0.6s						
FSSB	Fossombrone	1.36	344	Pn	Pn	02 37 29.7	-0.9
	35µm,0.6s						
CAFI	Castiglion Fio	1.36	314	Pn	Pn	02 37 29.9	-0.7
	24µm,1.0s						
CAFI	Castiglion Fio	1.36	314	Pn	Pn	02 37 29.9	-0.7
	24µm,1.0s						
BADI	Badiali	1.37	326	Pn	Pn	02 37 30.2	-0.4
	30µm,0.9s						
BADI	Badiali	1.37	326	Pn	Pn	02 37 30.2	-0.4
	30µm,0.9s						
PTRJ	Pietraroja	1.37	138	Pn	Pn	02 37 29.8	-1.0
	22µm,0.9s						
PTRJ	Pietraroja	1.37	138	Pn	Pn	02 37 29.8	-1.0
	22µm,0.9s						
ARCI	Arcidosso	1.43	290	⇑ePn	Pn	02 37 31.5	-0.1
	19µm,1.3s						
ARCI	Arcidosso	1.43	290	⇑ePn	Pn	02 37 31.5	-0.1
	19µm,1.3s						
PARC	Parchiule	1.48	329	Pn	Pn	02 37 32.0	-0.3
	25µm,0.8s						
PARC	Parchiule	1.48	329	Pn	Pn	02 37 32.0	-0.3
	25µm,0.8s						
CRE	Caprese Michel	1.58	322	Pn	Pn	02 37 33.9	+0.2
	19µm,1.7s						
CRE	Caprese Michel	1.58	322	Pn	Pn	02 37 33.9	+0.2
	19µm,1.7s						
PESA	Pesaro	1.59	348	⇑ePn	Pn	02 37 34.2	+0.5
	42µm,1.1s						
PESA	Pesaro	1.59	348	⇑ePn	Pn	02 37 34.2	+0.5
	42µm,1.1s						
MAON	Monte Argentar	1.61	272	⇑ePn	Pn	02 37 33.1	-0.9
	14µm,1.2s						
MAON	Monte Argentar	1.61	272	⇑ePn	Pn	02 37 33.1	-0.9
	14µm,1.2s						
RSM	Repubblica di	1.67	338	Pn	Pb	02 37 36.1	-0.4
	113µm,1.0s						
RSM	Repubblica di	1.67	338	Pn	Pb	02 37 36.1	-0.4
	113µm,1.0s						
MOCO	Biccari - m.te	1.72	126	Pn	Pn	02 37 36.1	+0.6
	47µm,4.1s						
MRB1	Monte Rocchett	1.77	135	Pn	Pb	02 37 37.9	-0.4
	20µm,1.8s						
MRB1	Monte Rocchett	1.77	135	Pn	Pb	02 37 37.9	-0.4
	20µm,1.8s						
CSNT	Castellina Chi	1.83	307	Pn	Pn	02 37 37.3	+0.2
	7µm,1.2s						
CSNT	Castellina Chi	1.83	307	Pn	Pn	02 37 37.3	+0.2
	7µm,1.2s						
CASP	Castiglione de	1.85	283	⇑ePn	Pn	02 37 36.6	-0.6
	23µm,2.3s						
CASP	Castiglione de	1.85	283	⇑ePn	Pn	02 37 36.6	-0.6
	23µm,2.3s						
SGRT	San Giovanni R	1.92	108	Pn	Pn	02 37 38.0	-0.3
	4µm,0.7s						
SGRT	San Giovanni R	1.92	108	Pn	Pn	02 37 38.0	-0.3
	4µm,0.7s						
CAFE	Carife	1.98	133	Pn	Pn	02 37 40.1	+0.9
	10µm,2.7s						
CAFE	Carife	1.98	133	Pn	Pn	02 37 40.1	+0.9
	10µm,2.7s						
SGTA	Sant Agata di	1.98	128	Pn	Pn	02 37 40.3	+1.1
	4µm,0.8s						
SGTA	Sant Agata di	1.98	128	Pn	Pn	02 37 40.3	+1.1
	4µm,0.8s						
MSAG	Monte S. Angel	2.05	108	Pn	Pn	02 37 40.4	+0.3
	5µm,0.5s						
MSAG	Monte S. Angel	2.05	108	Pn	Pn	02 37 40.4	+0.3
	5µm,0.5s						
MCRV	Calabrutti - M	2.13	138	Pn	Pn	02 37 41.2	0.0
MCRV	Calabrutti - M	2.13	138	Pn	Pn	02 37 41.2	0.0
CRMI	Carmignano	2.21	310	Pn	Pn	02 37 43.1	+0.8
	15µm,2.3s						
CRMI	Carmignano	2.21	310	Pn	Pn	02 37 43.1	+0.8
	15µm,2.3s						
CDRU	Civita di Ruta	2.42	141	Pn	Pn	02 37 45.2	0.0
	2µm,1.6s						
CDRU	Civita di Ruta	2.42	141	Pn	Pn	02 37 45.2	0.0
	2µm,1.6s						
PALZ	Palazzo San Ge	2.46	125	Pn	Pn	02 37 46.2	+0.6
	9µm,1.3s						
PALZ	Palazzo San Ge	2.46	125	Pn	Pn	02 37 46.2	+0.6
	9µm,1.3s						
NVLJ	Novalja	2.46	27	iPn	Pn	02 37 45.2	-0.4
NVLJ				Sn	Sn	02 38 16.1	+0.7
NVLJ	Novalja	2.46	27	iPn	Pn	02 37 45.1	-0.4
NVLJ				Sn	Sn	02 38 16.0	+0.7
MRVN	Minervino Murg	2.54	120	Pn	Pn	02 37 46.6	-0.1
	2µm,1.5s						
MRVN	Minervino Murg	2.54	120	Pn	Pn	02 37 46.6	-0.1
	2µm,1.5s						
MAIM	Mastiano	2.56	308	Pn	Pn	02 37 48.1	+1.0
	4µm,1.3s						
MAIM	Mastiano	2.56	308	P	Pn	02 37 48.1	+1.0
BDI	Bagni Di Lucca	2.59	311	Pn	Pn	02 37 47.9	+0.4
	6µm,1.4s						
BDI	Bagni Di Lucca	2.59	311	Pn	Pn	02 37 47.9	+0.4
	6µm,1.4s						
FIU	Minerbio Fiu	2.61	330	Pn	Pb	02 37 50.5	-2.0
	34µm,1.5s						
FIU	Minerbio Fiu	2.61	330	Pn	Pb	02 37 50.5	-2.0
	34µm,1.5s						
VLC	Villacollemand	2.77	311	ePn	Pn	02 37 49.7	-0.2
VLC				eSn	Sn	02 38 22.5	-0.7
VLC	Villacollemand	2.77	311	Pn	Pn	02 37 50.9	+0.9
	5µm,1.4s						
VLC	Villacollemand	2.77	311	ePn	Pn	02 37 49.7	-0.2
VLC				eSn	Sn	02 38 22.5	-0.7
BULG	Bulgheria - Ca	2.79	145	Pn	Pn	02 37 51.1	+0.9
	5µm,2.6s						
BULG	Bulgheria - Ca	2.79	145	Pn	Pn	02 37 51.1	+0.9
	5µm,2.6s						
AMUR	Altamura	2.88	120	Pn	Pn	02 37 51.5	+0.1
	913nm,0.8s						
AMUR	Altamura	2.88	120	Pn	Pn	02 37 51.5	+0.1
	913nm,0.8s						
CUC	Castrocucco	3.05	141	ePn	Pn	02 37 55.0	+1.2
CUC				ePg	Pg	02 38 07.2	+2.8
CUC	Castrocucco	3.05	141	ePn	Pn	02 37 55.0	+1.2
MATE	Matera	3.09	123	Pn	Pn	02 37 54.4	+0.2
	940nm,0.6s						
MATE	Matera	3.09	123	Pn	Pn	02 37 54.4	+0.2
	940nm,0.6s						
CRAC	Craco	3.10	130	Pn	Pn	02 37 56.0	+1.5
	5µm,1.4s						
CRAC	Craco	3.10	130	Pn	Pn	02 37 56.0	+1.5
	5µm,1.4s						
OSPF	L'Ospedale	3.15	258	P	Pn	02 37 54.1	-1.1
OSPF	L'Ospedale	3.15	258	P	Pn	02 37 54.1	-1.1
OSPF	L'Ospedale	3.15	258	P	Pn	02 37 54.1	-1.1
GRAM	Graiana	3.16	313	P	Pn	02 37 56.5	+1.2
PGF	Pioggiola	3.19	274	ePn	Pn	02 37 56.1	+0.3
	SNR=1.0						
PGF				eSn	Sn	02 38 36.9	+3.3
	1µm,0.9s						
PGF	Pioggiola	3.19	274	eP	Pn	02 37 56.1	+0.3
PGF				e		02 38 36.9	
PGF	Pioggiola	3.19	274	ePn	Pn	02 37 56.1	+0.3
PGF				eSn	Sn	02 38 36.9	+3.3
PGF	Pioggiola	3.19	274	ePn	Pn	02 37 56.1	+0.3
	SNR=1.0						
PGF				eSn	Sn	02 38 36.9	+3.3
	625nm,0.9s						
SKDS	Skadanscina	3.20	9	⇑iPn	Pn	02 37 55.1	-0.7
SKDS				eSn	Sn	02 38 31.0	-2.8
SKDS							
	comp=Z,1µm,0.4s						
SKDS	Skadanscina	3.20	9	⇑iPn	Pn	02 37 55.2	-0.7
SKDS				eSn	Sn	02 38 31.0	-2.8
	comp=Z,1µm,0.4s						
CODM	Codolo	3.22	310	P	Pn	02 37 56.5	+0.4
STON	Ston	3.28	80	iPn	Pn	02 37 56.4	-0.5
STON				Sn	Sn	02 38 34.7	-0.9
STON	Ston	3.28	80	iPn	Pn	02 37 56.4	-0.5
STON				Sn	Sn	02 38 34.7	-0.9
TRI	Trieste	3.34	6	eP	Pn	02 37 56.3	-1.4
TRI	Trieste	3.34	6	ePn	Pn	02 37 56.3	-1.4
TRI				eS	Sg	02 38 50.2	-3.0
TRI	Trieste	3.34	6	Pn	Pn	02 37 56.6	-1.1
TRI	Trieste	3.34	6	eP	Pn	02 37 56.3	-1.4
TRI	Trieste	3.34	6	Pn	Pn	02 37 56.6	-1.1
MSSA	Maissana	3.37	306	Pn	Pn	02 37 59.7	+1.5
	comp=Z,3µm,1.6s						
MSSA	Maissana	3.37	306	Pn	Pn	02 37 59.7	+1.5
	comp=Z,3µm,1.6s						
SC2M	Scurtabo	3.41	308	Pn	Pn	02 38 00.0	+1.3
	comp=Z,2µm,0.9s						
SC2M	Scurtabo	3.41	308	Pn	Pn	02 38 00.0	+1.3
	comp=Z,2µm,0.9s						
BOJS	Bojanci	3.42	24	ePn	Pn	02 37 58.6	-0.2
BOJS	Bojanci	3.42	24	ePn	Pn	02 37 58.6	-0.2
SABO	M.te Sabotino	3.60	3	Pn	Pn	02 38 00.6	-0.7
	comp=Z,6µm,1.1s						
SABO	M.te Sabotino	3.60	3	Pn	Pn	02 38 00.6	-0.7
	comp=Z,6µm,1.1s						
VOJS	Vojsko	3.67	6	iPn	Pn	02 38 01.5	-0.9
VOJS				eSn	Sn	02 38 44.4	-1.0
VOJS							
	comp=Z,4µm,1.6s						
VOJS	Vojsko	3.67	6	iPn	Pn	02 38 01.5	-0.9
VOJS				eSn	Sn	02 38 44.4	-1.0
	comp=Z,4µm,1.6s						
BLY	Banja Luka	3.68	49	⇑iPn	Pn	02 38 03.0	+0.6
BLY	Banja Luka	3.68	49	⇑iPn	Pn	02 38 03.0	+0.6
POLC	Polcenigo	3.69	351	Pn	Pn	02 38 02.6	+0.1
	comp=Z,5µm,0.7s						
GENL	Genova Univers	3.75	304	P	Pn	02 38 04.8	+1.5
LJU	Ljubljana	3.76	13	⇑iPn	Pn	02 38 03.7	+0.2
LJU				eSn	Sn	02 38 44.5	-3.0
LJU							
	comp=Z,7µm,2.0s						
LJU	Ljubljana	3.76	13	⇑iPn	Pn	02 38 03.7	+0.2
LJU				eSn	Sn	02 38 44.5	-3.0
	comp=Z,7µm,2.0s						
SISC	Sisak	3.80	35	ePn	Pn	02 38 04.2	+0.2
SISC				Sn	Sn	02 38 49.1	+0.7
SISC	Sisak	3.80	35	ePn	Pn	02 38 04.2	+0.2
SISC				Sn	Sn	02 38 49.1	+0.7
SALO	Salr	3.80	329	Pn	Pn	02 38 04.5	+0.4
	comp=Z,5µm,0.9s						
SALO	Salr	3.80	329	Pn	Pn	02 38 04.5	+0.4
	comp=Z,5µm,0.9s						
HCY	Herceg Novi	3.84	87	⇑iPn	Pn	02 38 04.7	0.0
HCY				eSn	Sn	02 38 52.0	+2.4
HCY	Herceg Novi	3.84	87	⇓P	Pn	02 38 04.7	0.0
HCY				S	Sn	02 38 51.4	+1.8
HCY	Herceg Novi	3.84	87	⇓P	Pn	02 38 04.7	0.0
HCY				S	Sn	02 38 51.4	+1.8
HCY	Herceg Novi	3.84	87	⇑iPn	Pn	02 38 04.7	0.0
HCY				S	Sn	02 38 51.4	+1.8
HCY				eSn	Sn	02 38 52.0	+2.4
CTI	Castel Tesino	3.85	343	Pn	Pn	02 38 05.4	+0.6
	comp=Z,3µm,0.9s						
CTI	Castel Tesino	3.85	343	Pn	Pn	02 38 05.4	+0.6
	comp=Z,3µm,0.9s						
CADS	Cadrg	3.85	4	⇑iPn	Pn	02 38 04.1	-0.8
CADS				e		02 38 42.7	
CADS				eSn	Sn	02 38 48.6	-1.3
CADS							
	comp=Z,2µm,1.0s						
CADS	Cadrg	3.85	4	⇑iPn	Pn	02 38 04.1	-0.8
CADS				eSn	Sn	02 38 48.6	-1.3
	comp=Z,2µm,1.0s						
BRY	Bratogost	3.90	81	ePn	Pn	02 38 05.6	+0.1
BRY				eSn	Sn	02 38 52.5	+1.4
BRY	Bratogost	3.90	81	P	Pn	02 38 05.2	-0.3
BRY				S	Sn	02 38 52.3	+1.2
BRY	Bratogost	3.90	81	P	Pn	02 38 05.2	-0.3
BRY				S	Sn	02 38 52.3	+1.2
BRY	Bratogost	3.90	81	P	Pn	02 38 05.2	-0.3
BRY	Bratogost	3.90	81	ePn	Pn	02 38 05.6	+0.1
BRY				S	Sn	02 38 52.3	+1.2

GOLS	Golise	3.99	24	i Pn	Pn	02 38 06.5	-0.2
GOLS	Golise	3.99	24	i Pn	Pn	02 38 06.5	-0.2
AGOR	Agordo	4.00	347	Pn	Pn	02 38 06.9	+0.1
	comp=Z,5µm,1.7s						
TIP	Timpagrande	4.14	140	ePn	Pn	02 38 08.5	-0.3
TIP				ePg	Pg	02 38 23.5	-1.8
TIP	Timpagrande	4.14	140	ePn	Pn	02 38 08.5	-0.3
BUM	Brajici-Budva	4.14	89⇓	iPn	Pn	02 38 09.5	+0.6
BUM				eSn	Sn	02 38 58.4	+1.3
BUM	Brajici-Budva	4.14	89⇓	iPn	Pn	02 38 09.5	+0.6
BUM				eSn	Sn	02 38 58.4	+1.3
VSL	Villasalto	4.14	227	eP	Pn	02 38 07.6	-1.2
VSL				eS	Sn	02 38 55.3	-1.7
VSL	Villasalto	4.14	227	Pn	Pn	02 38 08.2	-0.6
VSL	Villasalto	4.14	227	eP	Pn	02 38 07.6	-1.2
VSL	Villasalto	4.14	227	Pn	Pn	02 38 08.2	-0.6
VSL				eS	Sn	02 38 55.3	-1.7
RORO	Rocca Rossa	4.20	296	Pn	Pn	02 38 09.7	+0.2
	comp=Z,2µm,3.4s						
RORO	Rocca Rossa	4.20	296	Pn	Pn	02 38 09.7	+0.2
	comp=Z,2µm,3.4s						
UPM	Unac-Piva	4.20	77⇑	iPn	Pn	02 38 10.6	+0.8
UPM				eSn	Sn	02 39 01.1	+2.4
UPM	Unac-Piva	4.20	77⇑	iPn	Pn	02 38 10.6	+0.8
UPM				eSn	Sn	02 39 01.1	+2.4
OBKA	Obir	4.22	12⇓	iPn	Pn	02 38 10.0	+0.1
	SNR=21						
OBKA	Obir	4.22	12⇓	iPn	Pn	02 38 10.0	+0.1
OBKA	Obir	4.22	12⇓	iPn	Pn	02 38 10.0	+0.1
NKY	Niksic	4.22	82⇑	iPn	Pn	02 38 11.2	+1.2
NKY				eSn	Sn	02 39 00.5	+1.5
NKY	Niksic	4.22	82	⇑P	Pn	02 38 10.5	+0.5
NKY				S	Sn	02 39 01.0	+2.0
NKY	Niksic	4.22	82	⇑P	Pn	02 38 10.4	+0.5
NKY				S	Sn	02 39 01.0	+2.0
NKY	Niksic	4.22	82	⇑P	Pn	02 38 10.4	+0.5
NKY	Niksic	4.22	82⇑	iPn	Pn	02 38 11.2	+1.2
NKY				eSn	Sn	02 39 00.5	+1.5
NKY				S	Sn	02 39 01.0	+2.0
IMI	Imperia	4.24	293	Pn	Pn	02 38 10.3	+0.1
IMI	Imperia	4.24	293	Pn	Pn	02 38 10.3	+0.1
MDI	Monti di Nese	4.26	324	Pn	Pn	02 38 10.6	+0.1
	comp=Z,556nm,0.5s						
MDI	Monti di Nese	4.26	324	Pn	Pn	02 38 10.6	+0.1
	comp=Z,556nm,0.5s						
ABTA	Abfaltersbach	4.40	353⇑	iPn	Pn	02 38 12.8	+0.4
	SNR=82						
ABTA	Abfaltersbach	4.40	353⇑	iPn	Pn	02 38 12.8	+0.4
ABTA	Abfaltersbach	4.40	353⇑	iPn	Pn	02 38 12.8	+0.4
PDG	Podgorica	4.41	87⇑	iPn	Pn	02 38 12.7	+0.4
PDG				eSn	Sn	02 39 04.1	+0.7
PDG	Podgorica	4.41	87⇑	iPn	Pn	02 38 12.7	+0.4
PDG				eSn	Sn	02 39 04.1	+0.7
TTG	Podgorica	4.41	87⇑	iPn	Pn	02 38 12.8	+0.4
TTG				eSn	Sn	02 39 05.6	+2.2
ULC	Ulcinj	4.43	93⇑	iPn	Pn	02 38 12.8	0.0
ULC				eSn	Sn	02 39 06.2	+2.0
ULC	Ulcinj	4.43	93⇑	iPn	Pn	02 38 12.8	0.0
ULC				eSn	Sn	02 39 06.2	+2.0
SAOF	Saorge	4.50	293	P	Pn	02 38 14.3	+0.6
SAOF	Saorge	4.50	293	P	Pn	02 38 14.3	+0.6
SAOF	Saorge	4.50	293	P	Pn	02 38 14.3	+0.6
SAOF	Saorge	4.50	293	P	Pn	02 38 14.3	+0.6
SBF	Sospel	4.54	291	ePn	Pn	02 38 14.8	+0.5
	SNR=1.0						
SBF				eSn	Sn	02 39 04.1	-2.8
	comp=Z,676nm,0.7s						
SBF	Sospel	4.54	291	eP	Pn	02 38 14.8	+0.5
SBF				e		02 39 04.1	
SBF	Sospel	4.54	291	ePn	Pn	02 38 14.8	+0.5
SBF				eSn	Sn	02 39 04.1	-2.8
SBF	Sospel	4.54	291	ePn	Pn	02 38 14.8	+0.5
	SNR=1.0						
SBF				eSn	Sn	02 39 04.1	-2.8
	comp=Z,338nm,0.7s						
REVF	Revere	4.56	289	P	Pn	02 38 14.4	-0.1
REVF	Revere	4.56	289	P	Pn	02 38 14.4	-0.1
REVF	Revere	4.56	289	P	Pn	02 38 14.4	-0.1
REVF	Revere	4.56	289	P	Pn	02 38 14.4	-0.1
PLE	Pljevlja	4.57	76⇑	iPn	Pn	02 38 16.1	+1.3
PLE				eSn	Sn	02 39 09.8	+2.1
PLE	Pljevlja	4.57	76⇑	iPn	Pn	02 38 16.1	+1.3
PLE				eSn	Sn	02 39 09.8	+2.1
CEL	Celeste	4.57	154	ePn	Pn	02 38 12.9	-1.8
CEL	Celeste	4.57	154	ePn	Pn	02 38 12.9	-1.8
KOGS	Kog	4.58	26	i Pn	Pn	02 38 13.9	-0.8
KOGS	Kog	4.58	26	i Pn	Pn	02 38 13.9	-0.8
AUTN	L'Aution	4.59	293	P	Pn	02 38 15.6	+0.5
AUTN	L'Aution	4.59	293	P	Pn	02 38 15.6	+0.5
AUTN	L'Aution	4.59	293	P	Pn	02 38 15.6	+0.5
AUTN	L'Aution	4.59	293	P	Pn	02 38 15.6	+0.5
KBA	Koelnbreinsper	4.69	0⇓	iP	Pn	02 38 16.9	+0.4
KBA	Koelnbreinsper	4.69	0⇓	iPn	Pn	02 38 16.9	+0.4
	SNR=28						
KBA	Koelnbreinsper	4.69	0⇓	iPn	Pn	02 38 16.9	+0.4
KBA	Koelnbreinsper	4.69	0	i P	Pn	02 38 16.9	+0.4
BBLS	Lazići	4.70	70	ePn	Pn	02 38 16.2	-0.3
BBLS				eSn	Sn	02 39 09.0	-1.9
BBLS	Lazići	4.70	70	ePn	Pn	02 38 16.2	-0.3
BBLS				eSn	Sn	02 39 09.0	-1.9
TOUF	Mont Tournerai	4.72	292	P	Pn	02 38 17.5	+0.7
TOUF	Mont Tournerai	4.72	292	P	Pn	02 38 17.5	+0.7
TOUF	Mont Tournerai	4.72	292	P	Pn	02 38 17.5	+0.7
TOUF	Mont Tournerai	4.72	292	P	Pn	02 38 17.5	+0.7
MVIF	Mont Vial	4.75	291	P	Pn	02 38 17.7	+0.5
MVIF	Mont Vial	4.75	291	P	Pn	02 38 17.7	+0.5
MVIF	Mont Vial	4.75	291	P	Pn	02 38 17.7	+0.5
MVIF	Mont Vial	4.75	291	P	Pn	02 38 17.7	+0.5
FUORN	Ofenpass-Fuorn	4.76	334	ePn	Pn	02 38 18.9	+1.4
FUORN				eSn	Sn	02 39 11.5	-1.0
FUORN	Ofenpass-Fuorn	4.76	334	ePn	Pn	02 38 18.9	+1.4
FUORN				eSn	Sn	02 39 11.5	-1.0
BEY	Berane	4.88	82⇑	iPn	Pn	02 38 20.8	+1.7
BEY				eSn	Sn	02 39 17.4	+2.0
IVA	Berane	4.88	82⇑	iPn	Pn	02 38 20.8	+1.7
IVA				eSn	Sn	02 39 17.4	+2.0
CALN	Calern	4.89	288	P	Pn	02 38 19.5	+0.3
CALN	Calern	4.89	288	P	Pn	02 38 19.5	+0.3
CALN	Calern	4.89	288	P	Pn	02 38 19.5	+0.3
CALN	Calern	4.89	288	P	Pn	02 38 19.5	+0.3
PUK	Puka	4.91	92	i PN	Pn	02 38 20.8	+1.5
PUK				i SN	Sn	02 39 16.8	+0.9
PUK	Puka	4.91	92	i Pn	Pn	02 38 20.8	+1.5
PUK				i Sn	Sn	02 39 16.8	+0.9
PVY	Plav	4.92	85⇑	iPn	Pn	02 38 20.9	+1.3
PVY				eSn	Sn	02 39 18.8	+2.4
TUE	Stuetta	4.97	327	ePn	Pn	02 38 21.4	+1.1
TUE				eSn	Sn	02 39 18.0	+0.3
TUE	Stuetta	4.97	327	ePn	Pn	02 38 21.5	+1.1
TUE				eSn	Sn	02 39 18.0	+0.3
SJES	Sjenica	4.98	78	ePn	Pn	02 38 21.2	+0.8
FETA	Feichten	4.99	339⇓	iPn	Pn	02 38 21.9	+1.4
	SNR=56						
FETA	Feichten	4.99	339⇓	iPn	Pn	02 38 21.9	+1.4
FETA	Feichten	4.99	339⇓	iPn	Pn	02 38 21.9	+1.4
TIR	Tirane	5.01	100	i PN	Pn	02 38 20.4	-0.3
TIR				i SN	Sn	02 39 18.9	+0.6
TIR	Tirane	5.01	100	P	Pn	02 38 20.9	+0.2
TIR	Tirane	5.01	100	eP	Pn	02 38 20.2	-0.4
TIR				e		02 39 16.6	
TIR	Tirane	5.01	100	ePn	Pn	02 38 20.2	-0.4
TIR				eSn	Sn	02 39 16.6	-1.7
TIR	Tirane	5.01	100	eP	Pn	02 38 20.2	-0.4
TIR	Tirane	5.01	100⇑	iPn	Pn	02 38 20.8	+0.1
TIR				eSn	Sn	02 39 17.5	-0.8
TIR	Tirane	5.01	100⇑	iPn	Pn	02 38 20.8	+0.1
TIR				eS	Sn	02 39 16.6	-1.7
TIR				eSn	Sn	02 39 17.5	-0.8
BCI	Bajram Curri	5.01	88	i PN	Pn	02 38 22.2	+1.5
BCI				i SN	Sn	02 39 21.3	+2.9
BCI	Bajram Curri	5.01	88	i Pn	Pn	02 38 22.2	+1.5
BCI				i Sn	Sn	02 39 21.3	+2.9
TEKS	Tekeris	5.02	62	ePn	Pn	02 38 20.2	-0.6
TEKS	Tekeris	5.02	62	ePn	Pn	02 38 20.2	-0.6
WTTA	Wattenberg	5.02	347⇑	iP	Pn	02 38 22.2	+1.2
WTTA	Wattenberg	5.02	347⇑	iPn	Pn	02 38 22.1	+1.2
	SNR=46						
WTTA	Wattenberg	5.02	347⇑	iPn	Pn	02 38 22.1	+1.2
WTTA	Wattenberg	5.02	347⇑	iPn	Pn	02 38 22.1	+1.1
FRF	La Foret Royal	5.02	286	ePn	Pn	02 38 20.5	-0.4
	SNR=1.0						
FRF				eSn	Sn	02 39 16.3	-2.4
	comp=Z,116nm,0.6s						
FRF	La Foret Royal	5.02	286	eP	Pn	02 38 20.5	-0.4
FRF				e		02 39 16.3	
FRF	La Foret Royal	5.02	286	ePn	Pn	02 38 20.5	-0.4
FRF				eSn	Sn	02 39 16.3	-2.4
FRF	La Foret Royal	5.02	286	ePn	Pn	02 38 20.5	-0.4
	SNR=1.0						
FRF				eSn	Sn	02 39 16.3	-2.4
	comp=Z,58nm,0.6s						
DAVOX	Davos/Dischmat	5.03	332	Pn	Pn	02 38 23.3	+2.2
DAVOX				Sn	Sn	02 39 21.4	+2.3
DAVOX	Davos/Dischmat	5.03	332	Pn	Pn	02 38 23.3	+2.2
	comp=Z,15nm,0.3s,baz=155,slow=14,SNR=87						
DAVOX				Sn	Sn	02 39 21.4	+2.3
	comp=Z,40nm,0.3s,baz=236,slow=22,SNR=6.7						
DAVOX	Davos/Dischmat	5.03	332	P	Pn	02 38 23.3	+2.2
	comp=Z,15nm,0.3s						
DAVOX				S	Sn	02 39 21.4	+2.3
	comp=Z,40nm,0.3s						
LMR	La Mourre	5.08	283	ePn	Pn	02 38 21.1	-0.6
	SNR=1.0						
LMR				eSn	Sn	02 39 17.2	-2.9
	comp=Z,84nm,0.5s						
LMR	La Mourre	5.08	283	eP	Pn	02 38 21.1	-0.6
LMR				e		02 39 17.2	
LMR	La Mourre	5.08	283	ePn	Pn	02 38 21.1	-0.6
LMR				eSn	Sn	02 39 17.2	-2.9
LMR	La Mourre	5.08	283	ePn	Pn	02 38 21.1	-0.6
	SNR=1.0						
LMR				eSn	Sn	02 39 17.2	-2.9
	comp=Z,42nm,0.5s						
WATA	Walderalm	5.10	347⇓	iP	Pn	02 38 23.3	+1.3
WATA	Walderalm	5.10	347⇓	iPn	Pn	02 38 23.3	+1.3
	SNR=31						
WATA	Walderalm	5.10	347⇓	iPn	Pn	02 38 23.3	+1.3
WATA	Walderalm	5.10	347	i P	Pn	02 38 23.3	+1.3
ARSA	Arzberg	5.11	17⇑	iPn	Pn	02 38 21.6	-0.6
	SNR=30						
ARSA	Arzberg	5.11	17⇑	iPn	Pn	02 38 21.6	-0.6
ARSA	Arzberg	5.11	17	ePn	Pn	02 38 21.5	-0.6
ARSA	Arzberg	5.11	17⇑	iPn	Pn	02 38 21.6	-0.6
IVAS	Ivanjica	5.16	74⇓	iPn	Pn	02 38 23.3	+0.5
IVAS				eSn	Sn	02 39 22.3	+0.1
IVAS	Ivanjica	5.16	74⇓	iPn	Pn	02 38 23.3	+0.5
IVAS				eSn	Sn	02 39 22.3	+0.1
DIVS	Divibare	5.18	68	P	Pn	02 38 22.9	-0.2
DIVS	Divibare	5.18	68⇑	iPn	Pn	02 38 22.9	-0.2
DIVS				eSn	Sn	02 39 21.5	-1.0
DIVS	Divibare	5.18	68	P	Pn	02 38 22.9	-0.2
DIVS				eSn	Sn	02 39 21.5	-1.0
MOTA	Moosalm	5.20	343⇑	iP	Pn	02 38 24.7	+1.3
MOTA	Moosalm	5.20	343⇑	iPn	Pn	02 38 24.7	+1.3
	SNR=60						
MOTA	Moosalm	5.20	343⇑	iPn	Pn	02 38 24.7	+1.3
MOTA	Moosalm	5.20	343	i P	Pn	02 38 24.7	+1.3
MBDF	Montbardon	5.29	298	eP	Pn	02 38 26.4	+1.7
	SNR=1.0						
MBDF	Montbardon	5.29	298	eP	Pn	02 38 26.4	+1.7
MBDF	Montbardon	5.29	298	eP	Pn	02 38 26.4	+1.7
MBDF	Montbardon	5.29	298	eP	Pn	02 38 26.4	+1.7
	SNR=1.0						
PHP	Peshkopia	5.36	95	i PN	Pn	02 38 25.3	-0.3
PHP				i SN	Sn	02 39 26.9	-0.2
PHP	Peshkopia	5.36	95	P	Pn	02 38 26.4	+0.8
PHP	Peshkopia	5.36	95	i Pn	Pn	02 38 25.3	-0.3
PHP	Peshkopia	5.36	95	P	Pn	02 38 26.4	+0.8
PHP				i Sn	Sn	02 39 26.9	-0.2
RJOB	Jochberg	5.36	356	ePn	Pn	02 38 26.1	+0.5
RETA	Reutte	5.41	341	i Pn	Pn	02 38 28.5	+2.3
	SNR=23						
RETA	Reutte	5.41	341	i Pn	Pn	02 38 28.5	+2.3
RETA	Reutte	5.41	341	Pn	Pn	02 38 28.5	+2.3
	SNR=23						
PKSM	Moragy	5.41	43	⇑P	Pn	02 38 26.0	-0.2
PKSM	Moragy	5.41	43⇑	iP	Pn	02 38 26.0	-0.2
PKSM	Moragy	5.41	43⇑	iPn	Pn	02 38 24.9	-1.3
PKSM	Moragy	5.41	43⇑	iPn	Pn	02 38 24.9	-1.3
PKSM	Moragy	5.41	43	P	Pn	02 38 26.0	-0.2
DAVA	Damuels	5.47	335⇑	iPn	Pn	02 38 29.4	+2.2
	SNR=80						
DAVA	Damuels	5.47	335⇑	iPn	Pn	02 38 29.4	+2.2
BNI	Bardonecchia	5.49	301	eP	Pn	02 38 29.0	+1.6
BNI				e		02 39 33.1	
BNI	Bardonecchia	5.49	301	ePn	Pn	02 38 28.9	+1.6
BNI				eSn	Sn	02 39 33.1	+2.7
BNI	Bardonecchia	5.49	301	eP	Pn	02 38 29.0	+1.6
TRUS	Trudelj	5.50	68⇑	iPn	Pn	02 38 26.2	-1.2
TRUS	Trudelj	5.50	68⇑	iPn	Pn	02 38 26.2	-1.2
MOA	Molln	5.51	7	i Pn	Pn	02 38 27.7	+0.2
	SNR=42						
MOA	Molln	5.51	7	i Pn	Pn	02 38 27.7	+0.2
MOA	Molln	5.51	7	i Pn	Pn	02 38 27.7	+0.2
KEK	Kerkira	5.59	116	P	Pn	02 38 29.2	+0.6
KEK				S	Sn	02 39 37.4	+4.8
KEK	Kerkira	5.59	116	eP	Pn	02 38 29.6	+1.0
KEK	Kerkira	5.59	116	P	Pn	02 38 29.2	+0.6
GRUS	Gruza	5.63	72⇑	iPn	Pn	02 38 29.0	-0.2
GRUS				eSn	Sn	02 39 31.2	-2.3
GRUS	Gruza	5.63	72⇑	iPn	Pn	02 38 29.0	-0.2
LPG	La Plagne	5.66	306	eP	Pn	02 38 32.1	+2.2
	SNR=1.0						
LPG	La Plagne	5.66	306	eP	Pn	02 38 32.1	+2.2
LPG	La Plagne	5.66	306	eP	Pn	02 38 32.1	+2.2
LPL	La Plagne	5.68	306	eP	Pn	02 38 31.9	+1.8
	SNR=1.0						
LPL				eSn	Sn	02 39 31.5	-3.7
	comp=Z,181nm,0.7s						
LPL	La Plagne	5.68	306	eP	Pn	02 38 31.9	+1.8
LPL				e		02 39 31.5	
LPL	La Plagne	5.68	306	eP	Pn	02 38 31.9	+1.8
LPL				eSn	Sn	02 39 31.5	-3.7
LPL	La Plagne	5.68	306	eP	Pn	02 38 31.9	+1.8
	SNR=1.0						
SELS	Selova	5.81	79⇓	iPn	Pn	02 38 31.1	-0.6
SELS	Selova	5.81	79⇓	iPn	Pn	02 38 31.1	-0.6
CONA	Conrad Observa	5.83	17⇑	iPn	Pn	02 38 31.7	-0.3
	SNR=47						
CONA	Conrad Observa	5.83	17⇑	iPn	Pn	02 38 31.7	-0.3
CONA	Conrad Observa	5.83	17⇑	iPn	Pn	02 38 31.7	-0.3
SENIN	Lac Senin/Sane	5.86	315	ePn	Pn	02 38 33.5	+1.0
SENIN				eSn	Sn	02 39 40.7	+1.2
SENIN	Lac Senin/Sane	5.86	315	ePn	Pn	02 38 33.5	+1.0
SENIN				eSn	Sn	02 39 40.7	+1.2
SMRF	Simiane la Rot	5.87	288	eP	Pn	02 38 33.5	+0.9
	SNR=1.0						
SMRF	Simiane la Rot	5.87	288	eP	Pn	02 38 33.5	+0.9
SMRF	Simiane la Rot	5.87	288	eP	Pn	02 38 33.5	+0.9
	SNR=1.0						
ORIF	Oris-en-Rattie	5.95	298	eP	Pn	02 38 36.3	+2.6
	SNR=1.0						
ORIF	Oris-en-Rattie	5.95	298	eP	Pn	02 38 36.3	+2.6
ORIF	Oris-en-Rattie	5.95	298	eP	Pn	02 38 36.3	+2.6
FUR	Furstenfeldbru	5.95	347	eP	Pn	02 38 34.2	+0.5
FUR	Furstenfeldbru	5.95	347	ePn	Pn	02 38 34.2	+0.5
FUR	Furstenfeldbru	5.95	347	eP	Pn	02 38 34.2	+0.5
IGT	Igoumenitsa	6.04	116	P	Pn	02 38 35.8	+1.0
IGT				S	Sn	02 39 47.4	+3.8
IGT	Igoumenitsa	6.04	116	P	Pn	02 38 35.8	+1.0
SKO	Skopje	6.06	91	P	Pn	02 38 36.6	+1.5
SKO	Skopje	6.06	91	i Pn	Pn	02 38 36.2	+1.1
SKO				eSg	Sn	02 39 45.1	+0.9
SKO	Skopje	6.06	91	P	Pn	02 38 36.6	+1.5
SVIS	Svilajnac	6.07	69⇑	iPn	Pn	02 38 34.5	-0.7
NEST	Nestorio	6.15	106	P	Pn	02 38 38.0	+1.6
NEST				S	Sn	02 39 49.2	+2.7
NEST	Nestorio	6.15	106	P	Pn	02 38 38.0	+1.6
NEST				S	Sn	02 39 49.2	+2.7
BIA	Bitola	6.16	100	P	Pn	02 38 36.5	0.0
BIA	Bitola	6.16	100	i Pn	Pn	02 38 36.3	-0.2
BIA				eSg	Sn	02 39 43.9	-2.8
BIA	Bitola	6.16	100	P	Pn	02 38 36.5	0.0
FNA	Florina	6.26	102	P	Pn	02 38 38.4	+0.5
FNA				S	Sn	02 39 53.6	+4.4
FNA	Florina	6.26	102	eP	Pn	02 38 38.4	+0.5
FNA	Florina	6.26	102	P	Pn	02 38 38.4	+0.5
BARS	Barje	6.30	83⇑	iPn	Pn	02 38 38.5	+0.1
BARS				eSn	Sn	02 39 48.7	-1.3
BARS	Barje	6.30	83⇑	iPn	Pn	02 38 38.5	+0.1
BARS				eSn	Sn	02 39 48.7	-1.3
JAN	Janina	6.32	113	P	Pn	02 38 40.2	+1.4
JAN	Janina	6.32	113	eP	Pn	02 38 39.7	+0.9
JAN	Janina	6.32	113	P	Pn	02 38 40.2	+1.4
GEC2	GERESS Array S	6.47	2	eP	Pn	02 38 39.5	-1.3
GEC2	GERESS Array S	6.47	2	ePn	Pn	02 38 39.5	-1.3
GEC2	GERESS Array S	6.47	2	eP	Pn	02 38 39.5	-1.3
GERES	GERESS Array B	6.47	2	Pn	Pn	02 38 40.0	-0.8
GERES				Sn	Sn	02 39 53.8	-0.5
GERES	GERESS Array B	6.47	2	Pn	Pn	02 38 40.0	-0.8
	comp=Z,4.7nm,0.3s,baz=179,slow=13,SNR=43						
GERES				Sn	Sn	02 39 53.8	-0.5
	comp=Z,26nm,0.3s,baz=177,slow=25,SNR=12						
GERES	GERESS Array B	6.47	2	P	Pn	02 38 40.0	-0.8
	comp=Z,5.0nm,0.3s						
GERES				S	Sn	02 39 53.8	-0.5
	comp=Z,26nm,0.3s						
BOLS	Boljevac	6.49	74	ePn	Pn	02 38 39.4	-1.6
BOLS				eSn	Sn	02 39 51.2	-3.6
BOLS	Boljevac	6.49	74	ePn	Pn	02 38 39.4	-1.6
BBS	Basel-Blauen	6.53	323	P	Pn	02 38 39.1	-2.5
BBS	Basel-Blauen	6.53	323	P	Pn	02 38 39.1	-2.5
BBS	Basel-Blauen	6.53	323	P	Pn	02 38 39.1	-2.5
SPAK	Spaichingen-Ko	6.54	332	P	Pn	02 38 41.7	-0.1
SPAK	Spaichingen-Ko	6.54	332	P	Pn	02 38 41.7	-0.1
FELD	Feldberg im Sc	6.65	327	P	Pn	02 38 42.3	-1.0
FELD	Feldberg im Sc	6.65	327	P	Pn	02 38 42.3	-1.0
LKD2	Lefkada island	6.65	120	P	Pn	02 38 44.9	+1.7
LKD2	Lefkada island	6.65	120	eP	Pn	02 38 44.7	+1.5
LKD2	Lefkada island	6.65	120	P	Pn	02 38 44.9	+1.7
CABF	La Chapelle	6.67	312	ePn	Pn	02 38 44.1	+0.6
	SNR=1.0						
CABF				eSn	Sn	02 39 57.7	-1.6
	comp=Z,171nm,0.8s,SNR=1.0						
CABF	La Chapelle	6.67	312	eP	Pn	02 38 44.1	+0.6
CABF				e		02 39 57.7	
CABF	La Chapelle	6.67	312	ePn	Pn	02 38 44.1	+0.6
CABF				eSn	Sn	02 39 57.7	-1.6
CABF	La Chapelle	6.67	312	ePn	Pn	02 38 44.1	+0.6
	SNR=1.0						
CABF				eSn	Sn	02 39 57.7	-1.6
	comp=Z,86nm,0.8s,SNR=1.0						
KZN	Kozani	6.70	105	P	Pn	02 38 45.0	+1.0
KZN	Kozani	6.70	105	eP	Pn	02 38 45.0	+1.0
KZN	Kozani	6.70	105	P	Pn	02 38 45.0	+1.0
VIVF	Saint-Julien-l	6.73	294	ePn	Pn	02 38 45.8	+1.4
	SNR=1.0						
VIVF	Saint-Julien-l	6.73	294	eP	Pn	02 38 45.8	+1.4
VIVF	Saint-Julien-l	6.73	294	ePn	Pn	02 38 45.8	+1.4
VIVF	Saint-Julien-l	6.73	294	ePn	Pn	02 38 45.8	+1.4
	SNR=1.0						
KHC	Kasperske Hory	6.75	2	eP	Pn	02 38 43.4	-1.2
KHC				e		02 39 58.4	
KHC	Kasperske Hory	6.75	2	ePn	Pn	02 38 43.4	-1.2
KHC				eSn	Sn	02 39 58.4	-2.8
KHC	Kasperske Hory	6.75	2	ePN	Pn	02 38 43.8	-0.8
KHC				ex	x	02 38 50.0	
KHC				eSN	Sn	02 39 58.1	-3.1
KHC				AMS	AMS	02 41 40.0	
	comp=Z,5µm,10.9s						
KHC	Kasperske Hory	6.75	2	eP	Pn	02 38 43.4	-1.2
WET	Wettzell	6.77	358	eP	Pn	02 38 44.1	-0.7
WET	Wettzell	6.77	358	ePn	Pn	02 38 44.1	-0.7
WET	Wettzell	6.77	358	eP	Pn	02 38 44.1	-0.7
LOMF	Lomont	6.77	319	P	Pn	02 38 45.0	+0.1
LOMF	Lomont	6.77	319	P	Pn	02 38 45.0	+0.1
LOMF	Lomont	6.77	319	P	Pn	02 38 45.0	+0.1
LOMF	Lomont	6.77	319	P	Pn	02 38 45.0	+0.1
SMOL	Smolenice	6.78	24	eP	Pn	02 38 44.4	-0.6
SMOL				e		02 39 53.1	
SMOL	Smolenice	6.78	24	ePN	Pn	02 38 44.4	-0.6
SMOL				eSN	Sn	02 39 53.1	-8.8
SMOL	Smolenice	6.78	24	eP	Pn	02 38 44.4	-0.6
BZS	Buzias	6.81	59	⇑P	Pn	02 38 45.9	+0.5
BZS	Buzias	6.81	59⇑	iP	Pn	02 38 45.9	+0.5
BZS	Buzias	6.81	59	ePn	Pn	02 38 45.7	+0.3
BZS	Buzias	6.81	59	ePn	Pn	02 38 45.7	+0.3
BFO	Black Forest	6.90	331	eP	Pn	02 38 46.0	-0.6
BFO				e		02 40 04.2	
BFO	Black Forest	6.90	331	ePn	Pn	02 38 45.7	-0.9
BFO	Black Forest	6.90	331	ePn	Pn	02 38 46.0	-0.6
BFO				eSn	Sn	02 40 04.2	-0.7
BFO	Black Forest	6.90	331	eP	Pn	02 38 46.0	-0.6
BFO				eS	Sn	02 40 04.2	-0.7
ZAPS	Zavoj	6.92	79⇑	iPn	Pn	02 38 47.6	+0.7
ZAPS				eSn	Sn	02 40 04.2	-1.1
ZAPS	Zavoj	6.92	79⇑	iPn	Pn	02 38 47.6	+0.7
ZAPS				eSn	Sn	02 40 04.2	-1.1
GRG	Griva	6.96	99	eP	Pn	02 38 47.4	-0.1
SSB	Saint Sauveur	6.96	298	eP	Pn	02 38 48.8	+1.2
SSB				pmax	pmax		
	comp=Z,110nm,0.9s						
SSB	Saint Sauveur	6.96	298	ePn	Pn	02 38 48.8	+1.2
	comp=Z,110nm,0.9s						
SSB	Saint Sauveur	6.96	298	P	Pn	02 38 49.2	+1.6
SSB	Saint Sauveur	6.96	298	eP	Pn	02 38 48.8	+1.2
	comp=Z,110nm,0.9s						
VLS	Valsamata	6.98	125	P	Pn	02 38 49.2	+1.5
VLS	Valsamata	6.98	125	P	Pn	02 38 49.2	+1.5
MOF	Molkenrain	6.99	324	P	Pn	02 38 47.1	-0.9
MOF	Molkenrain	6.99	324	P	Pn	02 38 47.1	-0.9
MOF	Molkenrain	6.99	324	P	Pn	02 38 47.1	-0.9
MOF	Molkenrain	6.99	324	P	Pn	02 38 47.1	-0.9
VAY	Valandovo	7.00	96	P	Pn	02 38 47.2	-0.8
VAY	Valandovo	7.00	96	ePn	Pn	02 38 44.9	-3.1
VAY				eSg	Sn	02 40 05.0	-2.4
VAY	Valandovo	7.00	96	P	Pn	02 38 47.2	-0.8
STU	Stuttgart	7.01	337	eP	Pn	02 38 49.1	+1.0
STU	Stuttgart	7.01	337	ePn	Pn	02 38 49.1	+1.0
STU	Stuttgart	7.01	337	ePn	Pn	02 38 47.4	-0.7
STU				eSn	Sn	02 40 03.2	-4.2
STU	Stuttgart	7.01	337	ePn	Pn	02 38 47.4	-0.7
STU	Stuttgart	7.01	337	eP	Pn	02 38 49.1	+1.0
LIBD	Limburg	7.03	327	P	Pn	02 38 47.9	-0.5
LIBD	Limburg	7.03	327	P	Pn	02 38 47.9	-0.5
LIBD	Limburg	7.03	327	P	Pn	02 38 47.9	-0.5
TREC	Trest	7.08	12	ePN	Pn	02 38 48.3	-0.8
TREC				eSN	Sn	02 40 05.1	-4.1
TREC				AMS	AMS	02 41 50.0	
	comp=Z,6µm,12.1s						
HINF	Hinteralfeld	7.09	322	ePn	Pn	02 38 48.5	-0.8
	SNR=1.0						
HINF				eSn	Sn	02 40 05.7	-3.9
	comp=Z,1µm,1.3s						
HINF	Hinteralfeld	7.09	322	eP	Pn	02 38 48.5	-0.8
HINF				e		02 40 05.7	
HINF	Hinteralfeld	7.09	322	ePn	Pn	02 38 48.5	-0.8
HINF				eSn	Sn	02 40 05.7	-3.9
HINF	Hinteralfeld	7.09	322	ePn	Pn	02 38 48.5	-0.8
	SNR=1.0						
LASF	Ste Croix	7.10	287	ePn	Pn	02 38 49.3	-0.2
	SNR=1.0						
LASF	Ste Croix	7.10	287	ePn	Pn	02 38 49.3	-0.2
LASF	Ste Croix	7.10	287	ePn	Pn	02 38 49.3	-0.2
	SNR=1.0						
KFL	Anninata	7.14	124	P	Pn	02 38 51.6	+1.6
KFL	Anninata	7.14	124	P	Pn	02 38 51.6	+1.6
THL	Klokotos Trika	7.17	110	P	Pn	02 38 50.9	+0.6
THL	Klokotos Trika	7.17	110	eP	Pn	02 38 51.1	+0.8
THL	Klokotos Trika	7.17	110	P	Pn	02 38 50.9	+0.6
PSZ	Piszkesteto	7.23	38	⇑P	Pn	02 38 51.3	+0.1
PSZ	Piszkesteto	7.23	38	ePn	Pn	02 38 49.9	-1.3
PSZ				eSn	Sn	02 40 11.1	-2.0
PSZ	Piszkesteto	7.23	38⇑	iP	Pn	02 38 51.3	+0.1
PSZ	Piszkesteto	7.23	38	ePn	Pn	02 38 49.9	-1.3
PSZ	Piszkesteto	7.23	38	P	Pn	02 38 51.3	+0.1
VYHS	Vyhne	7.24	31	eP	Pn	02 38 50.8	-0.5
VYHS				e		02 40 07.8	
VYHS				MLR	MLR		
	comp=Z,600nm,2.6s						
VYHS	Vyhne	7.24	31	ePN	Pn	02 38 50.8	-0.5
VYHS				eSN	Sn	02 40 07.8	-5.4
VYHS				e		02 41 10.9	
VYHS	Vyhne	7.24	31	eP	Pn	02 38 50.8	-0.5
ECH	Echery	7.26	325	eP	Pn	02 38 50.9	-0.7
ECH				e		02 40 11.5	
ECH				pmax	pmax		
	comp=Z,112nm,0.8s						
ECH	Echery	7.26	325	ePn	Pn	02 38 50.9	-0.7
	comp=Z,112nm,0.8s						
ECH				eSn	Sn	02 40 11.5	-2.3
ECH	Echery	7.26	325	P	Pn	02 38 50.8	-0.8
ECH	Echery	7.26	325	eP	Pn	02 38 50.9	-0.8
	comp=Z,112nm,0.8s						
KNT	Kendrikon	7.28	96	P	Pn	02 38 51.4	-0.4

KNT	Kendrikon	7.28	96	P	Pn	02 38 51.4	-0.4
LIT	Litokhoron	7.29	105	P	Pn	02 38 51.7	-0.3
LIT	Litokhoron	7.29	105	eP	Pn	02 38 51.8	-0.3
LIT	Litokhoron	7.29	105	P	Pn	02 38 51.7	-0.3
VRAC	Vranov	7.29	17	Pn	Pn	02 38 51.4	-0.7
VRAC				Sn	Sn	02 40 12.7	-1.8
VRAC	Vranov	7.29	17⇑	iP	Pn	02 38 51.9	-0.1
VRAC	Vranov	7.29	17	Pn	Pn	02 38 51.4	-0.7
	comp=Z,2.4nm,0.3s,baz=192,slow=13,SNR=13						
VRAC				Sn	Sn	02 40 12.7	-1.8
	comp=Z,5.2nm,0.3s,baz=124,slow=13,SNR=3.7						
VRAC				LR	LR	02 41 29.0	
	comp=Z,2µm,20.4s,baz=204,slow=37						
VRAC	Vranov	7.29	17	P	Pn	02 38 51.4	-0.7
	comp=Z,2.0nm,0.3s						
VRAC				Sn	Sn	02 40 12.7	-1.8
KEST	Kesra	7.32	206	ePn	Pn	02 38 56.5	+3.9
KEST				eSn	Sn	02 40 13.0	-2.4
KEST	Kesra	7.32	206	Pn	Pn	02 38 55.5	+2.9
	comp=Z,3.7nm,0.3s,baz=350,slow=12,SNR=98						
KEST				Sn	Sn	02 40 17.0	+1.5
	baz=336,slow=15,SNR=1.1						
KEST				LR	LR	02 41 55.0	
	comp=Z,2µm,19.4s,baz=122,slow=40						
VTS	Vitosha	7.32	85	P	Pn	02 38 52.9	+0.3
VTS	Vitosha	7.32	85	⇑P	Pn	02 38 53.2	+0.6
VTS	Vitosha	7.32	85⇑	iP	Pn	02 38 53.2	+0.6
VTS	Vitosha	7.32	85⇑	iPn	Pn	02 38 52.8	+0.2
VTS	Vitosha	7.32	85⇑	iPn	Pn	02 38 52.8	+0.2
EVR	Evrytania	7.33	115	P	Pn	02 38 54.6	+1.9
EVR	Evrytania	7.33	115	eP	Pn	02 38 54.7	+2.0
EVR	Evrytania	7.33	115	P	Pn	02 38 54.6	+1.9
CDF	Champ du Feu	7.37	327	ePn	Pn	02 38 52.4	-0.7
	SNR=1.0						
CDF				eSn	Sn	02 40 12.6	-3.9
	comp=Z,400nm,0.8s						
CDF	Champ du Feu	7.37	327	eP	Pn	02 38 52.4	-0.7
CDF				e		02 40 12.6	
CDF	Champ du Feu	7.37	327	ePn	Pn	02 38 52.4	-0.7
CDF				eSn	Sn	02 40 12.6	-3.9
CDF	Champ du Feu	7.37	327	ePn	Pn	02 38 52.4	-0.7
	SNR=1.0						
ROTZ	Rotzenmuhle	7.42	354	ePn	Pn	02 38 53.1	-0.7
GRA1	Grafenberg Arr	7.45	350	eP	Pn	02 38 53.1	-1.1
GRF	Grafenberg Arr	7.45	350	eP	Pn	02 38 53.1	-1.1
GRF	Grafenberg Arr	7.45	350	ePn	Pn	02 38 53.1	-1.1
THE	Thessaloniki	7.46	100	eP	Pn	02 38 54.0	-0.3
HAU	Haudompre	7.46	321	ePn	Pn	02 38 53.5	-0.9
	SNR=1.0						
HAU				eSn	Sn	02 40 13.7	-5.0
	comp=Z,230nm,0.5s,SNR=1.0						
HAU	Haudompre	7.46	321	eP	Pn	02 38 53.5	-0.9
HAU				e		02 40 13.7	
HAU	Haudompre	7.46	321	ePn	Pn	02 38 53.5	-0.9
HAU				eSn	Sn	02 40 13.7	-5.0
HAU	Haudompre	7.46	321	ePn	Pn	02 38 53.5	-0.9
	SNR=1.0						
MAKR	Makrakomi, Fth	7.50	114	P	Pn	02 38 57.7	+2.7
HORT	Hortiatis	7.57	100	eP	Pn	02 38 55.4	-0.5
RLS	Riolos of Patr	7.59	122	P	Pn	02 38 58.0	+1.8
RLS	Riolos of Patr	7.59	122	eP	Pn	02 38 58.0	+1.8
RLS	Riolos of Patr	7.59	122	P	Pn	02 38 58.0	+1.8
AGG	Agios Georgios	7.63	113	P	Pn	02 38 58.9	+2.1
AGG	Agios Georgios	7.63	113	eP	Pn	02 38 58.9	+2.1
AGG	Agios Georgios	7.63	113	P	Pn	02 38 58.9	+2.1
LANF	Langenberg	7.63	332	P	Pn	02 38 56.2	-0.5
LANF	Langenberg	7.63	332	P	Pn	02 38 56.2	-0.5
LANF	Langenberg	7.63	332	P	Pn	02 38 56.2	-0.5
LANF	Langenberg	7.63	332	P	Pn	02 38 56.2	-0.5
PRU	Pruhonice	7.65	6	ePN	Pn	02 38 55.3	-1.6
PRU				eSN	Sn	02 40 19.8	-3.5
PRU				AMS	AMS	02 42 10.0	
	comp=Z,3µm,10.6s						
EFP	Efpalio	7.66	118	P	Pn	02 38 59.0	+1.9
EFP	Efpalio	7.66	118	eP	Pn	02 38 59.2	+2.1
EFP	Efpalio	7.66	118	P	Pn	02 38 59.0	+1.9
UPR	University Cam	7.66	120	eP	Pn	02 39 03.9	+6.8
SOH	Sokhos	7.69	98	eP	Pn	02 38 57.3	-0.3
SJAF	Saint Jean de	7.71	274	P	Pn	02 38 56.3	-1.5
SJAF	Saint Jean de	7.71	274	P	Pn	02 38 56.3	-1.5
SJAF	Saint Jean de	7.71	274	P	Pn	02 38 56.3	-1.5
PRA	Prague	7.73	5	PN	Pn	02 38 57.0	-0.9
DEV	Deva	7.74	60⇓	iP	Pn	02 38 59.8	+1.7
THEF	They Montfort	7.79	321	P	Pn	02 38 58.3	-0.5
THEF	They Montfort	7.79	321	P	Pn	02 38 58.3	-0.5
THEF	They Montfort	7.79	321	P	Pn	02 38 58.3	-0.5
THEF	They Montfort	7.79	321	P	Pn	02 38 58.3	-0.5
SRS	Serrai	7.80	96	P	Pn	02 38 58.7	-0.3
SRS	Serrai	7.80	96	P	Pn	02 38 58.7	-0.3
TRIZ	Trizonia	7.80	118	P	Pn	02 39 02.1	+3.1
LBL	Lubilhac	7.81	295	P	Pn	02 39 01.4	+2.2
LBL	Lubilhac	7.81	295	P	Pn	02 39 01.4	+2.2
LBL	Lubilhac	7.81	295	P	Pn	02 39 01.4	+2.2
LAKA	Lakka	7.81	119	eP	Pn	02 39 01.3	+2.1
KALE	Kalithea	7.83	118	eP	Pn	02 39 02.0	+2.5
TOD	Tromm	7.87	338	P	Pn	02 38 59.4	-0.6
TOD	Tromm	7.87	338	P	Pn	02 38 59.4	-0.6
TOD	Tromm	7.87	338	P	Pn	02 38 59.4	-0.6
NKC	Novy Kostel	7.87	356	ePN	Pn	02 38 58.9	-1.1
NKC				eSN	Sn	02 40 25.6	-3.2
NKC				AMS	AMS	02 42 50.0	
	comp=Z,5µm,9.4s						
PLG	Polygyros	7.89	101	P	Pn	02 38 59.3	-0.9
PLG	Polygyros	7.89	101	eP	Pn	02 39 04.1	+3.9
PLG	Polygyros	7.89	101	P	Pn	02 38 59.3	-0.9
FILF	Fillols	7.95	275	P	Pn	02 39 01.3	+0.2
FILF	Fillols	7.95	275	P	Pn	02 39 01.3	+0.2
FILF	Fillols	7.95	275	P	Pn	02 39 01.3	+0.2
NVR	Nevrokopi	7.95	94	P	Pn	02 39 01.4	+0.3
NVR	Nevrokopi	7.95	94	eP	Pn	02 39 01.2	+0.1
NVR	Nevrokopi	7.95	94	P	Pn	02 39 01.4	+0.3
LRDF	Laroque-de-Fa	7.96	278	P	Pn	02 38 59.6	-1.5
LRDF	Laroque-de-Fa	7.96	278	P	Pn	02 38 59.6	-1.5
LRDF	Laroque-de-Fa	7.96	278	P	Pn	02 38 59.6	-1.5
MORC	Moravsky Berou	7.96	20	⇓P	Pn	02 39 01.8	+0.6
MORC	Moravsky Berou	7.96	20	ePn	Pn	02 38 60.0	-1.2
MORC				eSn	Sn	02 40 25.7	-5.2
MORC	Moravsky Berou	7.96	20⇓	iP	Pn	02 39 01.8	+0.6
MORC	Moravsky Berou	7.96	20	ePn	Pn	02 39 00.0	-1.2
MORC	Moravsky Berou	7.96	20	P	Pn	02 39 01.8	+0.6
SMF	Signal de Mont	7.99	305	ePn	Pn	02 39 02.3	+0.7
	SNR=1.0						
SMF				eSn	Sn	02 40 25.5	-6.2
	comp=Z,86nm,0.6s						
SMF	Signal de Mont	7.99	305	eP	Pn	02 39 02.3	+0.7
SMF				e		02 40 25.5	
SMF	Signal de Mont	7.99	305	ePn	Pn	02 39 02.3	+0.7
SMF				eSn	Sn	02 40 25.5	-6.2
SMF	Signal de Mont	7.99	305	ePn	Pn	02 39 02.3	+0.7
	SNR=1.0						
TANN	Tannenbergstha	8.05	356	ePn	Pn	02 39 02.5	0.0
AMT	Artemida-Makis	8.07	124	eP	Pn	02 39 06.8	+4.1
PYM	Petit Puy Mans	8.14	298	P	Pn	02 39 05.1	+1.4
PYM	Petit Puy Mans	8.14	298	P	Pn	02 39 05.1	+1.4
PYM	Petit Puy Mans	8.14	298	P	Pn	02 39 05.1	+1.4
PYM	Petit Puy Mans	8.14	298	P	Pn	02 39 05.1	+1.4
PAGF	Fort de Pagny	8.15	322	ePn	Pn	02 39 03.2	-0.5
PAGF	Fort de Pagny	8.15	322	ePn	Pn	02 39 03.2	-0.5
PAGF	Fort de Pagny	8.15	322	ePn	Pn	02 39 03.2	-0.5
AGO	Saint Agoulin	8.17	300	P	Pn	02 39 05.6	+1.5
AGO	Saint Agoulin	8.17	300	P	Pn	02 39 05.6	+1.5
AGO	Saint Agoulin	8.17	300	P	Pn	02 39 05.6	+1.5
OKC	Ostrava-Krasne	8.18	23	ePN	Pn	02 39 02.7	-1.4
OKC				eSN	Sn	02 40 30.9	-5.3
OKC				AMS	AMS	02 43 20.0	
	comp=Z,5µm,8.2s						
PVCC	Panska Ves	8.19	6	ePN	Pn	02 39 03.2	-1.1
PVCC				eSN	Sn	02 40 32.9	-3.7
PVCC				AMS	AMS	02 42 20.0	
	comp=Z,4µm,14.7s						
MTLF	Montolieu	8.20	280	ePn	Pn	02 39 04.5	0.0
	SNR=1.0						
MTLF				eSn	Sn	02 40 35.8	-1.1
	comp=Z,23nm,0.6s,SNR=1.0						
MTLF	Montolieu	8.20	280	eP	Pn	02 39 04.5	0.0
MTLF				e		02 40 35.8	
MTLF	Montolieu	8.20	280	ePn	Pn	02 39 04.5	0.0
MTLF				eSn	Sn	02 40 35.8	-1.1
MTLF	Montolieu	8.20	280	ePn	Pn	02 39 04.5	0.0
	SNR=1.0						
MTLF				eSn	Sn	02 40 35.8	-1.1
	comp=Z,12nm,0.6s,SNR=1.0						

GUR	Goura	8.22	120	P	Pn	02 39 07.4	+2.5
GUR	Goura	8.22	120	eP	Pn	02 39 06.9	+2.0
GUR	Goura	8.22	120	P	Pn	02 39 07.4	+2.5
DPC	Dobruska-Polom	8.23	14	eP	Pn	02 39 03.3	-1.7
DPC	Dobruska-Polom	8.23	14	ePn	Pn	02 39 03.3	-1.7
DPC	Dobruska-Polom	8.23	14	ePN	Pn	02 39 03.7	-1.3
DPC				eSN	Sn	02 40 32.2	-5.5
DPC				AMS	AMS	02 42 30.0	
	comp=Z,5µm,11.6s						
DPC	Dobruska-Polom	8.23	14	eP	Pn	02 39 03.3	-1.7
LKR	Lokris	8.27	114	eP	Pn	02 39 08.3	+2.8
CARF	Carcanieres	8.28	276	P	Pn	02 39 04.1	-1.5
CARF	Carcanieres	8.28	276	P	Pn	02 39 04.1	-1.5
CARF	Carcanieres	8.28	276	P	Pn	02 39 04.1	-1.5
LOR	Lormes	8.30	309	ePn	Pn	02 39 05.1	-0.7
	baz=125,SNR=1.0						
LOR				eSn	Sn	02 40 36.3	-3.0
	comp=Z,37nm,0.4s,SNR=1.0						
LOR	Lormes	8.30	309	ePn	Pn	02 39 05.1	-0.7
LOR				eSn	Sn	02 40 36.3	-3.0
LOR	Lormes	8.30	309	ePn	Pn	02 39 05.1	-0.7
	baz=125,SNR=1.0						
FRNF	Fournols	8.32	295	P	Pn	02 39 08.1	+2.0
FRNF	Fournols	8.32	295	P	Pn	02 39 08.1	+2.0
UPC	Upice	8.34	12	PN	Pn	02 39 05.5	-0.8
UPC				SN	Sn	02 40 36.6	-3.5
MOX	Moxa	8.34	353	eP	Pn	02 39 05.3	-1.1
MOX	Moxa	8.34	353	ePn	Pn	02 39 05.3	-1.1
MOX	Moxa	8.34	353	eP	Pn	02 39 05.3	-1.1
AVF	Avril sur Loir	8.36	305	ePn	Pn	02 39 07.5	+0.9
	SNR=1.0						
AVF	Avril sur Loir	8.36	305	eP	Pn	02 39 07.5	+0.9
AVF	Avril sur Loir	8.36	305	ePn	Pn	02 39 07.5	+0.9
AVF	Avril sur Loir	8.36	305	ePn	Pn	02 39 07.5	+0.9
	SNR=1.0						
SSF	Saint Saulge	8.39	307	ePn	Pn	02 39 06.8	-0.3
	SNR=1.0						
SSF	Saint Saulge	8.39	307	eP	Pn	02 39 06.8	-0.3
SSF	Saint Saulge	8.39	307	ePn	Pn	02 39 06.8	-0.3
SSF	Saint Saulge	8.39	307	ePn	Pn	02 39 06.8	-0.3
	SNR=1.0						
RAC	Raciborz	8.41	22	eP	Pn	02 39 10.3	+3.0
BRG	Berggiesshubel	8.50	3	PN	Pn	02 39 07.0	-1.6
	comp=Z,8.7nm,0.6s						
BRG				i		02 39 19.3	
BRG				i		02 40 38.0	
BRG				i		02 41 44.1	
	comp=Z,1µm,2.2s						
BRG							
	comp=N,3µm,14.9s						
BRG							
	comp=E,8µm,15.7s						
BRG							
	comp=Z,4µm,14.1s						
BRG	Berggiesshubel	8.50	3	P	Pn	02 39 07.0	-1.6
BRG				i		02 40 38.0	
BRG				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BRG				MLR	MLR		
	comp=N,3µm,14.9s						
BRG				MLR	MLR		
	comp=E,8µm,15.7s						
BRG				MLR	MLR		
	comp=Z,4µm,14.1s						
BRG	Berggiesshubel	8.50	3	ePn	Pn	02 39 08.3	-0.3
BRG	Berggiesshubel	8.50	3	P	Pn	02 39 07.0	-1.6
	comp=Z,9.0nm,0.6s						
RUP	Ruppelstein	8.51	331	P	Pn	02 39 09.0	+0.3
RUP	Ruppelstein	8.51	331	P	Pn	02 39 09.0	+0.3
RUP	Ruppelstein	8.51	331	P	Pn	02 39 09.0	+0.3
PYL	PYLOS	8.51	127	P	Pn	02 39 10.2	+1.5
PYL	PYLOS	8.51	127	eP	Pn	02 39 09.6	+0.9
PYL	PYLOS	8.51	127	P	Pn	02 39 10.2	+1.5
TNS	Taunus Mts	8.53	338	eP	Pn	02 39 09.4	+0.4
TNS	Taunus Mts	8.53	338	ePn	Pn	02 39 09.4	+0.4
TNS	Taunus Mts	8.53	338	eP	Pn	02 39 09.4	+0.4
CAF	Calviac	8.54	291	eP	Pn	02 39 09.8	+0.7
	SNR=1.0						
CAF	Calviac	8.54	291	eP	Pn	02 39 09.8	+0.7
CAF	Calviac	8.54	291	eP	Pn	02 39 09.8	+0.7
CAF	Calviac	8.54	291	eP	Pn	02 39 09.8	+0.7
	SNR=1.0						
BGF	Bois d'Agland	8.56	303	ePn	Pn	02 39 09.8	+0.4
	SNR=1.0						
BGF	Bois d'Agland	8.56	303	eP	Pn	02 39 09.8	+0.4
BGF	Bois d'Agland	8.56	303	ePn	Pn	02 39 09.8	+0.4
BGF	Bois d'Agland	8.56	303	ePn	Pn	02 39 09.8	+0.4
	SNR=1.0						
NIE	Niedzica	8.56	32	eP	Pn	02 39 09.6	+0.2
NIE				e		02 40 45.1	
NIE	Niedzica	8.56	32	eP	Pn	02 39 09.6	+0.2
NIE				eSn	Sn	02 40 45.1	-0.6
NIE	Niedzica	8.56	32	eP	Pn	02 39 09.6	+0.2
NIE				eS	Sn	02 40 45.1	-0.6
LTK	Loutraki	8.58	117	eP	Pn	02 39 12.2	+2.5
VLX	Vlachokerasia	8.59	123	eP	Pn	02 39 13.0	+3.1
CRVS	Cervenica-Dubn	8.66	38	eP	Pn	02 39 11.0	+0.2
CRVS				MLR	MLR		
	comp=Z,2µm,4.5s						
CRVS	Cervenica-Dubn	8.66	38	ePN	Pn	02 39 11.0	+0.2
CRVS				ePG	Pg	02 39 55.6	+3.9
CRVS				e		02 41 46.0	
CRVS	Cervenica-Dubn	8.66	38	eP	Pn	02 39 11.0	+0.2
	comp=Z,2µm,4.5s						
TRPA	Tarpa	8.68	45⇓	iP	Pn	02 39 10.9	-0.1
KSP	Ksiaz	8.71	13	eP	Pn	02 39 10.1	-1.3
KSP				e		02 40 44.9	
KSP	Ksiaz	8.71	13	eP	Pn	02 39 10.4	-1.0
KSP				eS	Sg	02 41 24.3	-21
KSP				LMZ	LR	02 42 54.5	
KSP	Ksiaz	8.71	13	eP	Pn	02 39 10.1	-1.3
ARR	Arges	8.71	66⇓	iP	Pn	02 39 12.9	+1.4
UBBA	Unterbreizbach	8.74	346	ePn	Pn	02 39 11.4	-0.3
WLF	Walferdange	8.81	328	PN	Pn	02 39 14.0	+1.2
WLF				SN	Sn	02 40 48.9	-3.0
	comp=N,43nm,0.0s						
WLF	Walferdange	8.81	328	eP	Pn	02 39 11.6	-1.3
WLF				e		02 40 48.3	
WLF				pmax	pmax		
	comp=Z,68nm,0.8s						
WLF	Walferdange	8.81	328	ePn	Pn	02 39 14.8	+1.9
WLF	Walferdange	8.81	328	ePn	Pn	02 39 11.6	-1.3
	comp=Z,68nm,0.8s						
WLF				eSn	Sn	02 40 48.3	-3.6
WLF	Walferdange	8.81	328	eP	Pn	02 39 11.6	-1.3
	comp=Z,68nm,0.8s						
TCF	Toulx Ste Croi	8.86	300	ePn	Pn	02 39 14.8	+1.3
	SNR=1.0						
TCF				eSn	Sn	02 40 46.2	-6.8
	comp=Z,22nm,0.6s,SNR=1.0						
TCF	Toulx Ste Croi	8.86	300	eP	Pn	02 39 14.8	+1.3
TCF				e		02 40 46.2	
TCF	Toulx Ste Croi	8.86	300	ePn	Pn	02 39 14.8	+1.3
TCF				eSn	Sn	02 40 46.2	-6.8
TCF	Toulx Ste Croi	8.86	300	ePn	Pn	02 39 14.8	+1.3
	SNR=1.0						
UZH	Uzhgorod	8.87	42	eP	Pn	02 39 13.4	-0.3
UZH				eS	Sn	02 40 52.6	-0.8
UZH				MLR	MLR		
	comp=N,4µm,11.0s						
UZH				MLR	MLR		
	comp=E,6µm,11.0s						
UZH				MLR	MLR		
	comp=Z,3µm,11.0s						
UZH	Uzhgorod	8.87	42	eP	Pn	02 39 13.4	-0.3
UZH				eS	Sn	02 40 52.6	-0.8
CLL	Collm	8.93	359	i P	Pn	02 39 15.9	+1.5
CLL				e		02 40 48.0	
CLL	Collm	8.93	359	ePn	Pn	02 39 14.2	-0.2
CLL	Collm	8.93	359	ePn	Pn	02 39 13.0	-1.4
CLL				i Pn(2)		02 39 15.9	
CLL				eSn	Sn	02 40 48.0	-6.7
CLL				eSb1		02 41 23.0	
CLL				eSb2		02 41 44.0	
CLL				eSg	Sg	02 41 59.0	+6.8
	comp=N,1µm,22.9s						
CLL				eSg	Sg	02 41 59.0	+6.8
	comp=E,7µm,20.8s						
CLL				Lmax		02 42 00.0	
CLL	Collm	8.93	359	i P	Pn	02 39 15.9	+1.5
ZIMR		8.93	78	⇑P	Pn	02 39 15.1	+0.7
ZIMR		8.93	78⇑	iP	Pn	02 39 15.1	+0.7
ZIMR		8.93	78	P	Pn	02 39 15.1	+0.7

DYR	Agios Nikonas	8.95	126	eP	Pn	02 39 19.5	+4.7
RJF	Les Rejaudoux	9.00	293	eP	Pn	02 39 17.3	+1.8
	SNR=1.0						
RJF	Les Rejaudoux	9.00	293	eP	Pn	02 39 17.3	+1.8
RJF	Les Rejaudoux	9.00	293	eP	Pn	02 39 17.3	+1.8
RJF	Les Rejaudoux	9.00	293	eP	Pn	02 39 17.3	+1.8
	SNR=1.0						
MLS	Moulis	9.02	278	P	Pn	02 39 15.5	-0.2
MLS	Moulis	9.02	278	P	Pn	02 39 15.5	-0.2
MLS	Moulis	9.02	278	P	Pn	02 39 15.5	-0.2
OJC	Ojcow	9.03	28	eP	Pn	02 39 20.1	+4.3
OJC	Ojcow	9.03	28	ePn	Pn	02 39 12.7	-3.1
OJC	Ojcow	9.03	28	eP	Pn	02 39 20.1	+4.3
DID	Didima	9.05	119	eP	Pn	02 39 17.7	+1.5
KOLS	Kolonicke sedl	9.07	41	eP	Pn	02 39 18.6	+2.2
KOLS				MLR	MLR		
	comp=Z,2µm,4.7s						
KOLS	Kolonicke sedl	9.07	41	ePN	Pn	02 39 18.6	+2.2
KOLS				e		02 42 03.2	
KOLS	Kolonicke sedl	9.07	41	eP	Pn	02 39 18.6	+2.2
	comp=Z,2µm,4.7s						
VLI	Veliai	9.34	124	eP	Pn	02 39 22.9	+2.7
EPF	Esparros	9.57	278	ePn	Pn	02 39 22.5	-0.8
	SNR=1.0						
EPF	Esparros	9.57	278	eP	Pn	02 39 22.5	-0.8
EPF	Esparros	9.57	278	ePn	Pn	02 39 22.5	-0.8
EPF	Esparros	9.57	278	ePn	Pn	02 39 22.5	-0.8
	SNR=1.0						
RESF	Ens	9.57	277	P	Pn	02 39 24.3	+0.9
RESF	Ens	9.57	277	P	Pn	02 39 24.3	+0.9
RESF	Ens	9.57	277	P	Pn	02 39 24.3	+0.9
MLR	Muntele Rosu	9.63	67	Pn	Pn	02 39 26.3	+2.1
MLR	Muntele Rosu	9.63	67	Pn	Pn	02 39 26.3	+2.1
	comp=Z,0.4nm,0.3s,baz=266,slow=12,SNR=33						
MLR				LR	LR	02 42 23.8	
	comp=Z,232nm,20.8s,baz=257,slow=33						
MLR	Muntele Rosu	9.63	67	P	Pn	02 39 26.3	+2.1
MEM	Membach	9.64	331	PN	Pn	02 39 25.4	+1.3
MEM				SN	Sn	02 41 10.6	-1.5
	comp=E,26nm,0.0s						
ALN	Alexandroupoli	9.66	95	eP	Pn	02 39 24.6	+0.2
CLZ	Clausthal	9.67	349	eP	Pn	02 39 25.9	+1.3
CLZ	Clausthal	9.67	349	ePn	Pn	02 39 25.9	+1.3
CLZ	Clausthal	9.67	349	eP	Pn	02 39 25.9	+1.3
SULR		9.68	72⇑	iP	Pn	02 39 22.6	-2.2
GIVF	Givet	9.69	326	ePn	Pn	02 39 25.7	+0.8
	SNR=1.0						
GIVF	Givet	9.69	326	eP	Pn	02 39 25.7	+0.8
GIVF	Givet	9.69	326	ePn	Pn	02 39 25.7	+0.8
GIVF	Givet	9.69	326	ePn	Pn	02 39 25.7	+0.8
	SNR=1.0						
BCLA	Clavier	9.75	328	PN	Pn	02 39 27.1	+1.5
BCLA				SN	Sn	02 41 10.3	-4.5
	comp=N,22nm,0.0s						
KWP	Kalwaria Pacla	9.76	39	eP	Pn	02 39 24.4	-1.4
KWP				pmax	pmax		
	comp=Z,197nm,1.3s						
KWP	Kalwaria Pacla	9.76	39	ePn	Pn	02 39 24.4	-1.4
	comp=Z,197nm,1.3s						
KWP	Kalwaria Pacla	9.76	39	eP	Pn	02 39 24.4	-1.4
	comp=Z,197nm,1.3s						
LABF	Labassere	9.76	278	P	Pn	02 39 24.9	-1.1
LABF	Labassere	9.76	278	P	Pn	02 39 24.9	-1.1
LABF	Labassere	9.76	278	P	Pn	02 39 24.9	-1.1
DOU	Dourbes	9.79	325	PN	Pn	02 39 28.0	+1.8
DOU				SN	Sn	02 41 15.8	0.0
	comp=E,26nm,0.0s						
VIEF	Viey	9.80	277	P	Pn	02 39 27.8	+1.3
VIEF	Viey	9.80	277	P	Pn	02 39 27.8	+1.3
VIEF	Viey	9.80	277	P	Pn	02 39 27.8	+1.3
JMB	Yambol	9.82	85	P	Pn	02 39 26.5	-0.2
JMB	Yambol	9.82	85	P	Pn	02 39 26.5	-0.2
BAIF	Baives	9.93	324	ePn	Pn	02 39 27.9	-0.2
	SNR=1.0						
BAIF	Baives	9.93	324	eP	Pn	02 39 27.9	-0.2
BAIF	Baives	9.93	324	ePn	Pn	02 39 27.9	-0.2
BAIF	Baives	9.93	324	ePn	Pn	02 39 27.9	-0.2
	SNR=1.0						
BUR08	Bucovina Ar. S	9.93	54	ePn	Pn	02 39 27.7	-0.5
BUR08	Bucovina Ar. S	9.93	54	ePn	Pn	02 39 27.7	-0.5
BUG	Bochum--Univer	9.95	338	eP	Pn	02 39 30.4	+2.0
BUG	Bochum--Univer	9.95	338	ePn	Pn	02 39 30.4	+2.0
BUG	Bochum--Univer	9.95	338	eP	Pn	02 39 30.4	+2.0
ISR	Istrita	9.96	70	⇑P	Pn	02 39 28.4	-0.3
ISR	Istrita	9.96	70⇑	iP	Pn	02 39 28.4	-0.3
ISR	Istrita	9.96	70	P	Pn	02 39 28.4	-0.3
REYF	Montagne du Re	10.11	278	P	Pn	02 39 32.0	+1.3
REYF	Montagne du Re	10.11	278	P	Pn	02 39 32.0	+1.3
REYF	Montagne du Re	10.11	278	P	Pn	02 39 32.0	+1.3
PLOR	Plostina	10.20	66	⇑P	Pn	02 39 32.9	+1.0
PLOR	Plostina	10.20	66⇑	iP	Pn	02 39 32.9	+1.0
PLOR	Plostina	10.20	66	P	Pn	02 39 32.9	+1.0
SNF	Seneffe	10.23	326	PN	Pn	02 39 33.8	+1.6
VRI	Vrincioaia	10.26	66	⇑P	Pn	02 39 33.8	+1.1
VRI	Vrincioaia	10.26	66⇑	iP	Pn	02 39 33.8	+1.1
VRI	Vrincioaia	10.26	66	P	Pn	02 39 33.8	+1.1
GRER		10.31	68⇑	iP	Pn	02 39 36.4	+3.0
NRDL	Niedersach Rie	10.34	349	ePn	Pn	02 39 33.7	0.0
TESR		10.39	62⇓	iP	Pn	02 39 33.5	-1.0
MFF	Saint Martin d	10.49	298	eP	Pn	02 39 38.4	+2.6
	SNR=1.0						
MFF	Saint Martin d	10.49	298	eP	Pn	02 39 38.4	+2.6
MFF	Saint Martin d	10.49	298	eP	Pn	02 39 38.4	+2.6
LVV	L'vov	10.52	41	eP	Pn	02 39 40.1	+3.9
LVV				eS	Sn	02 41 43.6	+10
LVV				MLR	MLR		
	comp=Z,3µm,10.2s						
WTSB	Winterswijk	10.55	337	eP	Pn	02 39 43.6	+7.0
	comp=Z,27nm,0.8s						
WTSB				eS	Sn	02 41 43.6	+9.1
AYVA	Ayvalik	10.60	102	eP	Pn	02 39 37.2	-0.1
AYVA	Ayvalik	10.60	102	eP	Pn	02 39 37.2	-0.1
BEL	Belsk	10.74	26	eP	Pn	02 39 41.9	+2.7
BEL				LMZ	LR	02 44 49.5	
CFR	Carcaliu	11.08	70	P	Pn	02 39 45.1	+1.2
CFR	Carcaliu	11.08	70⇑	iP	Pn	02 39 43.9	0.0
CFR	Carcaliu	11.08	70	P	Pn	02 39 45.1	+1.2
BALY	Balya	11.13	99	eP	Pn	02 39 43.4	-1.2
BALY	Balya	11.13	99	eP	Pn	02 39 43.4	-1.2
TIRR	Tirgusor	11.18	74	⇑P	Pn	02 39 44.9	-0.4
TIRR	Tirgusor	11.18	74	ePn	Pn	02 39 42.3	-3.0
TIRR				eSn	Sn	02 41 47.3	-2.8
TIRR	Tirgusor	11.18	74⇑	iP	Pn	02 39 44.9	-0.4
TIRR	Tirgusor	11.18	74	P	Pn	02 39 44.9	-0.4
GKP	Gorka Klasztor	11.20	12	eP	Pn	02 39 40.5	-5.0
GKP				eS	Sn	02 41 55.3	+4.9
GKP				LMZ	LR	02 44 40.2	
LEOM	Leova	11.44	64	P	Pn	02 39 52.6	+3.8
TLCR		11.56	71	⇑P	Pn	02 39 51.0	+0.6
TLCR		11.56	71⇑	iP	Pn	02 39 51.0	+0.6
TLCR		11.56	71	P	Pn	02 39 51.0	+0.6
GRR	Gorron	11.62	306	ePn	Pn	02 39 50.4	-0.9
	SNR=1.0						
GRR	Gorron	11.62	306	eP	Pn	02 39 50.4	-0.9
GRR	Gorron	11.62	306	ePn	Pn	02 39 50.4	-0.9
GRR	Gorron	11.62	306	ePn	Pn	02 39 50.4	-0.9
	SNR=1.0						
KIS	Kishinev	11.96	62	eP	Pn	02 39 57.0	+1.1
KIS				pmax	pmax		
	comp=Z,300nm,2.0s						
KIS				pmax	pmax		
	comp=Z,900nm,3.0s						
KIS				MLR	MLR		
	comp=E,5µm,14.0s						
KIS				MLR	MLR		
	comp=Z,7µm,14.0s						
KIS				MLR	MLR		
	comp=N,3µm,13.0s						
KIS				MLR	MLR		
	comp=Z,7µm,16.0s						
KIS	Kishinev	11.96	62	eP	Pn	02 39 57.0	+1.1
	comp=Z,300nm,2.0s						
KIS				LRM	MLR	02 45 18.0	
	comp=Z,7µm,14.0s						
KIS	Kishinev	11.96	62⇑	iP	Pn	02 39 58.1	+2.2
KIS	Kishinev	11.96	62	eP	Pn	02 39 57.0	+1.1
	comp=Z,7µm,16.0s						
RGN	Rugen	12.17	0	ePn	Pn	02 39 57.9	-0.8
	comp=Z,27nm,1.0s						
RGN	Rugen	12.17	0	ePn	Pn	02 39 57.9	-0.8
	comp=Z,27nm,1.0s						
SGMF	Saint Gilles	12.60	303	ePn	Pn	02 40 06.7	+2.0
	SNR=1.0						

SGMF Saint Gilles 12.60 303 eP Pn 02 40 06.7 +2.0
SGMF Saint Gilles 12.60 303 ePn Pn 02 40 06.7 +2.0
GDZ Gediz 12.70 100 i P Pn 02 40 04.7 -1.6
GDZ Gediz 12.70 100 i P Pn 02 40 04.7 -1.6
LLD Lille Linde 12.98 357 i P Pn 02 40 10.0 +0.2
comp=Z,46nm,0.9s
ESDC Sonseca Array 13.32 264 Pn Pn 02 40 14.0 -0.5
ESDC Sn Sn 02 42 42.5 +0.2
ESDC Sonseca Array 13.32 264 Pn Pn 02 40 14.0 -0.5
comp=Z,0.3nm,0.3s,baz=72,slow=14,SNR=11
ESDC Sn Sn 02 42 42.5 +0.2
comp=Z,0.2nm,0.3s,baz=72,slow=25,SNR=2.7
ESDC Sonseca Array 13.32 264 Pn Pn 02 40 14.0 -0.5
ESDC Sn Sn 02 42 42.5 +0.2
SUW Suwalki 13.35 26 eP Pn 02 40 15.8 +0.9
SUW Suwalki 13.35 26 ePn Pn 02 40 15.8 +0.9
SUW Suwalki 13.35 26 eP Pn 02 40 16.0 +1.1
SUW LMZ LR 02 46 30.8
SUW Suwalki 13.35 26 eP Pn 02 40 15.8 +0.9
GOLH Golhisar 13.51 107 i P P 02 40 22.4 -4.0
PAB San Pablo 13.64 264 eP Pn 02 40 17.6 -1.4
PAB San Pablo 13.64 264 ePn Pn 02 40 17.6 -1.4
PAB San Pablo 13.64 264 eP Pn 02 40 17.6 -1.4
AK02 Malin Array Si 13.70 47 ePn Pn 02 40 20.6 +0.9
AK02 Malin Array Si 13.70 47 ePn Pn 02 40 20.5 +0.9
KIEV Kiev 13.72 47 eP Pn 02 40 18.5 -1.4
KIEV Kiev 13.72 47 ePn Pn 02 40 18.5 -1.4
KIEV Kiev 13.72 47 eP Pn 02 40 18.5 -1.4
AK01 Malin Array Si 13.72 47 ePn Pn 02 40 18.5 -1.5
AK01 Malin Array Si 13.72 47 ePn Pn 02 40 18.5 -1.5
AKASG Malin Array Be 13.73 47 P Pn 02 40 19.8 -0.3
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG MLR MLR
comp=Z,3µm,18.2s
AKASG Malin Array Be 13.73 47 Pn Pn 02 40 19.8 -0.3
AKASG Malin Array Be 13.73 47 Pn Pn 02 40 19.8 -0.3
comp=Z,0.8nm,0.3s,baz=237,slow=13,SNR=5.4
AKASG LR LR 02 46 25.8
comp=Z,3µm,18.1s,baz=265,slow=41
AKASG Malin Array Be 13.73 47 P Pn 02 40 19.8 -0.3
comp=Z,3µm,18.2s
LZLA Zalla 14.23 165 i P P 02 40 33.5 -0.8
comp=Z,56nm,1.4s,SNR=43
MVO Moncorvo 15.22 272 eP Pn 02 40 38.9 -1.6
BBAL Bala 15.24 94 i P Pn 02 40 42.9 +2.2
NACGM Naroch 15.33 31 e Pn 02 40 39.0 -2.7
MICGM Minsk 15.47 33 e Pn 02 40 39.0 -4.5
IIGN Ignalina 15.47 29 eP Pn 02 40 43.6 +0.1
IIGN AMB AMB 02 40 45.8
comp=Z,48nm,1.2s
BR131 Keskin Array S 15.57 93 ePn Pn 02 40 43.3 -1.8
comp=Z,7.4nm,0.9s
BR131 Keskin Array S 15.57 93 ePn Pn 02 40 43.3 -1.8
comp=Z,7.4nm,0.9s
BRTR Keskin Array B 15.57 93 Pn Pn 02 40 45.8 +0.7
BRTR Keskin Array B 15.57 93 Pn Pn 02 40 45.8 +0.7
comp=Z,0.0nm,0.3s,baz=282,slow=11,SNR=7.4
BRTR Keskin Array B 15.57 93 Pn Pn 02 40 45.8 +0.7
ISAL Salakas 15.61 28 eP Pn 02 40 44.8 -0.6
ISAL AMB AMB 02 40 47.3
comp=Z,22nm,1.2s
MTE Manteigas 15.77 270 eP P 02 40 53.7 +2.2
comp=Z,39nm,1.3s
MTE Manteigas 15.77 270 ePn Pn 02 40 46.5 -1.1
comp=Z,27nm,1.0s
MTE Manteigas 15.77 270 ePn Pn 02 40 46.5 -1.1
comp=Z,27nm,1.0s
MTE Manteigas 15.77 270 eP P 02 40 53.7 +2.2
comp=Z,39nm,1.3s
IZAR Zarasai 15.80 28 eP Pn 02 40 47.0 -0.8
IZAR AMB AMB 02 40 54.5
comp=Z,46nm,1.3s
PMRV Marv??o 15.92 266 eP Pn 02 40 50.6 +1.1
comp=Z,33nm,1.4s
GAZI Gazipasa 15.93 106 i P P 02 40 54.1 +0.8
GAZI Gazipasa 15.93 106 i P P 02 40 54.1 +0.8
PBAR Barrancos 16.08 262 eP P 02 40 56.3 +1.5
comp=Z,64nm,1.8s
PBAR Barrancos 16.08 262 eP P 02 40 56.3 +1.5
comp=Z,64nm,1.8s
PESTR Estremoz 16.24 264 eP P 02 40 57.6 +0.9
comp=Z,40nm,1.3s
PESTR Estremoz 16.24 264 eP P 02 40 57.6 +0.9
comp=Z,40nm,1.3s
PMTG Montargil 16.65 266 eP P 02 41 02.5 +1.4
comp=Z,68nm,1.5s
PMTG Montargil 16.65 266 eP P 02 41 02.5 +1.4
comp=Z,68nm,1.5s
EVO Evora 16.67 264 eP P 02 41 04.9 +3.5
comp=Z,42nm,1.8s
EKA Eskdalemuir Ar 16.83 326 Pn Pn 02 41 01.3 +0.3
EKA Sn Sn 02 44 05.7 -1.8
EKA Eskdalemuir Ar 16.83 326 Pn Pn 02 41 01.3 +0.3
baz=134,slow=14,SNR=12
EKA Sn Sn 02 44 05.7 -1.8
baz=138,slow=26,SNR=4.4
EKA Eskdalemuir Ar 16.83 326 P Pn 02 41 01.3 +0.3
PVAQ Vaqueiros 16.87 260 eP P 02 41 05.1 +1.5
comp=Z,49nm,1.3s
PVAQ Vaqueiros 16.87 260 eP P 02 41 05.1 +1.5
comp=Z,49nm,1.3s
MDT Midelt 17.08 242 P P 02 41 07.0 +0.9
MDT Midelt 17.08 242 P P 02 41 07.0 +0.9
comp=Z,0.1nm,0.3s,baz=57,slow=12,SNR=12
MDT Midelt 17.08 242 P P 02 41 07.0 +0.9
PBDV Barranco-do-Ve 17.09 260 eP P 02 41 08.0 +1.9
comp=Z,42nm,1.3s
PBDV Barranco-do-Ve 17.09 260 eP P 02 41 08.0 +1.9
comp=Z,42nm,1.3s
GULE Gulek 17.25 100 i P P 02 41 12.3 +4.3
CSS Prodhromos 17.28 109 ePn Pn 02 41 04.8 -2.0
comp=Z,26nm,1.0s
CSS Prodhromos 17.28 109 ePn Pn 02 41 04.8 -2.0
comp=Z,26nm,1.0s
ANN Anapa 17.63 74 eP Pn 02 41 11.0 0.0
ANN eS Sn 02 44 30.6 +3.6
ANN pmax pmax
comp=Z,45nm,1.1s
ANN MLR MLR
comp=N,2µm,14.0s
ANN MLR MLR
comp=E,1µm,14.0s
ANN MLR MLR
comp=Z,1µm,14.0s
ANN Anapa 17.63 74 eP Pn 02 41 11.0 0.0
comp=Z,45nm,1.1s
ERBA Erbaa 17.63 88 i P P 02 41 16.2 +4.1
HFS Hagfors 17.77 1 P P 02 41 13.4 0.0
HFS Hagfors 17.77 1 P P 02 41 13.4 0.0
comp=Z,0.3nm,0.3s,baz=186,slow=13,SNR=12
HFS LR LR 02 49 24.4
comp=Z,2µm,20.0s,baz=270,slow=42
HFS Hagfors 17.77 1 P P 02 41 13.4 0.0
comp=Z,2µm,20.0s
VSU Vasula 18.17 23c iP P 02 41 18.2 +0.4
VSU pmax pmax
comp=Z,76nm,1.3s
VSU Vasula 18.17 23 i P P 02 41 18.2 +0.4
comp=Z,76nm,1.3s
ANDN Andirin 18.28 98 eP P 02 41 20.0 +0.7
NAO01 NORSAR Array S 18.54 356 ePn P 02 41 20.2 -1.7
comp=Z,44nm,1.1s
NAO01 NORSAR Array S 18.54 356 ePn P 02 41 20.2 -1.7
comp=Z,44nm,1.1s
NB2 NORSAR Subarra 18.73 357 P P 02 41 23.8 -0.2
comp=Z,31nm,1.1s,baz=175,slow=12
NB2 NORSAR Subarra 18.73 357 P P 02 41 23.8 -0.2
comp=Z,31nm,1.1s,baz=175,slow=11,SNR=2.6
NOA NORSAR Array B 18.73 357 P P 02 41 24.1 +0.2
NOA NORSAR Array B 18.73 357 P P 02 41 24.1 +0.2
comp=Z,0.5nm,0.3s,baz=174,slow=12,SNR=17
NOA LR LR 02 49 56.1
comp=Z,791nm,19.4s,baz=35,slow=41
NOA NORSAR Array B 18.73 357 P P 02 41 24.1 +0.2
comp=Z,791nm,19.4s
SUSE Susehri 18.82 88 i P Pn 02 41 27.7 +1.9
AKCD Akcadag 19.18 94 i P Pn 02 41 32.0 +1.8
GZT Gaziantep 19.26 97 i P Pn 02 41 33.1 +2.0
SOC Sochi 19.34 77c iP Pn 02 41 32.4 +0.6
SOC e 02 45 11.0
SOC pmax pmax
comp=Z,52nm,1.0s
SOC MLR MLR
comp=Z,1µm,15.0s

SOC Sochi 19.34 77 i P Pn 02 41 32.4 +0.6
comp=Z,52nm,1.0s
SOC eS S 02 45 11.0 +1.9
comp=Z,1µm,15.0s
MALT Malatya 19.55 94 ⇑P Pn 02 41 35.4 +0.8
MALT Malatya 19.55 94 ePn P 02 41 31.5 -1.8
comp=Z,27nm,1.1s
MALT Malatya 19.55 94⇑iP Pn 02 41 35.4 +0.8
MALT Malatya 19.55 94 P Pn 02 41 35.4 +0.8
KELT Kelkit 19.61 88 i P Pn 02 41 36.3 +0.9
KELT Kelkit 19.61 88 i P Pn 02 41 36.3 +0.9
VSR Storozhevoye 19.70 54 eP P 02 41 34.3 -0.3
VSR eS S 02 45 14.9 -1.3
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR smax smax
comp=N,40nm,1.1s
VSR smax smax
comp=E,20nm,1.1s
VSR smax smax
comp=Z,20nm,1.1s
VSR MLR MLR
comp=N,1µm,13.0s
VSR MLR MLR
comp=E,2µm,13.0s
VSR MLR MLR
comp=Z,3µm,13.0s
VSR Storozhevoye 19.70 54 eP P 02 41 34.3 -0.3
VORD Divnogorie 19.71 55 eP Pn 02 41 38.0 +1.8
VORD eS Sn 02 45 17.7 +0.6
VORD pmax pmax
comp=N,20nm,0.4s
VORD pmax pmax
comp=E,10.0nm,0.4s
VORD pmax pmax
comp=Z,10.0nm,0.4s
VORD smax smax
comp=N,110nm,0.7s
VORD smax smax
comp=E,100nm,0.7s
VORD smax smax
comp=Z,40nm,0.7s
VORD MLR MLR
comp=N,880nm,20.0s
VORD MLR MLR
comp=E,2µm,20.0s
VORD MLR MLR
comp=Z,2µm,20.0s
MMAI Mount Meron Ar 19.78 111 P Pn 02 41 38.6 +1.3
MMAI Mount Meron Ar 19.78 111 P Pn 02 41 38.6 +1.3
comp=Z,0.9nm,0.3s,baz=317,slow=12,SNR=5.9
MMAI Mount Meron Ar 19.78 111 P Pn 02 41 38.6 +1.3
OBN Obninsk 19.82 42⇓iP P 02 41 34.8 -1.1
OBN pmax pmax
comp=Z,33nm,1.0s
OBN Obninsk 19.82 42 eP P 02 41 34.4 -1.5
comp=Z,451nm,2.3s
OBN Obninsk 19.82 42 i P P 02 41 34.8 -1.1
comp=Z,33nm,1.0s
ELZG Elazig 19.90 93 i P Pn 02 41 38.8 0.0
ELZG Elazig 19.90 93 i P Pn 02 41 38.8 0.0
PUL Pulkovo 20.31 25d iP P 02 41 41.1 -0.1
PUL pmax pmax
comp=Z,343nm,2.5s
PUL Pulkovo 20.31 25 i P P 02 41 41.1 -0.1
comp=Z,343nm,2.5s
FINES FINESS Array B 20.57 18 P P 02 41 43.9 -0.2
FINES FINESS Array B 20.57 18 P P 02 41 43.9 -0.2
comp=Z,19nm,0.9s,baz=213,slow=9.8,SNR=24
FINES FINESS Array B 20.57 18 P P 02 41 43.9 -0.2
comp=Z,19nm,0.9s
FIA1 FINESS Array S 20.58 18 eP P 02 41 42.8 -1.3
FIA1 FINESS Array S 20.58 18 eP P 02 41 42.8 -1.3
TAM Tamanrasset 20.59 201 eP P 02 41 45.2 +0.5
TAM pmax pmax
comp=Z,38nm,1.4s
TAM Tamanrasset 20.59 201 eP P 02 41 45.2 +0.5
comp=Z,38nm,1.4s
TAM Tamanrasset 20.59 201 eP P 02 41 45.2 +0.5
comp=Z,38nm,1.4s
MOS Moscow 20.65 41 eP P 02 41 43.1 -1.8
MOS e 02 42 01.7
MOS e 02 42 13.4
MOS eS Sn 02 45 38.5 -1.3
MOS pmax pmax
comp=Z,113nm,1.6s
MOS MLR MLR
comp=Z,3µm,11.0s
MOS MLR MLR
comp=E,2µm,10.0s
MOS Moscow 20.65 41 eP P 02 41 43.1 -1.8
comp=E,113nm,1.6s
MOS eS Sn 02 45 38.5 -1.3
VRHR Novokhopersk 21.16 56 eP P 02 41 52.2 +1.7
VRHR e*PP pP 02 41 55.1 +0.4
VRHR e 02 42 09.1
VRHR eS Sn 02 45 48.9 -3.3
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,30nm,0.9s
VRHR pmax pmax
comp=Z,30nm,0.9s
VRHR pmax pmax
comp=N,120nm,1.1s
VRHR pmax pmax
comp=Z,100nm,1.1s
VRHR pmax pmax
comp=E,70nm,0.6s
VRHR smax smax
comp=N,80nm,2.0s
VRHR smax smax
comp=E,140nm,2.0s
VRHR smax smax
comp=Z,40nm,2.0s
VRHR MLR MLR
comp=N,810nm,14.0s
VRHR MLR MLR
comp=E,2µm,14.0s
VRHR MLR MLR
comp=Z,2µm,14.0s
VRHR Novokhopersk 21.16 56 eP P 02 41 52.2 +1.7
VRHR eS Sn 02 45 48.9 -3.3
DBAD Bademkaya 21.20 84 i P P 02 41 53.1 +1.9
KAF Kangasniemi 21.22 17 eP P 02 41 49.8 -1.2
KAF pmax pmax
comp=Z,14nm,0.6s
KAF Kangasniemi 21.22 17 ep P 02 41 49.8 -1.2
comp=Z,14nm,0.6s
KAF Kangasniemi 21.22 17 eP P 02 41 49.8 -1.2
comp=Z,14nm,0.6s
DDEM Demirkent 21.27 84 i P P 02 41 54.2 +2.3
ASF Jabal al Asfar 21.30 111 P P 02 41 54.5 +2.3
ASF Jabal al Asfar 21.30 111 P P 02 41 54.5 +2.3
comp=Z,1.1nm,0.3s,baz=6.4,slow=3.5,SNR=5.3
ARTV Artvin 21.34 84 i P P 02 41 54.8 +2.0
DAGI Agillar 21.35 84 i P P 02 41 54.8 +2.0
KIV Kislovodsk 21.44 76 eP P 02 41 54.9 +1.2
KIV pmax pmax
comp=Z,83nm,1.1s
KIV Kislovodsk 21.44 76 eP P 02 41 52.1 -1.5
comp=Z,92nm,1.1s
KIV Kislovodsk 21.44 76 P P 02 41 55.7 +2.0
SNR=25
KIV Kislovodsk 21.44 76 mb 02 42 00.9
SNR=21
KIV Kislovodsk 21.44 76 eP P 02 41 54.9 +1.2
comp=Z,83nm,1.1s
EIL Elat 21.55 119 P P 02 41 54.9 +0.1
EIL Elat 21.55 119 P P 02 41 54.9 +0.1
comp=Z,22nm,1.2s,baz=323,slow=10,SNR=6.5
EIL Elat 21.55 119 P P 02 41 54.9 +0.1
HOMI Horasan 21.60 87 i P P 02 41 59.8 +4.2
KBZ Khabaz 21.62 76 P P 02 41 57.4 +2.0
KBZ pmax pmax
comp=Z,37nm,0.9s
KBZ Khabaz 21.62 76 P P 02 41 57.4 +2.0
KBZ Khabaz 21.62 76 P P 02 41 57.4 +2.0
comp=Z,37nm,0.9s,baz=277,slow=10.0,SNR=27
KBZ Khabaz 21.62 76 P P 02 41 57.4 +2.0
BEST Besiri 21.80 93 i P P 02 42 00.5 +2.9
ONI Oni 22.18 79 P P 02 42 05.6 +3.9

AKH Akhalkalaki 22.44 82 P P 02 42 07.8 +3.3
TUTA Tutak 22.45 88 i P P 02 42 08.0 +3.2
GOR Gori 22.77 81 P P 02 42 10.3 +2.4
JOF Joensuu 23.12 21 eP P 02 42 10.7 -0.6
JOF pmax pmax
comp=Z,8.0nm,0.6s
JOF Joensuu 23.12 21 ep P 02 42 10.7 -0.6
comp=Z,8.1nm,0.6s
TVAN Van 23.16 89 i P P 02 42 14.6 +2.4
TVAN Van 23.16 89 i P P 02 42 14.6 +2.4
TBLG Delisi 23.29 81 P P 02 42 15.2 +2.0
HAKT HAKKARI 23.72 92 i P P 02 42 18.3 +0.6
HAKT HAKKARI 23.72 92 i P P 02 42 18.3 +0.6
DGRG David-gareji 23.81 81 P P 02 42 20.4 +2.1
KLMR Klimovskoe 24.35 32 eP P 02 42 21.3 -1.8
KLMR pmax pmax
comp=Z,133nm,1.6s
IMRD Marand 24.81 88 eP P 02 42 28.3 +0.6
IHRS Heris 25.93 88 eP P 02 42 38.0 +0.1
TMCR Tamitsa 26.03 25 eP P 02 42 36.3 -1.9
TMCR pmax pmax
comp=Z,71nm,1.4s
IBST Bostanabad 26.03 89 eP P 02 42 38.3 -0.6
BHD Baghdad 26.06 100 ex P 02 42 37.0 -1.8
BHD ex S 02 47 11.0 +1.6
IGHG Ghaleghazi 27.16 96 eP P 02 42 48.9 -0.2
IVIS Veis 27.28 96 eP P 02 42 53.4 +3.4
ARCES ARCESS Array B 27.94 9 P P 02 42 55.0 -0.4
ARCES ARCESS Array B 27.94 9 P P 02 42 55.0 -0.4
comp=Z,2.6nm,0.7s,baz=187,slow=8.6,SNR=6.0
ARCES ARCESS Array B 27.94 9 P P 02 42 55.0 -0.4
comp=Z,3.0nm,0.7s
IRAZ Razeghan 29.18 92 eP P 02 43 08.6 +1.6
IRAZ Razeghan 29.18 92 eP P 02 43 08.6 +1.6
TOA0 Torodi Ar. Sit 30.82 202 eP P 02 43 20.4 -1.1
TOA0 Torodi Ar. Sit 30.82 202 eP P 02 43 20.4 -1.1
TORD Torodi Ar. Bea 30.82 202 P P 02 43 22.0 +0.6
TORD Torodi Ar. Bea 30.82 202 P P 02 43 22.0 +0.6
comp=Z,3.3nm,0.6s,baz=18,slow=8.3,SNR=57
TORD Torodi Ar. Bea 30.82 202 P P 02 43 22.0 +0.6
AKTK Aktyubinsk 31.45 60 P P 02 43 26.5 -0.3
comp=Z,4.0nm,0.8s
AKTO Aktyubinsk 31.45 60 P P 02 43 26.5 -0.3
AKTO pmax pmax
comp=Z,4.0nm,0.8s
AKTO Aktyubinsk 31.45 60 P P 02 43 26.5 -0.3
AKTO Aktyubinsk 31.45 60 P P 02 43 26.5 -0.3
comp=Z,3.5nm,0.8s,baz=273,slow=9.9,SNR=9.5
AKTO Aktyubinsk 31.45 60 P P 02 43 26.5 -0.3
SOKR Solikamsk 31.60 42 eP P 02 43 27.9 0.0
SOKR pmax pmax
comp=Z,10.0nm,0.7s
SOKR Solikamsk 31.60 42 eP P 02 43 27.9 0.0
comp=Z,10.0nm,0.7s
ARU Arti 31.98 48d iP P 02 43 31.2 -0.1
ARU 02 44 33.4
ARU S S 02 48 44.2 +2.1
ARU SS SnSn 02 50 31.9 +0.9
ARU pmax pmax
comp=Z,44nm,1.0s
ARU Arti 31.98 48 eP P 02 43 30.8 -0.5
ARU Arti 31.98 48 i P P 02 43 31.2 -0.1
comp=Z,44nm,1.0s
ARU S S 02 48 44.2 +2.1
IZEF Zefreh 32.08 94 eP P 02 43 32.2 -0.6
IZEF Zefreh 32.08 94 eP P 02 43 32.2 -0.6
ABKAR Akbulak array 32.79 62 eP P 02 43 36.8 -1.7
ABKAR Akbulak array 32.79 62 eP P 02 43 36.8 -1.7
SPITS Spitsbergen Ar 35.93 1 P P 02 44 05.6 +0.3
SPITS Spitsbergen Ar 35.93 1 P P 02 44 05.6 +0.3
comp=Z,3.5nm,0.9s,baz=188,slow=12,SNR=4.0
SPITS Spitsbergen Ar 35.93 1 P P 02 44 05.6 +0.3
comp=Z,4.0nm,0.9s
ITEG Tejag 36.83 90 eP P 02 44 14.7 +0.9
ITEG Tejag 36.83 90 eP P 02 44 14.7 +0.9
BRVK Borovoye 38.81 54 eP P 02 44 31.2 +1.1
BRVK pmax pmax
comp=Z,24nm,1.0s
BRVK Borovoye 38.81 54 eP P 02 44 28.4 -1.6
comp=Z,17nm,0.7s
BRVK Borovoye 38.81 54 P P 02 44 31.1 +1.1
SNR=13
BRVK Borovoye 38.81 54 P P 02 44 31.1 +1.0
SNR=13
BVAR Borovoye Array 38.88 54 P P 02 44 31.7 +1.1
BVAR 02 46 01.2
BVAR pmax pmax
comp=Z,6.0nm,0.8s
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BVAR Borovoye Array 38.88 54 P P 02 44 31.7 +1.1
BVAR PP PnPn 02 46 01.2 -0.7
BVAR Borovoye Array 38.88 54 P P 02 44 31.7 +1.1
comp=Z,6.1nm,0.8s,baz=262,slow=6.8,SNR=28
BVAR PP PnPn 02 46 01.2 -0.7
comp=Z,2.3nm,0.7s,baz=278,slow=11,SNR=2.3
BVAR Borovoye Array 38.88 54 P P 02 44 31.7 +1.1
comp=Z,6.0nm,0.8s
BVAR Borovoye Array 38.88 54 PP PP 02 46 01.2 +1.6
DBIC Dimbokro 39.03 209 P P 02 44 34.0 +1.8
DBIC Dimbokro 39.03 209 P P 02 44 34.0 +1.8
comp=Z,3.0nm,0.7s,baz=355,slow=10,SNR=4.9
DBIC Dimbokro 39.03 209 P P 02 44 34.0 +1.8
KKAR Karatay Array 41.31 69 eP P 02 44 49.8 -1.1
KKAR Karatay Array 41.31 69 eP P 02 44 49.8 -1.1
KKAR Karatay Array 41.31 69 eP P 02 44 49.8 -1.1
SMDO Samad 41.73 103 P P 02 44 54.9 +0.2
SNR=7.8
SMDO Samad 41.73 103 P P 02 44 54.9 +0.2
SNR=7.8
SFJD Kangerlussuaq 41.79 328 P P 02 44 52.3 -2.2
SFJD Kangerlussuaq 41.79 328 P P 02 44 52.3 -2.2
comp=Z,25nm,1.3s,baz=87,slow=9.0,SNR=5.7
EKS2 Erkin-Say 43.71 68 eP P 02 45 08.8 -1.8
EKS2 pmax pmax
comp=Z,61nm,1.5s
EKS2 Erkin-Say 43.71 68 eP P 02 45 08.8 -1.8
comp=Z,61nm,1.5s
EKS2 Erkin-Say 43.71 68 eP P 02 45 08.8 -1.8
comp=Z,61nm,1.5s
AAK Ala-Archa 44.22 68d iP P 02 45 16.0 +1.3
AAK pmax pmax
comp=Z,68nm,2.5s
AAK Ala-Archa 44.22 68 eP P 02 45 13.4 -1.3
comp=Z,80nm,1.4s
AAK Ala-Archa 44.22 68 P P 02 45 16.3 +1.6
SNR=9.4
AAK Ala-Archa 44.22 68 i P P 02 45 16.0 +1.3
comp=Z,68nm,2.5s
FRU Bishkek 44.23 68 eP P 02 45 16.0 +1.4
FRU Bishkek 44.23 68 eP P 02 45 16.0 +1.4
KURK Kurchatov 44.34 56 eP P 02 45 15.5 +0.1
KURK pmax pmax
comp=Z,21nm,2.5s
KURK Kurchatov 44.34 56 eP P 02 45 13.8 -1.5
KURK Kurchatov 44.34 56 eP P 02 45 15.5 +0.1
comp=Z,21nm,2.5s
NVS Novosibirsk 45.98 49 i P P 02 45 29.0 +0.7
NVS i 02 47 17.5
NVS pmax pmax
comp=E,27nm,2.5s
NVS pmax pmax
comp=Z,109nm,2.5s
NVS pmax pmax
comp=N,13nm,1.9s
NVS Novosibirsk 45.98 49 i P P 02 45 29.0 +0.7
comp=N,13nm,1.9s
KSH Kashi 46.47 71 P P 02 45 33.0 +0.5
KSH pP pP 02 45 38.0 +0.9
KSH sP sP 02 45 40.0 +1.1
KSH PcP PcP 02 47 09.0 +2.0
KSH PP PP 02 47 22.0 +0.4
KSH ScP ScP 02 51 01.0 +1.2
KSH PcS PcS 02 51 02.0 +0.2
KSH S S 02 52 18.0 -2.2
KSH ScS ScS 02 55 26.0 -1.3
KSH SS SS 02 55 36.0 -10
KSH pmax pmax
comp=Z,21nm,1.0s
KSH pmax pmax
comp=Z,920nm,7.4s
KSH LR LR
comp=N,530nm,13.0s
KSH LR LR

comp=E,370nm,8.0s
KSH LR LR
comp=Z,3µm,18.8s
ZALV Zalesovo Beam 47.11 50 P **P 02 45 37.4 +0.2**
ZALV 02 47 28.5
ZALV pmax pmax
comp=Z,4.0nm,0.8s
ZALV pmax pmax
comp=Z,3.0nm,0.8s
ZALV Zalesovo Beam 47.11 50 P **P 02 45 37.4 +0.2**
ZALV PP **PP 02 47 28.5 +0.8**
ZALV Zalesovo Beam 47.11 50 P **P 02 45 37.4 +0.2**
comp=Z,4.3nm,0.8s,baz=286,slow=7.7,SNR=18
ZALV PP **PP 02 47 28.5 +0.8**
comp=Z,3.2nm,0.8s,baz=298,slow=9.7,SNR=3.3
ZALV Zalesovo Beam 47.11 50 P **P 02 45 37.4 +0.2**
comp=Z,4.0nm,0.8s
ZALV Zalesovo Beam 47.11 50 PP PP 02 47 28.5 +0.8
MK31 Makanchi Array 47.89 60 *e*P **P 02 45 42.3 -1.1**
MK31 Makanchi Array 47.89 60 *e*P **P 02 45 42.3 -1.1**
MK31 Makanchi Array 47.89 60 *e*P **P 02 45 42.3 -1.1**
MKAR Makanchi Array 47.89 60 *e*P **P 02 45 43.7 +0.3**
MKAR Makanchi Array 47.89 60 *e*P **P 02 45 43.7 +0.3**
MKAR Makanchi Array 47.89 60 P **P 02 45 43.6 +0.2**
comp=Z,6.2nm,0.6s,baz=285,slow=6.7,SNR=64
MKAR Makanchi Array 47.89 60 *e*P **P 02 45 43.7 +0.2**
KMBO Kilima Mbogo 48.41 147 P **P 02 45 48.2 +0.3**
KMBO Kilima Mbogo 48.41 147 P **P 02 45 48.2 +0.3**
comp=Z,0.3nm,0.3s,baz=315,slow=5.7,SNR=1.8
KMBO Kilima Mbogo 48.41 147 P **P 02 45 48.2 +0.3**
SCHQ Schefferville 51.59 313 P **P 02 46 10.6 -0.9**
SCHQ Schefferville 51.59 313 P **P 02 46 10.6 -0.9**
comp=Z,3.1nm,0.7s,baz=84,slow=8.4,SNR=4.8
SCHQ Schefferville 51.59 313 P **P 02 46 10.6 -0.9**
WMQ Urumqi 52.58 61 P **P 02 46 20.0 +1.0**
WMQ sP **sP 02 46 27.0 +1.5**
WMQ PcP **PcP 02 47 30.0 +0.9**
WMQ PP **PP 02 48 20.0 +2.2**
WMQ ScP **ScP 02 51 26.0 +0.2**
WMQ S **S 02 53 44.0 -1.5**
WMQ ScS **ScS 02 56 06.0 -2.3**
WMQ pmax pmax
comp=Z,26nm,1.1s
WMQ pmax pmax
comp=Z,430nm,5.0s
WMQ LR LR
comp=N,2µm,16.0s
WMQ LR LR
comp=E,2µm,16.0s
WMQ LR LR
comp=Z,1µm,16.0s
MOY Mondy 57.04 48 *e*P **P 02 46 52.7 +1.4**
MOY Mondy 57.04 48 *e*P **P 02 46 52.7 +1.4**
PYUN Piuthan 57.19 80 *e*P **P 02 46 52.6 -0.2**
comp=Z,113nm,1.1s
DANN Dangsing 57.61 80 *e*P **P 02 46 55.6 -0.2**
KOLN Koldanda 57.82 80 *e*P **P 02 46 56.2 -1.0**
TLY Talaya 58.48 47 *e*P **P 02 47 00.6 -0.7**
TLY pmax pmax
comp=Z,12nm,1.0s
TLY Talaya 58.48 47 P **P 02 47 03.1 +1.8**
SNR=5.5
TLY Talaya 58.48 47 *e*P **P 02 47 00.6 -0.7**
comp=Z,12nm,1.0s
ZAK Zakamensk 58.92 48 *e*P **P 02 47 04.9 +0.4**
ZAK pmax pmax
comp=Z,3.0nm,1.6s
ZAK Zakamensk 58.92 48 *e*P **P 02 47 04.9 +0.4**
comp=Z,3.0nm,1.6s
GUN Gumba 59.40 79 *e*P **P 02 47 07.9 -0.5**
comp=Z,51nm,1.0s
RAMN Ramite 60.47 79 *e*P **P 02 47 14.8 -0.9**
comp=Z,34nm,0.9s
TAPN Taplejung 61.05 78 *e*P **P 02 47 19.9 +0.2**
comp=Z,44nm,1.2s
ODAN Odare 61.10 79 *e*P **P 02 47 19.8 -0.1**
SONM Songino Array 62.00 50 P **P 02 47 26.3 +0.6**
SONM Songino Array 62.00 50 P **P 02 47 26.3 +0.6**
comp=Z,7.0nm,1.0s,baz=291,slow=8.4,SNR=42
SONM Songino Array 62.00 50 P **P 02 47 26.3 +0.6**
comp=Z,7.0nm,1.0s
ULN Ulaanbaatar 62.36 49 *e*P **P 02 47 28.9 +0.9**
comp=Z,9.7nm,1.2s
ULN Ulaanbaatar 62.36 49 P **P 02 47 29.7 +1.7**
SNR=6.2
ULN Ulaanbaatar 62.36 49 *e*P **P 02 47 28.9 +0.9**
comp=Z,10.0nm,1.2s
GTA Gaotai 62.64 61 *e*P **P 02 47 31.0 +1.0**
GTA pP **pP 02 47 34.9 +0.2**
GTA sP **sP 02 47 37.2 +0.7**
GTA pmax pmax
comp=Z,6.0nm,1.5s
SHL Shillong 65.12 77 *e*P **P 02 47 45.0 -1.6**
RCBR Riachuelo 65.55 236 P **P 02 47 49.9 +0.7**
RCBR Riachuelo 65.55 236 P **P 02 47 49.9 +0.7**
comp=Z,5.4nm,1.1s,baz=11,slow=5.2,SNR=3.0
RCBR Riachuelo 65.55 236 P **P 02 47 49.9 +0.7**
JSRW J. Sargeant Re 66.62 300 *e*P **P 02 47 56.5 +0.7**
JSRW J. Sargeant Re 66.62 300 *e*P **P 02 47 56.5 +0.7**
INK Inuvik 66.86 347 P **P 02 47 57.5 +0.7**
INK Inuvik 66.86 347 P **P 02 47 57.5 +0.7**
comp=Z,1.4nm,0.6s,baz=21,slow=5.0,SNR=7.3
INK Inuvik 66.86 347 P **P 02 47 57.5 +0.7**
comp=Z,1.0nm,0.6s
LZH Lanzhou 67.16 62 *e*P **P 02 47 59.5 0.0**
LZH pP **pP 02 48 02.7 -1.6**
LZH sP **sP 02 48 04.2 -1.8**
LZH PP **PP 02 50 28.6 +1.5**
LZH pmax pmax
comp=Z,25nm,1.2s
LZH pmax pmax
comp=Z,83nm,7.5s
LZH LR LR
comp=N,460nm,14.5s
LZH LR LR
comp=E,430nm,15.0s
LZH LR LR
comp=Z,520nm,18.0s
YKW3 Yellowknife Ar 67.40 337 *e*P **P 02 47 58.8 -1.6**
comp=Z,0.1nm,0.9s
YKW3 Yellowknife Ar 67.40 337 *e*P **P 02 47 58.8 -1.6**
comp=Z,0.1nm,0.9s
YKA Yellowknife Ar 67.45 337 P **P 02 48 01.0 +0.3**
YKA Yellowknife Ar 67.45 337 P **P 02 48 01.0 +0.3**
comp=Z,0.9nm,0.6s,baz=41,slow=5.7,SNR=26
YKA Yellowknife Ar 67.45 337 P **P 02 48 01.0 +0.3**
comp=Z,1.0nm,0.6s
BILL Bilibino 68.03 11⇑ *e*P **P 02 48 04.9 +0.6**
BILL pmax pmax
comp=Z,10.0nm,1.2s
BILL Bilibino 68.03 11 *e*P **P 02 48 04.9 +0.6**
comp=Z,10.0nm,1.2s
FFC Flin Flon 68.68 326 *ce*P **P 02 48 09.1 +0.5**
FFC Flin Flon 68.68 326 *e*P **P 02 48 08.7 +0.1**
FFC Flin Flon 68.68 326 *e*P **P 02 48 09.1 +0.5**
ULM Lac du Bonnet 68.98 319 P **P 02 48 09.9 -0.5**
ULM Lac du Bonnet 68.98 319 P **P 02 48 09.9 -0.5**
comp=Z,1.6nm,0.3s,baz=56,slow=6.4,SNR=5.2
ULM Lac du Bonnet 68.98 319 P **P 02 48 10.0 -0.5**
comp=Z,2.0nm,0.3s
HHC Hu-ho-hao-te 69.09 53 *e*P **P 02 48 10.8 -0.7**
HHC sP **sP 02 48 17.9 -0.1**
HHC PcP **PcP 02 48 35.6 +0.1**
HHC PP **PP 02 50 45.2 +1.5**
HHC ScP 02 52 37.3
HHC PcS 02 52 39.2
HHC S **S 02 57 13.1 -3.3**
HHC ScS **SKSac 02 58 07.2 -3.8**
HHC SS **SS 03 01 40.5 -1.1**
HHC pmax pmax
comp=Z,34nm,0.7s
HHC pmax pmax
comp=Z,2µm,6.4s
HHC LR LR
comp=N,410nm,17.0s
HHC LR LR
comp=E,460nm,16.1s
HHC LR LR
comp=Z,460nm,16.3s
SEY Seymchan 70.05 19 *e*P **P 02 48 18.0 +1.1**
SEY Seymchan 70.05 19 *e*P **P 02 48 18.0 +1.1**
CD2 Chengdu 70.23 66 P **P 02 48 18.0 -0.6**
KMSC Kings Mountain 70.38 300⇑ P **P 02 48 19.1 -0.3**
baz=70
SFIN Scholer Farm 70.66 307⇓ P **P 02 48 19.4 -1.6**
baz=70
JSC Jenkinsville 70.87 299 *e*P **P 02 48 21.2 -1.2**
JSC Jenkinsville 70.87 299 *e*P **P 02 48 21.2 -1.2**
JSC Jenkinsville 70.87 299 *e*P **P 02 48 21.2 -1.2**
BOSA Boshof 71.50 169 P **P 02 48 26.1 0.0**
BOSA Boshof 71.50 169 P **P 02 48 26.1 0.0**
comp=Z,6.8nm,1.1s,baz=346,slow=5.6,SNR=6.2
BOSA Boshof 71.50 169 P **P 02 48 26.2 0.0**
comp=Z,7.0nm,1.1s
WCI Wyandotte Cave 71.54 305 *e*P **P 02 48 26.2 -0.3**
WCI pmax pmax
comp=Z,13nm,1.1s
WCI Wyandotte Cave 71.54 305 *e*P **P 02 48 26.2 -0.3**
comp=Z,13nm,1.1s
WCI Wyandotte Cave 71.54 305 *e*P **P 02 48 26.2 -0.3**
comp=Z,13nm,1.1s
ILAR Eielson Array 72.06 351 P **P 02 48 30.2 +1.2**
ILAR Eielson Array 72.06 351 P **P 02 48 30.2 +1.2**
comp=Z,0.9nm,0.9s,baz=5.9,slow=4.5,SNR=7.9
ILAR Eielson Array 72.06 351 P **P 02 48 30.2 +1.2**
comp=Z,1.0nm,0.9s
CPCT Cooper Cave 72.22 302 *e*P **P 02 48 30.5 0.0**
CPCT Cooper Cave 72.22 302 *e*P **P 02 48 30.5 0.0**
KMI Kunming 73.13 71 P **P 02 48 37.1 +0.7**
KMI pmax pmax
comp=Z,8.0nm,0.5s
A24A Westby 73.70 322⇓ P **P 02 48 39.6 +0.5**
baz=73
ECSD EROS Data Cent 73.76 315 *e*P **P 02 48 39.6 +0.1**
comp=Z,10nm,1.1s
ECSD EROS Data Cent 73.76 315 *e*P **P 02 48 39.6 +0.1**
comp=Z,10nm,1.1s
KLR Kul'dur 73.99 37 *e*P **P 02 48 38.2 -2.5**
DGMT Dagmar 74.12 322⇑ P **P 02 48 41.8 +0.2**
baz=74
TIGA Tifton 74.18 298⇑ P **P 02 48 42.8 +0.6**
baz=74
B23A Brockton 74.48 323⇑ P **P 02 48 43.9 +0.2**
baz=74
A22A Carney Farms, 74.50 323⇓ P **P 02 48 44.3 +0.4**
baz=74
CMAR Chiang Mai Arr 74.64 79 P **P 02 48 44.5 -0.5**
CMAR Chiang Mai Arr 74.64 79 P **P 02 48 44.5 -0.5**
comp=Z,1.9nm,0.6s,baz=301,slow=7.0,SNR=7.7
CMAR Chiang Mai Arr 74.64 79 P **P 02 48 44.5 -0.5**
comp=Z,2.0nm,0.6s
PLAL Pickwick Lake 74.73 303 *e*P P 02 48 52.3 +6.9
CN2 Changchun 74.87 44 *e*P **P 02 48 46.9 +1.0**
CN2 *es*P **sP 02 48 54.0 +1.5**
CN2 *e*S **S 02 58 19.7 -2.7**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,600nm,13.0s
CN2 LR LR
comp=E,500nm,13.0s
CN2 LR LR
comp=Z,1µm,14.0s
C24A Savage 74.91 322⇑ P **P 02 48 46.7 +0.5**
baz=75
A21A Bergtoll Ranch 74.95 324⇓ P **P 02 48 46.5 +0.1**
baz=75
GYA Guiyang 75.01 68 *e*P **P 02 48 45.8 -1.4**
GYA pmax pmax
comp=Z,10.0nm,0.8s
LRAL Lakeview Retre 75.34 301 *e*P **P 02 48 48.0 -0.8**
comp=Z,8.1nm,0.7s
LRAL Lakeview Retre 75.34 301 *e*P **P 02 48 48.0 -0.8**
comp=Z,8.1nm,0.7s
C22A Vida 75.42 322⇑ P **P 02 48 49.4 +0.2**
baz=75
A20A Cobblestone Ra 75.47 324⇓ P **P 02 48 49.7 +0.3**
baz=75
D23A Lindsay 75.53 322⇓ P **P 02 48 50.5 +0.7**
baz=75
A19A Klindworth Far 75.78 325⇑ P **P 02 48 51.9 +0.6**
baz=76
C21A Desert Coulee 75.90 323⇑ P **P 02 48 52.5 +0.6**
baz=76
D22A Cohagen 76.00 322⇑ P **P 02 48 53.2 +0.7**
baz=76
BGNE Belgrade 76.19 314⇓ P **P 02 48 53.7 +0.1**
baz=76
B19A Brinkman Farms 76.23 325⇓ P **P 02 48 54.2 +0.4**
baz=76
A18A Metzger Ranch, 76.26 325⇓ P **P 02 48 54.3 +0.4**
baz=76
MDJ Mudanjiang 76.36 41 P **P 02 48 51.3 -3.2**
MDJ pmax pmax
comp=Z,7.0nm,2.1s
MDJ pmax pmax
comp=Z,380nm,4.7s
C20A Veseth Ranch, 76.39 324⇑ P **P 02 48 55.0 +0.3**
baz=76
D21A La Casta Ranch 76.43 323⇑ P **P 02 48 55.6 +0.7**
baz=76
A17A Triple J Farms 76.59 326⇑ P **P 02 48 56.0 +0.1**
baz=76
B18A Beardsley Farm 76.63 325⇓ P **P 02 48 56.5 +0.4**
baz=76
C19A Slack Wire Ran 76.83 324⇑ P **P 02 48 58.0 +0.8**
baz=77
EGMT Eagleton 76.91 325 *e*P **P 02 48 58.7 +1.1**
EGMT Eagleton 76.91 325⇑ P **P 02 48 58.3 +0.6**
baz=77
EGMT Eagleton 76.91 325 *e*P **P 02 48 58.7 +1.1**
D20A Manuel Ranch, 76.92 323⇑ P **P 02 48 58.1 +0.4**
baz=77
KSU1 Kansas State U 76.97 311 *e*P **P 02 48 58.2 +0.2**
comp=Z,15nm,0.8s
KSU1 Kansas State U 76.97 311 *e*P **P 02 48 58.2 +0.2**
comp=Z,15nm,0.8s
H24A Dirks Ranch, A 77.02 320⇑ P **P 02 48 58.8 +0.5**
baz=77
G23A Biddle 77.08 320⇓ P **P 02 48 58.9 +0.2**
baz=77
B17A L&G Farms, Che 77.14 325⇑ P **P 02 48 59.2 +0.3**
baz=77,SNR=9.0
D19A Cripps Ranch, 77.19 324⇑ P **P 02 48 59.4 +0.2**
baz=77
K27A Flueckinger Fa 77.39 317⇑ P **P 02 49 00.2 -0.2**
baz=77
A15A Johnson Ranch, 77.40 327⇓ P **P 02 49 00.1 -0.3**
baz=77,SNR=5.9
C17A Wham Farm, 77.64 325⇑ P **P 02 49 02.2 +0.4**
baz=77,SNR=9.2
A14A Double T Ranch 77.69 327⇓ P **P 02 49 02.3 +0.3**
baz=77,SNR=18
E19A Rath Farm, Rou 77.69 323⇑ P **P 02 49 02.5 +0.4**
baz=77
USRK Ussuriysk Arra 77.83 40 P **P 02 49 03.7 +1.0**
comp=Z,4.7nm,0.9s,baz=240,slow=5.0,SNR=5.9
B15A Bradely Ranch, 77.86 326⇓ P **P 02 49 03.0 0.0**
baz=78
F20A Billings 77.91 322⇓ P **P 02 49 03.5 +0.2**
baz=78
C16A Fuhringer Ranc 77.92 326⇑ P **P 02 49 03.1 -0.3**
baz=78
D17A Six Diamond Ra 77.98 325⇑ P **P 02 49 03.8 +0.1**
baz=78
E18A Harlowton 78.10 324⇑ P **P 02 49 04.6 +0.2**
baz=78
B14A Marquette Ranc 78.11 327⇓ P **P 02 49 04.2 -0.2**
baz=78
F19A Roth Farm, Mol 78.22 323⇓ P **P 02 49 05.2 +0.1**
baz=78
G20A Bridger 78.38 322⇑ P **P 02 49 06.1 +0.1**
baz=78
D16A Dana Ranch, Ca 78.45 325⇑ P **P 02 49 06.4 +0.1**
baz=78
F18A Big Timber 78.53 323⇑ P **P 02 49 07.3 +0.5**
baz=78
B13A Whitefish 78.58 327⇑ P **P 02 49 07.3 +0.4**
baz=78
I22A 9 Mile Ranch, 78.58 320⇓ P **P 02 49 07.5 +0.4**
baz=78
A12A Yaak River Ran 78.59 328⇓ P **P 02 49 07.4 +0.4**
baz=78
E17A Martinsdale 78.59 324⇑ P **P 02 49 07.5 +0.3**
baz=78
TUL1 Tulsa 78.73 309⇑ P **P 02 49 08.4 +0.5**
baz=78
C14A Swan Lake 78.78 327⇓ P **P 02 49 07.9 -0.2**
baz=78
BLMT Blacktail Moun 78.83 327 *e*P **P 02 49 07.8 -0.7**
BLMT Blacktail Moun 78.83 327 *e*P **P 02 49 07.8 -0.7**
H20A Greybull 78.84 321⇑ P **P 02 49 09.1 +0.5**
baz=79
E16A East Helena 78.89 325⇓ P **P 02 49 09.2 +0.5**
baz=79
RLMT Red Lodge 78.93 323 *e*P P 02 49 13.0 +3.9
RLMT Red Lodge 78.93 323⇑ P **P 02 49 09.8 +0.6**
baz=79
F17A Fitzpatrick Pl 78.94 324⇓ P **P 02 49 09.5 +0.5**
baz=79
JTMT Jette 79.01 327 *e*P **P 02 49 10.2 +0.8**
JTMT Jette 79.01 327 *e*P **P 02 49 10.2 +0.8**
I21A Big Trails, Te 79.03 321⇓ P **P 02 49 10.0 +0.4**
baz=79
SWMT Swartz Lake 79.08 327 *e*P **P 02 49 08.8 -1.0**
SWMT Swartz Lake 79.08 327 *e*P **P 02 49 08.8 -1.0**
BSMT Bassoo Peak 79.13 327 *e*P **P 02 49 11.3 +1.2**
BSMT Bassoo Peak 79.13 327 *e*P **P 02 49 11.3 +1.2**
H19A Powell 79.15 322⇓ P **P 02 49 10.9 +0.6**
baz=79
C13A Hot Springs 79.18 327⇑ P **P 02 49 10.9 +0.6**
baz=79,SNR=11
D14A Greenough 79.22 326⇑ P **P 02 49 10.6 +0.1**
baz=79
I20A Worland 79.31 321⇑ P **P 02 49 10.4 -0.7**
baz=79
O27A Beecher Island 79.35 315⇓ P **P 02 49 11.7 +0.3**
baz=79
E15A Deer Lodge 79.39 325⇑ P **P 02 49 11.9 +0.4**
baz=79,SNR=8.8
J21A Lysite 79.45 320⇓ P **P 02 49 12.2 +0.2**
baz=79
H18A Shoshone NF, C 79.45 322⇑ P **P 02 49 12.3 +0.2**
baz=79
F16A Kennard Place, 79.46 324⇓ P **P 02 49 12.6 +0.7**
baz=79
KDAK Kodiak Island 79.50 352 P **P 02 49 11.8 +0.2**
KDAK Kodiak Island 79.50 352 P **P 02 49 11.8 +0.2**
comp=Z,6.1nm,1.0s,baz=350,slow=4.0,SNR=4.6
KDAK Kodiak Island 79.50 352 P **P 02 49 11.9 +0.2**
comp=Z,6.0nm,1.0s
C12B Naegeli Ranch, 79.52 328⇓ P **P 02 49 12.6 +0.5**
baz=79
K22A Casper 79.54 319⇓ P **P 02 49 12.2 -0.2**
baz=79
BOZ Bozeman (W) 79.57 324⇑ P **P 02 49 13.3 +0.8**
baz=79,SNR=9.8
M24A Cheyenne 79.60 318⇑ P **P 02 49 13.6 +0.8**
baz=79
D13A Huson 79.61 327⇑ P **P 02 49 13.0 +0.4**
baz=79,SNR=11
MSO Missoula 79.61 326⇓ P **P 02 49 13.2 +0.6**
baz=79
I19A Meeteetse 79.65 322⇑ P **P 02 49 13.5 +0.4**
baz=79
NEW Newport 79.71 329 *e*P **P 02 49 13.7 +0.6**
NEW Newport 79.71 329⇓ P **P 02 49 13.5 +0.4**
baz=79
NEW Newport 79.71 329 *e*P **P 02 49 13.7 +0.6**
C11A Tepee Creek (N 79.72 328⇓ P **P 02 49 13.4 +0.2**
baz=79
J20A Shoshoni 79.75 321⇑ P **P 02 49 14.2 +0.6**
baz=80
E14A Clinton 79.75 326⇓ P **P 02 49 13.5 0.0**
baz=80
LRM Limekiln Ridge 79.78 325 *e*P **P 02 49 12.8 -0.9**
comp=Z,21nm,0.7s
LRM Limekiln Ridge 79.78 325 *e*P **P 02 49 12.9 -0.9**
comp=Z,21nm,0.7s
F15A Butte 79.78 325⇓ P **P 02 49 14.4 +0.6**
baz=80
LKWY Lake 79.87 323 *e*P **P 02 49 16.7 +2.4**
LKWY Lake 79.87 323 *e*P **P 02 49 16.7 +2.4**
LKWY Lake 79.87 323 *e*P **P 02 49 16.7 +2.4**
L22A Ellis Ranch, M 79.97 319⇓ P **P 02 49 15.2 +0.3**
baz=80
G16A Moss Hill, Enn 79.97 324⇓ P **P 02 49 15.5 +0.8**
baz=80,SNR=7.6
D12A Red Ives Fores 80.00 327⇓ P **P 02 49 14.7 0.0**
baz=80
E13A Victor 80.02 326⇓ P **P 02 49 15.0 +0.1**
baz=80
H17A Grant Village 80.08 323⇓ P **P 02 49 17.5 +2.1**
baz=80,SNR=5.2
N24A Carr 80.10 317⇑ P **P 02 49 16.2 +0.7**
baz=80
H16A Russell Place, 80.14 323⇑ P **P 02 49 16.7 +1.0**
baz=80
P26A Davis Ranch, A 80.26 315⇓ P **P 02 49 16.9 +0.5**
baz=80
KSCO Kaye Shedlock' 80.29 315⇑ P **P 02 49 17.2 +0.7**
baz=80
G15A Dillon 80.32 324⇓ P **P 02 49 16.9 +0.3**
baz=80
YSS Yuzh-Sakhalins 80.40 32 *e*P **P 02 49 19.9 +3.2**
K20A Yellowstone Ra 80.40 320⇑ P **P 02 49 17.6 +0.5**
baz=80
I17A Pilgrim Ck. 80.46 323⇓ P **P 02 49 17.4 0.0**
baz=80
L21A Rawlins 80.47 319⇑ P **P 02 49 17.9 +0.3**
baz=80
M22A Cedar Creek Ra 80.52 319⇑ P **P 02 49 18.2 +0.3**
baz=80
N23A Red Feather La 80.58 318⇑ P **P 02 49 18.5 +0.3**
baz=80
F13A Darby 80.60 326⇑ P **P 02 49 18.5 +0.4**
baz=80,SNR=10
BDFB Brasilia 80.64 239 P **P 02 49 19.2 +0.7**
BDFB Brasilia 80.64 239 P **P 02 49 19.2 +0.7**
comp=Z,5.7nm,0.9s,baz=15,slow=3.8,SNR=6.5
BDFB Brasilia 80.64 239 P **P 02 49 19.2 +0.7**
MOOW Moose Ponds 80.67 323 *e*P **P 02 49 20.0 +1.4**
MOOW Moose Ponds 80.67 323 *e*P **P 02 49 20.0 +1.4**
KSAR Wonju Array Be 80.72 47 P **P 02 49 19.2 +0.6**
KSAR Wonju Array Be 80.72 47 P **P 02 49 19.2 +0.6**
P25A Willow Gulch B 80.72 316⇑ P **P 02 49 19.6 +0.7**
baz=80,SNR=5.7
O24A Longmont 80.73 317⇑ P **P 02 49 19.7 +0.8**
baz=80
KSRS Korea Array 80.73 47 P **P 02 49 19.2 +0.6**
comp=Z,1.4nm,0.7s,baz=332,slow=4.8,SNR=8.5
KSRS Korea Array 80.73 47 P **P 02 49 19.3 +0.6**
comp=Z,1.0nm,0.7s
M21A Separation Pea 80.74 319⇑ P **P 02 49 19.0 -0.1**
baz=80
J18A Kendall Valley 80.76 322⇓ P **P 02 49 19.7 +0.6**
baz=80,SNR=7.9
H15A Lima 80.82 324⇑ P **P 02 49 20.5 +1.1**
baz=80
BW06 Boulder Array 80.89 321⇓ P **P 02 49 19.4 -0.4**
baz=81
PDAR Pinedale Array 80.89 321 P **P 02 49 19.6 -0.3**
PDAR Pinedale Array 80.89 321 P **P 02 49 19.6 -0.3**
comp=Z,0.9nm,0.7s,baz=54,slow=4.6,SNR=5.9
PDAR Pinedale Array 80.89 321 P **P 02 49 19.5 -0.3**
I16A Newdale 80.90 323⇑ P **P 02 49 20.8 +1.1**
baz=81,SNR=5.3
L20A Wamsutter 80.90 320⇑ P **P 02 49 20.9 +1.1**
baz=81
N22A Wattenberg Ran 80.91 318⇑ P **P 02 49 20.8 +0.8**
baz=81
R27A Eads 80.92 314⇑ P **P 02 49 20.4 +0.6**
baz=81
F12A Elk City 81.01 326⇓ P **P 02 49 20.8 +0.5**
baz=81,SNR=6.6
O23A Lake Granby, G 81.09 317⇓ P **P 02 49 21.6 +0.6**
baz=81
G13A Cobalt 81.12 325⇓ P **P 02 49 21.3 +0.4**
baz=81
H14A Leadore 81.13 325⇑ P **P 02 49 21.5 +0.5**
baz=81
Q25A Bedland, Calha 81.21 316⇓ P **P 02 49 22.3 +0.8**
baz=81
K18A Toltan Ranch, 81.21 321⇑ P **P 02 49 21.7 +0.1**
baz=81
M20A Sweetwater, Wa 81.23 320⇑ P **P 02 49 21.9 +0.3**
baz=81
ISCO Idaho Springs 81.24 317 *e*P **P 02 49 23.1 +1.3**
ISCO Idaho Springs 81.24 317 *e*P **P 02 49 23.1 +1.3**
ISCO Idaho Springs 81.24 317⇑ P **P 02 49 22.3 +0.5**
baz=81
ISCO Idaho Springs 81.24 317 *e*P **P 02 49 23.1 +1.3**
R26A Arlington 81.25 315⇓ P **P 02 49 22.3 +0.7**
baz=81
L19A Farson 81.31 321⇓ P **P 02 49 22.6 +0.6**
baz=81
T28A Walsh 81.41 313⇓ P **P 02 49 23.2 +0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=81						
O22A	**Kremmling**	**81.44**	**318**	⇓P	**P**	**02 49 23.4**	**+0.5**
	baz=81,SNR=6.0						
N21A	**Black Mountain**	**81.46**	**319**	⇓P	**P**	**02 49 23.3**	**+0.4**
	baz=81,SNR=8.6						
G12A	**Big Creek, Yel**	**81.55**	**326**	⇓P	**P**	**02 49 23.3**	**+0.1**
	baz=81						
H13A	**Challis**	**81.56**	**325**	⇑P	**P**	**02 49 23.5**	**+0.3**
	baz=81						
Q24A	**Divide**	**81.64**	**316**	⇑P	**P**	**02 49 24.3**	**+0.4**
	baz=81						
P23A	**Jefferson**	**81.68**	**317**	⇑P	**P**	**02 49 24.0**	**-0.2**
	baz=81						
J15A	**Blackfoot**	**81.69**	**323**	⇑P	**P**	**02 49 24.7**	**+0.7**
	baz=81						
I14A	**Mackay**	**81.72**	**324**	⇓P	**P**	**02 49 25.4**	**+1.3**
	baz=81,SNR=12						
S26A	**Kim**	**81.76**	**314**	⇑P	**P**	**02 49 25.3**	**+0.9**
	baz=82						
L18A	**Fontenelle, Gr**	**81.77**	**321**	⇑P	**P**	**02 49 24.5**	**0.0**
	baz=82						
K16A	**Soda Springs**	**81.77**	**322**	⇓P	**P**	**02 49 25.4**	**+1.0**
	baz=82						
R25A	**Fountain Ranch**	**81.80**	**315**	⇑P	**P**	**02 49 25.1**	**+0.5**
	baz=82						
H12A	**Diamond D Ranc**	**81.82**	**325**	⇓P	**P**	**02 49 24.6**	**0.0**
	baz=82,SNR=5.6						
P22A	**Eagle**	**81.97**	**318**	⇓P	**P**	**02 49 26.3**	**+0.7**
	baz=82						
L17A	**Cokeville**	**82.02**	**322**	⇓P	**P**	**02 49 25.9**	**+0.2**
	baz=82						
I13A	**Wildhorse Cree**	**82.02**	**325**	⇓P	**P**	**02 49 26.8**	**+1.1**
	baz=82,SNR=14						
X31A	**McDonald Ranch**	**82.04**	**310**	⇓P	**P**	**02 49 26.8**	**+1.0**
	baz=82						
N19A	**John Jarvie Ra**	**82.16**	**320**	⇓P	**P**	**02 49 26.9**	**+0.4**
	baz=82						
T26A	**Comanche Natio**	**82.16**	**314**	⇓P	**P**	**02 49 27.3**	**+0.7**
	baz=82						
R24A	**Sanders Place,**	**82.17**	**316**	⇓P	**P**	**02 49 27.4**	**+0.8**
	baz=82						
M18A	**Lyman**	**82.17**	**321**	⇑P	**P**	**02 49 27.4**	**+0.8**
	baz=82						
Y32A	**R-V Farms, Ver**	**82.19**	**309**	⇓P	**P**	**02 49 27.1**	**+0.6**
	baz=82						
J14A	**Carey**	**82.23**	**324**	⇑P	**P**	**02 49 27.4**	**+0.6**
	baz=82						
S25A	**Robets Cordova**	**82.24**	**315**	⇑P	**P**	**02 49 27.5**	**+0.5**
	baz=82,SNR=8.4						
O20A	**White River Ci**	**82.30**	**319**	⇑P	**P**	**02 49 27.7**	**+0.5**
	baz=82						
K15A	**Arbon**	**82.31**	**323**	⇓P	**P**	**02 49 27.6**	**+0.5**
	baz=82						
N18A	**Larsen Ranch,**	**82.33**	**320**	⇓P	**P**	**02 49 28.1**	**+0.7**
	baz=82						
L16A	**Fish Haven**	**82.34**	**322**	⇓P	**P**	**02 49 27.9**	**+0.4**
	baz=82						
P21A	**Newcastle**	**82.37**	**318**	⇑P	**P**	**02 49 28.4**	**+0.7**
	baz=82						
M17A	**Scullys Gap (B**	**82.41**	**321**	⇑P	**P**	**02 49 27.8**	**-0.1**
	baz=82						
HLID	**Hailey**	**82.43**	**325**	⇑P	**P**	**02 49 28.2**	**+0.4**
	baz=82						
J13A	**Cove Ranch, Pi**	**82.46**	**324**	⇑P	**P**	**02 49 28.4**	**+0.4**
	baz=82						
I12A	**Atlanta**	**82.55**	**325**	⇓P	**P**	**02 49 29.2**	**+0.8**
	baz=82						
R23A	**Moffat**	**82.57**	**316**	⇓P	**P**	**02 49 29.1**	**+0.3**
	baz=82						
O19A	**Miners Draw (B**	**82.60**	**319**	⇓P	**P**	**02 49 29.5**	**+0.8**
	baz=82						
Q22A	**Crested Butte,**	**82.61**	**317**	⇓P	**P**	**02 49 29.5**	**+0.5**
	baz=82,SNR=9.6						
T25A	**Trinidad**	**82.62**	**314**	⇓P	**P**	**02 49 29.3**	**+0.3**
	baz=82						
S24A	**Houchin Ranch,**	**82.67**	**315**	⇓P	**P**	**02 49 29.6**	**+0.3**
	baz=82						
X30A	**Coker Ranch, T**	**82.68**	**311**	⇑P	**P**	**02 49 29.9**	**+0.7**
	baz=82						
Y31A	**Rekieta Farm,**	**82.69**	**310**	⇓P	**P**	**02 49 29.7**	**+0.5**
	baz=82						
K14A	**Jones Ranch, D**	**82.70**	**323**	⇑P	**P**	**02 49 30.0**	**+0.7**
	baz=82						
Z32A	**Haskell**	**82.71**	**309**	⇓P	**P**	**02 49 29.8**	**+0.5**
	baz=82						
L15A	**Malad City**	**82.78**	**322**	⇑P	**P**	**02 49 29.8**	**+0.1**
	baz=82						
U26A	**Atchley Ranch,**	**82.82**	**314**	⇑P	**P**	**02 49 30.5**	**+0.5**
	baz=83						
N17A	**Moffit Pass**	**82.91**	**321**	⇓P	**P**	**02 49 30.2**	**-0.3**
	baz=83,SNR=5.7						
M16A	**Huntsville**	**82.98**	**322**	⇓P	**P**	**02 49 30.9**	**+0.1**
	baz=83						
T24A	**Torres, Weston**	**83.01**	**315**	⇓P	**P**	**02 49 32.1**	**+1.0**
	baz=83						
R22A	**Saguache, Gunn**	**83.01**	**317**	⇓P	**P**	**02 49 32.4**	**+1.3**
	baz=83,SNR=9.2						
P19A	**Cripple Cowboy**	**83.04**	**319**	⇑P	**P**	**02 49 31.4**	**+0.2**
	baz=83						
O18A	**Roosevelt**	**83.05**	**320**	⇑P	**P**	**02 49 31.0**	**-0.1**
	baz=83						
Z31A	**Sharp Cattle R**	**83.09**	**309**	⇓P	**P**	**02 49 31.6**	**+0.3**
	baz=83						
MFID	**Camas Ranch**	**83.15**	**325**	⇓P	**P**	**02 49 31.9**	**+0.3**
	baz=83						
U25A	**Circle Dot Ran**	**83.17**	**314**	⇓P	**P**	**02 49 32.8**	**+1.0**
	baz=83,SNR=12						
Q20A	**Ridgley Place,**	**83.23**	**318**	⇑P	**P**	**02 49 32.0**	**-0.1**
	baz=83						
V26A	**Tequesquite Ra**	**83.29**	**313**	⇑P	**P**	**02 49 32.5**	**+0.1**
	baz=83						
R21A	**Cimarron**	**83.31**	**317**	⇑P	**P**	**02 49 32.8**	**+0.2**
	baz=83						
S22A	**4UR Ranch, Cre**	**83.42**	**316**	⇑P	**P**	**02 49 33.9**	**+0.7**
	baz=83,SNR=7.3						
W27A	**Bowe Ranch, En**	**83.44**	**312**	⇓P	**P**	**02 49 33.5**	**+0.4**
	baz=83						
O17A	**Robinson Place**	**83.45**	**320**	⇓P	**P**	**02 49 33.2**	**-0.1**
	baz=83						
JLU	**Jordanelle**	**83.46**	**321**	*e*P	**P**	**02 49 33.8**	**+0.5**
JLU	**Jordanelle**	**83.46**	**321**	*e*P	**P**	**02 49 33.8**	**+0.5**
T23A	**Casias Ranch,**	**83.55**	**315**	⇓P	**P**	**02 49 34.7**	**+0.8**
	baz=83,SNR=5.7						
Y29A	**Porterfield Fa**	**83.56**	**311**	⇓P	**P**	**02 49 33.8**	**+0.1**
	baz=83						
U24A	**Moreno Valley**	**83.63**	**315**	⇑P	**P**	**02 49 34.9**	**+0.6**
	baz=83						
P18A	**Preston Nutter**	**83.66**	**320**	⇑P	**P**	**02 49 33.7**	**-0.8**
	baz=83						
Z30A	**Sanderson Ranc**	**83.67**	**310**	⇑P	**P**	**02 49 34.7**	**+0.4**
	baz=84						
V25A	**Rancho No Teng**	**83.71**	**314**	⇓P	**P**	**02 49 34.8**	**+0.2**
	baz=84						
Q19A	**Hogan Spring (**	**83.71**	**319**	⇓P	**P**	**02 49 34.4**	**0.0**
	baz=83						
R20A	**Redvale**	**83.86**	**318**	⇑P	**P**	**02 49 35.6**	**+0.2**
	baz=84						
S21A	**Coal Bank Pass**	**83.97**	**317**	⇓P	**P**	**02 49 36.9**	**+0.8**
	baz=84,SNR=10						
T22A	**Edith**	**84.02**	**316**	⇑P	**P**	**02 49 37.1**	**+0.9**
	baz=84,SNR=9.6						
Z29A	**Hungry Hill Ra**	**84.02**	**310**	⇑P	**P**	**02 49 36.8**	**+0.7**
	baz=84						
W25A	**X Bar L Ranch,**	**84.09**	**313**	⇓P	**P**	**02 49 37.1**	**+0.6**
	baz=84,SNR=5.5						
MSTX	**Muleshoe**	**84.09**	**311**	⇓P	**P**	**02 49 37.2**	**+0.7**
	baz=84						
S20A	**Disappointment**	**84.13**	**317**	⇑P	**P**	**02 49 37.0**	**+0.2**
	baz=84						
V24A	**Rampart Ranch,**	**84.14**	**314**	⇑P	**P**	**02 49 37.4**	**+0.5**
	baz=84						
U23A	**El Rito**	**84.17**	**315**	⇓P	**P**	**02 49 37.7**	**+0.7**
	baz=84						
O15A	**The Old Anders**	**84.19**	**321**	⇑P	**P**	**02 49 37.3**	**+0.4**
	baz=84						
SRU	**San Rafael**	**84.20**	**319**	⇑P	**P**	**02 49 37.4**	**+0.4**
	baz=84						
X26A	**CR and CF Fran**	**84.23**	**312**	⇓P	**P**	**02 49 37.7**	**+0.5**
	baz=84						
332A	**Millersview**	**84.26**	**308**	⇑P	**P**	**02 49 38.4**	**+1.1**
	baz=84						
T21A	**Navajo Lake**	**84.36**	**316**	⇑P	**P**	**02 49 38.2**	**+0.3**
	baz=84						
Y27A	**Causey**	**84.38**	**312**	⇓P	**P**	**02 49 38.2**	**+0.3**
	baz=84						
DUG	**Dugway**	**84.42**	**322**	*e*P	**P**	**02 49 39.0**	**+0.9**
DUG	**Dugway**	**84.42**	**322**	*e*P	**P**	**02 49 39.0**	**+0.9**
DUG	**Dugway**	**84.42**	**322**	⇑P	**P**	**02 49 38.5**	**+0.4**
	baz=84						
DUG	**Dugway**	**84.42**	**322**	*e*P	**P**	**02 49 39.0**	**+0.9**
U22A	**Llaves**	**84.48**	**315**	⇓P	**P**	**02 49 39.8**	**+1.3**
	baz=84,SNR=12						
W24A	**Lazy 6 Ranch,**	**84.60**	**314**	⇓P	**P**	**02 49 40.0**	**+0.8**
	baz=84,SNR=5.4						
V23A	**Ortiz Mt. (NFS**	**84.61**	**315**	⇑P	**P**	**02 49 40.0**	**+0.8**
	baz=84						
Q16A	**Castle Valley**	**84.66**	**320**	⇑P	**P**	**02 49 39.5**	**+0.1**
	baz=84						
P15A	**Leamington**	**84.67**	**321**	⇑P	**P**	**02 49 40.1**	**+0.8**
	baz=84						
MVCO	**Mesa Verde**	**84.68**	**317**	*e*P	**P**	**02 49 40.5**	**+0.9**
MVCO	**Mesa Verde**	**84.68**	**317**	⇑P	**P**	**02 49 40.2**	**+0.6**
	baz=84						
MVCO	**Mesa Verde**	**84.68**	**317**	*e*P	**P**	**02 49 40.5**	**+0.9**
Y26A	**Elida**	**84.71**	**312**	⇓P	**P**	**02 49 40.3**	**+0.6**
	baz=84						
331A	**San Angelo**	**84.72**	**308**	⇓P	**P**	**02 49 40.1**	**+0.5**
	baz=84						
U21A	**Nageezi**	**84.85**	**316**	⇑P	**P**	**02 49 40.9**	**+0.4**
	baz=85						
128A	**Castleberry Fa**	**84.93**	**310**	⇑P	**P**	**02 49 41.2**	**+0.5**
	baz=85						
JCT	**Junction City**	**84.95**	**307**	⇓P	**P**	**02 49 41.6**	**+0.7**
	baz=85						
ROSC	**El Rosal**	**85.01**	**272**	P	**P**	**02 49 41.8**	**0.0**
ROSC	**El Rosal**	**85.01**	**272**	P	**P**	**02 49 41.8**	**0.0**
	comp=Z,1.5nm,0.4s,baz=103,slow=22,SNR=2.1						
ROSC	**El Rosal**	**85.01**	**272**	P	**P**	**02 49 41.8**	**0.0**
S18A	**Hurst Farm, Bl**	**85.05**	**318**	⇑P	**P**	**02 49 41.2**	**-0.3**
	baz=85						
330A	**Mertzon**	**85.08**	**309**	⇑P	**P**	**02 49 42.0**	**+0.5**
	baz=85						
Y25A	**Mesa, Roswell**	**85.19**	**313**	⇑P	**P**	**02 49 42.2**	**+0.1**
	baz=85						
532A	**Rocksprings**	**85.27**	**307**	⇓P	**P**	**02 49 42.9**	**+0.5**
	baz=85						
431A	**Sonora**	**85.28**	**308**	⇓P	**P**	**02 49 42.9**	**+0.4**
	baz=85						
Z26A	**Caprock**	**85.28**	**312**	⇑P	**P**	**02 49 43.3**	**+0.8**
	baz=85,SNR=10						
127A	**Arkansas Junct**	**85.38**	**311**	⇑P	**P**	**02 49 43.7**	**+0.7**
	baz=85						
329A	**Wagon Wheel Ra**	**85.48**	**309**	⇓P	**P**	**02 49 44.1**	**+0.6**
	baz=85						
430A	**Baggett Ranch,**	**85.57**	**308**	⇑P	**P**	**02 49 44.4**	**+0.4**
	baz=85						
Y24A	**Capitan**	**85.59**	**313**	⇓P	**P**	**02 49 44.7**	**+0.5**
	baz=85						
531A	**Rocksprings**	**85.62**	**307**	⇑P	**P**	**02 49 44.5**	**+0.3**
	baz=85						
632A	**Uvalde**	**85.65**	**306**	⇓P	**P**	**02 49 45.3**	**+1.0**
	baz=85						
Z25A	**Roswell**	**85.68**	**312**	⇓P	**P**	**02 49 45.5**	**+1.0**
	baz=86						
V20A	**Brimhall**	**85.75**	**316**	⇓P	**P**	**02 49 45.4**	**+0.4**
	baz=86						
126A	**Clayton Basin,**	**85.78**	**311**	⇑P	**P**	**02 49 45.9**	**+0.9**
	baz=86						
Y23A	**Lovelace Mesa,**	**85.92**	**313**	⇓P	**P**	**02 49 45.7**	**-0.1**
	baz=86						
328A	**Wristen Ranch,**	**86.04**	**310**	⇑P	**P**	**02 49 46.5**	**+0.3**
	baz=86						
429A	**Davenport Ranc**	**86.07**	**309**	⇓P	**P**	**02 49 46.8**	**+0.4**
	baz=86						
530A	**J-C Ranch, Com**	**86.10**	**308**	⇓P	**P**	**02 49 47.0**	**+0.5**
	baz=86						
125A	**Gardner Draw,**	**86.12**	**312**	⇑P	**P**	**02 49 46.5**	**-0.2**
	baz=86						
631A	**Perdido Creek**	**86.19**	**307**	⇑P	**P**	**02 49 47.5**	**+0.5**
	baz=86						
226B	**Tecolote Peak,**	**86.28**	**311**	⇓P	**P**	**02 49 47.8**	**+0.3**
	baz=86						
Z23A	**Rita Site, Whi**	**86.52**	**313**	⇑P	**P**	**02 49 49.8**	**+1.1**
	baz=86						
124A	**Stringfield Ra**	**86.53**	**312**	⇓P	**P**	**02 49 49.5**	**+0.6**
	baz=86						
529A	**Stev Forest Ra**	**86.63**	**308**	⇓P	**P**	**02 49 50.1**	**+0.9**
	baz=86						
MJAR	**Matsushiro Arr**	**86.75**	**41**	P	**P**	**02 49 49.9**	**+0.3**
MJAR	**Matsushiro Arr**	**86.75**	**41**	P	**P**	**02 49 49.9**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=309,slow=5.2,SNR=4.2						
MJAR	**Matsushiro Arr**	**86.75**	**41**	P	**P**	**02 49 49.9**	**+0.3**
	comp=Z,1.0nm,0.6s						
427A	**Hayter Ranch,**	**86.77**	**310**	⇓P	**P**	**02 49 50.7**	**+0.8**
	baz=87						
528A	**Cox Ranch, San**	**86.93**	**309**	⇑P	**P**	**02 49 51.2**	**+0.5**
	baz=87						
224A	**Cornudas Mount**	**87.04**	**312**	⇓P	**P**	**02 49 51.9**	**+0.6**
	baz=87						
MNTX	**Cornudas Mount**	**87.25**	**312**	⇓P	**P**	**02 49 53.3**	**+1.2**
	baz=87						
426A	**McDonald Obser**	**87.26**	**310**	⇑P	**P**	**02 49 52.1**	**-0.3**
	baz=87						
527A	**Woodward Ranch**	**87.42**	**309**	⇑P	**P**	**02 49 53.9**	**+0.8**
	baz=87						
628A	**Black Gap, Mar**	**87.49**	**308**	⇓P	**P**	**02 49 52.8**	**-0.5**
	baz=87						
324A	**Moseley Ranch,**	**87.50**	**311**	⇑P	**P**	**02 49 53.4**	**-0.1**
	baz=87						
526A	**Mary Lane Ranc**	**87.75**	**310**	⇑P	**P**	**02 49 55.3**	**+0.5**
	baz=88						
627A	**Terlingua Ranc**	**87.81**	**309**	⇑P	**P**	**02 49 55.7**	**+0.7**
	baz=88						
Z20A	**Nine Sixteen R**	**87.90**	**315**	⇓P	**P**	**02 49 55.8**	**+0.4**
	baz=88						
TXAR	**Lajitas Array**	**88.05**	**309**	P	**P**	**02 49 57.0**	**+0.9**
TXAR	**Lajitas Array**	**88.05**	**309**	P	**P**	**02 49 57.0**	**+0.9**
	comp=Z,1.6nm,1.1s,baz=34,slow=6.6,SNR=8.9						
TXAR	**Lajitas Array**	**88.05**	**309**	P	**P**	**02 49 57.0**	**+0.9**
	comp=Z,2.0nm,1.1s						
626A	**Big Bend Ranch**	**88.16**	**309**	⇑P	**P**	**02 49 57.1**	**+0.5**
	baz=88						
NVAR	**Mina Array Bea**	**88.32**	**324**	P	**P**	**02 49 57.3**	**-0.1**
NVAR	**Mina Array Bea**	**88.32**	**324**	P	**P**	**02 49 57.3**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=62,slow=6.2,SNR=2.5						
NVAR	**Mina Array Bea**	**88.32**	**324**	P	**P**	**02 49 57.3**	**-0.1**
X16A	**Lo Mia Camp, P**	**88.35**	**317**	⇑P	**P**	**02 49 57.9**	**+0.3**
	baz=88						
W13A	**Hualapai Mount**	**89.01**	**319**	⇑P	**P**	**02 50 00.9**	**+0.2**
	baz=89						
WRA	**Warramunga Arr**	**125.95**	**85**	PKP	**PKPdf**	**02 56 07.9**	**+0.2**
WRA	**Warramunga Arr**	**125.95**	**85**	PKP	**PKPdf**	**02 56 07.9**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=329,slow=2.3,SNR=3.0						
WRA	**Warramunga Arr**	**125.95**	**85**	PKIKP	**PKPdf**	**02 56 07.9**	**+0.2**
ASAR	**Alice Springs**	**127.87**	**89**	PKP	**PKPdf**	**02 56 12.3**	**+1.0**
ASAR	**Alice Springs**	**127.87**	**89**	PKP	**PKPdf**	**02 56 12.3**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=316,slow=1.0,SNR=5.5						
ASAR	**Alice Springs**	**127.87**	**89**	PKIKP	**PKPdf**	**02 56 12.3**	**+1.0**

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*ISCJB **06** 02:37:33.5±0.6, 22°.44S±0°.05×69°.11W±0°.06, h111^{km}±5^{km}, mb3.9/3, Error ellipse: s-maj=9.6km s-min=8.3km az=158.3*
*IDC **06** 02:37:33.9±2.8, 22°.68S×68°.80W, h83^{km}±25^{km}, mb3.6/3, mb1 3.5/6, mb1mx3.4/20, mbtmp3.5/6, Error ellipse: s-maj=58.7km s-min=19.8km az=100.0*
*GUC **06** 02:37:34.7±0.7, 22°.52S×69°.17W, h86^{km}±4^{km}, ML4.0*
ISC 06 02:37:34.0±0.9**, 22°.52S**±0°.06×**69°.11W**±0°.06**, h110**^{km}±7^{km}**,**
n17, σ2^s.33/24**, mb3.7**/3**, 3C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.21**	**117**	*e*P	**Pn**	**02 37 51.6**	**+1.8**
LVC				*i* S	**Sn**	**02 38 01.8**	**+0.2**
LVC				AML	AML	02 38 03.0	
	comp=E,7µm,0.2s						
PB04	**Plate Boundary**	**0.43**	**306**	⇑*i*P	Pn	02 37 53.7	+3.3
PB04				*i* S	**Sn**	**02 38 08.6**	**+5.9**
PB04				AML	AML	02 38 12.1	
	comp=N,6µm,0.4s						
MACH	**Maria Elena**	**0.68**	**298**	⇓*i*P	**Pn**	**02 37 50.7**	**-1.8**
MACH				*i* S	**Sn**	**02 38 03.0**	**-3.3**
PB09	**Plate Boundary**	**0.73**	**351**	⇓*i*P	**Pn**	**02 37 51.7**	**-1.1**
PB09				*i* S	**Sn**	**02 38 04.8**	**-2.1**
PB09				AML	AML	02 38 05.9	
	comp=N,12µm,0.5s						
SPCH	**San Pedro de A**	**0.93**	**115**	*e*P	**Pn**	**02 37 54.4**	**-0.4**
SPCH				*i* S	**Sn**	**02 38 10.0**	**-0.5**
SPCH				AML	AML	02 38 11.2	
	comp=E,4µm,0.5s						
PB07	**Plate Boundary**	**1.06**	**317**	⇓*i*P	**Pn**	**02 37 55.1**	**-1.0**
PB07				*i* S	**Sn**	**02 38 10.8**	**-1.9**
PB07				AML	AML	02 38 11.4	
	comp=E,11µm,0.3s						
CEN1	**Los Morros**	**1.33**	**229**	*e*P	**Pn**	**02 38 01.0**	**+2.1**
CEN1				*i* S	**Sn**	**02 38 20.9**	**+3.1**
CEN1				AML	AML	02 38 26.1	
	comp=N,2µm,0.8s						
MECH	**Mejillones**	**1.36**	**244**	⇑*i*P	**Pn**	**02 37 58.2**	**-1.0**
MECH				AML	AML	02 38 22.6	
	comp=E,3µm,0.4s						
PB01	**Plate Boundary**	**1.51**	**347**	⇑*i*P	**Pn**	**02 38 00.7**	**-0.3**
PB01				*i* S	**Sn**	**02 38 21.3**	**-0.2**
PB01				AML	AML	02 38 21.9	
	comp=E,3µm,0.6s						
ANCH	**Antofagasta**	**1.67**	**226**	⇓*i*P	**Pn**	**02 38 02.7**	**-0.1**
ANCH				AML	AML	02 38 29.6	
	comp=E,4µm,0.7s						
LPAZ	**La Paz**	**6.26**	**9**	P	**Pn**	**02 39 06.6**	**+2.1**
	comp=E,0.7nm,0.3s,baz=180,slow=15,SNR=20						
CFAA	**Coronel Fontan**	**9.09**	**175**	P	**Pn**	**02 39 39.5**	**-2.7**
	comp=E,0.1nm,0.3s,baz=349,slow=13,SNR=21						
CFAA				S	**Sn**	**02 41 19.4**	**-3.3**
	comp=E,0.1nm,0.3s,baz=170,slow=20,SNR=1.5						
SIV	**San Ignacio**	**9.99**	**51**	P	**Pn**	**02 39 52.4**	**-2.1**
	comp=E,1.5nm,0.3s,baz=250,slow=12,SNR=39						
BDFB	**Brasilia**	**21.07**	**75**	P	**P**	**02 42 09.2**	**-0.4**
	comp=E,1.7nm,0.5s,baz=221,slow=7.9,SNR=4.2						
RCBR	**Riachuelo**	**36.09**	**68**	P	**P**	**02 44 26.5**	**+1.0**
	comp=E,3.6nm,0.9s,baz=234,slow=8.7,SNR=4.3						
TORD	**Torodi Ar. Bea**	**77.88**	**70**	P	**P**	**02 49 21.8**	**+1.8**
	comp=E,1.5nm,1.1s,baz=253,slow=4.7,SNR=12						
MKAR	**Makanchi Array**	**146.56**	**37**	pPKPbc	pPKPbc	02 57 29.4	-2.8
	comp=E,0.8nm,0.9s,baz=304,slow=2.8,SNR=4.1						

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*ISCJB **06** 02:44:31.8±0.3, 42°.34N±0°.02×13°.36E±0°.03, h13^{km}±2^{km}, mb3.0/2, Error ellipse: s-maj=3.7km s-min=3.2km az=26.1*
*ROM **06** 02:44:31.9±0.1, 42°.34N×13°.37E, h8^{km}±1^{km}, Ml3.3/12, Error ellipse: s-maj=1.4km s-min=1.2km az=52.0*
*CSEM **06** 02:44:32.4±0.1, 42°.33N×13°.37E, h2^{km}, ML3.0/6, Error ellipse: s-maj=2.5km s-min=2.4km az=37.0*
*LDG **06** 02:44:34.1±0.3, 42°.21N×13°.33E, h2^{km}, Ml3.0/6, Error ellipse: s-maj=10.7km s-min=7.4km az=55.0*
*IDC **06** 02:44:34.8±1.1, 42°.57N×13°.48E, h0^{km}, mb3.3/3, mb1 3.5/7, mb1mx3.3/30, mbtmp3.3/7, ML3.2/4, Error ellipse: s-maj=20.0km s-min=13.3km az=97.0*
ISC 06 02:44:32.7±0.8**, 42°.34N**±0°.02×**13°.36E**±0°.02**, h7**^{km}±4^{km}**,**
n83, σ1^s.34/109**, 2C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.03**	**63**	⇓*i*Pg	**Pg**	**02 44 33.8**	**-0.4**
AQU				Sg	**Sg**	**02 44 34.7**	**-0.6**
AQU	**L'Aquila**	**0.03**	**63**	⇓*i*Pg	**Pg**	**02 44 33.8**	**-0.4**
AQU				Sg	**Sg**	**02 44 34.7**	**-0.6**
FAGN	**Fagnano**	**0.18**	**114**	Pg	**Pg**	**02 44 36.5**	**+0.2**
FAGN				Sg	**Sg**	**02 44 39.4**	**+0.5**
FAGN	**Fagnano**	**0.18**	**114**	Pg	**Pg**	**02 44 36.5**	**+0.2**
FAGN				Sg	**Sg**	**02 44 39.4**	**+0.5**
FIAM	**Fiamignano**	**0.19**	**249**	Pg	**Pg**	**02 44 36.6**	**0.0**
FIAM				Sg	**Sg**	**02 44 40.3**	**+1.0**
FIAM	**Fiamignano**	**0.19**	**249**	Pg	**Pg**	**02 44 36.6**	**0.0**
FIAM				Sg	**Sg**	**02 44 40.3**	**+1.0**
CAMP	**Campotosto**	**0.20**	**10**	Pg	**Pg**	**02 44 36.7**	**0.0**
CAMP				Sg	**Sg**	**02 44 39.5**	**0.0**
	48µm,0.5s						
CAMP	**Campotosto**	**0.20**	**10**	Pg	**Pg**	**02 44 36.7**	**0.0**
CAMP				Sg	**Sg**	**02 44 39.5**	**0.0**
	48µm,0.5s						
PTQR	**Pietraquaria**	**0.32**	**175**	Pg	**Pg**	**02 44 38.9**	**0.0**
PTQR	**Pietraquaria**	**0.32**	**175**	Pg	**Pg**	**02 44 38.9**	**0.0**
CERT	**Cerreto**	**0.48**	**216**	⇑*i*Pg	**Pg**	**02 44 41.8**	**-0.2**
CERT	**Cerreto**	**0.48**	**216**	⇑*i*Pg	**Pg**	**02 44 41.8**	**-0.2**
INTR	**Introdacqua**	**0.52**	**129**	Pg	**Pg**	**02 44 42.2**	**-0.5**
INTR				Sg	**Sg**	**02 44 50.0**	**+0.5**
INTR	**Introdacqua**	**0.52**	**129**	Pg	**Pg**	**02 44 42.2**	**-0.5**
INTR				Sg	**Sg**	**02 44 50.0**	**+0.5**
NRCA	**Norcia**	**0.53**	**340**	Pg	**Pg**	**02 44 42.5**	**-0.4**
NRCA				Sg	**Sg**	**02 44 50.5**	**+0.7**
NRCA	**Norcia**	**0.53**	**340**	Pg	**Pg**	**02 44 42.5**	**-0.4**
NRCA				Sg	**Sg**	**02 44 50.5**	**+0.7**
GUAR	**Guarcino**	**0.55**	**184**	Pg	**Pg**	**02 44 42.9**	**-0.3**
	1µm,0.5s						
GUAR	**Guarcino**	**0.55**	**184**	Pg	**Pg**	**02 44 42.9**	**-0.3**
	1µm,0.5s						
MTCE	**Montecelio**	**0.56**	**236**	Pg	**Pg**	**02 44 42.8**	**-0.6**
	844nm,0.5s						
MTCE	**Montecelio**	**0.56**	**236**	Pg	**Pg**	**02 44 42.8**	**-0.6**
	844nm,0.5s						
TRTR	**Tortoreto Alta**	**0.62**	**41**	Pg	**Pg**	**02 44 44.9**	**+0.2**
	6µm,0.8s						
TRTR	**Tortoreto Alta**	**0.62**	**41**	Pg	**Pg**	**02 44 44.9**	**+0.2**
	6µm,0.8s						
OFFI	**Offida**	**0.64**	**22**	Pg	**Pg**	**02 44 45.3**	**+0.2**
OFFI	**Offida**	**0.64**	**22**	Pg	**Pg**	**02 44 45.3**	**+0.2**
POFI	**Posta Fibreno**	**0.67**	**157**	Pg	**Pg**	**02 44 44.6**	**-1.0**
	637nm,0.7s						
POFI	**Posta Fibreno**	**0.67**	**157**	Pg	**Pg**	**02 44 44.6**	**-1.0**
	637nm,0.7s						
LPEL	**Lama dei Pelig**	**0.68**	**115**	Pg	**Pg**	**02 44 45.1**	**-0.6**
LPEL				Sg	**Sg**	**02 44 54.8**	**+0.3**
LPEL	**Lama dei Pelig**	**0.68**	**115**	Pg	**Pg**	**02 44 45.1**	**-0.6**
LPEL				Sg	**Sg**	**02 44 54.8**	**+0.3**
SDI	**San Donato**	**0.71**	**152**	Pg	**Pg**	**02 44 45.7**	**-0.7**
SDI	**San Donato**	**0.71**	**152**	Pg	**Pg**	**02 44 45.7**	**-0.7**
RMP	**Rome, Mte Porz**	**0.72**	**223**	Pg	**Pg**	**02 44 45.2**	**-1.3**
	1µm,0.4s						
RMP	**Rome, Mte Porz**	**0.72**	**223**	Pg	**Pg**	**02 44 45.2**	**-1.3**
	1µm,0.4s						
CESI	**CESI - Serrava**	**0.75**	**333**	Pg	**Pg**	**02 44 46.7**	**-0.3**
	396nm,0.4s						
CESI	**CESI - Serrava**	**0.75**	**333**	Pg	**Pg**	**02 44 46.7**	**-0.3**
	396nm,0.4s						
RDP	**Rocca di Papa**	**0.75**	**220**	Pg	**Pg**	**02 44 47.0**	**-0.1**
	2µm,0.5s						
RDP	**Rocca di Papa**	**0.75**	**220**	Pg	**Pg**	**02 44 47.0**	**-0.1**
	2µm,0.5s						
MA9	**Marino**	**0.77**	**223**	Pg	**Pg**	**02 44 47.7**	**+0.2**
	2µm,0.7s						
MA9	**Marino**	**0.77**	**223**	Pg	**Pg**	**02 44 47.7**	**+0.2**
	2µm,0.7s						
GIUL	**Giuliano Di Ro**	**0.78**	**186**	Pg	**Pg**	**02 44 46.4**	**-1.3**
GIUL	**Giuliano Di Ro**	**0.78**	**186**	Pg	**Pg**	**02 44 46.4**	**-1.3**
CERA	**Filignano**	**0.89**	**146**	Pg	**Pg**	**02 44 48.5**	**-1.2**
	697nm,0.6s						
CERA	**Filignano**	**0.89**	**146**	Pg	**Pg**	**02 44 48.5**	**-1.2**
	697nm,0.6s						
TOLF	**Tolfa**	**1.05**	**255**	Pg	**Pg**	**02 44 52.9**	**+0.2**
	250nm,0.6s						
TOLF	**Tolfa**	**1.05**	**255**	Pg	**Pg**	**02 44 52.9**	**+0.2**
	250nm,0.6s						
MURB	**Monte Urbino**	**1.11**	**327**	Pg	**Pg**	**02 44 53.2**	**-0.8**
	1µm,0.6s						
MURB	**Monte Urbino**	**1.11**	**327**	Pg	**Pg**	**02 44 53.2**	**-0.8**
	1µm,0.6s						
NVLJ	**Novalja**	**2.48**	**26**	*e*Pn	**Pn**	**02 45 13.2**	**-0.2**
NVLJ				Sn	**Sn**	**02 45 43.9**	**-0.1**
NVLJ	**Novalja**	**2.48**	**26**	*e*Pn	**Pn**	**02 45 13.2**	**-0.2**
NVLJ				Sn	**Sn**	**02 45 43.8**	**-0.1**
PGF	**Pioggiola**	**3.23**	**275**	*e*Pn	**Pn**	**02 45 25.0**	**+1.1**
PGF				*e*Sn	**Sn**	**02 46 05.2**	**+2.5**
	7.5nm,0.5s						
PGF	**Pioggiola**	**3.23**	**275**	*e*Pn	**Pn**	**02 45 25.0**	**+1.1**
PGF				*e*Sn	**Sn**	**02 46 05.2**	**+2.5**
	3.8nm,0.5s						
STON	**Ston**	**3.25**	**79**	*i* Pn	**Pn**	**02 45 23.9**	**0.0**
STON				Sn	**Sn**	**02 46 02.2**	**-0.6**
STON	**Ston**	**3.25**	**79**	*i* Pn	**Pn**	**02 45 23.9**	**0.0**
STON				Sn	**Sn**	**02 46 02.2**	**-0.6**
SBF	**Sospel**	**4.60**	**291**	*e*Pn	**Pn**	**02 45 43.2**	**+0.6**
SBF				*e*Sn	**Sn**	**02 46 33.7**	**-2.6**
	4.1nm,0.4s						
SBF	**Sospel**	**4.60**	**291**	*e*Pn	**Pn**	**02 45 43.2**	**+0.6**
SBF				*e*Sn	**Sn**	**02 46 33.7**	**-2.6**
	2.0nm,0.4s						
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**02 45 49.6**	**+0.5**
FRF				*e*Sn	**Sn**	**02 46 44.4**	**-3.6**
	1.9nm,0.4s						
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**02 45 49.6**	**+0.5**
FRF				*e*Sn	**Sn**	**02 46 44.4**	**-3.6**
	0.9nm,0.4s						
DAVOX	**Davos/Dischmat**	**5.09**	**332**	Pn	**Pn**	**02 45 51.8**	**+2.3**
	1.5nm,0.3s,baz=155,slow=20,SNR=8.7						
DAVOX				Sn	**Sn**	**02 46 49.5**	**+0.9**
	0.6nm,0.3s,baz=263,slow=19,SNR=2.2						
LMR	**La Mourre**	**5.13**	**283**	*e*Pn	**Pn**	**02 45 49.8**	**-0.1**

LMR	La Mourre	5.13	283	ePn	Pn	02 45 49.8	-0.1
IVAS	Ivanjica	5.14	74	ePn	Pn	02 45 50.5	+0.5
DIVS	Divibare	5.16	68	ePn	Pn	02 45 50.6	+0.3
MBDF	Montbardon	5.35	299	eP	Pn	02 45 55.5	+2.5
MBDF	Montbardon	5.35	299	eP	Pn	02 45 55.5	+2.5
GRUS	Gruza	5.60	71	ePn	Pn	02 45 57.6	+1.3
LPG	La Plagne	5.72	306	eP	Pn	02 46 01.1	+2.8
LPG	La Plagne	5.72	306	eP	Pn	02 46 01.1	+2.8
SMRF	Simiane la Rot	5.92	289	ePn	Pn	02 46 00.0	-0.8
SMRF	Simiane la Rot	5.92	289	ePn	Pn	02 46 00.0	-0.8
ORIF	Oris-en-Rattie	6.01	298	eP	Pn	02 46 05.8	+3.8
BARS	Barje	6.26	83	ePn	Pn	02 46 05.9	+0.5
GERES	GERESS Array B	6.51	2	Pn	Pn	02 46 08.4	-0.5
	0.3nm,0.3s,baz=175,slow=11,SNR=7.4						
GERES				Sn	Sn	02 47 21.7	-1.7
	0.8nm,0.3s,baz=176,slow=28,SNR=6.2						
HINF	Hinteralfeld	7.16	322	ePn	Pn	02 46 17.4	-0.3
HINF				eSn	Sn	02 47 34.1	-5.1
	3.8nm,0.5s						
HINF	Hinteralfeld	7.16	322	ePn	Pn	02 46 17.4	-0.3
KEST	Kesra	7.30	207	Pn	Pn	02 46 24.8	+5.0
	0.5nm,0.3s,baz=311,slow=4.6,SNR=24						
KEST				Sn	Sn	02 47 52.8	+10
	0.0nm,0.3s,baz=330,slow=23,SNR=1.5						
VRAC	Vranov	7.33	17	Pn	Pn	02 46 18.1	-1.9
	0.4nm,0.3s,baz=299,slow=11,SNR=1.5						
VRAC				Sn	Sn	02 47 40.5	-2.8
	0.5nm,0.3s,baz=150,slow=21,SNR=3.2						
CDF	Champ du Feu	7.43	327	ePn	Pn	02 46 21.2	-0.3
CDF				eSn	Sn	02 47 41.2	-4.8
	5.3nm,0.5s						
CDF	Champ du Feu	7.43	327	ePn	Pn	02 46 21.2	-0.3
HAU	Haudompre	7.53	321	ePn	Pn	02 46 22.6	-0.1
HAU				eSn	Sn	02 47 41.6	-6.7
	5.3nm,0.4s						
HAU	Haudompre	7.53	321	ePn	Pn	02 46 22.6	-0.1
MLR	Muntele Rosu	9.61	67	Pn	Pn	02 46 54.2	+2.7
	0.0nm,0.3s,baz=293,slow=14,SNR=3.8						
FINES	FINESS Array B	20.61	17	P	P	02 49 12.3	+0.2
	2.7nm,0.9s,baz=193,slow=10.0,SNR=4.5						
TORD	Torodi Ar. Bea	30.80	203	P	P	02 50 55.3	+6.4
	0.1nm,0.5s,baz=15,slow=8.9,SNR=2.2						
MKAR	Makanchi Array	47.88	60	P	P	02 53 11.2	+0.1
	0.1nm,0.5s,baz=278,slow=8.3,SNR=2.8						

*ISCJB **06** 02:47:27.5±0.3, 42°.37N±0°.02×13°.34E±0°.03, h13km±2km, mb3.1/1, Error ellipse: s-maj=3.7km s-min=3.5km az=36.0*
*ROM **06** 02:47:27.5±0.1, 42°.37N×13°.36E, h9km±1km, Ml2.9/10, Error ellipse: s-maj=1.8km s-min=1.5km az=88.0*
*CSEM **06** 02:47:28.1±0.1, 42°.37N×13°.35E, h5km, ML3.1/3, Error ellipse: s-maj=2.3km s-min=2.2km az=53.0*
*IDC **06** 02:47:29.3±1.9, 42°.50N×13°.49E, h0km, mb3.1/1, mb1 3.2/5, mb1mx3.1/30, mbtmp3.0/5, ML2.9/3, Error ellipse: s-maj=25.3km s-min=17.6km az=66.0*
*LDG **06** 02:47:30.0±1.4, 42°.42N×13°.29E, h2km, Ml3.1/3, Error ellipse: s-maj=31.8km s-min=13.5km az=103.0*
ISC 06 02:47:28.1±0.8**, 42°.37N**±0°.02×**13°.34E**±0°.02**, h10**km±4km**, n74,** σ**1s.29**/95**, 2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	113⇓	iPg	Pg	02 47 29.7	-0.4
AQU				Sg	Sg	02 47 31.1	-0.5
AQU	L'Aquila	0.05	113⇓	iPg	Pg	02 47 29.7	-0.4
AQU				Sg	Sg	02 47 31.1	-0.5
CAMP	Campotosto	0.17	16	Pg	Pg	02 47 31.7	-0.2
CAMP				Sg	Sg	02 47 34.8	+0.3
CAMP	Campotosto	0.17	16	Pg	Pg	02 47 31.7	-0.2
CAMP				Sg	Sg	02 47 34.8	+0.3
FIAM	Fiamignano	0.20	238	Pg	Pg	02 47 32.1	-0.2
FIAM				Sg	Sg	02 47 35.2	0.0
FIAM	Fiamignano	0.20	238	Pg	Pg	02 47 32.1	-0.2
FIAM				Sg	Sg	02 47 35.2	0.0
FAGN	Fagnano	0.21	121	Pg	Pg	02 47 32.6	+0.2
FAGN				Sg	Sg	02 47 35.6	+0.2
FAGN	Fagnano	0.21	121	Pg	Pg	02 47 32.6	+0.2
FAGN				Sg	Sg	02 47 35.6	+0.2
TERO	Teramo	0.32	37	Pg	Pg	02 47 33.7	-0.7
TERO	Teramo	0.32	37	Pg	Pg	02 47 33.7	-0.7
PTQR	Pietraquaria	0.35	173	Pg	Pg	02 47 34.4	-0.7
PTQR				Sg	Sg	02 47 39.7	-0.1
PTQR	Pietraquaria	0.35	173	Pg	Pg	02 47 34.4	-0.7
PTQR				Sg	Sg	02 47 39.7	-0.1
VCEL	Villa Celiera	0.37	86	Pg	Pg	02 47 35.2	-0.2
VCEL	Villa Celiera	0.37	86	Pg	Pg	02 47 35.2	-0.2
MNS	Montasola	0.49	272	Pg	Pg	02 47 38.1	+0.5
MNS	Montasola	0.49	272	Pg	Pg	02 47 38.1	+0.5
NRCA	Norcia	0.49	340	Pg	Pg	02 47 37.4	-0.3
NRCA				Sg	Sb	02 47 45.5	-0.6
NRCA	Norcia	0.49	340	Pg	Pg	02 47 37.4	-0.3
NRCA				Sg	Sb	02 47 45.5	-0.6
VVLD	Villa Vallelon	0.54	157	Pg	Pg	02 47 38.3	-0.3
	823nm,0.7s						
VVLD	Villa Vallelon	0.54	157	Pg	Pg	02 47 38.3	-0.3
	823nm,0.7s						
MTCE	Montecelio	0.57	232	Pg	Pg	02 47 39.1	0.0
	439nm,0.5s						
MTCE	Montecelio	0.57	232	Pg	Pg	02 47 39.1	0.0
	439nm,0.5s						
GUAR	Guarcino	0.58	182	Pg	Pg	02 47 39.5	+0.2
	587nm,0.6s						
GUAR	Guarcino	0.58	182	Pg	Pg	02 47 39.5	+0.2
	587nm,0.6s						
TRTR	Tortoreto Alta	0.61	44	Pg	Pg	02 47 40.2	+0.4
	4μm,0.8s						
TRTR	Tortoreto Alta	0.61	44	Pg	Pg	02 47 40.2	+0.4
	4μm,0.8s						
OFFI	Offida	0.62	24	Pg	Pg	02 47 40.2	+0.2
OFFI	Offida	0.62	24	Pg	Pg	02 47 40.2	+0.2
LPEL	Lama dei Pelig	0.70	117	Pg	Pg	02 47 40.7	-1.0
LPEL				Sg	Sg	02 47 51.0	+0.1
LPEL	Lama dei Pelig	0.70	117	Pg	Pg	02 47 40.7	-1.0
LPEL				Sg	Sg	02 47 51.0	+0.1
CESI	CESI - Serrava	0.71	333	Pg	Pg	02 47 41.3	-0.5
	288nm,0.6s						
CESI	CESI - Serrava	0.71	333	Pg	Pg	02 47 41.3	-0.5
	288nm,0.6s						
POFI	Posta Fibreno	0.71	157	Pg	Pb	02 47 42.7	+0.2
	269nm,0.5s						
POFI	Posta Fibreno	0.71	157	Pg	Pb	02 47 42.7	+0.2
	269nm,0.5s						
RMP	Rome, Mte Porz	0.74	221	Pg	Pg	02 47 42.4	+0.1
	641nm,0.4s						
RMP	Rome, Mte Porz	0.74	221	Pg	Pg	02 47 42.4	+0.1
	641nm,0.4s						
GIUL	Giuliano Di Ro	0.82	185	Pg	Pg	02 47 43.7	-0.1
	276nm,0.5s						
GIUL	Giuliano Di Ro	0.82	185	Pg	Pg	02 47 43.7	-0.1
	276nm,0.5s						
TOLF	Tolfa	1.04	253	Pg	Pb	02 47 48.3	+0.1
	190nm,0.7s						
TOLF	Tolfa	1.04	253	Pg	Pb	02 47 48.3	+0.1
	190nm,0.7s						
MURB	Monte Urbino	1.07	326	Pg	Pg	02 47 48.8	+0.1
	662nm,0.3s						
MURB	Monte Urbino	1.07	326	Pg	Pg	02 47 48.8	+0.1
	662nm,0.3s						
NVLJ	Novalja	2.46	26	i Pn	Pn	02 48 08.3	+0.2
NVLJ				Sn	Sn	02 48 39.5	+1.3
NVLJ	Novalja	2.46	26	i Pn	Pn	02 48 08.3	+0.2
NVLJ				Sn	Sn	02 48 39.5	+1.3
PGF	Pioggiola	3.22	275	ePn	Pn	02 48 19.7	+1.0
PGF	Pioggiola	3.22	275	ePn	Pn	02 48 19.7	+1.0
STON	Ston	3.25	80	i Pn	Pn	02 48 19.6	+0.5
STON				Sn	Sn	02 48 57.8	0.0
STON	Ston	3.25	80	i Pn	Pn	02 48 19.5	+0.5
STON				Sn	Sn	02 48 57.8	0.0
SBF	Sospel	4.57	291	ePn	Pn	02 48 38.0	+0.7
SBF	Sospel	4.57	291	ePn	Pn	02 48 38.0	+0.7
DAVOX	Davos/Dischmat	5.05	332	Pn	Pn	02 48 47.0	+2.9
	0.5nm,0.3s,baz=155,slow=18,SNR=3.9						
FRF	La Foret Royal	5.06	286	ePn	Pn	02 48 44.0	+0.1
FRF	La Foret Royal	5.06	286	ePn	Pn	02 48 44.0	+0.1
LMR	La Mourre	5.12	283	ePn	Pn	02 48 44.5	-0.2
LMR	La Mourre	5.12	283	ePn	Pn	02 48 44.5	-0.2
IVAS	Ivanjica	5.14	74	ePn	Pn	02 48 46.5	+1.4
MBDF	Montbardon	5.33	298	eP	Pn	02 48 49.8	+2.1
MBDF	Montbardon	5.33	298	eP	Pn	02 48 49.8	+2.1
GRUS	Gruza	5.60	72	ePn	Pn	02 48 52.2	+0.8
LPL	La Plagne	5.71	306	eP	Pn	02 48 55.9	+2.8
LPL	La Plagne	5.71	306	eP	Pn	02 48 55.9	+2.8
SMRF	Simiane la Rot	5.90	288	ePn	Pn	02 48 53.0	-2.5
BARS	Barje	6.27	83	ePn	Pn	02 49 01.6	+1.0
GERES	GERESS Array B	6.48	2	Pn	Pn	02 49 04.7	+1.2
	0.2nm,0.3s,baz=181,slow=13,SNR=3.8						
GERES				Sn	Sn	02 50 16.3	-1.1
	0.6nm,0.3s,baz=180,slow=23,SNR=6.3						
ZAPS	Zavoj	6.89	79	ePn	Pn	02 49 12.0	+2.9
HINF	Hinteralfeld	7.12	322	ePn	Pn	02 49 12.1	-0.2
HINF				eSn	Sn	02 50 28.3	-4.9
	1.0nm,0.3s						
HINF	Hinteralfeld	7.12	322	ePn	Pn	02 49 12.1	-0.2
KEST	Kesra	7.32	206	Pn	Pn	02 49 19.3	+4.2
	0.1nm,0.3s,baz=347,slow=14,SNR=6.1						
CDF	Champ du Feu	7.39	327	ePn	Pn	02 49 15.8	-0.3
CDF				eSn	Sn	02 50 35.7	-4.3
	2.8nm,0.4s						
CDF	Champ du Feu	7.39	327	ePn	Pn	02 49 15.8	-0.3
HAU	Haudompre	7.49	321	ePn	Pn	02 49 17.4	+0.1
HAU				eSn	Sn	02 50 36.4	-5.9
	3.0nm,0.3s						
HAU	Haudompre	7.49	321	ePn	Pn	02 49 17.4	+0.1
MLR	Muntele Rosu	9.61	67	Pn	Pn	02 49 48.2	+1.7
	baz=263,slow=17						
MKAR	Makanchi Array	47.87	60	P	P	02 56 07.2	+1.2
	0.1nm,0.5s,baz=272,slow=7.1,SNR=2.4						

*ISCJB **06** 02:48:13.2±0.4, 42°.39N±0°.02×13°.33E±0°.04, h13km±3km, mb3.3/2, Error ellipse: s-maj=4.8km s-min=4.0km az=175.0*
*CSEM **06** 02:48:13.0, 42°.39N×13°.32E, h9km, After ROM*
*ROM **06** 02:48:13.0±0.1, 42°.39N×13°.32E, h9km±1km, Ml3.0/5, Error ellipse: s-maj=2.0km s-min=1.7km az=112.0*
*IDC **06** 02:48:13.8±1.3, 42°.43N×13°.72E, h0km, mb3.2/2, mb1 3.2/5, mb1mx3.1/29, mbtmp3.2/5, ML3.0/2, Error ellipse: s-maj=35.2km s-min=14.1km az=94.0*
ISC 06 02:48:13.9±0.8**, 42°.40N**±0°.02×**13°.33E**±0°.02**, h7**km±5km**, n33,** σ**0s.75**/49**, 6C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	129⇑	iPg	Pg	02 48 15.5	-0.3
AQU				Sg	Sg	02 48 16.9	-0.2
AQU	L'Aquila	0.07	129⇑	iPg	Pg	02 48 15.5	-0.3
AQU				Sg	Sg	02 48 16.9	-0.2
CAMP	Campotosto	0.15	23⇑	iPg	Pg	02 48 17.2	+0.1
CAMP				Sg	Sg	02 48 20.1	+0.8
CAMP	Campotosto	0.15	23⇑	iPg	Pg	02 48 17.2	+0.1
CAMP				Sg	Sg	02 48 20.1	+0.8
FIAM	Fiamignano	0.20	231	Pg	Pg	02 48 18.1	+0.1
FIAM				Sg	Sg	02 48 20.7	-0.1
FIAM	Fiamignano	0.20	231	Pg	Pg	02 48 18.1	+0.1
FIAM				Sg	Sg	02 48 20.7	-0.1
FAGN	Fagnano	0.23	125	Pg	Pg	02 48 19.0	+0.5
FAGN				Sg	Sg	02 48 22.7	+1.1
FAGN	Fagnano	0.23	125	Pg	Pg	02 48 19.0	+0.5
FAGN				Sg	Sg	02 48 22.7	+1.1
TERO	Teramo	0.30	42	Pg	Pg	02 48 19.4	-0.5
TERO				Sg	Sg	02 48 24.1	+0.2
TERO	Teramo	0.30	42	Pg	Pg	02 48 19.4	-0.5
TERO				Sg	Sg	02 48 24.1	+0.2
NRCA	Norcia	0.46	340	Pg	Pg	02 48 22.7	-0.2
NRCA				Sg	Sb	02 48 30.3	-1.3
	989nm,0.1s						
NRCA	Norcia	0.46	340	Pg	Pg	02 48 22.7	-0.2
NRCA				Sg	Sb	02 48 30.3	-1.3
	989nm,0.1s						
MNS	Montasola	0.48	269	Pg	Pg	02 48 22.8	-0.4
MNS	Montasola	0.48	269	Pg	Pg	02 48 22.8	-0.4
CERT	Cerreto	0.52	210⇑	iPg	Pg	02 48 22.7	-1.2
CERT	Cerreto	0.52	210⇑	iPg	Pg	02 48 22.7	-1.2
MTCE	Montecelio	0.57	230	Pg	Pg	02 48 24.8	-0.2
	513nm,0.3s						
MTCE	Montecelio	0.57	230	Pg	Pg	02 48 24.8	-0.2
	513nm,0.3s						
INTR	Introdacqua	0.58	132	Pg	Pg	02 48 24.9	-0.1
INTR				Sg	Sb	02 48 33.9	-0.9
INTR	Introdacqua	0.58	132	Pg	Pg	02 48 24.9	-0.1
INTR				Sg	Sb	02 48 33.9	-0.9
OFFI	Offida	0.60	26	Pg	Pb	02 48 25.9	-0.8
OFFI	Offida	0.60	26	Pg	Pb	02 48 25.9	-0.8
GUAR	Guarcino	0.60	181	Pg	Pg	02 48 25.4	-0.1
	713nm,0.4s						
GUAR	Guarcino	0.60	181	Pg	Pg	02 48 25.4	-0.1
	713nm,0.4s						
LPEL	Lama dei Pelig	0.72	119	Pg	Pg	02 48 26.5	-1.4
LPEL				Sg	Sg	02 48 37.3	0.0
	802nm,0.4s						
LPEL	Lama dei Pelig	0.72	119	Pg	Pg	02 48 26.5	-1.4
LPEL				Sg	Sg	02 48 37.3	0.0
	802nm,0.4s						
GIUL	Giuliano Di Ro	0.84	184	Pg	Pg	02 48 29.9	-0.2
	392nm,0.6s						
GIUL	Giuliano Di Ro	0.84	184	Pg	Pg	02 48 29.9	-0.2
	392nm,0.6s						
DAVOX	Davos/Dischmat	5.03	332	Pn	Pn	02 49 31.4	+1.5
	0.4nm,0.3s,baz=155,slow=19,SNR=2.0						
DAVOX				Sn	Sn	02 50 34.6	+6.2
	0.7nm,0.3s,baz=40,slow=20,SNR=3.3						
GERES	GERESS Array B	6.45	2	Pn	Pn	02 49 50.2	+0.8
	0.2nm,0.3s,baz=173,slow=17,SNR=2.7						
GERES				Sn	Sn	02 51 03.4	+0.1
	0.4nm,0.3s,baz=183,slow=20,SNR=3.8						
KEST	Kesra	7.34	206	Pn	Pn	02 50 06.2	+4.6
	0.1nm,0.3s,baz=331,slow=4.6,SNR=4.3						
TORD	Torodi Ar. Bea	30.84	203	P	P	02 54 32.3	+1.7
	0.2nm,0.7s,baz=14,slow=10,SNR=3.3						
MKAR	Makanchi Array	47.87	60	P	P	02 56 51.5	-0.9
	0.3nm,0.7s,baz=286,slow=5.0,SNR=2.8						

*ISCJB **06** 02:55:33.8±0.2, 42°.38N±0°.02×13°.33E±0°.02, h11km±1km, mb3.4/4, Error ellipse: s-maj=2.6km s-min=2.3km az=14.6*
*CSEM **06** 02:55:34.3±0.1, 42°.38N×13°.31E, h2km, ML3.2/6, Error ellipse: s-maj=2.2km s-min=1.9km az=25.0*
*PRU **06** 02:55:34.9, 42°.37N×13°.54E, h0km*
*ROM **06** 02:55:34.0±0.1, 42°.37N×13°.32E, h9km±1km, Ml3.4/34, Error ellipse: s-maj=1.2km s-min=1.1km az=102.0*
*IDC **06** 02:55:34.5±1.3, 42°.51N×13°.14E, h0km, mb3.3/5, mb1 3.5/9, mb1mx3.4/30, mbtmp3.3/9, ML3.4/4, Error ellipse: s-maj=20.2km s-min=14.9km az=87.0*
*LDG **06** 02:55:35.4±0.3, 42°.46N×13°.44E, h2km, Ml3.2/6, Error ellipse: s-maj=8.5km s-min=6.0km az=11.0*
*BEO **06** 02:55:35.8±1.1, 42°.47N×13°.21E, h15km±42km, ML3.7/7*
ISC 06 02:55:34.7±0.7**, 42°.39N**±0°.02×**13°.30E**±0°.02**, h11**km±4km**, n201,** σ**1s.39**/244**, mb3.4**/4**, 9C-3D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.08	116⇓	iPg	Pg	02 55 36.6	-0.6
AQU				Sg	Sg	02 55 38.1	-1.0
AQU	L'Aquila	0.08	116⇓	iPg	Pg	02 55 36.6	-0.6
AQU				Sg	Sg	02 55 38.1	-1.0
CAMP	Campotosto	0.17	28⇑	iPg	Pg	02 55 38.2	-0.3
CAMP				Sg	Sg	02 55 41.1	0.0
	84μm,0.3s						
CAMP	Campotosto	0.17	28⇑	iPg	Pg	02 55 38.2	-0.3
CAMP				Sg	Sg	02 55 41.1	0.0
	84μm,0.3s						
FIAM	Fiamignano	0.18	228	Pg	Pg	02 55 38.2	-0.5
FIAM				Sg	Sg	02 55 41.6	+0.1
FIAM	Fiamignano	0.18	228	Pg	Pg	02 55 38.2	-0.5
FIAM				Sg	Sg	02 55 41.6	+0.1
FAGN	Fagnano	0.24	121	Pg	Pg	02 55 40.4	+0.7
FAGN				Sg	Sg	02 55 43.0	-0.1
FAGN	Fagnano	0.24	121	Pg	Pg	02 55 40.4	+0.7
FAGN				Sg	Sg	02 55 43.0	-0.1
TERO	Teramo	0.32	44	Pg	Pg	02 55 40.3	-0.9
TERO				Sg	Sg	02 55 45.3	-0.2
TERO	Teramo	0.32	44	Pg	Pg	02 55 40.3	-0.9
TERO				Sg	Sg	02 55 45.3	-0.2
PTQR	Pietraquaria	0.38	169	Pg	Pg	02 55 41.3	-0.9
PTQR	Pietraquaria	0.38	169	Pg	Pg	02 55 41.3	-0.9
MNS	Montasola	0.46	269⇑	iPg	Pg	02 55 43.4	-0.3
MNS	Montasola	0.46	269⇑	iPg	Pg	02 55 43.4	-0.3
NRCA	Norcia	0.46	343	Pg	Pg	02 55 43.6	-0.2
NRCA				Sg	Sb	02 55 51.2	-0.7
NRCA	Norcia	0.46	343	Pg	Pg	02 55 43.6	-0.2
NRCA				Sg	Sb	02 55 51.2	-0.7
CERT	Cerreto	0.50	208⇑	iPg	Pg	02 55 43.7	-0.8
CERT				Sg	Sg	02 55 50.8	-0.3
CERT	Cerreto	0.50	208⇑	iPg	Pg	02 55 43.7	-0.8
CERT				Sg	Sg	02 55 50.8	-0.3
MTCE	Montecelio	0.56	229	Pg	Pg	02 55 44.8	-0.7
	2μm,0.4s						
MTCE	Montecelio	0.56	229	Pg	Pg	02 55 44.8	-0.7
	2μm,0.4s						
VVLD	Villa Vallelon	0.57	155	Pg	Pg	02 55 44.5	-1.3
VVLD	Villa Vallelon	0.57	155	Pg	Pg	02 55 44.5	-1.3
INTR	Introdacqua	0.59	130	Pg	Pg	02 55 44.5	-1.6
INTR				Sg	Sg	02 55 54.0	+0.2
	3μm,0.4s						
INTR	Introdacqua	0.59	130	Pg	Pg	02 55 44.5	-1.6
INTR				Sg	Sg	02 55 54.0	+0.2
	3μm,0.4s						
GUAR	Guarcino	0.60	179	Pg	Pg	02 55 46.1	-0.2
	2μm,0.4s						
GUAR	Guarcino	0.60	179	Pg	Pg	02 55 46.1	-0.2
	2μm,0.4s						
OFFI	Offida	0.61	27	Pg	Pg	02 55 46.6	0.0
	10μm,0.6s						
OFFI	Offida	0.61	27	Pg	Pg	02 55 46.6	0.0
	10μm,0.6s						
TRTR	Tortoreto Alta	0.61	47	Pg	Pb	02 55 46.8	-0.7
	15μm,0.9s						
TRTR	Tortoreto Alta	0.61	47	Pg	Pb	02 55 46.8	-0.7
	15μm,0.9s						
CESI	CESI - Serrava	0.68	335	Pg	Pg	02 55 47.3	-0.6
	968nm,0.5s						
CESI	CESI - Serrava	0.68	335	Pg	Pg	02 55 47.3	-0.6
	968nm,0.5s						
RMP	Rome, Mte Porz	0.73	218	Pg	Pg	02 55 47.8	-1.0
	2μm,0.6s						
RMP	Rome, Mte Porz	0.73	218	Pg	Pg	02 55 47.8	-1.0
	2μm,0.6s						
LPEL	Lama dei Pelig	0.74	117	Pg	Pg	02 55 47.5	-1.5
LPEL				Sg	Sg	02 55 58.5	-0.1
LPEL	Lama dei Pelig	0.74	117	Pg	Pg	02 55 47.5	-1.5
LPEL				Sg	Sg	02 55 58.5	-0.1
POFI	Posta Fibreno	0.74	155	Pg	Pg	02 55 48.2	-0.8
	918nm,0.7s						
POFI	Posta Fibreno	0.74	155	Pg	Pg	02 55 48.2	-0.8
	918nm,0.7s						
RDP	Rocca di Papa	0.77	215	Pg	Pg	02 55 48.4	-1.1
	4μm,0.5s						
RDP	Rocca di Papa	0.77	215	Pg	Pg	02 55 48.4	-1.1
	4μm,0.5s						
CAFR	Castel Frentan	0.79	102	Pg	Pg	02 55 49.1	-0.9
	3μm,0.7s						
CAFR	Castel Frentan	0.79	102	Pg	Pg	02 55 49.1	-0.9
	3μm,0.7s						
GIUL	Giuliano Di Ro	0.83	182	Pg	Pg	02 55 49.9	-0.8
GIUL	Giuliano Di Ro	0.83	182	Pg	Pg	02 55 49.9	-0.8
RNI2	Rionero Sannit	0.94	137	Pg	Pg	02 55 52.4	-0.3
	902nm,0.7s						
RNI2	Rionero Sannit	0.94	137	Pg	Pg	02 55 52.4	-0.3
	902nm,0.7s						
TOLF	Tolfa	1.02	252	Pg	Pg	02 55 52.9	-1.4
	656nm,0.7s						
TOLF	Tolfa	1.02	252	Pg	Pg	02 55 52.9	-1.4
	656nm,0.7s						
MGAB	Montegabbione	1.02	301	Pg	Pg	02 55 53.8	-0.5
	1μm,0.5s						
MGAB	Montegabbione	1.02	301	Pg	Pg	02 55 53.8	-0.5
	1μm,0.5s						
MIDA	Miranda	1.03	136	Pg	Pg	02 55 52.7	-1.8
	2μm,1.3s						
MIDA	Miranda	1.03	136	Pg	Pg	02 55 52.7	-1.8
	2μm,1.3s						
MURB	Monte Urbino	1.04	327	Pg	Pg	02 55 54.0	-0.8
	3μm,0.3s						
MURB	Monte Urbino	1.04	327	Pg	Pg	02 55 54.0	-0.8
	3μm,0.3s						
SACS	San Casciano d	1.13	294	Pg	Pg	02 55 55.5	-0.8
	2μm,1.3s						
ARVD	Arcevia	1.14	347	Pg	Pg	02 55 55.3	-1.3
	626nm,0.6s						
ARVD	Arcevia	1.14	347	Pg	Pg	02 55 55.3	-1.3
	626nm,0.6s						
AOI	Ancona	1.18	11	Pg	Pg	02 55 56.1	-1.3
	628nm,0.6s						
AOI	Ancona	1.18	11	Pg	Pg	02 55 56.1	-1.3
	628nm,0.6s						
PIEI	Pieia	1.28	334	Pg	Pg	02 55 58.0	-1.2
	470nm,0.4s						
PIEI	Pieia	1.28	334	Pg	Pg	02 55 58.0	-1.2
	470nm,0.4s						
CAFI	Castiglion Fio	1.36	314	Pn	Pn	02 56 00.2	+0.6
	468nm,0.8s						
CAFI	Castiglion Fio	1.36	314	Pn	Pn	02 56 00.2	+0.6
	468nm,0.8s						
ARCI	Arcidosso	1.43	289	Pn	Pn	02 56 01.0	+0.4
ARCI	Arcidosso	1.43	289	Pn	Pn	02 56 01.0	+0.4
PESA	Pesaro	1.59	348	Pn	Pg	02 56 04.4	-0.7
	611nm,0.5s						
PESA	Pesaro	1.59	348	Pn	Pg	02 56 04.4	-0.7
	611nm,0.5s						
MAON	Monte Argentar	1.61	272	Pn	Pn	02 56 03.2	+0.2
	233nm,0.7s						
MAON	Monte Argentar	1.61	272	Pn	Pn	02 56 03.2	+0.2
	233nm,0.7s						
ASQU	Asqua	1.79	322	Pn	Pn	02 56 06.3	+0.7
	210nm,1.0s						
ASQU	Asqua	1.79	322	Pn	Pn	02 56 06.3	+0.7
	210nm,1.0s						
CSNT	Castellina Chi	1.83	307	Pn	Pn	02 56 07.3	+1.2
	77nm,0.6s						
CSNT	Castellina Chi	1.83	307	Pn	Pn	02 56 07.3	+1.2
	77nm,0.6s						
CASP	Castiglione de	1.84	283	Pn	Pn	02 56 06.2	-0.1
	90nm,0.7s						
CASP	Castiglione de	1.84	283	Pn	Pn	02 56 06.2	-0.1
	90nm,0.7s						
SFI	Santa Sofia	1.85	325	Pn	Pn	02 56 07.0	+0.6
	203nm,0.9s						
SFI	Santa Sofia	1.85	325	Pn	Pn	02 56 07.0	+0.6
	203nm,0.9s						
SGRT	San Giovanni R	1.93	108	Pn	Pn	02 56 08.6	+1.1
	248nm,0.6s						
SGRT	San Giovanni R	1.93	108	Pn	Pn	02 56 08.6	+1.1
	248nm,0.6s						
NVLJ	Novalja	2.45	27	ePn	Pn	02 56 14.7	+0.1
NVLJ				Sn	Sn	02 56 44.7	+0.1
NVLJ	Novalja	2.45	27	ePn	Pn	02 56 14.7	+0.1
NVLJ				Sn	Sn	02 56 44.7	+0.1
MAIM	Mastiano	2.56	307	P	Pn	02 56 16.9	+0.8
BDI	Bagni Di Lucca	2.59	311	Pn	Pn	02 56 17.8	+1.2
	65nm,0.7s						
BDI	Bagni Di Lucca	2.59	311	Pn	Pn	02 56 17.8	+1.2
	65nm,0.7s						
OSPF	L'Ospedale	3.15	258	P	Pn	02 56 23.7	-0.6
OSPF	L'Ospedale	3.15	258	P	Pn	02 56 23.7	-0.6
GRAM	Graiana	3.16	313	P	Pn	02 56 25.6	+1.2
PGF	Pioggiola	3.19	274	ePn	Pn	02 56 25.7	+0.9
PGF				eSn	Sn	02 57 05.5	+2.6
	18nm,0.4s						
PGF	Pioggiola	3.19	274	ePn	Pn	02 56 25.7	+0.9
PGF				eSn	Sn	02 57 05.5	+2.6
	9.0nm,0.4s						
SKDS	Skadanscina	3.20	9	i Pn	Pn	02 56 24.8	-0.1
SKDS	Skadanscina	3.20	9	Pn	Pn	02 56 24.8	-0.1
CODM	Codolo	3.21	310	P	Pn	02 56 26.2	+1.1
STON	Ston	3.28	80	ePn	Pn	02 56 26.0	0.0
STON				Sn	Sn	02 57 03.8	-1.2
STON	Ston	3.28	80	ePn	Pn	02 56 26.0	0.0
STON				Sn	Sn	02 57 03.8	-1.2
SC2M	Scurtabo	3.41	308	P	Pn	02 56 29.3	+1.5
CGRP	Cima Grappa	3.65	343	Pn	Pn	02 56 31.2	-0.1
	103nm,0.5s						
CGRP	Cima Grappa	3.65	343	Pn	Pn	02 56 31.2	-0.1
	103nm,0.5s						
BLY	Banja Luka	3.68	49	ePn	Pn	02 56 32.6	+1.1
BLY	Banja Luka	3.68	49	ePn	Pn	02 56 32.6	+1.1
VNDS	Vrh nad Dolski	3.84	15	i Pn	Pn	02 56 34.4	+0.6
CTI	Castel Tesino	3.84	343	Pn	Pn	02 56 35.1	+1.2
	60nm,0.4s						
CTI	Castel Tesino	3.84	343	Pn	Pn	02 56 35.1	+1.2
	60nm,0.4s						
VINO	Villanova	3.87	360	Pn	Pn	02 56 34.0	-0.1
	74nm,0.6s						
VINO	Villanova	3.87	360	Pn	Pn	02 56 34.0	-0.1
	74nm,0.6s						
GORS	Gorjuse	3.96	7	i Pn	Pn	02 56 35.9	+0.5
GORS	Gorjuse	3.96	7	i Pn	Pn	02 56 35.9	+0.5
VSL	Villasalto	4.15	227	Pn	Pn	02 56 38.8	+0.9
	43nm,1.3s						
VSL	Villasalto	4.15	227	Pn	Pn	02 56 38.8	+0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	43nm,1.3s						
MDI	Monti di Nese	4.26	324	Pn	Pn	02 56 40.7	+1.1
	23nm,0.4s						
MDI	Monti di Nese	4.26	324	Pn	Pn	02 56 40.7	+1.1
	23nm,0.4s						
ABTA	Abfaltersbach	4.39	353	⇑iPn	Pn	02 56 42.4	+1.0
	SNR=19						
ABTA	Abfaltersbach	4.39	353	Pn	Pn	02 56 42.4	+1.0
	SNR=19						
PDG	Podgorica	4.41	87	ePn	Pn	02 56 42.8	+1.3
PDG				eSn	Sn	02 57 34.1	+1.3
PDG	Podgorica	4.41	87	ePn	Pn	02 56 42.8	+1.3
PDG				eSn	Sn	02 57 34.1	+1.3
SAOF	Saorge	4.50	293	P	Pn	02 56 44.3	+1.6
SAOF	Saorge	4.50	293	P	Pn	02 56 44.3	+1.6
SBF	Sospel	4.54	291	ePn	Pn	02 56 44.3	+0.9
SBF	Sospel	4.54	291	ePn	Pn	02 56 44.3	+0.9
REVF	Revere	4.55	289	P	Pn	02 56 44.2	+0.6
REVF	Revere	4.55	289	P	Pn	02 56 44.2	+0.6
AUTN	L'Aution	4.58	292	P	Pn	02 56 46.1	+1.9
AUTN	L'Aution	4.58	292	P	Pn	02 56 46.1	+1.9
TOUF	Mont Tournerai	4.71	292	P	Pn	02 56 47.5	+1.6
TOUF	Mont Tournerai	4.71	292	P	Pn	02 56 47.5	+1.6
MVIF	Mont Vial	4.75	291	P	Pn	02 56 47.3	+1.0
MVIF	Mont Vial	4.75	291	P	Pn	02 56 47.3	+1.0
CALN	Calern	4.89	288	P	Pn	02 56 49.8	+1.5
CALN	Calern	4.89	288	P	Pn	02 56 49.8	+1.5
FETA	Feichten	4.98	339	⇓iPn	Pn	02 56 51.2	+1.7
FETA	Feichten	4.98	339	Pn	Pn	02 56 51.2	+1.7
TIR	Tirane	5.01	100	ePn	Pn	02 56 50.6	+0.8
TIR				eSn	Sn	02 57 47.8	+0.1
TIR	Tirane	5.01	100	ePn	Pn	02 56 50.6	+0.8
TIR				eSn	Sn	02 57 47.8	+0.1
WTTA	Wattenberg	5.01	347	⇑iPn	Pn	02 56 53.1	+3.1
	SNR=12						
WTTA	Wattenberg	5.01	347	Pn	Pn	02 56 53.1	+3.1
	SNR=12						
FRF	La Foret Royal	5.02	286	ePn	Pn	02 56 50.4	+0.5
FRF				eSn	Sn	02 57 45.4	-2.6
	1.7nm,0.4s						
FRF	La Foret Royal	5.02	286	ePn	Pn	02 56 50.4	+0.5
FRF				eSn	Sn	02 57 45.4	-2.6
	0.9nm,0.4s						
DAVOX	Davos/Dischmat	5.02	332	Pn	Pn	02 56 52.7	+2.6
	1.5nm,0.3s,baz=152,slow=18,SNR=20						
DAVOX				Sn	Sn	02 57 51.8	+3.5
	1.1nm,0.3s,baz=164,slow=23,SNR=3.4						
LMR	La Mourre	5.08	283	ePn	Pn	02 56 50.9	+0.1
LMR	La Mourre	5.08	283	ePn	Pn	02 56 50.9	+0.1
WATA	Walderalm	5.09	347	⇑iPn	Pn	02 56 54.3	+3.2
	SNR=10						
WATA	Walderalm	5.09	347	Pn	Pn	02 56 54.3	+3.2
	SNR=10						
IVAS	Ivanjica	5.16	74	ePn	Pn	02 56 53.1	+1.1
IVAS				eSn	Sn	02 57 49.5	-2.0
IVAS	Ivanjica	5.16	74	ePn	Pn	02 56 53.1	+1.1
IVAS				eSn	Sn	02 57 49.5	-2.0
DIVS	Divibare	5.18	68	ePn	Pn	02 56 52.8	+0.7
DIVS	Divibare	5.18	68	ePn	Pn	02 56 52.8	+0.7
MBDF	Montbardon	5.29	298	eP	Pn	02 56 56.0	+2.2
MBDF	Montbardon	5.29	298	eP	Pn	02 56 56.0	+2.2
TRUS	Trudelj	5.50	68	ePn	Pn	02 56 56.2	-0.3
TRUS	Trudelj	5.50	68	ePn	Pn	02 56 56.2	-0.3
GRUS	Gruza	5.63	72	ePn	Pn	02 56 59.0	+0.7
GRUS				eSn	Sn	02 58 01.5	-1.4
GRUS	Gruza	5.63	72	ePn	Pn	02 56 59.0	+0.7
LPG	La Plagne	5.66	306	eP	Pn	02 57 01.8	+2.8
LPG				eSn	Sn	02 58 01.0	-3.0
	5.2nm,0.6s						
LPG	La Plagne	5.66	306	eP	Pn	02 57 01.8	+2.8
SELS	Selova	5.81	79	ePn	Pn	02 57 01.1	+0.3
SELS	Selova	5.81	79	ePn	Pn	02 57 01.1	+0.3
CONA	Conrad Observa	5.83	17	i Pn	Pn	02 57 01.1	0.0
	SNR=7.8						
CONA	Conrad Observa	5.83	17	Pn	Pn	02 57 01.1	0.0
	SNR=7.8						
SMRF	Simiane la Rot	5.87	288	eP	Pn	02 57 03.2	+1.6
SMRF	Simiane la Rot	5.87	288	eP	Pn	02 57 03.2	+1.6
SVIS	Svilajnac	6.07	69	ePn	Pn	02 57 06.2	+1.9
BIA	Bitola	6.16	100	ePn	Pn	02 57 05.1	-0.6
BIA				eSg	Sn	02 58 12.2	-3.9
BIA	Bitola	6.16	100	ePn	Pn	02 57 05.0	-0.6
BARS	Barje	6.30	83	ePn	Pn	02 57 08.3	+0.8
BARS	Barje	6.30	83	ePn	Pn	02 57 08.3	+0.8
GERES	GERESS Array B	6.46	2	Pn	Pn	02 57 10.2	+0.4
	0.6nm,0.3s,baz=170,slow=13,SNR=19						
GERES				Sn	Sn	02 58 21.3	-2.2
	1.8nm,0.3s,baz=194,slow=26,SNR=9.7						
BOLS	Boljevac	6.49	74	ePn	Pn	02 57 09.3	-0.8
BOLS	Boljevac	6.49	74	ePn	Pn	02 57 09.3	-0.8
CABF	La Chapelle	6.66	312	ePn	Pn	02 57 13.2	+0.6
CABF	La Chapelle	6.66	312	ePn	Pn	02 57 13.2	+0.6
VIVF	Saint-Julien-l	6.73	294	ePn	Pn	02 57 15.4	+2.0
VIVF	Saint-Julien-l	6.73	294	ePn	Pn	02 57 15.4	+2.0
KHC	Kasperske Hory	6.74	2	ePN	Pn	02 57 15.1	+1.5
KHC				eSN	Sn	02 58 28.0	-2.4
KHC	Kasperske Hory	6.74	2	Pn	Pn	02 57 15.1	+1.5
ZAPS	Zavoj	6.92	80	ePn	Pn	02 57 17.5	+1.5
ZAPS				eSn	Sn	02 58 33.0	-1.7
TREC	Trest	7.07	12	ePN	Pn	02 57 18.3	+0.2
TREC				eSN	Sn	02 58 36.8	-1.6
TREC	Trest	7.07	12	Pn	Pn	02 57 18.3	+0.2
HINF	Hinteralfeld	7.09	322	ePn	Pn	02 57 18.0	-0.3
HINF				eSn	Sn	02 58 34.4	-4.5
	5.4nm,0.4s						
HINF	Hinteralfeld	7.09	322	ePn	Pn	02 57 18.0	-0.3
LASF	Ste Croix	7.10	287	ePn	Pn	02 57 19.0	+0.5
LASF	Ste Croix	7.10	287	ePn	Pn	02 57 19.0	+0.5
VYHS	Vyhne	7.24	31	ePN	Pn	02 57 23.2	+2.8
VYHS				eSN	Sn	02 58 38.9	-3.6
VYHS	Vyhne	7.24	31	ePn	Pn	02 57 23.2	+2.8
KEST	Kesra	7.33	206	Pn	Pn	02 57 26.6	+4.9
	0.2nm,0.3s,baz=6.6,slow=16,SNR=16						
KEST				Sn	Sn	02 58 47.6	+2.8
	baz=202,slow=23,SNR=1.5						
CDF	Champ du Feu	7.36	327	ePn	Pn	02 57 22.3	+0.1
CDF				eSn	Sn	02 58 41.6	-4.1
	3.8nm,0.3s						
CDF	Champ du Feu	7.36	327	ePn	Pn	02 57 22.3	+0.1
HAU	Haudompre	7.46	321	ePn	Pn	02 57 23.5	+0.1
HAU				eSn	Sn	02 58 42.0	-6.0
	8.0nm,0.4s						
HAU	Haudompre	7.46	321	ePn	Pn	02 57 23.5	+0.1
PRU	Pruhonice	7.65	6	eSN	Sn	02 58 50.9	-1.7
NKC	Novy Kostel	7.87	356	ePN	Pn	02 57 30.0	+1.0
NKC				eSN	Sn	02 58 57.0	-1.0
NKC	Novy Kostel	7.87	356	Pn	Pn	02 57 30.0	+1.0
CAF	Calviac	8.53	291	eP	Pn	02 57 39.8	+1.6
CAF	Calviac	8.53	291	eP	Pn	02 57 39.8	+1.6
CLL	Collm	8.92	359	ePn	Pn	02 57 47.0	+3.6
CLL				eSn	Sn	02 59 20.0	-3.9
CLL				eSg	Sg	03 00 29.0	+8.2
MLR	Muntele Rosu	9.63	67	Pn	Pn	02 57 56.1	+2.7
	0.1nm,0.3s,baz=270,slow=14,SNR=8.2						
ESDC	Sonseca Array	13.32	264	Pn	Pn	02 58 44.3	+0.7
	0.1nm,0.3s,baz=63,slow=14,SNR=2.8						
BRTR	Keskin Array B	15.57	93	Pn	P	02 59 16.8	-1.7
	0.0nm,0.3s,baz=296,slow=11,SNR=2.7						
FINES	FINESS Array B	20.57	18	P	Pn	03 00 15.1	-0.3
	1.7nm,0.8s,baz=200,slow=12,SNR=4.0						
KBZ	Khabaz	21.62	76	P	P	03 00 29.0	+4.4
	0.9nm,0.6s,baz=315,slow=10.0,SNR=4.9						
TORD	Torodi Ar. Bea	30.83	202	P	P	03 01 52.2	+1.5
	0.3nm,0.7s,baz=13,slow=8.8,SNR=5.5						
MKAR	Makanchi Array	47.89	60	P	P	03 04 13.9	+1.3
	0.3nm,0.6s,baz=285,slow=6.3,SNR=5.1						
SONM	Songino Array	62.00	50	P	P	03 05 56.2	+1.3
	0.1nm,0.4s,baz=302,slow=6.6,SNR=2.3						

*CSEM **06** 03:12:58.6, 42°.28N×13°.40E, h8km, After ROM*
*ROM **06** 03:12:58.6±0.1, 42°.28N×13°.40E, h8km±1km, Ml3.0/2, Error ellipse: s-maj=1.4km s-min=1.2km az=75.0*
*IDC **06** 03:12:59.0±1.5, 42°.23N×13°.35E, h0km, mb3.1/2, mb1 3.1/4, mb1mx3.0/28, mbtmp3.0/4, ML3.0/2, Error ellipse: s-maj=39.8km s-min=16.0km az=94.0*
*ISCJB **06** 03:12:59.0±0.5, 42°.28N±0°.03×13°.40E±0°.05, h11km±3km, mb3.0/2, Error ellipse: s-maj=6.0km s-min=4.0km az=159.1*
ISC 06 03:12:59.5±0.9, **42°.28N**±0°.02×**13°.42E**±0°.02, **h5**km±7km, **n31**, σ**0s.91**/45, **Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	352	Pg	Pg	03 13 01.1	-0.2
AQU				Sg	Sg	03 13 02.4	0.0
AQU	L'Aquila	0.07	352	Pg	Pg	03 13 01.1	-0.2
AQU				Sg	Sg	03 13 02.4	0.0
FAGN	Fagnano	0.12	96	Pg	Pg	03 13 02.1	0.0
FAGN				Sg	Sg	03 13 05.0	+1.2
FAGN	Fagnano	0.12	96	Pg	Pg	03 13 02.1	0.0
FAGN				Sg	Sg	03 13 05.0	+1.2
FIAM	Fiamignano	0.22	267	Pg	Pg	03 13 03.7	-0.2
FIAM	Fiamignano	0.22	267	Pg	Pg	03 13 03.7	-0.2
CAMP	Campotosto	0.26	359	Pg	Pg	03 13 04.4	-0.2
CAMP				Sg	Sg	03 13 08.7	+0.7
CAMP	Campotosto	0.26	359	Pg	Pg	03 13 04.4	-0.2
CAMP				Sg	Sg	03 13 08.7	+0.7
PTQR	Pietraquaria	0.26	183	Pg	Pg	03 13 04.5	0.0
PTQR				Sg	Sg	03 13 09.0	+1.1
PTQR	Pietraquaria	0.26	183	Pg	Pg	03 13 04.5	0.0
PTQR				Sg	Sg	03 13 09.0	+1.1
VCEL	Villa Celiera	0.34	70	Pg	Pb	03 13 06.8	-1.3
VCEL	Villa Celiera	0.34	70	Pg	Pb	03 13 06.8	-1.3
VVLD	Villa Vallelon	0.44	159	Pg	Pg	03 13 07.8	-0.1
VVLD				Sg	Sg	03 13 14.3	+0.7
VVLD	Villa Vallelon	0.44	159	Pg	Pg	03 13 07.8	-0.1
VVLD				Sg	Sg	03 13 14.3	+0.7
INTR	Introdacqua	0.45	126	Pg	Pg	03 13 08.0	-0.2
INTR				Sg	Sb	03 13 15.2	-1.9
	1µm,0.7s						
INTR	Introdacqua	0.45	126	Pg	Pg	03 13 08.0	-0.2
INTR				Sg	Sb	03 13 15.2	-1.9
	1µm,0.7s						
GUAR	Guarcino	0.49	189	Pg	Pb	03 13 09.7	-1.0
GUAR	Guarcino	0.49	189	Pg	Pb	03 13 09.7	-1.0
MNS	Montasola	0.56	281	Pg	Pg	03 13 09.5	-0.7
MNS	Montasola	0.56	281	Pg	Pg	03 13 09.5	-0.7
POFI	Posta Fibreno	0.60	158	Pg	Pg	03 13 11.3	+0.2
POFI	Posta Fibreno	0.60	158	Pg	Pg	03 13 11.3	+0.2
LPEL	Lama dei Pelig	0.61	112	Pg	Pg	03 13 10.8	-0.6
LPEL				Sg	Sb	03 13 20.4	-1.4
	531nm,0.5s						
LPEL	Lama dei Pelig	0.61	112	Pg	Pg	03 13 10.8	-0.6
LPEL				Sg	Sb	03 13 20.4	-1.4
	531nm,0.5s						
CAFR	Castel Frentan	0.69	94	Pg	Pg	03 13 12.8	0.0
CAFR	Castel Frentan	0.69	94	Pg	Pg	03 13 12.8	0.0
DAVOX	Davos/Dischmat	5.16	332	Pn	Pn	03 14 19.8	+2.2
	0.4nm,0.3s,baz=145,slow=18,SNR=3.7						
GERES	GERESS Array B	6.57	2	Pn	Pn	03 14 38.0	+1.1
	0.2nm,0.3s,baz=173,slow=13,SNR=4.4						
GERES				Sn	Sn	03 15 53.2	+1.0
	0.2nm,0.3s,baz=184,slow=25,SNR=4.2						
KEST	Kesra	7.26	207	Pn	Pn	03 14 52.3	+5.8
	0.1nm,0.3s,baz=278,slow=5.8,SNR=4.1						
TORD	Torodi Ar. Bea	30.76	203	P	P	03 19 15.2	-0.7
	0.2nm,0.8s,baz=9.9,slow=9.1,SNR=3.1						
MKAR	Makanchi Array	47.87	60	P	P	03 21 39.2	+0.8
	0.1nm,0.5s,baz=282,slow=7.2,SNR=2.3						

*IDC **06** 03:14:39.2±1.6, 2°.63N×95°.75E, h0km, mb3.9/6, mb1 4.1/8, mb1mx3.8/27, mbtmp3.9/8, ML4.0/2, MS4.0/2, Ms1 4.0/2, ms1mx3.3/49, Error ellipse: s-maj=40.7km s-min=19.8km az=51.0*
*DJA **06** 03:14:47.7±1.7, 3°N±6°×9°6E±1°8, h13km±14km, M4.0/5, mb4.2/2, mB5.6/1, MLv3.9/5, Mw(mB)5.1/1*
ISC 06 03:14:43.7±0.9, **2°.71N**±0°.07×**96°.05E**±0°.09, **h25**km, **n20**, σ**1s.37**/20, **mb4.0**/6, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	2.06	133	P	Pn	03 15 19.2	+2.4
GSI				S	Sb	03 15 44.8	-1.0
LHMI	Lhok Sumawe	2.66	20	P	Pb	03 15 31.1	+0.5
LHMI				S	Sb	03 16 05.7	+2.9
PSI	Prapat	2.87	88	P	Pb	03 15 32.4	-1.9
PSI	Prapat	2.87	88	Pn	Pb	03 15 32.3	-2.0
	3.9nm,0.3s,baz=320,slow=5.6,SNR=15						
PSI				Sn	Sb	03 16 08.4	-0.6
	2.3nm,0.3s,baz=334,slow=13,SNR=5.3						
PSI				LR	LR	03 16 58.4	
	comp=Z,479nm,18.4s,baz=37,slow=44						
BSI	Banda Aceh	2.87	345	P	Pn	03 15 25.7	-2.2
IPM	Ipoh	5.26	70	P	Pn	03 16 05.0	+4.1
	29nm,1.0s,0.1nm						
PPI	Padang Panjang	5.36	126	P	Pn	03 16 06.5	+4.3
CMAR	Chiang Mai Arr	15.90	10	Pn	Pn	03 18 25.6	-0.4
	0.6nm,0.3s,baz=201,slow=10,SNR=10						
ODAN	Odare	25.41	342	eP	P	03 20 10.1	+0.4
	12nm,0.9s						
RAMN	Ramite	25.75	340	eP	P	03 20 13.6	+0.8
	17nm,0.6s						
TAPN	Taplejung	25.77	343	eP	P	03 20 13.9	+0.9
	19nm,1.0s						
GUN	Gumba	26.88	340	eP	P	03 20 23.2	+0.1
	22nm,0.7s						
DANN	Dangsing	28.07	336	eP	P	03 20 34.3	+0.6
	12nm,0.7s						
FITZ	Fitzroy Crossi	35.74	126	LR	LR	03 35 45.9	
	comp=Z,1µm,21.5s,baz=109,slow=35						
WRA	Warramunga Arr	43.80	123	P	P	03 22 48.7	+0.8
	1.4nm,0.9s,baz=299,slow=9.6,SNR=4.2						
ASAR	Alice Springs	45.21	128	P	P	03 22 59.8	+0.6
	0.3nm,0.7s,baz=298,slow=8.0,SNR=3.6						
KSRS	Korea Array	45.29	36	P	P	03 22 59.8	+0.4
	1.0nm,0.6s,baz=224,slow=11,SNR=5.4						
MKAR	Makanchi Array	45.52	347	P	P	03 23 00.9	-0.3
	1.4nm,0.4s,baz=160,slow=8.2,SNR=25						
SONM	Songino Array	45.83	10	P	P	03 23 03.9	+0.1
	2.0nm,0.7s,baz=190,slow=9.2,SNR=16						
ARCES	ARCESS Array B	80.74	340	P	P	03 26 53.8	-0.8
	4.9nm,1.0s,baz=103,slow=6.6,SNR=4.0						

*CSEM **06** 03:16:04.2, 42°.32N×13°.38E, h9km, After ROM*
ROM 06 03:16:04.2±0.1, **42°.32N**×**13°.38E**, **h9**km±1km, **Ml2.9**/16, **4C-2D, Error ellipse: s-maj=1.4km s-min=1.2km az=45.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	30	⇓iPg	Pg	03 16 06.4	+0.3
AQU				Sg	Sg	03 16 07.6	+0.2
AQU	L'Aquila	0.04	30	⇓iPg	Pg	03 16 06.4	+0.3
AQU				Sg	Sg	03 16 07.6	+0.2
FAGN	Fagnano	0.16	110	Pg	Pg	03 16 08.5	+0.7
FAGN				Sg	Sg	03 16 11.5	+1.2
FAGN	Fagnano	0.16	110	Pg	Pg	03 16 08.5	+0.7
FAGN				Sg	Sg	03 16 11.5	+1.2
FIAM	Fiamignano	0.20	254	Pg	Pg	03 16 09.2	+0.7
FIAM				Sg	Sg	03 16 12.7	+1.3
FIAM	Fiamignano	0.20	254	Pg	Pg	03 16 09.2	+0.7
FIAM				Sg	Sg	03 16 12.7	+1.3
CAMP	Campotosto	0.21	6	⇑iPg	Pg	03 16 09.0	+0.2
CAMP				Sg	Sg	03 16 12.3	+0.3
CAMP	Campotosto	0.21	6	⇑iPg	Pg	03 16 09.0	+0.2
CAMP				Sg	Sg	03 16 12.3	+0.3
PTQR	Pietraquaria	0.30	177	Pg	Pg	03 16 10.8	+0.5
PTQR				Sg	Sg	03 16 15.5	+1.1
PTQR	Pietraquaria	0.30	177	Pg	Pg	03 16 10.8	+0.5
PTQR				Sg	Sg	03 16 15.5	+1.1
TERO	Teramo	0.34	29	⇑iPg	Pg	03 16 10.8	-0.3
TERO	Teramo	0.34	29	⇑iPg	Pg	03 16 10.8	-0.3
CERT	Cerreto	0.47	218	Pg	Pg	03 16 13.8	+0.2
CERT	Cerreto	0.47	218	Pg	Pg	03 16 13.8	+0.2
VVLD	Villa Vallelon	0.49	158	Pg	Pg	03 16 13.7	-0.1
VVLD				Sg	Sg	03 16 21.0	+0.7
	711nm,0.3s						
VVLD	Villa Vallelon	0.49	158	Pg	Pg	03 16 13.7	-0.1
VVLD				Sg	Sg	03 16 21.0	+0.7
	711nm,0.3s						
INTR	Introdacqua	0.50	128	Pg	Pg	03 16 14.1	0.0
INTR				Sg	Sb	03 16 21.8	-1.0
	1µm,0.3s						
INTR	Introdacqua	0.50	128	Pg	Pg	03 16 14.1	0.0
INTR				Sg	Sb	03 16 21.8	-1.0
	1µm,0.3s						
MNS	Montasola	0.52	277	Pg	Pg	03 16 14.4	0.0
MNS	Montasola	0.52	277	Pg	Pg	03 16 14.4	0.0
GUAR	Guarcino	0.53	185	Pg	Pg	03 16 15.1	+0.5
	477nm,0.5s						
GUAR	Guarcino	0.53	185	Pg	Pg	03 16 15.1	+0.5
	477nm,0.5s						
NRCA	Norcia	0.55	339	Pg	Pg	03 16 14.7	-0.3
NRCA				Sg	Sg	03 16 23.1	+0.8
	835nm,0.2s						
NRCA	Norcia	0.55	339	Pg	Pg	03 16 14.7	-0.3
NRCA				Sg	Sg	03 16 23.1	+0.8
	835nm,0.2s						
MTCE	Montecelio	0.56	238	Pg	Pg	03 16 15.2	+0.1
	232nm,0.4s						
MTCE	Montecelio	0.56	238	Pg	Pg	03 16 15.2	+0.1
	232nm,0.4s						
TRTR	Tortoreto Alta	0.63	39	Pg	Pb	03 16 17.2	-0.1
	2µm,0.7s						
TRTR	Tortoreto Alta	0.63	39	Pg	Pb	03 16 17.2	-0.1
	2µm,0.7s						
OFFI	Offida	0.65	20	Pg	Pb	03 16 17.6	-0.2
OFFI	Offida	0.65	20	Pg	Pb	03 16 17.6	-0.2
POFI	Posta Fibreno	0.65	157	Pg	Pb	03 16 17.7	-0.2
	241nm,0.6s						
POFI	Posta Fibreno	0.65	157	Pg	Pb	03 16 17.7	-0.2
	241nm,0.6s						
LPEL	Lama dei Pelig	0.66	114	Pg	Pg	03 16 16.8	-0.3
LPEL				Sg	Sb	03 16 26.9	-0.4
	576nm,0.6s						
LPEL	Lama dei Pelig	0.66	114	Pg	Pg	03 16 16.8	-0.3
LPEL				Sg	Sb	03 16 26.9	-0.4
	576nm,0.6s						
SDI	San Donato	0.69	152	Pg	Pb	03 16 18.8	+0.3
SDI	San Donato	0.69	152	Pg	Pb	03 16 18.8	+0.3
RMP	Rome, Mte Porz	0.72	225	Pg	Pg	03 16 18.0	-0.1
	406nm,0.4s						
RMP	Rome, Mte Porz	0.72	225	Pg	Pg	03 16 18.0	-0.1
	406nm,0.4s						
CAFR	Castel Frentan	0.73	97	Pg	Pg	03 16 18.3	+0.1
	511nm,0.3s						
CAFR	Castel Frentan	0.73	97	Pg	Pg	03 16 18.3	+0.1
	511nm,0.3s						
CESI	CESI - Serrava	0.77	333	Pg	Pg	03 16 18.9	-0.2
CESI				Sg	Sb	03 16 31.0	+0.6
	189nm,0.3s						
CESI	CESI - Serrava	0.77	333	Pg	Pg	03 16 18.9	-0.2
CESI				Sg	Sb	03 16 31.0	+0.6
	189nm,0.3s						
GIUL	Giuliano Di Ro	0.77	187	Pg	Pg	03 16 18.6	-0.5
	210nm,0.5s						
GIUL	Giuliano Di Ro	0.77	187	Pg	Pg	03 16 18.6	-0.5
	210nm,0.5s						
RNI2	Rionero Sannit	0.85	137	Pg	Pg	03 16 20.8	+0.1
	457nm,0.8s						
RNI2	Rionero Sannit	0.85	137	Pg	Pg	03 16 20.8	+0.1
	457nm,0.8s						
MGAB	Montegabbione	1.10	303	Pg	Pn	03 16 26.0	+0.1
	322nm,0.6s						
MGAB	Montegabbione	1.10	303	Pg	Pn	03 16 26.0	+0.1
	322nm,0.6s						
MURB	Monte Urbino	1.13	327	Pg	Pn	03 16 26.3	0.0
	484nm,0.4s						
MURB	Monte Urbino	1.13	327	Pg	Pn	03 16 26.3	0.0
	484nm,0.4s						
AOI	Ancona	1.24	8	Pg	Pn	03 16 27.7	0.0
	167nm,0.6s						
AOI	Ancona	1.24	8	Pg	Pn	03 16 27.7	0.0
	167nm,0.6s						
SKDS	Skadanscina	3.26	8	i Pn	Sn	03 17 35.3	+1.0
BOJS	Bojanci	3.46	22	i Pn	Sn	03 17 40.3	+1.1
JAVS	Javornik	3.60	8	i Pn	Sn	03 17 43.8	+0.7
VISS	Visnje	3.64	16	i Pn	Sn	03 17 45.9	+2.2

*ISCJB **06** 03:17:04.3±0.3, 42°.37N±0°.02×13°.35E±0°.03, h13km±2km, mb3.3/2, Error ellipse: s-maj=3.6km s-min=3.1km az=174.1*
*CSEM **06** 03:17:04.8±0.1, 42°.37N×13°.35E, h2km, ML3.2/5, Error ellipse: s-maj=2.2km s-min=1.7km az=65.0*
*ROM **06** 03:17:04.4±0.1, 42°.36N×13°.36E, h9km±1km, Ml3.2/11, Error ellipse: s-maj=1.4km s-min=1.2km az=74.0*
*IDC **06** 03:17:04.9±1.4, 42°.41N×13°.21E, h0km, mb3.2/2, mb1 3.3/5, mb1mx3.2/29, mbtmp3.1/5, ML3.0/3, Error ellipse: s-maj=24.6km s-min=16.1km az=92.0*
*LDG **06** 03:17:07.2±0.5, 42°.41N×13°.34E, h2km, Ml3.2/5, Error ellipse: s-maj=11.6km s-min=6.4km az=104.0*
ISC 06 03:17:05.1±0.8, **42°.37N**±0°.02×**13°.35E**±0°.02, **h8**km±5km, **n87**, σ**1s.47**/113, **2D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	115	⇓iPg	Pg	03 17 06.5	-0.3
AQU				Sg	Sg	03 17 07.7	-0.4
AQU	L'Aquila	0.05	115	⇓iPg	Pg	03 17 06.5	-0.3
AQU				Sg	Sg	03 17 07.7	-0.4
CAMP	Campotosto	0.17	16	Pg	Pg	03 17 08.0	-0.7
CAMP				Sg	Sg	03 17 11.7	+0.5
CAMP	Campotosto	0.17	16	Pg	Pg	03 17 08.0	-0.7
CAMP				Sg	Sg	03 17 11.7	+0.5
FIAM	Fiamignano	0.20	238	Pg	Pg	03 17 09.5	+0.3
FIAM				Sg	Sg	03 17 12.8	+0.8
FIAM	Fiamignano	0.20	238	Pg	Pg	03 17 09.5	+0.3
FIAM				Sg	Sg	03 17 12.8	+0.8
FAGN	Fagnano	0.21	121	Pg	Pg	03 17 09.2	-0.1
FAGN				Sg	Sg	03 17 12.7	+0.5
FAGN	Fagnano	0.21	121	Pg	Pg	03 17 09.2	-0.1
FAGN				Sg	Sg	03 17 12.7	+0.5
TERO	Teramo	0.31	37	Pg	Pg	03 17 10.9	-0.4
TERO	Teramo	0.31	37	Pg	Pg	03 17 10.9	-0.4
PTQR	Pietraquaria	0.35	173	Pg	Pg	03 17 11.6	-0.5
PTQR	Pietraquaria	0.35	173	Pg	Pg	03 17 11.6	-0.5
VCEL	Villa Celiera	0.37	87	Pg	Pg	03 17 12.2	-0.1
VCEL	Villa Celiera	0.37	87	Pg	Pg	03 17 12.2	-0.1
NRCA	Norcia	0.49	340	Pg	Pg	03 17 14.4	-0.2
NRCA				Sg	Sg	03 17 22.3	+1.2
NRCA	Norcia	0.49	340	Pg	Pg	03 17 14.4	-0.2
NRCA				Sg	Sg	03 17 22.3	+1.2
MNS	Montasola	0.49	272	Pg	Pg	03 17 14.4	-0.2
MNS	Montasola	0.49	272	Pg	Pg	03 17 14.4	-0.2
CERT	Cerreto	0.50	213	Pg	Pg	03 17 14.3	-0.5
CERT				Sg	Sg	03 17 21.6	+0.2
CERT	Cerreto	0.50	213	Pg	Pg	03 17 14.3	-0.5
CERT				Sg	Sg	03 17 21.6	+0.2
VVLD	Villa Vallelon	0.54	158	Pg	Pg	03 17 14.5	-1.1
VVLD	Villa Vallelon	0.54	158	Pg	Pg	03 17 14.5	-1.1
INTR	Introdacqua	0.55	131	Pg	Pg	03 17 15.0	-0.8
INTR				Sg	Sg	03 17 23.7	+0.7
INTR	Introdacqua	0.55	131	Pg	Pg	03 17 15.0	-0.8
INTR				Sg	Sg	03 17 23.7	+0.7
MTCE	Montecelio	0.57	232	Pg	Pg	03 17 15.5	-0.6
	695nm,0.5s						
MTCE	Montecelio	0.57	232	Pg	Pg	03 17 15.5	-0.6
	695nm,0.5s						
GUAR	Guarcino	0.58	182	Pg	Pg	03 17 16.2	-0.1
	777nm,0.5s						
GUAR	Guarcino	0.58	182	Pg	Pg	03 17 16.2	-0.1
	777nm,0.5s						
TRTR	Tortoreto Alta	0.60	44	Pg	Pg	03 17 17.2	+0.4
TRTR	Tortoreto Alta	0.60	44	Pg	Pg	03 17 17.2	+0.4
OFFI	Offida	0.61	24	Pg	Pg	03 17 17.5	+0.5
	6µm,0.5s						
OFFI	Offida	0.61	24	Pg	Pg	03 17 17.5	+0.5
	6µm,0.5s						
LPEL	Lama dei Pelig	0.70	117	Pg	Pg	03 17 17.6	-1.0
LPEL				Sg	Sg	03 17 27.8	0.0
LPEL	Lama dei Pelig	0.70	117	Pg	Pg	03 17 17.6	-1.0
LPEL				Sg	Sg	03 17 27.8	0.0
CESI	CESI - Serrava	0.71	333	Pg	Pg	03 17 18.8	0.0
	370nm,0.4s						
CESI	CESI - Serrava	0.71	333	Pg	Pg	03 17 18.8	0.0
	370nm,0.4s						
POFI	Posta Fibreno	0.71	157	Pg	Pg	03 17 18.7	-0.1
POFI	Posta Fibreno	0.71	157	Pg	Pg	03 17 18.7	-0.1
RMP	Rome, Mte Porz	0.74	221	Pg	Pg	03 17 19.0	-0.3
	905nm,0.4s						
RMP	Rome, Mte Porz	0.74	221	Pg	Pg	03 17 19.0	-0.3
	905nm,0.4s						
SDI	San Donato	0.75	152	Pg	Pg	03 17 19.9	+0.4
SDI	San Donato	0.75	152	Pg	Pg	03 17 19.9	+0.4
CAFR	Castel Frentan	0.76	101	Pg	Pg	03 17 19.2	-0.5
CAFR	Castel Frentan	0.76	101	Pg	Pg	03 17 19.2	-0.5
GIUL	Giuliano Di Ro	0.82	185	Pg	Pg	03 17 20.8	0.0
	984nm,0.6s						
GIUL	Giuliano Di Ro	0.82	185	Pg	Pg	03 17 20.8	0.0
	984nm,0.6s						
CERA	Filignano	0.92	147	Pg	Pg	03 17 22.0	-0.8
	1µm,0.8s						
CERA	Filignano	0.92	147	Pg	Pg	03 17 22.0	-0.8
	1µm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MIDA	Miranda	1.00	137	Pg	Pg	03 17 22.5	-1.7
	501nm,0.4s						
MIDA	Miranda	1.00	137	Pg	Pg	03 17 22.5	-1.7
	501nm,0.4s						
CING	Cingoli	1.01	354	Pg	Pg	03 17 23.9	-0.6
	981nm,0.9s						
CING	Cingoli	1.01	354	Pg	Pg	03 17 23.9	-0.6
	981nm,0.9s						
MGAB	Montegabbione	1.06	301	Pg	Pg	03 17 25.3	-0.1
MGAB	Montegabbione	1.06	301	Pg	Pg	03 17 25.3	-0.1
ARVD	Arcevia	1.16	345	Pg	Pg	03 17 26.5	-0.9
	703nm,1.0s						
ARVD	Arcevia	1.16	345	Pg	Pg	03 17 26.5	-0.9
	703nm,1.0s						
AOI	Ancona	1.19	9	Pg	Pb	03 17 27.7	-0.3
	576nm,0.7s						
AOI	Ancona	1.19	9	Pg	Pb	03 17 27.7	-0.3
	576nm,0.7s						
MAON	Monte Argentar	1.64	273	Pn	Pn	03 17 34.5	+0.3
MAON	Monte Argentar	1.64	273	Pn	Pn	03 17 34.5	+0.3
MAIM	Mastiano	2.59	307	P	Pn	03 17 49.2	+1.8
SKDS	Skadanscina	3.21	8	i Sn	Sn	03 18 36.0	+1.7
SKDS	Skadanscina	3.21	8	i Sn	Sn	03 18 36.0	+1.7
PGF	Pioggiola	3.22	275	ePn	Pn	03 17 57.1	+1.0
PGF				eSn	Sn	03 18 37.3	+2.6
	20nm,0.5s						
PGF	Pioggiola	3.22	275	ePn	Pn	03 17 57.1	+1.0
PGF				eSn	Sn	03 18 37.3	+2.6
	9.8nm,0.5s						
BOJS	Bojanci	3.42	23	i Sn	Sn	03 18 36.8	-2.6
JAVS	Javornik	3.56	8	i Sn	Sn	03 18 45.6	+2.6
VISS	Visnje	3.59	17	i Sn	Sn	03 18 45.4	+1.7
SBF	Sospel	4.58	291	ePn	Pn	03 18 15.5	+0.9
SBF				eSn	Sn	03 19 06.0	-2.0
	6.2nm,0.5s						
SBF	Sospel	4.58	291	ePn	Pn	03 18 15.5	+0.9
SBF				eSn	Sn	03 19 06.0	-2.0
	3.1nm,0.5s						
DAVOX	Davos/Dischmat	5.05	332	Pn	Pn	03 18 21.1	-0.2
	0.4nm,0.3s,baz=155,slow=19,SNR=2.1						
FRF	La Foret Royal	5.06	286	ePn	Pn	03 18 21.4	+0.2
FRF	La Foret Royal	5.06	286	ePn	Pn	03 18 21.4	+0.2
LMR	La Mourre	5.12	283	ePn	Pn	03 18 22.1	+0.1
LMR	La Mourre	5.12	283	ePn	Pn	03 18 22.1	+0.1
GERES	GERESS Array B	6.48	2	Pn	Pn	03 18 42.2	+1.5
	0.2nm,0.3s,baz=176,slow=14,SNR=3.9						
GERES				Sn	Sn	03 19 54.3	-0.6
	0.8nm,0.3s,baz=177,slow=22,SNR=6.3						
KHC	Kasperske Hory	6.76	1	ePN	Pn	03 18 45.3	+0.7
KHC				ex	x	03 19 01.3	
KHC				eSN	Sn	03 20 01.1	-0.7
HINF	Hinteralfeld	7.12	322	ePn	Pn	03 18 49.5	-0.1
HINF				eSn	Sn	03 20 06.3	-4.3
	6.8nm,0.5s						
HINF	Hinteralfeld	7.12	322	ePn	Pn	03 18 49.5	-0.1
HINF				eSn	Sn	03 20 06.3	-4.3
	3.4nm,0.5s						
KEST	Kesra	7.32	206	Pn	Pn	03 18 57.1	+4.6
	0.3nm,0.3s,baz=288,slow=4.7,SNR=7.0						
CDF	Champ du Feu	7.39	327	ePn	Pn	03 18 53.3	-0.1
CDF				eSn	Sn	03 20 12.9	-4.6
	2.1nm,0.4s						
CDF	Champ du Feu	7.39	327	ePn	Pn	03 18 53.3	-0.1
CDF				eSn	Sn	03 20 12.9	-4.6
	1.0nm,0.4s						
HAU	Haudompre	7.49	321	ePn	Pn	03 18 54.8	+0.2
HAU				eSn	Sn	03 20 13.8	-5.9
	5.4nm,0.4s						
HAU	Haudompre	7.49	321	ePn	Pn	03 18 54.8	+0.2
HAU				eSn	Sn	03 20 13.8	-5.9
	2.7nm,0.4s						
MLR	Muntele Rosu	9.61	67	Pn	Pn	03 19 27.1	+3.4
	0.0nm,0.3s,baz=171,slow=7.8,SNR=4.2						
TORD	Torodi Ar. Bea	30.82	203	P	P	03 23 22.3	+0.8
	0.2nm,0.7s,baz=8.1,slow=9.5,SNR=3.3						
MKAR	Makanchi Array	47.87	60	P	P	03 25 44.3	+0.9
	0.3nm,0.6s,baz=283,slow=6.8,SNR=4.0						

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*ROM **06** 03:17:29.9±0.1, 42°.37N×13°.33E, h9^{km}±1^{km}, Ml3.5/7, Error ellipse: s-maj=2.1km s-min=1.6km az=92.0*
*CSEM **06** 03:17:29.9, 42°.37N×13°.33E, h9^{km}, After ROM*
*ISCJB **06** 03:17:30.0±0.4, 42°.37N±0°.02×13°.32E±0°.04, h13^{km}±3^{km}, mb3.5/4, Error ellipse: s-maj=5.5km s-min=4.0km az=8.5*
*IDC **06** 03:17:30.0±1.5, 42°.46N×13°.07E, h0^{km}, mb3.4/4, mb1 3.6/6, mb1mx3.4/28, mbtmp3.4/6, ML3.1/2, Error ellipse: s-maj=24.5km s-min=16.3km az=90.0*
ISC 06 03:17:30.7±0.8, 42°.37N±0°.02×13°.32E±0°.03, h7^{km}±5^{km}, n39, σ0^{s}80/53, mb3.5/4, 2C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	101	Pg	Pg	03 17 32.3	-0.2
AQU				Sg	Sg	03 17 33.7	0.0
AQU	L'Aquila	0.06	101	Pg	Pg	03 17 32.3	-0.2
AQU				Sg	Sg	03 17 33.7	0.0
FIAM	Fiamignano	0.18	237	Pg	Pg	03 17 34.5	+0.1
FIAM	Fiamignano	0.18	237	Pg	Pg	03 17 34.5	+0.1
CAMP	Campotosto	0.18	21⇑	iPg	Pg	03 17 34.1	-0.3
CAMP				Sg	Sg	03 17 37.0	0.0
CAMP	Campotosto	0.18	21⇑	iPg	Pg	03 17 34.1	-0.3
CAMP				Sg	Sg	03 17 37.0	0.0
FAGN	Fagnano	0.22	117	Pg	Pg	03 17 34.9	-0.2
FAGN				Sg	Sg	03 17 39.0	+1.0
FAGN	Fagnano	0.22	117	Pg	Pg	03 17 34.9	-0.2
FAGN				Sg	Sg	03 17 39.0	+1.0
TERO	Teramo	0.33	39	Pg	Pg	03 17 36.2	-1.0
TERO				Sg	Sg	03 17 42.4	+0.8
TERO	Teramo	0.33	39	Pg	Pg	03 17 36.2	-1.0
TERO				Sg	Sg	03 17 42.4	+0.8
PTQR	Pietraquaria	0.35	170	Pg	Pg	03 17 37.2	-0.3
PTQR	Pietraquaria	0.35	170	Pg	Pg	03 17 37.2	-0.3
VCEL	Villa Celiera	0.39	86	Pg	Pg	03 17 38.8	+0.6
VCEL	Villa Celiera	0.39	86	Pg	Pg	03 17 38.8	+0.6
CERT	Cerreto	0.49	211	Pg	Pg	03 17 39.5	-0.6
CERT				Sg	Sg	03 17 46.7	+0.2
CERT	Cerreto	0.49	211	Pg	Pg	03 17 39.5	-0.6
CERT				Sg	Sg	03 17 46.7	+0.2
NRCA	Norcia	0.49	342	Pg	Pg	03 17 40.1	-0.1
NRCA				Sg	Sg	03 17 47.5	+0.8
	2μm,0.1s						
NRCA	Norcia	0.49	342	Pg	Pg	03 17 40.1	-0.1
NRCA				Sg	Sg	03 17 47.5	+0.8
	2μm,0.1s						
VVLD	Villa Vallelon	0.54	156	Pg	Pg	03 17 40.7	-0.5
	3μm,0.8s						
VVLD	Villa Vallelon	0.54	156	Pg	Pg	03 17 40.7	-0.5
	3μm,0.8s						
MTCE	Montecelio	0.55	232	Pg	Pb	03 17 42.5	-0.2
	1μm,0.4s						
MTCE	Montecelio	0.55	232	Pg	Pb	03 17 42.5	-0.2
	1μm,0.4s						
INTR	Introdacqua	0.56	129	Pg	Pg	03 17 41.1	-0.4
	3μm,0.6s						
INTR	Introdacqua	0.56	129	Pg	Pg	03 17 41.1	-0.4
	3μm,0.6s						
GUAR	Guarcino	0.57	181	Pg	Pb	03 17 42.7	-0.3
	2μm,0.5s						
GUAR	Guarcino	0.57	181	Pg	Pb	03 17 42.7	-0.3
	2μm,0.5s						
TRTR	Tortoreto Alta	0.62	45	Pg	Pg	03 17 42.8	+0.1
TRTR	Tortoreto Alta	0.62	45	Pg	Pg	03 17 42.8	+0.1
OFFI	Offida	0.63	25	Pg	Pg	03 17 43.0	+0.2
	7μm,0.5s						
OFFI	Offida	0.63	25	Pg	Pg	03 17 43.0	+0.2
	7μm,0.5s						
LPEL	Lama dei Pelig	0.72	116	Pg	Pg	03 17 43.3	-1.2
LPEL				Sg	Sg	03 17 54.2	+0.4
	1μm,0.2s						
LPEL	Lama dei Pelig	0.72	116	Pg	Pg	03 17 43.3	-1.2
LPEL				Sg	Sg	03 17 54.2	+0.4
	1μm,0.2s						
GERES	GERESS Array B	6.49	2	Pn	Pn	03 19 05.3	-1.3
	0.4nm,0.3s,baz=182,slow=17,SNR=4.4						
GERES				Sn	Sn	03 20 20.0	-0.8
	1.1nm,0.3s,baz=180,slow=23,SNR=6.0						
KHC	Kasperske Hory	6.77	1	eSN	Sn	03 20 24.4	-3.3
MLR	Muntele Rosu	9.63	67	Pn	Pn	03 19 53.5	+3.8
	0.0nm,0.3s,baz=176,slow=6.6,SNR=7.1						
KBZ	Khabaz	21.61	76	P	P	03 22 22.9	+1.8
	2.4nm,1.0s,baz=252,slow=9.6,SNR=4.2						
TORD	Torodi Ar. Bea	30.81	203	P	P	03 23 48.4	+1.2
	0.2nm,0.6s,baz=16,slow=9.3,SNR=5.6						
MKAR	Makanchi Array	47.89	60	P	P	03 26 09.3	+0.1
	0.5nm,0.6s,baz=280,slow=7.4,SNR=5.9						
SONM	Songino Array	62.01	50	P	P	03 27 52.1	+0.6
	0.2nm,0.6s,baz=317,slow=7.9,SNR=2.7						

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*ISCJB **06** 03:18:43.1±0.3, 42°.38N±0°.02×13°.33E±0°.03, h14^{km}±2^{km}, mb3.3/3, Error ellipse: s-maj=3.8km s-min=3.2km az=162.5*
*CSEM **06** 03:18:43.7±0.1, 42°.37N×13°.35E, h10^{km}, ML3.1/6, Error ellipse: s-maj=2.7km s-min=2.0km az=54.0*
*ROM **06** 03:18:43.4±0.1, 42°.37N×13°.34E, h9^{km}±1^{km}, Ml3.4/4, Error ellipse: s-maj=1.8km s-min=1.6km az=87.0*
*IDC **06** 03:18:44.9±1.4, 42°.35N×13°.38E, h0^{km}, mb3.2/2, mb1 3.4/5, mb1mx3.2/28, mbtmp3.3/5, ML3.1/3, Error ellipse: s-maj=30.3km s-min=19.5km az=134.0*
*LDG **06** 03:18:45.8±0.7, 42°.43N×13°.31E, h2^{km}, Ml3.1/6, Error ellipse: s-maj=14.1km s-min=9.0km az=110.0*
ISC 06 03:18:44.0±0.8, 42°.37N±0°.02×13°.34E±0°.02, h10^{km}±4^{km}, n80, σ1^{s}17/102, mb3.4/3, 2C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	105⇓	iPg	Pg	03 18 45.7	-0.4
AQU				Sg	Sg	03 18 47.1	-0.5
AQU	L'Aquila	0.05	105⇓	iPg	Pg	03 18 45.7	-0.4
AQU				Sg	Sg	03 18 47.1	-0.5
CAMP	Campotosto	0.18	16⇑	iPg	Pg	03 18 47.7	-0.2
CAMP				Sg	Sg	03 18 50.9	+0.3
CAMP	Campotosto	0.18	16⇑	iPg	Pg	03 18 47.7	-0.2
CAMP				Sg	Sg	03 18 50.9	+0.3
FIAM	Fiamignano	0.19	240	Pg	Pg	03 18 48.3	+0.1
FIAM				Sg	Sg	03 18 51.0	0.0
FIAM	Fiamignano	0.19	240	Pg	Pg	03 18 48.3	+0.1
FIAM				Sg	Sg	03 18 51.0	0.0
FAGN	Fagnano	0.20	119	Pg	Pg	03 18 48.5	+0.1
FAGN				Sg	Sg	03 18 52.1	+0.8
FAGN	Fagnano	0.20	119	Pg	Pg	03 18 48.5	+0.1
FAGN				Sg	Sg	03 18 52.1	+0.8
TERO	Teramo	0.32	37	Pg	Pg	03 18 49.8	-0.7
TERO				Sg	Sg	03 18 54.7	-0.1
TERO	Teramo	0.32	37	Pg	Pg	03 18 49.8	-0.7
TERO				Sg	Sg	03 18 54.7	-0.1
PTQR	Pietraquaria	0.35	173	Pg	Pg	03 18 50.4	-0.5
PTQR	Pietraquaria	0.35	173	Pg	Pg	03 18 50.4	-0.5
VCEL	Villa Celiera	0.37	85	Pg	Pg	03 18 51.3	-0.1
VCEL	Villa Celiera	0.37	85	Pg	Pg	03 18 51.3	-0.1
CERT	Cerreto	0.49	213	Pg	Pg	03 18 52.8	-0.9
CERT				Sg	Sg	03 19 00.5	+0.3
CERT	Cerreto	0.49	213	Pg	Pg	03 18 52.8	-0.9
CERT				Sg	Sg	03 19 00.5	+0.3
NRCA	Norcia	0.50	340	Pg	Pg	03 18 53.2	-0.5
NRCA				Sg	Sg	03 19 00.8	+0.5
NRCA	Norcia	0.50	340	Pg	Pg	03 18 53.2	-0.5
NRCA				Sg	Sg	03 19 00.8	+0.5
VVLD	Villa Vallelon	0.54	157	Pg	Pg	03 18 54.4	-0.1
VVLD	Villa Vallelon	0.54	157	Pg	Pg	03 18 54.4	-0.1
INTR	Introdacqua	0.55	130	Pg	Pg	03 18 53.8	-0.9
INTR				Sg	Sb	03 19 03.1	-0.6
INTR	Introdacqua	0.55	130	Pg	Pg	03 18 53.8	-0.9
INTR				Sg	Sb	03 19 03.1	-0.6
MTCE	Montecelio	0.56	233	Pg	Pg	03 18 54.1	-0.9
MTCE	Montecelio	0.56	233	Pg	Pg	03 18 54.1	-0.9
GUAR	Guarcino	0.57	182	Pg	Pb	03 18 55.7	-0.4
GUAR	Guarcino	0.57	182	Pg	Pb	03 18 55.7	-0.4
TRTR	Tortoreto Alta	0.61	43	Pg	Pb	03 18 56.2	-0.6
TRTR	Tortoreto Alta	0.61	43	Pg	Pb	03 18 56.2	-0.6
OFFI	Offida	0.62	24	Pg	Pg	03 18 56.4	+0.3
OFFI	Offida	0.62	24	Pg	Pg	03 18 56.4	+0.3
LPEL	Lama dei Pelig	0.70	117	Pg	Pg	03 18 56.7	-0.9
LPEL				Sg	Sb	03 19 07.5	-0.6
LPEL	Lama dei Pelig	0.70	117	Pg	Pg	03 18 56.7	-0.9
LPEL				Sg	Sb	03 19 07.5	-0.6
POFI	Posta Fibreno	0.70	157	Pg	Pg	03 18 57.3	-0.3
POFI	Posta Fibreno	0.70	157	Pg	Pg	03 18 57.3	-0.3
CESI	CESI - Serrava	0.72	333	Pg	Pg	03 18 57.4	-0.5
CESI	CESI - Serrava	0.72	333	Pg	Pg	03 18 57.4	-0.5
SDI	San Donato	0.74	152	Pg	Pb	03 18 59.2	+0.1
SDI	San Donato	0.74	152	Pg	Pb	03 18 59.2	+0.1
CAFR	Castel Frentan	0.76	100	Pg	Pg	03 18 58.1	-0.6
CAFR	Castel Frentan	0.76	100	Pg	Pg	03 18 58.1	-0.6
GIUL	Giuliano Di Ro	0.81	185	Pg	Pg	03 18 58.7	-0.9
GIUL	Giuliano Di Ro	0.81	185	Pg	Pg	03 18 58.7	-0.9
MIDA	Miranda	0.99	136	Pg	Pg	03 19 01.3	-1.8
MIDA	Miranda	0.99	136	Pg	Pg	03 19 01.3	-1.8
CING	Cingoli	1.01	354	Pg	Pg	03 19 02.7	-0.9
	964nm,0.4s						
CING	Cingoli	1.01	354	Pg	Pg	03 19 02.7	-0.9
	964nm,0.4s						
FRES	Fresagrandinar	1.06	111	Pg	Pg	03 19 03.4	-1.0
	1μm,1.0s						
FRES	Fresagrandinar	1.06	111	Pg	Pg	03 19 03.4	-1.0
	1μm,1.0s						
SACS	San Casciano d	1.16	295	Pg	Pb	03 19 06.4	+0.2
	526nm,0.9s						
PTRJ	Pietraroja	1.34	138	Pg	Pg	03 19 09.9	+0.2
	1μm,0.7s						
PTRJ	Pietraroja	1.34	138	Pg	Pg	03 19 09.9	+0.2
	1μm,0.7s						
SENI	Senigallia	1.34	357	Pg	Pb	03 19 09.2	0.0
SENI	Senigallia	1.34	357	Pg	Pb	03 19 09.2	0.0
CAFI	Castiglion Fio	1.40	314	Pg	Pb	03 19 10.2	0.0
CAFI	Castiglion Fio	1.40	314	Pg	Pb	03 19 10.2	0.0
PGF	Pioggiola	3.22	275	ePn	Pn	03 19 35.0	+0.3
PGF				eSn	Sn	03 20 15.4	+2.3
	8.3nm,0.4s						
PGF	Pioggiola	3.22	275	ePn	Pn	03 19 35.0	+0.3
PGF				eSn	Sn	03 20 15.4	+2.3
	4.2nm,0.4s						
SBF	Sospel	4.58	291	ePn	Pn	03 19 54.0	+0.7
SBF				eSn	Sn	03 20 44.0	-2.6
	6.3nm,0.4s						
SBF	Sospel	4.58	291	ePn	Pn	03 19 54.0	+0.7
SBF				eSn	Sn	03 20 44.0	-2.6
	3.2nm,0.4s						
FRF	La Foret Royal	5.06	286	ePn	Pn	03 19 59.8	-0.1
FRF				eSn	Sn	03 20 54.9	-3.4
	1.7nm,0.5s						
FRF	La Foret Royal	5.06	286	ePn	Pn	03 19 59.8	-0.1
FRF				eSn	Sn	03 20 54.9	-3.4
	0.9nm,0.5s						
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	03 20 03.5	+3.4
	1.5nm,0.3s,baz=162,slow=20,SNR=3.6						
DAVOX				Sn	Sn	03 21 02.7	+4.1
	2.1nm,0.3s,baz=180,slow=20,SNR=3.0						
LMR	La Mourre	5.12	283	ePn	Pn	03 20 00.3	-0.4
LMR	La Mourre	5.12	283	ePn	Pn	03 20 00.3	-0.4
MBDF	Montbardon	5.33	299	eP	Pn	03 20 05.5	+1.8
MBDF	Montbardon	5.33	299	eP	Pn	03 20 05.5	+1.8
GERES	GERESS Array B	6.49	2	Sn	Sn	03 21 33.0	-0.5
	1.8nm,0.3s,baz=176,slow=23,SNR=7.0						
CABF	La Chapelle	6.70	312	ePn	Pn	03 20 23.1	+0.6
CABF	La Chapelle	6.70	312	ePn	Pn	03 20 23.1	+0.6
HINF	Hinteralfeld	7.12	322	ePn	Pn	03 20 27.4	-0.9
HINF				eSn	Sn	03 21 43.7	-5.6
	5.8nm,0.4s						
HINF	Hinteralfeld	7.12	322	ePn	Pn	03 20 27.4	-0.9
KEST	Kesra	7.32	206	Pn	Pn	03 20 35.2	+4.2
	0.3nm,0.3s,baz=327,slow=2.8,SNR=5.0						
CDF	Champ du Feu	7.40	327	ePn	Pn	03 20 31.3	-0.8
CDF				eSn	Sn	03 21 51.0	-5.1
	3.2nm,0.4s						
CDF	Champ du Feu	7.40	327	ePn	Pn	03 20 31.3	-0.8
HAU	Haudompre	7.50	321	ePn	Pn	03 20 32.9	-0.5
HAU				eSn	Sn	03 21 51.9	-6.5
	7.9nm,0.4s						
HAU	Haudompre	7.50	321	ePn	Pn	03 20 32.9	-0.5
MLR	Muntele Rosu	9.61	67	Pn	Pn	03 21 06.1	+3.6
	0.0nm,0.3s,baz=270,slow=15,SNR=4.1						
KBZ	Khabaz	21.59	76	P	P	03 23 39.4	+5.6
	1.6nm,0.9s,baz=328,slow=12,SNR=4.4						
TORD	Torodi Ar. Bea	30.82	203	P	P	03 25 01.8	+1.8
	0.2nm,0.8s,baz=20,slow=8.8,SNR=3.9						
MKAR	Makanchi Array	47.88	60	P	P	03 27 23.2	+1.2
	0.3nm,0.7s,baz=288,slow=7.5,SNR=2.6						

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*CSEM **06** 03:22:10.0, 42°.32N×13°.39E, h9^{km}, After ROM*
ROM 06 03:22:10.0±0.1, 42°.32N×13°.39E, h9^{km}±1^{km}, Ml2.7/10, 4C-2D, Error ellipse: s-maj=1.5km s-min=1.2km az=65.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	13⇓	iPg	Pg	03 22 12.4	+0.5
AQU				Sg	Sg	03 22 13.6	+0.3
AQU	L'Aquila	0.04	13⇓	iPg	Pg	03 22 12.4	+0.5
AQU				Sg	Sg	03 22 13.6	+0.3
FAGN	Fagnano	0.15	109	Pg	Pg	03 22 14.1	+0.7
FAGN				Sg	Sg	03 22 17.1	+1.3
FAGN	Fagnano	0.15	109	Pg	Pg	03 22 14.1	+0.7
FAGN				Sg	Sg	03 22 17.1	+1.3
FIAM	Fiamignano	0.21	257	Pg	Pg	03 22 15.2	+0.7
FIAM	Fiamignano	0.21	257	Pg	Pg	03 22 15.2	+0.7
CAMP	Campotosto	0.22	4⇑	iPg	Pg	03 22 15.0	+0.3
CAMP				Sg	Sg	03 22 18.4	+0.4
CAMP	Campotosto	0.22	4⇑	iPg	Pg	03 22 15.0	+0.3
CAMP				Sg	Sg	03 22 18.4	+0.4
PTQR	Pietraquaria	0.29	178	Pg	Pg	03 22 16.5	+0.5
PTQR				Sg	Sg	03 22 21.3	+1.2
PTQR	Pietraquaria	0.29	178	Pg	Pg	03 22 16.5	+0.5
PTQR				Sg	Sg	03 22 21.3	+1.2
VCEL	Villa Celiera	0.34	77	Pg	Pg	03 22 17.3	+0.3
VCEL	Villa Celiera	0.34	77	Pg	Pg	03 22 17.3	+0.3
TERO	Teramo	0.34	27	Pg	Pg	03 22 16.7	-0.3
TERO				Sg	Sb	03 22 23.0	-1.0
TERO	Teramo	0.34	27	Pg	Pg	03 22 16.7	-0.3
TERO				Sg	Sb	03 22 23.0	-1.0
CERT	Cerreto	0.48	220⇑	iPg	Pg	03 22 19.7	+0.3
CERT				Sg	Sb	03 22 27.1	-0.7
CERT	Cerreto	0.48	220⇑	iPg	Pg	03 22 19.7	+0.3
CERT				Sg	Sb	03 22 27.1	-0.7
VVLD	Villa Vallelon	0.48	159	Pg	Pg	03 22 19.5	+0.1
	481nm,0.4s						
VVLD	Villa Vallelon	0.48	159	Pg	Pg	03 22 19.5	+0.1
	481nm,0.4s						
INTR	Introdacqua	0.49	128	Pg	Pg	03 22 20.1	+0.4
INTR				Sg	Sb	03 22 27.7	-0.5
INTR	Introdacqua	0.49	128	Pg	Pg	03 22 20.1	+0.4
INTR				Sg	Sb	03 22 27.7	-0.5
GUAR	Guarcino	0.52	186	Pg	Pg	03 22 20.5	+0.2
	355nm,0.3s						
GUAR	Guarcino	0.52	186	Pg	Pg	03 22 20.5	+0.2
	355nm,0.3s						
MNS	Montasola	0.53	278	Pg	Pg	03 22 20.5	+0.1
MNS	Montasola	0.53	278	Pg	Pg	03 22 20.5	+0.1
NRCA	Norcia	0.56	339	Pg	Pg	03 22 20.8	-0.2
NRCA				Sg	Sb	03 22 29.3	-0.9
NRCA	Norcia	0.56	339	Pg	Pg	03 22 20.8	-0.2
NRCA				Sg	Sb	03 22 29.3	-0.9
MTCE	Montecelio	0.56	239	Pg	Pg	03 22 21.2	+0.2
	833nm,1.8s						
MTCE	Montecelio	0.56	239	Pg	Pg	03 22 21.2	+0.2
	833nm,1.8s						
TRTR	Tortoreto Alta	0.63	38	Pg	Pb	03 22 23.2	+0.1
TRTR	Tortoreto Alta	0.63	38	Pg	Pb	03 22 23.2	+0.1
POFI	Posta Fibreno	0.64	158	Pg	Pb	03 22 23.7	+0.2
POFI	Posta Fibreno	0.64	158	Pg	Pb	03 22 23.7	+0.2
LPEL	Lama dei Pelig	0.65	114	Pg	Pg	03 22 22.4	-0.2
LPEL				Sg	Sg	03 22 31.9	+0.7
	200nm,0.2s						
LPEL	Lama dei Pelig	0.65	114	Pg	Pg	03 22 22.4	-0.2
LPEL				Sg	Sg	03 22 31.9	+0.7
	200nm,0.2s						
OFFI	Offida	0.66	19	Pg	Pb	03 22 23.5	-0.1
OFFI	Offida	0.66	19	Pg	Pb	03 22 23.5	-0.1
SDI	San Donato	0.68	153	Pg	Pg	03 22 23.7	+0.4
SDI	San Donato	0.68	153	Pg	Pg	03 22 23.7	+0.4
CESI	CESI - Serrava	0.78	333	Pg	Pg	03 22 25.0	-0.1
CESI	CESI - Serrava	0.78	333	Pg	Pg	03 22 25.0	-0.1
CERA	Filignano	0.86	147	Pg	Pg	03 22 26.3	-0.3
	246nm,0.6s						
CERA	Filignano	0.86	147	Pg	Pg	03 22 26.3	-0.3
	246nm,0.6s						
MIDA	Miranda	0.93	136	Pg	Pg	03 22 27.6	-0.5
MIDA	Miranda	0.93	136	Pg	Pg	03 22 27.6	-0.5
CING	Cingoli	1.07	352	Pg	Pg	03 22 30.2	-0.4
	419nm,0.7s						
CING	Cingoli	1.07	352	Pg	Pg	03 22 30.2	-0.4
	419nm,0.7s						
MGAB	Montegabbione	1.12	303	Pg	Pn	03 22 32.1	+0.3
	212nm,0.6s						
MGAB	Montegabbione	1.12	303	Pg	Pn	03 22 32.1	+0.3
	212nm,0.6s						
ARVD	Arcevia	1.23	345	Pg	Pn	03 22 33.0	-0.3
	179nm,0.6s						
ARVD	Arcevia	1.23	345	Pg	Pn	03 22 33.0	-0.3
	179nm,0.6s						
AOI	Ancona	1.24	7	Pg	Pg	03 22 34.2	+0.2
	147nm,0.8s						
AOI	Ancona	1.24	7	Pg	Pg	03 22 34.2	+0.2
	147nm,0.8s						
PIEI	Pieia	1.37	333	Pg	Pg	03 22 36.7	+0.3
	85nm,0.6s						
PIEI	Pieia	1.37	333	Pg	Pg	03 22 36.7	+0.3
	85nm,0.6s						

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*CSEM **06** 03:23:10.1, 42°.35N×13°.31E, h10^{km}, After ROM*
ROM 06 03:23:10.1±0.1, 42°.35N×13°.31E, h10^{km}±1^{km}, Ml3.2/3, 10C, Error ellipse: s-maj=1.6km s-min=1.6km az=64.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	82⇑	iPg	Pg	03 23 12.6	+0.3
AQU				Sg	Sg	03 23 14.2	+0.2
AQU	L'Aquila	0.07	82⇑	iPg	Pg	03 23 12.6	+0.3
AQU				Sg	Sg	03 23 14.2	+0.2
FIAM	Fiamignano	0.16	242⇑	iPg	Pg	03 23 14.5	+0.7
FIAM	Fiamignano	0.16	242⇑	iPg	Pg	03 23 14.5	+0.7
CAMP	Campotosto	0.20	21⇑	iPg	Pg	03 23 14.8	+0.2
CAMP				Sg	Sg	03 23 18.1	+0.5
CAMP	Campotosto	0.20	21⇑	iPg	Pg	03 23 14.8	+0.2
CAMP				Sg	Sg	03 23 18.1	+0.5
FAGN	Fagnano	0.22	111	Pg	Pg	03 23 15.9	+1.2
FAGN				Sg	Sg	03 23 18.9	+1.1
FAGN	Fagnano	0.22	111	Pg	Pg	03 23 15.9	+1.2
FAGN				Sg	Sg	03 23 18.9	+1.1
PTQR	Pietraquaria	0.33	168⇑	iPg	Pg	03 23 17.0	+0.2
PTQR				Sg	Sg	03 23 22.2	+0.9
PTQR	Pietraquaria	0.33	168⇑	iPg	Pg	03 23 17.0	+0.2
PTQR				Sg	Sg	03 23 22.2	+0.9
TERO	Teramo	0.35	38	Pg	Pg	03 23 16.9	-0.3
TERO				Sg	Sg	03 23 23.1	+1.2
TERO	Teramo	0.35	38	Pg	Pg	03 23 16.9	-0.3
TERO				Sg	Sg	03 23 23.1	+1.2
VCEL	Villa Celiera	0.40	83	Pg	Pg	03 23 18.6	+0.5
VCEL	Villa Celiera	0.40	83	Pg	Pg	03 23 18.6	+0.5
CERT	Cerreto	0.47	212⇑	iPg	Pg	03 23 19.4	+0.1
CERT	Cerreto	0.47	212⇑	iPg	Pg	03 23 19.4	+0.1
MNS	Montasola	0.47	275	Pg	Pg	03 23 19.5	+0.1
MNS	Montasola	0.47	275	Pg	Pg	03 23 19.5	+0.1
NRCA	Norcia	0.51	343	Pg	Pg	03 23 19.9	-0.3
NRCA	Norcia	0.51	343	Pg	Pg	03 23 19.9	-0.3
VVLD	Villa Vallelon	0.53	154	Pg	Pg	03 23 20.1	-0.4
VVLD	Villa Vallelon	0.53	154	Pg	Pg	03 23 20.1	-0.4
MTCE	Montecelio	0.53	233	Pg	Pg	03 23 20.6	+0.1
MTCE	Montecelio	0.53	233	Pg	Pg	03 23 20.6	+0.1
INTR	Introdacqua	0.55	127	Pg	Pg	03 23 21.3	+0.3
INTR				Sg	Sg	03 23 29.0	+0.7
	489nm,0.4s						
INTR	Introdacqua	0.55	127	Pg	Pg	03 23 21.3	+0.3
INTR				Sg	Sg	03 23 29.0	+0.7
	489nm,0.4s						
TRTR	Tortoreto Alta	0.64	44	Pg	Pb	03 23 23.4	0.0
TRTR	Tortoreto Alta	0.64	44	Pg	Pb	03 23 23.4	0.0
OFFI	Offida	0.65	25	Pg	Pb	03 23 23.4	-0.2
	4μm,0.6s						
OFFI	Offida	0.65	25	Pg	Pb	03 23 23.4	-0.2
	4μm,0.6s						
LPEL	Lama dei Pelig	0.71	114	Pg	Pg	03 23 24.0	0.0
LPEL	Lama dei Pelig	0.71	114	Pg	Pg	03 23 24.0	0.0
RDP	Rocca di Papa	0.73	217	Pg	Pb	03 23 24.9	-0.2
RDP	Rocca di Papa	0.73	217	Pg	Pb	03 23 24.9	-0.2
SDI	San Donato	0.74	150	Pg	Pg	03 23 24.3	-0.1
SDI	San Donato	0.74	150	Pg	Pg	03 23 24.3	-0.1
CAFR	Castel Frentan	0.78	98	Pg	Pb	03 23 25.5	-0.2
CAFR	Castel Frentan	0.78	98	Pg	Pb	03 23 25.5	-0.2
CERA	Filignano	0.91	145	Pg	Pb	03 23 28.2	0.0
CERA	Filignano	0.91	145	Pg	Pb	03 23 28.2	0.0
MURB	Monte Urbino	1.08	328	Pg	Pb	03 23 31.3	+0.2
	356nm,0.3s						
MURB	Monte Urbino	1.08	328	Pg	Pb	03 23 31.3	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	356nm,0.3s						
AOI	Ancona	1.22	10	Pg	Pn	03 23 33.1	-0.3
AOI	Ancona	1.22	10	Pg	Pn	03 23 33.1	-0.3

MEX 06 03:25:46.5±0.8, 17°.19N×99°.69W, h26km±23km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.36	206	i P	Pb	03 25 53.2	-1.3
ACX				i S	Sb	03 25 59.7	-0.2
CAIG	El Cayaco	0.57	256	eP	Pb	03 25 55.5	-2.4
CAIG				i S	Sb	03 26 03.5	-2.1
MEIG	Mezcala	0.73	5	i P	Pb	03 25 58.6	-2.2
MEIG				eS	Sb	03 26 07.2	-3.4
ARIG	Puente Sto Nin	1.25	330	eP	Pn	03 26 06.0	-2.3
ARIG				eS	Sn	03 26 20.7	-3.8
PNIG	Pinotepa	1.70	118	eP	Pn	03 26 12.2	-2.4
PNIG				i S	Sn	03 26 31.3	-4.1
ZIIG	Zihuatanejo	1.74	284	eP	Pn	03 26 12.9	-2.2
ZIIG				i S	Sn	03 26 34.1	-2.3
YAIG	Yautepec	1.77	20	eP	Pn	03 26 13.6	-2.0
YAIG				i S	Sn	03 26 34.9	-2.5
UTMO	Huajuapan	1.91	70	i P	Pn	03 26 15.9	-1.8
UTMO				eP	Pb	03 26 16.3	-4.7
UTMO				i S	Sn	03 26 37.7	-3.4

*ISCJB **06** 03:25:58.6±0.3, 42°.38N±0°.02×13°.32E±0°.04, h9km±3km, mb3.1/2, Error ellipse: s-maj=4.6km s-min=3.4km az=178.3*
*CSEM **06** 03:25:58.9±0.1, 42°.38N×13°.32E, h5km, Error ellipse: s-maj=3.7km s-min=2.7km az=93.0*
*ROM **06** 03:25:58.5±0.1, 42°.38N×13°.34E, h9km±1km, Ml2.8/3, Error ellipse: s-maj=2.1km s-min=1.6km az=81.0*
*IDC **06** 03:25:58.4±1.4, 42°.42N×13°.76E, h0km, mb3.1/2, mb1 3.1/5, mb1mx3.1/29, mbtmp3.1/5, ML3.1/3, Error ellipse: s-maj=35.0km s-min=15.1km az=94.0*
*PRU **06** 03:26:00.1, 42°.38N×13°.48E, h0km*
ISC 06 03:25:59.2±0.8, 42°.38N±0°.02×13°.36E±0°.03, h9km±4km, n63, σ1s.24/81, 4C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	130⇑	iPg	Pg	03 26 00.8	-0.2
AQU				Sg	Sg	03 26 02.4	0.0
AQU	L'Aquila	0.04	130⇑	iPg	Pg	03 26 00.8	-0.2
AQU				Sg	Sg	03 26 02.4	0.0
CAMP	Campotosto	0.16	13⇑	iPg	Pg	03 26 02.5	-0.2
CAMP				Sg	Sg	03 26 05.4	+0.2
CAMP	Campotosto	0.16	13⇑	iPg	Pg	03 26 02.5	-0.2
CAMP				Sg	Sg	03 26 05.4	+0.2
FAGN	Fagnano	0.20	124	Pg	Pg	03 26 03.8	+0.4
FAGN				Sg	Sg	03 26 07.3	+1.1
FAGN	Fagnano	0.20	124	Pg	Pg	03 26 03.8	+0.4
FAGN				Sg	Sg	03 26 07.3	+1.1
FIAM	Fiamignano	0.21	238	Pg	Pg	03 26 02.9	-0.7
FIAM	Fiamignano	0.21	238	Pg	Pg	03 26 02.9	-0.7
TERO	Teramo	0.30	36	Pg	Pg	03 26 04.7	-0.6
TERO	Teramo	0.30	36	Pg	Pg	03 26 04.7	-0.6
VCEL	Villa Celiera	0.36	87	Pg	Pb	03 26 07.0	-0.8
VCEL	Villa Celiera	0.36	87	Pg	Pb	03 26 07.0	-0.8
PTQR	Pietraquaria	0.36	175	Pg	Pg	03 26 05.5	-0.8
PTQR				Sg	Sg	03 26 11.0	0.0
PTQR	Pietraquaria	0.36	175	Pg	Pg	03 26 05.5	-0.8
PTQR				Sg	Sg	03 26 11.0	0.0
NRCA	Norcia	0.49	338	Pg	Pg	03 26 08.1	-0.6
NRCA				Sg	Sg	03 26 15.8	+0.6
NRCA	Norcia	0.49	338	Pg	Pg	03 26 08.1	-0.6
NRCA				Sg	Sg	03 26 15.8	+0.6
CERT	Cerreto	0.51	213⇓	iPg	Pg	03 26 09.9	+0.7
CERT	Cerreto	0.51	213⇓	iPg	Pg	03 26 09.9	+0.7
VVLD	Villa Vallelon	0.54	159	Pg	Pg	03 26 08.8	-1.0
VVLD	Villa Vallelon	0.54	159	Pg	Pg	03 26 08.8	-1.0
INTR	Introdacqua	0.55	132	Pg	Pb	03 26 09.8	-1.2
INTR	Introdacqua	0.55	132	Pg	Pb	03 26 09.8	-1.2
MTCE	Montecelio	0.58	232	Pg	Pg	03 26 09.3	-1.2
MTCE	Montecelio	0.58	232	Pg	Pg	03 26 09.3	-1.2
TRTR	Tortoreto Alta	0.59	43	Pg	Pb	03 26 11.3	-0.4
TRTR	Tortoreto Alta	0.59	43	Pg	Pb	03 26 11.3	-0.4
OFFI	Offida	0.60	23	Pg	Pb	03 26 11.0	-0.9
OFFI	Offida	0.60	23	Pg	Pb	03 26 11.0	-0.9
LPEL	Lama dei Pelig	0.70	118	Pg	Pb	03 26 11.8	-1.7
LPEL				Sg	Sb	03 26 22.8	-0.4
LPEL	Lama dei Pelig	0.70	118	Pg	Pb	03 26 11.8	-1.7
LPEL				Sg	Sb	03 26 22.8	-0.4
CESI	CESI - Serrava	0.71	332	Pg	Pg	03 26 12.1	-0.8
	290nm,0.4s						
CESI	CESI - Serrava	0.71	332	Pg	Pg	03 26 12.1	-0.8
	290nm,0.4s						
CAFR	Castel Frentan	0.75	101	Pg	Pb	03 26 13.5	-0.9
CAFR	Castel Frentan	0.75	101	Pg	Pb	03 26 13.5	-0.9
RMP	Rome, Mte Porz	0.75	221	Pg	Pg	03 26 13.6	0.0
RMP	Rome, Mte Porz	0.75	221	Pg	Pg	03 26 13.6	0.0
RDP	Rocca di Papa	0.79	218	Pg	Pg	03 26 13.8	-0.5
RDP	Rocca di Papa	0.79	218	Pg	Pg	03 26 13.8	-0.5
GIUL	Giuliano Di Ro	0.82	186	Pg	Pg	03 26 14.5	-0.6
GIUL	Giuliano Di Ro	0.82	186	Pg	Pg	03 26 14.5	-0.6
CING	Cingoli	1.00	353	Pg	Pg	03 26 17.5	-1.0
	271nm,0.4s						
CING	Cingoli	1.00	353	Pg	Pg	03 26 17.5	-1.0
	271nm,0.4s						
TOLF	Tolfa	1.06	253	Pg	Pg	03 26 19.0	-0.5
	246nm,0.6s						
TOLF	Tolfa	1.06	253	Pg	Pg	03 26 19.0	-0.5
	246nm,0.6s						
ARVD	Arcevia	1.16	345	Pg	Pg	03 26 20.8	-0.7
ARVD	Arcevia	1.16	345	Pg	Pg	03 26 20.8	-0.7
PIEI	Pieia	1.30	333	Pg	Pg	03 26 23.7	-0.5
PIEI	Pieia	1.30	333	Pg	Pg	03 26 23.7	-0.5
SKDS	Skadanscina	3.20	8	i Pn	Pn	03 26 47.6	-2.1
SKDS				i Sn	Sn	03 27 28.3	+0.3
SKDS	Skadanscina	3.20	8	i Pn	Pn	03 26 47.6	-2.1
SKDS				i Sn	Sn	03 27 28.3	+0.3
BOJS	Bojanci	3.41	23	i Pn	Pn	03 26 54.0	+1.5
BOJS				i Sn	Sb	03 27 39.2	-2.0
BOJS	Bojanci	3.41	23	i Pn	Pn	03 26 54.0	+1.5
JAVS	Javornik	3.55	8	i Pn	Pn	03 26 55.4	+0.9
JAVS				i Sn	Sn	03 27 38.8	+2.1
JAVS	Javornik	3.55	8	i Pn	Pn	03 26 55.4	+0.9
JAVS				i Sn	Sn	03 27 38.8	+2.1
VISS	Visnje	3.58	17	i Pn	Pn	03 26 57.5	+2.6
VISS	Visnje	3.58	17	i Pn	Pn	03 26 57.5	+2.6
VISS				i Sn	Sn	03 27 39.7	+2.3
DAVOX	Davos/Dischmat	5.05	332	Pn	Pn	03 27 17.7	+2.5
	0.7nm,0.3s,baz=155,slow=17,SNR=4.9						
DAVOX				Sn	Sn	03 28 18.7	+4.9
	0.5nm,0.3s,baz=350,slow=23,SNR=2.1						
GERES	GERESS Array B	6.47	2	Pn	Pn	03 27 35.3	+0.7
	0.3nm,0.3s,baz=180,slow=13,SNR=5.0						
GERES				Sn	Sn	03 28 47.0	-1.6
	0.5nm,0.3s,baz=173,slow=22,SNR=4.4						
KHC	Kasperske Hory	6.75	1	ex	x	03 28 14.5	
KHC				ex	x	03 28 53.6	
KHC	Kasperske Hory	6.75	1	Sn	Sn	03 28 53.6	-1.9
KEST	Kesra	7.33	206	Pn	Pn	03 27 50.5	+3.9
	0.1nm,0.3s,baz=338,slow=6.3,SNR=6.5						
TORD	Torodi Ar. Bea	30.84	203	P	P	03 32 16.4	+0.9
	0.1nm,0.7s,baz=21,slow=9.0,SNR=4.1						
MKAR	Makanchi Array	47.86	60	P	P	03 34 36.1	-1.1
	0.2nm,0.5s,baz=304,slow=7.8,SNR=3.0						

*ISCJB **06** 03:30:59.8±0.3, 42°.36N±0°.02×13°.34E±0°.03, h15km±3km, mb3.3/2, Error ellipse: s-maj=4.3km s-min=2.9km az=160.6*
*CSEM **06** 03:31:00.3±0.1, 42°.36N×13°.35E, h10km, ML3.0/4, Error ellipse: s-maj=2.6km s-min=1.9km az=63.0*
*ROM **06** 03:31:00.3±0.1, 42°.35N×13°.37E, h10km±1km, Md2.9/12, Ml2.9/20, Error ellipse: s-maj=1.9km s-min=1.2km az=68.0*
*IDC **06** 03:31:01.4±1.3, 42°.42N×13°.49E, h0km, mb3.2/2, mb1 3.1/5, mb1mx3.1/29, mbtmp3.1/5, ML2.8/3, Error ellipse: s-maj=34.7km s-min=14.3km az=95.0*
*LDG **06** 03:31:02.4±0.2, 42°.30N×13°.26E, h2km, Ml2.7/5, Error ellipse: s-maj=7.7km s-min=5.2km az=48.0*
ISC 06 03:31:00.9±0.8, 42°.36N±0°.02×13°.34E±0°.02, h11km±4km, n80, σ1s.27/106, 4C, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	102⇑	iPg	Pg	03 31 02.6	-0.4
AQU				Sg	Sg	03 31 04.0	-0.5
AQU	L'Aquila	0.04	102⇑	iPg	Pg	03 31 02.6	-0.4
AQU				Sg	Sg	03 31 04.0	-0.5
CAMP	Campotosto	0.18	16⇑	iPg	Pg	03 31 04.7	-0.2
CAMP				Sg	Sg	03 31 07.7	+0.1
CAMP	Campotosto	0.18	16⇑	iPg	Pg	03 31 04.7	-0.2
CAMP				Sg	Sg	03 31 07.7	+0.1
FIAM	Fiamignano	0.19	241	Pg	Pg	03 31 05.1	0.0
FIAM	Fiamignano	0.19	241	Pg	Pg	03 31 05.1	0.0
FAGN	Fagnano	0.20	118	Pg	Pg	03 31 04.9	-0.3
FAGN				Sg	Sg	03 31 08.7	+0.5
FAGN	Fagnano	0.20	118	Pg	Pg	03 31 04.9	-0.3
FAGN				Sg	Sg	03 31 08.7	+0.5
TERO	Teramo	0.32	36	Pg	Pg	03 31 06.7	-0.7
TERO				Sg	Sg	03 31 11.6	-0.2
TERO	Teramo	0.32	36	Pg	Pg	03 31 06.7	-0.7
TERO				Sg	Sg	03 31 11.6	-0.2
PTQR	Pietraquaria	0.34	173	Pg	Pg	03 31 07.2	-0.6
PTQR				Sg	Sg	03 31 12.5	+0.2
PTQR	Pietraquaria	0.34	173	Pg	Pg	03 31 07.2	-0.6
PTQR				Sg	Sg	03 31 12.5	+0.2
CERT	Cerreto	0.49	213	Pg	Pg	03 31 09.9	-0.6
CERT	Cerreto	0.49	213	Pg	Pg	03 31 09.9	-0.6
NRCA	Norcia	0.50	340	Pg	Pg	03 31 10.4	-0.3
NRCA				Sg	Sb	03 31 18.6	-0.6
NRCA	Norcia	0.50	340	Pg	Pg	03 31 10.4	-0.3
NRCA				Sg	Sb	03 31 18.6	-0.6
VVLD	Villa Vallelon	0.53	157	Pg	Pg	03 31 10.9	-0.4
VVLD				Sg	Sg	03 31 17.8	-0.5
	423nm,0.5s						
VVLD	Villa Vallelon	0.53	157	Pg	Pg	03 31 10.9	-0.4
VVLD				Sg	Sg	03 31 17.8	-0.5
	423nm,0.5s						
INTR	Introdacqua	0.55	130	Pg	Pg	03 31 10.6	-0.9
INTR				Sg	Sg	03 31 18.8	+0.1
	747nm,0.6s						
INTR	Introdacqua	0.55	130	Pg	Pg	03 31 10.6	-0.9
INTR				Sg	Sg	03 31 18.8	+0.1
	747nm,0.6s						
MTCE	Montecelio	0.56	233	Pg	Pg	03 31 11.3	-0.5
	320nm,0.3s						
MTCE	Montecelio	0.56	233	Pg	Pg	03 31 11.3	-0.5
	320nm,0.3s						
GUAR	Guarcino	0.57	182	Pg	Pg	03 31 10.7	-1.2
GUAR	Guarcino	0.57	182	Pg	Pg	03 31 10.7	-1.2
TRTR	Tortoreto Alta	0.61	43	Pg	Pg	03 31 11.2	-1.6
	4μm,1.0s						
TRTR	Tortoreto Alta	0.61	43	Pg	Pg	03 31 11.2	-1.6
	4μm,1.0s						
OFFI	Offida	0.62	24	Pg	Pg	03 31 13.1	+0.1
	3μm,0.7s						
OFFI	Offida	0.62	24	Pg	Pg	03 31 13.1	+0.1
	3μm,0.7s						
LPEL	Lama dei Pelig	0.70	117	Pg	Pg	03 31 13.4	-1.0
LPEL				Sg	Sg	03 31 24.2	+0.6
LPEL	Lama dei Pelig	0.70	117	Pg	Pg	03 31 13.4	-1.0
LPEL				Sg	Sg	03 31 24.2	+0.6
POFI	Posta Fibreno	0.70	157	Pg	Pg	03 31 13.8	-0.7
	190nm,0.6s						
POFI	Posta Fibreno	0.70	157	Pg	Pg	03 31 13.8	-0.7
	190nm,0.6s						
CESI	CESI - Serrava	0.72	333	Pg	Pg	03 31 14.5	-0.3
CESI				Sg	Sb	03 31 26.0	+0.6
	174nm,0.3s						
CESI	CESI - Serrava	0.72	333	Pg	Pg	03 31 14.5	-0.3
CESI				Sg	Sb	03 31 26.0	+0.6
	174nm,0.3s						
RMP	Rome, Mte Porz	0.73	221	Pg	Pg	03 31 15.0	0.0
	523nm,0.4s						
RMP	Rome, Mte Porz	0.73	221	Pg	Pg	03 31 15.0	0.0
	523nm,0.4s						
SDI	San Donato	0.74	152	Pg	Pb	03 31 15.8	0.0
SDI	San Donato	0.74	152	Pg	Pb	03 31 15.8	0.0
CAFR	Castel Frentan	0.76	100	Pg	Pg	03 31 14.8	-0.7
	783nm,0.4s						
CAFR	Castel Frentan	0.76	100	Pg	Pg	03 31 14.8	-0.7
	783nm,0.4s						
GIUL	Giuliano Di Ro	0.81	185	Pg	Pg	03 31 15.1	-1.4
	266nm,0.7s						
GIUL	Giuliano Di Ro	0.81	185	Pg	Pg	03 31 15.1	-1.4
	266nm,0.7s						
MIDA	Miranda	0.99	136	Pg	Pg	03 31 17.9	-2.0
	158nm,0.6s						
MIDA	Miranda	0.99	136	Pg	Pg	03 31 17.9	-2.0
	158nm,0.6s						
CING	Cingoli	1.02	354	Pg	Pg	03 31 19.6	-0.9
	245nm,0.7s						
CING	Cingoli	1.02	354	Pg	Pg	03 31 19.6	-0.9
	245nm,0.7s						
TOLF	Tolfa	1.04	254	Pg	Pb	03 31 19.7	-1.3
	215nm,1.0s						
TOLF	Tolfa	1.04	254	Pg	Pb	03 31 19.7	-1.3
	215nm,1.0s						
MGAB	Montegabbione	1.06	302	Pg	Pb	03 31 20.8	-0.5
	274nm,0.4s						
MGAB	Montegabbione	1.06	302	Pg	Pb	03 31 20.8	-0.5
	274nm,0.4s						
MURB	Monte Urbino	1.08	326	Pg	Pb	03 31 21.1	-0.6
	433nm,0.3s						
MURB	Monte Urbino	1.08	326	Pg	Pb	03 31 21.1	-0.6
	433nm,0.3s						
SACS	San Casciano d	1.17	295	Pg	Pb	03 31 22.4	-0.7
	193nm,0.8s						
ARVD	Arcevia	1.17	346	Pg	Pb	03 31 22.3	-0.9
	255nm,0.8s						
ARVD	Arcevia	1.17	346	Pg	Pb	03 31 22.3	-0.9
	255nm,0.8s						
PIEI	Pieia	1.31	333	Pg	Pn	03 31 25.1	-0.2
	96nm,0.4s						
PIEI	Pieia	1.31	333	Pg	Pn	03 31 25.1	-0.2
	96nm,0.4s						
PARC	Parchiule	1.52	328	Pg	Pb	03 31 29.2	+0.1
	186nm,1.1s						
PARC	Parchiule	1.52	328	Pg	Pb	03 31 29.2	+0.1
	186nm,1.1s						
PGF	Pioggiola	3.22	275	ePn	Pn	03 31 51.9	+0.4
PGF				eSn	Sn	03 32 31.9	+1.9
	2.9nm,0.4s						
PGF	Pioggiola	3.22	275	ePn	Pn	03 31 51.9	+0.4
PGF				eSn	Sn	03 32 31.9	+1.9
	1.5nm,0.4s						
CTI	Castel Tesino	3.88	342	Pn	Pn	03 32 01.8	+1.2
	18nm,0.3s						
CTI	Castel Tesino	3.88	342	Pn	Pn	03 32 01.8	+1.2
	18nm,0.3s						
SBF	Sospel	4.58	291	ePn	Pn	03 32 10.5	+0.3
SBF				eSn	Sn	03 33 00.2	-3.2
	4.0nm,0.5s						
SBF	Sospel	4.58	291	ePn	Pn	03 32 10.5	+0.3
SBF				eSn	Sn	03 33 00.2	-3.2
	2.0nm,0.5s						
FRF	La Foret Royal	5.06	286	ePn	Pn	03 32 16.5	-0.2
FRF	La Foret Royal	5.06	286	ePn	Pn	03 32 16.5	-0.2
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	03 32 20.2	+3.2
	0.5nm,0.3s,baz=156,slow=16,SNR=4.9						
DAVOX				Sn	Sn	03 33 20.1	+4.6
	0.7nm,0.3s,baz=263,slow=16,SNR=3.7						
LMR	La Mourre	5.12	283	ePn	Pn	03 32 17.3	-0.2
LMR	La Mourre	5.12	283	ePn	Pn	03 32 17.3	-0.2
GERES	GERESS Array B	6.49	2	Pn	Pn	03 32 38.0	+1.6
	0.2nm,0.3s,baz=175,slow=13,SNR=4.0						
GERES				Sn	Sn	03 33 50.2	-0.2
	0.5nm,0.3s,baz=181,slow=24,SNR=7.4						
HINF	Hinteralfeld	7.13	322	ePn	Pn	03 32 44.7	-0.4
HINF				eSn	Sn	03 34 00.7	-5.4
	1.3nm,0.4s						
HINF	Hinteralfeld	7.13	322	ePn	Pn	03 32 44.7	-0.4
KEST	Kesra	7.32	206	Pn	Pn	03 32 52.0	+4.2
	0.1nm,0.3s,baz=32,slow=9.5,SNR=3.4						
CDF	Champ du Feu	7.40	327	ePn	Pn	03 32 48.2	-0.8
CDF				eSn	Sn	03 34 07.7	-5.3
	0.9nm,0.3s						
CDF	Champ du Feu	7.40	327	ePn	Pn	03 32 48.2	-0.8
HAU	Haudompre	7.50	321	ePn	Pn	03 32 49.8	-0.4
HAU				eSn	Sn	03 34 08.1	-7.1
	0.8nm,0.2s						
HAU	Haudompre	7.50	321	ePn	Pn	03 32 49.8	-0.4
TORD	Torodi Ar. Bea	30.82	203	P	P	03 37 19.0	+2.2
	1.3nm,1.4s,baz=14,slow=7.5,SNR=2.9						
MKAR	Makanchi Array	47.88	60	P	P	03 39 40.2	+1.4
	0.1nm,0.5s,baz=276,slow=6.8,SNR=2.7						

*CSEM **06** 03:31:44.3, 42°.36N×13°.45E, h8km, After ROM*
ROM 06 03:31:44.3±0.1, 42°.36N×13°.45E, h8km±1km, Ml2.7/3, 2D, Error ellipse: s-maj=1.5km s-min=1.1km az=81.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	264⇓	iPg	Pg	03 31 46.5	+0.6
AQU				Sg	Sg	03 31 47.3	+0.2
AQU	L'Aquila	0.04	264⇓	iPg	Pg	03 31 46.5	+0.6
AQU				Sg	Sg	03 31 47.3	+0.2
FAGN	Fagnano	0.13	133	Pg	Pg	03 31 47.6	+0.3
FAGN				Sg	Sg	03 31 50.0	+0.6
FAGN	Fagnano	0.13	133	Pg	Pg	03 31 47.6	+0.3
FAGN				Sg	Sg	03 31 50.0	+0.6
CAMP	Campotosto	0.18	350	Pg	Pg	03 31 49.1	+0.9
CAMP				Sg	Sg	03 31 52.0	+1.1
CAMP	Campotosto	0.18	350	Pg	Pg	03 31 49.1	+0.9
CAMP				Sg	Sg	03 31 52.0	+1.1
FIAM	Fiamignano	0.26	250	Pg	Pg	03 31 50.0	+0.3
FIAM				Sg	Sg	03 31 54.4	+1.0
FIAM	Fiamignano	0.26	250	Pg	Pg	03 31 50.0	+0.3
FIAM				Sg	Sg	03 31 54.4	+1.0
TERO	Teramo	0.29	23	Pg	Pg	03 31 50.6	+0.5
TERO				Sg	Sg	03 31 55.4	+1.4
TERO	Teramo	0.29	23	Pg	Pg	03 31 50.6	+0.5
TERO				Sg	Sg	03 31 55.4	+1.4
INTR	Introdacqua	0.48	136	Pn	Pb	03 31 55.0	-0.2
INTR				Sn	Sb	03 32 01.9	-0.6
	527nm,0.6s						
INTR	Introdacqua	0.48	136	Pn	Pb	03 31 55.0	-0.2
INTR				Sn	Sb	03 32 01.9	-0.6
	527nm,0.6s						
VVLD	Villa Vallelon	0.50	165	Pn	Pb	03 31 54.9	-0.6
	343nm,0.5s						
VVLD	Villa Vallelon	0.50	165	Pn	Pb	03 31 54.9	-0.6
	343nm,0.5s						
NRCA	Norcia	0.54	332	Pn	Pg	03 31 55.4	+0.6
NRCA				Sn	Sb	03 32 03.3	-0.8
NRCA	Norcia	0.54	332	Pn	Pg	03 31 55.4	+0.6
NRCA				Sn	Sb	03 32 03.3	-0.8
CERT	Cerreto	0.54	221	Pn	Pg	03 31 55.2	+0.4
CERT	Cerreto	0.54	221	Pn	Pg	03 31 55.2	+0.4
OFFI	Offida	0.60	17	Pn	Pg	03 31 56.2	+0.2
OFFI	Offida	0.60	17	Pn	Pg	03 31 56.2	+0.2
LPEL	Lama dei Pelig	0.63	120	Pn	Pg	03 31 56.0	-0.5
LPEL				Sn	Sb	03 32 06.5	-0.1
	394nm,0.5s						
LPEL	Lama dei Pelig	0.63	120	Pn	Pg	03 31 56.0	-0.5
LPEL				Sn	Sb	03 32 06.5	-0.1
	394nm,0.5s						

*CSEM **06** 03:32:30.2, 42°.37N×13°.36E, h8km, After ROM*
ROM 06 03:32:30.2±0.2, 42°.37N×13°.36E, h8km±1km, Ml2.8/5, 4C-2D, Error ellipse: s-maj=3.2km s-min=1.6km az=75.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	112⇓	iPg	Pg	03 32 32.2	+0.3
AQU				Sg	Sg	03 32 33.1	0.0
AQU	L'Aquila	0.03	112⇓	iPg	Pg	03 32 32.2	+0.3
AQU				Sg	Sg	03 32 33.1	0.0
CAMP	Campotosto	0.17	12⇑	iPg	Pg	03 32 34.5	+0.5
CAMP				Sg	Sg	03 32 37.4	+0.8
CAMP	Campotosto	0.17	12⇑	iPg	Pg	03 32 34.5	+0.5
CAMP				Sg	Sg	03 32 37.4	+0.8
FAGN	Fagnano	0.20	121	Pg	Pg	03 32 35.2	+0.9
FAGN				Sg	Sg	03 32 38.6	+1.5
FAGN	Fagnano	0.20	121	Pg	Pg	03 32 35.2	+0.9
FAGN				Sg	Sg	03 32 38.6	+1.5
TERO	Teramo	0.31	35	Pg	Pg	03 32 36.5	0.0
TERO	Teramo	0.31	35	Pg	Pg	03 32 36.5	0.0
PTQR	Pietraquaria	0.35	175	Pg	Pb	03 32 39.1	+0.4
PTQR				Sg	Sg	03 32 42.9	+1.1
PTQR	Pietraquaria	0.35	175	Pg	Pb	03 32 39.1	+0.4
PTQR				Sg	Sg	03 32 42.9	+1.1
VCEL	Villa Celiera	0.36	85	Pg	Pg	03 32 37.9	+0.5
VCEL	Villa Celiera	0.36	85	Pg	Pg	03 32 37.9	+0.5
NRCA	Norcia	0.50	339	Pg	Pg	03 32 40.2	+0.1
NRCA				Sg	Sb	03 32 48.0	-0.9
	881nm,0.1s						
NRCA	Norcia	0.50	339	Pg	Pg	03 32 40.2	+0.1
NRCA				Sg	Sb	03 32 48.0	-0.9
	881nm,0.1s						
CERT	Cerreto	0.50	214⇑	iPg	Pg	03 32 40.2	+0.1
CERT	Cerreto	0.50	214⇑	iPg	Pg	03 32 40.2	+0.1
VVLD	Villa Vallelon	0.53	158	Pg	Pb	03 32 41.8	-0.1
	293nm,0.6s						
VVLD	Villa Vallelon	0.53	158	Pg	Pb	03 32 41.8	-0.1
	293nm,0.6s						
INTR	Introdacqua	0.54	131	Pg	Pg	03 32 40.8	0.0
INTR				Sg	Sb	03 32 49.5	-0.5
INTR	Introdacqua	0.54	131	Pg	Pg	03 32 40.8	0.0
INTR				Sg	Sb	03 32 49.5	-0.5
GUAR	Guarcino	0.57	183	Pg	Pb	03 32 43.1	+0.5
	250nm,0.5s						
GUAR	Guarcino	0.57	183	Pg	Pb	03 32 43.1	+0.5
	250nm,0.5s						
MTCE	Montecelio	0.57	233	Pg	Pg	03 32 41.5	+0.2
	199nm,0.6s						
MTCE	Montecelio	0.57	233	Pg	Pg	03 32 41.5	+0.2
	199nm,0.6s						
OFFI	Offida	0.62	23	Pg	Pb	03 32 43.3	0.0
	3μm,0.7s						
OFFI	Offida	0.62	23	Pg	Pb	03 32 43.3	0.0
	3μm,0.7s						
CESI	CESI - Serrava	0.72	332	Pg	Pb	03 32 44.9	-0.2
CESI				Sg	Sb	03 32 55.8	+0.6
CESI	CESI - Serrava	0.72	332	Pg	Pb	03 32 44.9	-0.2
CESI				Sg	Sb	03 32 55.8	+0.6

*IDC **06** 03:33:34.5±1.7, 44°.18N×12°.23E, h0km, mb3.3/2, mb1 3.5/4, mb1mx3.3/27, mbtmp3.3/4, ML3.3/2, MS3.2/1, Ms1 3.2/1, ms1mx2.9/27, Error ellipse: s-maj=52.9km s-min=16.0km az=106.0*
*CSEM **06** 03:33:39.6±0.1, 44°.27N×11°.98E, h25km±1km, ML3.6/7, Error ellipse: s-maj=2.6km s-min=2.3km az=163.0*
*ISCJB **06** 03:33:39.2±0.2, 44°.30N±0°.02×11°.90E±0°.02, h39km±5km, mb3.2/2, Error ellipse: s-maj=3.1km s-min=2.4km az=149.5*
*PRU **06** 03:33:39.1, 44°.45N×12°.14E, h0km*
*ROM **06** 03:33:39.4±0.1, 44°.25N×11°.96E, h28km±2km, Ml3.3/10, Error ellipse: s-maj=2.8km s-min=2.4km az=61.0*
*LDG **06** 03:33:40.4±0.2, 44°.32N×12°.10E, h30km, Ml3.4/18, Error ellipse: s-maj=4.9km s-min=1.9km az=160.0*
*STR **06** 03:33:47.6±0.7, 44°.65N×11°.04E, h10km, Ml3.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 06 03:33:39.3±0.6, 44°.28N±0°.02×11°.93E±0°.02, h31km±4km, n220, σ1s.46/280, 6C-3D, Northern Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAEN	Faenza	0.04	285	Pg	Pb	03 33 43.9	-0.5
FAEN				Sg	Sb	03 33 48.3	+0.3
FAEN	Faenza	0.04	285	Pg	Pb	03 33 43.9	-0.5
FAEN				Sg	Sb	03 33 48.3	+0.3
BRSN	Barisano	0.11	88	Pg	Pb	03 33 44.3	-0.4
	1.0nm,0.2s						
BRSN	Barisano	0.11	88	Pg	Pb	03 33 44.3	-0.4
	1.0nm,0.2s						
CMPO	Campotto Po	0.31	344	Pg	Pn	03 33 47.4	-0.3
	3μm,1.0s						
CMPO	Campotto Po	0.31	344	Pg	Pn	03 33 47.4	-0.3
	3μm,1.0s						
MTRZ	Monterenzio	0.35	286	Pg	Pn	03 33 48.2	0.0
	1μm,0.4s						
MTRZ	Monterenzio	0.35	286	Pg	Pn	03 33 48.2	0.0
	1μm,0.4s						
SFI	Santa Sofia	0.38	189	Pg	Pb	03 33 46.8	-1.1
SFI				Sg	Sb	03 33 53.1	-0.7
SFI	Santa Sofia	0.38	189	Pg	Pb	03 33 46.8	-1.1
SFI				Sg	Sb	03 33 53.1	-0.7
BLLA	Bellaria	0.41	109	Pg	Pb	03 33 48.2	-0.2
BLLA	Bellaria	0.41	109	Pg	Pb	03 33 48.2	-0.2
VMG	Vicchio	0.42	221	Pg	Pb	03 33 47.7	-0.9
VMG				Sg	Sb	03 33 54.8	-0.1
VMG	Vicchio	0.42	221	Pg	Pb	03 33 47.7	-0.9

VMG Sg **Sb** **03 33 54.8 -0.1**
SEI **Scarperia** **0.47 242** Pg **Pb** **03 33 48.6 -0.7**
910nm,0.3s
SEI **Scarperia** **0.47 242** Pg **Pb** **03 33 48.6 -0.7**
910nm,0.3s
FIU **Minerbio Fiu** **0.48 319** Pg **Pn** **03 33 51.5 +1.5**
2µm,0.3s
FIU **Minerbio Fiu** **0.48 319** Pg **Pn** **03 33 51.5 +1.5**
2µm,0.3s
ASQU **Asqua** **0.49 192** Pg **Pb** **03 33 48.7 -1.0**
ASQU Sg **Sb** **03 33 56.5 -0.3**
ASQU **Asqua** **0.49 192** Pg **Pb** **03 33 48.7 -1.0**
ASQU Sg **Sb** **03 33 56.5 -0.3**
RSM **Repubblica di** **0.51 133** Pg **Pb** **03 33 50.1 +0.1**
RSM **Repubblica di** **0.51 133** Pg **Pb** **03 33 50.1 +0.1**
FNVD **Fontana Vidola** **0.59 259** Pg **Pb** **03 33 51.0 -0.3**
FNVD **Fontana Vidola** **0.59 259** Pg **Pb** **03 33 51.0 -0.3**
CRE **Caprese Michel** **0.66 179** Pg **Pb** **03 33 51.5 -0.9**
CRE **Caprese Michel** **0.66 179** Pg **Pb** **03 33 51.5 -0.9**
PARC **Parchiule** **0.67 160** Pg **Pb** **03 33 51.7 -0.8**
PARC Sg **Sn** **03 34 02.6 +0.5**
PARC **Parchiule** **0.67 160** Pg **Pb** **03 33 51.7 -0.8**
PARC Sg **Sn** **03 34 02.6 +0.5**
ZCCA **Zocca** **0.69 276** Pg **Pn** **03 33 54.8 +1.8**
ZCCA **Zocca** **0.69 276** Pg **Pn** **03 33 54.8 +1.8**
PESA **Pesaro** **0.74 117** Pg **Pn** **03 33 54.0 +0.4**
PESA **Pesaro** **0.74 117** Pg **Pn** **03 33 54.0 +0.4**
RAVA **Ravarino** **0.75 310** Pg **Pn** **03 33 56.6 +2.9**
2µm,0.7s
RAVA **Ravarino** **0.75 310** Pg **Pn** **03 33 56.6 +2.9**
2µm,0.7s
CRMI **Carmignano** **0.85 235** Pg **Pb** **03 33 55.4 -0.1**
CRMI **Carmignano** **0.85 235** Pg **Pb** **03 33 55.4 -0.1**
FSSB **Fossombrone** **0.85 134** Pg **Pb** **03 33 55.7 +0.2**
FSSB **Fossombrone** **0.85 134** Pg **Pb** **03 33 55.7 +0.2**
CDCA **Citt' di Caste** **0.85 165** Pg **Pb** **03 33 56.7 +1.2**
CDCA **Citt' di Caste** **0.85 165** Pg **Pb** **03 33 56.7 +1.2**
PIEI **Pieia** **0.86 149** Pg **Pn** **03 33 55.0 -0.3**
PIEI **Pieia** **0.86 149** Pg **Pb** **03 33 55.0 -0.3**
CSNT **Castellina Chi** **0.93 210** Pg **Pb** **03 33 56.9 0.0**
CSNT **Castellina Chi** **0.93 210** Pg **Pb** **03 33 56.9 0.0**
GSCL **Gusciola** **0.97 275** Pg **Pb** **03 33 59.3 +1.8**
GSCL **Gusciola** **0.97 275** Pg **Pb** **03 33 59.3 +1.8**
BDI **Bagni Di Lucca** **0.98 258** Pg **Pb** **03 33 58.5 +0.7**
BDI **Bagni Di Lucca** **0.98 258** Pg **Pb** **03 33 58.5 +0.7**
NOVE **Novellara** **1.01 301** Pn **Pb** **03 34 00.5 +2.3**
NOVE **Novellara** **1.01 301** Pn **Pb** **03 34 00.5 +2.3**
ARVD **Arcevia** **1.07 137** Pg **Pb** **03 33 59.3 +0.1**
ARVD **Arcevia** **1.07 137** Pg **Pb** **03 33 59.3 +0.1**
MAIM **Mastiano** **1.10 251** Pg **Pb** **03 33 59.5 -0.2**
MAIM **Mastiano** **1.10 251** P **Pb** **03 33 59.6 -0.2**
MURB **Monte Urbino** **1.10 157** Pn **Pb** **03 34 00.5 +0.7**
MURB **Monte Urbino** **1.10 157** Pn **Pb** **03 34 00.5 +0.7**
PII **Pisa** **1.16 242** Pg **Pb** **03 34 00.3 -0.4**
PII **Pisa** **1.16 242** Pg **Pb** **03 34 00.3 -0.4**
PRMA **PARMA** **1.25 293** Pn **Pb** **03 34 03.6 +1.5**
PRMA **PARMA** **1.25 293** Pn **Pb** **03 34 03.6 +1.5**
GRAM **Graiana** **1.35 280** P **Pb** **03 34 05.7 +1.7**
MGAB **Montegabbione** **1.37 174** Pn **Pb** **03 34 03.8 -0.6**
MGAB **Montegabbione** **1.37 174** Pn **Pb** **03 34 03.8 -0.6**
AOI **Ancona** **1.41 121** Pn **Pb** **03 34 04.2 -0.8**
AOI **Ancona** **1.41 121** Pn **Pb** **03 34 04.2 -0.8**
SACS **San Casciano d** **1.43 181** Pn **Pn** **03 34 03.9 +0.7**
ARCI **Arcidosso** **1.47 193** Pn **Pb** **03 34 04.8 -1.2**
ARCI **Arcidosso** **1.47 193** Pn **Pb** **03 34 04.8 -1.2**
CODM **Codolo** **1.50 275** P **Pb** **03 34 07.1 +0.6**
ROVR **Rover¯¤ Verone** **1.50 336** Pn **Pn** **03 34 04.9 +0.8**
ROVR **Rover¯¤ Verone** **1.50 336** Pn **Pn** **03 34 04.9 +0.8**
CGRP **Cima Grappa** **1.60 357** Pn **Pn** **03 34 05.1 -0.6**
365nm,0.5s
CGRP **Cima Grappa** **1.60 357** Pn **Pn** **03 34 05.1 -0.6**
365nm,0.5s
CASP **Castiglione de** **1.68 208** Pn **Pn** **03 34 06.9 +0.4**
CASP **Castiglione de** **1.68 208** Pn **Pn** **03 34 06.9 +0.4**
GROG **Isola di Gorgo** **1.70 241** Pn **Pn** **03 34 08.0 +1.2**
GROG **Isola di Gorgo** **1.70 241** Pn **Pn** **03 34 08.0 +1.2**
SC2M **Scurtabo** **1.72 275** P **Pb** **03 34 11.4 +1.1**
MSSA **Maissana** **1.73 272** Pn **Pb** **03 34 10.1 -0.4**
MSSA **Maissana** **1.73 272** Pn **Pb** **03 34 10.1 -0.4**
CTI **Castel Tesino** **1.78 354** Pn **Pn** **03 34 08.8 +0.8**
311nm,0.2s
CTI **Castel Tesino** **1.78 354** Pn **Pn** **03 34 08.8 +0.8**
311nm,0.2s
POLC **Polcenigo** **1.79 13** Pn **Pn** **03 34 08.6 +0.5**
674nm,0.6s
TRI **Trieste** **1.93 42** Pn **Pn** **03 34 09.9 -0.1**
TRI **Trieste** **1.93 42** Pn **Pn** **03 34 09.9 -0.1**
SKDS **Skadanscina** **1.95 49** *i* Pn **Pn** **03 34 10.0 -0.3**
SKDS *i* Sn **Sn** **03 34 33.8 +0.1**
SKDS
comp=Z,183nm,0.3s
SKDS **Skadanscina** **1.95 49** *i* Pn **Pn** **03 34 10.0 -0.3**
SKDS *i* Sn **Sn** **03 34 33.8 +0.1**
comp=Z,183nm,0.3s
SABO **M.te Sabotino** **2.07 34**⇑ *i* Pn **Pn** **03 34 12.4 +0.5**
SABO **M.te Sabotino** **2.07 34**⇑ *i* Pn **Pn** **03 34 12.4 +0.5**
NVLJ **Novalja** **2.13 81** *i* Pn **Pn** **03 34 13.1 +0.5**
NVLJ Sn **Sn** **03 34 38.6 +0.6**
NVLJ **Novalja** **2.13 81** *i* Pn **Pn** **03 34 13.1 +0.5**
NVLJ Sn **Sn** **03 34 38.5 +0.6**
MDI **Monti di Nese** **2.17 314** Pn **Pn** **03 34 14.7 +1.3**
comp=Z,115nm,0.6s
MDI **Monti di Nese** **2.17 314** Pn **Pn** **03 34 14.7 +1.3**
comp=Z,115nm,0.6s
VINO **Villanova** **2.19 25** Pn **Pn** **03 34 14.0 +0.3**
VINO **Villanova** **2.19 25** Pn **Pn** **03 34 14.0 +0.3**
JAVS **Javornik** **2.21 42** *i* Pn **Pn** **03 34 13.7 -0.3**
JAVS *i* Sn **Sn** **03 34 41.5 +1.2**
JAVS **Javornik** **2.21 42** *i* Pn **Pn** **03 34 13.6 -0.3**
JAVS *i* Sn **Sn** **03 34 41.5 +1.2**
VOY **Vojsko** **2.24 38** *e*Pn **Pn** **03 34 14.1 -0.3**
VOY *e*Sn **Sn** **03 34 41.5 +0.6**
VOY **Vojsko** **2.24 38** *e*Pn **Pn** **03 34 14.0 -0.3**
VOY *e*Sn **Sn** **03 34 41.5 +0.6**
APPI **Appiano** **2.25 348** Pn **Pn** **03 34 16.1 +1.6**
comp=Z,249nm,0.4s
APPI **Appiano** **2.25 348** Pn **Pn** **03 34 16.1 +1.6**
comp=Z,249nm,0.4s
FVI **Forni Avoltri** **2.39 14** Pn **Pn** **03 34 17.7 +1.3**
FVI **Forni Avoltri** **2.39 14** Pn **Pn** **03 34 17.7 +1.3**
BRMO **Bormio** **2.46 334** Pn **Pn** **03 34 19.3 +2.0**
comp=Z,45nm,0.4s
BRMO **Bormio** **2.46 334** Pn **Pn** **03 34 19.3 +2.0**
comp=Z,45nm,0.4s
ABTA **Abfaltersbach** **2.50 9** *i* Pn **Pn** **03 34 19.4 +1.4**
SNR=11
ABTA **Abfaltersbach** **2.50 9** Pn **Pn** **03 34 19.4 +1.5**
SNR=11
GORS **Gorjuse** **2.50 35** *i* Pn **Pn** **03 34 18.2 +0.2**
GORS *i* Sn **Sn** **03 34 48.4 +0.9**
GORS
comp=Z,35nm,0.1s
GORS **Gorjuse** **2.50 35** *i* Pn **Pn** **03 34 18.2 +0.2**
GORS *i* Sn **Sn** **03 34 48.4 +0.9**
comp=Z,35nm,0.1s
VISS **Visnje** **2.56 53** *i* Pn **Pn** **03 34 19.2 +0.5**
VISS *i* Sn **Sn** **03 34 49.8 +0.9**
VISS
comp=Z,33nm,0.2s
VISS **Visnje** **2.56 53** *i* Pn **Pn** **03 34 19.2 +0.5**
VISS *i* Sn **Sn** **03 34 49.8 +0.9**
comp=Z,33nm,0.2s
BOJS **Bojanci** **2.66 61** *i* Pn **Pn** **03 34 20.5 +0.5**
BOJS *i* Sn **Sn** **03 34 53.5 +2.3**
BOJS **Bojanci** **2.66 61** *i* Pn **Pn** **03 34 20.5 +0.5**
BOJS *i* Sn **Sn** **03 34 53.5 +2.3**
PGF **Pioggiola** **2.75 232** *e*Pn **Pn** **03 34 22.4 +1.1**
SNR=1.0
PGF *e*Sn **Sn** **03 34 54.3 +0.8**
comp=Z,42nm,0.4s,SNR=1.0
PGF **Pioggiola** **2.75 232** *e*Pn **Pn** **03 34 22.4 +1.1**
SNR=1.0
PGF *e*Sn **Sn** **03 34 54.3 +0.8**
comp=Z,21nm,0.4s,SNR=1.0
DAVOX **Davos/Dischmat** **2.89 331** Pn Pn 03 34 26.7 +3.4
comp=Z,3.0nm,0.3s,baz=152,slow=15,SNR=27
DAVOX Sn **Sb** **03 35 01.9 -3.2**
comp=Z,10.0nm,0.3s,baz=317,slow=20,SNR=8.0
DAVOX LR LR 03 35 52.6
comp=Z,389nm,20.0s,baz=160,slow=45
OBKA **Obir** **2.89 39**⇓ *i* Pn **Pn** **03 34 24.1 +0.8**
SNR=10
OBKA **Obir** **2.89 39** Pn **Pn** **03 34 24.1 +0.8**
SNR=10
KBA **Koelnbreinsper** **2.97 19** *i* Pn **Pn** **03 34 25.8 +1.4**
SNR=9.3
KBA **Koelnbreinsper** **2.97 19** Pn **Pn** **03 34 25.8 +1.4**
SNR=9.3
WTTA **Wattenberg** **2.99 356**⇑ *i* Pn **Pn** **03 34 26.5 +1.7**
SNR=12
WTTA **Wattenberg** **2.99 356** Pn **Pn** **03 34 26.5 +1.8**
SNR=12
WATA **Walderalm** **3.07 355**⇑ *i* Pn **Pn** **03 34 27.7 +2.0**
SNR=13
WATA **Walderalm** **3.07 355** Pn **Pn** **03 34 27.7 +2.0**
SNR=13
MOTA **Moosalm** **3.12 350**⇑ *i* Pn **Pn** **03 34 28.3 +1.8**
SNR=9.9
MOTA **Moosalm** **3.12 350** Pn **Pn** **03 34 28.3 +1.8**
SNR=9.9
SAOF **Saorge** **3.16 266** P **Pn** **03 34 28.8 +1.8**
SAOF **Saorge** **3.16 266** P **Pn** **03 34 28.8 +1.8**
AUTN **L'Aution** **3.25 267** P **Pn** **03 34 30.9 +2.5**
AUTN **L'Aution** **3.25 267** P **Pn** **03 34 30.9 +2.5**
SBF **Sospel** **3.27 264** *e*Pn **Pn** **03 34 29.9 +1.5**
SNR=1.0
SBF *e*Sn **Sn** **03 35 06.5 +0.3**
comp=Z,31nm,0.4s,SNR=1.0
SBF **Sospel** **3.27 264** *e*Pn **Pn** **03 34 29.9 +1.5**
SNR=1.0
SBF *e*Sn **Sn** **03 35 06.5 +0.3**
comp=Z,16nm,0.4s,SNR=1.0
RETA **Reutte** **3.31 346**⇓ *i* Pn **Pn** **03 34 30.6 +1.6**
SNR=11
RETA **Reutte** **3.31 346** Pn **Pn** **03 34 30.6 +1.6**
SNR=11
DAVA **Damuels** **3.33 335**⇑ *i* Pn Pn 03 34 32.6 +3.2
SNR=11
DAVA **Damuels** **3.33 335** Pn Pn 03 34 32.6 +3.2
SNR=11
TOUF **Mont Tournerai** **3.38 267** P **Pn** **03 34 32.1 +2.0**
TOUF **Mont Tournerai** **3.38 267** P **Pn** **03 34 32.1 +2.0**
MBDF **Montbardon** **3.72 279** *e*Pn **Pn** **03 34 35.9 +1.2**
SNR=1.0
MBDF *e*Sn **Sn** **03 35 16.5 -1.0**
comp=Z,9.1nm,0.3s,SNR=1.0
MBDF **Montbardon** **3.72 279** *e*Pn **Pn** **03 34 35.9 +1.2**
SNR=1.0
MBDF *e*Sn **Sn** **03 35 16.5 -1.0**
comp=Z,4.6nm,0.3s,SNR=1.0
LPG **La Plagne** **3.88 290** *e*Pn **Pn** **03 34 37.2 +0.2**
SNR=1.0
LPG *e*Sn **Sn** **03 35 20.1 -1.5**
comp=Z,21nm,0.4s,SNR=1.0
LPG **La Plagne** **3.88 290** *e*Pn **Pn** **03 34 37.2 +0.2**
SNR=1.0
LPG *e*Sn **Sn** **03 35 20.1 -1.5**
comp=Z,10nm,0.4s,SNR=1.0
FRF **La Foret Royal** **3.88 261** *e*Pn **Pn** **03 34 38.2 +1.4**
SNR=1.0
FRF *e*Sn **Sn** **03 35 20.1 -1.3**
comp=Z,12nm,0.3s,SNR=1.0
FRF **La Foret Royal** **3.88 261** *e*Pn **Pn** **03 34 38.2 +1.4**
SNR=1.0
FRF *e*Sn **Sn** **03 35 20.1 -1.3**
comp=Z,6.1nm,0.3s,SNR=1.0
LPL **La Plagne** **3.90 290** *e*Pn **Pn** **03 34 37.4 +0.2**
SNR=1.0
LPL *e*Sn **Sn** **03 35 19.6 -2.4**
comp=Z,16nm,0.3s,SNR=1.0
LPL **La Plagne** **3.90 290** *e*Pn **Pn** **03 34 37.4 +0.2**
SNR=1.0
LPL *e*Sn **Sn** **03 35 19.6 -2.4**
comp=Z,8.2nm,0.3s,SNR=1.0
MOA **Molln** **3.92 24**⇓ *i* Pn **Pn** **03 34 38.5 +1.1**
SNR=24
MOA **Molln** **3.92 24** Pn **Pn** **03 34 38.5 +1.1**
SNR=24
LMR **La Mourre** **4.04 258** *e*Pn **Pn** **03 34 40.1 +1.2**
SNR=1.0
LMR *e*Sn **Sn** **03 35 25.0 -0.1**
comp=Z,10nm,0.3s
LMR **La Mourre** **4.04 258** *e*Pn **Pn** **03 34 40.1 +1.2**
SNR=1.0
LMR *e*Sn **Sn** **03 35 25.0 -0.1**
comp=Z,5.1nm,0.3s
ORIF **Oris-en-Rattie** **4.37 281** *e*Pn **Pn** **03 34 45.7 +2.1**
SNR=1.0
ORIF *e*Sn **Sn** **03 35 33.5 +0.1**
comp=Z,14nm,0.4s
ORIF **Oris-en-Rattie** **4.37 281** *e*Pn **Pn** **03 34 45.7 +2.1**
SNR=1.0
ORIF *e*Sn **Sn** **03 35 33.5 +0.1**
comp=Z,6.9nm,0.4s
STON **Ston** **4.42 107** *e*Pn **Pn** **03 34 44.9 +0.7**
STON Sn **Sn** **03 35 33.0 -1.7**
STON **Ston** **4.42 107** *e*Pn **Pn** **03 34 44.9 +0.7**
STON Sn **Sn** **03 35 32.9 -1.7**
BBS **Basel-Blauen** **4.44 317** P **Pn** **03 34 45.6 +1.2**
FELD **Feldberg im Sc** **4.52 324** P **Pn** **03 34 46.6 +0.9**
FELD S **Sn** **03 35 35.0 -2.2**
SMRF **Simiane la Rot** **4.58 268** *e*Pn Pn 03 34 49.8 +3.3
SNR=1.0
SMRF **Simiane la Rot** **4.58 268** *e*Pn Pn 03 34 49.8 +3.3
SNR=1.0
LOMF **Lomont** **4.71 313** P **Pn** **03 34 49.5 +1.3**
LOMF S **Sn** **03 35 39.3 -2.5**
LOMF **Lomont** **4.71 313** P **Pn** **03 34 49.5 +1.3**
LOMF S **Sn** **03 35 39.3 -2.5**
CABF **La Chapelle** **4.73 302** *e*Pn **Pn** **03 34 50.1 +1.6**
SNR=1.0
CABF *e*Sn **Sn** **03 35 39.6 -2.7**
comp=Z,4.6nm,0.3s,SNR=1.0
CABF **La Chapelle** **4.73 302** *e*Pn **Pn** **03 34 50.1 +1.6**
SNR=1.0
CABF *e*Sn **Sn** **03 35 39.6 -2.7**
comp=Z,2.3nm,0.3s,SNR=1.0
GERES **GERESS Array B** **4.73 14** Pn **Pn** **03 34 48.9 +0.4**
comp=Z,1.0nm,0.3s,baz=198,slow=14,SNR=20
GERES Sn **Sn** **03 35 42.2 -0.1**
comp=Z,2.9nm,0.3s,baz=190,slow=22,SNR=14
MOF **Molkenrain** **4.89 319** P **Pn** **03 34 51.6 +0.9**
MOF **Molkenrain** **4.89 319** P **Pn** **03 34 51.6 +0.9**
KHC **Kasperske Hory** **4.98 13** *e*PN **Pn** **03 34 52.6 +0.6**
KHC *ex* x 03 35 07.0
KHC *ex* x 03 35 14.5
KHC *e*SN **Sn** **03 35 46.9 -1.6**
KHC **Kasperske Hory** **4.98 13** Pn **Pn** **03 34 52.6 +0.6**
KHC Sn **Sn** **03 35 46.9 -1.6**
HINF **Hinteralfeld** **5.00 317** *e*Pn **Pn** **03 34 53.0 +0.8**
SNR=1.0
HINF *e*Sn **Sn** **03 35 46.7 -2.2**
comp=Z,27nm,0.4s
HINF **Hinteralfeld** **5.00 317** *e*Pn **Pn** **03 34 53.0 +0.8**
SNR=1.0
HINF *e*Sn **Sn** **03 35 46.7 -2.2**
comp=Z,14nm,0.4s
ECH **Echery** **5.14 322** P **Pn** **03 34 55.1 +1.0**
ECH **Echery** **5.14 322** P **Pn** **03 34 55.1 +1.0**
VIVF **Saint-Julien-l** **5.22 279** *e*Pn **Pn** **03 34 55.5 +0.3**
SNR=1.0
VIVF *e*Sn **Sn** **03 35 52.2 -2.1**
comp=Z,4.7nm,0.3s,SNR=1.0
VIVF **Saint-Julien-l** **5.22 279** *e*Pn **Pn** **03 34 55.5 +0.3**
SNR=1.0
VIVF *e*Sn **Sn** **03 35 52.2 -2.1**
comp=Z,2.3nm,0.3s,SNR=1.0
CDF **Champ du Feu** **5.24 324** *e*Pn **Pn** **03 34 56.7 +1.2**
SNR=1.0
CDF *e*Sn **Sn** **03 35 51.7 -3.2**
comp=Z,13nm,0.3s,SNR=1.0
CDF **Champ du Feu** **5.24 324** *e*Pn **Pn** **03 34 56.7 +1.2**
SNR=1.0
CDF *e*Sn **Sn** **03 35 51.7 -3.2**
comp=Z,6.6nm,0.3s,SNR=1.0
HAU **Haudompre** **5.38 316** *e*Pn **Pn** **03 34 58.0 +0.6**
SNR=1.0
HAU *e*Sn **Sn** **03 35 54.7 -3.5**
comp=Z,55nm,0.4s,SNR=1.0
HAU **Haudompre** **5.38 316** *e*Pn **Pn** **03 34 58.0 +0.6**
SNR=1.0
HAU *e*Sn **Sn** **03 35 54.7 -3.5**
comp=Z,27nm,0.4s,SNR=1.0
LANF **Langenberg** **5.49 330** P **Pn** **03 34 59.6 +0.7**
LANF **Langenberg** **5.49 330** P **Pn** **03 34 59.6 +0.7**
TREC **Trest** **5.58 25** *e*SN **Sn** **03 36 00.3 -2.9**
THEF **They Montfort** **5.71 316** P **Pn** **03 35 03.3 +1.4**
THEF **They Montfort** **5.71 316** P **Pn** **03 35 03.3 +1.4**
LASF **Ste Croix** **5.81 271** *e*Pn **Pn** **03 35 05.5 +2.2**
SNR=1.0
LASF **Ste Croix** **5.81 271** *e*Pn **Pn** **03 35 05.5 +2.2**
SNR=1.0
NKC **Novy Kostel** **5.97 3** *e*SN **Sn** **03 36 10.1 -2.6**
PRU **Pruhonice** **5.98 16** *e*PN **Pn** **03 35 06.0 +0.4**
PRU *e*SN **Sn** **03 36 10.3 -2.7**
PRU **Pruhonice** **5.98 16** Pn **Pn** **03 35 06.0 +0.4**
SMF **Signal de Mont** **6.16 295** *e*Pn **Pn** **03 35 09.0 +0.9**
SNR=1.0
SMF **Signal de Mont** **6.16 295** *e*Pn **Pn** **03 35 09.0 +0.9**
SNR=1.0
MEZF **Maizieres J'vi** **6.36 314** *e*Pn **Pn** **03 35 13.1 +2.3**
SNR=1.0
MEZF *e*Sn **Sn** **03 36 18.8 -3.5**
comp=Z,6.0nm,0.3s,SNR=1.0
MEZF **Maizieres J'vi** **6.36 314** *e*Pn **Pn** **03 35 13.1 +2.3**
SNR=1.0
VYHS **Vyhne** **6.37 46** *e*PN **Pn** **03 35 11.8 +0.8**
VYHS *e*SN **Sn** **03 36 17.8 -4.8**
VYHS **Vyhne** **6.37 46** *e*Pn **Pn** **03 35 11.8 +0.8**
LOR **Lormes** **6.39 301** *e*Pn **Pn** **03 35 12.4 +1.2**
SNR=1.0
LOR **Lormes** **6.39 301** *e*Pn **Pn** **03 35 12.4 +1.2**
SNR=1.0
PVCC **Panska Ves** **6.50 15** *e*PN **Pn** **03 35 13.4 +0.6**
PVCC *e*SN **Sn** **03 36 22.8 -3.0**
PVCC **Panska Ves** **6.50 15** Pn **Pn** **03 35 13.4 +0.6**
SSF **Saint Saulge** **6.53 298** *e*Pn **Pn** **03 35 13.5 +0.4**
SNR=1.0
SSF *e*Sn **Sn** **03 36 22.8 -3.6**
comp=Z,6.6nm,0.4s
SSF **Saint Saulge** **6.53 298** *e*Pn **Pn** **03 35 13.5 +0.4**
SNR=1.0
AVF **Avril sur Loir** **6.53 296** *e*Pn **Pn** **03 35 13.7 +0.6**
SNR=1.0
AVF *e*Sn **Sn** **03 36 23.3 -3.1**
comp=Z,7.2nm,0.6s,SNR=1.0
AVF **Avril sur Loir** **6.53 296** *e*Pn **Pn** **03 35 13.7 +0.6**
SNR=1.0
BRG **Berggiesshubel** **6.74 11** *e*(P) **Pn** **03 35 17.2 +1.2**
comp=Z,1.7nm,0.2s
BRG *e* 03 36 27.4
comp=Z,2.4nm,0.5s
BRG *e* 03 37 18.2
comp=Z,2.9nm,0.6s
DPC **Dobruska-Polom** **6.77 25** *e*SN **Sn** **03 36 27.7 -4.7**
BGF **Bois d'Agland** **6.79 293** *e*Pn **Pn** **03 35 17.5 +0.8**
SNR=1.0
BGF *e*Sn **Sn** **03 36 28.8 -4.1**
comp=Z,9.9nm,0.3s,SNR=1.0
BGF **Bois d'Agland** **6.79 293** *e*Pn **Pn** **03 35 17.5 +0.8**
SNR=1.0
CLL **Collm** **7.07 5** *i* Pn **Pn** **03 35 20.8 +0.3**
CLL *e*Sg Sb 03 37 30.0 +25
CAF **Calviac** **7.07 279** *e*Pn **Pn** **03 35 22.2 +1.5**
SNR=1.0
CAF **Calviac** **7.07 279** *e*Pn **Pn** **03 35 22.2 +1.5**
SNR=1.0
MTLF **Montolieu** **7.09 266** *e*Pn **Pn** **03 35 22.5 +1.6**
SNR=1.0
MTLF **Montolieu** **7.09 266** *e*Pn **Pn** **03 35 22.5 +1.6**
SNR=1.0
TCF **Toulx Ste Croi** **7.14 290** *e*SN **Sn** **03 36 38.0 -3.7**
comp=Z,4.0nm,0.3s,SNR=1.0
GIVF **Givet** **7.57 323** *e*Pn **Pn** **03 35 27.7 +0.3**
SNR=1.0
GIVF **Givet** **7.57 323** *e*Pn **Pn** **03 35 27.7 +0.3**
SNR=1.0
KEST **Kesra** **8.76 194** Pn Pn 03 35 51.0 +7.1
comp=Z,0.1nm,0.3s,baz=300,slow=2.5,SNR=5.1
GRR **Gorron** **9.75 299** *e*Pn **Pn** **03 35 59.7 +2.4**
SNR=1.0
GRR **Gorron** **9.75 299** *e*Pn **Pn** **03 35 59.7 +2.4**
SNR=1.0
SGMF **Saint Gilles** **10.79 297** *e*Pn **Pn** **03 36 13.7 +2.2**
SNR=1.0
SGMF **Saint Gilles** **10.79 297** *e*Pn **Pn** **03 36 13.7 +2.2**
SNR=1.0
TORD **Torodi Ar. Bea** **32.24 199** P **P** **03 40 04.5 -0.4**
comp=Z,0.2nm,0.6s,baz=10,slow=9.0,SNR=4.4
YKA **Yellowknife Ar** **65.31 336** P **P** **03 44 17.4 -0.4**
comp=Z,0.2nm,0.5s,baz=41,slow=6.2,SNR=5.3

CSEM ***06*** *03:42:09.7, 42°.35N × 13°.38E, h9km, After ROM*
ROM 06 03:42:09.7±0.1, 42°.35N×13°.38E, h9km, Ml2.5/4, 2D, Error ellipse: s-maj=1.7km s-min=1.1km az=68.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.02**	**84**⇓	*i* Pg	Pg	03 42 11.6	+0.2
AQU				Sg	Sg	03 42 12.6	-0.1
AQU	**L'Aquila**	**0.02**	**84**⇓	*i* Pg	Pg	03 42 11.6	+0.2
AQU				Sg	Sg	03 42 12.6	-0.1
FAGN	**Fagnano**	**0.18**	**119**	Pg	Pg	03 42 14.5	+1.0
FAGN				Sg	Sg	03 42 17.5	+1.4
FAGN	**Fagnano**	**0.18**	**119**	Pg	Pg	03 42 14.5	+1.0
FAGN				Sg	Sg	03 42 17.5	+1.4
CAMP	**Campotosto**	**0.18**	**7**	Pg	Pg	03 42 14.3	+0.5
CAMP				Sg	Sg	03 42 17.2	+0.6
CAMP	**Campotosto**	**0.18**	**7**	Pg	Pg	03 42 14.3	+0.5
CAMP				Sg	Sg	03 42 17.2	+0.6
FIAM	**Fiamignano**	**0.21**	**247**	Pg	Pg	03 42 14.9	+0.7
FIAM	**Fiamignano**	**0.21**	**247**	Pg	Pg	03 42 14.9	+0.7
PTQR	**Pietraquaria**	**0.33**	**177**	Pg	Pg	03 42 16.8	+0.4
PTQR				Sg	Sg	03 42 21.7	+0.8
PTQR	**Pietraquaria**	**0.33**	**177**	Pg	Pg	03 42 16.8	+0.4
PTQR				Sg	Sg	03 42 21.7	+0.8
VCEL	**Villa Celiera**	**0.35**	**83**	Pg	Pg	03 42 17.4	+0.7
VCEL	**Villa Celiera**	**0.35**	**83**	Pg	Pg	03 42 17.4	+0.7
CERT	**Cerreto**	**0.50**	**216**	Pg	Pb	03 42 20.6	-0.1
CERT				Sg	Sb	03 42 27.2	-1.0
	244nm,0.3s						
CERT	**Cerreto**	**0.50**	**216**	Pg	Pb	03 42 20.6	-0.1
CERT				Sg	Sb	03 42 27.2	-1.0
	244nm,0.3s						
INTR	**Introdacqua**	**0.52**	**131**	Pg	Pg	03 42 19.7	-0.2
INTR				Sg	Sb	03 42 28.0	-0.8
	420nm,0.8s						
INTR	**Introdacqua**	**0.52**	**131**	Pg	Pg	03 42 19.7	-0.2
INTR				Sg	Sb	03 42 28.0	-0.8
	420nm,0.8s						
NRCA	**Norcia**	**0.52**	**338**	Pg	Pg	03 42 20.0	+0.1
NRCA				Sg	Sg	03 42 27.7	+0.8
NRCA	**Norcia**	**0.52**	**338**	Pg	Pg	03 42 20.0	+0.1
NRCA				Sg	Sg	03 42 27.7	+0.8
OFFI	**Offida**	**0.63**	**21**	Pg	Pb	03 42 22.9	+0.1
	790nm,0.6s						
OFFI	**Offida**	**0.63**	**21**	Pg	Pb	03 42 22.9	+0.1
	790nm,0.6s						
LPEL	**Lama dei Pelig**	**0.67**	**117**	Pg	Pg	03 42 22.6	-0.2
LPEL				Sg	Sb	03 42 32.8	-0.4
LPEL	**Lama dei Pelig**	**0.67**	**117**	Pg	Pg	03 42 22.6	-0.2
LPEL				Sg	Sb	03 42 32.8	-0.4
FDMO	**Fiordimonte**	**0.72**	**343**	Pg	Pg	03 42 23.6	0.0
FDMO				Sg	Sb	03 42 34.3	-0.1
FDMO	**Fiordimonte**	**0.72**	**343**	Pg	Pg	03 42 23.6	0.0
FDMO				Sg	Sb	03 42 34.3	-0.1
ARVD	**Arcevia**	**1.19**	**345**	Pg	Pb	03 42 31.9	-0.6
	67nm,1.2s						
ARVD	**Arcevia**	**1.19**	**345**	Pg	Pb	03 42 31.9	-0.6
	67nm,1.2s						

CSEM ***06*** *03:43:16.9±0.1, 42°.34N × 13°.34E, h5km, ML3.9/7, Error ellipse: s-maj=2.0km s-min=1.7km az=73.0*
IDC ***06*** *03:43:16.9±1.3, 42°.43N × 13°.53E, h0km, mb3.2/2, mb1 3.3/5, mb1mx3.2/29, mbtmp3.3/5, ML3.2/3, MS3.5/3, Ms1 3.4/3, ms1mx3.1/26, Error ellipse: s-maj=35.5km s-min=14.1km az=95.0*
ROM ***06*** *03:43:16.6±0.1, 42°.33N × 13°.36E, h9km±1km, Ml3.1/32, Error ellipse: s-maj=1.4km s-min=1.2km az=89.0*
ISCJB ***06*** *03:43:16.6±0.2, 42°.34N±0°.01 × 13°.35E±0°.02, h10km±2km, mb3.2/2, MS3.6/1, Error ellipse: s-maj=2.8km s-min=2.5km az=179.8*
PRU ***06*** *03:43:18.4, 42°.33N × 13°.48E, h0km*
LDG ***06*** *03:43:18.6±0.2, 42°.28N × 13°.26E, h2km, Ml2.9/6, Error ellipse: s-maj=6.2km s-min=4.0km az=48.0*
ISC 06 03:43:17.1±0.7, 42°.34N±0°.01 × 13°.35E±0°.02, h10km±4km, n121, σ1°21/167, 2C-2D, Central Italy

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AQU	**L'Aquila**	**0.04**	**62**	⇓*i*Pg	**Pg**	**03 43 18.9**	**-0.2**
AQU				Sg	**Sg**	**03 43 20.3**	**-0.2**
AQU	**L'Aquila**	**0.04**	**62**	⇓*i*Pg	**Pg**	**03 43 18.9**	**-0.2**
AQU				Sg	**Sg**	**03 43 20.3**	**-0.2**
FAGN	**Fagnano**	**0.18**	**112**	⇑*i*Pg	**Pg**	**03 43 20.9**	**-0.1**
FAGN				Sg	**Sg**	**03 43 24.3**	**+0.5**
FAGN	**Fagnano**	**0.18**	**112**	⇑*i*Pg	**Pg**	**03 43 20.9**	**-0.1**
FAGN				Sg	**Sg**	**03 43 24.3**	**+0.5**
FIAM	**Fiamignano**	**0.19**	**249**	Pg	**Pg**	**03 43 21.3**	**+0.2**
FIAM				Sg	**Sg**	**03 43 24.5**	**+0.6**
FIAM	**Fiamignano**	**0.19**	**249**	Pg	**Pg**	**03 43 21.3**	**+0.2**
FIAM				Sg	**Sg**	**03 43 24.5**	**+0.6**
CAMP	**Campotosto**	**0.20**	**12**	Pg	**Pg**	**03 43 21.3**	**-0.1**
CAMP				Sg	**Sg**	**03 43 24.6**	**+0.2**
	31μm,0.4s						
CAMP	**Campotosto**	**0.20**	**12**	Pg	**Pg**	**03 43 21.3**	**-0.1**
CAMP				Sg	**Sg**	**03 43 24.6**	**+0.2**
	31μm,0.4s						
PTQR	**Pietraquaria**	**0.32**	**173**	Pg	**Pg**	**03 43 23.0**	**-0.4**
PTQR				Sg	**Sg**	**03 43 27.9**	**+0.3**
PTQR	**Pietraquaria**	**0.32**	**173**	Pg	**Pg**	**03 43 23.0**	**-0.4**
PTQR				Sg	**Sg**	**03 43 27.9**	**+0.3**
TERO	**Teramo**	**0.34**	**33**	Pg	**Pg**	**03 43 23.2**	**-0.7**
TERO				Sg	**Sg**	**03 43 28.7**	**+0.2**
TERO	**Teramo**	**0.34**	**33**	Pg	**Pg**	**03 43 23.2**	**-0.7**
TERO				Sg	**Sg**	**03 43 28.7**	**+0.2**
VCEL	**Villa Celiera**	**0.37**	**80**	Pg	**Pg**	**03 43 24.2**	**-0.2**
VCEL	**Villa Celiera**	**0.37**	**80**	Pg	**Pg**	**03 43 24.2**	**-0.2**
CERT	**Cerreto**	**0.47**	**216**	Pg	**Pg**	**03 43 25.9**	**-0.4**
CERT				Sg	**Sg**	**03 43 32.9**	**+0.3**
	2μm,0.4s						
CERT	**Cerreto**	**0.47**	**216**	Pg	**Pg**	**03 43 25.9**	**-0.4**
CERT				Sg	**Sg**	**03 43 32.9**	**+0.3**
	2μm,0.4s						
MNS	**Montasola**	**0.50**	**276**	Pg	**Pg**	**03 43 26.4**	**-0.4**
MNS	**Montasola**	**0.50**	**276**	Pg	**Pg**	**03 43 26.4**	**-0.4**
VVLD	**Villa Vallelon**	**0.51**	**157**	Pg	**Pg**	**03 43 26.7**	**-0.2**
VVLD				Sg	**Sg**	**03 43 34.1**	**+0.5**
	1μm,0.5s						
VVLD	**Villa Vallelon**	**0.51**	**157**	Pg	**Pg**	**03 43 26.7**	**-0.2**
VVLD				Sg	**Sg**	**03 43 34.1**	**+0.5**
	1μm,0.5s						
INTR	**Introdacqua**	**0.52**	**128**	Pg	**Pg**	**03 43 26.3**	**-0.9**
INTR				Sg	**Sg**	**03 43 34.2**	**+0.1**
	1μm,0.4s						
INTR	**Introdacqua**	**0.52**	**128**	Pg	**Pg**	**03 43 26.3**	**-0.9**
INTR				Sg	**Sg**	**03 43 34.2**	**+0.1**
	1μm,0.4s						
NRCA	**Norcia**	**0.53**	**341**	Pg	**Pg**	**03 43 26.8**	**-0.6**
NRCA				Sg	**Sg**	**03 43 35.6**	**+1.2**
	2μm,0.1s						
NRCA	**Norcia**	**0.53**	**341**	Pg	**Pg**	**03 43 26.8**	**-0.6**
NRCA				Sg	**Sg**	**03 43 35.6**	**+1.2**
	2μm,0.1s						
GUAR	**Guarcino**	**0.54**	**183**	Pg	**Pb**	**03 43 28.1**	**-0.6**
	873nm,0.5s						
GUAR	**Guarcino**	**0.54**	**183**	Pg	**Pb**	**03 43 28.1**	**-0.6**
	873nm,0.5s						
MTCE	**Montecelio**	**0.55**	**236**	Pg	**Pg**	**03 43 27.2**	**-0.6**
MTCE				Sg	**Sg**	**03 43 35.5**	**+0.5**
	653nm,0.6s						
MTCE	**Montecelio**	**0.55**	**236**	Pg	**Pg**	**03 43 27.2**	**-0.6**
MTCE				Sg	**Sg**	**03 43 35.5**	**+0.5**
	653nm,0.6s						
TRTR	**Tortoreto Alta**	**0.63**	**41**	Pg	**Pg**	**03 43 29.7**	**+0.4**
	9μm,0.9s						
TRTR	**Tortoreto Alta**	**0.63**	**41**	Pg	**Pg**	**03 43 29.7**	**+0.4**
	9μm,0.9s						
OFFI	**Offida**	**0.65**	**22**	Pg	**Pg**	**03 43 29.9**	**+0.3**
	8μm,0.5s						
OFFI	**Offida**	**0.65**	**22**	Pg	**Pg**	**03 43 29.9**	**+0.3**
	8μm,0.5s						
POFI	**Posta Fibreno**	**0.67**	**156**	Pg	**Pb**	**03 43 30.9**	**0.0**
	442nm,0.6s						
POFI	**Posta Fibreno**	**0.67**	**156**	Pg	**Pb**	**03 43 30.9**	**0.0**
	442nm,0.6s						
LPEL	**Lama dei Pelig**	**0.68**	**115**	Pg	**Pg**	**03 43 29.2**	**-1.0**
LPEL				Sg	**Sb**	**03 43 39.9**	**-0.7**
LPEL	**Lama dei Pelig**	**0.68**	**115**	Pg	**Pg**	**03 43 29.2**	**-1.0**
LPEL				Sg	**Sb**	**03 43 39.9**	**-0.7**
SDI	**San Donato**	**0.71**	**151**	Pg	**Pg**	**03 43 30.6**	**-0.2**
SDI	**San Donato**	**0.71**	**151**	Pg	**Pg**	**03 43 30.6**	**-0.2**
RMP	**Rome, Mte Porz**	**0.71**	**223**	Pg	**Pg**	**03 43 30.2**	**-0.6**
	771nm,0.5s						
RMP	**Rome, Mte Porz**	**0.71**	**223**	Pg	**Pg**	**03 43 30.2**	**-0.6**
	771nm,0.5s						
FDMO	**Fiordimonte**	**0.73**	**344**	Pg	**Pg**	**03 43 30.2**	**-0.9**
FDMO				Sg	**Sb**	**03 43 42.2**	**+0.3**
	716nm,0.4s						
FDMO	**Fiordimonte**	**0.73**	**344**	Pg	**Pg**	**03 43 30.2**	**-0.9**
FDMO				Sg	**Sb**	**03 43 42.2**	**+0.3**
	716nm,0.4s						
CAFR	**Castel Frentan**	**0.75**	**98**	Pg	**Pg**	**03 43 30.7**	**-0.8**
	1μm,0.6s						
CAFR	**Castel Frentan**	**0.75**	**98**	Pg	**Pg**	**03 43 30.7**	**-0.8**
	1μm,0.6s						
RDP	**Rocca di Papa**	**0.75**	**220**	Pg	**Pg**	**03 43 31.2**	**-0.3**
	1μm,0.4s						
RDP	**Rocca di Papa**	**0.75**	**220**	Pg	**Pg**	**03 43 31.2**	**-0.3**
	1μm,0.4s						
CESI	**CESI - Serrava**	**0.75**	**334**	Pg	**Pg**	**03 43 31.1**	**-0.4**
	798nm,0.6s						
CESI	**CESI - Serrava**	**0.75**	**334**	Pg	**Pg**	**03 43 31.1**	**-0.4**
	798nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.78**	**185**	Pg	**Pg**	**03 43 32.3**	**+0.2**
	403nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.78**	**185**	Pg	**Pg**	**03 43 32.3**	**+0.2**
	403nm,0.5s						
CING	**Cingoli**	**1.05**	**354**	Pg	**Pb**	**03 43 36.1**	**-1.2**
	486nm,0.4s						
CING	**Cingoli**	**1.05**	**354**	Pg	**Pb**	**03 43 36.1**	**-1.2**
	486nm,0.4s						
MGAB	**Montegabbione**	**1.08**	**303**	Pg	**Pb**	**03 43 37.9**	**0.0**
	865nm,0.5s						
MGAB	**Montegabbione**	**1.08**	**303**	Pg	**Pb**	**03 43 37.9**	**0.0**
	865nm,0.5s						
MURB	**Monte Urbino**	**1.11**	**327**	Pg	**Pb**	**03 43 38.0**	**-0.4**
	2μm,0.4s						
MURB	**Monte Urbino**	**1.11**	**327**	Pg	**Pb**	**03 43 38.0**	**-0.4**
	2μm,0.4s						
LATE	**Laterza**	**1.18**	**284**	Pg	**Pg**	**03 43 39.9**	**+0.2**
	101nm,1.1s						
LATE	**Laterza**	**1.18**	**284**	Pg	**Pg**	**03 43 39.9**	**+0.2**
	101nm,1.1s						
ARVD	**Arcevia**	**1.20**	**346**	Pg	**Pn**	**03 43 38.9**	**-1.1**
	385nm,0.8s						
ARVD	**Arcevia**	**1.20**	**346**	Pg	**Pn**	**03 43 38.9**	**-1.1**
	385nm,0.8s						
AOI	**Ancona**	**1.23**	**8**	Pg	**Pn**	**03 43 39.7**	**-0.6**
	352nm,0.6s						
AOI	**Ancona**	**1.23**	**8**	Pg	**Pn**	**03 43 39.7**	**-0.6**
	352nm,0.6s						
MODR	**Mondragone**	**1.25**	**162**	Pg	**Pb**	**03 43 40.6**	**-0.2**
	111nm,1.2s						
MODR	**Mondragone**	**1.25**	**162**	Pg	**Pb**	**03 43 40.6**	**-0.2**
	111nm,1.2s						
PIEI	**Pieia**	**1.34**	**334**	Pn	**Pn**	**03 43 41.8**	**-0.1**
	250nm,0.4s						
PIEI	**Pieia**	**1.34**	**334**	Pn	**Pn**	**03 43 41.8**	**-0.1**
	250nm,0.4s						
ARCI	**Arcidosso**	**1.48**	**291**	Pn	**Pb**	**03 43 44.8**	**+0.1**
	92nm,0.9s						
ARCI	**Arcidosso**	**1.48**	**291**	Pn	**Pb**	**03 43 44.8**	**+0.1**
	92nm,0.9s						
PARC	**Parchiule**	**1.55**	**328**	Pn	**Pb**	**03 43 45.6**	**-0.2**
	204nm,0.6s						
PARC	**Parchiule**	**1.55**	**328**	Pn	**Pb**	**03 43 45.6**	**-0.2**
	204nm,0.6s						
MAON	**Monte Argentar**	**1.65**	**274**	Pn	**Pn**	**03 43 46.2**	**+0.1**
	83nm,0.6s						
MAON	**Monte Argentar**	**1.65**	**274**	Pn	**Pn**	**03 43 46.2**	**+0.1**
	83nm,0.6s						
SGRT	**San Giovanni R**	**1.87**	**107**	Pn	**Pb**	**03 43 50.3**	**-1.1**
SGRT	**San Giovanni R**	**1.87**	**107**	Pn	**Pb**	**03 43 50.3**	**-1.1**
CASP	**Castiglione de**	**1.89**	**285**	Pn	**Pn**	**03 43 49.7**	**+0.2**
	55nm,1.1s						
CASP	**Castiglione de**	**1.89**	**285**	Pn	**Pn**	**03 43 49.7**	**+0.2**
	55nm,1.1s						
SFI	**Santa Sofia**	**1.92**	**325**	Pn	**Pn**	**03 43 51.0**	**+1.2**
	103nm,0.8s						
SFI	**Santa Sofia**	**1.92**	**325**	Pn	**Pn**	**03 43 51.0**	**+1.2**
	103nm,0.8s						
MSAG	**Monte S. Angel**	**2.00**	**107**	Pn	**Pb**	**03 43 52.4**	**-1.2**
MSAG	**Monte S. Angel**	**2.00**	**107**	Pn	**Pb**	**03 43 52.4**	**-1.2**
NVLJ	**Novalja**	**2.49**	**26**	*e*Pn	**Pn**	**03 43 57.8**	**+0.1**
NVLJ				Sn	**Sn**	**03 44 28.4**	**+0.4**
NVLJ	**Novalja**	**2.49**	**26**	*e*Pn	**Pn**	**03 43 57.7**	**+0.1**
NVLJ				Sn	**Sn**	**03 44 28.4**	**+0.4**
PGF	**Pioggiola**	**3.23**	**275**	*e*Pn	**Pn**	**03 44 08.3**	**+0.4**
PGF				*e*Sn	**Sn**	**03 44 48.3**	**+1.8**
	4.9nm,0.4s						
PGF	**Pioggiola**	**3.23**	**275**	*e*Pn	**Pn**	**03 44 08.3**	**+0.4**
PGF				*e*Sn	**Sn**	**03 44 48.3**	**+1.8**
	2.5nm,0.4s						
SKDS	**Skadanscina**	**3.25**	**8**	*i* Pn	**Pn**	**03 44 08.8**	**+0.7**
SKDS				*i* Sn	**Sn**	**03 44 47.8**	**+1.0**
SKDS	**Skadanscina**	**3.25**	**8**	*i* Pn	**Pn**	**03 44 08.8**	**+0.7**
SKDS				*i* Sn	**Sn**	**03 44 47.8**	**+1.0**
STON	**Ston**	**3.25**	**79**	*e*Pn	**Pn**	**03 44 09.0**	**+0.8**
STON				Sn	**Sn**	**03 44 48.6**	**+1.7**
STON	**Ston**	**3.25**	**79**	*e*Pn	**Pn**	**03 44 08.9**	**+0.8**
STON				Sn	**Sn**	**03 44 48.6**	**+1.7**
BOJS	**Bojanci**	**3.45**	**23**	*i* Pn	**Pn**	**03 44 11.4**	**+0.5**
BOJS				*i* Sn	**Sn**	**03 44 53.9**	**+2.0**
BOJS	**Bojanci**	**3.45**	**23**	*i* Pn	**Pn**	**03 44 11.4**	**+0.5**
BOJS				*i* Sn	**Sn**	**03 44 53.8**	**+2.0**
JAVS	**Javornik**	**3.59**	**8**	*i* Pn	**Pn**	**03 44 13.6**	**+0.7**
JAVS				*i* Sn	**Sn**	**03 44 58.0**	**+2.5**
JAVS	**Javornik**	**3.59**	**8**	*i* Pn	**Pn**	**03 44 13.6**	**+0.7**
JAVS				*i* Sn	**Sn**	**03 44 58.0**	**+2.5**
CTI	**Castel Tesino**	**3.91**	**342**	Pn	**Pn**	**03 44 18.1**	**+0.8**
	21nm,0.4s						
CTI	**Castel Tesino**	**3.91**	**342**	Pn	**Pn**	**03 44 18.1**	**+0.8**
	21nm,0.4s						
VINO	**Villanova**	**3.92**	**359**	Pn	**Pn**	**03 44 17.4**	**0.0**
	29nm,0.6s						
VINO	**Villanova**	**3.92**	**359**	Pn	**Pn**	**03 44 17.4**	**0.0**
	29nm,0.6s						
SBF	**Sospel**	**4.59**	**291**	*e*Pn	**Pn**	**03 44 27.0**	**+0.4**
SBF				*e*Sn	**Sn**	**03 45 16.6**	**-3.5**
	2.0nm,0.4s						
SBF	**Sospel**	**4.59**	**291**	*e*Pn	**Pn**	**03 44 27.0**	**+0.4**
SBF				*e*Sn	**Sn**	**03 45 16.6**	**-3.5**
	1.0nm,0.4s						
FRF	**La Foret Royal**	**5.07**	**286**	*e*Pn	**Pn**	**03 44 33.3**	**+0.2**
FRF				*e*Sn	**Sn**	**03 45 27.9**	**-3.9**
	1.7nm,0.4s						
FRF	**La Foret Royal**	**5.07**	**286**	*e*Pn	**Pn**	**03 44 33.3**	**+0.2**
FRF				*e*Sn	**Sn**	**03 45 27.9**	**-3.9**
	0.9nm,0.4s						
DAVOX	**Davos/Dischmat**	**5.09**	**332**	Pn	**Pn**	**03 44 35.8**	**+2.2**
	0.9nm,0.3s,baz=149,slow=17,SNR=8.1						
DAVOX				Sn	**Sn**	**03 45 35.3**	**+2.8**
	0.3nm,0.3s,baz=299,slow=22,SNR=3.8						
DAVOX				LR	LR	03 46 19.3	
	comp=Z,474nm,19.4s,baz=35,slow=36						
LMR	**La Mourre**	**5.13**	**284**	*e*Pn	**Pn**	**03 44 33.8**	**-0.1**
LMR	**La Mourre**	**5.13**	**284**	*e*Pn	**Pn**	**03 44 33.8**	**-0.1**
MBDF	**Montbardon**	**5.35**	**299**	*e*P	**Pn**	**03 44 38.6**	**+1.5**
MBDF	**Montbardon**	**5.35**	**299**	*e*P	**Pn**	**03 44 38.6**	**+1.5**
GERES	**GERESS Array B**	**6.52**	**2**	Pn	**Pn**	**03 44 52.5**	**-0.5**
	0.3nm,0.3s,baz=175,slow=12,SNR=6.9						
GERES				Sn	**Sn**	**03 46 07.0**	**-0.5**
	0.6nm,0.3s,baz=176,slow=19,SNR=6.4						
KHC	**Kasperske Hory**	**6.80**	**1**	*e*PN	**Pn**	**03 44 58.5**	**+1.6**
KHC				*e*SN	**Sn**	**03 46 12.9**	**-1.4**
KHC	**Kasperske Hory**	**6.80**	**1**	Pn	**Pn**	**03 44 58.5**	**+1.6**
KHC				Sn	**Sn**	**03 46 12.9**	**-1.4**
HINF	**Hinteralfeld**	**7.15**	**322**	*e*Pn	**Pn**	**03 45 00.6**	**-1.2**
HINF				*e*Sn	**Sn**	**03 46 17.7**	**-5.4**
	4.0nm,0.4s						
HINF	**Hinteralfeld**	**7.15**	**322**	*e*Pn	**Pn**	**03 45 00.6**	**-1.2**
KEST	**Kesra**	**7.29**	**207**	Pn	Pn	03 45 08.1	+4.4
	0.3nm,0.3s,baz=286,slow=6.8,SNR=20						
KEST				LR	LR	03 47 55.5	
	comp=Z,136nm,20.1s,baz=348,slow=38						
CDF	**Champ du Feu**	**7.43**	**327**	*e*Pn	**Pn**	**03 45 04.1**	**-1.5**
CDF				*e*Sn	**Sn**	**03 46 24.3**	**-5.6**
	2.0nm,0.3s						
CDF	**Champ du Feu**	**7.43**	**327**	*e*Pn	**Pn**	**03 45 04.1**	**-1.5**
HAU	**Haudompre**	**7.52**	**321**	*e*Pn	**Pn**	**03 45 06.4**	**-0.4**
HAU				*e*Sn	Sn	03 46 25.3	-6.9
	5.7nm,0.5s						
HAU	**Haudompre**	**7.52**	**321**	*e*Pn	**Pn**	**03 45 06.4**	**-0.4**
PRU	**Pruhonice**	**7.70**	**6**	*e*SN	**Sn**	**03 46 34.3**	**-2.1**
NKC	**Novy Kostel**	**7.92**	**356**	*e*SN	**Sn**	**03 46 40.3**	**-1.7**
NKC	**Novy Kostel**	**7.92**	**356**	Sn	**Sn**	**03 46 40.3**	**-1.7**
KBZ	**Khabaz**	**21.59**	**76**	LR	LR	03 58 18.1	
	comp=Z,246nm,18.5s,baz=105,slow=42						
TORD	**Torodi Ar. Bea**	**30.79**	**203**	P	**P**	**03 49 34.7**	**+1.8**
	0.4nm,0.9s,baz=19,slow=8.0,SNR=3.5						
MKAR	**Makanchi Array**	**47.88**	**60**	P	**P**	**03 51 55.8**	**+0.6**
	0.1nm,0.5s,baz=293,slow=6.6,SNR=2.6						

*ISCJB **06** 03:46:49.0±0.3, 42°.35N±0°.02×13°.33E±0°.03, h10km±3km, Error ellipse: s-maj=3.8km s-min=2.8km az=163.4*
*CSEM **06** 03:46:49.4±0.1, 42°.35N×13°.33E, h5km, ML3.6/6, Error ellipse: s-maj=2.4km s-min=1.7km az=72.0*
*ROM **06** 03:46:49.2±0.1, 42°.35N×13°.34E, h10km±1km, Ml2.7/23, Error ellipse: s-maj=1.8km s-min=1.3km az=71.0*
ISC 06 03:46:49.6±0.8**, 42°.36N**±0°.02×**13°.35E**±0°.02**, h11**km±4km**,**
n71, σ0.85/101**, 6C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**91**	⇓*i*Pg	**Pg**	**03 46 51.5**	**-0.3**
AQU				Sg	**Sg**	**03 46 52.8**	**-0.5**
AQU	**L'Aquila**	**0.04**	**91**	⇓*i*Pg	**Pg**	**03 46 51.5**	**-0.3**
AQU				Sg	**Sg**	**03 46 52.8**	**-0.5**
CAMP	**Campotosto**	**0.19**	**14**	⇑*i*Pg	**Pg**	**03 46 53.6**	**-0.2**
CAMP				Sg	**Sg**	**03 46 56.8**	**+0.2**
CAMP	**Campotosto**	**0.19**	**14**	⇑*i*Pg	**Pg**	**03 46 53.6**	**-0.2**
CAMP				Sg	**Sg**	**03 46 56.8**	**+0.2**
FIAM	**Fiamignano**	**0.19**	**243**	Pg	**Pg**	**03 46 53.9**	**+0.1**
FIAM	**Fiamignano**	**0.19**	**243**	Pg	**Pg**	**03 46 53.9**	**+0.1**
FAGN	**Fagnano**	**0.20**	**117**	Pg	**Pg**	**03 46 54.4**	**+0.5**
FAGN				Sg	**Sg**	**03 46 57.6**	**+0.8**
FAGN	**Fagnano**	**0.20**	**117**	Pg	**Pg**	**03 46 54.4**	**+0.5**
FAGN				Sg	**Sg**	**03 46 57.6**	**+0.8**
TERO	**Teramo**	**0.33**	**35**	⇑*i*Pg	**Pg**	**03 46 55.8**	**-0.5**
TERO				Sg	**Sg**	**03 47 00.6**	**-0.1**
TERO	**Teramo**	**0.33**	**35**	⇑*i*Pg	**Pg**	**03 46 55.8**	**-0.5**
TERO				Sg	**Sg**	**03 47 00.6**	**-0.1**
PTQR	**Pietraquaria**	**0.34**	**173**	⇑*i*Pg	**Pg**	**03 46 56.2**	**-0.2**
PTQR				Sg	**Sg**	**03 47 01.5**	**+0.7**
PTQR	**Pietraquaria**	**0.34**	**173**	⇑*i*Pg	**Pg**	**03 46 56.2**	**-0.2**
PTQR				Sg	**Sg**	**03 47 01.5**	**+0.7**
VCEL	**Villa Celiera**	**0.37**	**84**	Pg	**Pg**	**03 46 57.5**	**+0.5**
VCEL	**Villa Celiera**	**0.37**	**84**	Pg	**Pg**	**03 46 57.5**	**+0.5**
CERT	**Cerreto**	**0.49**	**214**	Pg	**Pg**	**03 46 58.8**	**-0.4**
CERT				Sg	**Sg**	**03 47 04.9**	**-0.7**
	2μm,0.4s						
CERT	**Cerreto**	**0.49**	**214**	Pg	**Pg**	**03 46 58.8**	**-0.4**
CERT				Sg	**Sg**	**03 47 04.9**	**-0.7**
	2μm,0.4s						
NRCA	**Norcia**	**0.51**	**340**	Pg	**Pg**	**03 46 59.1**	**-0.5**
NRCA				Sg	**Sg**	**03 47 07.1**	**+0.8**
	971nm,0.1s						
NRCA	**Norcia**	**0.51**	**340**	Pg	**Pg**	**03 46 59.1**	**-0.5**
NRCA				Sg	**Sg**	**03 47 07.1**	**+0.8**
	971nm,0.1s						
VVLD	**Villa Vallelon**	**0.53**	**157**	Pg	**Pg**	**03 46 59.3**	**-0.6**
VVLD				Sg	**Sg**	**03 47 06.9**	**+0.1**
	679nm,0.7s						
VVLD	**Villa Vallelon**	**0.53**	**157**	Pg	**Pg**	**03 46 59.3**	**-0.6**
VVLD				Sg	**Sg**	**03 47 06.9**	**+0.1**
	679nm,0.7s						
INTR	**Introdacqua**	**0.54**	**129**	Pg	**Pg**	**03 46 59.8**	**-0.3**
INTR				Sg	**Sg**	**03 47 08.0**	**+0.7**
	634nm,0.5s						
INTR	**Introdacqua**	**0.54**	**129**	Pg	**Pg**	**03 46 59.8**	**-0.3**
INTR				Sg	**Sg**	**03 47 08.0**	**+0.7**
	634nm,0.5s						
MTCE	**Montecelio**	**0.56**	**234**	Pg	**Pg**	**03 47 00.0**	**-0.5**
	322nm,0.6s						
MTCE	**Montecelio**	**0.56**	**234**	Pg	**Pg**	**03 47 00.0**	**-0.5**
	322nm,0.6s						
GUAR	**Guarcino**	**0.56**	**183**	Pg	**Pg**	**03 46 59.8**	**-0.7**
	389nm,0.4s						
GUAR	**Guarcino**	**0.56**	**183**	Pg	**Pg**	**03 46 59.8**	**-0.7**
	389nm,0.4s						
TRTR	**Tortoreto Alta**	**0.62**	**43**	Pg	**Pb**	**03 47 02.3**	**-0.2**
	2μm,0.8s						
TRTR	**Tortoreto Alta**	**0.62**	**43**	Pg	**Pb**	**03 47 02.3**	**-0.2**
	2μm,0.8s						
OFFI	**Offida**	**0.63**	**23**	Pg	**Pg**	**03 47 02.1**	**+0.2**
OFFI	**Offida**	**0.63**	**23**	Pg	**Pg**	**03 47 02.1**	**+0.2**
POFI	**Posta Fibreno**	**0.69**	**157**	Pg	**Pb**	**03 47 03.5**	**-0.3**
	175nm,0.5s						
POFI	**Posta Fibreno**	**0.69**	**157**	Pg	**Pb**	**03 47 03.5**	**-0.3**
	175nm,0.5s						
LPEL	**Lama dei Pelig**	**0.69**	**116**	Pg	**Pg**	**03 47 02.6**	**-0.5**
LPEL				Sg	**Sb**	**03 47 13.1**	**-0.3**
	506nm,0.4s						
LPEL	**Lama dei Pelig**	**0.69**	**116**	Pg	**Pg**	**03 47 02.6**	**-0.5**
LPEL				Sg	**Sb**	**03 47 13.1**	**-0.3**
	506nm,0.4s						
FDMO	**Fiordimonte**	**0.71**	**344**	Pg	**Pg**	**03 47 02.6**	**-0.7**
	287nm,0.4s						
FDMO	**Fiordimonte**	**0.71**	**344**	Pg	**Pg**	**03 47 02.6**	**-0.7**
	287nm,0.4s						
CESI	**CESI - Serrava**	**0.73**	**334**	Pg	**Pg**	**03 47 03.2**	**-0.5**
CESI				Sg	**Sb**	**03 47 14.8**	**+0.4**
	249nm,0.5s						
CESI	**CESI - Serrava**	**0.73**	**334**	Pg	**Pg**	**03 47 03.2**	**-0.5**
CESI				Sg	**Sb**	**03 47 14.8**	**+0.4**
	249nm,0.5s						
SDI	**San Donato**	**0.73**	**152**	Pg	**Pg**	**03 47 03.2**	**-0.6**
SDI	**San Donato**	**0.73**	**152**	Pg	**Pg**	**03 47 03.2**	**-0.6**
CAFR	**Castel Frentan**	**0.75**	**99**	Pg	**Pg**	**03 47 04.3**	**+0.1**
	526nm,0.3s						
CAFR	**Castel Frentan**	**0.75**	**99**	Pg	**Pg**	**03 47 04.3**	**+0.1**
	526nm,0.3s						
GIUL	**Giuliano Di Ro**	**0.80**	**185**	Pg	**Pg**	**03 47 04.0**	**-1.0**
	392nm,0.7s						
GIUL	**Giuliano Di Ro**	**0.80**	**185**	Pg	**Pg**	**03 47 04.0**	**-1.0**
	392nm,0.7s						
MIDA	**Miranda**	**0.98**	**136**	Pg	**Pg**	**03 47 06.9**	**-1.6**
	209nm,0.8s						
MIDA	**Miranda**	**0.98**	**136**	Pg	**Pg**	**03 47 06.9**	**-1.6**
	209nm,0.8s						
CING	**Cingoli**	**1.03**	**354**	Pg	**Pg**	**03 47 08.2**	**-1.2**
	696nm,0.8s						
CING	**Cingoli**	**1.03**	**354**	Pg	**Pg**	**03 47 08.2**	**-1.2**
	696nm,0.8s						
LATE	**Laterza**	**1.17**	**283**	Pg	**Pg**	**03 47 12.1**	**0.0**
	24nm,0.8s						
LATE	**Laterza**	**1.17**	**283**	Pg	**Pg**	**03 47 12.1**	**0.0**
	24nm,0.8s						
SACS	**San Casciano d**	**1.17**	**295**	Pg	**Pg**	**03 47 12.8**	**+0.7**
	133nm,0.8s						
ARVD	**Arcevia**	**1.18**	**346**	Pg	**Pb**	**03 47 11.2**	**-0.9**
	232nm,0.6s						
ARVD	**Arcevia**	**1.18**	**346**	Pg	**Pb**	**03 47 11.2**	**-0.9**
	232nm,0.6s						
AOI	**Ancona**	**1.21**	**9**	Pg	**Pn**	**03 47 12.0**	**-0.6**
	232nm,0.9s						
AOI	**Ancona**	**1.21**	**9**	Pg	**Pn**	**03 47 12.0**	**-0.6**
	232nm,0.9s						
MODR	**Mondragone**	**1.27**	**162**	Pg	**Pb**	**03 47 13.5**	**-0.1**
	38nm,1.1s						
MODR	**Mondragone**	**1.27**	**162**	Pg	**Pb**	**03 47 13.5**	**-0.1**
	38nm,1.1s						
CAFI	**Castiglion Fio**	**1.41**	**314**	Pg	**Pb**	**03 47 15.9**	**0.0**
	87nm,0.6s						
CAFI	**Castiglion Fio**	**1.41**	**314**	Pg	**Pb**	**03 47 15.9**	**0.0**
	87nm,0.6s						
PARC	**Parchiule**	**1.53**	**328**	Pn	**Pb**	**03 47 18.4**	**+0.4**
	128nm,0.6s						
PARC	**Parchiule**	**1.53**	**328**	Pn	**Pb**	**03 47 18.4**	**+0.4**
	128nm,0.6s						
CSNT	**Castellina Chi**	**1.88**	**307**	Pn	**Pn**	**03 47 22.5**	**+0.8**
	16nm,0.7s						
CSNT	**Castellina Chi**	**1.88**	**307**	Pn	**Pn**	**03 47 22.5**	**+0.8**
	16nm,0.7s						
NVLJ	**Novalja**	**2.47**	**26**	*i* Pn	**Pn**	**03 47 30.2**	**+0.4**
NVLJ				Sn	**Sn**	**03 48 00.8**	**+0.7**
NVLJ	**Novalja**	**2.47**	**26**	*i* Pn	**Pn**	**03 47 30.2**	**+0.4**
NVLJ				Sn	**Sn**	**03 48 00.7**	**+0.7**
SKDS	**Skadanscina**	**3.23**	**8**	*i* Pn	**Pn**	**03 47 40.9**	**+0.6**
SKDS				*i* Sn	**Sn**	**03 48 20.6**	**+1.8**
SKDS	**Skadanscina**	**3.23**	**8**	*i* Pn	**Pn**	**03 47 40.9**	**+0.6**
SKDS				*i* Sn	**Sn**	**03 48 20.5**	**+1.8**
STON	**Ston**	**3.25**	**79**	*i* Pn	**Pn**	**03 47 41.7**	**+1.1**
STON				Sn	**Sn**	**03 48 19.5**	**+0.2**
STON	**Ston**	**3.25**	**79**	*i* Pn	**Pn**	**03 47 41.7**	**+1.1**
STON				Sn	**Sn**	**03 48 19.5**	**+0.2**
BOJS	**Bojanci**	**3.44**	**23**	*i* Pn	**Pn**	**03 47 44.4**	**+1.3**
BOJS				*i* Sn	**Sb**	**03 48 28.6**	**-3.7**
BOJS	**Bojanci**	**3.44**	**23**	*i* Pn	**Pn**	**03 47 44.4**	**+1.3**
BOJS				*i* Sn	**Sb**	**03 48 28.6**	**-3.7**

MEX 06 03:48:38.6±0.9**, 16°.96N×95°.04W, h121**km±7km**, MD4.3, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.20**	**48**	*i* P	Pn	03 48 53.9	-1.4
CMIG				*i* S	Sn	03 49 05.5	-2.5
HUIG	**Huatulco**	**1.57**	**221**	*i* P	Pn	03 49 05.1	-1.8
HUIG				*i* S	Sn	03 49 27.4	-1.0
VHO	**Vista Hermosa**	**1.63**	**274**	*i* P	Pn	03 49 07.0	-0.8
VHO				*i* S	Sn	03 49 28.9	-1.2
TGIG		**1.84**	**95**	*i* P	Pn	03 49 09.8	-0.4
TGIG				*i* S	Sn	03 49 32.7	-1.7
TPIG	**Tehuac#an**	**2.65**	**304**	*i* P	Pn	03 49 19.6	-1.0
TPIG				*i* S	Sn	03 49 51.0	-1.8
UTMO	**Huajuapan**	**2.78**	**289**	*i* P	Pn	03 49 21.5	-0.9
UTMO				*i* S	Sn	03 49 53.8	-2.2
CCIG	**Comitan**	**2.86**	**103**	*e*P	Pn	03 49 21.8	-1.6
CCIG				*e*S	Sn	03 49 56.3	-1.5
PNIG	**Pinotepa**	**3.01**	**260**	*i* P	Pn	03 49 22.6	-2.5
PNIG				*i* S	Sn	03 49 59.4	-1.6
YAIG	**Yautepec**	**4.28**	**297**	*i* P	Pn	03 49 40.7	-1.4
YAIG				*i* S	Sn	03 50 29.3	-2.0
CAIG	**El Cayaco**	**5.00**	**272**	*i* P	Pn	03 49 49.7	-2.0
CAIG				*i* S	Sn	03 50 45.8	-2.7
ARIG	**Puente Sto Nin**	**5.23**	**285**	*e*P	Pn	03 49 54.2	-0.5
ARIG				*e*S	Sn	03 50 51.2	-2.9
ZIIG	**Zihuatanejo**	**6.17**	**277**	*i* P	Pn	03 50 06.7	-0.7
ZIIG				*i* S	Sn	03 51 13.7	-3.0

*CSEM **06** 03:55:46.8, 42°.21N×13°.50E, h8km, After ROM*
ROM 06 03:55:46.8±0.1**, 42°.21N×13°.50E, h8**km±1km**, Ml2.8**/9**, 2C,**
Error ellipse: s-maj=1.6km s-min=1.4km az=86.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.08**	**51**	⇑*i*Pg	Pg	03 55 49.3	+0.2
FAGN				Sg	Sg	03 55 51.0	+0.3
FAGN	**Fagnano**	**0.08**	**51**	⇑*i*Pg	Pg	03 55 49.3	+0.2
FAGN				Sg	Sg	03 55 51.0	+0.3
AQU	**L'Aquila**	**0.16**	**333**	Pg	Pg	03 55 51.0	+0.7
AQU				Sg	Sg	03 55 52.9	+0.3
AQU	**L'Aquila**	**0.16**	**333**	Pg	Pg	03 55 51.0	+0.7
AQU				Sg	Sg	03 55 52.9	+0.3
PTQR	**Pietraquaria**	**0.20**	**201**	Pg	Pg	03 55 52.1	+1.0
PTQR	**Pietraquaria**	**0.20**	**201**	Pg	Pg	03 55 52.1	+1.0
FIAM	**Fiamignano**	**0.29**	**281**	Pg	Pg	03 55 53.0	+0.3
FIAM	**Fiamignano**	**0.29**	**281**	Pg	Pg	03 55 53.0	+0.3
VCEL	**Villa Celiera**	**0.31**	**55**	Pg	Pg	03 55 53.6	+0.4
VCEL	**Villa Celiera**	**0.31**	**55**	Pg	Pg	03 55 53.6	+0.4
CAMP	**Campotosto**	**0.33**	**348**	Pg	Pg	03 55 54.2	+0.7
CAMP				Sg	Sb	03 55 59.5	-1.2
CAMP	**Campotosto**	**0.33**	**348**	Pg	Pg	03 55 54.2	+0.7
CAMP				Sg	Sb	03 55 59.5	-1.2
VVLD	**Villa Vallelon**	**0.35**	**165**	Pg	Pg	03 55 54.3	+0.4
VVLD				Sg	Sg	03 56 00.0	+1.3
VVLD	**Villa Vallelon**	**0.35**	**165**	Pg	Pg	03 55 54.3	+0.4
VVLD				Sg	Sg	03 56 00.0	+1.3
INTR	**Introdacqua**	**0.36**	**124**	Pg	Pg	03 55 54.7	+0.6
INTR				Sg	Sb	03 56 00.7	-0.9
INTR	**Introdacqua**	**0.36**	**124**	Pg	Pg	03 55 54.7	+0.6
INTR				Sg	Sb	03 56 00.7	-0.9
TERO	**Teramo**	**0.42**	**11**	Pg	Pg	03 55 54.9	-0.1
TERO	**Teramo**	**0.42**	**11**	Pg	Pg	03 55 54.9	-0.1
GUAR	**Guarcino**	**0.44**	**198**	Pg	Pg	03 55 56.1	+0.6
GUAR	**Guarcino**	**0.44**	**198**	Pg	Pg	03 55 56.1	+0.6
CERT	**Cerreto**	**0.47**	**236**	Pg	Pg	03 55 56.3	+0.3
CERT				Sg	Sg	03 56 03.3	+1.1
CERT	**Cerreto**	**0.47**	**236**	Pg	Pg	03 55 56.3	+0.3
CERT				Sg	Sg	03 56 03.3	+1.1
POFI	**Posta Fibreno**	**0.52**	**162**	Pg	Pb	03 55 58.4	+0.1
	209nm,0.6s						
POFI	**Posta Fibreno**	**0.52**	**162**	Pg	Pb	03 55 58.4	+0.1
	209nm,0.6s						
LPEL	**Lama dei Pelig**	**0.54**	**108**	Pg	Pg	03 55 57.3	0.0
LPEL				Sg	Sb	03 56 05.6	-0.9
LPEL	**Lama dei Pelig**	**0.54**	**108**	Pg	Pg	03 55 57.3	0.0

LPEL				Sg	Sb	03 56 05.6	-0.9
MTCE	Montecelio	0.59	251	Pg	Pb	03 55 59.5	0.0
	376nm,0.5s						
MTCE	Montecelio	0.59	251	Pg	Pb	03 55 59.5	0.0
	376nm,0.5s						
MNS	Montasola	0.63	286	Pg	Pg	03 55 58.9	-0.2
MNS	Montasola	0.63	286	Pg	Pg	03 55 58.9	-0.2
CAFR	Castel Frentan	0.63	89	Pg	Pb	03 55 59.8	-0.3
CAFR	Castel Frentan	0.63	89	Pg	Pb	03 55 59.8	-0.3
TRTR	Tortoreto Alta	0.67	27	Pg	Pb	03 56 01.4	+0.7
	3µm,1.1s						
TRTR	Tortoreto Alta	0.67	27	Pg	Pb	03 56 01.4	+0.7
	3µm,1.1s						
GIUL	Giuliano Di Ro	0.68	196	Pg	Pb	03 56 00.5	-0.5
GIUL	Giuliano Di Ro	0.68	196	Pg	Pb	03 56 00.5	-0.5
NRCA	Norcia	0.68	336	Pg	Pg	03 55 59.6	-0.5
NRCA				Sg	Sg	03 56 09.7	+0.6
	469nm,0.1s						
NRCA	Norcia	0.68	336	Pg	Pg	03 55 59.6	-0.5
NRCA				Sg	Sg	03 56 09.7	+0.6
	469nm,0.1s						
OFFI	Offida	0.73	11	Pg	Pb	03 56 01.8	-0.1
	2µm,0.6s						
OFFI	Offida	0.73	11	Pg	Pb	03 56 01.8	-0.1
	2µm,0.6s						
MIDA	Miranda	0.80	135	Pg	Pb	03 56 02.8	-0.3
MIDA	Miranda	0.80	135	Pg	Pb	03 56 02.8	-0.3
FDMO	Fiordimonte	0.88	340	Pg	Pg	03 56 03.5	-0.2
FDMO				Sg	Sb	03 56 17.1	+0.9
	223nm,0.5s						
FDMO	Fiordimonte	0.88	340	Pg	Pg	03 56 03.5	-0.2
FDMO				Sg	Sb	03 56 17.1	+0.9
	223nm,0.5s						
CING	Cingoli	1.18	349	Pg	Pb	03 56 09.3	-0.2
	147nm,0.6s						
CING	Cingoli	1.18	349	Pg	Pb	03 56 09.3	-0.2
	147nm,0.6s						
MGAB	Montegabbione	1.24	305	Pg	Pg	03 56 11.3	+0.6
	151nm,0.4s						
MGAB	Montegabbione	1.24	305	Pg	Pg	03 56 11.3	+0.6
	151nm,0.4s						
SACS	San Casciano d	1.33	299	Pg	Pg	03 56 12.9	+0.4
	203nm,1.3s						

*STR **06** 03:56:32.4±2.7, 41°.69N×14°.63E, h10^{km}, Ml4.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BJI **06** 03:56:40.5, 42°.22N×12°.40E, h6^{km}, mB5.1/11, mb4.7/16, Ms4.8/3, Ms7 4.3/4*
*TIR **06** 03:56:43.5, 42°.20N×13°.90E, h0^{km}*
*ISCJB **06** 03:56:45.6±0.2, 42°.38N±0°.01×13°.36E±0°.01, h10^{km}±1^{km}, mb4.4/52, MS4.1/5, Error ellipse: s-maj=2.1km s-min=1.5km az=23.1*
*ROM **06** 03:56:45.7±0.1, 42°.34N×13°.39E, h9^{km}±1^{km}, Ml4.1/32, Error ellipse: s-maj=1.3km s-min=1.1km az=56.0*
*LDG **06** 03:56:45.3±0.2, 42°.38N×13°.46E, h2^{km}, Ml4.2/12, Error ellipse: s-maj=5.1km s-min=3.9km az=167.0*
*IDC **06** 03:56:45.8±0.5, 42°.44N×13°.27E, h0^{km}, mb4.1/22, mb1 4.2/32, mb1mx4.1/41, mbtmp4.0/32, ML3.8/10, MS3.3/3, Ms1 3.4/3, ms1mx3.0/48, Error ellipse: s-maj=10.9km s-min=9.1km az=111.0*
*NEIC **06** 03:56:45.0, 42°.34N×13°.39E, h10^{km}, mb4.4/13, ML4.2(LDG), ML4.1(PDG), MW4.6(ROM), After ROM.*
NEIC Felt [III] at Rome and Sulmona. Also felt at Bettona, Lanciano, Montesilvano, Naples, Ortona, Perugia, Quarto, Rieti and Terni.
*PDG **06** 03:56:46.3±0.8, 42°.39N×13°.37E, h9^{km}±1^{km}, ML4.0/9, Error ellipse: s-maj=1.1km s-min=1.0km az=90.0*
*CSEM **06** 03:56:46.2±0.1, 42°.37N×13°.36E, h2^{km}, mb4.3/32, ML4.4/7, Mw4.6, Error ellipse: s-maj=1.9km s-min=1.4km az=15.0*
*PRU **06** 03:56:46.8, 42°.39N×13°.50E, h0^{km}, M4.4*
*MOS **06** 03:56:46.0±0.9, 42°.41N×13°.35E, h15^{km}, mb4.4/30, Error ellipse: s-maj=3.7km s-min=2.8km az=101.1*
*BEO **06** 03:56:47.8±0.7, 42°.37N×13°.25E, h23^{km}±17^{km}, ML4.3/1*

ISC 06 03:56:47.8±0.4, **42°.35N**±0°.02×**13°.37E**±0°.01, **h13**^{km}±2^{km}, **n825**, σ1§**41**/988, **mb4.4**/52, **MS3.9**/5, **89C-53D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.02	82	eP	Pg	03 56 47.4	-2.7
AQU	L'Aquila	0.02	82	Pg	Pg	03 56 47.6	-2.5
AQU				Sg	Sg	03 56 49.1	-2.6
AQU	L'Aquila	0.02	82	Pg	Pg	03 56 47.6	-2.5
AQU				Sg	Sg	03 56 49.1	-2.6
FAGN	Fagnano	0.18	118	⇑ePg	Pg	03 56 49.8	-2.1
FAGN				Sg	Sg	03 56 53.6	-1.1
FAGN	Fagnano	0.18	118	⇑ePg	Pg	03 56 49.8	-2.1
FAGN				Sg	Sg	03 56 53.6	-1.1
CAMP	Campotosto	0.19	8	⇑iPg	Pg	03 56 50.3	-1.8
CAMP				Sg	Sg	03 56 53.8	-1.3
CAMP	Campotosto	0.19	8	⇑iPg	Pg	03 56 50.3	-1.8
CAMP				Sg	Sg	03 56 53.8	-1.3
FIAM	Fiamignano	0.21	247	⇑iPg	Pg	03 56 50.7	-1.7
FIAM				Sg	Sg	03 56 54.5	-1.0
FIAM	Fiamignano	0.21	247	⇑iPg	Pg	03 56 50.7	-1.7
FIAM				Sg	Sg	03 56 54.5	-1.0
TERO	Teramo	0.32	32	⇑ePg	Pg	03 56 52.0	-2.4
TERO	Teramo	0.32	32	⇑ePg	Pg	03 56 52.0	-2.4
PTQR	Pietraquaria	0.33	176	⇑iPg	Pg	03 56 52.3	-2.2
PTQR	Pietraquaria	0.33	176	⇑iPg	Pg	03 56 52.3	-2.2
VCEL	Villa Celiera	0.35	83	⇑ePg	Pg	03 56 52.8	-2.1
VCEL	Villa Celiera	0.35	83	⇑ePg	Pg	03 56 52.8	-2.1
GAVE	Gavelli	0.49	314	Pg	Pg	03 56 56.7	-0.8
GAVE	Gavelli	0.49	314	Pg	Pg	03 56 56.7	-0.8
CERT	Cerreto	0.50	216	⇑iPg	Pg	03 56 55.4	-2.1
	26µm,0.4s						
CERT	Cerreto	0.50	216	⇑iPg	Pg	03 56 55.4	-2.1
	26µm,0.4s						
MNS	Montasola	0.51	274	⇑iPg	Pg	03 56 55.8	-2.1
MNS	Montasola	0.51	274	⇑iPg	Pg	03 56 55.8	-2.1
VVLD	Villa Vallelon	0.51	159	Pg	Pg	03 56 55.3	-2.6
VVLD				Sg	Sg	03 57 03.9	-0.8
	16µm,1.0s						
VVLD	Villa Vallelon	0.51	159	Pg	Pg	03 56 55.3	-2.6
VVLD				Sg	Sg	03 57 03.9	-0.8
	16µm,1.0s						
NRCA	Norcia	0.52	339	Pg	Pg	03 56 56.1	-1.9
NRCA				Sg	Sg	03 57 04.2	-0.7
NRCA	Norcia	0.52	339	Pg	Pg	03 56 56.1	-1.9
NRCA				Sg	Sg	03 57 04.2	-0.7
INTR	Introdacqua	0.52	130	⇑ePg	Pg	03 56 55.6	-2.4
INTR				Sg	Sg	03 57 03.3	-1.6
	20µm,0.8s						
INTR	Introdacqua	0.52	130	⇑ePg	Pg	03 56 55.6	-2.4
INTR				Sg	Sg	03 57 03.3	-1.6
	20µm,0.8s						
MTCE	Montecelio	0.57	235	⇑iPg	Pg	03 56 56.7	-2.2
MTCE				Sg	Sg	03 57 05.3	-1.2
MTCE	Montecelio	0.57	235	⇑iPg	Pg	03 56 56.7	-2.2
MTCE				Sg	Sg	03 57 05.3	-1.2
TRTR	Tortoreto Alta	0.61	41	⇑ePg	Pg	03 56 58.2	-1.4
	67µm,0.8s						
TRTR	Tortoreto Alta	0.61	41	⇑ePg	Pg	03 56 58.2	-1.4
	67µm,0.8s						
OFFI	Offida	0.63	21	⇑ePg	Pg	03 56 58.6	-1.4
	64µm,0.7s						
OFFI	Offida	0.63	21	⇑ePg	Pg	03 56 58.6	-1.4
	64µm,0.7s						
LPEL	Lama dei Pelig	0.67	116	Pg	Pg	03 56 58.0	-2.9
LPEL				Sg	Sg	03 57 07.7	-2.1
	17µm,1.2s						
LPEL	Lama dei Pelig	0.67	116	Pg	Pg	03 56 58.0	-2.9
LPEL				Sg	Sg	03 57 07.7	-2.1
	17µm,1.2s						
POFI	Posta Fibreno	0.68	158	Pg	Pg	03 56 58.9	-2.1
	11µm,1.1s						
POFI	Posta Fibreno	0.68	158	Pg	Pg	03 56 58.9	-2.1
	11µm,1.1s						
FDMO	Fiordimonte	0.72	343	⇑ePg	Pg	03 56 59.3	-2.4
	14µm,0.4s						
FDMO	Fiordimonte	0.72	343	⇑ePg	Pg	03 56 59.3	-2.4
	14µm,0.4s						
CESI	CESI - Serrava	0.74	332	⇑ePg	Pg	03 56 59.9	-2.2
CESI				Sg	Sb	03 57 12.3	-0.4
	8µm,0.4s						
CESI	CESI - Serrava	0.74	332	⇑ePg	Pg	03 56 59.9	-2.2
RDP	Rocca di Papa	0.77	220	Pg	Pg	03 57 00.1	-2.5
RDP	Rocca di Papa	0.77	220	Pg	Pg	03 57 00.1	-2.5
CING	Cingoli	1.03	353	Pg	Pb	03 57 04.9	-2.7
CING	Cingoli	1.03	353	Pg	Pb	03 57 04.9	-2.7
FRES	Fresagrandinar	1.03	111	Pg	Pb	03 57 04.7	-2.9
FRES	Fresagrandinar	1.03	111	Pg	Pb	03 57 04.7	-2.9
TOLF	Tolfa	1.06	255	Pg	Pb	03 57 05.4	-2.6
	4µm,0.7s						
TOLF	Tolfa	1.06	255	Pg	Pb	03 57 05.4	-2.6
	4µm,0.7s						
MGAB	Montegabbione	1.09	302	Pg	Pb	03 57 06.9	-1.6
	10µm,0.6s						
MGAB	Montegabbione	1.09	302	Pg	Pb	03 57 06.9	-1.6
	10µm,0.6s						
MURB	Monte Urbino	1.10	326	Pg	Pb	03 57 06.5	-2.3
	19µm,0.4s						
MURB	Monte Urbino	1.10	326	Pg	Pb	03 57 06.5	-2.3
	19µm,0.4s						
VAGA	Valle Agricola	1.14	145	Pg	Pb	03 57 07.1	-2.2
	8µm,1.8s						
VAGA	Valle Agricola	1.14	145	Pg	Pb	03 57 07.1	-2.2
	8µm,1.8s						
LATE	Laterza	1.19	283	Pg	Pn	03 57 08.8	-1.4
	941nm,0.7s						
LATE	Laterza	1.19	283	Pg	Pn	03 57 08.8	-1.4
	941nm,0.7s						
AOI	Ancona	1.21	8	Pg	Pn	03 57 08.2	-2.3
AOI	Ancona	1.21	8	Pg	Pn	03 57 08.2	-2.3
PIEI	Pieia	1.33	333	Pn	Pn	03 57 10.4	-1.8
	5µm,0.8s						
PIEI	Pieia	1.33	333	Pn	Pn	03 57 10.4	-1.8
	5µm,0.8s						
FSSB	Fossombrone	1.41	342	Pn	Pn	03 57 11.8	-1.4
FSSB	Fossombrone	1.41	342	Pn	Pn	03 57 11.8	-1.4
BADI	Badiali	1.42	325	Pn	Pn	03 57 12.7	-0.7
BADI	Badiali	1.42	325	Pn	Pn	03 57 12.7	-0.7
CAFI	Castiglion Fio	1.42	314	Pn	Pn	03 57 12.9	-0.5
CAFI	Castiglion Fio	1.42	314	Pn	Pn	03 57 12.9	-0.5
ARCI	Arcidosso	1.49	290	Pn	Pn	03 57 13.8	-0.6
	2µm,0.9s						
ARCI	Arcidosso	1.49	290	Pn	Pn	03 57 13.8	-0.6
	2µm,0.9s						
MAON	Monte Argentar	1.66	273	⇑iPn	Pn	03 57 15.2	-1.5
	2µm,0.8s						
MAON	Monte Argentar	1.66	273	⇑iPn	Pn	03 57 15.2	-1.5
	2µm,0.8s						
SGRT	San Giovanni R	1.86	108	Pn	Pn	03 57 19.5	0.0
	2µm,1.0s						
SGRT	San Giovanni R	1.86	108	Pn	Pn	03 57 19.5	0.0
	2µm,1.0s						
CSNT	Castellina Chi	1.90	307	Pn	Pn	03 57 19.6	-0.3
	1µm,1.1s						
CSNT	Castellina Chi	1.90	307	Pn	Pn	03 57 19.6	-0.3
	1µm,1.1s						
CASP	Castiglione de	1.90	284	Pn	Pn	03 57 18.9	-1.1
	927nm,1.0s						
CASP	Castiglione de	1.90	284	Pn	Pn	03 57 18.9	-1.1
	927nm,1.0s						
SFI	Santa Sofia	1.91	325	Pn	Pn	03 57 19.8	-0.4
	2µm,0.8s						
SFI	Santa Sofia	1.91	325	Pn	Pn	03 57 19.8	-0.4
	2µm,0.8s						
MSAG	Monte S. Angel	2.00	108	Pn	Pn	03 57 21.7	+0.4
	2µm,0.8s						
MSAG	Monte S. Angel	2.00	108	Pn	Pn	03 57 21.7	+0.4
	2µm,0.8s						
MCRV	Calabrutti - M	2.07	139	Pn	Pn	03 57 21.8	-0.5
	918nm,1.2s						
MCRV	Calabrutti - M	2.07	139	Pn	Pn	03 57 21.8	-0.5
	918nm,1.2s						
CDRU	Civita di Ruta	2.36	141	Pn	Pn	03 57 25.8	-0.6
	771nm,1.9s						
CDRU	Civita di Ruta	2.36	141	Pn	Pn	03 57 25.8	-0.6
	771nm,1.9s						
PALZ	Palazzo San Ge	2.40	125	Pn	Pn	03 57 27.2	+0.4
	2µm,1.1s						
PALZ	Palazzo San Ge	2.40	125	Pn	Pn	03 57 27.2	+0.4
	2µm,1.1s						
NVLJ	Novalja	2.47	26	iPn	Pn	03 57 27.2	-0.6
NVLJ				Sn	Sn	03 57 57.1	-0.7
NVLJ	Novalja	2.47	26	iPn	Pn	03 57 27.1	-0.6
NVLJ				Sn	Sn	03 57 57.0	-0.7
MAIM	Mastiano	2.62	308	Pn	Pn	03 57 29.6	-0.3
	651nm,0.6s						
MAIM	Mastiano	2.62	308	P	Pn	03 57 29.0	-0.9
MAIM	Mastiano	2.62	308	Pn	Pn	03 57 29.6	-0.3
	651nm,0.6s						
BDI	Bagni Di Lucca	2.65	311	Pn	Pn	03 57 30.1	-0.3
	664nm,0.6s						
BDI	Bagni Di Lucca	2.65	311	Pn	Pn	03 57 30.1	-0.3
	664nm,0.6s						
AMUR	Altamura	2.82	120	Pn	Pn	03 57 32.8	+0.2
	579nm,1.2s						
AMUR	Altamura	2.82	120	Pn	Pn	03 57 32.8	+0.2
	579nm,1.2s						
VLC	Villacollemand	2.83	311	ePn	Pn	03 57 32.8	0.0
VLC				eSn	Sn	03 58 06.2	-0.6
VLC	Villacollemand	2.83	311	ePn	Pn	03 57 32.8	0.0
VLC				eSn	Sn	03 58 06.2	-0.6
CUC	Castrocucco	2.99	141	ePn	Pn	03 57 35.9	+0.9
CUC				eS	Sg	03 58 36.6	+13
CUC	Castrocucco	2.99	141	ePn	Pn	03 57 35.9	+0.9
OSPF	L'Ospedale	3.19	259	P	Pn	03 57 35.8	-2.0
OSPF	L'Ospedale	3.19	259	P	Pn	03 57 35.8	-2.0
OSPF	L'Ospedale	3.19	259	P	Pn	03 57 35.8	-2.0
GRAM	Graiana	3.22	313	P	Pn	03 57 38.8	+0.6
SKDS	Skadanscina	3.23	8	⇑iPn	Pn	03 57 37.1	-1.1
SKDS				iSn	Sn	03 58 16.4	-0.2
SKDS							
	comp=Z,383nm,0.6s						
SKDS	Skadanscina	3.23	8	⇑iPn	Pn	03 57 37.1	-1.1
SKDS				iSn	Sn	03 58 16.4	-0.2
	comp=Z,383nm,0.6s						
STON	Ston	3.24	79	iPn	Pn	03 57 37.2	-1.1
STON	Ston	3.24	79	iPn	Pn	03 57 37.1	-1.1
PGF	Pioggiola	3.24	275	ePn	Pn	03 57 37.9	-0.6
	SNR=1.0						
PGF				eSn	Sn	03 58 19.5	+2.5
	comp=Z,105nm,0.6s						
PGF	Pioggiola	3.24	275	eP	Pn	03 57 37.9	-0.6
PGF				e		03 58 19.5	
PGF	Pioggiola	3.24	275	ePn	Pn	03 57 37.9	-0.6
PGF				eSn	Sn	03 58 19.5	+2.5
PGF	Pioggiola	3.24	275	ePn	Pn	03 57 37.9	-0.6
	SNR=1.0						
PGF				eSn	Sn	03 58 19.5	+2.5
	comp=Z,53nm,0.6s						
CODM	Codolo	3.28	310	P	Pn	03 57 39.9	+1.0
TRI	Trieste	3.37	5	eP	Pn	03 57 38.3	-1.8
TRI	Trieste	3.37	5	ePn	Pn	03 57 38.3	-1.8
TRI				ePg	Pg	03 57 51.8	-0.5
TRI				eSg	Sg	03 58 36.2	+0.2
TRI	Trieste	3.37	5	eP	Pn	03 57 38.3	-1.8
BOJS	Bojanci	3.43	23	⇓iPn	Pn	03 57 40.7	-0.3
BOJS				eSn	Sn	03 58 19.8	-1.8
BOJS	Bojanci	3.43	23	⇓iPn	Pn	03 57 40.7	-0.3
BOJS				eSn	Sn	03 58 19.8	-1.8
JAVS	Javornik	3.58	8	iPn	Pn	03 57 41.9	-1.2
JAVS	Javornik	3.58	8	iPn	Pn	03 57 41.9	-1.2
BLY	Banja Luka	3.66	48	ePn	Pn	03 57 44.5	+0.3
BLY				eSn	Sn	03 58 26.7	-0.6
BLY	Banja Luka	3.66	48	ePn	Pn	03 57 44.5	+0.3
BLY				eSn	Sn	03 58 26.7	-0.6
VOY	Vojsko	3.70	6	ePn	Pn	03 57 43.0	-1.8
VOY	Vojsko	3.70	6	ePn	Pn	03 57 43.0	-1.8
CGRP	Cima Grappa	3.71	343	Pn	Pn	03 57 43.2	-1.7
	comp=Z,609nm,0.5s						
CGRP	Cima Grappa	3.71	343	Pn	Pn	03 57 43.2	-1.7
	comp=Z,609nm,0.5s						
POLC	Polcenigo	3.73	351	Pn	Pn	03 57 44.6	-0.5
	comp=Z,706nm,0.5s						
LJU	Ljubljana	3.78	12	iPn	Pn	03 57 45.5	-0.3
LJU				iSn	Sn	03 58 30.8	+0.6
LJU							
	comp=Z,961nm,1.3s						
LJU	Ljubljana	3.78	12	iPn	Pn	03 57 45.5	-0.3
LJU				iSn	Sn	03 58 30.8	+0.6
	comp=Z,961nm,1.3s						
HCY	Herceg Novi	3.79	87	⇑iPn	Pn	03 57 45.9	0.0
HCY				eSn	Sn	03 58 30.8	+0.3
HCY	Herceg Novi	3.79	87	⇓P	Pn	03 57 46.0	0.0
HCY				S	Sn	03 58 31.7	+1.2
HCY	Herceg Novi	3.79	87	⇓P	Pn	03 57 46.0	0.0
HCY				S	Sn	03 58 31.6	+1.2
HCY	Herceg Novi	3.79	87	P	Pn	03 57 46.0	0.0
HCY				eSn	Sn	03 58 30.8	+0.3
HCY				S	Sn	03 58 31.6	+1.1
BRY	Bratogost	3.85	80	⇓iPn	Pn	03 57 46.6	-0.3
BRY				eSn	Sn	03 58 33.8	+1.6
BRY	Bratogost	3.85	80	⇓P	Pn	03 57 46.7	-0.2
BRY				S	Sn	03 58 33.7	+1.6
BRY	Bratogost	3.85	80	⇓P	Pn	03 57 46.7	-0.2
BRY				S	Sn	03 58 33.7	+1.6
BRY	Bratogost	3.85	80	P	Pn	03 57 46.7	-0.2
BRY				eSn	Sn	03 58 33.8	+1.6
SALO	Salr	3.86	329	Pn	Pn	03 57 47.1	+0.2
	comp=Z,625nm,0.9s						
SALO	Salr	3.86	329	Pn	Pn	03 57 47.1	+0.2
	comp=Z,625nm,0.9s						
VNDS	Vrh nad Dolski	3.87	14	iPn	Pn	03 57 46.4	-0.6
CADS	Cadrg	3.88	4	iPn	Pn	03 57 46.0	-1.3
CADS	Cadrg	3.88	4	iPn	Pn	03 57 46.0	-1.3
CTI	Castel Tesino	3.90	342	Pn	Pn	03 57 47.4	-0.1
	comp=Z,345nm,0.4s						
CTI	Castel Tesino	3.90	342	Pn	Pn	03 57 47.4	-0.1
	comp=Z,345nm,0.4s						
PTCC	Patocco-Chiusa	4.05	360	Pn	Pn	03 57 48.3	-1.3
PTCC	Patocco-Chiusa	4.05	360	Pn	Pn	03 57 48.3	-1.3
TIP	Timpagrande	4.08	140	ePn	Pn	03 57 51.2	+1.2
TIP				eSn	Sn	03 58 38.6	+0.9
TIP	Timpagrande	4.08	140	ePn	Pn	03 57 51.2	+1.2
TIP				eSn	Sn	03 58 38.6	+0.9
DOBS	Dobrina	4.09	21	iPn	Pn	03 57 49.3	-0.7
DOBS	Dobrina	4.09	21	iPn	Pn	03 57 49.3	-0.7
BUM	Brajici-Budva	4.09	89	⇑iPn	Pn	03 57 50.7	+0.5
BUM				eSn	Sn	03 58 39.8	+1.8
BUM	Brajici-Budva	4.09	89	⇑iPn	Pn	03 57 50.7	+0.5
BUM				eSn	Sn	03 58 39.8	+1.8
VSL	Villasalto	4.16	228	ePn	Pn	03 57 50.0	-1.0
VSL				eSn	Sn	03 58 40.5	+1.0
VSL	Villasalto	4.16	228	ePn	Pn	03 57 50.0	-1.0
VSL				eSn	Sn	03 58 40.5	+1.0
UPM	Unac-Piva	4.16	76	⇑iPn	Pn	03 57 52.2	+1.0
UPM				eSn	Sn	03 58 40.7	+0.9
UPM	Unac-Piva	4.16	76	⇑iPn	Pn	03 57 52.2	+1.0
UPM				eSn	Sn	03 58 40.7	+0.9
NKY	Niksic	4.18	82	⇓iPn	Pn	03 57 51.0	-0.3
NKY				eSn	Sn	03 58 40.9	+0.8
NKY	Niksic	4.18	82	⇑P	Pn	03 57 50.8	-0.5
NKY				S	Sn	03 58 40.4	+0.3
NKY	Niksic	4.18	82	⇑P	Pn	03 57 50.8	-0.5
NKY				S	Sn	03 58 40.4	+0.3
NKY	Niksic	4.18	82	⇓iPn	Pn	03 57 51.0	-0.3
NKY				S	S	03 58 40.4	
NKY				eSn	Sn	03 58 40.9	+0.8
ACOM	Acomizza, Ital	4.20	1	Pn	Pn	03 57 50.9	-0.8
ACOM	Acomizza, Ital	4.20	1	Pn	Pn	03 57 50.9	-0.8
OBKA	Obir	4.24	11	iPn	Pn	03 57 51.9	-0.4
	SNR=18						
OBKA	Obir	4.24	11	iPn	Pn	03 57 51.9	-0.4
OBKA	Obir	4.24	11	iPn	Pn	03 57 51.9	-0.4
PDG	Podgorica	4.36	87	⇓iPn	Pn	03 57 53.9	+0.2
PDG				eSn	Sn	03 58 44.1	-0.3
PDG	Podgorica	4.36	87	⇓iPn	Pn	03 57 53.9	+0.2
PDG				eSn	Sn	03 58 45.2	+0.8
TTG	Podgorica	4.36	87	⇓iPn	Pn	03 57 54.2	+0.5
TTG				eSn	Sn	03 58 45.2	+0.8
TTG	Podgorica	4.36	87	⇓P	Pn	03 57 54.1	+0.4
TTG				S	Sn	03 58 45.5	+1.1
TTG	Podgorica	4.36	87	⇓P	Pn	03 57 54.1	+0.4
TTG				S	Sn	03 58 45.5	+1.1
TTG	Podgorica	4.36	87	P	Pn	03 57 54.1	+0.4
TTG				S	Sn	03 58 45.5	+1.1
ULC	Ulcinj	4.38	93	⇓iPn	Pn	03 57 54.1	0.0
ULC				eSn	Sn	03 58 45.9	+0.9
ULC	Ulcinj	4.38	93	⇑P	Pn	03 57 54.2	+0.1
ULC				S	Sn	03 58 46.3	+1.3
ULC	Ulcinj	4.38	93	⇑P	Pn	03 57 54.2	+0.1
ULC				S	Sn	03 58 46.3	+1.3
ULC	Ulcinj	4.38	93	⇓iPn	Pn	03 57 54.1	0.0
ULC				eSn	Sn	03 58 45.9	+0.9
ULC				S	Sn	03 58 46.3	+1.3
APPI	Appiano	4.40	340	Pn	Pn	03 57 54.7	+0.3
APPI	Appiano	4.40	340	Pn	Pn	03 57 54.7	+0.3
ABTA	Abfaltersbach	4.44	352	iPn	Pn	03 57 55.2	+0.3
	SNR=90						
ABTA	Abfaltersbach	4.44	352	iPn	Pn	03 57 55.2	+0.3
ABTA	Abfaltersbach	4.44	352	iPn	Pn	03 57 55.2	+0.3
SOKA	Soboth	4.49	15	⇑iPn	Pn	03 57 54.8	-0.7
SOKA	Soboth	4.49	15	⇑iPn	Pn	03 57 54.8	-0.7
SOKA	Soboth	4.49	15	⇑iPn	Pn	03 57 54.8	-0.7
CEL	Celeste	4.52	154	ePn	Pn	03 57 56.0	0.0
CEL	Celeste	4.52	154	ePn	Pn	03 57 56.0	0.0
PLE	Pljevlja	4.53	75	⇑iPn	Pn	03 57 57.2	+1.0
PLE				eSn	Sn	03 58 50.4	+1.6
PLE	Pljevlja	4.53	75	⇑iPn	Pn	03 57 57.2	+1.0
PLE				eSn	Sn	03 58 50.4	+1.6
SAOF	Saorge	4.56	293	P	Pn	03 57 56.7	+0.2
SAOF	Saorge	4.56	293	P	Pn	03 57 56.7	+0.2
SAOF	Saorge	4.56	293	P	Pn	03 57 56.7	+0.2
SAOF	Saorge	4.56	293	P	Pn	03 57 56.7	+0.2
SBF	Sospel	4.60	291	ePn	Pn	03 57 56.8	-0.4
	SNR=1.0						
SBF				eSn	Sn	03 58 48.5	-2.0
	comp=Z,143nm,0.5s						
SBF	Sospel	4.60	291	eP	Pn	03 57 56.8	-0.4
SBF				e		03 58 48.5	
SBF	Sospel	4.60	291	ePn	Pn	03 57 56.8	-0.4
SBF				eSn	Sn	03 58 48.5	-2.0
SBF	Sospel	4.60	291	ePn	Pn	03 57 56.8	-0.4
	SNR=1.0						
SBF				eSn	Sn	03 58 48.5	-2.0
	comp=Z,72nm,0.5s						
REVF	Revere	4.62	290	P	Pn	03 57 56.9	-0.4
REVF	Revere	4.62	290	P	Pn	03 57 56.9	-0.4
REVF	Revere	4.62	290	P	Pn	03 57 56.9	-0.4
REVF	Revere	4.62	290	P	Pn	03 57 56.9	-0.4
AUTN	L'Aution	4.65	293	P	Pn	03 57 58.0	+0.1
AUTN	L'Aution	4.65	293	P	Pn	03 57 58.0	+0.1
AUTN	L'Aution	4.65	293	P	Pn	03 57 58.0	+0.1
AUTN	L'Aution	4.65	293	P	Pn	03 57 58.0	+0.1
BBLS	Lazići	4.67	69	ePn	Pn	03 57 58.6	+0.5
BBLS				eSn	Sn	03 58 50.1	-2.1
BBLS	Lazići	4.67	69	ePn	Pn	03 57 58.6	+0.5
BBLS				eSn	Sn	03 58 50.1	-2.1
KBA	Koelnbreinsper	4.73	360	⇓iP	Pn	03 57 58.5	-0.5
KBA	Koelnbreinsper	4.73	360	⇓iPn	Pn	03 57 58.5	-0.5
	SNR=32						
KBA	Koelnbreinsper	4.73	360	⇓iPn	Pn	03 57 58.5	-0.5
KBA	Koelnbreinsper	4.73	360	iP	Pn	03 57 58.5	-0.5
TOUF	Mont Tournerai	4.78	292	P	Pn	03 57 59.7	0.0
TOUF	Mont Tournerai	4.78	292	P	Pn	03 57 59.7	0.0
TOUF	Mont Tournerai	4.78	292	P	Pn	03 57 59.7	0.0
TOUF	Mont Tournerai	4.78	292	P	Pn	03 57 59.7	0.0
BEHE	Becsehely	4.79	29	⇓epPn	Pn	03 58 01.3	+1.7
MVIF	Mont Vial	4.81	291	P	Pn	03 58 00.0	0.0
MVIF	Mont Vial	4.81	291	P	Pn	03 58 00.0	0.0
MVIF	Mont Vial	4.81	291	P	Pn	03 58 00.0	0.0
MVIF	Mont Vial	4.81	291	P	Pn	03 58 00.0	0.0
BEY	Berane	4.84	82	ePn	Pn	03 58 01.7	+1.3
BEY				eSn	Sn	03 58 56.6	+0.2
IVA	Berane	4.84	82	ePn	Pn	03 58 01.7	+1.3
IVA				eSn	Sn	03 58 56.6	+0.2
PUK	Puka	4.85	91	iPN	Pn	03 58 01.4	+0.8
PUK				iSN	Sn	03 58 56.4	-0.3
PUK	Puka	4.85	91	iPn	Pn	03 58 01.4	+0.8
PUK				iSn	Sn	03 58 56.4	-0.3
PVY	Plav	4.88	85	⇓iPn	Pn	03 58 02.0	+1.0
PVY				eSn	Sn	03 58 57.8	+0.4
PVY	Plav	4.88	85	⇓iPn	Pn	03 58 02.0	+1.0
PVY				eSn	Sn	03 58 57.8	+0.4
TIR	Tirane	4.95	100	P	Pn	03 58 01.8	-0.1
TIR	Tirane	4.95	100	eP	Pn	03 58 01.7	-0.1
TIR				e		03 58 59.4	
TIR	Tirane	4.95	100	ePn	Pn	03 58 01.7	-0.2
TIR				eSn	Sn	03 58 59.4	+0.4
TIR	Tirane	4.95	100	⇑iPn	Pn	03 58 01.7	-0.2
TIR				eSn	Sn	03 58 57.0	-2.0
TIR	Tirane	4.95	100	P	Pn	03 58 01.8	-0.2
TIR				eS	Sn	03 58 59.4	+0.4
CALN	Calern	4.95	289	P	Pn	03 58 02.1	+0.1
CALN	Calern	4.95	289	P	Pn	03 58 02.1	+0.1
CALN	Calern	4.95	289	P	Pn	03 58 02.1	+0.1
CALN	Calern	4.95	289	P	Pn	03 58 02.1	+0.1
BCI	Bajram Curri	4.96	88	iPN	Pn	03 58 03.2	+1.2
BCI				iSN	Sn	03 59 02.2	+2.9
BCI	Bajram Curri	4.96	88	iPn	Pn	03 58 03.2	+1.2
BCI				iSn	Sn	03 59 02.2	+2.9

TUE	Stuetta	5.03	326	ePn	Pn	03 58 02.9	-0.2
	comp=Z,85nm,0.8s						
TUE				eSn	Sn	03 59 01.2	0.0
TUE	Stuetta	5.03	326	ePn	Pn	03 58 02.9	-0.2
	comp=Z,85nm,0.8s						
TUE				eSn	Sn	03 59 01.2	0.0
FETA	Feichten	5.04	339⇓	iPn	Pn	03 58 03.8	+0.6
	SNR=47						
FETA	Feichten	5.04	339⇓	iPn	Pn	03 58 03.8	+0.6
FETA	Feichten	5.04	339⇓	iPn	Pn	03 58 03.8	+0.6
WTTA	Wattenberg	5.07	346⇓	iP	Pn	03 58 04.3	+0.7
WTTA	Wattenberg	5.07	346⇓	iPn	Pn	03 58 04.3	+0.7
	SNR=29						
WTTA	Wattenberg	5.07	346⇓	iPn	Pn	03 58 04.3	+0.7
WTTA	Wattenberg	5.07	346	i P	Pn	03 58 04.3	+0.7
FRF	La Foret Royal	5.08	286	ePn	Pn	03 58 02.9	-0.8
	SNR=1.0						
FRF				eSn	Sn	03 58 59.1	-3.1
	comp=Z,52nm,0.6s						
FRF	La Foret Royal	5.08	286	eP	Pn	03 58 02.9	-0.8
FRF				e		03 58 59.1	
FRF	La Foret Royal	5.08	286	ePn	Pn	03 58 02.9	-0.8
FRF				eSn	Sn	03 58 59.1	-3.1
FRF	La Foret Royal	5.08	286	ePn	Pn	03 58 02.9	-0.8
	SNR=1.0						
FRF				eSn	Sn	03 58 59.1	-3.1
	comp=Z,26nm,0.6s						
DAVOX	Davos/Dischmat	5.08	332	Pn	Pn	03 58 05.3	+1.4
DAVOX				Sn	Sn	03 59 07.0	+4.5
DAVOX	Davos/Dischmat	5.08	332	Pn	Pn	03 58 05.3	+1.4
	comp=Z,7.8nm,0.3s,baz=158,slow=16,SNR=49						
DAVOX				Sn	Sn	03 59 07.0	+4.5
	comp=Z,16nm,0.3s,baz=294,slow=23,SNR=7.6						
DAVOX	Davos/Dischmat	5.08	332	P	Pn	03 58 05.3	+1.4
	comp=Z,8.0nm,0.3s						
IVAS	Ivanjica	5.12	74⇓	iPn	Pn	03 58 04.2	-0.1
IVAS				eSn	Sn	03 59 01.6	-1.8
IVAS	Ivanjica	5.12	74⇓	iPn	Pn	03 58 04.2	-0.1
IVAS				eSn	Sn	03 59 01.6	-1.8
ARSA	Arzberg	5.13	17⇑	iPn	Pn	03 58 03.1	-1.2
	SNR=9.3						
ARSA	Arzberg	5.13	17⇑	iPn	Pn	03 58 03.1	-1.2
ARSA	Arzberg	5.13	17	ePn	Pn	03 58 03.2	-1.2
ARSA	Arzberg	5.13	17	ePn	Pn	03 58 03.2	-1.2
LMR	La Mourre	5.14	283	ePn	Pn	03 58 03.4	-1.1
	SNR=1.0						
LMR				eSn	Sn	03 58 59.7	-4.0
	comp=Z,69nm,0.9s						
LMR	La Mourre	5.14	283	eP	Pn	03 58 03.4	-1.1
LMR				e		03 58 59.7	
LMR	La Mourre	5.14	283	ePn	Pn	03 58 03.4	-1.1
LMR				eSn	Sn	03 58 59.7	-4.0
LMR	La Mourre	5.14	283	ePn	Pn	03 58 03.4	-1.1
	SNR=1.0						
LMR				eSn	Sn	03 58 59.7	-4.0
	comp=Z,35nm,0.9s						
DIVS	Divibare	5.14	68	P	Pn	03 58 04.7	+0.1
DIVS	Divibare	5.14	68⇑	iPn	Pn	03 58 04.0	-0.6
DIVS				eSn	Sn	03 59 01.0	-2.8
DIVS	Divibare	5.14	68⇑	iPn	Pn	03 58 04.0	-0.6
DIVS	Divibare	5.14	68	P	Pn	03 58 04.7	+0.1
DIVS				eSn	Sn	03 59 01.0	-2.8
WATA	Walderalm	5.15	346⇓	iP	Pn	03 58 05.9	+1.2
WATA	Walderalm	5.15	346⇓	iPn	Pn	03 58 05.9	+1.2
	SNR=32						
WATA	Walderalm	5.15	346⇓	iPn	Pn	03 58 05.9	+1.2
WATA	Walderalm	5.15	346	i P	Pn	03 58 05.9	+1.2
MOTA	Moosalm	5.25	343⇓	iP	Pn	03 58 07.4	+1.3
MOTA	Moosalm	5.25	343⇓	iPn	Pn	03 58 07.4	+1.3
	SNR=50						
MOTA	Moosalm	5.25	343⇓	iPn	Pn	03 58 07.4	+1.3
MOTA	Moosalm	5.25	343	i P	Pn	03 58 07.4	+1.3
PHP	Peshkopia	5.31	95	i PN	Pn	03 58 07.3	+0.5
PHP				i SN	Sn	03 59 12.0	+4.1
PHP	Peshkopia	5.31	95	P	Pn	03 58 07.5	+0.7
PHP	Peshkopia	5.31	95	i Pn	Pn	03 58 07.3	+0.5
PHP				i Sn	Sn	03 59 12.0	+4.1
MBDF	Montbardon	5.35	299	ePn	Pn	03 58 08.1	+0.5
	SNR=1.0						
MBDF	Montbardon	5.35	299	eP	Pn	03 58 08.1	+0.5
MBDF	Montbardon	5.35	299	ePn	Pn	03 58 08.1	+0.5
MBDF	Montbardon	5.35	299	ePn	Pn	03 58 08.1	+0.5
	SNR=1.0						
RJOB	Jochberg	5.40	356	ePn	Pn	03 58 08.2	+0.1
PKSM	Moragy	5.40	43	⇑P	Pn	03 58 11.0	+2.9
PKSM	Moragy	5.40	43⇑	iP	Pn	03 58 11.0	+2.9
PKSM	Moragy	5.40	43	ePn	Pn	03 58 06.5	-1.6
PKSM				eSn	Sn	03 59 07.2	-2.9
PKSM	Moragy	5.40	43⇓	ePn	Pn	03 58 07.0	-1.1
PKSM	Moragy	5.40	43	ePn	Pn	03 58 06.5	-1.6
PKSM	Moragy	5.40	43⇓	eP	Pn	03 58 07.0	-1.1
PKSM				eSn	Sn	03 59 07.2	-2.9
RETA	Reutte	5.46	341⇑	iPn	Pn	03 58 09.8	+0.9
	SNR=46						
RETA	Reutte	5.46	341⇑	iPn	Pn	03 58 09.8	+0.9
RETA	Reutte	5.46	341⇑	iPn	Pn	03 58 09.8	+0.9
TRUS	Trudelj	5.46	68⇑	iPn	Pn	03 58 07.3	-1.6
TRUS	Trudelj	5.46	68⇑	iPn	Pn	03 58 07.3	-1.6
DAVA	Damuels	5.53	334	i Pn	Pn	03 58 11.1	+1.2
	SNR=55						
DAVA	Damuels	5.53	334	i Pn	Pn	03 58 11.1	+1.2
DAVA	Damuels	5.53	334	i Pn	Pn	03 58 11.1	+1.2
KEK	Kerkira	5.53	116	P	Pn	03 58 10.6	+0.8
MOA	Molln	5.54	6⇑	iPn	Pn	03 58 09.7	-0.2
	SNR=48						
MOA	Molln	5.54	6⇑	iPn	Pn	03 58 09.7	-0.2
MOA	Molln	5.54	6⇑	iPn	Pn	03 58 09.7	-0.2
BNI	Bardonecchia	5.55	301	eP	Pn	03 58 11.3	+1.0
BNI				e		03 59 13.3	
BNI				pmax	pmax		
	comp=Z,87nm,1.1s						
BNI	Bardonecchia	5.55	301	ePn	Pn	03 58 11.3	+1.0
	comp=Z,87nm,1.1s						
BNI				eSn	Sn	03 59 13.3	-0.7
BNI	Bardonecchia	5.55	301	eP	Pn	03 58 11.3	+1.0
	comp=Z,87nm,1.1s						
BNI				eS	Sn	03 59 13.3	-0.7
GRUS	Gruza	5.59	72⇑	iPn	Pn	03 58 10.2	-0.4
GRUS				eSn	Sn	03 59 13.7	-1.0
GRUS	Gruza	5.59	72⇑	iPn	Pn	03 58 10.2	-0.4
GRUS				eSn	Sn	03 59 13.7	-1.0
LPG	La Plagne	5.72	306	ePn	Pn	03 58 12.5	-0.2
	SNR=1.0						
LPG				eSn	Sn	03 59 14.7	-3.7
	comp=Z,101nm,0.6s						
LPG	La Plagne	5.72	306	eP	Pn	03 58 12.5	-0.2
LPG				e		03 59 14.7	
LPG	La Plagne	5.72	306	ePn	Pn	03 58 12.5	-0.2
LPG				eSn	Sn	03 59 14.7	-3.7
LPG	La Plagne	5.72	306	ePn	Pn	03 58 12.5	-0.2
	SNR=1.0						
LPL	La Plagne	5.74	306	ePn	Pn	03 58 13.0	0.0
	SNR=1.0						
LPL				eSn	Sn	03 59 13.6	-5.3
	comp=Z,44nm,0.6s,SNR=1.0						
LPL	La Plagne	5.74	306	eP	Pn	03 58 13.0	0.0
LPL				e		03 59 13.6	
LPL	La Plagne	5.74	306	ePn	Pn	03 58 13.0	0.0
LPL				eSn	Sn	03 59 13.6	-5.3
LPL	La Plagne	5.74	306	ePn	Pn	03 58 13.0	0.0
	SNR=1.0						
SELS	Selova	5.77	79⇑	iPn	Pn	03 58 12.5	-0.6
SELS	Selova	5.77	79⇑	iPn	Pn	03 58 12.5	-0.6
SOP	Sopron	5.79	22	ePn	Pn	03 58 12.4	-1.0
SOP	Sopron	5.79	22	eP	Pn	03 58 12.4	-1.0
CONA	Conrad Observa	5.85	17⇑	iPn	Pn	03 58 13.5	-0.8
	SNR=28						
CONA	Conrad Observa	5.85	17⇑	iPn	Pn	03 58 13.5	-0.8
CONA	Conrad Observa	5.85	17⇑	iPn	Pn	03 58 13.5	-0.8
SMRF	Simiane la Rot	5.93	289	eP	Pn	03 58 16.1	+0.7
	SNR=1.0						
SMRF	Simiane la Rot	5.93	289	eP	Pn	03 58 16.1	+0.7
SMRF	Simiane la Rot	5.93	289	eP	Pn	03 58 16.1	+0.7
	SNR=1.0						
IGT	Igoumenitsa	5.97	116	P	Pn	03 58 16.4	+0.5
FUR	Furstenfeldbru	6.00	346	eP	Pn	03 58 15.8	-0.5
FUR	Furstenfeldbru	6.00	346	ePn	Pn	03 58 15.8	-0.5
FUR	Furstenfeldbru	6.00	346	eP	Pn	03 58 15.8	-0.5
SKO	Skopje	6.01	91	ePn	Pn	03 58 16.9	+0.5
SKO				eSg	Sn	03 59 25.2	+0.1
ORIF	Oris-en-Rattie	6.01	298	ePn	Pn	03 58 15.9	-0.6
	SNR=1.0						
ORIF	Oris-en-Rattie	6.01	298	eP	Pn	03 58 15.9	-0.6
ORIF	Oris-en-Rattie	6.01	298	ePn	Pn	03 58 15.9	-0.6
ORIF	Oris-en-Rattie	6.01	298	ePn	Pn	03 58 15.9	-0.6
	SNR=1.0						
NEST	Nestorio	6.09	106	P	Pn	03 58 18.9	+1.3
BIA	Bitola	6.10	100	P	Pn	03 58 17.8	+0.1
BIA	Bitola	6.10	100	ePn	Pn	03 58 17.5	-0.2
BIA				eSg	Sn	03 59 25.2	-2.2
FNA	Florina	6.20	102	P	Pn	03 58 19.4	+0.3
BARS	Barje	6.25	83⇑	iPn	Pn	03 58 19.4	-0.3
BARS				eSn	Sn	03 59 28.1	-2.9
BARS	Barje	6.25	83⇑	iPn	Pn	03 58 19.4	-0.3
JAN	Janina	6.26	113	P	Pn	03 58 21.5	+1.6
BOLS	Boljevac	6.45	74	ePn	Pn	03 58 20.7	-1.8
BOLS	Boljevac	6.45	74	ePn	Pn	03 58 20.7	-1.8
GEC2	GERESS Array S	6.50	2	eP	Pn	03 58 21.9	-1.3
GEC2	GERESS Array S	6.50	2	ePn	Pn	03 58 21.9	-1.3
GEC2	GERESS Array S	6.50	2	eP	Pn	03 58 21.9	-1.3
GERES	GERESS Array B	6.50	2	Pn	Pn	03 58 22.0	-1.3
GERES				Sn	Sn	03 59 35.5	-1.8
GERES	GERESS Array B	6.50	2	Pn	Pn	03 58 22.0	-1.3
	comp=Z,1.7nm,0.3s,baz=181,slow=13,SNR=50						
GERES				Sn	Sn	03 59 35.5	-1.8
	comp=Z,10nm,0.3s,baz=181,slow=24,SNR=13						
GERES	GERESS Array B	6.50	2	P	Pn	03 58 22.0	-1.3
	comp=Z,2.0nm,0.3s						
GERES				S	Sn	03 59 35.5	-1.8
	comp=Z,11nm,0.3s						
BUD	Budapest	6.51	36	epPn	Pn	03 58 29.9	+6.6
LKD2	Lefkada island	6.59	120	P	Pn	03 58 25.9	+1.5
BBS	Basel-Blauen	6.59	323	P	Pn	03 58 24.2	-0.2
BBS	Basel-Blauen	6.59	323	P	Pn	03 58 24.2	-0.2
BBS	Basel-Blauen	6.59	323	P	Pn	03 58 24.2	-0.2
SPAK	Spaichingen-Ko	6.60	332	P	Pn	03 58 24.0	-0.6
SPAK	Spaichingen-Ko	6.60	332	P	Pn	03 58 24.0	-0.6
FELD	Feldberg im Sc	6.70	327	P	Pn	03 58 25.3	-0.8
FELD	Feldberg im Sc	6.70	327	P	Pn	03 58 25.3	-0.8
CABF	La Chapelle	6.73	312	ePn	Pn	03 58 26.4	0.0
	SNR=1.0						
CABF				eSn	Sn	03 59 36.7	-6.2
	comp=Z,46nm,0.6s,SNR=1.0						
CABF	La Chapelle	6.73	312	eP	Pn	03 58 26.4	0.0
CABF				e		03 59 36.7	
CABF	La Chapelle	6.73	312	ePn	Pn	03 58 26.4	0.0
CABF				eSn	Sn	03 59 36.7	-6.2
CABF	La Chapelle	6.73	312	ePn	Pn	03 58 26.4	0.0
	SNR=1.0						
BZS	Buzias	6.78	58⇓	iP	Pn	03 58 28.5	+1.5
BZS	Buzias	6.78	58	ePn	Pn	03 58 26.7	-0.3
BZS	Buzias	6.78	58	ePn	Pn	03 58 26.7	-0.3
KHC	Kasperske Hory	6.78	1	eP	Pn	03 58 25.4	-1.7
KHC				e		03 59 41.1	
KHC				pmax	pmax		
	comp=Z,29nm,0.8s						
KHC	Kasperske Hory	6.78	1	ePn	Pn	03 58 25.4	-1.7
	comp=Z,28nm,0.8s						
KHC				eSn	Sn	03 59 41.1	-3.1
KHC	Kasperske Hory	6.78	1	ePN	Pn	03 58 25.7	-1.4
KHC				ex	x	03 58 41.0	
KHC				eSN	Sn	03 59 40.3	-3.9
KHC	Kasperske Hory	6.78	1	eP	Pn	03 58 25.4	-1.7
	comp=Z,29nm,0.8s						
KHC	Kasperske Hory	6.78	1	Pn	Pn	03 58 25.7	-1.4
SMOL	Smolenice	6.79	23	eP	Pn	03 58 29.4	+2.3
SMOL				e		03 59 45.2	
SMOL	Smolenice	6.79	23	ePN	Pn	03 58 29.4	+2.3
SMOL				eSN	Sn	03 59 45.2	+0.9
SMOL	Smolenice	6.79	23	eS	Sn	03 59 45.2	+0.9
VIVF	Saint-Julien-l	6.79	295	ePn	Pn	03 58 27.9	+0.7
	SNR=1.0						
VIVF	Saint-Julien-l	6.79	295	eP	Pn	03 58 27.9	+0.7
VIVF	Saint-Julien-l	6.79	295	ePn	Pn	03 58 27.9	+0.7
VIVF	Saint-Julien-l	6.79	295	ePn	Pn	03 58 27.9	+0.7
	SNR=1.0						
WET	Wettzell	6.80	357	eP	Pn	03 58 26.0	-1.3
WET	Wettzell	6.80	357	ePn	Pn	03 58 26.0	-1.3
WET	Wettzell	6.80	357	eP	Pn	03 58 26.0	-1.3
LOMF	Lomont	6.83	319	P	Pn	03 58 27.6	-0.1
LOMF	Lomont	6.83	319	P	Pn	03 58 27.6	-0.1
LOMF	Lomont	6.83	319	P	Pn	03 58 27.6	-0.1
LOMF	Lomont	6.83	319	P	Pn	03 58 27.6	-0.1
ZAPS	Zavoj	6.87	79	ePn	Pn	03 58 28.6	+0.3
ZAPS				eSn	Sn	03 59 43.6	-2.8
ZAPS	Zavoj	6.87	79	ePn	Pn	03 58 28.6	+0.3
VAY	Valandovo	6.95	95	ePn	Pn	03 58 27.3	-2.0
VAY				eSg	Sn	03 59 40.3	-7.8
BFO	Black Forest	6.95	331	eP	Pn	03 58 28.3	-1.1
BFO	Black Forest	6.95	331	ePn	Pn	03 58 28.3	-1.1
BFO	Black Forest	6.95	331	ePn	Pn	03 58 27.9	-1.4
	comp=Z,28nm,0.7s						
BFO				eSn	Sn	03 59 46.4	-2.0
BFO	Black Forest	6.95	331	ePn	Pn	03 58 28.0	-1.4
	comp=Z,28nm,0.7s						
BFO	Black Forest	6.95	331	eP	Pn	03 58 28.3	-1.1
BFO				eSn	Sn	03 59 46.4	-2.0
SSB	Saint Sauveur	7.03	298	eP	Pn	03 58 30.9	+0.5
SSB				pmax	pmax		
	comp=Z,27nm,0.8s						
SSB	Saint Sauveur	7.03	298	ePn	Pn	03 58 30.9	+0.5
	comp=Z,27nm,0.8s						
SSB				eSg	Sg	04 00 32.2	-1.0
SSB	Saint Sauveur	7.03	298	P	Pn	03 58 30.3	-0.1
SSB	Saint Sauveur	7.03	298	P	Pn	03 58 30.3	-0.1
SSB	Saint Sauveur	7.03	298	ePn	Pn	03 58 30.9	+0.5
	comp=Z,27nm,0.8s						
SSB				eSg	Sg	04 00 32.2	-1.0
MOF	Molkenrain	7.05	323	P	Pn	03 58 30.2	-0.6
MOF	Molkenrain	7.05	323	P	Pn	03 58 30.2	-0.6
MOF	Molkenrain	7.05	323	P	Pn	03 58 30.2	-0.6
MOF	Molkenrain	7.05	323	P	Pn	03 58 30.2	-0.6
STU	Stuttgart	7.06	337	eP	Pn	03 58 31.2	+0.4
STU				e		03 59 51.0	
STU				pmax	pmax		
	comp=Z,40nm,0.8s						
STU	Stuttgart	7.06	337	ePn	Pn	03 58 31.2	+0.4
	comp=Z,40nm,0.8s						
STU				eSn	Sn	03 59 51.0	+0.1
STU	Stuttgart	7.06	337	eP	Pn	03 58 31.2	+0.4
	comp=Z,40nm,0.8s						
STU				eS	Sn	03 59 51.0	+0.1
LIBD	Limburg	7.08	327	P	Pn	03 58 30.0	-1.1
LIBD	Limburg	7.08	327	P	Pn	03 58 30.0	-1.1
LIBD	Limburg	7.08	327	P	Pn	03 58 30.0	-1.1
TREC	Trest	7.10	11	eP	Pn	03 58 30.1	-1.3
TREC				MLR	MLR		
	comp=Z,700nm,8.9s						
TREC	Trest	7.10	11	ePN	Pn	03 58 30.1	-1.3
TREC				AMS	AMS	04 01 30.0	
	comp=Z,700nm,8.9s						
TREC	Trest	7.10	11	Pn	Pn	03 58 30.1	-1.3
HINF	Hinteralfeld	7.15	322	ePn	Pn	03 58 31.2	-0.9
	SNR=1.0						
HINF				eSn	Sn	03 59 47.3	-5.9
	comp=Z,129nm,0.7s						
HINF	Hinteralfeld	7.15	322	eP	Pn	03 58 31.2	-0.9
HINF				e		03 59 47.3	
HINF	Hinteralfeld	7.15	322	ePn	Pn	03 58 31.2	-0.9
HINF				eSn	Sn	03 59 47.3	-5.9
HINF	Hinteralfeld	7.15	322	ePn	Pn	03 58 31.2	-0.9
	SNR=1.0						
PSZ	Piszkesteto	7.23	37	⇑P	Pn	03 58 33.1	-0.1
PSZ	Piszkesteto	7.23	37	ePn	Pn	03 58 32.5	-0.7
	comp=Z,26nm,0.9s						
PSZ				eSn	Sn	03 59 55.6	+0.5
PSZ	Piszkesteto	7.23	37⇑	iP	Pn	03 58 33.1	-0.1
PSZ	Piszkesteto	7.23	37⇑	ePn	Pn	03 58 32.9	-0.3
PSZ	Piszkesteto	7.23	37	ePn	Pn	03 58 32.5	-0.7
	comp=Z,26nm,0.9s						
PSZ	Piszkesteto	7.23	37⇑	eP	Pn	03 58 32.9	-0.3
PSZ				eSn	Sn	03 59 55.6	+0.5
KKB	Krupnik	7.24	91	P	Pn	03 58 35.4	+2.1
VYHS	Vyhne	7.25	30	eP	Pn	03 58 33.8	+0.4
VYHS				e		03 59 49.2	
VYHS				MLR	MLR		
	comp=Z,100nm,2.1s						
VYHS	Vyhne	7.25	30	ePN	Pn	03 58 33.8	+0.4
VYHS				eSN	Sn	03 59 49.2	-6.3
VYHS	Vyhne	7.25	30	eP	Pn	03 58 33.8	+0.4
	comp=Z,100nm,2.1s						
EVR	Evrytania	7.27	115	P	Pn	03 58 35.1	+1.2
VTS	Vitosha	7.28	85	P	Pn	03 58 33.6	-0.4
VTS	Vitosha	7.28	85	⇓P	Pn	03 58 34.0	+0.1
VTS	Vitosha	7.28	85⇓	iP	Pn	03 58 34.0	+0.1
VTS	Vitosha	7.28	85	ePn	Pn	03 58 34.1	+0.1
VTS				eSn	Sn	03 59 53.0	-3.5
VTS	Vitosha	7.28	85	P	Pn	03 58 34.2	+0.2
VTS	Vitosha	7.28	85	P	Pn	03 58 34.0	+0.1
VRAC	Vranov	7.31	17	Pn	Pn	03 58 34.2	-0.1
VRAC				Sn	Sn	03 59 54.2	-2.9
VRAC	Vranov	7.31	17⇓	iP	Pn	03 58 34.1	-0.2
VRAC	Vranov	7.31	17	Pn	Pn	03 58 34.2	-0.1
	comp=Z,0.8nm,0.3s,baz=203,slow=14,SNR=9.0						
VRAC				Sn	Sn	03 59 54.2	-2.9
	comp=Z,1.3nm,0.3s,baz=110,slow=22,SNR=1.4						
VRAC				LR	LR	04 01 11.2	
	comp=Z,307nm,19.6s,baz=207,slow=37						
VRAC	Vranov	7.31	17	P	Pn	03 58 34.2	-0.1
	comp=Z,1.0nm,0.3s						
KEST	Kesra	7.31	207	ePn	Pn	03 58 37.0	+2.6
KEST				Sn	Sn	03 59 55.3	-2.0
KEST	Kesra	7.31	207	Pn	Pn	03 58 37.8	+3.4
	comp=Z,2.4nm,0.3s,baz=341,slow=3.6,SNR=106						
KEST				Sn	Sn	03 59 55.3	-2.0
	baz=70,slow=20,SNR=0.8						
KEST				LR	LR	04 01 35.0	
	comp=Z,174nm,21.8s,baz=286,slow=39						
KEST	Kesra	7.31	207	ePn	Pn	03 58 37.0	+2.6
ECH	Echery	7.32	325	eP	Pn	03 58 32.6	-1.8
ECH				e		03 59 55.2	
ECH				pmax	pmax		
	comp=Z,29nm,0.7s						
ECH	Echery	7.32	325	ePn	Pn	03 58 32.6	-1.8
	comp=Z,29nm,0.7s						
ECH				eSn	Sn	03 59 55.2	-2.2
ECH	Echery	7.32	325	P	Pn	03 58 33.5	-0.9
ECH	Echery	7.32	325	ePn	Pn	03 58 32.6	-1.8
	comp=Z,29nm,0.7s						
ECH	Echery	7.32	325	P	Pn	03 58 33.5	-0.9
ECH				eS	Sn	03 59 55.2	-2.2
CDF	Champ du Feu	7.42	327	ePn	Pn	03 58 34.6	-1.3
	SNR=1.0						
CDF				eSn	Sn	03 59 55.0	-5.0
	comp=Z,81nm,0.6s						
CDF	Champ du Feu	7.42	327	eP	Pn	03 58 34.6	-1.3
CDF				e		03 59 55.0	
CDF	Champ du Feu	7.42	327	ePn	Pn	03 58 34.6	-1.3
CDF				eSn	Sn	03 59 55.0	-5.0
CDF	Champ du Feu	7.42	327	ePn	Pn	03 58 34.6	-1.3
	SNR=1.0						
ROTZ	Rotzenmuhle	7.46	354	ePn	Pn	03 58 35.8	-0.5
GRA1	Grafenberg Arr	7.49	349	eP	Pn	03 58 36.9	+0.1
GRF	Grafenberg Arr	7.49	349	eP	Pn	03 58 36.9	+0.1
GRF	Grafenberg Arr	7.49	349	ePn	Pn	03 58 36.9	+0.1
HAU	Haudompre	7.52	321	ePn	Pn	03 58 36.0	-1.2
	SNR=1.0						
HAU				eSn	Sn	03 59 55.8	-6.5
	comp=Z,85nm,0.5s						
HAU	Haudompre	7.52	321	eP	Pn	03 58 36.0	-1.2
HAU				e		03 59 55.8	
HAU	Haudompre	7.52	321	ePn	Pn	03 58 36.0	-1.2
HAU				eSn	Sn	03 59 55.8	-6.5
HAU	Haudompre	7.52	321	ePn	Pn	03 58 36.0	-1.2
	SNR=1.0						
EFP	Efpalio	7.60	118	P	Pn	03 58 39.9	+1.7
PRU	Pruhonice	7.68	6	ePN	Pn	03 58 37.6	-1.7
PRU				eSN	Sn	04 00 02.0	-4.2
PRU	Pruhonice	7.68	6	Pn	Pn	03 58 37.6	-1.7
LANF	Langenberg	7.69	331	P	Pn	03 58 38.6	-0.9
LANF	Langenberg	7.69	331	P	Pn	03 58 38.6	-0.9
LANF	Langenberg	7.69	331	P	Pn	03 58 38.6	-0.9
LANF	Langenberg	7.69	331	P	Pn	03 58 38.6	-0.9
SJAF	Saint Jean de	7.76	275	P	Pn	03 58 38.1	-2.4
SJAF	Saint Jean de	7.76	275	P	Pn	03 58 38.1	-2.4
SJAF	Saint Jean de	7.76	275	P	Pn	03 58 38.1	-2.4
THEF	They Montfort	7.85	321	P	Pn	03 58 41.0	-0.7
THEF	They Montfort	7.85	321	P	Pn	03 58 41.0	-0.7
THEF	They Montfort	7.85	321	P	Pn	03 58 41.0	-0.7
THEF	They Montfort	7.85	321	P	Pn	03 58 41.0	-0.7
LBL	Lubilhac	7.87	295	P	Pn	03 58 43.5	+1.5
LBL	Lubilhac	7.87	295	P	Pn	03 58 43.5	+1.5
LBL	Lubilhac	7.87	295	P	Pn	03 58 43.5	+1.5
LBL	Lubilhac	7.87	295	P	Pn	03 58 43.5	+1.5
NKC	Novy Kostel	7.91	356	eSN	Sn	04 00 08.5	-3.4
MORC	Moravsky Berou	7.97	20	⇑P	Pn	03 58 44.5	+1.1
MORC	Moravsky Berou	7.97	20	ePn	Pn	03 58 43.4	0.0
	comp=Z,19nm,1.0s						
MORC				eSn	Sn	04 00 04.7	-8.7
MORC	Moravsky Berou	7.97	20⇑	iP	Pn	03 58 44.5	+1.1
MORC	Moravsky Berou	7.97	20	ePn	Pn	03 58 43.3	0.0
MORC	Moravsky Berou	7.97	20	P	Pn	03 58 44.5	+1.1
PGB	Panagyurishte	7.99	85	i P	Pn	03 58 44.5	+0.9
FILF	Fillols	8.00	275	P	Pn	03 58 42.9	-0.9
FILF	Fillols	8.00	275	P	Pn	03 58 42.9	-0.9
FILF	Fillols	8.00	275	P	Pn	03 58 42.9	-0.9
LRDF	Laroque-de-Fa	8.01	278	P	Pn	03 58 42.1	-1.8
LRDF	Laroque-de-Fa	8.01	278	P	Pn	03 58 42.1	-1.8
LRDF	Laroque-de-Fa	8.01	278	P	Pn	03 58 42.1	-1.8
SMF	Signal de Mont	8.05	305	ePn	Pn	03 58 44.4	0.0
	SNR=1.0						
SMF				eSn	Sn	04 00 09.4	-5.9
SMF	Signal de Mont	8.05	305	eP	Pn	03 58 44.4	0.0
SMF				e		04 00 09.4	
SMF	Signal de Mont	8.05	305	ePn	Pn	03 58 44.4	0.0
SMF				eSn	Sn	04 00 09.4	-5.9
SMF	Signal de Mont	8.05	305	ePn	Pn	03 58 44.4	0.0
	SNR=1.0						
TANN	Tannenbergstha	8.09	356	ePn	Pn	03 58 44.4	-0.6
LOT	Lotru	8.12	64⇓	iP	Pn	03 58 49.7	+4.2
GUR	Goura	8.16	120	P	Pn	03 58 48.4	+2.3
OKC	Ostrava-Krasne	8.19	22	AMS	AMS	04 02 50.0	
	comp=Z,800nm,8.7s						
PYM	Petit Puy Mans	8.20	298	P	Pn	03 58 47.9	+1.3
PYM	Petit Puy Mans	8.20	298	P	Pn	03 58 47.9	+1.3
PYM	Petit Puy Mans	8.20	298	P	Pn	03 58 47.9	+1.3
PYM	Petit Puy Mans	8.20	298	P	Pn	03 58 47.9	+1.3
PAGF	Fort de Pagny	8.21	322	ePn	Pn	03 58 44.7	-1.8
PAGF	Fort de Pagny	8.21	322	ePn	Pn	03 58 44.7	-1.8
PAGF	Fort de Pagny	8.21	322	ePn	Pn	03 58 44.7	-1.8
AGO	Saint Agoulin	8.23	300	P	Pn	03 58 47.7	+0.7
AGO	Saint Agoulin	8.23	300	P	Pn	03 58 47.7	+0.7
AGO	Saint Agoulin	8.23	300	P	Pn	03 58 47.7	+0.7
DPC	Dobruska-Polom	8.26	13	ePN	Pn	03 58 45.7	-1.6
DPC				AMS	AMS	04 02 10.0	
	comp=Z,700nm,16.8s						
DPC	Dobruska-Polom	8.26	13	Pn	Pn	03 58 45.7	-1.6
MTLF	Montolieu	8.26	281	ePn	Pn	03 58 46.0	-1.3
	SNR=1.0						
MTLF	Montolieu	8.26	281	eP	Pn	03 58 46.0	-1.3
MTLF	Montolieu	8.26	281	ePn	Pn	03 58 46.0	-1.3
MTLF	Montolieu	8.26	281	ePn	Pn	03 58 46.0	-1.3
	SNR=1.0						
LOR	Lormes	8.36	309	ePn	Pn	03 58 47.9	-0.8
	SNR=1.0						
LOR				eSn	Sn	04 00 18.8	-4.1
	comp=Z,20nm,0.4s,SNR=1.0						
LOR	Lormes	8.36	309	ePn	Pn	03 58 47.9	-0.8
LOR				eSn	Sn	04 00 18.8	-4.1
LOR	Lormes	8.36	309	ePn	Pn	03 58 47.9	-0.8
	SNR=1.0						
MOX	Moxa	8.38	352	eP	Pn	03 58 48.3	-0.7
MOX	Moxa	8.38	352	ePn	Pn	03 58 48.3	-0.7
MOX	Moxa	8.38	352	eP	Pn	03 58 48.3	-0.7
AVF	Avril sur Loir	8.42	305	ePn	Pn	03 58 49.6	+0.2
	SNR=1.0						
AVF	Avril sur Loir	8.42	305	eP	Pn	03 58 49.6	+0.2
AVF	Avril sur Loir	8.42	305	ePn	Pn	03 58 49.6	+0.2
AVF	Avril sur Loir	8.42	305	ePn	Pn	03 58 49.6	+0.2
	SNR=1.0						
SSF	Saint Saulge	8.46	307	ePn	Pn	03 58 50.0	0.0
	SNR=1.0						
SSF	Saint Saulge	8.46	307	eP	Pn	03 58 50.0	0.0
SSF	Saint Saulge	8.46	307	ePn	Pn	03 58 50.0	0.0
SSF	Saint Saulge	8.46	307	ePn	Pn	03 58 50.0	0.0
	SNR=1.0						
MEZF	Maizieres J'vi	8.49	319	ePn	Pn	03 58 50.5	+0.1
	SNR=1.0						
MEZF	Maizieres J'vi	8.49	319	ePn	Pn	03 58 50.5	+0.1
MEZF	Maizieres J'vi	8.49	319	ePn	Pn	03 58 50.5	+0.1
	SNR=1.0						
BRG	Berggiesshubel	8.54	2	PN	Pn	03 58 48.8	-2.2
BRG				i		03 58 57.1	
BRG				i		03 59 32.6	
BRG				i		04 00 15.9	
BRG				i		04 01 33.0	
	comp=Z,86nm,1.4s						
BRG							

comp=N,411nm,16.9s
BRG
comp=E,1µm,15.1s
BRG
comp=Z,530nm,13.8s
BRG Berggiesshubel 8.54 2 P **Pn 03 58 48.8 -2.2**
BRG MLR MLR
comp=N,411nm,16.9s
BRG MLR MLR
comp=E,1µm,15.1s
BRG MLR MLR
comp=Z,530nm,13.8s
BRG Berggiesshubel 8.54 2 *e*Pn **Pn 03 58 51.9 +0.9**
BRG Berggiesshubel 8.54 2 P **Pn 03 58 48.8 -2.2**
comp=Z,530nm,13.8s
NIE Niedzica 8.56 32 *e*P Pn 03 58 55.1 +3.6
NIE Niedzica 8.56 32 *e*P Pn 03 58 55.1 +3.6
TNS Taunus Mts 8.58 338 *e*P **Pn 03 58 52.8 +1.1**
TNS Taunus Mts 8.58 338 *e*Pn **Pn 03 58 52.8 +1.1**
TNS Taunus Mts 8.58 338 *e*P **Pn 03 58 52.8 +1.1**
CAF Calviac 8.60 291 *e*Pn **Pn 03 58 51.5 -0.4**
SNR=1.0
CAF Calviac 8.60 291 *e*P **Pn 03 58 51.5 -0.4**
CAF Calviac 8.60 291 *e*Pn **Pn 03 58 51.5 -0.4**
CAF Calviac 8.60 291 *e*Pn **Pn 03 58 51.5 -0.4**
SNR=1.0
BGF Bois d'Agland 8.62 303 *e*Pn **Pn 03 58 52.5 +0.2**
SNR=1.0
BGF *e*Sn **Sn 04 00 24.0 -5.4**
comp=Z,26nm,0.5s,SNR=1.0
BGF Bois d'Agland 8.62 303 *e*P **Pn 03 58 52.5 +0.2**
BGF *e* 04 00 24.0
BGF Bois d'Agland 8.62 303 *e*Pn **Pn 03 58 52.5 +0.2**
BGF *e*Sn **Sn 04 00 24.0 -5.4**
BGF Bois d'Agland 8.62 303 *e*Pn **Pn 03 58 52.5 +0.2**
SNR=1.0
CRVS Cervenica-Dubn 8.66 38 *e*P **Pn 03 58 52.8 0.0**
CRVS MLR MLR
comp=Z,100nm,2.6s
CRVS Cervenica-Dubn 8.66 38 *e*PN **Pn 03 58 52.8 0.0**
CRVS *e*PG Pg 03 59 47.6 +14
CRVS Cervenica-Dubn 8.66 38 *e*P **Pn 03 58 52.8 0.0**
comp=Z,100nm,2.6s
TRPA Tarpa 8.67 45⇑*i*P **Pn 03 58 54.9 +2.0**
TRPA Tarpa 8.67 45 *e*Pn **Pn 03 58 54.0 +1.1**
TRPA Tarpa 8.67 45 *e*P **Pn 03 58 54.0 +1.1**
ARR Arges 8.68 66⇓*i*P **Pn 03 58 54.8 +1.7**
KSP Ksiaz 8.73 12 *e*P **Pn 03 58 51.7 -2.0**
KSP Ksiaz 8.73 12 *e*P **Pn 03 58 51.7 -2.0**
UZH Uzhgorod 8.87 42 *e*P **Pn 03 58 56.2 +0.6**
UZH *e*S **Sn 04 00 35.0 -0.3**
UZH MLR MLR
comp=N,800nm,12.0s
UZH MLR MLR
comp=E,1µm,12.0s
UZH MLR MLR
comp=Z,600nm,12.0s
UZH Uzhgorod 8.87 42 *e*P **Pn 03 58 56.2 +0.6**
WLF Walferdange 8.87 328 PN **Pn 03 58 53.8 -1.9**
WLF SN **Sn 04 00 37.6 +2.2**
comp=N,20nm,0.8s
WLF Walferdange 8.87 328 *e*P **Pn 03 58 55.7 +0.1**
WLF *e* 04 00 35.1
WLF pmax pmax
comp=Z,24nm,0.8s
WLF Walferdange 8.87 328 *e*Pn **Pn 03 58 55.5 -0.1**
WLF Walferdange 8.87 328 *e*Pn **Pn 03 58 55.7 +0.1**
comp=Z,24nm,0.8s
WLF *e*Sn **Sn 04 00 35.1 -0.3**
WLF Walferdange 8.87 328 *e*P **Pn 03 58 55.7 +0.1**
comp=Z,24nm,0.8s
WLF *e*Sn **Sn 04 00 35.1 -0.3**
ZIMR 8.89 78⇑P **Pn 03 58 56.4 +0.6**
ZIMR 8.89 78⇑*i*P **Pn 03 58 56.4 +0.6**
ZIMR 8.89 78 P **Pn 03 58 56.4 +0.6**
TCF Toulx Ste Croi 8.92 300 *e*Pn **Pn 03 58 57.2 +0.9**
SNR=1.0
TCF Toulx Ste Croi 8.92 300 *e*P **Pn 03 58 57.2 +0.9**
TCF Toulx Ste Croi 8.92 300 *e*Pn **Pn 03 58 57.2 +0.9**
TCF Toulx Ste Croi 8.92 300 *e*Pn **Pn 03 58 57.2 +0.9**
SNR=1.0
CLL Collm 8.96 359 *e*P **Pn 03 58 56.0 -0.9**
CLL Collm 8.96 359 *e*Pn **Pn 03 58 56.0 -0.9**
CLL *e*Sn Sn 04 00 26.0 -12
CLL *e*Sb Sg 04 01 27.0 -8.2
CLL *e*Sg Sg 04 01 46.0 +11
comp=E,1µm,19.1s
CLL Lmax 04 02 00.0
CLL Collm 8.96 359 *e*P **Pn 03 58 56.0 -0.9**
OJC Ojcow 9.04 27 *e*P **Pn 03 59 00.0 +2.1**
OJC Ojcow 9.04 27 *e*P **Pn 03 59 00.0 +2.1**
OJC Ojcow 9.04 27 *e*P **Pn 03 59 00.0 +2.1**
KOLS Kolonicke sedl 9.06 40 *e*P **Pn 03 59 00.6 +2.3**
KOLS MLR MLR
comp=Z,100nm,2.0s
KOLS Kolonicke sedl 9.06 40 *e*PN **Pn 03 59 00.6 +2.3**
KOLS *e*PG 03 59 52.4
RJF Les Rejaudoux 9.06 293 *e*Pn **Pn 03 58 59.1 +0.8**
SNR=1.0
RJF Les Rejaudoux 9.06 293 *e*P **Pn 03 58 59.1 +0.8**
RJF Les Rejaudoux 9.06 293 *e*Pn **Pn 03 58 59.1 +0.8**
RJF Les Rejaudoux 9.06 293 *e*Pn **Pn 03 58 59.1 +0.8**
SNR=1.0
MLS Moulis 9.07 278 P **Pn 03 58 57.2 -1.2**
MLS Moulis 9.07 278 P **Pn 03 58 57.2 -1.2**
MLS Moulis 9.07 278 P **Pn 03 58 57.2 -1.2**
MLR Muntele Rosu 9.60 67 Pn **Pn 03 59 07.2 +1.4**
MLR Muntele Rosu 9.60 67 Pn **Pn 03 59 07.2 +1.4**
comp=Z,0.1nm,0.3s,baz=266,slow=14,SNR=29
MLR Muntele Rosu 9.60 67 P **Pn 03 59 07.2 +1.4**
MEM Membach 9.69 331 PN **Pn 03 59 08.7 +1.8**
KWP Kalwaria Pacla 9.75 39 *e*P **Pn 03 59 07.9 +0.2**
KWP pmax pmax
comp=Z,46nm,1.0s
KWP Kalwaria Pacla 9.75 39 *e*Pn **Pn 03 59 07.9 +0.2**
comp=Z,46nm,1.0s
KWP Kalwaria Pacla 9.75 39⇑*i*P Pn 03 59 12.3 +4.6
KWP Kalwaria Pacla 9.75 39 *e*P Pn 03 59 12.4 +4.7
KWP Kalwaria Pacla 9.75 39 *e*P **Pn 03 59 07.9 +0.2**
comp=Z,46nm,1.0s
BCLA Clavier 9.80 328 PN **Pn 03 59 09.0 +0.6**
BCLA SN Sn 04 00 51.9 -6.4
comp=N,7.1nm,0.0s
DOU Dourbes 9.84 325 PN **Pn 03 59 09.6 +0.7**
DOU SN **Sn 04 00 56.1 -3.1**
comp=E,8.4nm,0.0s
BUR08 Bucovina Ar. S 9.90 54 *e*Pn **Pn 03 59 10.0 +0.1**
BUR08 Bucovina Ar. S 9.90 54 *e*Pn **Pn 03 59 10.0 +0.1**
PLOR Plostina 10.17 65⇓P **Pn 03 59 14.3 +0.8**
PLOR Plostina 10.17 65⇓*i*P **Pn 03 59 14.3 +0.8**
PLOR Plostina 10.17 65 P **Pn 03 59 14.3 +0.8**
VRI Vrincioaia 10.23 65⇑P **Pn 03 59 15.6 +1.3**
VRI Vrincioaia 10.23 65⇑*i*P **Pn 03 59 15.6 +1.3**
VRI Vrincioaia 10.23 65 P **Pn 03 59 15.6 +1.3**
TESR 10.37 62⇑*i*P **Pn 03 59 18.4 +2.3**
LVV L'vov 10.51 41 *e*P **Pn 03 59 20.9 +2.8**
LVV MLR MLR
comp=N,100nm,10.0s
LVV MLR MLR
comp=E,300nm,10.0s
MFF Saint Martin d 10.55 298 *e*Pn **Pn 03 59 19.6 +0.9**
SNR=1.0
MFF Saint Martin d 10.55 298 *e*P **Pn 03 59 19.6 +0.9**
MFF Saint Martin d 10.55 298 *e*Pn **Pn 03 59 19.6 +0.9**
MFF Saint Martin d 10.55 298 *e*Pn **Pn 03 59 19.6 +0.9**
SNR=1.0
CFR Carcaliu 11.05 70⇑*i*P **Pn 03 59 26.6 +1.2**
TIRR Tirgusor 11.14 74⇓P **Pn 03 59 26.5 -0.3**
TIRR Tirgusor 11.14 74 *e*Pn **Pn 03 59 26.0 -0.8**
comp=E,8.5nm,1.0s
TIRR Tirgusor 11.14 74⇓*i*P **Pn 03 59 26.5 -0.3**
TIRR Tirgusor 11.14 74 *e*Pn **Pn 03 59 26.0 -0.8**
comp=E,8.5nm,1.0s
TIRR Tirgusor 11.14 74 P **Pn 03 59 26.5 -0.3**
TLCR 11.52 71⇓P **Pn 03 59 32.4 +0.5**
TLCR 11.52 71⇓*i*P **Pn 03 59 32.4 +0.5**
TLCR 11.52 71 P **Pn 03 59 32.4 +0.5**
KIS Kishinev 11.93 62 *e*P **Pn 03 59 37.0 -0.6**
KIS *e* 04 01 52.0
KIS MLR MLR
comp=Z,900nm,14.0s
KIS MLR MLR
comp=N,300nm,12.0s
KIS MLR MLR
comp=E,700nm,13.0s
KIS MLR MLR
KIS Kishinev 11.93 62 *e*P **Pn 03 59 37.0 -0.6**
KIS LRM MLR 04 05 05.0
comp=Z,800nm,16.0s
comp=Z,900nm,14.0s
KIS Kishinev 11.93 62 *e*P **Pn 03 59 37.0 -0.6**
ESDC Sonseca Array 13.36 264 Pn **Pn 03 59 56.0 -1.2**
ESDC Sonseca Array 13.36 264 Pn **Pn 03 59 56.0 -1.2**
comp=Z,0.3nm,0.3s,baz=68,slow=14,SNR=17
ESDC Sonseca Array 13.36 264 Pn **Pn 03 59 56.0 -1.2**
AK02 Malin Array Si 13.69 47 *e*Pn **Pn 04 00 01.5 0.0**
AK02 Malin Array Si 13.69 47 *e*Pn **Pn 04 00 01.5 0.0**
KIEV Kiev 13.71 47 *e*P **Pn 04 00 01.7 -0.1**
KIEV pmax pmax
comp=Z,7.0nm,1.1s
KIEV Kiev 13.71 47 *e*Pn **Pn 04 00 01.7 -0.1**
comp=Z,7.3nm,1.1s
KIEV Kiev 13.71 47 *e*P **Pn 04 00 01.7 -0.1**
comp=Z,7.0nm,1.1s
AK01 Malin Array Si 13.71 47 *e*Pn **Pn 04 00 01.2 -0.5**
AK01 Malin Array Si 13.71 47 *e*Pn **Pn 04 00 01.2 -0.5**
AKASG Malin Array Be 13.72 47 P **Pn 04 00 01.4 -0.5**
AKASG Malin Array Be 13.72 47 Pn **Pn 04 00 01.4 -0.5**
AKASG Malin Array Be 13.72 47 Pn **Pn 04 00 01.4 -0.5**
comp=Z,0.4nm,0.3s,baz=237,slow=12,SNR=3.5
AKASG Malin Array Be 13.72 47 P **Pn 04 00 01.4 -0.5**
NACGM Naroch 15.33 30 *e* **Pn 04 00 20.0 -3.8**
BR131 Keskin Array S 15.52 93 *e*Pn **Pn 04 00 27.3 +0.9**
comp=Z,1.3nm,0.7s
BR131 Keskin Array S 15.52 93 *e*Pn **Pn 04 00 27.3 +0.9**
comp=Z,1.3nm,0.7s
BRTR Keskin Array B 15.52 93 Pn **Pn 04 00 27.5 +1.1**
BRTR Keskin Array B 15.52 93 Pn **Pn 04 00 27.5 +1.1**
comp=Z,0.0nm,0.3s,baz=311,slow=13,SNR=3.3
BRTR Keskin Array B 15.52 93 Pn **Pn 04 00 27.5 +1.1**
PBAR Barrancos 16.12 262 *e*P **P 04 00 38.4 +1.0**
comp=Z,28nm,1.5s
PBAR Barrancos 16.12 262 *e*P **P 04 00 38.4 +1.0**
comp=Z,28nm,1.5s
PESTR Estremoz 16.29 265 *e*P **P 04 00 39.6 +0.4**
PESTR Estremoz 16.29 265 *e*P **P 04 00 39.6 +0.4**
EKA Eskdalemuir Ar 16.89 326 Pn **Pn 04 00 43.5 -0.2**
EKA Eskdalemuir Ar 16.89 326 Pn **Pn 04 00 43.5 -0.2**
baz=133,slow=15,SNR=4.2
EKA Eskdalemuir Ar 16.89 326 P **Pn 04 00 43.5 -0.2**
MDT Midelt 17.11 242 P **P 04 00 48.8 +0.3**
MDT Midelt 17.11 242 P **P 04 00 48.8 +0.3**
comp=Z,0.0nm,0.3s,baz=68,slow=14,SNR=7.3
MDT Midelt 17.11 242 P **P 04 00 48.8 +0.3**
PBDV Barranco-do-Ve 17.14 260 *e*P **P 04 00 50.5 +1.9**
PBDV Barranco-do-Ve 17.14 260 *e*P **P 04 00 50.5 +1.9**
ANN Anapa 17.59 74 *e*P **Pn 04 00 52.7 +0.1**
ANN *e*S **Sn 04 04 06.7 -1.5**
ANN pmax pmax
comp=Z,40nm,1.3s
ANN MLR MLR
comp=N,227nm,14.0s
ANN MLR MLR
comp=Z,196nm,14.0s
ANN Anapa 17.59 74 *e*P **Pn 04 00 52.7 +0.1**
comp=Z,40nm,1.3s
HFS Hagfors 17.81 1 P **Pn 04 00 54.9 -0.2**
HFS Hagfors 17.81 1 P **Pn 04 00 54.9 -0.2**
comp=Z,0.1nm,0.3s,baz=150,slow=12,SNR=5.2
HFS Hagfors 17.81 1 P **Pn 04 00 54.9 -0.2**
VSU Vasula 18.18 23 *e*P **Pn 04 00 58.9 -0.8**
VSU pmax pmax
comp=Z,33nm,1.0s
VSU Vasula 18.18 23 *e*P **Pn 04 00 58.9 -0.8**
comp=Z,33nm,1.0s
NAO01 NORSAR Array S 18.58 356 *e*P **Pn 04 01 04.7 +0.1**
comp=Z,9.6nm,0.8s
NAO01 NORSAR Array S 18.58 356 *e*P **Pn 04 01 04.7 +0.1**
comp=Z,9.6nm,0.8s
NB2 NORSAR Subarra 18.76 357 P **P 04 01 06.0 -0.4**
comp=Z,15nm,1.1s,baz=175,slow=11
NB2 NORSAR Subarra 18.76 357 P **P 04 01 06.0 -0.4**
comp=Z,15nm,1.1s,baz=175,slow=11,SNR=1.6
NOA NORSAR Array B 18.76 357 P **P 04 01 06.4 0.0**
NOA NORSAR Array B 18.76 357 P **P 04 01 06.4 0.0**
comp=Z,0.3nm,0.3s,baz=175,slow=11,SNR=8.1
NOA LR LR 04 09 21.9
comp=Z,131nm,19.6s,baz=180,slow=40
NOA NORSAR Array B 18.76 357 P **P 04 01 06.4 0.0**
comp=Z,131nm,19.6s
SOC Sochi 19.30 77 *e*P **P 04 01 12.2 -0.1**
SOC *e* 04 04 50.5
SOC pmax pmax
comp=Z,7.0nm,0.7s
SOC MLR MLR
comp=Z,284nm,16.0s
SOC Sochi 19.30 77 *e*P **P 04 01 12.3 -0.1**
SOC Sochi 19.30 77 *e*P **P 04 01 12.3 -0.1**
SOC *e*S **S 04 04 50.5 0.0**
comp=Z,284nm,16.0s
MALT Malatya 19.50 94 *e*P **P 04 01 15.3 +0.6**
MALT pmax pmax
comp=Z,9.0nm,1.0s
MALT Malatya 19.50 94 *e*P **P 04 01 15.3 +0.6**
comp=Z,9.4nm,1.0s
MALT Malatya 19.50 94 *e*P **P 04 01 15.3 +0.6**
comp=Z,9.4nm,1.0s
VSR Storozhevoye 19.68 54 *e*P **Pn 04 01 17.7 -0.2**
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s
VSR pmax pmax
comp=N,1.0nm,0.2s
VSR Storozhevoye 19.68 54 *e*P **Pn 04 01 17.7 -0.2**
comp=N,1.0nm,0.2s
VORD Divnogorie 19.69 55 *e*P **P 04 01 17.0 +0.5**
VORD pmax pmax
comp=N,9.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.7s
VORD pmax pmax
comp=Z,6.0nm,0.7s
VORD MLR MLR
comp=E,560nm,19.0s
VORD MLR MLR
comp=Z,530nm,19.0s
VORD MLR MLR
comp=N,100nm,11.0s
VORD Divnogorie 19.69 55 *e*P **P 04 01 17.0 +0.5**
comp=N,100nm,11.0s
MMAI Mount Meron Ar 19.73 111 P **P 04 01 17.9 +0.7**
MMAI Mount Meron Ar 19.73 111 P **P 04 01 17.9 +0.7**
comp=N,0.9nm,0.3s,baz=298,slow=13,SNR=3.7
MMAI Mount Meron Ar 19.73 111 P **P 04 01 17.9 +0.7**
OBN Obninsk 19.81 42⇑*i*P **P 04 01 16.6 -1.2**
OBN pmax pmax
comp=Z,48nm,2.5s
OBN Obninsk 19.81 42 *i* P **P 04 01 16.6 -1.2**
comp=Z,48nm,2.5s
TAM Tamanrasset 20.58 201 *e*P **P 04 01 27.2 +0.6**
TAM pmax pmax
comp=Z,13nm,1.4s
TAM Tamanrasset 20.58 201 *e*P **P 04 01 27.2 +0.6**
comp=Z,13nm,1.4s
TAM Tamanrasset 20.58 201 *e*P **P 04 01 27.2 +0.6**
comp=Z,13nm,1.4s
FINES FINESS Array B 20.59 17 P **P 04 01 26.0 -0.3**
FINES FINESS Array B 20.59 17 P **P 04 01 26.0 -0.3**
comp=Z,6.9nm,0.6s,baz=201,slow=10,SNR=17
FINES FINESS Array B 20.59 17 P **P 04 01 26.0 -0.3**
comp=Z,7.0nm,0.6s
FIA1 FINESS Array S 20.59 17 *e*P **P 04 01 26.1 -0.2**
FIA1 FINESS Array S 20.59 17 *e*P **P 04 01 26.1 -0.2**
MOS Moscow 20.65 41 *e*P Pn 04 01 30.4 +1.2
VRHR Novokhopersk 21.14 56 *e*P **P 04 01 31.6 -0.7**
VRHR pmax pmax
comp=E,8.0nm,0.6s
VRHR pmax pmax
comp=Z,9.0nm,0.6s
VRHR pmax pmax
comp=N,3.0nm,0.3s
VRHR MLR MLR
comp=N,260nm,18.0s
VRHR MLR MLR
comp=E,370nm,18.0s
VRHR MLR MLR
comp=Z,410nm,18.0s
VRHR Novokhopersk 21.14 56 *e*P **P 04 01 31.6 -0.7**
comp=Z,3.0nm,0.3s
ASF Jabal al Asfar 21.24 111 P P 04 01 39.2 +5.5
ASF Jabal al Asfar 21.24 111 P P 04 01 39.2 +5.5
comp=Z,0.9nm,0.5s,baz=52,slow=11,SNR=1.7
KAF Kangasniemi 21.24 17 *e*P **P 04 01 31.6 -1.7**
KAF pmax pmax
comp=Z,8.0nm,0.8s
KAF Kangasniemi 21.24 17 *e*p **P 04 01 31.6 -1.7**
comp=Z,7.9nm,0.8s
KAF Kangasniemi 21.24 17 *e*P **P 04 01 31.6 -1.7**
comp=Z,8.0nm,0.8s
KIV Kislovodsk 21.40 76 *e*P **P 04 01 37.0 +1.7**
KIV pmax pmax
comp=Z,33nm,1.1s
KIV MLR MLR
comp=Z,175nm,14.0s
KIV Kislovodsk 21.40 76 *e*P **P 04 01 36.0 +0.7**
comp=Z,44nm,1.3s
KIV Kislovodsk 21.40 76 *e*P **P 04 01 36.0 +0.7**
comp=Z,44nm,1.3s
EIL Elat 21.49 119 P **P 04 01 37.6 +1.4**
EIL Elat 21.49 119 P **P 04 01 37.6 +1.4**
comp=Z,4.2nm,0.7s,baz=322,slow=12,SNR=2.8
EIL Elat 21.49 119 P **P 04 01 37.7 +1.4**
KBZ Khabaz 21.58 76 P **P 04 01 38.9 +1.9**
KBZ pmax pmax
comp=Z,16nm,1.0s
KBZ Khabaz 21.58 76 P **P 04 01 38.9 +1.9**
KBZ Khabaz 21.58 76 P **P 04 01 38.9 +1.9**
comp=Z,16nm,1.0s,baz=273,slow=10,SNR=34
KBZ Khabaz 21.58 76 P **P 04 01 38.9 +1.9**
comp=Z,16nm,1.0s
JOF Joensuu 23.14 21 *e*P **P 04 01 50.9 -2.6**
JOF pmax pmax
comp=Z,4.0nm,0.6s
JOF Joensuu 23.14 21 *e*p **P 04 01 50.9 -2.6**
comp=Z,3.9nm,0.6s
KLMR Klimovskoe 24.35 32 *e*P **P 04 02 03.2 -2.0**
KLMR pmax pmax
comp=Z,38nm,1.4s
KLMR Klimovskoe 24.35 32 *e*P **P 04 02 03.2 -2.0**
comp=Z,36nm,1.4s
TMCR Tamitsa 26.04 25 *e*P **P 04 02 23.2 +2.8**
TMCR pmax pmax
comp=Z,36nm,1.4s
ARCES ARCESS Array B 27.97 9 P **P 04 02 37.7 0.0**
ARCES ARCESS Array B 27.97 9 P **P 04 02 37.7 0.0**
comp=Z,1.4nm,0.8s,baz=180,slow=10,SNR=3.3
ARCES ARCESS Array B 27.97 9 P **P 04 02 37.7 0.0**
comp=Z,1.0nm,0.8s
LVZ Lovozero 28.03 17*d i*P **P 04 02 38.3 -0.1**
LVZ pmax pmax
comp=Z,44nm,1.7s
LVZ Lovozero 28.03 17 *i* P **P 04 02 38.3 -0.1**
comp=Z,44nm,1.7s
TOA0 Torodi Ar. Sit 30.81 203 *e*P **P 04 03 03.8 +0.4**
TOA0 Torodi Ar. Sit 30.81 203 *e*P **P 04 03 03.8 +0.4**
TORD Torodi Ar. Bea 30.81 203 P **P 04 03 03.8 +0.4**
TORD Torodi Ar. Bea 30.81 203 P **P 04 03 03.8 +0.4**
comp=Z,1.5nm,0.7s,baz=19,slow=8.4,SNR=25
TORD Torodi Ar. Bea 30.81 203 P **P 04 03 03.8 +0.4**
ARU Arti 31.97 48*d i*P **P 04 03 12.4 -0.9**
ARU 04 04 14.3
ARU S **S 04 08 23.5 -0.7**
ARU SS **SnSn 04 10 08.5 -4.3**
ARU pmax pmax
comp=Z,22nm,1.2s
ARU Arti 31.97 48 *e*P **P 04 03 12.0 -1.3**
comp=Z,10nm,0.8s
ARU Arti 31.97 48 *i* P **P 04 03 12.4 -0.9**
comp=Z,22nm,1.2s
ARU S **S 04 08 23.5 -0.7**
ABKAR Akbulak array 32.76 62 *e*P **P 04 03 19.1 -1.2**
comp=Z,1.7nm,0.9s
ABKAR Akbulak array 32.76 62 *e*P **P 04 03 19.0 -1.2**
comp=Z,1.7nm,0.9s
BRVK Borovoye 38.79 54*c i*P **P 04 04 12.7 +0.7**
BRVK pmax pmax
comp=Z,6.0nm,0.7s
BRVK Borovoye 38.79 54 *e*P **P 04 04 12.1 +0.1**
comp=Z,6.1nm,0.8s
BRVK Borovoye 38.79 54 *e*P **P 04 04 12.1 +0.1**
comp=Z,6.1nm,0.8s
DBIC Dimbokro 39.03 210 P **P 04 04 15.3 +1.0**
DBIC Dimbokro 39.03 210 P **P 04 04 15.3 +1.0**
comp=Z,1.8nm,0.8s,baz=25,slow=8.4,SNR=3.2
DBIC Dimbokro 39.03 210 P **P 04 04 15.3 +1.0**
comp=Z,2.0nm,0.8s
KKAR Karatay Array 41.27 69 *e*P **P 04 04 32.7 0.0**
KKAR pmax pmax
comp=Z,4.0nm,0.7s
KKAR Karatay Array 41.27 69 *e*P **P 04 04 32.7 0.0**
comp=Z,3.8nm,0.7s
KKAR Karatay Array 41.27 69 *e*P **P 04 04 32.7 0.0**
comp=Z,3.6nm,0.7s
EKS2 Erkin-Say 43.68 68 *e*P **P 04 04 53.3 +0.9**
EKS2 Erkin-Say 43.68 68 *e*P **P 04 04 53.3 +0.9**
EKS2 Erkin-Say 43.68 68 *e*P **P 04 04 53.3 +0.9**
AAK Ala-Archa 44.18 68*c i*P **P 04 04 57.6 +1.1**
AAK pmax pmax
comp=Z,16nm,1.7s
AAK Ala-Archa 44.18 68 *e*P **P 04 04 56.9 +0.4**
comp=Z,22nm,1.0s
AAK Ala-Archa 44.18 68 *e*P **P 04 04 56.9 +0.4**
comp=Z,22nm,1.0s
KURK Kurchatov 44.32 56*c i*P **P 04 04 57.1 -0.2**
KURK pmax pmax
comp=Z,7.0nm,1.7s
KURK Kurchatov 44.32 56 *e*P **P 04 04 56.9 -0.4**
comp=Z,4.0nm,1.1s
KURK Kurchatov 44.32 56 *i* P **P 04 04 57.1 -0.2**
comp=Z,7.0nm,1.7s
NVS Novosibirsk 45.96 49 *e*P **P 04 05 10.2 0.0**
NVS pmax pmax
comp=E,6.0nm,1.6s
NVS pmax pmax
comp=Z,17nm,1.6s
NVS Novosibirsk 45.96 49 *e*P **P 04 05 10.2 0.0**
ZALV Zalesovo Beam 47.09 50 P **P 04 05 18.2 -1.0**
ZALV pmax pmax
comp=Z,1.0nm,0.8s
ZALV Zalesovo Beam 47.09 50 P **P 04 05 18.1 -1.0**
ZALV Zalesovo Beam 47.09 50 P **P 04 05 18.1 -1.0**
comp=Z,1.4nm,0.8s,baz=285,slow=7.8,SNR=8.0
ZALV Zalesovo Beam 47.09 50 P **P 04 05 18.2 -1.0**
comp=Z,1.0nm,0.8s
MK31 Makanchi Array 47.86 60 *e*P **P 04 05 24.7 -0.6**
MK31 Makanchi Array 47.86 60 *e*P **P 04 05 24.7 -0.6**
MK31 Makanchi Array 47.86 60 *e*P **P 04 05 24.7 -0.6**
MKAR Makanchi Array 47.86 60 P **P 04 05 25.2 -0.1**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR Makanchi Array 47.86 60 P **P 04 05 25.2 -0.1**
MKAR Makanchi Array 47.86 60 P **P 04 05 25.2 -0.1**
comp=Z,2.6nm,0.6s,baz=284,slow=6.9,SNR=46
MKAR Makanchi Array 47.86 60 P **P 04 05 25.2 -0.1**
comp=Z,3.0nm,0.6s
FRB Frobisher Bay 49.65 325 P **P 04 05 38.6 0.0**
FRB Frobisher Bay 49.65 325 P **P 04 05 38.6 0.0**
comp=Z,1.2nm,0.6s,baz=81,slow=6.5,SNR=5.0
FRB Frobisher Bay 49.65 325 P **P 04 05 38.7 0.0**
comp=Z,1.0nm,0.6s
SCHQ Schefferville 51.65 313 P **P 04 05 53.5 -0.5**
SCHQ Schefferville 51.65 313 P **P 04 05 53.5 -0.5**
comp=Z,4.6nm,1.1s,baz=45,slow=5.7,SNR=3.5
SCHQ Schefferville 51.65 313 P **P 04 05 53.5 -0.5**
WMQ Urumqi 52.55 61 *e*P **P 04 06 04.0 +3.1**
WMQ sP **sP 04 06 11.0 +4.6**
WMQ PcP **PcP 04 07 14.0 +2.9**
WMQ PP **PP 04 08 04.0 +4.4**
WMQ ScP **ScP 04 11 10.0 +2.0**
WMQ S **S 04 13 28.0 +0.6**
WMQ ScS **ScS 04 15 50.0 -0.5**
WMQ pmax pmax
comp=Z,18nm,1.1s
WMQ pmax pmax
comp=Z,220nm,5.0s
WMQ LR LR
comp=Z,87nm,16.0s
TIXI Tiksi 57.62 20*d i*P **P 04 06 38.0 +1.0**
TIXI pmax pmax
comp=Z,7.0nm,1.7s
TIXI Tiksi 57.62 20 *i* P **P 04 06 38.0 +1.0**
comp=Z,7.0nm,1.7s
TLY Talaya 58.46 47 *e*P **P 04 06 40.4 -2.9**
TLY pmax pmax
comp=Z,9.0nm,1.6s

TLY	Talaya	58.46	47	eP	P	04 06 44.0	+0.7
	comp=Z,7.1nm,1.1s						
TLY	Talaya	58.46	47	eP	P	04 06 44.0	+0.7
	comp=Z,7.1nm,1.1s						
SONM	Songino Array	61.99	50	P	P	04 07 07.4	-0.2
SONM	Songino Array	61.99	50	P	P	04 07 07.4	-0.2
	comp=Z,2.7nm,1.0s,baz=293,slow=6.4,SNR=19						
SONM	Songino Array	61.99	50	P	P	04 07 07.4	-0.2
	comp=Z,3.0nm,1.0s						
GTA	Gaotai	62.61	61	eP	P	04 07 12.4	+0.5
GTA				pP	pP	04 07 16.9	+1.0
GTA				sP	sP	04 07 19.5	+2.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
SADO	Sadowa	63.39	307	P	P	04 07 16.5	-0.3
SADO	Sadowa	63.39	307	P	P	04 07 16.5	-0.3
	comp=Z,6.9nm,1.1s,baz=22,slow=5.4,SNR=2.5						
SADO	Sadowa	63.39	307	P	P	04 07 16.5	-0.3
YAK	Yakutsk	64.09	28	eP	P	04 07 21.3	+0.2
YAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
YAK	Yakutsk	64.09	28	eP	P	04 07 21.3	+0.2
	comp=Z,2.0nm,1.3s						
INK	Inuvik	66.91	347	P	P	04 07 37.5	-1.7
INK	Inuvik	66.91	347	P	P	04 07 37.5	-1.7
	comp=Z,1.4nm,1.1s,baz=14,slow=5.4,SNR=2.3						
INK	Inuvik	66.91	347	P	P	04 07 37.5	-1.7
	comp=Z,1.0nm,1.1s						
LZH	Lanzhou	67.13	62	eP	P	04 07 42.0	+0.6
LZH				pP	pP	04 07 43.3	-2.2
LZH				sP	sP	04 07 46.7	-0.3
LZH				ePP	PP	04 10 11.2	+2.2
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,51nm,7.7s						
LZH				LR	LR		
	comp=N,230nm,15.2s						
LZH				LR	LR		
	comp=E,210nm,15.5s						
LZH				LR	LR		
	comp=Z,300nm,18.1s						
YKA	Yellowknife Ar	67.50	337	P	P	04 07 42.8	-0.3
YKA	Yellowknife Ar	67.50	337	P	P	04 07 42.8	-0.3
	comp=Z,1.0nm,0.7s,baz=40,slow=5.7,SNR=14						
YKA	Yellowknife Ar	67.50	337	P	P	04 07 42.8	-0.3
	comp=Z,1.0nm,0.7s						
BILL	Bilibino	68.06	11	eP	P	04 07 47.0	+0.5
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BILL	Bilibino	68.06	11	eP	P	04 07 47.0	+0.5
	comp=Z,3.0nm,1.2s						
FFC	Flin Flon	68.74	326	ceP	P	04 07 53.3	+2.3
FFC	Flin Flon	68.74	326	eP	P	04 07 53.3	+2.3
ULM	Lac du Bonnet	69.04	320	P	P	04 07 51.7	-1.3
ULM	Lac du Bonnet	69.04	320	P	P	04 07 51.7	-1.3
	comp=Z,1.7nm,0.6s,baz=51,slow=6.5,SNR=2.2						
ULM	Lac du Bonnet	69.04	320	P	P	04 07 51.7	-1.3
	comp=Z,2.0nm,0.6s						
HHC	Hu-ho-hao-te	69.07	54	eP	P	04 07 54.8	+1.3
HHC				sP	sP	04 08 02.4	+3.3
HHC				PcP	PcP	04 08 19.5	+2.0
HHC				PP	PP	04 10 29.0	+3.4
HHC				S	S	04 16 57.7	-0.8
HHC				ScS	SKSac	04 17 51.7	-1.5
HHC				pmax	pmax		
	comp=Z,26nm,0.7s						
HHC				pmax	pmax		
	comp=Z,620nm,6.9s						
HHC				LR	LR		
	comp=N,190nm,16.4s						
HHC				LR	LR		
	comp=E,300nm,16.2s						
HHC				LR	LR		
	comp=Z,140nm,16.3s						
CD2	Chengdu	70.20	66	P	P	04 08 02.0	+1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,90nm,6.8s						
BOSA	Boshof	71.46	169	P	P	04 08 07.3	-0.6
BOSA	Boshof	71.46	169	P	P	04 08 07.3	-0.6
	comp=Z,2.0nm,0.7s,baz=344,slow=7.4,SNR=4.3						
BOSA	Boshof	71.46	169	P	P	04 08 07.4	-0.6
	comp=Z,2.0nm,0.7s						
TKL	Tuckaleechee C	71.67	302	P	P	04 08 07.4	-2.0
TKL	Tuckaleechee C	71.67	302	P	P	04 08 07.4	-2.0
	comp=Z,2.5nm,0.9s,baz=59,slow=7.9,SNR=2.7						
TKL	Tuckaleechee C	71.67	302	P	P	04 08 07.4	-2.0
	comp=Z,3.0nm,0.9s						
ILAR	Eielson Array	72.10	351	P	P	04 08 12.0	+0.6
ILAR	Eielson Array	72.10	351	P	P	04 08 12.0	+0.6
	comp=Z,0.6nm,0.8s,baz=3.2,slow=5.3,SNR=6.1						
ILAR	Eielson Array	72.10	351	P	P	04 08 12.0	+0.6
	comp=Z,1.0nm,0.8s						
KMI	Kunming	73.09	71	P	P	04 08 17.8	-0.4
KMI				pP	pP	04 08 20.9	-1.4
KMI				sP	sP	04 08 22.7	-1.1
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CMAR	Chiang Mai Arr	74.60	79	P	P	04 08 26.7	-0.2
CMAR	Chiang Mai Arr	74.60	79	P	P	04 08 26.7	-0.2
	comp=Z,0.6nm,0.3s,baz=310,slow=7.1,SNR=6.2						
CMAR	Chiang Mai Arr	74.60	79	P	P	04 08 26.7	-0.2
	comp=Z,1.0nm,0.3s						
CN2	Changchun	74.86	44	eP	P	04 08 28.4	+0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MDJ	Mudanjiang	76.36	41	P	P	04 08 35.5	-1.0
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,160nm,4.5s						
EGMT	Eagleton	76.97	325	eP	P	04 08 40.1	+0.1
	comp=Z,5.1nm,0.9s						
EGMT	Eagleton	76.97	325	eP	P	04 08 40.1	+0.1
	comp=Z,5.1nm,0.9s						
JTMT	Jette	79.07	327	eP	P	04 08 51.7	-0.1
	comp=Z,5.7nm,1.3s						
JTMT	Jette	79.07	327	eP	P	04 08 51.7	-0.1
	comp=Z,5.7nm,1.3s						
BDFB	Brasilia	80.67	239	P	P	04 09 02.0	+1.3
BDFB	Brasilia	80.67	239	P	P	04 09 02.0	+1.3
	comp=Z,1.3nm,0.8s,baz=71,slow=4.9,SNR=3.1						
BDFB	Brasilia	80.67	239	P	P	04 09 02.0	+1.3
KSAR	Wonju Array Be	80.70	47	P	P	04 09 01.1	+0.4
KSAR	Wonju Array Be	80.70	47	P	P	04 09 01.1	+0.4
KSRS	Korea Array	80.72	47	P	P	04 09 01.1	+0.4
	comp=Z,0.6nm,0.4s,baz=316,slow=5.2,SNR=5.8						
KSRS	Korea Array	80.72	47	P	P	04 09 01.1	+0.4
	comp=Z,1.0nm,0.4s						
PDAR	Pinedale Array	80.95	321	P	P	04 09 01.4	-0.8
PDAR	Pinedale Array	80.95	321	P	P	04 09 01.4	-0.8
	comp=Z,0.3nm,0.7s,baz=53,slow=3.5,SNR=3.1						
PDAR	Pinedale Array	80.95	321	P	P	04 09 01.4	-0.8
PV01	Paradox Valley	84.06	318	eP	P	04 09 17.9	-0.6
	comp=Z,250nm,1.0s						
PV01	Paradox Valley	84.06	318	eP	P	04 09 17.9	-0.6
	comp=Z,250nm,1.0s						
SRU	San Rafael	84.26	320	eP	P	04 09 18.8	-0.7
SRU	San Rafael	84.26	320	eP	P	04 09 18.8	-0.7
	comp=Z,122nm,0.9s						
SRU	San Rafael	84.26	320	eP	P	04 09 18.8	-0.7
	comp=Z,122nm,0.9s						

*ISCJB **06** 04:02:27.3±0.3, 42°.32N±0°.02×13°.38E±0°.03, h12^{km}±3^{km}, Error ellipse: s-maj=3.7km s-min=2.8km az=159.4*

*ROM **06** 04:02:27.3±0.1, 42°.32N×13°.39E, h10^{km}±1^{km}, Ml2.7/17, Error ellipse: s-maj=1.5km s-min=1.3km az=57.0*

*CSEM **06** 04:02:27.7±0.1, 42°.33N×13°.38E, h8^{km}, ML3.5/8, Error ellipse: s-maj=2.5km s-min=1.8km az=75.0*

ISC 06 04:02:28.1±0.8, **42°.33N**±0°.02×**13°.39E**±0°.02, **h10**^{km}±4^{km}, **n58**, σ**0^{s}70**/92, **4C-2D**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	22⇓	iPg	Pg	04 02 29.7	-0.4
AQU				Sg	Sg	04 02 31.0	-0.5
AQU	L'Aquila	0.03	22⇓	iPg	Pg	04 02 29.7	-0.4
AQU				Sg	Sg	04 02 31.0	-0.5
FAGN	Fagnano	0.16	113	Pg	Pg	04 02 31.7	+0.1
FAGN				Sg	Sg	04 02 34.7	+0.6
FAGN	Fagnano	0.16	113	Pg	Pg	04 02 31.7	+0.1
FAGN				Sg	Sg	04 02 34.7	+0.6
CAMP	Campotosto	0.21	4⇑	iPg	Pg	04 02 32.2	-0.3
CAMP				Sg	Sg	04 02 35.7	+0.1
CAMP	Campotosto	0.21	4⇑	iPg	Pg	04 02 32.2	-0.3
CAMP				Sg	Sg	04 02 35.7	+0.1
FIAM	Fiamignano	0.21	254	Pg	Pg	04 02 32.4	-0.1
FIAM				Sg	Sg	04 02 35.8	+0.3
FIAM	Fiamignano	0.21	254	Pg	Pg	04 02 32.4	-0.1
FIAM				Sg	Sg	04 02 35.8	+0.3
PTQR	Pietraquaria	0.31	178⇑	iPg	Pg	04 02 33.9	-0.3
PTQR				Sg	Sg	04 02 38.7	+0.3
PTQR	Pietraquaria	0.31	178⇑	iPg	Pg	04 02 33.9	-0.3
PTQR				Sg	Sg	04 02 38.7	+0.3
TERO	Teramo	0.34	28	Pg	Pg	04 02 34.1	-0.7
TERO	Teramo	0.34	28	Pg	Pg	04 02 34.1	-0.7
VCEL	Villa Celiera	0.34	79	Pg	Pg	04 02 34.8	-0.1
VCEL	Villa Celiera	0.34	79	Pg	Pg	04 02 34.8	-0.1
CERT	Cerreto	0.48	219	Pg	Pg	04 02 37.0	-0.5
CERT				Sg	Sg	04 02 43.8	-0.1
	1µm,0.4s						
CERT	Cerreto	0.48	219	Pg	Pg	04 02 37.0	-0.5
CERT				Sg	Sg	04 02 43.8	-0.1
	1µm,0.4s						
VVLD	Villa Vallelon	0.49	159	Pg	Pg	04 02 36.8	-0.8
VVLD				Sg	Sg	04 02 43.7	-0.4
	573nm,0.5s						
VVLD	Villa Vallelon	0.49	159	Pg	Pg	04 02 36.8	-0.8
VVLD				Sg	Sg	04 02 43.7	-0.4
	573nm,0.5s						
INTR	Introdacqua	0.50	129	Pg	Pg	04 02 37.3	-0.5
INTR				Sg	Sb	04 02 45.4	-0.8
	1µm,0.3s						
INTR	Introdacqua	0.50	129	Pg	Pg	04 02 37.3	-0.5
INTR				Sg	Sb	04 02 45.4	-0.8
	1µm,0.3s						
GUAR	Guarcino	0.54	186	Pg	Pg	04 02 38.2	-0.3
	364nm,0.4s						
GUAR	Guarcino	0.54	186	Pg	Pg	04 02 38.2	-0.3
	364nm,0.4s						
NRCA	Norcia	0.54	338	Pg	Pg	04 02 37.8	-0.9
NRCA				Sg	Sg	04 02 46.4	+0.5
	603nm,0.4s						
NRCA	Norcia	0.54	338	Pg	Pg	04 02 37.8	-0.9
NRCA				Sg	Sg	04 02 46.4	+0.5
	603nm,0.4s						
MTCE	Montecelio	0.57	238	Pg	Pg	04 02 38.4	-0.7
MTCE				Sg	Sg	04 02 46.8	+0.2
	326nm,0.8s						
MTCE	Montecelio	0.57	238	Pg	Pg	04 02 38.4	-0.7
MTCE				Sg	Sg	04 02 46.8	+0.2
	326nm,0.8s						
LPEL	Lama dei Pelig	0.66	115	Pg	Pg	04 02 39.7	-1.0
LPEL				Sg	Sg	04 02 49.7	+0.4
	477nm,0.2s						
LPEL	Lama dei Pelig	0.66	115	Pg	Pg	04 02 39.7	-1.0
LPEL				Sg	Sg	04 02 49.7	+0.4
	477nm,0.2s						
POFI	Posta Fibreno	0.66	158	Pg	Pg	04 02 41.1	+0.3
	179nm,0.5s						
POFI	Posta Fibreno	0.66	158	Pg	Pg	04 02 41.1	+0.3
	179nm,0.5s						
FDMO	Fiordimonte	0.74	343	Pg	Pg	04 02 41.2	-1.2
FDMO				Sg	Sb	04 02 53.0	-0.3
	255nm,0.2s						
FDMO	Fiordimonte	0.74	343	Pg	Pg	04 02 41.2	-1.2
FDMO				Sg	Sb	04 02 53.0	-0.3
	255nm,0.2s						
CESI	CESI - Serrava	0.77	332	Pg	Pg	04 02 42.1	-0.7
CESI				Sg	Sb	04 02 54.4	+0.4
	236nm,0.8s						
CESI	CESI - Serrava	0.77	332	Pg	Pg	04 02 42.1	-0.7
CESI				Sg	Sb	04 02 54.4	+0.4
	236nm,0.8s						
GIUL	Giuliano Di Ro	0.78	187	Pg	Pg	04 02 42.3	-0.7
	220nm,0.7s						
GIUL	Giuliano Di Ro	0.78	187	Pg	Pg	04 02 42.3	-0.7
	220nm,0.7s						
CERA	Filignano	0.87	147	Pg	Pg	04 02 43.6	-1.2
CERA	Filignano	0.87	147	Pg	Pg	04 02 43.6	-1.2
CING	Cingoli	1.06	352	Pg	Pg	04 02 47.1	-1.3
	192nm,0.4s						
CING	Cingoli	1.06	352	Pg	Pg	04 02 47.1	-1.3
	192nm,0.4s						
TOLF	Tolfa	1.06	256	Pg	Pg	04 02 48.3	-0.2
	111nm,0.9s						
TOLF	Tolfa	1.06	256	Pg	Pg	04 02 48.3	-0.2
	111nm,0.9s						
MGAB	Montegabbione	1.11	302	Pg	Pn	04 02 49.7	+0.1
	181nm,0.5s						
MGAB	Montegabbione	1.11	302	Pg	Pn	04 02 49.7	+0.1
	181nm,0.5s						
MURB	Monte Urbino	1.13	326	Pg	Pb	04 02 49.5	-0.2
	507nm,0.3s						
MURB	Monte Urbino	1.13	326	Pg	Pb	04 02 49.5	-0.2
	507nm,0.3s						
ARVD	Arcevia	1.22	345	Pg	Pn	04 02 49.9	-1.2
	128nm,0.8s						
ARVD	Arcevia	1.22	345	Pg	Pn	04 02 49.9	-1.2
	128nm,0.8s						
PIEI	Pieia	1.36	333	Pg	Pg	04 02 54.1	-0.1
	89nm,0.6s						
PIEI	Pieia	1.36	333	Pg	Pg	04 02 54.1	-0.1
	89nm,0.6s						
NVLJ	Novalja	2.48	25	iPn	Pn	04 03 08.2	-0.2
NVLJ				Sn	Sn	04 03 39.5	+0.8
NVLJ	Novalja	2.48	25	iPn	Pn	04 03 08.2	-0.2
NVLJ				Sn	Sn	04 03 39.5	+0.8
STON	Ston	3.23	79	iPn	Pn	04 03 20.1	+1.3
STON				Sn	Sn	04 03 56.3	-1.0
STON	Ston	3.23	79	iPn	Pn	04 03 20.0	+1.3
STON				Sn	Sn	04 03 56.2	-1.0
SKDS	Skadanscina	3.25	8	iPn	Pn	04 03 19.8	+0.7
SKDS				iSn	Sn	04 03 59.1	+1.3
SKDS	Skadanscina	3.25	8	iPn	Pn	04 03 19.8	+0.7
SKDS				iSn	Sn	04 03 59.1	+1.3
BOJS	Bojanci	3.45	22	iPn	Pn	04 03 22.8	+1.0
BOJS				iSn	Sn	04 04 03.7	+1.1
BOJS	Bojanci	3.45	22	iPn	Pn	04 03 22.8	+1.0
BOJS				iSn	Sn	04 04 03.7	+1.1

*ISCJB **06** 04:06:06.7±0.4, 3°.55S±0°.04×127°.33E±0°.04, h42^{km}, mb4.2/10, MS3.8/1, Error ellipse: s-maj=5.6km s-min=5.4km az=38.4*

*DJA **06** 04:06:06.0±0.3, 3°S±3°×12°7E±°, h10^{km}, M4.8/13, mb5.2/5, mB5.2/3, MLv4.7/13, Mw(mB)4.6/3*

*IDC **06** 04:06:09.6±3.5, 3°.52S×127°.31E, h50^{km}±31^{km}, mb4.0/11, mb1 4.2/13, mb1mx4.0/24, mbtmp4.1/13, ML3.7/2, MS3.9/1, Ms1 3.9/1, ms1mx2.8/49, Error ellipse: s-maj=23.3km s-min=10.6km az=76.0*

ISC 06 04:06:08.6±0.6, **3°.54S**±0°.05×**127°.38E**±0°.06, **h42**^{km}, **n36**, σ**1^{s}09**/39, **mb4.2**/10, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	Namlea	0.41	318	P	Pn	04 06 10.6	-7.6
AAI	Ambon	0.83	100	P	Pn	04 06 21.7	-2.1
BNDI	Bandanaira	2.71	111	P	Pn	04 06 53.2	+3.6
LBMI	Labuha	2.89	2	P	Pn	04 06 52.0	-0.1
LBMI				S	Sn	04 07 25.2	-0.4
TNTI	Ternate	4.29	360	P	Pn	04 07 10.9	-0.4
TNTI				S	Sn	04 08 01.2	+1.1
SWI	Sorong	4.71	56	P	Pn	04 07 17.1	0.0
KDI	Kendari	4.76	265	P	Pn	04 07 17.6	-0.3
FAKI	Fak Fak	4.91	83	P	Pn	04 07 21.8	+2.0
LUWI	Luwuk	5.23	298	P	Pn	04 07 22.1	-2.1
	413nm,0.8s,5µm1.8nm						
TLE	Tual	5.74	111	P	Pn	04 07 32.6	+1.4
	154nm,0.9s,0.5nm						
MRSI	Marisa	6.74	306	P	Pn	04 07 45.0	0.0
	266nm,0.8s,2µm						
BKSI	Bulukumba	7.44	256	P	Pn	04 07 57.3	+2.6
	78nm,0.8s,860nm0.2nm						
SPSI	Sidrap Palu	7.60	267	P	Pn	04 07 57.4	+0.5
KAPI	Kappang	7.74	259	P	Pn	04 07 59.7	+0.9
	3.4nm,0.3s,baz=145,slow=8.4,SNR=17						
KAPI				S	Sn	04 09 24.8	-0.4
	0.6nm,0.3s,baz=17,slow=19,SNR=3.1						
FITZ	Fitzroy Crossi	14.57	187	P	Pn	04 09 32.0	-0.1
	0.1nm,0.3s,baz=13,slow=12,SNR=4.3						
WRA	Warramunga Arr	17.66	158	P	Pn	04 10 09.2	-2.3
	0.8nm,0.3s,baz=342,slow=13,SNR=30						
WRA				S	S	04 13 32.9	-0.6
	baz=337,slow=21,SNR=2.5						
ASAR	Alice Springs	20.98	163	P	P	04 10 49.4	+1.0
	63nm,0.8s,baz=345,slow=12,SNR=477						
ASAR				S	S	04 14 42.0	+2.1
	3.6nm,0.9s,baz=345,slow=23,SNR=6.1						
PSI	Prapat	29.13	282	P	P	04 12 05.7	-0.2
	4.8nm,0.7s,baz=74,slow=7.6,SNR=5.4						
STKA	Stephens Creek	31.20	156	P	P	04 12 23.9	0.0
	3.7nm,1.1s,baz=315,slow=7.1,SNR=3.8						
CBIJ	Chichi jima	33.65	24	LR	LR	04 26 25.6	
	comp=Z,192nm,19.2s,baz=103,slow=36						
CMAR	Chiang Mai Arr	35.53	309	P	P	04 13 02.2	+0.3
	1.0nm,0.3s,baz=129,slow=7.2,SNR=3.3						
CMAR				PcP	PcP	04 15 31.4	+0.8
	1.3nm,0.4s,baz=151,slow=3.3,SNR=6.3						
KSRS	Korea Array	40.79	1	P	P	04 13 46.8	+1.0
	3.6nm,0.9s,baz=176,slow=10,SNR=12						
MJAR	Matsushiro Arr	41.14	13	P	P	04 13 48.2	-0.6
	2.6nm,0.8s,baz=188,slow=12,SNR=6.5						
USRK	Ussuriysk Arra	47.71	4	P	P	04 14 41.4	+0.3
	3.7nm,0.6s,baz=173,slow=5.8,SNR=8.7						
ODAN	Odare	49.03	311	eP	P	04 14 52.6	+0.7
	13nm,0.6s						
TAPN	Taplejung	49.05	311	eP	P	04 14 52.4	+0.3
RAMN	Ramite	49.68	310	eP	P	04 14 56.9	0.0
GUN	Gumba	50.73	311	eP	P	04 15 04.8	-0.1
	28nm,0.8s						
KOLN	Koldanda	52.40	309	eP	P	04 15 17.2	0.0
	15nm,0.6s						
DANN	Dangsing	52.56	310	eP	P	04 15 18.4	-0.1
	22nm,0.6s						
PYUN	Piuthan	53.03	309	eP	P	04 15 21.2	-0.7
	50nm,1.0s						
SONM	Songino Array	54.37	343	P	P	04 15 31.2	-0.1
	2.5nm,1.0s,baz=152,slow=8.4,SNR=10						
MKAR	Makanchi Array	63.92	327	P	P	04 16 36.7	-0.6
	3.6nm,0.9s,baz=127,slow=8.0,SNR=19						
ZALV	Zalesovo Beam	67.35	334	P	P	04 16 58.1	-1.1
	1.8nm,0.7s,baz=106,slow=4.8,SNR=8.8						
VNDA	Vanda	76.18	173	P	P	04 17 52.1	+0.2
	1.8nm,0.8s,baz=306,slow=3.5,SNR=8.0						
TORD	Torodi Ar. Bea	125.52	284	PKP	PKPdf	04 25 05.0	-1.3
	0.8nm,0.7s,baz=80,slow=1.7,SNR=6.5						

*ISCJB **06** 04:16:40.0±0.2, 42°.38N±0°.02×13°.29E±0°.03, h12^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=2.7km az=152.1*

*ROM **06** 04:16:40.2±0.1, 42°.38N×13°.32E, h9^{km}±1^{km}, Ml3.1/23, Error ellipse: s-maj=1.7km s-min=1.3km az=82.0*

*CSEM **06** 04:16:40.5±0.1, 42°.39N×13°.29E, h5^{km}, ML3.6/5, Error ellipse: s-maj=2.2km s-min=1.9km az=47.0*

*PRU **06** 04:16:41.9, 42°.39N×13°.49E, h0^{km}*

*LDG **06** 04:16:42.4±0.2, 42°.34N×13°.21E, h2^{km}, Ml3.0/6, Error ellipse: s-maj=7.3km s-min=4.3km az=44.0*

ISC 06 04:16:40.5±0.8, **42°.38N**±0°.02×**13°.28E**±0°.02, **h10**^{km}±5^{km}, **n99**, σ**1^{s}20**/133, **2C-2D**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.09	107	Pg	Pg	04 16 42.8	-0.3
AQU				Sg	Sg	04 16 44.5	-0.4
AQU	L'Aquila	0.09	107	Pg	Pg	04 16 42.8	-0.3
AQU				Sg	Sg	04 16 44.5	-0.4
FIAM	Fiamignano	0.17	228	Pg	Pg	04 16 44.7	+0.5
FIAM	Fiamignano	0.17	228	Pg	Pg	04 16 44.7	+0.5
CAMP	Campotosto	0.18	31⇑	iPg	Pg	04 16 44.2	-0.3
CAMP				Sg	Sg	04 16 47.2	0.0
CAMP	Campotosto	0.18	31⇑	iPg	Pg	04 16 44.2	-0.3
CAMP				Sg	Sg	04 16 47.2	0.0
FAGN	Fagnano	0.25	117	Pg	Pg	04 16 45.4	-0.2
FAGN				Sg	Sg	04 16 49.9	+0.8
FAGN	Fagnano	0.25	117	Pg	Pg	04 16 45.4	-0.2
FAGN				Sg	Sg	04 16 49.9	+0.8
TERO	Teramo	0.34	44	Pg	Pg	04 16 46.5	-0.8
TERO				Sg	Sg	04 16 52.4	+0.6
TERO	Teramo	0.34	44	Pg	Pg	04 16 46.5	-0.8
TERO				Sg	Sg	04 16 52.4	+0.6
PTQR	Pietraquaria	0.37	166⇓	iPg	Pg	04 16 47.6	-0.2
PTQR				Sg	Sg	04 16 53.3	+0.6
PTQR	Pietraquaria	0.37	166⇓	iPg	Pg	04 16 47.6	-0.2
PTQR				Sg	Sg	04 16 53.3	+0.6
VCEL	Villa Celiera	0.41	88	Pg	Pg	04 16 48.5	-0.1
VCEL	Villa Celiera	0.41	88	Pg	Pg	04 16 48.5	-0.1
MNS	Montasola	0.45	271	Pg	Pg	04 16 49.3	0.0
MNS	Montasola	0.45	271	Pg	Pg	04 16 49.3	0.0
NRCA	Norcia	0.47	345	Pg	Pg	04 16 49.4	-0.3
NRCA				Sg	Sg	04 16 56.9	+1.0
	2µm,0.1s						
NRCA	Norcia	0.47	345	Pg	Pg	04 16 49.4	-0.3
NRCA				Sg	Sg	04 16 56.9	+1.0
	2µm,0.1s						
CERT	Cerreto	0.49	208	Pg	Pg	04 16 49.8	-0.2
CERT				Sg	Sb	04 16 57.4	-0.9
	3µm,0.7s						
CERT	Cerreto	0.49	208	Pg	Pg	04 16 49.8	-0.2
CERT				Sg	Sb	04 16 57.4	-0.9
	3µm,0.7s						
MTCE	Montecelio	0.54	229	Pg	Pg	04 16 51.1	+0.1
	729nm,0.6s						
MTCE	Montecelio	0.54	229	Pg	Pg	04 16 51.1	+0.1
	729nm,0.6s						
VVLD	Villa Vallelon	0.57	154	Pg	Pg	04 16 50.7	-0.8
	2µm,0.5s						
VVLD	Villa Vallelon	0.57	154	Pg	Pg	04 16 50.7	-0.8
	2µm,0.5s						
GUAR	Guarcino	0.59	178	Pg	Pg	04 16 52.3	+0.4
	1µm,0.7s						
GUAR	Guarcino	0.59	178	Pg	Pg	04 16 52.3	+0.4
	1µm,0.7s						
INTR	Introdacqua	0.59	128	Pg	Pg	04 16 51.2	-0.8
INTR				Sg	Sb	04 17 00.8	-0.6
INTR	Introdacqua	0.59	128	Pg	Pg	04 16 51.2	-0.8
INTR				Sg	Sb	04 17 00.8	-0.6
OFFI	Offida	0.63	28	Pg	Pg	04 16 52.6	-0.1
OFFI	Offida	0.63	28	Pg	Pg	04 16 52.6	-0.1
TRTR	Tortoreto Alta	0.63	47	Pg	Pg	04 16 52.9	+0.2
TRTR	Tortoreto Alta	0.63	47	Pg	Pg	04 16 52.9	+0.2
FDMO	Fiordimonte	0.67	348	Pg	Pg	04 16 52.8	-0.7
FDMO				Sg	Sb	04 17 04.0	+0.3
	319nm,0.3s						
FDMO	Fiordimonte	0.67	348	Pg	Pg	04 16 52.8	-0.7
FDMO				Sg	Sb	04 17 04.0	+0.3
	319nm,0.3s						
CESI	CESI - Serrava	0.68	336	Pg	Pg	04 16 53.4	-0.3
CESI				Sg	Sb	04 17 04.4	+0.3
	380nm,0.6s						
CESI	CESI - Serrava	0.68	336	Pg	Pg	04 16 53.4	-0.3
CESI				Sg	Sb	04 17 04.4	+0.3
	380nm,0.6s						
RMP	Rome, Mte Porz	0.71	217	Pg	Pb	04 16 55.1	+0.1
	1µm,0.6s						
RMP	Rome, Mte Porz	0.71	217	Pg	Pb	04 16 55.1	+0.1
	1µm,0.6s						
POFI	Posta Fibreno	0.73	154	Pg	Pg	04 16 55.0	+0.3
	626nm,0.6s						
POFI	Posta Fibreno	0.73	154	Pg	Pg	04 16 55.0	+0.3
	626nm,0.6s						
LPEL	Lama dei Pelig	0.75	116	Pg	Pg	04 16 54.0	-0.9
LPEL				Sg	Sg	04 17 05.1	+0.4
LPEL	Lama dei Pelig	0.75	116	Pg	Pg	04 16 54.0	-0.9
LPEL				Sg	Sg	04 17 05.1	+0.4
CAFR	Castel Frentan	0.80	101	Pg	Pg	04 16 55.4	-0.6
	2µm,0.3s						
CAFR	Castel Frentan	0.80	101	Pg	Pg	04 16 55.4	-0.6
	2µm,0.3s						
GIUL	Giuliano Di Ro	0.82	182	Pg	Pb	04 16 56.6	-0.3
	760nm,0.6s						
GIUL	Giuliano Di Ro	0.82	182	Pg	Pb	04 16 56.6	-0.3
	760nm,0.6s						
CING	Cingoli	1.00	356	Pg	Pg	04 16 58.8	-0.9
	501nm,0.4s						
CING	Cingoli	1.00	356	Pg	Pg	04 16 58.8	-0.9
	501nm,0.4s						
TOLF	Tolfa	1.00	252	Pg	Pn	04 17 00.6	0.0
	534nm,1.0s						
TOLF	Tolfa	1.00	252	Pg	Pn	04 17 00.6	0.0
	534nm,1.0s						
MGAB	Montegabbione	1.01	302	Pg	Pb	04 17 00.2	0.0
	680nm,0.8s						
MGAB	Montegabbione	1.01	302	Pg	Pb	04 17 00.2	0.0
	680nm,0.8s						
SACS	San Casciano d	1.12	295	Pg	Pn	04 17 02.9	+0.7
	387nm,0.6s						
LATE	Laterza	1.12	283	Pg	Pn	04 17 02.7	+0.5
	54nm,0.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LATE	Laterza	1.12	283	Pg	Pn	04 17 02.7	+0.5
	54nm,0.6s						
ARVD	Arcevia	1.15	347	Pg	Pb	04 17 01.9	-0.5
	376nm,0.7s						
ARVD	Arcevia	1.15	347	Pg	Pb	04 17 01.9	-0.5
	376nm,0.7s						
PIEI	Pieia	1.28	335	Pg	Pn	04 17 04.6	+0.2
	256nm,0.4s						
PIEI	Pieia	1.28	335	Pg	Pn	04 17 04.6	+0.2
	256nm,0.4s						
MODR	Mondragone	1.31	160	Pg	Pb	04 17 05.1	-0.1
	99nm,0.7s						
MODR	Mondragone	1.31	160	Pg	Pb	04 17 05.1	-0.1
	99nm,0.7s						
CAFI	Castiglion Fio	1.36	315	Pg	Pg	04 17 06.4	-0.1
	275nm,0.8s						
CAFI	Castiglion Fio	1.36	315	Pg	Pg	04 17 06.4	-0.1
	275nm,0.8s						
ARCI	Arcidosso	1.42	290	Pn	Pg	04 17 07.7	0.0
	126nm,1.0s						
ARCI	Arcidosso	1.42	290	Pn	Pg	04 17 07.7	0.0
	126nm,1.0s						
MAON	Monte Argentar	1.59	272	Pn	Pn	04 17 09.1	+0.4
	112nm,0.8s						
MAON	Monte Argentar	1.59	272	Pn	Pn	04 17 09.1	+0.4
	112nm,0.8s						
SGRT	San Giovanni R	1.94	108	Pn	Pb	04 17 14.9	-1.0
SGRT	San Giovanni R	1.94	108	Pn	Pb	04 17 14.9	-1.0
MAIM	Mastiano	2.56	308	P	Pn	04 17 23.2	+1.3
PGF	Pioggiola	3.17	274	ePn	Pn	04 17 31.4	+0.9
PGF				eSn	Sn	04 18 11.7	+3.2
	17nm,0.4s						
PGF	Pioggiola	3.17	274	ePn	Pn	04 17 31.4	+0.9
PGF				eSn	Sn	04 18 11.7	+3.2
	8.6nm,0.4s						
SKDS	Skadanscina	3.21	9	iPn	Pn	04 17 32.5	+1.5
SKDS				iSn	Sn	04 18 12.0	+2.8
SKDS	Skadanscina	3.21	9	iPn	Pn	04 17 32.5	+1.5
SKDS				iSn	Sn	04 18 12.0	+2.8
SC2M	Scurtabo	3.40	308	P	Pn	04 17 32.8	-0.8
BOJS	Bojanci	3.43	24	iPn	Pb	04 17 38.0	-3.3
BOJS				iSn	Sn	04 18 17.8	+3.2
BOJS	Bojanci	3.43	24	iPn	Pb	04 17 38.0	-3.3
BOJS				iSn	Sn	04 18 17.8	+3.2
SBF	Sospel	4.53	291	ePn	Pn	04 17 49.6	+0.5
SBF				eSn	Sn	04 18 39.0	-2.9
	6.3nm,0.3s						
SBF	Sospel	4.53	291	ePn	Pn	04 17 49.6	+0.5
SBF				eSn	Sn	04 18 39.0	-2.9
	3.2nm,0.3s						
FRF	La Foret Royal	5.01	286	ePn	Pn	04 17 55.9	+0.2
FRF	La Foret Royal	5.01	286	ePn	Pn	04 17 55.9	+0.2
LMR	La Mourre	5.07	283	ePn	Pn	04 17 56.5	0.0
LMR				eSn	Sn	04 18 52.3	-2.8
	1.3nm,0.3s						
LMR	La Mourre	5.07	283	ePn	Pn	04 17 56.5	0.0
LMR				eSn	Sn	04 18 52.3	-2.8
	0.6nm,0.3s						
IVAS	Ivanjica	5.18	74	ePn	Pn	04 17 58.6	+0.6
DIVS	Divibare	5.19	68	ePn	Pn	04 17 58.8	+0.6
MBDF	Montbardon	5.28	299	eP	Pn	04 18 01.6	+2.1
MBDF	Montbardon	5.28	299	eP	Pn	04 18 01.6	+2.1
GRUS	Gruza	5.64	72	ePn	Pn	04 18 05.5	+1.1
SELS	Selova	5.83	79	ePn	Pn	04 18 07.3	+0.4
BARS	Barje	6.31	83	ePn	Pn	04 18 14.9	+1.3
KHC	Kasperske Hory	6.75	2	ePN	Pn	04 18 21.5	+1.9
KHC				eSN	Sn	04 19 34.7	-1.9
KHC				ex	x	04 19 55.5	
KHC	Kasperske Hory	6.75	2	Pn	Pn	04 18 21.5	+1.9
KHC				Sn	Sn	04 19 34.7	-1.9
ZAPS	Zavoj	6.93	79	ePn	Pn	04 18 23.2	+1.1
HINF	Hinteralfeld	7.09	322	ePn	Pn	04 18 23.9	-0.3
HINF				eSn	Sn	04 19 40.3	-4.5
	1.8nm,0.3s						
HINF	Hinteralfeld	7.09	322	ePn	Pn	04 18 23.9	-0.3
CDF	Champ du Feu	7.36	327	ePn	Pn	04 18 27.6	-0.5
CDF				eSn	Sn	04 19 47.3	-4.4
	1.3nm,0.2s						
CDF	Champ du Feu	7.36	327	ePn	Pn	04 18 27.6	-0.5
HAU	Haudompre	7.46	321	ePn	Pn	04 18 28.9	-0.4
HAU				eSn	Sn	04 19 47.8	-6.1
	2.6nm,0.3s						
HAU	Haudompre	7.46	321	ePn	Pn	04 18 28.9	-0.4

*ISCJB **06** 04:17:06.6±0.4, 42°.35N±0°.03×13°.44E±0°.04, h15km±3km, Error ellipse: s-maj=5.1km s-min=3.9km az=145.6*
*ROM **06** 04:17:06.5±0.1, 42°.33N×13°.43E, h10km±1km, Ml3.2/3, Error ellipse: s-maj=1.5km s-min=1.2km az=66.0*
*CSEM **06** 04:17:07.3±0.1, 42°.33N×13°.45E, h5km, ML3.0/7, Error ellipse: s-maj=3.0km s-min=2.3km az=48.0*
*LDG **06** 04:17:10.9±0.7, 42°.43N×13°.33E, h2km, Ml3.0/7, Error ellipse: s-maj=13.9km s-min=9.6km az=116.0*
ISC 06 04:17:07.0±0.8, 42°.34N±0°.02×13°.43E±0°.02, h11km±4km, n46, σ1s.54/73, 2C, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	296	⇑iPg	Pg	04 17 08.7	-0.4
AQU				Sg	Sg	04 17 09.8	-0.8
AQU	L'Aquila	0.03	296	⇑iPg	Pg	04 17 08.7	-0.4
AQU				Sg	Sg	04 17 09.8	-0.8
FAGN	Fagnano	0.14	124	Pg	Pg	04 17 10.1	-0.2
FAGN				Sg	Sg	04 17 12.8	+0.2
FAGN	Fagnano	0.14	124	Pg	Pg	04 17 10.1	-0.2
FAGN				Sg	Sg	04 17 12.8	+0.2
CAMP	Campotosto	0.19	354	Pg	Pg	04 17 11.5	+0.2
CAMP				Sg	Sg	04 17 15.0	+0.8
CAMP	Campotosto	0.19	354	Pg	Pg	04 17 11.5	+0.2
CAMP				Sg	Sg	04 17 15.0	+0.8
FIAM	Fiamignano	0.25	253	Pg	Pg	04 17 12.3	+0.1
FIAM				Sg	Sg	04 17 16.2	+0.6
FIAM	Fiamignano	0.25	253	Pg	Pg	04 17 12.3	+0.1
FIAM				Sg	Sg	04 17 16.2	+0.6
VCEL	Villa Celiera	0.31	80	Pg	Pg	04 17 13.3	+0.1
VCEL	Villa Celiera	0.31	80	Pg	Pg	04 17 13.3	+0.1
TERO	Teramo	0.31	24	Pg	Pg	04 17 13.2	-0.1
TERO				Sg	Sg	04 17 18.1	+0.7
TERO	Teramo	0.31	24	Pg	Pg	04 17 13.2	-0.1
TERO				Sg	Sg	04 17 18.1	+0.7
PTQR	Pietraquaria	0.32	184	Pg	Pg	04 17 13.3	-0.2
PTQR	Pietraquaria	0.32	184	Pg	Pg	04 17 13.3	-0.2
INTR	Introdacqua	0.48	133	Pg	Pg	04 17 16.1	-0.3
INTR				Sg	Sb	04 17 24.5	-0.1
INTR	Introdacqua	0.48	133	Pg	Pg	04 17 16.1	-0.3
INTR				Sg	Sb	04 17 24.5	-0.1
VVLD	Villa Vallelon	0.49	163	Pg	Pg	04 17 16.1	-0.5
VVLD	Villa Vallelon	0.49	163	Pg	Pg	04 17 16.1	-0.5
CERT	Cerreto	0.52	221	Pg	Pg	04 17 16.8	-0.3
CERT	Cerreto	0.52	221	Pg	Pg	04 17 16.8	-0.3
NRCA	Norcia	0.55	334	Pg	Pg	04 17 17.4	-0.3
NRCA				Sg	Sb	04 17 26.3	-0.2
NRCA	Norcia	0.55	334	Pg	Pg	04 17 17.4	-0.3
NRCA				Sg	Sb	04 17 26.3	-0.2
OFFI	Offida	0.62	17	Pg	Pb	04 17 20.1	+0.2
OFFI	Offida	0.62	17	Pg	Pb	04 17 20.1	+0.2
LPEL	Lama dei Pelig	0.63	118	Pg	Pg	04 17 18.8	-0.4
LPEL				Sg	Sb	04 17 28.6	-0.3
LPEL	Lama dei Pelig	0.63	118	Pg	Pg	04 17 18.8	-0.4
LPEL				Sg	Sb	04 17 28.6	-0.3
PGF	Pioggiola	3.29	275	ePn	Pn	04 18 00.6	+2.0
PGF				eSn	Sn	04 18 40.8	+3.1
	6.5nm,0.4s						
PGF	Pioggiola	3.29	275	ePn	Pn	04 18 00.6	+2.0
PGF				eSn	Sn	04 18 40.8	+3.1
	3.2nm,0.4s						
SBF	Sospel	4.65	291	ePn	Pn	04 18 18.6	+1.4
SBF				eSn	Sn	04 19 09.0	-2.2
	13nm,0.6s						
SBF	Sospel	4.65	291	ePn	Pn	04 18 18.6	+1.4
SBF				eSn	Sn	04 19 09.0	-2.2
	6.4nm,0.6s						
FRF	La Foret Royal	5.13	286	ePn	Pn	04 18 25.1	+1.4
FRF				eSn	Sn	04 19 19.8	-3.1
	0.6nm,0.2s						
FRF	La Foret Royal	5.13	286	ePn	Pn	04 18 25.1	+1.4
FRF				eSn	Sn	04 19 19.8	-3.1
	0.3nm,0.2s						
LMR	La Mourre	5.19	283	ePn	Pn	04 18 25.7	+1.2
LMR				eSn	Sn	04 19 21.9	-2.4
	1.5nm,0.5s						
LMR	La Mourre	5.19	283	ePn	Pn	04 18 25.7	+1.2
LMR				eSn	Sn	04 19 21.9	-2.4
	0.8nm,0.5s						
MBDF	Montbardon	5.40	298	ePn	Pn	04 18 29.9	+2.3
MBDF	Montbardon	5.40	298	ePn	Pn	04 18 29.9	+2.3
CABF	La Chapelle	6.77	312	ePn	Pn	04 18 48.5	+2.2
CABF	La Chapelle	6.77	312	ePn	Pn	04 18 48.5	+2.2
KHC	Kasperske Hory	6.79	1	eSN	Sn	04 20 04.2	+0.3
KHC	Kasperske Hory	6.79	1	Sn	Sn	04 20 04.2	+0.3
HINF	Hinteralfeld	7.18	322	ePn	Pn	04 18 52.7	+0.7
HINF				eSn	Sn	04 20 09.3	-4.3
	7.8nm,0.6s						
HINF	Hinteralfeld	7.18	322	ePn	Pn	04 18 52.7	+0.7
CDF	Champ du Feu	7.46	327	ePn	Pn	04 18 56.3	+0.5
CDF				eSn	Sn	04 20 17.0	-3.3
	5.6nm,0.6s						
CDF	Champ du Feu	7.46	327	ePn	Pn	04 18 56.3	+0.5
HAU	Haudompre	7.56	321	ePn	Pn	04 18 57.7	+0.6
HAU				eSn	Sn	04 20 17.7	-5.0
	4.1nm,0.3s						
HAU	Haudompre	7.56	321	ePn	Pn	04 18 57.7	+0.6

*ISCJB **06** 04:23:54.2±1.4, 22°.3S±0°.1×148°.10E±0°.10, h10km, Error ellipse: s-maj=17.4km s-min=8.9km az=38.3*
*IDC **06** 04:23:55.2±2.2, 22°.14S×148°.11E, h0km, mb1 3.6/4, mb1mx3.5/16, mbtmp3.5/4, ML3.5/4, Error ellipse: s-maj=30.0km s-min=19.2km az=61.0*
ISC 06 04:23:55.2±1.2, 22°.17S±0°.08×148°.21E±0°.09, h10km, n11, σ1s.29/14, Queensland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	2.76	318	Pn	Pn	04 24 40.0	+0.5
	3.6nm,0.3s,baz=137,slow=14,SNR=49						
CTA				Pg	Pb	04 24 44.3	-0.3
	8.3nm,0.3s,baz=135,slow=18,SNR=38						
CTA				Lg	Lg	04 25 20.1	
	16nm,0.3s,baz=221,slow=22,SNR=15						
RMQ	Roma	4.33	173	P	Pg	04 25 19.6	+1.4
	baz=23,SNR=5.7						
QLP	Quilpie	5.70	219	P	Pg	04 25 44.6	+0.2
	baz=24,SNR=13						
ARMA	Armidale	8.77	160	P	Pn	04 26 02.5	+0.3
	baz=27,SNR=4.6						
STKA	Stephens Creek	11.33	210	Pn	Pn	04 26 36.6	-0.5
	0.5nm,0.3s,baz=32,slow=15,SNR=8.8						
STKA				Sn	Sn	04 28 36.9	-6.9
	0.3nm,0.3s,baz=174,slow=17,SNR=2.7						
STKA	Stephens Creek	11.33	210	P	Pn	04 26 37.2	+0.1
	baz=30,SNR=7.0						
YNG	Young	12.09	179	P	Pn	04 26 47.3	-0.3
	baz=31,SNR=32						
WRA	Warramunga Arr	13.14	277	Pn	Pn	04 27 01.3	-0.7
	0.3nm,0.3s,baz=101,slow=14,SNR=8.3						
WRA				Sn	Sn	04 29 30.1	+1.7
	0.1nm,0.3s,baz=98,slow=23,SNR=4.4						
WRA				Lg	Lg	04 30 50.1	
	0.2nm,0.3s,baz=101,slow=28,SNR=5.6						
ASAR	Alice Springs	13.27	261	Pn	Pn	04 27 04.4	+0.5
	0.1nm,0.3s,baz=82,slow=13,SNR=3.6						
ASAR				Sn	Sn	04 29 30.0	-1.6
	0.1nm,0.3s,baz=90,slow=22,SNR=6.2						
ASAR				Lg	Lg	04 30 52.7	
	0.1nm,0.3s,baz=86,slow=29,SNR=4.6						
LHI	Lord Howe Isla	13.43	136	S	SgSg	04 31 03.7	-2.9
	baz=29,SNR=3.6						
TORD	Torodi Ar. Bea	146.92	260	PKPbc	PKPab	04 43 39.6	-0.6
	0.4nm,0.5s,baz=104,slow=1.4,SNR=16						

KRSC 06 04:26:48.6±1.0, 50°.62N×157°.62E, h10km±10km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	1.74	342	iP	Pn	04 27 19.4	+0.5
MIPR				eS	Sb	04 27 42.0	-0.7
MTVR	Mutnovka	1.90	10	eP	Pn	04 27 21.8	+0.6
MTVR				iS	Sn	04 27 46.1	+0.7
RUS	Russkaya	1.90	17	eP	Pn	04 27 21.3	+0.3
RUS				iS	Sn	04 27 44.9	-0.1
GRL	Gorelyy	1.96	8	eP	Pn	04 27 22.4	+0.4
GRL				iS	Sn	04 27 47.0	+0.3
APC	Apacha	2.33	353	eP	Pn	04 27 27.4	+0.5
APC				eS	Sn	04 27 55.5	0.0
PET	Petropavlovsk	2.49	15	P	Pn	04 27 30.7	+1.5
PET				iS	Sn	04 28 01.0	+1.4
UGLR	Uglovaya	2.70	16	eP	Pn	04 27 33.8	+1.6
AVH	Avacha	2.74	14	eP	Pn	04 27 34.7	+2.0
AVH				eS	Sn	04 28 08.5	+2.6
SMAR	Somma	2.75	15	eP	Pn	04 27 34.5	+1.5
KOK	Koryaka	2.75	13	eP	Pn	04 27 34.9	+2.0
SDLR	Sedlovina	2.77	16	iP	Pn	04 27 33.8	+0.6
KRER	Koryakskii	2.78	14	eP	Pn	04 27 34.9	+1.5
SPN	Mys Shipunski	2.90	30	P	Pn	04 27 36.6	+1.9
SPN				iS	Sn	04 28 11.5	+2.0
GNL	Ganaly	3.09	4	eP	Pn	04 27 39.8	+2.3
MKZ	Mys Kozlova	4.67	31	P	Pn	04 27 59.8	+0.7
MKZ				iS	Sn	04 28 52.0	-1.3

*ISCJB **06** 04:42:37.1±0.7, 17°.4S±0°.2×178°.4W±0°.2, h547km, mb4.1/6, Error ellipse: s-maj=35.3km s-min=11.4km az=149.2*
*IDC **06** 04:42:38.0±1.9, 17°.24S×178°.49W, h536km±23km, mb3.7/6, mb1 3.9/8, mb1mx3.4/22, mbtmp3.7/8, Error ellipse: s-maj=66.1km s-min=14.4km az=148.0*
*AUST **06** 04:42:41.7±0.0, 17°.36S×178°.54W, h571km, Error ellipse: s-maj=2.3km s-min=1.6km az=343.0*
ISC 06 04:42:38.2±0.9, 17°.4S±0°.3×178°.4W±0°.2, h547km, n29, σ0s.90/31, mb4.3/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.22	62	P	P	04 44 27.6	-0.8
	12nm,0.3s,baz=222,slow=16,SNR=10						
DZM	Mont Dzumac	15.04	250	P	P	04 45 48.0	-0.3
	0.9nm,0.3s,baz=130,slow=22,SNR=8.6						
ARMA	Armidale	30.24	239	P	P	04 48 05.6	+0.6
	baz=30,SNR=6.5						
RMQ	Roma	31.74	248	P	P	04 48 18.8	+1.0
	baz=32,SNR=5.4						
CNB	Canberra Magne	33.78	232	P	P	04 48 35.3	+0.3
	baz=34,SNR=14						
CMSA	Cobar Meteorol	35.45	240	P	P	04 48 49.1	+0.2
	baz=35,SNR=7.5						
QLP	Quilpie	35.76	249	P	P	04 48 51.7	+0.1
	baz=36,SNR=12						
COEN	Coen	37.15	270	P	P	04 49 04.8	+1.6
	baz=37,SNR=24						
TOO	Toolangi	37.53	230	P	P	04 49 06.3	+0.3
	baz=37,SNR=3.6						
STKA	Stephens Creek	38.92	241	P	P	04 49 17.8	+0.4
	9.6nm,0.6s,baz=85,slow=9.7,SNR=22						
STKA	Stephens Creek	38.92	241	P	P	04 49 17.8	+0.4
	baz=39,SNR=14						
BBOO	Buckleboo	43.70	241	P	P	04 49 55.0	-0.2
	baz=44,SNR=15						
WRA	Warramunga Arr	44.77	259	P	P	04 50 03.5	-0.2
	7.4nm,0.5s,baz=93,slow=7.0,SNR=132						
WRA				PcP	PcP	04 51 33.9	-0.1
	1.1nm,0.6s,baz=88,slow=3.6,SNR=4.8						
ASAR	Alice Springs	44.98	254	P	P	04 50 05.3	+0.1
	56nm,0.6s,baz=88,slow=8.3,SNR=604						
ASAR				PcP	PcP	04 51 34.2	-0.5
	1.3nm,0.6s,baz=109,slow=3.2,SNR=4.3						
KDU	Kakadu	47.61	269	P	P	04 50 25.6	+0.4
	baz=47,SNR=8.2						
MTN	Manton Dam	48.86	268	P	P	04 50 31.5	-3.0
	baz=49,SNR=7.8						
FORT	Forrest	50.27	244	P	P	04 50 43.9	-0.8
	baz=50,SNR=12						
FITZ	Fitzroy Crossi	53.16	260	P	P	04 51 06.0	+0.3
	baz=53,SNR=12						
MEEK	Meekatharra	58.66	249	P	P	04 51 42.9	-0.8
	baz=58,SNR=4.0						
KLBR	Kellerberrin	59.10	243	P	P	04 51 45.5	-1.0
	baz=59,SNR=7.4						
NWAO	Narrogin (SRO)	59.49	242	P	P	04 51 48.9	-0.2
	4.9nm,0.6s,baz=67,slow=7.7,SNR=4.8						
MORW	Morawa	60.73	246	P	P	04 51 56.1	-1.2
	baz=60,SNR=3.3						
UGM	Wanagama	69.71	268	P	P	04 52 54.2	+0.2
	baz=70,SNR=5.6						
PSI	Prapat	83.89	275	P	P	04 54 11.6	+0.1
	baz=84,SNR=3.1						
ILAR	Eielson Array	85.38	13	P	P	04 54 17.1	-0.4
	0.4nm,0.4s,baz=223,slow=5.4,SNR=14						
TXAR	Lajitas Array	85.68	58	P	P	04 54 21.6	+1.8
	0.5nm,0.7s,baz=202,slow=4.5,SNR=4.0						
MKAR	Makanchi Array	108.81	314	PKiKP	PKiKP	05 00 04.7	-0.8
	0.1nm,0.5s,baz=70,slow=1.7,SNR=3.0						
BRTR	Keskin Array B	144.45	315	PKP	PKPab	05 01 13.3	-0.1
	1.9nm,0.8s,baz=134,slow=3.4,SNR=8.7						
GERES	GERESS Array B	147.13	345	PKPbc	PKPbc	05 01 20.5	+0.4
	0.7nm,0.4s,baz=46,slow=2.8,SNR=9.2						

*CSEM **06** 04:47:36.6, 42°.36N×13°.35E, h11km, After ROM*
ROM 06 04:47:36.6±0.2, 42°.36N×13°.35E, h11km, Ml2.4/2, Error ellipse: s-maj=3.6km s-min=0.5km az=135.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	103	Pg	Pg	04 47 39.0	+0.2
AQU				Sg	Sg	04 47 40.3	-0.1
AQU	L'Aquila	0.04	103	Pg	Pg	04 47 39.0	+0.2
AQU				Sg	Sg	04 47 40.3	-0.1
CAMP	Campotosto	0.18	14	Pg	Pg	04 47 41.2	+0.5
CAMP				Sg	Sg	04 47 44.3	+0.7
CAMP	Campotosto	0.18	14	Pg	Pg	04 47 41.2	+0.5
CAMP				Sg	Sg	04 47 44.3	+0.7
FIAM	Fiamignano	0.20	241	Pg	Pg	04 47 41.6	+0.6
FIAM				Sg	Sg	04 47 44.8	+0.8
FIAM	Fiamignano	0.20	241	Pg	Pg	04 47 41.6	+0.6
FIAM				Sg	Sg	04 47 44.8	+0.8
FAGN	Fagnano	0.20	119	Pg	Pb	04 47 42.4	0.0
FAGN				Sg	Sg	04 47 44.7	+0.7
FAGN	Fagnano	0.20	119	Pg	Pb	04 47 42.4	0.0
FAGN				Sg	Sg	04 47 44.7	+0.7
TERO	Teramo	0.32	36	Pg	Pg	04 47 42.6	-0.6
TERO				Sg	Sg	04 47 47.9	+0.3
TERO	Teramo	0.32	36	Pg	Pg	04 47 42.6	-0.6
TERO				Sg	Sg	04 47 47.9	+0.3
PTQR	Pietraquaria	0.34	174	Pg	Pg	04 47 43.6	0.0
PTQR				Sg	Sg	04 47 48.7	+0.4
PTQR	Pietraquaria	0.34	174	Pg	Pg	04 47 43.6	0.0
PTQR				Sg	Sg	04 47 48.7	+0.4
VCEL	Villa Celiera	0.36	85	Pg	Pb	04 47 45.1	-0.2
VCEL	Villa Celiera	0.36	85	Pg	Pb	04 47 45.1	-0.2

*STR **06** 04:47:48.9±3.5, 42°.18N×13°.81E, h10km, Ml3.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **06** 04:47:53.0, 42°.35N×13°.35E, h9km, ML4.0(PDG), ML3.7(ROM), After ROM.*
NEIC Felt [II] at Albano Laziale, Cassino, Foligno, Rome and Sulmona.
*ISCJB **06** 04:47:53.4±0.2, 42°.37N±0°.01×13°.32E±0°.02, h9km±1km, mb3.6/4, Error ellipse: s-maj=2.3km s-min=1.8km az=18.9*
*CSEM **06** 04:47:53.9±0.1, 42°.36N×13°.31E, h2km, ML3.9/5, Error ellipse: s-maj=2.4km s-min=1.8km az=25.0*
*BEO **06** 04:47:53.5±0.9, 42°.30N×13°.26E, h0km, ML3.9/8*
*ROM **06** 04:47:53.6±0.1, 42°.36N×13°.36E, h9km±1km, Ml3.6/42, Error ellipse: s-maj=1.4km s-min=1.1km az=81.0*
*LDG **06** 04:47:53.7±0.1, 42°.34N×13°.35E, h2km, Ml3.6/8, Error ellipse: s-maj=4.4km s-min=2.6km az=43.0*
*PRU **06** 04:47:54.8, 42°.36N×13°.52E, h0km*
*PDG **06** 04:47:54.5±1.3, 42°.35N×13°.32E, h6km±1km, ML3.8/9, Error ellipse: s-maj=1.2km s-min=1.5km az=0.0*
*IDC **06** 04:47:54.2±1.0, 42°.49N×13°.19E, h0km, mb3.6/5, mb1 3.7/12, mb1mx3.6/33, mbtmp3.6/12, ML3.4/7, MS3.5/1, Ms1 3.5/1, ms1mx3.0/48, Error ellipse: s-maj=17.0km s-min=13.0km az=96.0*
ISC 06 04:47:54.4±0.7, 42°.37N±0°.01×13°.33E±0°.01, h8km±4km, n325, σ1s.48/421, mb3.7/4, 41C-18D, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	104	ePg	Pg	04 47 55.5	-0.7
AQU	L'Aquila	0.06	104	Pg	Pg	04 47 55.8	-0.4
AQU				Sg	Sg	04 47 57.2	-0.3
	196μm,0.4s						
AQU	L'Aquila	0.06	104	Pg	Pg	04 47 55.8	-0.4
AQU				Sg	Sg	04 47 57.2	-0.3
	196μm,0.4s						
CAMP	Campotosto	0.18	20	⇑iPg	Pg	04 47 57.9	-0.2
CAMP				Sg	Sg	04 48 01.0	+0.3
CAMP	Campotosto	0.18	20	⇑iPg	Pg	04 47 57.9	-0.2
CAMP				Sg	Sg	04 48 01.0	+0.3
FIAM	Fiamignano	0.18	237	Pg	Pg	04 47 57.7	-0.5
FIAM				Sg	Sg	04 48 01.9	+1.1
FIAM	Fiamignano	0.18	237	Pg	Pg	04 47 57.7	-0.5
FIAM				Sg	Sg	04 48 01.9	+1.1
FAGN	Fagnano	0.22	118	⇑ePg	Pg	04 47 58.3	-0.5
FAGN				Sg	Sg	04 48 01.9	+0.2
FAGN	Fagnano	0.22	118	⇑ePg	Pg	04 47 58.3	-0.5
FAGN				Sg	Sg	04 48 01.9	+0.2
TERO	Teramo	0.33	39	Pg	Pg	04 48 00.0	-0.9
TERO				Sg	Sg	04 48 04.7	-0.5
TERO	Teramo	0.33	39	Pg	Pg	04 48 00.0	-0.9
TERO				Sg	Sg	04 48 04.7	-0.5
PTQR	Pietraquaria	0.35	171	⇑iPg	Pg	04 48 00.7	-0.6
PTQR	Pietraquaria	0.35	171	⇑iPg	Pg	04 48 00.7	-0.6
GAVE	Gavelli	0.46	316	Pg	Pb	04 48 04.5	-0.3
GAVE	Gavelli	0.46	316	Pg	Pb	04 48 04.5	-0.3
MNS	Montasola	0.48	272	P	Pg	04 48 03.4	-0.3
MNS				S	Sb	04 48 12.6	+0.2
MNS	Montasola	0.48	272	⇑ePg	Pg	04 48 03.4	-0.3
	5μm,0.7s						
MNS	Montasola	0.48	272	⇑ePg	Pg	04 48 03.4	-0.3
	5μm,0.7s						
MNS				S	Sb	04 48 12.6	+0.2
CERT	Cerreto	0.49	212	P	Pg	04 48 03.4	-0.5
CERT				S	Sg	04 48 10.9	+0.5
CERT	Cerreto	0.49	212	⇑ePg	Pg	04 48 03.4	-0.5
CERT				Sg	Sg	04 48 10.8	+0.5
CERT	Cerreto	0.49	212	⇑ePg	Pg	04 48 03.4	-0.5
CERT				S	Sg	04 48 10.9	+0.5
NRCA	Norcia	0.49	341	P	Pg	04 48 03.5	-0.5
NRCA				S	Sg	04 48 11.5	+1.1
NRCA	Norcia	0.49	341	Pg	Pg	04 48 03.5	-0.5
NRCA				Sg	Sg	04 48 11.5	+1.1
NRCA	Norcia	0.49	341	Pg	Pg	04 48 03.5	-0.5
NRCA				Sg	Sg	04 48 11.5	+1.1
VVLD	Villa Vallelon	0.54	156	P	Pg	04 48 03.8	-1.1
VVLD	Villa Vallelon	0.54	156	Pg	Pg	04 48 03.9	-1.1
	4μm,0.5s						
VVLD	Villa Vallelon	0.54	156	P	Pg	04 48 03.8	-1.1
MTCE	Montecelio	0.56	232	P	Pg	04 48 04.7	-0.5
MTCE	Montecelio	0.56	232	⇑ePg	Pg	04 48 04.6	-0.5
	3μm,0.7s						
MTCE	Montecelio	0.56	232	⇑ePg	Pg	04 48 04.6	-0.5
	3μm,0.7s						
INTR	Introdacqua	0.56	129	P	Pg	04 48 04.2	-1.0
INTR	Introdacqua	0.56	129	⇑ePg	Pg	04 48 04.2	-1.0
	5μm,0.7s						
INTR	Introdacqua	0.56	129	⇑ePg	Pg	04 48 04.2	-1.0
	5μm,0.7s						
GUAR	Guarcino	0.57	181	P	Pg	04 48 04.9	-0.6
GUAR				S	Sg	04 48 13.9	+0.9
GUAR	Guarcino	0.57	181	Pg	Pg	04 48 04.9	-0.6
GUAR	Guarcino	0.57	181	Pg	Pg	04 48 04.9	-0.6
GUAR				S	Sg	04 48 13.9	+0.9
TRTR	Tortoreto Alta	0.62	44	Pg	Pg	04 48 06.5	+0.2
	30μm,0.9s						
TRTR	Tortoreto Alta	0.62	44	Pg	Pg	04 48 06.5	+0.2
	30μm,0.9s						
OFFI	Offida	0.62	25	P	Pg	04 48 06.4	-0.1
OFFI				S	Sb	04 48 17.2	+0.6
OFFI	Offida	0.62	25	⇑ePg	Pg	04 48 06.4	-0.1
OFFI	Offida	0.62	25	⇑ePg	Pg	04 48 06.4	-0.1
OFFI				S	Sb	04 48 17.2	+0.6
FDMO	Fiordimonte	0.69	345	Pg	Pg	04 48 06.9	-0.8
	2μm,0.8s						
FDMO	Fiordimonte	0.69	345	Pg	Pg	04 48 06.9	-0.8
	2μm,0.8s						
CESI	CESI - Serrava	0.71	334	Pg	Pg	04 48 07.3	-0.8
	2μm,0.6s						
CESI	CESI - Serrava	0.71	334	Pg	Pg	04 48 07.3	-0.8
	2μm,0.6s						
POFI	Posta Fibreno	0.71	156	Pg	Pg	04 48 07.6	-0.5
	2μm,0.8s						
POFI	Posta Fibreno	0.71	156	Pg	Pg	04 48 07.6	-0.5
	2μm,0.8s						

LPEL Lama dei Pelig 0.71 116 Pg Pg 04 48 06.5 -1.6
LPEL Sg Sg 04 48 17.8 +0.4
3µm,0.6s
LPEL Lama dei Pelig 0.71 116 Pg Pg 04 48 06.5 -1.6
LPEL Sg Sg 04 48 17.8 +0.4
3µm,0.6s
RMP Rome, Mte Porz 0.72 220 Pg Pg 04 48 07.4 -1.0
4µm,0.7s
RMP Rome, Mte Porz 0.72 220 Pg Pg 04 48 07.4 -1.0
4µm,0.7s
SDI San Donato 0.75 151 Pg Pg 04 48 07.6 -1.3
SDI San Donato 0.75 151 Pg Pg 04 48 07.6 -1.3
RDP Rocca di Papa 0.76 217 Pg Pg 04 48 08.2 -0.8
RDP Rocca di Papa 0.76 217 Pg Pg 04 48 08.2 -0.8
CAFR Castel Frentan 0.77 100 Pg Pg 04 48 08.2 -1.0
6µm,0.9s
CAFR Castel Frentan 0.77 100 Pg Pg 04 48 08.2 -1.0
6µm,0.9s
GIUL Giuliano Di Ro 0.81 184 Pg Pg 04 48 08.7 -1.3
3µm,0.8s
GIUL Giuliano Di Ro 0.81 184 Pg Pg 04 48 08.7 -1.3
3µm,0.8s
ASSB Assisi San Ben 0.83 324 Pg Pg 04 48 09.5 -1.0
ASSB Assisi San Ben 0.83 324 Pg Pg 04 48 09.5 -1.0
RNI2 Rionero Sannit 0.91 137 Pg Pg 04 48 10.2 -1.6
5µm,1.4s
RNI2 Rionero Sannit 0.91 137 Pg Pg 04 48 10.2 -1.6
5µm,1.4s
CERA Filignano 0.93 146 Pg Pg 04 48 10.5 -1.7
2µm,0.7s
CERA Filignano 0.93 146 Pg Pg 04 48 10.5 -1.7
2µm,0.7s
MIDA Miranda 1.00 136 Pg Pg 04 48 11.5 -2.2
1µm,0.7s
MIDA Miranda 1.00 136 Pg Pg 04 48 11.5 -2.2
1µm,0.7s
CING Cingoli 1.01 355 Pg Pg 04 48 12.5 -1.4
2µm,0.6s
CING Cingoli 1.01 355 Pg Pg 04 48 12.5 -1.4
2µm,0.6s
TOLF Tolfa 1.03 253 Pg Pg 04 48 13.2 -1.0
1µm,0.6s
TOLF Tolfa 1.03 253 Pg Pg 04 48 13.2 -1.0
1µm,0.6s
MGAB Montegabbione 1.05 302 Pg Pg 04 48 13.5 -1.1
MGAB Montegabbione 1.05 302 Pg Pg 04 48 13.5 -1.1
MURB Monte Urbino 1.07 327 Pg Pg 04 48 13.9 -1.1
6µm,0.9s
MURB Monte Urbino 1.07 327 Pg Pg 04 48 13.9 -1.1
6µm,0.9s
LATE Laterza 1.15 283 Pg Pg 04 48 16.4 -0.1
250nm,0.7s
LATE Laterza 1.15 283 Pg Pg 04 48 16.4 -0.1
250nm,0.7s
ARVD Arcevia 1.16 346 Pg Pg 04 48 15.5 -1.3
3µm,0.8s
ARVD Arcevia 1.16 346 Pg Pg 04 48 15.5 -1.3
3µm,0.8s
VAGA Valle Agricola 1.17 144 Pg Pg 04 48 15.9 -0.9
1µm,0.9s
VAGA Valle Agricola 1.17 144 Pg Pg 04 48 15.9 -0.9
1µm,0.9s
AOI Ancona 1.20 10 Pg Pb 04 48 15.8 -1.6
2µm,0.9s
AOI Ancona 1.20 10 Pg Pb 04 48 15.8 -1.6
2µm,0.9s
MODR Mondragone 1.29 161 Pn Pn 04 48 18.5 -0.3
400nm,1.3s
MODR Mondragone 1.29 161 Pn Pn 04 48 18.5 -0.3
400nm,1.3s
PIEI Pieia 1.30 334 Pn Pn 04 48 18.1 -0.9
1µm,0.7s
PIEI Pieia 1.30 334 Pn Pn 04 48 18.1 -0.9
1µm,0.7s
SENI Senigallia 1.34 357 Pn Pb 04 48 19.9 +0.1
2µm,0.9s
SENI Senigallia 1.34 357 Pn Pb 04 48 19.9 +0.1
2µm,0.9s
FSSB Fossombrone 1.38 343 Pn Pn 04 48 19.5 -0.6
2µm,0.5s
FSSB Fossombrone 1.38 343 Pn Pn 04 48 19.5 -0.6
2µm,0.5s
CAFI Castiglion Fio 1.39 314 Pn Pn 04 48 20.1 -0.1
1µm,0.8s
CAFI Castiglion Fio 1.39 314 Pn Pn 04 48 20.1 -0.1
1µm,0.8s
BADI Badiali 1.39 326 Pn Pn 04 48 20.4 +0.2
2µm,0.9s
BADI Badiali 1.39 326 Pn Pn 04 48 20.4 +0.2
2µm,0.9s
ARCI Arcidosso 1.45 290 Pn Pn 04 48 21.3 +0.2
475nm,1.0s
ARCI Arcidosso 1.45 290 Pn Pn 04 48 21.3 +0.2
475nm,1.0s
PARC Parchiule 1.51 328 Pn Pn 04 48 22.1 +0.3
1µm,0.8s
PARC Parchiule 1.51 328 Pn Pn 04 48 22.1 +0.3
1µm,0.8s
MAON Monte Argentar 1.63 273 Pn Pn 04 48 23.2 -0.2
433nm,0.6s
MAON Monte Argentar 1.63 273 Pn Pn 04 48 23.2 -0.2
433nm,0.6s
CSNT Castellina Chi 1.86 307 Pn Pn 04 48 27.4 +0.8
302nm,0.8s
CSNT Castellina Chi 1.86 307 Pn Pn 04 48 27.4 +0.8
302nm,0.8s
CASP Castiglione de 1.87 284 Pn Pn 04 48 26.9 +0.2
221nm,0.9s
CASP Castiglione de 1.87 284 Pn Pn 04 48 26.9 +0.2
221nm,0.9s
SFI Santa Sofia 1.88 325 Pn Pn 04 48 27.6 +0.7
678nm,1.1s
SFI Santa Sofia 1.88 325 Pn Pn 04 48 27.6 +0.7
678nm,1.1s
SGRT San Giovanni R 1.90 108 Pn Pn 04 48 28.0 +0.7
633nm,0.9s
SGRT San Giovanni R 1.90 108 Pn Pn 04 48 28.0 +0.7
633nm,0.9s
CRMI Carmignano 2.24 310 Pn Pb 04 48 33.6 -1.5
CRMI Carmignano 2.24 310 Pn Pb 04 48 33.6 -1.5
NVLJ Novalja 2.47 27 *i* Pn Pn 04 48 34.6 -0.4
NVLJ Sn Sn 04 49 05.1 -0.2
NVLJ Novalja 2.47 27 *i* Pn Pn 04 48 34.5 -0.4
NVLJ Sn Sn 04 49 05.0 -0.2
MAIM Mastiano 2.59 308 Pn Pn 04 48 38.4 +1.8
192nm,1.0s
MAIM Mastiano 2.59 308 Pn Pn 04 48 38.4 +1.8
192nm,1.0s
BDI Bagni Di Lucca 2.62 311 Pn Pn 04 48 38.2 +1.1
198nm,0.8s
BDI Bagni Di Lucca 2.62 311 Pn Pn 04 48 38.2 +1.1
198nm,0.8s
VLC Villacollemand 2.80 311 Pn Pn 04 48 41.2 +1.7
VLC S Sn 04 49 15.8 +2.3
VLC Villacollemand 2.80 311 Pn Pn 04 48 41.2 +1.7
VLC S Sn 04 49 15.8 +2.3
CUC Castrocucco 3.03 141 *e*Pn Pn 04 48 40.9 -1.8
CUC *e*S Sg 04 49 30.4 -1.2
CUC Castrocucco 3.03 141 *e*Pn Pn 04 48 40.9 -1.8
OSPF L'Ospedale 3.16 259 P Pn 04 48 43.1 -1.5
OSPF L'Ospedale 3.16 259 P Pn 04 48 43.1 -1.5
OSPF L'Ospedale 3.16 259 P Pn 04 48 43.1 -1.5
PGF Pioggiola 3.21 275 *e*Pn Pn 04 48 45.3 +0.1
PGF *e*Sn Sn 04 49 25.8 +2.1
100nm,0.9s
PGF Pioggiola 3.21 275 *e*Pn Pn 04 48 45.3 +0.1
PGF *e*Sn Sn 04 49 25.8 +2.1
50nm,0.9s
SKDS Skadanscina 3.22 9 *i* Pn Pn 04 48 44.6 -0.7
SKDS *i* Sn Sn 04 49 22.2 -1.6
SKDS
comp=Z,112nm,0.6s
SKDS Skadanscina 3.22 9 Pn Pn 04 48 44.6 -0.7
SKDS *i* Sn Sn 04 49 22.2 -1.6
comp=Z,112nm,0.6s
STON Ston 3.27 80 *e*Pn Pn 04 48 45.9 0.0
STON Sn Sn 04 49 24.3 -0.7
STON Ston 3.27 80 *e*Pn Pn 04 48 45.9 0.0
STON Sn Sn 04 49 24.3 -0.7
TRI Trieste 3.35 5 *e*Pn Pn 04 48 45.8 -1.3
TRI *e*S Sb 04 49 35.9 +0.8
TRI Trieste 3.35 5 *e*Pn Pn 04 48 45.8 -1.3
BOJS Bojanci 3.43 23 *e*Pn Pn 04 48 48.1 -0.1
BOJS *e*Sn Sn 04 49 31.8 +2.8
BOJS Bojanci 3.43 23 *e*Pn Pn 04 48 48.1 -0.1
BOJS *e*Sn Sn 04 49 31.8 +2.8

SC2M Scurtabo 3.43 308 P Pn 04 48 50.1 +1.8
JAVS Javornik 3.56 8 *i* Pn Pn 04 48 49.9 -0.3
JAVS Javornik 3.56 8 *i* Pn Pn 04 48 49.9 -0.3
BLY Banja Luka 3.68 48 *e*Pn Pn 04 48 52.3 +0.7
BLY Banja Luka 3.68 48 *e*Pn Pn 04 48 52.3 +0.7
VOY Vojsko 3.69 6 *e*Pn Pn 04 48 51.8 0.0
VOY Vojsko 3.69 6 *e*Pn Pn 04 48 51.8 0.0
POLC Polcenigo 3.71 351 Pn Pn 04 48 53.0 +1.0
comp=Z,304nm,0.7s
CRNS Crni Vrh 3.77 10 *i* Pn Pn 04 48 53.4 +0.4
HCY Herceg Novi 3.83 87 ⇑*i* Pn Pn 04 48 54.9 +1.3
HCY *e*Sn Sn 04 49 41.6 +2.7
HCY Herceg Novi 3.83 87 ⇓P Pn 04 48 55.0 +1.3
HCY S Sn 04 49 40.6 +1.8
HCY Herceg Novi 3.83 87 ⇓P Pn 04 48 55.0 +1.3
HCY S Sn 04 49 40.6 +1.8
HCY *e*Sn Sn 04 49 41.6 +2.7
SALO Salr 3.83 329 Pn Pn 04 48 55.0 +1.3
comp=Z,294nm,0.7s
SALO Salr 3.83 329 Pn Pn 04 48 55.0 +1.3
comp=Z,294nm,0.7s
CTI Castel Tesino 3.87 342 Pn Pn 04 48 55.0 +0.6
comp=Z,113nm,0.5s
CTI Castel Tesino 3.87 342 Pn Pn 04 48 55.0 +0.6
comp=Z,113nm,0.5s
BRY Bratogost 3.88 80 ⇑*i* Pn Pn 04 48 55.4 +0.8
BRY *e*Sn Sn 04 49 42.8 +2.4
BRY Bratogost 3.88 80 ⇓P Pn 04 48 55.7 +1.2
BRY S Sn 04 49 43.4 +3.0
BRY Bratogost 3.88 80 ⇑*i* Pn Pn 04 48 55.4 +0.8
BRY Bratogost 3.88 80 ⇓P Pn 04 48 55.7 +1.2
BRY *e*Sn Sn 04 49 42.8 +2.4
BRY S Sn 04 49 43.4 +3.0
VINO Villanova 3.89 360 Pn Pn 04 48 54.1 -0.4
comp=Z,121nm,0.7s
VINO Villanova 3.89 360 Pn Pn 04 48 54.1 -0.4
comp=Z,121nm,0.7s
PCP Piancastagn 4.10 304 P Pn 04 48 56.8 -0.7
TIP Timpagrande 4.12 140 *e*Pn Pn 04 48 54.8 -2.9
TIP Timpagrande 4.12 140 *e*Pn Pn 04 48 54.8 -2.9
BUM Brajici-Budva 4.13 89 ⇑*i* Pn Pn 04 48 59.3 +1.4
BUM *e*Sn Sn 04 49 48.4 +2.0
BUM Brajici-Budva 4.13 89 ⇑*i* Pn Pn 04 48 59.3 +1.4
BUM *e*Sn Sn 04 49 48.4 +2.0
VSL Villasalto 4.14 228 *e*Pn Pn 04 48 56.7 -1.3
VSL *e*S Sn 04 49 48.4 +1.7
VSL Villasalto 4.14 228 *e*Pn Pn 04 48 56.7 -1.3
VSL *e*S Sn 04 49 48.4 +1.7
UPM Unac-Piva 4.19 77 ⇓*i* Pn Pn 04 49 00.4 +1.6
UPM *e*Sn Sn 04 49 50.6 +2.5
UPM Unac-Piva 4.19 77 ⇓*i* Pn Pn 04 49 00.4 +1.6
UPM *e*Sn Sn 04 49 50.6 +2.5
NKY Niksic 4.21 82 ⇑*i* Pn Pn 04 49 00.3 +1.3
NKY *e*Sn Sn 04 49 50.6 +2.5
NKY Niksic 4.21 82 ⇓P Pn 04 49 00.8 +1.8
NKY S Sn 04 49 50.9 +2.5
NKY Niksic 4.21 82 ⇑*i* Pn Pn 04 49 00.3 +1.3
NKY Niksic 4.21 82 ⇓P Pn 04 49 00.8 +1.8
NKY *e*Sn Sn 04 49 50.9 +2.5
OBKA Obir 4.23 12 ⇑*i* Pn Pn 04 48 59.4 +0.1
SNR=9.6
OBKA Obir 4.23 12 Pn Pn 04 48 59.4 +0.1
SNR=9.6
PDG Podgorica 4.39 87 *e*Pn Pn 04 49 01.7 +0.3
PDG *e*Sn Sn 04 49 53.2 +0.5
PDG Podgorica 4.39 87 ⇑*i* Pn Pn 04 49 02.6 +1.2
PDG *e*Sn Sn 04 49 55.0 +2.2
TTG Podgorica 4.39 87 ⇑*i* Pn Pn 04 49 02.6 +1.2
TTG *e*Sn Sn 04 49 55.0 +2.2
TTG Podgorica 4.39 87 ⇑P Pn 04 49 03.0 +1.6
TTG S Sn 04 49 54.9 +2.2
TTG Podgorica 4.39 87 ⇑P Pn 04 49 03.0 +1.6
TTG S Sn 04 49 54.9 +2.2
ABTA Abfaltersbach 4.42 353 ⇑*i* Pn Pn 04 49 02.3 +0.5
SNR=61
ABTA Abfaltersbach 4.42 353 Pn Pn 04 49 02.3 +0.5
SNR=61
ULC Ulcinj 4.42 93 ⇓*i* Pn Pn 04 49 02.7 +0.9
ULC *e*Sn Sn 04 49 55.1 +1.7
ULC Ulcinj 4.42 93 ⇑P Pn 04 49 02.5 +0.7
ULC S Sn 04 49 54.1 +0.7
ULC Ulcinj 4.42 93 ⇓*i* Pn Pn 04 49 02.7 +0.9
ULC S Sn 04 49 54.1 +0.7
ULC *e*Sn Sn 04 49 55.1 +1.7
SAOF Saorge 4.52 293 P Pn 04 49 02.2 -1.0
SAOF Saorge 4.52 293 P Pn 04 49 02.2 -1.0
SAOF Saorge 4.52 293 P Pn 04 49 02.2 -1.0
PLE Pljevlja 4.56 76 ⇓*i* Pn Pn 04 49 05.4 +1.6
PLE *e*Sn Sn 04 49 59.6 +2.5
PLE Pljevlja 4.56 76 ⇓*i* Pn Pn 04 49 05.4 +1.6
PLE *e*Sn Sn 04 49 59.6 +2.5
SBF Sospel 4.56 291 *e*Pn Pn 04 49 04.3 +0.4
SBF *e*Sn Sn 04 49 55.5 -1.6
comp=Z,23nm,0.6s
SBF Sospel 4.56 291 *e*Pn Pn 04 49 04.3 +0.4
SBF *e*Sn Sn 04 49 55.5 -1.6
comp=Z,11nm,0.6s
REVF Revere 4.58 289 P Pn 04 49 02.7 -1.3
REVF Revere 4.58 289 P Pn 04 49 02.7 -1.3
REVF Revere 4.58 289 P Pn 04 49 02.7 -1.3
BBLS Lazići 4.69 69 *e*Pn Pn 04 49 05.3 -0.3
BBLS Lazići 4.69 69 *e*Pn Pn 04 49 05.3 -0.3
KBA Koelnbreinsper 4.71 0 ⇑*i* Pn Pn 04 49 06.9 +0.9
SNR=12
KBA Koelnbreinsper 4.71 0 Pn Pn 04 49 06.9 +0.9
SNR=12
TOUF Mont Tournerai 4.74 292 P Pn 04 49 06.0 -0.4
TOUF Mont Tournerai 4.74 292 P Pn 04 49 06.0 -0.4
TOUF Mont Tournerai 4.74 292 P Pn 04 49 06.0 -0.4
MVIF Mont Vial 4.77 291 P Pn 04 49 07.6 +0.8
MVIF Mont Vial 4.77 291 P Pn 04 49 07.6 +0.8
MVIF Mont Vial 4.77 291 P Pn 04 49 07.6 +0.8
BEY Berane 4.87 82 ⇑*i* Pn Pn 04 49 10.3 +2.2
BEY *e*Sn Sn 04 50 07.2 +2.5
IVA Berane 4.87 82 ⇑*i* Pn Pn 04 49 10.3 +2.2
IVA *e*Sn Sn 04 50 07.2 +2.5
PVY Plav 4.91 85 ⇑*i* Pn Pn 04 49 10.4 +1.7
PVY *e*Sn Sn 04 50 08.5 +2.8
PVY Plav 4.91 85 P Pn 04 49 10.4 +1.7
PVY S Sn 04 50 09.7 +4.0
CALN Calern 4.92 289 P Pn 04 49 08.2 -0.5
CALN Calern 4.92 289 P Pn 04 49 08.2 -0.5
CALN Calern 4.92 289 P Pn 04 49 08.2 -0.5
TIR Tirane 4.99 100 *e*Pn Pn 04 49 08.0 -1.6
TIR *e*S Sn 04 50 03.2 -4.3
TIR Tirane 4.99 100 *e*Pn Pn 04 49 10.0 +0.4
TIR Tirane 4.99 100 *e*Pn Pn 04 49 10.0 +0.4
TIR *e*S Sn 04 50 03.2 -4.3
TUE Stuetta 5.00 327 *e*Pn Pn 04 49 08.9 -1.0
comp=Z,51nm,1.3s
TUE *e*Sn Sn 04 50 05.8 -2.2
TUE Stuetta 5.00 327 *e*Pn Pn 04 49 08.9 -1.0
comp=Z,51nm,1.3s
TUE *e*Sn Sn 04 50 05.8 -2.2
FETA Feichten 5.01 339 ⇑*i* Pn Pn 04 49 11.4 +1.4
SNR=23
FETA Feichten 5.01 339 Pn Pn 04 49 11.4 +1.4
SNR=23
WTTA Wattenberg 5.04 347 ⇓*i* Pn Pn 04 49 11.5 +1.0
SNR=13
WTTA Wattenberg 5.04 347 Pn Pn 04 49 11.5 +1.0
SNR=13
FRF La Foret Royal 5.04 286 *e*Pn Pn 04 49 10.3 -0.1
FRF *e*Sn Sn 04 50 05.0 -3.9
comp=Z,7.8nm,0.6s
FRF La Foret Royal 5.04 286 *e*Pn Pn 04 49 10.3 -0.1
FRF *e*Sn Sn 04 50 05.0 -3.9
comp=Z,3.9nm,0.6s
DAVOX Davos/Dischmat 5.05 332 Pn Pn 04 49 10.9 +0.2
comp=Z,2.4nm,0.3s,baz=149,slow=16,SNR=30
DAVOX Sn Sn 04 50 09.2 -0.1
comp=Z,0.6nm,0.3s,baz=126,slow=22,SNR=3.2
LMR La Mourre 5.10 283 *e*Pn Pn 04 49 11.0 -0.2
LMR *e*Sn Sn 04 50 06.8 -3.5
comp=Z,7.1nm,0.6s
LMR La Mourre 5.10 283 *e*Pn Pn 04 49 11.0 -0.2
LMR *e*Sn Sn 04 50 06.8 -3.5
comp=Z,3.5nm,0.6s
WATA Walderalm 5.12 347 ⇑*i* Pn Pn 04 49 12.9 +1.3
SNR=16
WATA Walderalm 5.12 347 Pn Pn 04 49 12.9 +1.3
SNR=16

IVAS Ivanjica 5.15 74 ⇓*i* Pn Pn 04 49 12.1 +0.2
IVAS *e*Sn Sn 04 50 10.9 -0.7
IVAS Ivanjica 5.15 74 ⇓*i* Pn Pn 04 49 12.1 +0.2
IVAS *e*Sn Sn 04 50 10.9 -0.7
DIVS Divibare 5.17 68 *e*Pn Pn 04 49 12.1 -0.1
DIVS Divibare 5.17 68 *e*Pn Pn 04 49 12.1 -0.1
MOTA Moosalm 5.22 343 ⇓*i* Pn Pn 04 49 14.7 +1.7
SNR=18
MOTA Moosalm 5.22 343 Pn Pn 04 49 14.7 +1.7
SNR=18
MBDF Montbardon 5.32 299 *e*P Pn 04 49 16.2 +1.9
MBDF Montbardon 5.32 299 *e*P Pn 04 49 16.2 +1.9
RJOB Jochberg 5.38 356 *e*Pn Pn 04 49 17.3 +2.2
RETA Reutte 5.43 341 ⇑*i* Pn Pn 04 49 18.2 +2.4
SNR=8.1
RETA Reutte 5.43 341 Pn Pn 04 49 18.2 +2.4
SNR=8.1
TRUS Trudelj 5.49 68 *e*Pn Pn 04 49 15.4 -1.1
TRUS Trudelj 5.49 68 *e*Pn Pn 04 49 15.4 -1.1
DAVA Damuels 5.49 335 ⇑*i* Pn Pn 04 49 18.5 +1.8
SNR=13
DAVA Damuels 5.49 335 Pn Pn 04 49 18.5 +1.8
SNR=13
BNI Bardonecchia 5.51 301 *e*Pn Pn 04 49 18.1 +1.1
comp=Z,14nm,0.9s
BNI *e*S Sn 04 50 24.3 +3.7
BNI Bardonecchia 5.51 301 *e*Pn Pn 04 49 18.1 +1.1
comp=Z,14nm,0.9s
BNI *e*S Sn 04 50 24.3 +3.7
MOA Molln 5.52 7 ⇑*i* Pn Pn 04 49 17.1 +0.1
SNR=8.1
MOA Molln 5.52 7 Pn Pn 04 49 17.1 +0.1
SNR=8.1
GRUS Gruza 5.62 72 *e*Pn Pn 04 49 18.4 +0.2
GRUS *e*Sn Sn 04 50 22.8 -0.1
GRUS Gruza 5.62 72 *e*Pn Pn 04 49 18.4 +0.2
GRUS *e*Sn Sn 04 50 22.8 -0.1
LPG La Plagne 5.69 306 *e*P Pn 04 49 21.9 +2.4
LPG La Plagne 5.69 306 *e*P Pn 04 49 21.9 +2.4
SELS Selova 5.80 79 ⇓*i* Pn Pn 04 49 21.6 +0.9
SELS Selova 5.80 79 ⇓*i* Pn Pn 04 49 21.6 +0.9
SMRF Simiane la Rot 5.89 288 *e*P Pn 04 49 23.5 +1.4
SMRF Simiane la Rot 5.89 288 *e*P Pn 04 49 23.5 +1.4
BARS Barje 6.28 83 ⇑*i* Pn Pn 04 49 27.8 +0.4
BARS *e*Sn Sn 04 50 37.8 -1.6
GEC2 GERESS Array S 6.48 2 *e*Pn Pn 04 49 31.1 +0.9
GERES GERESS Array B 6.48 2 Pn Pn 04 49 29.2 -1.0
comp=Z,0.3nm,0.3s,baz=186,slow=11,SNR=24
GERES Sn Sn 04 50 42.3 -2.2
comp=Z,2.8nm,0.3s,baz=179,slow=21,SNR=12
FELD Feldberg im Sc 6.67 327 P Pn 04 49 31.7 -1.1
FELD Feldberg im Sc 6.67 327 P Pn 04 49 31.7 -1.1
CABF La Chapelle 6.69 312 *e*Pn Pn 04 49 33.4 +0.3
CABF La Chapelle 6.69 312 *e*Pn Pn 04 49 33.4 +0.3
KHC Kasperske Hory 6.77 1 *e*Pn Pn 04 49 31.8 -2.2
comp=Z,7.7nm,0.6s
KHC *e*S Sn 04 50 48.2 -3.1
KHC Kasperske Hory 6.77 1 *e*PN Pn 04 49 35.0 +0.9
KHC *ex* x 04 49 47.0
KHC *e*SN Sn 04 50 48.4 -2.9
KHC *ex* x 04 51 03.0
KHC Kasperske Hory 6.77 1 Pn Pn 04 49 35.0 +0.9
KHC Sn Sn 04 50 48.4 -2.9
WET Wettzell 6.78 358 *e*Pn Pn 04 49 35.3 +1.0
ZAPS Zavoj 6.90 79 ⇑*i* Pn Pn 04 49 37.4 +1.5
ZAPS *e*Sn Sn 04 50 52.1 -2.6
BFO Black Forest 6.92 331 *e*Pn Pn 04 49 36.8 +0.6
BFO Black Forest 6.92 331 *e*Pn Pn 04 49 32.8 -3.4
comp=Z,7.0nm,0.8s
BFO *e*S Sn 04 50 54.3 -0.8
SSB Saint Sauveur 6.99 298 *e*Pn Pn 04 49 39.4 +2.3
SSB Saint Sauveur 6.99 298 *e*Pn Pn 04 49 39.4 +2.3
MOF Molkenrain 7.02 323 P Pn 04 49 35.9 -1.6
MOF Molkenrain 7.02 323 P Pn 04 49 35.9 -1.6
MOF Molkenrain 7.02 323 P Pn 04 49 35.9 -1.6
HINF Hinteralfeld 7.12 322 *e*Pn Pn 04 49 38.0 -0.9
HINF *e*Sn Sn 04 50 55.3 -4.6
comp=Z,24nm,0.6s
HINF Hinteralfeld 7.12 322 *e*Pn Pn 04 49 38.0 -0.9
VYHS Vyhne 7.25 30 *e*PN Pn 04 49 42.2 +1.6
VYHS *e*SN Sn 04 50 55.2 -7.9
VYHS Vyhne 7.25 30 *e*Pn Pn 04 49 42.2 +1.6
KKB Krupnik 7.27 91 P Pn 04 49 42.4 +1.4
KKB Krupnik 7.27 91 P Pn 04 49 42.4 +1.4
ECH Echery 7.29 325 *e*Pn Pn 04 49 38.8 -2.4
comp=Z,6.2nm,0.6s
ECH *e*S Sn 04 51 01.6 -2.5
ECH Echery 7.29 325 P Pn 04 49 40.4 -0.8
ECH Echery 7.29 325 *e*Pn Pn 04 49 38.8 -2.4
comp=Z,6.2nm,0.6s
ECH Echery 7.29 325 P Pn 04 49 40.4 -0.8
ECH *e*S Sn 04 51 01.6 -2.5
VRAC Vranov 7.31 17 LR LR 04 52 41.3
comp=Z,374nm,21.4s,baz=15,slow=40
VTS Vitosha 7.31 85 P Pn 04 49 42.7 +1.1
VTS Vitosha 7.31 85 P Pn 04 49 42.7 +1.1
KEST Kesra 7.31 206 *e*Pn Pn 04 49 46.0 +4.3
KEST Kesra 7.31 206 Pn Pn 04 49 45.3 +3.7
comp=Z,1.6nm,0.3s,baz=300,slow=3.7,SNR=40
CDF Champ du Feu 7.39 327 *e*Pn Pn 04 49 42.0 -0.7
CDF *e*Sn Sn 04 51 01.4 -5.4
comp=Z,42nm,0.7s
CDF Champ du Feu 7.39 327 *e*Pn Pn 04 49 42.0 -0.7
ROTZ Rotzenmuhle 7.44 354 *e*Pn Pn 04 49 43.5 +0.2
GRF Grafenberg Arr 7.47 349 *e*Pn Pn 04 49 43.1 -0.6
HAU Haudompre 7.49 321 *e*Pn Pn 04 49 43.5 -0.4
HAU *e*Sn Sn 04 51 02.3 -6.7
comp=Z,25nm,0.6s
HAU Haudompre 7.49 321 *e*Pn Pn 04 49 43.5 -0.4
PRU Pruhonice 7.67 6 *e*PN Pn 04 49 46.6 +0.2
PRU *e*SN Sn 04 51 09.3 -4.1
PRU Pruhonice 7.67 6 Pn Pn 04 49 46.6 +0.2
MMB Musomiste 7.79 92 P Pn 04 49 49.5 +1.4
MMB Musomiste 7.79 92 P Pn 04 49 49.5 +1.4
LBL Lubilhac 7.83 295 P Pn 04 49 48.5 -0.2
LBL Lubilhac 7.83 295 P Pn 04 49 48.5 -0.2
LBL Lubilhac 7.83 295 P Pn 04 49 48.5 -0.2
NKC Novy Kostel 7.89 356 *e*SN Sn 04 51 16.2 -2.7
NKC Novy Kostel 7.89 356 Sn Sn 04 51 16.2 -2.7
MORC Moravsky Berou 7.97 20 *e*Pn Pn 04 49 50.2 -0.3
comp=Z,2.9nm,0.6s
MORC Moravsky Berou 7.97 20 *e*Pn Pn 04 49 50.2 -0.3
comp=Z,2.9nm,0.6s
PGB Panagyurishte 8.02 85 P Pn 04 49 52.6 +1.3
PGB Panagyurishte 8.02 85 P Pn 04 49 52.6 +1.3
LOR Lormes 8.32 309 *e*Pn Pn 04 49 55.0 -0.4
LOR *e*Sn Sn 04 51 24.5 -5.0
comp=Z,13nm,0.7s
LOR Lormes 8.32 309 *e*Pn Pn 04 49 55.0 -0.4
MOX Moxa 8.36 352 *e*Pn Pn 04 49 57.0 +1.1
CLL Collm 8.95 359 *e*Pn Pn 04 50 05.0 +1.1
CLL *e*Sn Sn 04 51 37.0 -7.8
CLL *e*Sb1 04 52 12.0
CLL *e*Sb2 04 52 35.0
CLL *e*Sg Sg 04 52 49.0 +7.7
MLR Muntele Rosu 9.62 67 Pn Pn 04 50 16.3 +2.9
comp=Z,0.1nm,0.3s,baz=238,slow=6.1,SNR=9.8
KWP Kalwaria Pacla 9.76 39 *e*Pn Pn 04 50 13.4 -1.7
comp=Z,19nm,1.1s
KWP Kalwaria Pacla 9.76 39 *e*Pn Pn 04 50 13.4 -1.7
comp=Z,19nm,1.1s
BUR08 Bucovina Ar. S 9.92 54 *e*Pn Pn 04 50 17.8 +0.4
BUR08 Bucovina Ar. S 9.92 54 *e*Pn Pn 04 50 17.8 +0.4
ESDC Sonseca Array 13.33 264 Pn Pn 04 51 03.8 -0.2
comp=Z,0.1nm,0.3s,baz=66,slow=14,SNR=3.0
BRTR Keskin Array B 15.55 93 Pn Pn 04 51 36.1 +2.0
comp=Z,0.0nm,0.3s,baz=301,slow=12,SNR=2.9
NB2 NORSAR Subarra 18.74 357 P P 04 52 12.5 -1.0
comp=Z,3.0nm,1.1s,baz=170,slow=11
NB2 NORSAR Subarra 18.74 357 P P 04 52 12.5 -1.0
comp=Z,3.0nm,1.1s,baz=170,slow=10,SNR=4.4
NOA NORSAR Array B 18.74 357 P P 04 52 13.7 +0.2
comp=Z,0.1nm,0.3s,baz=172,slow=9.6,SNR=3.2
FINES FINESS Array B 20.59 18 P P 04 52 33.9 +0.3
comp=Z,3.9nm,0.8s,baz=199,slow=9.5,SNR=5.9
TOA0 Torodi Ar. Sit 30.82 203 *e*P P 04 54 09.3 -1.5
TOA0 Torodi Ar. Sit 30.82 203 *e*P P 04 54 09.3 -1.5
TORD Torodi Ar. Bea 30.82 203 P P 04 54 11.2 +0.4
comp=Z,0.5nm,0.5s,baz=16,slow=7.9,SNR=9.9
MKAR Makanchi Array 47.88 60 P P 04 56 33.4 +0.5
comp=Z,0.5nm,0.6s,baz=291,slow=6.6,SNR=7.8
SONM Songino Array 62.00 50 P P 04 58 16.3 +1.2
comp=Z,0.6nm,0.8s,baz=286,slow=11,SNR=5.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar**	**67.47**	**337**	P	**P**	**04 58 50.9**	**+0.6**
	comp=Z,0.2nm,0.7s,baz=40,slow=5.5,SNR=8.2						

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*IDC **06** 04:50:31.6±5.7, 36.°11N×70.°74E, h126km±50km, mb3.4/8, mb1 3.5/12, mb1mx3.2/32, mbtmp3.4/12, Error ellipse: s-maj=39.6km s-min=18.8km az=32.0*
*ISCJB **06** 04:50:36.7±0.7, 36.°57N±0.°06×70.°90E±0.°08, h188km, mb3.4/7, Error ellipse: s-maj=9.1km s-min=7.8km az=18.9*
*NNC **06** 04:50:40.5±5.1, 36.°91N×70.°61E, h172km±45km, mb3.0, mpv4.3, Error ellipse: s-maj=42.9km s-min=24.9km az=15.0*
ISC 06 04:50:36.6±0.8**, 36.°49N**±0.°07×**71.°0E**±0.°1**, h188**km**, n33,** σ**1.s70**/36**, mb3.5**/7**, 3C-10D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.76**	**165**	⇓P	**Pn**	**04 51 21.3**	**-1.7**
CEP				S	**Sn**	**04 51 56.0**	**-3.1**
AML	**Almayashu**	**6.00**	**19**	P	**Pn**	**04 52 04.2**	**+0.3**
	SNR=295						
UCH	**Uchtor**	**6.33**	**24**	P	**Pn**	**04 52 09.0**	**+0.6**
	SNR=5.1						
KZA	**Kyzart**	**6.47**	**29**	P	**Pn**	**04 52 10.2**	**+0.1**
	SNR=15						
EKS2	**Erkin-Say**	**6.52**	**18**	P	**Pn**	**04 52 11.1**	**+0.6**
	SNR=23						
KK31	**Karatay Array**	**6.62**	**357**	⇓P	**Pn**	**04 52 10.8**	**-0.8**
	11nm,0.2s,baz=176,slow=13,SNR=595						
KK31				⇓S	Sn	04 53 21.3	-5.5
	15nm,0.9s,baz=185,slow=21,SNR=9.7						
AAK	**Ala-Archa**	**6.69**	**23**	P	**Pn**	**04 52 13.7**	**+0.9**
	SNR=36						
AAK	**Ala-Archa**	**6.69**	**23**	P	**Pn**	**04 52 13.6**	**+0.8**
	7.6nm,0.3s,baz=196,slow=11,SNR=73						
AAK				S	**Sn**	**04 53 28.0**	**-0.9**
	2.3nm,0.3s,baz=333,slow=22,SNR=12						
CHMS	**Chumysh**	**7.10**	**23**	P	**Pn**	**04 52 18.6**	**+0.6**
	SNR=17						
USP	**Ospenovka**	**7.27**	**20**	P	**Pn**	**04 52 21.1**	**+0.8**
	SNR=25						
TKM2	**Tokmak 2**	**7.32**	**27**	⇓P	**Pn**	**04 52 21.6**	**+0.5**
	4.4nm,0.4s						
TKM2				⇓S	**Sn**	**04 53 42.1**	**-1.8**
	6.5nm,0.6s						
TKM2	**Tokmak 2**	**7.32**	**27**	P	**Pn**	**04 52 21.8**	**+0.7**
	SNR=14						
DDI	**Dehra Dun**	**8.51**	**134**	*e*x	x	04 53 39.0	
MK31	**Makanchi Array**	**13.28**	**36**	⇑P	**P**	**04 53 40.5**	**-0.6**
	0.3nm,0.4s,baz=206,slow=10,SNR=6.9						
MKAR	**Makanchi Array**	**13.28**	**36**	P	**P**	**04 53 40.3**	**-0.8**
	0.1nm,0.3s,baz=221,slow=15,SNR=5.9						
AB31	**Akbulak array**	**15.10**	**331**	P	**Pn**	**04 53 58.8**	**-1.5**
	2.2nm,0.6s,baz=139,slow=14,SNR=75						
AB31				⇑S	S	04 56 40.3	-8.7
	1.4nm,0.5s,baz=153,slow=24,SNR=13						
KURK	**Kurchatov**	**15.23**	**19**	⇑P	**Pn**	**04 54 02.0**	**+0.1**
	2.4nm,0.9s						
VOSK	**Vostochnaya**	**16.23**	**360**	⇓P	**Pn**	**04 54 14.2**	**+0.2**
	1.3nm,0.8s						
ZRNK	**Zerenda**	**16.52**	**356**	⇓P	**P**	**04 54 16.8**	**0.0**
	1.9nm,0.9s						
BVA0	**Borovoye Array**	**16.54**	**359**	P	**Pn**	**04 54 17.7**	**0.0**
	0.3nm,0.7s,baz=223,slow=42,SNR=4.0						
BVAR	**Borovoye Array**	**16.54**	**359**	P	**Pn**	**04 54 22.0**	**+4.3**
	0.5nm,0.3s,baz=172,slow=12,SNR=16						
BRVK	**Borovoye**	**16.57**	**358**	⇓P	**P**	**04 54 16.8**	**-0.6**
	3.6nm,0.6s						
AKTO	**Aktyubinsk**	**16.80**	**330**	⇓P	**P**	**04 54 19.0**	**-0.8**
	0.7nm,0.8s						
AKTO				⇓S	**S**	**04 57 20.7**	**-4.6**
	0.5nm,0.7s						
AKTO	**Aktyubinsk**	**16.80**	**330**	P	**Pn**	**04 54 21.8**	**+0.9**
	0.5nm,0.3s,baz=140,slow=14,SNR=18						
AKTO				S	**S**	**04 57 24.0**	**-1.3**
	0.2nm,0.3s,baz=224,slow=24,SNR=6.6						
ZALV	**Zalesovo Beam**	**19.91**	**24**	P	**Pn**	**04 54 57.0**	**-0.7**
	3.2nm,0.4s,baz=221,slow=11,SNR=16						
FINES	**FINESS Array B**	**37.50**	**326**	P	**P**	**04 57 34.6**	**+2.8**
	1.1nm,0.7s,baz=104,slow=8.0,SNR=3.5						
ARCES	**ARCESS Array B**	**41.16**	**338**	P	P	04 58 05.3	+3.2
	0.8nm,0.5s,baz=104,slow=8.1,SNR=7.4						
HFS	**Hagfors**	**43.09**	**322**	P	**P**	**04 58 19.8**	**+2.1**
	2.0nm,0.6s,baz=124,slow=13,SNR=5.9						
NB2	**NORSAR Subarra**	**44.40**	**323**	P	**P**	**04 58 30.0**	**+1.8**
	comp=Z,0.7nm,0.5s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.40**	**323**	P	**P**	**04 58 30.1**	**+1.8**
	comp=Z,1.2nm,0.6s,baz=99,slow=8.0,SNR=6.1						
TORD	**Torodi Ar. Bea**	**65.74**	**269**	P	**P**	**05 01 01.4**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=48,slow=5.8,SNR=6.5						
WRA	**Warramunga Arr**	**81.97**	**122**	P	**P**	**05 02 37.6**	**+2.0**
	comp=Z,0.1nm,0.4s,baz=328,slow=5.1,SNR=4.6						
ASAR	**Alice Springs**	**84.23**	**125**	P	**P**	**05 02 49.3**	**+2.2**
	comp=Z,0.3nm,0.6s,baz=335,slow=5.3,SNR=3.0						

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*ISCJB **06** 04:51:35.7±0.7, 10.°86N±0.°02×67.°89W±0.°02, h3km±5km, mb4.5/46, MS3.9/4, Error ellipse: s-maj=3.2km s-min=3.0km az=14.1*
*NEIC **06** 04:51:37.3, 10.°80N×67.°90W, h1km, mb4.6/23, MW4.4(CAR), After CAR.*
NEIC Felt [III] at Caracas. Also felt at Chacao, El Limon, Moron, Puerto Cabello and Valencia.
*FUNV **06** 04:51:38.1, 10.°77N×67.°90W, h4km, MW4.4*
*IDC **06** 04:51:39.6±4.6, 10.°80N×67.°89W, h20km±29km, mb4.1/26, mb1 4.2/29, mb1mx4.2/35, mbtmp4.1/29, ML3.6/1, MS3.8/5, Ms1 3.8/5, ms1mx3.4/39, Error ellipse: s-maj=12.2km s-min=10.3km az=106.0*
ISC 06 04:51:37.6±1.1**, 10.°83N**±0.°03×**67.°90W**±0.°02**, h7**km±7km**, n334,** σ**0.s95**/350**, mb4.5**/46**, MS3.9**/4**, 113C-105D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURV	**Turiamo**	**0.38**	**171**	⇓*e*P	**Pg**	**04 51 44.4**	**-0.6**
TURV				*e*S	**Sg**	**04 51 48.6**	**-1.4**
JACV	**Jacura**	**0.95**	**286**	⇑*e*P	**Pn**	**04 51 58.4**	**+1.0**
JACV				*e*S	**Sb**	**04 52 10.1**	**+0.9**
FDCV	**FORTIN DE LA C**	**0.97**	**107**	*e*P	**Pg**	**04 51 56.1**	**-0.3**
FDCV				*e*S	**Sb**	**04 52 10.3**	**+0.3**
FUNV	**FUNVISIS**	**1.13**	**108**	⇓*e*P	**Pg**	**04 51 58.5**	**-0.8**
FUNV				*e*S	**Sg**	**04 52 13.8**	**-0.2**
LLAV	**El Llanito**	**1.13**	**108**	*e*P	**Pg**	**04 51 58.6**	**-0.7**
LLAV				*e*S	**Sg**	**04 52 13.8**	**-0.3**
MAPV	**Macapo**	**1.13**	**209**	⇑*e*P	**Pg**	**04 51 58.3**	**-1.1**
MAPV				*e*S	**Sg**	**04 52 13.0**	**-1.0**
TEPV	**Terepaima**	**1.53**	**236**	⇑*e*P	**Pn**	**04 52 04.4**	**-1.1**
BIRV	**Birongo**	**1.64**	**102**	⇓*e*P	**Pn**	**04 52 06.0**	**-0.9**
BIRV				*e*S	**Sn**	**04 52 28.0**	**-0.2**
BAUV	**El Baul**	**1.88**	**184**	⇓*e*P	**Pn**	**04 52 09.4**	**-0.7**
BAUV				*e*S	**Sn**	**04 52 33.9**	**-0.1**
SIQV	**Siquisique**	**1.88**	**265**	⇑*e*P	**Pn**	**04 52 09.4**	**-0.9**
SIQV				*e*S	**Sn**	**04 52 34.1**	**-0.2**
SANV	**Sanarito**	**2.08**	**231**	⇑*e*P	**Pn**	**04 52 12.7**	**-0.4**
SANV				*e*S	**Sn**	**04 52 38.4**	**-0.8**
CURV	**Curarigua**	**2.18**	**248**	⇑*e*P	**Pn**	**04 52 13.6**	**-0.8**
CURV				*e*S	**Sn**	**04 52 41.6**	**-0.1**
CUPV	**Cœpira**	**2.21**	**110**	⇓*i*P	**Pn**	**04 52 15.1**	**+0.3**
MERV	**Las Mercedes**	**2.22**	**135**	⇓*e*P	**Pn**	**04 52 15.0**	**+0.1**
MONV	**Montecano**	**2.32**	**299**	⇑*e*P	**Pn**	**04 52 15.7**	**-0.5**
QARV	**Quebrada Arrib**	**2.65**	**257**	⇑*e*P	**Pn**	**04 52 21.4**	**+0.5**
DABV	**Dabajuro**	**2.69**	**272**	⇑*e*P	**Pn**	**04 52 20.4**	**-0.9**
PCRV	**Puerto La Cruz**	**3.27**	**101**	*e*P	**Pn**	**04 52 30.4**	**+1.0**
SDV	**Santo Domingo**	**3.31**	**235**	*e*Pn	**Pn**	**04 52 30.6**	**+0.5**
SDV				*e*Pg	**Pg**	**04 52 40.3**	**-0.9**
SDV				S	**Sb**	**04 53 15.7**	**-1.7**
PRGV	**PARIAGUAN**	**3.81**	**122**	⇓*e*P	**Pn**	**04 52 36.3**	**-0.5**
SOCV	**Socops**	**3.86**	**229**	⇑*i*P	**Pn**	**04 52 37.1**	**-0.3**
VIGV	**El Vigia**	**3.94**	**240**	⇑*e*P	**Pn**	**04 52 38.5**	**-0.1**
ELOV	**Elorza**	**4.11**	**202**	⇓*e*P	**Pn**	**04 52 41.1**	**+0.3**
CAPV	**Capacho**	**5.25**	**236**	⇑*e*P	**Pn**	**04 52 56.4**	**-0.5**
GURV	**El Guri**	**5.65**	**122**	*e*P	**Pn**	**04 53 00.6**	**-1.5**
GRGR	**Grenville**	**6.26**	**77**	*e*Pn	**Pn**	**04 53 09.0**	**-1.5**
	332nm,1.0s						
GRGR				*e*Sn	Sn	04 54 15.6	-6.7
CRPR	**Cabo Rojo, PR**	**7.18**	**6**	*e*Pn	**Pn**	**04 53 24.0**	**+1.0**
	22nm,0.4s						
CRPR				*e*Sn	Sn	04 54 34.0	-11
OBIP	**Obispado Ponce**	**7.28**	**10**	*e*Pn	**Pn**	**04 53 23.9**	**-0.6**
	102nm,0.6s						
OBIP				*e*Sn	Sn	04 54 37.0	-11
CELP	**Cerrillos**	**7.32**	**10**	*e*Pn	**Pn**	**04 53 24.4**	**-0.6**
CELP				*e*Sn	Sn	04 54 38.2	-10
LSP	**Las Mesas**	**7.35**	**6**	*e*Pn	**Pn**	**04 53 26.4**	**+0.9**
LSP				*e*Sn	**Sn**	**04 54 43.9**	**-5.3**
SJG	**San Juan**	**7.44**	**13**	*e*Pn	**Pn**	**04 53 25.5**	**-1.1**
	92nm,0.8s						
SJG				*e*Sn	Sn	04 54 39.6	-12
SJG	**San Juan**	**7.44**	**13**	Pn	**Pn**	**04 53 25.6**	**-1.0**
	16nm,0.3s,baz=176,slow=12,SNR=42						
SJG				Sn	Sn	04 54 42.2	-9.1
	65nm,0.3s,baz=326,slow=18,SNR=15						
SJG				LR	LR	04 56 39.2	
	comp=Z,235nm,20.4s,baz=72,slow=40						
LRS	**Lares**	**7.49**	**8**	*e*Pn	**Pn**	**04 53 27.5**	**+0.1**
LRS				*e*Sn	Sn	04 54 44.3	-8.4
MTP	**Monte Pirata**	**7.58**	**17**	*e*Pn	**Pn**	**04 53 27.7**	**-0.8**
	42nm,0.6s						
MTP				*e*Sn	Sn	04 54 44.1	-11
AGPR	**Aguadilla, PR**	**7.63**	**6**	*e*Pn	**Pn**	**04 53 30.5**	**+1.2**
	77nm,0.4s						
AGPR				*e*Sn	Sn	04 54 49.1	-7.0
FDF	**Fort de France**	**7.64**	**59**	*e*Pn	**Pn**	**04 53 27.3**	**-2.2**
	90nm,0.4s						
FDF				*e*Sn	Sn	04 54 47.8	-8.7
FDF	**Fort de France**	**7.64**	**59**	*e*P	Sn	04 54 48.6	-7.9
FDF				*e*S	Sb	04 55 09.8	-12
CBYP	**Canovanas**	**7.66**	**15**	*e*Pn	**Pn**	**04 53 28.9**	**-0.8**
	46nm,0.3s						
CBYP				*e*Sn	Sn	04 54 49.4	-7.5
LZG	**Guadaloupe-1**	**7.96**	**48**	*e*P	Pn	04 53 30.0	-3.8
PHG	**Guadaloupe-2**	**7.98**	**49**	*e*P	**Pn**	**04 53 31.3**	**-2.9**
STVI	**Saint Thomas**	**8.01**	**21**	*e*Pn	**Pn**	**04 53 33.2**	**-1.2**
	26nm,0.6s						
STVI				*e*Sn	Sn	04 54 56.2	-9.1
ROSC	**El Rosal**	**8.70**	**228**	Pn	**Pn**	**04 53 45.6**	**+1.3**
ROSC				Sn	**Sn**	**04 55 24.8**	**+1.8**
ROSC	**El Rosal**	**8.70**	**228**	Pn	**Pn**	**04 53 45.6**	**+1.3**
	5.3nm,0.3s,baz=83,slow=8.9,SNR=52						
ROSC				Sn	**Sn**	**04 55 24.8**	**+1.8**
	7.4nm,0.3s,baz=89,slow=22,SNR=6.2						
SDDR	**Presa de Saban**	**8.74**	**338**	*e*Pn	**Pn**	**04 53 45.6**	**+1.0**
	27nm,0.7s						
SDDR				*e*Sn	**Sn**	**04 55 18.7**	**-4.9**
OTAV	**Otavalo**	**14.85**	**226**	*e*Pn	**Pn**	**04 55 10.2**	**+1.6**
	88nm,1.0s						
JTS	**JuntasAbangare**	**16.77**	**270**	*e*Pn	**Pn**	**04 55 33.4**	**+0.2**
	38nm,1.2s						
JTS	**JuntasAbangare**	**16.77**	**270**	Pn	**Pn**	**04 55 34.2**	**+0.9**
	0.2nm,0.3s,baz=92,slow=13,SNR=7.0						
SAML	**Samuel**	**20.20**	**166**	*e*P	**P**	**04 56 12.6**	**-0.5**
	1.4nm,0.4s						
SAML				S	**S**	**05 00 00.8**	**+0.7**
ATAH	**Atahualpa**	**20.68**	**211**	P	**P**	**04 56 19.9**	**+1.1**
ATAH				S	**S**	**05 00 09.9**	**-0.5**
ATAH	**Atahualpa**	**20.68**	**211**	P	**P**	**04 56 19.9**	**+1.1**
	9.7nm,0.8s,baz=8.3,slow=9.5,SNR=6.8						
ATAH				S	**S**	**05 00 09.9**	**-0.5**
	1.9nm,0.6s,baz=29,slow=19,SNR=2.2						
TEIG	**Tepich**	**21.72**	**298**	P	**P**	**04 56 30.9**	**+1.3**
TEIG	**Tepich**	**21.72**	**298**	P	**P**	**04 56 30.9**	**+1.3**
	9.0nm,0.8s,baz=108,slow=6.4,SNR=3.4						
LPAZ	**La Paz**	**26.94**	**180**	*e*P	**P**	**04 57 19.7**	**-0.9**
	9.7nm,1.2s						
LPAZ	**La Paz**	**26.94**	**180**	P	**P**	**04 57 20.0**	**-0.6**
	3.0nm,0.6s,baz=27,slow=8.0,SNR=9.3						
SIV	**San Ignacio**	**27.49**	**166**	P	**P**	**04 57 23.6**	**-1.2**
SIV	**San Ignacio**	**27.49**	**166**	P	**P**	**04 57 23.6**	**-1.2**
	1.6nm,0.5s,baz=12,slow=11,SNR=9.2						
SIV				LR	LR	05 08 48.1	
	comp=Z,239nm,18.6s,slow=38						
BDFB	**Brasilia**	**32.85**	**143**	P	**P**	**04 58 12.9**	**+0.5**
BDFB	**Brasilia**	**32.85**	**143**	P	**P**	**04 58 12.9**	**+0.5**
	1.5nm,0.8s,baz=342,slow=10,SNR=3.6						
SIUC	**Southern Illin**	**32.91**	**328**	*e*P	**P**	**04 58 13.4**	**+0.8**
	20nm,0.8s						
SFIN	**Scholer Farm**	**33.98**	**333**	⇑P	**P**	**04 58 24.3**	**+2.4**
	baz=34						
532A	**Rocksprings**	**35.41**	**308**	⇓P	**P**	**04 58 35.8**	**+1.2**
	baz=36						
TUL1	**Tulsa**	**35.52**	**319**	⇑P	**P**	**04 58 35.7**	**+0.4**
	baz=36						
631A	**Perdido Creek**	**35.64**	**306**	⇑P	**P**	**04 58 37.6**	**+1.2**
	baz=36						
432A	**Menard**	**35.66**	**309**	⇑P	**P**	**04 58 37.5**	**+0.9**
	baz=36						
332A	**Millersview**	**35.86**	**310**	⇑P	**P**	**04 58 38.7**	**+0.4**
	baz=36						
RCBR	**Riachuelo**	**35.90**	**116**	P	**P**	**04 58 39.0**	**+0.2**
RCBR	**Riachuelo**	**35.90**	**116**	P	**P**	**04 58 39.0**	**+0.2**
	6.0nm,0.8s,baz=278,slow=6.0,SNR=8.0						
531A	**Rocksprings**	**35.93**	**307**	⇑P	**P**	**04 58 39.7**	**+0.8**
	baz=36						
232A	**Coleman**	**36.02**	**310**	⇓P	**P**	**04 58 39.8**	**+0.1**
	baz=36						
431A	**Sonora**	**36.20**	**308**	⇓P	**P**	**04 58 42.3**	**+1.0**
	baz=36						
331A	**San Angelo**	**36.34**	**309**	⇓P	**P**	**04 58 42.7**	**+0.2**
	baz=36,SNR=7.5						
ABTX	**Abilene, Hawle**	**36.37**	**312**	⇓P	**P**	**04 58 43.4**	**+0.8**
	baz=36						
530A	**J-C Ranch, Com**	**36.55**	**307**	⇓P	**P**	**04 58 46.3**	**+2.1**
	baz=37						
231A	**Bronte**	**36.55**	**310**	⇑P	**P**	**04 58 44.6**	**+0.4**
	baz=37						
Z32A	**Haskell**	**36.59**	**313**	⇑P	**P**	**04 58 45.2**	**+0.6**
	baz=37						
430A	**Baggett Ranch,**	**36.73**	**308**	⇓P	**P**	**04 58 48.0**	**+2.1**
	baz=37						
330A	**Mertzon**	**36.96**	**309**	⇑P	**P**	**04 58 48.4**	**+0.7**
	baz=37						
Z31A	**Sharp Cattle R**	**37.08**	**312**	⇑P	**P**	**04 58 49.2**	**+0.5**
	baz=37						
429A	**Davenport Ranc**	**37.18**	**307**	⇓P	**P**	**04 58 51.1**	**+1.5**
	baz=37						
529A	**Stev Forest Ra**	**37.23**	**306**	⇓P	**P**	**04 58 52.4**	**+2.3**
	baz=37						
Y31A	**Rekieta Farm,**	**37.49**	**313**	⇑P	**P**	**04 58 53.1**	**+0.9**
	baz=38						
628A	**Black Gap, Mar**	**37.52**	**305**	⇓P	**P**	**04 58 54.2**	**+1.7**
	baz=38						
329A	**Wagon Wheel Ra**	**37.61**	**308**	⇓P	**P**	**04 58 53.3**	**0.0**
	baz=38,SNR=7.6						
X31A	**McDonald Ranch**	**37.63**	**314**	⇑P	**P**	**04 58 53.8**	**+0.5**
	baz=38						
528A	**Cox Ranch, San**	**37.70**	**306**	⇑P	**P**	**04 58 55.4**	**+1.3**
	baz=38						
Z30A	**Sanderson Ranc**	**37.79**	**311**	⇓P	**P**	**04 58 55.1**	**+0.4**
	baz=38						
428A	**Kincaid Ranch,**	**37.84**	**307**	⇓P	**P**	**04 58 56.2**	**+1.0**
	baz=38						
Y30A	**Stafford Cattl**	**37.90**	**312**	⇑P	**P**	**04 58 55.6**	**-0.1**
	baz=38						
627A	**Terlingua Ranc**	**37.91**	**305**	⇑P	**P**	**04 58 57.3**	**+1.4**
	baz=38						
129A	**Stewart Farms,**	**38.03**	**310**	⇓P	**P**	**04 58 57.5**	**+0.7**
	baz=38						
KSU1	**Kansas State U**	**38.03**	**323**	*e*P	**P**	**04 58 56.6**	**0.0**
	12nm,0.8s						
TXAR	**Lajitas Array**	**38.09**	**304**	P	**P**	**04 58 58.5**	**+1.1**
TXAR	**Lajitas Array**	**38.09**	**304**	P	**P**	**04 58 58.5**	**+1.1**
	0.3nm,0.5s,baz=112,slow=9.8,SNR=3.6						
X30A	**Coker Ranch, T**	**38.17**	**313**	⇓P	**P**	**04 58 58.3**	**+0.4**
	baz=38						
Z29A	**Hungry Hill Ra**	**38.20**	**311**	⇑P	**P**	**04 58 58.7**	**+0.5**
	baz=38,SNR=5.6						
328A	**Wristen Ranch,**	**38.21**	**308**	⇓P	**P**	**04 58 58.5**	**+0.2**
	baz=38,SNR=7.8						
CPUP	**Villa Florida**	**38.34**	**165**	P	**P**	**04 58 56.3**	**-2.9**
CPUP	**Villa Florida**	**38.34**	**165**	P	**P**	**04 58 56.3**	**-2.9**
	4.2nm,0.7s,baz=312,slow=9.2,SNR=6.2						
527A	**Woodward Ranch**	**38.35**	**305**	⇑P	**P**	**04 59 01.2**	**+1.5**
	baz=38						
427A	**Hayter Ranch,**	**38.46**	**307**	⇑P	**P**	**04 59 01.6**	**+1.1**
	baz=38						
Y29A	**Porterfield Fa**	**38.46**	**312**	⇑P	**P**	**04 59 00.2**	**-0.2**
	baz=38						
626A	**Big Bend Ranch**	**38.55**	**304**	⇑P	**P**	**04 59 02.6**	**+1.4**
	baz=39						
X29A	**Tulia**	**38.76**	**313**	⇑P	**P**	**04 59 03.2**	**+0.2**
	baz=39						
127A	**Arkansas Junct**	**39.18**	**309**	⇑P	**P**	**04 59 07.1**	**+0.6**
	baz=39						
Z27A	**Tatum**	**39.35**	**310**	⇑P	**P**	**04 59 08.3**	**+0.3**
	baz=39						
325A	**Bean Ranch, Si**	**39.90**	**307**	⇓P	**P**	**04 59 12.8**	**+0.2**
	baz=40						
W27A	**Bowe Ranch, En**	**40.04**	**313**	⇑P	**P**	**04 59 13.2**	**-0.5**
	baz=40						
225A	**Deer Hill, Car**	**40.07**	**308**	⇓P	**P**	**04 59 14.4**	**+0.4**
	baz=40						
324A	**Moseley Ranch,**	**40.33**	**306**	⇑P	**P**	**04 59 17.1**	**+0.9**
	baz=40						
MNTX	**Cornudas Mount**	**40.35**	**307**	⇑P	**P**	**04 59 16.8**	**+0.6**
	baz=40						
Z25A	**Roswell**	**40.47**	**309**	⇑P	**P**	**04 59 17.5**	**+0.3**
	baz=40						
224A	**Cornudas Mount**	**40.60**	**307**	⇑P	**P**	**04 59 19.8**	**+1.4**
	baz=41,SNR=7.5						
124A	**Stringfield Ra**	**40.80**	**308**	⇓P	**P**	**04 59 20.8**	**+0.7**
	baz=41						
Z24A	**Sheeppen Canyo**	**40.98**	**309**	⇓P	**P**	**04 59 21.9**	**+0.3**
	baz=41						
ECSD	**EROS Data Cent**	**41.14**	**328**	*e*P	**P**	**04 59 23.2**	**+0.7**
Y24A	**Capitan**	**41.28**	**310**	⇓P	**P**	**04 59 24.3**	**+0.2**
	baz=41						
Z23A	**Rita Site, Whi**	**41.62**	**309**	⇑P	**P**	**04 59 27.2**	**+0.5**
	baz=42						
U25A	**Circle Dot Ran**	**41.64**	**314**	⇑P	**P**	**04 59 26.7**	**-0.3**
	baz=42						
Y23A	**Lovelace Mesa,**	**41.75**	**310**	⇓P	**P**	**04 59 27.7**	**-0.2**
	baz=42						
Z22A	**Elephant Butte**	**42.18**	**308**	⇑P	**P**	**04 59 31.6**	**+0.3**
	baz=42						
Z21A	**St. Cloud Mine**	**42.75**	**308**	⇑P	**P**	**04 59 36.9**	**+0.8**
	baz=43						
LAZ	**Ladron**	**42.77**	**310**	*e*P	**P**	**04 59 37.0**	**+0.8**
	2.3nm,0.9s						
220A	**Playas Peak, P**	**42.92**	**306**	⇑P	**P**	**04 59 39.0**	**+1.6**
	baz=43						
Y21A	**Point of Rocks**	**43.02**	**309**	⇓P	**P**	**04 59 39.2**	**+0.9**
	baz=43						
U22A	**Llaves**	**43.38**	**312**	⇓P	**P**	**04 59 41.0**	**-0.2**
	baz=43						
Y20A	**Horse Springs,**	**43.52**	**308**	⇑P	**P**	**04 59 43.1**	**+0.7**
	baz=44						
SCHQ	**Schefferville**	**43.90**	**1**	*e*P	**P**	**04 59 45.7**	**+0.9**
	8.3nm,1.0s						
SCHQ	**Schefferville**	**43.90**	**1**	P	**P**	**04 59 46.2**	**+1.4**
	4.2nm,0.4s,baz=208,slow=6.7,SNR=29						
U21A	**Nageezi**	**43.99**	**312**	⇓P	**P**	**04 59 46.8**	**+0.7**
	baz=44						
N23A	**Red Feather La**	**44.91**	**319**	⇑P	**P**	**04 59 53.7**	**+0.3**
	baz=45						
O22A	**Kremmling**	**44.94**	**317**	⇓P	**P**	**04 59 54.0**	**+0.4**
	baz=45						
X18A	**Snowflake**	**44.96**	**309**	⇑P	**P**	**04 59 54.8**	**+1.0**
	baz=45						
N22A	**Wattenberg Ran**	**45.19**	**318**	⇓P	**P**	**04 59 56.1**	**+0.4**
	baz=45						
PV01	**Paradox Valley**	**45.38**	**314**	*e*P	**P**	**04 59 58.9**	**+1.7**
	314nm,0.7s						
L23A	**Garrett**	**45.39**	**320**	⇓P	**P**	**04 59 57.5**	**+0.3**
	baz=46						
ULM	**Lac du Bonnet**	**45.56**	**335**	P	**P**	**04 59 57.5**	**-0.6**
ULM	**Lac du Bonnet**	**45.56**	**335**	P	**P**	**04 59 57.5**	**-0.6**
	1.6nm,0.4s,baz=158,slow=3.7,SNR=4.3						
ULM				LR	LR	05 18 49.2	
	comp=Z,173nm,21.7s,baz=102,slow=36						
K22A	**Casper**	**46.19**	**320**	⇑P	**P**	**05 00 04.0**	**+0.5**
	baz=46						
S18A	**Hurst Farm, Bl**	**46.22**	**313**	⇓P	**P**	**05 00 03.9**	**+0.1**
	baz=46						
J22A	**Midwest**	**46.57**	**321**	⇑P	**P**	**05 00 06.1**	**-0.3**
	baz=47						
K21A	**Alcova**	**46.64**	**320**	⇑P	**P**	**05 00 07.7**	**+0.7**
	baz=47,SNR=8.9						
M20A	**Sweetwater, Wa**	**46.67**	**318**	⇑P	**P**	**05 00 07.2**	**-0.1**
	baz=47						
O19A	**Miners Draw (B**	**46.73**	**316**	⇓P	**P**	**05 00 07.3**	**-0.4**
	baz=47						
I22A	**9 Mile Ranch,**	**46.83**	**322**	⇓P	**P**	**05 00 08.6**	**+0.2**
	baz=47						
G23A	**Biddle**	**46.91**	**324**	⇓P	**P**	**05 00 09.3**	**+0.3**
	baz=47						
L20A	**Wamsutter**	**47.02**	**319**	⇑P	**P**	**05 00 10.3**	**+0.3**
	baz=47						
N19A	**John Jarvie Ra**	**47.04**	**317**	⇑P	**P**	**05 00 10.4**	**+0.2**
	baz=47						
J21A	**Lysite**	**47.13**	**321**	⇓P	**P**	**05 00 11.0**	**+0.2**
	baz=47						
Y14A	**Wickenburg**	**47.14**	**307**	⇑P	**P**	**05 00 11.9**	**+1.0**
	baz=47						
SRU	**San Rafael**	**47.18**	**314**	*e*P	**P**	**05 00 12.1**	**+0.8**
	138nm,0.7s						
SRU	**San Rafael**	**47.18**	**314**	⇓P	**P**	**05 00 11.3**	**0.0**
	baz=47						
P18A	**Preston Nutter**	**47.21**	**315**	⇓P	**P**	**05 00 12.5**	**+0.9**
	baz=47,SNR=9.4						
I21A	**Big Trails, Te**	**47.28**	**321**	⇓P	**P**	**05 00 12.1**	**+0.1**
	baz=47						
K20A	**Yellowstone Ra**	**47.35**	**319**	⇑P	**P**	**05 00 12.7**	**+0.3**
	baz=47						
G22A	**Birney**	**47.45**	**323**	⇑P	**P**	**05 00 13.1**	**0.0**
	baz=48						
P17A	**Butcher Ranch,**	**47.49**	**314**	⇓P	**P**	**05 00 14.5**	**+0.9**
	baz=48						
J20A	**Shoshoni**	**47.53**	**320**	⇑P	**P**	**05 00 13.4**	**-0.5**
	baz=48						
L19A	**Farson**	**47.73**	**318**	⇓P	**P**	**05 00 16.1**	**+0.5**
	baz=48,SNR=8.6						
F22A	**Rosebud**	**47.74**	**324**	⇓P	**P**	**05 00 16.0**	**+0.6**
	baz=48						
K19A	**Absolon Red Bu**	**47.75**	**319**	⇑P	**P**	**05 00 15.7**	**0.0**
	baz=48						
O17A	**Robinson Place**	**47.79**	**315**	⇓P	**P**	**05 00 17.6**	**+1.5**
	baz=48,SNR=16						
I20A	**Worland**	**47.87**	**321**	⇑P	**P**	**05 00 16.9**	**+0.4**
	baz=48						
D23A	**Lindsay**	**47.97**	**326**	⇑P	**P**	**05 00 17.5**	**+0.4**
	baz=48						
G21A	**Lodge Grass**	**47.99**	**323**	⇑P	**P**	**05 00 17.6**	**+0.2**
	baz=48						
H20A	**Greybull**	**48.07**	**322**	⇑P	**P**	**05 00 17.7**	**-0.3**
	baz=48						
L18A	**Fontenelle, Gr**	**48.09**	**318**	⇓P	**P**	**05 00 18.3**	**-0.1**
	baz=48						
J19A	**Crowheart**	**48.10**	**320**	⇑P	**P**	**05 00 18.8**	**+0.5**
	baz=48,SNR=8.2						
BW06	**Boulder Array**	**48.18**	**319**	⇓P	**P**	**05 00 19.4**	**+0.3**
	baz=48						
PDAR	**Pinedale Array**	**48.18**	**319**	P	**P**	**05 00 19.4**	**+0.4**
PDAR	**Pinedale Array**	**48.18**	**319**	P	**P**	**05 00 19.4**	**+0.4**
	1.7nm,0.6s,baz=124,slow=10,SNR=17						
N17A	**Moffit Pass**	**48.19**	**316**	⇑P	**P**	**05 00 20.1**	**+1.0**
	baz=48						
W13A	**Hualapai Mount**	**48.20**	**308**	⇓P	**P**	**05 00 20.1**	**+0.8**
	baz=48						
DGMT	**Dagmar**	**48.22**	**328**	*e*P	**P**	**05 00 19.3**	**+0.3**
	7.1nm,0.6s						
DGMT	**Dagmar**	**48.22**	**328**	⇓P	**P**	**05 00 20.0**	**+1.0**
	baz=48						
M17A	**Scullys Gap (B**	**48.31**	**317**	⇓P	**P**	**05 00 20.3**	**+0.3**
	baz=48						
C23A	**Lambert**	**48.33**	**327**	⇓P	**P**	**05 00 20.8**	**+0.9**
	baz=48						
A24A	**Westby**	**48.41**	**329**	⇑P	**P**	**05 00 21.7**	**+1.3**
	baz=48,SNR=6.7						
K18A	**Toltan Ranch,**	**48.43**	**319**	⇑P	**P**	**05 00 21.7**	**+0.7**
	baz=48						
I19A	**Meeteetse**	**48.45**	**321**	⇑P	**P**	**05 00 21.0**	**-0.1**
	baz=48						
JLU	**Jordanelle**	**48.46**	**316**	*e*P	**P**	**05 00 20.4**	**-0.8**
	3.1nm,0.4s						
D22A	**Cohagen**	**48.49**	**326**	⇓P	**P**	**05 00 22.0**	**+0.9**
	baz=49						
N16A	**Rees Ranch, Co**	**48.57**	**316**	⇑P	**P**	**05 00 23.2**	**+1.1**
	baz=49						
G20A	**Bridger**	**48.59**	**322**	⇓P	**P**	**05 00 21.7**	**-0.3**
	baz=49						
B23A	**Brockton**	**48.63**	**328**	⇓P	**P**	**05 00 23.5**	**+1.3**
	baz=49						
C22A	**Vida**	**48.68**	**326**	⇓P	**P**	**05 00 23.5**	**+1.0**
	baz=49						
J18A	**Kendall Valley**	**48.69**	**319**	⇓P	**P**	**05 00 23.2**	**+0.2**
	baz=49						
L17A	**Cokeville**	**48.73**	**318**	⇓P	**P**	**05 00 23.3**	**+0.1**
	baz=49						
H19A	**Powell**	**48.77**	**321**	⇓P	**P**	**05 00 24.0**	**+0.6**
	baz=49						
I18A	**Diamond G Ranc**	**48.80**	**320**	⇑P	**P**	**05 00 24.6**	**+0.8**
	baz=49						
F20A	**Billings**	**48.86**	**323**	⇑P	**P**	**05 00 24.7**	**+0.7**
	baz=49						
M16A	**Huntsville**	**48.89**	**316**	⇑P	**P**	**05 00 25.0**	**+0.5**
	baz=49						

D21A	La Casta Ranch	48.90	325	⇓P	P	05 00 25.0	+0.8
	baz=49						
BC3	Big Chuckawall	49.01	305	⇑P	P	05 00 26.1	+0.8
	baz=49						
K17A	Gardner Place,	49.06	318	⇑P	P	05 00 26.0	+0.3
	baz=49						
L16A	Fish Haven	49.06	317	⇓P	P	05 00 26.4	+0.6
	baz=49,SNR=9.7						
B22A	Reddig Ranch S	49.07	327	⇓P	P	05 00 26.6	+1.1
	baz=49						
RLMT	Red Lodge	49.17	322	*e*P	P	05 00 26.9	+0.3
	4.2nm,0.6s						
RLMT	Red Lodge	49.17	322	⇓P	P	05 00 27.0	+0.3
	baz=49,SNR=8.5						
H18A	Shoshone NF, C	49.19	321	⇓P	P	05 00 26.3	-0.4
	baz=49						
J17A	Brown Place, J	49.21	319	⇑P	P	05 00 27.4	+0.5
	baz=49,SNR=13						
E20A	Meyer Farm, Mu	49.23	324	⇓P	P	05 00 27.4	+0.6
	baz=49,SNR=7.7						
DUG	Dugway	49.24	314	⇑P	P	05 00 28.2	+1.1
	baz=49						
LOHW	Long Hollow	49.26	319	*e*P	P	05 00 27.1	-0.2
	3.6nm,0.7s						
SNOW	Snow King Moun	49.28	319	*e*P	P	05 00 26.7	-0.8
	5.5nm,0.5s						
F19A	Roth Farm, Mol	49.36	323	⇓P	P	05 00 27.9	0.0
	baz=49						
C21A	Desert Coulee	49.39	326	⇑P	P	05 00 28.6	+0.6
	baz=50						
I17A	Pilgrim Ck.	49.39	320	⇓P	P	05 00 29.1	+0.8
	baz=49						
TPAW	Teton Pass	49.42	319	*e*P	P	05 00 28.6	0.0
	5.4nm,0.8s						
A22A	Carney Farms,	49.44	328	⇓P	P	05 00 29.5	+1.1
	baz=50						
G18A	Lazy EL Ranch,	49.45	322	⇑P	P	05 00 29.3	+0.6
	baz=50						
M15A	Larsen Ranch,	49.51	316	⇑P	P	05 00 29.5	+0.4
	baz=50,SNR=11						
K16A	Soda Springs	49.53	318	⇑P	P	05 00 29.8	+0.4
	baz=50						
D20A	Manuel Ranch,	49.55	325	⇓P	P	05 00 29.9	+0.6
	baz=50						
E19A	Rath Farm, Rou	49.59	324	⇑P	P	05 00 29.7	+0.1
	baz=50						
RRI2	Red Ridge	49.59	319	*e*P	P	05 00 30.1	+0.2
	5.3nm,0.6s						
IMW	Indian Meadow	49.61	320	*e*P	P	05 00 29.8	-0.2
	1.5nm,0.5s						
DCID1	Drake Creek	49.62	319	*e*P	P	05 00 30.6	+0.6
	9.3nm,0.7s						
L15A	Malad City	49.70	317	⇓P	P	05 00 31.1	+0.5
	baz=50,SNR=15						
GCMT	Greycliff	49.76	322	*e*P	P	05 00 31.9	+0.9
	2.8nm,0.8s						
C20A	Veseth Ranch,	49.83	325	⇓P	P	05 00 31.9	+0.5
	baz=50						
F18A	Big Timber	49.84	322	⇓P	P	05 00 32.2	+0.6
	baz=50,SNR=9.8						
HVU	Hansel Valley	49.87	316	*e*P	P	05 00 30.5	-1.4
	5.5nm,0.8s						
I16A	Newdale	49.95	319	⇑P	P	05 00 33.4	+0.9
	baz=50,SNR=13						
A21A	Bergtoll Ranch	49.97	327	⇓P	P	05 00 33.3	+0.8
	baz=50,SNR=5.7						
D19A	Cripps Ranch,	50.02	324	⇓P	P	05 00 33.5	+0.6
	baz=50						
K15A	Arbon	50.09	318	⇓P	P	05 00 34.0	+0.5
	baz=50						
BBTS	Babate	50.17	80	LR	LR	05 16 59.6	
	comp=Z,124nm,20.8s,baz=168,slow=30						
G17A	Pierce Place,	50.17	321	⇑P	P	05 00 34.8	+0.6
	baz=50						
H16A	Russell Place,	50.19	320	⇑P	P	05 00 35.2	+0.9
	baz=50						
B20A	Solberg Farm,	50.25	326	⇑P	P	05 00 35.3	+0.8
	baz=50						
E18A	Harlowton	50.30	323	⇑P	P	05 00 35.5	+0.4
	baz=50						
J15A	Blackfoot	50.34	318	⇓P	P	05 00 36.3	+0.9
	baz=50,SNR=11						
F17A	Fitzpatrick Pl	50.41	322	⇓P	P	05 00 36.8	+0.8
	baz=50						
C19A	Slack Wire Ran	50.43	325	⇑P	P	05 00 36.5	+0.6
	baz=50						
A20A	Cobblestone Ra	50.45	327	⇑P	P	05 00 36.8	+0.7
	baz=50,SNR=6.0						
K14A	Jones Ranch, D	50.46	317	⇑P	P	05 00 36.9	+0.5
	baz=50						
GSC	Goldstone	50.54	307	⇓P	P	05 00 38.4	+1.4
	baz=51						
R11A	Troy Canyon, C	50.55	311	⇓P	P	05 00 38.1	+0.9
	baz=51						
G16A	Moss Hill, Enn	50.78	321	⇓P	P	05 00 38.9	+0.1
	baz=51						
E17A	Martinsdale	50.81	323	⇓P	P	05 00 39.5	+0.5
	baz=51						
BOZ	Bozeman (W)	50.88	321	⇓P	P	05 00 39.8	+0.3
	baz=51						
A19A	Klindworth Far	50.92	326	⇓P	P	05 00 40.5	+0.9
	baz=51						
F16A	Kennard Place,	50.94	321	⇓P	P	05 00 40.5	+0.6
	baz=51						
J14A	Carey	51.02	318	⇓P	P	05 00 42.0	+1.4
	baz=51,SNR=16						
H15A	Lima	51.03	320	⇓P	P	05 00 41.6	+0.9
	baz=51						
D17A	Six Diamond Ra	51.06	323	⇑P	P	05 00 40.6	-0.2
	baz=51						
G15A	Dillon	51.18	320	⇑P	P	05 00 42.0	+0.2
	baz=51						
B18A	Beardsley Farm	51.20	325	⇑P	P	05 00 42.1	+0.4
	baz=51						
I14A	Mackay	51.24	319	⇑P	P	05 00 43.3	+1.0
	baz=51						
E16A	East Helena	51.34	322	⇑P	P	05 00 43.2	+0.3
	baz=51						
C17A	Wharram Farm,	51.35	324	⇓P	P	05 00 42.9	0.0
	baz=51						
PLCA	Paso Flores	51.36	183	P	P	05 00 41.8	-1.1
PLCA	Paso Flores	51.36	183	P	P	05 00 41.8	-1.1
	9.1nm,0.7s,baz=4.1,slow=6.5,SNR=6.4						
J13A	Cove Ranch, Pi	51.48	318	⇓P	P	05 00 44.5	+0.5
	baz=52						
H14A	Leadore	51.49	319	⇓P	P	05 00 44.5	+0.4
	baz=52						
D16A	Dana Ranch, Ca	51.51	323	⇓P	P	05 00 44.8	+0.6
	baz=52						
HRY	Holter Researc	51.52	322	*e*P	P	05 00 44.6	+0.3
	4.9nm,0.6s						
A18A	Metzger Ranch,	51.52	326	⇓P	P	05 00 44.3	+0.2
	baz=52						
I13A	Wildhorse Cree	51.66	318	⇑P	P	05 00 46.0	+0.5
	baz=52						
HLID	Hailey	51.71	318	*e*P	P	05 00 44.5	-1.3
	5.0nm,0.9s						
HLID	Hailey	51.71	318	⇑P	P	05 00 46.6	+0.8
	baz=52						
G14A	Jackson	51.83	320	⇑P	P	05 00 46.8	+0.1
	baz=52						
A17A	Triple J Farms	52.01	325	⇑P	P	05 00 48.1	+0.4
	baz=52						
C16A	Fuhringer Ranc	52.01	324	⇓P	P	05 00 48.2	+0.4
	baz=52						
F14A	Wisdom	52.03	321	⇓P	P	05 00 48.5	+0.4
	baz=52						
H13A	Challis	52.03	319	⇓P	P	05 00 48.2	0.0
	baz=52						
D15A	Lincoln	52.09	322	⇑P	P	05 00 48.9	+0.3
	baz=52						
G13A	Cobalt	52.25	320	⇑P	P	05 00 50.2	+0.4
	baz=52						
I12A	Atlanta	52.28	318	⇑P	P	05 00 50.8	+0.7
	baz=52						
B16A	M & M Farms, S	52.30	324	⇓P	P	05 00 50.1	+0.1
	baz=52						
E14A	Clinton	52.38	321	⇓P	P	05 00 51.0	+0.3
	baz=52						
H12A	Diamond D Ranc	52.41	319	⇑P	P	05 00 51.5	+0.5
	baz=52						
BSC	Santa Cruz Isl	52.45	305	⇓P	P	05 00 52.8	+1.5
	baz=52						
VES	Vestal, Richgr	52.47	307	⇓P	P	05 00 52.7	+1.4
	baz=52						
C15A	Salmond Ranch,	52.50	323	⇓P	P	05 00 52.1	+0.6
	baz=53						
MFID	Camas Ranch	52.59	317	⇑P	P	05 00 52.8	+0.6
	baz=53						
NVAR	Mina Array Bea	52.60	310	P	P	05 00 53.4	+0.8
NVAR	Mina Array Bea	52.60	310	P	P	05 00 53.4	+0.8
	1.7nm,0.7s,baz=126,slow=7.5,SNR=4.3						
F13A	Darby	52.62	320	⇑P	P	05 00 52.7	+0.3
	baz=53						
D14A	Greenough	52.70	322	⇓P	P	05 00 53.3	+0.3
	baz=53						
B15A	Bradely Ranch,	52.74	324	⇓P	P	05 00 53.0	-0.3
	baz=53						
E13A	Victor	52.82	321	⇑P	P	05 00 54.4	+0.5
	baz=53						
A15A	Johnson Ranch,	53.17	325	⇑P	P	05 00 56.3	-0.2
	baz=53						
C14A	Swan Lake	53.17	323	⇑P	P	05 00 56.7	+0.3
	baz=53						
B14A	Marquette Ranc	53.18	324	⇑P	P	05 00 56.8	+0.3
	baz=53						
F12A	Elk City	53.19	320	⇓P	P	05 00 57.2	+0.5
	baz=53						
D13A	Huson	53.28	322	⇑P	P	05 00 57.9	+0.6
	baz=53						
C13A	Hot Springs	53.62	322	⇑P	P	05 00 59.9	+0.2
	baz=54						
B13A	Whitefish	53.88	323	⇑P	P	05 01 02.1	+0.5
	baz=54						
A13A	Flathead Natio	54.12	324	⇑P	P	05 01 03.3	-0.1
	baz=54						
C11A	Tepee Creek (N	54.71	322	⇓P	P	05 01 07.8	+0.1
	baz=55						
RPN	Rapa Nui	55.12	226	LR	LR	05 21 41.3	
	comp=Z,81nm,21.2s,baz=147,slow=33						
NEW	Newport	55.42	322	⇑P	P	05 01 12.4	-0.3
	baz=56						
YBH	Yreka Blue Hor	56.80	313	P	P	05 01 21.5	-1.3
YBH	Yreka Blue Hor	56.80	313	P	P	05 01 21.5	-1.3
	2.6nm,0.7s,baz=103,slow=4.2,SNR=5.7						
YKA	Yellowknife Ar	61.44	337	P	P	05 01 53.6	-0.9
YKA	Yellowknife Ar	61.44	337	P	P	05 01 53.6	-0.9
	2.3nm,0.5s,baz=115,slow=6.8,SNR=68						
MDT	Midelt	61.80	59	P	P	05 01 58.3	+0.7
MDT	Midelt	61.80	59	P	P	05 01 58.3	+0.7
	1.6nm,0.9s,baz=258,slow=4.5,SNR=4.2						
DBIC	Dimbokro	62.36	88	*e*P	P	05 02 00.4	-1.2
	3.0nm,0.7s						
DBIC	Dimbokro	62.36	88	P	P	05 02 00.5	-1.0
	2.2nm,0.5s,baz=283,slow=9.2,SNR=7.6						
ESDC	Sonseca Array	63.14	51	P	P	05 02 06.8	+0.4
ESDC	Sonseca Array	63.14	51	P	P	05 02 06.9	+0.4
	0.1nm,0.3s,baz=270,slow=7.8,SNR=3.4						
EKA	Eskdalemuir Ar	66.88	34	P	P	05 02 30.8	+0.4
EKA	Eskdalemuir Ar	66.88	34	P	P	05 02 30.7	+0.4
	1.9nm,0.5s,baz=269,slow=4.9,SNR=19						
TOA0	Torodi Ar. Sit	67.92	80	*e*P	P	05 02 36.5	-1.1
TORD	Torodi Ar. Bea	67.92	80	P	P	05 02 36.8	-0.9
TORD	Torodi Ar. Bea	67.92	80	P	P	05 02 36.8	-0.9
	4.1nm,0.7s,baz=286,slow=7.0,SNR=81						
TAM	Tamanrasset	70.70	70	*e*P	P	05 02 55.9	+0.9
	2.6nm,0.8s						
BMRM	Bremner River	74.15	330	*e*P	P	05 03 15.6	+0.9
	9.7nm,0.9s						
NB2	NORSAR Subarra	75.33	30	P	P	05 03 22.5	+1.0
	comp=Z,2.5nm,0.6s,baz=264,slow=5.9						
NOA	NORSAR Array B	75.33	30	P	P	05 03 22.0	+0.5
NOA	NORSAR Array B	75.33	30	P	P	05 03 22.0	+0.5
	comp=Z,2.1nm,0.6s,baz=266,slow=5.8,SNR=6.4						
ILAR	Eielson Array	75.58	334	P	P	05 03 21.9	-0.9
ILAR	Eielson Array	75.58	334	P	P	05 03 21.9	-0.9
	comp=Z,0.4nm,0.4s,baz=96,slow=4.2,SNR=10						
GERES	GERESS Array B	76.42	42	P	P	05 03 28.2	+0.2
GERES	GERESS Array B	76.42	42	P	P	05 03 28.2	+0.2
	comp=Z,1.1nm,0.6s,baz=272,slow=5.2,SNR=8.6						
ARCES	ARCESS Array B	81.13	21	P	P	05 03 53.8	+0.3
ARCES	ARCESS Array B	81.13	21	P	P	05 03 53.8	+0.3
	comp=Z,3.1nm,0.7s,baz=306,slow=7.7,SNR=9.6						
FINES	FINESS Array B	82.48	29	P	P	05 04 01.3	+0.6
FINES	FINESS Array B	82.48	29	P	P	05 04 01.3	+0.6
	comp=Z,2.2nm,0.7s,baz=259,slow=3.1,SNR=7.7						
SNAA	Sanae	92.64	163	P	P	05 04 51.3	+1.5
SNAA	Sanae	92.64	163	P	P	05 04 51.3	+1.5
	comp=Z,0.7nm,1.0s,baz=300,slow=8.1,SNR=4.0						
MMAI	Mount Meron Ar	95.09	55	P	P	05 05 03.0	+1.0
MMAI	Mount Meron Ar	95.09	55	P	P	05 05 03.0	+1.0
	comp=Z,1.0nm,0.2s,baz=282,slow=8.7,SNR=4.2						
MKAR	Makanchi Array	116.75	22	SKP	SKPdf	05 13 55.6	-3.6
	comp=Z,0.5nm,0.9s,baz=327,slow=2.0,SNR=4.3						
STKA	Stephens Creek	145.65	228	PKPbc	PKPbc	05 11 17.8	+0.1
STKA	Stephens Creek	145.65	228	PKPbc	PKPbc	05 11 17.8	+0.1
	comp=Z,3.2nm,0.7s,baz=109,slow=4.4,SNR=5.5						
CMAR	Chiang Mai Arr	148.14	24	PKPbc	PKPbc	05 11 24.1	-1.1
CMAR	Chiang Mai Arr	148.14	24	PKPbc	PKPbc	05 11 24.1	-1.1
	comp=Z,1.1nm,0.3s,baz=324,slow=4.3,SNR=8.0						
ASAR	Alice Springs	155.62	236	PKP	PKPdf	05 11 32.7	-0.4
ASAR				PKPbc	PKPab	05 11 41.7	-17
ASAR				PKPab	PKPab	05 12 00.2	+1.1
ASAR	Alice Springs	155.62	236	PKP	PKPdf	05 11 32.7	-0.4
	comp=Z,0.4nm,0.7s,baz=129,slow=1.3,SNR=3.3						
ASAR				PKPbc	PKPab	05 11 41.7	-17
	comp=Z,0.7nm,0.5s,baz=132,slow=2.8,SNR=6.9						
ASAR				PKPab	PKPab	05 12 00.2	+1.1
	comp=Z,0.7nm,0.8s,baz=100,slow=3.2,SNR=4.0						
WRA	Warramunga Arr	156.75	244	PKP	PKPdf	05 11 33.8	-0.9
WRA				PKPbc	PKPab	05 11 43.6	-20
WRA				PKPab	PKPab	05 12 02.3	-1.7
WRA	Warramunga Arr	156.75	244	PKP	PKPdf	05 11 33.8	-0.9
	comp=Z,0.7nm,0.8s,baz=124,slow=0.7,SNR=3.9						
WRA				PKPbc	PKPab	05 11 43.6	-20
	comp=Z,0.5nm,0.6s,baz=104,slow=2.6,SNR=7.4						
WRA				PKPab	PKPab	05 12 02.3	-1.7
	comp=Z,1.2nm,0.8s,baz=104,slow=3.8,SNR=6.5						

GUC 06 04:54:11.2±0.6**, 31°.23S**×**68°.75W, h160km**±16km**, ML3.8, 3C-3D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	1.93	271	⇓*i*P	Pn	04 54 46.8	+0.6
CMCH				*i* S	Sn	04 55 13.9	+0.7
CMCH				AML	AML	04 55 16.9	
	comp=E,2μm,0.7s						
TLL	Tololo Astrono	2.06	300	*e*P	Pn	04 54 48.9	+0.9
TLL				*i* S	Sn	04 55 16.9	+0.6
TLL				AML	AML	04 55 20.6	
	comp=E,439nm,0.3s						
CHNG	Los Chungos	2.43	254	*e*P	Pn	04 54 52.4	+0.5
CHNG				*i* S	Sn	04 55 23.5	0.0
CHNG				AML	AML	04 55 32.3	
	comp=E,92nm,0.6s						
PEL	Peldehue	2.51	220	⇑*i*P	Pn	04 54 53.5	+0.5
PEL				*i* S	Sn	04 55 25.4	0.0
PEL				AML	AML	04 55 27.8	
	comp=N,468nm,0.5s						
ROCH	El Roble	2.59	227	⇑*i*P	Pn	04 54 54.2	+0.1
ROCH				*i* S	Sn	04 55 27.6	+0.2
ROCH				AML	AML	04 55 29.8	
	comp=N,350nm,0.2s						
CLCH	Cerro Calan	2.63	215	*e*P	Pn	04 54 55.2	+0.6
CLCH				*e*S	Sn	04 55 28.6	+0.4
CLCH				AML	AML	04 55 36.4	
	comp=E,405nm,0.5s						
LCO	Las Campanas	2.78	322	⇑*i*P	Pn	04 54 57.4	+0.7
LCO				*e*S	Sn	04 55 32.5	+0.7
LCO				AML	AML	04 55 37.5	
	comp=E,194nm,0.4s						
LCO	Las Campanas	2.78	322	P	Pn	04 54 57.4	+0.7
	baz=96,SNR=27						
ANTU	Antumapu	2.82	214	*e*P	Pn	04 54 57.7	+0.9
ANTU				*i* S	Sn	04 55 32.7	+0.5
ANTU				AML	AML	04 55 35.6	
	comp=E,346nm,0.2s						
LMEL	Las Melosas	2.88	205	⇓*i*P	Pn	04 54 58.2	+0.6
LMEL				AML	AML	04 55 42.6	
	comp=N,124nm,0.2s						
CHCH	Chadas Angostu	3.13	210	*e*P	Pn	04 55 01.4	+0.7
CACH	El Canelo	3.27	208	⇓*i*P	Pn	04 55 03.6	+1.0
CPCH	Copiapo	4.11	340	*e*P	Pn	04 55 12.9	-0.3
CPCH				*i* S	Sn	04 56 00.7	-0.7
CDCH	Caldera	4.53	336	*e*P	Pn	04 55 19.2	+0.6

*ISK **06** 04:55:13.9, 37°.92N×26°.65E, h13km, MD2.9*
*ISCJB **06** 04:55:17.2±0.6, 37°.92N±0°.02×27°.00E±0°.07, h11km±5km, Error ellipse: s-maj=9.6km s-min=3.5km az=165.6*
*DDA **06** 04:55:17.7, 37°.96N×27°.09E, h9km, MD2.9*
*CSEM **06** 04:55:17.2±0.2, 37°.92N×27°.01E, h15km, MD2.9, Error ellipse: s-maj=6.8km s-min=2.9km az=76.0*
ISC 06 04:55:17.2±1.0**, 37°.92N**±0°.02×**27°.00E**±0°.04**, h15km**±8km**, n34, σ0s.62**/49**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.28	139	*i* P	Pg	04 55 23.5	+0.2
GCAM				*i* S	Sg	04 55 27.4	0.0
GCAM	G?zelcaml?	0.28	139	*i* P	Pg	04 55 23.5	+0.2
GCAM				*i* S	Sg	04 55 27.4	0.0
BLCB	Balcova	0.47	4	PG	Pg	04 55 26.2	-0.4
BLCB				*e*SG	Sg	04 55 33.3	+0.3
BLCB	Balcova	0.47	4	*i* Pg	Pg	04 55 26.2	-0.4
BLCB				*e*Sg	Sg	04 55 33.3	+0.3
IZM	Izmir	0.53	23	PG	Pg	04 55 27.0	-0.7
IZM	Izmir	0.53	23	*i* Pg	Pg	04 55 27.0	-0.7
URLA	Izmir	0.55	325	*i* P	Pb	04 55 28.7	+0.2
URLA				*i* S	Sb	04 55 37.2	+1.0
URLA	Izmir	0.55	325	*i* P	Pb	04 55 28.7	+0.2
URLA				*i* S	Sb	04 55 37.2	+1.0
AYDN	Tasoluk	0.74	110	*i* P	Pg	04 55 31.8	+0.1
AYDN				*i* S	Sb	04 55 42.4	+0.5
AYDN	Tasoluk	0.74	110	*i* P	Pg	04 55 31.8	+0.1
AYDN				*i* S	Sb	04 55 42.4	+0.5
MLSB	Milas	0.88	135	*e*PN	Pn	04 55 35.3	+0.3
MLSB	Milas	0.88	135	*e*Pn	Pn	04 55 35.3	+0.3
BODT	Bodrum	0.89	164	*e*PG	Pb	04 55 33.9	-0.4
BODT				*e*SG	Sn	04 55 48.0	+0.2
BODT	Bodrum	0.89	164	*e*Pg	Pb	04 55 33.9	-0.4
BODT				*e*Sg	Sn	04 55 48.0	+0.2
BDRM	Kayabasi	0.92	157	*i* P	Pb	04 55 34.8	-0.1
BDRM				*i* S	Sb	04 55 46.7	-0.2
BDRM	Kayabasi	0.92	157	*i* P	Pb	04 55 34.8	-0.1
BDRM				*i* S	Sb	04 55 46.7	-0.2
AKHS	Akhisar	1.16	33	*i* P	Pn	04 55 38.7	-0.2
AKHS				*i* S	Sb	04 55 52.6	-1.1
AKHS	Akhisar	1.16	33	*i* P	Pn	04 55 38.7	-0.2
AKHS				*i* S	Sb	04 55 52.6	-1.1
AKS	Akhisar	1.16	33	*e*PN	Pn	04 55 38.8	-0.1
AKS	Akhisar	1.16	33	*e*Pn	Pn	04 55 38.8	-0.1
DAT	Datca	1.27	158	*e*PN	Pn	04 55 39.8	-0.8
DAT	Datca	1.27	158	*e*Pn	Pn	04 55 39.8	-0.8
YER	Yerkesik	1.28	127	*e*PN	Pb	04 55 41.0	-0.1
YER	Yerkesik	1.28	127	*e*Pn	Pb	04 55 41.1	-0.1
APE	Apeiranthos	1.44	235	*e*PN	Pn	04 55 36.8	-6.0
KULA	Kula-Manisa	1.44	65	*e*PN	Pb	04 55 44.2	+0.4
KULA	Kula-Manisa	1.44	65	*e*Pn	Pb	04 55 44.2	+0.4
BALY	Balya	1.89	15	*i* P	Pn	04 55 49.2	+0.3
BALY				*i* S	Sb	04 56 16.3	+1.5
BALY	Balya	1.89	15	*i* P	Pn	04 55 49.2	+0.3
DURS	Dursunbey	2.04	34	*i* P	Pn	04 55 50.3	-0.8
DURS				*i* S	Sb	04 56 18.7	-0.6
DURS	Dursunbey	2.04	34	*i* P	Pn	04 55 50.3	-0.8
GONE	Gonen-Balikesi	2.19	14	*e*PN	Pn	04 55 52.2	-1.0
GONE	Gonen-Balikesi	2.19	14	*e*Pn	Pn	04 55 52.2	-1.0
TVSB	Tavsanli	2.46	51	*e*PN	Pn	04 55 58.3	+1.4

*BJI **06** 05:09:30.8, 42°.84N×132°.26E, h548km, mB4.8/14, mb5.2/38*
*JMA **06** 05:09:33.9±0.3, 42°.84N×132°.15E, h561km, M4.6*
*MOS **06** 05:09:33.2±0.9, 42°.95N×131°.69E, h523km, mb4.3/54, Error ellipse: s-maj=8.7km s-min=5.3km az=117.1*
*SKHL **06** 05:09:33.3±1.0, 42°.88N×131°.75E, h526km±5km, mb5.4/8, msh5.1/6*
*ISCJB **06** 05:09:33.5±0.2, 42°.89N±0°.02×131°.61E±0°.03, h517km±2km, mb4.3/91, Error ellipse: s-maj=3.3km s-min=2.9km az=142.3*
*IDC **06** 05:09:34.9±0.3, 42°.89N×131°.65E, h528km±3km, mb3.7/33, mb1 3.8/40, mb1mx3.8/44, mbtmp3.7/40, Error ellipse: s-maj=6.8km s-min=6.6km az=78.0*
*NEIC **06** 05:09:34.1±0.4, 42°.93N×131°.67E, h522km±7km, mb4.5/43, Error ellipse: s-maj=9.9km s-min=5.2km az=157.0*
*DJA **06** 05:09:39.8±3.6, 43°N±13°×13°1E±3°2, h584km±35km, M4.5/9, mB4.7/3, mb4.7/9, Mw(mB)3.9/3*
ISC 06 05:09:34.5±0.4**, 42°.86N**±0°.04×**131°.73E**±0°.04**, h529**km±4km**, h528km:pP-P, n466, σ1s.27**/520**, mb4.3**/91**, 73C-81D, Priamurye-Northeastern China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLA	Vladivostok	0.29	24	*e*P	P	05 10 36.2	-1.2
VLA				*e*S	S	05 11 25.3	-3.6
VLA	Vladivostok	0.29	24	*e*P	P	05 10 36.2	-1.2
VLA				*e*S	S	05 11 25.3	-3.6
GRTR	Gornotajezhnoj	0.90	20	⇑*i*P	P	05 10 38.8	+0.5
GRTR				*i* S	S	05 11 30.0	-0.6
USRK	Ussuriysk Arra	1.36	8	P	P	05 10 39.8	+0.3
	14nm,0.3s,baz=203,slow=3.3,SNR=157						
USRK				S	S	05 11 32.1	-0.6
	3.6nm,0.3s,baz=224,slow=10,SNR=10.0						
TEY	Ternei	4.14	57	⇓*i*P	P	05 10 56.1	+0.3
TEY				AMB	AMB	05 10 56.6	
	185nm,0.6s						
TEY				*e*S	S	05 12 01.6	-0.7
TEY				A	A	05 12 02.8	
	172nm,1.0s						
TEY				A	A	05 12 03.1	
	2μm,3.5s						
CN2	Changchun	4.68	284	⇓P	P	05 11 00.3	0.0
CN2				*e*S	S	05 12 10.1	-0.3
CN2				PcS	PcS	05 20 35.8	-0.7
CN2				pmax	pmax		
	comp=Z,70nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
JOSM	Okushiri--Mats	5.78	95	P	P	05 11 08.8	-1.2
KHBR	Khabarovsk	6.08	21	P	P	05 11 13.2	+0.6
KHBR				S	S	05 12 32.2	-0.9
KSRS	Korea Array	6.13	210	P	P	05 11 15.0	+1.6
KSRS	Korea Array	6.13	210	P	P	05 11 15.0	+1.6
	comp=Z,0.5nm,0.3s,baz=26,slow=9.2,SNR=13						
KSRS				S	S	05 12 37.6	+3.3
	baz=17,slow=17,SNR=10						
KLR	Kul'dur	6.37	0	⇓*i*P	P	05 11 12.7	-2.7
KLR				*e*S	S	05 12 34.7	-3.5
KLR				pmax	pmax		
	comp=N,120nm,1.0s						
KLR				pmax	pmax		
	comp=E,100nm,1.0s						
KLR				pmax	pmax		
	comp=Z,460nm,1.0s						
KLR				smax	smax		
	comp=N,140nm,1.6s						
KLR				smax	smax		
	comp=E,360nm,1.6s						
KLR	Kul'dur	6.37	0	⇓*i*P	P	05 11 15.8	+0.4
KLR				AMB	AMB	05 11 16.9	
	comp=E,120nm,1.0s						
KLR				AMB	AMB	05 11 16.9	
	comp=E,100nm,1.0s						
KLR				AMB	AMB	05 11 16.9	
	comp=E,460nm,1.0s						
KLR				*e*S	S	05 12 37.8	-0.4
KLR				A	A	05 12 39.2	
	comp=E,140nm,1.6s						
KLR				A	A	05 12 39.2	
	comp=E,360nm,1.6s						
INCN	Inchon	6.64	218	*e*Pn	P	05 11 18.3	0.0
SAI	Saigo	6.76	169	P	P	05 11 20.3	+0.9
JKB	Kayabe	6.96	95	P	P	05 11 19.3	-1.9
JOT	Ohata	7.08	99	P	P	05 11 20.3	-2.1
JHR	Hokuryu	7.34	80	P	P	05 11 24.1	-0.9
JWK2	Keihoku	7.72	68	P	P	05 11 28.6	0.0
JHS	Saijyo	7.92	172	P	P	05 11 31.9	+0.9
JHS				*e*S	S	05 13 04.9	-1.5
ASAJ	Asahikawa	8.00	77	*e*P	P	05 11 30.1	-1.4
	comp=E,64nm,0.6s						
ASAJ				*e*S	S	05 13 07.0	-0.6
ASAJ	Asahikawa	8.00	77	P	P	05 11 31.7	+0.2
	comp=E,34nm,0.3s,baz=269,slow=8.3,SNR=78						
ASAJ				S	S	05 13 06.9	-0.6
	baz=248,slow=19,SNR=2.1						
JKA	Kamikawa-asahi	8.00	77	P	P	05 11 31.7	+0.2
MAJO	Matsushiro	8.04	140	*e*P	P	05 11 31.3	-0.8
MAJO				*e*S	S	05 13 07.3	-1.3
MAJO	Matsushiro	8.04	140	*e*P	P	05 11 31.3	-0.8
MAJO				*e*S	S	05 13 07.2	-1.3
MAT	Matsushiro	8.04	140	P	P	05 11 31.0	-1.1
MAT				S	S	05 13 06.2	-2.3

MAT Matsushiro 8.04 140 P **P** 05 11 31.1 -1.1
MAT *eS* **S** 05 13 06.1 -2.4
MJAR Matsushiro Arr 8.04 140 P **P** 05 11 31.7 -0.5
comp=E,3.9nm,0.3s,baz=314,slow=9.7,SNR=49
JMK Ichinoseki 8.18 115 P **P** 05 11 30.9 -2.5
JMK S S 05 13 04.8 -6.1
ERM Erimo 8.49 92*d iP* **P** 05 11 35.2 -1.4
ERM pmax pmax
comp=Z,233nm,0.6s
ERM Erimo 8.49 92 *eP* **P** 05 11 35.1 -1.4
comp=Z,293nm,0.6s
ERM Erimo 8.49 92⇓ *iP* **P** 05 11 35.2 -1.4
JTU Tsushima 8.52 193 P **P** 05 11 37.5 +0.5
GRNR Gornyy 8.54 20⇑ *iP* **P** 05 11 37.1 +0.2
GRNR AMB AMB 05 11 38.0
comp=Z,51nm,0.9s
GRNR *eS* **S** 05 13 16.0 -1.5
GRNR A A 05 13 18.0
comp=Z,51nm,1.0s
JCH Churui 8.56 88 P **P** 05 11 34.2 -3.1
JCH S S 05 13 09.5 -8.6
JRY Ryogami san 8.80 139 P **P** 05 11 38.2 -1.6
JRY S S 05 13 18.1 -4.6
YSS Yuzh-Sakhalins 8.83 59⇑ *eP* **P** 05 11 40.5 +0.6
YSS *eS* **S** 05 13 22.6 -0.3
YSS pmax pmax
comp=N,50nm,0.5s
YSS pmax pmax
comp=E,80nm,0.5s
YSS pmax pmax
comp=Z,200nm,0.5s
YSS smax smax
comp=N,150nm,1.0s
YSS smax smax
comp=E,60nm,1.0s
YSS Yuzh-Sakhalins 8.83 59 *eP* **P** 05 11 39.4 -0.5
comp=E,185nm,0.4s
YSS Yuzh-Sakhalins 8.83 59⇑ *eP* **P** 05 11 40.5 +0.6
YSS AMB AMB 05 11 42.1
comp=E,50nm,0.5s
YSS AMB AMB 05 11 42.1
comp=E,80nm,0.5s
YSS AMB AMB 05 11 42.1
comp=E,200nm,0.5s
YSS *eS* **S** 05 13 22.6 -0.3
YSS A A 05 13 23.9
comp=E,150nm,1.0s
YSS A A 05 13 23.9
comp=E,60nm,1.0s
JTKR Abashiri--Toko 8.93 79 P **P** 05 11 39.5 -1.5
JIE Ise 9.30 154 P **P** 05 11 44.7 -0.3
JIE S **S** 05 13 29.8 -2.4
JOD2 Odawara 2 9.49 141 P **P** 05 11 45.5 -1.5
JOD2 S S 05 13 29.3 -6.5
UGL Uglegorsk 9.51 46 *eP* **P** 05 11 47.0 +0.2
UGL AMB AMB 05 11 48.0
comp=E,270nm,0.8s
JNU Nakatsue 9.74 184 *eP* **P** 05 11 50.5 +0.8
comp=E,54nm,0.8s
JNU Nakatsue 9.74 184 P **P** 05 11 50.4 +0.8
comp=E,6.8nm,0.3s,baz=12,slow=5.6,SNR=82
JWZ Kozaga 9.82 160 P **P** 05 11 49.9 -0.5
JTO Tosashimizu 10.02 175 P **P** 05 11 52.2 -0.2
TTO1 TONANKAI O.B.S 10.04 155 P **P** 05 11 52.1 -0.2
EKMR Ekimchan 10.25 4⇑ *iP* **P** 05 11 53.6 -0.9
EKMR AMB AMB 05 11 54.6
comp=E,90nm,0.7s
EKMR AMB AMB 05 11 54.6
comp=E,34nm,0.7s
EKMR AMB AMB 05 11 54.6
comp=E,117nm,0.7s
EKMR *i* S **S** 05 13 48.1 -1.6
EKMR A A 05 13 49.1
comp=E,132nm,1.3s
NEM2 Nemuro 2 10.26 82 P **P** 05 11 52.8 -1.9
NEM2 *eS* **S** 05 13 44.2 -5.9
YUK Yuzh-Kuril'sk 10.35 79⇑ *iP* **P** 05 11 54.9 -0.7
YASR Yasnyy 10.73 348⇑ *iP* **P** 05 11 57.8 -1.7
YASR AMB AMB 05 11 58.6
comp=E,120nm,0.7s
BSO1 Boso 1 10.91 136 P **P** 05 11 59.2 -1.9
BSO1 *eS* **S** 05 13 56.4 -5.4
TYV Tymovskoe 10.95 39 *eP* **P** 05 12 01.8 +0.1
TYV AMB AMB 05 12 03.0
comp=E,22nm,0.8s
TYV AMB AMB 05 12 03.0
comp=E,82nm,0.9s
TYV *eS* **S** 05 14 01.5 -1.5
TYV A A 05 14 03.2
comp=E,80nm,1.2s
JSJ Shimokoshiki 11.27 189 P **P** 05 12 06.1 +0.6
ZEA Zeya 11.29 346⇑ *iP* **P** 05 12 04.8 -0.4
ZEA AMB AMB 05 12 05.7
comp=E,230nm,1.0s
ZEA *eS* **S** 05 14 06.6 -2.8
ZEA A A 05 14 08.1
comp=E,200nm,2.0s
ZEA A A 05 14 08.7
comp=E,170nm,1.6s
KUR Kuril'sk 11.85 73 *eP* **P** 05 12 10.5 -0.8
KUR AMB AMB 05 12 11.5
comp=E,150nm,0.6s
NKL Nikolayevsk 11.90 27⇑ *iP* **P** 05 12 10.1 -1.6
NKL AMB AMB 05 12 10.9
comp=E,30nm,0.7s
NKL AMB AMB 05 12 10.9
comp=E,20nm,0.7s
NKL AMB AMB 05 12 10.9
comp=E,40nm,0.7s
NKL *eS* **S** 05 14 17.1 -4.0
NKL A A 05 14 20.0
comp=E,700nm,4.0s
NKL A A 05 14 20.1
comp=E,290nm,2.0s
NKL A A 05 14 20.1
comp=E,200nm,2.0s
KROS Kirovskiy 12.00 347⇑ *iP* **P** 05 12 11.1 -1.6
KROS AMB AMB 05 12 11.6
comp=E,23nm,0.5s
KROS AMB AMB 05 12 11.6
comp=E,37nm,0.5s
BJI Beijing 12.01 262 P **P** 05 12 13.1 +0.1
BJI pmax pmax
comp=Z,220nm,0.7s
BJI pmax pmax
comp=Z,360nm,3.5s
BMKR Bomnak 12.01 352⇑ *iP* **P** 05 12 11.0 -1.8
BMKR AMB AMB 05 12 11.5
comp=Z,98nm,0.5s
BMKR AMB AMB 05 12 11.5
comp=Z,36nm,0.5s
BMKR AMB AMB 05 12 11.5
comp=Z,117nm,0.5s
BJT Baijiatuau 12.02 262 *eP* **P** 05 12 13.1 -0.1
comp=Z,159nm,0.6s
BJT Baijiatuau 12.02 262 *eP* **P** 05 12 13.1 -0.1
TIA Tai'an 13.07 244 ⇓P **P** 05 12 24.1 -0.2
CLNS Chul'man 14.66 345 *eP* **P** 05 12 37.6 -2.9
CLNS pmax pmax
comp=Z,11nm,0.7s
CLNS pmax pmax
comp=E,6.0nm,0.8s
CLNS pmax pmax
comp=N,13nm,0.9s
CLNS Chul'man 14.66 345 *eP* **P** 05 12 37.6 -2.9
CLNS AMB AMB 05 12 39.1
comp=N,11nm,0.7s
HHC Hu-ho-hao-te 15.16 269 *eP* **P** 05 12 45.4 -0.7
HHC S **S** 05 15 19.7 -4.1
HHC pmax pmax
comp=Z,120nm,0.7s
HHC pmax pmax
comp=Z,440nm,4.9s
JOW Kunigami 16.23 191 P **P** 05 12 56.4 -0.6
comp=Z,6.8nm,0.3s,baz=48,slow=6.1,SNR=9.5
JOW S **S** 05 15 37.6 -5.2
comp=Z,1.2nm,0.3s,baz=166,slow=29,SNR=8.1
CBIJ Chichi jima 17.88 148 P **P** 05 13 12.4 0.0
comp=Z,11nm,0.3s,baz=301,slow=21,SNR=9.9
CBIJ S **S** 05 16 08.7 -1.2
comp=Z,12nm,0.3s,baz=315,slow=20,SNR=5.7
ULN Ulaanbaatar 18.02 295 *eP* **P** 05 13 13.7 +0.1
comp=Z,26nm,0.6s
ULN Ulaanbaatar 18.02 295 *eP* **P** 05 13 13.7 +0.1
ULN Ulaanbaatar 18.02 295 P **P** 05 13 13.9 +0.4
SNR=12
ULN Ulaanbaatar 18.02 295 P **P** 05 13 13.5 -0.1
comp=Z,40nm,0.6s,comp=Z,443nm
SONM Songino Array 18.45 294 P **P** 05 13 17.8 +0.3
comp=Z,3.3nm,0.3s,baz=100,slow=9.5,SNR=116
SONM ScP **ScP** 05 20 04.4 -0.8
comp=Z,0.2nm,0.3s,baz=107,slow=1.5,SNR=4.8
WHN Wuhan 18.54 234 P **P** 05 13 18.0 -0.3
WHN pmax pmax
comp=Z,230nm,0.7s
YAK Yakutsk 19.25 357 *eP* **P** 05 13 23.1 -1.2
YAK *eS* **S** 05 16 29.2 -1.9
YAK pmax pmax
comp=Z,84nm,0.8s
YAK pmax pmax
comp=E,4.0nm,0.6s
YAK pmax pmax
comp=N,12nm,0.8s
YAK smax smax
comp=N,82nm,2.1s
YAK smax smax
comp=E,52nm,2.0s
YAK Yakutsk 19.25 357 *eP* **P** 05 13 23.2 -1.2
comp=E,144nm,0.7s
YAK Yakutsk 19.25 357 *eP* **P** 05 13 23.1 -1.2
XAN Xi'an 19.87 251 P **P** 05 13 30.3 -0.2
XAN pmax pmax
comp=Z,8.0nm,0.8s
XAN pmax pmax
comp=Z,32nm,9.3s
PETK Petropavlovsk- 20.07 50 P **P** 05 13 32.2 +0.2
PETK pmax pmax
comp=Z,3.0nm,0.5s
PETK Petropavlovsk- 20.07 50 P **P** 05 13 32.2 +0.2
comp=Z,3.2nm,0.5s,baz=234,slow=6.9,SNR=3.0
ZAK Zakamensk 20.85 301 *eP* **P** 05 13 39.2 0.0
ZAK pmax pmax
comp=Z,14nm,0.8s
ZAK Zakamensk 20.85 301 *eP* **P** 05 13 39.2 0.0
TLY Talaya 20.89 305 *eP* **P** 05 13 38.9 -0.6
TLY pmax pmax
comp=Z,8.0nm,0.8s
TLY Talaya 20.89 305 *eP* **P** 05 13 38.9 -0.6
LZH Lanzhou 22.50 262 ⇓P **P** 05 13 55.1 +0.8
LZH pmax pmax
comp=Z,28nm,1.4s
LZH pmax pmax
comp=Z,130nm,6.2s
MOY Mondy 22.50 304 *eP* **P** 05 13 54.3 +0.2
SEY Seymchan 23.45 24*d iP* **P** 05 14 02.9 +0.8
SEY Seymchan 23.45 24⇓ *iP* **P** 05 14 02.9 +0.8
GTA Gaotai 24.21 273 ⇓P **P** 05 14 10.2 +0.8
GTA pmax pmax
comp=Z,59nm,0.8s
GTA pmax pmax
comp=Z,150nm,5.5s
GYA Guiyang 26.18 239⇓ *iP* **P** 05 14 26.1 -0.9
GYA pmax pmax
comp=Z,40nm,0.8s
FX1 Attu Island--F 29.17 55 *eP* **P** 05 14 53.2 +0.6
FX1 Attu Island--F 29.17 55 P **P** 05 14 53.8 +1.2
comp=Z,46nm,0.9s,baz=240,slow=7.3,SNR=7.7
KMI Kunming 29.64 243 P **P** 05 14 57.1 -0.2
KMI pmax pmax
comp=Z,35nm,0.7s
BILL Bilibino 31.15 24⇑ *iP* **P** 05 15 09.5 0.0
BILL *i* S **S** 05 19 39.2 +1.6
BILL pmax pmax
comp=Z,14nm,1.2s
BILL MLR MLR
comp=Z,300nm,21.0s
BILL Bilibino 31.15 24 *eP* **P** 05 15 09.8 +0.3
comp=Z,3.4nm,0.4s
BILL Bilibino 31.15 24⇑ *iP* **P** 05 15 09.5 0.0
WMQ Urumqi 31.76 287 P **P** 05 15 14.7 -0.5
WMQ pmax pmax
comp=Z,14nm,1.0s
ZALV Zalesovo Beam 32.48 307 P **P** 05 15 20.5 -0.5
ZALV 05 17 51.3
ZALV pmax pmax
comp=Z,2.0nm,0.3s
ZALV Zalesovo Beam 32.48 307 P **P** 05 15 20.5 -0.5
comp=Z,2.4nm,0.3s,baz=70,slow=8.7,SNR=20
ZALV PcP **PcP** 05 17 51.3 -0.7
comp=Z,0.9nm,0.5s,baz=80,slow=3.4,SNR=4.3
ZALV ScP **ScP** 05 20 44.3 -1.2
comp=Z,3.3nm,0.5s,baz=105,slow=3.1,SNR=14
MK31 Makanchi Array 34.82 294 *i* P **P** 05 15 40.3 -0.6
MK31 pmax pmax
comp=Z,5.0nm,0.5s
MK31 Makanchi Array 34.82 294 *eP* **P** 05 15 40.7 -0.2
MKAR Makanchi Array 34.82 294 P **P** 05 15 41.0 +0.1
MKAR 05 17 59.4
MKAR pmax pmax
comp=Z,6.0nm,0.7s
MKAR pmax pmax
comp=N,2.0nm,0.8s
MKAR Makanchi Array 34.82 294 P **P** 05 15 41.0 +0.1
comp=N,5.8nm,0.7s,baz=85,slow=10.0,SNR=68
MKAR PcP **PcP** 05 17 59.4 +0.3
comp=N,0.4nm,0.4s,baz=62,slow=3.7,SNR=4.4
MKAR ScP **ScP** 05 20 52.6 -1.5
comp=N,1.9nm,0.8s,baz=65,slow=5.8,SNR=9.4
LSA Lhasa 34.92 261 P **P** 05 15 43.4 +1.0
KURK Kurchatov 36.51 301 *eP* **P** 05 15 54.2 -0.6
KURK pmax pmax
comp=Z,28nm,0.7s
KURK Kurchatov 36.51 301 *eP* **P** 05 15 54.2 -0.6
comp=Z,28nm,0.7s
KURK Kurchatov 36.51 301 P **P** 05 15 54.6 -0.2
SNR=14
CMMT Chiang Mai 36.60 239 P **P** 05 15 56.9 +0.9
comp=Z,42nm,0.9s
CHTO Chiang Mai 36.60 239 *eP* **P** 05 15 55.9 -0.1
CHTO pmax pmax
comp=Z,29nm,0.8s
CHTO Chiang Mai 36.60 239 *eP* **P** 05 15 55.9 -0.1
comp=Z,29nm,0.8s
CHTO Chiang Mai 36.60 239 *eP* **P** 05 15 55.9 -0.1
CHTO Chiang Mai 36.60 239 P **P** 05 15 56.8 +0.9
SNR=9.1
CHTO Chiang Mai 36.60 239 P **P** 05 15 56.5 +0.5
comp=Z,45nm,0.9s
CMAR Chiang Mai Arr 36.87 239 *eP* **P** 05 15 58.8 +0.6
CMAR Chiang Mai Arr 36.87 239 P **P** 05 15 58.8 +0.6
comp=Z,10nm,0.8s,baz=31,slow=7.6,SNR=53
CMAR pP **pP** 05 17 31.5 +1.5
comp=Z,0.8nm,0.4s,baz=25,slow=11,SNR=1.5
TAPN Taplejung 38.74 261 *eP* **P** 05 16 14.3 +0.6
comp=Z,50nm,0.5s
ODAN Odare 39.25 261 *eP* **P** 05 16 18.1 +0.3
GUN Gumba 39.75 263 *eP* **P** 05 16 22.0 +0.1
comp=Z,115nm,0.6s
RAMN Ramite 39.77 261 *eP* **P** 05 16 22.1 +0.1
comp=Z,85nm,0.7s
TNA Tin City 39.86 34 *eP* **P** 05 16 23.8 +2.1
comp=Z,7.6nm,0.9s
SRDT SRDT 39.89 235 P **P** 05 16 23.2 +0.5
KKN Kakani 40.26 264 *eP* **P** 05 16 25.8 0.0
PKI Pulchoki 40.29 263 *eP* **P** 05 16 26.1 -0.1
PKIN Phulchoki 40.29 263 *eP* **P** 05 16 26.2 +0.1
comp=Z,52nm,0.6s
TKM2 Tokmak 2 40.46 290 *eP* **P** 05 16 27.9 +0.7
TKM2 pmax pmax
comp=Z,34nm,0.8s
TKM2 Tokmak 2 40.46 290 *eP* **P** 05 16 27.9 +0.7
comp=Z,34nm,0.8s
TKM2 Tokmak 2 40.46 290 P **P** 05 16 27.9 +0.7
SNR=49
DMN Daman 40.49 263 *eP* **P** 05 16 27.6 -0.1
KZA Kyzart 40.99 289 *i* P **P** 05 16 32.7 +1.0
KZA Kyzart 40.99 289 P **P** 05 16 32.7 +1.0
SNR=15
KBK Karagaybulak 41.00 290 *i* P **P** 05 16 31.9 +0.4
KBK Karagaybulak 41.00 290 P **P** 05 16 31.9 +0.4
SNR=32
DANN Dangsing 41.06 265 *eP* **P** 05 16 32.9 +0.6
USP Ospenovka 41.10 291 *i* P **P** 05 16 32.2 +0.1
USP Ospenovka 41.10 291 P **P** 05 16 32.2 +0.1
SNR=6.9
BVA0 Borovoye Array 41.14 306 *i* P **P** 05 16 31.6 -0.6
BVA0 pmax pmax
comp=Z,1.0nm,0.3s
BVAR Borovoye Array 41.14 306 P **P** 05 16 32.1 -0.1
BVAR 05 18 19.2
BVAR S **S** 05 22 05.0 -1.9
BVAR pmax pmax
comp=Z,11nm,0.4s
BVAR smax smax
comp=N,3.0nm,0.9s
BVAR Borovoye Array 41.14 306 P **P** 05 16 32.1 -0.1
comp=N,11nm,0.4s,baz=78,slow=8.1,SNR=96
BVAR PcP **PcP** 05 18 19.2 +0.4
comp=N,1.7nm,0.5s,baz=82,slow=3.1,SNR=4.0
BVAR ScP **ScP** 05 21 17.4 -0.8
comp=N,0.8nm,0.5s,baz=64,slow=3.5,SNR=3.9
BVAR S **S** 05 22 05.0 -1.9
comp=N,3.4nm,0.9s,baz=78,slow=14,SNR=10
BRVK Borovoye 41.20 306*ce* P **P** 05 16 32.2 -0.4
BRVK pmax pmax
comp=Z,6.0nm,0.8s
BRVK Borovoye 41.20 306 *eP* **P** 05 16 32.2 -0.4
comp=Z,9.7nm,0.5s
BRVK Borovoye 41.20 306 *eP* **P** 05 16 32.2 -0.4
AAK Ala-Archa 41.32 290*c iP* **P** 05 16 33.3 -0.7
AAK pmax pmax
comp=Z,21nm,0.8s
AAK Ala-Archa 41.32 290 *eP* **P** 05 16 34.0 0.0
comp=Z,55nm,0.8s
AAK Ala-Archa 41.32 290 *i* P **P** 05 16 33.3 -0.7
AAK Ala-Archa 41.32 290 P **P** 05 16 34.1 +0.1
SNR=16
AAK Ala-Archa 41.32 290 P **P** 05 16 34.0 0.0
comp=Z,12nm,0.6s,baz=110,slow=5.0,SNR=46
KOLN Koldanda 41.50 265 *eP* **P** 05 16 36.0 +0.3
PYUN Piuthan 41.76 266 *eP* **P** 05 16 38.1 +0.4
EKS2 Erkin-Say 41.81 290 *eP* **P** 05 16 38.1 +0.3
EKS2 pmax pmax
comp=Z,5.0nm,0.4s
EKS2 Erkin-Say 41.81 290 *eP* **P** 05 16 38.1 +0.3
comp=Z,4.7nm,0.4s
AML Almayashu 42.06 290 *i* P **P** 05 16 40.6 +0.5
AML Almayashu 42.06 290 P **P** 05 16 40.6 +0.5
SNR=7.0
SBUM Sibu 43.84 209 P **P** 05 16 55.1 +1.2
comp=Z,29nm,0.9s
KK31 Karatay Array 43.89 292 *i* P **P** 05 16 53.2 -0.7
KK31 pmax pmax
comp=Z,11nm,0.5s
KKAR Karatay Array 43.89 292 *eP* **P** 05 16 53.6 -0.3
KKAR pmax pmax
comp=Z,14nm,0.6s
KKAR Karatay Array 43.89 292 *eP* **P** 05 16 53.6 -0.3
comp=Z,14nm,0.6s
KSM Kuching 45.45 211 P **P** 05 17 07.3 +1.1
comp=Z,19nm,0.8s
KULM Kulim 46.44 225 *eP* **P** 05 17 14.9 +1.2
comp=Z,19nm,0.6s
KULM Kulim 46.44 225 P **P** 05 17 14.8 +1.1
comp=Z,39nm,0.8s,comp=Z,429nm
COLD Coldfoot 46.89 31 *eP* **P** 05 17 17.4 +0.9
comp=Z,8.8nm,0.9s
IPM Ipoh 46.93 224 *eP* **P** 05 17 17.7 +0.2
comp=Z,12nm,0.8s
ARU Arti 47.02 313*d iP* **P** 05 17 17.0 -0.6
ARU 05 19 09.6
ARU S **S** 05 23 31.3 +1.4
ARU SS **SS** 05 27 05.1 0.0
ARU pmax pmax
comp=Z,27nm,1.0s
ARU Arti 47.02 313 *eP* **P** 05 17 17.2 -0.4
comp=Z,33nm,1.0s
KDAK Kodiak Island 47.96 44 P **P** 05 17 25.0 +0.4
comp=Z,8.5nm,0.5s,baz=306,slow=3.8,SNR=26
COLA College 48.31 34 *i* P **P** 05 17 28.1 +1.0
COLA College 48.31 34 *i* P **P** 05 17 28.1 +1.0
AB31 Akbulak array 48.51 304 *i* P **P** 05 17 28.1 -0.7
AB31 pmax pmax
comp=Z,11nm,0.3s
ABKAR Akbulak array 48.51 304 *eP* **P** 05 17 28.3 -0.5
comp=Z,18nm,0.4s
KBL Kabul 48.62 282 *eP* **P** 05 17 29.6 -0.6
KBL pmax pmax
comp=Z,16nm,0.9s
KBL Kabul 48.62 282 *eP* **P** 05 17 29.6 -0.6
comp=Z,16nm,0.9s
ILAR Eielson Array 48.73 34 P **P** 05 17 30.8 +0.5
ILAR pP **pP** 05 19 09.9 +0.7
ILAR Eielson Array 48.73 34 P **P** 05 17 30.8 +0.5
comp=Z,5.4nm,0.6s,baz=289,slow=8.1,SNR=80
ILAR pP **pP** 05 19 09.8 +0.7
comp=Z,2.4nm,0.8s,baz=285,slow=8.2,SNR=8.4
SEW Seward 48.85 41 *eP* **P** 05 17 31.7 +0.5
comp=Z,7.3nm,0.4s
SML Sawmill 48.89 38 *eP* **P** 05 17 32.5 +0.9
SML pmax pmax
comp=Z,1.0nm,0.4s
SML Sawmill 48.89 38 *eP* **P** 05 17 32.5 +0.9
comp=Z,0.9nm,0.4s
AKTO Aktyubinsk 49.24 306 P **P** 05 17 34.0 -0.3
AKTO pmax pmax
comp=Z,4.0nm,0.6s
AKTO Aktyubinsk 49.24 306 P **P** 05 17 34.0 -0.3
comp=Z,4.0nm,0.6s,baz=71,slow=8.6,SNR=16
PSI Prapat 49.44 225 P **P** 05 17 36.6 +0.2
EGAK Eagle 51.08 33 *eP* **P** 05 17 47.9 +0.4
comp=Z,5.9nm,0.6s
EGAK *ep* **pP** 05 19 28.7 +1.0
INK Inuvik 52.66 28 P **P** 05 17 59.5 +0.7
INK Inuvik 52.66 28 P **P** 05 17 59.5 +0.7
comp=Z,6.0nm,0.5s,baz=310,slow=7.5,SNR=57
POO Poona 54.20 262 *ex* P 05 18 05.0 -5.5
KLMR Klimovskoe 54.76 323 *eP* **P** 05 18 12.3 -1.4
KLMR pmax pmax
comp=Z,11nm,1.1s
KEV Kevo 55.23 336 *eP* **P** 05 18 15.2 -1.7
KEV pmax pmax
comp=Z,8.0nm,0.4s
KEV Kevo 55.23 336 *ep* **P** 05 18 15.2 -1.7
comp=Z,7.5nm,0.4s
ARCES ARCESS Array B 55.80 336 P **P** 05 18 21.0 +0.2
ARCES ARCESS Array B 55.80 336 P **P** 05 18 21.0 +0.2
comp=Z,7.0nm,0.5s,baz=62,slow=7.9,SNR=116
KTK1 Kautokeino 56.76 336 *eP* **P** 05 18 27.7 +0.2
JOF Joensuu 57.20 328 *eP* **P** 05 18 29.5 -1.1
JOF pmax pmax
comp=Z,6.0nm,0.5s
JOF Joensuu 57.20 328 *ep* **P** 05 18 29.5 -1.1
comp=Z,5.6nm,0.5s
VRHR Novokhopersk 58.32 312 *eP* **P** 05 18 36.1 -2.3
VRHR pmax pmax
comp=N,5.0nm,0.6s
VRHR pmax pmax
comp=E,6.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s
DLBC Dease Lake 58.60 38 P **P** 05 18 42.2 +1.9
comp=Z,1.2nm,0.4s,baz=328,slow=7.1,SNR=4.9
RES Resolute Bay 58.72 13 *eP* **P** 05 18 40.6 -0.1
comp=Z,12nm,0.6s
RES Resolute Bay 58.72 13 P **P** 05 18 40.7 -0.1
comp=Z,15nm,0.7s,baz=310,slow=6.8,SNR=117
OBN Obninsk 58.89 318 *eP* **P** 05 18 41.1 -1.0
OBN Obninsk 58.89 318 *eP* **P** 05 18 41.1 -1.0
VSR Storozhevoye 59.59 313 *eP* **P** 05 18 45.6 -1.3
VSR pmax pmax
comp=Z,8.0nm,0.4s
VSR pmax pmax
comp=N,1.0nm,0.3s
KAF Kangasniemi 59.59 328 *eP* **P** 05 18 45.4 -1.3
KAF pmax pmax
comp=Z,5.0nm,0.6s
KAF Kangasniemi 59.59 328 *ep* **P** 05 18 45.4 -1.3
comp=Z,5.2nm,0.6s
VORD Divnogorie 59.65 313 *eP* **P** 05 18 45.9 -1.4
VORD pmax pmax
comp=N,7.0nm,0.5s
VORD pmax pmax
comp=E,2.0nm,0.5s
VORD pmax pmax
comp=Z,3.0nm,0.5s
FIA1 FINESS Array S 60.06 328 *eP* **P** 05 18 49.0 -0.9
FINES FINESS Array B 60.06 328 P **P** 05 18 49.5 -0.4
comp=Z,8.4nm,0.5s,baz=74,slow=6.8,SNR=47
FINES pP **pP** 05 20 35.1 +0.3
comp=Z,2.8nm,0.7s,baz=29,slow=8.8,SNR=3.6
MOR8 Moi Rana 61.16 336 *eP* **P** 05 18 55.2 -1.9
KBZ Khabaz 61.47 304 P **P** 05 18 59.4 0.0
KBZ pmax pmax
comp=Z,2.0nm,0.4s
KBZ Khabaz 61.47 304 P **P** 05 18 59.4 0.0
comp=Z,1.9nm,0.4s,baz=1.4,slow=3.8,SNR=10

KIV	Kislovodsk	61.47	305	eP	P	05 18 59.1	-0.5
KIV				pmax	pmax		
	comp=Z,24nm,1.1s						
KIV	Kislovodsk	61.47	305	eP	P	05 18 59.7	+0.1
	comp=Z,20nm,0.9s						
KIV	Kislovodsk	61.47	305	P	P	05 18 59.1	-0.5
YKA	Yellowknife Ar	62.41	29	P	P	05 19 05.3	+0.1
YKA	Yellowknife Ar	62.41	29	P	P	05 19 05.3	+0.1
	comp=Z,2.0nm,0.4s,baz=313,slow=6.0,SNR=117						
WRA	Warramunga Arr	62.53	177	P	P	05 19 06.3	-0.3
WRA				pP	pP	05 20 53.5	+0.6
WRA	Warramunga Arr	62.53	177	P	P	05 19 06.3	-0.3
	comp=Z,4.6nm,0.4s,baz=354,slow=7.0,SNR=41						
WRA				pP	pP	05 20 53.5	+0.6
	comp=Z,3.6nm,1.2s,baz=356,slow=7.7,SNR=4.7						
HOQ	Hoqain	63.21	278	P	P	05 19 12.0	+0.9
	SNR=5.3						
JMDO	Jabal Madar	63.37	277	P	P	05 19 12.7	+0.6
	SNR=5.9						
BSY	Bisya	63.80	277	P	P	05 19 15.7	+0.8
	SNR=6.3						
AKASG	Malin Array Be	65.05	317	P	P	05 19 21.3	-1.0
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AKASG	Malin Array Be	65.05	317	P	P	05 19 21.3	-1.0
	comp=Z,7.5nm,0.6s,baz=50,slow=6.3,SNR=17						
AK01	Malin Array Si	65.07	317	eP	P	05 19 21.2	-1.1
AK02	Malin Array Si	65.09	317	eP	P	05 19 21.3	-1.2
HFS	Hagfors	65.56	331	P	P	05 19 24.5	-0.8
HFS	Hagfors	65.56	331	P	P	05 19 24.5	-0.8
	comp=Z,7.4nm,0.5s,baz=72,slow=6.4,SNR=59						
NB2	NORSAR Subarra	65.78	333	P	P	05 19 25.9	-0.8
	baz=42,slow=6.5						
NB2	NORSAR Subarra	65.78	333	P	P	05 19 25.9	-0.8
	comp=Z,5.9nm,0.7s,baz=42,slow=6.5						
NOA	NORSAR Array B	65.78	333	P	P	05 19 26.0	-0.8
	comp=Z,4.1nm,0.5s,baz=42,slow=6.1,SNR=28						
ASAR	Alice Springs	66.22	178	P	P	05 19 30.8	+0.9
ASAR				pP	pP	05 21 20.1	+2.2
ASAR	Alice Springs	66.22	178	P	P	05 19 30.8	+0.9
	comp=Z,3.1nm,0.7s,baz=2.3,slow=5.8,SNR=26						
ASAR				pP	pP	05 21 20.1	+2.2
	comp=Z,1.4nm,1.0s,baz=358,slow=4.2,SNR=4.2						
BUR08	Bucovina Ar. S	69.03	316	eP	P	05 19 46.7	-0.3
BR131	Keskin Array S	69.42	305	eP	P	05 19 48.6	-0.9
	comp=Z,1.9nm,0.8s						
BRTR	Keskin Array B	69.42	305	P	P	05 19 48.9	-0.6
	comp=Z,1.5nm,0.7s,baz=65,slow=4.9,SNR=8.5						
BRTR				pP	pP	05 21 39.5	+0.9
	comp=Z,0.8nm,0.8s,baz=126,slow=4.1,SNR=3.4						
OJC	Ojcow	69.94	321	eP	P	05 19 52.2	-0.1
OJC	Ojcow	69.94	321	eP	P	05 19 52.2	-0.1
CRVS	Cervenica-Dubn	70.05	319	eP	P	05 19 52.7	-0.3
CRVS	Cervenica-Dubn	70.05	319	eP	P	05 19 52.7	-0.3
NEW	Newport	70.91	41	⇓P	P	05 19 59.1	+1.0
	baz=71						
NEW	Newport	70.91	41	P	P	05 19 58.7	+0.6
	comp=Z,1.2nm,0.5s,baz=298,slow=3.6,SNR=5.2						
DPC	Dobruska-Polom	71.44	322	eP	P	05 20 01.8	+0.6
VYHS	Vyhne	71.59	320	eP	P	05 20 02.6	+0.5
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.5s						
VYHS	Vyhne	71.59	320	eP	P	05 20 02.6	+0.5
A13A	Flathead Natio	71.74	39	⇓P	P	05 20 04.2	+1.2
	baz=71						
VRAC	Vranov	72.06	321	P	P	05 20 05.7	+0.9
	comp=Z,3.3nm,0.5s,baz=15,slow=5.3,SNR=4.8						
C12B	Naegeli Ranch,	72.10	41	⇓P	P	05 20 06.6	+1.6
	baz=72						
B13A	Whitefish	72.11	40	⇑P	P	05 20 06.7	+1.6
	baz=72						
BRG	Berggiesshubel	72.11	324	eP	P	05 20 05.0	0.0
	comp=Z,4.8nm,0.6s						
BRG	Berggiesshubel	72.11	324	eP	P	05 20 05.0	0.0
BRG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
A14A	Double T Ranch	72.17	39	⇑P	P	05 20 06.5	+0.9
	baz=72,SNR=5.8						
CLL	Collm	72.20	325	⇓iP	P	05 20 05.0	-0.5
CLL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CLL	Collm	72.20	325	iP	P	05 20 05.0	-0.5
CLL	Collm	72.20	325	⇓iP	P	05 20 05.0	-0.5
	comp=Z,8.0nm,0.6s						
A15A	Johnson Ranch,	72.48	39	⇓P	P	05 20 07.9	+0.6
	baz=72						
C13A	Hot Springs	72.55	40	⇓P	P	05 20 09.2	+1.6
	baz=72,SNR=5.3						
FFC	Flin Flon	72.57	29	ceP	P	05 20 08.1	+0.5
D12A	Red Ives Fores	72.62	41	⇓P	P	05 20 09.2	+1.1
	baz=72						
B14A	Marquette Ranc	72.68	39	⇑P	P	05 20 09.9	+1.4
	baz=72						
C14A	Swan Lake	72.88	40	⇑P	P	05 20 11.1	+1.5
	baz=73						
D13A	Huson	73.02	41	⇑P	P	05 20 11.7	+1.3
	baz=73						
B15A	Bradely Ranch,	73.04	39	⇓P	P	05 20 11.8	+1.2
	baz=73,SNR=11						
SLMT	Seeley Lake	73.38	40	eP	P	05 20 13.9	+1.3
	comp=Z,7.9nm,1.2s						
C15A	Salmond Ranch,	73.41	39	⇓P	P	05 20 14.1	+1.4
	baz=73,SNR=11						
A17A	Triple J Farms	73.43	38	⇑P	P	05 20 13.9	+1.2
	baz=73						
MSO	Missoula	73.46	41	⇑P	P	05 20 14.0	+1.0
	baz=73						
D14A	Greenough	73.48	40	⇓P	P	05 20 14.1	+1.0
	baz=73,SNR=6.3						
KHC	Kasperske Hory	73.55	323	eP	P	05 20 13.8	+0.4
F12A	Elk City	73.58	42	⇓P	P	05 20 15.1	+1.4
	baz=73						
GERES	GERESS Array B	73.71	323	P	P	05 20 14.2	-0.1
	comp=Z,1.0nm,0.5s,baz=38,slow=6.8,SNR=6.7						
C16A	Fuhringer Ranc	73.79	39	⇑P	P	05 20 16.1	+1.3
	baz=74						
A18A	Metzger Ranch,	73.83	37	⇓P	P	05 20 15.6	+0.7
	baz=74						
B17A	L&G Farms, Che	73.86	38	⇓P	P	05 20 16.1	+1.0
	baz=74,SNR=5.3						
E14A	Clinton	73.97	41	⇑P	P	05 20 17.0	+1.1
	baz=74						
D15A	Lincoln	73.98	40	⇓P	P	05 20 16.8	+0.9
	baz=74						
G12A	Big Creek, Yel	73.99	43	⇓P	P	05 20 17.1	+1.0
	baz=74						
B18A	Beardsley Farm	74.25	37	⇓P	P	05 20 18.4	+1.1
	baz=74						
A19A	Klindworth Far	74.31	37	⇑P	P	05 20 18.5	+0.8
	baz=74						
E15A	Deer Lodge	74.37	40	⇑P	P	05 20 19.4	+1.2
	baz=74						
D16A	Dana Ranch, Ca	74.44	39	⇑P	P	05 20 19.9	+1.3
	baz=74						
EGMT	Eagleton	74.53	38	⇑P	P	05 20 20.1	+1.1
	baz=74						
HRY	Holter Researc	74.55	40	eP	P	05 20 20.7	+1.6
	comp=Z,1.0nm,0.3s						
G13A	Cobalt	74.56	42	⇓P	P	05 20 19.9	+0.7
	baz=74						
B19A	Brinkman Farms	74.57	37	⇑P	P	05 20 20.2	+1.0
	baz=74						
H12A	Diamond D Ranc	74.64	43	⇑P	P	05 20 20.7	+0.9
	baz=74,SNR=9.2						
E16A	East Helena	74.75	40	⇑P	P	05 20 21.8	+1.5
	baz=74						
D17A	Six Diamond Ra	74.75	39	⇓P	P	05 20 21.6	+1.3
	baz=74						
F15A	Butte	74.86	41	⇑P	P	05 20 21.9	+0.9
	baz=75,SNR=6.1						
LRM	Limekiln Ridge	74.90	41	eP	P	05 20 19.3	-2.0
	comp=Z,14nm,0.8s						
LRM				epP	pP	05 22 14.9	+2.2
STKA	Stephens Creek	74.92	171	P	P	05 20 22.6	+1.5
	comp=Z,4.0nm,0.6s,baz=319,slow=7.3,SNR=7.8						
EKA	Eskdalemuir Ar	74.95	335	P	P	05 20 21.2	+0.1
	comp=Z,1.3nm,0.3s,baz=37,slow=5.4,SNR=25						
MFID	Camas Ranch	74.95	44	⇓P	P	05 20 23.4	+1.9
	baz=75						
I12A	Atlanta	75.04	44	⇑P	P	05 20 23.7	+1.7
	baz=75						
A21A	Bergtoll Ranch	75.05	36	⇑P	P	05 20 22.9	+1.1
	baz=75						
C19A	Slack Wire Ran	75.07	38	⇓P	P	05 20 23.4	+1.4
	baz=75						
DLMT	Dillon	75.16	41	eP	P	05 20 24.1	+1.5
	comp=Z,9.7nm,1.1s						
E17A	Martinsdale	75.18	39	⇑P	P	05 20 24.3	+1.5
	baz=75,SNR=6.7						
F16A	Kennard Place,	75.32	40	⇓P	P	05 20 24.9	+1.4
	baz=75						
H14A	Leadore	75.33	42	⇑P	P	05 20 24.6	+0.9
	baz=75						
G15A	Dillon	75.36	41	⇓P	P	05 20 25.2	+1.4
	baz=75,SNR=11						
BOZ	Bozeman (W)	75.42	40	⇓P	P	05 20 25.2	+1.1
	baz=75,SNR=5.0						
B21A	Ellsworth Farm	75.44	36	⇑P	P	05 20 25.3	+1.3
	baz=75						
I13A	Wildhorse Cree	75.46	43	⇓P	P	05 20 26.1	+1.6
	baz=75,SNR=12						
A22A	Carney Farms,	75.48	35	⇓P	P	05 20 24.9	+0.6
	baz=75						
C20A	Veseth Ranch,	75.55	37	⇓P	P	05 20 25.8	+1.1
	baz=75						
HLID	Hailey	75.57	43	⇓P	P	05 20 27.1	+2.1
	baz=75						
D19A	Cripps Ranch,	75.57	38	⇑P	P	05 20 26.4	+1.7
	baz=75						
G16A	Moss Hill, Enn	75.64	41	⇓P	P	05 20 26.4	+1.0
	baz=75,SNR=6.2						
H15A	Lima	75.68	42	⇓P	P	05 20 27.1	+1.4
	baz=75						
F17A	Fitzpatrick Pl	75.69	40	⇓P	P	05 20 27.2	+1.6
	baz=75						
I14A	Mackay	75.79	43	⇑P	P	05 20 28.1	+1.9
	baz=76						
J13A	Cove Ranch, Pi	75.81	43	⇑P	P	05 20 28.1	+1.8
	baz=76,SNR=8.4						
C21A	Desert Coulee	75.86	36	⇑P	P	05 20 27.5	+1.1
	baz=76						
D20A	Manuel Ranch,	75.96	38	⇓P	P	05 20 28.4	+1.5
	baz=76						
G17A	Pierce Place,	76.08	40	⇓P	P	05 20 29.6	+1.8
	baz=76						
F18A	Big Timber	76.13	39	⇑P	P	05 20 29.6	+1.7
	baz=76						
E19A	Rath Farm, Rou	76.14	38	⇓P	P	05 20 29.5	+1.5
	baz=76						
J14A	Carey	76.19	43	⇑P	P	05 20 30.4	+1.9
	baz=76,SNR=5.5						
B23A	Brockton	76.28	35	⇑P	P	05 20 29.8	+1.1
	baz=76						
H16A	Russell Place,	76.30	41	⇓P	P	05 20 30.8	+1.8
	baz=76						
E20A	Meyer Farm, Mu	76.41	38	⇓P	P	05 20 31.0	+1.5
	baz=76						
F19A	Roth Farm, Mol	76.53	39	⇓P	P	05 20 31.8	+1.7
	baz=76						
DGMT	Dagmar	76.60	35	⇓P	P	05 20 31.5	+1.0
	baz=76						
J15A	Blackfoot	76.68	42	⇑P	P	05 20 33.1	+2.1
	baz=76						
C23A	Lambert	76.71	35	⇑P	P	05 20 32.7	+1.7
	baz=76						
D22A	Cohagen	76.78	36	⇓P	P	05 20 32.1	+0.7
	baz=76						
I16A	Newdale	76.79	42	⇓P	P	05 20 33.7	+2.0
	baz=76,SNR=5.5						
CDF	Champ du Feu	76.81	326	eP	P	05 20 30.4	-1.2
CDF	Champ du Feu	76.81	326	eP	P	05 20 30.4	-1.2
CDF	Champ du Feu	76.81	326	eP	P	05 20 30.4	-1.2
H17A	Grant Village	76.85	41	⇓P	P	05 20 34.7	+2.6
	baz=76						
RLMT	Red Lodge	76.92	39	⇑P	P	05 20 34.0	+1.5
	baz=77						
F20A	Billings	76.93	38	⇓P	P	05 20 33.6	+1.2
	baz=77						
K14A	Jones Ranch, D	76.93	43	⇓P	P	05 20 34.6	+2.1
	baz=77						
NVAR	Mina Array Bea	77.16	49	P	P	05 20 35.5	+1.6
	comp=Z,1.1nm,0.5s,baz=288,slow=5.8,SNR=9.1						
NVAR				pP	pP	05 22 28.3	+2.2
	comp=Z,0.6nm,0.5s,baz=297,slow=5.9,SNR=3.7						
I17A	Pilgrim Ck.	77.20	41	⇓P	P	05 20 36.5	+2.4
	baz=77						
H19A	Powell	77.40	40	⇓P	P	05 20 36.4	+1.5
	baz=77						
J17A	Brown Place, J	77.55	41	⇓P	P	05 20 38.4	+2.5
	baz=77						
L15A	Malad City	77.72	43	⇓P	P	05 20 38.4	+1.5
	baz=77						
I19A	Meeteetse	77.87	40	⇓P	P	05 20 39.7	+2.1
	baz=78						
SFTF	Sexfontaines	77.89	327	eP	P	05 20 37.4	0.0
SFTF	Sexfontaines	77.89	327	eP	P	05 20 37.4	0.0
H20A	Greybull	78.00	39	⇑P	P	05 20 39.6	+1.4
	baz=78						
J18A	Kendall Valley	78.00	41	⇑P	P	05 20 39.8	+1.4
	baz=78						
M15A	Larsen Ranch,	78.09	44	⇑P	P	05 20 40.4	+1.7
	baz=78						
I20A	Worland	78.34	40	⇑P	P	05 20 41.9	+1.9
	baz=78						
ULM	Lac du Bonnet	78.38	29	P	P	05 20 40.1	+0.1
	comp=Z,2.5nm,0.6s,baz=275,slow=5.1,SNR=4.5						
J19A	Crowheart	78.42	41	⇓P	P	05 20 42.0	+1.4
	baz=78						
BW06	Boulder Array	78.56	41	⇓P	P	05 20 42.2	+0.9
	baz=78						
PDAR	Pinedale Array	78.56	41	P	P	05 20 42.3	+1.0
	comp=Z,1.3nm,0.8s,baz=329,slow=2.3,SNR=12						
PDAR				pP	pP	05 22 34.8	+0.7
	comp=Z,1.6nm,0.9s,baz=318,slow=2.0,SNR=7.3						
M16A	Huntsville	78.62	43	⇑P	P	05 20 43.2	+1.5
	baz=78						
G23A	Biddle	78.63	37	⇑P	P	05 20 43.0	+1.4
	baz=78						
DUG	Dugway	78.84	45	⇑P	P	05 20 44.7	+1.9
	baz=78						
I21A	Big Trails, Te	78.84	39	⇓P	P	05 20 43.9	+1.1
	baz=78						
O15A	The Old Anders	78.95	45	⇓P	P	05 20 45.4	+2.0
	baz=79						
M17A	Scullys Gap (B	78.98	43	⇓P	P	05 20 45.1	+1.5
	baz=79						
LOR	Lormes	79.11	327	eP	P	05 20 43.2	-0.8
	comp=Z,15nm,0.6s						
LOR	Lormes	79.11	327	eP	P	05 20 43.2	-0.8
	comp=Z,15nm,0.6s						
I22A	9 Mile Ranch,	79.15	39	⇑P	P	05 20 45.3	+0.9
	baz=79						
MPMC	Manual Prospec	79.29	50	⇓P	P	05 20 47.4	+2.0
	baz=79						
N17A	Moffit Pass	79.30	43	⇑P	P	05 20 46.9	+1.5
	baz=79						
LPL	La Plagne	79.32	324	eP	P	05 20 45.1	-0.2
	comp=Z,13nm,0.5s						
LPL	La Plagne	79.32	324	eP	P	05 20 45.1	-0.2
LPL				pmax	pmax		
	comp=Z,13nm,0.5s						
LPL	La Plagne	79.32	324	eP	P	05 20 45.1	-0.2
	comp=Z,13nm,0.5s						
LPG	La Plagne	79.32	324	eP	P	05 20 45.2	-0.2
	comp=Z,16nm,0.5s						
LPG	La Plagne	79.32	324	eP	P	05 20 45.2	-0.2
LPG				pmax	pmax		
	comp=Z,16nm,0.5s						
LPG	La Plagne	79.32	324	eP	P	05 20 45.2	-0.2
	comp=Z,16nm,0.5s						
FURC	Furnace Creek,	79.35	50	⇑P	P	05 20 47.5	+2.1
	baz=79						
SSF	Saint Saulge	79.42	327	eP	P	05 20 44.9	-0.7
	comp=Z,7.8nm,0.7s						
SSF	Saint Saulge	79.42	327	eP	P	05 20 44.9	-0.7
SSF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SSF	Saint Saulge	79.42	327	eP	P	05 20 44.9	-0.7
	comp=Z,7.8nm,0.7s						
J22A	Midwest	79.52	39	⇑P	P	05 20 46.8	+0.5
	baz=79						
FLN	La Foliniere	79.56	330	eP	P	05 20 44.7	-1.5
FLN	La Foliniere	79.56	330	eP	P	05 20 44.7	-1.5
FLN	La Foliniere	79.56	330	eP	P	05 20 44.7	-1.5
LDF	La Druitiere	79.57	330	eP	P	05 20 45.1	-1.2
LDF	La Druitiere	79.57	330	eP	P	05 20 45.1	-1.2
LDF	La Druitiere	79.57	330	eP	P	05 20 45.1	-1.2
SMF	Signal de Mont	79.62	326	eP	P	05 20 45.8	-0.9
	comp=Z,5.4nm,0.5s						
SMF	Signal de Mont	79.62	326	eP	P	05 20 45.8	-0.9
SMF				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SMF	Signal de Mont	79.62	326	eP	P	05 20 45.8	-0.9
	comp=Z,5.4nm,0.5s						
AVF	Avril sur Loir	79.70	327	eP	P	05 20 46.4	-0.6
	comp=Z,15nm,0.8s						
AVF	Avril sur Loir	79.70	327	eP	P	05 20 46.4	-0.6
AVF				pmax	pmax		
	comp=Z,15nm,0.8s						
AVF	Avril sur Loir	79.70	327	eP	P	05 20 46.4	-0.6
	comp=Z,15nm,0.8s						
L20A	Wamsutter	79.72	41	⇑P	P	05 20 49.0	+1.4
	baz=79						
K21A	Alcova	79.76	40	⇑P	P	05 20 48.6	+0.9
	baz=79						
MBDF	Montbardon	79.92	324	eP	P	05 20 47.5	-0.9
	comp=Z,12nm,0.6s						
MBDF	Montbardon	79.92	324	eP	P	05 20 47.5	-0.9
MBDF				pmax	pmax		
	comp=Z,12nm,0.6s						
MBDF	Montbardon	79.92	324	eP	P	05 20 47.5	-0.9
	comp=Z,12nm,0.6s						
GRR	Gorron	80.01	330	eP	P	05 20 47.7	-0.9
	comp=Z,5.0nm,0.3s						
GRR	Gorron	80.01	330	eP	P	05 20 47.7	-0.9
GRR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
GRR	Gorron	80.01	330	eP	P	05 20 47.7	-0.9
	comp=Z,5.0nm,0.3s						
BGF	Bois d'Agland	80.10	327	eP	P	05 20 48.4	-0.7
BGF	Bois d'Agland	80.10	327	eP	P	05 20 48.4	-0.7
BGF	Bois d'Agland	80.10	327	eP	P	05 20 48.4	-0.7
ORIF	Oris-en-Rattie	80.16	324	eP	P	05 20 49.1	-0.5
ORIF	Oris-en-Rattie	80.16	324	eP	P	05 20 49.1	-0.5
ORIF	Oris-en-Rattie	80.16	324	eP	P	05 20 49.1	-0.5
GSC	Goldstone	80.22	51	⇑P	P	05 20 52.4	+2.3
	baz=80						
SBF	Sospel	80.31	323	eP	P	05 20 49.2	-1.2
SBF	Sospel	80.31	323	eP	P	05 20 49.2	-1.2
SBF	Sospel	80.31	323	eP	P	05 20 49.2	-1.2
TCF	Toulx Ste Croi	80.57	327	eP	P	05 20 51.3	-0.3
	comp=Z,5.2nm,0.7s						
TCF	Toulx Ste Croi	80.57	327	eP	P	05 20 51.3	-0.3
TCF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TCF	Toulx Ste Croi	80.57	327	eP	P	05 20 51.3	-0.3
	comp=Z,5.2nm,0.7s						
P18A	Preston Nutter	80.58	44	⇑P	P	05 20 53.8	+1.7
	baz=80						
PGF	Pioggiola	80.63	321	eP	P	05 20 51.4	-0.7
	comp=Z,2.8nm,0.6s						
PGF	Pioggiola	80.63	321	eP	P	05 20 51.4	-0.7
PGF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PGF	Pioggiola	80.63	321	eP	P	05 20 51.4	-0.7
	comp=Z,2.8nm,0.6s						
O19A	Miners Draw (B	80.64	43	⇓P	P	05 20 53.5	+1.3
	baz=80						
VIVF	Saint-Julien-l	80.72	325	eP	P	05 20 52.0	-0.4
	comp=Z,8.3nm,0.7s						
VIVF	Saint-Julien-l	80.72	325	eP	P	05 20 52.0	-0.4
VIVF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
VIVF	Saint-Julien-l	80.72	325	eP	P	05 20 52.0	-0.4
	comp=Z,8.3nm,0.7s						
SGMF	Saint Gilles	80.74	331	eP	P	05 20 51.9	-0.5
	comp=Z,2.3nm,0.4s						
SGMF	Saint Gilles	80.74	331	eP	P	05 20 51.9	-0.5
SGMF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
SGMF	Saint Gilles	80.74	331	eP	P	05 20 51.9	-0.5
	comp=Z,2.3nm,0.4s						
ROSF	Rostrenen	80.92	331	eP	P	05 20 53.0	-0.3
ROSF	Rostrenen	80.92	331	eP	P	05 20 53.0	-0.3
ROSF	Rostrenen	80.92	331	eP	P	05 20 53.0	-0.3
LMR	La Mourre	81.14	323	eP	P	05 20 53.8	-0.8
	comp=Z,4.3nm,0.6s						
LMR	La Mourre	81.14	323	eP	P	05 20 53.8	-0.8
LMR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LMR	La Mourre	81.14	323	eP	P	05 20 53.8	-0.8
	comp=Z,4.3nm,0.6s						
P19A	Cripple Cowboy	81.21	43	⇓P	P	05 20 56.9	+1.6
	baz=81						
MFF	Saint Martin d	81.23	329	eP	P	05 20 54.6	-0.4
MFF	Saint Martin d	81.23	329	eP	P	05 20 54.6	-0.4
MFF	Saint Martin d	81.23	329	eP	P	05 20 54.6	-0.4
QUIF	Quistinic	81.24	331	eP	P	05 20 54.3	-0.7
QUIF	Quistinic	81.24	331	eP	P	05 20 54.3	-0.7
QUIF	Quistinic	81.24	331	eP	P	05 20 54.3	-0.7
SCHQ	Schefferville	81.40	11	P	P	05 20 55.6	-0.1
	comp=Z,4.6nm,1.0s,baz=350,slow=2.1,SNR=3.8						
Q19A	Hogan Spring (	81.58	44	⇓P	P	05 20 58.3	+1.2
	baz=81						
RJF	Les Rejaudoux	81.66	327	eP	P	05 20 56.8	-0.4
RJF	Les Rejaudoux	81.66	327	eP	P	05 20 56.8	-0.4
RJF	Les Rejaudoux	81.66	327	eP	P	05 20 56.8	-0.4
CAF	Calviac	81.75	326	eP	P	05 20 57.9	+0.2
CAF	Calviac	81.75	326	eP	P	05 20 57.9	+0.2
CAF	Calviac	81.75	326	eP	P	05 20 57.9	+0.2
U15A	North Rim	81.90	47	⇑P	P	05 21 01.5	+2.5
	baz=82						
O22A	Kremmling	82.00	41	⇓P	P	05 21 00.8	+1.3
	baz=82						
S18A	Hurst Farm, Bl	82.17	45	⇓P	P	05 21 01.8	+1.5
	baz=82						
LFF	La Frestale	82.27	327	eP	P	05 21 00.5	+0.2
	comp=Z,15nm,0.6s						
LFF	La Frestale	82.27	327	eP	P	05 21 00.5	+0.2
LFF				pmax	pmax		
	comp=Z,15nm,0.6s						
LFF	La Frestale	82.27	327	eP	P	05 21 00.5	+0.2
	comp=Z,15nm,0.6s						
P22A	Eagle	82.34	42	⇑P	P	05 21 03.0	+1.9
	baz=82						
R20A	Redvale	82.62	44	⇑P	P	05 21 04.2	+1.7
	baz=82						
R21A	Cimarron	82.89	43	⇑P	P	05 21 05.7	+1.8
	baz=83						
WUAZ	Wupatki	83.07	47	⇓P	P	05 21 06.6	+1.8
	baz=83						
S21A	Coal Bank Pass	83.32	44	⇓P	P	05 21 08.2	+2.1
	baz=83						
S22A	4UR Ranch, Cre	83.74	43	⇑P	P	05 21 10.2	+2.0
	baz=83						
X16A	Lo Mia Camp, P	83.86	48	⇓P	P	05 21 11.0	+2.3
	baz=84						
U20A	Newcomb	83.93	45	⇑P	P	05 21 11.1	+2.1
	baz=84						
P26A	Davis Ranch, A	84.00	40	⇑P	P	05 21 10.9	+1.6
	baz=84						
R24A	Sanders Place,	84.21	42	⇓P	P	05 21 12.2	+1.8
	baz=84						
T22A	Edith	84.27	43	⇓P	P	05 21 12.7	+1.9
	baz=84						
U21A	Nageezi	84.33	44	⇑P	P	05 21 12.6	+1.5
	baz=84						
ETSF	Etsaut	84.49	327	eP	P	05 21 11.9	+0.4
	comp=Z,3.3nm,0.7s						
ETSF	Etsaut	84.49	327	eP	P	05 21 11.9	+0.4
ETSF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ETSF	Etsaut	84.49	327	eP	P	05 21 11.9	+0.4
	comp=Z,3.3nm,0.7s						
X18A	Snowflake	84.58	47	⇑P	P	05 21 13.8	+1.5
	baz=84						
R25A	Fountain Ranch	84.67	41	⇓P	P	05 21 13.8	+1.2
	baz=84						
T23A	Casias Ranch,	84.68	43	⇑P	P	05 21 14.5	+1.6
	baz=84						
W20A	Ramah	84.90	46	⇓P	P	05 21 15.6	+1.7
	baz=85						
U23A	El Rito	85.16	43	⇓P	P	05 21 17.2	+2.1
	baz=85						
R27A	Eads	85.27	40	⇓P	P	05 21 16.8	+1.3
	baz=85						
TXAR	Lajitas Array	91.97	46	P	P	05 21 48.8	+1.9
	comp=Z,0.4nm,0.8s,baz=324,slow=4.5,SNR=3.1						
TORD	Torodi Ar. Bea	107.92	308	PP	PP	05 27 33.0	-1.1
	comp=Z,0.5nm,1.0s,baz=30,slow=6.4,SNR=3.7						
SNAA	Sanae	143.72	202	eP	PKPbc	05 28 06.8	-0.2
SNAA	Sanae	143.72	202	eP	SKPbc	05 30 57.0	+0.4
SNAA	Sanae	143.72	202	PKP	PKPab	05 28 07.1	+0.1
	comp=Z,0.6nm,0.5s,baz=159,slow=4.1,SNR=23						
VNA2	Neumayer--Watz	145.37	202	eP	PKPbc	05 28 12.1	+0.1
	baz=96,slow=2.5						
VNA3	Neumayer Olymp	145.81	201	eP	PKPbc	05 28 12.9	-0.4
LPAZ	La Paz	148.55	39	PKPbc	PKPbc	05 28 23.9	+1.1
	comp=Z,1.2nm,0.6s,baz=49,slow=2.4,SNR=5.3						

*ISCJB **06** 05:11:47.6±0.4, 42°33N±0°02×13°35E±0°04, h14km±3km, Error ellipse: s-maj=4.5km s-min=3.7km az=174.3*
*ROM **06** 05:11:47.7±0.1, 42°32N×13°36E, h10km±1km, Ml2.5/14, Error ellipse: s-maj=1.6km s-min=1.4km az=61.0*
*CSEM **06** 05:11:47.9±0.1, 42°32N×13°35E, h10km, ML3.5/4, Error ellipse: s-maj=2.8km s-min=2.1km az=80.0*
ISC 06 05:11:48.1±0.8**, 42°31N**±0°02×**13°37E**±0°02**, h12**km±4km**, n44, σ0s61**/64**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**34**	Pg	**Pg**	**05 11 50.2**	**-0.2**
AQU				Sg	**Sg**	**05 11 51.5**	**-0.7**
	6μm,0.2s						
AQU	**L'Aquila**	**0.05**	**34**	Pg	**Pg**	**05 11 50.2**	**-0.2**
AQU				Sg	**Sg**	**05 11 51.5**	**-0.7**
	6μm,0.2s						
FAGN	**Fagnano**	**0.17**	**106**	Pg	**Pg**	**05 11 52.4**	**+0.5**
FAGN				Sg	**Sg**	**05 11 55.5**	**+0.8**
FAGN	**Fagnano**	**0.17**	**106**	Pg	**Pg**	**05 11 52.4**	**+0.5**
FAGN				Sg	**Sg**	**05 11 55.5**	**+0.8**
FIAM	**Fiamignano**	**0.19**	**256**	Pg	**Pg**	**05 11 52.8**	**+0.5**
FIAM	**Fiamignano**	**0.19**	**256**	Pg	**Pg**	**05 11 52.8**	**+0.5**
CAMP	**Campotosto**	**0.23**	**8**	Pg	**Pg**	**05 11 52.6**	**-0.3**
CAMP				Sg	**Sg**	**05 11 56.0**	**-0.3**
CAMP	**Campotosto**	**0.23**	**8**	Pg	**Pg**	**05 11 52.6**	**-0.3**
CAMP				Sg	**Sg**	**05 11 56.0**	**-0.3**
PTQR	**Pietraquaria**	**0.29**	**175**	Pg	**Pg**	**05 11 53.4**	**-0.7**
PTQR				Sg	**Sb**	**05 11 59.3**	**-0.9**
PTQR	**Pietraquaria**	**0.29**	**175**	Pg	**Pg**	**05 11 53.4**	**-0.7**
PTQR				Sg	**Sb**	**05 11 59.3**	**-0.9**
TERO	**Teramo**	**0.36**	**30**	Pg	**Pg**	**05 11 55.1**	**-0.2**
TERO				Sg	**Sg**	**05 12 00.8**	**+0.7**
TERO	**Teramo**	**0.36**	**30**	Pg	**Pg**	**05 11 55.1**	**-0.2**
TERO				Sg	**Sg**	**05 12 00.8**	**+0.7**
CERT	**Cerreto**	**0.46**	**218**	Pg	**Pg**	**05 11 57.4**	**+0.2**
CERT				Sg	**Sb**	**05 12 04.9**	**-0.1**
	544nm,0.3s						
CERT	**Cerreto**	**0.46**	**218**	Pg	**Pg**	**05 11 57.4**	**+0.2**
CERT				Sg	**Sb**	**05 12 04.9**	**-0.1**
	544nm,0.3s						
VVLD	**Villa Vallelon**	**0.48**	**157**	Pg	**Pg**	**05 11 57.7**	**+0.2**
	337nm,0.5s						
VVLD	**Villa Vallelon**	**0.48**	**157**	Pg	**Pg**	**05 11 57.7**	**+0.2**
	337nm,0.5s						
INTR	**Introdacqua**	**0.50**	**127**	Pg	**Pb**	**05 11 58.8**	**-0.1**
INTR				Sg	**Sb**	**05 12 05.7**	**-0.5**
	404nm,0.2s						
INTR	**Introdacqua**	**0.50**	**127**	Pg	**Pb**	**05 11 58.8**	**-0.1**
INTR				Sg	**Sb**	**05 12 05.7**	**-0.5**
	404nm,0.2s						
MNS	**Montasola**	**0.51**	**278**	Pg	**Pg**	**05 11 57.9**	**-0.2**
	197nm,0.5s						
MNS	**Montasola**	**0.51**	**278**	Pg	**Pg**	**05 11 57.9**	**-0.2**
	197nm,0.5s						
GUAR	**Guarcino**	**0.52**	**184**	Pg	**Pg**	**05 11 57.2**	**-1.0**
GUAR	**Guarcino**	**0.52**	**184**	Pg	**Pg**	**05 11 57.2**	**-1.0**
MTCE	**Montecelio**	**0.55**	**238**	Pg	**Pg**	**05 11 58.8**	**+0.1**
	131nm,0.6s						
MTCE	**Montecelio**	**0.55**	**238**	Pg	**Pg**	**05 11 58.8**	**+0.1**
	131nm,0.6s						
NRCA	**Norcia**	**0.55**	**340**	Pg	**Pg**	**05 11 58.8**	**-0.1**
	218nm,0.2s						
NRCA	**Norcia**	**0.55**	**340**	Pg	**Pg**	**05 11 58.8**	**-0.1**
	218nm,0.2s						
POFI	**Posta Fibreno**	**0.65**	**156**	Pg	**Pg**	**05 12 00.5**	**-0.2**
	113nm,0.5s						
POFI	**Posta Fibreno**	**0.65**	**156**	Pg	**Pg**	**05 12 00.5**	**-0.2**
	113nm,0.5s						
LPEL	**Lama dei Pelig**	**0.66**	**113**	Pg	**Pg**	**05 11 59.6**	**-1.4**
LPEL				Sg	**Sb**	**05 12 10.8**	**0.0**
	274nm,0.2s						
LPEL	**Lama dei Pelig**	**0.66**	**113**	Pg	**Pg**	**05 11 59.6**	**-1.4**
LPEL				Sg	**Sb**	**05 12 10.8**	**0.0**
	274nm,0.2s						
OFFI	**Offida**	**0.67**	**21**	Pg	**Pg**	**05 12 01.1**	**+0.1**
	743nm,0.5s						
OFFI	**Offida**	**0.67**	**21**	Pg	**Pg**	**05 12 01.1**	**+0.1**
	743nm,0.5s						
FDMO	**Fiordimonte**	**0.75**	**344**	Pg	**Pg**	**05 12 02.3**	**-0.3**
	85nm,0.3s						
FDMO	**Fiordimonte**	**0.75**	**344**	Pg	**Pg**	**05 12 02.3**	**-0.3**
	85nm,0.3s						
CESI	**CESI - Serrava**	**0.77**	**334**	Pg	**Pg**	**05 12 02.4**	**-0.6**
	64nm,0.5s						
CESI	**CESI - Serrava**	**0.77**	**334**	Pg	**Pg**	**05 12 02.4**	**-0.6**
	64nm,0.5s						
ASSB	**Assisi San Ben**	**0.90**	**325**	Pg	**Pg**	**05 12 04.6**	**-0.8**
	130nm,0.6s						
ASSB	**Assisi San Ben**	**0.90**	**325**	Pg	**Pg**	**05 12 04.6**	**-0.8**
	130nm,0.6s						
CING	**Cingoli**	**1.07**	**353**	Pg	**Pb**	**05 12 08.1**	**-0.5**
	70nm,0.6s						
CING	**Cingoli**	**1.07**	**353**	Pg	**Pb**	**05 12 08.1**	**-0.5**
	70nm,0.6s						
NVLJ	**Novalja**	**2.50**	**25**	*e*Pn	**Pn**	**05 12 28.4**	**-0.2**
NVLJ				Sn	**Sn**	**05 13 00.4**	**+1.3**
NVLJ	**Novalja**	**2.50**	**25**	*e*Pn	**Pn**	**05 12 28.3**	**-0.2**
NVLJ				Sn	**Sn**	**05 13 00.3**	**+1.3**
STON	**Ston**	**3.25**	**79**	*e*Pn	**Pn**	**05 12 39.8**	**+0.9**
STON				Sn	**Sn**	**05 13 17.4**	**0.0**
STON	**Ston**	**3.25**	**79**	*e*Pn	**Pn**	**05 12 39.7**	**+0.9**
STON				Sn	**Sn**	**05 13 17.4**	**0.0**

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*ISCJB **06** 05:14:08.8±0.3, 42°38N±0°02×13°32E±0°03, h12km±3km, Error ellipse: s-maj=3.9km s-min=2.9km az=152.7*
*ROM **06** 05:14:08.9±0.1, 42°37N×13°35E, h9km±1km, Ml2.8/26, Error ellipse: s-maj=1.5km s-min=1.2km az=87.0*
*CSEM **06** 05:14:09.1±0.1, 42°38N×13°32E, h8km, ML3.7/10, Error ellipse: s-maj=2.4km s-min=1.7km az=64.0*
ISC 06 05:14:08.9±0.8**, 42°37N**±0°02×**13°34E**±0°02**, h12**km±5km**, n62, σ0s93**/88**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**115**	Pg	**Pg**	**05 14 11.2**	**-0.2**
AQU				Sg	**Sg**	**05 14 12.5**	**-0.7**
	25μm,0.2s						
AQU	**L'Aquila**	**0.05**	**115**	Pg	**Pg**	**05 14 11.2**	**-0.2**
AQU				Sg	**Sg**	**05 14 12.5**	**-0.7**
	25μm,0.2s						
CAMP	**Campotosto**	**0.17**	**17**	Pg	**Pg**	**05 14 13.1**	**+0.2**
CAMP				Sg	**Sg**	**05 14 15.8**	**0.0**
	11μm,0.3s						
CAMP	**Campotosto**	**0.17**	**17**	Pg	**Pg**	**05 14 13.1**	**+0.2**
CAMP				Sg	**Sg**	**05 14 15.8**	**0.0**
	11μm,0.3s						
FIAM	**Fiamignano**	**0.20**	**238**	Pg	**Pg**	**05 14 14.0**	**+0.7**
FIAM				Sg	**Sg**	**05 14 17.4**	**+1.0**
FIAM	**Fiamignano**	**0.20**	**238**	Pg	**Pg**	**05 14 14.0**	**+0.7**
FIAM				Sg	**Sg**	**05 14 17.4**	**+1.0**
FAGN	**Fagnano**	**0.21**	**121**	Pg	**Pg**	**05 14 13.9**	**+0.4**
FAGN				Sg	**Sg**	**05 14 17.6**	**+0.9**
	8μm,0.4s						
FAGN	**Fagnano**	**0.21**	**121**	Pg	**Pg**	**05 14 13.9**	**+0.4**
FAGN				Sg	**Sg**	**05 14 17.6**	**+0.9**
	8μm,0.4s						
TERO	**Teramo**	**0.32**	**38**	Pg	**Pb**	**05 14 15.3**	**-1.2**
TERO				Sg	**Sb**	**05 14 19.9**	**-1.7**
	3μm,0.1s						
TERO	**Teramo**	**0.32**	**38**	Pg	**Pb**	**05 14 15.3**	**-1.2**
TERO				Sg	**Sb**	**05 14 19.9**	**-1.7**
	3μm,0.1s						
NRCA	**Norcia**	**0.49**	**340**	Pg	**Pb**	**05 14 18.6**	**-0.9**
NRCA				Sg	**Sb**	**05 14 26.2**	**-0.4**
	862nm,0.1s						
NRCA	**Norcia**	**0.49**	**340**	Pg	**Pb**	**05 14 18.6**	**-0.9**
NRCA				Sg	**Sb**	**05 14 26.2**	**-0.4**
	862nm,0.1s						
MNS	**Montasola**	**0.49**	**271**	Pg	**Pb**	**05 14 18.7**	**-0.8**
	403nm,0.8s						
MNS	**Montasola**	**0.49**	**271**	Pg	**Pb**	**05 14 18.7**	**-0.8**
	403nm,0.8s						
CERT	**Cerreto**	**0.50**	**212**	Pg	**Pb**	**05 14 18.9**	**-0.8**
CERT				Sg	**Sb**	**05 14 26.6**	**-0.4**
	979nm,0.4s						
CERT	**Cerreto**	**0.50**	**212**	Pg	**Pb**	**05 14 18.9**	**-0.8**
CERT				Sg	**Sb**	**05 14 26.6**	**-0.4**
	979nm,0.4s						
VVLD	**Villa Vallelon**	**0.55**	**157**	Pg	**Pb**	**05 14 19.4**	**-1.0**
	329nm,0.4s						
VVLD	**Villa Vallelon**	**0.55**	**157**	Pg	**Pb**	**05 14 19.4**	**-1.0**
	329nm,0.4s						
INTR	**Introdacqua**	**0.55**	**131**	Pg	**Pb**	**05 14 19.9**	**-0.7**
INTR				Sg	**Sb**	**05 14 28.7**	**+0.2**
	459nm,0.2s						
INTR	**Introdacqua**	**0.55**	**131**	Pg	**Pb**	**05 14 19.9**	**-0.7**
INTR				Sg	**Sb**	**05 14 28.7**	**+0.2**
	459nm,0.2s						
MTCE	**Montecelio**	**0.57**	**232**	Pg	**Pb**	**05 14 20.1**	**-0.7**
	242nm,0.5s						
MTCE	**Montecelio**	**0.57**	**232**	Pg	**Pb**	**05 14 20.1**	**-0.7**
	242nm,0.5s						
GUAR	**Guarcino**	**0.58**	**182**	Pg	**Pb**	**05 14 20.6**	**-0.4**
	261nm,0.6s						
GUAR	**Guarcino**	**0.58**	**182**	Pg	**Pb**	**05 14 20.6**	**-0.4**
	261nm,0.6s						
TRTR	**Tortoreto Alta**	**0.60**	**44**	Pg	**Pb**	**05 14 21.7**	**+0.3**
	2μm,0.8s						
TRTR	**Tortoreto Alta**	**0.60**	**44**	Pg	**Pb**	**05 14 21.7**	**+0.3**
	2μm,0.8s						
OFFI	**Offida**	**0.61**	**24**	Pg	**Pb**	**05 14 21.8**	**+0.2**
	3μm,0.6s						
OFFI	**Offida**	**0.61**	**24**	Pg	**Pb**	**05 14 21.8**	**+0.2**
	3μm,0.6s						
FDMO	**Fiordimonte**	**0.69**	**344**	Pg	**Pb**	**05 14 22.0**	**-0.8**
FDMO				Sg	**Sb**	**05 14 32.9**	**+0.6**
	188nm,0.3s						
FDMO	**Fiordimonte**	**0.69**	**344**	Pg	**Pb**	**05 14 22.0**	**-0.8**
FDMO				Sg	**Sb**	**05 14 32.9**	**+0.6**
	188nm,0.3s						
LPEL	**Lama dei Pelig**	**0.71**	**117**	Pg	**Pb**	**05 14 22.3**	**-0.8**
LPEL				Sg	**Sb**	**05 14 33.4**	**+0.6**
	307nm,0.2s						
LPEL	**Lama dei Pelig**	**0.71**	**117**	Pg	**Pb**	**05 14 22.3**	**-0.8**
LPEL				Sg	**Sb**	**05 14 33.4**	**+0.6**
	307nm,0.2s						
CESI	**CESI - Serrava**	**0.71**	**333**	Pg	**Pb**	**05 14 22.5**	**-0.7**
CESI				Sg	**Sb**	**05 14 33.8**	**+0.9**
	129nm,0.3s						
CESI	**CESI - Serrava**	**0.71**	**333**	Pg	**Pb**	**05 14 22.5**	**-0.7**
CESI				Sg	**Sb**	**05 14 33.8**	**+0.9**
	129nm,0.3s						
POFI	**Posta Fibreno**	**0.71**	**157**	Pg	**Pn**	**05 14 23.5**	**-1.3**
	93nm,0.4s						
POFI	**Posta Fibreno**	**0.71**	**157**	Pg	**Pn**	**05 14 23.5**	**-1.3**
	93nm,0.4s						
CAFR	**Castel Frentan**	**0.76**	**101**	Pg	**Pn**	**05 14 24.1**	**-1.3**
CAFR	**Castel Frentan**	**0.76**	**101**	Pg	**Pn**	**05 14 24.1**	**-1.3**
ASSB	**Assisi San Ben**	**0.84**	**323**	Pg	**Pb**	**05 14 24.7**	**-0.7**
	202nm,0.2s						
ASSB	**Assisi San Ben**	**0.84**	**323**	Pg	**Pb**	**05 14 24.7**	**-0.7**
	202nm,0.2s						
MIDA	**Miranda**	**1.00**	**137**	Pg	**Pg**	**05 14 27.3**	**-0.9**
	84nm,0.5s						
MIDA	**Miranda**	**1.00**	**137**	Pg	**Pg**	**05 14 27.3**	**-0.9**
	84nm,0.5s						
CING	**Cingoli**	**1.01**	**354**	Pg	**Pn**	**05 14 28.1**	**-0.8**
	148nm,0.3s						
CING	**Cingoli**	**1.01**	**354**	Pg	**Pn**	**05 14 28.1**	**-0.8**
	148nm,0.3s						
MURB	**Monte Urbino**	**1.07**	**326**	Pg	**Pn**	**05 14 29.2**	**-0.6**
	456nm,0.3s						
MURB	**Monte Urbino**	**1.07**	**326**	Pg	**Pn**	**05 14 29.2**	**-0.6**
	456nm,0.3s						
ARVD	**Arcevia**	**1.16**	**345**	Pg	**Pn**	**05 14 30.6**	**-0.4**
	89nm,0.5s						
ARVD	**Arcevia**	**1.16**	**345**	Pg	**Pn**	**05 14 30.6**	**-0.4**
	89nm,0.5s						
AOI	**Ancona**	**1.19**	**9**	Pg	**Pg**	**05 14 31.6**	**-0.2**
	108nm,0.5s						
AOI	**Ancona**	**1.19**	**9**	Pg	**Pg**	**05 14 31.6**	**-0.2**
	108nm,0.5s						
PIEI	**Pieia**	**1.30**	**333**	Pg	**Pg**	**05 14 33.6**	**-0.4**
	53nm,0.4s						
PIEI	**Pieia**	**1.30**	**333**	Pg	**Pg**	**05 14 33.6**	**-0.4**
	53nm,0.4s						
CAFI	**Castiglion Fio**	**1.39**	**314**	Pg	**Pg**	**05 14 35.1**	**-0.5**
	64nm,0.8s						
CAFI	**Castiglion Fio**	**1.39**	**314**	Pg	**Pg**	**05 14 35.1**	**-0.5**
	64nm,0.8s						
BADI	**Badiali**	**1.39**	**325**	Pg	**Pg**	**05 14 35.8**	**+0.1**
BADI	**Badiali**	**1.39**	**325**	Pg	**Pg**	**05 14 35.8**	**+0.1**
PARC	**Parchiule**	**1.51**	**328**	Pg	**Pg**	**05 14 37.8**	**-0.1**
	66nm,0.7s						
PARC	**Parchiule**	**1.51**	**328**	Pg	**Pg**	**05 14 37.8**	**-0.1**
	66nm,0.7s						
NVLJ	**Novalja**	**2.46**	**26**	*e*Pn	**Pn**	**05 14 50.1**	**+1.3**
NVLJ				Sn	**Sb**	**05 15 20.8**	**-2.4**
NVLJ	**Novalja**	**2.46**	**26**	*e*Pn	**Pn**	**05 14 50.0**	**+1.3**
NVLJ				Sn	**Sb**	**05 15 20.7**	**-2.4**
STON	**Ston**	**3.25**	**80**	*i* Pn	**Pn**	**05 15 01.5**	**+1.8**
STON				Sn	**Sn**	**05 15 40.2**	**+1.9**
STON	**Ston**	**3.25**	**80**	*i* Pn	**Pn**	**05 15 01.5**	**+1.8**
STON				Sn	**Sn**	**05 15 40.2**	**+1.9**

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*CSEM **06** 05:15:22.0, 42°36N×13°37E, h10km, After ROM*
ROM 06 05:15:22.0±0.1**, 42°36N×13°37E, h10**km**, Ml2.7**/2**, Error ellipse: s-maj=1.6km s-min=1.0km az=80.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.02**	**115**	Pg	Pg	05 15 24.0	+0.1
AQU				Sg	Sg	05 15 25.3	+0.1
AQU	**L'Aquila**	**0.02**	**115**	Pg	Pg	05 15 24.0	+0.1
AQU				Sg	Sg	05 15 25.3	+0.1
CAMP	**Campotosto**	**0.17**	**9**	Pg	Pg	05 15 26.6	+0.6
CAMP				Sg	Sg	05 15 29.5	+0.8
CAMP	**Campotosto**	**0.17**	**9**	Pg	Pg	05 15 26.6	+0.6
CAMP				Sg	Sg	05 15 29.5	+0.8
FAGN	**Fagnano**	**0.18**	**122**	Pg	Pg	05 15 27.0	+1.0
FAGN				Sg	Sg	05 15 29.9	+1.1
FAGN	**Fagnano**	**0.18**	**122**	Pg	Pg	05 15 27.0	+1.0
FAGN				Sg	Sg	05 15 29.9	+1.1
TERO	**Teramo**	**0.31**	**33**	Pg	Pg	05 15 28.6	+0.3
TERO	**Teramo**	**0.31**	**33**	Pg	Pg	05 15 28.6	+0.3
PTQR	**Pietraquaria**	**0.34**	**177**	Pg	Pg	05 15 29.4	+0.5
PTQR				Sg	Sb	05 15 34.8	-1.1
PTQR	**Pietraquaria**	**0.34**	**177**	Pg	Pg	05 15 29.4	+0.5
PTQR				Sg	Sb	05 15 34.8	-1.1
VCEL	**Villa Celiera**	**0.35**	**85**	Pg	Pg	05 15 29.7	+0.6
VCEL	**Villa Celiera**	**0.35**	**85**	Pg	Pg	05 15 29.7	+0.6
CERT	**Cerreto**	**0.51**	**215**	Pg	Pg	05 15 32.3	+0.3
CERT	**Cerreto**	**0.51**	**215**	Pg	Pg	05 15 32.3	+0.3
VVLD	**Villa Vallelon**	**0.53**	**159**	Pg	Pg	05 15 32.4	0.0
	722nm,0.6s						
VVLD	**Villa Vallelon**	**0.53**	**159**	Pg	Pg	05 15 32.4	0.0
	722nm,0.6s						
INTR	**Introdacqua**	**0.53**	**132**	Pg	Pg	05 15 32.6	+0.2
INTR	**Introdacqua**	**0.53**	**132**	Pg	Pg	05 15 32.6	+0.2
GUAR	**Guarcino**	**0.57**	**185**	Pg	Pb	05 15 33.9	-0.3
	237nm,0.5s						
GUAR	**Guarcino**	**0.57**	**185**	Pg	Pb	05 15 33.9	-0.3
	237nm,0.5s						
MTCE	**Montecelio**	**0.58**	**234**	Pg	Pg	05 15 33.7	+0.4
MTCE	**Montecelio**	**0.58**	**234**	Pg	Pg	05 15 33.7	+0.4

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*ISCJB **06** 05:15:28.9±0.2, 42°48N±0°02×13°37E±0°02, h11km±2km, mb3.2/1, Error ellipse: s-maj=3.4km s-min=2.4km az=33.4*
*CSEM **06** 05:15:29.3±0.1, 42°47N×13°36E, h5km, ML3.4/5, Error ellipse: s-maj=2.5km s-min=1.8km az=36.0*
*ROM **06** 05:15:29.0±0.1, 42°47N×13°40E, h10km±1km, Ml3.2/16, Error ellipse: s-maj=1.8km s-min=1.2km az=70.0*
*PDG **06** 05:15:29.2±0.2, 42°50N×13°42E, h7km, ML3.5/9, Error ellipse: s-maj=0.5km s-min=1.0km az=0.0*
*IDC **06** 05:15:30.0±2.1, 42°55N×13°56E, h0km, mb3.2/1, mb1 3.3/4, mb1mx3.2/29, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=61.9km s-min=15.1km az=97.0*
*LDG **06** 05:15:31.4±0.3, 42°43N×13°24E, h2km, Ml3.0/5, Error ellipse: s-maj=12.5km s-min=7.3km az=49.0*
ISC 06 05:15:29.9±0.8**, 42°48N**±0°02×**13°37E**±0°02**, h10**km±4km**, n97, σ1s33**/150**, 10C-6D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**29**	Pg	**Pg**	**05 15 31.7**	**-0.5**
CAMP				Sg	**Sg**	**05 15 33.3**	**-0.6**
CAMP	**Campotosto**	**0.07**	**29**	Pg	**Pg**	**05 15 31.7**	**-0.5**
CAMP				Sg	**Sg**	**05 15 33.3**	**-0.6**
AQU	**L'Aquila**	**0.13**	**168**	Pg	**Pg**	**05 15 32.9**	**0.0**
AQU				Sg	**Sg**	**05 15 34.9**	**-0.2**
AQU	**L'Aquila**	**0.13**	**168**	Pg	**Pg**	**05 15 32.9**	**0.0**
AQU				Sg	**Sg**	**05 15 34.9**	**-0.2**
TERO	**Teramo**	**0.23**	**51**	Pg	**Pg**	**05 15 33.8**	**-0.8**
TERO				Sg	**Sg**	**05 15 37.2**	**-0.6**
TERO	**Teramo**	**0.23**	**51**	Pg	**Pg**	**05 15 33.8**	**-0.8**
TERO				Sg	**Sg**	**05 15 37.2**	**-0.6**
FAGN	**Fagnano**	**0.27**	**143**	Pg	**Pg**	**05 15 36.0**	**+0.7**
FAGN				Sg	**Sg**	**05 15 38.9**	**-0.1**
FAGN	**Fagnano**	**0.27**	**143**	Pg	**Pg**	**05 15 36.0**	**+0.7**
FAGN				Sg	**Sg**	**05 15 38.9**	**-0.1**
VCEL	**Villa Celiera**	**0.36**	**103**	Pg	**Pg**	**05 15 36.4**	**-0.7**
VCEL	**Villa Celiera**	**0.36**	**103**	Pg	**Pg**	**05 15 36.4**	**-0.7**
NRCA	**Norcia**	**0.40**	**332**	Pg	**Pg**	**05 15 37.3**	**-0.5**
NRCA				Sg	**Sg**	**05 15 43.5**	**+0.4**
NRCA	**Norcia**	**0.40**	**332**	Pg	**Pg**	**05 15 37.3**	**-0.5**
NRCA				Sg	**Sg**	**05 15 43.5**	**+0.4**
GAVE	**Gavelli**	**0.41**	**302**	Pg	**Pg**	**05 15 37.6**	**-0.4**
GAVE	**Gavelli**	**0.41**	**302**	Pg	**Pg**	**05 15 37.6**	**-0.4**
PTQR	**Pietraquaria**	**0.46**	**177**	Pg	**Pg**	**05 15 38.0**	**-0.8**
PTQR				Sg	**Sg**	**05 15 45.8**	**+0.9**
PTQR	**Pietraquaria**	**0.46**	**177**	Pg	**Pg**	**05 15 38.0**	**-0.8**
PTQR				Sg	**Sg**	**05 15 45.8**	**+0.9**
OFFI	**Offida**	**0.51**	**27**	Pg	**Pg**	**05 15 40.0**	**+0.1**
	13μm,0.6s						
OFFI	**Offida**	**0.51**	**27**	Pg	**Pg**	**05 15 40.0**	**+0.1**
	13μm,0.6s						
MNS	**Montasola**	**0.52**	**260**	Pg	**Pg**	**05 15 39.0**	**-0.9**
MNS				Sg	**Sg**	**05 15 47.1**	**+0.4**
MNS	**Montasola**	**0.52**	**260**	Pg	**Pg**	**05 15 39.0**	**-0.9**
MNS				Sg	**Sg**	**05 15 47.1**	**+0.4**
TRTR	**Tortoreto Alta**	**0.52**	**51**	Pg	**Pg**	**05 15 40.1**	**+0.1**
	9μm,0.6s						
TRTR	**Tortoreto Alta**	**0.52**	**51**	Pg	**Pg**	**05 15 40.1**	**+0.1**
	9μm,0.6s						
FDMO	**Fiordimonte**	**0.59**	**340**	Pg	**Pg**	**05 15 40.6**	**-0.8**
FDMO				Sg	**Sg**	**05 15 49.9**	**+0.7**
	700nm,0.2s						
FDMO	**Fiordimonte**	**0.59**	**340**	Pg	**Pg**	**05 15 40.6**	**-0.8**
FDMO				Sg	**Sg**	**05 15 49.9**	**+0.7**
	700nm,0.2s						
CERT	**Cerreto**	**0.60**	**208**	Pg	**Pg**	**05 15 41.1**	**-0.5**
	4μm,0.6s						
CERT	**Cerreto**	**0.60**	**208**	Pg	**Pg**	**05 15 41.1**	**-0.5**
	4μm,0.6s						
INTR	**Introdacqua**	**0.61**	**139**	Pg	**Pg**	**05 15 40.4**	**-1.4**
INTR	**Introdacqua**	**0.61**	**139**	Pg	**Pg**	**05 15 40.4**	**-1.4**
CESI	**CESI - Serrava**	**0.63**	**327**	Pg	**Pg**	**05 15 41.3**	**-0.7**
CESI				Sg	**Sg**	**05 15 50.9**	**+0.6**
	470nm,0.5s						
CESI	**CESI - Serrava**	**0.63**	**327**	Pg	**Pg**	**05 15 41.3**	**-0.7**
CESI				Sg	**Sg**	**05 15 50.9**	**+0.6**
	470nm,0.5s						
VVLD	**Villa Vallelon**	**0.64**	**163**	Pg	**Pg**	**05 15 40.3**	**-1.9**
	1μm,0.5s						
VVLD	**Villa Vallelon**	**0.64**	**163**	Pg	**Pg**	**05 15 40.3**	**-1.9**
	1μm,0.5s						
MTCE	**Montecelio**	**0.65**	**226**	Pg	**Pg**	**05 15 42.3**	**-0.2**
MTCE	**Montecelio**	**0.65**	**226**	Pg	**Pg**	**05 15 42.3**	**-0.2**
LPEL	**Lama dei Pelig**	**0.74**	**125**	Pg	**Pg**	**05 15 42.6**	**-1.7**
LPEL				Sg	**Sg**	**05 15 53.6**	**-0.4**
	2μm,0.5s						
LPEL	**Lama dei Pelig**	**0.74**	**125**	Pg	**Pg**	**05 15 42.6**	**-1.7**
LPEL				Sg	**Sg**	**05 15 53.6**	**-0.4**
	2μm,0.5s						
CAFR	**Castel Frentan**	**0.77**	**109**	Pg	**Pg**	**05 15 43.5**	**-1.2**
	2μm,0.4s						
CAFR	**Castel Frentan**	**0.77**	**109**	Pg	**Pg**	**05 15 43.5**	**-1.2**
	2μm,0.4s						
POFI	**Posta Fibreno**	**0.80**	**161**	Pg	**Pg**	**05 15 43.9**	**-1.5**
	380nm,0.8s						
POFI	**Posta Fibreno**	**0.80**	**161**	Pg	**Pg**	**05 15 43.9**	**-1.5**
	380nm,0.8s						
SNTG	**Esanatoglia**	**0.84**	**338**	Pg	**Pg**	**05 15 45.1**	**-0.9**
	185nm,0.3s						
SNTG	**Esanatoglia**	**0.84**	**338**	Pg	**Pg**	**05 15 45.1**	**-0.9**
	185nm,0.3s						
ARVD	**Arcevia**	**1.06**	**343**	Pg	**Pg**	**05 15 49.2**	**-1.2**
	628nm,1.2s						
ARVD	**Arcevia**	**1.06**	**343**	Pg	**Pg**	**05 15 49.2**	**-1.2**
	628nm,1.2s						
MIDA	**Miranda**	**1.07**	**141**	Pg	**Pg**	**05 15 48.2**	**-2.2**
	479nm,0.7s						
MIDA	**Miranda**	**1.07**	**141**	Pg	**Pg**	**05 15 48.2**	**-2.2**
	479nm,0.7s						
AOI	**Ancona**	**1.08**	**9**	Pg	**Pg**	**05 15 49.6**	**-1.1**
	474nm,0.8s						
AOI	**Ancona**	**1.08**	**9**	Pg	**Pg**	**05 15 49.6**	**-1.1**
	474nm,0.8s						
SACS	**San Casciano d**	**1.14**	**289**	Pg	**Pb**	**05 15 51.4**	**-0.3**
	869nm,1.4s						
PIEI	**Pieia**	**1.22**	**330**	Pg	**Pb**	**05 15 53.2**	**+0.1**
	245nm,0.7s						
PIEI	**Pieia**	**1.22**	**330**	Pg	**Pb**	**05 15 53.2**	**+0.1**
	245nm,0.7s						
CAFI	**Castiglion Fio**	**1.33**	**310**	Pg	**Pn**	**05 15 54.5**	**-0.1**
	250nm,0.5s						
CAFI	**Castiglion Fio**	**1.33**	**310**	Pg	**Pn**	**05 15 54.5**	**-0.1**
	250nm,0.5s						
ARCI	**Arcidosso**	**1.44**	**286**	Pn	**Pn**	**05 15 56.5**	**+0.3**
	83nm,0.7s						
ARCI	**Arcidosso**	**1.44**	**286**	Pn	**Pn**	**05 15 56.5**	**+0.3**
	83nm,0.7s						
MAIM	**Mastiano**	**2.54**	**305**	P	**Pn**	**05 16 10.0**	**-1.2**
PGF	**Pioggiola**	**3.23**	**273**	*e*Pn	**Pn**	**05 16 20.6**	**-0.1**
PGF				*e*Sn	**Sn**	**05 17 00.6**	**+1.3**
	8.4nm,0.5s						
PGF	**Pioggiola**	**3.23**	**273**	*e*Pn	**Pn**	**05 16 20.6**	**-0.1**
PGF				*e*Sn	**Sn**	**05 17 00.6**	**+1.3**
	4.2nm,0.5s						
HCY	**Herceg Novi**	**3.79**	**89**⇑	*i*Pn	**Pn**	**05 16 28.2**	**-0.2**
HCY				*e*Sn	**Sn**	**05 17 13.8**	**+0.7**
HCY	**Herceg Novi**	**3.79**	**89**⇑	*i*Pn	**Pn**	**05 16 28.2**	**-0.2**
HCY				*e*Sn	**Sn**	**05 17 13.8**	**+0.7**
BRY	**Bratogost**	**3.84**	**82**⇑	*i*Pn	**Pn**	**05 16 29.4**	**+0.3**
BRY				*e*Sn	**Sn**	**05 17 15.5**	**+1.2**
BRY	**Bratogost**	**3.84**	**82**⇑	*i*Pn	**Pn**	**05 16 29.4**	**+0.3**
BRY				*e*Sn	**Sn**	**05 17 15.5**	**+1.2**
BUM	**Brajici-Budva**	**4.10**	**91**⇑	*i*Pn	**Pn**	**05 16 33.0**	**+0.4**
BUM				*e*Sn	**Sn**	**05 17 21.6**	**+0.9**
BUM	**Brajici-Budva**	**4.10**	**91**⇑	*i*Pn	**Pn**	**05 16 33.0**	**+0.4**
BUM				*e*Sn	**Sn**	**05 17 21.6**	**+0.9**
UPM	**Unac-Piva**	**4.14**	**78**	*e*Pn	**Pn**	**05 16 33.8**	**+0.5**
UPM				*e*Sn	**Sn**	**05 17 22.8**	**+1.0**
UPM	**Unac-Piva**	**4.14**	**78**	*e*Pn	**Pn**	**05 16 33.8**	**+0.5**
UPM				*e*Sn	**Sn**	**05 17 22.8**	**+1.0**
NKY	**Niksic**	**4.16**	**84**⇓	*i*Pn	**Pn**	**05 16 33.4**	**-0.2**
NKY				*e*Sn	**Sn**	**05 17 24.0**	**+1.6**
NKY	**Niksic**	**4.16**	**84**⇓	*i*Pn	**Pn**	**05 16 33.4**	**-0.2**
NKY				*e*Sn	**Sn**	**05 17 24.0**	**+1.6**
PDG	**Podgorica**	**4.36**	**89**⇑	*i*Pn	**Pn**	**05 16 36.6**	**+0.5**
PDG				*e*Sn	**Sn**	**05 17 27.4**	**+0.5**
TTG	**Podgorica**	**4.36**	**89**⇑	*i*Pn	**Pn**	**05 16 36.6**	**+0.5**
TTG				*e*Sn	**Sn**	**05 17 27.4**	**+0.5**
ULC	**Ulcinj**	**4.40**	**95**⇓	*i*Pn	**Pn**	**05 16 36.9**	**+0.2**
ULC				*e*Sn	**Sn**	**05 17 27.9**	**-0.1**
ULC	**Ulcinj**	**4.40**	**95**⇓	*i*Pn	**Pn**	**05 16 36.9**	**+0.2**
ULC				*e*Sn	**Sn**	**05 17 27.9**	**-0.1**
PLE	**Pljevlja**	**4.50**	**77**⇓	*i*Pn	**Pn**	**05 16 38.8**	**+0.5**
PLE				*e*Sn	**Sn**	**05 17 31.8**	**+1.0**
PLE	**Pljevlja**	**4.50**	**77**⇓	*i*Pn	**Pn**	**05 16 38.8**	**+0.5**
PLE				*e*Sn	**Sn**	**05 17 31.8**	**+1.0**
SBF	**Sospel**	**4.55**	**290**	*e*Pn	**Pn**	**05 16 39.1**	**+0.2**
SBF				*e*Sn	**Sn**	**05 17 29.0**	**-2.9**
	3.9nm,0.4s						
SBF	**Sospel**	**4.55**	**290**	*e*Pn	**Pn**	**05 16 39.1**	**+0.2**
SBF				*e*Sn	**Sn**	**05 17 29.0**	**-2.9**
	2.0nm,0.4s						
BEY	**Berane**	**4.83**	**83**	*e*Pn	**Pn**	**05 16 43.9**	**+1.2**
BEY				*e*Sn	**Sn**	**05 17 39.4**	**+0.7**
IVA	**Berane**	**4.83**	**83**	*e*Pn	**Pn**	**05 16 43.9**	**+1.2**
IVA				*e*Sn	**Sn**	**05 17 39.4**	**+0.7**
PVY	**Plav**	**4.87**	**86**⇑	*i*Pn	**Pn**	**05 16 44.6**	**+1.3**
PVY				*e*Sn	**Sn**	**05 17 40.9**	**+1.0**
PVY	**Plav**	**4.87**	**86**⇑	*i*Pn	**Pn**	**05 16 44.6**	**+1.3**
PVY				*e*Sn	**Sn**	**05 17 40.9**	**+1.0**
DAVOX	**Davos/Dischmat**	**4.97**	**331**	Pn	**Pn**	**05 16 47.1**	**+2.4**
	1.2nm,0.3s,baz=161,slow=18,SNR=9.5						
DAVOX				Sn	**Sn**	**05 17 45.8**	**+3.5**
	baz=107,slow=19						
LMR	**La Mourre**	**5.11**	**282**	*e*Pn	**Pn**	**05 16 45.6**	**-0.8**
LMR	**La Mourre**	**5.11**	**282**	*e*Pn	**Pn**	**05 16 45.6**	**-0.8**
MBDF	**Montbardon**	**5.29**	**297**	*e*P	**Pn**	**05 16 50.5**	**+1.4**
MBDF	**Montbardon**	**5.29**	**297**	*e*P	**Pn**	**05 16 50.5**	**+1.4**
GERES	**GERESS Array B**	**6.37**	**2**	Pn	**Pn**	**05 17 05.8**	**+1.9**
	0.3nm,0.3s,baz=173,slow=12,SNR=4.6						
GERES				Sn	**Sn**	**05 18 14.7**	**-2.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.8nm,0.3s,baz=182,slow=24,SNR=4.5						
KHC	Kasperske Hory	6.65	1	ePN	Pn	05 17 09.3	+1.6
KHC				eSN	Sn	05 18 21.6	-2.0
KHC	Kasperske Hory	6.65	1	Pn	Pn	05 17 09.3	+1.6
KHC				Sn	Sn	05 18 21.6	-2.0
HINF	Hinteralfeld	7.05	321	ePn	Pn	05 17 13.0	-0.1
HINF				eSn	Sn	05 18 29.3	-4.0
	3.0nm,0.5s						
HINF	Hinteralfeld	7.05	321	ePn	Pn	05 17 13.0	-0.1
HINF				eSn	Sn	05 18 29.3	-4.0
	1.5nm,0.5s						
CDF	Champ du Feu	7.32	326	ePn	Pn	05 17 17.1	+0.3
CDF				eSn	Sn	05 18 36.4	-3.5
	2.3nm,0.4s						
CDF	Champ du Feu	7.32	326	ePn	Pn	05 17 17.1	+0.3
CDF				eSn	Sn	05 18 36.4	-3.5
	1.1nm,0.4s						
HAU	Haudompre	7.42	321	ePn	Pn	05 17 18.5	+0.3
HAU				eSn	Sn	05 18 37.4	-5.0
	3.9nm,0.3s						
HAU	Haudompre	7.42	321	ePn	Pn	05 17 18.5	+0.3
HAU				eSn	Sn	05 18 37.4	-5.0
	2.0nm,0.3s						
KEST	Kesra	7.43	206	Pn	Pn	05 17 23.3	+4.9
	0.2nm,0.3s,baz=124,slow=16,SNR=4.8						
NACGM	Naroch	15.23	31	e	P	05 19 11.0	+1.2
TORD	Torodi Ar. Bea	30.93	203	P	P	05 21 48.2	+1.2
	0.2nm,0.5s,baz=17,slow=9.5,SNR=4.4						

*DDA **06** 05:18:42.7, 38°.94N×26°.17E, h5km, MD3.0*
*ISCJB **06** 05:18:43.5±0.6, 38°.89N±0°.02×26°.06E±0°.05, h3km±5km, Error ellipse: s-maj=6.2km s-min=3.7km az=162.4*
*THE **06** 05:18:43.6, 38°.89N×25°.98E, h7km±1km, ML2.4/4, Error ellipse: s-maj=1.3km s-min=0.4km az=89.0*
*CSEM **06** 05:18:44.0±0.4, 38°.87N×26°.09E, h2km, ML2.4/4, Error ellipse: s-maj=9.8km s-min=5.7km az=69.0*
*ISK **06** 05:18:46.0, 38°.94N×26°.30E, h5km, MD2.9*
ISC 06 05:18:43.1±0.9**, 38°.89N**±0°.02×**26°.06E**±0°.04**, h15**km±9km**, n43, σ0s85**/64**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.36	333	P	Pg	05 18 50.3	-0.1
SIGR				S	Sg	05 18 55.2	-0.2
SIGR	SIGRI	0.36	333	P	Pg	05 18 50.3	-0.1
SIGR				S	Sg	05 18 55.2	-0.2
PRK	Paraskevi	0.39	25	P	Pb	05 18 51.5	-0.3
PRK				S	Sb	05 18 58.1	+0.5
PRK	Paraskevi	0.39	25	P	Pb	05 18 51.5	-0.3
PRK				S	Sb	05 18 58.1	+0.5
CHOS	Chios island	0.51	181	P	Pg	05 18 53.4	+0.2
CHOS				S	Sg	05 19 00.8	+0.9
CHOS	Chios island	0.51	181	P	Pg	05 18 53.4	+0.2
CHOS				S	Sg	05 19 00.8	+0.9
AYVA	Ayvalik	0.64	50	iP	Pb	05 18 56.0	-0.1
AYVA				iS	Sb	05 19 05.5	+0.7
AYVA	Ayvalik	0.64	50	iP	Pb	05 18 56.0	-0.1
AYVA				iS	Sb	05 19 05.5	+0.7
URLA	Izmir	0.68	142	iP	Pg	05 18 54.9	-1.5
URLA				iS	Sb	05 19 07.7	+1.8
URLA	Izmir	0.68	142	iP	Pg	05 18 54.9	-1.5
URLA				iS	Sb	05 19 07.7	+1.8
BLCB	Balcova	0.92	123	ePG	Pg	05 19 01.6	+0.6
BLCB				eSG	Sb	05 19 13.2	+0.4
BLCB	Balcova	0.92	123	ePg	Pg	05 19 01.6	+0.6
BLCB				eSg	Sb	05 19 13.2	+0.4
BOZC	Bozcaada	0.95	360	iP	Pb	05 19 00.4	-0.9
BOZC				iS	Sb	05 19 13.6	-0.1
EZN	Ezine	0.95	12	ePG	Pn	05 19 03.1	+1.1
EZN				eSG	Sn	05 19 15.4	0.0
EZN	Ezine	0.95	12	ePg	Pn	05 19 03.1	+1.1
EZN				eSg	Sn	05 19 15.4	0.0
IZM	Izmir	1.06	117	ePG	Pg	05 19 04.2	+0.5
IZM	Izmir	1.06	117	ePg	Pg	05 19 04.2	+0.5
LIA	Limnos Island	1.21	326	P	Pn	05 19 05.4	-0.2
LIA				S	Sg	05 19 22.2	-0.1
LIA	Limnos Island	1.21	326	P	Pn	05 19 05.4	-0.2
LIA				S	Sg	05 19 22.2	-0.1
BALY	Balya	1.48	55	iP	Pn	05 19 08.8	-0.4
BALY				iS	Sn	05 19 28.0	-0.4
BALY	Balya	1.48	55	iP	Pn	05 19 08.8	-0.4
BALY				iS	Sn	05 19 28.0	-0.4
GELI	Tayfur-Gelibol	1.54	12	ePN	Pg	05 19 13.8	+1.1
GELI	Tayfur-Gelibol	1.54	12	ePn	Pg	05 19 13.8	+1.1
LPK	Lapseki	1.57	20	ePN	Pg	05 19 14.3	+0.9
LPK	Lapseki	1.57	20	ePn	Pg	05 19 14.3	+0.9
BALB	Balikesir	1.60	62	ePN	Pb	05 19 13.2	+0.9
BALB	Balikesir	1.60	62	ePn	Pb	05 19 13.2	+0.9
GONE	Gonen-Balikesi	1.71	47	ePN	Pg	05 19 15.4	-0.5
GONE	Gonen-Balikesi	1.71	47	ePn	Pg	05 19 15.4	-0.5
KRBG	Karabiga-Canak	1.78	32	ePN	Pb	05 19 16.2	+0.8
KRBG	Karabiga-Canak	1.78	32	ePn	Pb	05 19 16.2	+0.8
ENEZ	Enez	1.84	2	ePN	Pg	05 19 18.8	+0.3
ENEZ	Enez	1.84	2	ePn	Pg	05 19 18.8	+0.3
RKY	Sarkoy-Tekirda	1.99	25	ePN	Pb	05 19 19.1	0.0
RKY	Sarkoy-Tekirda	1.99	25	ePn	Pb	05 19 19.1	0.0
DURS	Dursunbey	2.00	69	iP	Pn	05 19 16.5	0.0
DURS				iS	Sn	05 19 39.9	-1.5
DURS	Dursunbey	2.00	69	iP	Pn	05 19 16.5	0.0
DURS				iS	Sn	05 19 39.9	-1.5
MFT	Murefte	2.11	26	ePN	Pb	05 19 21.5	+0.3
MFT	Murefte	2.11	26	ePn	Pb	05 19 21.5	+0.3
TVSB	Tavsanli	2.70	77	ePN	Pb	05 19 29.2	-2.0
TVSB	Tavsanli	2.70	77	ePn	Pb	05 19 29.2	-2.0
EDRB	Edirne	3.00	10	ePN	Pb	05 19 34.9	-1.4
EDRB	Edirne	3.00	10	ePn	Pb	05 19 34.9	-1.4

*ISCJB **06** 05:20:21.2±0.4, 36°.23N±0°.07×137°.09E±0°.08, h277km±3km, mb3.2/9, Error ellipse: s-maj=12.1km s-min=9.0km az=41.6*
*JMA **06** 05:20:21.5±0.2, 36°.20N×137°.13E, h277km±2km, M3.3*
*IDC **06** 05:20:22.1±0.8, 36°.21N×137°.07E, h273km±5km, mb3.0/9, mb1 3.3/11, mb1mx3.1/30, mbtmp3.0/11, Error ellipse: s-maj=23.0km s-min=18.1km az=94.0*
ISC 06 05:20:22.0±0.7**, 36°.22N**±0°.08×**137°.10E**±0°.07**, h272**km±6km**, n24, σ0s61**/34**, mb3.4**/9**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGN	Niukaw	0.17	89	P	Pn	05 20 56.8	-0.1
JGN				eS	S	05 21 24.7	+0.3
JGM	Miyama	0.60	211	P	Pn	05 20 57.7	-0.1
JKG	Kaga	0.62	276	P	Pn	05 20 58.0	+0.3
MAT	Matsushiro	0.95	70	P	Pn	05 20 59.1	0.0
MAT				S	S	05 21 28.8	+0.3
MAT	Matsushiro	0.95	70	P	Pn	05 20 59.2	+0.1
MAT				S	S	05 21 28.9	+0.4
MJAR	Matsushiro Arr	0.95	70	P	Pn	05 20 59.5	+0.3
	11nm,0.3s,baz=252,slow=7.4,SNR=90						
MJAR				S	S	05 21 29.6	+1.2
	0.8nm,0.3s,baz=192,slow=11,SNR=11						
JYN	Shimob	1.38	121	P	Pn	05 21 01.3	-0.4
JRY	Ryogami san	1.47	97	P	Pn	05 21 02.1	-0.2
JRY				eS	S	05 21 33.3	-0.8
JWT	Wachi	1.67	236	P	Pn	05 21 03.5	-0.2
JWT				S	S	05 21 35.8	-0.9
JIE	Ise	1.85	190	P	Pn	05 21 05.5	+0.3
JIE				S	S	05 21 39.0	-0.3
JOD2	Odawara 2	1.88	120	P	Pn	05 21 05.4	+0.1
JOD2				S	S	05 21 40.4	+0.7
JAG	Ashikaga	1.91	83	P	Pn	05 21 05.3	-0.2
JAG				eS	S	05 21 39.0	-1.1
JSD	Sado	2.04	27	P	Pn	05 21 06.7	+0.2
JSD				S	S	05 21 41.2	-0.7
USRK	Ussuriysk Arra	8.87	336	P	Pn	05 22 26.9	+0.8
	0.2nm,0.3s,baz=151,slow=13,SNR=4.6						
ASAJ	Asahikawa	8.94	26	P	Pn	05 22 25.2	-1.7
	4.9nm,0.3s,baz=229,slow=9.9,SNR=16						
MKAR	Makanchi Array	41.61	302	P	P	05 27 43.5	-0.2
	0.2nm,0.5s,baz=90,slow=11,SNR=3.6						
ILAR	Eielson Array	52.03	32	P	P	05 29 03.8	+0.2
	0.2nm,0.5s,baz=268,slow=5.5,SNR=5.0						
WRA	Warramunga Arr	55.92	183	P	P	05 29 31.6	-0.5
	0.7nm,0.4s,baz=359,slow=7.6,SNR=7.0						
RES	Resolute Bay	64.22	13	P	P	05 30 27.6	+0.1
	0.5nm,0.4s,baz=294,slow=6.8,SNR=4.8						
YKA	Yellowknife Ar	66.22	29	P	P	05 30 40.3	-0.2
	0.1nm,0.7s,baz=317,slow=5.0,SNR=4.1						
NOA	NORSAR Array B	73.55	336	P	P	05 31 24.7	-0.4
	0.7nm,0.8s,baz=33,slow=7.4,SNR=3.2						
PDAR	Pinedale Array	80.67	43	P	P	05 32 05.8	+0.6
	0.5nm,0.8s,baz=290,slow=4.4,SNR=3.6						
EKA	Eskdalemuir Ar	82.67	338	P	P	05 32 14.9	0.0
	0.8nm,0.8s,baz=36,slow=4.7,SNR=5.5						
TXAR	Lajitas Array	93.33	50	P	P	05 33 07.2	+0.7
	0.4nm,0.6s,baz=308,slow=4.8,SNR=3.4						

WEL 06 05:20:28.8±0.3**, 38°.66S**×**178°.48E, h26**km±2km**, ML3.6**/6**, 3C-1D, Error ellipse: s-maj=3.5km s-min=1.4km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.28	309	⇑P*	Pb	05 20 35.6	+0.1
PRGZ	Paritu Road	0.54	241	⇑P*	Pb	05 20 39.6	-0.1
PUZ	Puketiti	0.61	343	⇑P*	Pb	05 20 40.9	-0.1
PUZ				S*	Sb	05 20 49.4	+0.2
MHGZ	Mahia Peninsul	0.67	222	P*	Pb	05 20 41.5	-0.3
MHGZ				S*	Sn	05 20 52.8	+0.6
KNZ	Kokohu	0.73	240	⇓P*	Pb	05 20 42.0	-0.8
KNZ				S*	Sn	05 20 53.1	-0.5
MWZ	Matawai	0.82	293	P*	Pb	05 20 43.2	-1.2
MWZ				S*	Sb	05 20 55.2	+0.1
MXZ	Matakaoa Point	1.10	353	PN	Pb	05 20 48.9	-0.3
RAHZ	Arahi	1.12	256	PN	Pn	05 20 48.1	-0.8
RAHZ				SN	Sn	05 21 03.4	-0.1
URZ	Urewera	1.15	290	PN	Pn	05 20 48.7	-0.4
URZ				SN	Sn	05 21 03.8	-0.2
NMHZ	Naumai	1.38	251	PN	Pn	05 20 51.7	-0.7
CKHZ	Cape Kidnapper	1.48	227	PN	Pn	05 20 52.8	-0.9
MCHZ	McNeill Hill	1.60	240	PN	Pn	05 20 54.9	-0.5
BKZ	Black Stump Fm	1.63	251	PN	Pn	05 20 55.5	-0.4
KAHZ	Kahuranaki	1.69	227	PN	Pn	05 20 55.6	-1.0
BHHZ	Black Hill Sta	2.06	246	PN	Pn	05 21 00.7	-1.1
WNVZ	Wahianoa	2.35	253	PN	Pn	05 21 05.1	-0.7
FWVZ	Far West T-bar	2.36	254	PN	Pn	05 21 05.6	-0.6
TSZ	Takapari Road	2.40	234	PN	Pn	05 21 04.5	-1.9
DVHZ	Dannevirke	2.43	227	PN	Pn	05 21 04.8	-2.0
BFZ	Birch Farm	2.66	220	PN	Pn	05 21 07.2	-2.7
MRZ	Mangatainoka R	3.00	227	PN	Pn	05 21 13.0	-1.7
HOWZ	Holdsworth Sta	3.20	225	PN	Pn	05 21 14.6	-2.8

IDC 06 05:21:40.7±2.9**, 0°.39S**×**132°.93E, h0**km**, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.3**/21**, mbtmp3.3**/3**, ML3.3**/1**, Error ellipse: s-maj=157.1km s-min=26.2km az=74.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.48	176	P	P	05 26 08.8	-0.7
	0.1nm,0.3s,baz=355,slow=11,SNR=6.1						
ASAR	Alice Springs	23.16	178	P	P	05 26 49.4	+0.4
	1.1nm,0.7s,baz=0.6,slow=9.8,SNR=11						
MKAR	Makanchi Array	64.48	324	P	P	05 32 19.3	0.0
	0.1nm,0.4s,baz=111,slow=8.0,SNR=3.4						

*ISCJB **06** 05:32:29.6±0.5, 55°.97N±0°.04×160°.91E±0°.07, h146km±3km, mb3.2/4, Error ellipse: s-maj=7.6km s-min=5.6km az=43.0*
*KRSC **06** 05:32:29.9±0.8, 55°.89N×160°.93E, h142km±21km, ML3.6*
*IDC **06** 05:32:31.1±2.6, 56°.00N×160°.71E, h152km±27km, mb2.9/4, mb1 3.1/5, mb1mx2.9/29, mbtmp2.8/5, Error ellipse: s-maj=37.5km s-min=20.4km az=137.0*
ISC 06 05:32:30.2±0.8**, 55°.95N**±0°.05×**160°.90E**±0°.05**, h144**km±6km**, n34, σ0s80**/55**, mb3.2**/4**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZLN	Zelenaya	0.09	324	iP	Pn	05 32 50.2	+0.4
ZLN				iS	Sn	05 33 05.1	+0.4
BZGR	Bezymyannyi-Gr	0.11	267	iP	Pn	05 32 50.1	+0.3
BZGR				iS	Sn	05 33 04.6	-0.1
LGNR	Loginova	0.18	320	eP	Pn	05 32 50.7	+0.5
LGNR				iS	Sn	05 33 06.5	+1.2
CIRR	Tsirk	0.19	334	iP	Pn	05 32 50.3	+0.3
CIRR				iS	Sn	05 33 05.2	+0.1
BZWR	Bezymyannyi-We	0.23	275	iP	Pn	05 32 50.5	+0.4
BZMR	Bezymyannaya	0.23	267	iP	Pn	05 32 50.4	+0.3
BZMR				iS	Sn	05 33 04.6	-0.5
KRSR	Krestovskiy	0.33	326	eP	Pn	05 32 50.2	-0.1
KRSR				eS	Sn	05 33 05.4	-0.2
KPT	Kopyto	0.38	273	iP	Pn	05 32 50.4	-0.1
KPT				iS	Sn	05 33 05.1	-0.8
KLY	Klyuchi	0.39	340	eP	Pn	05 32 50.4	0.0
KLY				iS	Sn	05 33 05.2	-0.6
KMNR	Kamenistaya	0.42	243	eP	Pn	05 32 50.9	+0.2
KMNR				iS	Sn	05 33 06.2	0.0
KOZ	Kozyrevsk	0.59	281	iP	Pn	05 32 51.2	-0.2
KOZ				iS	Sn	05 33 06.9	-0.6
BDR	Baidarnaya	0.65	15	eP	Pn	05 32 52.4	+0.5
BDR				iS	Sn	05 33 08.9	+0.5
SMKR	Semkarok	0.71	26	eP	Pn	05 32 52.4	+0.1
SMKR				iS	Sn	05 33 09.0	-0.1
SRKR	Sorokina	0.73	12	eP	Pn	05 32 52.8	+0.4
SRKR				iS	Sn	05 33 09.3	0.0
SRDR	Sredinnyy	0.76	300	iP	Pn	05 32 52.2	-0.4
SRDR				iS	Sn	05 33 08.6	-1.0
TUMR	Tumrok	0.79	213	iP	Pn	05 32 53.6	+0.7
TUMR				iS	Sn	05 33 11.0	+0.9
KBTR	Krutoberegovo	1.11	76	iP	Pn	05 32 55.5	+0.1
KBTR				iS	Sn	05 33 14.4	-0.2
ESO	Esso	1.24	270	eP	Pn	05 32 56.6	-0.1
ESO				iS	Sn	05 33 16.4	-0.4
MKZ	Mys Kozlova	1.47	161	iP	Pn	05 32 59.0	0.0
MKZ				iS	Sn	05 33 20.3	-0.7
KII	Karymskiy	2.09	204	P	Pn	05 33 06.8	+0.7
GNL	Ganaly	2.83	218	eP	Pn	05 33 15.7	+0.4
SPN	Mys Shipunski	2.90	190	P	Pn	05 33 15.2	-0.9
SPN				iS	Sn	05 33 48.0	-3.4
SDLR	Sedlovina	2.92	204	P	Pn	05 33 17.0	+0.6
SMAR	Somma	2.95	205	P	Pn	05 33 17.5	+0.5
AVH	Avacha	2.97	206	P	Pn	05 33 17.3	+0.3
BKI	Bering	2.98	102	iP	Pn	05 33 17.6	+0.6
BKI				iS	Sn	05 33 52.2	-0.9
UGLR	Uglovaya	3.00	205	P	Pn	05 33 17.2	-0.2
PETK	Petropavlovsk-	3.40	215	P	Pn	05 33 23.4	+0.9
	0.6nm,0.3s,baz=59,slow=12,SNR=7.5						
APC	Apacha	3.73	217	iP	Pn	05 33 28.0	+1.2
MTVR	Mutnovka	3.82	206	P	Pn	05 33 29.9	+1.8
MTVR				iS	Sn	05 34 14.4	+1.5
ILAR	Eielson Array	26.53	49	P	P	05 37 54.0	+0.1
	0.2nm,0.6s,baz=262,slow=6.9,SNR=4.2						
YKA	Yellowknife Ar	40.77	45	P	P	05 39 57.3	+0.7
	0.2nm,0.5s,baz=302,slow=8.1,SNR=6.1						
KURBB	Kurchatov Arra	46.77	300	P	P	05 40 43.5	-1.1
	0.6nm,0.5s,baz=56,slow=8.1,SNR=5.4						
WRA	Warramunga Arr	78.87	205	P	P	05 44 17.2	+0.1
	0.6nm,0.8s,baz=15,slow=6.1,SNR=6.3						

*BJI **06** 05:34:11.9, 34°.23N×93°.28E, h10km, mB4.3/1, mb4.1/5, ML3.5/3, Ms3.6/3, Ms7 3.4/3*
*ISCJB **06** 05:34:12.1±0.5, 34°.45N±0°.06×93°.16E±0°.08, h10km, mb3.6/4, MS3.2/1, Error ellipse: s-maj=10.9km s-min=6.4km az=34.9*
*IDC **06** 05:34:12.0±1.1, 34°.38N×93°.20E, h0km, mb3.5/5, mb1 3.7/9, mb1mx3.5/30, mbtmp3.6/9, ML3.7/4, MS3.3/3, Ms1 3.4/3, ms1mx2.9/33, Error ellipse: s-maj=40.3km s-min=21.4km az=63.0*
ISC 06 05:34:13.1±0.7**, 34°.34N**±0°.07×**93°.15E**±0°.09**, h10**km**, n22, σ1s61**/16**, mb3.8**/4**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	4.92	201	Pg	Pn	05 35 33.4	+5.7
LSA				Sg	Sg	05 36 49.2	-2.2
LSA				LR	LR		
	comp=N,480nm,8.5s						
GTA	Gaotai	7.36	45	ePn	Pn	05 36 02.0	+1.2
GTA				Sn	Sn	05 37 32.6	+8.1
GTA				LR	LR		
	comp=Z,370nm,15.0s						
TAPN	Taplejung	8.39	215	eP	Pn	05 36 20.0	+4.9
LZH	Lanzhou	8.92	76	eP	Pn	05 36 22.5	+0.2
LZH				pP	pP	05 36 24.6	
LZH				sP		05 36 26.6	
LZH				PP	PnPn	05 36 30.7	+0.9
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,57nm,4.1s						
LZH				LR	LR		
	comp=N,360nm,13.0s						
LZH				LR	LR		
	comp=E,240nm,12.5s						
LZH				LR	LR		
	comp=Z,260nm,15.0s						
GUN	Gumba	8.93	226	eP	Pn	05 36 26.5	+3.9
	comp=Z,23nm,0.8s						
ODAN	Odare	8.95	215	eP	Pn	05 36 26.5	+3.7
	comp=Z,20nm,0.7s						
RAMN	Ramite	9.27	219	eP	Pn	05 36 29.3	+2.1
	comp=Z,20nm,0.6s						
PKI	Pulchoki	9.47	227	eP	Pn	05 36 33.4	+3.5
DANN	Dangsing	10.00	236	eP	Pn	05 36 40.4	+3.2
	comp=Z,18nm,0.8s						
KOLN	Koldanda	10.48	234	eP	Pn	05 36 44.9	+1.2
PYUN	Piuthan	10.69	237	eP	Pn	05 36 46.7	+0.2
	comp=Z,25nm,1.1s						
MKAR	Makanchi Array	14.91	330	Pn	Pn	05 37 42.4	-1.6
	comp=Z,0.1nm,0.3s,baz=142,slow=14,SNR=6.4						
CMAR	Chiang Mai Arr	16.64	160	Pn	P	05 38 08.2	-0.8
	comp=Z,0.5nm,0.3s,baz=342,slow=11,SNR=6.3						
SONM	Songino Array	16.74	32	Pn	P	05 38 07.6	-2.5
	comp=Z,0.1nm,0.3s,baz=221,slow=12,SNR=18						
AAK	Ala-Archa	16.77	305	Pn	P	05 38 12.3	+1.9
	comp=Z,0.1nm,0.3s,baz=111,slow=14,SNR=3.6						
AAK				LR	LR	05 45 43.2	
	comp=Z,150nm,18.0s,baz=284,slow=41						
KURBB	Kurchatov Arra	19.46	331	P	Pn	05 38 40.4	-0.7
	comp=Z,0.0nm,0.3s,baz=140,slow=11,SNR=13						
KURBB				LR	LR	05 46 06.8	
	comp=Z,86nm,19.9s,baz=200,slow=37						
ZALV	Zalesovo Beam	20.47	346	P	Pn	05 38 51.8	-1.2
	comp=Z,0.7nm,0.6s,baz=158,slow=9.3,SNR=3.7						
BVAR	Borovoye Array	24.72	326	P	P	05 39 36.1	+1.6
	comp=Z,1.3nm,0.6s,baz=126,slow=9.1,SNR=7.2						
NOA	NORSAR Array B	56.84	325	LR	LR	06 11 14.7	
	comp=Z,20nm,19.9s,baz=115,slow=39						
ASAR	Alice Springs	69.47	140	P	P	05 45 23.3	+1.4
	comp=Z,0.5nm,0.7s,baz=327,slow=6.4,SNR=5.6						
ILAR	Eielson Array	70.72	23	P	P	05 45 27.7	-1.3
	comp=Z,0.4nm,0.8s,baz=301,slow=5.8,SNR=4.9						
TORD	Torodi Ar. Bea	83.89	282	P	P	05 46 42.9	-0.7
	comp=Z,0.6nm,0.7s,baz=49,slow=4.1,SNR=6.3						

*ISCJB **06** 05:41:32.3±0.4, 42°.35N±0°.02×13°.35E±0°.04, h15km±3km, Error ellipse: s-maj=4.5km s-min=3.3km az=167.8*
*CSEM **06** 05:41:32.8±0.1, 42°.36N×13°.33E, h10km, ML3.6/4, Error ellipse: s-maj=2.2km s-min=1.6km az=82.0*
*ROM **06** 05:41:32.5±0.1, 42°.35N×13°.36E, h10km±1km, Ml2.8/18, Error ellipse: s-maj=1.7km s-min=1.3km az=87.0*
ISC 06 05:41:32.9±0.8**, 42°.36N**±0°.02×**13°.34E**±0°.02**, h11**km±4km**, n52, σ0s42**/74**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	91	Pg	Pg	05 41 34.8	-0.2
AQU				Sg	Sg	05 41 36.1	-0.4
	20μm,0.2s						
AQU	L'Aquila	0.04	91	Pg	Pg	05 41 34.8	-0.2
AQU				Sg	Sg	05 41 36.1	-0.4
	20μm,0.2s						
CAMP	Campotosto	0.19	15	Pg	Pg	05 41 37.1	+0.1
CAMP				Sg	Sg	05 41 40.1	+0.2
CAMP	Campotosto	0.19	15	Pg	Pg	05 41 37.1	+0.1
CAMP				Sg	Sg	05 41 40.1	+0.2
FIAM	Fiamignano	0.19	243	Pg	Pg	05 41 36.8	-0.2
FIAM				Sg	Sg	05 41 40.7	+0.8
FIAM	Fiamignano	0.19	243	Pg	Pg	05 41 36.8	-0.2
FIAM				Sg	Sg	05 41 40.7	+0.8
FAGN	Fagnano	0.20	116	Pg	Pg	05 41 37.3	+0.1
FAGN				Sg	Sg	05 41 40.6	+0.5
FAGN	Fagnano	0.20	116	Pg	Pg	05 41 37.3	+0.1
FAGN				Sg	Sg	05 41 40.6	+0.5
TERO	Teramo	0.33	36	Pg	Pg	05 41 39.1	-0.4
TERO				Sg	Sg	05 41 43.9	-0.1
TERO	Teramo	0.33	36	Pg	Pg	05 41 39.1	-0.4
TERO				Sg	Sg	05 41 43.9	-0.1
PTQR	Pietraquaria	0.34	173	Pg	Pg	05 41 39.5	-0.1
PTQR				Sg	Sg	05 41 44.3	+0.2
PTQR	Pietraquaria	0.34	173	Pg	Pg	05 41 39.5	-0.1
PTQR				Sg	Sg	05 41 44.3	+0.2
VCEL	Villa Celiera	0.37	84	Pg	Pg	05 41 40.7	+0.4
VCEL	Villa Celiera	0.37	84	Pg	Pg	05 41 40.7	+0.4
CERT	Cerreto	0.49	214	Pg	Pg	05 41 42.2	-0.2
	744nm,0.4s						
CERT	Cerreto	0.49	214	Pg	Pg	05 41 42.2	-0.2
	744nm,0.4s						
MNS	Montasola	0.49	274	Pg	Pg	05 41 42.4	-0.1
	337nm,0.5s						
MNS	Montasola	0.49	274	Pg	Pg	05 41 42.4	-0.1
	337nm,0.5s						
NRCA	Norcia	0.51	341	Pg	Pg	05 41 42.7	-0.1
NRCA				Sg	Sg	05 41 50.3	+0.7
	665nm,0.1s						
NRCA	Norcia	0.51	341	Pg	Pg	05 41 42.7	-0.1
NRCA				Sg	Sg	05 41 50.3	+0.7
	665nm,0.1s						
VVLD	Villa Vallelon	0.53	157	Pg	Pg	05 41 42.9	-0.3
	581nm,0.6s						
VVLD	Villa Vallelon	0.53	157	Pg	Pg	05 41 42.9	-0.3
	581nm,0.6s						
INTR	Introdacqua	0.54	129	Pg	Pg	05 41 43.3	-0.1
INTR				Sg	Sg	05 41 50.5	-0.1
	907nm,0.7s						
INTR	Introdacqua	0.54	129	Pg	Pg	05 41 43.3	-0.1
INTR				Sg	Sg	05 41 50.5	-0.1
	907nm,0.7s						
MTCE	Montecelio	0.56	234	Pg	Pg	05 41 43.5	-0.2
	228nm,0.5s						
MTCE	Montecelio	0.56	234	Pg	Pg	05 41 43.5	-0.2
	228nm,0.5s						
GUAR	Guarcino	0.56	182	Pg	Pb	05 41 44.8	0.0
	288nm,0.5s						
GUAR	Guarcino	0.56	182	Pg	Pb	05 41 44.8	0.0
	288nm,0.5s						
TRTR	Tortoreto Alta	0.62	43	Pg	Pb	05 41 45.6	-0.1
	2μm,0.9s						
TRTR	Tortoreto Alta	0.62	43	Pg	Pb	05 41 45.6	-0.1
	2μm,0.9s						
OFFI	Offida	0.63	23	Pg	Pg	05 41 45.3	+0.1
	2μm,0.4s						
OFFI	Offida	0.63	23	Pg	Pg	05 41 45.3	+0.1
	2μm,0.4s						
POFI	Posta Fibreno	0.69	157	Pg	Pb	05 41 47.2	+0.1
	276nm,0.9s						
POFI	Posta Fibreno	0.69	157	Pg	Pb	05 41 47.2	+0.1
	276nm,0.9s						
FDMO	Fiordimonte	0.71	345	Pg	Pg	05 41 46.0	-0.6
FDMO				Sg	Sb	05 41 57.1	0.0
	306nm,0.8s						
FDMO	Fiordimonte	0.71	345	Pg	Pg	05 41 46.0	-0.6
FDMO				Sg	Sb	05 41 57.1	0.0
	306nm,0.8s						
CESI	CESI - Serrava	0.73	334	Pg	Pg	05 41 46.7	-0.3
	154nm,0.5s						
CESI	CESI - Serrava	0.73	334	Pg	Pg	05 41 46.7	-0.3
	154nm,0.5s						
GIUL	Giuliano Di Ro	0.80	185	Pg	Pg	05 41 47.5	-0.8
	188nm,0.6s						
GIUL	Giuliano Di Ro	0.80	185	Pg	Pg	05 41 47.5	-0.8
	188nm,0.6s						
ASSB	Assisi San Ben	0.85	324	Pg	Pg	05 41 49.5	+0.1
	260nm,0.8s						
ASSB	Assisi San Ben	0.85	324	Pg	Pg	05 41 49.5	+0.1
	260nm,0.8s						
CING	Cingoli	1.03	354	Pg	Pg	05 41 52.1	-0.5
	216nm,0.4s						
CING	Cingoli	1.03	354	Pg	Pg	05 41 52.1	-0.5
	216nm,0.4s						
MURB	Monte Urbino	1.09	327	Pg	Pn	05 41 54.5	+0.3
	401nm,0.3s						
MURB	Monte Urbino	1.09	327	Pg	Pn	05 41 54.5	+0.3
	401nm,0.3s						
ARVD	Arcevia	1.18	346	Pg	Pb	05 41 54.8	-0.5
	180nm,0.6s						
ARVD	Arcevia	1.18	346	Pg	Pb	05 41 54.8	-0.5
	180nm,0.6s						
NVLJ	Novalja	2.47	26	ePn	Pn	05 42 13.7	+0.5
NVLJ				Sn	Sn	05 42 43.5	+0.2
NVLJ	Novalja	2.47	26	ePn	Pn	05 42 13.6	+0.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVLJ				Sn	Sn	05 42 43.4	+0.2
STON	Ston	3.26	79	i Pn	Pn	05 42 24.4	+0.5
STON				Sn	Sn	05 43 01.6	-1.1
STON	Ston	3.26	79	i Pn	Pn	05 42 24.4	+0.5
STON				Sn	Sn	05 43 01.5	-1.1

*ISCJB **06** 05:50:36.6±0.4, 42°.30N±0°.02×13°.46E±0°.04, h12km±3km, Error ellipse: s-maj=4.7km s-min=3.2km az=161.9*
*ROM **06** 05:50:36.6±0.1, 42°.30N×13°.48E, h9km, Ml3.2/13, Error ellipse: s-maj=1.4km s-min=0.9km az=61.0*
*CSEM **06** 05:50:37.1±0.1, 42°.30N×13°.47E, h5km, ML3.7/5, Error ellipse: s-maj=2.1km s-min=1.7km az=68.0*
*PRU **06** 05:50:38.8, 42°.28N×13°.46E, h0km*
ISC 06 05:50:37.6±0.9, **42°.31N**±0°.02×**13°.48E**±0°.02, **h7**km±5km, **n53**, σ0.s**71**/73, **6C-4D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	311	⇑iPg	Pg	05 50 39.4	-0.1
AQU				Sg	Sg	05 50 41.2	+0.3
	36µm,0.3s						
AQU	L'Aquila	0.07	311	⇑iPg	Pg	05 50 39.4	-0.1
AQU				Sg	Sg	05 50 41.2	+0.3
	36µm,0.3s						
FAGN	Fagnano	0.09	117	Pg	Pg	05 50 39.2	-0.6
FAGN				Sg	Sg	05 50 41.0	-0.3
	38µm,1.0s						
FAGN	Fagnano	0.09	117	Pg	Pg	05 50 39.2	-0.6
FAGN				Sg	Sg	05 50 41.0	-0.3
	38µm,1.0s						
CAMP	Campotosto	0.23	348	⇓iPg	Pg	05 50 42.1	-0.2
CAMP				Sg	Sg	05 50 46.1	+0.6
	15µm,0.6s						
CAMP	Campotosto	0.23	348	⇓iPg	Pg	05 50 42.1	-0.2
CAMP				Sg	Sg	05 50 46.1	+0.6
	15µm,0.6s						
FIAM	Fiamignano	0.27	262	⇑iPg	Pg	05 50 42.9	0.0
FIAM	Fiamignano	0.27	262	⇑iPg	Pg	05 50 42.9	0.0
VCEL	Villa Celiera	0.28	72	Pg	Pg	05 50 43.0	-0.3
VCEL	Villa Celiera	0.28	72	Pg	Pg	05 50 43.0	-0.3
PTQR	Pietraquaria	0.29	191	Pg	Pg	05 50 43.0	-0.3
PTQR				Sg	Sg	05 50 48.1	+0.9
PTQR	Pietraquaria	0.29	191	Pg	Pg	05 50 43.0	-0.3
PTQR				Sg	Sg	05 50 48.1	+0.9
TERO	Teramo	0.33	17	⇓iPg	Pg	05 50 43.5	-0.6
TERO				Sg	Sg	05 50 48.9	+0.4
TERO	Teramo	0.33	17	⇓iPg	Pg	05 50 43.5	-0.6
TERO				Sg	Sg	05 50 48.9	+0.4
VVLD	Villa Vallelon	0.45	166	Pg	Pg	05 50 45.7	-0.6
VVLD				Sg	Sg	05 50 52.4	+0.2
	1µm,0.8s						
VVLD	Villa Vallelon	0.45	166	Pg	Pg	05 50 45.7	-0.6
VVLD				Sg	Sg	05 50 52.4	+0.2
	1µm,0.8s						
CERT	Cerreto	0.51	226	Pg	Pg	05 50 46.7	-0.8
	2µm,0.6s						
CERT	Cerreto	0.51	226	Pg	Pg	05 50 46.7	-0.8
	2µm,0.6s						
LPEL	Lama dei Pelig	0.59	116	Pg	Pg	05 50 48.1	-0.8
LPEL				Sg	Sg	05 50 57.1	+0.5
	1µm,0.9s						
LPEL	Lama dei Pelig	0.59	116	Pg	Pg	05 50 48.1	-0.8
LPEL				Sg	Sg	05 50 57.1	+0.5
	1µm,0.9s						
NRCA	Norcia	0.59	333	Pg	Pg	05 50 48.2	-0.8
NRCA				Sg	Sg	05 50 57.6	+0.9
NRCA	Norcia	0.59	333	Pg	Pg	05 50 48.2	-0.8
NRCA				Sg	Sg	05 50 57.6	+0.9
MNS	Montasola	0.59	278	Pg	Pg	05 50 48.2	-0.8
MNS	Montasola	0.59	278	Pg	Pg	05 50 48.2	-0.8
MTCE	Montecelio	0.61	243	Pg	Pg	05 50 48.6	-0.8
	501nm,0.5s						
MTCE	Montecelio	0.61	243	Pg	Pg	05 50 48.6	-0.8
	501nm,0.5s						
POFI	Posta Fibreno	0.61	163	Pg	Pg	05 50 49.2	-0.2
	405nm,0.8s						
POFI	Posta Fibreno	0.61	163	Pg	Pg	05 50 49.2	-0.2
	405nm,0.8s						
OFFI	Offida	0.65	14	Pg	Pg	05 50 50.0	-0.1
OFFI	Offida	0.65	14	Pg	Pg	05 50 50.0	-0.1
CAFR	Castel Frentan	0.65	97	Pg	Pg	05 50 49.9	-0.3
	1µm,0.3s						
CAFR	Castel Frentan	0.65	97	Pg	Pg	05 50 49.9	-0.3
	1µm,0.3s						
GIUL	Giuliano Di Ro	0.77	192	Pg	Pg	05 50 51.9	-0.4
GIUL	Giuliano Di Ro	0.77	192	Pg	Pg	05 50 51.9	-0.4
RNI2	Rionero Sannit	0.79	140	Pg	Pg	05 50 52.9	+0.2
RNI2	Rionero Sannit	0.79	140	Pg	Pg	05 50 52.9	+0.2
CESI	CESI - Serrava	0.81	329	⇑iPg	Pg	05 50 52.3	-1.0
CESI	CESI - Serrava	0.81	329	⇑iPg	Pg	05 50 52.3	-1.0
CERA	Filignano	0.82	150	Pg	Pg	05 50 52.2	-1.1
	604nm,0.6s						
CERA	Filignano	0.82	150	Pg	Pg	05 50 52.2	-1.1
	604nm,0.6s						
MIDA	Miranda	0.88	139	Pg	Pg	05 50 53.3	-1.2
	356nm,0.8s						
MIDA	Miranda	0.88	139	Pg	Pg	05 50 53.3	-1.2
	356nm,0.8s						
CING	Cingoli	1.09	349	Pg	Pg	05 50 57.3	-1.2
CING	Cingoli	1.09	349	Pg	Pg	05 50 57.3	-1.2
TOLF	Tolfa	1.12	258	Pg	Pg	05 50 58.7	-0.4
	187nm,0.5s						
TOLF	Tolfa	1.12	258	Pg	Pg	05 50 58.7	-0.4
	187nm,0.5s						
ARVD	Arcevia	1.25	342	Pg	Pg	05 51 00.2	-1.4
	551nm,1.1s						
ARVD	Arcevia	1.25	342	Pg	Pg	05 51 00.2	-1.4
	551nm,1.1s						
NVLJ	Novalja	2.47	24	ePn	Pn	05 51 18.3	0.0
NVLJ				Sn	Sn	05 51 49.9	+1.2
NVLJ	Novalja	2.47	24	ePn	Pn	05 51 18.2	0.0
NVLJ				Sn	Sn	05 51 49.9	+1.2
STON	Ston	3.17	78	ePn	Pn	05 51 28.0	+0.2
STON				Sn	Sn	05 52 06.4	+0.4
STON	Ston	3.17	78	ePn	Pn	05 51 28.0	+0.2
STON				Sn	Sn	05 52 06.3	+0.4
KHC	Kasperske Hory	6.83	1	eSN	Sn	05 53 34.7	-1.3

*ISCJB **06** 05:56:48.2±0.9, 39°.79N±0°.05×41°.86E±0°.05, h14km±5km, Error ellipse: s-maj=8.6km s-min=6.1km az=8.3*
*DDA **06** 05:56:49.3, 39°.90N×41°.70E, h7km, MD2.7*
ISC 06 05:56:47.9±1.3, **39°.82N**±0°.05×**41°.84E**±0°.05, **h15**km±9km, **n7**, σ0.s**87**/14, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOMI	Horasan	0.23	13	i P	Pb	05 56 53.4	-0.6
HOMI				i S	Sg	05 56 58.1	+1.2
ERZM	Erzurum	0.37	283	i P	Pb	05 56 55.2	-1.2
ERZM				i S	Sb	05 57 03.4	+1.3
EZM	Erzurum	0.38	283	ePG	Pb	05 56 55.9	-0.5
EZM				eSG	Sb	05 57 03.3	+1.2
AGRB	Hanur-Agry	0.92	105	ePG	Pg	05 57 05.5	-0.3
AGRB				eSG	Sn	05 57 20.2	+0.6
DDEM	Demirkent	1.07	356	i P	Pg	05 57 08.3	-0.4
DDEM				i S	Sn	05 57 23.6	+0.4
DBAD	Bademkaya	1.20	355	i P	Pg	05 57 10.7	-0.5
DBAD				i S	Sb	05 57 26.1	+0.3
DAGI	Agillar	1.26	3	i P	Pn	05 57 10.8	-0.2
DAGI				i S	Sg	05 57 28.5	-0.1

*ISK **06** 05:58:10.8, 40°.06N×41°.91E, h5km, MD2.9*
*CSEM **06** 05:58:11.8±0.3, 39°.80N×41°.85E, h10km, MD2.8, Error ellipse: s-maj=10.5km s-min=4.5km az=19.0*
*DDA **06** 05:58:11.9, 39°.84N×41°.88E, h7km, MD2.8*
*ISCJB **06** 05:58:12.8±0.6, 39°.81N±0°.04×41°.88E±0°.04, h11km±4km, Error ellipse: s-maj=6.7km s-min=4.3km az=17.8*
ISC 06 05:58:12.4±1.0, **39°.82N**±0°.04×**41°.86E**±0°.03, **h12**km±9km, **n15**, σ0.s**45**/29, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOMI	Horasan	0.23	8	i P	Pg	05 58 17.4	0.0
HOMI				i S	Sg	05 58 21.7	+0.8
ERZM	Erzurum	0.39	283	i P	Pg	05 58 19.8	-0.5
ERZM				i S	Sb	05 58 27.5	-0.1
ERZM	Erzurum	0.39	283	i P	Pg	05 58 19.8	-0.5
ERZM				i S	Sb	05 58 27.5	-0.1
EZM	Erzurum	0.39	283	PG	Pg	05 58 20.1	-0.2
EZM				eSG	Sb	05 58 28.2	+0.5
TUTA	Tutak	0.84	119	i P	Pg	05 58 28.1	-0.6
TUTA				i S	Sg	05 58 40.1	+0.3
TUTA	Tutak	0.84	119	i P	Pg	05 58 28.1	-0.6
TUTA				i S	Sg	05 58 40.1	+0.3
AGRB	Hanur-Agry	0.91	105	ePG	Pg	05 58 29.8	-0.1
AGRB				eSG	Sn	05 58 45.0	+0.8
AGRB	Hanur-Agry	0.91	105	ePg	Pg	05 58 29.8	-0.1
AGRB				eSg	Sn	05 58 45.1	+0.8
KOPT	Kop Dagi	1.07	281	i P	Pb	05 58 32.8	-0.2
KOPT				i S	Sb	05 58 47.0	-0.1
KOPT	Kop Dagi	1.07	281	i P	Pb	05 58 32.8	-0.2
KOPT				i S	Sb	05 58 47.0	-0.1
DDEM	Demirkent	1.08	356	i P	Pb	05 58 32.7	-0.4
DDEM				i S	Sb	05 58 46.9	-0.4
DDEM	Demirkent	1.08	356	i P	Pb	05 58 32.7	-0.4
DDEM				i S	Sb	05 58 46.9	-0.4
DAGI	Agillar	1.26	2	i P	Pn	05 58 35.5	-0.5
DAGI				i S	Sb	05 58 52.8	+0.2
BAYT	Ayd˜–ntepe-Bay	1.44	294	ePN	Pn	05 58 38.8	+0.3
BAYT				eSN	Sg	05 58 59.3	+0.5
BAYT	Ayd˜–ntepe-Bay	1.44	294	ePn	Pn	05 58 38.8	+0.3

*IDC **06** 05:59:12.3±3.7, 53°.59N×163°.69W, h0km, mb3.1/3, mb1 3.3/5, mb1mx3.2/31, mbtmp3.2/5, ML3.2/2, Error ellipse: s-maj=81.2km s-min=29.4km az=160.0*
*NEIC **06** 05:59:14.5, 53°.36N×163°.52W, h23km, ML3.2(AEIC), After AEIC.*
ISC 06 05:59:12.4±3.1, **53°.44N**±0°.10×**163°.57W**±0°.05, **h9**km±18km, **n26**, σ0.s**81**/33, **Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	1.20	330	P	Pb	05 59 35.2	-0.1
WESN	West Dahl Nort	1.28	332	P	Pn	05 59 36.6	+0.2
SSLS	Shishaldin Sou	1.30	349	P	Pn	05 59 37.0	+0.2
SSLS				S	Sn	05 59 54.9	+0.6
SSLW	Shishaldin Wes	1.37	346	P	Pn	05 59 37.8	0.0
FALS	False Pass	1.42	4	P	Pn	05 59 38.4	0.0
FALS				S	Sg	05 59 58.3	+0.1
AHB	Akutan Harbor	1.50	298	P	Pn	05 59 39.3	-0.1
ZRO	Akutan Zero	1.57	295	P	Pn	05 59 40.3	-0.2
AKLV	Akutan Long Va	1.59	298	P	Pn	05 59 40.5	-0.3
AKGG	Akutan Green G	1.63	299	P	Pn	05 59 41.1	-0.1
DRIA	Deer Island	1.71	26	P	Pn	05 59 42.9	+0.5
UNV	Unalaska Valle	1.79	284	P	Pn	05 59 42.9	-0.5
UNV				S	Sn	06 00 05.8	-0.5
DT1	Dutton Round H	1.83	24	P	Pn	05 59 43.9	-0.1
DT1				S	Sn	06 00 07.1	-0.2
DTNA	Dutton South F	1.88	24	P	Pn	05 59 45.1	+0.4
MTBL	Makushin Table	1.92	287	P	Pn	05 59 46.3	+0.9
MREP	Makushin Rep't	1.93	282	P	Pn	05 59 46.1	+0.7
MSW	Makushin Switc	1.97	285	P	Pn	05 59 46.1	+0.1
MSW				S	Sn	06 00 10.1	-0.7
MCIR	Makushin Cirqu	2.04	286	P	Pn	05 59 47.3	+0.3
PS4A	Pavlof South-4	2.16	27	P	Pn	05 59 49.5	+1.0
PS4A				S	Sn	06 00 16.1	+0.8
SDPT	Sand Point	2.63	42	P	Pn	05 59 55.6	+0.6
SDPT				S	Sn	06 00 25.3	-1.6
OKCE	Okmok Cone E	2.75	272	P	Pn	05 59 58.3	+1.7
OHAK	Old Harbor	6.98	53	P	Pn	06 00 53.1	-1.6
KDAK	Kodiak Island	7.59	51	Pn	Pn	06 01 02.8	-0.2
	0.6nm,0.3s,baz=243,slow=12,SNR=11						
KDAK				Sn	Sn	06 02 21.7	-7.3
	0.4nm,0.3s,baz=154,slow=22,SNR=8.6						
ILAR	Eielson Array	14.16	30	Pn	Pn	06 02 31.4	-1.5
	0.0nm,0.3s,baz=225,slow=13,SNR=3.4						
INK	Inuvik	20.54	32	P	P	06 03 50.0	-0.7
	0.8nm,0.8s,baz=248,slow=6.9,SNR=2.4						
YKA	Yellowknife Ar	26.86	51	P	P	06 04 54.5	+1.6
	0.1nm,0.4s,baz=272,slow=9.5,SNR=6.3						
SONM	Songino Array	53.71	303	P	P	06 08 34.6	+0.2
	0.2nm,0.3s,baz=46,slow=6.4,SNR=3.7						

IDC 06 06:01:28.1±5.3, **49°.31S**×**123°.19E**, **h0**km, **mb3.4**/2, **mb1 3.7**/2, **mb1mx3.5**/14, **mbtmp3.4**/2, **Error ellipse: s-maj=310.4km s-min=72.1km az=100.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	26.95	22	P	P	06 07 10.8	-0.4
	0.6nm,0.7s,baz=192,slow=8.9,SNR=8.5						
WRA	Warramunga Arr	30.63	21	P	P	06 07 44.4	+0.4
	0.3nm,0.9s,baz=196,slow=8.8,SNR=2.7						
YKA	Yellowknife Ar	146.26	45	PKPbc	PKPdf	06 21 08.4	+0.3
	0.1nm,0.5s,baz=258,slow=3.9,SNR=5.2						

IDC 06 06:05:31.7±1.0, **33°.66N**×**82°.27E**, **h0**km, **mb3.3**/8, **mb1 3.6**/10, **mb1mx3.4**/30, **mbtmp3.4**/10, **ML3.1**/2, **MS3.2**/1, **Ms1 3.1**/1, **ms1mx2.2**/31, **Error ellipse: s-maj=31.5km s-min=18.7km az=65.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.12	0	Pn	Pn	06 08 40.2	+0.8
	0.1nm,0.3s,baz=180,slow=13,SNR=6.2						
KURBB	Kurchatov Arra	17.18	352	P	Pn	06 09 33.6	+0.7
	0.0nm,0.3s,baz=170,slow=11,SNR=2.6						
ZALV	Zalesovo Beam	20.37	4	P	P	06 10 10.6	+0.9
	0.8nm,0.7s,baz=193,slow=12,SNR=2.2						
BVAR	Borovoye Array	21.15	340	P	P	06 10 16.7	-1.5
	1.3nm,0.3s,baz=188,slow=14,SNR=11						
CMAR	Chiang Mai Arr	21.25	131	P	P	06 10 19.0	-0.5
	1.1nm,0.3s,baz=303,slow=11,SNR=7.4						
SONM	Songino Array	23.00	45	P	P	06 10 37.7	-0.5
	0.2nm,0.7s,baz=236,slow=10,SNR=2.6						
KBZ	Khabaz	32.07	300	LR	LR	06 26 55.8	
	comp=Z,36nm,18.4s,baz=223,slow=40						
WRA	Warramunga Arr	72.82	129	P	P	06 17 03.2	+0.7
	0.6nm,0.8s,baz=324,slow=6.2,SNR=4.4						
TORD	Torodi Ar. Bea	75.06	276	P	P	06 17 15.9	+0.1
	0.2nm,0.4s,baz=29,slow=5.9,SNR=6.8						
ASAR	Alice Springs	75.26	132	P	P	06 17 16.2	-0.4
	0.2nm,0.4s,baz=316,slow=5.2,SNR=4.1						
YKA	Yellowknife Ar	83.22	8	P	P	06 17 59.7	+0.1
	0.2nm,0.5s,baz=337,slow=5.5,SNR=8.7						

MEX 06 06:13:39.5±0.8, **15°.46N**×**94°.57W**, **h18**km±30km, **MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.51	282	eP	Pn	06 14 02.5	-3.2
HUIG				i S	Sn	06 14 20.1	-4.8
CMIG	Matias Romero	1.65	350	eP	Pn	06 14 04.0	-3.6
CMIG				i S	Sn	06 14 23.5	-4.9
TGIG		1.91	46	i P	Pn	06 14 08.8	-2.5
TGIG				i S	Sn	06 14 31.0	-4.0
THIG		2.29	103	eP	Pn	06 14 13.7	-2.6
THIG				i S	Sn	06 14 39.5	-4.6
CCIG	Comitan	2.48	70	eP	Pn	06 14 16.8	-2.4
CCIG				i S	Sn	06 14 46.2	-3.0
VHO	Vista Hermosa	2.63	308	i P	Pn	06 14 18.5	-2.7
VHO				i S	Sn	06 14 49.9	-3.0
PNIG	Pinotepa	3.55	286	i P	Pn	06 14 32.0	-1.7
PNIG				i S	Sn	06 15 12.2	-3.0
UTMO	Huajuapan	3.90	308	i P	Pn	06 14 35.8	-3.0
UTMO				i S	Sn	06 15 20.1	-4.1

*CSEM **06** 06:17:24.4, 42°.29N×13°.42E, h10km, After ROM*
ROM 06 06:17:24.4±0.1, **42°.29N**×**13°.42E**, **h10**km±1km, **Ml2.3**/9, **Error ellipse: s-maj=1.5km s-min=1.2km az=7.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	347	Pg	Pg	06 17 27.0	+0.3
AQU				Sg	Sg	06 17 28.5	+0.1
	3µm,0.4s						
AQU	L'Aquila	0.07	347	Pg	Pg	06 17 27.0	+0.3
AQU				Sg	Sg	06 17 28.5	+0.1
	3µm,0.4s						
FAGN	Fagnano	0.12	100	Pg	Pg	06 17 28.0	+0.6
FAGN				Sg	Sg	06 17 30.2	+0.7
	1µm,0.4s						
FAGN	Fagnano	0.12	100	Pg	Pg	06 17 28.0	+0.6
FAGN				Sg	Sg	06 17 30.2	+0.7
	1µm,0.4s						
FIAM	Fiamignano	0.23	265	Pg	Pg	06 17 29.9	+0.6
FIAM				Sg	Sg	06 17 33.9	+1.4
FIAM	Fiamignano	0.23	265	Pg	Pg	06 17 29.9	+0.6
FIAM				Sg	Sg	06 17 33.9	+1.4
CAMP	Campotosto	0.25	358	Pg	Pg	06 17 30.3	+0.6
CAMP	Campotosto	0.25	358	Pg	Pg	06 17 30.3	+0.6
PTQR	Pietraquaria	0.27	184	Pg	Pg	06 17 30.5	+0.6
PTQR	Pietraquaria	0.27	184	Pg	Pg	06 17 30.5	+0.6
VCEL	Villa Celiera	0.33	71	Pg	Pg	06 17 31.8	+0.7
VCEL	Villa Celiera	0.33	71	Pg	Pg	06 17 31.8	+0.7
TERO	Teramo	0.36	22	Pg	Pg	06 17 31.8	+0.1
	129nm,0.2s						
TERO	Teramo	0.36	22	Pg	Pg	06 17 31.8	+0.1
	129nm,0.2s						
VVLD	Villa Vallelon	0.44	160	Pg	Pg	06 17 33.2	0.0
	207nm,0.5s						
VVLD	Villa Vallelon	0.44	160	Pg	Pg	06 17 33.2	0.0
	207nm,0.5s						
INTR	Introdacqua	0.45	127	Pg	Pg	06 17 33.5	+0.1
	110nm,0.3s						
INTR	Introdacqua	0.45	127	Pg	Pg	06 17 33.5	+0.1
	110nm,0.3s						
CERT	Cerreto	0.47	224	Pg	Pg	06 17 33.9	+0.2
	212nm,0.5s						
CERT	Cerreto	0.47	224	Pg	Pg	06 17 33.9	+0.2
	212nm,0.5s						
NRCA	Norcia	0.59	337	Pg	Pg	06 17 36.0	0.0
	215nm,0.1s						
NRCA	Norcia	0.59	337	Pg	Pg	06 17 36.0	0.0
	215nm,0.1s						
LPEL	Lama dei Pelig	0.61	113	Pg	Pg	06 17 36.7	+0.3
	253nm,0.2s						
LPEL	Lama dei Pelig	0.61	113	Pg	Pg	06 17 36.7	+0.3
	253nm,0.2s						
GIUL	Giuliano Di Ro	0.74	190	Pg	Pb	06 17 39.8	+0.3
	70nm,0.5s						
GIUL	Giuliano Di Ro	0.74	190	Pg	Pb	06 17 39.8	+0.3
	70nm,0.5s						

*CSEM **06** 06:17:30.6, 42°.33N×13°.40E, h10km, After ROM*
ROM 06 06:17:30.6±0.1, **42°.33N**×**13°.40E**, **h10**km±1km, **Ml2.5**/7, **Error ellipse: s-maj=1.6km s-min=1.4km az=57.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	2	Pg	Pg	06 17 32.9	+0.4
AQU				Sg	Sg	06 17 33.9	+0.1
AQU	L'Aquila	0.03	2	Pg	Pg	06 17 32.9	+0.4
AQU				Sg	Sg	06 17 33.9	+0.1
FAGN	Fagnano	0.15	114	Pg	Pg	06 17 34.7	+0.7
FAGN				Sg	Sg	06 17 37.3	+1.0
	6µm,0.5s						
FAGN	Fagnano	0.15	114	Pg	Pg	06 17 34.7	+0.7
FAGN				Sg	Sg	06 17 37.3	+1.0
	6µm,0.5s						
CAMP	Campotosto	0.21	2	Pg	Pg	06 17 34.7	-0.4
CAMP				Sg	Sg	06 17 39.1	+0.9
CAMP	Campotosto	0.21	2	Pg	Pg	06 17 34.7	-0.4
CAMP				Sg	Sg	06 17 39.1	+0.9
FIAM	Fiamignano	0.22	254	Pg	Pg	06 17 35.9	+0.6
FIAM				Sg	Sg	06 17 40.1	+1.7
FIAM	Fiamignano	0.22	254	Pg	Pg	06 17 35.9	+0.6
FIAM				Sg	Sg	06 17 40.1	+1.7
PTQR	Pietraquaria	0.31	180	Pg	Pg	06 17 37.3	+0.5
PTQR	Pietraquaria	0.31	180	Pg	Pg	06 17 37.3	+0.5
TERO	Teramo	0.33	27	Pg	Pg	06 17 37.6	+0.3
TERO				Sg	Sb	06 17 43.4	-0.8
TERO	Teramo	0.33	27	Pg	Pg	06 17 37.6	+0.3
TERO				Sg	Sb	06 17 43.4	-0.8
VVLD	Villa Vallelon	0.48	160	Pg	Pg	06 17 40.1	-0.1
	415nm,0.5s						
VVLD	Villa Vallelon	0.48	160	Pg	Pg	06 17 40.1	-0.1
	415nm,0.5s						
CERT	Cerreto	0.49	220	Pg	Pg	06 17 40.6	+0.3
	616nm,0.5s						
CERT	Cerreto	0.49	220	Pg	Pg	06 17 40.6	+0.3
	616nm,0.5s						
INTR	Introdacqua	0.49	130	Pg	Pg	06 17 40.3	0.0
INTR				Sg	Sb	06 17 48.3	-0.5
	480nm,0.3s						
INTR	Introdacqua	0.49	130	Pg	Pg	06 17 40.3	0.0
INTR				Sg	Sb	06 17 48.3	-0.5
	480nm,0.3s						
MNS	Montasola	0.54	276	Pg	Pg	06 17 40.6	-0.5
	153nm,0.4s						
MNS	Montasola	0.54	276	Pg	Pg	06 17 40.6	-0.5
	153nm,0.4s						
NRCA	Norcia	0.55	337	Pg	Pg	06 17 41.7	+0.3
	21nm,0.2s						
NRCA	Norcia	0.55	337	Pg	Pg	06 17 41.7	+0.3
	21nm,0.2s						
OFFI	Offida	0.64	19	Pg	Pb	06 17 44.2	+0.2
OFFI	Offida	0.64	19	Pg	Pb	06 17 44.2	+0.2
LPEL	Lama dei Pelig	0.65	116	Pg	Pg	06 17 42.9	-0.3
LPEL				Sg	Sb	06 17 52.7	-0.6
	253nm,0.2s						
LPEL	Lama dei Pelig	0.65	116	Pg	Pg	06 17 42.9	-0.3
LPEL				Sg	Sb	06 17 52.7	-0.6
	253nm,0.2s						
CAFR	Castel Frentan	0.71	98	Pg	Pb	06 17 45.0	-0.1
CAFR	Castel Frentan	0.71	98	Pg	Pb	06 17 45.0	-0.1
CESI	CESI - Serrava	0.77	332	Pg	Pg	06 17 45.8	+0.2
CESI	CESI - Serrava	0.77	332	Pg	Pg	06 17 45.8	+0.2

PRE 06 06:20:56.7±2.4, **26°.43S**×**27°.48E**, **h2**km, **ML2.4, 1C, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLOF	Kloof	0.14	56	eP	Pg	06 21 00.3	+0.7
KLOF				eS	Sg	06 21 01.9	+0.3
KLOF				AML	AML	06 21 02.2	
	comp=Z,6µm,0.6s						
PRYS	Parys	0.51	193	eP	Pg	06 21 07.2	+0.4
PRYS				eS	Sg	06 21 13.6	+0.1
PRYS				AML	AML	06 21 19.4	
	comp=Z,66nm,0.5s						
ERPM	east rand prop	0.69	83	⇑iP	Pg	06 21 10.7	+0.5
ERPM				eS	Sg	06 21 17.8	-1.4
ERPM				AML	AML	06 21 19.4	
	comp=Z,113nm,0.5s						
KSR	Koster	0.78	317	eP	Pg	06 21 11.7	-0.1
KSR				eS	Sg	06 21 21.1	-1.1
KSR				AML	AML	06 21 22.0	
	comp=Z,117nm,0.2s						
SLR	Silverton	0.99	46	eP	Pg	06 21 15.5	-0.5
SLR				eS	Sg	06 21 29.6	+0.6
SLR				AML	AML	06 21 34.2	
	comp=Z,56nm,0.5s						
SEK	Senekal	1.90	176	eP	Pb	06 21 32.2	-0.1
SEK				eS	Sn	06 21 55.3	+0.3
SEK				AML	AML	06 21 57.3	
	comp=Z,40nm,0.7s						
LBTB	Lobatse	2.21	309	eP	Pn	06 21 35.6	+1.0
LBTB				eS	Sn	06 22 03.8	+1.3
LBTB				AML	AML	06 22 07.2	
	comp=Z,71nm,0.5s						
BOSA	Boshof	2.94	222	eP	Pn	06 21 44.7	0.0
BOSA				eS	Sn	06 22 18.8	-2.0
BOSA				AML	AML	06 22 29.9	
	comp=Z,9.9nm,0.5s						

*CSEM **06** 06:21:06.6±0.1, 42°.32N×13°.38E, h2km, ML3.1, Error ellipse: s-maj=2.8km s-min=2.1km az=55.0*
*ROM **06** 06:21:06.3±0.1, 42°.32N×13°.39E, h9km±1km, Ml3.3/34, Error ellipse: s-maj=1.6km s-min=1.3km az=51.0*
*ISCJB **06** 06:21:06.3±0.2, 42°.33N±0°.02×13°.39E±0°.02, h9km±2km, mb3.4/4, Error ellipse: s-maj=3.2km s-min=2.7km az=143.3*
*IDC **06** 06:21:07.2±1.2, 42°.49N×13°.23E, h0km, mb3.3/5, mb1 3.6/8, mb1mx3.4/29, mbtmp3.4/8, ML3.2/3, Error ellipse: s-maj=22.1km s-min=14.4km az=98.0*
*PRU **06** 06:21:08.6, 42°.38N×13°.45E, h0km*
*LDG **06** 06:21:08.9±0.2, 42°.31N×13°.30E, h2km, Ml3.1/7, Error ellipse: s-maj=6.9km s-min=4.5km az=46.0*
ISC 06 06:21:06.7±0.7, **42°.33N**±0°.02×**13°.38E**±0°.02, **h11**km±4km, **n125**, σ1.s**41**/157, **mb3.5**/4, **6C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	34	⇓iPg	Pg	06 21 08.5	-0.3
AQU				Sg	Sg	06 21 09.8	-0.5
	126µm,0.4s						
AQU	L'Aquila	0.03	34	⇓iPg	Pg	06 21 08.5	-0.3
AQU				Sg	Sg	06 21 09.8	-0.5
	126µm,0.4s						
FAGN	Fagnano	0.16	113	Pg	Pg	06 21 10.3	-0.1
FAGN				Sg	Sg	06 21 13.4	+0.4
FAGN	Fagnano	0.16	113	Pg	Pg	06 21 10.3	-0.1
FAGN				Sg	Sg	06 21 13.4	+0.4
FIAM	Fiamignano	0.20	253	Pg	Pg	06 21 11.2	+0.1
FIAM				Sg	Sg	06 21 14.7	+0.6
FIAM	Fiamignano	0.20	253	Pg	Pg	06 21 11.2	+0.1
FIAM				Sg	Sg	06 21 14.7	+0.6
CAMP	Campotosto	0.21	6	⇑iPg	Pg	06 21 11.0	-0.2
CAMP				Sg	Sg	06 21 14.6	+0.3
CAMP	Campotosto	0.21	6	⇑iPg	Pg	06 21 11.0	-0.2
CAMP				Sg	Sg	06 21 14.6	+0.3
PTQR	Pietraquaria	0.31	177	⇑iPg	Pg	06 21 12.7	-0.2
PTQR	Pietraquaria	0.31	177	⇑iPg	Pg	06 21 12.7	-0.2
TERO	Teramo	0.34	29	Pg	Pg	06 21 12.9	-0.6
TERO				Sg	Sg	06 21 18.9	+0.9
	10µm,0.4s						
TERO	Teramo	0.34	29	Pg	Pg	06 21 12.9	-0.6
TERO				Sg	Sg	06 21 18.9	+0.9
	10µm,0.4s						
CERT	Cerreto	0.48	218	Pg	Pg	06 21 15.8	-0.3
	5µm,0.8s						
CERT	Cerreto	0.48	218	Pg	Pg	06 21 15.8	-0.3
	5µm,0.8s						
VVLD	Villa Vallelon	0.49	158	Pg	Pg	06 21 16.0	-0.3
VVLD				Sg	Sg	06 21 23.3	+0.4
	2µm,0.6s						
VVLD	Villa Vallelon	0.49	158	Pg	Pg	06 21 16.0	-0.3
VVLD				Sg	Sg	06 21 23.3	+0.4
	2µm,0.6s						
INTR	Introdacqua	0.50	129	Pg	Pg	06 21 16.5	0.0
INTR				Sg	Sb	06 21 24.0	-1.0
	4µm,0.4s						
INTR	Introdacqua	0.50	129	Pg	Pg	06 21 16.5	0.0
INTR				Sg	Sb	06 21 24.0	-1.0
	4µm,0.4s						
MNS	Montasola	0.52	276	Pg	Pg	06 21 16.4	-0.5
	665nm,0.4s						
MNS	Montasola	0.52	276	Pg	Pg	06 21 16.4	-0.5
	665nm,0.4s						
GUAR	Guarcino	0.54	185	Pg	Pg	06 21 16.6	-0.6
	2µm,0.6s						
GUAR	Guarcino	0.54	185	Pg	Pg	06 21 16.6	-0.6
	2µm,0.6s						
NRCA	Norcia	0.54	339	Pg	Pg	06 21 16.8	-0.5
NRCA				Sg	Sb	06 21 25.3	-0.8
NRCA	Norcia	0.54	339	Pg	Pg	06 21 16.8	-0.5
NRCA				Sg	Sb	06 21 25.3	-0.8
MTCE	Montecelio	0.56	237	Pg	Pg	06 21 17.3	-0.4
	1µm,0.6s						
MTCE	Montecelio	0.56	237	Pg	Pg	06 21 17.3	-0.4
	1µm,0.6s						
TRTR	Tortoreto Alta	0.62	39	Pg	Pb	06 21 19.4	-0.2
	8µm,0.5s						
TRTR	Tortoreto Alta	0.62	39	Pg	Pb	06 21 19.4	-0.2
	8µm,0.5s						
OFFI	Offida	0.65	20	Pg	Pg	06 21 19.2	-0.1
	7µm,0.7s						
OFFI	Offida	0.65	20	Pg	Pg	06 21 19.2	-0.1
	7µm,0.7s						
POFI	Posta Fibreno	0.66	158	Pg	Pb	06 21 19.8	-0.5
	738nm,0.6s						
POFI	Posta Fibreno	0.66	158	Pg	Pb	06 21 19.8	-0.5
	738nm,0.6s						
LPEL	Lama dei Pelig	0.66	115	Pg	Pg	06 21 18.8	-0.7
LPEL				Sg	Sb	06 21 28.8	-0.7
LPEL	Lama dei Pelig	0.66	115	Pg	Pg	06 21 18.8	-0.7
LPEL				Sg	Sb	06 21 28.8	-0.7
RMP	Rome, Mte Porz	0.72	224	Pg	Pg	06 21 20.1	-0.6
	2µm,0.5s						
RMP	Rome, Mte Porz	0.72	224	Pg	Pg	06 21 20.1	-0.6
	2µm,0.5s						
CAFR	Castel Frentan	0.72	98	Pg	Pg	06 21 20.3	-0.4
	3µm,0.4s						
CAFR	Castel Frentan	0.72	98	Pg	Pg	06 21 20.3	-0.4
	3µm,0.4s						
FDMO	Fiordimonte	0.74	343	Pg	Pg	06 21 20.1	-0.9
FDMO	Fiordimonte	0.74	343	Pg	Pg	06 21 20.1	-0.9
CESI	CESI - Serrava	0.76	333	Pg	Pg	06 21 20.7	-0.7
	664nm,0.6s						
CESI	CESI - Serrava	0.76	333	Pg	Pg	06 21 20.7	-0.7
	664nm,0.6s						
GIUL	Giuliano Di Ro	0.78	187	Pg	Pg	06 21 21.0	-0.7
GIUL	Giuliano Di Ro	0.78	187	Pg	Pg	06 21 21.0	-0.7
RNI2	Rionero Sannit	0.85	137	Pg	Pg	06 21 22.8	-0.3
	3µm,1.3s						
RNI2	Rionero Sannit	0.85	137	Pg	Pg	06 21 22.8	-0.3
	3µm,1.3s						
CERA	Filignano	0.87	147	Pg	Pg	06 21 22.9	-0.6
	1µm,0.5s						
CERA	Filignano	0.87	147	Pg	Pg	06 21 22.9	-0.6
	1µm,0.5s						
ASSB	Assisi San Ben	0.89	324	Pg	Pg	06 21 23.8	-0.1
	1µm,0.5s						
ASSB	Assisi San Ben	0.89	324	Pg	Pg	06 21 23.8	-0.1
	1µm,0.5s						
MIDA	Miranda	0.95	136	Pg	Pg	06 21 22.7	-2.2
	1µm,0.9s						
MIDA	Miranda	0.95	136	Pg	Pg	06 21 22.7	-2.2
	1µm,0.9s						
CING	Cingoli	1.05	353	Pg	Pb	06 21 26.2	-0.8
	544nm,0.6s						
CING	Cingoli	1.05	353	Pg	Pb	06 21 26.2	-0.8
	544nm,0.6s						
MGAB	Montegabbione	1.10	302	Pg	Pn	06 21 28.1	0.0
	604nm,0.6s						
MGAB	Montegabbione	1.10	302	Pg	Pn	06 21 28.1	0.0
	604nm,0.6s						
LATE	Laterza	1.20	284	Pg	Pg	06 21 30.0	+0.2
	70nm,0.7s						
LATE	Laterza	1.20	284	Pg	Pg	06 21 30.0	+0.2
	70nm,0.7s						
SACS	San Casciano d	1.20	296	Pg	Pg	06 21 30.0	+0.2
	2µm,1.5s						
ARVD	Arcevia	1.21	345	Pg	Pn	06 21 28.8	-0.8
	626nm,0.7s						
ARVD	Arcevia	1.21	345	Pg	Pn	06 21 28.8	-0.8
	626nm,0.7s						
MODR	Mondragone	1.24	162	Pg	Pg	06 21 30.4	-0.1
	174nm,1.2s						
MODR	Mondragone	1.24	162	Pg	Pg	06 21 30.4	-0.1
	174nm,1.2s						
PIEI	Pieia	1.36	333	Pn	Pb	06 21 32.1	0.0
	254nm,0.4s						
PIEI	Pieia	1.36	333	Pn	Pb	06 21 32.1	0.0
	254nm,0.4s						
CAFI	Castiglion Fio	1.44	314	Pn	Pg	06 21 34.3	-0.1
	261nm,0.6s						
CAFI	Castiglion Fio	1.44	314	Pn	Pg	06 21 34.3	-0.1
	261nm,0.6s						
ARCI	Arcidosso	1.50	291	Pn	Pg	06 21 35.1	-0.4
	293nm,1.5s						
ARCI	Arcidosso	1.50	291	Pn	Pg	06 21 35.1	-0.4
	293nm,1.5s						
PARC	Parchiule	1.56	328	Pn	Pg	06 21 36.5	-0.2
	510nm,0.8s						
PARC	Parchiule	1.56	328	Pn	Pg	06 21 36.5	-0.2
	510nm,0.8s						
CRE	Caprese Michel	1.66	321	Pn	Pb	06 21 37.2	-0.2
CRE	Caprese Michel	1.66	321	Pn	Pb	06 21 37.2	-0.2
MAON	Monte Argentar	1.67	274	Pn	Pn	06 21 35.9	0.0
	356nm,1.5s						
MAON	Monte Argentar	1.67	274	Pn	Pn	06 21 35.9	0.0
	356nm,1.5s						
SGRT	San Giovanni R	1.85	107	Pn	Pb	06 21 40.0	-0.6
	301nm,0.9s						
SGRT	San Giovanni R	1.85	107	Pn	Pb	06 21 40.0	-0.6
	301nm,0.9s						
CASP	Castiglione de	1.91	285	Pn	Pn	06 21 39.6	+0.4
	55nm,0.7s						
CASP	Castiglione de	1.91	285	Pn	Pn	06 21 39.6	+0.4
	55nm,0.7s						
SFI	Santa Sofia	1.93	325	Pn	Pb	06 21 41.5	-0.5
	216nm,1.1s						
SFI	Santa Sofia	1.93	325	Pn	Pb	06 21 41.5	-0.5
	216nm,1.1s						
NVLJ	Novalja	2.48	25	ePn	Pn	06 21 47.3	+0.3
NVLJ				Sn	Sn	06 22 16.9	-0.4
MAIM	Mastiano	2.64	308	P	Pn	06 21 51.4	+2.2
STON	Ston	3.23	79	ePn	Pn	06 21 58.3	+0.9
STON				Sn	Sn	06 22 37.1	+1.3
STON	Ston	3.23	79	ePn	Pn	06 21 58.3	+0.9
STON				Sn	Sn	06 22 37.1	+1.3
PGF	Pioggiola	3.25	275	ePn	Pn	06 21 59.0	+1.3
PGF				eSn	Sn	06 22 39.1	+2.7
	5.7nm,0.4s						
PGF	Pioggiola	3.25	275	ePn	Pn	06 21 59.0	+1.3
PGF				eSn	Sn	06 22 39.1	+2.7
	2.8nm,0.4s						
SKDS	Skadanscina	3.25	8	iPn	Pn	06 21 57.7	+0.1
SKDS	Skadanscina	3.25	8	Pn	Pn	06 21 57.7	+0.1
SC2M	Scurtabo	3.49	308	P	Pn	06 22 04.0	+3.1
VOY	Vojsko	3.72	6	ePn	Pn	06 22 04.4	+0.2
VOY				e		06 22 12.8	
VOY				e		06 22 49.8	
VOY	Vojsko	3.72	6	ePn	Pn	06 22 04.4	+0.2
VOY				eSn	Sn	06 22 49.8	+1.8
CTI	Castel Tesino	3.92	342	Pn	Pn	06 22 08.4	+1.5
	62nm,0.5s						
CTI	Castel Tesino	3.92	342	Pn	Pn	06 22 08.4	+1.5
	62nm,0.5s						
ABTA	Abfaltersbach	4.46	352	⇑iPn	Pn	06 22 15.5	+1.2
ABTA	Abfaltersbach	4.46	352	Pn	Pn	06 22 15.5	+1.2
SBF	Sospel	4.62	291	ePn	Pn	06 22 16.9	+0.5
SBF				eSn	Sn	06 23 07.3	-2.7
	4.3nm,0.4s						
SBF	Sospel	4.62	291	ePn	Pn	06 22 16.9	+0.5
SBF				eSn	Sn	06 23 07.3	-2.7
	2.2nm,0.4s						
FETA	Feichten	5.06	339	⇑iPn	Pn	06 22 25.8	+3.2
FETA	Feichten	5.06	339	Pn	Pn	06 22 25.8	+3.2
FRF	La Foret Royal	5.09	286	ePn	Pn	06 22 23.3	+0.4
FRF				eSn	Sn	06 23 18.1	-3.6
	3.4nm,0.4s						
FRF	La Foret Royal	5.09	286	ePn	Pn	06 22 23.3	+0.4
FRF				eSn	Sn	06 23 18.1	-3.6
	1.7nm,0.4s						
DAVOX	Davos/Dischmat	5.11	332	Pn	Pn	06 22 25.8	+2.6
	2.5nm,0.3s,baz=159,slow=18,SNR=9.6						
DAVOX				Sn	Sn	06 23 24.5	+2.3
	0.7nm,0.3s,baz=108,slow=20,SNR=2.6						
LMR	La Mourre	5.15	284	ePn	Pn	06 22 24.1	+0.4
LMR				eSn	Sn	06 23 19.8	-3.3
	3.6nm,0.5s						
LMR	La Mourre	5.15	284	ePn	Pn	06 22 24.1	+0.4
LMR				eSn	Sn	06 23 19.8	-3.3
	1.8nm,0.5s						
MBDF	Montbardon	5.37	299	eP	Pn	06 22 29.3	+2.4
MBDF	Montbardon	5.37	299	eP	Pn	06 22 29.3	+2.4
LPG	La Plagne	5.74	306	eP	Pn	06 22 35.1	+3.0
LPG	La Plagne	5.74	306	eP	Pn	06 22 35.1	+3.0
GERES	GERESS Array B	6.52	2	Pn	Pn	06 22 43.4	+0.8
	0.3nm,0.3s,baz=173,slow=12,SNR=6.8						
GERES				Sn	Sn	06 23 55.1	-1.9
	1.8nm,0.3s,baz=173,slow=23,SNR=8.2						
KHC	Kasperske Hory	6.80	1	ePN	Pn	06 22 47.8	+1.4
KHC				eSN	Sn	06 24 01.4	-2.5
KHC	Kasperske Hory	6.80	1	Pn	Pn	06 22 47.8	+1.4
HINF	Hinteralfeld	7.17	322	ePn	Pn	06 22 51.4	-0.1
HINF				eSn	Sn	06 24 07.7	-5.2
	8.7nm,0.6s						
HINF	Hinteralfeld	7.17	322	ePn	Pn	06 22 51.4	-0.1
HINF				eSn	Sn	06 24 07.7	-5.2
	4.3nm,0.6s						
KEST	Kesra	7.30	207	Pn	Pn	06 22 57.6	+4.4
	0.8nm,0.3s,baz=293,slow=3.9,SNR=23						
CDF	Champ du Feu	7.45	327	ePn	Pn	06 22 55.3	0.0
CDF				eSn	Sn	06 24 15.1	-4.6
	10.0nm,0.7s						
CDF	Champ du Feu	7.45	327	ePn	Pn	06 22 55.3	0.0
CDF				eSn	Sn	06 24 15.1	-4.6
	5.0nm,0.7s						
HAU	Haudompre	7.54	321	ePn	Pn	06 22 56.8	+0.3
HAU				eSn	Sn	06 24 14.6	-7.4
	9.3nm,0.4s						
HAU	Haudompre	7.54	321	ePn	Pn	06 22 56.8	+0.3
HAU				eSn	Sn	06 24 14.6	-7.4
	4.7nm,0.4s						
MLR	Muntele Rosu	9.60	67	Pn	Pn	06 23 29.2	+4.3
	0.0nm,0.3s,baz=112,slow=18,SNR=5.1						
FINES	FINESS Array B	20.61	17	P	P	06 25 46.1	+0.5
	1.3nm,0.5s,baz=189,slow=9.7,SNR=7.5						
KBZ	Khabaz	21.58	76	P	P	06 25 58.2	+2.1
	2.0nm,0.9s,baz=282,slow=12,SNR=4.3						
TORD	Torodi Ar. Bea	30.79	203	P	P	06 27 25.6	+3.2
	0.5nm,0.8s,baz=17,slow=8.7,SNR=4.6						
MKAR	Makanchi Array	47.87	60	P	P	06 29 45.5	+1.0
	0.2nm,0.5s,baz=289,slow=7.1,SNR=2.2						
YKA	Yellowknife Ar	67.52	337	P	P	06 32 03.1	+0.7
	0.1nm,0.5s,baz=37,slow=6.2,SNR=2.8						

WEL 06 06:22:04.1±0.2, 38°.69S×178°.46E, h22km±1km, ML3.7/8, 2C-1D, Error ellipse: s-maj=1.8km s-min=0.7km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.28	315	⇑P*	Pb	06 22 10.7	+0.1
CNGZ				S*	Sb	06 22 15.3	+0.3
PRGZ	Paritu Road	0.51	242	⇑P*	Pb	06 22 14.7	+0.3
PRGZ				S*	Sb	06 22 21.5	0.0
PUZ	Puketiti	0.63	345	P*	Pb	06 22 16.0	-0.5
PUZ				S*	Sb	06 22 25.1	+0.1
MHGZ	Mahia Peninsul	0.64	222	P*	Pb	06 22 16.7	+0.1
MHGZ				S*	Sb	06 22 24.7	-0.5
KNZ	Kokohu	0.70	241	⇓P*	Pb	06 22 17.2	-0.4
KNZ				S*	Sb	06 22 27.6	+0.8
MWZ	Matawai	0.81	295	P*	Pb	06 22 18.8	-0.8
MWZ				S*	Sb	06 22 30.3	+0.2
RAHZ	Arahi	1.10	257	PN	Pn	06 22 23.4	-0.9
MXZ	Matakaoa Point	1.13	354	PN	Pn	06 22 24.2	-0.3
MXZ				SN	Sn	06 22 39.7	+0.4
URZ	Urewera	1.14	291	PN	Pn	06 22 24.0	-0.8
URZ				SN	Sn	06 22 39.7	0.0
NMHZ	Naumai	1.35	252	PN	Pn	06 22 26.9	-0.9
NMHZ				SN	Sn	06 22 44.8	-0.4
CKHZ	Cape Kidnapper	1.45	227	PN	Pn	06 22 27.9	-1.1
MCHZ	McNeill Hill	1.57	240	PN	Pn	06 22 30.5	-0.2
TARZ	Mount Tarawera	1.60	286	PN	Pn	06 22 31.0	-0.2
BKZ	Black Stump Fm	1.61	252	PN	Pn	06 22 30.7	-0.6
KAHZ	Kahuranaki	1.66	227	PN	Pn	06 22 30.9	-1.1
PXZ	Pawanui	1.83	222	PN	Pn	06 22 32.1	-2.1
BHHZ	Black Hill Sta	2.03	246	PN	Pn	06 22 35.9	-1.2
WPHZ	Waipukurau	2.08	228	PN	Pn	06 22 35.8	-2.0
PRHZ	Porangahau	2.12	221	PN	Pn	06 22 36.1	-2.2
PNHZ	Pukenui	2.14	234	PN	Pn	06 22 36.8	-1.8
MOVZ	Moawhango	2.23	250	PN	Pn	06 22 39.4	-0.4
NGZ	Ngauruhoe	2.28	257	PN	Pn	06 22 40.4	-0.3
WNVZ	Wahianoa	2.32	253	PN	Pn	06 22 40.7	-0.6
FWVZ	Far West T-bar	2.34	255	PN	Pn	06 22 40.7	-0.9
TSZ	Takapari Road	2.37	234	PN	Pn	06 22 39.9	-1.9
DVHZ	Dannevirke	2.40	227	PN	Pn	06 22 39.5	-2.6
MTVZ	Mangateitei	2.43	252	PN	Pn	06 22 42.7	+0.1
BFZ	Birch Farm	2.62	220	PN	Pn	06 22 41.9	-3.3
TCW	Tory Channel	4.09	231	PN	Pn	06 23 03.1	-2.1
QRZ	Quartz Range	5.04	243	PN	Pn	06 23 15.1	-3.4

*IDC **06** 06:23:43.5±0.7, 33°.59N×82°.26E, h0km, mb3.8/16, mb1 4.0/19, mb1mx3.8/34, mbtmp3.8/19, ML3.5/3, MS3.1/3, Ms1 3.1/3, ms1mx2.6/47, Error ellipse: s-maj=22.4km s-min=14.2km az=57.0*

*ISCJB **06** 06:23:46.9±0.6, 33°.67N±0°.09×82°.3E±0°.1, h33km, mb3.8/15, MS2.7/1, Error ellipse: s-maj=17.4km s-min=10.2km az=149.8*

*BJI **06** 06:23:48.4, 33°.99N×82°.49E, h6km, mb4.3/3, ML3.6/1*

ISC 06 06:23:48.6±0.7, 33°.7N±0°.1×82°.48E±0°.09, h35km, n23, σ1s.47/24, mb3.9/15, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDI	Dehra Dun	5.04	229	ex	Pn	06 25 06.0	+4.2
AAK	Ala-Archa	10.91	327	Pn	Pn	06 26 23.1	+0.7
	0.2nm,0.3s,baz=180,slow=16,SNR=3.1						
AAK				LR	LR	06 30 52.3	
	comp=Z,88nm,18.2s,baz=135,slow=39						
MKAR	Makanchi Array	13.09	359	Pn	Pn	06 26 51.5	-0.5
	0.3nm,0.3s,baz=182,slow=13,SNR=22						
GTA	Gaotai	15.05	63	eP	P	06 27 26.9	+3.2
GTA				pP	pP	06 27 31.3	-1.6
GTA				sP	sP	06 27 34.0	-3.3
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURBB	Kurchatov Arra	17.17	351	P	Pn	06 27 45.4	-0.2
	comp=Z,0.1nm,0.3s,baz=172,slow=11,SNR=11						
KURBB				LR	LR	06 35 31.8	
	comp=Z,72nm,18.2s,baz=175,slow=41						
LZH	Lanzhou	17.69	76	eP	Pn	06 27 50.0	-2.4
LZH				pP	P	06 27 55.3	+2.3
LZH				sP	sP	06 27 57.6	-9.0
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
ZALV	Zalesovo Beam	20.32	4	P	Pn	06 28 22.7	-1.0
	comp=Z,1.7nm,0.5s,baz=196,slow=8.9,SNR=13						
CMAR	Chiang Mai Arr	21.14	132	P	P	06 28 31.7	+1.1
	comp=Z,8.3nm,0.9s,baz=305,slow=11,SNR=21						
BVAR	Borovoye Array	21.18	340	P	P	06 28 31.6	+0.9
	comp=Z,3.2nm,0.8s,baz=134,slow=11,SNR=15						
BVAR				LR	LR	06 37 23.7	
	comp=Z,32nm,19.6s,baz=149,slow=39						
SONM	Songino Array	22.85	45	P	P	06 28 50.7	+1.8
	comp=Z,1.1nm,0.9s,baz=241,slow=11,SNR=8.8						
AKTO	Aktyubinsk	24.52	320	P	P	06 29 04.0	-0.7
	comp=Z,3.3nm,0.7s,baz=114,slow=12,SNR=14						
FINES	FINESS Array B	45.10	326	P	P	06 32 01.0	-0.1
	comp=Z,1.3nm,0.6s,baz=117,slow=6.6,SNR=6.9						
ARCES	ARCESS Array B	47.42	336	P	P	06 32 19.8	+0.5
	comp=Z,4.1nm,0.9s,baz=96,slow=7.6,SNR=4.3						
HFS	Hagfors	51.02	323	P	P	06 32 46.9	0.0
	comp=Z,0.8nm,0.4s,baz=93,slow=9.1,SNR=4.3						
NOA	NORSAR Array B	52.22	324	P	P	06 32 56.1	+0.2
	comp=Z,0.8nm,0.6s,baz=90,slow=6.7,SNR=3.1						
EKA	Eskdalemuir Ar	60.70	319	P	P	06 33 56.2	0.0
	comp=Z,0.3nm,0.4s,baz=79,slow=7.3,SNR=2.5						
WRA	Warramunga Arr	72.71	129	P	P	06 35 13.9	+0.7
	comp=Z,1.0nm,0.8s,baz=327,slow=5.7,SNR=9.0						
ILAR	Eielson Array	74.57	20	P	P	06 35 24.1	+0.5
	comp=Z,0.2nm,0.5s,baz=316,slow=5.6,SNR=5.1						
ASAR	Alice Springs	75.15	132	P	P	06 35 28.8	+1.3
	comp=Z,0.6nm,0.7s,baz=317,slow=5.3,SNR=7.8						
TORD	Torodi Ar. Bea	75.23	276	P	P	06 35 27.8	-0.4
	comp=Z,1.0nm,0.6s,baz=47,slow=5.1,SNR=14						
BOSA	Boshof	82.31	228	P	P	06 36 05.6	-1.2
	comp=Z,3.2nm,1.1s,baz=108,slow=3.2,SNR=3.2						
YKA	Yellowknife Ar	83.17	8	P	P	06 36 10.6	-0.1
	comp=Z,0.4nm,0.5s,baz=338,slow=5.4,SNR=19						
LPAZ	La Paz	148.38	296	PKPbc	PKPbc	06 43 31.8	-0.9
	comp=Z,0.7nm,0.7s,baz=63,slow=2.3,SNR=2.6						

*ISCJB **06** 06:28:57.4±0.4, 42°.38N±0°.02×13°.34E±0°.04, h8km±4km, Error ellipse: s-maj=4.6km s-min=3.1km az=157.7*

*CSEM **06** 06:28:57.6±0.1, 42°.38N×13°.34E, h5km, ML3.5/5, Error ellipse: s-maj=2.3km s-min=1.7km az=68.0*

*ROM **06** 06:28:57.1±0.1, 42°.37N×13°.37E, h8km±1km, Md2.9/9, Ml2.8/19, Error ellipse: s-maj=1.9km s-min=1.2km az=75.0*

ISC 06 06:28:57.6±0.8, 42°.38N±0°.02×13°.36E±0°.02, h8km±5km, n56, σ0s.47/74, 6C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	128	Pg	Pg	06 28 59.2	-0.1
AQU				Sg	Sg	06 29 00.1	-0.5
AQU	L'Aquila	0.04	128	Pg	Pg	06 28 59.2	-0.1
AQU				Sg	Sg	06 29 00.1	-0.5
CAMP	Campotosto	0.16	13	⇑iPg	Pg	06 29 01.4	+0.3
CAMP				Sg	Sg	06 29 04.3	+0.8
CAMP	Campotosto	0.16	13	⇑iPg	Pg	06 29 01.4	+0.3
CAMP				Sg	Sg	06 29 04.3	+0.8
FAGN	Fagnano	0.20	124	Pg	Pg	06 29 02.1	+0.4
FAGN				Sg	Sg	06 29 04.7	+0.2
	4µm,0.6s						
FAGN	Fagnano	0.20	124	Pg	Pg	06 29 02.1	+0.4
FAGN				Sg	Sg	06 29 04.7	+0.2
	4µm,0.6s						
FIAM	Fiamignano	0.21	238	Pg	Pg	06 29 02.4	+0.5
FIAM	Fiamignano	0.21	238	Pg	Pg	06 29 02.4	+0.5
TERO	Teramo	0.30	36	⇑iPg	Pg	06 29 03.4	-0.2
TERO				Sg	Sg	06 29 07.9	+0.2
TERO	Teramo	0.30	36	⇑iPg	Pg	06 29 03.4	-0.2
TERO				Sg	Sg	06 29 07.9	+0.2
VCEL	Villa Celiera	0.36	87	Pg	Pg	06 29 04.4	-0.2
VCEL	Villa Celiera	0.36	87	Pg	Pg	06 29 04.4	-0.2
PTQR	Pietraquaria	0.36	175	⇑iPg	Pg	06 29 04.4	-0.2
PTQR				Sg	Sb	06 29 12.2	+0.2
PTQR	Pietraquaria	0.36	175	⇑iPg	Pg	06 29 04.4	-0.2
NRCA	Norcia	0.49	338	Pg	Pg	06 29 07.3	+0.2
NRCA				Sg	Sb	06 29 14.9	-0.9
	843nm,0.1s						
NRCA	Norcia	0.49	338	Pg	Pg	06 29 07.3	+0.2
NRCA				Sg	Sb	06 29 14.9	-0.9
	843nm,0.1s						
MNS	Montasola	0.50	271	Pg	Pg	06 29 07.3	0.0
	503nm,0.7s						
MNS	Montasola	0.50	271	Pg	Pg	06 29 07.3	0.0
	503nm,0.7s						
CERT	Cerreto	0.51	213	Pg	Pg	06 29 07.2	-0.3
	988nm,0.5s						
CERT	Cerreto	0.51	213	Pg	Pg	06 29 07.2	-0.3
	988nm,0.5s						
VVLD	Villa Vallelon	0.54	159	Pg	Pg	06 29 08.0	-0.1
	534nm,0.8s						
VVLD	Villa Vallelon	0.54	159	Pg	Pg	06 29 08.0	-0.1
	534nm,0.8s						
INTR	Introdacqua	0.55	132	Pg	Pg	06 29 07.9	-0.3
INTR				Sg	Sb	06 29 16.5	-0.9
	849nm,0.7s						
INTR	Introdacqua	0.55	132	Pg	Pg	06 29 07.9	-0.3
INTR				Sg	Sb	06 29 16.5	-0.9
	849nm,0.7s						
MTCE	Montecelio	0.58	232	Pg	Pg	06 29 08.5	-0.3
	268nm,0.8s						
MTCE	Montecelio	0.58	232	Pg	Pg	06 29 08.5	-0.3
	268nm,0.8s						
GUAR	Guarcino	0.58	183	Pg	Pg	06 29 09.1	+0.2
	293nm,0.6s						
GUAR	Guarcino	0.58	183	Pg	Pg	06 29 09.1	+0.2
	293nm,0.6s						
TRTR	Tortoreto Alta	0.59	43	Pg	Pb	06 29 10.0	-0.2
TRTR	Tortoreto Alta	0.59	43	Pg	Pb	06 29 10.0	-0.2
OFFI	Offida	0.61	23	Pg	Pb	06 29 10.1	-0.3
	6µm,0.6s						
OFFI	Offida	0.61	23	Pg	Pb	06 29 10.1	-0.3
	6µm,0.6s						
FDMO	Fiordimonte	0.69	343	Pg	Pg	06 29 10.4	-0.4
FDMO				Sg	Sb	06 29 21.0	-0.5
	255nm,0.2s						
FDMO	Fiordimonte	0.69	343	Pg	Pg	06 29 10.4	-0.4
FDMO				Sg	Sb	06 29 21.0	-0.5
	255nm,0.2s						
LPEL	Lama dei Pelig	0.70	118	Pg	Pg	06 29 10.6	-0.4
LPEL				Sg	Sb	06 29 20.9	-0.8
	365nm,0.5s						
LPEL	Lama dei Pelig	0.70	118	Pg	Pg	06 29 10.6	-0.4
LPEL				Sg	Sb	06 29 20.9	-0.8
	365nm,0.5s						
CESI	CESI - Serrava	0.71	332	Pg	Pg	06 29 11.2	-0.1
	181nm,0.5s						
CESI	CESI - Serrava	0.71	332	Pg	Pg	06 29 11.2	-0.1
	181nm,0.5s						
POFI	Posta Fibreno	0.71	158	Pg	Pb	06 29 12.2	0.0
	177nm,0.8s						
POFI	Posta Fibreno	0.71	158	Pg	Pb	06 29 12.2	0.0
	177nm,0.8s						
ASSB	Assisi San Ben	0.84	322	Pg	Pg	06 29 13.5	-0.3
	265nm,0.3s						
ASSB	Assisi San Ben	0.84	322	Pg	Pg	06 29 13.5	-0.3
	265nm,0.3s						
MGAB	Montegabbione	1.06	301	Pg	Pb	06 29 18.1	-0.1
MGAB	Montegabbione	1.06	301	Pg	Pb	06 29 18.1	-0.1
MURB	Monte Urbino	1.08	325	Pg	Pg	06 29 17.6	-0.6
	420nm,0.3s						
MURB	Monte Urbino	1.08	325	Pg	Pg	06 29 17.6	-0.6
	420nm,0.3s						
ARVD	Arcevia	1.16	345	Pg	Pb	06 29 19.2	-0.7
	139nm,0.7s						
ARVD	Arcevia	1.16	345	Pg	Pb	06 29 19.2	-0.7
	139nm,0.7s						
AOI	Ancona	1.18	9	Pg	Pb	06 29 20.1	-0.2
	162nm,0.6s						
AOI	Ancona	1.18	9	Pg	Pb	06 29 20.1	-0.2
	162nm,0.6s						
PIEI	Pieia	1.30	333	Pg	Pn	06 29 22.0	-0.1
	103nm,0.4s						
PIEI	Pieia	1.30	333	Pg	Pn	06 29 22.0	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	103nm,0.4s						
PARC	**Parchiule**	**1.51**	**327**	Pn	**Pg**	**06 29 26.3**	**-0.3**
	171nm,0.9s						
PARC	**Parchiule**	**1.51**	**327**	Pn	**Pg**	**06 29 26.3**	**-0.3**
	171nm,0.9s						
NVLJ	**Novalja**	**2.44**	**26**	*e*Pn	**Pn**	**06 29 38.6**	**+0.9**
NVLJ				Sn	**Sn**	**06 30 09.1**	**+1.4**
NVLJ	**Novalja**	**2.44**	**26**	*e*Pn	**Pn**	**06 29 38.5**	**+0.9**

*ISCJB **06** 06:48:15.7±0.3, 42°.30N±0°.02×13°.38E±0°.03, h6km±3km, mb3.4/3, Error ellipse: s-maj=3.4km s-min=3.1km az=152.9*
*CSEM **06** 06:48:15.9±0.1, 42°.29N×13°.37E, h2km, Error ellipse: s-maj=2.4km s-min=1.9km az=62.0*
*ROM **06** 06:48:15.3±0.1, 42°.30N×13°.38E, h7km±1km, Ml3.2/15, Error ellipse: s-maj=1.3km s-min=1.2km az=83.0*
*IDC **06** 06:48:17.3±1.3, 42°.41N×13°.36E, h0km, mb3.3/3, mb1 3.3/7, mb1mx3.2/30, mbtmp3.2/7, ML3.0/4, Error ellipse: s-maj=23.4km s-min=15.1km az=92.0*
ISC 06 06:48:16.5±1.1**, 42°.30N**±0°.02×**13°.37E**±0°.02**, h2**km±7km**, n76, σ0s.90**/97**, mb3.4**/3**, 2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**23**	Pg	**Pg**	**06 48 17.3**	**-0.4**
AQU				Sg	**Sg**	**06 48 18.5**	**0.0**
	79μm,0.7s						
AQU	**L'Aquila**	**0.06**	**23**	Pg	**Pg**	**06 48 17.3**	**-0.4**
AQU				Sg	**Sg**	**06 48 18.5**	**0.0**
	79μm,0.7s						
FAGN	**Fagnano**	**0.16**	**103**	Pg	**Pg**	**06 48 19.0**	**-0.6**
FAGN				Sg	**Sg**	**06 48 21.9**	**+0.1**
	16μm,0.3s						
FAGN	**Fagnano**	**0.16**	**103**	Pg	**Pg**	**06 48 19.0**	**-0.6**
FAGN				Sg	**Sg**	**06 48 21.9**	**+0.1**
	16μm,0.3s						
FIAM	**Fiamignano**	**0.19**	**260**	Pg	**Pg**	**06 48 20.3**	**+0.1**
FIAM				Sg	**Sg**	**06 48 23.7**	**+0.9**
FIAM	**Fiamignano**	**0.19**	**260**	Pg	**Pg**	**06 48 20.3**	**+0.1**
FIAM				Sg	**Sg**	**06 48 23.7**	**+0.9**
CAMP	**Campotosto**	**0.23**	**7**	⇓*i*Pg	**Pg**	**06 48 20.8**	**-0.3**
CAMP				Sg	**Sg**	**06 48 24.5**	**+0.4**
CAMP	**Campotosto**	**0.23**	**7**	⇓*i*Pg	**Pg**	**06 48 20.8**	**-0.3**
CAMP				Sg	**Sg**	**06 48 24.5**	**+0.4**
PTQR	**Pietraquaria**	**0.28**	**176**	Pg	**Pg**	**06 48 21.7**	**-0.2**
PTQR	**Pietraquaria**	**0.28**	**176**	Pg	**Pg**	**06 48 21.7**	**-0.2**
VCEL	**Villa Celiera**	**0.36**	**75**	Pg	**Pg**	**06 48 23.3**	**-0.1**
VCEL	**Villa Celiera**	**0.36**	**75**	Pg	**Pg**	**06 48 23.3**	**-0.1**
TERO	**Teramo**	**0.36**	**28**	Pg	**Pg**	**06 48 22.8**	**-0.7**
TERO				Sg	**Sg**	**06 48 28.4**	**+0.2**
TERO	**Teramo**	**0.36**	**28**	Pg	**Pg**	**06 48 22.8**	**-0.7**
TERO				Sg	**Sg**	**06 48 28.4**	**+0.2**
CERT	**Cerreto**	**0.46**	**220**	Pg	**Pg**	**06 48 24.8**	**-0.5**
CERT				Sg	**Sg**	**06 48 32.0**	**+0.8**
CERT	**Cerreto**	**0.46**	**220**	Pg	**Pg**	**06 48 24.8**	**-0.5**
CERT				Sg	**Sg**	**06 48 32.0**	**+0.8**
VVLD	**Villa Vallelon**	**0.47**	**157**	Pg	**Pg**	**06 48 24.8**	**-0.7**
	2μm,0.6s						
VVLD	**Villa Vallelon**	**0.47**	**157**	Pg	**Pg**	**06 48 24.8**	**-0.7**
	2μm,0.6s						
INTR	**Introdacqua**	**0.49**	**126**	Pg	**Pg**	**06 48 25.3**	**-0.6**
INTR				Sg	**Sg**	**06 48 33.2**	**+0.9**
INTR	**Introdacqua**	**0.49**	**126**	Pg	**Pg**	**06 48 25.3**	**-0.6**
INTR				Sg	**Sg**	**06 48 33.2**	**+0.9**
GUAR	**Guarcino**	**0.51**	**185**	Pg	**Pg**	**06 48 25.6**	**-0.7**
GUAR	**Guarcino**	**0.51**	**185**	Pg	**Pg**	**06 48 25.6**	**-0.7**
MNS	**Montasola**	**0.52**	**279**	Pg	**Pg**	**06 48 25.8**	**-0.7**
MNS	**Montasola**	**0.52**	**279**	Pg	**Pg**	**06 48 25.8**	**-0.7**
MTCE	**Montecelio**	**0.55**	**239**	Pg	**Pg**	**06 48 26.3**	**-0.7**
	1μm,1.0s						
MTCE	**Montecelio**	**0.55**	**239**	Pg	**Pg**	**06 48 26.3**	**-0.7**
	1μm,1.0s						
NRCA	**Norcia**	**0.56**	**340**	Pg	**Pg**	**06 48 26.6**	**-0.7**
NRCA	**Norcia**	**0.56**	**340**	Pg	**Pg**	**06 48 26.6**	**-0.7**
POFI	**Posta Fibreno**	**0.64**	**156**	Pg	**Pg**	**06 48 27.1**	**-1.6**
	615nm,0.8s						
POFI	**Posta Fibreno**	**0.64**	**156**	Pg	**Pg**	**06 48 27.1**	**-1.6**
	615nm,0.8s						
TRTR	**Tortoreto Alta**	**0.64**	**38**	Pg	**Pg**	**06 48 29.4**	**+0.5**
	6μm,1.0s						
TRTR	**Tortoreto Alta**	**0.64**	**38**	Pg	**Pg**	**06 48 29.4**	**+0.5**
	6μm,1.0s						
LPEL	**Lama dei Pelig**	**0.66**	**113**	Pg	**Pg**	**06 48 28.1**	**-1.0**
LPEL				Sg	**Sg**	**06 48 38.3**	**+0.8**
LPEL	**Lama dei Pelig**	**0.66**	**113**	Pg	**Pg**	**06 48 28.1**	**-1.0**
LPEL				Sg	**Sg**	**06 48 38.3**	**+0.8**
OFFI	**Offida**	**0.67**	**20**	Pg	**Pg**	**06 48 29.5**	**+0.1**
OFFI	**Offida**	**0.67**	**20**	Pg	**Pg**	**06 48 29.5**	**+0.1**
SDI	**San Donato**	**0.68**	**151**	Pg	**Pg**	**06 48 28.7**	**-0.8**
SDI	**San Donato**	**0.68**	**151**	Pg	**Pg**	**06 48 28.7**	**-0.8**
CAFR	**Castel Frentan**	**0.73**	**96**	Pg	**Pg**	**06 48 30.3**	**-0.1**
	2μm,0.8s						
CAFR	**Castel Frentan**	**0.73**	**96**	Pg	**Pg**	**06 48 30.3**	**-0.1**
	2μm,0.8s						
GIUL	**Giuliano Di Ro**	**0.75**	**187**	Pg	**Pg**	**06 48 29.5**	**-1.4**
GIUL	**Giuliano Di Ro**	**0.75**	**187**	Pg	**Pg**	**06 48 29.5**	**-1.4**
FDMO	**Fiordimonte**	**0.76**	**344**	Pg	**Pg**	**06 48 29.9**	**-1.2**
FDMO	**Fiordimonte**	**0.76**	**344**	Pg	**Pg**	**06 48 29.9**	**-1.2**
CESI	**CESI - Serrava**	**0.78**	**334**	Pg	**Pg**	**06 48 30.6**	**-0.9**
	768nm,1.3s						
CESI	**CESI - Serrava**	**0.78**	**334**	Pg	**Pg**	**06 48 30.6**	**-0.9**
	768nm,1.3s						
RNI2	**Rionero Sannit**	**0.83**	**136**	Pg	**Pg**	**06 48 31.9**	**-0.6**
	994nm,0.8s						
RNI2	**Rionero Sannit**	**0.83**	**136**	Pg	**Pg**	**06 48 31.9**	**-0.6**
	994nm,0.8s						
CERA	**Filignano**	**0.85**	**145**	Pg	**Pg**	**06 48 31.6**	**-1.3**
	736nm,0.6s						
CERA	**Filignano**	**0.85**	**145**	Pg	**Pg**	**06 48 31.6**	**-1.3**
	736nm,0.6s						
ASSB	**Assisi San Ben**	**0.91**	**325**	Pg	**Pg**	**06 48 33.5**	**-0.4**
ASSB	**Assisi San Ben**	**0.91**	**325**	Pg	**Pg**	**06 48 33.5**	**-0.4**
MIDA	**Miranda**	**0.93**	**135**	Pg	**Pg**	**06 48 32.5**	**-1.9**
	585nm,0.8s						
MIDA	**Miranda**	**0.93**	**135**	Pg	**Pg**	**06 48 32.5**	**-1.9**
	585nm,0.8s						
SACS	**San Casciano d**	**1.21**	**297**	Pg	**Pg**	**06 48 39.3**	**-0.4**
	767nm,1.6s						
PIEI	**Pieia**	**1.38**	**334**	Pn	**Pn**	**06 48 41.1**	**-1.7**
	129nm,0.5s						
PIEI	**Pieia**	**1.38**	**334**	Pn	**Pn**	**06 48 41.1**	**-1.7**
	129nm,0.5s						
BADI	**Badiali**	**1.46**	**326**	Pn	**Pn**	**06 48 43.9**	**-0.1**
	198nm,0.7s						
BADI	**Badiali**	**1.46**	**326**	Pn	**Pn**	**06 48 43.9**	**-0.1**
	198nm,0.7s						
PARC	**Parchiule**	**1.58**	**329**	Pn	**Pn**	**06 48 45.5**	**-0.1**
	277nm,0.8s						
PARC	**Parchiule**	**1.58**	**329**	Pn	**Pn**	**06 48 45.5**	**-0.1**
	277nm,0.8s						
MS1	**Monte Sant'Ang**	**2.01**	**106**	*e*Pn	**Pg**	**06 48 54.5**	**-0.4**
NVLJ	**Novalja**	**2.51**	**25**	*i* Pn	**Pn**	**06 48 57.4**	**-1.0**
NVLJ				Sn	**Sn**	**06 49 29.7**	**+0.2**
NVLJ	**Novalja**	**2.51**	**25**	*i* Pn	**Pn**	**06 48 57.3**	**-1.0**
NVLJ				Sn	**Sn**	**06 49 29.6**	**+0.2**
MAIM	**Mastiano**	**2.65**	**308**	P	**Pn**	**06 49 01.4**	**+1.1**
STON	**Ston**	**3.25**	**78**	*e*Pn	**Pn**	**06 49 08.3**	**-0.2**
STON				Sn	**Sn**	**06 49 47.4**	**-0.2**
STON	**Ston**	**3.25**	**78**	*e*Pn	**Pn**	**06 49 08.2**	**-0.2**
STON				Sn	**Sn**	**06 49 47.4**	**-0.2**
DAVOX	**Davos/Dischmat**	**5.13**	**332**	Pn	**Pn**	**06 49 36.1**	**+1.7**
	0.6nm,0.3s,baz=148,slow=19,SNR=11						
DAVOX				Sn	**Sn**	**06 50 33.9**	**-0.3**
	0.2nm,0.3s,baz=158,slow=21,SNR=1.5						
GERES	**GERESS Array B**	**6.55**	**2**	Pn	**Pn**	**06 49 53.3**	**-0.6**
	0.2nm,0.3s,baz=187,slow=14,SNR=3.9						
GERES				Sn	**Sn**	**06 51 07.2**	**-1.9**
	0.4nm,0.3s,baz=176,slow=24,SNR=6.1						
KHC	**Kasperske Hory**	**6.83**	**1**	*e*x	x	06 51 08.0	
KHC				*e*SN	**Sn**	**06 51 13.9**	**-2.1**
KHC	**Kasperske Hory**	**6.83**	**1**	Sn	**Sn**	**06 51 13.9**	**-2.1**
KEST	**Kesra**	**7.27**	**207**	Pn	Pn	06 50 07.8	+4.0
	0.2nm,0.3s,baz=25,slow=9.6,SNR=5.8						
MLR	**Muntele Rosu**	**9.62**	**66**	Pn	**Pn**	**06 50 38.5**	**+2.5**
	0.0nm,0.3s,baz=281,slow=21,SNR=3.2						
TORD	**Torodi Ar. Bea**	**30.77**	**203**	P	**P**	**06 54 34.2**	**+0.8**
	0.4nm,0.9s,baz=14,slow=8.1,SNR=2.8						
MKAR	**Makanchi Array**	**47.89**	**60**	P	**P**	**06 56 55.8**	**-0.1**
	0.2nm,0.6s,baz=282,slow=7.1,SNR=3.1						
SONM	**Songino Array**	**62.02**	**50**	P	**P**	**06 58 38.8**	**+0.6**
	0.4nm,0.9s,baz=307,slow=5.2,SNR=2.8						

MEX 06 06:51:00.5±1.0**, 17°.02N**×**94°.60W, h135**km±8km**, MD3.9, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.28**	**285**	*i* P	Pn	06 51 17.8	-1.4
CMIG				*i* S	Sn	06 51 31.3	-2.0
TGIG		**1.44**	**99**	*i* P	Pn	06 51 27.3	-1.0
TGIG				*i* S	Sn	06 51 47.2	-2.3
HUIG	**Huatulco**	**1.91**	**230**	*e*P	Pn	06 51 31.4	-2.2
HUIG				*e*S	Sn	06 51 57.9	-1.1
VHO	**Vista Hermosa**	**2.04**	**272**	*e*P	Pn	06 51 34.6	-0.9
VHO				*i* S	Sn	06 52 01.2	-1.1
CCIG	**Comitan**	**2.47**	**107**	*e*P	Pn	06 51 40.1	-0.7
CCIG				*i* S	Sn	06 52 09.8	-2.0
TPIG	**Tehuac#an**	**2.98**	**298**	*e*P	Pn	06 51 45.7	-1.5
TPIG				*i* S	Sn	06 52 21.1	-2.3
THIG		**3.07**	**133**	*i* P	Pn	06 51 47.4	-0.9
THIG				*i* S	Sn	06 52 22.5	-2.6
UTMO	**Huajuapan**	**3.16**	**285**	*i* P	Pn	06 51 48.8	-0.9
UTMO				*i* S	Sn	06 52 25.1	-2.6
PNIG	**Pinotepa**	**3.44**	**260**	*e*P	Pn	06 51 50.5	-2.5
PNIG				*i* S	Sn	06 52 31.0	-2.6

GUC 06 06:58:58.1±0.7**, 32°.64S**×**71°.64W, h12**km±4km**, MD3.6, ML2.6, 6C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.38**	**181**	⇓*i*P	Pb	06 59 06.3	-0.5
IHA				*i* S	Sb	06 59 12.1	-0.6
CHNG	**Los Chungos**	**0.77**	**9**	⇑*i*P	Pg	06 59 12.5	-0.4
CHNG				*i* S	Sg	06 59 23.1	+0.2
CHNG				AML	AML	06 59 24.6	
	comp=N,187nm,0.3s						
STL	**Santa Lucia**	**1.15**	**134**	⇑*i*P	Pb	06 59 18.7	-1.4
STL				*i* S	Sb	06 59 34.2	-0.8
TACH	**Talagante**	**1.17**	**150**	⇑*i*P	Pb	06 59 18.7	-1.6
ANTU	**Antumapu**	**1.25**	**138**	⇑*i*P	Pn	06 59 20.4	-1.0
ANTU				*i* S	Sb	06 59 37.0	-0.9
ANTU				AML	AML	06 59 41.5	
	comp=E,188nm,1.2s						
FCH	**Farellones**	**1.32**	**122**	*i* S	Sb	06 59 39.8	-0.7
LNV	**Longovilo**	**1.32**	**172**	*e*P	Pn	06 59 20.7	-1.7
SJCH	**San Jose de Ma**	**1.47**	**133**	*e*P	Pn	06 59 22.7	-1.8
SJCH				*e*S	Sn	06 59 42.6	-1.1
SJCH				AML	AML	06 59 45.2	
	comp=E,63nm,0.3s						
CHCH	**Chadas Angostu**	**1.53**	**148**	*e*P	Pn	06 59 25.1	-0.3
CHCH				*i* S	Sn	06 59 44.5	-0.7
CMCH	**Combarbala**	**1.56**	**20**	⇑*i*P	Pn	06 59 24.9	-1.0
CMCH				*i* S	Sn	06 59 45.8	-0.3
CMCH				AML	AML	06 59 50.3	
	comp=N,651nm,0.5s						
LMEL	**Las Melosas**	**1.70**	**135**	⇑*i*P	Pn	06 59 27.5	-0.3
LMEL				*i* S	Sn	06 59 49.8	+0.2
LMEL				AML	AML	06 59 54.9	
	comp=N,164nm,0.1s						
CACH	**El Canelo**	**1.71**	**150**	*e*P	Pn	06 59 28.1	+0.2
CACH				*e*S	Sb	06 59 51.5	+0.2

*IDC **06** 07:01:23.9±0.5, 34°.82N×73°.15E, h0km, mb4.3/26, mb1 4.4/31, mb1mx4.4/37, mbtmp4.3/31, ML4.2/5, MS3.3/11, Ms1 3.3/11, ms1mx3.0/49, Error ellipse: s-maj=12.8km s-min=10.8km az=35.0*
*NDI **06** 07:01:24.0±2.5, 34°.95N×72°.73E, h10km, ML4.4, mb4.6(NEIC)*
*ISCJB **06** 07:01:24.8±0.8, 34°.84N±0°.02×73°.20E±0°.03, h18km±6km, mb4.3/53, MS3.4/12, Error ellipse: s-maj=4.8km s-min=2.8km az=159.0*
*NEIC **06** 07:01:26.1±1.1, 34°.77N×73°.10E, h13km±7km, mb4.6/18, Error ellipse: s-maj=5.4km s-min=4.8km az=82.0*
NEIC Felt at Rawalpindi.
*BJI **06** 07:01:27.4, 34°.76N×73°.73E, h5km, mB4.7/9, mb4.5/17, ML4.2/3, Ms4.0/6, Ms7 3.6/5*
*MOS **06** 07:01:27.2±0.9, 34°.85N×73°.11E, h33km, mb4.7/35, Error ellipse: s-maj=8.4km s-min=4.5km az=96.4*
*NNC **06** 07:01:35.9±1.6, 35°.19N×72°.86E, h95km±14km, mb3.8, mpv4.4, Error ellipse: s-maj=14.6km s-min=10.1km az=78.0*
ISC 06 07:01:26.2±0.6**, 34°.82N**±0°.03×**73°.10E**±0°.03**, h15**km±3km**, n215, σ1s.61**/239**, mb4.5**/53**, MS3.5**/12**, 15C-9D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**1.16**	**173**	P	**Pg**	**07 01 48.9**	**+0.3**
NIL	**Nilore**	**1.17**	**174**	*e*Pg	**Pn**	**07 01 46.8**	**-1.1**
NIL				*e*Sg	**Sb**	**07 02 00.6**	**-2.4**
CEP	**Cherat**	**1.40**	**225**	P	**Pb**	**07 01 52.3**	**+0.3**
CEP				S	**Sg**	**07 02 14.0**	**+2.7**
JMU	**Jammu**	**2.57**	**144**	*e*P	**Pb**	**07 02 13.0**	**+1.0**
JMU				*e*S	**Sb**	**07 02 44.5**	**+1.1**
KBL	**Kabul**	**3.35**	**266**	*e*P	**Pn**	**07 02 19.0**	**+0.8**
KBL	**Kabul**	**3.35**	**266**	*e*Pn	**Pn**	**07 02 19.0**	**+0.8**
KBL				*e*Sg	**Sg**	**07 03 14.3**	**+0.3**
DHRM	**DHARAMSHALA**	**3.70**	**133**	*e*P	Pn	07 02 26.4	+3.5
DHRM				*e*S	**Sn**	**07 03 10.2**	**+3.8**
DHRM				AML	AML	07 03 30.4	
	comp=Z,1μm,0.5s						
DHRM				AML	AML	07 03 30.7	
	comp=N,2μm,0.3s						
BHK	**Bhakra**	**4.38**	**140**	*e*P	**Pn**	**07 02 34.9**	**+2.7**
BHK				*e*x	**Sg**	**07 03 45.0**	**-2.0**
SMLA	**Simla**	**5.02**	**136**	*i* P	**Pn**	**07 02 44.0**	**+3.1**
SMLA				*i* S	**Sn**	**07 03 40.9**	**+2.3**
SMLA				*i* S	**Sn**	**07 03 41.3**	**+2.8**
KSH	**Kashi**	**5.22**	**25**	Pn	**Pn**	**07 02 42.4**	**-1.4**
KSH				Sn	Sn	07 03 37.0	-6.8
KSH				smax	smax		
	comp=N,210nm,0.9s						
KSH				smax	smax		
	comp=E,360nm,1.0s						
DDI	**Dehra Dun**	**6.13**	**136**	*e*P	**Pn**	**07 02 57.8**	**+1.6**
DDI				*e*S	**Sn**	**07 04 08.0**	**+2.0**
NDI	**New Delhi**	**7.04**	**149**	*e*P	**Pn**	**07 03 09.0**	**+0.3**
NDI				*e*x	**Sn**	**07 04 34.0**	**+5.5**
KHET	**Khetri**	**7.11**	**160**	*e*P	**Pn**	**07 03 10.9**	**+1.3**
KHET				*e*S	**Sn**	**07 04 28.1**	**-1.9**
KHET				*e*S	**Sn**	**07 04 29.8**	**-0.3**
AYAN	**Aya Nagar**	**7.18**	**150**	*e*P	**Pn**	**07 03 11.6**	**+0.9**
AYAN				*e*S	**Sn**	**07 04 33.1**	**+1.2**
KUDL	**Kundal**	**7.25**	**156**	*e*P	**Pn**	**07 03 12.1**	**+0.5**
KUDL				*e*S	**Sn**	**07 04 33.3**	**-0.3**
AML	**Almayashu**	**7.32**	**3**	*i* P	Pn	07 03 16.2	+3.4
AML	**Almayashu**	**7.32**	**3**	P	Pn	07 03 16.2	+3.4
	SNR=25						
SONA	**Sohna**	**7.37**	**151**	*e*P	**Pn**	**07 03 14.4**	**+1.2**
SONA				*e*S	**Sn**	**07 04 36.2**	**-0.4**
KZA	**Kyzart**	**7.45**	**12**	*i* P	**Pn**	**07 03 16.9**	**+2.3**
KZA	**Kyzart**	**7.45**	**12**	P	**Pn**	**07 03 16.9**	**+2.3**
	SNR=28						
EKS2	**Erkin-Say**	**7.85**	**4**	*e*P	**Pn**	**07 03 21.7**	**+1.8**
EKS2				*e*		07 04 48.8	
EKS2				pmax	pmax		
	comp=Z,22nm,0.7s						
EKS2	**Erkin-Say**	**7.85**	**4**	*e*Pn	**Pn**	**07 03 21.6**	**+1.8**
	comp=Z,22nm,0.7s						
EKS2				*e*Sn	**Sn**	**07 04 48.8**	**+0.3**
EKS2	**Erkin-Say**	**7.85**	**4**	P	Pn	07 03 23.9	+4.0
	SNR=8.2						
AAK	**Ala-Archa**	**7.88**	**8**	P	Pn	07 03 23.2	+2.9
AAK						07 04 51.7	
AAK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AAK				smax	smax		
	comp=N,2.0nm,0.3s						
AAK	**Ala-Archa**	**7.88**	**8**	Pn	Pn	07 03 23.2	+2.9
AAK				Sn	**Sn**	**07 04 51.7**	**+2.4**
AAK	**Ala-Archa**	**7.88**	**8**	P	Pn	07 03 25.5	+5.2
	SNR=6.5						
AAK	**Ala-Archa**	**7.88**	**8**	Pn	Pn	07 03 23.2	+2.9
	comp=N,2.1nm,0.3s,baz=167,slow=7.4,SNR=17						
AAK				Sn	**Sn**	**07 04 51.7**	**+2.4**
	comp=N,1.6nm,0.3s,baz=334,slow=23,SNR=6.7						
AAK				LR	LR	07 06 53.7	
	comp=N,89nm,19.8s,baz=182,slow=42						
LGTI	**Lohaghat**	**8.08**	**129**	*e*P	**Pn**	**07 03 25.5**	**+2.6**
LGTI				*e*x	x	07 05 36.2	
FRU	**Bishkek**	**8.09**	**8**	*e*P	Pn	07 03 32.0	+8.9
FRU				*e*		07 04 54.0	
FRU				pmax	pmax		
	comp=N,200nm,2.0s						
TKM2	**Tokmak 2**	**8.32**	**13**	⇑P	Pn	07 03 29.2	+2.8
	comp=N,15nm,1.0s						
TKM2				⇓S	**Sn**	**07 04 59.6**	**-0.6**
	comp=N,32nm,0.7s						
TKM2	**Tokmak 2**	**8.32**	**13**	*i* P	**Pn**	**07 03 28.3**	**+1.9**
TKM2	**Tokmak 2**	**8.32**	**13**	*e*Pn	Pn	07 03 29.2	+2.8
	comp=N,16nm,0.7s						
TKM2				*e*Sn	**Sn**	**07 04 59.1**	**-1.2**
TKM2	**Tokmak 2**	**8.32**	**13**	P	**Pn**	**07 03 28.4**	**+1.9**
	SNR=19						
AJM	**Ajmer**	**8.41**	**171**	*e*P	**Pn**	**07 03 28.0**	**+0.4**
AJM				*e*S	**Sn**	**07 05 00.0**	**-2.3**
KK31	**Karatay Array**	**8.52**	**347**	⇑P	**Pn**	**07 03 30.4**	**+1.5**
	comp=N,11nm,0.3s						
KK31				⇑S	**Sn**	**07 05 02.6**	**-2.1**
	comp=N,9.3nm,0.4s						
KK31	**Karatay Array**	**8.52**	**347**	P	**Pn**	**07 03 30.4**	**+1.5**
KK31				S	**Sn**	**07 05 05.1**	**+0.4**
KK31				pmax	pmax		
	comp=Z,22nm,0.3s						
KK31				smax	smax		
	comp=N,33nm,0.5s						
KKAR	**Karatay Array**	**8.52**	**347**	*e*P	**Pn**	**07 03 30.7**	**+1.8**
KKAR				*e*		07 05 05.0	
KKAR				pmax	pmax		
	comp=Z,26nm,0.4s						
KKAR	**Karatay Array**	**8.52**	**347**	*e*Pn	**Pn**	**07 03 30.6**	**+1.8**
	comp=Z,26nm,0.4s						
KKAR				*e*Sn	**Sn**	**07 05 05.0**	**+0.3**
AGRA	**Agra**	**8.62**	**150**	*e*P	**Pn**	**07 03 32.4**	**+2.1**
AGRA				*e*S	**Sn**	**07 05 03.4**	**-4.0**
AGRA				AML	AML	07 06 15.8	
	comp=N,185nm,0.8s						
AGRA				AML	AML	07 06 16.4	
	comp=E,192nm,0.8s						
PYUN	**Piuthan**	**10.77**	**126**	*e*P	**Pn**	**07 03 58.2**	**-1.8**
	comp=E,62nm,0.3s						
DANN	**Dangsing**	**11.14**	**122**	*e*P	**Pn**	**07 04 03.7**	**-1.4**
	comp=E,131nm,0.6s						
KOLN	**Koldanda**	**11.39**	**125**	*e*P	**Pn**	**07 04 06.8**	**-1.7**
	comp=E,34nm,0.3s						
BHJ	**Bhuj**	**11.91**	**196**	*e*P	**Pn**	**07 04 13.2**	**-2.1**
BHJ				*e*S	Sn	07 06 16.5	-11
BHPL	**Bhopal**	**12.13**	**161**	*e*P	**Pn**	**07 04 18.2**	**-0.4**
BHPL				*e*x	x	07 06 27.8	
DMN	**Daman**	**12.53**	**122**	*e*P	**Pn**	**07 04 22.1**	**-2.0**
	comp=E,73nm,0.6s						
KKN	**Kakani**	**12.54**	**121**	*e*P	**Pn**	**07 04 22.1**	**-2.2**
	comp=E,105nm,0.6s						
PKIN	**Phulchoki**	**12.75**	**121**	*e*P	**Pn**	**07 04 25.0**	**-2.2**
	comp=E,49nm,0.4s						
PKI	**Pulchoki**	**12.77**	**121**	*e*P	**Pn**	**07 04 25.4**	**-2.0**
	comp=E,78nm,0.6s						
GUN	**Gumba**	**12.90**	**119**	*e*P	**Pn**	**07 04 27.2**	**-2.1**
	comp=E,86nm,0.6s						
MK31	**Makanchi Array**	**13.83**	**27**	P	**Pn**	**07 04 43.6**	**+2.0**
	comp=E,2.8nm,0.6s,baz=203,slow=15,SNR=38						
MK31	**Makanchi Array**	**13.83**	**27**	*e*P	**Pn**	**07 04 42.0**	**+0.4**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MK31	**Makanchi Array**	**13.83**	**27**	*e*Pn	**Pn**	**07 04 42.2**	**+0.7**
MKAR	**Makanchi Array**	**13.83**	**27**	P	**Pn**	**07 04 42.4**	**+0.8**
MKAR				MLR	MLR		
	comp=Z,50nm,19.1s						
MKAR	**Makanchi Array**	**13.83**	**27**	Pn	**Pn**	**07 04 42.4**	**+0.8**
MKAR	**Makanchi Array**	**13.83**	**27**	Pn	**Pn**	**07 04 42.4**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=202,slow=15,SNR=28						
MKAR				LR	LR	07 09 31.7	
	comp=Z,50nm,19.1s,baz=31,slow=35						
RAMN	**Ramite**	**13.98**	**120**	*e*P	**Pn**	**07 04 41.2**	**-2.8**
	comp=Z,72nm,0.5s						
WMQ	**Urumqi**	**14.42**	**47**	P	P	07 05 00.9	+4.3
WMQ				pmax	pmax		
	comp=Z,14nm,1.0s						
TAPN	**Taplejung**	**14.55**	**117**	*e*P	Pn	07 04 48.4	-3.4
	comp=Z,50nm,0.4s						
ODAN	**Odare**	**14.60**	**119**	*e*P	Pn	07 04 48.7	-3.7
	comp=Z,46nm,0.5s						
LSA	**Lhasa**	**16.09**	**103**	P	**Pn**	**07 05 11.3**	**-1.0**
KURBB	**Kurchatov Arra**	**16.29**	**12**	Pn	**Pn**	**07 05 12.3**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=21						
KURK	**Kurchatov**	**16.39**	**13**	⇑P	**Pn**	**07 05 15.2**	**-0.3**
	comp=Z,9.0nm,0.9s						
KURK	**Kurchatov**	**16.39**	**13**	⇓*e*P	**Pn**	**07 05 13.7**	**-1.8**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KURK	**Kurchatov**	**16.39**	**13**	*e*Pn	**Pn**	**07 05 12.7**	**-2.8**
	comp=Z,11nm,0.9s						
KURK				*e*Sn	**Sn**	**07 08 22.4**	**+5.3**
LATR	**Latur**	**16.62**	**168**	*e*x	Sn	07 08 14.5	-8.4
AB31	**Akbulak array**	**17.39**	**330**	⇓P	**Pn**	**07 05 26.8**	**-1.3**
	comp=Z,4.7nm,0.5s,baz=146,slow=11,SNR=12						
AB31				⇓S	**Sn**	**07 08 36.0**	**-5.2**
	comp=Z,1.5nm,0.6s,baz=157,slow=22,SNR=2.5						
AB31	**Akbulak array**	**17.39**	**330**	*i* P	**Pn**	**07 05 27.6**	**-0.5**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.4s						
ABKAR	**Akbulak array**	**17.39**	**330**	*e*Pn	**Pn**	**07 05 26.5**	**-1.6**
	comp=Z,7.4nm,0.5s						
KAD	**Karad**	**17.46**	**177**	*e*P	**Pn**	**07 05 29.8**	**+0.6**
VOSK	**Vostochnaya**	**17.97**	**356**	⇑P	**Pn**	**07 05 34.9**	**-0.3**
	comp=Z,5.4nm,0.8s						
HYB	**Hyderabad**	**18.00**	**163**	*i* P	**Pn**	**07 05 32.0**	**-3.8**
HYB				*e*S	**Sn**	**07 08 58.0**	**+1.6**
BVA0	**Borovoye Array**	**18.31**	**355**	⇑P	**Pn**	**07 05 38.6**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=164,slow=10,SNR=57						
BVA0				⇓S	**Sn**	**07 08 58.8**	**-4.6**
	comp=Z,1.6nm,1.4s						
BVA0	**Borovoye Array**	**18.31**	**355**	*i* P	**P**	**07 05 39.9**	**+0.5**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR	**Borovoye Array**	**18.31**	**355**	P	**P**	**07 05 39.8**	**+0.3**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BVAR	**Borovoye Array**	**18.31**	**355**	P	**P**	**07 05 39.8**	**+0.3**
BVAR	**Borovoye Array**	**18.31**	**355**	P	**P**	**07 05 39.8**	**+0.3**
	comp=Z,1.7nm,0.3s,baz=166,slow=10,SNR=40						
BRVK	**Borovoye**	**18.35**	**355**	⇑P	**Pn**	**07 05 38.9**	**-1.0**
	comp=Z,18nm,0.9s						
BRVK				⇑S	**Sn**	**07 08 59.9**	**-4.5**
	comp=Z,6.2nm,1.1s						
BRVK	**Borovoye**	**18.35**	**355**	*c i*P	**P**	**07 05 40.1**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BRVK	**Borovoye**	**18.35**	**355**	*e*P	**P**	**07 05 40.5**	**+0.6**
	comp=Z,9.4nm,0.7s						
ZRNK	**Zerenda**	**18.36**	**352**	⇑P	**Pn**	**07 05 39.7**	**-0.4**
	comp=Z,7.8nm,0.6s						
SHL	**Shillong**	**18.65**	**115**	*e*x	**P**	**07 05 40.0**	**-3.6**
SHL				*e*x	x	07 08 50.0	
AKTO	**Aktyubinsk**	**19.09**	**329**	⇓P	**P**	**07 05 47.2**	**-0.9**
	comp=Z,4.0nm,0.6s						
AKTO				⇓S	Sn	07 09 14.5	-8.0
	comp=Z,1.1nm,1.2s						
AKTO	**Aktyubinsk**	**19.09**	**329**	P	**Pn**	**07 05 49.0**	**0.0**
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AKTO	**Aktyubinsk**	**19.09**	**329**	P	**Pn**	**07 05 49.0**	**0.0**
AKTO	**Aktyubinsk**	**19.09**	**329**	P	**Pn**	**07 05 49.0**	**0.0**
	comp=Z,4.4nm,0.3s,baz=133,slow=11,SNR=40						
ZALV	**Zalesovo Beam**	**20.83**	**20**	P	**P**	**07 06 06.3**	**-0.6**
ZALV				S	**S**	**07 09 54.2**	**-4.5**
ZALV				pmax	pmax		
	comp=Z,12nm,0.5s						
ZALV				smax	smax		
	comp=N,1.0nm,0.4s						
ZALV				MLR	MLR		
	comp=Z,13nm,20.3s						
ZALV	**Zalesovo Beam**	**20.83**	**20**	P	**P**	**07 06 06.3**	**-0.6**
ZALV				S	**S**	**07 09 54.1**	**-4.5**
ZALV	**Zalesovo Beam**	**20.83**	**20**	P	**P**	**07 06 06.3**	**-0.6**
	comp=Z,12nm,0.5s,baz=214,slow=10,SNR=71						
ZALV				S	**S**	**07 09 54.2**	**-4.5**
	comp=Z,0.6nm,0.4s,baz=211,slow=16,SNR=2.5						
ZALV				LR	LR	07 13 39.9	
	comp=Z,13nm,20.2s,baz=231,slow=35						
NVS	**Novosibirsk**	**21.23**	**16**	⇑*i*P	**P**	**07 06 09.7**	**-1.6**
NVS				*e*S	**S**	**07 10 01.7**	**-4.9**
NVS				pmax	pmax		
	comp=N,17nm,1.1s						
NVS				pmax	pmax		
	comp=Z,21nm,1.1s						

NVS				pmax	pmax		
	comp=E,3.0nm,0.6s						
NVS				smax	smax		
	comp=N,26nm,1.7s						
NVS				smax	smax		
	comp=E,26nm,2.0s						
GTA	**Gaotai**	**21.76**	**70**	*e*P	**P**	**07 06 17.7**	**+0.5**
GTA				pP	**pP**	**07 06 22.3**	**+0.7**
GTA				sP	**sP**	**07 06 24.8**	**+1.1**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,170nm,4.7s						
GTA				LR	LR		
	comp=N,160nm,14.7s						
GTA				LR	LR		
	comp=E,200nm,15.7s						
GTA				LR	LR		
	comp=Z,94nm,16.4s						
KBD	**Kabd**	**22.24**	**262**	*e*P	**P**	**07 06 23.7**	**+1.4**
MIB	**Mutribah**	**22.31**	**264**	*e*P	**P**	**07 06 24.5**	**+1.4**
RDF	**Al-Radifah**	**22.45**	**262**	*e*P	**P**	**07 06 26.1**	**+1.5**
NAY	**Al-Naaiem**	**22.58**	**263**	*e*P	**P**	**07 06 27.3**	**+1.3**
ARU	**Arti**	**23.79**	**340**	*d i*P	**P**	**07 06 38.9**	**+0.9**
ARU						07 07 04.6	
ARU				S	**S**	**07 10 55.1**	**+2.3**
ARU				SS	**SnSn**	**07 11 33.6**	**+2.1**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ARU	**Arti**	**23.79**	**340**	*e*P	**P**	**07 06 38.6**	**+0.6**
	comp=Z,9.7nm,0.6s						
KBZ	**Khabaz**	**24.91**	**300**	P	**P**	**07 06 49.4**	**+1.1**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KBZ	**Khabaz**	**24.91**	**300**	P	**P**	**07 06 49.4**	**+1.1**
KBZ	**Khabaz**	**24.91**	**300**	P	**P**	**07 06 49.4**	**+1.1**
	comp=Z,2.2nm,0.7s,baz=140,slow=8.2,SNR=5.9						
LZH	**Lanzhou**	**25.03**	**78**	*e*P	**P**	**07 06 49.0**	**-0.8**
LZH				pP	**pP**	**07 06 52.3**	**-2.1**
LZH				sP	**sP**	**07 06 55.6**	**-0.8**
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
KIV	**Kislovodsk**	**25.10**	**300**	*e*P	**P**	**07 06 46.5**	**-3.8**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,29nm,14.0s						
ZAK	**Zakamensk**	**26.88**	**45**	*e*P	**P**	**07 07 06.0**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CHTO	**Chiang Mai**	**27.92**	**118**	*e*P	**P**	**07 07 17.7**	**+1.9**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CHTO	**Chiang Mai**	**27.92**	**118**	*e*P	**P**	**07 07 17.7**	**+1.9**
	comp=Z,5.6nm,0.7s						
SONM	**Songino Array**	**27.95**	**52**	P	**P**	**07 07 16.4**	**+0.4**
SONM	**Songino Array**	**27.95**	**52**	P	**P**	**07 07 16.4**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=252,slow=9.3,SNR=10						
SONM				LR	LR	07 19 50.5	
	comp=Z,126nm,19.1s,baz=181,slow=40						
CMAR	**Chiang Mai Arr**	**28.15**	**119**	P	**P**	**07 07 17.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**28.15**	**119**	P	**P**	**07 07 17.2**	**-0.6**
	comp=Z,5.7nm,0.7s,baz=297,slow=8.9,SNR=19						
ASF	**Jabal al Asfar**	**30.21**	**275**	LR	LR	07 20 58.0	
	comp=Z,23nm,21.9s,baz=290,slow=39						
HHC	**Hu-ho-hao-te**	**30.79**	**67**	*e*P	**P**	**07 07 40.2**	**-1.0**
HHC				PP	**PnPn**	**07 08 41.4**	**+0.1**
HHC				PcP	**PcP**	**07 10 36.8**	**-1.5**
HHC				S	**S**	**07 12 42.8**	**-1.3**
HHC				PcS	**PcS**	**07 14 19.9**	**-2.4**
HHC				pmax	pmax		
	comp=Z,34nm,0.6s						
HHC				pmax	pmax		
	comp=Z,200nm,5.2s						
HHC				LR	LR		
	comp=N,300nm,12.0s						
HHC				LR	LR		
	comp=E,360nm,11.4s						
HHC				LR	LR		
	comp=Z,280nm,11.0s						
MMAI	**Mount Meron Ar**	**31.22**	**278**	LR	LR	07 22 20.4	
	comp=Z,39nm,18.9s,baz=195,slow=40						
BRTR	**Keskin Array B**	**31.60**	**291**	P	**P**	**07 07 49.3**	**+0.9**
BRTR	**Keskin Array B**	**31.60**	**291**	P	**P**	**07 07 49.3**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=98,slow=8.9,SNR=4.5						
OBN	**Obninsk**	**32.33**	**320**	*e*P	**P**	**07 07 54.2**	**-0.2**
OBN				*i*		07 10 39.2	
OBN				*e*S	**S**	**07 13 10.8**	**+3.4**
OBN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
EIL	**Elat**	**32.54**	**272**	LR	LR	07 22 13.3	
	comp=Z,55nm,21.2s,baz=270,slow=38						
KLMR	**Klimovskoe**	**33.78**	**331**	*e*P	**P**	**07 08 05.3**	**-1.8**
KLMR				pmax	pmax		
	comp=Z,15nm,1.1s						
AKASG	**Malin Array Be**	**35.34**	**310**	P	**P**	**07 08 20.2**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**35.34**	**310**	P	**P**	**07 08 20.2**	**-0.4**
AKASG	**Malin Array Be**	**35.34**	**310**	P	**P**	**07 08 20.2**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=82,slow=7.7,SNR=8.1						
AK02	**Malin Array Si**	**35.34**	**310**	*e*P	**P**	**07 08 20.7**	**0.0**
KIEV	**Kiev**	**35.34**	**310⇑**	*e*P	**P**	**07 08 20.3**	**-0.4**
MLR	**Muntele Rosu**	**37.10**	**301**	P	**P**	**07 08 36.7**	**+0.7**
MLR	**Muntele Rosu**	**37.10**	**301**	P	**P**	**07 08 36.7**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=135,slow=7.1,SNR=5.4						
MLR				LR	LR	07 24 24.4	
	comp=Z,121nm,18.9s,baz=31,slow=37						
JOF	**Joensuu**	**38.18**	**330**	*e*P	**P**	**07 08 44.6**	**0.0**
JOF				pmax	pmax		
	comp=Z,9.0nm,0.4s						
JOF	**Joensuu**	**38.18**	**330**	*e*p	**P**	**07 08 44.6**	**0.0**
	comp=Z,8.9nm,0.4s						
KOLS	**Kolonicke sedl**	**39.65**	**307**	*e*P	**P**	**07 08 56.5**	**-0.7**
KOLS	**Kolonicke sedl**	**39.65**	**307**	*e*P	**P**	**07 08 56.5**	**-0.7**
FIA1	**FINESS Array S**	**39.83**	**327**	*e*P	**P**	**07 08 59.1**	**+0.6**
FINES	**FINESS Array B**	**39.83**	**327**	P	**P**	**07 08 58.9**	**+0.4**
FINES	**FINESS Array B**	**39.83**	**327**	P	**P**	**07 08 58.9**	**+0.4**
	comp=Z,7.0nm,0.5s,baz=116,slow=9.6,SNR=35						
PSI	**Prapat**	**39.88**	**137**	P	**P**	**07 09 00.0**	**+0.4**
PSI	**Prapat**	**39.88**	**137**	P	**P**	**07 09 00.0**	**+0.4**
	comp=Z,2.4nm,0.2s,baz=318,slow=14,SNR=3.8						
KAF	**Kangasniemi**	**39.96**	**328**	*e*P	**P**	**07 08 59.5**	**-0.1**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KAF	**Kangasniemi**	**39.96**	**328**	*e*p	**P**	**07 08 59.5**	**-0.1**
	comp=Z,5.6nm,0.8s						
CRVS	**Cervenica-Dubn**	**40.18**	**307**	*e*P	**P**	**07 09 02.0**	**+0.4**
CRVS	**Cervenica-Dubn**	**40.18**	**307**	*e*P	**P**	**07 09 02.0**	**+0.4**
KEV	**Kevo**	**42.99**	**338**	*e*P	**P**	**07 09 22.0**	**-2.4**
KEV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KEV	**Kevo**	**42.99**	**338**	*e*p	**P**	**07 09 22.0**	**-2.4**
	comp=Z,7.2nm,0.8s						
ARCES	**ARCESS Array B**	**43.35**	**338**	P	**P**	**07 09 27.2**	**-0.1**
ARCES	**ARCESS Array B**	**43.35**	**338**	P	**P**	**07 09 27.2**	**-0.1**
	comp=Z,7.3nm,0.6s,baz=114,slow=7.9,SNR=48						
KSAR	**Wonju Array Be**	**43.80**	**70**	P	**P**	**07 09 31.8**	**+0.5**
KSRS	**Korea Array**	**43.83**	**70**	P	**P**	**07 09 31.8**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=281,slow=7.3,SNR=10						
YAK	**Yakutsk**	**44.37**	**34**	*e*P	**P**	**07 09 35.6**	**+0.1**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GERES	**GERESS Array B**	**45.30**	**307**	P	**P**	**07 09 43.6**	**+0.3**
GERES	**GERESS Array B**	**45.30**	**307**	P	**P**	**07 09 43.6**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=124,slow=8.7,SNR=4.1						
HFS	**Hagfors**	**45.44**	**323**	P	**P**	**07 09 44.4**	**+0.3**
HFS	**Hagfors**	**45.44**	**323**	P	**P**	**07 09 44.4**	**+0.3**
	comp=Z,6.3nm,0.5s,baz=96,slow=8.8,SNR=21						
HFS				LR	LR	07 28 25.8	
	comp=Z,97nm,22.0s,baz=356,slow=36						
NB2	**NORSAR Subarra**	**46.75**	**324**	P	**P**	**07 09 54.0**	**-0.4**
	comp=Z,6.0nm,0.7s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**46.75**	**324**	P	**P**	**07 09 54.7**	**+0.3**
NOA	**NORSAR Array B**	**46.75**	**324**	P	**P**	**07 09 54.7**	**+0.3**
	comp=Z,4.8nm,0.7s,baz=96,slow=7.7,SNR=21						
KMBO	**Kilima Mbogo**	**49.03**	**231**	*e*P	**P**	**07 10 15.6**	**+2.7**
	comp=Z,6.2nm,0.9s						
KMBO	**Kilima Mbogo**	**49.03**	**231**	P	**P**	**07 10 14.4**	**+1.5**
	comp=Z,4.7nm,0.7s,baz=53,slow=10,SNR=16						
PGF	**Pioggiola**	**49.57**	**299**	*e*P	**P**	**07 10 17.0**	**+0.4**
	comp=Z,6.9nm,0.7s						
PGF	**Pioggiola**	**49.57**	**299**	*e*P	**P**	**07 10 17.0**	**+0.4**
PGF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PGF	**Pioggiola**	**49.57**	**299**	*e*P	**P**	**07 10 17.0**	**+0.4**
	comp=Z,6.9nm,0.7s						
LPG	**La Plagne**	**50.49**	**303**	*e*P	**P**	**07 10 24.1**	**+0.3**
	comp=Z,8.6nm,0.9s						
LPG	**La Plagne**	**50.49**	**303**	*e*P	**P**	**07 10 24.1**	**+0.3**
LPG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LPG	**La Plagne**	**50.49**	**303**	*e*P	**P**	**07 10 24.1**	**+0.3**
	comp=Z,8.6nm,0.9s						
KBS	**Kingsbay**	**50.63**	**347⇑**	*e*P	**P**	**07 10 24.6**	**+0.6**
KBS				pmax	pmax		
	comp=Z,16nm,1.6s						
MAJO	**Matsushiro**	**51.99**	**68**	*e*P	**P**	**07 10 34.6**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,12nm,0.8s						
MAJO	**Matsushiro**	**51.99**	**68**	*e*P	**P**	**07 10 34.6**	**-0.2**
	comp=Z,12nm,0.8s						
MAT	**Matsushiro**	**51.99**	**68**	P	**P**	**07 10 34.4**	**-0.4**
MJAR	**Matsushiro Arr**	**51.99**	**68**	P	**P**	**07 10 35.0**	**+0.2**
MJAR	**Matsushiro Arr**	**51.99**	**68**	P	**P**	**07 10 35.0**	**+0.2**
	comp=Z,6.3nm,0.6s,baz=287,slow=10.0,SNR=19						
SMF	**Signal de Mont**	**52.22**	**305**	*e*P	**P**	**07 10 36.0**	**-0.3**
SMF	**Signal de Mont**	**52.22**	**305**	*e*P	**P**	**07 10 36.0**	**-0.3**
SMF	**Signal de Mont**	**52.22**	**305**	*e*P	**P**	**07 10 36.0**	**-0.3**
AVF	**Avril sur Loir**	**52.51**	**306**	*e*P	**P**	**07 10 39.0**	**+0.5**
AVF	**Avril sur Loir**	**52.51**	**306**	*e*P	**P**	**07 10 39.0**	**+0.5**
AVF	**Avril sur Loir**	**52.51**	**306**	*e*P	**P**	**07 10 39.0**	**+0.5**
ASAJ	**Asahikawa**	**53.00**	**58**	LR	LR	07 36 28.7	
	comp=Z,63nm,18.8s,baz=8.8,slow=40						
MTLF	**Montolieu**	**54.18**	**302**	*e*P	**P**	**07 10 51.5**	**+0.7**
	comp=Z,3.7nm,0.6s						
MTLF	**Montolieu**	**54.18**	**302**	*e*P	**P**	**07 10 51.5**	**+0.7**
MTLF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MTLF	**Montolieu**	**54.18**	**302**	*e*P	**P**	**07 10 51.5**	**+0.7**
	comp=Z,3.7nm,0.6s						
EKA	**Eskdalemuir Ar**	**54.68**	**317**	P	**P**	**07 10 54.5**	**+0.2**
EKA	**Eskdalemuir Ar**	**54.68**	**317**	P	**P**	**07 10 54.5**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=84,slow=8.5,SNR=4.3						
JMIC	**Jan Mayen**	**54.81**	**337**	LR	LR	07 36 07.3	
	comp=Z,53nm,18.4s,baz=85,slow=38						
ETSF	**Etsaut**	**56.25**	**302**	*e*P	**P**	**07 11 05.7**	**-0.2**
	comp=Z,4.5nm,0.6s						
ETSF	**Etsaut**	**56.25**	**302**	*e*P	**P**	**07 11 05.7**	**-0.2**
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ETSF	**Etsaut**	**56.25**	**302**	*e*P	**P**	**07 11 05.7**	**-0.2**
	comp=Z,4.5nm,0.6s						
BILL	**Bilibino**	**59.37**	**26⇓**	*e*P	**P**	**07 11 27.5**	**+0.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ESDC	**Sonseca Array**	**59.77**	**299**	P	**P**	**07 11 30.4**	**-0.2**
ESDC	**Sonseca Array**	**59.77**	**299**	P	**P**	**07 11 30.4**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=52,slow=8.3,SNR=4.4						
TOA0	**Torodi Ar. Sit**	**67.42**	**271**	*e*P	**P**	**07 12 21.2**	**-0.1**
TORD	**Torodi Ar. Bea**	**67.42**	**271**	P	**P**	**07 12 21.3**	**0.0**
TORD	**Torodi Ar. Bea**	**67.42**	**271**	P	**P**	**07 12 21.3**	**0.0**
	comp=Z,4.0nm,0.6s,baz=45,slow=5.4,SNR=38						
TNA	**Tin City**	**69.45**	**23**	*e*P	**P**	**07 12 35.4**	**+2.1**
	comp=Z,7.4nm,1.2s						
FITZ	**Fitzroy Crossi**	**72.51**	**128**	P	**P**	**07 12 52.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**72.51**	**128**	P	**P**	**07 12 52.6**	**+0.1**
	comp=Z,3.0nm,1.0s,baz=312,slow=6.2,SNR=3.5						
COLD	**Coldfoot**	**73.12**	**16**	*e*P	**P**	**07 12 55.8**	**+0.4**
	comp=Z,4.4nm,0.9s						
LBTB	**Lobatse**	**74.61**	**224**	*e*P	**P**	**07 13 06.4**	**+1.5**
COLA	**College**	**75.60**	**17**	*e*P	**P**	**07 13 10.5**	**+0.6**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
COLA	**College**	**75.60**	**17**	*e*P	**P**	**07 13 10.5**	**+0.6**
	comp=Z,3.0nm,0.7s						
ILAR	**Eielson Array**	**75.92**	**16**	P	**P**	**07 13 11.3**	**-0.5**
ILAR	**Eielson Array**	**75.92**	**16**	P	**P**	**07 13 11.3**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=307,slow=5.0,SNR=22						
DBIC	**Dimbokro**	**76.34**	**269**	*e*P	**P**	**07 13 15.8**	**+0.9**
	comp=Z,11nm,1.0s						
DBIC	**Dimbokro**	**76.34**	**269**	P	**P**	**07 13 15.5**	**+0.6**
	comp=Z,11nm,0.8s,baz=42,slow=5.6,SNR=18						
LIC	**Lamto**	**76.73**	**268⇑**	*i*P	**P**	**07 13 17.7**	**+0.5**
	comp=Z,22nm,0.8s						
LIC	**Lamto**	**76.73**	**268⇑**	*i*P	**P**	**07 13 17.7**	**+0.5**
	comp=Z,22nm,0.8s						
BOSA	**Boshof**	**77.60**	**222**	P	**P**	**07 13 22.6**	**+0.9**
BOSA	**Boshof**	**77.60**	**222**	P	**P**	**07 13 22.6**	**+0.9**
	comp=Z,6.4nm,0.6s,baz=352,slow=4.1,SNR=15						
PAX	**Paxson**	**77.78**	**17**	*e*P	**P**	**07 13 22.6**	**+0.2**
PAX				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PAX	**Paxson**	**77.78**	**17**	*e*P	**P**	**07 13 22.6**	**+0.2**
	comp=Z,1.9nm,0.7s						
SML	**Sawmill**	**78.04**	**19**	*e*P	**P**	**07 13 24.1**	**+0.3**
SML				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SML	**Sawmill**	**78.04**	**19**	*e*P	**P**	**07 13 24.1**	**+0.3**
	comp=Z,3.2nm,1.0s						
WRA	**Warramunga Arr**	**79.64**	**123**	P	**P**	**07 13 33.2**	**+0.1**
WRA	**Warramunga Arr**	**79.64**	**123**	P	**P**	**07 13 33.3**	**+0.1**
	comp=Z,2.7nm,0.7s,baz=323,slow=5.1,SNR=30						
ASAR	**Alice Springs**	**81.89**	**126**	P	**P**	**07 13 45.1**	**+0.1**
ASAR	**Alice Springs**	**81.89**	**126**	P	**P**	**07 13 45.1**	**+0.1**
	comp=Z,2.4nm,0.7s,baz=316,slow=5.4,SNR=30						
YKW3	**Yellowknife Ar**	**82.76**	**4**	*e*P	**P**	**07 13 49.3**	**+0.2**
	comp=Z,0.1nm,0.9s						
YKA	**Yellowknife Ar**	**82.83**	**4**	P	**P**	**07 13 49.4**	**0.0**
YKA	**Yellowknife Ar**	**82.83**	**4**	P	**P**	**07 13 49.4**	**0.0**
	comp=Z,3.6nm,0.5s,baz=346,slow=5.4,SNR=131						
FFC	**Flin Flon**	**90.72**	**357**	*i* P	P	07 14 31.8	+3.7
CFAA	**Coronel Fontan**	**147.63**	**265**	PKPbc	**PKPbc**	**07 21 09.6**	**-0.5**
CFAA	**Coronel Fontan**	**147.63**	**265**	PKPbc	**PKPbc**	**07 21 09.6**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=80,slow=4.6,SNR=12						

*CSEM **06** 07:01:59.6, 42°.36N×13°.35E, h10km, After ROM*

ROM 06 07:01:59.6±0.1**, 42°.36N×13°.35E, h10**km±1km**, Ml2.2**/5**, 4C, Error ellipse: s-maj=2.1km s-min=1.3km az=86.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**103**	Pg	Pg	07 02 01.9	+0.3
AQU				Sg	Sg	07 02 03.3	+0.4
AQU	**L'Aquila**	**0.04**	**103**	Pg	Pg	07 02 01.9	+0.3
AQU				Sg	Sg	07 02 03.3	+0.4
CAMP	**Campotosto**	**0.18**	**13⇑**	*i*Pg	Pg	07 02 03.9	+0.3
CAMP				Sg	Sg	07 02 07.0	+0.6
CAMP	**Campotosto**	**0.18**	**13⇑**	*i*Pg	Pg	07 02 03.9	+0.3
CAMP				Sg	Sg	07 02 07.0	+0.6
FAGN	**Fagnano**	**0.20**	**119**	Pg	Pg	07 02 04.5	+0.7
FAGN				Sg	Sg	07 02 08.0	+1.3
FAGN	**Fagnano**	**0.20**	**119**	Pg	Pg	07 02 04.5	+0.7
FAGN				Sg	Sg	07 02 08.0	+1.3
FIAM	**Fiamignano**	**0.20**	**242**	Pg	Pg	07 02 04.5	+0.6
FIAM	**Fiamignano**	**0.20**	**242**	Pg	Pg	07 02 04.5	+0.6
TERO	**Teramo**	**0.32**	**35⇑**	*i*Pg	Pg	07 02 06.0	-0.1
TERO	**Teramo**	**0.32**	**35⇑**	*i*Pg	Pg	07 02 06.0	-0.1
PTQR	**Pietraquaria**	**0.34**	**174**	Pg	Pg	07 02 06.7	+0.2
PTQR				Sg	Sg	07 02 11.9	+0.7
PTQR	**Pietraquaria**	**0.34**	**174**	Pg	Pg	07 02 06.7	+0.2
PTQR				Sg	Sg	07 02 11.9	+0.7
VCEL	**Villa Celiera**	**0.36**	**85**	Pg	Pg	07 02 07.6	+0.6
VCEL	**Villa Celiera**	**0.36**	**85**	Pg	Pg	07 02 07.6	+0.6
CERT	**Cerreto**	**0.50**	**214**	Pg	Pg	07 02 09.2	-0.2
CERT				Sg	Sg	07 02 16.8	+0.8
	179nm,0.4s						
CERT	**Cerreto**	**0.50**	**214**	Pg	Pg	07 02 09.2	-0.2
CERT				Sg	Sg	07 02 16.8	+0.8
	179nm,0.4s						
MNS	**Montasola**	**0.50**	**273**	Pg	Pb	07 02 10.4	-0.2
	67nm,0.4s						
MNS	**Montasola**	**0.50**	**273**	Pg	Pb	07 02 10.4	-0.2
	67nm,0.4s						
NRCA	**Norcia**	**0.50**	**339**	Pg	Pg	07 02 09.6	0.0
NRCA				Sg	Sb	07 02 17.4	-0.8
	155nm,0.1s						
NRCA	**Norcia**	**0.50**	**339**	Pg	Pg	07 02 09.6	0.0
NRCA				Sg	Sb	07 02 17.4	-0.8
	155nm,0.1s						
INTR	**Introdacqua**	**0.54**	**130**	Pg	Pg	07 02 10.6	+0.4
INTR	**Introdacqua**	**0.54**	**130**	Pg	Pg	07 02 10.6	+0.4
GUAR	**Guarcino**	**0.57**	**183**	Pg	Pb	07 02 11.8	0.0
GUAR	**Guarcino**	**0.57**	**183**	Pg	Pb	07 02 11.8	0.0
OFFI	**Offida**	**0.62**	**23**	Pg	Pb	07 02 12.6	0.0
	298nm,0.4s						
OFFI	**Offida**	**0.62**	**23**	Pg	Pb	07 02 12.6	0.0
	298nm,0.4s						
FDMO	**Fiordimonte**	**0.70**	**344**	Pg	Pg	07 02 13.3	0.0
FDMO				Sg	Sb	07 02 24.0	+0.2
	38nm,0.4s						
FDMO	**Fiordimonte**	**0.70**	**344**	Pg	Pg	07 02 13.3	0.0
FDMO				Sg	Sb	07 02 24.0	+0.2
	38nm,0.4s						
CESI	**CESI - Serrava**	**0.72**	**333**	Pg	Pg	07 02 13.7	0.0
CESI	**CESI - Serrava**	**0.72**	**333**	Pg	Pg	07 02 13.7	0.0
GIUL	**Giuliano Di Ro**	**0.81**	**185**	Pg	Pb	07 02 16.1	+0.3
GIUL	**Giuliano Di Ro**	**0.81**	**185**	Pg	Pb	07 02 16.1	+0.3

IDC 06 07:05:12.2±2.1**, 14°.96S×72°.25W, h99**km±25km**, mb3.4**/3**, mb1 3.5**/7**, mb1mx3.4**/23**, mbtmp3.4**/7**, Error ellipse: s-maj=47.1km s-min=15.8km az=33.0, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.19**	**109**	P	Pn	07 06 19.4	+4.6
	9.1nm,0.3s,baz=300,slow=14,SNR=215						
NNA	**Nana**	**5.35**	**303**	P	Pn	07 06 31.1	+1.3
	21nm,0.3s,baz=140,slow=12,SNR=57						
NNA				S	Sn	07 07 29.8	-0.5
	19nm,0.3s,baz=243,slow=18,SNR=9.7						
ATAH	**Atahualpa**	**9.83**	**322**	S	Sn	07 09 22.4	+2.1
	0.3nm,0.3s,baz=72,slow=20,SNR=5.1						
SIV	**San Ignacio**	**10.83**	**97**	P	Pn	07 07 44.7	+0.3
	0.8nm,0.3s,baz=280,slow=14,SNR=21						
CFAA	**Coronel Fontan**	**16.98**	**168**	P	Pn	07 09 03.4	-0.2
	0.0nm,0.3s,baz=342,slow=12,SNR=7.2						
CPUP	**Villa Florida**	**17.95**	**131**	P	P	07 09 14.9	+0.2
	0.4nm,0.3s,baz=298,slow=13,SNR=4.8						
BDFB	**Brasilia**	**23.39**	**95**	P	P	07 10 12.1	-0.5
	1.0nm,0.4s,baz=249,slow=7.8,SNR=5.8						
TORD	**Torodi Ar. Bea**	**78.32**	**73**	P	P	07 17 02.0	-0.1
	1.5nm,0.7s,baz=257,slow=5.8,SNR=11						
YKA	**Yellowknife Ar**	**84.00**	**342**	P	P	07 17 31.8	+0.6
	0.2nm,0.7s,baz=137,slow=5.7,SNR=5.7						

IDC 06 07:08:07.5±7.0**, 14°.25N×143°.67E, h0**km**, mb3.5**/5**, mb1 3.7**/5**, mb1mx3.5**/26**, mbtmp3.5**/5**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.1**/28**, Error ellipse: s-maj=285.3km s-min=23.7km az=80.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**28.54**	**145**	LR	LR	07 24 20.1	
	comp=Z,94nm,18.2s,baz=358,slow=34						
WRA	**Warramunga Arr**	**35.20**	**195**	P	P	07 15 03.1	-0.4
	2.2nm,0.8s,baz=18,slow=9.6,SNR=7.0						
ASAR	**Alice Springs**	**38.88**	**194**	P	P	07 15 35.3	+0.4
	0.2nm,0.6s,baz=17,slow=9.7,SNR=2.9						
SONM	**Songino Array**	**45.52**	**325**	P	P	07 16 29.3	+0.3
	0.4nm,0.8s,baz=133,slow=8.7,SNR=4.3						
MKAR	**Makanchi Array**	**60.21**	**316**	P	P	07 18 17.4	-0.1
	0.4nm,0.9s,baz=95,slow=6.8,SNR=3.4						
KURBB	**Kurchatov Arra**	**63.37**	**320**	P	P	07 18 38.2	-0.4
	0.5nm,0.7s,baz=99,slow=6.6,SNR=8.3						

*CSEM **06** 07:08:07.8, 42°.33N×13°.36E, h10km, After ROM*

ROM 06 07:08:07.8±0.1**, 42°.33N×13°.36E, h10**km**, Ml2.8**/1**, 4C-2D, Error ellipse: s-maj=1.2km s-min=1.1km az=116.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**58⇓**	*i*Pg	Pg	07 08 10.2	+0.5
AQU				Sg	Sg	07 08 11.6	+0.5
AQU	**L'Aquila**	**0.04**	**58⇓**	*i*Pg	Pg	07 08 10.2	+0.5
AQU				Sg	Sg	07 08 11.6	+0.5
FAGN	**Fagnano**	**0.18**	**112**	Pg	Pg	07 08 12.2	+0.5
FAGN				Sg	Sg	07 08 15.3	+0.9
FAGN	**Fagnano**	**0.18**	**112**	Pg	Pg	07 08 12.2	+0.5
FAGN				Sg	Sg	07 08 15.3	+0.9
FIAM	**Fiamignano**	**0.19**	**250⇑**	*i*Pg	Pg	07 08 12.7	+0.7
FIAM				Sg	Sg	07 08 15.9	+1.1
FIAM	**Fiamignano**	**0.19**	**250⇑**	*i*Pg	Pg	07 08 12.7	+0.7
FIAM				Sg	Sg	07 08 15.9	+1.1
CAMP	**Campotosto**	**0.20**	**10⇑**	*i*Pg	Pg	07 08 12.6	+0.3
CAMP				Sg	Sg	07 08 15.9	+0.6
CAMP	**Campotosto**	**0.20**	**10⇑**	*i*Pg	Pg	07 08 12.6	+0.3
CAMP				Sg	Sg	07 08 15.9	+0.6
PTQR	**Pietraquaria**	**0.31**	**174**	Pg	Pb	07 08 15.0	-0.7
PTQR				Sg	Sg	07 08 19.3	+0.8
PTQR	**Pietraquaria**	**0.31**	**174**	Pg	Pb	07 08 15.0	-0.7
PTQR				Sg	Sg	07 08 19.3	+0.8
TERO	**Teramo**	**0.34**	**32**	Pg	Pg	07 08 14.7	0.0
TERO				Sg	Sb	07 08 20.6	-1.1
TERO	**Teramo**	**0.34**	**32**	Pg	Pg	07 08 14.7	0.0
TERO				Sg	Sb	07 08 20.6	-1.1
VCEL	**Villa Celiera**	**0.36**	**80**	Pg	Pb	07 08 16.2	-0.3
VCEL	**Villa Celiera**	**0.36**	**80**	Pg	Pb	07 08 16.2	-0.3
CERT	**Cerreto**	**0.48**	**216**	Pg	Pg	07 08 17.3	+0.1
CERT				Sg	Sb	07 08 24.7	-0.9
CERT	**Cerreto**	**0.48**	**216**	Pg	Pg	07 08 17.3	+0.1
CERT				Sg	Sb	07 08 24.7	-0.9
VVLD	**Villa Vallelon**	**0.50**	**157**	Pg	Pg	07 08 18.0	+0.3
VVLD	**Villa Vallelon**	**0.50**	**157**	Pg	Pg	07 08 18.0	+0.3
INTR	**Introdacqua**	**0.52**	**128**	Pg	Pb	07 08 18.7	-0.5
INTR				Sg	Sb	07 08 26.2	-0.6
INTR	**Introdacqua**	**0.52**	**128**	Pg	Pb	07 08 18.7	-0.5
INTR				Sg	Sb	07 08 26.2	-0.6
NRCA	**Norcia**	**0.53**	**340**	Pg	Pg	07 08 18.4	+0.1
NRCA				Sg	Sb	07 08 26.7	-0.5
NRCA	**Norcia**	**0.53**	**340**	Pg	Pg	07 08 18.4	+0.1
NRCA				Sg	Sb	07 08 26.7	-0.5
OFFI	**Offida**	**0.65**	**22**	Pg	Pb	07 08 21.4	+0.1
OFFI	**Offida**	**0.65**	**22**	Pg	Pb	07 08 21.4	+0.1
LPEL	**Lama dei Pelig**	**0.68**	**115**	Pg	Pg	07 08 20.8	-0.2
LPEL				Sg	Sb	07 08 30.8	-0.5
LPEL	**Lama dei Pelig**	**0.68**	**115**	Pg	Pg	07 08 20.8	-0.2
LPEL				Sg	Sb	07 08 30.8	-0.5
BADI	**Badiali**	**1.43**	**326**	Pg	Pn	07 08 34.3	+0.4
	237nm,1.0s						
BADI	**Badiali**	**1.43**	**326**	Pg	Pn	07 08 34.3	+0.4
	237nm,1.0s						

*CSEM **06** 07:08:44.7, 42°.22N×13°.51E, h10km, After ROM*

ROM 06 07:08:44.7±0.1**, 42°.22N×13°.51E, h10**km±1km**, Ml2.7**/1**, 6C, Error ellipse: s-maj=1.7km s-min=1.2km az=88.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.07**	**51⇑**	*i*Pg	Pg	07 08 47.2	+0.2
FAGN				Sg	Sg	07 08 48.6	-0.1
FAGN	**Fagnano**	**0.07**	**51⇑**	*i*Pg	Pg	07 08 47.2	+0.2
FAGN				Sg	Sg	07 08 48.6	-0.1
AQU	**L'Aquila**	**0.15**	**329**	Pg	Pg	07 08 49.5	+1.3
AQU				Sg	Sg	07 08 51.0	+0.4
AQU	**L'Aquila**	**0.15**	**329**	Pg	Pg	07 08 49.5	+1.3
AQU				Sg	Sg	07 08 51.0	+0.4
PTQR	**Pietraquaria**	**0.21**	**202⇑**	*i*Pg	Pg	07 08 49.9	+0.6
PTQR				Sg	Sg	07 08 54.3	+1.9
PTQR	**Pietraquaria**	**0.21**	**202⇑**	*i*Pg	Pg	07 08 49.9	+0.6
PTQR				Sg	Sg	07 08 54.3	+1.9
FIAM	**Fiamignano**	**0.29**	**279**	Pg	Pg	07 08 50.9	+0.1
FIAM	**Fiamignano**	**0.29**	**279**	Pg	Pg	07 08 50.9	+0.1
VCEL	**Villa Celiera**	**0.30**	**55**	Pg	Pb	07 08 52.3	-0.1
VCEL	**Villa Celiera**	**0.30**	**55**	Pg	Pb	07 08 52.3	-0.1
CAMP	**Campotosto**	**0.32**	**347**	Pg	Pg	07 08 51.8	+0.4
CAMP				Sg	Sb	07 08 57.9	-0.4
CAMP	**Campotosto**	**0.32**	**347**	Pg	Pg	07 08 51.8	+0.4
CAMP				Sg	Sb	07 08 57.9	-0.4
VVLD	**Villa Vallelon**	**0.36**	**166**	Pg	Pg	07 08 52.3	+0.3
VVLD				Sg	Sb	07 08 58.1	-1.1
VVLD	**Villa Vallelon**	**0.36**	**166**	Pg	Pg	07 08 52.3	+0.3
VVLD				Sg	Sb	07 08 58.1	-1.1
INTR	**Introdacqua**	**0.36**	**125**	Pg	Pg	07 08 52.5	+0.5
INTR				Sg	Sg	07 08 58.0	+1.1
INTR	**Introdacqua**	**0.36**	**125**	Pg	Pg	07 08 52.5	+0.5
INTR				Sg	Sg	07 08 58.0	+1.1
TERO	**Teramo**	**0.41**	**10**	Pg	Pg	07 08 53.2	+0.4
TERO				Sg	Sb	07 08 59.6	-0.9
TERO	**Teramo**	**0.41**	**10**	Pg	Pg	07 08 53.2	+0.4
TERO				Sg	Sb	07 08 59.6	-0.9
CERT	**Cerreto**	**0.48**	**235⇑**	*i*Pg	Pg	07 08 54.1	0.0
CERT				Sg	Sb	07 09 01.6	-0.9
CERT	**Cerreto**	**0.48**	**235⇑**	*i*Pg	Pg	07 08 54.1	0.0
CERT				Sg	Sb	07 09 01.6	-0.9

NRCA	Norcia	0.68	335	Pg	Pg	07 08 57.9	-0.1
NRCA				Sg	Sb	07 09 07.7	-0.7
NRCA	Norcia	0.68	335	Pg	Pg	07 08 57.9	-0.1
NRCA				Sg	Sb	07 09 07.7	-0.7

AUST ***06*** *07:10:53.5, 3°.50N×124°.00E, h300km*
DJA ***06*** *07:11:01.6±0.7, 3°N±10°×12°4E±°, h344km±6km, M4.6/7, mb4.3/5, mB4.7/1, MLv4.7/7, Mw(mB)3.9/1*
IDC ***06*** *07:11:03.0±2.7, 3°.34N×124°.32E, h399km±31km, mb3.6/16, mb1 3.8/16, mb1mx3.6/28, mbtmp3.6/16, Error ellipse: s-maj=25.8km s-min=8.0km az=70.0*
ISCJB ***06*** *07:11:03.6±0.3, 3°.32N±0°.07×124°.31E±0°.10, h423km, mb3.9/16, Error ellipse: s-maj=14.9km s-min=5.9km az=148.2*
ISC 06 07:11:05.1±0.5**, 3°.31N**±0°.08×**124°.2E**±0°.1**, h423km, n43, σ0s.88**/38**, mb4.0**/16**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	Manado	1.95	162	P	P	07 11 50.4	-13
KMSI	Cibinong	2.73	185	P	P	07 11 57.3	-11
MRSI	Marisa	3.62	219	P	P	07 12 05.5	-10
TNTI	Ternate	4.02	129	P	P	07 12 08.7	-10
LUWI	Luwuk	4.56	199	P	P	07 12 14.3	-9.5
LBMI	Labuha	5.11	140	P	P	07 12 20.5	-8.7
MYLDM	Lahad Datu	6.01	288	P	P	07 12 31.8	-6.6
	79nm,0.9s,0.3nm						
BNDI	Bandanaira	9.63	144	P	P	07 13 18.2	-0.1
FAKI	Fak Fak	10.13	128	P	P	07 13 22.5	-1.3
	63nm,0.8s						
SBUM	Sibu	12.02	266	P	P	07 13 43.1	-1.5
	20nm,0.9s,771nm						
MTN	Manton Dam	17.45	157	P	P	07 14 41.2	-1.8
	baz=18,SNR=26						
MTN				S	S	07 17 54.9	+12
	baz=18,SNR=4.3						
KDU	Kakadu	17.88	153	P	P	07 14 45.8	-1.8
	baz=18,SNR=8.6						
FITZ	Fitzroy Crossi	21.32	176	P	P	07 15 19.4	-0.7
	5.7nm,0.3s,baz=5.2,slow=8.3,SNR=82						
FITZ	Fitzroy Crossi	21.32	176	P	P	07 15 19.5	-0.7
	baz=22,SNR=15						
WRA	Warramunga Arr	25.15	157	P	P	07 15 53.8	-0.9
	14nm,0.4s,baz=336,slow=10,SNR=121						
ASAR	Alice Springs	28.42	161	P	P	07 16 23.2	-0.3
	2.8nm,0.4s,baz=341,slow=7.0,SNR=27						
ASAR				S	S	07 20 41.6	+1.9
	0.4nm,0.8s,baz=331,slow=13,SNR=4.2						
CMAR	Chiang Mai Arr	28.97	303	P	P	07 16 28.9	+0.5
	0.7nm,0.3s,baz=106,slow=6.7,SNR=3.1						
MEEK	Meekatharra	30.26	190	P	P	07 16 39.2	-0.4
	baz=31,SNR=5.3						
MAT	Matsushiro	35.49	20	P	P	07 17 23.3	-0.9
MJAR	Matsushiro Arr	35.49	20	P	P	07 17 23.3	-0.9
	5.6nm,0.8s,baz=196,slow=9.8,SNR=12						
BBOO	Buckleboo	37.63	164	P	P	07 17 42.7	+0.7
	baz=38,SNR=15						
STKA	Stephens Creek	38.69	156	P	P	07 17 50.7	-0.1
	8.0nm,0.4s,baz=332,slow=9.4,SNR=30						
STKA	Stephens Creek	38.69	156	P	P	07 17 52.1	+1.3
	baz=39,SNR=26						
ODAN	Odare	42.31	307	eP	P	07 18 21.3	+1.0
	11nm,0.7s						
RAMN	Ramite	42.98	307	eP	P	07 18 26.9	+1.3
GUN	Gumba	43.98	308	eP	P	07 18 34.1	+0.5
	23nm,0.6s						
PKI	Pulchoki	44.20	307	eP	P	07 18 35.4	+0.1
	8.0nm,0.5s						
KKN	Kakani	44.40	307	eP	P	07 18 36.8	+0.1
DMN	Daman	44.46	307	eP	P	07 18 38.1	+0.9
KOLN	Koldanda	45.73	306	eP	P	07 18 47.5	+0.4
	34nm,0.5s						
DANN	Dangsing	45.85	307	eP	P	07 18 48.1	0.0
	30nm,0.6s						
PYUN	Piuthan	46.36	306	eP	P	07 18 52.4	+0.5
	34nm,0.6s						
SONM	Songino Array	46.95	344	P	P	07 18 55.8	-0.1
	2.6nm,0.8s,baz=157,slow=9.1,SNR=21						
LHI	Lord Howe Isla	47.93	139	P	P	07 19 04.3	+0.8
	baz=48,SNR=3.6						
MKAR	Makanchi Array	56.50	327	P	P	07 20 05.9	+0.6
	4.0nm,0.5s,baz=122,slow=7.6,SNR=72						
MKAR				PcP	PcP	07 20 56.7	+0.3
	0.9nm,0.8s,baz=138,slow=3.8,SNR=3.1						
AAK	Ala-Archa	59.01	319	P	P	07 20 23.1	+0.3
	0.7nm,0.3s,baz=149,slow=5.9,SNR=4.7						
ZALV	Zalesovo Beam	59.85	334	P	P	07 20 27.5	-0.6
	1.5nm,0.5s,baz=129,slow=5.9,SNR=8.7						
KURBB	Kurchatov Arra	60.77	329	P	P	07 20 34.4	+0.2
	9.8nm,0.9s,baz=126,slow=6.1,SNR=96						
BVAR	Borovoye Array	66.33	328	P	P	07 21 10.3	+0.3
	2.6nm,0.6s,baz=122,slow=5.4,SNR=18						
AKTO	Aktyubinsk	72.44	322	P	P	07 21 47.5	+0.4
	2.9nm,0.4s,baz=110,slow=7.1,SNR=12						
ILAR	Eielson Array	86.55	25	P	P	07 23 01.8	+0.1
	0.2nm,0.5s,baz=241,slow=4.5,SNR=6.4						
BRTR	Keskin Array B	88.36	310	P	P	07 23 11.3	+0.3
	0.4nm,0.5s,baz=106,slow=4.7,SNR=2.9						
FINES	FINESS Array B	91.02	332	P	P	07 23 22.3	-0.2
	2.3nm,0.8s,baz=90,slow=2.8,SNR=4.7						

DDA ***06*** *07:11:33.4, 37°.34N×38°.65E, h3km, MD3.0*
ISCJB ***06*** *07:11:34.5±0.7, 37°.36N±0°.02×38°.58E±0°.02, h10km±5km, Error ellipse: s-maj=3.7km s-min=3.3km az=172.9*
ISK ***06*** *07:11:34.5, 37°.35N×38°.52E, h12km, MD2.7*
CSEM ***06*** *07:11:35.0±0.1, 37°.38N×38°.55E, h15km, MD2.7, Error ellipse: s-maj=3.7km s-min=3.2km az=80.0*
NSSC ***06*** *07:11:35.1±0.9, 37°.37N×38°.62E, h9km±7km, MD1.2, ML2.7*
ISC 06 07:11:34.9±1.2**, 37°.38N**±0°.02×**38°.56E**±0°.02**, h14km**±10km**, n45, σ0s.60**/76**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZT	Gaziantep	0.79	269	i P	Pg	07 11 49.9	-0.5
GZT				i S	Sb	07 12 01.6	+0.4
MALT	Malatya	0.94	354	ePG	Pg	07 11 53.3	+0.1
MALT				eSG	Sn	07 12 07.5	+0.3
MALT	Malatya	0.94	354	ePg	Pg	07 11 53.3	+0.1
MALT				eSg	Sn	07 12 07.5	+0.3
MYA	Malataya	0.95	354	ePG	Pb	07 11 53.3	-0.1
MYA				eSG	Sn	07 12 07.6	+0.1
MYA	Malataya	0.95	354	ePg	Pb	07 11 53.3	-0.1
MYA				eSg	Sn	07 12 07.6	+0.1
AKCD	Akcadag	1.05	331	i P	Pb	07 11 54.5	-0.4
AKCD				i S	Sb	07 12 08.0	-0.6
AKCD	Akcadag	1.05	331	i P	Pb	07 11 54.5	-0.4
AKCD				i S	Sb	07 12 08.0	-0.6
GAZ	Gaziantep	1.09	260	ePG	Pb	07 11 55.5	-0.2
GAZ				eSG	Sg	07 12 10.5	+0.2
GAZ	Gaziantep	1.09	260	ePg	Pb	07 11 55.5	-0.2
GAZ				eSg	Sg	07 12 10.5	+0.2
SVRC	Sivrice-ELAZID	1.16	30	ePN	Pb	07 11 57.0	+0.1
SVRC	Sivrice-ELAZID	1.16	30	ePn	Pb	07 11 57.1	+0.1
ELZG	Elazig	1.17	17	i P	Pn	07 11 56.2	-0.9
ELZG				i S	Sb	07 12 11.7	-0.4
ELZG	Elazig	1.17	17	i P	Pn	07 11 56.2	-0.9
ELZG				i S	Sb	07 12 11.7	-0.4
SLMH	Al Salmeh	1.27	204	i P	Pn	07 11 58.4	+0.1
SLMH				i S	Sn	07 12 15.4	+0.3
SLMH				AML	AML	07 12 19.2	
	comp=Z,150nm,0.5s						
SLMH	Al Salmeh	1.27	204	i P	Pn	07 11 58.4	+0.1
	SNR=61						
SLMH				i S	Sn	07 12 15.4	+0.3
	comp=Z,150nm,0.5s,SNR=62						
KMRS	Kahramanmaras	1.33	276	ePN	Pn	07 11 58.3	-0.8
KMRS				eSN	Sn	07 12 17.1	+0.5
KMRS	Kahramanmaras	1.33	276	ePn	Pn	07 11 58.3	-0.8
KMRS				eSn	Sn	07 12 17.1	+0.5
KUZU	Kuzuini	1.33	244	i P	Pb	07 12 00.0	+0.3
KUZU				i S	Sn	07 12 17.4	+0.6
KUZU	Kuzuini	1.33	244	i P	Pb	07 12 00.0	+0.3
KUZU				i S	Sn	07 12 17.4	+0.6
AYKD	Aykdinkavak	1.40	272	i P	Pn	07 11 59.8	-0.3
AYKD				i S	Sn	07 12 17.8	-0.6
DIY	Diyarbakir	1.42	68	ePN	Pb	07 12 01.3	+0.1
DIY	Diyarbakir	1.42	68	ePn	Pb	07 12 01.3	+0.1
DARE	Darende-Malaty	1.47	325	ePN	Pb	07 12 01.7	-0.3
DARE	Darende-Malaty	1.47	325	ePn	Pb	07 12 01.7	-0.3
MNKR	ALMNKUR	1.54	158	eP	Pn	07 12 02.5	+0.5
MNKR				eS	Sn	07 12 21.7	-0.1
MNKR				AML	AML	07 12 26.4	
	comp=Z,661nm,0.2s						
MNKR	ALMNKUR	1.54	158	eP	Pn	07 12 02.5	+0.5
	SNR=61						
MNKR				eS	Sn	07 12 21.7	-0.1
	comp=Z,661nm,0.2s,SNR=62						
SFNV	Sufian	1.57	127	eP	Pn	07 12 02.3	-0.1
SFNV				eS	Sn	07 12 22.3	-0.3
SFNV				AML	AML	07 12 25.6	
	comp=Z,307nm,0.3s						
SFNV	Sufian	1.57	127	eP	Pn	07 12 02.3	-0.1
	SNR=61						
SFNV				eS	Sn	07 12 22.3	-0.3
	comp=Z,307nm,0.3s,SNR=62						
KBSD	Kabsdagh	1.63	103	eP	Pn	07 12 03.4	+0.2
KBSD				eS	Sn	07 12 24.0	0.0
KBSD				AML	AML	07 12 27.6	
	comp=Z,102nm,0.3s						
KBSD	Kabsdagh	1.63	103	eP	Pn	07 12 03.4	+0.2
	SNR=47						
KBSD				eS	Sn	07 12 24.0	0.0
	comp=Z,102nm,0.3s,SNR=49						
JHLN	Al Jahlan	1.70	183	eP	Pn	07 12 05.2	+1.0
JHLN				eS	Sn	07 12 26.4	+0.6
JHLN				AML	AML	07 12 35.2	
	comp=Z,61nm,0.6s						
JHLN	Al Jahlan	1.70	183	eP	Pn	07 12 05.2	+1.0
	SNR=47						
JHLN				eS	Sn	07 12 26.4	+0.6
	comp=Z,61nm,0.6s,SNR=49						
MARD	Mardin	1.77	91	i P	Pn	07 12 04.3	-1.0
MARD				i S	Sn	07 12 26.6	-1.0
ANDN	Andirin	1.77	277	i P	Pn	07 12 04.9	-0.4
ANDN				i S	Sn	07 12 27.8	0.0
ANDN	Andirin	1.77	277	i P	Pn	07 12 04.9	-0.4
ANDN				i S	Sn	07 12 27.8	0.0
ILIC	ilic-Erzincan	2.07	0	ePN	Pn	07 12 10.7	+1.3
ILIC	ilic-Erzincan	2.07	0	ePn	Pn	07 12 10.7	+1.3
BINT	Bingol	2.13	45	ePn	Pb	07 12 14.2	+0.7
MZRK	Al-Mazaregh	2.29	132	eP	Pn	07 12 11.6	-0.7
MZRK				eS	Sn	07 12 39.5	-0.7
MZRK				AML	AML	07 12 51.7	
	comp=Z,55nm,0.4s						
MZRK	Al-Mazaregh	2.29	132	eP	Pn	07 12 11.6	-0.7
	SNR=47						
MZRK				eS	Sn	07 12 39.5	-0.7
	comp=Z,55nm,0.4s,SNR=49						
BNGB	Bingˆ¶l	2.32	45	ePN	Pn	07 12 14.2	+1.4
ERZN	Erzincan	2.39	22	ePN	Pn	07 12 15.8	+2.0
EZC	Erzincan	2.45	14	ePn	Pn	07 12 15.8	+1.1
BTMT	Batman	2.46	70	ePN	Pn	07 12 14.5	-0.2
BTMT	Batman	2.46	70	ePn	Pn	07 12 14.5	-0.2

TAP ***06*** *07:15:25.7, 24°.81N×122°.00E, h5km, ML3.5, C*
IDC ***06*** *07:15:26.2±2.0, 24°.42N×121°.59E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/25, mbtmp3.4/4, Error ellipse: s-maj=149.5km s-min=24.5km az=63.0*
JMA ***06*** *07:15:26.4±0.1, 25°.19N×122°.36E, h0km*
ISC 06 07:15:26.3±1.0**, 24°.80N**±0°.02×**122°.04E**±0°.02**, h6km**±8km**, n47, σ0s.82**/76**, mb3.3**/4**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.22	347	⇓iP	Pg	07 15 30.6	-0.1
	baz=359						
TWB1				i S	Sg	07 15 33.9	+0.4
	baz=359						
TWC	Suao	0.26	223	i P	Pg	07 15 31.2	-0.1
	baz=214						
TWC				i S	Sg	07 15 34.4	-0.3
	baz=214						
ILA	Ilan	0.27	264	P	Pg	07 15 31.0	-0.6
	baz=258						
ILA				S	Sg	07 15 35.2	+0.1
	baz=258						
TWE	Neicheng	0.35	258	i P	Pg	07 15 32.9	-0.2
	baz=253						
TWE				i S	Sg	07 15 37.5	-0.2
	baz=253						
NWF	Wu-fen Shan	0.36	319	i P	Pg	07 15 33.6	+0.2
	baz=322						
NWF				i S	Sg	07 15 38.8	+0.6
	baz=322						
ENA	Nanau	0.46	217	eP	Pg	07 15 35.1	-0.1
	baz=211						
ENTT	Nioudou	0.46	250	eP	Pg	07 15 35.3	+0.1
	baz=246						
ENTT				eS	Sg	07 15 42.0	+0.8
	baz=246						
TAP1	Taipei	0.53	297	eP	Pg	07 15 37.1	+0.6
	baz=296						
TAP1				eS	Sg	07 15 43.5	0.0
	baz=296						
TAP	Taipei	0.54	297	eP	Pg	07 15 37.0	+0.2
	baz=296						
TAP				eS	Sg	07 15 44.2	+0.3
	baz=296						
TWY	Chenhua	0.62	320	P	Pg	07 15 38.9	+0.5
	baz=309						
TWY				eS	Sb	07 15 47.6	-1.1
	baz=309						
NSK	Sanguang	0.63	259	eP	Pg	07 15 37.9	-0.6
	baz=257						
NSK				eS	Sg	07 15 46.1	-0.6
	baz=257						
TWS1	Kuangyinshan	0.64	298	eP	Pb	07 15 39.4	-0.6
	baz=299						
TWS1				eS	Sb	07 15 48.0	-1.2
	baz=299						
NNS	Nan Shan	0.70	240	P	Pg	07 15 39.9	0.0
	baz=237						
NNS				eS	Sg	07 15 48.9	-0.1
	baz=237						
TWD	Chiawan	0.82	210	P	Pg	07 15 42.2	+0.1
	baz=207						
TWD				S	Sg	07 15 53.0	+0.2
	baz=207						
YOJ	Yonaguni jima	0.94	110	eP	Pg	07 15 45.2	+0.8
	baz=122						
YOJ	Yonaguni jima	0.94	110	P	Pg	07 15 44.7	+0.3
YOJ				eS	Sg	07 15 57.6	+0.9
TWT	Tachien	0.96	236	eP	Pg	07 15 44.7	0.0
	baz=224						
WHF	Hehuan Shan	0.96	228	eP	Pg	07 15 44.2	-0.6
	baz=225						
WHF				eS	Sb	07 15 57.8	-1.0
	baz=225						
NSTT	Nanjuang	0.96	260	eP	Pg	07 15 44.9	+0.2
	baz=259						
NSTT				eS	Sb	07 15 58.7	+0.3
	baz=259						
HSN	Hsinchu	0.97	271	eP	Pg	07 15 44.1	-0.9
	baz=288						
HSN				eS	Sn	07 15 59.5	-1.2
	baz=288						
ESL	Shilin	1.12	210	eP	Pb	07 15 48.4	+0.2
	baz=208						
ESL				eS	Sn	07 16 03.8	-0.6
	baz=208						
NSY	Sanyi	1.23	252	eP	Pg	07 15 49.8	0.0
	baz=250						
NSY				eS	Sn	07 16 07.3	+0.3
	baz=250						
TWQ1	Liyutan	1.24	249	eP	Pn	07 15 50.4	+0.1
	baz=247						
TWQ1				eS	Sn	07 16 07.1	-0.2
	baz=247						
SMLT	Sun Moon Lake	1.38	229	eP	Pn	07 15 51.7	-0.6
	baz=228						
SMLT				eS	Sn	07 16 10.5	-0.4
	baz=228						
TYC	Yuchr	1.40	231	eP	Pn	07 15 52.4	-0.1
	baz=229						
TYC				eS	Sg	07 16 11.5	+0.3
	baz=229						
TCU	Taichung	1.40	243	eP	Pg	07 15 53.7	+0.5
	baz=263						
EHY	Hungye	1.44	207	eP	Pn	07 15 53.1	+0.1
	baz=215						
EHY				eS	Sn	07 16 12.5	+0.2
	baz=215						
TWF1	Yuli	1.59	205	eP	Pn	07 15 55.1	+0.1
	baz=216						
IRIF	Iriomote-Funau	1.60	106	P	Pn	07 15 54.7	-0.5
IRIF				eS	Sn	07 16 14.7	-1.6
ALS	Alishan	1.71	222	eP	Pb	07 15 58.6	+0.3
	baz=221						
CHN5	Tsauling	1.73	226	eP	Pb	07 15 58.6	+0.1
	baz=226						
CHN5				eS	Sg	07 16 22.3	+0.6
	baz=226						
HATJ	Hateruma jima	1.77	114	eS	Sn	07 16 20.9	+0.6
ELDTW	Lidau	1.85	211	eP	Pn	07 15 59.8	+1.0
	baz=211						
JKRS	Kuro-shima	1.88	107	P	Pn	07 15 58.9	-0.1
JKRS				eS	Sn	07 16 22.0	-1.0
CHN4	Tsaushan	1.96	223	eP	Pb	07 16 01.9	-0.5
	baz=224						
CHN4				eS	Sg	07 16 28.8	-0.4
	baz=224						
JIJ	Ishigaki jima	1.96	102	eS	Sn	07 16 22.9	-2.2
WTP	Ta-pu	2.02	221	eP	Pn	07 16 02.0	+1.0
	baz=205						
TWK	Hsinying	2.08	223	eP	Pn	07 16 03.2	+1.3
	baz=225						
CHN1	Nanshi	2.12	221	eP	Pb	07 16 04.3	-0.9
	baz=208						
CHN1				eS	Sb	07 16 32.6	+0.8
	baz=208						
TWG	Pinlang	2.16	205	eP	Pb	07 16 04.6	-1.2
	baz=206						
TWG				eS	Sn	07 16 30.6	+0.6
	baz=206						
SSD	Sandimen	2.42	213	eP	Pb	07 16 09.5	-0.7
	baz=213						
EAST	Anshuo	2.64	205	eP	Pb	07 16 12.1	-2.0
	baz=194						
SCZT	Fangliau	2.74	209	eP	Pn	07 16 13.3	+2.4
	baz=210						
SONM	Songino Array	26.12	336	P	P	07 21 03.7	+2.5
	1.3nm,1.1s,baz=154,slow=8.0,SNR=4.7						
MKAR	Makanchi Array	38.45	315	P	P	07 22 49.7	+0.7
	0.3nm,0.7s,baz=114,slow=7.0,SNR=2.5						
KURBB	Kurchatov Arra	42.15	319	P	P	07 23 19.8	+0.2
	0.3nm,0.8s,baz=122,slow=7.2,SNR=2.4						
WRA	Warramunga Arr	46.05	164	P	P	07 23 49.9	-1.2
	0.9nm,0.8s,baz=346,slow=8.7,SNR=5.3						

AUST ***06*** *07:16:13.2, 1°.50N×122°.50E, h35km*
ISCJB ***06*** *07:16:35.1±0.7, 0°.30N±0°.06×122°.49E±0°.07, h150km, mb3.8/5, Error ellipse: s-maj=11.4km s-min=7.6km az=35.2*
IDC ***06*** *07:16:36.1±2.2, 0°.30N×122°.57E, h153km±18km, mb3.5/5, mb1 3.8/7, mb1mx3.5/24, mbtmp3.6/7, Error ellipse: s-maj=26.9km s-min=15.0km az=75.0*
DJA ***06*** *07:16:39.0±0.8, 0°N±5°×12°2E±°, h115km±9km, M4.0/5, mb3.8/1, mB4.3/1, MLv4.1/5, Mw(mB)3.5/1*
ISC 06 07:16:35.8±0.7**, 0°.31N**±0°.06×**122°.48E**±0°.07**, h150km, n26, σ1s.12**/31**, mb3.8**/5**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	Marisa	0.56	287	P	Pn	07 16 57.6	+0.1
LUWI	Luwuk	1.38	168	P	Pn	07 17 04.0	-0.1
LUWI				S	Sn	07 17 24.3	-1.5
KMSI	Cibinong	1.53	80	P	Pn	07 17 07.0	+1.3
KMSI				S	Sn	07 17 30.5	+2.0
PCI	Palu	2.90	245	S	Sn	07 17 43.0	-15
	baz=3.6,SNR=213						
KDI	Kendari	4.24	178	P	Pn	07 17 39.1	-0.2
TTSI	Tana Toraja	4.26	219	P	Pn	07 17 41.2	+1.7
SPSI	Sidrap Palu	5.04	212	P	Pn	07 17 50.3	+0.6
KAPI	Kappang	5.95	207	P	Pn	07 18 01.6	-0.3
	2.6nm,0.3s,baz=31,slow=9.6,SNR=9.6						
KAPI				S	Sn	07 19 11.7	+2.5
	baz=72,slow=20,SNR=1.9						
BKSI	Bulukumba	6.07	203	P	Pn	07 18 06.1	+2.6
MYLDM	Lahad Datu	6.26	321	P	Pn	07 18 13.9	+7.9
WSI	Waingapu	10.15	192	S	Sn	07 21 01.1	+11
	baz=11,SNR=3.0						
MTN	Manton Dam	15.64	147	P	P	07 20 09.0	-0.2
	baz=17,SNR=6.3						
MTN				S	S	07 23 05.8	+1.6
	baz=17,SNR=4.7						
FITZ	Fitzroy Crossi	18.56	171	P	P	07 20 41.4	+0.1
	1.9nm,0.3s,baz=0.1,slow=7.9,SNR=35						
FITZ	Fitzroy Crossi	18.56	171	P	P	07 20 41.2	-0.1
	baz=20,SNR=13						
WRA	Warramunga Arr	23.24	151	P	P	07 21 28.9	-1.1
	4.9nm,0.7s,baz=332,slow=9.9,SNR=38						
WRA				PcP	PcP	07 25 12.8	-0.6
	0.2nm,0.4s,baz=329,slow=2.1,SNR=4.8						
WRA				ScP	ScP	07 28 36.4	-1.1
	0.3nm,1.0s,baz=310,slow=3.0,SNR=3.1						
ASAR	Alice Springs	26.29	156	P	P	07 21 57.1	-0.5
	1.1nm,0.5s,baz=344,slow=14,SNR=18						
ASAR				PcP	PcP	07 25 19.9	-0.3
	0.5nm,0.3s,baz=349,slow=2.2,SNR=8.1						
MEEK	Meekatharra	27.05	188	P	P	07 22 03.3	-1.0
	baz=28,SNR=17						
MORW	Morawa	29.85	191	P	P	07 22 28.4	-0.7
	baz=31,SNR=3.3						
STKA	Stephens Creek	36.77	152	P	P	07 23 29.1	0.0
	1.9nm,0.4s,baz=329,slow=9.6,SNR=8.1						
STKA	Stephens Creek	36.77	152	P	P	07 23 29.3	+0.2
	baz=38,SNR=7.0						
MJAR	Matsushiro Arr	38.89	20	P	P	07 23 46.8	0.0
	0.9nm,0.4s,baz=186,slow=9.6,SNR=4.5						
SONM	Songino Array	49.36	346	PcP	PcP	07 26 30.2	-0.2
	0.4nm,0.6s,baz=166,slow=3.7,SNR=3.6						
MKAR	Makanchi Array	58.08	329	P	P	07 26 14.4	+1.1
	0.2nm,0.3s,baz=134,slow=8.6,SNR=6.3						
MKAR				PcP	PcP	07 27 02.6	-0.9
	0.4nm,0.6s,baz=136,slow=5.2,SNR=2.1						
MKAR				ScP	ScP	07 30 49.5	-0.2
	0.2nm,0.8s,baz=114,slow=3.5,SNR=2.5						
KMBO	Kilima Mbogo	85.23	269	P	P	07 28 50.0	-6.7
	baz=85,SNR=27						
TORD	Torodi Ar. Bea	119.82	285	PKP	PKPdf	07 35 08.4	-1.0
	0.3nm,0.6s,baz=25,slow=1.5,SNR=2.7						
CFAA	Coronel Fontan	147.26	163	PKPbc	PKPbc	07 36 01.8	-0.6
	0.1nm,0.3s,baz=253,slow=3.8,SNR=13						

CSEM ***06*** *07:16:37.2, 42°.32N×13°.49E, h7km, After ROM*
ROM 06 07:16:37.2±0.1**, 42°.32N×13°.49E, h7km**±1km**, Ml2.8**/7**, Error ellipse: s-maj=1.6km s-min=1.3km az=54.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.08	297	Pg	Pg	07 16 39.7	+0.5
AQU				Sg	Sg	07 16 41.1	+0.6
	21μm,0.5s						
AQU	L'Aquila	0.08	297	Pg	Pg	07 16 39.7	+0.5
AQU				Sg	Sg	07 16 41.1	+0.6
	21μm,0.5s						
FAGN	Fagnano	0.09	129	Pg	Pg	07 16 40.0	+0.7
FAGN				Sg	Sg	07 16 40.4	-0.4
	6μm,0.4s						
FAGN	Fagnano	0.09	129	Pg	Pg	07 16 40.0	+0.7
FAGN				Sg	Sg	07 16 40.4	-0.4
	6μm,0.4s						
CAMP	Campotosto	0.22	344	Pg	Pg	07 16 42.8	+0.9
CAMP				Sg	Sg	07 16 46.7	+1.7
CAMP	Campotosto	0.22	344	Pg	Pg	07 16 42.8	+0.9
CAMP				Sg	Sg	07 16 46.7	+1.7
VCEL	Villa Celiera	0.27	74	Pg	Pb	07 16 43.8	-0.8
VCEL				Sg	Sb	07 16 48.1	-1.4
	2μm,0.6s						
VCEL	Villa Celiera	0.27	74	Pg	Pb	07 16 43.8	-0.8
VCEL				Sg	Sb	07 16 48.1	-1.4
	2μm,0.6s						
FIAM	Fiamignano	0.28	260	Pg	Pg	07 16 43.4	+0.5
FIAM				Sg	Sb	07 16 48.6	-1.3
FIAM	Fiamignano	0.28	260	Pg	Pg	07 16 43.4	+0.5
FIAM				Sg	Sb	07 16 48.6	-1.3
PTQR	Pietraquaria	0.31	193	Pg	Pb	07 16 45.2	0.0
PTQR				Sg	Sg	07 16 48.8	+1.3
	222nm,0.8s						
PTQR	Pietraquaria	0.31	193	Pg	Pb	07 16 45.2	0.0
PTQR				Sg	Sg	07 16 48.8	+1.3
	222nm,0.8s						
TERO	Teramo	0.31	15	Pg	Pg	07 16 43.7	+0.2
TERO				Sg	Sg	07 16 49.1	+1.4
TERO	Teramo	0.31	15	Pg	Pg	07 16 43.7	+0.2
TERO				Sg	Sg	07 16 49.1	+1.4
INTR	Introdacqua	0.43	135	Pg	Pb	07 16 46.6	-0.8
INTR				Sg	Sb	07 16 53.8	-0.4

INTR	Introdacqua	0.43	135	Pg	Pb	07 16 46.6	-0.8
INTR				Sg	Sb	07 16 53.8	-0.4
VVLD	Villa Vallelon	0.46	168	Pg	Pg	07 16 46.5	+0.3
	380nm,0.8s						
VVLD	Villa Vallelon	0.46	168	Pg	Pg	07 16 46.5	+0.3
	380nm,0.8s						
CERT	Cerreto	0.53	226	Pg	Pg	07 16 48.0	+0.4
	761nm,0.8s						
CERT	Cerreto	0.53	226	Pg	Pg	07 16 48.0	+0.4
	761nm,0.8s						
GUAR	Guarcino	0.54	194	Pg	Pb	07 16 49.2	0.0
	171nm,0.5s						
GUAR	Guarcino	0.54	194	Pg	Pb	07 16 49.2	0.0
	171nm,0.5s						
LPEL	Lama dei Pelig	0.58	118	Pg	Pb	07 16 49.5	-0.3
LPEL				Sg	Sb	07 16 58.7	+0.3
	243nm,0.6s						
LPEL	Lama dei Pelig	0.58	118	Pg	Pb	07 16 49.5	-0.3
LPEL				Sg	Sb	07 16 58.7	+0.3
	243nm,0.6s						
NRCA	Norcia	0.58	332	Pg	Pg	07 16 48.5	-0.1
NRCA				Sg	Sb	07 16 57.7	-0.9
NRCA	Norcia	0.58	332	Pg	Pg	07 16 48.5	-0.1
NRCA				Sg	Sb	07 16 57.7	-0.9
SDI	San Donato	0.66	159	Pn	Pb	07 16 50.6	-0.5
	218nm,0.9s						
SDI	San Donato	0.66	159	Pn	Pb	07 16 50.6	-0.5
	218nm,0.9s						

*STR **06** 07:16:59.0±4.7, 41.°86N×14.°58E, h10km, Ml3.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*CSEM **06** 07:17:10.7±0.1, 42.°36N×13.°34E, h2km, mb4.4, Mw4.3, Error ellipse: s-maj=2.1km s-min=1.6km az=37.0*

*NEIC **06** 07:17:10.0, 42.°36N×13.°37E, h9km, mb4.3/7, ML4.4(PDG), MW4.3(ROM), After ROM.*

NEIC Felt [III] at Ascoli Piceno and [II] at Cassino, Ciampino, Foligno, Grottaferrata, Pomezia, Rome and Sulmona. Also felt at Albano Laziale, Ancona, Aprilia, Atina, Avezzano, Castel Gandolfo, Chieti, Rieti, Rocca di Papa, Spoleto and Terni.

*ISCJB **06** 07:17:10.2±0.2, 42.°38N±0.°01×13.°36E±0.°01, h7km±1km, mb4.2/31, MS3.7/19, Error ellipse: s-maj=2.3km s-min=1.6km az=33.1*

*PDG **06** 07:17:10.9±0.4, 42.°43N×13.°38E, h9km±1km, ML4.2/9, Error ellipse: s-maj=0.9km s-min=1.8km az=0.0*

*MOS **06** 07:17:10.8±0.9, 42.°44N×13.°36E, h10km, mb4.4/23, Error ellipse: s-maj=5.0km s-min=3.5km az=83.8*

*ROM **06** 07:17:10.1±0.1, 42.°36N×13.°38E, h9km, Ml4.0/35, Error ellipse: s-maj=1.3km s-min=1.0km az=63.0*

*PRU **06** 07:17:11.8, 42.°42N×13.°46E, h0km, M4.3*

*LDG **06** 07:17:11.7±0.2, 42.°51N×13.°49E, h2km, Ml3.8/8, Error ellipse: s-maj=4.9km s-min=2.4km az=19.0*

*IDC **06** 07:17:11.0±0.7, 42.°52N×13.°25E, h0km, mb4.0/14, mb1 4.1/26, mb1mx4.0/40, mbtmp3.9/26, ML3.8/9, MS3.5/18, Ms1 3.5/18, ms1mx3.3/51, Error ellipse: s-maj=12.8km s-min=9.6km az=103.0*

ISC 06 07:17:11.9±0.5**, 42.°38N**±0.°02×**13.°37E**±0.°02**, h9**km±2km**, n565, σ1.s46**/663**, mb4.3**/31**, MS3.6**/19**, 86C-56D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	129	ePg	Pg	07 17 11.7	-2.1
AQU	L'Aquila	0.03	129⇓	iP	Pg	07 17 12.0	-1.7
AQU	L'Aquila	0.03	129⇓	iPg	Pg	07 17 12.1	-1.7
AQU				Sg	Sg	07 17 13.0	-2.1
AQU	L'Aquila	0.03	129	eP	Pg	07 17 11.7	-2.1
AQU	L'Aquila	0.03	129⇓	iPg	Pg	07 17 12.1	-1.7
AQU				Sg	Sg	07 17 13.0	-2.1
CAMP	Campotosto	0.16	11⇑	iPg	Pg	07 17 14.6	-0.9
CAMP				Sg	Sg	07 17 17.4	-0.7
CAMP	Campotosto	0.16	11⇑	iPg	Pg	07 17 14.6	-0.9
CAMP				Sg	Sg	07 17 17.4	-0.7
FAGN	Fagnano	0.19	124	ePg	Pg	07 17 14.6	-1.4
FAGN				Sg	Sg	07 17 18.0	-0.8
	137μm,0.2s						
FAGN	Fagnano	0.19	124	ePg	Pg	07 17 14.6	-1.4
FAGN				Sg	Sg	07 17 18.0	-0.8
	137μm,0.2s						
FIAM	Fiamignano	0.21	240	Pg	Pg	07 17 15.5	-0.9
FIAM				Sg	Sg	07 17 19.2	-0.2
FIAM	Fiamignano	0.21	240	Pg	Pg	07 17 15.5	-0.9
FIAM				Sg	Sg	07 17 19.2	-0.2
TERO	Teramo	0.30	35⇑	iPg	Pg	07 17 16.4	-1.6
TERO				Sg	Sg	07 17 21.1	-1.0
TERO	Teramo	0.30	35⇑	iPg	Pg	07 17 16.4	-1.6
TERO				Sg	Sg	07 17 21.1	-1.0
VCEL	Villa Celiera	0.35	87⇑	ePg	Pg	07 17 17.3	-1.6
	67μm,0.6s						
VCEL	Villa Celiera	0.35	87⇑	ePg	Pg	07 17 17.3	-1.6
	67μm,0.6s						
PTQR	Pietraquaria	0.35	176⇑	iPg	Pg	07 17 17.3	-1.6
PTQR	Pietraquaria	0.35	176⇑	iPg	Pg	07 17 17.3	-1.6
GAVE	Gavelli	0.47	312	Pg	Pg	07 17 20.4	-0.7
GAVE	Gavelli	0.47	312	Pg	Pg	07 17 20.4	-0.7
NRCA	Norcia	0.49	338	Pg	Pg	07 17 20.2	-1.4
NRCA				Sg	Sg	07 17 28.0	-0.1
NRCA	Norcia	0.49	338	Pg	Pg	07 17 20.2	-1.4
NRCA				Sg	Sg	07 17 28.0	-0.1
MNS	Montasola	0.51	271⇑	iPg	Pg	07 17 20.4	-1.4
	10μm,0.9s						
MNS	Montasola	0.51	271⇑	iPg	Pg	07 17 20.4	-1.4
	10μm,0.9s						
CERT	Cerreto	0.51	214⇑	iPg	Pg	07 17 20.2	-1.7
	39μm,1.0s						
CERT	Cerreto	0.51	214⇑	iPg	Pg	07 17 20.2	-1.7
	39μm,1.0s						
VVLD	Villa Vallelon	0.54	159⇑	ePg	Pg	07 17 20.2	-2.2
VVLD	Villa Vallelon	0.54	159⇑	ePg	Pg	07 17 20.2	-2.2
INTR	Introdacqua	0.54	132⇑	ePg	Pg	07 17 20.5	-1.9
INTR				Sg	Sg	07 17 29.3	-0.2
INTR	Introdacqua	0.54	132⇑	ePg	Pg	07 17 20.5	-1.9
INTR				Sg	Sg	07 17 29.3	-0.2
GUAR	Guarcino	0.58	184⇑	iPg	Pg	07 17 21.1	-2.1
	7μm,0.5s						
GUAR	Guarcino	0.58	184⇑	iPg	Pg	07 17 21.1	-2.1
	7μm,0.5s						
MTCE	Montecelio	0.58	233⇑	iPg	Pg	07 17 21.6	-1.6
	5μm,0.7s						
MTCE	Montecelio	0.58	233⇑	iPg	Pg	07 17 21.6	-1.6
	5μm,0.7s						
TRTR	Tortoreto Alta	0.59	43⇑	ePg	Pg	07 17 22.8	-0.6
	52μm,0.7s						
TRTR	Tortoreto Alta	0.59	43⇑	ePg	Pg	07 17 22.8	-0.6
	52μm,0.7s						
OFFI	Offida	0.61	23⇑	ePg	Pg	07 17 22.9	-0.8
OFFI	Offida	0.61	23⇑	ePg	Pg	07 17 22.9	-0.8
LPEL	Lama dei Pelig	0.69	118⇑	ePg	Pg	07 17 22.9	-2.3
LPEL				Sg	Sg	07 17 33.8	-0.4
LPEL	Lama dei Pelig	0.69	118⇑	ePg	Pg	07 17 22.9	-2.3
LPEL				Sg	Sg	07 17 33.8	-0.4
FDMO	Fiordimonte	0.69	343⇑	ePg	Pg	07 17 23.7	-1.6
FDMO				Sg	Sg	07 17 34.4	0.0
FDMO	Fiordimonte	0.69	343⇑	ePg	Pg	07 17 23.7	-1.6
FDMO				Sg	Sg	07 17 34.4	0.0
POFI	Posta Fibreno	0.70	159	Pg	Pg	07 17 23.0	-2.5
POFI	Posta Fibreno	0.70	159	Pg	Pg	07 17 23.0	-2.5
CESI	CESI - Serrava	0.72	332	Pg	Pg	07 17 24.1	-1.7
	2μm,0.4s						
CESI	CESI - Serrava	0.72	332	Pg	Pg	07 17 24.1	-1.7
	2μm,0.4s						
CAFR	Castel Frentan	0.74	101⇑	ePg	Pg	07 17 24.5	-1.7
	15μm,0.5s						
CAFR	Castel Frentan	0.74	101⇑	ePg	Pg	07 17 24.5	-1.7
	15μm,0.5s						
SDI	San Donato	0.74	153	Pg	Pg	07 17 23.7	-2.5
SDI	San Donato	0.74	153	Pg	Pg	07 17 23.7	-2.5
RMP	Rome, Mte Porz	0.75	222⇑	iPg	Pg	07 17 24.4	-2.0
	7μm,0.5s						
RMP	Rome, Mte Porz	0.75	222⇑	iPg	Pg	07 17 24.4	-2.0
	7μm,0.5s						
GIUL	Giuliano Di Ro	0.82	186⇑	ePg	Pg	07 17 25.2	-2.5
GIUL	Giuliano Di Ro	0.82	186⇑	ePg	Pg	07 17 25.2	-2.5
ASSB	Assisi San Ben	0.85	322⇑	ePg	Pg	07 17 26.4	-1.8
	4μm,0.5s						
ASSB	Assisi San Ben	0.85	322⇑	ePg	Pg	07 17 26.4	-1.8
	4μm,0.5s						
RNI2	Rionero Sannit	0.89	139	Pg	Pg	07 17 27.0	-2.0
RNI2	Rionero Sannit	0.89	139	Pg	Pg	07 17 27.0	-2.0
CERA	Filignano	0.92	148	Pg	Pg	07 17 26.9	-2.6
	7μm,0.7s						
CERA	Filignano	0.92	148	Pg	Pg	07 17 26.9	-2.6
	7μm,0.7s						
SNTG	Esanatoglia	0.93	341	Pg	Pg	07 17 27.9	-2.0
SNTG	Esanatoglia	0.93	341	Pg	Pg	07 17 27.9	-2.0
MIDA	Miranda	0.99	138⇑	ePg	Pg	07 17 27.9	-3.0
	5μm,0.9s						
MIDA	Miranda	0.99	138⇑	ePg	Pg	07 17 27.9	-3.0
	5μm,0.9s						
CING	Cingoli	1.01	353	Pg	Pg	07 17 29.0	-2.3
CING	Cingoli	1.01	353	Pg	Pg	07 17 29.0	-2.3
FRES	Fresagrandinar	1.05	112	Pg	Pg	07 17 29.3	-2.7
	7μm,0.7s						
FRES	Fresagrandinar	1.05	112	Pg	Pg	07 17 29.3	-2.7
	7μm,0.7s						
MURB	Monte Urbino	1.08	325	Pg	Pg	07 17 30.9	-1.8
	7μm,0.5s						
MURB	Monte Urbino	1.08	325	Pg	Pg	07 17 30.9	-1.8
	7μm,0.5s						
ARVD	Arcevia	1.17	345	Pg	Pb	07 17 32.1	-2.1
	5μm,1.1s						
ARVD	Arcevia	1.17	345	Pg	Pb	07 17 32.1	-2.1
	5μm,1.1s						
SACS	San Casciano d	1.18	294	Pg	Pb	07 17 32.8	-1.6
AOI	Ancona	1.19	8	Pg	Pb	07 17 32.6	-2.0
	4μm,0.9s						
AOI	Ancona	1.19	8	Pg	Pb	07 17 32.6	-2.0
	4μm,0.9s						
MODR	Mondragone	1.29	163⇑	ePn	Pn	07 17 34.3	-1.7
MODR	Mondragone	1.29	163⇑	ePn	Pn	07 17 34.3	-1.7
PIEI	Pieia	1.31	333	Pn	Pn	07 17 35.0	-1.4
	3μm,1.2s						
PIEI	Pieia	1.31	333	Pn	Pn	07 17 35.0	-1.4
	3μm,1.2s						
FSSB	Fossombrone	1.39	342	Pn	Pn	07 17 36.4	-1.0
	5μm,0.4s						
FSSB	Fossombrone	1.39	342	Pn	Pn	07 17 36.4	-1.0
	5μm,0.4s						
BADI	Badiali	1.40	324	Pn	Pn	07 17 37.2	-0.4
	3μm,0.8s						
BADI	Badiali	1.40	324	Pn	Pn	07 17 37.2	-0.4
	3μm,0.8s						
ARCI	Arcidosso	1.48	289	Pn	Pn	07 17 38.5	-0.2
	1μm,1.3s						
ARCI	Arcidosso	1.48	289	Pn	Pn	07 17 38.5	-0.2
	1μm,1.3s						
PARC	Parchiule	1.52	327	Pn	Pn	07 17 38.9	-0.3
	3μm,0.8s						
PARC	Parchiule	1.52	327	Pn	Pn	07 17 38.9	-0.3
	3μm,0.8s						
MAON	Monte Argentar	1.66	273	Pn	Pn	07 17 40.2	-0.9
	1μm,1.1s						
MAON	Monte Argentar	1.66	273	Pn	Pn	07 17 40.2	-0.9
	1μm,1.1s						
CSNT	Castellina Chi	1.88	306	Pn	Pn	07 17 44.7	+0.5
	363nm,0.7s						
CSNT	Castellina Chi	1.88	306	Pn	Pn	07 17 44.7	+0.5
	363nm,0.7s						
SFI	Santa Sofia	1.89	324	Pn	Pn	07 17 44.3	0.0
	900nm,0.9s						
SFI	Santa Sofia	1.89	324	Pn	Pn	07 17 44.3	0.0
	900nm,0.9s						
CASP	Castiglione de	1.89	284	Pn	Pn	07 17 44.0	-0.4
	2μm,2.1s						
CASP	Castiglione de	1.89	284	Pn	Pn	07 17 44.0	-0.4
	2μm,2.1s						
SGTA	Sant Agata di	1.94	129	Pn	Pn	07 17 46.0	+0.9
	3μm,1.7s						
SGTA	Sant Agata di	1.94	129	Pn	Pn	07 17 46.0	+0.9
	3μm,1.7s						
SNAL	S. Angelo Dei	2.00	136	Pn	Pn	07 17 46.1	+0.2
	3μm,1.4s						
SNAL	S. Angelo Dei	2.00	136	Pn	Pn	07 17 46.1	+0.2
	3μm,1.4s						
MS1	Monte Sant'Ang	2.03	108	ePn	Pn	07 17 47.1	+0.8
MS1				eSn	Sg	07 18 16.1	-1.1
CDRU	Civita di Ruta	2.38	142	Pn	Pn	07 17 51.0	-0.1
	231nm,0.8s						
CDRU	Civita di Ruta	2.38	142	Pn	Pn	07 17 51.0	-0.1
	231nm,0.8s						
NVLJ	Novalja	2.45	26	i Pn	Pn	07 17 50.9	-1.0
NVLJ				Sn	Sn	07 18 21.2	-0.7
NVLJ	Novalja	2.45	26	i Pn	Pn	07 17 50.9	-1.0
NVLJ				Sn	Sn	07 18 21.1	-0.7
MRVN	Minervino Murg	2.49	121	Pn	Pn	07 17 52.9	+0.3
	713nm,1.3s						
MRVN	Minervino Murg	2.49	121	Pn	Pn	07 17 52.9	+0.3
	713nm,1.3s						
CDT	Castel del Mon	2.53	120	ePn	Pn	07 17 53.9	+0.8
CDT				eSn	Sn	07 18 25.4	+1.4
MAIM	Mastiano	2.61	307	P	Pn	07 17 54.4	+0.3
VLC	Villacollemand	2.81	310	ePn	Pn	07 17 57.8	+0.8
VLC				eSn	Sn	07 18 32.4	+1.3
VLC	Villacollemand	2.81	310	ePn	Pn	07 17 57.8	+0.8
VLC				eSn	Sn	07 18 32.4	+1.3
AMUR	Altamura	2.83	120	Pn	Pn	07 17 57.7	+0.4
	356nm,0.6s						
AMUR	Altamura	2.83	120	Pn	Pn	07 17 57.7	+0.4
	356nm,0.6s						
BAI	Bari	2.92	115	ePn	Pn	07 17 59.0	+0.6
CUC	Castrocucco	3.01	141	ePn	Pn	07 18 01.6	+1.8
CUC				eSn	Sn	07 18 34.8	-1.2
CUC	Castrocucco	3.01	141	ePn	Pn	07 18 01.6	+1.8
CUC				eSn	Sn	07 18 34.8	-1.2
OSPF	L'Ospedale	3.19	259	P	Pn	07 18 00.8	-1.5
OSPF	L'Ospedale	3.19	259	P	Pn	07 18 00.8	-1.5
OSPF	L'Ospedale	3.19	259	P	Pn	07 18 00.8	-1.5
SKDS	Skadanscina	3.21	8	i Pn	Pn	07 18 01.5	-0.9
SKDS				eSn	Sn	07 18 40.8	+0.1
SKDS							
	comp=Z,254nm,0.5s						
SKDS	Skadanscina	3.21	8	Pn	Pn	07 18 01.5	-0.9
SKDS				eSn	Sn	07 18 40.8	+0.1
	comp=Z,254nm,0.5s						
PGF	Pioggiola	3.24	275	ePn	Pn	07 18 02.4	-0.5
PGF				eSn	Sn	07 18 42.7	+1.1
	comp=Z,81nm,0.7s						
PGF	Pioggiola	3.24	275	ePn	Pn	07 18 02.4	-0.5
PGF				eSn	Sn	07 18 42.7	+1.1
	comp=Z,40nm,0.7s						
STON	Ston	3.24	80	ePn	Pn	07 18 02.5	-0.3
STON				Sn	Sn	07 18 40.8	-0.5
STON	Ston	3.24	80	ePn	Pn	07 18 02.4	-0.3
STON				Sn	Sn	07 18 40.8	-0.5
TRI	Trieste	3.35	5	eP	Pn	07 18 03.5	-0.8
TRI				e		07 18 46.0	
TRI	Trieste	3.35	5	ePn	Pn	07 18 03.5	-0.8
TRI				eSn	Sn	07 18 46.0	+1.9
TRI	Trieste	3.35	5	eP	Pn	07 18 03.5	-0.8
TRI				eS	Sn	07 18 46.0	+1.9
SC2M	Scurtabo	3.45	307	P	Pn	07 18 05.5	-0.3
JAVS	Javornik	3.55	8	i Pn	Pn	07 18 06.9	-0.4
JAVS	Javornik	3.55	8	i Pn	Pn	07 18 06.9	-0.4
VISS	Visnje	3.59	17	i Pn	Pn	07 18 07.6	-0.1
VISS	Visnje	3.59	17	i Pn	Pn	07 18 07.6	-0.1
VOY	Vojsko	3.68	6	ePn	Pn	07 18 07.7	-1.2
VOY				e		07 18 16.3	
VOY				e		07 18 53.6	
VOY	Vojsko	3.68	6	ePn	Pn	07 18 07.7	-1.2
VOY				eSn	Sn	07 18 53.6	+1.2
CGRP	Cima Grappa	3.68	343	Pn	Pn	07 18 08.5	-0.6
CGRP	Cima Grappa	3.68	343	Pn	Pn	07 18 08.5	-0.6
HCY	Herceg Novi	3.80	87⇓	iPn	Pn	07 18 10.8	+0.3
HCY				eSn	Sn	07 18 56.2	+1.0
HCY	Herceg Novi	3.80	87	⇓P	Pn	07 18 11.1	+0.6
HCY				S	Sn	07 18 56.7	+1.4
HCY	Herceg Novi	3.80	87	⇓P	Pn	07 18 11.1	+0.6
HCY				S	Sn	07 18 56.6	+1.4
HCY	Herceg Novi	3.80	87⇓	iPn	Pn	07 18 10.8	+0.3
HCY	Herceg Novi	3.80	87	P	Pn	07 18 11.1	+0.6
HCY				eSn	Sn	07 18 56.2	+1.0
HCY				S	Sn	07 18 56.7	+1.4
SALO	Salr	3.84	329	Pn	Pn	07 18 11.8	+0.7
	comp=Z,773nm,1.2s						
SALO	Salr	3.84	329	Pn	Pn	07 18 11.8	+0.7
	comp=Z,773nm,1.2s						
BRY	Bratogost	3.85	80⇓	iPn	Pn	07 18 11.9	+0.5
BRY				eSn	Sn	07 18 56.9	+0.1
BRY	Bratogost	3.85	80	⇓P	Pn	07 18 12.0	+0.5
BRY				S	Sn	07 18 57.2	+0.4
BRY	Bratogost	3.85	80	⇓P	Pn	07 18 11.9	+0.5
BRY				S	Sn	07 18 57.2	+0.4
BRY	Bratogost	3.85	80⇓	iPn	Pn	07 18 11.9	+0.5
BRY				eSn	Sn	07 18 56.9	+0.1
BRY				S	Sn	07 18 57.2	+0.4
CTI	Castel Tesino	3.88	342	Pn	Pn	07 18 11.4	-0.3
	comp=Z,196nm,0.4s						
CTI	Castel Tesino	3.88	342	Pn	Pn	07 18 11.4	-0.3
	comp=Z,196nm,0.4s						
BUM	Brajici-Budva	4.10	89⇓	iPn	Pn	07 18 15.4	+0.7
BUM				eSn	Sn	07 19 03.1	+0.3
BUM	Brajici-Budva	4.10	89⇓	iPn	Pn	07 18 15.4	+0.7
BUM				eSn	Sn	07 19 03.1	+0.3
TIP	Timpagrande	4.10	140	ePn	Pn	07 18 11.9	-2.9
TIP				eSn	Sn	07 19 02.2	-0.6
PCP	Piancastagn	4.12	303	P	Pn	07 18 13.8	-1.3
UPM	Unac-Piva	4.16	77⇑	iPn	Pn	07 18 16.1	+0.4
UPM				eSn	Sn	07 19 05.5	+1.1
UPM	Unac-Piva	4.16	77⇑	iPn	Pn	07 18 16.1	+0.4
UPM				eSn	Sn	07 19 05.5	+1.1
VSL	Villasalto	4.17	228	ePn	Pn	07 18 14.6	-1.1
VSL				eSn	Sn	07 19 04.0	-0.5
VSL	Villasalto	4.17	228	ePn	Pn	07 18 14.6	-1.1
VSL				eSn	Sn	07 19 04.0	-0.5
NKY	Niksic	4.18	82⇓	iPn	Pn	07 18 15.4	-0.4
NKY				eSn	Sn	07 19 05.6	+0.8
NKY	Niksic	4.18	82	⇑P	Pn	07 18 17.0	+1.2
NKY				S	Sn	07 19 05.6	+0.8
NKY	Niksic	4.18	82	⇑P	Pn	07 18 16.9	+1.2
NKY				S	Sn	07 19 05.6	+0.8
NKY	Niksic	4.18	82⇓	iPn	Pn	07 18 15.4	-0.4
NKY	Niksic	4.18	82	P	Pn	07 18 17.0	+1.2
NKY				eSn	Sn	07 19 05.6	+0.8
OBKA	Obir	4.22	11⇑	iPn	Pn	07 18 16.4	0.0
	SNR=17						
OBKA	Obir	4.22	11⇑	iPn	Pn	07 18 16.4	0.0
OBKA	Obir	4.22	11⇑	iPn	Pn	07 18 16.4	0.0
FVI	Forni Avoltri	4.24	355	Pn	Pn	07 18 17.0	+0.3
	comp=Z,191nm,1.0s						
FVI	Forni Avoltri	4.24	355	Pn	Pn	07 18 17.0	+0.3
	comp=Z,191nm,1.0s						
MYKA	Terra Mystica	4.26	3⇑	iPn	Pn	07 18 17.3	+0.4
MYKA	Terra Mystica	4.26	3⇑	iPn	Pn	07 18 17.3	+0.4
MYKA	Terra Mystica	4.26	3⇑	iPn	Pn	07 18 17.3	+0.4
MDI	Monti di Nese	4.30	323	Pn	Pn	07 18 17.5	0.0
	comp=Z,102nm,0.7s						
MDI	Monti di Nese	4.30	323	Pn	Pn	07 18 17.5	0.0
	comp=Z,102nm,0.7s						
PDG	Podgorica	4.36	87⇑	iPn	Pn	07 18 18.5	+0.3
PDG				eSn	Sn	07 19 09.6	+0.5
TTG	Podgorica	4.36	87⇑	iPn	Pn	07 18 18.5	+0.3
TTG				eSn	Sn	07 19 09.6	+0.5
TTG	Podgorica	4.36	87	⇓P	Pn	07 18 19.1	+0.8
TTG				S	Sn	07 19 09.6	+0.5
TTG	Podgorica	4.36	87	⇓P	Pn	07 18 19.1	+0.8
TTG				S	Sn	07 19 09.6	+0.5
TTG	Podgorica	4.36	87	⇓P	Pn	07 18 19.0	+0.8
TTG				S	Sn	07 19 09.6	+0.5
ULC	Ulcinj	4.39	93⇑	iPn	Pn	07 18 18.7	+0.1
ULC				eSn	Sn	07 19 09.8	-0.1
ULC	Ulcinj	4.39	93	⇑P	Pn	07 18 19.0	+0.3
ULC				S	Sn	07 19 09.9	+0.1
ULC	Ulcinj	4.39	93	⇑P	Pn	07 18 19.0	+0.3
ULC				S	Sn	07 19 09.9	+0.1
ULC	Ulcinj	4.39	93⇑	iPn	Pn	07 18 18.7	+0.1
ULC	Ulcinj	4.39	93	P	Pn	07 18 19.0	+0.3
ULC				S	Sn	07 19 09.9	+0.1
ABTA	Abfaltersbach	4.42	352⇓	iPn	Pn	07 18 19.3	+0.2
	SNR=62						
ABTA	Abfaltersbach	4.42	352⇓	iPn	Pn	07 18 19.3	+0.2
ABTA	Abfaltersbach	4.42	352⇓	iPn	Pn	07 18 19.3	+0.2
SOKA	Soboth	4.46	15⇓	iPn	Pn	07 18 20.4	+0.6
SOKA	Soboth	4.46	15⇓	iPn	Pn	07 18 20.4	+0.6
SOKA	Soboth	4.46	15⇓	iPn	Pn	07 18 20.4	+0.6
PLE	Pljevlja	4.53	76⇑	iPn	Pn	07 18 21.2	+0.5
PLE				eSn	Sn	07 19 14.4	+0.9
PLE	Pljevlja	4.53	76⇑	iPn	Pn	07 18 21.2	+0.5
PLE				eSn	Sn	07 19 14.4	+0.9
CEL	Celeste	4.54	154	ePn	Pn	07 18 22.0	+1.2
CEL	Celeste	4.54	154	ePn	Pn	07 18 22.0	+1.2
SAOF	Saorge	4.54	293	P	Pn	07 18 21.4	+0.6
SAOF	Saorge	4.54	293	P	Pn	07 18 21.4	+0.6
SAOF	Saorge	4.54	293	P	Pn	07 18 21.4	+0.6
SAOF	Saorge	4.54	293	P	Pn	07 18 21.4	+0.6
SBF	Sospel	4.59	291	ePn	Pn	07 18 21.5	0.0
SBF				eSn	Sn	07 19 11.1	-3.8
	comp=Z,84nm,0.8s						
SBF	Sospel	4.59	291	ePn	Pn	07 18 21.5	0.0
SBF				eSn	Sn	07 19 11.1	-3.8
	comp=Z,42nm,0.8s						
AUTN	L'Aution	4.64	292	P	Pn	07 18 22.8	+0.6
AUTN	L'Aution	4.64	292	P	Pn	07 18 22.8	+0.6
AUTN	L'Aution	4.64	292	P	Pn	07 18 22.8	+0.6
AUTN	L'Aution	4.64	292	P	Pn	07 18 22.8	+0.6
KBA	Koelnbreinsper	4.70	360⇓	iP	Pn	07 18 23.9	+0.8
KBA	Koelnbreinsper	4.70	360⇓	iPn	Pn	07 18 23.9	+0.8
	SNR=20						
KBA	Koelnbreinsper	4.70	360⇓	iPn	Pn	07 18 23.9	+0.8
KBA	Koelnbreinsper	4.70	360	i P	Pn	07 18 23.9	+0.8
TOUF	Mont Tournerai	4.76	292	P	Pn	07 18 23.9	-0.1
TOUF	Mont Tournerai	4.76	292	P	Pn	07 18 23.9	-0.1
TOUF	Mont Tournerai	4.76	292	P	Pn	07 18 23.9	-0.1
TOUF	Mont Tournerai	4.76	292	P	Pn	07 18 23.9	-0.1
BEHE	Becsehely	4.77	30	e	Pb	07 18 32.8	-2.7
BEY	Berane	4.84	82	ePn	Pn	07 18 26.1	+1.2
BEY				eSn	Sn	07 19 21.8	+0.7
IVA	Berane	4.84	82	ePn	Pn	07 18 26.1	+1.2
IVA				eSn	Sn	07 19 21.8	+0.7
PUK	Puka	4.86	92	i PN	Pn	07 18 26.1	+0.9
PUK				i SN	Sn	07 19 22.3	+0.8
PVY	Plav	4.88	85⇑	iPn	Pn	07 18 26.7	+1.2
PVY				eSn	Sn	07 19 22.9	+0.8
PVY	Plav	4.88	85⇑	iPn	Pn	07 18 26.7	+1.2
PVY				eSn	Sn	07 19 22.9	+0.8
CALN	Calern	4.94	288	P	Pn	07 18 26.7	+0.3
CALN	Calern	4.94	288	P	Pn	07 18 26.7	+0.3
CALN	Calern	4.94	288	P	Pn	07 18 26.7	+0.3
CALN	Calern	4.94	288	P	Pn	07 18 26.7	+0.3
TIR	Tirane	4.96	100	i PN	Pn	07 18 27.3	+0.8
TIR	Tirane	4.96	100	eP	Pn	07 18 26.1	-0.4
TIR				e		07 19 22.7	
TIR	Tirane	4.96	100	ePn	Pn	07 18 26.1	-0.4
TIR				eSn	Sn	07 19 22.7	-1.2
TIR	Tirane	4.96	100	eP	Pn	07 18 26.1	-0.4
TIR				eS	Sn	07 19 22.7	-1.2
BCI	Bajram Curri	4.96	88	i PN	Pn	07 18 28.3	+1.7
BCI				i SN	Sb	07 19 36.5	-2.2
TUE	Stuetta	5.01	326	ePn	Pn	07 18 27.9	+0.6
	comp=Z,37nm,0.6s						
TUE				eSn	Sn	07 19 23.8	-1.6
TUE	Stuetta	5.01	326	ePn	Pn	07 18 27.9	+0.6
	comp=Z,37nm,0.6s						
TUE				eSn	Sn	07 19 23.8	-1.6
FETA	Feichten	5.01	339⇓	iPn	Pn	07 18 28.8	+1.4
	SNR=36						
FETA	Feichten	5.01	339⇓	iPn	Pn	07 18 28.8	+1.4
FETA	Feichten	5.01	339⇓	iPn	Pn	07 18 28.8	+1.4
WTTA	Wattenberg	5.04	346	i P	Pn	07 18 29.3	+1.6
WTTA	Wattenberg	5.04	346	i Pn	Pn	07 18 29.3	+1.6
	SNR=28						
WTTA	Wattenberg	5.04	346	i Pn	Pn	07 18 29.3	+1.6
WTTA	Wattenberg	5.04	346	i P	Pn	07 18 29.3	+1.6
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	07 18 29.0	+1.0
DAVOX				Sn	Sn	07 19 29.7	+3.0
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	07 18 29.0	+1.0
	comp=Z,8.7nm,0.3s,baz=159,slow=19,SNR=25						
DAVOX				Sn	Sn	07 19 29.7	+3.0
	comp=Z,8.2nm,0.3s,baz=299,slow=17,SNR=5.5						
DAVOX	Davos/Dischmat	5.06	332	P	Pn	07 18 29.0	+1.0
	comp=Z,9.0nm,0.3s						
DAVOX				S	Sn	07 19 29.7	+3.0
	comp=Z,8.0nm,0.3s						
FRF	La Foret Royal	5.07	286	ePn	Pn	07 18 27.6	-0.4
FRF				eSn	Sn	07 19 22.5	-4.2
	comp=Z,11nm,0.5s						
FRF	La Foret Royal	5.07	286	ePn	Pn	07 18 27.6	-0.4
FRF				eSn	Sn	07 19 22.5	-4.2
	comp=Z,5.6nm,0.5s						
ARSA	Arzberg	5.11	17⇑	iPn	Pn	07 18 28.7	+0.1
	SNR=11						
ARSA	Arzberg	5.11	17⇑	iPn	Pn	07 18 28.7	+0.1
ARSA	Arzberg	5.11	17⇑	iPn	Pn	07 18 28.7	+0.1
WATA	Walderalm	5.12	346⇑	iP	Pn	07 18 30.6	+1.8
WATA	Walderalm	5.12	346⇑	iPn	Pn	07 18 30.6	+1.8
	SNR=8.7						

WATA Walderalm 5.12 346 ⇑*i*Pn Pn 07 18 30.6 +1.8
WATA Walderalm 5.12 346 *i* P Pn 07 18 30.6 +1.8
LMR La Mourre 5.13 283 *e*Pn Pn 07 18 27.8 -1.0
LMR *e*Sn Sn 07 19 24.1 -4.0
comp=Z,19nm,0.6s
LMR La Mourre 5.13 283 *e*Pn Pn 07 18 27.8 -1.0
LMR *e*Sn Sn 07 19 24.1 -4.0
comp=Z,9.6nm,0.6s
MOTA Moosalm 5.22 343 ⇑*i*P Pn 07 18 32.5 +2.2
MOTA Moosalm 5.22 343 ⇑*i*Pn Pn 07 18 32.5 +2.2
SNR=13
MOTA Moosalm 5.22 343 ⇑*i*Pn Pn 07 18 32.5 +2.2
MOTA Moosalm 5.22 343 *i* P Pn 07 18 32.5 +2.2
PHP Peshkopia 5.31 95 *i* PN Pn 07 18 32.1 +0.7
PHP Peshkopia 5.31 95 *i* Pn Pn 07 18 32.1 +0.7
MBDF Montbardon 5.34 298 *e*P Pn 07 18 33.2 +1.4
MBDF Montbardon 5.34 298 *e*P Pn 07 18 33.2 +1.4
RJOB Jochberg 5.38 356 *e*Pn Pn 07 18 34.0 +1.7
PKSM Moragy 5.39 43⇓*e* Pn 07 18 32.8 +0.5
PKSM Moragy 5.39 43⇓*e*P Pn 07 18 32.8 +0.5
RETA Reutte 5.44 341 ⇑*i*Pn Pn 07 18 35.1 +2.0
SNR=12
RETA Reutte 5.44 341 ⇑*i*Pn Pn 07 18 35.1 +2.0
DAVA Damuels 5.50 334 ⇓*i*Pn Pn 07 18 36.2 +2.1
SNR=11
DAVA Damuels 5.50 334 ⇓*i*Pn Pn 07 18 36.2 +2.1
MOA Molln 5.51 6 ⇑*i*Pn Pn 07 18 34.4 +0.4
SNR=32
MOA Molln 5.51 6 ⇑*i*Pn Pn 07 18 34.5 +0.4
MOA Molln 5.51 6 ⇑*i*Pn Pn 07 18 34.5 +0.4
BNI Bardonecchia 5.54 301 *e*P Pn 07 18 36.8 +2.2
BNI pmax pmax
comp=Z,33nm,1.0s
BNI Bardonecchia 5.54 301 *e*Pn Pn 07 18 36.8 +2.2
comp=Z,33nm,1.0s
LPL La Plagne 5.73 306 *e*P Pn 07 18 39.4 +2.2
SOP Sopron 5.77 22 *e* Pn 07 18 34.5 -3.1
CONA Conrad Observa 5.83 17⇓*i*Pn Pn 07 18 37.7 -0.8
SNR=14
CONA Conrad Observa 5.83 17⇓*i*Pn Pn 07 18 37.7 -0.8
CONA Conrad Observa 5.83 17⇓*i*Pn Pn 07 18 37.7 -0.8
SMRF Simiane la Rot 5.92 288 *e*P Pn 07 18 40.8 +1.1
SMRF Simiane la Rot 5.92 288 *e*P Pn 07 18 40.8 +1.1
SKO Skopje 6.01 91 *e*Pn Pn 07 18 41.9 +1.0
SKO *e*Sg Sn 07 19 42.8 -7.1
BIA Bitola 6.11 100 *e*Pn Pn 07 18 41.4 -0.9
BIA *e*Sg Sn 07 19 43.2 -9.1
GEC2 GERESS Array S 6.47 2 *e*P Pn 07 18 47.9 +0.5
GEC2 GERESS Array S 6.47 2 *e*Pn Pn 07 18 47.9 +0.5
GEC2 GERESS Array S 6.47 2 *e*P Pn 07 18 47.9 +0.5
GERES GERESS Array B 6.47 2 Pn Pn 07 18 46.4 -1.0
GERES Sn Sn 07 19 58.5 -2.9
GERES GERESS Array B 6.47 2 Pn Pn 07 18 46.4 -1.0
comp=Z,2.3nm,0.3s,baz=171,slow=13,SNR=31
GERES Sn Sn 07 19 58.5 -2.9
comp=Z,4.9nm,0.3s,baz=173,slow=24,SNR=7.2
GERES GERESS Array B 6.47 2 P Pn 07 18 46.4 -1.0
comp=Z,2.0nm,0.3s
BUD Budapest 6.50 36 *e* Pn 07 18 54.9 +7.4
FELD Feldberg im Sc 6.68 327 P Pn 07 18 49.9 -0.3
FELD Feldberg im Sc 6.68 327 P Pn 07 18 49.9 -0.3
CABF La Chapelle 6.71 312 *e*Pn Pn 07 18 51.0 +0.4
CABF La Chapelle 6.71 312 *e*Pn Pn 07 18 51.0 +0.4
KHC Kasperske Hory 6.76 1 *e*P Pn 07 18 49.6 -1.6
KHC *e* 07 20 06.5
KHC pmax pmax
comp=Z,17nm,0.8s
KHC Kasperske Hory 6.76 1 *e*Pn Pn 07 18 49.6 -1.6
comp=Z,17nm,0.8s
KHC *e*Sn Sn 07 20 06.5 -1.8
KHC Kasperske Hory 6.76 1 *e*PN Pn 07 18 50.7 -0.5
KHC *ex* x 07 18 59.0
KHC *e*SN Sn 07 20 04.6 -3.7
KHC *ex* x 07 20 30.0
KHC AMS AMS 07 21 40.0
comp=Z,300nm,14.5s
KHC Kasperske Hory 6.76 1 *e*P Pn 07 18 49.6 -1.6
comp=Z,17nm,0.8s
KHC Kasperske Hory 6.76 1 Pn Pn 07 18 50.7 -0.5
KHC *e*Sn Sn 07 20 06.5 -1.8
SMOL Smolenice 6.77 24 *e*P Pn 07 18 50.2 -1.1
SMOL Smolenice 6.77 24 *e*PN Pn 07 18 50.2 -1.1
SMOL Smolenice 6.77 24 *e*P Pn 07 18 50.2 -1.1
BZS Buzias 6.77 59 ⇑P Pn 07 18 53.9 +2.5
BZS Buzias 6.77 59 ⇑*i*P Pn 07 18 53.9 +2.5
BZS Buzias 6.77 59 P Pn 07 18 53.9 +2.5
WET Wettzell 6.78 357 *e*P Pn 07 18 52.1 +0.6
WET Wettzell 6.78 357 *e*Pn Pn 07 18 52.1 +0.6
WET Wettzell 6.78 357 *e*P Pn 07 18 52.1 +0.6
LOMF Lomont 6.81 319 P Pn 07 18 52.8 +0.9
LOMF Lomont 6.81 319 P Pn 07 18 52.8 +0.9
LOMF Lomont 6.81 319 P Pn 07 18 52.8 +0.9
LOMF Lomont 6.81 319 P Pn 07 18 52.8 +0.9
BFO Black Forest 6.93 331 *e*P Pn 07 18 55.1 +1.5
BFO Black Forest 6.93 331 *e*Pn Pn 07 18 55.1 +1.5
BFO Black Forest 6.93 331 *e*Pn Pn 07 18 53.4 -0.1
comp=Z,18nm,0.8s
BFO *e*Sn Sn 07 20 10.9 -1.6
BFO Black Forest 6.93 331 *e*Pn Pn 07 18 53.4 -0.1
comp=Z,18nm,0.8s
BFO Black Forest 6.93 331 *e*P Pn 07 18 55.1 +1.5
BFO *e*Sn Sn 07 20 10.9 -1.6
VAY Valandovo 6.95 96 *e*Pn Pn 07 18 49.9 -3.9
VAY *e*Sg Sn 07 20 09.5 -3.5
SSB Saint Sauveur 7.01 297 *e*P Pn 07 18 53.6 -1.1
SSB pmax pmax
comp=Z,7.0nm,0.7s
SSB Saint Sauveur 7.01 297 *e*Pn Pn 07 18 53.6 -1.1
comp=Z,6.8nm,0.7s
SSB Saint Sauveur 7.01 297 *e*P Pn 07 18 53.6 -1.1
comp=Z,7.0nm,0.7s
MOF Molkenrain 7.03 323 P Pn 07 18 54.2 -0.8
MOF Molkenrain 7.03 323 P Pn 07 18 54.2 -0.8
MOF Molkenrain 7.03 323 P Pn 07 18 54.2 -0.8
MOF Molkenrain 7.03 323 P Pn 07 18 54.2 -0.8
STU Stuttgart 7.03 337 *e*P Pn 07 18 54.1 -0.8
STU Stuttgart 7.03 337 *e*Pn Pn 07 18 54.1 -0.8
STU Stuttgart 7.03 337 *e*P Pn 07 18 54.1 -0.8
TREC Trest 7.08 11 *e*P Pn 07 18 55.2 -0.4
TREC *e* 07 20 12.5
TREC MLR MLR
comp=Z,400nm,11.8s
TREC Trest 7.08 11 *e*PN Pn 07 18 55.2 -0.4
TREC *e*SN Sn 07 20 12.5 -3.6
TREC AMS AMS 07 21 50.0
comp=Z,400nm,11.8s
TREC Trest 7.08 11 Pn Pn 07 18 55.2 -0.4
HINF Hinteralfeld 7.13 322 *e*Pn Pn 07 18 55.3 -1.0
HINF *e*Sn Sn 07 20 12.4 -5.0
comp=Z,26nm,0.5s
HINF Hinteralfeld 7.13 322 *e*Pn Pn 07 18 55.3 -1.0
PSZ Piszkesteto 7.21 38 ⇑P Pn 07 19 03.0 +5.6
PSZ Piszkesteto 7.21 38 *e*Pn Pn 07 18 56.4 -1.1
comp=Z,6.8nm,0.8s
PSZ Piszkesteto 7.21 38 ⇑*i*P Pn 07 19 03.0 +5.6
PSZ Piszkesteto 7.21 38 *ep*Pn Pn 07 19 02.8 +5.4
PSZ Piszkesteto 7.21 38 *e*Pn Pn 07 18 56.3 -1.1
comp=Z,6.8nm,0.8s
VYHS Vyhne 7.23 30 *e*P Pn 07 18 58.3 +0.7
VYHS *e* 07 20 14.4
VYHS MLR MLR
comp=Z,100nm,3.0s
VYHS Vyhne 7.23 30 *e*PN Pn 07 18 58.3 +0.7
VYHS *e*SN Sn 07 20 14.4 -5.3
VYHS Vyhne 7.23 30 *e*P Pn 07 18 58.3 +0.7
comp=Z,100nm,3.0s
KKB Krupnik 7.24 91 P Pn 07 19 00.5 +2.7
VTS Vitosha 7.28 85 ⇑P Pn 07 18 59.5 +1.0
VTS Vitosha 7.28 85 ⇑*i*P Pn 07 18 59.5 +1.0
VTS Vitosha 7.28 85 P Pn 07 18 59.0 +0.5
VTS Vitosha 7.28 85 P Pn 07 18 59.5 +1.0
VRAC Vranov 7.29 17 Pn Pn 07 18 57.4 -1.1
VRAC Sn Sn 07 20 20.6 -0.7
VRAC Vranov 7.29 17 Pn Pn 07 18 57.4 -1.1
comp=Z,0.8nm,0.3s,baz=196,slow=15,SNR=2.5
VRAC Sn Sn 07 20 20.6 -0.7
comp=Z,1.0nm,0.3s,baz=194,slow=17,SNR=2.2
VRAC LR LR 07 21 59.1
comp=Z,251nm,18.1s,baz=205,slow=40
VRAC Vranov 7.29 17 P Pn 07 18 57.4 -1.1
comp=Z,1.0nm,0.3s
VRAC S Sn 07 20 20.6 -0.7
comp=Z,1.0nm,0.3s

ECH Echery 7.30 325 *e*P Pn 07 18 57.8 -0.8
ECH *e* 07 20 20.9
ECH pmax pmax
comp=Z,13nm,0.4s
ECH Echery 7.30 325 *e*Pn Pn 07 18 57.8 -0.8
comp=Z,13nm,0.4s
ECH *e*Sn Sn 07 20 20.9 -0.6
ECH Echery 7.30 325 P Pn 07 18 57.7 -0.8
ECH Echery 7.30 325 *e*P Pn 07 18 57.8 -0.8
comp=Z,13nm,0.4s
ECH *e*S Sn 07 20 20.9 -0.6
KEST Kesra 7.33 207 *e*Pn Pn 07 19 03.1 +3.9
KEST *e*Sn Sn 07 20 20.6 -1.9
KEST Kesra 7.33 207 Pn Pn 07 19 02.5 +3.3
comp=Z,2.8nm,0.3s,baz=303,slow=2.4,SNR=46
KEST LR LR 07 22 05.8
comp=Z,134nm,19.3s,baz=183,slow=40
CDF Champ du Feu 7.40 327 *e*Pn Pn 07 18 59.1 -1.0
CDF *e*Sn Sn 07 20 19.0 -5.2
comp=Z,15nm,0.4s
CDF Champ du Feu 7.40 327 *e*Pn Pn 07 18 59.1 -1.0
ROTZ Rotzenmuhle 7.44 354 *e*Pn Pn 07 19 02.3 +1.8
GRA1 Grafenberg Arr 7.47 349 *e*P Pn 07 19 01.2 +0.3
GRF Grafenberg Arr 7.47 349 *e*P Pn 07 19 01.2 +0.3
GRF Grafenberg Arr 7.47 349 *e*Pn Pn 07 19 01.2 +0.3
HAU Haudompre 7.50 321 *e*Pn Pn 07 19 00.8 -0.6
HAU *e*Sn Sn 07 20 19.9 -6.6
comp=Z,58nm,0.8s
HAU Haudompre 7.50 321 *e*Pn Pn 07 19 00.8 -0.6
PRU Pruhonice 7.66 6 *e*PN Pn 07 19 02.6 -0.9
PRU *e*SN Sn 07 20 24.7 -5.6
PRU AMS AMS 07 22 10.0
comp=Z,300nm,15.5s
PRU Pruhonice 7.66 6 Pn Pn 07 19 02.6 -0.9
MPEP Malo Treshtene 7.68 79 P Pn 07 19 06.8 +2.9
MMB Musomiste 7.76 92 P Pn 07 19 06.0 +1.0
LBL Lubilhac 7.86 295 P Pn 07 19 08.6 +2.3
LBL Lubilhac 7.86 295 P Pn 07 19 08.6 +2.3
LBL Lubilhac 7.86 295 P Pn 07 19 08.6 +2.3
NKC Novy Kostel 7.89 356 *e*PN Pn 07 19 05.4 -1.3
NKC *e*SN Sn 07 20 30.6 -5.4
NKC AMS AMS 07 22 30.0
comp=Z,300nm,14.3s
NKC Novy Kostel 7.89 356 Pn Pn 07 19 05.4 -1.3
MORC Moravsky Berou 7.95 20 ⇓P Pn 07 19 12.0 +4.4
MORC Moravsky Berou 7.95 20 *e*Pn Pn 07 19 07.4 -0.2
comp=Z,13nm,0.8s
MORC *e*Sn Sn 07 20 34.3 -3.3
MORC Moravsky Berou 7.95 20 ⇓*i*P Pn 07 19 12.0 +4.4
MORC Moravsky Berou 7.95 20 *e*Pn Pn 07 19 07.4 -0.2
comp=Z,13nm,0.8s
PGB Panagyurishte 7.99 85 P Pn 07 19 10.5 +2.4
DRGR 8.00 53 ⇓P Pn 07 19 11.7 +3.5
DRGR 8.00 53 ⇓*i*P Pn 07 19 11.7 +3.5
TANN Tannenbergstha 8.07 356 *e*Pn Pn 07 19 10.3 +1.1
OKC Ostrava-Krasne 8.17 22 AMS AMS 07 23 20.0
comp=Z,400nm,13.8s
PYM Petit Puy Mans 8.19 298 P Pn 07 19 12.1 +1.2
PYM Petit Puy Mans 8.19 298 P Pn 07 19 12.1 +1.2
PYM Petit Puy Mans 8.19 298 P Pn 07 19 12.1 +1.2
PYM Petit Puy Mans 8.19 298 P Pn 07 19 12.1 +1.2
DPC Dobruska-Polom 8.23 13 AMS AMS 07 22 40.0
comp=Z,400nm,16.8s
LOR Lormes 8.34 309 *e*Pn Pn 07 19 12.0 -0.9
LOR *e*Sn Sn 07 20 42.1 -5.1
comp=Z,9.0nm,0.5s
LOR Lormes 8.34 309 *e*Pn Pn 07 19 12.0 -0.9
MOX Moxa 8.36 352 *e*P Pn 07 19 14.8 +1.7
MOX Moxa 8.36 352 *e*Pn Pn 07 19 14.8 +1.7
MOX Moxa 8.36 352 *e*P Pn 07 19 14.8 +1.7
RZN Rozhen 8.48 91 P Pn 07 19 17.7 +2.8
BRG Berggiesshubel 8.51 2 *e*(P) Pn 07 19 17.1 +1.9
comp=Z,4.7nm,0.9s
BRG Berggiesshubel 8.51 2 *e*P Pn 07 19 17.1 +1.9
BRG pmax pmax
comp=Z,5.0nm,0.9s
BRG Berggiesshubel 8.51 2 *e*P Pn 07 19 17.1 +1.9
comp=Z,5.0nm,0.9s
TNS Taunus Mts 8.55 338 *e*P Pn 07 19 17.0 +1.1
TNS Taunus Mts 8.55 338 *e*Pn Pn 07 19 17.0 +1.1
TNS Taunus Mts 8.55 338 *e*P Pn 07 19 17.0 +1.1
CRVS Cervenica-Dubn 8.64 38 *e*P Pn 07 19 18.2 +1.2
CRVS Cervenica-Dubn 8.64 38 *e*PN Pn 07 19 18.2 +1.2
CRVS *e* 07 21 53.0
CRVS Cervenica-Dubn 8.64 38 *e*P Pn 07 19 18.2 +1.2
ARR Arges 8.67 66 ⇓*i*P Pn 07 19 20.9 +3.4
PVL Pavlikeni 8.84 81 P Pn 07 19 20.4 +0.7
UZH Uzhgorod 8.85 42 *e*P Pn 07 19 22.8 +2.9
UZH *e*S Sn 07 21 01.0 +1.4
UZH MLR MLR
comp=N,350nm,12.0s
UZH MLR MLR
comp=E,500nm,12.0s
UZH MLR MLR
comp=Z,200nm,12.0s
CLL Collm 8.94 359 *e*P Pn 07 19 21.0 -0.1
CLL Collm 8.94 359 *e*Pn Pn 07 19 21.0 -0.1
CLL *e*Sn Sn 07 20 50.0 -12
CLL *e* 07 21 13.0
CLL *e*Sb Sg 07 21 54.0 -4.6
CLL Lmax 07 22 00.0
CLL *e*Sg Sg 07 22 12.0 +13
comp=E,500nm,20.0s
CLL L L 07 22 30.0
comp=Z,200nm,18.3s
CLL Collm 8.94 359 *e*P Pn 07 19 21.0 -0.1
KOLS Kolonicke sedl 9.05 40 *e*P Pn 07 19 21.1 -1.4
KOLS MLR MLR
comp=Z,300nm,4.2s
KOLS Kolonicke sedl 9.05 40 *e*PN Pn 07 19 21.1 -1.4
KOLS *e* 07 20 21.1
KOLS Kolonicke sedl 9.05 40 *e*P Pn 07 19 21.1 -1.4
comp=Z,300nm,4.2s
SZH Strazhica 9.28 80 P Pn 07 19 28.9 +3.1
MLR Muntele Rosu 9.59 67 Pn Pn 07 19 31.6 +1.4
MLR Muntele Rosu 9.59 67 Pn Pn 07 19 31.6 +1.4
comp=Z,0.1nm,0.3s,baz=131,slow=18,SNR=28
MLR Muntele Rosu 9.59 67 P Pn 07 19 31.6 +1.4
KWP Kalwaria Pacla 9.74 39 ⇓P Pn 07 19 37.0 +5.0
KWP Kalwaria Pacla 9.74 39 *e*Pn Pn 07 19 38.3 +6.3
comp=Z,37nm,1.1s
KWP Kalwaria Pacla 9.74 39 ⇓*i*P Pn 07 19 37.0 +5.0
BUR08 Bucovina Ar. S 9.89 54 *e*Pn Pn 07 19 37.8 +3.5
ISR Istrita 9.92 69 ⇓P Pn 07 19 36.3 +1.7
ISR Istrita 9.92 69 ⇓*i*P Pn 07 19 36.3 +1.7
ISR Istrita 9.92 69 P Pn 07 19 36.3 +1.7
PLOR Plostina 10.16 66 ⇓P Pn 07 19 39.7 +1.8
PLOR Plostina 10.16 66 ⇓*i*P Pn 07 19 39.7 +1.8
PLOR Plostina 10.16 66 P Pn 07 19 39.7 +1.8
VRI Vrincioaia 10.22 65 ⇑P Pn 07 19 41.1 +2.4
VRI Vrincioaia 10.22 65 ⇑*i*P Pn 07 19 41.1 +2.4
VRI Vrincioaia 10.22 65 P Pn 07 19 41.1 +2.4
CFR Carcaliu 11.04 70 ⇓P Pn 07 19 51.0 +1.2
CFR Carcaliu 11.04 70 ⇓*i*P Pn 07 19 51.0 +1.2
CFR Carcaliu 11.04 70 P Pn 07 19 51.0 +1.2
TIRR Tirgusor 11.14 74 ⇓P Pn 07 19 52.5 +1.3
TIRR Tirgusor 11.14 74 ⇓*i*P Pn 07 19 52.5 +1.3
TIRR Tirgusor 11.14 74 P Pn 07 19 52.5 +1.3
ESDC Sonseca Array 13.36 264 Pn Pn 07 20 21.1 -0.5
ESDC Sonseca Array 13.36 264 Pn Pn 07 20 21.1 -0.5
baz=70,slow=15,SNR=4.4
ESDC LR LR 07 25 22.9
comp=Z,71nm,21.5s,baz=125,slow=37
ESDC Sonseca Array 13.36 264 Pn Pn 07 20 21.1 -0.5
KIEV Kiev 13.70 47 ⇑*e*P Pn 07 20 27.2 +1.1
KIEV Kiev 13.70 47 *e*P Pn 07 20 27.2 +1.1
AKASG Malin Array Be 13.71 47 P Pn 07 20 26.1 -0.1
AKASG Malin Array Be 13.71 47 Pn Pn 07 20 26.1 -0.1
AKASG Malin Array Be 13.71 47 Pn Pn 07 20 26.1 -0.1
comp=Z,0.3nm,0.3s,baz=240,slow=13,SNR=2.8
AKASG Malin Array Be 13.71 47 P Pn 07 20 26.1 -0.1
BR131 Keskin Array S 15.52 93 *e*Pn Pn 07 20 52.5 +1.5
comp=Z,4.3nm,1.0s
BR131 Keskin Array S 15.52 93 *e*Pn Pn 07 20 52.5 +1.5
comp=Z,4.3nm,1.0s
BRTR Keskin Array B 15.52 93 Pn Pn 07 20 53.0 +2.0
BRTR Keskin Array B 15.52 93 Pn Pn 07 20 53.0 +2.0
comp=Z,0.1nm,0.3s,baz=297,slow=13,SNR=3.6
BRTR Keskin Array B 15.52 93 Pn Pn 07 20 53.0 +2.0
EKA Eskdalemuir Ar 16.86 326 Pn Pn 07 21 07.1 -0.8
EKA Eskdalemuir Ar 16.86 326 Pn Pn 07 21 07.1 -0.8
baz=125,slow=16,SNR=3.1
MDT Midelt 17.12 242 P P 07 21 12.4 -0.7

MDT Midelt 17.12 242 P P 07 21 12.4 -0.7
comp=Z,0.1nm,0.3s,baz=41,slow=12,SNR=4.7
MDT LR LR 07 27 56.0
comp=Z,60nm,18.6s,baz=354,slow=38
MDT Midelt 17.12 242 P P 07 21 12.4 -0.7
ANN Anapa 17.59 74 *e*P Pn 07 21 16.9 -0.1
ANN *e*S Sn 07 24 32.6 -0.3
ANN pmax pmax
comp=Z,36nm,1.7s
ANN Anapa 17.59 74 *e*P Pn 07 21 16.9 -0.1
comp=Z,36nm,1.7s
HFS Hagfors 17.79 1 P Pn 07 21 18.3 -1.1
HFS Hagfors 17.79 1 P Pn 07 21 18.3 -1.1
comp=Z,0.1nm,0.3s,baz=207,slow=13,SNR=4.6
HFS Hagfors 17.79 1 P Pn 07 21 18.3 -1.1
NB2 NORSAR Subarra 18.74 357 P P 07 21 30.0 -0.7
comp=Z,3.6nm,0.8s,baz=175,slow=10
NB2 NORSAR Subarra 18.74 357 P P 07 21 30.0 -0.7
comp=Z,3.6nm,0.8s,baz=175,slow=9.6,SNR=7.5
NOA NORSAR Array B 18.74 357 P P 07 21 29.1 -1.6
NOA NORSAR Array B 18.74 357 P P 07 21 29.1 -1.6
comp=Z,0.2nm,0.3s,baz=174,slow=11,SNR=4.7
NOA NORSAR Array B 18.74 357 P P 07 21 29.1 -1.6
MALT Malatya 19.50 94 *e*P Pn 07 21 42.2 +1.6
MALT pmax pmax
comp=Z,16nm,1.2s
MALT Malatya 19.50 94 *e*P Pn 07 21 42.2 +1.6
comp=Z,16nm,1.2s
VSR Storozhevoye 19.67 54 *e*P P 07 21 40.8 -0.1
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s
VSR pmax pmax
comp=E,3.0nm,0.4s
VSR Storozhevoye 19.67 54 *e*P P 07 21 40.8 -0.1
MMAI Mount Meron Ar 19.74 111 P Pn 07 21 45.2 +1.9
MMAI Mount Meron Ar 19.74 111 P Pn 07 21 45.2 +1.9
comp=E,2.9nm,0.3s,baz=287,slow=16,SNR=2.9
OBN Obninsk 19.80 42 ⇓*i*P P 07 21 42.2 0.0
OBN pmax pmax
comp=Z,7.0nm,1.0s
OBN MLR MLR
comp=Z,100nm,17.0s
OBN Obninsk 19.80 42 *i* P P 07 21 42.2 0.0
comp=Z,100nm,17.0s
FINES FINESS Array B 20.57 18 P P 07 21 50.7 +0.1
FINES FINESS Array B 20.57 18 P P 07 21 50.7 +0.1
comp=Z,8.0nm,0.6s,baz=184,slow=9.3,SNR=13
FINES LR LR 07 30 51.2
comp=Z,151nm,19.0s,baz=325,slow=40
FINES FINESS Array B 20.57 18 P P 07 21 50.7 +0.1
comp=Z,151nm,19.0s
TAM Tamanrasset 20.60 201 *e*P Pn 07 21 54.0 +0.3
TAM pmax pmax
comp=Z,4.0nm,0.9s
TAM Tamanrasset 20.60 201 *e*P Pn 07 21 54.0 +0.4
comp=Z,4.3nm,0.9s
MOS Moscow 20.63 41 *e*P P 07 21 45.7 -5.6
VRHR Novokhopersk 21.13 56 *e*P P 07 21 59.6 +2.8
VRHR pmax pmax
comp=Z,10.0nm,1.0s
VRHR pmax pmax
comp=N,7.0nm,0.5s
VRHR pmax pmax
comp=E,8.0nm,0.5s
KAF Kangasniemi 21.22 17 *e*P P 07 21 57.0 -0.6
KAF pmax pmax
comp=Z,7.0nm,0.8s
KAF Kangasniemi 21.22 17 *ep* P 07 21 57.0 -0.6
comp=Z,6.5nm,0.8s
KAF Kangasniemi 21.22 17 *e*P P 07 21 57.0 -0.6
comp=Z,7.0nm,0.8s
KIV Kislovodsk 21.40 76 *e*P P 07 22 01.4 +1.6
KIV pmax pmax
comp=Z,21nm,1.1s
KIV MLR MLR
comp=Z,31nm,14.0s
KIV Kislovodsk 21.40 76 *e*P P 07 22 01.4 +1.6
comp=Z,31nm,14.0s
KBZ Khabaz 21.57 76 P P 07 22 03.7 +2.1
KBZ pmax pmax
comp=Z,5.0nm,0.8s
KBZ Khabaz 21.57 76 P P 07 22 03.7 +2.1
KBZ Khabaz 21.57 76 P P 07 22 03.7 +2.1
comp=Z,4.6nm,0.8s,baz=288,slow=8.9,SNR=11
KBZ Khabaz 21.57 76 P P 07 22 03.7 +2.1
comp=Z,5.0nm,0.8s
JOF Joensuu 23.12 21 *e*P P 07 22 17.8 0.0
JOF pmax pmax
comp=Z,3.0nm,0.6s
JOF Joensuu 23.12 21 *ep* P 07 22 17.8 0.0
comp=Z,2.7nm,0.6s
JOF Joensuu 23.12 21 *e*P P 07 22 17.8 0.0
comp=Z,3.0nm,0.6s
KLMR Klimovskoe 24.34 32 *e*P P 07 22 29.3 -0.3
KLMR pmax pmax
comp=Z,33nm,1.7s
KLMR Klimovskoe 24.34 32 *e*P P 07 22 29.3 -0.3
comp=Z,33nm,1.7s
ARCES ARCESS Array B 27.95 9 P P 07 23 01.3 -0.9
ARCES ARCESS Array B 27.95 9 P P 07 23 01.3 -0.9
comp=Z,3.5nm,1.0s,baz=176,slow=13,SNR=3.2
ARCES LR LR 07 35 13.2
comp=Z,58nm,18.1s,baz=181,slow=39
ARCES ARCESS Array B 27.95 9 P P 07 23 01.3 -0.9
comp=Z,58nm,18.1s
TOA0 Torodi Ar. Sit 30.83 203 *e*P P 07 23 26.9 -1.3
TOA0 Torodi Ar. Sit 30.83 203 *e*P P 07 23 26.9 -1.3
TORD Torodi Ar. Bea 30.83 203 P P 07 23 29.2 +1.0
TORD Torodi Ar. Bea 30.83 203 P P 07 23 29.2 +1.0
comp=Z,3.0nm,0.7s,baz=20,slow=8.0,SNR=12
TORD LR LR 07 36 44.1
comp=Z,89nm,19.9s,baz=0.0,slow=38
TORD Torodi Ar. Bea 30.83 203 P P 07 23 29.2 +1.0
AKTK Aktyubinsk 31.42 60 P P 07 23 33.3 +0.2
comp=Z,59nm,18.6s
AKTO Aktyubinsk 31.42 60 P P 07 23 33.3 +0.2
AKTO pmax pmax
comp=Z,1.0nm,0.4s
AKTO MLR MLR
comp=Z,59nm,18.6s
AKTO Aktyubinsk 31.42 60 P P 07 23 33.3 +0.2
AKTO Aktyubinsk 31.42 60 P P 07 23 33.3 +0.2
comp=Z,0.6nm,0.4s,baz=293,slow=13,SNR=2.7
AKTO LR LR 07 37 33.1
comp=Z,59nm,18.6s,baz=301,slow=39
AKTO Aktyubinsk 31.42 60 P P 07 23 33.3 +0.2
ARU Arti 31.96 48 *d i*P P 07 23 38.1 +0.4
ARU 07 24 40.8
ARU S S 07 28 49.8 +1.0
ARU pmax pmax
comp=Z,10.0nm,1.2s
ARU Arti 31.96 48 *i* P P 07 23 38.1 +0.4
comp=Z,10.0nm,1.2s
ARU S S 07 28 49.8 +1.0
SPITS Spitsbergen Ar 35.94 1 LR LR 07 41 01.0
comp=Z,46nm,18.5s,baz=140,slow=40
BRVK Borovoye 38.78 54 ⇑*e*P P 07 24 37.4 +0.9
BRVK pmax pmax
comp=Z,7.0nm,1.0s
BRVK Borovoye 38.78 54 *e*P P 07 24 37.4 +0.9
comp=Z,7.0nm,1.0s
BVAR Borovoye Array 38.85 54 P P 07 24 38.0 +1.0
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR MLR MLR
comp=Z,81nm,18.5s
BVAR Borovoye Array 38.85 54 P P 07 24 38.0 +1.0
BVAR Borovoye Array 38.85 54 P P 07 24 38.0 +1.0
comp=Z,0.7nm,0.7s,baz=316,slow=6.0,SNR=5.0
BVAR LR LR 07 42 03.8
comp=Z,81nm,18.5s,baz=132,slow=38
BVAR Borovoye Array 38.85 54 P P 07 24 38.0 +1.0
comp=Z,81nm,18.5s
EKS2 Erkin-Say 43.67 68 *e*P P 07 25 18.1 +1.1
EKS2 pmax pmax
comp=Z,6.0nm,0.8s
EKS2 Erkin-Say 43.67 68 *e*P P 07 25 18.1 +1.1
comp=Z,6.3nm,0.8s
EKS2 Erkin-Say 43.67 68 *e*P P 07 25 18.1 +1.1
comp=Z,6.3nm,0.8s
AAK Ala-Archa 44.18 68 ⇑*e*P P 07 25 22.2 +1.1
AAK pmax pmax
comp=Z,10.0nm,1.3s
AAK Ala-Archa 44.18 68 *e*P P 07 25 22.2 +1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,10.0nm,1.3s						
KURBB	Kurchatov Arra	44.28	56	LR	LR	07 45 28.5	
	comp=Z,74nm,19.0s,baz=265,slow=38						
KURK	Kurchatov	44.31	56	⇑eP	P	07 25 23.2	+1.4
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KURK	Kurchatov	44.31	56	eP	P	07 25 19.3	-2.5
	comp=Z,5.7nm,1.4s						
KURK	Kurchatov	44.31	56	eP	P	07 25 23.2	+1.4
	comp=Z,6.0nm,1.7s						
ZALV	Zalesovo Beam	47.08	50	P	P	07 25 43.9	+0.2
ZALV				MLR	MLR		
	comp=Z,95nm,18.5s						
ZALV	Zalesovo Beam	47.08	50	P	P	07 25 43.9	+0.2
ZALV	Zalesovo Beam	47.08	50	P	P	07 25 43.9	+0.2
	comp=Z,0.4nm,0.4s,baz=265,slow=7.0,SNR=3.7						
ZALV				LR	LR	07 47 11.1	
	comp=Z,94nm,18.4s,baz=33,slow=38						
ZALV	Zalesovo Beam	47.08	50	P	P	07 25 43.9	+0.2
	comp=Z,95nm,18.5s						
MKAR	Makanchi Array	47.86	60	P	P	07 25 49.9	0.0
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,39nm,20.7s						
MKAR	Makanchi Array	47.86	60	P	P	07 25 49.9	0.0
MKAR	Makanchi Array	47.86	60	P	P	07 25 49.9	0.0
	comp=Z,1.7nm,0.7s,baz=292,slow=6.3,SNR=17						
MKAR				LR	LR	07 47 59.2	
	comp=Z,38nm,20.7s,baz=78,slow=39						
MKAR	Makanchi Array	47.86	60	P	P	07 25 49.9	0.0
	comp=Z,39nm,20.7s						
SCHQ	Schefferville	51.63	313	P	P	07 26 17.7	-0.8
SCHQ	Schefferville	51.63	313	P	P	07 26 17.7	-0.8
	comp=Z,2.8nm,0.8s,baz=76,slow=8.3,SNR=3.1						
SCHQ	Schefferville	51.63	313	P	P	07 26 17.7	-0.8
WMQ	Urumqi	52.54	61	eP	P	07 26 29.0	+3.6
WMQ				sP	sP	07 26 36.0	+6.4
WMQ				PcP	PcP	07 27 39.0	+3.3
WMQ				PP	PP	07 28 29.0	+4.9
WMQ				ScP	ScP	07 31 35.0	+2.0
WMQ				S	S	07 33 53.0	+0.8
WMQ				ScS	ScS	07 36 15.0	-0.4
WMQ				SS	SS	07 37 29.0	-0.9
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,220nm,5.0s						
WMQ				LR	LR		
	comp=N,1μm,16.0s						
WMQ				LR	LR		
	comp=E,1μm,16.0s						
WMQ				LR	LR		
	comp=Z,87nm,16.0s						
TIXI	Tiksi	57.60	20	⇓eP	P	07 27 02.1	+0.7
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TIXI	Tiksi	57.60	20	eP	P	07 27 02.1	+0.7
	comp=Z,2.0nm,0.7s						
TLY	Talaya	58.45	47	eP	P	07 27 06.8	-1.0
TLY				e		07 29 17.8	
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,42nm,19.0s						
TLY	Talaya	58.45	47	eP	P	07 27 06.8	-1.0
	comp=Z,4.0nm,0.8s						
SONM	Songino Array	61.98	50	LR	LR	07 56 32.6	
	comp=Z,70nm,21.2s,baz=142,slow=38						
LZH	Lanzhou	67.12	62	eP	P	07 28 07.0	+1.0
LZH				pP	pP	07 28 10.2	+1.1
LZH				sP	sP	07 28 11.7	+1.5
LZH				ePP	PP	07 30 36.1	+2.6
LZH				pmax	pmax		
	comp=Z,46nm,7.5s						
LZH				LR	LR		
	comp=N,200nm,15.0s						
LZH				LR	LR		
	comp=E,200nm,16.1s						
LZH				LR	LR		
	comp=Z,250nm,18.1s						
YKA	Yellowknife Ar	67.48	337	P	P	07 28 07.2	-0.4
YKA	Yellowknife Ar	67.48	337	P	P	07 28 07.2	-0.4
	comp=Z,0.9nm,0.8s,baz=41,slow=5.8,SNR=14						
YKA	Yellowknife Ar	67.48	337	P	P	07 28 07.2	-0.4
	comp=Z,1.0nm,0.8s						
BILL	Bilibino	68.03	11	⇓eP	P	07 28 11.5	+0.5
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BILL	Bilibino	68.03	11	eP	P	07 28 11.5	+0.5
	comp=Z,3.0nm,1.1s						
HHC	Hu-ho-hao-te	69.06	54	eP	P	07 28 19.0	+1.0
HHC				sP	sP	07 28 26.2	+3.9
HHC				PcP	PcP	07 28 43.5	+1.4
HHC				PP	PP	07 30 52.9	+2.8
HHC				ScP		07 32 45.3	
HHC				PcS		07 32 47.8	
HHC				S	S	07 37 20.9	-2.4
HHC				sS	sS	07 37 28.2	-0.2
HHC				ScS	SKSac	07 38 15.8	-2.3
HHC				SS	SS	07 41 47.8	-0.5
HHC				pmax	pmax		
	comp=Z,390nm,6.5s						
HHC				LR	LR		
	comp=N,220nm,16.1s						
HHC				LR	LR		
	comp=E,180nm,16.6s						
HHC				LR	LR		
	comp=Z,210nm,16.5s						
AGMN	Agassiz Nation	70.31	318	eP	P	07 28 18.8	-6.7
	comp=Z,3.7nm,0.3s						
BOSA	Boshof	71.48	169	P	P	07 28 33.8	+1.0
BOSA	Boshof	71.48	169	P	P	07 28 33.8	+1.0
	comp=Z,4.1nm,1.0s,baz=4.3,slow=3.3,SNR=4.3						
BOSA	Boshof	71.48	169	P	P	07 28 33.8	+1.0
	comp=Z,4.0nm,1.0s						
ILAR	Eielson Array	72.07	351	P	P	07 28 35.8	-0.1
ILAR	Eielson Array	72.07	351	P	P	07 28 35.8	-0.1
	comp=Z,0.4nm,0.9s,baz=10,slow=5.6,SNR=6.2						
ILAR	Eielson Array	72.07	351	P	P	07 28 35.8	-0.1
KMI	Kunming	73.09	71	P	P	07 28 41.8	-1.0
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CMAR	Chiang Mai Arr	74.60	79	P	P	07 28 51.5	0.0
CMAR	Chiang Mai Arr	74.60	79	P	P	07 28 51.5	0.0
	comp=Z,1.5nm,0.5s,baz=292,slow=7.6,SNR=4.1						
CMAR	Chiang Mai Arr	74.60	79	P	P	07 28 51.5	0.0
	comp=Z,2.0nm,0.5s						
MDJ	Mudanjiang	76.34	41	P	P	07 29 01.2	+0.1
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,25nm,3.2s						
LKWY	Lake	79.91	323	eP	P	07 29 19.9	-1.4
LKWY				pmax	pmax		
	comp=Z,5.0nm,0.4s						
LKWY	Lake	79.91	323	eP	P	07 29 19.9	-1.4
	comp=Z,5.1nm,0.4s						
LKWY	Lake	79.91	323	eP	P	07 29 19.9	-1.4
	comp=Z,5.1nm,0.4s						
YSS	Yuzh-Sakhalins	80.38	32	P	P	07 29 27.0	+3.6
KSAR	Wonju Array Be	80.69	47	P	P	07 29 26.1	+0.9
KSAR	Wonju Array Be	80.69	47	P	P	07 29 26.1	+0.9
KSRS	Korea Array	80.70	47	P	P	07 29 26.1	+0.9
	comp=Z,1.2nm,0.5s,baz=278,slow=3.4,SNR=6.5						
KSRS	Korea Array	80.70	47	P	P	07 29 26.1	+0.9
	comp=Z,1.0nm,0.5s						
PDAR	Pinedale Array	80.93	321	LR	LR	08 07 06.1	
	comp=Z,44nm,21.8s,baz=257,slow=37						
ASAJ	Asahikawa	82.63	34	LR	LR	08 10 51.3	
	comp=Z,72nm,19.9s,baz=3.9,slow=39						
MJAR	Matsushiro Arr	86.72	41	LR	LR	08 12 50.5	
	comp=Z,92nm,19.9s,baz=25,slow=38						
JHJ	Hachijo jima 2	90.23	42	LR	LR	08 15 32.2	
	comp=Z,73nm,18.0s,baz=64,slow=39						
WRA	Warramunga Arr	125.90	85	PKP	PKPdf	07 36 15.0	+0.6
WRA	Warramunga Arr	125.90	85	PKP	PKPdf	07 36 15.0	+0.6
	comp=Z,0.7nm,1.1s,baz=17,slow=28,SNR=2.9						

*CSEM **06** 07:17:11.2, 36.°67N×22.°19E, h22km, MD2.7, After ATH*

ATH 06 07:17:11.2, 36.°67N×22.°19E, h22km±2km, MD2.7/7, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DYR	Agios Nikonas	0.15	51	ePB	Pb	07 17 16.1	-0.5
DYR				eSB	Sb	07 17 19.3	-1.0
DYR	Agios Nikonas	0.15	51	ePb	Pb	07 17 16.1	-0.5
DYR				eSb	Sb	07 17 19.3	-1.0
PYL	PYLOS	0.42	302	ePB	Pb	07 17 19.8	-0.2
PYL				eSB	Sb	07 17 26.5	+0.5
PYL	PYLOS	0.42	302	ePb	Pb	07 17 19.8	-0.2
PYL				eSb	Sb	07 17 26.5	+0.5
ITM	Ithomi	0.55	338	ePN	Pb	07 17 21.8	-0.5
ITM				eSN	Sb	07 17 30.4	+0.6
ITM	Ithomi	0.55	338	ePn	Pb	07 17 21.8	-0.5
ITM				eSn	Sb	07 17 30.4	+0.6
VLI	Veliai	0.60	85	ePN	Pn	07 17 24.1	-0.4
VLI	Veliai	0.60	85	ePn	Pn	07 17 24.1	-0.4
VLX	Vlachokerasia	0.71	12	ePB	Pb	07 17 24.3	-0.9
VLX				eSN	Sn	07 17 35.7	-0.9
VLX	Vlachokerasia	0.71	12	ePb	Pb	07 17 24.3	-0.9
VLX				eSn	Sn	07 17 35.7	-0.9
AMT	Artemida-Makis	0.94	336	ePN	Pn	07 17 29.9	+0.7
AMT				eSN	Sn	07 17 43.0	+1.0
AMT	Artemida-Makis	0.94	336	ePn	Pn	07 17 29.9	+0.7
AMT				eSn	Sn	07 17 43.0	+1.0
DID	Didima	1.18	45	ePN	Pb	07 17 33.1	+0.1
DID				eSN	Sn	07 17 50.0	+2.0
DID	Didima	1.18	45	ePn	Pb	07 17 33.1	+0.1
DID				eSn	Sn	07 17 50.0	+2.0

*IDC **06** 07:22:14.4±1.1, 34.°77N×73.°26E, h0km, mb3.7/9, mb1 3.7/14, mb1mx3.6/33, mbtmp3.6/14, ML3.1/4, MS3.0/1, Ms1 3.0/1, ms1mx2.1/55, Error ellipse: s-maj=26.8km s-min=21.6km az=90.0*

*ISCJB **06** 07:22:17.3±0.8, 34.°89N±0.°07×73.°1E±0.°1, h24km, mb3.6/8, MS3.0/1, Error ellipse: s-maj=13.0km s-min=9.3km az=8.2*

*NNC **06** 07:22:26.7±3.7, 35.°19N×72.°98E, h82km±44km, mb3.1, mpv3.5, Error ellipse: s-maj=29.4km s-min=22.6km az=38.0*

ISC 06 07:22:18.7±1.0, 34.°83N±0.°09×73.°0E±0.°1, h24km, n21, σ1.s68/23, mb3.7/8, 2C-4D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	Dehra Dun	6.21	135	ex	Pn	07 23 53.0	+4.2
AAK	Ala-Archa	7.88	8	Pn	Pn	07 24 14.3	+2.5
	0.3nm,0.3s,baz=160,slow=6.6,SNR=4.1						
AAK				Sn	Sn	07 25 41.9	+1.6
	0.2nm,0.3s,baz=158,slow=19,SNR=4.2						
TKM2	Tokmak 2	8.33	13	⇓P	Pn	07 24 20.4	+2.4
	0.9nm,0.5s						
TKM2				⇓S	Sn	07 25 49.6	-1.8
	3.1nm,0.5s						
KK31	Karatay Array	8.48	348	P	Pn	07 24 21.8	+1.8
	1.0nm,0.3s,baz=156,slow=11,SNR=42						
KK31				⇑S	Sn	07 25 53.1	-1.8
	1.1nm,0.3s,baz=146,slow=26,SNR=9.1						
MK31	Makanchi Array	13.86	28	⇓P	Pn	07 25 35.0	+1.5
	1.3nm,0.7s,baz=209,slow=13,SNR=4.2						
MKAR	Makanchi Array	13.86	28	Pn	Pn	07 25 33.0	-0.5
	0.0nm,0.3s,baz=210,slow=13,SNR=4.0						
KURBB	Kurchatov Arra	16.29	13	Pn	Pn	07 26 02.1	-3.6
	0.0nm,0.3s,baz=200,slow=11,SNR=4.2						
AB31	Akbulak array	17.33	330	P	Pn	07 26 18.6	-0.2
	0.2nm,0.4s,baz=143,slow=11,SNR=11						
AB31				⇓S	Sn	07 29 28.2	-2.5
	0.5nm,0.8s						
BVAR	Borovoye Array	18.28	355	P	Pn	07 26 30.2	-0.3
	0.3nm,0.3s,baz=170,slow=9.8,SNR=4.8						
AKTO	Aktyubinsk	19.03	330	⇑P	P	07 26 39.0	+0.2
	0.3nm,0.5s						
AKTO	Aktyubinsk	19.03	330	P	Pn	07 26 39.5	-0.1
	0.8nm,0.3s,baz=129,slow=12,SNR=14						
ZALV	Zalesovo Beam	20.84	20	P	P	07 26 56.6	-1.9
	1.5nm,0.4s,baz=215,slow=10,SNR=6.6						
FINES	FINESS Array B	39.76	327	P	P	07 29 49.8	+0.6
	3.6nm,0.8s,baz=117,slow=8.4,SNR=6.7						
ARCES	ARCESS Array B	43.30	338	P	P	07 30 18.7	+0.6
	1.8nm,0.6s,baz=112,slow=7.3,SNR=11						
GERES	GERESS Array B	45.22	307	LR	LR	07 51 20.3	
	comp=Z,18nm,19.9s,baz=319,slow=38						
HFS	Hagfors	45.37	323	P	P	07 30 35.7	+0.9
	1.5nm,0.9s,baz=82,slow=10,SNR=4.3						
NOA	NORSAR Array B	46.68	324	P	P	07 30 46.7	+1.6
	0.7nm,0.9s,baz=104,slow=7.3,SNR=2.9						
TORD	Torodi Ar. Bea	67.32	271	P	P	07 33 12.3	+0.4
	0.2nm,0.5s,baz=46,slow=5.8,SNR=4.5						
ILAR	Eielson Array	75.93	16	P	P	07 34 02.7	-0.3
	0.2nm,0.6s,baz=294,slow=5.9,SNR=3.4						
ASAR	Alice Springs	81.97	126	P	P	07 34 35.2	-1.5
	0.2nm,0.7s,baz=305,slow=6.5,SNR=2.8						
YKA	Yellowknife Ar	82.82	4	P	P	07 34 40.4	-0.1
	0.4nm,0.5s,baz=346,slow=5.5,SNR=16						

*ISCJB **06** 07:24:22.2±0.4, 42.°33N±0.°02×13.°38E±0.°03, h14km±4km, Error ellipse: s-maj=4.1km s-min=2.9km az=163.2*

*CSEM **06** 07:24:22.6±0.1, 42.°33N×13.°39E, h10km, ML3.6/8, Error ellipse: s-maj=2.5km s-min=1.7km az=70.0*

*ROM **06** 07:24:22.5±0.1, 42.°32N×13.°39E, h10km, Ml3.0/16, Error ellipse: s-maj=1.3km s-min=1.0km az=62.0*

ISC 06 07:24:22.6±0.8, 42.°33N±0.°02×13.°39E±0.°02, h13km±4km, n64, σ0.s54/88, 4C-6D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.02	17	⇑iPg	Pg	07 24 24.7	-0.2
AQU				Sg	Sg	07 24 26.0	-0.6
	37μm,0.4s						
AQU	L'Aquila	0.02	17	⇑iPg	Pg	07 24 24.7	-0.2
AQU				Sg	Sg	07 24 26.0	-0.6
	37μm,0.4s						
FAGN	Fagnano	0.16	115	Pg	Pg	07 24 26.6	+0.3
FAGN				Sg	Sg	07 24 29.5	+0.5
	14μm,0.5s						
FAGN	Fagnano	0.16	115	Pg	Pg	07 24 26.6	+0.3
FAGN				Sg	Sg	07 24 29.5	+0.5
	14μm,0.5s						
CAMP	Campotosto	0.20	3	⇓iPg	Pg	07 24 27.3	+0.1
CAMP				Sg	Sg	07 24 30.8	+0.5
CAMP	Campotosto	0.20	3	⇓iPg	Pg	07 24 27.3	+0.1
CAMP				Sg	Sg	07 24 30.8	+0.5
FIAM	Fiamignano	0.21	253	Pg	Pb	07 24 28.4	0.0
FIAM				Sg	Sg	07 24 31.2	+0.7
FIAM	Fiamignano	0.21	253	Pg	Pb	07 24 28.4	0.0
FIAM				Sg	Sg	07 24 31.2	+0.7
PTQR	Pietraquaria	0.31	179	⇓iPg	Pg	07 24 28.9	0.0
PTQR				Sg	Sg	07 24 33.7	+0.5
PTQR	Pietraquaria	0.31	179	⇓iPg	Pg	07 24 28.9	0.0
PTQR				Sg	Sg	07 24 33.7	+0.5
TERO	Teramo	0.33	28	⇓ePg	Pg	07 24 29.1	-0.2
TERO				Sg	Sb	07 24 35.2	-0.5
	1μm,0.4s						
TERO	Teramo	0.33	28	⇓ePg	Pg	07 24 29.1	-0.2
TERO				Sg	Sb	07 24 35.2	-0.5
	1μm,0.4s						
VCEL	Villa Celiera	0.34	79	Pg	Pg	07 24 29.9	+0.4
	2μm,0.4s						
VCEL	Villa Celiera	0.34	79	Pg	Pg	07 24 29.9	+0.4
	2μm,0.4s						
CERT	Cerreto	0.49	219	Pg	Pg	07 24 32.1	-0.1
CERT				Sg	Sb	07 24 39.6	-0.6
	2μm,0.5s						
CERT	Cerreto	0.49	219	Pg	Pg	07 24 32.1	-0.1
CERT				Sg	Sb	07 24 39.6	-0.6
	2μm,0.5s						
VVLD	Villa Vallelon	0.49	160	Pg	Pg	07 24 31.8	-0.4
VVLD				Sg	Sg	07 24 39.2	+0.4
	522nm,0.6s						
VVLD	Villa Vallelon	0.49	160	Pg	Pg	07 24 31.8	-0.4
VVLD				Sg	Sg	07 24 39.2	+0.4
	522nm,0.6s						
INTR	Introdacqua	0.50	130	Pg	Pg	07 24 32.2	-0.1
INTR				Sg	Sb	07 24 39.9	-0.5
	754nm,0.3s						
INTR	Introdacqua	0.50	130	Pg	Pg	07 24 32.2	-0.1
INTR				Sg	Sb	07 24 39.9	-0.5
	754nm,0.3s						
MNS	Montasola	0.53	276	Pg	Pb	07 24 34.0	+0.2
MNS	Montasola	0.53	276	Pg	Pb	07 24 34.0	+0.2
NRCA	Norcia	0.54	338	⇑ePg	Pg	07 24 33.1	-0.1
NRCA				Sg	Sb	07 24 41.8	0.0
	504nm,0.1s						
NRCA	Norcia	0.54	338	⇑ePg	Pg	07 24 33.1	-0.1
NRCA				Sg	Sb	07 24 41.8	0.0
	504nm,0.1s						
MTCE	Montecelio	0.57	238	Pg	Pg	07 24 33.6	-0.2
MTCE	Montecelio	0.57	238	Pg	Pg	07 24 33.6	-0.2
TRTR	Tortoreto Alta	0.61	39	Pg	Pb	07 24 35.5	+0.3
	867nm,0.5s						
TRTR	Tortoreto Alta	0.61	39	Pg	Pb	07 24 35.5	+0.3
	867nm,0.5s						
OFFI	Offida	0.64	20	Pg	Pb	07 24 35.8	+0.1
	1μm,0.4s						
OFFI	Offida	0.64	20	Pg	Pb	07 24 35.8	+0.1
	1μm,0.4s						
LPEL	Lama dei Pelig	0.65	116	Pg	Pg	07 24 34.9	-0.4
LPEL				Sg	Sb	07 24 44.9	0.0
	463nm,0.3s						
LPEL	Lama dei Pelig	0.65	116	Pg	Pg	07 24 34.9	-0.4
LPEL				Sg	Sb	07 24 44.9	0.0
	463nm,0.3s						
POFI	Posta Fibreno	0.66	159	Pg	Pg	07 24 35.2	-0.2
POFI	Posta Fibreno	0.66	159	Pg	Pg	07 24 35.2	-0.2
SDI	San Donato	0.69	153	Pg	Pg	07 24 35.6	-0.5
	202nm,0.2s						
SDI	San Donato	0.69	153	Pg	Pg	07 24 35.6	-0.5
	202nm,0.2s						
CAFR	Castel Frentan	0.72	98	Pg	Pb	07 24 36.9	0.0
CAFR	Castel Frentan	0.72	98	Pg	Pb	07 24 36.9	0.0
FDMO	Fiordimonte	0.74	342	Pg	Pg	07 24 36.5	-0.4
	198nm,0.4s						
FDMO	Fiordimonte	0.74	342	Pg	Pg	07 24 36.5	-0.4
	198nm,0.4s						
CESI	CESI - Serrava	0.76	332	Pg	Pg	07 24 37.1	-0.3
CESI	CESI - Serrava	0.76	332	Pg	Pg	07 24 37.1	-0.3
GIUL	Giuliano Di Ro	0.78	188	Pg	Pg	07 24 37.3	-0.4
GIUL	Giuliano Di Ro	0.78	188	Pg	Pg	07 24 37.3	-0.4
RNI2	Rionero Sannit	0.85	138	Pg	Pb	07 24 39.0	-0.2
	186nm,0.6s						
RNI2	Rionero Sannit	0.85	138	Pg	Pb	07 24 39.0	-0.2
	186nm,0.6s						
CERA	Filignano	0.87	147	Pg	Pg	07 24 38.2	-1.2
CERA	Filignano	0.87	147	Pg	Pg	07 24 38.2	-1.2
ASSB	Assisi San Ben	0.89	323	Pg	Pg	07 24 39.8	-0.1
	132nm,0.3s						
ASSB	Assisi San Ben	0.89	323	Pg	Pg	07 24 39.8	-0.1
	132nm,0.3s						
CING	Cingoli	1.05	352	Pg	Pb	07 24 42.3	-0.4
	249nm,0.9s						
CING	Cingoli	1.05	352	Pg	Pb	07 24 42.3	-0.4
	249nm,0.9s						
VAGA	Valle Agricola	1.11	145	Pg	Pg	07 24 44.3	+0.4
VAGA	Valle Agricola	1.11	145	Pg	Pg	07 24 44.3	+0.4
MURB	Monte Urbino	1.13	326	Pg	Pg	07 24 44.8	+0.5
	267nm,0.3s						
MURB	Monte Urbino	1.13	326	Pg	Pg	07 24 44.8	+0.5
	267nm,0.3s						
ARVD	Arcevia	1.21	344	Pg	Pn	07 24 45.1	-0.2
ARVD	Arcevia	1.21	344	Pg	Pn	07 24 45.1	-0.2
AOI	Ancona	1.23	7	Pg	Pb	07 24 45.9	+0.2
AOI	Ancona	1.23	7	Pg	Pb	07 24 45.9	+0.2
PIEI	Pieia	1.36	333	Pg	Pb	07 24 48.2	+0.3
PIEI	Pieia	1.36	333	Pg	Pb	07 24 48.2	+0.3
NVLJ	Novalja	2.48	25	ePn	Pn	07 25 03.7	+1.1
NVLJ				Sn	Sb	07 25 35.2	-2.2
NVLJ	Novalja	2.48	25	ePn	Pn	07 25 03.7	+1.1
NVLJ				Sn	Sb	07 25 35.1	-2.2

IDC 06 07:28:04.0±0.9, 33.°58N×82.°25E, h0km, mb3.3/9, mb1 3.5/11, mb1mx3.4/31, mbtmp3.4/11, ML2.9/2, Error ellipse: s-maj=30.3km s-min=17.5km az=58.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.20	0	Pn	Pn	07 31 13.0	+0.3
	0.1nm,0.3s,baz=181,slow=12,SNR=6.6						
KURBB	Kurchatov Arra	17.25	352	P	Pn	07 32 05.3	-0.9
	0.0nm,0.3s,baz=174,slow=11,SNR=6.2						
ZALV	Zalesovo Beam	20.44	4	P	P	07 32 42.7	-0.1
	0.3nm,0.2s,baz=188,slow=8.2,SNR=3.6						
CMAR	Chiang Mai Arr	21.21	131	P	P	07 32 51.3	-0.1
	2.0nm,0.7s,baz=306,slow=11,SNR=10						
BVAR	Borovoye Array	21.21	340	P	P	07 32 51.9	+0.8
	0.4nm,0.4s,baz=126,slow=10.0,SNR=4.0						
SONM	Songino Array	23.06	45	P	P	07 33 11.9	+0.8
	0.5nm,0.8s,baz=239,slow=8.2,SNR=3.7						
AKTO	Aktyubinsk	24.49	321	P	P	07 33 25.1	+0.3
	0.7nm,0.4s,baz=111,slow=9.8,SNR=5.1						
WRA	Warramunga Arr	72.79	129	P	P	07 39 34.6	+0.1
	0.6nm,1.0s,baz=330,slow=5.6,SNR=3.0						
TORD	Torodi Ar. Bea	75.06	276	P	P	07 39 48.2	+0.2
	0.4nm,0.5s,baz=46,slow=5.4,SNR=9.6						
ASAR	Alice Springs	75.22	132	P	P	07 39 48.9	+0.2
	0.2nm,0.7s,baz=330,slow=5.4,SNR=3.3						
YKA	Yellowknife Ar	83.30	8	P	P	07 40 30.9	-1.4
	0.1nm,0.5s,baz=336,slow=5.6,SNR=5.7						

*ISCJB **06** 07:28:45.1±0.3, 42.°35N±0.°02×13.°39E±0.°03, h14km±2km, Error ellipse: s-maj=3.5km s-min=2.9km az=152.1*

*CSEM **06** 07:28:45.6±0.1, 42.°34N×13.°39E, h8km, ML3.8/7, Error ellipse: s-maj=3.1km s-min=2.3km az=63.0*

*ROM **06** 07:28:45.4±0.1, 42.°34N×13.°40E, h12km±2km, Ml3.1/32, Error ellipse: s-maj=1.7km s-min=1.2km az=50.0*

*LDG **06** 07:28:47.2±0.2, 42.°31N×13.°37E, h2km, Ml3.1/6, Error ellipse: s-maj=6.3km s-min=4.3km az=50.0*

ISC 06 07:28:45.5±0.8, 42.°34N±0.°02×13.°37E±0.°02, h17km±4km, n94, σ1.s28/128, 18C-6D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	60	⇓iPg	Pg	07 28 48.5	-0.1
AQU				Sg	Sg	07 28 50.0	-0.7
	345nm,0.2s						
AQU	L'Aquila	0.03	60	⇓iPg	Pg	07 28 48.5	-0.1
AQU				Sg	Sg	07 28 50.0	-0.7
	345nm,0.2s						
FAGN	Fagnano	0.18	114	⇑iPg	Pg	07 28 49.8	-0.2
FAGN				Sg	Sg	07 28 52.1	-1.0
	14μm,0.4s						
FAGN	Fagnano	0.18	114	⇑iPg	Pg	07 28 49.8	-0.2
FAGN				Sg	Sg	07 28 52.1	-1.0
	14μm,0.4s						
FIAM	Fiamignano	0.20	249	⇑iPg	Pb	07 28 50.7	0.0
FIAM				Sg	Sg	07 28 53.8	+0.2
FIAM	Fiamignano	0.20	249	⇑iPg	Pb	07 28 50.7	0.0
FIAM				Sg	Sg	07 28 53.8	+0.2
CAMP	Campotosto	0.20	9	⇑iPg	Pg	07 28 50.1	-0.3
CAMP				Sg	Sg	07 28 53.0	-0.8
CAMP	Campotosto	0.20	9	⇑iPg	Pg	07 28 50.1	-0.3
CAMP				Sg	Sg	07 28 53.0	-0.8
PTQR	Pietraquaria	0.32	175	⇓iPg	Pg	07 28 52.4	+0.1
PTQR	Pietraquaria	0.32	175	⇓iPg	Pg	07 28 52.4	+0.1
TERO	Teramo	0.34	32	⇑iPg	Pg	07 28 52.4	-0.2
TERO				Sg	Sg	07 28 57.0	-0.4
	4μm,0.7s						
TERO	Teramo	0.34	32	⇑iPg	Pg	07 28 52.4	-0.2
TERO				Sg	Sg	07 28 57.0	-0.4
	4μm,0.7s						
VCEL	Villa Celiera	0.36	81	Pg	Pb	07 28 53.4	-0.1
	4μm,0.5s						
VCEL	Villa Celiera	0.36	81	Pg	Pb	07 28 53.4	-0.1
	4μm,0.5s						
CERT	Cerreto	0.48	216	⇑iPg	Pb	07 28 55.8	+0.2
CERT				Sg	Sb	07 29 03.4	+1.0
	3μm,0.7s						
CERT	Cerreto	0.48	216	⇑iPg	Pb	07 28 55.8	+0.2
CERT				Sg	Sb	07 29 03.4	+1.0
	3μm,0.7s						
VVLD	Villa Vallelon	0.50	158	⇓iPg	Pg	07 28 55.1	-0.5
	1μm,0.5s						
VVLD	Villa Vallelon	0.50	158	⇓iPg	Pg	07 28 55.1	-0.5
	1μm,0.5s						
MNS	Montasola	0.51	276	⇑iPg	Pg	07 28 55.4	-0.3
	1μm,0.6s						
MNS	Montasola	0.51	276	⇑iPg	Pg	07 28 55.4	-0.3
	1μm,0.6s						
INTR	Introdacqua	0.52	129	Pg	Pg	07 28 55.3	-0.5
INTR				Sg	Sg	07 29 02.4	-0.4
	2μm,0.7s						
INTR	Introdacqua	0.52	129	Pg	Pg	07 28 55.3	-0.5
INTR				Sg	Sg	07 29 02.4	-0.4
	2μm,0.7s						
NRCA	Norcia	0.53	340	Pg	Pg	07 28 55.3	-0.8
NRCA				Sg	Sg	07 29 02.8	-0.4
	2μm,0.1s						
NRCA	Norcia	0.53	340	Pg	Pg	07 28 55.3	-0.8

NRCA				Sg	Sg	07 29 02.8	-0.4
	2µm,0.1s						
GUAR	**Guarcino**	**0.54**	**184**	Pg	**Pg**	**07 28 56.3**	**0.0**
	598nm,0.6s						
GUAR	**Guarcino**	**0.54**	**184**	Pg	**Pg**	**07 28 56.3**	**0.0**
	598nm,0.6s						
MTCE	**Montecelio**	**0.56**	**236**	⇑*i*Pg	**Pb**	**07 28 56.9**	**0.0**
	391nm,0.4s						
MTCE	**Montecelio**	**0.56**	**236**	⇑*i*Pg	**Pb**	**07 28 56.9**	**0.0**
	391nm,0.4s						
TRTR	**Tortoreto Alta**	**0.62**	**41**	Pg	**Pb**	**07 28 58.6**	**+0.7**
	6µm,0.9s						
TRTR	**Tortoreto Alta**	**0.62**	**41**	Pg	**Pb**	**07 28 58.6**	**+0.7**
	6µm,0.9s						
OFFI	**Offida**	**0.64**	**22**	⇑*i*Pg	**Pb**	**07 28 58.7**	**+0.4**
	4µm,0.4s						
OFFI	**Offida**	**0.64**	**22**	⇑*i*Pg	**Pb**	**07 28 58.7**	**+0.4**
	4µm,0.4s						
POFI	**Posta Fibreno**	**0.67**	**157**	Pg	**Pg**	**07 28 58.0**	**-0.7**
	352nm,0.6s						
POFI	**Posta Fibreno**	**0.67**	**157**	Pg	**Pg**	**07 28 58.0**	**-0.7**
	352nm,0.6s						
LPEL	**Lama dei Pelig**	**0.67**	**115**	Pg	**Pg**	**07 28 57.7**	**-1.0**
LPEL				Sg	**Sg**	**07 29 07.0**	**-0.7**
	1µm,0.9s						
LPEL	**Lama dei Pelig**	**0.67**	**115**	Pg	**Pg**	**07 28 57.7**	**-1.0**
LPEL				Sg	**Sg**	**07 29 07.0**	**-0.7**
	1µm,0.9s						
SDI	**San Donato**	**0.71**	**152**	Pg	**Pg**	**07 28 58.5**	**-0.9**
	133nm,0.2s						
SDI	**San Donato**	**0.71**	**152**	Pg	**Pg**	**07 28 58.5**	**-0.9**
	133nm,0.2s						
FDMO	**Fiordimonte**	**0.73**	**344**	⇑*i*Pg	**Pg**	**07 28 58.8**	**-1.0**
FDMO				Sg	**Sb**	**07 29 09.7**	**+0.2**
	386nm,0.2s						
FDMO	**Fiordimonte**	**0.73**	**344**	⇑*i*Pg	**Pg**	**07 28 58.8**	**-1.0**
FDMO				Sg	**Sb**	**07 29 09.7**	**+0.2**
	386nm,0.2s						
CESI	**CESI - Serrava**	**0.75**	**333**	Pg	**Pb**	**07 28 59.3**	**-0.8**
	338nm,0.4s						
CESI	**CESI - Serrava**	**0.75**	**333**	Pg	**Pb**	**07 28 59.3**	**-0.8**
	338nm,0.4s						
GIUL	**Giuliano Di Ro**	**0.78**	**186**	Pg	**Pn**	**07 29 01.7**	**-0.1**
	583nm,0.7s						
GIUL	**Giuliano Di Ro**	**0.78**	**186**	Pg	**Pn**	**07 29 01.7**	**-0.1**
	583nm,0.7s						
ASSB	**Assisi San Ben**	**0.88**	**324**	Pg	**Pb**	**07 29 01.6**	**-0.7**
	596nm,0.7s						
ASSB	**Assisi San Ben**	**0.88**	**324**	Pg	**Pb**	**07 29 01.6**	**-0.7**
	596nm,0.7s						
CERA	**Filignano**	**0.89**	**146**	Pg	**Pb**	**07 29 01.5**	**-1.0**
	455nm,0.7s						
CERA	**Filignano**	**0.89**	**146**	Pg	**Pb**	**07 29 01.5**	**-1.0**
	455nm,0.7s						
MIDA	**Miranda**	**0.96**	**136**	Pg	**Pb**	**07 29 02.6**	**-1.1**
	332nm,0.6s						
MIDA	**Miranda**	**0.96**	**136**	Pg	**Pb**	**07 29 02.6**	**-1.1**
	332nm,0.6s						
CING	**Cingoli**	**1.04**	**353**	Pg	**Pb**	**07 29 04.5**	**-0.7**
	467nm,0.5s						
CING	**Cingoli**	**1.04**	**353**	Pg	**Pb**	**07 29 04.5**	**-0.7**
	467nm,0.5s						
MGAB	**Montegabbione**	**1.09**	**302**	Pg	**Pn**	**07 29 06.2**	**+0.2**
	543nm,0.5s						
MGAB	**Montegabbione**	**1.09**	**302**	Pg	**Pn**	**07 29 06.2**	**+0.2**
	543nm,0.5s						
MURB	**Monte Urbino**	**1.11**	**327**	Pg	**Pb**	**07 29 06.3**	**0.0**
	944nm,0.4s						
MURB	**Monte Urbino**	**1.11**	**327**	Pg	**Pb**	**07 29 06.3**	**0.0**
	944nm,0.4s						
ARVD	**Arcevia**	**1.20**	**345**	Pg	**Pn**	**07 29 07.6**	**0.0**
	397nm,1.0s						
ARVD	**Arcevia**	**1.20**	**345**	Pg	**Pn**	**07 29 07.6**	**0.0**
	397nm,1.0s						
AOI	**Ancona**	**1.22**	**8**	Pg	**Pb**	**07 29 08.3**	**+0.1**
	316nm,0.5s						
AOI	**Ancona**	**1.22**	**8**	Pg	**Pb**	**07 29 08.3**	**+0.1**
	316nm,0.5s						
PIEI	**Pieia**	**1.34**	**333**	Pn	**Pb**	**07 29 10.3**	**0.0**
	176nm,0.7s						
PIEI	**Pieia**	**1.34**	**333**	Pn	**Pb**	**07 29 10.3**	**0.0**
	176nm,0.7s						
PARC	**Parchiule**	**1.55**	**328**	Pn	**Pb**	**07 29 14.4**	**+0.6**
	141nm,0.5s						
PARC	**Parchiule**	**1.55**	**328**	Pn	**Pb**	**07 29 14.4**	**+0.6**
	141nm,0.5s						
MAON	**Monte Argentar**	**1.66**	**274**	Pn	**Pb**	**07 29 15.3**	**-0.3**
	103nm,0.8s						
MAON	**Monte Argentar**	**1.66**	**274**	Pn	**Pb**	**07 29 15.3**	**-0.3**
	103nm,0.8s						
ASQU	**Asqua**	**1.86**	**322**	Pn	**Pb**	**07 29 19.0**	**-0.1**
	78nm,0.9s						
ASQU	**Asqua**	**1.86**	**322**	Pn	**Pb**	**07 29 19.0**	**-0.1**
	78nm,0.9s						
SFI	**Santa Sofia**	**1.92**	**325**	Pn	**Pb**	**07 29 20.1**	**0.0**
	86nm,0.9s						
SFI	**Santa Sofia**	**1.92**	**325**	Pn	**Pb**	**07 29 20.1**	**0.0**
	86nm,0.9s						
NVLJ	**Novalja**	**2.48**	**26**	*e*Pn	**Pn**	**07 29 26.8**	**+1.7**
NVLJ				Sn	**Sn**	**07 29 56.3**	**+1.3**
NVLJ	**Novalja**	**2.48**	**26**	*e*Pn	**Pn**	**07 29 26.8**	**+1.7**
NVLJ				Sn	**Sn**	**07 29 56.2**	**+1.3**
MAIM	**Mastiano**	**2.63**	**308**	P	**Pb**	**07 29 30.4**	**-1.7**
MAIM				S	**Sn**	**07 29 59.0**	**+0.4**
PGF	**Pioggiola**	**3.24**	**275**	*e*Pn	**Pn**	**07 29 37.6**	**+2.0**
PGF				*e*Sn	**Sn**	**07 30 17.4**	**+3.5**
	11nm,0.7s						
PGF	**Pioggiola**	**3.24**	**275**	*e*Pn	**Pn**	**07 29 37.6**	**+2.0**
PGF				*e*Sn	**Sn**	**07 30 17.4**	**+3.5**
	5.4nm,0.7s						
STON	**Ston**	**3.24**	**79**	*e*Pn	**Pn**	**07 29 37.6**	**+2.0**
STON				Sn	**Sn**	**07 30 14.2**	**+0.3**
STON	**Ston**	**3.24**	**79**	*e*Pn	**Pn**	**07 29 37.6**	**+2.0**
STON				Sn	**Sn**	**07 30 14.1**	**+0.3**
CTI	**Castel Tesino**	**3.91**	**342**	Pn	**Pn**	**07 29 47.3**	**+2.4**
	39nm,0.6s						
CTI	**Castel Tesino**	**3.91**	**342**	Pn	**Pn**	**07 29 47.3**	**+2.4**
	39nm,0.6s						
SBF	**Sospel**	**4.60**	**291**	*e*Pn	**Pn**	**07 29 55.7**	**+1.4**
SBF				*e*Sn	**Sn**	**07 30 45.3**	**-2.1**
	5.1nm,0.4s						
SBF	**Sospel**	**4.60**	**291**	*e*Pn	**Pn**	**07 29 55.7**	**+1.4**
SBF				*e*Sn	**Sn**	**07 30 45.3**	**-2.1**
	2.5nm,0.4s						
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**07 30 02.2**	**+1.3**
FRF				*e*Sn	**Sn**	**07 30 56.8**	**-2.3**
	3.2nm,0.3s						
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**07 30 02.2**	**+1.3**
FRF				*e*Sn	**Sn**	**07 30 56.8**	**-2.3**
	1.6nm,0.3s						
LMR	**La Mourre**	**5.14**	**283**	*e*Pn	**Pn**	**07 30 02.8**	**+1.2**
LMR	**La Mourre**	**5.14**	**283**	*e*Pn	**Pn**	**07 30 02.8**	**+1.2**
MBDF	**Montbardon**	**5.36**	**299**	*e*P	**Pn**	**07 30 07.6**	**+2.8**
MBDF	**Montbardon**	**5.36**	**299**	*e*P	**Pn**	**07 30 07.6**	**+2.8**
KHC	**Kasperske Hory**	**6.80**	**1**	*e*x	x	07 30 38.0	
KHC				*e*SN	**Sn**	**07 31 40.5**	**-0.9**
HINF	**Hinteralfeld**	**7.16**	**322**	*e*Pn	**Pn**	**07 30 30.0**	**+0.6**
HINF				*e*Sn	**Sn**	**07 31 46.8**	**-3.5**
	2.9nm,0.3s						
HINF	**Hinteralfeld**	**7.16**	**322**	*e*Pn	**Pn**	**07 30 30.0**	**+0.6**
CDF	**Champ du Feu**	**7.43**	**327**	*e*Pn	**Pn**	**07 30 34.5**	**+1.3**
CDF				*e*Sn	**Sn**	**07 31 53.7**	**-3.4**
	4.5nm,0.4s						
CDF	**Champ du Feu**	**7.43**	**327**	*e*Pn	**Pn**	**07 30 34.5**	**+1.3**
HAU	**Haudompre**	**7.53**	**321**	*e*Pn	**Pn**	**07 30 35.7**	**+1.2**
HAU				*e*Sn	**Sn**	**07 31 53.8**	**-5.6**
	3.5nm,0.3s						
HAU	**Haudompre**	**7.53**	**321**	*e*Pn	**Pn**	**07 30 35.7**	**+1.2**

*CSEM **06** 07:32:34.9, 37.82N×30.15E, h6km, MD2.6, After ISK*

ISK 06 07:32:34.9, 37.82N×30.15E, h6km, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.30**	**90**	*e*PG	Pg	07 32 40.5	-0.3
ISP	**Isparta**	**0.30**	**90**	*e*Pg	Pg	07 32 40.5	-0.4
BCK	**Bucak**	**0.50**	**136**	*e*PG	Pg	07 32 45.4	+0.6
BCK				*e*SG	Sb	07 32 52.8	-1.1
BCK	**Bucak**	**0.50**	**136**	*e*Pg	Pg	07 32 45.4	+0.7
BCK				*e*Sg	Sb	07 32 52.8	-1.1
KHL	**Karahalli**	**0.70**	**316**	*e*PG	Pg	07 32 48.7	+0.1
KHL				*e*SG	Sb	07 32 59.0	-0.7
KHL	**Karahalli**	**0.70**	**316**	*e*Pg	Pg	07 32 48.7	+0.1
KHL				*e*Sg	Sb	07 32 59.0	-0.7
SHUT	**Suhut-Afyon**	**0.80**	**23**	*e*PG	Pg	07 32 50.8	+0.4
SHUT				*e*SG	Sb	07 33 02.3	-0.2
SHUT	**Suhut-Afyon**	**0.80**	**23**	*e*Pg	Pg	07 32 50.8	+0.4
SHUT				*e*Sg	Sb	07 33 02.3	-0.2
ALT	**Altintas**	**1.23**	**359**	*e*PN	Pn	07 32 58.9	0.0
ALT	**Altintas**	**1.23**	**359**	*e*Pn	Pn	07 32 58.9	+0.1
KULA	**Kula-Manisa**	**1.36**	**301**	*e*PN	Pb	07 33 00.9	0.0
KULA	**Kula-Manisa**	**1.36**	**301**	*e*Pn	Pb	07 33 00.9	0.0
TVSB	**Tavsanli**	**1.71**	**342**	*e*PN	Pn	07 33 06.1	+0.7
TVSB	**Tavsanli**	**1.71**	**342**	*e*Pn	Pn	07 33 06.1	+0.7

IDC 06 07:32:54.9±2.4**, 15.28S×73.45W, h106**km±21km**, mb3.3**/2**, mb1 3.2**/6**, mb1mx3.1**/23**, mbtmp3.1**/6**, MS2.8**/2**, Ms1 2.9**/2**, ms1mx2.4**/10**, Error ellipse: s-maj=52.5km s-min=21.9km az=33.0, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.65**	**314**	P	Pn	07 34 02.8	-0.2
	8.6nm,0.3s,baz=136,slow=15,SNR=19						
NNA				S	Sn	07 35 11.1	+15
	12nm,0.3s,baz=60,slow=23,SNR=6.7						
LPAZ	**La Paz**	**5.22**	**102**	P	Pn	07 34 12.1	+0.7
	0.7nm,0.3s,baz=265,slow=13,SNR=36						
LPAZ				LR	LR	07 36 30.2	
	comp=Z,91nm,19.2s,baz=223,slow=41						
SIV	**San Ignacio**	**11.95**	**95**	P	Pn	07 35 40.7	-1.2
	0.2nm,0.3s,baz=265,slow=15,SNR=3.4						
SIV				LR	LR	07 41 03.1	
	comp=Z,46nm,21.2s,slow=41						
CFAA	**Coronel Fontan**	**16.93**	**165**	P	Pn	07 36 45.2	-0.2
	0.0nm,0.3s,baz=340,slow=11,SNR=4.3						
TORD	**Torodi Ar. Bea**	**79.53**	**73**	P	P	07 44 50.5	-0.1
	0.8nm,0.9s,baz=246,slow=4.9,SNR=4.1						
YKA	**Yellowknife Ar**	**83.95**	**342**	P	P	07 45 12.6	-0.1
	0.3nm,0.8s,baz=134,slow=5.3,SNR=6.8						
SONM	**Songino Array**	**147.54**	**0**	PKPbc	PKPbc	07 52 26.7	-0.2
	0.5nm,0.6s,baz=4.3,slow=2.3,SNR=4.7						

IDC 06 07:38:55.6±4.6**, 5.28S×146.16E, h193**km±54km**, mb3.1**/4**, mb1 3.2**/6**, mb1mx3.1**/19**, mbtmp3.0**/6**, Error ellipse: s-maj=59.3km s-min=21.5km az=135.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.22**	**166**	P	Pn	07 40 01.7	+1.7
	0.9nm,0.3s,baz=350,slow=6.1,SNR=2.3						
PMG				S	Sn	07 40 49.9	-0.8
	2.9nm,0.3s,baz=33,slow=17,SNR=4.6						
WRA	**Warramunga Arr**	**18.57**	**217**	P	P	07 42 58.4	+0.1
	0.3nm,0.3s,baz=38,slow=12,SNR=22						
ASAR	**Alice Springs**	**21.76**	**212**	P	P	07 43 32.9	+0.6
	0.6nm,0.4s,baz=39,slow=7.4,SNR=15						
FITZ	**Fitzroy Crossi**	**23.76**	**236**	P	P	07 43 50.1	-0.5
	2.3nm,0.5s,baz=47,slow=11,SNR=17						
MKAR	**Makanchi Array**	**76.41**	**321**	P	P	07 50 23.8	-0.1
	0.1nm,0.4s,baz=112,slow=7.1,SNR=2.7						
ILAR	**Eielson Array**	**85.15**	**23**	P	P	07 51 09.8	+0.1
	0.7nm,0.7s,baz=249,slow=4.6,SNR=12						

*ISCJB **06** 07:39:41.4±0.2, 42.34N±0.02×13.37E±0.02, h10km±2km, mb3.4/4, Error ellipse: s-maj=3.0km s-min=2.7km az=149.4*

*CSEM **06** 07:39:41.7±0.1, 42.33N×13.37E, h5km, ML4.1/6, Error ellipse: s-maj=2.5km s-min=2.0km az=54.0*

*ROM **06** 07:39:41.3±0.1, 42.32N×13.38E, h9km±1km, Ml3.3/38, Error ellipse: s-maj=1.4km s-min=1.2km az=56.0*

*IDC **06** 07:39:42.1±1.2, 42.50N×13.24E, h0km, mb3.3/5, mb1 3.6/8, mb1mx3.5/29, mbtmp3.4/8, ML3.4/3, Error ellipse: s-maj=21.6km s-min=14.7km az=97.0*

*LDG **06** 07:39:43.5±0.2, 42.32N×13.33E, h2km, Ml3.2/6, Error ellipse: s-maj=6.3km s-min=4.1km az=49.0*

ISC 06 07:39:42.3±0.7**, 42.33N**±0.02×**13.37E**±0.02**, h9**km±4km**, n127, σ1§23**/162**, mb3.4**/4**, 10C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**42**	⇓*i*Pg	**Pg**	**07 39 43.6**	**-0.6**
AQU				Sg	**Sg**	**07 39 44.8**	**-0.7**
	817nm,0.3s						
AQU	**L'Aquila**	**0.04**	**42**	⇓*i*Pg	**Pg**	**07 39 43.6**	**-0.6**
AQU				Sg	**Sg**	**07 39 44.8**	**-0.7**
	817nm,0.3s						
FAGN	**Fagnano**	**0.17**	**110**	Pg	**Pg**	**07 39 45.6**	**-0.4**
FAGN				Sg	**Sg**	**07 39 48.8**	**+0.3**
	43µm,0.5s						
FAGN	**Fagnano**	**0.17**	**110**	Pg	**Pg**	**07 39 45.6**	**-0.4**
FAGN				Sg	**Sg**	**07 39 48.8**	**+0.3**
	43µm,0.5s						
FIAM	**Fiamignano**	**0.19**	**253**	Pg	**Pg**	**07 39 46.9**	**+0.5**
FIAM				Sg	**Sg**	**07 39 49.8**	**+0.6**
FIAM	**Fiamignano**	**0.19**	**253**	Pg	**Pg**	**07 39 46.9**	**+0.5**
FIAM				Sg	**Sg**	**07 39 49.8**	**+0.6**
CAMP	**Campotosto**	**0.21**	**8**	⇑*i*Pg	**Pg**	**07 39 46.1**	**-0.7**
CAMP				Sg	**Sg**	**07 39 49.5**	**-0.3**
CAMP	**Campotosto**	**0.21**	**8**	⇑*i*Pg	**Pg**	**07 39 46.1**	**-0.7**
CAMP				Sg	**Sg**	**07 39 49.5**	**-0.3**
PTQR	**Pietraquaria**	**0.30**	**175**	Pg	**Pg**	**07 39 47.9**	**-0.5**
PTQR				Sg	**Sg**	**07 39 53.0**	**+0.5**
PTQR	**Pietraquaria**	**0.30**	**175**	Pg	**Pg**	**07 39 47.9**	**-0.5**
PTQR				Sg	**Sg**	**07 39 53.0**	**+0.5**
TERO	**Teramo**	**0.34**	**30**	Pg	**Pg**	**07 39 48.0**	**-1.2**
TERO				Sg	**Sg**	**07 39 54.3**	**+0.5**
	7µm,0.4s						
TERO	**Teramo**	**0.34**	**30**	Pg	**Pg**	**07 39 48.0**	**-1.2**
TERO				Sg	**Sg**	**07 39 54.3**	**+0.5**
	7µm,0.4s						
VCEL	**Villa Celiera**	**0.36**	**79**	Pg	**Pg**	**07 39 48.5**	**-0.9**
	8µm,0.4s						
VCEL	**Villa Celiera**	**0.36**	**79**	Pg	**Pg**	**07 39 48.5**	**-0.9**
	8µm,0.4s						
CERT	**Cerreto**	**0.47**	**217**	⇑*i*Pg	**Pg**	**07 39 51.0**	**-0.5**
CERT				Sg	**Sg**	**07 39 58.0**	**+0.2**
	5µm,0.4s						
CERT	**Cerreto**	**0.47**	**217**	⇑*i*Pg	**Pg**	**07 39 51.0**	**-0.5**
CERT				Sg	**Sg**	**07 39 58.0**	**+0.2**
	5µm,0.4s						
VVLD	**Villa Vallelon**	**0.49**	**157**	Pg	**Pg**	**07 39 51.4**	**-0.5**
	3µm,0.5s						
VVLD	**Villa Vallelon**	**0.49**	**157**	Pg	**Pg**	**07 39 51.4**	**-0.5**
	3µm,0.5s						
INTR	**Introdacqua**	**0.51**	**128**	Pg	**Pg**	**07 39 51.3**	**-0.9**
INTR				Sg	**Sg**	**07 39 59.0**	**+0.1**
	3µm,0.8s						
INTR	**Introdacqua**	**0.51**	**128**	Pg	**Pg**	**07 39 51.3**	**-0.9**
INTR				Sg	**Sg**	**07 39 59.0**	**+0.1**
	3µm,0.8s						
MNS	**Montasola**	**0.51**	**277**	Pg	**Pg**	**07 39 51.5**	**-0.8**
	2µm,0.6s						
MNS	**Montasola**	**0.51**	**277**	Pg	**Pg**	**07 39 51.5**	**-0.8**
	2µm,0.6s						
GUAR	**Guarcino**	**0.53**	**184**	Pg	**Pg**	**07 39 51.8**	**-0.9**
	2µm,0.4s						
GUAR	**Guarcino**	**0.53**	**184**	Pg	**Pg**	**07 39 51.8**	**-0.9**
	2µm,0.4s						
NRCA	**Norcia**	**0.54**	**340**	Pg	**Pg**	**07 39 51.9**	**-1.0**
NRCA				Sg	**Sg**	**07 40 00.7**	**+0.7**
	2µm,0.2s						
NRCA	**Norcia**	**0.54**	**340**	Pg	**Pg**	**07 39 51.9**	**-1.0**
NRCA				Sg	**Sg**	**07 40 00.7**	**+0.7**
	2µm,0.2s						
MTCE	**Montecelio**	**0.55**	**237**	⇑*i*Pg	**Pg**	**07 39 52.4**	**-0.7**
	1µm,0.8s						
MTCE	**Montecelio**	**0.55**	**237**	⇑*i*Pg	**Pg**	**07 39 52.4**	**-0.7**
	1µm,0.8s						
TRTR	**Tortoreto Alta**	**0.63**	**40**	Pg	**Pg**	**07 39 54.8**	**+0.3**
	9µm,0.9s						
TRTR	**Tortoreto Alta**	**0.63**	**40**	Pg	**Pg**	**07 39 54.8**	**+0.3**
	9µm,0.9s						
OFFI	**Offida**	**0.65**	**21**	⇑*i*Pg	**Pg**	**07 39 54.4**	**-0.6**
	7µm,0.6s						
OFFI	**Offida**	**0.65**	**21**	⇑*i*Pg	**Pg**	**07 39 54.4**	**-0.6**
	7µm,0.6s						
POFI	**Posta Fibreno**	**0.66**	**157**	Pg	**Pg**	**07 39 54.4**	**-0.7**
	923nm,0.7s						
POFI	**Posta Fibreno**	**0.66**	**157**	Pg	**Pg**	**07 39 54.4**	**-0.7**
	923nm,0.7s						
LPEL	**Lama dei Pelig**	**0.67**	**114**	Pg	**Pg**	**07 39 53.3**	**-1.9**
LPEL				Sg	**Sg**	**07 40 04.1**	**+0.1**
	2µm,0.8s						
LPEL	**Lama dei Pelig**	**0.67**	**114**	Pg	**Pg**	**07 39 53.3**	**-1.9**
LPEL				Sg	**Sg**	**07 40 04.1**	**+0.1**
	2µm,0.8s						
SDI	**San Donato**	**0.70**	**152**	Pg	**Pg**	**07 39 54.8**	**-1.0**
SDI	**San Donato**	**0.70**	**152**	Pg	**Pg**	**07 39 54.8**	**-1.0**
RMP	**Rome, Mte Porz**	**0.71**	**224**	Pg	**Pg**	**07 39 55.1**	**-1.0**
	2µm,0.5s						
RMP	**Rome, Mte Porz**	**0.71**	**224**	Pg	**Pg**	**07 39 55.1**	**-1.0**
	2µm,0.5s						
CAFR	**Castel Frentan**	**0.73**	**97**	Pg	**Pg**	**07 39 55.5**	**-1.0**
	2µm,0.7s						
CAFR	**Castel Frentan**	**0.73**	**97**	Pg	**Pg**	**07 39 55.5**	**-1.0**
	2µm,0.7s						
FDMO	**Fiordimonte**	**0.74**	**344**	Pg	**Pg**	**07 39 55.1**	**-1.5**
	1µm,0.4s						
FDMO	**Fiordimonte**	**0.74**	**344**	Pg	**Pg**	**07 39 55.1**	**-1.5**
	1µm,0.4s						
CESI	**CESI - Serrava**	**0.76**	**333**	Pg	**Pg**	**07 39 55.9**	**-1.1**
	783nm,0.4s						
CESI	**CESI - Serrava**	**0.76**	**333**	Pg	**Pg**	**07 39 55.9**	**-1.1**
	783nm,0.4s						
GIUL	**Giuliano Di Ro**	**0.77**	**186**	Pg	**Pg**	**07 39 56.1**	**-1.1**
	1µm,0.9s						
GIUL	**Giuliano Di Ro**	**0.77**	**186**	Pg	**Pg**	**07 39 56.1**	**-1.1**
	1µm,0.9s						
ASSB	**Assisi San Ben**	**0.89**	**324**	Pg	**Pg**	**07 39 58.0**	**-1.4**
	1µm,0.5s						
ASSB	**Assisi San Ben**	**0.89**	**324**	Pg	**Pg**	**07 39 58.0**	**-1.4**
	1µm,0.5s						
MIDA	**Miranda**	**0.95**	**136**	Pg	**Pg**	**07 39 58.3**	**-2.3**
	1µm,0.9s						
MIDA	**Miranda**	**0.95**	**136**	Pg	**Pg**	**07 39 58.3**	**-2.3**
	1µm,0.9s						
CING	**Cingoli**	**1.06**	**353**	Pg	**Pg**	**07 40 01.1**	**-1.6**
	712nm,0.5s						
CING	**Cingoli**	**1.06**	**353**	Pg	**Pg**	**07 40 01.1**	**-1.6**
	712nm,0.5s						
MGAB	**Montegabbione**	**1.10**	**303**	Pg	**Pg**	**07 40 02.6**	**-0.8**
	857nm,0.5s						
MGAB	**Montegabbione**	**1.10**	**303**	Pg	**Pg**	**07 40 02.6**	**-0.8**
	857nm,0.5s						
SACS	**San Casciano d**	**1.20**	**296**	Pg	**Pb**	**07 40 04.9**	**-0.3**
	1µm,1.3s						
AOI	**Ancona**	**1.24**	**8**	Pg	**Pn**	**07 40 04.8**	**-1.1**
	879nm,1.0s						
AOI	**Ancona**	**1.24**	**8**	Pg	**Pn**	**07 40 04.8**	**-1.1**
	879nm,1.0s						
MODR	**Mondragone**	**1.24**	**162**	Pn	**Pn**	**07 40 05.7**	**-0.2**
	86nm,1.0s						
MODR	**Mondragone**	**1.24**	**162**	Pn	**Pn**	**07 40 05.7**	**-0.2**
	86nm,1.0s						
CAFI	**Castiglion Fio**	**1.44**	**315**	Pn	**Pn**	**07 40 08.7**	**+0.1**
	326nm,0.8s						
CAFI	**Castiglion Fio**	**1.44**	**315**	Pn	**Pn**	**07 40 08.7**	**+0.1**
	326nm,0.8s						
BADI	**Badiali**	**1.44**	**326**	Pn	**Pn**	**07 40 08.9**	**+0.2**
	161nm,0.5s						
BADI	**Badiali**	**1.44**	**326**	Pn	**Pn**	**07 40 08.9**	**+0.2**
	161nm,0.5s						
ARCI	**Arcidosso**	**1.49**	**291**	Pn	**Pb**	**07 40 10.0**	**-0.3**
	98nm,0.6s						
ARCI	**Arcidosso**	**1.49**	**291**	Pn	**Pb**	**07 40 10.0**	**-0.3**
	98nm,0.6s						
PARC	**Parchiule**	**1.56**	**328**	Pn	**Pb**	**07 40 10.8**	**-0.6**
	422nm,0.9s						
PARC	**Parchiule**	**1.56**	**328**	Pn	**Pb**	**07 40 10.8**	**-0.6**
	422nm,0.9s						
MAON	**Monte Argentar**	**1.66**	**274**	Pn	**Pn**	**07 40 11.0**	**-0.6**
	141nm,0.6s						
MAON	**Monte Argentar**	**1.66**	**274**	Pn	**Pn**	**07 40 11.0**	**-0.6**
	141nm,0.6s						
SGRT	**San Giovanni R**	**1.86**	**107**	Pn	**Pn**	**07 40 15.2**	**+0.7**
	198nm,0.6s						
SGRT	**San Giovanni R**	**1.86**	**107**	Pn	**Pn**	**07 40 15.2**	**+0.7**
	198nm,0.6s						
CASP	**Castiglione de**	**1.91**	**285**	Pn	**Pn**	**07 40 14.7**	**-0.3**
	130nm,1.2s						
CASP	**Castiglione de**	**1.91**	**285**	Pn	**Pn**	**07 40 14.7**	**-0.3**
	130nm,1.2s						
CSNT	**Castellina Chi**	**1.91**	**308**	Pn	**Pn**	**07 40 16.1**	**+1.0**
	105nm,1.0s						
CSNT	**Castellina Chi**	**1.91**	**308**	Pn	**Pn**	**07 40 16.1**	**+1.0**
	105nm,1.0s						
SFI	**Santa Sofia**	**1.93**	**325**	Pn	**Pn**	**07 40 15.3**	**-0.1**
	211nm,1.1s						
SFI	**Santa Sofia**	**1.93**	**325**	Pn	**Pn**	**07 40 15.3**	**-0.1**
	211nm,1.1s						
MSAG	**Monte S. Angel**	**1.99**	**107**	Pn	**Pn**	**07 40 17.4**	**+1.1**
	254nm,0.5s						
MSAG	**Monte S. Angel**	**1.99**	**107**	Pn	**Pn**	**07 40 17.4**	**+1.1**
	254nm,0.5s						
MS1	**Monte Sant'Ang**	**2.02**	**107**	*e*Pn	**Pb**	**07 40 19.5**	**+0.3**
NVLJ	**Novalja**	**2.49**	**26**	*e*Pn	**Pn**	**07 40 23.0**	**-0.1**
NVLJ				Sn	**Sn**	**07 40 53.6**	**0.0**
NVLJ	**Novalja**	**2.49**	**26**	*e*Pn	**Pn**	**07 40 22.9**	**-0.1**
NVLJ				Sn	**Sn**	**07 40 53.5**	**0.0**
MAIM	**Mastiano**	**2.64**	**308**	P	**Pn**	**07 40 24.8**	**-0.3**
MAIM				S	**Sn**	**07 40 55.3**	**-1.9**
PGF	**Pioggiola**	**3.24**	**275**	*e*Pn	**Pn**	**07 40 33.7**	**+0.2**
PGF				*e*Sn	**Sn**	**07 41 14.1**	**+1.9**
	7.6nm,0.3s						
PGF	**Pioggiola**	**3.24**	**275**	*e*Pn	**Pn**	**07 40 33.7**	**+0.2**
PGF				*e*Sn	**Sn**	**07 41 14.1**	**+1.9**
	3.8nm,0.3s						
STON	**Ston**	**3.25**	**79**	*e*Pn	**Pn**	**07 40 34.1**	**+0.6**
STON				Sn	**Sn**	**07 41 11.3**	**-0.8**
STON	**Ston**	**3.25**	**79**	*e*Pn	**Pn**	**07 40 34.0**	**+0.6**
STON				Sn	**Sn**	**07 41 11.3**	**-0.8**
SC2M	**Scurtabo**	**3.48**	**308**	P	**Pn**	**07 40 35.7**	**-1.0**
VOY	**Vojsko**	**3.73**	**6**	*e*Pn	**Pn**	**07 40 38.0**	**-2.1**
VOY				*e*		07 40 43.7	
VOY				*e*		07 41 25.2	
VOY	**Vojsko**	**3.73**	**6**	Pn	**Pn**	**07 40 38.0**	**-2.1**
VOY				*e*Sn	**Sn**	**07 41 25.2**	**+1.0**
CTI	**Castel Tesino**	**3.92**	**342**	Pn	**Pn**	**07 40 43.4**	**+0.6**
	54nm,0.5s						
CTI	**Castel Tesino**	**3.92**	**342**	Pn	**Pn**	**07 40 43.4**	**+0.6**
	54nm,0.5s						
ABTA	**Abfaltersbach**	**4.46**	**352**	⇑*i*Pn	**Pn**	**07 40 50.7**	**+0.4**
ABTA	**Abfaltersbach**	**4.46**	**352**	Pn	**Pn**	**07 40 50.7**	**+0.4**
SBF	**Sospel**	**4.61**	**291**	*e*Pn	**Pn**	**07 40 52.1**	**-0.1**
SBF				*e*Sn	**Sn**	**07 41 41.9**	**-4.0**
	4.9nm,0.3s						
SBF	**Sospel**	**4.61**	**291**	*e*Pn	**Pn**	**07 40 52.1**	**-0.1**
SBF				*e*Sn	**Sn**	**07 41 41.9**	**-4.0**
	2.5nm,0.3s						
FETA	**Feichten**	**5.06**	**339**	⇑*i*Pn	**Pn**	**07 40 59.8**	**+1.3**
FETA	**Feichten**	**5.06**	**339**	Pn	**Pn**	**07 40 59.8**	**+1.3**
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**07 40 57.8**	**-0.9**
FRF				*e*Sn	**Sn**	**07 41 53.2**	**-4.4**
	4.5nm,0.4s						
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**07 40 57.8**	**-0.9**
FRF				*e*Sn	**Sn**	**07 41 53.2**	**-4.4**
	2.2nm,0.4s						
DAVOX	**Davos/Dischmat**	**5.10**	**332**	Pn	**Pn**	**07 41 00.8**	**+1.6**
	1.3nm,0.3s,baz=160,slow=17,SNR=8.4						
DAVOX				Sn	**Sn**	**07 41 59.6**	**+1.4**
	1.5nm,0.3s,baz=131,slow=20,SNR=5.2						
LMR	**La Mourre**	**5.14**	**284**	*e*Pn	**Pn**	**07 40 58.5**	**-1.0**
LMR	**La Mourre**	**5.14**	**284**	*e*Pn	**Pn**	**07 40 58.5**	**-1.0**
MBDF	**Montbardon**	**5.36**	**299**	*e*P	**Pn**	**07 41 04.1**	**+1.4**
MBDF	**Montbardon**	**5.36**	**299**	*e*P	**Pn**	**07 41 04.1**	**+1.4**
LPG	**La Plagne**	**5.74**	**306**	*e*P	**Pn**	**07 41 09.9**	**+2.0**
LPG	**La Plagne**	**5.74**	**306**	*e*P	**Pn**	**07 41 09.9**	**+2.0**
GERES	**GERESS Array B**	**6.53**	**2**	Pn	**Pn**	**07 41 18.3**	**-0.3**
	0.5nm,0.3s,baz=173,slow=13,SNR=6.7						
GERES				Sn	**Sn**	**07 42 29.3**	**-3.9**
	1.4nm,0.3s,baz=193,slow=30,SNR=6.3						
CABF	**La Chapelle**	**6.74**	**312**	*e*Pn	**Pn**	**07 41 21.6**	**0.0**
CABF	**La Chapelle**	**6.74**	**312**	*e*Pn	**Pn**	**07 41 21.6**	**0.0**
KHC	**Kasperske Hory**	**6.81**	**1**	*e*PN	**Pn**	**07 41 22.8**	**+0.4**
KHC				*e*PG	**Pg**	**07 41 55.0**	**+2.4**
KHC				*e*SN	**Sn**	**07 42 37.1**	**-2.9**
KHC	**Kasperske Hory**	**6.81**	**1**	Pn	**Pn**	**07 41 22.8**	**+0.4**
HINF	**Hinteralfeld**	**7.17**	**322**	*e*Pn	**Pn**	**07 41 27.0**	**-0.3**
HINF				*e*Sn	Sn	07 42 41.8	-7.1
	5.5nm,0.4s						
HINF	**Hinteralfeld**	**7.17**	**322**	*e*Pn	**Pn**	**07 41 27.0**	**-0.3**
KEST	**Kesra**	**7.29**	**207**	Pn	Pn	07 41 33.5	+4.4
	0.7nm,0.3s,baz=316,slow=5.0,SNR=20						
CDF	**Champ du Feu**	**7.44**	**327**	*e*Pn	**Pn**	**07 41 30.1**	**-1.1**
CDF				*e*Sn	Sn	07 42 49.6	-6.1
	5.1nm,0.4s						
CDF	**Champ du Feu**	**7.44**	**327**	*e*Pn	**Pn**	**07 41 30.1**	**-1.1**
HAU	**Haudompre**	**7.54**	**321**	*e*Pn	**Pn**	**07 41 31.9**	**-0.5**
HAU				*e*Sn	Sn	07 42 50.9	-7.1
	7.3nm,0.4s						

HAU Haudompre 7.54 321 *e*Pn Pn 07 41 31.9 -0.5
MLR Muntele Rosu 9.61 67 Pn Pn 07 42 03.2 +2.2
0.1nm,0.3s,baz=157,slow=4.4,SNR=5.8
FINES FINESS Array B 20.62 17 P P 07 44 21.5 -0.2
2.5nm,0.8s,baz=199,slow=12,SNR=3.4
KBZ Khabaz 21.59 76 P P 07 44 34.5 +2.2
0.5nm,0.3s,baz=261,slow=17,SNR=2.5
TORD Torodi Ar. Bea 30.79 203 P P 07 45 59.5 +1.2
0.5nm,0.9s,baz=9.2,slow=8.8,SNR=3.7
MKAR Makanchi Array 47.88 60 P P 07 48 21.0 +0.4
0.3nm,0.5s,baz=281,slow=6.7,SNR=6.5
YKA Yellowknife Ar 67.52 337 P P 07 50 38.2 -0.2
0.1nm,0.4s,baz=45,slow=6.2,SNR=4.2

IDC 06 07:48:52.2±0.8**, 33.64N×82.21E, h0km, mb3.6**/13, **mb1 3.8**/16**, mb1mx3.7**/32**, mbtmp3.6**/16**, ML2.9**/2**, Error ellipse: s-maj=23.9km s-min=14.7km az=51.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	10.83	328	Pn	Pn	07 51 29.3	+0.5
	baz=145,slow=12,SNR=1.9						
AAK				Sn	Sn	07 53 29.7	-1.2
	0.2nm,0.3s,baz=141,slow=13,SNR=2.4						
MKAR	Makanchi Array	13.14	0	Pn	Pn	07 51 60.0	-0.1
	0.2nm,0.3s,baz=179,slow=13,SNR=12						
MKAR				Sn	Sn	07 54 25.3	-1.7
	0.1nm,0.3s,baz=190,slow=24,SNR=4.8						
KURBB	Kurchatov Arra	17.18	352	P	Pn	07 52 52.9	-0.7
	0.0nm,0.3s,baz=172,slow=11,SNR=9.1						
ZALV	Zalesovo Beam	20.38	4	P	P	07 53 30.6	+0.2
	1.3nm,0.6s,baz=196,slow=10,SNR=8.9						
BVAR	Borovoye Array	21.14	340	P	P	07 53 38.7	0.0
	0.6nm,0.6s,baz=138,slow=9.7,SNR=4.4						
CMAR	Chiang Mai Arr	21.28	131	P	P	07 53 41.0	+0.6
	2.2nm,0.8s,baz=310,slow=10,SNR=9.4						
SONM	Songino Array	23.05	45	P	P	07 53 60.0	+0.8
	0.9nm,0.9s,baz=229,slow=8.5,SNR=5.7						
AKTO	Aktyubinsk	24.42	321	P	P	07 54 12.9	+0.5
	1.3nm,0.6s,baz=118,slow=10,SNR=6.0						
MLR	Muntele Rosu	44.12	303	P	P	07 57 02.6	+0.1
	0.5nm,0.8s,baz=143,slow=10,SNR=4.1						
FINES	FINESS Array B	45.01	326	P	P	07 57 10.6	+1.4
	0.9nm,0.7s,baz=115,slow=10.0,SNR=2.9						
NOA	NORSAR Array B	52.12	324	P	P	07 58 03.2	-0.8
	0.7nm,0.7s,baz=88,slow=7.5,SNR=3.1						
KEST	Kesra	58.63	294	P	P	07 58 51.5	+0.1
	0.8nm,0.7s,baz=84,slow=9.2,SNR=2.4						
WRA	Warramunga Arr	72.86	129	P	P	08 00 23.0	-0.2
	1.0nm,0.9s,baz=323,slow=5.8,SNR=6.5						
ILAR	Eielson Array	74.69	20	P	P	08 00 32.9	-0.4
	0.1nm,0.5s,baz=312,slow=5.2,SNR=4.2						
TORD	Torodi Ar. Bea	75.02	276	P	P	08 00 35.9	-0.2
	0.7nm,0.6s,baz=44,slow=5.1,SNR=6.5						
ASAR	Alice Springs	75.29	132	P	P	08 00 37.4	+0.1
	0.5nm,0.8s,baz=328,slow=5.4,SNR=4.8						
YKA	Yellowknife Ar	83.25	8	P	P	08 01 19.4	-0.9
	0.5nm,0.7s,baz=337,slow=5.5,SNR=16						

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*BJI **06** 08:30:03.5, 5.75S×146.11E, h61km, mB5.0/18, mb4.9/34, Ms5.0/15, Ms7 4.5/13*
*ISCJB **06** 08:30:06.5±1.0, 5.55S±0.04×145.73E±0.04, h72km±10km, mb4.5/50, Error ellipse: s-maj=7.4km s-min=7.2km az=17.9*
*IDC **06** 08:30:09.0±0.7, 5.55S×145.67E, h83km±6km, mb4.2/22, mb1 4.3/25, mb1mx4.3/28, mbtmp4.3/25, MS3.4/10, Ms1 3.4/10, ms1mx3.1/31, Error ellipse: s-maj=16.4km s-min=9.5km az=79.0*
*DJA **06** 08:30:09.3±1.2, 5°S±9°×14°6E±1°2, h69km±9km, M5.2/12, mB5.7/4, mb4.9/12, MLv5.3/4, Mw(mB)5.2/4, Mwp6.7/1*
*NEIC **06** 08:30:10.4±1.2, 5.53S×145.68E, h95km±11km, mb4.6/21, Error ellipse: s-maj=8.8km s-min=7.6km az=92.0*
NEIC Felt at Goroka.
*AUST **06** 08:30:12.5, 5.80S×145.59E, h100km*
ISC 06 08:30:07.3±0.4**, 5.56S**±0.04×**145.74E**±0.05**, h68**km±2km**, h67km:pP-P, n142, σ1.53**/198**, mb4.8**/49**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.08	160	*e*Pn	Pn	08 31 08.9	+1.6
PMG				S	Sn	08 31 52.8	-0.9
PMG				*e*Sn	Sn	08 31 53.5	-0.3
PMG	Port Moresby	4.08	160	P	Pn	08 31 09.3	+2.0
PMG	Port Moresby	4.08	160	P	Pn	08 31 09.3	+2.0
	219nm,0.3s,baz=338,slow=6.8,SNR=457						
PMG				S	Sn	08 31 52.8	-0.9
	198nm,0.3s,baz=138,slow=18,SNR=13						
JAY	Jayapura	5.86	301	P	Pn	08 31 37.1	+5.4
	78nm,0.6s,4μm1.2nm						
JAY	Jayapura	5.86	301	P	Pn	08 31 38.2	+6.5
	baz=5.9,SNR=4.3						
MMPI	Merauke	6.05	241	S	Sn	08 32 43.3	+1.1
	baz=5.8,SNR=5.5						
SMPI	Sarmi	7.86	297	P	Pn	08 32 06.3	+7.3
	74nm,1.4s,0.3nm						
COEN	Coen	8.72	197	*e*Pn	Pn	08 32 13.2	+2.3
COEN				*e*Sn	Sn	08 33 45.9	-1.9
COEN	Coen	8.72	197	P	Pn	08 32 13.5	+2.6
	baz=8.5,SNR=160						
COEN				S	Sn	08 33 45.2	-2.5
	baz=8.5,SNR=8.7						
TLE	Tual	12.94	269	S	Sn	08 35 03.4	-27
	baz=13,SNR=4.8						
CTA	Charters Tower	14.46	178	P	P	08 33 32.8	-0.7
CTA	Charters Tower	14.46	178	P	P	08 33 32.8	-0.7
	3.6nm,0.3s,baz=356,slow=14,SNR=25						
CTA				LR	LR	08 38 20.0	
	comp=Z,66nm,20.9s,baz=360,slow=34						
CTAO	Charters Tower	14.46	178	*e*Pn	P	08 33 32.9	-0.6
HNR	Honiara	14.60	106	*e*Pn	P	08 33 33.5	-1.7
HNR	Honiara	14.60	106	P	P	08 33 34.2	-0.9
	14nm,0.3s,baz=335,slow=1.0,SNR=12						
HNR				LR	LR	08 38 48.1	
	comp=Z,63nm,18.4s,baz=178,slow=35						
KDU	Kakadu	14.89	241	P	Pn	08 33 34.9	+0.8
	baz=15,SNR=25						
SWI	Sorong	15.19	287	P	Pn	08 33 38.9	+0.9
SWI	Sorong	15.19	287	P	P	08 33 43.4	+1.8
	baz=15,SNR=8.5						
MTN	Manton Dam	16.13	242	P	Pn	08 33 49.7	-0.3
	baz=16,SNR=34						
AAI	Ambon	17.59	275	P	P	08 34 14.3	+6.1
	84nm,0.7s						
WRAB	Tennant Creek	18.08	217	*e*P	Pn	08 34 14.7	+0.7
	20nm,1.0s						
WRAB				*e*S	Sn	08 37 29.3	-6.1
WRA	Warramunga Arr	18.10	217	P	P	08 34 13.1	-0.7
WRA				ScP	ScP	08 42 12.8	-2.2
WRA	Warramunga Arr	18.10	217	P	P	08 34 13.1	-0.7
	0.4nm,0.3s,baz=41,slow=12,SNR=17						
WRA				ScP	ScP	08 42 12.8	-2.2
	baz=25,slow=2.1,SNR=5.1						
NLAI	Namlea	18.73	276	P	Pn	08 34 27.2	+5.4
	52nm,1.3s						
LBMI	Labuha	18.85	284	P	Pn	08 34 24.6	+1.3
	87nm,0.9s						
GUMO	Guam	19.04	357	LR	LR	08 40 44.8	
	comp=Z,48nm,21.6s,baz=308,slow=33						
EIDS	Eidsvold	20.36	166	*e*P	Pn	08 34 41.4	+0.3
	21nm,0.6s						
EIDS	Eidsvold	20.36	166	P	Pn	08 34 41.0	0.0
	baz=20,SNR=4.4						
QLP	Quilpie	20.96	184	P	Pn	08 34 48.0	-0.1
	baz=21,SNR=3.8						
AS31	Alice Springs	21.31	211	*e*P	P	08 34 50.3	+1.5
ASAR	Alice Springs	21.31	211	P	P	08 34 49.1	+0.3
ASAR				S	S	08 38 40.3	-1.6
ASAR	Alice Springs	21.31	211	P	P	08 34 49.1	+0.3
	1.8nm,0.8s,baz=36,slow=7.8,SNR=15						
ASAR				pP	pP	08 35 04.7	+1.6
	6.6nm,0.7s,baz=34,slow=12,SNR=15						
ASAR				S	S	08 38 40.3	-1.6
	0.7nm,0.9s,baz=36,slow=24,SNR=2.4						
MNI	Manado	22.00	288	P	P	08 34 58.9	+2.7
FITZ	Fitzroy Crossi	23.26	236	P	P	08 35 07.4	-1.8
FITZ				ScP	ScP	08 42 23.9	-3.5
FITZ	Fitzroy Crossi	23.26	236	P	P	08 35 07.4	-1.8
	5.3nm,0.6s,baz=75,slow=8.5,SNR=14						
FITZ				ScP	ScP	08 42 23.9	-3.5
	4.7nm,1.0s,baz=90,slow=1.0,SNR=3.1						
FITZ				LR	LR	08 45 03.5	
	comp=Z,70nm,19.8s,baz=302,slow=39						
DZM	Mont Dzumac	25.90	131	P	P	08 35 33.4	+0.1
DZM	Mont Dzumac	25.90	131	P	P	08 35 33.4	+0.1
	5.6nm,0.6s,baz=288,slow=18,SNR=10						
DZM				LR	LR	08 44 26.8	
	comp=Z,114nm,18.2s,baz=32,slow=33						
PCI	Palu	26.26	279	S	S	08 40 30.2	+26
	baz=26,SNR=7.1						
STKA	Stephens Creek	26.47	188	*e*P	P	08 35 38.4	+0.1
	9.0nm,1.3s						
STKA	Stephens Creek	26.47	188	P	P	08 35 38.1	-0.1
	4.0nm,0.8s,baz=344,slow=8.6,SNR=6.4						
STKA				pP	pP	08 35 58.4	+4.0
	17nm,0.8s,baz=337,slow=11,SNR=11						
STKA				LR	LR	08 48 08.2	
	comp=Z,117nm,19.0s,baz=27,slow=41						
STKA	Stephens Creek	26.47	188	P	P	08 35 38.5	+0.2
	baz=26,SNR=4.5						
MEEK	Meekatharra	33.30	228	P	P	08 36 39.2	+0.4
	baz=33,SNR=5.1						
JNU	Nakatsue	40.97	341	*e*P	P	08 37 43.6	-0.1
JNU	Nakatsue	40.97	341	P	P	08 37 43.0	-0.7
	7.4nm,0.8s,baz=32,slow=20,SNR=4.3						
MJAR	Matsushiro Arr	42.47	351	P	P	08 37 55.3	-0.5
MJAR	Matsushiro Arr	42.47	351	P	P	08 37 55.3	-0.5
	3.3nm,0.6s,baz=183,slow=8.5,SNR=15						
MJAR				LR	LR	08 53 40.1	
	comp=Z,55nm,19.3s,baz=150,slow=33						
MAJO	Matsushiro	42.47	351	*e*P	P	08 37 55.6	-0.2
	21nm,1.3s						
MAT	Matsushiro	42.47	351	P	P	08 37 55.0	-0.8
URZ	Urewera	43.25	143	P	P	08 38 03.4	+1.2
URZ	Urewera	43.25	143	P	P	08 38 03.4	+1.2
	3.0nm,0.5s,baz=6.5,slow=22,SNR=7.2						
KSRS	Korea Array	45.90	340	P	P	08 38 23.5	+0.3
	10nm,0.9s,baz=160,slow=9.3,SNR=34						
KSRS				LR	LR	08 55 51.4	
	comp=Z,36nm,19.3s,baz=178,slow=34						
KSAR	Wonju Array Be	45.90	340	P	P	08 38 23.5	+0.3
PSI	Prapat	47.49	279	P	P	08 38 36.1	-0.1
PSI	Prapat	47.49	279	P	P	08 38 36.1	-0.1
	3.7nm,0.4s,baz=142,slow=15,SNR=5.1						
GSI	Gunungsitoli	48.58	277	P	P	08 38 46.6	+2.1
	baz=48,SNR=4.0						
GYA	Guiyang	49.45	312	P	P	08 38 52.8	+1.7
GYA				pP	pP	08 39 08.5	+0.2
GYA				sP	sP	08 39 17.2	+1.2
GYA				PcP	PcP	08 40 15.0	+2.5
GYA				PP	PP	08 40 47.8	+1.9
GYA				ScP	ScP	08 44 02.3	+0.2
GYA				S	S	08 45 54.2	+0.4
GYA				sS	sS	08 46 22.0	-1.0
GYA				SS	SS	08 49 21.9	-4.7
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,90nm,4.9s						
GYA				LR	LR		
	comp=N,450nm,18.1s						
GYA				LR	LR		
	comp=E,390nm,19.5s						
GYA				LR	LR		
	comp=Z,420nm,18.0s						
ASAJ	Asahikawa	49.52	357	P	P	08 38 50.5	-0.6
ASAJ	Asahikawa	49.52	357	P	P	08 38 50.5	-0.6
	comp=Z,5.4nm,0.5s,baz=233,slow=5.1,SNR=4.1						
USRK	Ussuriysk Arra	51.05	347	P	P	08 39 03.0	+0.4
	comp=Z,12nm,0.7s,baz=177,slow=7.1,SNR=45						
KMI	Kunming	51.73	308	P	P	08 39 09.3	+0.8
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
CMAR	Chiang Mai Arr	51.94	299	P	P	08 39 11.1	+1.3
CMAR	Chiang Mai Arr	51.94	299	P	P	08 39 11.1	+1.3
	comp=Z,2.8nm,0.4s,baz=117,slow=6.5,SNR=4.3						
CMAR				LR	LR	09 03 25.1	
	comp=Z,32nm,18.1s,baz=129,slow=38						
MDJ	Mudanjiang	52.01	345	P	P	08 39 09.9	0.0
MDJ				pP	pP	08 39 25.6	-1.6
MDJ				sP	sP	08 39 32.7	-2.2
MDJ				ScP	ScP	08 44 13.3	+0.8
MDJ				PcS	PcS	08 44 20.2	+0.8
MDJ				S	S	08 46 28.4	+0.1
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,61nm,4.3s						
CHTO	Chiang Mai	52.07	299	*e*P	P	08 39 11.7	+0.9
	comp=Z,14nm,0.8s						
CN2	Changchun	52.44	342	*e*P	P	08 39 16.3	+3.3
XAN	Xi'an	52.55	321	P	P	08 39 13.9	-0.2
XAN				pP	pP	08 39 30.2	-1.3
XAN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,22nm,5.5s						
BJI	Beijing	52.91	332	P	P	08 39 17.8	+1.2
BJI				LR	LR		
	comp=N,460nm,15.3s						
BJI				LR	LR		
	comp=E,470nm,19.0s						
BJI				LR	LR		
	comp=Z,340nm,20.0s						
CD2	Chengdu	54.07	315	P	P	08 39 26.5	+1.1
CD2				pP	pP	08 39 46.6	+3.8
CD2				PP	PP	08 41 30.7	+3.1
CD2				PcS	PcS	08 44 28.1	-1.0
CD2				S	S	08 46 55.2	-1.7
CD2				sS	sS	08 47 30.2	+3.7
CD2				SS	SS	08 50 37.4	-2.1
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
CD2				pmax	pmax		
	comp=Z,80nm,5.6s						
HHC	Hu-ho-hao-te	55.80	329	*e*P	P	08 39 39.0	+1.2
HHC				pP	pP	08 39 54.4	-0.9
HHC				sP	sP	08 40 01.6	-1.3
HHC				PcP	PcP	08 40 37.1	+1.0
HHC				PP	PP	08 41 45.3	+2.3
HHC				ScP	ScP	08 44 29.8	+0.4
HHC				PcS	PcS	08 44 36.6	+0.1
HHC				S	S	08 47 19.6	-0.3
HHC				sS	sS	08 47 46.4	-3.3
HHC				ScS	ScS	08 49 19.2	-1.8
HHC				SS	SS	08 51 05.4	-1.2
HHC				pmax	pmax		
	comp=Z,39nm,0.7s						
HHC				pmax	pmax		
	comp=Z,220nm,6.4s						
HHC				LR	LR		
	comp=N,240nm,16.2s						
HHC				LR	LR		
	comp=E,200nm,16.7s						
HHC				LR	LR		
	comp=Z,190nm,16.1s						
LZH	Lanzhou	57.06	320	*e*P	P	08 39 48.0	+1.1
LZH				pP	pP	08 40 04.2	-0.3
LZH				sP	sP	08 40 11.3	-0.8
LZH				PP	PP	08 41 56.5	+2.1
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,69nm,7.2s						
LZH				LR	LR		
	comp=N,410nm,15.0s						
LZH				LR	LR		
	comp=E,410nm,15.5s						
LZH				LR	LR		
	comp=Z,500nm,18.3s						
PETK	Petropavlovsk-	59.31	8	P	P	08 40 02.8	+0.8
PETK	Petropavlovsk-	59.31	8	P	P	08 40 02.8	+0.8
	comp=Z,11nm,0.8s,baz=182,slow=7.4,SNR=16						
GTA	Gaotai	61.60	321	P	P	08 40 18.8	+0.7
GTA				pP	pP	08 40 35.0	-0.9
GTA				sP	sP	08 40 41.9	-1.6
GTA				S	S	08 48 34.7	-0.6
GTA				sS	sS	08 49 02.2	-3.3
GTA				SS	SS	08 52 38.2	+0.3
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,76nm,5.2s						
GTA				LR	LR		
	comp=N,63nm,16.6s						
GTA				LR	LR		
	comp=E,120nm,15.7s						
GTA				LR	LR		
	comp=Z,110nm,15.7s						
GTA	Gaotai	61.60	321	pP	pP	08 40 35.0	-0.9
GTA				sP	sP	08 40 41.9	-1.6
GTA				S	S	08 48 34.7	-0.6
GTA				sS	sS	08 49 02.2	-3.3
GTA				SS	SS	08 52 38.2	+0.3
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,76nm,5.2s						
GTA				LR	LR		
	comp=N,63nm,16.6s						
GTA				LR	LR		
	comp=E,120nm,15.7s						
LSA	Lhasa	62.97	307	P	P	08 40 28.3	+0.4
ULN	Ulaanbaatar	63.12	332	*e*P	P	08 40 28.8	+0.7
	comp=E,5.0nm,0.7s						
SONM	Songino Array	63.41	331	P	P	08 40 30.3	+0.3
SONM				sP	sP	08 40 59.6	+4.2
SONM	Songino Array	63.41	331	P	P	08 40 30.3	+0.3
	comp=E,2.1nm,0.6s,baz=158,slow=6.4,SNR=20						
SONM				sP	sP	08 40 59.6	+4.2
	comp=E,0.4nm,0.4s,baz=141,slow=5.2,SNR=3.1						
TAPN	Taplejung	64.86	304	*e*P	P	08 40 40.5	+0.4
	comp=E,35nm,0.8s						
ODAN	Odare	64.95	303	*e*P	P	08 40 41.2	+0.6
	comp=E,47nm,0.7s						
RAMN	Ramite	65.64	303	*e*P	P	08 40 45.7	+0.6
	comp=E,20nm,0.6s						
GUN	Gumba	66.58	303	*e*P	P	08 40 51.8	+0.6
	comp=E,63nm,0.5s						
PKI	Pulchoki	66.85	303	*e*P	P	08 40 53.1	+0.1
KKN	Kakani	67.03	303	*e*P	P	08 40 54.3	+0.3
	comp=E,54nm,0.9s						
DMN	Daman	67.12	303	*e*P	P	08 40 55.0	+0.4
KOLN	Koldanda	68.43	303	*e*P	P	08 41 02.9	+0.1
	comp=E,43nm,0.7s						
DANN	Dangsing	68.48	303	*e*P	P	08 41 03.2	0.0
	comp=E,36nm,0.6s						
PYUN	Piuthan	69.05	303	*e*P	P	08 41 06.5	-0.1
	comp=E,80nm,0.8s						
HYB	Hyderabad	70.13	291	*i* P	P	08 41 11.0	-2.2
WMQ	Urumqi	71.64	320	P	P	08 41 23.0	+1.1
WMQ				pP	pP	08 41 40.0	-0.1
WMQ				sP	sP	08 41 47.0	-0.6
WMQ				PP	PP	08 44 04.0	+2.2
WMQ				S	S	08 50 36.0	-0.4
WMQ				ScS	SKSac	08 51 18.0	-1.7
WMQ				SS	SS	08 55 13.0	-0.3
WMQ				pmax	pmax		
	comp=Z,19nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,86nm,6.0s						
WMQ				LR	LR		
	comp=N,140nm,16.0s						
WMQ				LR	LR		
	comp=E,180nm,16.0s						
WMQ				LR	LR		
	comp=Z,210nm,16.0s						
VNDA	Vanda	72.43	176	P	P	08 41 26.6	+0.7
VNDA	Vanda	72.43	176	P	P	08 41 26.6	+0.7
	comp=Z,0.9nm,0.7s,baz=322,slow=6.4,SNR=4.5						
MK31	Makanchi Array	76.36	321	*e*P	P	08 41 49.4	+0.1
MKAR	Makanchi Array	76.36	321	P	P	08 41 49.4	+0.1
MKAR	Makanchi Array	76.36	321	P	P	08 41 49.4	+0.1
	comp=Z,4.5nm,0.7s,baz=105,slow=6.8,SNR=53						
ZALV	Zalesovo Beam	77.97	328	P	P	08 41 57.0	-1.2
ZALV	Zalesovo Beam	77.97	328	P	P	08 41 57.0	-1.2
	comp=Z,4.9nm,0.7s,baz=106,slow=4.9,SNR=11						
KSH	Kashi	78.15	312	P	P	08 42 01.0	+1.3
KSH				PcP	PcP	08 42 10.0	+1.0
KSH				pP	pP	08 42 17.0	-1.1
KSH				sP	sP	08 42 24.0	-1.5
KSH				PP	PP	08 45 00.0	+2.9
KSH				S	S	08 51 50.0	+0.9
KSH				SKS	SKSac	08 52 04.0	-4.4
KSH				ScS	ScS	08 52 12.0	-2.2
KSH				sS	sS	08 52 18.0	-2.4
KSH				SS	SS	08 56 55.0	+2.5
KSH				pmax	pmax		
	comp=Z,14nm,0.8s						
KSH				LR	LR		
	comp=N,100nm,4.5s						
KSH				LR	LR		
	comp=E,150nm,4.4s						
KSH				LR	LR		
	comp=Z,260nm,6.9s						
KZA	Kyzart	79.44	314	P	P	08 42 08.2	+1.2
	SNR=45						
TKM2	Tokmak 2	79.45	315	*e*P	P	08 42 06.9	+0.1
	comp=Z,9.3nm,0.6s						
TKM2	Tokmak 2	79.45	315	P	P	08 42 07.0	+0.1
	SNR=17						
KURK	Kurchatov	80.11	324	*e*P	P	08 42 09.5	-0.4
	comp=Z,7.9nm,0.9s						
AAK	Ala-Archa	80.14	315	*e*P	P	08 42 10.8	+0.3
	comp=Z,21nm,0.9s						
AAK	Ala-Archa	80.14	315	P	P	08 42 10.8	+0.3
	comp=Z,4.4nm,0.8s,baz=113,slow=4.8,SNR=13						
USP	Ospenovka	80.32	315	P	P	08 42 11.5	+0.2
	SNR=11						
AML	Almayashu	80.56	314	P	P	08 42 13.8	+0.7
	SNR=27						
EKS2	Erkin-Say	80.65	315	*e*P	P	08 42 13.9	+0.7
	comp=Z,9.8nm,0.8s						
EKS2	Erkin-Say	80.65	315	P	P	08 42 13.9	+0.7
	SNR=11						
KBL	Kabul	82.25	306	*e*P	P	08 42 21.3	-0.6
	comp=Z,8.3nm,0.6s						
RC01	Rabbit Creek A	82.88	26	*e*P	P	08 42 23.6	-0.8
	comp=Z,1.9nm,0.5s						
KKAR	Karatay Array	83.08	314	*e*P	P	08 42 25.7	-0.2
	comp=Z,1.6nm,0.5s						
SML	Sawmill	83.79	26	*e*P	P	08 42 29.3	+0.3
	comp=Z,2.2nm,0.8s						
QSPA	South Pole Qui	84.41	180	P	P	08 42 31.6	-0.7
QSPA	South Pole Qui	84.41	180	P	P	08 42 31.6	-0.7
	comp=Z,1.8nm,0.8s,baz=316,slow=5.0,SNR=8.3						
BMRM	Bremner River	85.13	27	*e*P	P	08 42 36.8	+0.9
	comp=Z,22nm,1.5s						
COLA	College	85.23	23	*e*P	P	08 42 35.5	-0.7
	comp=Z,8.9nm,0.8s						
COLD	Coldfoot	85.36	21	*e*P	P	08 42 37.9	+1.0
	comp=Z,4.2nm,0.9s						
ILAR	Eielson Array	85.57	23	P	P	08 42 36.5	-1.4
ILAR	Eielson Array	85.57	23	P	P	08 42 36.5	-1.4
	comp=Z,8.3nm,0.8s,baz=256,slow=4.9,SNR=88						
BVAR	Borovoye Array	85.67	324	P	P	08 42 37.8	-0.9
BVAR	Borovoye Array	85.67	324	P	P	08 42 37.8	-0.9
	comp=Z,5.4nm,0.7s,baz=104,slow=6.3,SNR=35						
BRVK	Borovoye	85.74	324	*e*P	P	08 42 38.1	-0.9
	comp=Z,4.1nm,0.8s						
MENT	Mentasta	86.21	26	*e*P	P	08 42 41.4	+0.2
DOT	Dot Lake	86.31	25	*e*P	P	08 42 42.0	+0.3
	comp=Z,4.2nm,0.9s						
EGAK	Eagle	87.88	24	*e*P	P	08 42 49.5	+0.4
	comp=Z,6.9nm,1.0s						
ABKAR	Akbulak array	91.42	319	*e*P	P	08 43 04.7	-1.4
	comp=Z,4.4nm,0.7s						
AKTO	Aktyubinsk	92.79	320	P	P	08 43 10.8	-1.6
AKTO	Aktyubinsk	92.79	320	P	P	08 43 10.8	-1.6
	comp=Z,0.9nm,0.6s,baz=122,slow=7.9,SNR=3.7						
OPO	Ambohidratompo	96.31	251	LR	LR	09 22 17.6	
	comp=Z,127nm,19.5s,baz=223,slow=32						
YKA	Yellowknife Ar	99.36	28	P	Pdif	08 43 40.8	-1.2
YKA	Yellowknife Ar	99.36	28	P	Pdif	08 43 40.7	-1.2
	comp=Z,0.5nm,0.9s,baz=272,slow=4.3,SNR=7.2						
CPUP	Villa Florida	141.21	146	PKP	PKPdf	08 49 31.3	+0.3
CPUP	Villa Florida	141.21	146	PKP	PKPdf	08 49 31.3	+0.3
	comp=Z,2.0nm,0.8s,baz=191,slow=3.5,SNR=5.0						
TOA0	Torodi Ar. Sit	143.76	285	*e*PKPdf	PKPbc	08 49 33.7	+0.1
TORD	Torodi Ar. Bea	143.76	285	PKP	PKPab	08 49 33.1	+0.3
TORD				pPKP	pPKPdf	08 49 59.1	+3.7
TORD	Torodi Ar. Bea	143.76	285	PKP	PKPab	08 49 33.1	+0.3
	comp=Z,2.4nm,0.5s,baz=83,slow=2.1,SNR=31						
TORD				pPKP	pPKPdf	08 49 59.1	+3.7
	comp=Z,0.5nm,0.4s,baz=91,slow=2.6,SNR=1.6						
SIV	San Ignacio	145.90	129	PKPbc	PKPbc	08 49 40.1	-0.2
SIV	San Ignacio	145.90	129	PKPbc	PKPbc	08 49 40.1	-0.2
	comp=Z,10.0nm,0.7s,baz=248,slow=3.4,SNR=47						
DBIC	Dimbokro	150.74	274	PKPbc	PKPbc	08 49 53.0	-0.1
DBIC				PKPab	PKPab	08 49 59.6	-0.6
DBIC	Dimbokro	150.74	274	PKPbc	PKPbc	08 49 53.0	-0.1
	comp=Z,26nm,0.8s,baz=90,slow=2.5,SNR=51						
DBIC				PKPab	PKPab	08 49 59.6	-0.6
	comp=Z,5.3nm,0.6s,baz=60,slow=4.0,SNR=6.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BDFB	**Brasilia**	**154.92**	**147**	PKPbc	**PKPbc**	**08 50 02.4**	**0.0**
BDFB	**Brasilia**	**154.92**	**147**	PKPbc	**PKPbc**	**08 50 02.4**	**0.0**
	comp=Z,1.2nm,0.7s,baz=190,slow=11,SNR=3.4						

*ISCJB **06** 08:32:26.2±0.4, 44.°29N±0.°04×11.°97E±0.°05, h29km±5km, Error ellipse: s-maj=6.3km s-min=5.6km az=42.3*
*CSEM **06** 08:32:26.6±0.2, 44.°25N×11.°96E, h30km, ML2.6/4, Error ellipse: s-maj=5.4km s-min=5.1km az=107.0*
*ROM **06** 08:32:27.2±0.3, 44.°22N×11.°90E, h24km±4km, Ml2.1/9, Error ellipse: s-maj=3.7km s-min=2.9km az=36.0*
ISC 06 08:32:26.4±0.9**, 44.°24N**±0.°03×**11.°94E**±0.°03**, h27**km±6km**, n48, σ0.s94**/60**, 2C, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAEN	**Faenza**	**0.07**	**314**	⇑iPg	**Pb**	**08 32 30.8**	**-0.3**
FAEN				Sg	**Sb**	**08 32 35.3**	**+1.0**
FAEN	**Faenza**	**0.07**	**314**	⇑iPg	**Pb**	**08 32 30.8**	**-0.3**
FAEN				Sg	**Sb**	**08 32 35.3**	**+1.0**
SFI	**Santa Sofia**	**0.35**	**192**	Pg	**Pb**	**08 32 33.8**	**-0.5**
SFI				Sg	**Sn**	**08 32 40.2**	**-1.5**
	372nm,0.4s						
SFI	**Santa Sofia**	**0.35**	**192**	Pg	**Pb**	**08 32 33.8**	**-0.5**
SFI				Sg	**Sn**	**08 32 40.2**	**-1.5**
	372nm,0.4s						
MTRZ	**Monterenzio**	**0.37**	**291**	Pg	**Pn**	**08 32 35.3**	**-0.7**
	123nm,0.3s						
MTRZ	**Monterenzio**	**0.37**	**291**	Pg	**Pn**	**08 32 35.3**	**-0.7**
	123nm,0.3s						
VMG	**Vicchio**	**0.40**	**226**	Pg	**Pb**	**08 32 34.7**	**-0.4**
VMG				Sg	**Sn**	**08 32 41.8**	**-1.3**
	97nm,0.2s						
VMG	**Vicchio**	**0.40**	**226**	Pg	**Pb**	**08 32 34.7**	**-0.4**
VMG				Sg	**Sn**	**08 32 41.8**	**-1.3**
	97nm,0.2s						
ASQU	**Asqua**	**0.46**	**194**	Pg	**Pb**	**08 32 35.6**	**-0.5**
ASQU				Sg	**Sn**	**08 32 43.5**	**-1.1**
	161nm,0.7s						
ASQU	**Asqua**	**0.46**	**194**	Pg	**Pb**	**08 32 35.6**	**-0.5**
ASQU				Sg	**Sn**	**08 32 43.5**	**-1.1**
	161nm,0.7s						
SEI	**Scarperia**	**0.46**	**246**	Pg	**Pb**	**08 32 35.7**	**-0.4**
	274nm,0.4s						
SEI	**Scarperia**	**0.46**	**246**	Pg	**Pb**	**08 32 35.7**	**-0.4**
	274nm,0.4s						
FIU	**Minerbio Fiu**	**0.51**	**321**	Pg	**Pn**	**08 32 39.6**	**+1.7**
FIU	**Minerbio Fiu**	**0.51**	**321**	Pg	**Pn**	**08 32 39.6**	**+1.7**
FNVD	**Fontana Vidola**	**0.59**	**263**	Pg	**Pn**	**08 32 38.2**	**-0.9**
FNVD	**Fontana Vidola**	**0.59**	**263**	Pg	**Pn**	**08 32 38.2**	**-0.9**
CRE	**Caprese Michel**	**0.62**	**179**	Pg	**Pn**	**08 32 38.9**	**-0.7**
CRE	**Caprese Michel**	**0.62**	**179**	Pg	**Pn**	**08 32 38.9**	**-0.7**
PARC	**Parchiule**	**0.63**	**160**	Pg	**Pn**	**08 32 39.0**	**-0.6**
PARC				Sg	**Sn**	**08 32 49.4**	**+0.6**
	61nm,0.5s						
PARC	**Parchiule**	**0.63**	**160**	Pg	**Pn**	**08 32 39.0**	**-0.6**
PARC				Sg	**Sn**	**08 32 49.4**	**+0.6**
	61nm,0.5s						
PESA	**Pesaro**	**0.71**	**115**	Pg	**Pn**	**08 32 41.8**	**+1.1**
PESA	**Pesaro**	**0.71**	**115**	Pg	**Pn**	**08 32 41.8**	**+1.1**
BADI	**Badiali**	**0.77**	**163**	Pg	**Pn**	**08 32 42.6**	**+1.2**
	106nm,0.5s						
BADI	**Badiali**	**0.77**	**163**	Pg	**Pn**	**08 32 42.6**	**+1.2**
	106nm,0.5s						
PZZT	**Monte Pizzetto**	**0.79**	**262**	Pg	**Pn**	**08 32 42.0**	**+0.2**
PZZT	**Monte Pizzetto**	**0.79**	**262**	Pg	**Pn**	**08 32 42.0**	**+0.2**
FSSB	**Fossombrone**	**0.82**	**132**	Pg	**Pn**	**08 32 43.3**	**+1.2**
FSSB	**Fossombrone**	**0.82**	**132**	Pg	**Pn**	**08 32 43.3**	**+1.2**
PIEI	**Pieia**	**0.83**	**149**	Pg	**Pn**	**08 32 42.4**	**+0.1**
	70nm,0.7s						
PIEI	**Pieia**	**0.83**	**149**	Pg	**Pn**	**08 32 42.4**	**+0.1**
	70nm,0.7s						
CRMI	**Carmignano**	**0.84**	**237**	Pg	**Pn**	**08 32 42.9**	**+0.5**
	45nm,0.3s						
CRMI	**Carmignano**	**0.84**	**237**	Pg	**Pn**	**08 32 42.9**	**+0.5**
	45nm,0.3s						
CSNT	**Castellina Chi**	**0.90**	**212**	Pg	**Pb**	**08 32 44.6**	**+1.1**
	51nm,0.6s						
CSNT	**Castellina Chi**	**0.90**	**212**	Pg	**Pb**	**08 32 44.6**	**+1.1**
	51nm,0.6s						
BDI	**Bagni Di Lucca**	**0.99**	**260**	Pg	**Pb**	**08 32 45.8**	**+0.9**
	52nm,0.8s						
BDI	**Bagni Di Lucca**	**0.99**	**260**	Pg	**Pb**	**08 32 45.8**	**+0.9**
	52nm,0.8s						
CTI	**Castel Tesino**	**1.82**	**354**	Pg	**Pn**	**08 32 55.6**	**-0.4**
CTI	**Castel Tesino**	**1.82**	**354**	Pg	**Pn**	**08 32 55.6**	**-0.4**
SKDS	**Skadanscina**	**1.97**	**48**	*i* Pn	**Pn**	**08 32 56.9**	**-1.0**
SKDS	**Skadanscina**	**1.97**	**48**	Pn	**Pn**	**08 32 56.9**	**-1.0**
NVLJ	**Novalja**	**2.12**	**80**	*e*Pn	**Pn**	**08 32 59.9**	**-0.1**
NVLJ				Sn	**Sn**	**08 33 25.2**	**-0.3**
NVLJ	**Novalja**	**2.12**	**80**	*e*Pn	**Pn**	**08 32 59.9**	**-0.1**
NVLJ				Sn	**Sn**	**08 33 25.2**	**-0.3**
JAVS	**Javornik**	**2.23**	**42**	*i* Pn	**Pn**	**08 33 00.7**	**-1.0**
JAVS	**Javornik**	**2.23**	**42**	*i* Pn	**Pn**	**08 33 00.7**	**-1.0**
VOY	**Vojsko**	**2.26**	**37**	*e*Pn	**Pn**	**08 33 00.4**	**-1.6**
VOY				*e*		08 33 06.8	
VOY	**Vojsko**	**2.26**	**37**	*e*Pn	**Pn**	**08 33 00.4**	**-1.6**
TUE	**Stuetta**	**2.88**	**322**	Pn	**Pn**	**08 33 11.7**	**+1.0**
TUE	**Stuetta**	**2.88**	**322**	Pn	**Pn**	**08 33 11.7**	**+1.0**

*ISCJB **06** 08:40:14.2±0.2, 42.°38N±0.°02×13.°35E±0.°02, h9km±2km, mb3.1/3, Error ellipse: s-maj=3.1km s-min=2.8km az=168.8*
*CSEM **06** 08:40:14.5±0.1, 42.°37N×13.°35E, h5km, ML4.0/6, Error ellipse: s-maj=2.6km s-min=2.1km az=56.0*
*ROM **06** 08:40:14.0±0.1, 42.°36N×13.°36E, h9km±1km, Ml3.3/26, Error ellipse: s-maj=1.4km s-min=1.2km az=79.0*
*IDC **06** 08:40:15.1±1.1, 42.°49N×13.°25E, h0km, mb3.1/3, mb1 3.4/7, mb1mx3.3/29, mbtmp3.2/7, ML3.2/4, Error ellipse: s-maj=20.4km s-min=13.9km az=96.0*
*LDG **06** 08:40:16.3±0.2, 42.°32N×13.°31E, h2km, Ml3.1/7, Error ellipse: s-maj=6.0km s-min=3.9km az=46.0*
ISC 06 08:40:14.9±0.8**, 42.°37N**±0.°02×**13.°36E**±0.°02**, h9**km±4km**, n104, σ1.s32**/138**, mb3.1**/3**, 14C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**111**	⇓iPg	**Pg**	**08 40 16.2**	**-0.6**
AQU				Sg	**Sg**	**08 40 17.4**	**-0.7**
	75μm,0.5s						
AQU	**L'Aquila**	**0.04**	**111**	⇓iPg	**Pg**	**08 40 16.2**	**-0.6**
AQU				Sg	**Sg**	**08 40 17.4**	**-0.7**
	75μm,0.5s						
CAMP	**Campotosto**	**0.17**	**13**	⇑iPg	**Pg**	**08 40 18.4**	**-0.3**
CAMP				Sg	**Sg**	**08 40 21.5**	**+0.2**
	26μm,0.5s						
CAMP	**Campotosto**	**0.17**	**13**	⇑iPg	**Pg**	**08 40 18.4**	**-0.3**
CAMP				Sg	**Sg**	**08 40 21.5**	**+0.2**
	26μm,0.5s						
FAGN	**Fagnano**	**0.20**	**121**	⇑ePg	**Pg**	**08 40 18.7**	**-0.3**
FAGN				Sg	**Sg**	**08 40 22.2**	**+0.3**
	28μm,0.3s						
FAGN	**Fagnano**	**0.20**	**121**	⇑ePg	**Pg**	**08 40 18.7**	**-0.3**
FAGN				Sg	**Sg**	**08 40 22.2**	**+0.3**
	28μm,0.3s						
FIAM	**Fiamignano**	**0.20**	**241**	⇑iPg	**Pg**	**08 40 19.0**	**-0.2**
FIAM				Sg	**Sg**	**08 40 22.7**	**+0.7**
FIAM	**Fiamignano**	**0.20**	**241**	⇑iPg	**Pg**	**08 40 19.0**	**-0.2**
FIAM				Sg	**Sg**	**08 40 22.7**	**+0.7**
TERO	**Teramo**	**0.32**	**36**	Pg	**Pg**	**08 40 20.4**	**-0.8**
TERO				Sg	**Sg**	**08 40 25.4**	**0.0**
TERO	**Teramo**	**0.32**	**36**	Pg	**Pg**	**08 40 20.4**	**-0.8**
TERO				Sg	**Sg**	**08 40 25.4**	**0.0**
PTQR	**Pietraquaria**	**0.35**	**174**	Pg	**Pg**	**08 40 21.1**	**-0.7**
PTQR				Sg	**Sg**	**08 40 25.9**	**-0.5**
PTQR	**Pietraquaria**	**0.35**	**174**	Pg	**Pg**	**08 40 21.1**	**-0.7**
PTQR				Sg	**Sg**	**08 40 25.9**	**-0.5**
VCEL	**Villa Celiera**	**0.36**	**85**	Pg	**Pg**	**08 40 21.7**	**-0.4**
	7μm,0.7s						
VCEL	**Villa Celiera**	**0.36**	**85**	Pg	**Pg**	**08 40 21.7**	**-0.4**
	7μm,0.7s						
NRCA	**Norcia**	**0.50**	**339**	Pg	**Pg**	**08 40 24.0**	**-0.7**
NRCA				Sg	**Sg**	**08 40 31.7**	**+0.4**
NRCA	**Norcia**	**0.50**	**339**	Pg	**Pg**	**08 40 24.0**	**-0.7**
NRCA				Sg	**Sg**	**08 40 31.7**	**+0.4**
MNS	**Montasola**	**0.50**	**272**	⇑iPg	**Pg**	**08 40 23.9**	**-0.7**
	2μm,0.5s						
MNS	**Montasola**	**0.50**	**272**	⇑iPg	**Pg**	**08 40 23.9**	**-0.7**
	2μm,0.5s						
CERT	**Cerreto**	**0.50**	**214**	⇑iPg	**Pg**	**08 40 23.8**	**-0.9**
CERT				Sg	**Sg**	**08 40 31.3**	**0.0**
	5μm,0.5s						
CERT	**Cerreto**	**0.50**	**214**	⇑iPg	**Pg**	**08 40 23.8**	**-0.9**
CERT				Sg	**Sg**	**08 40 31.3**	**0.0**
	5μm,0.5s						
VVLD	**Villa Vallelon**	**0.53**	**158**	Pg	**Pg**	**08 40 24.2**	**-1.1**
	2μm,0.5s						
VVLD	**Villa Vallelon**	**0.53**	**158**	Pg	**Pg**	**08 40 24.2**	**-1.1**
	2μm,0.5s						
INTR	**Introdacqua**	**0.54**	**131**	Pg	**Pg**	**08 40 24.5**	**-0.9**
INTR				Sg	**Sg**	**08 40 33.4**	**+0.9**
	2μm,0.5s						
INTR	**Introdacqua**	**0.54**	**131**	Pg	**Pg**	**08 40 24.5**	**-0.9**
INTR				Sg	**Sg**	**08 40 33.4**	**+0.9**
	2μm,0.5s						
MTCE	**Montecelio**	**0.57**	**233**	⇑iPg	**Pg**	**08 40 25.1**	**-0.9**
MTCE				Sg	**Sg**	**08 40 34.1**	**+0.6**
	1μm,0.5s						
MTCE	**Montecelio**	**0.57**	**233**	⇑iPg	**Pg**	**08 40 25.1**	**-0.9**
MTCE				Sg	**Sg**	**08 40 34.1**	**+0.6**
	1μm,0.5s						
GUAR	**Guarcino**	**0.57**	**183**	Pg	**Pg**	**08 40 26.5**	**+0.5**
	1μm,0.4s						
GUAR	**Guarcino**	**0.57**	**183**	Pg	**Pg**	**08 40 26.5**	**+0.5**
	1μm,0.4s						
TRTR	**Tortoreto Alta**	**0.60**	**43**	Pg	**Pg**	**08 40 27.0**	**+0.4**
	6μm,0.9s						
TRTR	**Tortoreto Alta**	**0.60**	**43**	Pg	**Pg**	**08 40 27.0**	**+0.4**
	6μm,0.9s						
OFFI	**Offida**	**0.62**	**23**	⇑iPg	**Pg**	**08 40 26.9**	**0.0**
OFFI	**Offida**	**0.62**	**23**	⇑iPg	**Pg**	**08 40 26.9**	**0.0**
LPEL	**Lama dei Pelig**	**0.69**	**117**	Pg	**Pg**	**08 40 26.9**	**-1.4**
LPEL				Sg	**Sg**	**08 40 37.3**	**-0.1**
LPEL	**Lama dei Pelig**	**0.69**	**117**	Pg	**Pg**	**08 40 26.9**	**-1.4**
LPEL				Sg	**Sg**	**08 40 37.3**	**-0.1**
FDMO	**Fiordimonte**	**0.70**	**344**	Pg	**Pg**	**08 40 27.5**	**-0.9**
FDMO	**Fiordimonte**	**0.70**	**344**	Pg	**Pg**	**08 40 27.5**	**-0.9**
POFI	**Posta Fibreno**	**0.70**	**158**	Pg	**Pg**	**08 40 28.5**	**+0.1**
POFI	**Posta Fibreno**	**0.70**	**158**	Pg	**Pg**	**08 40 28.5**	**+0.1**
CESI	**CESI - Serrava**	**0.72**	**333**	Pg	**Pg**	**08 40 28.2**	**-0.6**
	394nm,0.5s						
CESI	**CESI - Serrava**	**0.72**	**333**	Pg	**Pg**	**08 40 28.2**	**-0.6**
	394nm,0.5s						
CAFR	**Castel Frentan**	**0.75**	**100**	Pg	**Pg**	**08 40 28.5**	**-0.8**
	1μm,0.5s						
CAFR	**Castel Frentan**	**0.75**	**100**	Pg	**Pg**	**08 40 28.5**	**-0.8**
	1μm,0.5s						
GIUL	**Giuliano Di Ro**	**0.81**	**185**	Pg	**Pg**	**08 40 29.7**	**-0.8**
	1μm,1.1s						
GIUL	**Giuliano Di Ro**	**0.81**	**185**	Pg	**Pg**	**08 40 29.7**	**-0.8**
	1μm,1.1s						
ASSB	**Assisi San Ben**	**0.85**	**323**	Pg	**Pg**	**08 40 30.5**	**-0.8**
ASSB	**Assisi San Ben**	**0.85**	**323**	Pg	**Pg**	**08 40 30.5**	**-0.8**
CERA	**Filignano**	**0.91**	**147**	Pg	**Pg**	**08 40 31.5**	**-1.0**
	874nm,0.8s						
CERA	**Filignano**	**0.91**	**147**	Pg	**Pg**	**08 40 31.5**	**-1.0**
	874nm,0.8s						
MIDA	**Miranda**	**0.99**	**137**	Pg	**Pg**	**08 40 31.8**	**-2.1**
	453nm,0.5s						
MIDA	**Miranda**	**0.99**	**137**	Pg	**Pg**	**08 40 31.8**	**-2.1**
	453nm,0.5s						
CING	**Cingoli**	**1.01**	**353**	Pg	**Pg**	**08 40 33.4**	**-1.0**
CING	**Cingoli**	**1.01**	**353**	Pg	**Pg**	**08 40 33.4**	**-1.0**
TOLF	**Tolfa**	**1.05**	**254**	Pg	**Pg**	**08 40 34.9**	**-0.2**
	533nm,0.9s						
TOLF	**Tolfa**	**1.05**	**254**	Pg	**Pg**	**08 40 34.9**	**-0.2**
	533nm,0.9s						
MURB	**Monte Urbino**	**1.08**	**326**	Pg	**Pg**	**08 40 34.5**	**-1.3**
	893nm,0.3s						
MURB	**Monte Urbino**	**1.08**	**326**	Pg	**Pg**	**08 40 34.5**	**-1.3**
	893nm,0.3s						
MODR	**Mondragone**	**1.28**	**162**	Pn	**Pn**	**08 40 38.8**	**-0.1**
	103nm,1.0s						
MODR	**Mondragone**	**1.28**	**162**	Pn	**Pn**	**08 40 38.8**	**-0.1**
	103nm,1.0s						
PIEI	**Pieia**	**1.31**	**333**	Pn	**Pn**	**08 40 39.1**	**-0.4**
	347nm,0.8s						
PIEI	**Pieia**	**1.31**	**333**	Pn	**Pn**	**08 40 39.1**	**-0.4**
	347nm,0.8s						
PTRJ	**Pietraroja**	**1.33**	**138**	Pn	**Pb**	**08 40 40.3**	**+0.2**
	659nm,0.7s						
PTRJ	**Pietraroja**	**1.33**	**138**	Pn	**Pb**	**08 40 40.3**	**+0.2**
	659nm,0.7s						
ARCI	**Arcidosso**	**1.47**	**290**	Pn	**Pn**	**08 40 42.0**	**+0.4**
	108nm,0.8s						
ARCI	**Arcidosso**	**1.47**	**290**	Pn	**Pn**	**08 40 42.0**	**+0.4**
	108nm,0.8s						
PARC	**Parchiule**	**1.52**	**328**	Pn	**Pb**	**08 40 43.6**	**+0.3**
	493nm,0.9s						
PARC	**Parchiule**	**1.52**	**328**	Pn	**Pb**	**08 40 43.6**	**+0.3**
	493nm,0.9s						
CASP	**Castiglione de**	**1.89**	**284**	Pn	**Pn**	**08 40 47.2**	**-0.1**
	69nm,0.9s						
CASP	**Castiglione de**	**1.89**	**284**	Pn	**Pn**	**08 40 47.2**	**-0.1**
	69nm,0.9s						
MS1	**Monte Sant'Ang**	**2.04**	**108**	*e*Pn	**Pb**	**08 40 51.7**	**-0.4**
NVLJ	**Novalja**	**2.46**	**26**	*e*Pn	**Pn**	**08 40 55.5**	**+0.4**
NVLJ				Sn	**Sn**	**08 41 24.8**	**-0.4**
NVLJ	**Novalja**	**2.46**	**26**	*e*Pn	**Pn**	**08 40 55.5**	**+0.4**
NVLJ				Sn	**Sn**	**08 41 24.8**	**-0.4**
CDT	**Castel del Mon**	**2.53**	**119**	*e*Pn	**Pn**	**08 40 57.3**	**+1.1**
BDI	**Bagni Di Lucca**	**2.63**	**311**	Pn	**Pn**	**08 40 58.9**	**+1.3**
	43nm,0.7s						
BDI	**Bagni Di Lucca**	**2.63**	**311**	Pn	**Pn**	**08 40 58.9**	**+1.3**
	43nm,0.7s						
PGF	**Pioggiola**	**3.23**	**275**	*e*Pn	**Pn**	**08 41 06.2**	**+0.4**
PGF				*e*Sn	**Sn**	**08 41 45.9**	**+1.5**
	18nm,0.6s						
PGF	**Pioggiola**	**3.23**	**275**	*e*Pn	**Pn**	**08 41 06.2**	**+0.4**
PGF				*e*Sn	**Sn**	**08 41 45.9**	**+1.5**
	9.1nm,0.6s						
STON	**Ston**	**3.25**	**80**	*e*Pn	**Pn**	**08 41 07.0**	**+1.0**
STON	**Ston**	**3.25**	**80**	*e*Pn	**Pn**	**08 41 06.9**	**+1.0**
CTI	**Castel Tesino**	**3.88**	**342**	Pn	**Pn**	**08 41 16.0**	**+1.2**
	48nm,0.5s						
CTI	**Castel Tesino**	**3.88**	**342**	Pn	**Pn**	**08 41 16.0**	**+1.2**
	48nm,0.5s						
SBF	**Sospel**	**4.58**	**291**	*e*Pn	**Pn**	**08 41 24.5**	**+0.1**
SBF				*e*Sn	**Sn**	**08 42 12.8**	**-5.0**
	6.3nm,0.3s						
SBF	**Sospel**	**4.58**	**291**	*e*Pn	**Pn**	**08 41 24.5**	**+0.1**
DAVOX	**Davos/Dischmat**	**5.06**	**332**	Pn	**Pn**	**08 41 31.8**	**+0.7**
	0.9nm,0.3s,baz=158,slow=16,SNR=7.1						
DAVOX				Sn	**Sn**	**08 42 30.4**	**+0.7**
	0.7nm,0.3s,baz=311,slow=19,SNR=2.4						
FRF	**La Foret Royal**	**5.07**	**286**	*e*Pn	**Pn**	**08 41 30.7**	**-0.3**
FRF				*e*Sn	**Sn**	**08 42 26.0**	**-3.5**
	3.7nm,0.3s						
FRF	**La Foret Royal**	**5.07**	**286**	*e*Pn	**Pn**	**08 41 30.7**	**-0.3**
FRF				*e*Sn	**Sn**	**08 42 26.0**	**-3.5**
	1.9nm,0.3s						
LMR	**La Mourre**	**5.12**	**283**	*e*Pn	**Pn**	**08 41 31.2**	**-0.6**
LMR				*e*Sn	**Sn**	**08 42 27.3**	**-3.7**
	3.8nm,0.5s						
LMR	**La Mourre**	**5.12**	**283**	*e*Pn	**Pn**	**08 41 31.2**	**-0.6**
LMR				*e*Sn	**Sn**	**08 42 27.3**	**-3.7**
	1.9nm,0.5s						
MBDF	**Montbardon**	**5.33**	**298**	*e*P	**Pn**	**08 41 37.0**	**+2.2**
MBDF	**Montbardon**	**5.33**	**298**	*e*P	**Pn**	**08 41 37.0**	**+2.2**
GERES	**GERESS Array B**	**6.48**	**2**	Pn	**Pn**	**08 41 51.7**	**+1.2**
	0.2nm,0.3s,baz=178,slow=13,SNR=6.7						
GERES				Sn	**Sn**	**08 43 01.4**	**-3.2**
	0.3nm,0.3s,baz=183,slow=22,SNR=4.1						
KHC	**Kasperske Hory**	**6.77**	**1**	*e*PN	**Pn**	**08 41 54.3**	**0.0**
KHC				*e*SN	**Sn**	**08 43 09.0**	**-2.5**
KHC	**Kasperske Hory**	**6.77**	**1**	Pn	**Pn**	**08 41 54.3**	**0.0**
HINF	**Hinteralfeld**	**7.13**	**322**	*e*Pn	**Pn**	**08 41 58.8**	**-0.5**
HINF				*e*Sn	**Sn**	**08 43 15.4**	**-5.0**
	5.8nm,0.5s						
HINF	**Hinteralfeld**	**7.13**	**322**	*e*Pn	**Pn**	**08 41 58.8**	**-0.5**
KEST	**Kesra**	**7.32**	**207**	Pn	Pn	08 42 06.5	+4.4
	0.6nm,0.3s,baz=300,slow=5.6,SNR=13						
CDF	**Champ du Feu**	**7.41**	**327**	*e*Pn	**Pn**	**08 42 02.1**	**-1.0**
CDF				*e*Sn	**Sn**	**08 43 22.1**	**-5.1**
	4.3nm,0.5s						
CDF	**Champ du Feu**	**7.41**	**327**	*e*Pn	**Pn**	**08 42 02.1**	**-1.0**
HAU	**Haudompre**	**7.50**	**321**	*e*Pn	**Pn**	**08 42 04.2**	**-0.2**
HAU				*e*Sn	Sn	08 43 23.2	-6.3
	5.2nm,0.4s						
HAU	**Haudompre**	**7.50**	**321**	*e*Pn	**Pn**	**08 42 04.2**	**-0.2**
MLR	**Muntele Rosu**	**9.61**	**67**	Pn	**Pn**	**08 42 36.5**	**+3.1**
	0.0nm,0.3s,baz=229,slow=19,SNR=5.4						
FINES	**FINESS Array B**	**20.58**	**18**	P	Pn	08 44 58.0	+2.0
	2.2nm,0.8s,baz=240,slow=15,SNR=2.5						
TORD	**Torodi Ar. Bea**	**30.82**	**203**	P	**P**	**08 46 32.7**	**+1.6**
	0.1nm,0.5s,baz=18,slow=7.7,SNR=2.6						
MKAR	**Makanchi Array**	**47.87**	**60**	P	**P**	**08 48 53.7**	**+0.7**
	0.2nm,0.5s,baz=278,slow=7.5,SNR=3.5						
YKA	**Yellowknife Ar**	**67.48**	**337**	P	**P**	**08 51 11.1**	**+0.5**
	0.1nm,0.7s,baz=44,slow=5.4,SNR=4.2						

*ISCJB **06** 08:44:46.3±1.0, 50.°55N±0.°07×130.°00W±0.°09, h10km, Error ellipse: s-maj=12.3km s-min=4.3km az=38.3*
*PGC **06** 08:44:47.9±3.6, 50.°43N×130.°13W, h10km, ML2.9/9, Mw3.5, 193km west of Pt. Hardy, Bc Vancouver Island Region*
*IDC **06** 08:44:50.9±4.9, 50.°29N×129.°44W, h0km, mb1 3.2/3, mb1mx3.1/28, mbtmp2.8/3, ML3.0/3, Error ellipse: s-maj=73.7km s-min=28.0km az=59.0*
ISC 06 08:44:45.6±1.6**, 50.°43N**±0.°10×**130.°11W**±0.°08**, h10**km**, n14, σ1.s38**/21**, 6D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.28**	**80**	P	**Pb**	**08 45 10.0**	**+0.2**
BPBC	**Brooks Peninsu**	**1.53**	**99**	⇓Pn	**Pn**	**08 45 12.8**	**-0.1**
BPBC				⇑Sn	**Sn**	**08 45 31.1**	**-1.8**
PHC	**Port Hardy**	**1.73**	**80**	Pn	**Pn**	**08 45 16.5**	**+0.8**
PHC				⇓Sn	**Sn**	**08 45 36.7**	**-1.2**
MAYB	**Maynard**	**1.88**	**90**	⇓Pn	**Pn**	**08 45 18.4**	**+0.5**
MAYB				⇓Sn	**Sn**	**08 45 40.2**	**-1.6**
EDB	**Eliza Dome**	**2.00**	**105**	⇑Pn	**Pn**	**08 45 19.8**	**+0.4**
EDB				⇓Sn	**Sn**	**08 45 42.9**	**-1.6**
BBB	**Bella Bella**	**2.16**	**35**	Pn	**Pn**	**08 45 22.5**	**+0.9**
BBB				⇑Sn	**Sn**	**08 45 46.7**	**-1.8**
WOSB	**Woss**	**2.29**	**95**	Pn	**Pn**	**08 45 24.5**	**+1.1**
BNB	**Barry Inlet**	**2.38**	**335**	⇑Pn	**Pn**	**08 45 25.1**	**+0.4**
BNB				⇓Sn	**Sn**	**08 45 53.0**	**-1.0**
GDR	**Gold River**	**2.71**	**102**	Pn	**Pn**	**08 45 30.0**	**+0.9**
MOBC	**Moresby Island**	**2.96**	**338**	⇑Pn	**Pn**	**08 45 33.1**	**+0.5**
MOBC				⇑Sn	**Sn**	**08 46 06.4**	**-1.7**
DIB	**Dawson Inlet,**	**3.14**	**333**	Pn	**Pn**	**08 45 36.4**	**+1.3**
DIB				Sn	**Sn**	**08 46 09.6**	**-3.1**
	SNR=32						
YKA	**Yellowknife Ar**	**14.77**	**29**	Pn	**Pn**	**08 48 15.5**	**+1.3**
	0.0nm,0.3s,baz=220,slow=12,SNR=4.2						
PDAR	**Pinedale Array**	**16.04**	**111**	Pn	**P**	**08 48 34.5**	**-0.3**
	0.1nm,0.3s,baz=310,slow=12,SNR=4.9						
ILAR	**Eielson Array**	**16.87**	**335**	P	P	08 48 51.9	+8.3
	0.0nm,0.3s,baz=138,slow=11,SNR=4.0						

*ISCJB **06** 08:53:16.2±0.3, 42.°23N±0.°02×13.°49E±0.°03, h13km±2km, mb3.5/5, Error ellipse: s-maj=3.9km s-min=3.2km az=151.1*
*CSEM **06** 08:53:16.7±0.1, 42.°23N×13.°51E, h8km, ML2.9/6, Error ellipse: s-maj=3.3km s-min=2.4km az=56.0*
*ROM **06** 08:53:16.2±0.1, 42.°22N×13.°50E, h9km, Ml2.7/7, Error ellipse: s-maj=1.2km s-min=0.9km az=46.0*
*IDC **06** 08:53:16.8±1.0, 42.°26N×13.°69E, h0km, mb3.5/6, mb1 3.7/9, mb1mx3.5/29, mbtmp3.5/9, ML3.5/3, Error ellipse: s-maj=29.5km s-min=17.0km az=102.0*
*LDG **06** 08:53:19.7±0.2, 42.°21N×13.°38E, h2km, Ml3.2/5, Error ellipse: s-maj=6.2km s-min=3.9km az=48.0*
ISC 06 08:53:16.7±0.6**, 42.°24N**±0.°02×**13.°48E**±0.°02**, h9**km±4km**, n78, σ1.s12**/92**, mb3.5**/5**, 12C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.08**	**72**	⇑iPg	**Pg**	**08 53 19.0**	**+0.1**
FAGN				Sg	**Sg**	**08 53 20.5**	**0.0**
	13μm,0.4s						
FAGN	**Fagnano**	**0.08**	**72**	⇑iPg	**Pg**	**08 53 19.0**	**+0.1**
FAGN				Sg	**Sg**	**08 53 20.5**	**0.0**
	13μm,0.4s						
AQU	**L'Aquila**	**0.13**	**332**	Pg	**Pg**	**08 53 20.2**	**+0.6**
AQU				Sg	**Sg**	**08 53 22.6**	**+0.9**
AQU	**L'Aquila**	**0.13**	**332**	Pg	**Pg**	**08 53 20.2**	**+0.6**
AQU				Sg	**Sg**	**08 53 22.6**	**+0.9**
PTQR	**Pietraquaria**	**0.23**	**196**	⇑iPg	**Pg**	**08 53 21.6**	**+0.3**
	293nm,1.0s						
PTQR	**Pietraquaria**	**0.23**	**196**	⇑iPg	**Pg**	**08 53 21.6**	**+0.3**
	293nm,1.0s						
FIAM	**Fiamignano**	**0.27**	**276**	⇑iPg	**Pb**	**08 53 22.6**	**-1.2**
FIAM	**Fiamignano**	**0.27**	**276**	⇑iPg	**Pb**	**08 53 22.6**	**-1.2**
CAMP	**Campotosto**	**0.30**	**349**	Pg	**Pb**	**08 53 23.0**	**-1.3**
CAMP				Sg	**Sb**	**08 53 29.4**	**0.0**
CAMP	**Campotosto**	**0.30**	**349**	Pg	**Pb**	**08 53 23.0**	**-1.3**
CAMP				Sg	**Sb**	**08 53 29.4**	**0.0**
VCEL	**Villa Celiera**	**0.31**	**60**	⇑ePg	**Pg**	**08 53 22.9**	**+0.1**
	1μm,0.5s						
VCEL	**Villa Celiera**	**0.31**	**60**	⇑ePg	**Pg**	**08 53 22.9**	**+0.1**
	1μm,0.5s						
VVLD	**Villa Vallelon**	**0.38**	**164**	⇑iPg	**Pg**	**08 53 24.0**	**-0.2**
VVLD				Sg	**Sg**	**08 53 29.8**	**+0.5**
	337nm,0.7s						
VVLD	**Villa Vallelon**	**0.38**	**164**	⇑iPg	**Pg**	**08 53 24.0**	**-0.2**
VVLD				Sg	**Sg**	**08 53 29.8**	**+0.5**
	337nm,0.7s						
INTR	**Introdacqua**	**0.39**	**126**	⇑iPg	**Pg**	**08 53 24.1**	**-0.2**
INTR				Sg	**Sg**	**08 53 30.0**	**+0.6**
	593nm,1.0s						
INTR	**Introdacqua**	**0.39**	**126**	⇑iPg	**Pg**	**08 53 24.1**	**-0.2**
INTR				Sg	**Sg**	**08 53 30.0**	**+0.6**
	593nm,1.0s						
TERO	**Teramo**	**0.39**	**13**	Pg	**Pb**	**08 53 24.3**	**-1.5**
TERO				Sg	**Sb**	**08 53 31.2**	**-0.8**
	600nm,0.8s						
TERO	**Teramo**	**0.39**	**13**	Pg	**Pb**	**08 53 24.3**	**-1.5**
TERO				Sg	**Sb**	**08 53 31.2**	**-0.8**
	600nm,0.8s						
GUAR	**Guarcino**	**0.46**	**196**	Pg	**Pg**	**08 53 25.5**	**-0.2**
GUAR	**Guarcino**	**0.46**	**196**	Pg	**Pg**	**08 53 25.5**	**-0.2**
CERT	**Cerreto**	**0.47**	**232**	Pg	**Pg**	**08 53 25.8**	**-0.1**
CERT	**Cerreto**	**0.47**	**232**	Pg	**Pg**	**08 53 25.8**	**-0.1**
LPEL	**Lama dei Pelig**	**0.56**	**110**	Pg	**Pg**	**08 53 26.8**	**-0.6**
LPEL				Sg	**Sg**	**08 53 35.0**	**+0.3**
	383nm,0.4s						
LPEL	**Lama dei Pelig**	**0.56**	**110**	Pg	**Pg**	**08 53 26.8**	**-0.6**
LPEL				Sg	**Sg**	**08 53 35.0**	**+0.3**
	383nm,0.4s						
SDI	**San Donato**	**0.58**	**155**	Pg	**Pg**	**08 53 27.6**	**-0.4**
	84nm,0.3s						
SDI	**San Donato**	**0.58**	**155**	Pg	**Pg**	**08 53 27.6**	**-0.4**
	84nm,0.3s						
MNS	**Montasola**	**0.61**	**284**	Pg	**Pb**	**08 53 28.3**	**-1.3**
MNS	**Montasola**	**0.61**	**284**	Pg	**Pb**	**08 53 28.3**	**-1.3**
CAFR	**Castel Frentan**	**0.64**	**91**	Pg	**Pb**	**08 53 29.4**	**-0.6**
CAFR	**Castel Frentan**	**0.64**	**91**	Pg	**Pb**	**08 53 29.4**	**-0.6**
NRCA	**Norcia**	**0.65**	**335**	Pg	**Pb**	**08 53 29.1**	**-1.2**
NRCA	**Norcia**	**0.65**	**335**	Pg	**Pb**	**08 53 29.1**	**-1.2**
GIUL	**Giuliano Di Ro**	**0.70**	**194**	Pg	**Pg**	**08 53 29.9**	**-0.3**
GIUL	**Giuliano Di Ro**	**0.70**	**194**	Pg	**Pg**	**08 53 29.9**	**-0.3**
OFFI	**Offida**	**0.71**	**12**	Pg	**Pb**	**08 53 30.9**	**-0.3**
	638nm,0.6s						
OFFI	**Offida**	**0.71**	**12**	Pg	**Pb**	**08 53 30.9**	**-0.3**
	638nm,0.6s						
RDP	**Rocca di Papa**	**0.75**	**230**	Pg	**Pb**	**08 53 31.0**	**-0.9**
RDP	**Rocca di Papa**	**0.75**	**230**	Pg	**Pb**	**08 53 31.0**	**-0.9**
CERA	**Filignano**	**0.76**	**148**	Pg	**Pg**	**08 53 30.2**	**-1.0**
CERA	**Filignano**	**0.76**	**148**	Pg	**Pg**	**08 53 30.2**	**-1.0**
MIDA	**Miranda**	**0.83**	**136**	Pg	**Pg**	**08 53 31.4**	**-1.2**
MIDA	**Miranda**	**0.83**	**136**	Pg	**Pg**	**08 53 31.4**	**-1.2**
CESI	**CESI - Serrava**	**0.88**	**331**	Pg	**Pn**	**08 53 33.4**	**-1.8**
CESI	**CESI - Serrava**	**0.88**	**331**	Pg	**Pn**	**08 53 33.4**	**-1.8**
ASSB	**Assisi San Ben**	**1.01**	**323**	Pg	**Pn**	**08 53 36.1**	**-0.9**
ASSB	**Assisi San Ben**	**1.01**	**323**	Pg	**Pn**	**08 53 36.1**	**-0.9**
NVLJ	**Novalja**	**2.53**	**23**	*e*Pn	**Pn**	**08 53 58.1**	**+0.2**
NVLJ				Sn	**Sn**	**08 54 28.9**	**0.0**
STON	**Ston**	**3.18**	**77**	*e*Pn	**Pn**	**08 54 07.6**	**+0.8**
STON				Sn	**Sn**	**08 54 46.5**	**+1.7**
PGF	**Pioggiola**	**3.33**	**277**	*e*Pn	**Pn**	**08 54 10.4**	**+1.3**
PGF				*e*Sn	**Sn**	**08 54 50.5**	**+1.6**
	13nm,0.5s						
PGF	**Pioggiola**	**3.33**	**277**	*e*Pn	**Pn**	**08 54 10.4**	**+1.3**
PGF				*e*Sn	**Sn**	**08 54 50.5**	**+1.6**
	6.6nm,0.5s						
VOY	**Vojsko**	**3.80**	**4**	*e*Pn	**Pn**	**08 54 15.4**	**-0.1**
VOY				*e*Sn	**Sn**	**08 55 00.3**	**0.0**
SBF	**Sospel**	**4.72**	**292**	*e*Pn	**Pn**	**08 54 28.9**	**+0.8**
SBF	**Sospel**	**4.72**	**292**	*e*Pn	**Pn**	**08 54 28.9**	**+0.8**
FRF	**La Foret Royal**	**5.19**	**287**	*e*Pn	**Pn**	**08 54 35.1**	**+0.6**
FRF				*e*Sn	**Sn**	**08 55 30.3**	**-4.2**
	6.1nm,0.4s						
FRF	**La Foret Royal**	**5.19**	**287**	*e*Pn	**Pn**	**08 54 35.1**	**+0.6**
FRF				*e*Sn	**Sn**	**08 55 30.3**	**-4.2**
	3.0nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAVOX	Davos/Dischmat	5.22	332	Pn	Pn	08 54 38.5	+3.5
	3.1nm,0.3s,baz=156,slow=17,SNR=13						
DAVOX				Sn	Sn	08 55 27.2	-8.2
	1.3nm,0.3s,baz=143,slow=20,SNR=3.3						
DAVOX				Lg	Lg	08 56 22.3	
	baz=131,slow=20,SNR=1.2						
LMR	**La Mourre**	**5.25**	**284**	*e*Pn	**Pn**	**08 54 35.6**	**+0.4**
LMR	**La Mourre**	**5.25**	**284**	*e*Pn	**Pn**	**08 54 35.6**	**+0.4**
MBDF	**Montbardon**	**5.48**	**299**	*e*P	Pn	08 54 40.9	+2.3
MBDF	**Montbardon**	**5.48**	**299**	*e*P	Pn	08 54 40.9	+2.3
SMRF	**Simiane la Rot**	**6.04**	**289**	*e*P	Pn	08 54 48.4	+2.2
SMRF	**Simiane la Rot**	**6.04**	**289**	*e*P	Pn	08 54 48.4	+2.2
GERES	**GERESS Array B**	**6.61**	**1**	Pn	**Pn**	**08 54 55.7**	**+1.7**
	0.4nm,0.3s,baz=185,slow=13,SNR=8.8						
GERES				Sn	**Sn**	**08 56 08.3**	**-1.1**
	0.7nm,0.3s,baz=192,slow=24,SNR=5.6						
GERES				Lg	Lg	08 56 51.4	
	baz=190,slow=34,SNR=2.0						
VIVF	**Saint-Julien-l**	**6.91**	**295**	*e*Pn	**Pn**	**08 55 00.2**	**+2.0**
VIVF	**Saint-Julien-l**	**6.91**	**295**	*e*Pn	**Pn**	**08 55 00.2**	**+2.0**
KEST	**Kesra**	**7.25**	**208**	Pn	Pn	08 55 07.5	+4.6
	0.5nm,0.3s,baz=326,slow=4.2,SNR=11						
HINF	**Hinteralfeld**	**7.29**	**322**	*e*Pn	**Pn**	**08 55 02.7**	**-0.6**
HINF				*e*Sn	Sn	08 56 18.7	-7.4
	2.6nm,0.3s						
HINF	**Hinteralfeld**	**7.29**	**322**	*e*Pn	**Pn**	**08 55 02.7**	**-0.6**
HINF				*e*Sn	Sn	08 56 18.7	-7.4
	1.3nm,0.3s						
CDF	**Champ du Feu**	**7.56**	**327**	*e*Pn	**Pn**	**08 55 06.7**	**-0.4**
CDF				*e*Sn	Sn	08 56 26.3	-6.6
	2.8nm,0.4s						
CDF	**Champ du Feu**	**7.56**	**327**	*e*Pn	**Pn**	**08 55 06.7**	**-0.4**
CDF				*e*Sn	Sn	08 56 26.3	-6.6
	1.4nm,0.4s						
HAU	**Haudompre**	**7.66**	**321**	*e*Pn	**Pn**	**08 55 07.8**	**-0.5**
HAU				*e*Sn	Sn	08 56 26.9	-8.3
	6.3nm,0.4s						
HAU	**Haudompre**	**7.66**	**321**	*e*Pn	**Pn**	**08 55 07.8**	**-0.5**
HAU				*e*Sn	Sn	08 56 26.9	-8.3
	3.2nm,0.4s						
FINES	**FINESS Array B**	**20.67**	**17**	P	Pn	08 57 58.7	-0.2
	6.8nm,1.2s,baz=191,slow=14,SNR=2.7						
TORD	**Torodi Ar. Bea**	**30.74**	**203**	P	**P**	**08 59 34.0**	**+1.8**
	0.7nm,1.0s,baz=5.4,slow=7.4,SNR=3.6						
MKAR	**Makanchi Array**	**47.85**	**60**	P	**P**	**09 01 54.4**	**-0.2**
	0.2nm,0.5s,baz=298,slow=7.3,SNR=2.8						
SONM	**Songino Array**	**62.00**	**50**	P	**P**	**09 03 38.5**	**+1.4**
	0.3nm,0.9s,baz=266,slow=6.8,SNR=2.4						
YKA	**Yellowknife Ar**	**67.63**	**337**	P	**P**	**09 04 14.4**	**+1.0**
	0.1nm,0.4s,baz=39,slow=5.8,SNR=11						
ULM	**Lac du Bonnet**	**69.17**	**320**	P	P	09 04 25.5	+2.2
	1.2nm,0.4s,baz=297,slow=6.8,SNR=2.9						

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*ISCJB **06** 08:54:06.6±0.4, 42°.32N±0°.02×13°.39E±0°.03, h12km±3km, mb3.1/2, Error ellipse: s-maj=4.3km s-min=3.5km az=165.2*
*CSEM **06** 08:54:06.5, 42°.32N×13°.39E, h10km, After ROM*
*ROM **06** 08:54:06.5±0.1, 42°.32N×13°.39E, h10km±1km, Ml2.5/12, Error ellipse: s-maj=1.2km s-min=1.2km az=80.0*
*IDC **06** 08:54:07.7±1.2, 42°.49N×13°.05E, h0km, mb3.3/3, mb1 3.6/5, mb1mx3.3/28, mbtmp3.4/5, ML3.3/2, Error ellipse: s-maj=31.3km s-min=18.3km az=137.0*
ISC 06 08:54:07.5±0.8**, 42°.32N**±0°.02×**13°.39E**±0°.02**, h8**km±5km**, n43, σ0s.59**/61**, 4C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**17**	⇓*i*Pg	**Pg**	**08 54 08.9**	**-0.3**
AQU				Sg	**Sg**	**08 54 10.3**	**-0.1**
AQU	**L'Aquila**	**0.04**	**17**	⇓*i*Pg	**Pg**	**08 54 08.9**	**-0.3**
AQU				Sg	**Sg**	**08 54 10.3**	**-0.1**
FAGN	**Fagnano**	**0.15**	**110**	Pg	**Pg**	**08 54 10.5**	**-0.3**
FAGN				Sg	**Sg**	**08 54 13.6**	**+0.5**
	13μm,0.4s						
FAGN	**Fagnano**	**0.15**	**110**	Pg	**Pg**	**08 54 10.5**	**-0.3**
FAGN				Sg	**Sg**	**08 54 13.6**	**+0.5**
	13μm,0.4s						
FIAM	**Fiamignano**	**0.21**	**256**	⇑*i*Pg	**Pg**	**08 54 11.5**	**-0.2**
FIAM				Sg	**Sg**	**08 54 15.0**	**+0.4**
FIAM	**Fiamignano**	**0.21**	**256**	⇑*i*Pg	**Pg**	**08 54 11.5**	**-0.2**
FIAM				Sg	**Sg**	**08 54 15.0**	**+0.4**
CAMP	**Campotosto**	**0.22**	**4**	⇑*i*Pg	**Pg**	**08 54 11.4**	**-0.5**
CAMP				Sg	**Sg**	**08 54 15.1**	**+0.2**
CAMP	**Campotosto**	**0.22**	**4**	⇑*i*Pg	**Pg**	**08 54 11.4**	**-0.5**
CAMP				Sg	**Sg**	**08 54 15.1**	**+0.2**
PTQR	**Pietraquaria**	**0.30**	**178**	Pg	**Pg**	**08 54 12.9**	**-0.5**
PTQR				Sg	**Sg**	**08 54 17.8**	**+0.4**
	293nm,1.0s						
PTQR	**Pietraquaria**	**0.30**	**178**	Pg	**Pg**	**08 54 12.9**	**-0.5**
PTQR				Sg	**Sg**	**08 54 17.8**	**+0.4**
	293nm,1.0s						
TERO	**Teramo**	**0.34**	**28**	Pg	**Pg**	**08 54 13.2**	**-1.0**
TERO				Sg	**Sg**	**08 54 19.4**	**+0.6**
	600nm,0.8s						
TERO	**Teramo**	**0.34**	**28**	Pg	**Pg**	**08 54 13.2**	**-1.0**
TERO				Sg	**Sg**	**08 54 19.4**	**+0.6**
	600nm,0.8s						
VCEL	**Villa Celiera**	**0.34**	**77**	Pg	**Pg**	**08 54 14.3**	**0.0**
	1μm,0.5s						
VCEL	**Villa Celiera**	**0.34**	**77**	Pg	**Pg**	**08 54 14.3**	**0.0**
	1μm,0.5s						
CERT	**Cerreto**	**0.48**	**219**	Pg	**Pg**	**08 54 16.0**	**-0.8**
CERT				Sg	**Sg**	**08 54 23.4**	**+0.4**
CERT	**Cerreto**	**0.48**	**219**	Pg	**Pg**	**08 54 16.0**	**-0.8**
CERT				Sg	**Sg**	**08 54 23.4**	**+0.4**
VVLD	**Villa Vallelon**	**0.48**	**159**	Pg	**Pg**	**08 54 15.9**	**-0.9**
	337nm,0.7s						
VVLD	**Villa Vallelon**	**0.48**	**159**	Pg	**Pg**	**08 54 15.9**	**-0.9**
	337nm,0.7s						
INTR	**Introdacqua**	**0.49**	**129**	Pg	**Pg**	**08 54 16.4**	**-0.6**
INTR				Sg	**Sg**	**08 54 23.8**	**+0.3**
	593nm,1.0s						
INTR	**Introdacqua**	**0.49**	**129**	Pg	**Pg**	**08 54 16.4**	**-0.6**
INTR				Sg	**Sg**	**08 54 23.8**	**+0.3**
	593nm,1.0s						
GUAR	**Guarcino**	**0.53**	**186**	Pg	**Pg**	**08 54 17.3**	**-0.4**
	124nm,0.4s						
GUAR	**Guarcino**	**0.53**	**186**	Pg	**Pg**	**08 54 17.3**	**-0.4**
	124nm,0.4s						
MNS	**Montasola**	**0.53**	**277**	Pg	**Pg**	**08 54 17.1**	**-0.6**
	103nm,0.6s						
MNS	**Montasola**	**0.53**	**277**	Pg	**Pg**	**08 54 17.1**	**-0.6**
	103nm,0.6s						
LPEL	**Lama dei Pelig**	**0.65**	**115**	Pg	**Pg**	**08 54 19.1**	**-0.9**
LPEL				Sg	**Sg**	**08 54 28.8**	**+0.3**
	383nm,0.4s						
LPEL	**Lama dei Pelig**	**0.65**	**115**	Pg	**Pg**	**08 54 19.1**	**-0.9**
LPEL				Sg	**Sg**	**08 54 28.8**	**+0.3**
	383nm,0.4s						
OFFI	**Offida**	**0.65**	**20**	Pg	**Pg**	**08 54 20.0**	**-0.1**
	638nm,0.6s						
OFFI	**Offida**	**0.65**	**20**	Pg	**Pg**	**08 54 20.0**	**-0.1**
	638nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.77**	**188**	Pg	**Pg**	**08 54 21.8**	**-0.4**
	95nm,1.0s						
GIUL	**Giuliano Di Ro**	**0.77**	**188**	Pg	**Pg**	**08 54 21.8**	**-0.4**
	95nm,1.0s						
CESI	**CESI - Serrava**	**0.77**	**333**	Pg	**Pg**	**08 54 21.9**	**-0.4**
CESI				Sg	**Sb**	**08 54 33.3**	**-0.6**
CESI	**CESI - Serrava**	**0.77**	**333**	Pg	**Pg**	**08 54 21.9**	**-0.4**
CESI				Sg	**Sb**	**08 54 33.3**	**-0.6**
ASSB	**Assisi San Ben**	**0.90**	**324**	Pg	**Pg**	**08 54 24.1**	**-0.7**
	36nm,0.3s						
ASSB	**Assisi San Ben**	**0.90**	**324**	Pg	**Pg**	**08 54 24.1**	**-0.7**
	36nm,0.3s						
MIDA	**Miranda**	**0.94**	**136**	Pg	**Pg**	**08 54 24.2**	**-1.2**
	87nm,0.6s						
MIDA	**Miranda**	**0.94**	**136**	Pg	**Pg**	**08 54 24.2**	**-1.2**
	87nm,0.6s						
PIEI	**Pieia**	**1.37**	**333**	Pg	**Pb**	**08 54 32.9**	**-0.4**
PIEI	**Pieia**	**1.37**	**333**	Pg	**Pb**	**08 54 32.9**	**-0.4**
KEST	**Kesra**	**7.29**	**207**	Pn	Pn	08 55 58.4	+4.0
	0.6nm,0.3s,baz=295,slow=2.8,SNR=9.2						
MLR	**Muntele Rosu**	**9.60**	**66**	Pn	Pn	08 56 30.4	+4.4
	0.1nm,0.3s,baz=188,slow=14,SNR=2.3						
FINES	**FINESS Array B**	**20.62**	**17**	P	**P**	**08 58 47.4**	**+0.5**
	4.7nm,0.9s,baz=200,slow=10,SNR=3.6						
TORD	**Torodi Ar. Bea**	**30.79**	**203**	P	**P**	**09 00 24.7**	**+1.2**
	0.2nm,0.6s,baz=20,slow=9.0,SNR=2.3						
YKA	**Yellowknife Ar**	**67.53**	**337**	P	**P**	**09 05 03.7**	**0.0**
	0.1nm,0.6s,baz=50,slow=5.7,SNR=2.5						

IDC 06 08:59:21.4±10.0**, 0°.50N**×**99°.40W, h0**km**, mb3.4**/4**, mb1 3.8**/4**, mb1mx3.6**/19**, mbtmp3.4**/4**, Error ellipse: s-maj=389.4km s-min=183.7km az=98.0, West of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PDAR	**Pinedale Array**	**43.06**	**349**	P	P	09 07 23.2	-0.2
	0.3nm,0.6s,baz=148,slow=8.6,SNR=3.1						
YKA	**Yellowknife Ar**	**62.89**	**352**	P	P	09 09 49.5	+0.4
	0.4nm,0.9s,baz=161,slow=6.6,SNR=5.9						
INK	**Inuvik**	**71.59**	**347**	P	P	09 10 44.1	-0.1
	0.5nm,0.9s,baz=144,slow=5.7,SNR=3.1						
ILAR	**Eielson Array**	**72.70**	**341**	P	P	09 10 50.7	-0.3
	0.3nm,0.6s,baz=147,slow=5.5,SNR=4.8						

IDC 06 09:01:18.5±2.0**, 1°.40N**×**128°.24E, h0**km**, mb3.3**/3**, mb1 3.5**/4**, mb1mx3.3**/22**, mbtmp3.3**/4**, ML3.3**/1**, Error ellipse: s-maj=128.7km s-min=24.5km az=71.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.55**	**187**	P	P	09 05 47.9	0.0
	0.1nm,0.3s,baz=32,slow=9.5,SNR=2.8						
WRA	**Warramunga Arr**	**22.04**	**165**	P	P	09 06 14.2	-0.8
	0.5nm,0.5s,baz=344,slow=11,SNR=9.5						
ASAR	**Alice Springs**	**25.52**	**168**	P	P	09 06 48.8	-0.2
	0.5nm,0.4s,baz=341,slow=8.1,SNR=6.8						
MKAR	**Makanchi Array**	**60.32**	**325**	P	P	09 11 27.8	-1.5
	0.4nm,0.7s,baz=118,slow=6.5,SNR=3.9						
TORD	**Torodi Ar. Bea**	**125.06**	**287**	PKP	PKPdf	09 20 23.7	+1.7
	0.4nm,0.9s,baz=52,slow=1.5,SNR=2.6						

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*ISCJB **06** 09:15:20.7±0.6, 37°.93N±0°.03×29°.03E±0°.04, h3km±7km, Error ellipse: s-maj=6.0km s-min=4.4km az=11.1*
*CSEM **06** 09:15:20.7±0.1, 37°.91N×29°.06E, h5km, MD2.9, Error ellipse: s-maj=3.0km s-min=2.3km az=117.0*
*ISK **06** 09:15:20.0, 37°.93N×29°.04E, h3km, MD2.9*
*DDA **06** 09:15:20.9, 37°.91N×29°.06E, h7km, MD2.8*
ISC 06 09:15:21.0±1.0**, 37°.93N**±0°.02×**29°.06E**±0°.03**, h7**km±11km**, n34, σ0s.49**/44**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.17**	**187**	*e*PG	**Pg**	**09 15 24.4**	**-0.1**
DENT	**Denizli**	**0.17**	**187**	*e*Pg	**Pg**	**09 15 24.4**	**-0.1**
DNZL	**Cakiroluk**	**0.24**	**182**	*i* P	**Pg**	**09 15 25.4**	**-0.4**
DNZL				*i* S	**Sg**	**09 15 28.9**	**0.0**
DNZL	**Cakiroluk**	**0.24**	**182**	*i* P	**Pg**	**09 15 25.4**	**-0.4**
DNZL				*i* S	**Sg**	**09 15 28.9**	**0.0**
KHL	**Karahalli**	**0.54**	**43**	*e*PG	**Pg**	**09 15 31.3**	**-0.2**
KHL				*e*SG	**Sb**	**09 15 39.8**	**-1.1**
KHL	**Karahalli**	**0.54**	**43**	*e*Pg	**Pg**	**09 15 31.3**	**-0.2**
KHL				*e*Sg	**Sb**	**09 15 39.8**	**-1.1**
KULA	**Kula-Manisa**	**0.67**	**332**	*e*PG	**Pg**	**09 15 33.5**	**-0.4**
KULA				*e*SG	**Sg**	**09 15 43.2**	**+0.6**
KULA	**Kula-Manisa**	**0.67**	**332**	*e*Pg	**Pg**	**09 15 33.5**	**-0.4**
KULA				*e*Sg	**Sg**	**09 15 43.2**	**+0.6**
GOLH	**Golhisar**	**0.80**	**150**	*i* P	**Pg**	**09 15 36.1**	**-0.2**
GOLH				*i* S	**Sb**	**09 15 48.7**	**+0.4**
GOLH	**Golhisar**	**0.80**	**150**	*i* P	**Pg**	**09 15 36.1**	**-0.2**
GOLH				*i* S	**Sb**	**09 15 48.7**	**+0.4**
AYDN	**Tasoluk**	**0.97**	**255**	*i* P	**Pg**	**09 15 39.6**	**-0.1**
AYDN				*i* S	**Sb**	**09 15 53.7**	**+0.4**
AYDN	**Tasoluk**	**0.97**	**255**	*i* P	**Pg**	**09 15 39.6**	**-0.1**
AYDN				*i* S	**Sb**	**09 15 53.7**	**+0.4**
YER	**Yerkesik**	**1.00**	**218**	*e*PG	**Pg**	**09 15 39.3**	**-0.9**
YER	**Yerkesik**	**1.00**	**218**	*e*Pg	**Pg**	**09 15 39.3**	**-0.9**
ISP	**Isparta**	**1.16**	**95**	*e*PN	**Pb**	**09 15 43.8**	**+0.2**
ISP	**Isparta**	**1.16**	**95**	*e*Pn	**Pb**	**09 15 43.8**	**+0.2**
MLSB	**Milas**	**1.20**	**239**	*e*PN	**Pg**	**09 15 43.2**	**-0.8**
MLSB	**Milas**	**1.20**	**239**	*e*Pn	**Pg**	**09 15 43.2**	**-0.8**
SHUT	**Suhut-Afyon**	**1.33**	**62**	*e*PN	**Pb**	**09 15 46.5**	**+0.1**
SHUT	**Suhut-Afyon**	**1.33**	**62**	*e*Pn	**Pb**	**09 15 46.5**	**+0.1**
ALT	**Altintas**	**1.40**	**36**	*e*PN	**Pn**	**09 15 47.3**	**+0.2**
ALT	**Altintas**	**1.40**	**36**	*e*Pn	**Pn**	**09 15 47.3**	**+0.2**
TVSB	**Tavsanli**	**1.55**	**12**	*e*PN	**Pn**	**09 15 49.4**	**+0.1**
TVSB	**Tavsanli**	**1.55**	**12**	*e*Pn	**Pn**	**09 15 49.4**	**+0.1**
BODT	**Bodrum**	**1.64**	**239**	*e*PN	**Pn**	**09 15 50.4**	**+0.1**
BODT	**Bodrum**	**1.64**	**239**	*e*Pn	**Pn**	**09 15 50.4**	**+0.1**
BLCB	**Balcova**	**1.65**	**287**	*e*PN	**Pn**	**09 15 50.6**	**+0.1**
BLCB	**Balcova**	**1.65**	**287**	*e*Pn	**Pn**	**09 15 50.6**	**+0.1**
BALB	**Balikesir**	**1.94**	**332**	*e*PN	**Pn**	**09 15 54.8**	**+0.3**
BALB	**Balikesir**	**1.94**	**332**	*e*Pn	**Pn**	**09 15 54.8**	**+0.3**
GONE	**Gonen-Balikesi**	**2.37**	**334**	*e*PN	**Pn**	**09 15 59.9**	**-0.5**
GONE	**Gonen-Balikesi**	**2.37**	**334**	*e*Pn	**Pn**	**09 15 59.9**	**-0.5**
ARMT	**Armutlu**	**2.64**	**357**	*e*PN	**Pn**	**09 16 04.7**	**+0.6**
ARMT	**Armutlu**	**2.64**	**357**	*e*Pn	**Pn**	**09 16 04.7**	**+0.6**

IDC 06 09:15:32.9±1.1**, 53°.49S**×**23°.66E, h0**km**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/19**, mbtmp3.7**/3**, Error ellipse: s-maj=95.2km s-min=32.0km az=43.0, South of Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**68.99**	**337**	P	P	09 26 39.8	-0.1
	0.5nm,1.1s,baz=178,slow=6.7,SNR=2.8						
ASAR	**Alice Springs**	**82.50**	**120**	P	P	09 27 57.6	+0.2
	0.6nm,0.7s,baz=208,slow=5.3,SNR=5.7						
WRA	**Warramunga Arr**	**85.79**	**118**	P	P	09 28 14.1	-0.1
	0.8nm,0.7s,baz=206,slow=3.9,SNR=7.5						
PDAR	**Pinedale Array**	**147.54**	**270**	PKPbc	PKPbc	09 35 17.5	-1.0
	0.3nm,0.7s,baz=140,slow=3.5,SNR=3.4						
YKA	**Yellowknife Ar**	**156.52**	**309**	PKPab	PKPab	09 35 57.4	+0.2
	0.1nm,0.6s,baz=93,slow=4.8,SNR=4.4						

IDC 06 09:20:18.7±4.3**, 12°.84S**×**166°.92E, h252**km±45km**, mb3.5**/12**, mb1 3.7**/13**, mb1mx3.5**/21**, mbtmp3.5**/13**, Error ellipse: s-maj=31.8km s-min=19.1km az=148.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.20**	**183**	P	Pn	09 22 27.3	+0.1
	1.6nm,0.3s,baz=101,slow=21,SNR=22						
DZM				S	S	09 24 07.1	-4.1
	0.2nm,0.3s,baz=0.0,slow=20,SNR=2.7						
STKA	**Stephens Creek**	**29.99**	**227**	P	P	09 26 05.2	+1.0
	1.2nm,0.4s,baz=49,slow=7.6,SNR=4.6						
WRA	**Warramunga Arr**	**32.00**	**253**	P	P	09 26 21.4	-0.6
	0.1nm,0.4s,baz=85,slow=9.1,SNR=4.7						
ASAR	**Alice Springs**	**33.07**	**246**	P	P	09 26 30.7	-0.5
	0.7nm,0.6s,baz=74,slow=9.3,SNR=16						
ASAR				pP	pP	09 27 20.6	-0.9
	0.2nm,0.5s,baz=71,slow=9.8,SNR=2.0						
MJAR	**Matsushiro Arr**	**56.08**	**332**	P	P	09 29 31.5	-0.5
	1.7nm,0.6s,baz=171,slow=8.6,SNR=7.2						
PETK	**Petropavlovsk-**	**66.15**	**354**	P	P	09 30 39.9	+0.8
	2.1nm,0.8s,baz=164,slow=5.7,SNR=2.8						
SONM	**Songino Array**	**80.78**	**324**	P	P	09 32 05.0	+0.6
	0.6nm,0.7s,baz=143,slow=6.3,SNR=4.0						
YBH	**Yreka Blue Hor**	**84.33**	**45**	P	P	09 32 23.0	+0.2
	0.8nm,0.9s,baz=270,slow=2.0,SNR=3.6						
ILAR	**Eielson Array**	**84.84**	**18**	P	P	09 32 24.2	-0.4
	2.1nm,0.5s,baz=232,slow=5.2,SNR=84						
NVAR	**Mina Array Bea**	**86.30**	**49**	P	P	09 32 32.5	-0.2
	0.8nm,0.7s,baz=223,slow=8.0,SNR=4.3						
MKAR	**Makanchi Array**	**95.60**	**317**	P	P	09 33 16.4	+0.9
	0.7nm,0.6s,baz=86,slow=5.3,SNR=6.6						
ZALV	**Zalesovo Beam**	**95.67**	**324**	P	P	09 33 14.5	-1.1
	0.5nm,0.3s,baz=79,slow=7.5,SNR=3.5						
YKA	**Yellowknife Ar**	**96.03**	**27**	P	P	09 33 15.9	-1.1
	0.3nm,0.5s,baz=259,slow=4.7,SNR=17						
ARCES	**ARCESS Array B**	**118.34**	**346**	PKP	PKPdf	09 38 35.8	+0.2
	3.3nm,1.0s,baz=71,slow=2.5,SNR=13						

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*IDC **06** 09:25:43.6±0.5, 33°.65N×82°.38E, h0km, mb4.1/22, mb1 4.3/24, mb1mx4.1/34, mbtmp4.1/24, ML3.3/2, MS3.5/5, Ms1 3.5/5, ms1mx2.9/50, Error ellipse: s-maj=16.2km s-min=11.6km az=49.0*
*MOS **06** 09:25:46.9±0.9, 33°.73N×82°.39E, h33km, mb4.3/22, Error ellipse: s-maj=12.5km s-min=6.7km az=110.3*
*ISCJB **06** 09:25:47.0±0.3, 33°.73N±0°.05×82°.26E±0°.04, h33km, mb4.1/27, MS3.5/4, Error ellipse: s-maj=7.0km s-min=4.6km az=25.5*
*NEIC **06** 09:25:48.9±0.3, 33°.70N×82°.40E, h35km, mb4.1/4, Error ellipse: s-maj=7.7km s-min=5.0km az=52.0*
*BJI **06** 09:25:49.3, 34°.01N×82°.48E, h8km, mB4.4/2, mb4.4/7, ML3.8/2, Ms3.8/2, Ms7 3.7/2*
*NNC **06** 09:25:50.1±3.0, 31°.68N×77°.30E, h0km, mb3.6, Error ellipse: s-maj=124.9km s-min=22.4km az=71.0*
ISC 06 09:25:49.3±0.5**, 33°.76N**±0°.06×**82°.33E**±0°.05**, h35**km**, n95, σ1s.61**/96**, mb4.2**/27**, MS3.4**/4**, 2C-1D, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**4.99**	**228**	*e*x	**Pn**	**09 27 03.5**	**+1.7**
KSH	**Kashi**	**7.69**	**320**	Pn	Pn	09 27 43.9	+5.1
KSH				Sn	**Sn**	**09 29 03.6**	**-1.1**
KSH				smax	smax		
	comp=N,48nm,1.3s						
KSH				smax	smax		
	comp=E,18nm,0.7s						
LSA	**Lhasa**	**8.53**	**116**	P	**Pn**	**09 27 53.0**	**+2.2**
LSA				LR	LR		
	comp=N,420nm,13.5s						
LSA				LR	LR		
	comp=E,480nm,14.6s						
LSA				LR	LR		
	comp=Z,590nm,11.5s						
CEP	**Cherat**	**8.68**	**273**	P	**Pn**	**09 27 52.7**	**+0.2**
CEP				S	**Sn**	**09 29 29.0**	**-0.1**
TKM2	**Tokmak 2**	**10.56**	**332**	*e*P	**Pn**	**09 28 20.8**	**+2.5**
TKM2				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TKM2	**Tokmak 2**	**10.56**	**332**	*e*Pn	**Pn**	**09 28 20.8**	**+2.5**
	comp=Z,9.1nm,1.3s						
AAK	**Ala-Archa**	**10.79**	**327**	P	**Pn**	**09 28 22.1**	**+0.7**
AAK				MLR	MLR		
	comp=Z,201nm,18.4s						
AAK	**Ala-Archa**	**10.79**	**327**	*e*Pn	**Pn**	**09 28 21.4**	**+0.1**
	comp=Z,27nm,1.0s						
AAK				Sn	Sn	09 30 11.0	-10
AAK				Lg	Lg	09 31 29.5	
AAK	**Ala-Archa**	**10.79**	**327**	Pn	**Pn**	**09 28 22.1**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=175,slow=11,SNR=1.9						
AAK				Sn	Sn	09 30 11.0	-10
	comp=Z,0.1nm,0.3s,baz=216,slow=19,SNR=1.8						
AAK				Lg	Lg	09 31 29.5	
	comp=Z,0.1nm,0.3s,baz=264,slow=18,SNR=1.8						
AAK				LR	LR	09 32 58.9	
	comp=Z,201nm,18.4s,baz=143,slow=40						
FRU	**Bishkek**	**10.89**	**328**	*e*P	Pn	09 28 29.0	+6.3
KBL	**Kabul**	**11.04**	**278**	*e*P	**Pn**	**09 28 25.7**	**+0.8**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KBL	**Kabul**	**11.04**	**278**	*e*Pn	**Pn**	**09 28 25.7**	**+0.8**
	comp=Z,8.6nm,0.6s						
EKS2	**Erkin-Say**	**11.14**	**325**	*e*P	**Pn**	**09 28 25.6**	**-0.5**
EKS2				pmax	pmax		
	comp=Z,4.0nm,1.1s						
EKS2	**Erkin-Say**	**11.14**	**325**	*e*Pn	**Pn**	**09 28 25.6**	**-0.5**
	comp=Z,4.2nm,1.1s						
MK31	**Makanchi Array**	**13.02**	**360**	Pn	**Pn**	**09 28 50.5**	**-1.2**
	comp=Z,15nm,1.2s,baz=191,slow=14,SNR=43						
MK31	**Makanchi Array**	**13.02**	**360**	*e*P	**Pn**	**09 28 51.3**	**-0.4**
MK31	**Makanchi Array**	**13.02**	**360**	*e*Pn	**Pn**	**09 28 51.3**	**-0.4**
MKAR	**Makanchi Array**	**13.02**	**360**	P	**Pn**	**09 28 50.9**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**13.02**	**360**	Pn	**Pn**	**09 28 50.9**	**-0.8**
MKAR	**Makanchi Array**	**13.02**	**360**	Pn	**Pn**	**09 28 50.9**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=174,slow=13,SNR=26						
KK31	**Karatay Array**	**13.13**	**319**	⇑Pn	**Pn**	**09 28 52.8**	**-0.5**
	comp=Z,2.3nm,0.9s,baz=152,slow=13,SNR=6.0						
KK31				⇓Sn	**Sn**	**09 31 18.3**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=154,slow=24						
KKAR	**Karatay Array**	**13.13**	**319**	*e*P	**Pn**	**09 28 54.2**	**+0.9**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KKAR	**Karatay Array**	**13.13**	**319**	*e*Pn	**Pn**	**09 28 54.2**	**+0.9**
	comp=Z,1.7nm,0.6s						
GTA	**Gaotai**	**15.13**	**63**	*e*P	**P**	**09 29 26.0**	**+0.8**
GTA				pP	**pP**	**09 29 29.5**	**-4.9**
GTA				sP	sP	09 29 31.7	-7.1
GTA				S	**Sn**	**09 32 10.2**	**+3.3**
GTA				sS	**S**	**09 32 16.4**	**-6.8**
GTA				SS	**SnSn**	**09 32 28.0**	**+8.5**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,73nm,4.8s						
GTA				LR	LR		
	comp=N,490nm,16.9s						
GTA				LR	LR		
	comp=E,250nm,15.4s						
GTA				LR	LR		
	comp=Z,360nm,15.7s						
KURBB	**Kurchatov Arra**	**17.08**	**352**	P	**Pn**	**09 29 44.1**	**-1.1**
	baz=170,slow=11,SNR=8.5						
KURK	**Kurchatov**	**17.16**	**352**	*e*P	**Pn**	**09 29 45.9**	**-0.3**
KURK	**Kurchatov**	**17.16**	**352**	*e*Pn	**Pn**	**09 29 45.9**	**-0.3**
LZH	**Lanzhou**	**17.79**	**76**	*e*P	**P**	**09 29 57.0**	**+2.2**
LZH				pP	**pP**	**09 30 06.0**	**+2.0**
LZH				sP	**sP**	**09 30 09.5**	**+1.1**
LZH				pmax	pmax		
	comp=Z,26nm,1.5s						
ZALV	**Zalesovo Beam**	**20.26**	**4**	P	Pn	09 30 22.4	-1.2
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZALV	**Zalesovo Beam**	**20.26**	**4**	P	Pn	09 30 22.4	-1.2
ZALV	**Zalesovo Beam**	**20.26**	**4**	P	Pn	09 30 22.4	-1.2
	comp=Z,5.6nm,0.7s,baz=200,slow=9.0,SNR=22						
CHTO	**Chiang Mai**	**21.01**	**131**	*e*P	**P**	**09 30 28.5**	**-1.5**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CHTO	**Chiang Mai**	**21.01**	**131**	*e*P	**P**	**09 30 28.5**	**-1.5**
	comp=Z,7.7nm,1.0s						
BVAR	**Borovoye Array**	**21.07**	**340**	P	**P**	**09 30 31.3**	**+1.1**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BVAR	**Borovoye Array**	**21.07**	**340**	P	**P**	**09 30 31.3**	**+1.1**
BVAR	**Borovoye Array**	**21.07**	**340**	P	**P**	**09 30 31.3**	**+1.1**
	comp=Z,4.3nm,0.9s,baz=142,slow=12,SNR=8.4						
BRVK	**Borovoye**	**21.13**	**340**	*e*P	**P**	**09 30 31.8**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,16nm,1.1s						
BRVK	**Borovoye**	**21.13**	**340**	*e*P	**P**	**09 30 31.8**	**+0.9**
	comp=Z,16nm,1.1s						
CMAR	**Chiang Mai Arr**	**21.28**	**132**	P	**P**	**09 30 31.9**	**-0.9**
CMAR	**Chiang Mai Arr**	**21.28**	**132**	P	**P**	**09 30 31.9**	**-0.9**
	comp=Z,14nm,0.9s,baz=311,slow=10,SNR=38						
ZAK	**Zakamensk**	**22.63**	**37**	*e*P	**P**	**09 30 45.8**	**-1.3**
AB31	**Akbulak array**	**22.70**	**320**	P	**P**	**09 30 45.3**	**-2.4**
	comp=Z,3.4nm,0.8s,baz=119,slow=11,SNR=30						
ABKAR	**Akbulak array**	**22.70**	**320**	*e*P	**P**	**09 30 47.8**	**+0.1**
	comp=Z,3.9nm,0.8s						
SONM	**Songino Array**	**22.89**	**45**	P	**P**	**09 30 50.6**	**+0.6**
SONM	**Songino Array**	**22.89**	**45**	P	**P**	**09 30 50.6**	**+0.6**
	comp=Z,3.0nm,0.9s,baz=232,slow=9.1,SNR=19						
AKTO	**Aktyubinsk**	**24.39**	**320**	⇑P	**P**	**09 31 02.4**	**-1.8**
	comp=Z,0.8nm,1.0s						
AKTO	**Aktyubinsk**	**24.39**	**320**	P	**P**	**09 31 04.9**	**+0.7**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKTO				MLR	MLR		
	comp=Z,67nm,18.3s						
AKTO	**Aktyubinsk**	**24.39**	**320**	P	**P**	**09 31 04.9**	**+0.7**
AKTO	**Aktyubinsk**	**24.39**	**320**	P	**P**	**09 31 04.9**	**+0.7**
	comp=Z,2.5nm,0.7s,baz=121,slow=9.5,SNR=14						
AKTO				LR	LR	09 41 30.5	
	comp=Z,67nm,18.3s,baz=155,slow=39						
KBZ	**Khabaz**	**32.06**	**300**	LR	LR	09 46 21.8	
	comp=Z,51nm,21.4s,baz=66,slow=38						
KSAR	**Wonju Array Be**	**36.95**	**71**	P	**P**	**09 32 54.1**	**-0.9**
KSRS	**Korea Array**	**36.98**	**71**	P	**P**	**09 32 54.1**	**-1.1**
	comp=Z,1.0nm,0.8s,baz=272,slow=9.6,SNR=5.0						
BRTR	**Keskin Array B**	**39.08**	**293**	P	**P**	**09 33 14.7**	**+1.5**
BRTR	**Keskin Array B**	**39.08**	**293**	P	**P**	**09 33 14.7**	**+1.5**
	comp=Z,1.0nm,0.8s,baz=115,slow=8.5,SNR=5.5						
AKASG	**Malin Array Be**	**41.85**	**310**	P	**P**	**09 33 35.7**	**0.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**41.85**	**310**	P	**P**	**09 33 35.7**	**0.0**
AKASG	**Malin Array Be**	**41.85**	**310**	P	**P**	**09 33 35.7**	**0.0**
	comp=Z,0.5nm,0.4s,baz=77,slow=8.7,SNR=3.0						
JOF	**Joensuu**	**42.97**	**329**	*e*P	**P**	**09 33 45.2**	**+0.5**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.5s						
JOF	**Joensuu**	**42.97**	**329**	*e*p	**P**	**09 33 45.2**	**+0.5**
	comp=Z,7.3nm,0.5s						
FINES	**FINESS Array B**	**44.97**	**326**	P	**P**	**09 34 01.6**	**+0.9**
FINES	**FINESS Array B**	**44.97**	**326**	P	**P**	**09 34 01.6**	**+0.9**

	comp=Z,3.5nm,0.6s,baz=99,slow=8.6,SNR=12						
MJAR	**Matsushiro Arr**	**45.23**	**70**	P	**P**	**09 34 02.2**	**-1.0**
MJAR	**Matsushiro Arr**	**45.23**	**70**	P	**P**	**09 34 02.2**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=282,slow=9.8,SNR=6.3						
ARCES	**ARCESS Array B**	**47.30**	**336**	P	**P**	**09 34 19.5**	**+0.5**
ARCES	**ARCESS Array B**	**47.30**	**336**	P	**P**	**09 34 19.5**	**+0.5**
	comp=Z,5.6nm,0.9s,baz=72,slow=4.0,SNR=7.6						
NB2	**NORSAR Subarra**	**52.09**	**324**	P	**P**	**09 34 55.4**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=88,slow=7.4						
NOA	**NORSAR Array B**	**52.09**	**324**	P	**P**	**09 34 55.8**	**+0.2**
NOA	**NORSAR Array B**	**52.09**	**324**	P	**P**	**09 34 55.8**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=87,slow=7.4,SNR=8.6						
DAVOX	**Davos/Dischmat**	**54.94**	**307**	LR	LR	10 04 19.3	
	comp=Z,48nm,18.1s,baz=72,slow=42						
FITZ	**Fitzroy Crossi**	**66.06**	**134**	P	**P**	**09 36 31.9**	**-0.9**
FITZ	**Fitzroy Crossi**	**66.06**	**134**	P	**P**	**09 36 31.9**	**-0.9**
	comp=Z,2.7nm,0.9s,baz=304,slow=7.3,SNR=3.7						
RES	**Resolute Bay**	**71.81**	**359**	LR	LR	10 07 54.2	
	comp=Z,123nm,19.9s,baz=22,slow=35						
WRA	**Warramunga Arr**	**72.85**	**129**	P	**P**	**09 37 14.3**	**-0.4**
WRA	**Warramunga Arr**	**72.85**	**129**	P	**P**	**09 37 14.3**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=326,slow=6.0,SNR=31						
NWAO	**Narrogin (SRO)**	**74.02**	**150**	P	**P**	**09 37 20.1**	**-1.2**
NWAO	**Narrogin (SRO)**	**74.02**	**150**	P	**P**	**09 37 20.1**	**-1.2**
	comp=Z,2.7nm,0.5s,baz=315,slow=11,SNR=3.1						
COLA	**College**	**74.19**	**20**	*e*P	**P**	**09 37 22.4**	**+0.4**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
COLA	**College**	**74.19**	**20**	*e*P	**P**	**09 37 22.4**	**+0.4**
	comp=Z,2.8nm,0.9s						
ILAR	**Eielson Array**	**74.54**	**20**	P	**P**	**09 37 23.8**	**-0.3**
ILAR	**Eielson Array**	**74.54**	**20**	P	**P**	**09 37 23.8**	**-0.3**
	comp=Z,1.3nm,1.0s,baz=308,slow=4.9,SNR=13						
TOA0	**Torodi Ar. Sit**	**75.11**	**276**	*e*P	**P**	**09 37 27.5**	**-0.7**
TORD	**Torodi Ar. Bea**	**75.11**	**276**	P	**P**	**09 37 27.8**	**-0.4**
TORD	**Torodi Ar. Bea**	**75.11**	**276**	P	**P**	**09 37 27.8**	**-0.4**
	comp=Z,2.6nm,0.6s,baz=46,slow=5.1,SNR=41						
ASAR	**Alice Springs**	**75.29**	**132**	P	**P**	**09 37 28.3**	**-0.7**
ASAR	**Alice Springs**	**75.29**	**132**	P	**P**	**09 37 28.3**	**-0.7**
	comp=Z,1.6nm,0.7s,baz=316,slow=5.7,SNR=22						
LBTB	**Lobatse**	**79.52**	**230**	P	**P**	**09 37 52.5**	**-0.2**
LBTB	**Lobatse**	**79.52**	**230**	P	**P**	**09 37 52.5**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=82,slow=5.7,SNR=2.8						
BOSA	**Boshof**	**82.27**	**228**	P	**P**	**09 38 06.5**	**-0.7**
BOSA	**Boshof**	**82.27**	**228**	P	**P**	**09 38 06.5**	**-0.7**
	comp=Z,4.0nm,0.6s,baz=50,slow=6.8,SNR=9.6						
YKA	**Yellowknife Ar**	**83.11**	**8**	P	**P**	**09 38 10.5**	**-0.6**
YKA	**Yellowknife Ar**	**83.11**	**8**	P	**P**	**09 38 10.5**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=337,slow=5.5,SNR=65						
DBIC	**Dimbokro**	**84.01**	**274**	P	**P**	**09 38 16.3**	**-0.2**
DBIC	**Dimbokro**	**84.01**	**274**	P	**P**	**09 38 16.3**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=335,slow=2.0,SNR=2.6						
CPUP	**Villa Florida**	**144.48**	**271**	PKP	**PKPab**	**09 45 19.4**	**-1.2**
CPUP	**Villa Florida**	**144.48**	**271**	PKP	**PKPab**	**09 45 19.4**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=68,slow=4.1,SNR=3.7						

*ISCJB **06** 09:30:12.3±0.3, 42°37N±0°02×13°31E±0°03, h14km±2km, Error ellipse: s-maj=3.3km s-min=3.0km az=160.3*
*ROM **06** 09:30:12.5±0.1, 42°36N×13°33E, h9km±1km, Ml3.1/27, Error ellipse: s-maj=1.3km s-min=1.1km az=73.0*
*CSEM **06** 09:30:12.8±0.1, 42°37N×13°33E, h5km, ML3.7/6, Error ellipse: s-maj=2.4km s-min=2.0km az=62.0*
*LDG **06** 09:30:14.5±0.2, 42°38N×13°30E, h2km, Ml2.9/7, Error ellipse: s-maj=5.7km s-min=4.1km az=56.0*
ISC 06 09:30:11.4±0.9**, 42°38N**±0°02×**13°38E**±0°02**, h19**km±2km**, n91, σ1s06**/111**, 8C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.03**	**148**	⇓*i*Pg	**Pg**	**09 30 15.0**	**+0.2**
AQU				Sg	**Sg**	**09 30 16.3**	**-0.8**
	36µm,0.5s						
AQU	**L'Aquila**	**0.03**	**148**	⇓*i*Pg	**Pg**	**09 30 15.0**	**+0.2**
AQU				Sg	**Sg**	**09 30 16.3**	**-0.8**
	36µm,0.5s						
CAMP	**Campotosto**	**0.16**	**7**	⇑*i*Pg	**Pg**	**09 30 17.0**	**+1.0**
CAMP				Sg	**Sg**	**09 30 20.1**	**+0.9**
CAMP	**Campotosto**	**0.16**	**7**	⇑*i*Pg	**Pg**	**09 30 17.0**	**+1.0**
CAMP				Sg	**Sg**	**09 30 20.1**	**+0.9**
FAGN	**Fagnano**	**0.19**	**127**	Pg	**Pg**	**09 30 17.4**	**+1.1**
FAGN				Sg	**Sg**	**09 30 21.0**	**+1.4**
FAGN	**Fagnano**	**0.19**	**127**	Pg	**Pg**	**09 30 17.4**	**+1.1**
FAGN				Sg	**Sg**	**09 30 21.0**	**+1.4**
FIAM	**Fiamignano**	**0.23**	**241**	Pg	**Pg**	**09 30 17.1**	**+0.2**
FIAM				Sg	**Sg**	**09 30 20.7**	**+0.1**
FIAM	**Fiamignano**	**0.23**	**241**	Pg	**Pg**	**09 30 17.1**	**+0.2**
FIAM				Sg	**Sg**	**09 30 20.7**	**+0.1**
TERO	**Teramo**	**0.29**	**34**	⇑*i*Pg	**Pb**	**09 30 19.1**	**+1.0**
TERO				Sg	**Sn**	**09 30 25.4**	**-1.3**
	4µm,0.7s						
TERO	**Teramo**	**0.29**	**34**	⇑*i*Pg	**Pb**	**09 30 19.1**	**+1.0**
TERO				Sg	**Sn**	**09 30 25.4**	**-1.3**
	4µm,0.7s						
VCEL	**Villa Celiera**	**0.34**	**87**	Pg	**Pn**	**09 30 20.5**	**-0.9**
VCEL	**Villa Celiera**	**0.34**	**87**	Pg	**Pn**	**09 30 20.5**	**-0.9**
PTQR	**Pietraquaria**	**0.35**	**178**	Pg	**Pb**	**09 30 19.7**	**+0.5**
PTQR				Sg	**Sb**	**09 30 25.0**	**+0.5**
PTQR	**Pietraquaria**	**0.35**	**178**	Pg	**Pb**	**09 30 19.7**	**+0.5**
PTQR				Sg	**Sb**	**09 30 25.0**	**+0.5**
NRCA	**Norcia**	**0.50**	**337**	Pg	**Pn**	**09 30 22.6**	**-1.0**
NRCA	**Norcia**	**0.50**	**337**	Pg	**Pn**	**09 30 22.6**	**-1.0**
MNS	**Montasola**	**0.52**	**271**	Pg	**Pb**	**09 30 22.2**	**+0.3**
	861nm,0.4s						
MNS	**Montasola**	**0.52**	**271**	Pg	**Pb**	**09 30 22.2**	**+0.3**
	861nm,0.4s						
CERT	**Cerreto**	**0.52**	**215**	⇑*i*Pg	**Pb**	**09 30 22.2**	**+0.3**
CERT				Sg	**Sb**	**09 30 29.6**	**+0.6**
	3µm,0.5s						
CERT	**Cerreto**	**0.52**	**215**	⇑*i*Pg	**Pb**	**09 30 22.2**	**+0.3**
CERT				Sg	**Sb**	**09 30 29.6**	**+0.6**
	3µm,0.5s						
INTR	**Introdacqua**	**0.53**	**133**	Pg	**Pg**	**09 30 23.1**	**+1.0**
INTR				Sg	**Sn**	**09 30 31.8**	**-0.7**
	1µm,0.3s						
INTR	**Introdacqua**	**0.53**	**133**	Pg	**Pg**	**09 30 23.1**	**+1.0**
INTR				Sg	**Sn**	**09 30 31.8**	**-0.7**
	1µm,0.3s						
VVLD	**Villa Vallelon**	**0.54**	**160**	Pg	**Pg**	**09 30 22.8**	**+0.6**
	1µm,0.6s						
VVLD	**Villa Vallelon**	**0.54**	**160**	Pg	**Pg**	**09 30 22.8**	**+0.6**
	1µm,0.6s						
TRTR	**Tortoreto Alta**	**0.58**	**42**	Pg	**Pn**	**09 30 25.5**	**+0.9**
	5µm,0.9s						
TRTR	**Tortoreto Alta**	**0.58**	**42**	Pg	**Pn**	**09 30 25.5**	**+0.9**
	5µm,0.9s						
GUAR	**Guarcino**	**0.58**	**185**	Pg	**Pn**	**09 30 24.7**	**0.0**
	817nm,0.3s						
GUAR	**Guarcino**	**0.58**	**185**	Pg	**Pn**	**09 30 24.7**	**0.0**
	817nm,0.3s						
MTCE	**Montecelio**	**0.59**	**234**	Pg	**Pg**	**09 30 23.3**	**+0.1**
	650nm,0.5s						
MTCE	**Montecelio**	**0.59**	**234**	Pg	**Pg**	**09 30 23.3**	**+0.1**
	650nm,0.5s						
OFFI	**Offida**	**0.60**	**22**	⇑*i*Pg	**Pn**	**09 30 25.4**	**+0.5**
	3µm,0.6s						
OFFI	**Offida**	**0.60**	**22**	⇑*i*Pg	**Pn**	**09 30 25.4**	**+0.5**
	3µm,0.6s						
LPEL	**Lama dei Pelig**	**0.68**	**119**	Pg	**Pn**	**09 30 26.0**	**0.0**
LPEL				Sg	**Sn**	**09 30 36.7**	**+0.5**
	849nm,0.6s						
LPEL	**Lama dei Pelig**	**0.68**	**119**	Pg	**Pn**	**09 30 26.0**	**0.0**
LPEL				Sg	**Sn**	**09 30 36.7**	**+0.5**
	849nm,0.6s						
FDMO	**Fiordimonte**	**0.69**	**342**	Pg	**Pn**	**09 30 25.8**	**-0.4**
FDMO				Sg	**Sn**	**09 30 37.5**	**+1.0**
	298nm,0.4s						
FDMO	**Fiordimonte**	**0.69**	**342**	Pg	**Pn**	**09 30 25.8**	**-0.4**
FDMO				Sg	**Sn**	**09 30 37.5**	**+1.0**
	298nm,0.4s						
POFI	**Posta Fibreno**	**0.70**	**159**	Pg	**Pn**	**09 30 26.6**	**+0.2**
	507nm,0.7s						
POFI	**Posta Fibreno**	**0.70**	**159**	Pg	**Pn**	**09 30 26.6**	**+0.2**
	507nm,0.7s						
CESI	**CESI - Serrava**	**0.72**	**331**	Pg	**Pn**	**09 30 26.4**	**-0.2**
	304nm,0.8s						
CESI	**CESI - Serrava**	**0.72**	**331**	Pg	**Pn**	**09 30 26.4**	**-0.2**
	304nm,0.8s						
CAFR	**Castel Frentan**	**0.73**	**101**	Pg	**Pn**	**09 30 27.3**	**+0.6**
	1µm,0.5s						
CAFR	**Castel Frentan**	**0.73**	**101**	Pg	**Pn**	**09 30 27.3**	**+0.6**
	1µm,0.5s						
SDI	**San Donato**	**0.74**	**154**	Pg	**Pg**	**09 30 26.3**	**+0.4**
	185nm,0.3s						
SDI	**San Donato**	**0.74**	**154**	Pg	**Pg**	**09 30 26.3**	**+0.4**
	185nm,0.3s						
RDP	**Rocca di Papa**	**0.79**	**219**	Pg	**Pn**	**09 30 27.6**	**0.0**
	2µm,0.5s						
RDP	**Rocca di Papa**	**0.79**	**219**	Pg	**Pn**	**09 30 27.6**	**0.0**
	2µm,0.5s						
GIUL	**Giuliano Di Ro**	**0.82**	**187**	Pg	**Pn**	**09 30 28.2**	**+0.2**
	552nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.82**	**187**	Pg	**Pn**	**09 30 28.2**	**+0.2**
	552nm,0.5s						
ASSB	**Assisi San Ben**	**0.85**	**322**	Pg	**Pn**	**09 30 28.7**	**+0.3**
	556nm,1.0s						
ASSB	**Assisi San Ben**	**0.85**	**322**	Pg	**Pn**	**09 30 28.7**	**+0.3**
	556nm,1.0s						
CERA	**Filignano**	**0.91**	**148**	Pg	**Pg**	**09 30 30.5**	**+1.4**
	839nm,0.8s						
CERA	**Filignano**	**0.91**	**148**	Pg	**Pg**	**09 30 30.5**	**+1.4**
	839nm,0.8s						
MIDA	**Miranda**	**0.98**	**138**	Pg	**Pg**	**09 30 30.5**	**0.0**
	358nm,0.7s						
MIDA	**Miranda**	**0.98**	**138**	Pg	**Pg**	**09 30 30.5**	**0.0**
	358nm,0.7s						
MURB	**Monte Urbino**	**1.09**	**325**	Pg	**Pg**	**09 30 33.2**	**+0.7**
	971nm,0.9s						
MURB	**Monte Urbino**	**1.09**	**325**	Pg	**Pg**	**09 30 33.2**	**+0.7**
	971nm,0.9s						
ARVD	**Arcevia**	**1.17**	**344**	Pg	**Pg**	**09 30 34.4**	**+0.4**
	376nm,0.8s						
ARVD	**Arcevia**	**1.17**	**344**	Pg	**Pg**	**09 30 34.4**	**+0.4**
	376nm,0.8s						
AOI	**Ancona**	**1.18**	**8**	Pg	**Pg**	**09 30 35.2**	**+0.9**
	371nm,1.0s						
AOI	**Ancona**	**1.18**	**8**	Pg	**Pg**	**09 30 35.2**	**+0.9**
	371nm,1.0s						
MODR	**Mondragone**	**1.28**	**163**	Pn	**Pg**	**09 30 37.4**	**+1.2**
	47nm,0.6s						
MODR	**Mondragone**	**1.28**	**163**	Pn	**Pg**	**09 30 37.4**	**+1.2**
	47nm,0.6s						
PIEI	**Pieia**	**1.31**	**332**	Pn	**Pg**	**09 30 37.6**	**+0.8**
	152nm,0.5s						
PIEI	**Pieia**	**1.31**	**332**	Pn	**Pg**	**09 30 37.6**	**+0.8**
	152nm,0.5s						
MAON	**Monte Argentar**	**1.67**	**273**	Pn	**Pb**	**09 30 42.0**	**+0.5**
MAON	**Monte Argentar**	**1.67**	**273**	Pn	**Pb**	**09 30 42.0**	**+0.5**
SGRT	**San Giovanni R**	**1.86**	**109**	Pn	**Pg**	**09 30 46.9**	**-0.3**
	280nm,1.2s						
SGRT	**San Giovanni R**	**1.86**	**109**	Pn	**Pg**	**09 30 46.9**	**-0.3**
	280nm,1.2s						
MSAG	**Monte S. Angel**	**2.00**	**109**	Pn	**Pg**	**09 30 48.8**	**-0.9**
	119nm,0.7s						
MSAG	**Monte S. Angel**	**2.00**	**109**	Pn	**Pg**	**09 30 48.8**	**-0.9**
	119nm,0.7s						
MS1	**Monte Sant'Ang**	**2.02**	**109**	*e*Pn	**Pg**	**09 30 51.6**	**+1.4**
NVLJ	**Novalja**	**2.44**	**26**	*i* Pn	**Pn**	**09 30 52.4**	**+2.3**
NVLJ				Sn	**Sb**	**09 31 24.2**	**0.0**
NVLJ	**Novalja**	**2.44**	**26**	*i* Pn	**Pn**	**09 30 52.4**	**+2.3**
NVLJ				Sn	**Sb**	**09 31 24.2**	**0.0**
STON	**Ston**	**3.22**	**80**	*e*Pn	**Pb**	**09 31 05.5**	**-2.4**
STON				Sn	**Sb**	**09 31 43.6**	**-3.2**
STON	**Ston**	**3.22**	**80**	*e*Pn	**Pb**	**09 31 05.5**	**-2.4**
PGF	**Pioggiola**	**3.25**	**274**	*e*Pn	Pn	09 31 04.5	+3.1
PGF				*e*Sn	**Sb**	**09 31 44.8**	**-2.8**
	9.6nm,0.6s						
PGF	**Pioggiola**	**3.25**	**274**	*e*Pn	Pn	09 31 04.5	+3.1
PGF				*e*Sn	**Sb**	**09 31 44.8**	**-2.8**
	4.8nm,0.6s						
SBF	**Sospel**	**4.60**	**291**	*e*Pn	Pn	09 31 22.8	+2.9
SBF				*e*Sn	**Sn**	**09 32 12.5**	**-0.3**
	2.2nm,0.2s						
SBF	**Sospel**	**4.60**	**291**	*e*Pn	Pn	09 31 22.8	+2.9
SBF				*e*Sn	**Sn**	**09 32 12.5**	**-0.3**
	1.1nm,0.2s						
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	Pn	09 31 29.1	+2.6
FRF				*e*Sn	**Sn**	**09 32 24.5**	**-0.1**
	2.8nm,0.3s						
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	Pn	09 31 29.1	+2.6
FRF				*e*Sn	**Sn**	**09 32 24.5**	**-0.1**
	1.4nm,0.3s						
LMR	**La Mourre**	**5.14**	**283**	*e*Pn	Pn	09 31 29.6	+2.3
LMR				*e*Sn	**Sn**	**09 32 25.6**	**-0.5**
	3.4nm,0.5s						
LMR	**La Mourre**	**5.14**	**283**	*e*Pn	Pn	09 31 29.6	+2.3
LMR				*e*Sn	**Sn**	**09 32 25.6**	**-0.5**
	1.7nm,0.5s						
MBDF	**Montbardon**	**5.35**	**298**	*e*P	Pn	09 31 34.8	+4.5
MBDF	**Montbardon**	**5.35**	**298**	*e*P	Pn	09 31 34.8	+4.5
HINF	**Hinteralfeld**	**7.13**	**322**	*e*Pn	Pn	09 31 56.7	+2.0
HINF				*e*Sn	**Sn**	**09 33 13.4**	**-1.8**
	2.0nm,0.3s						
HINF	**Hinteralfeld**	**7.13**	**322**	*e*Pn	Pn	09 31 56.7	+2.0
CDF	**Champ du Feu**	**7.41**	**327**	*e*Pn	**Pn**	**09 32 00.4**	**+1.9**
CDF				*e*Sn	**Sn**	**09 33 20.3**	**-1.7**
	1.6nm,0.3s						
CDF	**Champ du Feu**	**7.41**	**327**	*e*Pn	**Pn**	**09 32 00.4**	**+1.9**
HAU	**Haudompre**	**7.50**	**321**	*e*Pn	Pn	09 32 02.0	+2.2
HAU				*e*Sn	**Sn**	**09 33 21.1**	**-3.2**
	3.7nm,0.5s						
HAU	**Haudompre**	**7.50**	**321**	*e*Pn	Pn	09 32 02.0	+2.2

*ISCJB **06** 09:47:06.3±0.3, 42°41N±0°02×13°37E±0°04, h9km±3km, mb3.2/2, Error ellipse: s-maj=4.9km s-min=3.1km az=161.4*
*ROM **06** 09:47:06.2±0.1, 42°41N×13°38E, h8km±1km, Ml3.1/9, Error ellipse: s-maj=2.2km s-min=1.3km az=75.0*
*IDC **06** 09:47:06.5±1.4, 42°51N×13°60E, h0km, mb3.2/2, mb1 3.3/4, mb1mx3.2/28, mbtmp3.2/4, ML3.2/2, Error ellipse: s-maj=37.2km s-min=15.7km az=91.0*
*CSEM **06** 09:47:06.5±0.1, 42°41N×13°36E, h5km, Error ellipse: s-maj=3.1km s-min=2.1km az=67.0*
ISC 06 09:47:06.8±0.8**, 42°42N**±0°02×**13°37E**±0°02**, h6**km±5km**, n61, σ0s82**/80**, 2C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**161**	⇑*i*Pg	**Pg**	**09 47 08.1**	**-0.4**
AQU				Sg	**Sg**	**09 47 09.8**	**0.0**
AQU	**L'Aquila**	**0.07**	**161**	⇑*i*Pg	**Pg**	**09 47 08.1**	**-0.4**
AQU				Sg	**Sg**	**09 47 09.8**	**0.0**
CAMP	**Campotosto**	**0.12**	**13**	Pg	**Pg**	**09 47 09.4**	**-0.1**
CAMP				Sg	**Sg**	**09 47 12.1**	**+0.9**
CAMP	**Campotosto**	**0.12**	**13**	Pg	**Pg**	**09 47 09.4**	**-0.1**
CAMP				Sg	**Sg**	**09 47 12.1**	**+0.9**
FAGN	**Fagnano**	**0.22**	**134**	Pg	**Pg**	**09 47 11.4**	**+0.3**
FAGN				Sg	**Sg**	**09 47 15.3**	**+1.2**
FAGN	**Fagnano**	**0.22**	**134**	Pg	**Pg**	**09 47 11.4**	**+0.3**
FAGN				Sg	**Sg**	**09 47 15.3**	**+1.2**
FIAM	**Fiamignano**	**0.24**	**232**	Pg	**Pg**	**09 47 11.9**	**+0.3**
FIAM	**Fiamignano**	**0.24**	**232**	Pg	**Pg**	**09 47 11.9**	**+0.3**
TERO	**Teramo**	**0.27**	**40**	Pg	**Pg**	**09 47 11.6**	**-0.5**
TERO				Sg	**Sg**	**09 47 15.8**	**+0.1**
TERO	**Teramo**	**0.27**	**40**	Pg	**Pg**	**09 47 11.6**	**-0.5**
TERO				Sg	**Sg**	**09 47 15.8**	**+0.1**
VCEL	**Villa Celiera**	**0.35**	**94**	Pg	**Pg**	**09 47 14.3**	**+0.7**
VCEL	**Villa Celiera**	**0.35**	**94**	Pg	**Pg**	**09 47 14.3**	**+0.7**
PTQR	**Pietraquaria**	**0.40**	**177**	Pg	**Pg**	**09 47 13.7**	**-0.8**
PTQR				Sg	**Sg**	**09 47 20.4**	**+0.7**
PTQR	**Pietraquaria**	**0.40**	**177**	Pg	**Pg**	**09 47 13.7**	**-0.8**
PTQR				Sg	**Sg**	**09 47 20.4**	**+0.7**
NRCA	**Norcia**	**0.46**	**336**	Pg	**Pg**	**09 47 15.5**	**-0.2**
NRCA	**Norcia**	**0.46**	**336**	Pg	**Pg**	**09 47 15.5**	**-0.2**
MNS	**Montasola**	**0.51**	**267**	Pg	**Pg**	**09 47 16.6**	**-0.1**
MNS	**Montasola**	**0.51**	**267**	Pg	**Pg**	**09 47 16.6**	**-0.1**
CERT	**Cerreto**	**0.55**	**212**	Pg	**Pb**	**09 47 18.3**	**-0.6**
CERT	**Cerreto**	**0.55**	**212**	Pg	**Pb**	**09 47 18.3**	**-0.6**
TRTR	**Tortoreto Alta**	**0.56**	**46**	Pg	**Pb**	**09 47 18.5**	**-0.5**
	4µm,0.6s						
TRTR	**Tortoreto Alta**	**0.56**	**46**	Pg	**Pb**	**09 47 18.5**	**-0.5**
	4µm,0.6s						
OFFI	**Offida**	**0.57**	**24**	Pg	**Pb**	**09 47 18.3**	**-0.9**
	5µm,0.9s						
OFFI	**Offida**	**0.57**	**24**	Pg	**Pb**	**09 47 18.3**	**-0.9**
	5µm,0.9s						
INTR	**Introdacqua**	**0.57**	**136**	Pg	**Pg**	**09 47 17.5**	**-0.2**
INTR				Sg	**Sg**	**09 47 26.3**	**+1.2**
INTR	**Introdacqua**	**0.57**	**136**	Pg	**Pg**	**09 47 17.5**	**-0.2**
INTR				Sg	**Sg**	**09 47 26.3**	**+1.2**
GUAR	**Guarcino**	**0.62**	**184**	Pg	**Pg**	**09 47 17.4**	**-1.4**
GUAR	**Guarcino**	**0.62**	**184**	Pg	**Pg**	**09 47 17.4**	**-1.4**
FDMO	**Fiordimonte**	**0.65**	**341**	Pg	**Pg**	**09 47 18.6**	**-0.8**
FDMO				Sg	**Sb**	**09 47 29.3**	**-0.7**
FDMO	**Fiordimonte**	**0.65**	**341**	Pg	**Pg**	**09 47 18.6**	**-0.8**
FDMO				Sg	**Sb**	**09 47 29.3**	**-0.7**
CESI	**CESI - Serrava**	**0.68**	**330**	Pg	**Pg**	**09 47 19.3**	**-0.6**
	230nm,0.6s						
CESI	**CESI - Serrava**	**0.68**	**330**	Pg	**Pg**	**09 47 19.3**	**-0.6**
	230nm,0.6s						
LPEL	**Lama dei Pelig**	**0.71**	**121**	Pg	**Pg**	**09 47 19.8**	**-0.6**
LPEL				Sg	**Sg**	**09 47 30.2**	**+0.6**
LPEL	**Lama dei Pelig**	**0.71**	**121**	Pg	**Pg**	**09 47 19.8**	**-0.6**
LPEL				Sg	**Sg**	**09 47 30.2**	**+0.6**
CAFR	**Castel Frentan**	**0.75**	**104**	Pg	**Pg**	**09 47 20.8**	**-0.4**
	1µm,0.7s						
CAFR	**Castel Frentan**	**0.75**	**104**	Pg	**Pg**	**09 47 20.8**	**-0.4**
	1µm,0.7s						
SDI	**San Donato**	**0.78**	**155**	Pg	**Pg**	**09 47 20.5**	**-1.3**
SDI	**San Donato**	**0.78**	**155**	Pg	**Pg**	**09 47 20.5**	**-1.3**
ASSB	**Assisi San Ben**	**0.82**	**320**	Pg	**Pb**	**09 47 22.6**	**-0.9**
ASSB	**Assisi San Ben**	**0.82**	**320**	Pg	**Pb**	**09 47 22.6**	**-0.9**
CING	**Cingoli**	**0.97**	**352**	Pg	**Pg**	**09 47 24.9**	**-0.5**
CING	**Cingoli**	**0.97**	**352**	Pg	**Pg**	**09 47 24.9**	**-0.5**
MIDA	**Miranda**	**1.02**	**139**	Pg	**Pg**	**09 47 24.8**	**-1.5**
MIDA	**Miranda**	**1.02**	**139**	Pg	**Pg**	**09 47 24.8**	**-1.5**
ARVD	**Arcevia**	**1.12**	**344**	Pg	**Pg**	**09 47 27.4**	**-1.0**
	300nm,0.7s						
ARVD	**Arcevia**	**1.12**	**344**	Pg	**Pg**	**09 47 27.4**	**-1.0**
	300nm,0.7s						
AOI	**Ancona**	**1.14**	**8**	Pg	**Pb**	**09 47 28.6**	**-0.4**
	676nm,1.2s						
AOI	**Ancona**	**1.14**	**8**	Pg	**Pb**	**09 47 28.6**	**-0.4**
	676nm,1.2s						
PIEI	**Pieia**	**1.27**	**332**	Pg	**Pn**	**09 47 30.7**	**-0.5**
	300nm,1.0s						
PIEI	**Pieia**	**1.27**	**332**	Pg	**Pn**	**09 47 30.7**	**-0.5**
	300nm,1.0s						
CAFI	**Castiglion Fio**	**1.38**	**312**	Pn	**Pg**	**09 47 33.0**	**-0.2**
	201nm,0.8s						
CAFI	**Castiglion Fio**	**1.38**	**312**	Pn	**Pg**	**09 47 33.0**	**-0.2**
	201nm,0.8s						
PARC	**Parchiule**	**1.48**	**326**	Pn	**Pb**	**09 47 34.4**	**-0.4**
	334nm,0.8s						
PARC	**Parchiule**	**1.48**	**326**	Pn	**Pb**	**09 47 34.4**	**-0.4**
	334nm,0.8s						
NVLJ	**Novalja**	**2.41**	**26**	*e*Pn	**Pn**	**09 47 46.8**	**+0.1**
NVLJ				Sn	**Sn**	**09 48 17.2**	**+0.8**
NVLJ	**Novalja**	**2.41**	**26**	*e*Pn	**Pn**	**09 47 46.8**	**+0.1**
MAIM	**Mastiano**	**2.58**	**306**	P	**Pn**	**09 47 49.2**	**0.0**
DAVOX	**Davos/Dischmat**	**5.02**	**331**	Pn	**Pn**	**09 48 24.3**	**+1.4**
	0.7nm,0.3s,baz=157,slow=20,SNR=6.8						
DAVOX				Sn	**Sn**	**09 49 23.5**	**+2.2**
	0.3nm,0.3s,baz=141,slow=18,SNR=2.5						
GERES	**GERESS Array B**	**6.43**	**2**	Pn	**Pn**	**09 48 41.0**	**-1.1**
	0.4nm,0.3s,baz=174,slow=14,SNR=6.0						
GERES				Sn	**Sn**	**09 49 54.3**	**-1.6**
	0.3nm,0.3s,baz=172,slow=23,SNR=2.5						
TORD	**Torodi Ar. Bea**	**30.87**	**203**	P	**P**	**09 53 25.8**	**+1.8**
	0.3nm,0.9s,baz=22,slow=8.2,SNR=2.4						
MKAR	**Makanchi Array**	**47.83**	**60**	P	**P**	**09 55 44.6**	**-0.5**
	0.2nm,0.6s,baz=300,slow=6.1,SNR=3.3						

*NIED **06** 09:47:00, 48°80N×154°90E, h17km, Mw4.9 Best double couple: M0 2.76000×10^16 NP1:φs221.00000°, δ66.00000°, λ110.00000°. NP2:φs359.00000°, δ31.00000°, λ53.00000°.*
*IDC **06** 09:47:32.8±0.4, 48°38N×154°77E, h0km, mb4.6/40, mb1 4.7/42, mb1mx4.7/43, mbtmp4.6/42, ML4.1/2, MS4.4/45, Ms1 4.4/45, ms1mx4.2/59, Error ellipse: s-maj=13.6km s-min=8.9km az=148.0*
*SKHL **06** 09:47:35.8±0.3, 48°21N×155°51E, h53km±1km, mb5.7/6, Ms4.6/6, msh5.9/2*
*KRSC **06** 09:47:36.0±1.4, 48°08N×156°23E, h75km±25km, ML5.4*
*BJI **06** 09:47:36.8, 48°48N×155°11E, h60km, mB4.9/34, mb4.8/40, Ms4.7/38, Ms7 4.5/38*
*MOS **06** 09:47:37.0±0.9, 48°38N×154°91E, h38km, mb5.2/77, MS4.4/32, Error ellipse: s-maj=6.8km s-min=3.8km az=89.8*
*NEIC **06** 09:47:39.7±0.4, 48°39N×154°82E, h47km±3km, mb5.1/139, Error ellipse: s-maj=4.1km s-min=2.2km az=167.0*
*ISCJB **06** 09:47:39.0±0.1, 48°40N±0°02×154°86E±0°02, h56km, mb4.9/230, MS4.5/73, Error ellipse: s-maj=3.3km s-min=1.7km az=159.7*
*GCMT **06** 09:47:41.9±0.2, 48°35N×155°17E, h34km, MW5.1, Moment Tensor Solution. s49,c74; s74,c114; Moment tensor: Scale 10^16Nm; Mrr4.40±.17; Mθθ-1.63±.11; Mφφ-2.78±.11; Mrθ1.32±.14; Mθφ-2.37±.07; Mφr1.03±.13; Best double couple: M0 4.80000×10^16 NP1:φs213.00000°, δ35.00000°, λ82.00000°. NP2:φs43.00000°, δ55.00000°, λ96.00000°. Principal axes: T 4.7200, Plg79.0000°, Azm335.0000°; N 0.2000, Plg5.0000°, Azm220.0000°; P -4.9300, Plg10.0000°, Azm129.0000°; Data Used: II IU IC G CN.*
*SZGRF **06** 09:47:41.7, 49°83N×154°55E, h33km, mb5.3, MS4.6, Kuril Islands, Russia*
*DJA **06** 09:47:43.6±6.5, 49°N±11°×15°5E±2°3, h89km±53km, M4.8/10, mB5.4/4, mb4.9/10, Mw(mB)4.8/4*
*BGS **06** 09:47:56.9±2.1, 50°54N×149°56E, h47km, mb5.1*
ISC 06 09:47:40.4±0.3**, 48°33N**±0°04×**154°92E**±0°03**, h59**km±2km**, h58km:pP-P, n1088, σ1s14**/1159**, mb5.0**/230**, MS4.5**/73**, 299C-212D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.48**	**18**	*e*PN	Pn	09 48 13.5	-4.8
SKR				*i* S	**Sn**	**09 48 42.0**	**-5.4**
SKR				pmax	pmax		
	comp=N,2µm,2.0s						
SKR				pmax	pmax		
	comp=E,2µm,2.0s						
SKR				pmax	pmax		
	comp=Z,3µm,2.0s						
SKR				pmax	pmax		
	comp=N,1µm,1.0s						
SKR				pmax	pmax		
	comp=Z,2µm,1.0s						
SKR				pmax	pmax		
	comp=E,710nm,0.3s						
SKR				smax	smax		
	comp=N,5µm,0.5s						
SKR				smax	smax		
	comp=E,3µm,0.5s						
SKR				smax	smax		
	comp=N,12µm,2.0s						
SKR				smax	smax		
	comp=E,10µm,2.0s						
SKR				MLR	MLR		
	comp=N,11µm,14.0s						
SKR				MLR	MLR		
	comp=Z,13µm,14.0s						
SKR				MLR	MLR		
	comp=E,10µm,8.0s						
SKR	**Severo-Kuril's**	**2.48**	**18**	*e*P	Pn	09 48 13.5	-4.8
SKR				AMB	AMB	09 48 18.0	
	comp=E,3µm,2.0s						
SKR				AMB	AMB	09 48 18.0	
	comp=E,2µm,2.0s						
SKR				AMB	AMB	09 48 18.9	
	comp=E,710nm,0.2s						
SKR				AMB	AMB	09 48 18.9	
	comp=E,1µm,1.0s						
SKR				AMB	AMB	09 48 18.9	
	comp=E,2µm,1.0s						
SKR				pP		09 48 28.5	
SKR				*i* S	**Sn**	**09 48 42.0**	**-5.4**
SKR				A	A	09 48 58.8	
	comp=E,5µm,0.5s						
SKR				A	A	09 48 58.8	
	comp=E,3µm,0.5s						
SKR				A	A	09 48 58.8	
	comp=E,2µm,0.5s						
SKR				A	A	09 48 59.0	
	comp=E,12µm,2.0s						
SKR				A	A	09 48 59.0	
	comp=E,10µm,2.0s						
SKR				A	A	09 48 59.0	
	comp=E,12µm,2.0s						
SKR				A	A	09 48 59.0	
	comp=E,10µm,2.0s						
SKR				A	A	09 48 59.0	
	comp=E,2µm,2.0s						
SKR				AMS	AMS	09 49 20.0	
	comp=E,10µm,8.0s						
SKR				AMS	AMS	09 49 20.0	
	comp=E,11µm,14.0s						
SKR				AMS	AMS	09 49 20.0	

comp=E,13µm,14.0s
SKR AMS AMS 09 49 20.0
comp=E,10µm,8.0s
SKR AMS AMS 09 49 20.0
comp=E,11µm,14.0s
SKR AMS AMS 09 49 20.0
comp=E,12µm,14.0s
MIPR Malaya Ipel'ka 4.12 16 *e*P **Pn 09 48 39.8 -1.0**
MIPR *e*S **Sn 09 49 26.7 -1.0**
MTVR Mutnovka 4.65 25 *i* P **Pn 09 48 46.3 -1.8**
MTVR *i* S **Sn 09 49 37.4 -3.4**
GRL Gorelyy 4.68 24 *e*P **Pn 09 48 47.3 -1.2**
GRL *i* S **Sn 09 49 40.4 -1.2**
RUS Russkaya 4.71 28 PN **Pn 09 48 46.0 -2.7**
RUS Russkaya 4.71 28 *e*P **Pn 09 48 46.0 -2.7**
RUS *i* S **Sn 09 49 36.2 -5.7**
APC Apacha 4.81 16 *e*P **Pn 09 48 50.3 +0.1**
APC *i* S **Sn 09 49 44.5 -0.1**
PEA0B Petropavlovsk- 5.10 19 *e*Pn **Pn 09 48 53.6 -0.5**
PETK Petropavlovsk- 5.10 19 PN **Pn 09 48 53.7 -0.5**
PETK 09 49 54.7
PETK pmax pmax
comp=Z,25nm,0.3s
PETK smax smax
comp=N,2.0nm,0.3s
PETK MLR MLR
comp=Z,4µm,20.4s
PETK Petropavlovsk- 5.10 19 Pn **Pn 09 48 53.6 -0.5**
PETK Sn **Sn 09 49 54.6 +3.0**
PETK Petropavlovsk- 5.10 19 Pn **Pn 09 48 53.6 -0.5**
comp=Z,25nm,0.3s,baz=171,slow=14,SNR=410
PETK Sn **Sn 09 49 54.7 +3.0**
comp=Z,2.4nm,0.3s,baz=161,slow=18,SNR=2.0
PETK LR LR 09 51 04.1
comp=Z,4µm,20.4s,baz=329,slow=42
PET Petropavlovsk 5.26 25 *e*PN **Pn 09 48 54.3 -2.0**
PET MLR MLR
comp=Z,2µm,16.0s
PET MLR MLR
comp=Z,3µm,17.0s
PET Petropavlovsk 5.26 25 *e*Pn **Pn 09 48 54.4 -2.0**
PET *e*Sn **Sn 09 49 55.6 0.0**
PET Petropavlovsk 5.26 25 *e*P **Pn 09 48 54.4 -2.0**
PET *i* S **Sn 09 49 50.6 -5.0**
UGLR Uglovaya 5.47 25 *e*P **Pn 09 48 58.3 -1.1**
KOK Koryaka 5.50 24 *i* P **Pn 09 48 59.1 -0.6**
AVH Avacha 5.50 25 *e*P **Pn 09 48 58.8 -0.9**
AVH *i* S **Sn 09 49 58.0 -3.6**
SMAR Somma 5.52 25 *e*P **Pn 09 48 59.0 -1.1**
KRER Koryakskii 5.54 25 *e*P **Pn 09 48 59.2 -1.1**
SDLR Sedlovina 5.55 25 *e*P **Pn 09 48 58.5 -2.0**
GNL Ganaly 5.70 18 *e*P **Pn 09 49 02.1 -0.4**
GNL *i* S **Sn 09 50 04.9 -1.6**
KUR Kuril'sk 5.75 240 *e*PN **Pn 09 49 04.0 +0.9**
KUR *e*S **Sn 09 50 10.0 +2.3**
KUR pmax pmax
comp=Z,2µm,2.0s
KUR smax smax
comp=E,2µm,1.0s
KUR smax smax
comp=N,3µm,1.3s
KUR smax smax
comp=N,10µm,2.0s
KUR smax smax
comp=E,5µm,2.0s
KUR Kuril'sk 5.75 240 *e*P **Pn 09 49 04.0 +0.9**
KUR AMB AMB 09 49 10.0
comp=E,150nm,0.5s
KUR AMB AMB 09 49 10.0
comp=E,2µm,2.0s
KUR AMB AMB 09 49 10.0
comp=E,990nm,0.9s
KUR *e*S **Sn 09 50 10.0 +2.3**
KUR A A 09 50 21.0
comp=E,10µm,2.0s
KUR A A 09 50 21.0
comp=E,5µm,2.0s
KUR A A 09 50 21.0
comp=E,3µm,1.0s
KUR A A 09 50 21.0
comp=E,2µm,1.0s
SPN Mys Shipunski 5.77 32 PN **Pn 09 49 00.5 -2.8**
SPN Mys Shipunski 5.77 32 *e*P **Pn 09 49 00.5 -2.8**
SPN *i* S Sn 09 50 01.8 -6.2
MKZ Mys Kozlova 7.54 32 PN Pn 09 49 23.8 -3.8
MKZ Mys Kozlova 7.54 32 *e*P Pn 09 49 23.8 -3.8
MKZ *i* S Sn 09 50 41.7 -10
YUK Yuzh-Kuril'sk 7.61 239 *d i* PN **Pn 09 49 28.2 -0.3**
YUK pmax pmax
comp=N,22nm,0.2s
YUK pmax pmax
comp=E,32nm,0.2s
YUK pmax pmax
comp=Z,138nm,0.2s
YUK MLR MLR
comp=N,1µm,16.0s
YUK MLR MLR
comp=E,1µm,16.0s
YUK MLR MLR
comp=Z,2µm,16.0s
YUK Yuzh-Kuril'sk 7.61 239 ⇓ *i* P **Pn 09 49 28.3 -0.3**
YUK AMB AMB 09 49 29.1
comp=Z,20nm,0.2s
YUK AMB AMB 09 49 29.1
comp=Z,30nm,0.2s
YUK AMB AMB 09 49 29.1
comp=Z,140nm,0.2s
YUK *e*S **Sn 09 50 55.9 +2.5**
YUK AMS AMS 09 52 09.4
comp=Z,1µm,16.0s
YUK AMS AMS 09 52 09.4
comp=Z,2µm,16.0s
TUMR Tumrok 7.68 23 *e*P **Pn 09 49 28.0 -1.5**
ESO Esso 7.95 16 PN **Pn 09 49 33.5 +0.3**
ESO Esso 7.95 16 P **Pn 09 49 33.5 +0.3**
JRA Rausu 8.10 241 P **Pn 09 49 35.1 -0.1**
NEM2 Nemuro 2 8.11 236 P Pn 09 49 31.9 -3.4
NEM2 *e*S Sn 09 50 58.8 -6.6
KMNR Kamenistaya 8.12 22 *e*P **Pn 09 49 34.3 -1.3**
KOZ Kozyrevsk 8.31 20 P **Pn 09 49 36.7 -1.4**
KOZR Kozyr 8.32 20 PN **Pn 09 49 36.7 -1.6**
YSS Yuzh-Sakhalins 8.33 265 ⇓ *e*PN **Pn 09 49 41.0 +2.6**
YSS 09 51 26.0
YSS pmax pmax
comp=N,30nm,0.9s
YSS pmax pmax
comp=E,50nm,0.9s
YSS pmax pmax
comp=Z,30nm,0.9s
YSS MLR MLR
comp=E,2µm,17.0s
YSS MLR MLR
comp=Z,2µm,17.0s
YSS Yuzh-Sakhalins 8.33 265 *e*Pn **Pn 09 49 39.0 +0.6**
comp=Z,86nm,0.9s
YSS *e*Sn **Sn 09 51 09.6 -1.4**
YSS Yuzh-Sakhalins 8.33 265 ⇓ *e*P **Pn 09 49 41.0 +2.6**
YSS AMB AMB 09 49 42.7
comp=Z,30nm,0.9s
YSS AMB AMB 09 49 42.7
comp=Z,30nm,0.9s
YSS AMB AMB 09 49 42.7
comp=Z,50nm,0.9s
YSS *e*SP 09 50 02.0
YSS *e*S **Sn 09 51 11.0 0.0**
YSS *e*LQ LQ 09 51 26.0
YSS *e*LR LR 09 52 02.0
YSS AMS AMS 09 52 34.0
comp=Z,2µm,17.0s
YSS AMS AMS 09 52 34.0
comp=Z,2µm,17.0s
TYV Tymovskoe 8.36 292 *e*P **Pn 09 49 39.8 +1.0**
TYV AMB AMB 09 49 43.5
comp=Z,22nm,1.0s
TYV AMB AMB 09 49 43.5
comp=Z,62nm,1.0s
TYV AMB AMB 09 49 43.5
comp=Z,110nm,1.0s
TYV AMB AMB 09 49 44.0
comp=Z,600nm,8.0s
TYV AMS AMS 09 53 20.0
comp=Z,6µm,16.0s
TYV AMS AMS 09 53 20.0
comp=Z,2µm,18.0s
BZWR Bezymyannyi-We 8.38 22 P **Pn 09 49 37.2 -1.9**
BZGR Bezymyannyi-Gr 8.40 23 *e*P **Pn 09 49 39.0 -0.5**
ZLN Zelenaya 8.50 23 P **Pn 09 49 39.6 -1.2**
SRDR Sredinnyy 8.52 18 P **Pn 09 49 39.2 -1.8**
UGL Uglegorsk 8.54 280 *e*PN **Pn 09 49 39.8 -1.4**
UGL pmax pmax
comp=Z,46nm,0.5s
UGL MLR MLR
comp=N,3µm,16.0s
UGL MLR MLR
comp=E,3µm,20.0s
UGL Uglegorsk 8.54 280 *e*P **Pn 09 49 39.8 -1.4**
UGL AMB AMB 09 49 40.5
comp=E,46nm,0.5s
UGL *e*L L 09 51 41.0
UGL AMS AMS 09 53 03.0
comp=E,3µm,20.0s
UGL AMS AMS 09 53 03.0
comp=E,3µm,16.0s
JNK Nakash 8.54 240 P **Pn 09 49 40.2 -1.1**
KRSR Krestovskiy 8.62 22 P **Pn 09 49 40.3 -2.1**
KLY Klyuchi 8.73 22 PN **Pn 09 49 43.8 +0.1**
KLY Klyuchi 8.73 22 P **Pn 09 49 43.8 +0.1**
JTKR Abashiri--Toko 8.80 244 P **Pn 09 49 44.8 0.0**
JAK Akkeshi 8.93 237 P **Pn 09 49 43.6 -2.9**
JAK *e*S Sn 09 51 18.6 -6.9
JMP Maruseppu 9.11 246 P **Pn 09 49 49.8 +0.7**
SMKR Semkarok 9.17 23 P Pn 09 49 46.7 -3.3
OKH Okha 9.19 309 *e*PN **Pn 09 49 52.0 +1.9**
OKH pmax pmax
comp=Z,1µm,3.6s
OKH MLR MLR
comp=Z,3µm,12.0s
OKH Okha 9.19 309 *e*P **Pn 09 49 52.0 +1.9**
OKH AMB AMB 09 49 52.2
comp=Z,1µm,3.6s
OKH AMB AMB 09 49 54.6
comp=Z,1µm,1.8s
OKH *e*LQ LQ 09 52 40.0
OKH AMS AMS 09 54 08.0
comp=Z,3µm,12.0s
OKH AMS AMS 09 54 08.0
comp=Z,5µm,14.0s
OKH AMS AMS 09 54 08.0
comp=Z,3µm,12.0s
KBTR Krutoberegovo 9.25 29 PN Pn 09 49 47.3 -3.6
KBTR Krutoberegovo 9.25 29 P Pn 09 49 47.3 -3.6
JAR Ashorobuto 9.27 241 P **Pn 09 49 50.2 -1.1**
JAR *e*S **Sn 09 51 31.1 -2.9**
JWK2 Keihoku 9.43 256 P Pn 09 49 57.4 +4.1
ASAJ Asahikawa 9.52 248 *e*Pn **Pn 09 49 55.8 +1.1**
ASAJ *e*Sn **Sn 09 51 42.0 +1.8**
ASAJ Asahikawa 9.52 248 P **Pn 09 49 55.9 +1.1**
ASAJ Asahikawa 9.52 248 Pn **Pn 09 49 56.0 +1.3**
comp=Z,12nm,0.3s,baz=76,slow=16,SNR=99
ASAJ LR LR 09 53 22.4
comp=Z,2µm,19.2s,baz=67,slow=37
JKK2 Kamakawa 2 9.56 247 P **Pn 09 49 55.6 +0.4**
BKI Bering 9.70 41 PN Pn 09 49 52.5 -4.5
BKI Bering 9.70 41 *e*P Pn 09 49 52.5 -4.5
BKI *i* S Sn 09 51 30.9 -13
JCH Churui 9.93 239 P Pn 09 49 56.5 -3.7
JCH *e*S Sn 09 51 43.1 -6.9
NKL Nikolayevsk 10.23 303 *e*P **Pn 09 50 02.0 -2.3**
NKL AMB AMB 09 50 04.0
comp=Z,500nm,4.0s
NKL AMB AMB 09 50 04.5
comp=Z,53nm,1.4s
NKL AMB AMB 09 50 04.5
comp=Z,170nm,1.4s
NKL AMB AMB 09 50 04.5
comp=Z,210nm,1.4s
NKL *e*L L 09 53 17.0
NKL AMS AMS 09 55 00.0
comp=Z,2µm,14.0s
NKL AMS AMS 09 55 00.0
comp=Z,900nm,14.0s
NKL AMS AMS 09 55 00.0
comp=Z,2µm,14.0s
JBT2 Biratori 2 10.41 242 P **Pn 09 50 04.0 -2.8**
ERM Erimo 10.43 237 *e*PN **Pn 09 50 05.1 -2.0**
ERM Erimo 10.43 237 *e*Pn **Pn 09 50 06.1 -0.9**
ERM *e*Sn **Sn 09 52 01.1 -1.2**
JNBK Urakawa-nobuka 10.49 239 P Pn 09 50 03.7 -4.2
JKB Kayabe 11.73 242 P Pn 09 50 20.9 -3.9
JSH Shimam 11.88 247 P **Pn 09 50 25.2 -1.7**
JYM2 Yakumo 2 11.99 244 P **Pn 09 50 26.1 -2.2**
FX1 Attu Island--F 12.44 62 Pn **Pn 09 50 31.4 -3.1**
FX1 Sn Sn 09 52 35.9 -15
FX1 Attu Island--F 12.44 62 Pn **Pn 09 50 31.4 -3.1**
comp=Z,3.4nm,0.3s,baz=30,slow=15,SNR=12
FX1 Sn Sn 09 52 35.9 -15
comp=Z,10nm,0.3s,baz=180,slow=20,SNR=7.3
JYA Atsumi 14.70 234 P Pn 09 50 58.6 -6.2
SEY Seymchan 14.70 355 ⇓ *i* P **Pn 09 51 04.2 -0.5**
KLR Kul'dur 15.29 282 *e*P **Pn 09 51 12.1 -0.4**
KLR pmax pmax
comp=E,85nm,1.6s
KLR pmax pmax
comp=Z,85nm,1.6s
JFY Yanaizu 15.58 231 P **Pn 09 51 11.6 -4.6**
USRK Ussuriysk Arra 16.36 264 Pn **Pn 09 51 25.2 -0.8**
comp=Z,1.0nm,0.3s,baz=69,slow=12,SNR=20
USRK LR LR 09 57 17.7
comp=Z,821nm,20.7s,baz=58,slow=36
MAJO Matsushiro 17.02 232 *e*P **Pn 09 51 30.4 -3.9**
MAJO pmax pmax
comp=Z,128nm,1.9s
MAJO Matsushiro 17.02 232 *e*Pn **Pn 09 51 30.4 -3.9**
comp=Z,128nm,1.9s
MAT Matsushiro 17.02 232 P **Pn 09 51 30.1 -4.2**
MAT S **Sn 09 54 41.6 -0.9**
MJAR Matsushiro Arr 17.02 232 Pn **Pn 09 51 30.4 -3.9**
MJAR Matsushiro Arr 17.02 232 Pn **Pn 09 51 30.4 -3.9**
comp=Z,0.7nm,0.3s,baz=30,slow=13,SNR=39
MDJ Mudanjiang 17.81 267 P **Pn 09 51 43.0 -1.0**
MDJ pP **pP 09 51 56.1 -0.6**
MDJ sP **sP 09 52 03.9 -0.2**
MDJ S **Sn 09 54 59.9 -1.7**
MDJ ScP **ScP 09 59 48.0 +0.1**
MDJ PcS **PcS 09 59 54.7 +0.4**
MDJ pmax pmax
comp=Z,22nm,1.0s
MDJ pmax pmax
comp=Z,140nm,4.2s
MDJ LR LR
comp=N,540nm,19.6s
MDJ LR LR
comp=E,480nm,20.1s
MDJ LR LR
comp=Z,830nm,17.5s
ZEA Zeya 18.16 298 *e*P **P 09 51 45.3 -2.5**
ZEA AMB AMB 09 51 48.3
comp=Z,29nm,1.2s
ZEA AMB AMB 09 51 48.3
comp=Z,37nm,1.4s
ZEA AMB AMB 09 51 48.3
comp=Z,55nm,1.4s
ZEA AMB AMB 09 52 04.0
comp=Z,700nm,11.0s
ZEA AMB AMB 09 52 04.0
comp=Z,500nm,12.0s
ZEA *e*S **Sn 09 55 10.5 +0.6**
ZEA A A 09 55 34.0
comp=Z,700nm,8.0s
ZEA A A 09 55 34.0
comp=Z,700nm,7.0s
JHJ Hachijo jima 2 18.99 222 LR LR 09 58 17.3
comp=Z,274nm,20.8s,baz=157,slow=34
YAK Yakutsk 19.71 323 *e*P **P 09 52 05.5 +0.8**
YAK *e*S **Sn 09 55 46.7 -0.5**
YAK pmax pmax
comp=Z,25nm,1.1s
YAK pmax pmax
comp=N,16nm,1.1s
YAK pmax pmax
comp=E,31nm,1.4s
YAK smax smax
comp=N,118nm,2.3s
YAK smax smax
comp=E,56nm,2.1s
YAK MLR MLR
comp=N,576nm,15.0s
YAK MLR MLR
comp=Z,939nm,17.0s
YAK MLR MLR
comp=E,389nm,15.0s
YAK Yakutsk 19.71 323 *e*P **P 09 52 03.8 -0.9**
comp=E,46nm,0.7s
CLNS Chul'man 19.99 306 *e*P Pn 09 52 10.7 +0.7
CLNS *e*S **S 09 55 47.6 -1.6**
CLNS pmax pmax
comp=Z,26nm,1.0s
CLNS pmax pmax
comp=E,20nm,1.3s
CLNS pmax pmax
comp=N,18nm,1.1s
CLNS smax smax
comp=E,118nm,12.0s
CLNS smax smax
comp=N,348nm,13.2s
CLNS MLR MLR
comp=Z,1µm,15.0s
CLNS MLR MLR
comp=N,770nm,16.0s
CLNS MLR MLR
comp=E,945nm,13.0s
BILL Bilibino 20.58 12 *d i* P **P 09 52 11.9 -2.1**
BILL *i* 09 52 24.1
BILL *i* 09 52 30.8
BILL *e*S **S 09 56 03.1 +2.5**
BILL pmax pmax
comp=Z,25nm,1.0s
BILL MLR MLR
comp=Z,1µm,17.0s
BILL Bilibino 20.58 12 P **P 09 52 11.6 -2.5**
comp=Z,23nm,0.8s
CN2 Changchun 20.88 269 *e*P **P 09 52 14.8 -2.7**
CN2 PP **PnPn 09 52 37.6 -0.4**
CN2 *e*S S 09 55 54.9 -12
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,15.0s
CN2 LR LR
comp=E,800nm,15.0s
CN2 LR LR
comp=Z,800nm,16.0s
KSRS Korea Array 22.46 251 P **P 09 52 34.3 -0.1**
comp=Z,22nm,0.7s,baz=49,slow=10.0,SNR=80
KSRS PcP **PcP 09 56 27.5 +0.9**
comp=Z,1.4nm,0.8s,baz=46,slow=0.7,SNR=4.2
KSRS LR LR 10 00 51.6
comp=Z,941nm,18.6s,baz=43,slow=36
KSAR Wonju Array Be 22.49 251 P **P 09 52 34.3 -0.4**
KSAR PcP **PcP 09 56 27.5 +0.8**
SNY Shenyang 22.96 265 ⇑ P **P 09 52 38.4 -1.2**
SNY S **S 09 56 48.2 +3.0**
SNY pmax pmax
comp=Z,11nm,0.4s
SNY pmax pmax
comp=Z,190nm,9.8s
SNY LR LR
comp=N,190nm,17.5s
SNY LR LR
comp=E,610nm,25.3s
SNY LR LR
comp=Z,670nm,21.4s
CBIJ Chichi jima 23.41 210 LR LR 10 00 19.3
comp=Z,281nm,21.9s,baz=339,slow=33
JNU Nakatsue 23.59 239 *e*P **P 09 52 45.9 +0.2**
comp=Z,12nm,1.1s
JNU Nakatsue 23.59 239 P **P 09 52 45.9 +0.2**
comp=Z,13nm,0.9s,baz=330,slow=9.9,SNR=8.5
JNU LR LR 10 02 09.5
comp=Z,452nm,20.8s,baz=40,slow=37
GAMB Gambell 23.82 37 *e*P **P 09 52 47.6 +0.1**
comp=Z,89nm,1.2s
TNA Tin City 26.03 35 *e*P **P 09 53 08.8 +1.2**
comp=Z,61nm,1.1s
SSE Sheshan 30.82 248 P **P 09 53 50.1 -0.4**
SSE S **S 09 58 46.8 -3.0**
SSE pmax pmax
comp=Z,34nm,0.7s
SSE pmax pmax
comp=Z,76nm,4.4s
SSE LR LR
comp=N,130nm,24.8s
SSE LR LR
comp=E,180nm,24.8s
SSE LR LR
comp=Z,270nm,22.9s
HHC Hu-ho-hao-te 31.43 273 *e*P **P 09 53 55.6 -0.4**
HHC pP **pP 09 54 09.7 -0.9**
HHC sP **sP 09 54 18.0 +0.5**
HHC PP **PnPn 09 54 59.8 -0.7**
HHC PcP **PcP 09 56 49.1 +1.1**
HHC S **S 09 58 56.2 -3.2**
HHC sS **sS 09 59 22.2 -2.1**
HHC ScP **ScP 10 00 25.7 -0.1**
HHC PcS **PcS 10 00 32.2 -0.3**
HHC SS **SnSn 10 00 45.5 -2.7**
HHC ScS **ScS 10 04 22.0 -1.6**
HHC pmax pmax
comp=Z,41nm,0.6s
HHC pmax pmax
comp=Z,200nm,6.3s
HHC LR LR
comp=N,1µm,13.3s
HHC LR LR
comp=E,1µm,13.5s
HHC LR LR
comp=Z,2µm,13.6s
ULN Ulaanbaatar 31.56 287 *e*P **P 09 53 55.9 -1.2**
comp=Z,13nm,1.5s
ULN Ulaanbaatar 31.56 287 P **P 09 53 54.9 -2.3**
comp=Z,5.2nm,1.3s
NJ2 Nanjing 31.64 252 *e*P **P 09 53 58.1 +0.4**
NJ2 pP **pP 09 54 12.3 -0.1**
NJ2 sP **sP 09 54 21.2 +1.9**
NJ2 S **S 09 59 00.0 -2.6**
NJ2 sS **sS 09 59 27.5 0.0**
NJ2 pmax pmax
comp=Z,20nm,1.0s
NJ2 pmax pmax
comp=Z,210nm,6.0s
NJ2 LR LR
comp=N,570nm,16.7s
NJ2 LR LR
comp=E,440nm,17.8s
NJ2 LR LR
comp=Z,830nm,19.6s
SONM Songino Array 31.99 288 P **P 09 53 59.5 -1.4**
SONM PcP **PcP 09 56 49.2 -0.3**
SONM Songino Array 31.99 288 P **P 09 53 59.5 -1.4**
comp=Z,2.1nm,0.8s,baz=64,slow=8.9,SNR=14
SONM PcP **PcP 09 56 49.2 -0.3**
comp=Z,2.5nm,0.9s,baz=107,slow=2.0,SNR=7.7
SONM LR LR 10 08 05.0
comp=Z,1µm,19.4s,baz=75,slow=39
KDAK Kodiak Island 32.16 53 P **P 09 54 02.9 +0.9**
KDAK PcP **PcP 09 56 50.5 +1.0**
KDAK Kodiak Island 32.16 53 P **P 09 54 02.9 +0.9**
comp=Z,5.0nm,0.9s,baz=284,slow=4.2,SNR=3.3
KDAK PcP **PcP 09 56 50.5 +1.0**
comp=Z,3.1nm,0.7s,baz=207,slow=2.3,SNR=4.1
TLY Talaya 32.57 296 *e*P **P 09 54 03.4 -2.4**
TLY *e* 09 55 22.1
TLY *e*SSS SSS 10 01 21.4
TLY pmax pmax
comp=Z,9.0nm,1.4s
TLY MLR MLR
comp=Z,916nm,17.0s
TLY Talaya 32.57 296 *e*P **P 09 54 05.6 -0.2**
comp=Z,19nm,1.5s
ZAK Zakamensk 33.15 293 *e*P **P 09 54 09.7 -1.2**
ZAK *e* 09 56 53.0
ZAK pmax pmax
comp=Z,5.0nm,1.3s
COLD Coldfoot 33.33 35 *e*P **P 09 54 12.8 +0.6**
comp=Z,14nm,0.9s
SML Sawmill 33.98 45 *e*P **P 09 54 17.9 -0.1**
SML pmax pmax
comp=Z,5.0nm,1.0s
SML Sawmill 33.98 45 *e*P **P 09 54 17.9 -0.1**
comp=Z,4.9nm,1.0s
COLA College 34.14 40 *e*P **P 09 54 19.4 +0.2**
COLA pmax pmax
comp=Z,22nm,1.0s
COLA College 34.14 40 *e*P **P 09 54 19.4 +0.2**

comp=Z,22nm,1.0s
ILAR Eielson Array 34.55 40 P **P** 09 54 22.4 -0.3
ILAR PcP **PcP** 09 56 55.2 -1.0
ILAR Eielson Array 34.55 40 P **P** 09 54 22.4 -0.3
comp=Z,2.7nm,0.9s,baz=262,slow=8.9,SNR=31
ILAR PcP **PcP** 09 56 55.2 -1.0
comp=Z,0.7nm,0.5s,baz=285,slow=3.5,SNR=5.6
ILAR LR LR 10 10 22.4
comp=Z,206nm,18.2s,baz=133,slow=40
PAX Paxson 35.24 43 *e*P **P** 09 54 29.1 +0.2
PAX pmax pmax
comp=Z,15nm,1.6s
PAX Paxson 35.24 43 *e*P **P** 09 54 29.1 +0.2
comp=Z,15nm,1.6s
WHN Wuhan 35.52 255 P **P** 09 54 31.4 -0.1
WHN S **S** 09 59 59.7 -3.0
WHN LR LR
comp=Z,690nm,14.3s
GUMO Guam 35.63 197 LR LR 10 05 17.8
comp=Z,300nm,21.8s,baz=269,slow=30
DOT Dot Lake 35.83 42 *e*P **P** 09 54 33.4 -0.5
comp=Z,4.7nm,0.8s
BMRM Bremner River 35.85 46 *e*P **P** 09 54 34.6 +0.5
comp=Z,17nm,1.2s
MENT Mentasta 36.04 43 *e*P **P** 09 54 35.6 -0.1
EGAK Eagle 37.00 40 *e*P **P** 09 54 43.0 -0.7
comp=Z,16nm,1.1s
LZH Lanzhou 39.07 271 *e*P **P** 09 55 01.7 0.0
LZH pP **pP** 09 55 17.2 +0.5
LZH sP **sP** 09 55 24.3 +0.8
LZH PP **PnPn** 09 56 36.5 +1.5
LZH *e*S **S** 10 00 56.1 -0.8
LZH sS **sS** 10 01 22.0 -0.2
LZH pmax pmax
comp=Z,39nm,1.2s
LZH pmax pmax
comp=Z,120nm,5.1s
LZH LR LR
comp=N,290nm,12.6s
LZH LR LR
comp=E,260nm,12.0s
LZH LR LR
comp=Z,430nm,13.5s
INK Inuvik 39.66 34 P **P** 09 55 06.7 +0.7
INK Inuvik 39.66 34 P **P** 09 55 06.7 +0.7
comp=Z,5.9nm,0.8s,baz=288,slow=7.5,SNR=30
GTA Gaotai 39.95 278 P **P** 09 55 09.1 +0.2
GTA pP **pP** 09 55 24.5 +0.6
GTA sP **sP** 09 55 31.6 +0.9
GTA PcP **PcP** 09 57 14.5 +1.2
GTA S **S** 10 01 10.3 +0.4
GTA sS **sS** 10 01 36.6 +1.4
GTA SS **SS** 10 04 03.4 -4.8
GTA pmax pmax
comp=Z,8.0nm,1.3s
GTA pmax pmax
comp=Z,52nm,7.4s
GTA LR LR
comp=N,580nm,17.1s
GTA LR LR
comp=E,670nm,17.1s
GTA LR LR
comp=Z,1μm,17.6s
CD2 Chengdu 42.24 265 P **P** 09 55 26.5 -1.2
CD2 PP **PP** 09 57 07.6 +1.3
CD2 PcS **PcS** 10 01 11.8 -1.0
CD2 S **S** 10 01 43.7 -0.2
CD2 SS SS 10 04 46.4 -7.3
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,80nm,5.5s
CD2 LR LR
comp=N,350nm,17.1s
CD2 LR LR
comp=E,550nm,17.2s
CD2 LR LR
comp=Z,590nm,20.6s
ZALV Zalesovo Beam 42.70 305 P **P** 09 55 29.7 -1.4
ZALV 09 57 22.3
ZALV pmax pmax
comp=Z,2.0nm,0.5s
ZALV MLR MLR
comp=Z,464nm,19.7s
ZALV Zalesovo Beam 42.70 305 P **P** 09 55 29.7 -1.4
ZALV PcP **PcP** 09 57 22.3 +0.5
ZALV Zalesovo Beam 42.70 305 P **P** 09 55 29.7 -1.4
comp=Z,2.2nm,0.5s,baz=57,slow=6.2,SNR=16
ZALV PcP **PcP** 09 57 22.3 +0.5
comp=Z,1.7nm,0.4s,baz=64,slow=3.4,SNR=10
ZALV LR LR 10 14 09.9
comp=Z,464nm,19.7s,baz=70,slow=38
GYA Guiyang 43.25 257⇑ *i*P **P** 09 55 35.7 -0.4
GYA pP **pP** 09 55 51.2 0.0
GYA sP **sP** 09 55 59.5 +1.5
GYA PP **PP** 09 57 18.9 +1.5
GYA PcP **PcP** 09 57 26.4 +2.1
GYA ScP **ScP** 10 01 10.0 -0.3
GYA S **S** 10 01 57.8 -1.2
GYA sS **sS** 10 02 25.5 +0.9
GYA SS SS 10 05 04.3 -10
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,5.9s
GYA LR LR
comp=N,480nm,18.5s
GYA LR LR
comp=E,440nm,19.0s
GYA LR LR
comp=Z,490nm,18.3s
DLBC Dease Lake 43.62 47 P **P** 09 55 40.1 +1.5
DLBC Dease Lake 43.62 47 P **P** 09 55 40.1 +1.5
comp=Z,6.1nm,1.0s,baz=295,slow=12,SNR=11
WMQ Urumqi 45.51 291 P **P** 09 55 56.0 +2.2
WMQ pP **pP** 09 56 12.0 +3.0
WMQ sP sP 09 56 20.0 +4.2
WMQ PP **PP** 09 57 43.0 +2.0
WMQ S **S** 10 02 32.0 +0.7
WMQ sS **sS** 10 02 59.0 +2.1
WMQ SS **ScS** 10 05 48.0 +3.5
WMQ pmax pmax
comp=Z,21nm,1.1s
WMQ pmax pmax
comp=Z,55nm,5.0s
WMQ LR LR
comp=N,630nm,16.0s
WMQ LR LR
comp=E,710nm,16.0s
WMQ LR LR
comp=Z,600nm,16.0s
KIP Kipapa 46.05 109 *i*P **P** 09 55 55.6 -2.6
QIZ Qiongzhong 46.59 247 P **P** 09 56 02.3 -0.2
QIZ PP **PP** 09 57 55.1 +2.4
QIZ S **S** 10 02 47.0 -0.2
QIZ LR LR
comp=E,200nm,14.6s
QIZ LR LR
comp=Z,490nm,16.2s
KMI Kunming 46.73 260 P **P** 09 56 03.9 0.0
KMI pmax pmax
comp=Z,23nm,1.1s
MK31 Makanchi Array 47.31 297 *i*P **P** 09 56 06.7 -1.2
MK31 pmax pmax
comp=Z,2.0nm,0.3s
MK31 Makanchi Array 47.31 297 *e*P **P** 09 56 06.6 -1.3
MKAR Makanchi Array 47.31 297 P **P** 09 56 06.8 -1.1
MKAR pmax pmax
comp=Z,5.0nm,0.6s
MKAR MLR MLR
comp=Z,519nm,18.5s
MKAR Makanchi Array 47.31 297 P **P** 09 56 06.8 -1.1
MKAR Makanchi Array 47.31 297 P **P** 09 56 06.8 -1.1
comp=Z,5.2nm,0.6s,baz=65,slow=7.9,SNR=64
MKAR LR LR 10 17 34.6
comp=Z,519nm,18.5s,baz=47,slow=38
KURK Kurchatov 47.52 303*d i*P **P** 09 56 08.6 -0.8
KURK pmax pmax
comp=Z,27nm,1.5s
KURK Kurchatov 47.52 303 *e*P **P** 09 56 07.8 -1.5
comp=Z,46nm,1.6s
KURBB Kurchatov Arra 47.61 303 LR LR 10 17 29.0
comp=Z,658nm,18.5s,baz=60,slow=38
YKW3 Yellowknife Ar 48.89 38 *e*P **P** 09 56 20.2 +0.5
comp=Z,0.3nm,0.9s
YKA Yellowknife Ar 48.92 38 P **P** 09 56 20.6 +0.6
YKA Yellowknife Ar 48.92 38 P **P** 09 56 20.6 +0.6
comp=Z,10.0nm,0.9s,baz=297,slow=7.6,SNR=102
RES Resolute Bay 48.94 19 *e*P **P** 09 56 20.6 +0.6
comp=Z,32nm,1.2s
RES Resolute Bay 48.94 19 P **P** 09 56 20.6 +0.6
comp=Z,17nm,0.9s,baz=311,slow=8.5,SNR=74
VOSK Vostochnaya 50.65 309 P **P** 09 56 30.4 -2.9
VOSK pmax pmax
comp=Z,2.0nm,0.5s
BVA0 Borovoye Array 50.81 309 *i*P **P** 09 56 33.0 -1.5
BVAR Borovoye Array 50.81 309 LR LR 10 19 58.0
comp=Z,804nm,18.6s,baz=64,slow=38
BRVK Borovoye 50.84 309*d i*P **P** 09 56 34.2 -0.5
BRVK pmax pmax
comp=Z,3.0nm,0.6s
BRVK Borovoye 50.84 309 *e*P **P** 09 56 33.0 -1.8
SPITS Spitsbergen Ar 51.27 350 P **P** 09 56 36.6 -1.1
SPITS Spitsbergen Ar 51.27 350 P **P** 09 56 36.6 -1.1
comp=Z,2.6nm,0.5s,baz=76,slow=10,SNR=13
SPITS LR LR 10 18 03.8
comp=Z,323nm,21.7s,baz=45,slow=36
LSA Lhasa 51.41 273 P **P** 09 56 41.2 +1.3
ZRNK Zerenda 51.56 310 P **P** 09 56 38.2 -1.9
ZRNK pmax pmax
comp=Z,3.0nm,0.6s
TKM2 Tokmak 2 53.41 296 *e*P **P** 09 56 53.6 -0.6
TKM2 *e**PP **pP** 09 57 09.7 0.0
TKM2 pmax pmax
comp=Z,7.0nm,0.6s
TKM2 Tokmak 2 53.41 296 *e*P **P** 09 56 53.6 -0.6
comp=Z,7.3nm,0.6s
TKM2 *e*pP **pP** 09 57 09.7 0.0
TKM2 Tokmak 2 53.41 296 P **P** 09 56 54.0 -0.2
SNR=5.9
SOKR Solikamsk 53.63 321 *e*P **pP** 09 57 07.1 -3.6
SOKR S S 10 04 40.1 +16
SOKR pmax pmax
comp=Z,10.0nm,0.9s
SOKR MLR MLR
comp=Z,380nm,22.0s
CMMT Chiang Mai 53.67 257 P **P** 09 56 55.9 -0.2
comp=Z,26nm,1.6s,comp=Z,384nm
CHTO Chiang Mai 53.67 257 *e*P **P** 09 56 56.8 +0.7
CHTO Chiang Mai 53.67 257 *e*P **P** 09 56 56.8 +0.7
CHTO Chiang Mai 53.67 257 P **P** 09 56 55.0 -1.1
comp=Z,31nm,1.4s,comp=Z,361nm
USP Ospenovka 53.86 297 P **P** 09 56 57.1 -0.1
SNR=11
CMAR Chiang Mai Arr 53.93 257 P **P** 09 56 58.9 +0.8
CMAR Chiang Mai Arr 53.93 257 P **P** 09 56 58.9 +0.8
comp=Z,9.1nm,0.8s,baz=32,slow=7.1,SNR=20
CMAR LR LR 10 21 45.6
comp=Z,370nm,18.4s,baz=53,slow=38
KZA Kyzart 54.10 295 P **P** 09 56 59.9 +0.3
SNR=9.9
AAK Ala-Archa 54.23 296 *e*P **P** 09 56 59.1 -1.0
AAK *e**PP **pP** 09 57 14.8 -0.9
AAK pmax pmax
comp=Z,19nm,0.7s
AAK Ala-Archa 54.23 296 *e*P **P** 09 56 59.1 -1.0
comp=Z,19nm,0.7s
AAK *e*pP **pP** 09 57 14.8 -0.9
AAK Ala-Archa 54.23 296 P **P** 09 56 59.8 -0.3
SNR=5.5
AAK Ala-Archa 54.23 296 LR LR 10 21 41.3
comp=Z,550nm,18.0s,baz=32,slow=38
EKS2 Erkin-Say 54.65 297 *e*P **P** 09 57 03.0 -0.1
EKS2 pmax pmax
comp=Z,9.0nm,1.0s
EKS2 Erkin-Say 54.65 297 *e*P **P** 09 57 03.0 -0.1
comp=Z,8.9nm,1.0s
EKS2 Erkin-Say 54.65 297 P **P** 09 57 03.1 -0.1
SNR=8.2
ARU Arti 54.67 317*d i*P **P** 09 57 02.4 -0.5
ARU 09 59 01.3
ARU S **S** 10 04 41.9 +3.6
ARU SS **SS** 10 08 19.7 -1.4
ARU pmax pmax
comp=Z,4.0nm,0.6s
ARU MLR MLR
comp=Z,317nm,16.0s
ARU Arti 54.67 317 *e*P **P** 09 57 01.6 -1.3
comp=Z,6.4nm,0.5s
KSH Kashi 55.18 292 P **P** 09 57 10.0 +3.0
KSH pP **pP** 09 57 26.0 +3.4
KSH sP **sP** 09 57 33.0 +3.7
KSH PcP **PcP** 09 58 10.0 +2.5
KSH PP PP 09 59 16.0 +5.4
KSH ScP **ScP** 10 02 02.0 +1.1
KSH PcS **PcS** 10 02 09.0 +1.4
KSH S **S** 10 04 49.0 +3.1
KSH sS **sS** 10 05 16.0 +3.8
KSH ScS **ScS** 10 06 50.0 -0.8
KSH SS **SS** 10 08 34.0 +3.9
KSH pmax pmax
comp=Z,9.0nm,1.0s
KSH LR LR
comp=N,140nm,6.6s
KSH LR LR
comp=E,170nm,4.2s
KSH LR LR
comp=Z,400nm,12.6s
TAPN Taplejung 55.23 273 *e*P **P** 09 57 08.6 +0.9
NEW Newport 55.25 54 *e*P **P** 09 57 07.9 +0.6
NEW Newport 55.25 54⇓ P **P** 09 57 07.4 +0.2
baz=55,SNR=5.2
NEW Newport 55.25 54 P **P** 09 57 07.5 +0.2
comp=Z,3.5nm,1.0s,baz=295,slow=8.3,SNR=5.4
HUMO Hull Mountain 55.26 63 *e*P **P** 09 57 08.5 +1.1
comp=Z,9.6nm,1.3s
A12A Yaak River Ran 55.65 53⇑ P **P** 09 57 10.6 +0.5
baz=55
ODAN Odare 55.77 273 *e*P **P** 09 57 12.4 +0.9
comp=Z,13nm,0.4s
CHBT CHBT 56.02 249 P **P** 09 57 13.2 +0.1
GUN Gumba 56.08 275 *e*P **P** 09 57 14.2 +0.3
comp=Z,29nm,0.5s
RAMN Ramite 56.24 274 *e*P **P** 09 57 15.2 +0.3
comp=Z,44nm,0.4s
A13A Flathead Natio 56.30 52⇓ P **P** 09 57 14.9 0.0
baz=56
KKAR Karatay Array 56.31 299 *e*P **P** 09 57 14.5 -0.4
KKAR pmax pmax
comp=Z,1.0nm,0.5s
KKAR Karatay Array 56.31 299 *e*P **P** 09 57 14.4 -0.4
comp=Z,1.2nm,0.5s
APA Apatity 56.37 337⇑ *e*P P 09 57 20.2 +5.3
APA MLR MLR
comp=Z,800nm,16.0s
KKN Kakani 56.56 275 *e*P **P** 09 57 17.7 +0.6
comp=Z,33nm,0.6s
B13A Whitefish 56.61 53⇑ P **P** 09 57 18.0 +0.9
baz=56,SNR=15
PKIN Phulchoki 56.62 275 *e*P **P** 09 57 18.3 +0.7
comp=Z,16nm,0.6s
BSMT Basoo Peak 56.75 54 *e*P **P** 09 57 19.6 +1.4
ARCES ARCESS Array B 56.76 341 P **P** 09 57 16.5 -1.2
ARCES ARCESS Array B 56.76 341 P **P** 09 57 16.5 -1.2
comp=Z,1.6nm,0.5s,baz=33,slow=7.5,SNR=19
ARCES LR LR 10 26 48.6
comp=Z,554nm,18.8s,baz=24,slow=42
DMN Daman 56.79 275 *e*P **P** 09 57 19.3 +0.5
A14A Double T Ranch 56.80 52⇑ P **P** 09 57 18.9 +0.5
baz=57,SNR=7.4
BLMT Blacktail Moun 56.88 53 *e*P **P** 09 57 20.2 +1.1
D12A Red Ives Fores 56.93 55⇓ P **P** 09 57 19.8 +0.5
baz=57
C13A Hot Springs 56.97 54⇓ P **P** 09 57 19.9 +0.3
baz=57
JTMT Jetmt 57.09 53 *e*P **P** 09 57 21.5 +1.0
A15A Johnson Ranch, 57.16 52⇓ P **P** 09 57 20.9 0.0
baz=57,SNR=9.3
YBMT Yellow Bay 57.16 53 *e*P **P** 09 57 21.2 +0.2
comp=Z,18nm,1.5s
BMO Blue Mountains 57.18 58 *e*P **P** 09 57 22.4 +1.3
comp=Z,8.6nm,1.2s
DANN Dangsing 57.20 277 *e*P **P** 09 57 22.2 +0.5
comp=Z,62nm,0.5s
B14A Marquette Ranc 57.25 52⇓ P **P** 09 57 21.9 +0.2
baz=57
MOD Modoc 57.25 62 *e*P **P** 09 57 23.2 +1.4
comp=Z,7.1nm,1.1s
C14A Swan Lake 57.36 53⇑ P **P** 09 57 22.9 +0.5
baz=57,SNR=7.5
SWMT Swartz Lake 57.38 54 *e*P **P** 09 57 23.7 +1.2
D13A Huson 57.39 54⇑ P **P** 09 57 22.8 +0.2
baz=57,SNR=5.4
B15A Bradely Ranch, 57.66 52⇓ P **P** 09 57 24.5 0.0
baz=57,SNR=9.1
KOLN Koldanda 57.69 277 *e*P **P** 09 57 25.4 +0.3
comp=Z,32nm,0.6s
F12A Elk City 57.77 56⇓ P **P** 09 57 25.5 +0.2
baz=58,SNR=9.3
SLMT Seeley Lake 57.82 54 *e*P **P** 09 57 26.7 +1.0
MSO Missoula 57.83 54 *e*P **P** 09 57 26.4 +0.7
comp=Z,12nm,1.3s
MSO Missoula 57.83 54⇑ P **P** 09 57 26.0 +0.3
baz=58,SNR=14
PYUN Piuthan 57.87 277 *e*P **P** 09 57 26.5 +0.1
D14A Greenough 57.91 54⇑ P **P** 09 57 26.6 +0.3
baz=58,SNR=16
E13A Victor 57.94 55⇑ P **P** 09 57 26.8 +0.3
baz=58,SNR=6.5
C15A Salmond Ranch, 57.97 53⇑ P **P** 09 57 27.5 +0.8
baz=58,SNR=21
B16A M & M Farms, S 58.04 52⇓ P **P** 09 57 27.6 +0.5
baz=58
G12A Big Creek, Yel 58.12 56⇓ P **P** 09 57 28.1 +0.3
baz=58,SNR=12
CHMT Chamberlain Mo 58.15 54 *e*P **P** 09 57 28.5 +0.4
A17A Triple J Farms 58.24 51⇑ P **P** 09 57 28.7 +0.2
baz=58,SNR=9.8
F13A Darby 58.26 55⇑ P **P** 09 57 29.2 +0.4
baz=58,SNR=7.3
E14A Clinton 58.33 54⇓ P **P** 09 57 29.4 +0.1
baz=58,SNR=8.1
AB31 Akbulak array 58.35 310 *i*P **P** 09 57 27.7 -1.4
AB31 pmax pmax
comp=Z,1.0nm,0.3s
ABKAR Akbulak array 58.35 310 *e*P **P** 09 57 27.8 -1.4
comp=Z,1.7nm,0.4s
C16A Fuhringer Ranc 58.40 52⇑ P **P** 09 57 30.1 +0.4
baz=58,SNR=9.7
D15A Lincoln 58.47 53⇓ P **P** 09 57 30.5 +0.3
baz=58,SNR=6.5
AKTO Aktyubinsk 58.58 312 P **P** 09 57 29.7 -1.1
AKTO 09 58 20.0
AKTO MLR MLR
comp=Z,250nm,18.3s
AKTO Aktyubinsk 58.58 312 P **P** 09 57 29.7 -1.1
AKTO PcP **PcP** 09 58 20.0 -0.4
AKTO Aktyubinsk 58.58 312 P **P** 09 57 29.7 -1.1
comp=Z,0.6nm,0.4s,baz=46,slow=13,SNR=3.7
AKTO PcP **PcP** 09 58 20.0 -0.4
comp=Z,3.1nm,0.8s,baz=106,slow=3.9,SNR=6.0
AKTO LR LR 10 25 01.6
comp=Z,250nm,18.3s,baz=52,slow=38
B17A L&G Farms, Che 58.59 51⇑ P **P** 09 57 31.6 +0.7
baz=58,SNR=6.1
A18A Metzger Ranch, 58.69 50⇓ P **P** 09 57 31.7 +0.1
baz=58,SNR=8.0
FFC Flin Flon 58.74 41*c e*P **P** 09 57 33.0 +1.2
FFC Flin Flon 58.74 41 *e*P **P** 09 57 31.7 -0.1
comp=Z,21nm,1.1s
G13A Cobalt 58.75 56⇑ P **P** 09 57 32.7 +0.5
baz=58,SNR=19
F14A Wisdom 58.77 55⇑ P **P** 09 57 32.7 +0.3
baz=59
E15A Deer Lodge 58.79 54⇓ P **P** 09 57 33.0 +0.6
baz=59,SNR=10
D16A Dana Ranch, Ca 58.99 53⇓ P **P** 09 57 34.9 +1.1
baz=59,SNR=19
C17A Wharram Farm, 59.03 52⇑ P **P** 09 57 34.6 +0.6
baz=59,SNR=20
SUMG Summit 59.03 5 *e*P **P** 09 57 34.4 +0.5
SUMG Summit 59.03 5 *e*P **P** 09 57 34.4 +0.5
comp=Z,71nm,1.0s
SUMG Summit 59.03 5⇑ *i*P **P** 09 57 34.5 +0.5
comp=Z,44nm,0.9s
HRY Holter Researc 59.04 53 *e*P **P** 09 57 35.2 +1.1
B18A Beardsley Farm 59.06 51⇓ P **P** 09 57 34.8 +0.6
baz=59,SNR=17
I12A Atlanta 59.06 58⇓ P **P** 09 57 35.2 +0.8
baz=59,SNR=10.0
H13A Challis 59.07 56⇓ P **P** 09 57 34.9 +0.4
baz=59,SNR=10
G14A Jackson 59.08 55⇓ P **P** 09 57 34.8 +0.2
baz=59
WCN Washoe City 59.20 64 *e*P **P** 09 57 36.3 +0.9
WCN pmax pmax
comp=Z,23nm,1.9s
WCN Washoe City 59.20 64 *e*P **P** 09 57 36.3 +0.9
comp=Z,23nm,1.9s
F15A Butte 59.23 54⇑ P **P** 09 57 36.6 +1.1
baz=59,SNR=13
E16A East Helena 59.24 53⇑ P **P** 09 57 36.5 +1.0
baz=59,SNR=7.6
A19A Klindworth Far 59.25 50⇓ P **P** 09 57 36.1 +0.6
baz=59,SNR=8.2
LRM Limekiln Ridge 59.27 54 *e*P **P** 09 57 36.8 +0.9
D17A Six Diamond Ra 59.37 52⇑ P **P** 09 57 37.1 +0.7
baz=59,SNR=14
KLMR Klimovskoe 59.38 329 *e*P **P** 09 57 33.6 -2.5
KLMR pmax pmax
comp=Z,15nm,1.3s
KLMR MLR MLR
comp=Z,643nm,18.0s
B19A Brinkman Farms 59.45 50⇑ P **P** 09 57 37.5 +0.6
baz=59,SNR=9.8
DLMT Dillon 59.48 55 *e*P **P** 09 57 38.3 +1.1
comp=Z,51nm,2.0s
H14A Leadore 59.53 56⇑ P **P** 09 57 37.9 +0.2
baz=59,SNR=5.5
I13A Wildhorse Cree 59.56 57⇑ P **P** 09 57 38.7 +0.9
baz=59,SNR=14
HLID Hailey 59.61 57 *e*P **P** 09 57 39.3 +1.1
comp=Z,13nm,1.4s
HLID Hailey 59.61 57⇑ P **P** 09 57 38.9 +0.7
baz=59,SNR=8.1
CMB Columbia Colle 59.62 66 *e*P **P** 09 57 39.3 +1.1
CMB pmax pmax
comp=Z,11nm,1.5s
CMB Columbia Colle 59.62 66 *e*P **P** 09 57 39.3 +1.1
comp=Z,11nm,1.5s
G15A Dillon 59.66 55⇓ P **P** 09 57 39.3 +0.7
baz=60,SNR=7.3
MCMT McKenzie Canyo 59.68 55 *e*P **P** 09 57 39.4 +0.6
comp=Z,26nm,1.0s
A20A Cobblestone Ra 59.70 49⇑ P **P** 09 57 39.4 +0.9
baz=60,SNR=10
F16A Kennard Place, 59.74 54⇓ P **P** 09 57 40.0 +1.0
baz=60,SNR=8.7
D18A Linhart Farms, 59.81 52⇑ P **P** 09 57 40.4 +1.0
baz=60,SNR=6.9
BOZ Bozeman (W) 59.83 54 *e*P **P** 09 57 40.9 +1.3
BOZ pmax pmax
comp=Z,28nm,1.4s
BOZ Bozeman (W) 59.83 54 *e*P **P** 09 57 40.9 +1.3
comp=Z,28nm,1.4s
BOZ Bozeman (W) 59.83 54⇑ P **P** 09 57 41.0 +1.3
baz=60,SNR=22
J13A Cove Ranch, Pi 59.85 57⇓ P **P** 09 57 41.0 +1.2
baz=60,SNR=7.9
C19A Slack Wire Ran 59.86 51⇑ P **P** 09 57 40.8 +1.1
baz=60,SNR=16
I14A Mackay 59.92 57⇓ P **P** 09 57 41.8 +1.5
baz=60,SNR=17
H15A Lima 59.93 56⇓ P **P** 09 57 41.4 +1.0
baz=60
B20A Solberg Farm, 59.93 50⇓ P **P** 09 57 40.9 +0.7
baz=60,SNR=14
G16A Moss Hill, Enn 60.00 55⇑ P **P** 09 57 41.8 +1.0
baz=60,SNR=20
A21A Bergtoll Ranch 60.13 49⇓ P **P** 09 57 43.0 +1.5
baz=60,SNR=12
E18A Harlowton 60.15 52⇑ P **P** 09 57 43.3 +1.5
baz=60,SNR=11
F17A Fitzpatrick Pl 60.18 53⇓ P **P** 09 57 43.4 +1.3
baz=60,SNR=15
J14A Carey 60.27 57⇓ P **P** 09 57 44.2 +1.6
baz=60,SNR=12
D19A Cripps Ranch, 60.31 51⇓ P **P** 09 57 44.1 +1.2
baz=60,SNR=12
JMIC Jan Mayen 60.40 354 LR LR 10 22 23.4
comp=Z,185nm,19.8s,baz=73,slow=35
C20A Veseth Ranch, 60.41 50⇑ P **P** 09 57 44.7 +1.3
baz=60,SNR=23
I15A Monteview 60.41 56⇑ P **P** 09 57 44.6 +0.9
baz=60
B21A Ellsworth Farm 60.45 49⇓ P **P** 09 57 44.7 +1.0
baz=60
QLMT Earthquake Lak 60.46 55 *e*P **P** 09 57 45.2 +1.2

G17A **Pierce Place,** 60.51 54 ⇓P P 09 57 46.2 +1.9
baz=60,SNR=10.0
NVAR **Mina Array Bea** 60.63 64 P P 09 57 46.0 +0.7
NVAR **Mina Array Bea** 60.63 64 P P 09 57 46.0 +0.7
comp=Z,1.3nm,0.6s,baz=297,slow=7.1,SNR=8.5
NVAR LR LR 10 20 08.1
comp=Z,176nm,20.9s,baz=310,slow=32
A22A **Carney Farms,** 60.63 48 ⇓P P 09 57 46.3 +1.3
baz=60,SNR=14
H16A **Russell Place,** 60.64 55 ⇓P P 09 57 46.5 +1.3
baz=60,SNR=12
F18A **Big Timber** 60.69 53 ⇑P P 09 57 46.8 +1.4
baz=60,SNR=22
D20A **Manuel Ranch,** 60.74 51 ⇓P P 09 57 47.0 +1.3
baz=60,SNR=24
GCMT **Greycliff** 60.78 53 *e*P P 09 57 47.6 +1.4
comp=Z,16nm,1.2s
C21A **Desert Coulee** 60.80 50 ⇑P P 09 57 47.3 +1.2
baz=61,SNR=10.0
E19A **Rath Farm, Rou** 60.82 52 ⇓P P 09 57 47.8 +1.5
baz=61,SNR=16
J15A **Blackfoot** 60.83 56 ⇑P P 09 57 47.9 +1.4
baz=61
K14A **Jones Ranch, D** 60.96 58 ⇑P P 09 57 48.6 +1.2
baz=61,SNR=7.3
I16A **Newdale** 61.04 56 ⇓P P 09 57 49.2 +1.3
baz=61
B22A **Reddig Ranch S** 61.05 49 ⇓P P 09 57 48.7 +1.0
baz=61
F19A **Roth Farm, Mol** 61.13 53 ⇓P P 09 57 49.8 +1.4
baz=61,SNR=21
E20A **Meyer Farm, Mu** 61.13 52 ⇓P P 09 57 49.8 +1.4
baz=61,SNR=12
G18A **Lazy EL Ranch,** 61.15 53 ⇓P P 09 57 49.5 +0.8
baz=61
A23A **Redstone** 61.17 48 ⇓P P 09 57 49.4 +0.8
baz=61
LKWY **Lake** 61.19 54 *e*P P 09 57 51.7 +2.6
LKWY pmax pmax
comp=Z,13nm,1.1s
LKWY **Lake** 61.19 54 *e*P P 09 57 51.6 +2.6
comp=Z,13nm,1.1s
H17A **Grant Village** 61.20 55 ⇑P P 09 57 51.4 +2.2
baz=61,SNR=14
K15A **Arbon** 61.23 57 ⇓P P 09 57 50.7 +1.5
baz=61
L14A **Malta** 61.26 58 ⇓P P 09 57 50.6 +1.2
baz=61
IMW **Indian Meadow** 61.33 55 *e*P P 09 57 52.1 +2.1
comp=Z,14nm,1.3s
D21A **La Casta Ranch** 61.35 50 ⇑P P 09 57 51.2 +1.4
baz=61,SNR=17
DCID1 **Drake Creek** 61.39 56 *e*P P 09 57 52.7 +2.3
comp=Z,7.3nm,0.8s
KAPI **Kappang** 61.40 221 P P 09 57 50.1 -0.2
KAPI **Kappang** 61.40 221 P P 09 57 50.1 -0.2
comp=Z,5.0nm,0.6s,baz=74,slow=7.4
KAPI LR LR 10 24 21.5
comp=Z,91nm,19.8s,baz=215,slow=36
RLMT **Red Lodge** 61.43 53 *e*P P 09 57 51.8 +1.2
comp=Z,24nm,1.1s
RLMT **Red Lodge** 61.43 53 ⇑P P 09 57 52.4 +1.8
baz=61,SNR=18
B23A **Brockton** 61.44 48 ⇑P P 09 57 51.4 +1.0
baz=61,SNR=13
C22A **Vida** 61.47 49 ⇓P P 09 57 51.6 +1.0
baz=61,SNR=10
SCO **Scoresbysund** 61.48 359 *i* P P 09 57 50.5 +0.3
comp=Z,8.5nm,1.0s
RRI2 **Red Ridge** 61.48 56 *e*P P 09 57 52.2 +1.2
comp=Z,12nm,0.9s
H18A **Shoshone NF, C** 61.51 54 ⇓P P 09 57 52.3 +1.1
baz=61,SNR=7.2
I17A **Pilgrim Ck.** 61.51 55 ⇓P P 09 57 53.2 +2.0
baz=61,SNR=6.5
MOOW **Moose Ponds** 61.53 55 *e*P P 09 57 52.9 +1.6
comp=Z,14nm,1.5s
F20A **Billings** 61.58 52 ⇓P P 09 57 52.6 +1.1
baz=61
TPAW **Teton Pass** 61.59 56 *e*P P 09 57 53.1 +1.4
comp=Z,27nm,1.4s
SMMC **Simmler** 61.62 68 ⇑P P 09 57 53.1 +1.3
baz=62
A24A **Westby** 61.62 47 ⇓P P 09 57 52.5 +0.8
baz=61,SNR=8.4
E21A **Keefer Ranch,** 61.66 51 ⇓P P 09 57 53.1 +1.1
baz=61
K16A **Soda Springs** 61.66 57 ⇑P P 09 57 54.6 +2.4
baz=62,SNR=8.4
LOHW **Long Hollow** 61.70 55 *e*P P 09 57 54.1 +1.7
comp=Z,20nm,1.4s
D22A **Cohagen** 61.71 50 ⇑P P 09 57 53.4 +1.1
baz=62,SNR=16
SNOW **Snow King Moun** 61.71 56 *e*P P 09 57 53.8 +1.2
comp=Z,9.9nm,1.0s
L15A **Malad City** 61.76 58 ⇓P P 09 57 53.8 +1.0
baz=62
C23A **Lambert** 61.78 49 ⇓P P 09 57 53.7 +1.0
baz=62,SNR=8.1
J17A **Brown Place, J** 61.80 56 ⇓P P 09 57 54.6 +1.5
baz=62,SNR=13
DGMT **Dagmar** 61.83 48 ⇓P P 09 57 54.0 +1.0
baz=62,SNR=11
VES **Vestal, Richgr** 61.83 67 ⇓P P 09 57 53.6 +0.5
baz=62
H19A **Powell** 61.88 54 ⇓P P 09 57 54.8 +1.2
baz=62,SNR=9.3
G20A **Bridger** 61.93 53 ⇑P P 09 57 54.6 +0.7
baz=62,SNR=12
I18A **Diamond G Ranc** 62.07 55 ⇓P P 09 57 56.0 +1.0
baz=62,SNR=7.2
M15A **Larsen Ranch,** 62.08 58 ⇓P P 09 57 55.8 +0.9
baz=62,SNR=9.6
D23A **Lindsay** 62.19 49 ⇑P P 09 57 56.9 +1.4
baz=62,SNR=6.7
J18A **Kendall Valley** 62.28 55 ⇑P P 09 57 57.1 +0.7
baz=62
L16A **Fish Haven** 62.29 57 ⇓P P 09 57 57.3 +0.9
baz=62
I19A **Meeteetse** 62.30 54 ⇑P P 09 57 57.6 +1.2
baz=62,SNR=7.8
R11A **Troy Canyon, C** 62.30 63 ⇓P P 09 57 57.4 +0.8
baz=62,SNR=6.4
E22A **Miles City** 62.31 50 ⇑P P 09 57 57.2 +0.9
baz=62,SNR=6.7
C24A **Savage** 62.35 49 ⇑P P 09 57 57.5 +1.0
baz=62
HWUT **Hardware Ranch** 62.48 58 *e*P P 09 57 58.5 +0.8
comp=Z,8.1nm,1.2s
H20A **Greybull** 62.53 53 ⇓P P 09 57 58.6 +0.8
baz=62
L17A **Cokeville** 62.55 57 ⇓P P 09 57 58.6 +0.5
baz=62
F22A **Rosebud** 62.59 51 ⇓P P 09 57 59.1 +0.9
baz=62,SNR=14
E23A **Ismay** 62.60 50 ⇑P P 09 57 59.6 +1.4
baz=62,SNR=14
KBL **Kabul** 62.62 292 *e*P P 09 57 56.9 -1.8
KBL pmax pmax
comp=Z,13nm,1.3s
KBL **Kabul** 62.62 292 *e*P P 09 57 56.9 -1.8
comp=Z,13nm,1.3s
K18A **Toltan Ranch,** 62.65 56 ⇑P P 09 58 00.2 +1.3
baz=62,SNR=12
MPMC **Manual Prospec** 62.66 66 ⇓P P 09 58 00.0 +1.1
baz=62
D24A **Glendive** 62.68 49 ⇑P P 09 57 60.0 +1.2
baz=62,SNR=13
DUG **Dugway** 62.70 59 *e*P P 09 58 00.3 +1.2
DUG pmax pmax
comp=Z,18nm,1.4s
DUG **Dugway** 62.70 59 *e*P P 09 58 00.3 +1.2
comp=Z,18nm,1.4s
DUG **Dugway** 62.70 59 ⇑P P 09 58 00.0 +0.9
baz=62,SNR=7.8
FURC **Furnace Creek,** 62.77 65 ⇓P P 09 58 00.5 +1.1
baz=63,SNR=8.6
J19A **Crowheart** 62.78 55 ⇓P P 09 58 01.0 +1.4
baz=63,SNR=12
I20A **Worland** 62.82 54 ⇑P P 09 58 01.3 +1.5
baz=63,SNR=11
BW06 **Boulder Array** 62.83 55 *e*P P 09 58 00.1 0.0
comp=Z,20nm,1.3s
BW06 **Boulder Array** 62.83 55 ⇓P P 09 58 00.6 +0.6
baz=63,SNR=18
PDAR **Pinedale Array** 62.83 55 P P 09 58 00.7 +0.6
PDAR **Pinedale Array** 62.83 55 P P 09 58 00.7 +0.6
comp=Z,9.7nm,1.1s,baz=302,slow=2.8,SNR=40
PDAR LR LR 10 26 18.2
comp=Z,76nm,19.5s,baz=331,slow=37
O15A **The Old Anders** 62.84 59 ⇓P P 09 58 00.6 +0.5
baz=63
G22A **Birney** 62.95 52 ⇑P P 09 58 01.5 +0.9
baz=63,SNR=6.1
H21A **Big Horn, Sher** 62.95 53 ⇓P P 09 58 01.8 +1.1
baz=63,SNR=15
N16A **Rees Ranch, Co** 63.03 58 ⇑P P 09 58 02.7 +1.3
baz=63
E24A **Baker** 63.06 49 ⇓P P 09 58 02.2 +0.9
baz=63
M17A **Scullys Gap (B** 63.08 57 ⇑P P 09 58 02.8 +1.1
baz=63
FIA1 **FINESS Array S** 63.12 335 *e*P P 09 58 01.3 0.0
FINES **FINESS Array B** 63.12 335 P P 09 58 00.5 -0.8
FINES **FINESS Array B** 63.12 335 P P 09 58 00.5 -0.8
comp=Z,3.4nm,0.3s,baz=34,slow=7.5,SNR=36
FINES LR LR 10 28 06.6
comp=Z,521nm,20.6s,baz=201,slow=39
L18A **Fontenelle, Gr** 63.13 56 ⇓P P 09 58 02.9 +0.9
baz=63
EDW2 **Edwards Air Fo** 63.14 67 ⇑P P 09 58 02.7 +0.8
baz=63,SNR=7.4
K19A **Absolon Red Bu** 63.18 55 ⇑P P 09 58 02.9 +0.6
baz=63,SNR=8.2
JLU **Jordanelle** 63.21 58 *e*P P 09 58 03.8 +1.1
comp=Z,3.3nm,1.2s
J20A **Shoshoni** 63.24 54 ⇑P P 09 58 03.5 +0.9
baz=63,SNR=9.4
H22A **Clearmont** 63.33 52 ⇑P P 09 58 03.9 +0.7
baz=63
N17A **Moffit Pass** 63.34 58 ⇑P P 09 58 04.4 +1.0
baz=63,SNR=8.4
I21A **Big Trails, Te** 63.36 53 ⇑P P 09 58 04.4 +1.0
baz=63,SNR=23
SFJD **Kanglussuaq** 63.37 11 *e*P P 09 58 02.7 -0.3
comp=Z,17nm,1.1s
SFJD **Kangerlussuaq** 63.37 11 *i* P P 09 58 02.6 -0.3
comp=Z,7.1nm,0.9s
L19A **Farson** 63.38 56 ⇑P P 09 58 04.4 +0.7
baz=63
P15A **Leamington** 63.42 60 ⇓P P 09 58 04.7 +0.8
baz=63
G23A **Biddle** 63.43 51 ⇑P P 09 58 04.5 +0.8
baz=63,SNR=13
M18A **Lyman** 63.44 57 ⇓P P 09 58 04.5 +0.4
baz=63
DAU **Daniels Canyon** 63.45 58 *e*P P 09 58 04.6 +0.3
DAU **Daniels Canyon** 63.45 58 *e*P P 09 58 04.6 +0.3
F24A **Ekalaka** 63.48 50 ⇑P P 09 58 05.1 +1.0
baz=63,SNR=6.0
SHOC **Shoshone** 63.50 65 ⇑P P 09 58 04.6 +0.3
baz=63
MWC **Mount Wilson** 63.53 68 *e*P P 09 58 05.5 +0.7
MWC *e**PP pP 09 58 16.7 -4.0
MWC pmax pmax
comp=Z,13nm,1.4s
MWC **Mount Wilson** 63.53 68 *e*P P 09 58 05.5 +0.7
comp=Z,13nm,1.4s
MWC *e*pP pP 09 58 16.7 -4.0
K20A **Yellowstone Ra** 63.57 55 ⇓P P 09 58 05.4 +0.5
baz=63
GSC **Goldstone** 63.58 66 *e*P P 09 58 05.7 +0.8
GSC pmax pmax
comp=Z,47nm,2.6s
GSC **Goldstone** 63.58 66 *e*P P 09 58 05.7 +0.8
comp=Z,47nm,2.6s
GSC **Goldstone** 63.58 66 ⇓P P 09 58 05.7 +0.8
baz=63
J21A **Lysite** 63.59 54 ⇓P P 09 58 05.8 +0.8
baz=63,SNR=12
I22A **9 Mile Ranch,** 63.74 53 ⇑P P 09 58 06.9 +1.0
baz=64,SNR=13
P16A **Fountain Green** 63.76 59 ⇓P P 09 58 07.4 +1.2
baz=64
BFSC **Mount Baldy Ra** 63.77 67 ⇑P P 09 58 06.9 +0.7
baz=64
G24A **Alzada** 63.84 51 ⇓P P 09 58 07.0 +0.5
baz=64,SNR=6.1
O17A **Robinson Place** 63.89 58 ⇑P P 09 58 08.1 +1.0
baz=64
ARUT **Antelope Range** 63.94 62 *e*P P 09 58 08.1 +0.8
ARUT **Antelope Range** 63.94 62 *e*P P 09 58 08.1 +0.8
comp=Z,1.3nm,0.6s
N18A **Larsen Ranch,** 63.97 57 ⇑P P 09 58 07.9 +0.4
baz=64
L20A **Wamsutter** 64.01 55 ⇑P P 09 58 08.4 +0.6
baz=64,SNR=6.0
J22A **Midwest** 64.07 53 ⇓P P 09 58 08.9 +0.8
baz=64,SNR=16
CCUT **Cedar City** 64.14 62 *e*P P 09 58 09.7 +0.9
comp=Z,7.6nm,1.3s
H24A **Dirks Ranch, A** 64.17 51 ⇓P P 09 58 09.3 +0.6
baz=64,SNR=11
MVU **Marysvale** 64.18 61 *e*P P 09 58 10.5 +1.5
comp=Z,56nm,2.8s
K21A **Alcova** 64.18 54 ⇑P P 09 58 09.6 +0.7
baz=64,SNR=12
HEC **Hector,Ludlow** 64.19 66 ⇓P P 09 58 10.0 +1.1
baz=64
BBRC **Big Bear Solar** 64.20 67 ⇑P P 09 58 09.7 +0.5
baz=64
TMUT **Trail Mountain** 64.22 59 *e*P P 09 58 09.4 +0.1
comp=Z,150nm,2.8s
I23A **Meade Ranch, G** 64.23 52 ⇓P P 09 58 09.6 +0.5
baz=64
O18A **Roosevelt** 64.25 58 ⇓P P 09 58 10.9 +1.5
baz=64,SNR=7.3
N19A **John Jarvie Ra** 64.30 57 ⇑P P 09 58 10.2 +0.6
baz=64
P17A **Butcher Ranch,** 64.37 59 ⇑P P 09 58 11.2 +1.0
baz=64
M20A **Sweetwater, Wa** 64.44 56 ⇓P P 09 58 12.0 +1.3
baz=64,SNR=5.3
MURC **Murrieta** 64.48 68 ⇓P P 09 58 11.1 +0.4
baz=64
MDND **Maddock** 64.50 46 ⇓P P 09 58 11.4 +0.7
baz=64
Q16A **Castle Valley** 64.50 60 ⇓P P 09 58 11.9 +0.9
baz=64
ULM **Lac du Bonnet** 64.52 42 *e*P P 09 58 11.3 +0.5
ULM **Lac du Bonnet** 64.52 42 P P 09 58 11.1 +0.3
comp=Z,6.3nm,0.9s,baz=314,slow=6.6,SNR=10
ULM LR LR 10 29 38.2
comp=Z,176nm,19.0s,baz=330,slow=39
P18A **Preston Nutter** 64.55 58 ⇓P P 09 58 12.6 +1.1
baz=64,SNR=6.0
K22A **Casper** 64.56 54 ⇓P P 09 58 12.1 +0.7
baz=64,SNR=6.9
L21A **Rawlins** 64.57 55 ⇓P P 09 58 12.1 +0.6
baz=64,SNR=8.7
GMRC **Granite Mounta** 64.63 66 ⇓P P 09 58 12.5 +0.6
baz=64,SNR=5.2
OBN **Obninsk** 64.69 326 *e*P P 09 58 11.0 -0.7
OBN *i* 09 58 44.6
OBN *i* S S 10 06 53.4 +6.3
OBN pmax pmax
comp=Z,15nm,0.9s
OBN MLR MLR
comp=Z,300nm,18.0s
O19A **Miners Draw (B** 64.73 57 ⇓P P 09 58 12.7 +0.2
baz=64,SNR=5.7
SRU **San Rafael** 64.74 59 *e*P P 09 58 13.5 +0.9
SRU **San Rafael** 64.74 59 *e*P P 09 58 13.5 +0.9
comp=Z,342nm,0.9s
SRU **San Rafael** 64.74 59 ⇑P P 09 58 13.2 +0.6
baz=64,SNR=10
I24A **Kuemmerle Ranc** 64.74 52 ⇑P P 09 58 12.7 +0.2
baz=64
M21A **Separation Pea** 64.82 55 ⇓P P 09 58 13.7 +0.5
baz=65,SNR=5.6
RSSD **Black Hills** 64.87 51 *e*P P 09 58 14.1 +0.7
RSSD pmax pmax
comp=Z,28nm,1.1s
RSSD **Black Hills** 64.87 51 *e*P P 09 58 14.1 +0.7
comp=Z,28nm,1.1s
PFO **Pinyon Flat Ob** 64.93 67 ⇑P P 09 58 14.2 +0.3
baz=65
BELC **Belle Mtn. Jos** 64.95 66 ⇑P P 09 58 14.1 +0.2
baz=65
K23A **Bowen Ranch, D** 64.97 53 ⇑P P 09 58 14.5 +0.5
baz=65
L22A **Ellis Ranch, M** 65.03 54 ⇓P P 09 58 15.4 +0.9
baz=65,SNR=5.9
J24A **Dixon Ranch, L** 65.09 52 ⇑P P 09 58 14.8 +0.1
baz=65
P19A **Cripple Cowboy** 65.26 58 ⇑P P 09 58 16.6 +0.5
baz=65,SNR=11
N21A **Black Mountain** 65.31 56 ⇑P P 09 58 17.0 +0.7
baz=65
O20A **White River Ci** 65.34 57 ⇓P P 09 58 16.6 +0.2
baz=65
IRM **Iron Mountain** 65.36 66 ⇑P P 09 58 17.0 +0.6
baz=65
L23A **Garrett** 65.37 54 ⇓P P 09 58 17.0 +0.3
baz=65,SNR=5.4
M22A **Cedar Creek Ra** 65.38 55 ⇑P P 09 58 17.3 +0.5
baz=65,SNR=10
MONP **Monument Peak** 65.44 68 ⇓P P 09 58 17.9 +0.6
baz=65
W13A **Hualapai Mount** 65.48 64 ⇑P P 09 58 17.8 +0.3
baz=65
BC3 **Big Chuckawall** 65.51 66 ⇓P P 09 58 17.8 +0.2
baz=65
U15A **North Rim** 65.53 62 ⇓P P 09 58 17.5 -0.4
baz=65
Q19A **Hogan Spring (** 65.57 58 ⇓P P 09 58 18.1 +0.2
baz=65,SNR=17
P20A **De Beque** 65.69 57 ⇓P P 09 58 18.7 0.0
baz=66
O21A **Pagoda** 65.71 56 ⇑P P 09 58 19.0 +0.1
baz=66
SWSC **Sam W. Stewart** 65.79 67 ⇑P P 09 58 19.7 +0.5
baz=66
PSI **Prapat** 65.86 245 P P 09 58 20.6 +0.6
PSI **Prapat** 65.86 245 P P 09 58 18.5 -1.5
comp=Z,12nm,1.1s
PSI **Prapat** 65.86 245 P P 09 58 20.6 +0.6
comp=Z,5.0nm,0.5s,baz=20,slow=4.8,SNR=7.5
N22A **Wattenberg Ran** 65.87 55 ⇓P P 09 58 20.7 +0.8
baz=66,SNR=7.0
PDMCI **Parker Dam,Lak** 65.87 65 ⇑P P 09 58 20.1 +0.3
baz=66
AGMN **Agassiz Nation** 65.94 44 *e*P P 09 58 20.2 +0.2
comp=Z,28nm,1.3s
S18A **Hurst Farm, Bl** 66.01 60 ⇓P P 09 58 21.4 +0.4
baz=66,SNR=9.5
Y12C **Blythe** 66.02 66 ⇑P P 09 58 21.3 +0.6
baz=66
N23A **Red Feather La** 66.08 55 ⇑P P 09 58 22.0 +0.6
baz=66,SNR=6.9
Q20A **Ridgley Place,** 66.12 58 ⇑P P 09 58 21.8 +0.3
baz=66,SNR=6.4
PV04 **Paradox Valley** 66.16 59 *e*P P 09 58 22.6 +0.8
P21A **Newcastle** 66.20 57 ⇓P P 09 58 22.8 +0.8
baz=66,SNR=6.0
O22A **Kremmling** 66.26 56 ⇓P P 09 58 23.2 +0.6
baz=66
L25A **Engebretsen Ra** 66.27 53 ⇓P P 09 58 23.1 +0.8
baz=66
M24A **Cheyenne** 66.29 54 ⇑P P 09 58 23.0 +0.5
baz=66
K26A **Motz Farm, Whi** 66.31 52 ⇑P P 09 58 23.6 +1.0
baz=66
PV01 **Paradox Valley** 66.53 59 *e*P P 09 58 24.9 +0.7
comp=Z,2µm,1.6s
P22A **Eagle** 66.53 56 ⇑P P 09 58 25.1 +0.9
baz=66,SNR=7.2
O23A **Lake Granby, G** 66.57 55 ⇑P P 09 58 25.5 +1.0
baz=66,SNR=8.1
R20A **Redvale** 66.60 59 ⇓P P 09 58 25.1 +0.5
baz=66,SNR=5.2
Q21A **Lamborn Mesa,** 66.61 58 ⇑P P 09 58 25.6 +0.9
baz=66,SNR=12
WUAZ **Wupatki** 66.70 62 ⇑P P 09 58 26.4 +1.1
baz=66
SMCO **Snowmass** 66.70 57 *e*P P 09 58 26.4 +0.9
comp=Z,9.0nm,1.1s
N24A **Carr** 66.71 54 ⇓P P 09 58 26.2 +1.0
baz=66
M25A **Palm-Egli Farm** 66.73 53 ⇓P P 09 58 26.7 +1.4
baz=66
K27A **Flueckinger Fa** 66.80 51 ⇑P P 09 58 26.4 +0.8
baz=67
S20A **Disappointment** 66.85 59 ⇓P P 09 58 27.0 +0.7
baz=67,SNR=8.7
R21A **Cimarron** 66.94 58 ⇑P P 09 58 27.9 +1.0
baz=67,SNR=18
Q22A **Crested Butte,** 66.96 57 ⇓P P 09 58 28.1 +1.0
baz=67,SNR=8.5
ISCO **Idaho Springs** 67.03 56 *e*P P 09 58 28.2 +0.8
ISCO pmax pmax
comp=Z,19nm,1.2s
ISCO **Idaho Springs** 67.03 56 *e*P P 09 58 28.2 +0.8
comp=Z,18nm,1.2s
ISCO **Idaho Springs** 67.03 56 ⇓P P 09 58 28.3 +0.8
baz=67,SNR=16
O24A **Longmont** 67.10 55 ⇓P P 09 58 28.5 +0.8
baz=67
NB2 **NORSAR Subarra** 67.12 342 P P 09 58 26.8 -0.5
comp=Z,3.5nm,0.6s,baz=30,slow=6.5
NOA **NORSAR Array B** 67.12 342 P P 09 58 26.6 -0.7
NOA **NORSAR Array B** 67.12 342 P P 09 58 26.6 -0.7
comp=Z,2.4nm,0.5s,baz=25,slow=6.2,SNR=27
NOA LR LR 10 32 39.8
comp=Z,213nm,18.7s,baz=355,slow=40
113A **Mohawk Valley,** 67.15 66 ⇑P P 09 58 28.8 +0.9
baz=67
M26A **McRoberts Ranc** 67.19 53 ⇓P P 09 58 29.1 +0.9
baz=67
P23A **Jefferson** 67.20 56 ⇑P P 09 58 29.4 +0.8
baz=67
MVCO **Mesa Verde** 67.20 59 *e*P P 09 58 29.2 +0.7
comp=Z,33nm,1.6s
MVCO **Mesa Verde** 67.20 59 ⇓P P 09 58 29.1 +0.6
baz=67,SNR=6.0
BORG **Borgarnes** 67.22 358 LR LR 10 25 19.9
comp=Z,169nm,20.9s,baz=40,slow=34
S21A **Coal Bank Pass** 67.30 59 ⇓P P 09 58 30.1 +1.0
baz=67,SNR=11
HFS **Hagfors** 67.39 340 P P 09 58 28.8 -0.2
HFS **Hagfors** 67.39 340 P P 09 58 28.8 -0.2
comp=Z,6.0nm,0.4s,baz=48,slow=4.4,SNR=39
HFS LR LR 10 33 46.6
comp=Z,355nm,18.1s,baz=8.5,slow=41
X16A **Lo Mia Camp, P** 67.42 63 ⇓P P 09 58 30.5 +0.7
baz=67
R22A **Saguache, Gunn** 67.49 58 ⇓P P 09 58 31.5 +1.2
baz=67,SNR=7.9
Q23A **Hartsel** 67.53 56 ⇑P P 09 58 31.5 +0.9
baz=67
P24A **Kohler Place,** 67.61 55 ⇓P P 09 58 32.0 +1.0
baz=67
O25A **Wiggins** 67.62 55 ⇑P P 09 58 32.0 +1.0
baz=67
S22A **4UR Ranch, Cre** 67.78 58 ⇓P P 09 58 33.3 +1.1
baz=68,SNR=11
Q24A **Divide** 67.87 56 ⇑P P 09 58 33.1 +0.4
baz=68
T21A **Navajo Lake** 67.91 59 ⇓P P 09 58 33.8 +0.8
baz=68
N27A **Anderson Farm,** 67.98 53 ⇓P P 09 58 34.1 +0.9
baz=68,SNR=5.6
P25A **Willow Gulch B** 68.02 55 ⇑P P 09 58 34.8 +1.3
baz=68
R23A **Moffat** 68.03 57 ⇑P P 09 58 35.0 +1.2
baz=68,SNR=8.4
OGNE **Ogallala** 68.15 53 *e*P P 09 58 34.8 +0.5
comp=Z,59nm,1.0s
OGNE **Ogallala** 68.15 53 ⇑P P 09 58 35.1 +0.8
baz=68,SNR=9.7
EYMN **Ely** 68.17 42 *e*P P 09 58 34.8 +0.6
comp=Z,21nm,1.0s
HYB **Hyderabad** 68.18 272 *i* P P 09 58 34.0 -0.6
V20A **Brimhall** 68.21 60 ⇓P P 09 58 35.5 +0.7
baz=68
X18A **Snowflake** 68.22 62 ⇑P P 09 58 35.6 +0.7
baz=68
U21A **Nageezi** 68.23 59 ⇓P P 09 58 35.6 +0.6
baz=68
T22A **Edith** 68.25 59 ⇑P P 09 58 36.3 +1.2
baz=68,SNR=7.7
S23A **Nye Farm, Mont** 68.28 57 ⇓P P 09 58 36.6 +1.4
baz=68,SNR=8.8
214A **Organ Pipe Nat** 68.29 66 ⇑P P 09 58 36.1 +0.9
baz=68
Q25A **Bedland, Calha** 68.40 55 ⇑P P 09 58 36.6 +0.6
baz=68,SNR=8.4
R24A **Sanders Place,** 68.41 57 ⇑P P 09 58 36.9 +0.9
baz=68,SNR=6.1
P26A **Davis Ranch, A** 68.44 54 ⇓P P 09 58 37.0 +0.9
baz=68,SNR=6.0
O27A **Beecher Island** 68.45 53 ⇓P P 09 58 36.7 +0.6
baz=68
W20A **Ramah** 68.66 61 ⇓P P 09 58 38.6 +0.9

baz=68,SNR=5.6
AFI Afiamalu 68.67 145 LR LR 10 22 43.3
comp=Z,243nm,19.8s,baz=55,slow=31
U22A Llaves 68.73 59 ⇓P **P 09 58 38.9 +0.8**
baz=68
T23A Casias Ranch, 68.73 58 ⇓P **P 09 58 38.6 +0.5**
baz=68
S24A Houchin Ranch, 68.77 57 ⇓P **P 09 58 39.6 +1.2**
baz=69,SNR=5.3
Q26A Hugo 68.79 55 ⇓P **P 09 58 38.9 +0.6**
baz=69,SNR=6.1
P27A Ficken Ranch, 68.85 54 ⇑P **P 09 58 38.9 +0.2**
baz=69
ECSD EROS Data Cent 68.91 47 *e*P **P 09 58 39.0 +0.2**
comp=Z,23nm,1.0s
R25A Fountain Ranch 68.92 56 ⇑P **P 09 58 39.8 +0.6**
baz=69
X20A Quemado 69.07 61 ⇑P **P 09 58 41.4 +1.2**
baz=69,SNR=9.7
U23A El Rito 69.14 59 ⇓P **P 09 58 42.0 +1.3**
baz=69,SNR=24
W21A San Fidel 69.16 60 ⇑P **P 09 58 41.5 +0.8**
baz=69
S25A Robets Cordova 69.19 57 ⇓P **P 09 58 41.0 +0.2**
baz=69
KSCO Kaye Shedlock' 69.22 54 ⇑P **P 09 58 41.5 +0.6**
baz=69
T24A Torres, Weston 69.26 57 ⇓P **P 09 58 42.6 +1.2**
baz=69,SNR=5.9
TUC Tucson 69.28 65 *e*P **P 09 58 41.8 +0.5**
TUC pmax pmax
comp=Z,3.0nm,1.0s
TUC Tucson 69.28 65 *e*P **P 09 58 41.8 +0.5**
comp=Z,3.3nm,1.0s
R26A Arlington 69.28 55 ⇓P **P 09 58 41.9 +0.6**
baz=69,SNR=13
V23A Ortiz Mt. (NFS 69.56 59 ⇑P **P 09 58 44.8 +1.6**
baz=69,SNR=7.6
T25A Trinidad 69.57 57 ⇑P **P 09 58 43.9 +0.7**
baz=69,SNR=8.7
Y20A Horse Springs, 69.58 62 ⇓P **P 09 58 44.7 +1.3**
baz=69,SNR=8.7
U24A Moreno Valley 69.60 58 ⇓P **P 09 58 44.7 +1.1**
baz=69,SNR=7.1
SPMN St. Paul 69.62 44 ⇓P **P 09 58 43.4 +0.2**
baz=69,SNR=5.3
R27A Eads 69.64 55 ⇓P **P 09 58 43.8 +0.2**
baz=69,SNR=6.2
S26A Kim 69.75 56 ⇓P **P 09 58 44.7 +0.5**
baz=70,SNR=5.1
BGNE Belgrade 69.84 50 ⇑P **P 09 58 45.0 +0.3**
baz=70
Y21A Point of Rocks 69.93 61 ⇑P **P 09 58 46.8 +1.3**
baz=70,SNR=6.7
LAZ Ladron 69.96 61 *e*P **P 09 58 46.7 +1.0**
comp=Z,5.7nm,1.3s
X22A Bernardo 69.96 60 ⇑P **P 09 58 46.6 +1.0**
baz=70
ANMO Albuquerque 69.97 60 *e*P **P 09 58 45.1 -0.6**
comp=Z,65nm,2.8s
W23A Werner Place, 69.99 59 ⇑P **P 09 58 46.6 +0.7**
baz=70,SNR=5.5
T26A Comanche Natio 70.00 56 ⇓P **P 09 58 45.9 +0.1**
baz=70,SNR=10
Z20A Nine Sixteen R 70.02 63 ⇑P **P 09 58 46.6 +0.6**
baz=70
V24A Rampart Ranch, 70.09 59 ⇑P **P 09 58 47.7 +1.2**
baz=70,SNR=8.7
U25A Circle Dot Ran 70.10 57 ⇑P **P 09 58 47.3 +0.8**
baz=70,SNR=11
W24A Lazy 6 Ranch, 70.38 59 ⇑P **P 09 58 49.4 +1.1**
baz=70,SNR=10.0
X23A Hourglass Bar 70.38 60 ⇓P **P 09 58 49.3 +1.0**
baz=70
V25A Rancho No Teng 70.39 58 ⇑P **P 09 58 49.2 +1.0**
baz=70,SNR=6.4
Y22A Socorro 70.39 61 ⇓P **P 09 58 49.0 +0.7**
baz=70
WRAB Tennant Creek 70.41 201 *e*P **P 09 58 48.0 -0.1**
WRAB pmax pmax
comp=Z,29nm,1.3s
WRAB Tennant Creek 70.41 201 *e*P **P 09 58 48.0 -0.1**
comp=Z,30nm,1.3s
WRA Warramunga Arr 70.42 201 P **P 09 58 48.2 0.0**
WRA Warramunga Arr 70.42 201 P **P 09 58 48.2 0.0**
comp=Z,14nm,0.9s,baz=16,slow=6.4,SNR=62
Z21A St. Cloud Mine 70.42 62 ⇑P **P 09 58 49.8 +1.2**
baz=70,SNR=8.4
BNM Barren Site 70.44 61 *e*P **P 09 58 49.4 +0.7**
comp=Z,4.5nm,1.2s
U26A Atchley Ranch, 70.48 57 ⇓P **P 09 58 49.4 +0.6**
baz=70
POO Poona 70.52 276 ⇓*i*P **P 09 58 48.0 -1.1**
comp=Z,50nm,1.0s
KIV Kislovodsk 70.56 315 *e*P **P 09 58 50.1 +1.0**
KIV pmax pmax
comp=Z,7.0nm,0.9s
KIV MLR MLR
comp=Z,301nm,19.0s
T27A Campo 70.57 56 ⇓P **P 09 58 49.8 +0.5**
baz=70
KBZ Khabaz 70.63 315 P **P 09 58 50.2 +0.9**
KBZ pmax pmax
comp=Z,3.0nm,0.5s
KBZ MLR MLR
comp=Z,404nm,21.5s
KBZ Khabaz 70.63 315 P **P**
KBZ Khabaz 70.63 315 P **P 09 58 50.2 +0.9**
comp=Z,3.3nm,0.5s,baz=159,slow=4.0,SNR=8.7
KBZ LR LR 10 32 41.0
comp=Z,404nm,21.5s,baz=39,slow=38
X24A Lazy VL Ranch, 70.83 59 ⇑P **P 09 58 52.0 +1.0**
baz=71,SNR=9.4
DZM Mont Dzumac 70.84 169 *e*SS SS 10 12 38.5 +3.1
comp=Z,86nm,25.1s
DZM *e*LR LR 10 20 18.9
comp=Z,421nm,25.0s
319A Douglas 70.84 64 ⇓P **P 09 58 52.3 +1.3**
baz=71,SNR=11
T28A Walsh 70.86 56 ⇑P **P 09 58 51.3 +0.3**
baz=71
Z22A Elephant Butte 70.88 61 ⇓P **P 09 58 51.6 +0.4**
baz=71
V26A Tequesquite Ra 70.88 58 ⇑P **P 09 58 51.9 +0.7**
baz=71
AKASG Malin Array Be 70.90 327 P **P 09 58 50.3 -0.6**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG MLR MLR
comp=Z,277nm,21.8s
AKASG Malin Array Be 70.90 327 P **P 09 58 50.3 -0.6**
AKASG Malin Array Be 70.90 327 P **P 09 58 50.3 -0.6**
comp=Z,2.6nm,0.5s,baz=20,slow=5.4,SNR=6.4
AKASG LR LR 10 32 33.0
comp=Z,277nm,21.8s,baz=10.0,slow=38
121A Cookes Peak, D 70.91 62 ⇑P **P 09 58 52.5 +1.0**
baz=71,SNR=5.3
KIEV Kiev 70.91 327 *e*P **P 09 58 50.3 -0.6**
KIEV pmax pmax
comp=Z,23nm,1.6s
KIEV Kiev 70.91 327 *e*P **P 09 58 50.3 -0.6**
comp=Z,23nm,1.6s
AK01 Malin Array Si 70.92 327 *e*P **P 09 58 50.4 -0.5**
220A Playas Peak, P 70.92 63 ⇓P **P 09 58 52.5 +1.0**
baz=71,SNR=5.1
W25A X Bar L Ranch, 70.92 58 ⇑P **P 09 58 52.5 +1.1**
baz=71,SNR=13
Y23A Lovelace Mesa, 70.92 60 ⇑P **P 09 58 52.5 +0.9**
baz=71,SNR=5.2
AK02 Malin Array Si 70.94 327 *e*P **P 09 58 50.5 -0.6**
FITZ Fitzroy Crossi 71.12 209 *e*P **P 09 58 53.3 +0.8**
comp=Z,24nm,1.2s
122A Conniff Cattle 71.25 62 ⇓P **P 09 58 54.6 +1.1**
baz=71
221A Mesquite Ranch 71.29 63 ⇓P **P 09 58 54.8 +1.1**
baz=71
Y24A Capitan 71.29 60 ⇓P **P 09 58 54.6 +0.8**
baz=71,SNR=9.0
X25A Clemmons Ranch 71.30 59 ⇑P **P 09 58 54.8 +1.1**
baz=71,SNR=8.2
Z23A Rita Site, Whi 71.30 61 ⇑P **P 09 58 54.8 +1.0**
baz=71
320A Kipp Ranch, An 71.32 64 ⇓P **P 09 58 54.9 +1.0**
baz=71
SCHQ Schefferville 71.37 24 *e*P **P 09 58 54.0 +0.3**
SCHQ Schefferville 71.37 24 P **P 09 58 53.8 +0.1**
comp=Z,13nm,0.9s,baz=3.3,slow=6.0,SNR=20
SCHQ LR LR 10 33 33.7
comp=Z,204nm,19.3s,baz=18,slow=39
BSD Bornholm Skovb 71.59 337 *i*P **P 09 58 55.3 +0.4**
comp=Z,9.2nm,1.1s
222A Williams Famil 71.62 62 ⇓P **P 09 58 56.5 +0.8**
baz=71
COP Copenhagen 71.70 339 *i*P **P 09 58 56.7 +1.2**
comp=Z,7.9nm,0.7s
Y25A Mesa, Roswell 71.72 59 ⇓P **P 09 58 57.1 +0.9**
baz=72,SNR=11
MUD Monsted U'grnd 71.75 341 *i*P **P 09 58 56.7 +0.9**
comp=Z,6.0nm,0.7s
Z24A Sheeppen Canyo 71.76 60 ⇓P **P 09 58 57.5 +0.9**
baz=72,SNR=8.0
X26A CR and CF Fran 71.77 58 ⇓P **P 09 58 57.3 +0.7**
baz=72
W27A Bowe Ranch, En 71.82 58 ⇑P **P 09 58 57.8 +1.0**
baz=72
LLD Lille Linde 72.07 339 *i*P **P 09 58 58.4 +0.6**
comp=Z,20nm,0.7s
X27A F and S Farms, 72.10 58 ⇓P **P 09 58 59.1 +0.6**
baz=72
W28A Vega 72.16 57 ⇓P **P 09 58 59.3 +0.4**
baz=72
Z25A Roswell 72.17 60 ⇑P **P 09 58 59.9 +0.9**
baz=72
Y26A Elida 72.22 59 ⇑P **P 09 58 59.7 +0.5**
baz=72
ANN Anapa 72.32 318 *e*P **P 09 58 59.0 -0.5**
ANN *e*S **S 10 08 23.7 +5.8**
ANN pmax pmax
comp=Z,14nm,1.4s
224A Cornudas Mount 72.57 61 ⇓P **P 09 59 01.6 +0.2**
baz=72,SNR=6.4
Z26A Caprock 72.60 59 ⇑P **P 09 59 02.0 +0.5**
baz=72,SNR=8.3
Y27A Causey 72.62 59 ⇑P **P 09 59 02.1 +0.5**
baz=72,SNR=10
125A Gardner Draw, 72.65 60 ⇑P **P 09 59 02.4 +0.6**
baz=72,SNR=7.3
AMTX Amarillo 72.73 57 *e*P **P 09 59 03.4 +1.2**
comp=Z,12nm,0.9s
AMTX Amarillo 72.73 57 ⇓P **P 09 59 03.1 +0.8**
baz=72
MSTX Muleshoe 72.78 58 ⇑P **P 09 59 03.2 +0.6**
baz=73,SNR=6.2
CPRX Cap Rock 72.84 60 *e*P **P 09 59 03.4 +0.4**
comp=Z,14nm,0.4s
MNTX Cornudas Mount 72.92 62 *e*P **P 09 59 04.0 +0.6**
comp=Z,8.2nm,1.2s
MNTX Cornudas Mount 72.92 62 ⇓P **P 09 59 03.9 +0.6**
baz=73,SNR=7.6
225A Deer Hill, Car 72.95 61 ⇑P **P 09 59 04.8 +1.1**
baz=73
Z27A Tatum 73.01 59 ⇓P **P 09 59 04.4 +0.5**
baz=73,SNR=17
126A Clayton Basin, 73.03 60 ⇑P **P 09 59 04.7 +0.7**
baz=73
X29A Tulia 73.04 57 ⇑P **P 09 59 04.9 +0.9**
baz=73,SNR=6.8
Y28A McKinney Farm, 73.12 58 ⇑P **P 09 59 04.3 -0.2**
baz=73
GDL2 Guadalupe Moun 73.15 61 *e*P **P 09 59 05.5 +0.7**
MDO Dochfour 73.20 348 *e*P **P 09 59 04.1 -0.4**
MDO Dochfour 73.20 348 P **P 09 59 04.1 -0.4**
KAC Achnashellach 73.27 349 *e*P **P 09 59 04.9 0.0**
KAC Achnashellach 73.27 349 P **P 09 59 04.9 0.0**
226B Tecolote Peak, 73.36 60 ⇓P **P 09 59 06.5 +0.5**
baz=73,SNR=14
127A Arkansas Junct 73.39 60 ⇑P **P 09 59 06.6 +0.4**
baz=73
325A Bean Ranch, Si 73.40 61 ⇓P **P 09 59 06.1 -0.2**
baz=73
KPL Plockton 73.47 349 *e*P **P 09 59 06.3 +0.3**
KPL AMB AMB 09 59 09.7
comp=Z,78nm,2.7s
KPL Plockton 73.47 349 P **P 09 59 06.3 +0.3**
KPL AMB AMB 09 59 09.7
comp=Z,78nm,2.7s
W31A Holland Ranch, 73.47 56 ⇓P **P 09 59 06.3 -0.2**
baz=73
Y29A Porterfield Fa 73.48 58 ⇓P **P 09 59 07.1 +0.4**
baz=73
Z28A Tucker Farm, M 73.50 58 ⇓P **P 09 59 06.8 0.0**
baz=73
X30A Coker Ranch, T 73.50 57 ⇑P **P 09 59 06.9 +0.2**
baz=73
KSB Sheil Bridge 73.57 349 *e*P **P 09 59 06.8 +0.1**
KSB Sheil Bridge 73.57 349 P **P 09 59 06.8 +0.1**
425A Indio Mountain 73.82 62 ⇑P **P 09 59 09.1 +0.3**
baz=74,SNR=7.4
X31A McDonald Ranch 73.86 56 ⇑P **P 09 59 09.1 +0.3**
baz=74
Y30A Stafford Cattl 73.91 57 ⇓P **P 09 59 09.5 +0.4**
baz=74
Z29A Hungry Hill Ra 73.91 58 ⇑P **P 09 59 09.3 +0.2**
baz=74,SNR=7.3
128A Castleberry Fa 73.93 59 ⇓P **P 09 59 09.5 +0.2**
baz=74
326A Caldwell Ranch 74.02 61 ⇑P **P 09 59 10.4 +0.5**
baz=74,SNR=9.3
KWP Kalwaria Pacla 74.08 330 ⇑P **P 09 59 10.4 +0.6**
KWP Kalwaria Pacla 74.08 330 *e*P **P 09 59 10.1 +0.3**
comp=Z,84nm,1.3s
KWP Kalwaria Pacla 74.08 330 ⇑*i*P **P 09 59 10.4 +0.6**
KWP Kalwaria Pacla 74.08 330 *e*P **P 09 59 10.4 +0.6**
AS31 Alice Springs 74.10 200 *e*P **P 09 59 10.9 +0.8**
ASAR Alice Springs 74.11 200 P **P 09 59 11.1 +1.0**
ASAR Alice Springs 74.11 200 P **P 09 59 11.1 +1.0**
comp=Z,7.6nm,0.9s,baz=12,slow=5.2,SNR=72
ASAR LR LR 10 28 47.0
comp=Z,198nm,20.0s,baz=359,slow=33
Y31A Rekieta Farm, 74.20 57 ⇑P **P 09 59 10.6 -0.2**
baz=74
Z30A Sanderson Ranc 74.21 58 ⇓P **P 09 59 11.1 +0.2**
baz=74,SNR=8.2
228A UT Block 9, Go 74.24 59 ⇑P **P 09 59 11.6 +0.5**
baz=74
129A Stewart Farms, 74.28 59 ⇓P **P 09 59 11.9 +0.6**
baz=74
EAB Aberfoyle 74.42 348 *e*P **P 09 59 11.8 +0.2**
EAB Aberfoyle 74.42 348 P **P 09 59 11.8 +0.2**
ESY Stoneypath 74.43 347 *e*P **P 09 59 11.5 -0.2**
ESY Stoneypath 74.43 347 P **P 09 59 11.5 -0.2**
WMOK Wichita Mounta 74.44 55 *e*P **P 09 59 12.3 +0.1**
WMOK pmax pmax
comp=Z,12nm,1.1s
WMOK Wichita Mounta 74.44 55 *e*P **P 09 59 12.3 +0.1**
comp=Z,12nm,1.1s
426A McDonald Obser 74.47 61 ⇑P **P 09 59 12.9 +0.2**
baz=74
OJC Ojcow 74.51 332 *e*P **P 09 59 12.9 +0.6**
OJC pmax pmax
comp=Z,45nm,1.3s
OJC Ojcow 74.51 332 *e*P **P 09 59 12.9 +0.6**
comp=Z,45nm,1.3s
OJC Ojcow 74.51 332 *e*P **P 09 59 12.8 +0.5**
Y32A R-V Farms, Ver 74.62 56 ⇑P **P 09 59 13.6 +0.3**
baz=74
EAU Auchinoon 74.62 348 *e*P **P 09 59 13.1 +0.3**
EAU Auchinoon 74.62 348 P **P 09 59 13.1 +0.3**
328A Wristen Ranch, 74.65 60 ⇑P **P 09 59 13.8 +0.3**
baz=74,SNR=8.3
427A Hayter Ranch, 74.70 61 ⇓P **P 09 59 14.3 +0.5**
baz=74
Z31A Sharp Cattle R 74.74 57 ⇓P **P 09 59 13.8 -0.2**
baz=74,SNR=9.5
229A Bryant Ranch, 74.80 59 ⇑P **P 09 59 14.9 +0.6**
baz=75
PGBU Glenifferbraes 74.80 348 *e*P **P 09 59 13.7 -0.1**
PGBU AMB AMB 09 59 14.0
comp=Z,136nm,3.0s
PGBU Glenifferbraes 74.80 348 P **P 09 59 13.7 -0.1**
PGBU AMB AMB 09 59 14.0
comp=Z,136nm,3.0s
KOLS Kolonicke sedl 74.83 330 *e*P **P 09 59 14.3 +0.1**
KOLS pmax pmax
comp=Z,20nm,1.3s
KOLS Kolonicke sedl 74.83 330 *e*P **P 09 59 14.3 +0.1**
KOLS *e*pP **PcP 09 59 24.6 -3.3**
526A Mary Lane Ranc 74.88 62 ⇓P **P 09 59 15.4 +0.5**
baz=75,SNR=9.5
BUR08 Bucovina Ar. S 74.91 327 *e*P **P 09 59 14.9 +0.1**
KSP Ksiaz 75.02 334 *e*P **P 09 59 15.9 +0.7**
KSP Ksiaz 75.02 334 *e*P **P 09 59 16.4 +1.2**
329A Wagon Wheel Ra 75.05 59 ⇑P **P 09 59 16.2 +0.4**
baz=75,SNR=6.6
EKA Eskdalemuir Ar 75.08 347 P **P 09 59 15.7 +0.2**
comp=Z,7.2nm,0.4s,baz=22,slow=5.3,SNR=39
UZH Uzhgorod 75.08 330 *e*P **P 09 59 16.2 +0.6**
UZH *e*S **S 10 08 48.6 -0.3**
UZH MLR MLR
comp=N,440nm,16.0s
UZH MLR MLR
comp=E,300nm,16.0s
UZH MLR MLR
comp=Z,300nm,16.0s
527A Woodward Ranch 75.09 61 ⇓P **P 09 59 16.4 +0.2**
baz=75
Z32A Haskell 75.12 57 ⇑P **P 09 59 16.2 +0.1**
baz=75,SNR=7.3
CRVS Cervenica-Dubn 75.12 330 *e*P **P 09 59 16.0 +0.1**
CRVS pmax pmax
comp=Z,12nm,1.4s
CRVS Cervenica-Dubn 75.12 330 *e*P **P 09 59 16.0 +0.1**
TUL1 Tulsa 75.17 52 ⇓P **P 09 59 16.6 +0.2**
baz=75
NRDL Niedersach Rie 75.17 339 *e*P **P 09 59 16.4 +0.4**
comp=Z,33nm,1.5s
428A Kincaid Ranch, 75.21 60 ⇓P **P 09 59 17.5 +0.7**
baz=75,SNR=6.5
626A Big Bend Ranch 75.22 62 ⇑P **P 09 59 17.2 +0.3**
baz=75,SNR=7.4
230A Sterling City 75.25 59 ⇑P **P 09 59 17.2 +0.2**
baz=75
TESR 75.34 326 ⇑*i*P **P 09 59 17.5 +0.4**
OKC Ostrava-Krasne 75.36 333 *e*P **P 09 59 18.2 +1.0**
OKC AMS AMS 10 37 30.0
comp=Z,400nm,17.4s
UPC Upice 75.40 334 *e*P **P 09 59 18.2 +0.8**
TRPA Tarpa 75.43 329 ⇑*i*P **P 09 59 18.1 +0.5**
TRPA Tarpa 75.43 329 ⇑*e* **P 09 59 18.3 +0.7**
DPC Dobruska-Polom 75.45 334 *e*P **P 09 59 18.3 +0.5**
DPC pmax pmax
comp=Z,49nm,1.3s
DPC Dobruska-Polom 75.45 334 *e*P **P 09 59 18.3 +0.5**
comp=Z,49nm,1.3s
DPC Dobruska-Polom 75.45 334 *e*P **P 09 59 18.8 +1.0**
DPC AMS AMS 10 38 10.0
comp=Z,300nm,17.9s
CLL Collm 75.52 336 ⇑*i*P **P 09 59 18.1 0.0**
CLL pmax pmax
comp=Z,55nm,1.4s
CLL MLR MLR
comp=Z,300nm,21.6s
CLL Collm 75.52 336 *e*P **P 09 59 18.1 0.0**
comp=Z,53nm,1.4s
CLL Collm 75.52 336 ⇑*i*P **P 09 59 18.1 0.0**
comp=Z,55nm,1.4s
CLL *e*(SS) 10 14 30.0
CLL *e*(SSS) 10 16 54.0
CLL Lm MLR 10 35 00.0
comp=N,200nm,18.9s
CLL Lm MLR 10 35 00.0
comp=E,200nm,19.8s
CLL Lm MLR 10 35 00.0
comp=Z,300nm,21.6s
ABTX Abilene, Hawle 75.54 57 ⇑P **P 09 59 19.0 +0.5**
baz=75
KRLC Kraliky 75.56 334 *e*P **P 09 59 19.2 +0.8**
KRLC Kraliky 75.56 334 *e*P **P 09 59 19.2 +0.8**
528A Cox Ranch, San 75.56 61 ⇓P **P 09 59 19.6 +0.7**
baz=75,SNR=7.4
330A Mertzon 75.58 59 ⇓P **P 09 59 19.2 +0.4**
baz=75
MORC Moravsky Berou 75.60 333 ⇑P **P 09 59 19.3 +0.7**
MORC Moravsky Berou 75.60 333 *e*P **P 09 59 18.9 +0.3**
comp=Z,19nm,0.9s
MORC Moravsky Berou 75.60 333 ⇑*i*P **P 09 59 19.3 +0.7**
BRG Berggiesshubel 75.66 336 *e*P **P 09 59 19.0 +0.1**
comp=Z,38nm,1.8s
BRG Berggiesshubel 75.66 336 *e*P **P 09 59 19.0 +0.1**
BRG pmax pmax
comp=Z,38nm,1.8s
BRG Berggiesshubel 75.66 336 *e*P **P 09 59 19.0 +0.1**
comp=Z,34nm,1.7s
TXAR Lajitas Array 75.66 62 P **P 09 59 20.2 +0.8**
TXAR Lajitas Array 75.66 62 P **P 09 59 20.2 +0.8**
comp=Z,7.1nm,0.7s,baz=298,slow=4.0,SNR=80
231A Bronte 75.67 58 ⇓P **P 09 59 19.2 -0.1**
baz=76
CLZ Clausthal 75.71 338 *e*P **P 09 59 20.1 +0.9**
CLZ pmax pmax
comp=Z,35nm,1.1s
CLZ Clausthal 75.71 338 *e*P **P 09 59 20.1 +0.9**
comp=Z,35nm,1.1s
627A Terlingua Ranc 75.73 62 ⇑P **P 09 59 20.3 +0.5**
baz=76,SNR=9.8
429A Davenport Ranc 75.74 60 ⇓P **P 09 59 19.9 +0.1**
baz=76
PVCC Panska Ves 75.79 335 *e*P **P 09 59 20.1 +0.4**
PVCC AMS AMS 10 35 20.0
comp=Z,400nm,18.8s
VRI Vrincioaia 75.85 326 ⇑P **P 09 59 21.0 +0.9**
VRI Vrincioaia 75.85 326 ⇑*i*P **P 09 59 21.0 +0.9**
CFR Carcaliu 75.89 324 ⇓P **P 09 59 19.8 -0.4**
CFR Carcaliu 75.89 324 ⇓*i*P **P 09 59 19.8 -0.4**
529A Stev Forest Ra 75.92 61 ⇑P **P 09 59 21.1 +0.3**
baz=76,SNR=7.5
430A Baggett Ranch, 76.00 59 ⇓P **P 09 59 21.5 +0.3**
baz=76,SNR=8.6
628A Black Gap, Mar 76.00 61 ⇓P **P 09 59 21.6 +0.3**
baz=76
SFIN Scholer Farm 76.03 44 ⇓P **P 09 59 21.2 0.0**
baz=76
331A San Angelo 76.08 59 ⇓P **P 09 59 21.9 +0.3**
baz=76,SNR=6.1
232A Coleman 76.08 58 ⇓P **P 09 59 21.8 +0.1**
baz=76,SNR=6.5
PRU Pruhonice 76.29 335 *e*P **P 09 59 23.2 +0.7**
PRU AMS AMS 10 35 00.0
comp=Z,400nm,17.0s
VRAC Vranov 76.30 333 LR LR 10 39 05.2
comp=Z,419nm,18.5s,baz=17,slow=41
VYHS Vyhne 76.33 332 *e*P **P 09 59 23.3 +0.5**
VYHS pmax pmax
comp=Z,12nm,1.3s
VYHS Vyhne 76.33 332 *e*P **P 09 59 23.3 +0.5**
332A Millersview 76.41 58 ⇑P **P 09 59 23.9 +0.4**
baz=76
530A J-C Ranch, Com 76.41 60 ⇑P **P 09 59 24.0 +0.4**
baz=76,SNR=6.9
431A Sonora 76.44 59 ⇑P **P 09 59 23.9 +0.1**
baz=76,SNR=6.2
MLR Muntele Rosu 76.46 326 P **P 09 59 24.4 +0.7**
MLR Muntele Rosu 76.46 326 P **P 09 59 24.4 +0.7**
comp=Z,3.5nm,0.6s,baz=350,slow=0.8,SNR=22
TANN Tannenbergstha 76.47 336 *e*P **P 09 59 24.2 +0.6**
comp=Z,17nm,1.3s
MOX Moxa 76.49 337 *e*P **P 09 59 24.1 +0.5**
MOX pmax pmax
comp=Z,16nm,1.0s
MOX MLR MLR
comp=Z,300nm,20.3s
MOX Moxa 76.49 337 *e*P **P 09 59 24.1 +0.5**
comp=Z,16nm,1.0s
MOX *e*L L 10 35 58.7
comp=Z,308nm,20.3s
PSZ Piszkesteto 76.50 331 *e*P **P 09 59 24.2 +0.4**
PSZ Piszkesteto 76.50 331 *e*P **P 09 59 24.2 +0.4**
PSZ Piszkesteto 76.50 331 ⇑*e* **P 09 59 24.5 +0.7**
TREC Trest 76.64 334 *e*P **P 09 59 25.2 +0.7**
TREC MLR MLR
comp=Z,500nm,15.1s
TREC Trest 76.64 334 *e*P **P 09 59 25.2 +0.7**
TREC AMS AMS 10 39 00.0
comp=Z,500nm,15.1s
NKC Novy Kostel 76.64 336 *e*P **P 09 59 25.1 +0.6**
NKC AMS AMS 10 36 10.0
comp=Z,300nm,16.5s
UBBA Unterbreizbach 76.74 338 *e*P **P 09 59 25.7 +0.8**
comp=Z,29nm,1.4s
432A Menard 76.76 58 ⇓P **P 09 59 25.8 +0.2**
baz=77
KBI1 Birley Grange 76.83 346 *e*P **P 09 59 25.2 -0.2**
KBI1 Birley Grange 76.83 346 P **P 09 59 25.2 -0.2**
531A Rocksprings 76.86 59 ⇑P **P 09 59 26.3 +0.2**
baz=77,SNR=7.0
MALT Malatya 76.96 314 ⇑P **P 09 59 28.2 +1.6**
MALT Malatya 76.96 314 *e*P **P 09 59 27.5 +0.9**
comp=Z,24nm,1.3s
MALT Malatya 76.96 314 ⇑*i*P **P 09 59 28.2 +1.6**
JCT Junction City 77.05 59 *e*P **P 09 59 27.5 +0.3**

JCT e*PP PcP 09 59 40.0 +2.1
JCT Junction City 77.05 59 eP P 09 59 27.5 +0.3
JCT epP PcP 09 59 40.0 +2.1
JCT Junction City 77.05 59 ⇑P P 09 59 27.3 +0.1
baz=77,SNR=5.8
ARR Arges 77.05 327⇑iP P 09 59 28.9 +1.9
ROTZ Rotzenmuhle 77.13 336 eP P 09 59 28.3 +1.0
comp=Z,344nm,1.4s
BUD Budapest 77.16 331⇓eP P 09 59 28.8 +1.4
532A Rocksprings 77.25 59 ⇑P P 09 59 28.5 +0.1
baz=77,SNR=8.0
KHC Kasperske Hory 77.33 335 eP P 09 59 29.3 +0.9
KHC pmax pmax
comp=Z,8.0nm,0.5s
KHC Kasperske Hory 77.33 335 eP P 09 59 29.3 +0.9
comp=Z,8.3nm,0.5s
KHC Kasperske Hory 77.33 335 eP P 09 59 29.3 +0.9
KHC AMS AMS 10 36 10.0
comp=Z,400nm,18.7s
631A Perdido Creek 77.40 60 ⇑P P 09 59 29.5 +0.4
baz=77,SNR=14
GRF Grafenberg Arr 77.46 337 eP P 09 59 30.1 +1.0
GRF pmax pmax
comp=Z,86nm,1.6s
GRF MLR MLR
comp=Z,300nm,21.0s
GRF Grafenberg Arr 77.46 337 eP P 09 59 30.1 +1.0
comp=Z,86nm,1.6s
GRF eL L 10 36 48.5
comp=Z,324nm,21.0s
WET Wettzell 77.52 336 eP P 09 59 30.4 +1.0
WET pmax pmax
comp=Z,53nm,1.5s
WET Wettzell 77.52 336 eP P 09 59 30.4 +1.0
comp=Z,53nm,1.5s
GEC2 GERESS Array S 77.56 335 eP P 09 59 30.2 +0.5
GEC2 pmax pmax
comp=Z,207nm,3.2s
GERES GERESS Array B 77.56 335 P P 09 59 30.2 +0.5
GERES GERESS Array B 77.56 335 P P 09 59 30.2 +0.5
comp=Z,5.2nm,0.5s,baz=35,slow=5.7,SNR=48
GERES LR LR 10 36 55.8
comp=Z,385nm,20.6s,baz=188,slow=38
TNS Taunus Mts 77.67 339 eP P 09 59 31.0 +0.7
TNS pmax pmax
comp=Z,18nm,0.8s
TNS Taunus Mts 77.67 339 eP P 09 59 31.0 +0.7
comp=Z,18nm,0.8s
CONA Conrad Observa 77.75 333⇑iP P 09 59 31.8 +1.0
comp=Z,32nm,1.4s,SNR=14
CONA Conrad Observa 77.75 333⇑iP P 09 59 31.8 +1.0
comp=Z,32nm,1.4s
SOP Sopron 77.76 333⇓eP P 09 59 32.4 +1.6
632A Uvalde 77.79 59 ⇑P P 09 59 32.0 +0.7
baz=78
BZS Buzias 77.92 329 ⇓P P 09 59 31.6 -0.1
BZS Buzias 77.92 329⇓iP P 09 59 31.6 -0.1
BR131 Keskin Array S 78.06 318 eP P 09 59 33.2 +0.4
comp=Z,13nm,0.9s
BRTR Keskin Array B 78.06 318 P P 09 59 33.5 +0.7
BRTR Keskin Array B 78.06 318 P P 09 59 33.5 +0.7
comp=Z,9.2nm,0.8s,baz=56,slow=3.1,SNR=33
BRTR LR LR 10 39 32.5
comp=Z,147nm,19.1s,baz=200,slow=40
WCI Wyandotte Cave 78.12 45 eP P 09 59 33.5 +0.5
WCI pmax pmax
comp=Z,19nm,1.0s
WCI Wyandotte Cave 78.12 45 eP P 09 59 33.5 +0.5
comp=Z,19nm,1.0s
TOD Tromm 78.16 338 eP P 09 59 33.4 +0.4
TOD Tromm 78.16 338 eP P 09 59 33.4 +0.4
BCLA Clavier 78.22 341 P P 09 59 33.8 +0.6
comp=Z,15nm,1.3s
732A Laxson Ranch, 78.26 60 ⇑P P 09 59 34.2 +0.3
baz=78,SNR=7.3
MOA Molln 78.29 334⇑iP P 09 59 34.4 +0.6
comp=Z,9.3nm,0.8s
MOA Molln 78.29 334⇑iP P 09 59 34.4 +0.6
comp=Z,9.3nm,0.8s
SZH Strazhica 78.35 325 P P 09 59 34.1 0.0
PKSM Moragy 78.40 331⇑eP P 09 59 34.3 -0.1
ARSA Arzberg 78.46 333⇑iP P 09 59 35.6 +0.8
comp=Z,20nm,1.2s
ARSA Arzberg 78.46 333⇑iP P 09 59 35.6 +0.8
comp=Z,20nm,1.2s
RUP Ruppelstein 78.49 339 eP P 09 59 35.3 +0.4
RUP Ruppelstein 78.49 339 eP P 09 59 35.3 +0.4
GIVF Givet 78.62 341⇑iP P 09 59 35.7 +0.2
comp=Z,45nm,1.2s
GIVF Givet 78.62 341⇑iP P 09 59 35.7 +0.2
GIVF pmax pmax
comp=Z,45nm,1.2s
GIVF Givet 78.62 341⇑iP P 09 59 35.7 +0.2
comp=Z,45nm,1.2s
BEHE Becsehely 78.77 332⇑e P 09 59 37.3 +0.9
BAIF Baives 78.80 341⇑iP P 09 59 36.7 +0.3
comp=Z,63nm,1.3s
BAIF Baives 78.80 341⇑iP P 09 59 36.7 +0.3
BAIF pmax pmax
comp=Z,63nm,1.3s
BAIF Baives 78.80 341⇑iP P 09 59 36.7 +0.3
comp=Z,63nm,1.3s
RJOB Jochberg 78.82 335 eP P 09 59 37.7 +1.0
comp=Z,14nm,0.9s
FUR Furstenfeldbru 78.84 336 eP P 09 59 37.7 +0.9
FUR pmax pmax
comp=Z,65nm,1.2s
FUR Furstenfeldbru 78.84 336 eP P 09 59 37.7 +0.9
comp=Z,65nm,1.2s
MIB Mutribah 78.87 302 eP P 09 59 37.0 -0.2
MIB AMb AMB 09 59 38.1
comp=Z,55nm,0.6s
LANF Langenberg 78.98 339 eP P 09 59 38.1 +0.6
LANF Langenberg 78.98 339 eP P 09 59 38.1 +0.6
LANF Langenberg 78.98 339 eP P 09 59 38.1 +0.6
MPEP Malo Peshtene 79.11 326 P P 09 59 38.7 +0.4
SOKA Soboth 79.12 333⇑iP P 09 59 38.8 +0.4
comp=Z,40nm,1.4s
SOKA Soboth 79.12 333⇑iP P 09 59 38.8 +0.4
comp=Z,40nm,1.4s
PERS Pernice 79.14 333 iP P 09 59 39.1 +0.6
KBA Koelnbreinsper 79.26 334 iP P 09 59 40.3 +1.0
KBA pmax pmax
comp=Z,47nm,0.9s
KBA Koelnbreinsper 79.26 334 iP P 09 59 40.3 +1.0
comp=Z,47nm,0.9s,SNR=25
KBA Koelnbreinsper 79.26 334 iP P 09 59 40.2 +1.0
comp=Z,47nm,0.9s
QRN Al-Qurain 79.34 301 eP P 09 59 40.0 +0.2
QRN AMb AMB 09 59 40.8
comp=Z,28nm,0.9s
NAY Al-Naaiem 79.34 302 eP P 09 59 39.7 -0.1
NAY AMb AMB 09 59 41.7
comp=Z,29nm,1.4s
BFO Black Forest 79.46 338 eP P 09 59 40.7 +0.5
BFO pmax pmax
comp=Z,37nm,1.4s
BFO Black Forest 79.46 338 eP P 09 59 40.7 +0.5
comp=Z,37nm,1.4s
BFO Black Forest 79.46 338 eP P 09 59 40.2 0.0
WATA Walderalm 79.52 336⇑iP P 09 59 41.5 +0.8
WATA pmax pmax
comp=Z,40nm,1.2s
WATA Walderalm 79.52 336⇑iP P 09 59 41.5 +0.8
comp=Z,40nm,1.2s
WATA Walderalm 79.52 336⇑iP P 09 59 41.5 +0.8
comp=Z,40nm,1.2s
SPAK Spaichingen-Ko 79.56 338 eP P 09 59 41.6 +0.8
WTTA Wattenberg 79.57 336⇓iP P 09 59 42.0 +1.0
WTTA pmax pmax
comp=Z,68nm,1.4s
WTTA Wattenberg 79.57 336⇓iP P 09 59 42.0 +1.0
comp=Z,68nm,1.4s,SNR=22
WTTA Wattenberg 79.57 336⇓iP P 09 59 42.0 +1.0
comp=Z,68nm,1.4s
MYKA Terra Mystica 79.58 334⇓iP P 09 59 40.9 0.0
comp=Z,8.5nm,0.8s
MYKA Terra Mystica 79.58 334⇓iP P 09 59 40.9 0.0
comp=Z,8.5nm,0.8s
RETA Reutte 79.61 336⇓iP P 09 59 41.9 +0.8
comp=Z,19nm,1.0s
RETA Reutte 79.61 336⇓iP P 09 59 41.9 +0.8
comp=Z,19nm,1.0s
CDF Champ du Feu 79.64 339⇑iP P 09 59 41.5 +0.3
comp=Z,73nm,1.3s
CDF Champ du Feu 79.64 339⇑iP P 09 59 41.5 +0.3

CDF pmax pmax
comp=Z,73nm,1.3s
CDF Champ du Feu 79.64 339⇑iP P 09 59 41.5 +0.3
comp=Z,73nm,1.3s
MOTA Moosalm 79.64 336⇑iP P 09 59 42.2 +0.8
MOTA pmax pmax
comp=Z,25nm,0.8s
MOTA Moosalm 79.64 336⇑iP P 09 59 42.2 +0.8
comp=Z,25nm,0.8s,SNR=19
MOTA Moosalm 79.64 336⇑iP P 09 59 42.2 +0.8
comp=Z,25nm,0.8s
ABTA Abfaltersbach 79.80 335⇑iP P 09 59 42.3 +0.2
comp=Z,24nm,1.3s
ABTA Abfaltersbach 79.80 335⇑iP P 09 59 42.3 +0.2
comp=Z,24nm,1.3s
PLAL Pickwick Lake 79.85 48 eP P 09 59 47.0 +4.6
comp=Z,12nm,0.9s
ECH Echery 79.85 339 eP P 09 59 42.9 +0.6
ECH Echery 79.85 339 eP P 09 59 42.9 +0.6
ECH Echery 79.85 339 eP P 09 59 42.9 +0.6
PAGF Fort de Pagny 79.87 340⇑iP P 09 59 43.1 +0.7
comp=Z,60nm,1.3s
PAGF Fort de Pagny 79.87 340⇑iP P 09 59 43.1 +0.7
comp=Z,60nm,1.3s
FELD Feldberg im Sc 79.96 338 eP P 09 59 43.6 +0.6
VTS Vitosha 79.96 326 ⇑P P 09 59 43.0 -0.2
VTS Vitosha 79.96 326⇑iP P 09 59 43.0 -0.2
VTS Vitosha 79.96 326 P P 09 59 42.9 -0.2
DAVA Damuels 80.03 337⇑iP P 09 59 43.9 +0.5
comp=Z,38nm,1.3s
DAVA Damuels 80.03 337⇑iP P 09 59 43.9 +0.5
comp=Z,38nm,1.3s
FETA Feichten 80.04 336 ⇑P P 09 59 44.3 +0.8
comp=Z,31nm,1.2s,SNR=6.1
FETA Feichten 80.04 336 ⇑P P 09 59 44.3 +0.8
comp=Z,31nm,1.2s
MEZF Maizieres J'vi 80.08 340⇑iP P 09 59 44.0 +0.6
comp=Z,105nm,1.2s
MEZF Maizieres J'vi 80.08 340⇑iP P 09 59 44.0 +0.6
comp=Z,105nm,1.2s
BOJS Bojanci 80.11 332 iP P 09 59 43.7 0.0
JAVS Javornik 80.12 333 iP P 09 59 43.3 -0.6
THEF They Montfort 80.12 339 eP P 09 59 44.3 +0.6
THEF They Montfort 80.12 339 eP P 09 59 44.3 +0.6
THEF They Montfort 80.12 339 eP P 09 59 44.3 +0.6
MOF Molkenrain 80.20 339 eP P 09 59 44.3 +0.1
MOF Molkenrain 80.20 339 eP P 09 59 44.3 +0.1
MOF Molkenrain 80.20 339 eP P 09 59 44.3 +0.1
HAU Haudompre 80.24 339⇑iP P 09 59 44.6 +0.2
comp=Z,39nm,1.1s
HAU eR
comp=Z,317nm,22.2s
HAU Haudompre 80.24 339⇑iP P 09 59 44.6 +0.2
HAU pmax pmax
comp=Z,39nm,1.1s
HAU Haudompre 80.24 339⇑iP P 09 59 44.6 +0.2
comp=Z,39nm,1.1s
HINF Hinteralfeld 80.30 339⇑iP P 09 59 44.7 0.0
comp=Z,44nm,1.2s
HINF Hinteralfeld 80.30 339⇑iP P 09 59 44.7 0.0
HINF pmax pmax
comp=Z,44nm,1.2s
HINF Hinteralfeld 80.30 339⇑iP P 09 59 44.7 0.0
comp=Z,44nm,1.2s
SFTF Sexfontaines 80.36 340⇑iP P 09 59 45.3 +0.3
comp=Z,49nm,0.7s
SFTF Sexfontaines 80.36 340⇑iP P 09 59 45.3 +0.3
comp=Z,49nm,0.7s
SKDS Skadanscina 80.45 333 iP P 09 59 45.4 -0.1
BBS Basel-Blauen 80.47 338 eP P 09 59 46.3 +0.7
BBS Basel-Blauen 80.47 338 eP P 09 59 46.3 +0.7
DAVOX Davos/Dischmat 80.49 336 LR LR 10 39 14.2
comp=Z,166nm,18.2s,baz=76,slow=39
FUORN Ofenpass-Fuorn 80.54 336 eP P 09 59 47.1 +0.8
MMB Musomiste 80.63 325 P P 09 59 47.0 +0.4
SWET Sewanee 80.71 46 eP P 09 59 47.6 +0.5
comp=Z,29nm,1.4s
STKA Stephens Creek 80.73 191 P P 09 59 47.4 +0.4
STKA Stephens Creek 80.73 191 P P 09 59 47.4 +0.4
comp=Z,1.1nm,0.6s,baz=333,slow=9.7,SNR=5.9
STKA LR LR 10 36 04.1
comp=Z,200nm,19.1s,baz=25,slow=36
LOMF Lomont 80.74 339 eP P 09 59 47.3 +0.2
LOMF Lomont 80.74 339 eP P 09 59 47.3 +0.2
LOMF Lomont 80.74 339 eP P 09 59 47.3 +0.2
TUE Stuetta 80.92 337 eP P 09 59 48.9 +0.6
comp=Z,49nm,1.1s
FLN La Foliniere 80.97 344⇑iP P 09 59 48.5 +0.3
comp=Z,95nm,1.3s
FLN eR
comp=Z,274nm,21.5s
FLN La Foliniere 80.97 344⇑iP P 09 59 48.5 +0.3
FLN pmax pmax
comp=Z,95nm,1.3s
FLN La Foliniere 80.97 344⇑iP P 09 59 48.5 +0.3
comp=Z,95nm,1.3s
LDF La Druitiere 81.07 344⇑iP P 09 59 48.8 +0.1
comp=Z,30nm,0.9s
LDF La Druitiere 81.07 344⇑iP P 09 59 48.8 +0.1
LDF pmax pmax
comp=Z,30nm,0.9s
LDF La Druitiere 81.07 344⇑iP P 09 59 48.8 +0.1
comp=Z,30nm,0.9s
SKO Skopje 81.15 327 eP P 09 59 49.4 +0.1
VAY Valandovo 81.30 326 eP P 09 59 49.5 -0.6
GRR Gorron 81.40 344 eP P 09 59 51.0 +0.5
comp=Z,91nm,1.3s
GRR Gorron 81.40 344 eP P 09 59 51.0 +0.5
GRR pmax pmax
comp=Z,91nm,1.3s
GRR Gorron 81.40 344 eP P 09 59 51.0 +0.5
comp=Z,91nm,1.3s
LOR Lormes 81.51 341⇑iP P 09 59 51.3 +0.1
comp=Z,71nm,1.2s
LOR eR
comp=Z,402nm,21.5s
LOR Lormes 81.51 341⇑iP P 09 59 51.3 +0.1
comp=Z,71nm,1.2s
SENIN Lac Senin/Sane 81.55 338 eP P 09 59 52.6 +1.0
CABF La Chapelle 81.61 339⇑iP P 09 59 52.3 +0.5
comp=Z,107nm,1.4s
CABF La Chapelle 81.61 339⇑iP P 09 59 52.3 +0.5
CABF pmax pmax
comp=Z,107nm,1.4s
CABF La Chapelle 81.61 339⇑iP P 09 59 52.3 +0.5
comp=Z,107nm,1.4s
SSF Saint Saulge 81.78 341⇑iP P 09 59 52.8 +0.2
comp=Z,28nm,0.9s
SSF Saint Saulge 81.78 341⇑iP P 09 59 52.8 +0.2
SSF pmax pmax
comp=Z,28nm,0.9s
SSF Saint Saulge 81.78 341⇑iP P 09 59 52.8 +0.2
comp=Z,28nm,0.9s
SGMF Saint Gilles 81.83 345 eP P 09 59 53.3 +0.5
comp=Z,143nm,1.4s
SGMF Saint Gilles 81.83 345 eP P 09 59 53.3 +0.5
SGMF Saint Gilles 81.83 345 eP P 09 59 53.3 +0.5
comp=Z,143nm,1.4s
ROSF Rostrenen 81.88 346 eP P 09 59 52.6 -0.4
comp=Z,50nm,1.1s
ROSF Rostrenen 81.88 346 eP P 09 59 52.6 -0.4
ROSF pmax pmax
comp=Z,50nm,1.1s
ROSF Rostrenen 81.88 346 eP P 09 59 52.6 -0.4
comp=Z,50nm,1.1s
AVF Avril sur Loir 82.07 341⇑iP P 09 59 54.5 +0.4
comp=Z,53nm,1.0s
AVF Avril sur Loir 82.07 341⇑iP P 09 59 54.5 +0.4
AVF pmax pmax
comp=Z,53nm,1.0s
AVF Avril sur Loir 82.07 341⇑iP P 09 59 54.5 +0.4
comp=Z,53nm,1.0s
SMF Signal de Mont 82.10 340⇑iP P 09 59 54.7 +0.4
comp=Z,131nm,1.4s
SMF Signal de Mont 82.10 340⇑iP P 09 59 54.7 +0.4
SMF pmax pmax
comp=Z,131nm,1.4s
SMF Signal de Mont 82.10 340⇑iP P 09 59 54.7 +0.4
comp=Z,131nm,1.4s
PPT Papeete 82.12 127 LR LR 10 30 53.7
comp=Z,326nm,19.2s,baz=191,slow=32
PPT2 Papeete2 82.14 127 eLR LR 10 25 40.7
comp=Z,373nm,22.2s
QUIF Quistinic 82.26 345 eP P 09 59 55.6 +0.6
QUIF Quistinic 82.26 345 eP P 09 59 55.6 +0.6
QUIF Quistinic 82.26 345 eP P 09 59 55.6 +0.6

BGF Bois d'Agland 82.41 341 eP P 09 59 56.3 +0.5
comp=Z,20nm,0.7s
BGF Bois d'Agland 82.41 341 eP P 09 59 56.3 +0.5
BGF pmax pmax
comp=Z,20nm,0.7s
BGF Bois d'Agland 82.41 341 eP P 09 59 56.3 +0.5
comp=Z,20nm,0.7s
LPL La Plagne 82.48 338⇑iP P 09 59 57.6 +1.1
comp=Z,80nm,1.1s
LPL La Plagne 82.48 338⇑iP P 09 59 57.6 +1.1
LPL pmax pmax
comp=Z,80nm,1.1s
LPL La Plagne 82.48 338⇑iP P 09 59 57.6 +1.1
comp=Z,80nm,1.1s
LPG La Plagne 82.49 338⇑iP P 09 59 57.8 +1.1
comp=Z,129nm,1.2s
LPG La Plagne 82.49 338⇑iP P 09 59 57.8 +1.1
LPG La Plagne 82.49 338⇑iP P 09 59 57.8 +1.1
comp=Z,129nm,1.2s
ASF Jabal al Asfar 82.60 311 P P 09 59 57.8 +0.5
ASF Jabal al Asfar 82.60 311 P P 09 59 57.8 +0.5
comp=Z,6.3nm,0.9s,baz=264,slow=4.8,SNR=5.0
ASF LR LR 10 40 12.2
comp=Z,174nm,21.5s,baz=264,slow=38
MMAI Mount Meron Ar 82.67 313 P P 09 59 58.5 +1.0
MMAI Mount Meron Ar 82.67 313 P P 09 59 58.5 +1.0
comp=Z,8.7nm,0.5s,baz=40,slow=8.0,SNR=15
TCF Toulx Ste Croi 82.80 341⇑iP P 09 59 58.5 +0.6
comp=Z,52nm,1.1s
TCF Toulx Ste Croi 82.80 341⇑iP P 09 59 58.5 +0.6
TCF pmax pmax
comp=Z,52nm,1.1s
TCF Toulx Ste Croi 82.80 341⇑iP P 09 59 58.5 +0.6
comp=Z,52nm,1.1s
AGO Saint Agoulin 82.82 341 eP P 09 59 59.2 +1.2
AGO Saint Agoulin 82.82 341 eP P 09 59 59.2 +1.2
BNI Bardonecchia 82.93 338 eP P 10 00 00.0 +1.2
BNI pmax pmax
comp=Z,43nm,1.4s
BNI Bardonecchia 82.93 338 eP P 09 59 60.0 +1.2
comp=Z,43nm,1.4s
MFF Saint Martin d 82.98 343⇑iP P 09 59 59.5 +0.7
comp=Z,23nm,0.8s
MFF Saint Martin d 82.98 343⇑iP P 09 59 59.5 +0.7
MFF pmax pmax
comp=Z,23nm,0.8s
MFF Saint Martin d 82.98 343⇑iP P 09 59 59.5 +0.7
comp=Z,23nm,0.8s
PYM Petit Puy Mans 83.14 341 eP P 10 00 00.6 +0.9
PYM Petit Puy Mans 83.14 341 eP P 10 00 00.6 +0.9
PYM Petit Puy Mans 83.14 341 eP P 10 00 00.6 +0.9
MBDF Montbardon 83.21 338⇑iP P 10 00 00.8 +0.6
comp=Z,39nm,1.1s
MBDF Montbardon 83.21 338⇑iP P 10 00 00.8 +0.6
MBDF pmax pmax
comp=Z,39nm,1.1s
MBDF Montbardon 83.21 338⇑iP P 10 00 00.8 +0.6
comp=Z,39nm,1.1s
SSB Saint Sauveur 83.23 339 eP P 10 00 00.6 +0.4
SSB pmax pmax
comp=Z,53nm,1.3s
SSB Saint Sauveur 83.23 339 eP P 10 00 00.6 +0.4
comp=Z,53nm,1.3s
ORIF Oris-en-Rattie 83.25 338⇑iP P 10 00 01.5 +1.1
comp=Z,54nm,1.0s
ORIF eR
comp=Z,251nm,22.5s
ORIF Oris-en-Rattie 83.25 338⇑iP P 10 00 01.5 +1.1
ORIF pmax pmax
comp=Z,55nm,1.0s
ORIF Oris-en-Rattie 83.25 338⇑iP P 10 00 01.5 +1.1
comp=Z,54nm,1.0s
LBL Lubilhac 83.57 340 eP P 10 00 03.6 +1.6
LBL Lubilhac 83.57 340 eP P 10 00 03.6 +1.6
LBL Lubilhac 83.57 340 eP P 10 00 03.6 +1.6
VIVF Saint-Julien-l 83.60 339⇑iP P 10 00 03.0 +0.9
comp=Z,95nm,1.4s
VIVF Saint-Julien-l 83.60 339⇑iP P 10 00 03.0 +0.9
VIVF pmax pmax
comp=Z,95nm,1.4s
VIVF Saint-Julien-l 83.60 339⇑iP P 10 00 03.0 +0.9
comp=Z,95nm,1.4s
SAOF Saorge 83.70 337 eP P 10 00 03.0 +0.4
SAOF Saorge 83.70 337 eP P 10 00 03.0 +0.4
SAOF Saorge 83.70 337 eP P 10 00 03.0 +0.4
AUTN L'Aution 83.72 337 eP P 10 00 03.7 +0.7
AUTN L'Aution 83.72 337 eP P 10 00 03.7 +0.7
AUTN L'Aution 83.72 337 eP P 10 00 03.7 +0.7
TOUF Mont Tournerai 83.75 337 eP P 10 00 03.5 +0.4
TOUF Mont Tournerai 83.75 337 eP P 10 00 03.5 +0.4
TOUF Mont Tournerai 83.75 337 eP P 10 00 03.5 +0.4
SBF Sospel 83.84 337⇑iP P 10 00 03.5 +0.1
comp=Z,123nm,1.2s
SBF Sospel 83.84 337⇑iP P 10 00 03.5 +0.1
SBF Sospel 83.84 337⇑iP P 10 00 03.5 +0.1
comp=Z,123nm,1.2s
MVIF Mont Vial 83.89 337 eP P 10 00 04.3 +0.6
MVIF Mont Vial 83.89 337 eP P 10 00 04.3 +0.6
MVIF Mont Vial 83.89 337 eP P 10 00 04.3 +0.6
REVF Revere 83.98 337 eP P 10 00 04.4 +0.4
REVF Revere 83.98 337 eP P 10 00 04.4 +0.4
REVF Revere 83.98 337 eP P 10 00 04.4 +0.4
CALN Calern 84.09 337 eP P 10 00 05.4 +0.7
CALN Calern 84.09 337 eP P 10 00 05.4 +0.7
CALN Calern 84.09 337 eP P 10 00 05.4 +0.7
CAF Calviac 84.13 341 eP P 10 00 05.8 +1.0
comp=Z,62nm,1.2s
CAF Calviac 84.13 341 eP P 10 00 05.8 +1.0
CAF pmax pmax
comp=Z,62nm,1.2s
CAF Calviac 84.13 341 eP P 10 00 05.8 +1.0
comp=Z,62nm,1.2s
SMRF Simiane la Rot 84.21 338⇑iP P 10 00 06.4 +1.2
comp=Z,79nm,1.3s
SMRF Simiane la Rot 84.21 338⇑iP P 10 00 06.4 +1.2
comp=Z,79nm,1.3s
FRF La Foret Royal 84.33 337⇑iP P 10 00 06.0 +0.2
comp=Z,84nm,1.4s
FRF La Foret Royal 84.33 337⇑iP P 10 00 06.0 +0.2
FRF pmax pmax
comp=Z,84nm,1.4s
FRF La Foret Royal 84.33 337⇑iP P 10 00 06.0 +0.2
comp=Z,84nm,1.4s
LFF La Frestale 84.39 342 eP P 10 00 06.7 +0.6
LFF La Frestale 84.39 342 eP P 10 00 06.7 +0.6
LFF La Frestale 84.39 342 eP P 10 00 06.7 +0.6
LASF Ste Croix 84.53 339⇑iP P 10 00 07.9 +1.1
comp=Z,36nm,1.4s
LASF Ste Croix 84.53 339⇑iP P 10 00 07.9 +1.1
comp=Z,36nm,1.4s
LMR La Mourre 84.58 337⇑iP P 10 00 07.5 +0.5
comp=Z,136nm,1.2s
LMR La Mourre 84.58 337⇑iP P 10 00 07.5 +0.5
LMR La Mourre 84.58 337⇑iP P 10 00 07.5 +0.5
comp=Z,136nm,1.2s
PGF Pioggiola 84.64 335⇑iP P 10 00 07.6 +0.1
comp=Z,86nm,1.4s
PGF Pioggiola 84.64 335⇑iP P 10 00 07.6 +0.1
PGF pmax pmax
comp=Z,86nm,1.4s
PGF Pioggiola 84.64 335⇑iP P 10 00 07.6 +0.1
comp=Z,86nm,1.4s
RAYN Ar Rayn 84.73 300 P P 10 00 08.0 -0.2
comp=Z,114nm,1.6s,SNR=11
TIGA Tifton 84.91 47 ⇓P P 10 00 09.2 +0.3
baz=85
TIP Timpagrande 85.29 329 eP P 10 00 10.8 +0.1
comp=Z,50nm,1.4s
OSPF L'Ospedale 85.41 335 eP P 10 00 11.6 +0.3
OSPF L'Ospedale 85.41 335 eP P 10 00 11.6 +0.3
MTLF Montolieu 85.60 340 eP P 10 00 12.1 -0.1
MTLF Montolieu 85.60 340 eP P 10 00 12.1 -0.1
MTLF Montolieu 85.60 340 eP P 10 00 12.1 -0.1
EIL Elat 85.60 311 P P 10 00 12.8 +0.4
EIL Elat 85.60 311 P P 10 00 12.8 +0.4
comp=Z,4.0nm,0.7s,baz=21,slow=4.2,SNR=4.5
EPF Esparros 86.31 342 eP P 10 00 15.9 +0.2
comp=Z,12nm,1.0s
EPF Esparros 86.31 342 eP P 10 00 15.9 +0.2
EPF pmax pmax
comp=Z,12nm,1.0s
EPF Esparros 86.31 342 eP P 10 00 15.9 +0.2
comp=Z,12nm,1.0s
SJPF Ste Jean 86.55 343 eP P 10 00 17.1 +0.3
SJPF Ste Jean 86.55 343 eP P 10 00 17.1 +0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SJPF	**Ste Jean**	**86.55**	**343**	*e*P	**P**	**10 00 17.1**	**+0.3**
ETSF	**Etsaut**	**86.62**	**342**	*e*P	**P**	**10 00 17.2**	**-0.1**
	comp=Z,11nm,0.8s						
ETSF	**Etsaut**	**86.62**	**342**	*e*P	**P**	**10 00 17.2**	**-0.1**
ETSF				pmax	pmax		
	comp=Z,11nm,0.8s						
ETSF	**Etsaut**	**86.62**	**342**	*e*P	**P**	**10 00 17.2**	**-0.1**
	comp=Z,11nm,0.8s						
TBI	**Tubuai**	**86.97**	**131**	*e*LR	LR	10 27 48.5	
	comp=Z,444nm,23.0s,baz=332						
URZ	**Urewera**	**88.44**	**163**	LR	LR	10 32 51.3	
	comp=Z,195nm,20.1s,baz=81,slow=31						
ESDC	**Sonseca Array**	**90.39**	**344**	P	**P**	**10 00 34.5**	**-0.7**
ESDC	**Sonseca Array**	**90.39**	**344**	P	**P**	**10 00 34.5**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=353,slow=4.5,SNR=8.0						
ESDC				LR	LR	10 45 56.4	
	comp=Z,209nm,20.0s,baz=5.0,slow=39						
KEST	**Kesra**	**90.85**	**333**	P	**P**	**10 00 37.9**	**+0.4**
KEST	**Kesra**	**90.85**	**333**	P	**P**	**10 00 37.9**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=128,slow=0.5,SNR=4.6						
KEST				LR	LR	10 46 26.4	
	comp=Z,127nm,20.9s,baz=204,slow=39						
ATD	**Arta Tunnel**	**95.62**	**294**	LR	LR	10 49 51.9	
	comp=Z,297nm,18.5s,baz=12,slow=39						
MDT	**Midelt**	**97.17**	**343**	LR	LR	10 48 59.5	
	comp=Z,107nm,19.6s,baz=294,slow=38						
TORD	**Torodi Ar. Bea**	**114.33**	**331**	PKP	PKPdf	10 06 13.2	-0.5
TORD	**Torodi Ar. Bea**	**114.33**	**331**	PKP	PKPdf	10 06 13.2	-0.5
	comp=Z,0.3nm,0.5s,baz=20,slow=1.9,SNR=7.7						
DRV	**Dumont d'Urvil**	**115.23**	**187**	SS	SS	10 23 34.0	+26
DBIC	**Dimbokro**	**122.42**	**336**	PKP	**PKPdf**	**10 06 28.5**	**-0.7**
DBIC	**Dimbokro**	**122.42**	**336**	PKP	**PKPdf**	**10 06 28.5**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=28,slow=2.3,SNR=3.8						
VNDA	**Vanda**	**125.65**	**178**	PKP	**PKPdf**	**10 06 33.3**	**-0.1**
VNDA	**Vanda**	**125.65**	**178**	PKP	**PKPdf**	**10 06 33.3**	**-0.1**
	comp=Z,1.1nm,0.9s,baz=346,slow=4.2,SNR=3.4						
BDFB	**Brasilia**	**142.34**	**38**	PKP	**PKPdf**	**10 07 07.7**	**+1.1**
BDFB	**Brasilia**	**142.34**	**38**	PKP	**PKPdf**	**10 07 07.7**	**+1.1**
	comp=Z,2.3nm,0.7s,baz=120,slow=6.2,SNR=3.1						
CPUP	**Villa Florida**	**146.62**	**61**	PKPbc	**PKPbc**	**10 07 15.3**	**+0.2**
CPUP	**Villa Florida**	**146.62**	**61**	PKPbc	**PKPbc**	**10 07 15.3**	**+0.2**
	comp=Z,3.0nm,0.5s,baz=313,slow=2.2,SNR=14						
MAIT	**Maitri**	**151.61**	**205**	*e*P	PKPdf	10 07 15.0	-5.2
SNAA	**Sanae**	**154.41**	**196**	*e*PKPab	**PKPab**	**10 07 47.4**	**+0.1**
VNA2	**Neumayer--Watz**	**155.84**	**194**	*e*PKPab	**PKPab**	**10 07 54.3**	**+1.0**
VNA3	**Neumayer Olymp**	**155.90**	**192**	*e*PKPab	**PKPab**	**10 07 54.0**	**+0.4**

*ISCJB **06** 09:51:02.5±0.3, 42°.40N±0°.02×13°.30E±0°.03, h11km±4km, Error ellipse: s-maj=3.9km s-min=3.1km az=171.8*
*ROM **06** 09:51:02.7±0.1, 42°.39N×13°.33E, h10km±1km, Ml2.9/23, Error ellipse: s-maj=1.5km s-min=1.2km az=86.0*
*CSEM **06** 09:51:03.0±0.1, 42°.40N×13°.31E, h2km, ML3.8/7, Error ellipse: s-maj=2.4km s-min=1.8km az=76.0*
ISC 06 09:51:03.1±0.8**, 42°.40N**±0°.02×**13°.30E**±0°.02**, h11**km±5km**, n63,** σ**0.s72**/87**, 6C, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.09**	**120**⇑	*i*Pg	**Pg**	**09 51 05.4**	**-0.4**
AQU				Sg	**Sg**	**09 51 07.0**	**-0.7**
	33µm,0.4s						
AQU	**L'Aquila**	**0.09**	**120**⇑	*i*Pg	**Pg**	**09 51 05.4**	**-0.4**
AQU				Sg	**Sg**	**09 51 07.0**	**-0.7**
	33µm,0.4s						
CAMP	**Campotosto**	**0.16**	**31**⇑	*i*Pg	**Pg**	**09 51 06.6**	**-0.2**
CAMP				Sg	**Sg**	**09 51 09.4**	**0.0**
CAMP	**Campotosto**	**0.16**	**31**⇑	*i*Pg	**Pg**	**09 51 06.6**	**-0.2**
CAMP				Sg	**Sg**	**09 51 09.4**	**0.0**
FIAM	**Fiamignano**	**0.19**	**225**	Pg	**Pg**	**09 51 07.5**	**+0.3**
FIAM				Sg	**Sg**	**09 51 11.4**	**+1.3**
FIAM	**Fiamignano**	**0.19**	**225**	Pg	**Pg**	**09 51 07.5**	**+0.3**
FIAM				Sg	**Sg**	**09 51 11.4**	**+1.3**
FAGN	**Fagnano**	**0.25**	**122**	Pg	**Pg**	**09 51 08.1**	**-0.2**
FAGN				Sg	**Sg**	**09 51 12.1**	**+0.3**
	14µm,0.4s						
FAGN	**Fagnano**	**0.25**	**122**	Pg	**Pg**	**09 51 08.1**	**-0.2**
FAGN				Sg	**Sg**	**09 51 12.1**	**+0.3**
	14µm,0.4s						
TERO	**Teramo**	**0.32**	**45**⇑	*i*Pg	**Pg**	**09 51 09.0**	**-0.5**
TERO				Sg	**Sg**	**09 51 13.6**	**-0.2**
	2µm,0.4s						
TERO	**Teramo**	**0.32**	**45**⇑	*i*Pg	**Pg**	**09 51 09.0**	**-0.5**
TERO				Sg	**Sg**	**09 51 13.6**	**-0.2**
	2µm,0.4s						
PTQR	**Pietraquaria**	**0.39**	**168**	Pg	**Pg**	**09 51 10.4**	**-0.4**
PTQR				Sg	**Sg**	**09 51 16.2**	**+0.3**
PTQR	**Pietraquaria**	**0.39**	**168**	Pg	**Pg**	**09 51 10.4**	**-0.4**
PTQR				Sg	**Sg**	**09 51 16.2**	**+0.3**
VCEL	**Villa Celiera**	**0.40**	**91**	Pg	**Pg**	**09 51 10.5**	**-0.6**
	2µm,0.3s						
VCEL	**Villa Celiera**	**0.40**	**91**	Pg	**Pg**	**09 51 10.5**	**-0.6**
	2µm,0.3s						
NRCA	**Norcia**	**0.45**	**343**	Pg	**Pg**	**09 51 12.0**	**0.0**
	125nm,0.5s						
NRCA	**Norcia**	**0.45**	**343**	Pg	**Pg**	**09 51 12.0**	**0.0**
	125nm,0.5s						
MNS	**Montasola**	**0.46**	**268**	Pg	**Pb**	**09 51 12.1**	**-1.1**
	1µm,1.2s						
MNS	**Montasola**	**0.46**	**268**	Pg	**Pb**	**09 51 12.1**	**-1.1**
	1µm,1.2s						
CERT	**Cerreto**	**0.51**	**208**	Pg	**Pg**	**09 51 12.7**	**-0.3**
CERT				Sg	**Sb**	**09 51 20.3**	**-1.1**
	2µm,0.4s						
CERT	**Cerreto**	**0.51**	**208**	Pg	**Pg**	**09 51 12.7**	**-0.3**
CERT				Sg	**Sb**	**09 51 20.3**	**-1.1**
	2µm,0.4s						
MTCE	**Montecelio**	**0.56**	**228**	Pg	**Pg**	**09 51 13.8**	**-0.2**
	593nm,1.1s						
MTCE	**Montecelio**	**0.56**	**228**	Pg	**Pg**	**09 51 13.8**	**-0.2**
	593nm,1.1s						
VVLD	**Villa Vallelon**	**0.58**	**155**	Pg	**Pg**	**09 51 13.5**	**-0.9**
VVLD				Sg	**Sg**	**09 51 21.3**	**-0.8**
	569nm,0.6s						
VVLD	**Villa Vallelon**	**0.58**	**155**	Pg	**Pg**	**09 51 13.5**	**-0.9**
VVLD				Sg	**Sg**	**09 51 21.3**	**-0.8**
	569nm,0.6s						
INTR	**Introdacqua**	**0.59**	**130**	Pg	**Pg**	**09 51 14.0**	**-0.7**
INTR				Sg	**Sb**	**09 51 23.4**	**-0.6**
	773nm,0.2s						
INTR	**Introdacqua**	**0.59**	**130**	Pg	**Pg**	**09 51 14.0**	**-0.7**
INTR				Sg	**Sb**	**09 51 23.4**	**-0.6**
	773nm,0.2s						
GUAR	**Guarcino**	**0.60**	**179**	Pg	**Pb**	**09 51 15.9**	**+0.2**
	352nm,0.5s						
GUAR	**Guarcino**	**0.60**	**179**	Pg	**Pb**	**09 51 15.9**	**+0.2**
	352nm,0.5s						
OFFI	**Offida**	**0.61**	**28**	Pg	**Pb**	**09 51 15.3**	**-0.4**
	2µm,0.6s						
OFFI	**Offida**	**0.61**	**28**	Pg	**Pb**	**09 51 15.3**	**-0.4**
	2µm,0.6s						
TRTR	**Tortoreto Alta**	**0.61**	**48**	Pg	**Pb**	**09 51 15.4**	**-0.4**
	1µm,0.4s						
TRTR	**Tortoreto Alta**	**0.61**	**48**	Pg	**Pb**	**09 51 15.4**	**-0.4**
	1µm,0.4s						
FDMO	**Fiordimonte**	**0.66**	**346**	Pg	**Pg**	**09 51 15.5**	**-0.3**
FDMO	**Fiordimonte**	**0.66**	**346**	Pg	**Pg**	**09 51 15.5**	**-0.3**
LPEL	**Lama dei Pelig**	**0.75**	**118**	Pg	**Pg**	**09 51 16.3**	**-1.2**
LPEL				Sg	**Sg**	**09 51 27.6**	**+0.3**
	714nm,0.2s						
LPEL	**Lama dei Pelig**	**0.75**	**118**	Pg	**Pg**	**09 51 16.3**	**-1.2**
LPEL				Sg	**Sg**	**09 51 27.6**	**+0.3**
	714nm,0.2s						
POFI	**Posta Fibreno**	**0.75**	**155**	Pg	**Pg**	**09 51 16.9**	**-0.7**
	200nm,0.5s						
POFI	**Posta Fibreno**	**0.75**	**155**	Pg	**Pg**	**09 51 16.9**	**-0.7**
	200nm,0.5s						
SDI	**San Donato**	**0.79**	**151**	Pg	**Pg**	**09 51 18.1**	**-0.2**
	124nm,0.2s						
SDI	**San Donato**	**0.79**	**151**	Pg	**Pg**	**09 51 18.1**	**-0.2**
	124nm,0.2s						
ASSB	**Assisi San Ben**	**0.80**	**324**	Pg	**Pg**	**09 51 18.2**	**-0.3**
	215nm,0.4s						
ASSB	**Assisi San Ben**	**0.80**	**324**	Pg	**Pg**	**09 51 18.2**	**-0.3**
	215nm,0.4s						
GIUL	**Giuliano Di Ro**	**0.84**	**182**	Pg	**Pg**	**09 51 18.5**	**-0.8**
	1µm,2.1s						
GIUL	**Giuliano Di Ro**	**0.84**	**182**	Pg	**Pg**	**09 51 18.5**	**-0.8**
	1µm,2.1s						
CERA	**Filignano**	**0.96**	**146**	Pg	**Pg**	**09 51 21.0**	**-0.7**
	211nm,0.4s						
CERA	**Filignano**	**0.96**	**146**	Pg	**Pg**	**09 51 21.0**	**-0.7**
	211nm,0.4s						
CING	**Cingoli**	**0.98**	**356**	Pg	**Pg**	**09 51 21.1**	**-0.8**
	40nm,0.4s						
CING	**Cingoli**	**0.98**	**356**	Pg	**Pg**	**09 51 21.1**	**-0.8**
	40nm,0.4s						
MGAB	**Montegabbione**	**1.01**	**301**	Pg	**Pn**	**09 51 22.9**	**-0.4**
	226nm,0.5s						
MGAB	**Montegabbione**	**1.01**	**301**	Pg	**Pn**	**09 51 22.9**	**-0.4**
	226nm,0.5s						
MURB	**Monte Urbino**	**1.03**	**327**	Pg	**Pn**	**09 51 23.0**	**-0.6**
	179nm,0.3s						
MURB	**Monte Urbino**	**1.03**	**327**	Pg	**Pn**	**09 51 23.0**	**-0.6**
	179nm,0.3s						
MIDA	**Miranda**	**1.04**	**136**	Pg	**Pg**	**09 51 21.8**	**-1.3**
	136nm,0.5s						
MIDA	**Miranda**	**1.04**	**136**	Pg	**Pg**	**09 51 21.8**	**-1.3**
	136nm,0.5s						
AOI	**Ancona**	**1.17**	**11**	Pg	**Pb**	**09 51 24.9**	**-0.5**
	160nm,0.8s						
AOI	**Ancona**	**1.17**	**11**	Pg	**Pb**	**09 51 24.9**	**-0.5**
	160nm,0.8s						
PIEI	**Pieia**	**1.27**	**334**	Pg	**Pg**	**09 51 27.1**	**-0.3**
	65nm,0.4s						
PIEI	**Pieia**	**1.27**	**334**	Pg	**Pg**	**09 51 27.1**	**-0.3**
	65nm,0.4s						
MS1	**Monte Sant'Ang**	**2.09**	**109**	*e*Sn	**Sb**	**09 52 08.1**	**+1.1**
NVLJ	**Novalja**	**2.45**	**27**	*e*Pn	**Pn**	**09 51 43.5**	**+0.5**
NVLJ				Sn	**Sn**	**09 52 14.0**	**+1.2**
NVLJ	**Novalja**	**2.45**	**27**	*e*Pn	**Pn**	**09 51 43.4**	**+0.5**
NVLJ				Sn	**Sn**	**09 52 14.0**	**+1.2**
STON	**Ston**	**3.28**	**80**	*e*Pn	**Pn**	**09 51 55.7**	**+1.2**
STON				Sn	**Sn**	**09 52 35.0**	**+1.6**
STON	**Ston**	**3.28**	**80**	*e*Pn	**Pn**	**09 51 55.6**	**+1.2**
STON				Sn	**Sn**	**09 52 34.9**	**+1.6**

MEX 06 09:55:09.5±0.8**, 16°.74N**×**94°.05W, h147**km±8km**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.87**	**294**	*i* P	Pn	09 55 31.4	-1.4
CMIG				*i* S	Sn	09 55 48.8	-1.9
TGIG		**0.89**	**87**	*i* P	Pn	09 55 31.8	-1.3
TGIG				*i* S	Sn	09 55 49.0	-2.1
CCIG	**Comitan**	**1.89**	**104**	*e*P	Pn	09 55 42.3	-1.1
CCIG				*i* S	Sn	09 56 07.3	-2.1
HUIG	**Huatulco**	**2.20**	**244**	*e*P	Pn	09 55 44.6	-2.2
HUIG				*e*S	Sn	09 56 14.3	-1.1
VHO	**Vista Hermosa**	**2.59**	**278**	*e*P	Pn	09 55 51.1	-0.7
VHO				*i* S	Sn	09 56 22.5	-1.9
UTMO	**Huajuapan**	**3.75**	**287**	*e*P	Pn	09 56 05.7	-0.9
UTMO				*i* S	Sn	09 56 48.0	-3.0
PNIG	**Pinotepa**	**3.92**	**266**	*e*P	Pn	09 56 06.6	-2.1
PNIG				*i* S	Sn	09 56 51.9	-2.8

*CSEM **06** 09:57:17.0, 42°.35N×13°.38E, h10km, After ROM*
ROM 06 09:57:17.0±0.1**, 42°.35N**×**13°.38E, h10**km±1km**, Ml2.5**/2**, 2D, Error ellipse: s-maj=2.3km s-min=1.5km az=86.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.01**	**83**⇓	*i*Pg	Pg	09 57 19.3	+0.4
AQU				Sg	Sg	09 57 20.3	0.0
AQU	**L'Aquila**	**0.01**	**83**⇓	*i*Pg	Pg	09 57 19.3	+0.4
AQU				Sg	Sg	09 57 20.3	0.0
FAGN	**Fagnano**	**0.17**	**120**	Pg	Pb	09 57 21.7	-0.7
FAGN				Sg	Sg	09 57 24.5	+1.0
FAGN	**Fagnano**	**0.17**	**120**	Pg	Pb	09 57 21.7	-0.7
FAGN				Sg	Sg	09 57 24.5	+1.0
CAMP	**Campotosto**	**0.18**	**6**	Pg	Pg	09 57 21.9	+0.7
CAMP				Sg	Sg	09 57 25.1	+1.0
CAMP	**Campotosto**	**0.18**	**6**	Pg	Pg	09 57 21.9	+0.7
CAMP				Sg	Sg	09 57 25.1	+1.0
FIAM	**Fiamignano**	**0.21**	**247**	Pg	Pb	09 57 22.4	-0.7
FIAM	**Fiamignano**	**0.21**	**247**	Pg	Pb	09 57 22.4	-0.7
TERO	**Teramo**	**0.32**	**31**	Pg	Pg	09 57 23.7	+0.2
TERO				Sg	Sg	09 57 28.6	+0.8
TERO	**Teramo**	**0.32**	**31**	Pg	Pg	09 57 23.7	+0.2
TERO				Sg	Sg	09 57 28.6	+0.8
PTQR	**Pietraquaria**	**0.33**	**178**	Pg	Pg	09 57 24.1	+0.4
PTQR				Sg	Sg	09 57 29.2	+1.0
PTQR	**Pietraquaria**	**0.33**	**178**	Pg	Pg	09 57 24.1	+0.4
PTQR				Sg	Sg	09 57 29.2	+1.0
VCEL	**Villa Celiera**	**0.34**	**83**	Pg	Pb	09 57 25.2	-0.2
VCEL	**Villa Celiera**	**0.34**	**83**	Pg	Pb	09 57 25.2	-0.2

IDC 06 09:59:26.6±1.2**, 14°.46N**×**54°.09E, h0**km**, mb3.4**/5**, mb1 3.6**/5**, mb1mx3.3**/28**, mbtmp3.4**/5**, Error ellipse: s-maj=34.4km s-min=31.8km az=163.0, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**39.92**	**30**	P	P	10 07 02.6	0.0
	0.2nm,0.7s,baz=214,slow=8.2,SNR=2.8						
BVAR	**Borovoye Array**	**40.59**	**15**	P	P	10 07 07.7	-0.2
	0.2nm,0.3s,baz=205,slow=6.4,SNR=2.6						
TORD	**Torodi Ar. Bea**	**50.80**	**275**	P	P	10 08 29.2	-0.1
	0.4nm,0.8s,baz=87,slow=5.4,SNR=2.4						
WRA	**Warramunga Arr**	**85.98**	**112**	P	P	10 12 09.5	0.0
	0.4nm,0.6s,baz=295,slow=4.0,SNR=7.1						
ASAR	**Alice Springs**	**86.68**	**115**	P	P	10 12 12.9	0.0
	0.3nm,0.5s,baz=293,slow=4.6,SNR=8.1						

*ISCJB **06** 09:59:29.0±0.3, 42°.32N±0°.02×13°.36E±0°.03, h11km±3km, Error ellipse: s-maj=4.1km s-min=2.9km az=169.7*
*ROM **06** 09:59:29.1±0.1, 42°.32N×13°.39E, h11km, Ml3.3/25, Error ellipse: s-maj=1.3km s-min=0.9km az=72.0*
*CSEM **06** 09:59:29.5±0.1, 42°.32N×13°.36E, h0km±2km, ML3.8/8, Error ellipse: s-maj=3.2km s-min=2.4km az=79.0*
ISC 06 09:59:29.6±0.8**, 42°.33N**±0°.02×**13°.39E**±0°.02**, h11**km±4km**, n69,** σ**1.s04**/94**, 6C-6D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.03**	**18**⇓	*i*P	**Pg**	**09 59 31.4**	**-0.3**
AQU	**L'Aquila**	**0.03**	**18**⇓	*i*Pg	**Pg**	**09 59 31.6**	**-0.1**
AQU				Sg	**Sg**	**09 59 32.9**	**-0.3**
	6µm,0.3s						
AQU	**L'Aquila**	**0.03**	**18**⇓	*i*P	**Pg**	**09 59 31.4**	**-0.3**
AQU	**L'Aquila**	**0.03**	**18**⇓	*i*Pg	**Pg**	**09 59 31.6**	**-0.1**
AQU				Sg	**Sg**	**09 59 32.9**	**-0.3**
	6µm,0.3s						
FAGN	**Fagnano**	**0.16**	**113**	Pg	**Pg**	**09 59 33.3**	**+0.1**
FAGN				Sg	**Sg**	**09 59 36.3**	**+0.6**
	36µm,0.4s						
FAGN	**Fagnano**	**0.16**	**113**	Pg	**Pg**	**09 59 33.3**	**+0.1**
FAGN				Sg	**Sg**	**09 59 36.3**	**+0.6**
	36µm,0.4s						
CAMP	**Campotosto**	**0.21**	**4**⇓	*i*Pg	**Pg**	**09 59 33.9**	**-0.2**
CAMP				Sg	**Sg**	**09 59 37.4**	**+0.2**
CAMP	**Campotosto**	**0.21**	**4**⇓	*i*Pg	**Pg**	**09 59 33.9**	**-0.2**
CAMP				Sg	**Sg**	**09 59 37.4**	**+0.2**
FIAM	**Fiamignano**	**0.21**	**254**⇑	*i*Pg	**Pg**	**09 59 34.3**	**+0.2**
FIAM	**Fiamignano**	**0.21**	**254**⇑	*i*Pg	**Pg**	**09 59 34.3**	**+0.2**
PTQR	**Pietraquaria**	**0.31**	**179**	Pg	**Pg**	**09 59 35.8**	**0.0**
PTQR				Sg	**Sg**	**09 59 40.7**	**+0.8**
PTQR	**Pietraquaria**	**0.31**	**179**	Pg	**Pg**	**09 59 35.8**	**0.0**
PTQR				Sg	**Sg**	**09 59 40.7**	**+0.8**
TERO	**Teramo**	**0.33**	**28**	Pg	**Pg**	**09 59 36.1**	**-0.2**
TERO				Sg	**Sg**	**09 59 41.2**	**+0.4**
	6µm,0.6s						
TERO	**Teramo**	**0.33**	**28**	Pg	**Pg**	**09 59 36.1**	**-0.2**
TERO				Sg	**Sg**	**09 59 41.2**	**+0.4**
	6µm,0.6s						
VCEL	**Villa Celiera**	**0.34**	**79**	Pg	**Pg**	**09 59 36.5**	**+0.1**
	6µm,0.7s						
VCEL	**Villa Celiera**	**0.34**	**79**	Pg	**Pg**	**09 59 36.5**	**+0.1**
	6µm,0.7s						
CERT	**Cerreto**	**0.49**	**219**⇑	*i*Pg	**Pg**	**09 59 38.8**	**-0.3**
CERT				Sg	**Sg**	**09 59 45.8**	**+0.3**
	4µm,0.6s						
CERT	**Cerreto**	**0.49**	**219**⇑	*i*Pg	**Pg**	**09 59 38.8**	**-0.3**
CERT				Sg	**Sg**	**09 59 45.8**	**+0.3**
	4µm,0.6s						
VVLD	**Villa Vallelon**	**0.49**	**159**	Pg	**Pg**	**09 59 38.7**	**-0.4**
VVLD				Sg	**Sg**	**09 59 45.4**	**-0.2**
	2µm,0.5s						
VVLD	**Villa Vallelon**	**0.49**	**159**	Pg	**Pg**	**09 59 38.7**	**-0.4**
VVLD				Sg	**Sg**	**09 59 45.4**	**-0.2**
	2µm,0.5s						
INTR	**Introdacqua**	**0.50**	**129**	Pg	**Pg**	**09 59 38.9**	**-0.4**
INTR				Sg	**Sb**	**09 59 47.0**	**-0.6**
	2µm,0.6s						
INTR	**Introdacqua**	**0.50**	**129**	Pg	**Pg**	**09 59 38.9**	**-0.4**
INTR				Sg	**Sb**	**09 59 47.0**	**-0.6**
	2µm,0.6s						
MNS	**Montasola**	**0.53**	**276**	Pg	**Pg**	**09 59 39.4**	**-0.5**
MNS	**Montasola**	**0.53**	**276**	Pg	**Pg**	**09 59 39.4**	**-0.5**
GUAR	**Guarcino**	**0.54**	**186**	Pg	**Pb**	**09 59 40.5**	**-0.5**
	1µm,0.6s						
GUAR	**Guarcino**	**0.54**	**186**	Pg	**Pb**	**09 59 40.5**	**-0.5**
	1µm,0.6s						
NRCA	**Norcia**	**0.55**	**338**	Pg	**Pg**	**09 59 39.6**	**-0.6**
NRCA				Sg	**Sb**	**09 59 48.7**	**-0.4**
	1µm,0.1s						
NRCA	**Norcia**	**0.55**	**338**	Pg	**Pg**	**09 59 39.6**	**-0.6**
NRCA				Sg	**Sb**	**09 59 48.7**	**-0.4**
	1µm,0.1s						
MTCE	**Montecelio**	**0.57**	**238**⇑	*i*Pg	**Pg**	**09 59 40.3**	**-0.4**
	455nm,0.4s						
MTCE	**Montecelio**	**0.57**	**238**⇑	*i*Pg	**Pg**	**09 59 40.3**	**-0.4**
	455nm,0.4s						
TRTR	**Tortoreto Alta**	**0.62**	**39**	Pg	**Pb**	**09 59 42.3**	**0.0**
	8µm,0.7s						
TRTR	**Tortoreto Alta**	**0.62**	**39**	Pg	**Pb**	**09 59 42.3**	**0.0**
	8µm,0.7s						
OFFI	**Offida**	**0.65**	**20**	Pg	**Pb**	**09 59 42.6**	**-0.2**
	4µm,0.4s						
OFFI	**Offida**	**0.65**	**20**	Pg	**Pb**	**09 59 42.6**	**-0.2**
	4µm,0.4s						
LPEL	**Lama dei Pelig**	**0.65**	**115**	Pg	**Pg**	**09 59 41.4**	**-0.8**
LPEL				Sg	**Sg**	**09 59 51.1**	**+0.3**
	1µm,0.7s						
LPEL	**Lama dei Pelig**	**0.65**	**115**	Pg	**Pg**	**09 59 41.4**	**-0.8**
LPEL				Sg	**Sg**	**09 59 51.1**	**+0.3**
	1µm,0.7s						
POFI	**Posta Fibreno**	**0.66**	**158**	Pg	**Pg**	**09 59 41.7**	**-0.6**
	460nm,0.6s						
POFI	**Posta Fibreno**	**0.66**	**158**	Pg	**Pg**	**09 59 41.7**	**-0.6**
	460nm,0.6s						
SDI	**San Donato**	**0.69**	**153**	Pg	**Pg**	**09 59 42.2**	**-0.8**
SDI	**San Donato**	**0.69**	**153**	Pg	**Pg**	**09 59 42.2**	**-0.8**
CAFR	**Castel Frentan**	**0.72**	**98**	Pg	**Pg**	**09 59 43.1**	**-0.3**
	1µm,0.5s						
CAFR	**Castel Frentan**	**0.72**	**98**	Pg	**Pg**	**09 59 43.1**	**-0.3**
	1µm,0.5s						
RMP	**Rome, Mte Porz**	**0.73**	**225**	Pg	**Pg**	**09 59 43.1**	**-0.5**
	888nm,0.5s						
RMP	**Rome, Mte Porz**	**0.73**	**225**	Pg	**Pg**	**09 59 43.1**	**-0.5**
	888nm,0.5s						
FDMO	**Fiordimonte**	**0.74**	**343**	Pg	**Pg**	**09 59 43.0**	**-0.9**
	598nm,0.6s						
FDMO	**Fiordimonte**	**0.74**	**343**	Pg	**Pg**	**09 59 43.0**	**-0.9**
	598nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.78**	**188**	Pg	**Pg**	**09 59 44.2**	**-0.4**
	1µm,1.0s						
GIUL	**Giuliano Di Ro**	**0.78**	**188**	Pg	**Pg**	**09 59 44.2**	**-0.4**
	1µm,1.0s						
CERA	**Filignano**	**0.87**	**147**	Pg	**Pg**	**09 59 45.2**	**-1.1**
	953nm,0.6s						
CERA	**Filignano**	**0.87**	**147**	Pg	**Pg**	**09 59 45.2**	**-1.1**
	953nm,0.6s						
ASSB	**Assisi San Ben**	**0.90**	**323**	Pg	**Pg**	**09 59 46.2**	**-0.6**
	527nm,0.6s						
ASSB	**Assisi San Ben**	**0.90**	**323**	Pg	**Pg**	**09 59 46.2**	**-0.6**
	527nm,0.6s						
MIDA	**Miranda**	**0.94**	**137**	Pg	**Pg**	**09 59 46.2**	**-1.5**
	564nm,0.6s						
MIDA	**Miranda**	**0.94**	**137**	Pg	**Pg**	**09 59 46.2**	**-1.5**
	564nm,0.6s						
CING	**Cingoli**	**1.06**	**352**	Pg	**Pb**	**09 59 48.8**	**-1.1**
	636nm,0.8s						
CING	**Cingoli**	**1.06**	**352**	Pg	**Pb**	**09 59 48.8**	**-1.1**
	636nm,0.8s						
MGAB	**Montegabbione**	**1.11**	**302**	Pg	**Pb**	**09 59 50.4**	**-0.4**
	1µm,0.5s						
MGAB	**Montegabbione**	**1.11**	**302**	Pg	**Pb**	**09 59 50.4**	**-0.4**
	1µm,0.5s						
MURB	**Monte Urbino**	**1.13**	**326**	Pg	**Pb**	**09 59 50.3**	**-0.9**
	1µm,0.4s						
MURB	**Monte Urbino**	**1.13**	**326**	Pg	**Pb**	**09 59 50.3**	**-0.9**
	1µm,0.4s						
ARVD	**Arcevia**	**1.22**	**344**	Pg	**Pn**	**09 59 51.6**	**-0.9**
	297nm,0.7s						
ARVD	**Arcevia**	**1.22**	**344**	Pg	**Pn**	**09 59 51.6**	**-0.9**
	297nm,0.7s						
MS1	**Monte Sant'Ang**	**2.00**	**107**	*e*Pn	**Pg**	**10 00 07.5**	**-0.4**
CDT	**Castel del Mon**	**2.49**	**119**	*e*Pn	**Pg**	**10 00 16.0**	**-1.3**
SKDS	**Skadanscina**	**3.25**	**8**	*i* Pn	**Pn**	**10 00 21.8**	**+1.3**
SKDS				*i* Sn	**Sn**	**10 01 01.7**	**+2.6**
SKDS	**Skadanscina**	**3.25**	**8**	*i* Pn	**Pn**	**10 00 21.8**	**+1.3**
SKDS				*i* Sn	**Sn**	**10 01 01.7**	**+2.6**
BOJS	**Bojanci**	**3.45**	**22**	*i* Pn	**Pb**	**10 00 27.5**	**-3.1**
BOJS				*i* Sn	**Sn**	**10 01 07.9**	**+3.9**
BOJS	**Bojanci**	**3.45**	**22**	*i* Pn	**Pb**	**10 00 27.5**	**-3.1**
BOJS				*i* Sn	**Sn**	**10 01 07.9**	**+3.9**
KHC	**Kasperske Hory**	**6.80**	**1**	*e*PN	**Pn**	**10 01 10.0**	**+0.7**
KHC				*e*SN	**Sn**	**10 02 25.5**	**-1.3**

*ISCJB **06** 10:04:46.2±0.3, 42°.36N±0°.02×13°.34E±0°.03, h12km±2km, mb3.4/1, Error ellipse: s-maj=3.5km s-min=3.2km az=145.7*
*CSEM **06** 10:04:46.5±0.1, 42°.36N×13°.33E, h5km, ML3.1/7, Error ellipse: s-maj=2.8km s-min=2.6km az=45.0*
*ROM **06** 10:04:46.2±0.1, 42°.36N×13°.35E, h9km±1km, Ml3.2/9, Error ellipse: s-maj=1.4km s-min=1.3km az=110.0*
*IDC **06** 10:04:47.7±1.9, 42°.53N×13°.37E, h0km, mb3.3/1, mb1 3.5/5, mb1mx3.3/30, mbtmp3.3/5, ML3.3/4, MS3.3/1, Ms1 3.3/1, ms1mx2.1/29, Error ellipse: s-maj=25.2km s-min=17.8km az=68.0*
*LDG **06** 10:04:49.8±0.3, 42°.34N×13°.08E, h2km, Ml3.1/7, Error ellipse: s-maj=11.2km s-min=5.0km az=35.0*
ISC 06 10:04:46.7±0.8**, 42°.37N**±0°.02×**13°.31E**±0°.02**, h10**km±4km**, n95,** σ**1.s46**/133**, 2C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**100**⇓	*i*Pg	**Pg**	**10 04 48.5**	**-0.6**
AQU				Sg	**Sg**	**10 04 49.9**	**-0.9**
AQU	**L'Aquila**	**0.07**	**100**⇓	*i*Pg	**Pg**	**10 04 48.5**	**-0.6**
AQU				Sg	**Sg**	**10 04 49.9**	**-0.9**
FIAM	**Fiamignano**	**0.17**	**236**	Pg	**Pg**	**10 04 50.9**	**+0.3**
FIAM				Sg	**Sg**	**10 04 54.2**	**+0.9**
FIAM	**Fiamignano**	**0.17**	**236**	Pg	**Pg**	**10 04 50.9**	**+0.3**
FIAM				Sg	**Sg**	**10 04 54.2**	**+0.9**
CAMP	**Campotosto**	**0.18**	**23**⇑	*i*Pg	**Pg**	**10 04 50.5**	**-0.3**
CAMP				Sg	**Sg**	**10 04 53.5**	**-0.1**
CAMP	**Campotosto**	**0.18**	**23**⇑	*i*Pg	**Pg**	**10 04 50.5**	**-0.3**
CAMP				Sg	**Sg**	**10 04 53.5**	**-0.1**
FAGN	**Fagnano**	**0.23**	**116**	Pg	**Pg**	**10 04 51.1**	**-0.3**
FAGN				Sg	**Sg**	**10 04 54.8**	**+0.2**
FAGN	**Fagnano**	**0.23**	**116**	Pg	**Pg**	**10 04 51.1**	**-0.3**
FAGN				Sg	**Sg**	**10 04 54.8**	**+0.2**
TERO	**Teramo**	**0.34**	**40**	Pg	**Pg**	**10 04 52.6**	**-0.9**
TERO				Sg	**Sg**	**10 04 58.6**	**+0.6**
TERO	**Teramo**	**0.34**	**40**	Pg	**Pg**	**10 04 52.6**	**-0.9**
TERO				Sg	**Sg**	**10 04 58.6**	**+0.6**
PTQR	**Pietraquaria**	**0.35**	**169**	Pg	**Pg**	**10 04 53.5**	**-0.2**
PTQR	**Pietraquaria**	**0.35**	**169**	Pg	**Pg**	**10 04 53.5**	**-0.2**
VCEL	**Villa Celiera**	**0.39**	**86**	Pg	**Pg**	**10 04 54.2**	**-0.4**
VCEL	**Villa Celiera**	**0.39**	**86**	Pg	**Pg**	**10 04 54.2**	**-0.4**
CERT	**Cerreto**	**0.48**	**211**	Pg	**Pg**	**10 04 55.8**	**-0.4**
CERT				Sg	**Sg**	**10 05 03.2**	**+0.6**
	4µm,0.4s						
CERT	**Cerreto**	**0.48**	**211**	Pg	**Pg**	**10 04 55.8**	**-0.4**
CERT				Sg	**Sg**	**10 05 03.2**	**+0.6**
	4µm,0.4s						
NRCA	**Norcia**	**0.49**	**343**	Pg	**Pg**	**10 04 56.4**	**+0.1**
NRCA				Sg	**Sb**	**10 05 04.3**	**-0.5**
NRCA	**Norcia**	**0.49**	**343**	Pg	**Pg**	**10 04 56.4**	**+0.1**
NRCA				Sg	**Sb**	**10 05 04.3**	**-0.5**
MTCE	**Montecelio**	**0.54**	**231**	Pg	**Pg**	**10 04 57.1**	**-0.2**
	792nm,0.5s						
MTCE	**Montecelio**	**0.54**	**231**	Pg	**Pg**	**10 04 57.1**	**-0.2**
	792nm,0.5s						
VVLD	**Villa Vallelon**	**0.55**	**155**	Pg	**Pg**	**10 04 57.3**	**-0.1**
VVLD	**Villa Vallelon**	**0.55**	**155**	Pg	**Pg**	**10 04 57.3**	**-0.1**
INTR	**Introdacqua**	**0.56**	**129**	Pg	**Pg**	**10 04 57.1**	**-0.6**
INTR	**Introdacqua**	**0.56**	**129**	Pg	**Pg**	**10 04 57.1**	**-0.6**
OFFI	**Offida**	**0.63**	**26**	Pg	**Pg**	**10 04 58.9**	**-0.1**
	4µm,0.5s						
OFFI	**Offida**	**0.63**	**26**	Pg	**Pg**	**10 04 58.9**	**-0.1**

	4μm,0.5s						
FDMO	Fiordimonte	0.69	346	Pg	Pg	10 04 59.3	-0.8
	681nm,0.2s						
FDMO	Fiordimonte	0.69	346	Pg	Pg	10 04 59.3	-0.8
	681nm,0.2s						
LPEL	Lama dei Pelig	0.72	116	Pg	Pg	10 04 59.5	-1.2
LPEL				Sg	Sg	10 05 10.1	0.0
LPEL	Lama dei Pelig	0.72	116	Pg	Pg	10 04 59.5	-1.2
LPEL				Sg	Sg	10 05 10.1	0.0
CAFR	Castel Frentan	0.78	100	Pg	Pg	10 05 00.8	-1.0
CAFR	Castel Frentan	0.78	100	Pg	Pg	10 05 00.8	-1.0
GIUL	Giuliano Di Ro	0.81	183	Pg	Pg	10 05 02.2	-0.1
	991nm,0.8s						
GIUL	Giuliano Di Ro	0.81	183	Pg	Pg	10 05 02.2	-0.1
	991nm,0.8s						
ASSB	Assisi San Ben	0.83	325	Pg	Pg	10 05 02.4	-0.4
	847nm,0.5s						
ASSB	Assisi San Ben	0.83	325	Pg	Pg	10 05 02.4	-0.4
	847nm,0.5s						
MIDA	Miranda	1.01	136	Pg	Pg	10 05 03.6	-2.5
MIDA	Miranda	1.01	136	Pg	Pg	10 05 03.6	-2.5
CING	Cingoli	1.01	355	Pg	Pg	10 05 05.6	-0.7
	716nm,0.5s						
CING	Cingoli	1.01	355	Pg	Pg	10 05 05.6	-0.7
	716nm,0.5s						
MGAB	Montegabbione	1.04	302	Pn	Pb	10 05 06.9	+0.1
MGAB	Montegabbione	1.04	302	Pn	Pb	10 05 06.9	+0.1
LATE	Laterza	1.14	283	Pn	Pn	10 05 09.0	+0.2
	77nm,0.6s						
LATE	Laterza	1.14	283	Pn	Pn	10 05 09.0	+0.2
	77nm,0.6s						
SACS	San Casciano d	1.14	296	Pn	Pg	10 05 08.8	+0.1
AOI	Ancona	1.20	10	Pn	Pn	10 05 09.0	-0.6
	674nm,0.6s						
AOI	Ancona	1.20	10	Pn	Pn	10 05 09.0	-0.6
	674nm,0.6s						
BADI	Badiali	1.39	326	Pn	Pg	10 05 13.5	+0.1
BADI	Badiali	1.39	326	Pn	Pg	10 05 13.5	+0.1
ARCI	Arcidosso	1.44	290	Pn	Pg	10 05 14.2	-0.2
ARCI	Arcidosso	1.44	290	Pn	Pg	10 05 14.2	-0.2
MAON	Monte Argentar	1.62	273	Pn	Pn	10 05 15.8	+0.5
MAON	Monte Argentar	1.62	273	Pn	Pn	10 05 15.8	+0.5
CASP	Castiglione de	1.86	284	Pn	Pn	10 05 19.1	+0.5
CASP	Castiglione de	1.86	284	Pn	Pn	10 05 19.1	+0.5
MS1	Monte Sant'Ang	2.07	108	ePn	Pb	10 05 25.1	+0.7
NVLJ	Novalja	2.47	27	ePn	Pn	10 05 27.6	+0.6
NVLJ				Sn	Sn	10 05 57.0	-0.2
NVLJ	Novalja	2.47	27	ePn	Pn	10 05 27.6	+0.6
NVLJ				Sn	Sn	10 05 57.0	-0.2
CDT	Castel del Mon	2.56	119	ePn	Pg	10 05 35.4	-0.4
MAIM	Mastiano	2.58	308	P	Pn	10 05 30.0	+1.5
PGF	Pioggiola	3.20	275	ePn	Pn	10 05 37.9	+0.8
PGF				eSn	Sn	10 06 16.2	+0.9
	12nm,0.6s						
PGF	Pioggiola	3.20	275	ePn	Pn	10 05 37.9	+0.8
PGF				eSn	Sn	10 06 16.2	+0.9
	5.8nm,0.6s						
SKDS	Skadanscina	3.22	9	i Pn	Pn	10 05 37.6	+0.2
SKDS				i Sn	Sn	10 06 17.0	+1.3
SKDS	Skadanscina	3.22	9	i Pn	Pn	10 05 37.6	+0.2
SKDS				i Sn	Sn	10 06 17.0	+1.3
STON	Ston	3.28	80	i Pn	Pn	10 05 39.6	+1.5
STON				Sn	Sn	10 06 16.9	-0.2
STON	Ston	3.28	80	i Pn	Pn	10 05 39.6	+1.5
STON				Sn	Sn	10 06 16.9	-0.2
SC2M	Scurtabo	3.43	308	P	Pn	10 05 42.0	+1.8
BOJS	Bojanci	3.44	23	i Pn	Pn	10 05 42.8	+2.5
BOJS				i Sn	Sn	10 06 23.9	+2.9
BOJS	Bojanci	3.44	23	i Pn	Pn	10 05 42.8	+2.5
BOJS				i Sn	Sn	10 06 23.9	+2.9
VOY	Vojsko	3.69	6	ePn	Pn	10 05 43.4	-0.5
VOY				e		10 05 45.9	
VOY	Vojsko	3.69	6	ePn	Pn	10 05 43.4	-0.5
SBF	Sospel	4.55	291	ePn	Pn	10 05 56.3	+0.6
SBF				eSn	Sn	10 06 44.6	-4.1
	9.7nm,0.6s						
SBF	Sospel	4.55	291	ePn	Pn	10 05 56.3	+0.6
SBF				eSn	Sn	10 06 44.6	-4.1
	4.8nm,0.6s						
FRF	La Foret Royal	5.04	286	ePn	Pn	10 06 02.5	+0.3
FRF				eSn	Sn	10 06 57.2	-3.2
	3.3nm,0.5s						
FRF	La Foret Royal	5.04	286	ePn	Pn	10 06 02.5	+0.3
FRF				eSn	Sn	10 06 57.2	-3.2
	1.6nm,0.5s						
DAVOX	Davos/Dischmat	5.05	332	Pn	Pn	10 06 04.1	+1.5
	1.3nm,0.3s,baz=158,slow=18,SNR=7.8						
DAVOX				Sn	Sn	10 07 04.4	+3.4
	1.0nm,0.3s,baz=319,slow=20,SNR=2.8						
LMR	La Mourre	5.09	283	ePn	Pn	10 06 03.0	0.0
LMR				eSn	Sn	10 06 59.1	-2.8
	3.9nm,0.6s						
LMR	La Mourre	5.09	283	ePn	Pn	10 06 03.0	0.0
LMR				eSn	Sn	10 06 59.1	-2.8
	2.0nm,0.6s						
MBDF	Montbardon	5.31	299	eP	Pn	10 06 08.3	+2.2
MBDF	Montbardon	5.31	299	eP	Pn	10 06 08.3	+2.2
SMRF	Simiane la Rot	5.88	288	eP	Pn	10 06 15.8	+1.9
SMRF	Simiane la Rot	5.88	288	eP	Pn	10 06 15.8	+1.9
GERES	GERESS Array B	6.49	2	Pn	Pn	10 06 22.2	0.0
	0.4nm,0.3s,baz=189,slow=12,SNR=5.2						
GERES				Sn	Sn	10 07 35.4	-1.0
	0.9nm,0.3s,baz=182,slow=24,SNR=7.9						
GERES				Lg	Lg	10 08 15.6	
	baz=171,slow=31,SNR=1.7						
KHC	Kasperske Hory	6.77	1	ePN	Pn	10 06 27.3	+1.2
KHC				eSN	Sn	10 07 41.9	-1.3
KHC	Kasperske Hory	6.77	1	Pn	Pn	10 06 27.3	+1.2
KHC				Sn	Sn	10 07 41.9	-1.3
HINF	Hinteralfeld	7.11	322	ePn	Pn	10 06 30.3	-0.5
HINF				eSn	Sn	10 07 47.0	-4.6
	4.3nm,0.4s						
HINF	Hinteralfeld	7.11	322	ePn	Pn	10 06 30.3	-0.5
HINF				eSn	Sn	10 07 47.0	-4.6
	2.2nm,0.4s						
KEST	Kesra	7.31	206	Pn	Pn	10 06 38.8	+5.3
	0.4nm,0.3s,baz=324,slow=8.2,SNR=7.2						
CDF	Champ du Feu	7.39	327	ePn	Pn	10 06 34.4	-0.2
CDF				eSn	Sn	10 07 54.2	-4.3
	4.5nm,0.4s						
CDF	Champ du Feu	7.39	327	ePn	Pn	10 06 34.4	-0.2
CDF				eSn	Sn	10 07 54.2	-4.3
	2.2nm,0.4s						
HAU	Haudompre	7.48	321	ePn	Pn	10 06 36.0	+0.1
HAU				eSn	Sn	10 07 54.4	-6.3
	6.0nm,0.4s						
HAU	Haudompre	7.48	321	ePn	Pn	10 06 36.0	+0.1
MLR	Muntele Rosu	9.64	67	Pn	Pn	10 07 07.7	+2.3
	0.1nm,0.3s,baz=243,slow=18,SNR=2.8						
HFS	Hagfors	17.80	1	LR	LR	10 16 25.1	
	comp=Z,103nm,21.9s,baz=197,slow=40						
MKAR	Makanchi Array	47.90	60	P	P	10 13 25.4	+0.5
	0.2nm,0.5s,baz=294,slow=6.2,SNR=5.1						

WEL 06 10:07:32.5±0.3, 38°.67S×178°.49E, h31km±1km, ML3.7/6, 3C-1D, Error ellipse: s-maj=2.9km s-min=1.0km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.29	309	⇑P*	Pb	10 07 39.3	-0.5
CNGZ				S*	Sn	10 07 45.5	-0.3
PRGZ	Paritu Road	0.54	241	⇑P*	Pb	10 07 43.3	-0.3
PRGZ				S*	Sb	10 07 51.7	+0.4
PUZ	Puketiti	0.62	343	⇑PN	Pb	10 07 44.6	-0.3
PUZ				S*	Sn	10 07 54.4	+0.3
MHGZ	Mahia Peninsul	0.67	223	PN	Pb	10 07 45.3	-0.4
MHGZ				SN	Sb	10 07 54.8	+0.1
KNZ	Kokohu	0.73	241	⇓PN	Pn	10 07 45.8	-0.9
KNZ				SN	Sn	10 07 56.7	-0.1
MWZ	Matawai	0.82	293	PN	Pn	10 07 46.9	-1.1
MWZ				SN	Sb	10 07 58.5	-0.7
MXZ	Matakaoa Point	1.11	352	PN	Pb	10 07 52.6	-0.4
RAHZ	Arahi	1.12	257	PN	Pn	10 07 51.7	-0.4
URZ	Urewera	1.16	290	PN	Pn	10 07 52.2	-0.3
NMHZ	Naumai	1.38	251	PN	Pn	10 07 55.6	-0.1
CKHZ	Cape Kidnapper	1.48	227	PN	Pn	10 07 56.5	-0.5
EDRZ	Edgecumbe	1.48	292	PN	Pn	10 07 57.4	+0.2
EDRZ				SN	Sn	10 08 12.5	-3.1
MCHZ	McNeill Hill	1.60	240	PN	Pn	10 07 58.3	-0.3
TARZ	Mount Tarawera	1.61	285	PN	Pn	10 07 59.7	+0.7
BKZ	Black Stump Fm	1.64	252	PN	Pn	10 07 58.7	-0.5
KAHZ	Kahuranaki	1.69	227	PN	Pn	10 07 59.0	-0.9
OPRZ	Ohinepanea	1.73	298	PN	Pn	10 07 59.7	-0.7
PXZ	Pawanui	1.86	222	PN	Pn	10 08 00.5	-1.6
BHHZ	Black Hill Sta	2.06	246	PN	Pn	10 08 04.4	-0.7
WPHZ	Waipukurau	2.12	228	PN	Pn	10 08 04.4	-1.4
PRHZ	Porangahau	2.15	221	PN	Pn	10 08 05.0	-1.2
MOVZ	Moawhango	2.26	250	PN	Pn	10 08 07.9	+0.2
WNVZ	Wahianoa	2.35	253	PN	Pn	10 08 08.9	-0.2
WPVZ	Whakapapa	2.36	256	PN	Pn	10 08 09.3	0.0
FWVZ	Far West T-bar	2.36	255	PN	Pn	10 08 09.2	-0.3
TSZ	Takapari Road	2.40	234	PN	Pn	10 08 08.0	-1.7
BFZ	Birch Farm	2.65	220	PN	Pn	10 08 10.7	-2.4
MRZ	Mangatainoka R	3.00	227	PN	Pn	10 08 16.0	-2.0

*STR **06** 10:12:23.7±0.0, 41°.79N×14°.58E, h10km, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **06** 10:12:35.9±0.2, 42°.32N×13°.36E, h2km, Ml3.4/7, Error ellipse: s-maj=6.6km s-min=3.6km az=46.0*
*IDC **06** 10:12:35.7±1.0, 42°.44N×13°.20E, h0km, mb3.6/9, mb1 3.8/12, mb1mx3.7/30, mbtmp3.6/12, ML3.5/3, Error ellipse: s-maj=18.8km s-min=14.5km az=86.0*
*ROM **06** 10:12:35.7±0.1, 42°.32N×13°.38E, h10km, Ml3.6/31, Error ellipse: s-maj=1.0km s-min=0.9km az=91.0*
*ISCJB **06** 10:12:35.8±0.2, 42°.33N±0°.01×13°.35E±0°.02, h10km±1km, mb3.6/9, Error ellipse: s-maj=2.5km s-min=2.0km az=27.5*
*PDG **06** 10:12:36.6±0.3, 42°.37N×13°.36E, h11km, ML3.7/6, Error ellipse: s-maj=0.8km s-min=1.7km az=0.0*
*CSEM **06** 10:12:36.1±0.1, 42°.33N×13°.35E, h2km, ML3.4/7, Error ellipse: s-maj=2.1km s-min=1.6km az=36.0*
ISC 06 10:12:36.7±0.7, 42°.33N±0°.01×13°.38E±0°.02, h9km±4km, n197, σ1§29/252, mb3.7/9, 27C-12D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	36	⇓iPg	Pg	10 12 38.1	-0.4
AQU				Sg	Sg	10 12 39.5	-0.3
	106μm,0.7s						
AQU	L'Aquila	0.03	36	⇓iPg	Pg	10 12 38.1	-0.4
AQU				Sg	Sg	10 12 39.5	-0.3
	106μm,0.7s						
FAGN	Fagnano	0.17	111	⇑iPg	Pg	10 12 39.8	-0.5
FAGN				Sg	Sg	10 12 42.9	+0.2
FAGN	Fagnano	0.17	111	⇑iPg	Pg	10 12 39.8	-0.5
FAGN				Sg	Sg	10 12 42.9	+0.2
FIAM	Fiamignano	0.20	253	⇑iPg	Pg	10 12 40.8	-0.1
FIAM				Sg	Sg	10 12 44.4	+0.7
FIAM	Fiamignano	0.20	253	⇑iPg	Pg	10 12 40.8	-0.1
CAMP	Campotosto	0.21	7	⇑iPg	Pg	10 12 40.7	-0.4
CAMP				Sg	Sg	10 12 44.3	+0.2
CAMP	Campotosto	0.21	7	⇑iPg	Pg	10 12 40.7	-0.4
CAMP				Sg	Sg	10 12 44.3	+0.2
PTQR	Pietraquaria	0.30	176	⇑iPg	Pg	10 12 42.2	-0.6
PTQR	Pietraquaria	0.30	176	⇑iPg	Pg	10 12 42.2	-0.6
TERO	Teramo	0.34	30	Pg	Pg	10 12 42.5	-1.0
TERO				Sg	Sg	10 12 48.7	+0.7
TERO	Teramo	0.34	30	Pg	Pg	10 12 42.5	-1.0
TERO				Sg	Sg	10 12 48.7	+0.7
VCEL	Villa Celiera	0.35	79	Pg	Pg	10 12 43.1	-0.6
VCEL	Villa Celiera	0.35	79	Pg	Pg	10 12 43.1	-0.6
CERT	Cerreto	0.48	218	⇑iPg	Pg	10 12 45.3	-0.7
CERT				Sg	Sg	10 12 52.8	+0.5
CERT	Cerreto	0.48	218	⇑iPg	Pg	10 12 45.3	-0.7
CERT				Sg	Sg	10 12 52.8	+0.5
VVLD	Villa Vallelon	0.49	158	Pg	Pg	10 12 45.2	-1.1
VVLD				Sg	Sg	10 12 52.1	-0.6
VVLD	Villa Vallelon	0.49	158	Pg	Pg	10 12 45.2	-1.1
VVLD				Sg	Sg	10 12 52.1	-0.6
INTR	Introdacqua	0.50	128	Pg	Pg	10 12 45.6	-0.9
INTR				Sg	Sg	10 12 53.7	+0.6
INTR	Introdacqua	0.50	128	Pg	Pg	10 12 45.6	-0.9
INTR				Sg	Sg	10 12 53.7	+0.6
GAVE	Gavelli	0.51	316	Pg	Pg	10 12 47.0	+0.4
GAVE	Gavelli	0.51	316	Pg	Pg	10 12 47.0	+0.4
MNS	Montasola	0.52	277	⇑iPg	Pg	10 12 45.9	-0.9
MNS	Montasola	0.52	277	⇑iPg	Pg	10 12 45.9	-0.9
GUAR	Guarcino	0.53	185	Pg	Pg	10 12 46.0	-1.1
GUAR	Guarcino	0.53	185	Pg	Pg	10 12 46.0	-1.1
NRCA	Norcia	0.54	339	Pg	Pg	10 12 46.4	-0.9
NRCA				Sg	Sg	10 12 55.2	+0.8
NRCA	Norcia	0.54	339	Pg	Pg	10 12 46.4	-0.9
NRCA				Sg	Sg	10 12 55.2	+0.8
MTCE	Montecelio	0.56	237	⇑iPg	Pg	10 12 46.8	-0.8
MTCE				Sg	Sg	10 12 55.3	+0.4
	3μm,0.6s						
MTCE	Montecelio	0.56	237	⇑iPg	Pg	10 12 46.8	-0.8
MTCE				Sg	Sg	10 12 55.3	+0.4
	3μm,0.6s						
TRTR	Tortoreto Alta	0.62	39	Pg	Pg	10 12 49.0	+0.2
	23μm,0.7s						
TRTR	Tortoreto Alta	0.62	39	Pg	Pg	10 12 49.0	+0.2
	23μm,0.7s						
OFFI	Offida	0.65	21	⇑iPg	Pg	10 12 49.0	-0.3
	22μm,0.6s						
OFFI	Offida	0.65	21	⇑iPg	Pg	10 12 49.0	-0.3
	22μm,0.6s						
POFI	Posta Fibreno	0.66	157	Pg	Pg	10 12 48.6	-0.8
	3μm,0.5s						
POFI	Posta Fibreno	0.66	157	Pg	Pg	10 12 48.6	-0.8
	3μm,0.5s						
LPEL	Lama dei Pelig	0.66	115	Pg	Pg	10 12 48.1	-1.4
LPEL				Sg	Sg	10 12 58.1	-0.1
LPEL	Lama dei Pelig	0.66	115	Pg	Pg	10 12 48.1	-1.4
LPEL				Sg	Sg	10 12 58.1	-0.1
SDI	San Donato	0.70	152	Pg	Pg	10 12 49.0	-1.2
SDI	San Donato	0.70	152	Pg	Pg	10 12 49.0	-1.2
RMP	Rome, Mte Porz	0.72	224	Pg	Pg	10 12 49.5	-1.1
	4μm,0.4s						
RMP	Rome, Mte Porz	0.72	224	Pg	Pg	10 12 49.5	-1.1
	4μm,0.4s						
CAFR	Castel Frentan	0.73	98	⇑iPg	Pg	10 12 49.8	-0.9
	5μm,0.7s						
CAFR	Castel Frentan	0.73	98	⇑iPg	Pg	10 12 49.8	-0.9
	5μm,0.7s						
FDMO	Fiordimonte	0.74	343	Pg	Pg	10 12 49.8	-1.2
	2μm,0.7s						
FDMO	Fiordimonte	0.74	343	Pg	Pg	10 12 49.8	-1.2
	2μm,0.7s						
CESI	CESI - Serrava	0.76	333	Pg	Pg	10 12 50.2	-1.2
	1μm,0.7s						
CESI	CESI - Serrava	0.76	333	Pg	Pg	10 12 50.2	-1.2
	1μm,0.7s						
GIUL	Giuliano Di Ro	0.77	187	Pg	Pg	10 12 50.2	-1.4
GIUL	Giuliano Di Ro	0.77	187	Pg	Pg	10 12 50.2	-1.4
CERA	Filignano	0.87	146	Pg	Pg	10 12 51.7	-1.8
CERA	Filignano	0.87	146	Pg	Pg	10 12 51.7	-1.8
ASSB	Assisi San Ben	0.89	324	Pg	Pg	10 12 52.6	-1.2
	2μm,0.7s						
ASSB	Assisi San Ben	0.89	324	Pg	Pg	10 12 52.6	-1.2
	2μm,0.7s						
TOLF	Tolfa	1.05	256	Pg	Pg	10 12 55.5	-1.5
	963nm,0.7s						
TOLF	Tolfa	1.05	256	Pg	Pg	10 12 55.5	-1.5
	963nm,0.7s						
CING	Cingoli	1.06	353	Pg	Pg	10 12 55.2	-1.8
	1μm,0.5s						
CING	Cingoli	1.06	353	Pg	Pg	10 12 55.2	-1.8
	1μm,0.5s						
MGAB	Montegabbione	1.10	303	Pg	Pb	10 12 57.1	-0.8
	2μm,1.0s						
MGAB	Montegabbione	1.10	303	Pg	Pb	10 12 57.1	-0.8
	2μm,1.0s						
VAGA	Valle Agricola	1.11	145	Pg	Pb	10 12 56.7	-1.5
	956nm,0.7s						
VAGA	Valle Agricola	1.11	145	Pg	Pb	10 12 56.7	-1.5
	956nm,0.7s						
MURB	Monte Urbino	1.13	327	Pg	Pb	10 12 57.0	-1.4
	4μm,0.3s						
MURB	Monte Urbino	1.13	327	Pg	Pb	10 12 57.0	-1.4
	4μm,0.3s						
ARVD	Arcevia	1.21	345	Pg	Pn	10 12 58.2	-1.7
	850nm,0.6s						
ARVD	Arcevia	1.21	345	Pg	Pn	10 12 58.2	-1.7
	850nm,0.6s						
AOI	Ancona	1.23	8	Pn	Pn	10 12 58.7	-1.5
	1μm,0.7s						
AOI	Ancona	1.23	8	Pn	Pn	10 12 58.7	-1.5
	1μm,0.7s						
MODR	Mondragone	1.24	162	Pn	Pn	10 12 59.6	-0.6
	189nm,0.6s						
MODR	Mondragone	1.24	162	Pn	Pn	10 12 59.6	-0.6
	189nm,0.6s						
PIEI	Pieia	1.36	333	Pn	Pn	10 13 01.1	-0.8
PIEI	Pieia	1.36	333	Pn	Pn	10 13 01.1	-0.8
CAFI	Castiglion Fio	1.44	315	Pn	Pn	10 13 03.0	0.0
	564nm,0.7s						
CAFI	Castiglion Fio	1.44	315	Pn	Pn	10 13 03.0	0.0
	564nm,0.7s						
BADI	Badiali	1.45	325	Pn	Pb	10 13 03.2	-0.6
	2μm,0.9s						
BADI	Badiali	1.45	325	Pn	Pb	10 13 03.2	-0.6
	2μm,0.9s						
ARCI	Arcidosso	1.50	291	Pn	Pb	10 13 04.1	-0.6
	440nm,1.5s						
ARCI	Arcidosso	1.50	291	Pn	Pb	10 13 04.1	-0.6
	440nm,1.5s						
PARC	Parchiule	1.56	328	Pn	Pb	10 13 05.1	-0.7
	991nm,0.8s						
PARC	Parchiule	1.56	328	Pn	Pb	10 13 05.1	-0.7
	991nm,0.8s						
MAON	Monte Argentar	1.67	274	Pn	Pn	10 13 05.4	-0.7
	205nm,0.7s						
MAON	Monte Argentar	1.67	274	Pn	Pn	10 13 05.4	-0.7
	205nm,0.7s						
SGRT	San Giovanni R	1.85	107	Pn	Pn	10 13 08.8	+0.1
	456nm,0.6s						
SGRT	San Giovanni R	1.85	107	Pn	Pn	10 13 08.8	+0.1
	456nm,0.6s						
ASQU	Asqua	1.87	322	Pn	Pn	10 13 08.5	-0.5
	408nm,1.0s						
ASQU	Asqua	1.87	322	Pn	Pn	10 13 08.5	-0.5
	408nm,1.0s						
SFI	Santa Sofia	1.93	325	Pn	Pn	10 13 09.6	-0.2
	333nm,0.9s						
SFI	Santa Sofia	1.93	325	Pn	Pn	10 13 09.6	-0.2
	333nm,0.9s						
MSAG	Monte S. Angel	1.99	107	Pn	Pn	10 13 11.2	+0.7
	898nm,0.6s						
MSAG	Monte S. Angel	1.99	107	Pn	Pn	10 13 11.2	+0.7
	898nm,0.6s						
MS1	Monte Sant'Ang	2.01	107	ePn	Pb	10 13 12.6	-0.9
CDRU	Civita di Ruta	2.34	141	Pn	Pn	10 13 16.1	+0.7
	80nm,1.0s						
CDRU	Civita di Ruta	2.34	141	Pn	Pn	10 13 16.1	+0.7
	80nm,1.0s						
NVLJ	Novalja	2.49	25	ePn	Pn	10 13 16.9	-0.4
NVLJ				Sn	Sn	10 13 47.4	-0.4
NVLJ	Novalja	2.49	25	ePn	Pn	10 13 16.9	-0.4
NVLJ				Sn	Sn	10 13 47.4	-0.4
CDT	Castel del Mon	2.50	119	ePn	Pn	10 13 18.2	+0.6
CDT				eSn	Sn	10 13 49.9	+1.7
AMUR	Altamura	2.81	119	Pn	Pn	10 13 22.6	+0.9
	107nm,0.5s						
AMUR	Altamura	2.81	119	Pn	Pn	10 13 22.6	+0.9
	107nm,0.5s						
BAI	Bari	2.89	114	ePn	Pn	10 13 24.4	+1.5
STON	Ston	3.24	79	ePn	Pn	10 13 27.9	+0.3
STON				Sn	Sn	10 14 05.6	-0.7
STON	Ston	3.24	79	ePn	Pn	10 13 27.9	+0.3
STON				Sn	Sn	10 14 05.6	-0.7
PGF	Pioggiola	3.25	275	ePn	Pn	10 13 28.1	+0.2
PGF				eSn	Sn	10 14 08.0	+1.3
	21nm,0.5s						
PGF	Pioggiola	3.25	275	ePn	Pn	10 13 28.1	+0.2
PGF				eSn	Sn	10 14 08.0	+1.3
	10nm,0.5s						
SKDS	Skadanscina	3.25	8	i Pn	Pn	10 13 27.9	0.0
SKDS	Skadanscina	3.25	8	i Pn	Pn	10 13 27.9	0.0
GBRS	Gornja Briga	3.37	17	i Pn	Pn	10 13 29.7	+0.2
SC2M	Scurtabo	3.49	308	P	Pn	10 13 31.3	+0.2
VOY	Vojsko	3.72	6	ePn	Pn	10 13 34.0	-0.4
VOY				eSn	Sn	10 14 18.5	+0.1
VOY	Vojsko	3.72	6	ePn	Pn	10 13 34.0	-0.4
VOY				eSn	Sn	10 14 18.5	+0.1
CGRP	Cima Grappa	3.73	343	Pn	Pn	10 13 33.8	-0.8
	167nm,0.5s						
CGRP	Cima Grappa	3.73	343	Pn	Pn	10 13 33.8	-0.8
	167nm,0.5s						
HCY	Herceg Novi	3.79	86	⇑iPn	Pn	10 13 36.4	+1.1
HCY				eSn	Sn	10 14 21.6	+1.6
HCY	Herceg Novi	3.79	86	⇑iPn	Pn	10 13 36.4	+1.1
HCY				eSn	Sn	10 14 21.6	+1.6
CRNS	Crni Vrh	3.81	9	i Pn	Pn	10 13 36.1	+0.5
BRY	Bratogost	3.85	80	⇓iPn	Pn	10 13 37.5	+1.2
BRY				eSn	Sn	10 14 23.3	+1.6
BRY	Bratogost	3.85	80	⇓iPn	Pn	10 13 37.5	+1.2
BRY				eSn	Sn	10 14 23.3	+1.6
CTI	Castel Tesino	3.92	342	Pn	Pn	10 13 37.6	+0.4
	71nm,0.3s						
CTI	Castel Tesino	3.92	342	Pn	Pn	10 13 37.6	+0.4
	71nm,0.3s						
BUM	Brajici-Budva	4.09	89	⇑iPn	Pn	10 13 40.9	+1.4
BUM				eSn	Sn	10 14 29.2	+1.7
BUM	Brajici-Budva	4.09	89	⇑iPn	Pn	10 13 40.9	+1.4
BUM				eSn	Sn	10 14 29.2	+1.7
UPM	Unac-Piva	4.17	76	⇓iPn	Pn	10 13 42.2	+1.6
UPM				eSn	Sn	10 14 31.0	+1.5
UPM	Unac-Piva	4.17	76	⇓iPn	Pn	10 13 42.2	+1.6
UPM				eSn	Sn	10 14 31.0	+1.5
NKY	Niksic	4.18	81	⇑iPn	Pn	10 13 42.2	+1.5
NKY				eSn	Sn	10 14 31.3	+1.6
NKY	Niksic	4.18	81	⇑iPn	Pn	10 13 42.2	+1.5
NKY				eSn	Sn	10 14 31.3	+1.6
OBKA	Obir	4.27	11	i Pn	Pn	10 13 42.2	+0.3
	SNR=12						
OBKA	Obir	4.27	11	Pn	Pn	10 13 42.2	+0.3
	SNR=12						
PDG	Podgorica	4.36	87	⇓iPn	Pn	10 13 44.5	+1.5
PDG				eSn	Sn	10 14 36.1	+2.2
TTG	Podgorica	4.36	87	⇓iPn	Pn	10 13 44.5	+1.5
TTG				eSn	Sn	10 14 36.1	+2.2
ULC	Ulcinj	4.38	93	⇑iPn	Pn	10 13 44.0	+0.6
ULC				eSn	Sn	10 14 36.4	+1.9
ULC	Ulcinj	4.38	93	⇑iPn	Pn	10 13 44.0	+0.6
ULC				eSn	Sn	10 14 36.4	+1.9
ABTA	Abfaltersbach	4.46	352	⇑iPn	Pn	10 13 45.3	+0.7
	SNR=20						
ABTA	Abfaltersbach	4.46	352	Pn	Pn	10 13 45.3	+0.7
	SNR=20						
PLE	Pljevlja	4.54	75	⇓iPn	Pn	10 13 46.8	+1.2
PLE				eSn	Sn	10 14 39.6	+1.1
PLE	Pljevlja	4.54	75	⇓iPn	Pn	10 13 46.8	+1.2
PLE				eSn	Sn	10 14 39.6	+1.1
SAOF	Saorge	4.57	293	P	Pn	10 13 46.8	+0.8
SAOF	Saorge	4.57	293	P	Pn	10 13 46.8	+0.8
SBF	Sospel	4.61	291	ePn	Pn	10 13 46.7	+0.1
SBF				eSn	Sn	10 14 35.0	-5.3
	21nm,0.7s						
SBF	Sospel	4.61	291	ePn	Pn	10 13 46.7	+0.1
REVF	Revere	4.62	290	P	Pn	10 13 47.4	+0.6
REVF	Revere	4.62	290	P	Pn	10 13 47.4	+0.6
AUTN	L'Aution	4.66	293	P	Pn	10 13 48.2	+0.8
AUTN	L'Aution	4.66	293	P	Pn	10 13 48.2	+0.8
KBA	Koelnbreinsper	4.75	360	⇓iPn	Pn	10 13 49.7	+1.1
	SNR=7.5						
KBA	Koelnbreinsper	4.75	360	Pn	Pn	10 13 49.7	+1.1
	SNR=7.5						
TOUF	Mont Tournerai	4.79	293	P	Pn	10 13 50.1	+0.9
TOUF	Mont Tournerai	4.79	293	P	Pn	10 13 50.1	+0.9
MVIF	Mont Vial	4.82	291	P	Pn	10 13 50.4	+0.9
MVIF	Mont Vial	4.82	291	P	Pn	10 13 50.4	+0.9
CALN	Calern	4.96	289	P	Pn	10 13 52.2	+0.7
CALN	Calern	4.96	289	P	Pn	10 13 52.2	+0.7
FRF	La Foret Royal	5.09	286	ePn	Pn	10 13 52.8	-0.3
FRF				eSn	Sn	10 14 47.3	-4.7
	4.0nm,0.4s						
FRF	La Foret Royal	5.09	286	ePn	Pn	10 13 52.8	-0.3
FRF				eSn	Sn	10 14 47.3	-4.7
	2.0nm,0.4s						
DAVOX	Davos/Dischmat	5.11	332	Pn	Pn	10 13 54.5	+1.0
	2.7nm,0.3s,baz=157,slow=19,SNR=15						
DAVOX				Sn	Sn	10 14 55.3	+2.7
	1.1nm,0.3s,baz=171,slow=22,SNR=5.3						
LMR	La Mourre	5.15	284	ePn	Pn	10 13 53.2	-0.7
LMR				eSn	Sn	10 14 48.7	-4.7
	5.8nm,0.5s						
LMR	La Mourre	5.15	284	ePn	Pn	10 13 53.2	-0.7
LMR				eSn	Sn	10 14 48.7	-4.7
	2.9nm,0.5s						
MBDF	Montbardon	5.37	299	eP	Pn	10 13 58.6	+1.5
MBDF	Montbardon	5.37	299	eP	Pn	10 13 58.6	+1.5
MOA	Molln	5.56	6	⇓iPn	Pn	10 14 00.6	+1.0
	SNR=9.3						
MOA	Molln	5.56	6	Pn	Pn	10 14 00.6	+1.0
	SNR=9.3						
LPG	La Plagne	5.74	306	eP	Pn	10 14 04.8	+2.5

LPG	La Plagne	5.74	306	eP	Pn	10 14 04.8	+2.5
SMRF	Simiane la Rot	5.94	289	eP	Pn	10 14 05.7	+0.9
SMRF	Simiane la Rot	5.94	289	eP	Pn	10 14 05.7	+0.9
GERES	GERESS Array B	6.52	2	Pn	Pn	10 14 11.7	-1.2
	1.1nm,0.3s,baz=174,slow=13,SNR=17						
GERES				Sn	Sn	10 15 24.8	-2.6
	3.0nm,0.3s,baz=182,slow=26,SNR=9.4						
GERES				Lg	Lg	10 16 04.3	
	baz=187,slow=24,SNR=2.1						
FELD	Feldberg im Sc	6.72	327	P	Pn	10 14 15.5	-0.2
CABF	La Chapelle	6.75	312	ePn	Pn	10 14 16.3	+0.4
CABF	La Chapelle	6.75	312	ePn	Pn	10 14 16.3	+0.4
VIVF	Saint-Julien-l	6.81	295	ePn	Pn	10 14 17.6	+0.9
VIVF	Saint-Julien-l	6.81	295	ePn	Pn	10 14 17.6	+0.9
KHC	Kasperske Hory	6.81	1	ePN	Pn	10 14 16.5	-0.2
KHC				ex	x	10 14 26.0	
KHC				eSN	Sn	10 15 30.6	-3.7
KHC	Kasperske Hory	6.81	1	Pn	Pn	10 14 16.5	-0.2
MOF	Molkenrain	7.07	323	P	Pn	10 14 20.2	-0.2
MOF	Molkenrain	7.07	323	P	Pn	10 14 20.2	-0.2
HINF	Hinteralfeld	7.17	322	ePn	Pn	10 14 20.5	-1.2
HINF				eSn	Sn	10 15 36.9	-6.4
	9.7nm,0.5s						
HINF	Hinteralfeld	7.17	322	ePn	Pn	10 14 20.5	-1.2
VYHS	Vyhne	7.26	30	ePN	Pn	10 14 24.2	+1.2
VYHS				eSN	Sn	10 15 44.2	-1.3
VYHS	Vyhne	7.26	30	ePn	Pn	10 14 24.2	+1.2
KEST	Kesra	7.29	207	Pn	Pn	10 14 27.1	+3.7
	2.3nm,0.3s,baz=316,slow=3.7,SNR=37						
KEST				Sn	Sn	10 15 48.6	+2.2
	0.3nm,0.3s,baz=180,slow=15,SNR=2.3						
ECH	Echery	7.34	325	P	Pn	10 14 23.4	-0.6
ECH	Echery	7.34	325	P	Pn	10 14 23.4	-0.6
CDF	Champ du Feu	7.45	327	ePn	Pn	10 14 24.3	-1.2
CDF				eSn	Sn	10 15 43.8	-6.3
	22nm,0.8s						
CDF	Champ du Feu	7.45	327	ePn	Pn	10 14 24.3	-1.2
HAU	Haudompre	7.54	321	ePn	Pn	10 14 25.8	-1.0
HAU				eSn	Sn	10 15 44.7	-7.7
	11nm,0.4s						
HAU	Haudompre	7.54	321	ePn	Pn	10 14 25.8	-1.0
CLL	Collm	8.99	359	eSn	Sn	10 16 23.0	-4.8
CLL				eSg	Sg	10 17 37.0	+12
MLR	Muntele Rosu	9.61	67	Pn	Pn	10 14 57.9	+2.7
	0.1nm,0.3s,baz=286,slow=15,SNR=6.7						
NOA	NORSAR Array B	18.79	357	P	P	10 16 55.6	-0.5
	0.1nm,0.3s,baz=175,slow=11,SNR=2.7						
FINES	FINESS Array B	20.62	17	P	P	10 17 15.4	-0.5
	5.2nm,0.7s,baz=178,slow=8.3,SNR=4.4						
KBZ	Khabaz	21.58	76	P	P	10 17 28.2	+1.7
	1.1nm,0.3s,baz=293,slow=8.0,SNR=5.4						
JOF	Joensuu	23.16	21	ep	P	10 17 41.9	-1.2
	2.0nm,0.8s						
TORD	Torodi Ar. Bea	30.79	203	P	P	10 18 53.1	+0.4
	0.6nm,0.6s,baz=18,slow=8.2,SNR=11						
BVAR	Borovoye Array	38.87	54	P	P	10 20 02.3	+0.2
	0.6nm,0.6s,baz=272,slow=5.6,SNR=3.0						
ZALV	Zalesovo Beam	47.11	50	P	P	10 21 08.8	0.0
	0.3nm,0.3s,baz=260,slow=8.5,SNR=3.2						
MKAR	Makanchi Array	47.88	60	P	P	10 21 15.1	+0.2
	0.4nm,0.5s,baz=280,slow=7.0,SNR=7.7						
SONM	Songino Array	62.00	50	P	P	10 22 57.9	+0.7
	0.8nm,0.9s,baz=288,slow=6.0,SNR=5.9						
YKA	Yellowknife Ar	67.52	337	P	P	10 23 32.7	0.0
	0.3nm,0.8s,baz=41,slow=5.6,SNR=7.8						
ILAR	Eielson Array	72.12	351	P	P	10 24 01.5	+0.5
	0.2nm,0.8s,baz=8.3,slow=6.8,SNR=3.7						

*DDA **06** 10:14:59.1, 37°.29N×37°.22E, h7km, MD3.1*

ISC 06 10:14:58.6±2.3**, 37°.2N**±0°.2×**37°.20E**±0°.05**, h5**km±14km**, n6, σ0ˢ96**/7**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.06	174	ePG	Pg	10 14 56.8	-3.3
GZT	Gaziantep	0.31	67	i P	Pg	10 15 05.1	+0.4
AYKD	Aykdinkavak	0.36	300	eP	Pg	10 15 05.4	-0.2
KMRS	Kahramanmaras	0.36	319	ePG	Pg	10 15 06.2	+0.5
KMRS				eSG	Sb	10 15 13.3	-0.3
KOZT	Kozan	1.12	283	ePN	Pg	10 15 20.1	-0.1
KOZT				eSN	Sn	10 15 38.1	+1.3
MALT	Malatya	1.45	42	ePN	Pn	10 15 24.9	-0.7

*ISCJB **06** 10:23:29.4±0.8, 9°.54S±0°.10×117°.67E±0°.05, h124km, mb3.2/2, Error ellipse: s-maj=14.3km s-min=6.5km az=12.6*

*DJA **06** 10:23:32.4±0.9, 9°S±11°×11°8E±°, h71km±28km, M4.5/8, mb4.9/1, MLv4.3/8*

*IDC **06** 10:23:33.5±1.7, 9°.51S×118°.95E, h0km, mb3.2/3, mb1 3.5/6, mb1mx3.4/22, mbtmp3.3/6, ML2.9/3, MS3.1/1, Ms1 3.1/1, ms1mx2.5/21, Error ellipse: s-maj=75.3km s-min=21.1km az=59.0*

ISC 06 10:23:29.5±1.2**, 9°.48S**±0°.10×**117°.73E**±0°.06**, h124**km**, n14, σ1ˢ72**/16**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHKI	Kahang-Kahang	2.38	298	P	Pn	10 24 07.5	-0.4
DNP	Denpasar	2.62	288	P	Pn	10 24 11.7	+0.8
DNP				S	Sn	10 24 43.5	+0.7
IGBI	Denpasar	2.64	284	P	Pn	10 24 10.5	-0.7
IGBI				S	Sn	10 24 41.0	-2.3
SRBI	Singaraja	2.85	299	P	Pn	10 24 14.2	+0.2
SRBI				S	Sn	10 24 48.3	0.0
GMJI	Gumukmas	4.41	285	P	Pn	10 24 34.8	+0.3
GMJI				S	Sn	10 25 25.4	+0.3
BLJI	Banyuglugur	4.44	293	P	Pn	10 24 35.6	+0.6
BKSI	Bulukumba	4.76	30	P	Pn	10 24 41.4	+2.0
KAPI	Kappang	4.87	24	Pn	Pn	10 24 42.4	+1.6
	0.6nm,0.3s,baz=203,slow=15,SNR=3.2						
KAPI				Sn	Sn	10 25 32.6	-3.6
	9.6nm,0.3s,baz=95,slow=23,SNR=14						
PWJI	Pagerwojo	6.04	283	P	Pn	10 24 58.9	+2.4
FITZ	Fitzroy Crossi	11.50	139	Pn	Pn	10 26 08.6	-1.4
	0.1nm,0.3s,baz=318,slow=15,SNR=3.5						
FITZ				Sn	Sn	10 28 06.1	-11
	0.1nm,0.3s,baz=161,slow=10,SNR=4.5						
FITZ				LR	LR	10 30 30.4	
	comp=Z,85nm,18.7s,baz=219,slow=39						
WRA	Warramunga Arr	19.11	125	P	Pn	10 27 46.9	+1.8
	0.0nm,0.3s,baz=301,slow=13,SNR=5.3						
ASAR	Alice Springs	20.92	134	P	Pn	10 28 08.6	+2.3
	0.6nm,0.9s,baz=311,slow=9.9,SNR=8.1						
SONM	Songino Array	57.94	351	P	P	10 33 30.4	+21
	0.1nm,0.3s,baz=166,slow=7.9,SNR=3.1						
MKAR	Makanchi Array	64.32	334	P	P	10 34 13.9	+22
	0.2nm,0.5s,baz=123,slow=7.1,SNR=3.4						

IDC 06 10:27:05.7±2.2**, 5°.27N**×**127°.56E, h0**km**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/23**, mbtmp3.4**/3**, Error ellipse: s-maj=158.3km s-min=25.7km az=66.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.93	165	P	P	10 32 39.7	-0.2
	1.2nm,0.5s,baz=345,slow=10,SNR=18						
ASAR	Alice Springs	29.42	168	P	P	10 33 11.5	+0.3
	0.2nm,0.7s,baz=351,slow=7.8,SNR=4.3						
MKAR	Makanchi Array	56.78	324	P	P	10 36 51.7	-0.1
	0.1nm,0.3s,baz=117,slow=8.4,SNR=3.9						

GUC 06 10:31:40.0±0.8**, 31°.53S**×**71°.63W, h18**km±4km**, MD3.9, ML3.3, 4C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.37	163⇑	iP	Pb	10 31 48.8	+0.6
CHNG				i S	Sb	10 31 54.1	+0.4
CHNG				AML	AML	10 31 54.9	
	comp=E,3μm,0.4s						
CMCH	Combarbala	0.64	57⇑	iP	Pb	10 31 52.1	-0.7
CMCH				i S	Sb	10 32 01.2	-0.3
CMCH				AML	AML	10 32 06.5	
	comp=E,4μm,0.6s						
IHA	Instituto Hidr	1.50	180	eP	Pn	10 32 05.3	-0.7
IHA				i S	Sn	10 32 24.9	-0.1
TLL	Tololo Astrono	1.53	28⇑	iP	Pn	10 32 06.6	-0.2
TLL				eS	Sn	10 32 26.8	+0.4
TLL				AML	AML	10 32 30.5	
	comp=E,482nm,0.5s						
ROCH	El Roble	1.54	160⇑	iP	Pn	10 32 06.8	0.0
ROCH				i S	Sn	10 32 26.6	+0.1
ROCH				AML	AML	10 32 32.4	
	comp=N,654nm,0.5s						
PEL	Peldehue	1.80	154	eP	Pn	10 32 10.9	+0.6
PEL				eS	Sb	10 32 33.9	-1.0
PEL				AML	AML	10 32 38.5	
	comp=E,632nm,0.2s						
CLCH	Cerro Calan	2.08	154	eP	Pn	10 32 15.2	+1.1
CLCH				eS	Sb	10 32 41.5	-1.5
CLCH				AML	AML	10 32 50.7	
	comp=E,419nm,0.3s						
LNV	Longovilo	2.43	176	eP	Pn	10 32 19.6	+0.7
CHCH	Chadas Angostu	2.54	161	eP	Pn	10 32 21.6	+1.1
CHCH				eS	Sn	10 32 53.2	+2.2
LMEL	Las Melosas	2.61	153	eP	Pn	10 32 22.9	+1.3
LMEL				i S	Sn	10 32 55.1	+2.2
LMEL				AML	AML	10 33 04.5	
	comp=N,213nm,1.0s						
CACH	El Canelo	2.73	162	eP	Pn	10 32 24.4	+1.3

*IDC **06** 10:32:50.7±5.0, 30°.96S×179°.97E, h385km±45km, mb3.3/4, mb1 3.5/5, mb1mx3.2/19, mbtmp3.4/5, Error ellipse: s-maj=53.9km s-min=26.5km az=25.0*

*ISCJB **06** 10:32:54.8±1.1, 31°.56S±0°.06×179°.9E±0°.2, h451km, mb3.6/4, Error ellipse: s-maj=23.9km s-min=8.2km az=175.9*

ISC 06 10:32:57.6±1.4**, 31°.67S**±0°.09×**179°.7E**±0°.2**, h451**km**, n38, σ1ˢ03**/49**, mb3.6**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	6.00	191	PN	P	10 34 32.0	+0.3
PUZ	Puketiti	6.50	190	PN	P	10 34 38.0	+1.0
PUZ				SN	S	10 35 55.4	-3.0
MWZ	Matawai	6.89	195	PN	P	10 34 41.2	+0.1
MWZ				SN	S	10 36 04.4	-1.5
CNGZ	Carnagh Statio	6.92	190	PN	P	10 34 42.0	+0.8
CNGZ				SN	S	10 36 05.2	-1.0
URZ	Urewera	6.92	197	PN	P	10 34 41.5	+0.2
URZ				SN	S	10 36 05.0	-1.3
URZ	Urewera	6.92	197	P	P	10 34 41.1	-0.1
	15nm,0.3s,baz=300,slow=2.0,SNR=20						
URZ				S	S	10 36 04.7	-1.5
	20nm,0.3s,baz=246,slow=23,SNR=12						
TARZ	Mount Tarawera	7.07	201	PN	P	10 34 45.2	+2.3
PRGZ	Paritu Road	7.39	191	PN	P	10 34 48.1	+1.7
PRGZ				SN	S	10 36 16.1	+0.5
KNZ	Kokohu	7.53	192	PN	P	10 34 47.2	-0.5
RAHZ	Arahi	7.55	196	PN	P	10 34 48.8	+0.8
NMHZ	Naumai	7.79	197	PN	P	10 34 51.9	+1.3
BKZ	Black Stump Fm	7.93	199	PN	P	10 34 51.8	-0.3
MCHZ	McNeill Hill	8.14	197	PN	P	10 34 55.6	+1.2
BHHZ	Black Hill Sta	8.35	200	PN	P	10 34 56.2	-0.5
KAHZ	Kahuranaki	8.43	195	PN	P	10 34 58.3	+0.8
PXZ	Pawanui	8.66	195	PN	P	10 34 59.5	-0.5
PNHZ	Pukenui	8.71	198	PN	P	10 35 00.8	+0.2
WPHZ	Waipukurau	8.79	197	PN	P	10 35 01.5	+0.1
TSZ	Takapari Road	8.91	199	PN	P	10 35 01.9	-0.8
PRHZ	Porangahau	8.94	195	PN	P	10 35 03.6	+0.6
DVHZ	Dannevirke	9.08	197	PN	P	10 35 04.2	-0.3
ANWZ	Angora Road	9.16	196	PN	P	10 35 06.1	+0.8
PRWZ	Pori Road	9.37	198	PN	P	10 35 08.6	+0.9
BFZ	Birch Farm	9.42	196	PN	P	10 35 08.0	-0.2
MRZ	Mangatainoka R	9.58	199	PN	P	10 35 09.5	-0.5
MRZ				SN	S	10 36 59.0	+0.1
HOWZ	Holdsworth Sta	9.82	199	PN	P	10 35 12.7	+0.1
OGWZ	Otaki Gorge	9.84	201	PN	P	10 35 13.3	+0.6
TMWZ	Te Maipa	9.91	197	PN	P	10 35 14.3	+0.7
KIW	Kapiti Island	9.96	202	PN	P	10 35 14.3	+0.2
KIW				SN	S	10 37 06.7	+0.2
MTW	Mount Morrison	10.06	199	PN	P	10 35 15.6	+0.4
MTW				SN	S	10 37 09.1	+0.6
CAW	Cannon Point	10.14	200	PN	P	10 35 15.5	-0.5
STKA	Stephens Creek	32.30	259	P	P	10 38 49.5	+1.6
	0.9nm,0.4s,baz=95,slow=11,SNR=4.4						
ASAR	Alice Springs	41.11	269	P	P	10 40 00.5	-0.5
	0.4nm,0.3s,baz=107,slow=7.4,SNR=23						
ASAR				PcP	PcP	10 41 50.0	-0.2
	0.5nm,0.9s,baz=115,slow=3.9,SNR=4.1						
WRA	Warramunga Arr	42.22	275	P	P	10 40 08.8	-0.9
	1.8nm,0.3s,baz=111,slow=8.1,SNR=127						
FITZ	Fitzroy Crossi	50.42	272	P	P	10 41 12.2	-0.3
	2.3nm,0.7s,baz=156,slow=11,SNR=7.6						
FINES	FINESS Array B	145.62	338	PKPbc	PKPdf	10 51 41.7	-1.1
	1.3nm,0.4s,baz=47,slow=2.7,SNR=11						
BRTR	Keskin Array B	151.44	296	PKPbc	PKPbc	10 51 59.4	-0.3
	0.4nm,0.6s,baz=66,slow=3.6,SNR=1.9						
BRTR				PKPab	PKPab	10 52 08.8	-1.2
	1.1nm,0.7s,baz=82,slow=2.9,SNR=3.3						
TORD	Torodi Ar. Bea	161.48	186	PKPab	PKPab	10 52 56.0	+2.5
	0.4nm,1.0s,baz=186,slow=5.6,SNR=2.7						

*ISCJB **06** 10:36:18.1±0.3, 42°.34N±0°.02×13°.38E±0°.03, h8km±2km, mb3.2/2, Error ellipse: s-maj=3.3km s-min=2.9km az=162.6*

*CSEM **06** 10:36:18.6±0.1, 42°.33N×13°.40E, h2km, ML4.2/7, Error ellipse: s-maj=2.5km s-min=2.1km az=63.0*

*ROM **06** 10:36:18.1±0.1, 42°.34N×13°.40E, h10km, Ml3.5/12, Error ellipse: s-maj=1.2km s-min=1.0km az=62.0*

*IDC **06** 10:36:19.2±1.4, 42°.37N×13°.34E, h0km, mb3.4/3, mb1 3.6/6, mb1mx3.4/29, mbtmp3.4/6, ML3.3/3, Error ellipse: s-maj=22.6km s-min=15.7km az=86.0*

*LDG **06** 10:36:20.6±0.2, 42°.29N×13°.35E, h2km, Ml3.0/7, Error ellipse: s-maj=6.8km s-min=4.2km az=44.0*

ISC 06 10:36:19.1±0.8**, 42°.34N**±0°.02×**13°.38E**±0°.02**, h8**km±4km**, n94, σ1ˢ44**/128**, 4C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.02	56⇓	iPg	Pg	10 36 20.2	-0.5
AQU				Sg	Sg	10 36 21.2	-0.5
	14μm,0.1s						
AQU	L'Aquila	0.02	56⇓	iPg	Pg	10 36 20.2	-0.5
AQU				Sg	Sg	10 36 21.2	-0.5
	14μm,0.1s						
FAGN	Fagnano	0.17	117	Pg	Pg	10 36 22.2	-0.5
FAGN				Sg	Sg	10 36 25.2	+0.1
	108μm,0.3s						
FAGN	Fagnano	0.17	117	Pg	Pg	10 36 22.2	-0.5
FAGN				Sg	Sg	10 36 25.2	+0.1
	108μm,0.3s						
CAMP	Campotosto	0.19	7	Pg	Pg	10 36 22.9	-0.2
CAMP				Sg	Sg	10 36 26.1	+0.2
CAMP	Campotosto	0.19	7	Pg	Pg	10 36 22.9	-0.2
CAMP				Sg	Sg	10 36 26.1	+0.2
FIAM	Fiamignano	0.21	249⇑	iPg	Pg	10 36 23.7	+0.4
FIAM	Fiamignano	0.21	249⇑	iPg	Pg	10 36 23.7	+0.4
PTQR	Pietraquaria	0.32	177	Pg	Pg	10 36 25.1	-0.4
PTQR	Pietraquaria	0.32	177	Pg	Pg	10 36 25.1	-0.4
TERO	Teramo	0.33	31	Pg	Pg	10 36 24.7	-0.9
TERO				Sg	Sg	10 36 29.5	-0.4
	3μm,0.6s						
TERO	Teramo	0.33	31	Pg	Pg	10 36 24.7	-0.9
TERO				Sg	Sg	10 36 29.5	-0.4
	3μm,0.6s						
VCEL	Villa Celiera	0.35	81⇑	ePg	Pg	10 36 25.1	-0.9
	15μm,0.4s						
VCEL	Villa Celiera	0.35	81⇑	ePg	Pg	10 36 25.1	-0.9
	15μm,0.4s						
CERT	Cerreto	0.49	217	Pg	Pg	10 36 28.2	-0.4
CERT				Sg	Sg	10 36 35.9	+0.8
	5μm,0.4s						
CERT	Cerreto	0.49	217	Pg	Pg	10 36 28.2	-0.4
CERT				Sg	Sg	10 36 35.9	+0.8
	5μm,0.4s						
VVLD	Villa Vallelon	0.51	159	Pg	Pg	10 36 28.0	-0.9
VVLD				Sg	Sg	10 36 34.7	-0.8
	3μm,0.5s						
VVLD	Villa Vallelon	0.51	159	Pg	Pg	10 36 28.0	-0.9
VVLD				Sg	Sg	10 36 34.7	-0.8
	3μm,0.5s						
INTR	Introdacqua	0.51	130	Pg	Pg	10 36 28.1	-0.9
INTR				Sg	Sg	10 36 35.9	+0.2
	6μm,0.3s						
INTR	Introdacqua	0.51	130	Pg	Pg	10 36 28.1	-0.9
INTR				Sg	Sg	10 36 35.9	+0.2
	6μm,0.3s						
MNS	Montasola	0.52	275	Pg	Pg	10 36 28.7	-0.5
	1μm,0.5s						
MNS	Montasola	0.52	275	Pg	Pg	10 36 28.7	-0.5
	1μm,0.5s						
NRCA	Norcia	0.53	338	Pg	Pg	10 36 28.7	-0.7
NRCA	Norcia	0.53	338	Pg	Pg	10 36 28.7	-0.7
GUAR	Guarcino	0.55	185	Pg	Pg	10 36 28.9	-0.8
	2μm,0.3s						
GUAR	Guarcino	0.55	185	Pg	Pg	10 36 28.9	-0.8
	2μm,0.3s						
MTCE	Montecelio	0.57	236	Pg	Pg	10 36 29.8	-0.3
	906nm,0.4s						
MTCE	Montecelio	0.57	236	Pg	Pg	10 36 29.8	-0.3
	906nm,0.4s						
TRTR	Tortoreto Alta	0.61	40	Pg	Pg	10 36 31.1	+0.2
TRTR	Tortoreto Alta	0.61	40	Pg	Pg	10 36 31.1	+0.2
OFFI	Offida	0.63	21	Pg	Pg	10 36 31.3	-0.1
OFFI	Offida	0.63	21	Pg	Pg	10 36 31.3	-0.1
LPEL	Lama dei Pelig	0.67	116	Pg	Pg	10 36 30.4	-1.6
LPEL				Sg	Sg	10 36 40.4	-0.3
	2μm,0.5s						
LPEL	Lama dei Pelig	0.67	116	Pg	Pg	10 36 30.4	-1.6
LPEL				Sg	Sg	10 36 40.4	-0.3
	2μm,0.5s						
POFI	Posta Fibreno	0.67	158	Pg	Pg	10 36 30.7	-1.4
	1μm,0.8s						
POFI	Posta Fibreno	0.67	158	Pg	Pg	10 36 30.7	-1.4
	1μm,0.8s						
SDI	San Donato	0.71	153	Pg	Pg	10 36 31.5	-1.3
SDI	San Donato	0.71	153	Pg	Pg	10 36 31.5	-1.3
FDMO	Fiordimonte	0.73	343	Pg	Pg	10 36 32.0	-1.1
FDMO	Fiordimonte	0.73	343	Pg	Pg	10 36 32.0	-1.1
CAFR	Castel Frentan	0.73	99	Pg	Pg	10 36 32.2	-0.9
CAFR	Castel Frentan	0.73	99	Pg	Pg	10 36 32.2	-0.9
RMP	Rome, Mte Porz	0.73	224	Pg	Pg	10 36 32.5	-0.7
RMP	Rome, Mte Porz	0.73	224	Pg	Pg	10 36 32.5	-0.7
GIUL	Giuliano Di Ro	0.79	187	Pg	Pg	10 36 32.9	-1.4
GIUL	Giuliano Di Ro	0.79	187	Pg	Pg	10 36 32.9	-1.4
RNI2	Rionero Sannit	0.86	138	Pg	Pg	10 36 34.4	-1.3
RNI2	Rionero Sannit	0.86	138	Pg	Pg	10 36 34.4	-1.3
ASSB	Assisi San Ben	0.88	323	Pg	Pg	10 36 35.0	-1.0
ASSB	Assisi San Ben	0.88	323	Pg	Pg	10 36 35.0	-1.0
CERA	Filignano	0.88	147	Pg	Pg	10 36 34.3	-1.8
CERA	Filignano	0.88	147	Pg	Pg	10 36 34.3	-1.8
MIDA	Miranda	0.96	137	Pg	Pg	10 36 35.4	-2.1
MIDA	Miranda	0.96	137	Pg	Pg	10 36 35.4	-2.1
AOI	Ancona	1.22	8	Pg	Pb	10 36 41.5	-0.9
AOI	Ancona	1.22	8	Pg	Pb	10 36 41.5	-0.9
MS1	Monte Sant'Ang	2.01	108	ePn	Pb	10 36 56.2	+0.2
MS1				eSn	Sg	10 37 23.9	+0.1
NVLJ	Novalja	2.47	26	i Pn	Pn	10 37 00.6	+0.9
NVLJ				Sn	Sn	10 37 30.2	+0.1
NVLJ	Novalja	2.47	26	i Pn	Pn	10 37 00.5	+0.9
NVLJ				Sn	Sn	10 37 30.1	+0.1
CDT	Castel del Mon	2.51	119	ePn	Pb	10 37 05.0	+0.6
CDT				eSn	Sn	10 37 33.1	+2.1
MAIM	Mastiano	2.63	308	P	Pn	10 37 02.0	+0.1
STON	Ston	3.23	79	ePn	Pn	10 37 10.7	+0.5
STON				Sn	Sn	10 37 49.3	+0.5
STON	Ston	3.23	79	ePn	Pn	10 37 10.6	+0.5
STON				Sn	Sn	10 37 49.3	+0.5
SKDS	Skadanscina	3.24	8	i Pn	Pn	10 37 11.0	+0.8
SKDS				i Sn	Sn	10 37 49.4	+0.4
SKDS	Skadanscina	3.24	8	Pn	Pn	10 37 11.0	+0.8
SKDS				i Sn	Sn	10 37 49.4	+0.4
PGF	Pioggiola	3.25	275	ePn	Pn	10 37 11.5	+1.0
PGF				eSn	Sn	10 37 51.2	+1.8
	12nm,0.6s						
PGF	Pioggiola	3.25	275	ePn	Pn	10 37 11.5	+1.0
PGF				eSn	Sn	10 37 51.2	+1.8
	6.0nm,0.6s						
BOJS	Bojanci	3.44	23	i Pn	Pn	10 37 15.3	+2.3
BOJS				i		10 38 01.6	
BOJS	Bojanci	3.44	23	i Pn	Pn	10 37 15.3	+2.3
SBF	Sospel	4.61	291	ePn	Pn	10 37 29.8	+0.7
SBF				eSn	Sn	10 38 19.1	-3.8
	11nm,0.6s						
SBF	Sospel	4.61	291	ePn	Pn	10 37 29.8	+0.7
SBF				eSn	Sn	10 38 19.1	-3.8
	5.4nm,0.6s						
FRF	La Foret Royal	5.09	286	ePn	Pn	10 37 36.0	+0.3
FRF				eSn	Sn	10 38 30.6	-4.0
	2.5nm,0.5s						
FRF	La Foret Royal	5.09	286	ePn	Pn	10 37 36.0	+0.3
DAVOX	Davos/Dischmat	5.09	332	Pn	Pn	10 37 38.3	+2.4
	0.8nm,0.3s,baz=152,slow=17,SNR=6.5						
DAVOX				Sn	Sn	10 38 36.1	+1.1
	0.3nm,0.3s,baz=86,slow=19,SNR=2.4						
LMR	La Mourre	5.15	283	ePn	Pn	10 37 36.8	+0.3
LMR				eSn	Sn	10 38 31.7	-4.3
	2.6nm,0.5s						
LMR	La Mourre	5.15	283	ePn	Pn	10 37 36.8	+0.3
MBDF	Montbardon	5.36	299	eP	Pn	10 37 41.8	+2.2
MBDF	Montbardon	5.36	299	eP	Pn	10 37 41.8	+2.2
SMRF	Simiane la Rot	5.94	289	eP	Pn	10 37 49.1	+1.7
SMRF	Simiane la Rot	5.94	289	eP	Pn	10 37 49.1	+1.7
GERES	GERESS Array B	6.51	2	Pn	Pn	10 37 55.6	+0.4
	0.2nm,0.3s,baz=183,slow=12,SNR=4.5						
GERES				Sn	Sn	10 39 10.9	+1.3
	0.7nm,0.3s,baz=184,slow=23,SNR=5.6						
KHC	Kasperske Hory	6.79	1	ePN	Pn	10 38 00.3	+1.2
KHC				eSN	Sn	10 39 14.7	-1.9
KHC	Kasperske Hory	6.79	1	Pn	Pn	10 38 00.3	+1.2
HINF	Hinteralfeld	7.16	322	ePn	Pn	10 38 03.7	-0.4
HINF				eSn	Sn	10 39 20.4	-5.3
	3.4nm,0.5s						
HINF	Hinteralfeld	7.16	322	ePn	Pn	10 38 03.7	-0.4
KEST	Kesra	7.31	207	Pn	Pn	10 38 11.1	+4.9
	0.6nm,0.3s,baz=337,slow=4.4,SNR=5.4						
CDF	Champ du Feu	7.43	327	ePn	Pn	10 38 07.6	-0.3
CDF				eSn	Sn	10 39 27.0	-5.5
	2.6nm,0.5s						
CDF	Champ du Feu	7.43	327	ePn	Pn	10 38 07.6	-0.3
HAU	Haudompre	7.53	321	ePn	Pn	10 38 09.0	-0.2
HAU				eSn	Sn	10 39 28.2	-6.5
	5.7nm,0.4s						
HAU	Haudompre	7.53	321	ePn	Pn	10 38 09.0	-0.2
MLR	Muntele Rosu	9.60	67	Pn	Pn	10 38 40.7	+3.0
	0.1nm,0.3s,baz=132,slow=18,SNR=5.9						
FINES	FINESS Array B	20.60	17	P	P	10 40 59.4	+1.1
	3.8nm,0.9s,baz=213,slow=9.9,SNR=4.2						
TORD	Torodi Ar. Bea	30.81	203	P	P	10 42 37.3	+1.9
	0.3nm,0.7s,baz=21,slow=8.0,SNR=2.9						
MKAR	Makanchi Array	47.86	60	P	P	10 44 57.1	-0.3
	0.1nm,0.3s,baz=282,slow=7.2,SNR=2.2						

*IDC **06** 10:37:25.5±0.7, 13°.09N×123°.61E, h0km, mb4.0/11, mb1 4.1/11, mb1mx3.9/26, mbtmp4.0/11, MS3.3/8, Ms1 3.3/8, ms1mx3.0/40, Error ellipse: s-maj=35.4km s-min=14.3km az=73.0*

*MAN **06** 10:37:28, 13°.24N×123°.69E, h37km, mb5.4, ML4.4, MS4.5*

MAN INTENSITY V - GUINOBATAN ALBAY PROPER; INTENSITY IV - SALUGAN CAMALIG; INTENSITY III - LEGASPI CITY PROPER.

*ISCJB **06** 10:37:29.9±0.7, 13°.14N±0°.05×123°.65E±0°.05, h48km±7km, mb4.1/13, MS3.3/6, Error ellipse: s-maj=10.1km s-min=6.0km az=137.7*

*NEIC **06** 10:37:32.2±2.0, 13°.07N×123°.61E, h52km±17km, mb4.6/2, Error ellipse: s-maj=19.5km s-min=6.2km az=71.0*

NEIC Felt [V PIVS] at Guinobatan; [IV PIVS] at Camalig and Salugan; [III PIVS] at Legaspi; [II PIVS] at Buang and Tabaco.

ISC 06 10:37:31.2±1.3**, 13°.14N**±0°.06×**123°.66E**±0°.05**, h41**km±13km**, n45, σ1ˢ13**/49**, mb4.1**/13**, MS3.3**/6**, 2C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	San Andres	0.98	281	eP	Pn	10 37 46.6	-1.8
AUQP				eS	Sn	10 38 05.1	+3.9
CNP	Catarman	1.16	123	eP	Pn	10 37 49.4	-1.5
CNP				eS	Sn	10 38 07.9	+2.3
GQP	Guinayangan	1.41	303⇓	eP	Pn	10 37 50.5	-3.9
GQP				i S	Sn	10 38 09.7	-2.0
OTRP	Odiongan	1.78	244	eP	Pn	10 37 58.6	-0.9
BOAC	Boac	1.80	280	eP	Pn	10 37 58.3	-1.5
BOAC				eS	Sn	10 38 23.2	+1.8
RCP	Roxas	1.81	210⇑	eP	Pn	10 37 58.4	-1.5
RCP				eS	Sn	10 38 22.9	+1.3
SJMP	San Jose	2.57	255	eP	Pn	10 38 09.9	-0.5
GUIM	Jordan	2.71	203	eP	Pn	10 38 13.5	+1.2
TGY	Tagaytay City	2.82	290	Pn	Pn	10 38 14.8	+0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGY				Lg	Lg	10 38 51.3	
TGY	Tagaytay City	2.82	290	Pn	Pn	10 38 14.8	+0.9
	60nm,0.3s,baz=92,slow=5.9,SNR=11						
TGY				Lg	Lg	10 38 51.3	
	49nm,0.3s,baz=139,slow=5.2,SNR=3.2						
LLP	Lapu-Lapu	2.82	174⇑	eP	Pn	10 38 14.2	+0.3
LLP				eS	Sn	10 38 54.6	+8.0
MSLP	Maasin	3.21	158	eP	Pn	10 38 18.4	-0.7
CUYO	Cuyo Island	3.45	229	eP	Pn	10 38 21.2	-1.2
JOW	Kunigami	14.29	17	LR	LR	10 45 39.2	
	comp=Z,35nm,18.8s,baz=119,slow=34						
KSM	Kuching	17.59	230	Pn	Pn	10 41 32.4	-1.0
KAPI	Kappang	18.45	192	P	P	10 41 42.8	-0.8
KAPI	Kappang	18.45	192	LR	LR	10 48 51.4	
	comp=Z,81nm,18.2s,baz=98,slow=37						
CMAR	Chiang Mai Arr	24.36	286	P	P	10 42 45.2	-0.4
CMAR	Chiang Mai Arr	24.36	286	P	P	10 42 45.2	-0.4
	2.3nm,0.6s,baz=92,slow=8.3,SNR=12						
KSRS	Korea Array	24.51	8	LR	LR	10 53 50.9	
	comp=Z,40nm,19.1s,baz=182,slow=40						
JHJ	Hachijo jima 2	24.74	34	LR	LR	10 51 39.8	
	comp=Z,75nm,18.0s,baz=65,slow=34						
PSI	Prapat	26.54	249	LR	LR	10 52 37.3	
	comp=Z,98nm,19.6s,baz=331,slow=34						
FITZ	Fitzroy Crossi	31.11	176	P	P	10 43 45.5	-0.4
FITZ	Fitzroy Crossi	31.11	176	P	P	10 43 45.5	-0.4
	2.2nm,0.8s,baz=3.1,slow=10,SNR=3.6						
USRK	Ussuriysk Arra	31.77	11	P	P	10 43 52.3	+0.8
	1.7nm,0.7s,baz=207,slow=13,SNR=4.4						
WRAB	Tennant Creek	34.51	162	eP	P	10 44 15.0	-0.7
	2.6nm,0.7s						
WRA	Warramunga Arr	34.51	162	P	P	10 44 14.3	-1.4
WRA				PcP	PcP	10 46 51.0	+0.7
WRA	Warramunga Arr	34.51	162	P	P	10 44 14.3	-1.4
	2.4nm,0.7s,baz=339,slow=9.8,SNR=20						
WRA				PcP	PcP	10 46 51.0	+0.7
	0.8nm,0.8s,baz=342,slow=3.3,SNR=6.0						
SONM	Songino Array	37.47	341	P	P	10 44 40.6	-0.3
SONM	Songino Array	37.47	341	P	P	10 44 40.6	-0.3
	0.4nm,0.7s,baz=161,slow=8.3,SNR=5.1						
SONM				LR	LR	11 00 52.7	
	comp=Z,55nm,19.3s,baz=188,slow=38						
ASAR	Alice Springs	37.93	165	P	P	10 44 44.8	-0.1
ASAR				PcP	PcP	10 47 00.9	+0.5
ASAR	Alice Springs	37.93	165	P	P	10 44 44.8	-0.1
	2.4nm,0.8s,baz=340,slow=7.4,SNR=27						
ASAR				PcP	PcP	10 47 00.9	+0.5
	0.6nm,0.8s,baz=343,slow=2.9,SNR=5.1						
NWAO	Narrogin (SRO)	46.22	187	P	P	10 45 52.2	-0.2
NWAO	Narrogin (SRO)	46.22	187	P	P	10 45 52.2	-0.2
	8.2nm,0.8s,baz=344,slow=7.4,SNR=3.9						
PETK	Petropavlovsk-	48.17	27	LR	LR	11 07 30.9	
	comp=Z,26nm,18.4s,baz=215,slow=37						
MK31	Makanchi Array	48.21	322	eP	P	10 46 08.1	+0.2
MKAR	Makanchi Array	48.21	322	P	P	10 46 08.1	+0.2
MKAR				PcP	PcP	10 47 35.1	+0.5
MKAR	Makanchi Array	48.21	322	P	P	10 46 08.1	+0.2
	2.2nm,0.7s,baz=120,slow=8.2,SNR=26						
MKAR				PcP	PcP	10 47 35.1	+0.5
	0.3nm,0.6s,baz=174,slow=2.9,SNR=2.4						
ZALV	Zalesovo Beam	50.90	331	P	P	10 46 28.4	+0.3
ZALV	Zalesovo Beam	50.90	331	P	P	10 46 28.4	+0.3
	0.6nm,0.7s,baz=151,slow=6.3,SNR=3.3						
ZALV				LR	LR	11 10 20.6	
	comp=Z,43nm,20.7s,baz=68,slow=39						
KURK	Kurchatov	52.27	325	eP	P	10 46 38.4	-0.1
	11nm,0.7s						
AKASG	Malin Array Be	82.74	320	P	P	10 49 50.5	-0.4
AKASG	Malin Array Be	82.74	320	P	P	10 49 50.5	-0.4
	1.0nm,0.5s,baz=58,slow=6.0,SNR=4.2						
YKA	Yellowknife Ar	92.17	23	P	P	10 50 37.0	+0.6
YKA	Yellowknife Ar	92.17	23	P	P	10 50 36.9	+0.6
	0.2nm,0.7s,baz=297,slow=4.1,SNR=4.5						

IDC 06 10:39:18.2±1.9, 3°.95N×126°.89E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/24, mbtmp3.3/4, Error ellipse: s-maj=109.0km s-min=23.9km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.94	183	P	P	10 44 13.7	+0.1
	0.9nm,0.9s,baz=0.0,slow=11,SNR=3.2						
WRA	Warramunga Arr	24.84	163	P	P	10 44 41.1	-1.4
	0.7nm,0.5s,baz=342,slow=11,SNR=10						
ASAR	Alice Springs	28.29	166	P	P	10 45 15.0	+1.4
	0.4nm,0.7s,baz=348,slow=8.7,SNR=4.3						
MKAR	Makanchi Array	57.47	325	P	P	10 49 09.1	-0.1
	0.1nm,0.5s,baz=112,slow=6.1,SNR=2.8						

ISCJB 06 10:46:01.3±0.7, 48°.39N±0°.08×155°.1E±0°.2, h43km, mb3.3/6, Error ellipse: s-maj=17.9km s-min=8.0km az=34.4
MOS 06 10:46:01.6±1.7, 48°.40N×155°.08E, h48km, mb3.9/2, Error ellipse: s-maj=33.0km s-min=14.5km az=63.7
IDC 06 10:46:02.8±3.8, 48°.31N×154°.96E, h40km±36km, mb3.1/6, mb1 3.5/8, mb1mx3.3/27, mbtmp3.3/8, ML3.4/2, Error ellipse: s-maj=34.7km s-min=19.3km az=145.0
ISC 06 10:46:03.0±0.8, 48°.4N±0°.1×155°.1E±0°.1, h43km, n12, σ1s.69/15, mb3.3/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.40	15	ePN	Pn	10 46 38.0	-1.6
SKR				eS	Sn	10 47 06.5	-1.2
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax	smax		
	comp=N,150nm,0.5s						
SKR				smax	smax		
	comp=E,170nm,0.5s						
PETK	Petropavlovsk-	5.01	18	PN	Pn	10 47 17.3	+1.8
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	5.01	18	P	Pn	10 47 17.3	+1.8
	comp=Z,1.1nm,0.3s,baz=184,slow=18,SNR=7.3						
PETK				S	Sn	10 48 26.2	+14
	baz=179,slow=20,SNR=2.3						
ASAJ	Asahikawa	9.66	248	P	Pn	10 48 21.4	+2.1
	comp=Z,0.4nm,0.3s,baz=42,slow=14,SNR=3.8						
FX1	Attu Island--F	12.31	62	P	Pn	10 48 55.2	-0.2
	comp=Z,0.9nm,0.3s,baz=288,slow=3.2,SNR=3.1						
FX1				S	Sn	10 51 01.5	-10
	comp=Z,0.4nm,0.3s,baz=348,slow=19,SNR=3.3						
KSRS	Korea Array	22.59	251	P	P	10 51 00.1	+0.4
	comp=Z,0.8nm,0.6s,baz=43,slow=11,SNR=3.6						
MKAR	Makanchi Array	47.40	297	P	P	10 54 31.2	-1.6
MKAR	Makanchi Array	47.40	297	P	P	10 54 31.2	-1.6
	comp=Z,0.2nm,0.6s,baz=80,slow=9.7,SNR=2.4						
YKA	Yellowknife Ar	48.81	38	P	P	10 54 44.7	+1.4
	comp=Z,0.1nm,0.5s,baz=293,slow=7.1,SNR=2.4						
WRA	Warramunga Arr	70.51	201	P	P	10 57 11.8	-1.3
	comp=Z,0.5nm,0.8s,baz=21,slow=6.5,SNR=4.0						
WRA				pP	pP	10 57 23.1	-2.6
	comp=Z,0.3nm,0.7s,baz=14,slow=6.2,SNR=2.7						
ASAR	Alice Springs	74.19	200	P	P	10 57 35.1	+0.1
	comp=Z,0.3nm,1.0s,baz=18,slow=5.6,SNR=5.1						
ASAR				pP	pP	10 57 46.1	-1.6
	comp=Z,0.2nm,0.5s,baz=9.8,slow=5.3,SNR=1.5						
TXAR	Lajitas Array	75.52	62	P	P	10 57 44.1	+1.2
	comp=Z,0.4nm,0.6s,baz=296,slow=4.8,SNR=4.9						

CSEM 06 10:57:06.2, 42°.26N×13°.49E, h10km, After ROM
ROM 06 10:57:06.2±0.1, 42°.26N×13°.49E, h10km, Ml2.3/5, 2C, Error ellipse: s-maj=0.9km s-min=0.6km az=54.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.07	88⇑	iPg	Pg	10 57 08.8	+0.3
FAGN				Sg	Sg	10 57 10.3	+0.1
FAGN	Fagnano	0.07	88⇑	iPg	Pg	10 57 08.8	+0.3
FAGN				Sg	Sg	10 57 10.3	+0.1
AQU	L'Aquila	0.11	324	Pg	Pg	10 57 09.6	+0.5
AQU				Sg	Sg	10 57 11.6	+0.5
AQU	L'Aquila	0.11	324	Pg	Pg	10 57 09.6	+0.5
AQU				Sg	Sg	10 57 11.6	+0.5
PTQR	Pietraquaria	0.25	195	Pg	Pg	10 57 11.8	+0.4
PTQR				Sg	Sg	10 57 16.1	+1.2
PTQR	Pietraquaria	0.25	195	Pg	Pg	10 57 11.8	+0.4
PTQR				Sg	Sg	10 57 16.1	+1.2
FIAM	Fiamignano	0.28	271	Pg	Pg	10 57 12.4	+0.4
FIAM	Fiamignano	0.28	271	Pg	Pg	10 57 12.4	+0.4
CAMP	Campotosto	0.28	348	Pg	Pg	10 57 12.6	+0.5
CAMP				Sg	Sb	10 57 17.3	-1.2
CAMP	Campotosto	0.28	348	Pg	Pg	10 57 12.6	+0.5
CAMP				Sg	Sb	10 57 17.3	-1.2
VCEL	Villa Celiera	0.29	63	Pg	Pg	10 57 12.9	+0.6
VCEL	Villa Celiera	0.29	63	Pg	Pg	10 57 12.9	+0.6
TERO	Teramo	0.37	13	Pg	Pg	10 57 14.2	+0.6
TERO				Sg	Sg	10 57 19.4	+0.8
TERO	Teramo	0.37	13	Pg	Pg	10 57 14.2	+0.6
TERO				Sg	Sg	10 57 19.4	+0.8
INTR	Introdacqua	0.40	129	Pg	Pg	10 57 14.6	+0.4
INTR				Sg	Sb	10 57 20.7	-1.0
	204nm,0.3s						
INTR	Introdacqua	0.40	129	Pg	Pg	10 57 14.6	+0.4
INTR				Sg	Sb	10 57 20.7	-1.0
	204nm,0.3s						
VVLD	Villa Vallelon	0.40	166	Pg	Pg	10 57 14.7	+0.4
VVLD				Sg	Sg	10 57 20.8	+1.1
	81nm,0.1s						
VVLD	Villa Vallelon	0.40	166	Pg	Pg	10 57 14.7	+0.4
VVLD				Sg	Sg	10 57 20.8	+1.1
	81nm,0.1s						
GUAR	Guarcino	0.49	196	Pg	Pb	10 57 16.6	-0.4
	84nm,0.5s						
GUAR	Guarcino	0.49	196	Pg	Pb	10 57 16.6	-0.4
	84nm,0.5s						
CERT	Cerreto	0.49	230	Pg	Pg	10 57 16.1	+0.2
	537nm,0.4s						
CERT	Cerreto	0.49	230	Pg	Pg	10 57 16.1	+0.2
	537nm,0.4s						
LPEL	Lama dei Pelig	0.56	113	Pg	Pg	10 57 17.1	-0.1
LPEL				Sg	Sb	10 57 25.5	-0.8
	201nm,0.2s						
LPEL	Lama dei Pelig	0.56	113	Pg	Pg	10 57 17.1	-0.1
LPEL				Sg	Sb	10 57 25.5	-0.8
	201nm,0.2s						
POFI	Posta Fibreno	0.57	163	Pg	Pg	10 57 17.7	+0.3
POFI	Posta Fibreno	0.57	163	Pg	Pg	10 57 17.7	+0.3
SDI	San Donato	0.60	157	Pg	Pb	10 57 18.5	-0.4
	34nm,0.2s						
SDI	San Donato	0.60	157	Pg	Pb	10 57 18.5	-0.4
	34nm,0.2s						

CSEM 06 10:57:21.8, 42°.32N×13°.39E, h10km, After ROM
ROM 06 10:57:21.8±0.1, 42°.32N×13°.39E, h10km, Ml2.6/2, 2D, Error ellipse: s-maj=1.1km s-min=1.1km az=73.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	13⇓	iPg	Pg	10 57 24.2	+0.4
AQU				Sg	Sg	10 57 25.7	+0.4
AQU	L'Aquila	0.03	13⇓	iPg	Pg	10 57 24.2	+0.4
AQU				Sg	Sg	10 57 25.7	+0.4
FAGN	Fagnano	0.15	111	Pg	Pg	10 57 25.9	+0.6
FAGN				Sg	Sg	10 57 28.8	+1.0
FAGN	Fagnano	0.15	111	Pg	Pg	10 57 25.9	+0.6
FAGN				Sg	Sg	10 57 28.8	+1.0
FIAM	Fiamignano	0.21	256	Pg	Pb	10 57 27.4	-0.5
FIAM				Sg	Sg	10 57 30.6	+1.1
FIAM	Fiamignano	0.21	256	Pg	Pb	10 57 27.4	-0.5
FIAM				Sg	Sg	10 57 30.6	+1.1
CAMP	Campotosto	0.21	3	Pg	Pg	10 57 26.8	+0.3
CAMP				Sg	Sg	10 57 30.4	+0.7
CAMP	Campotosto	0.21	3	Pg	Pg	10 57 26.8	+0.3
CAMP				Sg	Sg	10 57 30.4	+0.7
PTQR	Pietraquaria	0.30	179	Pg	Pg	10 57 28.3	+0.3
PTQR				Sg	Sg	10 57 33.0	+0.9
PTQR	Pietraquaria	0.30	179	Pg	Pg	10 57 28.3	+0.3
PTQR				Sg	Sg	10 57 33.0	+0.9
TERO	Teramo	0.34	27	Pg	Pg	10 57 28.6	-0.1
TERO				Sg	Sb	10 57 34.8	-0.8
TERO	Teramo	0.34	27	Pg	Pg	10 57 28.6	-0.1
TERO				Sg	Sb	10 57 34.8	-0.8
VCEL	Villa Celiera	0.34	77	Pg	Pg	10 57 29.4	+0.6
VCEL	Villa Celiera	0.34	77	Pg	Pg	10 57 29.4	+0.6
CERT	Cerreto	0.48	220	Pg	Pg	10 57 31.6	+0.3
CERT				Sg	Sb	10 57 38.7	-0.9
CERT	Cerreto	0.48	220	Pg	Pg	10 57 31.6	+0.3
CERT				Sg	Sb	10 57 38.7	-0.9
VVLD	Villa Vallelon	0.48	159	Pg	Pg	10 57 31.2	-0.1
VVLD	Villa Vallelon	0.48	159	Pg	Pg	10 57 31.2	-0.1
INTR	Introdacqua	0.49	129	Pg	Pg	10 57 31.6	+0.1
INTR				Sg	Sb	10 57 39.6	-0.4
INTR	Introdacqua	0.49	129	Pg	Pg	10 57 31.6	+0.1
INTR				Sg	Sb	10 57 39.6	-0.4
NRCA	Norcia	0.55	338	Pg	Pb	10 57 33.5	-0.2
NRCA				Sg	Sb	10 57 41.3	-0.5
	305nm,0.1s						
NRCA	Norcia	0.55	338	Pg	Pb	10 57 33.5	-0.2
NRCA				Sg	Sb	10 57 41.3	-0.5
	305nm,0.1s						
LPEL	Lama dei Pelig	0.65	115	Pg	Pg	10 57 34.2	-0.3
LPEL				Sg	Sb	10 57 43.8	-0.7
	201nm,0.2s						
LPEL	Lama dei Pelig	0.65	115	Pg	Pg	10 57 34.2	-0.3
LPEL				Sg	Sb	10 57 43.8	-0.7
	201nm,0.2s						

CSEM 06 10:59:35.1, 42°.31N×13°.40E, h10km, After ROM
ROM 06 10:59:35.1±0.1, 42°.31N×13°.40E, h10km±1km, Ml2.8/24, 10C-2D, Error ellipse: s-maj=1.4km s-min=1.3km az=36.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	3⇓	iPg	Pg	10 59 37.6	+0.5
AQU				Sg	Sg	10 59 39.1	+0.5
	26µm,0.3s						
AQU	L'Aquila	0.05	3⇓	iPg	Pg	10 59 37.6	+0.5
AQU				Sg	Sg	10 59 39.1	+0.5
	26µm,0.3s						
FAGN	Fagnano	0.14	106	Pg	Pg	10 59 39.0	+0.6
FAGN				Sg	Sg	10 59 41.9	+1.2
FAGN	Fagnano	0.14	106	Pg	Pg	10 59 39.0	+0.6
FAGN				Sg	Sg	10 59 41.9	+1.2
FIAM	Fiamignano	0.21	260⇑	iPg	Pg	10 59 40.2	+0.5
FIAM				Sg	Sg	10 59 43.8	+1.1
FIAM	Fiamignano	0.21	260⇑	iPg	Pg	10 59 40.2	+0.5
FIAM				Sg	Sg	10 59 43.8	+1.1
CAMP	Campotosto	0.23	2⇑	iPg	Pg	10 59 40.1	+0.1
CAMP				Sg	Sg	10 59 43.8	+0.5
	2µm,0.5s						
CAMP	Campotosto	0.23	2⇑	iPg	Pg	10 59 40.1	+0.1
CAMP				Sg	Sg	10 59 43.8	+0.5
	2µm,0.5s						
PTQR	Pietraquaria	0.28	180⇑	iPg	Pg	10 59 41.4	+0.5
PTQR				Sg	Sg	10 59 46.1	+1.2
	195nm,0.4s						
PTQR	Pietraquaria	0.28	180⇑	iPg	Pg	10 59 41.4	+0.5
PTQR				Sg	Sg	10 59 46.1	+1.2
	195nm,0.4s						
VCEL	Villa Celiera	0.34	75	Pg	Pg	10 59 42.2	+0.2
	2µm,0.5s						
VCEL	Villa Celiera	0.34	75	Pg	Pg	10 59 42.2	+0.2
	2µm,0.5s						
TERO	Teramo	0.35	26	Pg	Pg	10 59 41.9	-0.3
TERO				Sg	Sg	10 59 47.9	+1.0
TERO	Teramo	0.35	26	Pg	Pg	10 59 41.9	-0.3
TERO				Sg	Sg	10 59 47.9	+1.0
VVLD	Villa Vallelon	0.47	159	Pg	Pg	10 59 44.3	0.0
	475nm,0.4s						
VVLD	Villa Vallelon	0.47	159	Pg	Pg	10 59 44.3	0.0
	475nm,0.4s						
CERT	Cerreto	0.47	221⇑	iPg	Pg	10 59 44.6	+0.2
CERT				Sg	Sg	10 59 51.5	+0.8
	2µm,0.5s						
CERT	Cerreto	0.47	221⇑	iPg	Pg	10 59 44.6	+0.2
CERT				Sg	Sg	10 59 51.5	+0.8
	2µm,0.5s						
INTR	Introdacqua	0.48	128	Pg	Pb	10 59 45.2	-0.6
INTR				Sg	Sb	10 59 52.1	-0.9
INTR	Introdacqua	0.48	128	Pg	Pb	10 59 45.2	-0.6
INTR				Sg	Sb	10 59 52.1	-0.9
GUAR	Guarcino	0.52	187	Pg	Pb	10 59 46.2	-0.2
	456nm,0.5s						
GUAR	Guarcino	0.52	187	Pg	Pb	10 59 46.2	-0.2
	456nm,0.5s						
MNS	Montasola	0.54	279	Pg	Pg	10 59 45.4	-0.2
MNS				Sg	Sb	10 59 54.1	-0.5
	301nm,0.3s						
MNS	Montasola	0.54	279	Pg	Pg	10 59 45.4	-0.2
MNS				Sg	Sb	10 59 54.1	-0.5
	301nm,0.3s						
MTCE	Montecelio	0.56	240⇑	iPg	Pg	10 59 46.2	+0.1
	418nm,0.6s						
MTCE	Montecelio	0.56	240⇑	iPg	Pg	10 59 46.2	+0.1
	418nm,0.6s						
NRCA	Norcia	0.57	338	Pg	Pg	10 59 45.9	-0.4
NRCA				Sg	Sg	10 59 54.7	+0.8
	828nm,0.1s						
NRCA	Norcia	0.57	338	Pg	Pg	10 59 45.9	-0.4
NRCA				Sg	Sg	10 59 54.7	+0.8
	828nm,0.1s						
TRTR	Tortoreto Alta	0.63	37	Pg	Pb	10 59 48.8	+0.5
	2µm,0.7s						
TRTR	Tortoreto Alta	0.63	37	Pg	Pb	10 59 48.8	+0.5
	2µm,0.7s						
LPEL	Lama dei Pelig	0.64	114	Pg	Pg	10 59 47.1	-0.5
LPEL				Sg	Sb	10 59 57.1	-0.4
LPEL	Lama dei Pelig	0.64	114	Pg	Pg	10 59 47.1	-0.5
LPEL				Sg	Sb	10 59 57.1	-0.4
OFFI	Offida	0.66	19	Pg	Pg	10 59 48.2	+0.2
	3µm,0.6s						
OFFI	Offida	0.66	19	Pg	Pg	10 59 48.2	+0.2
	3µm,0.6s						
SDI	San Donato	0.67	153	Pg	Pb	10 59 48.9	-0.1
	94nm,0.3s						
SDI	San Donato	0.67	153	Pg	Pb	10 59 48.9	-0.1
	94nm,0.3s						
FDMO	Fiordimonte	0.77	343	Pg	Pg	10 59 49.6	-0.4
FDMO				Sg	Sb	11 00 01.8	+0.6
FDMO	Fiordimonte	0.77	343	Pg	Pg	10 59 49.6	-0.4
FDMO				Sg	Sb	11 00 01.8	+0.6
CERA	Filignano	0.84	147	Pg	Pb	10 59 51.9	-0.1
	199nm,0.5s						
CERA	Filignano	0.84	147	Pg	Pb	10 59 51.9	-0.1
	199nm,0.5s						
ASSB	Assisi San Ben	0.92	324	Pg	Pg	10 59 52.4	-0.5
	257nm,0.4s						
ASSB	Assisi San Ben	0.92	324	Pg	Pg	10 59 52.4	-0.5
	257nm,0.4s						
MIDA	Miranda	0.92	136	Pg	Pg	10 59 52.3	-0.7
	138nm,0.6s						
MIDA	Miranda	0.92	136	Pg	Pg	10 59 52.3	-0.7
	138nm,0.6s						
TOLF	Tolfa	1.07	257	Pg	Pn	10 59 56.2	0.0
	56nm,0.5s						
TOLF	Tolfa	1.07	257	Pg	Pn	10 59 56.2	0.0
	56nm,0.5s						
MGAB	Montegabbione	1.13	303	Pg	Pn	10 59 57.0	-0.1
	343nm,1.1s						
MGAB	Montegabbione	1.13	303	Pg	Pn	10 59 57.0	-0.1
	343nm,1.1s						
MURB	Monte Urbino	1.15	326	Pg	Pb	10 59 57.1	-0.2
	424nm,0.4s						
MURB	Monte Urbino	1.15	326	Pg	Pb	10 59 57.1	-0.2
	424nm,0.4s						
SACS	San Casciano d	1.23	297	Pg	Pn	10 59 58.4	-0.1
	207nm,1.2s						
ARVD	Arcevia	1.24	344	Pg	Pn	10 59 57.3	-1.3
	95nm,0.6s						
ARVD	Arcevia	1.24	344	Pg	Pn	10 59 57.3	-1.3
	95nm,0.6s						
AOI	Ancona	1.25	7	Pg	Pn	10 59 58.5	-0.3
	132nm,0.5s						
AOI	Ancona	1.25	7	Pg	Pn	10 59 58.5	-0.3
	132nm,0.5s						
PIEI	Pieia	1.38	333	Pn	Pn	11 00 00.9	+0.3
	68nm,0.5s						
PIEI	Pieia	1.38	333	Pn	Pn	11 00 00.9	+0.3
	68nm,0.5s						
CAFI	Castiglion Fio	1.47	315	Pn	Pg	11 00 03.5	+0.1
	61nm,0.8s						
CAFI	Castiglion Fio	1.47	315	Pn	Pg	11 00 03.5	+0.1
	61nm,0.8s						
BADI	Badiali	1.47	325	Pn	Pg	11 00 03.8	+0.4
	155nm,1.0s						
BADI	Badiali	1.47	325	Pn	Pg	11 00 03.8	+0.4
	155nm,1.0s						
PARC	Parchiule	1.59	328	Pn	Pg	11 00 05.7	0.0
	104nm,0.8s						
PARC	Parchiule	1.59	328	Pn	Pg	11 00 05.7	0.0
	104nm,0.8s						
NVLJ	Novalja	2.50	25	i Pn	Pn	11 00 16.0	+0.2
NVLJ				Sn	Sn	11 00 47.1	+0.7
STON	Ston	3.23	78	ePn	Pn	11 00 27.4	+1.6
STON				Sn	Sn	11 01 01.2	-3.1

CSEM 06 11:00:04.0, 42°.31N×13°.39E, h11km, After ROM
ROM 06 11:00:04.0±0.1, 42°.31N×13°.39E, h11km, Ml2.7/3, 2D, Error ellipse: s-maj=1.0km s-min=0.9km az=63.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	11⇓	iPg	Pg	11 00 06.5	+0.3
AQU				Sg	Sg	11 00 08.0	+0.2
AQU	L'Aquila	0.05	11⇓	iPg	Pg	11 00 06.5	+0.3
AQU				Sg	Sg	11 00 08.0	+0.2
FAGN	Fagnano	0.15	106	Pg	Pg	11 00 07.9	+0.4
FAGN				Sg	Sg	11 00 10.8	+0.8
FAGN	Fagnano	0.15	106	Pg	Pg	11 00 07.9	+0.4
FAGN				Sg	Sg	11 00 10.8	+0.8
FIAM	Fiamignano	0.21	259	Pg	Pg	11 00 09.1	+0.6
FIAM				Sg	Sg	11 00 12.8	+1.2
FIAM	Fiamignano	0.21	259	Pg	Pg	11 00 09.1	+0.6
FIAM				Sg	Sg	11 00 12.8	+1.2
CAMP	Campotosto	0.23	4	Pg	Pg	11 00 09.0	0.0
CAMP				Sg	Sg	11 00 12.8	+0.5
CAMP	Campotosto	0.23	4	Pg	Pg	11 00 09.0	0.0
CAMP				Sg	Sg	11 00 12.8	+0.5
PTQR	Pietraquaria	0.29	178	Pg	Pg	11 00 10.3	+0.4
PTQR				Sg	Sg	11 00 14.9	+1.0
PTQR	Pietraquaria	0.29	178	Pg	Pg	11 00 10.3	+0.4
PTQR				Sg	Sg	11 00 14.9	+1.0
VCEL	Villa Celiera	0.34	75	Pg	Pb	11 00 11.8	-0.6
VCEL	Villa Celiera	0.34	75	Pg	Pb	11 00 11.8	-0.6
TERO	Teramo	0.35	27	Pg	Pg	11 00 11.3	+0.2
TERO				Sg	Sg	11 00 16.8	+0.9
TERO	Teramo	0.35	27	Pg	Pg	11 00 11.3	+0.2
TERO				Sg	Sg	11 00 16.8	+0.9
CERT	Cerreto	0.47	220	Pg	Pg	11 00 13.6	+0.3
CERT				Sg	Sg	11 00 20.5	+0.9
CERT	Cerreto	0.47	220	Pg	Pg	11 00 13.6	+0.3
CERT				Sg	Sg	11 00 20.5	+0.9
VVLD	Villa Vallelon	0.47	158	Pg	Pg	11 00 13.3	0.0
VVLD	Villa Vallelon	0.47	158	Pg	Pg	11 00 13.3	0.0
INTR	Introdacqua	0.48	128	Pg	Pg	11 00 13.7	+0.1
INTR				Sg	Sb	11 00 21.6	-0.3
INTR	Introdacqua	0.48	128	Pg	Pg	11 00 13.7	+0.1
INTR				Sg	Sb	11 00 21.6	-0.3
MNS	Montasola	0.53	279	Pg	Pg	11 00 14.6	+0.2
MNS	Montasola	0.53	279	Pg	Pg	11 00 14.6	+0.2
MTCE	Montecelio	0.56	240	Pg	Pg	11 00 15.0	+0.1
MTCE	Montecelio	0.56	240	Pg	Pg	11 00 15.0	+0.1
NRCA	Norcia	0.56	339	Pg	Pg	11 00 15.1	0.0
NRCA				Sg	Sb	11 00 23.7	-0.5
NRCA	Norcia	0.56	339	Pg	Pg	11 00 15.1	0.0
NRCA				Sg	Sb	11 00 23.7	-0.5
LPEL	Lama dei Pelig	0.65	114	Pg	Pg	11 00 16.2	-0.4
LPEL				Sg	Sg	11 00 25.8	+0.6
LPEL	Lama dei Pelig	0.65	114	Pg	Pg	11 00 16.2	-0.4
LPEL				Sg	Sg	11 00 25.8	+0.6
OFFI	Offida	0.66	19	Pg	Pb	11 00 17.8	+0.1
OFFI	Offida	0.66	19	Pg	Pb	11 00 17.8	+0.1

IDC 06 11:07:38.2±4.2, 5°.64S×147°.49E, h214km±46km, mb3.1/3, mb1 3.4/5, mb1mx3.0/19, mbtmp3.1/5, Error ellipse: s-maj=78.0km s-min=24.3km az=135.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.75	185	P	Pn	11 08 38.6	+1.0
	3.1nm,0.3s,baz=32,slow=5.5,SNR=21						
PMG				S	S	11 09 24.4	+0.4
	6.0nm,0.3s,baz=57,slow=23,SNR=9.0						
WRA	Warramunga Arr	19.12	221	P	P	11 11 44.8	-0.6
	0.7nm,0.3s,baz=38,slow=11,SNR=48						
ASAR	Alice Springs	22.19	215	P	P	11 12 17.6	+0.4
	0.9nm,0.7s,baz=48,slow=8.5,SNR=14						
FITZ	Fitzroy Crossi	24.67	238	P	P	11 12 40.0	+0.3

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	3.1nm,0.6s,baz=51,slow=7.6,SNR=17						
ILAR	**Eielson Array**	**84.96**	**23**	P	P	11 19 48.7	-0.3
	0.1nm,0.7s,baz=218,slow=4.2,SNR=3.9						

IDC 06 11:08:32.0±4.8**,5°.63S**×**146°.02E,h99**km±50km**,mb3.4**/4**, mb1 3.5**/6**,mb1mx3.2**/19**,mbtmp3.3**/6**,Error ellipse: s-maj=39.1km s-min=32.8km az=154.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.92**	**163**	P	Pn	11 09 31.3	+1.2
	14nm,0.3s,baz=322,slow=14,SNR=17						
PMG				S	Sn	11 10 15.2	+0.1
	15nm,0.3s,baz=138,slow=19,SNR=7.4						
CTA	**Charters Tower**	**14.37**	**179**	P	P	11 11 55.2	+0.3
	0.2nm,0.3s,baz=349,slow=16,SNR=2.8						
WRA	**Warramunga Arr**	**18.21**	**218**	P	P	11 12 37.8	+0.5
	baz=35,slow=10,SNR=2.6						
FITZ	**Fitzroy Crossi**	**23.45**	**236**	P	P	11 13 32.5	-0.2
	0.7nm,0.4s,baz=39,slow=13,SNR=3.8						
CMAR	**Chiang Mai Arr**	**52.22**	**298**	P	P	11 17 33.0	-0.3
	1.5nm,0.5s,baz=122,slow=6.4,SNR=7.8						
MKAR	**Makanchi Array**	**76.60**	**321**	P	P	11 20 11.5	-0.3
	0.3nm,0.5s,baz=106,slow=6.5,SNR=4.1						
ILAR	**Eielson Array**	**85.53**	**23**	P	P	11 20 58.7	0.0
	0.5nm,0.8s,baz=249,slow=5.5,SNR=7.2						
TORD	**Torodi Ar. Bea**	**144.06**	**285**	PKP	PKPbc	11 27 55.2	-0.1
	0.4nm,0.8s,baz=114,slow=1.8,SNR=4.6						
DBIC	**Dimbokro**	**151.03**	**274**	PKPbc	PKPbc	11 28 15.4	+0.8
	0.4nm,0.4s,baz=0.0,slow=2.0,SNR=3.8						

*CSEM **06** 11:23:14.7,42°.40N×13°.33E,h11km,After ROM*
ROM 06 11:23:14.7±0.1**,42°.40N×13°.33E,h11**km**,Ml1.9**/1**,2C, Error ellipse: s-maj=1.5km s-min=0.9km az=96.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**131**	Pg	Pg	11 23 17.5	+0.4
AQU				Sg	Sg	11 23 19.3	+0.4
AQU	**L'Aquila**	**0.07**	**131**	Pg	Pg	11 23 17.5	+0.4
AQU				Sg	Sg	11 23 19.3	+0.4
CAMP	**Campotosto**	**0.15**	**24**⇑	*i*Pg	Pg	11 23 18.9	+0.6
CAMP				Sg	Sg	11 23 21.5	+0.7
CAMP	**Campotosto**	**0.15**	**24**⇑	*i*Pg	Pg	11 23 18.9	+0.6
CAMP				Sg	Sg	11 23 21.5	+0.7
FIAM	**Fiamignano**	**0.21**	**230**	Pg	Pg	11 23 19.8	+0.6
FIAM				Sg	Sg	11 23 23.3	+1.0
FIAM	**Fiamignano**	**0.21**	**230**	Pg	Pg	11 23 19.8	+0.6
FIAM				Sg	Sg	11 23 23.3	+1.0
FAGN	**Fagnano**	**0.23**	**125**	Pg	Pb	11 23 20.6	-0.5
FAGN				Sg	Sg	11 23 24.8	+1.8
FAGN	**Fagnano**	**0.23**	**125**	Pg	Pb	11 23 20.6	-0.5
FAGN				Sg	Sg	11 23 24.8	+1.8
TERO	**Teramo**	**0.30**	**42**	Pg	Pg	11 23 21.1	+0.2
TERO				Sg	Sg	11 23 25.8	+0.8
TERO	**Teramo**	**0.30**	**42**	Pg	Pg	11 23 21.1	+0.2
TERO				Sg	Sg	11 23 25.8	+0.8
VCEL	**Villa Celiera**	**0.38**	**91**	Pg	Pg	11 23 22.8	+0.4
VCEL	**Villa Celiera**	**0.38**	**91**	Pg	Pg	11 23 22.8	+0.4
PTQR	**Pietraquaria**	**0.38**	**172**	Pg	Pg	11 23 22.7	+0.3
PTQR				Sg	Sg	11 23 28.5	+0.9
PTQR	**Pietraquaria**	**0.38**	**172**	Pg	Pg	11 23 22.7	+0.3
PTQR				Sg	Sg	11 23 28.5	+0.9
NRCA	**Norcia**	**0.46**	**340**	Pg	Pg	11 23 24.1	+0.2
NRCA				Sg	Sb	11 23 31.4	-0.6
NRCA	**Norcia**	**0.46**	**340**	Pg	Pg	11 23 24.1	+0.2
NRCA				Sg	Sb	11 23 31.4	-0.6
CERT	**Cerreto**	**0.52**	**210**	Pg	Pg	11 23 25.0	0.0
CERT	**Cerreto**	**0.52**	**210**	Pg	Pg	11 23 25.0	0.0

*ISK **06** 11:23:45.8,37°.87N×27°.38E,h3km,MD2.8*
*CSEM **06** 11:23:46.9±0.1,37°.87N×27°.39E,h2km,MD3.1,Error ellipse: s-maj=3.1km s-min=2.2km az=66.0*
*DDA **06** 11:23:46.4,37°.86N×27°.36E,h7km,MD3.1*
*ATH **06** 11:23:58.1,36°.93N×26°.89E,h10km,MD3.0/3*
ISC 06 11:23:46.8±1.1**,37°.86N**±0°.02×**27°.37E**±0°.02**,h6**km±10km**, n50,**σ**0.72**/58**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.19**	**214**	*i* P	**Pg**	**11 23 50.2**	**-0.3**
GCAM	**G?zelcaml?**	**0.19**	**214**	*i* P	**Pg**	**11 23 50.2**	**-0.3**
AYDN	**Tasoluk**	**0.45**	**116**	*i* P	**Pg**	**11 23 55.5**	**0.0**
AYDN				*i* S	**Sg**	**11 24 01.5**	**+0.2**
AYDN	**Tasoluk**	**0.45**	**116**	*i* P	**Pg**	**11 23 55.5**	**0.0**
AYDN				*i* S	**Sg**	**11 24 01.5**	**+0.2**
IZM	**Izmir**	**0.55**	**351**	*e*PG	**Pg**	**11 23 57.1**	**-0.2**
IZM				*e*SG	**Sg**	**11 24 05.4**	**+1.0**
BLCB	**Balcova**	**0.59**	**334**	*e*PG	**Pg**	**11 23 57.9**	**-0.2**
BLCB	**Balcova**	**0.59**	**334**	*e*Pg	**Pg**	**11 23 57.9**	**-0.2**
MLSB	**Milas**	**0.65**	**150**	*e*PG	**Pg**	**11 23 59.0**	**-0.2**
MLSB	**Milas**	**0.65**	**150**	*e*Pg	**Pg**	**11 23 59.0**	**-0.2**
URLA	**Izmir**	**0.79**	**310**	*i* P	**Pb**	**11 24 02.4**	**-0.5**
URLA				*i* S	**Sb**	**11 24 13.3**	**-0.6**
URLA	**Izmir**	**0.79**	**310**	*i* P	**Pb**	**11 24 02.4**	**-0.5**
URLA				*i* S	**Sb**	**11 24 13.3**	**-0.6**
BODT	**Bodrum**	**0.80**	**183**	*e*PG	**Pg**	**11 24 02.2**	**+0.1**
BODT	**Bodrum**	**0.80**	**183**	*e*Pg	**Pg**	**11 24 02.2**	**+0.1**
YER	**Yerkesik**	**1.02**	**135**	*e*PG	**Pg**	**11 24 06.4**	**0.0**
YER	**Yerkesik**	**1.02**	**135**	*e*Pg	**Pg**	**11 24 06.4**	**0.0**
AKHS	**Akhisar**	**1.08**	**19**	*e*P	**Pg**	**11 24 06.9**	**-0.6**
AKHS				*i* S	**Sn**	**11 24 23.0**	**-0.7**
AKHS	**Akhisar**	**1.08**	**19**	*e*P	**Pg**	**11 24 06.9**	**-0.6**
AKHS				*i* S	**Sn**	**11 24 23.0**	**-0.7**
AKS	**Akhisar**	**1.08**	**19**	*e*PG	**Pg**	**11 24 07.1**	**-0.3**
AKS	**Akhisar**	**1.08**	**19**	*e*Pg	**Pg**	**11 24 07.1**	**-0.3**
DAT	**Datca**	**1.14**	**172**	*e*PN	**Pg**	**11 24 08.6**	**0.0**
KULA	**Kula-Manisa**	**1.21**	**57**	*e*PN	**Pg**	**11 24 09.5**	**-0.5**
DENT	**Denizli**	**1.32**	**94**	*e*PN	**Pb**	**11 24 11.9**	**-0.1**
DENT	**Denizli**	**1.32**	**94**	*e*Pn	**Pb**	**11 24 11.9**	**-0.1**
DNZL	**Cakiroluk**	**1.34**	**97**	*i* P	**Pn**	**11 24 11.7**	**-0.5**
DNZL				*i* S	**Sn**	**11 24 32.0**	**+1.6**
DNZL	**Cakiroluk**	**1.34**	**97**	*i* P	**Pn**	**11 24 11.7**	**-0.5**
TURN	**Turunc**	**1.39**	**135**	*i* P	**Pn**	**11 24 10.1**	**-2.6**
TURN	**Turunc**	**1.39**	**135**	*i* P	**Pn**	**11 24 10.1**	**-2.6**
DEMI	**Demirci**	**1.59**	**41**	*i* P	**Pb**	**11 24 16.5**	**-0.1**
DEMI	**Demirci**	**1.59**	**41**	*i* P	**Pb**	**11 24 16.5**	**-0.1**
APE	**Apeiranthos**	**1.66**	**242**	*e*PN	**Pb**	**11 24 17.6**	**-0.2**
APE	**Apeiranthos**	**1.66**	**242**	*e*PB	**Pg**	**11 24 19.0**	**+0.4**
APE	**Apeiranthos**	**1.66**	**242**	*e*Pn	**Pb**	**11 24 17.6**	**-0.2**
APE	**Apeiranthos**	**1.66**	**242**	*e*Pb	**Pg**	**11 24 19.0**	**+0.4**
ARG	**Arkhangelos**	**1.75**	**160**	*e*PB	**Pg**	**11 24 21.2**	**+1.0**
ARG	**Arkhangelos**	**1.75**	**160**	*e*Pb	**Pg**	**11 24 21.2**	**+1.0**
KHL	**Karahalli**	**1.76**	**74**	*e*PN	**Pn**	**11 24 17.9**	**0.0**
FETY	**Fethiye**	**1.83**	**131**	*e*PN	**Pn**	**11 24 19.2**	**+0.4**
FETY	**Fethiye**	**1.83**	**131**	*e*Pn	**Pn**	**11 24 19.2**	**+0.4**
EZN	**Ezine**	**2.13**	**338**	*e*PN	**Pn**	**11 24 23.4**	**+0.6**
EZN	**Ezine**	**2.13**	**338**	*e*Pn	**Pn**	**11 24 23.4**	**+0.6**
GONE	**Gonen-Balikesi**	**2.20**	**6**	*e*PN	**Pn**	**11 24 24.2**	**+0.4**
GONE	**Gonen-Balikesi**	**2.20**	**6**	*e*Pn	**Pn**	**11 24 24.2**	**+0.4**
TVSB	**Tavsanli**	**2.28**	**45**	*e*PN	**Pn**	**11 24 25.4**	**+0.3**
TVSB	**Tavsanli**	**2.28**	**45**	*e*Pn	**Pn**	**11 24 25.4**	**+0.3**
ELL	**Elmali**	**2.31**	**118**	*e*PN	**Pn**	**11 24 26.2**	**+0.8**
ELL	**Elmali**	**2.31**	**118**	*e*Pn	**Pn**	**11 24 26.2**	**+0.8**
ORLT	**Orhaneli**	**2.49**	**28**	*e*PN	**Pn**	**11 24 28.4**	**+0.6**
ORLT	**Orhaneli**	**2.49**	**28**	*e*Pn	**Pn**	**11 24 28.4**	**+0.6**
GELI	**Tayfur-Gelibol**	**2.63**	**345**	*e*PN	**Pn**	**11 24 30.5**	**+0.8**
GELI	**Tayfur-Gelibol**	**2.63**	**345**	*e*Pn	**Pn**	**11 24 30.5**	**+0.8**

*IDC **06** 11:26:06.1±1.6,22°.77S×174°.69W,h0km,mb4.0/8, mb1 4.3/8,mb1mx4.1/19,mbtmp4.0/8,MS3.7/1,Ms1 3.7/1, ms1mx2.7/30,Error ellipse: s-maj=69.5km s-min=26.0km az=149.0*
*ISCJB **06** 11:26:10.9±0.8,22°.5S±0°.2×175°.0W±0°.2,h33km,mb4.0/8, MS3.7/1,Error ellipse: s-maj=28.0km s-min=23.1km az=138.1*
ISC 06 11:26:11.9±0.9**,22°.5S**±0°.2×**174°.8W**±0°.2**,h33**km**,n14,** σ**1.36**/13**,mb4.1**/7**,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.67**	**247**	LR	LR	11 48 54.3	
	comp=Z,114nm,20.0s,baz=26,slow=34						
ASAR	**Alice Springs**	**47.00**	**258**	P	**P**	**11 34 39.0**	**-1.3**
	2.3nm,0.8s,baz=102,slow=7.1,SNR=24						
ASAR				PcP	**PcP**	**11 36 13.2**	**+0.8**
	0.4nm,0.7s,baz=125,slow=3.7,SNR=4.6						
WRA	**Warramunga Arr**	**47.31**	**263**	P	**P**	**11 34 40.8**	**-1.9**
	1.3nm,0.6s,baz=102,slow=7.8,SNR=18						
WRA				PcP	**PcP**	**11 36 14.4**	**+1.0**
	0.8nm,0.9s,baz=101,slow=3.2,SNR=4.2						
MJAR	**Matsushiro Arr**	**73.64**	**322**	P	**P**	**11 37 42.0**	**-0.2**
	1.4nm,0.7s,baz=167,slow=7.0,SNR=5.9						
USRK	**Ussuriysk Arra**	**82.34**	**324**	P	**P**	**11 38 32.8**	**+2.6**
	1.1nm,0.6s,baz=98,slow=3.9,SNR=5.0						
SNAA	**Sanae**	**85.87**	**177**	*e*P	**P**	**11 38 48.7**	**+0.6**
VNA3	**Neumayer Olymp**	**85.89**	**175**	*e*P	**P**	**11 38 48.9**	**+0.8**
PDAR	**Pinedale Array**	**88.43**	**42**	P	**P**	**11 38 59.1**	**-1.9**
	0.5nm,0.6s,baz=68,slow=8.5,SNR=7.0						
ILAR	**Eielson Array**	**89.67**	**12**	P	**P**	**11 39 06.0**	**0.0**
	0.5nm,0.9s,baz=217,slow=4.9,SNR=6.7						
CMAR	**Chiang Mai Arr**	**93.61**	**288**	P	**P**	**11 39 25.6**	**+0.2**
	0.5nm,0.2s,baz=154,slow=2.8,SNR=6.5						
YKA	**Yellowknife Ar**	**97.13**	**24**	P	Pdif	11 39 41.0	+0.6
	0.1nm,0.6s,baz=240,slow=4.5,SNR=6.5						
MKAR	**Makanchi Array**	**114.77**	**312**	PKP	PKPdf	11 44 48.9	-0.1
	0.2nm,0.6s,baz=246,slow=4.8,SNR=3.0						
AKASG	**Malin Array Be**	**146.22**	**332**	PKPbc	**PKPbc**	**11 45 48.5**	**-0.3**
	2.3nm,0.6s,baz=44,slow=3.9,SNR=8.2						
BRTR	**Keskin Array B**	**150.42**	**312**	PKPbc	**PKPbc**	**11 46 00.1**	**-0.3**
	0.4nm,0.4s,baz=35,slow=5.3,SNR=3.0						

IDC 06 11:30:11.9±3.2**,21°.38S**×**175°.24W,h0**km**,mb3.9**/5**, mb1 4.1**/5**,mb1mx3.8**/22**,mbtmp3.9**/5**,MS3.4**/1**,Ms1 3.4**/1**, ms1mx2.8**/29**,Error ellipse: s-maj=160.6km s-min=28.3km az=149.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**18.07**	**200**	LR	LR	11 40 16.4	
	comp=Z,111nm,19.9s,baz=156,slow=34						
CTA	**Charters Tower**	**35.97**	**265**	P	P	11 37 15.4	+0.7
	1.9nm,0.4s,baz=103,slow=12,SNR=6.2						
ASAR	**Alice Springs**	**46.83**	**257**	P	P	11 38 44.4	+0.5
	1.6nm,0.6s,baz=98,slow=7.6,SNR=24						
ASAR				PcP	PcP	11 40 16.2	-0.9
	0.5nm,0.5s,baz=108,slow=3.8,SNR=6.7						
WRA	**Warramunga Arr**	**47.03**	**262**	P	P	11 38 44.7	-0.8
	0.4nm,0.3s,baz=97,slow=6.6,SNR=22						
FITZ	**Fitzroy Crossi**	**55.46**	**262**	P	P	11 39 48.4	-0.4
	1.4nm,0.8s,baz=39,slow=6.5						
ILAR	**Eielson Array**	**88.62**	**12**	P	P	11 43 06.1	-0.2
	0.2nm,1.0s,baz=198,slow=5.5,SNR=2.3						
AKASG	**Malin Array Be**	**145.00**	**333**	PKPbc	PKPbc	11 49 47.8	-2.5
	1.2nm,0.5s,baz=49,slow=3.4,SNR=4.5						
BRTR	**Keskin Array B**	**149.33**	**313**	PKPbc	PKPbc	11 50 02.6	-0.6
	0.5nm,0.4s,baz=146,slow=4.6,SNR=3.6						
GERES	**GERESS Array B**	**151.68**	**347**	PKPbc	PKPbc	11 50 10.1	+1.7
	0.2nm,0.2s,baz=129,slow=1.9,SNR=3.5						

*ISCJB **06** 11:43:14.0±0.6,9°.58S±0°.06×122°.38E±0°.05,h33km, mb3.8/4,Error ellipse: s-maj=10.2km s-min=5.1km az=39.6*
*IDC **06** 11:43:15.6±1.1,10°.09S×120°.76E,h87km±9km,mb3.5/4, mb1 3.8/7,mb1mx3.5/20,mbtmp3.7/7,Error ellipse: s-maj=71.5km s-min=13.4km az=67.0*
*AUST **06** 11:43:18.6,9°.50S×122°.50E,h60km*
ISC 06 11:43:16.4±0.9**,9°.68S**±0°.08×**122°.29E**±0°.07**,h35**km**,n16,** σ**2.85**/17**,mb3.9**/4**,Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.96**	**270**	P	Pn	11 43 55.0	+7.8
	baz=2.2,SNR=3.9						
WSI				S	**Sn**	**11 44 11.1**	**+0.5**
	baz=2.2,SNR=4.9						
KAPI	**Kappang**	**5.27**	**331**	P	**Pn**	**11 44 31.7**	**-1.0**
	8.4nm,0.3s,baz=165,slow=8.8,SNR=40						
KAPI				S	**Sn**	**11 45 30.7**	**-1.5**
	baz=243,slow=17,SNR=2.5						
FITZ	**Fitzroy Crossi**	**8.98**	**159**	P	Pn	11 45 28.1	+4.4
	1.6nm,0.3s,baz=354,slow=9.5,SNR=48						
FITZ				S	**Sn**	**11 47 04.5**	**+0.8**
	1.9nm,0.3s,baz=130,slow=12,SNR=14						
FITZ	**Fitzroy Crossi**	**8.98**	**159**	P	Pn	11 45 28.0	+4.3
	baz=9.1,SNR=28						
FITZ				S	**Sn**	**11 47 07.6**	**+3.8**
	baz=9.1,SNR=4.4						
MTN	**Manton Dam**	**9.23**	**111**	P	**Pn**	**11 45 29.2**	**+2.1**
	baz=9.1,SNR=33						
MTN				S	**Sn**	**11 47 07.7**	**-2.0**
	baz=9.1,SNR=3.7						
KDU	**Kakadu**	**10.43**	**108**	P	**Pn**	**11 45 44.6**	**+1.1**
	baz=10,SNR=30						
WRA	**Warramunga Arr**	**15.48**	**133**	P	**Pn**	**11 46 50.8**	**-1.4**
	0.6nm,0.3s,baz=310,slow=13,SNR=32						
WRA				S	Sn	11 49 35.1	-7.5
	0.4nm,0.3s,baz=306,slow=24,SNR=6.1						
MEEK	**Meekatharra**	**17.23**	**191**	P	**P**	**11 47 19.0**	**+3.4**
	baz=18,SNR=9.2						
MEEK				S	Sn	11 50 16.9	-8.1
	baz=18,SNR=5.0						
ASAR	**Alice Springs**	**17.80**	**143**	P	**P**	**11 47 23.3**	**+1.3**
	0.9nm,0.3s,baz=323,slow=12,SNR=37						
ASAR				S	**Sn**	**11 50 34.1**	**-4.8**
	0.2nm,0.3s,baz=310,slow=21,SNR=8.3						
QIS	**Mount Isa**	**19.89**	**125**	P	**Pn**	**11 47 46.9**	**+0.1**
	baz=20,SNR=14						
MORW	**Morawa**	**20.16**	**196**	P	**P**	**11 47 48.7**	**+0.8**
	baz=20,SNR=3.2						
MORW				S	**S**	**11 51 25.6**	**-6.8**
	baz=20,SNR=9.0						
GSI	**Gunungsitoli**	**26.92**	**293**	S	**S**	**11 53 29.8**	**+0.3**
	baz=27,SNR=3.5						
STKA	**Stephens Creek**	**28.43**	**144**	P	**P**	**11 49 08.5**	**+0.6**
	2.9nm,0.5s,baz=309,slow=7.5,SNR=7.5						
SONM	**Songino Array**	**58.97**	**348**	P	P	11 53 05.0	-7.4
	0.2nm,0.4s,baz=166,slow=6.5,SNR=2.6						
SONM				pP	pP	11 53 26.9	+3.9
	0.3nm,0.5s,baz=170,slow=6.3,SNR=2.3						
MKAR	**Makanchi Array**	**66.57**	**331**	P	P	11 53 55.8	-7.2
	0.2nm,0.5s,baz=134,slow=7.3,SNR=3.5						
MKAR				pP	pP	11 54 16.6	+2.8
	0.2nm,0.4s,baz=154,slow=5.5,SNR=2.9						
ZALV	**Zalesovo Beam**	**70.86**	**338**	P	P	11 54 20.5	-9.0
	1.1nm,0.5s,baz=135,slow=5.6,SNR=3.7						
ZALV				pP	pP	11 54 44.4	+4.0
	0.5nm,0.4s,baz=123,slow=5.3,SNR=1.7						

*NAO **06** 12:02:49.7±2.3,59°.31N×26°.95E,ML2.4*
*HEL **06** 12:02:49.9±0.8,59°.29N×27°.17E,h0km,ML1.9,Explosion*
*BER **06** 12:02:50.4±3.1,59°.33N×26°.98E,h0km,ML2.4(NAO), Suspected explosion*
*IDC **06** 12:02:51.9±2.0,59°.44N×27°.15E,h0km,mb1 3.2/4, mb1mx2.9/28,mbtmp3.1/4,ML2.6/4,Error ellipse: s-maj=18.1km s-min=11.1km az=121.0*
*CSEM **06** 12:02:54.1±0.3,59°.63N×27°.02E,h2km,ML2.4,Error ellipse: s-maj=7.9km s-min=4.8km az=91.0,Mining explosion.*
ISC 06 12:02:48.0±0.7**,59°.39N**±0°.02×**27°.16E**±0°.03**,h0**km**,n53,** σ**1.43**/77**,Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VJF	**Virojoki**	**1.17**	**10**	PG	**Pn**	**12 03 12.3**	**+0.7**
VJF				SG	**Sn**	**12 03 29.4**	**+1.1**
VJF				MSG		12 03 29.4	
	comp=Z,8.1nm,0.2s						
VJF	**Virojoki**	**1.17**	**10**	PG	**Pn**	**12 03 12.3**	**+0.7**
VJF				SG	**Sn**	**12 03 29.4**	**+1.1**
VJF				MSG		12 03 29.4	
	comp=Z,8.1nm,0.2s						
VJF	**Virojoki**	**1.17**	**10**	Pg	**Pn**	**12 03 12.3**	**+0.7**
	SNR=90						
VJF				Sg	**Sn**	**12 03 29.4**	**+1.1**
PVF	**Pernaja**	**1.33**	**331**	PG	**Pb**	**12 03 15.1**	**+1.3**
PVF				SG	**Sn**	**12 03 33.6**	**+1.4**
PVF				MSG		12 03 33.6	
	comp=Z,3.8nm,0.1s						
PVF	**Pernaja**	**1.33**	**331**	PG	**Pb**	**12 03 15.1**	**+1.3**
PVF				SG	**Sn**	**12 03 33.6**	**+1.4**
PVF				MSG		12 03 33.6	
	comp=Z,3.8nm,0.1s						
PVF	**Pernaja**	**1.33**	**331**	Pg	**Pb**	**12 03 15.1**	**+1.3**
	SNR=90						
PVF				Sg	**Sn**	**12 03 33.6**	**+1.4**
MEF	**Metsahovi**	**1.62**	**302**	PG	**Pg**	**12 03 20.1**	**+1.0**
MEF				SG	**Sg**	**12 03 41.9**	**+1.8**
MEF				MSG		12 03 41.9	
	comp=Z,8.7nm,0.2s						
MEF	**Metsahovi**	**1.62**	**302**	PG	**Pg**	**12 03 20.1**	**+1.0**
MEF				SG	**Sg**	**12 03 41.9**	**+1.8**
MEF				MSG		12 03 41.9	
	comp=Z,8.7nm,0.2s						
MEF	**Metsahovi**	**1.62**	**302**	Pg	**Pg**	**12 03 20.1**	**+1.0**
	SNR=90						
MEF				Sg	**Sg**	**12 03 41.9**	**+1.8**
	comp=Z,8.7nm,0.2s,SNR=90						
MTSE	**Matsula**	**1.85**	**250**	PN	**Pn**	**12 03 21.5**	**+0.5**
MTSE				SG	**Sn**	**12 03 45.0**	**-0.1**
MTSE	**Matsula**	**1.85**	**250**	PN	**Pn**	**12 03 21.5**	**+0.5**
MTSE				SG	**Sn**	**12 03 45.0**	**-0.1**
FIA0	**FINESS Array S**	**2.13**	**346**	Pn	**Pb**	**12 03 27.6**	**+0.1**
	baz=164,slow=18						
FIA0				Lg	Lg	12 03 58.3	
	baz=168,slow=28						
FIA0				Rg	Rg	12 04 09.2	
	baz=163,slow=37						
FIA0	**FINESS Array S**	**2.13**	**346**	Pn	**Pb**	**12 03 27.6**	**+0.1**
	baz=164,slow=18						
FIA0				Lg	Lg	12 03 58.3	
	baz=168,slow=28						
FIA0				Rg	Rg	12 04 09.2	
	baz=163,slow=37						
FIA0	**FINESS Array S**	**2.13**	**346**	Pn	**Pb**	**12 03 27.6**	**+0.1**
	baz=164,slow=18						
FIA0				Lg	Lg	12 03 58.3	
	baz=168,slow=28						
FIA0				Rg	Rg	12 04 09.2	
	baz=163,slow=37						
FIA0	**FINESS Array S**	**2.13**	**346**	PN	**Pb**	**12 03 27.6**	**+0.1**
	baz=165						
FIA0				MSG	**Sb**	**12 03 56.4**	**+2.0**
	comp=Z,5.4nm,0.3s						
FIA0				SG	**Sb**	**12 03 56.4**	**+2.0**
FIA0				RG	Rg	12 04 11.6	
FIA0	**FINESS Array S**	**2.13**	**346**	PN	**Pb**	**12 03 27.6**	**+0.1**
	baz=165						
FIA0				SG	**Sb**	**12 03 56.4**	**+2.0**
FIA0				MSG		12 03 56.4	
	comp=Z,5.4nm,0.3s						
FIA0				RG	Rg	12 04 11.6	
FIA0	**FINESS Array S**	**2.13**	**346**	Pn	**Pb**	**12 03 27.6**	**+0.1**
	comp=Z,5.4nm,0.3s,baz=165,SNR=33						
FIA0				Sg	**Sb**	**12 03 56.4**	**+2.0**
	SNR=90						
FIA0				Lg	Lg	12 03 58.3	
	baz=168,slow=26						
FINES	**FINESS Array B**	**2.13**	**346**	Pn	**Pb**	**12 03 27.6**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=164,slow=15,SNR=41						
FINES				Pg	**Pg**	**12 03 29.1**	**+0.3**
	comp=Z,1.8nm,0.3s,baz=159,slow=16,SNR=40						
FINES				Lg	Lg	12 03 57.6	
	comp=Z,4.8nm,0.3s,baz=168,slow=27,SNR=26						
FINES				Rg	Rg	12 04 09.3	
	comp=Z,51nm,0.9s,baz=162,slow=32,SNR=14						
KAF	**Kangasniemi**	**2.77**	**352**	PN	**Pb**	**12 03 37.2**	**-1.1**
KAF				SG	**Sb**	**12 04 12.1**	**-0.5**
KAF				MSG		12 04 12.1	
	comp=Z,3.2nm,0.2s						
KAF	**Kangasniemi**	**2.77**	**352**	PN	**Pb**	**12 03 37.2**	**-1.1**
KAF				SG	**Sb**	**12 04 12.1**	**-0.5**
KAF				MSG		12 04 12.1	
	comp=Z,3.2nm,0.2s						
KAF	**Kangasniemi**	**2.77**	**352**	Pn	**Pb**	**12 03 37.1**	**-1.1**
KAF				Sg	**Sb**	**12 04 12.1**	**-0.5**
RAF	**Rauma**	**3.15**	**304**	PN	**Pb**	**12 03 42.7**	**-2.1**
	baz=112						
RAF	**Rauma**	**3.15**	**304**	PN	**Pb**	**12 03 42.7**	**-2.1**
	baz=112						
RAF	**Rauma**	**3.15**	**304**	Pn	**Pb**	**12 03 42.7**	**-2.1**
	baz=112,SNR=33						
SUF	**Sumiainen**	**3.38**	**352**	PN	Pn	12 03 45.6	+3.7
SUF				SG	**Sg**	**12 04 35.4**	**-1.0**
SUF				MSG		12 04 35.4	
	comp=Z,3.0nm,0.4s						
SUF	**Sumiainen**	**3.38**	**352**	PN	Pn	12 03 45.6	+3.7
SUF				SG	**Sg**	**12 04 35.4**	**-1.0**
SUF				MSG		12 04 35.4	
	comp=Z,3.0nm,0.4s						
SUF	**Sumiainen**	**3.38**	**352**	Pn	Pn	12 03 45.6	+3.7
	SNR=33						
SUF				Sg	**Sg**	**12 04 35.4**	**-1.0**
	comp=Z,3.0nm,0.4s,SNR=90						
IZAR	**Zarasai**	**3.68**	**188**	*e*P	**Pb**	**12 03 55.5**	**+1.7**
IZAR				*e*S	**Sb**	**12 04 39.1**	**+0.2**
IZAR				AML	AML	12 04 56.8	
	comp=Z,12nm,0.3s						
IZAR	**Zarasai**	**3.68**	**188**	*e*P	**Pb**	**12 03 55.5**	**+1.7**
	SNR=31						
AAL	**Aland**	**3.71**	**285**	SG	**Sg**	**12 04 47.1**	**+0.1**
AAL	**Aland**	**3.71**	**285**	SG	**Sg**	**12 04 47.1**	**+0.1**
AAL	**Aland**	**3.71**	**285**	Sg	**Sg**	**12 04 47.1**	**+0.1**
ISAL	**Salakas**	**3.87**	**189**	*e*P	**Pb**	**12 03 57.8**	**+0.8**
ISAL				*e*S	**Sb**	**12 04 42.9**	**-1.4**
ISAL				AML	AML	12 04 54.4	
	comp=Z,6.0nm,0.5s						
ISAL	**Salakas**	**3.87**	**189**	*e*P	**Pb**	**12 03 57.8**	**+0.8**
	SNR=31						
JOF	**Joensuu**	**4.07**	**28**	PN	Pn	12 03 54.9	+3.4
	baz=207						
JOF				MSG	**Sg**	**12 04 58.6**	**-0.1**
	comp=Z,5.0nm,0.4s						
JOF				SG	**Sg**	**12 04 58.6**	**-0.1**
JOF	**Joensuu**	**4.07**	**28**	PN	Pn	12 03 54.9	+3.4
	baz=207						
JOF				SG	**Sg**	**12 04 58.6**	**-0.1**
JOF				MSG		12 04 58.6	
	comp=Z,5.0nm,0.4s						
JOF	**Joensuu**	**4.07**	**28**	Pn	Pn	12 03 54.9	+3.4
	comp=Z,5.0nm,0.4s,baz=207,SNR=33						
JOF				Sg	**Sg**	**12 04 58.6**	**-0.1**
	SNR=90						
IIGN	**Ignalina**	**4.08**	**188**	*e*P	**Pb**	**12 04 00.8**	**+0.2**
IIGN				*e*S	**Sb**	**12 04 48.2**	**-2.3**
IIGN				AML	AML	12 04 57.5	
	comp=Z,8.0nm,0.4s						
IIGN	**Ignalina**	**4.08**	**188**	*e*P	**Pb**	**12 04 00.8**	**+0.2**
	SNR=31						
HFS	**Hagfors**	**6.84**	**282**	Sn	Sn	12 05 42.4	-5.6
	baz=111,slow=18						
HFS				Lg	Lg	12 06 18.9	
	baz=92,slow=28						
HFS	**Hagfors**	**6.84**	**282**	Sn	Sn	12 05 42.4	-5.6
	baz=111,slow=18						
HFS				Lg	Lg	12 06 18.9	
	baz=92,slow=28						
HFS	**Hagfors**	**6.84**	**282**	Sn	Sn	12 05 42.4	-5.6
	baz=111,slow=18						
HFS				Lg	Lg	12 06 18.9	
	baz=92,slow=28						
HFS	**Hagfors**	**6.84**	**282**	Pn	**Pn**	**12 04 30.9**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=94,slow=12,SNR=2.6						
HFS				Sn	**Sn**	**12 05 46.5**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=105,slow=28,SNR=5.2						
HFS				Lg	Lg	12 06 19.0	
	comp=Z,0.7nm,0.3s,baz=97,slow=32,SNR=6.2						
NB2	**NORSAR Subarra**	**8.11**	**289**	Pn	**Pn**	**12 04 46.3**	**-0.6**
NB2	**NORSAR Subarra**	**8.11**	**289**	Pn	**Pn**	**12 04 46.3**	**-0.6**
NB2	**NORSAR Subarra**	**8.11**	**289**	Pn	**Pn**	**12 04 46.3**	**-0.6**
NOA	**NORSAR Array B**	**8.11**	**289**	Pn	**Pn**	**12 04 47.3**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=103,slow=12,SNR=3.6						
NOA				Sn	**Sn**	**12 06 14.7**	**-4.5**
	comp=Z,0.2nm,0.3s,baz=234,slow=21,SNR=1.8						
NOA				Lg	Lg	12 06 59.8	
	comp=Z,0.4nm,0.3s,baz=182,slow=4.9,SNR=2.5						
AKASG	**Malin Array Be**	**8.79**	**171**	Lg	Lg	12 07 29.6	
	comp=Z,1.0nm,0.3s,baz=347,slow=12,SNR=4.4						
ARA0	**ARCESS Array S**	**10.21**	**357**	Pn	**Pn**	**12 05 16.1**	**+0.5**
	baz=170,slow=14						
ARA0				Sn	**Sn**	**12 07 06.9**	**-3.8**
	baz=171,slow=28						
ARA0	**ARCESS Array S**	**10.21**	**357**	Pn	**Pn**	**12 05 16.1**	**+0.5**
	baz=170,slow=14						
ARA0				Sn	**Sn**	**12 07 06.9**	**-3.8**
	baz=171,slow=28						
ARA0	**ARCESS Array S**	**10.21**	**357**	Pn	**Pn**	**12 05 16.1**	**+0.5**
	baz=170,slow=14						
ARA0				Sn	**Sn**	**12 07 06.9**	**-3.8**
	baz=171,slow=28						
ARA0	**ARCESS Array S**	**10.21**	**357**	Pn	**Pn**	**12 05 16.1**	**+0.5**
	baz=170,slow=14,SNR=50						
ARCES	**ARCESS Array B**	**10.21**	**357**	Pn	**Pn**	**12 05 16.3**	**+0.7**

comp=Z,0.1nm,0.3s,baz=172,slow=14,SNR=8.1

*IDC **06** 12:16:02.5±0.4, 22.°59S×174.°78W, h0km, mb5.1/24, mb1 5.1/24, mb1mx5.1/25, mbtmp5.0/24, MS5.2/27, Ms1 5.2/27, ms1mx5.1/39, Error ellipse: s-maj=15.3km s-min=10.6km az=168.0*

*AUST **06** 12:16:05.7±0.9, 22.°25S×174.°21W, h45km, Error ellipse: s-maj=1.5km s-min=1.3km az=324.0*

*MOS **06** 12:16:07.7±1.2, 22.°33S×175.°03W, h33km, mb5.5/52, MS5.4/39, Error ellipse: s-maj=9.0km s-min=8.5km az=151.4*

*GCMT **06** 12:16:07.4±0.1, 22.°50S×174.°19W, h12km, MW5.6, Moment Tensor Solution. s84,c162; s99,c215; Moment tensor: Scale 10^{17}Nm; M_{rr}2.10±.03; $M_{\theta\theta}$0.26±.03; $M_{\phi\phi}$-2.37±.02; $M_{r\theta}$0.41±.08; $M_{\theta\phi}$0.17±.02; $M_{\phi r}$2.07±.07; Best double couple: $M_0$3.10000×10^{17} NP1:ϕ_s164.00000°, δ25.00000°, λ69.00000°. NP2:ϕ_s7.00000°, δ67.00000°, λ100.00000°. Principal axes: T 2.9900, Plg67.0000°, Azm294.0000°; N 0.1900, Plg9.0000°, Azm183.0000°; P -3.1800, Plg21.0000°, Azm90.0000°; Data Used: II IU CN IC G. Surface waves from 109 sta.*

*NEIC **06** 12:16:08.9±0.2, 22.°38S×174.°94W, h35km, mb5.4/89, MS5.5/154 Error ellipse: s-maj=8.2km s-min=4.7km az=147.0*

*ISCJB **06** 12:16:12.2±0.1, 22.°55S±0.°04×174.°93W±0.°03, h79km, mb5.2/135, Error ellipse: s-maj=6.6km s-min=3.2km az=160.5*

*BJI **06** 12:16:15.2, 21.°74S×174.°89W, h80km, mB6.1/50, mb5.5/51, Ms5.5/56, Ms7 5.2/50*

*DJA **06** 12:16:23.6±4.3, 23°S±11°×17°5W±1°4, h146km±35km, M5.5/21, mB6.0/11, mb5.2/21, Mw(mB)5.6/11*

ISC 06 12:16:14.4±0.3**, 22.°47S**±0.°05×**174.°87W**±0.°04**, h84**km±2km**, h84**km**:pP-P, n1011, σ1.°35**/979**, mb5.3**/134**, 213C-183D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.72	55	P	Pn	12 17 19.6	-17
	baz=5.1,SNR=20						
MSVF	Nonsavu	8.15	304	eP	Pn	12 18 09.9	-0.1
MSVF	Nonsavu	8.15	304	ePn	Pn	12 18 09.9	-0.1
AFI	Afiamalu	9.00	20	ePn	Pn	12 18 07.7	-14
AFI				Sn	Sn	12 19 37.2	-24
AFI	Afiamalu	9.00	20	Pn	Pn	12 18 07.9	-14
	14nm,0.3s,baz=215,slow=2.8,SNR=12						
AFI				Sn	Sn	12 19 37.2	-24
	11nm,0.3s,baz=250,slow=23,SNR=1.8						
RAR	Rarotonga	14.07	88	Pn	Pn	12 19 12.6	-17
	27nm,0.3s,baz=270,slow=6.8,SNR=41						
RAR				Sn	Sn	12 21 34.5	-30
	8.0nm,0.3s,baz=90,slow=24,SNR=2.7						
RAR				LR	LR	12 23 06.3	
	comp=Z,12µm,18.5s,baz=268,slow=30						
URZ	Urewera	17.18	202	ePn	Pn	12 20 07.7	-1.3
	54nm,1.1s						
URZ				S	Sn	12 23 03.1	-17
URZ	Urewera	17.18	202	P	Pn	12 20 07.1	-1.9
	5.1nm,0.3s,baz=36,slow=2.9,SNR=18						
URZ				S	Sn	12 23 03.1	-17
	2.1nm,0.3s,baz=153,slow=22,SNR=7.3						
URZ				LR	LR	12 25 38.6	
	comp=Z,8µm,19.8s,baz=5.0,slow=34						
DZM	Mont Dzumac	17.30	268	eP	P	12 20 11.2	+0.2
	231nm,1.2s						
DZM				eLR	LR	12 24 14.2	
	15µm,26.9s						
DZM	Mont Dzumac	17.30	268	eP	Pn	12 20 09.3	-1.5
DZM	Mont Dzumac	17.30	268	ePn	Pn	12 20 10.1	-0.6
	130nm,1.1s						
DZM	Mont Dzumac	17.30	268	P	P	12 20 11.0	0.0
	1.2nm,0.3s,baz=88,slow=18,SNR=11						
NOUC	Port Laguerre	17.43	268	eP	Pn	12 20 10.8	-1.4
SNZO	South Karori	20.74	203	PFAKE		12 21 00.0	+8.7
SNZO				LR	LR		
	comp=Z,10µm,21.0s						
KHZ	Kahutara	22.13	203	eP	P	12 21 02.2	-0.8
	comp=Z,78nm,1.1s						
TBI	Tubuai	23.41	97	eP	P	12 21 14.0	-2.2
	comp=Z,517nm,1.4s						
TBI				eS	S	12 25 15.4	-7.6
	comp=Z,10µm,27.8s						
TBI				eLR	LR	12 26 37.9	
	comp=Z,15µm,28.0s,baz=267						
TBI	Tubuai	23.41	97	eP	P	12 21 14.0	-2.2
	comp=Z,517nm,1.4s						
TBI				eS	S	12 25 15.4	-7.6
RPZ	Rata Peaks	24.19	205	P	P	12 21 20.8	-2.1
RPZ	Rata Peaks	24.19	205	P	P	12 21 20.8	-2.1
	comp=Z,13nm,0.7s,baz=174,slow=2.4,SNR=2.8						
PPT2	Papeete2	24.24	83	eP	P	12 21 25.5	+1.8
	comp=Z,92nm,1.5s						
PPT2				epP	pP	12 21 43.3	+0.7
	comp=Z,144nm,1.3s						
PPT2				eS	S	12 25 37.3	+0.7
	comp=Z,7µm,25.5s						
PPT2				eLR	LR	12 26 40.3	
	comp=Z,22µm,27.5s,baz=255						
PPT	Papeete	24.25	83	P	P	12 21 19.6	-4.1
PPT	Papeete	24.25	83	P	P	12 21 19.6	-4.1
	comp=Z,22nm,0.7s,baz=41,slow=20,SNR=2.5						
PPT				LR	LR	12 28 32.8	
	comp=Z,8µm,18.3s,baz=251,slow=31						
TIAR	Tiarei	24.46	83	eP	P	12 21 28.0	+2.4
	comp=Z,92nm,1.0s						
TIAR				epP	pP	12 21 45.9	+1.3
	comp=Z,136nm,1.0s						
TIAR	Tiarei	24.46	83	eP	P	12 21 28.0	+2.4
	comp=Z,92nm,1.0s						
TIAR				epP	pP	12 21 45.9	+1.3
TARA	Tarawa	26.50	332	PFAKE		12 21 50.0	+5.9
TARA				LR	LR		
	comp=Z,8µm,19.0s						
HNR	Honiara	27.41	294	eP	P	12 21 50.7	-1.6
HNR	Honiara	27.41	294	P	P	12 21 50.6	-1.6
	comp=Z,68nm,1.0s,baz=309,slow=4.2,SNR=6.5						
HNR				LR	LR	12 29 15.2	
	comp=Z,2µm,20.3s,baz=134,slow=29						
XMAS	Kiritimati	29.71	37	PFAKE		12 22 20.0	+7.3
XMAS				LR	LR		
	comp=Z,7µm,21.0s						
ARMA	Armidale	30.94	248	eP	P	12 22 23.0	-0.7
	comp=Z,62nm,1.4s						
ARMA	Armidale	30.94	248	P	P	12 22 23.7	0.0
	baz=32,SNR=5.8						
EIDS	Eidsvold	31.21	258	eP	P	12 22 24.4	-1.5
	comp=Z,70nm,1.4s						
EIDS	Eidsvold	31.21	258	P	P	12 22 24.5	-1.5
	baz=32,SNR=7.3						
RMQ	Roma	33.27	256	P	P	12 22 43.5	-0.6
	baz=34,SNR=11						
RMQ				S	S	12 28 03.9	+5.5
	baz=34,SNR=4.9						
CAN	Canberra	33.94	240	eP	P	12 22 47.8	-2.0
CAN				pmax	pmax		
	comp=Z,32nm,1.3s						
CAN				MLR	MLR		
	comp=Z,8µm,19.0s						
CAN	Canberra	33.94	240	eP	P	12 22 47.8	-2.0
	comp=Z,32nm,1.3s						
CAN				LR	LR		
	comp=Z,8µm,19.0s						
CMSA	Cobar Meteorol	36.12	247	P	P	12 23 06.3	-2.2
	baz=37,SNR=22						
CTA	Charters Tower	36.24	266	P	P	12 23 08.1	-1.6
CTA	Charters Tower	36.24	266	P	P	12 23 08.1	-1.6
	comp=Z,12nm,0.6s,baz=88,slow=10,SNR=15						
CTAO	Charters Tower	36.24	266	eP	P	12 23 08.3	-1.3
CTAO				pmax	pmax		
	comp=Z,104nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,2µm,20.0s						
CTAO	Charters Tower	36.24	266	eP	P	12 23 08.3	-1.3
	comp=Z,104nm,1.4s						
CTAO				LR	LR		
	comp=Z,2µm,20.0s						
RKT	Rikitea	36.71	99	eP	P	12 23 12.8	-0.8
	comp=Z,78nm,1.3s						
RKT				eS	S	12 28 48.4	-2.8
	comp=Z,1µm,25.8s						
RKT				eLQ	LQ	12 31 17.9	
	comp=Z,1µm,30.5s						
RKT				eLR	LR	12 32 30.1	
	comp=Z,10µm,30.5s,baz=264						
RKT	Rikitea	36.71	99	eP	P	12 23 12.8	-0.8
RKT				eS	S	12 28 48.4	-2.8
RKT				pmax	pmax		
	comp=Z,78nm,1.3s						
RKT	Rikitea	36.71	99	eP	P	12 23 12.8	-0.8
	comp=Z,78nm,1.3s						
RKT				eS	S	12 28 48.4	-2.8
RKT				eLQ	LQ	12 31 17.9	
QLP	Quilpie	37.32	255	P	P	12 23 17.0	-1.7
	baz=38,SNR=8.1						
TAU	Tasmania Unive	37.38	228	PFAKE		12 23 30.0	+11
TAU				LR	LR		
	comp=Z,5µm,19.0s						
PMG	Port Moresby	38.63	283	eP	P	12 23 27.7	-2.1
	comp=Z,108nm,1.1s						
PMG				S	S	12 29 23.3	+2.9
PMG				LR	LR		
	comp=Z,3µm,19.0s						
PMG	Port Moresby	38.63	283	P	P	12 23 27.5	-2.3
	comp=Z,93nm,1.3s,comp=Z,2µm						
PMG	Port Moresby	38.63	283	P	P	12 23 28.0	-1.8
	comp=Z,78nm,1.2s,baz=104,slow=5.4,SNR=43						
PMG				S	S	12 29 23.3	+2.9
	comp=Z,1.7nm,0.4s,baz=317,slow=9.4,SNR=1.7						
STKA	Stephens Creek	39.63	247	eP	P	12 23 37.0	-1.0
	comp=Z,11nm,1.4s						
STKA	Stephens Creek	39.63	247	P	P	12 23 36.5	-1.6
	comp=Z,12nm,0.9s,baz=80,slow=9.2,SNR=14						
STKA				LR	LR	12 38 42.7	
	comp=Z,8µm,19.6s,baz=73,slow=34						
STKA	Stephens Creek	39.63	247	P	P	12 23 37.2	-0.8
	baz=40,SNR=8.7						
COEN	Coen	40.63	275	P	P	12 23 45.9	-0.6
	baz=41,SNR=17						
BBOO	Buckleboo	44.34	246	eP	P	12 24 15.1	-1.3
	comp=Z,1µm,1.5s						
BBOO	Buckleboo	44.34	246	P	P	12 24 15.9	-0.5
	baz=45,SNR=7.7						
WAKE	Wake Island	45.25	335	PFAKE		12 24 30.0	+6.4
WAKE				LR	LR		
	comp=Z,5µm,20.0s						
KIP	Kipapa	46.62	22	⇓eP	P	12 24 34.3	0.0
AS31	Alice Springs	46.94	258	eP	P	12 24 34.9	-2.2
ASAR	Alice Springs	46.94	258	P	P	12 24 34.9	-2.1
ASAR				S	S	12 31 24.6	+2.3
ASAR	Alice Springs	46.94	258	P	P	12 24 34.9	-2.1
	comp=Z,77nm,1.1s,baz=93,slow=7.8,SNR=126						
ASAR				S	S	12 31 24.6	+2.3
	comp=Z,9.4nm,1.3s,baz=93,slow=14,SNR=8.5						
ASAR				LR	LR	12 44 55.6	
	comp=Z,4µm,18.6s,baz=112,slow=37						
WRAB	Tennant Creek	47.23	263	eP	P	12 24 36.7	-2.6
WRAB				pmax	pmax		
	comp=Z,47nm,1.0s						
WRAB				MLR	MLR		
	comp=Z,3µm,19.0s						
WRAB	Tennant Creek	47.23	263	eP	P	12 24 36.7	-2.6
	comp=Z,47nm,1.0s						
WRAB				LR	LR		
	comp=Z,3µm,19.0s						
WRA	Warramunga Arr	47.24	263	P	P	12 24 36.6	-2.8
WRA				PcP	PcP	12 26 10.9	+1.4
WRA				S	S	12 31 28.6	+2.0
WRA	Warramunga Arr	47.24	263	P	P	12 24 36.6	-2.8
	comp=Z,30nm,0.9s,baz=101,slow=8.3,SNR=92						
WRA				PcP	PcP	12 26 10.9	+1.4
	comp=Z,5.9nm,0.9s,baz=97,slow=4.5,SNR=3.9						
WRA				S	S	12 31 28.6	+2.0
	comp=Z,0.3nm,0.8s,baz=344,slow=10,SNR=5.1						
WRA				LR	LR	12 43 29.1	
	comp=Z,3µm,20.1s,baz=90,slow=35						
JAY	Jayapura	47.43	288	P	P	12 24 38.8	-2.1
	baz=48,SNR=11						
MIDW	Midway	50.44	357	PFAKE		12 25 10.0	+6.5
MIDW				LR	LR		
	comp=Z,4µm,19.0s						
KDU	Kakadu	50.91	272	P	P	12 25 05.8	-1.7
	baz=52,SNR=5.7						
FORT	Forrest	51.23	248	eP	P	12 25 08.1	-1.5
MTN	Manton Dam	52.10	271	P	P	12 25 15.1	-1.2
	baz=53,SNR=4.3						
DRV	Dumont d'Urvil	52.52	201	P	P	12 25 12.0	-6.6
DRV				S	S	12 32 13.0	-26
DRV				L	L	12 38 00.0	
DRV				R		12 41 00.0	
GUMO	Guam	53.30	308	LR	LR	12 43 00.7	
	comp=Z,787nm,19.6s,baz=131,slow=30						
FITZ	Fitzroy Crossi	55.67	263	eP	P	12 25 40.9	-1.5
	comp=Z,57nm,1.0s						
FITZ				S	S	12 33 26.7	+4.2
FITZ	Fitzroy Crossi	55.67	263	S	S	12 33 26.7	+4.2
	comp=Z,3.8nm,1.0s,baz=326,slow=13,SNR=3.8						
FITZ				LR	LR	12 50 03.8	
	comp=Z,3µm,18.2s,baz=98,slow=37						
FITZ	Fitzroy Crossi	55.67	263	P	P	12 25 40.8	-1.5
	baz=56,SNR=32						
SBA	Scott Base	56.13	185	eP	P	12 25 47.1	+2.4
SBA				MLR	MLR		
	comp=Z,4µm,21.0s						
SBA	Scott Base	56.13	185	eP	P	12 25 47.1	+2.4
SBA				LR	LR		
	comp=Z,4µm,21.0s						
VNDA	Vanda	56.24	186	eP	P	12 25 47.1	+1.6
VNDA	Vanda	56.24	186	P	P	12 25 46.9	+1.4
	comp=Z,4.5nm,0.9s,baz=10,slow=6.4,SNR=17						
VNDA				LR	LR	12 45 50.9	
	comp=Z,3µm,19.9s,baz=18,slow=32						
SWI	Sorong	56.56	285	P	P	12 25 47.5	-1.3
	baz=57,SNR=4.8						
PALU	Palau	57.76	295	P	P	12 25 57.5	+0.4
	baz=58,SNR=5.1						
RPN	Rapa Nui	59.09	109	PFAKE		12 26 20.0	+14
RPN				LR	LR		
	comp=Z,5µm,19.0s						
KLBR	Kellerberrin	59.89	246	P	P	12 26 11.6	-0.2
	baz=60,SNR=8.3						
MEEK	Meekatharra	60.04	251	P	P	12 26 11.5	-1.4
	baz=61,SNR=4.1						
NWAO	Narrogin (SRO)	60.11	244	LR	LR	12 51 08.1	
	comp=Z,3µm,19.7s,baz=82,slow=35						
MBWA	Marble Bar	60.28	258	eP	P	12 26 12.9	-1.6
	comp=Z,27nm,0.8s						
MBWA				LR	LR		
	comp=Z,2µm,19.0s						
BLDU	Ballidu	60.94	247	P	P	12 26 18.3	-0.5
	baz=62,SNR=9.4						
MORW	Morawa	61.79	248	P	P	12 26 24.1	-0.6
	baz=62,SNR=5.5						
CASY	Casey	63.46	206	PFAKE		12 26 50.0	+15
CASY				LR	LR		
	comp=Z,2µm,19.0s						
CBIJ	Chichi jima	64.44	318	LR	LR	12 53 27.1	
	comp=Z,900nm,18.9s,baz=128,slow=35						
DAV	Davao City (W)	65.24	290	PFAKE		12 27 00.0	+12
DAV				LR	LR		
	comp=Z,1µm,21.0s						
KAPI	Kappang	65.36	275	LR	LR	12 53 52.6	
	comp=Z,810nm,21.5s,baz=44,slow=35						
CTBH	Cotabato--PC H	66.48	289	⇓iP	P	12 26 54.4	-1.1
QSPA	South Pole Qui	67.61	180	eP	P	12 27 02.2	+0.1
	comp=Z,268nm,1.8s						
QSPA				LR	LR		
	comp=Z,4µm,20.0s						
QSPA	South Pole Qui	67.61	180	P	P	12 27 00.6	-1.4
	comp=Z,27nm,1.1s,baz=41,slow=2.4,SNR=25						
JHJ	Hachijo jima 2	70.19	321	LR	LR	12 58 06.2	
	comp=Z,991nm,18.0s,baz=214,slow=36						
MIR	Mirnyy	70.46	205	⇓iP	P	12 27 21.5	+2.1
MIR				e		12 27 43.0	
MIR				pmax	pmax		
	comp=Z,144nm,1.8s						
TGY	Tagaytay City	72.62	294	LR	LR	12 58 28.5	
	comp=Z,6.3nm,18.5s,baz=294,slow=35						
MJAR	Matsushiro Arr	73.53	322	P	P	12 27 37.4	-0.8
MJAR	Matsushiro Arr	73.53	322	P	P	12 27 37.4	-0.8
	comp=Z,12nm,0.6s,baz=166,slow=6.5,SNR=32						
MJAR				LR	LR	12 56 07.5	
	comp=Z,676nm,18.5s,baz=105,slow=33						
MAJO	Matsushiro	73.53	322	eP	P	12 27 37.5	-0.7
MAJO				pmax	pmax		
	comp=Z,140nm,1.6s						
MAJO				MLR	MLR		
	comp=Z,859nm,19.0s						
MAJO	Matsushiro	73.53	322	eP	P	12 27 37.5	-0.7
	comp=Z,140nm,1.6s						
MAJO				LR	LR		
	comp=Z,859nm,19.0s						
MAT	Matsushiro	73.53	322	P	P	12 27 37.3	-0.9
MAT				S	S	12 37 02.8	+1.3
JOW	Kunigami	73.66	309	LR	LR	12 53 08.8	
	comp=Z,902nm,21.0s,baz=123,slow=30						
ERM	Erimo	74.98	329	d iP	P	12 27 48.0	+1.5
ERM				pmax	pmax		
	comp=Z,128nm,1.7s						
ERM	Erimo	74.98	329	PFAKE		12 28 00.0	+14
ERM				LR	LR		
	comp=Z,3µm,20.0s						
YUK	Yuzh-Kuril'sk	75.33	332	c iP	P	12 27 43.3	-5.1
YUK				i		12 30 36.2	
YUK				ePPP	PPP	12 32 23.5	
YUK				i S	S	12 37 24.9	+3.7
YUK				pmax	pmax		
	comp=E,128nm,0.7s						
YUK				pmax	pmax		
	comp=N,82nm,0.7s						
YUK				pmax	pmax		
	comp=Z,360nm,1.5s						
YUK				pmax	pmax		
	comp=Z,2µm,3.5s						
JNU	Nakatsue	75.71	315	eP	P	12 27 51.6	+0.7
	comp=Z,17nm,1.2s						
JNU	Nakatsue	75.71	315	P	P	12 27 50.3	-0.6
	comp=Z,19nm,1.0s,baz=134,slow=5.2,SNR=8.6						
KSM	Kuching	76.56	277	eP	P	12 27 55.9	-0.3
	comp=Z,42nm,1.0s						
KSM				LR	LR		
	comp=Z,601nm,22.0s						
KSM	Kuching	76.56	277	P	P	12 27 56.7	+0.5
KSM	Kuching	76.56	277	P	P	12 27 55.9	-0.3
	comp=Z,51nm,1.3s,comp=Z,2µm						
KSM	Kuching	76.56	277	P	P	12 27 56.5	+0.3
	baz=77,SNR=10						
ASAJ	Asahikawa	76.86	330	eP	P	12 27 58.2	+1.1
	comp=Z,45nm,1.2s						
ASAJ	Asahikawa	76.86	330	P	P	12 27 58.5	+1.4
	comp=Z,68nm,1.2s,baz=219,slow=5.0,SNR=8.5						
BSC	Santa Cruz Isl	76.89	44	⇓P	P	12 27 59.0	+1.4
	baz=77						
CIS	Catalina Islan	77.34	46	⇓P	P	12 28 01.5	+1.4
	baz=78						
PKM	Peak Mountain	77.34	44	⇓P	P	12 28 01.8	+1.6
	baz=78						
TPUB	Ta-pu	77.49	302	eP	P	12 27 59.3	-1.9
	comp=Z,48nm,0.9s						
YHNB	Yeheng	77.62	303	PFAKE		12 28 10.0	+8.1
YHNB				LR	LR		
	comp=Z,2µm,20.0s						
TATO	Taipei	77.69	304	PFAKE		12 28 10.0	+7.8
TATO				LR	LR		
	comp=Z,2µm,20.0s						
MWC	Mount Wilson	78.06	45	eP	P	12 28 04.9	+0.5
MWC				pmax	pmax		
	comp=Z,14nm,1.2s						
MWC	Mount Wilson	78.06	45	eP	P	12 28 04.8	+0.5
	comp=Z,14nm,1.2s						
PMSA	Palmer Station	78.32	156	PFAKE		12 28 20.0	+15
PMSA				LR	LR		
	comp=Z,2µm,19.0s						
BFSC	Mount Baldy Ra	78.33	45	⇓P	P	12 28 05.1	-0.7
	baz=78						
MONP	Monument Peak	78.35	47	⇓P	P	12 28 05.2	-0.8
	baz=78						
DVTC	Desert V Tower	78.43	47	⇑P	P	12 28 06.0	-0.3
	baz=79						
EDW2	Edwards Air Fo	78.51	45	⇓P	P	12 28 05.8	-0.8
	baz=79						
PET	Petropavlovsk	78.62	344	eP	P	12 28 05.7	-0.9
PET				eS	S	12 38 01.8	+5.2
PET				ePS	PnS	12 38 47.2	-2.4
PET				ePPS	PPS	12 39 00.8	
PET				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PET				MLR	MLR		
	comp=Z,2µm,17.0s						
PET				MLR	MLR		
	comp=Z,2µm,18.0s						
PET	Petropavlovsk	78.62	344	PFAKE		12 28 20.0	+13
PET				LR	LR		
	comp=Z,2µm,19.0s						
ISA	Isabella	78.67	44	eP	P	12 28 07.1	-0.4
ISA				pmax	pmax		
	comp=Z,36nm,1.4s						
ISA	Isabella	78.67	44	eP	P	12 28 07.1	-0.4
	comp=Z,36nm,1.4s						
ISA	Isabella	78.67	44	⇓P	P	12 28 07.2	-0.3
	baz=79						
PFO	Pinyon Flat Ob	78.75	46	eP	P	12 28 08.3	+0.2
	comp=Z,21nm,1.4s						
PFO				LR	LR		
	comp=Z,4µm,20.0s						
PFO	Pinyon Flat Ob	78.75	46	⇑P	P	12 28 07.5	-0.6
	baz=79						
BBRC	Big Bear Solar	78.83	46	⇓P	P	12 28 08.6	-0.1
	baz=79						
PEA0B	Petropavlovsk-	78.94	344	eP	P	12 28 08.4	-0.1
PETK	Petropavlovsk-	78.94	344	P	P	12 28 08.1	-0.4
PETK				pmax	pmax		
	comp=Z,35nm,0.9s						
PETK	Petropavlovsk-	78.94	344	P	P	12 28 08.1	-0.4
PETK	Petropavlovsk-	78.94	344	P	P	12 28 08.1	-0.4
	comp=Z,35nm,0.9s,baz=128,slow=6.4,SNR=28						
PETK				LR	LR	12 59 05.2	
	comp=Z,1µm,20.0s,baz=148,slow=33						
YSS	Yuzh-Sakhalins	78.97	332	⇑iP	P	12 28 10.5	+1.8
YSS				e		12 28 21.2	
YSS				eS	S	12 38 10.0	+9.4
YSS				i		12 38 28.0	
YSS				e*SS	sS	12 38 48.0	+10
YSS				ePS	PnS	12 38 52.0	-2.2
YSS				pmax	pmax		
	comp=Z,120nm,1.3s						
YSS				pmax	pmax		
	comp=E,30nm,1.1s						
YSS				smax	smax		
	comp=N,2µm,10.0s						
YSS				MLR	MLR		
	comp=Z,1µm,18.0s						
YSS				MLR	MLR		
	comp=N,700nm,19.0s						
YSS				MLR	MLR		
	comp=E,800nm,19.0s						
YSS	Yuzh-Sakhalins	78.97	332	eP	P	12 28 09.5	+0.7
	comp=E,130nm,1.1s						
YSS				LR	LR		
	comp=Z,501nm,20.0s						
LRMC	Laurel Mountai	79.07	44	⇓P	P	12 28 09.6	-0.1
	baz=79						
BELC	Belle Mtn. Jos	79.29	46	⇑P	P	12 28 10.3	-0.7
	baz=80						
BC3	Big Chuckawall	79.46	47	⇓P	P	12 28 11.3	-0.6
	baz=80						
GLA	Glamis	79.53	48	⇑P	P	12 28 11.4	-0.8
	baz=80						
GSC	Goldstone	79.53	45	⇓P	P	12 28 11.6	-0.6
	baz=80						
MPMC	Manual Prospec	79.55	44	⇑P	P	12 28 11.6	-0.9
	baz=80						
DAC	Darwin (Calif)	79.61	44	PFAKE		12 28 20.0	+7.2
DAC				LR	LR		
	comp=Z,3µm,20.0s						
MLAC	Mammoth Lakes	79.67	42	⇑P	P	12 28 13.1	0.0
	baz=80						
QZH	Quanzhou	79.92	302	⇑iP	P	12 28 14.6	+0.2
QZH				S	S	12 38 05.3	-6.3
QZH				SKS	SKSac	12 38 21.7	-2.7
QZH				pmax	pmax		
	comp=Z,2µm,6.1s						
QZH				LR	LR		
	comp=N,1µm,14.7s						
QZH				LR	LR		
	comp=E,2µm,15.5s						
QZH				LR	LR		
	comp=Z,2µm,19.9s						
IRM	Iron Mountain	79.95	47	⇓P	P	12 28 14.0	-0.5
	baz=80						
GMRC	Granite Mounta	79.98	46	⇑P	P	12 28 14.4	-0.3
	baz=80						
YBH	Yreka Blue Hor	80.05	37	eP	P	12 28 16.6	+1.7
	comp=Z,51nm,1.6s						
113A	Mohawk Valley,	80.10	48	⇓P	P	12 28 15.2	0.0
	baz=80						
Y12C	Blythe	80.14	47	⇓P	P	12 28 15.4	-0.1

baz=80
WCN Washoe City 80.16 40 *e*P **P** 12 28 16.2 +0.5
WCN pmax pmax
comp=Z,35nm,1.4s
WCN Washoe City 80.16 40 *e*P **P** 12 28 16.2 +0.5
comp=Z,35nm,1.4s
GRAC Grapevine Rang 80.20 43 ⇓P **P** 12 28 16.9 +1.2
baz=80
FURC Furnace Creek, 80.20 44 ⇑P **P** 12 28 15.9 +0.3
baz=80
SHOC Shoshone 80.23 45 ⇑P **P** 12 28 16.8 +0.8
baz=80
KSRS Korea Array 80.29 317 P **P** 12 28 16.8 +0.7
comp=Z,32nm,1.2s,baz=138,slow=5.7,SNR=43
KSRS LR LR 12 59 22.9
comp=Z,790nm,20.6s,baz=118,slow=32
214A Organ Pipe Nat 80.31 50 ⇑P **P** 12 28 17.2 +0.8
baz=80
KSAR Wonju Array Be 80.31 317 P **P** 12 28 16.8 +0.6
NVAR Mina Array Bea 80.50 42 P **P** 12 28 16.8 -0.8
NVAR Mina Array Bea 80.50 42 P **P** 12 28 16.8 -0.8
comp=Z,3.0nm,0.8s,baz=217,slow=6.5,SNR=15
NVAR LR LR 12 58 18.7
comp=Z,1μm,18.7s,baz=126,slow=32
HUMO Hull Mountain 80.50 36 *e*P **P** 12 28 18.2 +1.0
comp=Z,47nm,1.5s
MAW Mawson 80.69 199 P **P** 12 28 18.1 +0.3
MAW Mawson 80.69 199 P **P** 12 28 18.1 +0.3
comp=Z,10nm,0.7s,baz=100,slow=5.1,SNR=22
MAW LR LR 13 02 15.4
comp=Z,3μm,19.5s,baz=121,slow=34
MAW Mawson 80.69 199 P **P** 12 28 18.3 +0.4
baz=81,SNR=7.7
PDMCI Parker Dam,Lak 80.72 47 ⇓P **P** 12 28 19.4 +0.9
baz=81
TPH Tonopah 80.95 42 PFAKE 12 28 30.0 +10
TPH LR LR
comp=Z,2μm,20.0s
Z14A Wintersburg 81.00 48 ⇓P **P** 12 28 20.9 +0.8
baz=81
INCN Inchon 81.12 317 *e*P **P** 12 28 20.3 -0.3
comp=Z,72nm,1.1s
INCN LR LR
comp=Z,822nm,19.0s
SSE Sheshan 81.18 309 P **P** 12 28 21.5 +0.5
SSE sP **sP** 12 28 51.6 -0.7
SSE pmax pmax
comp=Z,44nm,0.7s
SSE pmax pmax
comp=Z,520nm,5.6s
SSE LR LR
comp=N,370nm,19.0s
SSE LR LR
comp=E,540nm,18.6s
SSE LR LR
comp=Z,560nm,19.8s
Y14A Wickenburg 81.29 48 ⇑P **P** 12 28 21.4 -0.2
baz=82
W13A Hualapai Mount 81.35 46 ⇓P **P** 12 28 22.0 -0.1
baz=82
OHAK Old Harbor 81.43 12 *e*P **P** 12 28 22.2 +0.5
comp=Z,74nm,1.5s
MOD Modoc 81.52 38 *e*P **P** 12 28 23.7 +0.9
comp=Z,139nm,2.1s
VLA Vladivostok 81.57 324 ⇓*i*P **P** 12 28 21.7 -1.1
VLA *i* 12 28 27.0
VLA 12 31 29.0
VLA *e*S **S** 12 38 27.6 -0.4
VLA pmax pmax
comp=Z,66nm,1.2s
TUC Tucson 81.94 50 *e*P **P** 12 28 25.0 -0.2
TUC pmax pmax
comp=Z,9.0nm,1.0s
TUC MLR MLR
comp=Z,4μm,20.0s
TUC Tucson 81.94 50 *e*P **P** 12 28 25.0 -0.2
comp=Z,8.9nm,1.0s
TUC LR LR
comp=Z,4μm,20.0s
KDAK Kodiak Island 82.09 12 PFAKE 12 28 40.0 +15
KDAK LR LR
comp=Z,2μm,20.0s
R11A Troy Canyon, C 82.14 43 ⇑P **P** 12 28 25.8 -0.4
baz=82
HKC Hong Kong Obse 82.17 298 *i* P **P** 12 28 28.0 +1.5
USRK Ussuriysk Arra 82.23 324 P **P** 12 28 27.4 +1.2
comp=Z,60nm,1.1s,baz=126,slow=3.3,SNR=60
USRK LR LR 13 03 37.5
comp=Z,2μm,19.3s,baz=124,slow=35
BMN Battle Mountai 82.39 41 *e*P **P** 12 28 27.9 +0.5
BMN pmax pmax
comp=Z,36nm,1.4s
BMN MLR MLR
comp=Z,2μm,22.0s
BMN Battle Mountai 82.39 41 *e*P **P** 12 28 27.9 +0.5
comp=Z,36nm,1.4s
BMN LR LR
comp=Z,2μm,22.0s
319A Douglas 82.52 52 ⇓P **P** 12 28 28.1 -0.2
baz=83
X16A Lo Mia Camp, P 82.63 48 ⇑P **P** 12 28 28.5 -0.3
baz=83
320A Kipp Ranch, An 83.05 52 ⇓P **P** 12 28 30.6 -0.4
baz=83
U15A North Rim 83.17 46 ⇑P **P** 12 28 31.3 -0.4
baz=83
ARUT Antelope Range 83.19 44 *e*P **P** 12 28 33.1 +1.5
ARUT pmax pmax
comp=Z,59nm,1.6s
ARUT Antelope Range 83.19 44 *e*P **P** 12 28 33.1 +1.5
comp=Z,59nm,1.6s
KGM Kluang 83.20 275 P **P** 12 28 32.9 +0.8
GZH Guangzhou 83.22 298 P **P** 12 28 32.6 +0.7
GZH pmax pmax
comp=Z,2μm,3.8s
WUAZ Wupatki 83.28 47 *e*P **P** 12 28 32.7 +0.6
comp=Z,45nm,1.6s
WUAZ LR LR
comp=Z,2μm,20.0s
WUAZ Wupatki 83.28 47 ⇓P **P** 12 28 31.9 -0.3
baz=84
NLWA Neilton Lookou 83.30 32 *e*P **P** 12 28 33.5 +1.7
comp=Z,51nm,1.5s
NLWA LR LR
comp=Z,3μm,20.0s
220A Playas Peak, P 83.35 52 ⇑P **P** 12 28 32.3 -0.3
baz=84
NJ2 Nanjing 83.38 308 *e*P **P** 12 28 33.7 +1.2
NJ2 SKS **S** 12 38 46.5 -0.4
NJ2 pmax pmax
comp=Z,120nm,1.4s
NJ2 pmax pmax
comp=Z,1μm,5.7s
NJ2 LR LR
comp=N,390nm,17.8s
NJ2 LR LR
comp=E,660nm,18.0s
NJ2 LR LR
comp=Z,820nm,22.6s
X18A Snowflake 83.72 49 ⇑P **P** 12 28 34.1 -0.4
baz=84
ELK Elko 83.78 41 *e*P **P** 12 28 35.0 +0.3
MDJ Mudanjiang 83.81 324 P **P** 12 28 35.6 +1.2
MDJ pP **pP** 12 28 56.9 +0.2
MDJ sP **sP** 12 29 05.8 0.0
MDJ S **S** 12 38 52.5 +1.7
MDJ sS **sS** 12 39 30.0 +1.1
MDJ pmax pmax
comp=Z,85nm,1.4s
MDJ pmax pmax
comp=Z,1μm,4.5s
MDJ LR LR
comp=N,530nm,19.5s
MDJ LR LR
comp=E,720nm,17.3s
MDJ LR LR
comp=Z,1μm,19.2s
COCO West Island 83.88 259 *e*P **P** 12 28 35.2 -0.3
COCO pmax pmax
comp=Z,303nm,1.5s
COCO MLR MLR
comp=Z,1μm,19.0s
COCO West Island 83.88 259 *e*P **P** 12 28 35.2 -0.3
comp=Z,303nm,1.5s
COCO LR LR
comp=Z,1μm,19.0s
COCO West Island 83.88 259 P pP 12 28 50.3 -7.5

Z20A Nine Sixteen R 83.93 51 ⇑P **P** 12 28 34.8 -0.8
baz=84
221A Mesquite Ranch 83.94 52 ⇓P **P** 12 28 35.3 -0.3
baz=84
W18A Petrified Fore 84.19 48 ⇓P **P** 12 28 35.9 -0.9
baz=84,SNR=5.5
121A Cookes Peak, D 84.21 51 ⇑P **P** 12 28 36.2 -0.8
baz=84
QIZ Qiongzhong 84.31 293 P **P** 12 28 38.7 +1.1
QIZ pP **pP** 12 28 59.2 -0.7
QIZ PP **PP** 12 31 52.3 -1.3
QIZ S **S** 12 38 58.2 +1.3
QIZ sS **sS** 12 39 34.0 -1.1
QIZ SS **SS** 12 44 29.1 +0.3
QIZ pmax pmax
comp=Z,44nm,2.1s
QIZ pmax pmax
comp=Z,660nm,8.3s
QIZ LR LR
comp=N,530nm,21.0s
QIZ LR LR
comp=Z,980nm,18.4s
PGC Sidney 84.37 31 *e*P **P** 12 28 37.8 +0.7
comp=Z,8.3nm,1.9s
MVU Marysvale 84.39 44 *e*P **P** 12 28 38.2 +0.3
comp=Z,33nm,1.4s
MVU LR LR
comp=Z,2μm,21.0s
MSU Marysvale 84.42 44 *e*P **P** 12 28 38.3 +0.4
MSU pmax pmax
comp=Z,40nm,1.4s
MSU Marysvale 84.42 44 *e*P **P** 12 28 38.3 +0.4
comp=Z,40nm,1.4s
Y20A Horse Springs, 84.50 50 ⇓P **P** 12 28 37.4 -1.1
baz=85,SNR=18
Z21A St. Cloud Mine 84.69 51 ⇑P **P** 12 28 38.7 -0.8
baz=85,SNR=9.9
PAYG Puerto Ayora 84.74 89 PFAKE 12 28 50.0 +10
PAYG LR LR
comp=Z,2μm,20.0s
X20A Quemado 84.74 49 ⇑P **P** 12 28 39.1 -0.6
baz=85,SNR=14
HAWA Hanford 84.84 35 *e*P **P** 12 28 39.6 0.0
comp=Z,93nm,1.6s
HAWA LR LR
comp=Z,6μm,19.0s
SEW Seward 84.85 12 *e*P **P** 12 28 40.2 +0.9
comp=Z,74nm,1.4s
122A Conniff Cattle 84.86 52 ⇑P **P** 12 28 40.2 -0.1
baz=85
P15A Leamington 84.95 44 ⇓P **P** 12 28 40.5 0.0
baz=85
DUG Dugway 84.96 43 PFAKE 12 28 50.0 +9.4
DUG LR LR
comp=Z,2μm,20.0s
DUG Dugway 84.96 43 ⇑P **P** 12 28 40.6 +0.1
baz=85
MFID Camas Ranch 85.03 39 *e*P **P** 12 28 41.5 +0.7
comp=Z,56nm,1.6s
MFID Camas Ranch 85.03 39 ⇓P **P** 12 28 41.3 +0.5
baz=85,SNR=5.5
W20A Ramah 85.05 49 ⇓P **P** 12 28 40.6 -0.6
baz=85,SNR=17
Y21A Point of Rocks 85.05 50 ⇑P **P** 12 28 40.9 -0.4
baz=85
BMO Blue Mountains 85.08 37 *e*P **P** 12 28 41.2 +0.3
BMO pmax pmax
comp=Z,38nm,1.5s
BMO MLR MLR
comp=Z,3μm,20.0s
BMO Blue Mountains 85.08 37 *e*P **P** 12 28 41.2 +0.3
comp=Z,38nm,1.5s
BMO LR LR
comp=Z,3μm,20.0s
DL2 Dalian 85.16 316 ⇑*i*P **P** 12 28 42.3 +1.0
DL2 S **S** 12 39 06.1 +1.7
DL2 pmax pmax
comp=Z,30nm,1.5s
DL2 pmax pmax
comp=Z,720nm,3.6s
DL2 LR LR
comp=N,300nm,18.8s
DL2 LR LR
comp=Z,360nm,17.9s
Z22A Elephant Butte 85.17 51 ⇑P **P** 12 28 41.7 -0.1
baz=85
O15A The Old Anders 85.23 43 ⇑P **P** 12 28 42.2 +0.3
baz=85
FRIM Kepong 85.23 275 P **P** 12 28 43.1 +0.8
Q16A Castle Valley 85.29 45 ⇓P **P** 12 28 42.4 +0.1
baz=86,SNR=6.9
324A Moseley Ranch, 85.35 53 ⇑P **P** 12 28 42.2 -0.5
baz=86
P16A Fountain Green 85.36 44 ⇓P **P** 12 28 42.7 +0.1
baz=86
425A Indio Mountain 85.39 54 ⇓P **P** 12 28 42.5 -0.4
baz=86
S18A Hurst Farm, Bl 85.40 46 ⇓P **P** 12 28 43.3 +0.4
baz=86,SNR=5.5
V20A Brimhall 85.43 48 ⇑P **P** 12 28 43.0 -0.1
baz=86
626A Big Bend Ranch 85.44 56 ⇑P **P** 12 28 42.8 -0.4
baz=86,SNR=6.3
TMUT Trail Mountain 85.48 44 *e*P **P** 12 28 43.3 -0.1
comp=Z,98nm,1.5s
Y22A Socorro 85.52 51 ⇑P **P** 12 28 43.1 -0.5
baz=86
MNTX Cornudas Mount 85.55 53 PFAKE 12 29 00.0 +16
MNTX LR LR
comp=Z,1μm,19.0s
MNTX Cornudas Mount 85.55 53 ⇑P **P** 12 28 43.3 -0.2
baz=86
LENM Lemitar 85.63 50 *e*P **P** 12 28 45.1 +1.0
comp=Z,14nm,1.1s
224A Cornudas Mount 85.63 53 ⇑P **P** 12 28 43.3 -0.8
baz=86,SNR=9.6
LAZ Ladron 85.63 50 *e*P **P** 12 28 44.1 0.0
comp=Z,34nm,1.6s
CN2 Changchun 85.64 321 *e*P **P** 12 28 43.8 +0.2
CN2 *es*P **sP** 12 29 20.0 +4.9
CN2 *e*S **SKKSac** 12 39 08.3 -0.3
CN2 SS **SS** 12 44 41.8 -5.7
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,600nm,20.0s
CN2 LR LR
comp=E,700nm,20.0s
CN2 LR LR
comp=Z,800nm,18.0s
I12A Atlanta 85.67 39 ⇓P **P** 12 28 43.8 -0.3
baz=86
U20A Newcomb 85.69 48 ⇑P **P** 12 28 43.7 -0.6
baz=86
325A Bean Ranch, Si 85.69 54 ⇑P **P** 12 28 43.4 -1.1
baz=86
TXAR Lajitas Array 85.69 56 P **P** 12 28 43.0 -1.4
TXAR Lajitas Array 85.69 56 P **P** 12 28 43.0 -1.4
comp=Z,5.5nm,1.0s,baz=205,slow=5.5,SNR=13
TXAR LR LR 13 03 07.3
comp=Z,2μm,18.0s,baz=110,slow=33
Z23A Rita Site, Whi 85.70 51 ⇓P **P** 12 28 43.8 -0.6
baz=86
RC01 Rabbit Creek A 85.71 12 *e*P **P** 12 28 43.7 +0.2
comp=Z,44nm,0.8s
KLR Kul'dur 85.71 328 *e*P **P** 12 28 41.8 -2.1
KLR *e* 12 31 57.5
KLR *e*S **S** 12 39 10.5 +1.1
KLR pmax pmax
comp=E,170nm,3.0s
KLR pmax pmax
comp=Z,600nm,3.0s
KLR pmax pmax
comp=Z,2μm,9.5s
526A Mary Lane Ranc 85.72 55 ⇓P **P** 12 28 43.4 -1.2
baz=86
X22A Bernardo 85.78 50 ⇑P **P** 12 28 44.2 -0.6
baz=86
PLCA Paso Flores 85.81 132 LR LR 13 01 13.4
comp=Z,2μm,18.5s,baz=244,slow=32
SRU San Rafael 85.82 45 *e*P **P** 12 28 45.0 +0.1
SRU San Rafael 85.82 45 *e*P **P** 12 28 45.0 +0.1
comp=Z,1μm,1.3s
SRU San Rafael 85.82 45 ⇓P **P** 12 28 44.7 -0.2
baz=86,SNR=14
BNM Barren Site 85.87 51 *e*P **P** 12 28 45.6 +0.3
comp=Z,62nm,1.9s

P17A Butcher Ranch, 85.88 44 ⇓P **P** 12 28 44.9 -0.3
baz=86,SNR=10
HVU Hansel Valley 85.89 42 *e*P **P** 12 28 45.3 +0.1
HVU pmax pmax
comp=Z,34nm,1.8s
HVU Hansel Valley 85.89 42 *e*P **P** 12 28 45.3 +0.1
comp=Z,34nm,1.8s
M15A Larsen Ranch, 85.92 42 ⇑P **P** 12 28 44.8 -0.4
baz=86,SNR=5.6
LPM Los Pinos Moun 85.95 50 *e*P **P** 12 28 46.3 +0.7
comp=Z,38nm,1.4s
HLID Hailey 85.95 39 ⇓P **P** 12 28 44.8 -0.6
baz=86,SNR=7.6
SNAA Sanae 85.95 177 *e*P **P** 12 28 45.6 +0.6
SNAA Sanae 85.95 177 *e*P **P** 12 28 45.3 +0.4
comp=Z,75nm,1.5s
WHN Wuhan 85.95 305 P **P** 12 28 46.9 +1.4
WHN S **S** 12 39 13.2 +0.6
WHN pmax pmax
comp=Z,120nm,1.3s
WHN pmax pmax
comp=Z,3μm,3.8s
WHN LR LR
comp=N,2μm,19.6s
WHN LR LR
comp=E,2μm,20.9s
WHN LR LR
comp=Z,2μm,21.6s
627A Terlingua Ranc 85.96 56 ⇓P **P** 12 28 44.8 -1.0
baz=86,SNR=9.5
VNA3 Neumayer Olymp 85.97 175 *e*P **P** 12 28 44.9 -0.1
124A Stringfield Ra 85.99 52 ⇓P **P** 12 28 45.1 -0.9
baz=86,SNR=7.1
GAMB Gambell 85.99 1 *e*P **P** 12 28 44.7 -0.1
comp=Z,132nm,1.4s
J13A Cove Ranch, Pi 85.99 40 ⇑P **P** 12 28 44.8 -0.8
baz=86,SNR=8.6
V21A Milan 86.00 49 ⇑P **P** 12 28 44.8 -1.1
baz=86
JLU Jordanelle 86.05 43 *e*P **P** 12 28 46.9 +0.8
comp=Z,38nm,1.6s
426A McDonald Obser 86.06 55 ⇓P **P** 12 28 45.1 -1.2
baz=86,SNR=12
DAU Daniels Canyon 86.07 43 *e*P **P** 12 28 46.6 +0.3
DAU pmax pmax
comp=Z,56nm,2.0s
DAU Daniels Canyon 86.07 43 *e*P **P** 12 28 46.6 +0.3
comp=Z,56nm,2.0s
K14A Jones Ranch, D 86.09 41 ⇓P **P** 12 28 45.3 -0.8
baz=86
MVCO Mesa Verde 86.15 47 *e*P **P** 12 28 47.5 +0.9
comp=Z,36nm,1.6s
MVCO LR LR
comp=Z,2μm,20.0s
MVCO Mesa Verde 86.15 47 ⇑P **P** 12 28 45.8 -0.8
baz=86
225A Deer Hill, Car 86.16 53 ⇓P **P** 12 28 45.6 -1.2
baz=86
Y23A Lovelace Mesa, 86.17 51 ⇑P **P** 12 28 45.6 -1.1
baz=86
N16A Rees Ranch, Co 86.22 43 ⇑P **P** 12 28 46.3 -0.6
baz=86,SNR=5.9
IPM Ipoh 86.26 276 *e*P **P** 12 28 47.8 +0.4
comp=Z,89nm,1.1s
IPM Ipoh 86.26 276 P **P** 12 28 48.7 +1.3
IPM Ipoh 86.26 276 P **P** 12 28 47.2 -0.3
comp=Z,92nm,1.4s,comp=Z,2μm
L15A Malad City 86.26 41 ⇓P **P** 12 28 46.1 -0.8
baz=86
H12A Diamond D Ranc 86.28 38 ⇑P **P** 12 28 46.9 -0.1
baz=86,SNR=8.1
O17A Robinson Place 86.28 44 ⇓P **P** 12 28 46.7 -0.5
baz=86,SNR=9.7
P18A Preston Nutter 86.28 44 ⇓P **P** 12 28 46.6 -0.7
baz=86,SNR=5.8
PMR Palmer 86.28 12 *e*P **P** 12 28 45.9 -0.5
PMR pmax pmax
comp=Z,62nm,1.2s
PMR Palmer 86.28 12 *e*P **P** 12 28 45.9 -0.5
comp=Z,62nm,1.2s
U21A Nageezi 86.31 48 ⇓P **P** 12 28 46.4 -1.0
baz=86,SNR=13
I13A Wildhorse Cree 86.33 39 ⇑P **P** 12 28 46.4 -1.0
baz=86
J14A Carey 86.34 40 ⇑P **P** 12 28 47.3 0.0
baz=86,SNR=10
G12A Big Creek, Yel 86.36 38 ⇓P **P** 12 28 47.1 -0.3
baz=87,SNR=9.0
628A Black Gap, Mar 86.36 56 ⇑P **P** 12 28 46.9 -0.8
baz=86,SNR=5.8
Z24A Sheeppen Canyo 86.37 52 ⇓P **P** 12 28 47.3 -0.4
baz=86
WRAK Wrangell Islan 86.39 22 PFAKE 12 29 00.0 +13
WRAK LR LR
comp=Z,1μm,19.0s
ANMO Albuquerque 86.39 50 *e*P **P** 12 28 47.6 -0.2
comp=Z,42nm,1.3s
ANMO LR LR
comp=Z,3μm,19.0s
326A Caldwell Ranch 86.41 54 ⇑P **P** 12 28 47.3 -0.6
baz=87
VNA2 Neumayer--Watz 86.45 176 *e*P **P** 12 28 47.6 +0.3
baz=204,slow=4.4
HWUT Hardware Ranch 86.54 42 PFAKE 12 29 00.0 +12
HWUT LR LR
comp=Z,2μm,21.0s
GDL2 Guadalupe Moun 86.55 53 *e*P **P** 12 28 48.0 -0.6
comp=Z,24nm,1.0s
125A Gardner Draw, 86.55 53 ⇑P **P** 12 28 47.3 -1.3
baz=87,SNR=8.8
K15A Arbon 86.56 41 ⇓P **P** 12 28 48.0 -0.4
baz=87
Q19A Hogan Spring (86.56 45 ⇑P **P** 12 28 48.0 -0.5
baz=87
S20A Disappointment 86.56 47 ⇓P **P** 12 28 48.2 -0.5
baz=87
PV01 Paradox Valley 86.58 46 *e*P **P** 12 28 49.1 +0.3
comp=Z,3μm,2.1s
Y24A Capitan 86.61 51 ⇑P **P** 12 28 47.8 -1.1
baz=87,SNR=16
427A Hayter Ranch, 86.62 55 ⇓P **P** 12 28 47.7 -1.2
baz=87,SNR=13
N17A Moffit Pass 86.63 43 ⇓P **P** 12 28 48.2 -0.8
baz=87
H13A Challis 86.63 39 ⇑P **P** 12 28 48.0 -0.7
baz=87,SNR=7.2
226B Tecolote Peak, 86.64 53 ⇑P **P** 12 28 48.0 -1.0
baz=87
VNA1 Neumayer--Stat 86.66 176 *e*P **P** 12 28 49.3 +1.0
T21A Navajo Lake 86.69 48 ⇑P **P** 12 28 48.6 -0.7
baz=87
W23A Warner Place, 86.72 50 ⇑P **P** 12 28 48.0 -1.4
baz=87
I14A Mackay 86.73 39 ⇑P **P** 12 28 48.4 -0.8
baz=87
R20A Redvale 86.74 46 ⇑P **P** 12 28 48.7 -0.8
baz=87
528A Cox Ranch, San 86.76 56 ⇓P **P** 12 28 49.4 -0.3
baz=87,SNR=7.8
F12A Elk City 86.77 37 ⇓P **P** 12 28 49.8 +0.5
baz=87,SNR=10
O18A Roosevelt 86.78 44 ⇑P **P** 12 28 49.9 +0.3
baz=87
Z25A Roswell 86.81 52 ⇓P **P** 12 28 49.5 -0.4
baz=87
U22A Llaves 86.84 49 ⇓P **P** 12 28 49.7 -0.4
baz=87
L16A Fish Haven 86.85 42 ⇑P **P** 12 28 49.8 -0.2
baz=87
S21A Coal Bank Pass 86.86 47 ⇑P **P** 12 28 49.9 -0.3
baz=87,SNR=6.0
MAIT Maitri 86.90 182 *e*P P 12 28 38.7 -11
G13A Cobalt 86.96 38 ⇓P **P** 12 28 50.0 -0.3
baz=87
V23A Ortiz Mt. (NFS 86.99 49 ⇓P **P** 12 28 50.5 -0.2
baz=87,SNR=7.7
126A Clayton Basin, 87.02 53 ⇑P **P** 12 28 50.1 -0.7
baz=87
J15A Blackfoot 87.03 40 ⇓P **P** 12 28 49.8 -0.8
baz=87
M17A Scullys Gap (B 87.03 43 ⇓P **P** 12 28 49.8 -1.0
baz=87
428A Kincaid Ranch, 87.10 55 ⇑P **P** 12 28 50.3 -0.9
baz=87
P19A Cripple Cowboy 87.11 45 ⇑P **P** 12 28 50.5 -0.8
baz=87
T22A Edith 87.13 48 ⇑P **P** 12 28 50.6 -0.9
baz=87

Y25A	**Mesa, Roswell**	87.15	52	⇑P	P	12 28 51.0	-0.5
	baz=87,SNR=12						
529A	**Stev Forest Ra**	87.17	56	⇓P	P	12 28 50.3	-1.3
	baz=87						
H14A	**Leadore**	87.18	39	⇓P	P	12 28 51.3	-0.1
	baz=87,SNR=6.1						
Q20A	**Ridgley Place,**	87.20	46	⇓P	P	12 28 50.9	-0.8
	baz=87						
K16A	**Soda Springs**	87.22	41	⇓P	P	12 28 52.4	+0.7
	baz=87						
L17A	**Cokeville**	87.25	42	⇑P	P	12 28 52.1	+0.3
	baz=87						
227A	**Bennet, Jal**	87.25	54	⇓P	P	12 28 52.2	+0.3
	baz=87						
W24A	**Lazy 6 Ranch,**	87.27	50	⇓P	P	12 28 51.7	-0.4
	baz=87						
U23A	**El Rito**	87.28	49	⇓P	P	12 28 52.2	0.0
	baz=88,SNR=6.0						
NEW	**Newport**	87.30	34	PFAKE		12 29 00.0	+8.3
NEW				LR	LR		
	comp=Z,5µm,20.0s						
NEW	**Newport**	87.30	34	⇑P	P	12 28 52.5	+0.8
	baz=88						
F13A	**Darby**	87.31	38	⇑P	P	12 28 51.7	-0.3
	baz=88						
328A	**Wristen Ranch,**	87.32	55	⇑P	P	12 28 51.6	-0.6
	baz=88						
Z26A	**Caprock**	87.35	52	⇑P	P	12 28 51.6	-0.8
	baz=88,SNR=6.3						
O19A	**Miners Draw (B**	87.37	44	⇑P	P	12 28 52.8	+0.4
	baz=88						
M18A	**Lyman**	87.38	43	⇑P	P	12 28 52.3	-0.3
	baz=88						
N18A	**Larsen Ranch,**	87.39	43	⇑P	P	12 28 52.3	-0.2
	baz=88						
R21A	**Cimarron**	87.39	47	⇓P	P	12 28 52.4	-0.3
	baz=88						
X25A	**Clemmons Ranch**	87.46	51	⇑P	P	12 28 52.1	-0.9
	baz=88,SNR=8.0						
AHID	**Auburn Hatcher**	87.48	41	*e*P	P	12 28 53.4	+0.5
AHID				LR	LR		
	comp=Z,2µm,19.0s						
D12A	**Red Ives Fores**	87.50	36	⇓P	P	12 28 52.7	0.0
	baz=88,SNR=5.8						
127A	**Arkansas Junct**	87.52	53	⇑P	P	12 28 52.4	-0.9
	baz=88						
PSI	**Prapat**	87.55	274	P	P	12 28 52.9	-1.0
	comp=Z,94nm,1.4s,comp=Z,2µm						
PSI	**Prapat**	87.55	274	P	P	12 28 53.6	-0.3
	baz=88,SNR=25						
S22A	**4UR Ranch, Cre**	87.56	47	⇑P	P	12 28 52.3	-1.3
	baz=88,SNR=7.0						
K17A	**Gardner Place,**	87.58	41	⇑P	P	12 28 52.7	-0.7
	baz=88						
MCMT	**McKenzie Canyo**	87.60	39	*e*P	P	12 28 54.3	+0.7
	comp=Z,6.6nm,1.4s						
Q21A	**Lamborn Mesa,**	87.62	46	⇑P	P	12 28 52.7	-0.9
	baz=88						
V24A	**Rampart Ranch,**	87.62	50	⇑P	P	12 28 52.5	-1.3
	baz=88,SNR=8.1						
N19A	**John Jarvie Ra**	87.66	44	⇓P	P	12 28 53.6	-0.2
	baz=88						
429A	**Davenport Ranc**	87.66	56	⇑P	P	12 28 52.5	-1.4
	baz=88,SNR=14						
Y26A	**Elida**	87.78	52	⇑P	P	12 28 54.6	+0.1
	baz=88						
E13A	**Victor**	87.78	37	⇑P	P	12 28 54.7	+0.5
	baz=88						
228A	**UT Block 9, Go**	87.83	54	⇓P	P	12 28 54.8	+0.1
	baz=88						
C12B	**Naegeli Ranch,**	87.83	36	⇓P	P	12 28 54.3	0.0
	baz=88						
SKAG	**Skagway**	87.84	19	*e*P	P	12 28 54.2	+0.3
	comp=Z,112nm,1.6s						
R22A	**Saguache, Gunn**	87.86	47	⇑P	P	12 28 54.1	-0.9
	baz=88						
O20A	**White River Ci**	87.86	45	⇓P	P	12 28 53.9	-0.9
	baz=88						
I16A	**Newdale**	87.86	40	⇓P	P	12 28 54.3	-0.4
	baz=88						
530A	**J-C Ranch, Com**	87.86	56	⇓P	P	12 28 54.2	-0.7
	baz=88						
F14A	**Wisdom**	87.87	38	⇓P	P	12 28 54.2	-0.5
	baz=88						
DCID1	**Drake Creek**	87.89	41	*e*P	P	12 28 54.3	-0.5
	comp=Z,6.7nm,0.8s						
TNA	**Tin City**	87.91	3	*e*P	P	12 28 54.4	+0.3
	comp=Z,55nm,1.6s						
Z27A	**Tatum**	87.93	53	⇓P	P	12 28 54.0	-1.2
	baz=88						
W25A	**X Bar L Ranch,**	87.95	51	⇑P	P	12 28 54.2	-1.1
	baz=88,SNR=16						
TPAW	**Teton Pass**	87.97	41	*e*P	P	12 28 56.1	+0.7
	comp=Z,57nm,2.0s						
329A	**Wagon Wheel Ra**	87.99	55	⇑P	P	12 28 55.2	-0.3
	baz=88						
M19A	**Rock Springs**	88.00	43	⇑P	P	12 28 55.0	-0.4
	baz=88						
G15A	**Dillon**	88.00	39	⇑P	P	12 28 55.3	0.0
	baz=88						
D13A	**Huson**	88.01	36	⇓P	P	12 28 55.3	+0.1
	baz=88						
J17A	**Brown Place, J**	88.04	41	⇓P	P	12 28 55.4	-0.2
	baz=88						
DLMT	**Dillon**	88.05	39	*e*P	P	12 28 55.9	+0.4
	comp=Z,52nm,1.9s						
K18A	**Toltan Ranch,**	88.06	42	⇑P	P	12 28 55.1	-0.7
	baz=88,SNR=5.0						
P21A	**Newcastle**	88.06	46	⇓P	P	12 28 55.3	-0.5
	baz=88						
Q22A	**Crested Butte,**	88.08	46	⇓P	P	12 28 55.3	-0.7
	baz=88						
X26A	**CR and CF Fran**	88.09	51	⇓P	P	12 28 55.2	-0.8
	baz=88						
631A	**Perdido Creek**	88.12	57	⇑P	P	12 28 55.1	-0.9
	baz=88						
PAF	**Port-aux-Franc**	88.13	216	PFAKE		12 29 10.0	+14
PAF				LR	LR		
	comp=Z,2µm,19.0s						
V25A	**Rancho No Teng**	88.14	50	⇓P	P	12 28 55.3	-1.0
	baz=88,SNR=10						
128A	**Castleberry Fa**	88.14	54	⇓P	P	12 28 55.4	-0.8
	baz=88						
MSO	**Missoula**	88.14	37	PFAKE		12 29 10.0	+14
MSO				LR	LR		
	comp=Z,3µm,19.0s						
MSO	**Missoula**	88.14	37	⇓P	P	12 28 55.8	-0.1
	baz=88						
E14A	**Clinton**	88.15	37	⇑P	P	12 28 55.9	-0.1
	baz=88						
L19A	**Farson**	88.19	43	⇓P	P	12 28 56.5	+0.1
	baz=88						
SMCO	**Snowmass**	88.19	46	*e*P	P	12 28 57.7	+1.0
	comp=Z,11nm,1.1s						
IMW	**Indian Meadow**	88.20	41	*e*P	P	12 28 57.6	+1.1
	comp=Z,32nm,1.8s						
B12A	**Libby**	88.23	35	⇓P	P	12 28 56.3	+0.1
	baz=88						
GSI	**Gunungsitoli**	88.23	272	P	P	12 28 58.9	+1.9
	baz=89,SNR=9.1						
430A	**Baggett Ranch,**	88.23	56	⇑P	P	12 28 56.2	-0.4
	baz=88						
Y27A	**Causey**	88.24	52	⇑P	P	12 28 56.1	-0.5
	baz=88						
LOHW	**Long Hollow**	88.25	41	*e*P	P	12 28 58.1	+1.5
	comp=Z,94nm,2.4s						
732A	**Laxson Ranch,**	88.28	58	⇓P	P	12 28 56.0	-0.8
	baz=88						
BSMT	**Bassoo Peak**	88.29	36	*e*P	P	12 28 57.0	+0.4
	comp=Z,53nm,2.1s						
CHBT	**CHBT**	88.29	284	P	P	12 28 57.8	+0.7
	comp=Z,70nm,1.9s,comp=Z,2µm						
J18A	**Kendall Valley**	88.38	41	⇑P	P	12 28 56.5	-0.8
	baz=89,SNR=8.8						
F15A	**Butte**	88.39	38	⇓P	P	12 28 56.8	-0.4
	baz=89						
LRM	**Limekiln Ridge**	88.40	38	*e*P	P	12 28 58.1	+0.8
	comp=Z,451nm,2.1s						
BW06	**Boulder Array**	88.43	42	PFAKE		12 29 10.0	+13
BW06				LR	LR		
	comp=Z,2µm,19.0s						
BW06	**Boulder Array**	88.43	42	⇑P	P	12 28 56.8	-0.7
	baz=89						
PDAR	**Pinedale Array**	88.43	42	P	P	12 28 55.9	-1.6
PDAR	**Pinedale Array**	88.43	42	P	P	12 28 55.9	-1.6
	comp=Z,1.7nm,0.8s,baz=179,slow=3.0,SNR=12						
PDAR				LR	LR	13 00 44.3	
	comp=Z,993nm,20.9s,baz=237,slow=30						

QLMT	**Earthquake Lak**	88.43	40	*e*P	P	12 28 59.3	+1.9
I17A	**Pilgrim Ck.**	88.43	41	⇑P	P	12 28 57.5	0.0
	baz=89						
G16A	**Moss Hill, Enn**	88.44	39	⇑P	P	12 28 57.5	+0.1
	baz=89						
R23A	**Moffat**	88.47	47	⇓P	P	12 28 57.5	-0.4
	baz=89						
H16A	**Russell Place,**	88.47	40	⇑P	P	12 28 57.5	-0.1
	baz=89						
A12A	**Yaak River Ran**	88.48	35	⇑P	P	12 28 57.8	+0.5
	baz=89						
Z28A	**Tucker Farm, M**	88.53	53	⇑P	P	12 28 57.2	-0.8
	baz=89						
D14A	**Greenough**	88.53	37	⇓P	P	12 28 57.6	-0.1
	baz=89						
P22A	**Eagle**	88.55	46	⇑P	P	12 28 57.8	-0.4
	baz=89						
U25A	**Circle Dot Ran**	88.56	50	⇓P	P	12 28 58.0	-0.2
	baz=89						
MSTX	**Muleshoe**	88.57	52	⇓P	P	12 28 57.2	-1.0
	baz=89						
CHMT	**Chamberlain Mo**	88.58	37	*e*P	P	12 28 58.5	+0.4
	comp=Z,34nm,1.9s						
M20A	**Sweetwater, Wa**	88.61	44	⇓P	P	12 28 58.1	-0.2
	baz=89						
129A	**Stewart Farms,**	88.61	54	⇑P	P	12 28 57.6	-0.8
	baz=89						
S24A	**Houchin Ranch,**	88.61	48	⇑P	P	12 28 57.9	-0.7
	baz=89						
MENT	**Mentasta**	88.61	14	*e*P	P	12 28 57.2	-0.4
YMR	**Madison River**	88.62	40	*e*P	P	12 28 59.9	+1.6
	comp=Z,1.5nm,0.5s						
SLMT	**Seeley Lake**	88.63	37	*e*P	P	12 28 57.6	-0.6
	comp=Z,21nm,1.6s						
E15A	**Deer Lodge**	88.64	38	⇓P	P	12 28 58.4	+0.2
	baz=89						
X27A	**F and S Farms,**	88.65	52	⇑P	P	12 28 58.2	-0.4
	baz=89						
N21A	**Black Mountain**	88.65	45	⇓P	P	12 28 58.6	0.0
	baz=89						
431A	**Sonora**	88.67	56	⇑P	P	12 28 58.0	-0.7
	baz=89						
H17A	**Grant Village**	88.70	40	⇑P	P	12 28 59.0	+0.2
	baz=89						
V26A	**Tequesquite Ra**	88.71	50	⇑P	P	12 28 59.0	+0.1
	baz=89						
DLBC	**Dease Lake**	88.75	22	*e*P	P	12 28 59.5	+1.1
B13A	**Whitefish**	88.77	35	⇑P	P	12 28 59.2	+0.5
	baz=89						
632A	**Uvalde**	88.77	57	⇓P	P	12 28 58.8	-0.3
	baz=89						
I18A	**Diamond G Ranc**	88.77	41	⇑P	P	12 28 59.1	0.0
	baz=89						
BOZ	**Bozeman (W)**	88.78	39	*e*P	P	12 28 59.5	+0.6
BOZ				pmax	pmax		
	comp=Z,59nm,2.1s						
BOZ				MLR	MLR		
	comp=Z,2µm,19.0s						
BOZ	**Bozeman (W)**	88.78	39	*e*P	P	12 28 59.5	+0.6
	comp=Z,59nm,2.1s						
BOZ				LR	LR		
	comp=Z,2µm,19.0s						
BOZ	**Bozeman (W)**	88.78	39	⇑P	P	12 28 58.7	-0.2
	baz=89						
L20A	**Wamsutter**	88.78	43	⇑P	P	12 28 58.6	-0.5
	baz=89,SNR=5.1						
F16A	**Kennard Place,**	88.85	39	⇑P	P	12 29 00.2	+0.9
	baz=89						
W27A	**Bowe Ranch, En**	88.88	51	⇑P	P	12 29 00.5	+0.9
	baz=89						
LKWY	**Lake**	88.89	40	PFAKE		12 29 10.0	+10
LKWY				LR	LR		
	comp=Z,2µm,22.0s						
K19A	**Absolon Red Bu**	88.90	42	⇓P	P	12 29 00.3	+0.6
	baz=89						
Y28A	**McKinney Farm,**	88.92	53	⇓P	P	12 29 00.1	+0.2
	baz=89						
532A	**Rocksprings**	88.96	57	⇑P	P	12 28 59.2	-0.9
	baz=89,SNR=7.0						
SEY	**Seymchan**	88.97	346	⇑*i*P	P	12 28 59.3	+0.1
R24A	**Sanders Place,**	88.98	48	⇓P	P	12 29 00.1	0.0
	baz=89						
O22A	**Kremmling**	88.98	45	⇓P	P	12 28 59.9	-0.3
	baz=89						
J19A	**Crowheart**	89.01	42	⇓P	P	12 29 00.5	+0.4
	baz=89						
Z29A	**Hungry Hill Ra**	89.02	53	⇓P	P	12 29 00.1	-0.2
	baz=89						
U26A	**Atchley Ranch,**	89.03	50	⇑P	P	12 29 00.4	0.0
	baz=89						
D15A	**Lincoln**	89.06	37	⇑P	P	12 29 00.0	-0.2
	baz=89,SNR=5.2						
331A	**San Angelo**	89.09	56	⇓P	P	12 29 00.6	-0.1
	baz=89						
G17A	**Pierce Place,**	89.11	39	⇓P	P	12 29 00.9	+0.4
	baz=89						
K20A	**Yellowstone Ra**	89.12	43	⇓P	P	12 29 00.9	+0.3
	baz=89						
S25A	**Robets Cordova**	89.16	48	⇓P	P	12 29 00.9	0.0
	baz=89						
DOT	**Dot Lake**	89.17	13	*e*P	P	12 29 00.3	+0.1
	comp=Z,20nm,1.3s						
M21A	**Separation Pea**	89.19	44	⇓P	P	12 29 01.4	+0.3
	baz=89						
JCT	**Junction City**	89.20	57	*e*P	P	12 29 01.1	-0.1
JCT				pmax	pmax		
	comp=Z,45nm,1.8s						
JCT				MLR	MLR		
	comp=Z,3µm,19.0s						
JCT	**Junction City**	89.20	57	*e*P	P	12 29 01.1	-0.1
	comp=Z,45nm,1.8s						
JCT				LR	LR		
	comp=Z,3µm,19.0s						
JCT	**Junction City**	89.20	57	⇓P	P	12 29 01.3	+0.2
	baz=89						
E16A	**East Helena**	89.25	38	⇓P	P	12 29 01.8	+0.7
	baz=89						
130A	**Snyder**	89.27	54	⇑P	P	12 29 01.8	+0.4
	baz=89						
Q24A	**Divide**	89.31	47	⇑P	P	12 29 01.7	-0.2
	baz=90						
Y29A	**Porterfield Fa**	89.32	53	⇓P	P	12 29 01.4	-0.3
	baz=90						
BJT	**Baijiatuau**	89.33	314	PFAKE		12 29 10.0	+8.5
BJT				LR	LR		
	comp=Z,770nm,19.0s						
BJI	**Beijing**	89.34	314	P	P	12 29 02.5	+1.0
BJI				pP	**pP**	12 29 24.4	+0.4
BJI				sP	**sP**	12 29 33.2	+0.2
BJI				PP	**PP**	12 32 34.9	+1.2
BJI				S	**SKKSac**	12 39 31.4	-5.1
BJI				sS	**sS**	12 40 23.8	+0.7
BJI				pmax	pmax		
	comp=Z,1µm,4.2s						
BJI				LR	LR		
	comp=N,510nm,18.9s						
BJI				LR	LR		
	comp=E,580nm,21.5s						
BJI				LR	LR		
	comp=Z,500nm,23.8s						
N22A	**Wattenberg Ran**	89.37	45	⇓P	P	12 29 01.7	-0.3
	baz=90						
L21A	**Rawlins**	89.38	44	⇑P	P	12 29 02.2	+0.3
	baz=90						
432A	**Menard**	89.38	56	⇓P	P	12 29 01.5	-0.5
	baz=90						
H18A	**Shoshone NF, C**	89.40	40	⇑P	P	12 29 01.8	-0.1
	baz=90						
B14A	**Marquette Ranc**	89.41	36	⇓P	P	12 29 01.9	+0.1
	baz=90,SNR=8.8						
KVTX	**Kingsville**	89.41	60	PFAKE		12 29 10.0	+7.9
KVTX				LR	LR		
	comp=Z,1µm,20.0s						
ISCO	**Idaho Springs**	89.42	46	PFAKE		12 29 10.0	+7.7
ISCO				LR	LR		
	comp=Z,1µm,21.0s						
O23A	**Lake Granby, G**	89.42	46	⇑P	P	12 29 02.7	+0.4
	baz=90						
C15A	**Salmond Ranch,**	89.43	37	⇑P	P	12 29 02.2	+0.3
	baz=90,SNR=6.8						
I19A	**Meeteetse**	89.46	41	⇓P	P	12 29 02.6	+0.4
	baz=90						
231A	**Bronte**	89.46	55	⇑P	P	12 29 02.5	+0.2
	baz=90						
Z30A	**Sanderson Ranc**	89.46	54	⇑P	P	12 29 01.9	-0.4
	baz=90						
WALA	**Waterton Lakes**	89.47	35	*e*P	P	12 29 02.7	+0.6
	comp=Z,1.5nm,1.6s						

F17A	**Fitzpatrick Pl**	89.48	39	⇑P	P	12 29 02.4	+0.2
	baz=90,SNR=5.5						
R25A	**Fountain Ranch**	89.50	48	⇑P	P	12 29 02.8	+0.3
	baz=90						
T26A	**Comanche Natio**	89.51	49	⇓P	P	12 29 02.8	+0.2
	baz=90						
COLA	**College**	89.53	11	*e*P	P	12 29 00.7	-1.0
COLA				pmax	pmax		
	comp=Z,75nm,1.4s						
COLA				MLR	MLR		
	comp=Z,1µm,20.0s						
COLA	**College**	89.53	11	*e*P	P	12 29 00.7	-1.0
	comp=Z,75nm,1.4s						
COLA				LR	LR		
	comp=Z,1µm,20.0s						
X29A	**Tulia**	89.57	52	⇓P	P	12 29 03.0	+0.1
	baz=90						
M22A	**Cedar Creek Ra**	89.58	44	⇓P	P	12 29 03.0	0.0
	baz=90						
D16A	**Dana Ranch, Ca**	89.60	38	⇑P	P	12 29 02.8	+0.1
	baz=90						
ILAR	**Eielson Array**	89.61	12	P	P	12 29 01.4	-0.8
ILAR				PP	PP	12 32 29.3	-6.1
ILAR	**Eielson Array**	89.61	12	P	P	12 29 01.4	-0.8
	comp=Z,6.8nm,0.9s,baz=220,slow=4.1,SNR=45						
ILAR				PP	PP	12 32 29.3	-6.1
	comp=Z,0.8nm,1.0s,baz=215,slow=7.7,SNR=3.4						
332A	**Millersview**	89.65	56	⇓P	P	12 29 03.3	+0.1
	baz=90						
J20A	**Shoshoni**	89.65	42	⇑P	P	12 29 03.3	+0.2
	baz=90						
A14A	**Double T Ranch**	89.68	35	⇑P	P	12 29 02.8	-0.3
	baz=90,SNR=7.5						
N23A	**Red Feather La**	89.75	45	⇓P	P	12 29 03.8	+0.1
	baz=90						
B15A	**Bradely Ranch,**	89.77	36	⇓P	P	12 29 03.5	0.0
	baz=90,SNR=6.5						
AMTX	**Amarillo**	89.79	52	PFAKE		12 29 20.0	+16
AMTX				LR	LR		
	comp=Z,5µm,19.0s						
AMTX	**Amarillo**	89.79	52	⇑P	P	12 29 03.2	-0.6
	baz=90						
K21A	**Alcova**	89.80	43	⇑P	P	12 29 03.3	-0.5
	baz=90						
H19A	**Powell**	89.80	41	⇑P	P	12 29 04.1	+0.4
	baz=90						
G18A	**Lazy EL Ranch,**	89.80	40	⇑P	P	12 29 04.1	+0.3
	baz=90						
S26A	**Kim**	89.81	49	⇑P	P	12 29 03.3	-0.6
	baz=90,SNR=5.9						
RLMT	**Red Lodge**	89.88	40	PFAKE		12 29 20.0	+16
RLMT				LR	LR		
	comp=Z,1µm,20.0s						
RLMT	**Red Lodge**	89.88	40	⇓P	P	12 29 04.2	0.0
	baz=90						
Q25A	**Bedland, Calha**	89.90	47	⇓P	P	12 29 04.0	-0.4
	baz=90						
C16A	**Fuhringer Ranc**	89.92	37	⇑P	P	12 29 04.3	+0.1
	baz=90						
I20A	**Worland**	89.94	42	⇓P	P	12 29 04.5	+0.1
	baz=90						
232A	**Coleman**	89.94	55	⇓P	P	12 29 04.2	-0.4
	baz=90						
GCMT	**Greycliff**	90.00	39	*e*P	P	12 29 06.1	+1.4
	comp=Z,44nm,1.9s						
L22A	**Ellis Ranch, M**	90.01	44	⇑P	P	12 29 04.6	-0.3
	baz=90						
F18A	**Big Timber**	90.03	39	⇓P	P	12 29 04.8	0.0
	baz=90						
J21A	**Lysite**	90.05	42	⇑P	P	12 29 05.1	+0.1
	baz=90						
A15A	**Johnson Ranch,**	90.06	36	⇑P	P	12 29 04.8	0.0
	baz=90,SNR=12						
T27A	**Campo**	90.07	50	⇓P	P	12 29 05.2	0.0
	baz=90						
GYA	**Guiyang**	90.15	299	⇑*i*P	P	12 29 07.3	+1.5
GYA				pP	**pP**	12 29 30.4	+2.1
GYA				sP	**sP**	12 29 39.8	+2.5
GYA				PP	**PP**	12 32 42.6	+2.0
GYA				SKS	**SKSac**	12 39 26.5	-3.2
GYA				S	**S**	12 39 50.4	-2.5
GYA				sS	**sS**	12 40 29.9	-1.7
GYA				SS	**SS**	12 45 53.1	-1.1
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,150nm,5.3s						
GYA				LR	LR		
	comp=N,6µm,20.5s						
GYA				LR	LR		
	comp=E,4µm,21.0s						
GYA				LR	LR		
	comp=Z,6µm,19.3s						
R26A	**Arlington**	90.15	48	⇑P	P	12 29 04.6	-0.9
	baz=90						
D17A	**Six Diamond Ra**	90.16	38	⇑P	P	12 29 05.3	-0.1
	baz=90,SNR=8.5						
Z31A	**Sharp Cattle R**	90.21	54	⇓P	P	12 29 05.9	+0.1
	baz=90						
P25A	**Willow Gulch B**	90.25	47	⇑P	P	12 29 06.1	+0.1
	baz=90						
K22A	**Casper**	90.27	43	⇑P	P	12 29 05.9	-0.1
	baz=90						
PHWY	**Pilot Hill**	90.27	45	*e*P	P	12 29 06.6	+0.4
ABTX	**Abilene, Hawle**	90.28	55	⇑P	P	12 29 06.2	+0.1
	baz=90						
E18A	**Harlowton**	90.28	39	⇑P	P	12 29 05.7	-0.2
	baz=90						
B16A	**M & M Farms, S**	90.29	36	⇑P	P	12 29 05.8	-0.1
	baz=90						
C17A	**Wharram Farm,**	90.38	37	⇑P	P	12 29 05.8	-0.5
	baz=91,SNR=10						
I21A	**Big Trails, Te**	90.38	42	⇑P	P	12 29 06.7	+0.2
	baz=91						
Q26A	**Hugo**	90.40	48	⇑P	P	12 29 06.6	-0.1
	baz=91						
Y31A	**Rekieta Farm,**	90.41	53	⇑P	P	12 29 06.6	-0.1
	baz=91						
F19A	**Roth Farm, Mol**	90.46	40	⇑P	P	12 29 07.4	+0.7
	baz=91						
L23A	**Garrett**	90.52	44	⇓P	P	12 29 07.4	+0.1
	baz=91						
T28A	**Walsh**	90.52	50	⇓P	P	12 29 07.3	0.0
	baz=91						
G20A	**Bridger**	90.56	40	⇑P	P	12 29 07.4	+0.1
	baz=91						
R27A	**Eads**	90.59	48	⇓P	P	12 29 07.1	-0.5
	baz=91						
J22A	**Midwest**	90.68	43	⇓P	P	12 29 08.2	+0.3
	baz=91						
D18A	**Linhart Farms,**	90.69	38	⇑P	P	12 29 08.6	+0.8
	baz=91						
Z32A	**Haskell**	90.70	54	⇑P	P	12 29 08.1	0.0
	baz=91						
B17A	**L&G Farms, Che**	90.73	37	⇓P	P	12 29 08.4	+0.5
	baz=91						
TIY	**Taiyuan**	90.76	311	*e*P	P	12 29 09.9	+1.6
TIY				pP	**pP**	12 29 30.7	-0.2
TIY				PP	**PP**	12 32 49.4	+4.2
TIY				S	**S**	12 39 56.3	-1.6
TIY				pmax	pmax		
	comp=Z,610nm,5.4s						
TIY				LR	LR		
	comp=N,860nm,24.0s						
TIY				LR	LR		
	comp=E,440nm,18.2s						
TIY				LR	LR		
	comp=Z,600nm,20.3s						
M24A	**Cheyenne**	90.77	45	⇑P	P	12 29 08.6	+0.2
	baz=91						
EGAK	**Eagle**	90.78	14	*e*P	P	12 29 07.5	-0.1
	comp=Z,58nm,1.4s						
EGAK				LR	LR		
	comp=Z,2µm,19.0s						
LCO	**Las Campanas**	90.86	122	PFAKE		12 29 20.0	+11
LCO				LR	LR		
	comp=Z,3µm,19.0s						
E19A	**Rath Farm, Rou**	90.88	39	⇓P	P	12 29 08.9	+0.2
	baz=91,SNR=5.9						
F20A	**Billings**	90.90	40	⇓P	P	12 29 08.6	-0.2
	baz=91						
I22A	**9 Mile Ranch,**	90.92	42	⇓P	P	12 29 09.9	+0.9
	baz=91						
H21A	**Big Horn, Sher**	90.96	41	⇓P	P	12 29 09.9	+0.8
	baz=91						
L24A	**Wheatland**	90.98	44	⇓P	P	12 29 09.9	+0.6
	baz=91						

Y32A R-V Farms, Ver 91.04 54 ⇑P P 12 29 10.3 +0.6
baz=91
KSCO Kaye Shedlock' 91.05 48 ⇓P P 12 29 10.4 +0.6
baz=91
A17A Triple J Farms 91.14 36 ⇑P P 12 29 10.0 +0.2
baz=91,SNR=7.5
EGMT Eagleton 91.16 38 *e*P P 12 29 10.9 +0.9
comp=Z,60nm,1.7s
EGMT LR LR
comp=Z,3μm,19.0s
EGMT Eagleton 91.16 38 ⇓P P 12 29 10.5 +0.6
baz=91
D19A Cripps Ranch, 91.20 39 ⇓P P 12 29 10.6 +0.5
baz=91
W31A Holland Ranch, 91.20 52 ⇓P P 12 29 10.5 +0.1
baz=91
E20A Meyer Farm, Mu 91.28 39 ⇓P P 12 29 11.7 +1.2
baz=92
COLD Coldfoot 91.30 9 *e*P P 12 29 10.6 +0.6
comp=Z,19nm,1.1s
BILL Bilibino 91.31 353 ⇓*i*P P 12 29 10.0 0.0
BILL *i* 12 29 21.2
BILL *i* 12 39 41.4
BILL *e*SS SS 12 46 19.0 +10
BILL pmax pmax
comp=Z,41nm,2.5s
BILL Bilibino 91.31 353 *e*P P 12 29 09.7 -0.3
comp=Z,30nm,1.4s
BILL LR LR
comp=Z,5μm,20.0s
B18A Beardsley Farm 91.35 37 ⇓P P 12 29 11.5 +0.7
baz=92,SNR=7.2
H22A Clearmont 91.36 42 ⇑P P 12 29 11.7 +0.7
baz=92
C19A Slack Wire Ran 91.41 38 ⇑P P 12 29 11.8 +0.7
baz=92,SNR=9.6
D20A Manuel Ranch, 91.59 39 ⇓P P 12 29 12.9 +1.0
baz=92,SNR=6.3
CFAA Coronel Fontan 91.59 125 P P 12 29 11.7 -0.8
CFAA Coronel Fontan 91.59 125 P P 12 29 11.7 -0.8
comp=Z,0.3nm,0.6s,baz=233,slow=5.1,SNR=3.1
A18A Metzger Ranch, 91.60 37 ⇑P P 12 29 12.6 +0.8
baz=92,SNR=8.5
XAN Xi'an 91.64 306 P P 12 29 12.9 +0.5
XAN pP pP 12 29 34.1 -0.9
XAN sP sP 12 29 43.2 -0.8
XAN SKS SKSac 12 39 32.1 -5.6
XAN pmax pmax
comp=Z,21nm,1.4s
XAN pmax pmax
comp=Z,170nm,8.7s
XAN LR LR
comp=N,470nm,21.5s
XAN LR LR
comp=E,150nm,24.5s
G22A Birney 91.72 41 ⇓P P 12 29 13.8 +1.2
baz=92
SRDT SRDT 91.79 285 P P 12 29 12.8 -0.6
comp=E,38nm,2.1s,comp=E,5μm
B19A Brinkman Farms 91.85 37 ⇑P P 12 29 14.7 +1.6
baz=92
WMOK Wichita Mounta 91.85 53 PFAKE 12 29 20.0 +6.6
WMOK LR LR
comp=Z,2μm,20.0s
K25A Mack Ranch, Ha 91.95 44 ⇓P P 12 29 15.4 +1.6
baz=92
C20A Veseth Ranch, 91.99 38 ⇓P P 12 29 14.3 +0.6
baz=92,SNR=8.4
F22A Rosebud 92.02 41 ⇓P P 12 29 14.1 +0.2
baz=92
HKT Hockley 92.06 58 *e*P P 12 29 13.5 -0.8
HKT pmax pmax
comp=Z,50nm,1.8s
HKT Hockley 92.06 58 *e*P P 12 29 13.5 -0.8
comp=Z,50nm,1.8s
A19A Klindworth Far 92.22 37 ⇓P P 12 29 15.6 +0.8
baz=92,SNR=5.7
D21A La Casta Ranch 92.24 39 ⇓P P 12 29 15.6 +0.7
baz=92
G23A Biddle 92.26 42 ⇓P P 12 29 15.6 +0.5
baz=92
OGNE Ogallala 92.36 46 PFAKE 12 29 30.0 +14
OGNE LR LR
comp=Z,2μm,19.0s
B20A Solberg Farm, 92.36 38 ⇑P P 12 29 16.9 +1.5
baz=92
K26A Motz Farm, Whi 92.44 44 ⇓P P 12 29 17.5 +1.5
baz=93
E22A Miles City 92.54 40 ⇑P P 12 29 17.6 +1.3
baz=93
H24A Dirks Ranch, A 92.55 42 ⇓P P 12 29 17.4 +0.9
baz=93
RSSD Black Hills 92.57 43 *e*P P 12 29 16.8 +0.1
RSSD pmax pmax
comp=Z,24nm,1.4s
RSSD Black Hills 92.57 43 *e*P P 12 29 16.8 +0.1
comp=Z,24nm,1.4s
C21A Desert Coulee 92.58 39 ⇑P P 12 29 17.6 +1.2
baz=93
A20A Cobblestone Ra 92.65 37 ⇓P P 12 29 17.3 +0.6
baz=93,SNR=6.2
NNA Nana 92.75 104 PFAKE 12 29 30.0 +12
NNA LR LR
comp=Z,3μm,20.0s
D22A Cohagen 92.76 40 ⇑P P 12 29 17.6 +0.2
baz=93,SNR=6.1
HHC Hu-ho-hao-te 92.81 313 *e*P P 12 29 18.3 +0.5
HHC pP pP 12 29 40.1 -0.3
HHC sP sP 12 29 48.6 -0.7
HHC PP PP 12 33 04.3 +2.9
HHC SKS SKSac 12 39 44.2 +0.1
HHC S S 12 40 15.0 -1.3
HHC sS sS 12 40 52.3 -2.9
HHC pmax pmax
comp=Z,120nm,1.2s
HHC pmax pmax
comp=Z,1μm,6.9s
HHC LR LR
comp=N,1μm,17.7s
HHC LR LR
comp=E,1μm,17.2s
HHC LR LR
comp=Z,2μm,17.5s
KMI Kunming 92.83 296 P P 12 29 20.1 +1.7
KMI S S 12 40 19.6 +2.2
KMI SS SS 12 46 30.4 -2.7
KMI pmax pmax
comp=Z,45nm,1.4s
KMI pmax pmax
comp=Z,830nm,4.9s
KMI LR LR
comp=N,400nm,21.1s
KMI LR LR
comp=E,600nm,19.8s
KMI LR LR
comp=Z,1μm,21.8s
TRQA Tornquist 92.91 133 PFAKE 12 29 30.0 +12
TRQA LR LR
comp=Z,2μm,19.0s
G24A Alzada 92.92 42 ⇑P P 12 29 19.3 +1.2
baz=93
E23A Ismay 92.96 40 ⇑P P 12 29 19.5 +1.3
baz=93
TGUH Tegucigalpa,Un 93.10 76 PFAKE 12 29 30.0 +11
TGUH LR LR
comp=Z,1μm,21.0s
F24A Ekalaka 93.16 41 ⇓P P 12 29 20.3 +1.1
baz=93
C22A Vida 93.24 39 ⇑P P 12 29 20.7 +1.2
baz=93
A21A Bergtoll Ranch 93.27 38 ⇓P P 12 29 20.6 +1.0
baz=94,SNR=6.7
D23A Lindsay 93.35 40 ⇑P P 12 29 20.8 +0.8
baz=94
CM31 Chiang Mai Arr 93.51 288 *e*P P 12 29 23.2 +1.8
comp=Z,66nm,1.2s
CMAR Chiang Mai Arr 93.51 288 P P 12 29 22.8 +1.4
CMAR PP PP 12 33 07.6 +0.5
CMAR Chiang Mai Arr 93.51 288 P P 12 29 22.8 +1.4
comp=Z,14nm,1.0s,baz=118,slow=3.0,SNR=78
CMAR PP PP 12 33 07.6 +0.5
comp=Z,0.4nm,0.3s,baz=108,slow=4.8,SNR=3.1
CMAR LR LR 13 10 33.2
comp=Z,449nm,20.0s,baz=125,slow=35
CMMT Chiang Mai 93.64 289 P P 12 29 21.1 -0.9
comp=Z,42nm,1.6s,comp=Z,890nm
CHTO Chiang Mai 93.64 289 *e*P P 12 29 23.1 +1.1
CHTO pmax pmax
comp=Z,127nm,1.5s
CHTO MLR MLR
comp=Z,603nm,20.0s
CHTO Chiang Mai 93.64 289 *e*P P 12 29 23.1 +1.1
comp=Z,127nm,1.5s
CHTO LR LR
comp=Z,603nm,20.0s
CHTO Chiang Mai 93.64 289 P P 12 29 23.4 +1.4
comp=Z,46nm,1.7s,comp=Z,912nm
C23A Lambert 93.68 39 ⇓P P 12 29 22.3 +0.8
baz=94
BTO Baotou 93.75 312 *e*P P 12 29 22.5 +0.4
JTS JuntasAbangare 93.79 80 *e*P P 12 29 22.4 -0.4
comp=Z,25nm,1.2s
JTS LR LR
comp=Z,1μm,19.0s
A22A Carney Farms, 93.85 38 ⇑P P 12 29 23.4 +1.2
baz=94
D24A Glendive 93.85 40 ⇓P P 12 29 23.2 +0.9
baz=94
C24A Savage 93.99 40 ⇑P P 12 29 23.7 +0.8
baz=94
B23A Brockton 94.11 39 ⇓P P 12 29 24.2 +0.7
baz=94
CD2 Chengdu 94.30 302 P P 12 29 24.9 +0.1
CD2 pP pP 12 29 48.1 +0.7
CD2 sP sP 12 29 57.4 +1.1
CD2 PP PP 12 33 15.3 +2.2
CD2 SKS SKSac 12 39 50.6 -2.0
CD2 S S 12 40 26.1 -3.6
CD2 sS sS 12 41 06.3 -2.3
CD2 SS SS 12 46 53.2 -0.3
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,640nm,8.3s
CD2 LR LR
comp=N,660nm,21.5s
CD2 LR LR
comp=E,990nm,21.1s
CD2 LR LR
comp=Z,910nm,22.1s
TEIG Tepich 94.53 70 PFAKE 12 29 40.0 +14
TEIG LR LR
comp=Z,2μm,20.0s
DGMT Dagmar 94.58 39 *e*P P 12 29 26.2 +0.6
comp=Z,48nm,1.1s
DGMT LR LR
comp=Z,2μm,20.0s
DGMT Dagmar 94.58 39 ⇓P P 12 29 26.5 +0.9
baz=95
A24A Westby 94.91 39 ⇑P P 12 29 27.9 +0.8
baz=95
YAK Yakutsk 95.03 337 *e*P P 12 29 26.1 -1.2
YAK *e**PP pP 12 29 44.7 -5.2
YAK *e* 12 33 18.4
YAK *e*S SKSac 12 39 57.6 +2.7
YAK *e*PS ScS 12 40 41.8 +6.4
YAK *e*SS SS 12 46 59.2 -3.2
YAK pmax pmax
comp=Z,26nm,1.5s
YAK pmax pmax
comp=E,13nm,1.5s
YAK pmax pmax
comp=N,4.0nm,1.4s
YAK pmax pmax
comp=Z,165nm,3.5s
YAK pmax pmax
comp=E,131nm,3.7s
YAK pmax pmax
comp=N,194nm,4.8s
YAK smax smax
comp=E,161nm,6.9s
YAK smax smax
comp=N,216nm,6.6s
YAK Yakutsk 95.03 337 PFAKE 12 29 40.0 +13
YAK LR LR
comp=Z,865nm,20.0s
KSU1 Kansas State U 95.29 50 PFAKE 12 29 40.0 +11
KSU1 LR LR
comp=Z,3μm,19.0s
MIAR Mount Ida 95.68 55 PFAKE 12 29 40.0 +9.1
MIAR LR LR
comp=Z,2μm,19.0s
OTAV Otavalo 96.03 92 PFAKE 12 29 50.0 +16
OTAV LR LR
comp=Z,1μm,19.0s
LZH Lanzhou 96.28 306 ⇑P P 12 29 35.6 +1.8
LZH pP pP 12 29 59.1 +2.6
LZH sP sP 12 30 08.5 +3.1
LZH PP PP 12 33 32.4 +3.9
LZH S S 12 40 46.1 -0.8
LZH sS sS 12 41 24.2 -1.7
LZH pmax pmax
comp=Z,53nm,1.3s
LZH pmax pmax
comp=Z,510nm,7.1s
LZH LR LR
comp=N,810nm,18.0s
LZH LR LR
comp=E,720nm,18.2s
LZH LR LR
comp=Z,960nm,15.5s
YKA Yellowknife Ar 97.09 24 P P 12 29 35.7 -0.9
YKA PP PP 12 33 27.4 -6.5
YKA PKKPbc PKKPdf 12 46 21.1 +0.1
YKA Yellowknife Ar 97.09 24 P P 12 29 35.7 -0.9
comp=Z,1.7nm,0.7s,baz=239,slow=4.4,SNR=32
YKA PP PP 12 33 27.4 -6.5
comp=Z,0.3nm,0.8s,baz=243,slow=6.3,SNR=3.9
YKA PKKPbc PKKPdf 12 46 21.1 +0.1
comp=Z,0.2nm,0.5s,baz=38,slow=2.2,SNR=5.6
YKW3 Yellowknife Ar 97.13 24 *e*P P 12 29 36.5 -0.3
VBMS Vicksburg 97.15 58 PFAKE 12 29 50.0 +12
VBMS LR LR
comp=Z,2μm,20.0s
ECSD EROS Data Cent 97.19 46 *e*P P 12 29 37.6 0.0
comp=Z,68nm,1.8s
ECSD LR LR
comp=Z,1μm,20.0s
BCIP Isla Barro Col 98.06 83 PFAKE 12 29 50.0 +7.8
BCIP LR LR
comp=Z,1μm,19.0s
LPAZ La Paz 98.62 112 P Pdif 12 29 45.8 +0.3
LPAZ PP PP 12 33 45.2 -1.8
LPAZ La Paz 98.62 112 P Pdif 12 29 45.8 +0.3
comp=Z,0.8nm,0.8s,baz=252,slow=4.8,SNR=4.2
LPAZ PP PP 12 33 45.2 -1.8
comp=Z,0.6nm,0.7s,baz=232,slow=12,SNR=2.7
LPAZ LR LR 13 08 05.8
comp=Z,2μm,18.1s,baz=271,slow=32
FFC Flin Flon 98.72 34 PFAKE 12 30 00.0 +16
FFC LR LR
comp=Z,3μm,20.0s
ULN Ulaanbaatar 98.76 318 PFAKE 12 30 00.0 +15
ULN LR LR
comp=Z,968nm,19.0s
ULN Ulaanbaatar 98.76 318 P Pdif 12 29 45.2 +0.5
SCIA State Center 98.78 48 PFAKE 12 30 00.0 +15
SCIA LR LR
comp=Z,2μm,20.0s
OXF Oxford 98.85 56 PFAKE 12 30 00.0 +15
OXF LR LR
comp=Z,4μm,19.0s
SONM Songino Array 99.15 318 P Pdif 12 29 47.3 +0.9
SONM PP PP 12 33 45.8 -4.5
SONM Songino Array 99.15 318 P Pdif 12 29 47.3 +0.9
comp=Z,0.6nm,0.6s,baz=131,slow=4.5,SNR=9.0
SONM PP PP 12 33 45.8 -4.5
comp=Z,2.9nm,1.2s,baz=123,slow=7.3,SNR=4.4
SONM LR LR 13 16 02.6
comp=Z,611nm,18.6s,baz=118,slow=36
BRAL Brewton 99.47 60 PFAKE 12 30 00.0 +12
BRAL LR LR
comp=Z,1μm,20.0s
AGMN Agassiz Nation 99.50 42 PFAKE 12 30 00.0 +12
AGMN LR LR
comp=Z,1μm,20.0s
PLAL Pickwick Lake 100.04 56 PFAKE 12 30 00.0 +9.5
PLAL LR LR
comp=Z,2μm,20.0s
LRAL Lakeview Retre 100.21 59 PFAKE 12 30 00.0 +8.7
LRAL LR LR
comp=Z,2μm,19.0s
GTA Gaotai 100.47 308 ⇓P Pdif 12 29 54.3 +1.8
GTA pP pP 12 30 17.9 +2.6
GTA sP sP 12 30 27.2 +3.0
GTA PP PP 12 34 04.6 +4.1
GTA SKS SKSac 12 40 24.4 +0.3
GTA S Sdif 12 41 20.1 -2.1
GTA sS sS 12 42 00.8 -0.6
GTA pmax pmax
comp=Z,9.0nm,2.5s
GTA pmax pmax
comp=Z,250nm,8.3s
GTA LR LR
comp=N,350nm,17.1s
GTA LR LR
comp=E,550nm,18.5s
GTA LR LR
comp=Z,750nm,19.0s
TIXI Tiksi 101.40 344 PFAKE 12 30 10.0 +14
TIXI LR LR
comp=Z,2μm,20.0s
ZAK Zakamensk 102.00 320 *e*P Pdif 12 29 57.4 -1.6
ZAK pmax pmax
comp=Z,3.0nm,2.0s
EYMN Ely 102.09 43 PFAKE 12 30 10.0 +11
EYMN LR LR
comp=Z,1μm,20.0s
TLY Talaya 102.24 321 *e*P Pdif 12 29 57.6 -2.3
TLY *e* 12 34 16.3
TLY *e* 12 40 39.0
TLY *e*SS PS 12 43 16.1 -4.8
TLY pmax pmax
comp=Z,3.0nm,0.7s
TLY MLR MLR
comp=Z,593nm,20.0s
TLY Talaya 102.24 321 PFAKE 12 30 10.0 +10
TLY LR LR
comp=Z,677nm,19.0s
MTDJ Mount Denham 103.32 76 PFAKE 12 30 20.0 +14
MTDJ LR LR
comp=Z,792nm,21.0s
ACSO Alum Creek Sta 105.53 53 PFAKE 12 34 40.0
ACSO LR LR
comp=Z,2μm,20.0s
AAM Ann Arbor 105.62 50 PFAKE 12 34 40.0
AAM LR LR
comp=Z,3μm,19.0s
GLMI Grayling 105.65 48 PFAKE 12 34 40.0
GLMI LR LR
comp=Z,2μm,20.0s
NHSC New Hope 105.67 60 PFAKE 12 34 40.0
NHSC LR LR
comp=Z,2μm,19.0s
GTBY Guantanamo Bay 106.04 75 PFAKE 12 34 40.0
GTBY LR LR
comp=Z,562nm,20.0s
SAML Samuel 106.20 107 PFAKE 12 34 40.0
SAML LR LR
comp=Z,1μm,19.0s
SDV Santo Domingo 106.44 87 PFAKE 12 34 40.0
SDV LR LR
comp=Z,1.0nm,21.0s
BLA Blacksburg 106.62 56 PFAKE 12 34 40.0
BLA LR LR
comp=Z,1μm,20.0s
DGAR Diego Garcia 107.76 254 PFAKE 12 34 40.0
DGAR LR LR
comp=Z,2μm,21.0s
CNNC Cliffs of the 108.07 59 PFAKE 12 34 50.0
CNNC LR LR
comp=Z,3μm,20.0s
ERPA Erie 108.20 51 PFAKE 12 34 50.0
ERPA LR LR
comp=Z,3μm,19.0s
SDDR Presa de Saban 109.17 77 PFAKE 12 34 50.0
SDDR LR LR
comp=Z,558nm,22.0s
CBN Corbin 109.21 56 PFAKE 12 34 50.0
CBN LR LR
comp=Z,2μm,19.0s
GRTK Grand Turk 110.06 74 PFAKE 12 34 50.0
GRTK LR LR
comp=Z,704nm,19.0s
WMQ Urumqi 110.41 310 Pdif **Pdif** 12 30 36.4 -0.1
WMQ PP **PP** 12 35 16.4 +2.7
WMQ SKS **SKSdf** 12 41 36.4 -5.2
WMQ SS **SS** 12 50 36.4 +0.8
WMQ AMB AMB
comp=Z,74nm,10.0s
WMQ LR LR
comp=N,540nm,20.0s
WMQ LR LR
comp=E,630nm,20.0s
WMQ LR LR
comp=Z,700nm,20.0s
BINY Binghamton 111.12 52 PFAKE 12 34 50.0
BINY LR LR
comp=Z,3μm,19.0s
SPB Sao Paulo 111.39 129 PFAKE 12 34 50.0
SPB LR LR
comp=Z,4μm,19.0s
LONY Lake Ozonia 112.58 50 PFAKE 12 34 50.0
LONY LR LR
comp=Z,2μm,19.0s
NCB Newcomb 112.72 50 PFAKE 12 34 50.0
NCB LR LR
comp=Z,3μm,20.0s
SJG San Juan 113.56 79 PFAKE 12 35 00.0
SJG LR LR
comp=Z,672nm,20.0s
ZALV Zalesovo Beam 113.85 321 PKIKP **PKiKP** 12 34 42.5 -0.6
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 113.85 321 PKP **PKiKP** 12 34 42.5 -0.6
ZALV Zalesovo Beam 113.85 321 PKP **PKiKP** 12 34 42.5 -0.6
comp=Z,0.7nm,0.6s,baz=107,slow=1.5,SNR=5.1
RER Riviere de l'E 114.30 232 PFAKE 12 35 00.0 +15
RER LR LR
comp=Z,2μm,20.0s
LBNH Lisbon 114.40 50 PFAKE 12 35 00.0 +16
LBNH LR LR
comp=Z,3μm,20.0s
MKAR Makanchi Array 114.66 313 PKIKP PKPdf 12 34 44.5 -0.5
MKAR 12 35 41.1
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR pmax pmax
comp=Z,2.0nm,1.1s
MKAR Makanchi Array 114.66 313 PKP PKPdf 12 34 44.5 -0.5
MKAR PP **PP** 12 35 41.1 -2.8
MKAR Makanchi Array 114.66 313 PKP PKPdf 12 34 44.5 -0.5
comp=Z,0.7nm,0.5s,baz=193,slow=1.0,SNR=9.4
MKAR PP **PP** 12 35 41.1 -2.8
comp=Z,2.1nm,1.1s,baz=96,slow=4.9,SNR=3.6
NVS Novosibirsk 114.85 321 *e*PKIKP PKPdf 12 34 55.2 +10
NVS *e* 12 41 25.5
NVS pmax pmax
comp=N,9.0nm,1.9s
NVS pmax pmax
comp=Z,27nm,1.9s
NVS pmax pmax
comp=E,11nm,1.6s
NVS pmax pmax
comp=N,9.0nm,1.9s
NVS pmax pmax
comp=E,48nm,2.8s
GRGR Grenville 115.84 87 PFAKE 12 35 00.0 +12
GRGR LR LR
comp=Z,755nm,19.0s
FDF Fort de France 117.13 84 PFAKE 12 35 00.0 +9.4
FDF LR LR
comp=Z,622nm,19.0s
ANWB Willy Bob 117.41 81 PFAKE 12 35 00.0 +9.0
ANWB LR LR
comp=Z,502nm,19.0s
KURK Kurchatov 117.41 317 *e*PKIKP **PKPdf** 12 34 49.5 -0.6
KURK MLR MLR
comp=Z,729nm,20.0s
KURK Kurchatov 117.41 317 *e*PKPdf **PKPdf** 12 34 49.5 -0.6
KURK LR LR
comp=Z,729nm,20.0s
BBGH Gun Hill 118.10 87 PFAKE 12 35 00.0 +7.6
BBGH LR LR
comp=Z,2μm,20.0s
BBSR BB Station 118.19 64 PFAKE 12 35 00.0 +7.9
BBSR LR LR
comp=Z,825nm,22.0s

KSH Kashi 118.40 304 ePKP PKPdf 12 34 52.0 -0.5
KSH esPKP 12 35 29.6
KSH PP PP 12 36 15.3 +5.0
KSH PKS PKSdf 12 38 27.1 -2.2
KSH SKS SKSdf 12 41 53.2 -4.1
KSH SKKS SKKSac 12 42 56.5 -6.2
KSH SS SS 12 52 21.1 +0.1
KSH AMB AMB
comp=Z,630nm,7.0s
KSH LR LR
comp=N,530nm,14.7s
KSH LR LR
comp=E,290nm,6.3s
KSH LR LR
comp=Z,1µm,16.8s
TKM2 Tokmak 2 119.01 308 ePKIKP PKPdf 12 34 53.6 -0.1
TKM2 MLR MLR
comp=Z,475nm,19.0s
TKM2 Tokmak 2 119.01 308 ePKPdf PKPdf 12 34 53.6 -0.1
TKM2 LR LR
comp=Z,475nm,19.0s
AAK Ala-Archa 119.80 307⇓iPKIKP PKPdf 12 34 55.6 +0.4
AAK Ala-Archa 119.80 307 PKP PKPdf 12 34 55.1 0.0
AAK ePKPdf PKiKP 12 34 55.4 +0.1
AAK LR LR
comp=Z,702nm,20.0s
AAK Ala-Archa 119.80 307 PKP PKPdf 12 34 55.1 0.0
comp=Z,2.1nm,0.8s,baz=176,slow=8.4,SNR=5.0
NIL Nilore 119.81 297 PFAKE 12 35 10.0 +15
NIL LR LR
comp=Z,27nm,20.0s
EKS2 Erkin-Say 120.33 307 ePKIKP PKPdf 12 34 56.6 +0.5
EKS2 MLR MLR
comp=Z,697nm,19.0s
EKS2 Erkin-Say 120.33 307 ePKPdf PKPdf 12 34 56.6 +0.5
EKS2 LR LR
comp=Z,697nm,19.0s
BVAR Borovoye Array 122.46 319 PKIKP PKPdf 12 34 59.2 -0.5
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR Borovoye Array 122.46 319 PKP PKPdf 12 34 59.2 -0.5
BVAR Borovoye Array 122.46 319 PKP PKPdf 12 34 59.2 -0.5
comp=Z,1.2nm,0.5s,baz=79,slow=2.3,SNR=9.4
BRVK Borovoye 122.52 319⇓iPKIKP PKPdf 12 34 59.8 0.0
BRVK Borovoye 122.52 319 PFAKE 12 35 10.0 +10
BRVK LR LR
comp=Z,727nm,19.0s
KKAR Karatay Array 122.75 308 ePKIKP PKPdf 12 35 00.2 -0.4
KKAR Karatay Array 122.75 308 ePKPdf PKPdf 12 35 00.2 -0.4
KBL Kabul 123.38 297 ePKIKP PKPdf 12 35 03.4 +1.0
KBL Kabul 123.38 297 ePKPdf PKPdf 12 35 03.4 +1.0
KBS Kingsbay 123.39 358 PFAKE 12 35 10.0 +9.2
KBS LR LR
comp=Z,705nm,19.0s
SUR Sutherland 123.44 196 PFAKE 12 35 10.0 +7.4
SUR LR LR
comp=Z,3µm,20.0s
SFJD Kangerlussuaq 123.64 23 PFAKE 12 35 10.0 +8.5
SFJD LR LR
comp=Z,1µm,19.0s
MSEY Mahe Island 123.89 248 PFAKE 12 35 20.0 +16
MSEY LR LR
comp=Z,2µm,20.0s
SUMG Summit 124.34 15 ePKIKP PKPdf 12 35 04.3 +1.0
SUMG Summit 124.34 15 ePKPdf PKPdf 12 35 04.3 +1.0
SUMG Summit 124.34 15 iP PKPdf 12 35 14.2 +11
comp=Z,9.0nm,1.0s
BOSA Boshof 125.64 202 ePKPdf PKPdf 12 35 07.0 +0.2
BOSA PKP PKPdf 12 35 08.2 +1.3
BOSA Boshof 125.64 202 PKP PKPdf 12 35 08.2 +1.3
comp=Z,8.6nm,1.1s,baz=130,slow=1.5,SNR=3.4
SVE Sverdlovsk 127.25 325 iPKIKP PKPdf 12 35 09.9 +1.1
SVE ePPP PPP 12 40 00.1
SVE e 12 47 11.9
SVE pmax pmax
comp=Z,33nm,1.6s
SVE MLR MLR
comp=Z,847nm,20.0s
SOKR Solikamsk 128.25 329 iPKIKP PKPdf 12 35 09.8 -0.7
SOKR pmax pmax
comp=Z,10.0nm,0.6s
SOKR MLR MLR
comp=Z,2µm,27.0s
ARU Arti 128.47 325 iPKIKP PKPdf 12 35 11.8 +0.7
ARU 12 37 19.1
ARU 12 42 11.3
ARU Arti 128.47 325 ePKPdf PKPdf 12 35 11.4 +0.3
ARU LR LR
comp=Z,1µm,19.0s
SCO Scoresbysund 129.39 11 iP PKPdf 12 35 14.1 +1.7
comp=Z,7.5nm,1.0s
SCO
comp=Z,800nm,19.0s
ABKAR Akbulak array 129.51 316 ePKPdf PKPdf 12 35 13.6 +0.3
AKTO Aktyubinsk 130.47 318 PKIKP PKPdf 12 35 16.3 +1.2
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO Aktyubinsk 130.47 318 PKP PKPdf 12 35 16.3 +1.2
AKTO Aktyubinsk 130.47 318 PKP PKPdf 12 35 16.3 +1.2
comp=Z,0.8nm,0.3s,baz=7.8,slow=5.6,SNR=5.6
KEV Kevo 130.92 350 PFAKE 12 35 30.0 +15
KEV LR LR
comp=Z,1µm,21.0s
RCBR Riachuelo 130.99 120 PFAKE 12 35 30.0 +13
RCBR LR LR
comp=Z,3µm,19.0s
LVZ Lovozero 131.02 346 PFAKE 12 35 30.0 +14
LVZ LR LR
comp=Z,1µm,20.0s
ARCES ARCESS Array B 131.35 351 PKP PKPdf 12 35 17.0 +0.8
ARCES ARCESS Array B 131.35 351 PKP PKPdf 12 35 17.0 +0.8
comp=Z,4.4nm,0.7s,baz=50,slow=1.1,SNR=22
APA Apatity 131.57 346⇑ePKIKP PKPdf 12 35 21.0 +4.3
KLMR Klimovskoe 134.83 337 ePKIKP PKPdf 12 35 23.0 0.0
KLMR pmax pmax
comp=Z,28nm,1.2s
LSZ Lusaka 136.22 213 PFAKE 12 35 40.0 +13
LSZ LR LR
comp=Z,1µm,19.0s
TSUM Tsumeb 136.84 197 PFAKE 12 35 40.0 +12
TSUM LR LR
comp=Z,2µm,19.0s
FINES FINESS Array B 138.44 345 PKPpre PKPpre 12 35 21.6
FINES PKP PKiKP 12 35 31.6 -0.1
FINES FINESS Array B 138.44 345 PKhKP PKPpre 12 35 21.6
comp=Z,2.0nm,0.9s,baz=54,slow=7.2,SNR=3.7
FINES PKP PKiKP 12 35 31.7 -0.1
comp=Z,2.2nm,0.7s,baz=83,slow=6.0,SNR=10
MOS Moscow 138.99 332 ePKIKP PKPdf 12 35 29.0 -1.8
MOS e 12 35 43.8
MAK Makhachkala 139.43 310 ePKIKP PKPdf 12 35 29.8 -2.2
MAK e 12 38 22.9
MAK e 12 42 36.3
MAK pmax pmax
comp=Z,55nm,0.4s
VRHR Novokhopersk 139.80 324 ePKIKP PKPdf 12 35 31.8 -0.6
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=Z,10.0nm,0.9s
VRHR pmax pmax
comp=E,9.0nm,0.4s
OBN Obninsk 139.85 332 iPKIKP PKPdf 12 35 31.5 -0.9
OBN i 12 38 25.3
OBN e 12 42 32.7
OBN pmax pmax
comp=Z,42nm,1.2s
OBN Obninsk 139.85 332 PFAKE 12 35 40.0 +7.6
OBN LR LR
comp=Z,1µm,19.0s
SHEL Horse Pasture 140.35 163 PFAKE 12 35 50.0 +15
SHEL LR LR
comp=Z,1µm,20.0s
KMBO Kilima Mbogo 140.88 237 PKPpre PKPpre 12 35 31.7
KMBO ePKPdf PKPdf 12 35 34.0 -1.9
KMBO LR LR
comp=Z,936nm,19.0s
KMBO Kilima Mbogo 140.88 237 PKhKP PKPpre 12 35 31.7
comp=Z,1.8nm,0.8s,baz=212,slow=21,SNR=3.7
VSR Storozhevoye 141.03 326 ePKIKP PKPdf 12 35 32.5 -2.2
VSR pmax pmax
comp=Z,20nm,1.0s
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,3.0nm,0.5s
VSR MLR MLR
comp=N,580nm,24.0s
VSR MLR MLR
comp=E,1µm,24.0s
VSR MLR MLR
comp=Z,1µm,24.0s
NB2 NORSAR Subarra 141.22 355 PKPdf PKPpre 12 35 26.8
baz=14,slow=1.8
NB2 NORSAR Subarra 141.22 355 PKPdf PKPpre 12 35 26.8
comp=Z,37nm,1.7s,baz=14,slow=1.8
NOA NORSAR Array B 141.22 355 PKPpre PKPpre 12 35 31.3
NOA NORSAR Array B 141.22 355 PKhKP PKPpre 12 35 31.3
comp=Z,0.6nm,0.5s,baz=43,slow=1.7,SNR=4.4
DGRG David-gareji 141.38 309 P PKPdf 12 35 35.1 -0.6
TBLG Delisi 141.75 310 P PKPpre 12 35 31.2
HFS Hagfors 141.88 353 PKPpre PKPpre 12 35 30.3
HFS Hagfors 141.88 353 PKhKP PKPpre 12 35 30.3
comp=Z,4.5nm,0.7s,baz=48,slow=4.8,SNR=12
KBZ Khabaz 142.35 313 iPKIKP PKPpre 12 35 33.7
KBZ Khabaz 142.35 313 PKPpre PKPpre 12 35 33.7
KBZ Khabaz 142.35 313 PKhKP PKPpre 12 35 33.7
comp=Z,0.7nm,0.4s,baz=276,slow=5.7,SNR=3.2
ONI Oni 142.38 311 P PKPpre 12 35 30.1
KIV Kislovodsk 142.41 314 iPKIKP PKPdf 12 35 35.7 -1.8
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV Kislovodsk 142.41 314 PFAKE 12 35 50.0 +12
KIV LR LR
comp=Z,913nm,20.0s
KONO Kongsberg 142.71 356 PFAKE 12 35 50.0 +13
KONO LR LR
comp=Z,936nm,19.0s
AKH Akhalkalaki 142.74 310 P PKPdf 12 35 47.9 +10
CLDR Caldiran 143.09 306 eP PKPbc 12 35 35.8 -0.4
AGRB Hanur-Agry 143.66 307 eP PKPab 12 35 36.6 -0.2
MICGM Minsk 143.72 338 e PKPbc 12 35 37.0 -0.1
MNK Minsk 143.74 338 ePKIKP PKPbc 12 35 37.0 -0.2
NACGM Naroch 143.78 339 e PKPdf 12 35 40.0 +0.6
CUKT Cukurca 143.79 303 eP PKPbc 12 35 38.3 +0.2
BHD Baghdad 143.86 296 ix PKPbc 12 35 37.3 -0.9
BCA Borcka 144.06 310 eP PKPab 12 35 38.0 -0.1
SOC Sochi 144.53 315c iPKIKP PKPab 12 35 39.8 +0.1
SOC e 12 38 53.1
SOC pmax pmax
comp=Z,25nm,1.0s
SOC MLR MLR
comp=Z,816nm,17.0s
EZM Erzurum 144.76 308 eP PKPbc 12 35 41.6 +0.4
VRTB Varto-Mus 144.92 307 eP PKPdf 12 35 43.7 +1.5
ANN Anapa 145.43 318 iPKIKP PKPdf 12 35 42.5 -0.1
ANN pmax pmax
comp=Z,318nm,1.5s
BAYT Ayd˜–ntepe-Bay 145.48 309 eP PKPab 12 35 44.0 +0.3
KTUT Trabzon 145.53 311 eP PKPdf 12 35 42.6 -0.3
BNGB Bingˆ¶l 145.55 307 eP PKPab 12 35 44.2 +0.4
SUW Suwalki 145.67 341 ePKIKP PKPbc 12 35 43.2 0.0
SUW Suwalki 145.67 341 ePKPdf PKPbc 12 35 43.2 0.0
SUW Suwalki 145.67 341 ePKP PKPab 12 35 43.7 +0.1
MUD Monsted U'grnd 145.92 356⇑iP PKPdf 12 35 43.1 0.0
comp=Z,70nm,1.1s
GUMT Gumushane 145.92 310 eP PKPab 12 35 46.6 +1.3
ERZN Erzincan 146.06 308 eP PKPab 12 35 47.0 +1.2
MBAR Mbarara 146.11 231 PFAKE 12 36 00.0 +13
MBAR LR LR
comp=Z,717nm,21.0s
AKASG Malin Array Be 146.12 332 PKP2 PKPbc 12 35 44.2 -0.5
AKASG pmax pmax
comp=Z,11nm,0.6s
AKASG Malin Array Be 146.12 332 PKPbc PKPbc 12 35 44.2 -0.5
AKASG Malin Array Be 146.12 332 PKPbc PKPbc 12 35 44.2 -0.5
comp=Z,11nm,0.6s,baz=40,slow=3.5,SNR=27
KIEV Kiev 146.13 332 ePKP2 PKPdf 12 35 43.8 +0.2
KIEV MLR MLR
comp=Z,938nm,20.0s
KIEV Kiev 146.13 332 ePKPdf PKPdf 12 35 43.8 +0.2
KIEV LR LR
comp=Z,938nm,20.0s
AK01 Malin Array Si 146.13 332 ePKPdf PKPdf 12 35 43.8 +0.2
AK02 Malin Array Si 146.16 332 ePKPdf PKPdf 12 35 44.0 +0.3
ESPY Espiye-Giresun 146.28 311 eP PKPbc 12 35 45.2 -0.4
COP Copenhagen 146.38 353 iP PKPbc 12 35 45.5 +0.2
COP
comp=Z,490nm,17.0s
BSD Bornholm Skovb 146.58 350 iP PKPab 12 35 46.5 -0.5
BSD
comp=Z,850nm,20.0s
EKA Eskdalemuir Ar 146.60 9 PKPbc PKPbc 12 35 46.1 +0.2
EKA Eskdalemuir Ar 146.60 9 PKPbc PKPbc 12 35 46.1 +0.2
comp=Z,6.7nm,0.8s,baz=343,slow=2.6,SNR=9.5
ESK Eskdalemuir 146.61 9 PFAKE 12 36 00.0 +13
ESK LR LR
comp=Z,849nm,20.0s
LLD Lille Linde 146.75 353 iP PKPab 12 35 49.6 +1.9
ILIC ilic-Erzincan 146.94 309 eP PKPab 12 35 48.6 -0.6
SIM Simferopol' 147.36 320c ePKP2 PKPbc 12 35 49.4 +1.0
SIM 12 39 18.3
SIM pmax pmax
comp=Z,440nm,9.9s
URFA Urfa 147.42 305 eP PKPbc 12 35 49.7 +0.7
MYA Malataya 147.43 307 eP PKPab 12 35 50.5 -0.7
MALT Malatya 147.44 307 eP PKPbc 12 35 48.1 -0.9
MALT Malatya 147.44 307 ⇑PKIKP PKPdf 12 35 46.3 -0.1
MALT Malatya 147.44 307 ePKPdf PKPbc 12 35 49.8 +0.8
MALT LR LR
comp=Z,760nm,19.0s
MALT Malatya 147.44 307⇑iP PKPdf 12 35 46.3 -0.1
RSDY Resadiye-TOKAT 147.47 311 eP PKPbc 12 35 49.9 +1.0
GKP Gorka Klasztor 147.89 346 ePKP PKPdf 12 35 47.3 +0.8
DARE Darende-Malaty 148.04 308 eP PKPbc 12 35 52.1 +1.5
BEL Belsk 148.28 341 ePKP PKPab 12 35 52.4 -1.5
DIKM Dikmen 148.34 314 eP PKPbc 12 35 51.6 +0.5
BYBT Boyabat 148.75 314 eP PKPbc 12 35 52.6 +0.5
KMRS Kahramanmaras 148.84 306 eP PKPbc 12 35 52.1 -0.6
SARI SarD1z-Kayseri 148.88 308 eP PKPbc 12 35 52.6 -0.3
LVV L'vov 148.91 336 ePKP2 PKPbc 12 35 52.2 -0.1
KIS Kishinev 148.96 328 iPKIKP PKPdf 12 35 50.0 +1.6
KIS e 12 42 46.0
KIS pmax pmax
comp=Z,1µm,4.0s
KIS pmax pmax
comp=Z,1µm,4.0s
KIS MLR MLR
comp=Z,800nm,22.0s
KIS MLR MLR
comp=Z,700nm,24.0s
KIS Kishinev 148.96 328 ePKIKP PKPdf 12 35 50.0 +1.6
KIS M 12 35 52.0
comp=Z,1µm,4.0s
KIS LRM MLR 13 41 52.0
comp=Z,700nm,24.0s
BZK Bozkurt 149.01 316 eP PKPbc 12 35 54.8 +2.0
BNN Bunyan 149.13 309 eP PKPbc 12 35 52.6 -0.8
CORM Corum 149.43 312 eP PKPbc 12 35 52.9 -1.2
TOS Tosya 149.44 314 eP PKPbc 12 35 54.8 +0.7
KWP Kalwaria Pacla 149.55 337 ePKP2 PKPbc 12 35 54.1 +0.1
KWP MLR MLR
comp=Z,1µm,19.0s
KWP Kalwaria Pacla 149.55 337 ePKPbc PKPbc 12 35 54.1 +0.1
KWP LR LR
comp=Z,1µm,19.0s
KWP Kalwaria Pacla 149.55 337⇑iP PKPbc 12 35 54.5 +0.5
KWP Kalwaria Pacla 149.55 337 ePKP PKPbc 12 35 54.0 +0.1
CMLA Cha da Macela 149.58 53 PFAKE 12 36 00.0 +0.3
CMLA LR LR
comp=Z,2µm,20.0s
LEOM Leova 149.61 328 ⇑PKP2 PKPbc 12 35 54.5 +0.4
LEOM Leova 149.61 328⇑iP PKPbc 12 35 54.5 +0.4
KOZT Kozan 149.65 307 eP PKPdf 12 35 51.5 +1.6
CEYT Ceyhan 149.88 306 eP PKPbc 12 35 54.8 -0.3
CANT Cankiri 149.92 314 eP PKPbc 12 35 54.5 -0.7
OJC Ojcow 150.00 341 ePKHKP PKPdf 12 35 51.5 +1.5
OJC Ojcow 150.00 341 ePKPdf PKPdf 12 35 51.5 +1.5
OJC ePKiKP PKiKP 12 35 55.7 -0.2
OJC ePKPab PKPab 12 36 02.2 +1.2
BUR08 Bucovina Ar. S 150.16 332 ePKPbc PKPbc 12 35 56.8 +1.1
TLCR 150.19 325 ⇑PKP2 PKPbc 12 35 56.0 +0.4
TLCR 150.19 325⇑iP PKPbc 12 35 56.0 +0.4
SAFT Safranbolu 150.22 315 eP PKPbc 12 35 55.4 -0.5
ASF Jabal al Asfar 150.26 296 PKPbc PKPbc 12 35 57.5 +1.2
ASF Jabal al Asfar 150.26 296 PKPbc PKPbc 12 35 57.5 +1.2
comp=Z,10nm,0.9s,baz=95,slow=2.2,SNR=6.3
KOLS Kolonicke sedl 150.29 337 ePKIKP PKPbc 12 35 57.0 +1.2
KOLS Kolonicke sedl 150.29 337 ePKP PKPbc 12 35 57.0 +1.2
BR131 Keskin Array S 150.31 312 ePKPbc PKPbc 12 35 56.1 -0.2
BRTR Keskin Array B 150.31 312 PKPbc PKPbc 12 35 56.4 +0.1
BRTR PP PP 12 39 29.8 -2.4
BRTR Keskin Array B 150.31 312 PKPbc PKPbc 12 35 56.4 +0.1
comp=Z,6.6nm,0.8s,baz=114,slow=1.5,SNR=29
BRTR PP PP 12 39 29.8 -2.4
comp=Z,2.5nm,1.2s,baz=110,slow=3.4,SNR=4.4
TESR 150.35 329⇓iP PKPbc 12 35 56.5 +0.5
KSP Ksiaz 150.36 346 ePKIKP PKPdf 12 35 50.6 0.0
KSP i 12 35 57.2
KSP eSS SS 12 58 49.0 +6.4
KSP Ksiaz 150.36 346 ePKP PKPdf 12 35 51.4 +0.8
WTSB Winterswijk 150.52 358 ePKP PKPdf 12 35 52.0 +1.3
comp=Z,206nm,1.2s
UZH Uzhgorod 150.53 337 iPKIKP PKPbc 12 35 57.0 +0.7
UZH e 12 36 01.6
NIE Niedzica 150.54 340 ePKIKP PKPbc 12 35 58.3 +1.9
NIE Niedzica 150.54 340 ePKP PKPbc 12 35 58.3 +1.9
CFR Carcaliu 150.55 326 ⇑PKIKP PKPbc 12 35 56.8 +0.3
CFR Carcaliu 150.55 326⇑iP PKPbc 12 35 56.8 +0.3
CLL Collm 150.57 350 ePKIKP PKPbc 12 35 56.0 -0.3
CLL e 12 36 02.0
CLL i 12 36 07.6
CLL pmax pmax
comp=Z,93nm,1.6s
CLL pmax pmax
comp=Z,46nm,0.9s
CLL MLR MLR
comp=Z,900nm,20.6s
CLL Collm 150.57 350 ePKPbc PKPbc 12 35 56.0 -0.3
comp=Z,93nm,1.6s
CLL ePKPab PKPab 12 36 02.0 -1.2
comp=Z,46nm,0.9s
CLL i pPKPbc PKiKP 12 36 07.6 +11
comp=Z,268nm,1.7s
CLL ePP PP 12 39 31.0 -1.3
CLL ePSKS 12 49 42.0
CLL ePPS PPS 12 52 45.0
CLL eSS SS 12 58 56.0 +11
CLL eSSS SSS 13 04 18.0
CLL e 13 05 30.0
CLL e(SSSS) 13 08 06.0
CLL Lm MLR 13 43 00.0
comp=Z,900nm,20.6s
CRVS Cervenica-Dubn 150.60 338 ePKIKP PKPbc 12 35 57.6 +1.1
CRVS Cervenica-Dubn 150.60 338 ePKP PKPbc 12 35 57.6 +1.1
UPC Upice 150.74 346 ePKPDF PKPdf 12 35 52.9 +1.7
UPC epPKP PKPab 12 36 08.6 +4.6
UPC ex x 12 36 24.5
VRI Vrincioaia 150.78 328 ⇓PKIKP PKPbc 12 35 56.7 -0.4
VRI Vrincioaia 150.78 328⇓iP PKPbc 12 35 56.7 -0.4
DPC Dobruska-Polom 150.82 345⇑ePKP PKPbc 12 35 56.5 -0.5
DPC ePKPAB PKPab 12 36 06.7 +2.3
DPC ePP PP 12 39 32.9 -1.0
DPC eSS SS 12 58 48.9 +1.1
DPC AMS AMS 13 47 50.0
comp=Z,1µm,22.6s
OKC Ostrava-Krasne 150.82 343⇑ePKP PKPbc 12 35 57.3 +0.3
OKC ePKPAB PKPab 12 36 06.3 +2.0
OKC epPKP pPKPdf 12 36 16.9 +2.0
OKC ex x 12 36 24.6
OKC ePP PP 12 39 32.5 -1.4
OKC eSS SS 12 58 56.2 +8.4
OKC AMS AMS 13 40 10.0
comp=Z,900nm,21.9s
BRG Berggiesshubel 150.82 349 iPKP PKPbc 12 35 55.0 -1.9
comp=Z,57nm,1.5s
BRG i 12 36 02.7
comp=Z,34nm,0.9s
BRG SS SS 12 58 57.0 +9.4
BRG
comp=N,589nm,19.5s
BRG
comp=E,659nm,19.0s
BRG
comp=Z,734nm,16.6s
BRG Berggiesshubel 150.82 349 iPKIKP PKPbc 12 35 55.0 -1.9
BRG i 12 36 02.7
BRG SS SS 12 58 57.0 +9.4
BRG pmax pmax
comp=Z,57nm,1.5s
BRG pmax pmax
comp=Z,34nm,0.9s
BRG MLR MLR
comp=N,589nm,19.5s
BRG MLR MLR
comp=E,659nm,19.0s
BRG MLR MLR
comp=Z,734nm,16.6s
PLOR Plostina 150.83 328 ⇑PKIKP PKPbc 12 35 57.7 +0.5
PLOR Plostina 150.83 328⇑iP PKPbc 12 35 57.7 +0.5
AFSR Af¯ar-Bala (A 150.83 312 eP PKPbc 12 35 58.3 +0.8
LOD Lodumlu 150.84 313 eP PKPbc 12 35 57.5 +0.1
TRPA Tarpa 150.85 336⇓iP PKPbc 12 35 54.3 -2.8
TRPA Tarpa 150.85 336 ePKPdf PKPdf 12 35 53.3 +1.9
TIRR Tirgusor 150.89 324 ⇑PKIKP PKPbc 12 35 58.1 +0.8
TIRR Tirgusor 150.89 324⇑iP PKPbc 12 35 58.0 +0.8
KRLC Kraliky 150.96 344 ePKIKP PKPbc 12 35 58.3 +0.9
KRLC Kraliky 150.96 344⇑ePKP PKPbc 12 35 58.3 +0.9
KRLC epPKP pPKPdf 12 36 17.6 +2.4
PVCC Panska Ves 151.03 348⇑ePKP PKPbc 12 35 58.4 +1.0
PVCC ePKPAB PKPab 12 36 07.1 +1.9
PVCC AMS AMS 13 52 10.0
comp=Z,1µm,17.2s
MORC Moravsky Berou 151.04 343 ⇑PKIKP PKPdf 12 35 51.6 -0.2
MORC Moravsky Berou 151.04 343 ePKPbc PKPbc 12 35 57.1 -0.5
MORC Moravsky Berou 151.04 343⇑iP PKPdf 12 35 51.5 -0.2
MMAI Mount Meron Ar 151.31 298 PKPbc PKPbc 12 36 00.4 +1.6
MMAI Mount Meron Ar 151.31 298 PKPbc PKPbc 12 36 00.4 +1.6
comp=Z,8.3nm,0.6s,baz=66,slow=2.8,SNR=7.7
ISR Istrita 151.41 327 ⇑PKIKP PKPab 12 36 04.8 -2.2
ISR Istrita 151.41 327⇑iP PKPab 12 36 04.8 -2.2
MLR Muntele Rosu 151.43 328 PKPbc PKPbc 12 35 59.6 +0.9
MLR Muntele Rosu 151.43 328 PKPbc PKPbc 12 35 59.6 +0.9
comp=Z,5.1nm,1.1s,baz=48,slow=4.5,SNR=15
PRA Prague 151.49 347 ⇑PKP PKPbc 12 35 59.0 +0.5
PRA PKPAB PKPab 12 36 10.0 +2.9
PRU Pruhonice 151.55 347⇑ePKP PKPbc 12 35 59.3 +0.6
PRU ePKPAB PKPab 12 36 08.8 +1.4
PRU eSS SS 12 58 59.1 +3.4
PRU AMS AMS 13 51 50.0
comp=Z,600nm,24.1s
NKC Novy Kostel 151.70 350⇑ePKP PKPbc 12 35 59.1 +0.1
NKC ePKPAB PKPab 12 36 09.2 +1.2
NKC AMS AMS 13 44 40.0
comp=Z,1µm,21.5s
VRAC Vranov 151.72 344 PKPbc PKPbc 12 35 58.8 -0.3
VRAC Vranov 151.72 344⇓iP PKPdf 12 35 54.4 +1.7
VRAC Vranov 151.72 344 PKPbc PKPbc 12 35 58.8 -0.3
comp=Z,2.2nm,0.5s,baz=70,slow=11,SNR=4.9
HGN Heimansgroeve 151.75 359 ePKP PKPdf 12 35 54.8 +2.1
comp=Z,316nm,2.0s
SACV Santiago Islan 151.81 100 PFAKE 12 36 10.0 +0.4
SACV LR LR
comp=Z,880nm,20.0s
VYHS Vyhne 151.82 341 ePKIKP PKPbc 12 36 00.2 +0.8
VYHS e 12 36 11.0
VYHS Vyhne 151.82 341 ePKP PKPbc 12 36 00.2 +0.8
VYHS e 12 36 11.0
DRGR 151.88 334 ⇓PKIKP PKPbc 12 35 59.8 +0.2
DRGR 151.88 334⇓iP PKPbc 12 35 59.8 +0.2
PSZ Piszkesteto 151.98 339 ePKIKP PKPdf 12 35 55.4 +2.2
PSZ e 12 36 00.9
PSZ e 12 36 08.8
PSZ MLR MLR
comp=Z,1µm,20.0s
PSZ Piszkesteto 151.98 339 ePKPdf PKPdf 12 35 55.4 +2.2
PSZ ePKPbc PKiKP 12 36 00.9 +0.7
PSZ ePKPab PKPab 12 36 08.8 -0.6
PSZ LR LR
comp=Z,1µm,20.0s
PSZ Piszkesteto 151.98 339⇑iP PKPbc 12 35 59.2 -0.6
PSZ Piszkesteto 151.98 339 ePKPdf PKPbc 12 36 00.7 +0.9
TREC Trest 152.00 345 ePKIKP PKPbc 12 36 00.7 +0.9
TREC e 12 36 11.2
TREC e 12 39 40.2
TREC MLR MLR
comp=Z,1µm,18.9s
TREC Trest 152.00 345⇑ePKP PKPbc 12 36 00.7 +0.9
TREC ePKPAB PKPab 12 36 11.2 +1.9
TREC ePP PP 12 39 40.2 -0.4
TREC eSS SS 12 59 16.4 +16

TREC				AMS	AMS	13 45 50.0	
	comp=Z,1µm,18.9s						
SNF	Seneffe	152.00	1	PKPbc	PKPbc	12 36 00.8	+1.2
BCLA	Clavier	152.10	360	PKP	PKPab	12 36 11.8	+2.2
ARR	Arges	152.15	330	⇑iP	PKPdf	12 35 55.0	+1.4
SMOL	Smolenice	152.22	342	ePKP	PKPab	12 36 13.0	+2.8
EIL	Elat	152.32	291	PKPbc	PKPbc	12 36 02.7	+1.7
EIL	Elat	152.32	291	PKPbc	PKPbc	12 36 02.7	+1.7
	comp=Z,13nm,0.8s,baz=70,slow=2.2,SNR=10						
CSS	Prodhromos	152.41	303	PFAKE		12 36 10.0	-1.6
CSS				LR	LR		
	comp=Z,757nm,20.0s						
DOU	Dourbes	152.42	1	PKPbc	PKPbc	12 36 01.9	+1.3
KHC	Kasperske Hory	152.56	348	ePKIKP	PKPdf	12 35 57.3	+3.3
KHC	Kasperske Hory	152.56	348	ePKPdf	PKPdf	12 35 57.3	+3.3
KHC	Kasperske Hory	152.56	348	ePKPDF	PKPdf	12 35 55.6	+1.6
KHC				ePKPAB	PKPab	12 36 12.7	+1.0
KHC				ePP	PP	12 39 42.2	-1.6
KHC				eSS	SS	12 59 18.1	+11
KHC				AMS	AMS	13 51 20.0	
	comp=Z,900nm,17.5s						
ABH	Alteburg	152.57	357	PKP	PKPbc	12 36 01.8	+0.8
BUD	Budapest	152.65	339	e	PKPab	12 36 13.4	+1.3
TOD	Tromm	152.76	355	PKIKP	PKPbc	12 36 01.5	+0.1
TOD	Tromm	152.76	355	PKP	PKPbc	12 36 01.5	+0.1
RUP	Ruppelstein	152.78	357	PKIKP	PKPbc	12 36 02.2	+0.7
RUP	Ruppelstein	152.78	357	PKP	PKPbc	12 36 02.2	+0.7
GERES	GERESS Array B	152.81	348	PKPbc	PKPbc	12 36 01.9	+0.2
GERES	GERESS Array B	152.81	348	PKPbc	PKPbc	12 36 01.9	+0.2
	comp=Z,0.8nm,0.5s,baz=17,slow=1.8,SNR=12						
WLF	Walferdange	152.84	359	PFAKE		12 36 10.0	-2.8
WLF				LR	LR		
	comp=Z,2µm,20.0s						
GZR	Gura Zlata	152.96	332	⇓PKIKP	PKPbc	12 36 03.0	+0.9
GZR	Gura Zlata	152.96	332	⇓iP	PKPbc	12 36 03.0	+0.9
CONA	Conrad Observa	153.18	344	⇑iPKPbc	PKPbc	12 35 59.2	-3.3
	comp=Z,41nm,1.6s						
CONA	Conrad Observa	153.18	344	⇑iP	PKPbc	12 35 59.2	-3.3
SOP	Sopron	153.22	343	e	PKPdf	12 35 54.6	-0.4
BZS	Buzias	153.27	334	⇓PKIKP	PKPbc	12 36 03.2	+0.5
BZS	Buzias	153.27	334	⇓iP	PKPbc	12 36 03.2	+0.5
ISP	Isparta	153.35	311	PFAKE		12 36 10.0	-5.6
ISP				LR	LR		
	comp=Z,907nm,19.0s						
STU	Stuttgart	153.55	354	ePKIKP	PKPdf	12 35 55.8	+0.4
STU	Stuttgart	153.55	354	ePKPdf	PKPdf	12 35 55.8	+0.4
PKSM	Moragy	153.89	338	⇑PKIKP	PKPdf	12 35 55.5	-0.5
PKSM	Moragy	153.89	338	⇑iP	PKPdf	12 35 55.5	-0.5
PKSM	Moragy	153.89	338	ePKPdf	PKPdf	12 35 56.2	+0.2
BFO	Black Forest	154.06	355	ePKIKP	PKPbc	12 36 04.1	-0.2
BFO				MLR	MLR		
	comp=Z,804nm,21.0s						
BFO	Black Forest	154.06	355	ePKPbc	PKPbc	12 36 04.1	-0.2
BFO				LR	LR		
	comp=Z,804nm,21.0s						
SPAK	Spaichingen-Ko	154.25	354	PKP	PKPbc	12 36 04.8	0.0
ECH	Echery	154.25	357	PKIKP	PKPbc	12 36 04.3	-0.4
ECH				MLR	MLR		
	comp=Z,1µm,19.0s						
ECH	Echery	154.25	357	PKP	PKPbc	12 36 04.3	-0.4
ECH				LR	LR		
	comp=Z,1µm,19.0s						
ECH	Echery	154.25	357	PKP	PKPbc	12 36 04.3	-0.4
THEF	They Montfort	154.28	359	PKIKP	PKPbc	12 36 05.0	+0.2
THEF	They Montfort	154.28	359	PKP	PKPbc	12 36 05.0	+0.2
THEF	They Montfort	154.28	359	PKP	PKPbc	12 36 05.0	+0.2
FELD	Feldberg im Sc	154.54	355	PKP	PKPbc	12 36 03.6	-1.9
MOF	Molkenrain	154.62	357	PKIKP	PKPbc	12 36 05.9	+0.3
MOF	Molkenrain	154.62	357	PKP	PKPbc	12 36 05.9	+0.3
MOF	Molkenrain	154.62	357	PKP	PKPbc	12 36 05.9	+0.3
VTS	Vitosha	154.90	327	⇓PKIKP	PKPdf	12 35 58.7	+1.0
VTS	Vitosha	154.90	327	⇓iP	PKPdf	12 35 58.7	+1.0
ABTA	Abfaltersbach	155.05	348	⇑iPKPbc	PKPdf	12 36 03.0	+5.3
	comp=Z,12nm,1.2s						
ABTA	Abfaltersbach	155.05	348	⇑iP	PKPdf	12 36 03.0	+5.3
FETA	Feichten	155.09	351	⇑iPKPdf	PKPdf	12 35 58.6	+0.8
	comp=Z,16nm,1.3s						
FETA	Feichten	155.09	351	⇑iP	PKPdf	12 35 58.6	+0.8
DAVOX	Davos/Dischmat	155.44	352	PKPbc	PKPdf	12 36 07.5	+9.2
DAVOX	Davos/Dischmat	155.44	352	PKPbc	PKPdf	12 36 07.5	+9.2
	comp=Z,1.2nm,0.4s,baz=326,slow=17,SNR=6.8						
TUE	Stuetta	155.81	353	PFAKE		12 36 10.0	+11
TUE				LR	LR		
	comp=Z,1µm,20.0s						
SSB	Saint Sauveur	157.24	1	PFAKE		12 36 10.0	+9.4
SSB				LR	LR		
	comp=Z,1µm,20.0s						
BNI	Bardonecchia	157.43	357	PFAKE		12 36 10.0	+9.1
BNI				LR	LR		
	comp=Z,1µm,19.0s						
TIR	Tirane	157.46	330	PFAKE		12 36 10.0	+9.1
TIR				LR	LR		
	comp=Z,2µm,20.0s						
PGAV	Gavieira, Arco	157.55	27	eLR	LR	13 34 49.6	
	comp=Z,942nm,20.0s						
POLO	Lamas de Olo	158.24	27	ePKPdf	PKPdf	12 36 00.8	-1.2
MVO	Moncorvo	158.73	26	ePKPdf	PKPdf	12 36 05.6	+3.0
MVO				eLR	LR	13 32 52.3	
	comp=Z,1µm,20.0s						
AQU	L'Aquila	159.00	343	PFAKE		12 36 10.0	+7.2
AQU				LR	LR		
	comp=Z,3µm,20.0s						
MTE	Manteigas	159.15	28	eLR	LR	13 33 54.6	
	comp=Z,1µm,20.0s						
MTE	Manteigas	159.15	28	PFAKE		12 36 10.0	+6.9
MTE				LR	LR		
	comp=Z,1µm,20.0s						
PTOM	Tomar	159.38	31	ePKPdf	PKPdf	12 36 05.8	+2.5
PMAFR	Mafra	159.46	34	ePKPdf	PKPdf	12 36 03.2	-0.2
LIS	Lisbon	159.71	34	eP	PKPdf	12 36 05.0	+1.4
LIS				ePP	PP	12 40 24.6	+0.7
LIS				AMS	AMS	13 59 44.1	
	comp=E,1µm,22.4s						
LIS	Lisbon	159.71	34	ePKIKP	PKPdf	12 36 05.0	+1.4
LIS				e		12 40 24.6	
PMTG	Montargil	159.90	32	ePKPdf	PKPdf	12 36 03.4	-0.5
PMRV	Marv??o	160.00	29	ePKPdf	PKPdf	12 36 03.1	-0.9
PMRV				eLR	LR	13 34 51.8	
	comp=E,986nm,20.0s						
CUC	Castrocucco	160.31	335	PFAKE		12 36 20.0	+16
CUC				LR	LR		
	comp=Z,780nm,19.0s						
PESTR	Estremoz	160.36	31	ePKPdf	PKPdf	12 36 07.4	+3.0
PNCL	Nicolau / Gran	160.48	34	ePKPdf	PKPdf	12 36 02.8	-1.7
TIP	Timpagrande	160.61	332	PFAKE		12 36 20.0	+15
TIP				LR	LR		
	comp=Z,1µm,20.0s						
PTEO	Sao Teotonio	160.80	35	ePKPdf	PKPdf	12 36 08.8	+3.9
MESJ	Messejana	160.85	34	eP	PKPdf	12 36 05.8	+0.9
MESJ				ePP	PP	12 40 31.0	+0.9
MESJ				AMS	AMS	13 59 16.2	
	comp=Z,1µm,17.3s						
MESJ	Messejana	160.85	34	ePP	PP	12 40 31.0	+0.9
MESJ				A	A	13 59 16.2	
	comp=Z,1µm,17.3s						
MESJ	Messejana	160.85	34	ePKIKP	PKPdf	12 36 05.8	+0.9
MESJ				e		12 40 31.0	
MORF	Marmelete	161.02	36	ePKIKP	PKPdf	12 36 06.4	+1.2
PFVI	Vila Bisbo	161.05	36	ePKPdf	PKPdf	12 36 09.4	+4.2
PCVE	Castro Verde	161.10	34	ePKPdf	PKPdf	12 36 03.2	-2.0
PAB	San Pablo	161.16	23	PFAKE		12 36 20.0	+15
PAB				LR	LR		
	comp=Z,1µm,20.0s						
ESDC	Sonseca Array	161.18	22	PKPab	PKPab	12 36 48.7	-0.3
ESDC	Sonseca Array	161.18	22	PKPbc	PKPdf	12 36 16.8	+11
	comp=Z,0.2nm,0.3s,baz=28,slow=2.3,SNR=7.0						
ESDC				PKPab	PKPab	12 36 48.7	-0.3
	comp=Z,0.3nm,0.3s,baz=336,slow=3.3,SNR=5.0						
PVAQ	Vaqueiros	161.44	34	ePKPdf	PKPdf	12 36 07.7	+2.1
PVAQ				eLR	LR	13 34 44.9	
	comp=Z,1µm,20.0s						
DBIC	Dimbokro	161.58	147	PKP	PKPdf	12 36 06.3	-0.1
DBIC	Dimbokro	161.58	147	PKP	PKPdf	12 36 06.3	-0.1
	comp=Z,3.0nm,0.9s,baz=160,slow=1.4,SNR=5.6						
CEL	Celeste	161.75	332	PFAKE		12 36 20.0	+14
CEL				LR	LR		
	comp=Z,1µm,20.0s						
VSL	Villasalto	162.64	349	PFAKE		12 36 20.0	+13
VSL				LR	LR		
	comp=Z,1µm,19.0s						
WDD	Wield Dalam	164.34	331	PFAKE		12 36 20.0	+12
WDD				LR	LR		
	comp=Z,2µm,19.0s						
RTC	Rabat Centre	164.41	40	PFAKE		12 36 20.0	+11
RTC				LR	LR		
	comp=Z,1µm,19.0s						
KEST	Kesra	166.28	345	PKPab	PKPab	12 37 11.6	+0.1
KEST	Kesra	166.28	345	PKPab	PKPab	12 37 11.6	+0.1
	comp=Z,2.2nm,0.9s,baz=309,slow=4.5,SNR=4.0						
MDT	Midelt	166.56	38	PKP	PKPdf	12 36 12.0	+1.5
MDT	Midelt	166.56	38	PKP	PKPdf	12 36 12.0	+1.5
	comp=Z,3.5nm,1.1s,baz=315,slow=3.0,SNR=3.8						
TOA0	Torodi Ar. Sit	170.17	160	ePKPdf	PKPdf	12 36 12.7	-0.6
TORD	Torodi Ar. Bea	170.17	160	PKP	PKPdf	12 36 11.8	-1.4
TORD				PKPab	PKPab	12 37 28.8	-0.3
TORD				PP	PP	12 41 21.8	+3.7
TORD	Torodi Ar. Bea	170.17	160	PKP	PKPdf	12 36 11.8	-1.4
	comp=Z,1.8nm,1.1s,baz=347,slow=1.4,SNR=7.1						
TORD				PKPab	PKPab	12 37 28.8	-0.3
	comp=Z,2.2nm,1.1s,baz=183,slow=2.6,SNR=2.9						
TORD				PP	PP	12 41 21.8	+3.7
	comp=Z,3.0nm,1.2s,baz=214,slow=1.8,SNR=4.6						
TAM	Tamanrasset	179.51	312	ePKIKP	PKPdf	12 36 16.9	+0.8
TAM				MLR	MLR		
	comp=Z,1µm,19.0s						
TAM	Tamanrasset	179.51	312	ePKPdf	PKPdf	12 36 16.9	+0.8
TAM				LR	LR		
	comp=Z,1µm,19.0s						

*JMA **06** 12:25:12.4±0.3,24°.73N×122°.85E,h28km,M2.4*
*ISCJB **06** 12:25:13.3±1.0,24°.75N±0°.06×122°.90E±0°.03,h12km±7km, Error ellipse: s-maj=10.7km s-min=3.9km az=11.6*
*TAP **06** 12:25:14.9,24°.65N×122°.78E,h10km±1km,ML2.8,C*
ISC 06 12:25:12.8±1.2**,24°.70N**±0°.06×**122°.87E**±0°.03**,h18**km±4km**, n18,**σ0s.86/31**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.27	151	P	Pb	12 25 19.6	+0.5
YOJ				S	Sg	12 25 24.5	+1.4
TWB1	Santiao Chiao	0.85	291	eP	Pn	12 25 30.1	+0.2
	baz=296						
TWB1				eS	Sn	12 25 41.4	-0.6
	baz=296						
IRIF	Iriomote-Funau	0.87	115	P	Pb	12 25 28.7	-0.6
IRIF				S	Sg	12 25 41.7	+0.5
TWC	Suao	0.93	265	P	Pn	12 25 30.7	-0.2
	baz=260						
TWC				S	Sg	12 25 43.0	-0.3
	baz=260						
NWF	Wu-fen Shan	1.05	291	eP	Pg	12 25 34.5	+1.2
	baz=295						
NWF				S	Sg	12 25 48.1	+1.0
	baz=295						
ENA	Nanau	1.06	255	eP	Pg	12 25 33.6	+0.2
	baz=257						
ENA				eS	Sg	12 25 47.5	+0.1
	baz=257						
TWE	Neicheng	1.09	271	eP	Pg	12 25 34.1	+0.1
	baz=266						
TWE				S	Sg	12 25 48.3	0.0
	baz=266						
JKRS	Kuro-shima	1.14	114	eS	Sn	12 25 49.9	+1.0
ENTT	Nioudou	1.19	267	eP	Pb	12 25 35.1	+0.3
	baz=261						
ENTT				S	Sg	12 25 51.1	-0.2
	baz=261						
JIJ	Ishigaki jima	1.21	106	P	Pn	12 25 33.5	-1.3
NSK	Sanguang	1.37	269	eP	Pg	12 25 39.1	-0.2
	baz=272						
NSK				eS	Sb	12 25 55.0	-0.3
	baz=272						
NNS	Nan Shan	1.39	260	eP	Pg	12 25 39.1	-0.5
	baz=250						
NNS				eS	Sg	12 25 56.8	-0.9
	baz=250						
WHF	Hehuan Shan	1.56	250	eP	Pb	12 25 42.1	+0.7
	baz=260						
WHF				eS	Sg	12 26 03.4	0.0
	baz=260						
TWT	Tachien	1.60	254	eP	Pg	12 25 43.3	-0.5
	baz=255						
TWT				eS	Sg	12 26 03.4	-1.3
	baz=255						
JTJ	Tarama	1.67	92	P	Pn	12 25 40.7	-0.4
NSTT	Nanjuang	1.70	268	eP	Pg	12 25 45.9	+0.3
	baz=290						
NSTT				eS	Sg	12 26 05.7	-2.0
	baz=290						
ALS	Alishan	2.23	238	eP	Pn	12 25 50.6	+1.6
	baz=237						
CHN5	Tsauling	2.28	242	eP	Pg	12 25 55.5	-1.2
	baz=240						

*CSEM **06** 12:33:05.2,42°.35N×13°.34E,h9km,After ROM*
ROM 06 12:33:05.2±0.2**,42°.35N×13°.34E,h9**km±2km**,Ml1.9**/2**,2C, Error ellipse: s-maj=3.3km s-min=2.7km az=155.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	78	⇑iPg	Pg	12 33 07.5	+0.4
AQU				Sg	Sg	12 33 09.1	+0.7
	859nm,0.5s						
AQU	L'Aquila	0.04	78	⇑iPg	Pg	12 33 07.5	+0.4
AQU				Sg	Sg	12 33 09.1	+0.7
	859nm,0.5s						
FIAM	Fiamignano	0.18	245	Pg	Pg	12 33 09.7	+0.5
FIAM				Sg	Sg	12 33 12.7	+0.8
FIAM	Fiamignano	0.18	245	Pg	Pg	12 33 09.7	+0.5
FIAM				Sg	Sg	12 33 12.7	+0.8
FAGN	Fagnano	0.20	114	Pg	Pg	12 33 10.5	+1.1
FAGN				Sg	Sg	12 33 12.1	-0.1
FAGN	Fagnano	0.20	114	Pg	Pg	12 33 10.5	+1.1
FAGN				Sg	Sg	12 33 12.1	-0.1
CAMP	Campotosto	0.20	14	Pg	Pg	12 33 09.1	-0.4
CAMP				Sg	Sg	12 33 13.4	+1.0
CAMP	Campotosto	0.20	14	Pg	Pg	12 33 09.1	-0.4
CAMP				Sg	Sg	12 33 13.4	+1.0
VCEL	Villa Celiera	0.37	82	Pg	Pb	12 33 13.8	-0.4
VCEL				Sg	Sb	12 33 19.5	-0.7
VCEL	Villa Celiera	0.37	82	Pg	Pb	12 33 13.8	-0.4
VCEL				Sg	Sb	12 33 19.5	-0.7
VVLD	Villa Vallelon	0.52	156	Pg	Pb	12 33 16.6	0.0
VVLD	Villa Vallelon	0.52	156	Pg	Pb	12 33 16.6	0.0
LPEL	Lama dei Pelig	0.69	115	Pg	Pb	12 33 19.5	0.0
LPEL	Lama dei Pelig	0.69	115	Pg	Pb	12 33 19.5	0.0

*CSEM **06** 12:33:16.4,42°.27N×13°.39E,h11km,After ROM*
ROM 06 12:33:16.4±0.2**,42°.27N×13°.39E,h11**km±1km**,Ml1.8**/2**,2C, Error ellipse: s-maj=2.5km s-min=2.3km az=85.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.09	5	⇑iPg	Pg	12 33 19.5	+0.5
AQU				Sg	Sg	12 33 21.1	+0.2
	859nm,0.5s						
AQU	L'Aquila	0.09	5	⇑iPg	Pg	12 33 19.5	+0.5
AQU				Sg	Sg	12 33 21.1	+0.2
	859nm,0.5s						
FAGN	Fagnano	0.14	90	Pg	Pg	12 33 20.5	+0.7
FAGN				Sg	Sg	12 33 23.1	+0.9
FAGN	Fagnano	0.14	90	Pg	Pg	12 33 20.5	+0.7
FAGN				Sg	Sg	12 33 23.1	+0.9
FIAM	Fiamignano	0.20	270	Pg	Pb	12 33 22.1	-0.2
FIAM				Sg	Sg	12 33 25.5	+1.6
FIAM	Fiamignano	0.20	270	Pg	Pb	12 33 22.1	-0.2
FIAM				Sg	Sg	12 33 25.5	+1.6
PTQR	Pietraquaria	0.24	179	Pg	Pg	12 33 21.9	+0.3
PTQR				Sg	Sg	12 33 27.0	+1.9
PTQR	Pietraquaria	0.24	179	Pg	Pg	12 33 21.9	+0.3
PTQR				Sg	Sg	12 33 27.0	+1.9
CAMP	Campotosto	0.27	3	Pg	Pg	12 33 22.1	0.0
CAMP				Sg	Sb	12 33 27.2	-1.1
CAMP	Campotosto	0.27	3	Pg	Pg	12 33 22.1	0.0
CAMP				Sg	Sb	12 33 27.2	-1.1
VCEL	Villa Celiera	0.36	69	Pg	Pb	12 33 24.9	-0.1
VCEL				Sg	Sb	12 33 30.2	-0.5
VCEL	Villa Celiera	0.36	69	Pg	Pb	12 33 24.9	-0.1
VCEL				Sg	Sb	12 33 30.2	-0.5
TERO	Teramo	0.39	24	Pg	Pg	12 33 24.3	+0.1
TERO				Sg	Sg	12 33 30.2	+0.7
TERO	Teramo	0.39	24	Pg	Pg	12 33 24.3	+0.1
TERO				Sg	Sg	12 33 30.2	+0.7
VVLD	Villa Vallelon	0.43	157	Pg	Pg	12 33 23.6	-1.4
VVLD				Sg	Sg	12 33 31.4	+0.6
	43nm,0.4s						
VVLD	Villa Vallelon	0.43	157	Pg	Pg	12 33 23.6	-1.4
VVLD				Sg	Sg	12 33 31.4	+0.6
	43nm,0.4s						
VVLD	Villa Vallelon	0.43	157	Sg	Pg	12 33 23.1	-1.9
	43nm,0.4s						
VVLD	Villa Vallelon	0.43	157	Sg	Pg	12 33 23.1	-1.9
	43nm,0.4s						
LPEL	Lama dei Pelig	0.63	110	Pg	Pg	12 33 27.8	-0.9
LPEL				Sg	Sb	12 33 38.5	+0.1
	64nm,0.3s						
LPEL	Lama dei Pelig	0.63	110	Pg	Pg	12 33 27.8	-0.9
LPEL				Sg	Sb	12 33 38.5	+0.1
	64nm,0.3s						
LPEL	Lama dei Pelig	0.63	110	Sg	Pg	12 33 27.9	-0.8
	64nm,0.3s						
LPEL	Lama dei Pelig	0.63	110	Sg	Pg	12 33 27.9	-0.8
	64nm,0.3s						

CSEM 06 12:33:49.7,41°.54N×0°.73W,h0km,ML1.3,Mining explosion. After MDD,Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESAC	San Caprasio	0.27	46	Pg	Pg	12 33 54.6	-0.3
	24nm,0.3s,SNR=17						
ESAC				Lg	Lg	12 33 58.7	
	103nm,0.4s,SNR=5.0						
ERTA	Horta de San J	0.99	126	Pg	Pg	12 34 08.3	-0.4
	2.9nm,0.9s,SNR=7.9						
ERTA				Lg	Lg	12 34 21.2	
	9.7nm,0.7s,SNR=7.9						
EMOS	Mosqueruela	1.19	171	Pg	Pg	12 34 11.4	-1.3
	4.4nm,0.6s,SNR=11						
EMOS				Lg	Lg	12 34 28.2	
	4.8nm,0.5s,SNR=7.4						
ETOR	Torete	1.23	235	Pg	Pg	12 34 12.2	-1.3
	10nm,0.7s,SNR=8.8						
ETOR				Lg	Lg	12 34 29.6	
	10nm,0.5s						
IEPA	Eparoz	1.30	342	Pg	Pg	12 34 14.1	-0.7
	2.9nm,0.7s,SNR=7.9						
IEPA				Lg	Lg	12 34 32.5	
	0.7nm,0.1s,SNR=7.9						
EPOB	Poblet	1.37	97	Pg	Pg	12 34 14.1	-2.0
	3.8nm,0.6s,SNR=11						
EPOB				Lg	Lg	12 34 34.2	
	2.5nm,0.3s,SNR=5.0						
EORO	Oroz-Betelu	1.42	342	Pg	Pn	12 34 14.8	-2.1
	2.6nm,1.0s,SNR=7.9						
EORO				Lg	Lg	12 34 34.2	
	1.5nm,0.8s,SNR=7.9						
CSOR	Sort	1.62	58	Pg	Pn	12 34 19.0	-0.7
	0.4nm,0.5s,SNR=7.9						
CSOR				Lg	Lg	12 34 42.7	
	5.9nm,1.2s,SNR=7.9						
EMIR	Miracle	1.73	77	Pg	Pn	12 34 19.6	-1.5
	14nm,1.0s,SNR=7.9						
EMIR				Lg	Lg	12 34 44.8	
	4.2nm,0.7s,SNR=7.9						

IDC 06 12:40:44.3±1.6**,0°.54S×125°.48E,h0km,mb3.5**/4**, mb1 3.7**/5**,mb1mx3.4**/23**,mbtmp3.5**/5**,ML3.6**/1**,MS3.7**/1**, Ms1 3.7**/1**,ms1mx2.9**/29**,Error ellipse: s-maj=119.1km s-min=23.0km az=66.0,Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	7.25	232	LR	LR	12 45 23.1	
	comp=Z,668nm,21.0s,baz=127,slow=38						
FITZ	Fitzroy Crossi	17.46	179	P	Pn	12 44 48.5	-0.9
	0.2nm,0.3s,baz=9.7,slow=12,SNR=1.1						
WRA	Warramunga Arr	21.15	156	P	P	12 45 33.0	+1.8
	0.5nm,0.3s,baz=338,slow=8.9,SNR=9.2						
ASAR	Alice Springs	24.40	161	P	P	12 46 02.9	-1.8
	0.6nm,0.4s,baz=328,slow=9.1,SNR=8.6						
STKA	Stephens Creek	34.70	155	P	P	12 47 36.8	+0.8
	2.5nm,1.0s,baz=328,slow=4.3,SNR=1.7						
MKAR	Makanchi Array	60.39	327	P	P	12 50 55.5	0.0
	0.1nm,0.5s,baz=120,slow=8.2,SNR=2.3						

*ISCJB **06** 12:55:16.5±0.2,42°.37N±0°.02×13°.32E±0°.02,h7km±2km, mb3.6/3,Error ellipse: s-maj=2.8km s-min=2.4km az=148.2*
*CSEM **06** 12:55:16.8±0.1,42°.36N×13°.33E,h2km,ML4.0/8,Error ellipse: s-maj=2.3km s-min=1.7km az=54.0*
*ROM **06** 12:55:16.6±0.1,42°.36N×13°.35E,h10km,Ml3.3/37,Error ellipse: s-maj=1.1km s-min=0.9km az=67.0*
*IDC **06** 12:55:17.6±1.3,42°.48N×13°.15E,h0km,mb3.3/2, mb1 3.4/5,mb1mx3.2/28,mbtmp3.2/5,ML3.1/3,Error ellipse: s-maj=24.3km s-min=14.2km az=98.0*
*LDG **06** 12:55:18.8±0.2,42°.32N×13°.28E,h2km,Ml3.1/7,Error ellipse: s-maj=8.0km s-min=5.0km az=41.0*
ISC 06 12:55:17.4±0.8**,42°.37N**±0°.01×**13°.33E**±0°.02**,h10**km±4km**, n134,**σ1s.32/174**,mb3.7**/3**,20C-2D,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	104	⇓iPg	Pg	12 55 19.1	-0.4
AQU				Sg	Sg	12 55 20.4	-0.7
	64µm,0.3s						
AQU	L'Aquila	0.05	104	⇓iPg	Pg	12 55 19.1	-0.4
AQU				Sg	Sg	12 55 20.4	-0.7
	64µm,0.3s						
CAMP	Campotosto	0.18	18	⇑iPg	Pg	12 55 21.0	-0.3
CAMP				Sg	Sg	12 55 23.9	-0.1
CAMP	Campotosto	0.18	18	⇑iPg	Pg	12 55 21.0	-0.3
CAMP				Sg	Sg	12 55 23.9	-0.1
FIAM	Fiamignano	0.19	239	⇑iPg	Pg	12 55 21.6	+0.1
FIAM				Sg	Sg	12 55 24.7	+0.4
FIAM	Fiamignano	0.19	239	⇑iPg	Pg	12 55 21.6	+0.1
FIAM				Sg	Sg	12 55 24.7	+0.4
FAGN	Fagnano	0.21	118	⇑Pg	Pg	12 55 21.5	-0.3
FAGN				Sg	Sg	12 55 25.0	+0.2
	29µm,0.3s						
FAGN	Fagnano	0.21	118	⇑Pg	Pg	12 55 21.5	-0.3
FAGN				Sg	Sg	12 55 25.0	+0.2
	29µm,0.3s						
TERO	Teramo	0.33	38	⇑iPg	Pg	12 55 23.1	-0.8
TERO				Sg	Sg	12 55 27.8	-0.5
	5µm,0.5s						
TERO	Teramo	0.33	38	⇑iPg	Pg	12 55 23.1	-0.8
TERO				Sg	Sg	12 55 27.8	-0.5
	5µm,0.5s						
PTQR	Pietraquaria	0.35	172	⇑iPg	Pg	12 55 24.0	-0.3
PTQR				Sg	Sg	12 55 29.8	+0.8
PTQR	Pietraquaria	0.35	172	⇑iPg	Pg	12 55 24.0	-0.3
PTQR				Sg	Sg	12 55 29.8	+0.8
VCEL	Villa Celiera	0.38	86	Pg	Pg	12 55 24.1	-0.8
VCEL				Sg	Sg	12 55 30.8	+0.9
	9µm,0.7s						
VCEL	Villa Celiera	0.38	86	Pg	Pg	12 55 24.1	-0.8
VCEL				Sg	Sg	12 55 30.8	+0.9
	9µm,0.7s						
MNS	Montasola	0.48	272	⇑Pg	Pg	12 55 26.4	-0.4
	2µm,0.8s						
MNS	Montasola	0.48	272	⇑Pg	Pg	12 55 26.4	-0.4
	2µm,0.8s						
CERT	Cerreto	0.49	212	⇑iPg	Pg	12 55 26.5	-0.5
CERT				Sg	Sg	12 55 33.9	+0.4
	5µm,0.4s						
CERT	Cerreto	0.49	212	⇑iPg	Pg	12 55 26.5	-0.5
CERT				Sg	Sg	12 55 33.9	+0.4
	5µm,0.4s						
NRCA	Norcia	0.49	341	Pg	Pg	12 55 26.4	-0.6
NRCA				Sg	Sg	12 55 34.2	+0.6
NRCA	Norcia	0.49	341	Pg	Pg	12 55 26.4	-0.6
NRCA				Sg	Sg	12 55 34.2	+0.6
VVLD	Villa Vallelon	0.54	157	Pg	Pg	12 55 26.9	-1.0
VVLD				Sg	Sg	12 55 35.1	+0.1
	2µm,0.5s						
VVLD	Villa Vallelon	0.54	157	Pg	Pg	12 55 26.9	-1.0
VVLD				Sg	Sg	12 55 35.1	+0.1
	2µm,0.5s						
INTR	Introdacqua	0.55	130	Pg	Pg	12 55 27.3	-0.8
INTR				Sg	Sg	12 55 35.8	+0.4
	4µm,0.9s						
INTR	Introdacqua	0.55	130	Pg	Pg	12 55 27.3	-0.8

INTR Sg Sg 12 55 35.8 +0.4
4µm,0.9s
MTCE Montecelio 0.56 232 ⇑Pg **Pg 12 55 27.7 -0.5**
1µm,0.4s
MTCE Montecelio 0.56 232 ⇑Pg **Pg 12 55 27.7 -0.5**
1µm,0.4s
GUAR Guarcino 0.57 182 Pg **Pg 12 55 27.8 -0.7**
821nm,0.3s
GUAR Guarcino 0.57 182 Pg **Pg 12 55 27.8 -0.7**
821nm,0.3s
TRTR Tortoreto Alta 0.61 44 Pg **Pg 12 55 29.6 +0.3**
9µm,0.9s
TRTR Tortoreto Alta 0.61 44 Pg **Pg 12 55 29.6 +0.3**
9µm,0.9s
OFFI Offida 0.62 24 Pg **Pg 12 55 29.5 0.0**
6µm,0.6s
OFFI Offida 0.62 24 Pg **Pg 12 55 29.5 0.0**
6µm,0.6s
FDMO Fiordimonte 0.69 345 ⇑Pg **Pg 12 55 29.8 -1.0**
666nm,0.5s
FDMO Fiordimonte 0.69 345 ⇑Pg **Pg 12 55 29.8 -1.0**
666nm,0.5s
LPEL Lama dei Pelig 0.71 117 Pg **Pg 12 55 29.7 -1.3**
LPEL Sg **Sg 12 55 40.3 0.0**
1µm,0.5s
LPEL Lama dei Pelig 0.71 117 Pg **Pg 12 55 29.7 -1.3**
LPEL Sg **Sg 12 55 40.3 0.0**
1µm,0.5s
POFI Posta Fibreno 0.71 156 Pg **Pg 12 55 30.7 -0.3**
POFI Posta Fibreno 0.71 156 Pg **Pg 12 55 30.7 -0.3**
RMP Rome, Mte Porz 0.73 220 Pg **Pg 12 55 30.6 -0.8**
1µm,0.5s
RMP Rome, Mte Porz 0.73 220 Pg **Pg 12 55 30.6 -0.8**
1µm,0.5s
SDI San Donato 0.75 151 Pg **Pg 12 55 30.9 -0.9**
SDI San Donato 0.75 151 Pg **Pg 12 55 30.9 -0.9**
RDP Rocca di Papa 0.76 217 Pg **Pg 12 55 32.1 0.0**
3µm,0.5s
RDP Rocca di Papa 0.76 217 Pg **Pg 12 55 32.1 0.0**
3µm,0.5s
CAFR Castel Frentan 0.76 100 Pg **Pg 12 55 31.5 -0.6**
2µm,0.7s
CAFR Castel Frentan 0.76 100 Pg **Pg 12 55 31.5 -0.6**
2µm,0.7s
GIUL Giuliano Di Ro 0.81 184 Pg **Pg 12 55 31.5 -1.5**
604nm,0.5s
GIUL Giuliano Di Ro 0.81 184 Pg **Pg 12 55 31.5 -1.5**
604nm,0.5s
ASSB Assisi San Ben 0.84 324 Pg **Pg 12 55 32.8 -0.8**
642nm,0.5s
ASSB Assisi San Ben 0.84 324 Pg **Pg 12 55 32.8 -0.8**
642nm,0.5s
RNI2 Rionero Sannit 0.90 137 Pg **Pg 12 55 34.1 -0.6**
775nm,0.6s
RNI2 Rionero Sannit 0.90 137 Pg **Pg 12 55 34.1 -0.6**
775nm,0.6s
CERA Filignano 0.92 146 Pg **Pg 12 55 33.8 -1.3**
796nm,0.7s
CERA Filignano 0.92 146 Pg **Pg 12 55 33.8 -1.3**
796nm,0.7s
SNTG Esanatoglia 0.93 342 Pg **Pg 12 55 34.1 -1.3**
215nm,0.4s
SNTG Esanatoglia 0.93 342 Pg **Pg 12 55 34.1 -1.3**
215nm,0.4s
MIDA Miranda 1.00 136 Pg **Pg 12 55 34.5 -2.1**
687nm,0.9s
MIDA Miranda 1.00 136 Pg **Pg 12 55 34.5 -2.1**
687nm,0.9s
CING Cingoli 1.01 354 Pg **Pg 12 55 35.8 -1.1**
1µm,0.8s
CING Cingoli 1.01 354 Pg **Pg 12 55 35.8 -1.1**
1µm,0.8s
TOLF Tolfa 1.04 253 Pg **Pg 12 55 36.3 -1.0**
TOLF Tolfa 1.04 253 Pg **Pg 12 55 36.3 -1.0**
MGAB Montegabbione 1.05 302 Pg **Pg 12 55 36.6 -1.0**
604nm,0.5s
MGAB Montegabbione 1.05 302 Pg **Pg 12 55 36.6 -1.0**
604nm,0.5s
FRES Fresagrandinar 1.07 111 Pg **Pg 12 55 37.3 -0.6**
1µm,0.7s
FRES Fresagrandinar 1.07 111 Pg **Pg 12 55 37.3 -0.6**
1µm,0.7s
MURB Monte Urbino 1.08 327 Pg **Pg 12 55 37.1 -1.0**
2µm,0.8s
MURB Monte Urbino 1.08 327 Pg **Pg 12 55 37.1 -1.0**
2µm,0.8s
TRIV Trivento 1.09 123 Pg **Pg 12 55 37.2 -1.0**
451nm,0.8s
TRIV Trivento 1.09 123 Pg **Pg 12 55 37.2 -1.0**
451nm,0.8s
VAGA Valle Agricola 1.16 144 Pg **Pb 12 55 39.0 -0.6**
356nm,0.8s
VAGA Valle Agricola 1.16 144 Pg **Pb 12 55 39.0 -0.6**
356nm,0.8s
ARVD Arcevia 1.17 346 Pg **Pb 12 55 38.4 -1.2**
446nm,0.6s
ARVD Arcevia 1.17 346 Pg **Pb 12 55 38.4 -1.2**
446nm,0.6s
AOI Ancona 1.20 9 Pg **Pb 12 55 39.1 -1.1**
363nm,0.7s
AOI Ancona 1.20 9 Pg **Pb 12 55 39.1 -1.1**
363nm,0.7s
SGG Gregorio Mates 1.25 141 Pn **Pn 12 55 40.7 -0.3**
334nm,0.8s
SGG Gregorio Mates 1.25 141 Pn **Pn 12 55 40.7 -0.3**
334nm,0.8s
MODR Mondragone 1.29 161 Pn **Pn 12 55 41.0 -0.4**
MODR Mondragone 1.29 161 Pn **Pn 12 55 41.0 -0.4**
PIEI Pieia 1.31 334 Pn **Pn 12 55 41.3 -0.4**
216nm,0.4s
PIEI Pieia 1.31 334 Pn **Pn 12 55 41.3 -0.4**
216nm,0.4s
FSSB Fossombrone 1.39 343 Pn **Pn 12 55 42.4 -0.4**
681nm,0.4s
FSSB Fossombrone 1.39 343 Pn **Pn 12 55 42.4 -0.4**
681nm,0.4s
CAFI Castiglion Fio 1.39 314 Pn **Pb 12 55 43.3 -0.2**
352nm,1.0s
CAFI Castiglion Fio 1.39 314 Pn **Pb 12 55 43.3 -0.2**
352nm,1.0s
ARCI Arcidosso 1.46 290 Pn **Pb 12 55 44.4 -0.2**
ARCI Arcidosso 1.46 290 Pn **Pb 12 55 44.4 -0.2**
PARC Parchiule 1.51 328 Pn **Pn 12 55 44.9 +0.4**
334nm,0.8s
PARC Parchiule 1.51 328 Pn **Pn 12 55 44.9 +0.4**
334nm,0.8s
MAON Monte Argentar 1.63 273 Pn **Pn 12 55 46.2 +0.1**
242nm,0.8s
MAON Monte Argentar 1.63 273 Pn **Pn 12 55 46.2 +0.1**
242nm,0.8s
SFI Santa Sofia 1.88 325 Pn **Pn 12 55 50.8 +1.2**
SFI Santa Sofia 1.88 325 Pn **Pn 12 55 50.8 +1.2**
SGRT San Giovanni R 1.90 108 Pn **Pn 12 55 50.9 +1.1**
215nm,0.7s
SGRT San Giovanni R 1.90 108 Pn **Pn 12 55 50.9 +1.1**
215nm,0.7s
MSAG Monte S. Angel 2.03 108 Pn **Pn 12 55 52.8 +1.2**
338nm,0.6s
MSAG Monte S. Angel 2.03 108 Pn **Pn 12 55 52.8 +1.2**
338nm,0.6s
NVLJ Novalja 2.46 26 *e*Pn **Pn 12 55 57.7 +0.1**
NVLJ Sn **Sn 12 56 23.7 -4.0**
CDT Castel del Mon 2.55 119 *e*Pn **Pn 12 55 59.6 +0.9**
CDT *e*Sn **Sb 12 56 32.5 -2.0**
PGF Pioggiola 3.21 275 *e*Pn **Pn 12 56 08.8 +0.8**
PGF *e*Sn **Sn 12 56 47.8 +1.5**
42nm,1.0s
PGF Pioggiola 3.21 275 *e*Pn **Pn 12 56 08.8 +0.8**
PGF *e*Sn **Sn 12 56 47.8 +1.5**
21nm,1.0s
STON Ston 3.26 80 *e*Pn **Pn 12 56 09.7 +1.1**
STON Sn **Sn 12 56 46.2 -1.1**
STON Ston 3.26 80 *e*Pn **Pn 12 56 09.6 +1.1**
STON Sn **Sn 12 56 46.2 -1.1**
VOY Vojsko 3.69 6 *e*Pn **Pn 12 56 16.5 +2.0**
VOY *e*Sn **Sn 12 56 59.8 +1.8**
VOY Vojsko 3.69 6 Pn **Pn 12 56 16.5 +2.0**
VOY *e*Sn **Sn 12 56 59.8 +1.8**
OBKA Obir 4.23 11⇑*i*Pn **Pn 12 56 23.5 +1.5**
OBKA Obir 4.23 11 Pn **Pn 12 56 23.5 +1.5**
SBF Sospel 4.57 291 *e*Pn **Pn 12 56 26.6 0.0**
SBF *e*Sn **Sn 12 57 16.1 -3.6**
8.3nm,0.5s
SBF Sospel 4.57 291 *e*Pn **Pn 12 56 26.6 0.0**
SBF *e*Sn **Sn 12 57 16.1 -3.6**
4.2nm,0.5s
FETA Feichten 5.01 339⇑*i*Pn **Pn 12 56 35.1 +2.4**
FETA Feichten 5.01 339 Pn **Pn 12 56 35.1 +2.4**
FRF La Foret Royal 5.05 286 *e*Pn **Pn 12 56 33.1 0.0**
FRF *e*Sn **Sn 12 57 28.4 -3.1**
6.0nm,0.5s
FRF La Foret Royal 5.05 286 *e*Pn **Pn 12 56 33.1 0.0**
FRF *e*Sn **Sn 12 57 28.4 -3.1**
3.0nm,0.5s
LMR La Mourre 5.11 283 *e*Pn **Pn 12 56 33.7 -0.2**
LMR *e*Sn **Sn 12 57 29.8 -3.1**
2.6nm,0.4s
LMR La Mourre 5.11 283 *e*Pn **Pn 12 56 33.7 -0.2**
LMR *e*Sn **Sn 12 57 29.8 -3.1**
1.3nm,0.4s
MBDF Montbardon 5.32 299 *e*P **Pn 12 56 39.3 +2.3**
MBDF Montbardon 5.32 299 *e*P **Pn 12 56 39.3 +2.3**
SMRF Simiane la Rot 5.90 288 *e*P **Pn 12 56 46.8 +2.0**
SMRF Simiane la Rot 5.90 288 *e*P **Pn 12 56 46.8 +2.0**
GERES GERESS Array B 6.48 2 Pn **Pn 12 56 54.1 +1.3**
0.2nm,0.3s,baz=185,slow=13,SNR=6.2
GERES Sn **Sn 12 58 05.5 -1.4**
1.3nm,0.3s,baz=189,slow=25,SNR=11
KHC Kasperske Hory 6.77 1 *e*PN **Pn 12 56 57.7 +1.0**
KHC *e*x x 12 57 06.0
KHC *e*x x 12 57 22.0
KHC *e*SN **Sn 12 58 11.6 -2.2**
KHC *e*x x 12 58 35.5
KHC Kasperske Hory 6.77 1 Pn **Pn 12 56 57.7 +1.0**
HINF Hinteralfeld 7.12 322 *e*Pn **Pn 12 57 01.2 -0.4**
HINF *e*Sn **Sn 12 58 17.3 -5.2**
2.7nm,0.3s
HINF Hinteralfeld 7.12 322 *e*Pn **Pn 12 57 01.2 -0.4**
KEST Kesra 7.32 206 Pn Pn 12 57 08.5 +4.2
0.2nm,0.3s,baz=312,slow=10,SNR=4.5
CDF Champ du Feu 7.40 327 *e*Pn **Pn 12 57 05.1 -0.3**
CDF *e*Sn **Sn 12 58 24.8 -4.5**
6.2nm,0.5s
CDF Champ du Feu 7.40 327 *e*Pn **Pn 12 57 05.1 -0.3**
HAU Haudompre 7.49 321 *e*Pn **Pn 12 57 06.7 +0.1**
HAU *e*Sn Sn 12 58 25.0 -6.6
4.0nm,0.3s
HAU Haudompre 7.49 321 *e*Pn **Pn 12 57 06.7 +0.1**
MLR Muntele Rosu 9.62 67 Pn Pn 12 57 39.6 +3.7
0.0nm,0.3s,baz=159,slow=14,SNR=3.4
KBZ Khabaz 21.60 76 P **P 13 00 10.8 +3.6**
2.2nm,0.2s,baz=293,slow=6.7,SNR=4.7
TORD Torodi Ar. Bea 30.82 203 P **P 13 01 35.1 +1.7**
0.2nm,0.8s,baz=30,slow=6.7,SNR=3.4
MKAR Makanchi Array 47.88 60 P **P 13 03 56.4 +1.0**
0.4nm,0.6s,baz=293,slow=6.4,SNR=5.1

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*CSEM **06** 13:01:33.5, 42°.38N×13°.32E, h9km, After ROM*
ROM 06 13:01:33.5±0.1**, 42°.38N×13°.32E, h9**km±1km**, Ml2.0**/2**, 2C, Error ellipse: s-maj=2.1km s-min=1.8km az=155.0, Central Italy**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
AQU L'Aquila 0.07 111 Pg Pg 13 01 36.0 +0.4
AQU Sg Sg 13 01 37.4 +0.2
AQU L'Aquila 0.07 111 Pg Pg 13 01 36.0 +0.4
AQU Sg Sg 13 01 37.4 +0.2
CAMP Campotosto 0.17 23⇑*i*Pg Pg 13 01 37.9 +0.5
CAMP Sg Sg 13 01 41.0 +1.0
CAMP Campotosto 0.17 23⇑*i*Pg Pg 13 01 37.9 +0.5
CAMP Sg Sg 13 01 41.0 +1.0
FIAM Fiamignano 0.19 234 Pg Pg 13 01 38.3 +0.8
FIAM Sg Sg 13 01 41.2 +0.9
FIAM Fiamignano 0.19 234 Pg Pg 13 01 38.3 +0.8
FIAM Sg Sg 13 01 41.2 +0.9
FAGN Fagnano 0.23 119 Pg Pg 13 01 39.0 +0.8
FAGN Sg Sg 13 01 42.9 +1.5
FAGN Fagnano 0.23 119 Pg Pg 13 01 39.0 +0.8
FAGN Sg Sg 13 01 42.9 +1.5
TERO Teramo 0.32 40 Pg Pg 13 01 40.0 0.0
TERO Sg Sg 13 01 44.7 +0.3
TERO Teramo 0.32 40 Pg Pg 13 01 40.0 0.0
TERO Sg Sg 13 01 44.7 +0.3
VCEL Villa Celiera 0.39 87 Pg Pb 13 01 42.1 -0.6
VCEL Sg Sb 13 01 48.7 -0.2
439nm,0.6s
VCEL Villa Celiera 0.39 87 Pg Pb 13 01 42.1 -0.6
VCEL Sg Sb 13 01 48.7 -0.2
439nm,0.6s
NRCA Norcia 0.48 342 Pg Pg 13 01 43.2 +0.2
NRCA Sg Sb 13 01 51.3 -0.3
NRCA Norcia 0.48 342 Pg Pg 13 01 43.2 +0.2
NRCA Sg Sb 13 01 51.3 -0.3
CERT Cerreto 0.50 211 Pg Pg 13 01 43.2 -0.1
CERT Cerreto 0.50 211 Pg Pg 13 01 43.2 -0.1
FDMO Fiordimonte 0.68 345 Pg Pb 13 01 47.2 -0.4
18nm,0.2s
FDMO Fiordimonte 0.68 345 Pg Pb 13 01 47.2 -0.4
18nm,0.2s

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*CSEM **06** 13:01:52.0, 42°.27N×13°.52E, h11km, After ROM*
ROM 06 13:01:52.0±0.3**, 42°.27N×13°.52E, h11**km±4km**, Ml2.3**/1**, Error ellipse: s-maj=3.4km s-min=3.1km az=158.0, Central Italy**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
FAGN Fagnano 0.05 89 Pg Pg 13 01 54.3 0.0
FAGN Sg Sg 13 01 56.1 +0.1
FAGN Fagnano 0.05 89 Pg Pg 13 01 54.3 0.0
FAGN Sg Sg 13 01 56.1 +0.1
AQU L'Aquila 0.12 316 Pg Pb 13 01 56.0 -0.5
AQU Sg Sg 13 01 58.2 +0.8
AQU L'Aquila 0.12 316 Pg Pb 13 01 56.0 -0.5
AQU Sg Sg 13 01 58.2 +0.8
PTQR Pietraquaria 0.26 200 Pg Pb 13 01 58.2 -0.6
PTQR Sg Sg 13 02 01.7 +0.6
36nm,0.2s
PTQR Pietraquaria 0.26 200 Pg Pb 13 01 58.2 -0.6
PTQR Sg Sg 13 02 01.7 +0.6
36nm,0.2s
VCEL Villa Celiera 0.27 62 Pg Pg 13 01 58.3 +0.5
439nm,0.6s
VCEL Villa Celiera 0.27 62 Pg Pg 13 01 58.3 +0.5
439nm,0.6s
CAMP Campotosto 0.28 344 Pg Pb 13 01 58.7 -0.6
CAMP Sg Sg 13 02 01.8 -0.2
CAMP Campotosto 0.28 344 Pg Pb 13 01 58.7 -0.6
CAMP Sg Sg 13 02 01.8 -0.2
FIAM Fiamignano 0.30 271 Pg Pb 13 01 59.1 -0.4
FIAM Sg Sg 13 02 02.3 0.0
FIAM Fiamignano 0.30 271 Pg Pb 13 01 59.1 -0.4
FIAM Sg Sg 13 02 02.3 0.0
NRCA Norcia 0.64 333 Pg Pg 13 02 04.6 0.0
NRCA Norcia 0.64 333 Pg Pg 13 02 04.6 0.0

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*CSEM **06** 13:02:27.1, 42°.38N×13°.39E, h9km, After ROM*
ROM 06 13:02:27.1±0.1**, 42°.38N×13°.39E, h9**km±1km**, Ml2.4**/1**, 4C, Error ellipse: s-maj=2.5km s-min=1.5km az=76.0, Central Italy**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
AQU L'Aquila 0.03 163⇑*i*Pg Pg 13 02 28.8 0.0
AQU Sg Sg 13 02 29.7 -0.4
AQU L'Aquila 0.03 163⇑*i*Pg Pg 13 02 28.8 0.0
AQU Sg Sg 13 02 29.7 -0.4
CAMP Campotosto 0.16 5⇑*i*Pg Pg 13 02 31.2 +0.5
CAMP Sg Sg 13 02 34.1 +0.9
CAMP Campotosto 0.16 5⇑*i*Pg Pg 13 02 31.2 +0.5
CAMP Sg Sg 13 02 34.1 +0.9
FAGN Fagnano 0.18 128 Pg Pg 13 02 32.1 +1.1
FAGN Sg Sg 13 02 35.0 +1.3
FAGN Fagnano 0.18 128 Pg Pg 13 02 32.1 +1.1
FAGN Sg Sg 13 02 35.0 +1.3
FIAM Fiamignano 0.23 242 Pg Pg 13 02 32.7 +0.7
FIAM Fiamignano 0.23 242 Pg Pg 13 02 32.7 +0.7
TERO Teramo 0.29 33 Pg Pg 13 02 33.3 +0.3
TERO Sg Sg 13 02 37.9 +0.9
TERO Teramo 0.29 33 Pg Pg 13 02 33.3 +0.3
TERO Sg Sg 13 02 37.9 +0.9
VCEL Villa Celiera 0.33 87 Pg Pb 13 02 34.9 -0.5
439nm,0.6s
VCEL Villa Celiera 0.33 87 Pg Pb 13 02 34.9 -0.5
439nm,0.6s
PTQR Pietraquaria 0.36 179 Pg Pb 13 02 35.0 -0.7
PTQR Sg Sg 13 02 40.0 +0.9
36nm,0.2s
PTQR Pietraquaria 0.36 179 Pg Pb 13 02 35.0 -0.7
PTQR Sg Sg 13 02 40.0 +0.9
36nm,0.2s
NRCA Norcia 0.50 336 Pg Pg 13 02 37.3 +0.3
NRCA Sg Sb 13 02 45.2 -0.5
NRCA Norcia 0.50 336 Pg Pg 13 02 37.3 +0.3
NRCA Sg Sb 13 02 45.2 -0.5
INTR Introdacqua 0.53 134 Pg Pg 13 02 38.0 +0.5
INTR Introdacqua 0.53 134 Pg Pg 13 02 38.0 +0.5

IDC 06 13:03:54.8±0.9**, 22°.35S×174°.91W, h0**km**, mb4.2**/10**, mb1 4.3**/11**, mb1mx4.2**/20**, mbtmp4.1**/11**, ML4.0**/1**, Error ellipse: s-maj=34.8km s-min=21.5km az=119.0, Tonga Islands region**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
RAR Rarotonga 14.11 88 Pn Pn 13 07 05.7 -10
4.7nm,0.3s,baz=270,slow=7.3,SNR=8.5
URZ Urewera 17.27 202 P P 13 07 59.1 +0.1
0.5nm,0.3s,baz=131,slow=22,SNR=5.2
URZ S Sn 13 10 55.4 -15
0.6nm,0.3s,baz=113,slow=17,SNR=2.1
STKA Stephens Creek 39.64 247 P P 13 11 29.1 +0.7
1.4nm,0.6s,baz=93,slow=8.7,SNR=4.4
ASAR Alice Springs 46.92 258 P P 13 12 26.8 -0.7
4.7nm,1.0s,baz=91,slow=8.2,SNR=26
WRA Warramunga Arr 47.22 263 P P 13 12 28.5 -1.3
2.3nm,0.7s,baz=102,slow=8.0,SNR=24
WRA PcP PcP 13 14 01.6 +0.3
0.7nm,0.8s,baz=101,slow=3.5,SNR=3.5
VNDA Vanda 56.35 186 P P 13 13 36.4 -0.8
0.9nm,0.8s,baz=350,slow=6.8,SNR=3.6
MJAR Matsushiro Arr 73.42 322 P P 13 15 29.2 +0.3
1.0nm,0.6s,baz=173,slow=6.7,SNR=4.8
PETK Petropavlovsk- 78.82 344 P P 13 15 59.3 0.0
2.2nm,0.7s,baz=121,slow=14,SNR=4.1
MAW Mawson 80.78 199 P P 13 16 10.1 +0.3
4.8nm,1.0s,baz=100,slow=6.1,SNR=4.0
ILAR Eielson Array 89.51 12 P P 13 16 53.3 -0.1
0.9nm,0.9s,baz=221,slow=5.7,SNR=10
CMAR Chiang Mai Arr 93.44 288 P P 13 17 14.3 +1.6
3.8nm,1.2s,baz=120,slow=3.5,SNR=9.2
YKA Yellowknife Ar 97.01 24 P P 13 17 27.5 -0.4
0.2nm,0.6s,baz=239,slow=4.5,SNR=9.2
AKASG Malin Array Be 146.00 332 PKPbc PKPdf 13 23 34.6 -1.0
2.6nm,0.6s,baz=40,slow=4.2,SNR=4.6
BRTR Keskin Array B 150.21 312 PKPbc PKPbc 13 23 47.3 -0.8
1.2nm,0.8s,baz=66,slow=3.1,SNR=5.4
MLR Muntele Rosu 151.32 329 PKPbc PKPbc 13 23 50.7 +0.1
0.3nm,0.4s,baz=121,slow=7.7,SNR=3.5
GERES GERESS Array B 152.69 348 PKPbc PKPbc 13 23 53.3 -0.2
0.3nm,0.2s,baz=20,slow=3.1,SNR=3.6

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*IDC **06** 13:07:22.9±1.3, 0°.28S×78°.62W, h0km, mb3.5/4, mb1 3.7/6, mb1mx3.6/23, mbtmp3.6/6, ML3.8/2, Error ellipse: s-maj=58.5km s-min=22.4km az=63.0*
*ISCJB **06** 13:07:30.5±0.4, 1°.00S±0°.06×79°.20W±0°.06, h150km, mb3.2/4, Error ellipse: s-maj=8.7km s-min=7.7km az=24.1*
*IGQ **06** 13:07:32.8, 0°.93S×79°.18W, h123km±168km, Mb4.2, Ms4.0, Error ellipse: s-maj=1.2km s-min=1.1km az=3.1*
ISC 06 13:07:31.0±1.2**, 0°.88S**±0°.06×**79°.14W**±0°.06**, h150**km**, n54,** σ**1s.69**/49**, mb3.3**/4**, 8C-35D, Ecuador**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
CAMI Rancho Maria 0.67 72 ⇓P **Pn 13 07 53.8 -0.1**
BNAS Cotopaxi Volca 0.69 73 ⇓P **Pn 13 07 53.9 -0.2**
BMOR Cotopaxi Volca 0.70 78 ⇓P **Pn 13 07 53.6 -0.5**
NAS2 Nasa 0.71 71 ⇓P **Pn 13 07 54.2 +0.1**
MOV1 Cotopaxi Vol s 0.72 77 ⇓P **Pn 13 07 53.8 -0.6**
BREF Cotopaxi Volca 0.73 73 ⇓P **Pn 13 07 54.4 0.0**
BVC2 Cotopaxi Volca 0.76 73 ⇓S **Sn 13 08 10.5 -2.0**
BVC2 Cotopaxi Volca 0.76 73 ⇓P **Pn 13 07 54.5 -0.1**
BTAM Cotopaxi Volca 0.77 75 ⇓P **Pn 13 07 54.5 -0.1**
VC1 Cotopaxi 1 0.77 72 ⇓P **Pn 13 07 54.6 0.0**
PISA Pisayambo 0.77 103 ⇑P **Pn 13 07 54.2 -0.5**
PITA Cotopaxi Volc 0.78 66 ⇓P **Pn 13 07 54.6 0.0**
IGUA Igualata 0.79 140 ⇓P **Pn 13 07 54.1 -0.7**
TAMB Tambo 0.79 77 ⇓P **Pn 13 07 54.8 0.0**
COV1 Cotopaxi Volc 0.82 75 ⇓P **Pn 13 07 54.4 -0.7**
JUA2 San Juan 2 0.85 39 ⇓P **Pn 13 07 55.4 +0.2**
BIL2 Estacion Bilba 0.85 132 ⇓P **Pn 13 07 54.3 -0.7**
JUI6 Juive 0.86 129 ⇓P **Pn 13 07 54.2 -0.8**
JUI6 Juive 0.86 129 ⇓S **Sn 13 08 09.9 -3.4**
BBIL Ulba Tungurahu 0.86 131 ⇓S **Sn 13 08 09.8 -3.7**
BBIL Ulba Tungurahu 0.86 131 ⇓P **Pn 13 07 54.2 -0.9**
TERV Terraza Guagua 0.88 37 ⇓P **Pn 13 07 55.7 +0.2**
GGP Refugio Guagua 0.89 38 ⇑P **Pn 13 07 55.7 +0.1**
RUN5 Runtun 0.89 127 P **Pn 13 07 54.6 -0.7**
PINO Pino 0.89 37 ⇑P **Pn 13 07 55.7 +0.1**
RETU Refugio 0.90 129 ⇓P **Pn 13 07 54.9 -0.6**
BMAS Trigal station 0.90 133 ⇓P **Pn 13 07 54.7 -0.7**
BRUN Tungurahua Vol 0.90 126 ⇓S **Sn 13 08 10.4 -3.6**
BRUN Tungurahua Vol 0.90 126 ⇓P **Pn 13 07 54.7 -0.7**
PECV Mancha de Ca P 0.92 276 P **Pn 13 07 57.4 +2.3**
BULB Ulba Tungurahu 0.92 127 ⇓S **Sn 13 08 10.1 -4.1**
BULB Ulba Tungurahu 0.92 127 ⇓P **Pn 13 07 54.9 -0.6**
ARRY Arrayan 0.93 132 ⇓P **Pn 13 07 54.8 -0.8**
ULBA Ulba 0.93 128 ⇓S **Sn 13 08 10.2 -4.1**
ULBA Ulba 0.93 128 ⇓P **Pn 13 07 54.9 -0.7**
PAT1 Patacocha 0.94 132 ⇓P **Pn 13 07 55.2 -0.7**
YANA Yana 0.95 37 P **Pn 13 07 56.0 +0.1**
RIOE Riobamba 1.00 150 P **Pn 13 07 55.5 -0.7**
ANTI Antisana 1.07 66 ⇓P **Pn 13 07 57.6 +0.6**
GOLV Golondrinas 1.08 0 ⇑P **Pn 13 07 55.5 -1.0**
JAMA Jama 1.23 300 ⇓P **Pn 13 07 56.5 -1.4**
OTAV Otavalo 1.31 32 ⇓P **Pn 13 07 59.9 +0.8**
COTA Cotacachi 1.45 34 ⇑P **Pn 13 08 02.2 +1.6**
CAYA Cayambe 1.49 51 ⇑P **Pn 13 08 03.0 +1.9**
CHIS Cerro-Chispas- 1.60 264 ⇑S **Sn 13 08 22.6 -2.4**
CHIS Cerro-Chispas- 1.60 264 ⇑P **Pn 13 08 00.8 -0.8**
MACE Macas 1.66 145 ⇓P **Pn 13 08 03.4 +0.9**
ATAH Atahualpa 6.26 173 Pn Pn 13 09 05.5 +3.9
1.2nm,0.3s,baz=33,slow=7.1,SNR=12
ATAH Sn **Sn 13 10 14.6 +2.2**
2.1nm,0.3s,baz=196,slow=21,SNR=8.3
LPAZ La Paz 18.77 145 P **Pn 13 11 46.1 +4.6**
0.2nm,0.3s,baz=321,slow=12,SNR=4.4
SIV San Ignacio 23.30 131 P P 13 12 32.7 +7.0
0.5nm,0.4s,baz=300,slow=10.0,SNR=5.3
YKA Yellowknife Ar 68.62 343 P P 13 18 25.4 +7.9
0.2nm,0.4s,baz=136,slow=5.9,SNR=6.3
TORD Torodi Ar. Bea 81.27 77 P P 13 19 38.6 +7.4
0.8nm,1.1s,baz=279,slow=4.3,SNR=4.9
ILAR Eielson Array 81.46 336 P P 13 19 39.2 +8.1
0.3nm,0.7s,baz=146,slow=4.3,SNR=6.4
WRA Warramunga Arr 141.21 236 PKhKP PKPpre 13 26 52.9
0.1nm,0.5s,baz=125,slow=1.7,SNR=3.2

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*ISCJB **06** 13:13:30.9±0.3, 42°.40N±0°.02×13°.32E±0°.03, h12km±3km, Error ellipse: s-maj=4.0km s-min=3.0km az=0.7*
*CSEM **06** 13:13:31.4±0.1, 42°.40N×13°.32E, h2km, ML3.1/5, Error ellipse: s-maj=2.5km s-min=2.0km az=75.0*
*ROM **06** 13:13:31.1±0.1, 42°.39N×13°.35E, h10km±1km, Ml3.0/21, Error ellipse: s-maj=1.5km s-min=1.2km az=97.0*
*LDG **06** 13:13:33.4±0.7, 42°.45N×13°.33E, h2km, Ml3.1/5, Error ellipse: s-maj=15.1km s-min=9.4km az=112.0*
ISC 06 13:13:31.0±0.6**, 42°.40N**±0°.02×**13°.33E**±0°.02**, h14**km±4km**, n90,** σ**1s.02**/113**, 8C, Central Italy**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
AQU L'Aquila 0.07 133⇑*i*Pg **Pg 13 13 33.6 -0.3**
AQU Sg **Sg 13 13 35.2 -0.7**
AQU L'Aquila 0.07 133⇑*i*Pg **Pg 13 13 33.6 -0.3**
AQU Sg **Sg 13 13 35.2 -0.7**
CAMP Campotosto 0.14 22⇑*i*Pg **Pg 13 13 35.0 +0.1**
CAMP Sg **Sg 13 13 37.7 +0.2**
CAMP Campotosto 0.14 22⇑*i*Pg **Pg 13 13 35.0 +0.1**
CAMP Sg **Sg 13 13 37.7 +0.2**
FIAM Fiamignano 0.21 230⇑*i*Pg **Pg 13 13 36.0 +0.2**
FIAM Sg **Sg 13 13 39.3 +0.3**
FIAM Fiamignano 0.21 230⇑*i*Pg **Pg 13 13 36.0 +0.2**
FIAM Sg **Sg 13 13 39.3 +0.3**
FAGN Fagnano 0.23 126 Pg **Pg 13 13 36.3 +0.2**
FAGN Sg **Sg 13 13 40.1 +0.6**

FAGN	Fagnano	0.23	126	Pg	Pg	13 13 36.3	+0.2
FAGN				Sg	Sg	13 13 40.1	+0.6
TERO	Teramo	0.30	42⇑	iPg	Pg	13 13 37.3	0.0
TERO				Sg	Sg	13 13 41.9	+0.4
TERO	Teramo	0.30	42⇑	iPg	Pg	13 13 37.3	0.0
TERO				Sg	Sg	13 13 41.9	+0.4
VCEL	Villa Celiera	0.38	91	Pg	Pg	13 13 38.8	+0.2
VCEL	Villa Celiera	0.38	91	Pg	Pg	13 13 38.8	+0.2
PTQR	Pietraquaria	0.38	173	Pg	Pg	13 13 38.8	0.0
PTQR				Sg	Sg	13 13 44.4	+0.4
PTQR	Pietraquaria	0.38	173	Pg	Pg	13 13 38.8	0.0
PTQR				Sg	Sg	13 13 44.4	+0.4
NRCA	Norcia	0.46	339	Pg	Pg	13 13 40.3	+0.1
NRCA				Sg	Sg	13 13 47.5	+1.0
	3µm,0.1s						
NRCA	Norcia	0.46	339	Pg	Pg	13 13 40.3	+0.1
NRCA				Sg	Sg	13 13 47.5	+1.0
	3µm,0.1s						
MNS	Montasola	0.48	268	Pg	Pg	13 13 40.6	0.0
	1µm,0.5s						
MNS	Montasola	0.48	268	Pg	Pg	13 13 40.6	0.0
	1µm,0.5s						
CERT	Cerreto	0.52	210	Pg	Pg	13 13 41.1	-0.2
CERT				Sg	Sg	13 13 48.8	+0.5
	2µm,0.4s						
CERT	Cerreto	0.52	210	Pg	Pg	13 13 41.1	-0.2
CERT				Sg	Sg	13 13 48.8	+0.5
	2µm,0.4s						
VVLD	Villa Vallelon	0.57	158	Pg	Pg	13 13 41.7	-0.6
	921nm,0.6s						
VVLD	Villa Vallelon	0.57	158	Pg	Pg	13 13 41.7	-0.6
	921nm,0.6s						
INTR	Introdacqua	0.58	132	Pg	Pg	13 13 42.1	-0.2
INTR	Introdacqua	0.58	132	Pg	Pg	13 13 42.1	-0.2
MTCE	Montecelio	0.58	229	Pg	Pg	13 13 42.1	-0.3
	456nm,0.3s						
MTCE	Montecelio	0.58	229	Pg	Pg	13 13 42.1	-0.3
	456nm,0.3s						
TRTR	Tortoreto Alta	0.59	46	Pg	Pb	13 13 43.5	+0.4
	4µm,1.1s						
TRTR	Tortoreto Alta	0.59	46	Pg	Pb	13 13 43.5	+0.4
	4µm,1.1s						
OFFI	Offida	0.59	26	Pg	Pb	13 13 43.7	+0.5
OFFI	Offida	0.59	26	Pg	Pb	13 13 43.7	+0.5
GUAR	Guarcino	0.61	182	Pg	Pg	13 13 43.1	+0.2
	518nm,0.4s						
GUAR	Guarcino	0.61	182	Pg	Pg	13 13 43.1	+0.2
	518nm,0.4s						
FDMO	Fiordimonte	0.66	344	Pg	Pg	13 13 43.8	-0.1
FDMO				Sg	Sb	13 13 53.9	+0.5
	673nm,0.2s						
FDMO	Fiordimonte	0.66	344	Pg	Pg	13 13 43.8	-0.1
FDMO				Sg	Sb	13 13 53.9	+0.5
	673nm,0.2s						
LPEL	Lama dei Pelig	0.72	119	Pg	Pg	13 13 44.8	-0.3
LPEL				Sg	Sb	13 13 56.1	+0.9
LPEL	Lama dei Pelig	0.72	119	Pg	Pg	13 13 44.8	-0.3
LPEL				Sg	Sb	13 13 56.1	+0.9
RMP	Rome, Mte Porz	0.75	219	Pg	Pb	13 13 46.4	+0.5
	605nm,0.3s						
RMP	Rome, Mte Porz	0.75	219	Pg	Pb	13 13 46.4	+0.5
	605nm,0.3s						
SDI	San Donato	0.78	153	Pg	Pg	13 13 45.8	-0.3
SDI	San Donato	0.78	153	Pg	Pg	13 13 45.8	-0.3
RDP	Rocca di Papa	0.79	216	Pg	Pb	13 13 47.0	+0.4
	1µm,0.5s						
RDP	Rocca di Papa	0.79	216	Pg	Pb	13 13 47.0	+0.4
	1µm,0.5s						
ASSB	Assisi San Ben	0.81	322	Pg	Pg	13 13 46.5	-0.3
	592nm,0.3s						
ASSB	Assisi San Ben	0.81	322	Pg	Pg	13 13 46.5	-0.3
	592nm,0.3s						
GIUL	Giuliano Di Ro	0.84	184	Pg	Pg	13 13 47.0	-0.4
	898nm,0.6s						
GIUL	Giuliano Di Ro	0.84	184	Pg	Pg	13 13 47.0	-0.4
	898nm,0.6s						
CING	Cingoli	0.98	354	Pg	Pb	13 13 49.4	-0.4
	420nm,0.2s						
CING	Cingoli	0.98	354	Pg	Pb	13 13 49.4	-0.4
	420nm,0.2s						
MGAB	Montegabbione	1.04	300	Pg	Pb	13 13 51.0	+0.2
MGAB	Montegabbione	1.04	300	Pg	Pb	13 13 51.0	+0.2
TOLF	Tolfa	1.05	252	Pg	Pb	13 13 50.9	0.0
	416nm,0.9s						
TOLF	Tolfa	1.05	252	Pg	Pb	13 13 50.9	0.0
	416nm,0.9s						
MURB	Monte Urbino	1.05	326	Pg	Pb	13 13 51.4	+0.4
MURB	Monte Urbino	1.05	326	Pg	Pb	13 13 51.4	+0.4
ARVD	Arcevia	1.13	345	Pg	Pb	13 13 52.4	0.0
	445nm,1.0s						
ARVD	Arcevia	1.13	345	Pg	Pb	13 13 52.4	0.0
	445nm,1.0s						
LATE	Laterza	1.15	281	Pg	Pb	13 13 53.2	+0.5
	40nm,0.4s						
LATE	Laterza	1.15	281	Pg	Pb	13 13 53.2	+0.5
	40nm,0.4s						
AOI	Ancona	1.17	10	Pg	Pb	13 13 53.3	+0.3
	288nm,0.5s						
AOI	Ancona	1.17	10	Pg	Pb	13 13 53.3	+0.3
	288nm,0.5s						
PIEI	Pieia	1.28	333	Pg	Pg	13 13 55.9	+0.3
	150nm,0.3s						
PIEI	Pieia	1.28	333	Pg	Pg	13 13 55.9	+0.3
	150nm,0.3s						
BADI	Badiali	1.37	325	Pn	Pg	13 13 57.6	+0.3
	357nm,0.9s						
BADI	Badiali	1.37	325	Pn	Pg	13 13 57.6	+0.3
	357nm,0.9s						
ARCI	Arcidosso	1.44	289	Pn	Pg	13 13 58.8	0.0
	131nm,0.9s						
ARCI	Arcidosso	1.44	289	Pn	Pg	13 13 58.8	0.0
	131nm,0.9s						
MAON	Monte Argentar	1.63	272	Pn	Pb	13 14 00.5	-0.4
	278nm,1.0s						
MAON	Monte Argentar	1.63	272	Pn	Pb	13 14 00.5	-0.4
	278nm,1.0s						
PGF	Pioggiola	3.21	274	ePn	Pn	13 14 23.0	+1.9
PGF	Pioggiola	3.21	274	ePn	Pn	13 14 23.0	+1.9
VOY	Vojsko	3.65	6	ePn	Pn	13 14 30.8	+3.6
VOY				e		13 14 47.1	
VOY	Vojsko	3.65	6	Pn	Pn	13 14 30.8	+3.6
SBF	Sospel	4.56	291	ePn	Pn	13 14 41.7	+2.1
SBF	Sospel	4.56	291	ePn	Pn	13 14 41.7	+2.1
FRF	La Foret Royal	5.04	286	ePn	Pn	13 14 47.6	+1.4
FRF				eSn	Sn	13 15 42.6	-1.6
	3.7nm,0.3s						
FRF	La Foret Royal	5.04	286	ePn	Pn	13 14 47.6	+1.4
FRF				eSn	Sn	13 15 42.6	-1.6
	1.9nm,0.3s						
LMR	La Mourre	5.10	283	ePn	Pn	13 14 48.3	+1.3
LMR				eSn	Sn	13 15 43.8	-1.9
	4.3nm,0.4s						
LMR	La Mourre	5.10	283	ePn	Pn	13 14 48.3	+1.3
LMR				eSn	Sn	13 15 43.8	-1.9
	2.2nm,0.4s						
MBDF	Montbardon	5.30	298	eP	Pn	13 14 53.3	+3.4
MBDF	Montbardon	5.30	298	eP	Pn	13 14 53.3	+3.4
SMRF	Simiane la Rot	5.89	288	eP	Pn	13 15 01.0	+3.2
SMRF	Simiane la Rot	5.89	288	eP	Pn	13 15 01.0	+3.2
CABF	La Chapelle	6.67	312	ePn	Pn	13 15 10.1	+1.4
CABF	La Chapelle	6.67	312	ePn	Pn	13 15 10.1	+1.4
HINF	Hinteralfeld	7.09	322	ePn	Pn	13 15 14.2	-0.2
HINF				eSn	Sn	13 16 32.0	-2.8
	2.2nm,0.3s						
HINF	Hinteralfeld	7.09	322	ePn	Pn	13 15 14.2	-0.2
CDF	Champ du Feu	7.37	327	ePn	Pn	13 15 18.9	+0.7
CDF				eSn	Sn	13 16 38.7	-2.9
	1.0nm,0.2s						
CDF	Champ du Feu	7.37	327	ePn	Pn	13 15 18.9	+0.7
HAU	Haudompre	7.46	321	ePn	Pn	13 15 20.7	+1.3
HAU				eSn	Sn	13 16 39.5	-4.4
	4.4nm,0.4s						
HAU	Haudompre	7.46	321	ePn	Pn	13 15 20.7	+1.3

*IDC **06** 13:14:04.5±1.2, 42°.11N×13°.46E, h0km, mb3.5/6, mb1 3.8/10, mb1mx3.6/30, mbtmp3.6/10, ML3.7/4, MS3.5/1, Ms1 3.5/1, ms1mx2.6/34, Error ellipse: s-maj=21.1km s-min=19.2km az=108.0*
*ROM **06** 13:14:04.6±0.1, 42°.23N×13°.49E, h9km±1km, Ml3.2/19, Error ellipse: s-maj=1.2km s-min=1.1km az=98.0*
*ISCJB **06** 13:14:04.9±0.3, 42°.23N±0°.02×13°.45E±0°.02, h11km±2km, mb3.4/5, Error ellipse: s-maj=2.8km s-min=2.4km az=11.4*

*CSEM **06** 13:14:05.3±0.1, 42°.24N×13°.44E, h2km, ML3.3/4, Error ellipse: s-maj=2.6km s-min=2.2km az=2.0*
*PDG **06** 13:14:06.1±0.4, 42°.28N×13°.53E, h6km±1km, ML3.7/9, Error ellipse: s-maj=1.6km s-min=2.2km az=0.0*
*LDG **06** 13:14:09.4±0.8, 42°.44N×13°.29E, h2km, Ml3.4/7, Error ellipse: s-maj=17.0km s-min=11.7km az=116.0*
ISC 06 13:14:05.5±0.8**, 42°.24N**±0°.02×**13°.47E**±0°.02**, h6**km±5km**,**
n119, σ1^{s}31/168**, mb3.6**/5**, 11C-8D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.09	70	Pg	Pg	13 14 07.1	-0.5
FAGN				Sg	Sg	13 14 08.7	-0.3
FAGN	Fagnano	0.09	70	Pg	Pg	13 14 07.1	-0.5
FAGN				Sg	Sg	13 14 08.7	-0.3
AQU	L'Aquila	0.13	336	Pg	Pg	13 14 08.3	0.0
AQU				Sg	Sg	13 14 10.5	+0.3
AQU	L'Aquila	0.13	336	Pg	Pg	13 14 08.3	0.0
AQU				Sg	Sg	13 14 10.5	+0.3
PTQR	Pietraquaria	0.22	194⇑	iPg	Pg	13 14 10.0	+0.1
PTQR	Pietraquaria	0.22	194⇑	iPg	Pg	13 14 10.0	+0.1
FIAM	Fiamignano	0.27	277	Pg	Pg	13 14 10.8	0.0
FIAM				Sg	Sg	13 14 15.0	+0.7
FIAM	Fiamignano	0.27	277	Pg	Pg	13 14 10.8	0.0
FIAM				Sg	Sg	13 14 15.0	+0.7
CAMP	Campotosto	0.30	351	Pg	Pg	13 14 11.5	0.0
CAMP				Sg	Sg	13 14 17.2	+1.6
CAMP	Campotosto	0.30	351	Pg	Pg	13 14 11.5	0.0
CAMP				Sg	Sg	13 14 17.2	+1.6
VCEL	Villa Celiera	0.32	60	Pg	Pg	13 14 11.3	-0.4
VCEL				Sg	Sg	13 14 15.9	0.0
VCEL	Villa Celiera	0.32	60	Pg	Pg	13 14 11.3	-0.4
VCEL				Sg	Sg	13 14 15.9	0.0
VVLD	Villa Vallelon	0.38	163	Pg	Pg	13 14 12.8	-0.1
VVLD				Sg	Sg	13 14 18.4	+0.5
	921nm,0.6s						
VVLD	Villa Vallelon	0.38	163	Pg	Pg	13 14 12.8	-0.1
VVLD				Sg	Sg	13 14 18.4	+0.5
	921nm,0.6s						
TERO	Teramo	0.40	14	Pg	Pg	13 14 12.6	-0.7
TERO				Sg	Sg	13 14 18.8	+0.3
TERO	Teramo	0.40	14	Pg	Pg	13 14 12.6	-0.7
TERO				Sg	Sg	13 14 18.8	+0.3
GUAR	Guarcino	0.46	195	Pg	Pg	13 14 14.1	-0.2
GUAR				Sg	Sg	13 14 21.2	+0.9
	518nm,0.4s						
GUAR	Guarcino	0.46	195	Pg	Pg	13 14 14.1	-0.2
GUAR				Sg	Sg	13 14 21.2	+0.9
	518nm,0.4s						
CERT	Cerreto	0.46	232	Pg	Pg	13 14 14.3	-0.2
CERT				Sg	Sg	13 14 21.6	+1.1
	2µm,0.4s						
CERT	Cerreto	0.46	232	Pg	Pg	13 14 14.3	-0.2
CERT				Sg	Sg	13 14 21.6	+1.1
	2µm,0.4s						
LPEL	Lama dei Pelig	0.56	109	Pg	Pg	13 14 15.2	-1.1
LPEL				Sg	Sg	13 14 23.3	-0.3
LPEL	Lama dei Pelig	0.56	109	Pg	Pg	13 14 15.2	-1.1
LPEL				Sg	Sg	13 14 23.3	-0.3
SDI	San Donato	0.58	154	Pg	Pg	13 14 16.2	-0.5
SDI				Sg	Sg	13 14 24.5	+0.2
SDI	San Donato	0.58	154	Pg	Pg	13 14 16.2	-0.5
SDI				Sg	Sg	13 14 24.5	+0.2
MTCE	Montecelio	0.58	249	Pg	Pg	13 14 16.2	-0.5
	456nm,0.3s						
MTCE	Montecelio	0.58	249	Pg	Pg	13 14 16.2	-0.5
	456nm,0.3s						
MNS	Montasola	0.61	285	Pn	Pg	13 14 16.8	-0.4
	1µm,0.5s						
MNS	Montasola	0.61	285	Pn	Pg	13 14 16.8	-0.4
	1µm,0.5s						
CAFR	Castel Frentan	0.65	90	Pn	Pg	13 14 17.3	-0.7
CAFR	Castel Frentan	0.65	90	Pn	Pg	13 14 17.3	-0.7
NRCA	Norcia	0.65	336	Pn	Pg	13 14 17.5	-0.6
	3µm,0.1s						
NRCA	Norcia	0.65	336	Pn	Pg	13 14 17.5	-0.6
	3µm,0.1s						
TRTR	Tortoreto Alta	0.66	29	Pn	Pg	13 14 18.5	+0.3
	4µm,1.1s						
TRTR	Tortoreto Alta	0.66	29	Pn	Pg	13 14 18.5	+0.3
	4µm,1.1s						
GIUL	Giuliano Di Ro	0.70	194	Pn	Pg	13 14 18.3	-0.6
	898nm,0.6s						
GIUL	Giuliano Di Ro	0.70	194	Pn	Pg	13 14 18.3	-0.6
	898nm,0.6s						
RMP	Rome, Mte Porz	0.71	234	Pn	Pg	13 14 18.1	-1.1
	605nm,0.3s						
RMP	Rome, Mte Porz	0.71	234	Pn	Pg	13 14 18.1	-1.1
	605nm,0.3s						
OFFI	Offida	0.72	13	Pn	Pg	13 14 19.3	0.0
OFFI	Offida	0.72	13	Pn	Pg	13 14 19.3	0.0
RNI2	Rionero Sannit	0.73	136	Pn	Pg	13 14 19.2	-0.4
	2µm,0.4s						
RNI2	Rionero Sannit	0.73	136	Pn	Pg	13 14 19.2	-0.4
	2µm,0.4s						
RDP	Rocca di Papa	0.74	230	Pn	Pg	13 14 20.1	+0.4
	1µm,0.5s						
RDP	Rocca di Papa	0.74	230	Pn	Pg	13 14 20.1	+0.4
	1µm,0.5s						
CERA	Filignano	0.76	147	Pn	Pg	13 14 18.8	-1.2
	2µm,0.5s						
MIDA	Miranda	0.83	135	Pn	Pg	13 14 20.5	-0.9
	1µm,0.5s						
FDMO	Fiordimonte	0.85	341	Pn	Pg	13 14 20.9	-0.9
	673nm,0.2s						
ASSB	Assisi San Ben	1.01	324	Pn	Pg	13 14 24.9	+0.1
	592nm,0.3s						
ASSB	Assisi San Ben	1.01	324	Pn	Pg	13 14 24.9	+0.1
	592nm,0.3s						
TOLF	Tolfa	1.11	262	Pn	Pg	13 14 26.6	-0.2
	416nm,0.9s						
TOLF	Tolfa	1.11	262	Pn	Pg	13 14 26.6	-0.2
	416nm,0.9s						
CING	Cingoli	1.16	350	Pn	Pg	13 14 27.4	-0.3
	420nm,0.2s						
CING	Cingoli	1.16	350	Pn	Pg	13 14 27.4	-0.3
	420nm,0.2s						
ARVD	Arcevia	1.32	343	Pn	Pn	13 14 30.4	-0.1
	445nm,1.0s						
ARVD	Arcevia	1.32	343	Pn	Pn	13 14 30.4	-0.1
	445nm,1.0s						
MAON	Monte Argentar	1.75	277	Pn	Pn	13 14 35.4	-0.9
	278nm,1.0s						
MAON	Monte Argentar	1.75	277	Pn	Pn	13 14 35.4	-0.9
	278nm,1.0s						
MS1	Monte Sant'Ang	1.92	105	ePn	Pb	13 14 41.4	+0.6
CDT	Castel del Mon	2.39	118	ePn	Pb	13 14 48.7	-0.3
CDT				eSn	Sb	13 15 16.9	-1.8
PGF	Pioggiola	3.33	277	ePn	Pn	13 14 58.7	+0.6
PGF				eSn	Sn	13 15 39.4	+1.4
	40nm,0.6s						
PGF	Pioggiola	3.33	277	ePn	Pn	13 14 58.7	+0.6
PGF				eSn	Sn	13 15 39.4	+1.4
	20nm,0.6s						
SKDS	Skadanscina	3.33	7	i Pn	Pn	13 14 59.3	+1.2
SKDS				i Sn	Sn	13 15 39.6	+1.6
SKDS	Skadanscina	3.33	7	i Pn	Pn	13 14 59.3	+1.2
SKDS				i Sn	Sn	13 15 39.6	+1.6
BOJS	Bojanci	3.51	21	i Pn	Pb	13 15 07.0	-1.0
BOJS				i Sn	Sn	13 15 43.0	+0.7
HCY	Herceg Novi	3.73	85	ePn	Pn	13 15 04.8	+1.3
HCY				eSn	Sn	13 15 49.4	+1.7
HCY	Herceg Novi	3.73	85	ePn	Pn	13 15 04.8	+1.3
HCY				eSn	Sn	13 15 49.4	+1.7
BRY	Bratogost	3.80	78⇓	iPn	Pn	13 15 06.2	+1.6
BRY				eSn	Sn	13 15 50.8	+1.1
BRY	Bratogost	3.80	78⇓	iPn	Pn	13 15 06.2	+1.6
BRY				eSn	Sn	13 15 50.8	+1.1
BUM	Brajici-Budva	4.02	87⇑	iPn	Pn	13 15 09.1	+1.5
BUM				eSn	Sn	13 15 56.2	+1.1
BUM	Brajici-Budva	4.02	87⇑	iPn	Pn	13 15 09.1	+1.5
BUM				eSn	Sn	13 15 56.2	+1.1
UPM	Unac-Piva	4.12	75⇑	iPn	Pn	13 15 10.6	+1.6
UPM				eSn	Sn	13 15 59.3	+1.7
UPM	Unac-Piva	4.12	75⇑	iPn	Pn	13 15 10.6	+1.6
UPM				eSn	Sn	13 15 59.3	+1.7
NKY	Niksic	4.12	80⇑	iPn	Pn	13 15 11.0	+2.0
NKY				eSn	Sn	13 15 58.5	+1.0
NKY	Niksic	4.12	80⇑	iPn	Pn	13 15 11.0	+2.0
NKY				eSn	Sn	13 15 58.5	+1.0
PDG	Podgorica	4.29	85⇓	iPn	Pn	13 15 11.9	+0.7
PDG				eSn	Sn	13 16 02.8	+1.3
TTG	Podgorica	4.29	85⇓	iPn	Pn	13 15 11.9	+0.7
TTG				eSn	Sn	13 16 02.8	+1.3
ULC	Ulcinj	4.30	92⇓	iPn	Pn	13 15 12.4	+1.0
ULC				eSn	Sn	13 16 03.0	+1.1
ULC	Ulcinj	4.30	92⇓	iPn	Pn	13 15 12.4	+1.0
ULC				eSn	Sn	13 16 03.0	+1.1
PLE	Pljevlja	4.49	74⇑	iPn	Pn	13 15 16.0	+1.9
PLE				eSn	Sn	13 16 08.2	+1.6
PLE	Pljevlja	4.49	74⇑	iPn	Pn	13 15 16.0	+1.9
PLE				eSn	Sn	13 16 08.2	+1.6
SBF	Sospel	4.71	292	ePn	Pn	13 15 17.5	+0.4
SBF				eSn	Sn	13 16 06.8	-5.3
	18nm,0.7s						
SBF	Sospel	4.71	292	ePn	Pn	13 15 17.5	+0.4
BEY	Berane	4.79	80⇓	iPn	Pn	13 15 19.1	+1.0
BEY				eSn	Sn	13 16 15.3	+1.4
IVA	Berane	4.79	80⇓	iPn	Pn	13 15 19.1	+1.0
IVA				eSn	Sn	13 16 15.3	+1.4
PVY	Plav	4.81	84⇑	iPn	Pn	13 15 20.5	+1.9
PVY				eSn	Sn	13 16 16.3	+1.6
FRF	La Foret Royal	5.19	287	ePn	Pn	13 15 23.2	-0.4
FRF				eSn	Sn	13 16 18.2	-5.5
	4.5nm,0.4s						
FRF	La Foret Royal	5.19	287	ePn	Pn	13 15 23.2	-0.4
DAVOX	Davos/Dischmat	5.22	332	Pn	Pn	13 15 27.1	+3.0
	2.3nm,0.3s,baz=171,slow=16,SNR=11						
DAVOX				Sn	Sn	13 16 24.4	-0.4
	baz=118,slow=20,SNR=1.4						
LMR	La Mourre	5.24	284	ePn	Pn	13 15 24.0	-0.3
LMR				eSn	Sn	13 16 19.8	-5.2
	2.1nm,0.4s						
LMR	La Mourre	5.24	284	ePn	Pn	13 15 24.0	-0.3
MBDF	Montbardon	5.47	299	eP	Pn	13 15 29.1	+1.4
MBDF	Montbardon	5.47	299	eP	Pn	13 15 29.1	+1.4
LPG	La Plagne	5.85	306	eP	Pn	13 15 34.8	+1.9
LPG	La Plagne	5.85	306	eP	Pn	13 15 34.8	+1.9
SMRF	Simiane la Rot	6.04	289	eP	Pn	13 15 36.6	+1.3
SMRF	Simiane la Rot	6.04	289	eP	Pn	13 15 36.6	+1.3
GERES	GERESS Array B	6.61	1	Pn	Pn	13 15 46.3	+3.1
	0.5nm,0.3s,baz=179,slow=14,SNR=7.4						
GERES				Sn	Sn	13 16 57.8	-1.1
	1.2nm,0.3s,baz=169,slow=22,SNR=5.1						
CABF	La Chapelle	6.86	312	ePn	Pn	13 15 46.4	-0.2
CABF	La Chapelle	6.86	312	ePn	Pn	13 15 46.4	-0.2
KHC	Kasperske Hory	6.90	1	ePN	Pn	13 15 48.3	+1.2
KHC				eSN	Sn	13 17 02.9	-2.9
VIVF	Saint-Julien-l	6.91	295	ePn	Pn	13 15 48.5	+1.3
VIVF	Saint-Julien-l	6.91	295	ePn	Pn	13 15 48.5	+1.3
KEST	Kesra	7.25	208	Pn	Pn	13 15 55.8	+3.9
	0.9nm,0.3s,baz=307,slow=3.9,SNR=17						
HINF	Hinteralfeld	7.29	322	ePn	Pn	13 15 51.5	-0.9
HINF				eSn	Sn	13 17 07.8	-7.6
	40nm,1.0s						
HINF	Hinteralfeld	7.29	322	ePn	Pn	13 15 51.5	-0.9
VRAC	Vranov	7.40	16	Pn	Pn	13 15 57.1	+3.1
	1.2nm,0.3s,baz=171,slow=13,SNR=2.8						
CDF	Champ du Feu	7.56	327	ePn	Pn	13 15 54.7	-1.5
CDF				eSn	Sn	13 17 14.3	-8.0
	21nm,0.9s						
CDF	Champ du Feu	7.56	327	ePn	Pn	13 15 54.7	-1.5
HAU	Haudompre	7.66	321	ePn	Pn	13 15 56.3	-1.2
HAU				eSn	Sn	13 17 15.3	-9.2
	10nm,0.5s						
HAU	Haudompre	7.66	321	ePn	Pn	13 15 56.3	-1.2
BRG	Berggiesshubel	8.65	2	e(P)	Pg	13 17 32.7	+42
	2.6nm,0.5s						
MLR	Muntele Rosu	9.58	66	Pn	Pn	13 16 25.7	+1.8
	0.1nm,0.3s,baz=256,slow=8.1,SNR=7.6						
MDT	Midelt	17.12	243	LR	LR	13 23 03.5	
	comp=Z,158nm,21.6s,baz=182,slow=32						
FINES	FINESS Array B	20.68	17	P	Pn	13 18 48.5	+0.3
	2.6nm,0.7s,baz=192,slow=5.5,SNR=7.0						
TORD	Torodi Ar. Bea	30.73	203	P	P	13 20 22.2	+0.8
	0.8nm,0.9s,baz=15,slow=7.8,SNR=4.5						
MKAR	Makanchi Array	47.86	60	P	P	13 22 43.7	-0.3
	0.3nm,0.6s,baz=316,slow=5.1,SNR=4.9						
SONM	Songino Array	62.01	50	P	P	13 24 26.7	+0.3
	0.6nm,1.2s,baz=98,slow=23,SNR=3.7						
YKA	Yellowknife Ar	67.64	337	P	P	13 25 01.6	-1.0
	0.2nm,0.5s,baz=42,slow=5.6,SNR=4.2						
ILAR	Eielson Array	72.22	351	P	P	13 25 30.0	-0.8
	0.1nm,0.5s,baz=319,slow=33,SNR=4.8						

*CSEM **06** 13:25:24.6±0.1, 42°.33N×13°.38E, h10km, ML3.6/7, Error ellipse: s-maj=2.1km s-min=1.6km az=67.0*
*ROM **06** 13:25:24.5±0.1, 42°.32N×13°.39E, h10km, Ml3.1/22, Error ellipse: s-maj=1.0km s-min=0.9km az=42.0*
ISC 06 13:25:24.8±0.8**, 42°.33N**±0°.02×**13°.38E**±0°.02**, h12**km±4km**,**
n79, σ0^{s}61/104**, 10C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	33⇓	iPg	Pg	13 25 26.8	-0.2
AQU				Sg	Sg	13 25 27.9	-0.7
	6µm,0.2s						
AQU	L'Aquila	0.03	33⇓	iPg	Pg	13 25 26.8	-0.2
AQU				Sg	Sg	13 25 27.9	-0.7
	6µm,0.2s						
FAGN	Fagnano	0.16	113	Pg	Pg	13 25 28.6	0.0
FAGN				Sg	Sg	13 25 31.6	+0.4
	18µm,0.4s						
FAGN	Fagnano	0.16	113	Pg	Pg	13 25 28.6	0.0
FAGN				Sg	Sg	13 25 31.6	+0.4
	18µm,0.4s						
CAMP	Campotosto	0.20	6⇑	iPg	Pg	13 25 29.5	+0.1
CAMP				Sg	Sg	13 25 32.9	+0.4
CAMP	Campotosto	0.20	6⇑	iPg	Pg	13 25 29.5	+0.1
CAMP				Sg	Sg	13 25 32.9	+0.4
FIAM	Fiamignano	0.21	252	Pg	Pg	13 25 29.9	+0.6
FIAM				Sg	Sg	13 25 33.6	+1.2
FIAM	Fiamignano	0.21	252	Pg	Pg	13 25 29.9	+0.6
FIAM				Sg	Sg	13 25 33.6	+1.2
PTQR	Pietraquaria	0.31	177⇑	iPg	Pg	13 25 31.2	0.0
PTQR				Sg	Sg	13 25 36.0	+0.6
PTQR	Pietraquaria	0.31	177⇑	iPg	Pg	13 25 31.2	0.0
PTQR				Sg	Sg	13 25 36.0	+0.6
TERO	Teramo	0.33	29	⇑Pg	Pg	13 25 31.2	-0.4
TERO				Sg	Sb	13 25 37.6	-0.6
	2µm,0.4s						
TERO	Teramo	0.33	29	⇑Pg	Pg	13 25 31.2	-0.4
TERO				Sg	Sb	13 25 37.6	-0.6
	2µm,0.4s						
VCEL	Villa Celiera	0.35	79	Pg	Pg	13 25 31.7	-0.1
VCEL				Sg	Sg	13 25 37.5	+1.0
	5µm,0.5s						
VCEL	Villa Celiera	0.35	79	Pg	Pg	13 25 31.7	-0.1
VCEL				Sg	Sg	13 25 37.5	+1.0
	5µm,0.5s						
CERT	Cerreto	0.48	218	⇑Pg	Pg	13 25 34.4	+0.1
	2µm,0.4s						
CERT	Cerreto	0.48	218	⇑Pg	Pg	13 25 34.4	+0.1
	2µm,0.4s						
VVLD	Villa Vallelon	0.49	159	Pg	Pg	13 25 34.1	-0.4
VVLD				Sg	Sg	13 25 41.2	+0.1
	1µm,0.7s						
VVLD	Villa Vallelon	0.49	159	Pg	Pg	13 25 34.1	-0.4
VVLD				Sg	Sg	13 25 41.2	+0.1
	1µm,0.7s						
INTR	Introdacqua	0.50	129	⇑Pg	Pg	13 25 34.3	-0.4
INTR				Sg	Sg	13 25 42.0	+0.6
	1µm,0.5s						
INTR	Introdacqua	0.50	129	⇑Pg	Pg	13 25 34.3	-0.4
INTR				Sg	Sg	13 25 42.0	+0.6
	1µm,0.5s						
MNS	Montasola	0.52	276	Pg	Pg	13 25 35.0	-0.1
MNS	Montasola	0.52	276	Pg	Pg	13 25 35.0	-0.1
GUAR	Guarcino	0.54	186	Pg	Pg	13 25 35.0	-0.4
GUAR	Guarcino	0.54	186	Pg	Pg	13 25 35.0	-0.4
NRCA	Norcia	0.54	339	Pg	Pg	13 25 35.3	-0.1
NRCA	Norcia	0.54	339	Pg	Pg	13 25 35.3	-0.1
MTCE	Montecelio	0.57	237	Pg	Pg	13 25 35.9	0.0
MTCE	Montecelio	0.57	237	Pg	Pg	13 25 35.9	0.0
TRTR	Tortoreto Alta	0.62	39	Pg	Pb	13 25 37.7	+0.1
	2µm,0.5s						
TRTR	Tortoreto Alta	0.62	39	Pg	Pb	13 25 37.7	+0.1
	2µm,0.5s						
OFFI	Offida	0.64	20	Pg	Pg	13 25 37.7	+0.3
	2µm,0.4s						
OFFI	Offida	0.64	20	Pg	Pg	13 25 37.7	+0.3
	2µm,0.4s						
LPEL	Lama dei Pelig	0.66	115	Pg	Pg	13 25 37.0	-0.7
LPEL				Sg	Sb	13 25 47.2	-0.3
	534nm,0.4s						
LPEL	Lama dei Pelig	0.66	115	Pg	Pg	13 25 37.0	-0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LPEL				Sg	Sb	13 25 47.2	-0.3
	534nm,0.4s						
POFI	Posta Fibreno	0.66	158	Pg	Pg	13 25 37.2	-0.5
POFI	Posta Fibreno	0.66	158	Pg	Pg	13 25 37.2	-0.5
SDI	San Donato	0.70	153	Pg	Pg	13 25 37.6	-0.8
	260nm,0.3s						
SDI	San Donato	0.70	153	Pg	Pg	13 25 37.6	-0.8
	260nm,0.3s						
CAFR	Castel Frentan	0.72	98	Pg	Pg	13 25 38.6	-0.2
	1µm,0.4s						
CAFR	Castel Frentan	0.72	98	Pg	Pg	13 25 38.6	-0.2
	1µm,0.4s						
RMP	Rome, Mte Porz	0.73	224	Pg	Pg	13 25 38.9	0.0
	552nm,0.6s						
RMP	Rome, Mte Porz	0.73	224	Pg	Pg	13 25 38.9	0.0
	552nm,0.6s						
FDMO	Fiordimonte	0.74	343	Pg	Pg	13 25 38.6	-0.5
	304nm,0.5s						
FDMO	Fiordimonte	0.74	343	Pg	Pg	13 25 38.6	-0.5
	304nm,0.5s						
CESI	CESI - Serrava	0.76	333	Pg	Pg	13 25 39.5	-0.1
CESI	CESI - Serrava	0.76	333	Pg	Pg	13 25 39.5	-0.1
GIUL	Giuliano Di Ro	0.78	187	Pg	Pg	13 25 39.4	-0.5
GIUL	Giuliano Di Ro	0.78	187	Pg	Pg	13 25 39.4	-0.5
RNI2	Rionero Sannit	0.85	137	Pg	Pg	13 25 41.1	-0.2
	966nm,1.2s						
RNI2	Rionero Sannit	0.85	137	Pg	Pg	13 25 41.1	-0.2
	966nm,1.2s						
CERA	Filignano	0.87	147	Pg	Pg	13 25 40.8	-0.9
	607nm,0.8s						
CERA	Filignano	0.87	147	Pg	Pg	13 25 40.8	-0.9
	607nm,0.8s						
ASSB	Assisi San Ben	0.89	323	Pg	Pg	13 25 41.6	-0.4
	356nm,0.4s						
ASSB	Assisi San Ben	0.89	323	Pg	Pg	13 25 41.6	-0.4
	356nm,0.4s						
MIDA	Miranda	0.95	136	Pg	Pg	13 25 41.8	-1.3
	276nm,0.5s						
MIDA	Miranda	0.95	136	Pg	Pg	13 25 41.8	-1.3
	276nm,0.5s						
SNTG	Esanatoglia	0.98	341	Pg	Pg	13 25 43.1	-0.6
	90nm,0.4s						
SNTG	Esanatoglia	0.98	341	Pg	Pg	13 25 43.1	-0.6
	90nm,0.4s						
TRIV	Trivento	1.04	123	Pg	Pb	13 25 44.5	-0.3
TRIV	Trivento	1.04	123	Pg	Pb	13 25 44.5	-0.3
CING	Cingoli	1.05	353	Pg	Pb	13 25 44.2	-0.9
	237nm,0.4s						
CING	Cingoli	1.05	353	Pg	Pb	13 25 44.2	-0.9
	237nm,0.4s						
TOLF	Tolfa	1.06	256	Pg	Pn	13 25 45.5	-0.1
TOLF	Tolfa	1.06	256	Pg	Pn	13 25 45.5	-0.1
MGAB	Montegabbione	1.10	302	Pg	Pb	13 25 45.1	-0.8
	280nm,0.4s						
MGAB	Montegabbione	1.10	302	Pg	Pb	13 25 45.1	-0.8
	280nm,0.4s						
VAGA	Valle Agricola	1.11	145	Pg	Pb	13 25 45.9	-0.2
	198nm,0.8s						
VAGA	Valle Agricola	1.11	145	Pg	Pb	13 25 45.9	-0.2
	198nm,0.8s						
MURB	Monte Urbino	1.12	326	Pg	Pb	13 25 46.1	-0.2
	515nm,0.3s						
MURB	Monte Urbino	1.12	326	Pg	Pb	13 25 46.1	-0.2
	515nm,0.3s						
ARVD	Arcevia	1.21	345	Pg	Pn	13 25 47.2	-0.5
	179nm,0.7s						
ARVD	Arcevia	1.21	345	Pg	Pn	13 25 47.2	-0.5
	179nm,0.7s						
AOI	Ancona	1.23	7	Pg	Pb	13 25 48.1	0.0
	228nm,0.7s						
AOI	Ancona	1.23	7	Pg	Pb	13 25 48.1	0.0
	228nm,0.7s						
NVLJ	Novalja	2.48	25	*e*Pn	Pn	13 26 06.5	+1.5
NVLJ				Sn	Sn	13 26 35.0	-0.4
NVLJ	Novalja	2.48	25	*e*Pn	Pn	13 26 06.5	+1.5
NVLJ				Sn	Sn	13 26 34.9	-0.4
STON	Ston	3.23	79	*e*Pn	Pn	13 26 16.9	+1.4
STON				Sn	Sn	13 26 53.9	0.0
STON	Ston	3.23	79	*e*Pn	Pn	13 26 16.8	+1.4
STON				Sn	Sn	13 26 53.8	0.0
KHC	Kasperske Hory	6.80	1	*e*PN	Pn	13 27 03.5	-1.0
KHC				*e*SN	Sn	13 28 23.5	+1.6

WEL 06 13:45:21.6±0.3, 38°.69S×178°.59E, h25km±1km, ML3.8/12, 3C-2D, Error ellipse: s-maj=3.0km s-min=1.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.36	304	⇑P*	Pb	13 45 29.2	-0.3
CNGZ				S*	Sb	13 45 35.2	+0.3
PRGZ	Paritu Road	0.60	246	⇑P*	Pb	13 45 33.6	0.0
PRGZ				S*	Sn	13 45 42.7	-0.9
PUZ	Puketiti	0.66	337	⇓P*	Pb	13 45 34.3	-0.3
PUZ				S*	Sb	13 45 43.6	+0.1
MHGZ	Mahia Peninsul	0.71	228	P*	Pb	13 45 35.7	+0.3
MHGZ				S*	Sb	13 45 45.1	+0.4
KNZ	Kokohu	0.79	245	P*	Pb	13 45 36.1	-0.6
KNZ				S*	Sb	13 45 47.5	+0.5
MWZ	Matawai	0.90	292	PN	Pb	13 45 37.4	-1.3
MWZ				SN	Sb	13 45 48.9	-1.5
MXZ	Matakaoa Point	1.14	349	⇓PN	Pn	13 45 42.3	+0.3
MXZ				SN	Sb	13 45 57.4	+0.3
RAHZ	Arahi	1.20	258	PN	Pn	13 45 41.9	-0.9
RAHZ				SN	Sn	13 45 58.1	-0.2
URZ	Urewera	1.23	290	PN	Pn	13 45 42.1	-1.2
URZ				SN	Sn	13 45 58.6	-0.5
NMHZ	Naumai	1.45	253	PN	Pn	13 45 45.9	-0.5
CKHZ	Cape Kidnapper	1.52	230	PN	Pn	13 45 46.9	-0.4
EDRZ	Edgecumbe	1.56	291	PN	Pn	13 45 47.8	-0.1
MCHZ	McNeill Hill	1.65	242	PN	Pn	13 45 48.6	-0.5
RRRZ	Republican Roa	1.66	281	PN	Pn	13 45 49.0	-0.2
TARZ	Mount Tarawera	1.69	285	PN	Pn	13 45 49.5	-0.3
BKZ	Black Stump Fm	1.70	253	PN	Pn	13 45 48.8	-1.1
PRRZ	Plateau Road	1.73	276	PN	Pn	13 45 50.4	+0.2
KAHZ	Kahuranaki	1.73	230	PN	Pn	13 45 49.6	-0.6
PXZ	Pawanui	1.90	224	PN	Pn	13 45 51.0	-1.4
BHHZ	Black Hill Sta	2.12	247	PN	Pn	13 45 54.7	-0.9
WPHZ	Waipukurau	2.16	230	PN	Pn	13 45 55.0	-1.1
PRHZ	Porangahau	2.19	223	PN	Pn	13 45 54.8	-1.6
PNHZ	Pukenui	2.22	236	PN	Pn	13 45 55.6	-1.3
KATZ	Kakaramea	2.28	262	PN	Pn	13 45 59.6	+1.8
MOVZ	Moawhango	2.32	251	PN	Pn	13 45 58.2	-0.2
KRVZ	Karewarewa	2.33	259	PN	Pn	13 45 58.2	-0.4
WNVZ	Wahianoa	2.42	254	PN	Pn	13 45 59.3	-0.5
WPVZ	Whakapapa	2.43	257	PN	Pn	13 45 59.3	-0.6
FWVZ	Far West T-bar	2.43	256	PN	Pn	13 45 59.5	-0.6
TSZ	Takapari Road	2.45	235	⇑PN	Pn	13 45 58.5	-1.7
DVHZ	Dannevirke	2.47	228	PN	Pn	13 45 58.9	-1.5
TWVZ	Taurewa	2.49	260	PN	Pn	13 46 00.6	-0.1
BFZ	Birch Farm	2.69	221	PN	Pn	13 46 01.4	-2.0
POWZ	Post Office Ro	2.77	231	PN	Pn	13 46 03.7	-0.7
KUZ	Kuaotunu	2.98	310	PN	Pn	13 46 06.7	-0.6
WAZ	Wanganui	2.99	248	PN	Pn	13 46 07.0	-0.5
MRZ	Mangatainoka R	3.05	229	PN	Pn	13 46 06.2	-2.1
TMWZ	Te Maipa	3.19	220	PN	Pn	13 46 07.9	-2.3
HOWZ	Holdsworth Sta	3.24	226	PN	Pn	13 46 09.0	-2.0
MTW	Mount Morrison	3.42	223	PN	Pn	13 46 10.5	-3.0
TRWZ	Traveller	3.51	218	PN	Pn	13 46 11.8	-2.8

IDC 06 13:48:00.6±1.0, 57°.07S×148°.12W, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.8/14, mbtmp3.9/2, MS4.2/7, Ms1 4.1/7, ms1mx3.7/31, Error ellipse: s-maj=121.6km s-min=33.0km az=3.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	28.77	280	LR	LR	14 03 20.4	
	comp=Z,247nm,18.0s,baz=288,slow=32						
TBI	Tubuai	33.70	358	*e*LR	LR	14 03 39.7	
	393nm,27.0s,baz=184						
TBI				*e*T	T	14 30 22.4	
	11nm,0.3s						
RKT	Rikitea	35.24	21	*e*LQ	LQ	14 02 50.2	
	324nm,31.5s						
RKT				*e*LR	LR	14 04 24.3	
	309nm,25.2s						
RKT				*e*T	T	14 32 23.6	
	2.7nm,0.2s						
MEH	Mehetia	39.13	0	*e*T	T	14 37 10.2	
	66nm,0.3s						
TVO	Taravao	39.23	358	*e*T	T	14 37 17.3	
	7.0nm,0.3s						
PPT2	Papeete2	39.43	358	*e*LR	LR	14 06 18.1	
	352nm,24.8s,baz=182						
PPT	Papeete	39.45	358	LR	LR	14 07 39.9	
	comp=Z,272nm,18.6s,baz=271,slow=30						
VAH	Vaihoa	41.76	1	*e*T	T	14 40 27.1	
	12nm,0.3s						
AFI	Afiamalu	46.70	328	LR	LR	14 11 22.4	
	comp=Z,215nm,18.6s,baz=155,slow=30						
PLCA	Paso Flores	50.66	106	LR	LR	14 13 44.2	
	comp=Z,259nm,19.2s,baz=190,slow=30						
STKA	Stephens Creek	53.35	267	LR	LR	14 15 04.4	
	comp=Z,226nm,19.1s,baz=126,slow=30						
MAW	Mawson	53.54	194	LR	LR	14 20 14.3	
	comp=Z,210nm,18.6s,baz=189,slow=36						
ASAR	Alice Springs	63.98	266	P	P	13 58 35.6	0.0
	1.0nm,0.8s,baz=141,slow=7.2,SNR=10						
WRA	Warramunga Arr	66.74	269	P	P	13 58 53.7	+0.1
	1.2nm,0.9s,baz=148,slow=5.6,SNR=6.0						
FITZ	Fitzroy Crossi	72.98	263	LR	LR	14 27 23.8	
	comp=Z,141nm,19.6s,baz=224,slow=32						
ILAR	Eielson Array	121.52	1	PKP	PKPdf	14 06 54.6	+0.3
	0.5nm,1.0s,baz=223,slow=0.6,SNR=5.1						
MKAR	Makanchi Array	147.97	273	PKPbc	PKPbc	14 07 47.1	+0.2
	2.5nm,0.8s,baz=115,slow=4.3,SNR=20						
ZALV	Zalesovo Beam	150.49	287	PKPbc	PKPbc	14 07 51.3	-1.6
	0.3nm,0.4s,baz=28,slow=4.1,SNR=2.5						
ZALV				PKPab	PKPab	14 07 59.1	-0.5
	0.4nm,0.4s,baz=104,slow=6.3,SNR=3.9						
ESDC	Sonseca Array	150.97	111	PKPbc	PKPbc	14 07 53.3	-1.2
	0.3nm,0.4s,baz=280,slow=0.2,SNR=2.9						
ESDC				PKPab	PKPab	14 08 02.5	+0.5
	0.2nm,0.2s,baz=250,slow=1.6,SNR=4.1						

*ECX **06** 13:48:33.3±0.5, 32°.14N×114°.78W, h16km±5km, MD3.1, ML3.3*
*NEIC **06** 13:48:33.3, 32°.14N×114°.78W, h6km, ML3.3(ECX), ML3.1(PAS), After ECX.*
ISC 06 13:48:34.2±1.3, 32°.08N±0°.04×114°.85W±0°.03, h16km±11km, n18, σ0^{s}64/34, 5C-9D, Western Arizona-Sonora border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.51	312	*e*P	Pb	13 48 45.4	+0.6
CPBX				*e*S	Sb	13 48 52.7	+0.7
CPBX				⇓*e*		13 48 55.0	
	comp=N,7µm,0.2s						
RDX	Rancho Dawling	0.94	261	*e*PN	Pb	13 48 52.2	+0.1
RDX				*e*S	Sb	13 49 04.8	+0.4
RDX				*e*		13 49 05.2	
	comp=N,527nm,0.2s						
GLA	Glamis	0.97	1	*e*Pg	Pn	13 48 53.3	0.0
GLA				*e*S	Sn	13 49 05.9	-0.8
GLA	Glamis	0.97	1	⇑P	Pn	13 48 53.3	0.0
	baz=1.1						
GLA				⇓Sb	Sn	13 49 07.4	+0.6
	baz=1.1						
113A	Mohawk Valley,	1.15	53	⇓P	Pg	13 48 57.2	+0.8
	baz=1.2						
113A				⇓S	Sn	13 49 11.9	+0.9
	baz=1.2						
SPX	San Pedro Mart	1.15	207	*e*PN	Pn	13 48 55.9	-0.1
SPX				*e*S	Sg	13 49 11.8	+0.2
SPX				⇑*e*		13 49 12.3	
	comp=E,482nm,0.5s						
RMX	La Rumorosa	1.16	297	*e*PN	Pb	13 48 55.3	-0.7
RMX				*e*S	Sb	13 49 10.0	-0.9
RMX				⇑*e*		13 49 11.7	
	comp=N,372nm,0.2s						
DVTC	Desert V Tower	1.21	299	⇑Sb	Sb	13 49 12.1	0.0
	baz=1.2						
ECNX	Esteban Cantu	1.54	255	*e*PN	Pn	13 49 01.3	+0.2
ECNX				*e*PN	Pn	13 49 01.2	+0.2
ECNX				*e*S	Sn	13 49 21.8	+0.9
ECNX				*e*S	Sb	13 49 22.1	+0.4
CBX	Cerro Bola	1.55	279	*e*PN	Pn	13 49 01.5	+0.2
CBX				*e*S	Sn	13 49 21.6	+0.5
MONP	Monument Peak	1.55	302	⇑Sb	Sb	13 49 22.7	+0.5
	baz=1.6						
PBX	Punta Banda	1.63	259	*e*PN	Pn	13 49 02.2	+0.1
PBX				*e*S	Sb	13 49 24.0	-0.1
BAR	Barrett	1.65	292	*e*Pn	Pn	13 49 01.8	-0.7
BAR				*e*Pg	Pg	13 49 05.0	-1.0
BAR				*e*Sn	Sn	13 49 23.3	-0.2
BC3	Big Chuckawall	1.65	342	⇓P	Pn	13 49 02.5	-0.2
	baz=1.7						
BC3				⇓S	Sn	13 49 22.2	-1.5
	baz=1.7						
214A	Organ Pipe Nat	1.74	93	⇓P	Pb	13 49 04.8	-0.9
	baz=1.7						
214A				⇓Sn	Sb	13 49 27.0	-0.4
	baz=1.7						
PFO	Pinyon Flat Ob	2.04	319	*e*Pn	Pn	13 49 07.5	-0.5
109C	Camp Elliot, M	2.07	294	⇓Sb	Sb	13 49 37.1	+0.3
	baz=2.1						
GSC	Goldstone	3.61	334	*e*Pg	Pb	13 49 38.6	+1.0

*ISCJB **06** 14:00:35.8±0.3, 42°.33N±0°.02×13°.35E±0°.03, h14km±3km, Error ellipse: s-maj=3.4km s-min=3.0km az=164.9*
*CSEM **06** 14:00:36.2±0.1, 42°.34N×13°.35E, h10km, ML3.8/8, Error ellipse: s-maj=2.3km s-min=1.8km az=72.0*
*ROM **06** 14:00:36.0±0.1, 42°.34N×13°.36E, h10km, Ml3.0/30, Error ellipse: s-maj=1.0km s-min=1.0km az=93.0*
ISC 06 14:00:36.5±0.8, 42°.34N±0°.02×13°.35E±0°.02, h11km±4km, n78, σ0^{s}73/104, 12C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	69	⇓*i*Pg	Pg	14 00 38.4	-0.2
AQU				Sg	Sg	14 00 39.8	-0.3
	111nm,0.2s						
AQU	L'Aquila	0.04	69	⇓*i*Pg	Pg	14 00 38.4	-0.2
AQU				Sg	Sg	14 00 39.8	-0.3
	111nm,0.2s						
FAGN	Fagnano	0.19	113	Pg	Pg	14 00 40.7	+0.2
FAGN				Sg	Sg	14 00 43.8	+0.5
	23µm,0.4s						
FAGN	Fagnano	0.19	113	Pg	Pg	14 00 40.7	+0.2
FAGN				Sg	Sg	14 00 43.8	+0.5
	23µm,0.4s						
FIAM	Fiamignano	0.19	248	⇑*i*Pg	Pg	14 00 40.9	+0.3
FIAM				Sg	Sg	14 00 44.3	+0.9
	4µm,0.5s						
FIAM	Fiamignano	0.19	248	⇑*i*Pg	Pg	14 00 40.9	+0.3
FIAM				Sg	Sg	14 00 44.3	+0.9
	4µm,0.5s						
CAMP	Campotosto	0.20	12	⇑*i*Pg	Pg	14 00 40.7	-0.1
CAMP				Sg	Sg	14 00 44.1	+0.3
	4µm,0.5s						
CAMP	Campotosto	0.20	12	⇑*i*Pg	Pg	14 00 40.7	-0.1
CAMP				Sg	Sg	14 00 44.1	+0.3
	4µm,0.5s						
PTQR	Pietraquaria	0.32	174	⇑*i*Pg	Pg	14 00 42.9	0.0
PTQR				Sg	Sg	14 00 47.7	+0.5
PTQR	Pietraquaria	0.32	174	⇑*i*Pg	Pg	14 00 42.9	0.0
PTQR				Sg	Sg	14 00 47.7	+0.5
TERO	Teramo	0.34	33	Pg	Pg	14 00 42.7	-0.6
TERO				Sg	Sg	14 00 49.0	+1.2
	3µm,0.4s						
TERO	Teramo	0.34	33	Pg	Pg	14 00 42.7	-0.6
TERO				Sg	Sg	14 00 49.0	+1.2
	3µm,0.4s						
VCEL	Villa Celiera	0.36	81	Pg	Pg	14 00 43.7	-0.1
VCEL				Sg	Sg	14 00 50.6	+1.9
	8µm,0.3s						
VCEL	Villa Celiera	0.36	81	Pg	Pg	14 00 43.7	-0.1
VCEL				Sg	Sg	14 00 50.6	+1.9
	8µm,0.3s						
CERT	Cerreto	0.48	215	⇑*i*Pg	Pg	14 00 45.7	-0.1
CERT				Sg	Sg	14 00 52.6	+0.4
	1µm,0.4s						
CERT	Cerreto	0.48	215	⇑*i*Pg	Pg	14 00 45.7	-0.1
CERT				Sg	Sg	14 00 52.6	+0.4
	1µm,0.4s						
MNS	Montasola	0.50	275	Pg	Pg	14 00 45.9	-0.4
	401nm,0.4s						
MNS	Montasola	0.50	275	Pg	Pg	14 00 45.9	-0.4
	401nm,0.4s						
VVLD	Villa Vallelon	0.51	157	Pg	Pg	14 00 46.4	0.0
	818nm,0.5s						
VVLD	Villa Vallelon	0.51	157	Pg	Pg	14 00 46.4	0.0
	818nm,0.5s						
NRCA	Norcia	0.52	340	⇑Pg	Pg	14 00 46.3	-0.4
NRCA				Sg	Sg	14 00 55.1	+1.4
NRCA	Norcia	0.52	340	⇑Pg	Pg	14 00 46.3	-0.4
NRCA				Sg	Sg	14 00 55.1	+1.4
INTR	Introdacqua	0.53	129	⇑Pg	Pg	14 00 46.4	-0.3
INTR				Sg	Sg	14 00 54.8	+1.1
	1µm,0.2s						
INTR	Introdacqua	0.53	129	⇑Pg	Pg	14 00 46.4	-0.3
INTR				Sg	Sg	14 00 54.8	+1.1
	1µm,0.2s						
GUAR	Guarcino	0.55	183	Pg	Pg	14 00 46.7	-0.4
	669nm,0.4s						
GUAR	Guarcino	0.55	183	Pg	Pg	14 00 46.7	-0.4
	669nm,0.4s						
MTCE	Montecelio	0.55	235	Pg	Pg	14 00 47.0	-0.3
	416nm,0.9s						
MTCE	Montecelio	0.55	235	Pg	Pg	14 00 47.0	-0.3
	416nm,0.9s						
TRTR	Tortoreto Alta	0.62	41	Pg	Pg	14 00 49.6	+1.0
TRTR	Tortoreto Alta	0.62	41	Pg	Pg	14 00 49.6	+1.0
OFFI	Offida	0.64	22	Pg	Pg	14 00 49.1	+0.1
	4µm,0.5s						
OFFI	Offida	0.64	22	Pg	Pg	14 00 49.1	+0.1
	4µm,0.5s						
POFI	Posta Fibreno	0.68	157	Pg	Pg	14 00 49.0	-0.6
POFI	Posta Fibreno	0.68	157	Pg	Pg	14 00 49.0	-0.6
LPEL	Lama dei Pelig	0.68	115	Pg	Pg	14 00 48.9	-0.8
LPEL				Sg	Sg	14 00 59.4	+0.7
	910nm,0.2s						
LPEL	Lama dei Pelig	0.68	115	Pg	Pg	14 00 48.9	-0.8
LPEL				Sg	Sg	14 00 59.4	+0.7
	910nm,0.2s						
RMP	Rome, Mte Porz	0.72	223	Pg	Pg	14 00 50.6	+0.3
	360nm,0.4s						
RMP	Rome, Mte Porz	0.72	223	Pg	Pg	14 00 50.6	+0.3
	360nm,0.4s						
SDI	San Donato	0.72	151	Pg	Pg	14 00 49.9	-0.4
	211nm,0.4s						
SDI	San Donato	0.72	151	Pg	Pg	14 00 49.9	-0.4
	211nm,0.4s						
FDMO	Fiordimonte	0.72	344	Pg	Pg	14 00 49.7	-0.8
	294nm,0.7s						
FDMO	Fiordimonte	0.72	344	Pg	Pg	14 00 49.7	-0.8
	294nm,0.7s						
CAFR	Castel Frentan	0.75	98	Pg	Pg	14 00 50.7	-0.2
	1µm,0.4s						
CAFR	Castel Frentan	0.75	98	Pg	Pg	14 00 50.7	-0.2
	1µm,0.4s						
GIUL	Giuliano Di Ro	0.79	185	Pg	Pg	14 00 50.7	-0.9
	348nm,0.6s						
GIUL	Giuliano Di Ro	0.79	185	Pg	Pg	14 00 50.7	-0.9
	348nm,0.6s						
ASSB	Assisi San Ben	0.87	324	Pg	Pg	14 00 53.0	-0.3
	257nm,0.4s						
ASSB	Assisi San Ben	0.87	324	Pg	Pg	14 00 53.0	-0.3
	257nm,0.4s						
RNI2	Rionero Sannit	0.87	137	Pg	Pg	14 00 53.0	-0.3
	418nm,0.6s						
RNI2	Rionero Sannit	0.87	137	Pg	Pg	14 00 53.0	-0.3
	418nm,0.6s						
CERA	Filignano	0.89	146	Pg	Pg	14 00 52.6	-1.1
	451nm,0.8s						
CERA	Filignano	0.89	146	Pg	Pg	14 00 52.6	-1.1
	451nm,0.8s						
SNTG	Esanatoglia	0.96	342	Pg	Pg	14 00 54.2	-0.8
	235nm,0.7s						
SNTG	Esanatoglia	0.96	342	Pg	Pg	14 00 54.2	-0.8
	235nm,0.7s						
MIDA	Miranda	0.97	136	Pg	Pg	14 00 53.6	-1.5
	214nm,0.4s						
MIDA	Miranda	0.97	136	Pg	Pg	14 00 53.6	-1.5
	214nm,0.4s						
CING	Cingoli	1.04	354	Pg	Pg	14 00 55.3	-1.2
	295nm,0.5s						
CING	Cingoli	1.04	354	Pg	Pg	14 00 55.3	-1.2
	295nm,0.5s						
TOLF	Tolfa	1.04	255	Pg	Pg	14 00 56.8	+0.3
	224nm,1.1s						
TOLF	Tolfa	1.04	255	Pg	Pg	14 00 56.8	+0.3
	224nm,1.1s						
MURB	Monte Urbino	1.11	327	Pg	Pb	14 00 56.8	-0.9
	441nm,0.4s						
MURB	Monte Urbino	1.11	327	Pg	Pb	14 00 56.8	-0.9
	441nm,0.4s						
VAGA	Valle Agricola	1.13	144	Pg	Pb	14 00 57.6	-0.6
	168nm,0.6s						
VAGA	Valle Agricola	1.13	144	Pg	Pb	14 00 57.6	-0.6
	168nm,0.6s						
ARVD	Arcevia	1.20	345	Pg	Pn	14 00 58.4	-0.8
	255nm,0.8s						
ARVD	Arcevia	1.20	345	Pg	Pn	14 00 58.4	-0.8
	255nm,0.8s						
AOI	Ancona	1.22	9	Pg	Pn	14 00 59.3	-0.3
	315nm,1.0s						
AOI	Ancona	1.22	9	Pg	Pn	14 00 59.3	-0.3
	315nm,1.0s						
FSSB	Fossombrone	1.42	343	Pn	Pn	14 01 02.5	+0.2
	338nm,0.4s						
FSSB	Fossombrone	1.42	343	Pn	Pn	14 01 02.5	+0.2
	338nm,0.4s						
CAFI	Castiglion Fio	1.42	315	Pn	Pn	14 01 03.1	+0.8
	72nm,0.7s						
CAFI	Castiglion Fio	1.42	315	Pn	Pn	14 01 03.1	+0.8
	72nm,0.7s						
PARC	Parchiule	1.54	328	Pn	Pn	14 01 05.0	+1.0
	114nm,0.7s						
PARC	Parchiule	1.54	328	Pn	Pn	14 01 05.0	+1.0
	114nm,0.7s						
NVLJ	Novalja	2.48	26	*e*Pn	Pn	14 01 16.6	-0.3
NVLJ				Sn	Sn	14 01 47.3	+0.2
NVLJ	Novalja	2.48	26	*e*Pn	Pn	14 01 16.5	-0.3
NVLJ				Sn	Sn	14 01 47.3	+0.2
STON	Ston	3.25	79	*i* Pn	Pn	14 01 28.6	+1.1
STON				Sn	Sn	14 02 06.0	-0.2
STON	Ston	3.25	79	*i* Pn	Pn	14 01 28.5	+1.1
STON				Sn	Sn	14 02 05.9	-0.2

IDC 06 14:03:59.2±2.0, 24°.82N×142°.52E, h0km, mb3.5/4, mb1 3.6/7, mb1mx3.4/27, mbtmp3.5/7, ML3.4/3, Error ellipse: s-maj=90.0km s-min=18.1km az=83.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.29	352	Pn	Pn	14 04 39.5	+1.3
	14nm,0.3s,baz=337,slow=17,SNR=8.2						
CBIJ				Sn	Sn	14 05 07.9	+0.7
	56nm,0.3s,baz=287,slow=20,SNR=12						
MJAR	Matsushiro Arr	12.26	343	Pn	Pn	14 06 56.3	+1.2
	0.2nm,0.3s,baz=152,slow=13,SNR=3.3						
KSRS	Korea Array	17.72	319	Pn	P	14 08 08.7	+0.5
	0.1nm,0.3s,baz=134,slow=11,SNR=6.1						
WRA	Warramunga Arr	45.20	191	P	P	14 12 18.6	+0.5
	0.4nm,0.4s,baz=17,slow=8.7,SNR=8.1						
ASAR	Alice Springs	48.91	191	P	P	14 12 47.0	-0.1
	0.2nm,0.6s,baz=11,slow=5.8,SNR=5.3						
MKAR	Makanchi Array	52.17	311	P	P	14 13 11.2	-0.4
	0.1nm,0.3s,baz=96,slow=8.9,SNR=3.2						
FINES	FINESS Array B	80.12	334	P	P	14 16 09.8	-1.0
	3.2nm,1.1s,baz=23,slow=7.5,SNR=3.3						

DDA 06 14:09:01.9, 38°.04N×37°.71E, h7km, MD2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKCD	Akcadag	0.31	33	*i* P	Pb	14 09 09.5	-0.5
AKCD				*i* S	Sg	14 09 12.1	-0.4
MALT	Malatya	0.63	64	PG	Pg	14 09 14.1	-0.2
MALT				*e*SG	Sg	14 09 20.0	-2.6
MYA	Malataya	0.63	63	PG	Pg	14 09 14.0	-0.4
MYA				*e*SG	Sg	14 09 19.5	-3.2
KUZU	Kuzuini	1.36	202	*i* P	Pg	14 09 40.6	+12
KUZU				*i* S	Sg	14 09 51.8	+6.0

*JMA **06** 14:12:00.0±0.3, 30°.87N×138°.08E, h493km, M4.1*
*ISCJB **06** 14:12:01.5±0.4, 30°.87N±0°.05×137°.99E±0°.07, h467km±3km, mb3.8/21, Error ellipse: s-maj=9.4km s-min=7.7km az=26.4*
*IDC **06** 14:12:02.1±0.6, 30°.84N×137°.97E, h454km±7km, mb3.5/18, mb1 3.5/26, mb1mx3.4/38, mbtmp3.5/26, Error ellipse: s-maj=15.3km s-min=8.0km az=76.0*
ISC 06 14:12:01.8±0.7, 30°.85N±0°.06×138°.10E±0°.08, h459km±7km,

n65, $\sigma 1^{s}29$/77, mb3.8/21, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	2.64	33	P	P	14 13 08.8	+1.9
JHJ	Hachijo jima 2	2.68	32	P	P	14 13 08.6	+1.5
	16nm,0.3s,baz=83,slow=22,SNR=21						
JHJ				S	S	14 14 02.1	+1.7
	49nm,0.3s,baz=52,slow=19,SNR=8.6						
JHJ2	Mitsune	2.69	33	P	P	14 13 08.9	+1.7
TK01	Tokai 1	2.94	352	P	P	14 13 09.3	+0.7
TTO1	TONANKAI O.B.S	2.98	338	P	P	14 13 10.7	+1.8
TTO3	TONANKAI O.B.S	3.06	349	P	P	14 13 12.1	+2.4
JWZ	Kozaga	3.35	324	P	P	14 13 12.9	+0.8
JWZ				eS	S	14 14 08.2	-1.1
JIE	Ise	3.72	342	P	P	14 13 16.6	+1.6
JIE				eS	S	14 14 14.9	+0.2
JWY	Kouya	3.97	328	P	P	14 13 18.4	+1.2
JAI	Aioi	4.25	314	P	P	14 13 20.4	+0.7
JOD2	Odawara 2	4.48	10	P	P	14 13 22.3	+0.6
JOD2				eS	S	14 14 25.0	-1.8
BSO1	Boso 1	4.50	32	P	P	14 13 22.2	+1.0
BSO1				eS	S	14 14 23.8	-2.3
JTO	Tosashimizu	4.93	295	P	P	14 13 26.0	+0.1
CBIJ	Chichi jima	5.18	135	P	P	14 13 28.4	-0.1
CBIJ	Chichi jima	5.18	135	P	P	14 13 28.2	-0.3
	11nm,0.3s,baz=273,slow=19,SNR=15						
CBIJ				S	S	14 14 35.9	-3.1
	64nm,0.3s,baz=311,slow=19,SNR=24						
JRY	Ryogami san	5.19	7	P	P	14 13 29.0	+0.6
JRY				eS	S	14 14 35.2	-3.9
MJAR	Matsushiro Arr	5.67	1	P	P	14 13 33.1	0.0
	4.7nm,0.3s,baz=182,slow=11,SNR=99						
MAT	Matsushiro	5.67	1	P	P	14 13 33.3	+0.2
MAT				eS	S	14 14 46.4	-1.3
JHS	Saijyo	5.88	316	P	P	14 13 35.7	+0.5
JNU	Nakatsue	6.54	292	P	P	14 13 41.9	0.0
	0.9nm,0.3s,baz=150,slow=2.3,SNR=11						
JMK	Ichinoseki	8.48	17	P	P	14 14 03.5	+1.2
JMK				eS	S	14 15 39.0	-2.3
JOW	Kunigami	9.50	247	P	P	14 14 13.5	-0.1
JOW	Kunigami	9.50	247	P	P	14 14 13.4	-0.1
	6.2nm,0.3s,baz=98,slow=12,SNR=27						
KSRS	Korea Array	10.69	311	P	P	14 14 26.2	0.0
	0.3nm,0.3s,baz=126,slow=11,SNR=7.4						
JOT	Ohata	10.77	12	P	P	14 14 29.2	+2.1
JKB	Kayabe	11.26	11	P	P	14 14 34.5	+2.1
JOSM	Okushiri--Mats	11.26	5	P	P	14 14 34.2	+1.8
ASAJ	Asahikawa	13.71	14	P	P	14 15 01.2	+2.5
	1.3nm,0.3s,baz=239,slow=9.0,SNR=19						
USRK	Ussuriysk Arra	14.17	342	P	P	14 15 04.2	+0.6
	3.6nm,0.3s,baz=150,slow=11,SNR=52						
SONM	Songino Array	29.53	314	P	P	14 17 27.3	-0.3
	0.8nm,0.5s,baz=124,slow=7.9,SNR=14						
CMAR	Chiang Mai Arr	37.48	260	P	P	14 18 34.7	-0.5
	2.9nm,0.7s,baz=57,slow=7.1,SNR=16						
TAPN	Taplejung	43.87	279	eP	P	14 19 25.6	-1.1
	4.5nm,0.3s						
ODAN	Odare	44.29	278	eP	P	14 19 28.9	-1.0
	8.5nm,0.4s						
ZALV	Zalesovo Beam	44.31	317	P	P	14 19 28.4	-1.0
	1.5nm,0.5s,baz=97,slow=7.1,SNR=7.8						
ZALV				PcP	PcP	14 21 04.0	+0.1
	0.7nm,0.4s,baz=97,slow=3.2,SNR=6.0						
RAMN	Ramite	44.93	278	eP	P	14 19 33.6	-1.3
	10nm,0.4s						
GUN	Gumba	45.26	280	eP	P	14 19 36.9	-0.6
	19nm,0.4s						
MKAR	Makanchi Array	45.34	307	P	P	14 19 37.1	-0.4
	1.9nm,0.5s,baz=87,slow=9.9,SNR=13						
MKAR				PcP	PcP	14 21 08.0	+0.3
	0.4nm,0.3s,baz=80,slow=5.5,SNR=5.7						
PKI	Pulchoki	45.76	280	eP	P	14 19 40.0	-1.3
PKIN	Phulchoki	45.77	280	eP	P	14 19 40.1	-1.2
	4.1nm,0.4s						
KKN	Kakani	45.80	280	eP	P	14 19 40.7	-0.8
	6.4nm,0.4s						
DMN	Daman	46.00	280	eP	P	14 19 42.2	-0.9
	7.4nm,0.3s						
DANN	Dangsing	46.92	281	eP	P	14 19 49.8	-0.4
	11nm,0.3s						
KOLN	Koldanda	47.23	281	eP	P	14 19 51.8	-0.6
	5.5nm,0.3s						
PYUN	Piuthan	47.65	281	eP	P	14 19 55.1	-0.5
	31nm,0.4s						
FITZ	Fitzroy Crossi	50.13	196	P	P	14 20 14.6	+0.8
	1.5nm,0.6s,baz=11,slow=8.7						
WRA	Warramunga Arr	50.63	185	P	P	14 20 18.3	+0.8
	2.2nm,0.4s,baz=0.5,slow=7.5,SNR=36						
BVAR	Borovoye Array	52.86	315	P	P	14 20 33.3	0.0
	1.7nm,0.2s,baz=93,slow=7.5,SNR=11						
BVAR				PcP	PcP	14 21 35.4	+0.2
	0.8nm,0.3s,baz=86,slow=5.9,SNR=5.0						
ASAR	Alice Springs	54.36	185	P	P	14 20 45.2	+0.9
	1.1nm,0.4s,baz=23,slow=11,SNR=46						
AKTO	Aktyubinsk	60.85	314	P	P	14 21 28.3	-0.1
	1.6nm,0.5s,baz=80,slow=11,SNR=8.8						
INK	Inuvik	61.13	25	P	P	14 21 32.2	+2.2
	0.3nm,0.4s,baz=249,slow=8.6,SNR=3.0						
STKA	Stephens Creek	62.48	177	P	P	14 21 40.7	+1.5
	2.2nm,0.8s,baz=357,slow=10,SNR=4.5						
KEV	Kevo	68.24	340	ep	P	14 22 13.0	-2.1
	0.6nm,0.3s						
ARCES	ARCESS Array B	68.81	340	P	P	14 22 19.8	+1.3
	2.4nm,0.4s,baz=63,slow=8.6,SNR=28						
JOF	Joensuu	70.12	332	ep	P	14 22 25.4	-1.1
	3.0nm,0.5s						
KAF	Kangasniemi	72.53	333	ep	P	14 22 40.0	-0.7
	3.4nm,0.4s						
KBZ	Khabaz	72.84	311	P	P	14 22 43.1	+0.3
	2.5nm,0.4s,baz=82,slow=2.9,SNR=9.2						
FINES	FINESS Array B	72.99	332	P	P	14 22 43.7	+0.3
	3.0nm,0.4s,baz=64,slow=6.3,SNR=42						
MIB	Mutribah	75.97	296	eP	P	14 22 60.0	-0.9
RDF	Al-Radifah	76.21	295	eP	P	14 23 01.5	-0.8
NAY	Al-Naaiem	76.30	296	eP	P	14 23 01.8	-0.9
AKASG	Malin Array Be	77.47	322	P	P	14 23 08.6	-0.2
	1.8nm,0.4s,baz=53,slow=5.2,SNR=8.1						
HFS	Hagfors	78.55	335	P	P	14 23 14.6	+0.2
	2.1nm,0.4s,baz=104,slow=5.0,SNR=35						
NB2	NORSAR Subarra	78.78	337	P	P	14 23 15.8	+0.1
	comp=Z,1.0nm,0.5s,baz=43,slow=5.3						
NOA	NORSAR Array B	78.78	337	P	P	14 23 16.0	+0.3
	comp=Z,1.4nm,0.6s,baz=45,slow=5.3,SNR=7.9						
BRTR	Keskin Array B	80.84	311	P	P	14 23 27.0	-0.1
	comp=Z,0.8nm,0.6s,baz=71,slow=5.1,SNR=4.3						

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*ISCJB **06** 14:14:39.1±0.2, 42°.37N±0°.02×13°.32E±0°.02, h8km±2km, mb3.4/2, Error ellipse: s-maj=2.9km s-min=2.7km az=11.8*

*CSEM **06** 14:14:39.3±0.1, 42°.37N×13°.34E, h5km, ML3.2/7, Error ellipse: s-maj=2.4km s-min=1.9km az=66.0*

*ROM **06** 14:14:39.1±0.1, 42°.36N×13°.35E, h10km, Ml3.4/20, Error ellipse: s-maj=1.1km s-min=1.0km az=77.0*

*IDC **06** 14:14:41.5±1.7, 42°.50N×13°.33E, h0km, mb3.2/2, mb1 3.4/6, mb1mx3.2/30, mbtmp3.2/6, ML3.1/4, MS3.9/1, Ms1 4.0/1, ms1mx3.1/26, Error ellipse: s-maj=26.5km s-min=17.1km az=71.0*

*LDG **06** 14:14:41.5±0.2, 42°.36N×13°.29E, h2km, Ml3.2/7, Error ellipse: s-maj=6.9km s-min=4.8km az=56.0*

ISC 06 14:14:39.7±0.8**, 42°.37N**±0°.02×**13°.32E**±0°.02**, h10**km±4km**,**
n117, $\sigma 1^{s}45$/164, 12C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	106	⇓iPg	Pg	14 14 41.5	-0.4
AQU				Sg	Sg	14 14 42.9	-0.5
AQU	L'Aquila	0.06	106	⇓iPg	Pg	14 14 41.5	-0.4
AQU				Sg	Sg	14 14 42.9	-0.5
CAMP	Campotosto	0.18	21	⇑iPg	Pg	14 14 43.5	-0.1
CAMP				Sg	Sg	14 14 46.6	+0.3
CAMP	Campotosto	0.18	21	⇑iPg	Pg	14 14 43.5	-0.1
CAMP				Sg	Sg	14 14 46.6	+0.3
FIAM	Fiamignano	0.18	236	⇑iPg	Pg	14 14 43.9	+0.3
FIAM				Sg	Sg	14 14 47.1	+0.8
	11µm,0.6s						
FIAM	Fiamignano	0.18	236	⇑iPg	Pg	14 14 43.9	+0.3
FIAM				Sg	Sg	14 14 47.1	+0.8
	11µm,0.6s						
FAGN	Fagnano	0.22	118	Pg	Pg	14 14 43.8	-0.5
FAGN				Sg	Sg	14 14 47.7	+0.3
FAGN	Fagnano	0.22	118	Pg	Pg	14 14 43.8	-0.5
FAGN				Sg	Sg	14 14 47.7	+0.3
TERO	Teramo	0.33	40	⇑Pg	Pg	14 14 45.6	-0.7
TERO				Sg	Sg	14 14 51.5	+0.9
TERO	Teramo	0.33	40	⇑Pg	Pg	14 14 45.6	-0.7
TERO				Sg	Sg	14 14 51.5	+0.9
PTQR	Pietraquaria	0.35	170	Pg	Pg	14 14 46.1	-0.6
PTQR				Sg	Sg	14 14 51.5	+0.1
PTQR	Pietraquaria	0.35	170	Pg	Pg	14 14 46.1	-0.6
PTQR				Sg	Sg	14 14 51.5	+0.1
VCEL	Villa Celiera	0.39	86	Pg	Pg	14 14 46.7	-0.6
VCEL				Sg	Sg	14 14 52.9	+0.4
VCEL	Villa Celiera	0.39	86	Pg	Pg	14 14 46.7	-0.6
VCEL				Sg	Sg	14 14 52.9	+0.4
MNS	Montasola	0.47	272	⇑Pg	Pg	14 14 48.7	-0.3
	2µm,0.7s						
MNS	Montasola	0.47	272	⇑Pg	Pg	14 14 48.7	-0.3
	2µm,0.7s						
NRCA	Norcia	0.49	342	Pg	Pg	14 14 48.9	-0.3
NRCA				Sg	Sg	14 14 56.1	+0.4
NRCA	Norcia	0.49	342	Pg	Pg	14 14 48.9	-0.3
NRCA				Sg	Sg	14 14 56.1	+0.4
CERT	Cerreto	0.49	211	Pg	Pg	14 14 48.8	-0.5
CERT				Sg	Sg	14 14 56.1	+0.3
	3µm,0.7s						
CERT	Cerreto	0.49	211	Pg	Pg	14 14 48.8	-0.5
CERT				Sg	Sg	14 14 56.1	+0.3
	3µm,0.7s						
VVLD	Villa Vallelon	0.55	156	Pg	Pg	14 14 49.4	-0.9
VVLD				Sg	Sg	14 14 58.1	+0.5
VVLD	Villa Vallelon	0.55	156	Pg	Pg	14 14 49.4	-0.9
VVLD				Sg	Sg	14 14 58.1	+0.5
MTCE	Montecelio	0.55	231	Pg	Pg	14 14 50.0	-0.4
MTCE				Sg	Sg	14 14 58.3	+0.6
MTCE	Montecelio	0.55	231	Pg	Pg	14 14 50.0	-0.4
MTCE				Sg	Sg	14 14 58.3	+0.6
INTR	Introdacqua	0.56	129	⇑Pg	Pg	14 14 49.6	-1.0
INTR				Sg	Sg	14 14 57.8	-0.3
INTR	Introdacqua	0.56	129	⇑Pg	Pg	14 14 49.6	-1.0
INTR				Sg	Sg	14 14 57.8	-0.3
GUAR	Guarcino	0.58	181	Pg	Pg	14 14 51.1	+0.2
GUAR	Guarcino	0.58	181	Pg	Pg	14 14 51.1	+0.2
TRTR	Tortoreto Alta	0.62	45	Pg	Pg	14 14 52.1	+0.4
	9µm,0.8s						
TRTR	Tortoreto Alta	0.62	45	Pg	Pg	14 14 52.1	+0.4
	9µm,0.8s						
OFFI	Offida	0.62	25	⇑iPg	Pg	14 14 51.9	+0.1
	10µm,0.7s						
OFFI	Offida	0.62	25	⇑iPg	Pg	14 14 51.9	+0.1
	10µm,0.7s						
FDMO	Fiordimonte	0.69	346	Pg	Pg	14 14 52.3	-0.7
	871nm,0.3s						
FDMO	Fiordimonte	0.69	346	Pg	Pg	14 14 52.3	-0.7
	871nm,0.3s						
POFI	Posta Fibreno	0.71	156	Pg	Pg	14 14 53.5	0.0
POFI	Posta Fibreno	0.71	156	Pg	Pg	14 14 53.5	0.0
LPEL	Lama dei Pelig	0.72	117	Pg	Pg	14 14 52.3	-1.3
LPEL				Sg	Sg	14 15 03.2	+0.3
LPEL	Lama dei Pelig	0.72	117	Pg	Pg	14 14 52.3	-1.3
LPEL				Sg	Sg	14 15 03.2	+0.3
RMP	Rome, Mte Porz	0.72	220	Pg	Pg	14 14 53.6	-0.1
	935nm,0.7s						
RMP	Rome, Mte Porz	0.72	220	Pg	Pg	14 14 53.6	-0.1
	935nm,0.7s						
SDI	San Donato	0.76	151	Pg	Pg	14 14 53.0	-1.3
SDI	San Donato	0.76	151	Pg	Pg	14 14 53.0	-1.3
CAFR	Castel Frentan	0.77	100	Pg	Pg	14 14 53.0	-1.6
CAFR	Castel Frentan	0.77	100	Pg	Pg	14 14 53.0	-1.6
GIUL	Giuliano Di Ro	0.81	184	Pg	Pg	14 14 55.3	-0.1
GIUL	Giuliano Di Ro	0.81	184	Pg	Pg	14 14 55.3	-0.1
ASSB	Assisi San Ben	0.83	324	Pg	Pg	14 14 55.2	-0.5
	1µm,0.6s						
ASSB	Assisi San Ben	0.83	324	Pg	Pg	14 14 55.2	-0.5
	1µm,0.6s						
SNTG	Esanatoglia	0.93	343	Pg	Pg	14 14 56.8	-0.8
	287nm,0.4s						
SNTG	Esanatoglia	0.93	343	Pg	Pg	14 14 56.8	-0.8
	287nm,0.4s						
CERA	Filignano	0.93	146	Pg	Pg	14 14 56.8	-0.8
	615nm,0.7s						
CERA	Filignano	0.93	146	Pg	Pg	14 14 56.8	-0.8
	615nm,0.7s						
MIDA	Miranda	1.01	136	Pg	Pg	14 14 56.9	-2.2
MIDA	Miranda	1.01	136	Pg	Pg	14 14 56.9	-2.2
CING	Cingoli	1.01	355	Pg	Pg	14 14 57.9	-1.2
	762nm,0.5s						
CING	Cingoli	1.01	355	Pg	Pg	14 14 57.9	-1.2
	762nm,0.5s						
TOLF	Tolfa	1.03	253	Pg	Pg	14 14 59.4	-0.1
TOLF	Tolfa	1.03	253	Pg	Pg	14 14 59.4	-0.1
MGAB	Montegabbione	1.04	302	Pg	Pg	14 14 59.5	-0.3
MGAB	Montegabbione	1.04	302	Pg	Pg	14 14 59.5	-0.3
MURB	Monte Urbino	1.07	327	Pg	Pb	14 14 59.4	-0.9
	2µm,0.4s						
MURB	Monte Urbino	1.07	327	Pg	Pb	14 14 59.4	-0.9
	2µm,0.4s						
SACS	San Casciano d	1.15	295	Pg	Pg	14 15 02.2	+0.5
	811nm,0.8s						
LATE	Laterza	1.15	283	Pg	Pb	14 15 01.8	+0.1
LATE	Laterza	1.15	283	Pg	Pb	14 15 01.8	+0.1
ARVD	Arcevia	1.16	346	Pg	Pb	14 15 00.9	-1.0
	903nm,1.0s						
ARVD	Arcevia	1.16	346	Pg	Pb	14 15 00.9	-1.0
	903nm,1.0s						
AOI	Ancona	1.20	10	Pg	Pn	14 15 01.6	-1.0
	1µm,1.1s						
AOI	Ancona	1.20	10	Pg	Pn	14 15 01.6	-1.0
	1µm,1.1s						
PIEI	Pieia	1.30	334	Pn	Pn	14 15 03.7	-0.3
	342nm,0.5s						
PIEI	Pieia	1.30	334	Pn	Pn	14 15 03.7	-0.3
	342nm,0.5s						
FSSB	Fossombrone	1.38	343	Pn	Pn	14 15 04.9	-0.2
	1µm,0.4s						
FSSB	Fossombrone	1.38	343	Pn	Pn	14 15 04.9	-0.2
	1µm,0.4s						
CAFI	Castiglion Fio	1.38	314	Pn	Pb	14 15 05.9	+0.2
	519nm,1.0s						
CAFI	Castiglion Fio	1.38	314	Pn	Pb	14 15 05.9	+0.2
	519nm,1.0s						
MAON	Monte Argentar	1.62	273	Pn	Pn	14 15 08.6	+0.2
	150nm,0.5s						
MAON	Monte Argentar	1.62	273	Pn	Pn	14 15 08.6	+0.2
	150nm,0.5s						
ASQU	Asqua	1.81	322	Pn	Pn	14 15 11.9	+0.8
	116nm,0.6s						
ASQU	Asqua	1.81	322	Pn	Pn	14 15 11.9	+0.8
	116nm,0.6s						
SFI	Santa Sofia	1.88	325	Pn	Pb	14 15 13.3	-0.8
	211nm,1.0s						
SFI	Santa Sofia	1.88	325	Pn	Pb	14 15 13.3	-0.8
	211nm,1.0s						
MS1	Monte Sant'Ang	2.06	108	ePn	Pb	14 15 18.1	+0.8
NVLJ	Novalja	2.46	27	ePn	Pn	14 15 19.3	-0.7
NVLJ				Sn	Sn	14 15 50.7	+0.6
NVLJ	Novalja	2.46	27	ePn	Pn	14 15 19.2	-0.7
NVLJ				Sn	Sn	14 15 50.7	+0.6
PGF	Pioggiola	3.20	275	ePn	Pn	14 15 30.8	+0.6
PGF				eSn	Sn	14 16 10.9	+2.4
	26nm,0.7s						
PGF	Pioggiola	3.20	275	ePn	Pn	14 15 30.8	+0.6
PGF				eSn	Sn	14 16 10.9	+2.4
	13nm,0.7s						
SKDS	Skadanscina	3.21	9	i Pn	Pn	14 15 31.0	+0.7
SKDS				i Sn	Sn	14 16 11.4	+2.8
SKDS	Skadanscina	3.21	9	Pn	Pn	14 15 31.0	+0.7
SKDS				i Sn	Sn	14 16 11.4	+2.8
BOJS	Bojanci	3.43	23	i Pn	Pn	14 15 34.8	+1.6
BOJS				i Sn	Sb	14 16 19.3	-2.9
BOJS	Bojanci	3.43	23	i Pn	Pn	14 15 34.8	+1.6
BOJS				i Sn	Sb	14 16 19.3	-2.9
VOY	Vojsko	3.68	6	ePn	Pn	14 15 38.8	+2.0
VOY				e		14 15 49.3	
VOY				eSn	Sn	14 16 23.4	+3.1
VOY	Vojsko	3.68	6	ePn	Pn	14 15 38.8	+2.0
VOY				eSn	Sn	14 16 23.4	+3.1
SBF	Sospel	4.56	291	ePn	Pn	14 15 49.1	+0.3
SBF				eSn	Sn	14 16 39.2	-2.7
	15nm,0.7s						
SBF	Sospel	4.56	291	ePn	Pn	14 15 49.1	+0.3
SBF				eSn	Sn	14 16 39.2	-2.7
	7.3nm,0.7s						
FRF	La Foret Royal	5.04	286	ePn	Pn	14 15 55.5	+0.2
FRF				eSn	Sn	14 16 50.2	-3.4
	5.0nm,0.6s						
FRF	La Foret Royal	5.04	286	ePn	Pn	14 15 55.5	+0.2
FRF				eSn	Sn	14 16 50.2	-3.4
	2.5nm,0.6s						
DAVOX	Davos/Dischmat	5.05	332	Pn	Pn	14 15 58.5	+2.8
	0.9nm,0.3s,baz=153,slow=15,SNR=9.9						
DAVOX				Sn	Sn	14 16 56.2	+2.1
	1.1nm,0.3s,baz=279,slow=22,SNR=4.5						
LMR	La Mourre	5.10	283	ePn	Pn	14 15 56.2	0.0
LMR				eSn	Sn	14 16 51.8	-3.3
	3.9nm,0.5s						
LMR	La Mourre	5.10	283	ePn	Pn	14 15 56.2	0.0
LMR				eSn	Sn	14 16 51.8	-3.3
	2.0nm,0.5s						
MBDF	Montbardon	5.31	299	eP	Pn	14 16 01.4	+2.2
MBDF	Montbardon	5.31	299	eP	Pn	14 16 01.4	+2.2
GERES	GERESS Array B	6.48	2	Pn	Pn	14 16 17.6	+2.4
	0.2nm,0.3s,baz=170,slow=12,SNR=5.6						
GERES				Sn	Sn	14 17 28.4	-0.8
	0.9nm,0.3s,baz=182,slow=23,SNR=10.0						
CABF	La Chapelle	6.69	312	ePn	Pn	14 16 18.8	+0.8
CABF	La Chapelle	6.69	312	ePn	Pn	14 16 18.8	+0.8
KHC	Kasperske Hory	6.76	1	ePN	Pn	14 16 20.8	+1.8
KHC				eSN	Sn	14 17 35.0	-1.1
KHC				ex	x	14 17 49.5	
KHC	Kasperske Hory	6.76	1	Pn	Pn	14 16 20.8	+1.8
KHC				Sn	Sn	14 17 35.0	-1.1
HINF	Hinteralfeld	7.11	322	ePn	Pn	14 16 22.9	-0.9
HINF				eSn	Sn	14 17 39.5	-5.2
	6.4nm,0.5s						
HINF	Hinteralfeld	7.11	322	ePn	Pn	14 16 22.9	-0.9
HINF				eSn	Sn	14 17 39.5	-5.2
	3.2nm,0.5s						
KEST	Kesra	7.32	206	Pn	Pn	14 16 31.4	+4.8
	0.1nm,0.3s,baz=277,slow=12,SNR=4.9						
CDF	Champ du Feu	7.39	327	ePn	Pn	14 16 26.9	-0.7
CDF				eSn	Sn	14 17 47.1	-4.4
	8.4nm,0.6s						
CDF	Champ du Feu	7.39	327	ePn	Pn	14 16 26.9	-0.7
CDF				eSn	Sn	14 17 47.1	-4.4
	4.2nm,0.6s						
HAU	Haudompre	7.48	321	ePn	Pn	14 16 28.4	-0.5
HAU				eSn	Sn	14 17 46.9	-6.9
	7.4nm,0.5s						
HAU	Haudompre	7.48	321	ePn	Pn	14 16 28.4	-0.5
HAU				eSn	Sn	14 17 46.9	-6.9
	3.7nm,0.5s						
MLR	Muntele Rosu	9.63	67	Pn	Pn	14 17 02.9	+4.6
	0.0nm,0.3s,baz=59,slow=23,SNR=3.2						
NOA	NORSAR Array B	18.74	357	LR	LR	14 26 11.4	
	comp=Z,328nm,18.8s,baz=210,slow=37						
MKAR	Makanchi Array	47.89	60	P	P	14 23 18.8	+1.0
	0.2nm,0.5s,baz=294,slow=6.3,SNR=3.0						
SONM	Songino Array	62.00	50	P	P	14 25 02.9	+2.8
	0.2nm,0.8s,baz=302,slow=8.4,SNR=2.5						

BJI 06 14:22:38.4, 31°.96N×117°.47E, h4km, ML3.9/17, 1C, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NJ2	Nanjing	1.18	85	ePn	Pg	14 22 58.9	-2.1
NJ2				Pg	Pb	14 23 00.1	-1.2
NJ2				Sn	Sg	14 23 14.4	-1.9
NJ2				Sg	Sb	14 23 15.8	-1.2
NJ2				smax	smax		
	comp=N,2µm,0.6s						
NJ2				smax	smax		
	comp=E,1µm,0.6s						
WHN	Wuhan	3.02	243	⇑Pg	Pb	14 23 34.1	+1.3
WHN				Sg	Sb	14 24 11.8	+1.8
WHN				smax	smax		
	comp=N,2µm,0.8s						
WHN				smax	smax		
	comp=E,1µm,0.6s						
SSE	Sheshan	3.29	104	Pg	Pb	14 23 37.4	+0.1
SSE				Sn	Sn	14 24 07.9	-2.3
SSE				smax	smax		
	comp=N,480nm,0.6s						
SSE				smax	smax		
	comp=E,230nm,0.5s						
TIA	Tai'an	4.25	356	Pn	Pn	14 23 42.5	-1.4
TIA				Pg	Pb	14 23 54.6	+0.9
TIA				Sg	Sb	14 24 47.4	+2.0
TIA				smax	smax		
	comp=N,150nm,0.6s						
TIA				smax	smax		
	comp=E,190nm,0.7s						
XAN	Xi'an	7.47	288	ePg	Pb	14 24 52.7	+4.0
XAN				eSg	Sg	14 26 30.4	-8.2
XAN				smax	smax		
	comp=N,54nm,0.9s						
XAN				smax	smax		
	comp=E,16nm,1.0s						
LZH	Lanzhou	12.03	294	eP	Pn	14 25 31.5	+0.6
LZH				pP		14 25 33.7	
LZH				sP		14 25 35.9	
LZH				ePP	PnPn	14 25 41.6	+3.0
GTA	Gaotai	16.14	302	eP	Pn	14 26 27.8	+1.5
GTA				pP	pP	14 26 32.2	+1.4
GTA				sP	sP	14 26 34.9	+3.6

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*NIED **06** 14:23:00, 46°.30N×146°.40E, h420km, Mw4.3 Best double couple: $M_0 3.72000\times10^{15}$ NP1: ϕ_s183.00000°, δ75.00000°, λ130.00000°. NP2: ϕ_s290.00000°, δ42.00000°, λ22.00000°.*

*MOS **06** 14:23:25.5±0.9, 46°.81N×146°.21E, h368km, mb4.2/16, Error ellipse: s-maj=11.5km s-min=7.0km az=86.7*

*ISCJB **06** 14:23:25.5±0.3, 46°.69N±0°.04×146°.22E±0°.06, h368km±3km, mb4.0/34, Error ellipse: s-maj=6.9km s-min=5.8km az=39.6*

*JMA **06** 14:23:26.2±0.3, 46°.34N×146°.44E, h389km, M4.0*

*BJI **06** 14:23:26.0, 47°.06N×146°.10E, h353km, mB4.7/10, mb4.6/13*

*IDC **06** 14:23:27.4±1.1, 46°.85N×146°.11E, h365km±11km, mb3.7/23, mb1 3.8/29, mb1mx3.8/34, mbtmp3.6/29, Error ellipse: s-maj=11.0km s-min=8.1km az=144.0*

ISC 06 14:23:26.2±0.5**, 46°.63N**±0°.05×**146°.19E**±0°.05**, h365**km±5km**,**
n96, $\sigma 1^{s}45$/120, mb4.1/34, 7C-4D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.82	139	ePN	Pn	14 24 18.0	+0.2
KUR				eS	S	14 25 00.5	+1.3
KUR				pmax	pmax		
	comp=Z,280nm,0.9s						
KUR				smax	smax		
	comp=N,370nm,1.0s						
KUR				smax	smax		
	comp=E,370nm,1.0s						
YSS	Yuzh-Sakhalins	2.38	279	⇑iPN	Pn	14 24 24.0	+2.4
YSS				i S	S	14 25 06.1	0.0
YSS				pmax	pmax		
	comp=N,70nm,0.6s						
YSS				pmax	pmax		
	comp=E,70nm,0.6s						
YSS				pmax	pmax		
	comp=Z,160nm,0.6s						
YSS				smax	smax		
	comp=N,250nm,1.1s						
YSS				smax	smax		
	comp=E,280nm,1.0s						
YUK	Yuzh-Kuril'sk	2.60	185	c iPN	Pn	14 24 23.7	+0.3
YUK				i S	S	14 25 09.5	+0.1
YUK				pmax	pmax		
	comp=N,27nm,0.4s						
YUK				pmax	pmax		
	comp=E,33nm,0.4s						
YUK				pmax	pmax		
	comp=Z,201nm,0.4s						
YUK				smax	smax		
	comp=E,633nm,0.6s						
YUK				smax	smax		
	comp=N,112nm,0.2s						
JRA	Rausu	2.79	196	P	Pn	14 24 25.4	+0.4
JSE	Soyaes	3.02	238	P	Pn	14 24 28.5	+1.6
JSE				eS	S	14 25 16.9	+1.1
JTKR	Abashiri--Toko	3.10	212	P	Pn	14 24 28.8	+1.1
JTKR				eS	S	14 25 18.0	+0.8
JWK2	Keihoku	3.27	248	P	Pn	14 24 31.4	+2.3
JWK2				eS	S	14 25 21.9	+2.2
NEM2	Nemuro 2	3.28	186	P	Pn	14 24 27.8	-1.4
NEM2				eS	S	14 25 16.3	-3.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAJ	Asahikawa	3.56	227	P	Pn	14 24 33.8	+1.9
	comp=N,11nm,0.3s,baz=35,slow=6.0,SNR=57						
JKK2	Kamakawa 2	3.67	223	P	Pn	14 24 34.2	+1.2
JKK2				eS	S	14 25 29.0	+2.2
UGL	Uglegorsk	3.70	313	ePN	Pn	14 24 33.0	0.0
UGL				eS	S	14 25 25.3	-1.8
UGL				pmax	pmax		
	comp=Z,54nm,0.5s						
UGL				smax	smax		
	comp=N,110nm,0.8s						
UGL				smax	smax		
	comp=E,120nm,0.6s						
JAR	Ashorobuto	3.75	208	P	Pn	14 24 34.4	+0.7
JAK	Akkeshi	3.78	197	P	Pn	14 24 33.1	-0.9
JAK				eS	S	14 25 25.4	-3.3
JHR	Hokuryu	4.27	229	P	Pn	14 24 40.4	+1.5
JFR	Furan	4.30	218	P	Pn	14 24 40.4	+1.2
JCH	Churui	4.49	208	P	Pn	14 24 40.5	-0.7
JCH				eS	S	14 25 37.9	-3.8
JNBK	Urakawa-nobuka	4.99	211	P	Pn	14 24 45.6	-0.9
JNBK				eS	S	14 25 46.1	-5.4
JEW	Eniwo	5.07	223	P	Pn	14 24 48.7	+1.4
JEW				eS	S	14 25 50.9	-2.1
ERM	Erimo	5.10	206	i PN	Pn	14 24 47.9	+0.3
JKB	Kayabe	6.01	220	P	Pn	14 24 57.2	-0.5
JKB				eS	S	14 26 06.9	-5.1
JOT	Ohata	6.42	217	P	Pn	14 25 01.7	-0.6
JOT				eS	S	14 26 14.7	-5.7
JOSM	Okushiri--Mats	6.62	229	P	Pn	14 25 04.8	+0.3
JOSM				eS	S	14 26 19.7	-4.8
JANG	Nango	7.11	210	P	Pn	14 25 09.1	-1.2
JANG				eS	S	14 26 28.8	-6.3
SKR	Severo-Kuril's	7.73	55	ePN	Pn	14 25 15.5	-1.7
PETK	Petropavlovsk-	9.86	45	PN	P	14 25 42.9	-0.3
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	9.86	45	P	P	14 25 42.9	-0.3
	comp=Z,0.7nm,0.3s,baz=216,slow=11,SNR=9.3						
KLR	Kul'dur	10.04	290	ePN	Pn	14 25 42.8	-1.7
KLR				pmax	pmax		
	comp=E,2.0nm,1.0s						
KLR				pmax	pmax		
	comp=Z,80nm,1.0s						
USRK	Ussuriysk Arra	10.27	261	P	P	14 25 48.2	+0.3
	comp=Z,6.0nm,0.3s,baz=69,slow=12,SNR=74						
PET	Petropavlovsk	10.28	47	⇓ePN	Pn	14 25 44.6	-2.7
MAJO	Matsushiro	11.71	213	⇓ePN	Pn	14 26 06.4	+2.0
MAT	Matsushiro	11.71	213	P	Pn	14 26 06.3	+1.9
MJAR	Matsushiro Arr	11.71	213	P	Pn	14 26 06.9	+2.5
	comp=Z,0.8nm,0.3s,baz=14,slow=12,SNR=14						
CN2	Changchun	14.88	267	eP	P	14 26 38.7	-0.1
CN2				pmax	pmax		
	comp=Z,30nm,0.6s						
KSRS	Korea Array	16.34	242	P	Pn	14 26 57.4	-0.7
	comp=Z,0.4nm,0.3s,baz=48,slow=11,SNR=15						
KSRS				PcP	PcP	14 31 26.4	+1.1
	comp=Z,0.0nm,0.3s,baz=24,slow=1.4,SNR=4.3						
CLNS	Chul'man	16.61	316	eP	P	14 26 57.0	-0.4
CLNS				pmax	pmax		
	comp=Z,13nm,1.0s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.9s						
CLNS				pmax	pmax		
	comp=N,3.0nm,0.6s						
SEY	Seymchan	16.71	10	⇑eP	P	14 26 58.4	+0.1
YAK	Yakutsk	18.10	334	eP	P	14 27 10.6	-2.4
YAK				eS	S	14 30 18.6	-2.4
YAK				pmax	pmax		
	comp=Z,11nm,0.6s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				smax	smax		
	comp=N,171nm,2.1s						
YAK				smax	smax		
	comp=E,64nm,2.2s						
FX1	Attu Island--F	18.45	60	P	P	14 27 18.7	+1.7
	comp=E,4.0nm,0.3s,baz=254,slow=18,SNR=8.8						
BILL	Bilibino	23.82	19	⇓iP	P	14 28 05.6	-1.7
BILL				pmax	pmax		
	comp=Z,6.0nm,1.3s						
HHC	Hu-ho-hao-te	25.53	270	eP	P	14 28 24.0	+0.8
HHC				pmax	pmax		
	comp=Z,37nm,0.6s						
HHC				pmax	pmax		
	comp=Z,390nm,5.3s						
SONM	Songino Array	26.85	287	P	P	14 28 35.6	+0.9
	comp=Z,2.1nm,0.8s,baz=86,slow=9.2,SNR=15						
SONM				PcP	PcP	14 31 46.7	+0.5
	comp=Z,0.9nm,0.7s,baz=100,slow=1.8,SNR=5.9						
KDAK	Kodiak Island	37.86	50	P	P	14 30 08.9	-0.1
	comp=Z,4.2nm,0.5s,baz=302,slow=13,SNR=7.8						
KDAK				PcP	PcP	14 32 17.2	+0.8
	comp=Z,7.6nm,1.0s,baz=281,slow=5.2,SNR=5.1						
ZALV	Zalesovo Beam	38.77	304	P	P	14 30 16.3	-0.3
ZALV						14 32 19.8	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	38.77	304	P	P	14 30 16.3	-0.3
	comp=Z,1.0nm,0.4s,baz=64,slow=7.8,SNR=7.2						
ZALV				PcP	PcP	14 32 19.8	+0.3
	comp=Z,2.2nm,0.6s,baz=74,slow=2.4,SNR=12						
ZALV				ScP	ScP	14 35 32.4	+0.4
	comp=Z,0.6nm,0.5s,baz=72,slow=4.7,SNR=6.2						
ILAR	Eielson Array	39.61	38	P	P	14 30 22.5	-0.8
	comp=Z,3.2nm,0.5s,baz=276,slow=7.7,SNR=105						
MKAR	Makanchi Array	42.71	295	eP	P	14 30 48.7	+0.1
MKAR	Makanchi Array	42.71	295	P	P	14 30 48.4	-0.2
	comp=Z,0.8nm,0.7s,baz=72,slow=8.2,SNR=7.1						
MKAR				PP	PcP	14 32 33.0	+0.5
	comp=Z,0.9nm,0.6s,baz=72,slow=9.3,SNR=6.4						
MKAR				ScP	ScP	14 35 48.0	+0.2
	comp=Z,0.5nm,0.5s,baz=67,slow=3.7,SNR=4.3						
KURK	Kurchatov	43.41	301	⇑eP	P	14 30 53.6	-0.4
INK	Inuvik	44.29	32	P	P	14 30 59.7	-1.0
	comp=Z,3.3nm,0.4s,baz=283,slow=6.2,SNR=43						
BRVK	Borovoye	47.23	307	⇓eP	P	14 31 24.2	+0.5
RES	Resolute Bay	52.41	17	P	P	14 32 00.6	-1.2
	comp=Z,14nm,0.5s,baz=312,slow=8.1,SNR=124						
RES				PcP	PcP	14 33 07.6	+0.7
	comp=Z,2.2nm,0.7s,baz=327,slow=3.5,SNR=5.0						
YKA	Yellowknife Ar	53.80	35	P	P	14 32 11.5	-0.6
	comp=Z,1.2nm,0.6s,baz=304,slow=6.9,SNR=25						
YKA				PcP	PcP	14 33 13.0	+0.6
	comp=Z,0.6nm,0.6s,baz=310,slow=3.7,SNR=14						
KEV	Kevo	55.78	338	eP	P	14 32 24.6	-1.4
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KEV	Kevo	55.78	338	ep	P	14 32 24.6	-1.4
	comp=Z,0.7nm,0.3s						
ARCES	ARCESS Array B	56.32	339	P	P	14 32 28.9	-0.8
	comp=Z,4.7nm,1.0s,baz=36,slow=7.8,SNR=14						
JOF	Joensuu	59.23	331	eP	P	14 32 48.2	-1.7
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
JOF	Joensuu	59.23	331	ep	P	14 32 48.2	-1.7
	comp=Z,3.0nm,0.5s						
KAF	Kangasniemi	61.44	332	eP	P	14 33 03.2	-1.5
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KAF	Kangasniemi	61.44	332	ep	P	14 33 03.2	-1.5
	comp=Z,2.1nm,0.5s						
FINES	FINESS Array B	62.01	332	P	P	14 33 07.6	-0.8
	comp=Z,7.0nm,0.5s,baz=41,slow=7.4,SNR=48						
FFC	Flin Flon	63.80	37	i P	P	14 33 20.8	+0.6
NVAR	Mina Array Bea	66.64	58	P	P	14 33 40.2	+1.4
	comp=Z,3.3nm,0.7s,baz=308,slow=7.4,SNR=20						
NB2	NORSAR Subarra	66.68	338	P	P	14 33 37.6	-0.9
	comp=Z,2.6nm,0.4s,baz=30,slow=6.5						
NOA	NORSAR Array B	66.68	338	P	P	14 33 37.8	-0.7
	comp=Z,4.0nm,0.4s,baz=30,slow=6.5,SNR=26						
HFS	Hagfors	66.78	336	P	P	14 33 38.1	-0.9
	comp=Z,4.6nm,0.4s,baz=40,slow=4.0,SNR=36						
WRA	Warramunga Arr	67.11	192	P	P	14 33 43.1	+1.5
	comp=Z,3.2nm,0.5s,baz=7.6,slow=6.6,SNR=34						
KIV	Kislovodsk	67.36	310	eP	P	14 33 43.9	+0.8
KIV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KBZ	Khabaz	67.40	310	P	P	14 33 44.2	+1.0
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBZ	Khabaz	67.40	310	P	P	14 33 44.2	+1.0
	comp=Z,3.7nm,0.8s,baz=32,slow=7.7,SNR=10						
PDAR	Pinedale Array	68.58	50	P	P	14 33 51.6	+0.8
	comp=Z,8.3nm,0.7s,baz=298,slow=1.9,SNR=63						
AKASG	Malin Array Be	68.87	323	eP	P	14 33 50.3	-1.8
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	Malin Array Be	68.87	323	P	P	14 33 51.4	-0.7
	comp=Z,1.9nm,0.4s,baz=37,slow=6.9,SNR=5.8						
KIEV	Kiev	68.88	323	⇑iP	P	14 33 51.3	-0.9
ULM	Lac du Bonnet	69.62	37	P	P	14 33 56.3	-0.3
	comp=Z,5.4nm,0.6s,baz=316,slow=5.9,SNR=10.0						
ASAR	Alice Springs	70.84	192	P	P	14 34 06.6	+2.4
	comp=Z,0.8nm,0.4s,baz=6.8,slow=5.8,SNR=39						
KOLS	Kolonicke sedl	73.07	325	eP	P	14 34 17.5	+0.3
KOLS	Kolonicke sedl	73.07	325	eP	P	14 34 17.5	+0.3
CLL	Collm	74.45	332	⇑iP	P	14 34 24.7	-0.3
CLL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CLL	Collm	74.45	332	⇑iP	P	14 34 24.7	-0.3
	comp=Z,7.0nm,0.8s						
BRTR	Keskin Array B	75.08	313	P	P	14 34 29.8	+0.7
	comp=Z,1.0nm,0.7s,baz=85,slow=2.5,SNR=4.7						
SCHQ	Schefferville	75.13	19	P	P	14 34 29.3	+0.5
	comp=Z,1.1nm,0.4s,baz=321,slow=6.0,SNR=8.5						
KHC	Kasperske Hory	76.12	330	eP	P	14 34 34.5	0.0
GERES	GERESS Array B	76.32	330	P	P	14 34 35.6	-0.1
	comp=Z,1.2nm,0.5s,baz=38,slow=6.5,SNR=5.7						
PAGF	Fort de Pagny	79.14	334	eP	P	14 34 51.3	+0.3
	comp=Z,2.1nm,0.5s						
GRR	Gorron	81.10	338	eP	P	14 35 01.4	0.0
LPG	La Plagne	81.56	332	eP	P	14 35 04.6	+0.4
	comp=Z,4.6nm,0.6s						
TXAR	Lajitas Array	81.61	56	P	P	14 35 05.5	+1.0
	comp=Z,2.8nm,0.7s,baz=297,slow=4.0,SNR=15						
MFF	Saint Martin d	82.57	337	eP	P	14 35 09.0	0.0
	comp=Z,7.4nm,0.6s						
ETSF	Etsaut	86.11	336	eP	P	14 35 27.6	+0.9
	comp=Z,8.4nm,0.8s						
TORD	Torodi Ar. Bea	112.50	322	PKiKP	PKiKP	14 41 19.3	-0.5
	comp=Z,0.4nm,0.5s,baz=45,slow=2.6,SNR=3.5						
BDFB	Brasilia	146.91	26	PKPbc	PKPbc	14 42 27.2	+0.7
	comp=Z,5.5nm,0.7s,baz=292,slow=3.6,SNR=6.1						
SNAA	Sanae	150.96	200	eP	PKPbc	14 42 35.7	+0.8
SNAA	Sanae	150.96	200	PKPbc	PKPbc	14 42 35.5	+0.5
	comp=Z,0.7nm,0.6s,baz=315,slow=2.9,SNR=22						
VNA2	Neumayer--Watz	152.53	198	eP	PKPbc	14 42 39.7	+1.3
	baz=119,slow=1.0						
VNA3	Neumayer Olymp	152.76	197	eP	PKPbc	14 42 40.0	+1.1
VNA1	Neumayer--Stat	152.92	198	eP	PKPbc	14 42 41.3	+2.1

*NNC **06** 14:29:42.9±2.0, 39°.62N×75°.81E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=22.6km s-min=12.1km az=167.0*
ISC 06 14:29:45.5±2.2**, 39°.78N**±0°.08×**75°.9E**±0°.1**, h0km**±23km**, n14, σ1s14**/16**, 2C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	0.28	160	Pg	Pg	14 29 50.8	-0.1
KSH				Sg	Sb	14 29 58.4	-0.4
KSH				smax	smax		
	comp=N,1μm,0.5s						
KSH				smax	smax		
	comp=E,1μm,0.5s						
KZA	Kyzart	2.34	349	P	Pn	14 30 24.6	-0.9
	SNR=13						
ULHL	Ulahol	2.48	7	P	Pn	14 30 28.7	+1.4
	SNR=28						
UCH	Uchtor	2.64	338	P	Pn	14 30 29.0	-0.8
	SNR=18						
AML	Almayashu	2.86	326	P	Pn	14 30 31.6	-1.1
	SNR=8.3						
KBK	Karagaybulak	2.95	347	P	Pb	14 30 37.8	-1.2
	SNR=11						
AAK	Ala-Archa	3.03	341	P	Pn	14 30 34.2	-0.6
	SNR=14						
TKM2	Tokmak 2	3.14	357	⇓Pn	Pn	14 30 36.0	-0.4
	comp=E,20nm,0.5s						
TKM2				⇓Lg	Lg	14 31 27.0	
	comp=E,59nm,0.9s						
TKM2	Tokmak 2	3.14	357	P	Pn	14 30 36.5	+0.1
	SNR=6.5						
EKS2	Erkin-Say	3.27	332	P	Pn	14 30 37.9	-0.2
	SNR=5.8						
CHMS	Chumysh	3.32	346	P	Pn	14 30 38.2	-0.5
	SNR=6.3						
USP	Ospenovka	3.63	344	P	Pn	14 30 42.9	0.0
	SNR=6.8						
KK31	Karatay Array	5.21	311	⇑Pn	Pn	14 31 06.1	+1.5
	comp=E,0.8nm,0.5s,baz=127,slow=13						
KK31				⇑Pg	Pb	14 31 18.9	+1.5
	comp=E,4.5nm,0.7s						
KK31				⇓Lg	Lg	14 32 28.4	
	comp=E,7.5nm,0.7s,baz=132,slow=28						
MK31	Makanchi Array	8.43	32	⇓Pn	Pn	14 31 50.9	+2.0
	comp=E,1.4nm,0.8s,baz=212,slow=23,SNR=4.2						
MK31				⇓Lg	Lg	14 34 11.5	
	comp=E,1.5nm,0.7s,baz=212,slow=31,SNR=3.6						

*CSEM **06** 14:32:13.7, 42°.37N×13°.34E, h10km, After ROM*
ROM 06 14:32:13.7±0.1**, 42°.37N**×**13°.34E, h10km, Ml2.2**/7**, 2C, Error ellipse: s-maj=1.5km s-min=1.1km az=124.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	111	Pg	Pg	14 32 16.3	+0.5
AQU				Sg	Sg	14 32 17.7	+0.3
	4μm,0.3s						
AQU	L'Aquila	0.05	111	Pg	Pg	14 32 16.3	+0.5
AQU				Sg	Sg	14 32 17.7	+0.3
	4μm,0.3s						
CAMP	Campotosto	0.17	17	⇑Pg	Pg	14 32 18.2	+0.5
CAMP				Sg	Sg	14 32 21.1	+0.7
	507nm,0.3s						
CAMP	Campotosto	0.17	17	⇑Pg	Pg	14 32 18.2	+0.5
CAMP				Sg	Sg	14 32 21.1	+0.7
	507nm,0.3s						
FIAM	Fiamignano	0.20	238	Pg	Pg	14 32 18.7	+0.7
FIAM				Sg	Sg	14 32 21.9	+0.9
	332nm,0.4s						
FIAM	Fiamignano	0.20	238	Pg	Pg	14 32 18.7	+0.7
FIAM				Sg	Sg	14 32 21.9	+0.9
	332nm,0.4s						
FAGN	Fagnano	0.21	120	Pg	Pb	14 32 19.0	-0.7
FAGN				Sg	Sg	14 32 22.6	+1.4
	848nm,0.3s						
FAGN	Fagnano	0.21	120	Pg	Pb	14 32 19.0	-0.7
FAGN				Sg	Sg	14 32 22.6	+1.4
	848nm,0.3s						
TERO	Teramo	0.32	37	Pg	Pg	14 32 20.3	+0.1
TERO				Sg	Sg	14 32 25.1	+0.6
TERO	Teramo	0.32	37	Pg	Pg	14 32 20.3	+0.1
TERO				Sg	Sg	14 32 25.1	+0.6
PTQR	Pietraquaria	0.35	173	Pg	Pg	14 32 21.2	+0.4
PTQR				Sg	Sg	14 32 26.4	+0.8
	37nm,0.3s						
PTQR	Pietraquaria	0.35	173	Pg	Pg	14 32 21.2	+0.4
PTQR				Sg	Sg	14 32 26.4	+0.8
	37nm,0.3s						
VCEL	Villa Celiera	0.37	86	Pg	Pb	14 32 22.3	-0.2
VCEL				Sg	Sb	14 32 27.9	-0.6
	223nm,0.5s						
VCEL	Villa Celiera	0.37	86	Pg	Pb	14 32 22.3	-0.2
VCEL				Sg	Sb	14 32 27.9	-0.6
	223nm,0.5s						
MNS	Montasola	0.49	272	Pg	Pb	14 32 24.0	-0.5
MNS	Montasola	0.49	272	Pg	Pb	14 32 24.0	-0.5
NRCA	Norcia	0.49	340	Pg	Pg	14 32 23.9	+0.4
NRCA				Sg	Sg	14 32 30.9	+0.8
NRCA	Norcia	0.49	340	Pg	Pg	14 32 23.9	+0.4
NRCA				Sg	Sg	14 32 30.9	+0.8
CERT	Cerreto	0.50	213	Pg	Pg	14 32 23.6	0.0
CERT				Sg	Sg	14 32 31.1	+0.9
	173nm,0.3s						
CERT	Cerreto	0.50	213	Pg	Pg	14 32 23.6	0.0
CERT				Sg	Sg	14 32 31.1	+0.9
	173nm,0.3s						
VVLD	Villa Vallelon	0.54	157	Pg	Pg	14 32 24.1	-0.3
VVLD	Villa Vallelon	0.54	157	Pg	Pg	14 32 24.1	-0.3
INTR	Introdacqua	0.55	130	Pg	Pg	14 32 23.8	-0.8
INTR	Introdacqua	0.55	130	Pg	Pg	14 32 23.8	-0.8
LPEL	Lama dei Pelig	0.70	117	Pg	Pg	14 32 27.1	-0.3
LPEL				Sg	Sb	14 32 37.9	0.0
	46nm,0.4s						
LPEL	Lama dei Pelig	0.70	117	Pg	Pg	14 32 27.1	-0.3
LPEL				Sg	Sb	14 32 37.9	0.0
	46nm,0.4s						
ASSB	Assisi San Ben	0.84	323	Pg	Pb	14 32 30.4	-0.1
	31nm,0.5s						
ASSB	Assisi San Ben	0.84	323	Pg	Pb	14 32 30.4	-0.1
	31nm,0.5s						

*AUST **06** 14:42:47.5±0.0, 6°.13S×127°.68E, h171km, Error ellipse: s-maj=1.9km s-min=1.0km az=28.0*
*IDC **06** 14:43:03.0±2.2, 7°.13S×130°.24E, h0km, mb3.4/1, mb1 3.6/4, mb1mx3.4/20, mbtmp3.4/4, ML3.5/3, Error ellipse: s-maj=90.9km s-min=28.0km az=78.0*
ISC 06 14:43:04.8±2.9**, 7°.2S**±0°.1×**129°.3E**±0°.2**, h35km, n7, σ1s74**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TLE	Tual	3.75	66	P	Pn	14 44 01.5	+1.3
	baz=5.1,SNR=11						
MTN	Manton Dam	5.94	162	P	Pn	14 44 36.0	+5.7
	baz=7.5,SNR=16						
MTN				S	Sn	14 45 37.1	0.0
	baz=7.5,SNR=5.8						
KDU	Kakadu	6.33	150	P	Pn	14 44 36.5	+0.8
	baz=8.1,SNR=11						
FITZ	Fitzroy Crossi	11.44	198	Pn	Pn	14 45 52.9	+7.1
	0.3nm,0.3s,baz=30,slow=13,SNR=17						
FITZ				Sn	Sn	14 47 52.7	+0.3
	0.4nm,0.3s,baz=201,slow=17,SNR=7.0						
WRA	Warramunga Arr	13.62	159	Pn	Pn	14 46 13.1	-2.6
	0.3nm,0.3s,baz=344,slow=13,SNR=12						
WRA				Sn	Sn	14 48 33.3	-13
	0.5nm,0.3s,baz=341,slow=21,SNR=11						
ASAR	Alice Springs	17.00	165	Pn	Pn	14 47 00.2	+0.2
	0.1nm,0.3s,baz=350,slow=13,SNR=15						
ASAR				Sn	Sn	14 49 56.5	-12
	0.1nm,0.3s,baz=349,slow=26,SNR=5.4						
MKAR	Makanchi Array	67.97	327	P	P	14 54 07.0	+6.7
	0.2nm,0.5s,baz=126,slow=7.9,SNR=3.4						

MAN 06 15:07:30, 9°.53N×126°.50E, h40km, mb4.5, ML3.3, MS3.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUTP	Butuan	1.03	237	eP	Pn	15 07 48.0	-0.1
BUTP				eS	Sn	15 08 02.4	+1.1
MSLP	Maasin	1.73	290	eP	Pn	15 07 58.3	+0.8
MSLP				eS	Sn	15 08 19.3	+1.0
CGP	Cagayan de Oro	2.08	239	⇓eP	Pn	15 08 02.6	+0.1
CGP				eS	Sn	15 08 28.5	+1.3
BUKP	Musuan	2.17	221	eP	Pn	15 08 06.7	+2.9

*CSEM **06** 15:08:23.6±1.1, 36°.63N×27°.67E, h2km, MD3.0, Error ellipse: s-maj=18.6km s-min=8.2km az=24.0*
*DDA **06** 15:08:27.3, 36°.81N×27°.53E, h7km, MD3.0*
*ISK **06** 15:08:27.6, 36°.83N×27°.49E, h15km, MD2.4*
ISC 06 15:08:22.8±2.3**, 36°.6N**±0°.1×**27°.66E**±0°.05**, h0km**±13km**, n14, σ1s11**/27**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.48	339	i P	Pg	15 08 32.3	+0.3
BDRM				i S	Sg	15 08 37.0	-1.3
BDRM	Kayabasi	0.48	339	i P	Pg	15 08 32.3	+0.3
BDRM				i S	Sg	15 08 37.0	-1.3
BODT	Bodrum	0.53	328	ePG	Pg	15 08 34.0	+1.2
BODT				eSG	Sg	15 08 38.1	-1.6
BODT	Bodrum	0.53	328	ePg	Pg	15 08 34.1	+1.2
BODT				eSg	Sg	15 08 38.1	-1.6
MLSB	Milas	0.68	8	ePG	Pb	15 08 38.1	+0.5
MLSB				eSG	Sg	15 08 46.1	+1.3
MLSB	Milas	0.68	8	ePg	Pb	15 08 38.1	+0.5
MLSB				eSg	Sg	15 08 46.1	+1.3
YER	Yerkesik	0.72	44	ePG	Pn	15 08 41.2	+0.9
YER				eSG	Sn	15 08 52.3	+0.3
YER	Yerkesik	0.72	44	ePg	Pn	15 08 41.2	+0.9
TURN	Turunc	0.80	71	i P	Pg	15 08 38.0	-0.1
TURN				i S	Sg	15 08 47.6	-0.9
TURN	Turunc	0.80	71	i P	Pg	15 08 38.0	-0.1
TURN				i S	Sg	15 08 47.6	-0.9
AYDN	Tasoluk	1.05	9	i P	Pb	15 08 44.3	+0.3
AYDN				i S	Sb	15 08 57.0	-1.4
AYDN	Tasoluk	1.05	9	i P	Pb	15 08 44.3	+0.3
AYDN				i S	Sb	15 08 57.0	-1.4
GCAM	G?zelcaml?	1.13	343	i P	Pb	15 08 45.5	+0.2
GCAM				i S	Sb	15 08 58.9	-1.6
GCAM	G?zelcaml?	1.13	343	i P	Pb	15 08 45.5	+0.2
GCAM				i S	Sb	15 08 58.9	-1.6

IDC 06 15:14:15.1±1.7**, 5°.18N×127°.35E, h0km, mb3.7**/5**, mb1 3.9**/5**, mb1mx3.5**/24**, mbtmp3.8**/5**, 1C, Error ellipse: s-maj=101.1km s-min=22.3km az=68.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSPH	General Santos	2.55	291	⇑iP	Pn	15 14 59.1	+1.3
GSPH				i S	Sn	15 15 30.0	+0.3
FITZ	Fitzroy Crossi	23.20	184	P	P	15 19 23.2	-0.6
	2.1nm,1.0s,baz=7.1,slow=9.3,SNR=4.0						
WRA	Warramunga Arr	25.90	165	P	P	15 19 49.1	+0.2
	2.4nm,0.5s,baz=346,slow=10,SNR=24						
ASAR	Alice Springs	29.38	168	P	P	15 20 19.9	-0.3
	0.2nm,0.3s,baz=351,slow=8.4,SNR=8.2						
STKA	Stephens Creek	39.27	161	P	P	15 21 46.2	+0.5
	1.9nm,0.8s,baz=320,slow=17,SNR=3.8						
MKAR	Makanchi Array	56.73	324	P	P	15 24 00.7	-0.1
	0.5nm,0.5s,baz=113,slow=7.5,SNR=12						

*ISCJB **06** 15:52:20.5±0.5, 31°.29N±0°.04×140°.6E±0°.1, h97km, mb3.4/7, Error ellipse: s-maj=15.4km s-min=4.7km az=165.0*
*IDC **06** 15:52:21.5±1.0, 31°.24N×140°.33E, h92km±10km, mb3.0/6, mb1 3.2/8, mb1mx3.1/25, mbtmp3.0/8, MS2.6/1, Ms1 2.6/1, ms1mx2.1/14, Error ellipse: s-maj=29.6km s-min=8.6km az=75.0*
*JMA **06** 15:52:24.2±0.2, 31°.54N×140°.64E, h109km±4km, M3.3*
ISC 06 15:52:22.1±0.7**, 31°.30N**±0°.06×**140°.5E**±0°.1**, h97km, n21, σ1s09**/27**, mb3.3**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.90	342	P	Pn	15 52 54.0	+0.7
JHJ2				eS	Sn	15 53 16.6	-0.4
JHJ	Hachijo jima 2	1.92	341	P	Pn	15 52 54.4	+0.9
	17nm,0.3s,baz=83,slow=18,SNR=7.5						
JHJ				S	Sn	15 53 16.9	-0.5
	22nm,0.3s,baz=63,slow=20,SNR=3.9						
BSO1	Boso 1	3.37	6	P	Pn	15 53 12.5	+0.3
BSO1				eS	Sn	15 53 51.0	+0.1
BSO3	Boso 3	3.49	360	P	Pn	15 53 14.1	0.0
JOD2	Odawara 2	4.13	344	P	Pn	15 53 24.0	+1.0
CBIJ	Chichi jima	4.44	160	P	Pn	15 53 27.4	+0.2
	4.7nm,0.3s,baz=307,slow=20,SNR=5.0						
CBIJ				S	Sn	15 54 16.1	-1.6
	10nm,0.3s,baz=252,slow=23,SNR=5.6						
JYN	Shimob	4.50	339	P	Pn	15 53 29.4	+1.4
JRY	Ryogami san	4.89	344	P	Pn	15 53 34.1	+0.8
JAG	Ashikaga	5.19	350	P	Pn	15 53 36.4	-0.9
MJAR	Matsushiro Arr	5.57	340	P	Pn	15 53 41.7	-0.8
	0.7nm,0.3s,baz=226,slow=26,SNR=8.3						
MJAR				S	Sn	15 54 43.7	-1.5
	0.5nm,0.3s,baz=293,slow=24,SNR=5.0						
MAT	Matsushiro	5.57	340	P	Pn	15 53 42.8	+0.3
MAT				S	Sn	15 54 44.4	-0.8
JMK	Ichinoseki	7.65	4	P	Pn	15 54 09.3	-1.5
JMK				eS	Sn	15 55 29.4	-6.5
JOW	Kunigami	11.60	250	LR	LR	15 58 43.8	
	comp=Z,32nm,19.7s,baz=184,slow=34						
KSRS	Korea Array	12.07	304	P	Pn	15 55 13.0	+2.2
	baz=115,slow=15,SNR=4.3						
MKAR	Makanchi Array	46.74	307	P	P	16 00 39.5	-2.0
	0.1nm,0.4s,baz=82,slow=9.3,SNR=4.0						
WRA	Warramunga Arr	51.30	187	P	P	16 01 15.6	-0.8
	0.2nm,0.6s,baz=3.2,slow=7.7,SNR=3.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ILAR	**Eielson Array**	**54.77**	**30**	P	**P**	**16 01 41.7**	**+0.2**
	0.4nm,0.6s,baz=282,slow=5.1,SNR=5.6						
ASAR	**Alice Springs**	**55.02**	**187**	P	**P**	**16 01 43.9**	**+0.2**
	0.2nm,1.0s,baz=1.5,slow=6.1,SNR=2.6						
ASAR				pP	**pP**	**16 02 08.2**	**+0.9**
	0.2nm,0.5s,baz=358,slow=5.3,SNR=2.2						
YKA	**Yellowknife Ar**	**69.15**	**29**	P	**P**	**16 03 18.3**	**+0.6**
	0.2nm,0.6s,baz=291,slow=6.2,SNR=5.5						
AKASG	**Malin Array Be**	**78.39**	**323**	P	**P**	**16 04 11.0**	**-0.9**
	0.2nm,0.3s,baz=51,slow=5.2,SNR=4.4						
TXAR	**Lajitas Array**	**94.22**	**52**	P	**P**	**16 05 32.3**	**+1.6**
	0.8nm,0.6s,baz=311,slow=3.5,SNR=4.5						

KRSC 06 16:13:36.9±0.4**, 54°.66N×162°.82E, h19**^{km}±19^{km}**, ML3.8, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.64**	**261**	eP	Pb	16 13 49.4	0.0
MKZ				S	Sb	16 13 57.7	-0.2
KBTR	**Krutoberegovo**	**1.55**	**360**	eP	Pn	16 14 02.7	-0.8
KBTR				S	Sn	16 14 21.1	-2.0
TUMR	**Tumrok**	**1.66**	**293**	eP	Pn	16 14 05.7	+0.5
TUMR				eS	Sn	16 14 26.2	+0.1
BZGR	**Bezymyannyi-Gr**	**1.77**	**317**	eP	Pn	16 14 07.5	+0.9
BZGR				eS	Sn	16 14 29.4	+0.8
KMNR	**Kamenistaya**	**1.84**	**308**	eP	Pb	16 14 09.0	-1.1
KMNR				eS	Sb	16 14 32.8	-0.1
BZMR	**Bezymyannaya**	**1.85**	**315**	P	Pn	16 14 08.2	+0.5
BZMR				S	Sn	16 14 30.6	-0.1
BZWR	**Bezymyannyi-We**	**1.86**	**315**	eP	Pn	16 14 08.9	+0.9
BZWR				eS	Sn	16 14 32.3	+1.1
CIRR	**Tsirk**	**1.88**	**322**	eP	Pn	16 14 09.0	+0.8
CIRR				eS	Sb	16 14 33.1	-0.9
BKI	**Bering**	**1.90**	**72**	eP	Pn	16 14 06.8	-1.4
BKI				eS	Sn	16 14 28.8	-2.8
KPT	**Kopyto**	**1.98**	**312**	eP	Pn	16 14 10.8	+1.3
KPT				S	Sb	16 14 35.6	-1.2
KLY	**Klyuchi**	**2.07**	**324**	eP	Pn	16 14 10.6	+0.1
KLY				eS	Sn	16 14 35.0	-0.7
KOZ	**Kozyrevsk**	**2.19**	**311**	eP	Pb	16 14 14.3	-1.6
KOZ				S	Sb	16 14 41.1	-1.6
SPN	**Mys Shipunski**	**2.28**	**228**	eP	Pn	16 14 12.7	-0.8
SPN				eS	Sn	16 14 39.1	-1.9
SRDR	**Sredinnyy**	**2.42**	**315**	eP	Pn	16 14 16.3	+0.7
SRDR				eS	Sn	16 14 45.4	+0.7
ESO	**Esso**	**2.67**	**300**	eP	Pn	16 14 20.4	+1.4
ESO				S	Sn	16 14 52.0	+1.1
SDLR	**Sedlovina**	**2.71**	**241**	eP	Pn	16 14 20.8	+1.3
SDLR				eS	Sn	16 14 52.5	+0.7
SMAR	**Somma**	**2.76**	**241**	eP	Pn	16 14 21.7	+1.4
SMAR				eS	Sn	16 14 53.7	+0.4
KRER	**Koryakskii**	**2.76**	**242**	eP	Pn	16 14 22.0	+1.6
KRER				eS	Sn	16 14 54.1	+0.7
UGLR	**Uglovaya**	**2.77**	**240**	eP	Pn	16 14 21.9	+1.5
UGLR				eS	Sn	16 14 54.1	+0.6
AVH	**Avacha**	**2.79**	**242**	eP	Pn	16 14 22.5	+1.9
AVH				eS	Sn	16 14 55.1	+1.4
KOK	**Koryaka**	**2.83**	**243**	eP	Pn	16 14 22.6	+1.5
KOK				S	Sn	16 14 55.4	+0.7
PET	**Petropavlovsk**	**2.96**	**238**	eP	Pn	16 14 24.1	+1.3
PET				eS	Sn	16 14 58.8	+1.0
GNL	**Ganaly**	**3.03**	**253**	eP	Pn	16 14 25.9	+2.0
GNL				S	Sn	16 15 01.6	+1.9
RUS	**Russkaya**	**3.40**	**231**	S	Sn	16 15 10.0	+1.3
MTVR	**Mutnovka**	**3.52**	**234**	P	Pn	16 14 31.9	+1.2
MTVR				S	Sn	16 15 12.4	+0.4
APC	**Apacha**	**3.78**	**245**	eP	Pn	16 14 36.2	+2.1
APC				eS	Sn	16 15 19.4	+1.4

MAN 06 16:18:29, 9°.97N×125°.92E, h33^{km}**, mb4.6, ML3.5, MS3.4, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.06**	**279**	eP	Pb	16 18 48.3	-0.6
MSLP				eS	Sn	16 19 01.7	+0.6
OCLP	**Ormoc**	**1.68**	**310**	eP	Pn	16 18 57.1	+1.0
CGP	**Cagayan de Oro**	**1.93**	**219**⇓	eP	Pb	16 19 05.3	+1.7
CGP				eS	Sn	16 19 23.7	+1.0
TBP	**Tagbilaran**	**2.05**	**262**	eP	Pb	16 19 03.9	-1.7
BUKP	**Musuan**	**2.24**	**202**	eP	Pn	16 19 05.0	+1.1
BUKP				eS	Sn	16 19 29.6	-0.9

*IDC **06** 16:24:25.3±4.1, 24°.04N×96°.41E, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.3/26, mbtmp3.5/3, Error ellipse: s-maj=435.6km s-min=27.1km az=59.0*
*ISCJB **06** 16:24:28.1±1.1, 23°.8N±0°.3×96°.0E±0°.2, h36^{km}, mb3.5/3, Error ellipse: s-maj=47.4km s-min=10.9km az=33.4*
ISC 06 16:24:30.2±1.4**, 23°.8N**±0°.4**×95°.9E**±0°.2**, h36**^{km}**, n5,** σ1^{s}.**61**/6**, mb3.7**/3**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	**Imphal**	**2.06**	**298**	eP	**Pn**	**16 25 03.0**	**+0.6**
IMP				eS	**Sn**	**16 25 25.0**	**-1.9**
SHL	**Shillong**	**4.08**	**296**	ePN	**Pn**	**16 25 32.0**	**+1.8**
SHL				eSN	Sn	16 25 59.0	-18
MKAR	**Makanchi Array**	**25.41**	**338**	P	**P**	**16 29 54.1**	**-0.1**
	0.2nm,0.4s,baz=145,slow=7.2,SNR=6.3						
WRA	**Warramunga Arr**	**57.38**	**136**	P	**P**	**16 34 14.9**	**-0.4**
	0.6nm,0.5s,baz=326,slow=7.4,SNR=6.5						
ASAR	**Alice Springs**	**59.89**	**139**	P	**P**	**16 34 32.2**	**-0.4**
	0.5nm,0.8s,baz=319,slow=6.3,SNR=11						

IDC 06 16:27:57.7±3.7**, 20°.18S×176°.18W, h0**^{km}**, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.5**/19**, mbtmp3.6**/2**, Error ellipse: s-maj=253.4km s-min=74.7km az=162.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.26**	**256**	P	P	16 36 25.4	+0.2
	0.7nm,0.5s,baz=94,slow=8.1,SNR=30						
ASAR				PcP	PcP	16 37 59.6	-1.3
	0.2nm,0.6s,baz=108,slow=3.9,SNR=5.4						
WRA	**Warramunga Arr**	**46.34**	**261**	P	P	16 36 25.7	-0.2
	0.2nm,0.3s,baz=96,slow=7.4,SNR=6.1						
AKASG	**Malin Array Be**	**143.54**	**333**	PKP	PKPdf	16 47 35.8	+1.5
	1.4nm,0.4s,baz=45,slow=3.6,SNR=7.7						

*STR **06** 16:37:43.6±6.9, 41°.17N×15°.71E, h10^{km}, Ml3.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BJI **06** 16:38:08.6, 42°.38N×12°.45E, h33^{km}, mB5.0/2, mb4.5/6*
*IDC **06** 16:38:10.0±1.0, 42°.47N×13°.18E, h0^{km}, mb3.9/9, mb1 3.9/18, mb1mx3.9/35, mbtmp3.8/18, ML3.8/8, MS3.5/19, Ms1 3.6/19, ms1mx3.4/40, Error ellipse: s-maj=15.6km s-min=13.2km az=82.0*
*LDG **06** 16:38:09.6±0.1, 42°.41N×13°.39E, h2^{km}, Ml3.9/13, Error ellipse: s-maj=3.9km s-min=2.4km az=41.0*
*ISCJB **06** 16:38:09.3±0.2, 42°.39N±0°.01×13°.31E±0°.01, h9^{km}±1^{km}, mb4.2/24, MS3.8/18, Error ellipse: s-maj=2.1km s-min=1.5km az=28.6*
*NEIC **06** 16:38:09.0, 42°.36N×13°.33E, h10^{km}, mb4.3/9, MW4.4(ROM), After ROM.*
NEIC Felt [III] at Ascoli Piceno and Sulmona and [II] at Ancona, Avezzano, Cassino, Foligno, Isernia, Latina, Mentana, Pomezia, Rieti, Rocca di Papa, Rome, Spoleto and Terni. Also felt at Albano Laziale, Chieti, Ciampino, Falconara Marittima, Fonte Nuova, Perugia and Viterbo.
*MOS **06** 16:38:09.8±0.9, 42°.44N×13°.34E, h10^{km}, mb4.4/16, Error ellipse: s-maj=5.5km s-min=3.5km az=83.4*
*ROM **06** 16:38:09.7±0.1, 42°.36N×13°.34E, h10^{km}, Ml4.1/35, Error ellipse: s-maj=1.0km s-min=0.8km az=69.0*
*CSEM **06** 16:38:10.0±0.1, 42°.37N×13°.31E, h2^{km}, mb4.4/20, ML4.5/16, Mw4.4, Error ellipse: s-maj=2.1km s-min=1.7km az=34.0*
*PDG **06** 16:38:10.3±0.3, 42°.40N×13°.35E, h10^{km}, ML4.0/9, Error ellipse: s-maj=0.6km s-min=1.2km az=0.0*
*PRU **06** 16:38:11.4, 42°.43N×13°.44E, h0^{km}, M4.3*
*GEN **06** 16:38:11.3, 42°.36N×13°.33E, h10^{km}, ML3.9*
ISC 06 16:38:10.9±0.6**, 42°.36N**±0°.01×**13°.33E**±0°.01**, h10**^{km}±3^{km}**, n618,** σ1^{s}.**40**/708**, mb4.3**/24**, MS3.8**/18**, 70C-32D, Central**

Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**100**	ePg	**Pg**	**16 38 12.3**	**-0.6**
AQU	**L'Aquila**	**0.05**	**100**⇓	iPg	**Pg**	**16 38 12.3**	**-0.6**
AQU				Sg	**Sg**	**16 38 13.8**	**-0.6**
	24μm,0.3s						
AQU	**L'Aquila**	**0.05**	**100**⇓	iPg	**Pg**	**16 38 12.3**	**-0.6**
AQU				Sg	**Sg**	**16 38 13.8**	**-0.6**
	24μm,0.3s						
CAMP	**Campotosto**	**0.18**	**19**⇑	iPg	**Pg**	**16 38 14.1**	**-0.7**
CAMP				Sg	**Sg**	**16 38 17.2**	**-0.3**
CAMP	**Campotosto**	**0.18**	**19**⇑	iPg	**Pg**	**16 38 14.1**	**-0.7**
CAMP				Sg	**Sg**	**16 38 17.2**	**-0.3**
FIAM	**Fiamignano**	**0.18**	**239**	P	**Pg**	**16 38 14.6**	**-0.2**
FIAM				S	**Sg**	**16 38 17.5**	**0.0**
FIAM	**Fiamignano**	**0.18**	**239**⇑	iPg	**Pg**	**16 38 14.6**	**-0.2**
FIAM				Sg	**Sg**	**16 38 17.5**	**0.0**
	65μm,0.7s						
FIAM	**Fiamignano**	**0.18**	**239**⇑	iPg	**Pg**	**16 38 14.6**	**-0.2**
FIAM				Sg	**Sg**	**16 38 17.5**	**0.0**
	65μm,0.7s						
FAGN	**Fagnano**	**0.21**	**117**⇑	ePg	**Pg**	**16 38 14.8**	**-0.5**
FAGN				Sg	**Sg**	**16 38 17.9**	**-0.4**
	90μm,0.5s						
FAGN	**Fagnano**	**0.21**	**117**⇑	ePg	**Pg**	**16 38 14.8**	**-0.5**
FAGN				Sg	**Sg**	**16 38 17.9**	**-0.4**
	90μm,0.5s						
TERO	**Teramo**	**0.33**	**38**	P	**Pg**	**16 38 16.3**	**-1.2**
TERO				S	**Sg**	**16 38 21.1**	**-0.8**
TERO	**Teramo**	**0.33**	**38**	Pg	**Pg**	**16 38 16.3**	**-1.2**
TERO				Sg	**Sg**	**16 38 21.1**	**-0.8**
	55μm,0.8s						
TERO	**Teramo**	**0.33**	**38**	Pg	**Pg**	**16 38 16.3**	**-1.2**
TERO				Sg	**Sg**	**16 38 21.1**	**-0.8**
	55μm,0.8s						
PTQR	**Pietraquaria**	**0.34**	**171**	P	**Pg**	**16 38 17.1**	**-0.7**
PTQR	**Pietraquaria**	**0.34**	**171**⇑	iPg	**Pg**	**16 38 17.1**	**-0.7**
PTQR	**Pietraquaria**	**0.34**	**171**⇑	iPg	**Pg**	**16 38 17.1**	**-0.7**
VCEL	**Villa Celiera**	**0.38**	**85**	Pg	**Pg**	**16 38 17.5**	**-0.9**
VCEL				Sg	**Sg**	**16 38 24.2**	**+0.8**
	45μm,0.6s						
VCEL	**Villa Celiera**	**0.38**	**85**	Pg	**Pg**	**16 38 17.5**	**-0.9**
VCEL				Sg	**Sg**	**16 38 24.2**	**+0.8**
	45μm,0.6s						
MNS	**Montasola**	**0.48**	**273**	P	**Pg**	**16 38 19.4**	**-0.9**
MNS				S	**Sg**	**16 38 25.5**	**-1.1**
MNS	**Montasola**	**0.48**	**273**	P	**Pg**	**16 38 19.4**	**-0.9**
MNS				S	**Sg**	**16 38 25.5**	**-1.1**
MNS	**Montasola**	**0.48**	**273**	Pg	**Pg**	**16 38 19.4**	**-0.9**
	21μm,1.0s						
MNS	**Montasola**	**0.48**	**273**	Pg	**Pg**	**16 38 19.4**	**-0.9**
	21μm,1.0s						
MNS				S	**Sg**	**16 38 25.5**	**-1.1**
CERT	**Cerreto**	**0.49**	**212**	P	**Pg**	**16 38 19.5**	**-0.9**
CERT				S	**Sg**	**16 38 27.0**	**+0.2**
CERT	**Cerreto**	**0.49**	**212**	Pg	**Pg**	**16 38 19.5**	**-0.9**
CERT				Sg	**Sg**	**16 38 27.0**	**+0.2**
	18μm,0.4s						
CERT	**Cerreto**	**0.49**	**212**	Pg	**Pg**	**16 38 19.5**	**-0.9**
CERT				Sg	**Sg**	**16 38 27.0**	**+0.2**
	18μm,0.4s						
VVLD	**Villa Vallelon**	**0.54**	**156**	P	**Pg**	**16 38 20.1**	**-1.2**
VVLD	**Villa Vallelon**	**0.54**	**156**	Pg	**Pg**	**16 38 20.1**	**-1.2**
VVLD				Sg	**Sg**	**16 38 27.7**	**-0.7**
	7μm,0.6s						
VVLD	**Villa Vallelon**	**0.54**	**156**	Pg	**Pg**	**16 38 20.1**	**-1.2**
VVLD				Sg	**Sg**	**16 38 27.7**	**-0.7**
	7μm,0.6s						
INTR	**Introdacqua**	**0.55**	**129**	P	**Pg**	**16 38 20.5**	**-1.1**
INTR				S	**Sb**	**16 38 29.7**	**-1.0**
INTR	**Introdacqua**	**0.55**	**129**	Pg	**Pg**	**16 38 20.5**	**-1.1**
INTR				Sg	**Sg**	**16 38 28.4**	**-0.5**
	12μm,0.7s						
INTR	**Introdacqua**	**0.55**	**129**	Pg	**Pg**	**16 38 20.5**	**-1.1**
INTR				Sg	**Sg**	**16 38 28.4**	**-0.5**
	12μm,0.7s						
INTR				S	**Sb**	**16 38 29.7**	**-1.0**
MTCE	**Montecelio**	**0.55**	**232**	P	**Pg**	**16 38 20.7**	**-0.9**
MTCE				S	**Sb**	**16 38 30.9**	**+0.2**
MTCE	**Montecelio**	**0.55**	**232**	Pg	**Pg**	**16 38 20.7**	**-0.9**
	6μm,0.7s						
MTCE	**Montecelio**	**0.55**	**232**	Pg	**Pg**	**16 38 20.7**	**-0.9**
	6μm,0.7s						
MTCE				S	**Sb**	**16 38 30.9**	**+0.2**
GUAR	**Guarcino**	**0.57**	**181**	P	**Pg**	**16 38 20.8**	**-1.1**
GUAR	**Guarcino**	**0.57**	**181**	Pg	**Pg**	**16 38 20.8**	**-1.1**
	8μm,0.9s						
GUAR	**Guarcino**	**0.57**	**181**	Pg	**Pg**	**16 38 20.8**	**-1.1**
	8μm,0.9s						
TRTR	**Tortoreto Alta**	**0.62**	**44**	Pg	**Pg**	**16 38 22.4**	**-0.5**
	124μm,1.0s						
TRTR	**Tortoreto Alta**	**0.62**	**44**	Pg	**Pg**	**16 38 22.4**	**-0.5**
	124μm,1.0s						
OFFI	**Offida**	**0.63**	**25**	P	**Pg**	**16 38 22.6**	**-0.5**
OFFI				S	**Sb**	**16 38 33.2**	**+0.3**
OFFI	**Offida**	**0.63**	**25**	Pg	**Pg**	**16 38 22.6**	**-0.5**
	70μm,0.8s						
OFFI	**Offida**	**0.63**	**25**	Pg	**Pg**	**16 38 22.6**	**-0.5**
	70μm,0.8s						
OFFI				S	**Sb**	**16 38 33.2**	**+0.3**
FDMO	**Fiordimonte**	**0.70**	**345**	Pg	**Pg**	**16 38 22.9**	**-1.4**
FDMO				Sg	**Sg**	**16 38 33.6**	**+0.1**
	5μm,0.3s						
FDMO	**Fiordimonte**	**0.70**	**345**	Pg	**Pg**	**16 38 22.9**	**-1.4**
FDMO				Sg	**Sg**	**16 38 33.6**	**+0.1**
	5μm,0.3s						
POFI	**Posta Fibreno**	**0.70**	**156**	Pg	**Pg**	**16 38 23.1**	**-1.4**
POFI	**Posta Fibreno**	**0.70**	**156**	Pg	**Pg**	**16 38 23.1**	**-1.4**
LPEL	**Lama dei Pelig**	**0.71**	**116**	Pg	**Pg**	**16 38 22.8**	**-1.8**
LPEL				Sg	**Sg**	**16 38 33.6**	**-0.2**
	6μm,0.8s						
LPEL	**Lama dei Pelig**	**0.71**	**116**	Pg	**Pg**	**16 38 22.8**	**-1.8**
LPEL				Sg	**Sg**	**16 38 33.6**	**-0.2**
	6μm,0.8s						
RMP	**Rome, Mte Porz**	**0.72**	**220**	Pg	**Pg**	**16 38 23.7**	**-1.1**
	7μm,0.6s						
RMP	**Rome, Mte Porz**	**0.72**	**220**	Pg	**Pg**	**16 38 23.7**	**-1.1**
	7μm,0.6s						
SDI	**San Donato**	**0.74**	**151**	P	**Pg**	**16 38 23.7**	**-1.5**
SDI	**San Donato**	**0.74**	**151**	P	**Pg**	**16 38 23.7**	**-1.5**
SDI	**San Donato**	**0.74**	**151**	Pg	**Pg**	**16 38 23.7**	**-1.5**
SDI	**San Donato**	**0.74**	**151**	Pg	**Pg**	**16 38 23.7**	**-1.5**
CAFR	**Castel Frentan**	**0.77**	**100**	Pg	**Pg**	**16 38 24.7**	**-0.9**
	10μm,0.5s						
CAFR	**Castel Frentan**	**0.77**	**100**	Pg	**Pg**	**16 38 24.7**	**-0.9**
	10μm,0.5s						
GIUL	**Giuliano Di Ro**	**0.81**	**184**	Pg	**Pg**	**16 38 25.0**	**-1.4**
GIUL				Sg	**Sg**	**16 38 35.9**	**-1.0**
	6μm,0.8s						
GIUL	**Giuliano Di Ro**	**0.81**	**184**	Pg	**Pg**	**16 38 25.0**	**-1.4**
GIUL				Sg	**Sg**	**16 38 35.9**	**-1.0**
	6μm,0.8s						
LAV9	**Lanuvio**	**0.83**	**215**	Pg	**Pg**	**16 38 25.6**	**-1.3**
LAV9	**Lanuvio**	**0.83**	**215**	Pg	**Pg**	**16 38 25.6**	**-1.3**
ASSB	**Assisi San Ben**	**0.84**	**324**	Pg	**Pg**	**16 38 25.6**	**-1.5**
	10μm,0.6s						
ASSB	**Assisi San Ben**	**0.84**	**324**	Pg	**Pg**	**16 38 25.6**	**-1.5**
	10μm,0.6s						
RNI2	**Rionero Sannit**	**0.90**	**137**	Pg	**Pg**	**16 38 26.8**	**-1.4**
	6μm,0.8s						
RNI2	**Rionero Sannit**	**0.90**	**137**	Pg	**Pg**	**16 38 26.8**	**-1.4**
	6μm,0.8s						
CERA	**Filignano**	**0.92**	**146**	Pg	**Pg**	**16 38 26.7**	**-1.9**
	5μm,0.8s						
CERA	**Filignano**	**0.92**	**146**	Pg	**Pg**	**16 38 26.7**	**-1.9**
	5μm,0.8s						
SNTG	**Esanatoglia**	**0.94**	**342**	P	**Pg**	**16 38 27.1**	**-1.8**
SNTG	**Esanatoglia**	**0.94**	**342**	Pg	**Pg**	**16 38 27.1**	**-1.8**
SNTG	**Esanatoglia**	**0.94**	**342**	Pg	**Pg**	**16 38 27.1**	**-1.8**
MIDA	**Miranda**	**1.00**	**136**	Pg	**Pg**	**16 38 27.8**	**-2.2**
	11μm,1.6s						
MIDA	**Miranda**	**1.00**	**136**	Pg	**Pg**	**16 38 27.8**	**-2.2**
	11μm,1.6s						
CING	**Cingoli**	**1.02**	**354**	P	**Pg**	**16 38 28.5**	**-1.9**
CING				S	**Sb**	**16 38 44.3**	**+0.2**
CING	**Cingoli**	**1.02**	**354**	Pg	**Pg**	**16 38 28.5**	**-1.9**
	8μm,0.7s						
CING	**Cingoli**	**1.02**	**354**	Pg	**Pg**	**16 38 28.5**	**-1.9**
	8μm,0.7s						
CING				S	**Sb**	**16 38 44.3**	**+0.2**
TOLF	**Tolfa**	**1.03**	**254**	Pg	**Pg**	**16 38 29.4**	**-1.3**
	5μm,0.9s						
TOLF	**Tolfa**	**1.03**	**254**	Pg	**Pg**	**16 38 29.4**	**-1.3**
	5μm,0.9s						
FRES	**Fresagrandinar**	**1.07**	**111**	Pg	**Pg**	**16 38 29.8**	**-1.6**
FRES	**Fresagrandinar**	**1.07**	**111**	Pg	**Pg**	**16 38 29.8**	**-1.6**
MURB	**Monte Urbino**	**1.08**	**327**	Pg	**Pg**	**16 38 29.9**	**-1.7**
	13μm,0.5s						
MURB	**Monte Urbino**	**1.08**	**327**	Pg	**Pg**	**16 38 29.9**	**-1.7**
	13μm,0.5s						
TRIV	**Trivento**	**1.09**	**123**	Pg	**Pg**	**16 38 30.3**	**-1.4**
	3μm,0.9s						
TRIV	**Trivento**	**1.09**	**123**	Pg	**Pg**	**16 38 30.3**	**-1.4**
	3μm,0.9s						
SACS	**San Casciano d**	**1.16**	**295**	Pg	**Pb**	**16 38 31.6**	**-1.4**
LATE	**Laterza**	**1.16**	**283**	Pg	**Pb**	**16 38 31.6**	**-1.4**
	3μm,1.8s						
LATE	**Laterza**	**1.16**	**283**	Pg	**Pb**	**16 38 31.6**	**-1.4**
	3μm,1.8s						
VAGA	**Valle Agricola**	**1.16**	**144**	Pg	**Pb**	**16 38 31.7**	**-1.4**
	2μm,1.0s						
VAGA	**Valle Agricola**	**1.16**	**144**	Pg	**Pb**	**16 38 31.7**	**-1.4**
	2μm,1.0s						
ARVD	**Arcevia**	**1.17**	**346**	Pg	**Pb**	**16 38 31.3**	**-1.9**
	11μm,1.2s						
ARVD	**Arcevia**	**1.17**	**346**	Pg	**Pb**	**16 38 31.3**	**-1.9**
	11μm,1.2s						
AOI	**Ancona**	**1.20**	**9**	Pg	**Pb**	**16 38 31.5**	**-2.3**
	12μm,1.1s						
AOI	**Ancona**	**1.20**	**9**	Pg	**Pb**	**16 38 31.5**	**-2.3**
	12μm,1.1s						
BSSO	**Busso**	**1.25**	**130**	Pg	**Pn**	**16 38 32.6**	**-1.9**
	4μm,1.3s						
BSSO	**Busso**	**1.25**	**130**	Pg	**Pn**	**16 38 32.6**	**-1.9**
	4μm,1.3s						
SGG	**Gregorio Mates**	**1.25**	**141**	Pg	**Pn**	**16 38 33.6**	**-0.9**
	2μm,0.8s						
SGG	**Gregorio Mates**	**1.25**	**141**	Pg	**Pn**	**16 38 33.6**	**-0.9**
	2μm,0.8s						
PIEI	**Pieia**	**1.31**	**334**	Pg	**Pn**	**16 38 33.6**	**-1.7**
PIEI	**Pieia**	**1.31**	**334**	Pg	**Pn**	**16 38 33.6**	**-1.7**
PTRJ	**Pietraroja**	**1.34**	**138**	Pn	**Pn**	**16 38 34.7**	**-1.1**
	5μm,0.8s						
PTRJ	**Pietraroja**	**1.34**	**138**	Pn	**Pn**	**16 38 34.7**	**-1.1**
	5μm,0.8s						
FSSB	**Fossombrone**	**1.39**	**343**	Pn	**Pn**	**16 38 35.0**	**-1.4**
	6μm,0.6s						
FSSB	**Fossombrone**	**1.39**	**343**	Pn	**Pn**	**16 38 35.0**	**-1.4**
	6μm,0.6s						
ARCI	**Arcidosso**	**1.45**	**290**	Pn	**Pn**	**16 38 37.1**	**-0.2**
	3μm,1.3s						
ARCI	**Arcidosso**	**1.45**	**290**	Pn	**Pn**	**16 38 37.1**	**-0.2**
	3μm,1.3s						
PARC	**Parchiule**	**1.51**	**328**	Pn	**Pn**	**16 38 37.6**	**-0.5**
	4μm,0.7s						
PARC	**Parchiule**	**1.51**	**328**	Pn	**Pn**	**16 38 37.6**	**-0.5**
	4μm,0.7s						
MS1	**Monte Sant'Ang**	**2.05**	**108**	ePn	**Pn**	**16 38 46.5**	**+0.9**
NVLJ	**Novalja**	**2.47**	**27**	i Pn	**Pn**	**16 38 50.7**	**-0.5**
NVLJ				Sn	**Sn**	**16 39 20.3**	**-1.1**
NVLJ	**Novalja**	**2.47**	**27**	i Pn	**Pn**	**16 38 50.6**	**-0.5**
NVLJ				Sn	**Sn**	**16 39 20.2**	**-1.1**
CDT	**Castel del Mon**	**2.55**	**119**	ePn	**Pn**	**16 38 52.8**	**+0.5**
CDT				eSn	**Sb**	**16 39 26.3**	**-1.8**
MAIM	**Mastiano**	**2.59**	**308**	P	**Pn**	**16 38 53.3**	**+0.4**
BAI	**Bari**	**2.94**	**114**	ePn	**Pn**	**16 38 58.8**	**+1.2**
BAI				eSn	**Sn**	**16 39 35.5**	**+2.6**
CUC	**Castrocucco**	**3.02**	**141**	ePn	**Pn**	**16 39 00.4**	**+1.6**
CUC	**Castrocucco**	**3.02**	**141**	ePn	**Pn**	**16 39 00.4**	**+1.6**
GRAM	**Graiana**	**3.19**	**313**	P	**Pn**	**16 39 02.8**	**+1.6**
PGF	**Pioggiola**	**3.21**	**275**	ePn	**Pn**	**16 39 01.5**	**0.0**
	SNR=1.0						
PGF				eSn	**Sn**	**16 39 41.5**	**+1.7**
	137nm,0.7s						
PGF	**Pioggiola**	**3.21**	**275**	ePn	**Pn**	**16 39 01.5**	**0.0**
	SNR=1.0						
PGF				eSn	**Sn**	**16 39 41.5**	**+1.7**
	69nm,0.7s						
SKDS	**Skadanscina**	**3.22**	**9**⇑	iPn	**Pn**	**16 39 00.7**	**-0.9**
SKDS				i Sn	**Sn**	**16 39 39.9**	**-0.1**
SKDS							
	comp=Z,324nm,0.6s						
SKDS	**Skadanscina**	**3.22**	**9**	Pn	**Pn**	**16 39 00.6**	**-0.9**
SKDS				i Sn	**Sn**	**16 39 39.9**	**-0.1**
	comp=Z,324nm,0.6s						
STON	**Ston**	**3.27**	**80**	ePn	**Pn**	**16 39 01.8**	**-0.4**
STON				Sn	**Sn**	**16 39 40.4**	**-0.6**
STON	**Ston**	**3.27**	**80**	ePn	**Pn**	**16 39 01.7**	**-0.4**
STON				Sn	**Sn**	**16 39 40.4**	**-0.6**
TRI	**Trieste**	**3.36**	**5**	eP	**Pn**	**16 39 02.2**	**-1.2**
TRI	**Trieste**	**3.36**	**5**	ePn	**Pn**	**16 39 02.2**	**-1.2**
TRI	**Trieste**	**3.36**	**5**	eP	**Pn**	**16 39 02.2**	**-1.2**
BOJS	**Bojanci**	**3.43**	**23**	i Pn	**Pn**	**16 39 04.3**	**-0.1**
BOJS	**Bojanci**	**3.43**	**23**	i Pn	**Pn**	**16 39 04.3**	**-0.1**
VISS	**Visnje**	**3.61**	**17**	i Pn	**Pn**	**16 39 06.5**	**-0.3**
VISS				eSn	**Sn**	**16 39 50.0**	**+0.5**
VISS							
	comp=Z,1μm,1.6s						
VISS	**Visnje**	**3.61**	**17**	i Pn	**Pn**	**16 39 06.5**	**-0.3**
VISS				eSn	**Sn**	**16 39 50.0**	**+0.5**
	comp=Z,1μm,1.6s						
VOY	**Vojsko**	**3.69**	**6**	ePn	**Pn**	**16 39 06.8**	**-1.3**
VOY				e		16 39 24.2	
VOY				eSn	**Sn**	**16 39 50.8**	**-0.9**
VOY	**Vojsko**	**3.69**	**6**	ePn	**Pn**	**16 39 06.8**	**-1.3**
VOY				eSn	**Sn**	**16 39 50.8**	**-0.9**
HCY	**Herceg Novi**	**3.83**	**87**⇓	iPn	**Pn**	**16 39 10.5**	**+0.7**
HCY				eSn	**Sn**	**16 39 56.2**	**+1.3**
HCY	**Herceg Novi**	**3.83**	**87**⇓	iPn	**Pn**	**16 39 10.5**	**+0.7**
HCY				eSn	**Sn**	**16 39 56.2**	**+1.3**
CADS	**Cadrg**	**3.88**	**4**	i Pn	**Pn**	**16 39 09.8**	**-0.8**
CADS	**Cadrg**	**3.88**	**4**	i Pn	**Pn**	**16 39 09.8**	**-0.8**
BRY	**Bratogost**	**3.88**	**80**	ePn	**Pn**	**16 39 11.2**	**+0.5**
BRY				eSn	**Sn**	**16 39 57.8**	**+1.3**
BRY	**Bratogost**	**3.88**	**80**	ePn	**Pn**	**16 39 11.2**	**+0.5**
BRY				eSn	**Sn**	**16 39 57.8**	**+1.3**
PDKS	**Podkum**	**3.89**	**17**	i Pn	**Pn**	**16 39 10.7**	**0.0**
PDKS				eSn	**Sn**	**16 39 55.7**	**-0.7**
PDKS							
	comp=Z,1μm,1.5s						
PDKS	**Podkum**	**3.89**	**17**	i Pn	**Pn**	**16 39 10.7**	**0.0**
PDKS				eSn	**Sn**	**16 39 55.7**	**-0.7**
	comp=Z,1μm,1.5s						
PCP	**Piancastagn**	**4.11**	**304**	P	**Pn**	**16 39 12.8**	**-1.0**
TIP	**Timpagrande**	**4.11**	**140**	ePn	**Pn**	**16 39 15.2**	**+1.4**
TIP	**Timpagrande**	**4.11**	**140**	ePn	**Pn**	**16 39 15.2**	**+1.4**
BUM	**Brajici-Budva**	**4.12**	**89**⇑	iPn	**Pn**	**16 39 14.9**	**+0.9**
BUM				eSn	**Sn**	**16 40 02.9**	**+0.5**
BUM	**Brajici-Budva**	**4.12**	**89**⇑	iPn	**Pn**	**16 39 14.9**	**+0.9**
BUM				eSn	**Sn**	**16 40 02.9**	**+0.5**
VSL	**Villasalto**	**4.14**	**228**	ePn	**Pn**	**16 39 12.6**	**-1.6**
VSL	**Villasalto**	**4.14**	**228**	ePn	**Pn**	**16 39 12.6**	**-1.6**
UPM	**Unac-Piva**	**4.19**	**77**⇑	iPn	**Pn**	**16 39 16.0**	**+1.0**
UPM				eSn	**Sn**	**16 40 05.5**	**+1.4**
UPM	**Unac-Piva**	**4.19**	**77**⇑	iPn	**Pn**	**16 39 16.0**	**+1.0**
UPM				eSn	**Sn**	**16 40 05.5**	**+1.4**
NKY	**Niksic**	**4.21**	**82**⇓	iPn	**Pn**	**16 39 16.3**	**+1.1**
NKY				eSn	**Sn**	**16 40 05.1**	**+0.7**
NKY	**Niksic**	**4.21**	**82**⇓	iPn	**Pn**	**16 39 16.3**	**+1.1**
NKY				eSn	**Sn**	**16 40 05.1**	**+0.7**
OBKA	**Obir**	**4.24**	**11**⇓	iPn	**Pn**	**16 39 15.3**	**-0.3**
	SNR=19						
OBKA	**Obir**	**4.24**	**11**⇓	iPn	**Pn**	**16 39 15.3**	**-0.3**
OBKA	**Obir**	**4.24**	**11**⇓	iPn	**Pn**	**16 39 15.3**	**-0.3**
IMI	**Imperia**	**4.27**	**293**	P	Pn	16 39 12.3	-3.7
MYKA	**Terra Mystica**	**4.27**	**3**⇑	iPn	**Pn**	**16 39 16.1**	**+0.1**
MYKA	**Terra Mystica**	**4.27**	**3**⇑	iPn	**Pn**	**16 39 16.1**	**+0.1**
MYKA	**Terra Mystica**	**4.27**	**3**⇑	iPn	**Pn**	**16 39 16.1**	**+0.1**
PDG	**Podgorica**	**4.39**	**87**⇑	iPn	**Pn**	**16 39 18.6**	**+1.0**
PDG				eSn	**Sn**	**16 40 09.6**	**+0.9**
TTG	**Podgorica**	**4.39**	**87**⇑	iPn	**Pn**	**16 39 18.6**	**+1.0**
TTG				eSn	**Sn**	**16 40 09.6**	**+0.9**
ULC	**Ulcinj**	**4.42**	**93**⇑	iPn	**Pn**	**16 39 18.4**	**+0.4**
ULC				eSn	**Sn**	**16 40 10.2**	**+0.8**
ULC	**Ulcinj**	**4.42**	**93**⇑	iPn	**Pn**	**16 39 18.4**	**+0.4**
ULC				eSn	**Sn**	**16 40 10.2**	**+0.8**
ABTA	**Abfaltersbach**	**4.42**	**353**⇑	iPn	**Pn**	**16 39 18.4**	**+0.3**
	SNR=74						
ABTA	**Abfaltersbach**	**4.42**	**353**⇑	iPn	**Pn**	**16 39 18.4**	**+0.3**
ABTA	**Abfaltersbach**	**4.42**	**353**⇑	iPn	**Pn**	**16 39 18.4**	**+0.3**
SOKA	**Soboth**	**4.48**	**15**⇑	iPn	**Pn**	**16 39 18.8**	**-0.1**
SOKA	**Soboth**	**4.48**	**15**⇑	iPn	**Pn**	**16 39 18.8**	**-0.1**
SOKA	**Soboth**	**4.48**	**15**⇑	iPn	**Pn**	**16 39 18.8**	**-0.1**
SAOF	**Saorge**	**4.52**	**293**	P	**Pn**	**16 39 19.5**	**0.0**
SAOF	**Saorge**	**4.52**	**293**	P	**Pn**	**16 39 19.5**	**0.0**
SAOF	**Saorge**	**4.52**	**293**	P	**Pn**	**16 39 19.5**	**0.0**

SAOF	Saorge	4.52	293	P	Pn	16 39 19.5	0.0
CEL	Celeste	4.54	154	Pn	Pn	16 39 19.0	-0.8
CEL	Celeste	4.54	154	Pn	Pn	16 39 19.0	-0.8
PLE	Pljevlja	4.56	76	⇑iPn	Pn	16 39 21.1	+1.1
PLE				eSn	Sn	16 40 13.6	+0.5
PLE	Pljevlja	4.56	76	⇑iPn	Pn	16 39 21.1	+1.1
PLE				eSn	Sn	16 40 13.6	+0.5
SBF	Sospel	4.57	291	ePn	Pn	16 39 20.1	0.0
	SNR=1.0						
SBF				eSn	Sn	16 40 11.0	-2.3
	comp=Z,202nm,0.8s						
SBF	Sospel	4.57	291	ePn	Pn	16 39 20.1	0.0
	SNR=1.0						
SBF				eSn	Sn	16 40 11.0	-2.3
	comp=Z,101nm,0.8s						
REVF	Revere	4.58	289	P	Pn	16 39 20.1	-0.2
REVF	Revere	4.58	289	P	Pn	16 39 20.1	-0.2
REVF	Revere	4.58	289	P	Pn	16 39 20.1	-0.2
REVF	Revere	4.58	289	P	Pn	16 39 20.1	-0.2
AUTN	L'Aution	4.61	293	P	Pn	16 39 21.8	+0.9
AUTN	L'Aution	4.61	293	P	Pn	16 39 21.8	+0.9
AUTN	L'Aution	4.61	293	P	Pn	16 39 21.8	+0.9
AUTN	L'Aution	4.61	293	P	Pn	16 39 21.8	+0.9
KBA	Koelnbreinsper	4.71	0	⇓iP	Pn	16 39 22.6	+0.4
KBA	Koelnbreinsper	4.71	0	⇓iPn	Pn	16 39 22.6	+0.4
	SNR=19						
KBA	Koelnbreinsper	4.71	0	⇓iPn	Pn	16 39 22.6	+0.4
KBA	Koelnbreinsper	4.71	0	iP	Pn	16 39 22.6	+0.4
TOUF	Mont Tournerai	4.74	292	P	Pn	16 39 23.5	+0.9
TOUF	Mont Tournerai	4.74	292	P	Pn	16 39 23.5	+0.9
TOUF	Mont Tournerai	4.74	292	P	Pn	16 39 23.5	+0.9
TOUF	Mont Tournerai	4.74	292	P	Pn	16 39 23.5	+0.9
BEHE	Becsehely	4.79	30	ePn	Pn	16 39 22.9	-0.2
BEHE	Becsehely	4.79	30	eP	Pn	16 39 22.9	-0.2
BEY	Berane	4.87	82	ePn	Pn	16 39 25.6	+1.3
BEY				eSn	Sn	16 40 21.8	+1.0
IVA	Berane	4.87	82	ePn	Pn	16 39 25.6	+1.3
IVA				eSn	Sn	16 40 21.8	+1.0
PUK	Puka	4.89	92	iPN	Pn	16 39 25.9	+1.4
PUK	Puka	4.89	92	iPn	Pn	16 39 25.9	+1.4
PVY	Plav	4.91	85	⇑iPn	Pn	16 39 26.2	+1.4
PVY				eSn	Sn	16 40 22.5	+0.7
CALN	Calern	4.92	289	P	Pn	16 39 25.5	+0.5
CALN	Calern	4.92	289	P	Pn	16 39 25.5	+0.5
CALN	Calern	4.92	289	P	Pn	16 39 25.5	+0.5
CALN	Calern	4.92	289	P	Pn	16 39 25.5	+0.5
TIR	Tirane	4.99	100	iPN	Pn	16 39 26.7	+0.9
TIR	Tirane	4.99	100	eP	Pn	16 39 26.0	+0.2
TIR	Tirane	4.99	100	ePn	Pn	16 39 25.9	+0.2
TIR	Tirane	4.99	100	eP	Pn	16 39 26.6	+0.8
TIR	Tirane	4.99	100	eP	Pn	16 39 26.0	+0.2
BCI	Bajram Curri	4.99	88	iPN	Pn	16 39 27.8	+1.9
BCI	Bajram Curri	4.99	88	iPn	Pn	16 39 27.8	+1.9
TUE	Stuetta	5.00	327	ePn	Pn	16 39 26.8	+0.6
TUE	Stuetta	5.00	327	ePn	Pn	16 39 26.8	+0.6
FETA	Feichten	5.01	339	⇑iPn	Pn	16 39 27.5	+1.2
	SNR=31						
FETA	Feichten	5.01	339	⇑iPn	Pn	16 39 27.4	+1.2
FETA	Feichten	5.01	339	⇑iPn	Pn	16 39 27.5	+1.2
WTTA	Wattenberg	5.05	347	⇓iP	Pn	16 39 27.8	+1.1
WTTA	Wattenberg	5.05	347	⇓iPn	Pn	16 39 27.8	+1.1
	SNR=27						
WTTA	Wattenberg	5.05	347	⇓iPn	Pn	16 39 27.8	+1.1
WTTA	Wattenberg	5.05	347	iP	Pn	16 39 27.8	+1.1
FRF	La Foret Royal	5.05	286	ePn	Pn	16 39 26.5	-0.1
	SNR=1.0						
FRF				eSn	Sn	16 40 21.2	-3.8
	comp=Z,48nm,0.8s						
FRF	La Foret Royal	5.05	286	ePn	Pn	16 39 26.5	-0.1
	SNR=1.0						
FRF				eSn	Sn	16 40 21.2	-3.8
	comp=Z,24nm,0.8s						
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	16 39 28.2	+1.3
DAVOX				Sn	Sn	16 40 27.7	+2.2
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	16 39 28.2	+1.3
	comp=Z,4.2nm,0.3s,baz=156,slow=18,SNR=41						
DAVOX				Sn	Sn	16 40 27.7	+2.2
	comp=Z,5.5nm,0.3s,baz=286,slow=20,SNR=5.4						
DAVOX	Davos/Dischmat	5.06	332	P	Pn	16 39 28.2	+1.3
	comp=Z,4.0nm,0.3s						
DAVOX				S	Sn	16 40 27.7	+2.2
	comp=Z,6.0nm,0.3s						
LMR	La Mourre	5.11	283	ePn	Pn	16 39 26.9	-0.5
	SNR=1.0						
LMR				eSn	Sn	16 40 22.8	-3.7
	comp=Z,29nm,0.6s						
LMR	La Mourre	5.11	283	ePn	Pn	16 39 26.9	-0.5
	SNR=1.0						
LMR				eSn	Sn	16 40 22.8	-3.7
	comp=Z,14nm,0.6s						
WATA	Walderalm	5.13	347	⇑iP	Pn	16 39 28.6	+0.8
WATA	Walderalm	5.13	347	⇑iPn	Pn	16 39 28.6	+0.8
	SNR=23						
WATA	Walderalm	5.13	347	⇑iPn	Pn	16 39 28.6	+0.8
WATA	Walderalm	5.13	347	iP	Pn	16 39 28.6	+0.8
ARSA	Arzberg	5.13	17	⇓iPn	Pn	16 39 27.3	-0.5
ARSA	Arzberg	5.13	17	⇓iPn	Pn	16 39 27.3	-0.5
ARSA	Arzberg	5.13	17	⇓iPn	Pn	16 39 27.3	-0.5
DIVS	Divibare	5.17	68	P	Pn	16 39 29.0	+0.7
DIVS	Divibare	5.17	68	P	Pn	16 39 29.0	+0.7
SURF	Saint Ours	5.20	296	P	Pn	16 39 31.4	+2.5
SURF	Saint Ours	5.20	296	P	Pn	16 39 31.4	+2.5
SURF	Saint Ours	5.20	296	P	Pn	16 39 31.4	+2.5
MOTA	Moosalm	5.23	343	⇑iP	Pn	16 39 30.4	+1.2
MOTA	Moosalm	5.23	343	⇑iPn	Pn	16 39 30.4	+1.2
	SNR=20						
MOTA	Moosalm	5.23	343	⇑iPn	Pn	16 39 30.4	+1.2
MOTA	Moosalm	5.23	343	iP	Pn	16 39 30.4	+1.2
MBDF	Montbardon	5.32	299	eP	Pn	16 39 31.7	+1.2
	SNR=1.0						
MBDF	Montbardon	5.32	299	eP	Pn	16 39 31.7	+1.2
	SNR=1.0						
PHP	Peshkopia	5.34	95	P	Pn	16 39 32.9	+2.2
PHP	Peshkopia	5.34	95	P	Pn	16 39 32.9	+2.2
RJOB	Jochberg	5.39	356	ePn	Pn	16 39 32.4	+1.1
PKSM	Moragy	5.42	43	ePn	Pn	16 39 31.4	-0.3
PKSM	Moragy	5.42	43	eP	Pn	16 39 31.4	-0.3
RETA	Reutte	5.44	341	⇑iPn	Pn	16 39 33.7	+1.7
	SNR=16						
RETA	Reutte	5.44	341	⇑iPn	Pn	16 39 33.7	+1.7
RETA	Reutte	5.44	341	⇑iPn	Pn	16 39 33.7	+1.7
DAVA	Damuels	5.50	335	⇑iPn	Pn	16 39 34.6	+1.6
	SNR=32						
DAVA	Damuels	5.50	335	⇑iPn	Pn	16 39 34.6	+1.6
DAVA	Damuels	5.50	335	⇑iPn	Pn	16 39 34.6	+1.6
BNI	Bardonecchia	5.52	301	eP	Pn	16 39 35.1	+1.9
BNI	Bardonecchia	5.52	301	ePn	Pn	16 39 35.1	+1.9
BNI	Bardonecchia	5.52	301	eP	Pn	16 39 35.1	+1.9
MOA	Molln	5.53	7	⇓iPn	Pn	16 39 33.2	0.0
	SNR=26						
MOA	Molln	5.53	7	⇓iPn	Pn	16 39 33.2	0.0
MOA	Molln	5.53	7	⇓iPn	Pn	16 39 33.2	0.0
KEK	Kerkira	5.56	116	P	Pn	16 39 35.5	+1.8
LPG	La Plagne	5.69	306	eP	Pn	16 39 37.9	+2.2
LPG				eSn	Sn	16 40 37.1	-4.1
	comp=Z,44nm,0.7s						
LPG	La Plagne	5.69	306	eP	Pn	16 39 37.9	+2.2
LPL	La Plagne	5.71	306	eP	Pn	16 39 38.1	+2.2
	SNR=1.0						
LPL				eSn	Sn	16 40 36.9	-4.8
	comp=Z,39nm,0.7s						
LPL	La Plagne	5.71	306	eP	Pn	16 39 38.1	+2.2
	SNR=1.0						
SOP	Sopron	5.79	22	⇑epPn	Pn	16 39 37.3	+0.5
SOP	Sopron	5.79	22	⇑eP	Pn	16 39 37.3	+0.5
CONA	Conrad Observa	5.84	17	⇑iPn	Pn	16 39 37.4	-0.3
	SNR=37						
CONA	Conrad Observa	5.84	17	⇑iPn	Pn	16 39 37.4	-0.3
CONA	Conrad Observa	5.84	17	⇑iPn	Pn	16 39 37.4	-0.3
SMRF	Simiane la Rot	5.89	288	eP	Pn	16 39 39.3	+1.0
	SNR=1.0						
SMRF	Simiane la Rot	5.89	288	eP	Pn	16 39 39.3	+1.0
	SNR=1.0						
ORIF	Oris-en-Rattie	5.98	298	eP	Pn	16 39 42.3	+2.8
	SNR=1.0						
IGT	Igoumenitsa	6.01	116	P	Pn	16 39 41.4	+1.6
NEST	Nestorio	6.12	106	P	Pn	16 39 43.5	+2.0
BIA	Bitola	6.13	100	ePn	Pn	16 39 42.4	+0.8
BIA	Bitola	6.13	100	ePn	Pn	16 39 42.4	+0.8
OG01	Vacheresse	6.20	312	P	Pn	16 39 45.2	+2.7
OG01	Vacheresse	6.20	312	P	Pn	16 39 45.2	+2.7
FNA	Florina	6.24	102	P	Pn	16 39 44.1	+1.1
FNA	Florina	6.24	102	eP	Pn	16 39 44.1	+1.1

OCF	Saint Nazaire	6.25	293	P	Pn	16 39 45.6	+2.4
OG26	St.-Nazaire-De	6.25	293	P	Pn	16 39 45.6	+2.4
GEC2	GERESS Array S	6.49	2	eP	Pn	16 39 46.4	-0.1
GEC2	GERESS Array S	6.49	2	ePn	Pn	16 39 46.4	-0.1
GEC2	GERESS Array S	6.49	2	eP	Pn	16 39 46.4	-0.1
GERES	GERESS Array B	6.49	2	Pn	Pn	16 39 45.7	-0.8
GERES				Sn	Sn	16 40 58.4	-2.2
GERES	GERESS Array B	6.49	2	Pn	Pn	16 39 45.7	-0.8
	comp=Z,1.6nm,0.3s,baz=184,slow=13,SNR=32						
GERES				Sn	Sn	16 40 58.4	-2.2
	comp=Z,7.0nm,0.3s,baz=186,slow=20,SNR=16						
GERES				LR	LR	16 42 38.1	
	comp=Z,74nm,20.8s,baz=7.2,slow=42						
GERES	GERESS Array B	6.49	2	P	Pn	16 39 45.7	-0.8
	comp=Z,2.0nm,0.3s						
GERES				S	Sn	16 40 58.4	-2.2
	comp=Z,7.0nm,0.3s						
BUD	Budapest	6.52	36	⇑epPn	Pn	16 39 50.9	+4.1
LKD2	Lefkada island	6.62	120	P	Pn	16 39 50.6	+2.3
LKD2	Lefkada island	6.62	120	eP	Pn	16 39 50.0	+1.7
FELD	Feldberg im Sc	6.67	327	P	Pn	16 39 48.5	-0.6
CABF	La Chapelle	6.70	312	ePn	Pn	16 39 49.8	+0.4
	SNR=1.0						
CABF				eSg	Sb	16 41 32.3	+4.8
	comp=Z,24nm,0.8s,SNR=1.0						
CABF	La Chapelle	6.70	312	ePn	Pn	16 39 49.8	+0.4
	SNR=1.0						
VIVF	Saint-Julien-l	6.76	295	ePn	Pn	16 39 51.5	+1.3
	SNR=1.0						
VIVF	Saint-Julien-l	6.76	295	ePn	Pn	16 39 51.5	+1.3
	SNR=1.0						
KHC	Kasperske Hory	6.77	1	eP	Pn	16 39 49.2	-1.1
KHC	Kasperske Hory	6.77	1	ePn	Pn	16 39 49.2	-1.1
KHC	Kasperske Hory	6.77	1	ePN	Pn	16 39 49.7	-0.6
KHC				ex	x	16 40 08.5	
KHC				eSN	Sn	16 41 04.1	-3.4
KHC				AMS	AMS	16 42 40.0	
	comp=Z,700nm,10.9s						
KHC	Kasperske Hory	6.77	1	eP	Pn	16 39 49.2	-1.1
KHC	Kasperske Hory	6.77	1	Pn	Pn	16 39 49.7	-0.6
WET	Wettzell	6.79	357	eP	Pn	16 39 50.3	-0.3
WET	Wettzell	6.79	357	ePn	Pn	16 39 50.3	-0.3
WET	Wettzell	6.79	357	eP	Pn	16 39 50.3	-0.3
SMOL	Smolenice	6.79	24	eP	Pn	16 39 50.9	+0.3
SMOL	Smolenice	6.79	24	ePN	Pn	16 39 50.9	+0.3
SMOL				ePG	Pg	16 40 21.3	+0.4
SMOL	Smolenice	6.79	24	eP	Pn	16 39 50.9	+0.3
LOMF	Lomont	6.80	319	P	Pn	16 39 52.1	+1.4
LOMF	Lomont	6.80	319	P	Pn	16 39 52.1	+1.4
LOMF	Lomont	6.80	319	P	Pn	16 39 52.1	+1.4
BZS	Buzias	6.80	59	⇓P	Pn	16 39 53.1	+2.4
BZS	Buzias	6.80	59	⇓iP	Pn	16 39 53.1	+2.4
BZS	Buzias	6.80	59	P	Pn	16 39 53.1	+2.4
BFO	Black Forest	6.93	331	eP	Pn	16 39 52.6	+0.1
BFO	Black Forest	6.93	331	ePn	Pn	16 39 52.6	+0.1
BFO	Black Forest	6.93	331	ePn	Pn	16 39 51.6	-0.8
BFO				eSn	Sn	16 41 10.6	-0.7
BFO	Black Forest	6.93	331	ePn	Pn	16 39 51.6	-0.8
BFO	Black Forest	6.93	331	eP	Pn	16 39 52.6	+0.1
BFO				eSn	Sn	16 41 10.6	-0.7
GRG	Griva	6.94	99	P	Pn	16 39 53.5	+0.9
VLS	Valsamata	6.95	125	P	Pn	16 39 54.5	+1.7
VAY	Valandovo	6.98	95	ePn	Pn	16 39 53.1	-0.1
VAY				ePn	Pn	16 39 53.9	+0.8
VAY	Valandovo	6.98	95	ePn	Pn	16 39 53.5	+0.4
SSB	Saint Sauveur	6.99	298	eP	Pn	16 39 54.5	+1.1
SSB	Saint Sauveur	6.99	298	ePn	Pn	16 39 54.5	+1.1
SSB	Saint Sauveur	6.99	298	eP	Pn	16 39 54.5	+1.1
MOF	Molkenrain	7.02	324	P	Pn	16 39 53.5	-0.3
MOF	Molkenrain	7.02	324	P	Pn	16 39 53.5	-0.3
MOF	Molkenrain	7.02	324	P	Pn	16 39 53.5	-0.3
TREC	Trest	7.09	12	eP	Pn	16 39 53.9	-0.8
TREC				e		16 41 12.2	
TREC				MLR	MLR		
	comp=Z,1μm,10.5s						
TREC	Trest	7.09	12	ePN	Pn	16 39 53.9	-0.8
TREC				eSN	Sn	16 41 12.2	-3.2
TREC				AMS	AMS	16 42 50.0	
	comp=Z,1μm,10.5s						
TREC	Trest	7.09	12	Pn	Pn	16 39 53.9	-0.8
KFL	Anninata	7.11	124	P	Pn	16 39 57.8	+2.8
HINF	Hinteralfeld	7.12	322	ePn	Pn	16 39 54.2	-0.9
	SNR=1.0						
HINF				eSn	Sn	16 41 10.5	-5.6
	comp=Z,142nm,1.2s						
HINF	Hinteralfeld	7.12	322	ePn	Pn	16 39 54.2	-0.9
	SNR=1.0						
LASF	Ste Croix	7.13	287	ePn	Pn	16 39 54.5	-0.7
	SNR=1.0						
LASF				eSg	Sb	16 41 42.8	+2.9
	comp=Z,4.4nm,0.6s,SNR=1.0						
LASF	Ste Croix	7.13	287	ePn	Pn	16 39 54.5	-0.7
	SNR=1.0						
THL	Klokotos Trika	7.14	110	P	Pn	16 39 57.8	+2.4
THL	Klokotos Trika	7.14	110	eP	Pn	16 39 57.0	+1.6
PSZ	Piszkesteto	7.24	38	eP	Pn	16 39 54.8	-2.0
PSZ	Piszkesteto	7.24	38	ePn	Pn	16 39 54.8	-2.0
PSZ	Piszkesteto	7.24	38	⇑epPn	Pn	16 39 58.8	+2.1
PSZ	Piszkesteto	7.24	38	eP	Pn	16 39 54.8	-2.0
VYHS	Vyhne	7.25	30	eP	Pn	16 39 57.6	+0.7
VYHS				e		16 41 13.5	
VYHS	Vyhne	7.25	30	ePN	Pn	16 39 57.6	+0.7
VYHS				ePG	Pg	16 40 38.3	+8.7
VYHS				eSN	Sn	16 41 13.5	-5.7
VYHS	Vyhne	7.25	30	eP	Pn	16 39 57.6	+0.7
KNT	Kendrikon	7.25	96	P	Pn	16 39 57.8	+0.9
LIT	Litokhoron	7.26	105	P	Pn	16 39 58.5	+1.4
LIT	Litokhoron	7.26	105	eP	Pn	16 39 58.0	+0.9
KKB	Krupnik	7.27	91	P	Pn	16 39 58.5	+1.3
ECH	Echery	7.29	325	P	Pn	16 39 57.2	-0.2
ECH	Echery	7.29	325	P	Pn	16 39 57.2	-0.2
ECH	Echery	7.29	325	P	Pn	16 39 57.2	-0.2
EVR	Evrytania	7.31	115	P	Pn	16 40 00.3	+2.5
EVR	Evrytania	7.31	115	eP	Pn	16 40 00.0	+2.2
VTS	Vitosha	7.31	85	P	Pn	16 39 58.9	+1.1
VTS	Vitosha	7.31	85	⇑P	Pn	16 39 58.6	+0.8
VTS	Vitosha	7.31	85	⇑iP	Pn	16 39 58.6	+0.8
VTS	Vitosha	7.31	85	P	Pn	16 39 59.4	+1.6
VTS	Vitosha	7.31	85	P	Pn	16 39 58.6	+0.8
VRAC	Vranov	7.31	17	Pn	Pn	16 39 57.6	-0.1
VRAC	Vranov	7.31	17	⇑iP	Pn	16 39 58.8	+1.1
VRAC	Vranov	7.31	17	Pn	Pn	16 39 57.6	-0.1
	comp=Z,0.8nm,0.3s,baz=201,slow=15,SNR=5.3						
VRAC				LR	LR	16 42 34.5	
	comp=Z,139nm,20.8s,baz=205,slow=36						
VRAC	Vranov	7.31	17	Pn	Pn	16 39 57.6	-0.1
VRAC	Vranov	7.31	17	P	Pn	16 39 58.8	+1.1
KEST	Kesra	7.31	206	Pn	Pn	16 40 01.4	+3.6
KEST	Kesra	7.31	206	Pn	Pn	16 40 01.4	+3.6
	comp=Z,1.0nm,0.3s,baz=303,slow=2.6,SNR=29						
KEST				LR	LR	16 43 00.3	
	comp=Z,252nm,19.6s,baz=352,slow=40						
CDF	Champ du Feu	7.40	327	ePn	Pn	16 39 57.9	-1.1
	SNR=1.0						
CDF				eSn	Sn	16 41 17.6	-5.4
	comp=Z,145nm,1.0s						
CDF	Champ du Feu	7.40	327	ePn	Pn	16 39 57.9	-1.1
	SNR=1.0						
ROTZ	Rotzenmuhle	7.45	354	ePn	Pn	16 40 00.1	+0.6
GZR	Gura Zlata	7.47	63	⇑iP	Pn	16 40 02.0	+2.1
GRFO	Grafenberg	7.47	349	eP	Pn	16 39 59.0	-0.9
GRFO	Grafenberg	7.47	349	ePn	Pn	16 39 59.0	-0.9
GRFO	Grafenberg	7.47	349	eP	Pn	16 39 59.0	-0.9
GRA1	Grafenberg Arr	7.47	349	eP	Pn	16 39 58.7	-1.3
GRF	Grafenberg Arr	7.47	349	eP	Pn	16 39 58.7	-1.3
GRF	Grafenberg Arr	7.47	349	ePn	Pn	16 39 58.7	-1.3
MAKR	Makrakomi, Fth	7.48	114	P	Pn	16 40 02.8	+2.8
HAU	Haudompre	7.49	321	ePn	Pn	16 39 59.3	-0.9
	SNR=1.0						
HAU				eSn	Sn	16 41 18.1	-7.1
	comp=Z,93nm,0.7s						
HAU	Haudompre	7.49	321	ePn	Pn	16 39 59.3	-0.9
	SNR=1.0						
AGG	Agios Georgios	7.61	113	P	Pn	16 40 04.5	+2.7
AGG	Agios Georgios	7.61	113	eP	Pn	16 40 04.0	+2.2
EFP	Efpalio	7.63	118	P	Pn	16 40 05.0	+2.9
EFP	Efpalio	7.63	118	eP	Pn	16 40 05.0	+2.9
PRU	Pruhonice	7.67	6	ePN	Pn	16 40 02.9	+0.3
PRU				eSN	Sn	16 41 25.6	-4.0
PRU				AMS	AMS	16 43 10.0	
	comp=Z,500nm,9.4s						
PRU	Pruhonice	7.67	6	Pn	Pn	16 40 02.9	+0.3

SJAF	Saint Jean de	7.73	274	P	Pn	16 40 02.1	-1.4
SJAF	Saint Jean de	7.73	274	P	Pn	16 40 02.1	-1.4
SRS	Serrai	7.78	96	P	Pn	16 40 04.6	+0.5
TRIZ	Trizonia	7.78	118	P	Pn	16 40 07.5	+3.4
TRIZ	Trizonia	7.78	118	eP	Pn	16 40 07.0	+2.9
LAKA	Lakka	7.79	119	P	Pn	16 40 06.8	+2.5
LAKA	Lakka	7.79	119	eP	Pn	16 40 06.0	+1.7
MMB	Musomiste	7.79	92	P	Pn	16 40 05.4	+1.1
KALE	Kalithea	7.81	118	P	Pn	16 40 08.0	+3.4
KALE	Kalithea	7.81	118	eP	Pn	16 40 08.0	+3.4
THEF	They Montfort	7.82	321	P	Pn	16 40 04.2	-0.5
THEF	They Montfort	7.82	321	P	Pn	16 40 04.2	-0.5
THEF	They Montfort	7.82	321	P	Pn	16 40 04.2	-0.5
LBL	Lubilhac	7.84	295	P	Pn	16 40 07.1	+2.1
NKC	Novy Kostel	7.90	356	ePN	Pn	16 40 05.7	0.0
NKC				eSN	Sn	16 41 30.4	-4.7
NKC				AMS	AMS	16 44 00.0	
	comp=Z,700nm,8.8s						
NKC	Novy Kostel	7.90	356	Pn	Pn	16 40 05.7	0.0
NVR	Nevrokopi	7.93	94	P	Pn	16 40 06.8	+0.6
NVR	Nevrokopi	7.93	94	eP	Pn	16 40 06.0	-0.2
FILF	Fillols	7.97	275	P	Pn	16 40 06.9	+0.1
FILF	Fillols	7.97	275	P	Pn	16 40 06.9	+0.1
MORC	Moravsky Berou	7.97	20	⇓P	Pn	16 40 07.8	+1.0
MORC	Moravsky Berou	7.97	20	ePn	Pn	16 40 06.5	-0.3
MORC	Moravsky Berou	7.97	20	⇓iP	Pn	16 40 07.8	+1.0
MORC	Moravsky Berou	7.97	20	ePn	Pn	16 40 06.5	-0.3
MORC	Moravsky Berou	7.97	20	P	Pn	16 40 07.8	+1.0
PGB	Panagyurishte	8.02	85	P	Pn	16 40 09.1	+1.7
SMF	Signal de Mont	8.02	305	ePn	Pn	16 40 07.8	+0.4
	SNR=1.0						
SMF				eSn	Sn	16 41 31.7	-6.4
	comp=Z,25nm,0.7s						
SMF	Signal de Mont	8.02	305	ePn	Pn	16 40 07.8	+0.4
	SNR=1.0						
DRGR		8.03	53	⇑P	Pn	16 40 09.6	+2.0
DRGR		8.03	53	⇑iP	Pn	16 40 09.6	+2.0
DRGR		8.03	53	P	Pn	16 40 09.6	+2.0
KRLC	Kraliky	8.07	16	eP	Pn	16 40 08.1	-0.1
KRLC				e		16 41 35.6	
KRLC	Kraliky	8.07	16	ePN	Pn	16 40 08.1	-0.1
KRLC				ex	x	16 41 35.6	
KRLC	Kraliky	8.07	16	Pn	Pn	16 40 08.1	-0.1
PYM	Petit Puy Mans	8.17	298	P	Pn	16 40 11.2	+1.7
PAIG	Paliouri	8.18	104	P	Pn	16 40 09.3	-0.3
PAIG	Paliouri	8.18	104	eP	Pn	16 40 09.0	-0.6
OKC	Ostrava-Krasne	8.19	22	AMS	AMS	16 44 20.0	
	comp=Z,800nm,8.4s						
AGO	Saint Agoulin	8.20	300	P	Pn	16 40 11.2	+1.3
PVCC	Panska Ves	8.21	6	ePN	Pn	16 40 09.6	-0.4
PVCC				eSN	Sn	16 41 38.0	-4.8
PVCC				AMS	AMS	16 43 30.0	
	comp=Z,500nm,8.9s						
PVCC	Panska Ves	8.21	6	Pn	Pn	16 40 09.6	-0.4
MTLF	Montolieu	8.22	281	ePn	Pn	16 40 09.6	-0.6
MTLF	Montolieu	8.22	281	ePn	Pn	16 40 09.6	-0.6
DPC	Dobruska-Polom	8.25	13	ePN	Pn	16 40 10.5	-0.1
DPC				eSN	Sn	16 41 39.6	-4.3
DPC				AMS	AMS	16 43 40.0	
	comp=Z,800nm,12.6s						
DPC	Dobruska-Polom	8.25	13	Pn	Pn	16 40 10.5	-0.1
LOR	Lormes	8.33	309	ePn	Pn	16 40 10.6	-1.0
	SNR=1.0						
LOR				eSn	Sn	16 41 41.1	-4.6
	comp=Z,12nm,0.6s						
LOR	Lormes	8.33	309	ePn	Pn	16 40 10.6	-1.0
	SNR=1.0						
UPC	Upice	8.35	12	ePN	Pn	16 40 11.1	-0.9
UPC				eSN	Sn	16 41 42.1	-4.2
UPC	Upice	8.35	12	Pn	Pn	16 40 11.1	-0.9
MOX	Moxa	8.37	352	eP	Pn	16 40 12.0	-0.2
MOX	Moxa	8.37	352	ePn	Pn	16 40 12.0	-0.2
MOX	Moxa	8.37	352	eP	Pn	16 40 12.0	-0.2
AVF	Avril sur Loir	8.38	305	ePn	Pn	16 40 12.4	0.0
	SNR=1.0						
AVF	Avril sur Loir	8.38	305	ePn	Pn	16 40 12.4	0.0
	SNR=1.0						
RZN	Rozhen	8.50	91	P	Pn	16 40 16.0	+1.8
BRG	Berggiesshubel	8.52	3	PN	Pn	16 40 15.2	+0.8
BRG				e		16 40 34.7	
BRG				i		16 42 14.7	
BRG				i		16 42 53.7	
	comp=Z,54nm,1.4s						
BRG							
	comp=N,368nm,11.4s						
BRG							
	comp=E,856nm,13.5s						
BRG							
	comp=Z,563nm,8.6s						
BRG	Berggiesshubel	8.52	3	P	Pn	16 40 15.1	+0.8
BRG				MLR	MLR		
	comp=N,368nm,11.4s						
BRG				MLR	MLR		
	comp=E,856nm,13.5s						
BRG				MLR	MLR		
	comp=Z,563nm,8.6s						
BRG	Berggiesshubel	8.52	3	P	Pn	16 40 15.1	+0.8
	comp=Z,563nm,8.6s						
CAF	Calviac	8.56	291	eP	Pn	16 40 15.8	+0.9
CAF	Calviac	8.56	291	eP	Pn	16 40 15.8	+0.9
CRVS	Cervenica-Dubn	8.67	38	eP	Pn	16 40 15.9	-0.4
CRVS				MLR	MLR		
	comp=Z,100nm,2.2s						
CRVS	Cervenica-Dubn	8.67	38	ePN	Pn	16 40 15.9	-0.4
CRVS				ePG	Pg	16 41 01.4	+4.7
CRVS	Cervenica-Dubn	8.67	38	eP	Pn	16 40 15.9	-0.4
	comp=Z,100nm,2.2s						
TRPA	Tarpa	8.68	45	⇓iP	Pn	16 40 19.2	+2.7
TRPA	Tarpa	8.68	45	⇑epPn	Pn	16 40 18.7	+2.2
TRPA	Tarpa	8.68	45	⇑eP	Pn	16 40 18.7	+2.2
ARR	Arges	8.70	66	⇑iP	Pn	16 40 18.9	+2.1
HUMR	Humele	8.75	72	⇑iP	Pn	16 40 18.6	+1.2
PVL	Pavlikeni	8.87	80	P	Pn	16 40 18.9	-0.2
UZH	Uzhgorod	8.88	42	eP	Pn	16 40 18.2	-1.0
UZH				eS	Sn	16 41 58.6	-0.6
UZH	Uzhgorod	8.88	42	eP	Pn	16 40 18.2	-1.0
UZH				eS	Sn	16 41 58.6	-0.6
CLL	Collm	8.95	359	eP	Pn	16 40 20.0	-0.1
CLL				e		16 41 56.0	
CLL	Collm	8.95	359	ePn	Pn	16 40 19.4	-0.7
CLL	Collm	8.95	359	ePn	Pn	16 40 20.0	-0.1
CLL				eSn	Sn	16 41 56.0	-5.0
CLL				eSb1		16 42 30.0	
CLL				eSb2		16 42 55.0	
CLL				Lmax		16 43 00.0	
CLL				eSg	Sg	16 43 06.0	+8.1
	comp=E,900nm,21.5s						
CLL	Collm	8.95	359	eP	Pn	16 40 20.0	-0.1
DID	Didima	9.02	119	P	Pn	16 40 22.5	+1.3
DID	Didima	9.02	119	eP	Pn	16 40 22.0	+0.8
RJF	Les Rejaudoux	9.03	293	ePn	Pn	16 40 23.1	+1.8
	SNR=1.0						
RJF	Les Rejaudoux	9.03	293	ePn	Pn	16 40 23.1	+1.8
	SNR=1.0						
MLS	Moulis	9.04	278	P	Pn	16 40 21.1	-0.3
MLS	Moulis	9.04	278	P	Pn	16 40 21.1	-0.3
KOLS	Kolonicke sedl	9.07	41	eP	Pn	16 40 24.1	+2.2
KOLS	Kolonicke sedl	9.07	41	ePN	Pn	16 40 24.1	+2.2
KOLS				ePG		16 41 09.6	
KOLS	Kolonicke sedl	9.07	41	eP	Pn	16 40 24.1	+2.2
EPF	Esparros	9.59	278	ePn	Pn	16 40 27.6	-1.4
EPF	Esparros	9.59	278	ePn	Pn	16 40 27.6	-1.4
MLR	Muntele Rosu	9.62	67	Pn	Pn	16 40 31.6	+2.1
MLR	Muntele Rosu	9.62	67	Pn	Pn	16 40 31.6	+2.1
	comp=E,0.1nm,0.3s,baz=257,slow=6.4,SNR=11						
MLR	Muntele Rosu	9.62	67	P	Pn	16 40 31.6	+2.1
BUR08	Bucovina Ar. S	9.92	54	ePn	Pn	16 40 36.1	+2.5
BUR08	Bucovina Ar. S	9.92	54	ePn	Pn	16 40 36.1	+2.5
PLOR	Plostina	10.19	65	⇑P	Pn	16 40 39.3	+2.0
PLOR	Plostina	10.19	65	⇑iP	Pn	16 40 39.3	+2.0
PLOR	Plostina	10.19	65	P	Pn	16 40 39.3	+2.0
VRI	Vrincioaia	10.25	65	⇑P	Pn	16 40 40.1	+2.1
VRI	Vrincioaia	10.25	65	⇑iP	Pn	16 40 40.0	+2.1
VRI	Vrincioaia	10.25	65	P	Pn	16 40 40.1	+2.1
ETSF	Etsaut	10.25	278	ePn	Pn	16 40 39.2	+1.1
ETSF	Etsaut	10.25	278	ePn	Pn	16 40 39.2	+1.1
LVV	L'vov	10.52	41	eP	Pn	16 40 51.2	+10
LVV				MLR	MLR		
	comp=N,200nm,10.0s						
LVV				MLR	MLR		
	comp=E,400nm,10.0s						
LVV				MLR	MLR		

comp=Z,400nm,10.0s
CFR Carcaliu 11.07 70 ⇑P **Pn** **16 40 50.5 +1.3**
CFR Carcaliu 11.07 70 ⇑*i*P **Pn** **16 40 50.5 +1.3**
CFR Carcaliu 11.07 70 P **Pn** **16 40 50.5 +1.3**
TLCR 11.55 71 ⇓P **Pn** **16 40 57.3 +1.6**
TLCR 11.55 71 ⇓*i*P **Pn** **16 40 57.3 +1.6**
TLCR 11.55 71 P **Pn** **16 40 57.3 +1.6**
GRR Gorron 11.65 306 *e*Pn **Pn** **16 40 55.2 -1.9**
SNR=1.0
GRR Gorron 11.65 306 *e*Pn **Pn** **16 40 55.2 -1.9**
SNR=1.0
KIS Kishinev 11.96 62 *e*P Pn 16 41 06.0 +4.7
KIS MLR MLR
comp=Z,1μm,13.0s
KIS MLR MLR
comp=Z,1μm,14.0s
KIS Kishinev 11.96 62 *e*P Pn 16 41 06.0 +4.7
KIS LRM MLR 16 46 36.0
comp=Z,1μm,14.0s
ESDC Sonseca Array 13.33 264 Pn **Pn** **16 41 18.3 -1.9**
ESDC Sonseca Array 13.33 264 Pn **Pn** **16 41 18.3 -1.9**
comp=Z,0.4nm,0.3s,baz=72,slow=13,SNR=6.1
ESDC Sonseca Array 13.33 264 Pn **Pn** **16 41 18.3 -1.9**
KIEV Kiev 13.72 47 P **Pn** **16 41 26.2 +0.8**
KIEV Kiev 13.72 47 Pn **Pn** **16 41 26.2 +0.8**
KIEV Kiev 13.72 47 P **Pn** **16 41 26.2 +0.8**
AKASG Malin Array Be 13.73 47 P **Pn** **16 41 26.5 +0.9**
AKASG Malin Array Be 13.73 47 Pn **Pn** **16 41 26.5 +0.9**
AKASG Malin Array Be 13.73 47 Pn **Pn** **16 41 26.5 +0.9**
comp=Z,0.2nm,0.3s,baz=239,slow=12,SNR=2.6
AKASG Malin Array Be 13.73 47 P **Pn** **16 41 26.5 +0.9**
IIGN Ignalina 15.48 29 *e*P **Pn** **16 41 50.0 +0.8**
IIGN AMB AMB 16 41 51.3
comp=Z,10nm,1.4s
BRTR Keskin Array B 15.55 93 Pn **Pn** **16 41 51.6 +1.4**
BRTR Keskin Array B 15.55 93 Pn **Pn** **16 41 51.6 +1.4**
comp=Z,0.1nm,0.3s,baz=283,slow=12,SNR=3.9
BRTR Keskin Array B 15.55 93 Pn **Pn** **16 41 51.7 +1.4**
ISAL Salakas 15.62 28 *e*P **Pn** **16 41 51.4 +0.4**
ISAL AMB AMB 16 41 58.0
comp=Z,9.6nm,1.4s
IZAR Zarasai 15.81 28 *e*P **Pn** **16 41 53.2 -0.2**
IZAR AMB AMB 16 41 59.9
comp=Z,11nm,1.1s
EKA Eskdalemuir Ar 16.86 326 Pn **Pn** **16 42 07.3 +0.5**
EKA Eskdalemuir Ar 16.86 326 Pn **Pn** **16 42 07.3 +0.5**
baz=137,slow=12,SNR=4.9
EKA Eskdalemuir Ar 16.86 326 P **Pn** **16 42 07.3 +0.5**
MDT Midelt 17.09 242 LR LR 16 48 04.4
comp=Z,83nm,19.1s,baz=345,slow=35
ANN Anapa 17.62 74 *e*P Pn 16 42 10.2 -6.1
ANN MLR MLR
comp=N,153nm,13.0s
ANN MLR MLR
comp=Z,200nm,13.0s
HFS Hagfors 17.80 1 P **Pn** **16 42 18.4 -0.1**
HFS Hagfors 17.80 1 P **Pn** **16 42 18.4 -0.1**
comp=Z,0.0nm,0.3s,baz=200,slow=12,SNR=2.2
HFS LR LR 16 50 03.5
comp=Z,142nm,18.9s,baz=186,slow=40
HFS Hagfors 17.80 1 P **Pn** **16 42 18.4 -0.1**
comp=Z,142nm,18.9s
NB2 NORSAR Subarra 18.75 357 P **P** **16 42 27.8 -1.9**
comp=Z,7.9nm,1.2s,baz=175,slow=12
NB2 NORSAR Subarra 18.75 357 P **P** **16 42 27.8 -1.9**
comp=Z,7.9nm,1.2s,baz=175,slow=11,SNR=8.3
NOA NORSAR Array B 18.75 357 P **Pn** **16 42 29.9 -0.2**
NOA NORSAR Array B 18.75 357 P **Pn** **16 42 29.9 -0.2**
comp=Z,0.2nm,0.3s,baz=184,slow=11,SNR=4.7
NOA LR LR 16 51 02.1
comp=Z,84nm,19.5s,baz=180,slow=41
NOA NORSAR Array B 18.75 357 P **Pn** **16 42 30.0 -0.2**
comp=Z,84nm,19.5s
SOC Sochi 19.32 77 *e*P **P** **16 42 33.2 -2.9**
SOC *e* 16 46 08.7
SOC MLR MLR
comp=Z,118nm,11.0s
MALT Malatya 19.53 94 *e*P **Pn** **16 42 40.2 +0.4**
MALT pmax pmax
comp=Z,4.0nm,0.8s
MALT Malatya 19.53 94 *e*P **Pn** **16 42 40.2 +0.4**
comp=Z,4.1nm,0.8s
MALT Malatya 19.53 94 *e*P **Pn** **16 42 40.2 +0.4**
comp=Z,4.1nm,0.8s
OBN Obninsk 19.82 42 *e*P **Pn** **16 42 44.6 +1.6**
OBN pmax pmax
comp=Z,17nm,1.2s
OBN MLR MLR
comp=Z,200nm,14.0s
TAM Tamanrasset 20.58 201 P Pn 16 42 53.7 +1.4
TAM pmax pmax
comp=Z,14nm,1.4s
TAM Tamanrasset 20.58 201 P Pn 16 42 53.7 +1.3
comp=Z,14nm,1.4s
FINES FINESS Array B 20.59 18 P **P** **16 42 49.4 -0.3**
FINES FINESS Array B 20.59 18 P **P** **16 42 49.4 -0.3**
comp=Z,6.1nm,0.8s,baz=216,slow=8.6,SNR=12
FINES LR LR 16 51 29.0
comp=Z,150nm,20.2s,baz=205,slow=39
FINES FINESS Array B 20.59 18 P **P** **16 42 49.4 -0.3**
comp=Z,150nm,20.2s
MOS Moscow 20.66 41 *e*P **P** **16 42 50.1 -0.4**
MOS *e* 16 43 07.0
MOS Moscow 20.66 41 *e*P **P** **16 42 50.1 -0.4**
KAF Kangasniemi 21.24 17 *e*P **P** **16 42 55.6 -1.1**
KAF pmax pmax
comp=Z,4.0nm,0.7s
KAF Kangasniemi 21.24 17 *e*p **P** **16 42 55.6 -1.1**
comp=Z,3.8nm,0.7s
KAF Kangasniemi 21.24 17 *e*P **P** **16 42 55.6 -1.1**
comp=Z,4.0nm,0.7s
ASF Jabal al Asfar 21.27 111 LR LR 16 52 34.4
comp=Z,58nm,19.3s,baz=222,slow=40
KIV Kislovodsk 21.43 76 *e*P **P** **16 43 00.9 +1.8**
KIV *e*S **S** **16 47 00.1 +3.3**
KIV pmax pmax
comp=Z,17nm,1.1s
KIV MLR MLR
comp=Z,87nm,15.0s
KIV Kislovodsk 21.43 76 *e*P **P** **16 43 00.5 +1.4**
comp=Z,19nm,1.0s
KIV Kislovodsk 21.43 76 *e*P **P** **16 43 00.5 +1.4**
comp=Z,19nm,1.0s
KIV *e*S **S** **16 47 00.1 +3.3**
comp=Z,87nm,15.0s
KBZ Khabaz 21.60 76 P **P** **16 43 03.7 +2.9**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
KBZ Khabaz 21.60 76 P **P** **16 43 03.7 +2.9**
KBZ Khabaz 21.60 76 P **P** **16 43 03.7 +2.9**
comp=Z,6.3nm,0.9s,baz=275,slow=10,SNR=9.8
KBZ Khabaz 21.60 76 P **P** **16 43 03.7 +2.9**
comp=Z,6.0nm,0.9s
JOF Joensuu 23.14 21 *e*P **P** **16 43 16.9 -0.1**
JOF pmax pmax
comp=Z,3.0nm,0.6s
JOF Joensuu 23.14 21 *e*p **P** **16 43 16.9 -0.1**
comp=Z,2.6nm,0.6s
JOF Joensuu 23.14 21 *e*P **P** **16 43 16.9 -0.1**
comp=Z,3.0nm,0.6s
KLMR Klimovskoe 24.36 32 *e*P **P** **16 43 28.9 +0.1**
KLMR pmax pmax
comp=Z,28nm,1.6s
KLMR MLR MLR
comp=Z,550nm,17.0s
KLMR Klimovskoe 24.36 32 *e*P **P** **16 43 28.9 +0.1**
comp=Z,550nm,17.0s
MAK Makhachkala 25.04 77 P **P** **16 43 33.9 -1.2**
MAK S **S** **16 47 58.4 -0.8**
MAK MLR MLR
comp=Z,286nm,13.0s
MAK Makhachkala 25.04 77 P **P** **16 43 33.9 -1.2**
comp=Z,286nm,13.0s
MAK S **S** **16 47 58.4 -0.8**
ARCES ARCESS Array B 27.96 9 LR LR 16 56 12.1
comp=Z,95nm,20.1s,baz=16,slow=39
TORD Torodi Ar. Bea 30.81 203 P **P** **16 44 27.5 +0.6**
TORD Torodi Ar. Bea 30.81 203 P **P** **16 44 27.5 +0.6**
comp=Z,1.2nm,0.7s,baz=20,slow=8.5,SNR=6.0
TORD LR LR 16 59 07.4
comp=Z,82nm,19.1s,baz=10.0,slow=41
TORD Torodi Ar. Bea 30.81 203 P **P** **16 44 27.5 +0.6**
ARU Arti 31.99 48 *d*iP **P** **16 44 36.6 -0.3**
ARU S **S** **16 49 49.5 +1.3**
ARU SS **SnSn** **16 51 32.9 -3.9**
ARU pmax pmax
comp=Z,17nm,1.0s
ARU MLR MLR
comp=Z,300nm,16.0s
ARU Arti 31.99 48 *e*P **P** **16 44 36.3 -0.7**
comp=Z,16nm,1.0s
ARU Arti 31.99 48 *i* P **P** **16 44 36.6 -0.3**
comp=Z,17nm,1.0s
ARU S **S** **16 49 49.5 +1.3**
ABKAR Akbulak array 32.78 62 *e*P **P** **16 44 43.8 -0.2**
comp=Z,1.2nm,0.8s
ABKAR Akbulak array 32.78 62 *e*P **P** **16 44 43.8 -0.2**
comp=Z,1.2nm,0.8s
SVE Sverdlovsk 33.17 48 ⇓*i*P **P** **16 44 48.1 +0.8**
SVE pmax pmax
comp=Z,19nm,1.2s
SVE MLR MLR
comp=Z,321nm,13.0s
SVE Sverdlovsk 33.17 48 *i* P **P** **16 44 48.1 +0.8**
comp=Z,321nm,13.0s
BRVK Borovoye 38.81 54 *d*iP **P** **16 45 36.4 +0.8**
BRVK pmax pmax
comp=Z,8.0nm,1.0s
BRVK Borovoye 38.81 54 *e*P **P** **16 45 36.1 +0.5**
comp=Z,6.3nm,0.9s
BRVK Borovoye 38.81 54 *e*P **P** **16 45 36.1 +0.5**
comp=Z,6.3nm,0.9s
DBIC Dimbokro 39.02 209 LR LR 17 02 38.0
comp=Z,57nm,18.7s,baz=277,slow=38
KKAR Karatay Array 41.30 69 *e*P **P** **16 45 57.0 +0.5**
KKAR pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 41.30 69 *e*P **P** **16 45 57.0 +0.5**
comp=Z,2.6nm,0.8s
KKAR Karatay Array 41.30 69 *e*P **P** **16 45 57.0 +0.5**
comp=Z,2.6nm,0.8s
EKS2 Erkin-Say 43.70 68 *e*P **P** **16 46 17.6 +1.5**
EKS2 pmax pmax
comp=Z,8.0nm,1.1s
EKS2 Erkin-Say 43.70 68 *e*P **P** **16 46 17.6 +1.5**
comp=Z,8.3nm,1.1s
EKS2 Erkin-Say 43.70 68 *e*P **P** **16 46 17.6 +1.5**
comp=Z,8.3nm,1.1s
AAK Ala-Archa 44.21 68⇑*e*P **P** **16 46 20.4 +0.2**
AAK pmax pmax
comp=Z,6.0nm,1.0s
AAK Ala-Archa 44.21 68 *e*P **P** **16 46 20.6 +0.4**
comp=Z,11nm,1.0s
AAK Ala-Archa 44.21 68 *e*P **P** **16 46 20.6 +0.4**
comp=Z,11nm,1.0s
KURK Kurchatov 44.34 56 ⇓*i*P **P** **16 46 20.7 -0.3**
KURK pmax pmax
comp=Z,3.0nm,1.7s
KURK Kurchatov 44.34 56 *i* P **P** **16 46 20.7 -0.3**
comp=Z,3.0nm,1.7s
NVS Novosibirsk 45.98 49 *e*P **P** **16 46 34.5 +0.6**
NVS Novosibirsk 45.98 49 *e*P **P** **16 46 34.5 +0.6**
ZALV Zalesovo Beam 47.11 50 P **P** **16 46 43.1 +0.3**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV MLR MLR
comp=Z,214nm,18.8s
ZALV Zalesovo Beam 47.11 50 P **P** **16 46 43.1 +0.3**
ZALV Zalesovo Beam 47.11 50 P **P** **16 46 43.1 +0.3**
comp=Z,0.8nm,0.3s,baz=295,slow=6.5,SNR=4.6
ZALV LR LR 17 08 29.2
comp=Z,214nm,18.8s,baz=69,slow=39
ZALV Zalesovo Beam 47.11 50 P **P** **16 46 43.1 +0.3**
comp=Z,214nm,18.8s
MK31 Makanchi Array 47.89 60 *e*P **P** **16 46 49.2 +0.2**
MK31 Makanchi Array 47.89 60 *e*P **P** **16 46 49.2 +0.2**
MK31 Makanchi Array 47.89 60 *e*P **P** **16 46 49.2 +0.2**
MKAR Makanchi Array 47.89 60 *ce*P **P** **16 46 49.5 +0.5**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 47.89 60 P **P** **16 46 49.3 +0.3**
MKAR Makanchi Array 47.89 60 P **P** **16 46 49.3 +0.3**
comp=Z,2.0nm,0.6s,baz=285,slow=6.8,SNR=39
MKAR LR LR 17 08 47.1
comp=Z,66nm,19.0s,baz=93,slow=38
MKAR Makanchi Array 47.89 60 *e*P **P** **16 46 49.5 +0.5**
comp=Z,2.0nm,0.6s
SONM Songino Array 62.00 50 P **P** **16 48 31.9 +0.7**
SONM Songino Array 62.00 50 P **P** **16 48 31.9 +0.7**
comp=Z,1.8nm,1.0s,baz=291,slow=7.9,SNR=14
SONM LR LR 17 17 20.8
comp=Z,145nm,18.8s,baz=265,slow=38
SONM Songino Array 62.00 50 P **P** **16 48 31.9 +0.7**
comp=Z,145nm,18.8s
YAK Yakutsk 64.09 28 *e*P **P** **16 48 43.5 -1.1**
YAK pmax pmax
comp=Z,5.0nm,1.3s
YAK Yakutsk 64.09 28 *e*P **P** **16 48 43.5 -1.1**
comp=Z,5.0nm,1.3s
YKA Yellowknife Ar 67.48 337 P **P** **16 49 06.6 +0.1**
YKA Yellowknife Ar 67.48 337 P **P** **16 49 06.6 +0.1**
comp=Z,0.3nm,0.6s,baz=42,slow=5.7,SNR=12
YKA Yellowknife Ar 67.48 337 P **P** **16 49 06.6 +0.1**
BILL Bilibino 68.05 11 *e*P **P** **16 49 09.8 -0.2**
BILL pmax pmax
comp=Z,5.0nm,1.2s
BILL Bilibino 68.05 11 *e*P **P** **16 49 09.8 -0.2**
comp=Z,5.0nm,1.2s
FFC Flin Flon 68.71 326 *ce*P **P** **16 49 15.8 +1.4**
FFC Flin Flon 68.71 326 *e*P **P** **16 49 15.8 +1.4**
HHC Hu-ho-hao-te 69.09 53 *e*P **P** **16 49 19.1 +2.0**
HHC S **S** **16 58 21.4 -1.1**
HHC pmax pmax
comp=Z,27nm,0.7s
HHC pmax pmax
comp=Z,160nm,7.0s
CD2 Chengdu 70.22 66 P **P** **16 49 23.7 -0.5**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,90nm,5.6s
ILAR Eielson Array 72.08 351 P **P** **16 49 35.6 +0.8**
ILAR Eielson Array 72.08 351 P **P** **16 49 35.6 +0.8**
comp=Z,0.3nm,0.7s,baz=6.8,slow=8.4,SNR=5.2
ILAR Eielson Array 72.08 351 P **P** **16 49 35.6 +0.8**
CMAR Chiang Mai Arr 74.63 79 P **P** **16 49 51.6 +1.0**
CMAR Chiang Mai Arr 74.63 79 P **P** **16 49 51.6 +1.0**
comp=Z,0.4nm,0.4s,baz=308,slow=7.9,SNR=5.5
CMAR LR LR 17 24 08.2
comp=Z,25nm,19.9s,baz=353,slow=37
CMAR Chiang Mai Arr 74.63 79 P **P** **16 49 51.6 +1.0**
comp=Z,25nm,19.9s
USRK Ussuriysk Arra 77.84 40 LR LR 17 27 49.8
comp=Z,82nm,18.5s,baz=336,slow=38
PETK Petropavlovsk- 80.07 21 LR LR 17 31 12.2
comp=Z,32nm,18.6s,baz=9.9,slow=40
KSRS Korea Array 80.73 47 LR LR 17 30 46.6
comp=Z,51nm,20.1s,baz=290,slow=39
MJAR Matsushiro Arr 86.75 41 LR LR 17 34 05.6
comp=Z,149nm,18.4s,baz=335,slow=39

*CSEM **06** 16:50:11.5, 42°.37N×13°.34E, h10km, After ROM*
ROM 06 16:50:11.5±0.1, 42°.37N×13°.34E, h10km, MI2.0/1, 2D, Error ellipse: s-maj=1.3km s-min=1.2km az=106.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**113**	⇓*i*Pg	Pg	16 50 14.1	+0.5
AQU				Sg	Sg	16 50 15.5	+0.4
AQU	**L'Aquila**	**0.05**	**113**	⇓*i*Pg	Pg	16 50 14.1	+0.5
AQU				Sg	Sg	16 50 15.5	+0.4
CAMP	**Campotosto**	**0.17**	**18**	Pg	Pg	16 50 16.0	+0.6
CAMP				Sg	Sg	16 50 19.0	+0.9
	327nm,0.5s						
CAMP	**Campotosto**	**0.17**	**18**	Pg	Pg	16 50 16.0	+0.6
CAMP				Sg	Sg	16 50 19.0	+0.9
	327nm,0.5s						
FIAM	**Fiamignano**	**0.19**	**237**	Pg	Pg	16 50 16.4	+0.6
FIAM				Sg	Sg	16 50 19.6	+1.0
FIAM	**Fiamignano**	**0.19**	**237**	Pg	Pg	16 50 16.4	+0.6
FIAM				Sg	Sg	16 50 19.6	+1.0
FAGN	**Fagnano**	**0.21**	**120**	Pg	Pg	16 50 16.9	+0.9
FAGN				Sg	Sg	16 50 20.1	+1.0
FAGN	**Fagnano**	**0.21**	**120**	Pg	Pg	16 50 16.9	+0.9
FAGN				Sg	Sg	16 50 20.1	+1.0
TERO	**Teramo**	**0.32**	**38**	Pg	Pb	16 50 18.8	-0.6
TERO				Sg	Sg	16 50 23.0	+0.7
TERO	**Teramo**	**0.32**	**38**	Pg	Pb	16 50 18.8	-0.6
TERO				Sg	Sg	16 50 23.0	+0.7
NRCA	**Norcia**	**0.49**	**340**	Pg	Pg	16 50 21.2	0.0
NRCA				Sg	Sb	16 50 29.1	-0.6
NRCA	**Norcia**	**0.49**	**340**	Pg	Pg	16 50 21.2	0.0
NRCA				Sg	Sb	16 50 29.1	-0.6
CERT	**Cerreto**	**0.50**	**212**	Pg	Pg	16 50 21.4	+0.1
CERT	**Cerreto**	**0.50**	**212**	Pg	Pg	16 50 21.4	+0.1
INTR	**Introdacqua**	**0.56**	**130**	Pg	Pg	16 50 22.9	+0.5
INTR				Sg	Sb	16 50 31.1	-0.5
INTR	**Introdacqua**	**0.56**	**130**	Pg	Pg	16 50 22.9	+0.5
INTR				Sg	Sb	16 50 31.1	-0.5

*CSEM **06** 16:51:02.7, 42°.36N×13°.34E, h10km, After ROM*
ROM 06 16:51:02.7±0.1, 42°.36N×13°.34E, h10km, MI2.3/4, 2C, Error ellipse: s-maj=1.3km s-min=1.1km az=138.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**97**	⇑*i*Pg	Pg	16 51 05.2	+0.4
AQU				Sg	Sg	16 51 06.6	+0.3
AQU	**L'Aquila**	**0.05**	**97**	⇑*i*Pg	Pg	16 51 05.2	+0.4
AQU				Sg	Sg	16 51 06.6	+0.3
CAMP	**Campotosto**	**0.18**	**17**	Pg	Pg	16 51 07.2	+0.4
CAMP				Sg	Sg	16 51 10.3	+0.7
	511nm,0.6s						
CAMP	**Campotosto**	**0.18**	**17**	Pg	Pg	16 51 07.2	+0.4
CAMP				Sg	Sg	16 51 10.3	+0.7
	511nm,0.6s						
FIAM	**Fiamignano**	**0.19**	**240**	Pg	Pg	16 51 07.6	+0.8
FIAM				Sg	Sg	16 51 10.7	+1.1
	1μm,0.6s						
FIAM	**Fiamignano**	**0.19**	**240**	Pg	Pg	16 51 07.6	+0.8
FIAM				Sg	Sg	16 51 10.7	+1.1
	1μm,0.6s						
FAGN	**Fagnano**	**0.21**	**117**	Pg	Pg	16 51 07.8	+0.7
FAGN				Sg	Sg	16 51 11.3	+1.2
FAGN	**Fagnano**	**0.21**	**117**	Pg	Pg	16 51 07.8	+0.7
FAGN				Sg	Sg	16 51 11.3	+1.2
TERO	**Teramo**	**0.33**	**37**	Pg	Pg	16 51 09.3	-0.1
TERO				Sg	Sb	16 51 15.6	-0.6
	308nm,0.4s						
TERO	**Teramo**	**0.33**	**37**	Pg	Pg	16 51 09.3	-0.1
TERO				Sg	Sb	16 51 15.6	-0.6
	308nm,0.4s						
PTQR	**Pietraquaria**	**0.34**	**172**	Pg	Pg	16 51 09.9	+0.3
PTQR				Sg	Sg	16 51 15.3	+1.0
	14nm,0.2s						
PTQR	**Pietraquaria**	**0.34**	**172**	Pg	Pg	16 51 09.9	+0.3
PTQR				Sg	Sg	16 51 15.3	+1.0
	14nm,0.2s						
VCEL	**Villa Celiera**	**0.38**	**85**	Pg	Pg	16 51 10.8	+0.5
VCEL				Sg	Sb	16 51 17.0	-0.7
VCEL	**Villa Celiera**	**0.38**	**85**	Pg	Pg	16 51 10.8	+0.5
VCEL				Sg	Sb	16 51 17.0	-0.7
MNS	**Montasola**	**0.48**	**273**	Pg	Pg	16 51 12.7	+0.4
	79nm,0.4s						
MNS	**Montasola**	**0.48**	**273**	Pg	Pg	16 51 12.7	+0.4
	79nm,0.4s						

IDC 06 16:54:23.1±4.9, 35°.17S×79°.37E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/21, mbtmp3.7/6, Error ellipse: s-maj=175.0km s-min=33.3km az=28.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**48.34**	**92**	P	P	17 03 06.4	-0.3
	0.5nm,0.8s,baz=240,slow=7.3,SNR=4.9						
WRA	**Warramunga Arr**	**50.45**	**88**	P	P	17 03 22.9	+0.2
	1.9nm,0.9s,baz=242,slow=7.2,SNR=6.6						
MKAR	**Makanchi Array**	**81.63**	**2**	P	P	17 06 43.4	+0.7
	0.2nm,0.7s,baz=182,slow=4.9,SNR=4.0						
BRTR	**Keskin Array B**	**85.64**	**326**	P	P	17 07 03.7	+0.1
	0.8nm,0.8s,baz=163,slow=6.8,SNR=3.8						
SONM	**Songino Array**	**86.10**	**18**	P	P	17 07 05.3	-0.3
	0.4nm,0.8s,baz=211,slow=4.7,SNR=4.4						
ZALV	**Zalesovo Beam**	**88.88**	**3**	P	P	17 07 17.8	-0.8
	0.2nm,0.2s,baz=188,slow=2.9,SNR=2.3						

*ISCJB **06** 16:57:25.6±0.2, 42°.37N±0°.02×13°.29E±0°.02, h13km±2km, mb3.2/3, Error ellipse: s-maj=2.9km s-min=2.7km az=162.3*
*CSEM **06** 16:57:26.2±0.1, 42°.36N×13°.31E, h8km, ML3.8/14, Error ellipse: s-maj=2.7km s-min=2.1km az=60.0*
*ROM **06** 16:57:26.0±0.1, 42°.35N×13°.32E, h10km, MI3.2/24, Error ellipse: s-maj=0.9km s-min=0.8km az=36.0*
*LDG **06** 16:57:28.7±0.2, 42°.32N×13°.20E, h2km, MI3.0/7, Error ellipse: s-maj=8.5km s-min=5.3km az=42.0*
*IDC **06** 16:57:28.6±1.3, 42°.58N×13°.12E, h0km, mb3.3/4, mb1 3.4/5, mb1mx3.2/27, mbtmp3.2/5, ML3.2/1, Error ellipse: s-maj=43.4km s-min=15.6km az=98.0*
*PRU **06** 16:57:28.0, 42°.40N×13°.36E, h0km*
ISC 06 16:57:26.6±0.8, 42°.36N±0°.02×13°.31E±0°.02, h11km±4km, n100, σ1§36/144, mb3.3/3, 2C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**95**	Pg	**Pg**	**16 57 28.6**	**-0.4**
AQU				Sg	**Sg**	**16 57 30.1**	**-0.6**
	53μm,0.5s						
AQU	**L'Aquila**	**0.07**	**95**	Pg	**Pg**	**16 57 28.6**	**-0.4**
AQU				Sg	**Sg**	**16 57 30.1**	**-0.6**
	53μm,0.5s						
FIAM	**Fiamignano**	**0.17**	**237**	Pg	**Pg**	**16 57 30.4**	**+0.1**
FIAM				Sg	**Sg**	**16 57 33.3**	**+0.3**
	9μm,0.8s						
FIAM	**Fiamignano**	**0.17**	**237**	Pg	**Pg**	**16 57 30.4**	**+0.1**
FIAM				Sg	**Sg**	**16 57 33.3**	**+0.3**
	9μm,0.8s						
CAMP	**Campotosto**	**0.19**	**23**	⇑*i*Pg	**Pg**	**16 57 30.7**	**-0.1**
CAMP				Sg	**Sg**	**16 57 33.9**	**+0.2**
CAMP	**Campotosto**	**0.19**	**23**	⇑*i*Pg	**Pg**	**16 57 30.7**	**-0.1**
CAMP				Sg	**Sg**	**16 57 33.9**	**+0.2**
FAGN	**Fagnano**	**0.23**	**114**	Pg	**Pg**	**16 57 31.3**	**0.0**
FAGN				Sg	**Sg**	**16 57 34.9**	**+0.4**
	34μm,0.4s						
FAGN	**Fagnano**	**0.23**	**114**	Pg	**Pg**	**16 57 31.3**	**0.0**
FAGN				Sg	**Sg**	**16 57 34.9**	**+0.4**
	34μm,0.4s						
TERO	**Teramo**	**0.34**	**40**	Pg	**Pg**	**16 57 32.9**	**-0.5**
TERO				Sg	**Sg**	**16 57 38.4**	**+0.4**
	3μm,0.4s						
TERO	**Teramo**	**0.34**	**40**	Pg	**Pg**	**16 57 32.9**	**-0.5**
TERO				Sg	**Sg**	**16 57 38.4**	**+0.4**
	3μm,0.4s						
PTQR	**Pietraquaria**	**0.34**	**168**	Pg	**Pg**	**16 57 33.1**	**-0.4**
PTQR				Sg	**Sg**	**16 57 38.3**	**+0.2**
PTQR	**Pietraquaria**	**0.34**	**168**	Pg	**Pg**	**16 57 33.1**	**-0.4**
PTQR				Sg	**Sg**	**16 57 38.3**	**+0.2**
VCEL	**Villa Celiera**	**0.40**	**85**	Pg	**Pg**	**16 57 34.2**	**-0.3**
VCEL				Sg	**Sg**	**16 57 39.9**	**+0.2**
	7μm,0.7s						
VCEL	**Villa Celiera**	**0.40**	**85**	Pg	**Pg**	**16 57 34.2**	**-0.3**
VCEL				Sg	**Sg**	**16 57 39.9**	**+0.2**
	7μm,0.7s						
MNS	**Montasola**	**0.47**	**273**	Pg	**Pg**	**16 57 35.3**	**-0.4**
MNS				Sg	**Sg**	**16 57 41.9**	**+0.1**
	1μm,0.7s						
MNS	**Montasola**	**0.47**	**273**	Pg	**Pg**	**16 57 35.3**	**-0.4**
MNS				Sg	**Sg**	**16 57 41.9**	**+0.1**
	1μm,0.7s						
CERT	**Cerreto**	**0.48**	**211**	Pg	**Pg**	**16 57 35.4**	**-0.5**
CERT				Sg	**Sg**	**16 57 42.7**	**+0.5**
	4μm,0.3s						
CERT	**Cerreto**	**0.48**	**211**	Pg	**Pg**	**16 57 35.4**	**-0.5**
CERT				Sg	**Sg**	**16 57 42.7**	**+0.5**
	4μm,0.3s						
MTCE	**Montecelio**	**0.54**	**231**	Pg	**Pg**	**16 57 36.5**	**-0.5**
MTCE				Sg	**Sg**	**16 57 44.5**	**+0.3**
	849nm,0.8s						
MTCE	**Montecelio**	**0.54**	**231**	Pg	**Pg**	**16 57 36.5**	**-0.5**
MTCE				Sg	**Sg**	**16 57 44.5**	**+0.3**
	849nm,0.8s						
VVLD	**Villa Vallelon**	**0.54**	**154**	Pg	**Pg**	**16 57 36.4**	**-0.7**
VVLD				Sg	**Sg**	**16 57 44.4**	**+0.1**
	2μm,0.5s						
VVLD	**Villa Vallelon**	**0.54**	**154**	Pg	**Pg**	**16 57 36.4**	**-0.7**
VVLD				Sg	**Sg**	**16 57 44.4**	**+0.1**
	2μm,0.5s						
INTR	**Introdacqua**	**0.56**	**128**	Pg	**Pg**	**16 57 36.8**	**-0.8**
INTR				Sg	**Sg**	**16 57 45.5**	**+0.5**

	3µm,1.1s						
INTR	Introdacqua	0.56	128	Pg	Pg	16 57 36.8	-0.8
INTR				Sg	Sg	16 57 45.5	+0.5
	3µm,1.1s						
GUAR	Guarcino	0.56	180	Pg	Pg	16 57 37.4	-0.2
	1µm,0.4s						
GUAR	Guarcino	0.56	180	Pg	Pg	16 57 37.4	-0.2
	1µm,0.4s						
OFFI	Offida	0.64	26	Pg	Pg	16 57 39.3	+0.3
	3µm,0.4s						
OFFI	Offida	0.64	26	Pg	Pg	16 57 39.3	+0.3
	3µm,0.4s						
FDMO	Fiordimonte	0.70	347	Pg	Pg	16 57 39.3	-0.8
FDMO				Sg	Sg	16 57 50.0	+0.8
	506nm,0.4s						
FDMO	Fiordimonte	0.70	347	Pg	Pg	16 57 39.3	-0.8
FDMO				Sg	Sg	16 57 50.0	+0.8
	506nm,0.4s						
LPEL	Lama dei Pelig	0.72	115	Pg	Pg	16 57 39.8	-0.7
LPEL				Sg	Sg	16 57 50.7	+0.7
	1µm,0.6s						
LPEL	Lama dei Pelig	0.72	115	Pg	Pg	16 57 39.8	-0.7
LPEL				Sg	Sg	16 57 50.7	+0.7
	1µm,0.6s						
SDI	San Donato	0.75	150	Pg	Pg	16 57 40.6	-0.5
	275nm,0.2s						
SDI	San Donato	0.75	150	Pg	Pg	16 57 40.6	-0.5
	275nm,0.2s						
CAFR	Castel Frentan	0.78	99	Pg	Pg	16 57 41.7	0.0
CAFR	Castel Frentan	0.78	99	Pg	Pg	16 57 41.7	0.0
GIUL	Giuliano Di Ro	0.80	183	Pg	Pg	16 57 40.9	-1.1
GIUL				Sg	Sg	16 57 51.6	-0.9
	479nm,0.4s						
GIUL	Giuliano Di Ro	0.80	183	Pg	Pg	16 57 40.9	-1.1
GIUL				Sg	Sg	16 57 51.6	-0.9
	479nm,0.4s						
LAV9	Lanuvio	0.82	214	Pg	Pg	16 57 41.7	-0.7
	551nm,0.2s						
LAV9	Lanuvio	0.82	214	Pg	Pg	16 57 41.7	-0.7
	551nm,0.2s						
ASSB	Assisi San Ben	0.83	325	Pg	Pg	16 57 42.2	-0.5
	647nm,0.5s						
ASSB	Assisi San Ben	0.83	325	Pg	Pg	16 57 42.2	-0.5
	647nm,0.5s						
CERA	Filignano	0.93	145	Pg	Pg	16 57 43.4	-1.0
	1µm,1.3s						
CERA	Filignano	0.93	145	Pg	Pg	16 57 43.4	-1.0
	1µm,1.3s						
SNTG	Esanatoglia	0.94	343	Pg	Pg	16 57 43.8	-0.8
	428nm,0.8s						
SNTG	Esanatoglia	0.94	343	Pg	Pg	16 57 43.8	-0.8
	428nm,0.8s						
MIDA	Miranda	1.01	135	Pg	Pg	16 57 44.1	-1.8
	315nm,0.7s						
MIDA	Miranda	1.01	135	Pg	Pg	16 57 44.1	-1.8
	315nm,0.7s						
CING	Cingoli	1.02	355	Pg	Pg	16 57 45.5	-0.7
	719nm,0.7s						
CING	Cingoli	1.02	355	Pg	Pg	16 57 45.5	-0.7
	719nm,0.7s						
MGAB	Montegabbione	1.04	302	Pg	Pg	16 57 46.1	-0.5
MGAB	Montegabbione	1.04	302	Pg	Pg	16 57 46.1	-0.5
MURB	Monte Urbino	1.07	328	Pg	Pb	16 57 46.6	-0.6
	1µm,0.4s						
MURB	Monte Urbino	1.07	328	Pg	Pb	16 57 46.6	-0.6
	1µm,0.4s						
LATE	Laterza	1.14	283	Pg	Pb	16 57 47.7	-0.6
	130nm,1.2s						
LATE	Laterza	1.14	283	Pg	Pb	16 57 47.7	-0.6
	130nm,1.2s						
SACS	San Casciano d	1.14	296	Pg	Pb	16 57 48.0	-0.4
	388nm,0.7s						
ARVD	Arcevia	1.17	347	Pg	Pb	16 57 47.1	-1.7
	720nm,1.1s						
ARVD	Arcevia	1.17	347	Pg	Pb	16 57 47.1	-1.7
	720nm,1.1s						
AOI	Ancona	1.21	10	Pg	Pn	16 57 48.8	-0.7
	376nm,0.6s						
AOI	Ancona	1.21	10	Pg	Pn	16 57 48.8	-0.7
	376nm,0.6s						
PIEI	Pieia	1.30	335	Pg	Pn	16 57 50.5	-0.3
	221nm,0.6s						
PIEI	Pieia	1.30	335	Pg	Pn	16 57 50.5	-0.3
	221nm,0.6s						
MS1	Monte Sant'Ang	2.07	108	ePn	Pg	16 58 06.1	-0.1
MS1				eSn	Sb	16 58 29.2	-0.7
MAIM	Mastiano	2.58	308	P	Pn	16 58 08.9	+0.6
PGF	Pioggiola	3.19	275	ePn	Pn	16 58 17.8	+1.0
PGF				eSn	Sn	16 58 58.4	+3.4
	11nm,0.6s						
PGF	Pioggiola	3.19	275	ePn	Pn	16 58 17.8	+1.0
PGF				eSn	Sn	16 58 58.4	+3.4
	5.3nm,0.6s						
VOY	Vojsko	3.69	6	ePn	Pn	16 58 24.9	+1.2
VOY				eSn	Sn	16 59 06.5	-0.8
VOY	Vojsko	3.69	6	Pn	Pn	16 58 24.9	+1.2
VOY				eSn	Sn	16 59 06.5	-0.8
ABTA	Abfaltersbach	4.42	353⇓	iPn	Pn	16 58 35.4	+1.7
ABTA	Abfaltersbach	4.42	353	Pn	Pn	16 58 35.4	+1.7
SBF	Sospel	4.55	291	ePn	Pn	16 58 36.3	+0.8
SBF				eSn	Sn	16 59 26.4	-2.0
	15nm,0.7s						
SBF	Sospel	4.55	291	ePn	Pn	16 58 36.3	+0.8
SBF				eSn	Sn	16 59 26.4	-2.0
	7.4nm,0.7s						
FRF	La Foret Royal	5.03	286	ePn	Pn	16 58 42.1	+0.1
FRF				eSn	Sn	16 59 37.0	-3.2
	2.2nm,0.5s						
FRF	La Foret Royal	5.03	286	ePn	Pn	16 58 42.1	+0.1
FRF				eSn	Sn	16 59 37.0	-3.2
	1.1nm,0.5s						
DAVOX	Davos/Dischmat	5.05	332	Pn	Pn	16 58 45.6	+3.1
	1.0nm,0.3s,baz=149,slow=19,SNR=9.5						
DAVOX				Sn	Sn	16 59 43.2	+2.3
	0.7nm,0.3s,baz=315,slow=20,SNR=4.1						
LMR	La Mourre	5.09	283	ePn	Pn	16 58 42.7	-0.1
LMR				eSn	Sn	16 59 37.9	-3.7
	2.4nm,0.5s						
LMR	La Mourre	5.09	283	ePn	Pn	16 58 42.7	-0.1
LMR				eSn	Sn	16 59 37.9	-3.7
	1.2nm,0.5s						
MBDF	Montbardon	5.31	299	eP	Pn	16 58 48.2	+2.3
MBDF	Montbardon	5.31	299	eP	Pn	16 58 48.2	+2.3
GERES	GERESS Array B	6.49	2	Pn	Pn	16 59 03.2	+1.1
	0.3nm,0.3s,baz=175,slow=13,SNR=6.3						
GERES				Sn	Sn	17 00 14.9	-1.3
	1.7nm,0.3s,baz=182,slow=24,SNR=12						
VIVF	Saint-Julien-l	6.75	295	ePn	Pn	16 59 07.4	+1.8
VIVF	Saint-Julien-l	6.75	295	ePn	Pn	16 59 07.4	+1.8
KHC	Kasperske Hory	6.78	2	ePN	Pn	16 59 07.5	+1.6
KHC				ex	x	16 59 17.5	
KHC				eSN	Sn	17 00 20.5	-2.6
KHC	Kasperske Hory	6.78	2	Pn	Pn	16 59 07.5	+1.6
KHC				Sn	Sn	17 00 20.5	-2.6
HINF	Hinteralfeld	7.11	322	ePn	Pn	16 59 09.7	-0.9
HINF				eSn	Sn	17 00 26.7	-4.7
	3.5nm,0.4s						
HINF	Hinteralfeld	7.11	322	ePn	Pn	16 59 09.7	-0.9
CDF	Champ du Feu	7.39	327	ePn	Pn	16 59 14.0	-0.5
CDF				eSn	Sn	17 00 33.8	-4.5
	3.8nm,0.5s						
CDF	Champ du Feu	7.39	327	ePn	Pn	16 59 14.0	-0.5
HAU	Haudompre	7.48	321	ePn	Pn	16 59 15.4	-0.3
HAU				eSn	Sn	17 00 34.4	-6.1
	4.7nm,0.4s						
HAU	Haudompre	7.48	321	ePn	Pn	16 59 15.4	-0.3
PRU	Pruhonice	7.68	6	eSN	Sn	17 00 43.2	-2.0
PRU	Pruhonice	7.68	6	Sn	Sn	17 00 43.2	-2.0
NKC	Novy Kostel	7.90	356	eSN	Sn	17 00 48.6	-2.1
NKC	Novy Kostel	7.90	356	Sn	Sn	17 00 48.6	-2.1
BRG	Berggiesshubel	8.53	3	SG	Sn	17 01 16.6	+10
	1.4nm,0.7s						
FINES	FINESS Array B	20.60	18	P	Pn	17 02 08.9	+1.2
	2.8nm,1.0s,baz=197,slow=12,SNR=3.4						
TORD	Torodi Ar. Bea	30.80	203	P	P	17 03 48.1	+5.8
	0.2nm,0.6s,baz=17,slow=9.2,SNR=2.4						
MKAR	Makanchi Array	47.90	60	P	P	17 06 07.7	+3.0
	0.4nm,0.8s,baz=296,slow=7.7,SNR=3.8						
YKA	Yellowknife Ar	67.47	337	P	P	17 08 23.2	+1.1
	0.1nm,0.5s,baz=44,slow=5.6,SNR=3.0						

IDC 06 16:59:45.2±3.0,30°.47S×177°.48W,h0km,mb3.7/2, mb1 3.9/3,mb1mx3.6/19,mbtmp3.7/3,ML2.6/1,Error ellipse: s-maj=70.3km s-min=36.3km az=113.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.96	208	Pn	Pn	17 01 56.3	+0.3
	0.1nm,0.3s,baz=249,slow=8.6,SNR=1.9						
URZ				Sn	Sn	17 03 36.7	-0.9
	0.2nm,0.3s,baz=135,slow=1.4,SNR=4.7						
ASAR	Alice Springs	43.55	267	P	P	17 07 51.0	-0.1
	0.3nm,0.4s,baz=104,slow=7.4,SNR=9.4						
WRA	Warramunga Arr	44.55	272	P	P	17 07 59.0	-0.1
	0.9nm,0.4s,baz=109,slow=8.0,SNR=14						
FINES	FINESS Array B	145.36	340	PKPbc	PKPbc	17 19 23.3	-0.9
	2.2nm,0.8s,baz=20,slow=4.4,SNR=7.9						

ISK 06 17:24:08.9,40°.14N×28°.95E,h5km,MD3.5
ISCJB 06 17:24:09.0±0.4,40°.14N±0°.02×28°.96E±0°.02,h1km±4km, Error ellipse: s-maj=2.8km s-min=2.8km az=8.3
CSEM 06 17:24:09.6±0.1,40°.14N×28°.95E,h5km,MD3.5,Error ellipse: s-maj=1.8km s-min=1.7km az=81.0
DDA 06 17:24:09.3,40°.13N×28°.92E,h6km,MD3.3
ISC 06 17:24:10.0±1.0,40°.14N±0°.02×28°.95E±0°.02,h7km±8km, n137,σ0s64/162,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORLT	Orhaneli	0.10	205	ePG	Pg	17 24 12.1	-0.2
ORLT	Orhaneli	0.10	205	ePg	Pg	17 24 12.1	-0.2
MDNY	Mudanya-Bursa	0.24	347	ePG	Pg	17 24 14.4	-0.3
MDNY	Mudanya-Bursa	0.24	347	ePg	Pg	17 24 14.4	-0.3
GEMT	Gemlik	0.35	31	ePG	Pg	17 24 16.4	-0.4
GEMT				eSG	Sg	17 24 21.9	+0.5
GEMT	Gemlik	0.35	31	ePg	Pg	17 24 16.4	-0.4
GEMT				eSg	Sg	17 24 21.9	+0.5
ARMT	Armutlu	0.43	351	ePG	Pg	17 24 17.7	-0.7
ARMT	Armutlu	0.43	351	ePg	Pg	17 24 17.7	-0.7
YLV	Yalova	0.54	37	ePG	Pg	17 24 20.0	-0.3
YLV	Yalova	0.54	37	ePg	Pg	17 24 20.0	-0.3
DST	Dursunbey	0.59	206	ePG	Pg	17 24 20.8	-0.6
DST	Dursunbey	0.59	206	ePg	Pg	17 24 20.8	-0.6
DURS	Dursunbey	0.65	215	iP	Pg	17 24 21.9	-0.6
DURS				iS	Sg	17 24 30.7	-0.3
DURS	Dursunbey	0.65	215	iP	Pg	17 24 21.9	-0.6
DURS				iS	Sg	17 24 30.7	-0.3
CAVI	Cavuskoy	0.69	84	ePG	Pg	17 24 22.0	-1.2
CAVI	Cavuskoy	0.69	84	ePg	Pg	17 24 22.0	-1.2
BUY	Buyukada	0.72	10	iP	Pg	17 24 23.9	0.0
BUY				iS	Sb	17 24 35.2	+0.1
BUY	Buyukada	0.72	10	iP	Pg	17 24 23.9	0.0
BUY				iS	Sb	17 24 35.2	+0.1
TVSB	Tavsanli	0.79	150	ePG	Pg	17 24 24.6	-0.6
TVSB	Tavsanli	0.79	150	ePg	Pg	17 24 24.6	-0.6
BNT	Bandirma	0.82	286	ePG	Pg	17 24 24.9	-0.8
BNT	Bandirma	0.82	286	ePg	Pg	17 24 25.0	-0.8
EDC	Edincik	0.86	284	ePG	Pg	17 24 26.4	-0.1
EDC	Edincik	0.86	284	ePg	Pg	17 24 26.4	-0.1
HRT	Hereke	0.87	38	ePG	Pg	17 24 25.8	-1.0
HRT	Hereke	0.87	38	ePg	Pg	17 24 25.8	-1.0
ISK	Istanbul-Kandi	0.93	5	ePG	Pg	17 24 27.5	-0.3
ISK	Istanbul-Kandi	0.93	5	ePg	Pg	17 24 27.5	-0.3
BALB	Balikesir	0.96	239	ePG	Pg	17 24 28.0	-0.5
BALB	Balikesir	0.96	239	ePg	Pg	17 24 28.0	-0.5
GONE	Gonen-Balikesi	0.98	265	ePG	Pg	17 24 27.9	-0.8
GONE	Gonen-Balikesi	0.98	265	ePg	Pg	17 24 27.9	-0.8
GPA	Golpazari	1.05	81	ePG	Pg	17 24 29.6	-0.5
GPA				eSG	Sb	17 24 44.8	+0.3
BGKT	Bogazkoy	1.05	353	ePG	Pg	17 24 29.1	-1.0
BGKT	Bogazkoy	1.05	353	ePg	Pg	17 24 29.1	-1.0
ELBA	Catalca	1.08	339	iP	Pg	17 24 30.5	-0.3
ELBA				iS	Sb	17 24 45.4	-0.1
ELBA	Catalca	1.08	339	iP	Pg	17 24 30.5	-0.3
ELBA				iS	Sb	17 24 45.4	-0.1
BALY	Balya	1.10	249	iP	Pg	17 24 30.2	-0.9
BALY				iS	Sg	17 24 45.1	-0.3
BALY	Balya	1.10	249	iP	Pg	17 24 30.2	-0.9
BALY				iS	Sg	17 24 45.1	-0.3
DEMI	Demirci	1.11	190	iP	Pg	17 24 30.6	-0.7
DEMI				iS	Sb	17 24 46.7	+0.5
DEMI	Demirci	1.11	190	iP	Pg	17 24 30.6	-0.7
DEMI				iS	Sb	17 24 46.7	+0.5
GDZ	Gediz	1.12	159	iP	Pg	17 24 30.8	-0.8
GDZ				iS	Sb	17 24 46.7	0.0
GDZ	Gediz	1.12	159	iP	Pg	17 24 30.8	-0.8
GDZ				iS	Sb	17 24 46.7	0.0
SILT	Sile	1.14	27	ePN	Pg	17 24 31.3	-0.6
SILT	Sile	1.14	27	ePn	Pg	17 24 31.3	-0.6
CTKS	Kestanelik-??a	1.15	343	ePN	Pg	17 24 30.9	-1.0
CTKS	Kestanelik-??a	1.15	343	ePn	Pg	17 24 31.0	-1.0
SPNC	Sapanca-Adapaz	1.17	62	ePN	Pg	17 24 31.9	-0.5
SPNC	Sapanca-Adapaz	1.17	62	ePn	Pg	17 24 31.9	-0.5
SLVT	Silivri	1.23	333	ePN	Pg	17 24 32.8	-0.8
SLVT	Silivri	1.23	333	ePn	Pg	17 24 32.8	-0.8
GULT	Gulveren	1.23	76	ePN	Pg	17 24 32.9	-0.7
GULT	Gulveren	1.23	76	ePn	Pg	17 24 32.9	-0.7
KRBG	Karabiga-Canak	1.29	282	ePN	Pg	17 24 33.7	-1.0
KRBG	Karabiga-Canak	1.29	282	ePn	Pg	17 24 33.7	-1.0
CRLT	Corlu	1.35	317	ePN	Pg	17 24 35.2	-0.8
CRLT	Corlu	1.35	317	ePn	Pg	17 24 35.2	-0.8
TKR	Tekirdag	1.38	309	ePN	Pg	17 24 35.5	-0.8
TKR	Tekirdag	1.38	309	ePn	Pg	17 24 35.5	-0.8
ALT	Altintas	1.40	140	ePN	Pn	17 24 35.6	-0.5
ALT	Altintas	1.40	140	iP	Pn	17 24 28.2	-7.9
ALT				iS	Sg	17 24 41.0	-14
ALT	Altintas	1.40	140	ePn	Pn	17 24 35.6	-0.5
CTYL	Yal??k??y-??at	1.43	340	ePN	Pn	17 24 35.8	-0.5
CTYL	Yal??k??y-??at	1.43	340	ePn	Pn	17 24 35.8	-0.5
MFT	Murefte	1.43	297	ePN	Pn	17 24 36.4	-0.1
MFT	Murefte	1.43	297	ePn	Pn	17 24 36.4	-0.1
SART	Tekirdag	1.46	293	iP	Pn	17 24 36.5	-0.4
SART				iS	Sg	17 24 56.1	-0.9
SART	Tekirdag	1.46	293	iP	Pn	17 24 36.5	-0.4
SART				iS	Sg	17 24 56.1	-0.9
RKY	Sarkoy-Tekirda	1.46	293	ePN	Pn	17 24 36.6	-0.3
RKY	Sarkoy-Tekirda	1.46	293	ePn	Pn	17 24 36.6	-0.3
AKHS	Akhisar	1.54	215	iP	Pn	17 24 36.7	-1.1
AKHS				iS	Sg	17 24 59.2	-0.1
AKHS	Akhisar	1.54	215	iP	Pn	17 24 36.7	-1.1
AKHS				iS	Sg	17 24 59.2	-0.1
AKS	Akhisar	1.54	215	ePN	Pn	17 24 37.7	-0.1
AKS	Akhisar	1.54	215	ePn	Pn	17 24 37.7	-0.1
ESKT	Eskisehir	1.59	112	ePN	Pn	17 24 38.4	-0.3
ESKT	Eskisehir	1.59	112	ePn	Pn	17 24 38.4	-0.3
SEYT	Eskypehyr	1.59	112	iP	Pn	17 24 38.3	-0.3
SEYT				iS	Sn	17 24 58.7	-0.7
SEYT	Eskypehyr	1.59	112	iP	Pn	17 24 38.3	-0.3
SEYT				iS	Sn	17 24 58.7	-0.7
KULA	Kula-Manisa	1.64	188	ePN	Pn	17 24 39.1	-0.2
KULA	Kula-Manisa	1.64	188	ePn	Pn	17 24 39.1	-0.2
LPK	Lapseki	1.69	279	ePN	Pn	17 24 40.0	0.0
LPK	Lapseki	1.69	279	ePn	Pn	17 24 40.0	0.0
MDUB	Mudurnu	1.75	78	ePN	Pn	17 24 40.9	+0.1
MDUB	Mudurnu	1.75	78	ePn	Pn	17 24 40.9	+0.1
KHAL	Karahalli	1.81	166	iP	Pn	17 24 41.1	-0.6
KHAL				iS	Sn	17 25 05.4	+0.4
KHAL	Karahalli	1.81	166	iP	Pn	17 24 41.1	-0.6
KHAL				iS	Sn	17 25 05.4	+0.4
KHL	Karahalli	1.87	166	ePN	Pn	17 24 41.8	-0.7
KHL	Karahalli	1.87	166	ePn	Pn	17 24 41.8	-0.7
GELI	Tayfur-Gelibol	1.91	279	ePN	Pn	17 24 43.1	+0.1
GELI	Tayfur-Gelibol	1.91	279	ePn	Pn	17 24 43.1	+0.1
AYVA	Ayvalik	1.93	245	iP	Pb	17 24 45.8	+0.3
AYVA				iS	Sb	17 25 11.0	+1.2
AYVA	Ayvalik	1.93	245	iP	Pb	17 24 45.8	+0.3
AYVA				iS	Sb	17 25 11.0	+1.2
SHUT	Suhut-Afyon	2.01	141	ePN	Pn	17 24 44.3	-0.1
SHUT	Suhut-Afyon	2.01	141	ePn	Pn	17 24 44.3	-0.1
EZN	Ezine	2.04	262	ePN	Pn	17 24 45.1	+0.4
EZN	Ezine	2.04	262	ePn	Pn	17 24 45.2	+0.4
SVRH	Sivrihisar-ESK	2.10	108	ePN	Pn	17 24 45.9	+0.3
SVRH	Sivrihisar-ESK	2.10	108	ePn	Pn	17 24 45.9	+0.3
IZM	Izmir	2.18	218	ePN	Pn	17 24 46.9	+0.2
IZM	Izmir	2.18	218	ePn	Pn	17 24 46.9	+0.2
ENEZ	Enez	2.22	287	ePN	Pn	17 24 47.4	+0.2
ENEZ	Enez	2.22	287	ePn	Pn	17 24 47.4	+0.2
KDZE	Karadeniz Ereo	2.23	57	ePN	Pn	17 24 47.6	+0.3
KDZE	Karadeniz Ereo	2.23	57	ePn	Pn	17 24 47.6	+0.3
BOZC	Bozcaada	2.25	263	iP	Pb	17 24 51.1	+0.2
BOZC				iS	Sg	17 25 20.9	-1.3
BLCB	Balcova	2.29	221	ePN	Pn	17 24 48.5	+0.2
BLCB	Balcova	2.29	221	ePn	Pn	17 24 48.5	+0.2
DENT	Denizli	2.38	178	ePN	Pn	17 24 50.0	+0.5
DENT	Denizli	2.38	178	ePn	Pn	17 24 50.0	+0.5
EDRB	Edirne	2.39	316	ePN	Pn	17 24 49.2	-0.4
EDRB	Edirne	2.39	316	ePn	Pn	17 24 49.2	-0.4
KIZT	Kizilcal	2.59	118	ePN	Pn	17 24 52.2	-0.2
KIZT	Kizilcal	2.59	118	ePn	Pn	17 24 52.2	-0.2
ISP	Isparta	2.62	152	ePN	Pn	17 24 53.8	+1.0
ISP	Isparta	2.62	152	ePn	Pn	17 24 53.8	+1.0
LOD	Lodumlu	2.94	94	ePN	Pn	17 24 57.7	+0.5
LOD	Lodumlu	2.94	94	ePn	Pn	17 24 57.7	+0.5
BCK	Bucak	2.96	154	ePN	Pn	17 24 58.2	+0.7
BCK	Bucak	2.96	154	ePn	Pn	17 24 58.2	+0.7
MLSB	Milas	2.98	198	ePN	Pn	17 24 58.3	+0.6
MLSB	Milas	2.98	198	ePn	Pn	17 24 58.3	+0.6
SAFT	Safranbolu	3.04	68	ePN	Pn	17 24 59.2	+0.7
SAFT	Safranbolu	3.04	68	ePn	Pn	17 24 59.3	+0.7
YER	Yerkesik	3.04	190	ePN	Pn	17 24 59.1	+0.6
YER	Yerkesik	3.04	190	ePn	Pn	17 24 59.2	+0.6
AFSR	Af¯ar-Bala (A	3.25	101	ePN	Pn	17 25 02.1	+0.7
AFSR	Af¯ar-Bala (A	3.25	101	ePn	Pn	17 25 02.1	+0.7
LADK	Ladik-KONYA	3.28	125	ePN	Pn	17 25 02.6	+0.7
LADK	Ladik-KONYA	3.28	125	ePn	Pn	17 25 02.7	+0.7
KONT	Konya--Tatoy	3.44	128	ePN	Pn	17 25 04.8	+0.8
KONT	Konya--Tatoy	3.44	128	ePn	Pn	17 25 04.8	+0.8
ELL	Elmali	3.47	167	ePN	Pn	17 25 05.2	+0.7
ELL	Elmali	3.47	167	ePn	Pn	17 25 05.2	+0.7
MMB	Musomiste	4.22	292	P	Pn	17 25 16.0	+1.3
MMB	Musomiste	4.22	292	P	Pn	17 25 16.0	+1.3
VTS	Vitosha	4.97	301	P	Pn	17 25 27.0	+1.9
VTS	Vitosha	4.97	301	P	Pn	17 25 27.0	+1.9

CSEM 06 17:27:43.8,42°.38N×13°.34E,h10km,After ROM
ROM 06 17:27:43.8±0.1,42°.38N×13°.34E,h10km,Ml1.9/3,2D, Error ellipse: s-maj=1.2km s-min=1.0km az=100.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	117	iPg	Pg	17 27 46.4	+0.4
AQU				Sg	Sg	17 27 47.7	+0.2
	3µm,0.2s						
AQU	L'Aquila	0.05	117	iPg	Pg	17 27 46.4	+0.4
AQU				Sg	Sg	17 27 47.7	+0.2
	3µm,0.2s						
CAMP	Campotosto	0.17	17	Pg	Pg	17 27 48.4	+0.7
CAMP				Sg	Sg	17 27 51.2	+0.8
CAMP	Campotosto	0.17	17	Pg	Pg	17 27 48.4	+0.7
CAMP				Sg	Sg	17 27 51.2	+0.8
FIAM	Fiamignano	0.20	237⇓	iPg	Pg	17 27 48.9	+0.7
FIAM				Sg	Sg	17 27 52.1	+0.9
	141nm,0.6s						
FIAM	Fiamignano	0.20	237⇓	iPg	Pg	17 27 48.9	+0.7
FIAM				Sg	Sg	17 27 52.1	+0.9
	141nm,0.6s						
FAGN	Fagnano	0.21	122	Pg	Pb	17 27 49.5	-0.3
FAGN				Sg	Sg	17 27 52.7	+1.3
FAGN	Fagnano	0.21	122	Pg	Pb	17 27 49.5	-0.3
FAGN				Sg	Sg	17 27 52.7	+1.3
TERO	Teramo	0.31	38	Pg	Pg	17 27 50.6	+0.4
TERO				Sg	Sg	17 27 55.2	+0.7
	145nm,0.1s						
TERO	Teramo	0.31	38	Pg	Pg	17 27 50.6	+0.4
TERO				Sg	Sg	17 27 55.2	+0.7
	145nm,0.1s						
PTQR	Pietraquaria	0.36	173	Pg	Pg	17 27 51.5	+0.5
PTQR				Sg	Sg	17 27 56.8	+0.9
	19nm,0.2s						
PTQR	Pietraquaria	0.36	173	Pg	Pg	17 27 51.5	+0.5
PTQR				Sg	Sg	17 27 56.8	+0.9
	19nm,0.2s						
VCEL	Villa Celiera	0.37	87	Pg	Pg	17 27 51.8	+0.5
VCEL				Sg	Sb	17 27 57.5	-1.0
	162nm,0.6s						
VCEL	Villa Celiera	0.37	87	Pg	Pg	17 27 51.8	+0.5
VCEL				Sg	Sb	17 27 57.5	-1.0
	162nm,0.6s						
NRCA	Norcia	0.49	340	Pg	Pg	17 27 53.9	+0.4
NRCA				Sg	Sb	17 28 01.1	-0.8
NRCA	Norcia	0.49	340	Pg	Pg	17 27 53.9	+0.4
NRCA				Sg	Sb	17 28 01.1	-0.8
GUAR	Guarcino	0.58	182	Pg	Pg	17 27 55.3	+0.1
GUAR	Guarcino	0.58	182	Pg	Pg	17 27 55.3	+0.1

IDC 06 17:28:27.7±2.0,1°.00S×133°.34E,h0km,mb3.7/3, mb1 3.8/5,mb1mx3.5/22,mbtmp3.7/5,ML3.4/2,Error ellipse: s-maj=78.7km s-min=25.2km az=75.0
ISCJB 06 17:28:30.8±1.6,1°.1S±0°.1×133°.2E±0°.4,h33km,mb3.7/3, Error ellipse: s-maj=52.0km s-min=18.5km az=170.3
AUST 06 17:29:14.2±99.0,4°.36S×131°.42E,h34km±1km,Error ellipse: s-maj=3.0km s-min=1.0km az=39.0
ISC 06 17:28:33.4±1.7,1°.1S±0°.2×133°.0E±0°.1,h35km,n11, σ1s08/8,mb3.7/3,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLE	Tual	4.53	183	P	Pn	17 29 43.2	+3.7
	baz=1.8,SNR=8.3						
AAI	Ambon	5.44	242	P	Pn	17 30 01.1	+9.1
	baz=3.3,SNR=3.4						
KDU	Kakadu	11.54	182	P	Pn	17 31 16.8	+1.0
	baz=8.4,SNR=4.4						
MTN	Manton Dam	11.82	189	P	Pn	17 31 09.8	-10
	baz=8.5,SNR=6.1						
MTN				S	Sn	17 33 16.8	-14
	baz=8.5,SNR=3.7						
PCI	Palu	13.14	271	P	P	17 32 04.1	+17
	baz=12,SNR=4.0						
PCI				S	Sn	17 34 02.2	-0.6
	baz=12,SNR=4.4						
FITZ	Fitzroy Crossi	18.39	203	P	Pn	17 32 45.9	+0.2
	0.1nm,0.3s,baz=35,slow=14,SNR=3.9						
FITZ	Fitzroy Crossi	18.39	203	P	Pn	17 32 46.0	+0.3
	baz=15,SNR=3.8						
WRA	Warramunga Arr	18.79	176	P	Pn	17 32 49.1	-1.5
	0.1nm,0.3s,baz=356,slow=11,SNR=4.7						
ASAR	Alice Springs	22.46	178	P	P	17 33 30.6	+0.8
	1.7nm,0.6s,baz=0.5,slow=11,SNR=36						
STKA	Stephens Creek	31.69	166	P	P	17 34 52.8	-1.0
	1.7nm,0.7s,baz=347,slow=11,SNR=3.9						
MKAR	Makanchi Array	65.07	324	P	P	17 39 11.0	+0.5
	0.3nm,0.7s,baz=106,slow=7.5,SNR=4.7						

CSEM 06 17:28:36.9,42°.28N×13°.42E,h14km,After ROM
ROM 06 17:28:36.9±0.3,42°.28N×13°.42E,h14km±3km,Ml2.1/3, Error ellipse: s-maj=4.5km s-min=2.5km az=3.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.08	349	Pg	Pg	17 28 40.7	+0.9
AQU				Sg	Sg	17 28 42.1	+0.2
	3µm,0.2s						
AQU	L'Aquila	0.08	349	Pg	Pg	17 28 40.7	+0.9
AQU				Sg	Sg	17 28 42.1	+0.2
	3µm,0.2s						
FAGN	Fagnano	0.12	96	Pg	Pb	17 28 41.0	-0.2
FAGN				Sg	Sg	17 28 42.7	0.0
	521nm,0.4s						
FAGN	Fagnano	0.12	96	Pg	Pb	17 28 41.0	-0.2
FAGN				Sg	Sg	17 28 42.7	0.0
	521nm,0.4s						
FIAM	Fiamignano	0.23	268	Pg	Pg	17 28 41.5	-0.5
FIAM				Sg	Sg	17 28 46.2	+0.8
	283nm,0.6s						
FIAM	Fiamignano	0.23	268	Pg	Pg	17 28 41.5	-0.5
FIAM				Sg	Sg	17 28 46.2	+0.8
	283nm,0.6s						
CAMP	Campotosto	0.26	358	Pg	Pg	17 28 42.8	+0.2
CAMP				Sg	Sg	17 28 46.9	+0.5
CAMP	Campotosto	0.26	358	Pg	Pg	17 28 42.8	+0.2
CAMP				Sg	Sg	17 28 46.9	+0.5
VCEL	Villa Celiera	0.33	69	Pg	Pb	17 28 44.6	-0.2
VCEL				Sg	Sg	17 28 48.8	+0.2
	155nm,0.3s						
VCEL	Villa Celiera	0.33	69	Pg	Pb	17 28 44.6	-0.2
VCEL				Sg	Sg	17 28 48.8	+0.2
	155nm,0.3s						
TERO	Teramo	0.37	21	Pg	Pg	17 28 44.6	+0.1
TERO	Teramo	0.37	21	Pg	Pg	17 28 44.6	+0.1

CSEM 06 17:28:43.5, 42.40N×13.35E, h7km, After ROM
ROM 06 17:28:43.5±0.1, 42.40N×13.35E, h7km±1km, Ml2.1/3, Error ellipse: s-maj=1.4km s-min=1.2km az=91.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**140**	Pg	Pg	17 28 45.8	+0.5
AQU				Sg	Sg	17 28 47.1	+0.5
	3µm,0.2s						
AQU	**L'Aquila**	**0.06**	**140**	Pg	Pg	17 28 45.8	+0.5
AQU				Sg	Sg	17 28 47.1	+0.5
	3µm,0.2s						
CAMP	**Campotosto**	**0.14**	**19**	Pg	Pg	17 28 47.7	+1.0
CAMP				Sg	Sg	17 28 49.4	+0.5
CAMP	**Campotosto**	**0.14**	**19**	Pg	Pg	17 28 47.7	+1.0
CAMP				Sg	Sg	17 28 49.4	+0.5
FIAM	**Fiamignano**	**0.22**	**232**	Pg	Pg	17 28 48.6	+0.6
FIAM				Sg	Sg	17 28 51.7	+0.7
	283nm,0.6s						
FIAM	**Fiamignano**	**0.22**	**232**	Pg	Pg	17 28 48.6	+0.6
FIAM				Sg	Sg	17 28 51.7	+0.7
	283nm,0.6s						
FAGN	**Fagnano**	**0.22**	**128**	Pg	Pg	17 28 48.9	+0.9
FAGN				Sg	Sg	17 28 52.2	+1.1
	521nm,0.4s						
FAGN	**Fagnano**	**0.22**	**128**	Pg	Pg	17 28 48.9	+0.9
FAGN				Sg	Sg	17 28 52.2	+1.1
	521nm,0.4s						
TERO	**Teramo**	**0.29**	**41**	Pg	Pg	17 28 49.9	+0.6
TERO				Sg	Sg	17 28 54.5	+1.2
TERO	**Teramo**	**0.29**	**41**	Pg	Pg	17 28 49.9	+0.6
TERO				Sg	Sg	17 28 54.5	+1.2
VCEL	**Villa Celiera**	**0.37**	**91**	Pg	Pb	17 28 52.0	-0.5
VCEL				Sg	Sb	17 28 57.6	-0.9
	155nm,0.3s						
VCEL	**Villa Celiera**	**0.37**	**91**	Pg	Pb	17 28 52.0	-0.5
VCEL				Sg	Sb	17 28 57.6	-0.9
	155nm,0.3s						
PTQR	**Pietraquaria**	**0.38**	**174**	Pg	Pb	17 28 52.2	-0.5
PTQR	**Pietraquaria**	**0.38**	**174**	Pg	Pb	17 28 52.2	-0.5
NRCA	**Norcia**	**0.46**	**338**	Pg	Pb	17 28 53.9	-0.3
NRCA				Sg	Sb	17 29 00.4	-0.9
NRCA	**Norcia**	**0.46**	**338**	Pg	Pb	17 28 53.9	-0.3
NRCA				Sg	Sb	17 29 00.4	-0.9

IDC 06 17:38:00.4±61.0, 21.24S×178.35W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/18, mbtmp3.7/3, Error ellipse: s-maj=1110.0km s-min=165.8km az=84.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.18**	**245**	P	P	17 45 11.9	-1.5
	1.6nm,0.8s,baz=76,slow=8.3,SNR=3.9						
ASAR	**Alice Springs**	**44.04**	**258**	P	P	17 46 10.3	+0.1
	1.2nm,0.9s,baz=97,slow=7.2,SNR=13						
WRA	**Warramunga Arr**	**44.18**	**263**	P	P	17 46 12.1	+0.6
	0.2nm,0.3s,baz=93,slow=8.4,SNR=15						

MAN 06 17:40:12, 13.22N×123.66E, h22km, mb4.4, ML3.2, MS3.0, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.96**	**276**	eP	Pb	17 40 29.3	-0.7
AUQP				eS	Sn	17 40 44.1	+0.8
CNP	**Catarman**	**1.20**	**126**	eP	Pn	17 40 33.8	+0.2
CNP				eS	Sb	17 40 49.5	+0.2
GQP	**Guinayangan**	**1.36**	**300**	⇓eP	Pn	17 40 35.1	-0.6
GQP				i S	Sb	17 40 54.2	+0.3
BOAC	**Boac**	**1.78**	**278**	eP	Pb	17 40 43.1	-0.9
RCP	**Roxas**	**1.87**	**209**	⇑eP	Pb	17 40 46.7	+1.1
RCP				eS	Sb	17 41 08.3	-0.2
MSLP	**Maasin**	**3.28**	**159**	eP	Pn	17 41 03.5	+1.3

ISCJB 06 17:48:53.6±0.4, 24.59N±0.03×121.81E±0.02, h71km±4km, Error ellipse: s-maj=4.7km s-min=2.8km az=153.1
TAP 06 17:48:53.9, 24.57N×121.77E, h68km, ML3.7, B
JMA 06 17:48:54.1±0.3, 24.82N×121.90E, h71km, M3.0
ISC 06 17:48:54.2±1.3, 24.58N±0.03×121.80E±0.03, h68km±6km, n58, σ0.75/101, 10C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.05**	**52**	⇓iP	**Pn**	**17 49 04.3**	**+0.2**
	baz=62						
TWC				i S	**Sn**	**17 49 12.2**	**+0.8**
	baz=62						
ENA	**Nanau**	**0.16**	**201**	⇓iP	**Pn**	**17 49 04.5**	**0.0**
	baz=196						
ENA				eS	**Sn**	**17 49 12.4**	**+0.5**
	baz=196						
TWE	**Neicheng**	**0.19**	**319**	⇓iP	**Pn**	**17 49 04.8**	**+0.2**
	baz=325						
TWE				eS	**Sn**	**17 49 12.4**	**+0.3**
	baz=325						
ILA	**Ilan**	**0.20**	**345**	⇓iP	**Pn**	**17 49 05.1**	**+0.5**
	baz=350						
ILA				S	**Sn**	**17 49 13.2**	**+1.1**
	baz=350						
ENTT	**Nioudou**	**0.23**	**286**	⇓iP	**Pn**	**17 49 04.8**	**0.0**
	baz=292						
ENTT				S	**Sn**	**17 49 12.4**	**-0.1**
	baz=292						
NNS	**Nan Shan**	**0.41**	**251**	⇑iP	**Pn**	**17 49 06.2**	**0.0**
	baz=250						
NNS				S	**Sn**	**17 49 14.6**	**-0.4**
	baz=250						
NSK	**Sanguang**	**0.42**	**284**	⇑iP	**Pn**	**17 49 05.7**	**-0.5**
	baz=297						
NSK				i S	**Sn**	**17 49 14.0**	**-0.9**
	baz=297						
TWB1	**Santiao Chiao**	**0.46**	**21**	i P	**Pn**	**17 49 06.7**	**+0.2**
	baz=35						
TWB1				eS	**Sn**	**17 49 16.0**	**+0.5**
	baz=35						
NWF	**Wu-fen Shan**	**0.49**	**358**	⇓iP	**Pn**	**17 49 07.1**	**+0.2**
	baz=353						
NWF				S	**Sn**	**17 49 16.6**	**+0.4**
	baz=353						
TAP1	**Taipei**	**0.53**	**331**	eP	**Pn**	**17 49 06.7**	**-0.4**
	baz=326						
TAP1				eS	**Sn**	**17 49 15.9**	**-0.7**
	baz=326						
TWD	**Chiawan**	**0.53**	**201**	⇓P	**Pn**	**17 49 06.4**	**-0.8**
	baz=207						
TWD				eS	**Sn**	**17 49 15.3**	**-1.3**
	baz=207						
TAP	**Taipei**	**0.53**	**330**	P	**Pn**	**17 49 06.9**	**-0.3**
	baz=326						
TAP				eS	**Sn**	**17 49 16.1**	**-0.6**
	baz=326						
HWA	**Hwalien**	**0.62**	**197**	eP	**Pn**	**17 49 07.7**	**-0.4**
	baz=203						
WHF	**Hehuan Shan**	**0.65**	**229**	⇑P	**Pn**	**17 49 08.8**	**-0.1**
	baz=225						
WHF				eS	**Sn**	**17 49 19.2**	**-0.5**
	baz=225						
TWT	**Tachien**	**0.66**	**241**	P	**Pn**	**17 49 09.0**	**+0.4**
	baz=236						
TWT				S	**Sn**	**17 49 19.5**	**+0.2**
	baz=236						
NCU	**National Centr**	**0.68**	**305**	i P	**Pn**	**17 49 08.5**	**-0.3**
	baz=298						
NCU				S	**Sn**	**17 49 19.2**	**-0.3**
	baz=298						
TWY	**Chenhua**	**0.72**	**345**	P	**Pn**	**17 49 09.3**	**+0.1**
	baz=339						
TWY				eS	**Sn**	**17 49 20.6**	**+0.3**
	baz=339						
NSTT	**Nanjuang**	**0.73**	**274**	⇑iP	**Pn**	**17 49 09.0**	**-0.3**
	baz=284						
NSTT				S	**Sn**	**17 49 19.8**	**-0.7**
	baz=284						
HSN	**Hsinchu**	**0.79**	**287**	⇑iP	**Pn**	**17 49 09.5**	**-0.5**
	baz=290						
HSN				eS	**Sn**	**17 49 20.5**	**-1.2**
	baz=290						
ESL	**Shilin**	**0.83**	**204**	eP	**Pn**	**17 49 09.1**	**-1.5**
	baz=197						
NSY	**Sanyi**	**0.96**	**261**	⇑P	**Pn**	**17 49 12.4**	**+0.2**
	baz=261						
NSY				eS	**Sn**	**17 49 25.6**	**+0.1**
	baz=261						
TWQ1	**Liyutan**	**0.97**	**257**	⇑iP	**Pn**	**17 49 12.1**	**-0.1**
	baz=256						
TWQ1				eS	**Sn**	**17 49 25.0**	**-0.6**
	baz=256						
SMLT	**Sun Moon Lake**	**1.07**	**230**	P	**Pn**	**17 49 14.2**	**+0.5**
	baz=226						
SMLT				eS	**Sn**	**17 49 29.2**	**+1.0**
	baz=226						
PCYT	**Pengchaiyu**	**1.08**	**13**	eP	**Pn**	**17 49 13.8**	**+0.3**
	baz=15						
PCYT				eS	**Sn**	**17 49 28.7**	**+0.7**
	baz=15						
TYC	**Yuchr**	**1.09**	**232**	⇑iP	**Pn**	**17 49 14.2**	**+0.4**
	baz=232						
TYC				eS	**Sn**	**17 49 28.8**	**+0.5**
	baz=232						
YOJ	**Yonaguni jima**	**1.11**	**96**	eP	**Pn**	**17 49 13.6**	**-0.3**
	baz=87						
YOJ				S	**Sn**	**17 49 28.3**	**-0.3**
	baz=87						
YOJ	**Yonaguni jima**	**1.11**	**96**	P	**Pn**	**17 49 13.7**	**-0.3**
YOJ				S	**Sn**	**17 49 28.4**	**-0.3**
TCU	**Taichung**	**1.11**	**248**	eP	**Pn**	**17 49 14.1**	**+0.1**
	baz=247						
EHY	**Hungye**	**1.15**	**203**	eP	**Pn**	**17 49 14.1**	**-0.5**
	baz=195						
WNT	**Mingjian**	**1.24**	**236**	⇑iP	**Pn**	**17 49 15.9**	**+0.3**
	baz=247						
WNT				eS	**Sn**	**17 49 32.5**	**+0.8**
	baz=247						
TWF1	**Yuli**	**1.30**	**201**	eP	**Pn**	**17 49 15.8**	**-0.8**
	baz=200						
ALS	**Alishan**	**1.40**	**221**	⇑P	**Pn**	**17 49 18.8**	**+0.8**
	baz=231						
ALS				eS	**Sn**	**17 49 37.3**	**+1.4**
	baz=231						
CHN5	**Tsauling**	**1.42**	**227**	P	**Pn**	**17 49 18.5**	**+0.4**
	baz=236						
CHN5				eS	**Sn**	**17 49 37.0**	**+0.9**
	baz=236						
WGK	**Gukeng**	**1.44**	**232**	P	**Pn**	**17 49 18.8**	**+0.5**
	baz=243						
WGK				eS	**Sn**	**17 49 37.3**	**+0.9**
	baz=243						
CHKT	**Chengkung**	**1.52**	**195**	eP	**Pn**	**17 49 18.1**	**-1.3**
	baz=201						
CHKT				eS	**Sn**	**17 49 37.7**	**-0.8**
	baz=201						
ELDTW	**Lidau**	**1.56**	**208**	eP	**Pn**	**17 49 19.8**	**-0.3**
	baz=201						
WTCT	**Ta-ch'eng**	**1.56**	**243**	eP	**Pn**	**17 49 19.2**	**-0.7**
	baz=243						
WTCT				eS	**Sn**	**17 49 38.8**	**-0.5**
	baz=243						
CHN2	**Minshiung**	**1.60**	**230**	eP	**Pn**	**17 49 21.0**	**+0.6**
	baz=240						
CHN2				eS	**Sn**	**17 49 41.8**	**+1.5**
	baz=240						
CHN4	**Tsaushan**	**1.65**	**222**	eP	**Pn**	**17 49 21.7**	**+0.6**
	baz=223						
CHN4				eS	**Sn**	**17 49 43.2**	**+1.8**
	baz=223						
CHY	**Chiayi**	**1.66**	**230**	eP	**Pn**	**17 49 21.5**	**+0.3**
	baz=240						
CHY				eS	**Sn**	**17 49 42.0**	**+0.3**
	baz=240						
WTP	**Ta-pu**	**1.71**	**220**	P	**Pn**	**17 49 22.5**	**+0.4**
	baz=230						
WSF	**Szhu**	**1.72**	**237**	eP	**Pn**	**17 49 21.9**	**-0.2**
	baz=237						
WSF				eS	**Sn**	**17 49 43.1**	**0.0**
	baz=237						
IRIF	**Iriomote-Funau**	**1.77**	**97**	P	**Pn**	**17 49 22.4**	**-0.3**
IRIF				S	**Sn**	**17 49 43.7**	**-0.7**
TWK	**Hsinying**	**1.77**	**223**	eP	**Pn**	**17 49 23.1**	**+0.3**
	baz=235						
TWK				eS	**Sn**	**17 49 46.1**	**+1.6**
	baz=235						
CHN1	**Nanshi**	**1.81**	**220**	P	**Pn**	**17 49 23.9**	**+0.5**
	baz=233						
CHN1				eS	**Sn**	**17 49 46.7**	**+1.3**
	baz=233						
TWG	**Pinlang**	**1.87**	**201**	eP	**Pn**	**17 49 23.1**	**-1.0**
	baz=193						
HATJ	**Hateruma jima**	**1.90**	**105**	P	**Pn**	**17 49 25.1**	**+0.7**
HATJ				S	**Sn**	**17 49 48.2**	**+0.8**
CHN8	**Yiju**	**1.90**	**230**	eP	**Pn**	**17 49 24.5**	**0.0**
	baz=231						
CHN8				eS	**Sn**	**17 49 48.9**	**+1.3**
	baz=231						
JKRS	**Kuro-shima**	**2.04**	**99**	P	**Pn**	**17 49 26.5**	**+0.2**
JKRS				S	**Sn**	**17 49 50.8**	**0.0**
SSD	**Sandimen**	**2.12**	**211**	eP	**Pn**	**17 49 28.5**	**+1.1**
	baz=211						
ECL	**Taimali**	**2.12**	**202**	eP	**Pn**	**17 49 26.2**	**-1.3**
	baz=195						
JIJ	**Ishigaki jima**	**2.14**	**95**	P	**Pn**	**17 49 27.4**	**-0.3**
JIJ				S	**Sn**	**17 49 52.1**	**-1.2**
TWM1	**Shoushan**	**2.16**	**216**	eP	**Pn**	**17 49 27.1**	**-0.9**
	baz=226						
PNG	**Penghu**	**2.29**	**244**	eP	**Pn**	**17 49 28.4**	**-1.3**
	baz=244						
PNG				eS	**Sn**	**17 49 54.6**	**-2.3**
	baz=244						
EAST	**Anshuo**	**2.35**	**202**	eP	**Pn**	**17 49 31.4**	**+0.8**
	baz=195						
SCZT	**Fangliau**	**2.45**	**207**	eP	**Pn**	**17 49 32.2**	**+0.3**
	baz=207						
JTJ	**Tarama**	**2.64**	**88**	P	**Pn**	**17 49 34.9**	**+0.4**
KNM	**Kinmen**	**3.07**	**268**	eP	**Pn**	**17 49 40.4**	**0.0**
	baz=268						

CSEM 06 17:54:02.9, 42.29N×13.40E, h10km, After ROM
ROM 06 17:54:02.9±0.1, 42.29N×13.40E, h10km, Ml1.9/5, Error ellipse: s-maj=1.3km s-min=1.1km az=8.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**4**	Pg	Pg	17 54 05.2	+0.1
AQU				Sg	Sg	17 54 06.7	-0.1
	974nm,0.3s						
AQU	**L'Aquila**	**0.07**	**4**	Pg	Pg	17 54 05.2	+0.1
AQU				Sg	Sg	17 54 06.7	-0.1
	974nm,0.3s						
FAGN	**Fagnano**	**0.14**	**98**	Pg	Pg	17 54 06.7	+0.5
FAGN				Sg	Sg	17 54 09.4	+0.9
	1µm,0.4s						
FAGN	**Fagnano**	**0.14**	**98**	Pg	Pg	17 54 06.7	+0.5
FAGN				Sg	Sg	17 54 09.4	+0.9
	1µm,0.4s						
FIAM	**Fiamignano**	**0.21**	**265**	Pg	Pg	17 54 08.0	+0.6
FIAM				Sg	Sg	17 54 11.8	+1.4
	337nm,0.7s						
FIAM	**Fiamignano**	**0.21**	**265**	Pg	Pg	17 54 08.0	+0.6
FIAM				Sg	Sg	17 54 11.8	+1.4
	337nm,0.7s						
CAMP	**Campotosto**	**0.25**	**2**	Pg	Pg	17 54 09.1	+0.9
CAMP				Sg	Sg	17 54 13.0	+1.2
CAMP	**Campotosto**	**0.25**	**2**	Pg	Pg	17 54 09.1	+0.9
CAMP				Sg	Sg	17 54 13.0	+1.2
PTQR	**Pietraquaria**	**0.26**	**179**	Pg	Pg	17 54 08.8	+0.4
PTQR				Sg	Sg	17 54 13.3	+1.3
PTQR	**Pietraquaria**	**0.26**	**179**	Pg	Pg	17 54 08.8	+0.4
PTQR				Sg	Sg	17 54 13.3	+1.3
VCEL	**Villa Celiera**	**0.35**	**72**	Pg	Pb	17 54 11.0	-0.4
	131nm,0.4s						
VCEL	**Villa Celiera**	**0.35**	**72**	Pg	Pb	17 54 11.0	-0.4
	131nm,0.4s						
VVLD	**Villa Vallelon**	**0.45**	**158**	Pg	Pg	17 54 12.0	+0.2
	81nm,0.8s						
VVLD	**Villa Vallelon**	**0.45**	**158**	Pg	Pg	17 54 12.0	+0.2
	81nm,0.8s						
MNS	**Montasola**	**0.54**	**281**	Pg	Pg	17 54 13.6	+0.1
	52nm,0.9s						
MNS	**Montasola**	**0.54**	**281**	Pg	Pg	17 54 13.6	+0.1
	52nm,0.9s						

IDC 06 17:57:14.4±1.3, 27.76N×93.03E, h0km, mb3.3/6, mb1 3.5/7, mb1mx3.4/28, mbtmp3.3/7, ML3.3/1, Error ellipse: s-maj=54.8km s-min=17.0km az=65.0
DMN 06 17:57:14.1±0.5, 27.74N×93.03E, h10km, Ml4.6/11, Error ellipse: s-maj=31.9km s-min=8.0km az=4.0
BJI 06 17:57:17.0, 27.43N×92.85E, h5km, ML3.3/3
ISC 06 17:57:15.1±1.9, 27.64N±0.04×92.68E±0.06, h11km±13km, n23, σ1.46/37, mb3.4/6, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**2.19**	**199**	ex	**Pn**	**17 57 54.0**	**+2.4**
SHL				i SN	**Sb**	**17 58 22.5**	**+0.5**
LSA	**Lhasa**	**2.45**	**327**	Pn	**Pb**	**17 58 00.1**	**+0.6**
LSA				Sn	**Sg**	**17 58 33.6**	**-0.4**
IMP	**Imphal**	**3.06**	**158**	ex	**Pb**	**17 58 10.0**	**+0.3**
IMP				ex	x	17 58 30.0	
IMP				ex	**Sg**	**17 58 53.0**	**-0.6**
AGT	**Agartala**	**3.96**	**199**	eP	**Sb**	**17 59 09.0**	**-3.9**
TAPN	**Taplejung**	**4.42**	**267**	ePn	**Pn**	**17 58 24.4**	**+1.9**
TAPN				eSn	**Sn**	**17 59 15.8**	**+1.7**
	97nm,0.2s						
ODAN	**Odare**	**4.77**	**262**	ePn	**Pn**	**17 58 28.2**	**+1.0**
ODAN				eSn	**Sn**	**17 59 22.9**	**+0.2**
	184nm,0.3s						
RAMN	**Ramite**	**5.45**	**264**	ePn	**Pn**	**17 58 37.9**	**+1.3**
RAMN				eSn	**Sn**	**17 59 40.1**	**+0.6**
	74nm,0.2s						
GUN	**Gumba**	**6.03**	**274**	ePn	**Pn**	**17 58 46.1**	**+1.5**
GUN				eSn	**Sn**	**17 59 54.9**	**+1.1**
	81nm,0.3s						
PKI	**Pulchoki**	**6.45**	**271**	ePn	**Pn**	**17 58 51.5**	**+1.1**
PKI				eSn	**Sn**	**18 00 04.2**	**0.0**
	52nm,0.3s						
PKIN	**Phulchoki**	**6.46**	**271**	ePn	**Pn**	**17 58 51.4**	**+0.9**
PKIN				eSn	**Sn**	**18 00 04.5**	**+0.1**
	140nm,0.5s						
KKN	**Kakani**	**6.56**	**273**	ePn	**Pn**	**17 58 53.2**	**+1.4**
KKN				eSn	**Sn**	**18 00 07.4**	**+0.7**
	59nm,0.2s						
DMN	**Daman**	**6.72**	**271**	ePn	**Pn**	**17 58 55.2**	**+1.2**
DMN				eSn	**Sn**	**18 00 10.4**	**-0.3**
	24nm,0.2s						
DANN	**Dangsing**	**7.92**	**277**	ePn	**Pn**	**17 59 09.4**	**-1.1**
DANN				eSn	**Sn**	**18 00 37.2**	**-3.0**
	25nm,0.2s						
KOLN	**Koldanda**	**8.05**	**273**	ePn	**Pn**	**17 59 12.3**	**+0.1**
KOLN				eSn	**Sn**	**18 00 42.0**	**-1.3**
	76nm,0.4s						
PYUN	**Piuthan**	**8.59**	**275**	ePn	**Pn**	**17 59 18.7**	**-0.9**
PYUN				eSn	**Sn**	**18 00 53.9**	**-2.7**
	49nm,0.3s						
CMAR	**Chiang Mai Arr**	**10.81**	**146**	Pn	**Pn**	**17 59 49.4**	**-0.5**
	0.1nm,0.3s,baz=323,slow=13,SNR=2.9						
MKAR	**Makanchi Array**	**20.79**	**340**	P	**P**	**18 01 56.5**	**+0.2**
	0.4nm,0.3s,baz=165,slow=11,SNR=6.8						
AAK	**Ala-Archa**	**21.02**	**320**	P	**P**	**18 02 00.6**	**+1.6**
	0.5nm,0.7s,baz=115,slow=17,SNR=2.2						
SONM	**Songino Array**	**22.82**	**24**	P	**P**	**18 02 16.0**	**-2.2**
	0.2nm,0.4s,baz=208,slow=11,SNR=4.3						
ZALV	**Zalesovo Beam**	**26.91**	**350**	P	**P**	**18 02 57.3**	**+1.3**
	0.4nm,0.4s,baz=172,slow=8.2,SNR=3.0						
WRA	**Warramunga Arr**	**62.16**	**135**	P	**P**	**18 07 36.7**	**+0.1**
	4.6nm,0.7s,baz=324,slow=7.4,SNR=39						
ASAR	**Alice Springs**	**64.69**	**138**	P	**P**	**18 07 53.6**	**+0.3**
	1.3nm,0.7s,baz=323,slow=6.7,SNR=24						
ILAR	**Eielson Array**	**77.03**	**22**	P	**P**	**18 09 07.8**	**-0.1**
	0.3nm,0.8s,baz=304,slow=5.1,SNR=4.6						

IDC 06 17:58:26.9±1.1, 33.69N×82.44E, h0km, mb3.3/6, mb1 3.6/7, mb1mx3.3/29, mbtmp3.4/7, ML2.8/1, Error ellipse: s-maj=40.7km s-min=21.4km az=55.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.09**	**360**	Pn	Pn	18 01 33.4	-0.7
	0.1nm,0.3s,baz=172,slow=12,SNR=4.4						
ZALV	**Zalesovo Beam**	**20.32**	**4**	P	P	18 03 03.0	-1.4
	0.3nm,0.3s,baz=185,slow=7.2,SNR=3.2						
CMAR	**Chiang Mai Arr**	**21.16**	**132**	P	P	18 03 13.5	-0.3
	0.4nm,0.4s,baz=316,slow=11,SNR=4.9						
BVAR	**Borovoye Array**	**21.16**	**340**	P	P	18 03 14.8	+1.3
	0.3nm,0.4s,baz=167,slow=6.8,SNR=3.3						
GERES	**GERESS Array B**	**52.10**	**309**	P	P	18 07 39.5	+0.7
	0.3nm,0.5s,baz=46,slow=5.6,SNR=3.4						
WRA	**Warramunga Arr**	**72.73**	**129**	P	P	18 09 57.6	+0.5
	0.4nm,0.9s,baz=327,slow=6.0,SNR=5.0						
TORD	**Torodi Ar. Bea**	**75.20**	**276**	P	P	18 10 10.7	-1.1
	0.3nm,0.5s,baz=57,slow=4.9,SNR=4.5						

GUC 06 18:01:55.6±0.5, 28.16S×70.79W, h33km±5km, MD3.9, ML3.8, 2D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.85**	**175**	eP	Pn	18 02 11.9	+0.1
LCO				eS	Sb	18 02 24.2	+0.3
LCO				AML	AML	18 02 25.5	
	comp=E,5µm,0.2s						
CPCH	**Copiapo**	**0.88**	**26**	⇓iP	Pn	18 02 11.6	-0.2
CPCH				i S	Sb	18 02 24.0	-0.1
CPCH				AML	AML	18 02 25.0	
	comp=N,37µm,0.1s						
CDCH	**Caldera**	**1.08**	**358**	eP	Pn	18 02 14.9	+0.4
CDCH				i S	Sn	18 02 29.0	+0.6
CDCH				AML	AML	18 02 36.0	
	comp=N,911nm,0.5s						
TLL	**Tololo Astrono**	**2.00**	**180**	⇓iP	Pn	18 02 27.6	0.0
TLL				i S	Sn	18 02 53.2	+1.5
TLL				AML	AML	18 02 53.9	
	comp=E,281nm,0.6s						
CMCH	**Combarbala**	**3.01**	**183**	eP	Pn	18 02 39.9	-1.3
CMCH				i S	Sn	18 03 15.4	-0.8
CMCH				AML	AML	18 03 41.3	
	comp=E,756nm,0.9s						

ISCJB 06 18:03:36.5±0.1, 43.77N±0.01×105.30W±0.02, h0km, mb3.8/2, Error ellipse: s-maj=2.0km s-min=1.4km az=166.0
NEIC 06 18:03:37.5±0.3, 43.80N×105.25W, h0km, ML3.3, Error ellipse: s-maj=4.3km s-min=4.0km az=133.0, Suspected Mining explosion.
NEIC 60 km [35 miles] SSE of Gillette.
IDC 06 18:03:37.1±1.9, 43.73N×105.43W, h0km, mb3.7/2, mb1 3.8/7, mb1mx3.5/31, mbtmp3.6/7, ML3.5/5, Error ellipse: s-maj=52.1km s-min=9.2km az=150.0
ISC 06 18:03:37.2±0.6, 43.75N±0.02×105.30W±0.02, h0km, n212, σ0.81/237, 86C-84D, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I23A	**Meade Ranch, G**	**0.24**	**331**	⇓P	**Pg**	**18 03 42.7**	**+0.8**
	baz=0.2,SNR=216						
I23A				⇑S	**Sg**	**18 03 45.9**	**+0.9**
	baz=0.2						
J23A	**Dilts Ranch, B**	**0.39**	**208**	P	**Pg**	**18 03 44.9**	**+0.2**
	baz=0.5,SNR=129						
J23A				⇓S	**Sg**	**18 03 50.3**	**+0.5**
	baz=0.5						
I24A	**Kuemmerle Ranc**	**0.50**	**77**	P	**Pg**	**18 03 47.2**	**+0.4**
	baz=0.5,SNR=384						
I24A				⇑S	**Sg**	**18 03 54.4**	**+1.0**
	baz=0.5						
J24A	**Dixon Ranch, L**	**0.63**	**132**	⇑P	**Pg**	**18 03 49.2**	**0.0**
	baz=0.6,SNR=141						
J24A				⇑S	**Sg**	**18 03 56.9**	**-0.4**
	baz=0.6						
H23A	**Clabaugh Cattl**	**0.81**	**355**	⇑P	**Pg**	**18 03 52.8**	**-0.1**
	baz=0.8,SNR=25						
H23A				⇓S	**Sg**	**18 04 04.3**	**+0.8**
	baz=0.8						
I22A	**9 Mile Ranch,**	**0.87**	**280**	P	**Pg**	**18 03 53.7**	**-0.2**
	baz=0.9,SNR=690						
I22A				⇑S	**Sg**	**18 04 06.0**	**+0.9**
	baz=0.9						
J22A	**Midwest**	**0.92**	**249**	⇑P	**Pg**	**18 03 54.0**	**-0.8**
	baz=1.0,SNR=160						
J22A				⇓S	**Sg**	**18 04 07.2**	**+0.5**
	baz=1.0						
RSSD	**Black Hills**	**0.99**	**67**	eP	**Pg**	**18 03 56.0**	**-0.2**
K23A	**Bowen Ranch, D**	**1.02**	**193**	⇑P	**Pg**	**18 03 56.3**	**-0.5**
	baz=1.1						
K23A				⇓Sg	**Sb**	**18 04 12.4**	**+0.4**
	baz=1.1						
K24A	**Anderson Ranch**	**1.09**	**161**	⇑P	**Pg**	**18 03 57.5**	**-0.5**

	baz=1.1,SNR=110						
K24A				⇑Sb	Sb	18 04 14.3	+0.5
	baz=1.1						
H22A	**Clearmont**	**1.13**	**319**	⇑P	**Pg**	**18 03 58.6**	**-0.4**
	baz=1.1,SNR=134						
H24A	**Dirks Ranch, A**	**1.13**	**28**	⇑P	**Pg**	**18 03 58.2**	**-0.8**
	baz=1.1						
H24A				⇓S	Sg	18 04 14.5	+0.8
	baz=1.1						
K22A	**Casper**	**1.42**	**220**	P	**Pn**	**18 04 03.1**	**-1.3**
	baz=1.5,SNR=172						
K22A				⇑S	Sg	18 04 23.1	+0.4
	baz=1.5						
I21A	**Big Trails, Te**	**1.44**	**273**	⇑P	**Pn**	**18 04 03.2**	**-1.6**
	baz=1.5,SNR=287						
I21A				⇓S	Sg	18 04 23.4	-0.2
	baz=1.5						
G23A	**Biddle**	**1.45**	**358**	P	**Pn**	**18 04 04.0**	**-0.9**
	baz=1.4,SNR=169						
G23A				⇑S	Sn	18 04 25.5	+0.9
	baz=1.4						
H21A	**Big Horn, Sher**	**1.53**	**306**	⇓P	**Pn**	**18 04 05.6**	**-0.4**
	baz=1.5,SNR=154						
H21A				⇓S	Sn	18 04 27.4	+0.8
	baz=1.5						
K25A	**Mack Ranch, Ha**	**1.55**	**137**	⇓Pb	**Pn**	**18 04 06.4**	**+0.2**
	baz=1.6,SNR=104						
J21A	**Lysite**	**1.61**	**256**	P	**Pn**	**18 04 06.0**	**-1.2**
	baz=1.7,SNR=174						
J21A				⇓S	Sn	18 04 28.9	+0.2
	baz=1.7						
G22A	**Birney**	**1.63**	**335**	⇑P	**Pn**	**18 04 07.3**	**0.0**
	baz=1.6,SNR=155						
L23A	**Garrett**	**1.66**	**190**	⇓P	**Pn**	**18 04 07.3**	**-0.6**
	baz=1.7,SNR=501						
L23A				⇓S	Sn	18 04 30.2	+0.2
	baz=1.7						
G24A	**Alzada**	**1.70**	**22**	⇓P	**Pn**	**18 04 08.6**	**+0.4**
	baz=1.6,SNR=27						
G24A				⇑Sb	Sg	18 04 33.0	+1.2
	baz=1.6						
L24A	**Wheatland**	**1.73**	**171**	⇑P	**Pn**	**18 04 08.7**	**0.0**
	baz=1.8,SNR=29						
L24A				⇓Sb	Sg	18 04 33.1	+0.4
	baz=1.8						
K21A	**Alcova**	**1.81**	**233**	⇑P	**Pn**	**18 04 09.9**	**+0.1**
	baz=1.9,SNR=80						
K21A				⇑Sb	Sg	18 04 35.8	+0.4
	baz=1.9						
L25A	**Engebretsen Ra**	**1.87**	**148**	⇓Pb	**Pb**	**18 04 11.9**	**-0.5**
	baz=1.9,SNR=19						
L25A				⇑Sb	Sg	18 04 37.9	+0.6
	baz=1.9						
K26A	**Motz Farm, Whi**	**1.87**	**123**	⇑P	**Pn**	**18 04 10.8**	**+0.2**
	baz=1.9						
L22A	**Ellis Ranch, M**	**1.91**	**206**	⇑P	**Pn**	**18 04 11.3**	**+0.1**
	baz=2.0,SNR=37						
L22A				⇑Sb	Sb	18 04 38.1	+0.6
	baz=2.0						
G21A	**Lodge Grass**	**2.01**	**318**	P	**Pn**	**18 04 12.8**	**+0.3**
	baz=2.0,SNR=161						
G21A				⇓Sb	Sg	18 04 41.7	-0.1
	baz=2.0						
I20A	**Worland**	**2.06**	**277**	⇓P	**Pn**	**18 04 13.5**	**+0.3**
	baz=2.1,SNR=404						
I20A				⇑S	Sn	18 04 40.5	+0.9
	baz=2.1						
J20A	**Shoshoni**	**2.06**	**260**	⇑Pb	**Pb**	**18 04 15.2**	**-0.5**
	baz=2.1,SNR=174						
J20A				⇑Sb	Sb	18 04 42.7	+0.9
	baz=2.1						
H20A	**Greybull**	**2.08**	**292**	⇓P	**Pn**	**18 04 13.4**	**-0.1**
	baz=2.1,SNR=60						
H20A				⇑S	Sn	18 04 40.9	+0.8
	baz=2.1						
F22A	**Rosebud**	**2.14**	**342**	⇓P	**Pn**	**18 04 14.2**	**-0.1**
	baz=2.1,SNR=112						
F22A				⇓Sb	Sb	18 04 45.2	+1.1
	baz=2.1						
F24A	**Ekalaka**	**2.18**	**16**	⇓P	**Pn**	**18 04 15.6**	**+0.7**
	baz=2.1						
F24A				⇓Sb	Sg	18 04 47.2	-0.1
	baz=2.1						
M23A	**Laramie**	**2.30**	**188**	⇑P	**Pn**	**18 04 17.3**	**+0.7**
	baz=2.4,SNR=28						
M23A				⇓Sb	Sb	18 04 49.1	+0.2
	baz=2.4						
M24A	**Cheyenne**	**2.31**	**171**	⇑P	**Pn**	**18 04 17.5**	**+0.8**
	baz=2.4,SNR=125						
M24A				⇑Sb	Sb	18 04 50.7	+1.7
	baz=2.4						
L21A	**Rawlins**	**2.34**	**221**	⇑P	**Pn**	**18 04 17.8**	**+0.6**
	baz=2.4,SNR=46						
L26A	**Underwood Farm**	**2.37**	**136**	⇓Pb	**Pb**	**18 04 20.1**	**-0.7**
	baz=2.4						
F21A	**Absaloka Mine,**	**2.44**	**329**	⇑P	**Pn**	**18 04 18.4**	**-0.1**
	baz=2.4						
PHWY	**Pilot Hill**	**2.45**	**183**	eP	**Pn**	**18 04 18.9**	**+0.2**
K27A	**Flueckinger Fa**	**2.47**	**114**	⇑P	**Pn**	**18 04 18.8**	**0.0**
	baz=2.5						
K20A	**Yellowstone Ra**	**2.48**	**245**	⇑P	**Pn**	**18 04 19.4**	**+0.4**
	baz=2.5						
M25A	**Palm-Egli Farm**	**2.49**	**158**	⇑P	**Pn**	**18 04 20.5**	**+1.3**
	baz=2.5,SNR=17						
M22A	**Cedar Creek Ra**	**2.53**	**203**	⇓P	**Pn**	**18 04 21.4**	**+1.5**
	baz=2.6,SNR=239						
G20A	**Bridger**	**2.55**	**306**	P	**Pn**	**18 04 19.9**	**-0.1**
	baz=2.5,SNR=69						
M21A	**Separation Pea**	**2.63**	**216**	⇓P	**Pn**	**18 04 22.6**	**+1.4**
	baz=2.7,SNR=69						
I19A	**Meeteetse**	**2.69**	**277**	⇓P	**Pn**	**18 04 22.7**	**+0.8**
	baz=2.7,SNR=72						
E22A	**Miles City**	**2.73**	**351**	⇑P	**Pn**	**18 04 22.2**	**-0.2**
	baz=2.7,SNR=11						
E23A	**Ismay**	**2.75**	**360**	⇑P	**Pn**	**18 04 22.8**	**+0.1**
	baz=2.7,SNR=15						
K19A	**Absolon Red Bu**	**2.75**	**252**	⇑P	**Pn**	**18 04 23.6**	**+0.9**
	baz=2.8,SNR=68						
J19A	**Crowheart**	**2.77**	**261**	⇑P	**Pn**	**18 04 24.3**	**+1.2**
	baz=2.8,SNR=61						
H19A	**Powell**	**2.80**	**290**	⇑P	**Pn**	**18 04 23.9**	**+0.4**
	baz=2.8,SNR=26						
F20A	**Billings**	**2.88**	**316**	P	**Pn**	**18 04 24.3**	**-0.3**
	baz=2.9,SNR=27						
N23A	**Red Feather La**	**2.89**	**190**	⇓P	**Pn**	**18 04 25.9**	**+1.1**
	baz=3.0						
E24A	**Baker**	**2.90**	**14**	⇑P	**Pn**	**18 04 25.4**	**+0.7**
	baz=2.8,SNR=38						
N22A	**Wattenberg Ran**	**3.07**	**197**	⇑P	**Pn**	**18 04 28.7**	**+1.5**
	baz=3.1						
RLMT	**Red Lodge**	**3.15**	**297**	eP	**Pn**	**18 04 28.5**	**+0.2**
RLMT	**Red Lodge**	**3.15**	**297**	⇑P	**Pn**	**18 04 28.7**	**+0.3**
	baz=3.2,SNR=64						
BW06	**Boulder Array**	**3.26**	**254**	eP	**Pn**	**18 04 30.3**	**+0.5**
BW06	**Boulder Array**	**3.26**	**254**	P	**Pn**	**18 04 30.4**	**+0.6**
	baz=3.3,SNR=56						
PDAR	**Pinedale Array**	**3.26**	**254**	Pn	**Pn**	**18 04 30.4**	**+0.6**
PDAR				Lg	Lg	18 05 16.1	
PDAR	**Pinedale Array**	**3.26**	**254**	Pn	**Pn**	**18 04 30.4**	**+0.6**
	4.9nm,0.3s,baz=69,slow=15,SNR=119						
PDAR				Lg	Lg	18 05 16.1	
	17nm,0.3s,baz=77,slow=33,SNR=11						
H18A	**Shoshone NF, C**	**3.27**	**288**	⇓P	**Pn**	**18 04 30.0**	**0.0**
	baz=3.3,SNR=21						
I18A	**Diamond G Ranc**	**3.27**	**271**	P	**Pn**	**18 04 31.4**	**+1.4**
	baz=3.3,SNR=56						
F19A	**Roth Farm, Mol**	**3.34**	**310**	⇓P	**Pn**	**18 04 31.3**	**+0.5**
	baz=3.3,SNR=19						
E20A	**Meyer Farm, Mu**	**3.40**	**325**	⇓P	**Pn**	**18 04 31.7**	**0.0**
	baz=3.4						
N21A	**Black Mountain**	**3.41**	**210**	⇓P	**Pn**	**18 04 33.1**	**+1.2**
	baz=3.5,SNR=15						
D23A	**Lindsay**	**3.42**	**1**	⇓P	**Pn**	**18 04 32.6**	**+0.7**
	baz=3.4,SNR=13						
G18A	**Lazy EL Ranch,**	**3.43**	**299**	⇓P	**Pn**	**18 04 32.5**	**+0.4**
	baz=3.4,SNR=70						
D24A	**Glendive**	**3.44**	**11**	⇓P	**Pn**	**18 04 32.8**	**+0.8**
	baz=3.4,SNR=21						
D22A	**Cohagen**	**3.46**	**350**	⇑P	**Pn**	**18 04 32.5**	**+0.1**
	baz=3.4						
J18A	**Kendall Valley**	**3.48**	**263**	⇑P	**Pn**	**18 04 33.9**	**+1.0**
	baz=3.5,SNR=20						
D21A	**La Casta Ranch**	**3.52**	**341**	⇑P	**Pn**	**18 04 33.8**	**+0.5**
	baz=3.5						
O23A	**Lake Granby, G**	**3.57**	**188**	⇑P	**Pn**	**18 04 34.7**	**+0.6**
	baz=3.6,SNR=17						
N27A	**Anderson Farm,**	**3.59**	**144**	⇑P	**Pn**	**18 04 35.1**	**+0.9**
	baz=3.6						
M19A	**Rock Springs**	**3.62**	**233**	⇓P	**Pn**	**18 04 35.6**	**+0.8**
	baz=3.7						
O24A	**Longmont**	**3.63**	**177**	⇓P	**Pn**	**18 04 35.9**	**+1.1**
	baz=3.7						
K18A	**Toltan Ranch,**	**3.64**	**254**	⇓P	**Pn**	**18 04 36.7**	**+1.6**
	baz=3.7						
E19A	**Rath Farm, Rou**	**3.67**	**319**	⇓P	**Pn**	**18 04 35.0**	**-0.2**
	baz=3.6,SNR=7.9						
O22A	**Kremmling**	**3.70**	**195**	⇓P	**Pn**	**18 04 36.7**	**+0.7**
	baz=3.8,SNR=19						
OGNE	**Ogallala**	**3.71**	**138**	eP	**Pn**	**18 04 36.6**	**+0.7**
OGNE	**Ogallala**	**3.71**	**138**	⇓P	**Pn**	**18 04 36.5**	**+0.7**
	baz=3.7						
GCMT	**Greycliff**	**3.72**	**305**	ePn	**Pn**	**18 04 36.6**	**+0.5**
O25A	**Wiggins**	**3.74**	**166**	⇓P	**Pn**	**18 04 36.5**	**+0.2**
	baz=3.8						
LKWY	**Lake**	**3.76**	**284**	ePn	**Pn**	**18 04 37.1**	**+0.4**
O26A	**Horse Wrangler**	**3.81**	**156**	⇓P	**Pn**	**18 04 37.5**	**+0.3**
	baz=3.8						
F18A	**Big Timber**	**3.81**	**306**	⇑P	**Pn**	**18 04 37.6**	**+0.3**
	baz=3.8,SNR=46						
C24A	**Savage**	**3.83**	**9**	⇓P	**Pn**	**18 04 38.1**	**+0.6**
	baz=3.8						
LOHW	**Long Hollow**	**3.85**	**270**	ePn	**Pn**	**18 04 38.9**	**+1.0**
D20A	**Manuel Ranch,**	**3.89**	**330**	⇓P	**Pn**	**18 04 38.1**	**-0.2**
	baz=3.9,SNR=11						
MOOW	**Moose Ponds**	**3.94**	**272**	ePn	**Pn**	**18 04 39.9**	**+0.7**
ISCO	**Idaho Springs**	**3.95**	**183**	ePn	**Pn**	**18 04 39.7**	**+0.3**
ISCO	**Idaho Springs**	**3.95**	**183**	⇓P	**Pn**	**18 04 40.1**	**+0.7**
	baz=4.0,SNR=9.2						
SNOW	**Snow King Moun**	**3.97**	**268**	ePn	Pn	18 04 43.6	+4.0
C22A	**Vida**	**4.02**	**354**	⇓P	**Pn**	**18 04 40.8**	**+0.8**
	baz=4.0,SNR=6.1						
N19A	**John Jarvie Ra**	**4.05**	**227**	⇑P	**Pn**	**18 04 40.9**	**+0.2**
	baz=4.1,SNR=27						
C23A	**Lambert**	**4.05**	**1**	⇓P	**Pn**	**18 04 41.5**	**+0.9**
	baz=4.0,SNR=32						
IMW	**Indian Meadow**	**4.08**	**274**	ePn	**Pn**	**18 04 42.1**	**+1.0**
TPAW	**Teton Pass**	**4.11**	**268**	ePn	**Pn**	**18 04 42.9**	**+1.4**
O27A	**Beecher Island**	**4.13**	**148**	⇑P	**Pn**	**18 04 42.2**	**+0.5**
	baz=4.2						
YMR	**Madison River**	**4.17**	**285**	ePn	**Pn**	**18 04 42.7**	**+0.3**
G17A	**Pierce Place,**	**4.19**	**294**	⇓P	**Pn**	**18 04 43.1**	**+0.6**
	baz=4.2						
O20A	**White River Ci**	**4.22**	**212**	⇑P	**Pn**	**18 04 44.0**	**+0.9**
	baz=4.3,SNR=10						
D19A	**Cripps Ranch,**	**4.24**	**325**	⇓P	**Pn**	**18 04 43.2**	**0.0**
	baz=4.2						
N18A	**Larsen Ranch,**	**4.26**	**231**	⇑P	**Pn**	**18 04 44.2**	**+0.6**
	baz=4.3,SNR=6.5						
C21A	**Desert Coulee**	**4.27**	**344**	⇓P	**Pn**	**18 04 43.8**	**+0.4**
	baz=4.2						
DCID1	**Drake Creek**	**4.27**	**270**	ePn	**Pn**	**18 04 43.9**	**+0.2**
P22A	**Eagle**	**4.29**	**195**	⇑P	**Pn**	**18 04 45.0**	**+1.0**
	baz=4.4						
E18A	**Harlowton**	**4.31**	**312**	⇓P	**Pn**	**18 04 44.7**	**+0.6**
	baz=4.3						
P25A	**Willow Gulch B**	**4.32**	**168**	⇑P	**Pn**	**18 04 44.7**	**+0.4**
	baz=4.4						
AHID	**Auburn Hatcher**	**4.35**	**259**	ePn	**Pn**	**18 04 46.6**	**+1.9**
F17A	**Fitzpatrick Pl**	**4.38**	**301**	⇓P	**Pn**	**18 04 45.6**	**+0.5**
	baz=4.4,SNR=9.1						
H16A	**Russell Place,**	**4.38**	**285**	⇑P	**Pn**	**18 04 45.4**	**+0.2**
	baz=4.4						
P23A	**Jefferson**	**4.39**	**185**	⇓P	**Pn**	**18 04 46.1**	**+0.6**
	baz=4.4						
C20A	**Veseth Ranch,**	**4.39**	**335**	⇓P	**Pn**	**18 04 45.8**	**+0.6**
	baz=4.4						
RRI2	**Red Ridge**	**4.39**	**267**	ePn	**Pn**	**18 04 46.1**	**+0.6**
L17A	**Cokeville**	**4.41**	**250**	⇑P	**Pn**	**18 04 45.8**	**+0.1**
	baz=4.5						
P26A	**Davis Ranch, A**	**4.43**	**160**	⇑P	**Pn**	**18 04 46.7**	**+0.8**
	baz=4.5,SNR=13						
O19A	**Miners Draw (B**	**4.47**	**221**	⇑P	**Pn**	**18 04 47.2**	**+0.8**
	baz=4.5,SNR=5.3						
M17A	**Scullys Gap (B**	**4.57**	**242**	⇓P	**Pn**	**18 04 48.1**	**+0.4**
	baz=4.6						
P27A	**Ficken Ranch,**	**4.66**	**153**	⇓P	**Pn**	**18 04 49.4**	**+0.5**
	baz=4.7,SNR=10						
D18A	**Linhart Farms,**	**4.68**	**319**	⇑P	**Pn**	**18 04 49.9**	**+0.7**
	baz=4.7,SNR=5.1						
B23A	**Brockton**	**4.72**	**3**	⇓P	**Pn**	**18 04 50.8**	**+1.1**
	baz=4.7						
SMCO	**Snowmass**	**4.74**	**196**	eP	**Pb**	**18 05 02.9**	**+1.5**
C19A	**Slack Wire Ran**	**4.77**	**328**	⇑P	**Pn**	**18 04 50.6**	**+0.2**
	baz=4.7,SNR=46						
DGMT	**Dagmar**	**4.78**	**9**	ePn	**Pn**	**18 04 51.7**	**+1.1**
DGMT	**Dagmar**	**4.78**	**9**	⇓P	**Pn**	**18 04 51.7**	**+1.1**
	baz=4.7						
L16A	**Fish Haven**	**4.83**	**251**	⇓P	**Pn**	**18 04 52.1**	**+0.8**
	baz=4.9,SNR=22						
B21A	**Ellsworth Farm**	**4.83**	**346**	⇑P	**Pn**	**18 04 51.8**	**+0.6**
	baz=4.8						
G16A	**Moss Hill, Enn**	**4.88**	**290**	⇓P	**Pn**	**18 04 51.8**	**-0.3**
	baz=4.9,SNR=7.1						
BOZ	**Bozeman (W)**	**4.89**	**295**	ePn	**Pn**	**18 04 51.5**	**-0.7**
BOZ	**Bozeman (W)**	**4.89**	**295**	⇑P	**Pn**	**18 04 51.7**	**-0.5**
	baz=4.9						
Q25A	**Bedland, Calha**	**4.90**	**170**	⇑P	**Pn**	**18 04 52.9**	**+0.6**
	baz=4.9						
P19A	**Cripple Cowboy**	**4.95**	**215**	⇑P	**Pn**	**18 04 54.0**	**+0.9**
	baz=5.0						
N17A	**Moffit Pass**	**4.97**	**238**	⇓P	**Pn**	**18 04 53.7**	**+0.4**
	baz=5.0						
Q26A	**Hugo**	**5.00**	**164**	⇓P	**Pn**	**18 04 54.2**	**+0.5**
	baz=5.0						
B20A	**Solberg Farm,**	**5.06**	**339**	⇓P	**Pn**	**18 04 54.6**	**+0.3**
	baz=5.0						
HWUT	**Hardware Ranch**	**5.09**	**247**	ePn	**Pn**	**18 04 55.5**	**+0.6**
	11nm,0.4s						
D17A	**Six Diamond Ra**	**5.09**	**314**	P	**Pn**	**18 04 54.9**	**0.0**
	baz=5.1,SNR=55						
KSCO	**Kaye Shedlock'**	**5.14**	**156**	⇑P	**Pn**	**18 04 55.8**	**+0.2**
	baz=5.2						
A24A	**Westby**	**5.25**	**9**	⇑P	**Pn**	**18 04 58.1**	**+1.1**
	baz=5.2						
EGMT	**Eagleton**	**5.29**	**326**	ePn	**Pn**	**18 04 56.4**	**-1.1**
	28nm,0.5s						
EGMT	**Eagleton**	**5.29**	**326**	⇓P	**Pn**	**18 04 57.7**	**+0.2**
	baz=5.3						
E16A	**East Helena**	**5.30**	**304**	⇓P	**Pn**	**18 04 57.8**	**0.0**
	baz=5.3,SNR=7.2						
B19A	**Brinkman Farms**	**5.34**	**333**	⇓P	**Pn**	**18 04 58.8**	**+0.6**
	baz=5.3						
A21A	**Bergtoll Ranch**	**5.36**	**348**	⇑P	**Pn**	**18 04 58.7**	**+0.2**
	baz=5.3						
C17A	**Wharram Farm,**	**5.45**	**317**	⇑P	**Pn**	**18 05 00.2**	**+0.4**
	baz=5.4						
HRY	**Holter Researc**	**5.48**	**305**	ePn	Pn	18 04 56.0	-4.3
	19nm,0.5s						
D16A	**Dana Ranch, Ca**	**5.49**	**309**	⇓P	**Pn**	**18 05 00.5**	**+0.1**
	baz=5.5						
L15A	**Malad City**	**5.49**	**254**	⇑P	**Pn**	**18 05 01.2**	**+0.7**
	baz=5.5,SNR=9.9						
LRM	**Limekiln Ridge**	**5.49**	**295**	ePn	**Pn**	**18 05 00.5**	**-0.1**
	35nm,0.4s						
R24A	**Sanders Place,**	**5.51**	**178**	⇓P	**Pn**	**18 05 02.0**	**+1.2**
	baz=5.6						
MCMT	**McKenzie Canyo**	**5.52**	**284**	ePn	**Pn**	**18 05 04.1**	**+3.2**
	2.2nm,0.3s						
P18A	**Preston Nutter**	**5.54**	**224**	⇑P	**Pn**	**18 05 02.1**	**+0.9**
	baz=5.6,SNR=32						
DAU	**Daniels Canyon**	**5.54**	**235**	ePn	**Pn**	**18 05 02.9**	**+1.6**
	9.9nm,0.5s						
JLU	**Jordanelle**	**5.55**	**238**	ePn	**Pn**	**18 05 00.3**	**-1.0**
	8.1nm,0.5s						
R26A	**Arlington**	**5.62**	**165**	⇑P	**Pn**	**18 05 02.4**	**+0.2**
	baz=5.7,SNR=19						
R25A	**Fountain Ranch**	**5.65**	**172**	⇓P	**Pn**	**18 05 02.8**	**+0.2**
	baz=5.7,SNR=5.4						
A19A	**Klindworth Far**	**5.70**	**337**	⇑P	**Pn**	**18 05 02.6**	**-0.6**
	baz=5.7						
M15A	**Larsen Ranch,**	**5.75**	**249**	⇓P	**Pn**	**18 05 05.0**	**+1.1**
	baz=5.8						
HVU	**Hansel Valley**	**5.84**	**253**	ePn	**Pn**	**18 05 06.1**	**+0.8**
	10nm,0.7s						
E15A	**Deer Lodge**	**5.84**	**300**	⇑P	**Pn**	**18 05 05.4**	**+0.2**
	baz=5.8						
P17A	**Butcher Ranch,**	**5.90**	**225**	⇑P	**Pn**	**18 05 06.8**	**+0.7**
	baz=6.0,SNR=6.8						
B17A	**L&G Farms, Che**	**5.94**	**322**	⇑P	**Pn**	**18 05 06.7**	**+0.2**
	baz=5.9,SNR=6.4						
J14A	**Carey**	**5.99**	**269**	⇑P	**Pn**	**18 05 08.7**	**+1.4**
	baz=6.0						
PV04	**Paradox Valley**	**6.00**	**208**	ePn	**Pn**	**18 05 08.7**	**+1.2**
MPU	**Maple Canyon**	**6.02**	**234**	P	**Pn**	**18 05 08.9**	**+1.2**
	5.4nm,0.5s						
R20A	**Redvale**	**6.02**	**204**	⇓P	**Pn**	**18 05 09.3**	**+1.6**
	baz=6.1						
A18A	**Metzger Ranch,**	**6.05**	**330**	⇓P	**Pn**	**18 05 08.0**	**0.0**
	baz=6.0						
D15A	**Lincoln**	**6.05**	**305**	⇓P	**Pn**	**18 05 08.7**	**+0.6**
	baz=6.0						
C16A	**Fuhringer Ranc**	**6.06**	**314**	⇑P	**Pn**	**18 05 08.0**	**-0.1**
	baz=6.0						
SRU	**San Rafael**	**6.07**	**222**	ePn	**Pn**	**18 05 08.1**	**-0.4**
	11nm,0.5s						
SRU	**San Rafael**	**6.07**	**222**	⇓P	**Pn**	**18 05 08.6**	**+0.2**
	baz=6.1,SNR=15						
S25A	**Robets Cordova**	**6.12**	**174**	⇑P	**Pn**	**18 05 09.2**	**+0.2**
	baz=6.2,SNR=6.0						
PV01	**Paradox Valley**	**6.13**	**205**	ePn	**Pn**	**18 05 10.6**	**+1.3**
	592nm,0.5s						
S26A	**Kim**	**6.28**	**167**	⇑P	**Pn**	**18 05 11.3**	**+0.1**
	baz=6.3						
ECSD	**EROS Data Cent**	**6.29**	**87**	ePn	**Pn**	**18 05 11.5**	**+0.2**
	9.2nm,0.6s						
E14A	**Clinton**	**6.38**	**298**	⇓P	**Pn**	**18 05 12.8**	**+0.2**
	baz=6.4						
CHMT	**Chamberlain Mo**	**6.43**	**302**	ePn	**Pn**	**18 05 13.5**	**+0.1**
	3.3nm,0.5s						
B16A	**M & M Farms, S**	**6.45**	**319**	P	**Pn**	**18 05 13.4**	**0.0**
	baz=6.4,SNR=9.0						
Q16A	**Castle Valley**	**6.54**	**224**	⇑P	**Pn**	**18 05 15.0**	**+0.1**
	baz=6.6,SNR=8.5						
HLID	**Hailey**	**6.61**	**272**	ePn	**Pn**	**18 05 18.3**	**+2.5**
	2.2nm,0.6s						
DUG	**Dugway**	**6.63**	**240**	ePn	**Pn**	**18 05 16.4**	**+0.3**
	3.4nm,0.4s						
DUG	**Dugway**	**6.63**	**240**	⇑P	**Pn**	**18 05 16.5**	**+0.5**
	baz=6.7,SNR=11						
D14A	**Greenough**	**6.67**	**303**	⇑P	**Pn**	**18 05 16.5**	**0.0**
	baz=6.7						
T24A	**Torres, Weston**	**6.67**	**178**	⇓P	**Pn**	**18 05 17.6**	**+0.9**
	baz=6.7						
SLMT	**Seeley Lake**	**6.73**	**304**	ePn	**Pn**	**18 05 17.6**	**+0.2**
	4.3nm,0.6s						
B15A	**Bradely Ranch,**	**6.81**	**315**	⇓P	**Pn**	**18 05 17.8**	**-0.6**
	baz=6.8						
MSO	**Missoula**	**6.83**	**300**	ePn	**Pn**	**18 05 18.9**	**+0.2**
	2.5nm,0.7s						
MSO	**Missoula**	**6.83**	**300**	⇑P	**Pn**	**18 05 19.1**	**+0.4**
	baz=6.8						
T27A	**Campo**	**6.96**	**163**	⇓P	**Pn**	**18 05 20.6**	**0.0**
	baz=7.0						
MVCO	**Mesa Verde**	**6.97**	**202**	ePn	**Pn**	**18 05 23.3**	**+2.5**
	5.2nm,0.5s						
S18A	**Hurst Farm, Bl**	**7.02**	**212**	⇓P	**Pn**	**18 05 22.1**	**+0.6**
	baz=7.1,SNR=17						
SWMT	**Swartz Lake**	**7.16**	**305**	ePn	**Pn**	**18 05 23.3**	**0.0**
	4.0nm,0.4s						
B14A	**Marquette Ranc**	**7.21**	**313**	⇓P	**Pn**	**18 05 23.8**	**-0.2**
	baz=7.2						
D13A	**Huson**	**7.26**	**301**	⇓P	**Pn**	**18 05 24.7**	**+0.1**
	baz=7.2						
A15A	**Johnson Ranch,**	**7.33**	**318**	⇓P	**Pn**	**18 05 24.6**	**-1.0**
	baz=7.3						
YBMT	**Yellow Bay**	**7.34**	**307**	ePn	**Pn**	**18 05 26.9**	**+1.1**
	5.7nm,0.4s						
JTMT	**Jette**	**7.44**	**306**	ePn	**Pn**	**18 05 27.8**	**+0.6**
	2.9nm,0.4s						
A14A	**Double T Ranch**	**7.67**	**316**	⇑P	**Pn**	**18 05 29.3**	**-0.9**
	baz=7.6						
ULM	**Lac du Bonnet**	**9.15**	**41**	Pn	**Pn**	**18 05 49.5**	**-0.9**
ULM				Pg		18 06 24.3	
ULM				Lg	Lg	18 08 29.5	
ULM	**Lac du Bonnet**	**9.15**	**41**	Pn	**Pn**	**18 05 49.5**	**-0.9**
	1.1nm,0.3s,baz=236,slow=12,SNR=6.0						
ULM				Pg		18 06 24.3	
	1.3nm,0.3s,baz=217,slow=17,SNR=6.2						
ULM				Lg	Lg	18 08 29.5	
	0.8nm,0.3s,baz=307,slow=18,SNR=4.8						
WUAZ	**Wupatki**	**9.46**	**212**	eP	**Pn**	**18 05 56.1**	**+1.2**
	7.6nm,0.4s						
NVAR	**Mina Array Bea**	**11.15**	**246**	Pn	**Pn**	**18 06 20.1**	**+2.0**
NVAR	**Mina Array Bea**	**11.15**	**246**	Pn	**Pn**	**18 06 20.1**	**+2.0**
	0.2nm,0.3s,baz=55,slow=11,SNR=2.8						
FFC	**Flin Flon**	**11.20**	**10**	ePn	**Pn**	**18 06 16.2**	**-2.2**
	3.8nm,0.6s						
YBH	**Yreka Blue Hor**	**12.96**	**267**	Pn	Pn	18 06 46.9	+4.3
YBH	**Yreka Blue Hor**	**12.96**	**267**	Pn	Pn	18 06 46.9	+4.3
	0.1nm,0.3s,baz=100,slow=11,SNR=3.9						
YKA	**Yellowknife Ar**	**19.55**	**347**	P	**P**	**18 08 04.8**	**-1.3**
YKA	**Yellowknife Ar**	**19.55**	**347**	P	**P**	**18 08 04.8**	**-1.3**
	0.1nm,0.3s,baz=151,slow=13,SNR=9.8						
ZALV	**Zalesovo Beam**	**82.29**	**354**	P	**P**	**18 15 59.6**	**-0.6**
ZALV	**Zalesovo Beam**	**82.29**	**354**	P	**P**	**18 15 59.6**	**-0.6**
	0.7nm,0.6s,baz=354,slow=6.1,SNR=5.4						
SONM	**Songino Array**	**84.62**	**339**	P	**P**	**18 16 12.4**	**-0.2**
SONM	**Songino Array**	**84.62**	**339**	P	**P**	**18 16 12.4**	**-0.2**
	0.2nm,0.4s,baz=23,slow=1.9,SNR=2.9						

*BJI **06** 18:11:45.8, 36°.28N×70°.80E, h82km, mB4.8/9, mb4.7/20, Ms4.4/5, Ms7 3.9/3*

*ISCJB **06** 18:11:48.0±0.3, 36°.26N±0°.02×71°.14E±0°.03, h101km±4km, mb4.6/130, Error ellipse: s-maj=3.6km s-min=2.7km az=154.7*

*MOS **06** 18:11:47.9±1.1, 36°.27N×71°.10E, h101km, mb4.7/68, Error ellipse: s-maj=5.6km s-min=3.6km az=104.3*

*IDC **06** 18:11:49.6±0.7, 36°.19N×71°.07E, h108km±5km, mb4.2/36, mb1 4.3/38, mb1mx4.3/41, mbtmp4.2/38, MS3.3/8, Ms1 3.4/8, ms1mx3.0/44, Error ellipse: s-maj=11.1km s-min=8.3km az=15.0*

*NEIC **06** 18:11:50.0±0.2, 36°.29N×71°.09E, mb4.7/52, Error ellipse: s-maj=5.2km s-min=4.2km az=181.0*

NEIC Felt at Kabul and Mazar-e Sharif.

*NNC **06** 18:11:51.3±4.8, 36°.63N×70°.54E, h85km±42km, mb4.5, mpv5.2, Error ellipse: s-maj=35.9km s-min=31.7km az=151.0*

*DJA **06** 18:11:53.2±1.8, 36°N±26°×7°1E±°, h110km±15km, M4.9/7, mb4.8/7, MLv5.0/1*

*SZGRF **06** 18:12:44.8, 41°.46N×65°.07E, h78km, mb4.6, Central Kazakhstan*

ISC 06 18:11:49.8±0.3, **36°.31N**±0°.03×**71°.07E**±0°.03, **h103**km±3km, **h102**km**:pP-P, n457,** σ**1**§**71**/538, **mb4.7**/130, **36C-32D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.42**	**224**	ePN	**Pn**	**18 12 28.1**	**0.0**
KBL				eS	**Sn**	**18 12 58.0**	**+0.5**
KBL	**Kabul**	**2.42**	**224**	ePn	**Pn**	**18 12 28.1**	**0.0**
KBL				eS	**Sn**	**18 12 58.0**	**+0.5**
CEP	**Cherat**	**2.58**	**164**	⇓P	**Pn**	**18 12 31.7**	**+1.6**
CEP				S	**Sn**	**18 13 03.0**	**+2.0**
CHCP	**Chirah Chowk**	**3.20**	**145**	P	**Pn**	**18 12 40.2**	**+1.9**
THW	**Thamme Wali**	**3.55**	**171**	P	**Pn**	**18 12 43.8**	**+0.8**
SARP	**Sargodha**	**4.58**	**163**	P	**Pn**	**18 12 56.7**	**-0.1**
JMU	**Jammu**	**4.78**	**137**	eP	**Pn**	**18 13 00.0**	**+0.5**
JMU				eS	**Sn**	**18 13 52.5**	**-1.2**
KSH	**Kashi**	**5.03**	**49**	P	**Pn**	**18 13 00.2**	**-2.7**
KSH				S	Sn	18 13 49.5	-11
KSH				smax	smax		
	comp=N,4μm,0.5s						
KSH				smax	smax		
	comp=E,3μm,0.4s						
THN	**Thein Dam**	**5.45**	**134**	eP	**Pn**	**18 13 07.4**	**-1.2**
THN				ex	**Sn**	**18 14 06.3**	**-3.7**
DHRM	**DHARAMSHALA**	**5.93**	**132**	eP	**Pn**	**18 13 15.5**	**+0.2**
DHRM				eS	**Sn**	**18 14 19.4**	**-2.6**
AML	**Almayashu**	**6.16**	**19**	i PN	**Pn**	**18 13 18.6**	**+0.1**
AML	**Almayashu**	**6.16**	**19**	P	**Pn**	**18 13 18.6**	**+0.1**
	SNR=572						
UCH	**Uchtor**	**6.48**	**23**	i PN	**Pn**	**18 13 23.9**	**+0.9**
UCH	**Uchtor**	**6.48**	**23**	P	**Pn**	**18 13 23.9**	**+0.9**
	SNR=8.3						
BHK	**Bhakra**	**6.60**	**136**	eP	**Pn**	**18 13 24.0**	**-0.3**
BHK				eS	**Sn**	**18 14 36.0**	**-2.1**
KZA	**Kyzart**	**6.61**	**28**	i PN	**Pn**	**18 13 24.7**	**0.0**
KZA	**Kyzart**	**6.61**	**28**	P	**Pn**	**18 13 24.7**	**0.0**
	SNR=139						
EKS2	**Erkin-Say**	**6.68**	**17**	ePN	**Pn**	**18 13 25.5**	**+0.2**
EKS2	**Erkin-Say**	**6.68**	**17**	ePn	**Pn**	**18 13 25.5**	**+0.2**
EKS2	**Erkin-Say**	**6.68**	**17**	P	**Pn**	**18 13 25.5**	**+0.2**
	SNR=318						
KK31	**Karatay Array**	**6.80**	**357**	⇓P	**Pn**	**18 13 24.7**	**-2.2**
	comp=E,104nm,0.3s,baz=176,slow=12,SNR=4271						
KK31				⇓S	**Sn**	**18 14 37.6**	**-5.2**
	comp=E,77nm,0.4s,baz=173,slow=22						

KK31 Karatay Array 6.80 357 PN **Pn** 18 13 25.8 -1.1
KK31 pmax pmax
comp=Z,189nm,0.3s
KKAR Karatay Array 6.80 357 *e*PN **Pn** 18 13 25.8 -1.1
KKAR Karatay Array 6.80 357 *e*Pn **Pn** 18 13 25.8 -1.1
AAK Ala-Archa 6.85 22 *d i* PN **Pn** 18 13 27.9 +0.2
AAK Ala-Archa 6.85 22 *e*P **Pn** 18 13 27.6 -0.1
comp=Z,606nm,0.4s
AAK S **Sn** 18 14 40.6 -3.5
AAK Ala-Archa 6.85 22 P **Pn** 18 13 27.2 -0.5
SNR=50
AAK Ala-Archa 6.85 22 P **Pn** 18 13 28.2 +0.5
SNR=243
AAK Ala-Archa 6.85 22 P **Pn** 18 13 27.2 -0.5
comp=Z,57nm,0.3s,baz=186,slow=7.6,SNR=615
AAK S **Sn** 18 14 40.6 -3.5
comp=Z,28nm,0.3s,baz=140,slow=24,SNR=9.0
SDNR Sundarnagar 6.86 133 *e*P **Pn** 18 13 28.0 +0.2
SDNR *ex* **Sn** 18 14 39.5 -4.9
KBK Karagaybulak 7.01 24 *i* PN **Pn** 18 13 30.3 +0.4
KBK Karagaybulak 7.01 24 P **Pn** 18 13 30.4 +0.4
SNR=104
FRU Bishkek 7.07 22 ⇓ *i* PN **Pn** 18 13 31.0 +0.5
FRU pmax pmax
comp=Z,200nm,1.8s
ULHL Ulahol 7.16 33 *i* PN **Pn** 18 13 32.2 +0.3
ULHL Ulahol 7.16 33 P **Pn** 18 13 32.2 +0.3
SNR=32
SMLA Simla 7.25 134 *i* P **Pn** 18 13 32.8 -0.2
SMLA *i* S **Sn** 18 14 50.8 -2.9
CHMS Chumysh 7.26 22 *i* PN **Pn** 18 13 33.1 0.0
CHMS Chumysh 7.26 22 P **Pn** 18 13 33.1 0.0
SNR=183
USP Ospenovka 7.43 20 *i* PN **Pn** 18 13 35.1 -0.4
USP Ospenovka 7.43 20 P **Pn** 18 13 35.1 -0.4
SNR=87
TKM2 Tokmak 2 7.47 26 ⇑P **Pn** 18 13 35.9 -0.2
comp=Z,78nm,0.5s
TKM2 ⇑S **Sn** 18 15 00.4 +1.1
comp=Z,217nm,0.9s
TKM2 Tokmak 2 7.47 26 *i* PN **Pn** 18 13 36.4 +0.3
TKM2 Tokmak 2 7.47 26 *e*P **Pn** 18 13 36.0 -0.1
comp=Z,114nm,0.5s
TKM2 Tokmak 2 7.47 26 P **Pn** 18 13 36.5 +0.3
SNR=38
KKR Kurukshetra 7.96 141 *e*P **Pn** 18 13 39.8 -2.9
KNDC Almaty 8.26 32 ⇑P **Pn** 18 13 47.8 +1.1
comp=Z,55nm,0.6s
KNDC ⇑S **Sn** 18 15 19.9 +1.6
comp=Z,173nm,1.1s
DDI Dehra Dun 8.36 134 *e*P **Pn** 18 13 46.0 -2.1
DDI *ex* **Sn** 18 15 16.2 -4.6
KHET Khetri 9.14 153 *e*P **Pn** 18 13 56.5 -2.2
KHET *e*S Sn 18 15 33.0 -6.9
NDI New Delhi 9.21 144 *ex* Pn 18 13 54.0 -5.6
NDI *ex* Sn 18 15 31.0 -10
KUDL Kundal 9.34 149 *e*P **Pn** 18 13 58.9 -2.6
KUDL *e*S Sn 18 15 37.4 -7.4
KUDL AML AML 18 15 39.4
comp=E,446nm,0.4s
KUDL AML AML 18 15 45.8
comp=N,378nm,0.7s
BISR Bishrakh 9.40 143 *e*P Pn 18 13 52.4 -10
BISR *e*S Sn 18 15 31.5 -15
SONA Sohna 9.51 146 *e*P **Pn** 18 14 01.4 -2.4
SONA *e*S Sn 18 15 40.5 -8.3
SONA AML AML 18 15 45.3
comp=E,495nm,0.4s
SONA AML AML 18 15 50.0
comp=N,222nm,0.7s
PTH Pithoragarh 10.22 129 *e*P **Pn** 18 14 12.3 -1.3
PTH *ex* x 18 15 57.9
LGTI Lohaghat 10.31 129 *e*P **Pn** 18 14 13.5 -1.1
LGTI *ex* x 18 16 04.0
AGRA Agra 10.77 145 *e*P **Pn** 18 14 18.5 -2.5
AGRA AMb AMB 18 14 20.9
comp=Z,128nm,0.7s
AGRA *e*S Sn 18 16 09.0 -11
AGRA AML AML 18 16 35.0
comp=E,301nm,0.2s
AGRA AML AML 18 16 35.9
comp=N,342nm,0.5s
PYUN Piuthan 12.99 126 *e*P Pn 18 14 46.8 -3.8
comp=N,369nm,0.5s
DANN Dangsing 13.34 123 *e*P **Pn** 18 14 52.2 -3.1
comp=N,162nm,0.5s
MK31 Makanchi Array 13.41 35 P **Pn** 18 14 57.6 +1.7
comp=N,9.7nm,0.7s,baz=226,slow=15,SNR=134
MK31 ⇓S **Sn** 18 17 24.8 +1.5
comp=N,6.5nm,0.8s,baz=230,slow=27
MK31 Makanchi Array 13.41 35 *e*P **Pn** 18 14 55.0 -0.9
MK31 Makanchi Array 13.41 35 *e*P **Pn** 18 14 55.0 -0.9
MKAR Makanchi Array 13.41 35 P **Pn** 18 14 55.4 -0.4
MKAR pmax pmax
comp=Z,1.0nm,0.3s
MKAR Makanchi Array 13.41 35 P **Pn** 18 14 55.4 -0.4
MKAR Makanchi Array 13.41 35 P **Pn** 18 14 55.4 -0.4
comp=Z,0.5nm,0.3s,baz=223,slow=14,SNR=34
KOLN Koldanda 13.61 125 *e*P Pn 18 14 54.9 -3.8
comp=Z,101nm,0.4s
BHV Bhavnagar 14.54 176 *e*P **Pn** 18 15 09.0 -1.5
DMN Daman 14.72 122 *e*P Pn 18 15 09.7 -3.4
comp=Z,134nm,0.6s
KKN Kakani 14.73 121 *e*P Pn 18 15 09.9 -3.3
comp=Z,184nm,0.6s
WMQ Urumqi 14.76 54 P **Pn** 18 15 14.7 +1.4
WMQ S **S** 18 18 05.7 -2.0
PKIN Phulchoki 14.95 122 *e*P **Pn** 18 15 13.1 -2.8
comp=Z,164nm,0.5s
PKI Pulchoki 14.96 122 *e*P Pn 18 15 12.7 -3.5
comp=Z,172nm,0.6s
GUN Gumba 15.07 120 *e*P **Pn** 18 15 15.4 -2.3
comp=Z,114nm,0.4s
AB31 Akbulak array 15.28 331 P **Pn** 18 15 15.1 -4.6
comp=Z,24nm,0.3s,baz=153,slow=12,SNR=1583
AB31 ⇑S Sn 18 17 57.6 -11
comp=Z,94nm,0.5s,baz=159,slow=24,SNR=19
AB31 Akbulak array 15.28 331 *i* P **Pn** 18 15 16.4 -3.3
AB31 pmax pmax
comp=Z,26nm,0.2s
ABKAR Akbulak array 15.28 331 *e*Pn **Pn** 18 15 15.8 -3.9
KURBB Kurchatov Arra 15.28 18 P **Pn** 18 15 16.7 -3.0
comp=Z,0.3nm,0.3s,baz=210,slow=11,SNR=65
KURK Kurchatov 15.39 18 ⇑P **Pn** 18 15 20.9 -0.2
comp=Z,15nm,1.0s
KURK ⇑S **Sn** 18 18 10.4 -0.7
comp=Z,50nm,1.2s
KURK Kurchatov 15.39 18 ⇓ *e*P **Pn** 18 15 16.6 -4.5
KURK pmax pmax
comp=Z,7.0nm,0.7s
KURK Kurchatov 15.39 18 *e*Pn **Pn** 18 15 16.4 -4.7
comp=Z,14nm,0.7s
KURK Kurchatov 15.39 18 P **P** 18 15 23.7 +0.3
SNR=6.6
RAMN Ramite 16.17 121 *e*P **Pn** 18 15 27.8 -3.5
comp=Z,64nm,0.3s
VOSK Vostochnaya 16.41 360 ⇑P **Pn** 18 15 30.4 -3.4
comp=Z,8.6nm,0.6s
VOSK ⇓S Sn 18 18 26.8 -8.9
comp=Z,34nm,1.4s
VOSK Vostochnaya 16.41 360 P **Pn** 18 15 30.4 -3.4
VOSK pmax pmax
comp=Z,21nm,0.9s
NGP Nagpur 16.64 153 *ex* **Pn** 18 15 33.4 -3.4
NGP *ex* x 18 18 25.4
ZRNK Zerenda 16.70 356 ⇓P **Pn** 18 15 34.5 -2.8
comp=Z,13nm,0.7s
ZRNK ⇑S **Sn** 18 18 37.4 -5.2
comp=Z,18nm,1.1s
TAPN Taplejung 16.71 118 *e*P **Pn** 18 15 35.7 -2.2
comp=Z,151nm,0.6s
BVA0 Borovoye Array 16.72 359 P **Pn** 18 15 35.7 -1.9
comp=Z,1.8nm,0.7s,baz=178,slow=12,SNR=97
BVA0 ⇑S **Sn** 18 18 36.7 -6.4
comp=Z,3.3nm,1.0s,baz=170,slow=24,SNR=4.6
BVA0 Borovoye Array 16.72 359 *e*P **Pn** 18 15 35.5 -2.1
BVA0 pmax pmax
comp=Z,2.0nm,0.7s
BVAR Borovoye Array 16.72 359 P **Pn** 18 15 35.4 -2.2
BVAR pmax pmax
comp=Z,3.0nm,0.3s
BVAR MLR MLR
comp=Z,144nm,19.5s
BVAR Borovoye Array 16.72 359 P **Pn** 18 15 35.4 -2.2
BVAR Borovoye Array 16.72 359 P **Pn** 18 15 35.4 -2.2
comp=Z,3.0nm,0.3s,baz=167,slow=14,SNR=70
BVAR LR LR 18 22 18.7
comp=Z,144nm,19.5s,baz=13,slow=37
BRVK Borovoye 16.75 358 ⇑P **Pn** 18 15 35.4 -2.6
comp=Z,24nm,0.7s
BRVK ⇓S **Sn** 18 18 37.3 -6.6
comp=Z,46nm,1.4s
BRVK Borovoye 16.75 358 *c i* P **Pn** 18 15 35.9 -2.1
BRVK pmax pmax
comp=Z,13nm,0.7s
BRVK Borovoye 16.75 358 *e*Pn **Pn** 18 15 35.8 -2.2
comp=Z,100nm,1.6s
ODAN Odare 16.78 120 *e*P **Pn** 18 15 35.6 -3.1
comp=Z,87nm,0.5s
AKTO Aktyubinsk 16.97 330 ⇓P **Pn** 18 15 36.8 -3.9
comp=Z,12nm,0.7s
AKTO ⇓S Sn 18 18 40.8 -8.4
comp=Z,26nm,1.0s
AKTO Aktyubinsk 16.97 330 P **Pn** 18 15 38.9 -1.8
AKTO S Sn 18 18 40.3 -8.8
AKTO pmax pmax
comp=Z,5.0nm,0.3s
AKTO smax smax
comp=N,8.0nm,0.3s
AKTO Aktyubinsk 16.97 330 P **Pn** 18 15 38.9 -1.8
AKTO S Sn 18 18 40.3 -8.8
AKTO Aktyubinsk 16.97 330 P **Pn** 18 15 38.9 -1.8
comp=N,5.3nm,0.3s,baz=139,slow=15,SNR=105
AKTO S Sn 18 18 40.3 -8.8
comp=N,8.4nm,0.3s,baz=7.9,slow=20,SNR=7.9
AKTO LR LR 18 22 07.4
comp=N,68nm,18.2s,baz=154,slow=36
POO Poona 17.88 171 *ex* **P** 18 15 53.3 +2.0
POO *i* PCP **PcP** 18 20 20.0 -2.8
LSA Lhasa 18.07 106 P **Pn** 18 15 55.3 +0.7
LATR Latur 18.47 163 *e*P **P** 18 15 57.5 -0.1
LATR *ex* x 18 19 10.0
KAD Karad 19.13 171 *e*P **P** 18 16 04.0 -0.9
MAK Makhachkala 19.29 297 *e*P **P** 18 16 04.8 -1.6
MAK *e*S **S** 18 19 35.9 -3.3
MAK pmax pmax
comp=Z,38nm,0.6s
MAK MLR MLR
comp=Z,246nm,14.0s
HYB Hyderabad 19.95 159 *i* P **P** 18 16 13.5 -0.3
comp=Z,130nm,1.0s
HYB *e*sP **sP** 18 16 50.0 +4.0
HYB *e*S **S** 18 19 47.0 -5.8
ZAA0 Zalesovo Array 20.06 24 *e*P **P** 18 16 14.1 -0.6
ZALV Zalesovo Beam 20.06 24 P **P** 18 16 14.5 -0.2
ZALV S **S** 18 19 53.9 -0.5
ZALV pmax pmax
comp=Z,39nm,0.5s
ZALV smax smax
comp=N,4.0nm,0.8s
ZALV Zalesovo Beam 20.06 24 P **P** 18 16 14.5 -0.2
ZALV S **S** 18 19 53.9 -0.5
ZALV Zalesovo Beam 20.06 24 P **P** 18 16 14.5 -0.2
comp=N,39nm,0.5s,baz=222,slow=11,SNR=96
ZALV S **S** 18 19 53.9 -0.5
comp=N,3.8nm,0.8s,baz=214,slow=17,SNR=2.2
NVS Novosibirsk 20.34 21 ⇑ *i* P **P** 18 16 17.3 -0.3
NVS *e*S **S** 18 19 56.8 -2.9
NVS pmax pmax
comp=Z,29nm,1.0s
NVS pmax pmax
comp=N,9.0nm,0.6s
NVS pmax pmax
comp=E,4.0nm,0.7s
NVS smax smax
comp=N,22nm,1.4s
NVS smax smax
comp=E,20nm,1.4s
DGRG David-gareji 20.62 292 P Pn 18 16 23.3 -0.8
DGRG S Sn 18 20 38.6 +22
UMR Umm Al-Rimmam 20.70 258 *e*P **P** 18 16 20.8 -1.0
UMR AMb AMB 18 16 27.2
comp=Z,96nm,0.4s
MIB Mutribah 20.90 259 *e*P **P** 18 16 22.6 -1.2
MIB AMb AMB 18 16 32.1
comp=Z,151nm,0.8s
RDF Al-Radifah 21.10 256 *e*P **P** 18 16 24.5 -1.6
RDF AMb AMB 18 16 31.3
comp=Z,65nm,0.5s
TBLG Delisi 21.12 293 P **P** 18 16 28.4 +2.1
NAY Al-Naaiem 21.20 257 *e*P **P** 18 16 25.4 -1.7
NAY AMb AMB 18 16 32.2
comp=Z,69nm,0.5s
KZR Kazreti 21.33 292 P **P** 18 16 30.8 +2.3
AGT Agartala 21.36 120 *ex* P 18 16 36.0 +7.2
VIS Vishakhapatnam 21.46 146 *ex* **P** 18 16 33.0 +3.1
GOR Gori 21.62 293 P **P** 18 16 35.3 +3.8
SVE Sverdlovsk 21.69 344 ⇑ *e*P **P** 18 16 32.7 +0.6
SVE *e*S **S** 18 20 24.3 -1.7
SVE pmax pmax
comp=Z,45nm,1.2s
ARU Arti 21.83 341 *d i* P **P** 18 16 34.4 +0.9
ARU 18 17 05.6
ARU S **S** 18 20 30.6 +2.1
ARU SS **SnSn** 18 21 10.3 +7.0
ARU pmax pmax
comp=Z,118nm,1.7s
ARU MLR MLR
comp=Z,167nm,19.0s
ARU Arti 21.83 341 *e*P **P** 18 16 33.5 0.0
comp=Z,65nm,1.0s
AKH Akhalkalaki 22.02 292 P **P** 18 16 38.6 +2.7
BHD Baghdad 22.10 270 *ex* **P** 18 16 33.6 -3.1
BHD *ex* x 18 20 26.7
ONI Oni 22.17 295 P **P** 18 16 40.4 +3.0
ONI S **S** 18 20 37.5 +2.5
KBZ Khabaz 22.74 298 P **P** 18 16 43.2 +0.1
KBZ pmax pmax
comp=Z,14nm,0.8s
KBZ Khabaz 22.74 298 P **P** 18 16 43.1 +0.1
KBZ Khabaz 22.74 298 P **P** 18 16 43.1 +0.1
comp=Z,14nm,0.8s,baz=120,slow=5.8,SNR=42
GTA Gaotai 22.86 74 P **P** 18 16 46.6 +2.0
GTA pmax pmax
comp=Z,23nm,1.3s
GTA pmax pmax
comp=Z,85nm,5.0s
GTA LR LR
comp=N,320nm,7.6s
GTA LR LR
comp=E,210nm,8.5s
GTA LR LR
comp=Z,120nm,8.1s
KIV Kislovodsk 22.93 298 ⇑P **P** 18 16 43.3 -1.8
comp=Z,33nm,1.0s
KIV ⇓S **S** 18 20 43.9 -3.2
comp=Z,153nm,1.4s
KIV Kislovodsk 22.93 298 *e*P **P** 18 16 45.2 +0.1
KIV *e*S **S** 18 20 50.0 +2.8
KIV pmax pmax
comp=Z,32nm,1.0s
KIV MLR MLR
comp=Z,78nm,14.0s
KIV Kislovodsk 22.93 298 *e*P **P** 18 16 44.6 -0.5
comp=Z,32nm,0.6s
KIV Kislovodsk 22.93 298 P **P** 18 16 45.6 +0.5
SNR=13
RBK Rabkut 23.95 223 P **P** 18 16 55.6 +0.9
SNR=5.5
ABTO Aybut 24.58 224 P **P** 18 17 01.0 +0.6
SNR=13
SOC Sochi 25.01 297 *e*P **P** 18 17 05.0 +1.1
SOC *e*S **S** 18 21 25.7 +5.4
SOC pmax pmax
comp=Z,34nm,0.9s
SOKR Solikamsk 25.05 343 *e*P **P** 18 17 06.0 +1.9
SOKR pmax pmax
comp=Z,20nm,1.0s
VRHR Novokhopersk 25.69 314 *e*P **P** 18 17 10.8 +0.7
VRHR *e**PP **pP** 18 17 30.1 -2.5
VRHR pmax pmax
comp=N,5.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s
MALT Malatya 25.97 284 *e*P **P** 18 17 14.5 +1.7
MALT pmax pmax
comp=Z,15nm,0.8s
MALT Malatya 25.97 284 *e*P **P** 18 17 14.5 +1.7
comp=Z,15nm,0.8s
MOY Mondy 26.20 45 *e*P P 18 17 27.8 +13
LZH Lanzhou 26.38 81 *e*P P 18 17 08.3 -8.4
LZH pP pP 18 17 13.0 -26
LZH sP sP 18 17 15.6 -36
LZH pmax pmax
comp=Z,15nm,1.4s
ANN Anapa 26.77 299 *e*P **P** 18 17 19.6 -0.3
ANN *e**PP **pP** 18 17 38.6 -3.9
ANN *e*S **S** 18 21 49.4 +1.2
ANN pmax pmax
comp=Z,23nm,0.7s
VORD Divnogorie 27.01 313 *e*P **P** 18 17 22.6 +0.7
VORD *e**PP **pP** 18 17 42.9 -1.6
VORD *e**SP **sP** 18 17 54.3 -2.2
VORD *e*S **S** 18 21 54.5 +2.7
VORD *e**SS **sS** 18 22 31.0 -0.4
VORD pmax pmax
comp=N,4.0nm,0.5s
VORD pmax pmax
comp=E,9.0nm,0.5s
VORD pmax pmax
comp=Z,9.0nm,0.5s
VORD smax smax
comp=N,40nm,0.9s
VORD smax smax
comp=E,10.0nm,0.9s
VORD smax smax
comp=Z,5.0nm,0.5s
ZAK Zakamensk 27.07 49 *e*P **P** 18 17 24.2 +1.6
ZAK pmax pmax
comp=Z,4.0nm,1.5s
VSR Storozhevoye 27.17 313 *e*P **P** 18 17 24.2 +0.8
VSR *e**PP **pP** 18 17 44.5 -1.5
VSR *e*S **S** 18 21 57.9 +3.6
VSR *e**SS **sS** 18 22 34.3 +0.3
VSR pmax pmax
comp=N,6.0nm,0.7s
VSR pmax pmax
comp=E,10.0nm,0.7s
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR smax smax
comp=E,50nm,2.3s
VSR smax smax
comp=Z,10.0nm,1.1s
VSR smax smax
comp=N,6.0nm,0.6s
CD2 Chengdu 27.67 92 P **P** 18 17 29.5 +1.4
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.4s
SONM Songino Array 28.40 55 P **P** 18 17 35.4 +0.9
SONM Songino Array 28.40 55 P **P** 18 17 35.4 +0.9
comp=Z,1.2nm,0.5s,baz=260,slow=8.6,SNR=19
SONM LR LR 18 30 50.6
comp=Z,77nm,21.0s,baz=160,slow=40
ULN Ulaanbaatar 28.84 55 *e*P **P** 18 17 40.2 +1.8
comp=Z,3.0nm,0.7s
MMAI Mount Meron Ar 29.42 274 P **P** 18 17 44.4 +0.8
MMAI Mount Meron Ar 29.42 274 P **P** 18 17 44.4 +0.8
comp=Z,3.3nm,0.6s,baz=75,slow=10,SNR=7.3
MMAI LR LR 18 32 31.0
comp=Z,44nm,19.8s,baz=290,slow=42
BR131 Keskin Array S 29.55 288 *e*P **P** 18 17 45.2 +0.4
comp=Z,12nm,0.6s
BRTR Keskin Array B 29.55 288 P **P** 18 17 45.9 +1.1
BRTR Keskin Array B 29.55 288 P **P** 18 17 45.9 +1.1
comp=Z,14nm,0.7s,baz=101,slow=8.7,SNR=73
MOS Moscow 29.84 321 *e*P P 18 17 34.4 -13
MOS *e* 18 18 08.2
CHTO Chiang Mai 30.08 118 *e*P **P** 18 17 50.8 +1.3
CHTO pmax pmax
comp=Z,6.0nm,1.0s
CHTO Chiang Mai 30.08 118 *e*P **P** 18 17 50.8 +1.3
comp=Z,5.9nm,1.0s
CHTO Chiang Mai 30.08 118 P **P** 18 17 51.8 +2.3
comp=Z,8.3nm,0.9s
CMMT Chiang Mai 30.09 118 P **P** 18 17 52.3 +2.7
comp=Z,7.4nm,0.9s
OBN Obninsk 30.12 320 *e*P **P** 18 17 50.4 +1.0
OBN *i* *PP **pP** 18 18 10.6 -1.7
OBN pmax pmax
comp=Z,72nm,1.6s
OBN MLR MLR
comp=Z,100nm,15.0s
OBN Obninsk 30.12 320 *e*P **P** 18 17 49.7 +0.3
comp=Z,30nm,0.8s
CM31 Chiang Mai Arr 30.32 118 *e*P **P** 18 17 51.3 -0.2
comp=Z,2.8nm,0.5s
CMAR Chiang Mai Arr 30.32 118 P **P** 18 17 51.2 -0.3
CMAR Chiang Mai Arr 30.32 118 P **P** 18 17 51.2 -0.3
comp=Z,4.5nm,0.8s,baz=297,slow=8.5,SNR=31
HHC Hu-ho-hao-te 31.78 69 *e*P **P** 18 18 06.6 +2.2
HHC PP **PnPn** 18 19 13.6 +1.0
HHC PcP **PcP** 18 20 56.6 +3.4
HHC S **S** 18 23 10.3 +3.3
HHC sS sS 18 23 40.2 -6.7
HHC ScP **ScP** 18 24 32.4 +5.2
HHC PcS **PcS** 18 24 40.5 +2.5
HHC SS **SnSn** 18 25 03.9 -1.3
HHC ScS **ScS** 18 28 29.4 +3.8
HHC pmax pmax
comp=Z,36nm,0.6s
HHC pmax pmax
comp=Z,260nm,5.2s
HHC LR LR
comp=N,250nm,12.9s
HHC LR LR
comp=E,270nm,12.1s
HHC LR LR
comp=Z,170nm,11.5s
AKASG Malin Array Be 33.11 309 P **P** 18 18 15.3 -0.5
AKASG *PP **pP** 18 18 39.1 +0.3
AKASG pmax pmax
comp=Z,9.0nm,0.5s
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG Malin Array Be 33.11 309 P **P** 18 18 15.2 -0.5
AKASG pP **pP** 18 18 39.1 +0.3
AKASG Malin Array Be 33.11 309 P **P** 18 18 15.2 -0.5
comp=Z,8.6nm,0.5s,baz=80,slow=7.5,SNR=39
AKASG pP **pP** 18 18 39.1 +0.3
comp=Z,4.1nm,0.6s,baz=81,slow=7.2,SNR=3.6
AK02 Malin Array Si 33.11 309 *e*P **P** 18 18 15.5 -0.3
AK01 Malin Array Si 33.11 309 *e*P **P** 18 18 15.5 -0.2
KIEV Kiev 33.12 309 *e*P **P** 18 18 15.6 -0.2
KIEV pmax pmax
comp=Z,14nm,0.7s
KIEV Kiev 33.12 309 *e*P **P** 18 18 15.6 -0.2
comp=Z,14nm,0.7s
SRDT SRDT 33.27 124 P **P** 18 18 18.0 +0.5
comp=Z,34nm,0.8s
TMCR Tamitsa 34.24 335 *e*P P 18 18 19.4 -6.0
TMCR pmax pmax
comp=Z,49nm,1.3s
VRI Vrincioaia 34.37 300 ⇑P **P** 18 18 29.4 +2.6
VRI Vrincioaia 34.37 300 ⇑ *i* P **P** 18 18 29.4 +2.6
PLOR Plostina 34.42 300 ⇑P **P** 18 18 30.0 +2.7
PLOR Plostina 34.42 300 ⇑ *i* P **P** 18 18 30.0 +2.7
TESR 34.43 301 ⇑ *i* P **P** 18 18 28.5 +1.2
ISR Istrita 34.51 299 ⇓P P 18 18 31.9 +3.9
ISR Istrita 34.51 299 ⇓ *i* P P 18 18 31.9 +3.9
MLR Muntele Rosu 34.92 299 P **P** 18 18 33.2 +1.6
MLR Muntele Rosu 34.92 299 P **P** 18 18 33.2 +1.6
comp=Z,5.7nm,1.0s,baz=35,slow=1.6,SNR=20
BJI Beijing 35.37 70 P **P** 18 18 37.9 +2.5
BJI pmax pmax
comp=Z,17nm,0.5s
NACGM Naroch 35.39 316 *e* **P** 18 18 33.0 -2.4
BUR08 Bucovina Ar. S 35.45 303 *e*P **P** 18 18 36.5 +0.4
IIGN Ignalina 35.80 316 *e*P **P** 18 18 39.6 +0.7
IIGN AMB AMB 18 18 41.7
comp=Z,10nm,0.9s
IZAR Zarasai 35.88 317 *e*P **P** 18 18 40.2 +0.6
IZAR AMB AMB 18 18 42.2
comp=Z,12nm,0.7s
ISAL Salakas 35.91 317 *e*P **P** 18 18 40.5 +0.7
JOF Joensuu 36.06 330 *e*P **P** 18 18 41.0 0.0
JOF Joensuu 36.06 330 *e*p **P** 18 18 41.0 0.0
comp=Z,32nm,0.4s
CHBT CHBT 36.59 122 P **P** 18 18 45.6 -0.4
comp=Z,18nm,1.0s
UBPT Khong Chiam 37.10 115 P **P** 18 18 50.9 +0.6
KWP Kalwaria Pacla 37.17 306 ⇓P **P** 18 18 52.3 +1.7

KWP Kalwaria Pacla 37.17 306 ⇓*i*P P 18 18 52.3 +1.7
KWP Kalwaria Pacla 37.17 306 *e*P P 18 18 52.1 +1.5
TRPA Tarpa 37.24 304 ⇑*i*P P 18 18 53.0 +1.8
TRPA Tarpa 37.24 304 ⇓*e*P P 18 18 53.3 +2.1
SUW Suwalki 37.29 314 *e*P P 18 18 52.2 +0.7
SUW pmax pmax
comp=Z,40nm,1.2s
SUW Suwalki 37.29 314 *e*P P 18 18 52.2 +0.7
comp=Z,40nm,1.2s
UZH Uzhgorod 37.41 305 *e*P P 18 18 59.9 +7.2
KOLS Kolonicke sedl 37.43 305 *e*P P 18 18 54.2 +1.4
KOLS pmax pmax
comp=Z,11nm,1.3s
KOLS Kolonicke sedl 37.43 305 *e*P P 18 18 54.2 +1.4
KOLS *e*PP PnPn 18 20 21.3 -0.7
FIA1 FINESS Array S 37.67 326 *e*P P 18 18 54.9 +0.2
FINES FINESS Array B 37.67 326 P P 18 18 55.5 +0.8
FINES pP pP 18 19 19.7 +1.7
FINES FINESS Array B 37.67 326 P P 18 18 55.5 +0.8
comp=Z,16nm,0.4s,baz=118,slow=8.9,SNR=175
FINES pP pP 18 19 19.7 +1.7
comp=Z,4.6nm,0.6s,baz=101,slow=9.9,SNR=3.1
FINES LR LR 18 34 57.4
comp=Z,54nm,21.6s,baz=323,slow=37
KAF Kangasniemi 37.81 327 *e*P P 18 18 55.9 0.0
KAF pmax pmax
comp=Z,7.0nm,0.5s
KAF Kangasniemi 37.81 327 *e*p P 18 18 55.9 0.0
comp=Z,7.1nm,0.5s
CRVS Cervenica-Dubn 37.97 305 *e*P P 18 19 00.1 +2.7
CRVS *e* 18 20 29.3
CRVS Cervenica-Dubn 37.97 305 *e*P P 18 19 00.1 +2.7
CRVS *e*PP PnPn 18 20 29.3 +0.9
PSZ Piszkesteto 39.02 304 ⇓*e*P P 18 19 08.2 +1.9
OJC Ojcow 39.06 307 *e*P P 18 19 07.5 +1.0
OJC Ojcow 39.06 307 *e*P P 18 19 07.2 +0.7
comp=Z,14nm,1.0s
OJC Ojcow 39.06 307 *e*P P 18 19 07.5 +1.0
BUD Budapest 39.63 303 ⇓*e*P P 18 19 14.4 +3.2
VYHS Vyhne 39.71 305 *e*P P 18 19 14.1 +2.2
VYHS pmax pmax
comp=Z,5.0nm,1.4s
VYHS Vyhne 39.71 305 *e*P P 18 19 14.1 +2.2
VYHS *e*pP pP 18 19 30.9 -4.6
VYHS *e*PP PnPn 18 20 48.2 -0.9
PKSM Moragy 39.98 301 ⇓*e*P P 18 19 17.0 +2.9
OKC Ostrava-Krasne 40.13 307 ⇑*i*P P 18 19 17.4 +2.1
MORC Moravsky Berou 40.52 307 ⇓P P 18 19 20.6 +2.0
MORC Moravsky Berou 40.52 307 *e*P P 18 19 19.7 +1.1
comp=Z,6.3nm,0.7s
MORC Moravsky Berou 40.52 307 ⇓*i*P P 18 19 20.6 +2.0
KEV Kevo 41.00 338 *e*P P 18 19 22.0 -0.2
KEV pmax pmax
comp=Z,5.0nm,0.5s
KEV Kevo 41.00 338 *e*p P 18 19 22.0 -0.2
comp=Z,4.9nm,0.5s
KRLC Kraliky 41.00 307 *e*P P 18 19 24.1 +1.5
KRLC Kraliky 41.00 307 ⇑*e*P P 18 19 24.1 +1.5
VRAC Vranov 41.16 306 P P 18 19 24.5 +0.7
VRAC Vranov 41.16 306 ⇓*i*P P 18 19 26.1 +2.3
VRAC Vranov 41.16 306 P P 18 19 24.5 +0.7
comp=Z,6.4nm,0.8s,baz=89,slow=7.8,SNR=9.2
SOP Sopron 41.28 304 ⇓*e*P P 18 19 26.3 +1.5
DPC Dobruska-Polom 41.29 308 *e*P P 18 19 26.4 +1.5
DPC pmax pmax
comp=Z,12nm,0.7s
DPC Dobruska-Polom 41.29 308 *e*P P 18 19 26.4 +1.5
comp=Z,12nm,0.7s
DPC Dobruska-Polom 41.29 308 ⇑*i*P P 18 19 26.7 +1.8
ARCES ARCESS Array B 41.34 338 P P 18 19 25.1 +0.1
ARCES ARCESS Array B 41.34 338 P P 18 19 25.1 +0.1
comp=Z,16nm,0.6s,baz=115,slow=7.4,SNR=84
ARCES LR LR 18 37 48.4
comp=Z,115nm,19.6s,baz=164,slow=38
ARE0 ARCESS Array S 41.34 338 *e*P P 18 19 25.1 +0.1
UPC Upice 41.48 308 ⇓*i*P P 18 19 28.2 +1.7
CONA Conrad Observa 41.73 304 ⇓*i*P P 18 19 29.8 +1.2
comp=Z,13nm,1.0s
CONA Conrad Observa 41.73 304 ⇓*i*P P 18 19 29.8 +1.2
comp=Z,13nm,1.0s
KTK1 Kautokeino 41.81 336 *e*P P 18 19 29.1 +0.2
KTK1 AMB AMB 18 19 30.7
comp=Z,74nm,0.6s
TREC Trest 41.88 306 *e*P P 18 19 31.6 +1.9
TREC Trest 41.88 306 ⇑*e*P P 18 19 31.6 +1.9
IPM Ipoh 41.98 132 *e*P P 18 19 30.6 -0.2
comp=Z,22nm,0.6s
PSI Prapat 42.11 136 P P 18 19 31.0 -1.0
PSI Prapat 42.11 136 P P 18 19 31.0 -1.0
comp=Z,11nm,0.5s,baz=332,slow=7.2,SNR=13
BSD Bornholm Skovb 42.18 315 *i* P P 18 19 32.0 0.0
comp=Z,14nm,0.7s
PVCC Panska Ves 42.40 308 ⇑*e*P P 18 19 35.7 +1.8
SOKA Soboth 42.42 302 ⇑*i*P P 18 19 35.4 +1.2
comp=Z,11nm,0.9s
SOKA Soboth 42.42 302 ⇑*i*P P 18 19 35.4 +1.2
comp=Z,11nm,0.9s
PRU Pruhonice 42.45 307 ⇑*e*P P 18 19 36.1 +1.8
BRG Berggiesshubel 42.78 308 *e*P P 18 19 38.4 +1.4
comp=Z,8.3nm,0.8s
BRG Berggiesshubel 42.78 308 *e*P P 18 19 38.4 +1.4
BRG pmax pmax
comp=Z,8.0nm,0.8s
BRG Berggiesshubel 42.78 308 *e*P P 18 19 38.3 +1.4
comp=Z,10.0nm,1.0s
MOA Molln 42.81 304 ⇑*i*P P 18 19 38.4 +1.1
comp=Z,10nm,1.1s
MOA Molln 42.81 304 ⇑*i*P P 18 19 38.4 +1.1
comp=Z,10nm,1.0s
GERES GERESS Array B 43.09 305 P P 18 19 39.4 -0.2
GERES PP PP 18 21 23.5 +2.1
GERES GERESS Array B 43.09 305 P P 18 19 39.4 -0.2
comp=Z,0.7nm,0.5s,baz=90,slow=6.7,SNR=8.8
GERES PP PP 18 21 23.5 +2.1
comp=Z,1.1nm,0.7s,baz=90,slow=9.3,SNR=4.8
KHC Kasperske Hory 43.14 306 ⇑*i*P P 18 19 41.8 +1.8
HFS Hagfors 43.25 322 P P 18 19 40.9 +0.3
HFS pP pP 18 20 04.4 -0.1
HFS Hagfors 43.25 322 P P 18 19 40.9 +0.3
comp=Z,26nm,0.5s,baz=103,slow=11,SNR=143
HFS pP pP 18 20 04.4 -0.1
comp=Z,8.4nm,0.5s,baz=104,slow=11,SNR=3.6
CLL Collm 43.35 309 ⇓*i*P P 18 19 42.6 +1.0
CLL *i* *SP pP 18 20 08.9 +3.5
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 43.35 309 *e*P P 18 19 42.6 +1.0
comp=Z,8.0nm,0.9s
CLL Collm 43.35 309 ⇓*i*P P 18 19 42.6 +1.0
comp=Z,8.0nm,0.9s
CLL *i* (pP) pP 18 20 08.9 +3.5
CLL *e*PP PP 18 21 23.0 -1.1
CLL *e*PPP PPP 18 22 02.0
CLL *e*(SS) 18 29 30.0
TRO Tromso 43.46 336 *e*P P 18 19 43.1 +1.0
KBA Koelnbreinsper 43.52 303 ⇑*i*P P 18 19 44.7 +1.5
KBA pmax pmax
comp=Z,6.0nm,1.1s
KBA Koelnbreinsper 43.52 303 ⇑*i*P P 18 19 44.7 +1.5
comp=Z,6.4nm,1.1s
KBA Koelnbreinsper 43.52 303 ⇑*i*P P 18 19 44.7 +1.5
comp=Z,6.4nm,1.1s
COP Copenhagen 43.62 315 *i* P P 18 19 45.7 +2.1
comp=Z,11nm,0.9s
LLD Lille Linde 43.73 315 *i* P P 18 19 46.5 +2.0
comp=Z,21nm,0.8s
ROTZ Rotzenmuhle 43.97 307 *e*P P 18 19 48.6 +2.0
comp=Z,10.0nm,1.3s
MOR8 Moi Rana 44.01 331 *e*P P 18 19 46.8 +0.2
MOR8 AMB AMB 18 19 47.8
comp=Z,71nm,0.4s
STEI Steigen 44.17 333 *e*P P 18 19 49.1 +1.3
STEI *i* Pg P 18 19 49.1 +1.3
STEI AMB AMB 18 19 49.8
comp=Z,32nm,0.7s
MOX Moxa 44.27 308 *e*P P 18 19 50.2 +1.2
MOX pmax pmax
comp=Z,9.0nm,1.2s
MOX Moxa 44.27 308 *e*P P 18 19 50.2 +1.2
comp=Z,9.0nm,1.2s
FLOS Flostrand 44.47 331 *e*P P 18 19 51.8 +1.6
FLOS AMB AMB 18 19 53.7
comp=Z,60nm,1.1s
NB2 NORSAR Subarra 44.56 323 P P 18 19 50.8 -0.4
baz=96,slow=7.9
NB2 NORSAR Subarra 44.56 323 P P 18 19 50.8 -0.4
comp=Z,18nm,0.5s,baz=96,slow=7.9
NOA NORSAR Array B 44.56 323 P P 18 19 50.3 -0.8
NOA NORSAR Array B 44.56 323 P P 18 19 50.3 -0.8
comp=Z,16nm,0.5s,baz=97,slow=7.8,SNR=101
NOA LR LR 18 39 22.2
comp=Z,28nm,18.1s,baz=90,slow=37
KONS Konsvik 44.60 331 *e*P P 18 19 50.2 -1.1
KONS AMB AMB 18 19 55.6
comp=Z,65nm,1.8s
STOK Stokkvaagen 44.61 331 *e*P P 18 19 52.3 +1.0
GRF Grafenberg Arr 44.62 307 *e*P P 18 19 54.2 +2.5
GRF pmax pmax
comp=Z,8.0nm,0.9s
GRF Grafenberg Arr 44.62 307 *e*P P 18 19 54.2 +2.5
comp=Z,8.0nm,0.9s
LOF Lofoten 44.84 333 *e*P P 18 19 43.8 -9.4
LOF AMB AMB 18 19 45.2
comp=Z,86nm,1.3s
BSEG Bad Segeberg 44.86 313 *e*P P 18 19 55.2 +1.7
BSEG pmax pmax
comp=Z,27nm,0.7s
BSEG Bad Segeberg 44.86 313 *e*P P 18 19 55.2 +1.7
comp=Z,27nm,0.7s
KSAR Wonju Array Be 44.86 71 P P 18 19 54.0 +0.2
KSRS Korea Array 44.89 71 P P 18 19 54.0 0.0
comp=Z,2.9nm,0.5s,baz=272,slow=6.9,SNR=21
KSRS LR LR 18 40 16.3
comp=Z,21nm,18.6s,baz=33,slow=38
CLZ Clausthal 44.96 310 *e*P P 18 19 55.8 +1.4
CLZ pmax pmax
comp=Z,10.0nm,1.0s
CLZ Clausthal 44.96 310 *e*P P 18 19 55.8 +1.4
comp=Z,10.0nm,1.0s
NRDL Niedersach Rie 45.07 311 *e*P P 18 19 56.6 +1.5
comp=Z,12nm,1.0s
KONO Kongsberg 45.27 321 *e*P P 18 19 57.0 +0.3
KONO AMB AMB 18 19 58.2
comp=Z,21nm,0.6s
BJO Bjornoya 45.42 343 *e*P P 18 19 59.2 +1.6
DAVOX Davos/Dischmat 45.91 303 P P 18 20 01.9 -0.3
DAVOX Davos/Dischmat 45.91 303 P P 18 20 01.9 -0.3
comp=Z,3.7nm,0.6s,baz=96,slow=9.2,SNR=6.5
TIXI Tiksi 45.93 22 *e*P P 18 20 01.6 -0.1
TIXI pmax pmax
comp=Z,7.0nm,0.3s
TIXI Tiksi 45.93 22 *e*P P 18 20 01.6 -0.1
comp=Z,7.1nm,0.3s
MOL Molde 46.42 325 *e*P P 18 20 07.0 +1.3
SNART Snartemo 46.48 319 *e*P P 18 20 07.5 +1.3
ODD1 Odda 46.78 321 *e*P P 18 20 10.1 +1.5
ODD1 AMB AMB 18 20 13.4
comp=Z,32nm,1.6s
CDF Champ du Feu 47.37 306 *e*P P 18 20 12.8 -0.6
comp=Z,6.2nm,0.8s
CDF Champ du Feu 47.37 306 *e*P P 18 20 12.8 -0.6
CDF pmax pmax
comp=Z,6.0nm,0.8s
CDF Champ du Feu 47.37 306 *e*P P 18 20 12.8 -0.6
comp=Z,6.2nm,0.8s
PGF Pioggiola 47.41 298 *e*P P 18 20 12.5 -1.3
comp=Z,8.6nm,0.7s
PGF Pioggiola 47.41 298 *e*P P 18 20 12.5 -1.3
PGF pmax pmax
comp=Z,9.0nm,0.7s
PGF Pioggiola 47.41 298 *e*P P 18 20 12.5 -1.3
comp=Z,8.6nm,0.7s
RUND Rundenannen 47.41 322 *e*P P 18 20 13.3 -0.1
BER Bergen 47.42 322 *e*P P 18 20 13.5 0.0
EGD Espegrend 47.48 322 *e*P P 18 20 13.7 -0.2
ASK Askoy 47.49 322 *e*P P 18 20 13.8 -0.2
SPITS Spitsbergen Ar 47.69 347 P P 18 20 14.8 -0.5
SPITS Spitsbergen Ar 47.69 347 P P 18 20 14.8 -0.5
comp=Z,4.1nm,0.5s,baz=120,slow=12,SNR=26
SENIN Lac Senin/Sane 47.74 303 *e*P P 18 20 16.9 +0.4
comp=Z,7.0nm,0.8s
HINF Hinteralfeld 47.75 305 *e*P P 18 20 15.8 -0.5
comp=Z,7.8nm,0.8s
HINF *e*pP pP 18 20 42.0 +1.4
HINF Hinteralfeld 47.75 305 *e*P P 18 20 15.8 -0.5
HINF *e**PP pP 18 20 42.0 +1.4
HINF pmax pmax
comp=Z,8.0nm,0.8s
HINF Hinteralfeld 47.75 305 *e*P P 18 20 15.8 -0.5
comp=Z,7.8nm,0.8s
HINF *e*pP pP 18 20 42.0 +1.4
SBF Sospel 48.20 300 *e*P P 18 20 19.6 -0.3
comp=Z,19nm,0.8s
SBF Sospel 48.20 300 *e*P P 18 20 19.6 -0.3
SBF pmax pmax
comp=Z,19nm,0.8s
SBF Sospel 48.20 300 *e*P P 18 20 19.6 -0.3
comp=Z,19nm,0.8s
LPG La Plagne 48.29 302 *e*P P 18 20 20.7 -0.1
LPG *e*pP pP 18 20 46.5 +1.4
LPG La Plagne 48.29 302 *e*P P 18 20 20.7 -0.1
LPG *e**PP pP 18 20 46.5 +1.4
LPG La Plagne 48.29 302 *e*P P 18 20 20.7 -0.1
LPG *e*pP pP 18 20 46.5 +1.4
LPL La Plagne 48.30 302 *e*P P 18 20 20.7 -0.1
LPL La Plagne 48.30 302 *e*P P 18 20 20.7 -0.1
LPL La Plagne 48.30 302 *e*P P 18 20 20.7 -0.1
PAGF Fort de Pagny 48.36 306 *e*P P 18 20 21.4 +0.5
comp=Z,3.7nm,0.7s
PAGF *e*pP pP 18 20 47.9 +2.7
PAGF Fort de Pagny 48.36 306 *e*P P 18 20 21.4 +0.5
comp=Z,3.7nm,0.7s
PAGF *e*pP pP 18 20 47.9 +2.7
MBDF Montbardon 48.46 301 *e*P P 18 20 21.1 -0.8
comp=Z,7.2nm,0.6s
MBDF Montbardon 48.46 301 *e*P P 18 20 21.1 -0.8
MBDF pmax pmax
comp=Z,7.0nm,0.6s
MBDF Montbardon 48.46 301 *e*P P 18 20 21.1 -0.8
comp=Z,7.2nm,0.6s
CABF La Chapelle 48.50 303 *e*P P 18 20 21.7 -0.5
CABF La Chapelle 48.50 303 *e*P P 18 20 21.7 -0.5
CABF La Chapelle 48.50 303 *e*P P 18 20 21.7 -0.5
JNU Nakatsue 48.59 75 *e*P P 18 20 23.9 +0.9
comp=Z,8.1nm,0.9s
KMBO Kilima Mbogo 48.74 228 P P 18 20 24.2 -0.3
KMBO Kilima Mbogo 48.74 228 P P 18 20 24.2 -0.3
comp=Z,1.2nm,0.6s,baz=35,slow=14,SNR=3.7
MEZF Maizieres J'vi 48.80 306 *e*P P 18 20 24.7 +0.4
comp=Z,17nm,0.7s
MEZF *e*pP pP 18 20 50.1 +1.4
MEZF Maizieres J'vi 48.80 306 *e*P P 18 20 24.7 +0.4
comp=Z,17nm,0.7s
MEZF *e*pP pP 18 20 50.1 +1.4
KBS Kingsbay 48.81 347 *e*P P 18 20 25.1 +1.2
KBS AMB AMB 18 20 26.9
comp=Z,19nm,1.0s
KBS Kingsbay 48.81 347 ⇑*i*P P 18 20 25.3 +1.4
KBS pmax pmax
comp=Z,18nm,1.3s
FRF La Foret Royal 48.83 299 *e*P P 18 20 24.6 0.0
comp=Z,5.7nm,0.7s
FRF La Foret Royal 48.83 299 *e*P P 18 20 24.6 0.0
FRF pmax pmax
comp=Z,6.0nm,0.7s
FRF La Foret Royal 48.83 299 *e*P P 18 20 24.6 0.0
comp=Z,5.7nm,0.7s
BAIF Baives 49.05 308 *e*P P 18 20 26.7 +0.5
comp=Z,18nm,1.0s
BAIF *e*pP pP 18 20 53.3 +2.7
BAIF Baives 49.05 308 *e*P P 18 20 26.7 +0.5
BAIF *e**PP pP 18 20 53.3 +2.7
BAIF pmax pmax
comp=Z,18nm,1.0s
BAIF Baives 49.05 308 *e*P P 18 20 26.7 +0.5
comp=Z,18nm,1.0s
BAIF *e*pP pP 18 20 53.3 +2.7
KEST Kesra 49.15 289 *e*P P 18 20 28.3 +1.0
KEST Kesra 49.15 289 P P 18 20 26.6 -0.7
comp=Z,1.9nm,0.5s,baz=304,slow=1.9,SNR=13
LOR Lormes 49.85 305 *e*P P 18 20 31.8 -0.6
LOR *e*R
comp=Z,48nm,20.2s
LOR Lormes 49.85 305 *e*P P 18 20 31.8 -0.6
SMF Signal de Mont 50.01 304 *e*P P 18 20 33.1 -0.4
comp=Z,18nm,0.9s
SMF Signal de Mont 50.01 304 *e*P P 18 20 33.1 -0.4
SMF pmax pmax
comp=Z,18nm,0.9s
SMF Signal de Mont 50.01 304 *e*P P 18 20 33.1 -0.4
comp=Z,18nm,0.9s
SSF Saint Saulge 50.13 305 *e*P P 18 20 33.9 -0.6
comp=Z,5.2nm,0.7s
SSF Saint Saulge 50.13 305 *e*P P 18 20 33.9 -0.6
SSF pmax pmax
comp=Z,5.0nm,0.7s
SSF Saint Saulge 50.13 305 *e*P P 18 20 33.9 -0.6
comp=Z,5.2nm,0.7s
AVF Avril sur Loir 50.30 304 *e*P P 18 20 35.3 -0.4
comp=Z,14nm,0.7s
AVF *e*pP pP 18 21 01.1 +1.0
AVF Avril sur Loir 50.30 304 *e*P P 18 20 35.3 -0.4
AVF *e**PP pP 18 21 01.1 +1.0
AVF pmax pmax
comp=Z,14nm,0.7s
AVF Avril sur Loir 50.30 304 *e*P P 18 20 35.3 -0.4
comp=Z,14nm,0.7s
AVF *e*pP pP 18 21 01.1 +1.0
LASF Ste Croix 50.64 301 *e*P P 18 20 36.9 -1.5
LASF Ste Croix 50.64 301 *e*P P 18 20 36.9 -1.5
BGF Bois d'Agland 50.69 304 *e*P P 18 20 38.2 -0.5
BGF Bois d'Agland 50.69 304 *e*P P 18 20 38.2 -0.5
BGF Bois d'Agland 50.69 304 *e*P P 18 20 38.2 -0.5
TCF Toulx Ste Croi 51.19 304 *e*P P 18 20 42.3 -0.1
comp=Z,7.7nm,0.8s
TCF *e*pP pP 18 21 08.3 +1.4
TCF Toulx Ste Croi 51.19 304 *e*P P 18 20 42.3 -0.1
TCF *e**PP pP 18 21 08.3 +1.4
TCF pmax pmax
comp=Z,8.0nm,0.8s
TCF Toulx Ste Croi 51.19 304 *e*P P 18 20 42.3 -0.1
comp=Z,7.7nm,0.8s
TCF *e*pP pP 18 21 08.3 +1.4
CAF Calviac 51.65 302 *e*P P 18 20 45.4 -0.5
comp=Z,5.0nm,0.6s
CAF Calviac 51.65 302 *e*P P 18 20 45.4 -0.5
CAF pmax pmax
comp=Z,5.0nm,0.6s
CAF Calviac 51.65 302 *e*P P 18 20 45.4 -0.5
comp=Z,5.0nm,0.6s
RJF Les Rejaudoux 51.91 303 *e*P P 18 20 48.1 +0.3
RJF *e*R
comp=Z,52nm,19.8s
RJF Les Rejaudoux 51.91 303 *e*P P 18 20 48.1 +0.3
RJF Les Rejaudoux 51.91 303 *e*P P 18 20 48.1 +0.3
MTLF Montolieu 51.99 300 *e*P P 18 20 47.2 -1.2
comp=Z,3.2nm,0.6s
MTLF Montolieu 51.99 300 *e*P P 18 20 47.2 -1.2
MTLF pmax pmax
comp=Z,3.0nm,0.6s
MTLF Montolieu 51.99 300 *e*P P 18 20 47.2 -1.2
comp=Z,3.2nm,0.6s
LDF La Druitiere 52.14 307 *e*P P 18 20 48.7 -0.7
LDF La Druitiere 52.14 307 *e*P P 18 20 48.7 -0.7
LDF La Druitiere 52.14 307 *e*P P 18 20 48.7 -0.7
FLN La Foliniere 52.33 308 *e*P P 18 20 50.1 -0.7
FLN *e*pP pP 18 21 15.8 +0.4
FLN *e*R
comp=Z,48nm,19.0s
FLN La Foliniere 52.33 308 *e*P P 18 20 50.1 -0.7
FLN *e**PP pP 18 21 15.8 +0.4
FLN La Foliniere 52.33 308 *e*P P 18 20 50.1 -0.7
FLN *e*pP pP 18 21 15.8 +0.4
MBAR Mbarara 52.44 235 P P 18 20 50.4 -1.9
MBAR Mbarara 52.44 235 P P 18 20 50.4 -1.9
comp=Z,8.6nm,0.5s,baz=50,slow=12,SNR=7.7
EKA Eskdalemuir Ar 52.46 316 P P 18 20 51.8 +0.1
EKA Eskdalemuir Ar 52.46 316 P P 18 20 51.8 +0.1
comp=Z,5.0nm,0.7s,baz=96,slow=7.3,SNR=13
GRR Gorron 52.66 307 *e*P P 18 20 53.1 -0.2
GRR Gorron 52.66 307 *e*P P 18 20 53.1 -0.2
GRR Gorron 52.66 307 *e*P P 18 20 53.1 -0.2
MAJO Matsushiro 52.97 68 *e*P P 18 20 55.6 -0.2
MAJO pmax pmax
comp=Z,80nm,2.4s
MAJO Matsushiro 52.97 68 *e*P P 18 20 55.6 -0.2
comp=Z,80nm,2.4s
MAT Matsushiro 52.97 68 P P 18 20 55.4 -0.4
MJAR Matsushiro Arr 52.97 68 P P 18 20 55.8 0.0
MJAR Matsushiro Arr 52.97 68 P P 18 20 55.8 0.0
comp=Z,2.4nm,0.5s,baz=285,slow=10,SNR=15
EPF Esparros 53.39 300 *e*P P 18 20 58.1 -0.7
comp=Z,4.7nm,0.6s
EPF Esparros 53.39 300 *e*P P 18 20 58.1 -0.7
EPF pmax pmax
comp=Z,5.0nm,0.6s
EPF Esparros 53.39 300 *e*P P 18 20 58.1 -0.7
comp=Z,4.7nm,0.6s
SGMF Saint Gilles 53.79 307 *e*P P 18 21 01.0 -0.6
SGMF Saint Gilles 53.79 307 *e*P P 18 21 01.0 -0.6
SGMF Saint Gilles 53.79 307 *e*P P 18 21 01.0 -0.6
ETSF Etsaut 54.06 301 *e*P P 18 21 03.0 -0.7
comp=Z,12nm,0.5s
ETSF Etsaut 54.06 301 *e*P P 18 21 03.0 -0.7
ETSF pmax pmax
comp=Z,12nm,0.5s
ETSF Etsaut 54.06 301 *e*P P 18 21 03.0 -0.7
comp=Z,12nm,0.5s
ROSF Rostrenen 54.23 308 *e*P P 18 21 04.2 -0.5
ROSF Rostrenen 54.23 308 *e*P P 18 21 04.2 -0.5
ROSF Rostrenen 54.23 308 *e*P P 18 21 04.2 -0.5
SEY Seymchan 54.54 34 ⇓*e*P P 18 21 08.0 +1.2
ESDC Sonseca Array 57.59 298 P P 18 21 29.1 +0.1
ESDC pP pP 18 21 54.6 +0.7
ESDC Sonseca Array 57.59 298 P P 18 21 29.1 +0.1
comp=Z,0.8nm,0.5s,baz=57,slow=8.1,SNR=7.8
ESDC pP pP 18 21 54.6 +0.7
comp=Z,0.9nm,0.5s,baz=55,slow=7.3,SNR=3.3
TAM Tamanrasset 57.61 276 *e*P P 18 21 29.6 +0.2
TAM pmax pmax
comp=Z,1.0nm,0.4s
TAM Tamanrasset 57.61 276 *e*P P 18 21 29.6 +0.2
comp=Z,1.1nm,0.4s
BILL Bilibino 58.75 26 *e*P P 18 21 37.8 +1.3
BILL pmax pmax
comp=Z,6.0nm,1.2s
BILL Bilibino 58.75 26 *e*P P 18 21 37.2 +0.7
comp=Z,1.9nm,0.4s
SUMG Summit 61.26 341 *e*P P 18 21 56.0 +2.0
SUMG pmax pmax
comp=Z,17nm,0.9s
SUMG Summit 61.26 341 *e*P P 18 21 56.0 +2.0
comp=Z,17nm,0.9s
SUMG Summit 61.26 341 *i* P P 18 21 56.9 +2.9
comp=Z,15nm,0.9s
TOA0 Torodi Ar. Sit 65.77 269 *e*P P 18 22 21.3 -2.8
TORD Torodi Ar. Bea 65.77 269 P P 18 22 21.4 -2.7
TORD Torodi Ar. Bea 65.77 269 P P 18 22 21.4 -2.7
comp=Z,5.2nm,0.5s,baz=47,slow=5.7,SNR=72
SFJD Kangerlussuaq 67.95 339 *i* P P 18 22 38.5 +1.4
comp=Z,7.3nm,0.8s
COLD Coldfoot 72.14 16 *e*P P 18 23 02.5 -0.3
comp=Z,3.6nm,0.8s
INK Inuvik 74.08 9 P P 18 23 14.2 +0.1
INK Inuvik 74.08 9 P P 18 23 14.2 +0.1
comp=Z,8.3nm,0.5s,baz=351,slow=6.5,SNR=94
LBTB Lobatse 74.58 222 *e*P P 18 23 16.9 -0.8
comp=Z,80nm,2.1s
DBIC Dimbokro 74.74 267 *e*P P 18 23 15.2 -3.6
comp=Z,4.7nm,0.6s
DBIC Dimbokro 74.74 267 P P 18 23 16.7 -2.1
comp=Z,3.5nm,0.5s,baz=23,slow=7.2,SNR=12
ILAR Eielson Array 74.94 16 P P 18 23 18.4 -0.8
ILAR pP pP 18 23 47.1 +1.8
ILAR Eielson Array 74.94 16 P P 18 23 18.4 -0.8
comp=Z,1.6nm,0.9s,baz=303,slow=4.6,SNR=16
ILAR pP pP 18 23 47.1 +1.8
comp=Z,0.8nm,0.7s,baz=329,slow=4.0,SNR=3.1
LIC Lamto 75.14 267 *e*P P 18 23 18.6 -2.5
comp=Z,11nm,0.6s
LIC Lamto 75.14 267 *e*P P 18 23 18.6 -2.5
comp=Z,11nm,0.6s
FRB Frobisher Bay 75.26 343 P P 18 23 21.1 +0.2
FRB Frobisher Bay 75.26 343 P P 18 23 21.1 +0.2
comp=Z,2.6nm,0.4s,baz=57,slow=7.7,SNR=8.3
EGAK Eagle 76.12 14 *e*P P 18 23 26.6 +0.8
PAX Paxson 76.82 16 *e*P P 18 23 29.1 -0.9
PAX pmax pmax
comp=Z,17nm,1.7s
PAX Paxson 76.82 16 *e*P P 18 23 29.1 -0.9
comp=Z,17nm,1.7s
SML Sawmill 77.15 18 *e*P P 18 23 31.6 -0.2
SML pmax pmax
comp=Z,2.0nm,1.0s
SML Sawmill 77.15 18 *e*P P 18 23 31.6 -0.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,2.1nm,1.0s						
BOSA	Boshof	77.64	220	P	P	18 23 34.2	-0.7
BOSA	Boshof	77.64	220	P	P	18 23 34.2	-0.7
	comp=Z,2.2nm,0.5s,baz=70,slow=16,SNR=11						
YKA	Yellowknife Ar	81.43	3	P	P	18 23 54.8	-0.2
YKA				pP	pP	18 24 23.2	+1.7
YKA	Yellowknife Ar	81.43	3	P	P	18 23 54.8	-0.2
	comp=Z,2.7nm,0.4s,baz=350,slow=5.4,SNR=54						
YKA				pP	pP	18 24 23.2	+1.7
	comp=Z,1.3nm,0.5s,baz=349,slow=5.7,SNR=3.0						
WRA	Warramunga Arr	81.84	122	P	P	18 23 56.4	-1.4
WRA	Warramunga Arr	81.84	122	P	P	18 23 56.4	-1.4
	comp=Z,3.1nm,0.4s,baz=324,slow=4.9,SNR=64						
WRAB	Tennant Creek	81.84	122	eP	P	18 23 56.3	-1.5
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WRAB	Tennant Creek	81.84	122	eP	P	18 23 56.3	-1.5
	comp=Z,7.4nm,0.8s						
SCHQ	Schefferville	82.29	337	P	P	18 23 60.0	+0.3
SCHQ	Schefferville	82.29	337	P	P	18 23 60.0	+0.3
	comp=Z,2.6nm,0.7s,baz=43,slow=4.5,SNR=8.3						
DLBC	Dease Lake	83.97	11	P	P	18 24 08.3	0.0
DLBC	Dease Lake	83.97	11	P	P	18 24 08.3	0.0
	comp=Z,1.7nm,0.6s,baz=54,slow=5.1,SNR=4.3						
AS31	Alice Springs	84.10	125	eP	P	18 24 07.4	-2.0
ASAR	Alice Springs	84.10	125	P	P	18 24 08.0	-1.4
ASAR	Alice Springs	84.10	125	P	P	18 24 08.0	-1.4
	comp=Z,4.9nm,0.6s,baz=309,slow=5.1,SNR=154						
FFC	Flin Flon	89.13	356	eP	P	18 24 33.6	+0.2
FFC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
FFC	Flin Flon	89.13	356	eP	P	18 24 33.6	+0.2
	comp=Z,3.5nm,1.1s						
STKA	Stephens Creek	94.63	126	P	P	18 24 58.5	-0.6
STKA	Stephens Creek	94.63	126	P	P	18 24 58.5	-0.6
	comp=Z,2.5nm,0.9s,baz=239,slow=14,SNR=3.5						

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*CSEM **06** 18:17:02.8, 42°.32N×13°.39E, h10km, MD2.2/16, After ROM*

ROM 06 18:17:02.8±0.1**, 42°.32N×13°.39E, h10km, Md2.2**/16**, Ml2.1**/10**, Error ellipse: s-maj=1.1km s-min=1.0km az=130.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	18	Pg	Pg	18 17 05.1	+0.2
AQU				Sg	Sg	18 17 06.4	0.0
	3μm,0.4s						
AQU	L'Aquila	0.04	18	Pg	Pg	18 17 05.1	+0.2
AQU				Sg	Sg	18 17 06.4	0.0
	3μm,0.4s						
FAGN	Fagnano	0.16	108	Pg	Pg	18 17 06.9	+0.5
FAGN				Sg	Sg	18 17 10.2	+1.4
FAGN	Fagnano	0.16	108	Pg	Pg	18 17 06.9	+0.5
FAGN				Sg	Sg	18 17 10.2	+1.4
FIAM	Fiamignano	0.20	257	Pg	Pg	18 17 07.9	+0.6
FIAM				Sg	Sg	18 17 11.4	+1.1
	329nm,0.5s						
FIAM	Fiamignano	0.20	257	Pg	Pg	18 17 07.9	+0.6
FIAM				Sg	Sg	18 17 11.4	+1.1
	329nm,0.5s						
CAMP	Campotosto	0.22	5	Pg	Pg	18 17 07.7	+0.1
CAMP				Sg	Sg	18 17 12.6	+1.7
CAMP	Campotosto	0.22	5	Pg	Pg	18 17 07.7	+0.1
CAMP				Sg	Sg	18 17 12.6	+1.7
PTQR	Pietraquaria	0.29	178	Pg	Pb	18 17 09.6	-0.7
PTQR				Sg	Sb	18 17 14.5	-0.8
	18nm,0.2s						
PTQR	Pietraquaria	0.29	178	Pg	Pb	18 17 09.6	-0.7
PTQR				Sg	Sb	18 17 14.5	-0.8
	18nm,0.2s						
VCEL	Villa Celiera	0.35	77	Pg	Pg	18 17 09.9	0.0
VCEL				Sg	Sg	18 17 15.7	+1.0
	424nm,0.3s						
VCEL	Villa Celiera	0.35	77	Pg	Pg	18 17 09.9	0.0
VCEL				Sg	Sg	18 17 15.7	+1.0
	424nm,0.3s						
TERO	Teramo	0.35	28	Pg	Pg	18 17 10.1	+0.3
TERO				Sg	Sb	18 17 15.7	-1.1
	286nm,0.3s						
TERO	Teramo	0.35	28	Pg	Pg	18 17 10.1	+0.3
TERO				Sg	Sb	18 17 15.7	-1.1
	286nm,0.3s						
CERT	Cerreto	0.47	219	Pg	Pg	18 17 12.5	+0.3
CERT				Sg	Sg	18 17 19.3	+0.8
	170nm,0.2s						
CERT	Cerreto	0.47	219	Pg	Pg	18 17 12.5	+0.3
CERT				Sg	Sg	18 17 19.3	+0.8
	170nm,0.2s						
VVLD	Villa Vallelon	0.48	158	Pg	Pg	18 17 12.3	0.0
	75nm,0.5s						
VVLD	Villa Vallelon	0.48	158	Pg	Pg	18 17 12.3	0.0
	75nm,0.5s						
INTR	Introdacqua	0.49	128	Pg	Pg	18 17 12.6	+0.1
INTR				Sg	Sg	18 17 20.0	+0.9
	141nm,0.2s						
INTR	Introdacqua	0.49	128	Pg	Pg	18 17 12.6	+0.1
INTR				Sg	Sg	18 17 20.0	+0.9
	141nm,0.2s						
GUAR	Guarcino	0.52	186	Pg	Pb	18 17 14.9	+0.7
	56nm,0.3s						
GUAR	Guarcino	0.52	186	Pg	Pb	18 17 14.9	+0.7
	56nm,0.3s						
MNS	Montasola	0.53	278	Pg	Pg	18 17 13.0	-0.1
	58nm,0.5s						
MNS	Montasola	0.53	278	Pg	Pg	18 17 13.0	-0.1
	58nm,0.5s						
NRCA	Norcia	0.56	339	Pg	Pg	18 17 13.8	0.0
NRCA				Sg	Sb	18 17 22.3	-0.6
	31nm,0.3s						
NRCA	Norcia	0.56	339	Pg	Pg	18 17 13.8	0.0
NRCA				Sg	Sb	18 17 22.3	-0.6
	31nm,0.3s						
MTCE	Montecelio	0.56	239	Pg	Pg	18 17 13.9	+0.2
	41nm,0.4s						
MTCE	Montecelio	0.56	239	Pg	Pg	18 17 13.9	+0.2
	41nm,0.4s						
SDI	San Donato	0.68	152	Pg	Pg	18 17 15.5	-0.6
	25nm,0.2s						
SDI	San Donato	0.68	152	Pg	Pg	18 17 15.5	-0.6
	25nm,0.2s						
FDMO	Fiordimonte	0.75	343	Pg	Pg	18 17 17.1	-0.4
FDMO				Sg	Sb	18 17 28.6	+0.1
	36nm,0.3s						
FDMO	Fiordimonte	0.75	343	Pg	Pg	18 17 17.1	-0.4
FDMO				Sg	Sb	18 17 28.6	+0.1
	36nm,0.3s						

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*NIED **06** 18:25:00, 28°.10N×142°.20E, h56km, Mw4.0 Best double couple: M₀1.05000×10^15 NP1:φs354.00000°, δ62.00000°, λ82.00000°. NP2:φs191.00000°, δ29.00000°, λ105.00000°.*

IDC 06 18:25:20.4±4.6**, 28°.23N×142°.17E, h33km**±37km**, mb3.4**/6**, mb1 3.5**/7**, mb1mx3.3**/26**, mbtmp3.4**/7**, ML3.6**/1**, Error ellipse: s-maj=46.6km s-min=18.1km az=84.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.13	179	Pn	Pn	18 25 39.8	-0.1
	35nm,0.3s,baz=333,slow=7.9,SNR=34						
CBIJ				Sn	Sn	18 25 50.8	-3.5
	281nm,0.3s,baz=18,slow=20,SNR=58						
MJAR	Matsushiro Arr	8.94	339	Pn	Pn	18 27 27.0	-0.1
	0.6nm,0.3s,baz=164,slow=12,SNR=7.3						
WRA	Warramunga Arr	48.49	190	P	P	18 34 00.2	+0.2
	0.5nm,0.6s,baz=9.4,slow=8.4,SNR=9.0						
ASAR	Alice Springs	52.21	190	P	P	18 34 27.8	-0.4
	0.2nm,0.8s,baz=12,slow=6.9,SNR=3.7						
BVAR	Borovoye Array	57.20	317	P	P	18 35 04.3	+0.2
	0.6nm,0.4s,baz=88,slow=9.2,SNR=5.0						
AKTO	Aktyubinsk	65.21	316	P	P	18 35 58.0	-0.4
	0.6nm,0.4s,baz=94,slow=14,SNR=3.6						
YKA	Yellowknife Ar	71.15	29	P	P	18 36 35.2	-0.1
	0.1nm,0.3s,baz=296,slow=6.6,SNR=3.3						
FINES	FINESS Array B	76.92	334	P	P	18 37 09.2	+0.1
	0.4nm,0.3s,baz=47,slow=8.4,SNR=4.3						

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*CSEM **06** 18:25:32.0, 45°.76N×26°.70E, h133km, MD2.8/1, After BUC*

BUC 06 18:25:32.0±1.6**, 45°.76N×26°.70E, h133km**±12km**, MD2.8**/1**, 6C-9D, Error ellipse: s-maj=25.2km s-min=13.7km az=55.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	Plostina	0.10	339	⇑iP	Pn	18 25 50.3	+0.2
PLOR	Plostina	0.10	339	⇑iP	Pn	18 25 50.3	+0.2
PLOR				iS	Sn	18 26 03.6	-0.3
PLOR	Plostina	0.10	339	⇑iP	Pn	18 25 50.3	+0.2
PLOR				iS	Sn	18 26 03.6	-0.3
VRI	Vrincioaia	0.11	10	⇓iP	Pn	18 25 50.4	+0.3
VRI	Vrincioaia	0.11	10	⇓iP	Pn	18 25 50.4	+0.3
VRI				iS	Sn	18 26 03.8	-0.1
VRI	Vrincioaia	0.11	10	⇓iP	Pn	18 25 50.4	+0.3
VRI				iS	Sn	18 26 03.8	-0.1
ISR	Istrita	0.65	190	⇓iP	Pn	18 25 53.3	+0.8
ISR	Istrita	0.65	190	⇓iP	Pn	18 25 53.3	+0.8
ISR				iS	Sn	18 26 09.5	+1.6
ISR	Istrita	0.65	190	⇓iP	Pn	18 25 53.3	+0.8
ISR				iS	Sn	18 26 09.5	+1.6
CFR	Carcaliu	1.17	119	⇑iP	Pn	18 25 57.5	+0.8
CFR	Carcaliu	1.17	119	⇑iP	Pn	18 25 57.5	+0.8
CFR				iS	Sn	18 26 15.9	+0.3
CFR	Carcaliu	1.17	119	⇑iP	Pn	18 25 57.5	+0.8
CFR				iS	Sn	18 26 15.9	+0.3
TIRR	Tirgusor	1.78	136	⇓iP	Pn	18 26 03.7	+0.2
TIRR	Tirgusor	1.78	136	⇓iP	Pn	18 26 03.7	+0.2
TIRR				iS	Sn	18 26 27.1	-0.4
TIRR	Tirgusor	1.78	136	⇓iP	Pn	18 26 03.7	+0.2
TIRR				iS	Sn	18 26 27.1	-0.4

IDC 06 18:27:23.4±1.4**, 14°.18N×53°.81E, h0km, mb3.3**/5**, mb1 3.4**/5**, mb1mx3.2**/27**, mbtmp3.3**/5**, MS3.0**/1**, Ms1 3.1**/1**, ms1mx2.4**/27**, Error ellipse: s-maj=46.0km s-min=29.4km az=153.0, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	40.30	30	P	P	18 35 01.6	-0.9
	0.3nm,0.7s,baz=214,slow=10,SNR=3.2						
ZALV	Zalesovo Beam	46.55	25	P	P	18 35 52.8	+0.1
	0.5nm,0.5s,baz=208,slow=8.2,SNR=2.2						
TORD	Torodi Ar. Bea	50.57	275	P	P	18 36 24.2	-0.1
	0.4nm,1.0s,baz=86,slow=5.1,SNR=2.4						
SONM	Songino Array	54.77	41	P	P	18 36 55.6	+0.5
	0.2nm,0.8s,baz=235,slow=7.3,SNR=2.1						
NOA	NORSAR Array B	55.93	337	LR	LR	19 03 29.3	
	comp=Z,12nm,18.9s,baz=70,slow=39						
WRA	Warramunga Arr	86.12	112	P	P	18 40 06.9	-0.1
	0.4nm,0.9s,baz=296,slow=3.8,SNR=3.6						

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*ISCJB **06** 18:34:14.8±0.5, 49°.35S±0°.07×123°.5E±0°.3, h10km, mb4.1/8, MS3.8/11, Error ellipse: s-maj=25.9km s-min=9.2km az=10.3*

*IDC **06** 18:34:15.1±0.6, 49°.35S×123°.44E, h0km, mb4.1/7, mb1 4.3/8, mb1mx4.1/17, mbtmp4.2/8, ML2.6/1, MS3.8/12, Ms1 3.8/12, ms1mx3.6/24, Error ellipse: s-maj=36.6km s-min=15.5km az=99.0*

*NEIC **06** 18:34:16.8±0.3, 49°.34S×123°.34E, h10km, mb4.6/2, Error ellipse: s-maj=17.0km s-min=7.9km az=97.0*

ISC 06 18:34:16.7±0.5**, 49°.35S**±0°.09**×123°.4E**±0°.2**, h10km, n123, σ0s.62**/105**, mb4.2**/8**, MS3.8**/11**, 30C-35D, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	17.04	342	P	Pn	18 38 15.5	+0.5
NWAO	Narrogin (SRO)	17.04	342	P	Pn	18 38 15.5	+0.5
	1.0nm,0.3s,baz=168,slow=14,SNR=10						
NWAO				LR	LR	18 43 17.4	
	comp=Z,167nm,18.8s,baz=23,slow=32						
STKA	Stephens Creek	22.17	45	eP	P	18 39 13.8	+1.0
STKA	Stephens Creek	22.17	45	P	P	18 39 13.4	+0.6
	3.3nm,0.6s,baz=211,slow=11,SNR=9.2						
STKA				LR	LR	18 45 54.0	
	comp=Z,235nm,21.0s,baz=27,slow=32						
ASAR	Alice Springs	26.94	22	P	P	18 39 57.5	-0.8
ASAR				PcP	PcP	18 43 19.5	-0.5
ASAR	Alice Springs	26.94	22	P	P	18 39 57.5	-0.8
	4.5nm,0.9s,baz=200,slow=8.8,SNR=33						
ASAR				PcP	PcP	18 43 19.5	-0.5
	0.5nm,0.6s,baz=189,slow=1.9,SNR=12						
AS31	Alice Springs	26.94	22	eP	P	18 39 57.6	-0.7
WRA	Warramunga Arr	30.63	21	P	P	18 40 29.9	-1.2
WRA				PcP	PcP	18 43 28.4	-0.9
WRA	Warramunga Arr	30.63	21	P	P	18 40 29.9	-1.2
	0.4nm,0.4s,baz=196,slow=8.0,SNR=8.0						
WRA				PcP	PcP	18 43 28.4	-0.9
	0.7nm,0.7s,baz=211,slow=2.2,SNR=9.2						
WRAB	Tennant Creek	30.64	21	eP	P	18 40 30.8	-0.3
	5.8nm,1.3s						
FITZ	Fitzroy Crossi	31.23	4	LR	LR	18 52 11.3	
	comp=Z,130nm,18.4s,baz=127,slow=34						
VNDA	Vanda	31.81	165	eP	P	18 40 40.5	-0.4
VNDA	Vanda	31.81	165	P	P	18 40 40.1	-0.8
	2.0nm,0.7s,baz=304,slow=11,SNR=12						
VNDA				LR	LR	18 52 20.8	
	comp=Z,130nm,21.1s,baz=315,slow=34						
RPZ	Rata Peaks	32.83	99	LR	LR	18 50 41.7	
	comp=Z,270nm,19.1s,baz=262,slow=30						
CTA	Charters Tower	34.45	40	LR	LR	18 55 04.0	
	comp=Z,150nm,19.4s,baz=312,slow=36						
QSPA	South Pole Qui	40.77	180	P	P	18 41 58.5	+0.8
QSPA				PcP	PcP	18 43 58.1	-0.5
QSPA	South Pole Qui	40.77	180	P	P	18 41 58.5	+0.8
	4.1nm,1.0s,baz=342,slow=1.9,SNR=8.0						
QSPA				PcP	PcP	18 43 58.1	-0.5
	1.2nm,0.6s,baz=313,slow=6.5,SNR=5.5						
DZM	Mont Dzumac	43.46	67	LR	LR	18 57 52.8	
	comp=Z,244nm,18.4s,baz=216,slow=33						
KAPI	Kappang	44.29	355	LR	LR	18 59 47.5	
	comp=Z,38nm,18.4s,baz=192,slow=35						
HNR	Honiara	50.11	50	LR	LR	19 02 46.1	
	comp=Z,106nm,21.6s,baz=199,slow=34						
SNAA	Sanae	53.45	199	eP	P	18 43 36.5	+0.1
SNAA	Sanae	53.45	199	eP	P	18 43 36.0	-0.4
	12nm,0.9s						
SNAA	Sanae	53.45	199	P	P	18 43 36.5	+0.1
	3.9nm,0.8s,baz=152,slow=9.4,SNR=37						
VNA2	Neumayer--Watz	54.96	198	eP	P	18 43 47.5	+0.2
	baz=150,slow=6.1						
VNA3	Neumayer Olymp	55.15	197	eP	P	18 43 48.5	-0.2
VNA1	Neumayer--Stat	55.35	198	eP	P	18 43 51.3	+1.2
CMAR	Chiang Mai Arr	70.92	335	P	P	18 45 34.5	+0.5
CMAR	Chiang Mai Arr	70.92	335	P	P	18 45 34.5	+0.5
	2.1nm,0.8s,baz=186,slow=5.6,SNR=14						
BOSA	Boshof	73.79	245	LR	LR	19 11 15.8	
	comp=Z,66nm,20.2s,baz=2.8,slow=30						
KMBO	Kilima Mbogo	86.62	272	LR	LR	19 17 19.0	
	comp=Z,79nm,20.2s,baz=92,slow=30						
PLCA	Paso Flores	89.46	169	LR	LR	19 24 07.9	
	comp=Z,112nm,21.1s,baz=3.8,slow=34						
TORD	Torodi Ar. Bea	120.37	254	PKP	PKPdf	18 53 07.6	-0.8
TORD	Torodi Ar. Bea	120.37	254	PKP	PKPdf	18 53 07.6	-0.8
	0.3nm,0.4s,baz=107,slow=1.5,SNR=8.5						
ILAR	Eielson Array	133.02	36	PKP	PKPdf	18 53 30.8	-0.2
ILAR	Eielson Array	133.02	36	PKP	PKPdf	18 53 30.8	-0.2
	0.4nm,0.6s,baz=289,slow=3.6,SNR=7.0						
FINES	FINESS Array B	134.71	318	PKP	PKPdf	18 53 34.9	+0.7
FINES	FINESS Array B	134.71	318	PKP	PKPdf	18 53 34.9	+0.7
	0.7nm,0.7s,baz=90,slow=3.8,SNR=3.5						
MNTX	Cornudas Mount	139.73	97	ePKPdf	PKPdf	18 53 44.4	-0.1
JLU	Jordanelle	141.01	82	eP	PKPpre	18 53 37.3	
DAU	Daniels Canyon	141.03	82	eP	PKPpre	18 53 39.9	
RRI2	Red Ridge	142.48	78	eP	PKPpre	18 53 42.5	
TPAW	Teton Pass	142.78	78	ePKPpre	PKPpre	18 53 44.0	
REDW	Red Top Meadow	142.78	78	ePKPpre	PKPpre	18 53 41.7	
SNOW	Snow King Moun	142.90	78	ePKPpre	PKPpre	18 53 43.4	
IMW	Indian Meadow	142.98	77	ePKPdf	PKPdf	18 53 50.4	0.0
MOOW	Moose Ponds	143.04	78	ePKPdf	PKPbc	18 53 46.7	-0.5
LOHW	Long Hollow	143.06	78	ePKPpre	PKPpre	18 53 44.7	
B15A	Bradely Ranch,	143.88	70	⇓P	PKPbc	18 53 49.2	-0.1
	baz=144						
A15A	Johnson Ranch,	144.03	69	⇓P	PKPbc	18 53 50.1	+0.4
	baz=144,SNR=7.2						
T26A	Comanche Natio	144.25	92	⇓P	PKPbc	18 53 51.5	+0.6
	baz=144						
B16A	M & M Farms, S	144.44	70	⇑P	PKPbc	18 53 50.9	-0.1
	baz=145,SNR=12						
G18A	Lazy EL Ranch,	144.50	76	⇑P	PKPdf	18 53 52.4	-0.4
	baz=145						
D17A	Six Diamond Ra	144.57	72	⇑P	PKPbc	18 53 52.0	+0.4
	baz=145,SNR=14						
H19A	Powell	144.59	77	⇑P	PKPdf	18 53 52.8	-0.1
	baz=145						
S26A	Kim	144.59	91	⇓P	PKPbc	18 53 52.4	+0.5
	baz=145						
RLMT	Red Lodge	144.61	76	ePKPdf	PKPdf	18 53 53.7	+0.7
RLMT	Red Lodge	144.61	76	⇓P	PKPdf	18 53 53.0	-0.1
	baz=145						
F18A	Big Timber	144.66	75	⇑P	PKPdf	18 53 52.8	-0.2
	baz=145,SNR=8.6						
C17A	Wharram Farm,	144.72	72	⇓P	PKPdf	18 53 52.8	-0.1
	baz=145,SNR=8.2						
I20A	Worland	144.81	79	⇓P	PKPab	18 53 52.2	-0.1
	baz=145						
E18A	Harlowton	144.82	74	⇓P	PKPdf	18 53 53.7	+0.4
	baz=145						
B17A	L&G Farms, Che	144.96	71	⇑P	PKPdf	18 53 53.3	0.0
	baz=145,SNR=7.1						
J21A	Lysite	144.96	80	⇓P	PKPdf	18 53 53.5	-0.2
	baz=145,SNR=13						
R26A	Arlington	144.98	90	⇓P	PKPbc	18 53 53.3	+0.2
	baz=145						
L22A	Ellis Ranch, M	144.99	83	⇑P	PKPdf	18 53 54.8	+1.0
	baz=145						
F19A	Roth Farm, Mol	145.13	75	⇑P	PKPdf	18 53 54.3	+0.5
	baz=145,SNR=5.1						
H20A	Greybull	145.13	78	⇓P	PKPdf	18 53 53.8	0.0
	baz=145						
D18A	Linhart Farms,	145.14	73	⇓P	PKPdf	18 53 55.3	+1.5
	baz=145						
M23A	Laramie	145.17	84	⇑P	PKPdf	18 53 54.6	+0.5
	baz=145						
K22A	Casper	145.23	82	⇓P	PKPdf	18 53 54.8	+0.7
	baz=145,SNR=7.1						
A17A	Triple J Farms	145.26	70	⇑P	PKPdf	18 53 55.1	+1.2
	baz=145						
Q26A	Hugo	145.28	89	⇓P	PKPdf	18 53 54.9	+0.6
	baz=145						
I21A	Big Trails, Te	145.28	79	⇑P	PKPdf	18 53 54.4	+0.2
	baz=145,SNR=13						
R27A	Eads	145.40	91	⇓P	PKPab	18 53 54.9	+0.2
	baz=146						
E19A	Rath Farm, Rou	145.48	74	⇓P	PKPab	18 53 55.4	+0.8
	baz=146,SNR=6.0						
L23A	Garrett	145.50	83	⇑P	PKPab	18 53 56.0	+0.9
	baz=146,SNR=13						
J22A	Midwest	145.62	81	⇑P	PKPab	18 53 56.1	+0.7
	baz=146,SNR=5.8						
B18A	Beardsley Farm	145.62	71	⇑P	PKPab	18 53 55.7	+0.6
	baz=146						
D19A	Cripps Ranch,	145.71	73	⇓P	PKPab	18 53 56.3	+0.8
	baz=146,SNR=9.2						
P26A	Davis Ranch, A	145.73	89	⇑P	PKPab	18 53 56.4	+0.5
	baz=146						
A18A	Metzger Ranch,	145.78	70	⇓P	PKPbc	18 53 55.1	-0.1
	baz=146						
C19A	Slack Wire Ran	145.82	72	⇓P	PKPab	18 53 56.1	+0.2
	baz=146						
I22A	9 Mile Ranch,	145.84	80	⇓P	PKPab	18 53 56.2	+0.1
	baz=146						
E20A	Meyer Farm, Mu	145.91	75	⇑P	PKPab	18 53 57.1	+0.9
	baz=146						
WMOK	Wichita Mounta	145.93	99	ePKPdf	PKPbc	18 53 56.2	+0.1
D20A	Manuel Ranch,	146.15	74	⇑P	PKPab	18 53 57.3	+0.2
	baz=146,SNR=13						
B19A	Brinkman Farms	146.16	71	⇓P	PKPab	18 53 57.2	0.0
	baz=146,SNR=7.5						
YKA	Yellowknife Ar	146.21	45	PKPbc	PKPbc	18 53 56.0	0.0
YKA	Yellowknife Ar	146.21	45	PKPbc	PKPbc	18 53 56.0	0.0
	5.6nm,0.8s,baz=269,slow=3.0,SNR=90						
YKW3	Yellowknife Ar	146.21	45	ePKPdf	PKPdf	18 53 55.0	+0.1
H22A	Clearmont	146.24	79	⇓P	PKPbc	18 53 56.8	0.0
	baz=146						
K24A	Anderson Ranch	146.37	83	⇓P	PKPab	18 53 58.0	-0.3
	baz=146						
A19A	Klindworth Far	146.46	70	⇓P	PKPbc	18 53 57.5	+0.2
	baz=147,SNR=6.3						
C20A	Veseth Ranch,	146.47	73	⇑P	PKPab	18 53 57.9	-0.4
	baz=147,SNR=5.2						
O27A	Beecher Island	146.63	88	⇑P	PKPab	18 53 59.3	0.0
	baz=147						
B20A	Solberg Farm,	146.73	72	⇓P	PKPab	18 53 59.4	+0.1
	baz=147						
T31A	Randall Ranch,	146.76	95	⇑P	PKPab	18 53 59.6	-0.2
	baz=147						
N27A	Anderson Farm,	146.91	87	⇓P	PKPab	18 54 00.2	-0.1
	baz=147						
K25A	Mack Ranch, Ha	146.93	83	⇓P	PKPab	18 54 00.6	+0.1
	baz=147						
A20A	Cobblestone Ra	146.94	71	⇑P	PKPbc	18 53 59.2	+0.5
	baz=147						
C21A	Desert Coulee	147.08	73	⇓P	PKPab	18 53 60.0	-0.7
	baz=147						
G23A	Biddle	147.11	78	⇓P	PKPbc	18 53 59.2	-0.1
	baz=147						
L26A	Underwood Farm	147.17	85	⇓P	PKPab	18 54 00.5	-0.8
	baz=147						
M27A	Reverse DX Ran	147.37	86	⇑P	PKPbc	18 54 00.7	+0.5
	baz=148						
D22A	Cohagen	147.40	75	⇑P	PKPab	18 54 01.2	-0.8
	baz=148						
K26A	Motz Farm, Whi	147.42	84	⇓P	PKPab	18 54 01.4	-0.9
	baz=148						
H24A	Dirks Ranch, A	147.46	80	⇓P	PKPbc	18 54 01.3	+0.9
	baz=148						
EKA	Eskdalemuir Ar	147.50	301	PKPbc	PKPbc	18 53 59.0	-0.9
EKA	Eskdalemuir Ar	147.50	301	PKPbc	PKPbc	18 53 59.0	-0.9
	0.4nm,0.4s,baz=105,slow=2.0,SNR=4.2						
RSSD	Black Hills	147.52	81	ePKPbc	PKPbc	18 54 00.2	-0.4
A21A	Bergtoll Ranch	147.60	71	⇑P	PKPbc	18 54 01.3	+0.8
	baz=148						
F24A	Ekalaka	147.99	78	⇓P	PKPbc	18 54 02.0	+0.3
	baz=148						
D23A	Lindsay	148.02	75	⇓P	PKPbc	18 54 01.6	-0.1
	baz=148						
A22A	Carney Farms,	148.23	72	⇓P	PKPbc	18 54 02.8	+0.6
	baz=148						
C23A	Lambert	148.27	74	⇑P	PKPbc	18 54 03.5	+1.2
	baz=148						
D24A	Glendive	148.56	76	⇑P	PKPbc	18 54 03.9	+0.8
	baz=149						
B23A	Brockton	148.62	73	⇑P	PKPbc	18 54 03.3	+0.1
	baz=149						
A23A	Redstone	148.86	72	⇑P	PKPbc	18 54 04.4	+0.6
	baz=149						
DGMT	Dagmar	149.12	73	ePKPbc	PKPbc	18 54 05.3	+0.8
DGMT	Dagmar	149.12	73	⇑P	PKPbc	18 54 05.2	+0.8
	baz=149						
A24A	Westby	149.40	72	⇑P	PKPbc	18 54 05.8	+0.7
	baz=150						
KSU1	Kansas State U	149.89	95	ePKPbc	PKPbc	18 54 07.6	+1.0
RES	Resolute Bay	149.97	19	ePKPbc	PKPbc	18 54 05.0	-0.7

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*NIED **06** 18:48:00, 44°.70N×149°.30E, h26km, Mw3.6 Best double couple: M₀2.42000×10^14 NP1:φs4.00000°, δ53.00000°, λ60.00000°. NP2:φs228.00000°, δ47.00000°, λ123.00000°.*

JMA 06 18:48:54.3±0.7**, 44°.69N×149°.26E, h30km, M3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	2.86	244	P	Pn	18 49 36.9	-0.9
NEM2				eS	Sn	18 50 08.6	-2.6
JRA	Rausu	3.06	257	P	Pn	18 49 41.7	+1.1
JNK	Nakash	3.45	253	P	Pn	18 49 46.5	+0.5
JAK	Akkeshi	3.71	244	P	Pn	18 49 48.7	-0.8
JAK				eS	Sn	18 50 29.4	-2.8
JTKR	Abashiri--Toko	3.91	261	P	Pn	18 49 54.8	+2.6
JAR	Ashorobuto	4.20	253	P	Pn	18 49 57.6	+1.3
JAR				eS	Sn	18 50 45.4	+1.1
JCH	Churui	4.76	246	P	Pn	18 50 04.2	+0.3
JCH				eS	Sn	18 50 56.0	-2.0
JFR	Furan	5.05	255	P	Pn	18 50 10.3	+2.3
JEM	Erimo	5.19	241	P	Pn	18 50 09.3	-0.6
JNBK	Urakawa-nobuka	5.31	245	P	Pn	18 50 11.2	-0.3
JNBK				eS	Sn	18 51 09.4	-2.3
JKB	Kayabe	6.62	248	P	Pn	18 50 29.2	-0.3
JKB				eS	Sn	18 51 37.8	-6.2
JTH	Tanohata	7.25	232	eS	Sn	18 51 47.9	-12
OFUJ	Ofunato	7.96	228	P	Pn	18 50 46.1	-1.9
OFUJ				eS	Sn	18 52 05.4	-12
JIO	Ouri	8.60	226	eS	Sn	18 52 19.5	-13

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*IDC **06** 18:49:23.8±1.4, 7°.85S×120°.63E, h207km±14km, mb3.2/3, mb1 3.5/6, mb1mx3.1/24, mbtmp3.4/6, Error ellipse:*

s-maj=55.8km s-min=10.7km az=58.0
*DJA **06** 18:49:25.1±0.3, 8°S±3°×12°0E±°, h174km±7km, M4.1/10, mb4.2/7, mB5.1/1, MLv4.1/10, Mw(mB)4.5/1*
*AUST **06** 18:49:26.7, 8°.00S×120°.99E, h100km*
ISC 06 18:49:23.5±0.7**, 8°.01S**±0°.05×**120°.51E**±0°.07**, h200km, n35, σ2.07/26, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.66**	**187**	P	**Pn**	**18 49 57.3**	**-1.4**
WSI				S	**Sn**	**18 50 23.7**	**-2.5**
WSI	**Waingapu**	**1.66**	**187**	P	**Pn**	**18 49 57.4**	**-1.4**
	baz=1.8,SNR=10						
WSI				S	**Sn**	**18 50 23.9**	**-2.3**
	baz=1.8,SNR=22						
MMRI	**Maumere**	**1.82**	**110**	P	Pn	18 50 03.2	+3.0
BKSI	**Bulukumba**	**2.70**	**352**	P	**Pn**	**18 50 09.2**	**-0.4**
KAPI	**Kappang**	**3.07**	**346**	P	**Pn**	**18 50 12.5**	**-1.5**
KAPI	**Kappang**	**3.07**	**346**	P	**Pn**	**18 50 12.8**	**-1.2**
	9.7nm,0.3s,baz=190,slow=7.2,SNR=31						
KAPI				S	**Sn**	**18 50 52.3**	**-1.3**
	1.6nm,0.3s,baz=250,slow=12,SNR=2.3						
BNSI	**Bone**	**3.61**	**354**	P	Pn	18 50 24.0	+3.5
SPSI	**Sidrap Palu**	**4.08**	**350**	P	**Pn**	**18 50 26.1**	**-0.3**
KHKI	**Kahang-Kahang**	**4.86**	**265**	P	Pn	18 50 31.6	-4.6
TTSI	**Tana Toraja**	**4.98**	**352**	P	Pn	18 50 38.9	+1.2
	32nm,0.9s,0.1nm						
DNP	**Denpasar**	**5.28**	**262**	P	Pn	18 50 38.1	-3.4
DNP				S	Sn	18 51 35.7	-7.4
KBKI	**Kotabaru**	**6.37**	**317**	P	Pn	18 51 01.6	+6.1
GMJI	**Gumukmas**	**7.00**	**267**	P	**Pn**	**18 51 02.0**	**-1.7**
	25nm,2.1s,0.2nm						
GMJI				S	Sn	18 52 10.9	-12
	25nm,2.1s,0.2nm						
PCI	**Palu**	**7.09**	**355**	S	Sn	18 52 42.5	+17
	baz=7.2,SNR=3.1						
PWJI	**Pagerwojo**	**8.62**	**269**	P	Pn	18 51 20.4	-4.5
	27nm,3.0s						
AAI	**Ambon**	**8.77**	**61**	P	Pn	18 51 42.5	+16
	baz=8.4,SNR=4.3						
UGM	**Wanagama**	**9.89**	**270**	P	Pn	18 51 35.1	-6.3
	baz=10,SNR=5.9						
UGM				S	Sn	18 53 18.8	-13
	baz=10,SNR=7.4						
BNDI	**Bandanaira**	**9.96**	**70**	P	Pn	18 51 55.2	+13
	179nm,0.8s						
LBMI	**Labuha**	**10.11**	**44**	P	Pn	18 51 58.5	+14
FITZ	**Fitzroy Crossi**	**11.21**	**154**	P	**Pn**	**18 51 58.8**	**+0.5**
	0.7nm,0.3s,baz=343,slow=4.5,SNR=26						
FITZ				S	**Sn**	**18 54 02.4**	**-0.9**
	1.1nm,0.3s,baz=191,slow=17,SNR=4.9						
FITZ	**Fitzroy Crossi**	**11.21**	**154**	P	**Pn**	**18 51 58.7**	**+0.5**
	baz=11,SNR=16						
MTN	**Manton Dam**	**11.50**	**116**	P	**Pn**	**18 52 03.8**	**+1.7**
	baz=11,SNR=98						
MTN				S	**Sn**	**18 54 06.4**	**-4.0**
	baz=11,SNR=4.9						
KDU	**Kakadu**	**12.65**	**113**	P	Pn	18 52 06.3	-10
	baz=12,SNR=6.2						
KDU				S	**Sn**	**18 54 36.1**	**-1.8**
	baz=12,SNR=3.4						
SWI	**Sorong**	**12.85**	**57**	P	P	18 52 24.7	+2.1
SWI	**Sorong**	**12.85**	**57**	P	P	18 52 24.8	+2.2
	baz=12,SNR=6.1						
XMIS	**Christmas Isla**	**14.87**	**259**	P	P	18 53 00.8	+16
	baz=15,SNR=3.3						
WRA	**Warramunga Arr**	**17.89**	**133**	P	**Pn**	**18 53 19.7**	**-0.7**
	1.0nm,0.3s,baz=307,slow=12,SNR=83						
WRA				S	**S**	**18 56 32.5**	**-0.9**
	0.3nm,0.3s,baz=305,slow=21,SNR=6.5						
MEEK	**Meekatharra**	**18.61**	**185**	P	**P**	**18 53 25.8**	**-0.2**
	baz=19,SNR=7.5						
MEEK				S	**S**	**18 56 53.8**	**+6.1**
	baz=19,SNR=4.3						
RGRI	**Rengat**	**19.65**	**292**	P	**Pn**	**18 53 42.5**	**+1.4**
ASAR	**Alice Springs**	**20.18**	**142**	P	**P**	**18 53 44.1**	**+1.2**
	1.1nm,0.5s,baz=328,slow=12,SNR=43						
ASAR				S	**S**	**18 57 18.3**	**-0.2**
	3.6nm,0.8s,baz=322,slow=21,SNR=19						
MORW	**Morawa**	**21.37**	**191**	S	S	18 57 53.7	+14
	baz=22,SNR=6.3						
PPI	**Padang Panjang**	**21.40**	**290**	P	P	18 54 15.3	+19
	baz=22,SNR=3.5						
COEN	**Coen**	**23.01**	**107**	P	**P**	**18 54 13.4**	**+2.2**
	baz=23,SNR=4.6						
STKA	**Stephens Creek**	**30.81**	**143**	P	**P**	**18 55 22.0**	**+1.4**
	1.3nm,0.4s,baz=313,slow=12,SNR=8.3						
MKAR	**Makanchi Array**	**64.28**	**332**	P	**P**	**18 59 36.0**	**-1.4**
	0.3nm,0.5s,baz=130,slow=5.9,SNR=3.1						

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*ISK **06** 18:55:42.9, 37°.93N×29°.15E, h5km, MD2.5*
*ISCJB **06** 18:55:43.2±0.8, 37°.92N±0°.04×29°.13E±0°.08, h10km±10km, Error ellipse: s-maj=11.0km s-min=4.8km az=26.3*
*CSEM **06** 18:55:43.0±0.2, 37°.89N×29°.14E, h12km, MD2.8, Error ellipse: s-maj=5.3km s-min=2.9km az=125.0*
*DDA **06** 18:55:43.3, 37°.92N×29°.08E, h7km, MD2.8*
ISC 06 18:55:43.0±1.0**, 37°.91N**±0°.05×**29°.13E**±0°.04**, h15km**±12km**, n12, σ0.15/22, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.17**	**208**	*e*PG	**Pg**	**18 55 47.4**	**+0.1**
DENT	**Denizli**	**0.17**	**208**	*e*Pg	**Pg**	**18 55 47.4**	**+0.1**
DNZL	**Cakiroluk**	**0.23**	**198**	*i* P	**Pg**	**18 55 48.1**	**-0.1**
DNZL				*i* S	**Sg**	**18 55 51.6**	**-0.1**
DNZL	**Cakiroluk**	**0.23**	**198**	*i* P	**Pg**	**18 55 48.1**	**-0.1**
DNZL				*i* S	**Sg**	**18 55 51.6**	**-0.1**
KHL	**Karahalli**	**0.52**	**36**	*e*PG	**Pg**	**18 55 53.0**	**-0.3**
KHL				*e*SG	**Sg**	**18 56 00.3**	**0.0**
KHL	**Karahalli**	**0.52**	**36**	*e*Pg	**Pg**	**18 55 53.0**	**-0.3**
KHL				*e*Sg	**Sg**	**18 56 00.3**	**0.0**
KHAL	**Karahalli**	**0.54**	**31**	*i* P	**Pb**	**18 55 54.4**	**+0.1**
KHAL				*i* S	**Sb**	**18 56 02.1**	**+0.2**
KHAL	**Karahalli**	**0.54**	**31**	*i* P	**Pb**	**18 55 54.4**	**+0.1**
KHAL				*i* S	**Sb**	**18 56 02.1**	**+0.2**
KULA	**Kula-Manisa**	**0.71**	**329**	*e*PG	**Pg**	**18 55 56.9**	**0.0**
KULA				*e*SG	**Sb**	**18 56 06.9**	**+0.1**
KULA	**Kula-Manisa**	**0.71**	**329**	*e*Pg	**Pg**	**18 55 56.9**	**0.0**
KULA				*e*Sg	**Sb**	**18 56 06.9**	**+0.1**
AYDN	**Tasoluk**	**1.02**	**257**	*i* P	**Pb**	**18 56 02.3**	**-0.1**
AYDN				*i* S	**Sg**	**18 56 16.2**	**0.0**
AYDN	**Tasoluk**	**1.02**	**257**	*i* P	**Pb**	**18 56 02.3**	**-0.1**
AYDN				*i* S	**Sg**	**18 56 16.2**	**0.0**

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*IDC **06** 19:26:08.5±2.9, 8°.73S×118°.29E, h131km±26km, mb2.8/2, mb1 3.0/5, mb1mx2.9/24, mbtmp2.9/5, Error ellipse: s-maj=49.9km s-min=13.5km az=52.0*
*AUST **06** 19:26:17.2, 8°.99S×118°.96E, h100km*
ISC 06 19:26:09.9±1.6**, 8°.7S**±0°.1×**118°.4E**±0°.2**, h152km, n9, σ2.47/11, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.09**	**117**	P	**Pn**	**19 26 46.1**	**-0.1**
	baz=1.5,SNR=12						
KAPI	**Kappang**	**3.90**	**20**	P	**Pn**	**19 27 07.5**	**-1.5**
	1.1nm,0.3s,baz=218,slow=7.3,SNR=8.9						
PCI	**Palu**	**7.88**	**10**	P	Pn	19 28 15.8	+14
	baz=8.1,SNR=3.2						
PCI				S	Sn	19 29 43.6	+14
	baz=8.1,SNR=10.0						
FITZ	**Fitzroy Crossi**	**11.68**	**144**	P	**Pn**	**19 28 52.1**	**0.0**
	0.2nm,0.3s,baz=339,slow=13,SNR=9.9						
FITZ				S	**Sn**	**19 30 57.1**	**-4.2**
	0.7nm,0.3s,baz=195,slow=18,SNR=12						
FITZ	**Fitzroy Crossi**	**11.68**	**144**	P	**Pn**	**19 28 52.7**	**+0.6**
	baz=11,SNR=5.8						
FITZ				S	**Sn**	**19 30 57.9**	**-3.3**
	baz=11,SNR=5.6						
MTN	**Manton Dam**	**13.15**	**109**	P	**Pn**	**19 29 12.0**	**+1.0**
	baz=13,SNR=3.9						
MTN				S	Sn	19 31 28.9	-7.7
	baz=13,SNR=6.3						
WRA	**Warramunga Arr**	**19.02**	**128**	P	**Pn**	**19 30 22.3**	**-0.5**
	0.1nm,0.3s,baz=301,slow=13,SNR=8.3						
WRA				S	**S**	**19 33 51.4**	**+3.0**
	0.1nm,0.3s,baz=300,slow=25,SNR=3.0						
ASAR	**Alice Springs**	**21.00**	**137**	P	**P**	**19 30 44.3**	**+2.7**
	0.3nm,0.4s,baz=308,slow=9.3,SNR=20						
MKAR	**Makanchi Array**	**63.94**	**333**	P	**P**	**19 36 27.0**	**+0.3**
	0.1nm,0.3s,baz=134,slow=8.3,SNR=4.2						

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*AUST **06** 19:38:51.0±99.0, 7°.97S×130°.56E, h31km±3km, Error ellipse: s-maj=9.8km s-min=1.1km az=277.0*
IDC 06 19:38:01.9±2.4**, 5°.20S×130°.46E, h0km, mb3.3**/1**, mb1 3.7**/4**, mb1mx3.4**/19**, mbtmp3.5**/4**, ML3.7**/3**, Error ellipse: s-maj=115.2km s-min=27.5km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**7.63**	**175**	P	Pn	19 40 03.0	+8.5
	baz=4.9,SNR=15						
KDU	**Kakadu**	**7.70**	**165**	P	Pn	19 40 04.6	+9.1
	baz=5.1,SNR=82						
FITZ	**Fitzroy Crossi**	**13.67**	**200**	Pn	Pn	19 41 15.7	-1.5
	0.3nm,0.3s,baz=23,slow=12,SNR=20						
FITZ				Sn	Sn	19 43 31.7	-18
	0.1nm,0.3s,baz=341,slow=16,SNR=3.2						
WRA	**Warramunga Arr**	**15.13**	**166**	Pn	Pn	19 41 38.4	+1.2
	0.3nm,0.3s,baz=352,slow=12,SNR=21						
WRA				Sn	Sn	19 44 15.2	-11
	0.2nm,0.3s,baz=331,slow=23,SNR=6.7						
ASAR	**Alice Springs**	**18.66**	**170**	P	P	19 42 21.6	-0.1
	0.4nm,0.3s,baz=346,slow=9.5,SNR=25						
MKAR	**Makanchi Array**	**66.99**	**326**	P	P	19 48 56.7	+0.1
	0.1nm,0.5s,baz=135,slow=7.3,SNR=3.5						

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*CSEM **06** 19:45:16.8, 35°.16N×58°.57E, h15km, ML3.5, After THR*
THR 06 19:45:16.8±1.6**, 35°.16N×58°.57E, h15km, ML3.5, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TABS	**Tabas**	**1.93**	**219**	*e*Pn	Pb	19 45 51.7	-0.1
TABS				AML	AML	19 46 25.5	
	comp=E,328nm,0.4s						
TABS				AML	AML	19 46 28.2	
	comp=N,613nm,0.5s						
TABS	**Tabas**	**1.93**	**219**	*e*Pn	Pb	19 45 51.7	-0.1
SHRT	**Shahrakht**	**2.07**	**136**	*e*Pn	Pb	19 45 52.8	-1.4
SHRT				AML	AML	19 46 27.6	
	comp=E,490nm,0.3s						
SHRT				AML	AML	19 46 31.7	
	comp=N,466nm,0.7s						
SHRT	**Shahrakht**	**2.07**	**136**	*e*Pn	Pb	19 45 52.8	-1.4
SHRO	**Shahrood**	**2.25**	**292**	*e*Pn	Pn	19 45 55.4	+1.8
BJRD	**Bojnurd**	**2.71**	**340**	*e*Pn	Pb	19 46 02.7	-2.4
BJRD	**Bojnurd**	**2.71**	**340**	*e*Pn	Pb	19 46 02.7	-2.4
MRVT	**Maraveh tapeh**	**3.20**	**322**	*e*Pn	Pn	19 46 08.0	+1.3
MRVT	**Maraveh tapeh**	**3.20**	**322**	*e*Pn	Pn	19 46 08.0	+1.3
NASN	**Na'in**	**5.33**	**245**	*e*Pn	Pn	19 46 37.7	+1.3
NASN				AML	AML	19 48 26.6	
	comp=N,12nm,0.7s						
NASN	**Na'in**	**5.33**	**245**	*e*Pn	Pn	19 46 37.7	+1.3

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*ISK **06** 20:02:22.5, 39°.23N×29°.41E, h9km, MD2.7*
*CSEM **06** 20:02:22.5±0.1, 39°.25N×29°.39E, h1km, MD3.0, Error ellipse: s-maj=2.6km s-min=2.2km az=65.0*
*DDA **06** 20:02:24.4, 39°.19N×29°.38E, h16km, MD3.0*
ISC 06 20:02:22.9±0.8**, 39°.22N**±0°.02×**29°.38E**±0°.02**, h12km**±7km**, n40, σ0.26/53, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.16**	**148**	*i* P	**Pg**	**20 02 26.8**	**+0.1**
GDZ				*i* S	**Sg**	**20 02 29.5**	**+0.2**
GDZ	**Gediz**	**0.16**	**148**	*i* P	**Pg**	**20 02 26.8**	**+0.1**
GDZ				*i* S	**Sg**	**20 02 29.5**	**+0.2**
TVSB	**Tavsanli**	**0.24**	**16**	*e*PG	**Pg**	**20 02 27.5**	**-0.5**
TVSB				*e*SG	**Sg**	**20 02 31.1**	**-0.4**
DEMI	**Demirci**	**0.54**	**251**	*i* P	**Pg**	**20 02 33.4**	**-0.1**
DEMI				*i* S	**Sg**	**20 02 40.5**	**-0.2**
DEMI	**Demirci**	**0.54**	**251**	*i* P	**Pg**	**20 02 33.4**	**-0.1**
DEMI				*i* S	**Sg**	**20 02 40.5**	**-0.2**
ALT	**Altintas**	**0.59**	**106**	*e*PG	**Pg**	**20 02 34.2**	**-0.3**
ALT				*e*SG	**Sg**	**20 02 42.6**	**+0.2**
ALT	**Altintas**	**0.59**	**106**	*e*Pg	**Pg**	**20 02 34.2**	**-0.3**
DST	**Dursunbey**	**0.70**	**303**	*e*PG	**Pg**	**20 02 36.8**	**+0.3**
DST	**Dursunbey**	**0.70**	**303**	*e*Pg	**Pg**	**20 02 36.8**	**+0.3**
DURS	**Dursunbey**	**0.79**	**299**	*i* P	**Pg**	**20 02 38.1**	**-0.2**
DURS				*i* S	**Sn**	**20 02 52.1**	**+0.2**
DURS	**Dursunbey**	**0.79**	**299**	*i* P	**Pg**	**20 02 38.1**	**-0.2**
KHAL	**Karahalli**	**0.85**	**174**	*i* P	**Pg**	**20 02 39.4**	**-0.1**
KHAL				*i* S	**Sg**	**20 02 50.3**	**-0.3**
KHAL	**Karahalli**	**0.85**	**174**	*i* P	**Pg**	**20 02 39.4**	**-0.1**
KHAL				*i* S	**Sg**	**20 02 50.3**	**-0.3**
KULA	**Kula-Manisa**	**0.90**	**219**	*e*PG	**Pg**	**20 02 39.8**	**-0.5**
KULA	**Kula-Manisa**	**0.90**	**219**	*e*Pg	**Pg**	**20 02 39.8**	**-0.5**
ORLT	**Orhaneli**	**0.90**	**336**	*e*PG	**Pg**	**20 02 40.2**	**-0.1**
ORLT	**Orhaneli**	**0.90**	**336**	*e*Pg	**Pg**	**20 02 40.2**	**-0.1**
KHL	**Karahalli**	**0.90**	**173**	*e*PG	**Pb**	**20 02 40.6**	**+0.1**
KHL	**Karahalli**	**0.90**	**173**	*e*Pg	**Pb**	**20 02 40.6**	**+0.1**
SHUT	**Suhut-Afyon**	**1.14**	**126**	*e*PN	**Pb**	**20 02 44.4**	**-0.1**
ESKT	**Eskisehir**	**1.18**	**75**	*e*PN	**Pn**	**20 02 45.0**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.21**	**342**	*e*PN	**Pg**	**20 02 46.0**	**-0.1**
MDNY	**Mudanya-Bursa**	**1.21**	**342**	*e*Pn	**Pg**	**20 02 46.0**	**-0.1**
GEMT	**Gemlik**	**1.22**	**353**	*e*PN	**Pb**	**20 02 46.1**	**+0.2**
GEMT	**Gemlik**	**1.22**	**353**	*e*Pn	**Pb**	**20 02 46.1**	**+0.2**
AKHS	**Akhisar**	**1.26**	**255**	*i* P	**Pg**	**20 02 46.9**	**-0.3**
AKHS				*i* S	**Sb**	**20 03 03.0**	**+0.2**
AKHS	**Akhisar**	**1.26**	**255**	*i* P	**Pg**	**20 02 46.9**	**-0.3**
AKHS				*i* S	**Sb**	**20 03 03.0**	**+0.2**
AKS	**Akhisar**	**1.26**	**255**	*e*PN	**Pg**	**20 02 47.0**	**-0.2**
AKS	**Akhisar**	**1.26**	**255**	*e*Pn	**Pg**	**20 02 47.0**	**-0.2**
GPA	**Golpazari**	**1.29**	**34**	*e*PN	**Pn**	**20 02 46.9**	**+0.2**
GPA	**Golpazari**	**1.29**	**34**	*e*Pn	**Pn**	**20 02 46.9**	**+0.2**
ARMT	**Armutlu**	**1.40**	**344**	*e*PN	**Pb**	**20 02 48.9**	**-0.1**
ARMT	**Armutlu**	**1.40**	**344**	*e*Pn	**Pb**	**20 02 48.9**	**-0.1**
BALY	**Balya**	**1.45**	**291**	*i* P	**Pn**	**20 02 49.3**	**+0.3**
BALY				*i* S	**Sb**	**20 03 08.7**	**+0.3**
BALY	**Balya**	**1.45**	**291**	*i* P	**Pn**	**20 02 49.3**	**+0.3**
BALY				*i* S	**Sb**	**20 03 08.7**	**+0.3**
GULT	**Gulveren**	**1.49**	**36**	*e*PN	**Pn**	**20 02 49.8**	**+0.2**
GULT	**Gulveren**	**1.49**	**36**	*e*Pn	**Pn**	**20 02 49.8**	**+0.2**
GONE	**Gonen-Balikesi**	**1.54**	**303**	*e*PN	**Pb**	**20 02 51.0**	**-0.4**
GONE	**Gonen-Balikesi**	**1.54**	**303**	*e*Pn	**Pb**	**20 02 51.0**	**-0.4**
SVRH	**Sivrihisar-ESK**	**1.68**	**82**	*e*PN	**Pn**	**20 02 52.4**	**+0.2**

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*ISCJB **06** 20:03:34.5±0.2, 42°.23N±0°.01×13°.51E±0°.02, h10km±2km, mb3.0/1, Error ellipse: s-maj=2.8km s-min=2.4km az=162.0*
*ROM **06** 20:03:34.3±0.1, 42°.23N×13°.50E, h8km±1km, Ml3.1/36, Error ellipse: s-maj=1.2km s-min=1.2km az=85.0*
*CSEM **06** 20:03:34.8±0.1, 42°.24N×13°.50E, h2km, ML3.6/8, Error ellipse: s-maj=2.5km s-min=1.9km az=58.0*
*IDC **06** 20:03:34.9±1.3, 42°.28N×13°.37E, h0km, mb3.2/2, mb1 3.4/7, mb1mx3.2/31, mbtmp3.2/7, ML3.2/5, Error ellipse: s-maj=21.1km s-min=14.0km az=100.0*
*LDG **06** 20:03:35.0±0.2, 42°.22N×13°.47E, h2km, Ml3.0/7, Error ellipse: s-maj=5.8km s-min=3.8km az=47.0*
ISC 06 20:03:35.3±0.8**, 42°.24N**±0°.01×**13°.51E**±0°.02**, h9km**±5km**, n134, σ1.38/180, 14C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.06**	**63**⇑	*i*Pg	**Pg**	**20 03 37.0**	**-0.3**
FAGN				Sg	**Sg**	**20 03 38.4**	**-0.4**
FAGN	**Fagnano**	**0.06**	**63**⇑	*i*Pg	**Pg**	**20 03 37.0**	**-0.3**
FAGN				Sg	**Sg**	**20 03 38.4**	**-0.4**
AQU	**L'Aquila**	**0.14**	**326**	Pg	**Pg**	**20 03 38.1**	**-0.3**
AQU				Sg	**Sg**	**20 03 40.4**	**-0.2**
	12µm,0.5s						
AQU	**L'Aquila**	**0.14**	**326**	Pg	**Pg**	**20 03 38.1**	**-0.3**
AQU				Sg	**Sg**	**20 03 40.4**	**-0.2**
	12µm,0.5s						
PTQR	**Pietraquaria**	**0.23**	**200**⇑	*i*Pg	**Pg**	**20 03 39.9**	**0.0**
PTQR	**Pietraquaria**	**0.23**	**200**⇑	*i*Pg	**Pg**	**20 03 39.9**	**0.0**
FIAM	**Fiamignano**	**0.29**	**276**⇑	*i*Pg	**Pg**	**20 03 40.7**	**-0.4**
FIAM				Sg	**Sg**	**20 03 45.3**	**+0.3**
FIAM	**Fiamignano**	**0.29**	**276**⇑	*i*Pg	**Pg**	**20 03 40.7**	**-0.4**
FIAM				Sg	**Sg**	**20 03 45.3**	**+0.3**
VCEL	**Villa Celiera**	**0.29**	**57**⇑	*e*Pg	**Pg**	**20 03 40.9**	**-0.3**
VCEL				Sg	**Sg**	**20 03 45.6**	**+0.5**
	7µm,0.5s						
VCEL	**Villa Celiera**	**0.29**	**57**⇑	*e*Pg	**Pg**	**20 03 40.9**	**-0.3**
VCEL				Sg	**Sg**	**20 03 45.6**	**+0.5**
	7µm,0.5s						
CAMP	**Campotosto**	**0.31**	**346**	Pg	**Pg**	**20 03 40.8**	**-0.6**
CAMP				Sg	**Sb**	**20 03 47.2**	**-1.0**
CAMP	**Campotosto**	**0.31**	**346**	Pg	**Pg**	**20 03 40.8**	**-0.6**
CAMP				Sg	**Sb**	**20 03 47.2**	**-1.0**
INTR	**Introdacqua**	**0.37**	**127**	Pg	**Pg**	**20 03 42.4**	**-0.2**
INTR				Sg	**Sg**	**20 03 48.4**	**+0.9**
	3µm,0.3s						
INTR	**Introdacqua**	**0.37**	**127**	Pg	**Pg**	**20 03 42.4**	**-0.2**
INTR				Sg	**Sg**	**20 03 48.4**	**+0.9**
	3µm,0.3s						
VVLD	**Villa Vallelon**	**0.38**	**167**	Pg	**Pg**	**20 03 42.4**	**-0.3**
VVLD				Sg	**Sg**	**20 03 48.2**	**+0.6**
	3µm,0.4s						
VVLD	**Villa Vallelon**	**0.38**	**167**	Pg	**Pg**	**20 03 42.4**	**-0.3**
VVLD				Sg	**Sg**	**20 03 48.2**	**+0.6**
	3µm,0.4s						
TERO	**Teramo**	**0.39**	**11**	Pg	**Pg**	**20 03 42.1**	**-0.9**
TERO				Sg	**Sg**	**20 03 49.1**	**+0.9**
	3µm,0.5s						
TERO	**Teramo**	**0.39**	**11**	Pg	**Pg**	**20 03 42.1**	**-0.9**
TERO				Sg	**Sg**	**20 03 49.1**	**+0.9**
	3µm,0.5s						
GUAR	**Guarcino**	**0.47**	**198**⇑	*i*Pg	**Pg**	**20 03 43.9**	**-0.4**
GUAR				Sg	**Sg**	**20 03 51.0**	**+0.5**
	1µm,0.6s						
GUAR	**Guarcino**	**0.47**	**198**⇑	*i*Pg	**Pg**	**20 03 43.9**	**-0.4**
GUAR				Sg	**Sg**	**20 03 51.0**	**+0.5**
	1µm,0.6s						
CERT	**Cerreto**	**0.49**	**234**⇑	*i*Pg	**Pg**	**20 03 44.1**	**-0.6**
CERT				Sg	**Sg**	**20 03 51.9**	**+0.8**
	4µm,0.6s						
CERT	**Cerreto**	**0.49**	**234**⇑	*i*Pg	**Pg**	**20 03 44.1**	**-0.6**
CERT				Sg	**Sg**	**20 03 51.9**	**+0.8**
	4µm,0.6s						
POFI	**Posta Fibreno**	**0.54**	**164**	Pg	**Pg**	**20 03 45.0**	**-0.8**
POFI				Sg	**Sb**	**20 03 54.0**	**-0.9**
POFI	**Posta Fibreno**	**0.54**	**164**	Pg	**Pg**	**20 03 45.0**	**-0.8**
POFI				Sg	**Sb**	**20 03 54.0**	**-0.9**
SDI	**San Donato**	**0.57**	**157**	Pg	**Pg**	**20 03 45.9**	**-0.5**
SDI				Sg	**Sb**	**20 03 54.9**	**-0.9**
SDI	**San Donato**	**0.57**	**157**	Pg	**Pg**	**20 03 45.9**	**-0.5**
SDI				Sg	**Sb**	**20 03 54.9**	**-0.9**
MTCE	**Montecelio**	**0.61**	**250**	Pg	**Pg**	**20 03 46.1**	**-0.9**
	1µm,0.8s						
MTCE	**Montecelio**	**0.61**	**250**	Pg	**Pg**	**20 03 46.1**	**-0.9**
	1µm,0.8s						
CAFR	**Castel Frentan**	**0.62**	**91**⇑	*i*Pg	**Pg**	**20 03 47.2**	**-0.1**
	3µm,0.4s						
CAFR	**Castel Frentan**	**0.62**	**91**⇑	*i*Pg	**Pg**	**20 03 47.2**	**-0.1**
	3µm,0.4s						
MNS	**Montasola**	**0.63**	**284**	Pg	**Pg**	**20 03 46.3**	**-1.2**
	1µm,0.5s						
MNS	**Montasola**	**0.63**	**284**	Pg	**Pg**	**20 03 46.3**	**-1.2**
	1µm,0.5s						
NRCA	**Norcia**	**0.66**	**334**	Pg	**Pg**	**20 03 47.1**	**-1.0**
NRCA	**Norcia**	**0.66**	**334**	Pg	**Pg**	**20 03 47.1**	**-1.0**
GIUL	**Giuliano Di Ro**	**0.70**	**196**	Pg	**Pg**	**20 03 47.9**	**-0.9**
	902nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.70**	**196**	Pg	**Pg**	**20 03 47.9**	**-0.9**
	902nm,0.6s						
OFFI	**Offida**	**0.71**	**11**	Pg	**Pg**	**20 03 48.8**	**-0.2**
	5µm,0.7s						
OFFI	**Offida**	**0.71**	**11**	Pg	**Pg**	**20 03 48.8**	**-0.2**
	5µm,0.7s						
RNI2	**Rionero Sannit**	**0.72**	**138**	Pg	**Pg**	**20 03 48.8**	**-0.3**
	2µm,1.1s						
RNI2	**Rionero Sannit**	**0.72**	**138**	Pg	**Pg**	**20 03 48.8**	**-0.3**
	2µm,1.1s						
RMP	**Rome, Mte Porz**	**0.74**	**235**	Pg	**Pg**	**20 03 48.4**	**-1.0**
	1µm,0.4s						
RMP	**Rome, Mte Porz**	**0.74**	**235**	Pg	**Pg**	**20 03 48.4**	**-1.0**
	1µm,0.4s						
CERA	**Filignano**	**0.74**	**149**	Pg	**Pg**	**20 03 48.5**	**-1.1**
	941nm,0.5s						
CERA	**Filignano**	**0.74**	**149**	Pg	**Pg**	**20 03 48.5**	**-1.1**
	941nm,0.5s						
RDP	**Rocca di Papa**	**0.76**	**231**	Pg	**Pg**	**20 03 48.8**	**-1.1**
	3µm,0.5s						
RDP	**Rocca di Papa**	**0.76**	**231**	Pg	**Pg**	**20 03 48.8**	**-1.1**
	3µm,0.5s						
MIDA	**Miranda**	**0.81**	**137**	Pg	**Pg**	**20 03 49.6**	**-1.4**
	604nm,0.5s						
MIDA	**Miranda**	**0.81**	**137**	Pg	**Pg**	**20 03 49.6**	**-1.4**
	604nm,0.5s						
FDMO	**Fiordimonte**	**0.86**	**339**	Pg	**Pg**	**20 03 50.8**	**-1.0**
	518nm,0.5s						
FDMO	**Fiordimonte**	**0.86**	**339**	Pg	**Pg**	**20 03 50.8**	**-1.0**
	518nm,0.5s						
FRES	**Fresagrandinar**	**0.90**	**107**	Pg	**Pg**	**20 03 51.4**	**-1.2**
	518nm,0.5s						
FRES	**Fresagrandinar**	**0.90**	**107**	Pg	**Pg**	**20 03 51.4**	**-1.2**
	518nm,0.5s						
VAGA	**Valle Agricola**	**0.98**	**146**	Pg	**Pg**	**20 03 52.8**	**-1.4**
	329nm,0.4s						
VAGA	**Valle Agricola**	**0.98**	**146**	Pg	**Pg**	**20 03 52.8**	**-1.4**
	329nm,0.4s						
BSSO	**Busso**	**1.07**	**130**	Pg	**Pg**	**20 03 54.6**	**-1.1**
	353nm,0.8s						
BSSO	**Busso**	**1.07**	**130**	Pg	**Pg**	**20 03 54.6**	**-1.1**
	353nm,0.8s						
MODR	**Mondragone**	**1.12**	**166**	Pg	**Pb**	**20 03 56.9**	**0.0**
	61nm,0.6s						
MODR	**Mondragone**	**1.12**	**166**	Pg	**Pb**	**20 03 56.9**	**0.0**
	61nm,0.6s						
CING	**Cingoli**	**1.16**	**349**	Pg	**Pb**	**20 03 55.9**	**-1.6**
	320nm,0.4s						
CING	**Cingoli**	**1.16**	**349**	Pg	**Pb**	**20 03 55.9**	**-1.6**
	320nm,0.4s						
SACR	**S. Croce Del S**	**1.23**	**133**	Pg	**Pn**	**20 03 57.9**	**-0.8**
SACR	**S. Croce Del S**	**1.23**	**133**	Pg	**Pn**	**20 03 57.9**	**-0.8**
MURB	**Monte Urbino**	**1.25**	**325**	Pg	**Pn**	**20 03 58.6**	**-0.5**
	935nm,0.7s						
MURB	**Monte Urbino**	**1.25**	**325**	Pg	**Pn**	**20 03 58.6**	**-0.5**
	935nm,0.7s						
AOI	**Ancona**	**1.31**	**3**	Pn	**Pn**	**20 03 59.1**	**-0.7**
	260nm,0.4s						
AOI	**Ancona**	**1.31**	**3**	Pn	**Pn**	**20 03 59.1**	**-0.7**
	260nm,0.4s						
LATE	**Laterza**	**1.32**	**287**	Pn	**Pn**	**20 03 59.6**	**-0.3**
	27nm,0.6s						
LATE	**Laterza**	**1.32**	**287**	Pn	**Pn**	**20 03 59.6**	**-0.3**
	27nm,0.6s						
ARVD	**Arcevia**	**1.33**	**342**	Pn	**Pn**	**20 03 59.3**	**-0.7**
	548nm,0.8s						
ARVD	**Arcevia**	**1.33**	**342**	Pn	**Pn**	**20 03 59.3**	**-0.7**
	548nm,0.8s						
SACS	**San Casciano d**	**1.33**	**298**	Pn	**Pn**	**20 03 59.9**	**-0.2**
	478nm,1.4s						
PIEI	**Pieia**	**1.48**	**331**	Pn	**Pn**	**20 04 02.3**	**+0.1**
	161nm,0.6s						
PIEI	**Pieia**	**1.48**	**331**	Pn	**Pn**	**20 04 02.3**	**+0.1**
	161nm,0.6s						
CAFI	**Castiglion Fio**	**1.57**	**314**	Pn	**Pb**	**20 04 04.3**	**-0.3**
	134nm,0.7s						
CAFI	**Castiglion Fio**	**1.57**	**314**	Pn	**Pb**	**20 04 04.3**	**-0.3**
	134nm,0.7s						
ARCI	**Arcidosso**	**1.62**	**293**	Pn	**Pb**	**20 04 04.9**	**-0.5**
	98nm,1.3s						
ARCI	**Arcidosso**	**1.62**	**293**	Pn	**Pb**	**20 04 04.9**	**-0.5**
	98nm,1.3s						
PARC	**Parchiule**	**1.69**	**327**	Pn	**Pb**	**20 04 06.1**	**-0.5**
	288nm,1.1s						
PARC	**Parchiule**	**1.69**	**327**	Pn	**Pb**	**20 04 06.1**	**-0.5**
	288nm,1.1s						
SGRT	**San Giovanni R**	**1.74**	**105**	Pn	**Pn**	**20 04 06.3**	**+0.6**
	197nm,0.7s						
SGRT	**San Giovanni R**	**1.74**	**105**	Pn	**Pn**	**20 04 06.3**	**+0.6**
	197nm,0.7s						
SNAL	**S. Angelo Dei**	**1.83**	**135**	Pn	**Pb**	**20 04 08.4**	**-0.5**
SNAL	**S. Angelo Dei**	**1.83**	**135**	Pn	**Pb**	**20 04 08.4**	**-0.5**
MSAG	**Monte S. Angel**	**1.87**	**106**	Pn	**Pb**	**20 04 09.0**	**-0.6**
	276nm,0.5s						
MSAG	**Monte S. Angel**	**1.87**	**106**	Pn	**Pb**	**20 04 09.0**	**-0.6**
	276nm,0.5s						
MCRV	**Calabrutti - M**	**1.92**	**139**	Pn	**Pn**	**20 04 09.3**	**+1.1**
	62nm,0.7s						
MCRV	**Calabrutti - M**	**1.92**	**139**	Pn	**Pn**	**20 04 09.3**	**+1.1**
	62nm,0.7s						
SFI	**Santa Sofia**	**2.06**	**324**	Pn	**Pn**	**20 04 10.7**	**+0.6**
	135nm,1.1s						
SFI	**Santa Sofia**	**2.06**	**324**	Pn	**Pn**	**20 04 10.7**	**+0.6**
	135nm,1.1s						
NVLJ	**Novalja**	**2.53**	**23**	*e*Pn	**Pn**	**20 04 16.1**	**-0.4**
NVLJ				Sn	**Sn**	**20 04 48.6**	**+1.2**
NVLJ	**Novalja**	**2.53**	**23**	*e*Pn	**Pn**	**20 04 16.0**	**-0.4**
NVLJ				Sn	**Sn**	**20 04 48.6**	**+1.2**
MAIM	**Mastiano**	**2.77**	**308**	P	**Pn**	**20 04 19.2**	**-0.6**
STON	**Ston**	**3.16**	**77**	*e*Pn	**Pn**	**20 04 25.6**	**+0.4**

STON				Sn	Sn	20 05 02.5	-0.5
STON	Ston	3.16	77	ePn	Pn	20 04 25.5	+0.4
STON				Sn	Sn	20 05 02.5	-0.5
SKDS	Skadanscina	3.33	6	i Pn	Pn	20 04 28.7	+1.2
SKDS				i Sn	Sn	20 05 09.0	+1.8
SKDS	Skadanscina	3.33	6	Pn	Pn	20 04 28.7	+1.2
SKDS				i Sn	Sn	20 05 09.0	+1.8
PGF	Pioggiola	3.35	277	ePn	Pn	20 04 28.7	+0.8
PGF				eSn	Sn	20 05 09.2	+1.3
	17nm,0.6s						
PGF	Pioggiola	3.35	277	ePn	Pn	20 04 28.7	+0.8
PGF				eSn	Sn	20 05 09.2	+1.3
	8.7nm,0.6s						
BOJS	Bojanci	3.50	21	i Pn	Pn	20 04 31.1	+1.3
BOJS				i Sn	Sn	20 05 13.5	+2.1
BOJS	Bojanci	3.50	21	i Pn	Pn	20 04 31.1	+1.3
BOJS				i Sn	Sn	20 05 13.5	+2.1
VOY	Vojsko	3.80	4	ePn	Pn	20 04 35.4	+1.3
VOY				e(Sn)	Sn	20 05 19.7	+0.7
VOY	Vojsko	3.80	4	ePn	Pn	20 04 35.4	+1.3
SBF	Sospel	4.74	292	ePn	Pn	20 04 46.9	0.0
SBF				eSn	Sn	20 05 37.3	-4.7
	7.5nm,0.5s						
SBF	Sospel	4.74	292	ePn	Pn	20 04 46.9	0.0
SBF				eSn	Sn	20 05 37.3	-4.7
	3.8nm,0.5s						
DIVS	Divibare	5.09	66	ePn	Pn	20 04 50.9	-0.9
FRF	La Foret Royal	5.21	287	ePn	Pn	20 04 53.3	0.0
FRF				eSn	Sn	20 05 48.4	-5.1
	1.1nm,0.4s						
FRF	La Foret Royal	5.21	287	ePn	Pn	20 04 53.3	0.0
FRF				eSn	Sn	20 05 48.4	-5.1
	0.6nm,0.4s						
DAVOX	Davos/Dischmat	5.23	332	Pn	Pn	20 04 55.2	+1.4
	1.4nm,0.3s,baz=158,slow=17,SNR=11						
DAVOX				Sn	Sn	20 05 57.6	+3.3
	0.7nm,0.3s,baz=53,slow=20,SNR=3.3						
LMR	La Mourre	5.26	284	ePn	Pn	20 04 53.8	-0.3
LMR				eSn	Sn	20 05 49.8	-5.1
	15nm,1.0s						
LMR	La Mourre	5.26	284	ePn	Pn	20 04 53.8	-0.3
LMR				eSn	Sn	20 05 49.8	-5.1
	7.6nm,1.0s						
MBDF	Montbardon	5.50	299	eP	Pn	20 04 59.2	+1.8
MBDF	Montbardon	5.50	299	eP	Pn	20 04 59.2	+1.8
GRUS	Gruza	5.53	70	ePn	Pn	20 04 56.5	-1.3
LPG	La Plagne	5.87	306	eP	Pn	20 05 05.3	+2.6
LPG	La Plagne	5.87	306	eP	Pn	20 05 05.3	+2.6
GERES	GERESS Array B	6.61	1	Pn	Pn	20 05 12.9	+0.3
	0.3nm,0.3s,baz=175,slow=13,SNR=9.0						
GERES				Sn	Sn	20 06 27.6	-0.5
	0.6nm,0.3s,baz=174,slow=21,SNR=6.5						
KHC	Kasperske Hory	6.89	0	ePN	Pn	20 05 18.3	+1.8
KHC				ex	x	20 05 28.5	
KHC				eSN	Sn	20 06 33.0	-2.1
KHC	Kasperske Hory	6.89	0	Pn	Pn	20 05 18.3	+1.8
KHC				Sn	Sn	20 06 33.0	-2.1
VIVF	Saint-Julien-l	6.93	295	ePn	Pn	20 05 18.3	+1.3
VIVF	Saint-Julien-l	6.93	295	ePn	Pn	20 05 18.3	+1.3
KEST	Kesra	7.26	208	Pn	Pn	20 05 23.6	+2.1
	0.2nm,0.3s,baz=234,slow=2.4,SNR=6.2						
VYHS	Vyhne	7.29	29	ePN	Pn	20 05 22.3	+0.3
VYHS				ePG	Pg	20 06 01.2	+6.4
VYHS				eSN	Sn	20 06 41.7	-3.1
VYHS				eSG	Sg	20 07 41.7	+12
VYHS	Vyhne	7.29	29	ePn	Pn	20 05 22.3	+0.3
VYHS				eSn	Sn	20 06 41.7	-3.1
HINF	Hinteralfeld	7.30	322	ePn	Pn	20 05 21.7	-0.4
HINF				eSn	Sn	20 06 36.9	-8.2
	4.4nm,0.6s						
HINF	Hinteralfeld	7.30	322	ePn	Pn	20 05 21.7	-0.4
CDF	Champ du Feu	7.57	327	ePn	Pn	20 05 25.2	-0.7
CDF				eSn	Sn	20 06 44.5	-7.4
	3.3nm,0.6s						
CDF	Champ du Feu	7.57	327	ePn	Pn	20 05 25.2	-0.7
HAU	Haudompre	7.67	321	ePn	Pn	20 05 26.7	-0.5
HAU				eSn	Sn	20 06 45.1	-9.1
	2.4nm,0.3s						
HAU	Haudompre	7.67	321	ePn	Pn	20 05 26.7	-0.5
KOLS	Kolonicke sedl	9.08	40	e	Pn	20 05 59.0	+12
MLR	Muntele Rosu	9.55	66	Pn	Pn	20 05 55.3	+2.2
	0.0nm,0.3s,baz=134,slow=10,SNR=4.6						
AKASG	Malin Array Be	13.72	47	Pn	Pn	20 06 51.9	+2.0
	0.3nm,0.3s,baz=230,slow=13,SNR=3.8						
FINES	FINESS Array B	20.67	17	P	P	20 08 15.9	+0.7
	1.3nm,0.7s,baz=197,slow=4.4,SNR=3.2						
TORD	Torodi Ar. Bea	30.75	203	P	P	20 09 51.2	+0.4
	0.2nm,0.8s,baz=7.8,slow=7.7,SNR=2.6						

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*ISCJB **06** 20:10:12.3±0.3, 41°.75S±0°.03×172°.97E±0°.05, h103^{km}±4^{km}, mb4.3/4, Error ellipse: s-maj=7.4km s-min=3.3km az=38.9*
*IDC **06** 20:10:13.6±0.8, 41°.41S×172°.97E, h84^{km}±6^{km}, mb3.9/3, mb1 4.0/4, mb1mx3.7/16, mbtmp3.8/4, Error ellipse: s-maj=21.6km s-min=13.2km az=146.0*
*WEL **06** 20:10:13.9±0.2, 41°.66S×172°.90E, h91^{km}±1^{km}, ML4.5/18, Error ellipse: s-maj=1.9km s-min=1.5km az=90.0, reported intensity MM 5.*
WEL Felt from Nelson to Canterbury, and from West Coast to Wellington, maximum.
*NEIC **06** 20:10:13.4±0.3, 41°.77S×173°.02E, h97^{km}±5^{km}, mb4.5/2, ML4.5(WEL), Error ellipse: s-maj=6.9km s-min=3.2km az=128.0*
NEIC Felt in the northwestern part of the South Island.
ISC 06 20:10:13.2±0.6, **41°.71S**±0°.04×**172°.97E**±0°.04, **h90**^{km}±4^{km}, **h90**^{km}**:pP-P, n164,** σ1^{s}**25**/169, **mb4.3**/4, **10C-17D, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	Tophouse	0.07	224	PN	Pn	20 10 26.4	+0.4
THZ				SN	Sn	20 10 35.9	+0.4
THZ	Tophouse	0.07	224	Pn	Pn	20 10 26.4	+0.4
THZ				Sn	Sn	20 10 35.9	+0.4
NNZ	Nelson	0.58	32	⇓PN	Pn	20 10 29.3	+0.7
NNZ				SN	Sn	20 10 40.4	+0.3
NNZ	Nelson	0.58	32	Pn	Pn	20 10 29.3	+0.7
NNZ				Sn	Sn	20 10 40.4	+0.3
BSWZ	Blackbirch Sta	0.68	91	⇓PN	Pn	20 10 31.8	+2.4
BSWZ	Blackbirch Sta	0.68	91	Pn	Pn	20 10 31.8	+2.4
TUWZ	Tuamarina	0.78	69	⇓PN	Pn	20 10 32.2	+1.7
TUWZ	Tuamarina	0.78	69	Pn	Pn	20 10 32.2	+1.7
KHZ	Kahutara	0.82	149	PN	Pn	20 10 32.7	+1.8
KHZ	Kahutara	0.82	149	eP	Pn	20 10 33.0	+2.1
CMWZ	Cape Campbell	0.93	93	PN	Pn	20 10 35.3	+3.2
CMWZ	Cape Campbell	0.93	93	Pn	Pn	20 10 33.8	+1.7
QRZ	Quartz Range	0.94	339	PN	Pn	20 10 31.9	-0.3
QRZ	Quartz Range	0.94	339	Pn	Pn	20 10 31.2	-1.1
TCW	Tory Channel	1.10	64	⇓PN	Pn	20 10 35.7	+1.7
TCW	Tory Channel	1.10	64	Pn	Pn	20 10 35.7	+1.7
DUWZ	D'Urville Isla	1.16	39	⇓PN	Pn	20 10 36.1	+1.3
DUWZ	D'Urville Isla	1.16	39	Pn	Pn	20 10 36.1	+1.3
LTZ	Lake Taylor	1.19	206	PN	Pn	20 10 36.5	+1.4
LTZ	Lake Taylor	1.19	206	Pn	Pn	20 10 36.5	+1.4
SNZO	South Karori	1.36	73	⇓PN	Pn	20 10 38.4	+1.2
SNZO	South Karori	1.36	73	eP	Pn	20 10 37.6	+0.4
WEL	Wellington	1.42	73	PN	Pn	20 10 39.2	+1.3
WEL	Wellington	1.42	73	Pn	Pn	20 10 39.2	+1.3
BHW	Baring Head	1.46	79	⇓PN	Pn	20 10 39.4	+1.0
BHW	Baring Head	1.46	79	Pn	Pn	20 10 39.4	+1.0
CAW	Cannon Point	1.69	70	PN	Pn	20 10 42.2	+0.8
CAW	Cannon Point	1.69	70	Pn	Pn	20 10 42.2	+0.8
KIW	Kapiti Island	1.69	61	⇓PN	Pn	20 10 42.5	+1.2
KIW	Kapiti Island	1.69	61	Pn	Pn	20 10 42.5	+1.2
PLWZ	Palliser	1.72	86	PN	Pn	20 10 42.4	+0.7
PLWZ	Palliser	1.72	86	Pn	Pn	20 10 42.4	+0.7
MSWZ	Moikau Station	1.74	81	⇓PN	Pn	20 10 42.6	+0.6
MSWZ	Moikau Station	1.74	81	Pn	Pn	20 10 42.6	+0.6
PAWZ	Paruwai Farm	1.87	81	⇓PN	Pn	20 10 44.1	+0.4
PAWZ	Paruwai Farm	1.87	81	Pn	Pn	20 10 44.1	+0.4
CRLZ	Canterbury Las	1.88	188	⇑PN	Pn	20 10 44.7	+0.9
CRLZ	Canterbury Las	1.88	188	Pn	Pn	20 10 44.7	+0.9
OGWZ	Otaki Gorge	1.88	62	⇓PN	Pn	20 10 44.6	+0.8
OGWZ	Otaki Gorge	1.88	62	Pn	Pn	20 10 44.6	+0.8
MTW	Mount Morrison	1.98	75	⇓PN	Pn	20 10 45.4	+0.2
MTW	Mount Morrison	1.98	75	Pn	Pn	20 10 45.4	+0.2
MQZ	McQueen's Vall	2.01	187	⇑PN	Pn	20 10 45.9	+0.5
MQZ	McQueen's Vall	2.01	187	Pn	Pn	20 10 45.9	+0.5
TRWZ	Traveller	2.06	82	⇑PN	Pn	20 10 46.7	+0.5
TRWZ	Traveller	2.06	82	Pn	Pn	20 10 46.7	+0.5
HOWZ	Holdsworth Sta	2.08	68	⇓PN	Pn	20 10 46.6	+0.1
HOWZ	Holdsworth Sta	2.08	68	Pn	Pn	20 10 46.6	+0.1
WVZ	Waitaha Valley	2.14	230	PN	Pn	20 10 48.0	+0.8
WVZ	Waitaha Valley	2.14	230	Pn	Pn	20 10 48.0	+0.8
MRZ	Mangatainoka R	2.23	63	PN	Pn	20 10 48.5	+0.1
MRZ	Mangatainoka R	2.23	63	Pn	Pn	20 10 48.5	+0.1
TMWZ	Te Maipa	2.28	76	⇓PN	Pn	20 10 49.0	0.0
TMWZ	Te Maipa	2.28	76	Pn	Pn	20 10 49.0	0.0
TIWZ	Tintock	2.39	68	PN	Pn	20 10 50.3	-0.2
TIWZ	Tintock	2.39	68	Pn	Pn	20 10 50.3	-0.2
RPZ	Rata Peaks	2.45	215	eP	Pn	20 10 51.2	-0.1
RPZ				S	Sn	20 11 20.0	-0.6
RPZ	Rata Peaks	2.45	215	P	Pn	20 10 51.4	+0.1
	37nm,0.3s,baz=34,slow=1.8,SNR=151						
RPZ				S	Sn	20 11 20.0	-0.6
	92nm,0.3s,baz=340,slow=5.8,SNR=31						
WAZ	Wanganui	2.48	39	⇑PN	Pn	20 10 53.7	+1.9
WAZ	Wanganui	2.48	39	Pn	Pn	20 10 53.7	+1.9
NRZ	Ngariki Road	2.48	18	PN	Pn	20 10 53.3	+1.6
NRZ	Ngariki Road	2.48	18	Pn	Pn	20 10 53.3	+1.6
POWZ	Post Office Ro	2.49	59	Pn	Pn	20 10 51.7	-0.2
NWEZ	Newall Road	2.53	16	PN	Pn	20 10 53.8	+1.4
NWEZ	Newall Road	2.53	16	Pn	Pn	20 10 53.8	+1.4
DFE	Dawson Falls	2.53	20	⇑PN	Pn	20 10 54.0	+1.5
DFE	Dawson Falls	2.53	20	Pn	Pn	20 10 54.0	+1.5
PKE	Pukeiti	2.63	17	PN	Pn	20 10 55.1	+1.3
PKE	Pukeiti	2.63	17	Pn	Pn	20 10 55.1	+1.3
RAEZ	Rainy Point	2.65	25	PN	Pn	20 10 55.8	+1.8
RAEZ	Rainy Point	2.65	25	Pn	Pn	20 10 55.8	+1.8
BFZ	Birch Farm	2.68	68	PN	Pn	20 10 53.1	-1.3
BFZ	Birch Farm	2.68	68	Pn	Pn	20 10 53.1	-1.3
DREZ	Durham Road	2.69	21	⇓PN	Pn	20 10 55.9	+1.4
DREZ	Durham Road	2.69	21	Pn	Pn	20 10 55.9	+1.4
DVHZ	Dannevirke	2.80	61	Pn	Pn	20 10 55.3	-0.7
TSZ	Takapari Road	2.80	55	⇓PN	Pn	20 10 55.7	-0.4
TSZ	Takapari Road	2.80	55	Pn	Pn	20 10 55.7	-0.4
MHEZ	Mangahewa	2.83	22	⇑PN	Pn	20 10 57.8	+1.4
MHEZ	Mangahewa	2.83	22	Pn	Pn	20 10 57.8	+1.4
VRZ	Vera Road	2.92	28	⇑PN	Pn	20 10 59.3	+1.6
VRZ	Vera Road	2.92	28	Pn	Pn	20 10 59.2	+1.6
MTVZ	Mangateitei	3.00	40	Pn	Pn	20 11 01.1	+2.3
PKVZ	Pokaka	3.02	38	PN	Pn	20 11 01.1	+2.1
PKVZ	Pokaka	3.02	38	Pn	Pn	20 11 01.1	+2.1
PNHZ	Pukenui	3.04	55	PN	Pn	20 10 58.4	-0.8
PNHZ	Pukenui	3.04	55	Pn	Pn	20 10 58.5	-0.8
WPHZ	Waipukurau	3.10	59	Pn	Pn	20 10 58.8	-1.3
TRVZ	Turoa	3.11	40	Pn	Pn	20 11 01.8	+1.5
WNVZ	Wahianoa	3.11	41	PN	Pn	20 11 00.9	+0.6
WNVZ	Wahianoa	3.11	41	Pn	Pn	20 11 00.9	+0.6
PRHZ	Porangahau	3.13	64	⇑PN	Pn	20 10 59.5	-0.9
PRHZ	Porangahau	3.13	64	Pn	Pn	20 10 59.5	-0.9
MOVZ	Moawhango	3.13	44	Pn	Pn	20 11 00.5	0.0
DRZ	Dome Shelter	3.13	40	Pn	Pn	20 11 03.1	+2.3
FWVZ	Far West T-bar	3.15	40	PN	Pn	20 11 01.5	+0.6
FWVZ	Far West T-bar	3.15	40	Pn	Pn	20 11 01.5	+0.6
WPVZ	Whakapapa	3.18	39	Pn	Pn	20 11 01.9	+0.6
NGZ	Ngauruhoe	3.23	39	PN	Pn	20 11 01.5	-0.5
NGZ	Ngauruhoe	3.23	39	Pn	Pn	20 11 01.5	-0.5
BHHZ	Black Hill Sta	3.24	48	Pn	Pn	20 11 01.8	-0.2
TWVZ	Taurewa	3.24	36	Pn	Pn	20 11 03.6	+1.6
OTVZ	Oturere	3.27	40	Pn	Pn	20 11 03.5	+1.0
WTVZ	West Tongariro	3.27	39	PN	Pn	20 11 03.8	+1.3
WTVZ	West Tongariro	3.27	39	Pn	Pn	20 11 03.8	+1.3
KRVZ	Karewarewa	3.31	39	Pn	Pn	20 11 04.8	+1.7
LBZ	Lake Benmore	3.36	216	PN	Pn	20 11 02.9	-0.7
LBZ	Lake Benmore	3.36	216	Pn	Pn	20 11 02.9	-0.7
PXZ	Pawanui	3.39	62	PN	Pn	20 11 02.9	-1.1
PXZ	Pawanui	3.39	62	Pn	Pn	20 11 02.9	-1.1
KATZ	Kakaramea	3.44	38	Pn	Pn	20 11 07.2	+2.5
HIZ	Hauiti	3.50	25	⇑PN	Pn	20 11 06.0	+0.5
HIZ	Hauiti	3.50	25	Pn	Pn	20 11 06.0	+0.5
KAHZ	Kahuranaki	3.53	58	PN	Pn	20 11 04.9	-1.0
KAHZ	Kahuranaki	3.53	58	Pn	Pn	20 11 04.9	-1.0
RATZ	Rangitukua	3.56	38	Pn	Pn	20 11 09.5	+3.3
WATZ	Wairara	3.67	36	PN	Pn	20 11 09.8	+2.0
WATZ	Wairara	3.67	36	Pn	Pn	20 11 09.8	+2.0
CKHZ	Cape Kidnapper	3.73	58	PN	Pn	20 11 07.4	-1.2
CKHZ	Cape Kidnapper	3.73	58	Pn	Pn	20 11 07.4	-1.2
ODZ	Otahua Downs	3.74	206	⇓PN	Pn	20 11 08.9	+0.2
ODZ	Otahua Downs	3.74	206	eP	Pn	20 11 08.8	+0.1
WHTZ	Whakaora	3.81	38	Pn	Pn	20 11 15.5	+5.9
JCZ	Jackson Bay	3.89	231	⇑PN	Pn	20 11 10.6	-0.2
JCZ	Jackson Bay	3.89	231	Pn	Pn	20 11 10.6	-0.2
RAHZ	Arahi	4.21	50	Pn	Pn	20 11 24.1	+9.1
WKZ	Wanaka	4.25	221	Pn	Pn	20 11 13.6	-1.9
EAZ	Earnscleugh	4.41	216	Pn	Pn	20 11 16.5	-1.3
TOZ	Tahuroa Road	4.43	27	Pn	Pn	20 11 18.5	+0.5
MHGZ	Mahia Peninsul	4.55	57	PN	Pn	20 11 17.6	-2.0
MHGZ	Mahia Peninsul	4.55	57	Pn	Pn	20 11 17.6	-2.0
URZ	Urewera	4.69	44	P	Pn	20 11 18.5	-3.0
URZ				S	Sn	20 12 11.2	-3.5
URZ	Urewera	4.69	44	P	Pn	20 11 18.5	-3.0
	1.0nm,0.3s,baz=14,slow=12,SNR=5.7						
URZ				S	Sn	20 12 11.2	-3.5
	45nm,0.3s,baz=92,slow=17,SNR=18						
MSZ	Milford Sound	4.73	230	Pn	Pn	20 11 23.2	+1.2
MWZ	Matawai	4.86	48	Pn	Pn	20 11 22.7	-1.2
TUZ	Tuapeka	4.88	209	Pn	Pn	20 11 24.0	-0.1
MKAZ	Moumakai	4.90	21	Pn	Pn	20 11 25.0	+0.6
WTAZ	Waiatarua	4.93	15	Pn	Pn	20 11 26.1	+1.3
KUZ	Kuaotunu	5.40	24	Pn	Pn	20 11 31.4	+0.2
PUZ	Puketiti	5.45	50	Pn	Pn	20 11 29.1	-2.9
WHZ	Wether Hill Ro	5.54	219	Pn	Pn	20 11 31.6	-1.5
SYZ	Scrubby Hill	5.56	208	Pn	Pn	20 11 33.3	0.0
WCZ	Waipu Caves	5.86	11	Pn	Pn	20 11 37.7	+0.2
APZ	The Paps	6.24	213	Pn	Pn	20 11 41.1	-1.6
OUZ	Omahuta	6.50	5	Pn	Pn	20 11 46.4	+0.2
CTZ	Chatham Island	7.93	108	Pn	Pn	20 12 05.7	+0.1
ASAR	Alice Springs	37.10	287	P	P	20 17 15.7	+0.7
ASAR				pP	pP	20 17 36.2	+0.4
ASAR				sP	sP	20 17 44.5	-1.6
ASAR	Alice Springs	37.10	287	P	P	20 17 15.7	+0.7
	1.2nm,0.6s,baz=127,slow=7.0,SNR=37						
ASAR				pP	pP	20 17 36.2	+0.4
	0.4nm,0.5s,baz=123,slow=6.9,SNR=3.1						
ASAR				sP	sP	20 17 44.5	-1.6
	0.6nm,0.7s,baz=150,slow=10,SNR=3.1						
WRAB	Tennant Creek	39.19	292	eP	P	20 17 32.9	+0.4
	4.2nm,0.7s						
WRA	Warramunga Arr	39.20	292	P	P	20 17 32.3	-0.2
WRA	Warramunga Arr	39.20	292	P	P	20 17 32.3	-0.2
	2.3nm,0.6s,baz=127,slow=8.1,SNR=50						
CASY	Casey	41.72	213	eP	P	20 17 56.7	+4.0
QSPA	South Pole Qui	48.41	180	eP	P	20 18 50.9	+5.0
	6.2nm,0.7s						
QSPA	South Pole Qui	48.41	180	P	P	20 18 50.2	+4.2
	5.6nm,0.7s,baz=32,slow=2.1,SNR=25						
VNA3	Neumayer Olymp	67.34	179	eP	P	20 21 03.5	+5.5
VNA2	Neumayer--Watz	67.67	180	eP	P	20 21 03.2	+3.1
	baz=174,slow=4.7						
DBIC	Dimbokro	145.05	184	ePKPdf	PKPdf	20 29 41.0	+0.6
DBIC	Dimbokro	145.05	184	PKPbc	PKPdf	20 29 41.2	+0.8
	1.5nm,0.5s,baz=120,slow=6.1,SNR=5.1						
BRTR	Keskin Array B	149.31	280	PKPbc	PKPbc	20 29 52.2	+0.9
BRTR	Keskin Array B	149.31	280	PKPbc	PKPbc	20 29 52.2	+0.9
	0.8nm,0.9s,baz=114,slow=3.5,SNR=3.0						
TORD	Torodi Ar. Bea	150.54	197	PKPbc	PKPbc	20 29 55.8	+1.0
TORD				pPKPbc	pPKPbc	20 30 18.6	-1.1
TORD	Torodi Ar. Bea	150.54	197	PKPbc	PKPbc	20 29 55.8	+1.0
	0.3nm,0.4s,baz=170,slow=2.9,SNR=10						
TORD				pPKPbc	pPKPbc	20 30 18.6	-1.1
	0.6nm,0.5s,baz=170,slow=2.2,SNR=2.8						
FINES	FINESS Array B	151.97	326	PKPbc	PKPbc	20 29 55.7	-1.0
FINES				pPKPbc	pPKPbc	20 30 20.4	-1.2
FINES	FINESS Array B	151.97	326	PKPbc	PKPbc	20 29 55.7	-1.0
	0.6nm,0.5s,baz=96,slow=1.9,SNR=4.1						
FINES				pPKPbc	pPKPbc	20 30 20.4	-1.2
	1.0nm,0.7s,baz=79,slow=4.1,SNR=1.7						

IDC 06 20:10:58.8±1.1, **28°.88N**×**92°.30E, h0**^{km}**, mb3.7**/9, **mb1 3.8**/12, **mb1mx3.6**/32, **mbtmp3.6**/12, **ML3.3**/3, **Error ellipse: s-maj=45.2km s-min=15.8km az=60.0, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	Shillong	3.32	187	ePN	Pn	20 11 55.0	+2.8
SHL				i x	x	20 12 03.0	
SHL				i SN	Sb	20 12 42.0	+2.1
SHL				i x	x	20 12 48.0	
AGT	Agartala	5.06	191	eP	Pg	20 12 40.0	+4.2
CMAR	Chiang Mai Arr	12.02	148	Pn	Pn	20 13 52.8	+1.2
	0.1nm,0.3s,baz=318,slow=13,SNR=9.9						
MKAR	Makanchi Array	19.53	339	P	P	20 15 26.9	-0.8
	0.1nm,0.3s,baz=150,slow=12,SNR=9.0						
AAK	Ala-Archa	19.88	318	P	P	20 15 32.3	+0.5
	0.1nm,0.3s,baz=141,slow=9.8,SNR=5.0						
SONM	Songino Array	21.86	26	P	P	20 15 54.4	+1.3
	1.0nm,1.0s,baz=203,slow=10.0,SNR=6.0						
KURBB	Kurchatov Arra	24.08	338	P	P	20 16 15.3	-0.5
	0.9nm,0.8s,baz=159,slow=8.9,SNR=8.3						
ZALV	Zalesovo Beam	25.64	350	P	P	20 16 28.8	-1.2
	1.5nm,0.8s,baz=171,slow=9.2,SNR=9.7						
BVAR	Borovoye Array	29.03	332	P	P	20 17 00.7	+0.2
	0.2nm,0.3s,baz=143,slow=12,SNR=3.1						
FINES	FINESS Array B	53.76	327	P	P	20 20 23.6	+1.0
	3.7nm,1.0s,baz=166,slow=13,SNR=3.2						
WRA	Warramunga Arr	63.26	135	P	P	20 21 29.4	-0.1
	0.9nm,0.8s,baz=326,slow=6.6,SNR=6.0						
ASAR	Alice Springs	65.82	138	P	P	20 21 45.8	-0.4
	0.6nm,0.6s,baz=321,slow=6.6,SNR=9.8						
ILAR	Eielson Array	76.02	22	P	P	20 22 47.9	+0.2
	0.6nm,1.0s,baz=269,slow=6.0,SNR=4.5						
INK	Inuvik	77.36	16	P	P	20 22 54.8	-0.3
	0.7nm,0.7s,baz=291,slow=7.7,SNR=3.8						

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*IDC **06** 20:12:36.3±1.7, 43°.32N×105°.22W, h0^{km}, mb4.0/2, mb1 4.0/6, mb1mx3.6/30, mbtmp3.8/6, ML3.6/3, Error ellipse: s-maj=42.1km s-min=8.3km az=153.0*
*ISCJB **06** 20:12:38.1±0.2, 43°.66N±0°.01×105°.28W±0°.02, h0^{km}, mb4.1/2, Error ellipse: s-maj=2.1km s-min=1.7km az=159.0*
*NEIC **06** 20:12:39.1±0.3, 43°.69N×105°.26W, h0^{km}, ML3.2, Error ellipse: s-maj=5.0km s-min=4.2km az=147.0, Suspected Mining explosion.*
NEIC 70 km [45 miles] SSE of Gillette.
ISC 06 20:12:38.3±0.6, **43°.64N**±0°.02×**105°.30W**±0°.02, **h0**^{km}**, n122,** σ1^{s}**16**/154, **51C-45D, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
J23A	Dilts Ranch, B	0.30	218	P	Pb	20 12 45.7	-0.9
	baz=0.4,SNR=585						
J23A				⇑S	Sg	20 12 47.9	0.0
	baz=0.4						
I23A	Meade Ranch, G	0.34	340	⇑P	Pg	20 12 46.4	+1.4
	baz=0.3						
I23A				⇓S	Sg	20 12 50.2	+0.8
	baz=0.3						
I24A	Kuemmerle Ranc	0.54	65	P	Pg	20 12 49.5	+0.9
	baz=0.5,SNR=705						
I24A				⇓S	Sg	20 12 55.9	+0.3
	baz=0.5						
J24A	Dixon Ranch, L	0.56	123	P	Pb	20 12 49.9	-1.1
	baz=0.6,SNR=190						
J24A				⇓S	Sg	20 12 56.8	+0.6
	baz=0.6						
J22A	Midwest	0.89	256	P	Pg	20 12 56.0	+0.7
	baz=0.9,SNR=52						
J22A				⇓Sb	Sb	20 13 08.6	-0.5
	baz=0.9						
I22A	9 Mile Ranch,	0.90	287	P	Pg	20 12 56.2	+0.8
	baz=0.9,SNR=231						
I22A				⇑Sb	Sb	20 13 09.8	+0.4
	baz=0.9						
K23A	Bowen Ranch, D	0.91	195	⇓P	Pb	20 12 56.4	-0.7
	baz=1.0						
K23A				⇓S	Sg	20 13 08.4	+0.8
	baz=1.0						
H23A	Clabaugh Cattl	0.93	356	⇑P	Pg	20 12 56.2	+0.1
	baz=0.9,SNR=32						
K24A	Anderson Ranch	0.98	159	⇑P	Pb	20 12 57.6	-0.6
	baz=1.0						
K24A				⇑S	Sb	20 13 11.3	-0.5
	baz=1.0						
RSSD	Black Hills	1.03	62	eP	Pg	20 12 57.7	-0.4
H22A	Clearmont	1.22	322	⇑P	Pg	20 13 02.0	+0.3
	baz=1.2,SNR=46						
H24A	Dirks Ranch, A	1.23	26	P	Pg	20 13 01.4	-0.6
	baz=1.2,SNR=302						
K22A	Casper	1.33	223	⇑P	Pg	20 13 03.8	-0.1
	baz=1.4						
I21A	Big Trails, Te	1.46	278	⇓P	Pn	20 13 05.2	-0.8
	baz=1.5,SNR=282						
I21A				⇓S	Sg	20 13 25.8	+0.7
	baz=1.5						
K25A	Mack Ranch, Ha	1.46	134	⇑Pg	Pb	20 13 07.0	+0.4
	baz=1.5,SNR=38						
L23A	Garrett	1.55	191	⇑Pb	Pn	20 13 07.5	+0.1
	baz=1.6						
G23A	Biddle	1.57	358	⇑P	Pn	20 13 07.2	-0.3
	baz=1.5,SNR=214						
J21A	Lysite	1.59	260	⇓Pb	Pn	20 13 08.0	+0.1
	baz=1.6,SNR=179						
J21A				⇓S	Sn	20 13 29.4	+0.2
	baz=1.6						
H21A	Big Horn, Sher	1.60	309	⇓Pb	Pn	20 13 08.6	+0.6
	baz=1.6,SNR=48						
H21A				⇓S	Sb	20 13 30.3	+0.7
	baz=1.6						
L24A	Wheatland	1.61	170	⇓Pb	Pb	20 13 08.8	-0.3
	baz=1.7,SNR=12						
G22A	Birney	1.73	336	⇑Pb	Pn	20 13 10.8	+0.9
	baz=1.7,SNR=155						
G22A				⇓Sg	Sg	20 13 36.1	+2.1
	baz=1.7						
K21A	Alcova	1.75	236	⇓Pb	Pb	20 13 11.0	-0.3
	baz=1.8,SNR=210						
K21A				⇓Sb	Sg	20 13 34.6	+0.2
	baz=1.8						
L25A	Engebretsen Ra	1.78	146	⇑Pb	Pg	20 13 12.3	-0.1
	baz=1.8,SNR=28						
L25A				⇑Sb	Sg	20 13 36.4	+1.0
	baz=1.8						
G24A	Alzada	1.81	20	⇓Pb	Pn	20 13 12.0	+1.1
	baz=1.7,SNR=56						
G24A				⇑Sb	Sg	20 13 36.9	+0.6
	baz=1.7						
L22A	Ellis Ranch, M	1.81	208	⇑Pb	Pb	20 13 12.0	-0.4
	baz=1.9,SNR=12						
L22A				⇑Sb	Sg	20 13 37.0	+0.6
	baz=1.9						
K26A	Motz Farm, Whi	1.81	120	⇓Pb	Pb	20 13 12.0	-0.4
	baz=1.8,SNR=12						
J20A	Shoshoni	2.05	263	⇓Pg	Pb	20 13 17.0	+0.5
	baz=2.1						
J20A				⇑Sb	Sg	20 13 43.8	-0.2
	baz=2.1						
I20A	Worland	2.07	280	⇓Pb	Pb	20 13 16.4	-0.5
	baz=2.1,SNR=178						
I20A				⇓Sb	Sb	20 13 43.9	+0.7
	baz=2.1						
G21A	Lodge Grass	2.10	320	⇑Pb	Pn	20 13 15.8	+1.0
	baz=2.1,SNR=35						
G21A				⇑Sb	Sb	20 13 45.5	+1.6
	baz=2.1						
H20A	Greybull	2.12	295	⇓Pb	Pn	20 13 16.1	+1.0
	baz=2.1,SNR=30						
H20A				⇑Sb	Sb	20 13 45.8	+1.1
	baz=2.1						
M23A	Laramie	2.19	188	⇓Pb	Pb	20 13 18.4	-0.6
	baz=2.3,SNR=9.6						
M23A				⇑Sb	Sb	20 13 47.3	+0.6
	baz=2.3						
M24A	Cheyenne	2.20	171	⇓Pb	Pb	20 13 18.5	-0.5
	baz=2.2						
F22A	Rosebud	2.25	343	⇑P	Pn	20 13 16.6	-0.3
	baz=2.2,SNR=86						
F22A				⇑Sb	Sb	20 13 50.1	+1.8
	baz=2.2						
L21A	Rawlins	2.26	223	⇑Pb	Pb	20 13 19.3	-0.9
	baz=2.3,SNR=13						
L21A				⇓Sb	Sb	20 13 49.5	+0.7
	baz=2.3						
L26A	Underwood Farm	2.29	134	⇓Pb	Pb	20 13 20.3	-0.2
	baz=2.3						
PHWY	Pilot Hill	2.34	183	eP	Pn	20 13 19.3	+1.0
M25A	Palm-Egli Farm	2.38	157	⇓Pb	Pb	20 13 21.0	-1.2
	baz=2.4,SNR=22						
M25A				⇑Sb	Sg	20 13 53.6	-1.3
	baz=2.4						
M22A	Cedar Creek Ra	2.43	204	⇑Pb	Pb	20 13 22.2	-0.9
	baz=2.5,SNR=206						
M22A				⇑Sb	Sb	20 13 54.9	+1.3
	baz=2.5						
K20A	Yellowstone Ra	2.43	247	⇑Pb	Pb	20 13 21.8	-1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=2.5,SNR=67						
K20A				⇑Sb	Sb	20 13 54.4	+0.8
	baz=2.5						
M21A	Separation Pea	2.54	218	⇓Pb	Pb	20 13 23.8	-1.1
	baz=2.6,SNR=90						
M21A				⇓Sb	Sb	20 13 57.7	+1.0
	baz=2.6						
G20A	Bridger	2.62	308	⇑P	Pn	20 13 22.3	+0.3
	baz=2.6,SNR=64						
I19A	Meeteetse	2.70	280	⇑P	Pn	20 13 24.9	+1.7
	baz=2.7,SNR=59						
I19A				⇑Sb	Sb	20 14 02.1	+0.7
	baz=2.7						
K19A	Absolon Red Bu	2.72	254	⇑P	Pn	20 13 24.7	+1.3
	baz=2.8,SNR=112						
K19A				⇓Sb	Sb	20 14 02.8	+1.0
	baz=2.8						
J19A	Crowheart	2.76	264	⇑P	Pn	20 13 26.1	+2.1
	baz=2.8						
J19A				⇑Sb	Sb	20 14 04.4	+1.4
	baz=2.8						
L20A	Wamsutter	2.77	235	⇑P	Pb	20 13 26.6	-2.1
	baz=2.8						
N23A	Red Feather La	2.78	190	⇓P	Pn	20 13 26.4	+2.0
	baz=2.8,SNR=71						
N23A				⇓Sb	Sb	20 14 05.3	+1.5
	baz=2.8						
E22A	Miles City	2.84	351	⇓P	Pn	20 13 24.9	0.0
	baz=2.8,SNR=12						
H19A	Powell	2.85	293	⇓P	Pn	20 13 26.5	+1.3
	baz=2.8,SNR=25						
H19A				⇑Sb	Sb	20 14 05.7	+0.1
	baz=2.8						
N22A	Wattenberg Ran	2.96	197	⇑Sb	Sb	20 14 11.1	+2.2
	baz=3.0						
F20A	Billings	2.97	318	⇓P	Pn	20 13 27.0	+0.3
	baz=2.9,SNR=39						
E24A	Baker	3.01	13	⇑P	Pn	20 13 28.4	+1.1
	baz=2.9,SNR=28						
RLMT	Red Lodge	3.21	299	eP	Pn	20 13 31.1	+0.9
RLMT	Red Lodge	3.21	299	⇓P	Pn	20 13 31.3	+1.1
	baz=3.2,SNR=39						
PDAR	Pinedale Array	3.23	256	Pn	Pn	20 13 31.8	+1.3
PDAR				Lg	Lg	20 14 16.6	
PDAR	Pinedale Array	3.23	256	Pn	Pn	20 13 31.8	+1.3
	3.8nm,0.3s,baz=78,slow=18,SNR=64						
PDAR				Lg	Lg	20 14 16.6	
	39nm,0.3s,baz=72,slow=33,SNR=23						
BW06	Boulder Array	3.23	256	eP	Pn	20 13 31.6	+1.0
BW06	Boulder Array	3.23	256	⇓P	Pn	20 13 31.8	+1.3
	baz=3.3,SNR=65						
H18A	Shoshone NF, C	3.31	290	⇓P	Pn	20 13 32.2	+0.6
	baz=3.3,SNR=17						
N21A	Black Mountain	3.31	211	⇓P	Pn	20 13 34.2	+2.5
	baz=3.4,SNR=8.2						
F19A	Roth Farm, Mol	3.41	312	⇑P	Pn	20 13 33.9	+1.0
	baz=3.4,SNR=49						
G18A	Lazy EL Ranch,	3.48	300	⇓P	Pn	20 13 35.0	+1.1
	baz=3.5,SNR=95						
E20A	Meyer Farm, Mu	3.50	326	⇑P	Pn	20 13 34.8	+0.8
	baz=3.5						
D23A	Lindsay	3.54	1	⇑P	Pn	20 13 35.4	+0.9
	baz=3.5						
OGNE	Ogallala	3.62	137	eP	Pn	20 13 37.3	+1.6
GCMT	Greycliff	3.79	306	eP	Pn	20 13 39.4	+1.4
LKWY	Lake	3.79	286	eP	Pn	20 13 37.9	-0.3
ISCO	Idaho Springs	3.84	184	eP	Pn	20 13 40.5	+1.5
LOHW	Long Hollow	3.85	271	eP	Pn	20 13 40.7	+1.6
MOOW	Moose Ponds	3.95	274	eP	Pn	20 13 42.3	+1.9
N19A	John Jarvie Ra	3.97	228	⇑P	Pn	20 13 41.9	+1.2
	baz=4.0,SNR=6.9						
REDW	Red Top Meadow	4.05	268	ePg	Pb	20 13 51.1	+0.5
IMW	Indian Meadow	4.09	276	eP	Pn	20 13 44.0	+1.6
TPAW	Teton Pass	4.11	270	eP	Pn	20 13 44.7	+2.1
YMR	Madison River	4.21	286	eP	Pn	20 13 44.5	+0.6
DCID1	Drake Creek	4.27	271	eP	Pn	20 13 43.0	-1.8
P26A	Davis Ranch, A	4.33	160	⇓P	Pn	20 13 46.9	+1.3
	baz=4.4,SNR=8.3						
AHID	Auburn Hatcher	4.33	260	ePg	Pg	20 13 59.2	-2.0
RRI2	Red Ridge	4.39	268	eP	Pn	20 13 48.0	+1.5
QLMT	Earthquake Lak	4.56	287	eP	Pn	20 13 48.5	-0.4
SMCO	Snowmass	4.63	196	ePg	Pb	20 14 02.9	+2.3
C19A	Slack Wire Ran	4.87	329	⇑P	Pn	20 13 53.2	+0.4
	baz=4.8,SNR=18						
DGMT	Dagmar	4.90	9	eP	Pn	20 13 54.5	+1.3
BOZ	Bozeman (W)	4.94	296	eP	Pn	20 13 54.9	+0.9
HWUT	Hardware Ranch	5.05	248	eP	Pn	20 13 56.5	+1.1
	12nm,0.4s						
D17A	Six Diamond Ra	5.17	315	⇑P	Pn	20 13 57.5	+0.4
	baz=5.1,SNR=54						
EGMT	Eagleton	5.38	326	eP	Pn	20 14 00.4	+0.5
	20nm,0.5s						
P18A	Preston Nutter	5.46	224	⇓P	Pn	20 14 02.8	+1.6
	baz=5.5,SNR=21						
DAU	Daniels Canyon	5.48	236	eP	Pn	20 14 03.2	+1.7
	11nm,0.5s						
JLU	Jordanelle	5.49	239	eP	Pn	20 14 03.8	+2.2
	6.4nm,0.4s						
R26A	Arlington	5.51	165	⇑P	Pn	20 14 02.9	+1.2
	baz=5.6,SNR=11						
R21A	Cimarron	5.53	199	⇑P	Pn	20 14 04.1	+2.0
	baz=5.6,SNR=6.3						
LRM	Limekiln Ridge	5.54	296	eP	Pn	20 14 03.7	+1.4
	27nm,0.4s						
HRY	Holter Researc	5.55	306	eP	Pn	20 14 03.3	+1.1
	18nm,0.4s						
MCMT	McKenzie Canyo	5.55	285	eP	Pn	20 14 03.8	+1.4
	2.1nm,0.4s						
D16A	Dana Ranch, Ca	5.56	310	⇓P	Pn	20 14 02.8	+0.4
	baz=5.5,SNR=13						
HVU	Hansel Valley	5.81	254	eP	Pn	20 14 07.3	+1.4
	7.4nm,0.4s						
PV04	Paradox Valley	5.90	209	eP	Pn	20 14 09.0	+1.8
MPU	Maple Canyon	5.96	235	eP	Pn	20 14 10.0	+2.0
	9.8nm,0.6s						
SRU	San Rafael	5.99	223	eP	Pn	20 14 08.8	+0.4
	420nm,0.6s						
S26A	Kim	6.17	166	⇑P	Pn	20 14 11.4	+0.6
	baz=6.2,SNR=7.4						
TMUT	Trail Mountain	6.20	228	eP	Pn	20 14 13.6	+2.1
	13nm,0.5s						
ECSD	EROS Data Cent	6.30	86	eP	Pn	20 14 14.1	+1.6
	11nm,0.5s						
Q16A	Castle Valley	6.46	225	⇓P	Pn	20 14 15.8	+0.9
	baz=6.5,SNR=5.2						
CHMT	Chamberlain Mo	6.50	303	eP	Pn	20 14 15.9	+0.6
	2.6nm,0.4s						
DUG	Dugway	6.57	241	eP	Pn	20 14 17.4	+1.1
	5.2nm,0.5s						
D14A	Greenough	6.73	304	⇑P	Pn	20 14 18.0	-0.4
	baz=6.7,SNR=7.4						
SLMT	Seeley Lake	6.80	305	eP	Pn	20 14 19.3	-0.2
	3.7nm,0.5s						
MVCO	Mesa Verde	6.87	202	eP	Pn	20 14 17.4	-3.0
	16nm,0.4s						
S18A	Hurst Farm, Bl	6.93	213	⇑P	Pn	20 14 22.6	+1.2
	baz=7.0,SNR=9.1						
B14A	Marquette Ranc	7.29	313	⇓P	Pn	20 14 26.6	+0.5
	baz=7.3,SNR=5.4						
JTMT	Jette	7.51	306	eP	Pn	20 14 30.6	+1.3
	1.6nm,0.4s						
ULM	Lac du Bonnet	9.23	41	Pn	Pn	20 14 51.0	-1.7
ULM				Lg	Lg	20 17 31.4	
ULM	Lac du Bonnet	9.23	41	Pn	Pn	20 14 51.0	-1.7
	2.4nm,0.3s,baz=234,slow=11,SNR=10						
ULM				Lg	Lg	20 17 31.4	
	1.0nm,0.3s,baz=142,slow=22,SNR=3.8						
NVAR	Mina Array Bea	11.11	247	Pn	Pn	20 15 18.9	+0.3
NVAR	Mina Array Bea	11.11	247	Pn	Pn	20 15 19.0	+0.3
	0.2nm,0.3s,baz=72,slow=12,SNR=2.9						
FFC	Flin Flon	11.31	10	eP	Pn	20 15 19.5	-1.5
	3.7nm,0.6s						
YKA	Yellowknife Ar	19.66	347	P	Pn	20 17 10.0	+0.2
YKA	Yellowknife Ar	19.66	347	P	Pn	20 17 10.0	+0.2
	0.3nm,0.3s,baz=157,slow=8.9,SNR=6.5						
ARCES	ARCESS Array B	61.52	18	P	P	20 22 55.1	-1.3
ARCES	ARCESS Array B	61.52	18	P	P	20 22 55.1	-1.3
	4.1nm,1.1s,baz=337,slow=6.6,SNR=9.2						
ZALV	Zalesovo Beam	82.41	354	P	P	20 25 01.6	-0.4
ZALV	Zalesovo Beam	82.41	354	P	P	20 25 01.5	-0.4
	0.4nm,0.5s,baz=356,slow=4.3,SNR=3.4						

*CSEM **06** 20:15:29.7±0.3, 41°.50N×23°.35E, h15km, MD2.7, Error ellipse: s-maj=8.6km s-min=4.9km az=63.0*
*ATH **06** 20:15:31.8, 41°.40N×23°.46E, h28km±1km, MD2.7/3*
*SKO **06** 20:15:32.3, 41°.53N×23°.25E, h5km, M1.0, ML1.4*
*BEO **06** 20:15:33.7±1.5, 41°.58N×23°.24E, h0km, ML1.7/3*
ISC 06 20:15:30.8±1.0**, 41°.47N**±0°.03×**23°.33E**±0°.04**, h15**km±11km**, n16, σ0.47**/28**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVR	Nevrokopi	0.41	106	ePB	Pg	20 15 39.1	-0.1
NVR				eSB	Sg	20 15 44.9	+0.1
NVR	Nevrokopi	0.41	106	ePb	Pg	20 15 39.1	-0.1
NVR				eSb	Sg	20 15 44.9	+0.1
VAY	Valandovo	0.59	256	i Pg	Pb	20 15 43.1	+0.1
VAY				i Sg	Sg	20 15 50.6	+0.3
VAY				eLg	Lg	20 15 52.3	
	comp=E,10nm,0.2s						
VAY				eLg	Lg	20 15 54.3	
	comp=N,12nm,0.4s						
VAY	Valandovo	0.59	256	i Sg	Sb	20 15 51.1	-0.1
VAY				eLg	Lg	20 15 54.8	
	comp=N,12nm,0.4s						
SOH	Sokhos	0.65	179	ePN	Pg	20 15 43.6	+0.1
SOH				eSN	Sb	20 15 52.8	+0.1
SOH	Sokhos	0.65	179	ePn	Pg	20 15 43.6	+0.1
SOH				eSn	Sb	20 15 52.8	+0.1
PLG	Polygyros	1.10	176	ePN	Pb	20 15 51.6	0.0
PLG				eSN	Sb	20 16 04.7	-1.0
PLG	Polygyros	1.10	176	ePn	Pb	20 15 51.6	0.0
PLG				eSn	Sb	20 16 04.7	-1.0
VTS	Vitosha	1.13	355	ePg	Pb	20 15 52.0	-0.1
VTS				eSg	Sb	20 16 06.3	-0.4
VTS	Vitosha	1.13	355	ePg	Pb	20 15 52.0	-0.1
VTS				eSg	Sb	20 16 06.3	-0.4
BARS	Barje	1.76	321	ePg	Pb	20 16 02.6	-0.2
BARS				eSg	Sb	20 16 25.0	+0.3
BARS	Barje	1.76	321	ePg	Pb	20 16 02.6	-0.2
BARS				eSg	Sb	20 16 25.0	+0.3
ZAPS	Zavoj	1.88	344	ePg	Pb	20 16 05.4	+0.5
ZAPS				eSg	Sb	20 16 28.7	+0.5
ALN	Alexandroupoli	2.12	105	ePB	Pn	20 16 06.2	+0.4
ALN	Alexandroupoli	2.12	105	ePb	Pn	20 16 06.2	+0.4
GRUS	Gruza	3.09	322	eSg	Sg	20 17 08.9	-1.3

*CSEM **06** 20:24:11.5, 42°.38N×13°.35E, h10km, After ROM*
ROM 06 20:24:11.5±0.1**, 42°.38N×13°.35E, h10km, Ml2.1**/1**, 2C-2D, Error ellipse: s-maj=1.5km s-min=1.1km az=115.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	122	⇓iPg	Pg	20 24 13.9	+0.3
AQU				Sg	Sg	20 24 15.2	+0.1
AQU	L'Aquila	0.04	122	⇓iPg	Pg	20 24 13.9	+0.3
AQU				Sg	Sg	20 24 15.2	+0.1
CAMP	Campotosto	0.17	14	⇑iPg	Pg	20 24 15.9	+0.6
CAMP				Sg	Sg	20 24 18.7	+0.7
CAMP	Campotosto	0.17	14	⇑iPg	Pg	20 24 15.9	+0.6
CAMP				Sg	Sg	20 24 18.7	+0.7
FAGN	Fagnano	0.20	123	Pg	Pg	20 24 16.6	+0.7
FAGN				Sg	Sg	20 24 20.0	+1.1
FAGN	Fagnano	0.20	123	Pg	Pg	20 24 16.6	+0.7
FAGN				Sg	Sg	20 24 20.0	+1.1
FIAM	Fiamignano	0.21	239	Pg	Pg	20 24 16.6	+0.6
FIAM				Sg	Sg	20 24 20.0	+0.9
FIAM	Fiamignano	0.21	239	Pg	Pg	20 24 16.6	+0.6
FIAM				Sg	Sg	20 24 20.0	+0.9
TERO	Teramo	0.31	37	Pg	Pg	20 24 18.0	+0.2
TERO				Sg	Sg	20 24 22.7	+0.7
	179nm,0.1s						
TERO	Teramo	0.31	37	Pg	Pg	20 24 18.0	+0.2
TERO				Sg	Sg	20 24 22.7	+0.7
	179nm,0.1s						
PTQR	Pietraquaria	0.36	174	Pg	Pg	20 24 19.3	+0.6
PTQR				Sg	Sg	20 24 24.4	+0.9
	7.0nm,0.2s						
PTQR	Pietraquaria	0.36	174	Pg	Pg	20 24 19.3	+0.6
PTQR				Sg	Sg	20 24 24.4	+0.9
	7.0nm,0.2s						
VCEL	Villa Celiera	0.36	87	Pg	Pg	20 24 19.5	+0.6
VCEL	Villa Celiera	0.36	87	Pg	Pg	20 24 19.5	+0.6
CERT	Cerreto	0.51	213	Pg	Pg	20 24 21.6	+0.1
CERT				Sg	Sg	20 24 29.1	+0.8
CERT	Cerreto	0.51	213	Pg	Pg	20 24 21.6	+0.1
CERT				Sg	Sg	20 24 29.1	+0.8
INTR	Introdacqua	0.55	131	Pg	Pg	20 24 22.6	+0.3
INTR	Introdacqua	0.55	131	Pg	Pg	20 24 22.6	+0.3
OFFI	Offida	0.61	24	Pg	Pb	20 24 24.4	+0.1
OFFI	Offida	0.61	24	Pg	Pb	20 24 24.4	+0.1

*ISCJB **06** 20:24:32.1±0.6, 60°.29N±0°.04×140°.34W±0°.05, h8km±5km, Error ellipse: s-maj=6.4km s-min=3.9km az=5.1*
*NEIC **06** 20:24:33.5, 60°.27N×140°.44W, h6km, ML2.8(AEIC), After AEIC.*
*PGC **06** 20:24:34.0±6.0, 60°.23N×140°.41W, h1km, ML2.9/3, 116km northwest of Yakutat, Ak Southeastern Alaska*
ISC 06 20:24:34.0±1.0**, 60°.24N**±0°.05×**140°.46W**±0°.03**, h13**km±9km**, n27, σ1.44**/38**, 2D, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAMH	Samovar Hills	0.19	236	P	Pg	20 24 38.1	-0.2
SAMH				S	Sg	20 24 42.6	+1.2
RKAV	Rock Avalanche	0.45	279	P	Pg	20 24 42.6	-0.2
RKAV				S	Sg	20 24 49.6	+0.8
MESA	MESA	0.74	266	P	Pg	20 24 48.7	+0.3
PNL	Peninsula	0.78	136	P	Pg	20 24 47.8	-1.3
PNL				S	Sg	20 24 58.5	-0.9
BARN	Barnard Glacie	1.02	325	P	Pg	20 24 51.3	-2.3
KIAG	Kiagna River	1.16	307	P	Pg	20 24 54.0	-2.4
KIAG				S	Sg	20 25 09.3	-2.2
BALM	Baldy	1.23	312	P	Pg	20 24 54.9	-2.7
HYT	Haines Junctio	1.58	67	P	Pn	20 25 01.8	+0.1
HYT				S	Sn	20 25 22.6	+0.5
HYT	Haines Junctio	1.58	67	⇑Pn	Pn	20 25 01.9	+0.1
HYT				⇑Sg	Sn	20 25 22.6	+0.6
VRDI	Verde Repeater	1.77	305	P	Pn	20 25 03.4	-1.1
VRDI				S	Sn	20 25 27.5	+0.4
RAGM	Ragged Mountai	2.10	276	P	Pn	20 25 08.2	-0.7
GOAT	Goat Mountain	2.15	281	P	Pn	20 25 09.0	-0.5
BMRM	Bremner River	2.17	292	P	Pn	20 25 09.4	-0.5
DIV	Divide	2.76	291	ePn	Pn	20 25 18.3	+0.3
WHY	Whitehorse	2.80	79	P	Pn	20 25 18.7	+0.2
WHY	Whitehorse	2.80	79	⇓Pn	Pn	20 25 18.7	+0.2
WHY				⇓Pg	Pb	20 25 23.9	+0.1
WHY				⇑Sg	Sb	20 25 60.0	+1.9
BCA3	Beaver Creek A	2.91	348	P	Pn	20 25 21.1	+1.2
BESE	Bessie Mountai	3.31	118	P	Pn	20 25 24.8	-0.8
DOT	Dot Lake	3.82	335	ePn	Pn	20 25 31.4	-1.2
DAWY	Dawson	3.88	7	P	Pn	20 25 34.4	+1.1
DAWY	Dawson	3.88	7	⇑Pn	Pn	20 25 34.2	+0.9
DAWY				⇑Sn	Sn	20 26 18.9	+0.2
DAWY				⇑Sg	Sb	20 26 33.6	+4.6
SML	Sawmill	4.14	296	ePn	Pn	20 25 37.1	+0.1
PMR	Palmer	4.45	292	ePn	Pn	20 25 41.4	+0.4
RND	Reindeer	5.09	312	P	Pn	20 25 49.8	-0.2
SUA	Susitna One	5.18	288	P	Pn	20 25 51.1	-0.1
DLBC	Dease Lake	5.64	104	⇑Sn	Sn	20 26 59.1	-2.9
DLBC				⇑Sg	Sg	20 27 27.8	-6.9
KDAK	Kodiak Island	6.73	254	P	Pn	20 26 11.9	-0.4

*CSEM **06** 20:25:01.0, 42°.37N×13°.35E, h11km, After ROM*
ROM 06 20:25:01.0±0.1**, 42°.37N×13°.35E, h11**km±1km**, Ml2.1**/4**, 2C, Error ellipse: s-maj=1.5km s-min=1.1km az=125.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	116	Pg	Pg	20 25 03.6	+0.4
AQU				Sg	Sg	20 25 05.0	+0.2
	2μm,0.2s						
AQU	L'Aquila	0.04	116	Pg	Pg	20 25 03.6	+0.4
AQU				Sg	Sg	20 25 05.0	+0.2
	2μm,0.2s						
CAMP	Campotosto	0.17	14	Pg	Pg	20 25 05.5	+0.5
CAMP				Sg	Sg	20 25 08.5	+0.7
CAMP	Campotosto	0.17	14	Pg	Pg	20 25 05.5	+0.5
CAMP				Sg	Sg	20 25 08.5	+0.7
FAGN	Fagnano	0.20	122	Pg	Pb	20 25 06.1	-0.7
FAGN				Sg	Sg	20 25 09.7	+1.3
	792nm,0.3s						
FAGN	Fagnano	0.20	122	Pg	Pb	20 25 06.1	-0.7
FAGN				Sg	Sg	20 25 09.7	+1.3
	792nm,0.3s						
FIAM	Fiamignano	0.20	240	⇑iPg	Pg	20 25 05.9	+0.4
FIAM				Sg	Sg	20 25 09.6	+1.0
FIAM	Fiamignano	0.20	240	⇑iPg	Pg	20 25 05.9	+0.4
FIAM				Sg	Sg	20 25 09.6	+1.0
TERO	Teramo	0.31	36	Pg	Pg	20 25 07.6	+0.2
TERO				Sg	Sg	20 25 12.3	+0.6
	192nm,0.6s						
TERO	Teramo	0.31	36	Pg	Pg	20 25 07.6	+0.2
TERO				Sg	Sg	20 25 12.3	+0.6
	192nm,0.6s						
PTQR	Pietraquaria	0.35	174	Pg	Pb	20 25 08.9	-0.5
PTQR				Sg	Sg	20 25 13.6	+0.7
	23nm,0.2s						
PTQR	Pietraquaria	0.35	174	Pg	Pb	20 25 08.9	-0.5
PTQR				Sg	Sg	20 25 13.6	+0.7
	23nm,0.2s						
VCEL	Villa Celiera	0.36	86	Pg	Pg	20 25 08.8	+0.4
	174nm,0.3s						
VCEL	Villa Celiera	0.36	86	Pg	Pg	20 25 08.8	+0.4
	174nm,0.3s						
NRCA	Norcia	0.49	339	Pg	Pb	20 25 11.4	-0.5
	10.0nm,0.2s						
NRCA	Norcia	0.49	339	Pg	Pb	20 25 11.4	-0.5
	10.0nm,0.2s						
MNS	Montasola	0.50	272	Pg	Pg	20 25 10.9	0.0
	35nm,0.4s						
MNS	Montasola	0.50	272	Pg	Pg	20 25 10.9	0.0
	35nm,0.4s						
CERT	Cerreto	0.50	213	Pg	Pg	20 25 10.9	-0.1
CERT				Sg	Sg	20 25 18.4	+0.7
CERT	Cerreto	0.50	213	Pg	Pg	20 25 10.9	-0.1
CERT				Sg	Sg	20 25 18.4	+0.7
INTR	Introdacqua	0.54	131	Pg	Pg	20 25 10.7	-1.1
INTR	Introdacqua	0.54	131	Pg	Pg	20 25 10.7	-1.1

*CSEM **06** 20:25:54.4, 42°.35N×13°.38E, h11km, After ROM*
ROM 06 20:25:54.4±0.1**, 42°.35N×13°.38E, h11**km±1km**, Ml2.2**/3**, 2D, Error ellipse: s-maj=1.9km s-min=1.3km az=117.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.02	69	⇓iPg	Pg	20 25 56.8	+0.4
AQU				Sg	Sg	20 25 58.0	+0.2
	2μm,0.2s						
AQU	L'Aquila	0.02	69	⇓iPg	Pg	20 25 56.8	+0.4
AQU				Sg	Sg	20 25 58.0	+0.2
	2μm,0.2s						
FAGN	Fagnano	0.17	118	Pg	Pg	20 25 59.0	+0.7
FAGN				Sg	Sg	20 26 01.8	+0.8
	792nm,0.3s						
FAGN	Fagnano	0.17	118	Pg	Pg	20 25 59.0	+0.7
FAGN				Sg	Sg	20 26 01.8	+0.8
	792nm,0.3s						
CAMP	Campotosto	0.19	7	Pg	Pb	20 25 59.5	-0.7
CAMP				Sg	Sg	20 26 02.9	+1.2
CAMP	Campotosto	0.19	7	Pg	Pb	20 25 59.5	-0.7
CAMP				Sg	Sg	20 26 02.9	+1.2
FIAM	Fiamignano	0.21	248	Pg	Pb	20 25 59.7	-0.7
FIAM				Sg	Sg	20 26 03.2	+1.1
FIAM	Fiamignano	0.21	248	Pg	Pb	20 25 59.7	-0.7
FIAM				Sg	Sg	20 26 03.2	+1.1
TERO	Teramo	0.32	31	Pg	Pg	20 26 01.2	+0.2
TERO				Sg	Sg	20 26 06.0	+0.6
	192nm,0.6s						
TERO	Teramo	0.32	31	Pg	Pg	20 26 01.2	+0.2
TERO				Sg	Sg	20 26 06.0	+0.6
	192nm,0.6s						
PTQR	Pietraquaria	0.33	177	Pg	Pg	20 26 01.7	+0.6
PTQR				Sg	Sg	20 26 06.1	+0.6
	23nm,0.2s						
PTQR	Pietraquaria	0.33	177	Pg	Pg	20 26 01.7	+0.6
PTQR				Sg	Sg	20 26 06.1	+0.6
	23nm,0.2s						
VCEL	Villa Celiera	0.35	82	Pg	Pb	20 26 02.2	-0.6
	174nm,0.3s						
VCEL	Villa Celiera	0.35	82	Pg	Pb	20 26 02.2	-0.6
	174nm,0.3s						
CERT	Cerreto	0.49	217	Pg	Pg	20 26 04.3	+0.1
CERT	Cerreto	0.49	217	Pg	Pg	20 26 04.3	+0.1
INTR	Introdacqua	0.52	130	Pg	Pb	20 26 05.6	0.0
INTR	Introdacqua	0.52	130	Pg	Pb	20 26 05.6	0.0
NRCA	Norcia	0.52	338	Pg	Pg	20 26 04.5	-0.3
	10.0nm,0.2s						
NRCA	Norcia	0.52	338	Pg	Pg	20 26 04.5	-0.3
	10.0nm,0.2s						

*CSEM **06** 20:26:33.9, 42°.34N×13°.49E, h10km, After ROM*
ROM 06 20:26:33.9±0.1**, 42°.34N×13°.49E, h10**km±1km**, Ml2.1**/2**, Error ellipse: s-maj=2.2km s-min=1.5km az=57.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	281	Pg	Pg	20 26 36.7	+0.6
AQU				Sg	Sg	20 26 38.1	+0.5
	2μm,0.2s						
AQU	L'Aquila	0.06	281	Pg	Pg	20 26 36.7	+0.6
AQU				Sg	Sg	20 26 38.1	+0.5
	2μm,0.2s						
FAGN	Fagnano	0.10	136	Pg	Pg	20 26 36.8	+0.2
FAGN				Sg	Sg	20 26 39.1	+0.6
	792nm,0.3s						
FAGN	Fagnano	0.10	136	Pg	Pg	20 26 36.8	+0.2
FAGN				Sg	Sg	20 26 39.1	+0.6
	792nm,0.3s						
CAMP	Campotosto	0.20	344	Pg	Pg	20 26 38.6	+0.3
CAMP				Sg	Sg	20 26 42.7	+1.4
CAMP	Campotosto	0.20	344	Pg	Pg	20 26 38.6	+0.3
CAMP				Sg	Sg	20 26 42.7	+1.4
VCEL	Villa Celiera	0.27	79	Pg	Pb	20 26 40.9	-0.2
	174nm,0.3s						
VCEL	Villa Celiera	0.27	79	Pg	Pb	20 26 40.9	-0.2
	174nm,0.3s						
FIAM	Fiamignano	0.28	255	Pg	Pg	20 26 39.6	-0.2
FIAM				Sg	Sb	20 26 45.3	-0.9
FIAM	Fiamignano	0.28	255	Pg	Pg	20 26 39.6	-0.2
FIAM				Sg	Sb	20 26 45.3	-0.9
TERO	Teramo	0.29	17	Pg	Pg	20 26 40.0	+0.1
TERO	Teramo	0.29	17	Pg	Pg	20 26 40.0	+0.1
PTQR	Pietraquaria	0.33	191	Pg	Pg	20 26 41.0	+0.5
PTQR				Sg	Sb	20 26 47.0	-0.4
	23nm,0.2s						
PTQR	Pietraquaria	0.33	191	Pg	Pg	20 26 41.0	+0.5
PTQR				Sg	Sb	20 26 47.0	-0.4
	23nm,0.2s						
INTR	Introdacqua	0.45	137	Pg	Pg	20 26 43.2	+0.3
INTR	Introdacqua	0.45	137	Pg	Pg	20 26 43.2	+0.3
NRCA	Norcia	0.56	331	Pg	Pg	20 26 44.9	-0.1
NRCA				Sg	Sb	20 26 53.8	-0.5
	10.0nm,0.2s						
NRCA	Norcia	0.56	331	Pg	Pg	20 26 44.9	-0.1
NRCA				Sg	Sb	20 26 53.8	-0.5
	10.0nm,0.2s						

*IDC **06** 20:31:17.2±1.1, 60°.34N×152°.76W, h100km±12km, mb3.9/11, mb1 3.9/16, mb1mx3.6/34, mbtmp3.9/16, Error ellipse: s-maj=18.2km s-min=9.4km az=108.0*
*ISCJB **06** 20:31:18.2±0.2, 60°.34N±0°.03×152°.61W±0°.06, h124km±2km, mb4.1/11, Error ellipse: s-maj=5.2km s-min=3.5km az=39.7*
*NEIC **06** 20:31:20.5, 60°.32N×152°.65W, h110km, MG3.8(AEIC), After AEIC.*
NEIC Felt at Homer.
ISC 06 20:31:19.2±0.6**, 60°.32N**±0°.03×**152°.65W**±0°.04**, h122**km±5km**, n112, σ0.94**/125**, mb4.1**/11**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DFR	Drift River	0.27	356	P	Pn	20 31 35.6	-0.8
INE	Iliamna NE	0.33	218	P	Pn	20 31 36.2	-0.5
IVE	Iliamna Volcan	0.36	211	P	Pn	20 31 36.3	-0.5
IVE				S	Sn	20 31 49.0	-0.9
NNL	Ninilchik	0.73	112	P	Pn	20 31 39.9	+0.9
OPT	Oil Point	0.73	204	P	Pn	20 31 38.9	-0.1
BKG	Blockade Glaci	0.78	14	P	Pn	20 31 39.1	-0.3

BKG				S	Sn	20 31 54.0	-0.7
NKA	**Nikishka**	**0.82**	**58**	P	**Pn**	**20 31 41.0**	**+1.4**
HOM	**Homer**	**0.84**	**142**	P	**Pn**	**20 31 40.1**	**+0.3**
HOM				S	**Sn**	**20 31 55.4**	**+0.1**
SPU	**Mount Spurr**	**0.91**	**18**	P	**Pn**	**20 31 40.2**	**-0.3**
BGL	**Barrier Glacie**	**0.95**	**8**	P	**Pn**	**20 31 41.0**	**0.0**
AUNW	**Augustine NWes**	**1.03**	**204**	P	**Pn**	**20 31 41.7**	**+0.1**
AUP	**Augustine Pinn**	**1.04**	**202**	P	**Pn**	**20 31 41.8**	**0.0**
AUW	**Augustine West**	**1.04**	**204**	P	**Pn**	**20 31 41.8**	**0.0**
BRLK	**Bradley Lake**	**1.05**	**122**	P	**Pn**	**20 31 41.4**	**-0.4**
BRLK				S	**Sn**	**20 31 58.3**	**-0.7**
SLKM	**Skilak Lake**	**1.22**	**80**	P	**Pn**	**20 31 43.5**	**-0.1**
STLK	**Strandline Lak**	**1.25**	**18**	P	**Pn**	**20 31 43.8**	**-0.2**
MCNL	**McNeil River**	**1.43**	**218**	P	**Pn**	**20 31 45.6**	**-0.3**
SUA	**Susitna One**	**1.48**	**38**	P	**Pn**	**20 31 46.8**	**+0.2**
SUA				S	**Sn**	**20 32 07.6**	**+0.3**
SEW	**Seward**	**1.61**	**96**	P	**Pn**	**20 31 47.3**	**-0.7**
SEW				S	**Sn**	**20 32 08.4**	**-1.5**
FOSS	**Fourpeaked Sta**	**1.62**	**200**	P	**Pn**	**20 31 47.9**	**-0.3**
RC01	**Rabbit Creek A**	**1.63**	**60**	P	**Pn**	**20 31 47.9**	**-0.3**
RC01				S	**Sn**	**20 32 09.6**	**-0.6**
KAPH	**Katmai Pasha**	**1.94**	**207**	P	**Pn**	**20 31 52.1**	**+0.1**
PMR	**Palmer**	**2.14**	**52**	P	**Pn**	**20 31 53.5**	**-0.9**
PMR				S	**Sn**	**20 32 19.4**	**-1.9**
KAWH	**Katmai**	**2.23**	**210**	P	**Pn**	**20 31 55.6**	**-0.1**
KAKN	**Katmai Knife C**	**2.38**	**212**	P	**Pn**	**20 31 57.5**	**-0.1**
KCE	**Katmai Mt Cerb**	**2.46**	**213**	P	**Pn**	**20 31 59.1**	**+0.5**
KABU	**Katmai Buttres**	**2.46**	**214**	P	**Pn**	**20 31 58.9**	**+0.2**
KELA	**Mount Kelaz**	**2.46**	**221**	P	**Pn**	**20 31 58.4**	**-0.2**
KABR	**Katmai Barrier**	**2.50**	**209**	P	**Pn**	**20 31 58.9**	**-0.2**
KDAK	**Kodiak Island**	**2.55**	**179**	P	**Pn**	**20 31 58.0**	**-1.5**
KDAK				S	**Sn**	**20 32 28.1**	**-2.6**
KDAK	**Kodiak Island**	**2.55**	**179**	P	**Pn**	**20 31 58.0**	**-1.5**
	61nm,0.3s,baz=203,slow=13,SNR=1124						
KDAK				S	**Sn**	**20 32 28.1**	**-2.6**
	151nm,0.3s,baz=198,slow=19,SNR=21						
SML	**Sawmill**	**2.57**	**53**	P	**Pn**	**20 31 59.1**	**-0.9**
PPLA	**Purkeypile**	**2.59**	**5**	P	**Pn**	**20 32 00.8**	**+0.5**
TT01	**Tatalina**	**3.05**	**330**	P	**Pn**	**20 32 05.5**	**-0.6**
OHAK	**Old Harbor**	**3.13**	**186**	*e*P	**Pn**	**20 32 05.3**	**-1.8**
VLZ	**Valdez**	**3.21**	**73**	P	**Pn**	**20 32 07.0**	**-1.1**
MID	**Middleton Isla**	**3.31**	**103**	P	**Pn**	**20 32 09.4**	**0.0**
EYAK	**Cordova Ski Ar**	**3.43**	**83**	P	**Pn**	**20 32 11.1**	**0.0**
DIV	**Divide**	**3.47**	**74**	P	**Pn**	**20 32 10.6**	**-1.2**
RND	**Reindeer**	**3.58**	**29**	P	**Pn**	**20 32 12.7**	**-0.5**
DHY	**Denali Highway**	**3.73**	**40**	P	**Pn**	**20 32 15.0**	**-0.3**
BMRM	**Bremner River**	**4.01**	**77**	P	**Pn**	**20 32 17.5**	**-1.4**
HARP	**HAARP**	**4.17**	**57**	P	**Pn**	**20 32 20.8**	**-0.1**
PAX	**Paxson**	**4.33**	**49**	P	**Pn**	**20 32 23.2**	**0.0**
NEA	**Nenana**	**4.58**	**20**	P	**Pn**	**20 32 26.7**	**+0.3**
WRH	**Wood River Hil**	**4.67**	**25**	P	**Pn**	**20 32 26.8**	**-0.9**
DDM	**Donnelly Dome**	**4.72**	**40**	P	**Pn**	**20 32 29.6**	**+1.3**
MLY	**Manley**	**4.81**	**10**	P	**Pn**	**20 32 28.9**	**-0.6**
GCSA	**Galena City Sc**	**4.85**	**338**	P	**Pn**	**20 32 29.9**	**-0.1**
HDA	**Harding Lake**	**4.88**	**30**	P	**Pn**	**20 32 30.5**	**0.0**
CCB	**Clear Creek Bu**	**4.89**	**25**	P	**Pn**	**20 32 29.8**	**-0.7**
MENT	**Mentasta**	**5.00**	**55**	*e*P	**Pn**	**20 32 31.5**	**-0.6**
COLA	**College**	**5.08**	**24**	P	**Pn**	**20 32 32.6**	**-0.4**
MDM	**Murphy Dome**	**5.08**	**22**	P	**Pn**	**20 32 32.1**	**-1.0**
BALM	**Baldy**	**5.12**	**77**	P	**Pn**	**20 32 32.6**	**-1.1**
IL1	**Eielson Array**	**5.20**	**28**	P	**Pn**	**20 32 34.0**	**-0.7**
ILAR	**Eielson Array**	**5.20**	**28**	P	**Pn**	**20 32 33.8**	**-0.9**
ILAR				S	**Sn**	**20 33 29.3**	**-4.2**
ILAR	**Eielson Array**	**5.20**	**28**	P	**Pn**	**20 32 33.8**	**-0.9**
	35nm,0.3s,baz=214,slow=14,SNR=2366						
ILAR				S	**Sn**	**20 33 29.3**	**-4.2**
	4.8nm,0.3s,baz=217,slow=16,SNR=4.8						
DOT	**Dot Lake**	**5.25**	**47**	P	**Pn**	**20 32 35.2**	**-0.2**
GLM	**Gilmore Dome**	**5.27**	**25**	P	**Pn**	**20 32 35.5**	**-0.3**
MESA	**MESA**	**5.33**	**87**	P	**Pn**	**20 32 37.1**	**+0.4**
VNHG	**Veniaminof 1**	**5.36**	**223**	P	**Pn**	**20 32 37.8**	**+0.8**
IM3	**Indian Mountai**	**5.71**	**355**	P	**Pn**	**20 32 41.5**	**-0.1**
PNL	**Peninsula**	**6.68**	**90**	*e*P	**Pn**	**20 32 54.4**	**-0.3**
PNL				*e*Sn	**Sn**	**20 34 09.3**	**-0.1**
EGAK	**Eagle**	**6.94**	**45**	*e*P	**Pn**	**20 32 57.0**	**-1.1**
COLD	**Coldfoot**	**7.02**	**8**	*e*P	**Pn**	**20 32 58.4**	**-0.8**
WRAK	**Wrangell Islan**	**11.34**	**101**	*e*P	**Pn**	**20 33 58.8**	**+1.5**
CRAG	**Craig**	**11.45**	**107**	*e*P	**Pn**	**20 34 00.1**	**+1.3**
INK	**Inuvik**	**11.48**	**38**	P	**Pn**	**20 33 57.9**	**-1.3**
INK	**Inuvik**	**11.48**	**38**	P	**Pn**	**20 33 57.9**	**-1.3**
	0.7nm,0.3s,baz=238,slow=16,SNR=21						
DLBC	**Dease Lake**	**11.67**	**89**	P	**Pn**	**20 34 02.5**	**+0.6**
DLBC	**Dease Lake**	**11.67**	**89**	P	**Pn**	**20 34 02.5**	**+0.6**
	0.1nm,0.3s,baz=301,slow=19,SNR=2.6						
BBB	**Bella Bella**	**15.80**	**110**	P	**Pn**	**20 34 55.2**	**+0.6**
BBB	**Bella Bella**	**15.80**	**110**	P	**Pn**	**20 34 55.2**	**+0.6**
	0.1nm,0.3s,baz=347,slow=19,SNR=1.8						
YKA	**Yellowknife Ar**	**18.16**	**67**	P	**Pn**	**20 35 23.4**	**+0.2**
YKA				ScP	**ScP**	**20 43 13.9**	**+1.1**
YKA	**Yellowknife Ar**	**18.16**	**67**	P	**Pn**	**20 35 23.4**	**+0.2**
	0.9nm,0.3s,baz=277,slow=9.9,SNR=80						
YKA				ScP	**ScP**	**20 43 13.9**	**+1.1**
	0.1nm,0.3s,baz=281,slow=2.0,SNR=14						
RES	**Resolute Bay**	**24.94**	**32**	P	**P**	**20 36 30.5**	**-0.1**
RES	**Resolute Bay**	**24.94**	**32**	P	**P**	**20 36 30.5**	**-0.1**
	0.9nm,0.4s,baz=238,slow=13,SNR=13						
PDAR	**Pinedale Array**	**31.30**	**104**	pP	pP	20 37 58.0	+3.7
	0.4nm,0.8s,baz=302,slow=8.5,SNR=4.2						
FRB	**Frobisher Bay**	**36.91**	**47**	P	**P**	**20 38 16.5**	**+1.0**
FRB	**Frobisher Bay**	**36.91**	**47**	P	**P**	**20 38 16.5**	**+1.0**
	1.8nm,0.6s,baz=299,slow=9.5,SNR=3.6						
SPITS	**Spitsbergen Ar**	**41.58**	**3**	P	**P**	**20 38 53.7**	**-0.6**
SPITS	**Spitsbergen Ar**	**41.58**	**3**	P	**P**	**20 38 53.7**	**-0.6**
	0.4nm,0.3s,baz=8.8,slow=6.0,SNR=7.2						
TXAR	**Lajitas Array**	**44.93**	**111**	pP	pP	20 39 52.2	+2.7
	1.4nm,0.9s,baz=347,slow=5.1,SNR=4.5						
SONM	**Songino Array**	**54.74**	**306**	P	**P**	**20 40 36.3**	**+0.5**
SONM	**Songino Array**	**54.74**	**306**	P	**P**	**20 40 36.3**	**+0.5**
	5.0nm,0.5s,baz=44,slow=5.7,SNR=46						
ZALV	**Zalesovo Beam**	**57.22**	**324**	P	**P**	**20 40 53.5**	**+0.4**
ZALV	**Zalesovo Beam**	**57.22**	**324**	P	**P**	**20 40 53.5**	**+0.4**
	4.7nm,0.5s,baz=30,slow=6.9,SNR=37						
FINES	**FINESS Array B**	**58.56**	**1**	P	**P**	**20 41 02.7**	**+0.4**
FINES	**FINESS Array B**	**58.56**	**1**	P	**P**	**20 41 02.7**	**+0.4**
	3.7nm,1.1s,baz=14,slow=8.8,SNR=3.8						
BVAR	**Borovoye Array**	**61.87**	**332**	P	**P**	**20 41 25.3**	**+0.3**
BVAR	**Borovoye Array**	**61.87**	**332**	P	**P**	**20 41 25.3**	**+0.3**
	3.4nm,0.5s,baz=31,slow=6.5,SNR=29						
MKAR	**Makanchi Array**	**64.29**	**321**	P	**P**	**20 41 41.0**	**-0.2**
MKAR	**Makanchi Array**	**64.29**	**321**	P	**P**	**20 41 41.0**	**-0.2**
	1.2nm,0.5s,baz=37,slow=6.7,SNR=28						
AKTO	**Aktyubinsk**	**66.85**	**339**	P	**P**	**20 41 57.6**	**+0.1**
AKTO	**Aktyubinsk**	**66.85**	**339**	P	**P**	**20 41 57.6**	**+0.1**
	0.9nm,0.5s,baz=29,slow=3.6,SNR=3.8						
AAK	**Ala-Archa**	**70.39**	**325**	P	**P**	**20 42 19.4**	**-0.4**
AAK	**Ala-Archa**	**70.39**	**325**	P	**P**	**20 42 19.4**	**-0.4**
	0.7nm,0.5s,baz=218,slow=3.4,SNR=3.5						
TAPN	**Taplejung**	**79.78**	**308**	*e*P	**P**	**20 43 14.4**	**+0.4**
	10nm,0.6s						
GUN	**Gumba**	**79.98**	**310**	*e*P	**P**	**20 43 15.9**	**+0.7**
KKN	**Kakani**	**80.32**	**310**	*e*P	**P**	**20 43 16.9**	**+0.1**
ODAN	**Odare**	**80.34**	**308**	*e*P	**P**	**20 43 17.6**	**+0.6**
DANN	**Dangsing**	**80.38**	**312**	*e*P	**P**	**20 43 18.4**	**+1.1**
	20nm,0.7s						
RAMN	**Ramite**	**80.57**	**309**	*e*P	**P**	**20 43 18.4**	**+0.2**
	7.5nm,0.6s						
PYUN	**Piuthan**	**80.89**	**312**	*e*P	**P**	**20 43 20.3**	**+0.4**
KOLN	**Koldanda**	**80.97**	**312**	*e*P	**P**	**20 43 20.6**	**+0.3**
	4.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**82.89**	**295**	P	**P**	**20 43 29.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**82.89**	**295**	P	**P**	**20 43 29.8**	**-0.4**
	0.3nm,0.2s,baz=8.3,slow=5.7,SNR=5.1						
BOSA	**Boshof**	**148.26**	**4**	PKPbc	**PKPbc**	**20 50 50.9**	**+0.3**
BOSA	**Boshof**	**148.26**	**4**	PKPbc	**PKPbc**	**20 50 50.9**	**+0.3**
	2.0nm,0.5s,baz=225,slow=15,SNR=6.0						
QSPA	**South Pole Qui**	**150.12**	**180**	PKPbc	**PKPbc**	**20 50 53.7**	**-0.3**
QSPA	**South Pole Qui**	**150.12**	**180**	PKPbc	**PKPbc**	**20 50 53.7**	**-0.3**
	2.2nm,0.8s,baz=26,slow=0.5,SNR=6.8						

*CSEM **06** 20:55:43.5, 42°.32N×13°.37E, h10km, After ROM*

ROM 06 20:55:43.5±0.1**, 42°.32N×13°.37E, h10**km±1km**, Ml1.9**/6**, 2C-2D, Error ellipse: s-maj=1.4km s-min=1.2km az=108.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**37**	⇓*i*Pg	Pg	20 55 46.0	+0.5
AQU				Sg	Sg	20 55 47.4	+0.4
	5μm,0.3s						
AQU	**L'Aquila**	**0.04**	**37**	⇓*i*Pg	Pg	20 55 46.0	+0.5
AQU				Sg	Sg	20 55 47.4	+0.4
	5μm,0.3s						
FAGN	**Fagnano**	**0.17**	**110**	Pg	Pg	20 55 47.9	+0.6
FAGN				Sg	Sg	20 55 51.1	+1.3
FAGN	**Fagnano**	**0.17**	**110**	Pg	Pg	20 55 47.9	+0.6
FAGN				Sg	Sg	20 55 51.1	+1.3
FIAM	**Fiamignano**	**0.20**	**254**	⇑*i*Pg	Pg	20 55 48.5	+0.7
FIAM				Sg	Sg	20 55 51.8	+1.0
FIAM	**Fiamignano**	**0.20**	**254**	⇑*i*Pg	Pg	20 55 48.5	+0.7
FIAM				Sg	Sg	20 55 51.8	+1.0
CAMP	**Campotosto**	**0.21**	**7**	Pg	Pg	20 55 48.4	+0.2
CAMP				Sg	Sg	20 55 51.8	+0.5
CAMP	**Campotosto**	**0.21**	**7**	Pg	Pg	20 55 48.4	+0.2
CAMP				Sg	Sg	20 55 51.8	+0.5
PTQR	**Pietraquaria**	**0.30**	**176**	Pg	Pg	20 55 49.8	+0.1
PTQR				Sg	Sb	20 55 55.2	-1.1
PTQR	**Pietraquaria**	**0.30**	**176**	Pg	Pg	20 55 49.8	+0.1
PTQR				Sg	Sb	20 55 55.2	-1.1
TERO	**Teramo**	**0.34**	**30**	Pg	Pg	20 55 50.3	-0.2
TERO				Sg	Sb	20 55 56.6	-0.8
	49nm,0.2s						
TERO	**Teramo**	**0.34**	**30**	Pg	Pg	20 55 50.3	-0.2
TERO				Sg	Sb	20 55 56.6	-0.8
	49nm,0.2s						
VCEL	**Villa Celiera**	**0.35**	**78**	Pg	Pg	20 55 51.4	+0.7
	166nm,0.6s						
VCEL	**Villa Celiera**	**0.35**	**78**	Pg	Pg	20 55 51.4	+0.7
	166nm,0.6s						
CERT	**Cerreto**	**0.47**	**218**	Pg	Pg	20 55 53.1	+0.2
CERT	**Cerreto**	**0.47**	**218**	Pg	Pg	20 55 53.1	+0.2
VVLD	**Villa Vallelon**	**0.49**	**158**	Pg	Pg	20 55 53.7	+0.5
	124nm,0.5s						
VVLD	**Villa Vallelon**	**0.49**	**158**	Pg	Pg	20 55 53.7	+0.5
	124nm,0.5s						
INTR	**Introdacqua**	**0.50**	**128**	Pg	Pg	20 55 53.7	+0.2
INTR				Sg	Sg	20 56 00.5	+0.3
	108nm,0.3s						
INTR	**Introdacqua**	**0.50**	**128**	Pg	Pg	20 55 53.7	+0.2
INTR				Sg	Sg	20 56 00.5	+0.3
	108nm,0.3s						
MNS	**Montasola**	**0.52**	**277**	Pg	Pg	20 55 53.6	0.0
	64nm,0.4s						
MNS	**Montasola**	**0.52**	**277**	Pg	Pg	20 55 53.6	0.0
	64nm,0.4s						
NRCA	**Norcia**	**0.54**	**340**	Pg	Pg	20 55 54.4	+0.2
NRCA				Sg	Sb	20 56 03.2	0.0
	34nm,0.2s						
NRCA	**Norcia**	**0.54**	**340**	Pg	Pg	20 55 54.4	+0.2
NRCA				Sg	Sb	20 56 03.2	0.0
	34nm,0.2s						
MTCE	**Montecelio**	**0.56**	**237**	Pg	Pg	20 55 54.1	-0.3
	44nm,0.6s						
MTCE	**Montecelio**	**0.56**	**237**	Pg	Pg	20 55 54.1	-0.3
	44nm,0.6s						
OFFI	**Offida**	**0.65**	**21**	Pg	Pb	20 55 56.8	-0.2
OFFI	**Offida**	**0.65**	**21**	Pg	Pb	20 55 56.8	-0.2
GIUL	**Giuliano Di Ro**	**0.77**	**187**	Pg	Pb	20 55 59.5	+0.4
GIUL	**Giuliano Di Ro**	**0.77**	**187**	Pg	Pb	20 55 59.5	+0.4
ASSB	**Assisi San Ben**	**0.89**	**324**	Pg	Pg	20 56 00.7	-0.1
ASSB	**Assisi San Ben**	**0.89**	**324**	Pg	Pg	20 56 00.7	-0.1
ARVD	**Arcevia**	**1.22**	**345**	Pg	Pn	20 56 06.3	-0.3
ARVD	**Arcevia**	**1.22**	**345**	Pg	Pn	20 56 06.3	-0.3

*CSEM **06** 20:55:57.2, 42°.39N×13°.35E, h10km, After ROM*

ROM 06 20:55:57.2±0.1**, 42°.39N×13°.35E, h10**km±1km**, Ml1.6**/2**, 2D, Error ellipse: s-maj=2.3km s-min=1.7km az=112.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**129**	⇓*i*Pg	Pg	20 55 59.5	+0.2
AQU				Sg	Sg	20 56 00.8	0.0
AQU	**L'Aquila**	**0.05**	**129**	⇓*i*Pg	Pg	20 55 59.5	+0.2
AQU				Sg	Sg	20 56 00.8	0.0
CAMP	**Campotosto**	**0.16**	**16**	Pg	Pg	20 56 01.6	+0.7
CAMP				Sg	Sg	20 56 04.2	+0.7
CAMP	**Campotosto**	**0.16**	**16**	Pg	Pg	20 56 01.6	+0.7
CAMP				Sg	Sg	20 56 04.2	+0.7
FIAM	**Fiamignano**	**0.21**	**236**	Pg	Pg	20 56 02.4	+0.7
FIAM				Sg	Sg	20 56 05.5	+0.7
FIAM	**Fiamignano**	**0.21**	**236**	Pg	Pg	20 56 02.4	+0.7
FIAM				Sg	Sg	20 56 05.5	+0.7
FAGN	**Fagnano**	**0.21**	**124**	Pg	Pb	20 56 02.9	-0.3
FAGN				Sg	Sg	20 56 06.3	+1.6
FAGN	**Fagnano**	**0.21**	**124**	Pg	Pb	20 56 02.9	-0.3
FAGN				Sg	Sg	20 56 06.3	+1.6
TERO	**Teramo**	**0.30**	**38**	Pg	Pg	20 56 03.6	+0.2
TERO				Sg	Sg	20 56 08.2	+0.7
TERO	**Teramo**	**0.30**	**38**	Pg	Pg	20 56 03.6	+0.2
TERO				Sg	Sg	20 56 08.2	+0.7
PTQR	**Pietraquaria**	**0.36**	**174**	Pg	Pb	20 56 06.0	+0.1
PTQR				Sg	Sg	20 56 10.0	+0.5
PTQR	**Pietraquaria**	**0.36**	**174**	Pg	Pb	20 56 06.0	+0.1
PTQR				Sg	Sg	20 56 10.0	+0.5
NRCA	**Norcia**	**0.48**	**339**	Pg	Pg	20 56 06.8	0.0
NRCA				Sg	Sb	20 56 14.6	-0.5
NRCA	**Norcia**	**0.48**	**339**	Pg	Pg	20 56 06.8	0.0
NRCA				Sg	Sb	20 56 14.6	-0.5
CERT	**Cerreto**	**0.52**	**212**	Pg	Pb	20 56 08.3	-0.1
CERT	**Cerreto**	**0.52**	**212**	Pg	Pb	20 56 08.3	-0.1

*NIED **06** 20:59:00, 24°.80N×122°.50E, h5km, Mw4.2 Best double couple: M0 1.99000×10¹⁵ NP1:φs43.00000°, δ62.00000°, λ-141.00000°. NP2:φs292.00000°, δ56.00000°, λ-35.00000°.*

*IDC **06** 20:59:42.5±0.9, 24°.67N×122°.33E, h0km, mb3.6/8, mb1 3.8/10, mb1mx3.6/27, mbtmp3.6/10, ML4.2/1, MS3.2/7, Ms1 3.3/7, ms1mx3.0/37, Error ellipse: s-maj=23.0km s-min=18.3km az=77.0*

*ISCJB **06** 20:59:44.3±0.7, 24°.83N±0°.02×122°.48E±0°.02, h11km±5km, mb3.6/8, MS3.3/6, Error ellipse: s-maj=3.8km s-min=2.4km az=0.8*

*JMA **06** 20:59:45.6±0.3, 24°.80N×122°.46E, h37km, M3.9*

*TAP **06** 20:59:45.0, 24°.80N×122°.41E, h16km, ML4.4, C*

*BJI **06** 20:59:46.5, 24°.89N×122°.22E, h6km, mB4.5/5, mb3.9/8, ML4.0/4, Ms3.9/7, Ms7 3.8/7*

ISC 06 20:59:45.8±0.6**, 24°.79N**±0°.03**×122°.45E**±0°.02**, h20**km±3km**, n86, σ1.07**/116**, mb3.5**/8**, MS3.2**/6**, 10C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.47**	**298**	⇓*i*P	**Pg**	**20 59 54.3**	**-1.2**
	baz=298						
TWB1				*i* S	**Sg**	**20 59 59.9**	**-2.1**
	baz=298						
TWC	**Suao**	**0.57**	**252**	⇑*i*P	**Pb**	**20 59 55.5**	**-1.7**
	baz=256						
TWC				S	**Sb**	**21 00 03.4**	**-1.5**
	baz=256						
YOJ	**Yonaguni jima**	**0.60**	**122**	⇑*i*P	**Pb**	**20 59 57.7**	**0.0**
	baz=114						
YOJ				*i* S	**Sg**	**21 00 06.0**	**+0.1**
	baz=114						
YOJ	**Yonaguni jima**	**0.60**	**122**	P	**Pb**	**20 59 57.6**	**0.0**
YOJ				S	**Sg**	**21 00 06.1**	**+0.1**
ILA	**Ilan**	**0.64**	**268**	*e*P	**Pb**	**20 59 57.2**	**-1.0**
	baz=266						
ILA				*e*S	**Sb**	**21 00 06.5**	**-0.3**
	baz=266						
NWF	**Wu-fen Shan**	**0.67**	**295**	⇓*i*P	**Pb**	**20 59 58.4**	**-0.5**
	baz=295						
NWF				*i* S	**Sb**	**21 00 07.4**	**-0.4**
	baz=295						
TWE	**Neicheng**	**0.71**	**265**	⇑*i*P	**Pb**	**20 59 58.2**	**-1.4**
	baz=263						
TWE				*e*S	**Sb**	**21 00 07.4**	**-1.6**
	baz=263						
ENA	**Nanau**	**0.74**	**241**	⇑P	**Pb**	**20 59 58.5**	**-1.5**
	baz=245						
ENA				*e*S	**Sb**	**21 00 08.7**	**-0.9**
	baz=245						
EHP	**Heping Village**	**0.80**	**234**	*e*P	**Pb**	**21 00 00.1**	**-0.9**
	baz=230						
ENTT	**Nioudou**	**0.82**	**260**	⇑P	**Pb**	**20 59 59.9**	**-1.5**
	baz=245						
ENTT				*e*S	**Sb**	**21 00 11.1**	**-0.8**
	baz=245						
TAP1	**Taipei**	**0.88**	**287**	*e*P	**Pb**	**21 00 02.0**	**-0.4**
	baz=286						
TAP1				*i* S	**Sb**	**21 00 13.2**	**-0.5**
	baz=286						
TAP	**Taipei**	**0.89**	**287**	*e*P	**Pb**	**21 00 02.2**	**-0.4**
	baz=286						
TAP				*e*S	**Sb**	**21 00 13.8**	**-0.3**
	baz=286						
PCYT	**Pengchaiyu**	**0.91**	**338**	*e*P	**Pb**	**21 00 01.9**	**-1.0**
	baz=333						
TWY	**Chenhua**	**0.91**	**303**	P	**Pb**	**21 00 02.2**	**-0.7**
	baz=302						
TWY				*i* S	**Sb**	**21 00 14.3**	**-0.4**
	baz=302						
NSK	**Sanguang**	**1.00**	**264**	⇑P	**Pb**	**21 00 03.3**	**-1.2**
	baz=262						
NSK				S	**Sb**	**21 00 15.5**	**-1.8**
	baz=262						
NNS	**Nan Shan**	**1.04**	**251**	⇑P	**Pb**	**21 00 04.1**	**-1.1**
	baz=248						
NNS				S	**Sb**	**21 00 17.6**	**-0.8**
	baz=248						
TWD	**Chiawan**	**1.05**	**228**	⇑P	**Pb**	**21 00 04.4**	**-0.9**
	baz=231						
TWD				*e*S	**Sn**	**21 00 19.4**	**-0.1**
	baz=231						
HWA	**Hwalien**	**1.11**	**224**	*e*P	**Pg**	**21 00 07.2**	**-0.2**
	baz=201						
HWA				*e*S	**Sn**	**21 00 21.2**	**+0.1**
	baz=201						
NCU	**National Centr**	**1.16**	**279**	*e*P	**Pn**	**21 00 06.9**	**-0.1**
	baz=278						
NCU				*e*S	**Sn**	**21 00 22.4**	**+0.1**
	baz=278						
IRIF	**Iriomote-Funau**	**1.25**	**111**	P	**Pn**	**21 00 06.9**	**-1.3**
WHF	**Hehuan Shan**	**1.25**	**240**	⇑P	**Pn**	**21 00 08.1**	**-0.6**
	baz=247						
WHF				*e*S	**Sb**	**21 00 23.9**	**-1.1**
	baz=247						
TWT	**Tachien**	**1.27**	**246**	*e*P	**Pn**	**21 00 08.9**	**+0.2**
	baz=244						
TWT				*e*S	**Sb**	**21 00 25.9**	**+0.5**
	baz=244						
NSTT	**Nanjuang**	**1.33**	**264**	P	**Pn**	**21 00 08.9**	**-0.3**
	baz=262						
NSTT				*e*S	**Sn**	**21 00 25.9**	**-0.5**
	baz=262						
ESL	**Shilin**	**1.34**	**224**	⇑*e*P	**Pn**	**21 00 09.0**	**-0.4**
	baz=205						
ESL				*e*S	**Sb**	**21 00 27.2**	**+0.2**
	baz=205						
HSN	**Hsinchu**	**1.34**	**271**	*e*P	**Pn**	**21 00 08.9**	**-0.6**
	baz=271						
HATJ	**Hateruma jima**	**1.43**	**120**	P	**Pn**	**21 00 10.0**	**-0.7**
HATJ				S	**Sn**	**21 00 28.6**	**-0.4**
JKRS	**Kuro-shima**	**1.52**	**111**	P	**Pn**	**21 00 11.2**	**-0.7**
JKRS				*e*S	**Sn**	**21 00 30.6**	**-0.6**
NSY	**Sanyi**	**1.58**	**257**	*e*P	**Pb**	**21 00 13.9**	**-0.5**
	baz=255						
NSY				*e*S	**Sb**	**21 00 34.6**	**+0.7**
	baz=255						
TWQ1	**Liyutan**	**1.59**	**254**	*e*P	**Pb**	**21 00 14.2**	**-0.3**
	baz=253						
TWQ1				*e*S	**Sb**	**21 00 35.0**	**+0.8**
	baz=253						
JIJ	**Ishigaki jima**	**1.60**	**105**	P	**Pn**	**21 00 12.0**	**-1.0**
JIJ				*e*S	**Sn**	**21 00 31.6**	**-1.5**
EHY	**Hungye**	**1.64**	**219**	*e*P	**Pn**	**21 00 13.0**	**-0.5**
	baz=217						
SMLT	**Sun Moon Lake**	**1.68**	**238**	*e*P	**Pb**	**21 00 15.4**	**-0.7**
	baz=242						
SMLT				*e*S	**Sg**	**21 00 38.5**	**-1.4**
	baz=242						
TYC	**Yuchr**	**1.70**	**239**	*i* P	**Pb**	**21 00 15.8**	**-0.6**
	baz=224						
TCU	**Taichung**	**1.74**	**249**	*e*P	**Pb**	**21 00 16.3**	**-0.7**
	baz=267						
TCU				*e*S	**Sb**	**21 00 39.3**	**+0.8**
	baz=267						
TWF1	**Yuli**	**1.77**	**217**	*e*P	**Pn**	**21 00 14.6**	**-0.8**
	baz=202						
WNT	**Mingjian**	**1.85**	**241**	*e*P	**Pb**	**21 00 18.1**	**-0.8**
	baz=260						
WNT				*e*S	**Sg**	**21 00 43.6**	**-1.8**
	baz=260						
CHKT	**Chengkung**	**1.95**	**211**	*e*P	**Pn**	**21 00 16.6**	**-1.2**
	baz=194						
ALS	**Alishan**	**1.97**	**230**	*e*P	**Pn**	**21 00 19.6**	**+1.3**
	baz=215						
CHN5	**Tsauling**	**2.00**	**234**	*e*P	**Pb**	**21 00 20.6**	**-1.1**
	baz=216						
CHN5				*e*S	**Sb**	**21 00 46.9**	**+0.7**
	baz=216						
WGK	**Gukeng**	**2.04**	**238**	*e*P	**Pn**	**21 00 20.3**	**+1.3**
	baz=236						
JTJ	**Tarama**	**2.05**	**94**	P	**Pn**	**21 00 19.9**	**+0.7**
ELDTW	**Lidau**	**2.06**	**220**	*e*P	**Pn**	**21 00 19.1**	**-0.3**
	baz=204						
CHN2	**Minshiung**	**2.19**	**236**	*e*P	**Pn**	**21 00 22.9**	**+1.7**
	baz=218						
CHN2				*e*S	**Sb**	**21 00 52.2**	**+0.7**
	baz=218						
CHN4	**Tsaushan**	**2.22**	**230**	*e*P	**Pb**	**21 00 23.8**	**-1.4**
	baz=213						
CHN4				*e*S	**Sb**	**21 00 51.2**	**-1.1**
	baz=213						
CHY	**Chiayi**	**2.25**	**236**	*e*P	**Pn**	**21 00 22.4**	**+0.5**
	baz=250						
WTP	**Ta-pu**	**2.27**	**228**	*e*P	**Pn**	**21 00 23.7**	**+1.3**
	baz=210						
TWG	**Pinlang**	**2.33**	**213**	*e*P	**Pn**	**21 00 23.1**	**0.0**
	baz=211						
WSF	**Szhu**	**2.33**	**241**	*e*P	**Pn**	**21 00 23.5**	**+0.4**
	baz=239						
TWK	**Hsinying**	**2.35**	**230**	*e*P	**Pn**	**21 00 25.1**	**+1.8**
	baz=213						
CHN1	**Nanshi**	**2.37**	**228**	*e*P	**Pb**	**21 00 25.9**	**-2.0**
	baz=226						
CHN8	**Yiju**	**2.50**	**235**	*e*P	**Pn**	**21 00 26.0**	**+0.7**
	baz=218						
CHN3	**Shinhua**	**2.56**	**229**	*e*P	**Pb**	**21 00 29.2**	**-1.8**
	baz=227						
ECL	**Taimali**	**2.57**	**212**	*e*P	**Pn**	**21 00 25.1**	**-1.4**
	baz=211						
SCLT	**Jiali**	**2.61**	**233**	*e*P	**Pb**	**21 00 30.2**	**-1.8**
	baz=216						
SCLT				*e*S	**Sb**	**21 01 01.8**	**-1.8**
	baz=216						
SSD	**Sandimen**	**2.62**	**220**	*e*P	**Pn**	**21 00 28.2**	**+1.1**
	baz=218						
TWM1	**Shoushan**	**2.69**	**224**	*e*P	**Pb**	**21 00 30.8**	**-2.6**
	baz=222						
SGLT	**Jiouru**	**2.73**	**222**	*e*P	**Pb**	**21 00 32.4**	**-1.5**
	baz=206						
TAW	**Tawu**	**2.81**	**211**	*e*P	**Pn**	**21 00 30.8**	**+1.2**
	baz=209						
EAST	**Anshuo**	**2.81**	**212**	*e*P	**Pn**	**21 00 31.0**	**+1.3**
	baz=210						
LAY	**Lan-yu**	**2.86**	**197**	*e*P	**Pn**	**21 00 29.6**	**-0.7**
	baz=195						
PNG	**Penghu**	**2.91**	**246**	*e*P	**Pn**	**21 00 31.1**	**+0.1**
	baz=244						
SCZT	**Fangliau**	**2.93**	**215**	*e*P	**Pn**	**21 00 33.6**	**+2.3**
	baz=201						
SCZT				*e*S	**Sn**	**21 01 07.5**	**+1.6**
	baz=201						
WDGT	**Dungji**	**2.97**	**240**	*e*P	**Pn**	**21 00 32.9**	**+1.0**
	baz=240						
WDGT				*e*S	**Sn**	**21 01 07.9**	**+1.0**
	baz=240						
HEN	**Hengchun**	**3.18**	**210**	*e*P	Pn	21 00 37.7	+2.9
	baz=197						
TWK1	**Hengchun**	**3.21**	**208**	*e*P	**Pn**	**21 00 35.4**	**+0.2**
	baz=207						
TWK1				*e*S	**Sn**	**21 01 13.0**	**+0.2**
	baz=207						
QZH	**Quanzhou**	**3.51**	**273**	Pn	**Pn**	**21 00 40.1**	**+0.9**
QZH				smax	smax		
	comp=N,920nm,0.9s						
QZH				smax	smax		
	comp=E,280nm,0.8s						
QZH				LR	LR		
	comp=N,3μm,10.8s						
QZH				LR	LR		
	comp=E,2μm,13.4s						
QZH				LR	LR		
	comp=Z,2μm,10.4s						
KNM	**Kinmen**	**3.67**	**265**	*e*P	**Pn**	**21 00 41.8**	**+0.2**
	baz=264						
JOW	**Kunigami**	**5.63**	**68**	Pn	**Pn**	**21 01 10.7**	**+2.2**
	baz=99,slow=19,SNR=2.9						
NJ2	**Nanjing**	**7.90**	**337**	*e*P	Pb	21 01 58.5	-3.6
NJ2				S	Sn	21 03 18.7	+10

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
NJ2				LR	LR		
	comp=N,320nm,11.1s						
NJ2				LR	LR		
	comp=E,450nm,12.0s						
NJ2				LR	LR		
	comp=Z,330nm,13.3s						
KSRS	Korea Array	13.47	19	Pn	P	21 03 00.5	-4.5
	baz=200,slow=14,SNR=2.4						
KSRS				LR	LR	21 08 37.0	
	comp=Z,152nm,18.1s,baz=182,slow=39						
MAT	Matsushiro	17.89	45	P	Pn	21 03 53.6	0.0
MJAR	Matsushiro Arr	17.89	45	P	P	21 03 53.9	-0.2
	comp=Z,0.7nm,0.3s,baz=243,slow=6.2,SNR=7.6						
MJAR				LR	LR	21 11 01.1	
	comp=Z,71nm,20.7s,baz=245,slow=38						
CN2	Changchun	19.13	7	*e*P	Pn	21 04 09.9	+1.4
LZH	Lanzhou	19.57	309	*e*P	Pn	21 04 24.0	+10
LZH				pP	pP	21 04 28.0	+10
LZH				sP	sP	21 04 30.1	+9.3
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
USRK	Ussuriysk Arra	20.88	20	P	Pn	21 04 28.0	-1.2
	comp=Z,0.4nm,0.6s,baz=202,slow=9.3,SNR=2.2						
CMAR	Chiang Mai Arr	22.73	259	P	P	21 04 44.9	-1.8
	comp=Z,0.4nm,0.6s,baz=71,slow=7.8,SNR=3.8						
GTA	Gaotai	24.00	313	*e*P	P	21 04 59.7	+0.3
GTA				pP	pP	21 05 06.1	+0.8
GTA				sP	sP	21 05 08.9	+1.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.9s						
GTA				pmax	pmax		
	comp=Z,99nm,4.3s						
GTA				LR	LR		
	comp=N,180nm,16.6s						
GTA				LR	LR		
	comp=E,170nm,15.4s						
GTA				LR	LR		
	comp=Z,170nm,14.5s						
SONM	Songino Array	26.29	335	P	P	21 05 21.4	+1.3
	comp=Z,3.2nm,0.8s,baz=145,slow=9.1,SNR=25						
SONM				LR	LR	21 15 52.8	
	comp=Z,64nm,20.4s,baz=233,slow=37						
PSI	Prapat	31.50	230	LR	LR	21 18 46.7	
	comp=Z,53nm,20.2s,baz=10,slow=36						
MKAR	Makanchi Array	38.72	315	P	P	21 07 07.7	-0.9
	comp=Z,0.6nm,0.7s,baz=102,slow=11,SNR=7.9						
PETK	Petropavlovsk-	38.73	34	LR	LR	21 24 46.4	
	comp=Z,35nm,18.7s,baz=154,slow=39						
ZALV	Zalesovo Beam	40.38	326	P	P	21 07 21.9	-0.4
	comp=Z,0.8nm,0.6s,baz=111,slow=8.1,SNR=7.5						
ZALV				LR	LR	21 26 29.1	
	comp=Z,14nm,21.9s,baz=72,slow=40						
WRA	Warramunga Arr	45.94	164	P	P	21 08 07.1	-0.4
	comp=Z,3.3nm,0.8s,baz=346,slow=8.5,SNR=6.6						
ASAR	Alice Springs	49.43	166	P	P	21 08 33.3	-1.3
	comp=Z,1.4nm,0.9s,baz=345,slow=9.7,SNR=12						
NOA	NORSAR Array B	78.23	332	LR	LR	21 48 38.8	
	comp=Z,24nm,19.5s,baz=200,slow=38						
YKA	Yellowknife Ar	81.97	23	P	P	21 12 03.8	-0.2
	comp=Z,0.1nm,0.5s,baz=311,slow=4.9,SNR=3.0						

*ISCJB **06** 21:01:39.9±0.5, 55.°16S±0.°07×28.°2W±0.°2, h10km, mb4.5/13, MS3.8/12, Error ellipse: s-maj=12.8km s-min=9.2km az=159.6*

*IDC **06** 21:01:40.2±0.5, 55.°14S×28.°19W, h0km, mb4.4/11, mb1 4.5/12, mb1mx4.4/19, mbtmp4.5/12, ML4.5/1, MS3.8/13, Ms1 3.8/13, ms1mx3.7/26, Error ellipse: s-maj=18.0km s-min=16.2km az=44.0*

*NEIC **06** 21:01:45.4±0.2, 55.°21S×28.°29W, h35km, mb4.6/7, Error ellipse: s-maj=8.4km s-min=7.5km az=62.0*

ISC 06 21:01:41.8±0.4**, 55.°14S**±0.°08×**28.°2W**±0.°1**, h10**km**, n67, σ0.s82**/64**, mb4.6**/13**, MS3.9**/12**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	17.86	158	*e*Pn	P	21 05 53.4	+2.7
VNA3	Neumayer Olymp	18.05	161	*e*Pn	P	21 05 53.1	+0.3
VNA2	Neumayer--Watz	18.26	158	*e*Pn	Pn	21 05 54.6	-0.3
	baz=316,slow=14						
SNAA	Sanae	19.82	156	*e*Pn	P	21 06 11.3	-0.9
SNAA	Sanae	19.82	156	P	P	21 06 11.7	-0.5
	1.4nm,0.6s						
SNAA				*e*S	Sn	21 09 56.1	0.0
SNAA	Sanae	19.82	156	P	P	21 06 11.7	-0.5
	1.4nm,0.3s,baz=302,slow=12,SNR=96						
SNAA				LR	LR	21 11 43.9	
	comp=Z,102nm,18.5s,baz=13,slow=30						
PMSA	Palmer Station	20.07	227	*e*P	P	21 06 14.3	-0.6
	27nm,0.8s						
PMSA	Palmer Station	20.07	227	P	P	21 06 15.7	+0.9
	19nm,0.7s,baz=249,slow=19,SNR=3.3						
PMSA				LR	LR	21 12 09.1	
	comp=Z,275nm,20.2s,baz=117,slow=31						
USHA	Ushuaia	22.85	254	P	P	21 06 45.1	+0.4
USHA	Ushuaia	22.85	254	P	P	21 06 45.1	+0.4
	16nm,1.0s,baz=106,slow=8.6,SNR=4.3						
USHA				LR	LR	21 12 50.5	
	comp=Z,183nm,20.2s,baz=162,slow=29						
PLCA	Paso Flores	31.26	280	LR	LR	21 20 21.4	
	comp=Z,129nm,19.4s,baz=6.7,slow=36						
CPUP	Villa Florida	35.76	312	P	P	21 08 40.6	-0.1
CPUP	Villa Florida	35.76	312	P	P	21 08 40.6	-0.1
	4.8nm,0.6s,baz=134,slow=6.3,SNR=19						
CPUP				LR	LR	21 22 38.6	
	comp=Z,94nm,18.4s,baz=159,slow=35						
MAW	Mawson	41.24	144	P	P	21 09 25.9	-0.4
MAW	Mawson	41.24	144	P	P	21 09 25.9	-0.4
	4.2nm,0.5s,baz=238,slow=11,SNR=4.3						
MAW				LR	LR	21 26 10.5	
	comp=Z,214nm,19.1s,baz=90,slow=36						
BDFB	Brasilia	42.27	331	P	P	21 09 33.6	-1.9
BDFB	Brasilia	42.27	331	P	P	21 09 33.6	-1.9
	1.4nm,0.5s,baz=68,slow=11,SNR=2.1						
BOSA	Boshof	46.34	78	*e*P	P	21 10 07.9	0.0
BOSA	Boshof	46.34	78	P	P	21 10 07.0	-0.9
	3.0nm,0.5s,baz=155,slow=11,SNR=16						
BOSA				LR	LR	21 25 25.0	
	comp=Z,131nm,19.9s,baz=189,slow=31						
VNDA	Vanda	47.46	183	P	P	21 10 15.7	-0.2
VNDA	Vanda	47.46	183	P	P	21 10 15.7	-0.2
	4.5nm,0.7s,baz=196,slow=5.5,SNR=38						
LBTB	Lobatse	49.33	75	*e*P	P	21 10 31.4	+0.2
	2.0nm,0.6s						
LBTB	Lobatse	49.33	75	P	P	21 10 30.8	-0.3
	2.3nm,0.6s,baz=231,slow=7.4,SNR=7.3						
LPAZ	La Paz	49.36	306	P	P	21 10 32.7	+0.7
LPAZ	La Paz	49.36	306	P	P	21 10 32.7	+0.7
	4.6nm,0.5s,baz=144,slow=5.8,SNR=30						
SAML	Samuel	53.73	315	*e*P	P	21 11 03.8	-0.2
	11nm,1.3s						
CASY	Casey	54.97	161	*e*P	P	21 11 11.0	-1.4
	23nm,1.3s						
CASY				*e*PcP	PcP	21 12 16.9	+2.9
ATAH	Atahualpa	62.22	301	LR	LR	21 38 39.1	
	comp=Z,80nm,19.6s,baz=183,slow=36						
DBIC	Dimbokro	64.59	26	*e*P	P	21 12 19.0	-0.2
	2.6nm,0.7s						
DBIC	Dimbokro	64.59	26	P	P	21 12 19.7	+0.6
	1.3nm,0.5s,baz=160,slow=8.3,SNR=4.4						
DBIC				LR	LR	21 34 06.8	
	comp=Z,48nm,18.8s,baz=99,slow=30						
ROSC	El Rosal	70.86	311	LR	LR	21 41 50.8	
	comp=Z,56nm,18.6s,baz=11,slow=34						
TOA0	Torodi Ar. Sit	72.56	31	*e*P	P	21 13 09.4	+0.5
TORD	Torodi Ar. Bea	72.56	31	P	P	21 13 09.8	+0.9
TORD	Torodi Ar. Bea	72.56	31	P	P	21 13 09.8	+0.9
	4.0nm,0.4s,baz=200,slow=6.5,SNR=129						
TORD				LR	LR	21 38 05.2	
	comp=Z,120nm,20.8s,baz=205,slow=30						
KMBO	Kilima Mbogo	75.28	70	LR	LR	21 45 45.2	
	comp=Z,120nm,18.5s,baz=102,slow=35						
TAM	Tamanrasset	82.81	31	*e*P	P	21 14 06.9	+0.8
	7.8nm,1.2s						
ESDC	Sonseca Array	96.70	19	LR	LR	21 53 12.7	
	comp=Z,39nm,21.7s,baz=50,slow=32						
ASAR	Alice Springs	100.04	163	P	Pdif	21 15 25.6	-1.8
ASAR	Alice Springs	100.04	163	P	Pdif	21 15 25.6	-1.8
	0.6nm,0.9s,baz=175,slow=4.3,SNR=7.3						
FINES	FINESS Array B	123.86	28	PKP	PKPdf	21 20 38.2	-0.3
FINES	FINESS Array B	123.86	28	PKP	PKPdf	21 20 38.2	-0.3
	1.3nm,0.6s,baz=156,slow=0.6,SNR=6.7						
CMAR	Chiang Mai Arr	125.95	111	PKP	PKPdf	21 20 44.0	+0.2
CMAR	Chiang Mai Arr	125.95	111	PKP	PKPdf	21 20 44.0	+0.2
	0.6nm,0.7s,baz=223,slow=4.0,SNR=6.2						
ABKAR	Akbulak array	127.34	55	*e*PKPdf	PKPdf	21 20 45.4	-0.1
ARCES	ARCESS Array B	130.32	22	PKP	PKPdf	21 20 50.6	0.0
ARCES	ARCESS Array B	130.32	22	PKP	PKPdf	21 20 50.6	0.0
	2.3nm,0.8s,baz=211,slow=0.7,SNR=7.0						
YKA	Yellowknife Ar	135.09	319	PKP	PKPdf	21 20 59.8	0.0
YKA	Yellowknife Ar	135.09	319	PKP	PKPdf	21 20 59.7	0.0
	0.9nm,0.6s,baz=125,slow=2.4,SNR=13						
YKW3	Yellowknife Ar	135.13	319	*e*PKPdf	PKPdf	21 20 59.7	-0.1
RES	Resolute Bay	136.79	339	PKP	PKPdf	21 21 02.6	0.0
RES	Resolute Bay	136.79	339	PKP	PKPdf	21 21 02.6	0.0
	1.1nm,0.9s,baz=159,slow=2.8,SNR=4.8						
MKAR	Makanchi Array	137.16	71	PKP	PKPdf	21 21 03.9	-0.3
MKAR	Makanchi Array	137.16	71	PKP	PKPdf	21 21 03.9	-0.3
	0.2nm,0.7s,baz=225,slow=3.9,SNR=2.9						
ZALV	Zalesovo Beam	142.50	63	PKPpre	PKPpre	21 21 08.1	
ZALV				PKP	PKPdf	21 21 13.2	-0.3
ZALV	Zalesovo Beam	142.50	63	PKhKP	PKPpre	21 21 08.1	
	0.3nm,0.5s,baz=165,slow=6.0,SNR=3.3						
ZALV				PKP	PKPdf	21 21 13.2	-0.3
	0.9nm,0.6s,baz=203,slow=2.6,SNR=7.0						
INK	Inuvik	144.72	322	PKP	PKPab	21 21 15.8	-0.1
INK	Inuvik	144.72	322	PKP	PKPab	21 21 15.8	-0.1
	1.1nm,0.4s,baz=102,slow=2.4,SNR=6.6						
PAX	Paxson	148.03	310	*e*PKPbc	PKPbc	21 21 26.4	+0.2
SML	Sawmill	149.01	307	*e*PKPbc	PKPbc	21 21 28.8	+0.2
ILAR	Eielson Array	149.06	313	PKPbc	PKPbc	21 21 28.6	0.0
ILAR	Eielson Array	149.06	313	PKPbc	PKPbc	21 21 28.6	0.0
	6.2nm,0.6s,baz=119,slow=1.7,SNR=91						
COLA	College	149.48	313	*e*PKPdf	PKPdf	21 21 25.5	+0.5
KDAK	Kodiak Island	149.87	298	PKPbc	PKPbc	21 21 30.4	-0.3
KDAK	Kodiak Island	149.87	298	PKPbc	PKPbc	21 21 30.4	-0.3
	5.7nm,0.6s,baz=194,slow=8.7,SNR=6.8						
SONM	Songino Array	151.26	86	PKPbc	PKPbc	21 21 35.0	+0.4
SONM	Songino Array	151.26	86	PKPbc	PKPbc	21 21 35.0	+0.4
	2.4nm,0.6s,baz=226,slow=3.0,SNR=29						
ULN	Ulaanbaatar	151.65	86	*e*PKPdf	PKPdf	21 21 29.4	+0.2

IDC 06 21:03:46.2±1.1**, 3.°51N×126.°71E, h0**km**, mb3.6**/7**, mb1 3.8**/7**, mb1mx3.6**/24**, mbtmp3.6**/7**, Error ellipse: s-maj=56.5km s-min=17.4km az=72.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.51	183	P	P	21 08 35.7	-1.2
	0.7nm,0.5s,baz=25,slow=6.3,SNR=2.5						
WRA	Warramunga Arr	24.49	162	P	P	21 09 06.5	-0.8
	3.2nm,0.9s,baz=342,slow=10,SNR=5.5						
ASAR	Alice Springs	27.91	166	P	P	21 09 39.7	+1.4
	0.3nm,0.6s,baz=344,slow=7.3,SNR=2.2						
CMAR	Chiang Mai Arr	30.96	301	P	P	21 10 05.5	0.0
	0.6nm,0.7s,baz=104,slow=6.2,SNR=5.2						
KSRS	Korea Array	33.80	2	P	P	21 10 29.5	-0.5
	1.6nm,0.9s,baz=181,slow=9.2,SNR=4.9						
MKAR	Makanchi Array	57.72	325	P	P	21 13 39.3	+0.4
	0.7nm,0.7s,baz=126,slow=8.6,SNR=8.5						
ZALV	Zalesovo Beam	60.77	333	P	P	21 13 59.4	-0.3
	0.2nm,0.3s,baz=112,slow=6.9,SNR=2.8						

*CSEM **06** 21:16:57.6, 42.°22N×13.°49E, h10km, After ROM*

ROM 06 21:16:57.6±0.1**, 42.°22N×13.°49E, h10**km±1km**, Ml2.2**/1**, Error ellipse: s-maj=2.2km s-min=1.9km az=71.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.08	54	Pg	Pg	21 17 00.5	+0.4
FAGN				Sg	Sg	21 17 02.1	+0.2
FAGN	Fagnano	0.08	54	Pg	Pg	21 17 00.5	+0.4
FAGN				Sg	Sg	21 17 02.1	+0.2
AQU	L'Aquila	0.15	333	Pg	Pg	21 17 02.1	+1.0
AQU				Sg	Sg	21 17 03.5	0.0
AQU	L'Aquila	0.15	333	Pg	Pg	21 17 02.1	+1.0
AQU				Sg	Sg	21 17 03.5	0.0
PTQR	Pietraquaria	0.21	200	Pg	Pg	21 17 03.1	+1.0
PTQR	Pietraquaria	0.21	200	Pg	Pg	21 17 03.1	+1.0
FIAM	Fiamignano	0.28	280	Pg	Pg	21 17 04.1	+0.6
FIAM	Fiamignano	0.28	280	Pg	Pg	21 17 04.1	+0.6
VCEL	Villa Celiera	0.31	55	Pg	Pg	21 17 04.5	+0.5
VCEL	Villa Celiera	0.31	55	Pg	Pg	21 17 04.5	+0.5
CAMP	Campotosto	0.32	349	Pg	Pb	21 17 05.6	-0.1
CAMP	Campotosto	0.32	349	Pg	Pb	21 17 05.6	-0.1
VVLD	Villa Vallelon	0.36	165	Pg	Pg	21 17 05.5	+0.6
VVLD	Villa Vallelon	0.36	165	Pg	Pg	21 17 05.5	+0.6
INTR	Introdacqua	0.37	124	Pg	Pg	21 17 05.5	+0.5
INTR	Introdacqua	0.37	124	Pg	Pg	21 17 05.5	+0.5
TERO	Teramo	0.41	11	Pg	Pg	21 17 06.1	+0.3
TERO	Teramo	0.41	11	Pg	Pg	21 17 06.1	+0.3
CERT	Cerreto	0.47	235	Pg	Pg	21 17 07.2	+0.4
CERT	Cerreto	0.47	235	Pg	Pg	21 17 07.2	+0.4

*CSEM **06** 21:17:02.1, 42.°23N×13.°49E, h8km, After ROM*

ROM 06 21:17:02.1±0.1**, 42.°23N×13.°49E, h8**km±1km**, Ml2.5**/9**, Error ellipse: s-maj=1.5km s-min=1.2km az=97.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.08	62	Pg	Pg	21 17 04.9	+0.5
FAGN				Sg	Sg	21 17 06.3	+0.3
FAGN	Fagnano	0.08	62	Pg	Pg	21 17 04.9	+0.5
FAGN				Sg	Sg	21 17 06.3	+0.3
AQU	L'Aquila	0.14	334	Pg	Pg	21 17 06.2	+0.9
AQU				Sg	Sg	21 17 07.8	+0.3
AQU	L'Aquila	0.14	334	Pg	Pg	21 17 06.2	+0.9
AQU				Sg	Sg	21 17 07.8	+0.3
PTQR	Pietraquaria	0.21	197	Pg	Pg	21 17 06.7	+0.1
PTQR				Sg	Sg	21 17 11.3	+1.7
PTQR	Pietraquaria	0.21	197	Pg	Pg	21 17 06.7	+0.1
PTQR				Sg	Sg	21 17 11.3	+1.7
FIAM	Fiamignano	0.28	279	Pg	Pg	21 17 08.4	+0.6
FIAM				Sg	Sg	21 17 12.8	+1.2
	1μm,0.9s						
FIAM	Fiamignano	0.28	279	Pg	Pg	21 17 08.4	+0.6
FIAM				Sg	Sg	21 17 12.8	+1.2
	1μm,0.9s						
VCEL	Villa Celiera	0.31	57	Pg	Pg	21 17 09.2	+0.7
VCEL	Villa Celiera	0.31	57	Pg	Pg	21 17 09.2	+0.7
CAMP	Campotosto	0.31	350	Pg	Pg	21 17 08.9	+0.4
CAMP				Sg	Sb	21 17 14.8	-0.8
CAMP	Campotosto	0.31	350	Pg	Pg	21 17 08.9	+0.4
CAMP				Sg	Sb	21 17 14.8	-0.8
VVLD	Villa Vallelon	0.37	164	Pg	Pb	21 17 10.3	-0.7
VVLD				Sg	Sg	21 17 15.5	+1.0
VVLD	Villa Vallelon	0.37	164	Pg	Pb	21 17 10.3	-0.7
VVLD				Sg	Sg	21 17 15.5	+1.0
INTR	Introdacqua	0.38	125	Pg	Pg	21 17 10.0	+0.3
INTR				Sg	Sb	21 17 16.1	-1.2
	708nm,0.7s						
INTR	Introdacqua	0.38	125	Pg	Pg	21 17 10.0	+0.3
INTR				Sg	Sb	21 17 16.1	-1.2
	708nm,0.7s						
TERO	Teramo	0.41	12	Pg	Pg	21 17 10.1	0.0
TERO				Sg	Sb	21 17 17.0	-1.0
TERO	Teramo	0.41	12	Pg	Pg	21 17 10.1	0.0
TERO				Sg	Sb	21 17 17.0	-1.0
GUAR	Guarcino	0.45	197	Pg	Pb	21 17 12.7	+0.3
GUAR	Guarcino	0.45	197	Pg	Pb	21 17 12.7	+0.3
CERT	Cerreto	0.47	234	Pg	Pg	21 17 11.6	+0.3
	507nm,0.5s						
CERT	Cerreto	0.47	234	Pg	Pg	21 17 11.6	+0.3
	507nm,0.5s						
SDI	San Donato	0.57	155	Pg	Pg	21 17 13.6	+0.3
SDI	San Donato	0.57	155	Pg	Pg	21 17 13.6	+0.3
MTCE	Montecelio	0.59	250	Pg	Pg	21 17 13.9	+0.3
	239nm,1.0s						
MTCE	Montecelio	0.59	250	Pg	Pg	21 17 13.9	+0.3
	239nm,1.0s						
CAFR	Castel Frentan	0.64	90	Pg	Pb	21 17 15.2	-0.3
	663nm,0.5s						
CAFR	Castel Frentan	0.64	90	Pg	Pb	21 17 15.2	-0.3
	663nm,0.5s						
NRCA	Norcia	0.67	336	Pg	Pg	21 17 15.3	+0.2
NRCA	Norcia	0.67	336	Pg	Pg	21 17 15.3	+0.2
GIUL	Giuliano Di Ro	0.69	195	Pg	Pb	21 17 16.3	-0.1
	107nm,0.6s						
GIUL	Giuliano Di Ro	0.69	195	Pg	Pb	21 17 16.3	-0.1
	107nm,0.6s						
OFFI	Offida	0.72	12	Pg	Pb	21 17 16.8	-0.2
	743nm,0.7s						
OFFI	Offida	0.72	12	Pg	Pb	21 17 16.8	-0.2
	743nm,0.7s						
CESI	CESI - Serrava	0.89	331	Pg	Pb	21 17 20.2	+0.3
	48nm,0.7s						
CESI	CESI - Serrava	0.89	331	Pg	Pb	21 17 20.2	+0.3
	48nm,0.7s						
CING	Cingoli	1.17	350	Pg	Pb	21 17 24.3	-0.3
	52nm,0.5s						
CING	Cingoli	1.17	350	Pg	Pb	21 17 24.3	-0.3
	52nm,0.5s						

IDC 06 21:23:55.5±17.0**, 19.°58S×174.°55W, h0**km**, mb4.1**/5**, mb1 4.2**/5**, mb1mx3.8**/22**, mbtmp4.1**/5**, Error ellipse: s-maj=328.0km s-min=148.9km az=80.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	36.81	262	P	P	21 31 06.4	+0.9
	2.3nm,0.5s,baz=96,slow=14,SNR=4.1						
STKA	Stephens Creek	41.10	244	P	P	21 31 41.5	+0.2
	1.2nm,0.8s,baz=74,slow=7.4,SNR=4.1						
ASAR	Alice Springs	47.88	255	P	P	21 32 35.0	-0.7
	2.4nm,0.7s,baz=98,slow=7.5,SNR=26						
WRA	Warramunga Arr	47.94	260	P	P	21 32 35.7	-0.5
	1.1nm,0.3s,baz=97,slow=8.0,SNR=20						
FITZ	Fitzroy Crossi	56.37	261	P	P	21 33 38.8	-0.1
	0.3nm,0.3s,baz=71,slow=5.2,SNR=6.2						

*MOS **06** 21:28:19.6±0.9, 33.°79N×136.°53E, h382km, mb4.1/30, Error ellipse: s-maj=11.3km s-min=6.8km az=91.6*

*ISCJB **06** 21:28:20.6±0.2, 33.°84N±0.°04×136.°47E±0.°04, h383km±1km, mb4.1/52, Error ellipse: s-maj=6.8km s-min=4.3km az=151.0*

*IDC **06** 21:28:20.8±0.6, 33.°80N×136.°54E, h376km±6km, mb3.7/25, mb1 3.9/31, mb1mx3.8/38, mbtmp3.8/31, Error ellipse: s-maj=9.4km s-min=7.8km az=106.0*

*JMA **06** 21:28:21.0±0.1, 33.°85N×136.°53E, h382km±2km, M3.2*

*NEIC **06** 21:28:21.6±0.7, 33.°88N×136.°46E, h375km±5km, mb4.1/21, Error ellipse: s-maj=11.7km s-min=6.2km az=160.0*

ISC 06 21:28:21.0±0.6**, 33.°84N**±0.°05×**136.°56E**±0.°04**, h379**km±5km**, n157, σ1.s15**/187**, mb4.1**/52**, 5C, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO1	TONANKAI O.B.S	0.29	139	P	Pn	21 29 08.9	+1.1
TTO2	TONANKAI O.B.S	0.41	105	P	Pn	21 29 09.1	+1.2
JKN2	Miekihoku	0.46	329	P	Pn	21 29 08.9	+0.6
JKN2				*e*S	S	21 29 46.1	-0.4
JIE	Ise	0.56	13	P	Pn	21 29 09.2	+0.7
JIE				*e*S	S	21 29 46.7	-0.1
JWZ	Kozaga	0.77	246	P	Pn	21 29 09.0	-0.1
JWZ				*e*S	S	21 29 46.3	-1.5
JWY	Kouya	0.89	295	P	Pn	21 29 10.2	+0.7
JWY				*e*S	S	21 29 48.2	-0.4
TK02	Tokai 2	1.00	84	P	Pn	21 29 10.5	+1.0
TK02				*e*S	S	21 29 50.3	+1.7
JWT	Wachi	1.72	327	P	Pn	21 29 13.7	+0.5
JWT				*e*S	S	21 29 54.5	-0.8
JAI	Aioi	1.75	269	P	Pn	21 29 13.9	+0.4
JAI				*e*S	S	21 29 54.9	-0.8
JGM	Miyama	1.86	4	P	Pn	21 29 14.8	+0.8
JGM				*e*S	S	21 29 57.2	+0.4
JMN	Monobe	2.23	268	P	Pn	21 29 17.3	+0.7
JMN				*e*S	S	21 30 01.3	-0.2
JYN	Shimob	2.33	44	P	Pn	21 29 18.0	+0.8
JKG	Kaga	2.44	356	P	Pn	21 29 18.4	+0.5
JKG				*e*S	S	21 30 03.7	-0.2
JOD2	Odawara 2	2.52	55	P	Pn	21 29 19.3	+0.6
JHJ	Hachijo jima 2	2.79	104	P	Pn	21 29 21.4	+0.5
	74nm,0.3s,baz=240,slow=5.9,SNR=22						
JHJ2	Mitsune	2.82	104	P	Pn	21 29 21.3	+0.2
JRY	Ryogami san	2.90	41	P	Pn	21 29 22.5	+0.8
JRY				*e*S	S	21 30 11.2	+0.5
MAJO	Matsushiro	3.01	26	*e*P	Pn	21 29 22.8	+0.2
MAJO				*e*S	S	21 30 12.1	-0.3
MAJO	Matsushiro	3.01	26	*e*Pn	Pn	21 29 22.8	+0.2
MAJO				*e*S	S	21 30 12.1	-0.3
MAT	Matsushiro	3.01	26	P	Pn	21 29 22.8	+0.1
MAT				S	S	21 30 11.3	-1.1
MAT	Matsushiro	3.01	26	P	Pn	21 29 22.7	+0.1
MAT				*e*S	S	21 30 11.1	-1.3
MJAR	Matsushiro Arr	3.01	26	P	Pn	21 29 22.8	+0.2
	8.1nm,0.3s,baz=201,slow=8.5,SNR=80						
MJAR				S	S	21 30 11.8	-0.6
	3.2nm,0.3s,baz=195,slow=16,SNR=11						
JHS	Saijyo	3.07	293	P	Pn	21 29 23.6	+0.4
JHS				*e*S	S	21 30 13.3	-0.1
JTO	Tosashimizu	3.29	254	P	Pn	21 29 25.4	+0.2
JTO				*e*S	S	21 30 14.3	-2.6
SAI	Saigo	3.54	313	P	Pn	21 29 27.6	+0.3
SAI				*e*S	S	21 30 20.9	0.0
BSO1	Boso 1	3.75	76	P	Pn	21 29 26.6	-2.1
BSO1				*e*S	S	21 30 20.8	-2.7
JNU	Nakatsue	4.80	263	*e*Pn	Pn	21 29 40.3	+0.4
JNU	Nakatsue	4.80	263	P	Pn	21 29 40.4	+0.4
	15nm,0.3s,baz=74,slow=5.2,SNR=176						
KSRS	Korea Array	7.90	300	P	P	21 30 15.5	+0.4
	4.2nm,0.3s,baz=114,slow=12,SNR=152						
KSRS				S	S	21 31 49.4	+2.3
	baz=104,slow=23,SNR=4.9						
CBIJ	Chichi jima	8.29	143	P	Pn	21 30 14.9	-4.2
	15nm,0.3s,baz=278,slow=19,SNR=9.0						
CBIJ				S	S	21 31 45.2	-11
	40nm,0.3s,baz=316,slow=23,SNR=18						
INCN	Inchon	8.86	297	*e*Pn	P	21 30 26.4	-0.1
ERM	Erimo	9.68	31	*e*P	Pn	21 30 34.6	-0.4
ERM				*e*S	S	21 32 19.5	-5.5
ERM	Erimo	9.68	31	*e*Pn	Pn	21 30 34.6	-0.4
ERM				*e*S	S	21 32 19.5	-5.5
USRK	Ussuriysk Arra	10.93	342	P	Pn	21 30 49.5	-0.2
	3.0nm,0.3s,baz=162,slow=11,SNR=104						
ASAJ	Asahikawa	11.28	23	*e*P	P	21 30 52.8	-0.5
ASAJ				*e*S	S	21 32 58.1	-0.6
ASAJ	Asahikawa	11.28	23	P	P	21 30 52.6	-0.7
	7.7nm,0.3s,baz=235,slow=11,SNR=69						
ASAJ				S	S	21 32 57.0	-1.8
	1.1nm,0.3s,baz=197,slow=20,SNR=6.5						
YUK	Yuzh-Kuril'sk	12.48	33	P	P	21 31 01.1	-5.4
YUK				*e*S	S	21 33 23.0	-0.7
YUK				pmax	pmax		
	comp=E,19nm,0.4s						
YUK				pmax	pmax		
	comp=Z,34nm,0.4s						
YUK				pmax	pmax		
	comp=N,18nm,0.2s						
YSS	Yuzh-Sakhalins	13.91	18⇑	*e*P	Pn	21 31 24.1	-0.4
YSS				pmax	pmax		
	comp=Z,200nm,0.8s						
YSS	Yuzh-Sakhalins	13.91	18	*e*P	P	21 31 23.0	+0.8
	comp=Z,239nm,0.7s						
KLR	Kul'dur	15.78	348	*e*P	P	21 31 39.7	-2.9
PETK	Petropavlovsk-	24.46	32	P	P	21 33 08.2	+1.1
PETK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PETK	Petropavlovsk-	24.46	32	P	P	21 33 08.2	+1.1
	comp=Z,6.5nm,0.7s,baz=244,slow=4.6,SNR=5.0						
ULN	Ulaanbaatar	26.16	311	*e*P	P	21 33 23.7	+1.2
	comp=Z,3.6nm,0.7s						
SONM	Songino Array	26.56	311	P	P	21 33 26.8	+0.8
	comp=Z,3.4nm,0.8s,baz=122,slow=8.9,SNR=19						
YAK	Yakutsk	28.55	353	*e*P	P	21 33 43.2	+0.1
SEY	Seymchan	30.77	14⇑	*e*P	P	21 34 03.3	+0.7
FX1	Attu Island--F	32.24	43	*e*P	P	21 34 16.5	+1.0
FX1	Attu Island--F	32.24	43	P	P	21 34 17.2	+1.7
	comp=Z,3.2nm,0.3s,baz=268,slow=6.7,SNR=14						
CHTO	Chiang Mai	36.66	256	*e*P	P	21 34 53.4	0.0
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHTO	Chiang Mai	36.66	256	*e*P	P	21 34 53.4	0.0
	comp=Z,4.7nm,0.8s						
CMAR	Chiang Mai Arr	36.85	255	P	P	21 34 54.7	-0.3
	comp=Z,1.9nm,0.5s,baz=49,slow=6.9,SNR=15						
TIXI	Tiksi	38.09	356	*e*P	P	21 35 04.1	-0.4
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TIXI	Tiksi	38.09	356	*e*P	P	21 35 04.1	-0.4
	comp=Z,9.5nm,0.9s						
BILL	Bilibino	38.23	18*c*	*i*P	P	21 35 06.4	+0.6
BILL				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,51nm,1.0s						
BILL	**Bilibino**	**38.23**	**18**	*e*P	**P**	**21 35 06.0**	**+0.3**
	comp=Z,30nm,0.6s						
ZALV	**Zalesovo Beam**	**41.26**	**315**	P	**P**	**21 35 30.6**	**0.0**
ZALV						21 37 20.4	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**41.26**	**315**	P	**P**	**21 35 30.6**	**0.0**
	comp=Z,1.2nm,0.4s,baz=82,slow=8.6,SNR=13						
ZALV				PcP	**PcP**	**21 37 20.4**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=95,slow=3.1,SNR=14						
ZALV				ScP	**ScP**	**21 40 33.2**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=111,slow=3.3,SNR=6.3						
TAPN	**Taplejung**	**42.23**	**275**	*e*P	**P**	**21 35 38.7**	**-0.4**
NVS	**Novosibirsk**	**42.29**	**316**	*e*P	**P**	**21 35 38.3**	**-0.5**
MK31	**Makanchi Array**	**42.55**	**304**	*e*P	**P**	**21 35 41.3**	**+0.2**
MK31				*e*		21 37 25.3	
MK31	**Makanchi Array**	**42.55**	**304**	*e*P	**P**	**21 35 41.3**	**+0.2**
MK31				*e*PcP	**PcP**	**21 37 25.3**	**-0.2**
MKAR	**Makanchi Array**	**42.55**	**304**	P	**P**	**21 35 41.4**	**+0.3**
MKAR						21 37 25.3	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR				pmax	pmax		
	comp=N,1.0nm,0.5s						
MKAR	**Makanchi Array**	**42.55**	**304**	*e*P	**P**	**21 35 41.5**	**+0.5**
MKAR	**Makanchi Array**	**42.55**	**304**	P	**P**	**21 35 41.4**	**+0.3**
	comp=N,1.1nm,0.4s,baz=87,slow=10.0,SNR=36						
MKAR				PcP	**PcP**	**21 37 25.3**	**-0.2**
	comp=N,0.3nm,0.4s,baz=86,slow=5.4,SNR=5.0						
MKAR				ScP	**ScP**	**21 40 38.9**	**-0.6**
	comp=N,0.6nm,0.5s,baz=79,slow=6.0,SNR=9.0						
ODAN	**Odare**	**42.67**	**274**	*e*P	**P**	**21 35 41.9**	**-0.7**
	comp=N,5.2nm,0.6s						
RAMN	**Ramite**	**43.29**	**275**	*e*P	**P**	**21 35 47.0**	**-0.5**
	comp=N,12nm,0.7s						
GUN	**Gumba**	**43.54**	**276**	*e*P	**P**	**21 35 49.2**	**-0.4**
PKI	**Pulchoki**	**44.05**	**276**	*e*P	**P**	**21 35 52.5**	**-1.1**
PKIN	**Phulchoki**	**44.06**	**276**	*e*P	**P**	**21 35 52.5**	**-1.1**
KKN	**Kakani**	**44.08**	**277**	*e*P	**P**	**21 35 53.2**	**-0.5**
KURK	**Kurchatov**	**44.87**	**310***c*	*e*P	**P**	**21 35 58.8**	**-0.4**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	**Kurchatov**	**44.87**	**310**	*e*P	**P**	**21 35 57.7**	**-1.4**
	comp=Z,5.0nm,0.8s						
DANN	**Dangsing**	**45.14**	**278**	*e*P	**P**	**21 36 02.0**	**0.0**
	comp=Z,22nm,0.5s						
KOLN	**Koldanda**	**45.48**	**277**	*e*P	**P**	**21 36 04.3**	**-0.2**
	comp=Z,3.6nm,0.5s						
PYUN	**Piuthan**	**45.86**	**278**	*e*P	**P**	**21 36 07.3**	**-0.2**
KKAR	**Karatay Array**	**51.32**	**301**	*e*P	**P**	**21 36 48.3**	**+0.2**
KKAR	**Karatay Array**	**51.32**	**301**	*e*P	**P**	**21 36 48.3**	**+0.2**
KDAK	**Kodiak Island**	**52.10**	**40**	*e*P	**P**	**21 36 54.4**	**+0.9**
	comp=Z,21nm,0.9s						
SPU	**Mount Spurr**	**52.15**	**36**	*e*P	**P**	**21 36 54.6**	**+0.7**
FITZ	**Fitzroy Crossi**	**52.69**	**193**	P	**P**	**21 36 57.4**	**-0.8**
	comp=Z,6.9nm,0.7s,baz=11,slow=6.8,SNR=12						
WRAB	**Tennant Creek**	**53.52**	**183**	*e*P	**P**	**21 37 03.1**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.4s						
WRAB	**Tennant Creek**	**53.52**	**183**	*e*P	**P**	**21 37 03.0**	**-1.1**
	comp=Z,9.3nm,0.4s						
PMR	**Palmer**	**53.52**	**35**	*e*P	**P**	**21 37 04.5**	**+0.8**
PMR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PMR	**Palmer**	**53.52**	**35**	*e*P	**P**	**21 37 04.5**	**+0.8**
	comp=Z,9.7nm,1.0s						
WRA	**Warramunga Arr**	**53.53**	**183**	P	**P**	**21 37 03.4**	**-0.9**
	comp=Z,9.7nm,0.3s,baz=359,slow=7.7,SNR=61						
SML	**Sawmill**	**53.88**	**35**	*e*P	**P**	**21 37 07.9**	**+1.5**
SML				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SML	**Sawmill**	**53.88**	**35**	*e*P	**P**	**21 37 07.8**	**+1.5**
	comp=Z,2.7nm,1.0s						
ILAR	**Eielson Array**	**54.28**	**31**	P	**P**	**21 37 09.2**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=256,slow=5.5,SNR=30						
SVE	**Sverdlovsk**	**54.95**	**319**	*e*P	**P**	**21 37 13.3**	**-0.7**
DOT	**Dot Lake**	**55.63**	**32**	*e*P	**P**	**21 37 19.5**	**+0.8**
	comp=Z,4.2nm,0.7s						
BMRM	**Bremner River**	**55.77**	**35**	*e*P	**P**	**21 37 21.2**	**+1.4**
	comp=Z,11nm,1.0s						
MENT	**Mentasta**	**55.88**	**33**	*e*P	**P**	**21 37 21.3**	**+0.8**
ARU	**Arti**	**56.15**	**319***c*	*i*P	**P**	**21 37 22.1**	**-0.3**
ARU				*PP	**PcP**	**21 38 14.6**	**-0.6**
ARU						21 39 30.6	
ARU				S	S	21 44 57.4	+16
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARU	**Arti**	**56.15**	**319**	*e*P	**P**	**21 37 22.3**	**-0.1**
	comp=Z,6.2nm,1.0s						
EGAK	**Eagle**	**56.72**	**31**	*e*P	**P**	**21 37 26.2**	**0.0**
	comp=Z,1.0nm,0.6s						
ABKAR	**Akbulak array**	**56.97**	**311**	*e*P	**P**	**21 37 27.8**	**-0.5**
ASAR	**Alice Springs**	**57.25**	**183**	P	**P**	**21 37 29.9**	**-0.6**
	comp=Z,2.7nm,0.5s,baz=14,slow=13,SNR=31						
KEV	**Kevo**	**64.99**	**339**	*e*P	**P**	**21 38 19.7**	**-1.5**
KEV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KEV	**Kevo**	**64.99**	**339**	*e*p	**P**	**21 38 19.7**	**-1.5**
	comp=Z,3.2nm,0.6s						
STKA	**Stephens Creek**	**65.54**	**175**	P	**P**	**21 38 25.0**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=298,slow=8.1,SNR=5.4						
ARCES	**ARCESS Array B**	**65.56**	**339**	P	**P**	**21 38 25.1**	**+0.2**
	comp=Z,4.3nm,0.5s,baz=70,slow=9.0,SNR=39						
RES	**Resolute Bay**	**66.64**	**13**	*e*P	**P**	**21 38 32.1**	**+0.6**
RES	**Resolute Bay**	**66.64**	**13**	P	**P**	**21 38 32.0**	**+0.6**
	comp=Z,3.3nm,0.4s,baz=314,slow=5.2,SNR=30						
JOF	**Joensuu**	**66.88**	**331**	*e*P	**P**	**21 38 32.2**	**-1.0**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
JOF	**Joensuu**	**66.88**	**331**	*e*p	**P**	**21 38 32.2**	**-1.0**
	comp=Z,2.2nm,0.5s						
OBN	**Obninsk**	**68.24**	**322**	*e*P	**P**	**21 38 41.5**	**-0.2**
OBN				*e*		21 39 01.8	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA	**Yellowknife Ar**	**68.52**	**28**	P	**P**	**21 38 43.7**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=301,slow=6.4,SNR=24						
KAF	**Kangasniemi**	**69.28**	**332**	*e*P	**P**	**21 38 46.1**	**-1.9**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KAF	**Kangasniemi**	**69.28**	**332**	*e*p	**P**	**21 38 46.1**	**-1.9**
	comp=Z,5.2nm,0.5s						
FINES	**FINESS Array B**	**69.74**	**331**	P	**P**	**21 38 50.6**	**-0.2**
	comp=Z,4.8nm,0.4s,baz=56,slow=6.4,SNR=126						
KBZ	**Khabaz**	**69.92**	**310**	P	**P**	**21 38 52.9**	**+0.7**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	**Khabaz**	**69.92**	**310**	P	**P**	**21 38 52.9**	**+0.7**
	comp=Z,2.9nm,0.7s,baz=58,slow=3.2,SNR=9.4						
KIV	**Kislovodsk**	**69.95**	**310**	*e*P	**P**	**21 38 53.8**	**+1.3**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,33nm,19.0s						
MIB	**Mutribah**	**73.50**	**295**	*e*P	**P**	**21 39 12.6**	**-1.0**
RDF	**Al-Radifah**	**73.78**	**294**	*e*P	**P**	**21 39 14.6**	**-0.6**
SUMG	**Summit**	**73.81**	**358**	*e*P	**P**	**21 39 15.3**	**+0.2**
SUMG				pmax	pmax		
	comp=Z,12nm,0.5s						
SUMG	**Summit**	**73.81**	**358**	*e*P	**P**	**21 39 15.3**	**+0.2**
	comp=Z,12nm,0.5s						
NAY	**Al-Naaiem**	**73.85**	**295**	*e*P	**P**	**21 39 14.7**	**-1.0**
AKASG	**Malin Array Be**	**74.33**	**321**	P	**P**	**21 39 17.4**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**74.33**	**321**	P	**P**	**21 39 17.4**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=50,slow=5.8,SNR=5.0						
YBH	**Yreka Blue Hor**	**75.43**	**49**	P	**P**	**21 39 24.6**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=313,slow=3.4,SNR=5.5						
NB2	**NORSAR Subarra**	**75.53**	**336**	P	**P**	**21 39 24.1**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=46,slow=5.9						
NOA	**NORSAR Array B**	**75.53**	**336**	P	**P**	**21 39 24.2**	**-0.4**
	comp=Z,2.8nm,0.7s,baz=46,slow=5.6,SNR=16						
BSMT	**Bassoo Peak**	**76.68**	**41**	*e*P	**P**	**21 39 33.0**	**+1.5**
	comp=Z,3.2nm,1.1s						
BMO	**Blue Mountains**	**76.99**	**45**	*e*P	**P**	**21 39 34.3**	**+1.1**
BMO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BMO	**Blue Mountains**	**76.99**	**45**	*e*P	**P**	**21 39 34.2**	**+1.1**
	comp=Z,2.6nm,0.6s						
JTMT	**Jette**	**77.01**	**41**	*e*P	**P**	**21 39 34.8**	**+1.6**
SLMT	**Seeley Lake**	**77.74**	**41**	*e*P	**P**	**21 39 38.3**	**+1.0**
BRTR	**Keskin Array B**	**77.92**	**310**	P	**P**	**21 39 38.8**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=112,slow=3.3,SNR=7.5						
BUR08	**Bucovina Ar. S**	**78.26**	**320**	*e*P	**P**	**21 39 39.9**	**-0.1**
FFC	**Flin Flon**	**78.49**	**30**	*i* P	**P**	**21 39 41.9**	**+0.9**
FFC	**Flin Flon**	**78.49**	**30**	*e*P	**P**	**21 39 41.3**	**+0.3**
	comp=Z,3.1nm,0.7s						
LRM	**Limekiln Ridge**	**79.18**	**42**	*e*P	**P**	**21 39 46.5**	**+1.3**
DLMT	**Dillon**	**79.38**	**42**	*e*P	**P**	**21 39 47.6**	**+1.5**
HLID	**Hailey**	**79.43**	**44**	*e*P	**P**	**21 39 47.6**	**+1.0**
	comp=Z,2.2nm,0.8s						
NVAR	**Mina Array Bea**	**80.07**	**50**	P	**P**	**21 39 51.5**	**+1.5**
	comp=Z,1.2nm,0.5s,baz=303,slow=5.8,SNR=6.1						
FRB	**Frobisher Bay**	**80.72**	**11**	P	**P**	**21 39 53.0**	**+0.3**
	comp=Z,3.7nm,0.5s,baz=344,slow=5.9,SNR=8.0						
IMW	**Indian Meadow**	**81.21**	**43**	*e*P	**P**	**21 39 57.7**	**+1.6**
RRI2	**Red Ridge**	**81.34**	**43**	*e*P	**P**	**21 39 58.5**	**+1.8**
MOOW	**Moose Ponds**	**81.42**	**43**	*e*P	**P**	**21 39 58.9**	**+1.9**
TPAW	**Teton Pass**	**81.46**	**43**	*e*P	**P**	**21 39 58.4**	**+1.1**
	comp=Z,2.4nm,0.6s						
HVU	**Hansel Valley**	**81.47**	**45**	*e*P	**P**	**21 39 59.1**	**+1.8**
HVU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HVU	**Hansel Valley**	**81.47**	**45**	*e*P	**P**	**21 39 59.1**	**+1.8**
	comp=Z,4.3nm,0.7s						
HWUT	**Hardware Ranch**	**82.29**	**45**	*e*P	**P**	**21 40 03.2**	**+1.7**
	comp=Z,5.2nm,0.8s						
BW06	**Boulder Array**	**82.71**	**43**	*e*P	**P**	**21 40 04.5**	**+0.8**
PDAR	**Pinedale Array**	**82.71**	**43**	P	**P**	**21 40 04.4**	**+0.7**
	comp=Z,2.8nm,0.8s,baz=295,slow=3.2,SNR=14						
DAU	**Daniels Canyon**	**83.22**	**45**	*e*P	**P**	**21 40 08.5**	**+2.1**
DAU	**Daniels Canyon**	**83.22**	**45**	*e*P	**P**	**21 40 08.5**	**+2.1**
GERES	**GERESS Array B**	**83.23**	**326**	P	**P**	**21 40 04.9**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=37,slow=5.5,SNR=8.3						
RPZ	**Rata Peaks**	**83.36**	**156**	P	**P**	**21 40 07.2**	**+0.8**
	comp=Z,13nm,0.9s,baz=150,slow=20,SNR=2.5						
MSU	**Marysvale**	**83.86**	**47**	*e*P	**P**	**21 40 12.1**	**+2.5**
MSU	**Marysvale**	**83.86**	**47**	*e*P	**P**	**21 40 12.1**	**+2.5**
SRU	**San Rafael**	**84.48**	**46**	*e*P	**P**	**21 40 14.0**	**+1.4**
SRU	**San Rafael**	**84.48**	**46**	*e*P	**P**	**21 40 13.9**	**+1.4**
	comp=Z,158nm,0.6s						
SMCO	**Snowmass**	**86.53**	**44**	*e*P	**P**	**21 40 24.5**	**+1.6**
LPAZ	**La Paz**	**151.73**	**58**	PKPbc	**PKPbc**	**21 47 32.4**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=297,slow=2.7,SNR=3.8						
SIV	**San Ignacio**	**156.16**	**46**	PKPab	**PKPab**	**21 48 00.6**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=332,slow=4.6,SNR=6.1						

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*ISCJB **06** 21:30:41.2±1.6, 4°.8S±0°.2×151°.6E±0°.3, h129km, mb3.5/7, Error ellipse: s-maj=52.1km s-min=11.0km az=33.5*
*IDC **06** 21:30:44.9±4.3, 4°.84S×151°.50E, h151km±35km, mb3.4/7, mb1 3.6/8, mb1mx3.4/20, mbtmp3.4/8, Error ellipse: s-maj=55.0km s-min=23.4km az=115.0*
ISC 06 21:30:43.4±1.7**, 4°.9S**±0°.2×**151°.6E**±0°.3**, h129km, n12, σ1s.62**/11**, mb3.5**/7**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.35**	**224**	P	**Pn**	**21 32 17.0**	**+2.3**
	4.6nm,0.3s,baz=359,slow=4.0,SNR=8.9						
PMG				S	**Sn**	**21 33 23.6**	**-2.3**
	18nm,0.3s,baz=144,slow=15,SNR=17						
COEN	**Coen**	**12.31**	**222**	P	S	21 36 23.0	+14
	baz=8.4,SNR=5.4						
KDU	**Kakadu**	**20.47**	**246**	P	**P**	**21 35 10.4**	**-0.7**
	baz=3.3,SNR=34						
MTN	**Manton Dam**	**21.75**	**247**	P	**P**	**21 35 25.4**	**+0.6**
	baz=4.1,SNR=4.4						
WRA	**Warramunga Arr**	**22.56**	**227**	P	**P**	**21 35 31.2**	**-1.8**
	3.0nm,0.3s,baz=52,slow=9.8,SNR=36						
ASAR	**Alice Springs**	**25.35**	**221**	P	**P**	**21 35 58.3**	**-0.3**
	3.1nm,0.7s,baz=56,slow=8.5,SNR=29						
FITZ	**Fitzroy Crossi**	**28.63**	**240**	P	**P**	**21 36 27.0**	**-0.9**
	1.8nm,0.4s,baz=50,slow=9.4,SNR=14						
SONM	**Songino Array**	**65.75**	**328**	P	**P**	**21 41 14.9**	**+0.3**
	0.2nm,0.6s,baz=149,slow=5.4,SNR=4.0						
MKAR	**Makanchi Array**	**79.61**	**319**	P	P	21 42 33.3	-3.1
	0.2nm,0.5s,baz=102,slow=9.5,SNR=2.9						
ZALV	**Zalesovo Beam**	**80.55**	**327**	P	**P**	**21 42 40.7**	**-0.6**
	0.3nm,0.3s,baz=109,slow=7.9,SNR=3.6						
ILAR	**Eielson Array**	**82.64**	**22**	P	**P**	**21 42 50.9**	**-1.1**
	0.2nm,0.7s,baz=238,slow=5.2,SNR=3.7						
TORD	**Torodi Ar. Bea**	**149.22**	**288**	PKPbc	**PKPdf**	**21 50 15.3**	**+1.8**
	0.6nm,0.4s,baz=84,slow=2.2,SNR=13						

IDC 06 21:34:12.4±1.0**, 55°.21S**×**28°.61W, h0km, mb3.9**/5**, mb1 4.0**/5**, mb1mx3.8**/15**, mbtmp3.9**/5**, MS3.5**/1**, Ms1 3.4**/1**, ms1mx3.0**/17**, Error ellipse: s-maj=33.0km s-min=28.0km az=35.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**35.65**	**312**	P	P	21 41 12.6	+0.7
	0.4nm,0.3s,baz=162,slow=9.6,SNR=2.9						
BOSA	**Boshof**	**46.56**	**78**	P	P	21 42 42.8	+0.9
	5.2nm,1.0s,baz=174,slow=10,SNR=3.1						
BOSA				LR	LR	21 58 07.5	
	comp=Z,52nm,19.6s,baz=348,slow=31						
VNDA	**Vanda**	**47.38**	**183**	P	P	21 42 47.1	-0.4
	0.7nm,0.7s,baz=190,slow=6.3,SNR=5.3						
LPAZ	**La Paz**	**49.23**	**306**	P	P	21 43 02.5	-0.7
	0.6nm,0.5s,baz=166,slow=4.2,SNR=3.8						
TORD	**Torodi Ar. Bea**	**72.73**	**31**	P	P	21 45 41.5	-0.6
	0.6nm,0.4s,baz=200,slow=6.6,SNR=12						
YKA	**Yellowknife Ar**	**135.00**	**319**	PKP	PKPdf	21 53 32.2	+0.3
	0.1nm,0.4s,baz=141,slow=1.5,SNR=2.3						
ILAR	**Eielson Array**	**148.95**	**313**	PKPbc	PKPbc	21 54 00.7	0.0
	0.6nm,0.7s,baz=118,slow=1.7,SNR=8.7						
SONM	**Songino Array**	**151.48**	**86**	PKPbc	PKPbc	21 54 06.6	-0.8
	0.2nm,0.5s,baz=219,slow=4.3,SNR=3.7						

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*ISCJB **06** 21:35:09.1±0.5, 24°.81N±0°.03×122°.47E±0°.02, h8km±4km, Error ellipse: s-maj=5.7km s-min=2.6km az=10.0*
*TAP **06** 21:35:09.8, 24°.81N×122°.39E, h13km, ML3.5, C*
*JMA **06** 21:35:10.5±0.2, 24°.98N×122°.63E, h18km, M3.2*
ISC 06 21:35:08.1±1.1**, 24°.83N**±0°.04×**122°.49E**±0°.02**, h13**km±9km**, n39,** σ**1s.02**/66**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.49**	**291**	*i* P	**Pb**	**21 35 18.7**	**0.0**
	baz=298						
TWB1				*i* S	**Sb**	**21 35 25.0**	**-0.8**
	baz=298						
YOJ	**Yonaguni jima**	**0.60**	**128**	P	**Pn**	**21 35 22.4**	**+0.1**
YOJ				S	**Sn**	**21 35 30.7**	**-1.2**
TWC	**Suao**	**0.62**	**250**	P	**Pg**	**21 35 19.9**	**-0.4**
	baz=255						
TWC				*e*S	**Sg**	**21 35 28.2**	**-0.4**
	baz=255						
ILA	**Ilan**	**0.68**	**265**	*e*P	**Pb**	**21 35 22.3**	**+0.5**
	baz=265						
NWF	**Wu-fen Shan**	**0.69**	**291**	*i* P	**Pn**	**21 35 23.1**	**-0.7**
	baz=295						
NWF				*i* S	**Sb**	**21 35 32.0**	**+0.4**
	baz=295						
TWE	**Neicheng**	**0.76**	**262**	P	**Pg**	**21 35 22.8**	**0.0**
	baz=262						
TWE				S	**Sg**	**21 35 32.9**	**+0.1**
	baz=262						
ENA	**Nanau**	**0.79**	**240**	*i* P	**Pg**	**21 35 23.5**	**0.0**
	baz=245						
ENA				S	**Sg**	**21 35 33.4**	**-0.5**
	baz=245						
ENTT	**Nioudou**	**0.86**	**258**	P	**Pg**	**21 35 24.9**	**+0.1**
	baz=256						
ENTT				*i* S	**Sg**	**21 35 35.9**	**-0.2**
	baz=256						
PCYT	**Pengchaiyu**	**0.88**	**334**	*e*P	**Pn**	**21 35 28.0**	**+1.6**
	baz=332						
TAP1	**Taipei**	**0.91**	**284**	*e*P	**Pn**	**21 35 26.6**	**+0.1**
	baz=286						
TAP	**Taipei**	**0.92**	**283**	*e*P	**Pn**	**21 35 26.1**	**-0.8**
	baz=285						
TAP				*e*S	**Sn**	**21 35 38.6**	**-1.3**
	baz=285						
TWY	**Chenhua**	**0.93**	**299**	P	**Pn**	**21 35 27.1**	**+0.2**
	baz=302						
TWY				S	**Sn**	**21 35 38.7**	**-1.3**
	baz=302						
NSK	**Sanguang**	**1.04**	**262**	P	**Pb**	**21 35 28.1**	**0.0**
	baz=271						
NSK				*e*S	**Sb**	**21 35 40.6**	**-1.2**
	baz=271						
NNS	**Nan Shan**	**1.09**	**249**	*e*P	**Pb**	**21 35 29.2**	**+0.2**
	baz=235						
NNS				S	**Sb**	**21 35 42.4**	**-0.8**
	baz=235						
TWD	**Chiawan**	**1.11**	**228**	*e*P	**Pn**	**21 35 29.3**	**-0.1**
	baz=231						
TWD				*e*S	**Sb**	**21 35 42.8**	**-0.7**
	baz=231						
IRIF	**Iriomote-Funau**	**1.23**	**113**	P	**Pg**	**21 35 31.8**	**0.0**
IRIF				*e*S	**Sg**	**21 35 48.5**	**+0.7**
WHF	**Hehuan Shan**	**1.31**	**239**	*e*P	**Pn**	**21 35 32.9**	**+0.4**
	baz=247						
WHF				*e*S	**Sn**	**21 35 48.7**	**-1.5**
	baz=247						
TWT	**Tachien**	**1.33**	**245**	*e*P	**Pg**	**21 35 34.3**	**+0.6**
	baz=243						
TWT				*e*S	**Sn**	**21 35 50.1**	**-0.2**
	baz=243						
NSTT	**Nanjuang**	**1.37**	**262**	*e*P	**Pb**	**21 35 33.8**	**+0.1**
	baz=261						
NSTT				*e*S	**Sb**	**21 35 51.4**	**+0.2**
	baz=261						
ESL	**Shilin**	**1.40**	**224**	*e*P	**Pb**	**21 35 34.5**	**+0.4**
	baz=203						
ESL				*e*S	**Sn**	**21 35 52.6**	**+0.8**
	baz=203						
HATJ	**Hateruma jima**	**1.42**	**122**	P	**Pg**	**21 35 35.5**	**0.0**
HATJ				*e*S	**Sg**	**21 35 53.7**	**-0.2**
JKRS	**Kuro-shima**	**1.50**	**113**	P	**Pb**	**21 35 36.1**	**+0.2**
JKRS				*e*S	**Sb**	**21 35 55.4**	**+0.5**
JIJ	**Ishigaki jima**	**1.57**	**107**	P	**Pb**	**21 35 36.9**	**-0.2**
JIJ				*e*S	**Sb**	**21 35 56.2**	**-0.7**
NSY	**Sanyi**	**1.63**	**256**	*e*P	**Pn**	**21 35 37.3**	**+0.7**
	baz=273						
TWQ1	**Liyutan**	**1.64**	**253**	*e*P	**Pg**	**21 35 40.0**	**+0.4**
	baz=251						
TWQ1				*e*S	**Sb**	**21 35 59.2**	**+0.3**
	baz=251						
EHY	**Hungye**	**1.70**	**219**	*e*P	**Pb**	**21 35 39.0**	**-0.2**
	baz=216						
SMLT	**Sun Moon Lake**	**1.73**	**237**	*e*P	**Pb**	**21 35 39.8**	**-0.1**
	baz=242						
SMLT				*e*S	**Sb**	**21 36 03.1**	**+1.5**
	baz=242						
TYC	**Yuchr**	**1.75**	**239**	*e*P	**Pb**	**21 35 40.5**	**+0.3**
	baz=243						
TYC				*e*S	**Sb**	**21 36 02.7**	**+0.5**
	baz=243						
TWF1	**Yuli**	**1.83**	**217**	*e*P	**Pn**	**21 35 39.8**	**+0.4**
	baz=201						
CHKT	**Chengkung**	**2.01**	**211**	*e*P	**Pn**	**21 35 39.1**	**-2.7**
	baz=194						
CHKT				*e*S	**Sn**	**21 36 05.1**	**-1.7**
	baz=194						
ALS	**Alishan**	**2.02**	**230**	*e*P	**Pn**	**21 35 44.0**	**+1.7**
	baz=213						
CHN5	**Tsauling**	**2.06**	**234**	*e*P	**Pb**	**21 35 45.1**	**-0.4**
	baz=213						
CHN5				*e*S	**Sb**	**21 36 11.4**	**+0.2**
	baz=213						
ELDTW	**Lidau**	**2.12**	**220**	*e*P	**Pn**	**21 35 45.1**	**+1.7**
	baz=202						
CHN4	**Tsaushan**	**2.28**	**230**	*e*P	**Pn**	**21 35 47.5**	**+2.0**
	baz=211						
CHN4				*e*S	**Sb**	**21 36 16.8**	**-0.4**
	baz=211						
WTP	**Ta-pu**	**2.33**	**228**	*e*P	**Pn**	**21 35 47.5**	**+1.2**
	baz=209						
TWG	**Pinlang**	**2.38**	**213**	*e*P	**Pn**	**21 35 47.3**	**+0.3**
	baz=210						
TWK	**Hsinying**	**2.40**	**230**	*e*P	**Pn**	**21 35 49.6**	**+2.3**
	baz=211						
CHN1	**Nanshi**	**2.43**	**228**	*e*P	**Pn**	**21 35 49.4**	**+1.7**
	baz=225						
SSD	**Sandimen**	**2.68**	**220**	*e*P	**Pb**	**21 35 54.3**	**-1.8**
	baz=202						
SSD				*e*S	**Sn**	**21 36 26.6**	**+3.1**
	baz=202						

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*IPEC **06** 21:42:30.7±0.3, 50°.03N×18°.52E, h0km, ML1.0/3, Error ellipse: s-maj=2.3km s-min=2.0km az=111.0*
*PRU **06** 21:42:31.4, 50°.06N×18°.43E, h0km*
CSEM 06 21:42:30.9±0.6**, 50°.09N**×**18°.41E, h1km, ML1.7**/4**, Error ellipse: s-maj=9.1km s-min=5.3km az=73.0, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.30**	**214**	*e*PG	Pg	21 42 37.2	+0.5
OKC				*e*SG	Sg	21 42 41.6	+0.9
	comp=Z,6.1nm,0.3s						
OKC	**Ostrava-Krasne**	**0.30**	**214**	Pg	Pg	21 42 37.2	+0.5
OKC				Sg	Sg	21 42 41.6	+0.9
	6.1nm,0.3s						
MORC	**Moravsky Berou**	**0.64**	**241**	*e*Pg	Pg	21 42 43.7	+0.4
MORC				*e*Sg	Sg	21 42 51.9	+0.2
	2.3nm,0.3s,baz=68						
KRLC	**Kraliky**	**1.05**	**270**	*e*PG	Pg	21 42 51.1	0.0
KRLC				*e*SG	Sg	21 43 05.1	+0.3
KRLC	**Kraliky**	**1.05**	**270**	Pg	Pg	21 42 51.1	0.0
KRLC				Sg	Sg	21 43 05.1	+0.3
DPC	**Dobruska-Polom**	**1.37**	**282**	*e*PG	Pn	21 42 57.0	-0.2
DPC				*e*SG	Sn	21 43 16.5	+0.5
	comp=Z,1.5nm,0.3s						
DPC	**Dobruska-Polom**	**1.37**	**282**	Pg	Pn	21 42 57.0	-0.2
DPC				*e*Sg	Sn	21 43 16.2	+0.2
	baz=102						
VRAC	**Vranov**	**1.41**	**237**	*e*Pg	Pn	21 42 57.4	-0.4
VRAC				*e*Sg	Sg	21 43 15.7	-0.7
	1.5nm,0.2s,baz=59						
KRUC	**Moravsky**	**1.67**	**233**	*e*Sg	Sn	21 43 23.4	+0.2
	1.8nm,0.3s,baz=54						

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*STR **06** 21:56:44.5±4.4, 41°.97N×14°.37E, h10km, Ml3.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **06** 21:56:53.0, 42°.40N×13°.32E, h10km, mb4.1/4, ML3.8(ROM), After ROM.*
NEIC Felt [III] at Rieti and [II] at Albano Laziale, Ascoli Piceno, Avezzano, Casoli, Cassino, Ciampino, Foligno, Latina, Mentana, Rocca di Papa, Rome, Spoleto, Sulmona and Terni. Also felt at Caldarola, Castel Gandolfo, Frattocchie, Manoppello, Montelibretti, Pescara, Pratola Peligna, Rocca Priora and Salisano.
*ISCJB **06** 21:56:53.7±0.2, 42°.40N±0°.01×13°.31E±0°.01, h11km±1km, mb3.8/11, MS3.4/2, Error ellipse: s-maj=2.2km s-min=1.7km az=26.2*
*ROM **06** 21:56:53.9±0.1, 42°.38N×13°.34E, h10km, Ml3.9/33, Error ellipse: s-maj=0.9km s-min=0.7km az=95.0*
*LDG **06** 21:56:54.0±0.1, 42°.41N×13°.40E, h2km, Ml3.6/11, Error ellipse: s-maj=4.1km s-min=2.7km az=46.0*
*CSEM **06** 21:56:54.3±0.1, 42°.39N×13°.30E, h2km, mb4.1, Error ellipse: s-maj=2.2km s-min=1.9km az=23.0*
*IDC **06** 21:56:54.6±1.0, 42°.50N×13°.23E, h0km, mb3.7/7, mb1 3.8/17, mb1mx3.7/36, mbtmp3.7/17, ML3.7/8, MS3.2/3, Ms1 3.2/3, ms1mx2.5/48, Error ellipse: s-maj=16.2km s-min=12.6km az=97.0*
*PDG **06** 21:56:55.3±0.5, 42°.43N×13°.43E, h4km±2km, ML3.8/9, Error ellipse: s-maj=1.3km s-min=1.9km az=0.0*
*PRU **06** 21:56:56.0, 42°.45N×13°.42E, h0km, M4.1*
ISC 06 21:56:54.8±0.7**, 42°.39N**±0°.02×**13°.33E**±0°.02**, h11**km±4km**, n391,** σ**1s.61**/476**, mb3.8**/11**, 73C-34D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**126**	P	**Pg**	**21 56 56.5**	**-0.7**
AQU				S	**Sg**	**21 56 58.2**	**-0.7**
AQU	**L'Aquila**	**0.07**	**126**⇑	*i*Pg	**Pg**	**21 56 56.5**	**-0.7**
AQU				Sg	**Sg**	**21 56 58.0**	**-0.9**
	153µm,0.5s						
AQU	**L'Aquila**	**0.07**	**126**⇑	*i*Pg	**Pg**	**21 56 56.5**	**-0.7**
AQU				S	**Sg**	**21 56 58.2**	**-0.7**
CAMP	**Campotosto**	**0.15**	**22**⇑	*i*Pg	**Pg**	**21 56 57.9**	**-0.5**
CAMP				Sg	**Sg**	**21 57 00.6**	**-0.4**
CAMP	**Campotosto**	**0.15**	**22**⇑	*i*Pg	**Pg**	**21 56 57.9**	**-0.5**
CAMP				Sg	**Sg**	**21 57 00.6**	**-0.4**
FIAM	**Fiamignano**	**0.20**	**232**	P	**Pg**	**21 56 58.9**	**-0.2**
FIAM				S	**Sg**	**21 57 03.1**	**+1.0**
FIAM	**Fiamignano**	**0.20**	**232**⇑	*i*Pg	**Pg**	**21 56 58.9**	**-0.2**
FIAM				Sg	**Sg**	**21 57 02.4**	**+0.3**
FIAM	**Fiamignano**	**0.20**	**232**⇑	*i*Pg	**Pg**	**21 56 58.9**	**-0.2**
FIAM				Sg	**Sg**	**21 57 02.4**	**+0.3**
FIAM				S		21 57 03.1	
FAGN	**Fagnano**	**0.23**	**124**⇑	*e*Pg	**Pg**	**21 56 59.1**	**-0.5**
FAGN				Sg	**Sg**	**21 57 03.2**	**+0.4**
	144µm,0.4s						

FAGN Fagnano 0.23 124⇑*e*Pg Pg 21 56 59.1 -0.5
FAGN Sg Sg 21 57 03.2 +0.4
144µm,0.4s
TERO Teramo 0.31 41 P Pg 21 57 00.1 -0.9
TERO Teramo 0.31 41⇑*i*Pg Pg 21 57 00.1 -0.9
TERO Sg Sg 21 57 04.9 -0.3
14µm,0.4s
TERO Teramo 0.31 41 P Pg 21 57 00.2 -0.9
TERO Sg Sg 21 57 04.9 -0.3
14µm,0.4s
PTQR Pietraquaria 0.38 172 P Pg 21 57 01.6 -0.6
PTQR Pietraquaria 0.38 172⇑*i*Pg Pg 21 57 01.7 -0.6
PTQR Pietraquaria 0.38 172⇑*i*Pg Pg 21 57 01.7 -0.6
VCEL Villa Celiera 0.38 90 Pg Pg 21 57 01.7 -0.7
26µm,0.7s
VCEL Villa Celiera 0.38 90 Pg Pg 21 57 01.7 -0.7
26µm,0.7s
GAVE Gavelli 0.44 313 Pg Pg 21 57 03.3 -0.2
GAVE Gavelli 0.44 313 Pg Pg 21 57 03.3 -0.2
NRCA Norcia 0.47 340 Pg Pg 21 57 03.2 -0.8
NRCA Norcia 0.47 340 Pg Pg 21 57 03.2 -0.8
MNS Montasola 0.48 269⇑*i*Pg Pg 21 57 03.5 -0.7
MNS Sg Sg 21 57 10.2 -0.4
5µm,0.5s
MNS Montasola 0.48 269⇑*i*Pg Pg 21 57 03.5 -0.7
MNS Sg Sg 21 57 10.2 -0.4
5µm,0.5s
CERT Cerreto 0.51 210 P Pg 21 57 04.1 -0.7
CERT Cerreto 0.51 210⇑*i*Pg Pg 21 57 04.1 -0.7
CERT Sg Sg 21 57 11.9 +0.3
12µm,0.4s
CERT Cerreto 0.51 210⇑*i*Pg Pg 21 57 04.1 -0.7
CERT Sg Sg 21 57 11.9 +0.3
12µm,0.4s
VVLD Villa Vallelon 0.56 157 P Pg 21 57 04.7 -1.1
VVLD Villa Vallelon 0.56 157 Pg Pg 21 57 04.6 -1.2
VVLD Sg Sg 21 57 12.9 -0.4
5µm,0.4s
VVLD Villa Vallelon 0.56 157 P Pg 21 57 04.7 -1.1
VVLD Sg Sg 21 57 12.9 -0.4
5µm,0.4s
MTCE Montecelio 0.57 230 P Pg 21 57 05.1 -0.8
MTCE Montecelio 0.57 230⇑*i*Pg Pg 21 57 05.1 -0.8
3µm,0.5s
MTCE Montecelio 0.57 230⇑*i*Pg Pg 21 57 05.1 -0.8
3µm,0.4s
INTR Introdacqua 0.57 132 P Pg 21 57 05.1 -0.9
INTR Introdacqua 0.57 132 Pg Pg 21 57 05.1 -0.9
INTR Sg Sg 21 57 13.3 -0.2
7µm,0.5s
INTR Introdacqua 0.57 132 Pg Pg 21 57 05.1 -0.9
INTR Sg Sg 21 57 13.3 -0.2
7µm,0.5s
GUAR Guarcino 0.60 181⇑*e*Pg Pg 21 57 05.5 -0.9
4µm,0.4s
GUAR Guarcino 0.60 181⇑*e*Pg Pg 21 57 05.5 -0.9
4µm,0.4s
TRTR Tortoreto Alta 0.60 46⇑*e*Pg Pg 21 57 06.5 0.0
39µm,1.1s
TRTR Tortoreto Alta 0.60 46⇑*e*Pg Pg 21 57 06.5 0.0
39µm,1.1s
OFFI Offida 0.60 26⇑*i*Pg Pg 21 57 06.4 -0.1
33µm,0.6s
OFFI Offida 0.60 26⇑*i*Pg Pg 21 57 06.4 -0.1
33µm,0.6s
FDMO Fiordimonte 0.67 345⇑*e*Pg Pg 21 57 06.6 -1.2
FDMO Sg Sg 21 57 16.9 +0.4
2µm,0.5s
FDMO Fiordimonte 0.67 345⇑*e*Pg Pg 21 57 06.6 -1.2
FDMO Sg Sg 21 57 16.9 +0.4
2µm,0.5s
CESI CESI - Serrava 0.69 333 Pg Pg 21 57 07.3 -0.8
CESI Sg Sb 21 57 17.9 -0.5
CESI CESI - Serrava 0.69 333 Pg Pg 21 57 07.3 -0.8
CESI Sg Sb 21 57 17.9 -0.5
POFI Posta Fibreno 0.73 157 Pg Pg 21 57 07.8 -1.2
POFI Posta Fibreno 0.73 157 Pg Pg 21 57 07.8 -1.2
RMP Rome, Mte Porz 0.75 219⇑*e*Pg Pg 21 57 08.1 -1.1
4µm,0.5s
RMP Rome, Mte Porz 0.75 219⇑*e*Pg Pg 21 57 08.1 -1.1
4µm,0.5s
SDI San Donato 0.77 152 Pg Pg 21 57 08.3 -1.4
SDI San Donato 0.77 152 Pg Pg 21 57 08.3 -1.4
CAFR Castel Frentan 0.77 102⇑*e*Pg Pg 21 57 08.9 -0.8
10µm,0.9s
CAFR Castel Frentan 0.77 102⇑*e*Pg Pg 21 57 08.9 -0.8
10µm,0.9s
RDP Rocca di Papa 0.78 216⇑*e*Pg Pg 21 57 08.9 -1.0
9µm,0.5s
RDP Rocca di Papa 0.78 216⇑*e*Pg Pg 21 57 08.9 -1.0
9µm,0.5s
MA9 Marino 0.80 219 Pg Pg 21 57 09.0 -1.2
5µm,0.6s
MA9 Marino 0.80 219 Pg Pg 21 57 09.0 -1.2
5µm,0.6s
ASSB Assisi San Ben 0.82 323 Pg Pg 21 57 09.4 -1.2
ASSB Sg Sb 21 57 22.3 +0.2
3µm,0.4s
ASSB Assisi San Ben 0.82 323 Pg Pg 21 57 09.4 -1.2
ASSB Sg Sb 21 57 22.3 +0.2
3µm,0.4s
ROM9 Roma 0.83 227 Pg Pg 21 57 10.0 -0.8
7µm,0.9s
ROM9 Roma 0.83 227 Pg Pg 21 57 10.0 -0.8
7µm,0.9s
GIUL Giuliano Di Ro 0.84 184⇑*e*Pg Pg 21 57 09.4 -1.5
2µm,0.5s
GIUL Giuliano Di Ro 0.84 184⇑*e*Pg Pg 21 57 09.4 -1.5
2µm,0.5s
LAV9 Lanuvio 0.85 214 Pg Pg 21 57 10.3 -1.0
2µm,0.3s
LAV9 Lanuvio 0.85 214 Pg Pg 21 57 10.3 -1.0
2µm,0.3s
SNTG Esanatoglia 0.91 342⇑*e*Pg Pg 21 57 10.9 -1.4
SNTG Esanatoglia 0.91 342⇑*e*Pg Pg 21 57 10.9 -1.4
RNI2 Rionero Sannit 0.92 138 Pg Pg 21 57 11.0 -1.6
RNI2 Rionero Sannit 0.92 138 Pg Pg 21 57 11.0 -1.6
CERA Filignano 0.95 147 Pg Pg 21 57 11.2 -1.8
3µm,0.5s
CERA Filignano 0.95 147 Pg Pg 21 57 11.2 -1.8
3µm,0.5s
CING Cingoli 0.99 354⇑*e*Pg Pg 21 57 12.2 -1.6
2µm,0.4s
CING Cingoli 0.99 354⇑*e*Pg Pg 21 57 12.2 -1.6
2µm,0.4s
MIDA Miranda 1.02 137⇑*e*Pg Pb 21 57 12.3 -2.2
1µm,0.4s
MIDA Miranda 1.02 137⇑*e*Pg Pb 21 57 12.3 -2.2
1µm,0.4s
TOLF Tolfa 1.04 252 Pg Pb 21 57 13.3 -1.5
3µm,0.9s
TOLF Tolfa 1.04 252 Pg Pb 21 57 13.3 -1.5
3µm,0.9s
MURB Monte Urbino 1.05 326⇑*e*Pg Pb 21 57 14.0 -1.1
5µm,0.4s
MURB Monte Urbino 1.05 326⇑*e*Pg Pb 21 57 14.0 -1.1
5µm,0.4s
ARVD Arcevia 1.14 346 Pg Pb 21 57 14.9 -1.7
2µm,0.8s
ARVD Arcevia 1.14 346 Pg Pb 21 57 14.9 -1.7
2µm,0.8s
AOI Ancona 1.17 10⇑*e*Pg Pb 21 57 15.7 -1.4
2µm,0.9s
AOI Ancona 1.17 10⇑*e*Pg Pb 21 57 15.7 -1.4
2µm,0.9s
PIEI Pieia 1.28 333 Pg Pn 21 57 17.8 -0.9
963nm,0.5s
PIEI Pieia 1.28 333 Pg Pn 21 57 17.8 -0.9
963nm,0.5s
MODR Mondragone 1.31 162 Pn Pn 21 57 18.5 -0.6
MODR Mondragone 1.31 162 Pn Pn 21 57 18.5 -0.6
BADI Badiali 1.37 325 Pn Pn 21 57 19.7 -0.2
1µm,0.7s
BADI Badiali 1.37 325 Pn Pn 21 57 19.7 -0.2
1µm,0.7s
ARCI Arcidosso 1.44 289 Pn Pn 21 57 21.1 +0.1
ARCI Arcidosso 1.44 289 Pn Pn 21 57 21.1 +0.1
PARC Parchiule 1.49 328 Pn Pn 21 57 21.8 +0.2
1µm,0.7s
PARC Parchiule 1.49 328 Pn Pn 21 57 21.8 +0.2
1µm,0.7s
PESA Pesaro 1.59 347 Pn Pb 21 57 23.6 -0.6
2µm,0.9s
PESA Pesaro 1.59 347 Pn Pb 21 57 23.6 -0.6
2µm,0.9s
CSNT Castellina Chi 1.84 306 Pn Pn 21 57 26.8 +0.3
CSNT Castellina Chi 1.84 306 Pn Pn 21 57 26.8 +0.3
SFI Santa Sofia 1.86 325 Pn Pn 21 57 26.4 -0.3
SFI Santa Sofia 1.86 325 Pn Pn 21 57 26.4 -0.3
MSAG Monte S. Angel 2.04 109 Pn Pn 21 57 30.4 +1.2
988nm,0.6s
MSAG Monte S. Angel 2.04 109 Pn Pn 21 57 30.4 +1.2
988nm,0.6s
NVLJ Novalja 2.44 27 *e*Pn Pn 21 57 34.1 -0.5
NVLJ Sn Sn 21 58 04.9 +0.4
NVLJ Novalja 2.44 27 *e*Pn Pn 21 57 34.1 -0.5
NVLJ Sn Sn 21 58 04.9 +0.4
MAIM Mastiano 2.57 307 Pn Pn 21 57 37.3 +0.9
MAIM Mastiano 2.57 307 Pn Pn 21 57 37.3 +0.9
CUC Castrocucco 3.04 141 *e*Pn Pn 21 57 43.9 +0.9
CUC Castrocucco 3.04 141 *e*Pn Pn 21 57 43.9 +0.9
OSPF L'Ospedale 3.17 258 P Pn 21 57 44.2 -0.5
OSPF L'Ospedale 3.17 258 P Pn 21 57 44.2 -0.5
GRAM Graiana 3.17 313 P Pn 21 57 45.2 +0.5
SKDS Skadanscina 3.19 9 *i* Pn Pn 21 57 44.6 -0.4
SKDS *i* Sn Sn 21 58 21.6 -1.4
SKDS
comp=Z,103nm,0.5s
SKDS Skadanscina 3.19 9 Pn Pn 21 57 44.6 -0.4
SKDS *i* Sn Sn 21 58 21.6 -1.4
comp=Z,103nm,0.5s
PGF Pioggiola 3.21 274 *e*Pn Pn 21 57 46.0 +0.8
SNR=1.0
PGF *e*Sn Sn 21 58 25.9 +2.4
comp=Z,112nm,0.7s
PGF Pioggiola 3.21 274 *e*Pn Pn 21 57 46.0 +0.8
SNR=1.0
PGF *e*Sn Sn 21 58 25.9 +2.4
comp=Z,56nm,0.7s
CODM Codolo 3.23 309 P Pn 21 57 45.8 +0.3
STON Ston 3.26 80 *e*Pn Pn 21 57 46.2 +0.4
STON Sn Sn 21 58 25.4 +0.7
STON Ston 3.26 80 *e*Pn Pn 21 57 46.2 +0.4
STON Sn Sn 21 58 25.3 +0.7
TRI Trieste 3.33 5 *e*Pn Pn 21 57 46.3 -0.5
TRI *e*Sn Sn 21 58 25.5 -0.9
TRI Trieste 3.33 5 *e*Pn Pn 21 57 46.3 -0.5
TRI *e*Sn Sn 21 58 25.5 -0.9
BOJS Bojanci 3.41 23 *i* Pn Pn 21 57 48.7 +0.8
BOJS Bojanci 3.41 23 *i* Pn Pn 21 57 48.7 +0.8
SC2M Scurtabo 3.42 307 P Pn 21 57 48.2 +0.1
CGRP Cima Grappa 3.66 343 Pn Pn 21 57 50.6 -0.9
comp=Z,233nm,0.5s
CGRP Cima Grappa 3.66 343 Pn Pn 21 57 50.6 -0.9
comp=Z,233nm,0.5s
VOY Vojsko 3.66 6 *e*Pn Pn 21 57 51.1 -0.4
VOY *e* 21 57 52.6
VOY *e*Sn Sn 21 58 36.3 +1.6
VOY Vojsko 3.66 6 *e*Pn Pn 21 57 51.1 -0.4
VOY *e*Sn Sn 21 58 36.3 +1.6
HCY Herceg Novi 3.82 87⇓*i*Pn Pn 21 57 54.6 +1.0
HCY *e*Sn Sn 21 58 40.4 +1.8
HCY Herceg Novi 3.82 87⇓*i*Pn Pn 21 57 54.6 +1.0
HCY *e*Sn Sn 21 58 40.4 +1.8
CADS Cadrg 3.84 4 *i* Pn Pn 21 57 53.5 -0.5
CADS Cadrg 3.84 4 *i* Pn Pn 21 57 53.5 -0.5
VINO Villanova 3.86 360 Pn Pn 21 57 53.8 -0.4
VINO Villanova 3.86 360 Pn Pn 21 57 53.8 -0.4
BRY Bratogost 3.88 81⇑*i*Pn Pn 21 57 55.8 +1.3
BRY *e*Sn Sn 21 58 42.1 +2.0
BRY Bratogost 3.88 81⇑*i*Pn Pn 21 57 55.8 +1.3
BRY *e*Sn Sn 21 58 42.1 +2.0
BUM Brajici-Budva 4.12 89⇓*i*Pn Pn 21 57 59.6 +1.8
BUM *e*Sn Sn 21 58 48.1 +2.0
BUM Brajici-Budva 4.12 89⇓*i*Pn Pn 21 57 59.6 +1.8
BUM *e*Sn Sn 21 58 48.1 +2.0
TIP Timpagrande 4.13 140 *e*Pn Pn 21 57 56.1 -1.8
TIP Timpagrande 4.13 140 *e*Pn Pn 21 57 56.1 -1.8
VSL Villasalto 4.16 227 *e*Pn Pn 21 57 59.1 +0.8
VSL Sn Sn 21 58 45.4 -1.6
VSL Villasalto 4.16 227 *e*Pn Pn 21 57 59.1 +0.8
VSL Sn Sn 21 58 45.4 -1.6
UPM Unac-Piva 4.18 77⇓*i*Pn Pn 21 58 00.5 +1.8
UPM *e*Sn Sn 21 58 50.2 +2.5
UPM Unac-Piva 4.18 77⇓*i*Pn Pn 21 58 00.5 +1.8
UPM *e*Sn Sn 21 58 50.2 +2.5
NKY Niksic 4.20 82⇑*i*Pn Pn 21 58 00.8 +1.9
NKY *e*Sn Sn 21 58 49.4 +1.4
NKY Niksic 4.20 82⇑*i*Pn Pn 21 58 00.8 +1.9
NKY *e*Sn Sn 21 58 49.4 +1.4
OBKA Obir 4.21 12⇓*i*Pn Pn 21 57 58.9 -0.1
SNR=10
OBKA Obir 4.21 12 Pn Pn 21 57 58.9 -0.1
SNR=10
MYKA Terra Mystica 4.24 3⇓*i*Pn Pn 21 57 59.9 +0.4
MYKA Terra Mystica 4.24 3 Pn Pn 21 57 59.9 +0.4
PDG Podgorica 4.39 88⇓*i*Pn Pn 21 58 02.9 +1.5
PDG *e*Sn Sn 21 58 54.1 +1.7
TTG Podgorica 4.39 88⇓*i*Pn Pn 21 58 02.9 +1.5
TTG *e*Sn Sn 21 58 54.1 +1.7
ABTA Abfaltersbach 4.39 353⇑*i*Pn Pn 21 58 01.6 +0.1
SNR=34
ABTA Abfaltersbach 4.39 353 Pn Pn 21 58 01.6 +0.1
SNR=34
ULC Ulcinj 4.42 94⇓*i*Pn Pn 21 58 03.1 +1.3
ULC *e*Sn Sn 21 58 54.8 +1.6
ULC Ulcinj 4.42 94⇓*i*Pn Pn 21 58 03.1 +1.3
ULC *e*Sn Sn 21 58 54.8 +1.6
SOKA Soboth 4.45 15⇑*i*Pn Pn 21 58 02.3 0.0
SOKA Soboth 4.45 15 Pn Pn 21 58 02.3 0.0
SAOF Saorge 4.51 293 P Pn 21 58 03.6 +0.5
SAOF Saorge 4.51 293 P Pn 21 58 03.6 +0.5
PLE Pljevlja 4.55 76⇑*i*Pn Pn 21 58 06.0 +2.3
PLE *e*Sn Sn 21 58 58.8 +2.1
PLE Pljevlja 4.55 76⇑*i*Pn Pn 21 58 06.0 +2.3
PLE *e*Sn Sn 21 58 58.8 +2.1
SBF Sospel 4.56 291 *e*Pn Pn 21 58 04.4 +0.6
SNR=1.0
SBF *e*Sn Sn 21 58 54.2 -2.5
comp=Z,55nm,0.8s
SBF Sospel 4.56 291 *e*Pn Pn 21 58 04.4 +0.6
SNR=1.0
SBF *e*Sn Sn 21 58 54.2 -2.5
comp=Z,28nm,0.8s
CEL Celeste 4.57 154 *e*Pn Pn 21 58 02.3 -1.7
CEL Celeste 4.57 154 *e*Pn Pn 21 58 02.3 -1.7
REVF Revere 4.57 289 P Pn 21 58 05.2 +1.3
REVF Revere 4.57 289 P Pn 21 58 05.2 +1.3
AUTN L'Aution 4.60 292 P Pn 21 58 07.4 +2.9
AUTN L'Aution 4.60 292 P Pn 21 58 07.4 +2.9
BBLS Lazići 4.68 70 *e*Pn Pn 21 58 08.4 +2.9
KBA Koelnbreinsper 4.69 0⇑*i*Pn Pn 21 58 06.3 +0.7
SNR=9.8
KBA Koelnbreinsper 4.69 0 Pn Pn 21 58 06.3 +0.7
SNR=9.8
TOUF Mont Tournerai 4.73 292 P Pn 21 58 07.8 +1.5
TOUF Mont Tournerai 4.73 292 P Pn 21 58 07.8 +1.5
BEHE Becsehely 4.76 30⇓*e*pPn Pn 21 58 09.1 +2.6
BEHE Becsehely 4.76 30⇓*e*P Pn 21 58 09.1 +2.6
BEY Berane 4.87 82 *e*Pn Pn 21 58 10.5 +2.5
BEY *e*Sn Sn 21 59 06.1 +1.7
IVA Berane 4.87 82 *e*Pn Pn 21 58 10.5 +2.5
IVA *e*Sn Sn 21 59 06.1 +1.7
PUK Puka 4.89 92 *i* PN Pn 21 58 09.8 +1.5
PUK *i* SN Sn 21 59 05.3 +0.4
PUK Puka 4.89 92 *i* Pn Pn 21 58 09.8 +1.5
PUK *i* Sn Sn 21 59 05.3 +0.4
PVY Plav 4.91 85 *e*Pn Pn 21 58 11.0 +2.4
PVY *e*Sn Sn 21 59 07.5 +2.1
CALN Calern 4.91 288 P Pn 21 58 09.9 +1.2
CALN Calern 4.91 288 P Pn 21 58 09.9 +1.2
TUE Stuetta 4.98 326 *e*Pn Pn 21 58 10.4 +0.8
TUE *e*Sn Sn 21 59 05.4 -1.8
TUE Stuetta 4.98 326 *e*Pn Pn 21 58 10.4 +0.8
TUE *e*Sn Sn 21 59 05.4 -1.8
FETA Feichten 4.98 339⇑*i*Pn Pn 21 58 11.4 +1.7
SNR=18
FETA Feichten 4.98 339 Pn Pn 21 58 11.4 +1.7
SNR=18
BCI Bajram Curri 4.99 88 *i* PN Pn 21 58 11.8 +2.1
BCI *i* SN Sn 21 59 12.2 +4.8
BCI Bajram Curri 4.99 88 *i* Pn Pn 21 58 11.8 +2.1
BCI *i* Sn Sn 21 59 12.2 +4.8
TIR Tirane 4.99 100 *i* PN Pn 21 58 10.5 +0.8
TIR *i* SN Sn 21 59 05.3 -2.0
TIR Tirane 4.99 100 *e*Pn Pn 21 58 08.0 -1.7
TIR *e*Sn Sn 21 59 05.5 -1.8
TIR Tirane 4.99 100 *i* Pn Pn 21 58 10.5 +0.8
TIR *i* Sn Sn 21 59 05.3 -2.0
WTTA Wattenberg 5.02 347⇑*i*Pn Pn 21 58 12.1 +1.9
SNR=20
WTTA Wattenberg 5.02 347 Pn Pn 21 58 12.1 +1.9
SNR=20
DAVOX Davos/Dischmat 5.03 332 Pn Pn 21 58 11.6 +1.2
comp=Z,3.6nm,0.3s,baz=153,slow=17,SNR=28
DAVOX Sn Sn 21 59 12.3 +3.7
comp=Z,2.5nm,0.3s,baz=307,slow=20,SNR=3.7
FRF La Foret Royal 5.04 286 *e*Pn Pn 21 58 10.5 +0.2
SNR=1.0
FRF *e*Sn Sn 21 59 05.2 -3.3
comp=Z,6.9nm,0.6s
FRF La Foret Royal 5.04 286 *e*Pn Pn 21 58 10.5 +0.2
SNR=1.0
FRF *e*Sn Sn 21 59 05.2 -3.3
comp=Z,3.5nm,0.6s
WATA Walderalm 5.10 346⇑*i*Pn Pn 21 58 13.6 +2.3
SNR=16
WATA Walderalm 5.10 346 Pn Pn 21 58 13.6 +2.3
SNR=16
LMR La Mourre 5.10 283 *e*Pn Pn 21 58 11.3 +0.2
SNR=1.0
LMR *e*Sn Sn 21 59 06.0 -4.0
comp=Z,19nm,0.7s
LMR La Mourre 5.10 283 *e*Pn Pn 21 58 11.3 +0.2
SNR=1.0
LMR *e*Sn Sn 21 59 06.0 -4.0
comp=Z,9.6nm,0.7s
ARSA Arzberg 5.10 17⇑*i*Pn Pn 21 58 10.6 -0.6
SNR=8.5
ARSA Arzberg 5.10 17 Pn Pn 21 58 10.6 -0.6
SNR=8.5
IVAS Ivanjica 5.14 74 *e*Pn Pn 21 58 12.8 +1.0
DIVS Divibare 5.16 68 *e*Pn Pn 21 58 12.1 +0.1
MOTA Moosalm 5.20 343⇑*i*Pn Pn 21 58 14.4 +1.8
SNR=18
MOTA Moosalm 5.20 343 Pn Pn 21 58 14.4 +1.8
SNR=18
MBDF Montbardon 5.30 298 *e*P Pn 21 58 16.5 +2.4
MBDF Montbardon 5.30 298 *e*P Pn 21 58 16.5 +2.4
PHP Peshkopia 5.34 95 *i* PN Pn 21 58 16.1 +1.5
PHP *i* SN Sn 21 59 17.8 +1.7
PHP Peshkopia 5.34 95 *i* Pn Pn 21 58 16.1 +1.5
PHP *i* Sn Sn 21 59 17.8 +1.7
RJOB Jochberg 5.36 356 *e*Pn Pn 21 58 16.4 +1.7
PKSM Moragy 5.39 43⇓*e*Pn Pn 21 58 15.2 0.0
PKSM Moragy 5.39 43⇓*e*P Pn 21 58 15.2 0.0
RETA Reutte 5.41 341⇓*i*Pn Pn 21 58 17.4 +1.9
SNR=9.8
RETA Reutte 5.41 341 Pn Pn 21 58 17.4 +1.9
SNR=9.8
DAVA Damuels 5.47 335⇑*i*Pn Pn 21 58 17.8 +1.4
SNR=15
DAVA Damuels 5.47 335 Pn Pn 21 58 17.8 +1.4
SNR=15
TRUS Trudelj 5.48 68 *e*Pn Pn 21 58 15.9 -0.5
PKS9 Tamasi 5.49 38 *e*pPn Pn 21 58 17.5 +1.0
PKS9 Tamasi 5.49 38 *e*P Pn 21 58 17.5 +1.0
MOA Molln 5.50 7⇑*i*Pn Pn 21 58 18.5 +1.9
SNR=26
MOA Molln 5.50 7 Pn Pn 21 58 18.5 +1.9
SNR=26
BNI Bardonecchia 5.50 301 *e*Pn Pn 21 58 15.2 -1.6
comp=Z,11nm,0.9s
BNI *e*Sn Sn 21 59 17.4 -2.7
BNI Bardonecchia 5.50 301 *e*Pn Pn 21 58 15.2 -1.6
comp=Z,11nm,0.9s
GRUS Gruza 5.61 72 *e*Pn Pn 21 58 19.0 +0.9
LPG La Plagne 5.67 305 *e*P Pn 21 58 22.2 +2.9
LPG *e*Sn Sn 21 59 20.1 -4.4
comp=Z,16nm,0.6s
LPG La Plagne 5.67 305 *e*P Pn 21 58 22.2 +2.9
LPL La Plagne 5.69 305 *e*P Pn 21 58 22.4 +2.9
LPL *e*Sn Sn 21 59 20.7 -4.3
comp=Z,13nm,0.5s
LPL La Plagne 5.69 305 *e*P Pn 21 58 22.4 +2.9
SOP Sopron 5.76 22 *e*Pn Pn 21 58 19.9 -0.3
SOP Sopron 5.76 22 *e*P Pn 21 58 19.9 -0.3
SELS Selova 5.79 79 *e*Pn Pn 21 58 21.8 +1.1
CONA Conrad Observa 5.82 17⇓*i*Pn Pn 21 58 21.1 0.0
SNR=22
CONA Conrad Observa 5.82 17 Pn Pn 21 58 21.1 0.0
SNR=22
PKS2 Kecel 5.88 44 *e*pPn Pn 21 58 24.7 +2.9
PKS2 Kecel 5.88 44 *e*P Pn 21 58 24.7 +2.9
SMRF Simiane la Rot 5.89 288 *e*P Pn 21 58 23.5 +1.5
SMRF Simiane la Rot 5.89 288 *e*P Pn 21 58 23.5 +1.5
PKST T"s 5.90 33 *e*Pn Pn 21 58 22.2 0.0
PKST T"s 5.90 33 *e*P Pn 21 58 22.2 0.0
FUR Furstenfeldbru 5.95 347 *e*Pn Pn 21 58 16.3 -6.6
ORIF Oris-en-Rattie 5.96 298 *e*P Pn 21 58 26.8 +3.7
SVIS Svilajnac 6.05 69 *e*Pn Pn 21 58 24.1 -0.1
PKS6 Bocsa 6.13 45 *e*sPn sPn 21 58 34.7 +5.3
PKSG 6.16 34 *e*pPn Pn 21 58 27.2 +1.6
PKSG 6.16 34 *e*P Pn 21 58 27.2 +1.6
GEC2 GERESS Array S 6.46 2 *e*Pn Pn 21 58 30.7 +0.8
GERES GERESS Array B 6.46 2 Pn Pn 21 58 29.7 -0.2
comp=Z,1.0nm,0.3s,baz=169,slow=13,SNR=23
GERES Sn Sn 21 59 41.5 -2.1
comp=Z,2.2nm,0.3s,baz=187,slow=20,SNR=8.1
BOLS Boljevac 6.47 74 *e*Pn Pn 21 58 29.1 -0.9
FELD Feldberg im Sc 6.65 327 P Pn 21 58 33.3 +0.7
CABF La Chapelle 6.68 312 *e*Pn Pn 21 58 34.0 +1.1
SNR=1.0
CABF La Chapelle 6.68 312 *e*Pn Pn 21 58 34.0 +1.1
SNR=1.0
KHC Kasperske Hory 6.74 1 *e*Pn Pn 21 58 32.7 -1.0
comp=Z,6.8nm,0.6s
KHC *e*Sn Sn 21 59 49.0 -1.4
KHC Kasperske Hory 6.74 1 *e*PN Pn 21 58 34.6 +0.9
KHC *e*PG Pg 21 58 58.0 -5.8
KHC *e*SN Sn 21 59 48.3 -2.2
KHC Kasperske Hory 6.74 1 Pn Pn 21 58 34.6 +0.9
VIVF Saint-Julien-l 6.75 294 *e*Pn Pn 21 58 35.8 +2.0
SNR=1.0
VIVF Saint-Julien-l 6.75 294 *e*Pn Pn 21 58 35.8 +2.0
SNR=1.0
WET Wettzell 6.76 357 *e*Pn Pn 21 58 34.4 +0.4
SMOL Smolenice 6.76 24 *e*SN Sn 21 59 38.1 -13
LOMF Lomont 6.77 319 P Pn 21 58 35.4 +1.2
LOMF Lomont 6.77 319 P Pn 21 58 35.4 +1.2
BZS Buzias 6.79 59⇓*i*P Pn 21 58 36.2 +1.9
BZS Buzias 6.79 59⇓*i*P Pn 21 58 36.2 +1.9
ZAPS Zavoj 6.90 80 *e*Pn Pn 21 58 37.9 +2.0
BFO Black Forest 6.90 331 *e*Pn Pn 21 58 36.7 +0.8
BFO Black Forest 6.90 331 *e*Pn Pn 21 58 34.4 -1.5
comp=Z,5.7nm,0.6s
BFO *e*Sn Sn 21 59 53.1 -1.3
BFO Black Forest 6.90 331 *e*Pn Pn 21 58 34.4 -1.5
comp=Z,5.7nm,0.6s
BFO *e*Sn Sn 21 59 53.1 -1.3
MOF Molkenrain 7.00 323 P Pn 21 58 37.5 +0.2
MOF Molkenrain 7.00 323 P Pn 21 58 37.5 +0.2
TREC Trest 7.07 12 *e*PN Pn 21 58 38.2 +0.1
TREC *e*SN Sn 21 59 55.5 -2.9
TREC Trest 7.07 12 Pn Pn 21 58 38.2 +0.1
HINF Hinteralfeld 7.10 322 *e*Pn Pn 21 58 37.0 -1.6
SNR=1.0
HINF *e*Sn Sn 21 59 55.1 -4.2
comp=Z,26nm,0.8s
HINF Hinteralfeld 7.10 322 *e*Pn Pn 21 58 37.0 -1.6
SNR=1.0
LASF Ste Croix 7.12 287 *e*Pn Pn 21 58 39.3 +0.4
SNR=1.0
LASF Ste Croix 7.12 287 *e*Pn Pn 21 58 39.3 +0.4
SNR=1.0
VYHS Vyhne 7.22 31 *e*PN Pn 21 58 37.5 -2.8
VYHS *e*SN Sn 21 59 57.1 -5.2
ECH Echery 7.27 325 *e*Pn Pn 21 58 39.1 -1.8
comp=Z,6.6nm,0.6s
ECH *e*Sn Sn 22 00 01.6 -1.8
ECH Echery 7.27 325 P Pn 21 58 40.8 -0.1
ECH Echery 7.27 325 *e*Pn Pn 21 58 39.1 -1.8
comp=Z,6.6nm,0.6s
ECH Echery 7.27 325 P Pn 21 58 40.8 -0.1
KKB Krupnik 7.27 91 P Pn 21 58 44.2 +3.2
KKB Krupnik 7.27 91 P Pn 21 58 44.2 +3.2
VRAC Vranov 7.28 17⇓*i*P Pn 21 58 42.7 +1.6
VRAC Vranov 7.28 17 Pn Pn 21 58 42.8 +1.6
comp=Z,0.6nm,0.3s,baz=215,slow=13,SNR=5.2
VRAC LR LR 22 01 33.2
comp=Z,86nm,18.0s,baz=205,slow=39
VRAC Vranov 7.28 17⇓*i*P Pn 21 58 42.7 +1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VTS	Vitosha	7.30	85	P	Pn	21 58 42.9	+1.3
VTS	Vitosha	7.30	85	ePn	Pn	21 58 42.8	+1.2
KEST	Kesra	7.34	206	ePn	Pn	21 58 46.3	+4.4
KEST				S	Sg	22 00 50.1	-0.1
KEST	Kesra	7.34	206	Pn	Pn	21 58 45.9	+4.0
	comp=Z,0.4nm,0.3s,baz=282,slow=2.4,SNR=24						
CDF	Champ du Feu	7.37	327	ePn	Pn	21 58 42.1	-0.3
	SNR=1.0						
CDF				eSn	Sn	22 00 02.1	-4.0
	comp=Z,19nm,0.6s						
CDF	Champ du Feu	7.37	327	ePn	Pn	21 58 42.1	-0.3
	SNR=1.0						
ROTZ	Rotzenmuhle	7.42	354	ePn	Pn	21 58 43.6	+0.7
GRF	Grafenberg Arr	7.45	349	ePn	Pn	21 58 44.5	+1.1
GZR	Gura Zlata	7.45	63⇓	iP	Pn	21 58 45.2	+1.7
GZR	Gura Zlata	7.45	63⇓	iP	Pn	21 58 45.2	+1.7
HAU	Haudompre	7.47	321	ePn	Pn	21 58 43.6	-0.1
	SNR=1.0						
HAU				eSn	Sn	22 00 02.6	-5.7
	comp=Z,20nm,0.4s						
HAU	Haudompre	7.47	321	ePn	Pn	21 58 43.6	-0.1
	SNR=1.0						
PRU	Pruhonice	7.64	6	ePN	Pn	21 58 47.0	+1.0
PRU				eSN	Sn	22 00 08.6	-4.0
PRU	Pruhonice	7.64	6	Pn	Pn	21 58 47.0	+1.0
MPEP	Malo Peshtene	7.71	79	P	Pn	21 58 48.8	+1.8
DEV	Deva	7.72	60⇓	iP	Pn	21 58 48.6	+1.5
DEV	Deva	7.72	60⇓	iP	Pn	21 58 48.6	+1.5
MMB	Musomiste	7.79	92	P	Pn	21 58 49.8	+1.7
MMB	Musomiste	7.79	92	P	Pn	21 58 49.8	+1.7
NKC	Novy Kostel	7.87	356	ePN	Pn	21 58 50.3	+1.2
NKC				eSN	Sn	22 00 15.1	-3.0
NKC	Novy Kostel	7.87	356	Pn	Pn	21 58 50.3	+1.2
MORC	Moravsky Berou	7.94	20	ePn	Pn	21 58 48.6	-1.6
	comp=Z,6.3nm,0.9s						
MORC				eSn	Sn	22 00 17.3	-2.7
MORC	Moravsky Berou	7.94	20⇑	iP	Pn	21 58 51.7	+1.5
MORC	Moravsky Berou	7.94	20⇑	iP	Pn	21 58 51.7	+1.5
MORC	Moravsky Berou	7.94	20	ePn	Pn	21 58 52.1	+1.9
SMF	Signal de Mont	8.00	305	ePn	Pn	21 58 51.7	+0.7
	SNR=1.0						
SMF				eSn	Sn	22 00 15.9	-5.5
	comp=Z,6.2nm,0.5s						
SMF	Signal de Mont	8.00	305	ePn	Pn	21 58 51.7	+0.7
	SNR=1.0						
DRGR		8.01	54⇓	iP	Pn	21 58 52.9	+1.8
DRGR		8.01	54⇓	iP	Pn	21 58 52.9	+1.8
PGB	Panagyurishte	8.01	85	P	Pn	21 58 53.2	+2.0
PGB	Panagyurishte	8.01	85	P	Pn	21 58 53.2	+2.0
TANN	Tannenbergstha	8.05	356	ePn	Pn	21 58 51.1	-0.5
KRLC	Kraliky	8.05	16	ePN	Pn	21 58 52.5	+0.9
KRLC				eSN	Sn	22 00 19.0	-3.6
KRLC	Kraliky	8.05	16	Pn	Pn	21 58 52.5	+0.9
LOT	Lotru	8.13	64⇑	iP	Pn	21 58 54.5	+1.6
LOT	Lotru	8.13	64⇑	iP	Pn	21 58 54.5	+1.6
OKC	Ostrava-Krasne	8.16	23	eSN	Sn	22 00 22.4	-2.9
AGO	Saint Agoulin	8.19	300	P	Pn	21 58 55.5	+2.0
AGO	Saint Agoulin	8.19	300	P	Pn	21 58 55.5	+2.0
DPC	Dobruska-Polom	8.22	14	ePN	Pn	21 58 54.6	+0.6
DPC	Dobruska-Polom	8.22	14	Pn	Pn	21 58 54.6	+0.6
LOR	Lormes	8.31	309	ePn	Pn	21 58 55.0	-0.2
	SNR=1.0						
LOR				eSn	Sn	22 00 24.9	-4.1
	comp=Z,3.5nm,0.3s						
LOR	Lormes	8.31	309	ePn	Pn	21 58 55.0	-0.2
	SNR=1.0						
MOX	Moxa	8.34	352	ePn	Pn	21 58 54.5	-1.1
MEZF	Maizieres J'vi	8.43	319	ePn	Pn	21 58 57.4	+0.5
	SNR=1.0						
MEZF	Maizieres J'vi	8.43	319	ePn	Pn	21 58 57.4	+0.5
	SNR=1.0						
BRG	Berggiesshubel	8.49	3	PN	Pn	21 59 07.9	+10
	comp=Z,2.8nm,1.0s						
BRG				e		22 00 29.3	
BRG				e		22 01 43.8	
	comp=Z,6.7nm,1.0s						
RZN	Rozhen	8.51	91	P	Pn	21 58 59.9	+1.8
RZN	Rozhen	8.51	91	P	Pn	21 58 59.9	+1.8
CAF	Calviac	8.55	291	eP	Pn	21 59 00.0	+1.5
CAF	Calviac	8.55	291	eP	Pn	21 59 00.0	+1.5
BGF	Bois d'Agland	8.57	303	ePn	Pn	21 58 59.8	+1.0
	SNR=1.0						
BGF	Bois d'Agland	8.57	303	ePn	Pn	21 58 59.8	+1.0
	SNR=1.0						
CRVS	Cervenica-Dubn	8.65	38	ePN	Pn	21 59 00.0	+0.2
CRVS				ePG	Pg	21 59 44.7	+4.5
CRVS	Cervenica-Dubn	8.65	38	ePn	Pn	21 59 00.0	+0.2
TRPA	Tarpa	8.66	45⇑	iP	Pn	21 59 02.4	+2.4
TRPA	Tarpa	8.66	45⇓	ePn	Pn	21 59 02.0	+2.0
TRPA	Tarpa	8.66	45⇓	eP	Pn	21 59 02.0	+2.0
ARR	Arges	8.69	66⇓	iP	Pn	21 59 03.4	+2.9
ARR	Arges	8.69	66⇓	iP	Pn	21 59 03.4	+2.9
CLL	Collm	8.92	359	e(Pn)	Pn	21 59 15.0	+11
CLL				eSn	Sn	22 00 30.0	-14
CLL				eSg	Sg	22 01 41.0	+0.1
	comp=E,200nm,32.1s						
CLL				L	L	22 02 18.0	
	comp=Z,100nm,19.1s						
VOIR		8.99	66⇑	iP	Pn	21 59 07.3	+2.7
VOIR		8.99	66⇑	iP	Pn	21 59 07.3	+2.7
KDZ	Kurdzhali	9.03	91	eP	Pn	21 59 07.9	+2.8
KDZ	Kurdzhali	9.03	91	eP	Pn	21 59 07.9	+2.8
KOLS	Kolonicke sedl	9.05	41	ePN	Pn	21 59 11.6	+6.2
KOLS				e		21 59 28.0	
MLR	Muntele Rosu	9.61	67	Pn	Pn	21 59 15.8	+2.6
	baz=263,slow=8.1						
KWP	Kalwaria Pacla	9.74	39	ePn	Pn	21 59 14.6	-0.2
	comp=Z,16nm,1.0s						
KWP	Kalwaria Pacla	9.74	39⇑	iP	Pn	21 59 19.1	+4.3
KWP	Kalwaria Pacla	9.74	39	ePn	Pn	21 59 14.6	-0.2
	comp=Z,16nm,1.0s						
BUR08	Bucovina Ar. S	9.91	54	ePn	Pn	21 59 16.5	-0.7
BUR08	Bucovina Ar. S	9.91	54	ePn	Pn	21 59 16.5	-0.7
PLOR	Plostina	10.18	66⇑	iP	Pn	21 59 23.0	+2.1
PLOR	Plostina	10.18	66⇑	iP	Pn	21 59 23.0	+2.1
VRI	Vrincioaia	10.24	66⇑	iP	Pn	21 59 23.3	+1.6
VRI	Vrincioaia	10.24	66⇑	iP	Pn	21 59 23.3	+1.6
TESR		10.37	62⇑	iP	Pn	21 59 26.0	+2.5
TESR		10.37	62⇑	iP	Pn	21 59 26.0	+2.5
TLCR		11.54	71⇓	iP	Pn	21 59 41.3	+1.9
TLCR		11.54	71⇓	iP	Pn	21 59 41.3	+1.9
ESDC	Sonseca Array	13.34	264	Pn	Pn	22 00 04.9	+0.9
	comp=Z,0.1nm,0.3s,baz=68,slow=13,SNR=2.9						
AKASG	Malin Array Be	13.71	47	Pn	Pn	22 00 10.8	+1.7
	comp=Z,0.4nm,0.3s,baz=230,slow=14,SNR=4.6						
BRTR	Keskin Array B	15.55	93	Pn	Pn	22 00 35.6	+1.6
	comp=Z,0.0nm,0.3s,baz=267,slow=14,SNR=3.5						
HFS	Hagfors	17.77	1	P	P	22 01 02.3	-0.4
	comp=Z,0.0nm,0.3s,baz=209,slow=12,SNR=3.5						
NOA	NORSAR Array B	18.72	357	P	Pn	22 01 14.9	+1.4
	comp=Z,0.1nm,0.3s,baz=175,slow=12,SNR=4.9						
FINES	FINESS Array B	20.56	18	P	P	22 01 33.8	+0.6
	comp=Z,2.8nm,0.7s,baz=182,slow=9.3,SNR=12						
TAM	Tamanrasset	20.60	201	eP	P	22 01 32.6	-1.5
	comp=Z,3.8nm,1.3s						
TAM	Tamanrasset	20.60	201	eP	P	22 01 32.6	-1.5
	comp=Z,3.8nm,1.3s						
KAF	Kangasniemi	21.21	17	ep	P	22 01 39.2	-1.0
	comp=Z,3.1nm,0.8s						
KAF	Kangasniemi	21.21	17	eP	P	22 01 39.2	-1.0
	comp=Z,3.1nm,0.8s						
KBZ	Khabaz	21.60	76	P	P	22 01 46.8	+2.3
	comp=Z,4.3nm,0.9s,baz=328,slow=3.2,SNR=7.0						
JOF	Joensuu	23.11	21	ep	P	22 02 01.6	+1.1
	comp=Z,1.1nm,0.6s						
JOF	Joensuu	23.11	21	eP	P	22 02 01.6	+1.1
	comp=Z,1.1nm,0.6s						
TORD	Torodi Ar. Bea	30.84	203	P	P	22 03 12.1	+1.1
	comp=Z,0.9nm,0.7s,baz=12,slow=8.1,SNR=8.1						
AKTO	Aktyubinsk	31.43	60	LR	LR	22 15 51.1	
	comp=Z,68nm,18.4s,baz=353,slow=36						
ARU	Arti	31.97	48	eP	P	22 03 18.0	-2.5
	comp=Z,7.6nm,1.0s						
KKAR	Karatay Array	41.29	69	eP	P	22 04 37.7	-2.5
	comp=Z,2.6nm,0.8s						
EKS2	Erkin-Say	43.69	68	eP	P	22 04 57.1	-2.7
	comp=Z,4.8nm,1.0s						
ZALV	Zalesovo Beam	47.09	50	P	P	22 05 27.9	+1.5
	comp=Z,0.6nm,0.6s,baz=280,slow=8.3,SNR=5.2						
MK31	Makanchi Array	47.87	60	eP	P	22 05 32.1	-0.6
MK31	Makanchi Array	47.87	60	eP	P	22 05 32.1	-0.6
MKAR	Makanchi Array	47.87	60	P	P	22 05 34.4	+1.8
	comp=Z,0.8nm,0.6s,baz=281,slow=7.4,SNR=12						
SONM	Songino Array	61.98	50	P	P	22 07 15.2	+0.4
	comp=Z,1.0nm,0.8s,baz=280,slow=9.3,SNR=8.7						
YKA	Yellowknife Ar	67.45	337	P	P	22 07 50.8	+0.8
	comp=Z,0.2nm,0.6s,baz=42,slow=6.0,SNR=4.6						
KSRS	Korea Array	80.71	47	LR	LR	22 51 35.8	
	comp=Z,18nm,18.4s,baz=205,slow=41						

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*JMA **06** 21:57:05.2±0.6, 46°.03N×151°.20E, h30km, M4.3*
*IDC **06** 21:57:07.2±2.9, 46°.02N×151°.34E, h83km±26km, mb3.3/10, mb1 3.5/12, mb1mx3.3/27, mbtmp3.3/12, Error ellipse: s-maj=26.7km s-min=16.2km az=121.0*
*MOS **06** 21:57:12.5±1.9, 46°.87N×149°.83E, h63km, mb4.1/3, Error ellipse: s-maj=43.7km s-min=16.3km az=59.6*
ISC 06 21:57:02.5±0.9, **45°.5N**±0°.1×**151°.64E**±0°.09, **h32**km, **n36**, σ**2ˢ.44**/35, **mb3.6**/10, **1C-1D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.67	265	PN	Pb	21 57 50.0	+0.4
KUR				eS	Sn	21 58 13.5	-1.0
KUR				smax	smax		
	comp=N,610nm,0.6s						
KUR				smax	smax		
	comp=E,680nm,0.6s						
YUK	Yuzh-Kuril'sk	4.38	252	dPN	Pn	21 58 05.4	-1.2
YUK				iS	Sn	21 58 58.5	+2.0
YUK				pmax	pmax		
	comp=N,25nm,0.1s						
YUK				pmax	pmax		
	comp=E,39nm,0.1s						
YUK				pmax	pmax		
	comp=Z,77nm,0.1s						
YUK				smax	smax		
	comp=N,51nm,0.6s						
YUK				smax	smax		
	comp=E,128nm,0.6s						
NEM2	Nemuro 2	4.74	245	P	Pn	21 58 13.4	+1.7
NEM2				eS	Sn	21 59 03.7	-1.8
JRA	Rausu	4.91	253	P	Pn	21 58 16.9	+3.0
JRA				eS	Sn	21 59 11.1	+1.5
JNK	Nakash	5.31	251	P	Pn	21 58 22.1	+2.6
JAK	Akkeshi	5.59	246	P	Pn	21 58 25.0	+1.7
JAK				eS	Sn	21 59 23.6	-2.8
JTKR	Abashiri--Toko	5.72	257	P	Pn	21 58 28.4	+3.3
JAR	Ashorobuto	6.06	251	P	Pn	21 58 32.8	+3.0
JAR				eS	Sn	21 59 37.7	-0.4
JOB	Onbets	6.19	248	P	Pn	21 58 34.0	+2.4
JOB				eS	Sn	21 59 40.5	-0.7
ASAJ	Asahikawa	6.58	261	P	Pn	21 58 39.5	+2.5
	comp=E,0.4nm,0.3s,baz=45,slow=11,SNR=4.4						
JCH	Churui	6.63	247	P	Pn	21 58 38.9	+1.2
JCH				eS	Sn	21 59 49.1	-3.0
JEM	Erimo	7.07	243	P	Pn	21 58 46.7	+3.0
JEM				eS	Sn	22 00 01.2	-1.7
ERM	Erimo	7.07	243⇑	ePN	Pn	21 58 51.3	+7.6
JNBK	Urakawa-nobuka	7.19	246	P	Pn	21 58 46.2	+0.9
JNBK				eS	Sn	22 00 01.0	-4.9
JBT2	Biratori 2	7.21	251	P	Pn	21 58 47.6	+2.0
JNB	Noboribetsu	8.23	252	eS	Sn	22 00 29.8	-1.6
JKB	Kayabe	8.50	248	P	Pn	21 59 03.9	+0.6
JKB				eS	Sn	22 00 33.3	-4.7
PETK	Petropavlovsk-	8.55	25	ePN	Pn	21 59 09.2	+5.2
PETK	Petropavlovsk-	8.55	25	P	Pn	21 59 03.2	-0.8
	comp=E,0.3nm,0.3s,baz=196,slow=15,SNR=7.5						
JANG	Nango	9.03	239	P	Pn	21 59 10.0	-0.6
JANG				eS	Sn	22 00 43.4	-7.7
JTM	Tenmabayashi	9.06	242	eS	Sn	22 00 45.4	-6.4
JTH	Tanohata	9.10	236	eS	Sn	22 00 44.4	-8.5
JRG	Rokugo	10.18	237	eS	Sn	22 01 13.8	-5.4
MJA0	Matsu Arr-Jizo	13.50	233	ePN	P	22 00 24.3	+3.7
MJAR	Matsushiro Arr	13.52	233	P	P	22 00 20.5	-0.3
	comp=E,0.3nm,0.3s,baz=20,slow=8.1,SNR=4.7						
ILAR	Eielson Array	38.14	38	P	P	22 04 16.0	-2.3
	comp=E,0.4nm,1.0s,baz=287,slow=9.5,SNR=5.3						
MKAR	Makanchi Array	46.60	298	eP	P	22 05 24.5	-2.8
MKAR	Makanchi Array	46.60	298	P	P	22 05 24.6	-2.8
	comp=E,0.3nm,0.6s,baz=72,slow=8.2,SNR=4.5						
CMAR	Chiang Mai Arr	51.08	256	P	P	22 06 00.8	-1.2
	comp=E,0.7nm,0.6s,baz=36,slow=8.3,SNR=6.5						
YKA	Yellowknife Ar	52.52	36	P	P	22 06 09.5	-2.5
	comp=E,0.2nm,0.4s,baz=294,slow=6.8,SNR=5.1						
YKA				pP	pP	22 06 25.5	+3.8
	comp=E,0.4nm,0.7s,baz=296,slow=7.0,SNR=6.2						
FINES	FINESS Array B	64.70	334	P	P	22 07 32.8	-4.1
	comp=E,0.4nm,0.4s,baz=35,slow=4.7,SNR=5.4						
WRA	Warramunga Arr	67.03	198	P	P	22 07 53.1	+0.8
	comp=E,0.6nm,0.7s,baz=23,slow=7.1,SNR=4.9						
NOA	NORSAR Array B	69.05	341	P	P	22 07 59.8	-4.8
	comp=E,0.4nm,0.6s,baz=29,slow=2.5,SNR=6.1						
HFS	Hagfors	69.24	339	P	P	22 08 01.1	-4.7
	comp=E,0.7nm,0.3s,baz=45,slow=4.4,SNR=11						
ASAR	Alice Springs	70.73	197	P	P	22 08 17.3	+2.0
	comp=E,0.4nm,0.8s,baz=12,slow=5.2,SNR=4.2						
GERES	GERESS Array B	79.09	333	P	P	22 08 58.7	-4.8
	comp=E,0.2nm,0.4s,baz=35,slow=5.3,SNR=4.0						

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*ISCJB **06** 21:58:58.2±0.2, 42°.39N±0°.02×13°.32E±0°.03, h16km±4km, Error ellipse: s-maj=3.7km s-min=2.9km az=160.6*
*CSEM **06** 21:58:58.1±0.1, 42°.39N×13°.30E, h5km, ML3.9/6, Error ellipse: s-maj=2.1km s-min=1.7km az=63.0*
*ROM **06** 21:58:58.0±0.1, 42°.39N×13°.33E, h10km, Ml3.3/15, Error ellipse: s-maj=1.2km s-min=0.9km az=88.0*
*LDG **06** 21:59:00.1±0.3, 42°.43N×13°.32E, h2km, Ml3.1/7, Error ellipse: s-maj=6.8km s-min=4.7km az=115.0*
ISC 06 21:58:58.1±0.7, **42°.39N**±0°.02×**13°.33E**±0°.02, **h14**km±4km, **n90**, σ**0ˢ.88**/123, **21C**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	124⇑	iP	Pg	21 59 00.7	-0.3
AQU	L'Aquila	0.07	124⇑	iPg	Pg	21 59 00.7	-0.3
AQU				Sg	Sg	21 59 02.4	-0.6
AQU	L'Aquila	0.07	124⇑	iP	Pg	21 59 00.7	-0.3
AQU				Sg	Sg	21 59 02.4	-0.6
CAMP	Campotosto	0.16	23⇑	iPg	Pg	21 59 02.0	-0.2
CAMP				Sg	Sg	21 59 04.6	-0.3
CAMP	Campotosto	0.16	23⇑	iPg	Pg	21 59 02.0	-0.2
CAMP				Sg	Sg	21 59 04.6	-0.3
FIAM	Fiamignano	0.20	231⇑	iPg	Pg	21 59 02.9	+0.2
FIAM				Sg	Sg	21 59 05.7	-0.1
FIAM	Fiamignano	0.20	231⇑	iPg	Pg	21 59 02.9	+0.2
FIAM				Sg	Sg	21 59 05.7	-0.1
FAGN	Fagnano	0.23	123⇑	ePg	Pg	21 59 03.3	+0.1
FAGN				Sg	Sb	21 59 07.6	-0.5
FAGN	Fagnano	0.23	123⇑	ePg	Pg	21 59 03.3	+0.1
FAGN				Sg	Sb	21 59 07.6	-0.5
TERO	Teramo	0.31	42⇑	iPg	Pg	21 59 04.3	-0.3
TERO				Sg	Sg	21 59 08.9	-0.1
TERO	Teramo	0.31	42⇑	iPg	Pg	21 59 04.3	-0.3
TERO				Sg	Sg	21 59 08.9	-0.1
PTQR	Pietraquaria	0.37	171⇑	iPg	Pg	21 59 05.8	+0.1
PTQR				Sg	Sb	21 59 11.6	-0.7
PTQR	Pietraquaria	0.37	171⇑	iPg	Pg	21 59 05.8	+0.1
PTQR				Sg	Sb	21 59 11.6	-0.7
VCEL	Villa Celiera	0.38	89	Pg	Pg	21 59 05.8	-0.1
	5µm,0.7s						
VCEL	Villa Celiera	0.38	89	Pg	Pg	21 59 05.8	-0.1
	5µm,0.7s						
NRCA	Norcia	0.47	341	Pg	Pg	21 59 07.2	-0.2
NRCA	Norcia	0.47	341	Pg	Pg	21 59 07.2	-0.2
MNS	Montasola	0.48	269⇑	iPg	Pg	21 59 07.4	-0.2
	2µm,0.5s						
MNS	Montasola	0.48	269⇑	iPg	Pg	21 59 07.4	-0.2
	2µm,0.5s						
CERT	Cerreto	0.51	210⇑	iPg	Pg	21 59 08.1	-0.1
CERT				Sg	Sb	21 59 15.7	-0.5
	4µm,0.4s						
CERT	Cerreto	0.51	210⇑	iPg	Pg	21 59 08.1	-0.1
CERT				Sg	Sb	21 59 15.7	-0.5
	4µm,0.4s						
VVLD	Villa Vallelon	0.57	157	Pg	Pg	21 59 08.8	-0.5
VVLD				Sg	Sg	21 59 16.6	-0.2
	2µm,0.4s						
VVLD	Villa Vallelon	0.57	157	Pg	Pg	21 59 08.8	-0.5
VVLD				Sg	Sg	21 59 16.6	-0.2
	2µm,0.4s						
MTCE	Montecelio	0.57	230⇑	iPg	Pg	21 59 09.1	-0.2
	1µm,0.5s						
MTCE	Montecelio	0.57	230⇑	iPg	Pg	21 59 09.1	-0.2
	1µm,0.5s						
INTR	Introdacqua	0.57	131	Pg	Pg	21 59 09.2	-0.2
INTR				Sg	Sg	21 59 17.4	+0.3
	2µm,0.5s						
INTR	Introdacqua	0.57	131	Pg	Pg	21 59 09.2	-0.2
INTR				Sg	Sg	21 59 17.4	+0.3
	2µm,0.5s						
GUAR	Guarcino	0.60	181	Pg	Pg	21 59 09.6	-0.2
	1µm,0.4s						
GUAR	Guarcino	0.60	181	Pg	Pg	21 59 09.6	-0.2
	1µm,0.4s						
TRTR	Tortoreto Alta	0.60	46	Pg	Pb	21 59 10.7	+0.3
TRTR	Tortoreto Alta	0.60	46	Pg	Pb	21 59 10.7	+0.3
OFFI	Offida	0.60	26⇑	iPg	Pb	21 59 10.5	0.0
OFFI	Offida	0.60	26⇑	iPg	Pb	21 59 10.5	0.0
FDMO	Fiordimonte	0.67	345	Pg	Pg	21 59 10.8	-0.4
FDMO				Sg	Sb	21 59 20.8	+0.1
FDMO	Fiordimonte	0.67	345	Pg	Pg	21 59 10.8	-0.4
FDMO				Sg	Sb	21 59 20.8	+0.1
CESI	CESI - Serrava	0.69	333	Pg	Pg	21 59 11.1	-0.4
CESI				Sg	Sb	21 59 21.7	+0.4
	345nm,0.5s						
CESI	CESI - Serrava	0.69	333	Pg	Pg	21 59 11.1	-0.4
CESI				Sg	Sb	21 59 21.7	+0.4
	345nm,0.5s						
POFI	Posta Fibreno	0.73	157	Pg	Pg	21 59 12.1	-0.3
POFI	Posta Fibreno	0.73	157	Pg	Pg	21 59 12.1	-0.3
RMP	Rome, Mte Porz	0.74	219	Pg	Pg	21 59 12.1	-0.5
	2µm,0.5s						
RMP	Rome, Mte Porz	0.74	219	Pg	Pg	21 59 12.1	-0.5
	2µm,0.5s						
SDI	San Donato	0.77	152	Pg	Pg	21 59 12.6	-0.5
SDI	San Donato	0.77	152	Pg	Pg	21 59 12.6	-0.5
CAFR	Castel Frentan	0.78	102	Pg	Pb	21 59 13.6	+0.2
	3µm,0.9s						
CAFR	Castel Frentan	0.78	102	Pg	Pb	21 59 13.6	+0.2
	3µm,0.9s						
RDP	Rocca di Papa	0.78	216	Pg	Pg	21 59 12.9	-0.3
RDP	Rocca di Papa	0.78	216	Pg	Pg	21 59 12.9	-0.3
ASSB	Assisi San Ben	0.81	323	Pg	Pg	21 59 13.6	-0.3
ASSB				Sg	Sb	21 59 25.8	+0.9
	1µm,0.4s						
ASSB	Assisi San Ben	0.81	323	Pg	Pg	21 59 13.6	-0.3
ASSB				Sg	Sb	21 59 25.8	+0.9
	1µm,0.4s						
GIUL	Giuliano Di Ro	0.83	184	Pg	Pg	21 59 13.8	-0.5
GIUL	Giuliano Di Ro	0.83	184	Pg	Pg	21 59 13.8	-0.5
RNI2	Rionero Sannit	0.93	138	Pg	Pb	21 59 15.9	-0.1
RNI2	Rionero Sannit	0.93	138	Pg	Pb	21 59 15.9	-0.1
CERA	Filignano	0.95	147	Pg	Pb	21 59 16.1	-0.2
	863nm,0.5s						
CERA	Filignano	0.95	147	Pg	Pb	21 59 16.1	-0.2
	863nm,0.5s						
CING	Cingoli	0.99	355	Pg	Pb	21 59 16.5	-0.5
CING	Cingoli	0.99	355	Pg	Pb	21 59 16.5	-0.5
MIDA	Miranda	1.02	137	Pg	Pb	21 59 16.9	-0.7
MIDA	Miranda	1.02	137	Pg	Pb	21 59 16.9	-0.7
MGAB	Montegabbione	1.03	301	Pg	Pb	21 59 17.8	0.0
MGAB	Montegabbione	1.03	301	Pg	Pb	21 59 17.8	0.0
TOLF	Tolfa	1.04	252	Pg	Pb	21 59 17.5	-0.3
TOLF	Tolfa	1.04	252	Pg	Pb	21 59 17.5	-0.3
MURB	Monte Urbino	1.05	326	Pg	Pb	21 59 18.1	0.0
	587nm,0.4s						
MURB	Monte Urbino	1.05	326	Pg	Pb	21 59 18.1	0.0
	587nm,0.4s						
ARVD	Arcevia	1.14	346	Pg	Pb	21 59 19.3	-0.3
ARVD	Arcevia	1.14	346	Pg	Pb	21 59 19.3	-0.3
LATE	Laterza	1.15	282	Pg	Pg	21 59 19.9	-0.3
	256nm,0.7s						
LATE	Laterza	1.15	282	Pg	Pg	21 59 19.9	-0.3
	256nm,0.7s						
AOI	Ancona	1.18	10	Pg	Pb	21 59 20.2	0.0
AOI	Ancona	1.18	10	Pg	Pb	21 59 20.2	0.0
PIEI	Pieia	1.28	333	Pg	Pg	21 59 22.6	-0.2
	321nm,0.5s						
PIEI	Pieia	1.28	333	Pg	Pg	21 59 22.6	-0.2
	321nm,0.5s						
PGF	Pioggiola	3.20	274	ePn	Pn	21 59 49.7	+1.6
PGF				eSn	Sn	22 00 28.0	+1.9
	19nm,0.7s						
PGF	Pioggiola	3.20	274	ePn	Pn	21 59 49.7	+1.6
PGF				eSn	Sn	22 00 28.0	+1.9
	9.4nm,0.7s						
SBF	Sospel	4.55	291	ePn	Pn	22 00 08.1	+1.5
SBF				eSn	Sn	22 00 58.2	-1.2
	22nm,0.8s						
SBF	Sospel	4.55	291	ePn	Pn	22 00 08.1	+1.5
SBF				eSn	Sn	22 00 58.2	-1.2
	11nm,0.8s						
FRF	La Foret Royal	5.04	286	ePn	Pn	22 00 14.1	+0.9
FRF				eSn	Sn	22 01 09.4	-1.8
	13nm,0.9s						
FRF	La Foret Royal	5.04	286	ePn	Pn	22 00 14.1	+0.9
FRF				eSn	Sn	22 01 09.4	-1.8
	6.3nm,0.9s						
LMR	La Mourre	5.10	283	ePn	Pn	22 00 14.9	+0.9
LMR				eSn	Sn	22 01 10.9	-1.7
	3.0nm,0.6s						
LMR	La Mourre	5.10	283	ePn	Pn	22 00 14.9	+0.9
LMR				eSn	Sn	22 01 10.9	-1.7
	1.5nm,0.6s						
IVAS	Ivanjica	5.15	74	ePn	Pn	22 00 18.0	+3.2
ZAPS	Zavoj	6.90	80	ePn	Pn	22 00 41.9	+3.1
HINF	Hinteralfeld	7.10	322	ePn	Pn	22 00 42.2	+0.7
HINF				eSn	Sn	22 01 58.9	-3.0
	4.3nm,0.4s						
HINF	Hinteralfeld	7.10	322	ePn	Pn	22 00 42.2	+0.7
VTS	Vitosha	7.31	85	ePn	Pn	22 00 46.2	+1.7
CDF	Champ du Feu	7.37	327	ePn	Pn	22 00 45.7	+0.4
CDF				eSn	Sn	22 02 05.4	-3.3
	3.5nm,0.5s						
CDF	Champ du Feu	7.37	327	ePn	Pn	22 00 45.7	+0.4
HAU	Haudompre	7.47	321	ePn	Pn	22 00 47.4	+0.8
HAU				eSn	Sn	22 02 06.4	-4.6
	5.9nm,0.5s						
HAU	Haudompre	7.47	321	ePn	Pn	22 00 47.4	+0.8

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*DDA **06** 22:01:04.9, 39°.22N×29°.34E, h7km, MD2.9*
*ISK **06** 22:01:04.6, 39°.24N×29°.32E, h5km, MD2.7*
*ISCJB **06** 22:01:05.0±0.5, 39°.22N±0°.02×29°.36E±0°.03, h5km±5km, Error ellipse: s-maj=4.4km s-min=4.0km az=138.4*
*CSEM **06** 22:01:05.1±0.1, 39°.23N×29°.36E, h5km, MD2.9, Error ellipse: s-maj=2.1km s-min=1.9km az=156.0*
ISC 06 22:01:05.2±0.9, **39°.24N**±0°.02×**29°.36E**±0°.02, **h9**km±8km, **n36**, σ**0ˢ.32**/52, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	Gediz	0.17	147	iP	Pg	22 01 09.0	+0.1
GDZ				iS	Sg	22 01 11.6	+0.1
GDZ	Gediz	0.17	147	iP	Pg	22 01 09.0	+0.1
GDZ				iS	Sg	22 01 11.6	+0.1
TVSB	Tavsanli	0.23	20	ePG	Pg	22 01 09.7	-0.2
TVSB				eSG	Sg	22 01 13.1	0.0
TVSB	Tavsanli	0.23	20	ePg	Pg	22 01 09.7	-0.2
DEMI	Demirci	0.54	249	iP	Pg	22 01 15.6	0.0
DEMI				iS	Sg	22 01 22.7	0.0
DEMI	Demirci	0.54	249	iP	Pg	22 01 15.6	0.0
DEMI				iS	Sg	22 01 22.7	0.0
ALT	Altintas	0.61	107	ePG	Pb	22 01 18.0	-0.2
ALT	Altintas	0.61	107	ePg	Pb	22 01 18.0	-0.2
DST	Dursunbey	0.68	303	ePG	Pg	22 01 18.2	-0.2
DST	Dursunbey	0.68	303	ePg	Pg	22 01 18.2	-0.2
DURS	Dursunbey	0.78	298	iP	Pb	22 01 20.6	-0.4
DURS				iS	Sn	22 01 34.2	-0.2
DURS	Dursunbey	0.78	298	iP	Pb	22 01 20.6	-0.4
KHAL	Karahalli	0.87	173	iP	Pg	22 01 21.6	-0.3
KHAL				iS	Sg	22 01 32.7	-0.5
KHAL	Karahalli	0.87	173	iP	Pg	22 01 21.6	-0.3
KHAL				iS	Sg	22 01 32.7	-0.5
ORLT	Orhaneli	0.89	336	ePG	Pg	22 01 21.9	-0.4
ORLT	Orhaneli	0.89	336	ePg	Pg	22 01 21.9	-0.4
KULA	Kula-Manisa	0.90	217	ePG	Pg	22 01 22.0	-0.6
KULA				eSG	Sg	22 01 34.0	-0.3
KULA	Kula-Manisa	0.90	217	ePg	Pg	22 01 22.0	-0.6
KULA				eSg	Sg	22 01 34.0	-0.3
BORA	Eskisehir	1.06	52	iP	Pg	22 01 25.1	-0.6
BORA				iS	Sg	22 01 39.4	-0.1
BORA	Eskisehir	1.06	52	iP	Pg	22 01 25.1	-0.6
BORA				iS	Sg	22 01 39.4	-0.1
SHUT	Suhut-Afyon	1.15	126	ePN	Pn	22 01 28.3	+0.7
SHUT	Suhut-Afyon	1.15	126	ePn	Pn	22 01 28.3	+0.7
BALB	Balikesir	1.22	290	ePN	Pb	22 01 28.2	-0.2

BALB	Balikesir	1.22	290	*e*Pn	Pb	22 01 28.2	-0.2
AKHS	Akhisar	1.25	254	*i* P	Pg	22 01 29.4	+0.1
AKHS				*i* S	Sn	22 01 46.0	0.0
AKHS	Akhisar	1.25	254	*i* P	Pg	22 01 29.4	+0.1
AKHS				*i* S	Sn	22 01 46.0	0.0
YLV	Yalova	1.33	0	*e*PN	Pg	22 01 30.9	+0.1
YLV	Yalova	1.33	0	*e*Pn	Pg	22 01 30.9	+0.1
ARMT	Armutlu	1.38	344	*e*PN	Pb	22 01 31.1	-0.2
ARMT	Armutlu	1.38	344	*e*Pn	Pb	22 01 31.1	-0.2
BALY	Balya	1.44	291	*i* P	Pn	22 01 31.8	+0.3
BALY				*i* S	Sb	22 01 51.0	+0.4
BALY	Balya	1.44	291	*i* P	Pn	22 01 31.8	+0.3
BALY				*i* S	Sb	22 01 51.0	+0.4
GULT	Gulveren	1.49	36	*e*PN	Pb	22 01 32.9	-0.3
GULT	Gulveren	1.49	36	*e*Pn	Pb	22 01 32.9	-0.3
GONE	Gonen-Balikesi	1.52	303	*e*PN	Pn	22 01 33.0	+0.3
GONE	Gonen-Balikesi	1.52	303	*e*Pn	Pn	22 01 33.0	+0.3

*IDC **06** 22:14:48.6±1.4, 28.°99N×70.°24E, h0km, mb3.5/8, mb1 3.7/9, mb1mx3.4/31, mbtmp3.5/9, ML3.6/1, Error ellipse: s-maj=35.8km s-min=26.1km az=59.0*

ISC 06 22:14:53.2±1.2**, 29.°0N**±0.°2×**70.°6E**±0.°1**, h35km, n20, σ1.s79**/17**, mb3.6**/7**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYUN	Piuthan	10.95	92	*e*P	Pn	22 17 36.5	+8.9
	15nm,0.5s						
KOLN	Koldanda	11.53	93	*e*P	Pn	22 17 43.8	+8.3
	11nm,0.5s						
DANN	Dangsing	11.59	90	*e*P	Pn	22 17 45.2	+8.7
	40nm,0.7s						
DMN	Daman	12.87	93	*e*P	P	22 18 01.4	-2.9
KKN	Kakani	12.99	92	*e*P	P	22 18 03.3	-2.3
	9.9nm,0.5s						
PKIN	Phulchoki	13.13	93	*e*P	P	22 18 05.3	-1.9
	6.5nm,0.4s						
PKI	Pulchoki	13.14	93	*e*P	P	22 18 05.5	-1.9
GUN	Gumba	13.50	91	*e*P	P	22 18 09.2	-2.2
	41nm,0.7s						
AAK	Ala-Archa	13.95	12	Pn	Pn	22 18 08.5	-0.1
	0.3nm,0.3s,baz=164,slow=7.4,SNR=7.6						
RAMN	Ramite	14.30	94	*e*P	P	22 18 18.5	-1.7
ODAN	Odare	15.01	94	*e*P	P	22 18 27.9	-0.2
TAPN	Taplejung	15.19	92	*e*P	P	22 18 31.8	+1.6
MKAR	Makanchi Array	19.97	24	P	Pn	22 19 24.9	+0.6
	0.4nm,0.3s,baz=211,slow=10.0,SNR=5.7						
KURBB	Kurchatov Arra	22.40	13	P	P	22 19 49.3	+0.8
	0.7nm,0.5s,baz=204,slow=9.5,SNR=13						
BVAR	Borovoye Array	23.99	360	P	P	22 20 04.5	+0.1
	0.2nm,0.3s,baz=184,slow=8.0,SNR=3.7						
BRTR	Keskin Array B	32.11	299	P	P	22 21 15.8	-1.5
	0.5nm,0.7s,baz=131,slow=8.3,SNR=4.1						
FINES	FINESS Array B	43.67	331	P	P	22 22 53.1	-1.1
	1.2nm,1.0s,baz=128,slow=15,SNR=2.0						
ARCES	ARCESS Array B	47.99	340	P	P	22 23 28.4	+0.1
	5.3nm,1.1s,baz=128,slow=7.9,SNR=9.0						
WRA	Warramunga Arr	78.42	121	P	P	22 26 52.7	+2.1
	0.3nm,0.3s,baz=324,slow=5.2,SNR=5.3						
YKA	Yellowknife Ar	88.72	2	P	P	22 27 44.8	+2.1
	0.3nm,0.6s,baz=350,slow=4.7,SNR=4.0						

IDC 06 22:21:46.0±0.6**, 13.°36N**×**144.°72E, h141**km±4km**, mb3.3**/11**, mb1 3.4**/11**, mb1mx3.3**/27**, mbtmp3.3**/11**, Error ellipse: s-maj=24.9km s-min=15.9km az=92.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.27	32	P	Pn	22 22 06.6	+1.2
	3μm,0.3s,baz=173,slow=0.6,SNR=966						
GUMO				S	Sn	22 22 21.2	+1.0
	782nm,0.3s,baz=193,slow=22,SNR=7.7						
JOW	Kunigami	20.42	314	P	P	22 26 12.5	+0.3
	12nm,0.8s,baz=118,slow=15,SNR=3.0						
MJAR	Matsushiro Arr	23.81	347	P	P	22 26 47.0	+0.9
	2.5nm,1.0s,baz=171,slow=9.1,SNR=6.5						
WRA	Warramunga Arr	34.63	197	P	P	22 28 21.7	-0.3
	1.0nm,0.6s,baz=16,slow=9.6,SNR=6.4						
ASAR	Alice Springs	38.29	196	P	P	22 28 52.9	0.0
	0.3nm,0.5s,baz=17,slow=14,SNR=6.2						
CMAR	Chiang Mai Arr	44.23	283	P	P	22 29 41.0	-0.6
	0.6nm,0.3s,baz=87,slow=6.4,SNR=6.7						
SONM	Songino Array	46.84	325	P	P	22 30 02.1	+0.2
	0.2nm,0.5s,baz=144,slow=7.3,SNR=3.5						
MKAR	Makanchi Array	61.55	316	P	P	22 31 48.5	+0.2
	0.3nm,0.5s,baz=91,slow=8.4,SNR=11						
ILAR	Eielson Array	68.84	25	P	P	22 32 33.7	-1.2
	0.1nm,0.4s,baz=257,slow=5.2,SNR=3.6						
BVAR	Borovoye Array	70.02	322	P	P	22 32 41.7	-0.7
	0.4nm,0.4s,baz=105,slow=7.4,SNR=6.0						
YKA	Yellowknife Ar	83.13	27	P	P	22 33 57.1	+1.2
	0.1nm,0.3s,baz=289,slow=5.4,SNR=4.0						
FINES	FINESS Array B	91.31	335	P	P	22 34 33.9	-1.5
	0.9nm,0.8s,baz=103,slow=6.0,SNR=3.4						
TORD	Torodi Ar. Bea	134.88	304	PKP	PKPdf	22 40 50.7	+1.4
	0.2nm,0.5s,baz=25,slow=2.4,SNR=3.4						

*CSEM **06** 22:25:51.2, 42.°25N×13.°48E, h10km, After ROM*

ROM 06 22:25:51.2±0.1**, 42.°25N**×**13.°48E, h10**km**, Ml2.2**/2**, Error ellipse: s-maj=0.8km s-min=0.7km az=85.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	Fagnano	0.08	78	Pg	Pg	22 25 53.9	+0.3
FAGN				Sg	Sg	22 25 55.5	+0.1
FAGN	Fagnano	0.08	78	Pg	Pg	22 25 53.9	+0.3
FAGN				Sg	Sg	22 25 55.5	+0.1
AQU	L'Aquila	0.12	332	Pg	Pg	22 25 54.8	+0.6
AQU				Sg	Sg	22 25 56.8	+0.6
AQU	L'Aquila	0.12	332	Pg	Pg	22 25 54.8	+0.6
AQU				Sg	Sg	22 25 56.8	+0.6
PTQR	Pietraquaria	0.23	194	Pg	Pg	22 25 56.9	+0.8
PTQR				Sg	Sg	22 26 00.8	+1.4
PTQR	Pietraquaria	0.23	194	Pg	Pg	22 25 56.9	+0.8
PTQR				Sg	Sg	22 26 00.8	+1.4
FIAM	Fiamignano	0.27	274	Pg	Pg	22 25 57.3	+0.5
FIAM				Sg	Sg	22 26 01.7	+1.2
FIAM	Fiamignano	0.27	274	Pg	Pg	22 25 57.3	+0.5
FIAM				Sg	Sg	22 26 01.7	+1.2
VCEL	Villa Celiera	0.31	62	Pg	Pb	22 25 58.4	-0.6
	213nm,0.4s						
VCEL	Villa Celiera	0.31	62	Pg	Pb	22 25 58.4	-0.6
	213nm,0.4s						
TERO	Teramo	0.39	14	Pg	Pg	22 25 59.5	+0.6
TERO				Sg	Sg	22 26 05.2	+1.1
	182nm,0.2s						
TERO	Teramo	0.39	14	Pg	Pg	22 25 59.5	+0.6
TERO				Sg	Sg	22 26 05.2	+1.1
	182nm,0.2s						
INTR	Introdacqua	0.40	127	Pg	Pg	22 25 59.5	+0.4
INTR				Sg	Sb	22 26 05.7	-1.0
INTR	Introdacqua	0.40	127	Pg	Pg	22 25 59.5	+0.4
INTR				Sg	Sb	22 26 05.7	-1.0
CERT	Cerreto	0.47	231	Pg	Pg	22 26 01.0	+0.4
CERT	Cerreto	0.47	231	Pg	Pg	22 26 01.0	+0.4

*ISK **06** 22:26:10.6, 39.°08N×29.°02E, h4km, MD2.8*
*CSEM **06** 22:26:11.5±0.1, 39.°09N×29.°02E, h5km, MD3.0, Error ellipse: s-maj=1.7km s-min=1.3km az=28.0*
*DDA **06** 22:26:11.3, 39.°10N×29.°02E, h7km, MD3.0*

ISC 06 22:26:11.7±0.9**, 39.°09N**±0.°03×**29.°02E**±0.°02**, h11**km±9km**, n49, σ0.s57**/66**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	Demirci	0.24	259	*i* P	Pg	22 26 16.8	+0.1
DEMI				*i* S	Sg	22 26 20.3	+0.2
DEMI	Demirci	0.24	259	*i* P	Pg	22 26 16.8	+0.1
DEMI				*i* S	Sg	22 26 20.3	+0.2
GDZ	Gediz	0.36	90	*i* P	Pg	22 26 18.6	-0.3
GDZ				*i* S	Sg	22 26 23.8	+0.1
GDZ	Gediz	0.36	90	*i* P	Pg	22 26 18.6	-0.3
GDZ				*i* S	Sg	22 26 23.8	+0.1
TVSB	Tavsanli	0.50	43	*e*PG	Pg	22 26 21.0	-0.5
TVSB	Tavsanli	0.50	43	*e*Pg	Pg	22 26 21.0	-0.5
DST	Dursunbey	0.60	329	*e*PG	Pg	22 26 22.2	-1.2
KULA	Kula-Manisa	0.64	206	*e*PG	Pg	22 26 23.4	-0.7
KULA				*e*SG	Sg	22 26 32.6	+0.1
KULA	Kula-Manisa	0.64	206	*e*Pg	Pg	22 26 23.4	-0.7
DURS	Dursunbey	0.66	321	*i* P	Pg	22 26 24.0	-0.6
DURS				*i* S	Sg	22 26 33.2	-0.2
DURS	Dursunbey	0.66	321	*i* P	Pg	22 26 24.0	-0.6
DURS				*i* S	Sg	22 26 33.2	-0.2
KHAL	Karahalli	0.81	153	*i* P	Pb	22 26 27.6	-0.1
KHAL				*i* S	Sb	22 26 38.4	-0.2
KHAL	Karahalli	0.81	153	*i* P	Pb	22 26 27.6	-0.1
KHAL				*i* S	Sb	22 26 38.4	-0.2
ALT	Altintas	0.85	92	*e*PG	Pg	22 26 27.4	-0.6
ALT				*e*SG	Sb	22 26 39.8	-0.1
ALT	Altintas	0.85	92	*e*Pg	Pg	22 26 27.5	-0.6
ALT				*e*Sg	Sb	22 26 39.8	-0.1
KHL	Karahalli	0.86	153	*e*PG	Pg	22 26 27.5	-0.8
KHL				*e*SG	Sb	22 26 39.8	-0.3
KHL	Karahalli	0.86	153	*e*Pg	Pg	22 26 27.5	-0.8
KHL				*e*Sg	Sb	22 26 39.8	-0.3
AKHS	Akhisar	0.96	258	*i* P	Pb	22 26 30.5	+0.2
AKHS				*i* S	Sb	22 26 43.2	+0.2
AKHS	Akhisar	0.96	258	*i* P	Pb	22 26 30.5	+0.2
AKHS				*i* S	Sb	22 26 43.2	+0.2
ORLT	Orhaneli	0.96	354	*e*PG	Pg	22 26 29.7	-0.5
ORLT	Orhaneli	0.96	354	*e*Pg	Pg	22 26 29.7	-0.5
AKS	Akhisar	0.96	258	*e*PG	Pg	22 26 29.5	-0.7
AKS	Akhisar	0.96	258	*e*Pg	Pg	22 26 29.5	-0.7
BALB	Balikesir	1.04	302	*e*PG	Pg	22 26 31.3	-0.4
BALB	Balikesir	1.04	302	*e*Pg	Pg	22 26 31.3	-0.4
BALY	Balya	1.27	301	*i* P	Pn	22 26 35.7	+0.4
BALY				*i* S	Sg	22 26 51.7	-0.7
BALY	Balya	1.27	301	*i* P	Pn	22 26 35.7	+0.4
BALY				*i* S	Sg	22 26 51.7	-0.7
CAVI	Cavuskoy	1.28	29	*e*PN	Pn	22 26 35.6	+0.1
MDNY	Mudanya-Bursa	1.28	355	*e*PN	Pn	22 26 36.0	+0.5
MDNY	Mudanya-Bursa	1.28	355	*e*Pn	Pn	22 26 36.0	+0.5
SHUT	Suhut-Afyon	1.31	114	*e*PN	Pg	22 26 36.8	0.0
SHUT	Suhut-Afyon	1.31	114	*e*Pn	Pg	22 26 36.8	0.0
GEMT	Gemlik	1.35	6	*e*PN	Pn	22 26 37.0	+0.6
GEMT	Gemlik	1.35	6	*e*Pn	Pn	22 26 37.0	+0.6
GONE	Gonen-Balikesi	1.41	313	*e*PN	Pn	22 26 37.9	+0.7
GONE	Gonen-Balikesi	1.41	313	*e*Pn	Pn	22 26 37.9	+0.7
ARMT	Armutlu	1.48	355	*e*PN	Pn	22 26 39.0	+0.7
ARMT	Armutlu	1.48	355	*e*Pn	Pn	22 26 39.0	+0.7
ESKT	Eskisehir	1.48	73	*e*PN	Pn	22 26 39.0	+0.6
ESKT	Eskisehir	1.48	73	*e*Pn	Pn	22 26 39.0	+0.6
YLV	Yalova	1.50	10	*e*PN	Pn	22 26 39.3	+0.7
YLV	Yalova	1.50	10	*e*Pn	Pn	22 26 39.3	+0.7
BNT	Bandirma	1.52	327	*e*PN	Pn	22 26 39.7	+0.9
BNT	Bandirma	1.52	327	*e*Pn	Pn	22 26 39.7	+0.9
GPA	Golpazari	1.56	39	*e*PN	Pn	22 26 40.2	+0.9
GULT	Gulveren	1.77	40	*e*PN	Pn	22 26 43.2	+0.9
GULT	Gulveren	1.77	40	*e*Pn	Pn	22 26 43.2	+0.9
HRT	Hereke	1.80	16	*e*PN	Pn	22 26 43.5	+0.8
HRT	Hereke	1.80	16	*e*Pn	Pn	22 26 43.5	+0.8

*CSEM **06** 22:26:18.7, 42.°24N×13.°48E, h9km, After ROM*

ROM 06 22:26:18.7±0.1**, 42.°24N**×**13.°48E, h9**km**, Ml2.1**/1**, Error ellipse: s-maj=0.9km s-min=0.8km az=87.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	Fagnano	0.08	71	Pg	Pg	22 26 21.5	+0.4
FAGN				Sg	Sg	22 26 23.1	+0.3
FAGN	Fagnano	0.08	71	Pg	Pg	22 26 21.5	+0.4
FAGN				Sg	Sg	22 26 23.1	+0.3
AQU	L'Aquila	0.13	334	Pg	Pg	22 26 21.6	-0.2
AQU				Sg	Sg	22 26 24.8	+0.9
AQU	L'Aquila	0.13	334	Pg	Pg	22 26 21.6	-0.2
AQU				Sg	Sg	22 26 24.8	+0.9
PTQR	Pietraquaria	0.23	195	Pg	Pg	22 26 24.2	+0.8
PTQR				Sg	Sg	22 26 28.0	+1.4
PTQR	Pietraquaria	0.23	195	Pg	Pg	22 26 24.2	+0.8
PTQR				Sg	Sg	22 26 28.0	+1.4
FIAM	Fiamignano	0.27	276	Pg	Pb	22 26 25.3	-0.6
FIAM				Sg	Sg	22 26 29.3	+1.2
FIAM	Fiamignano	0.27	276	Pg	Pb	22 26 25.3	-0.6
FIAM				Sg	Sg	22 26 29.3	+1.2
VCEL	Villa Celiera	0.31	60	Pg	Pb	22 26 25.9	-0.7
	213nm,0.4s						
VCEL	Villa Celiera	0.31	60	Pg	Pb	22 26 25.9	-0.7
	213nm,0.4s						
VVLD	Villa Vallelon	0.38	164	Pg	Pg	22 26 27.0	+0.6
VVLD				Sg	Sg	22 26 32.7	+1.1
VVLD	Villa Vallelon	0.38	164	Pg	Pg	22 26 27.0	+0.6
VVLD				Sg	Sg	22 26 32.7	+1.1
INTR	Introdacqua	0.39	126	Pg	Pg	22 26 26.9	+0.4
INTR				Sg	Sb	22 26 33.0	-1.1
INTR	Introdacqua	0.39	126	Pg	Pg	22 26 26.9	+0.4
INTR				Sg	Sb	22 26 33.0	-1.1
TERO	Teramo	0.40	14	Pg	Pg	22 26 27.0	+0.4
TERO				Sg	Sb	22 26 33.4	-0.8
TERO	Teramo	0.40	14	Pg	Pg	22 26 27.0	+0.4
TERO				Sg	Sb	22 26 33.4	-0.8
CERT	Cerreto	0.47	232	Pg	Pg	22 26 28.2	+0.2
CERT				Sg	Sb	22 26 35.6	-0.7
CERT	Cerreto	0.47	232	Pg	Pg	22 26 28.2	+0.2
CERT				Sg	Sb	22 26 35.6	-0.7

*ISCJB **06** 22:31:10.4±0.4, 39.°12N±0.°03×29.°02E±0.°03, h3km±6km, Error ellipse: s-maj=4.8km s-min=3.8km az=5.8*
*CSEM **06** 22:31:10.7±0.1, 39.°11N×29.°03E, h5km, MD3.0, Error ellipse: s-maj=1.5km s-min=1.2km az=27.0*
*DDA **06** 22:31:10.4, 39.°11N×29.°02E, h8km, MD3.0*
*ISK **06** 22:31:10.2, 39.°11N×29.°03E, h5km, MD2.7*

ISC 06 22:31:10.8±0.9**, 39.°11N**±0.°02×**29.°03E**±0.°02**, h10**km±9km**, n39, σ0.s33**/53**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	Demirci	0.25	254	*i* P	Pg	22 31 16.0	0.0
DEMI				*i* S	Sg	22 31 19.5	0.0
DEMI	Demirci	0.25	254	*i* P	Pg	22 31 16.0	0.0
DEMI				*i* S	Sg	22 31 19.5	0.0
GDZ	Gediz	0.36	93	*i* P	Pg	22 31 17.9	0.0
GDZ				*i* S	Sg	22 31 22.9	+0.2
GDZ	Gediz	0.36	93	*i* P	Pg	22 31 17.9	0.0
GDZ				*i* S	Sg	22 31 22.9	+0.2
TVSB	Tavsanli	0.48	45	*e*PG	Pg	22 31 20.1	-0.1
TVSB				*e*SG	Sg	22 31 26.5	-0.1
TVSB	Tavsanli	0.48	45	*e*Pg	Pg	22 31 20.1	-0.1
TVSB				*e*Sg	Sg	22 31 26.5	-0.1
DST	Dursunbey	0.58	328	*e*PG	Pg	22 31 21.7	-0.5
DURS	Dursunbey	0.65	319	*i* P	Pg	22 31 23.1	-0.3
DURS				*i* S	Sg	22 31 32.0	0.0
DURS	Dursunbey	0.65	319	*i* P	Pg	22 31 23.1	-0.3
DURS				*i* S	Sg	22 31 32.0	0.0
KULA	Kula-Manisa	0.66	206	*e*PG	Pg	22 31 23.3	-0.3
KULA	Kula-Manisa	0.66	206	*e*Pg	Pg	22 31 23.3	-0.3
KHAL	Karahalli	0.82	154	*i* P	Pb	22 31 27.0	-0.3
KHAL				*i* S	Sg	22 31 37.6	+0.1
KHAL	Karahalli	0.82	154	*i* P	Pb	22 31 27.0	-0.3
KHAL				*i* S	Sg	22 31 37.6	+0.1
ALT	Altintas	0.85	93	*e*PG	Pg	22 31 27.0	-0.2
ALT	Altintas	0.85	93	*e*Pg	Pg	22 31 27.0	-0.2
KHL	Karahalli	0.88	153	*e*PG	Pg	22 31 27.7	-0.1
KHL	Karahalli	0.88	153	*e*Pg	Pg	22 31 27.7	-0.1
ORLT	Orhaneli	0.94	354	*e*PG	Pg	22 31 28.6	-0.4
ORLT	Orhaneli	0.94	354	*e*Pg	Pg	22 31 28.6	-0.4
AKHS	Akhisar	0.97	257	*i* P	Pg	22 31 29.5	-0.1
AKHS				*i* S	Sb	22 31 43.0	+0.3
AKHS	Akhisar	0.97	257	*i* P	Pg	22 31 29.5	-0.1
AKHS				*i* S	Sb	22 31 43.0	+0.3
AKS	Akhisar	0.97	257	*e*PG	Pg	22 31 29.2	-0.3
AKS	Akhisar	0.97	257	*e*Pg	Pg	22 31 29.2	-0.3
BALB	Balikesir	1.03	301	*e*PG	Pg	22 31 30.4	-0.3
BALB	Balikesir	1.03	301	*e*Pg	Pg	22 31 30.4	-0.3
BALY	Balya	1.26	300	*i* P	Pg	22 31 35.2	+0.2
BALY				*i* S	Sb	22 31 50.0	-0.9
BALY	Balya	1.26	300	*i* P	Pg	22 31 35.2	+0.2
BALY				*i* S	Sb	22 31 50.0	-0.9
CAVI	Cavuskoy	1.26	30	*e*PN	Pn	22 31 34.7	+0.2
MDNY	Mudanya-Bursa	1.26	355	*e*PN	Pn	22 31 34.7	+0.2
MDNY	Mudanya-Bursa	1.26	355	*e*Pn	Pn	22 31 34.7	+0.2
SHUT	Suhut-Afyon	1.32	115	*e*PN	Pn	22 31 35.5	+0.1
SHUT	Suhut-Afyon	1.32	115	*e*Pn	Pn	22 31 35.5	+0.1
GEMT	Gemlik	1.33	5	*e*PN	Pb	22 31 36.1	+0.2
GEMT	Gemlik	1.33	5	*e*Pn	Pb	22 31 36.1	+0.2
GONE	Gonen-Balikesi	1.39	313	*e*PN	Pb	22 31 37.1	+0.1
GONE	Gonen-Balikesi	1.39	313	*e*Pn	Pb	22 31 37.1	+0.1
ARMT	Armutlu	1.46	355	*e*PN	Pn	22 31 37.9	+0.6
ARMT	Armutlu	1.46	355	*e*Pn	Pn	22 31 37.9	+0.6
GULT	Gulveren	1.75	41	*e*PN	Pn	22 31 41.9	+0.6

*CSEM **06** 22:33:04.4, 42.°36N×13.°45E, h9km, After ROM*

ROM 06 22:33:04.4±0.1**, 42.°36N**×**13.°45E, h9**km±1km**, Ml2.0**/2**, Error ellipse: s-maj=1.7km s-min=1.3km az=68.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	256	Pg	Pg	22 33 06.2	0.0
AQU				Sg	Sg	22 33 07.6	0.0
AQU	L'Aquila	0.04	256	Pg	Pg	22 33 06.2	0.0
AQU				Sg	Sg	22 33 07.6	0.0
FAGN	Fagnano	0.14	134	Pg	Pg	22 33 08.1	+0.5
FAGN				Sg	Sg	22 33 10.7	+0.9
	376nm,0.4s						
FAGN	Fagnano	0.14	134	Pg	Pg	22 33 08.1	+0.5
FAGN				Sg	Sg	22 33 10.7	+0.9
	376nm,0.4s						
CAMP	Campotosto	0.17	350	Pg	Pg	22 33 08.8	+0.5
CAMP				Sg	Sg	22 33 12.6	+1.6
CAMP	Campotosto	0.17	350	Pg	Pg	22 33 08.8	+0.5
CAMP				Sg	Sg	22 33 12.6	+1.6
FIAM	Fiamignano	0.26	249	Pg	Pg	22 33 10.4	+0.5
FIAM				Sg	Sb	22 33 15.1	-1.1
FIAM	Fiamignano	0.26	249	Pg	Pg	22 33 10.4	+0.5
FIAM				Sg	Sb	22 33 15.1	-1.1
TERO	Teramo	0.28	24	Pg	Pg	22 33 10.3	+0.1
TERO				Sg	Sg	22 33 15.1	+1.0
TERO	Teramo	0.28	24	Pg	Pg	22 33 10.3	+0.1
TERO				Sg	Sg	22 33 15.1	+1.0
VCEL	Villa Celiera	0.29	84	Pg	Pg	22 33 10.9	+0.5
	158nm,0.4s						
VCEL	Villa Celiera	0.29	84	Pg	Pg	22 33 10.9	+0.5
	158nm,0.4s						
PTQR	Pietraquaria	0.34	186	Pg	Pb	22 33 12.6	-0.2
PTQR				Sg	Sg	22 33 16.8	+0.8
PTQR	Pietraquaria	0.34	186	Pg	Pb	22 33 12.6	-0.2
PTQR				Sg	Sg	22 33 16.8	+0.8
INTR	Introdacqua	0.49	136	Pg	Pg	22 33 14.6	+0.6
INTR				Sg	Sb	22 33 22.4	-0.2
INTR	Introdacqua	0.49	136	Pg	Pg	22 33 14.6	+0.6
INTR				Sg	Sb	22 33 22.4	-0.2
NRCA	Norcia	0.53	332	Pg	Pg	22 33 15.0	+0.1
NRCA				Sg	Sb	22 33 23.5	-0.4
NRCA	Norcia	0.53	332	Pg	Pg	22 33 15.0	+0.1
NRCA				Sg	Sb	22 33 23.5	-0.4
CERT	Cerreto	0.54	220	Pg	Pb	22 33 15.7	-0.4
CERT	Cerreto	0.54	220	Pg	Pb	22 33 15.7	-0.4

CASC 06 22:37:44.7±4.7**, 14.°45N**×**90.°53W, h35**km**, MD3.6, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.10	234	*e*P	Pn	22 37 48.1	-3.0
GCG	Guatemala City	0.14	357	*e*P	Pn	22 37 48.2	-3.0
GCG				*e*P		22 37 48.4	
NBG	Las Nubes	0.22	52	*e*P	Pn	22 37 50.2	-1.9
NBG				*e*S	Sn	22 37 55.4	-1.7
IXG	Ixpaco	0.28	166	*e*P	Pn	22 37 49.1	-3.6
FUG	Fuego 3	0.31	269	*e*P	Pn	22 37 52.1	-0.9
FG6		0.36	287	*e*P	Pn	22 37 53.5	-0.3
TP2	Tecpan 2	0.58	305	*e*P	Pn	22 37 58.3	+1.3
MRL	Marmol	1.01	53	*e*P	Pn	22 38 04.8	+2.1
MRL				*e*S	Sn	22 38 20.3	+4.4
RTR	El Retiro	1.02	123	*e*P	Pn	22 38 01.6	-1.1
SNJE	San Jose	1.06	123	*e*P	Pn	22 38 02.5	-0.9
SBLS	San Blas	1.07	125	*e*P	Pn	22 38 02.7	-0.8
JAT	Jato	1.08	263	*e*P	Pn	22 38 06.8	+3.4
JAT				*e*S	Sn	22 38 20.5	+3.3
BOQS	Boqueron	1.40	120	*e*P	Pn	22 38 09.0	+0.9
LFU	La Fuente	1.54	117	*e*P	Pn	22 38 11.3	+1.5
LBRS	Las Brisas	1.60	116	*e*P	Pn	22 38 11.7	+1.0
LFRS	El Faro	1.64	120	*e*P	Pn	22 38 12.5	+1.3
SNVI	San Vicente	1.84	117	*e*P	Pn	22 38 15.9	+1.9
CAHU	Cacacuatique	2.35	106	*e*P	Pn	22 38 23.9	+2.8

*CSEM **06** 22:45:01.6, 42.°30N×13.°48E, h10km, After ROM*

ROM 06 22:45:01.6±0.1**, 42.°30N**×**13.°48E, h10**km**, Ml1.6**/5**, Error ellipse: s-maj=1.6km s-min=1.1km az=69.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.08	314	Pg	Pg	22 45 04.6	+0.6
AQU				Sg	Sg	22 45 05.8	+0.1
	610nm,0.4s						
AQU	L'Aquila	0.08	314	Pg	Pg	22 45 04.6	+0.6
AQU				Sg	Sg	22 45 05.8	+0.1
	610nm,0.4s						
FAGN	Fagnano	0.09	114	Pg	Pg	22 45 04.6	+0.5
FAGN				Sg	Sg	22 45 06.1	+0.2
	467nm,0.3s						
FAGN	Fagnano	0.09	114	Pg	Pg	22 45 04.6	+0.5
FAGN				Sg	Sg	22 45 06.1	+0.2
	467nm,0.3s						
CAMP	Campotosto	0.24	348	Pg	Pg	22 45 07.3	+0.6
CAMP	Campotosto	0.24	348	Pg	Pg	22 45 07.3	+0.6
FIAM	Fiamignano	0.27	263	Pg	Pg	22 45 07.7	+0.5
FIAM				Sg	Sb	22 45 12.4	-1.0
	57nm,0.3s						
FIAM	Fiamignano	0.27	263	Pg	Pg	22 45 07.7	+0.5
FIAM				Sg	Sb	22 45 12.4	-1.0
	57nm,0.3s						
PTQR	Pietraquaria	0.28	191	Pg	Pg	22 45 08.1	+0.6
PTQR				Sg	Sg	22 45 12.5	+1.1
PTQR	Pietraquaria	0.28	191	Pg	Pg	22 45 08.1	+0.6
PTQR				Sg	Sg	22 45 12.5	+1.1
VCEL	Villa Celiera	0.29	71	Pg	Pb	22 45 08.8	-0.2
	93nm,0.3s						
VCEL	Villa Celiera	0.29	71	Pg	Pb	22 45 08.8	-0.2
	93nm,0.3s						
TERO	Teramo	0.34	16	Pg	Pg	22 45 08.6	+0.2
TERO				Sg	Sg	22 45 13.7	+0.7
	83nm,0.2s						
TERO	Teramo	0.34	16	Pg	Pg	22 45 08.6	+0.2
TERO				Sg	Sg	22 45 13.7	+0.7
	83nm,0.2s						
INTR	Introdacqua	0.43	132	Pg	Pg	22 45 10.6	+0.4
	51nm,0.3s						
INTR	Introdacqua	0.43	132	Pg	Pg	22 45 10.6	+0.4
	51nm,0.3s						
VVLD	Villa Vallelon	0.44	166	Pg	Pg	22 45 11.0	+0.6
VVLD				Sg	Sg	22 45 17.2	+0.8
	34nm,0.5s						
VVLD	Villa Vallelon	0.44	166	Pg	Pg	22 45 11.0	+0.6
VVLD				Sg	Sg	22 45 17.2	+0.8
	34nm,0.5s						
CERT	Cerreto	0.51	226	Pg	Pg	22 45 11.8	+0.2
CERT	Cerreto	0.51	226	Pg	Pg	22 45 11.8	+0.2
NRCA	Norcia	0.60	333	Pg	Pg	22 45 13.3	0.0
NRCA				Sg	Sb	22 45 22.6	-0.2
	7.0nm,0.1s						
NRCA	Norcia	0.60	333	Pg	Pg	22 45 13.3	0.0
NRCA				Sg	Sb	22 45 22.6	-0.2
	7.0nm,0.1s						

*NEIC **06** 22:47:13.0, 42.°35N×13.°29E, h12km, mb3.8/2, ML4.1(STR), ML3.6(ROM), After ROM.*
NEIC Felt [III] at Rieti and Terni; [II] at Albano Laziale, Avezzano, Ciampino, Foligno, Rocca di Papa, Rome, Spoleto and Sulmona. Also felt at Cascia, Castel Gandolfo, Grottaferrata, Mentana, Pratola Peligna, Rocca Priora and San Benedetto del Tronto.
*ISCJB **06** 22:47:13.9±0.2, 42.°36N±0.°01×13.°27E±0.°01, h10km±1km, mb3.7/7, Error ellipse: s-maj=2.4km s-min=1.8km az=21.4*
*ROM **06** 22:47:14.2±0.1, 42.°33N×13.°30E, h10km±1km, Ml3.7/30, Error ellipse: s-maj=1.1km s-min=1.0km az=129.0*
*LDG **06** 22:47:14.2±0.1, 42.°38N×13.°26E, h2km, Ml3.4/11, Error ellipse: s-maj=3.8km s-min=2.4km az=45.0*
*PDG **06** 22:47:14.9±0.3, 42.°42N×13.°32E, h10km, ML3.7/8, Error ellipse: s-maj=0.7km s-min=1.4km az=0.0*
*CSEM **06** 22:47:14.5±0.1, 42.°35N×13.°27E, h2km, mb3.8/2, ML4.2/5,*

Error ellipse: s-maj=2.0km s-min=1.6km az=27.0
*IDC **06** 22:47:15.1±0.9, 42°.53N×13°.02E, h0km, mb3.5/7, mb1 3.7/14, mb1mx3.6/33, mbtmp3.5/14, ML3.7/7, MS2.7/2, Ms1 2.7/2, ms1mx2.3/38, Error ellipse: s-maj=17.5km s-min=11.5km az=102.0*
*PRU **06** 22:47:16.2, 42°.42N×13°.46E, h0km, M3.8*
*STR **06** 22:47:20.9±9.4, 42°.62N×12°.91E, h10km, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 06 22:47:15.7±0.7, **42°.34N**±0°.02×**13°.30E**±0°.01, **h10**km±4km, **n349**, σ1°.**50**/424, **mb3.7**/7, **56C-13D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.08	83	eP	Pg	22 47 16.9	-1.2
AQU				S	Sg	22 47 18.8	-1.1
AQU	L'Aquila	0.08	83	⇓iPg	Pg	22 47 17.1	-1.1
AQU				Sg	Sg	22 47 18.8	-1.1
AQU	L'Aquila	0.08	83	eP	Pg	22 47 16.9	-1.2
AQU				Sg	Sg	22 47 18.8	-1.1
FIAM	Fiamignano	0.15	240	P	Pg	22 47 18.4	-0.8
FIAM				S	Sg	22 47 21.2	-0.5
FIAM	Fiamignano	0.15	240	⇑iPg	Pg	22 47 18.4	-0.8
FIAM				Sg	Sg	22 47 21.2	-0.5
	29µm,0.4s						
FIAM	Fiamignano	0.15	240	⇑iPg	Pg	22 47 18.4	-0.8
FIAM				Sg	Sg	22 47 21.2	-0.5
	29µm,0.4s						
CAMP	Campotosto	0.21	24	⇑iPg	Pg	22 47 19.1	-1.1
CAMP				Sg	Sg	22 47 23.9	+0.7
CAMP	Campotosto	0.21	24	⇑iPg	Pg	22 47 19.1	-1.1
CAMP				Sg	Sg	22 47 23.9	+0.7
FAGN	Fagnano	0.23	110	⇓iPg	Pg	22 47 19.3	-1.1
FAGN				Sg	Sg	22 47 23.1	-0.6
FAGN	Fagnano	0.23	110	⇓iPg	Pg	22 47 19.3	-1.1
FAGN				Sg	Sg	22 47 23.1	-0.6
PTQR	Pietraquaria	0.33	166	P	Pg	22 47 21.1	-1.3
PTQR	Pietraquaria	0.33	166	⇑iPg	Pg	22 47 21.1	-1.3
PTQR	Pietraquaria	0.33	166	⇑iPg	Pg	22 47 21.1	-1.3
TERO	Teramo	0.36	39	Pg	Pg	22 47 21.3	-1.6
TERO				Sg	Sg	22 47 27.7	0.0
TERO	Teramo	0.36	39	Pg	Pg	22 47 21.3	-1.6
TERO				Sg	Sg	22 47 27.7	0.0
VCEL	Villa Celiera	0.41	83	Pg	Pg	22 47 23.1	-0.7
VCEL	Villa Celiera	0.41	83	Pg	Pg	22 47 23.1	-0.7
MNS	Montasola	0.46	275	P	Pg	22 47 23.3	-1.4
MNS				S	Sg	22 47 29.1	-1.6
MNS	Montasola	0.46	275	⇑iPg	Pg	22 47 23.3	-1.4
MNS				Sg	Sg	22 47 29.3	-1.4
MNS	Montasola	0.46	275	⇑iPg	Pg	22 47 23.3	-1.4
MNS				S	Sg	22 47 29.1	-1.6
CERT	Cerreto	0.46	211	P	Pg	22 47 23.4	-1.3
CERT				S	Sg	22 47 30.4	-0.4
CERT	Cerreto	0.46	211	⇑iPg	Pg	22 47 23.4	-1.3
CERT				Sg	Sg	22 47 30.0	-0.8
	12µm,0.3s						
CERT	Cerreto	0.46	211	⇑iPg	Pg	22 47 23.4	-1.3
CERT				Sg	Sg	22 47 30.0	-0.8
	12µm,0.3s						
CERT				S	Sg	22 47 30.4	-0.4
NRCA	Norcia	0.51	345	⇑iPg	Pg	22 47 24.1	-1.5
NRCA	Norcia	0.51	345	⇑iPg	Pg	22 47 24.1	-1.5
MTCE	Montecelio	0.52	232	P	Pg	22 47 23.9	-1.9
MTCE	Montecelio	0.52	232	⇑iPg	Pg	22 47 24.5	-1.4
MTCE	Montecelio	0.52	232	P	Pg	22 47 23.9	-1.9
MTCE	Montecelio	0.52	232	⇑iPg	Pg	22 47 24.5	-1.4
VVLD	Villa Vallelon	0.53	153	P	Pg	22 47 23.1	-2.9
VVLD				S	Sg	22 47 27.3	-5.8
VVLD	Villa Vallelon	0.53	153	Pg	Pg	22 47 24.3	-1.8
VVLD				Sg	Sg	22 47 31.8	-1.3
VVLD	Villa Vallelon	0.53	153	P	Pg	22 47 23.1	-2.9
VVLD	Villa Vallelon	0.53	153	Pg	Pg	22 47 24.3	-1.8
VVLD				Sg	Sg	22 47 31.8	-1.3
GUAR	Guarcino	0.55	179	Pg	Pg	22 47 24.7	-1.7
	3µm,0.6s						
GUAR	Guarcino	0.55	179	Pg	Pg	22 47 24.7	-1.7
	3µm,0.6s						
INTR	Introdacqua	0.56	126	P	Pg	22 47 24.8	-1.8
INTR	Introdacqua	0.56	126	⇓ePg	Pg	22 47 24.8	-1.8
INTR				Sg	Sg	22 47 33.4	-0.6
	7µm,0.9s						
INTR	Introdacqua	0.56	126	⇓ePg	Pg	22 47 24.8	-1.8
INTR				Sg	Sg	22 47 33.4	-0.6
	7µm,0.9s						
TRTR	Tortoreto Alta	0.65	44	Pg	Pg	22 47 27.6	-0.7
	17µm,0.7s						
TRTR	Tortoreto Alta	0.65	44	Pg	Pg	22 47 27.6	-0.7
	17µm,0.7s						
OFFI	Offida	0.66	26	⇑iPg	Pg	22 47 27.5	-0.9
	12µm,0.6s						
OFFI	Offida	0.66	26	⇑iPg	Pg	22 47 27.5	-0.9
	12µm,0.6s						
RMP	Rome, Mte Porz	0.69	220	⇑iPg	Pg	22 47 27.4	-1.7
	3µm,0.4s						
RMP	Rome, Mte Porz	0.69	220	⇑iPg	Pg	22 47 27.4	-1.7
	3µm,0.4s						
POFI	Posta Fibreno	0.70	154	Pg	Pg	22 47 27.4	-1.8
POFI	Posta Fibreno	0.70	154	Pg	Pg	22 47 27.4	-1.8
FDMO	Fiordimonte	0.71	348	⇑iPg	Pg	22 47 27.6	-1.8
FDMO				Sg	Sb	22 47 39.1	-0.9
	2µm,0.6s						
FDMO	Fiordimonte	0.71	348	⇑iPg	Pg	22 47 27.6	-1.8
FDMO				Sg	Sb	22 47 39.1	-0.9
	2µm,0.6s						
RDP	Rocca di Papa	0.73	217	⇑iPg	Pg	22 47 28.1	-1.7
	6µm,0.4s						
RDP	Rocca di Papa	0.73	217	⇑iPg	Pg	22 47 28.1	-1.7
	6µm,0.4s						
SDI	San Donato	0.74	149	Pg	Pg	22 47 28.0	-2.0
SDI	San Donato	0.74	149	Pg	Pg	22 47 28.0	-2.0
GIUL	Giuliano Di Ro	0.79	182	Pg	Pg	22 47 28.7	-2.2
	4µm,0.6s						
GIUL	Giuliano Di Ro	0.79	182	Pg	Pg	22 47 28.7	-2.2
	4µm,0.6s						
ASSB	Assisi San Ben	0.84	326	Pg	Pg	22 47 29.9	-2.0
	4µm,0.6s						
ASSB	Assisi San Ben	0.84	326	Pg	Pg	22 47 29.9	-2.0
	4µm,0.6s						
MGAB	Montegabbione	1.04	303	Pg	Pg	22 47 34.3	-1.4
	4µm,0.5s						
MGAB	Montegabbione	1.04	303	Pg	Pg	22 47 34.3	-1.4
	4µm,0.5s						
FRES	Fresagrandinar	1.09	109	Pg	Pg	22 47 34.3	-2.3
	2µm,1.2s						
FRES	Fresagrandinar	1.09	109	Pg	Pg	22 47 34.3	-2.3
	2µm,1.2s						
TRIV	Trivento	1.10	121	Pg	Pg	22 47 34.4	-2.4
	1µm,0.8s						
TRIV	Trivento	1.10	121	Pg	Pg	22 47 34.4	-2.4
	1µm,0.8s						
SACS	San Casciano d	1.14	297	Pg	Pg	22 47 36.6	-1.0
	2µm,0.9s						
ARVD	Arcevia	1.18	347	Pg	Pg	22 47 35.8	-2.6
	3µm,0.8s						
ARVD	Arcevia	1.18	347	Pg	Pg	22 47 35.8	-2.6
	3µm,0.8s						
AOI	Ancona	1.23	10	Pg	Pg	22 47 36.8	-2.5
	2µm,0.8s						
AOI	Ancona	1.23	10	Pg	Pg	22 47 36.8	-2.5
	2µm,0.8s						
MODR	Mondragone	1.27	160	Pg	Pn	22 47 37.4	-2.1
MODR	Mondragone	1.27	160	Pg	Pn	22 47 37.4	-2.1
PIEI	Pieia	1.32	335	Pg	Pn	22 47 38.2	-1.9
	690nm,0.4s						
PIEI	Pieia	1.32	335	Pg	Pn	22 47 38.2	-1.9
	690nm,0.4s						
CAFI	Castiglion Fio	1.39	316	Pn	Pn	22 47 40.6	-0.5
	787nm,0.7s						
CAFI	Castiglion Fio	1.39	316	Pn	Pn	22 47 40.6	-0.5
	787nm,0.7s						
BADI	Badiali	1.40	327	Pn	Pn	22 47 40.4	-0.8
	2µm,1.1s						
BADI	Badiali	1.40	327	Pn	Pn	22 47 40.4	-0.8
	2µm,1.1s						
ARCI	Arcidosso	1.44	291	Pn	Pn	22 47 41.6	-0.2
ARCI	Arcidosso	1.44	291	Pn	Pn	22 47 41.6	-0.2
PARC	Parchiule	1.52	330	Pn	Pn	22 47 42.4	-0.5
	956nm,0.7s						
PARC	Parchiule	1.52	330	Pn	Pn	22 47 42.4	-0.5
	956nm,0.7s						
CRE	Caprese Michel	1.61	323	Pn	Pn	22 47 43.8	-0.5
	216nm,0.5s						
CRE	Caprese Michel	1.61	323	Pn	Pn	22 47 43.8	-0.5
	216nm,0.5s						
PESA	Pesaro	1.63	348	Pn	Pn	22 47 44.4	0.0
	2µm,0.8s						
PESA	Pesaro	1.63	348	Pn	Pn	22 47 44.4	0.0
	2µm,0.8s						
ASQU	Asqua	1.82	323	Pn	Pn	22 47 46.2	-0.9
	398nm,0.7s						
ASQU	Asqua	1.82	323	Pn	Pn	22 47 46.2	-0.9
	398nm,0.7s						
CSNT	Castellina Chi	1.85	308	Pn	Pn	22 47 47.1	-0.4
CSNT	Castellina Chi	1.85	308	Pn	Pn	22 47 47.1	-0.4
SFI	Santa Sofia	1.89	326	Pn	Pn	22 47 46.9	-1.1
	678nm,1.1s						
SFI	Santa Sofia	1.89	326	Pn	Pn	22 47 46.9	-1.1
	678nm,1.1s						
SGRT	San Giovanni R	1.92	107	Pn	Pn	22 47 48.4	0.0
	507nm,0.8s						
SGRT	San Giovanni R	1.92	107	Pn	Pn	22 47 48.4	0.0
	507nm,0.8s						
MSAG	Monte S. Angel	2.05	107	Pn	Pn	22 47 50.6	+0.4
	631nm,0.6s						
MSAG	Monte S. Angel	2.05	107	Pn	Pn	22 47 50.6	+0.4
	631nm,0.6s						
MS1	Monte Sant'Ang	2.07	107	ePn	Pb	22 47 53.5	+0.1
MCRV	Calabrutti - M	2.10	137	Pn	Pn	22 47 50.5	-0.5
MCRV	Calabrutti - M	2.10	137	Pn	Pn	22 47 50.5	-0.5
NVLJ	Novalja	2.50	27	i Pn	Pn	22 47 55.6	-0.7
NVLJ				Sn	Sn	22 48 26.7	-0.1
NVLJ	Novalja	2.50	27	i Pn	Pn	22 47 55.5	-0.7
NVLJ				Sn	Sn	22 48 26.6	-0.1
CDT	Castel del Mon	2.56	118	ePn	Pn	22 47 58.2	+1.0
CDT				eSn	Sb	22 48 33.6	+0.4
MAIM	Mastiano	2.58	308	P	Pn	22 47 57.9	+0.4
AMUR	Altamura	2.87	119	Pn	Pn	22 48 01.7	+0.3
AMUR	Altamura	2.87	119	Pn	Pn	22 48 01.7	+0.3
BAI	Bari	2.95	114	ePn	Pn	22 48 03.4	+0.8
BAI				eSn	Sn	22 48 41.0	+3.0
CUC	Castrocucco	3.02	140	ePn	Pn	22 48 04.4	+0.8
CUC	Castrocucco	3.02	140	ePn	Pn	22 48 04.4	+0.8
GRAM	Graiana	3.19	313	P	Pn	22 48 07.0	+1.2
PGF	Pioggiola	3.19	275	ePn	Pn	22 48 05.0	-0.9
	SNR=1.0						
PGF				eSn	Sn	22 48 44.9	+0.9
	22nm,0.4s						
PGF	Pioggiola	3.19	275	ePn	Pn	22 48 05.0	-0.9
	SNR=1.0						
PGF				eSn	Sn	22 48 44.9	+0.9
	11nm,0.4s						
NOCI	Noci	3.23	118	Pn	Pn	22 48 06.8	+0.4
NOCI	Noci	3.23	118	Pn	Pn	22 48 06.8	+0.4
CODM	Codolo	3.24	310	P	Pn	22 48 07.0	+0.4
SKDS	Skadanscina	3.24	9	i Pn	Pn	22 48 05.6	-1.0
SKDS				i Sn	Sn	22 48 44.9	-0.4
SKDS							
	comp=Z,80nm,0.3s						
SKDS	Skadanscina	3.24	9	Pn	Pn	22 48 05.6	-1.0
SKDS				i Sn	Sn	22 48 44.9	-0.4
	comp=Z,80nm,0.3s						
STON	Ston	3.29	79	i Pn	Pn	22 48 07.0	-0.2
STON				Sn	Sn	22 48 45.1	-1.3
STON	Ston	3.29	79	i Pn	Pn	22 48 07.0	-0.2
STON				Sn	Sn	22 48 45.1	-1.3
TRI	Trieste	3.38	6	ePn	Pn	22 48 07.7	-0.8
TRI	Trieste	3.38	6	ePn	Pn	22 48 07.7	-0.8
VISS	Visnje	3.63	17	i Pn	Pn	22 48 11.5	-0.4
VISS	Visnje	3.63	17	i Pn	Pn	22 48 11.5	-0.4
CGRP	Cima Grappa	3.70	344	Pn	Pn	22 48 11.4	-1.6
	comp=Z,209nm,0.5s						
CGRP	Cima Grappa	3.70	344	Pn	Pn	22 48 11.4	-1.6
	comp=Z,209nm,0.5s						
VOJS	Vojsko	3.71	6	i Pn	Pn	22 48 13.0	-0.1
VOJS	Vojsko	3.71	6	i Pn	Pn	22 48 13.0	-0.1
POLC	Polcenigo	3.73	351	Pn	Pn	22 48 13.3	+0.1
	comp=Z,221nm,0.6s						
HCY	Herceg Novi	3.85	87	⇑iPn	Pn	22 48 15.0	+0.1
HCY				eSn	Sn	22 49 01.3	+1.1
HCY	Herceg Novi	3.85	87	⇑iPn	Pn	22 48 15.0	+0.1
HCY				eSn	Sn	22 49 01.3	+1.1
BRY	Bratogost	3.91	80	⇑iPn	Pn	22 48 16.5	+0.6
BRY				eSn	Sn	22 49 02.4	+0.6
BRY	Bratogost	3.91	80	⇑iPn	Pn	22 48 16.5	+0.6
BRY				eSn	Sn	22 49 02.4	+0.6
VINO	Villanova	3.91	360	Pn	Pn	22 48 14.6	-1.2
	comp=Z,120nm,0.6s						
VINO	Villanova	3.91	360	Pn	Pn	22 48 14.6	-1.2
	comp=Z,120nm,0.6s						
VSL	Villasalto	4.11	228	ePn	Pn	22 48 17.4	-1.1
VSL				eSn	Sn	22 49 07.7	+1.0
VSL	Villasalto	4.11	228	ePn	Pn	22 48 17.4	-1.1
VSL				eSn	Sn	22 49 07.7	+1.0
TIP	Timpagrande	4.11	139	ePn	Pn	22 48 17.8	-0.8
TIP	Timpagrande	4.11	139	ePn	Pn	22 48 17.8	-0.8
BUM	Brajici-Budva	4.15	89	⇑iPn	Pn	22 48 19.7	+0.6
BUM				eSn	Sn	22 49 08.5	+0.8
BUM	Brajici-Budva	4.15	89	⇑iPn	Pn	22 48 19.7	+0.6
BUM				eSn	Sn	22 49 08.5	+0.8
UPM	Unac-Piva	4.22	76	⇑iPn	Pn	22 48 20.9	+0.8
UPM				eSn	Sn	22 49 10.4	+0.9
UPM	Unac-Piva	4.22	76	⇑iPn	Pn	22 48 20.9	+0.8
UPM				eSn	Sn	22 49 10.4	+0.9
OBKA	Obir	4.26	12	⇑iPn	Pn	22 48 20.1	-0.6
	SNR=9.7						
OBKA	Obir	4.26	12	Pn	Pn	22 48 20.0	-0.6
	SNR=9.7						
MYKA	Terra Mystica	4.29	3	⇓iPn	Pn	22 48 21.0	-0.1
MYKA	Terra Mystica	4.29	3	Pn	Pn	22 48 21.0	-0.1
PDG	Podgorica	4.42	87	⇑iPn	Pn	22 48 23.7	+1.0
PDG				eSn	Sn	22 49 14.8	+0.7
TTG	Podgorica	4.42	87	⇑iPn	Pn	22 48 23.7	+1.0
TTG				eSn	Sn	22 49 14.8	+0.7
ABTA	Abfaltersbach	4.44	353	⇓iPn	Pn	22 48 23.0	-0.1
	SNR=90						
ABTA	Abfaltersbach	4.44	353	Pn	Pn	22 48 23.0	-0.1
	SNR=90						
ULC	Ulcinj	4.44	93	⇑iPn	Pn	22 48 23.5	+0.5
ULC				eSn	Sn	22 49 15.7	+1.0
ULC	Ulcinj	4.44	93	⇑iPn	Pn	22 48 23.5	+0.5
ULC				eSn	Sn	22 49 15.7	+1.0
SAOF	Saorge	4.51	293	P	Pn	22 48 24.1	+0.1
SAOF	Saorge	4.51	293	P	Pn	22 48 24.1	+0.1
SAOF	Saorge	4.51	293	P	Pn	22 48 24.1	+0.1
SBF	Sospel	4.55	291	ePn	Pn	22 48 23.9	-0.7
	SNR=1.0						
SBF				eSn	Sn	22 49 13.8	-3.8
	comp=Z,22nm,0.6s						
SBF	Sospel	4.55	291	ePn	Pn	22 48 23.9	-0.7
	SNR=1.0						
SBF				eSn	Sn	22 49 13.8	-3.8
	comp=Z,11nm,0.6s						
REVF	Revere	4.56	290	P	Pn	22 48 24.4	-0.4
REVF	Revere	4.56	290	P	Pn	22 48 24.4	-0.4
REVF	Revere	4.56	290	P	Pn	22 48 24.4	-0.4
PLE	Pljevlja	4.59	76	⇓iPn	Pn	22 48 24.6	-0.6
PLE				eSn	Sn	22 49 18.3	-0.2
PLE	Pljevlja	4.59	76	⇓iPn	Pn	22 48 24.6	-0.6
PLE				eSn	Sn	22 49 18.3	-0.2
AUTN	L'Aution	4.60	293	P	Pn	22 48 25.8	+0.4
AUTN	L'Aution	4.60	293	P	Pn	22 48 25.8	+0.4
AUTN	L'Aution	4.60	293	P	Pn	22 48 25.8	+0.4
BBLS	Lazići	4.72	69	ePn	Pn	22 48 29.9	+2.9
TOUF	Mont Tournerai	4.73	293	P	Pn	22 48 27.5	+0.4
TOUF	Mont Tournerai	4.73	293	P	Pn	22 48 27.5	+0.4
TOUF	Mont Tournerai	4.73	293	P	Pn	22 48 27.5	+0.4
MVIF	Mont Vial	4.76	291	P	Pn	22 48 27.7	+0.2
MVIF	Mont Vial	4.76	291	P	Pn	22 48 27.7	+0.2
MVIF	Mont Vial	4.76	291	P	Pn	22 48 27.7	+0.2
BEHE	Becsehely	4.82	30	esPb	Pg	22 48 45.1	-2.9
BEY	Berane	4.90	82	ePn	Pn	22 48 30.4	+1.0
BEY				eSn	Sn	22 49 26.4	+0.3
IVA	Berane	4.90	82	ePn	Pn	22 48 30.4	+1.0
IVA				eSn	Sn	22 49 26.4	+0.3
CALN	Calern	4.90	289	P	Pn	22 48 29.4	-0.1
CALN	Calern	4.90	289	P	Pn	22 48 29.4	-0.1
CALN	Calern	4.90	289	P	Pn	22 48 29.4	-0.1
PUK	Puka	4.91	91	i PN	Pn	22 48 30.9	+1.3
PUK				i SN	Sb	22 49 36.9	-4.0
PUK	Puka	4.91	91	i Pn	Pn	22 48 30.9	+1.3
PVY	Plav	4.94	85	⇑iPn	Pn	22 48 30.8	+0.9
PVY				eSn	Sn	22 49 27.9	+0.8
TUE	Stuetta	5.00	327	ePn	Pn	22 48 30.9	0.0
TUE				eSn	Sn	22 49 31.9	+3.0
TUE	Stuetta	5.00	327	ePn	Pn	22 48 30.9	0.0
TUE				eSn	Sn	22 49 31.9	+3.0
TIR	Tirane	5.01	99	ePn	Pn	22 48 30.1	-0.8
	comp=Z,31nm,0.6s						
TIR				eSn	Sn	22 49 27.0	-1.7
TIR	Tirane	5.01	99	ePn	Pn	22 48 30.0	-0.8
	comp=Z,31nm,0.6s						
TIR				eSn	Sn	22 49 27.0	-1.7
BCI	Bajram Curri	5.02	87	i PN	Pn	22 48 32.5	+1.5
BCI				i SN	Sn	22 49 30.8	+1.8
BCI	Bajram Curri	5.02	87	i Pn	Pn	22 48 32.5	+1.5
BCI				i Sn	Sn	22 49 30.8	+1.8
FETA	Feichten	5.02	340	⇓iPn	Pn	22 48 31.6	+0.5
	SNR=18						
FETA	Feichten	5.02	340	Pn	Pn	22 48 31.6	+0.5
	SNR=18						
FRF	La Foret Royal	5.03	286	ePn	Pn	22 48 30.3	-0.8
	SNR=1.0						
FRF				eSn	Sn	22 49 24.7	-4.5
	comp=Z,12nm,0.7s						
FRF	La Foret Royal	5.03	286	ePn	Pn	22 48 30.3	-0.8
	SNR=1.0						
FRF				eSn	Sn	22 49 24.7	-4.5
	comp=Z,6.1nm,0.7s						
TEKS	Tekeris	5.04	62	ePn	Pn	22 48 30.7	-0.6
WTTA	Wattenberg	5.06	347	⇑iPn	Pn	22 48 32.9	+1.2
	SNR=20						
WTTA	Wattenberg	5.06	347	Pn	Pn	22 48 32.9	+1.2
	SNR=20						
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	22 48 32.7	+0.9
	comp=Z,4.0nm,0.3s,baz=156,slow=14,SNR=38						
DAVOX				Sn	Sn	22 49 32.0	+1.7
	comp=Z,1.7nm,0.3s,baz=325,slow=23,SNR=2.2						
LMR	La Mourre	5.09	283	ePn	Pn	22 48 30.8	-1.1
	SNR=1.0						
LMR				eSn	Sn	22 49 26.0	-4.7
	comp=Z,4.4nm,0.5s						
LMR	La Mourre	5.09	283	ePn	Pn	22 48 30.8	-1.1
	SNR=1.0						
LMR				eSn	Sn	22 49 26.0	-4.7
	comp=Z,2.2nm,0.5s						
WATA	Walderalm	5.14	347	⇑iPn	Pn	22 48 34.1	+1.3
	SNR=10						
WATA	Walderalm	5.14	347	Pn	Pn	22 48 34.1	+1.3
	SNR=10						
ARSA	Arzberg	5.16	17	⇑iPn	Pn	22 48 31.0	-1.8
	SNR=6.8						
ARSA	Arzberg	5.16	17	Pn	Pn	22 48 31.0	-1.8
	SNR=6.8						
IVAS	Ivanjica	5.18	74	ePn	Pn	22 48 33.7	+0.5
DIVS	Divibare	5.20	68	ePn	Pn	22 48 33.6	+0.1
MOTA	Moosalm	5.24	343	⇑iPn	Pn	22 48 34.5	+0.4
	SNR=17						
MOTA	Moosalm	5.24	343	Pn	Pn	22 48 34.5	+0.4
	SNR=17						
MBDF	Montbardon	5.31	299	eP	Pn	22 48 35.7	+0.6
MBDF	Montbardon	5.31	299	eP	Pn	22 48 35.7	+0.6
PHP	Peshkopia	5.36	95	i PN	Pn	22 48 37.3	+1.5
PHP	Peshkopia	5.36	95	i Pn	Pn	22 48 37.3	+1.5
RJOB	Jochberg	5.41	356	ePn	Pn	22 48 37.0	+0.7
PKSM	Moragy	5.45	43	epPn	Pn	22 48 41.1	+4.3
DAVA	Damuels	5.51	335	⇑iPn	Pn	22 48 38.5	+0.7
	SNR=14						
DAVA	Damuels	5.51	335	Pn	Pn	22 48 38.5	+0.7
	SNR=14						
BNI	Bardonecchia	5.51	302	ePn	Pn	22 48 39.1	+1.3
	comp=Z,5.9nm,0.6s						
BNI	Bardonecchia	5.51	302	ePn	Pn	22 48 39.1	+1.3
	comp=Z,5.9nm,0.6s						
TRUS	Trudelj	5.52	68	ePn	Pn	22 48 36.2	-1.7
MOA	Molln	5.55	7	⇑iPn	Pn	22 48 38.1	-0.1
MOA	Molln	5.55	7	Pn	Pn	22 48 38.1	-0.1
GRUS	Gruza	5.65	72	ePn	Pn	22 48 39.7	+0.1
LPG	La Plagne	5.68	306	eP	Pn	22 48 41.4	+1.1
LPG	La Plagne	5.68	306	eP	Pn	22 48 41.4	+1.1
LPL	La Plagne	5.70	306	eP	Pn	22 48 41.5	+0.9
LPL				eSn	Sn	22 49 39.7	-6.4
	comp=Z,7.9nm,0.5s						
LPL	La Plagne	5.70	306	eP	Pn	22 48 41.5	+0.9
SOP	Sopron	5.82	22	ePn	Pn	22 48 37.4	-4.5
SOP				eSn	Sn	22 49 40.3	-8.3
SELS	Selova	5.82	79	ePn	Pn	22 48 42.2	+0.1
CONA	Conrad Observa	5.87	17	⇓iPn	Pn	22 48 42.1	-0.6
	SNR=16						
CONA	Conrad Observa	5.87	17	Pn	Pn	22 48 42.1	-0.6
	SNR=16						
SMRF	Simiane la Rot	5.88	289	eP	Pn	22 48 42.9	+0.1
SMRF	Simiane la Rot	5.88	289	eP	Pn	22 48 42.9	+0.1
ORIF	Oris-en-Rattie	5.96	298	eP	Pn	22 48 46.1	+2.0
ORIF	Oris-en-Rattie	5.96	298	eP	Pn	22 48 46.1	+2.0
FUR	Furstenfeldbru	5.99	347	ePn	Pn	22 48 43.0	-1.4
BIA	Bitola	6.16	100	ePn	Pn	22 48 47.5	+0.9
BIA	Bitola	6.16	100	ePn	Pn	22 48 47.5	+0.9
BARS	Barje	6.31	83	ePn	Pn	22 48 48.4	-0.3
GEC2	GERESS Array S	6.51	2	ePn	Pn	22 48 50.6	-0.9
GERES	GERESS Array B	6.51	2	Pn	Pn	22 48 50.6	-0.9
	comp=Z,0.7nm,0.3s,baz=179,slow=13,SNR=30						
GERES				Sn	Sn	22 50 01.2	-4.5
	comp=Z,3.2nm,0.3s,baz=188,slow=29,SNR=13						
SPAK	Spaichingen-Ko	6.58	333	P	Pn	22 48 53.2	+0.7
SPAK	Spaichingen-Ko	6.58	333	P	Pn	22 48 53.2	+0.7
FELD	Feldberg im Sc	6.68	328	P	Pn	22 48 53.1	-0.8
FELD	Feldberg im Sc	6.68	328	P	Pn	22 48 53.1	-0.8
CABF	La Chapelle	6.69	312	ePn	Pn	22 48 53.4	-0.6
	SNR=1.0						
CABF	La Chapelle	6.69	312	ePn	Pn	22 48 53.4	-0.6
	SNR=1.0						
VIVF	Saint-Julien-l	6.75	295	ePn	Pn	22 48 54.7	0.0
	SNR=1.0						
VIVF	Saint-Julien-l	6.75	295	ePn	Pn	22 48 54.7	0.0
	SNR=1.0						
KHC	Kasperske Hory	6.79	2	ePn	Pn	22 48 54.4	-1.0
	comp=Z,0.3nm,1.5s						
KHC				eSn	Sn	22 50 09.5	-3.2
KHC	Kasperske Hory	6.79	2	ePN	Pn	22 48 54.7	-0.6
KHC				ex	x	22 49 06.5	
KHC				eSN	Sn	22 50 09.3	-3.4
KHC	Kasperske Hory	6.79	2	Pn	Pn	22 48 54.7	-0.6
LOMF	Lomont	6.79	320	P	Pn	22 48 55.9	+0.5
LOMF	Lomont	6.79	320	P	Pn	22 48 55.9	+0.5
LOMF	Lomont	6.79	320	P	Pn	22 48 55.9	+0.5
WET	Wettzell	6.81	358	ePn	Pn	22 48 54.9	-0.6
SMOL	Smolenice	6.82	24	ePN	Pn	22 48 56.4	+0.7
SMOL				e		22 50 14.7	
SMOL	Smolenice	6.82	24	ePn	Pn	22 48 56.4	+0.7
BZS	Buzias	6.83	59	⇑iP	Pn	22 48 57.9	+2.0
BZS	Buzias	6.83	59	⇑iP	Pn	22 48 57.9	+2.0
ZAPS	Zavoj	6.93	79	ePn	Pn	22 48 58.6	+1.3
BFO	Black Forest	6.93	331	ePn	Pn	22 48 56.6	-0.7
BFO	Black Forest	6.93	331	ePn	Pn	22 48 56.5	-0.8
BFO				eSn	Sn	22 50 16.2	+0.1
BFO	Black Forest	6.93	331	ePn	Pn	22 48 56.5	-0.8
BFO				eSn	Sn	22 50 16.2	+0.1
VAY	Valandovo	7.00	95	ePn	Pn	22 49 00.8	+2.6
MOF	Molkenrain	7.02	324	P	Pn	22 48 57.8	-0.8
MOF	Molkenrain	7.02	324	P	Pn	22 48 57.8	-0.8
MOF	Molkenrain	7.02	324	P	Pn	22 48 57.8	-0.8
LASF	Ste Croix	7.11	287	ePn	Pn	22 48 58.7	-1.0
	SNR=1.0						
LASF	Ste Croix	7.11	287	ePn	Pn	22 48 58.7	-1.0
	SNR=1.0						
TREC	Trest	7.12	12	ePN	Pn	22 48 59.2	-0.6
TREC				eSN	Sn	22 50 16.4	-4.3
TREC	Trest	7.12	12	Pn	Pn	22 48 59.2	-0.6
HINF	Hinteralfeld	7.12	322	ePn	Pn	22 48 58.1	-1.8
	SNR=1.0						
HINF				eSn	Sn	22 50 14.2	-6.6
	comp=Z,15nm,0.5s,SNR=1.0						
HINF	Hinteralfeld	7.12	322	ePn	Pn	22 48 58.1	-1.8
	SNR=1.0						
VYHS	Vyhne	7.28	30	ePN	Pn	22 49 02.2	+0.2
VYHS				eSN	Sn	22 50 19.7	-4.9
VYHS	Vyhne	7.28	30	ePn	Pn	22 49 02.2	+0.2
KEST	Kesra	7.28	206	ePn	Pn	22 49 04.3	+2.2
KEST	Kesra	7.28	206	Pn	Pn	22 49 04.8	+2.7
	comp=Z,1.1nm,0.3s,baz=296,slow=4.0,SNR=81						
KEST	Kesra	7.28	206	ePn	Pn	22 49 04.3	+2.2
ECH	Echery	7.29	326	ePn	Pn	22 49 01.0	-1.2
ECH				eSn	Sn	22 50 22.9	-2.1
ECH	Echery	7.29	326	P	Pn	22 49 01.2	-1.0
ECH	Echery	7.29	326	P	Pn	22 49 01.2	-1.0
ECH				eSn	Sn	22 50 22.9	-2.1
VTS	Vitosha	7.33	85	⇑iP	Pn	22 49 04.4	+1.5
VTS	Vitosha	7.33	85	ePn	Pn	22 49 03.9	+1.0
VTS	Vitosha	7.33	85	⇑iP	Pn	22 49 04.4	+1.5
VRAC	Vranov	7.33	17	Pn	Pn	22 49 03.3	+0.6
	comp=Z,0.4nm,0.3s,baz=203,slow=14,SNR=3.6						

VRAC				Sn	Sn	22 50 24.2	-1.8
	comp=Z,0.2nm,0.3s,baz=78,slow=22,SNR=2.9						
VRAC				LR	LR	22 52 03.0	
	comp=Z,37nm,18.4s,baz=8.9,slow=40						
CDF	Champ du Feu	7.40	327	ePn	Pn	22 49 02.2	-1.5
	SNR=1.0						
CDF				eSn	Sn	22 50 20.6	-7.1
	comp=Z,16nm,0.7s						
CDF	Champ du Feu	7.40	327	ePn	Pn	22 49 02.2	-1.5
	SNR=1.0						
GRF	Grafenberg Arr	7.49	350	ePn	Pn	22 49 04.6	-0.3
GRFO	Grafenberg	7.49	350	ePn	Pn	22 49 05.1	+0.2
GRFO	Grafenberg	7.49	350	ePn	Pn	22 49 05.1	+0.2
HAU	Haudompre	7.49	321	ePn	Pn	22 49 03.7	-1.2
	SNR=1.0						
HAU				eSn	Sn	22 50 21.6	-8.3
	comp=Z,16nm,0.5s,SNR=1.0						
HAU	Haudompre	7.49	321	ePn	Pn	22 49 03.7	-1.2
	SNR=1.0						
GZR	Gura Zlata	7.50	63	⇑iP	Pn	22 49 06.4	+1.3
GZR	Gura Zlata	7.50	63	⇑iP	Pn	22 49 06.4	+1.3
PRU	Pruhonice	7.70	6	ePN	Pn	22 49 07.5	-0.2
PRU				eSN	Sn	22 50 29.9	-4.9
PRU	Pruhonice	7.70	6	Pn	Pn	22 49 07.5	-0.2
NKC	Novy Kostel	7.91	356	ePN	Pn	22 49 10.4	-0.3
NKC				eSN	Sn	22 50 36.9	-3.3
NKC	Novy Kostel	7.91	356	Pn	Pn	22 49 10.4	-0.3
MORC	Moravsky Berou	8.00	20	ePn	Pn	22 49 12.6	+0.7
MORC	Moravsky Berou	8.00	20	⇑iP	Pn	22 49 11.7	-0.2
MORC	Moravsky Berou	8.00	20	⇑iP	Pn	22 49 11.7	-0.2
MORC	Moravsky Berou	8.00	20	ePn	Pn	22 49 12.6	+0.7
SMF	Signal de Mont	8.01	306	ePn	Pn	22 49 10.8	-1.2
	SNR=1.0						
SMF				eSn	Sn	22 50 35.3	-7.3
	comp=Z,5.9nm,0.5s						
SMF	Signal de Mont	8.01	306	ePn	Pn	22 49 10.8	-1.2
	SNR=1.0						
DRGR		8.06	53	⇓iP	Pn	22 49 14.4	+1.7
DRGR		8.06	53	⇓iP	Pn	22 49 14.4	+1.7
TANN	Tannenbergstha	8.09	356	ePn	Pn	22 49 13.2	0.0
PVCC	Panska Ves	8.23	6	eSN	Sn	22 50 43.7	-4.4
DPC	Dobruska-Polom	8.28	14	ePN	Pn	22 49 14.3	-1.4
DPC	Dobruska-Polom	8.28	14	Pn	Pn	22 49 14.3	-1.4
LOR	Lormes	8.32	309	eP	Pn	22 49 14.3	-2.0
LOR				eSn	Sn	22 50 43.8	-6.4
	comp=Z,4.0nm,0.5s						
LOR	Lormes	8.32	309	eP	Pn	22 49 14.3	-2.0
AVF	Avril sur Loir	8.37	305	ePn	Pn	22 49 16.0	-1.0
	SNR=1.0						
AVF	Avril sur Loir	8.37	305	ePn	Pn	22 49 16.0	-1.0
	SNR=1.0						
UPC	Upice	8.38	12	eSN	Sn	22 50 46.2	-5.4
MOX	Moxa	8.38	353	ePn	Pn	22 49 16.4	-0.7
SSF	Saint Saulge	8.42	307	eSn	Sn	22 50 49.4	-3.2
	comp=Z,2.8nm,0.5s,SNR=1.0						
BRG	Berggiesshubel	8.54	3	e(P)	Pg	22 49 52.7	-6.4
	comp=Z,2.7nm,0.6s						
BRG				e		22 50 50.2	
BRG				e		22 51 53.0	
	comp=Z,19nm,1.6s						
CAF	Calviac	8.54	291	eP	Pn	22 49 19.2	-0.2
CAF	Calviac	8.54	291	eP	Pn	22 49 19.2	-0.2
BGF	Bois d'Agland	8.58	303	ePn	Pn	22 49 19.0	-0.8
	SNR=1.0						
BGF	Bois d'Agland	8.58	303	ePn	Pn	22 49 19.0	-0.8
	SNR=1.0						
CRVS	Cervenica-Dubn	8.70	38	ePN	Pn	22 49 21.0	-0.5
CRVS	Cervenica-Dubn	8.70	38	ePn	Pn	22 49 21.0	-0.5
TRPA	Tarpa	8.71	45	⇑iP	Pn	22 49 24.2	+2.6
ARR	Arges	8.73	66	⇑iP	Pn	22 49 23.9	+1.9
ARR	Arges	8.73	66	⇑iP	Pn	22 49 23.9	+1.9
TCF	Toulx Ste Croi	8.87	300	ePn	Pn	22 49 22.8	-1.1
	SNR=1.0						
TCF	Toulx Ste Croi	8.87	300	ePn	Pn	22 49 22.8	-1.1
	SNR=1.0						
CLL	Collm	8.97	359	ePn	Pn	22 49 25.0	-0.1
CLL				eSn	Sn	22 50 51.0	-15
CLL				eSb1		22 51 34.0	
CLL				eSg	Sg	22 52 11.0	+7.7
	comp=E,100nm,29.6s						
RJF	Les Rejaudoux	9.02	293	eP	Pn	22 49 26.5	+0.7
RJF	Les Rejaudoux	9.02	293	eP	Pn	22 49 26.5	+0.7
MLR	Muntele Rosu	9.65	67	Pn	Pn	22 49 37.5	+2.9
	comp=E,0.0nm,0.3s,baz=215,slow=17,SNR=7.4						
KWP	Kalwaria Pacla	9.79	39	ePn	Pn	22 49 39.8	+3.3
KWP	Kalwaria Pacla	9.79	39	⇑iP	Pn	22 49 40.0	+3.5
VRI	Vrincioaia	10.28	65	⇑iP	Pn	22 49 45.6	+2.4
VRI	Vrincioaia	10.28	65	⇑iP	Pn	22 49 45.6	+2.4
ESDC	Sonseca Array	13.31	264	Pn	Pn	22 50 23.7	-0.9
	comp=E,0.2nm,0.3s,baz=64,slow=14,SNR=3.4						
EKA	Eskdalemuir Ar	16.86	326	Pn	Pn	22 51 07.0	-4.6
	baz=140,slow=13,SNR=3.6						
HFS	Hagfors	17.82	1	LR	LR	22 57 29.5	
	comp=E,29nm,18.2s,baz=232,slow=35						
NB2	NORSAR Subarra	18.77	357	P	P	22 51 34.1	-0.6
	comp=Z,0.9nm,0.6s,baz=174,slow=11						
NB2	NORSAR Subarra	18.77	357	P	P	22 51 34.1	-0.6
	comp=Z,0.9nm,0.6s,baz=174,slow=11,SNR=3.7						
NOA	NORSAR Array B	18.77	357	P	P	22 51 34.3	-0.4
	comp=Z,0.1nm,0.3s,baz=175,slow=11,SNR=4.1						
TAM	Tamanrasset	20.55	201	eP	P	22 51 54.5	0.0
	comp=Z,1.3nm,0.8s						
TAM	Tamanrasset	20.55	201	eP	P	22 51 54.5	0.0
	comp=Z,1.3nm,0.8s						
FINES	FINESS Array B	20.62	18	P	P	22 51 55.9	+1.1
	comp=Z,4.0nm,0.9s,baz=202,slow=8.9,SNR=9.2						
KBZ	Khabaz	21.63	76	P	P	22 52 08.1	+2.2
	comp=Z,3.7nm,1.0s,baz=292,slow=12,SNR=8.8						
TORD	Torodi Ar. Bea	30.78	203	P	P	22 53 31.6	+0.2
	comp=Z,0.4nm,0.5s,baz=10,slow=9.1,SNR=6.4						
AAK	Ala-Archa	44.24	68	P	P	22 55 27.2	+2.0
	comp=Z,2.3nm,0.6s						
AAK	Ala-Archa	44.24	68	P	P	22 55 27.2	+2.0
	comp=Z,2.3nm,0.6s						
ZALV	Zalesovo Beam	47.14	50	P	P	22 55 50.3	+2.5
	comp=Z,0.2nm,0.3s,baz=289,slow=8.8,SNR=2.9						
MK31	Makanchi Array	47.92	60	eP	P	22 55 54.1	+0.1
MK31	Makanchi Array	47.92	60	eP	P	22 55 54.1	+0.1
MKAR	Makanchi Array	47.92	60	P	P	22 55 54.9	+1.0
	comp=Z,0.5nm,0.6s,baz=297,slow=6.2,SNR=8.9						
SONM	Songino Array	62.04	50	P	P	22 57 38.4	+2.2
	comp=Z,0.4nm,0.7s,baz=283,slow=8.0,SNR=4.8						
YKA	Yellowknife Ar	67.48	337	P	P	22 58 10.8	-0.5
	comp=Z,0.3nm,0.6s,baz=41,slow=5.3,SNR=3.7						

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*BGS **06** 23:15:06.0±3.1, 39°.30N×13°.17E, h10km, mb4.9*
*STR **06** 23:15:23.2±5.1, 41°.73N×14°.65E, h10km, Ml4.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*TIR **06** 23:15:33.3, 42°.94N×13°.37E, h0km*
*BEO **06** 23:15:33.3±3.4, 42°.40N×12°.47E, h0km, ML5.4/6*
*BJI **06** 23:15:34.9, 42°.62N×13°.17E, h6km, mB5.2/29, mb4.9/43, Ms5.1/31, Ms7 4.8/30*
*ISCJB **06** 23:15:36.6±0.2, 42°.494N±0°.009×13°.376E±0°.010, h12km±1km, mb4.8/94, MS4.5/47, Error ellipse: s-maj=1.5km s-min=1.1km az=21.7*
*LDG **06** 23:15:36.1±0.1, 42°.48N×13°.42E, h2km, Ml4.5/13, Error ellipse: s-maj=2.8km s-min=2.2km az=32.0*
*PDG **06** 23:15:37.0±0.5, 42°.48N×13°.40E, h9km, MD5.0/9, ML4.9/9, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*IDC **06** 23:15:37.0±0.4, 42°.55N×13°.34E, h0km, mb4.6/31, mb1 4.6/44, mb1mx4.6/46, mbtmp4.5/44, ML4.5/9, MS4.3/33, Ms1 4.3/33, ms1mx4.2/42, Error ellipse: s-maj=9.9km s-min=7.6km az=104.0*
*ROM **06** 23:15:36.7±0.1, 42°.46N×13°.39E, h10km±1km, Ml5.0/23, Error ellipse: s-maj=1.2km s-min=0.9km az=65.0*
*PRU **06** 23:15:36.9, 42°.49N×13°.61E, h0km, M4.9*
*CRAAG **06** 23:15:37.6, 42°.47N×13°.41E, Mb5.0*
*NEIC **06** 23:15:37.0, 42°.45N×13°.36E, h9km, mb4.9/41, ML5.2(PDG), ML4.5(LDG), MW4.9(USGS), MW5.1(ROM), After ROM.*
NEIC Felt strongly at L'Aquila. Felt [IV] at Ascoli Piceno, Camerino, Chieti, Foligno, Francavilla al Mare, Guidonia, Lanciano, Macerata, Martinsicuro, Montesilvano, Pescara, Rieti, Roseto degli Abruzzi, San Benedetto del Tronto, Spoleto, Sulmona, Teramo and Terni; [III] at Ancona, Avezzano, Ciampino, Foligno, Ortona, Perugia, Rocca di Papa and Rome. Felt from Imola and Prato to Foggia and Salerno.
*MOS **06** 23:15:37.3±0.9, 42°.52N×13°.37E, h16km, mb5.1/48, MS4.4/37, Error ellipse: s-maj=3.1km s-min=2.3km az=102.2*
*CSEM **06** 23:15:37.2±0.1, 42°.46N×13°.35E, h2km, mb5.0/19, Ms5.0, Mw5.1, Error ellipse: s-maj=1.8km s-min=1.3km az=25.0*
*DJA **06** 23:15:38.2±1.1, 42°N±11°×1°3E±1°5, h10km, M4.5/8, mB5.1/3, mb4.5/8, Mw(mB)4.5/3*
*TEH **06** 23:15:38.0, 42°.47N×13°.39E, h2km, ML4.9*
*GEN **06** 23:15:40.2, 42°.45N×13°.36E, h9km, ML4.5*
*GCMT **06** 23:15:42.3±0.2, 42°.47N×13°.27E, h12km, MW5.1, Moment Tensor Solution. s60,c83; s87,c159; Moment tensor: Scale 10^{16}Nm; M_{rr}-4.81±.08; $M_{\theta\theta}$1.12±.09; $M_{\phi\phi}$3.70±.09; $M_{r\theta}$-1.66±.26; $M_{\theta\phi}$-2.37±.07; $M_{\phi r}$0.21±.25; Best double couple: $M_0$5.20000×10^{16} NP1:ϕ_s344.00000°, δ41.00000°, λ-67.00000°. NP2:ϕ_s135.00000°, δ53.00000°, λ-108.00000°. Principal axes: T 5.2200, Plg6.0000°, Azm238.0000°; N 0.0600, Plg15.0000°, Azm146.0000°; P -5.2600, Plg74.0000°, Azm350.0000°; Data Used: II IU IC G CN.*

ISC 06 23:15:38.9±0.3**, 42°.46N**±0°.01×**13°.37E**±0°.01**, h15**km±1km**, h14**km**:pP-P, n1560, σ1s54**/1753**, mb4.9**/94**, MS4.5**/47**, 231C-136D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	Campotosto	0.08	22	⇑ePg	Pg	23 15 39.6	-2.6
CAMP				Sg	Sg	23 15 41.3	-3.0
CAMP	Campotosto	0.08	22	⇑ePg	Pg	23 15 39.6	-2.6
CAMP				Sg	Sg	23 15 41.3	-3.0
AQU	L'Aquila	0.11	166	⇑iP	Pg	23 15 40.3	-2.0
AQU				eS	Sg	23 15 42.3	-2.2
AQU	L'Aquila	0.11	166	⇑ePg	Pg	23 15 40.4	-2.0
AQU				Sg	Sg	23 15 42.6	-1.9
AQU	L'Aquila	0.11	166	iP	Pg	23 15 40.3	-2.0
AQU				eS	Sg	23 15 42.3	-2.2
AQU				Sg	Sg	23 15 42.6	-1.9
TERO	Teramo	0.24	47	P	Pg	23 15 43.6	-0.5
TERO	Teramo	0.24	47	⇑ePg	Pg	23 15 41.8	-2.4
TERO				Sg	Sg	23 15 45.4	-2.4
TERO	Teramo	0.24	47	⇑ePg	Pg	23 15 41.8	-2.4
TERO	Teramo	0.24	47	P	Pg	23 15 43.7	-0.5
TERO				Sg	Sg	23 15 45.4	-2.4
FAGN	Fagnano	0.25	140	Pg	Pg	23 15 42.5	-1.9
FAGN				Sg	Sg	23 15 46.6	-1.5
FAGN	Fagnano	0.25	140	Pg	Pg	23 15 42.5	-1.9
FAGN				Sg	Sg	23 15 46.6	-1.5
FIAM	Fiamignano	0.27	224	P	Pg	23 15 43.1	-1.5
FIAM	Fiamignano	0.27	224	⇑iPg	Pg	23 15 43.1	-1.5
FIAM				Sg	Sg	23 15 47.7	-0.9
	260µm,1.0s						
FIAM	Fiamignano	0.27	224	⇑iPg	Pg	23 15 43.1	-1.5
FIAM				Sg	Sg	23 15 47.7	-0.9
	260µm,1.0s						
VCEL	Villa Celiera	0.36	100	Pg	Pg	23 15 44.0	-2.2
VCEL	Villa Celiera	0.36	100	Pg	Pg	23 15 44.0	-2.2
NRCA	Norcia	0.42	334	P	Pg	23 15 45.3	-2.0
NRCA	Norcia	0.42	334	⇑iPg	Pg	23 15 45.3	-2.0
NRCA	Norcia	0.42	334	⇑iPg	Pg	23 15 45.3	-2.0
GAVE	Gavelli	0.42	304	Pg	Pg	23 15 45.5	-1.9
GAVE	Gavelli	0.42	304	Pg	Pg	23 15 45.5	-1.9
PTQR	Pietraquaria	0.44	177	P	Pg	23 15 45.5	-2.2
PTQR	Pietraquaria	0.44	177	Pg	Pg	23 15 45.5	-2.2
PTQR	Pietraquaria	0.44	177	Pg	Pg	23 15 45.5	-2.2
MNS	Montasola	0.51	262	P	Pg	23 15 47.1	-2.0
MNS	Montasola	0.51	262	P	Pg	23 15 47.1	-2.0
MNS	Montasola	0.51	262	⇑iPg	Pg	23 15 47.1	-2.0
MNS				Sg	Sg	23 15 55.6	-0.3
MNS	Montasola	0.51	262	⇑iPg	Pg	23 15 47.1	-2.0
MNS				Sg	Sg	23 15 55.6	-0.3
OFFI	Offida	0.53	26	P	Pg	23 15 47.8	-1.6
OFFI	Offida	0.53	26	⇑iPg	Pg	23 15 47.8	-1.6
OFFI	Offida	0.53	26	⇑iPg	Pg	23 15 47.8	-1.6
TRTR	Tortoreto Alta	0.53	49	Pg	Pg	23 15 48.1	-1.3
TRTR	Tortoreto Alta	0.53	49	Pg	Pg	23 15 48.1	-1.3
CERT	Cerreto	0.58	209	P	Pg	23 15 48.3	-2.1
CERT	Cerreto	0.58	209	⇑ePg	Pg	23 15 48.3	-2.1
CERT				Sg	Sg	23 15 58.3	+0.1
	188µm,0.8s						
CERT	Cerreto	0.58	209	⇑ePg	Pg	23 15 48.3	-2.1
INTR	Introdacqua	0.60	138	P	Pg	23 15 48.3	-2.4
INTR	Introdacqua	0.60	138	Pg	Pg	23 15 48.3	-2.4
INTR				Sg	Sg	23 15 58.1	-0.6
	180µm,0.6s						
INTR	Introdacqua	0.60	138	Pg	Pg	23 15 48.3	-2.4
INTR				Sg	Sg	23 15 58.1	-0.6
	180µm,0.6s						
CESX	Cesi	0.60	285	P	Pg	23 15 48.7	-2.0
CESX	Cesi	0.60	285	Pg	Pg	23 15 48.5	-2.2
CESX	Cesi	0.60	285	Pg	Pg	23 15 48.5	-2.2
FDMO	Fiordimonte	0.61	340	P	Pg	23 15 48.4	-2.5
FDMO	Fiordimonte	0.61	340	Pg	Pg	23 15 48.5	-2.5
FDMO				Sg	Sg	23 15 58.1	-1.0
FDMO	Fiordimonte	0.61	340	Pg	Pg	23 15 48.5	-2.5
FDMO				Sg	Sg	23 15 58.1	-1.0
VVLD	Villa Vallelon	0.62	162	P	Pg	23 15 48.8	-2.3
VVLD	Villa Vallelon	0.62	162	⇑ePg	Pg	23 15 48.7	-2.3
VVLD				Sg	Sg	23 15 57.7	-1.5
	150µm,0.6s						
VVLD	Villa Vallelon	0.62	162	⇑ePg	Pg	23 15 48.7	-2.3
VVLD				Sg	Sg	23 15 57.7	-1.5
	150µm,0.6s						
MTCE	Montecelio	0.64	227	P	Pg	23 15 49.2	-2.1
MTCE	Montecelio	0.64	227	⇑ePg	Pg	23 15 49.3	-2.1
	139µm,1.6s						
MTCE	Montecelio	0.64	227	P	Pg	23 15 49.2	-2.1
CESI	CESI - Serrava	0.64	328	P	Pg	23 15 49.2	-2.3
CESI	CESI - Serrava	0.64	328	⇑ePg	Pg	23 15 49.2	-2.3
CESI	CESI - Serrava	0.64	328	⇑ePg	Pg	23 15 49.2	-2.3
GUAR	Guarcino	0.67	184	P	Pg	23 15 49.5	-2.4
GUAR	Guarcino	0.67	184	⇑ePg	Pg	23 15 49.5	-2.4
	59µm,0.5s						
GUAR	Guarcino	0.67	184	⇑ePg	Pg	23 15 49.5	-2.4
	59µm,0.5s						
CAFR	Castel Frentan	0.76	107	⇑ePg	Pg	23 15 51.5	-2.2
	93µm,0.6s						
CAFR	Castel Frentan	0.76	107	⇑ePg	Pg	23 15 51.5	-2.2
	93µm,0.6s						
ASSB	Assisi San Ben	0.78	318	Pg	Pg	23 15 51.6	-2.5
	32µm,0.8s						
ASSB	Assisi San Ben	0.78	318	Pg	Pg	23 15 51.6	-2.5
	32µm,0.8s						
POFI	Posta Fibreno	0.78	161	⇑ePg	Pg	23 15 51.2	-2.9
	72µm,1.2s						
POFI	Posta Fibreno	0.78	161	⇑ePg	Pg	23 15 51.2	-2.9
	72µm,1.2s						
RMP	Rome, Mte Porz	0.81	218	⇑ePg	Pg	23 15 52.5	-2.2
	81µm,0.9s						
RMP	Rome, Mte Porz	0.81	218	⇑ePg	Pg	23 15 52.5	-2.2
	81µm,0.9s						
SDI	San Donato	0.82	156	P	Pg	23 15 52.0	-2.8
SDI	San Donato	0.82	156	P	Pg	23 15 52.0	-2.8
SDI	San Donato	0.82	156	⇑iPg	Pg	23 15 52.0	-2.8
SDI	San Donato	0.82	156	⇑iPg	Pg	23 15 52.0	-2.8
RDP	Rocca di Papa	0.85	215	P	Pb	23 15 53.1	-2.3
RDP	Rocca di Papa	0.85	215	P	Pb	23 15 53.1	-2.3
RDP	Rocca di Papa	0.85	215	⇑ePg	Pb	23 15 53.1	-2.3
	94µm,0.6s						
RDP	Rocca di Papa	0.85	215	⇑ePg	Pb	23 15 53.1	-2.3
	94µm,0.6s						
SNTG	Esanatoglia	0.85	339	P	Pb	23 15 52.7	-2.8
SNTG	Esanatoglia	0.85	339	P	Pb	23 15 52.7	-2.8
MA9	Marino	0.87	218	P	Pb	23 15 53.2	-2.4
MA9	Marino	0.87	218	P	Pb	23 15 53.2	-2.4
ROM9	Roma	0.89	225	P	Pb	23 15 53.1	-3.0
ROM9	Roma	0.89	225	P	Pb	23 15 53.1	-3.0
GIUL	Giuliano Di Ro	0.90	185	⇑ePg	Pb	23 15 53.7	-2.6
	44µm,0.8s						
GIUL	Giuliano Di Ro	0.90	185	⇑ePg	Pb	23 15 53.7	-2.6
	44µm,0.8s						
CING	Cingoli	0.93	352	P	Pb	23 15 53.9	-2.8
CING	Cingoli	0.93	352	Pg	Pb	23 15 53.9	-2.8
CING	Cingoli	0.93	352	Pg	Pb	23 15 53.9	-2.8
LAV9	Lanuvio	0.93	213	P	Pb	23 15 54.5	-2.2
LAV9	Lanuvio	0.93	213	P	Pb	23 15 54.5	-2.2
RNI2	Rionero Sannit	0.96	142	P	Pb	23 15 54.7	-2.5
RNI2	Rionero Sannit	0.96	142	⇑ePg	Pb	23 15 54.7	-2.5
	74µm,0.9s						
RNI2	Rionero Sannit	0.96	142	⇑ePg	Pb	23 15 54.7	-2.5
	74µm,0.9s						
CERA	Filignano	0.99	150	⇑ePg	Pb	23 15 54.8	-2.9
	67µm,0.9s						
CERA	Filignano	0.99	150	⇑ePg	Pb	23 15 54.8	-2.9
	67µm,0.9s						
MURB	Monte Urbino	1.01	323	P	Pb	23 15 55.8	-2.3
MURB	Monte Urbino	1.01	323	Pg	Pb	23 15 55.9	-2.3
	48µm,0.7s						
MURB	Monte Urbino	1.01	323	Pg	Pb	23 15 55.9	-2.3
	48µm,0.7s						
MGAB	Montegabbione	1.03	297	P	Pb	23 15 56.3	-2.1
MGAB	Montegabbione	1.03	297	Pg	Pb	23 15 56.3	-2.1
	30µm,0.4s						
MGAB	Montegabbione	1.03	297	Pg	Pb	23 15 56.3	-2.1
	30µm,0.4s						
MIDA	Miranda	1.05	141	P	Pb	23 15 55.8	-3.0
MIDA	Miranda	1.05	141	⇑ePg	Pb	23 15 55.8	-3.0
	32µm,0.7s						
MIDA	Miranda	1.05	141	⇑ePg	Pb	23 15 55.8	-3.0
	32µm,0.7s						
ARVD	Arcevia	1.08	343	Pg	Pb	23 15 56.9	-2.5
ARVD	Arcevia	1.08	343	Pg	Pb	23 15 56.9	-2.5
TOLF	Tolfa	1.09	249	P	Pb	23 15 57.2	-2.2
TOLF	Tolfa	1.09	249	P	Pb	23 15 57.2	-2.2
AOI	Ancona	1.10	9	P	Pb	23 15 57.2	-2.5
AOI	Ancona	1.10	9	P	Pb	23 15 57.2	-2.5
LATE	Laterza	1.17	278	P	Pn	23 15 58.8	-1.9
LATE	Laterza	1.17	278	P	Pn	23 15 58.8	-1.9
VAGA	Valle Agricola	1.23	148	Pn	Pn	23 15 59.0	-2.6
	24µm,0.8s						
VAGA	Valle Agricola	1.23	148	Pn	Pn	23 15 59.0	-2.6
	24µm,0.8s						
PIEI	Pieia	1.24	331	P	Pn	23 15 59.6	-2.1
PIEI	Pieia	1.24	331	P	Pn	23 15 59.6	-2.1
RFI	Roccamonfina	1.25	158	P	Pn	23 16 00.7	-1.1
RFI	Roccamonfina	1.25	158	P	Pn	23 16 00.7	-1.1
CDCA	Citt' di Caste	1.30	321	P	Pn	23 16 01.9	-0.6
CDCA	Citt' di Caste	1.30	321	P	Pn	23 16 01.9	-0.6
FSSB	Fossombrone	1.31	341	P	Pn	23 15 59.4	-3.2
FSSB	Fossombrone	1.31	341	P	Pn	23 15 59.4	-3.2
SGG	Gregorio Mates	1.31	144	P	Pn	23 16 00.4	-2.3
SGG	Gregorio Mates	1.31	144	P	Pn	23 16 00.4	-2.3
BADI	Badiali	1.33	322	P	Pn	23 16 01.6	-1.4
BADI	Badiali	1.33	322	Pn	Pn	23 16 01.9	-1.1
	25µm,1.0s						
BADI	Badiali	1.33	322	P	Pn	23 16 01.6	-1.4
BADI	Badiali	1.33	322	Pn	Pn	23 16 01.9	-1.1
	25µm,1.0s						
CAFI	Castiglion Fio	1.35	311	Pn	Pn	23 16 01.9	-1.3
CAFI	Castiglion Fio	1.35	311	Pn	Pn	23 16 01.9	-1.3
MODR	Mondragone	1.37	164	Pn	Pn	23 16 02.9	-0.5
MODR	Mondragone	1.37	164	Pn	Pn	23 16 02.9	-0.5
CIGN	Sant'Elia a Pi	1.40	125	P	Pn	23 16 02.0	-1.9
CIGN	Sant'Elia a Pi	1.40	125	P	Pn	23 16 02.0	-1.9
CRE	Caprese Michel	1.56	319	P	Pb	23 16 07.2	-0.3
CRE	Caprese Michel	1.56	319	P	Pb	23 16 07.2	-0.3
CRE	Caprese Michel	1.56	319	P	Pb	23 16 07.2	-0.3
RSM	Repubblica di	1.62	336	P	Pn	23 16 07.2	+0.3
RSM	Repubblica di	1.62	336	P	Pn	23 16 07.2	+0.3
RSM	Repubblica di	1.62	336	P	Pn	23 16 07.2	+0.3
PSB1	Pescosannita	1.64	138	P	Pn	23 16 07.4	+0.2
PSB1	Pescosannita	1.64	138	P	Pn	23 16 07.4	+0.2
MAON	Monte Argentar	1.66	270	P	Pn	23 16 06.4	-1.0
MAON	Monte Argentar	1.66	270	Pn	Pn	23 16 06.2	-1.2
MAON	Monte Argentar	1.66	270	P	Pn	23 16 06.4	-1.0
VENT	Ventotene	1.66	179	P	Pn	23 16 06.8	-0.7
VENT	Ventotene	1.66	179	P	Pn	23 16 06.8	-0.7
MRB1	Monte Rocchett	1.79	137	P	Pn	23 16 09.6	+0.3
MRB1	Monte Rocchett	1.79	137	P	Pn	23 16 09.6	+0.3
SFI	Santa Sofia	1.82	323	P	Pn	23 16 08.7	-1.1
SFI	Santa Sofia	1.82	323	P	Pn	23 16 08.7	-1.1
SFI	Santa Sofia	1.82	323	P	Pn	23 16 08.7	-1.1
CSNT	Castellina Chi	1.83	304	P	Pn	23 16 08.3	-1.5
CSNT	Castellina Chi	1.83	304	Pn	Pn	23 16 09.3	-0.5
CSNT	Castellina Chi	1.83	304	P	Pn	23 16 08.3	-1.5
CSNT	Castellina Chi	1.83	304	Pn	Pn	23 16 09.3	-0.5
FG5	Orsara di Pugl	1.84	129	P	Pn	23 16 10.8	+0.8
FG5	Orsara di Pugl	1.84	129	P	Pn	23 16 10.8	+0.8
FG5	Orsara di Pugl	1.84	129	P	Pn	23 16 10.8	+0.8
CASP	Castiglione de	1.88	281	Pn	Pn	23 16 09.6	-0.8
CASP	Castiglione de	1.88	281	Pn	Pn	23 16 09.6	-0.8
GRFL	Gerfalco	1.89	292	P	Pn	23 16 10.0	-0.7
GRFL	Gerfalco	1.89	292	P	Pn	23 16 10.0	-0.7
SGRT	San Giovanni R	1.90	111	P	Pn	23 16 10.4	-0.5
SGRT	San Giovanni R	1.90	111	⇑ePn	Pn	23 16 10.2	-0.7
	11µm,0.6s						
SGRT	San Giovanni R	1.90	111	P	Pn	23 16 10.4	-0.5
VMG	Vicchio	2.01	319	P	Pn	23 16 11.9	-0.4
VMG	Vicchio	2.01	319	P	Pn	23 16 11.9	-0.4
CSSN	Cassano Irpino	2.02	142	P	Pn	23 16 06.7	-5.8
MSAG	Monte S. Angel	2.04	111	P	Pn	23 16 11.5	-1.2
MSAG	Monte S. Angel	2.04	111	P	Pn	23 16 11.5	-1.2
BRSN	Barisano	2.05	333	P	Pb	23 16 16.3	+0.5
BRSN	Barisano	2.05	333	P	Pb	23 16 16.3	+0.5
MS1	Monte Sant'Ang	2.06	111	ePn	Pn	23 16 13.0	0.0
SEI	Scarperia	2.17	318	P	Pn	23 16 15.0	+0.5
SEI	Scarperia	2.17	318	P	Pn	23 16 15.0	+0.5
FNVD	Fontana Vidola	2.37	317	P	Pn	23 16 15.2	-2.0
FNVD	Fontana Vidola	2.37	317	P	Pn	23 16 15.2	-2.0
NVLJ	Novalja	2.37	27	iPn	Pn	23 16 16.2	-1.1
NVLJ				Sn	Sn	23 16 46.2	+0.2
NVLJ	Novalja	2.37	27	iPn	Pn	23 16 16.1	-1.1
NVLJ				Sn	Sn	23 16 46.2	+0.2
PII	Pisa	2.43	302	P	Pn	23 16 18.1	0.0
PII	Pisa	2.43	302	P	Pn	23 16 18.1	0.0
PII	Pisa	2.43	302	P	Pn	23 16 18.1	0.0
ACER	Acerenza	2.55	130	P	Pn	23 16 15.0	-4.8
ACER	Acerenza	2.55	130	Pn	Pn	23 16 20.3	+0.5
ACER	Acerenza	2.55	130	P	Pn	23 16 15.0	-4.8
ACER	Acerenza	2.55	130	Pn	Pn	23 16 20.3	+0.5
MAIM	Mastiano	2.56	306	P	Pn	23 16 21.0	+1.2
FIU	Minerbio Fiu	2.57	329	P	Pb	23 16 22.4	-2.2
FIU	Minerbio Fiu	2.57	329	P	Pb	23 16 22.5	-2.2
ZCCA	Zocca	2.57	318	P	Pb	23 16 22.9	-1.8
ZCCA	Zocca	2.57	318	P	Pb	23 16 22.9	-1.8
CDT	Castel del Mon	2.57	121	ePn	Pn	23 16 20.3	+0.3
CDT				eSn	Sn	23 16 53.2	+2.1
BDI	Bagni Di Lucca	2.58	309	P	Pn	23 16 19.8	-0.4
BDI	Bagni Di Lucca	2.58	309	P	Pn	23 16 19.8	-0.4
BDI	Bagni Di Lucca	2.58	309	P	Pn	23 16 19.8	-0.4
GSCL	Gusciola	2.77	314	P	Pn	23 16 23.0	+0.2
GSCL	Gusciola	2.77	314	P	Pn	23 16 23.0	+0.2
PTRP	Pietrapertosa	2.80	133	P	Pn	23 16 25.1	+1.9
PTRP	Pietrapertosa	2.80	133	P	Pn	23 16 25.1	+1.9
RAVA	Ravarino	2.82	325	P	Pb	23 16 26.6	-2.3
RAVA	Ravarino	2.82	325	P	Pb	23 16 26.6	-2.3
AMUR	Altamura	2.88	122	Pn	Pn	23 16 23.8	-0.4
	5µm,0.8s						
AMUR	Altamura	2.88	122	Pn	Pn	23 16 23.8	-0.4
	5µm,0.8s						
ERBM	Eremo	2.91	313	P	Pn	23 16 26.5	+1.8
ERBM	Eremo	2.91	313	P	Pn	23 16 26.5	+1.8
BAI	Bari	2.95	116	ePn	Pn	23 16 25.6	+0.4
BAI				eSn	Sn	23 17 02.1	+1.7
NOVE	Novellara	3.03	321	P	Pn	23 16 24.1	-2.2
NOVE	Novellara	3.03	321	P	Pn	23 16 24.1	-2.2
CUC	Castrocucco	3.08	142	ePn	Pn	23 16 28.5	+1.5
CUC	Castrocucco	3.08	142	ePn	Pn	23 16 28.5	+1.5
SKDS	Skadanscina	3.12	8	iPn	Pn	23 16 26.1	-1.5
SKDS				eSn	Sn	23 17 03.9	-0.7
SKDS							
	comp=Z,2µm,0.8s						
SKDS	Skadanscina	3.12	8	Pn	Pn	23 16 26.1	-1.5
SKDS				eSn	Sn	23 17 03.9	-0.7
	comp=Z,2µm,0.8s						
GRAM	Graiana	3.15	311	P	Pn	23 16 29.8	+1.8
CODM	Codolo	3.21	308	P	Pn	23 16 29.6	+0.8
STON	Ston	3.22	81	ePn	Pn	23 16 28.5	-0.4
STON				Sn	Sn	23 17 05.8	-1.2
STON	Ston	3.22	81	ePn	Pn	23 16 28.5	-0.4
STON				Sn	Sn	23 17 05.8	-1.2
PGF	Pioggiola	3.23	273	ePn	Pn	23 16 28.6	-0.6
	SNR=1.0						
PGF				eSn	Sn	23 17 09.1	+1.7
	comp=Z,431nm,0.8s						
PGF	Pioggiola	3.23	273	eP	Pn	23 16 28.6	-0.6
PGF				e		23 17 09.1	
PGF	Pioggiola	3.23	273	ePn	Pn	23 16 28.6	-0.6
PGF				eSn	Sn	23 17 09.1	+1.7
PGF	Pioggiola	3.23	273	ePn	Pn	23 16 28.6	-0.6
	SNR=1.0						
PGF				eSn	Sn	23 17 09.1	+1.7
	comp=Z,215nm,0.8s						
NOCI	Noci	3.23	120	Pn	Pn	23 16 29.2	+0.1
NOCI	Noci	3.23	120	Pn	Pn	23 16 29.2	+0.1

TRI	Trieste	3.26	5	eP	Pn	23 16 28.3	-1.2
TRI				e		23 17 08.9	
TRI	Trieste	3.26	5	ePn	Pn	23 16 28.3	-1.2
TRI				eSn	Sn	23 17 08.9	+0.9
TRI	Trieste	3.26	5	eP	Pn	23 16 28.3	-1.2
TRI				eS	Sn	23 17 08.9	+0.9
ORI	Oriolo Calabro	3.33	135	P	Pn	23 16 32.7	+2.2
ORI	Oriolo Calabro	3.33	135	P	Pn	23 16 32.6	+2.2
ORI	Oriolo Calabro	3.33	135	P	Pn	23 16 32.7	+2.2
SC2M	Scurtabo	3.40	306	P	Pn	23 16 32.2	+0.8
JAVS	Javornik	3.47	8	i Pn	Pn	23 16 31.3	-1.2
JAVS	Javornik	3.47	8	i Pn	Pn	23 16 31.3	-1.2
VISS	Visnje	3.51	17	i Pn	Pn	23 16 32.1	-0.8
VISS				eSn	Sn	23 17 13.9	-0.2
VISS							
	comp=Z,7μm,2.1s						
VISS	Visnje	3.51	17	i Pn	Pn	23 16 32.1	-0.8
VISS				eSn	Sn	23 17 13.9	-0.2
	comp=Z,7μm,2.1s						
VOY	Vojsko	3.59	6	ePn	Pn	23 16 32.6	-1.5
VOY				eSn	Sn	23 17 17.4	+1.1
VOY	Vojsko	3.59	6	ePn	Pn	23 16 32.6	-1.5
VOY				eSn	Sn	23 17 17.4	+1.1
BLY	Banja Luka	3.59	49	ePn	Pn	23 16 34.1	0.0
BLY	Banja Luka	3.59	49	ePn	Pn	23 16 34.1	0.0
BOB	Bobbio (Coli)	3.66	310	P	Pn	23 16 37.9	+2.8
BOB	Bobbio (Coli)	3.66	310	P	Pn	23 16 37.9	+2.8
BOB	Bobbio (Coli)	3.66	310	P	Pn	23 16 37.9	+2.8
LJU	Ljubljana	3.68	13	i Pn	Pn	23 16 35.0	-0.3
LJU				ePg	Pg	23 16 50.0	+0.6
LJU				i Sn	Sn	23 17 18.6	+0.3
LJU							
	comp=Z,9μm,2.1s						
LJU	Ljubljana	3.68	13	i Pn	Pn	23 16 35.0	-0.3
LJU				i Sn	Sn	23 17 18.6	+0.3
	comp=Z,9μm,2.1s						
SISC	Sisak	3.71	35	ePn	Pn	23 16 35.2	-0.4
SISC				Sn	Sn	23 17 18.0	-1.1
SISC	Sisak	3.71	35	ePn	Pn	23 16 35.2	-0.4
SISC				Sn	Sn	23 17 18.0	-1.1
SALO	Salr	3.77	328	Pn	Pn	23 16 36.5	+0.1
	comp=Z,4μm,1.1s						
SALO	Salr	3.77	328	Pn	Pn	23 16 36.5	+0.1
	comp=Z,4μm,1.1s						
CADS	Cadrg	3.78	4	i Pn	Pn	23 16 35.2	-1.4
CADS				eSn	Sn	23 17 21.3	+0.5
CADS							
	comp=Z,6μm,2.6s						
CADS	Cadrg	3.78	4	i Pn	Pn	23 16 35.2	-1.4
CADS				eSn	Sn	23 17 21.3	+0.5
	comp=Z,6μm,2.6s						
HCY	Herceg Novi	3.79	88	ePn	Pn	23 16 36.5	-0.3
HCY				eSn	Sn	23 17 21.9	+0.7
HCY	Herceg Novi	3.79	88	⇑P	Pn	23 16 36.4	-0.3
HCY				S	Sn	23 17 22.1	+1.0
HCY	Herceg Novi	3.79	88	⇑P	Pn	23 16 36.4	-0.4
HCY				S	Sn	23 17 22.1	+1.0
HCY	Herceg Novi	3.79	88	ePn	Pn	23 16 36.5	-0.4
HCY				eSn	Sn	23 17 21.9	+0.7
CTI	Castel Tesino	3.79	342	P	Pn	23 16 36.7	-0.2
CTI	Castel Tesino	3.79	342	P	Pn	23 16 36.7	-0.2
CTI	Castel Tesino	3.79	342	Pn	Pn	23 16 36.4	-0.5
	comp=Z,5μm,1.7s						
CTI	Castel Tesino	3.79	342	Pn	Pn	23 16 36.4	-0.5
	comp=Z,5μm,1.7s						
CTI	Castel Tesino	3.79	342	P	Pn	23 16 36.7	-0.2
BRY	Bratogost	3.84	82	⇓iPn	Pn	23 16 37.0	-0.5
BRY				eSn	Sn	23 17 23.6	+1.1
BRY	Bratogost	3.84	82	⇑P	Pn	23 16 37.1	-0.5
BRY				S	Sn	23 17 23.4	+0.9
BRY	Bratogost	3.84	82	⇑P	Pn	23 16 37.1	-0.5
BRY				S	Sn	23 17 23.4	+0.9
BRY	Bratogost	3.84	82	P	Pn	23 16 37.1	-0.5
BRY				S	Sn	23 17 23.4	+0.9
PTCC	Patocco-Chiusa	3.95	360	P	Pn	23 16 37.3	-1.6
PTCC	Patocco-Chiusa	3.95	360	P	Pn	23 16 37.3	-1.6
PIPA	Pietrapaola	3.96	138	P	Pb	23 16 44.6	-3.7
PCP	Piancastagn	4.08	302	P	Pn	23 16 41.2	+0.4
BUM	Brajici-Budva	4.10	90	⇑iPn	Pn	23 16 41.1	+0.1
BUM				eSn	Sn	23 17 29.0	+0.3
BUM	Brajici-Budva	4.10	90	⇑iPn	Pn	23 16 41.1	+0.1
BUM				eSn	Sn	23 17 29.0	+0.3
QLNO	Quiliano	4.11	299	P	Pn	23 16 31.1	-10
OBKA	Obir	4.14	11	⇑iPn	Pn	23 16 40.8	-0.8
	SNR=85						
OBKA	Obir	4.14	11	⇑iPn	Pn	23 16 40.8	-0.8
OBKA	Obir	4.14	11	⇑iPn	Pn	23 16 40.8	-0.8
UPM	Unac-Piva	4.14	78	⇓iPn	Pn	23 16 42.1	+0.4
UPM				eSn	Sn	23 17 30.8	+0.8
UPM	Unac-Piva	4.14	78	⇓iPn	Pn	23 16 42.1	+0.4
UPM				eSn	Sn	23 17 30.8	+0.8
FVI	Forni Avoltri	4.16	354	P	Pn	23 16 42.0	+0.1
FVI	Forni Avoltri	4.16	354	P	Pn	23 16 42.0	+0.1
FVI	Forni Avoltri	4.16	354	P	Pn	23 16 42.0	+0.1
NKY	Niksic	4.17	83	⇑iPn	Pn	23 16 42.2	+0.2
NKY				eSn	Sn	23 17 31.1	+0.6
NKY	Niksic	4.17	83	⇑P	Pn	23 16 41.9	-0.1
NKY				S	Sn	23 17 31.3	+0.8
NKY	Niksic	4.17	83	⇑P	Pn	23 16 41.9	-0.1
NKY				S	Sn	23 17 31.3	+0.8
NKY	Niksic	4.17	83	P	Pn	23 16 41.9	-0.1
NKY	Niksic	4.17	83	⇑iPn	Pn	23 16 42.2	+0.2
NKY				S	Sn	23 17 31.3	+0.8
TIP	Timpagrande	4.17	141	ePn	Pn	23 16 45.3	+3.3
TIP	Timpagrande	4.17	141	ePn	Pn	23 16 45.3	+3.3
MYKA	Terra Mystica	4.17	3	⇑iPn	Pn	23 16 41.7	-0.4
MYKA	Terra Mystica	4.17	3	⇑iPn	Pn	23 16 41.7	-0.4
MYKA	Terra Mystica	4.17	3	⇑iPn	Pn	23 16 41.7	-0.4
RORO	Rocca Rossa	4.21	295	P	Pn	23 16 42.6	+0.1
VSL	Villasalto	4.23	227	⇑iPn	Pn	23 16 42.1	-0.7
VSL				eSn	Sn	23 17 31.2	-0.7
VSL	Villasalto	4.23	227	⇑iPn	Pn	23 16 42.1	-0.7
VSL				eSn	Sn	23 17 31.2	-0.7
IMI	Imperia	4.26	292	P	Pn	23 16 43.2	0.0
IMI	Imperia	4.26	292	P	Pn	23 16 43.2	0.0
APPI	Appiano	4.30	340	P	Pn	23 16 43.9	+0.1
APPI	Appiano	4.30	340	P	Pn	23 16 43.9	+0.1
GRI	Girifalco	4.31	146	P	Pn	23 16 46.4	+2.5
GRI	Girifalco	4.31	146	P	Pn	23 16 46.4	+2.5
GRI	Girifalco	4.31	146	P	Pn	23 16 46.4	+2.5
ABTA	Abfaltersbach	4.33	352	⇑iPn	Pn	23 16 43.8	-0.4
	SNR=374						
ABTA	Abfaltersbach	4.33	352	⇑iPn	Pn	23 16 43.8	-0.4
ABTA	Abfaltersbach	4.33	352	⇑iPn	Pn	23 16 43.8	-0.4
PDG	Podgorica	4.36	88	ePn	Pn	23 16 44.7	+0.1
PDG				eSn	Sn	23 17 36.7	+1.7
PDG	Podgorica	4.36	88	⇑iPn	Pn	23 16 44.5	+0.1
PDG				eSn	Sn	23 17 35.8	+0.8
TTG	Podgorica	4.36	88	⇑iPn	Pn	23 16 44.5	0.0
TTG				eSn	Sn	23 17 35.8	+0.8
TTG	Podgorica	4.36	88	⇑P	Pn	23 16 44.6	0.0
TTG				S	Sn	23 17 36.2	+1.2
TTG	Podgorica	4.36	88	⇑P	Pn	23 16 44.6	+0.1
TTG				S	Sn	23 17 36.2	+1.2
TTG	Podgorica	4.36	88	P	Pn	23 16 44.6	+0.1
TTG				S	Sn	23 17 36.2	+1.2
SOKA	Soboth	4.38	15	⇑iPn	Pn	23 16 44.0	-0.9
SOKA	Soboth	4.38	15	⇑iPn	Pn	23 16 44.0	-0.9
SOKA	Soboth	4.38	15	⇑iPn	Pn	23 16 44.0	-0.9
ULC	Ulcinj	4.39	94	ePn	Pn	23 16 44.5	-0.6
ULC				eSn	Sn	23 17 36.0	0.0
ULC	Ulcinj	4.39	94	⇑P	Pn	23 16 44.7	-0.4
ULC				S	Sn	23 17 36.3	+0.3
ULC	Ulcinj	4.39	94	⇑P	Pn	23 16 44.7	-0.4
ULC				S	Sn	23 17 36.3	+0.3
ULC	Ulcinj	4.39	94	P	Pn	23 16 44.7	-0.4
ULC				eSn	Sn	23 17 36.0	0.0
ULC				S	Sn	23 17 36.3	+0.3
KOGS	Kog	4.49	26	ePn	Pn	23 16 44.5	-1.9
KOGS				eSn	Sn	23 17 37.2	-1.1
KOGS							
	comp=Z,9μm,2.6s						
KOGS	Kog	4.49	26	ePn	Pn	23 16 44.5	-1.9
KOGS				eSn	Sn	23 17 37.2	-1.1
	comp=Z,9μm,2.6s						
GIB	Gibilmanna	4.49	173	P	Pn	23 16 49.8	+3.3
GIB	Gibilmanna	4.49	173	P	Pn	23 16 49.8	+3.3
GIB	Gibilmanna	4.49	173	P	Pn	23 16 49.8	+3.3
PLE	Pljevlja	4.51	77	⇓iPn	Pn	23 16 47.5	+0.8
PLE				eSn	Sn	23 17 39.9	+0.9
PLE	Pljevlja	4.51	77	⇓P	Pn	23 16 46.8	+0.1
PLE				S	Sn	23 17 40.1	+1.1
PLE	Pljevlja	4.51	77	⇓P	Pn	23 16 46.8	+0.1
PLE				S	Sn	23 17 40.1	+1.1
PLE	Pljevlja	4.51	77	P	Pn	23 16 46.8	+0.1
PLE	Pljevlja	4.51	77	⇓iPn	Pn	23 16 47.5	+0.8
PLE				eSn	Sn	23 17 39.9	+0.9
SAOF	Saorge	4.51	292	P	Pn	23 16 46.9	+0.2
SAOF	Saorge	4.51	292	P	Pn	23 16 46.9	+0.2
SAOF	Saorge	4.51	292	P	Pn	23 16 46.9	+0.2
SAOF	Saorge	4.51	292	P	Pn	23 16 46.9	+0.2
BRMO	Bormio	4.55	333	P	Pn	23 16 49.4	+2.1
BRMO	Bormio	4.55	333	P	Pn	23 16 49.4	+2.1
SBF	Sospel	4.56	290	ePn	Pn	23 16 47.4	0.0
	SNR=1.0						
SBF				eSn	Sn	23 17 36.6	-3.5
	comp=Z,460nm,0.8s,SNR=1.0						
SBF	Sospel	4.56	290	eP	Pn	23 16 47.4	0.0
SBF				e		23 17 36.6	
SBF	Sospel	4.56	290	ePn	Pn	23 16 47.4	0.0
SBF				eSn	Sn	23 17 36.6	-3.5
SBF	Sospel	4.56	290	ePn	Pn	23 16 47.4	0.0
	SNR=1.0						
SBF				eSn	Sn	23 17 36.6	-3.5
	comp=Z,230nm,0.8s,SNR=1.0						
REVF	Revere	4.58	288	P	Pn	23 16 47.2	-0.4
REVF	Revere	4.58	288	P	Pn	23 16 47.2	-0.4
REVF	Revere	4.58	288	P	Pn	23 16 47.2	-0.4
REVF	Revere	4.58	288	P	Pn	23 16 47.2	-0.4
AUTN	L'Aution	4.60	291	P	Pn	23 16 48.7	+0.6
AUTN	L'Aution	4.60	291	P	Pn	23 16 48.7	+0.6
AUTN	L'Aution	4.60	291	P	Pn	23 16 48.7	+0.6
AUTN	L'Aution	4.60	291	P	Pn	23 16 48.7	+0.6
CEL	Celeste	4.62	154	ePn	Pn	23 16 49.2	+1.0
CEL	Celeste	4.62	154	ePn	Pn	23 16 49.2	+1.0
KBA	Koelnbreinsper	4.62	360	⇓iP	Pn	23 16 48.3	0.0
KBA	Koelnbreinsper	4.62	360	⇓iPn	Pn	23 16 48.3	0.0
	SNR=70						
KBA	Koelnbreinsper	4.62	360	⇓iPn	Pn	23 16 48.3	0.0
KBA	Koelnbreinsper	4.62	360	i P	Pn	23 16 48.3	0.0
BBLS	Lazići	4.64	70	ePn	Pn	23 16 49.2	+0.8
BBLS	Lazići	4.64	70	ePn	Pn	23 16 49.2	+0.8
BEHE	Becsehely	4.69	30	⇓ePn	Pn	23 16 48.8	-0.4
BEHE	Becsehely	4.69	30	⇓eP	Pn	23 16 48.8	-0.4
ALJA	Alia	4.71	176	P	Pn	23 16 52.8	+3.3
ALJA	Alia	4.71	176	P	Pn	23 16 52.8	+3.3
FUORN	Ofenpass-Fuorn	4.71	333	ePn	Pn	23 16 50.5	+0.8
FUORN	Ofenpass-Fuorn	4.71	333	ePn	Pn	23 16 50.5	+0.8
TOUF	Mont Tournerai	4.73	291	P	Pn	23 16 50.2	+0.3
TOUF	Mont Tournerai	4.73	291	P	Pn	23 16 50.2	+0.3
TOUF	Mont Tournerai	4.73	291	P	Pn	23 16 50.2	+0.3
TOUF	Mont Tournerai	4.73	291	P	Pn	23 16 50.2	+0.3
STV	Sant Anna di V	4.75	294	P	Pn	23 16 51.0	+0.9
STV	Sant Anna di V	4.75	294	P	Pn	23 16 51.0	+0.9
STV	Sant Anna di V	4.75	294	P	Pn	23 16 51.0	+0.9
MVIF	Mont Vial	4.77	290	P	Pn	23 16 50.8	+0.5
MVIF	Mont Vial	4.77	290	P	Pn	23 16 50.8	+0.5
MVIF	Mont Vial	4.77	290	P	Pn	23 16 50.8	+0.5
MVIF	Mont Vial	4.77	290	P	Pn	23 16 50.8	+0.5
BEY	Berane	4.83	83	⇑iPn	Pn	23 16 52.0	+0.9
BEY				eSn	Sn	23 17 47.4	+0.6
IVA	Berane	4.83	83	⇑iPn	Pn	23 16 52.0	+0.9
IVA				eSn	Sn	23 17 47.4	+0.6
RESU	Resuttano	4.83	173	P	Pn	23 16 57.1	+6.0
SOI	Samo	4.84	154	P	Pn	23 16 53.3	+2.1
SOI	Samo	4.84	154	P	Pn	23 16 53.3	+2.1
SOI	Samo	4.84	154	P	Pn	23 16 53.3	+2.1
PUK	Puka	4.86	93	i PN	Pn	23 16 52.4	+0.9
PUK				i SN	Sn	23 17 49.5	+1.9
PUK	Puka	4.86	93	i Pn	Pn	23 16 52.4	+0.9
PUK				i Sn	Sn	23 17 49.5	+1.9
PVY	Plav	4.87	86	⇓iPn	Pn	23 16 52.7	+0.9
PVY				eSn	Sn	23 17 48.7	+0.7
DOI	San Damiano	4.90	297	P	Pn	23 16 53.7	+1.6
DOI	San Damiano	4.90	297	P	Pn	23 16 53.7	+1.6
DOI	San Damiano	4.90	297	P	Pn	23 16 53.7	+1.6
CALN	Calern	4.92	287	P	Pn	23 16 52.2	-0.1
CALN	Calern	4.92	287	P	Pn	23 16 52.2	-0.1
CALN	Calern	4.92	287	P	Pn	23 16 52.2	-0.1
CALN	Calern	4.92	287	P	Pn	23 16 52.2	-0.1
SJES	Sjenica	4.92	78	ePn	Pn	23 16 52.8	+0.4
FETA	Feichten	4.93	339	⇑iPn	Pn	23 16 53.7	+1.1
	SNR=188						
FETA	Feichten	4.93	339	⇑iPn	Pn	23 16 53.7	+1.1
FETA	Feichten	4.93	339	⇑iPn	Pn	23 16 53.7	+1.1
TUE	Stuetta	4.94	326	ePn	Pn	23 16 53.0	+0.3
TUE				eSn	Sn	23 17 48.4	-1.2
TUE	Stuetta	4.94	326	ePn	Pn	23 16 53.0	+0.3
TUE				eSn	Sn	23 17 48.4	-1.2
TEKS	Tekeris	4.95	63	ePn	Pn	23 16 52.3	-0.3
TEKS	Tekeris	4.95	63	ePn	Pn	23 16 52.3	-0.3
WTTA	Wattenberg	4.96	346	⇑iP	Pn	23 16 53.9	+0.9
WTTA	Wattenberg	4.96	346	⇑iPn	Pn	23 16 53.9	+0.9
	SNR=79						
WTTA	Wattenberg	4.96	346	⇑iPn	Pn	23 16 53.9	+0.9
WTTA	Wattenberg	4.96	346	i P	Pn	23 16 53.9	+0.9
BCI	Bajram Curri	4.96	89	i PN	Pn	23 16 53.5	+0.6
BCI				i SN	Sn	23 17 53.2	+3.2
BCI	Bajram Curri	4.96	89	i Pn	Pn	23 16 53.5	+0.6
BCI				i Sn	Sn	23 17 53.2	+3.2
TIR	Tirane	4.97	101	i PN	Pn	23 16 55.1	+2.1
TIR				i SN	Sn	23 17 49.5	-0.8
TIR	Tirane	4.97	101	eP	Pn	23 16 52.3	-0.8
TIR				e		23 17 49.9	
TIR	Tirane	4.97	101	ePn	Pn	23 16 52.3	-0.8
TIR				eSn	Sn	23 17 49.9	-0.4
TIR	Tirane	4.97	101	eP	Pn	23 16 52.2	-0.8
TIR	Tirane	4.97	101	ePn	Pn	23 16 53.1	+0.1
TIR				eSn	Sn	23 17 49.3	-1.0
TIR	Tirane	4.97	101	eP	Pn	23 16 52.3	-0.8
TIR				eS	Sn	23 17 49.9	-0.4
DAVOX	Davos/Dischmat	4.99	331	Pn	Pn	23 16 53.0	-0.3
DAVOX				Sn	Sn	23 17 54.7	+3.9
DAVOX	Davos/Dischmat	4.99	331	Pn	Pn	23 16 53.0	-0.3
	comp=Z,35nm,0.3s,baz=156,slow=17,SNR=104						
DAVOX				Sn	Sn	23 17 54.7	+3.9
	comp=Z,35nm,0.3s,baz=139,slow=22,SNR=4.4						
DAVOX	Davos/Dischmat	4.99	331	P	Pn	23 16 53.0	-0.3
	comp=Z,35nm,0.3s						
DAVOX				S	Sn	23 17 54.7	+3.9
	comp=Z,35nm,0.3s						
ARSA	Arzberg	5.03	17	⇑iPn	Pn	23 16 52.6	-1.2
	SNR=51						
ARSA	Arzberg	5.03	17	⇑iPn	Pn	23 16 52.6	-1.2
ARSA	Arzberg	5.03	17	⇑iPn	Pn	23 16 52.6	-1.2
WATA	Walderalm	5.04	346	⇑iP	Pn	23 16 55.3	+1.3
WATA	Walderalm	5.04	346	⇑iPn	Pn	23 16 55.3	+1.3
	SNR=98						
WATA	Walderalm	5.04	346	⇑iPn	Pn	23 16 55.3	+1.3
WATA	Walderalm	5.04	346	i P	Pn	23 16 55.3	+1.3
FRF	La Foret Royal	5.05	285	ePn	Pn	23 16 53.4	-0.6
	SNR=1.0						
FRF				eSn	Sn	23 17 48.3	-3.8
	comp=Z,151nm,0.8s						
FRF	La Foret Royal	5.05	285	eP	Pn	23 16 53.4	-0.6
FRF				e		23 17 48.3	
FRF	La Foret Royal	5.05	285	ePn	Pn	23 16 53.4	-0.6
FRF				eSn	Sn	23 17 48.3	-3.8
FRF	La Foret Royal	5.05	285	ePn	Pn	23 16 53.4	-0.6
	SNR=1.0						
FRF				eSn	Sn	23 17 48.3	-3.8
	comp=Z,76nm,0.8s						
IVAS	Ivanjica	5.10	75	ePn	Pn	23 16 55.2	+0.4
IVAS	Ivanjica	5.10	75	ePn	Pn	23 16 55.2	+0.4
DIVS	Divibare	5.11	69	ePn	Pn	23 16 54.4	-0.5
DIVS	Divibare	5.11	69	ePn	Pn	23 16 54.4	-0.5
LMR	La Mourre	5.11	282	ePn	Pn	23 16 54.0	-0.9
	SNR=1.0						
LMR				eSn	Sn	23 17 49.2	-4.5
	comp=Z,76nm,0.6s						
LMR	La Mourre	5.11	282	eP	Pn	23 16 54.0	-0.9
LMR				e		23 17 49.2	
LMR	La Mourre	5.11	282	ePn	Pn	23 16 54.0	-0.9
LMR				eSn	Sn	23 17 49.2	-4.5
LMR	La Mourre	5.11	282	ePn	Pn	23 16 54.0	-0.9
	SNR=1.0						
LMR				eSn	Sn	23 17 49.2	-4.5
	comp=Z,38nm,0.6s						
MOTA	Moosalm	5.14	343	⇑iP	Pn	23 16 56.3	+0.8
MOTA	Moosalm	5.14	343	⇑iPn	Pn	23 16 56.3	+0.8
	SNR=305						
MOTA	Moosalm	5.14	343	⇑iPn	Pn	23 16 56.3	+0.8
MOTA	Moosalm	5.14	343	i P	Pn	23 16 56.3	+0.8
RSP	Reno Superiore	5.17	303	P	Pn	23 16 57.9	+2.1
RSP	Reno Superiore	5.17	303	P	Pn	23 16 57.9	+2.1
RSP	Reno Superiore	5.17	303	P	Pn	23 16 57.9	+2.1
SURF	Saint Ours	5.18	295	P	Pn	23 16 57.8	+1.8
SURF	Saint Ours	5.18	295	P	Pn	23 16 57.8	+1.8
SURF	Saint Ours	5.18	295	P	Pn	23 16 57.8	+1.8
RAFF	Raffo Rosso	5.29	171	P	Pn	23 17 02.7	+5.4
RJOB	Jochberg	5.29	356	ePn	Pn	23 16 58.0	+0.5
MBDF	Montbardon	5.30	298	eP	Pn	23 16 58.9	+1.3
MBDF	Montbardon	5.30	298	eP	Pn	23 16 58.9	+1.3
MBDF	Montbardon	5.30	298	eP	Pn	23 16 58.9	+1.3
MBDF	Montbardon	5.30	298	eP	Pn	23 16 58.9	+1.3
PHP	Peshkopia	5.32	96	i PN	Pn	23 16 58.4	+0.6
PHP				i SN	Sn	23 18 00.1	+1.2
PHP	Peshkopia	5.32	96	i Pn	Pn	23 16 58.4	+0.6
PHP				i Sn	Sn	23 18 00.1	+1.2
PKSM	Moragy	5.33	43	ePn	Pn	23 16 56.7	-1.1
PKSM	Moragy	5.33	43	eP	Pn	23 16 56.7	-1.1
RETA	Reutte	5.36	341	⇓iPn	Pn	23 16 59.1	+0.8
	SNR=167						
RETA	Reutte	5.36	341	⇓iPn	Pn	23 16 59.1	+0.8
RETA	Reutte	5.36	341	⇓iPn	Pn	23 16 59.1	+0.8
HVZN	Vizzini	5.38	168	P	Pn	23 17 03.3	+4.7
AGST	Augusta-Monte	5.39	164	P	Pn	23 17 04.7	+6.0
PKS9	Tamasi	5.42	39	ePn	Pn	23 16 57.5	-1.6
PKS9	Tamasi	5.42	39	eP	Pn	23 16 57.5	-1.6
DAVA	Damuels	5.43	334	⇑iPn	Pn	23 17 00.6	+1.2
	SNR=192						
DAVA	Damuels	5.43	334	⇑iPn	Pn	23 17 00.6	+1.2
DAVA	Damuels	5.43	334	⇑iPn	Pn	23 17 00.6	+1.2
MOA	Molln	5.43	6	⇑iPn	Pn	23 16 59.5	+0.3
	SNR=180						
MOA	Molln	5.43	6	⇑iPn	Pn	23 16 59.5	+0.3
MOA	Molln	5.43	6	⇑iPn	Pn	23 16 59.5	+0.3
TRUS	Trudelj	5.43	69	ePn	Pn	23 16 58.1	-1.1
TRUS	Trudelj	5.43	69	ePn	Pn	23 16 58.1	-1.1
BNI	Bardonecchia	5.49	300	P	Pn	23 17 03.8	+3.5
BNI				e		23 18 04.2	
BNI	Bardonecchia	5.49	300	P	Pn	23 17 03.8	+3.5
BNI				eSn	Sn	23 18 04.2	+0.9
BNI	Bardonecchia	5.49	300	eS	Sn	23 18 04.2	+0.9
GRUS	Gruza	5.56	73	ePn	Pn	23 17 00.7	-0.4
GRUS	Gruza	5.56	73	ePn	Pn	23 17 00.7	-0.4
KEK	Kerkira	5.58	117	eP	Pn	23 17 01.8	+0.5
LPG	La Plagne	5.66	305	eP	Pn	23 17 03.9	+1.2
LPG	La Plagne	5.66	305	eP	Pn	23 17 03.9	+1.2
LPG	La Plagne	5.66	305	eP	Pn	23 17 03.9	+1.2
LPG	La Plagne	5.66	305	eP	Pn	23 17 03.9	+1.2
BEO	Beograd	5.67	63	ePn	Pn	23 17 01.5	-1.0
BEO	Beograd	5.67	63	ePn	Pn	23 17 01.5	-1.0
LPL	La Plagne	5.68	305	eP	Pn	23 17 04.5	+1.6
LPL				eSn	Sn	23 18 03.1	-4.8
	comp=Z,89nm,0.6s,SNR=1.0						
LPL	La Plagne	5.68	305	eP	Pn	23 17 04.5	+1.6
LPL				e		23 18 03.1	
LPL	La Plagne	5.68	305	eP	Pn	23 17 04.5	+1.6
LPL				eSn	Sn	23 18 03.1	-4.8
LPL	La Plagne	5.68	305	eP	Pn	23 17 04.5	+1.6
SOP	Sopron	5.69	22	⇓ePn	Pn	23 17 02.0	-0.8
SOP	Sopron	5.69	22	⇓eP	Pn	23 17 02.0	-0.8
PTS	Pantelleria	5.74	191	P	Pn	23 17 06.6	+3.1
PTS	Pantelleria	5.74	191	P	Pn	23 17 06.6	+3.1
CONA	Conrad Observa	5.75	17	i Pn	Pn	23 17 02.6	-1.1
	SNR=162						
CONA	Conrad Observa	5.75	17	i Pn	Pn	23 17 02.6	-1.1
CONA	Conrad Observa	5.75	17	i Pn	Pn	23 17 02.6	-1.1
SELS	Selova	5.75	80	ePn	Pn	23 17 03.9	+0.2
SELS	Selova	5.75	80	ePn	Pn	23 17 03.9	+0.2
PKS2	Kecel	5.81	44	ePn	Pn	23 17 04.4	0.0
PKS2	Kecel	5.81	44	eP	Pn	23 17 04.4	0.0
RSL	Roselend	5.83	306	P	Pn	23 17 07.7	+2.8
RSL	Roselend	5.83	306	P	Pn	23 17 07.7	+2.8
RSL	Roselend	5.83	306	P	Pn	23 17 07.7	+2.8
PKST	Tˆ's	5.83	33	ePn	Pn	23 17 03.7	-1.1
PKST	Tˆ's	5.83	33	eP	Pn	23 17 03.7	-1.1
SENIN	Lac Senin/Sane	5.84	314	ePn	Pn	23 17 06.3	+1.2
SENIN				eSn	Sn	23 18 12.8	+0.9
SENIN	Lac Senin/Sane	5.84	314	ePn	Pn	23 17 06.3	+1.2
SENIN				eSn	Sn	23 18 12.8	+0.9
SMRF	Simiane la Rot	5.89	288	eP	Pn	23 17 06.6	+0.9
SMRF	Simiane la Rot	5.89	288	eP	Pn	23 17 06.6	+0.9
SMRF	Simiane la Rot	5.89	288	eP	Pn	23 17 06.6	+0.9
FUR	Furstenfeldbru	5.89	346	eP	Pn	23 17 07.1	+1.4
FUR	Furstenfeldbru	5.89	346	ePn	Pn	23 17 07.1	+1.4
FUR	Furstenfeldbru	5.89	346	eP	Pn	23 17 07.1	+1.4
ORIF	Oris-en-Rattie	5.96	297	eP	Pn	23 17 09.1	+2.5
ORIF	Oris-en-Rattie	5.96	297	eP	Pn	23 17 09.1	+2.5
ORIF	Oris-en-Rattie	5.96	297	eP	Pn	23 17 09.1	+2.5
SVIS	Svilajnac	6.00	70	ePn	Pn	23 17 06.4	-0.7
SKO	Skopje	6.01	92	i Pn	Pn	23 17 08.4	+1.1
SKO				i Sg	Sn	23 18 13.3	-2.6
PKS6	Bocsa	6.06	45	ePn	Pn	23 17 06.7	-1.2
PKS6	Bocsa	6.06	45	eP	Pn	23 17 06.7	-1.2
PKSG		6.09	34	ePn	Pn	23 17 07.8	-0.4
PKSG		6.09	34	eP	Pn	23 17 07.8	-0.4
BIA	Bitola	6.12	101	i Pn	Pn	23 17 08.9	0.0
BIA				i Sg	Sn	23 18 16.0	-2.6
PKS7	Kunszentmiklos	6.17	40	ePn	Pn	23 17 08.7	-0.7
PKS7	Kunszentmiklos	6.17	40	eP	Pn	23 17 08.7	-0.7
FNA	Florina	6.23	103	eP	Pn	23 17 10.7	+0.4
OCF	Saint Nazaire	6.23	293	P	Pn	23 17 12.6	+2.2
OG26	St.-Nazaire-De	6.23	293	P	Pn	23 17 12.6	+2.2
BARS	Barje	6.24	84	ePn	Pn	23 17 10.5	+0.1
BARS				eSn	Sn	23 18 20.4	-1.1
BARS	Barje	6.24	84	ePn	Pn	23 17 10.5	+0.1
BARS				eSn	Sn	23 18 20.4	-1.1
JAN	Janina	6.31	114	eP	Pn	23 17 12.6	+1.2
GEC2	GERESS Array S	6.39	2	eP	Pn	23 17 11.2	-1.3
GEC2	GERESS Array S	6.39	2	ePn	Pn	23 17 11.2	-1.3
GEC2	GERESS Array S	6.39	2	eP	Pn	23 17 11.2	-1.3
GERES	GERESS Array B	6.39	2	Pn	Pn	23 17 11.3	-1.3
GERES				Sn	Sn	23 18 23.9	-1.4
GERES	GERESS Array B	6.39	2	Pn	Pn	23 17 11.3	-1.3
	comp=Z,7.4nm,0.3s,baz=176,slow=12,SNR=93						
GERES				Sn	Sn	23 18 23.9	-1.4
	comp=Z,26nm,0.3s,baz=173,slow=23,SNR=11						
GERES	GERESS Array B	6.39	2	P	Pn	23 17 11.3	-1.3
	comp=Z,7.0nm,0.3s						
GERES				S	Sn	23 18 23.9	-1.4
	comp=Z,26nm,0.3s						
PKSN	Nyarlorinc	6.42	44	epPn	Pn	23 17 14.2	+1.4
PKSN	Nyarlorinc	6.42	44	eP	Pn	23 17 14.2	+1.4
BOLS	Boljevac	6.43	75	ePn	Pn	23 17 11.4	-1.6
BOLS	Boljevac	6.43	75	ePn	Pn	23 17 11.4	-1.6
BUD	Budapest	6.43	37	⇑epPn	Pn	23 17 13.5	+0.5
BUD	Budapest	6.43	37	⇑eP	Pn	23 17 13.5	+0.5
SPAK	Spaichingen-Ko	6.50	332	P	Pn	23 17 15.1	+1.0
SPAK	Spaichingen-Ko	6.50	332	P	Pn	23 17 15.1	+1.0
BBS	Basel-Blauen	6.50	322	P	Pn	23 17 14.3	+0.3
BBS	Basel-Blauen	6.50	322	P	Pn	23 17 14.3	+0.3
BBS	Basel-Blauen	6.50	322	P	Pn	23 17 14.3	+0.3
FELD	Feldberg im Sc	6.61	327	P	Pn	23 17 15.1	-0.5
FELD	Feldberg im Sc	6.61	327	P	Pn	23 17 15.1	-0.5
CABF	La Chapelle	6.65	311	ePn	Pn	23 17 16.2	0.0
	SNR=1.0						
CABF	La Chapelle	6.65	311	eP	Pn	23 17 16.2	0.0
CABF	La Chapelle	6.65	311	ePn	Pn	23 17 16.2	0.0
CABF	La Chapelle	6.65	311	ePn	Pn	23 17 16.2	0.0
	SNR=1.0						
KHC	Kasperske Hory	6.67	1	eP	Pn	23 17 14.7	-1.7
KHC	Kasperske Hory	6.67	1	ePn	Pn	23 17 14.7	-1.7
KHC	Kasperske Hory	6.67	1	ePN	Pn	23 17 15.7	-0.7
KHC				ex	x	23 17 26.0	
KHC				eSN	Sn	23 18 28.4	-3.8
KHC				AMS	AMS	23 19 00.0	
	comp=Z,3μm,6.8s						
KHC	Kasperske Hory	6.67	1	eP	Pn	23 17 14.7	-1.7
KZN	Kozani	6.68	106	eP	Pn	23 17 17.3	+0.8
SMOL	Smolenice	6.69	24	eP	Pn	23 17 15.7	-0.9
SMOL				e		23 18 37.1	
SMOL	Smolenice	6.69	24	ePN	Pn	23 17 15.7	-0.9
SMOL				eSN	Sn	23 18 37.1	+4.5
SMOL	Smolenice	6.69	24	eP	Pn	23 17 15.7	-0.9
WET	Wettzell	6.70	357	eP	Pn	23 17 15.7	-1.0
WET	Wettzell	6.70	357	ePn	Pn	23 17 15.7	-1.0
WET	Wettzell	6.70	357	eP	Pn	23 17 15.7	-1.0
BZS	Buzias	6.73	59	⇓iP	Pn	23 17 16.7	-0.4
LOMF	Lomont	6.74	319	P	Pn	23 17 16.9	-0.5
LOMF	Lomont	6.74	319	P	Pn	23 17 16.9	-0.5
LOMF	Lomont	6.74	319	P	Pn	23 17 16.9	-0.5

LOMF	**Lomont**	**6.74**	**319**	P	**Pn**	**23 17 16.9**	**-0.5**
VIVF	**Saint-Julien-l**	**6.75**	**294**	*e*Pn	**Pn**	**23 17 18.4**	**+1.0**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**6.75**	**294**	*e*P	**Pn**	**23 17 18.4**	**+1.0**
VIVF	**Saint-Julien-l**	**6.75**	**294**	*e*Pn	**Pn**	**23 17 18.4**	**+1.0**
VIVF	**Saint-Julien-l**	**6.75**	**294**	*e*Pn	**Pn**	**23 17 18.4**	**+1.0**
	SNR=1.0						
BFO	**Black Forest**	**6.86**	**331**	*e*P	**Pn**	**23 17 18.2**	**-0.7**
BFO	**Black Forest**	**6.86**	**331**	*e*Pn	**Pn**	**23 17 17.9**	**-1.0**
BFO	**Black Forest**	**6.86**	**331**	*e*Pn	**Pn**	**23 17 18.1**	**-0.7**
BFO	**Black Forest**	**6.86**	**331**	*e*P	**Pn**	**23 17 18.2**	**-0.7**
ZAPS	**Zavoj**	**6.86**	**80**	*e*Pn	**Pn**	**23 17 19.6**	**+0.7**
ZAPS				*e*Sn	**Sn**	**23 18 34.8**	**-1.9**
ZAPS	**Zavoj**	**6.86**	**80**	*e*Pn	**Pn**	**23 17 19.6**	**+0.7**
ZAPS				*e*Sn	**Sn**	**23 18 34.8**	**-1.9**
STU	**Stuttgart**	**6.96**	**337**	*e*P	**Pn**	**23 17 22.1**	**+1.8**
STU				*e*		23 18 38.3	
STU	**Stuttgart**	**6.96**	**337**	*e*Pn	**Pn**	**23 17 19.5**	**-0.7**
STU	**Stuttgart**	**6.96**	**337**	*e*Pn	**Pn**	**23 17 22.1**	**+1.8**
STU				*e*Sn	**Sn**	**23 18 38.3**	**-0.7**
STU	**Stuttgart**	**6.96**	**337**	*e*Pn	**Pn**	**23 17 22.0**	**+1.8**
STU				*e*S	**Sn**	**23 18 38.3**	**-0.7**
MOF	**Molkenrain**	**6.96**	**323**	P	**Pn**	**23 17 19.5**	**-0.9**
MOF	**Molkenrain**	**6.96**	**323**	P	**Pn**	**23 17 19.5**	**-0.9**
MOF	**Molkenrain**	**6.96**	**323**	P	**Pn**	**23 17 19.5**	**-0.9**
MOF	**Molkenrain**	**6.96**	**323**	P	**Pn**	**23 17 19.5**	**-0.9**
VAY	**Valandovo**	**6.96**	**96**	*i* Pn	**Pn**	**23 17 19.4**	**-0.9**
VAY				*i* Sg	Sn	23 18 29.8	-9.4
SSB	**Saint Sauveur**	**6.97**	**297**	*e*P	**Pn**	**23 17 20.9**	**+0.4**
SSB				pmax	pmax		
	comp=Z,71nm,0.9s						
SSB	**Saint Sauveur**	**6.97**	**297**	*e*Pn	**Pn**	**23 17 20.9**	**+0.4**
	comp=Z,71nm,0.9s						
SSB	**Saint Sauveur**	**6.97**	**297**	*e*P	**Pn**	**23 17 20.9**	**+0.4**
	comp=Z,71nm,0.9s						
VLS	**Valsamata**	**6.98**	**125**	*e*P	**Pn**	**23 17 21.6**	**+1.0**
LIBD	**Limburg**	**6.99**	**326**	P	**Pn**	**23 17 20.4**	**-0.3**
LIBD	**Limburg**	**6.99**	**326**	P	**Pn**	**23 17 20.4**	**-0.3**
LIBD	**Limburg**	**6.99**	**326**	P	**Pn**	**23 17 20.4**	**-0.3**
TREC	**Trest**	**7.00**	**11**	*e*P	**Pn**	**23 17 19.3**	**-1.5**
TREC				*e*		23 18 35.7	
TREC				MLR	MLR		
	comp=Z,5µm,11.5s						
TREC	**Trest**	**7.00**	**11**	*e*PN	**Pn**	**23 17 19.3**	**-1.5**
TREC				*e*SN	**Sn**	**23 18 35.7**	**-4.3**
TREC				AMS	AMS	23 20 20.0	
	comp=Z,5µm,11.5s						
TREC	**Trest**	**7.00**	**11**	*e*P	**Pn**	**23 17 19.3**	**-1.5**
	comp=Z,5µm,11.5s						
HINF	**Hinteralfeld**	**7.06**	**322**	*e*Pn	**Pn**	**23 17 20.9**	**-0.8**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**23 18 37.7**	**-4.0**
	comp=Z,126nm,0.4s,SNR=1.0						
HINF	**Hinteralfeld**	**7.06**	**322**	*e*P	**Pn**	**23 17 20.9**	**-0.8**
HINF				*e*		23 18 37.7	
HINF	**Hinteralfeld**	**7.06**	**322**	*e*Pn	**Pn**	**23 17 20.9**	**-0.8**
HINF				*e*Sn	**Sn**	**23 18 37.7**	**-4.0**
HINF	**Hinteralfeld**	**7.06**	**322**	*e*Pn	**Pn**	**23 17 20.9**	**-0.8**
	SNR=1.0						
LASF	**Ste Croix**	**7.13**	**286**	*e*Pn	**Pn**	**23 17 22.1**	**-0.5**
	SNR=1.0						
LASF	**Ste Croix**	**7.13**	**286**	*e*Pn	**Pn**	**23 17 22.1**	**-0.5**
LASF	**Ste Croix**	**7.13**	**286**	*e*Pn	**Pn**	**23 17 22.1**	**-0.5**
	SNR=1.0						
PSZ	**Piszkesteto**	**7.14**	**38**	⇓P	**Pn**	**23 17 23.0**	**+0.1**
PSZ	**Piszkesteto**	**7.14**	**38**	*e*Pn	**Pn**	**23 17 22.0**	**-0.8**
PSZ				*e*Sn	**Sn**	**23 18 44.7**	**+0.9**
PSZ	**Piszkesteto**	**7.14**	**38**	⇓*i*P	**Pn**	**23 17 23.0**	**+0.1**
PSZ	**Piszkesteto**	**7.14**	**38**	*e*pPn	**Pn**	**23 17 24.7**	**+1.8**
PSZ	**Piszkesteto**	**7.14**	**38**	*e*Pn	**Pn**	**23 17 22.0**	**-0.8**
PSZ	**Piszkesteto**	**7.14**	**38**	P	**Pn**	**23 17 23.0**	**+0.1**
PSZ				*e*Sn	**Sn**	**23 18 44.7**	**+0.9**
VYHS	**Vyhne**	**7.15**	**31**	*e*P	**Pn**	**23 17 21.6**	**-1.3**
VYHS				*e*		23 18 38.6	
VYHS				MLR	MLR		
	comp=Z,1µm,2.8s						
VYHS	**Vyhne**	**7.15**	**31**	*e*PN	**Pn**	**23 17 21.6**	**-1.3**
VYHS				*e*SN	**Sn**	**23 18 38.6**	**-5.3**
VYHS				*e*		23 19 33.0	
VYHS	**Vyhne**	**7.15**	**31**	*e*P	**Pn**	**23 17 21.6**	**-1.3**
VRAC	**Vranov**	**7.21**	**17**	Pn	**Pn**	**23 17 22.5**	**-1.2**
VRAC				Sn	**Sn**	**23 18 44.0**	**-1.3**
VRAC				Lg	Lg	23 19 33.4	
VRAC	**Vranov**	**7.21**	**17**	⇑*i*P	**Pn**	**23 17 23.2**	**-0.5**
VRAC	**Vranov**	**7.21**	**17**	Pn	**Pn**	**23 17 22.5**	**-1.2**
	comp=Z,3.7nm,0.3s,baz=205,slow=13,SNR=23						
VRAC				Sn	**Sn**	**23 18 44.0**	**-1.3**
	comp=Z,3.7nm,0.3s,baz=244,slow=7.8,SNR=4.7						
VRAC				Lg	Lg	23 19 33.4	
	comp=Z,1.1nm,0.3s,baz=159,slow=17,SNR=1.9						
VRAC				LR	LR	23 20 14.2	
	comp=Z,2µm,18.2s,baz=205,slow=39						
VRAC	**Vranov**	**7.21**	**17**	Pn	**Pn**	**23 17 22.5**	**-1.2**
VRAC	**Vranov**	**7.21**	**17**	P	**Pn**	**23 17 23.2**	**-0.5**
VRAC				Sn	**Sn**	**23 18 44.0**	**-1.3**
ECH	**Echery**	**7.23**	**325**	⇑*e*P	**Pn**	**23 17 22.5**	**-1.5**
ECH				*e*		23 18 43.6	
ECH				pmax	pmax		
	comp=Z,94nm,0.6s						
ECH	**Echery**	**7.23**	**325**	⇑*e*Pn	**Pn**	**23 17 22.5**	**-1.5**
	comp=Z,94nm,0.6s						
ECH				*e*Sn	**Sn**	**23 18 43.6**	**-2.1**
ECH	**Echery**	**7.23**	**325**	P	**Pn**	**23 17 23.8**	**-0.2**
ECH	**Echery**	**7.23**	**325**	⇑*e*Pn	**Pn**	**23 17 22.5**	**-1.5**
	comp=Z,94nm,0.6s						
ECH	**Echery**	**7.23**	**325**	P	**Pn**	**23 17 23.8**	**-0.2**
LIT	**Litokhoron**	**7.26**	**106**	*e*P	**Pn**	**23 17 24.2**	**-0.3**
VTS	**Vitosha**	**7.27**	**86**	⇑P	**Pn**	**23 17 25.1**	**+0.4**
VTS	**Vitosha**	**7.27**	**86**	⇑*i*P	**Pn**	**23 17 25.1**	**+0.4**
VTS	**Vitosha**	**7.27**	**86**	*e*Pn	**Pn**	**23 17 24.7**	**0.0**
VTS				*e*Sn	**Sn**	**23 18 45.1**	**-2.0**
VTS	**Vitosha**	**7.27**	**86**	*e*Pn	**Pn**	**23 17 24.7**	**0.0**
VTS	**Vitosha**	**7.27**	**86**	P	**Pn**	**23 17 25.1**	**+0.4**
EVR	**Evrytania**	**7.33**	**116**	*e*P	**Pn**	**23 17 27.5**	**+2.1**
CDF	**Champ du Feu**	**7.33**	**326**	*e*Pn	**Pn**	**23 17 24.8**	**-0.7**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**23 18 44.9**	**-3.5**
	comp=Z,229nm,0.7s						
CDF	**Champ du Feu**	**7.33**	**326**	*e*P	**Pn**	**23 17 24.8**	**-0.7**
CDF				*e*		23 18 44.9	
CDF	**Champ du Feu**	**7.33**	**326**	*e*Pn	**Pn**	**23 17 24.8**	**-0.7**
CDF				*e*Sn	**Sn**	**23 18 44.9**	**-3.5**
CDF	**Champ du Feu**	**7.33**	**326**	*e*Pn	**Pn**	**23 17 24.8**	**-0.7**
	SNR=1.0						
ROTZ	**Rotzenmuhle**	**7.35**	**354**	*e*Pn	**Pn**	**23 17 23.9**	**-1.8**
GRA1	**Grafenberg Arr**	**7.39**	**349**	*e*P	**Pn**	**23 17 24.8**	**-1.3**
GRF	**Grafenberg Arr**	**7.39**	**349**	*e*P	**Pn**	**23 17 24.8**	**-1.3**
GRF	**Grafenberg Arr**	**7.39**	**349**	*e*Pn	**Pn**	**23 17 24.8**	**-1.3**
GRFO	**Grafenberg**	**7.39**	**349**	*e*P	**Pn**	**23 17 25.1**	**-1.0**
GRFO	**Grafenberg**	**7.39**	**349**	*e*Pn	**Pn**	**23 17 25.1**	**-1.0**
GRFO	**Grafenberg**	**7.39**	**349**	*e*P	**Pn**	**23 17 25.1**	**-1.0**
GZR	**Gura Zlata**	**7.40**	**63**	⇓*i*P	**Pn**	**23 17 26.9**	**+0.5**
KEST	**Kesra**	**7.41**	**206**	*e*Pn	Pn	23 17 30.5	+4.0
KEST				Sn	**Sn**	**23 18 54.9**	**+4.6**
KEST	**Kesra**	**7.41**	**206**	Pn	**Pn**	**23 17 29.2**	**+2.7**
	comp=Z,3.7nm,0.3s,baz=302,slow=0.9,SNR=113						
KEST				Sn	**Sn**	**23 18 54.9**	**+4.6**
	baz=9.0,slow=19,SNR=1.4						
CMAH	**Djebel Manchou**	**7.42**	**220**	P	Pn	23 17 30.9	+4.2
HAU	**Haudompre**	**7.43**	**321**	*e*Pn	**Pn**	**23 17 25.8**	**-1.0**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**23 18 45.4**	**-5.4**
	comp=Z,587nm,0.9s						
HAU	**Haudompre**	**7.43**	**321**	*e*P	**Pn**	**23 17 25.8**	**-1.0**
HAU				*e*		23 18 45.4	
HAU	**Haudompre**	**7.43**	**321**	*e*Pn	**Pn**	**23 17 25.8**	**-1.0**
HAU				*e*Sn	**Sn**	**23 18 45.4**	**-5.4**
HAU	**Haudompre**	**7.43**	**321**	*e*Pn	**Pn**	**23 17 25.8**	**-1.0**
	SNR=1.0						
PRU	**Pruhonice**	**7.58**	**6**	*e*PN	**Pn**	**23 17 27.9**	**-0.8**
PRU				*e*SN	**Sn**	**23 18 50.7**	**-3.5**
PRU				AMS	AMS	23 20 30.0	
	comp=Z,2µm,7.9s						
CAEH	**'Ain El Ouahch**	**7.58**	**224**	P	Pn	23 17 32.3	+3.5
LANF	**Langenberg**	**7.59**	**331**	P	**Pn**	**23 17 29.0**	**0.0**
LANF	**Langenberg**	**7.59**	**331**	P	**Pn**	**23 17 29.0**	**0.0**
LANF	**Langenberg**	**7.59**	**331**	P	**Pn**	**23 17 29.0**	**0.0**
LANF	**Langenberg**	**7.59**	**331**	P	**Pn**	**23 17 29.0**	**0.0**
AGG	**Agios Georgios**	**7.62**	**114**	*e*P	**Pn**	**23 17 30.6**	**+1.2**
DEV	**Deva**	**7.66**	**60**	⇓P	**Pn**	**23 17 31.1**	**+1.2**
DEV	**Deva**	**7.66**	**60**	⇓*i*P	**Pn**	**23 17 31.1**	**+1.2**
DEV	**Deva**	**7.66**	**60**	P	**Pn**	**23 17 31.1**	**+1.2**
ABSA	**Djebel Ababsia**	**7.68**	**218**	P	Pn	23 17 35.1	+4.9
LIKS	**Likavka**	**7.71**	**29**	*e*P	Pn	23 17 34.5	+3.9
LIKS	**Likavka**	**7.71**	**29**	*e*PN	Pn	23 17 34.5	+3.9
SJAF	**Saint Jean de**	**7.75**	**274**	P	**Pn**	**23 17 29.3**	**-1.9**
SJAF	**Saint Jean de**	**7.75**	**274**	P	**Pn**	**23 17 29.3**	**-1.9**
SJAF	**Saint Jean de**	**7.75**	**274**	P	**Pn**	**23 17 29.3**	**-1.9**
THEF	**They Montfort**	**7.76**	**321**	P	**Pn**	**23 17 30.6**	**-0.7**
THEF	**They Montfort**	**7.76**	**321**	P	**Pn**	**23 17 30.6**	**-0.7**
THEF	**They Montfort**	**7.76**	**321**	P	**Pn**	**23 17 30.6**	**-0.7**
THEF	**They Montfort**	**7.76**	**321**	P	**Pn**	**23 17 30.6**	**-0.7**
NKC	**Novy Kostel**	**7.80**	**356**	*e*PN	**Pn**	**23 17 31.4**	**-0.4**
NKC				*e*SN	**Sn**	**23 18 55.3**	**-4.6**
NKC				AMS	AMS	23 20 50.0	
	comp=Z,3µm,10.8s						
TOD	**Tromm**	**7.82**	**338**	P	**Pn**	**23 17 32.4**	**+0.3**
TOD	**Tromm**	**7.82**	**338**	P	**Pn**	**23 17 32.4**	**+0.3**
TOD	**Tromm**	**7.82**	**338**	P	**Pn**	**23 17 32.4**	**+0.3**
LBL	**Lubilhac**	**7.82**	**294**	P	**Pn**	**23 17 33.9**	**+1.7**
LBL	**Lubilhac**	**7.82**	**294**	P	**Pn**	**23 17 33.9**	**+1.7**
LBL	**Lubilhac**	**7.82**	**294**	P	**Pn**	**23 17 33.9**	**+1.7**
LBL	**Lubilhac**	**7.82**	**294**	P	**Pn**	**23 17 33.9**	**+1.7**
CRAR	**CRAIOVA**	**7.83**	**73**	P	**Pn**	**23 17 32.7**	**+0.6**
CRAR	**CRAIOVA**	**7.83**	**73**	P	**Pn**	**23 17 32.7**	**+0.6**
PLG	**Polygyros**	**7.86**	**102**	*e*P	**Pn**	**23 17 32.3**	**-0.3**
MORC	**Moravsky Berou**	**7.87**	**20**	⇑P	**Pn**	**23 17 33.0**	**+0.2**
MORC	**Moravsky Berou**	**7.87**	**20**	*e*Pn	**Pn**	**23 17 32.0**	**-0.8**
MORC	**Moravsky Berou**	**7.87**	**20**	⇑*i*P	**Pn**	**23 17 33.0**	**+0.2**
MORC	**Moravsky Berou**	**7.87**	**20**	*e*Pn	**Pn**	**23 17 32.0**	**-0.8**
MORC	**Moravsky Berou**	**7.87**	**20**	P	**Pn**	**23 17 33.0**	**+0.2**
CKFL	**Kef-Lekhel**	**7.94**	**223**	P	**Pn**	**23 17 36.5**	**+2.7**
DRGR		**7.95**	**54**	⇑P	**Pn**	**23 17 35.2**	**+1.3**
DRGR		**7.95**	**54**	⇑*i*P	**Pn**	**23 17 35.2**	**+1.3**
DRGR		**7.95**	**54**	P	**Pn**	**23 17 35.2**	**+1.3**
KRLC	**Kraliky**	**7.98**	**16**	*e*P	**Pn**	**23 17 33.6**	**-0.6**
KRLC				*e*		23 19 00.2	
KRLC	**Kraliky**	**7.98**	**16**	*e*PN	**Pn**	**23 17 33.6**	**-0.6**
KRLC				*e*SN	**Sn**	**23 19 00.2**	**-4.0**
KRLC	**Kraliky**	**7.98**	**16**	*e*P	**Pn**	**23 17 33.6**	**-0.6**
TANN	**Tannenbergstha**	**7.98**	**356**	*e*Pn	**Pn**	**23 17 33.4**	**-0.9**
FILF	**Fillols**	**7.99**	**274**	P	**Pn**	**23 17 34.2**	**-0.2**
FILF	**Fillols**	**7.99**	**274**	P	**Pn**	**23 17 34.2**	**-0.2**
FILF	**Fillols**	**7.99**	**274**	P	**Pn**	**23 17 34.2**	**-0.2**
SMF	**Signal de Mont**	**7.99**	**305**	*e*Pn	**Pn**	**23 17 34.3**	**-0.1**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**23 18 58.8**	**-5.6**
	comp=Z,62nm,0.6s,SNR=1.0						
SMF	**Signal de Mont**	**7.99**	**305**	*e*P	**Pn**	**23 17 34.3**	**-0.1**
SMF				*e*		23 18 58.8	
SMF	**Signal de Mont**	**7.99**	**305**	*e*Pn	**Pn**	**23 17 34.3**	**-0.1**
SMF				*e*Sn	**Sn**	**23 18 58.8**	**-5.6**
SMF	**Signal de Mont**	**7.99**	**305**	*e*Pn	**Pn**	**23 17 34.3**	**-0.1**
	SNR=1.0						
LOT	**Lotru**	**8.08**	**65**	⇓*i*P	**Pn**	**23 17 38.6**	**+2.9**
OKC	**Ostrava-Krasne**	**8.09**	**23**	*e*PN	**Pn**	**23 17 34.9**	**-0.8**
OKC				*e*SN	**Sn**	**23 19 02.5**	**-4.4**
OKC				AMS	AMS	23 21 20.0	
	comp=Z,4µm,10.0s						
NEO	**Neokhori**	**8.10**	**110**	*e*P	**Pn**	**23 17 36.2**	**+0.2**
PVCC	**Panska Ves**	**8.11**	**5**	*e*PN	**Pn**	**23 17 35.7**	**-0.4**
PVCC				*e*SN	**Sn**	**23 19 03.9**	**-3.6**
PVCC				AMS	AMS	23 20 50.0	
	comp=Z,2µm,8.6s						
PAGF	**Fort de Pagny**	**8.12**	**321**	*e*Pn	**Pn**	**23 17 36.1**	**-0.1**
PAGF				*e*Sn	**Sn**	**23 19 03.6**	**-4.0**
	comp=Z,95nm,1.0s						
PAGF	**Fort de Pagny**	**8.12**	**321**	*e*Pn	**Pn**	**23 17 36.1**	**-0.1**
PAGF				*e*Sn	**Sn**	**23 19 03.6**	**-4.0**
PAGF	**Fort de Pagny**	**8.12**	**321**	*e*Pn	**Pn**	**23 17 36.1**	**-0.1**
PYM	**Petit Puy Mans**	**8.15**	**297**	P	**Pn**	**23 17 37.9**	**+1.3**
PYM	**Petit Puy Mans**	**8.15**	**297**	P	**Pn**	**23 17 37.9**	**+1.3**
PYM	**Petit Puy Mans**	**8.15**	**297**	P	**Pn**	**23 17 37.9**	**+1.3**
PYM	**Petit Puy Mans**	**8.15**	**297**	P	**Pn**	**23 17 37.9**	**+1.3**
DPC	**Dobruska-Polom**	**8.15**	**13**	*e*P	**Pn**	**23 17 35.0**	**-1.7**
DPC	**Dobruska-Polom**	**8.15**	**13**	*e*Pn	**Pn**	**23 17 35.0**	**-1.7**
DPC	**Dobruska-Polom**	**8.15**	**13**	*e*PN	**Pn**	**23 17 34.8**	**-1.9**
DPC				*e*SN	**Sn**	**23 19 03.9**	**-4.6**
DPC				AMS	AMS	23 21 00.0	
	comp=Z,4µm,10.4s						
DPC	**Dobruska-Polom**	**8.15**	**13**	*e*P	**Pn**	**23 17 35.0**	**-1.7**
CASM	**Ain Smara**	**8.16**	**223**	P	**Pn**	**23 17 38.5**	**+1.6**
CASM	**Ain Smara**	**8.16**	**223**	P	**Pn**	**23 17 38.5**	**+1.6**
AGO	**Saint Agoulin**	**8.18**	**300**	P	**Pn**	**23 17 36.9**	**-0.1**
AGO	**Saint Agoulin**	**8.18**	**300**	P	**Pn**	**23 17 36.9**	**-0.1**
AGO	**Saint Agoulin**	**8.18**	**300**	P	**Pn**	**23 17 36.9**	**-0.1**
MTLF	**Montolieu**	**8.23**	**280**	*e*Pn	**Pn**	**23 17 36.9**	**-0.9**
	SNR=1.0						
MTLF	**Montolieu**	**8.23**	**280**	*e*P	**Pn**	**23 17 36.9**	**-0.9**
MTLF	**Montolieu**	**8.23**	**280**	*e*Pn	**Pn**	**23 17 36.9**	**-0.9**
MTLF	**Montolieu**	**8.23**	**280**	*e*Pn	**Pn**	**23 17 36.9**	**-0.9**
	SNR=1.0						
MOX	**Moxa**	**8.28**	**352**	*e*P	**Pn**	**23 17 37.9**	**-0.4**
MOX	**Moxa**	**8.28**	**352**	*e*Pn	**Pn**	**23 17 37.9**	**-0.4**
MOX	**Moxa**	**8.28**	**352**	*e*P	**Pn**	**23 17 37.9**	**-0.4**
LOR	**Lormes**	**8.29**	**309**	*e*Pn	**Pn**	**23 17 38.1**	**-0.4**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**23 19 07.8**	**-4.0**
	comp=Z,48nm,0.6s,SNR=1.0						
LOR	**Lormes**	**8.29**	**309**	*e*Pn	**Pn**	**23 17 38.1**	**-0.4**
LOR				*e*Sn	**Sn**	**23 19 07.8**	**-4.0**
LOR	**Lormes**	**8.29**	**309**	*e*Pn	**Pn**	**23 17 38.1**	**-0.4**
	SNR=1.0						
RAC	**Raciborz**	**8.32**	**22**	*e*P	Pn	23 17 43.6	+4.6
AVF	**Avril sur Loir**	**8.35**	**305**	*e*Pn	**Pn**	**23 17 39.0**	**-0.3**
	SNR=1.0						
AVF	**Avril sur Loir**	**8.35**	**305**	*e*P	**Pn**	**23 17 39.0**	**-0.3**
AVF	**Avril sur Loir**	**8.35**	**305**	*e*Pn	**Pn**	**23 17 39.0**	**-0.3**
AVF	**Avril sur Loir**	**8.35**	**305**	*e*Pn	**Pn**	**23 17 39.0**	**-0.3**
	SNR=1.0						
SSF	**Saint Saulge**	**8.39**	**307**	*e*Pn	**Pn**	**23 17 39.1**	**-0.8**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**23 19 10.8**	**-3.5**
	comp=Z,39nm,0.6s,SNR=1.0						
SSF	**Saint Saulge**	**8.39**	**307**	*e*P	**Pn**	**23 17 39.1**	**-0.8**
SSF				*e*		23 19 10.8	
SSF	**Saint Saulge**	**8.39**	**307**	*e*Pn	**Pn**	**23 17 39.1**	**-0.8**
SSF				*e*Sn	**Sn**	**23 19 10.8**	**-3.5**
SSF	**Saint Saulge**	**8.39**	**307**	*e*Pn	**Pn**	**23 17 39.1**	**-0.8**
	SNR=1.0						
MEZF	**Maizieres J'vi**	**8.40**	**319**	*e*Pn	**Pn**	**23 17 39.9**	**-0.1**
	SNR=1.0						
MEZF	**Maizieres J'vi**	**8.40**	**319**	*e*Pn	**Pn**	**23 17 39.9**	**-0.1**
MEZF	**Maizieres J'vi**	**8.40**	**319**	*e*Pn	**Pn**	**23 17 39.9**	**-0.1**
	SNR=1.0						
BRG	**Berggiesshubel**	**8.43**	**2**	PN	**Pn**	**23 17 40.4**	**0.0**
	comp=Z,5.5nm,0.5s						
BRG				*i*		23 17 50.2	
BRG				*i*		23 19 11.7	
BRG				*i*		23 19 43.4	
BRG				*i*		23 20 19.4	
	comp=Z,437nm,1.8s						
BRG							
	comp=N,3µm,5.5s						
BRG							
	comp=E,8µm,10.4s						
BRG							
	comp=Z,4µm,6.1s						
BRG	**Berggiesshubel**	**8.43**	**2**	P	**Pn**	**23 17 40.4**	**0.0**
BRG				*i*		23 19 11.7	
BRG				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BRG				MLR	MLR		
	comp=N,3µm,5.5s						
BRG				MLR	MLR		
	comp=E,8µm,10.4s						
BRG				MLR	MLR		
	comp=Z,4µm,6.1s						
BRG	**Berggiesshubel**	**8.43**	**2**	*e*Pn	**Pn**	**23 17 40.4**	**0.0**
BRG	**Berggiesshubel**	**8.43**	**2**	P	**Pn**	**23 17 40.4**	**0.0**
	comp=Z,6.0nm,0.5s						
ITM	**Ithomi**	**8.43**	**126**	*e*P	**Pn**	**23 17 41.3**	**+0.8**
RUP	**Ruppelstein**	**8.46**	**331**	P	**Pn**	**23 17 40.6**	**-0.3**
RUP	**Ruppelstein**	**8.46**	**331**	P	**Pn**	**23 17 40.6**	**-0.3**
RUP	**Ruppelstein**	**8.46**	**331**	P	**Pn**	**23 17 40.6**	**-0.3**
NIE	**Niedzica**	**8.47**	**32**	*e*P	Pn	23 17 45.0	+3.9
NIE				*e*		23 19 26.3	
NIE	**Niedzica**	**8.47**	**32**	*e*P	Pn	23 17 45.0	+3.9
NIE				*e*Sn	Sn	23 19 26.3	+10
TNS	**Taunus Mts**	**8.48**	**338**	*e*P	**Pn**	**23 17 41.7**	**+0.6**
TNS	**Taunus Mts**	**8.48**	**338**	*e*Pn	**Pn**	**23 17 41.7**	**+0.6**
TNS	**Taunus Mts**	**8.48**	**338**	*e*P	**Pn**	**23 17 41.7**	**+0.6**
CAF	**Calviac**	**8.55**	**291**	*e*P	**Pn**	**23 17 42.9**	**+0.7**
CAF	**Calviac**	**8.55**	**291**	*e*P	**Pn**	**23 17 42.9**	**+0.7**
CAF	**Calviac**	**8.55**	**291**	*e*P	**Pn**	**23 17 42.9**	**+0.7**
CAF	**Calviac**	**8.55**	**291**	*e*P	**Pn**	**23 17 42.9**	**+0.7**
BGF	**Bois d'Agland**	**8.56**	**302**	*e*P	**Pn**	**23 17 42.0**	**-0.2**
BGF				*e*Sn	Sn	23 19 12.0	-6.5
	comp=Z,35nm,0.5s,SNR=1.0						
BGF	**Bois d'Agland**	**8.56**	**302**	*e*P	**Pn**	**23 17 42.0**	**-0.2**
BGF				*e*		23 19 12.0	
BGF	**Bois d'Agland**	**8.56**	**302**	*e*P	**Pn**	**23 17 42.0**	**-0.2**
BGF				*e*Sn	Sn	23 19 12.0	-6.5
BGF	**Bois d'Agland**	**8.56**	**302**	*e*P	**Pn**	**23 17 42.0**	**-0.2**
CRVS	**Cervenica-Dubn**	**8.58**	**39**	*e*P	**Pn**	**23 17 43.0**	**+0.5**
CRVS				MLR	MLR		
	comp=Z,500nm,1.9s						
CRVS	**Cervenica-Dubn**	**8.58**	**39**	*e*PN	**Pn**	**23 17 43.0**	**+0.5**
CRVS				*e*PG	**Pg**	**23 18 24.8**	**+1.9**
CRVS				*e*		23 20 25.7	
CRVS	**Cervenica-Dubn**	**8.58**	**39**	*e*P	**Pn**	**23 17 43.0**	**+0.5**
	comp=Z,500nm,1.9s						
TRPA	**Tarpa**	**8.60**	**46**	⇑*i*P	**Pn**	**23 17 43.6**	**+0.9**
TRPA	**Tarpa**	**8.60**	**46**	⇓*e*Pn	**Pn**	**23 17 42.0**	**-0.7**
TRPA	**Tarpa**	**8.60**	**46**	⇓*e*P	**Pn**	**23 17 42.0**	**-0.7**
KSP	**Ksiaz**	**8.62**	**12**	*e*P	**Pn**	**23 17 43.3**	**+0.2**
KSP	**Ksiaz**	**8.62**	**12**	*e*P	**Pn**	**23 17 44.6**	**+1.5**
KSP	**Ksiaz**	**8.62**	**12**	*e*P	**Pn**	**23 17 43.3**	**+0.2**
ARR	**Arges**	**8.64**	**67**	⇑*i*P	**Pn**	**23 17 44.9**	**+1.6**
UBBA	**Unterbreizbach**	**8.68**	**346**	*e*Pn	**Pn**	**23 17 43.8**	**+0.1**
HUMR	**Humele**	**8.69**	**72**	⇑*i*P	**Pn**	**23 17 44.5**	**+0.5**
MDB	**Medias**	**8.71**	**61**	⇓*i*P	Pn	23 17 47.8	+3.5
WLF	**Walferdange**	**8.78**	**328**	PN	**Pn**	**23 17 45.2**	**0.0**
WLF				SN	**Sn**	**23 19 23.7**	**0.0**
	comp=N,46nm,0.0s						
WLF	**Walferdange**	**8.78**	**328**	*e*P	**Pn**	**23 17 44.2**	**-0.9**
WLF				*e*		23 19 19.9	
WLF	**Walferdange**	**8.78**	**328**	*e*Pn	**Pn**	**23 17 46.9**	**+1.7**
WLF	**Walferdange**	**8.78**	**328**	*e*Pn	**Pn**	**23 17 44.2**	**-0.9**
WLF				*e*Sn	**Sn**	**23 19 19.9**	**-3.9**
WLF	**Walferdange**	**8.78**	**328**	*e*P	**Pn**	**23 17 44.2**	**-0.9**
SET	**Setif**	**8.78**	**227**	P	Pn	23 17 51.0	+5.6
UZH	**Uzhgorod**	**8.79**	**42**	*e*P	**Pn**	**23 17 46.5**	**+1.2**
UZH				*e*S	**Sn**	**23 19 25.0**	**+0.9**
UZH				MLR	MLR		
	comp=N,5µm,10.0s						
UZH				MLR	MLR		
	comp=E,8µm,10.0s						
UZH				MLR	MLR		
	comp=Z,3µm,10.0s						
UZH	**Uzhgorod**	**8.79**	**42**	*e*P	**Pn**	**23 17 46.5**	**+1.2**
CLL	**Collm**	**8.86**	**359**	*e*P	**Pn**	**23 17 45.0**	**-1.2**
CLL				*e*		23 19 21.0	
CLL	**Collm**	**8.86**	**359**	*e*Pn	**Pn**	**23 17 44.8**	**-1.4**
CLL	**Collm**	**8.86**	**359**	*e*Pn	**Pn**	**23 17 45.0**	**-1.2**
CLL				*e*Sn	**Sn**	**23 19 21.0**	**-4.7**
CLL				*e*Sb1		23 20 01.0	
CLL				*e*Sg	Sg	23 20 31.0	+8.2
	comp=E,8µm,21.2s						
CLL				L	L	23 20 54.0	
	comp=Z,900nm,21.1s						
CLL				Lmax		23 22 00.0	
CLL	**Collm**	**8.86**	**359**	*e*P	**Pn**	**23 17 45.0**	**-1.2**
TCF	**Toulx Ste Croi**	**8.86**	**299**	*e*Pn	**Pn**	**23 17 46.5**	**+0.2**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**8.86**	**299**	*e*P	**Pn**	**23 17 46.5**	**+0.2**
TCF	**Toulx Ste Croi**	**8.86**	**299**	*e*Pn	**Pn**	**23 17 46.5**	**+0.2**
TCF	**Toulx Ste Croi**	**8.86**	**299**	*e*Pn	**Pn**	**23 17 46.5**	**+0.2**
	SNR=1.0						
ZIMR		**8.87**	**78**	⇓P	**Pn**	**23 17 47.3**	**+0.9**
ZIMR		**8.87**	**78**	⇓*i*P	**Pn**	**23 17 47.3**	**+0.9**
ZIMR		**8.87**	**78**	P	**Pn**	**23 17 47.3**	**+0.9**
VOIR		**8.94**	**67**	P	**Pn**	**23 17 50.2**	**+2.7**
VOIR		**8.94**	**67**	⇑*i*P	**Pn**	**23 17 49.4**	**+1.9**
VOIR		**8.94**	**67**	⇑*i*P	**Pn**	**23 17 49.4**	**+1.9**
OJC	**Ojcow**	**8.94**	**28**	*e*P	Pn	23 17 50.7	+3.2
OJC	**Ojcow**	**8.94**	**28**	*e*Pn	Pn	23 17 50.7	+3.2
OJC	**Ojcow**	**8.94**	**28**	*e*P	**Pn**	**23 17 50.4**	**+2.9**
OJC				*e*Sn	**Sn**	**23 19 29.0**	**+1.1**
OJC				L	L	23 22 01.2	
	comp=Z,6µm,12.0s						
KOLS	**Kolonicke sedl**	**8.98**	**41**	*e*P	**Pn**	**23 17 48.2**	**+0.2**
KOLS				MLR	MLR		
	comp=Z,3µm,5.1s						
KOLS	**Kolonicke sedl**	**8.98**	**41**	*e*PN	**Pn**	**23 17 48.2**	**+0.2**
KOLS				*e*PG	**Pg**	**23 18 33.2**	**+2.5**
KOLS				*e*		23 20 30.9	
KOLS	**Kolonicke sedl**	**8.98**	**41**	*e*P	**Pn**	**23 17 48.2**	**+0.2**
	comp=Z,3µm,5.1s						
RJF	**Les Rejaudoux**	**9.02**	**292**	*e*P	**Pn**	**23 17 49.9**	**+1.4**
RJF	**Les Rejaudoux**	**9.02**	**292**	*e*P	**Pn**	**23 17 49.9**	**+1.4**
RJF	**Les Rejaudoux**	**9.02**	**292**	*e*P	**Pn**	**23 17 49.9**	**+1.4**
RJF	**Les Rejaudoux**	**9.02**	**292**	*e*P	**Pn**	**23 17 49.9**	**+1.4**
NAIG	**Nisos Aigina**	**9.06**	**118**	*e*P	**Pn**	**23 17 51.5**	**+2.4**
ATH	**Athens Observa**	**9.10**	**116**	*e*P	**Pn**	**23 17 50.5**	**+0.9**
RDO	**Rodhopi**	**9.19**	**94**	*e*P	**Pn**	**23 17 50.7**	**-0.1**
DOPR	**Dopca**	**9.32**	**64**	⇓*i*P	**Pn**	**23 17 53.9**	**+1.3**
VLI	**Veliai**	**9.35**	**125**	*e*P	**Pn**	**23 17 55.7**	**+2.7**
LFF	**La Frestale**	**9.48**	**289**	*e*P	**Pn**	**23 17 56.0**	**+1.2**
LFF	**La Frestale**	**9.48**	**289**	*e*P	**Pn**	**23 17 56.0**	**+1.2**
LFF	**La Frestale**	**9.48**	**289**	*e*P	**Pn**	**23 17 56.0**	**+1.2**
LFF	**La Frestale**	**9.48**	**289**	*e*P	**Pn**	**23 17 56.0**	**+1.2**
SECR		**9.55**	**70**	⇓*i*P	**Pn**	**23 17 57.3**	**+1.5**
MLR	**Muntele Rosu**	**9.56**	**67**	Pn	**Pn**	**23 17 57.9**	**+1.8**
MLR				Sn	Sn	23 19 55.8	+12
MLR	**Muntele Rosu**	**9.56**	**67**	Pn	**Pn**	**23 17 57.9**	**+1.8**
	baz=268,slow=8.1						
MLR				Sn	Sn	23 19 55.8	+12
	comp=Z,0.1nm,0.3s,baz=111,slow=23,SNR=1.9						
MLR	**Muntele Rosu**	**9.56**	**67**	P	**Pn**	**23 17 57.9**	**+1.8**
MEM	**Membach**	**9.60**	**331**	PN	**Pn**	**23 17 57.4**	**+1.0**
EPF	**Esparros**	**9.60**	**278**	*e*Pn	**Pn**	**23 17 54.8**	**-1.8**
EPF	**Esparros**	**9.60**	**278**	*e*P	**Pn**	**23 17 54.8**	**-1.8**
EPF	**Esparros**	**9.60**	**278**	*e*Pn	**Pn**	**23 17 54.8**	**-1.8**
EPF	**Esparros**	**9.60**	**278**	*e*Pn	**Pn**	**23 17 54.8**	**-1.8**
CLZ	**Clausthal**	**9.61**	**349**	*e*P	**Pn**	**23 17 57.1**	**+0.6**
CLZ	**Clausthal**	**9.61**	**349**	*e*Pn	**Pn**	**23 17 57.1**	**+0.6**
CLZ	**Clausthal**	**9.61**	**349**	*e*P	**Pn**	**23 17 57.1**	**+0.6**
GIVF	**Givet**	**9.66**	**325**	*e*Pn	**Pn**	**23 17 58.0**	**+0.7**
	SNR=1.0						
GIVF	**Givet**	**9.66**	**325**	*e*P	**Pn**	**23 17 58.0**	**+0.7**
GIVF	**Givet**	**9.66**	**325**	*e*Pn	**Pn**	**23 17 58.0**	**+0.7**
GIVF	**Givet**	**9.66**	**325**	*e*Pn	**Pn**	**23 17 58.0**	**+0.7**
	SNR=1.0						
KWP	**Kalwaria Pacla**	**9.67**	**39**	*e*P	**Pn**	**23 18 00.4**	**+3.0**
KWP				*e*		23 19 47.8	
KWP	**Kalwaria Pacla**	**9.67**	**39**	*e*Pn	**Pn**	**23 18 00.4**	**+3.0**
KWP				*e*Sn	**Sn**	**23 19 47.8**	**+2.1**
KWP	**Kalwaria Pacla**	**9.67**	**39**	⇑*i*P	**Pn**	**23 17 59.9**	**+2.5**
KWP	**Kalwaria Pacla**	**9.67**	**39**	*e*P	Pn	23 18 01.8	+4.4
KYTH	**Kithira**	**9.70**	**126**	*e*P	Pn	23 18 01.0	+3.1
BCLA	**Clavier**	**9.71**	**328**	PN	**Pn**	**23 17 59.5**	**+1.6**
BCLA				SN	**Sn**	**23 19 42.8**	**-3.9**
	comp=N,25nm,0.0s						
ENEZ	**Enez**	**9.73**	**96**	*e*P	**Pn**	**23 17 56.7**	**-1.6**
HGN	**Heimansgroeve**	**9.75**	**331**	*e*P	**Pn**	**23 18 00.2**	**+1.7**
	comp=N,29nm,1.1s						
HGN				*e*S	**Sn**	**23 19 47.1**	**-0.6**
HGN	**Heimansgroeve**	**9.75**	**331**	*e*P	**Pn**	**23 18 00.2**	**+1.7**
	comp=N,29nm,1.1s						
DOU	**Dourbes**	**9.75**	**325**	PN	**Pn**	**23 18 00.7**	**+2.2**
DOU				SN	**Sn**	**23 19 45.7**	**-2.0**
	comp=E,18nm,0.0s						
BURAR	**Bucovina Array**	**9.84**	**54**	P	**Pn**	**23 18 02.4**	**+2.5**
BUR08	**Bucovina Ar. S**	**9.85**	**54**	*e*Pn	**Pn**	**23 18 01.1**	**+1.2**
BUR08				*e*Sn	**Sn**	**23 19 49.1**	**-1.1**
BUR08	**Bucovina Ar. S**	**9.85**	**54**	*e*Pn	**Pn**	**23 18 01.1**	**+1.2**
BAIF	**Baives**	**9.89**	**323**	*e*Pn	**Pn**	**23 18 00.1**	**-0.4**
	SNR=1.0						
BAIF	**Baives**	**9.89**	**323**	*e*P	**Pn**	**23 18 00.1**	**-0.4**
BAIF	**Baives**	**9.89**	**323**	*e*Pn	**Pn**	**23 18 00.1**	**-0.4**
BAIF	**Baives**	**9.89**	**323**	*e*Pn	**Pn**	**23 18 00.1**	**-0.4**
	SNR=1.0						
ISR	**Istrita**	**9.89**	**70**	⇑P	**Pn**	**23 18 02.3**	**+1.8**
ISR	**Istrita**	**9.89**	**70**	⇑*i*P	**Pn**	**23 18 02.3**	**+1.8**
ISR	**Istrita**	**9.89**	**70**	P	**Pn**	**23 18 02.3**	**+1.8**
ADJB	**Djebel Djouab**	**9.93**	**234**	P	Pn	23 18 07.5	+6.3
EDRB	**Edirne**	**9.96**	**89**	*e*P	**Pn**	**23 17 60.0**	**-1.4**
GELI	**Tayfur-Gelibol**	**10.06**	**97**	*e*P	**Pn**	**23 18 01.1**	**-1.7**
EZN	**Ezine**	**10.12**	**101**	*e*P	**Pn**	**23 18 01.7**	**-1.9**
PLOR	**Plostina**	**10.13**	**66**	P	**Pn**	**23 18 05.1**	**+1.3**
PLOR	**Plostina**	**10.13**	**66**	⇑*i*P	**Pn**	**23 18 05.0**	**+1.3**
PLOR	**Plostina**	**10.13**	**66**	P	**Pn**	**23 18 05.1**	**+1.3**
VRI	**Vrincioaia**	**10.19**	**66**	P	**Pn**	**23 18 05.9**	**+1.4**
VRI	**Vrincioaia**	**10.19**	**66**	⇑*i*P	**Pn**	**23 18 05.1**	**+0.6**
VRI	**Vrincioaia**	**10.19**	**66**	P	**Pn**	**23 18 05.9**	**+1.4**

SNF Seneffe 10.19 325 PN Pn 23 18 05.7 +1.1
EMHD Djebel Mahouad 10.20 236 P Pn 23 18 10.0 +5.2
GRER 10.24 69⇑*i*P Pn 23 18 08.0 +2.7
LPK Lapseki 10.28 97 *e*P Pn 23 18 04.2 -1.5
NRDL Niedersach Rie 10.28 349 *e*Pn Pn 23 18 07.0 +1.4
TESR 10.32 62⇑*i*P Pn 23 18 08.0 +1.7
PRAR RASCA 10.35 57⇓*i*P Pn 23 18 10.4 +3.6
AMRR Amara 10.37 73 ⇑P Pn 23 18 07.4 +0.4
AMRR Amara 10.37 73⇑*i*P Pn 23 18 07.4 +0.4
AMRR Amara 10.37 73 P Pn 23 18 07.4 +0.4
LVV L'vov 10.43 41 *e*P Pn 23 18 10.6 +2.8
LVV *e*S Sn 23 20 11.2 +6.9
LVV MLR MLR
comp=N,2µm,10.0s
LVV MLR MLR
comp=E,2µm,10.0s
LVV MLR MLR
comp=Z,2µm,10.0s
PETR 10.49 67⇑*i*P Pn 23 18 16.9 +8.2
MFF Saint Martin d 10.50 298 *e*P Pn 23 18 11.5 +2.8
MFF Saint Martin d 10.50 298 *e*P Pn 23 18 11.5 +2.8
MFF Saint Martin d 10.50 298 *e*P Pn 23 18 11.5 +2.8
RKY Sarkoy-Tekirda 10.50 95 *e*P Pn 23 18 07.6 -1.3
WTSB Winterswijk 10.50 337 *e*P Pn 23 18 10.5 +1.7
comp=Z,10nm,0.5s
WTSB Winterswijk 10.50 337 *e*P Pn 23 18 10.5 +1.7
comp=Z,10nm,0.5s
KRBG Karabiga-Canak 10.66 96 *e*P Pn 23 18 09.3 -1.7
GHRR 10.70 66⇑*i*P Pn 23 18 15.1 +3.7
APE Apeiranthos 10.80 116 *e*P Pn 23 18 14.2 +1.3
APE Apeiranthos 10.80 116 ⇑P Pn 23 18 13.4 +0.5
APE Apeiranthos 10.80 116⇑*i*P Pn 23 18 13.4 +0.5
APE Apeiranthos 10.80 116 P Pn 23 18 13.4 +0.5
CRLT Corlu 10.81 92 *e*P Pn 23 18 12.6 -0.5
VAM Vamos 10.98 126 *e*P Pn 23 18 17.8 +2.4
CFR Carcaliu 11.01 71 P Pn 23 18 16.8 +1.0
CFR Carcaliu 11.01 71 P Pn 23 18 16.8 +1.0
EBNR Beni Rached 11.03 240 P Pn 23 18 14.0 -2.2
EBNR Beni Rached 11.03 240 P Pn 23 18 14.0 -2.2
GONE Gonen-Balikesi 11.05 98 *e*P Pn 23 18 15.1 -1.2
EDC Edincik 11.09 96 *e*P Pn 23 18 15.8 -1.1
TIRR Tirgusor 11.12 75 ⇑P Pn 23 18 17.3 0.0
TIRR Tirgusor 11.12 75 *e*Pn Pn 23 18 15.7 -1.5
TIRR Tirgusor 11.12 75⇑*i*P Pn 23 18 17.3 0.0
TIRR Tirgusor 11.12 75 *e*Pn Pn 23 18 15.7 -1.5
TIRR Tirgusor 11.12 75 P Pn 23 18 17.3 0.0
BNT Bandirma 11.13 96 *e*P Pn 23 18 16.1 -1.3
IAS Iasi 11.13 60 P Pn 23 18 20.1 +2.7
SLVT Silivri 11.14 91 *e*P Pn 23 18 17.0 -0.6
CTYL Yal??k??y-??at 11.16 90 *e*P Pn 23 18 17.5 -0.3
ECHA Ech Chlef 11.22 240 P Pn 23 18 17.0 -1.7
ECHA Ech Chlef 11.22 240 P Pn 23 18 17.0 -1.7
BALB Balikesir 11.32 100 *e*P Pn 23 18 18.1 -1.8
IZM Izmir 11.34 106 *e*P Pn 23 18 19.2 -1.2
CTKS Kestanelik-??a 11.36 91 *e*P Pn 23 18 20.3 -0.2
LEOM Leova 11.36 64 P Pn 23 18 22.1 +1.5
LEOM Leova 11.36 64⇑*i*P Pn 23 18 22.0 +1.5
LEOM Leova 11.36 64 P Pn 23 18 22.1 +1.5
IDI Anoyia 11.48 125 *e*Pn Pn 23 18 21.7 -0.6
IDI Sn Sn 23 20 24.9 -5.3
IDI Anoyia 11.48 125 *e*Pn Pn 23 18 21.7 -0.6
TLCR 11.49 71 ⇑P Pn 23 18 22.6 +0.3
TLCR 11.49 71⇑*i*P Pn 23 18 22.6 +0.3
TLCR 11.49 71 P Pn 23 18 22.6 +0.3
EANR 'Ain N'Sour 11.52 240 P Pn 23 18 19.8 -3.0
EANR 'Ain N'Sour 11.52 240 P Pn 23 18 19.8 -3.0
AKS Akhisar 11.54 103 *e*P Pn 23 18 21.7 -1.4
FLN La Foliniere 11.56 308 *e*Pn Pn 23 18 22.5 -0.8
SNR=1.0
FLN La Foliniere 11.56 308 *e*P Pn 23 18 22.5 -0.8
FLN La Foliniere 11.56 308 *e*Pn Pn 23 18 22.5 -0.8
FLN La Foliniere 11.56 308 *e*Pn Pn 23 18 22.5 -0.8
SNR=1.0
BGKT Bogazkoy 11.57 91 *e*P Pn 23 18 23.0 -0.4
GRR Gorron 11.62 306 *e*Pn Pn 23 18 22.4 -1.6
SNR=1.0
GRR Gorron 11.62 306 *e*P Pn 23 18 22.4 -1.6
GRR Gorron 11.62 306 *e*Pn Pn 23 18 22.4 -1.6
GRR Gorron 11.62 306 *e*Pn Pn 23 18 22.4 -1.6
SNR=1.0
ETRT Tiaret 11.74 237 P Pn 23 18 22.0 -4.0
ARMT Armutlu 11.77 94 *e*P Pn 23 18 25.0 -1.2
ISK Istanbul-Kandi 11.80 91 *e*P Pn 23 18 26.4 -0.3
DST Dursunbey 11.87 99 *e*P Pn 23 18 26.0 -1.5
KIS Kishinev 11.89 62⇑*i*P Pn 23 18 27.5 -0.2
KIS *e*S Sn 23 20 39.0 -1.0
KIS pmax pmax
comp=Z,1µm,2.2s
KIS pmax pmax
comp=N,500nm,2.0s
KIS pmax pmax
comp=E,2µm,2.6s
KIS pmax pmax
comp=N,1µm,3.0s
KIS pmax pmax
comp=E,2µm,3.0s
KIS pmax pmax
comp=Z,1µm,3.0s
KIS MLR MLR
comp=N,2µm,10.0s
KIS MLR MLR
comp=E,3µm,10.0s
KIS MLR MLR
comp=Z,4µm,10.0s
KIS MLR MLR
comp=Z,5µm,12.0s
KIS Kishinev 11.89 62⇑*i*P Pn 23 18 27.5 -0.2
comp=Z,1µm,2.2s
KIS *e*S Sn 23 20 39.0 -1.0
KIS *i* LQ LQ 23 22 16.0
KIS LRM MLR 23 24 00.0
comp=Z,5µm,12.0s
KIS Kishinev 11.89 62⇑*i*P Pn 23 18 29.1 +1.4
KIS Kishinev 11.89 62 *i* P Pn 23 18 27.5 -0.2
comp=Z,500nm,2.0s
BODT Bodrum 12.00 112 *e*P Pn 23 18 29.4 0.0
MLSB Milas 12.21 110 *e*P Pn 23 18 31.9 -0.4
KULA Kula-Manisa 12.29 104 *e*P Pn 23 18 31.2 -2.2
HRT Hereke 12.31 92 *e*P Pn 23 18 32.9 -0.7
TVSB Tavsanli 12.53 98 *e*P Pn 23 18 35.2 -1.6
SGMF Saint Gilles 12.60 303 *e*Pn Pn 23 18 34.6 -2.9
SNR=1.0
SGMF Saint Gilles 12.60 303 *e*P Pn 23 18 34.6 -2.9
SGMF Saint Gilles 12.60 303 *e*Pn Pn 23 18 34.6 -2.9
YER Yerkesik 12.64 110 *e*P Pn 23 18 37.6 -0.5
BSD Bornholm Skovb 12.71 4 *i* P Pn 23 18 37.1 -1.8
BSD Bornholm Skovb 12.71 4 *i* P Pn 23 18 37.1 -1.8
GULT Gulveren 13.03 93 *e*P Pn 23 18 42.4 -1.0
SUW Suwalki 13.27 26 *e*P Pn 23 18 47.2 +0.7
SUW *e* 23 21 15.3
SUW Suwalki 13.27 26 *e*Pn Pn 23 18 47.2 +0.7
SUW *e*Sn Sn 23 21 15.3 +1.7
SUW Suwalki 13.27 26 *e*P Pn 23 18 47.3 +0.7
SUW Suwalki 13.27 26 *e*P Pn 23 18 47.2 +0.7
WOL Wolverton 13.32 317 *e*P Pn 23 18 46.9 -0.4
WOL AMB AMB 23 18 48.9
comp=Z,105nm,2.6s
WOL Wolverton 13.32 317 P Pn 23 18 46.9 -0.4
WOL AMB AMB 23 18 48.9
comp=Z,105nm,2.6s
WOL Wolverton 13.32 317 *e*P Pn 23 18 46.9 -0.4
SKP1 Kophill 13.36 319 *e*P Pn 23 18 47.6 -0.3
SKP1 Kophill 13.36 319 P Pn 23 18 47.6 -0.3
SKP1 Kophill 13.36 319 *e*P Pn 23 18 47.6 -0.3
ESDC Sonseca Array 13.37 264 Pn Pn 23 18 45.9 -2.2
ESDC Sonseca Array 13.37 264 Pn Pn 23 18 45.9 -2.2
comp=Z,0.4nm,0.3s,baz=67,slow=14,SNR=40
ESDC LR LR 23 23 58.9
comp=Z,794nm,18.7s,baz=65,slow=38
ESDC Sonseca Array 13.37 264 Pn Pn 23 18 45.9 -2.2
ESLA Sonseca Array 13.37 264 *e*Pn Pn 23 18 46.9 -1.2
ESLA Sonseca Array 13.37 264 *e*Pn Pn 23 18 46.9 -1.2
MDUB Mudurnu 13.52 92 *e*P Pn 23 18 49.1 -1.1
AK02 Malin Array Si 13.62 48 *e*Pn Pn 23 18 51.0 -0.3
AK02 Malin Array Si 13.62 48 *e*Pn Pn 23 18 51.0 -0.3
KIEV Kiev 13.64 47 *e*P Pn 23 18 51.6 0.0
KIEV 23 21 21.6
KIEV Kiev 13.64 47 *e*Pn Pn 23 18 51.6 0.0
KIEV Sn Sn 23 21 21.6 -1.1
KIEV Kiev 13.64 47 *e*P Pn 23 18 51.6 0.0
AK01 Malin Array Si 13.64 47 *e*Pn Pn 23 18 50.9 -0.7
AK01 Malin Array Si 13.64 47 *e*Pn Pn 23 18 50.9 -0.7

SHUT Suhut-Afyon 13.64 101 *e*P Pn 23 18 49.7 -2.2
AKASG Malin Array Be 13.65 47 P Pn 23 18 51.6 -0.2
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG MLR MLR
comp=Z,1µm,21.0s
AKASG Malin Array Be 13.65 47 Pn Pn 23 18 51.6 -0.2
AKASG Lg Lg 23 23 02.6
AKASG Malin Array Be 13.65 47 Pn Pn 23 18 51.6 -0.2
comp=Z,0.6nm,0.3s,baz=238,slow=13,SNR=13
AKASG Lg Lg 23 23 02.6
comp=Z,0.3nm,0.3s,baz=226,slow=32,SNR=3.0
AKASG LR LR 23 24 38.7
comp=Z,1µm,21.0s,baz=240,slow=40
AKASG Malin Array Be 13.65 47 P Pn 23 18 51.6 -0.2
comp=Z,1µm,21.0s
PAB San Pablo 13.69 264 *e*P Pn 23 18 52.3 -0.2
PAB San Pablo 13.69 264 *e*Pn Pn 23 18 52.3 -0.2
PAB San Pablo 13.69 264 *e*P Pn 23 18 52.3 -0.2
SWN1 Swindon 13.73 316 *e*P Pn 23 18 53.4 +0.5
SWN1 AMB AMB 23 18 55.1
comp=Z,112nm,2.6s
SWN1 Swindon 13.73 316 P Pn 23 18 53.4 +0.5
SWN1 AMB AMB 23 18 55.1
comp=Z,112nm,2.6s
SWN1 Swindon 13.73 316 *e*P Pn 23 18 53.4 +0.5
ELL Elmali 13.96 109 *e*P Pn 23 18 54.1 -2.2
SSW Stow on the Wo 14.02 318 *e*P Pn 23 18 56.7 -0.2
SSW Stow on the Wo 14.02 318 P Pn 23 18 56.7 -0.2
SSW Stow on the Wo 14.02 318 *e*P Pn 23 18 56.7 -0.2
LZLA Zalla 14.29 165 *i* P P 23 19 06.5 -1.3
comp=Z,62nm,1.4s,SNR=43
KIZT Kizilcal 14.50 98 *e*P Pn 23 19 01.6 -1.9
MCH1 Michaelchurch 14.62 316 *e*P Pn 23 19 01.8 -3.2
MCH1 AMB AMB 23 19 14.8
comp=Z,47nm,1.7s
MCH1 Michaelchurch 14.62 316 P Pn 23 19 01.8 -3.2
MCH1 AMB AMB 23 19 14.8
comp=Z,47nm,1.7s
MCH1 Michaelchurch 14.62 316 *e*P Pn 23 19 01.8 -3.2
HLM1 Long Mynd 14.86 318 *e*P Pn 23 19 07.8 -0.5
HLM1 AMB AMB 23 19 17.6
comp=Z,52nm,1.6s
HLM1 Long Mynd 14.86 318 P Pn 23 19 07.8 -0.5
HLM1 AMB AMB 23 19 17.6
comp=Z,52nm,1.6s
HLM1 Long Mynd 14.86 318 *e*P Pn 23 19 07.8 -0.5
PBRG Braganca 14.94 274 *e*P P 23 19 18.8 +3.8
comp=Z,54nm,1.5s
PBRG Braganca 14.94 274 *e*P P 23 19 18.8 +3.8
comp=Z,54nm,1.5s
SIM Simferopol' 15.21 74*c**e*P Pn 23 19 13.1 +0.1
SIM *e*S Sn 23 21 57.9 -3.2
SIM pmax pmax
comp=Z,29nm,1.0s
SIM MLR MLR
comp=Z,1µm,19.0s
NACGM Naroch 15.24 31 *e*P Pn 23 19 11.0 -2.4
MVO Moncorvo 15.27 272 *e*LR LR 23 23 28.9
comp=Z,926nm,18.0s
MNK Minsk 15.36 33*c**e*P Pn 23 19 14.0 -0.9
MNK *e*S Sn 23 22 02.0 -2.7
MNK pmax pmax
comp=E,260nm,1.4s
MNK pmax pmax
comp=Z,260nm,1.1s
MNK pmax pmax
comp=N,460nm,1.2s
MNK smax smax
comp=E,7µm,16.0s
MICGM Minsk 15.38 33⇑*e*P Pn 23 19 14.0 -1.2
IIGN Ignalina 15.39 29 *e*P Pn 23 19 15.0 -0.3
IIGN AMB AMB 23 19 19.3
comp=Z,68nm,1.3s
IIGN Ignalina 15.39 29 *e*P Pn 23 19 15.0 -0.3
comp=Z,68nm,1.3s,SNR=46
BR131 Keskin Array S 15.53 93 *e*Pn Pn 23 19 16.0 -1.3
comp=Z,15nm,0.9s
BR131 Keskin Array S 15.53 93 *e*Pn Pn 23 19 16.0 -1.3
comp=Z,15nm,0.9s
BRTR Keskin Array B 15.53 93 Pn Pn 23 19 17.1 -0.3
BRTR Keskin Array B 15.53 93 Pn Pn 23 19 17.1 -0.3
comp=Z,0.1nm,0.3s,baz=287,slow=12,SNR=15
BRTR Keskin Array B 15.53 93 Pn Pn 23 19 17.1 -0.3
ISAL Salakas 15.53 28 *e*P Pn 23 19 16.3 -0.8
ISAL AMB AMB 23 19 20.8
comp=Z,23nm,1.4s
ISAL Salakas 15.53 28 *e*P Pn 23 19 16.3 -0.8
comp=Z,23nm,1.4s,SNR=46
IZAR Zarasai 15.71 28 *e*P Pn 23 19 18.6 -0.9
IZAR AMB AMB 23 19 28.2
comp=Z,34nm,1.4s
PVRL Vila Real 15.75 273 *e*P P 23 19 25.1 +1.0
comp=Z,56nm,1.7s
PVRL Vila Real 15.75 273 *e*P P 23 19 25.1 +1.0
comp=Z,56nm,1.7s
POLO Lamas de Olo 15.79 273 *e*P P 23 19 29.2 +4.7
comp=Z,28nm,1.6s
POLO Lamas de Olo 15.79 273 *e*P P 23 19 29.2 +4.7
comp=Z,28nm,1.6s
MTE Manteigas 15.82 270 *e*P P 23 19 25.5 +0.7
comp=Z,52nm,1.4s
MTE *e*LR LR 23 23 41.0
comp=Z,1µm,18.0s
MTE Manteigas 15.82 270 *e*Pn Pn 23 19 18.9 -2.1
comp=Z,25nm,1.0s
MTE Manteigas 15.82 270 *e*Pn Pn 23 19 18.9 -2.1
comp=Z,25nm,1.0s
MTE Manteigas 15.82 270 *e*P P 23 19 25.5 +0.7
comp=Z,52nm,1.4s
PCAB Cabril 15.90 275 *e*P P 23 19 32.6 +6.9
comp=Z,94nm,2.0s
PCAB Cabril 15.90 275 *e*P P 23 19 32.6 +6.9
comp=Z,94nm,2.0s
PMRV Marv??o 15.97 266 *e*P Pn 23 19 23.4 +0.4
comp=Z,33nm,1.4s
PMRV *e*LR LR 23 23 47.6
comp=Z,621nm,18.0s
PMRV Marv??o 15.97 266 *e*P Pn 23 19 23.4 +0.4
comp=Z,33nm,1.4s
PGAV Gavieira, Arco 16.04 276 *e*P P 23 19 29.4 +2.1
comp=Z,101nm,1.6s
PGAV *e*LR LR 23 24 09.6
comp=Z,2µm,16.0s
PGAV Gavieira, Arco 16.04 276 *e*P P 23 19 29.4 +2.1
comp=Z,101nm,1.6s
PBAR Barrancos 16.13 261 *e*P Pn 23 19 25.7 +0.7
comp=Z,72nm,1.4s
PBAR Barrancos 16.13 261 *e*P Pn 23 19 25.7 +0.7
comp=Z,72nm,1.4s
PESTR Estremoz 16.30 264 *e*P Pn 23 19 27.7 +0.6
comp=Z,34nm,1.1s
PESTR Estremoz 16.30 264 *e*P Pn 23 19 27.7 +0.6
comp=Z,34nm,1.1s
PTOM Tomar 16.67 268 *e*P P 23 19 33.1 -1.1
comp=Z,73nm,1.4s
PTOM Tomar 16.67 268 *e*P P 23 19 33.1 -1.1
comp=Z,73nm,1.4s
PMTG Montargil 16.70 266 *e*P P 23 19 34.8 +0.3
comp=Z,73nm,1.5s
PMTG Montargil 16.70 266 *e*P P 23 19 34.8 +0.3
comp=Z,73nm,1.5s
EVO Evora 16.72 264 *e*P Pn 23 19 33.1 +0.6
comp=Z,31nm,1.3s
EVO Evora 16.72 264 *e*P Pn 23 19 33.1 +0.6
comp=Z,31nm,1.3s
EKA Eskdalemuir Ar 16.79 326 Pn Pn 23 19 34.1 +0.8
EKA Eskdalemuir Ar 16.79 326 Pn Pn 23 19 34.1 +0.8
baz=142,slow=13,SNR=21
PVAQ Vaqueiros 16.93 260 *e*P P 23 19 39.0 +1.9
comp=Z,65nm,1.6s
PVAQ *e*LR LR 23 24 03.7
comp=Z,1µm,20.0s
PVAQ Vaqueiros 16.93 260 *e*P P 23 19 39.0 +1.9
comp=Z,65nm,1.6s
PCVE Castro Verde 17.07 261 *e*P P 23 19 40.4 +1.7
comp=Z,43nm,1.5s
PCVE Castro Verde 17.07 261 *e*P P 23 19 40.4 +1.7
comp=Z,43nm,1.5s
PBDV Barranco-do-Ve 17.15 259 *e*P P 23 19 44.1 +4.5
comp=Z,60nm,1.5s
PBDV Barranco-do-Ve 17.15 259 *e*P P 23 19 44.1 +4.5
comp=Z,60nm,1.5s
MDT Midelt 17.16 242 P P 23 19 39.3 -0.5
MDT Midelt 17.16 242 P P 23 19 39.3 -0.5
comp=Z,0.1nm,0.3s,baz=63,slow=12,SNR=14

MDT LR LR 23 26 06.2
comp=Z,324nm,18.6s,baz=27,slow=37
CSS Prodhromos 17.26 109 *e*Pn Pn 23 19 38.6 -0.8
comp=Z,100nm,1.3s
KONO Kongsberg 17.37 354 *e*P Pn 23 19 39.5 -1.0
KONO pmax pmax
comp=Z,90nm,1.4s
KONO Kongsberg 17.37 354 *e*Pn Pn 23 19 39.5 -1.0
comp=Z,90nm,1.4s
LIS Lisbon 17.50 265 *e*P P 23 19 43.4 +0.1
LIS AMb AMB 23 19 54.5
comp=Z,128nm,1.6s
LIS *e*S S 23 23 00.6 -4.0
LIS Lisbon 17.50 265 *e*P P 23 19 43.4 +0.1
comp=Z,128nm,1.6s
LIS *e*S S 23 23 00.6 -4.0
LIS Lisbon 17.50 265 *e*P P 23 19 43.4 +0.1
LIS *e*S S 23 23 00.6 -4.0
LIS Lisbon 17.50 265 *e*P P 23 19 43.4 +0.1
comp=Z,128nm,1.6s
LIS *e*S S 23 23 00.6 -4.0
ANN Anapa 17.57 74 *e*P Pn 23 19 40.8 -2.2
ANN *e*S Sn 23 22 54.8 -3.5
ANN pmax pmax
comp=Z,189nm,1.4s
ANN MLR MLR
comp=N,747nm,12.0s
ANN MLR MLR
comp=E,682nm,12.0s
ANN MLR MLR
comp=Z,1µm,12.0s
MORF Marmelete 17.65 260 *e*P P 23 19 45.0 -0.1
MORF *e*S Sn 23 23 03.3 +2.8
HFS Hagfors 17.70 1 P Pn 23 19 43.6 -1.0
HFS Hagfors 17.70 1 P Pn 23 19 43.6 -1.0
comp=Z,0.4nm,0.3s,baz=179,slow=10,SNR=18
HFS LR LR 23 26 38.8
comp=Z,763nm,20.4s,baz=182,slow=38
RTC Rabat Centre 17.97 249 *e*Pn Pn 23 19 46.5 -1.6
NAO01 NORSAR Array S 18.48 356 *e*P P 23 19 53.1 -0.9
comp=Z,21nm,0.8s
VAL Valentia 18.56 309 *e*P P 23 19 47.4 -7.6
NB2 NORSAR Subarra 18.66 357 P P 23 19 55.6 -0.4
comp=Z,28nm,1.1s,baz=175,slow=12
NB2 NORSAR Subarra 18.66 357 P P 23 19 55.6 -0.4
comp=Z,28nm,1.1s,baz=175,slow=11,SNR=6.4
NOA NORSAR Array B 18.66 357 P P 23 19 54.3 -1.7
NOA NORSAR Array B 18.66 357 P P 23 19 54.3 -1.7
comp=Z,0.7nm,0.3s,baz=175,slow=11,SNR=26
NOA LR LR 23 27 05.5
comp=Z,729nm,21.1s,baz=175,slow=37
SOC Sochi 19.28 78*c* *i*P Pn 23 20 04.1 +0.2
SOC *e* 23 23 41.3
SOC pmax pmax
comp=Z,68nm,0.9s
SOC MLR MLR
comp=Z,660nm,16.0s
MALT Malatya 19.51 94 *e*P P 23 20 06.0 +0.4
MALT pmax pmax
comp=Z,91nm,1.2s
MALT Malatya 19.51 94 *e*P P 23 20 06.0 +0.4
comp=Z,91nm,1.2s
VSR Storozhevoye 19.62 55 *e*P P 23 20 06.0 -0.6
VSR *e*S S 23 23 45.0 -2.4
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,60nm,0.9s
VSR pmax pmax
comp=Z,50nm,0.9s
VSR smax smax
comp=N,70nm,1.9s
VSR smax smax
comp=E,90nm,1.9s
VSR smax smax
comp=Z,30nm,0.9s
VSR MLR MLR
comp=N,1µm,12.0s
VSR MLR MLR
comp=E,1µm,12.0s
VSR MLR MLR
comp=Z,2µm,12.0s
VORD Divnogorie 19.63 55 *e*P P 23 20 05.8 -0.8
VORD *e*S S 23 23 44.1 -3.4
VORD pmax pmax
comp=N,40nm,0.9s
VORD pmax pmax
comp=E,100nm,0.9s
VORD pmax pmax
comp=Z,40nm,0.9s
VORD smax smax
comp=N,110nm,1.9s
VORD smax smax
comp=E,120nm,1.9s
VORD smax smax
comp=Z,150nm,1.9s
VORD MLR MLR
comp=E,1µm,12.0s
VORD MLR MLR
comp=Z,1µm,12.0s
VORD MLR MLR
comp=N,110nm,10.0s
OBN Obninsk 19.73 42⇓*i*P P 23 20 06.2 -1.6
OBN *i* S S 23 23 47.2 -2.4
OBN pmax pmax
comp=Z,22nm,0.9s
OBN MLR MLR
comp=Z,1µm,15.0s
OBN Obninsk 19.73 42 *e*P P 23 20 06.1 -1.6
comp=Z,166nm,1.4s
MMAI Mount Meron Ar 19.77 111 P P 23 20 09.0 +0.6
MMAI Mount Meron Ar 19.77 111 P P 23 20 09.0 +0.6
comp=Z,1.2nm,0.3s,baz=319,slow=10.0,SNR=12
MMAI LR LR 23 28 55.6
comp=Z,457nm,21.8s,baz=320,slow=40
VOR Voronezh 19.79 53 P P 23 20 07.0 -1.4
VOR pmax pmax
comp=Z,480nm,2.6s
PUL Pulkovo 20.23 25⇑*e*P P 23 20 12.0 -1.1
PUL pmax pmax
comp=Z,48nm,0.5s
FINES FINESS Array B 20.49 18 P P 23 20 15.6 -0.3
FINES FINESS Array B 20.49 18 P P 23 20 15.6 -0.3
comp=Z,23nm,0.9s,baz=198,slow=9.0,SNR=40
FIA1 FINESS Array S 20.49 18 *e*P P 23 20 15.1 -0.9
MOS Moscow 20.57 41 *e*P P 23 20 15.9 -0.9
MOS *e* 23 20 33.3
MOS *e* 23 20 52.1
MOS *e*S S 23 24 06.9 +0.7
MOS pmax pmax
comp=Z,113nm,1.2s
MOS MLR MLR
comp=E,2µm,10.0s
MOS MLR MLR
comp=Z,2µm,10.0s
TAM Tamanrasset 20.68 201 *e*P P 23 20 18.7 +0.3
TAM pmax pmax
comp=Z,137nm,1.6s
TAM Tamanrasset 20.68 201 *e*P P 23 20 18.6 +0.3
comp=Z,137nm,1.6s
VRHR Novokhopersk 21.09 56 *e*P P 23 20 22.5 0.0
VRHR *e**SP sP 23 20 26.5 -2.2
VRHR *e*S S 23 24 17.2 +0.6
VRHR pmax pmax
comp=N,110nm,1.0s
VRHR pmax pmax
comp=E,220nm,1.0s
VRHR pmax pmax
comp=Z,240nm,1.0s
VRHR smax smax
comp=E,220nm,1.9s
VRHR smax smax
comp=Z,100nm,1.9s
VRHR smax smax
comp=N,30nm,0.6s
VRHR MLR MLR
comp=E,1µm,13.0s
VRHR MLR MLR
comp=Z,1µm,13.0s
VRHR MLR MLR
comp=N,310nm,11.0s
KAF Kangasniemi 21.14 17 *e*P P 23 20 21.2 -1.7
KAF pmax pmax
comp=Z,17nm,0.8s
KAF Kangasniemi 21.14 17 *e*p P 23 20 21.2 -1.7
comp=Z,17nm,0.8s

ASF Jabal al Asfar 21.28 111 P P 23 20 26.8 +1.9
ASF Jabal al Asfar 21.28 111 P P 23 20 26.8 +1.9
comp=Z,8.2nm,0.9s,baz=232,slow=2.6,SNR=4.8
ASF LR LR 23 30 00.8
comp=Z,497nm,19.1s,baz=350,slow=40
KIV Kislovodsk 21.38 76 *eP* **P 23 20 26.7 +0.9**
KIV *eS* **S 23 24 24.5 +1.8**
KIV pmax pmax
comp=Z,79nm,3.5s
KIV pmax pmax
comp=Z,280nm,1.1s
KIV MLR MLR
comp=Z,580nm,15.0s
KIV Kislovodsk 21.38 76 *eP* **P 23 20 25.6 -0.3**
comp=Z,227nm,1.0s
KIV Kislovodsk 21.38 76 P **P 23 20 27.2 +1.4**
SNR=77
EIL Elat 21.55 119 P **P 23 20 28.9 +1.4**
EIL Elat 21.55 119 P **P 23 20 28.9 +1.4**
comp=Z,29nm,1.2s,baz=331,slow=5.6,SNR=6.7
KBZ Khabaz 21.55 77 P **P 23 20 29.0 +1.4**
KBZ pmax pmax
comp=Z,149nm,1.0s
KBZ Khabaz 21.55 77 P **P 23 20 28.9 +1.4**
KBZ Khabaz 21.55 77 P **P 23 20 28.9 +1.4**
comp=Z,149nm,1.0s,baz=284,slow=9.6,SNR=93
ONI Oni 22.12 79 P **P 23 20 37.6 +3.8**
ONI S **S 23 24 39.7 +2.5**
AKH Akhalkalaki 22.39 82 P **P 23 20 40.3 +3.5**
AKH S **S 23 24 47.8 +5.5**
GOR Gori 22.71 81 P **P 23 20 41.9 +1.8**
JOF Joensuu 23.04 21 *eP* **P 23 20 42.3 -0.9**
JOF pmax pmax
comp=Z,8.0nm,0.5s
JOF Joensuu 23.04 21 *ep* **P 23 20 42.3 -0.9**
comp=Z,8.1nm,0.5s
KZR Kazreti 23.07 82 P **P 23 20 45.3 +1.6**
TBLG Delisi 23.23 81 P **P 23 20 47.2 +1.8**
TBLG S S 23 25 04.1 +7.2
DGRG David-gareji 23.75 82 P **P 23 20 53.1 +2.5**
DGRG S Sn 23 25 19.3 -8.0
KLMR Klimovskoe 24.26 32 *eP* **P 23 20 54.0 -1.1**
KLMR *e* 23 21 32.6
KLMR S S 23 24 58.9 -14
KLMR pmax pmax
comp=Z,130nm,1.5s
KLMR MLR MLR
comp=Z,2μm,16.0s
IMRD Marand 24.76 88 *eP* **P 23 21 00.8 +0.8**
IMRD Marand 24.76 88 *eP* **P 23 21 00.8 +0.8**
ITBZ Tabriz 25.25 89 *eP* **P 23 21 04.5 0.0**
ITBZ Tabriz 25.25 89 *eP* **P 23 21 04.5 0.0**
IHRS Heris 25.88 88 *eP* **P 23 21 09.6 -0.7**
IHRS Heris 25.88 88 *eP* **P 23 21 09.6 -0.7**
TMCR Tamitsa 25.94 25 *eP* **P 23 21 09.2 -1.0**
TMCR pmax pmax
comp=Z,81nm,1.3s
IBST Bostanabad 25.98 89 *eP* **P 23 21 11.3 +0.1**
IBST Bostanabad 25.98 89 *eP* **P 23 21 11.3 +0.1**
BHD Baghdad 26.03 100 *ex* **P 23 21 11.7 +0.3**
BHD *ex* **S 23 25 45.3 +3.6**
ISRB Sarab 26.51 88 *eP* **P 23 21 16.0 0.0**
ISRB Sarab 26.51 88 *eP* **P 23 21 16.0 0.0**
IDHR Dehrash 26.82 96 *eP* **P 23 21 19.3 +0.5**
IDHR Dehrash 26.82 96 *eP* **P 23 21 19.3 +0.5**
IGHG Ghaleghazi 27.13 96 *eP* **P 23 21 22.1 +0.5**
IGHG Ghaleghazi 27.13 96 *eP* **P 23 21 22.1 +0.5**
IVIS Veis 27.24 96 *eP* **P 23 21 22.3 -0.2**
IVIS Veis 27.24 96 *eP* **P 23 21 22.3 -0.2**
ARCES ARCESS Array B 27.86 9 P **P 23 21 27.1 -0.5**
ARCES ARCESS Array B 27.86 9 P **P 23 21 27.1 -0.5**
comp=Z,5.8nm,1.0s,baz=185,slow=8.5,SNR=9.8
IKOM Komasi 27.89 96 *eP* **P 23 21 28.8 +0.5**
IKOM Komasi 27.89 96 *eP* **P 23 21 28.8 +0.5**
IRAZ Razeghan 29.13 92 *eP* **P 23 21 40.4 +0.9**
IRAZ Razeghan 29.13 92 *eP* **P 23 21 40.4 +0.9**
IR3 Iran Long-Peri 29.91 91 *eP* **P 23 21 47.6 +1.4**
IR3 Iran Long-Peri 29.91 91 *eP* **P 23 21 47.6 +1.4**
MIB Mutribah 30.00 104 *eP* **P 23 21 47.4 +0.4**
NAY Al-Naaiem 30.25 105 *eP* **P 23 21 49.6 +0.5**
RDF Al-Radifah 30.65 105 *eP* **P 23 21 53.4 +0.7**
TOA0 Torodi Ar. Sit 30.91 203 *eP* **P 23 21 54.9 -0.1**
TORD Torodi Ar. Bea 30.91 203 P **P 23 21 55.6 +0.6**
TORD Torodi Ar. Bea 30.91 203 P **P 23 21 55.6 +0.6**
comp=Z,21nm,1.0s,baz=13,slow=9.0,SNR=34
TORD LR LR 23 35 21.6
comp=Z,413nm,18.9s,baz=15,slow=38
IPIR Pirpir 31.08 96 *eP* **P 23 21 58.3 +1.5**
IPIR Pirpir 31.08 96 *eP* **P 23 21 58.3 +1.5**
IFIR Firoozkooh 31.12 89 *eP* **P 23 21 58.7 +1.6**
IFIR Firoozkooh 31.12 89 *eP* **P 23 21 58.7 +1.6**
IKLH Kolahrood 31.29 94 *eP* **P 23 21 58.8 +0.2**
IKLH Kolahrood 31.29 94 *eP* **P 23 21 58.8 +0.2**
AKTO Aktyubinsk 31.38 60 P **P 23 21 58.5 -0.4**
AKTO pmax pmax
comp=Z,4.0nm,0.5s
AKTO Aktyubinsk 31.38 60 P **P 23 21 58.5 -0.4**
AKTO Aktyubinsk 31.38 60 P **P 23 21 58.5 -0.4**
comp=Z,4.4nm,0.5s,baz=271,slow=9.1,SNR=19
ILAS Lasjerd 31.39 90 *eP* **P 23 22 00.7 +1.3**
ILAS Lasjerd 31.39 90 *eP* **P 23 22 00.7 +1.3**
ISHM Shahmirzad 31.45 89 *eP* **P 23 22 00.8 +0.8**
ISHM Shahmirzad 31.45 89 *eP* **P 23 22 00.8 +0.8**
SOKR Solikamsk 31.51 42 *eP* **P 23 22 00.3 +0.4**
SOKR S **S 23 27 12.8 +5.4**
SOKR pmax pmax
comp=Z,30nm,1.5s
SOKR MLR MLR
comp=Z,1μm,21.0s
ARU Arti 31.90 48 *d iP* **P 23 22 02.7 -0.7**
ARU 23 23 04.9
ARU 23 24 53.6
ARU S **S 23 27 12.3 -1.3**
ARU pmax pmax
comp=Z,89nm,1.2s
ARU MLR MLR
comp=Z,1μm,15.0s
ARU Arti 31.90 48 *eP* **P 23 22 02.1 -1.3**
ARU Arti 31.90 48 PcP **PcP 23 24 53.6 +0.1**
IZEF Zefreh 32.04 94 *eP* **P 23 22 05.2 0.0**
IZEF Zefreh 32.04 94 *eP* **P 23 22 05.2 0.0**
IANJ Anjilo 32.06 89 *eP* **P 23 22 05.4 +0.1**
IANJ Anjilo 32.06 89 *eP* **P 23 22 05.4 +0.1**
IGAR Gharneh 32.07 95 *eP* **P 23 22 05.9 +0.5**
AB31 Akbulak array 32.71 62 *ceP* **P 23 22 10.4 -0.2**
AB31 pmax pmax
comp=Z,20nm,1.2s
ABKAR Akbulak array 32.71 62 *eP* **P 23 22 10.7 +0.1**
ABKAR PP **PnPn 23 23 19.8 +1.2**
SVE Sverdlovsk 33.08 48 *c iP* **P 23 22 14.0 +0.2**
SVE *eS* **S 23 27 33.2 +1.2**
SVE pmax pmax
comp=Z,59nm,0.9s
SVE MLR MLR
comp=Z,2μm,16.0s
ISRV Sarvestan 34.42 99 *eP* **P 23 22 26.8 +0.7**
ISRV Sarvestan 34.42 99 *eP* **P 23 22 26.8 +0.7**
IMEH Mehriz 34.47 95 *eP* **P 23 22 26.4 0.0**
IMEH Mehriz 34.47 95 *eP* **P 23 22 26.4 0.0**
IKRD Kardeh 34.92 84 *eP* P 23 22 37.4 +7.2
IKRD Kardeh 34.92 84 *eP* P 23 22 37.4 +7.2
IBAF Bafgh 35.07 94 *eP* **P 23 22 31.7 +0.2**
IBAF Bafgh 35.07 94 *eP* **P 23 22 31.7 +0.2**
IPAY Payeh 35.40 84 *eP* **P 23 22 35.0 +0.6**
IPAY Payeh 35.40 84 *eP* **P 23 22 35.0 +0.6**
SPITS Spitsbergen Ar 35.85 1 P **P 23 22 37.9 +0.4**
SPITS Spitsbergen Ar 35.85 1 P **P 23 22 37.9 +0.4**
comp=Z,7.9nm,0.8s,baz=165,slow=10,SNR=8.8
IMYA Miami 36.26 84 *eP* **P 23 22 43.1 +1.4**
IMYA Miami 36.26 84 *eP* **P 23 22 43.1 +1.4**
KBS Kingsbay 36.59 360⇑ *eP* P 23 22 47.0 +3.2
KBS pmax pmax
comp=Z,30nm,1.3s
KBS Kingsbay 36.59 360 *eP* P 23 22 48.3 +4.5
BANOM Banah 38.71 101 P **P 23 23 02.7 +0.4**
BRVK Borovoye 38.73 54 *c iP* **P 23 23 03.5 +1.3**
BRVK pmax pmax
comp=Z,81nm,2.5s
BRVK Borovoye 38.73 54 *eP* **P 23 23 01.5 -0.7**
BRVK *ePP* **PnPn 23 24 33.7 +0.8**
BRVK Borovoye 38.73 54 P **P 23 23 03.2 +1.0**
SNR=20
ASUD Al Ashush, Dub 38.78 104 P **P 23 23 03.3 +0.4**

NAZ Nazwa, Dubai 38.80 103 P **P 23 23 04.0 +0.9**
SUMG Summit 38.82 338 *eP* **P 23 23 05.1 +2.0**
SUMG Summit 38.82 338 *eP* **P 23 23 05.1 +2.0**
SUMG Summit 38.82 338 *i P* **P 23 23 05.1 +2.0**
comp=Z,4.5nm,0.9s
SUMG Summit 38.82 338 *i P* **P 23 23 05.1 +2.0**
comp=Z,4.5nm,0.9s
FAQ Al Faqa, Dubai 38.90 103 P **P 23 23 03.6 -0.3**
DBIC Dimbokro 39.12 209 *eP* **P 23 23 05.1 -0.7**
comp=Z,22nm,1.0s
DBIC Dimbokro 39.12 209 P **P 23 23 06.2 +0.4**
comp=Z,21nm,1.1s,baz=2.9,slow=9.0,SNR=12
DBIC LR LR 23 38 25.8
comp=Z,456nm,21.7s,baz=2.5,slow=35
HATD Hatta, Dubai 39.24 103 P **P 23 23 07.0 +0.2**
ASHO Ashiyiah 39.27 103 P **P 23 23 07.3 +0.2**
SNR=12
ATD Arta Tunnel 40.10 132 LR LR 23 42 32.0
comp=Z,104nm,18.3s,baz=308,slow=40
FURI Furi 40.15 139 *eP* **P 23 23 17.1 +2.3**
comp=Z,16nm,1.0s
ARQ Araqi 40.44 104 P **P 23 23 18.1 +1.3**
SNR=12
HOQ Hoqain 40.85 103 P **P 23 23 21.6 +1.4**
SNR=9.4
KK31 Karatay Array 41.24 69 *ceP* **P 23 23 23.3 +0.1**
KK31 pmax pmax
comp=Z,16nm,0.6s
KKAR Karatay Array 41.24 69 *eP* **P 23 23 24.6 +1.4**
KKAR Karatay Array 41.24 69 *eP* **P 23 23 24.6 +1.4**
SMDO Samad 41.71 103 P **P 23 23 28.1 +0.8**
SNR=12
SFJD Kangerlussuaq 41.75 328 *eP* **P 23 23 27.0 0.0**
SFJD Kangerlussuaq 41.75 328 *i P* P 23 23 30.4 +3.4
comp=Z,9.6nm,1.0s
SFJD Kangerlussuaq 41.75 328 P **P 23 23 26.8 -0.2**
comp=Z,39nm,1.3s,baz=87,slow=11,SNR=7.0
JMDO Jabal Madar 42.18 104 P **P 23 23 31.9 +0.9**
SNR=8.8
RBK Rakut 42.66 113 P **P 23 23 36.0 +1.0**
SNR=5.1
KBL Kabul 43.61 81 *eP* **P 23 23 42.1 -0.7**
KBL pmax pmax
comp=Z,6.0nm,0.9s
KBL Kabul 43.61 81 *eP* **P 23 23 42.1 -0.7**
comp=Z,6.0nm,0.9s
EKS2 Erkin-Say 43.64 68 *eP* **P 23 23 44.1 +1.2**
EKS2 *e* 23 25 27.4
EKS2 pmax pmax
comp=Z,38nm,0.8s
EKS2 Erkin-Say 43.64 68 *eP* **P 23 23 44.1 +1.2**
comp=Z,36nm,0.8s
EKS2 PP **PP 23 25 21.0 -3.2**
EKS2 *e*PcP **PcP 23 25 27.4 -2.6**
EKS2 Erkin-Say 43.64 68 P **P 23 23 44.1 +1.2**
SNR=57
AML Almayashu 43.78 69 P **P 23 23 45.7 +1.4**
SNR=11
AML Almayashu 43.78 69 P **P 23 23 43.5 -0.8**
SNR=14
USP Ospenovka 43.92 67 P **P 23 23 46.7 +1.7**
SNR=6.2
AAK Ala-Archa 44.15 68 P **P 23 23 47.8 +0.8**
AAK pmax pmax
comp=Z,7.0nm,0.8s
AAK Ala-Archa 44.15 68 *eP* **P 23 23 47.7 +0.7**
comp=Z,115nm,1.1s
AAK *e*PcP **PcP 23 25 30.7 -1.0**
AAK Ala-Archa 44.15 68 P **P 23 23 48.8 +1.9**
SNR=15
AAK Ala-Archa 44.15 68 P **P 23 23 47.8 +0.8**
comp=Z,7.0nm,0.8s,baz=262,slow=6.0,SNR=27
FRU Bishkek 44.16 68 *i P* **P 23 23 48.0 +1.1**
FRU *e* 23 30 22.0
FRU pmax pmax
comp=Z,90nm,2.0s
CHMS Chumysh 44.19 68 P **P 23 23 47.9 +0.7**
SNR=6.2
KURK Kurchatov 44.27 56 *ceP* **P 23 23 47.8 +0.2**
KURK pmax pmax
comp=Z,23nm,1.7s
KURK Kurchatov 44.27 56 *eP* **P 23 23 47.2 -0.4**
comp=Z,14nm,1.1s
KURK *e*PP **PP 23 25 29.8 -0.8**
KURK Kurchatov 44.27 56 P **P 23 23 48.3 +0.7**
SNR=12
KBK Karagaybulak 44.45 68 P **P 23 23 51.0 +1.7**
SNR=5.2
TKM2 Tokmak 2 44.79 67 *eP* **P 23 23 51.3 -0.9**
TKM2 Tokmak 2 44.79 67 *eP* **P 23 23 51.3 -0.9**
KZA Kyzart 44.87 69 P **P 23 23 54.6 +1.5**
SNR=22
MBAR Mbarara 45.64 155 LR LR 23 43 40.6
comp=Z,165nm,20.8s,baz=358,slow=37
NVS Novosibirsk 45.90 49⇓ *iP* **P 23 24 00.5 +0.1**
NVS *eS* **S 23 30 46.4 +2.4**
NVS pmax pmax
comp=Z,66nm,1.6s
NVS pmax pmax
comp=N,8.0nm,1.0s
NVS pmax pmax
comp=E,12nm,1.5s
NVS smax smax
comp=N,3.0nm,0.8s
NVS smax smax
comp=E,16nm,1.8s
KSH Kashi 46.40 72 P **P 23 24 05.0 +0.2**
KSH PcP **PcP 23 25 42.0 +2.4**
KSH PP **PP 23 25 54.0 +0.3**
KSH PcS **PcS 23 29 35.0 +0.7**
KSH S **S 23 30 52.0 0.0**
KSH ScS **ScS 23 34 00.0 +0.4**
KSH SS SS 23 34 09.0 -8.4
KSH pmax pmax
comp=Z,32nm,0.9s
KSH LR LR
comp=N,180nm,4.7s
KSH LR LR
comp=E,190nm,5.0s
KSH LR LR
comp=Z,440nm,7.1s
ZAA0 Zalesovo Array 47.03 50 *eP* **P 23 24 08.7 -0.7**
ZAA0 *ePP* **PP 23 25 59.1 -0.7**
ZALV Zalesovo Beam 47.03 50 P **P 23 24 09.2 -0.1**
ZALV 23 25 59.8
ZALV pmax pmax
comp=Z,7.0nm,0.6s
ZALV pmax pmax
comp=Z,5.0nm,0.7s
ZALV MLR MLR
comp=Z,433nm,20.3s
ZALV Zalesovo Beam 47.03 50 P **P 23 24 09.2 -0.1**
ZALV PP **PP 23 25 59.8 +0.1**
ZALV Zalesovo Beam 47.03 50 P **P 23 24 09.2 -0.1**
comp=Z,6.7nm,0.6s,baz=281,slow=7.7,SNR=46
ZALV PP **PP 23 25 59.8 +0.1**
comp=Z,4.5nm,0.7s,baz=292,slow=10,SNR=4.5
ZALV LR LR 23 45 10.3
comp=Z,433nm,20.3s,baz=263,slow=38
ZALV Zalesovo Beam 47.03 50 PP PP 23 25 59.8 +0.1
MK31 Makanchi Array 47.81 60 *ceP* **P 23 24 15.7 +0.1**
MK31 pmax pmax
comp=Z,10.0nm,0.6s
MK31 Makanchi Array 47.81 60 *eP* **P 23 24 15.1 -0.6**
MK31 Makanchi Array 47.81 60 *eP* **P 23 24 15.7 +0.1**
comp=Z,10.0nm,0.6s
MKAR Makanchi Array 47.81 60 P **P 23 24 15.8 +0.2**
MKAR 23 26 08.3
MKAR pmax pmax
comp=Z,12nm,0.6s
MKAR pmax pmax
comp=Z,3.0nm,1.0s
MKAR MLR MLR
comp=Z,530nm,20.1s
MKAR Makanchi Array 47.81 60 *eP* **P 23 24 15.6 0.0**
MKAR PP **PP 23 26 08.3 +1.0**
MKAR Makanchi Array 47.81 60 P **P 23 24 15.8 +0.2**
comp=Z,12nm,0.6s,baz=285,slow=6.7,SNR=185
MKAR PP **PP 23 26 08.3 +1.0**
comp=Z,3.1nm,1.0s,baz=294,slow=8.5,SNR=2.8
MKAR LR LR 23 46 02.9
comp=Z,530nm,20.1s,baz=286,slow=38
MKAR Makanchi Array 47.81 60 P **P 23 24 15.8 +0.2**
comp=Z,12nm,0.6s
KMBO Kilima Mbogo 48.44 147 *eP* **P 23 24 20.9 0.0**
comp=Z,9.5nm,1.5s

KMBO Kilima Mbogo 48.44 147 P **P 23 24 22.1 +1.1**
comp=Z,1.0nm,0.7s,baz=28,slow=4.3,SNR=5.6
KMBO LR LR 23 48 38.9
comp=Z,110nm,18.1s,baz=321,slow=41
KMBO Kilima Mbogo 48.44 147 *eP* **P 23 24 21.0 0.0**
comp=Z,9.5nm,1.5s
SCHQ Schefferville 51.58 313 *eP* **P 23 24 43.7 -0.5**
SCHQ Schefferville 51.58 313 P **P 23 24 43.5 -0.7**
comp=Z,7.0nm,0.7s,baz=81,slow=8.9,SNR=12
SCHQ LR LR 23 44 47.1
comp=Z,173nm,19.8s,baz=67,slow=34
SCHQ Schefferville 51.58 313 *eP* **P 23 24 43.7 -0.5**
WMQ Urumqi 52.50 61 P **P 23 24 53.0 +1.7**
WMQ sP **sP 23 25 00.0 +2.2**
WMQ PcP **PcP 23 26 03.0 +1.4**
WMQ PP **PP 23 26 53.0 +3.1**
WMQ ScP **ScP 23 29 59.0 +0.8**
WMQ S **S 23 32 17.0 -0.2**
WMQ ScS **ScS 23 34 39.0 -1.6**
WMQ SS **SS 23 35 53.0 -1.8**
WMQ pmax pmax
comp=Z,41nm,1.1s
WMQ pmax pmax
comp=Z,310nm,6.0s
WMQ LR LR
comp=N,2μm,16.0s
WMQ LR LR
comp=E,1μm,16.0s
WMQ LR LR
comp=Z,990nm,16.0s
RES Resolute Bay 54.07 342 *eP* **P 23 25 03.5 +1.3**
comp=Z,10nm,1.5s
RES Resolute Bay 54.07 342 *eP* **P 23 25 03.5 +1.3**
comp=Z,10nm,1.5s
MOY Mondy 56.95 48 *eP* **P 23 25 24.8 +1.3**
MOY pmax pmax
comp=Z,27nm,2.3s
MOY Mondy 56.95 48 *eP* **P 23 25 24.8 +1.3**
comp=Z,27nm,2.3s
PYUN Piuthan 57.13 80 *eP* **P 23 25 25.0 -0.2**
comp=Z,198nm,0.9s
TIXI Tiksi 57.52 20⇑ *eP* **P 23 25 27.9 +0.9**
TIXI pmax pmax
comp=Z,45nm,2.5s
TIXI Tiksi 57.52 20 *eP* **P 23 25 25.5 -1.5**
comp=Z,24nm,1.3s
TIXI Tiksi 57.52 20 *eP* **P 23 25 27.9 +0.9**
comp=Z,45nm,2.5s
DANN Dangsing 57.55 80 *eP* **P 23 25 27.8 -0.4**
comp=Z,54nm,0.7s
KOLN Koldanda 57.76 80 *eP* **P 23 25 29.3 -0.3**
comp=Z,50nm,1.0s
TLY Talaya 58.39 47 *d iP* **P 23 25 33.5 0.0**
TLY pmax pmax
comp=Z,24nm,1.0s
TLY MLR MLR
comp=Z,573nm,17.0s
TLY Talaya 58.39 47 *eP* **P 23 25 32.9 -0.6**
comp=Z,22nm,0.9s
TLY Talaya 58.39 47 P **P 23 25 35.7 +2.2**
SNR=13
TLY Talaya 58.39 47 *i P* **P 23 25 33.5 0.0**
comp=Z,573nm,17.0s
IRK Irkutsk 58.45 46 *eP* **P 23 25 32.8 -1.1**
IRK pmax pmax
comp=Z,46nm,1.4s
IRK Irkutsk 58.45 46 *eP* **P 23 25 32.8 -1.1**
comp=Z,46nm,1.4s
ZAK Zakamensk 58.84 48 *eP* **P 23 25 37.4 +0.7**
ZAK *e* 23 27 47.1
ZAK pmax pmax
comp=Z,6.0nm,1.6s
ZAK Zakamensk 58.84 48 *eP* **P 23 25 37.4 +0.7**
comp=Z,6.0nm,1.6s
DMN Daman 58.95 80 *eP* **P 23 25 37.5 -0.5**
comp=Z,108nm,1.2s
KKN Kakani 58.97 79 *eP* **P 23 25 37.1 -1.0**
comp=Z,34nm,0.9s
LSZ Lusaka 59.05 163 *eP* **P 23 25 36.7 -1.7**
comp=Z,62nm,2.3s
LSZ Lusaka 59.05 163 *eP* **P 23 25 36.7 -1.7**
comp=Z,62nm,2.3s
PKIN Phulchoki 59.18 79 *eP* **P 23 25 39.4 -0.2**
comp=Z,23nm,0.9s
PKI Pulchoki 59.19 79 *eP* **P 23 25 39.0 -0.8**
GUN Gumba 59.34 79 *eP* **P 23 25 40.2 -0.6**
comp=Z,126nm,1.0s
RAMN Ramite 60.41 79 *eP* **P 23 25 47.0 -1.1**
comp=Z,81nm,0.8s
TAPN Taplejung 60.99 78 *eP* **P 23 25 51.5 -0.6**
ODAN Odare 61.04 79 *eP* **P 23 25 51.5 -0.8**
comp=Z,78nm,1.2s
SONM Songino Array 61.92 50 P **P 23 25 58.4 +0.5**
SONM Songino Array 61.92 50 P **P 23 25 58.4 +0.5**
comp=Z,10nm,0.8s,baz=291,slow=8.4,SNR=89
SONM LR LR 23 54 45.9
comp=Z,841nm,19.1s,baz=270,slow=38
SONM Songino Array 61.92 50 P **P 23 25 58.4 +0.5**
comp=Z,841nm,19.1s
LSA Lhasa 62.11 74 P **P 23 26 00.0 +0.2**
ULN Ulaanbaatar 62.27 49 *eP* **P 23 26 00.2 -0.1**
comp=Z,25nm,1.4s
ULN Ulaanbaatar 62.27 49 P **P 23 26 01.8 +1.5**
SNR=12
ULN Ulaanbaatar 62.27 49 P **P 23 26 01.0 +0.7**
ULN Ulaanbaatar 62.27 49 *eP* **P 23 26 00.2 -0.1**
comp=Z,25nm,1.4s
GTA Gaotai 62.56 61 P **P 23 26 03.4 +1.1**
GTA pP **pP 23 26 08.1 +1.0**
GTA sP **sP 23 26 10.4 +1.5**
GTA ScP **ScP 23 30 45.1 +2.3**
GTA S **S 23 34 33.0 +3.5**
GTA sS **sS 23 34 40.6 +3.1**
GTA SS SS 23 38 40.5 +7.3
GTA pmax pmax
comp=Z,12nm,1.5s
GTA pmax pmax
comp=Z,170nm,6.2s
GTA LR LR
comp=N,360nm,21.4s
GTA LR LR
comp=E,360nm,19.0s
GTA LR LR
comp=Z,700nm,21.4s
YAK Yakutsk 63.99 28 *c iP* **P 23 26 11.7 +0.5**
YAK pmax pmax
comp=Z,19nm,0.8s
YAK pmax pmax
comp=N,13nm,1.2s
YAK pmax pmax
comp=E,15nm,1.2s
YAK Yakutsk 63.99 28 *i P* **P 23 26 11.7 +0.5**
comp=E,13nm,1.2s
LZH Lanzhou 67.08 62 *eP* **P 23 26 32.5 +0.7**
LZH pP **pP 23 26 35.7 -1.0**
LZH sP **sP 23 26 37.2 -1.3**
LZH *e*PP **PP 23 29 01.6 +2.3**
LZH *e*S **S 23 35 24.0 -1.4**
LZH pmax pmax
comp=Z,42nm,1.2s
LZH pmax pmax
comp=Z,120nm,5.1s
LZH LR LR
comp=N,520nm,15.0s
LZH LR LR
comp=E,450nm,14.8s
LZH LR LR
comp=Z,530nm,18.1s
YKW3 Yellowknife Ar 67.35 337 *eP* **P 23 26 32.4 -0.4**
YKW3 Yellowknife Ar 67.35 337 *eP* **P 23 26 32.4 -0.4**
YKA Yellowknife Ar 67.40 337 P **P 23 26 33.0 -0.2**
YKA Yellowknife Ar 67.40 337 P **P 23 26 33.0 -0.2**
comp=Z,1.8nm,0.7s,baz=41,slow=5.8,SNR=27
YKA Yellowknife Ar 67.40 337 P **P 23 26 33.0 -0.2**
comp=Z,2.0nm,0.7s
BILL Bilibino 67.95 11⇑ *i P* **P 23 26 36.8 +0.2**
BILL *i* 23 26 45.0
BILL pmax pmax
comp=Z,22nm,1.8s
BILL MLR MLR
comp=Z,200nm,19.0s
BILL Bilibino 67.95 11 *eP* **P 23 26 36.2 -0.4**
comp=Z,17nm,1.1s
BILL Bilibino 67.95 11 *i P* **P 23 26 36.8 +0.2**
comp=Z,22nm,1.8s
LBTB Lobatse 68.08 168 *eP* **P 23 26 38.7 +0.7**

	comp=Z,251nm,2.8s						
LBTB	**Lobatse**	**68.08**	**168**	*e*P	**P**	**23 26 38.7**	**+0.7**
	comp=Z,251nm,2.8s						
FFC	**Flin Flon**	**68.65**	**326**	*ce*P	**P**	**23 26 43.7**	**+2.5**
FFC	**Flin Flon**	**68.65**	**326**	*e*P	**P**	**23 26 41.3**	**+0.1**
	comp=Z,17nm,1.2s						
FFC	**Flin Flon**	**68.65**	**326**	*e*P	**P**	**23 26 41.3**	**+0.1**
	comp=Z,17nm,1.2s						
ULM	**Lac du Bonnet**	**68.95**	**320**	P	**P**	**23 26 43.2**	**+0.1**
ULM	**Lac du Bonnet**	**68.95**	**320**	P	**P**	**23 26 43.2**	**+0.1**
	comp=Z,3.9nm,0.6s,baz=67,slow=5.4,SNR=7.1						
ULM				LR	LR	23 57 32.9	
	comp=Z,160nm,21.1s,baz=287,slow=36						
ULM	**Lac du Bonnet**	**68.95**	**320**	P	**P**	**23 26 43.2**	**+0.1**
	comp=Z,160nm,21.1s						
HHC	**Hu-ho-hao-te**	**69.01**	**54**	*e*P	**P**	**23 26 43.5**	**-0.3**
HHC				PcP	**PcP**	**23 27 07.8**	**-0.2**
HHC				PP	**PP**	**23 29 17.6**	**+1.8**
HHC				PcS		23 31 11.5	
HHC				S	**S**	**23 35 46.7**	**-1.5**
HHC				SKS	**SKSac**	**23 36 39.6**	**-3.5**
HHC				ScS	**SKKSac**	**23 36 41.3**	**-1.9**
HHC				SS	**SS**	**23 40 13.4**	**+0.2**
HHC				pmax	pmax		
	comp=Z,45nm,0.7s						
HHC				pmax	pmax		
	comp=Z,390nm,6.7s						
HHC				LR	LR		
	comp=N,590nm,16.7s						
HHC				LR	LR		
	comp=E,960nm,16.6s						
HHC				LR	LR		
	comp=Z,830nm,16.5s						
COLD	**Coldfoot**	**69.93**	**353**	*e*P	**P**	**23 26 51.0**	**+2.1**
	comp=Z,5.5nm,1.1s						
SEY	**Seymchan**	**69.97**	**19**	*de*P	**P**	**23 26 50.6**	**+1.4**
CD2	**Chengdu**	**70.16**	**66**	P	**P**	**23 26 50.6**	**-0.4**
CD2				pP	**pP**	**23 26 55.3**	**-0.5**
CD2				sP	**sP**	**23 26 57.6**	**0.0**
CD2				PP	**PP**	**23 29 26.9**	**+1.0**
CD2				S	**S**	**23 35 58.8**	**-3.0**
CD2				SKS	**SKSac**	**23 36 47.4**	**-4.6**
CD2				SS	**SS**	**23 40 28.8**	**-2.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,160nm,4.9s						
CD2				LR	LR		
	comp=N,300nm,13.7s						
CD2				LR	LR		
	comp=Z,430nm,14.5s						
EGAK	**Eagle**	**71.25**	**349**	*e*P	**P**	**23 26 56.1**	**-0.8**
	comp=Z,9.8nm,1.3s						
BOSA	**Boshof**	**71.56**	**169**	*e*P	**P**	**23 26 59.3**	**-0.1**
BOSA	**Boshof**	**71.56**	**169**	P	**P**	**23 26 59.1**	**-0.2**
	comp=Z,10nm,0.9s,baz=0.7,slow=3.7,SNR=9.1						
BOSA				LR	LR	00 02 54.6	
	comp=Z,272nm,18.1s,baz=356,slow=40						
XAN	**Xi'an**	**71.62**	**61**	P	**P**	**23 27 00.6**	**+0.8**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,38nm,5.3s						
ILAR	**Eielson Array**	**71.99**	**351**	P	**P**	**23 27 02.0**	**+0.5**
ILAR	**Eielson Array**	**71.99**	**351**	P	**P**	**23 27 02.0**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=6.8,slow=6.1,SNR=17						
ILAR				LR	LR	23 56 00.1	
	comp=Z,117nm,20.6s,baz=336,slow=34						
BJI	**Beijing**	**72.24**	**52**	P	**P**	**23 27 04.6**	**+1.3**
BJI				pmax	pmax		
	comp=Z,24nm,1.2s						
BJI				LR	LR		
	comp=N,580nm,13.6s						
BJI				LR	LR		
	comp=E,780nm,15.9s						
BJI				LR	LR		
	comp=Z,64nm,20.8s						
TNA	**Tin City**	**72.31**	**1**	*e*P	**P**	**23 27 02.5**	**-0.8**
	comp=Z,25nm,1.5s						
MDND	**Maddock**	**72.39**	**319**	⇑P	**P**	**23 27 04.1**	**0.0**
	baz=72						
DOT	**Dot Lake**	**72.73**	**350**	*e*P	**P**	**23 27 08.0**	**+2.1**
	comp=Z,24nm,1.4s						
KMI	**Kunming**	**73.06**	**71**	P	**P**	**23 27 08.5**	**-0.3**
KMI				S	**S**	**23 36 31.7**	**-4.2**
KMI				SS	**SS**	**23 41 16.0**	**-0.3**
KMI				pmax	pmax		
	comp=Z,12nm,1.2s						
KMI				LR	LR		
	comp=N,190nm,21.8s						
KMI				LR	LR		
	comp=E,180nm,26.6s						
KMI				LR	LR		
	comp=Z,270nm,27.1s						
SDDR	**Presa de Saban**	**73.58**	**281**	*e*P	P	23 27 15.6	+3.9
	comp=Z,25nm,1.2s						
A24A	**Westby**	**73.67**	**322**	⇑P	**P**	**23 27 11.7**	**-0.1**
	baz=73						
ECSD	**EROS Data Cent**	**73.74**	**315**	*e*P	**P**	**23 27 12.7**	**+0.5**
	comp=Z,21nm,1.4s						
KLR	**Kul'dur**	**73.90**	**37**	*e*P	**P**	**23 27 10.2**	**-2.8**
KLR				pmax	pmax		
	comp=Z,45nm,1.6s						
DGMT	**Dagmar**	**74.09**	**322**	*e*P	**P**	**23 27 17.4**	**+3.2**
	comp=Z,10.0nm,0.8s						
TIGA	**Tifton**	**74.19**	**298**	⇑P	**P**	**23 27 15.3**	**+0.3**
	baz=74						
CHTO	**Chiang Mai**	**74.36**	**79**	*e*P	**P**	**23 27 14.9**	**-1.3**
CHTO	**Chiang Mai**	**74.36**	**79**	*e*P	**P**	**23 27 14.8**	**-1.3**
CHTO	**Chiang Mai**	**74.36**	**79**	P	**P**	**23 27 16.2**	**+0.1**
	SNR=10						
B23A	**Brockton**	**74.45**	**323**	⇑P	**P**	**23 27 15.6**	**-0.7**
	baz=74						
A22A	**Carney Farms,**	**74.47**	**323**	⇑P	**P**	**23 27 16.0**	**-0.5**
	baz=74						
CMAR	**Chiang Mai Arr**	**74.58**	**79**	P	**P**	**23 27 16.4**	**-1.1**
CMAR				PP	**PP**	**23 30 07.9**	**+3.8**
CMAR	**Chiang Mai Arr**	**74.58**	**79**	P	**P**	**23 27 16.4**	**-1.1**
	comp=Z,1.7nm,0.3s,baz=304,slow=7.4,SNR=25						
CMAR				PP	**PP**	**23 30 07.9**	**+3.8**
	comp=Z,0.4nm,0.3s,baz=320,slow=8.3,SNR=3.6						
CMAR				LR	LR	00 07 24.1	
	comp=Z,154nm,19.1s,baz=201,slow=42						
PLAL	**Pickwick Lake**	**74.73**	**303**	*e*P	**P**	**23 27 17.6**	**-0.6**
C24A	**Savage**	**74.88**	**322**	⇑P	**P**	**23 27 18.1**	**-0.7**
	baz=75						
A21A	**Bergtoll Ranch**	**74.92**	**324**	⇓P	**P**	**23 27 18.3**	**-0.8**
	baz=75						
GYA	**Guiyang**	**74.94**	**68**	P	**P**	**23 27 19.7**	**+0.1**
GYA				PP	**PP**	**23 30 09.8**	**+2.9**
GYA				S	**S**	**23 36 55.0**	**-1.7**
GYA				SKS	**SKSac**	**23 37 25.5**	**-2.7**
GYA				SS	**SS**	**23 41 46.0**	**+1.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,90nm,5.2s						
GYA				LR	LR		
	comp=N,470nm,18.5s						
GYA				LR	LR		
	comp=E,450nm,19.0s						
GYA				LR	LR		
	comp=Z,490nm,18.3s						
B22A	**Reddig Ranch S**	**75.03**	**323**	⇑P	**P**	**23 27 19.3**	**-0.4**
	baz=75						
C23A	**Lambert**	**75.03**	**322**	⇓P	**P**	**23 27 18.3**	**-1.3**
	baz=75						
SML	**Sawmill**	**75.03**	**351**	*e*P	**P**	**23 27 18.8**	**-0.6**
SML				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SML	**Sawmill**	**75.03**	**351**	*e*P	**P**	**23 27 18.8**	**-0.6**
	comp=Z,6.2nm,1.3s						
LRAL	**Lakeview Retre**	**75.34**	**301**	*e*P	**P**	**23 27 20.6**	**-1.0**
	comp=Z,14nm,1.0s						
BMRM	**Bremner River**	**75.37**	**349**	*e*P	**P**	**23 27 21.9**	**+0.5**
C22A	**Vida**	**75.39**	**323**	⇓P	**P**	**23 27 20.5**	**-1.2**
	baz=75						
A19A	**Klindworth Far**	**75.75**	**325**	⇓P	**P**	**23 27 22.4**	**-1.4**
	baz=76						
B20A	**Solberg Farm,**	**75.81**	**324**	⇓P	**P**	**23 27 23.8**	**-0.4**
	baz=76						
C21A	**Desert Coulee**	**75.87**	**323**	⇑P	**P**	**23 27 23.4**	**-1.1**
	baz=76						
D22A	**Cohagen**	**75.97**	**322**	⇑P	**P**	**23 27 24.2**	**-0.9**
	baz=76						
F24A	**Ekalaka**	**76.14**	**320**	⇓P	**P**	**23 27 26.0**	**-0.1**

	baz=76						
B19A	**Brinkman Farms**	**76.20**	**325**	⇑P	**P**	**23 27 25.6**	**-0.8**
	baz=76						
A18A	**Metzger Ranch,**	**76.22**	**325**	⇑P	**P**	**23 27 26.2**	**-0.3**
	baz=76						
MDJ	**Mudanjiang**	**76.28**	**41**	P	**P**	**23 27 26.0**	**-0.8**
MDJ				S	**S**	**23 37 10.2**	**-0.5**
MDJ				ScS	**ScS**	**23 37 41.0**	**-0.5**
MDJ				SS	**SS**	**23 42 02.3**	**-1.3**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,65nm,5.3s						
MDJ				LR	LR		
	comp=N,340nm,25.4s						
MDJ				LR	LR		
	comp=E,440nm,25.1s						
MDJ				LR	LR		
	comp=Z,180nm,22.9s						
C20A	**Veseth Ranch,**	**76.36**	**324**	⇑P	**P**	**23 27 27.0**	**-0.3**
	baz=76						
D21A	**La Casta Ranch**	**76.40**	**323**	⇓P	**P**	**23 27 26.4**	**-1.1**
	baz=76						
A17A	**Triple J Farms**	**76.56**	**326**	⇓P	**P**	**23 27 27.0**	**-1.4**
	baz=76						
B18A	**Beardsley Farm**	**76.60**	**325**	⇓P	**P**	**23 27 27.6**	**-1.1**
	baz=76						
C19A	**Slack Wire Ran**	**76.80**	**324**	⇓P	**P**	**23 27 29.1**	**-0.7**
	baz=76						
EGMT	**Eagleton**	**76.88**	**325**	*e*P	**P**	**23 27 30.4**	**+0.2**
EGMT	**Eagleton**	**76.88**	**325**	⇓P	**P**	**23 27 29.0**	**-1.3**
	baz=77						
D20A	**Manuel Ranch,**	**76.89**	**323**	⇓P	**P**	**23 27 29.6**	**-0.8**
	baz=77						
KSU1	**Kansas State U**	**76.95**	**311**	*e*P	**P**	**23 27 29.7**	**-1.1**
H24A	**Dirks Ranch, A**	**77.00**	**320**	⇓P	**P**	**23 27 29.8**	**-1.3**
	baz=77						
G23A	**Biddle**	**77.06**	**321**	⇑P	**P**	**23 27 30.1**	**-1.2**
	baz=77						
B17A	**L&G Farms, Che**	**77.11**	**325**	⇑P	**P**	**23 27 30.1**	**-1.4**
	baz=77						
D19A	**Cripps Ranch,**	**77.16**	**324**	⇓P	**P**	**23 27 30.3**	**-1.5**
	baz=77						
A15A	**Johnson Ranch,**	**77.37**	**327**	⇑P	**P**	**23 27 31.8**	**-1.3**
	baz=77,SNR=9.0						
A14A	**Double T Ranch**	**77.65**	**327**	⇓P	**P**	**23 27 33.9**	**-0.8**
	baz=77,SNR=30						
USRK	**Ussuriysk Arra**	**77.75**	**40**	P	**P**	**23 27 35.2**	**+0.2**
	comp=Z,9.5nm,0.9s,baz=280,slow=5.1,SNR=13						
USRK				LR	LR	00 05 15.2	
	comp=Z,404nm,19.1s,baz=320,slow=38						
B15A	**Bradely Ranch,**	**77.82**	**326**	⇓P	**P**	**23 27 33.9**	**-1.7**
	baz=78						
C16A	**Fuhringer Ranc**	**77.89**	**326**	⇓P	**P**	**23 27 33.9**	**-2.1**
	baz=78						
D17A	**Six Diamond Ra**	**77.95**	**325**	⇓P	**P**	**23 27 35.1**	**-1.3**
	baz=78,SNR=6.2						
H22A	**Clearmont**	**77.97**	**321**	⇓P	**P**	**23 27 34.9**	**-1.5**
	baz=78						
E18A	**Harlowton**	**78.07**	**324**	⇓P	**P**	**23 27 35.4**	**-1.6**
	baz=78						
B14A	**Marquette Ranc**	**78.08**	**327**	⇑P	**P**	**23 27 35.1**	**-1.9**
	baz=78						
C15A	**Salmond Ranch,**	**78.27**	**326**	⇑P	**P**	**23 27 36.6**	**-1.5**
	baz=78						
G20A	**Bridger**	**78.35**	**322**	⇓P	**P**	**23 27 36.4**	**-2.2**
	baz=78						
D16A	**Dana Ranch, Ca**	**78.41**	**325**	⇓P	**P**	**23 27 37.3**	**-1.6**
	baz=78						
F18A	**Big Timber**	**78.50**	**323**	⇑P	**P**	**23 27 37.3**	**-2.1**
	baz=78						
VLA	**Vladivostok**	**78.50**	**41**	⇓*e*P	**P**	**23 27 38.6**	**-0.7**
VLA				*e*		23 27 47.3	
VLA				S	**S**	**23 37 34.1**	**-0.8**
VLA				pmax	pmax		
	comp=Z,22nm,0.7s						
B13A	**Whitefish**	**78.54**	**328**	⇓P	**P**	**23 27 38.1**	**-1.5**
	baz=78						
A12A	**Yaak River Ran**	**78.56**	**328**	⇓P	**P**	**23 27 38.3**	**-1.3**
	baz=78						
E17A	**Martinsdale**	**78.56**	**324**	⇑P	**P**	**23 27 38.8**	**-1.1**
	baz=78						
YBMT	**Yellow Bay**	**78.77**	**327**	*e*P	**P**	**23 27 40.2**	**-0.7**
	comp=Z,4.2nm,0.9s						
HRY	**Holter Researc**	**78.78**	**325**	*e*P	**P**	**23 27 39.9**	**-1.0**
D15A	**Lincoln**	**78.81**	**326**	⇑P	**P**	**23 27 39.5**	**-1.7**
	baz=78						
E16A	**East Helena**	**78.86**	**325**	⇓P	**P**	**23 27 39.9**	**-1.5**
	baz=79						
G18A	**Lazy EL Ranch,**	**78.88**	**323**	⇓P	**P**	**23 27 38.8**	**-2.8**
	baz=79						
RLMT	**Red Lodge**	**78.90**	**323**	*e*P	**P**	**23 27 40.5**	**-1.3**
	comp=Z,8.2nm,1.1s						
RLMT	**Red Lodge**	**78.90**	**323**	⇑P	**P**	**23 27 39.9**	**-1.8**
	baz=79						
J22A	**Midwest**	**78.92**	**320**	⇑P	**P**	**23 27 40.7**	**-1.1**
	baz=79						
JTMT	**Jette**	**78.97**	**327**	*e*P	**P**	**23 27 43.0**	**+1.0**
I21A	**Big Trails, Te**	**79.00**	**321**	⇑P	**P**	**23 27 40.7**	**-1.5**
	baz=79						
SWMT	**Swartz Lake**	**79.05**	**327**	*e*P	**P**	**23 27 43.3**	**+0.9**
SLMT	**Seeley Lake**	**79.06**	**326**	*e*P	P	23 27 45.9	+3.4
BSMT	**Bassoo Peak**	**79.09**	**327**	*e*P	**P**	**23 27 44.4**	**+1.7**
C13A	**Hot Springs**	**79.14**	**327**	⇓P	**P**	**23 27 41.5**	**-1.3**
	baz=79,SNR=14						
D14A	**Greenough**	**79.19**	**326**	⇓P	**P**	**23 27 42.2**	**-1.0**
	baz=79						
CHMT	**Chamberlain Mo**	**79.22**	**326**	*e*P	**P**	**23 27 45.6**	**+2.1**
I20A	**Worland**	**79.28**	**321**	⇑P	**P**	**23 27 42.5**	**-1.2**
	baz=79						
E15A	**Deer Lodge**	**79.35**	**325**	⇑P	**P**	**23 27 42.8**	**-1.3**
	baz=79,SNR=6.8						
H18A	**Shoshone NF, C**	**79.43**	**323**	⇓P	**P**	**23 27 43.3**	**-1.4**
	baz=79						
J21A	**Lysite**	**79.43**	**320**	⇓P	**P**	**23 27 43.1**	**-1.5**
	baz=79						
C12B	**Naegeli Ranch,**	**79.48**	**328**	⇓P	**P**	**23 27 43.5**	**-1.2**
	baz=79						
BOZ	**Bozeman (W)**	**79.53**	**324**	⇑P	**P**	**23 27 44.1**	**-1.0**
	baz=79,SNR=7.9						
D13A	**Huson**	**79.57**	**327**	⇓P	**P**	**23 27 44.2**	**-1.0**
	baz=79						
I19A	**Meeteetse**	**79.62**	**322**	⇓P	**P**	**23 27 44.5**	**-1.2**
	baz=79						
NEW	**Newport**	**79.67**	**329**	*e*P	**P**	**23 27 48.2**	**+2.5**
E14A	**Clinton**	**79.72**	**326**	⇑P	**P**	**23 27 44.8**	**-1.3**
	baz=79						
J20A	**Shoshoni**	**79.72**	**321**	⇑P	**P**	**23 27 45.7**	**-0.5**
	baz=79						
LRM	**Limekiln Ridge**	**79.75**	**325**	*e*P	**P**	**23 27 46.6**	**+0.2**
F15A	**Butte**	**79.75**	**325**	⇓P	**P**	**23 27 44.8**	**-1.6**
	baz=79,SNR=6.8						
G16A	**Moss Hill, Enn**	**79.94**	**324**	⇑P	**P**	**23 27 46.4**	**-0.9**
	baz=80,SNR=7.9						
PETK	**Petropavlovsk-**	**79.97**	**21**	P	**P**	**23 27 46.9**	**-0.2**
PETK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PETK	**Petropavlovsk-**	**79.97**	**21**	P	**P**	**23 27 46.9**	**-0.2**
PETK	**Petropavlovsk-**	**79.97**	**21**	P	**P**	**23 27 46.9**	**-0.2**
	comp=Z,6.7nm,0.9s,baz=263,slow=2.5,SNR=3.4						
PETK				LR	LR	00 09 43.0	
	comp=Z,194nm,18.3s,baz=329,slow=41						
E13A	**Victor**	**79.98**	**326**	⇑P	**P**	**23 27 47.0**	**-0.5**
	baz=80						
PHWY	**Pilot Hill**	**80.01**	**318**	*e*P	**P**	**23 27 47.5**	**-0.5**
	comp=Z,6.3nm,1.1s						
H17A	**Grant Village**	**80.05**	**323**	⇑P	**P**	**23 27 47.1**	**-1.0**
	baz=80						
QLMT	**Earthquake Lak**	**80.09**	**324**	*e*P	**P**	**23 27 47.7**	**-0.5**
H16A	**Russell Place,**	**80.11**	**323**	⇑P	**P**	**23 27 47.6**	**-0.7**
	baz=80						
DLMT	**Dillon**	**80.18**	**325**	*e*P	**P**	**23 27 49.2**	**+0.6**
J19A	**Crowheart**	**80.24**	**321**	⇑P	**P**	**23 27 48.2**	**-0.8**
	baz=80						
I18A	**Diamond G Ranc**	**80.25**	**322**	⇓P	**P**	**23 27 47.7**	**-1.5**
	baz=80						
G15A	**Dillon**	**80.29**	**324**	⇓P	**P**	**23 27 47.8**	**-1.5**
	baz=80						
YSS	**Yuzh-Sakhalins**	**80.31**	**32**	⇓*e*P	**P**	**23 27 51.4**	**+2.3**
YSS				pmax	pmax		
	comp=Z,110nm,1.0s						
YSS				MLR	MLR		
	comp=Z,700nm,18.0s						
YSS				MLR	MLR		
	comp=N,500nm,16.0s						
YSS				MLR	MLR		
	comp=E,400nm,17.0s						

YSS	**Yuzh-Sakhalins**	**80.31**	**32**	*e*P	**P**	**23 27 48.9**	**-0.1**
	comp=E,120nm,1.1s						
L21A	**Rawlins**	**80.44**	**319**	⇑P	**P**	**23 27 48.3**	**-1.9**
	baz=80						
K19A	**Absolon Red Bu**	**80.48**	**321**	⇑P	**P**	**23 27 49.5**	**-0.9**
	baz=80						
N23A	**Red Feather La**	**80.56**	**318**	⇑P	**P**	**23 27 49.3**	**-1.6**
	baz=80						
F13A	**Darby**	**80.57**	**326**	⇓P	**P**	**23 27 49.3**	**-1.4**
	baz=80,SNR=10.0						
IMW	**Indian Meadow**	**80.61**	**323**	*e*P	**P**	**23 27 53.0**	**+1.8**
KSAR	**Wonju Array Be**	**80.63**	**47**	P	**P**	**23 27 51.5**	**+0.5**
KSAR				PP	**PP**	**23 30 50.5**	**-3.6**
MOOW	**Moose Ponds**	**80.64**	**323**	*e*P	**P**	**23 27 52.5**	**+1.3**
KSRS	**Korea Array**	**80.65**	**47**	P	**P**	**23 27 51.5**	**+0.5**
	comp=E,8.8nm,1.0s,baz=323,slow=4.9,SNR=17						
KSRS				PP	**PP**	**23 30 50.5**	**-3.7**
	comp=E,0.8nm,0.4s,baz=305,slow=8.7,SNR=4.2						
KSRS				LR	LR	00 10 04.5	
	comp=E,256nm,18.8s,baz=323,slow=40						
P25A	**Willow Gulch B**	**80.70**	**316**	⇓P	**P**	**23 27 49.8**	**-1.8**
	baz=80						
M21A	**Separation Pea**	**80.72**	**319**	⇓P	**P**	**23 27 49.5**	**-2.2**
	baz=80						
BDFB	**Brasilia**	**80.72**	**239**	P	**P**	**23 27 53.0**	**+1.2**
BDFB	**Brasilia**	**80.72**	**239**	P	**P**	**23 27 53.0**	**+1.2**
	comp=E,5.4nm,0.7s,baz=70,slow=4.2,SNR=11						
BDFB				LR	LR	00 05 07.1	
	comp=E,108nm,18.1s,baz=182,slow=37						
J18A	**Kendall Valley**	**80.73**	**322**	⇓P	**P**	**23 27 50.0**	**-1.8**
	baz=80,SNR=6.8						
BW06	**Boulder Array**	**80.86**	**321**	⇓P	**P**	**23 27 51.7**	**-0.7**
	baz=81						
PDAR	**Pinedale Array**	**80.86**	**321**	P	**P**	**23 27 52.5**	**+0.1**
PDAR				PP	**PP**	**23 30 59.5**	**+3.4**
PDAR	**Pinedale Array**	**80.86**	**321**	P	**P**	**23 27 52.5**	**+0.1**
	comp=E,1.0nm,0.8s,baz=66,slow=5.2,SNR=7.1						
PDAR				PP	**PP**	**23 30 59.5**	**+3.4**
	comp=E,0.8nm,1.1s,baz=50,slow=4.8,SNR=3.7						
PDAR				LR	LR	00 05 21.8	
	comp=E,165nm,21.4s,baz=49,slow=37						
N22A	**Wattenberg Ran**	**80.88**	**318**	⇑P	**P**	**23 27 50.4**	**-2.2**
	baz=81						
R27A	**Eads**	**80.90**	**314**	⇑P	**P**	**23 27 50.6**	**-1.9**
	baz=81						
J17A	**Brown Place, J**	**80.92**	**322**	⇓P	**P**	**23 27 51.0**	**-1.7**
	baz=81						
F12A	**Elk City**	**80.97**	**326**	⇑P	**P**	**23 27 51.0**	**-1.9**
	baz=81						
O23A	**Lake Granby, G**	**81.06**	**317**	⇓P	**P**	**23 27 52.1**	**-1.6**
	baz=81						
G13A	**Cobalt**	**81.09**	**325**	⇑P	**P**	**23 27 51.7**	**-1.8**
	baz=81						
H14A	**Leadore**	**81.10**	**325**	⇓P	**P**	**23 27 52.3**	**-1.3**
	baz=81						
K18A	**Toltan Ranch,**	**81.19**	**321**	⇓P	**P**	**23 27 52.1**	**-2.1**
	baz=81						
RRI2	**Red Ridge**	**81.21**	**323**	*e*P	**P**	**23 27 56.5**	**+2.1**
R26A	**Arlington**	**81.23**	**315**	⇓P	**P**	**23 27 53.3**	**-1.0**
	baz=81						
O22A	**Kremmling**	**81.42**	**318**	⇓P	**P**	**23 27 54.3**	**-1.2**
	baz=81						
N21A	**Black Mountain**	**81.44**	**319**	⇓P	**P**	**23 27 54.5**	**-1.1**
	baz=81						
G12A	**Big Creek, Yel**	**81.51**	**326**	⇓P	**P**	**23 27 55.1**	**-0.7**
	baz=81,SNR=9.1						
H13A	**Challis**	**81.52**	**325**	⇑P	**P**	**23 27 54.5**	**-1.3**
	baz=81						
P23A	**Jefferson**	**81.66**	**317**	⇓P	**P**	**23 27 55.7**	**-1.2**
	baz=81						
J15A	**Blackfoot**	**81.67**	**323**	⇑P	**P**	**23 27 55.6**	**-1.0**
	baz=81						
I14A	**Mackay**	**81.69**	**324**	⇑P	**P**	**23 27 55.3**	**-1.5**
	baz=81,SNR=11						
L18A	**Fontenelle, Gr**	**81.74**	**321**	⇑P	**P**	**23 27 55.4**	**-1.7**
	baz=81						
S26A	**Kim**	**81.75**	**314**	⇓P	**P**	**23 27 55.5**	**-1.6**
	baz=82						
H12A	**Diamond D Ranc**	**81.79**	**325**	⇑P	**P**	**23 27 55.3**	**-1.9**
	baz=82,SNR=5.4						
I13A	**Wildhorse Cree**	**81.99**	**325**	⇑P	**P**	**23 27 56.0**	**-2.4**
	baz=82,SNR=13						
QIZ	**Qiongzhong**	**82.01**	**72**	P	**P**	**23 27 58.8**	**+0.2**
QIZ				S	**S**	**23 38 07.2**	**-5.3**
QIZ				LR	LR		
	comp=N,250nm,21.0s						
QIZ				LR	LR		
	comp=Z,280nm,19.7s						
HAWA	**Hanford**	**82.14**	**329**	*e*P	**P**	**23 28 01.8**	**+2.9**
M18A	**Lyman**	**82.14**	**321**	⇓P	**P**	**23 27 57.8**	**-1.5**
	baz=82						
R24A	**Sanders Place,**	**82.15**	**316**	⇓P	**P**	**23 27 57.5**	**-1.8**
	baz=82						
J14A	**Carey**	**82.20**	**324**	⇑P	**P**	**23 27 57.6**	**-1.8**
	baz=82						
S25A	**Robets Cordova**	**82.22**	**315**	⇓P	**P**	**23 27 58.4**	**-1.3**
	baz=82						
O20A	**White River Ci**	**82.27**	**319**	⇑P	**P**	**23 27 58.0**	**-1.9**
	baz=82						
N18A	**Larsen Ranch,**	**82.31**	**320**	⇓P	**P**	**23 27 58.8**	**-1.3**
	baz=82						
L16A	**Fish Haven**	**82.31**	**322**	⇑P	**P**	**23 27 58.5**	**-1.6**
	baz=82						
P21A	**Newcastle**	**82.35**	**318**	⇓P	**P**	**23 27 59.0**	**-1.4**
	baz=82						
HLID	**Hailey**	**82.40**	**325**	⇑P	**P**	**23 27 58.9**	**-1.6**
	baz=82						
J13A	**Cove Ranch, Pi**	**82.43**	**324**	⇓P	**P**	**23 27 59.1**	**-1.5**
	baz=82						
WHTX	**Lake Whitney**	**82.47**	**307**	⇓P	**P**	**23 27 59.6**	**-1.2**
	baz=82						
I12A	**Atlanta**	**82.52**	**325**	⇓P	**P**	**23 27 59.4**	**-1.7**
	baz=82						
BMO	**Blue Mountains**	**82.55**	**327**	*e*P	**P**	**23 28 00.6**	**-0.6**
	comp=Z,16nm,1.1s						
R23A	**Moffat**	**82.55**	**316**	⇑P	**P**	**23 27 59.7**	**-1.8**
	baz=82						
ASAJ	**Asahikawa**	**82.56**	**34**	LR	LR	00 09 50.7	
	comp=Z,472nm,18.8s,baz=79,slow=39						
O19A	**Miners Draw (B**	**82.57**	**319**	⇓P	**P**	**23 27 59.7**	**-1.7**
	baz=82						
Q22A	**Crested Butte,**	**82.59**	**317**	⇓P	**P**	**23 27 59.9**	**-1.9**
	baz=82						
X30A	**Coker Ranch, T**	**82.67**	**311**	⇓P	**P**	**23 28 00.5**	**-1.4**
	baz=82						
Y31A	**Rekieta Farm,**	**82.68**	**310**	⇓P	**P**	**23 28 01.1**	**-0.8**
	baz=82						
HWUT	**Hardware Ranch**	**82.69**	**322**	*e*P	**P**	**23 28 00.3**	**-1.7**
	comp=Z,6.7nm,0.8s						
Z32A	**Haskell**	**82.70**	**309**	⇑P	**P**	**23 28 00.6**	**-1.4**
	baz=82						
U26A	**Atchley Ranch,**	**82.81**	**314**	⇓P	**P**	**23 28 01.1**	**-1.6**
	baz=82						
N17A	**Moffit Pass**	**82.88**	**321**	⇑P	**P**	**23 28 01.6**	**-1.5**
	baz=83						
M16A	**Huntsville**	**82.95**	**322**	⇓P	**P**	**23 28 02.7**	**-0.7**
	baz=83						
T24A	**Torres, Weston**	**82.99**	**315**	⇓P	**P**	**23 28 02.8**	**-1.0**
	baz=83						
R22A	**Saguache, Gunn**	**82.99**	**317**	⇑P	**P**	**23 28 02.7**	**-1.2**
	baz=83						
P19A	**Cripple Cowboy**	**83.02**	**319**	⇑P	**P**	**23 28 02.9**	**-1.0**
	baz=83						
Z31A	**Sharp Cattle R**	**83.08**	**309**	⇓P	**P**	**23 28 03.2**	**-0.8**
	baz=83						
L14A	**Malta**	**83.11**	**323**	⇑P	**P**	**23 28 03.3**	**-0.9**
	baz=83						
MFID	**Camas Ranch**	**83.12**	**325**	⇑P	**P**	**23 28 03.6**	**-0.5**
	baz=83						
U25A	**Circle Dot Ran**	**83.16**	**314**	⇓P	**P**	**23 28 04.0**	**-0.6**
	baz=83,SNR=12						
S22A	**4UR Ranch, Cre**	**83.40**	**316**	⇑P	**P**	**23 28 04.9**	**-1.0**
	baz=83						
P18A	**Preston Nutter**	**83.63**	**320**	⇓P	**P**	**23 28 05.7**	**-1.4**
	baz=83						
V25A	**Rancho No Teng**	**83.69**	**314**	⇓P	**P**	**23 28 06.7**	**-0.6**
	baz=83						
PV04	**Paradox Valley**	**83.94**	**318**	*e*P	**P**	**23 28 10.0**	**+1.5**
S21A	**Coal Bank Pass**	**83.95**	**317**	⇓P	**P**	**23 28 06.9**	**-1.9**
	baz=84,SNR=9.2						
YUK	**Yuzh-Kuril'sk**	**83.95**	**32**	P	**P**	**23 28 09.5**	**+1.3**
YUK				S	**S**	**23 38 28.1**	**-3.3**
YUK				MLR	MLR		
	comp=N,151nm,22.0s						
YUK				MLR	MLR		
	comp=E,250nm,22.0s						
YUK				MLR	MLR		
	comp=Z,588nm,22.0s						

PV01	Paradox Valley	83.98	318	eP	P	23 28 07.8	-1.1
T22A	Edith	84.00	316	⇓P	P	23 28 07.4	-1.6
	baz=84,SNR=6.1						
Z29A	Hungry Hill Ra	84.01	310	⇓P	P	23 28 08.0	-0.8
	baz=84						
W25A	X Bar L Ranch,	84.07	313	⇑P	P	23 28 08.4	-0.8
	baz=84						
MSTX	Muleshoe	84.08	311	⇑P	P	23 28 08.1	-1.1
	baz=84						
S20A	Disappointment	84.11	317	⇑P	P	23 28 08.1	-1.4
	baz=84						
V24A	Rampart Ranch,	84.12	314	⇑P	P	23 28 08.5	-1.1
	baz=84						
SRU	San Rafael	84.17	320	eP	P	23 28 09.8	+0.1
SRU	San Rafael	84.17	320	eP	P	23 28 09.8	+0.1
X26A	CR and CF Fran	84.22	312	⇓P	P	23 28 08.4	-1.6
	baz=84						
DUG	Dugway	84.39	322	eP	P	23 28 13.9	+3.1
DUG	Dugway	84.39	322	eP	P	23 28 13.9	+3.1
DUG	Dugway	84.39	322	⇑P	P	23 28 10.1	-0.6
	baz=84						
U22A	Llaves	84.46	316	⇓P	P	23 28 10.2	-1.0
	baz=84,SNR=5.8						
W24A	Lazy 6 Ranch,	84.58	314	⇓P	P	23 28 10.8	-1.1
	baz=84						
P15A	Leamington	84.64	321	⇑P	P	23 28 10.3	-1.7
	baz=84						
MVCO	Mesa Verde	84.66	317	eP	P	23 28 15.7	+3.4
U21A	Nageezi	84.83	316	⇑P	P	23 28 11.5	-1.6
	baz=85						
PSI	Prapat	84.84	91	P	P	23 28 13.1	-0.2
PSI	Prapat	84.84	91	P	P	23 28 13.1	-0.2
	comp=Z,7.0nm,0.6s,baz=315,slow=5.7,SNR=4.2						
128A	Castleberry Fa	84.92	310	⇑P	P	23 28 12.3	-1.2
	baz=85						
S18A	Hurst Farm, Bl	85.03	318	⇑P	P	23 28 12.1	-2.1
	baz=85						
ROSC	El Rosal	85.06	272	LR	LR	00 01 31.8	
	comp=Z,202nm,21.5s,baz=3.7,slow=32						
Y25A	Mesa, Roswell	85.17	313	⇓P	P	23 28 12.9	-1.9
	baz=85						
532A	Rocksprings	85.26	307	⇑P	P	23 28 13.9	-1.3
	baz=85						
431A	Sonora	85.27	308	⇑P	P	23 28 13.9	-1.3
	baz=85						
Z26A	Caprock	85.27	312	⇑P	P	23 28 13.5	-1.7
	baz=85						
V21A	Milan	85.30	316	⇑P	P	23 28 12.8	-2.7
	baz=85						
228A	UT Block 9, Go	85.35	310	⇓P	P	23 28 13.9	-1.8
	baz=85						
W22A	Albuquerque	85.46	315	⇑P	P	23 28 15.0	-1.3
	baz=85						
329A	Wagon Wheel Ra	85.47	309	⇑P	P	23 28 15.2	-1.0
	baz=85						
JNU	Nakatsue	85.47	48	P	P	23 28 15.2	-0.9
JNU	Nakatsue	85.47	48	P	P	23 28 15.2	-0.9
	comp=Z,9.0nm,0.9s,baz=265,slow=3.5,SNR=3.4						
X23A	Hourglass Bar	85.48	314	⇑P	P	23 28 15.2	-1.2
	baz=85						
430A	Baggett Ranch,	85.56	308	⇑P	P	23 28 15.8	-0.9
	baz=85						
Y24A	Capitan	85.57	313	⇓P	P	23 28 16.2	-0.6
	baz=85						
632A	Uvalde	85.64	307	⇑P	P	23 28 16.4	-0.6
	baz=85						
Z25A	Roswell	85.67	312	⇓P	P	23 28 16.9	-0.4
	baz=85						
Y23A	Lovelace Mesa,	85.90	313	⇓P	P	23 28 17.2	-1.3
	baz=86						
X22A	Bernardo	85.97	314	⇓P	P	23 28 17.4	-1.4
	baz=86						
328A	Wristen Ranch,	86.03	310	⇓P	P	23 28 18.2	-0.8
	baz=86						
429A	Davenport Ranc	86.06	309	⇓P	P	23 28 18.2	-1.0
	baz=86						
530A	J-C Ranch, Com	86.09	308	⇓P	P	23 28 18.2	-1.1
	baz=86						
125A	Gardner Draw,	86.11	312	⇑P	P	23 28 18.2	-1.3
	baz=86						
631A	Perdido Creek	86.18	307	⇑P	P	23 28 19.0	-0.8
	baz=86						
SAML	Samuel	86.21	254	eP	P	23 28 18.5	-1.4
	comp=Z,21nm,1.4s						
226B	Tecolote Peak,	86.27	311	⇓P	P	23 28 18.8	-1.5
	baz=86						
X21A	Alamocita Cree	86.43	315	⇓P	P	23 28 20.4	-0.7
	baz=86						
428A	Kincaid Ranch,	86.44	309	⇑P	P	23 28 20.4	-0.7
	baz=86						
529A	Stev Forest Ra	86.62	308	⇓P	P	23 28 20.9	-1.0
	baz=86						
MAT	Matsushiro	86.66	41	P	P	23 28 21.4	-0.6
MJAR	Matsushiro Arr	86.66	41	P	P	23 28 23.1	+1.1
MJAR	Matsushiro Arr	86.66	41	P	P	23 28 23.1	+1.1
	comp=Z,6.9nm,1.0s,baz=317,slow=5.5,SNR=13						
MJAR				LR	LR	00 10 55.3	
	comp=Z,460nm,18.4s,baz=335,slow=38						
X20A	Quemado	86.72	315	⇓P	P	23 28 20.9	-1.7
	baz=86						
427A	Hayter Ranch,	86.76	310	⇑P	P	23 28 21.7	-0.9
	baz=86						
528A	Cox Ranch, San	86.92	309	⇑P	P	23 28 22.4	-1.1
	baz=87						
224A	Cornudas Mount	87.02	312	⇓P	P	23 28 23.0	-0.9
	baz=87						
Y20A	Horse Springs,	87.15	315	⇓P	P	23 28 23.0	-1.7
	baz=87						
Z21A	St. Cloud Mine	87.24	314	⇓P	P	23 28 23.9	-1.2
	baz=87						
426A	McDonald Obser	87.25	310	⇓P	P	23 28 24.1	-1.1
	baz=87						
324A	Moseley Ranch,	87.48	311	⇓P	P	23 28 25.5	-0.8
	baz=87						
526A	Mary Lane Ranc	87.74	310	⇓P	P	23 28 26.2	-1.2
	baz=88						
121A	Cookes Peak, D	87.90	314	⇑P	P	23 28 26.9	-1.4
	baz=88						
TXAR	Lajitas Array	88.04	309	P	P	23 28 29.8	+0.9
TXAR	Lajitas Array	88.04	309	P	P	23 28 29.8	+0.9
	comp=Z,1.2nm,0.8s,baz=57,slow=3.8,SNR=6.6						
TXAR				LR	LR	00 11 14.0	
	comp=Z,138nm,19.0s,baz=180,slow=38						
626A	Big Bend Ranch	88.15	309	⇓P	P	23 28 28.4	-0.9
	baz=88						
NVAR	Mina Array Bea	88.29	324	P	P	23 28 30.5	+0.5
NVAR	Mina Array Bea	88.29	324	P	P	23 28 30.5	+0.5
	comp=Z,0.3nm,0.4s,baz=54,slow=4.6,SNR=2.8						
NVAR				LR	LR	00 06 31.3	
	comp=Z,156nm,20.4s,baz=168,slow=35						
OTAV	Otavalo	91.19	271	eP	P	23 28 43.8	-0.4
	comp=Z,45nm,1.3s						
CPUP	Villa Florida	94.43	238	LR	LR	00 08 20.2	
	comp=Z,172nm,19.7s,baz=221,slow=34						
LPAZ	La Paz	94.73	252	P	P	23 29 02.5	+1.9
LPAZ	La Paz	94.73	252	P	P	23 29 02.5	+1.9
	comp=Z,1.2nm,0.8s,baz=327,slow=5.1,SNR=4.3						
LPAZ				LR	LR	00 11 45.0	
	comp=Z,97nm,19.6s,baz=224,slow=36						
WRA	Warramunga Arr	125.90	85	PKP	PKPdf	23 34 41.6	+1.2
WRA	Warramunga Arr	125.90	85	PKP	PKPdf	23 34 41.6	+1.2
	comp=Z,1.3nm,1.0s,baz=320,slow=2.2,SNR=3.7						
ASAR	Alice Springs	127.82	89	PKP	PKPdf	23 34 45.4	+1.3
ASAR	Alice Springs	127.82	89	PKP	PKPdf	23 34 45.4	+1.3
	comp=Z,0.7nm,0.6s,baz=315,slow=1.5,SNR=7.1						

ISCJB ***06*** *23:19:46.5±0.6, 39°.55N±0°.03×28°.80E±0°.07, h4km±16km, Error ellipse: s-maj=9.6km s-min=5.3km az=2.1*
CSEM ***06*** *23:19:46.3±0.1, 39°.54N×28°.73E, h15km, MD2.2, Error ellipse: s-maj=2.6km s-min=1.9km az=88.0*
DDA ***06*** *23:19:46.1, 39°.57N×28°.82E, h7km, MD2.8*
ISK ***06*** *23:19:46.3, 39°.57N×28°.79E, h4km, MD2.2*
ISC 06 23:19:46.6±1.0**, 39°.55N**±0°.03×**28°.78E**±0°.04**, h12**km±9km**, n14, σ0s.25**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DST	Dursunbey	0.14	292	ePG	Pg	23 19 49.8	-0.1
DST	Dursunbey	0.14	292	ePg	Pg	23 19 49.8	-0.1
DURS	Dursunbey	0.24	282	iP	Pg	23 19 51.8	+0.1
DURS				iS	Sg	23 19 55.4	+0.2
DURS	Dursunbey	0.24	282	iP	Pg	23 19 51.8	+0.1
DURS				iS	Sg	23 19 55.4	+0.2
DEMI	Demirci	0.51	186	iP	Pg	23 19 56.5	-0.1
DEMI				iS	Sg	23 20 03.4	0.0
DEMI	Demirci	0.51	186	iP	Pg	23 19 56.5	-0.1
DEMI				iS	Sg	23 20 03.4	0.0
TVSB	Tavsanli	0.54	101	ePG	Pg	23 19 57.4	+0.3
TVSB	Tavsanli	0.54	101	ePg	Pg	23 19 57.4	+0.3
MDNY	Mudanya-Bursa	0.82	5	ePG	Pg	23 20 02.4	0.0
MDNY				eSG	Sb	23 20 14.2	+0.5
MDNY	Mudanya-Bursa	0.82	5	ePg	Pg	23 20 02.4	0.0
MDNY				eSg	Sb	23 20 14.2	+0.5
ARMT	Armutlu	1.01	3	ePG	Pg	23 20 06.1	0.0
ARMT				eSG	Sn	23 20 20.6	-0.3
ARMT	Armutlu	1.01	3	ePg	Pg	23 20 06.1	0.0
ARMT				eSg	Sn	23 20 20.6	-0.3
BORA	Eskisehir	1.33	75	iP	Pn	23 20 11.0	-0.1
BORA				iS	Sg	23 20 29.0	-0.4
BORA	Eskisehir	1.33	75	iP	Pn	23 20 11.0	-0.1
BORA				iS	Sg	23 20 29.0	-0.4

IDC 06 23:22:36.3±46.0**, 16°.43S**×**175°.04W, h0**km**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.8**/19**, mbtmp4.1**/3**, Error ellipse: s-maj=867.2km s-min=171.6km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.16	241	P	P	23 30 31.5	+0.6
	2.3nm,0.7s,baz=90,slow=11,SNR=5.5						
WRA	Warramunga Arr	48.08	258	P	P	23 31 17.5	-0.6
	0.3nm,0.3s,baz=95,slow=8.0,SNR=5.3						
ASAR	Alice Springs	48.30	253	P	P	23 31 19.6	-0.3
	4.9nm,0.6s,baz=88,slow=8.3,SNR=60						

IDC ***06*** *23:23:32.0±1.3, 2°.12N×96°.24E, h0km, mb4.1/8, mb1 4.1/9, mb1mx3.8/27, mbtmp4.0/9, ML3.4/1, Error ellipse: s-maj=46.4km s-min=19.2km az=48.0*
DJA ***06*** *23:23:33.9±2.9, 2°N±10°×9°6E±1°1, h29km±43km, M4.2/5, mb4.5/3, mB4.7/2, MLv4.1/5, Mw(mB)3.9/2*
ISCJB ***06*** *23:23:34.3±0.8, 2°.20N±0°.09×96°.25E±0°.08, h27km, mb4.0/8, Error ellipse: s-maj=15.7km s-min=7.4km az=42.0*
ISC 06 23:23:35.8±1.1**, 2°.14N**±0°.10×**96°.2E**±0°.1**, h27**km**, n17, σ0s.91**/18**, mb4.2**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	1.58	121	P	Pn	23 24 01.3	-0.8
GSI				S	Sn	23 24 21.2	-0.5
TSI	Tuntungan	2.70	60	P	Pn	23 24 17.7	+0.2
PSI	Prapat	2.78	76	P	Pn	23 24 18.4	-0.2
PSI	Prapat	2.78	76	Pn	Pn	23 24 18.5	-0.1
	6.6nm,0.3s,baz=257,slow=15,SNR=25						
BSI	Banda Aceh	3.46	345	P	Pn	23 24 25.8	-2.2
MNSI	Mandailing Nat	3.61	112	P	Pn	23 24 29.9	-0.1
IPM	Ipoh	5.33	64	P	Pn	23 24 53.7	+0.1
	31nm,1.0s,544nm						
KULM	Kulim	5.42	55	P	Pn	23 24 53.7	-1.1
	105nm,0.8s,761nm						
MYKOM	Kota Tinggi	7.63	92	P	Pn	23 25 25.2	0.0
WRA	Warramunga Arr	43.36	122	P	P	23 31 35.9	-0.2
	0.6nm,0.5s,baz=301,slow=9.0,SNR=4.8						
ASAR	Alice Springs	44.73	127	P	P	23 31 46.9	-0.3
	0.2nm,0.4s,baz=307,slow=8.0,SNR=2.9						
MKAR	Makanchi Array	46.11	347	P	P	23 31 57.9	+0.2
	5.2nm,0.8s,baz=162,slow=7.6,SNR=44						
SONM	Songino Array	46.36	9	P	P	23 31 59.6	-0.1
	1.2nm,0.5s,baz=188,slow=9.1,SNR=14						
ZALV	Zalesovo Beam	52.49	352	P	P	23 32 46.2	0.0
	7.6nm,0.7s,baz=178,slow=7.0,SNR=44						
FINES	FINESS Array B	78.72	333	P	P	23 35 35.6	+0.1
	1.1nm,0.7s,baz=44,slow=5.8,SNR=3.5						
ARCES	ARCESS Array B	81.33	340	P	P	23 35 50.0	+0.5
	2.9nm,1.0s,baz=90,slow=5.4,SNR=3.7						
HFS	Hagfors	84.43	330	P	P	23 36 08.0	+2.3
	1.5nm,0.9s,baz=86,slow=5.9,SNR=2.5						

ISCJB ***06*** *23:23:54.2±0.3, 42°.48N±0°.02×13°.41E±0°.03, h15km±3km, Error ellipse: s-maj=3.9km s-min=3.5km az=162.7*
CSEM ***06*** *23:23:54.7±0.1, 42°.45N×13°.39E, h8km, ML3.5/5, Error ellipse: s-maj=2.5km s-min=2.3km az=167.0*
ROM ***06*** *23:23:54.1±0.1, 42°.46N×13°.39E, h9km±1km, Ml3.1/10, Error ellipse: s-maj=1.8km s-min=1.4km az=76.0*
LDG ***06*** *23:23:56.0±0.2, 42°.39N×13°.41E, h2km, Ml3.1/6, Error ellipse: s-maj=4.0km s-min=3.3km az=61.0*
ISC 06 23:23:54.5±0.8**, 42°.47N**±0°.02×**13°.38E**±0°.02**, h12**km±4km**, n67, σ1s.13**/95**, 8C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	Campotosto	0.07	19	⇓iPg	Pg	23 23 57.1	-0.1
CAMP				Sg	Sg	23 23 58.9	-0.3
CAMP	Campotosto	0.07	19	⇓iPg	Pg	23 23 57.1	-0.1
CAMP				Sg	Sg	23 23 58.9	-0.3
AQU	L'Aquila	0.11	170	⇑iPg	Pg	23 23 57.4	-0.2
AQU				Sg	Sg	23 23 59.5	-0.3
	7µm,0.3s						
AQU	L'Aquila	0.11	170	⇑iPg	Pg	23 23 57.4	-0.2
AQU				Sg	Sg	23 23 59.5	-0.3
	7µm,0.3s						
TERO	Teramo	0.23	47	⇑iPg	Pg	23 23 59.1	-0.3
TERO				Sg	Sg	23 24 02.6	-0.2
TERO	Teramo	0.23	47	⇑iPg	Pg	23 23 59.1	-0.3
TERO				Sg	Sg	23 24 02.6	-0.2
FAGN	Fagnano	0.25	142	Pg	Pg	23 23 59.5	-0.3
FAGN				Sg	Sg	23 24 03.3	-0.1
	9µm,0.4s						
FAGN	Fagnano	0.25	142	Pg	Pg	23 23 59.5	-0.3
FAGN				Sg	Sg	23 24 03.3	-0.1
	9µm,0.4s						
FIAM	Fiamignano	0.28	224	⇑iPg	Pg	23 24 00.3	0.0
FIAM				Sg	Sg	23 24 04.7	+0.6
	4µm,0.5s						
FIAM	Fiamignano	0.28	224	⇑iPg	Pg	23 24 00.3	0.0
FIAM				Sg	Sg	23 24 04.7	+0.6
	4µm,0.5s						
VCEL	Villa Celiera	0.35	102	Pg	Pg	23 24 01.3	-0.3
VCEL	Villa Celiera	0.35	102	Pg	Pg	23 24 01.3	-0.3
NRCA	Norcia	0.41	332	⇑iPg	Pg	23 24 02.9	+0.1
NRCA	Norcia	0.41	332	⇑iPg	Pg	23 24 02.9	+0.1
PTQR	Pietraquaria	0.44	178	Pg	Pg	23 24 02.9	-0.4
PTQR				Sg	Sb	23 24 11.4	+0.4
	143nm,0.3s						
PTQR	Pietraquaria	0.44	178	Pg	Pg	23 24 02.9	-0.4
MNS	Montasola	0.52	261	Pg	Pg	23 24 04.5	-0.2
MNS				Sg	Sb	23 24 12.6	-0.6
	594nm,0.5s						
MNS	Montasola	0.52	261	Pg	Pg	23 24 04.5	-0.2
MNS				Sg	Sb	23 24 12.6	-0.6
	594nm,0.5s						
TRTR	Tortoreto Alta	0.52	49	Pg	Pb	23 24 05.5	-0.2
	5µm,0.7s						
TRTR	Tortoreto Alta	0.52	49	Pg	Pb	23 24 05.5	-0.2
	5µm,0.7s						
CERT	Cerreto	0.59	210	Pg	Pg	23 24 06.2	+0.1
CERT	Cerreto	0.59	210	Pg	Pg	23 24 06.2	+0.1
INTR	Introdacqua	0.60	139	Pg	Pg	23 24 05.8	-0.4
INTR				Sg	Sb	23 24 14.8	-0.7
	2µm,0.8s						
INTR	Introdacqua	0.60	139	Pg	Pg	23 24 05.8	-0.4
INTR				Sg	Sb	23 24 14.8	-0.7
	2µm,0.8s						
CESX	Cesi	0.61	284	Pg	Pg	23 24 06.3	0.0
	181nm,0.3s						
CESX	Cesi	0.61	284	Pg	Pg	23 24 06.3	0.0
	181nm,0.3s						
VVLD	Villa Vallelon	0.62	163	Pg	Pg	23 24 06.3	-0.3
VVLD	Villa Vallelon	0.62	163	Pg	Pg	23 24 06.3	-0.3
MTCE	Montecelio	0.65	227	Pg	Pg	23 24 06.6	-0.5
	450nm,0.4s						
MTCE	Montecelio	0.65	227	Pg	Pg	23 24 06.6	-0.5
	450nm,0.4s						
CAFR	Castel Frentan	0.76	108	Pg	Pb	23 24 09.8	+0.1
CAFR	Castel Frentan	0.76	108	Pg	Pb	23 24 09.8	+0.1
SDI	San Donato	0.82	157	Pg	Pg	23 24 09.5	-0.9
	435nm,0.8s						
SDI	San Donato	0.82	157	Pg	Pg	23 24 09.5	-0.9
	435nm,0.8s						
RMP	Rome, Mte Porz	0.82	218	Pg	Pg	23 24 10.4	-0.1
	594nm,0.4s						
RMP	Rome, Mte Porz	0.82	218	Pg	Pg	23 24 10.4	-0.1
	594nm,0.4s						
SNTG	Esanatoglia	0.85	338	Pg	Pg	23 24 10.4	-0.6
	101nm,0.2s						
SNTG	Esanatoglia	0.85	338	Pg	Pg	23 24 10.4	-0.6
	101nm,0.2s						
RDP	Rocca di Papa	0.86	215	Pg	Pb	23 24 11.4	0.0
	1µm,0.7s						
RDP	Rocca di Papa	0.86	215	Pg	Pb	23 24 11.4	0.0
	1µm,0.7s						
TOLF	Tolfa	1.10	249	Pg	Pb	23 24 15.1	-0.4
TOLF	Tolfa	1.10	249	Pg	Pb	23 24 15.1	-0.4
NVLJ	Novalja	2.36	27	ePn	Pn	23 24 33.9	+0.8
NVLJ				Sn	Sn	23 25 03.4	+1.4
NVLJ	Novalja	2.36	27	ePn	Pn	23 24 33.9	+0.8
NVLJ				Sn	Sn	23 25 03.3	+1.4
STON	Ston	3.21	81	ePn	Pn	23 24 45.6	+0.8
STON				Sn	Sn	23 25 21.6	-1.5
STON	Ston	3.21	81	ePn	Pn	23 24 45.6	+0.8
STON				Sn	Sn	23 25 21.5	-1.5
PGF	Pioggiola	3.24	273	ePn	Pn	23 24 46.5	+1.3
PGF				eSn	Sn	23 25 26.4	+2.6
	4.6nm,0.6s						
PGF	Pioggiola	3.24	273	ePn	Pn	23 24 46.5	+1.3
PGF				eSn	Sn	23 25 26.4	+2.6
	2.3nm,0.6s						
SBF	Sospel	4.56	290	ePn	Pn	23 25 04.8	+1.4
SBF				eSn	Sn	23 25 54.7	-1.7
	23nm,0.9s						
SBF	Sospel	4.56	290	ePn	Pn	23 25 04.8	+1.4
SBF				eSn	Sn	23 25 54.7	-1.7
	12nm,0.9s						
FRF	La Foret Royal	5.05	285	ePn	Pn	23 25 11.1	+1.0
FRF				eSn	Sn	23 26 06.1	-2.3
	42nm,1.5s						
FRF	La Foret Royal	5.05	285	ePn	Pn	23 25 11.1	+1.0
FRF				eSn	Sn	23 26 06.1	-2.3
	21nm,1.5s						
IVAS	Ivanjica	5.09	75	ePn	Pn	23 25 12.0	+1.3
DIVS	Divibare	5.10	69	ePn	Pn	23 25 11.3	+0.5
LMR	La Mourre	5.12	282	ePn	Pn	23 25 11.7	+0.7
LMR	La Mourre	5.12	282	ePn	Pn	23 25 11.7	+0.7
MBDF	Montbardon	5.30	297	eP	Pn	23 25 16.4	+2.7
MBDF	Montbardon	5.30	297	eP	Pn	23 25 16.4	+2.7
TRUS	Trudelj	5.42	69	ePn	Pn	23 25 13.7	-1.4
GRUS	Gruza	5.55	73	ePn	Pn	23 25 16.2	-0.7
BARS	Barje	6.23	84	ePn	Pn	23 25 27.2	+0.9
HINF	Hinteralfeld	7.06	321	ePn	Pn	23 25 39.2	+1.5
HINF				eSn	Sn	23 26 55.8	-2.1
	5.5nm,0.7s						
HINF	Hinteralfeld	7.06	321	ePn	Pn	23 25 39.2	+1.5
CDF	Champ du Feu	7.33	326	ePn	Pn	23 25 42.6	+1.2
CDF				eSn	Sn	23 27 02.4	-2.2
	2.2nm,0.5s						
CDF	Champ du Feu	7.33	326	ePn	Pn	23 25 42.6	+1.2
HAU	Haudompre	7.43	321	ePn	Pn	23 25 44.4	+1.6
HAU				eSn	Sn	23 27 03.1	-3.9
	3.4nm,0.4s						
HAU	Haudompre	7.43	321	ePn	Pn	23 25 44.4	+1.6

CSEM ***06*** *23:40:01.9±0.1, 42°.31N×13°.38E, h12km, ML3.5/8, Error ellipse: s-maj=2.1km s-min=1.6km az=83.0*
ROM ***06*** *23:40:01.9±0.1, 42°.30N×13°.39E, h11km, Ml2.8/26, Error ellipse: s-maj=1.1km s-min=0.8km az=75.0*
ISC 06 23:40:02.1±0.8**, 42°.31N**±0°.02×**13°.37E**±0°.02**, h13**km±5km**, n66, σ0s.51**/90**, 6C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	24	⇓iPg	Pg	23 40 04.5	-0.2
AQU				Sg	Sg	23 40 06.1	-0.4
	19µm,0.3s						
AQU	L'Aquila	0.05	24	⇓iPg	Pg	23 40 04.5	-0.2
AQU				Sg	Sg	23 40 06.1	-0.4
	19µm,0.3s						
FAGN	Fagnano	0.16	104	Pg	Pg	23 40 06.0	0.0
FAGN				Sg	Sg	23 40 09.0	+0.3
	17µm,0.5s						
FAGN	Fagnano	0.16	104	Pg	Pg	23 40 06.0	0.0
FAGN				Sg	Sg	23 40 09.0	+0.3
	17µm,0.5s						
FIAM	Fiamignano	0.19	259	⇑iPg	Pb	23 40 07.1	-0.5
FIAM				Sg	Sb	23 40 10.7	-0.6
	3µm,0.8s						
FIAM	Fiamignano	0.19	259	⇑iPg	Pb	23 40 07.1	-0.5
FIAM				Sg	Sb	23 40 10.7	-0.6
	3µm,0.8s						
CAMP	Campotosto	0.23	7	⇑iPg	Pg	23 40 07.0	-0.2
CAMP				Sg	Sg	23 40 10.7	+0.1
CAMP	Campotosto	0.23	7	⇑iPg	Pg	23 40 07.0	-0.2
CAMP				Sg	Sg	23 40 10.7	+0.1
PTQR	Pietraquaria	0.28	176	⇑iPg	Pg	23 40 08.3	+0.2
PTQR				Sg	Sg	23 40 12.9	+0.9
PTQR	Pietraquaria	0.28	176	⇑iPg	Pg	23 40 08.3	+0.2
PTQR				Sg	Sg	23 40 12.9	+0.9
VCEL	Villa Celiera	0.36	76	Pg	Pg	23 40 09.0	-0.4
VCEL				Sg	Sg	23 40 15.2	+0.9
	2µm,0.4s						
VCEL	Villa Celiera	0.36	76	Pg	Pg	23 40 09.0	-0.4
VCEL				Sg	Sg	23 40 15.2	+0.9
	2µm,0.4s						
TERO	Teramo	0.36	28	Pg	Pg	23 40 08.8	-0.6
TERO				Sg	Sg	23 40 14.8	+0.5
	1µm,0.5s						
TERO	Teramo	0.36	28	Pg	Pg	23 40 08.8	-0.6
TERO				Sg	Sg	23 40 14.8	+0.5
	1µm,0.5s						
CERT	Cerreto	0.46	219	Pg	Pg	23 40 11.5	+0.3
CERT				Sg	Sb	23 40 18.4	-0.5
	1µm,0.4s						
CERT	Cerreto	0.46	219	Pg	Pg	23 40 11.5	+0.3
CERT				Sg	Sb	23 40 18.4	-0.5
	1µm,0.4s						
VVLD	Villa Vallelon	0.47	157	Pg	Pg	23 40 11.2	-0.3
VVLD				Sg	Sg	23 40 17.8	0.0
	575nm,0.4s						
VVLD	Villa Vallelon	0.47	157	Pg	Pg	23 40 11.2	-0.3
VVLD				Sg	Sg	23 40 17.8	0.0
	575nm,0.4s						
INTR	Introdacqua	0.49	127	Pg	Pg	23 40 11.6	-0.2
INTR				Sg	Sb	23 40 19.7	-0.2
	668nm,0.3s						
INTR	Introdacqua	0.49	127	Pg	Pg	23 40 11.6	-0.2
INTR				Sg	Sb	23 40 19.7	-0.2
	668nm,0.3s						
GUAR	Guarcino	0.51	185	Pg	Pg	23 40 12.1	-0.1
	485nm,0.7s						
GUAR	Guarcino	0.51	185	Pg	Pg	23 40 12.1	-0.1
	485nm,0.7s						
MNS	Montasola	0.52	279	Pg	Pg	23 40 12.2	-0.1
	284nm,0.3s						
MNS	Montasola	0.52	279	Pg	Pg	23 40 12.2	-0.1
	284nm,0.3s						
MTCE	Montecelio	0.55	239	Pg	Pg	23 40 12.9	+0.1
	442nm,0.5s						
MTCE	Montecelio	0.55	239	Pg	Pg	23 40 12.9	+0.1
	442nm,0.5s						
NRCA	Norcia	0.56	340	Pg	Pg	23 40 12.8	-0.3
NRCA				Sg	Sb	23 40 21.7	-0.2
NRCA	Norcia	0.56	340	Pg	Pg	23 40 12.8	-0.3
NRCA				Sg	Sb	23 40 21.7	-0.2
POFI	Posta Fibreno	0.64	157	Pg	Pg	23 40 14.1	-0.5
	177nm,0.6s						
POFI	Posta Fibreno	0.64	157	Pg	Pg	23 40 14.1	-0.5
	177nm,0.6s						
TRTR	Tortoreto Alta	0.64	38	Pg	Pb	23 40 15.1	-0.1
	2µm,0.8s						
TRTR	Tortoreto Alta	0.64	38	Pg	Pb	23 40 15.1	-0.1
	2µm,0.8s						
OFFI	Offida	0.67	20	Pg	Pg	23 40 15.2	0.0
	2µm,0.5s						
OFFI	Offida	0.67	20	Pg	Pg	23 40 15.2	0.0
	2µm,0.5s						
SDI	San Donato	0.68	151	Pg	Pg	23 40 14.6	-0.7
SDI	San Donato	0.68	151	Pg	Pg	23 40 14.6	-0.7
RMP	Rome, Mte Porz	0.70	225	Pg	Pg	23 40 15.6	-0.2
RMP	Rome, Mte Porz	0.70	225	Pg	Pg	23 40 15.6	-0.2
CAFR	Castel Frentan	0.73	96	Pg	Pg	23 40 15.8	-0.4
	512nm,0.4s						
CAFR	Castel Frentan	0.73	96	Pg	Pg	23 40 15.8	-0.4
	512nm,0.4s						
RDP	Rocca di Papa	0.73	222	Pg	Pg	23 40 16.2	-0.2
	995nm,0.5s						
RDP	Rocca di Papa	0.73	222	Pg	Pg	23 40 16.2	-0.2
	995nm,0.5s						
GIUL	Giuliano Di Ro	0.75	187	Pg	Pg	23 40 16.4	-0.3
	193nm,0.6s						

GIUL	Giuliano Di Ro	0.75	187	Pg	Pg	23 40 16.4	-0.3
	193nm,0.6s						
FDMO	Fiordimonte	0.76	344	Pg	Pg	23 40 16.2	-0.7
	217nm,0.4s						
FDMO	Fiordimonte	0.76	344	Pg	Pg	23 40 16.2	-0.7
	217nm,0.4s						
CESI	CESI - Serrava	0.78	334	Pg	Pg	23 40 16.9	-0.3
	76nm,0.3s						
CESI	CESI - Serrava	0.78	334	Pg	Pg	23 40 16.9	-0.3
	76nm,0.3s						
CERA	Filignano	0.86	146	Pg	Pg	23 40 17.7	-1.0
	221nm,0.6s						
CERA	Filignano	0.86	146	Pg	Pg	23 40 17.7	-1.0
	221nm,0.6s						
ASSB	Assisi San Ben	0.91	325	Pg	Pg	23 40 19.2	-0.4
	193nm,0.4s						
ASSB	Assisi San Ben	0.91	325	Pg	Pg	23 40 19.2	-0.4
	193nm,0.4s						
MIDA	Miranda	0.93	135	Pg	Pg	23 40 18.8	-1.4
	159nm,0.6s						
MIDA	Miranda	0.93	135	Pg	Pg	23 40 18.8	-1.4
	159nm,0.6s						
CING	Cingoli	1.08	353	Pg	Pb	23 40 21.7	-1.0
	211nm,0.6s						
CING	Cingoli	1.08	353	Pg	Pb	23 40 21.7	-1.0
	211nm,0.6s						
MURB	Monte Urbino	1.14	327	Pg	Pb	23 40 23.8	0.0
	444nm,0.5s						
MURB	Monte Urbino	1.14	327	Pg	Pb	23 40 23.8	0.0
	444nm,0.5s						
ARVD	Arcevia	1.23	345	Pg	Pn	23 40 24.7	-0.4
	189nm,1.0s						
ARVD	Arcevia	1.23	345	Pg	Pn	23 40 24.7	-0.4
	189nm,1.0s						
AOI	Ancona	1.25	8	Pg	Pb	23 40 25.7	0.0
	155nm,0.9s						
AOI	Ancona	1.25	8	Pg	Pb	23 40 25.7	0.0
	155nm,0.9s						
PIEI	Pieia	1.38	334	Pn	Pn	23 40 27.4	+0.3
	65nm,0.6s						
PIEI	Pieia	1.38	334	Pn	Pn	23 40 27.4	+0.3
	65nm,0.6s						
NVLJ	Novalja	2.51	25	ePn	Pn	23 40 43.1	+0.6
NVLJ				Sn	Sn	23 41 14.1	+1.1
NVLJ	Novalja	2.51	25	ePn	Pn	23 40 43.1	+0.6
NVLJ				Sn	Sn	23 41 14.0	+1.1

*ISCJB **06** 23:49:34.1±0.2, 42°.36N±0°.02×13°.40E±0°.02, h9km±2km, Error ellipse: s-maj=3.1km s-min=2.8km az=153.5*
*CSEM **06** 23:49:34.5±0.1, 42°.36N×13°.39E, h2km, ML3.9/7, Error ellipse: s-maj=2.6km s-min=2.2km az=58.0*
*ROM **06** 23:49:34.0±0.1, 42°.36N×13°.40E, h9km, Ml3.2/31, Error ellipse: s-maj=1.3km s-min=1.0km az=80.0*
*LDG **06** 23:49:36.5±0.2, 42°.32N×13°.35E, h2km, Ml3.0/7, Error ellipse: s-maj=5.7km s-min=3.8km az=49.0*
ISC 06 23:49:34.5±0.8**, 42°.36N**±0°.02×**13°.39E**±0°.02**, h9**km±4km**, n117, σ1s.29**/145**, 27C-3D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.01	125⇓	iPg	Pg	23 49 35.9	-0.4
AQU				Sg	Sg	23 49 36.7	-0.8
	72µm,0.6s						
AQU	L'Aquila	0.01	125⇓	iPg	Pg	23 49 35.9	-0.4
AQU				Sg	Sg	23 49 36.7	-0.8
	72µm,0.6s						
CAMP	Campotosto	0.17	6⇑	iPg	Pg	23 49 38.4	+0.1
CAMP				Sg	Sg	23 49 41.3	+0.4
CAMP	Campotosto	0.17	6⇑	iPg	Pg	23 49 38.4	+0.1
CAMP				Sg	Sg	23 49 41.3	+0.4
FAGN	Fagnano	0.18	123	Pg	Pg	23 49 38.5	+0.2
FAGN				Sg	Sg	23 49 41.7	+0.8
	18µm,0.3s						
FAGN	Fagnano	0.18	123	Pg	Pg	23 49 38.5	+0.2
FAGN				Sg	Sg	23 49 41.7	+0.8
	18µm,0.3s						
FIAM	Fiamignano	0.22	245⇑	iPg	Pg	23 49 39.6	+0.5
FIAM				Sg	Sg	23 49 43.5	+1.4
	6µm,0.4s						
FIAM	Fiamignano	0.22	245⇑	iPg	Pg	23 49 39.6	+0.5
FIAM				Sg	Sg	23 49 43.5	+1.4
	6µm,0.4s						
TERO	Teramo	0.31	32⇑	iPg	Pg	23 49 40.2	-0.5
TERO				Sg	Sg	23 49 45.4	+0.6
	4µm,0.4s						
TERO	Teramo	0.31	32⇑	iPg	Pg	23 49 40.2	-0.5
TERO				Sg	Sg	23 49 45.4	+0.6
	4µm,0.4s						
VCEL	Villa Celiera	0.34	84⇑	ePg	Pg	23 49 41.1	-0.2
	4µm,0.4s						
VCEL	Villa Celiera	0.34	84⇑	ePg	Pg	23 49 41.1	-0.2
	4µm,0.4s						
PTQR	Pietraquaria	0.34	178⇑	iPg	Pg	23 49 41.4	+0.1
PTQR				Sg	Sg	23 49 47.0	+1.2
PTQR	Pietraquaria	0.34	178⇑	iPg	Pg	23 49 41.4	+0.1
PTQR				Sg	Sg	23 49 47.0	+1.2
CERT	Cerreto	0.51	216⇑	iPg	Pg	23 49 44.4	0.0
CERT				Sg	Sb	23 49 52.8	-0.4
	3µm,0.3s						
CERT	Cerreto	0.51	216⇑	iPg	Pg	23 49 44.4	0.0
CERT				Sg	Sb	23 49 52.8	-0.4
	3µm,0.3s						
NRCA	Norcia	0.51	337⇑	iPg	Pg	23 49 44.2	-0.3
NRCA	Norcia	0.51	337⇑	iPg	Pg	23 49 44.2	-0.3
INTR	Introdacqua	0.52	132	Pg	Pg	23 49 44.2	-0.5
INTR				Sg	Sg	23 49 52.4	+0.9
	3µm,0.4s						
INTR	Introdacqua	0.52	132	Pg	Pg	23 49 44.2	-0.5
INTR				Sg	Sg	23 49 52.4	+0.9
	3µm,0.4s						
MNS	Montasola	0.52	273⇑	iPg	Pg	23 49 44.6	-0.1
MNS	Montasola	0.52	273⇑	iPg	Pg	23 49 44.6	-0.1
VVLD	Villa Vallelon	0.52	160⇑	iPg	Pg	23 49 44.3	-0.4
	1µm,0.4s						
VVLD	Villa Vallelon	0.52	160⇑	iPg	Pg	23 49 44.3	-0.4
	1µm,0.4s						
GUAR	Guarcino	0.57	185⇑	iPg	Pg	23 49 45.2	-0.4
	1µm,0.3s						
GUAR	Guarcino	0.57	185⇑	iPg	Pg	23 49 45.2	-0.4
	1µm,0.3s						
MTCE	Montecelio	0.59	235⇑	iPg	Pg	23 49 45.7	-0.2
	471nm,0.3s						
MTCE	Montecelio	0.59	235⇑	iPg	Pg	23 49 45.7	-0.2
	471nm,0.3s						
TRTR	Tortoreto Alta	0.59	41	Pg	Pb	23 49 46.8	-0.2
	4µm,0.8s						
TRTR	Tortoreto Alta	0.59	41	Pg	Pb	23 49 46.8	-0.2
	4µm,0.8s						
OFFI	Offida	0.61	21⇑	iPg	Pg	23 49 46.8	+0.4
	6µm,0.6s						
OFFI	Offida	0.61	21⇑	iPg	Pg	23 49 46.8	+0.4
	6µm,0.6s						
POFI	Posta Fibreno	0.69	159	Pg	Pg	23 49 47.0	-0.8
	609nm,0.6s						
POFI	Posta Fibreno	0.69	159	Pg	Pg	23 49 47.0	-0.8
	609nm,0.6s						
FDMO	Fiordimonte	0.71	342⇑	iPg	Pg	23 49 47.5	-0.7
FDMO				Sg	Sb	23 49 58.5	-0.4
	534nm,0.4s						
FDMO	Fiordimonte	0.71	342⇑	iPg	Pg	23 49 47.5	-0.7
FDMO				Sg	Sb	23 49 58.5	-0.4
	534nm,0.4s						
CAFR	Castel Frentan	0.73	100	Pg	Pg	23 49 48.4	-0.1
	2µm,0.4s						
CAFR	Castel Frentan	0.73	100	Pg	Pg	23 49 48.4	-0.1
	2µm,0.4s						
CESI	CESI - Serrava	0.73	331	Pg	Pg	23 49 48.0	-0.7
CESI	CESI - Serrava	0.73	331	Pg	Pg	23 49 48.0	-0.7
RMP	Rome, Mte Porz	0.75	223	Pg	Pg	23 49 48.5	-0.5
	831nm,0.4s						
RMP	Rome, Mte Porz	0.75	223	Pg	Pg	23 49 48.5	-0.5
	831nm,0.4s						
RDP	Rocca di Papa	0.78	220	Pg	Pg	23 49 49.1	-0.5
	989nm,0.5s						
RDP	Rocca di Papa	0.78	220	Pg	Pg	23 49 49.1	-0.5
	989nm,0.5s						
GIUL	Giuliano Di Ro	0.81	187	Pg	Pg	23 49 49.2	-0.9
	219nm,0.6s						
GIUL	Giuliano Di Ro	0.81	187	Pg	Pg	23 49 49.2	-0.9
	219nm,0.6s						
ASSB	Assisi San Ben	0.86	322	Pg	Pg	23 49 50.5	-0.7
	421nm,0.4s						
ASSB	Assisi San Ben	0.86	322	Pg	Pg	23 49 50.5	-0.7
	421nm,0.4s						
RNI2	Rionero Sannit	0.87	139	Pg	Pg	23 49 50.9	-0.4
RNI2	Rionero Sannit	0.87	139	Pg	Pg	23 49 50.9	-0.4
CERA	Filignano	0.90	148	Pg	Pg	23 49 50.6	-1.2
	531nm,0.7s						
CERA	Filignano	0.90	148	Pg	Pg	23 49 50.6	-1.2
	531nm,0.7s						
MIDA	Miranda	0.97	138	Pg	Pg	23 49 51.6	-1.5
	321nm,0.5s						
MIDA	Miranda	0.97	138	Pg	Pg	23 49 51.6	-1.5
	321nm,0.5s						
ARVD	Arcevia	1.18	344	Pg	Pb	23 49 55.8	-1.3
	329nm,0.7s						
ARVD	Arcevia	1.18	344	Pg	Pb	23 49 55.8	-1.3
	329nm,0.7s						
AOI	Ancona	1.20	8	Pg	Pb	23 49 56.4	-1.0
	463nm,0.5s						
AOI	Ancona	1.20	8	Pg	Pb	23 49 56.4	-1.0
	463nm,0.5s						
BSSO	Busso	1.22	132	Pg	Pn	23 49 56.7	-1.0
	430nm,1.2s						
BSSO	Busso	1.22	132	Pg	Pn	23 49 56.7	-1.0
	430nm,1.2s						
PIEI	Pieia	1.33	332	Pn	Pn	23 49 58.7	-0.6
	176nm,0.4s						
PIEI	Pieia	1.33	332	Pn	Pn	23 49 58.7	-0.6
	176nm,0.4s						
BADI	Badiali	1.42	324	Pn	Pb	23 50 01.4	+0.2
	198nm,0.5s						
BADI	Badiali	1.42	324	Pn	Pb	23 50 01.4	+0.2
	198nm,0.5s						
CAFI	Castiglion Fio	1.42	313	Pn	Pb	23 50 01.3	+0.1
	174nm,0.7s						
CAFI	Castiglion Fio	1.42	313	Pn	Pb	23 50 01.3	+0.1
	174nm,0.7s						
PARC	Parchiule	1.54	327	Pn	Pb	23 50 03.2	0.0
	260nm,0.9s						
PARC	Parchiule	1.54	327	Pn	Pb	23 50 03.2	0.0
	260nm,0.9s						
MAON	Monte Argentar	1.67	273	Pn	Pn	23 50 04.5	+0.6
	66nm,0.8s						
MAON	Monte Argentar	1.67	273	Pn	Pn	23 50 04.5	+0.6
	66nm,0.8s						
SGRT	San Giovanni R	1.86	108	Pn	Pb	23 50 07.8	-0.9
SGRT	San Giovanni R	1.86	108	Pn	Pb	23 50 07.8	-0.9
SFI	Santa Sofia	1.91	324	Pn	Pb	23 50 08.6	-0.9
	112nm,1.0s						
SFI	Santa Sofia	1.91	324	Pn	Pb	23 50 08.6	-0.9
	112nm,1.0s						
MSAG	Monte S. Angel	1.99	108	Pn	Pb	23 50 10.1	-0.8
MSAG	Monte S. Angel	1.99	108	Pn	Pb	23 50 10.1	-0.8
NVLJ	Novalja	2.45	26	ePn	Pn	23 50 15.7	+1.1
NVLJ				Sn	Sn	23 50 45.5	+0.8
NVLJ	Novalja	2.45	26	ePn	Pn	23 50 15.7	+1.1
NVLJ				Sn	Sn	23 50 45.4	+0.8
MAIM	Mastiano	2.62	307	P	Pn	23 50 18.6	+1.6
STON	Ston	3.23	79	iPn	Pn	23 50 26.5	+1.2
STON				Sn	Sn	23 51 05.2	+1.4
STON	Ston	3.23	79	iPn	Pn	23 50 26.4	+1.2
STON				Sn	Sn	23 51 05.1	+1.4
PGF	Pioggiola	3.25	275	ePn	Pn	23 50 27.2	+1.5
PGF				eSn	Sn	23 51 07.1	+2.5
	6.1nm,0.5s						
PGF	Pioggiola	3.25	275	ePn	Pn	23 50 27.2	+1.5
PGF				eSn	Sn	23 51 07.1	+2.5
	3.0nm,0.5s						
SC2M	Scurtabo	3.47	307	P	Pn	23 50 29.4	+0.7
CTI	Castel Tesino	3.89	342	Pn	Pn	23 50 35.5	+1.0
	31nm,0.5s						
CTI	Castel Tesino	3.89	342	Pn	Pn	23 50 35.5	+1.0
	31nm,0.5s						
APPI	Appiano	4.40	340	Pn	Pn	23 50 43.1	+1.6
	28nm,0.3s						
APPI	Appiano	4.40	340	Pn	Pn	23 50 43.1	+1.6
	28nm,0.3s						
ABTA	Abfaltersbach	4.43	352⇓	iPn	Pn	23 50 43.0	+1.1
	SNR=24						
ABTA	Abfaltersbach	4.43	352	Pn	Pn	23 50 43.0	+1.1
	SNR=24						
SBF	Sospel	4.61	291	ePn	Pn	23 50 45.9	+1.6
SBF				eSn	Sn	23 51 35.4	-2.6
	7.8nm,0.6s						
SBF	Sospel	4.61	291	ePn	Pn	23 50 45.9	+1.6
SBF				eSn	Sn	23 51 35.4	-2.6
	3.9nm,0.6s						
WTTA	Wattenberg	5.06	346⇑	iPn	Pn	23 50 54.5	+3.9
WTTA	Wattenberg	5.06	346	Pn	Pn	23 50 54.5	+3.9
FRF	La Foret Royal	5.09	286	ePn	Pn	23 50 51.7	+0.8
FRF				eSn	Sn	23 51 46.9	-2.8
	8.3nm,0.9s						
FRF	La Foret Royal	5.09	286	ePn	Pn	23 50 51.7	+0.8
FRF				eSn	Sn	23 51 46.9	-2.8
	4.2nm,0.9s						
IVAS	Ivanjica	5.11	74	ePn	Pn	23 50 52.5	+1.2
DIVS	Divibare	5.13	68	ePn	Pn	23 50 57.3	+5.8
LMR	La Mourre	5.15	283	ePn	Pn	23 50 52.8	+1.1
LMR				eSn	Sn	23 51 48.1	-3.1
	2.6nm,0.5s						
LMR	La Mourre	5.15	283	ePn	Pn	23 50 52.8	+1.1
LMR				eSn	Sn	23 51 48.1	-3.1
	1.3nm,0.5s						
MBDF	Montbardon	5.36	298	eP	Pn	23 50 57.9	+3.2
MBDF	Montbardon	5.36	298	eP	Pn	23 50 57.9	+3.2
GRUS	Gruza	5.58	72	ePn	Pn	23 50 58.4	+0.8
LPL	La Plagne	5.75	306	eP	Pn	23 51 03.5	+3.4
LPL	La Plagne	5.75	306	eP	Pn	23 51 03.5	+3.4
SELS	Selova	5.75	79	ePn	Pn	23 51 00.4	+0.3
BARS	Barje	6.24	83	ePn	Pn	23 51 06.0	-0.7
KHC	Kasperske Hory	6.77	1	ePN	Pn	23 51 16.4	+2.4
KHC				ex	x	23 51 24.0	
KHC				eSN	Sn	23 52 30.6	-0.6
KHC	Kasperske Hory	6.77	1	Pn	Pn	23 51 16.4	+2.4
KHC				Sn	Sn	23 52 30.6	-0.6
ZAPS	Zavoj	6.86	79	ePn	Pn	23 51 16.9	+1.6
HINF	Hinteralfeld	7.15	322	ePn	Pn	23 51 19.5	+0.3
HINF				eSn	Sn	23 52 36.0	-4.5
	5.6nm,0.5s						
HINF	Hinteralfeld	7.15	322	ePn	Pn	23 51 19.5	+0.3
VTS	Vitosha	7.27	85	ePn	Pn	23 51 23.3	+2.4
CDF	Champ du Feu	7.42	327	ePn	Pn	23 51 23.4	+0.4
CDF				eSn	Sn	23 52 43.0	-4.3
	2.9nm,0.4s						
CDF	Champ du Feu	7.42	327	ePn	Pn	23 51 23.4	+0.4
HAU	Haudompre	7.52	321	ePn	Pn	23 51 24.8	+0.5
HAU				eSn	Sn	23 52 44.0	-5.6
	3.8nm,0.4s						
HAU	Haudompre	7.52	321	ePn	Pn	23 51 24.8	+0.5

IDC 06 23:49:44.0±1.2**, 55°.24S**×**28°.19W, h0**km**, mb3.7**/2**, mb1 3.7**/3**, mb1mx3.5**/17**, mbtmp3.6**/3**, ML3.6**/1**, Error ellipse: s-maj=53.3km s-min=31.4km az=53.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	Sanae	19.71	156	P	P	23 54 14.6	-0.1
	0.2nm,0.3s,baz=295,slow=11,SNR=20						
LPAZ	La Paz	49.44	306	P	P	23 58 36.4	-0.1
	0.8nm,0.7s,baz=119,slow=10,SNR=3.4						
TORD	Torodi Ar. Bea	72.64	31	P	P	00 01 13.1	-0.1
	0.3nm,0.5s,baz=204,slow=6.0,SNR=4.1						
ILAR	Eielson Array	149.15	313	PKPbc	PKPbc	00 09 32.1	-0.7
	0.4nm,0.6s,baz=122,slow=2.3,SNR=5.4						
SONM	Songino Array	151.24	86	PKPbc	PKPbc	00 09 38.4	-0.1
	0.2nm,0.4s,baz=222,slow=3.9,SNR=2.7						

*ISCJB **06** 23:53:46.4±0.4, 42°.32N±0°.02×13°.39E±0°.03, h15km±4km, Error ellipse: s-maj=3.9km s-min=3.1km az=5.7*
*CSEM **06** 23:53:46.9±0.1, 42°.31N×13°.39E, h10km, ML3.5/7, Error ellipse: s-maj=2.2km s-min=1.7km az=84.0*
*ROM **06** 23:53:46.8±0.1, 42°.31N×13°.40E, h11km, Ml2.9/23, Error ellipse: s-maj=1.1km s-min=0.9km az=74.0*
ISC 06 23:53:47.2±0.9**, 42°.32N**±0°.02×**13°.39E**±0°.02**, h11**km±4km**, n62, σ0s.63**/84**, 2C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	12	Pg	Pg	23 53 49.3	-0.2
AQU				Sg	Sg	23 53 50.7	-0.4
	9µm,0.4s						
AQU	L'Aquila	0.04	12	Pg	Pg	23 53 49.3	-0.2
AQU				Sg	Sg	23 53 50.7	-0.4
	9µm,0.4s						
FAGN	Fagnano	0.15	109	Pg	Pg	23 53 50.9	+0.1
FAGN				Sg	Sg	23 53 53.7	+0.4
	18µm,0.5s						
FAGN	Fagnano	0.15	109	Pg	Pg	23 53 50.9	+0.1
FAGN				Sg	Sg	23 53 53.7	+0.4
	18µm,0.5s						
FIAM	Fiamignano	0.21	257	Pg	Pg	23 53 51.7	-0.1
FIAM				Sg	Sg	23 53 55.5	+0.6
	2µm,0.5s						
FIAM	Fiamignano	0.21	257	Pg	Pg	23 53 51.7	-0.1
FIAM				Sg	Sg	23 53 55.5	+0.6
	2µm,0.5s						
CAMP	Campotosto	0.22	3⇑	iPg	Pg	23 53 51.8	-0.2
CAMP				Sg	Sg	23 53 55.4	+0.2
CAMP	Campotosto	0.22	3⇑	iPg	Pg	23 53 51.8	-0.2
CAMP				Sg	Sg	23 53 55.4	+0.2
PTQR	Pietraquaria	0.29	179	Pg	Pg	23 53 52.8	-0.5
PTQR				Sg	Sg	23 53 58.0	+0.7
PTQR	Pietraquaria	0.29	179	Pg	Pg	23 53 52.8	-0.5
PTQR				Sg	Sg	23 53 58.0	+0.7
VCEL	Villa Celiera	0.34	77	Pg	Pg	23 53 54.0	-0.2
	2µm,0.6s						
VCEL	Villa Celiera	0.34	77	Pg	Pg	23 53 54.0	-0.2
	2µm,0.6s						
TERO	Teramo	0.34	27	Pg	Pg	23 53 53.6	-0.6
TERO				Sg	Sg	23 53 59.7	+0.9
	2µm,0.4s						
TERO	Teramo	0.34	27	Pg	Pg	23 53 53.6	-0.6
TERO				Sg	Sg	23 53 59.7	+0.9
	2µm,0.4s						
CERT	Cerreto	0.48	220	Pg	Pg	23 53 56.5	-0.1
CERT				Sg	Sg	23 54 03.8	+0.9
	2µm,0.4s						
CERT	Cerreto	0.48	220	Pg	Pg	23 53 56.5	-0.1
CERT				Sg	Sg	23 54 03.8	+0.9
	2µm,0.4s						
VVLD	Villa Vallelon	0.48	159	Pg	Pg	23 53 56.3	-0.3
VVLD				Sg	Sg	23 54 03.0	0.0
VVLD	Villa Vallelon	0.48	159	Pg	Pg	23 53 56.3	-0.3
VVLD				Sg	Sg	23 54 03.0	0.0
INTR	Introdacqua	0.49	128	Pg	Pg	23 53 56.5	-0.3
INTR				Sg	Sg	23 54 03.9	+0.6
	734nm,0.2s						
INTR	Introdacqua	0.49	128	Pg	Pg	23 53 56.5	-0.3
INTR				Sg	Sg	23 54 03.9	+0.6
	734nm,0.2s						
GUAR	Guarcino	0.53	186	Pg	Pg	23 53 57.2	-0.3
	390nm,0.3s						
GUAR	Guarcino	0.53	186	Pg	Pg	23 53 57.2	-0.3
	390nm,0.3s						
MNS	Montasola	0.53	278	Pg	Pg	23 53 57.0	-0.6
	255nm,0.2s						
MNS	Montasola	0.53	278	Pg	Pg	23 53 57.0	-0.6
	255nm,0.2s						
NRCA	Norcia	0.56	339	Pg	Pg	23 53 57.9	-0.2
NRCA	Norcia	0.56	339	Pg	Pg	23 53 57.9	-0.2
MTCE	Montecelio	0.56	239	Pg	Pg	23 53 57.9	-0.3
MTCE				Sg	Sg	23 54 06.4	+0.7
	345nm,0.6s						
MTCE	Montecelio	0.56	239	Pg	Pg	23 53 57.9	-0.3
MTCE				Sg	Sg	23 54 06.4	+0.7
	345nm,0.6s						
TRTR	Tortoreto Alta	0.62	38	Pg	Pb	23 54 00.0	-0.1
	3µm,0.8s						
TRTR	Tortoreto Alta	0.62	38	Pg	Pb	23 54 00.0	-0.1
	3µm,0.8s						
POFI	Posta Fibreno	0.65	158	Pg	Pg	23 53 59.8	0.0
	235nm,0.5s						
POFI	Posta Fibreno	0.65	158	Pg	Pg	23 53 59.8	0.0
	235nm,0.5s						
OFFI	Offida	0.66	19	Pg	Pg	23 54 00.1	+0.1
	3µm,0.5s						
OFFI	Offida	0.66	19	Pg	Pg	23 54 00.1	+0.1
	3µm,0.5s						
SDI	San Donato	0.68	153	Pg	Pg	23 53 59.7	-0.8
	162nm,0.2s						
SDI	San Donato	0.68	153	Pg	Pg	23 53 59.7	-0.8
	162nm,0.2s						
CAFR	Castel Frentan	0.71	97	Pg	Pg	23 54 00.7	-0.4
	711nm,0.3s						
CAFR	Castel Frentan	0.71	97	Pg	Pg	23 54 00.7	-0.4
	711nm,0.3s						
RMP	Rome, Mte Porz	0.72	226	Pg	Pg	23 54 00.5	-0.7
	530nm,0.3s						
RMP	Rome, Mte Porz	0.72	226	Pg	Pg	23 54 00.5	-0.7
	530nm,0.3s						
RDP	Rocca di Papa	0.75	222	Pg	Pg	23 54 01.2	-0.6
	895nm,0.6s						
RDP	Rocca di Papa	0.75	222	Pg	Pg	23 54 01.2	-0.6
	895nm,0.6s						
FDMO	Fiordimonte	0.75	343	Pg	Pg	23 54 00.8	-1.0
	184nm,0.5s						
FDMO	Fiordimonte	0.75	343	Pg	Pg	23 54 00.8	-1.0
	184nm,0.5s						
GIUL	Giuliano Di Ro	0.76	188	Pg	Pg	23 54 01.6	-0.4
GIUL	Giuliano Di Ro	0.76	188	Pg	Pg	23 54 01.6	-0.4
CESI	CESI - Serrava	0.78	333	Pg	Pg	23 54 01.8	-0.5
	69nm,0.3s						
CESI	CESI - Serrava	0.78	333	Pg	Pg	23 54 01.8	-0.5
	69nm,0.3s						
CERA	Filignano	0.86	147	Pg	Pg	23 54 02.4	-1.4
	278nm,0.5s						
CERA	Filignano	0.86	147	Pg	Pg	23 54 02.4	-1.4
	278nm,0.5s						
ASSB	Assisi San Ben	0.91	324	Pg	Pg	23 54 04.2	-0.5
	264nm,0.5s						
ASSB	Assisi San Ben	0.91	324	Pg	Pg	23 54 04.2	-0.5
	264nm,0.5s						
MIDA	Miranda	0.93	136	Pg	Pg	23 54 03.7	-1.5
	165nm,0.5s						
MIDA	Miranda	0.93	136	Pg	Pg	23 54 03.7	-1.5
	165nm,0.5s						
CING	Cingoli	1.07	352	Pg	Pb	23 54 06.8	-0.9
	120nm,0.5s						
CING	Cingoli	1.07	352	Pg	Pb	23 54 06.8	-0.9
	120nm,0.5s						
MGAB	Montegabbione	1.12	303	Pg	Pb	23 54 08.5	0.0
	146nm,0.5s						
MGAB	Montegabbione	1.12	303	Pg	Pb	23 54 08.5	0.0
	146nm,0.5s						
ARVD	Arcevia	1.23	345	Pg	Pn	23 54 09.5	-0.8
	87nm,0.5s						
ARVD	Arcevia	1.23	345	Pg	Pn	23 54 09.5	-0.8
	87nm,0.5s						
NVLJ	Novalja	2.49	25	ePn	Pn	23 54 28.4	+0.7
NVLJ				Sn	Sn	23 54 59.0	+1.1
NVLJ	Novalja	2.49	25	ePn	Pn	23 54 28.3	+0.7
NVLJ				Sn	Sn	23 54 59.0	+1.1

IDC 07 00:02:31.6±17.0**, 17°.19N**×**145°.64E, h381**km±203km**, mb2.8**/7**, mb1 3.0**/7**, mb1mx2.9**/25**, mbtmp2.8**/7**, Error ellipse: s-maj=47.2km s-min=19.9km az=70.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	38.53	197	P	P	00 09 18.9	-0.4
	0.3nm,0.3s,baz=18,slow=8.7,SNR=2.6						
ASAR	Alice Springs	42.20	196	P	P	00 09 49.0	+0.1
	0.1nm,0.3s,baz=14,slow=7.8,SNR=3.4						
SONM	Songino Array	44.29	322	P	P	00 10 05.2	-0.1
	1.2nm,0.6s,baz=137,slow=6.9,SNR=10						
ZALV	Zalesovo Beam	59.18	323	P	P	00 11 53.2	-0.5
	0.3nm,0.3s,baz=115,slow=10.0,SNR=3.5						
MKAR	Makanchi Array	59.47	315	P	P	00 11 56.2	+0.2
	0.2nm,0.5s,baz=89,slow=7.7,SNR=5.8						
ILAR	Eielson Array	65.02	26	P	P	00 12 32.0	+0.1
	0.2nm,0.5s,baz=249,slow=5.8,SNR=6.6						
YKA	Yellowknife Ar	79.34	28	P	P	00 13 55.7	-0.1
	0.2nm,0.4s,baz=285,slow=5.6,SNR=4.2						

*CSEM **07** 00:04:26.9±0.1, 39°.53N×23°.43E, h15km, ML1.7/4, Error ellipse: s-maj=3.1km s-min=2.1km az=93.0*
*ISCJB **07** 00:04:27.0±0.4, 39°.54N±0°.02×23°.45E±0°.04, h10km±4km, Error ellipse: s-maj=4.8km s-min=3.0km az=8.0*
*THE **07** 00:04:27.0, 39°.54N×23°.43E, h10km±1km, ML1.7/4, Error ellipse: s-maj=1.7km s-min=0.5km az=117.0*
*ATH **07** 00:04:28.5, 39°.58N×23°.55E, h3km±2km, MD3.0/5*
ISC 07 00:04:27.0±0.9**, 39°.54N**±0°.02×**23°.45E**±0°.02**, h11**km±8km**, n42, σ0s.76**/68**, Aegean Sea**

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

XOR	Xorichti	0.26	229	P	Pg	00 04 31.9	-0.5
XOR				S	Sg	00 04 36.6	+0.6
XOR	Xorichti	0.26	229	P	Pg	00 04 31.9	-0.5
XOR				S	Sg	00 04 36.6	+0.6
SKIA	Skiathos	0.37	178	P	Pg	00 04 34.4	0.0
SKIA				S	Sg	00 04 39.8	+0.5
SKIA	Skiathos	0.37	178	P	Pg	00 04 34.4	0.0
SKIA				S	Sg	00 04 39.8	+0.5
PAIG	Paliouri	0.43	25	P	Pg	00 04 35.7	+0.2
PAIG				S	Sg	00 04 42.0	+0.8
PAIG	Paliouri	0.43	25	P	Pg	00 04 35.7	+0.2
PAIG				S	Sg	00 04 42.0	+0.8
AOS	Alonnisos	0.50	137	P	Pg	00 04 36.5	-0.2
AOS				S	Sg	00 04 44.3	+1.0
AOS	Alonnisos	0.50	137	*e*PG	Pb	00 04 37.6	-0.1
AOS				*e*SG	Sb	00 04 44.6	-0.4
AOS	Alonnisos	0.50	137	P	Pg	00 04 36.5	-0.2
AOS	Alonnisos	0.50	137	*e*Pg	Pb	00 04 37.6	-0.1
AOS				S	Sg	00 04 44.3	+1.0
AOS				*e*Sg	Sb	00 04 44.6	-0.4
PLG	Polygyros	0.84	360	P	Pg	00 04 42.6	-0.5
PLG				S	Sg	00 04 54.6	+0.5
PLG	Polygyros	0.84	360	*e*PG	Pg	00 04 42.9	-0.2
PLG				*e*SG	Sg	00 04 53.8	-0.3
PLG	Polygyros	0.84	360	P	Pg	00 04 42.6	-0.5
PLG	Polygyros	0.84	360	*e*Pg	Pg	00 04 42.9	-0.2
PLG				*e*Sg	Sg	00 04 53.8	-0.3
PLG				S	Sg	00 04 54.6	+0.5
MRKA	Markates	0.84	172	P	Pg	00 04 43.3	+0.2
MRKA				S	Sg	00 04 54.4	+0.3
MRKA	Markates	0.84	172	P	Pg	00 04 43.3	+0.2
MRKA				S	Sg	00 04 54.4	+0.3
OUR	Ouranopolis	0.90	27	P	Pg	00 04 44.1	-0.2
OUR				S	Sb	00 04 56.8	+0.3
OUR	Ouranopolis	0.90	27	P	Pg	00 04 44.1	-0.2
OUR				S	Sb	00 04 56.8	+0.3
LIT	Litokhoron	0.93	308	P	Pg	00 04 44.7	-0.2
LIT				S	Sg	00 04 56.9	0.0
LIT	Litokhoron	0.93	308	*e*PG	Pn	00 04 46.4	+0.5
LIT				*e*SG	Sn	00 05 00.2	+1.0
LIT	Litokhoron	0.93	308	P	Pg	00 04 44.7	-0.2
LIT	Litokhoron	0.93	308	*e*Pg	Pn	00 04 46.4	+0.5
LIT				S	Sg	00 04 56.9	0.0
LIT				*e*Sg	Sn	00 05 00.3	+1.0
LKR	Lokris	0.95	202	P	Pb	00 04 45.1	-0.3
LKR				S	Sb	00 04 58.1	+0.1
LKR	Lokris	0.95	202	P	Pb	00 04 45.1	-0.3
LKR				S	Sb	00 04 58.1	+0.1
AXAR	Agios Charalam	0.98	219	P	Pb	00 04 45.2	-0.8
AXAR	Agios Charalam	0.98	219	P	Pb	00 04 45.2	-0.8
AGG	Agios Georgios	1.01	240	P	Pb	00 04 45.1	-1.3
AGG				S	Sn	00 05 00.8	-0.4
AGG	Agios Georgios	1.01	240	P	Pb	00 04 45.1	-1.3
AGG				S	Sn	00 05 00.8	-0.4
THL	Klokotos Trika	1.11	272	P	Pb	00 04 47.2	-0.9
THL	Klokotos Trika	1.11	272	P	Pb	00 04 47.2	-0.9
MAKR	Makrakomi, Fth	1.15	243	P	Pb	00 04 48.4	-0.4
MAKR	Makrakomi, Fth	1.15	243	P	Pb	00 04 48.4	-0.4
SOH	Sokhos	1.28	357	P	Pn	00 04 50.4	-0.5
SOH	Sokhos	1.28	357	*e*PB	Pg	00 04 51.8	+0.1
SOH	Sokhos	1.28	357	P	Pn	00 04 50.4	-0.5
SOH	Sokhos	1.28	357	*e*Pb	Pg	00 04 51.8	+0.1
DSF	Desfina	1.33	213	P	Pn	00 04 50.2	-1.3
DSF	Desfina	1.33	213	P	Pn	00 04 50.2	-1.3
LIA	Limnos Island	1.39	74	*e*PB	Pb	00 04 53.0	+0.1
LIA	Limnos Island	1.39	74	*e*Pb	Pb	00 04 53.0	+0.1
EVR	Evrytania	1.41	245	*e*PB	Pg	00 04 56.9	+2.8
EVR	Evrytania	1.41	245	*e*Pb	Pg	00 04 56.9	+2.8

*ISCJB **07** 00:17:59.9±0.6, 40°.62N±0°.03×29°.13E±0°.05, h6km±5km, Error ellipse: s-maj=6.6km s-min=5.1km az=22.7*
*CSEM **07** 00:17:59.8±0.1, 40°.63N×29°.13E, h8km, MD2.6, Error ellipse: s-maj=2.5km s-min=2.0km az=151.0*
*ISK **07** 00:17:59.9, 40°.59N×29°.11E, h7km, MD2.6*
*DDA **07** 00:18:00.0, 40°.62N×29°.09E, h7km, MD2.8*
ISC 07 00:18:00.2±0.9**, 40°.62N**±0°.03×**29°.12E**±0°.03**, h8**km±8km**, n20, σ0s.26**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEMT	Gemlik	0.19	163	*e*PG	Pg	00 18 03.9	-0.2
GEMT				*e*SG	Sg	00 18 06.8	0.0
GEMT	Gemlik	0.19	163	*e*Pg	Pg	00 18 03.9	-0.2
GEMT				*e*Sg	Sg	00 18 06.8	0.0
ARMT	Armutlu	0.20	254	*e*PG	Pg	00 18 04.2	-0.1
ARMT				*e*SG	Sg	00 18 07.4	+0.3
ARMT	Armutlu	0.20	254	*e*Pg	Pg	00 18 04.2	-0.1
ARMT				*e*Sg	Sg	00 18 07.4	+0.3
YLV	Yalova	0.20	105	*e*PG	Pg	00 18 04.5	+0.1
YLV	Yalova	0.20	105	*e*Pg	Pg	00 18 04.5	+0.1
BUY	Buyukada	0.23	0	*i* P	Pg	00 18 04.8	-0.1
BUY				*i* S	Sg	00 18 07.9	-0.1
BUY	Buyukada	0.23	0	*i* P	Pg	00 18 04.8	-0.1
BUY				*i* S	Sg	00 18 07.9	-0.1
MDNY	Mudanya-Bursa	0.31	215	*e*PG	Pg	00 18 06.0	-0.2
MDNY	Mudanya-Bursa	0.31	215	*e*Pg	Pg	00 18 06.0	-0.2
GULT	Gulveren	1.08	100	*e*PN	Pg	00 18 21.0	0.0
GULT				*e*SN	Sn	00 18 36.5	-0.3
GULT	Gulveren	1.08	100	*e*Pn	Pg	00 18 21.0	0.0
GULT				*e*Sn	Sn	00 18 36.6	-0.3
DST	Dursunbey	1.08	201	*e*PG	Pg	00 18 20.8	-0.2
DST				*e*SG	Sb	00 18 35.6	+0.1
DST	Dursunbey	1.08	201	*e*Pg	Pg	00 18 20.8	-0.2
DST				*e*Sg	Sb	00 18 35.6	+0.1
DURS	Dursunbey	1.13	206	*i* P	Pn	00 18 22.5	+0.2
DURS				*i* S	Sb	00 18 37.2	+0.3
DURS	Dursunbey	1.13	206	*i* P	Pn	00 18 22.5	+0.2
DURS				*i* S	Sb	00 18 37.2	+0.3
TVSB	Tavsanli	1.20	167	*e*PN	Pb	00 18 22.8	-0.4
TVSB				*e*SN	Sg	00 18 39.3	+0.5
TVSB	Tavsanli	1.20	167	*e*Pn	Pb	00 18 22.8	-0.4
TVSB				*e*Sn	Sg	00 18 39.3	+0.5
GONE	Gonen-Balikesi	1.23	243	*e*PN	Pb	00 18 23.7	0.0
GONE	Gonen-Balikesi	1.23	243	*e*Pn	Pb	00 18 23.7	0.0

IDC 07 00:30:48.4±9.6**, 7°.16S×129°.40E, h100**km±93km**, mb3.6**/2**, mb1 4.0**/5**, mb1mx3.6**/20**, mbtmp3.8**/5**, ML4.4**/3**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.4**/25**, Error ellipse: s-maj=105.5km s-min=32.6km az=52.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.47	198	P	Pn	00 33 29.3	+0.1
	1.7nm,0.3s,baz=26,slow=11,SNR=26						
FITZ				S	Sn	00 35 29.4	-6.0
	4.5nm,0.3s,baz=158,slow=19,SNR=11						
WRA	Warramunga Arr	13.58	160	P	Pn	00 33 56.2	-0.9
	2.7nm,0.3s,baz=342,slow=13,SNR=21						
WRA				S	Sn	00 36 18.6	-7.9
	3.5nm,0.3s,baz=335,slow=23,SNR=13						
ASAR	Alice Springs	16.97	166	P	Pn	00 34 40.0	+0.1
	0.9nm,0.3s,baz=340,slow=11,SNR=33						
ASAR				S	Sn	00 37 42.8	-5.8
	0.7nm,0.3s,baz=342,slow=24,SNR=5.2						
GUMO	Guam	25.71	37	LR	LR	00 44 19.5	
	comp=Z,82nm,19.7s,baz=97,slow=32						
STKA	Stephens Creek	27.10	157	P	P	00 36 22.0	+0.1
	2.6nm,0.8s,baz=342,slow=9.6,SNR=3.7						
MKAR	Makanchi Array	68.03	327	P	P	00 41 37.2	0.0
	0.4nm,0.5s,baz=121,slow=7.8,SNR=4.1						

*IDC **07** 00:30:57.0±0.8, 3°.66N×126°.36E, h0km, mb4.1/15, mb1 4.2/15, mb1mx4.1/24, mbtmp4.1/15, MS3.3/3, Ms1 3.3/3, ms1mx2.8/32, Error ellipse: s-maj=33.6km s-min=17.7km az=73.0*
*ISCJB **07** 00:31:02.5±0.6, 3°.67N±0°.10×126°.3E±0°.1, h53km, mb4.2/21, MS3.5/2, Error ellipse: s-maj=21.3km s-min=12.6km az=160.1*
*NEIC **07** 00:31:02.5±0.5, 3°.69N×126°.36E, h35km, mb4.5/6, Error ellipse: s-maj=16.7km s-min=11.0km az=70.0*
ISC 07 00:31:04.2±0.7**, 3°.6N**±0°.1×**126°.5E**±0°.2**, h53**km**, n41, σ0s.98**/38**, mb4.2**/20**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	3.55	346	*e*Pn	Pn	00 31 52.6	-4.3
DAV				S	Sn	00 32 46.0	+8.3
DAV	Davao City (W)	3.55	346	LR	LR	00 33 28.7	
	comp=Z,252nm,20.4s,baz=59,slow=44						
CTBH	Cotabato--PC H	4.22	328	⇓*i*P	Pn	00 32 08.3	+2.3
ASAR	Alice Springs	28.06	165	P	P	00 36 51.3	+0.4
ASAR	Alice Springs	28.06	165	P	P	00 36 51.3	+0.4
	0.6nm,0.4s,baz=343,slow=11,SNR=2.9						
CMAR	Chiang Mai Arr	30.71	301	P	P	00 37 13.6	-0.8
CMAR	Chiang Mai Arr	30.71	301	P	P	00 37 13.6	-0.8
	0.5nm,0.3s,baz=104,slow=7.5,SNR=4.1						
KSAR	Wonju Array Be	33.70	2	P	P	00 37 39.8	-0.5
KSRS	Korea Array	33.71	2	P	P	00 37 39.8	-0.6
	2.5nm,0.8s,baz=175,slow=10,SNR=11						
STKA	Stephens Creek	38.11	159	P	P	00 38 18.9	+0.7
	3.8nm,0.7s,baz=329,slow=8.7,SNR=5.0						
USRK	Ussuriysk Arra	40.72	6	P	P	00 38 39.8	+0.1
	2.3nm,0.9s,baz=179,slow=8.6,SNR=5.0						
SONM	Songino Array	47.33	342	P	P	00 39 32.4	-0.4
SONM	Songino Array	47.33	342	P	P	00 39 32.4	-0.4
	0.8nm,0.5s,baz=158,slow=8.1,SNR=4.9						
PETK	Petropavlovsk-	55.64	22	P	P	00 40 35.5	+0.9
PETK	Petropavlovsk-	55.64	22	P	P	00 40 35.5	+0.9
	3.7nm,0.7s,baz=191,slow=7.2,SNR=4.5						
MK31	Makanchi Array	57.51	325	*e*P	P	00 40 47.3	-0.8
MKAR	Makanchi Array	57.51	325	P	P	00 40 47.5	-0.6
MKAR	Makanchi Array	57.51	325	P	P	00 40 47.5	-0.6
	1.2nm,0.5s,baz=120,slow=7.1,SNR=26						
MKAR				LR	LR	01 07 37.9	
	comp=Z,33nm,18.7s,baz=335,slow=38						
ZALV	Zalesovo Beam	60.58	333	P	P	00 41 07.5	-1.7
ZALV	Zalesovo Beam	60.58	333	P	P	00 41 07.5	-1.7
	0.4nm,0.4s,baz=114,slow=4.7,SNR=3.5						
KURK	Kurchatov	61.70	328	*e*P	P	00 41 16.2	-0.7
	4.8nm,0.6s						
BVAR	Borovoye Array	67.28	327	P	P	00 41 52.9	-0.4
BVAR	Borovoye Array	67.28	327	P	P	00 41 52.9	-0.4
	1.9nm,0.9s,baz=125,slow=7.6,SNR=11						
BRVK	Borovoye	67.35	327	*e*P	P	00 41 54.2	+0.5
	3.3nm,0.9s						
ABKAR	Akbulak array	72.08	321	*e*P	P	00 42 22.8	-0.1
	1.2nm,0.6s						
COLD	Coldfoot	84.10	23	*e*P	P	00 43 30.2	+1.0
	4.7nm,1.0s						
SML	Sawmill	84.56	28	*e*P	P	00 43 32.4	+0.7
	2.9nm,1.1s						
ILAR	Eielson Array	85.32	25	P	P	00 43 34.1	-1.2
ILAR	Eielson Array	85.32	25	P	P	00 43 34.1	-1.2
	1.2nm,1.0s,baz=256,slow=5.7,SNR=7.2						
PNL	Peninsula	89.00	30	*e*P	P	00 43 50.2	-3.1
	11nm,0.7s						
BRTR	Keskin Array B	89.90	310	P	P	00 43 57.4	-0.6
BRTR	Keskin Array B	89.90	310	P	P	00 43 57.4	-0.6
	0.9nm,0.9s,baz=116,slow=6.6,SNR=3.7						
ARCES	ARCESS Array B	90.47	340	P	P	00 43 59.9	-0.1
ARCES	ARCESS Array B	90.47	340	P	P	00 43 59.9	-0.1
	2.8nm,0.8s,baz=81,slow=6.7,SNR=3.7						
FINES	FINESS Array B	91.82	332	P	P	00 44 06.7	+0.5
FINES	FINESS Array B	91.82	332	P	P	00 44 06.7	+0.5
	1.0nm,0.8s,baz=72,slow=6.2,SNR=5.6						
NOA	NORSAR Array B	98.78	334	LR	LR	01 34 24.6	
	comp=Z,15nm,18.5s,baz=120,slow=39						
YKA	Yellowknife Ar	99.71	24	P	Pdif	00 44 42.5	+0.4
YKA	Yellowknife Ar	99.71	24	P	Pdif	00 44 42.5	+0.4
	0.2nm,0.6s,baz=291,slow=4.2,SNR=2.8						
TORD	Torodi Ar. Bea	122.71	288	PKP	PKPdf	00 49 55.5	+0.3
TORD	Torodi Ar. Bea	122.71	288	PKP	PKPdf	00 49 55.5	+0.3
	0.3nm,0.7s,baz=55,slow=1.9,SNR=2.9						

*ISCJB **07** 00:37:22.8±0.6, 40°.69N±0°.04×29°.09E±0°.08, h5km±9km, Error ellipse: s-maj=10.5km s-min=6.0km az=20.4*
*CSEM **07** 00:37:22.9±0.2, 40°.68N×29°.08E, h5km, MD2.4, Error ellipse: s-maj=6.8km s-min=4.4km az=97.0*
*DDA **07** 00:37:22.7, 40°.71N×29°.09E, h11km, MD2.7*
*ISK **07** 00:37:22.5, 40°.66N×29°.06E, h12km, MD2.4*
ISC 07 00:37:22.6±1.1**, 40°.70N**±0°.03×**29°.07E**±0°.04**, h9**km±11km**, n18, σ0s.36**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUY	Buyukada	0.15	13	*i* P	Pg	00 37 26.0	+0.1
BUY				*i* S	Sg	00 37 28.3	0.0
BUY	Buyukada	0.15	13	*i* P	Pg	00 37 26.0	+0.1
BUY				*i* S	Sg	00 37 28.3	0.0
ARMT	Armutlu	0.21	230	*e*PG	Pg	00 37 27.0	+0.1
ARMT				*e*SG	Sg	00 37 30.1	+0.2
ARMT	Armutlu	0.21	230	*e*Pg	Pg	00 37 27.0	+0.1
ARMT				*e*Sg	Sg	00 37 30.1	+0.2
YLV	Yalova	0.27	121	*e*PG	Pg	00 37 28.4	+0.4
YLV	Yalova	0.27	121	*e*Pg	Pg	00 37 28.4	+0.4
GEMT	Gemlik	0.28	162	*e*PG	Pg	00 37 28.0	-0.2
GEMT	Gemlik	0.28	162	*e*Pg	Pg	00 37 28.0	-0.2
MDNY	Mudanya-Bursa	0.36	203	*e*PG	Pg	00 37 29.5	-0.2
MDNY	Mudanya-Bursa	0.36	203	*e*Pg	Pg	00 37 29.5	-0.2
ISK	Istanbul-Kandi	0.36	358	*e*PG	Pb	00 37 30.8	-0.5
ISK	Istanbul-Kandi	0.36	358	*e*Pg	Pb	00 37 30.8	-0.5
BGKT	Bogazkoy	0.53	335	*e*PG	Pb	00 37 34.1	0.0
BGKT	Bogazkoy	0.53	335	*e*Pg	Pb	00 37 34.1	0.0
DST	Dursunbey	1.15	198	*e*PN	Pb	00 37 44.2	-0.5
DST	Dursunbey	1.15	198	*e*Pn	Pb	00 37 44.2	-0.5
DURS	Dursunbey	1.19	203	*i* P	Pg	00 37 46.1	+0.6
DURS				*i* S	Sg	00 38 01.3	+0.3
DURS	Dursunbey	1.19	203	*i* P	Pg	00 37 46.1	+0.6
DURS				*i* S	Sg	00 38 01.3	+0.3

JMA 07 00:37:51.5, 35°.86N×138°.77E, h12km±1km**, M2.7, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JRY	Ryogami san	0.19	34	P	Pg	00 37 55.8	0.0
JRY				S	Sg	00 37 58.4	-0.3
JYN	Shimob	0.41	207	P	Pg	00 37 59.6	-0.1
JYN				S	Sg	00 38 05.4	+0.2
MAT	Matsushiro	0.82	326	P	Pg	00 38 06.7	-0.7
MAT				S	Sg	00 38 17.4	-0.8

WEL 07 00:38:09.0±0.5**, 36°.99S×176°.51E, h284**km±4km**, ML4.0**/16**, 4C-2D, Error ellipse: s-maj=5.7km s-min=5.6km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	1.36	159	PN	Pn	00 38 49.8	+0.2
URZ				SN	S	00 39 21.5	-0.5
MXZ	Matakaoa Point	1.55	112	PN	Pn	00 38 51.2	+0.3
MXZ				SN	S	00 39 23.6	-0.6
MWZ	Matawai	1.57	149	PN	Pn	00 38 51.4	+0.3
MWZ				SN	S	00 39 24.8	+0.2
PUZ	Puketiti	1.76	128	PN	Pn	00 38 52.5	0.0
PUZ				SN	S	00 39 26.4	-0.7
RAHZ	Arahi	1.98	167	⇑PN	Pn	00 38 54.8	+0.6
CNGZ	Carnagh Statio	2.01	138	⇓PN	Pn	00 38 55.0	+0.5
NMHZ	Naumai	2.12	174	PN	Pn	00 38 56.2	+0.8
BKZ	Black Stump Fm	2.17	180	⇑PN	Pn	00 38 55.9	0.0
BKZ				SN	S	00 39 33.5	+0.3
KRVZ	Karewarewa	2.21	198	PN	Pn	00 38 57.1	+0.8
KNZ	Kokohu	2.23	156	PN	Pn	00 38 56.1	-0.2
WPVZ	Whakapapa	2.34	199	PN	Pn	00 38 58.0	+0.6
FWVZ	Far West T-bar	2.38	198	PN	Pn	00 38 58.2	+0.3
MHGZ	Mahia Peninsul	2.43	153	PN	Pn	00 38 58.2	+0.2
WNVZ	Wahianoa	2.44	197	⇑PN	Pn	00 38 58.7	+0.3
MOVZ	Moawhango	2.49	194	PN	Pn	00 38 58.5	-0.2
BHHZ	Black Hill Sta	2.52	188	PN	Pn	00 38 58.9	-0.2
CKHZ	Cape Kidnapper	2.70	171	PN	Pn	00 39 00.5	-0.2
KAHZ	Kahuranaki	2.82	174	PN	Pn	00 39 01.5	-0.3
PNHZ	Pukenui	2.93	185	PN	Pn	00 39 02.2	-0.8
WAZ	Wanganui	3.01	203	PN	Pn	00 39 03.9	+0.1
PXZ	Pawanui	3.05	175	PN	Pn	00 39 03.6	-0.6
WPHZ	Waipukurau	3.07	181	PN	Pn	00 39 03.7	-0.7
TSZ	Takapari Road	3.10	188	⇑PN	Pn	00 39 03.7	-0.9
PRHZ	Porangahau	3.27	178	PN	Pn	00 39 05.5	-0.9
DVHZ	Dannevirke	3.32	184	PN	Pn	00 39 06.1	-0.8
POWZ	Post Office Ro	3.45	189	PN	Pn	00 39 07.8	-0.5
BFZ	Birch Farm	3.69	183	PN	Pn	00 39 09.6	-1.3
MRZ	Mangatainoka R	3.74	191	⇓PN	Pn	00 39 09.8	-1.6
OGWZ	Otaki Gorge	3.96	195	PN	Pn	00 39 12.3	-1.6
KIW	Kapiti Island	4.06	197	PN	Pn	00 39 13.3	-1.8
MTW	Mount Morrison	4.24	190	PN	Pn	00 39 14.8	-2.3
CAW	Cannon Point	4.26	195	PN	Pn	00 39 15.3	-2.0
DUWZ	D'Urville Isla	4.31	207	PN	Pn	00 39 16.1	-1.8
TRWZ	Traveller	4.45	188	PN	Pn	00 39 17.4	-2.0
TCW	Tory Channel	4.56	202	PN	Pn	00 39 18.8	-1.9
TUWZ	Tuamarina	4.86	203	PN	Pn	00 39 21.9	-2.3
NNZ	Nelson	4.87	209	PN	Pn	00 39 22.0	-2.4
QRZ	Quartz Range	4.93	218	PN	Pn	00 39 22.6	-2.5
BSWZ	Blackbirch Sta	5.14	203	PN	Pn	00 39 25.7	-1.8
THZ	Tophouse	5.52	209	PN	Pn	00 39 29.8	-2.4
KHZ	Kahutara	5.88	202	PN	Pn	00 39 34.0	-2.3

*ISCJB **07** 01:03:20.4±0.4, 39°.13N±0°.03×29°.08E±0°.03, h2km±6km, Error ellipse: s-maj=4.7km s-min=3.6km az=174.8*
*DDA **07** 01:03:20.2, 39°.11N×29°.08E, h9km, MD3.0*
*CSEM **07** 01:03:20.7±0.1, 39°.13N×29°.09E, h5km, MD3.0, Error ellipse: s-maj=1.6km s-min=1.4km az=15.0*
*ISK **07** 01:03:20.2, 39°.14N×29°.09E, h5km, MD2.7*
ISC 07 01:03:20.8±0.9**, 39°.13N**±0°.02×**29°.08E**±0°.02**, h10**km±8km**, n40, σ0s.26**/57**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	Demirci	0.30	253	*i* P	Pg	01 03 26.8	0.0
DEMI				*i* S	Sg	01 03 31.0	+0.1
DEMI	Demirci	0.30	253	*i* P	Pg	01 03 26.8	0.0
DEMI				*i* S	Sg	01 03 31.0	+0.1
GDZ	Gediz	0.31	98	*i* P	Pg	01 03 27.0	-0.1
GDZ				*i* S	Sg	01 03 31.6	+0.3
GDZ	Gediz	0.31	98	*i* P	Pg	01 03 27.0	-0.1
GDZ				*i* S	Sg	01 03 31.6	+0.3
TVSB	Tavsanli	0.43	43	*e*PG	Pg	01 03 29.0	-0.3
TVSB				*e*SG	Sg	01 03 35.0	0.0
TVSB	Tavsanli	0.43	43	*e*Pg	Pg	01 03 29.0	-0.3
TVSB				*e*Sg	Sg	01 03 35.0	0.0
DST	Dursunbey	0.59	323	*e*PG	Pg	01 03 32.2	-0.1
DST				*e*SG	Sg	01 03 40.3	+0.2
DST	Dursunbey	0.59	323	*e*Pg	Pg	01 03 32.2	-0.1
DST				*e*Sg	Sg	01 03 40.3	+0.2
DURS	Dursunbey	0.67	315	*i* P	Pg	01 03 33.8	+0.1
DURS				*i* S	Sn	01 03 47.0	0.0
DURS	Dursunbey	0.67	315	*i* P	Pg	01 03 33.8	+0.1
KULA	Kula-Manisa	0.70	208	*e*PG	Pg	01 03 34.0	-0.3
KULA	Kula-Manisa	0.70	208	*e*Pg	Pg	01 03 34.0	-0.3
ALT	Altintas	0.80	95	*e*PG	Pg	01 03 36.4	+0.1
ALT	Altintas	0.80	95	*e*Pg	Pg	01 03 36.4	+0.1
KHAL	Karahalli	0.82	157	*i* P	Pg	01 03 36.5	-0.2
KHAL				*i* S	Sg	01 03 47.2	-0.3
KHAL	Karahalli	0.82	157	*i* P	Pg	01 03 36.5	-0.2
KHAL				*i* S	Sg	01 03 47.2	-0.3
KHL	Karahalli	0.88	157	*e*PG	Pg	01 03 37.5	-0.2
KHL	Karahalli	0.88	157	*e*Pg	Pg	01 03 37.5	-0.2
ORLT	Orhaneli	0.92	351	*e*PG	Pg	01 03 38.3	-0.3
ORLT	Orhaneli	0.92	351	*e*Pg	Pg	01 03 38.3	-0.3
AKHS	Akhisar	1.02	256	*i* P	Pn	01 03 41.4	+0.2
AKHS				*i* S	Sb	01 03 54.4	+0.3
AKHS	Akhisar	1.02	256	*i* P	Pn	01 03 41.4	+0.2
AKHS				*i* S	Sb	01 03 54.4	+0.3
AKS	Akhisar	1.02	256	*e*PG	Pg	01 03 40.4	-0.1
BALB	Balikesir	1.06	299	*e*PG	Pg	01 03 40.9	-0.3
BALB	Balikesir	1.06	299	*e*Pg	Pg	01 03 40.9	-0.3
CAVI	Cavuskoy	1.22	29	*e*PN	Pn	01 03 43.8	-0.2
CAVI	Cavuskoy	1.22	29	*e*Pn	Pn	01 03 43.8	-0.2
MDNY	Mudanya-Bursa	1.25	353	*e*PN	Pg	01 03 44.6	-0.1
BALY	Balya	1.29	299	*i* P	Pb	01 03 45.3	+0.2
BALY				*i* S	Sb	01 04 01.2	-0.6
BALY	Balya	1.29	299	*i* P	Pb	01 03 45.3	+0.2
BALY				*i* S	Sb	01 04 01.2	-0.6
BORA	Eskisehir	1.30	54	*i* P	Pn	01 03 45.2	+0.1
BORA				*i* S	Sn	01 04 02.7	+0.1
BORA	Eskisehir	1.30	54	*i* P	Pn	01 03 45.2	+0.1
BORA				*i* S	Sn	01 04 02.7	+0.1
GEMT	Gemlik	1.30	4	*e*PN	Pb	01 03 45.5	+0.1
GONE	Gonen-Balikesi	1.41	311	*e*PN	Pb	01 03 47.3	0.0
GONE	Gonen-Balikesi	1.41	311	*e*Pn	Pb	01 03 47.3	0.0
ARMT	Armutlu	1.44	353	*e*PN	Pb	01 03 47.6	-0.1
ARMT	Armutlu	1.44	353	*e*Pn	Pb	01 03 47.7	-0.1
YLV	Yalova	1.45	9	*e*PN	Pb	01 03 47.9	-0.1
GULT	Gulveren	1.70	40	*e*PN	Pn	01 03 51.3	+0.6
GULT	Gulveren	1.70	40	*e*Pn	Pn	01 03 51.3	+0.6

*ISCJB **07** 01:23:42.0±0.3, 42°.46N±0°.02×13°.39E±0°.03, h11km±2km, Error ellipse: s-maj=3.5km s-min=2.7km az=161.5*
*ROM **07** 01:23:42.2±0.1, 42°.45N×13°.41E, h9km±1km, Ml3.1/30, Error ellipse: s-maj=1.4km s-min=0.9km az=79.0*
*CSEM **07** 01:23:42.4±0.1, 42°.46N×13°.39E, h2km, ML3.7/10, Error ellipse: s-maj=2.6km s-min=2.0km az=77.0*
ISC 07 01:23:43.2±0.9**, 42°.46N**±0°.02×**13°.40E**±0°.02**, h9**km±5km**, n86, σ1s.05**/112**, 4C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	Campotosto	0.07	3	⇑*i*Pg	Pg	01 23 45.1	-0.4
CAMP				Sg	Sg	01 23 46.9	-0.2
CAMP	Campotosto	0.07	3	⇑*i*Pg	Pg	01 23 45.1	-0.4
CAMP				Sg	Sg	01 23 46.9	-0.2
AQU	L'Aquila	0.11	181	Pg	Pg	01 23 45.5	-0.4
AQU				Sg	Sg	01 23 47.3	-0.4
	15µm,0.7s						
AQU	L'Aquila	0.11	181	Pg	Pg	01 23 45.5	-0.4
AQU				Sg	Sg	01 23 47.3	-0.4
	15µm,0.7s						
TERO	Teramo	0.22	43	⇑*i*Pg	Pg	01 23 47.1	-0.6
TERO				Sg	Sg	01 23 50.5	-0.2
	4µm,0.3s						
TERO	Teramo	0.22	43	⇑*i*Pg	Pg	01 23 47.1	-0.6
TERO				Sg	Sg	01 23 50.5	-0.2
	4µm,0.3s						
FAGN	Fagnano	0.24	146	Pg	Pg	01 23 47.5	-0.5
FAGN				Sg	Sg	01 23 51.6	+0.3
	7µm,0.5s						
FAGN	Fagnano	0.24	146	Pg	Pg	01 23 47.5	-0.5
FAGN				Sg	Sg	01 23 51.6	+0.3
	7µm,0.5s						
FIAM	Fiamignano	0.29	228	Pg	Pg	01 23 48.6	-0.4
FIAM				Sg	Sg	01 23 52.6	-0.3
	2µm,0.6s						
FIAM	Fiamignano	0.29	228	Pg	Pg	01 23 48.6	-0.4
FIAM				Sg	Sg	01 23 52.6	-0.3
	2µm,0.6s						
VCEL	Villa Celiera	0.33	102	Pg	Pg	01 23 49.1	-0.7
VCEL				Sg	Sg	01 23 55.4	+1.2
	5µm,0.4s						
VCEL	Villa Celiera	0.33	102	Pg	Pg	01 23 49.1	-0.7
VCEL				Sg	Sg	01 23 55.4	+1.2
	5µm,0.4s						
NRCA	Norcia	0.43	330	Pg	Pg	01 23 51.1	-0.5
NRCA	Norcia	0.43	330	Pg	Pg	01 23 51.1	-0.5
PTQR	Pietraquaria	0.44	180	Pg	Pg	01 23 50.9	-0.9
	223nm,0.6s						
PTQR	Pietraquaria	0.44	180	Pg	Pg	01 23 50.9	-0.9
	223nm,0.6s						
TRTR	Tortoreto Alta	0.51	47	Pg	Pg	01 23 53.4	+0.3
	5µm,0.8s						
TRTR	Tortoreto Alta	0.51	47	Pg	Pg	01 23 53.4	+0.3
	5µm,0.8s						
OFFI	Offida	0.52	24	Pg	Pg	01 23 53.3	+0.1
	11µm,0.4s						
OFFI	Offida	0.52	24	Pg	Pg	01 23 53.3	+0.1
	11µm,0.4s						
MNS	Montasola	0.54	262	Pg	Pg	01 23 52.8	-0.9
	535nm,0.5s						
MNS	Montasola	0.54	262	Pg	Pg	01 23 52.8	-0.9
	535nm,0.5s						
INTR	Introdacqua	0.58	140	Pg	Pg	01 23 53.6	-0.9
INTR				Sg	Sg	01 24 02.6	+0.4
	1µm,0.5s						
INTR	Introdacqua	0.58	140	Pg	Pg	01 23 53.6	-0.9
INTR				Sg	Sg	01 24 02.6	+0.4
	1µm,0.5s						
CERT	Cerreto	0.60	212	Pg	Pg	01 23 53.6	-1.2
	2µm,0.5s						
CERT	Cerreto	0.60	212	Pg	Pg	01 23 53.6	-1.2
	2µm,0.5s						
VVLD	Villa Vallelon	0.61	165	Pg	Pg	01 23 53.9	-1.2
VVLD	Villa Vallelon	0.61	165	Pg	Pg	01 23 53.9	-1.2
FDMO	Fiordimonte	0.62	338	Pg	Pg	01 23 54.3	-0.9
FDMO				Sg	Sg	01 24 03.9	+0.6
	454nm,0.3s						
FDMO	Fiordimonte	0.62	338	Pg	Pg	01 23 54.3	-0.9
FDMO				Sg	Sg	01 24 03.9	+0.6
	454nm,0.3s						
CESI	CESI - Serrava	0.66	326	Pg	Pg	01 23 55.1	-0.7
	155nm,0.4s						

CESI	**CESI - Serrava**	**0.66**	**326**	Pg	**Pg**	**01 23 55.1**	**-0.7**
	155nm,0.4s						
MTCE	**Montecelio**	**0.66**	**228**	Pg	**Pg**	**01 23 54.7**	**-1.2**
	939nm,1.0s						
MTCE	**Montecelio**	**0.66**	**228**	Pg	**Pg**	**01 23 54.7**	**-1.2**
	939nm,1.0s						
GUAR	**Guarcino**	**0.67**	**186**	Pg	**Pg**	**01 23 55.5**	**-0.6**
	485nm,0.7s						
GUAR	**Guarcino**	**0.67**	**186**	Pg	**Pg**	**01 23 55.5**	**-0.6**
	485nm,0.7s						
GUMA	**Gualdo di Mace**	**0.72**	**33**	Pg	**Pg**	**01 23 54.4**	**-2.6**
GUMA				Sg	**Sg**	**01 24 04.5**	**-1.9**
	3μm,0.4s						
GUMA	**Gualdo di Mace**	**0.72**	**33**	Pg	**Pg**	**01 23 54.4**	**-2.6**
GUMA				Sg	**Sg**	**01 24 04.5**	**-1.9**
	3μm,0.4s						
CAFR	**Castel Frentan**	**0.74**	**108**	Pg	**Pg**	**01 23 56.4**	**-1.0**
	576nm,0.5s						
CAFR	**Castel Frentan**	**0.74**	**108**	Pg	**Pg**	**01 23 56.4**	**-1.0**
	576nm,0.5s						
POFI	**Posta Fibreno**	**0.78**	**163**	Pg	**Pg**	**01 23 57.0**	**-1.2**
	242nm,0.8s						
POFI	**Posta Fibreno**	**0.78**	**163**	Pg	**Pg**	**01 23 57.0**	**-1.2**
	242nm,0.8s						
ASSB	**Assisi San Ben**	**0.80**	**317**	Pg	**Pg**	**01 23 57.3**	**-1.3**
ASSB				Sg	**Sg**	**01 24 09.6**	**+0.6**
	426nm,0.5s						
ASSB	**Assisi San Ben**	**0.80**	**317**	Pg	**Pg**	**01 23 57.3**	**-1.3**
ASSB				Sg	**Sg**	**01 24 09.6**	**+0.6**
	426nm,0.5s						
SDI	**San Donato**	**0.81**	**158**	Pg	**Pg**	**01 23 57.2**	**-1.6**
SDI	**San Donato**	**0.81**	**158**	Pg	**Pg**	**01 23 57.2**	**-1.6**
RMP	**Rome, Mte Porz**	**0.83**	**219**	Pg	**Pg**	**01 23 58.6**	**-0.6**
	461nm,0.4s						
RMP	**Rome, Mte Porz**	**0.83**	**219**	Pg	**Pg**	**01 23 58.6**	**-0.6**
	461nm,0.4s						
SNTG	**Esanatoglia**	**0.86**	**337**	Pg	**Pg**	**01 23 58.6**	**-1.2**
	90nm,0.2s						
SNTG	**Esanatoglia**	**0.86**	**337**	Pg	**Pg**	**01 23 58.6**	**-1.2**
	90nm,0.2s						
RDP	**Rocca di Papa**	**0.87**	**216**	Pg	**Pg**	**01 23 59.5**	**-0.4**
	899nm,0.5s						
RDP	**Rocca di Papa**	**0.87**	**216**	Pg	**Pg**	**01 23 59.5**	**-0.4**
	899nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.91**	**187**	Pg	**Pg**	**01 24 00.0**	**-0.7**
	420nm,0.8s						
GIUL	**Giuliano Di Ro**	**0.91**	**187**	Pg	**Pg**	**01 24 00.0**	**-0.7**
	420nm,0.8s						
CING	**Cingoli**	**0.93**	**351**	Pg	**Pg**	**01 23 59.7**	**-1.3**
	393nm,0.4s						
CING	**Cingoli**	**0.93**	**351**	Pg	**Pg**	**01 23 59.7**	**-1.3**
	393nm,0.4s						
RNI2	**Rionero Sannit**	**0.94**	**144**	Pg	**Pg**	**01 24 00.1**	**-1.2**
	241nm,0.6s						
RNI2	**Rionero Sannit**	**0.94**	**144**	Pg	**Pg**	**01 24 00.1**	**-1.2**
	241nm,0.6s						
CERA	**Filignano**	**0.98**	**152**	Pg	**Pg**	**01 24 00.0**	**-2.0**
	357nm,0.8s						
CERA	**Filignano**	**0.98**	**152**	Pg	**Pg**	**01 24 00.0**	**-2.0**
	357nm,0.8s						
MURB	**Monte Urbino**	**1.03**	**321**	Pg	**Pg**	**01 24 02.0**	**-0.9**
	631nm,0.6s						
MURB	**Monte Urbino**	**1.03**	**321**	Pg	**Pg**	**01 24 02.0**	**-0.9**
	631nm,0.6s						
MIDA	**Miranda**	**1.04**	**142**	Pg	**Pg**	**01 24 00.9**	**-2.2**
	190nm,0.7s						
MIDA	**Miranda**	**1.04**	**142**	Pg	**Pg**	**01 24 00.9**	**-2.2**
	190nm,0.7s						
MGAB	**Montegabbione**	**1.05**	**296**	Pg	**Pg**	**01 24 02.2**	**-1.2**
	481nm,0.5s						
MGAB	**Montegabbione**	**1.05**	**296**	Pg	**Pg**	**01 24 02.2**	**-1.2**
	481nm,0.5s						
ARVD	**Arcevia**	**1.09**	**342**	Pg	**Pg**	**01 24 02.7**	**-1.4**
ARVD	**Arcevia**	**1.09**	**342**	Pg	**Pg**	**01 24 02.7**	**-1.4**
AOI	**Ancona**	**1.10**	**8**	Pg	**Pg**	**01 24 03.2**	**-1.0**
	364nm,0.4s						
AOI	**Ancona**	**1.10**	**8**	Pg	**Pg**	**01 24 03.2**	**-1.0**
	364nm,0.4s						
SACS	**San Casciano d**	**1.17**	**290**	Pg	**Pg**	**01 24 04.3**	**-1.3**
	212nm,0.9s						
PIEI	**Pieia**	**1.25**	**330**	Pg	**Pg**	**01 24 05.7**	**-1.4**
	159nm,0.5s						
PIEI	**Pieia**	**1.25**	**330**	Pg	**Pg**	**01 24 05.7**	**-1.4**
	159nm,0.5s						
NVLJ	**Novalja**	**2.35**	**26**	*e*Pn	**Pn**	**01 24 21.9**	**0.0**
NVLJ				Sn	**Sn**	**01 24 51.5**	**+0.6**
NVLJ	**Novalja**	**2.35**	**26**	*e*Pn	**Pn**	**01 24 21.9**	**0.0**
NVLJ				Sn	**Sn**	**01 24 51.5**	**+0.6**
MAIM	**Mastiano**	**2.58**	**305**	P	**Pn**	**01 24 25.9**	**+0.9**
SKDS	**Skadanscina**	**3.11**	**8**	*i* Pn	**Pn**	**01 24 32.5**	**+0.1**
SKDS				*i* Sn	**Sn**	**01 25 10.3**	**+0.5**
SKDS							
	comp=Z,14nm,0.2s						
SKDS	**Skadanscina**	**3.11**	**8**	Pn	**Pn**	**01 24 32.5**	**+0.1**
SKDS				*i* Sn	**Sn**	**01 25 10.3**	**+0.5**
	comp=Z,14nm,0.2s						
STON	**Ston**	**3.19**	**81**	*e*Pn	**Pn**	**01 24 33.8**	**+0.3**
STON				Sn	**Sn**	**01 25 11.9**	**+0.3**
STON	**Ston**	**3.19**	**81**	*e*Pn	**Pn**	**01 24 33.8**	**+0.3**
STON				Sn	**Sn**	**01 25 11.9**	**+0.3**
IVAS	**Ivanjica**	**5.07**	**75**	*e*Pn	**Pn**	**01 25 00.6**	**+1.2**
DIVS	**Divibare**	**5.08**	**69**	*e*Pn	Pn	01 25 02.9	+3.4
TRUS	**Trudelj**	**5.40**	**69**	*e*Pn	**Pn**	**01 25 02.9**	**-0.9**
GRUS	**Gruza**	**5.53**	**73**	*e*Pn	**Pn**	**01 25 07.1**	**+1.5**
KHC	**Kasperske Hory**	**6.67**	**1**	*e*PN	**Pn**	**01 25 23.0**	**+1.7**
KHC				*e*SN	**Sn**	**01 26 39.5**	**+2.1**
VTS	**Vitosha**	**7.25**	**86**	*e*Pn	**Pn**	**01 25 30.2**	**+0.9**

*NNC **07** 01:26:28.3±4.0, 39°.34N×71°.38E, h3^{km}±20^{km}, mb3.4, mpv3.3, Error ellipse: s-maj=26.7km s-min=16.9km az=4.0*
ISC 07 01:26:27.4±3.3**, 39°.0N**±0°.2×**71°.2E**±0°.1**, h33**^{km}**, n10, σ1.32**/12**, 4C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.62**	**31**	P	**Pn**	**01 27 21.1**	**-0.4**
	SNR=14						
KK31	**Karatay Array**	**4.10**	**353**	⇓Pn	**Pn**	**01 27 28.8**	**+1.0**
	1.8nm,0.2s,baz=180,slow=13,SNR=168						
KK31				⇓Sn	**Sn**	**01 28 14.8**	**+0.3**
	8.7nm,0.5s,baz=176,slow=22,SNR=5.3						
KK31				⇑Lg	Lg	01 28 29.4	
	3.0nm,0.3s,baz=165,slow=28,SNR=4.8						
EKS2	**Erkin-Say**	**4.10**	**27**	P	**Pn**	**01 27 29.7**	**+1.7**
	SNR=6.4						
KZA	**Kyzart**	**4.32**	**44**	P	**Pn**	**01 27 32.4**	**+1.3**
	SNR=10						
AAK	**Ala-Archa**	**4.36**	**34**	P	**Pn**	**01 27 32.4**	**+0.9**
	SNR=8.1						
CHMS	**Chumysh**	**4.77**	**33**	P	**Pn**	**01 27 37.9**	**+0.9**
	SNR=5.6						
TKM2	**Tokmak 2**	**5.10**	**39**	⇓Pn	**Pn**	**01 27 42.3**	**+0.6**
	2.3nm,0.5s						
TKM2				⇑Sn	**Sn**	**01 28 38.1**	**-1.4**
	3.1nm,0.6s						
TKM2				⇑Lg	Lg	01 28 58.9	
	3.6nm,0.6s						
TKM2	**Tokmak 2**	**5.10**	**39**	P	**Pn**	**01 27 42.8**	**+1.1**
	SNR=5.7						
AB31	**Akbulak array**	**13.02**	**325**	⇑P	**Pn**	**01 29 30.5**	**+0.6**
	0.2nm,0.3s,baz=129,slow=14,SNR=4.2						
AKTO	**Aktyubinsk**	**14.73**	**325**	⇓P	**Pn**	**01 29 51.2**	**-2.1**
	0.2nm,1.1s						

*CSEM **07** 01:36:31.1, 42°.26N×13°.47E, h11^{km}, MD1.7/3, After ROM*
ROM 07 01:36:31.1±0.1**, 42°.26N×13°.47E, h11**^{km}±1^{km}**, Md1.7**/3**, Error ellipse: s-maj=2.1km s-min=1.3km az=17.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.09**	**87**	Pg	Pg	01 36 34.3	+0.6
FAGN				Sg	Sg	01 36 35.8	+0.2
FAGN	**Fagnano**	**0.09**	**87**	Pg	Pg	01 36 34.3	+0.6
FAGN				Sg	Sg	01 36 35.8	+0.2
AQU	**L'Aquila**	**0.10**	**332**	Pg	Pb	01 36 35.0	-0.3
AQU				Sg	Sg	01 36 36.3	+0.3
AQU	**L'Aquila**	**0.10**	**332**	Pg	Pb	01 36 35.0	-0.3
AQU				Sg	Sg	01 36 36.3	+0.3
PTQR	**Pietraquaria**	**0.24**	**192**	Pg	Pg	01 36 36.7	+0.4
PTQR				Sg	Sg	01 36 40.8	+1.0
PTQR	**Pietraquaria**	**0.24**	**192**	Pg	Pg	01 36 36.7	+0.4
PTQR				Sg	Sg	01 36 40.8	+1.0
FIAM	**Fiamignano**	**0.26**	**271**	Pg	Pg	01 36 37.1	+0.5
FIAM				Sg	Sg	01 36 41.3	+1.0
FIAM	**Fiamignano**	**0.26**	**271**	Pg	Pg	01 36 37.1	+0.5
FIAM				Sg	Sg	01 36 41.3	+1.0
VCEL	**Villa Celiera**	**0.31**	**64**	Pg	Pg	01 36 37.6	+0.1
VCEL				Sg	Sg	01 36 42.8	+1.0
VCEL	**Villa Celiera**	**0.31**	**64**	Pg	Pg	01 36 37.6	+0.1
VCEL				Sg	Sg	01 36 42.8	+1.0
INTR	**Introdacqua**	**0.41**	**127**	Pg	Pg	01 36 39.6	+0.3
INTR				Sg	Sb	01 36 46.2	-0.7
INTR	**Introdacqua**	**0.41**	**127**	Pg	Pg	01 36 39.6	+0.3
INTR				Sg	Sb	01 36 46.2	-0.7

*CSEM **07** 01:37:03.6, 42°.46N×13°.41E, h9^{km}, MD2.1/13, After ROM*
ROM 07 01:37:03.6±0.1**, 42°.46N×13°.41E, h9**^{km}±1^{km}**, Md2.1**/13**, Ml1.8**/7**, 2C, Error ellipse: s-maj=1.4km s-min=1.1km az=86.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**2**	⇑*i*Pg	Pg	01 37 06.5	+0.6
CAMP				Sg	Sg	01 37 08.2	+0.7
CAMP	**Campotosto**	**0.07**	**2**	⇑*i*Pg	Pg	01 37 06.5	+0.6
CAMP				Sg	Sg	01 37 08.2	+0.7
AQU	**L'Aquila**	**0.11**	**181**	Pg	Pg	01 37 06.8	+0.5
AQU				Sg	Sg	01 37 08.9	+0.7
AQU	**L'Aquila**	**0.11**	**181**	Pg	Pg	01 37 06.8	+0.5
AQU				Sg	Sg	01 37 08.9	+0.7
TERO	**Teramo**	**0.22**	**43**	Pg	Pg	01 37 08.5	+0.4
TERO				Sg	Sg	01 37 11.9	+0.7
TERO	**Teramo**	**0.22**	**43**	Pg	Pg	01 37 08.5	+0.4
TERO				Sg	Sg	01 37 11.9	+0.7
FIAM	**Fiamignano**	**0.29**	**228**	Pg	Pg	01 37 09.8	+0.3
FIAM				Sg	Sg	01 37 14.7	+1.2
	90nm,0.4s						
FIAM	**Fiamignano**	**0.29**	**228**	Pg	Pg	01 37 09.8	+0.3
FIAM				Sg	Sg	01 37 14.7	+1.2
	90nm,0.4s						
VCEL	**Villa Celiera**	**0.33**	**102**	Pg	Pg	01 37 10.6	+0.3
VCEL				Sg	Sb	01 37 16.8	-0.6
	293nm,0.4s						
VCEL	**Villa Celiera**	**0.33**	**102**	Pg	Pg	01 37 10.6	+0.3
VCEL				Sg	Sb	01 37 16.8	-0.6
	293nm,0.4s						
NRCA	**Norcia**	**0.43**	**330**	Pg	Pg	01 37 12.5	+0.4
NRCA				Sg	Sb	01 37 19.2	-1.0
NRCA	**Norcia**	**0.43**	**330**	Pg	Pg	01 37 12.5	+0.4
NRCA				Sg	Sb	01 37 19.2	-1.0
OFFI	**Offida**	**0.51**	**24**	Pg	Pb	01 37 14.9	0.0
OFFI	**Offida**	**0.51**	**24**	Pg	Pb	01 37 14.9	0.0
MNS	**Montasola**	**0.54**	**262**	Pg	Pg	01 37 14.3	+0.1
	34nm,0.5s						
MNS	**Montasola**	**0.54**	**262**	Pg	Pg	01 37 14.3	+0.1
	34nm,0.5s						
INTR	**Introdacqua**	**0.58**	**140**	Pg	Pg	01 37 15.4	+0.3
INTR				Sg	Sb	01 37 24.2	-0.4
INTR	**Introdacqua**	**0.58**	**140**	Pg	Pg	01 37 15.4	+0.3
INTR				Sg	Sb	01 37 24.2	-0.4
CERT	**Cerreto**	**0.60**	**212**	Pg	Pg	01 37 15.8	+0.4
CERT				Sg	Sb	01 37 25.2	+0.1
CERT	**Cerreto**	**0.60**	**212**	Pg	Pg	01 37 15.8	+0.4
CERT				Sg	Sb	01 37 25.2	+0.1
FDMO	**Fiordimonte**	**0.62**	**338**	Pg	Pg	01 37 16.0	+0.3
	36nm,0.2s						
FDMO	**Fiordimonte**	**0.62**	**338**	Pg	Pg	01 37 16.0	+0.3
	36nm,0.2s						
CESI	**CESI - Serrava**	**0.65**	**326**	Pg	Pg	01 37 16.3	-0.1
CESI				Sg	Sb	01 37 26.6	-0.1
CESI	**CESI - Serrava**	**0.65**	**326**	Pg	Pg	01 37 16.3	-0.1
CESI				Sg	Sb	01 37 26.6	-0.1
MTCE	**Montecelio**	**0.66**	**228**	Pg	Pb	01 37 16.9	-0.5
	37nm,0.6s						
MTCE	**Montecelio**	**0.66**	**228**	Pg	Pb	01 37 16.9	-0.5
	37nm,0.6s						
ASSB	**Assisi San Ben**	**0.80**	**317**	Pg	Pg	01 37 18.8	-0.3
ASSB	**Assisi San Ben**	**0.80**	**317**	Pg	Pg	01 37 18.8	-0.3
MGAB	**Montegabbione**	**1.05**	**296**	Pg	Pg	01 37 23.6	-0.3
	25nm,0.5s						
MGAB	**Montegabbione**	**1.05**	**296**	Pg	Pg	01 37 23.6	-0.3
	25nm,0.5s						
ARVD	**Arcevia**	**1.09**	**342**	Pg	Pg	01 37 24.2	-0.4
	13nm,0.8s						
ARVD	**Arcevia**	**1.09**	**342**	Pg	Pg	01 37 24.2	-0.4
	13nm,0.8s						

*NIED **07** 01:38:00, 45°.90N×151°.40E, h47^{km}, Mw4.6 Best double couple: $M_0$1.03000×10^{16} NP1:ϕ_s50.00000°, δ64.00000°, λ75.00000°. NP2:ϕ_s261.00000°, δ29.00000°, λ118.00000°.*
*BJI **07** 01:38:52.8, 45°.91N×152°.13E, h60^{km}, mB4.6/16, mb4.8/32, Ms4.1/12, Ms7 3.8/14*
*SZGRF **07** 01:38:56.4, 46°.94N×151°.12E, h81^{km}, mb4.8, Kuril Islands, Russia*
*ISCJB **07** 01:38:57.9±0.4, 45°.95N±0°.03×151°.26E±0°.02, h56^{km}±4^{km}, mb4.8/166, MS4.0/29, Error ellipse: s-maj=5.4km s-min=2.6km az=168.3*
*SKHL **07** 01:38:58.8±1.6, 45°.97N×151°.53E, h38^{km}±4^{km}, mb6.1/1, Ms4.1/1, msh5.4/2*
*JMA **07** 01:38:58.7±0.5, 45°.87N×151°.39E, h30^{km}, M5.5*
*MOS **07** 01:39:00.8±0.9, 45°.99N×151°.19E, h80^{km}, mb4.8/80, Error ellipse: s-maj=7.3km s-min=4.6km az=103.8*
*NEIC **07** 01:39:01.8±0.5, 46°.04N×151°.21E, h76^{km}±4^{km}, mb4.9/96, Error ellipse: s-maj=4.5km s-min=2.6km az=163.0*
*IDC **07** 01:39:01.8±2.0, 46°.07N×151°.22E, h75^{km}±17^{km}, mb4.3/29, mb1 4.5/34, mb1mx4.5/35, mbtmp4.3/34, MS3.9/25, Ms1 3.9/25, ms1mx3.8/41, Error ellipse: s-maj=13.5km s-min=8.4km az=149.0*
ISC 07 01:39:00.0±0.5**, 45°.91N**±0°.05×**151°.30E**±0°.04**, h66**^{km}±4^{km}**, h65**^{km}**:pP-P, n913, σ1.03**/971**, mb4.8**/166**, 315C-185D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.50**	**256**	*e*PN	**Pn**	**01 39 39.2**	**+0.9**
KUR				*e*S	**Sn**	**01 40 08.0**	**+0.3**
KUR				smax	smax		
	comp=N,20μm,2.4s						
KUR				smax	smax		
	comp=E,5μm,2.0s						
KUR	**Kuril'sk**	**2.50**	**256**	*e*P	**Pn**	**01 39 39.2**	**+0.9**
KUR				*e*S	**Sn**	**01 40 08.0**	**+0.3**
KUR				A	A	01 40 23.0	
	comp=E,20μm,2.2s						
KUR				A	A	01 40 23.0	
	comp=E,5μm,2.2s						
YUK	**Yuzh-Kuril'sk**	**4.29**	**246**	*d i*PN	**Pn**	**01 40 03.6**	**+0.9**
YUK				*i* S	**Sn**	**01 40 53.0**	**+1.6**
YUK				pmax	pmax		
	comp=N,140nm,0.2s						
YUK				pmax	pmax		
	comp=E,169nm,0.2s						
YUK				pmax	pmax		
	comp=Z,414nm,0.3s						
YUK				smax	smax		
	comp=N,443nm,0.6s						
YUK				smax	smax		
	comp=E,2μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.29**	**246**	⇓*i*P	**Pn**	**01 40 03.7**	**+1.0**
YUK				AMB	AMB	01 40 15.7	
	comp=E,140nm,0.3s						
YUK				AMB	AMB	01 40 15.7	
	comp=E,169nm,0.3s						
YUK				AMB	AMB	01 40 15.7	
	comp=E,414nm,0.3s						
YUK				*i* sP	sP	01 40 23.0	
YUK				*i* S	**Sn**	**01 40 53.0**	**+1.6**
YUK				A	A	01 41 07.2	
	comp=E,443nm,0.6s						
YUK				A	A	01 41 07.2	
	comp=E,2μm,0.6s						
NEM2	**Nemuro 2**	**4.71**	**239**	P	**Pn**	**01 40 06.8**	**-1.6**
NEM2				*e*S	**Sn**	**01 40 57.1**	**-4.6**
JRA	**Rausu**	**4.80**	**248**	P	**Pn**	**01 40 11.4**	**+1.6**
JRA				*e*S	**Sn**	**01 41 07.0**	**+2.9**
JNK	**Nakash**	**5.23**	**246**	P	**Pn**	**01 40 16.5**	**+0.9**
JNK				*e*S	**Sn**	**01 41 13.6**	**-0.9**
JAK	**Akkeshi**	**5.55**	**241**	P	**Pn**	**01 40 19.1**	**-0.8**
JAK				*e*S	**Sn**	**01 41 19.0**	**-3.3**
JTKR	**Abashiri--Toko**	**5.59**	**252**	⇑P	**Pn**	**01 40 22.1**	**+1.6**
SKR	**Severo-Kuril's**	**5.76**	**32**	*e*PN	**Pn**	**01 40 20.0**	**-2.8**
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=E,70nm,0.5s						
SKR				pmax	pmax		
	comp=Z,160nm,0.5s						
SKR				MLR	MLR		
	comp=Z,2μm,12.0s						
SKR				MLR	MLR		
	comp=E,2μm,14.0s						
SKR	**Severo-Kuril's**	**5.76**	**32**	*e*P	**Pn**	**01 40 20.0**	**-2.8**
SKR				AMB	AMB	01 40 21.0	
	comp=E,80nm,0.5s						
SKR				AMB	AMB	01 40 21.0	
	comp=E,70nm,0.5s						
SKR				AMB	AMB	01 40 21.0	
	comp=E,160nm,0.5s						
SKR				pP		01 40 30.9	
SKR				*e*S	**Sn**	**01 41 22.2**	**-5.3**
SKR				A	A	01 41 39.0	
	comp=E,270nm,0.7s						
SKR				A	A	01 41 39.0	
	comp=E,130nm,0.7s						
SKR				A	A	01 41 39.0	
	comp=E,330nm,0.9s						
SKR				A	A	01 41 55.0	
	comp=E,2μm,6.0s						
SKR				AMS	AMS	01 42 42.0	
	comp=E,2μm,12.0s						
SKR				AMS	AMS	01 42 42.0	
	comp=E,2μm,14.0s						
JMP	**Maruseppu**	**5.94**	**254**	P	**Pn**	**01 40 27.5**	**+2.1**
JAR	**Ashorobuto**	**5.97**	**247**	⇑P	**Pn**	**01 40 26.9**	**+1.1**
JAR				*e*S	**Sn**	**01 41 33.7**	**+1.0**
YSS	**Yuzh-Sakhalins**	**6.00**	**283**	⇓*e*PN	**Pn**	**01 40 28.8**	**+2.7**
YSS				*e*S	**Sn**	**01 41 36.0**	**+2.7**
YSS				pmax	pmax		
	comp=E,130nm,0.5s						
YSS				pmax	pmax		
	comp=Z,160nm,0.5s						
YSS				MLR	MLR		
	comp=E,600nm,16.0s						
YSS				MLR	MLR		
	comp=Z,1μm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.00**	**283**	*e*Pn	**Pn**	**01 40 28.0**	**+2.0**
	comp=Z,112nm,0.4s						
YSS				*e*Sn	**Sn**	**01 41 32.4**	**-0.9**
YSS	**Yuzh-Sakhalins**	**6.00**	**283**	⇓*e*P	**Pn**	**01 40 28.8**	**+2.7**
YSS				AMB	AMB	01 40 29.7	
	comp=Z,130nm,0.5s						
YSS				AMB	AMB	01 40 29.7	
	comp=Z,160nm,0.5s						
YSS				pP		01 40 39.7	
YSS				*e*S	**Sn**	**01 41 36.0**	**+2.7**
YSS				*e*LR	LR	01 42 17.0	
YSS				AMS	AMS	01 42 44.0	
	comp=Z,1μm,16.0s						
YSS				AMS	AMS	01 42 44.0	
	comp=Z,600nm,16.0s						
JOB	**Onbets**	**6.13**	**243**	P	**Pn**	**01 40 28.0**	**+0.1**
JOB				*e*S	**Sn**	**01 41 33.9**	**-2.7**
JSE	**Soyaes**	**6.20**	**264**	P	Pn	01 40 32.4	+3.5
JKK2	**Kamakawa 2**	**6.40**	**255**	P	**Pn**	**01 40 34.1**	**+2.4**
ASAJ	**Asahikawa**	**6.42**	**257**	*e*Pn	**Pn**	**01 40 34.3**	**+2.4**
	comp=Z,42nm,0.9s						
ASAJ				P		01 40 35.0	
ASAJ				*e*Sn	**Sn**	**01 41 44.8**	**+1.1**
ASAJ	**Asahikawa**	**6.42**	**257**	P	**Pn**	**01 40 34.7**	**+2.8**
ASAJ	**Asahikawa**	**6.42**	**257**	P	**Pn**	**01 40 35.0**	**+3.1**
	comp=Z,6.0nm,0.3s,baz=87,slow=14,SNR=21						
ASAJ				S	**Sn**	**01 41 47.0**	**+3.2**
	comp=Z,2.9nm,0.3s,baz=114,slow=20,SNR=2.5						
ASAJ				LR	LR	01 43 01.7	
	comp=Z,752nm,21.3s,baz=30,slow=37						
JCH	**Churui**	**6.58**	**243**	P	**Pn**	**01 40 33.4**	**-0.6**
JCH				*e*S	**Sn**	**01 41 44.3**	**-3.3**
JWK2	**Keihoku**	**6.62**	**268**	P	Pn	01 40 38.9	+4.3
JFR	**Furan**	**6.80**	**249**	P	**Pn**	**01 40 38.6**	**+1.6**
JFR				*e*S	**Sn**	**01 41 53.7**	**+0.7**
UGL	**Uglegorsk**	**7.01**	**300**	*e*P	**Pn**	**01 40 39.5**	**-0.4**
UGL				AMB	AMB	01 40 43.5	
	comp=Z,99nm,0.6s						
UGL				pP		01 40 51.0	
UGL				*e*L	L	01 42 36.0	
JEM	**Erimo**	**7.04**	**239**	P	**Pn**	**01 40 41.1**	**+0.7**
JEM				*e*S	**Sn**	**01 41 56.3**	**-2.6**
ERM	**Erimo**	**7.04**	**239**	*e*PN	**Pn**	**01 40 41.7**	**+1.3**
ERM				pmax	pmax		
	comp=Z,167nm,0.4s						
ERM	**Erimo**	**7.04**	**239**	*e*Pn	**Pn**	**01 40 41.7**	**+1.3**
	comp=Z,167nm,0.4s						
ERM				*e*Sn	**Sn**	**01 41 54.8**	**-4.1**
JBT2	**Biratori 2**	**7.12**	**247**	P	**Pn**	**01 40 41.5**	**0.0**
JNBK	**Urakawa-nobuka**	**7.14**	**243**	P	**Pn**	**01 40 40.6**	**-1.1**
JNBK				*e*S	**Sn**	**01 41 57.9**	**-3.4**
TYV	**Tymovskoe**	**7.59**	**314**	*e*P	**Pn**	**01 40 48.8**	**+0.9**
TYV				AMB	AMB	01 40 50.0	
	comp=Z,55nm,0.8s						
TYV				AMB	AMB	01 40 50.0	
	comp=Z,64nm,0.8s						
TYV				AMB	AMB	01 40 50.0	
	comp=Z,101nm,0.8s						
JEW	**Eniwo**	**7.69**	**250**	P	**Pn**	**01 40 50.8**	**+1.5**
JNB	**Noboribetsu**	**8.13**	**249**	P	**Pn**	**01 40 55.0**	**-0.3**
JNB				*e*S	**Sn**	**01 42 23.5**	**-2.1**
PETK	**Petropavlovsk-**	**8.32**	**28**	PN	**Pn**	**01 40 57.9**	**0.0**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,407nm,21.2s						
PETK	**Petropavlovsk-**	**8.32**	**28**	P	**Pn**	**01 40 57.9**	**0.0**
PETK	**Petropavlovsk-**	**8.32**	**28**	P	**Pn**	**01 40 57.9**	**0.0**
	comp=Z,4.4nm,0.3s,baz=195,slow=14,SNR=34						
PETK				LR	LR	01 44 08.8	
	comp=Z,407nm,21.2s,baz=86,slow=37						
JKB	**Kayabe**	**8.43**	**245**	P	**Pn**	**01 40 58.4**	**-0.9**
JKB				*e*S	**Sn**	**01 42 27.2**	**-5.7**
PET	**Petropavlovsk**	**8.58**	**31**	*e*PN	**Pn**	**01 40 59.9**	**-1.5**
PET				MLR	MLR		
	comp=Z,700nm,15.0s						
PET				MLR	MLR		
	comp=Z,700nm,15.0s						
JYM2	**Yakumo 2**	**8.74**	**248**	P	**Pn**	**01 41 03.1**	**-0.4**
JSR	**Shiriuchi**	**9.01**	**245**	P	**Pn**	**01 41 05.9**	**-1.4**
JSR				*e*S	Sn	01 42 38.4	-8.7
JANG	**Nango**	**9.03**	**236**	P	Pn	01 41 04.4	-3.2
JANG				*e*S	Sn	01 42 37.3	-10
JTM	**Tenmabayashi**	**9.04**	**239**	P	**Pn**	**01 41 05.4**	**-2.2**
JTM				*e*S	Sn	01 42 38.9	-8.9
JTH	**Tanohata**	**9.13**	**233**	P	Pn	01 41 05.1	-3.8
JTH				*e*S	Sn	01 42 39.2	-11
JOSM	**Okushiri--Mats**	**9.34**	**250**	P	**Pn**	**01 41 11.2**	**-0.5**
OKH	**Okha**	**9.37**	**328**	*e*PN	**Pn**	**01 41 14.1**	**+2.0**
OKH				pmax	pmax		
	comp=Z,1μm,2.0s						
OKH				MLR	MLR		
	comp=Z,1μm,12.0s						
OKH	**Okha**	**9.37**	**328**	*e*P	**Pn**	**01 41 14.1**	**+2.0**
OKH				⇑*i*P		01 41 14.6	
OKH				AMB	AMB	01 41 15.0	
	comp=Z,400nm,1.0s						
OKH				AMB	AMB	01 41 15.8	
	comp=Z,1μm,2.0s						
OKH				*e*S	**Sn**	**01 42 51.2**	**-4.5**
OKH				AMS	AMS	01 45 42.2	
	comp=Z,2μm,14.0s						
OKH				AMS	AMS	01 45 42.2	
	comp=Z,1μm,12.0s						
OFUJ	**Ofunato**	**9.85**	**230**	P	Pn	01 41 15.6	-3.1
OFUJ				*e*S	Sn	01 42 56.7	-11
NKL	**Nikolayevsk**	**10.00**	**320**	*e*P	**Pn**	**01 41 22.0**	**+1.3**
NKL				AMB	AMB	01 41 25.3	
	comp=Z,90nm,1.5s						
NKL				AMB	AMB	01 41 25.3	
	comp=Z,110nm,1.5s						
NKL				AMB	AMB	01 41 25.3	
	comp=Z,130nm,1.5s						
NKL				*e*L	L	01 44 17.0	
NKL				AMS	AMS	01 45 56.0	
	comp=Z,700nm,15.0s						
NKL				AMS	AMS	01 45 56.0	
	comp=Z,300nm,15.0s						
NKL				AMS	AMS	01 45 56.0	
	comp=Z,1μm,15.0s						
TEY	**Ternei**	**10.36**	**270**	*e*P	Pn	01 41 31.7	+6.0
TEY				AMB	AMB	01 41 32.2	

comp=Z,26nm,0.8s
JIO Ouri 10.48 228 P Pn 01 41 23.7 -3.6
JIO eS Sn 01 43 11.5 -12
JYA Atsumi 11.26 234 P **Pn** **01 41 36.1 -2.0**
JFK Kawauchi 11.55 226 eS Sn 01 43 37.7 -12
MAJO Matsushiro 13.57 231 eP **Pn** **01 42 06.8 -2.6**
MAJO pmax pmax
comp=Z,34nm,0.8s
MAJO Matsushiro 13.57 231 ePn **Pn** **01 42 06.8 -2.6**
comp=Z,34nm,0.8s
MAT Matsushiro 13.57 231 P **Pn** **01 42 06.9 -2.5**
MAT S **Sn** **01 44 40.5 +2.1**
MJAR Matsushiro Arr 13.57 231 P **Pn** **01 42 07.1 -2.3**
MJAR Matsushiro Arr 13.57 231 P **Pn** **01 42 07.1 -2.3**
comp=Z,0.8nm,0.3s,baz=28,slow=14,SNR=10
KLR Kul'dur 13.61 291 eP **Pn** **01 42 08.9 -0.9**
KLR pmax pmax
comp=E,43nm,1.4s
KLR pmax pmax
comp=Z,43nm,1.4s
KLR MLR MLR
comp=Z,1µm,14.0s
USRK Ussuriysk Arra 13.75 270 P **Pn** **01 42 12.6 +0.9**
comp=Z,0.6nm,0.3s,baz=80,slow=12,SNR=26
USRK LR LR 01 47 28.3
comp=Z,354nm,19.7s,baz=59,slow=37
VLA Vladivostok 14.12 266 P **Pn** **01 42 17.3 +0.7**
VLA S **Sn** **01 44 51.8 +0.1**
VLA pmax pmax
comp=Z,18nm,0.6s
MDJ Mudanjiang 15.34 273 P **P** **01 42 35.6 -0.2**
MDJ pP **pP** **01 42 45.7 -3.7**
MDJ pmax pmax
comp=Z,31nm,1.0s
MDJ pmax pmax
comp=Z,55nm,8.3s
MDJ LR LR
comp=N,140nm,19.8s
MDJ LR LR
comp=E,300nm,21.2s
MDJ LR LR
comp=Z,340nm,21.6s
FX1 Attu Island--F 15.82 56 P **Pn** **01 42 37.7 -0.7**
FX1 ePn **P** **01 42 38.1 -2.9**
FX1 eSn Sn 01 45 23.8 -8.9
FX1 Attu Island--F 15.82 56 P **Pn** **01 42 37.7 -0.7**
comp=Z,3.6nm,0.3s,baz=223,slow=3.4,SNR=12
FX1 S Sn 01 45 22.8 -10
comp=Z,2.9nm,0.3s,baz=294,slow=20,SNR=6.3
FX1 LR LR 01 47 37.9
comp=Z,122nm,21.2s,baz=70,slow=33
SEY Seymchan 17.07 2µ *eP* **Pn** **01 42 51.7 -2.3**
ZEA Zeya 17.32 306 eP **Pn** **01 42 55.0 -2.1**
ZEA AMB AMB 01 42 57.7
comp=Z,24nm,1.0s
ZEA AMB AMB 01 42 57.7
comp=Z,35nm,1.0s
CN2 Changchun 18.42 273 eP **P** **01 43 10.3 +0.4**
CN2 pmax pmax
comp=Z,20nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,19.0s
CN2 LR LR
comp=E,400nm,19.0s
CN2 LR LR
comp=Z,300nm,15.0s
KSRS Korea Array 19.34 252 P **P** **01 43 20.7 +0.8**
comp=Z,1.0nm,0.3s,baz=56,slow=11,SNR=38
KSRS PcP **PcP** **01 47 41.2 +1.8**
comp=Z,0.2nm,0.3s,baz=16,slow=1.9,SNR=6.2
KSRS LR LR 01 50 17.1
comp=Z,157nm,18.6s,baz=31,slow=35
KSAR Wonju Array Be 19.37 252 P **P** **01 43 20.7 +0.4**
KSAR PcP **PcP** **01 47 41.2 +1.7**
CLNS Chul'man 19.65 313 eP **Pn** **01 43 25.6 +0.5**
CLNS eS **Sn** **01 47 04.1 -1.0**
CLNS pmax pmax
comp=E,8.0nm,0.8s
CLNS pmax pmax
comp=N,13nm,0.9s
CLNS pmax pmax
comp=Z,17nm,0.7s
CLNS smax smax
comp=E,5.0nm,0.8s
CLNS smax smax
comp=N,8.0nm,1.5s
CLNS MLR MLR
comp=E,280nm,15.0s
CLNS MLR MLR
comp=Z,277nm,16.0s
CLNS MLR MLR
comp=N,243nm,15.0s
CBIJ Chichi jima 20.12 204 LR LR 01 51 15.6
comp=N,96nm,18.4s,baz=289,slow=36
JNU Nakatsue 20.20 238 P **P** **01 43 30.8 +1.3**
JNU Nakatsue 20.20 238 P **P** **01 43 30.8 +1.3**
comp=N,6.0nm,0.5s,baz=45,slow=8.6,SNR=5.2
SNY Shenyang 20.35 268 ⇓P **P** **01 43 31.2 +0.4**
SNY S S 01 47 07.4 -7.7
SNY pmax pmax
comp=Z,53nm,4.8s
SNY LR LR
comp=N,120nm,13.8s
SNY LR LR
comp=E,190nm,15.6s
SNY LR LR
comp=Z,240nm,16.8s
YAK Yakutsk 20.39 330 *i* P Pn 01 43 33.3 -0.4
YAK pmax pmax
comp=Z,75nm,0.9s
YAK pmax pmax
comp=N,31nm,1.0s
YAK pmax pmax
comp=E,37nm,1.3s
YAK MLR MLR
comp=Z,252nm,18.0s
YAK MLR MLR
comp=E,156nm,18.0s
YAK MLR MLR
comp=N,143nm,17.0s
YAK Yakutsk 20.39 330 *eP* **P** **01 43 31.0 -0.1**
comp=N,133nm,0.9s
BILL Bilibino 23.51 14 ⇑*eP* **P** **01 44 04.1 +0.4**
BILL *PP **pP** **01 44 20.0 +1.4**
BILL *SP **sP** **01 44 27.0 +0.3**
BILL *e* 01 44 33.6
BILL pmax pmax
comp=Z,2.0nm,0.4s
BILL MLR MLR
comp=Z,300nm,16.0s
BILL Bilibino 23.51 14 P **P** **01 44 04.4 +0.7**
comp=Z,6.3nm,0.4s
BJI Beijing 26.21 270 P **P** **01 44 30.7 +2.3**
BJI S **S** **01 49 00.2 +4.5**
BJI pmax pmax
comp=Z,27nm,1.0s
BJI LR LR
comp=N,130nm,19.4s
BJI LR LR
comp=E,210nm,19.9s
BJI LR LR
comp=Z,150nm,25.9s
TIXI Tiksi 27.94 345 eP **P** **01 44 42.0 -1.6**
TIXI pmax pmax
comp=Z,5.0nm,0.6s
TIXI Tiksi 27.94 345 *eP* **P** **01 44 42.0 -1.6**
comp=Z,4.7nm,0.6s
HHC Hu-ho-hao-te 29.10 274 *eP* **P** **01 44 55.0 +0.6**
HHC PP **PnPn** **01 45 50.9 +1.3**
HHC PcP **PcP** **01 48 02.7 +1.9**
HHC S **S** **01 49 38.1 -3.4**
HHC sS **sS** **01 50 09.4 +0.7**
HHC ScP **ScP** **01 51 36.2 -0.2**
HHC PcS **PcS** **01 51 44.9 +1.2**
HHC ScS **ScS** **01 55 28.6 -2.0**
HHC pmax pmax
comp=Z,50nm,0.6s
HHC pmax pmax
comp=Z,210nm,6.0s
HHC LR LR
comp=N,250nm,11.8s
HHC LR LR
comp=E,530nm,12.2s
HHC LR LR

comp=Z,490nm,11.7s
ULN Ulaanbaatar 30.00 290 *eP* **P** **01 45 02.7 +0.4**
comp=Z,2.2nm,0.7s
ULN *ePcP **PcP** **01 48 04.6 +1.6**
SONM Songino Array 30.43 290 P **P** **01 45 06.9 +0.8**
SONM PcP **PcP** **01 48 04.3 +0.2**
SONM Songino Array 30.43 290 P **P** **01 45 06.9 +0.8**
comp=Z,1.2nm,0.7s,baz=74,slow=7.6,SNR=10
SONM PcP **PcP** **01 48 04.3 +0.2**
comp=Z,2.3nm,0.7s,baz=72,slow=2.6,SNR=7.1
SONM LR LR 01 58 21.0
comp=Z,251nm,18.6s,baz=91,slow=38
ZAK Zakamensk 31.90 296 *eP* **P** **01 45 17.5 -1.5**
ZAK pmax pmax
comp=Z,3.0nm,1.3s
WHN Wuhan 32.50 255 ⇑P **P** **01 45 24.7 +0.4**
WHN pmax pmax
comp=Z,62nm,0.9s
XAN Xi'an 34.19 265 P **P** **01 45 39.3 +0.3**
XAN pmax pmax
comp=Z,3.0nm,1.2s
XAN pmax pmax
comp=Z,29nm,4.8s
KDAK Kodiak Island 35.61 50 P **P** **01 45 50.1 -0.8**
KDAK Kodiak Island 35.61 50 P **P** **01 45 50.1 -0.8**
comp=Z,6.9nm,0.7s,baz=279,slow=6.1,SNR=5.9
LZH Lanzhou 36.66 272 *eP* **P** **01 45 59.0 -1.3**
LZH pmax pmax
comp=Z,20nm,1.4s
COLD Coldfoot 36.74 34 *eP* **P** **01 46 00.1 -0.3**
comp=Z,11nm,0.8s
COLD *ePcP **PcP** **01 48 21.9 +0.5**
SML Sawmill 37.45 43 *eP* **P** **01 46 06.6 0.0**
SML *e* 01 48 24.2
SML pmax pmax
comp=Z,3.0nm,0.5s
SML Sawmill 37.45 43 *eP* **P** **01 46 06.6 0.0**
comp=Z,2.8nm,0.5s
SML *ePcP **PcP** **01 48 24.2 +0.5**
COLA College 37.58 38 *eP* **P** **01 46 08.2 +0.6**
COLA pmax pmax
comp=Z,38nm,0.8s
COLA College 37.58 38 *eP* **P** **01 46 08.2 +0.6**
comp=Z,38nm,0.8s
GTA Gaotai 37.86 279 *eP* **P** **01 46 11.6 +1.2**
GTA PP **PnPn** **01 47 42.4 +2.7**
GTA PcP **PcP** **01 48 27.0 +1.5**
GTA S S 01 52 04.0 +7.1
GTA SS **SnSn** **01 54 42.5 -0.9**
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA pmax pmax
comp=Z,56nm,4.3s
GTA LR LR
comp=N,150nm,15.7s
GTA LR LR
comp=E,100nm,15.2s
GTA LR LR
comp=Z,120nm,15.7s
ILAR Eielson Array 37.99 38 P **P** **01 46 10.7 -0.4**
ILAR PcP **PcP** **01 48 24.4 -0.9**
ILAR Eielson Array 37.99 38 P **P** **01 46 10.7 -0.4**
comp=Z,8.5nm,0.9s,baz=265,slow=6.5,SNR=72
ILAR PcP **PcP** **01 48 24.4 -0.9**
comp=Z,1.1nm,0.6s,baz=282,slow=3.6,SNR=7.9
ILAR LR LR 02 03 22.7
comp=Z,64nm,19.9s,baz=313,slow=39
PAX Paxson 38.70 41 *eP* **P** **01 46 17.3 +0.1**
PAX *e* 01 48 27.8
PAX pmax pmax
comp=Z,7.0nm,0.9s
PAX Paxson 38.70 41 *eP* **P** **01 46 17.3 +0.1**
comp=Z,7.1nm,0.9s
PAX *ePcP **PcP** **01 48 27.8 +0.2**
DOT Dot Lake 39.28 40 *eP* **P** **01 46 20.9 -1.0**
comp=Z,3.7nm,0.8s
BMRM Bremner River 39.31 44 *eP* **P** **01 46 23.0 +0.8**
comp=Z,13nm,1.0s
BMRM *ePcP **PcP** **01 48 29.6 0.0**
GYA Guiyang 40.30 257 ⇑*iP* **P** **01 46 31.3 +0.4**
GYA pmax pmax
comp=Z,20nm,0.8s
EGAK Eagle 40.44 38 *eP* **P** **01 46 31.2 -0.3**
comp=Z,30nm,1.1s
ZALV Zalesovo Beam 42.09 306 P **P** **01 46 43.2 -1.9**
ZALV 01 48 39.2
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV MLR MLR
comp=Z,310nm,18.8s
ZALV Zalesovo Beam 42.09 306 P **P** **01 46 43.1 -1.9**
ZALV PcP **PcP** **01 48 39.2 +0.6**
ZALV Zalesovo Beam 42.09 306 P **P** **01 46 43.1 -1.9**
comp=Z,0.9nm,0.4s,baz=55,slow=7.2,SNR=6.4
ZALV PcP **PcP** **01 48 39.2 +0.6**
comp=Z,7.2nm,0.7s,baz=70,slow=2.7,SNR=25
ZALV LR LR 02 05 24.1
comp=Z,310nm,18.8s,baz=259,slow=38
INK Inuvik 43.04 32 P **P** **01 46 53.2 +0.6**
INK Inuvik 43.04 32 P **P** **01 46 53.2 +0.6**
comp=Z,30nm,0.8s,baz=296,slow=7.4,SNR=117
QIZ Qiongzhong 43.36 246 P **P** **01 46 52.7 -3.1**
QIZ S **S** **01 53 13.3 -5.5**
QIZ LR LR
comp=Z,77nm,25.5s
KMI Kunming 43.85 259 P **P** **01 47 01.1 +1.2**
KMI pP **pP** **01 47 15.9 -0.6**
KMI pmax pmax
comp=Z,17nm,1.2s
MK31 Makanchi Array 46.21 297 *i* P **P** **01 47 16.5 -1.7**
MK31 pmax pmax
comp=Z,3.0nm,0.5s
MK31 Makanchi Array 46.21 297 *eP* **P** **01 47 17.1 -1.1**
MK31 *e* 01 48 53.0
MK31 *e* 01 49 08.3
MK31 Makanchi Array 46.21 297 *eP* **P** **01 47 17.1 -1.1**
MK31 *ePcP **PcP** **01 48 53.0 +0.1**
MK31 *ePP **PP** **01 49 08.3 +0.9**
MKAR Makanchi Array 46.21 297 P **P** **01 47 18.0 -0.2**
MKAR 01 48 53.2
MKAR pmax pmax
comp=Z,4.0nm,0.6s
MKAR MLR MLR
comp=Z,280nm,19.5s
MKAR Makanchi Array 46.21 297 P **P** **01 47 17.9 -0.2**
MKAR PcP **PcP** **01 48 53.2 +0.3**
MKAR Makanchi Array 46.21 297 P **P** **01 47 18.0 -0.2**
comp=Z,4.2nm,0.6s,baz=69,slow=6.6,SNR=53
MKAR PcP **PcP** **01 48 53.2 +0.3**
comp=Z,3.9nm,0.7s,baz=63,slow=4.8,SNR=7.5
MKAR LR LR 02 07 42.0
comp=Z,280nm,19.5s,baz=52,slow=37
KURK Kurchatov 46.78 304 ⇑*eP* **P** **01 47 22.4 -0.2**
KURK pmax pmax
comp=Z,5.0nm,1.2s
KURK Kurchatov 46.78 304 *eP* **P** **01 47 21.1 -1.4**
comp=Z,3.3nm,0.6s
DLBC Dease Lake 47.08 45 *eP* **P** **01 47 26.6 +1.7**
DLBC P **P** **01 47 26.8 +1.9**
DLBC Dease Lake 47.08 45 P **P** **01 47 26.8 +1.9**
comp=Z,9.4nm,0.8s,baz=294,slow=7.8,SNR=18
LSA Lhasa 49.06 273 P **P** **01 47 42.7 +1.7**
VOSK Vostochnaya 50.23 309 P **P** **01 47 47.8 -1.3**
VOSK pmax pmax
comp=Z,3.0nm,0.9s
BVAR Borovoye Array 50.42 309 P **P** **01 47 50.1 -0.4**
BVAR 01 49 08.1
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR Borovoye Array 50.42 309 P **P** **01 47 50.0 -0.4**
BVAR PcP **PcP** **01 49 08.1 +0.2**
BVAR Borovoye Array 50.42 309 P **P** **01 47 50.1 -0.4**
comp=Z,1.6nm,0.6s,baz=52,slow=7.6,SNR=14
BVAR PcP **PcP** **01 49 08.1 +0.2**
comp=Z,2.9nm,0.4s,baz=72,slow=4.7,SNR=15
BRVK Borovoye 50.46 309 ⇑*eP* **P** **01 47 49.6 -1.1**
BRVK pmax pmax
comp=Z,2.0nm,0.6s
BRVK Borovoye 50.46 309 *eP* **P** **01 47 49.7 -1.1**
comp=Z,2.5nm,0.6s
BRVK *ePcP **PcP** **01 49 08.0 0.0**
CHTO Chiang Mai 50.69 256 *eP* **P** **01 47 53.4 +0.4**
CHTO pmax pmax
comp=Z,25nm,0.9s
CHTO Chiang Mai 50.69 256 *eP* **P** **01 47 53.4 +0.4**

comp=Z,25nm,0.9s
CMAR Chiang Mai Arr 50.94 255 P **P** **01 47 56.4 +1.6**
CMAR Chiang Mai Arr 50.94 255 P **P** **01 47 56.4 +1.6**
comp=Z,11nm,0.8s,baz=37,slow=7.4,SNR=40
CMAR LR LR 02 11 26.0
comp=Z,74nm,19.0s,baz=50,slow=38
SHL Shillong 51.09 268 *eP* **P** **01 47 55.0 -1.0**
ZRNK Zerenda 51.20 310 P **P** **01 47 56.4 +0.1**
RES Resolute Bay 52.03 18 P **P** **01 47 56.4 -0.5**
RES *eP* **P** **01 48 01.9 -0.3**
RES *ePcP **PcP** **01 49 14.3 +0.8**
RES Resolute Bay 52.03 18 P **P** **01 48 01.7 -0.5**
comp=Z,6.6nm,0.9s,baz=317,slow=7.9,SNR=31
YKW3 Yellowknife Ar 52.31 36 *eP* **P** **01 48 04.1 -0.3**
comp=Z,0.2nm,0.8s
YKA Yellowknife Ar 52.35 36 P **P** **01 48 05.1 +0.4**
YKA PcP **PcP** **01 49 15.3 +0.5**
YKA Yellowknife Ar 52.35 36 P **P** **01 48 05.1 +0.4**
comp=Z,6.4nm,0.7s,baz=296,slow=7.0,SNR=103
YKA PcP **PcP** **01 49 15.3 +0.5**
comp=Z,2.0nm,0.7s,baz=295,slow=4.0,SNR=6.3
TAPN Taplejung 52.88 273 *eP* **P** **01 48 10.5 +1.0**
comp=Z,18nm,0.5s
ODAN Odare 53.41 272 *eP* **P** **01 48 14.4 +1.1**
EKS2 Erkin-Say 53.51 296 *eP* **P** **01 48 12.8 -0.9**
EKS2 pmax pmax
comp=Z,6.0nm,0.6s
EKS2 Erkin-Say 53.51 296 *eP* **P** **01 48 12.8 -0.9**
comp=Z,5.6nm,0.6s
GUN Gumba 53.81 274 *eP* **P** **01 48 17.1 +0.7**
comp=Z,44nm,0.4s
RAMN Ramite 53.91 273 *eP* **P** **01 48 17.6 +0.6**
comp=Z,48nm,0.4s
KKN Kakani 54.31 275 *eP* **P** **01 48 21.2 +1.4**
comp=Z,40nm,0.6s
PKI Pulchoki 54.35 274 *eP* **P** **01 48 20.9 +0.6**
comp=Z,28nm,0.6s
PKIN Phulchoki 54.36 274 *eP* **P** **01 48 21.3 +1.0**
DMN Daman 54.54 275 *eP* **P** **01 48 22.6 +1.0**
ARU Arti 54.78 317 *d iP* **P** **01 48 22.3 -0.3**
ARU 01 50 22.0
ARU S **S** **01 55 59.6 +1.6**
ARU SS **SS** **01 59 37.1 -4.1**
ARU pmax pmax
comp=Z,8.0nm,1.2s
ARU MLR MLR
comp=Z,162nm,18.0s
ARU Arti 54.78 317 *eP* **P** **01 48 22.0 -0.6**
comp=Z,4.2nm,0.6s
DANN Dangsing 55.02 276 *eP* **P** **01 48 26.3 +1.2**
comp=Z,79nm,0.6s
KK31 Karatay Array 55.30 298 P **P** **01 48 25.9 -0.7**
KK31 pmax pmax
comp=Z,2.0nm,0.5s
KKAR Karatay Array 55.30 298 *eP* **P** **01 48 26.1 -0.5**
KKAR *e* 01 50 30.4
KKAR pmax pmax
comp=Z,3.0nm,0.7s
KKAR Karatay Array 55.30 298 *eP* **P** **01 48 26.1 -0.5**
comp=Z,3.2nm,0.7s
KKAR *ePP **PP** **01 50 30.4 0.0**
NLWA Neilton Lookou 55.39 55 *eP* **P** **01 48 27.3 +0.1**
comp=Z,12nm,0.7s
KOLN Koldanda 55.49 276 *eP* **P** **01 48 29.3 +0.9**
comp=Z,48nm,0.8s
PYUN Piuthan 55.71 276 *eP* **P** **01 48 30.7 +0.8**
comp=Z,130nm,0.9s
MBW Mount Baker 55.76 53 P **P** **01 48 30.6 +0.6**
TDL Tradedollar La 56.91 56 P **P** **01 48 39.6 +1.5**
NLW Nelson Butte 57.02 53 P **P** **01 48 39.8 +0.9**
ETW Entiat 57.28 54 P **P** **01 48 41.4 +0.6**
TBM Table Mountain 57.38 54 P **P** **01 48 42.2 +0.8**
KEV Kevo 57.71 340 *eP* P 01 48 48.9 +5.7
KEV pmax pmax
comp=Z,5.0nm,0.8s
KEV Kevo 57.71 340 *ep* P 01 48 48.9 +5.7
comp=Z,4.8nm,0.8s
VLL Laurance Lake 57.72 56 P **P** **01 48 45.6 +1.8**
AB31 Akbulak array 57.99 309 *i* P **P** **01 48 44.5 -1.1**
AB31 pmax pmax
comp=Z,7.0nm,0.5s
ABKAR Akbulak array 57.99 309 *eP* **P** **01 48 44.5 -1.1**
comp=Z,6.9nm,0.5s
ARCES ARCESS Array B 58.23 340 P **P** **01 48 47.2 +0.3**
ARCES PcP **PcP** **01 49 37.7 +0.2**
ARCES ARCESS Array B 58.23 340 P **P** **01 48 47.2 +0.3**
comp=Z,3.6nm,0.8s,baz=30,slow=7.3,SNR=8.8
ARCES PcP **PcP** **01 49 37.7 +0.2**
comp=Z,3.8nm,0.7s,baz=47,slow=5.3,SNR=7.7
ARCES LR LR 02 20 13.4
comp=Z,59nm,20.0s,baz=166,slow=43
NEW Newport 58.69 51 P **P** **01 48 51.0 +0.5**
NEW Newport 58.69 51 ⇑P **P** **01 48 51.1 +0.6**
baz=58,SNR=12
NEW Newport 58.69 51 P **P** **01 48 51.0 +0.5**
comp=Z,6.9nm,0.8s,baz=317,slow=6.1,SNR=11
VIPM Ingram Point 58.88 57 P **P** **01 48 53.4 +1.4**
VIPM Ingram Point 58.88 57 P **P** **01 48 53.4 +1.4**
A12A Yaak River Ran 59.09 50 ⇓P **P** **01 48 54.4 +1.1**
baz=59
C11A Tepee Creek (N 59.41 51 ⇑P **P** **01 48 56.4 +0.9**
baz=59
A13A Flathead Natio 59.76 50 ⇑P **P** **01 48 58.6 +0.7**
baz=60
C12B Naegeli Ranch, 59.91 51 ⇑P **P** **01 48 59.9 +0.9**
baz=60
WALA Waterton Lakes 59.95 49 *eP* **P** **01 48 59.8 +0.6**
comp=Z,0.5nm,1.0s
B13A Whitefish 60.06 50 ⇓P **P** **01 49 01.0 +1.1**
baz=60,SNR=23
BSMT Bassoo Peak 60.20 51 *eP* **P** **01 49 02.5 +1.4**
comp=Z,2.8nm,0.5s
A14A Double T Ranch 60.26 49 ⇑P **P** **01 49 01.9 +0.5**
baz=60,SNR=10
BLMT Blacktail Moun 60.33 50 *eP* **P** **01 49 03.1 +1.1**
comp=Z,14nm,0.8s
C13A Hot Springs 60.42 51 ⇓P **P** **01 49 03.4 +1.0**
baz=60,SNR=6.8
BMO Blue Mountains 60.59 55 *eP* **P** **01 49 04.3 +0.6**
comp=Z,14nm,1.5s
YBMT Yellow Bay 60.61 50 *eP* **P** **01 49 04.7 +0.9**
comp=Z,4.9nm,0.8s
A15A Johnson Ranch, 60.62 49 ⇓P **P** **01 49 03.9 +0.1**
baz=60,SNR=9.4
B14A Marcotte Ranc 60.70 50 ⇑P **P** **01 49 05.1 +0.7**
baz=60,SNR=7.5
C14A Swan Lake 60.81 50 ⇓P **P** **01 49 06.1 +1.0**
baz=60
SWMT Swartz Lake 60.83 51 *eP* **P** **01 49 05.8 +0.6**
comp=Z,12nm,1.2s
D13A Huson 60.83 51 ⇑P **P** **01 49 05.8 +0.6**
baz=61,SNR=8.7
B15A Bradely Ranch, 61.11 49 ⇓P **P** **01 49 07.5 +0.4**
baz=61,SNR=11
F12A Elk City 61.20 53 ⇓P **P** **01 49 08.9 +1.1**
baz=61,SNR=14
A16A West Butte Ran 61.23 48 ⇓P **P** **01 49 08.2 +0.2**
baz=61
MSO Missoula 61.27 51 *eP* **P** **01 49 08.9 +0.7**
comp=Z,18nm,1.3s
MSO Missoula 61.27 51 ⇓P **P** **01 49 09.0 +0.7**
baz=61,SNR=19
D14A Greenough 61.36 51 ⇑P **P** **01 49 09.5 +0.6**
baz=61,SNR=31
E13A Victor 61.38 52 ⇓P **P** **01 49 09.6 +0.7**
baz=61,SNR=7.4
C15A Salmond Ranch, 61.41 50 ⇓P **P** **01 49 10.4 +1.2**
baz=61,SNR=34
B16A M & M Farms, S 61.50 49 ⇓P **P** **01 49 10.1 +0.4**
baz=61,SNR=6.8
JOF Joensuu 61.53 333 *eP* **P** **01 49 06.9 -2.7**
JOF pmax pmax
comp=Z,2.0nm,0.5s
JOF Joensuu 61.53 333 *ep* **P** **01 49 06.9 -2.7**
comp=Z,2.4nm,0.5s
SUMG Summit 61.62 3 *eP* **P** **01 49 10.6 0.0**
SUMG pmax pmax
comp=Z,25nm,1.0s
SUMG Summit 61.62 3 *eP* **P** **01 49 10.6 0.0**
comp=Z,25nm,1.0s
SUMG Summit 61.62 3 *iP* **P** **01 49 10.6 0.0**
comp=Z,29nm,0.9s
F13A Darby 61.69 52 ⇓P **P** **01 49 11.6 +0.4**
baz=61,SNR=9.7
A17A Triple J Farms 61.70 48 ⇑P **P** **01 49 11.4 +0.4**
baz=61,SNR=6.7

E14A **Clinton** 61.77 51 ⇑P P 01 49 12.3 +0.6
baz=62,SNR=13
C16A **Fuhringer Ranc** 61.86 49 ⇑P P 01 49 13.1 +0.9
baz=62,SNR=28
D15A **Lincoln** 61.91 50 ⇓P P 01 49 13.4 +0.8
baz=62,SNR=8.1
B17A **L&G Farms, Che** 62.05 48 ⇓P P 01 49 13.9 +0.5
baz=62,SNR=6.0
A18A **Metzger Ranch,** 62.15 47 ⇑P P 01 49 14.3 +0.2
baz=62
H12A **Diamond D Ranc** 62.16 54 ⇓P P 01 49 14.8 +0.4
baz=62,SNR=8.3
G13A **Cobalt** 62.18 53 ⇓P P 01 49 15.0 +0.5
baz=62,SNR=17
FFC **Flin Flon** 62.19 39 *i* P P 01 49 14.8 +0.6
FFC **Flin Flon** 62.19 39 *e*P P 01 49 14.3 +0.1
comp=Z,16nm,0.8s
E15A **Deer Lodge** 62.23 51 ⇑P P 01 49 15.3 +0.6
baz=62,SNR=10
MFID **Camas Ranch** 62.31 55 ⇓P P 01 49 15.9 +0.6
baz=62
D16A **Dana Ranch, Ca** 62.44 50 ⇑P P 01 49 17.0 +0.8
baz=62,SNR=15
I12A **Atlanta** 62.47 55 ⇑P P 01 49 17.3 +0.8
baz=62,SNR=11
C17A **Wharram Farm,** 62.48 49 ⇓P P 01 49 16.8 +0.5
baz=62,SNR=20
HRY **Holter Researc** 62.49 50 *e*P P 01 49 17.1 +0.7
comp=Z,7.5nm,0.8s
H13A **Challis** 62.49 53 ⇑P P 01 49 17.3 +0.8
baz=62,SNR=16
G14A **Jackson** 62.51 52 ⇓P P 01 49 17.0 +0.2
baz=62
B18A **Beardsley Farm** 62.52 48 ⇓P P 01 49 17.3 +0.7
baz=62,SNR=11
F15A **Butte** 62.67 51 ⇑P P 01 49 18.5 +0.7
baz=62,SNR=16
E16A **East Helena** 62.68 50 ⇓P P 01 49 18.7 +1.0
baz=62,SNR=9.0
LRM **Limekiln Ridge** 62.71 51 *e*P P 01 49 18.7 +0.7
comp=Z,229nm,1.3s
A19A **Klindworth Far** 62.71 47 ⇑P P 01 49 18.5 +0.6
baz=62,SNR=16
EGMT **Eagleton** 62.76 48 *e*P P 01 49 18.7 +0.5
comp=Z,16nm,1.0s
EGMT **Eagleton** 62.76 48 ⇓P P 01 49 18.9 +0.6
baz=62,SNR=11
D17A **Six Diamond Ra** 62.82 49 ⇑P P 01 49 19.3 +0.6
baz=62,SNR=12
B19A **Brinkman Farms** 62.91 47 ⇑P P 01 49 19.9 +0.8
baz=63,SNR=21
H14A **Leadore** 62.95 53 ⇑P P 01 49 20.2 +0.5
baz=63
I13A **Wildhorse Cree** 62.97 54 ⇑P P 01 49 20.8 +1.0
baz=63,SNR=8.0
HLID **Hailey** 63.02 54 ⇑P P 01 49 21.1 +1.0
baz=63,SNR=8.9
G15A **Dillon** 63.10 52 ⇑P P 01 49 21.5 +0.9
baz=63,SNR=12
A20A **Cobblestone Ra** 63.16 47 ⇑P P 01 49 21.6 +0.8
baz=63,SNR=13
E17A **Martinsdale** 63.17 50 ⇑P P 01 49 22.2 +1.2
baz=63,SNR=15
F16A **Kennard Place,** 63.18 51 ⇑P P 01 49 22.0 +0.9
baz=63
D18A **Linhart Farms,** 63.26 49 ⇓P P 01 49 22.4 +0.9
baz=63
J13A **Cove Ranch, Pi** 63.26 54 ⇑P P 01 49 22.8 +1.1
baz=63,SNR=8.2
BOZ **Bozeman (W)** 63.27 51 ⇑P P 01 49 22.8 +1.1
baz=63,SNR=8.7
C19A **Slack Wire Ran** 63.31 48 ⇓P P 01 49 22.9 +1.0
baz=63,SNR=18
I14A **Mackay** 63.34 54 ⇑P P 01 49 23.4 +1.1
baz=63,SNR=11
B20A **Solberg Farm,** 63.39 47 ⇓P P 01 49 23.0 +0.6
baz=63,SNR=7.1
G16A **Moss Hill, Enn** 63.43 52 ⇓P P 01 49 23.6 +0.8
baz=63,SNR=16
A21A **Bergtoll Ranch** 63.59 46 ⇑P P 01 49 24.6 +0.9
baz=63,SNR=25
E18A **Harlowton** 63.60 50 ⇓P P 01 49 24.9 +1.0
baz=63
F17A **Fitzpatrick Pl** 63.63 51 ⇑P P 01 49 25.0 +0.9
baz=63,SNR=5.9
KAF **Kangasniemi** 63.67 335 *e*P P 01 49 20.9 -2.9
KAF pmax pmax
comp=Z,4.0nm,0.6s
KAF **Kangasniemi** 63.67 335 *e*p P 01 49 20.9 -2.9
comp=Z,4.3nm,0.6s
J14A **Carey** 63.68 54 ⇓P P 01 49 26.1 +1.6
baz=63
D19A **Cripps Ranch,** 63.77 49 ⇓P P 01 49 25.8 +0.9
baz=64
SCO **Scoresbysund** 63.82 357 *i* P P 01 49 24.6 -0.1
comp=Z,4.1nm,0.9s
C20A **Veseth Ranch,** 63.87 48 ⇓P P 01 49 26.5 +1.0
baz=64,SNR=24
NVAR **Mina Array Bea** 63.94 61 P P 01 49 27.5 +1.2
NVAR **Mina Array Bea** 63.94 61 P P 01 49 27.5 +1.2
comp=Z,3nm,0.7s,baz=292,slow=7.5,SNR=14
G17A **Pierce Place,** 63.96 51 ⇓P P 01 49 27.4 +1.2
baz=64
H16A **Russell Place,** 64.07 52 ⇑P P 01 49 28.2 +1.1
baz=64,SNR=10.0
A22A **Carney Farms,** 64.10 46 ⇑P P 01 49 27.6 +0.6
baz=64,SNR=21
F18A **Big Timber** 64.14 50 ⇑P P 01 49 28.5 +1.1
baz=64,SNR=11
D20A **Manuel Ranch,** 64.20 48 ⇓P P 01 49 28.9 +1.2
baz=64,SNR=17
J15A **Blackfoot** 64.25 54 ⇑P P 01 49 29.4 +1.2
baz=64
FINES **FINESS Array B** 64.26 334 P P 01 49 25.9 -1.8
FINES **FINESS Array B** 64.26 334 P P 01 49 25.9 -1.8
comp=Z,7.9nm,0.5s,baz=34,slow=7.4,SNR=71
FINES LR LR 02 22 37.9
comp=Z,119nm,19.0s,baz=320,slow=41
C21A **Desert Coulee** 64.26 47 ⇓P P 01 49 28.9 +0.8
baz=64
E19A **Rath Farm, Rou** 64.27 49 ⇑P P 01 49 29.2 +1.0
baz=64,SNR=8.4
K14A **Jones Ranch, D** 64.37 55 ⇓P P 01 49 30.4 +1.4
baz=64
I16A **Newdale** 64.47 53 ⇓P P 01 49 30.8 +1.1
baz=64
F19A **Roth Farm, Mol** 64.58 50 ⇑P P 01 49 31.3 +1.1
baz=64,SNR=9.3
E20A **Meyer Farm, Mu** 64.59 49 ⇑P P 01 49 31.4 +1.1
baz=64
LKWY **Lake** 64.63 52 *e*P P 01 49 32.2 +1.4
LKWY pmax pmax
comp=Z,6.0nm,0.8s
LKWY **Lake** 64.63 52 *e*P P 01 49 32.2 +1.4
comp=Z,6.0nm,0.8s
H17A **Grant Village** 64.64 52 ⇓P P 01 49 33.3 +2.5
baz=64,SNR=7.2
K15A **Arbon** 64.65 54 ⇑P P 01 49 32.5 +1.7
baz=64,SNR=5.6
L14A **Malta** 64.66 55 ⇓P P 01 49 32.1 +1.2
baz=64
J16A **Bone** 64.79 53 ⇓P P 01 49 33.3 +1.5
baz=64
D21A **La Casta Ranch** 64.81 48 ⇑P P 01 49 32.7 +1.0
baz=64
RLMT **Red Lodge** 64.88 50 ⇑P P 01 49 33.6 +1.3
baz=65,SNR=9.0
RRI2 **Red Ridge** 64.90 53 *e*P P 01 49 32.7 +0.1
comp=Z,16nm,0.8s
C22A **Vida** 64.93 47 ⇑P P 01 49 32.8 +0.4
baz=65
I17A **Pilgrim Ck.** 64.95 52 ⇓P P 01 49 34.5 +1.8
baz=65,SNR=6.6
H18A **Shoshone NF, C** 64.95 51 ⇓P P 01 49 34.0 +1.2
baz=65,SNR=7.2
TPAW **Teton Pass** 65.02 53 *e*P P 01 49 34.6 +1.3
comp=Z,22nm,1.3s
F20A **Billings** 65.04 49 ⇑P P 01 49 34.4 +1.2
baz=65
K16A **Soda Springs** 65.08 54 ⇓P P 01 49 35.4 +1.7
baz=65,SNR=5.1
A24A **Westby** 65.09 45 ⇓P P 01 49 34.0 +0.6
baz=65
LOHW **Long Hollow** 65.13 52 *e*P P 01 49 34.6 +0.7
comp=Z,25nm,1.6s
L15A **Malad City** 65.17 55 ⇑P P 01 49 35.4 +1.2
baz=65
D22A **Cohagen** 65.18 47 ⇓P P 01 49 34.9 +0.8
baz=65,SNR=5.9
J17A **Brown Place, J** 65.23 53 ⇑P P 01 49 36.0 +1.3
baz=65,SNR=7.5
C23A **Lambert** 65.25 46 ⇑P P 01 49 34.9 +0.4
baz=65
DGMT **Dagmar** 65.30 45 ⇓P P 01 49 35.3 +0.6
baz=65
H19A **Powell** 65.33 51 ⇑P P 01 49 36.2 +1.1
baz=65
CWC **Cottonwood Cre** 65.34 63 ⇓P P 01 49 36.0 +0.6
baz=65
G20A **Bridger** 65.38 50 ⇑P P 01 49 35.9 +0.5
baz=65
GRAC **Grapevine Rang** 65.42 62 ⇓P P 01 49 37.1 +1.4
baz=65
I18A **Diamond G Ranc** 65.51 52 ⇑P P 01 49 37.9 +1.4
baz=65,SNR=5.2
K17A **Gardner Place,** 65.51 53 ⇑P P 01 49 37.1 +0.7
baz=65
R11A **Troy Canyon, C** 65.64 60 ⇑P P 01 49 38.1 +0.8
baz=65,SNR=8.9
D23A **Lindsay** 65.66 47 ⇑P P 01 49 37.9 +0.7
baz=65
L16A **Fish Haven** 65.70 54 ⇓P P 01 49 38.6 +0.9
baz=65,SNR=5.3
J18A **Kendall Valley** 65.71 52 ⇓P P 01 49 38.4 +0.5
baz=65
I19A **Meeteetse** 65.74 51 ⇑P P 01 49 38.7 +0.8
baz=66
E22A **Miles City** 65.77 48 ⇑P P 01 49 38.5 +0.6
baz=66
C24A **Savage** 65.81 46 ⇑P P 01 49 38.5 +0.4
baz=66
MPMC **Manual Prospec** 65.95 63 ⇓P P 01 49 40.0 +0.7
baz=66,SNR=5.5
L17A **Cokeville** 65.96 54 ⇓P P 01 49 40.0 +0.6
baz=66
H20A **Greybull** 65.98 50 ⇓P P 01 49 39.7 +0.4
baz=66
F22A **Rosebud** 66.05 48 ⇓P P 01 49 40.2 +0.5
baz=66,SNR=7.7
E23A **Ismay** 66.06 47 ⇓P P 01 49 40.5 +0.8
baz=66
FURC **Furnace Creek,** 66.08 62 ⇑P P 01 49 40.9 +1.1
baz=66
K18A **Toltan Ranch,** 66.08 53 ⇓P P 01 49 41.1 +0.9
baz=66,SNR=7.3
DUG **Dugway** 66.09 56 ⇓P P 01 49 41.1 +1.0
baz=66,SNR=10.0
D24A **Glendive** 66.14 46 ⇓P P 01 49 41.2 +0.9
baz=66
LRMC **Laurel Mountai** 66.20 63 ⇑P P 01 49 41.6 +0.7
baz=66
J19A **Crowheart** 66.21 52 ⇑P P 01 49 41.7 +0.8
baz=66
O15A **The Old Anders** 66.23 56 ⇑P P 01 49 42.2 +1.1
baz=66
BW06 **Boulder Array** 66.26 53 ⇑P P 01 49 41.8 +0.5
baz=66,SNR=12
PDAR **Pinedale Array** 66.26 53 P P 01 49 41.9 +0.5
PDAR **Pinedale Array** 66.26 53 P P 01 49 41.9 +0.5
comp=Z,5.9nm,0.8s,baz=286,slow=1.8,SNR=37
I20A **Worland** 66.26 51 ⇓P P 01 49 42.2 +1.0
baz=66,SNR=5.0
H21A **Big Horn, Sher** 66.40 50 ⇑P P 01 49 42.7 +0.6
baz=66,SNR=9.6
EDW2 **Edwards Air Fo** 66.40 64 ⇓P P 01 49 42.7 +0.6
baz=66
G22A **Birney** 66.40 49 ⇓P P 01 49 42.5 +0.5
baz=66
M17A **Scullys Gap (B** 66.49 54 ⇓P P 01 49 43.2 +0.4
baz=66
L18A **Fontenelle, Gr** 66.55 54 ⇓P P 01 49 43.7 +0.6
baz=66
K19A **Absolon Red Bu** 66.62 52 ⇓P P 01 49 43.4 -0.1
baz=66,SNR=5.3
J20A **Shoshoni** 66.68 51 ⇓P P 01 49 44.5 +0.6
baz=66,SNR=10
N17A **Moffit Pass** 66.74 55 ⇑P P 01 49 45.0 +0.5
baz=66,SNR=8.9
H22A **Clearmont** 66.79 49 ⇓P P 01 49 44.8 +0.3
baz=66
SHOC **Shoshone** 66.80 62 ⇑P P 01 49 45.4 +0.8
baz=67
I21A **Big Trails, Te** 66.81 51 ⇑P P 01 49 45.3 +0.7
baz=66,SNR=11
P15A **Leamington** 66.81 57 ⇑P P 01 49 45.6 +0.9
baz=67
L19A **Farson** 66.81 53 ⇓P P 01 49 45.6 +0.8
baz=66
O16A **Spangville** 66.84 56 ⇑P P 01 49 45.8 +0.8
baz=67
M18A **Lyman** 66.86 54 ⇑P P 01 49 45.9 +0.8
baz=67
GSC **Goldstone** 66.86 63 ⇑P P 01 49 45.9 +0.8
baz=67
G23A **Biddle** 66.89 48 ⇓P P 01 49 45.4 +0.3
baz=67,SNR=5.9
F24A **Ekalaka** 66.94 47 ⇓P P 01 49 45.9 +0.5
baz=67
K20A **Yellowstone Ra** 67.00 52 ⇓P P 01 49 46.0 +0.1
baz=67,SNR=6.3
BFSC **Mount Baldy Ra** 67.02 64 ⇓P P 01 49 47.0 +0.8
baz=67
J21A **Lysite** 67.04 51 ⇓P P 01 49 46.6 +0.4
baz=67
I22A **9 Mile Ranch,** 67.19 50 ⇓P P 01 49 47.7 +0.6
baz=67,SNR=5.8
O17A **Robinson Place** 67.29 55 ⇓P P 01 49 48.8 +0.9
baz=67
G24A **Alzada** 67.31 48 ⇑P P 01 49 47.7 0.0
baz=67
WRAB **Tennant Creek** 67.31 197 *e*P P 01 49 48.1 +0.3
WRAB pmax pmax
comp=Z,18nm,0.8s
WRAB **Tennant Creek** 67.31 197 *e*P P 01 49 48.1 +0.3
comp=Z,18nm,0.8s
WRA **Warramunga Arr** 67.32 197 P P 01 49 48.4 +0.6
WRA **Warramunga Arr** 67.32 197 P P 01 49 48.4 +0.6
comp=Z,14nm,0.7s,baz=17,slow=6.8,SNR=59
TUQ **Turquoise Moun** 67.32 62 ⇑P P 01 49 48.8 +0.7
baz=67
N18A **Larsen Ranch,** 67.38 54 ⇑P P 01 49 48.8 +0.4
baz=67
L20A **Wamsutter** 67.44 53 ⇑P P 01 49 49.1 +0.3
baz=67
HEC **Hector,Ludlow** 67.47 63 ⇓P P 01 49 49.5 +0.6
baz=67,SNR=5.3
J22A **Mivest** 67.51 50 ⇓P P 01 49 49.6 +0.4
baz=67,SNR=7.9
K21A **Alcova** 67.62 51 ⇓P P 01 49 50.1 +0.3
baz=67,SNR=7.5
H24A **Dirks Ranch, A** 67.63 48 ⇑P P 01 49 49.7 -0.1
baz=67,SNR=7.1
O18A **Roosevelt** 67.66 55 ⇓P P 01 49 51.1 +0.9
baz=67
N19A **John Jarvie Ra** 67.72 54 ⇑P P 01 49 50.9 +0.4
baz=67
MURC **Murrieta** 67.73 64 ⇑P P 01 49 51.1 +0.6
baz=68
M20A **Sweetwater, Wa** 67.87 53 ⇑P P 01 49 52.3 +0.8
baz=68
Q16A **Castle Valley** 67.89 57 ⇑P P 01 49 52.5 +0.9
baz=68
GMRC **Granite Mounta** 67.92 63 ⇓P P 01 49 52.5 +0.7
baz=68
P18A **Preston Nutter** 67.95 56 ⇑P P 01 49 53.2 +1.1
baz=68
MDND **Maddock** 67.96 43 ⇓P P 01 49 52.1 +0.4
baz=68
ULM **Lac du Bonnet** 67.98 40 P P 01 49 51.5 -0.2
ULM **Lac du Bonnet** 67.98 40 P P 01 49 51.5 -0.2
comp=Z,10.0nm,0.8s,baz=305,slow=6.6,SNR=17
K22A **Casper** 68.00 51 ⇑P P 01 49 52.6 +0.4
baz=68
L21A **Rawlins** 68.00 52 ⇑P P 01 49 52.5 +0.2
baz=68
SRU **San Rafael** 68.13 56 ⇓P P 01 49 54.0 +0.8
baz=68
O19A **Miners Draw (B** 68.14 54 ⇑P P 01 49 53.4 +0.3
baz=68
I24A **Kuemmerle Ranc** 68.20 49 ⇑P P 01 49 53.3 -0.1
baz=68
BELC **Belle Mtn. Jos** 68.22 63 ⇓P P 01 49 54.4 +0.7
baz=68
M21A **Separation Pea** 68.25 52 ⇑P P 01 49 54.2 +0.2
baz=68
N20A **Spence Gulch,** 68.27 53 ⇓P P 01 49 54.9 +0.9
baz=68,SNR=6.4
K23A **Bowen Ranch, D** 68.42 50 ⇓P P 01 49 55.4 +0.5
baz=68
L22A **Ellis Ranch, M** 68.47 51 ⇓P P 01 49 56.0 +0.7
baz=68
NB2 **NORSAR Subarra** 68.61 340 P P 01 49 54.3 -1.3
comp=Z,5.3nm,0.4s,baz=29,slow=6.5
NOA **NORSAR Array B** 68.61 340 P P 01 49 54.5 -1.1
NOA **NORSAR Array B** 68.61 340 P P 01 49 54.5 -1.1
comp=Z,7.4nm,0.6s,baz=27,slow=6.3,SNR=64
NOA LR LR 02 22 07.6
comp=Z,67nm,21.2s,baz=0.0,slow=38
IRM **Iron Mountain** 68.64 63 ⇓P P 01 49 56.9 +0.7
baz=68
P19A **Cripple Cowboy** 68.67 55 ⇑P P 01 49 57.1 +0.5
baz=68,SNR=7.9
MONP **Monument Peak** 68.69 64 ⇑P P 01 49 57.4 +0.6
baz=68
N21A **Black Mountain** 68.73 53 ⇓P P 01 49 57.4 +0.5
baz=68
O20A **White River Ci** 68.75 54 ⇑P P 01 49 57.7 +0.7
baz=68
BC3 **Big Chuckawall** 68.79 63 ⇑P P 01 49 57.6 +0.4
baz=69
HFS **Hagfors** 68.80 339 LR LR 02 22 21.3
comp=Z,149nm,19.8s,baz=175,slow=38
W13A **Hualapai Mount** 68.80 61 ⇑P P 01 49 57.8 +0.4
baz=69
M22A **Cedar Creek Ra** 68.81 52 ⇑P P 01 49 57.8 +0.4
baz=68,SNR=7.3
L23A **Garrett** 68.81 51 ⇓P P 01 49 57.5 +0.1
baz=68
Q19A **Hogan Spring (** 68.97 55 ⇑P P 01 49 58.6 +0.3
baz=69
DZM **Mont Dzumac** 69.04 165 *e*LR LR 02 11 09.2
comp=Z,116nm,23.2s
P20A **De Beque** 69.10 55 ⇑P P 01 49 59.6 +0.5
baz=69
PDMCI **Parker Dam,Lak** 69.17 62 ⇓P P 01 50 00.2 +0.8
baz=69
N22A **Wattenberg Ran** 69.30 52 ⇓P P 01 50 01.4 +0.9
baz=69
Y12C **Blythe** 69.30 63 ⇑P P 01 50 01.2 +0.9
baz=69
S18A **Hurst Farm, Bl** 69.39 57 ⇑P P 01 50 01.5 +0.4
baz=69,SNR=5.6
N23A **Red Feather La** 69.52 52 ⇓P P 01 50 02.5 +0.7
baz=69
Q20A **Ridgley Place,** 69.52 55 ⇑P P 01 50 02.5 +0.7
baz=69
GLA **Glamis** 69.58 63 ⇑P P 01 50 02.8 +0.8
baz=69
P21A **Newcastle** 69.61 54 ⇑P P 01 50 03.0 +0.6
baz=69,SNR=6.9
O22A **Kremmling** 69.69 53 ⇑P P 01 50 03.5 +0.6
baz=69
M24A **Cheyenne** 69.73 51 ⇓P P 01 50 03.7 +0.6
baz=69
P22A **Eagle** 69.95 54 ⇓P P 01 50 05.2 +0.7
baz=70
R20A **Redvale** 69.99 56 ⇓P P 01 50 05.5 +0.8
baz=70
O23A **Lake Granby, G** 70.00 53 ⇓P P 01 50 05.9 +1.0
baz=70,SNR=7.5
WUAZ **Wupatki** 70.04 59 ⇓P P 01 50 06.1 +1.1
baz=70
Y14A **Wickenburg** 70.11 62 ⇑P P 01 50 06.3 +1.0
baz=70
M25A **Palm-Egli Farm** 70.17 51 ⇓P P 01 50 06.7 +1.0
baz=70
S20A **Disappointment** 70.25 56 ⇓P P 01 50 06.8 +0.4
baz=70
R21A **Cimarron** 70.35 55 ⇑P P 01 50 07.9 +0.9
baz=70,SNR=7.8
Q22A **Crested Butte,** 70.37 54 ⇑P P 01 50 08.1 +0.9
baz=70,SNR=6.2
113A **Mohawk Valley,** 70.43 63 ⇑P P 01 50 07.8 +0.6
baz=70
ISCO **Idaho Springs** 70.45 53 ⇓P P 01 50 08.5 +0.9
baz=70,SNR=6.3
KIV **Kislovodsk** 70.48 313 *e*P P 01 50 08.4 +1.0
KIV pmax pmax
comp=Z,7.0nm,0.7s
KIV MLR MLR
comp=Z,162nm,18.0s
KIV **Kislovodsk** 70.48 313 *e*P P 01 50 07.6 +0.1
comp=Z,6.2nm,0.7s
KBZ **Khabaz** 70.53 313 P P 01 50 08.6 +1.0
KBZ pmax pmax
comp=Z,6.0nm,0.6s
KBZ MLR MLR
comp=Z,250nm,19.0s
KBZ **Khabaz** 70.53 313 P P 01 50 08.6 +1.0
KBZ **Khabaz** 70.53 313 P P 01 50 08.6 +1.0
comp=Z,6.0nm,0.6s,baz=62,slow=3.9,SNR=20
KBZ LR LR 02 25 23.8
comp=Z,250nm,19.0s,baz=42,slow=40
N25A **Grover** 70.59 51 ⇑P P 01 50 08.9 +0.6
baz=70
MVCO **Mesa Verde** 70.59 56 ⇓P P 01 50 08.7 +0.3
baz=70
P23A **Jefferson** 70.62 53 ⇓P P 01 50 09.4 +0.7
baz=70
M26A **McRoberts Ranc** 70.64 50 ⇑P P 01 50 09.3 +0.8
baz=70
S21A **Coal Bank Pass** 70.69 56 ⇓P P 01 50 10.2 +1.1
baz=70,SNR=8.2
X16A **Lo Mia Camp, P** 70.74 60 ⇑P P 01 50 10.5 +1.2
baz=70,SNR=6.4
R22A **Saguache, Gunn** 70.90 55 ⇓P P 01 50 11.4 +1.1
baz=71
Q23A **Hartsel** 70.95 54 ⇑P P 01 50 11.6 +0.9
baz=71
AS31 **Alice Springs** 71.02 197 *e*P P 01 50 12.0 +1.3
ASAR **Alice Springs** 71.02 197 P P 01 50 12.2 +1.5
ASAR **Alice Springs** 71.02 197 P P 01 50 12.2 +1.5
comp=Z,7.5nm,0.8s,baz=14,slow=5.8,SNR=43
ASAR LR LR 02 16 41.6
comp=Z,107nm,20.7s,baz=356,slow=32
S22A **4UR Ranch, Cre** 71.19 55 ⇑P P 01 50 13.1 +1.0
baz=71,SNR=6.7
Q24A **Divide** 71.29 53 ⇑P P 01 50 13.2 +0.5
baz=71
T21A **Navajo Lake** 71.30 56 ⇑P P 01 50 13.7 +1.0
baz=71
N27A **Anderson Farm,** 71.43 50 ⇓P P 01 50 13.8 +0.5
baz=71,SNR=6.4
R23A **Moffat** 71.45 54 ⇓P P 01 50 14.4 +0.7
baz=71
P25A **Willow Gulch B** 71.45 52 ⇑P P 01 50 14.4 +0.8
baz=71
AKASG **Malin Array Be** 71.54 325 P P 01 50 12.8 -0.8
AKASG pmax pmax
comp=Z,7.0nm,0.4s
AKASG MLR MLR
comp=Z,139nm,19.5s
AKASG **Malin Array Be** 71.54 325 P P 01 50 12.8 -0.8
AKASG **Malin Array Be** 71.54 325 P P 01 50 12.8 -0.8
comp=Z,6.6nm,0.4s,baz=37,slow=6.3,SNR=20
AKASG LR LR 02 23 59.5
comp=Z,139nm,19.5s,baz=20,slow=38
AK01 **Malin Array Si** 71.55 325 *e*P P 01 50 12.8 -0.9
KIEV **Kiev** 71.55 325 *e*P P 01 50 12.7 -0.9
KIEV pmax pmax
comp=Z,7.0nm,0.7s
KIEV **Kiev** 71.55 325 *e*P P 01 50 12.7 -0.9
comp=Z,7.0nm,0.7s
X18A **Snowflake** 71.57 59 ⇑P P 01 50 15.3 +1.0
baz=71
214A **Organ Pipe Nat** 71.57 63 ⇓P P 01 50 15.4 +1.2
baz=71
AK02 **Malin Array Si** 71.58 325 *e*P P 01 50 12.3 -1.5
V20A **Brimhall** 71.58 57 ⇓P P 01 50 15.4 +1.1
baz=71
OGNE **Ogallala** 71.60 50 ⇑P P 01 50 14.7 +0.4
baz=71,SNR=5.2
U21A **Nageezi** 71.62 57 ⇓P P 01 50 15.6 +0.9
baz=71
EYMN **Ely** 71.62 39 *e*P P 01 50 13.6 -0.6
comp=Z,17nm,1.0s
T22A **Edith** 71.65 56 ⇑P P 01 50 15.6 +0.8
baz=71
Q25A **Bedland, Calha** 71.83 53 ⇑P P 01 50 16.3 +0.5
baz=72
P26A **Davis Ranch, A** 71.87 52 ⇑P P 01 50 16.8 +0.8
baz=72
W20A **Ramah** 72.02 58 ⇓P P 01 50 18.0 +1.0
baz=72

S24A Houchin Ranch, 72.18 54 ⇓P P 01 50 18.7 +0.7
baz=72
Q26A Hugo 72.23 52 ⇑P P 01 50 18.4 +0.2
baz=72
R25A Fountain Ranch 72.35 53 ⇑P P 01 50 19.3 +0.4
baz=72
ECSD EROS Data Cent 72.38 45 eP P 01 50 18.2 -0.5
comp=Z,10.0nm,0.8s
X20A Quemado 72.43 58 ⇑P P 01 50 20.6 +1.1
baz=72
U23A El Rito 72.54 56 ⇑P P 01 50 21.2 +1.0
baz=72,SNR=8.6
S25A Robets Cordova 72.61 54 ⇓P P 01 50 21.2 +0.8
baz=72
T24A Torres, Weston 72.67 55 ⇑P P 01 50 22.0 +1.0
baz=72
R26A Arlington 72.71 53 ⇑P P 01 50 21.5 +0.5
baz=72
BSD Bornholm Skovb 72.81 335 i P P 01 50 20.3 -0.8
comp=Z,8.0nm,0.7s
X21A Alamocita Cree 72.92 58 ⇓P P 01 50 23.7 +1.3
baz=73,SNR=6.0
Y20A Horse Springs, 72.94 59 ⇓P P 01 50 23.9 +1.4
baz=73,SNR=7.4
V23A Ortiz Mt. (NFS 72.95 56 ⇑P P 01 50 23.7 +1.1
baz=73
T25A Trinidad 72.99 54 ⇓P P 01 50 23.2 +0.4
baz=73,SNR=5.0
R27A Eads 73.08 52 ⇓P P 01 50 23.2 0.0
baz=73
S26A Kim 73.17 53 ⇓P P 01 50 23.8 0.0
baz=73
MUD Monsted U'grnd 73.18 339 i P P 01 50 23.1 -0.1
comp=Z,4.9nm,0.7s
Y21A Point of Rocks 73.29 58 ⇓P P 01 50 26.1 +1.5
baz=73
LAZ Ladron 73.33 58 eP P 01 50 25.0 +0.2
comp=Z,1.1nm,1.1s
X22A Bernardo 73.33 58 ⇓P P 01 50 26.5 +1.7
baz=73
Z20A Nine Sixteen R 73.36 60 ⇑P P 01 50 26.2 +1.3
baz=73
T26A Comanche Natio 73.42 54 ⇑P P 01 50 25.0 -0.2
baz=73,SNR=6.8
V24A Rampart Ranch, 73.49 56 ⇑P P 01 50 26.7 +0.9
baz=73
U25A Circle Dot Ran 73.51 55 ⇑P P 01 50 26.4 +0.6
baz=73
GKP Gorka Klasztor 73.70 333 eP P 01 50 26.0 -0.3
120A U Bar Ranch, L 73.73 60 ⇓P P 01 50 28.6 +1.4
baz=74
BEL Belsk 73.74 331 eP P 01 50 27.1 +0.5
Y22A Socorro 73.76 58 ⇓P P 01 50 28.6 +1.3
baz=74
W24A Lazy 6 Ranch, 73.78 56 ⇑P P 01 50 28.4 +1.0
baz=74,SNR=6.0
Z21A St. Cloud Mine 73.78 59 ⇑P P 01 50 28.8 +1.3
baz=74,SNR=7.8
T27A Campo 73.99 53 ⇓P P 01 50 28.6 +0.1
baz=74
319A Douglas 74.15 61 ⇑P P 01 50 30.6 +1.0
baz=74,SNR=7.0
X24A Lazy VL Ranch, 74.22 57 ⇑P P 01 50 30.8 +0.8
baz=74
Z22A Elephant Butte 74.24 58 ⇓P P 01 50 31.1 +1.0
baz=74
220A Playas Peak, P 74.24 60 ⇑P P 01 50 31.3 +1.2
baz=74
121A Cookes Peak, D 74.25 60 ⇓P P 01 50 31.4 +1.2
baz=74
T28A Walsh 74.29 53 ⇑P P 01 50 30.9 +0.7
baz=74
V26A Tequesquite Ra 74.29 55 ⇓P P 01 50 30.6 +0.3
baz=74
Y23A Lovelace Mesa, 74.30 57 ⇑P P 01 50 31.4 +1.0
baz=74,SNR=6.0
W25A X Bar L Ranch, 74.32 56 ⇓P P 01 50 31.2 +0.7
baz=74,SNR=5.5
SCHQ Schefferville 74.57 22 eP P 01 50 31.2 -0.2
comp=Z,4.0nm,0.5s
SCHQ ePcP PcP 01 50 46.3 +0.8
SCHQ Schefferville 74.57 22 P P 01 50 31.1 -0.4
comp=Z,8.3nm,0.7s,baz=348,slow=5.7,SNR=35
Y24A Capitan 74.67 57 ⇑P P 01 50 33.4 +0.8
baz=74,SNR=5.1
Z23A Rita Site, Whi 74.67 58 ⇓P P 01 50 33.4 +0.9
baz=74
X25A Clemmons Ranch 74.69 56 ⇓P P 01 50 33.6 +0.9
baz=74,SNR=5.7
KWP Kalwaria Pacla 74.89 328 ⇑P P 01 50 33.9 +0.5
KWP Kalwaria Pacla 74.89 328 eP P 01 50 33.1 -0.2
comp=Z,11nm,0.3s
KWP Kalwaria Pacla 74.89 328⇑iP P 01 50 33.9 +0.5
KWP Kalwaria Pacla 74.89 328 eP P 01 50 33.8 +0.4
Y25A Mesa, Roswell 75.10 57 ⇑P P 01 50 35.8 +0.7
baz=75
Z24A Sheeppen Canyo 75.13 57 ⇑P P 01 50 36.1 +0.8
baz=75
BSEG Bad Segeberg 75.14 337 eP P 01 50 34.9 +0.3
BSEG pmax pmax
comp=Z,7.0nm,0.9s
BSEG Bad Segeberg 75.14 337 eP P 01 50 34.9 +0.3
comp=Z,7.0nm,0.9s
X26A CR and CF Fran 75.17 56 ⇑P P 01 50 36.2 +0.8
baz=75
LEOM Leova 75.27 323 ⇓P P 01 50 35.7 +0.1
LEOM Leova 75.27 323⇓iP P 01 50 35.7 +0.1
OJC Ojcow 75.44 330 eP P 01 50 36.2 -0.3
OJC Ojcow 75.44 330 eP P 01 50 36.2 -0.3
124A Stringfield Ra 75.53 58 ⇑P P 01 50 38.1 +0.5
baz=75
Z25A Roswell 75.55 57 ⇑P P 01 50 38.2 +0.6
baz=75
BUR08 Bucovina Ar. S 75.57 326 eP P 01 50 37.1 -0.3
Y26A Elida 75.61 56 ⇑P P 01 50 38.5 +0.6
baz=75
KOLS Kolonicke sedl 75.63 328 eP P 01 50 37.6 0.0
TESR 75.91 324⇑iP P 01 50 39.0 -0.2
224A Cornudas Mount 75.93 58 ⇓P P 01 50 40.5 +0.6
baz=76
NIE Niedzica 75.93 329 eP P 01 50 40.2 +0.8
NIE e 01 50 51.5
NIE Niedzica 75.93 329 eP P 01 50 40.2 +0.8
NIE ePcP PcP 01 50 51.5 -0.1
CRVS Cervenica-Dubn 75.95 329 eP P 01 50 39.4 -0.1
Z26A Caprock 75.98 57 ⇓P P 01 50 40.6 +0.6
baz=76,SNR=14
Y27A Causey 76.02 56 ⇑P P 01 50 40.7 +0.4
baz=76,SNR=6.6
125A Gardner Draw, 76.03 57 ⇓P P 01 50 40.8 +0.5
baz=76,SNR=5.1
TLCR 76.06 322 ⇑P P 01 50 39.9 -0.2
TLCR 76.06 322⇑iP P 01 50 39.9 -0.2
KSP Ksiaz 76.08 332 eP P 01 50 40.3 +0.1
AMTX Amarillo 76.14 54 eP P 01 50 41.2 +0.3
comp=Z,9.0nm,0.8s
AMTX Amarillo 76.14 54 ⇑P P 01 50 41.6 +0.6
baz=76
MSTX Muleshoe 76.18 55 ⇑P P 01 50 41.4 +0.2
baz=76
TRPA Tarpa 76.19 327⇑iP P 01 50 41.2 +0.4
TRPA Tarpa 76.19 327⇑eP P 01 50 41.3 +0.4
MNTX Cornudas Mount 76.28 59 ⇓P P 01 50 42.2 +0.6
baz=76,SNR=6.6
225A Deer Hill, Car 76.32 58 ⇑P P 01 50 42.8 +0.7
baz=76
OKC Ostrava-Krasne 76.33 331 eP P 01 50 41.7 +0.1
CFR Carcaliu 76.35 322 ⇑P P 01 50 41.3 -0.5
CFR Carcaliu 76.35 322⇑iP P 01 50 41.3 -0.5
VRI Vrincioaia 76.39 324 ⇑P P 01 50 42.3 +0.3
VRI Vrincioaia 76.39 324⇑iP P 01 50 42.3 +0.3
Z27A Tatum 76.40 56 ⇓P P 01 50 42.6 +0.2
baz=76,SNR=11
324A Moseley Ranch, 76.40 59 ⇓P P 01 50 42.9 +0.4
baz=76
126A Clayton Basin, 76.41 57 ⇓P P 01 50 42.8 +0.3
baz=76
PLOR Plostina 76.44 324 ⇓P P 01 50 46.0 +3.7
PLOR Plostina 76.44 324⇓iP P 01 50 46.0 +3.7
X29A Tulia 76.45 54 ⇑P P 01 50 43.5 +0.8
baz=76
UPC Upice 76.46 332 eP P 01 50 42.2 -0.1
DPC Dobruska-Polom 76.50 332 eP P 01 50 42.9 +0.3
GDL2 Guadalupe Moun 76.53 58 eP P 01 50 43.5 +0.3
comp=Z,7.3nm,0.9s
KRLC Kraliky 76.58 332 eP P 01 50 43.3 +0.2

KRLC Kraliky 76.58 332 eP P 01 50 43.3 +0.2
MORC Moravsky Berou 76.59 331 ⇑P P 01 50 43.3 +0.2
MORC Moravsky Berou 76.59 331 eP P 01 50 42.9 -0.2
comp=Z,14nm,0.9s
MORC Moravsky Berou 76.59 331⇑iP P 01 50 43.3 +0.2
CLL Collm 76.70 335⇑iP P 01 50 43.1 -0.5
CLL e 01 50 58.0
CLL pmax pmax
comp=Z,17nm,0.6s
CLL Collm 76.70 335 eP P 01 50 43.4 -0.2
comp=Z,14nm,0.6s
CLL Collm 76.70 335⇑iP P 01 50 43.1 -0.5
comp=Z,17nm,0.6s
CLL Lm MLR 02 27 00.0
comp=Z,100nm,19.8s
226B Tecolote Peak, 76.73 58 ⇓P P 01 50 44.7 +0.5
baz=76,SNR=9.9
325A Bean Ranch, Si 76.76 59 ⇑P P 01 50 44.8 +0.3
baz=76
MALT Malatya 76.79 312 ⇑P P 01 50 45.8 +1.3
MALT Malatya 76.79 312 eP P 01 50 44.7 +0.1
comp=Z,4.1nm,0.7s
MALT Malatya 76.79 312⇑iP P 01 50 45.8 +1.3
BRG Berggiesshubel 76.80 334 eP P 01 50 43.8 -0.4
comp=Z,4.3nm,0.7s
BRG Berggiesshubel 76.80 334 eP P 01 50 43.8 -0.4
BRG pmax pmax
comp=Z,4.0nm,0.7s
BRG Berggiesshubel 76.80 334 eP P 01 50 44.1 -0.1
comp=Z,3.0nm,0.7s
Z28A Tucker Farm, M 76.90 56 ⇓P P 01 50 45.2 0.0
baz=77
PVCC Panska Ves 76.90 333 eP P 01 50 44.8 0.0
X30A Coker Ranch, T 76.92 54 ⇑P P 01 50 45.7 +0.5
baz=77
CLZ Clausthal 76.99 336 eP P 01 50 45.9 +0.6
CLZ pmax pmax
comp=Z,7.0nm,0.7s
CLZ Clausthal 76.99 336 eP P 01 50 45.9 +0.6
comp=Z,7.0nm,0.7s
ISR Istrita 77.07 323 ⇓P P 01 50 46.7 +0.8
ISR Istrita 77.07 323⇓iP P 01 50 46.7 +0.8
425A Indio Mountain 77.17 59 ⇓P P 01 50 47.3 +0.5
baz=77,SNR=7.6
VYHS Vyhne 77.23 330 eP P 01 50 47.1 +0.4
DRGR 77.24 327 ⇑P P 01 50 46.7 -0.2
DRGR 77.24 327⇑iP P 01 50 46.7 -0.2
X31A McDonald Ranch 77.28 53 ⇑P P 01 50 47.8 +0.5
baz=77
VRAC Vranov 77.31 332⇑iP P 01 50 47.7 +0.6
Z29A Hungry Hill Ra 77.31 55 ⇓P P 01 50 48.0 +0.5
baz=77,SNR=5.9
Y30A Stafford Cattl 77.32 54 ⇓P P 01 50 47.9 +0.4
baz=77
128A Castleberry Fa 77.32 56 ⇑P P 01 50 47.9 +0.3
baz=77,SNR=6.5
PSZ Piszkesteto 77.35 329 ⇑P P 01 50 48.0 +0.6
PSZ Piszkesteto 77.35 329⇑iP P 01 50 48.0 +0.6
PSZ Piszkesteto 77.35 329⇓eP P 01 50 48.1 +0.6
PRU Pruhonice 77.38 333 eP P 01 50 47.6 +0.1
326A Caldwell Ranch 77.39 58 ⇑P P 01 50 48.3 +0.3
baz=77
VOIR 77.43 324 ⇓P P 01 50 48.5 +0.5
VOIR 77.43 324⇓iP P 01 50 48.5 +0.5
Z30A Sanderson Ranc 77.62 55 ⇓P P 01 50 49.3 +0.1
baz=77,SNR=6.9
228A UT Block 9, Go 77.62 57 ⇑P P 01 50 49.7 +0.5
baz=77
TANN Tannenbergstha 77.65 334 eP P 01 50 49.1 0.0
comp=Z,2.0nm,0.8s
ARR Arges 77.65 325⇑iP P 01 50 50.2 +1.0
129A Stewart Farms, 77.67 56 ⇑P P 01 50 50.0 +0.5
baz=77
TREC Trest 77.68 332 eP P 01 50 49.2 0.0
TREC Trest 77.68 332 eP P 01 50 49.2 0.0
MOX Moxa 77.70 335 eP P 01 50 49.4 +0.1
MOX pmax pmax
comp=Z,4.0nm,0.7s
MOX Moxa 77.70 335 eP P 01 50 49.4 +0.1
comp=Z,4.0nm,0.7s
SMOL Smolenice 77.71 331 eP P 01 50 50.0 +0.7
NKC Novy Kostel 77.81 334 eP P 01 50 49.8 -0.1
426A McDonald Obser 77.82 59 ⇓P P 01 50 50.9 +0.3
baz=78
WTSB Winterswijk 77.84 338 eP P 01 50 49.8 -0.2
WMOK Wichita Mounta 77.87 52 eP P 01 50 50.6 0.0
WMOK pmax pmax
comp=Z,14nm,1.5s
WMOK Wichita Mounta 77.87 52 eP P 01 50 50.6 0.0
comp=Z,14nm,1.5s
STKA Stephens Creek 77.92 188 P P 01 50 52.1 +1.7
STKA Stephens Creek 77.92 188 P P 01 50 52.1 +1.7
comp=Z,3.9nm,0.9s,baz=6.3,slow=9.2,SNR=3.6
STKA LR LR 02 23 10.0
comp=Z,99nm,18.3s,baz=27,slow=34
DEV Deva 77.92 326 ⇓P P 01 50 51.3 +0.8
DEV Deva 77.92 326⇓iP P 01 50 51.3 +0.8
UMR Umm Al-Rimmam 77.97 300 eP P 01 50 51.0 -0.1
UMR AMb AMB 01 50 52.0
comp=Z,66nm,0.5s
UBBA Unterbreizbach 78.01 336 eP P 01 50 51.3 +0.5
comp=Z,4.0nm,0.6s
MIB Mutribah 78.02 300 eP P 01 50 51.5 +0.1
MIB AMb AMB 01 50 52.5
comp=Z,65nm,0.8s
BUD Budapest 78.03 329⇑eP P 01 50 51.7 +0.6
328A Wristen Ranch, 78.03 57 ⇓P P 01 50 51.8 +0.3
baz=78,SNR=9.5
Y32A R-V Farms, Ver 78.05 53 ⇓P P 01 50 51.5 0.0
baz=78
427A Hayter Ranch, 78.07 58 ⇑P P 01 50 51.9 +0.2
baz=78
BR131 Keskin Array S 78.13 316 eP P 01 50 51.6 -0.5
comp=Z,5.6nm,0.9s
BRTR Keskin Array B 78.13 316 P P 01 50 52.3 +0.3
BRTR Keskin Array B 78.13 316 P P 01 50 52.3 +0.3
comp=Z,4.3nm,0.8s,baz=80,slow=3.8,SNR=26
BRTR LR LR 02 30 27.6
comp=Z,75nm,18.9s,baz=49,slow=40
Z31A Sharp Cattle R 78.16 54 ⇓P P 01 50 52.1 0.0
baz=78,SNR=7.8
229A Bryant Ranch, 78.19 56 ⇓P P 01 50 52.9 +0.5
baz=78
BUG Bochum--Univer 78.19 338 eP P 01 50 52.0 +0.1
comp=Z,6.0nm,0.7s
130A Snyder 78.22 55 ⇓P P 01 50 52.9 +0.4
baz=78
526A Mary Lane Ranc 78.23 59 ⇓P P 01 50 53.3 +0.6
baz=78,SNR=6.1
ROTZ Rotzenmuhle 78.30 334 eP P 01 50 53.3 +0.7
comp=Z,5.0nm,0.8s
PKSG 78.33 329⇑eP P 01 50 53.1 +0.3
GZR Gura Zlata 78.37 326 ⇑P P 01 50 52.5 -0.7
GZR Gura Zlata 78.37 326⇑iP P 01 50 52.5 -0.7
QRN Al-Qurain 78.43 299 eP P 01 50 53.8 +0.1
QRN AMb AMB 01 50 54.5
comp=Z,70nm,0.5s
KHC Kasperske Hory 78.44 333 eP P 01 50 53.2 -0.2
KHC pmax pmax
comp=Z,23nm,1.0s
KHC Kasperske Hory 78.44 333 eP P 01 50 53.2 -0.2
comp=Z,23nm,1.0s
KHC Kasperske Hory 78.44 333 eP P 01 50 53.4 0.0
KHC ex x 01 50 57.8
329A Wagon Wheel Ra 78.44 57 ⇓P P 01 50 54.3 +0.5
baz=78,SNR=6.0
527A Woodward Ranch 78.45 59 ⇑P P 01 50 54.2 +0.3
baz=78
NAY Al-Naaiem 78.47 300 eP P 01 50 53.8 -0.1
NAY AMb AMB 01 50 55.1
comp=Z,22nm,1.2s
131A Roby 78.49 55 ⇑P P 01 50 54.3 +0.3
baz=78
RDF Al-Radifah 78.52 300 eP P 01 50 54.5 +0.3
RDF AMb AMB 01 50 55.3
comp=Z,68nm,0.6s
Z32A Haskell 78.54 54 ⇓P P 01 50 54.3 0.0
baz=78
626A Big Bend Ranch 78.57 59 ⇑P P 01 50 54.8 +0.3
baz=78,SNR=9.3
PKST Tˆ's 78.57 330⇑eP P 01 50 54.1 -0.1
428A Kincaid Ranch, 78.58 58 ⇑P P 01 50 55.6 +1.0
baz=78
TUL1 Tulsa 78.62 50 ⇑P P 01 50 55.5 +0.9
baz=78
BZS Buzias 78.64 327 ⇑P P 01 50 54.2 -0.3

BZS Buzias 78.64 327⇑iP P 01 50 54.2 -0.3
WET Wettzell 78.64 334 eP P 01 50 55.2 +0.6
WET pmax pmax
comp=Z,10.0nm,1.0s
WET Wettzell 78.64 334 eP P 01 50 55.2 +0.6
comp=Z,10.0nm,1.0s
GEC2 GERESS Array S 78.65 333 eP P 01 50 54.7 0.0
GEC2 e*PP pP 01 51 16.2 +3.5
GEC2 pmax pmax
comp=Z,7.0nm,1.0s
GEC2 GERESS Array S 78.65 333 eP P 01 50 54.7 0.0
comp=Z,7.0nm,1.0s
GEC2 epP pP 01 51 16.2 +3.5
GERES GERESS Array B 78.65 333 P P 01 50 54.6 -0.1
GERES GERESS Array B 78.65 333 P P 01 50 54.6 -0.1
comp=Z,4.0nm,0.4s,baz=36,slow=5.7,SNR=60
GERES LR LR 02 29 39.9
comp=Z,114nm,18.1s,baz=272,slow=39
230A Sterling City 78.65 56 ⇓P P 01 50 55.3 +0.3
baz=78,SNR=5.2
GRF Grafenberg Arr 78.66 335 eP P 01 50 55.2 +0.6
GRF pmax pmax
comp=Z,14nm,0.8s
GRF Grafenberg Arr 78.66 335 eP P 01 50 55.2 +0.6
comp=Z,14nm,0.8s
SOP Sopron 78.72 331⇑eP P 01 50 55.6 +0.7
CONA Conrad Observa 78.74 331 i P P 01 50 55.6 +0.4
comp=Z,9.7nm,0.6s,SNR=19
CONA Conrad Observa 78.74 331 i P P 01 50 55.6 +0.4
comp=Z,9.7nm,0.6s
528A Cox Ranch, San 78.93 58 ⇓P P 01 50 57.0 +0.4
baz=79
ABTX Abilene, Hawle 78.95 54 ⇓P P 01 50 56.8 +0.3
baz=79
330A Mertzon 78.97 56 ⇓P P 01 50 56.6 0.0
baz=79
TNS Taunus Mts 78.98 337 eP P 01 50 56.7 +0.3
TNS pmax pmax
comp=Z,7.0nm,0.6s
TNS Taunus Mts 78.98 337 eP P 01 50 56.7 +0.3
comp=Z,7.0nm,0.6s
TXAR Lajitas Array 79.00 59 P P 01 50 57.7 +0.7
TXAR Lajitas Array 79.00 59 P P 01 50 57.7 +0.7
comp=Z,6.4nm,0.8s,baz=298,slow=4.0,SNR=54
PKS9 Tamasi 79.06 329⇓eP P 01 50 56.5 -0.3
231A Bronte 79.07 55 ⇓P P 01 50 57.4 +0.2
baz=79
627A Terlingua Ranc 79.09 59 ⇑P P 01 50 57.8 +0.4
baz=79
429A Davenport Ranc 79.12 57 ⇑P P 01 50 57.9 +0.4
baz=79
HGN Heimansgroeve 79.16 338 eP P 01 50 56.9 -0.4
comp=Z,8.4nm,0.6s
PKSM Moragy 79.25 329 ⇑P P 01 50 57.1 -0.7
PKSM Moragy 79.25 329⇑iP P 01 50 57.1 -0.7
PKSM Moragy 79.25 329⇑eP P 01 50 57.3 -0.5
MEM Membach 79.28 338 P P 01 50 58.1 +0.1
comp=Z,12nm,1.2s
529A Stev Forest Ra 79.29 58 ⇓P P 01 50 58.9 +0.5
baz=79,SNR=6.5
MOA Molln 79.34 332⇑iP P 01 50 58.4 0.0
comp=Z,5.7nm,0.8s
MOA Molln 79.34 332⇑iP P 01 50 58.4 0.0
comp=Z,5.7nm,0.8s
628A Black Gap, Mar 79.36 59 ⇓P P 01 50 59.2 +0.3
baz=79
430A Baggett Ranch, 79.39 57 ⇓P P 01 50 59.1 +0.1
baz=79,SNR=7.4
TOD Tromm 79.44 336 eP P 01 50 59.0 +0.1
TOD Tromm 79.44 336 eP P 01 50 59.0 +0.1
331A San Angelo 79.47 56 ⇑P P 01 50 59.4 0.0
baz=79
232A Coleman 79.49 55 ⇑P P 01 50 59.7 +0.2
baz=79
MPEP Malo Peshtene 79.67 324 P P 01 51 00.2 0.0
530A J-C Ranch, Com 79.79 57 ⇑P P 01 51 01.8 +0.6
baz=80
332A Millersview 79.81 55 ⇑P P 01 51 01.5 +0.3
baz=80,SNR=5.4
431A Sonora 79.83 56 ⇑P P 01 51 01.6 +0.2
baz=80,SNR=5.7
RUP Ruppelstein 79.83 337 eP P 01 51 00.8 -0.2
RUP Ruppelstein 79.83 337 eP P 01 51 00.8 -0.2
RJOB Jochberg 79.91 333 eP P 01 51 02.2 +0.7
comp=Z,6.0nm,0.7s
FUR Furstenfeldbru 80.00 334 eP P 01 51 02.5 +0.5
FUR pmax pmax
comp=Z,18nm,0.9s
FUR Furstenfeldbru 80.00 334 eP P 01 51 02.5 +0.5
comp=Z,18nm,0.9s
GIVF Givet 80.05 339 eP P 01 51 02.0 -0.1
GIVF Givet 80.05 339 eP P 01 51 02.0 -0.1
GIVF Givet 80.05 339 eP P 01 51 02.0 -0.1
STU Stuttgart 80.08 336 eP P 01 51 02.4 +0.1
comp=Z,9.0nm,0.6s
SOKA Soboth 80.11 331⇑iP P 01 51 02.4 -0.2
comp=Z,13nm,1.0s
SOKA Soboth 80.11 331⇑iP P 01 51 02.4 -0.2
comp=Z,13nm,1.0s
DOU Dourbes 80.11 339 P P 01 51 02.5 +0.1
PERS Pernice 80.12 331 i P P 01 51 02.5 -0.2
432A Menard 80.16 56 ⇑P P 01 51 03.2 +0.1
baz=80,SNR=5.5
BAIF Baives 80.24 339⇑iP P 01 51 03.1 0.0
comp=Z,8.4nm,0.7s
BAIF Baives 80.24 339⇑iP P 01 51 03.1 0.0
BAIF pmax pmax
comp=Z,8.0nm,0.6s
BAIF Baives 80.24 339⇑iP P 01 51 03.1 0.0
comp=Z,8.4nm,0.6s
531A Rocksprings 80.24 57 ⇑P P 01 51 03.9 +0.3
baz=80
KBA Koelnbreinsper 80.32 332⇓iP P 01 51 04.5 +0.6
KBA pmax pmax
comp=Z,13nm,0.5s
KBA Koelnbreinsper 80.32 332⇓iP P 01 51 04.5 +0.6
comp=Z,13nm,0.5s,SNR=7.5
KBA Koelnbreinsper 80.32 332⇓iP P 01 51 04.5 +0.6
comp=Z,13nm,0.5s
JCT Junction City 80.44 56 ⇓P P 01 51 05.0 +0.3
baz=80
VTS Vitosha 80.53 324 ⇑P P 01 51 05.1 0.0
VTS Vitosha 80.53 324⇑iP P 01 51 05.1 0.0
VTS Vitosha 80.53 324 P P 01 51 05.0 0.0
532A Rocksprings 80.64 56 ⇓P P 01 51 05.8 0.0
baz=80,SNR=7.5
WATA Walderalm 80.65 334⇑iP P 01 51 05.9 +0.3
WATA pmax pmax
comp=Z,13nm,0.5s
WATA Walderalm 80.65 334⇑iP P 01 51 05.9 +0.3
comp=Z,13nm,0.5s
WATA Walderalm 80.65 334⇑iP P 01 51 05.9 +0.3
comp=Z,13nm,0.5s
WHTX Lake Whitney 80.65 53 ⇓P P 01 51 06.0 +0.3
baz=80
WTTA Wattenberg 80.70 333 i P P 01 51 06.2 +0.3
WTTA pmax pmax
comp=Z,19nm,0.5s
WTTA Wattenberg 80.70 333 i P P 01 51 06.2 +0.3
comp=Z,19nm,0.5s,SNR=24
WTTA Wattenberg 80.70 333 i P P 01 51 06.2 +0.3
comp=Z,19nm,0.5s
BFO Black Forest 80.73 336 eP P 01 51 06.0 +0.2
BFO pmax pmax
comp=Z,4.0nm,0.7s
BFO Black Forest 80.73 336 eP P 01 51 06.0 +0.2
comp=Z,4.0nm,0.7s
BFO Black Forest 80.73 336 eP P 01 51 05.1 -0.7
comp=Z,10nm,0.9s
RETA Reutte 80.77 334⇑iP P 01 51 06.3 +0.2
comp=Z,14nm,1.2s
RETA Reutte 80.77 334⇑iP P 01 51 06.3 +0.2
comp=Z,14nm,1.2s
631A Perdido Creek 80.78 57 ⇑P P 01 51 06.8 +0.3
baz=80,SNR=22
MOTA Moosalm 80.79 334⇑iP P 01 51 06.4 +0.1
MOTA pmax pmax
comp=Z,12nm,0.7s
MOTA Moosalm 80.79 334⇑iP P 01 51 06.4 +0.1
comp=Z,12nm,0.7s,SNR=14
MOTA Moosalm 80.79 334⇑iP P 01 51 06.4 +0.1
comp=Z,12nm,0.7s
SPAK Spaichingen-Ko 80.80 336 eP P 01 51 06.2 -0.1
MIAR Mount Ida 80.83 49 eP P 01 51 06.6 0.0
MIAR pmax pmax
comp=Z,13nm,1.1s

MIAR	Mount Ida	80.83	49	eP	P	01 51 06.6	0.0
	comp=Z,13nm,1.1s						
CDF	Champ du Feu	80.95	337	⇑iP	P	01 51 07.0	-0.1
	comp=Z,18nm,0.8s						
CDF	Champ du Feu	80.95	337	⇑iP	P	01 51 07.0	-0.1
CDF				pmax	pmax		
	comp=Z,19nm,0.8s						
CDF	Champ du Feu	80.95	337	⇑iP	P	01 51 07.0	-0.1
	comp=Z,18nm,0.8s						
MMB	Musomiste	81.14	323	P	P	01 51 08.0	-0.2
ECH	Echery	81.16	337	eP	P	01 51 07.6	-0.6
ECH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ECH	Echery	81.16	337	eP	P	01 51 07.6	-0.6
	comp=Z,9.3nm,0.8s						
ECH	Echery	81.16	337	eP	P	01 51 08.0	-0.1
632A	Uvalde	81.17	57	⇑P	P	01 51 09.0	+0.4
	baz=81,SNR=5.5						
FETA	Feichten	81.19	334	⇓iP	P	01 51 08.6	+0.1
	comp=Z,6.8nm,1.1s						
FETA	Feichten	81.19	334	⇓iP	P	01 51 08.6	+0.1
	comp=Z,6.8nm,1.1s						
DAVA	Damuels	81.21	335	⇑iP	P	01 51 08.6	0.0
	comp=Z,16nm,1.1s						
DAVA	Damuels	81.21	335	⇑iP	P	01 51 08.6	0.0
	comp=Z,16nm,1.1s						
FELD	Feldberg im Sc	81.23	336	eP	P	01 51 08.5	-0.2
PAGF	Fort de Pagny	81.24	338	⇑iP	P	01 51 08.9	+0.4
	comp=Z,14nm,0.6s						
PAGF	Fort de Pagny	81.24	338	⇑iP	P	01 51 08.9	+0.4
	comp=Z,14nm,0.6s						
MEZF	Maizieres J'vi	81.46	338	⇑iP	P	01 51 10.0	+0.3
	comp=Z,27nm,0.7s						
MEZF	Maizieres J'vi	81.46	338	⇑iP	P	01 51 10.0	+0.3
	comp=Z,27nm,0.7s						
THEF	They Montfort	81.47	337	eP	P	01 51 09.8	0.0
THEF	They Montfort	81.47	337	eP	P	01 51 09.8	0.0
THEF	They Montfort	81.47	337	eP	P	01 51 09.8	0.0
MOF	Molkenrain	81.50	337	eP	P	01 51 09.8	-0.2
MOF	Molkenrain	81.50	337	eP	P	01 51 09.8	-0.2
MOF	Molkenrain	81.50	337	eP	P	01 51 09.8	-0.2
HAU	Haudompre	81.57	337	⇑iP	P	01 51 10.1	-0.2
	comp=Z,12nm,0.7s						
HAU				eR			
	comp=Z,72nm,19.5s						
HAU	Haudompre	81.57	337	⇑iP	P	01 51 10.1	-0.2
HAU				pmax	pmax		
	comp=Z,13nm,0.7s						
HAU	Haudompre	81.57	337	⇑iP	P	01 51 10.1	-0.2
	comp=Z,12nm,0.7s						
HINF	Hinteralfeld	81.61	337	⇑iP	P	01 51 10.0	-0.5
	comp=Z,12nm,0.9s						
HINF	Hinteralfeld	81.61	337	⇑iP	P	01 51 10.0	-0.5
HINF				pmax	pmax		
	comp=Z,12nm,0.9s						
HINF	Hinteralfeld	81.61	337	⇑iP	P	01 51 10.0	-0.5
	comp=Z,12nm,0.9s						
732A	Laxson Ranch,	81.64	57	⇓P	P	01 51 11.7	+0.7
	baz=81,SNR=8.5						
PMOR	Pomariorio Ree	81.67	122	eT	T	03 20 51.2	
	comp=Z,15nm,0.2s						
SFTF	Sexfontaines	81.74	338	⇑iP	P	01 51 11.2	0.0
	comp=Z,55nm,0.7s						
SFTF	Sexfontaines	81.74	338	⇑iP	P	01 51 11.2	0.0
	comp=Z,55nm,0.7s						
BBS	Basel-Blauen	81.74	336	eP	P	01 51 11.3	0.0
BBS	Basel-Blauen	81.74	336	eP	P	01 51 11.3	0.0
SKO	Skopje	81.76	325	eP	P	01 51 11.4	0.0
VAY	Valandovo	81.85	324	eP	P	01 51 10.9	-1.0
TUE	Stuetta	82.11	335	eP	P	01 51 13.6	+0.2
	comp=Z,12nm,0.8s						
ASF	Jabal al Asfar	82.26	309	LR	LR	02 30 22.6	
	comp=Z,60nm,21.6s,baz=249,slow=38						
MMAI	Mount Meron Ar	82.42	310	LR	LR	02 32 18.9	
	comp=Z,132nm,19.9s,baz=80,slow=39						
FLN	La Foliniere	82.55	342	eP	P	01 51 15.3	-0.1
	comp=Z,28nm,0.7s						
FLN				eR			
	comp=Z,96nm,22.5s						
FLN	La Foliniere	82.55	342	eP	P	01 51 15.3	-0.1
FLN				pmax	pmax		
	comp=Z,28nm,0.7s						
FLN	La Foliniere	82.55	342	eP	P	01 51 15.3	-0.1
	comp=Z,28nm,0.7s						
LDF	La Druitiere	82.63	341	⇑iP	P	01 51 15.6	-0.2
	comp=Z,12nm,0.5s						
LDF	La Druitiere	82.63	341	⇑iP	P	01 51 15.6	-0.2
LDF				pmax	pmax		
	comp=Z,13nm,0.5s						
LDF	La Druitiere	82.63	341	⇑iP	P	01 51 15.6	-0.2
	comp=Z,12nm,0.5s						
PPT2	Papeete2	82.72	124	eLR	LR	02 17 16.6	
	comp=Z,174nm,25.5s						
TIAR	Tiarei	82.83	124	eT	T	03 22 18.0	
	comp=Z,14nm,0.2s						
LOR	Lormes	82.91	338	⇑iP	P	01 51 17.3	0.0
	comp=Z,18nm,0.6s						
LOR				eR			
	comp=Z,149nm,22.0s						
LOR	Lormes	82.91	338	⇑iP	P	01 51 17.3	0.0
	comp=Z,18nm,0.6s						
CABF	La Chapelle	82.92	337	⇑iP	P	01 51 17.5	0.0
	comp=Z,11nm,0.8s						
CABF	La Chapelle	82.92	337	⇑iP	P	01 51 17.5	0.0
CABF				pmax	pmax		
	comp=Z,11nm,0.8s						
CABF	La Chapelle	82.92	337	⇑iP	P	01 51 17.5	0.0
	comp=Z,11nm,0.8s						
GRR	Gorron	82.99	342	⇑iP	P	01 51 17.8	+0.1
	comp=Z,50nm,0.8s						
GRR	Gorron	82.99	342	⇑iP	P	01 51 17.8	+0.1
GRR				pmax	pmax		
	comp=Z,50nm,0.8s						
GRR	Gorron	82.99	342	⇑iP	P	01 51 17.8	+0.1
	comp=Z,50nm,0.8s						
SSF	Saint Saulge	83.19	338	⇑iP	P	01 51 18.8	0.0
	comp=Z,12nm,0.7s						
SSF	Saint Saulge	83.19	338	⇑iP	P	01 51 18.8	0.0
SSF				pmax	pmax		
	comp=Z,12nm,0.7s						
SSF	Saint Saulge	83.19	338	⇑iP	P	01 51 18.8	0.0
	comp=Z,12nm,0.7s						
SGMF	Saint Gilles	83.48	343	eP	P	01 51 20.4	+0.2
	comp=Z,19nm,0.7s						
SGMF	Saint Gilles	83.48	343	eP	P	01 51 20.4	+0.2
SGMF				pmax	pmax		
	comp=Z,19nm,0.6s						
SGMF	Saint Gilles	83.48	343	eP	P	01 51 20.4	+0.2
	comp=Z,19nm,0.6s						
AVF	Avril sur Loir	83.48	338	⇑iP	P	01 51 20.4	+0.2
	comp=Z,16nm,0.7s						
AVF	Avril sur Loir	83.48	338	⇑iP	P	01 51 20.4	+0.2
AVF				pmax	pmax		
	comp=Z,17nm,0.7s						
AVF	Avril sur Loir	83.48	338	⇑iP	P	01 51 20.4	+0.2
	comp=Z,16nm,0.7s						
SMF	Signal de Mont	83.49	338	⇑iP	P	01 51 20.5	+0.2
	comp=Z,31nm,0.8s						
SMF	Signal de Mont	83.49	338	⇑iP	P	01 51 20.5	+0.2
SMF				pmax	pmax		
	comp=Z,31nm,0.8s						
SMF	Signal de Mont	83.49	338	⇑iP	P	01 51 20.5	+0.2
	comp=Z,31nm,0.8s						
ROSF	Rostrenen	83.55	343	⇑iP	P	01 51 20.8	+0.3
ROSF	Rostrenen	83.55	343	⇑iP	P	01 51 20.8	+0.3
ROSF	Rostrenen	83.55	343	⇑iP	P	01 51 20.8	+0.3
RSL	Roselend	83.61	336	eP	P	01 51 22.4	+1.2
RSL	Roselend	83.61	336	eP	P	01 51 22.4	+1.2
RSL	Roselend	83.61	336	eP	P	01 51 22.4	+1.2
LPL	La Plagne	83.74	336	⇑iP	P	01 51 22.4	+0.5
	comp=Z,30nm,0.9s						
LPL	La Plagne	83.74	336	⇑iP	P	01 51 22.4	+0.5
LPL				pmax	pmax		
	comp=Z,30nm,0.9s						
LPL	La Plagne	83.74	336	⇑iP	P	01 51 22.4	+0.5
	comp=Z,30nm,0.9s						
LPG	La Plagne	83.75	336	⇑iP	P	01 51 22.6	+0.6
	comp=Z,20nm,0.7s						
LPG	La Plagne	83.75	336	⇑iP	P	01 51 22.6	+0.6
LPG				pmax	pmax		
	comp=Z,20nm,0.7s						
LPG	La Plagne	83.75	336	⇑iP	P	01 51 22.6	+0.6
	comp=Z,20nm,0.7s						
BGF	Bois d'Agland	83.83	339	⇑iP	P	01 51 22.2	+0.2
	comp=Z,13nm,0.7s						
BGF	Bois d'Agland	83.83	339	⇑iP	P	01 51 22.2	+0.2
BGF				pmax	pmax		
	comp=Z,13nm,0.7s						
BGF	Bois d'Agland	83.83	339	⇑iP	P	01 51 22.2	+0.2
	comp=Z,13nm,0.7s						
QUIF	Quistinic	83.92	343	eP	P	01 51 22.4	-0.1
QUIF	Quistinic	83.92	343	eP	P	01 51 22.4	-0.1
QUIF	Quistinic	83.92	343	eP	P	01 51 22.4	-0.1
BNI	Bardonecchia	84.18	336	eP	P	01 51 24.1	+0.1
BNI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BNI	Bardonecchia	84.18	336	eP	P	01 51 24.1	+0.1
	comp=Z,6.4nm,0.8s						
AGO	Saint Agoulin	84.23	338	eP	P	01 51 24.8	+0.7
AGO	Saint Agoulin	84.23	338	eP	P	01 51 24.8	+0.7
TCF	Toulx Ste Croi	84.24	339	⇑iP	P	01 51 24.5	+0.3
	comp=Z,32nm,1.0s						
TCF	Toulx Ste Croi	84.24	339	⇑iP	P	01 51 24.5	+0.3
TCF				pmax	pmax		
	comp=Z,32nm,1.0s						
TCF	Toulx Ste Croi	84.24	339	⇑iP	P	01 51 24.5	+0.3
	comp=Z,32nm,1.0s						
MBDF	Montbardon	84.45	335	⇑iP	P	01 51 25.4	0.0
	comp=Z,11nm,0.7s						
MBDF	Montbardon	84.45	335	⇑iP	P	01 51 25.4	0.0
MBDF				pmax	pmax		
	comp=Z,11nm,0.7s						
MBDF	Montbardon	84.45	335	⇑iP	P	01 51 25.4	0.0
	comp=Z,11nm,0.7s						
MFF	Saint Martin d	84.51	341	⇑iP	P	01 51 25.9	+0.4
	comp=Z,22nm,0.8s						
MFF	Saint Martin d	84.51	341	⇑iP	P	01 51 25.9	+0.4
MFF				pmax	pmax		
	comp=Z,23nm,0.8s						
MFF	Saint Martin d	84.51	341	⇑iP	P	01 51 25.9	+0.4
	comp=Z,22nm,0.8s						
ORIF	Oris-en-Rattie	84.53	336	⇑iP	P	01 51 26.4	+0.7
	comp=Z,33nm,0.8s						
ORIF				eR			
	comp=Z,114nm,21.2s						
ORIF	Oris-en-Rattie	84.53	336	⇑iP	P	01 51 26.4	+0.7
ORIF				pmax	pmax		
	comp=Z,33nm,0.8s						
ORIF	Oris-en-Rattie	84.53	336	⇑iP	P	01 51 26.4	+0.7
	comp=Z,33nm,0.8s						
PYM	Petit Puy Mans	84.54	338	eP	P	01 51 26.2	+0.4
PYM	Petit Puy Mans	84.54	338	eP	P	01 51 26.2	+0.4
PYM	Petit Puy Mans	84.54	338	eP	P	01 51 26.2	+0.4
SSB	Saint Sauveur	84.57	337	eP	P	01 51 25.8	-0.1
SSB				pmax	pmax		
	comp=Z,17nm,1.1s						
SSB	Saint Sauveur	84.57	337	eP	P	01 51 25.8	-0.1
	comp=Z,17nm,1.1s						
VIVF	Saint-Julien-l	84.92	337	⇑iP	P	01 51 28.2	+0.5
	comp=Z,5.6nm,0.5s						
VIVF	Saint-Julien-l	84.92	337	⇑iP	P	01 51 28.2	+0.5
VIVF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
VIVF	Saint-Julien-l	84.92	337	⇑iP	P	01 51 28.2	+0.5
	comp=Z,5.6nm,0.5s						
LBL	Lubilhac	84.96	338	eP	P	01 51 26.5	-1.4
LBL	Lubilhac	84.96	338	eP	P	01 51 26.5	-1.4
LBL	Lubilhac	84.96	338	eP	P	01 51 26.5	-1.4
TOUF	Mont Tournerai	84.96	335	eP	P	01 51 27.7	-0.4
TOUF	Mont Tournerai	84.96	335	eP	P	01 51 27.7	-0.4
TOUF	Mont Tournerai	84.96	335	eP	P	01 51 27.7	-0.4
SBF	Sospel	85.04	335	⇑iP	P	01 51 27.9	-0.4
	comp=Z,16nm,0.7s						
SBF	Sospel	85.04	335	⇑iP	P	01 51 27.9	-0.4
SBF				pmax	pmax		
	comp=Z,16nm,0.7s						
SBF	Sospel	85.04	335	⇑iP	P	01 51 27.9	-0.4
	comp=Z,16nm,0.7s						
MVIF	Mont Vial	85.10	335	eP	P	01 51 28.2	-0.5
MVIF	Mont Vial	85.10	335	eP	P	01 51 28.2	-0.5
MVIF	Mont Vial	85.10	335	eP	P	01 51 28.2	-0.5
EIL	Elat	85.25	308	LR	LR	02 34 30.7	
	comp=Z,60nm,19.2s,baz=88,slow=39						
RJF	Les Rejaudoux	85.33	339	⇑iP	P	01 51 30.2	+0.5
	comp=Z,27nm,1.0s						
RJF				eR			
	comp=Z,130nm,23.0s						
RJF	Les Rejaudoux	85.33	339	⇑iP	P	01 51 30.2	+0.5
RJF				pmax	pmax		
	comp=Z,27nm,1.0s						
RJF	Les Rejaudoux	85.33	339	⇑iP	P	01 51 30.2	+0.5
	comp=Z,27nm,1.0s						
SMRF	Simiane la Rot	85.48	336	eP	P	01 51 31.0	+0.5
SMRF	Simiane la Rot	85.48	336	eP	P	01 51 31.0	+0.5
CAF	Calviac	85.55	339	⇑iP	P	01 51 31.8	+1.0
	comp=Z,20nm,0.7s						
CAF	Calviac	85.55	339	⇑iP	P	01 51 31.8	+1.0
CAF				pmax	pmax		
	comp=Z,20nm,0.7s						
CAF	Calviac	85.55	339	⇑iP	P	01 51 31.8	+1.0
	comp=Z,20nm,0.7s						
FRF	La Foret Royal	85.55	335	⇑iP	P	01 51 30.5	-0.3
FRF	La Foret Royal	85.55	335	⇑iP	P	01 51 30.5	-0.3
FRF	La Foret Royal	85.55	335	⇑iP	P	01 51 30.5	-0.3
PGF	Pioggiola	85.75	333	eP	P	01 51 31.5	-0.4
PGF	Pioggiola	85.75	333	eP	P	01 51 31.5	-0.4
PGF	Pioggiola	85.75	333	eP	P	01 51 31.5	-0.4
LMR	La Mourre	85.80	335	⇑iP	P	01 51 32.1	+0.1
	comp=Z,38nm,1.0s						
LMR	La Mourre	85.80	335	⇑iP	P	01 51 32.1	+0.1
LMR				pmax	pmax		
	comp=Z,38nm,1.0s						
LMR	La Mourre	85.80	335	⇑iP	P	01 51 32.1	+0.1
	comp=Z,38nm,1.0s						
LFF	La Frestale	85.87	340	⇑iP	P	01 51 33.0	+0.7
	comp=Z,24nm,0.8s						
LFF	La Frestale	85.87	340	⇑iP	P	01 51 33.0	+0.7
LFF				pmax	pmax		
	comp=Z,25nm,0.8s						
LFF	La Frestale	85.87	340	⇑iP	P	01 51 33.0	+0.7
	comp=Z,24nm,0.8s						
LASF	Ste Croix	85.87	337	⇑iP	P	01 51 33.3	+1.0
	comp=Z,17nm,0.9s						
LASF	Ste Croix	85.87	337	⇑iP	P	01 51 33.3	+1.0
	comp=Z,17nm,0.9s						
KMSC	Kings Mountain	86.40	41	⇓P	P	01 51 34.8	-0.2
	baz=86						
MTLF	Montolieu	86.99	338	⇑iP	P	01 51 38.8	+1.0
	comp=Z,14nm,0.9s						
MTLF	Montolieu	86.99	338	⇑iP	P	01 51 38.8	+1.0
MTLF				pmax	pmax		
	comp=Z,14nm,0.9s						
MTLF	Montolieu	86.99	338	⇑iP	P	01 51 38.8	+1.0
	comp=Z,14nm,0.9s						
TBI	Tubuai	87.36	128	eT	T	03 27 57.6	
	comp=Z,12nm,0.2s						
EPF	Esparros	87.76	339	eP	P	01 51 40.5	-1.1
EPF	Esparros	87.76	339	eP	P	01 51 40.5	-1.1
EPF	Esparros	87.76	339	eP	P	01 51 40.5	-1.1
SJPF	Ste Jean	88.06	340	eP	P	01 51 42.5	-0.5
SJPF	Ste Jean	88.06	340	eP	P	01 51 42.5	-0.5
SJPF	Ste Jean	88.06	340	eP	P	01 51 42.5	-0.5
ETSF	Etsaut	88.10	340	eP	P	01 51 42.9	-0.4
	comp=Z,5.3nm,0.5s						
ETSF	Etsaut	88.10	340	eP	P	01 51 42.9	-0.4
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ETSF	Etsaut	88.10	340	eP	P	01 51 42.9	-0.4
	comp=Z,5.3nm,0.5s						
KEST	Kesra	91.79	330	P	P	01 52 00.5	-0.1
KEST	Kesra	91.79	330	P	P	01 52 00.5	-0.1
	comp=Z,1.4nm,0.8s,baz=324,slow=5.8,SNR=6.3						
KEST				LR	LR	02 35 44.9	
	comp=Z,42nm,21.1s,baz=201,slow=37						
ESDC	Sonseca Array	91.96	341	P	P	01 52 00.6	-0.7
ESDC	Sonseca Array	91.96	341	P	P	01 52 00.6	-0.7
	comp=Z,0.2nm,0.3s,baz=7.1,slow=4.8,SNR=3.7						
TORD	Torodi Ar. Bea	115.14	327	PKP	PKPdf	01 57 33.5	-0.5
TORD				PKKPbc	PKKPbc	02 08 08.6	+1.0
TORD	Torodi Ar. Bea	115.14	327	PKP	PKPdf	01 57 33.5	-0.5
	comp=Z,0.7nm,0.7s,baz=22,slow=1.7,SNR=24						
TORD				PKKPbc	PKKPbc	02 08 08.6	+1.0
	comp=Z,0.1nm,0.4s,baz=198,slow=3.2,SNR=5.4						
VNDA	Vanda	123.32	177	PKP	PKPdf	01 57 47.9	+0.1
VNDA	Vanda	123.32	177	PKP	PKPdf	01 57 47.9	+0.1
	comp=Z,0.6nm,0.6s,baz=354,slow=3.3,SNR=5.6						
DBIC	Dimbokro	123.49	331	PKP	PKPdf	01 57 49.6	-0.4
DBIC	Dimbokro	123.49	331	PKP	PKPdf	01 57 49.6	-0.4
	comp=Z,4.0nm,0.8s,baz=350,slow=1.3,SNR=7.0						
BOSA	Boshof	134.61	273	PKP	PKPdf	01 58 12.3	+1.4
BOSA	Boshof	134.61	273	PKP	PKPdf	01 58 12.3	+1.4
	comp=Z,5.7nm,1.1s,baz=207,slow=2.3,SNR=3.2						
LPAZ	La Paz	135.85	61	PKP	PKPdf	01 58 14.3	+0.2
LPAZ	La Paz	135.85	61	PKP	PKPdf	01 58 14.3	+0.2
	comp=Z,1.4nm,0.7s,baz=304,slow=3.6,SNR=6.0						
BDFB	Brasilia	145.76	34	PKPbc	PKPbc	01 58 32.1	+0.2
BDFB	Brasilia	145.76	34	PKPbc	PKPbc	01 58 32.1	+0.2
	comp=Z,7.4nm,0.5s,baz=325,slow=3.1,SNR=15						
PLCA	Paso Flores	149.38	95	PKPbc	PKPbc	01 58 41.9	+0.8
PLCA	Paso Flores	149.38	95	PKPbc	PKPbc	01 58 41.9	+0.8
	comp=Z,8.4nm,0.6s,baz=262,slow=3.0,SNR=8.4						
CPUP	Villa Florida	149.98	59	PKPbc	PKPbc	01 58 43.0	+0.2
CPUP	Villa Florida	149.98	59	PKPbc	PKPbc	01 58 43.0	+0.2
	comp=Z,6.5nm,0.7s,baz=298,slow=2.1,SNR=25						
SNAA	Sanae	151.38	197	eP	PKPbc	01 58 44.8	-0.1
SNAA	Sanae	151.38	197	ePKPdf	PKPdf	01 58 39.3	+0.6
SNAA				ePKPbc	PKPbc	01 58 44.8	-0.1
VNA2	Neumayer--Watz	152.86	195	eP	PKPbc	01 58 48.8	+0.7
	baz=26,slow=1.9						
VNA3	Neumayer Olymp	152.99	193	eP	PKPbc	01 58 48.4	0.0

*CSEM **07** 01:48:44.2, 42°.44N×13°.36E, h8km, MD1.9/3, After ROM*

ROM 07 01:48:44.2±0.2**, 42°.44N×13°.36E, h8**km±3km**, Md1.9**/3**, Ml1.5**/1**, Error ellipse: s-maj=3.3km s-min=2.0km az=113.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.09	162	Pg	Pg	01 48 47.3	+0.8
AQU				Sg	Sg	01 48 48.7	+0.6
AQU	L'Aquila	0.09	162	Pg	Pg	01 48 47.3	+0.8
AQU				Sg	Sg	01 48 48.7	+0.6
CAMP	Campotosto	0.10	19	Pg	Pg	01 48 47.6	+0.8
CAMP				Sg	Sg	01 48 49.1	+0.6
CAMP	Campotosto	0.10	19	Pg	Pg	01 48 47.6	+0.8
CAMP				Sg	Sg	01 48 49.1	+0.6
FAGN	Fagnano	0.24	137	Pg	Pg	01 48 49.9	+0.8
FAGN				Sg	Sg	01 48 53.8	+1.4
FAGN	Fagnano	0.24	137	Pg	Pg	01 48 49.9	+0.8
FAGN				Sg	Sg	01 48 53.8	+1.4
FIAM	Fiamignano	0.25	227	Pg	Pg	01 48 49.9	+0.5
FIAM				Sg	Sg	01 48 53.3	+0.4
FIAM	Fiamignano	0.25	227	Pg	Pg	01 48 49.9	+0.5
FIAM				Sg	Sg	01 48 53.3	+0.4
TERO	Teramo	0.25	44	Pg	Pg	01 48 49.8	+0.4
TERO				Sg	Sg	01 48 53.3	+0.5
TERO	Teramo	0.25	44	Pg	Pg	01 48 49.8	+0.4
TERO				Sg	Sg	01 48 53.3	+0.5
NRCA	Norcia	0.43	335	Pg	Pg	01 48 52.4	-0.4
NRCA				Sg	Sb	01 49 00.4	-0.7
	32nm,0.1s						
NRCA	Norcia	0.43	335	Pg	Pg	01 48 52.4	-0.4
NRCA				Sg	Sb	01 49 00.4	-0.7
	32nm,0.1s						
MNS	Montasola	0.51	264	Pg	Pb	01 48 55.3	-0.2
	26nm,0.3s						
MNS	Montasola	0.51	264	Pg	Pb	01 48 55.3	-0.2
	26nm,0.3s						
CESI	CESI - Serrava	0.66	329	Pg	Pb	01 48 57.8	-0.3
CESI	CESI - Serrava	0.66	329	Pg	Pb	01 48 57.8	-0.3

FUNV 07 01:51:07.6, 10°.78N×70°.45W, h4km, MW3.7, 3C-2D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DABV	Dabajuro	0.24	308	eS	Sg	01 51 15.7	+0.3
QARV	Quebrada Arrib	0.57	188	eP	Pg	01 51 18.9	+0.3
QARV				eS	Sb	01 51 27.6	-1.2
SIQV	Siquisique	0.64	101	⇓eP	Pg	01 51 20.1	+0.1
SIQV				eS	Sg	01 51 29.0	+0.7
CURV	Curarigua	0.90	148	⇓eP	Pg	01 51 23.5	-1.4
CURV				eS	Sg	01 51 37.1	+0.5
MONV	Montecano	1.26	22	eP	Pg	01 51 31.2	-0.7
MONV				eS	Sg	01 51 48.2	-0.1
TEPV	Terepaima	1.47	123	eP	Pn	01 51 35.0	0.0
TEPV				eS	Sg	01 51 55.2	0.0
SANV	Sanarito	1.55	145	eP	Pn	01 51 35.8	-0.4
JACV	Jacura	1.62	79	eP	Pn	01 51 35.9	-1.2
JACV				eS	Sn	01 51 57.6	-0.7
IMOV	Isla Los Monje	1.64	344	⇑eP	Pn	01 51 37.0	-0.2
IMOV				eS	Sn	01 51 58.5	-0.2
VIGV	El Vigia	2.12	205	⇑eP	Pn	01 51 43.0	-1.0
VIGV				eS	Sn	01 52 09.2	-1.8
MAPV	Macapo	2.17	115	eP	Pn	01 51 44.5	-0.1
MAPV				eS	Sn	01 52 11.2	-0.8
SOCV	Socops	2.51	189	eP	Pn	01 51 48.4	-0.8
SOCV				eS	Sn	01 52 17.8	-2.6
TURV	Turiamo	2.58	97	eS	Sn	01 52 20.1	-2.0
BAUV	El Baul	2.99	127	eP	Pn	01 51 55.2	-0.6
BAUV				eS	Sn	01 52 30.2	-2.0
CAPV	Capacho	3.43	213	⇑eP	Pn	01 52 00.6	-1.6
CAPV				eS	Sn	01 52 41.2	-2.3
BIRV	Birongo	4.12	94	eP	Pn	01 52 10.0	-1.4
BIRV				eS	Sn	01 52 55.6	-4.4
CUPV	Cœpira	4.64	98	eP	Pn	01 52 17.0	-1.6

IDC 07 02:03:17.5±1.4**, 25°.98N×109°.96W, h0km, mb4.1**/5**, mb1 4.1**/10**, mb1mx3.9**/29**, mbtmp3.8**/10**, ML3.7**/5**, MS3.7**/8**, Ms1 3.8**/8**, ms1mx3.4**/44**, Error ellipse: s-maj=27.3km s-min=24.3km az=106.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	La Paz	1.90	190	Pn	Pn	02 03 44.5	-6.6
	3.2nm,0.3s,baz=19,slow=0.6,SNR=33						
LPIG				Sn	Sn	02 04 05.9	-10
	5.7nm,0.3s,baz=210,slow=4.0,SNR=9.7						
TXAR	Lajitas Array	6.50	58	Pn	Pn	02 04 53.8	-0.8
	0.8nm,0.3s,baz=232,slow=15,SNR=26						
TXAR				Lg	Lg	02 06 50.4	
	3.1nm,0.3s,baz=241,slow=32,SNR=8.1						
TXAR				LR	LR	02 07 42.5	
	comp=Z,1µm,18.6s,baz=330,slow=41						
ANMO	Albuquerque	9.43	18	Pn	Pn	02 05 35.7	+0.8
	0.1nm,0.3s,baz=209,slow=12,SNR=4.5						
ANMO				Lg	Lg	02 08 16.5	
	0.3nm,0.3s,baz=328,slow=19,SNR=5.9						
ANMO				LR	LR	02 08 56.7	
	comp=Z,489nm,19.5s,baz=68,slow=36						
NVAR	Mina Array Bea	14.27	332	Pn	Pn	02 06 43.3	+2.1
	0.1nm,0.3s,baz=160,slow=12,SNR=4.2						
CMIG	Matias Romero	16.57	119	LR	LR	02 14 08.9	
	comp=Z,94nm,20.9s,baz=276,slow=39						
PDAR	Pinedale Array	16.75	1	Pn	P	02 07 15.2	-1.0
	0.0nm,0.3s,baz=167,slow=13,SNR=15						
PDAR				LR	LR	02 13 55.4	
	comp=Z,436nm,20.4s,baz=177,slow=38						
YBH	Yreka Blue Hor	18.91	329	P	Pn	02 07 41.4	+1.0
	0.1nm,0.3s,baz=145,slow=16,SNR=5.1						
YBH				LR	LR	02 15 04.9	
	comp=Z,183nm,19.7s,baz=154,slow=37						
TEIG	Tepich	20.74	102	LR	LR	02 18 27.1	
	comp=Z,192nm,18.4s,baz=330,slow=44						
NEW	Newport	22.94	348	P	P	02 08 24.0	+0.7
	4.5nm,0.7s,baz=162,slow=12,SNR=9.9						
NEW				LR	LR	02 17 50.1	
	comp=Z,282nm,19.6s,baz=167,slow=38						
TKL	Tuckaleechee C	24.40	60	LR	LR	02 19 05.4	
	comp=Z,302nm,18.6s,baz=87,slow=39						
ULM	Lac du Bonnet	26.55	20	P	P	02 08 59.9	+3.0
	1.1nm,0.4s,baz=188,slow=7.7,SNR=4.0						
YKA	Yellowknife Ar	36.64	356	P	P	02 10 24.3	-1.0
	1.2nm,1.0s,baz=173,slow=8.3,SNR=14						
SCHQ	Schefferville	42.65	36	P	P	02 11 17.4	+1.7
	4.2nm,1.0s,baz=267,slow=11,SNR=6.3						
ILAR	Eielson Array	45.41	339	P	P	02 11 37.0	-0.6
	3.5nm,1.0s,baz=145,slow=6.7,SNR=8.3						
PPT2	Papeete2	57.97	226	eLR	LR	02 29 46.0	
	97nm,25.0s						
HFS	Hagfors	82.67	25	P	P	02 15 43.1	+0.4
	2.9nm,0.8s,baz=314,slow=5.9,SNR=3.6						
WRA	Warramunga Arr	121.00	261	PKP	PKPdf	02 22 11.3	-1.3
	0.6nm,0.3s,baz=94,slow=1.5,SNR=6.0						
ASAR	Alice Springs	122.51	257	PKP	PKPdf	02 22 15.8	+0.3
	0.3nm,0.2s,baz=15,slow=1.4,SNR=4.7						

*ISCJB **07** 02:12:19.4±0.2, 42°.28N±0°.02×13°.58E±0°.03, h12km±2km, Error ellipse: s-maj=3.5km s-min=2.5km az=147.0*

*CSEM **07** 02:12:19.8±0.1, 42°.27N×13°.58E, h5km, ML3.3/6, Error*

ellipse: s-maj=2.8km s-min=2.1km az=54.0
*ROM **07** 02:12:19.3±0.1, 42°.27N×13°.58E, h7km±1km, Ml3.0/32, Error ellipse: s-maj=1.1km s-min=0.8km az=52.0*
*PRU **07** 02:12:20.0, 42°.19N×13°.53E, h0km*
*LDG **07** 02:12:25.1±0.6, 42°.42N×13°.34E, h2km, Ml2.8/7, Error ellipse: s-maj=12.0km s-min=8.3km az=116.0*
ISC 07 02:12:20.1±0.8**, 42°.28N**±0°.02×**13°.56E**±0°.02**, h10**km±5km**, n101,** σ1.16/131**, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.02	118	Pg	Pg	02 12 20.8	-1.2
FAGN	Fagnano	0.02	118	Pg	Pg	02 12 20.8	-1.2
AQU	L'Aquila	0.14	304	Pg	Pg	02 12 23.8	+0.4
AQU				Sg	Sg	02 12 25.9	+0.2
	10µm,0.7s						
AQU	L'Aquila	0.14	304	Pg	Pg	02 12 23.8	+0.4
AQU				Sg	Sg	02 12 25.9	+0.2
	10µm,0.7s						
VCEL	Villa Celiera	0.24	60	Pg	Pg	02 12 24.9	-0.2
VCEL				Sg	Sg	02 12 28.6	+0.2
	9µm,0.8s						
VCEL	Villa Celiera	0.24	60	Pg	Pg	02 12 24.9	-0.2
VCEL				Sg	Sg	02 12 28.6	+0.2
	9µm,0.8s						
PTQR	Pietraquaria	0.28	205	Pg	Pg	02 12 26.0	+0.2
PTQR				Sg	Sg	02 12 29.6	0.0
PTQR	Pietraquaria	0.28	205	Pg	Pg	02 12 26.0	+0.2
PTQR				Sg	Sg	02 12 29.6	0.0
CAMP	Campotosto	0.28	337	Pg	Pg	02 12 25.8	-0.1
CAMP				Sg	Sg	02 12 31.1	+1.3
CAMP	Campotosto	0.28	337	Pg	Pg	02 12 25.8	-0.1
CAMP				Sg	Sg	02 12 31.1	+1.3
FIAM	Fiamignano	0.33	269	Pg	Pg	02 12 27.0	+0.3
FIAM				Sg	Sg	02 12 32.8	+1.7
	2µm,0.8s						
FIAM	Fiamignano	0.33	269	Pg	Pg	02 12 27.0	+0.3
FIAM				Sg	Sg	02 12 32.8	+1.7
	2µm,0.8s						
TERO	Teramo	0.35	5	Pg	Pg	02 12 26.8	-0.3
TERO				Sg	Sg	02 12 32.3	+0.6
	1µm,0.5s						
TERO	Teramo	0.35	5	Pg	Pg	02 12 26.8	-0.3
TERO				Sg	Sg	02 12 32.3	+0.6
	1µm,0.5s						
INTR	Introdacqua	0.37	136	Pg	Pg	02 12 27.2	-0.2
INTR				Sg	Sg	02 12 33.3	+1.0
	4µm,0.7s						
INTR	Introdacqua	0.37	136	Pg	Pg	02 12 27.2	-0.2
VVLD	Villa Vallelon	0.41	174	Pg	Pg	02 12 28.0	-0.1
VVLD				Sg	Sg	02 12 34.6	+1.1
	2µm,0.5s						
VVLD	Villa Vallelon	0.41	174	Pg	Pg	02 12 28.0	-0.1
GUAR	Guarcino	0.52	201	Pg	Pg	02 12 29.9	-0.2
	642nm,0.5s						
GUAR	Guarcino	0.52	201	Pg	Pg	02 12 29.9	-0.2
	642nm,0.5s						
CERT	Cerreto	0.54	233	Pg	Pg	02 12 30.3	-0.3
	2µm,0.6s						
CERT	Cerreto	0.54	233	Pg	Pg	02 12 30.3	-0.3
	2µm,0.6s						
POFI	Posta Fibreno	0.57	169	Pg	Pg	02 12 30.8	-0.4
	668nm,0.8s						
POFI	Posta Fibreno	0.57	169	Pg	Pg	02 12 30.8	-0.4
	668nm,0.8s						
CAFR	Castel Frentan	0.58	94	Pg	Pg	02 12 31.5	0.0
	2µm,0.8s						
CAFR	Castel Frentan	0.58	94	Pg	Pg	02 12 31.5	0.0
	2µm,0.8s						
SDI	San Donato	0.59	162	Pg	Pg	02 12 31.1	-0.6
SDI				Sg	Sb	02 12 40.7	-0.5
SDI	San Donato	0.59	162	Pg	Pg	02 12 31.1	-0.6
NRCA	Norcia	0.65	330	Pg	Pg	02 12 32.2	-0.5
NRCA				Sg	Sb	02 12 42.7	-0.1
NRCA	Norcia	0.65	330	Pg	Pg	02 12 32.2	-0.5
NRCA				Sg	Sb	02 12 42.7	-0.1
MTCE	Montecelio	0.66	248	Pg	Pg	02 12 32.5	-0.4
	529nm,0.8s						
MTCE	Montecelio	0.66	248	Pg	Pg	02 12 32.5	-0.4
	529nm,0.8s						
MNS	Montasola	0.66	280	Pg	Pg	02 12 32.5	-0.4
	558nm,0.6s						
MNS	Montasola	0.66	280	Pg	Pg	02 12 32.5	-0.4
	558nm,0.6s						
OFFI	Offida	0.67	8	Pg	Pg	02 12 33.4	+0.4
	2µm,0.7s						
OFFI	Offida	0.67	8	Pg	Pg	02 12 33.4	+0.4
	2µm,0.7s						
GIUL	Giuliano Di Ro	0.75	198	Pg	Pg	02 12 33.9	-0.7
	881nm,0.8s						
GIUL	Giuliano Di Ro	0.75	198	Pg	Pg	02 12 33.9	-0.7
	881nm,0.8s						
CERA	Filignano	0.76	153	Pg	Pg	02 12 33.6	-1.2
	900nm,0.5s						
CERA	Filignano	0.76	153	Pg	Pg	02 12 33.6	-1.2
	900nm,0.5s						
MIDA	Miranda	0.82	141	Pg	Pg	02 12 34.7	-1.2
MIDA				Sg	Sb	02 12 47.0	-0.6
	526nm,0.7s						
MIDA	Miranda	0.82	141	Pg	Pg	02 12 34.7	-1.2
MIDA				Sg	Sb	02 12 47.0	-0.6
	526nm,0.7s						
FDMO	Fiordimonte	0.84	335	Pg	Pg	02 12 35.3	-1.0
	259nm,0.5s						
FDMO	Fiordimonte	0.84	335	Pg	Pg	02 12 35.3	-1.0
	259nm,0.5s						
CESI	CESI - Serrava	0.88	327	Pg	Pg	02 12 36.1	-0.9
	169nm,0.7s						
CESI	CESI - Serrava	0.88	327	Pg	Pg	02 12 36.1	-0.9
	169nm,0.7s						
TRIV	Trivento	0.90	124	Pg	Pg	02 12 36.3	-1.1
	385nm,0.8s						
TRIV	Trivento	0.90	124	Pg	Pg	02 12 36.3	-1.1
	385nm,0.8s						
VAGA	Valle Agricola	0.99	149	Pg	Pg	02 12 38.1	-1.2
	345nm,0.5s						
VAGA	Valle Agricola	0.99	149	Pg	Pg	02 12 38.1	-1.2
	345nm,0.5s						
ASSB	Assisi San Ben	1.02	319	Pg	Pg	02 12 38.8	-0.9
	371nm,0.9s						
ASSB	Assisi San Ben	1.02	319	Pg	Pg	02 12 38.8	-0.9
	371nm,0.9s						
BSSO	Busso	1.06	133	Pg	Pg	02 12 39.6	-0.9
	314nm,0.8s						
BSSO	Busso	1.06	133	Pg	Pg	02 12 39.6	-0.9
	314nm,0.8s						
SGG	Gregorio Mates	1.08	145	Pg	Pg	02 12 39.6	-1.2
	390nm,0.8s						
SGG	Gregorio Mates	1.08	145	Pg	Pg	02 12 39.6	-1.2
	390nm,0.8s						
CING	Cingoli	1.13	346	Pg	Pg	02 12 40.7	-1.2
	223nm,0.6s						
CING	Cingoli	1.13	346	Pg	Pg	02 12 40.7	-1.2
	223nm,0.6s						
PTRJ	Pietraroja	1.16	141	Pg	Pg	02 12 41.3	-1.2
	1µm,1.0s						
PTRJ	Pietraroja	1.16	141	Pg	Pg	02 12 41.3	-1.2
	1µm,1.0s						
TOLF	Tolfa	1.18	260	Pg	Pg	02 12 42.7	-0.1
	168nm,0.7s						
TOLF	Tolfa	1.18	260	Pg	Pg	02 12 42.7	-0.1
	168nm,0.7s						
MURB	Monte Urbino	1.25	323	Pg	Pg	02 12 43.0	-1.1
	450nm,0.8s						
MURB	Monte Urbino	1.25	323	Pg	Pg	02 12 43.0	-1.1
	450nm,0.8s						
AOI	Ancona	1.27	1	Pn	Pn	02 12 43.8	-0.3
	237nm,1.0s						
AOI	Ancona	1.27	1	Pn	Pn	02 12 43.8	-0.3
	237nm,1.0s						
ARVD	Arcevia	1.30	340	Pn	Pn	02 12 43.7	-0.8
	317nm,1.0s						
ARVD	Arcevia	1.30	340	Pn	Pn	02 12 43.7	-0.8
	317nm,1.0s						
LATE	Laterza	1.34	285	Pn	Pn	02 12 45.2	+0.2
	12nm,0.5s						
LATE	Laterza	1.34	285	Pn	Pn	02 12 45.2	+0.2
	12nm,0.5s						
SACS	San Casciano d	1.35	296	Pn	Pn	02 12 45.0	-0.1
	214nm,1.0s						
PIEI	Pieia	1.47	329	Pn	Pn	02 12 47.1	+0.4
	133nm,1.0s						
PIEI	Pieia	1.47	329	Pn	Pn	02 12 47.1	+0.4
	133nm,1.0s						
MS1	Monte Sant'Ang	1.86	107	*e*Pn	Pg	02 12 56.0	+0.1
NVLJ	Novalja	2.48	22	*i* Pn	Pn	02 13 01.4	+0.9
NVLJ				Sn	Sn	02 13 30.9	+0.1
NVLJ	Novalja	2.48	22	*i* Pn	Pn	02 13 01.4	+0.9
NVLJ				Sn	Sn	02 13 30.9	+0.1
MAIM	Mastiano	2.78	307	P	Pn	02 13 06.4	+1.7
STON	Ston	3.11	78	*i* Pn	Pn	02 13 11.2	+1.9
STON				Sn	Sn	02 13 47.3	+0.8
STON	Ston	3.11	78	*i* Pn	Pn	02 13 11.2	+1.9
STON				Sn	Sn	02 13 47.3	+0.8
PGF	Pioggiola	3.39	276	*e*Pn	Pn	02 13 15.2	+2.0
PGF				*e*Sn	Sn	02 13 54.9	+1.4
	30nm,1.2s						
PGF	Pioggiola	3.39	276	*e*Pn	Pn	02 13 15.2	+2.0
PGF				*e*Sn	Sn	02 13 54.9	+1.4
	15nm,1.2s						
SC2M	Scurtabo	3.63	307	P	Pn	02 13 17.0	+0.6
SBF	Sospel	4.76	292	*e*Pn	Pn	02 13 33.7	+1.7
SBF				*e*Sn	Sn	02 14 23.1	-4.2
	4.7nm,0.6s						
SBF	Sospel	4.76	292	*e*Pn	Pn	02 13 33.7	+1.7
IVAS	Ivanjica	5.01	73	*e*Pn	Pn	02 13 37.2	+1.8
FRF	La Foret Royal	5.24	287	*e*Pn	Pn	02 13 39.3	+0.8
FRF				*e*Sn	Sn	02 14 34.7	-4.2
	1.6nm,0.5s						
FRF	La Foret Royal	5.24	287	*e*Pn	Pn	02 13 39.3	+0.8
LMR	La Mourre	5.29	284	*e*Pn	Pn	02 13 40.1	+0.8
LMR				*e*Sn	Sn	02 14 36.1	-4.2
	1.2nm,0.5s						
LMR	La Mourre	5.29	284	*e*Pn	Pn	02 13 40.1	+0.8
GRUS	Gruza	5.48	70	*e*Pn	Pn	02 13 40.1	-1.7
MBDF	Montbardon	5.51	299	*e*P	Pn	02 13 45.8	+3.4
KHC	Kasperske Hory	6.86	0	*e*PN	Pn	02 14 01.2	+0.5
KHC				*e*SN	Sn	02 15 18.6	-0.2
KHC	Kasperske Hory	6.86	0	Pn	Pn	02 14 01.2	+0.5
KHC				Sn	Sn	02 15 18.6	-0.2
CABF	La Chapelle	6.88	312	*e*Pn	Pn	02 14 02.7	+1.5
CABF	La Chapelle	6.88	312	*e*Pn	Pn	02 14 02.7	+1.5
HINF	Hinteralfeld	7.30	322	*e*Pn	Pn	02 14 07.1	+0.3
HINF				*e*Sn	Sn	02 15 24.9	-4.8
	4.0nm,0.6s						
HINF	Hinteralfeld	7.30	322	*e*Pn	Pn	02 14 07.1	+0.3
CDF	Champ du Feu	7.56	326	*e*Pn	Pn	02 14 10.8	+0.3
CDF				*e*Sn	Sn	02 15 31.0	-5.3
	1.5nm,0.4s						
CDF	Champ du Feu	7.56	326	*e*Pn	Pn	02 14 10.8	+0.3
HAU	Haudompre	7.67	321	*e*Pn	Pn	02 14 12.4	+0.5
HAU				*e*Sn	Sn	02 15 32.2	-6.6
	4.1nm,0.5s						
HAU	Haudompre	7.67	321	*e*Pn	Pn	02 14 12.4	+0.5

IDC 07 02:12:56.7±1.2**, 25°.74N**×**109°.90W, h0**km**, mb4.0**/4**, mb1 4.1**/8**, mb1mx3.8**/28**, mbtmp3.8**/8**, ML3.4**/4**, MS3.9**/23**, Ms1 3.9**/23**, ms1mx3.8**/44**, Error ellipse: s-maj=33.0km s-min=15.8km az=101.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPIG	La Paz	1.67	193	Pn	Pn	02 13 26.4	-0.9
	1.6nm,0.3s,baz=148,slow=1.3,SNR=20						
LPIG				Sn	Sn	02 13 49.4	0.0
	6.1nm,0.3s,baz=360,slow=19,SNR=11						
TXAR	Lajitas Array	6.59	56	Pn	Pn	02 14 36.1	+1.0
	0.9nm,0.3s,baz=230,slow=12,SNR=17						
TXAR				Lg	Lg	02 16 34.8	
	4.2nm,0.3s,baz=235,slow=32,SNR=7.8						
ANMO	Albuquerque	9.65	17	Pn	Pn	02 15 18.6	+1.5
	0.0nm,0.3s,baz=198,slow=12,SNR=4.2						
ANMO				Lg	Lg	02 18 01.5	
	0.6nm,0.3s,baz=294,slow=22,SNR=7.4						
ANMO				LR	LR	02 19 34.7	
	comp=Z,665nm,20.0s,baz=62,slow=41						
NVAR	Mina Array Bea	14.51	333	Pn	Pn	02 16 25.0	+1.4
	0.1nm,0.3s,baz=134,slow=10,SNR=5.2						
CMIG	Matias Romero	16.41	119	LR	LR	02 23 14.1	
	comp=Z,486nm,18.0s,baz=276,slow=38						
PDAR	Pinedale Array	16.99	1	Pn	Pn	02 16 56.6	+0.5
	0.0nm,0.3s,baz=175,slow=8.9,SNR=16						
PDAR				LR	LR	02 23 37.0	
	comp=Z,687nm,21.1s,baz=183,slow=38						
YBH	Yreka Blue Hor	19.14	330	LR	LR	02 24 53.6	
	comp=Z,252nm,20.0s,baz=153,slow=37						
TEIG	Tepich	20.64	101	LR	LR	02 26 47.2	
	comp=Z,415nm,21.2s,baz=221,slow=40						
NEW	Newport	23.19	348	P	P	02 18 03.9	-1.2
	1.4nm,0.4s,baz=149,slow=9.1,SNR=4.0						
NEW				LR	LR	02 27 40.9	
	comp=Z,346nm,20.7s,baz=167,slow=38						
TKL	Tuckaleechee C	24.48	60	LR	LR	02 28 38.0	
	comp=Z,423nm,18.7s,baz=251,slow=38						
ULM	Lac du Bonnet	26.76	20	LR	LR	02 28 35.8	
	comp=Z,165nm,21.8s,baz=200,slow=35						
JTS	JuntasAbangare	28.18	118	LR	LR	02 30 22.9	
	comp=Z,124nm,18.6s,baz=310,slow=37						
BBB	Bella Bella	29.79	337	LR	LR	02 30 35.9	
	comp=Z,204nm,21.8s,baz=184,slow=36						
YKA	Yellowknife Ar	36.88	356	P	P	02 20 06.1	-0.6
	1.1nm,1.0s,baz=171,slow=8.2,SNR=14						
ROSC	El Rosal	39.88	115	LR	LR	02 39 19.6	
	comp=Z,96nm,18.1s,baz=6.4,slow=40						
INK	Inuvik	44.91	348	LR	LR	02 42 28.7	
	comp=Z,153nm,18.4s,baz=145,slow=40						
ILAR	Eielson Array	45.65	339	P	P	02 21 19.6	+0.8
	3.5nm,1.0s,baz=146,slow=7.2,SNR=13						
ILAR				LR	LR	02 40 27.0	
	comp=Z,105nm,18.6s,baz=140,slow=36						
PPT	Papeete	57.82	226	LR	LR	02 41 53.6	
	comp=Z,249nm,21.4s,baz=23,slow=30						
PPT2	Papeete2	57.83	226	*e*LR	LR	02 39 43.2	
	142nm,23.8s						
TBI	Tubuai	62.04	222	*e*LR	LR	02 41 45.3	
	57nm,30.0s						
JMIC	Jan Mayen	69.53	20	LR	LR	02 56 09.3	
	comp=Z,88nm,18.1s,baz=255,slow=37						
PETK	Petropavlovsk-	71.23	320	P	P	02 24 19.0	+1.4
	10.0nm,1.0s,baz=82,slow=6.4,SNR=6.3						
ARCES	ARCESS Array B	79.72	15	LR	LR	03 02 17.3	
	comp=Z,81nm,18.9s,baz=165,slow=37						
NOA	NORSAR Array B	81.35	25	LR	LR	02 59 26.8	
	comp=Z,62nm,18.3s,baz=115,slow=34						
FINES	FINESS Array B	86.15	20	LR	LR	03 02 50.9	
	comp=Z,89nm,20.1s,baz=142,slow=35						
GERES	GERESS Array B	90.31	33	LR	LR	03 06 56.0	
	comp=Z,94nm,20.3s,baz=94,slow=36						
VRAC	Vranov	91.41	32	LR	LR	03 06 43.5	
	comp=Z,102nm,19.1s,baz=45,slow=35						
AKASG	Malin Array Be	95.76	25	LR	LR	03 08 41.5	
	comp=Z,73nm,20.3s,baz=350,slow=35						
MLR	Muntele Rosu	98.52	30	LR	LR	03 09 03.7	
	comp=Z,23nm,18.9s,baz=126,slow=34						
ZALV	Zalesovo Beam	99.63	351	LR	LR	03 13 16.0	
	comp=Z,42nm,19.1s,baz=56,slow=36						

*CSEM **07** 02:21:36.3, 42°.29N×13°.49E, h10km, MD2.1/4, After ROM*
ROM 07 02:21:36.3±0.1**, 42°.29N**×**13°.49E, h10**km±1km**, Md2.1**/4**, Ml1.6**/2**, Error ellipse: s-maj=2.6km s-min=1.7km az=19.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.07	112	Pg	Pg	02 21 39.0	+0.3
FAGN				Sg	Sg	02 21 40.6	+0.2
FAGN	Fagnano	0.07	112	Pg	Pg	02 21 39.0	+0.3
FAGN				Sg	Sg	02 21 40.6	+0.2
AQU	L'Aquila	0.09	312	Pg	Pg	02 21 39.2	+0.3
AQU				Sg	Sg	02 21 41.3	+0.5
AQU	L'Aquila	0.09	312	Pg	Pg	02 21 39.2	+0.3
AQU				Sg	Sg	02 21 41.3	+0.5
VCEL	Villa Celiera	0.28	68	Pg	Pb	02 21 42.9	-0.7
VCEL				Sg	Sg	02 21 46.2	+0.2
VCEL	Villa Celiera	0.28	68	Pg	Pb	02 21 42.9	-0.7
VCEL				Sg	Sg	02 21 46.2	+0.2
FIAM	Fiamignano	0.28	265	Pg	Pg	02 21 42.6	+0.5
FIAM				Sg	Sg	02 21 47.2	+1.2
FIAM	Fiamignano	0.28	265	Pg	Pg	02 21 42.6	+0.5
FIAM				Sg	Sg	02 21 47.2	+1.2
PTQR	Pietraquaria	0.28	194	Pg	Pg	02 21 42.3	+0.2
PTQR				Sg	Sg	02 21 46.7	+0.7
PTQR	Pietraquaria	0.28	194	Pg	Pg	02 21 42.3	+0.2
PTQR				Sg	Sg	02 21 46.7	+0.7
INTR	Introdacqua	0.42	132	Pg	Pg	02 21 44.9	+0.3
INTR				Sg	Sg	02 21 51.2	+1.0
	71nm,0.3s						
INTR	Introdacqua	0.42	132	Pg	Pg	02 21 44.9	+0.3
INTR				Sg	Sg	02 21 51.2	+1.0
	71nm,0.3s						
VVLD	Villa Vallelon	0.43	167	Pg	Pg	02 21 45.0	+0.1
VVLD				Sg	Sg	02 21 51.4	+0.6
VVLD	Villa Vallelon	0.43	167	Pg	Pg	02 21 45.0	+0.1
VVLD				Sg	Sg	02 21 51.4	+0.6
GUAR	Guarcino	0.52	195	Pg	Pb	02 21 47.6	+0.1
GUAR				Sg	Sg	02 21 53.9	+0.6
	23nm,0.5s						
GUAR	Guarcino	0.52	195	Pg	Pb	02 21 47.6	+0.1
GUAR				Sg	Sg	02 21 53.9	+0.6
	23nm,0.5s						
SDI	San Donato	0.63	158	Pg	Pb	02 21 49.6	+0.1
SDI				Sg	Sb	02 21 58.4	0.0
	18nm,0.2s						
SDI	San Donato	0.63	158	Pg	Pb	02 21 49.6	+0.1
SDI				Sg	Sb	02 21 58.4	0.0
	18nm,0.2s						

*CSEM **07** 02:22:13.7, 42°.28N×13°.50E, h10km, MD1.8/3, After ROM*
ROM 07 02:22:13.7±0.1**, 42°.28N**×**13°.50E, h10**km**, Md1.8**/3**, Ml1.6**/2**, Error ellipse: s-maj=1.5km s-min=1.2km az=50.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.06	107	Pg	Pg	02 22 16.3	+0.3
FAGN				Sg	Sg	02 22 17.5	-0.2
FAGN	Fagnano	0.06	107	Pg	Pg	02 22 16.3	+0.3
FAGN				Sg	Sg	02 22 17.5	-0.2
AQU	L'Aquila	0.10	313	Pg	Pg	02 22 17.1	+0.6
AQU				Sg	Sg	02 22 19.2	+0.7
AQU	L'Aquila	0.10	313	Pg	Pg	02 22 17.1	+0.6
AQU				Sg	Sg	02 22 19.2	+0.7
CAMP	Campotosto	0.26	345	Pg	Pg	02 22 19.8	+0.5
CAMP				Sg	Sg	02 22 23.9	+0.9
CAMP	Campotosto	0.26	345	Pg	Pg	02 22 19.8	+0.5
CAMP				Sg	Sg	02 22 23.9	+0.9
PTQR	Pietraquaria	0.27	196	Pg	Pg	02 22 19.9	+0.5
PTQR				Sg	Sg	02 22 24.2	+1.0
	18nm,0.2s						
PTQR	Pietraquaria	0.27	196	Pg	Pg	02 22 19.9	+0.5
PTQR				Sg	Sg	02 22 24.2	+1.0
	18nm,0.2s						
VCEL	Villa Celiera	0.27	66	Pg	Pb	02 22 20.5	-0.4
VCEL				Sg	Sg	02 22 23.8	+0.5
	116nm,0.3s						
VCEL	Villa Celiera	0.27	66	Pg	Pb	02 22 20.5	-0.4
VCEL				Sg	Sg	02 22 23.8	+0.5
	116nm,0.3s						
FIAM	Fiamignano	0.29	267	Pg	Pg	02 22 20.1	+0.4
FIAM				Sg	Sg	02 22 24.7	+1.0
FIAM	Fiamignano	0.29	267	Pg	Pg	02 22 20.1	+0.4
FIAM				Sg	Sg	02 22 24.7	+1.0
TERO	Teramo	0.35	12	Pg	Pg	02 22 21.2	+0.5
TERO	Teramo	0.35	12	Pg	Pg	02 22 21.2	+0.5
INTR	Introdacqua	0.40	132	Pg	Pb	02 22 22.6	-0.4
INTR				Sg	Sb	02 22 29.1	-0.2
INTR	Introdacqua	0.40	132	Pg	Pb	02 22 22.6	-0.4
INTR				Sg	Sb	02 22 29.1	-0.2
VVLD	Villa Vallelon	0.42	168	Pg	Pg	02 22 22.4	+0.2
VVLD				Sg	Sg	02 22 28.8	+1.0
	33nm,0.4s						
VVLD	Villa Vallelon	0.42	168	Pg	Pg	02 22 22.4	+0.2
VVLD				Sg	Sg	02 22 28.8	+1.0
	33nm,0.4s						

*IDC **07** 02:35:35.1±0.8, 25°.96N×110°.00W, h0km, mb4.2/12, mb1 4.3/17, mb1mx4.1/31, mbtmp4.1/17, ML3.7/4, MS3.8/21, Ms1 3.8/21, ms1mx3.7/42, Error ellipse: s-maj=22.7km s-min=13.4km az=70.0*
*NEIC **07** 02:35:35.1±0.5, 25°.69N×110°.10W, h10km, mb4.3/41, MD4.7(MEX), Error ellipse: s-maj=7.9km s-min=4.8km az=54.0*
NEIC Felt at Huatabampo, Sonora.
*MEX **07** 02:35:36.0±0.3, 25°.54N×110°.06W, h4km±10km, MD4.7*
ISC 07 02:35:36.1±2.7**, 25°.64N**±0°.04×**110°.08W**±0°.03**, h14**km±17km**, n266,** σ1.67/230**, mb4.3**/36**, MS3.9**/17**, 67C-70D, Gulf of California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPIG	La Paz	1.55	188	Pn	Pn	02 36 03.1	-0.1
LPIG				Sn	Sn	02 36 24.2	+1.2
LPIG	La Paz	1.55	188	Pn	Pn	02 36 03.1	-0.1
	6.6nm,0.3s,baz=357,slow=5.3,SNR=65						
LPIG				Sn	Sn	02 36 24.2	+1.2
	33nm,0.3s,baz=0.0,slow=20,SNR=15						
SRIG	Santa Rosalia	2.56	311	*i* P	Pn	02 36 16.5	-0.6
SRIG				*i* S	Sn	02 36 47.9	-0.1
SRIG	Santa Rosalia	2.56	311	*i* P	Pn	02 36 16.5	-0.6
SRIG				*i* S	Sn	02 36 47.9	-0.1
HSIG		3.45	347	*i* P	Pn	02 36 29.3	-0.1
HSIG				*i* S	Sn	02 37 10.1	-0.1
HSIG		3.45	347	*i* P	Pn	02 36 29.3	-0.1
HSIG				*i* S	Sn	02 37 10.1	-0.1
MAIG	Mazatlaan	4.13	126	*i* P	Pn	02 36 35.9	-2.8
MAIG				*i* S	Sn	02 37 23.5	-3.2
MAIG	Mazatlaan	4.13	126	*i* P	Pn	02 36 35.9	-2.8
MAIG				*i* S	Sn	02 37 23.5	-3.2
HPIG		4.16	71	*i* P	Pn	02 36 38.2	-1.2
HPIG				*i* S	Sn	02 37 26.9	-1.0
HPIG		4.16	71	*i* P	Pn	02 36 38.2	-1.2
HPIG				*i* S	Sn	02 37 26.9	-1.0
CGIG		5.06	21	*i* P	Pn	02 36 51.5	-0.2
CGIG				*i* S	Sn	02 37 51.5	+1.6
CGIG		5.06	21	*i* P	Pn	02 36 51.5	-0.2
CGIG				*i* S	Sn	02 37 51.5	+1.6
319A	Douglas	5.75	7	⇓P	Pn	02 36 56.8	-4.4
	baz=5.7,SNR=10						
320A	Kipp Ranch, An	5.83	13	⇑P	Pn	02 36 58.7	-3.6
	baz=5.8,SNR=14						
220A	Playas Peak, P	6.39	12	P	Pn	02 37 06.2	-3.6
	baz=6.4,SNR=6.8						
220A				⇓S	Sb	02 38 48.9	+5.5
	baz=6.4						
220A				⇓S	Sb	02 38 48.9	+5.5
	baz=6.4						
626A	Big Bend Ranch	6.55	52	P	Pn	02 37 09.3	-2.9
	baz=6.5,SNR=37						
626A				⇑S	Sb	02 38 54.0	+5.9
	baz=6.5						
626A				⇑S	Sb	02 38 54.0	+5.9
	baz=6.5						
221A	Mesquite Ranch	6.66	17	⇓P	Pn	02 37 10.7	-2.8
	baz=6.6,SNR=9.9						
221A				⇓S	Sb	02 38 57.7	+6.6
	baz=6.6						
221A				⇓S	Sb	02 38 57.7	+6.6
	baz=6.6						
TXAR	Lajitas Array	6.78	56	Pn	Pn	02 37 12.2	-2.9
TXAR				Lg	Lg	02 39 09.4	
TXAR	Lajitas Array	6.78	56	Pn	Pn	02 37 12.2	-2.9
	0.7nm,0.3s,baz=231,slow=13,SNR=48						
TXAR				Lg	Lg	02 39 09.4	
	19nm,0.3s,baz=233,slow=22,SNR=8.2						
425A	Indio Mountain	6.81	40	⇓P	Pn	02 37 14.4	-1.3
	baz=6.8,SNR=18						
ANIG	Ahuacatlan	6.85	131	*e*P	Pn	02 37 15.5	-0.7
ANIG				*i* S	Sn	02 38 30.9	-3.1
ANIG	Ahuacatlan	6.85	131	*e*P	Pn	02 37 15.5	-0.7
ANIG				*i* S	Sn	02 38 30.9	-3.1
526A	Mary Lane Ranc	6.89	49	P	Pn	02 37 14.2	-2.5
	baz=6.9,SNR=32						
222A	Williams Famil	6.95	21	⇑S	Sb	02 39 06.0	+6.5
	baz=6.9						
120A	U Bar Ranch, L	7.00	10	⇓P	Pn	02 37 14.8	-3.4
	baz=7.0						
627A	Terlingua Ranc	7.04	56	⇓P	Pn	02 37 15.3	-3.6
	baz=7.0						
324A	Moseley Ranch,	7.05	34	⇑P	Pn	02 37 17.1	-1.8
	baz=7.0						
121A	Cookes Peak, D	7.15	16	⇓P	Pn	02 37 17.2	-3.2
	baz=7.1,SNR=12						
325A	Bean Ranch, Si	7.26	37	⇑P	Pn	02 37 19.6	-2.3
	baz=7.2,SNR=8.5						
527A	Woodward Ranch	7.27	50	⇑P	Pn	02 37 19.0	-2.9
	baz=7.3						
527A				⇓S	Sb	02 39 12.7	+4.0
	baz=7.3						
527A				⇓S	Sb	02 39 12.7	+4.0
	baz=7.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MNTX	Cornudas Mount	7.31	33	*e*Pn	Pn	02 37 20.3	-2.1
MNTX	Cornudas Mount	7.31	33	⇓P	Pn	02 37 21.0	-1.4
	baz=7.3						
426A	McDonald Obser	7.32	45	⇑P	Pn	02 37 20.6	-2.1
	baz=7.3,SNR=31						
ZAIG	Zacatecas	7.43	111	*i* P	Pn	02 37 22.5	-1.8
ZAIG				*i* S	Sn	02 38 47.4	-1.1
ZAIG	Zacatecas	7.43	111	*i* P	Pn	02 37 22.5	-1.8
ZAIG				*i* S	Sn	02 38 47.4	-1.1
628A	Black Gap, Mar	7.44	57	⇑P	Pn	02 37 20.8	-3.4
	baz=7.4,SNR=9.5						
122A	Conniff Cattle	7.53	20	⇓P	Pn	02 37 23.8	-1.7
	baz=7.5						
Z20A	Nine Sixteen R	7.56	10	⇑P	Pn	02 37 22.2	-3.7
	baz=7.5,SNR=11						
326A	Caldwell Ranch	7.79	42	⇑P	Pn	02 37 27.8	-1.3
	baz=7.8						
427A	Hayter Ranch,	7.84	47	⇓P	Pn	02 37 27.1	-2.7
	baz=7.8,SNR=10.0						
528A	Cox Ranch, San	7.86	53	⇓P	Pn	02 37 27.1	-3.0
	baz=7.9						
225A	Deer Hill, Car	7.92	34	⇓P	Pn	02 37 30.8	-0.1
	baz=7.9,SNR=5.9						
Z21A	St. Cloud Mine	7.92	15	P	Pn	02 37 28.6	-2.5
	baz=7.9,SNR=13						
Z22A	Elephant Butte	8.06	19	⇑P	Pn	02 37 32.4	-0.4
	baz=8.0,SNR=17						
124A	Stringfield Ra	8.11	29	⇑P	Pn	02 37 32.5	-1.1
	baz=8.1,SNR=13						
GDL2	Guadalupe Moun	8.23	36	*e*Pn	Pn	02 37 37.2	+2.1
226B	Tecolote Peak,	8.24	38	⇓P	Pn	02 37 35.3	0.0
	baz=8.2,SNR=8.9						
428A	Kincaid Ranch,	8.26	50	⇓P	Pn	02 37 34.6	-0.9
	baz=8.2						
529A	Stev Forest Ra	8.26	56	⇓P	Pn	02 37 32.7	-2.8
	baz=8.2,SNR=5.8						
Z23A	Rita Site, Whi	8.30	23	⇑P	Pn	02 37 35.2	-0.9
	baz=8.3,SNR=20						
Y20A	Horse Springs,	8.37	10	⇑P	Pn	02 37 32.9	-4.3
	baz=8.3						
125A	Gardner Draw,	8.44	33	⇓P	Pn	02 37 37.0	-1.1
	baz=8.4						
CLNB	Carlsbad	8.54	38	*e*Pn	Pn	02 37 41.1	+1.7
328A	Wristen Ranch,	8.57	47	⇓P	Pn	02 37 38.5	-1.3
	baz=8.6						
Y21A	Point of Rocks	8.59	13	⇑P	Pn	02 37 37.8	-2.4
	baz=8.6,SNR=12						
Z24A	Sheeppen Canyo	8.69	27	⇑P	Pn	02 37 40.7	-0.8
	baz=8.7						
Y22A	Socorro	8.70	17	⇑P	Pn	02 37 38.6	-3.0
	baz=8.7,SNR=8.3						
429A	Davenport Ranc	8.76	54	⇑P	Pn	02 37 40.2	-2.2
	baz=8.8,SNR=11						
X16A	Lo Mia Camp, P	8.83	353	⇓P	Pn	02 37 38.5	-4.9
	baz=8.8,SNR=16						
X18A	Snowflake	8.86	1	⇓P	Pn	02 37 40.0	-3.9
	baz=8.8						
LENM	Lemitar	8.91	17	*e*Pn	Pn	02 37 42.5	-2.0
Z25A	Roswell	8.93	30	⇓P	Pn	02 37 43.4	-1.3
	baz=8.9						
530A	J-C Ranch, Com	8.94	58	⇑P	Pn	02 37 43.0	-1.8
	baz=8.9						
Y23A	Lovelace Mesa,	8.97	22	⇑P	Pn	02 37 42.8	-2.5
	baz=9.0,SNR=28						
X20A	Quemado	8.97	8	⇓P	Pn	02 37 42.4	-3.1
	baz=9.0						
X21A	Alamocita Cree	8.99	12	⇑P	Pn	02 37 40.8	-4.9
	baz=9.0						
LAZ	Ladron	9.09	16	*e*Pn	Pn	02 37 45.2	-1.9
LPM	Los Pinos Moun	9.14	18	*e*Pn	Pn	02 37 45.2	-2.5
127A	Arkansas Junct	9.14	38	⇓P	Pn	02 37 48.3	+0.7
	baz=9.1						
Y24A	Capitan	9.19	25	⇓P	Pn	02 37 49.0	+0.7
	baz=9.2,SNR=18						
X22A	Bernardo	9.22	16	⇑P	Pn	02 37 46.6	-2.2
	baz=9.2						
631A	Perdido Creek	9.23	64	⇑P	Pn	02 37 42.6	-6.2
	baz=9.2						
Z26A	Caprock	9.27	34	⇓P	Pn	02 37 51.9	+2.4
	baz=9.3						
Y25A	Mesa, Roswell	9.48	28	⇓P	Pn	02 37 52.0	-0.3
	baz=9.5						
732A	Laxson Ranch,	9.51	69	⇓P	Pn	02 37 49.1	-3.5
	baz=9.5,SNR=5.9						
X23A	Hourglass Bar	9.52	20	P	Pn	02 37 53.4	+0.4
	baz=9.5,SNR=9.0						
W20A	Ramah	9.55	8	⇓P	Pn	02 37 52.5	-0.9
	baz=9.5,SNR=8.2						
531A	Rocksprings	9.56	60	⇑P	Pn	02 37 54.3	+1.1
	baz=9.5						
229A	Bryant Ranch,	9.60	47	⇑P	Pn	02 37 53.6	-0.4
	baz=9.6						
128A	Castleberry Fa	9.61	42	⇑P	Pn	02 37 52.9	-1.2
	baz=9.6						
W21A	San Fidel	9.67	12	⇑P	Pn	02 37 52.6	-2.4
	baz=9.7						
Z27A	Tatum	9.70	36	⇓P	Pn	02 37 55.1	-0.2
	baz=9.7,SNR=7.3						
330A	Mertzon	9.71	52	⇑P	Pn	02 37 54.7	-0.6
	baz=9.7						
431A	Sonora	9.74	57	⇑P	Pn	02 37 51.2	-4.7
	baz=9.7						
ANMO	Albuquerque	9.79	18	Pn	Pn	02 37 53.8	-2.8
ANMO				Lg	Lg	02 40 34.3	
ANMO	Albuquerque	9.79	18	Pn	Pn	02 37 53.8	-2.8
	0.1nm,0.3s,baz=206,slow=12,SNR=7.7						
ANMO				Lg	Lg	02 40 34.3	
	0.2nm,0.3s,baz=148,slow=19,SNR=2.7						
ANMO				LR	LR	02 42 10.7	
	comp=Z,555nm,20.1s,baz=70,slow=42						
Y26A	Elida	9.88	32	⇓P	Pn	02 37 58.2	+0.5
	baz=9.9,SNR=6.4						
632A	Uvalde	9.91	65	⇓P	Pn	02 37 55.4	-2.6
	baz=9.9						
WUAZ	Wupatki	9.91	354	*e*Pn	Pn	02 37 58.0	-0.1
WUAZ	Wupatki	9.91	354	⇑P	Pn	02 37 49.2	-8.9
	baz=9.9						
129A	Stewart Farms,	10.00	44	⇑P	Pn	02 38 00.2	+0.9
	baz=10.0						
230A	Sterling City	10.03	50	⇓P	Pn	02 37 58.8	-0.9
	baz=10.0						
532A	Rocksprings	10.04	61	⇓P	Pn	02 37 57.8	-2.1
	baz=10.0,SNR=5.4						
W23A	Werner Place,	10.07	19	⇑P	Pn	02 37 59.9	-0.6
	baz=10,SNR=13						
Z28A	Tucker Farm, M	10.14	40	⇓P	Pn	02 38 02.5	+1.2
	baz=10						
Y27A	Causey	10.17	35	⇑P	Pn	02 38 06.2	+4.4
	baz=10,SNR=6.5						
331A	San Angelo	10.19	54	⇑P	Pn	02 38 02.2	+0.3
	baz=10						
V20A	Brimhall	10.22	7	⇓P	Pn	02 38 01.5	-1.0
	baz=10,SNR=9.6						
JCT	Junction City	10.27	60	*e*Pn	Pn	02 38 04.5	+1.5
W24A	Lazy 6 Ranch,	10.35	22	⇓P	Pn	02 38 03.7	-0.6
	baz=10						
MSTX	Muleshoe	10.44	36	⇓P	Pn	02 38 07.6	+2.2
	baz=10,SNR=7.9						
432A	Menard	10.45	58	⇑P	Pn	02 38 02.3	-3.2
	baz=10						
Z29A	Hungry Hill Ra	10.52	42	⇑P	Pn	02 38 07.7	+1.2
	baz=10						
130A	Snyder	10.55	47	⇓P	Pn	02 38 08.6	+1.7
	baz=10						
V23A	Ortiz Mt. (NFS	10.61	17	⇑P	Pn	02 38 06.0	-1.9
	baz=11						
W25A	X Bar L Ranch,	10.70	26	⇓P	Pn	02 38 10.0	+0.9
	baz=11						
332A	Millersview	10.73	55	⇑P	Pn	02 38 08.1	-1.3
	baz=11						
U20A	Newcomb	10.78	7	⇑P	Pn	02 38 09.4	-0.8
	baz=11,SNR=8.7						
X27A	F and S Farms,	10.81	32	⇓P	Pn	02 38 11.4	+0.9
	baz=11,SNR=6.7						
V24A	Rampart Ranch,	10.87	21	⇓P	Pn	02 38 10.2	-1.2
	baz=11						
Z30A	Sanderson Ranc	10.89	44	⇓P	Pn	02 38 11.2	-0.4
	baz=11						
U15A	North Rim	10.92	351	⇑P	Pn	02 38 03.8	-8.3
	baz=11,SNR=16						
U21A	Nageezi	10.95	10	⇑P	Pn	02 38 12.7	+0.2
	baz=11,SNR=24						
Y29A	Porterfield Fa	10.97	40	⇑P	Pn	02 38 12.3	-0.4
	baz=11,SNR=7.4						
131A	Roby	10.98	48	⇓P	Pn	02 38 13.2	+0.4
	baz=11,SNR=6.0						
U22A	Llaves	11.05	14	⇑P	Pn	02 38 12.9	-1.0
	baz=11						
U23A	El Rito	11.16	16	⇑P	Pn	02 38 14.3	-1.1
	baz=11						
W27A	Bowe Ranch, En	11.17	31	⇓P	Pn	02 38 16.8	+1.4
	baz=11						
V25A	Rancho No Teng	11.19	23	⇓P	Pn	02 38 16.0	+0.2
	baz=11						
X29A	Tulia	11.38	38	⇑P	Pn	02 38 20.6	+2.3
	baz=11						
Y30A	Stafford Cattl	11.44	42	⇑P	Pn	02 38 20.0	+1.0
	baz=11						
ABTX	Abilene, Hawle	11.46	50	⇓P	Pn	02 38 20.1	+0.7
	baz=12						
V26A	Tequesquite Ra	11.47	27	⇓P	Pn	02 38 20.2	+0.6
	baz=12						
T21A	Navajo Lake	11.52	10	P	Pn	02 38 21.2	+0.9
	baz=12,SNR=10						
Z31A	Sharp Cattle R	11.54	46	⇓P	Pn	02 38 22.9	+2.5
	baz=12,SNR=5.6						
MVCO	Mesa Verde	11.61	6	*e*Pn	Pn	02 38 20.8	-0.7
MVCO	Mesa Verde	11.61	6	⇓P	Pn	02 38 20.6	-1.0
	baz=12,SNR=12						
T22A	Edith	11.65	13	⇑P	Pn	02 38 23.3	+1.1
	baz=12						
AMTX	Amarillo	11.72	36	*e*Pn	Pn	02 38 23.9	+0.9
AMTX	Amarillo	11.72	36	⇓P	Pn	02 38 25.6	+2.7
	baz=12,SNR=6.4						
U25A	Circle Dot Ran	11.77	23	⇓P	Pn	02 38 24.5	+0.8
	baz=12						
X30A	Coker Ranch, T	11.85	40	⇓P	Pn	02 38 27.4	+2.8
	baz=12,SNR=5.0						
T23A	Casias Ranch,	11.87	16	⇓P	Pn	02 38 25.7	+0.6
	baz=12						
Y31A	Rekieta Farm,	11.88	43	⇑P	Pn	02 38 27.3	+2.2
	baz=12						
Z32A	Haskell	11.97	48	⇑P	Pn	02 38 25.8	-0.5
	baz=12,SNR=8.4						
U26A	Atchley Ranch,	12.01	25	⇑P	Pn	02 38 27.5	+0.5
	baz=12						
S18A	Hurst Farm, Bl	12.01	0	⇓P	Pn	02 38 25.9	-1.2
	baz=12,SNR=14						
S21A	Coal Bank Pass	12.14	9	⇑P	Pn	02 38 28.0	-0.9
	baz=12,SNR=30						
T24A	Torres, Weston	12.17	19	⇑P	Pn	02 38 30.0	+0.7
	baz=12						
S20A	Disappointment	12.24	6	⇓P	Pn	02 38 28.8	-1.4
	baz=12						
S22A	4UR Ranch, Cre	12.38	12	⇑P	Pn	02 38 28.6	-3.5
	baz=12						
Y32A	R-V Farms, Ver	12.43	45	⇓P	Pn	02 38 33.8	+1.2
	baz=12						
X31A	McDonald Ranch	12.51	42	⇑P	Pn	02 38 35.3	+1.7
	baz=12						
R20A	Redvale	12.59	6	⇓P	Pn	02 38 33.3	-1.6
	baz=13						
PV04	Paradox Valley	12.75	4	*e*Pn	Pn	02 38 36.8	-0.3
T26A	Comanche Natio	12.75	24	⇑P	Pn	02 38 37.0	-0.1
	baz=13						
R22A	Saguache, Gunn	12.86	12	⇓P	Pn	02 38 38.0	-0.7
	baz=13						
R21A	Cimarron	12.87	9	⇑P	Pn	02 38 37.5	-1.3
	baz=13,SNR=6.0						
MVU	Marysvale	12.95	352	Pn	Pn	02 38 40.2	+0.3
MSU	Marysvale	12.96	353	*e*Pn	Pn	02 38 40.3	+0.4
	43nm,1.1s						
R23A	Moffat	13.02	15	⇓P	Pn	02 38 39.7	-1.1
	baz=13						
T28A	Walsh	13.30	29	⇑P	Pn	02 38 45.6	+1.0
	baz=13						
WMOK	Wichita Mounta	13.32	44	*e*Pn	Pn	02 38 45.4	+0.7
Q20A	Ridgley Place,	13.36	6	⇑P	Pn	02 38 43.2	-2.2
	baz=13						
SRU	San Rafael	13.44	358	*e*Pn	Pn	02 38 45.2	-1.3
SRU	San Rafael	13.44	358	⇓P	Pn	02 38 44.4	-2.1
	baz=13,SNR=16						
Q22A	Crested Butte,	13.45	11	⇓P	Pn	02 38 46.0	-0.8
	baz=13						
TMUT	Trail Mountain	13.65	356	*e*Pn	Pn	02 38 47.9	-1.6
SMCO	Snowmass	13.75	10	*e*Pn	Pn	02 38 50.4	-0.5
P18A	Preston Nutter	13.95	359	⇑P	Pn	02 38 50.9	-2.7
	baz=14,SNR=15						
P19A	Cripple Cowboy	13.98	3	⇓P	Pn	02 38 50.8	-3.2
	baz=14						
P21A	Newcastle	14.02	8	⇑P	Pn	02 38 50.9	-3.5
	baz=14,SNR=16						
P22A	Eagle	14.19	11	⇑P	Pn	02 38 53.8	-3.1
	baz=14						
NVAR	Mina Array Bea	14.52	333	Pn	Pn	02 39 02.2	+0.8
NVAR	Mina Array Bea	14.52	333	Pn	Pn	02 39 02.2	+0.8
	baz=158,slow=13,SNR=1.8						
ISCO	Idaho Springs	14.61	14	*e*Pn	Pn	02 39 02.9	+0.3
O22A	Kremmling	14.78	11	⇑P	Pn	02 39 00.2	-4.7
	baz=15						
N20A	Spence Gulch,	15.23	5	⇑P	Pn	02 39 06.7	-4.2
	baz=15,SNR=5.1						
N21A	Black Mountain	15.23	7	⇑P	Pn	02 39 03.1	-7.8
	baz=15						
N22A	Wattenberg Ran	15.42	10	⇓P	Pn	02 39 07.2	-6.2
	baz=15,SNR=9.8						
ELK	Elko	15.66	345	*e*P	P	02 39 20.6	-0.1
WCN	Washoe City	15.87	331	*e*P	Pn	02 39 19.5	+0.4
	49nm,1.3s						
BMN	Battle Mountai	15.91	340	*e*P	Pn	02 39 19.4	-0.3
	23nm,1.1s						
HWUT	Hardware Ranch	15.97	356	*e*P	Pn	02 39 19.5	-0.9
	28nm,1.3s						
HVU	Hansel Valley	16.25	353	*e*P	Pn	02 39 22.9	-1.2
	14nm,1.1s						
CMIG	Matias Romero	16.50	118	Pn	Pn	02 39 27.6	+0.4
CMIG	Matias Romero	16.50	118	Pn	Pn	02 39 27.6	+0.4
	0.1nm,0.3s,baz=307,slow=15,SNR=2.2						
CMIG				LR	LR	02 46 26.1	
	comp=Z,136nm,20.9s,baz=274,slow=39						
MIAR	Mount Ida	16.80	54	*e*P	P	02 39 36.2	+3.3
	21nm,0.9s						
BW06	Boulder Array	17.09	1	⇑P	Pn	02 39 23.4	-11
	baz=17,SNR=10						
PDAR	Pinedale Array	17.09	1	Pn	Pn	02 39 33.1	-1.6
PDAR	Pinedale Array	17.09	1	Pn	Pn	02 39 33.1	-1.6
	0.1nm,0.3s,baz=171,slow=10,SNR=18						
PDAR				LR	LR	02 46 21.8	
	comp=Z,914nm,18.2s,baz=182,slow=39						
KSU1	Kansas State U	17.56	37	*e*P	Pn	02 39 39.9	-0.6
	51nm,1.2s						
SNOW	Snow King Moun	17.79	358	*e*P	Pn	02 39 40.8	-2.6
	66nm,1.8s						
UALR	University of	17.80	55	P	P	02 39 44.4	+0.3
	29nm,1.0s						
DCID1	Drake Creek	17.93	357	*e*P	P	02 39 45.0	-0.7
	19nm,1.1s						
MOOW	Moose Ponds	18.07	358	*e*P	Pn	02 39 45.3	-1.6
	4.5nm,0.9s						
IMW	Indian Meadow	18.23	358	*e*P	Pn	02 39 47.8	-1.1
	7.7nm,1.0s						
MOD	Modoc	18.29	335	*e*P	Pn	02 39 48.7	-0.8
	20nm,1.2s						
I13A	Wildhorse Cree	18.52	351	⇓P	P	02 39 36.0	-16
	baz=18,SNR=8.3						
LKWY	Lake	18.88	359	P	Pn	02 39 56.1	-0.7
	7.6nm,0.9s						
YBH	Yreka Blue Hor	19.15	330	LR	LR	02 46 22.7	
	comp=Z,231nm,21.7s,baz=154,slow=34						
MCMT	McKenzie Canyo	19.27	354	*e*P	Pn	02 40 00.7	-0.8
	4.3nm,1.0s						
DLMT	Dillon	19.78	355	P	P	02 40 05.1	-0.8
	4.7nm,0.5s						
OXF	Oxford	19.92	59	P	P	02 40 06.2	-1.2
	32nm,1.0s						
OXF				*e*		02 40 11.9	
LRM	Limekiln Ridge	20.23	355	*e*P	P	02 40 10.3	-0.5
	65nm,1.1s						
TEIG	Tepich	20.78	101	LR	LR	02 49 11.9	
	comp=Z,283nm,20.8s,baz=270,slow=39						
HRY	Holter Researc	21.07	357	*e*P	P	02 40 19.1	-0.8
	8.5nm,0.7s						
ECSD	EROS Data Cent	21.12	28	*e*P	P	02 40 19.2	-1.2
	17nm,1.0s						
MSO	Missoula	21.37	353	*e*P	P	02 40 21.2	-1.9
	9.1nm,1.0s						
CHMT	Chamberlain Mo	21.38	354	*e*P	P	02 40 22.3	-1.0
	7.0nm,1.0s						
SIUC	Southern Illin	21.39	51	P	P	02 40 23.6	+0.4
	80nm,0.8s						
SIUC				*e*		02 40 27.6	
LRAL	Lakeview Retre	21.40	64	*e*P	P	02 40 25.1	+1.7
	14nm,1.0s						
WVT	Waverly	21.72	56	P	P	02 40 27.5	+0.7
	32nm,0.8s						
WVT				*e*		02 40 31.5	
SLMT	Seeley Lake	21.73	354	*e*P	P	02 40 25.7	-1.3
	12nm,1.0s						
HAWA	Hanford	22.04	342	*e*P	P	02 40 23.8	-6.4
	12nm,0.9s						
SWMT	Swartz Lake	22.05	353	*e*P	P	02 40 28.5	-1.8
	13nm,1.3s						
C15A	Salmond Ranch,	22.18	355	⇓P	P	02 40 17.8	-14
	baz=22						
C13A	Hot Springs	22.28	352	⇓P	P	02 40 19.1	-14
	baz=22						
JTMT	Jette	22.31	353	*e*P	P	02 40 31.2	-2.0
	9.3nm,1.3s						
EGMT	Eagleton	22.34	1	*e*P	P	02 40 30.4	-3.1
	21nm,1.2s						
YBMT	Yellow Bay	22.40	353	*e*P	P	02 40 32.3	-1.8
	7.6nm,1.3s						
C23A	Lambert	22.45	9	⇑P	P	02 40 21.1	-14
	baz=22						
BSMT	Bassoo Peak	22.48	352	*e*P	P	02 40 32.9	-2.2
	2.1nm,0.8s						
USIN	University of	22.60	52	*e*P	P	02 40 40.5	+4.2
	57nm,1.1s						
HDIL	Hopedale	22.82	44	*e*P	P	02 40 36.4	-2.1
	37nm,0.9s						
SWET	Sewanee	22.85	60	P	P	02 40 42.3	+3.3
	50nm,1.1s						
LON	Longmire	23.05	339	*e*P	P	02 40 39.2	-1.7
	27nm,1.1s						
NEW	Newport	23.25	348	*e*P	P	02 40 41.0	-2.0
	5.5nm,0.7s						
NEW	Newport	23.25	348	P	P	02 40 41.1	-1.8
	4.8nm,0.7s,baz=166,slow=13,SNR=8.3						
NEW				LR	LR	02 50 07.9	
	comp=Z,299nm,19.2s,baz=167,slow=38						
WALA	Waterton Lakes	23.57	354	*e*P	P	02 40 43.9	-2.3
	0.6nm,1.3s						
WCI	Wyandotte Cave	23.69	52	P	P	02 40 47.8	+0.4
BLO	Bloomington	23.94	50	*e*P	P	02 40 53.8	+4.0
	21nm,0.8s						
TGUH	Tegucigalpa,Un	24.30	114	P	P	02 40 54.4	+1.1
	27nm,1.0s						
TKL	Tuckaleechee C	24.66	60	P	P	02 40 56.5	0.0
TKL	Tuckaleechee C	24.66	60	P	P	02 40 56.5	0.0
	7.1nm,0.9s,baz=276,slow=9.2,SNR=3.1						
TKL				LR	LR	02 51 32.7	
	comp=Z,361nm,18.2s,baz=96,slow=39						
AGMN	Agassiz Nation	25.22	23	*e*P	P	02 41 00.4	-0.9
	12nm,0.9s						
ULM	Lac du Bonnet	26.91	20	P	P	02 41 16.5	0.0
ULM	Lac du Bonnet	26.91	20	P	P	02 41 16.5	0.0
	1.1nm,0.4s,baz=195,slow=10,SNR=2.1						
ULM				LR	LR	02 52 14.3	
	comp=Z,178nm,21.4s,baz=197,slow=38						
BBB	Bella Bella	29.82	337	LR	LR	02 53 11.5	
	comp=Z,159nm,18.9s,baz=231,slow=36						
YKA	Yellowknife Ar	36.97	357	P	P	02 42 42.7	-1.9
YKA	Yellowknife Ar	36.97	357	P	P	02 42 42.7	-1.9
	1.2nm,0.9s,baz=178,slow=8.3,SNR=21						
OTAV	Otavalo	39.61	125	*e*P	P	02 43 09.8	+1.9
	56nm,0.8s						
OTAV				*e*		02 43 15.8	
ROSC	El Rosal	39.98	115	LR	LR	02 59 35.2	
	comp=Z,63nm,19.2s,baz=5.8,slow=36						
SCHQ	Schefferville	42.99	36	P	P	02 43 32.9	-1.8
SCHQ	Schefferville	42.99	36	P	P	02 43 32.9	-1.8
	3.8nm,1.1s,baz=238,slow=15,SNR=2.8						
SCHQ				LR	LR	03 01 54.1	
	comp=Z,158nm,18.8s,baz=1.5,slow=37						
ATAH	Atahualpa	44.83	132	P	P	02 43 53.6	+3.2
ATAH	Atahualpa	44.83	132	P	P	02 43 53.6	+3.2
	4.1nm,0.8s,baz=345,slow=8.7,SNR=2.1						
INK	Inuvik	44.98	348	P	P	02 43 49.2	-1.2
INK	Inuvik	44.98	348	P	P	02 43 49.2	-1.2
	2.8nm,1.1s,baz=158,slow=9.6,SNR=4.7						
ILAR	Eielson Array	45.69	339	P	P	02 43 55.6	-0.5
ILAR	Eielson Array	45.69	339	P	P	02 43 55.6	-0.5
	2.7nm,1.1s,baz=140,slow=5.4,SNR=14						
ILAR				LR	LR	03 03 24.3	
	comp=Z,84nm,20.3s,baz=115,slow=37						
TRF	Thorofare Moun	46.03	336	*e*P	P	02 43 57.5	-1.6
	13nm,1.3s						
RES	Resolute Bay	49.73	5	LR	LR	03 06 25.3	
	comp=Z,108nm,18.1s,baz=20,slow=37						
PPT	Papeete	57.64	226	LR	LR	03 04 42.6	
	comp=Z,210nm,20.4s,baz=128,slow=30						
PPT2	Papeete2	57.65	226	*e*LR	LR	03 02 16.6	
	126nm,26.2s						
TBI	Tubuai	61.86	221	*e*LR	LR	03 04 13.9	
	57nm,26.2s						
AFI	Afiamalu	71.78	244	LR	LR	03 12 59.4	
	comp=Z,20nm,20.2s,baz=137,slow=31						
CPUP	Villa Florida	72.51	132	P	P	02 47 03.7	+1.1
CPUP	Villa Florida	72.51	132	P	P	02 47 03.7	+1.1
	4.9nm,1.0s,baz=323,slow=8.3,SNR=6.1						
BDFB	Brasilia	73.01	117	P	P	02 47 08.5	+2.6
BDFB	Brasilia	73.01	117	P	P	02 47 08.5	+2.6
	3.3nm,0.8s,baz=302,slow=7.3,SNR=4.2						
PLCA	Paso Flores	75.56	150	P	P	02 47 24.6	+4.4
PLCA	Paso Flores	75.56	150	P	P	02 47 24.6	+4.4
	2.6nm,0.8s,baz=316,slow=9.6,SNR=3.7						
ARCES	ARCESS Array B	79.85	14	LR	LR	03 23 12.9	
	comp=Z,68nm,19.4s,baz=351,slow=36						
NOA	NORSAR Array B	81.50	25	LR	LR	03 22 03.3	
	comp=Z,38nm,20.7s,baz=305,slow=34						
ESDC	Sonseca Array	85.39	48	LR	LR	03 25 57.9	
	comp=Z,74nm,18.1s,baz=240,slow=36						
FINES	FINESS Array B	86.29	19	P	P	02 48 19.6	+2.5
FINES	FINESS Array B	86.29	19	P	P	02 48 19.6	+2.5
	1.9nm,1.0s,baz=332,slow=6.9,SNR=3.6						
FINES				LR	LR	03 29 20.4	
	comp=Z,66nm,18.4s,baz=320,slow=38						
GERES	GERESS Array B	90.48	33	LR	LR	03 26 23.6	
	comp=Z,70nm,20.2s,baz=277,slow=34						
CBIJ	Chichi jima	92.88	302	LR	LR	03 27 37.5	
	comp=Z,90nm,18.1s,baz=78,slow=34						
SONM	Songino Array	99.85	336	P	Pdif	02 49 20.3	0.0
SONM	Songino Array	99.85	336	P	Pdif	02 49 20.3	0.0
	0.1nm,0.3s,baz=50,slow=4.7,SNR=2.8						
WRA	Warramunga Arr	120.84	261	PKP	PKPdf	02 54 29.1	+0.6
WRA	Warramunga Arr	120.84	261	PKP	PKPdf	02 54 29.1	+0.6
	0.8nm,0.8s,baz=69,slow=1.8,SNR=4.0						
ASAR	Alice Springs	122.33	257	PKP	PKPdf	02 54 31.7	+0.4
ASAR	Alice Springs	122.33	257	PKP	PKPdf	02 54 31.7	+0.4
	0.4nm,0.4s,baz=48,slow=1.9,SNR=4.5						

IDC 07 03:15:40.4±1.2**,5°.74S**×**150°.95E,h0**km**,mb3.8**/9**, mb1 4.0**/10**,mb1mx3.9**/18**,mbtmp3.9**/10**,ML3.3**/1**, MS3.6**/2**,Ms1 3.6**/2**,ms1mx3.0**/27**,Error ellipse: s-maj=44.3km s-min=18.0km az=113.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.23	226	Pn	Pn	03 17 01.8	+1.9
	7.4nm,0.3s,baz=53,slow=8.1,SNR=20						
PMG				Sn	Sn	03 17 57.2	-3.8
	11nm,0.3s,baz=72,slow=20,SNR=6.6						
WRA	Warramunga Arr	21.45	227	P	P	03 20 29.9	-0.6
	1.1nm,0.4s,baz=51,slow=10,SNR=9.6						
DZM	Mont Dzumac	22.09	139	LR	LR	03 27 39.3	
	comp=Z,149nm,18.6s,baz=354,slow=32						
ASAR	Alice Springs	24.23	221	P	P	03 20 58.2	-1.0
	0.4nm,0.4s,baz=49,slow=9.9,SNR=4.6						
STKA	Stephens Creek	27.43	197	P	P	03 21 29.4	+1.4
	1.7nm,0.4s,baz=6.3,slow=9.2,SNR=4.2						
FITZ	Fitzroy Crossi	27.59	241	P	P	03 21 28.3	-1.3
	2.9nm,0.8s,baz=55,slow=8.7,SNR=5.9						
JNU	Nakatsue	43.09	335	P	P	03 23 42.6	+0.2
	6.3nm,0.9s,baz=127,slow=5.1,SNR=3.0						
KSRS	Korea Array	48.04	335	P	P	03 24 24.2	+2.8
	1.5nm,0.9s,baz=151,slow=8.3,SNR=6.1						
SONM	Songino Array	66.15	329	P	P	03 26 31.0	+1.1
	0.4nm,0.3s,baz=144,slow=5.2,SNR=2.8						
MKAR	Makanchi Array	79.83	319	P	P	03 27 50.5	-0.4
	0.2nm,0.6s,baz=104,slow=3.7,SNR=3.3						
ILAR	Eielson Array	83.72	22	P	P	03 28 09.3	-1.6
	0.5nm,0.7s,baz=251,slow=5.5,SNR=7.6						
AAK	Ala-Archa	83.98	314	LR	LR	04 02 34.3	
	comp=Z,26nm,19.7s,baz=264,slow=34						
YKA	Yellowknife Ar	97.11	28	P	Pdif	03 29 15.0	+0.6
	0.1nm,0.5s,baz=263,slow=4.6,SNR=3.5						
TORD	Torodi Ar. Bea	148.82	286	PKPbc	PKPbc	03 35 30.6	-0.4
	3.0nm,0.6s,baz=47,slow=2.8,SNR=48						

IDC 07 03:16:19.4±12.0**,22°.81S**×**179°.40E,h648**km±94km**,**

mb3.2/4, mb1 3.4/5, mb1mx3.0/20, mbtmp3.3/5, Error ellipse: s-maj=243.0km s-min=66.8km az=31.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.01	271	eP	P	03 18 56.9	-1.4
DZM	Mont Dzumac	12.01	271	P	P	03 18 57.4	-0.9
	3.1nm,0.3s,baz=86,slow=13,SNR=25						
CTA	Charters Tower	30.93	269	P	P	03 21 47.9	+1.1
	2.1nm,0.4s,baz=106,slow=7.4,SNR=3.9						
ASAR	Alice Springs	41.68	260	P	P	03 23 13.1	-1.2
	1.5nm,0.3s,baz=97,slow=6.5,SNR=11						
WRA	Warramunga Arr	41.94	265	P	P	03 23 16.2	-0.1
	2.3nm,0.3s,baz=99,slow=6.8,SNR=21						
FITZ	Fitzroy Crossi	50.37	265	P	P	03 24 21.1	+1.5
	2.8nm,0.8s,baz=126,slow=8.7,SNR=3.9						
TORD	Torodi Ar. Bea	170.15	193	PKPab	PKPab	03 36 35.3	-0.2
	0.6nm,0.4s,baz=166,slow=4.2,SNR=8.9						

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*IDC **07** 03:46:05.4±0.6, 29°.78S×177°.34W, h0km, mb4.4/13, mb1 4.5/16, mb1mx4.5/23, mbtmp4.4/16, ML4.2/3, MS4.2/7, Ms1 4.2/7, ms1mx3.9/25, Error ellipse: s-maj=19.7km s-min=17.1km az=123.0*

*AUST **07** 03:46:07.8±2.2, 29°.91S×176°.83W, h25km, Error ellipse: s-maj=1.8km s-min=1.1km az=292.0*

*ISCJB **07** 03:46:08.3±0.6, 30°.06S±0°.07×177°.23W±0°.09, h35km, mb4.5/16, MS4.2/5, Error ellipse: s-maj=12.4km s-min=9.3km az=31.0*

*NEIC **07** 03:46:08.1±1.6, 29°.94S×177°.29W, h21km±11km, mb4.8/5, Error ellipse: s-maj=11.3km s-min=8.5km az=126.0*

ISC 07 03:46:10.1±0.5, 30°.03S±0°.07×177°.27W±0°.09, h35km, n90, σ1s.41/87, mb4.5/16, MS4.1/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.96	324	ePg	Pn	03 46 25.0	-2.1
URZ	Urewera	9.44	208	Pn	Pn	03 48 23.3	-0.2
URZ				Sn	Sn	03 50 05.2	-3.2
URZ	Urewera	9.44	208	Pn	Pn	03 48 23.3	-0.2
	0.8nm,0.3s,baz=19,slow=18,SNR=4.3						
URZ				Sn	Sn	03 50 05.2	-3.2
	3.7nm,0.3s,baz=200,slow=9.2,SNR=7.9						
NIUE	Niue	12.78	33	P	Pn	03 49 04.3	-5.1
	baz=12,SNR=3.6						
NIUE				S	Sn	03 51 12.5	-18
	baz=12,SNR=5.1						
MSVF	Nonsavu	12.96	340	ePn	Pn	03 49 15.0	+3.0
	21nm,0.9s						
RPZ	Rata Peaks	16.53	211	Pn	Pn	03 49 59.1	0.0
RPZ	Rata Peaks	16.53	211	Pn	Pn	03 49 59.1	0.0
	1.3nm,0.3s,baz=351,slow=8.7,SNR=6.2						
DZM	Mont Dzumac	16.63	295	eP	P	03 50 04.6	+1.7
	101nm,1.1s						
DZM				eLR	LR	03 54 01.1	
	1µm,24.0s						
DZM	Mont Dzumac	16.63	295	eP	P	03 50 05.2	+2.4
DZM	Mont Dzumac	16.63	295	ePn	P	03 50 05.4	+2.5
DZM	Mont Dzumac	16.63	295	Pn	P	03 50 05.0	+2.1
	1.3nm,0.3s,baz=120,slow=15,SNR=10						
DZM				LR	LR	03 55 02.5	
	comp=Z,848nm,19.8s,baz=206,slow=33						
RAR	Rarotonga	18.04	65	P	Pn	03 50 15.8	-2.2
RAR	Rarotonga	18.04	65	P	Pn	03 50 15.8	-2.2
	1.6nm,0.3s,baz=236,slow=5.8,SNR=3.8						
RAR				LR	LR	03 55 26.3	
	comp=Z,455nm,19.2s,baz=279,slow=31						
TBI	Tubuai	25.68	82	eLR	LR	03 57 50.7	
	601nm,27.2s,baz=256						
TBI				eT	T	04 17 46.1	
	16nm,0.4s						
ARMA	Armidale	26.84	261	P	P	03 51 51.0	+3.5
	baz=27,SNR=8.3						
PAE	Paea	28.07	70	eT	T	04 20 52.0	
	8.2nm,0.3s						
PPT2	Papeete2	28.11	70	eLR	LR	03 59 03.6	
	557nm,26.2s,baz=232						
PPT2				eT	T	04 20 55.8	
	5.2nm,0.3s						
PPT	Papeete	28.13	70	LR	LR	04 00 29.0	
	comp=Z,299nm,19.4s,baz=215,slow=31						
EIDS	Eidsvold	28.36	272	P	P	03 52 02.3	+1.3
	baz=29,SNR=3.3						
RMQ	Roma	30.07	268	P	P	03 52 18.6	+2.4
	baz=30,SNR=4.0						
VAH	Vaihoa	30.95	68	eT	T	04 24 28.1	
	9.4nm,0.2s						
QLP	Quilpie	33.97	266	P	P	03 52 51.5	+1.2
	baz=34,SNR=34						
CTA	Charters Tower	34.37	278	P	P	03 52 54.4	+0.5
CTA	Charters Tower	34.37	278	P	P	03 52 54.4	+0.5
	9.1nm,0.5s,baz=94,slow=10,SNR=18						
CTA				LR	LR	04 05 42.7	
	comp=Z,466nm,18.2s,baz=58,slow=34						
CTAO	Charters Tower	34.37	278	eP	P	03 52 54.1	+0.2
	18nm,0.8s						
STKA	Stephens Creek	35.18	256	eP	P	03 53 01.9	+1.0
	1.2nm,0.5s						
STKA	Stephens Creek	35.18	256	P	P	03 53 02.4	+1.5
	8.3nm,0.6s,baz=101,slow=10.0,SNR=28						
STKA				LR	LR	04 06 11.1	
	comp=Z,357nm,19.1s,baz=288,slow=34						
STKA	Stephens Creek	35.18	256	P	P	03 53 02.7	+1.9
	baz=36,SNR=15						
RKT	Rikitea	38.28	90	eLR	LR	04 03 45.6	
	352nm,29.0s						
BBOO	Buckleboo	39.68	254	P	P	03 53 39.3	+0.3
	baz=40,SNR=10.0						
AS31	Alice Springs	43.77	266	eP	P	03 54 11.8	-0.8
ASAR	Alice Springs	43.77	266	P	P	03 54 11.6	-1.0
ASAR	Alice Springs	43.77	266	P	P	03 54 11.6	-1.0
	3.9nm,0.5s,baz=105,slow=6.9,SNR=42						
ASAR				LR	LR	04 12 00.6	
	comp=Z,439nm,18.4s,baz=170,slow=36						
WRAB	Tennant Creek	44.72	271	eP	P	03 54 18.7	-1.4
	10nm,0.6s						
WRA	Warramunga Arr	44.72	271	P	P	03 54 19.4	-0.8
WRA	Warramunga Arr	44.72	271	P	P	03 54 19.4	-0.8
	11nm,0.5s,baz=110,slow=7.7,SNR=62						
WRA				LR	LR	04 12 00.7	
	comp=Z,194nm,18.0s,baz=75,slow=35						
VNDA	Vanda	48.53	186	P	P	03 54 53.1	+4.0
VNDA	Vanda	48.53	186	P	P	03 54 53.1	+4.0
	0.8nm,0.6s,baz=22,slow=9.6,SNR=4.6						
MTN	Manton Dam	50.56	278	P	P	03 55 04.7	-0.8
	baz=51,SNR=4.1						
FITZ	Fitzroy Crossi	53.00	269	P	P	03 55 23.2	-0.4
FITZ	Fitzroy Crossi	53.00	269	P	P	03 55 23.2	-0.4
	2.5nm,0.5s,baz=128,slow=6.8,SNR=11						
FITZ	Fitzroy Crossi	53.00	269	P	P	03 55 23.7	0.0
	baz=53,SNR=3.6						
CASY	Casey	55.76	208	eP	P	03 55 43.6	+0.5
	21nm,0.7s						
QSPA	South Pole Qui	60.08	180	P	P	03 56 16.0	+2.5
QSPA	South Pole Qui	60.08	180	P	P	03 56 16.0	+2.5
	4.7nm,0.9s,baz=42,slow=0.9,SNR=12						
MJAR	Matsushiro Arr	78.30	325	P	P	03 58 05.7	-0.9
MJAR	Matsushiro Arr	78.30	325	P	P	03 58 05.7	-0.9
	3.2nm,0.8s,baz=168,slow=7.1,SNR=10						
KSRS	Korea Array	84.48	319	P	P	03 58 39.3	+0.1
	1.1nm,0.7s,baz=129,slow=4.5,SNR=4.1						
KSAR	Wonju Array Be	84.49	319	P	P	03 58 39.3	0.0
PETK	Petropavlovsk-	85.61	345	P	P	03 58 44.5	0.0
PETK	Petropavlovsk-	85.61	345	P	P	03 58 44.5	0.0
	5.9nm,0.7s,baz=133,slow=7.2,SNR=5.6						
CMB	Columbia Colle	86.06	42	eP	P	03 58 49.3	+2.2
	4.4nm,1.1s						
USRK	Ussuriysk Arra	87.20	326	P	P	03 58 53.7	+1.2
	4.1nm,0.8s,baz=95,slow=4.3,SNR=7.1						
TXAR	Lajitas Array	91.65	57	P	P	03 59 15.7	+1.7
TXAR	Lajitas Array	91.65	57	P	P	03 59 15.7	+1.7
	0.4nm,1.0s,baz=193,slow=3.7,SNR=2.9						
ILAR	Eielson Array	97.42	13	P	P	03 59 37.6	-1.8
ILAR	Eielson Array	97.42	13	P	P	03 59 37.6	-1.8
	0.2nm,0.6s,baz=216,slow=4.5,SNR=3.7						
MKAR	Makanchi Array	118.02	310	PKP	PKPdf	04 04 51.9	-1.1
MKAR	Makanchi Array	118.02	310	PKP	PKPdf	04 04 51.9	-1.1
	0.2nm,0.5s,baz=106,slow=4.7,SNR=3.2						
ZALV	Zalesovo Beam	118.18	318	PKP	PKPdf	04 04 52.3	-0.6
ZALV	Zalesovo Beam	118.18	318	PKP	PKPdf	04 04 52.3	-0.6
	0.3nm,0.4s,baz=116,slow=3.4,SNR=2.8						
BVAR	Borovoye Array	126.58	316	PKP	PKPdf	04 05 08.7	-0.5
BVAR	Borovoye Array	126.58	316	PKP	PKPdf	04 05 08.7	-0.5
	1.0nm,0.5s,baz=90,slow=3.0,SNR=8.0						
ARCES	ARCESS Array B	138.36	348	PKPpre	PKPpre	04 05 25.6	
ARCES				PKP	PKPdf	04 05 31.0	+0.2
ARCES	ARCESS Array B	138.36	348	PKhKP	PKPpre	04 05 25.6	
	2.5nm,0.8s,baz=41,slow=3.9,SNR=7.4						
ARCES				PKP	PKPdf	04 05 31.0	+0.2
	1.1nm,0.5s,baz=48,slow=1.3,SNR=7.3						
JOF	Joensuu	142.30	339	ep	PKPdf	04 05 33.4	-4.7
	1.0nm,0.6s						
KAF	Kangasniemi	144.41	341	ep	PKPab	04 05 38.8	-1.3
	1.9nm,0.5s						
FIA1	FINESS Array S	145.01	341	ePKPdf	PKPab	04 05 42.1	-0.3
FINES	FINESS Array B	145.01	341	PKP	PKPdf	04 05 42.1	-0.8
FINES	FINESS Array B	145.01	341	PKP	PKPdf	04 05 42.1	-0.8
	8.8nm,0.5s,baz=55,slow=3.9,SNR=104						
KBZ	Khabaz	145.43	305	PKPbc	PKPab	04 05 44.6	+0.2
KBZ	Khabaz	145.43	305	PKPbc	PKPab	04 05 44.6	+0.2
	3.6nm,0.7s,baz=160,slow=3.6,SNR=11						
NB2	NORSAR Subarra	148.48	352	PKP	PKPbc	04 05 52.3	-0.2
	comp=Z,5.0nm,1.0s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.48	352	PKPbc	PKPbc	04 05 52.6	+0.2
NOA	NORSAR Array B	148.48	352	PKPbc	PKPbc	04 05 52.6	+0.2
	comp=Z,3.2nm,0.8s,baz=15,slow=4.4,SNR=13						
AKASG	Malin Array Be	151.38	324	PKPbc	PKPbc	04 05 59.9	+0.1
AKASG				PKPab	PKPab	04 06 06.5	-1.6
AKASG	Malin Array Be	151.38	324	PKPbc	PKPbc	04 05 59.9	+0.1
	comp=Z,3.5nm,0.6s,baz=48,slow=3.0,SNR=15						
AKASG				PKPab	PKPab	04 06 06.5	-1.6
	comp=Z,16nm,0.7s,baz=45,slow=3.2,SNR=23						
AK02	Malin Array Si	151.42	324	ePKPbc	PKPbc	04 05 59.9	0.0
AK02				ePKPab	PKPab	04 06 06.5	-1.7
BR131	Keskin Array S	152.98	299	ePKPbc	PKPbc	04 06 03.7	-0.2
BRTR	Keskin Array B	152.98	299	PKPbc	PKPbc	04 06 03.3	-0.6
BRTR	Keskin Array B	152.98	299	PKPbc	PKPbc	04 06 03.3	-0.6
	comp=Z,1.8nm,0.7s,baz=132,slow=2.9,SNR=9.6						
UPC	Upice	157.24	338	ePKPAB	PKPab	04 06 33.7	+0.8
UPC				epPKP	pPKPdf	04 06 37.6	+24
DPC	Dobruska-Polom	157.27	337	ePKPAB	PKPab	04 06 34.0	+0.9
DPC				epPKP	pPKPdf	04 06 39.6	+26
KRLC	Kraliky	157.34	336	ePKPAB	PKPab	04 06 34.0	+0.5
KRLC				epPKP	pPKPdf	04 06 39.9	+26
NKC	Novy Kostel	158.53	343	ePKPAB	PKPab	04 06 39.3	+0.8
NKC				ex	x	04 06 41.8	
NKC				ex	x	04 06 51.3	
KHC	Kasperske Hory	159.21	340	ePKPAB	PKPab	04 06 42.0	+0.5
KHC				epPKP	pPKPdf	04 06 47.9	+32
GERES	GERESS Array B	159.43	339	PKPab	PKPab	04 06 43.0	+0.5
GERES	GERESS Array B	159.43	339	PKPab	PKPab	04 06 43.0	+0.5
	comp=Z,1.4nm,0.8s,baz=33,slow=3.2,SNR=9.2						
TORD	Torodi Ar. Bea	163.17	176	PKP	PKPdf	04 06 09.8	+0.3
TORD				PKPab	PKPab	04 07 00.8	+1.2
TORD	Torodi Ar. Bea	163.17	176	PKP	PKPdf	04 06 09.8	+0.3
	comp=Z,0.2nm,0.7s,baz=114,slow=0.6,SNR=2.3						
TORD				PKPab	PKPab	04 07 00.8	+1.2
	comp=Z,0.5nm,0.5s,baz=172,slow=3.5,SNR=11						

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*ISK **07** 04:01:29.8, 39°.94N×39°.47E, h10km, MD2.4*

*ISCJB **07** 04:01:30.6±0.5, 39°.93N±0°.03×39°.49E±0°.04, h9km±6km, Error ellipse: s-maj=5.1km s-min=4.2km az=21.6*

*CSEM **07** 04:01:30.1±0.1, 39°.92N×39°.52E, h12km, MD2.4, Error ellipse: s-maj=3.6km s-min=2.1km az=130.0*

*DDA **07** 04:01:31.0, 39°.90N×39°.46E, h7km, MD3.0*

ISC 07 04:01:30.5±0.9, 39°.93N±0°.03×39°.49E±0°.03, h14km±7km, n23, σ0s.37/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZC	Erzincan	0.20	211	ePG	Pg	04 01 34.6	-0.6
EZC	Erzincan	0.20	211	ePg	Pg	04 01 34.6	-0.6
KELT	Kelkit	0.28	321	i P	Pb	04 01 37.4	-0.1
KELT				i S	Sg	04 01 41.7	+0.9
KELT	Kelkit	0.28	321	i P	Pb	04 01 37.4	-0.1
KELT				i S	Sg	04 01 41.7	+0.9
ERZN	Erzincan	0.38	152	ePG	Pg	04 01 38.2	-0.1
ERZN				eSG	Sb	04 01 44.3	-0.6
GUMT	Gumushane	0.53	359	ePG	Pg	04 01 40.6	-0.4
GUMT				eSG	Sg	04 01 48.3	+0.1
GUMT	Gumushane	0.53	359	ePg	Pg	04 01 40.6	-0.4
GUMT				eSg	Sg	04 01 48.3	+0.1
BAYT	Ayd˘–ntepe-Bay	0.68	47	ePG	Pg	04 01 43.5	-0.4
BAYT	Ayd˘–ntepe-Bay	0.68	47	ePg	Pg	04 01 43.5	-0.4
KOPT	Kop Dagi	0.78	83	i P	Pg	04 01 45.8	+0.1
KOPT				i S	Sn	04 01 58.9	0.0
KOPT	Kop Dagi	0.78	83	i P	Pg	04 01 45.8	+0.1
KOPT				i S	Sn	04 01 58.9	0.0
ILIC	ilic-Erzincan	0.85	237	ePG	Pg	04 01 46.5	-0.5
ILIC				eSG	Sb	04 01 58.7	+0.3
ILIC	ilic-Erzincan	0.85	237	ePg	Pg	04 01 46.5	-0.5
ILIC				eSg	Sb	04 01 58.7	+0.3
KEMA	Kemaliye	1.01	230	i P	Pb	04 01 49.8	0.0
KEMA				i S	Sb	04 02 03.0	+0.1
KEMA	Kemaliye	1.01	230	i P	Pb	04 01 49.8	0.0
KEMA				i S	Sb	04 02 03.0	+0.1
SUSE	Susehri	1.03	286	i P	Pn	04 01 50.8	+0.3
SUSE				i S	Sn	04 02 05.0	+0.2
SUSE	Susehri	1.03	286	i P	Pn	04 01 50.8	+0.3
SUSE				i S	Sn	04 02 05.0	+0.2
MACK	Trabzon	1.04	12	i P	Pb	04 01 50.3	+0.1
MACK				i S	Sb	04 02 03.5	-0.2
MACK	Trabzon	1.04	12	i P	Pb	04 01 50.3	+0.1
MACK				i S	Sb	04 02 03.5	-0.2
KTUT	Trabzon	1.08	11	ePG	Pb	04 01 50.8	-0.1
KTUT	Trabzon	1.08	11	ePg	Pb	04 01 50.8	-0.1
ESPY	Espiye-Giresun	1.15	330	ePN	Pn	04 01 51.8	-0.3
ESPY	Espiye-Giresun	1.15	330	ePn	Pn	04 01 51.8	-0.3

TAP 07 04:10:05.5, 21°.37N×121°.81E, h151km, ML3.6, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.71	340	P	Pn	04 10 27.9	-0.3
	baz=340						
LAY				S	Sn	04 10 44.3	-1.3
	baz=340						
TSEB	Hengchuen, Pin	1.00	302	eP	Pn	04 10 31.1	+0.8
	baz=296						
TSEB				eS	Sn	04 10 50.2	+0.8
	baz=296						
TWK1	Hengchun	1.10	302	eP	Pn	04 10 31.8	+0.6
	baz=299						
TWK1				eS	Sn	04 10 50.5	-0.3
	baz=299						
HEN	Hengchun	1.18	303	eP	Pn	04 10 33.5	+1.5
	baz=295						
EAST	Anshuo	1.35	319	P	Pn	04 10 33.8	+0.1
	baz=319						
EAST				S	Sn	04 10 54.3	-0.9
	baz=319						
ECL	Taimali	1.46	327	eP	Pn	04 10 34.5	-0.2
	baz=323						
ECL				eS	Sn	04 10 55.0	-2.2
	baz=323						
SCZT	Fangliau	1.49	312	eP	Pn	04 10 35.5	+0.5
	baz=317						
SCZT				S	Sn	04 10 57.0	-0.8
	baz=317						
TWG	Pinlang	1.60	335	eP	Pn	04 10 36.1	-0.1
	baz=330						
TWG				eS	Sn	04 10 58.1	-1.8
	baz=330						
TWP	Hsiaoliuchiu	1.66	306	eP	Pn	04 10 38.5	+1.7
	baz=306						
SSD	Sandimen	1.75	322	eP	Pn	04 10 38.3	+0.4
	baz=322						
SSD				eS	Sn	04 11 01.4	-1.5
	baz=322						
TWM1	Shoushan	1.94	319	eP	Pn	04 10 41.3	+1.3
	baz=311						
TWF1	Yuli	2.03	346	eP	Pn	04 10 41.2	+0.1
	baz=338						
TWF1				eS	Sn	04 11 07.1	-1.4
	baz=338						
CHN1	Nanshi	2.16	327	eP	Pn	04 10 43.1	+0.4
	baz=327						
CHN1				eS	Sn	04 11 10.1	-1.3
	baz=327						
WTP	Ta-pu	2.17	329	P	Pn	04 10 43.2	+0.4
	baz=330						
WTP				eS	Sn	04 11 10.6	-1.0
	baz=330						
TWK	Hsinying	2.25	327	P	Pn	04 10 44.0	+0.2
	baz=327						
TWK				S	Sn	04 11 12.2	-1.1
	baz=327						
CHN4	Tsaushan	2.27	330	eP	Pn	04 10 43.6	-0.3
	baz=330						
CHN4				eS	Sn	04 11 13.1	-0.5
	baz=330						
ALS	Alishan	2.33	337	eP	Pn	04 10 45.4	+0.4
	baz=329						
ALS				eS	Sn	04 11 14.5	-0.9
	baz=329						
CHN5	Tsauling	2.45	335	P	Pn	04 10 46.5	+0.3
	baz=328						
CHN5				eS	Sn	04 11 16.3	-1.4
	baz=328						

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*ISCJB **07** 04:12:31.8±0.2, 42°.46N±0°.02×13°.41E±0°.02, h11km±2km, Error ellipse: s-maj=3.2km s-min=2.8km az=143.0*

*ROM **07** 04:12:31.8±0.1, 42°.46N×13°.42E, h10km, Ml3.2/25, Error ellipse: s-maj=1.0km s-min=0.7km az=76.0*

*CSEM **07** 04:12:32.3±0.1, 42°.45N×13°.41E, h2km, ML3.7/11, Error ellipse: s-maj=2.8km s-min=2.1km az=64.0*

*LDG **07** 04:12:35.6±0.6, 42°.45N×13°.30E, h2km, Ml3.0/8, Error ellipse: s-maj=11.8km s-min=8.7km az=114.0*

ISC 07 04:12:32.5±0.8, 42°.45N±0°.02×13°.40E±0°.02, h11km±4km, n96, σ1s.24/135, 1C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	Campotosto	0.08	5	Pg	Pg	04 12 34.9	-0.3
CAMP				Sg	Sg	04 12 36.1	-1.0
CAMP	Campotosto	0.08	5	Pg	Pg	04 12 34.9	-0.3
CAMP				Sg	Sg	04 12 36.1	-1.0
AQU	L'Aquila	0.10	179	Pg	Pg	04 12 35.3	0.0
AQU				Sg	Sg	04 12 37.3	0.0
	18µm,0.3s						
AQU	L'Aquila	0.10	179	Pg	Pg	04 12 35.3	0.0
AQU				Sg	Sg	04 12 37.3	0.0
	18µm,0.3s						
TERO	Teramo	0.23	42	Pg	Pg	04 12 36.9	-0.4
TERO				Sg	Sg	04 12 40.2	-0.3
	5µm,0.6s						
TERO	Teramo	0.23	42	Pg	Pg	04 12 36.9	-0.4
TERO				Sg	Sg	04 12 40.2	-0.3
	5µm,0.6s						
FAGN	Fagnano	0.23	144	Pg	Pg	04 12 37.3	-0.1
FAGN				Sg	Sg	04 12 41.0	+0.3
	10µm,0.5s						
FAGN	Fagnano	0.23	144	Pg	Pg	04 12 37.3	-0.1
FAGN				Sg	Sg	04 12 41.0	+0.3
	10µm,0.5s						
FIAM	Fiamignano	0.28	229	Pg	Pg	04 12 38.3	0.0
FIAM				Sg	Sg	04 12 42.5	+0.4
	3µm,0.6s						
FIAM	Fiamignano	0.28	229	Pg	Pg	04 12 38.3	0.0
FIAM				Sg	Sg	04 12 42.5	+0.4
	3µm,0.6s						
VCEL	Villa Celiera	0.33	100	Pg	Pg	04 12 38.8	-0.4
VCEL				Sg	Sg	04 12 44.2	+0.5
	7µm,0.5s						
VCEL	Villa Celiera	0.33	100	Pg	Pg	04 12 38.8	-0.4
VCEL				Sg	Sg	04 12 44.2	+0.5
	7µm,0.5s						
PTQR	Pietraquaria	0.43	180	Pg	Pg	04 12 40.6	-0.4
PTQR	Pietraquaria	0.43	180	Pg	Pg	04 12 40.6	-0.4
NRCA	Norcia	0.43	331	Pg	Pg	04 12 40.9	-0.2
NRCA	Norcia	0.43	331	Pg	Pg	04 12 40.9	-0.2
OFFI	Offida	0.53	24	Pg	Pg	04 12 43.0	+0.2
	18µm,0.7s						
OFFI	Offida	0.53	24	Pg	Pg	04 12 43.0	+0.2
	18µm,0.7s						
MNS	Montasola	0.54	263	Pg	Pg	04 12 42.5	-0.5
MNS				Sg	Sg	04 12 50.6	+0.5
	777nm,0.5s						
MNS	Montasola	0.54	263	Pg	Pg	04 12 42.5	-0.5
MNS				Sg	Sg	04 12 50.6	+0.5
	777nm,0.5s						
INTR	Introdacqua	0.58	140	Pg	Pg	04 12 43.2	-0.6
INTR				Sg	Sg	04 12 52.0	+0.6
	2µm,0.5s						
INTR	Introdacqua	0.58	140	Pg	Pg	04 12 43.2	-0.6
INTR				Sg	Sg	04 12 52.0	+0.6
	2µm,0.5s						
CERT	Cerreto	0.59	212	Pg	Pg	04 12 43.4	-0.6
CERT				Sg	Sb	04 12 52.9	-0.4
	4µm,0.5s						
CERT	Cerreto	0.59	212	Pg	Pg	04 12 43.4	-0.6
CERT				Sg	Sb	04 12 52.9	-0.4
	4µm,0.5s						
VVLD	Villa Vallelon	0.61	164	Pg	Pg	04 12 43.4	-0.9
	1µm,0.5s						
VVLD	Villa Vallelon	0.61	164	Pg	Pg	04 12 43.4	-0.9
	1µm,0.5s						
FDMO	Fiordimonte	0.63	338	Pg	Pg	04 12 44.0	-0.7
FDMO				Sg	Sg	04 12 53.6	+0.7
	515nm,0.2s						
FDMO	Fiordimonte	0.63	338	Pg	Pg	04 12 44.0	-0.7
FDMO				Sg	Sg	04 12 53.6	+0.7
	515nm,0.2s						
MTCE	Montecelio	0.65	229	Pg	Pg	04 12 44.4	-0.7
	902nm,0.6s						
MTCE	Montecelio	0.65	229	Pg	Pg	04 12 44.4	-0.7
	902nm,0.6s						
CESI	CESI - Serrava	0.66	327	Pg	Pg	04 12 44.8	-0.5
CESI				Sg	Sg	04 12 54.5	+0.5
	194nm,0.5s						
CESI	CESI - Serrava	0.66	327	Pg	Pg	04 12 44.8	-0.5
CESI				Sg	Sg	04 12 54.5	+0.5
	194nm,0.5s						
GUAR	Guarcino	0.66	186	Pg	Pg	04 12 44.9	-0.4
	678nm,0.4s						
GUAR	Guarcino	0.66	186	Pg	Pg	04 12 44.9	-0.4
	678nm,0.4s						
CAFR	Castel Frentan	0.74	108	Pg	Pg	04 12 45.8	-1.0
	1µm,0.7s						
CAFR	Castel Frentan	0.74	108	Pg	Pg	04 12 45.8	-1.0
	1µm,0.7s						
POFI	Posta Fibreno	0.77	162	Pg	Pg	04 12 46.8	-0.6
	247nm,0.5s						
POFI	Posta Fibreno	0.77	162	Pg	Pg	04 12 46.8	-0.6
	247nm,0.5s						
ASSB	Assisi San Ben	0.80	317	Pg	Pg	04 12 47.1	-0.9
	548nm,0.5s						
ASSB	Assisi San Ben	0.80	317	Pg	Pg	04 12 47.1	-0.9
	548nm,0.5s						
SDI	San Donato	0.81	158	Pg	Pg	04 12 46.9	-1.1
	185nm,0.3s						
SDI	San Donato	0.81	158	Pg	Pg	04 12 46.9	-1.1
	185nm,0.3s						
GIUL	Giuliano Di Ro	0.90	187	Pg	Pg	04 12 49.7	-0.2
	524nm,0.7s						
GIUL	Giuliano Di Ro	0.90	187	Pg	Pg	04 12 49.7	-0.2
	524nm,0.7s						
CING	Cingoli	0.93	351	Pg	Pg	04 12 49.4	-1.1
	465nm,0.4s						
CING	Cingoli	0.93	351	Pg	Pg	04 12 49.4	-1.1
	465nm,0.4s						
CERA	Filignano	0.97	152	Pg	Pg	04 12 49.7	-1.5
	467nm,0.5s						
CERA	Filignano	0.97	152	Pg	Pg	04 12 49.7	-1.5
	467nm,0.5s						
MIDA	Miranda	1.03	142	Pg	Pg	04 12 50.6	-1.7
	194nm,0.4s						
MIDA	Miranda	1.03	142	Pg	Pg	04 12 50.6	-1.7
	194nm,0.4s						
MGAB	Montegabbione	1.05	296	Pg	Pb	04 12 51.9	-0.9
	638nm,0.5s						
MGAB	Montegabbione	1.05	296	Pg	Pb	04 12 51.9	-0.9
	638nm,0.5s						
ARVD	Arcevia	1.10	342	Pg	Pb	04 12 52.2	-1.3
	261nm,0.6s						
ARVD	Arcevia	1.10	342	Pg	Pb	04 12 52.2	-1.3
	261nm,0.6s						
VAGA	Valle Agricola	1.21	149	Pg	Pn	04 12 54.5	-0.9
	176nm,0.5s						
VAGA	Valle Agricola	1.21	149	Pg	Pn	04 12 54.5	-0.9
	176nm,0.5s						
PIEI	Pieia	1.25	330	Pn	Pn	04 12 55.3	-0.7
	233nm,0.5s						
PIEI	Pieia	1.25	330	Pn	Pn	04 12 55.3	-0.7
	233nm,0.5s						
MS1	Monte Sant'Ang	2.04	111	ePn	Pg	04 13 10.8	-0.7
NVLJ	Novalja	2.36	26	ePn	Pn	04 13 11.3	+0.1
NVLJ				Sn	Sn	04 13 41.4	+1.2
NVLJ	Novalja	2.36	26	ePn	Pn	04 13 11.3	+0.1
NVLJ				Sn	Sn	04 13 41.3	+1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CDT	**Castel del Mon**	**2.55**	**122**	*e*Pn	**Pb**	**04 13 17.4**	**-0.9**
CDT				*e*Sn	**Sb**	**04 13 48.4**	**-1.2**
MAIM	**Mastiano**	**2.58**	**305**	P	**Pn**	**04 13 15.6**	**+1.4**
SKDS	**Skadanscina**	**3.12**	**8**	*i* Pn	**Pn**	**04 13 22.0**	**+0.3**
SKDS				*e*Sn	**Sn**	**04 14 00.2**	**+1.2**
SKDS							
	comp=Z,18nm,0.2s						
SKDS	**Skadanscina**	**3.12**	**8**	Pn	**Pn**	**04 13 22.0**	**+0.3**
SKDS				*e*Sn	**Sn**	**04 14 00.2**	**+1.2**
	comp=Z,18nm,0.2s						
STON	**Ston**	**3.20**	**81**	*e*Pn	**Pn**	**04 13 23.2**	**+0.6**
STON				Sn	**Sn**	**04 14 01.2**	**+0.5**
STON	**Ston**	**3.20**	**81**	*e*Pn	**Pn**	**04 13 23.2**	**+0.6**
STON				Sn	**Sn**	**04 14 01.2**	**+0.5**
PGF	**Pioggiola**	**3.25**	**273**	*e*Pn	**Pn**	**04 13 24.8**	**+1.2**
PGF				*e*Sn	**Sn**	**04 14 04.6**	**+2.2**
	comp=Z,6.4nm,0.7s						
PGF	**Pioggiola**	**3.25**	**273**	*e*Pn	**Pn**	**04 13 24.8**	**+1.2**
PGF				*e*Sn	**Sn**	**04 14 04.6**	**+2.2**
	comp=Z,3.2nm,0.7s						
ABTA	**Abfaltersbach**	**4.34**	**352**	⇑*i*Pn	**Pn**	**04 13 39.4**	**+1.0**
ABTA	**Abfaltersbach**	**4.34**	**352**	Pn	**Pn**	**04 13 39.4**	**+1.0**
SBF	**Sospel**	**4.58**	**290**	*e*Pn	**Pn**	**04 13 42.9**	**+1.1**
SBF				*e*Sn	**Sn**	**04 14 33.0**	**-2.1**
	comp=Z,10nm,0.6s						
SBF	**Sospel**	**4.58**	**290**	*e*Pn	**Pn**	**04 13 42.9**	**+1.1**
SBF				*e*Sn	**Sn**	**04 14 33.0**	**-2.1**
	comp=Z,5.2nm,0.6s						
FRF	**La Foret Royal**	**5.07**	**285**	*e*Pn	**Pn**	**04 13 50.0**	**+1.5**
FRF				*e*Sn	**Sn**	**04 14 44.6**	**-2.5**
	comp=Z,6.4nm,0.8s						
FRF	**La Foret Royal**	**5.07**	**285**	*e*Pn	**Pn**	**04 13 50.0**	**+1.5**
FRF				*e*Sn	**Sn**	**04 14 44.6**	**-2.5**
	comp=Z,3.2nm,0.8s						
DIVS	**Divibare**	**5.08**	**69**	*e*Pn	**Pn**	**04 13 51.0**	**+2.3**
LMR	**La Mourre**	**5.14**	**282**	*e*Pn	**Pn**	**04 13 50.1**	**+0.8**
LMR				*e*Sn	**Sn**	**04 14 45.3**	**-3.3**
	comp=Z,3.1nm,0.6s						
LMR	**La Mourre**	**5.14**	**282**	*e*Pn	**Pn**	**04 13 50.1**	**+0.8**
MBDF	**Montbardon**	**5.32**	**298**	*e*P	**Pn**	**04 13 54.6**	**+2.6**
MBDF	**Montbardon**	**5.32**	**298**	*e*P	**Pn**	**04 13 54.6**	**+2.6**
GRUS	**Gruza**	**5.54**	**73**	*e*Pn	**Pn**	**04 13 57.6**	**+2.8**
LPL	**La Plagne**	**5.70**	**305**	*e*P	Pn	04 14 00.8	+3.5
LPL				*e*Sn	**Sn**	**04 14 58.7**	**-4.1**
	comp=Z,3.6nm,0.7s						
LPL	**La Plagne**	**5.70**	**305**	*e*P	Pn	04 14 00.8	+3.5
SELS	**Selova**	**5.73**	**80**	*e*Pn	**Pn**	**04 13 57.9**	**+0.4**
BARS	**Barje**	**6.22**	**84**	*e*Pn	**Pn**	**04 14 06.0**	**+1.8**
CABF	**La Chapelle**	**6.68**	**311**	*e*Pn	**Pn**	**04 14 12.5**	**+2.0**
CABF	**La Chapelle**	**6.68**	**311**	*e*Pn	**Pn**	**04 14 12.5**	**+2.0**
KHC	**Kasperske Hory**	**6.68**	**1**	*e*PN	**Pn**	**04 14 11.4**	**+0.9**
KHC				*e*x	x	04 14 23.0	
KHC				*e*x	x	04 14 33.5	
KHC				*e*SN	**Sn**	**04 15 24.7**	**-1.9**
KHC	**Kasperske Hory**	**6.68**	**1**	Pn	**Pn**	**04 14 11.4**	**+0.9**
ZAPS	**Zavoj**	**6.83**	**80**	*e*Pn	**Pn**	**04 14 13.5**	**+0.8**
HINF	**Hinteralfeld**	**7.08**	**321**	*e*Pn	**Pn**	**04 14 17.2**	**+1.1**
HINF				*e*Sn	**Sn**	**04 15 34.1**	**-2.4**
	comp=Z,8.5nm,0.7s						
HINF	**Hinteralfeld**	**7.08**	**321**	*e*Pn	**Pn**	**04 14 17.2**	**+1.1**
CDF	**Champ du Feu**	**7.35**	**326**	*e*Pn	**Pn**	**04 14 20.3**	**+0.5**
CDF				*e*Sn	**Sn**	**04 15 40.7**	**-2.5**
	comp=Z,3.4nm,0.5s						
CDF	**Champ du Feu**	**7.35**	**326**	*e*Pn	**Pn**	**04 14 20.3**	**+0.5**
HAU	**Haudompre**	**7.45**	**321**	*e*Pn	**Pn**	**04 14 22.0**	**+0.8**
HAU				*e*Sn	**Sn**	**04 15 41.6**	**-4.1**
	comp=Z,8.0nm,0.5s						
HAU	**Haudompre**	**7.45**	**321**	*e*Pn	**Pn**	**04 14 22.0**	**+0.8**

*NIED **07** 04:23:00, 46.°00N×152.°20E, h44km, Mw6.8 Best double couple: $M_0$1.51000×10^{19} NP1:ϕ_s341.00000°, δ60.00000°, λ48.00000°. NP2:ϕ_s222.00000°, δ50.00000°, λ139.00000°.*

*BJI **07** 04:23:29.2, 46.°22N×151.°93E, h30km, mB7.0/49, mb6.1/62, Ms6.8/77, Ms7 6.8/69*

*JMA **07** 04:23:30.1±0.6, 46.°01N×152.°19E, h30km, M6.7*

JMA Felt III J1.

*SKHL **07** 04:23:31.5±0.2, 45.°90N×152.°15E, h35km±1km, mb7.2/7, mbh6.8/4, Ms6.9/1, msh6.9/3*

SKHL Felt (III-IV) at Kurilsk, (II) at Severo-Kurilsk, Yushno-Kurilsk.

*ISCJB **07** 04:23:32.3±0.3, 46.°04N±0.°02×151.°59E±0.°01, h36km±3km, mb6.3/543, MS6.8/265, Error ellipse: s-maj=2.8km s-min=1.5km az=159.3*

*MOS **07** 04:23:33.3±1.7, 46.°02N×151.°67E, h56km, mb6.7/135, MS6.9/79, Error ellipse: s-maj=8.9km s-min=4.0km az=102.3 Broadband fault plane solution: P waves. $M_0$9.60000×10^{19} NP1:ϕ_s219.00000°, δ32.00000°, λ97.00000°. NP2:ϕ_s31.00000°, δ58.00000°, λ86.00000°. Principal axes: T Plg77.0000°, Azm289.0000°; N Plg4.0000°, Azm34.0000°; P Plg13.0000°, Azm124.0000°;*

MOS Fault plane solution: P-wave C225, D12 . Felt (III-IV) at Kuril'sk; (II) at Severo-Kuril'sk, Yuzhno-Kuril'sk.

*IDC **07** 04:23:33.5±1.1, 46.°10N×151.°57E, h33km±6km, mb5.6/26, mb1 5.7/30, mb1mx5.7/30, mbtmp5.6/30, ML5.4/4, MS6.8/29, Ms1 6.8/29, ms1mx6.7/33 Error ellipse: s-maj=9.3km s-min=7.1km az=127.0*

*NEIC **07** 04:23:33.1±0.1, 46.°05N×151.°55E, h31km, mb6.5/285, ME6.6, MS6.8/167, MW6.9, MW6.8, MW6.9(USGS), Error ellipse: s-maj=3.5km s-min=2.3km az=159.0, Moment Tensor Solution. s130 Moment tensor: Scale 10^{19}Nm; M_{rr}1.50; $M_{\theta\theta}$-0.43; $M_{\phi\phi}$-1.07; $M_{r\theta}$0.65; $M_{\theta\phi}$-0.40; $M_{\phi r}$0.94; Best double couple: $M_0$1.80000×10^{19} NP1:ϕ_s31.00000°, δ65.00000°, λ94.00000°. NP2:ϕ_s202.00000°, δ25.00000°, λ82.00000°. Principal axes: T 1.9200, Plg69.0000°, Azm308.0000°; N -0.2500, Plg3.0000°, Azm209.0000°; P -1.6700, Plg19.0000°, Azm118.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Felt [IV] at Kuril'sk and [II] at Severo-Kuril'sk and Yuzhno-Kuril'sk. Felt at Sapporo, Hokkaido. Recorded [3 JMA] in southeastern Hokkaido. Also recorded [1 JMA] in Aomori, Iwate and Miyagi, Honshu.

*TEH **07** 04:23:34.0, 46.°14N×151.°42E, h39km, ML7.0*

*DJA **07** 04:23:34.4±2.4, 46°N±6°×15°2E±°, h33km±17km, M6.9/92, mb6.2/92, mB7.0/87, Mw(mB)6.9/87, Mwp6.8/71*

*SZGRF **07** 04:23:34.7, 47.°27N×151.°44E, h33km, mb6.3, MS7.1, Kuril Islands, Russia*

*BGS **07** 04:23:36.1±1.8, 46.°88N×153.°58E, h33km, mb6.2, MS6.7*

*GCMT **07** 04:23:41.0±0.0, 46.°00N×151.°99E, h43km, MW6.9, Moment Tensor Solution. s114,c304; s99,c261; Moment tensor: Scale 10^{19}Nm; M_{rr}2.08±.01; $M_{\theta\theta}$-0.80±.01; $M_{\phi\phi}$-1.28±.01; $M_{r\theta}$0.41±.01; $M_{\theta\phi}$-1.19±.01; $M_{\phi r}$1.24±.01; Best double couple: $M_0$2.50000×10^{19} NP1:ϕ_s231.00000°, δ31.00000°, λ110.00000°. NP2: ϕ_s28.00000°, δ61.00000°, λ78.00000°. Principal axes: T 2.4900, Plg72.0000°, Azm271.0000°; N 0.0900, Plg10.0000°, Azm34.0000°; P -2.5800, Plg15.0000°, Azm127.0000°; Data Used: II IU IC G. LP body wave period 50 sec. Mantle waves from 109 sta. Surface waves: sta=117, comp=312, per= 50.*

ISC 07 04:23:34.1±0.3**, 46.°06N**±0.°03×**151.°64E**±0.°02**, h40**km±1km**, h40km:pP-P, n2296, σ1.s35**/2518**, mb6.3**/546**, MS6.8**/268**, 772C-271D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.77**	**254**	⇑*i*PN	**Pn**	**04 24 18.0**	**+2.1**
KUR				pmax	pmax		
	comp=Z,137µm,6.0s						
KUR	**Kuril'sk**	**2.77**	**254**	⇑*i*P	**Pn**	**04 24 18.0**	**+2.1**
KUR				AMB	AMB	04 24 22.0	
	comp=Z,137µm,6.0s						
YUK	**Yuzh-Kuril'sk**	**4.56**	**246***c*	*i*PN	**Pn**	**04 24 42.8**	**+2.2**
YUK				*i* S	**Sn**	**04 25 36.3**	**+4.0**
YUK				pmax	pmax		
	comp=E,3µm,0.5s						
YUK				pmax	pmax		
	comp=N,2µm,0.5s						
YUK				pmax	pmax		
	comp=Z,7µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.56**	**246**	*i* P	**Pn**	**04 24 43.1**	**+2.5**
YUK	**Yuzh-Kuril'sk**	**4.56**	**246**	⇑*i*P	**Pn**	**04 24 42.9**	**+2.3**
YUK				AMB	AMB	04 24 46.2	
	comp=Z,2µm,0.5s						
YUK				AMB	AMB	04 24 46.2	
	comp=Z,3µm,0.5s						
YUK				AMB	AMB	04 24 46.2	
	comp=Z,7µm,0.5s						
YUK				*i* sP	sP	04 24 58.2	
YUK				*i* S	**Sn**	**04 25 36.3**	**+4.0**
NEM2	**Nemuro 2**	**4.99**	**239**	P	**Pn**	**04 24 46.6**	**+0.2**
NEM2				*e*S	**Sn**	**04 25 43.7**	**+0.9**
JRA	**Rausu**	**5.08**	**248**	⇑P	**Pn**	**04 24 50.3**	**+2.6**
JRA				*e*S	**Sn**	**04 25 50.4**	**+5.3**
JNK	**Nakash**	**5.51**	**246**	P	**Pn**	**04 24 56.3**	**+2.8**
JNK				*e*S	**Sn**	**04 25 59.3**	**+3.8**
SKR	**Severo-Kuril's**	**5.51**	**31**	*e*PN	**Pn**	**04 24 53.1**	**-0.4**
SKR				pmax	pmax		
	comp=E,3µm,1.2s						
SKR				pmax	pmax		
	comp=Z,10µm,1.2s						
SKR				pmax	pmax		
	comp=N,570nm,0.4s						
SKR				pmax	pmax		
	comp=Z,12µm,3.0s						
SKR				pmax	pmax		
	comp=N,10µm,4.0s						
SKR				pmax	pmax		
	comp=E,3µm,2.0s						
SKR				MLR	MLR		
	comp=Z,706µm,14.0s						
SKR				MLR	MLR		
	comp=N,705µm,24.0s						
SKR				MLR	MLR		
	comp=E,705µm,12.0s						
SKR	**Severo-Kuril's**	**5.51**	**31**	*e*P	**Pn**	**04 24 53.1**	**-0.4**
SKR				AMB	AMB	04 24 57.5	
	comp=E,10µm,3.0s						
SKR				AMB	AMB	04 24 57.5	
	comp=E,3µm,3.0s						
SKR				AMB	AMB	04 24 57.5	
	comp=E,12µm,3.0s						
SKR				AMB	AMB	04 24 57.5	
	comp=E,570nm,0.4s						
SKR				AMB	AMB	04 24 57.5	
	comp=E,10µm,3.0s						
SKR				AMB	AMB	04 24 57.5	
	comp=E,11µm,3.0s						
SKR				AMB	AMB	04 24 57.5	
	comp=E,3µm,1.2s						
SKR				AMB	AMB	04 24 57.5	
	comp=E,10µm,1.2s						
SKR				*i* S	**Sn**	**04 25 54.4**	**-1.1**
SKR				A	A	04 26 04.0	
	comp=E,248µm,18.0s						
SKR				A	A	04 26 04.0	
	comp=E,753µm,9.0s						
SKR				A	A	04 26 20.0	
	comp=E,30µm,1.0s						
SKR				A	A	04 26 20.0	
	comp=E,27µm,1.0s						
SKR				A	A	04 26 20.0	
	comp=E,17µm,1.0s						
SKR				AMS	AMS	04 27 32.0	
	comp=E,705µm,12.0s						
SKR				AMS	AMS	04 27 32.0	
	comp=E,706µm,14.0s						
SKR				AMS	AMS	04 27 32.0	
	comp=E,340µm,24.0s						
JAK	**Akkeshi**	**5.83**	**241**	P	**Pn**	**04 24 58.3**	**+0.4**
JAK				*e*S	**Sn**	**04 26 04.2**	**+0.8**
JTKR	**Abashiri--Toko**	**5.86**	**252**	⇓P	**Pn**	**04 25 01.3**	**+2.9**
YSS	**Yuzh-Sakhalins**	**6.20**	**282**κ	*i*PN	Pn	04 25 08.2	+5.2
YSS				*e*S	**Sn**	**04 26 17.9**	**+5.4**
YSS				pmax	pmax		
	comp=Z,4µm,0.8s						
YSS				pmax	pmax		
	comp=N,2µm,0.5s						
YSS				pmax	pmax		
	comp=E,3µm,0.9s						
YSS				pmax	pmax		
	comp=Z,60µm,5.0s						
YSS				pmax	pmax		
	comp=E,46µm,4.0s						
YSS				MLR	MLR		
	comp=N,426µm,19.0s						
YSS				MLR	MLR		
	comp=Z,809µm,19.0s						
YSS				MLR	MLR		
	comp=E,577µm,20.0s						
YSS	**Yuzh-Sakhalins**	**6.20**	**282**	⇓*i*P	Pn	04 25 07.3	+4.4
	comp=E,2µm,0.7s						
YSS	**Yuzh-Sakhalins**	**6.20**	**282**	⇓*i*P	Pn	04 25 08.2	+5.2
YSS				⇓*i*P	Pn	04 25 08.2	+5.2
YSS				⇓*i*P	Pn	04 25 08.2	+5.2
YSS				AMB	AMB	04 25 12.3	
	comp=E,3µm,0.9s						
YSS				AMB	AMB	04 25 12.3	
	comp=E,4µm,0.8s						
YSS				AMB	AMB	04 25 12.3	
	comp=E,2µm,0.5s						
YSS				AMB	AMB	04 25 12.5	
	comp=E,60µm,5.0s						
YSS				AMB	AMB	04 25 12.5	
	comp=E,46µm,4.0s						
YSS				*i* pP		04 25 18.0	
YSS				*e*sP	sP	04 25 24.0	
YSS				*e*S	**Sn**	**04 26 17.9**	**+5.4**
YSS				*e*LQ	LQ	04 26 39.0	
YSS				*e*LR	LR	04 26 46.0	
YSS				AMS	AMS	04 27 17.0	
	comp=E,809µm,19.0s						
YSS				AMS	AMS	04 27 17.0	
	comp=E,843µm,18.0s						
YSS				AMS	AMS	04 27 17.0	
	comp=E,376µm,15.0s						
YSS				AMS	AMS	04 27 17.0	
	comp=E,577µm,20.0s						
YSS				AMS	AMS	04 27 17.0	
	comp=E,426µm,19.0s						
YSS				AMS	AMS	04 27 17.0	
	comp=E,564µm,19.0s						
YSS				AMS	AMS	04 27 18.0	
	comp=E,554µm,20.0s						
YSS				AMS	AMS	04 27 18.0	
	comp=E,779µm,20.0s						
YSS				AMS	AMS	04 27 18.0	
	comp=E,1170µm,19.0s						
JMP	**Maruseppu**	**6.21**	**254**	P	Pn	04 25 07.5	+4.2
JMP				*e*S	Sn	04 26 19.5	+6.5
JAR	**Ashorobuto**	**6.25**	**247**	⇑P	**Pn**	**04 25 06.4**	**+2.7**
JAR				*e*S	**Sn**	**04 26 18.1**	**+4.2**
JOB	**Onbets**	**6.41**	**243**	P	**Pn**	**04 25 07.3**	**+1.4**
JOB				*e*S	**Sn**	**04 26 18.8**	**+1.1**
JSE	**Soyaes**	**6.46**	**263**	P	Pn	04 25 11.2	+4.7
JKK2	**Kamakawa 2**	**6.67**	**254**	P	Pn	04 25 13.3	+3.8
ASAJ	**Asahikawa**	**6.69**	**256**	Pn	Pn	04 25 13.3	+3.6
ASAJ				*e*Pn	Pn	04 25 13.7	+3.9
ASAJ				Sn	Sn	04 26 36.5	+12
ASAJ	**Asahikawa**	**6.69**	**256**	P	Pn	04 25 14.1	+4.4
ASAJ	**Asahikawa**	**6.69**	**256**	Pn	Pn	04 25 13.3	+3.6
	comp=E,86nm,0.3s,baz=79,slow=14,SNR=248						
ASAJ				Sn	Sn	04 26 36.5	+12
	comp=E,118nm,0.3s,baz=151,slow=19,SNR=2.5						
ASAJ				LR	LR	04 27 54.5	
	comp=E,1019µm,21.3s,baz=80,slow=39						
JCH	**Churui**	**6.86**	**243**	⇑P	**Pn**	**04 25 12.5**	**+0.4**
JCH				*e*S	**Sn**	**04 26 28.2**	**-0.6**
JWK2	**Keihoku**	**6.86**	**267**	P	Pn	04 25 17.7	+5.6
JFR	**Furan**	**7.07**	**249**	⇑P	**Pn**	**04 25 17.8**	**+2.8**
JFR				*e*S	**Sn**	**04 26 38.9**	**+4.8**
JSS	**Shosan**	**7.11**	**260**	P	Pn	04 25 22.3	+6.9
UGL	**Uglegorsk**	**7.14**	**298**	⇓*i*PN	Pn	04 25 21.3	+5.3
UGL				*e*S	**Sn**	**04 26 40.0**	**+4.2**
UGL				pmax	pmax		
	comp=N,3µm,1.0s						
UGL				pmax	pmax		
	comp=E,3µm,1.0s						
UGL				pmax	pmax		
	comp=Z,8µm,1.0s						
UGL				smax	smax		
	comp=N,6µm,0.9s						
UGL				smax	smax		
	comp=E,5µm,0.9s						
UGL	**Uglegorsk**	**7.14**	**298**	⇓*i*P	Pn	04 25 21.3	+5.3
UGL				⇓*i*P		04 25 22.0	
UGL				AMB	AMB	04 25 27.0	
	comp=E,3µm,1.0s						
UGL				AMB	AMB	04 25 27.0	
	comp=E,3µm,1.0s						
UGL				AMB	AMB	04 25 27.0	
	comp=E,8µm,1.0s						
UGL				*e*S	**Sn**	**04 26 40.0**	**+4.2**
UGL				A	A	04 26 45.0	
	comp=E,6µm,0.9s						
UGL				A	A	04 26 45.0	
	comp=E,5µm,0.9s						
JAB	**Ashibetsu**	**7.17**	**253**	⇑P	Pn	04 25 20.7	+4.4
JEM	**Erimo**	**7.32**	**240**	P	**Pn**	**04 25 19.1**	**+0.7**
JEM				*e*S	**Sn**	**04 26 40.8**	**+0.6**
ERM	**Erimo**	**7.32**	**240***d*	*i*PN	**Pn**	**04 25 19.1**	**+0.7**
ERM	**Erimo**	**7.32**	**240**	*e*Pn	**Pn**	**04 25 18.9**	**+0.4**
ERM				*e*Sn	**Sn**	**04 26 37.3**	**-3.0**
ERM	**Erimo**	**7.32**	**240**	Pn	**Pn**	**04 25 20.0**	**+1.6**
	comp=E,34µm,0.7s						
JBT2	**Biratori 2**	**7.40**	**247**	⇑P	**Pn**	**04 25 20.9**	**+1.4**
JBT2				*e*S	**Sn**	**04 26 45.6**	**+3.4**
JHR	**Hokuryu**	**7.41**	**255**	P	Pn	04 25 24.6	+5.0
JNBK	**Urakawa-nobuka**	**7.42**	**243**	P	**Pn**	**04 25 19.6**	**-0.2**
JNBK				*e*S	**Sn**	**04 26 42.8**	**+0.2**
TYV	**Tymovskoe**	**7.66**	**312**	*e*P	Pn	04 25 27.0	+3.9
JEW	**Eniwo**	**7.97**	**250**	P	**Pn**	**04 25 29.7**	**+2.4**
PEA0B	**Petropavlovsk-**	**8.08**	**27**	*e*Pn	**Pn**	**04 25 30.4**	**+1.6**
PEA0B				*e*S	Sn	04 27 06.8	+8.0
PETK	**Petropavlovsk-**	**8.08**	**27**	PN	Pn	04 25 33.1	+4.3
PETK						04 27 04.0	
PETK				pmax	pmax		
	comp=Z,13nm,0.3s						
PETK				MLR	MLR		
	comp=Z,429µm,20.9s						
PETK	**Petropavlovsk-**	**8.08**	**27**	Pn	Pn	04 25 33.1	+4.3
PETK				Sn	**Sn**	**04 27 04.0**	**+5.3**
PETK	**Petropavlovsk-**	**8.08**	**27**	Pn	Pn	04 25 33.1	+4.3
	comp=Z,13nm,0.3s,baz=181,slow=12,SNR=90						
PETK				Sn	**Sn**	**04 27 04.0**	**+5.3**
	baz=222,slow=40,SNR=2.3						
PETK				LR	LR	04 28 39.4	
	comp=Z,429µm,20.9s,baz=56,slow=38						
PET	**Petropavlovsk**	**8.33**	**31**	⇑*i*PN	**Pn**	**04 25 32.8**	**+0.6**
PET				pmax	pmax		
	comp=Z,18µm,12.0s						
PET				pmax	pmax		
	comp=Z,37µm,15.0s						
PET				MLR	MLR		
	comp=Z,369µm,19.0s						
PET				MLR	MLR		
	comp=Z,311µm,18.0s						
PET	**Petropavlovsk**	**8.33**	**31**	*e*Pn	**Pn**	**04 25 33.1**	**+0.9**
PET				*e*Sn	**Sn**	**04 27 04.4**	**-0.5**
JSK	**Shakotan**	**8.40**	**255**	P	**Pn**	**04 25 36.2**	**+3.1**
JNB	**Noboribetsu**	**8.41**	**249**	P	**Pn**	**04 25 35.2**	**+1.9**
JNB				*e*S	**Sn**	**04 27 06.4**	**-0.5**
JKB	**Kayabe**	**8.71**	**245**	P	**Pn**	**04 25 37.2**	**-0.2**
JKB				*e*S	**Sn**	**04 27 10.1**	**-4.1**
JSH	**Shimam**	**8.98**	**252**	P	**Pn**	**04 25 42.8**	**+1.7**
JYM2	**Yakumo 2**	**9.01**	**248**	P	**Pn**	**04 25 42.2**	**+0.6**
JSR	**Shiriuchi**	**9.29**	**245**	P	**Pn**	**04 25 45.5**	**+0.1**
JSR				*e*S	**Sn**	**04 27 23.2**	**-5.3**
JANG	**Nango**	**9.32**	**236**	P	**Pn**	**04 25 43.2**	**-2.6**
JANG				*e*S	Sn	04 27 20.4	-8.8
JTM	**Tenmabayashi**	**9.32**	**239**	P	**Pn**	**04 25 43.6**	**-2.2**
JTM				*e*S	Sn	04 27 22.5	-6.7
OKH	**Okha**	**9.37**	**326***d*	*i*PN	Pn	04 25 50.0	+3.6
OKH				pmax	pmax		
	comp=Z,100µm,4.0s						
OKH				MLR	MLR		
	comp=Z,235µm,14.0s						
OKH	**Okha**	**9.37**	**326**	⇓*i*P	Pn	04 25 50.0	+3.6
OKH				⇓*i*P		04 25 51.6	
OKH				AMB	AMB	04 25 54.0	
	comp=Z,60µm,10.0s						
OKH				AMB	AMB	04 25 54.0	
	comp=Z,100µm,4.0s						
OKH				AMB	AMB	04 25 54.0	
	comp=Z,79µm,9.0s						
OKH				AMB	AMB	04 25 56.8	
	comp=Z,7µm,1.1s						
OKH				*e*S	**Sn**	**04 27 32.0**	**+1.6**
OKH				*e*S		04 27 32.1	
OKH				A	A	04 27 34.0	
	comp=Z,74µm,12.0s						
OKH				AMS	AMS	04 31 30.0	
	comp=Z,235µm,14.0s						
JTH	**Tanohata**	**9.41**	**233**	P	Pn	04 25 43.8	-3.3
JTH				*e*S	Sn	04 27 22.3	-9.2
JOSM	**Okushiri--Mats**	**9.61**	**250**	⇑P	**Pn**	**04 25 50.7**	**+0.9**
NKL	**Nikolayevsk**	**10.04**	**319**	⇓*i*P	Pn	04 26 00.5	+4.9
NKL				AMB	AMB	04 26 09.0	
	comp=Z,1µm,0.9s						
NKL				AMB	AMB	04 26 09.0	
	comp=Z,560nm,0.9s						
NKL				AMB	AMB	04 26 09.0	
	comp=Z,1µm,0.9s						
NKL				AMB	AMB	04 26 22.0	
	comp=Z,54µm,14.0s						
NKL				AMB	AMB	04 26 22.0	
	comp=Z,58µm,14.0s						
NKL				AMB	AMB	04 26 22.0	
	comp=Z,103µm,14.0s						
OFUJ	**Ofunato**	**10.13**	**230**	P	Pn	04 25 53.2	-3.7
OFUJ				*e*S	Sn	04 27 39.1	-10
JRG	**Rokugo**	**10.47**	**234**	P	**Pn**	**04 25 59.5**	**-2.1**
JRG				*e*S	**Sn**	**04 27 52.4**	**-5.2**
TEY	**Ternei**	**10.60**	**270**	*e*P	Pn	04 26 08.8	+5.5
TEY				AMB	AMB	04 26 09.0	
	comp=Z,2µm,4.6s						
TEY				AMB	AMB	04 26 09.0	
	comp=Z,65nm,1.0s						
TEY				AMB	AMB	04 26 09.0	
	comp=Z,108nm,1.0s						
TEY				AMB	AMB	04 26 09.0	
	comp=Z,20µm,6.0s						
TEY				AMB	AMB	04 26 09.0	
	comp=Z,24µm,6.6s						
JOG2	**Oga 2**	**10.62**	**239**	P	**Pn**	**04 26 02.7**	**-1.0**
JOG2				*e*S	**Sn**	**04 27 56.2**	**-5.0**
JIO	**Ouri**	**10.76**	**229**	P	Pn	04 26 01.6	-3.9
JIO				*e*S	Sn	04 27 54.7	-10
JYA	**Atsumi**	**11.55**	**234**	P	**Pn**	**04 26 14.1**	**-2.2**
JFK	**Kawauchi**	**11.82**	**227**	P	Pn	04 26 16.0	-4.1
JFK				*e*S	Sn	04 28 20.0	-11
JAW	**Awa shima**	**11.90**	**235**	P	**Pn**	**04 26 19.3**	**-1.9**
JFY	**Yanaizu**	**12.40**	**230**	P	**Pn**	**04 26 25.7**	**-2.3**
JIZZ	**Izumozaki**	**12.86**	**233**	P	**Pn**	**04 26 33.3**	**-0.8**
JJN	**Nakama**	**13.46**	**233**	P	**Pn**	**04 26 40.9**	**-1.6**
KLR	**Kul'dur**	**13.77**	**291**	⇓*i*P	**Pn**	**04 26 48.3**	**+1.7**
MJAR	**Matsushiro Arr**	**13.85**	**231**	Pn	**Pn**	**04 26 45.3**	**-2.5**
MJAR				Sn	**Sn**	**04 29 20.4**	**+0.3**
MJAR	**Matsushiro Arr**	**13.85**	**231**	Pn	**Pn**	**04 26 45.3**	**-2.5**
	comp=Z,18nm,0.3s,baz=29,slow=13,SNR=146						
MJAR				Sn	**Sn**	**04 29 20.4**	**+0.3**
	comp=Z,4.6nm,0.3s,baz=41,slow=34,SNR=3.6						
MAJO	**Matsushiro**	**13.85**	**231**	*e*P	**Pn**	**04 26 45.6**	**-2.2**
MAJO	**Matsushiro**	**13.85**	**231**	*e*Pn	**Pn**	**04 26 45.6**	**-2.2**
MAT	**Matsushiro**	**13.85**	**231**	P	**Pn**	**04 26 45.1**	**-2.6**
MAT				S	**Sn**	**04 29 20.4**	**+0.3**
MAT	**Matsushiro**	**13.85**	**231**	P	**Pn**	**04 26 45.5**	**-2.2**
JRY	**Ryogami san**	**13.87**	**228**	P	**Pn**	**04 26 45.9**	**-2.2**
USRK	**Ussuriysk Arra**	**13.99**	**269**	Pn	**Pn**	**04 26 52.2**	**+2.6**
	comp=Z,6.8nm,0.3s,baz=82,slow=11,SNR=219						
USRK				Sn	**Sn**	**04 29 22.9**	**-0.4**
	baz=75,slow=25,SNR=1.8						
USRK				LR	LR	04 32 10.5	
	comp=Z,453µm,20.5s,baz=68,slow=37						
JTT	**Ttatey**	**14.29**	**234**	P	**Pn**	**04 26 52.2**	**-1.5**
JOD2	**Odawara 2**	**14.37**	**226**	P	**Pn**	**04 26 52.7**	**-2.1**
VLA	**Vladivostok**	**14.37**	**265***c*	*i*P	**Pn**	**04 26 54.5**	**-0.2**
VLA				*i* S	**Sn**	**04 29 34.7**	**+2.0**
VLA				pmax	pmax		
	comp=Z,806nm,1.2s						
JGN	**Niukaw**	**14.57**	**233**	P	**Pn**	**04 26 55.7**	**-1.9**
JAO	**Obara**	**15.31**	**230**	P	**Pn**	**04 27 05.5**	**-1.8**
FX1	**Attu Island--F**	**15.54**	**56**	Pn	**Pn**	**04 27 09.8**	**-0.2**
FX1				*e*Pn	**P**	**04 27 10.0**	**-3.9**
FX1				*e*Sn	Sn	04 29 49.0	-12
FX1	**Attu Island--F**	**15.54**	**56**	Pn	**Pn**	**04 27 09.8**	**-0.2**
	comp=Z,69nm,0.3s,baz=295,slow=6.3,SNR=98						
FX1				Sn	Sn	04 29 52.6	-8.3
	comp=Z,199nm,0.3s,baz=203,slow=23,SNR=8.4						
FX1				LR	LR	04 32 37.0	
	comp=Z,129µm,21.6s,baz=273,slow=35						
MDJ	**Mudanjiang**	**15.57**	**273**	P	**Pn**	**04 27 12.2**	**+1.7**
MDJ				PP	**pP**	**04 27 28.4**	**+4.2**
MDJ				S	**Sn**	**04 29 58.1**	**-3.6**

MDJ SS S 04 30 23.6 +7.7
MDJ pmax pmax
comp=Z,1μm,1.3s
MDJ LR LR
comp=N,91μm,24.9s
MDJ LR LR
comp=E,266μm,24.9s
MDJ LR LR
comp=Z,427μm,20.9s
JHJ Hachijo jima 2 15.80 219 Pn **Pn 04 27 12.6 -1.0**
comp=Z,17nm,0.3s,baz=61,slow=10,SNR=4.0
JHJ Sn Sn 04 29 55.0 -13
comp=Z,101nm,0.3s,baz=95,slow=22,SNR=6.7
JHJ LR LR 04 33 34.9
comp=Z,100μm,19.6s,baz=30,slow=38
JKY Yasaka 16.25 236 P **Pn 04 27 17.9 -1.4**
JKSM Kasumi 16.53 237 P **Pn 04 27 21.5 -1.4**
SEY Seymchan 16.92 1⇑*i*P Pn 04 27 27.9 +0.4
ZEA Zeya 17.43 305⇑*i*P Pn 04 27 32.5 -1.4
ZEA AMB AMB 04 27 42.0
comp=Z,43μm,8.0s
ZEA AMB AMB 04 27 42.0
comp=Z,15μm,6.0s
ZEA AMB AMB 04 27 42.0
comp=Z,33μm,6.0s
ZEA AMB AMB 04 27 43.4
comp=Z,11μm,3.0s
ZEA AMB AMB 04 27 43.4
comp=Z,16μm,3.0s
ZEA *e*S **Sn 04 30 42.0 -4.7**
ZEA A A 04 30 58.0
comp=Z,33μm,12.0s
ZEA A A 04 30 58.0
comp=Z,68μm,12.0s
CN2 Changchun 18.65 273 *e*P **P 04 27 47.3 -1.1**
CN2 *ep*P **pP 04 27 55.2 -3.1**
CN2 *es*P **sP 04 27 59.6 -3.9**
CN2 PP **PnPn 04 28 03.0 +1.6**
CN2 *e*S **Sn 04 31 13.7 -2.8**
CN2 SS **SnSn 04 31 34.6 +4.2**
AMKA Amchitka 18.95 64 *e*P **P 04 27 52.0 +0.4**
comp=Z,292nm,0.8s
AMKA *e*Sn Sn 04 31 14.5 -9.1
KSRS Korea Array 19.61 252 P **P 04 27 59.1 +0.2**
comp=Z,17nm,0.3s,baz=59,slow=10,SNR=367
KSRS S **S 04 31 38.5 +0.5**
comp=Z,0.5nm,0.3s,baz=52,slow=20,SNR=3.5
KSRS PcP **PcP 04 32 18.5 +1.3**
comp=Z,1.1nm,0.3s,baz=345,slow=0.8,SNR=7.7
KSRS LR LR 04 34 52.4
comp=Z,177μm,19.6s,baz=59,slow=35
KSRS ScP **ScP 04 35 50.7 +0.9**
comp=Z,0.2nm,0.3s,baz=63,slow=2.3,SNR=4.4
KSAR Wonju Array Be 19.65 252 P **P 04 27 59.1 -0.1**
KSAR S **S 04 31 38.5 -0.1**
KSAR PcP **PcP 04 32 18.5 +1.2**
KSAR ScP **ScP 04 35 50.7 +0.8**
JKI Kunimi 19.72 238 P **Pn 04 28 01.4 -0.4**
CLNS Chul'man 19.72 313 *e*P **P 04 28 00.6 +0.6**
CLNS pmax pmax
comp=Z,132nm,0.9s
CLNS pmax pmax
comp=E,69nm,1.0s
CLNS pmax pmax
comp=N,62nm,1.1s
CLNS MLR MLR
comp=N,101μm,20.0s
CLNS MLR MLR
comp=Z,110μm,20.0s
CLNS MLR MLR
comp=E,141μm,23.0s
JUS Usuki 20.02 237 P Pn 04 28 04.8 -0.5
CBIJ Chichi jima 20.36 205 P **P 04 28 07.4 +0.3**
CBIJ S S 04 31 42.5 -10
CBIJ Chichi jima 20.36 205 P **P 04 28 07.4 +0.3**
comp=E,539nm,0.7s,baz=52,slow=3.4,SNR=19
CBIJ S S 04 31 42.5 -10
comp=E,458nm,0.8s,baz=138,slow=23,SNR=6.9
YAK Yakutsk 20.38 330*c i*P **P 04 28 06.5 -0.5**
YAK *e**PP pP 04 28 25.4 +8.4
YAK *e*S **S 04 31 50.1 -2.7**
YAK *e**SS sS 04 32 18.3 +9.4
YAK pmax pmax
comp=Z,4μm,1.0s
YAK pmax pmax
comp=N,2μm,1.1s
YAK pmax pmax
comp=E,2μm,1.2s
YAK smax smax
comp=N,3μm,1.9s
YAK smax smax
comp=E,6μm,2.3s
YAK Yakutsk 20.38 330 *e*P **P 04 28 06.7 -0.3**
comp=E,4μm,0.8s
YAK *e* 04 28 14.5
YAK *e* 04 31 57.6
YAK LR LR
comp=Z,400μm,22.0s
INCN Inchon 20.46 254 *e*Pn **P 04 28 09.3 +1.2**
comp=Z,2μm,1.1s
INCN LR LR
comp=Z,184μm,19.0s
INCN Inchon 20.46 254 P Pn 04 28 09.6 -0.9
SNR=177
JNU Nakatsue 20.49 238 *e*P **P 04 28 09.3 +0.8**
comp=Z,916nm,1.5s
JNU P Pn 04 28 09.9 -1.0
JNU S **S 04 31 57.8 +2.3**
JNU Nakatsue 20.49 238 P Pn 04 28 09.9 -1.0
comp=Z,684nm,1.1s,baz=49,slow=11,SNR=82
JNU S **S 04 31 57.8 +2.3**
comp=Z,52nm,1.1s,baz=45,slow=19,SNR=1.7
JKIT Kitakata 20.51 236 P Pn 04 28 10.3 -0.8
SNY Shenyang 20.59 268 ⇑P **P 04 28 09.8 +0.3**
SNY S **S 04 31 57.2 -0.2**
SNY LR LR
comp=N,64μm,16.8s
SNY LR LR
comp=E,280μm,21.0s
SNY LR LR
comp=Z,327μm,18.6s
JTSN Tsuno 20.75 235 P Pn 04 28 13.1 -0.8
JIU2 Izumi 2 20.93 237 P **P 04 28 14.5 +1.2**
JZO Okuchi 21.35 237 P **P 04 28 19.1 +1.3**
JHD Hondo 21.39 238 P **P 04 28 19.5 +1.3**
NGSJ Nagasakinomoza 21.47 239 P **P 04 28 20.6 +1.6**
JSU Suzuyama 21.90 236 P **P 04 28 24.5 +0.8**
JFU Fukue jima 2 22.09 241 P **P 04 28 26.8 +1.1**
JSJ Shimokoshiki 22.20 237 P **P 04 28 27.9 +1.0**
DL2 Dalian 23.16 263 P **P 04 28 36.9 0.0**
DL2 S **S 04 32 44.1 -1.3**
DL2 pmax pmax
comp=Z,470nm,1.3s
DL2 pmax pmax
comp=Z,47μm,9.2s
DL2 LR LR
comp=N,31μm,22.3s
DL2 LR LR
comp=E,55μm,27.1s
DL2 LR LR
comp=Z,94μm,32.9s
BILL Bilibino 23.30 14α*i*P **P 04 28 35.4 -2.6**
BILL *i* 04 28 44.6
BILL *e* 04 29 05.8
BILL *i* 04 29 28.2
BILL *i* S **S 04 32 47.5 +0.2**
BILL *e*SS **SnSn 04 33 29.8 +5.8**
BILL *i* SSS SSS 04 33 52.2
BILL pmax pmax
comp=Z,7μm,7.0s
BILL pmax pmax
comp=Z,157nm,0.8s
BILL MLR MLR
comp=Z,249μm,15.0s
BILL Bilibino 23.30 14 *e*P **P 04 28 36.0 -2.0**
comp=Z,261nm,0.9s
BILL *e*S **S 04 32 43.5 -3.8**
BILL LR LR
comp=Z,330μm,19.0s
CIT Chita 25.45 298 *e*P **P 04 28 56.1 -1.9**
CIT *e* 04 29 39.3
CIT *e* 04 33 15.9
CIT pmax pmax
comp=Z,1μm,2.5s
NIKO Nikolski 26.30 60 *e*P **P 04 29 03.0 -2.6**
comp=Z,135nm,0.8s
BJI Beijing 26.45 270 P **P 04 29 07.6 +0.5**
BJI S **S 04 33 37.5 -0.4**
BJI pmax pmax
comp=Z,370nm,1.6s
BJI pmax pmax
comp=Z,23μm,6.9s
BJI LR LR
comp=N,115μm,17.2s
BJI LR LR
comp=E,316μm,19.8s
BJI LR LR
comp=Z,235μm,23.4s
BJT Baijiatuan 26.46 270 *e*P **P 04 29 07.5 +0.2**
comp=Z,412nm,0.7s
BJT LR LR
comp=Z,334μm,20.0s
JOW Kunigami 26.69 232⇑*i*P P 04 29 09.6 +0.3
comp=Z,466nm,1.1s
JOW *e*PcP **PcP 04 32 33.0 +0.8**
GAMB Gambell 26.98 36⇑*i*P P 04 29 11.4 -0.2
comp=Z,410nm,1.2s
TIA Tai'an 27.60 261 ⇑P **P 04 29 18.5 +1.0**
TIA S **S 04 33 52.0 -4.3**
TIA pmax pmax
comp=Z,490nm,1.4s
TIA LR LR
comp=N,76μm,17.8s
TIA LR LR
comp=E,156μm,20.2s
TIA LR LR
comp=Z,122μm,21.4s
SSE Sheshan 27.89 248 P **P 04 29 21.4 +1.3**
SSE pP **pP 04 29 32.4 +1.3**
SSE S **S 04 34 03.3 +2.4**
SSE pmax pmax
comp=Z,520nm,1.2s
SSE pmax pmax
comp=Z,38μm,12.0s
SSE LR LR
comp=N,76μm,26.4s
SSE LR LR
comp=E,160μm,26.3s
SSE LR LR
comp=Z,213μm,26.7s
NJ2 Nanjing 28.82 253 *e*P **P 04 29 29.1 +0.8**
NJ2 pP **pP 04 29 37.1 -2.2**
NJ2 sP **sP 04 29 41.3 -2.9**
NJ2 S **S 04 34 17.5 +2.2**
NJ2 sS **sS 04 34 35.5 +1.7**
NJ2 pmax pmax
comp=Z,800nm,1.0s
NJ2 pmax pmax
comp=Z,43μm,10.7s
NJ2 LR LR
comp=N,137μm,18.3s
NJ2 LR LR
comp=E,180μm,18.1s
NJ2 LR LR
comp=Z,192μm,18.9s
TNA Tin City 29.18 34⇑*i*P P 04 29 32.8 +1.6
comp=Z,425nm,1.4s
TNA *e*S **S 04 34 19.4 -1.0**
HHC Hu-ho-hao-te 29.32 274⇑*i*P P 04 29 33.8 +0.9
HHC pP **pP 04 29 45.7 +1.7**
HHC sP **sP 04 29 51.2 +2.4**
HHC PP **PnPn 04 30 29.4 +2.0**
HHC S **S 04 34 21.9 -1.6**
HHC sS **sS 04 34 42.1 +0.2**
HHC SS **SnSn 04 35 54.1 +2.5**
HHC pmax pmax
comp=Z,790nm,1.8s
HHC pmax pmax
comp=Z,41μm,7.9s
HHC LR LR
comp=N,234μm,15.0s
HHC LR LR
comp=E,304μm,17.9s
HHC LR LR
comp=Z,433μm,19.6s
WAKE Wake Island 29.44 150 PFAKE 04 29 50.0 +16
WAKE LR LR
comp=Z,201μm,21.0s
TIY Taiyuan 30.10 268⇓*e*P P 04 29 41.2 +1.4
TIY pP **pP 04 29 50.9 +0.1**
TIY sP **sP 04 29 56.8 +1.1**
TIY PP **PnPn 04 30 39.0 +1.2**
TIY S **S 04 34 37.5 +1.8**
TIY sS **sS 04 34 53.5 -0.6**
TIY pmax pmax
comp=Z,340nm,1.2s
TIY pmax pmax
comp=Z,20μm,11.0s
TIY LR LR
comp=N,47μm,15.7s
TIY LR LR
comp=E,111μm,16.7s
TIY LR LR
comp=Z,148μm,18.4s
ULN Ulaanbaatar 30.17 290⇑*i*P P 04 29 38.0 -2.3
comp=Z,70nm,0.9s
ULN *e*PP **PP 04 30 49.9 +1.2**
ULN *e*S **S 04 34 33.4 -3.3**
ULN LR LR
comp=Z,120μm,20.0s
ULN Ulaanbaatar 30.17 290 P **P 04 29 40.7 +0.4**
SNR=39
ULN Ulaanbaatar 30.17 290 P **P 04 29 38.4 -2.0**
comp=Z,74nm,0.9s,comp=Z,20μmcomp=Z,274μm
MIDW Midway 30.19 115 PFAKE 04 29 50.0 +10
MIDW LR LR
comp=Z,249μm,22.0s
BTO Baotou 30.50 275 *e*P **P 04 29 44.0 +0.7**
BTO LR LR
comp=N,45μm,16.2s
BTO LR LR
comp=E,44μm,18.1s
SONM Songino Array 30.61 290 P **P 04 29 42.6 -1.6**
SONM PcP **PcP 04 32 42.4 +0.6**
SONM *e* 05 01 45.3
SONM PKKKP 05 02 45.0
SONM Songino Array 30.61 290 P **P 04 29 42.6 -1.6**
comp=E,16nm,0.7s,baz=77,slow=7.7,SNR=43
SONM PcP **PcP 04 32 42.4 +0.6**
comp=E,42nm,0.7s,baz=124,slow=1.8,SNR=5.8
SONM LR LR 04 43 38.5
comp=E,177μm,18.1s,baz=58,slow=39
SONM P3KPbc 05 01 45.3
comp=E,0.3nm,0.4s,baz=321,slow=1.9,SNR=3.9
SONM P3KP 05 02 45.0
comp=E,1.5nm,1.0s,baz=289,slow=2.7,SNR=3.7
IRK Irkutsk 31.13 299 *e*P **P 04 29 48.9 +0.3**
IRK pmax pmax
comp=Z,328nm,2.9s
SDPT Sand Point 31.15 55 *e*P **P 04 29 50.3 +1.6**
comp=Z,137nm,1.1s
TLY Talaya 31.60 298*d i*P **P 04 29 51.3 -1.4**
TLY *e* 04 31 04.1
TLY *e*SS SS 04 37 07.9 -6.8
TLY pmax pmax
comp=Z,49nm,0.8s
TLY MLR MLR
comp=Z,265μm,21.0s
TLY Talaya 31.60 298⇑*i*P P 04 29 51.6 -1.1
comp=Z,45nm,0.7s
TLY LR LR
comp=Z,296μm,21.0s
TLY Talaya 31.60 298 P **P 04 29 51.7 -1.0**
SNR=26
TLY Talaya 31.60 298 P **P 04 29 51.5 -1.2**
comp=Z,411nm,0.7s,SNR=24
TATO Taipei 32.02 239⇑*i*P P 04 29 56.5 -0.2
comp=Z,553nm,1.1s
TATO *e*PP **PP 04 31 07.2 -2.2**
TATO *e*S **S 04 35 05.2 -0.4**
TATO LR LR
comp=Z,162μm,22.0s
ZAK Zakamensk 32.05 296⇑*i*P P 04 29 55.7 -1.2
ZAK *e* 04 32 46.5
ZAK pmax pmax
comp=Z,103nm,1.4s
CHGN Chignik 32.26 53 *e*P **P 04 29 57.1 -1.3**
YHNB Yeheng 32.32 239 *e*P **P 04 29 57.8 -1.6**
YHNB pmax pmax
comp=Z,143nm,0.9s
YHNB LR LR
comp=Z,164μm,22.0s
NACB Ninganchiao 32.56 238⇑*i*P P 04 29 58.9 -2.5
comp=Z,214nm,1.2s
WHN Wuhan 32.77 255⇑*i*P P 04 30 03.8 +0.7
WHN pP **pP 04 30 13.6 -0.6**
WHN PcP **PcP 04 32 51.0 +3.3**
WHN S **S 04 35 18.1 +0.9**
WHN pmax pmax
comp=Z,380nm,0.6s
WHN pmax pmax
comp=Z,26μm,4.9s
WHN LR LR
comp=N,144μm,16.4s
WHN LR LR
comp=E,130μm,15.5s
WHN LR LR
comp=Z,216μm,18.5s
GUMO Guam 32.86 192 PFAKE 04 30 20.0 +16
GUMO LR LR
comp=Z,139μm,20.0s
MOY Mondy 33.23 298 *e*P **P 04 30 05.5 -1.6**
MOY *e* 04 31 18.3
MOY pmax pmax
comp=Z,206nm,3.5s
SSLB Suanglung 33.23 239⇑*i*P P 04 30 06.1 -1.3
comp=Z,380nm,1.0s
YULB Yu-li 33.33 238⇑*i*P P 04 30 06.6 -1.5
comp=Z,346nm,1.0s
SVW2 Sparrevohn 33.70 44 *e*P **P 04 30 11.6 +0.6**
comp=Z,83nm,1.1s
TPUB Ta-pu 33.80 238⇑*i*P P 04 30 11.4 -0.9
comp=Z,1μm,1.2s
QZH Quanzhou 33.81 243⇑*i*P P 04 30 15.4 +3.1
QZH PP **PP 04 31 28.8 -0.4**
QZH S **S 04 35 35.1 +1.7**
QZH pmax pmax
comp=Z,2μm,1.2s
QZH LR LR
comp=N,115μm,16.9s
QZH LR LR
comp=E,80μm,16.3s
QZH LR LR
comp=Z,262μm,25.4s
TWG Pinlang 33.90 237⇑*i*P P 04 30 12.9 -0.2
comp=Z,6μm,1.0s
XAN Xi'an 34.44 265 P **P 04 30 18.5 +0.8**
XAN pP **pP 04 30 27.6 -1.3**
XAN sP **sP 04 30 32.0 -1.7**
XAN PP **PnPn 04 31 33.1 -0.2**
XAN PcP **PcP 04 32 52.8 +0.4**
XAN S **S 04 35 42.5 -0.7**
XAN SS **SnSn 04 37 55.3 -0.5**
XAN ScS **ScS 04 40 36.1 -0.9**
XAN pmax pmax
comp=Z,140nm,1.3s
XAN LR LR
comp=N,88μm,25.8s
XAN LR LR
comp=E,18μm,28.8s
XAN LR LR
comp=Z,42μm,25.2s
OHAK Old Harbor 35.01 51⇑*i*P P 04 30 21.5 -0.8
comp=Z,351nm,1.0s
KDAK Kodiak Island 35.33 50⇑*i*P P 04 30 24.4 -0.7
comp=Z,290nm,0.8s
KDAK LR LR
comp=Z,155μm,20.0s
KDAK Kodiak Island 35.33 50 P **P 04 30 24.2 -0.9**
comp=Z,938nm,1.0s,SNR=8.2
SPU Mount Spurr 35.41 44 *e*P **P 04 30 26.7 +0.8**
TRF Thorofare Moun 36.23 40⇑*i*P P 04 30 32.8 -0.2
comp=Z,642nm,1.5s
COLD Coldfoot 36.48 34⇑*i*P P 04 30 35.4 +0.6
comp=Z,141nm,0.8s
SEW Seward 36.75 46⇑*i*P P 04 30 36.4 -0.7
comp=Z,2μm,2.3s
PMR Palmer 36.81 43⇑*i*P P 04 30 36.2 -1.4
PMR pmax pmax
comp=Z,135nm,1.0s
PMR Palmer 36.81 43⇑*i*P P 04 30 36.2 -1.4
comp=Z,135nm,1.0s
LZH Lanzhou 36.89 272 ⇑P **P 04 30 40.5 +1.6**
LZH pP **pP 04 30 50.7 +0.6**
LZH sP **sP 04 30 55.0 +0.1**
LZH PP **PnPn 04 32 06.0 +2.4**
LZH S **S 04 36 20.7 -0.2**
LZH sS **sS 04 36 37.5 -2.0**
LZH SS **SnSn 04 38 49.6 -5.6**
LZH pmax pmax
comp=Z,670nm,1.0s
LZH pmax pmax
comp=Z,20μm,8.2s
LZH LR LR
comp=N,139μm,16.8s
LZH LR LR
comp=E,129μm,18.0s
LZH LR LR
comp=Z,201μm,18.7s
SML Sawmill 37.17 43⇑*i*P P 04 30 41.1 +0.2
SML pmax pmax
comp=Z,95nm,0.8s
SML Sawmill 37.17 43⇑*i*P P 04 30 41.1 +0.2
comp=Z,96nm,0.8s
COLA College 37.31 38⇑*i*P P 04 30 42.6 +0.7
COLA pmax pmax
comp=Z,297nm,0.8s
COLA MLR MLR
comp=Z,93μm,20.0s
COLA College 37.31 38⇑*i*P P 04 30 42.6 +0.7
comp=Z,297nm,0.8s
COLA LR LR
comp=Z,93μm,20.0s
CVP Callao Caves 37.55 231⇑*e*P P 04 30 44.2 -0.1
PIP Pasuquin 37.70 233⇓*e*P P 04 30 42.5 -3.2
ILAR Eielson Array 37.73 38 P **P 04 30 45.4 -0.1**
ILAR S **S 04 36 31.9 -0.8**
ILAR PKiKP **PKiKP 04 40 15.8 -1.3**
ILAR *e* 05 01 03.6
ILAR P'P' 05 03 26.5
ILAR Eielson Array 37.73 38 P **P 04 30 45.4 -0.1**
comp=Z,79nm,1.0s,baz=261,slow=7.4,SNR=268
ILAR S **S 04 36 31.9 -0.8**
comp=Z,1.9nm,1.0s,baz=278,slow=14,SNR=2.5
ILAR PKiKP **PKiKP 04 40 15.8 -1.3**
comp=Z,1.0nm,0.7s,baz=287,slow=3.2,SNR=4.2
ILAR LR LR 04 48 22.7
comp=Z,63μm,18.0s,baz=283,slow=40
ILAR P3KPbc 05 01 03.6
comp=Z,1.1nm,0.8s,baz=128,slow=3.5,SNR=12
ILAR PKPPKP P'P'df 05 03 26.5 -11
comp=Z,1.2nm,1.0s,baz=351,slow=3.0,SNR=4.3
GTA Gaotai 38.07 279 ⇑P **P 04 30 49.6 +0.8**
GTA pP pP 04 30 54.3 -5.8
GTA sP sP 04 30 56.6 -8.2
GTA PP **PnPn 04 32 19.9 +2.1**
GTA PcP **PcP 04 33 05.7 +2.4**
GTA S **S 04 36 39.2 +0.5**
GTA ScP **ScP 04 36 50.8 +3.2**
GTA PcS **PcS 04 36 53.3 +0.9**
GTA SS **SnSn 04 39 18.5 -5.1**
GTA ScS **ScS 04 40 59.0 +1.8**
GTA pmax pmax
comp=Z,15μm,9.5s
GTA LR LR
comp=N,84μm,16.9s
GTA LR LR
comp=E,65μm,20.0s
GTA LR LR
comp=Z,84μm,19.2s
CAUP Cauayan 38.17 230 *e*P **P 04 30 51.9 +2.3**
ABRA Dolores 38.20 232 *e*P P 04 30 53.9 +4.0
MID Middleton Isla 38.39 47⇑*i*P P 04 30 51.5 +0.5
MID pmax pmax
comp=Z,263nm,0.8s
MID Middleton Isla 38.39 47⇑*i*P P 04 30 51.5 +0.5
comp=Z,263nm,0.8s
PAX Paxson 38.43 41⇑*i*P P 04 30 51.0 -0.5
PAX pmax pmax
comp=Z,119nm,1.0s
PAX Paxson 38.43 41⇑*i*P P 04 30 51.0 -0.5
comp=Z,118nm,1.0s
GZH Guangzhou 38.45 247 P P 04 30 47.9 -4.1
GZH PcP **PcP 04 33 03.9 -0.6**
GZH LR LR
comp=N,100μm,19.2s
GZH LR LR

comp=E,62µm,21.9s
GZH LR LR
comp=Z,234µm,19.8s
DIV Divide 38.46 44⇑ *iP* **P 04 30 52.2 +0.5**
comp=Z,743nm,1.8s
HKC Hong Kong Obse 38.49 245⇑ *iP* **P 04 30 52.0 -0.3**
HKC *iS* **S 04 36 46.0 +0.9**
DOT Dot Lake 39.01 40⇑ *iP* **P 04 30 55.7 -0.6**
comp=Z,104nm,1.0s
BMRM Bremner River 39.04 44⇑ *iP* **P 04 30 57.3 +0.7**
comp=Z,299nm,1.1s
MENT Mentasta 39.23 41 *eP* **P 04 30 58.8 +0.7**
BALP Baler 39.30 230 *eP* **P 04 31 00.6 +1.5**
BCPH Baguio City Da 39.30 231⇑ *iP* P 04 31 06.4 +7.1
BOLP Bolinao 39.67 232 *eP* **P 04 31 02.0 -0.2**
CD2 Chengdu 39.80 265⇑ *iP* **P 04 31 04.0 +0.7**
CD2 pP **pP 04 31 15.0 +0.4**
CD2 sP **sP 04 31 19.8 +0.5**
CD2 PP **PnPn 04 32 39.7 +1.2**
CD2 PcP **PcP 04 33 11.0 +2.2**
CD2 ScP **ScP 04 36 55.6 +1.3**
CD2 PcS **PcS 04 37 00.2 +1.1**
CD2 S **S 04 37 03.9 -0.9**
CD2 sS **sS 04 37 22.3 -1.2**
CD2 SS **SS 04 39 52.9 -8.7**
CD2 ScS **ScS 04 41 06.6 -0.7**
CD2 pmax pmax
comp=Z,500nm,0.8s
CD2 pmax pmax
comp=Z,41µm,9.4s
CD2 LR LR
comp=N,76µm,21.6s
CD2 LR LR
comp=E,92µm,26.5s
CD2 LR LR
comp=Z,142µm,25.9s
EGAK Eagle 40.17 38⇑ *iP* **P 04 31 05.9 0.0**
GYA Guiyang 40.56 257⇑ *iP* P 04 31 19.2 +9.5
GYA pP pP 04 31 20.8 -0.2
GYA sP sP 04 31 27.5 +1.7
GYA PP **PnPn 04 32 48.0 +0.3**
GYA PcP **PcP 04 33 14.7 +3.3**
GYA ScP **ScP 04 36 58.9 +1.5**
GYA S **S 04 37 16.0 -0.4**
GYA SS **SS 04 40 10.4 -6.7**
GYA pmax pmax
comp=Z,750nm,1.0s
GYA pmax pmax
comp=Z,25µm,14.6s
GYA LR LR
comp=N,46µm,18.3s
GYA LR LR
comp=E,46µm,18.9s
GYA LR LR
comp=Z,56µm,19.9s
LQP Lukban 40.68 228 *eP* **P 04 31 11.4 +0.6**
PLP Palo 41.52 222⇓ *iP* **P 04 31 16.6 -0.9**
PNL Peninsula 41.82 45⇑ *iP* **P 04 31 19.9 +0.3**
comp=Z,103nm,1.0s
ZAA0 Zalesovo Array 42.19 306⇑ *iP* **P 04 31 20.3 -2.2**
ZAA0 *e*PcP **PcP 04 33 16.7 +0.6**
ZALV Zalesovo Beam 42.19 306 P **P 04 31 21.6 -1.0**
ZALV 04 33 03.9
ZALV 04 33 16.9
ZALV MLR MLR
comp=Z,367µm,19.3s
ZALV Zalesovo Beam 42.19 306 P **P 04 31 21.6 -1.0**
ZALV PP **PP 04 33 03.9 +3.4**
ZALV PcP **PcP 04 33 16.9 +0.8**
ZALV ScP **ScP 04 37 02.3 -0.9**
ZALV P'P' 05 03 20.1
ZALV Zalesovo Beam 42.19 306 P **P 04 31 21.6 -1.0**
comp=Z,12nm,0.5s,baz=64,slow=6.4,SNR=49
ZALV PP **PP 04 33 03.9 +3.4**
comp=Z,23nm,0.8s,baz=74,slow=5.4,SNR=4.6
ZALV PcP **PcP 04 33 16.9 +0.8**
comp=Z,148nm,0.8s,baz=67,slow=3.1,SNR=22
ZALV ScP **ScP 04 37 02.3 -0.9**
comp=Z,5.6nm,0.7s,baz=64,slow=3.4,SNR=3.8
ZALV LR LR 04 50 12.3
comp=Z,367µm,19.3s,baz=71,slow=38
ZALV PKPPKP P'P'df 05 03 20.1 -11
comp=Z,1.3nm,0.8s,baz=316,slow=4.1,SNR=4.6
RCP Roxas 42.24 225⇑ *eP* **P 04 31 24.6 +1.3**
NVS Novosibirsk 42.80 308⇑ *iP* **P 04 31 25.1 -2.4**
NVS *i* 04 33 18.5
NVS pmax pmax
comp=N,90nm,2.9s
NVS pmax pmax
comp=E,192nm,2.9s
NVS pmax pmax
comp=Z,457nm,2.9s
QIZ Qiongzhong 43.63 246 P **P 04 31 35.6 +0.9**
QIZ pP **pP 04 31 43.9 -2.2**
QIZ PP **PP 04 33 16.9 +0.3**
QIZ S **S 04 38 02.1 +0.6**
QIZ LR LR
comp=N,55µm,20.7s
QIZ LR LR
comp=Z,115µm,24.3s
SKAG Skagway 43.88 45⇑ *iP* **P 04 31 38.0 +1.9**
comp=Z,1µm,2.2s
KMI Kunming 44.11 259 ⇑P **P 04 31 39.5 +0.8**
KMI pP **pP 04 31 48.7 -1.4**
KMI sP **sP 04 31 53.5 -1.4**
KMI PP **PP 04 33 22.1 +0.3**
KMI S **S 04 38 04.8 -4.0**
KMI sS sS 04 38 21.3 -6.4
KMI SS **SS 04 41 20.8 -6.2**
KMI pmax pmax
comp=Z,540nm,1.8s
KMI pmax pmax
comp=Z,21µm,9.6s
KMI LR LR
comp=N,51µm,19.1s
KMI LR LR
comp=E,31µm,20.1s
KMI LR LR
comp=Z,65µm,18.8s
WMQ Urumqi 44.23 291 P **P 04 31 40.0 +0.8**
WMQ pP **pP 04 31 50.0 -0.6**
WMQ sP **sP 04 31 54.0 -1.4**
WMQ PP **PcP 04 33 24.0 +0.7**
WMQ ScP **ScP 04 37 13.0 +1.2**
WMQ S **S 04 38 10.0 +0.2**
WMQ sS **sS 04 38 26.0 -2.8**
WMQ SS SS 04 41 18.0 -11
WMQ ScS **ScS 04 41 33.0 -1.1**
WMQ pmax pmax
comp=Z,530nm,1.0s
WMQ pmax pmax
comp=Z,13µm,5.0s
WMQ LR LR
comp=N,135µm,17.0s
WMQ LR LR
comp=E,85µm,16.0s
WMQ LR LR
comp=Z,149µm,20.0s
DAV Davao City (W) 44.88 218 PFAKE 04 32 00.0 +15
DAV LR LR
comp=Z,53µm,21.0s
DAV Davao City (W) 44.88 218⇑ *iP* **P 04 31 44.1 -0.5**
DAV Davao City (W) 44.88 218 P **P 04 31 46.5 +1.9**
SNR=17
CTBH Cotabato--PC H 45.33 220⇑ *iP* **P 04 31 49.3 +1.2**
CRAG Craig 46.29 50⇑ *iP* **P 04 31 57.7 +2.3**
comp=Z,186nm,1.3s
MK31 Makanchi Array 46.35 297 *iP* **P 04 31 55.1 -0.9**
MK31 pmax pmax
comp=Z,66nm,0.7s
MK31 Makanchi Array 46.35 297⇑ *iP* **P 04 31 54.8 -1.3**
MK31 *e*PcP **PcP 04 33 31.2 +0.7**
MK31 *e*ScP **ScP 04 37 21.3 +0.8**
MKAR Makanchi Array 46.35 297 P **P 04 31 54.9 -1.1**
MKAR 04 33 30.9
MKAR 04 41 46.7
MKAR MLR MLR
comp=Z,241µm,21.8s
MKAR Makanchi Array 46.35 297 P **P 04 31 54.9 -1.1**
MKAR *eP* **P 04 31 55.0 -1.0**
MKAR PcP **PcP 04 33 30.9 +0.4**
MKAR ScP **ScP 04 37 20.8 +0.3**
MKAR ScS **ScS 04 41 46.7 -0.8**
MKAR P'P' 05 03 21.0
MKAR *e* 05 09 44.1
MKAR Makanchi Array 46.35 297 P **P 04 31 54.9 -1.1**
comp=Z,26nm,0.6s,baz=68,slow=9.6,SNR=147
MKAR PcP **PcP 04 33 30.9 +0.4**
comp=Z,95nm,0.7s,baz=49,slow=3.4,SNR=9.0
MKAR ScP **ScP 04 37 20.8 +0.3**
comp=Z,28nm,0.8s,baz=57,slow=4.5,SNR=6.5
MKAR ScS **ScS 04 41 46.7 -0.8**
comp=Z,4.6nm,1.0s,baz=62,slow=8.4,SNR=3.8
MKAR LR LR 04 52 22.0
comp=Z,241µm,21.8s,baz=64,slow=37
MKAR PKPPKP **P'P'df 05 03 21.0 -4.7**
comp=Z,1.8nm,1.1s,baz=248,slow=2.0,SNR=3.7
MKAR P4KPbc 05 09 44.1
comp=Z,0.4nm,0.6s,baz=71,slow=3.8,SNR=4.4
WRAK Wrangell Islan 46.35 48⇑ *iP* **P 04 31 58.0 +2.2**
comp=Z,188nm,1.2s
WRAK LR LR
comp=Z,79µm,19.0s
DLBC Dease Lake 46.81 45⇑ *iP* **P 04 32 01.7 +2.2**
KURK Kurchatov 46.90 304*c iP* **P 04 31 58.9 -1.3**
KURK pmax pmax
comp=Z,93µm,17.4s
KURK Kurchatov 46.90 304⇑ *iP* **P 04 31 58.0 -2.2**
comp=Z,539nm,1.8s
KURK LR LR
comp=Z,118µm,22.0s
KURK Kurchatov 46.90 304 P **P 04 31 58.8 -1.3**
SNR=70
KURK Kurchatov 46.90 304 P **P 04 31 58.9 -1.3**
comp=Z,963nm,0.6s,SNR=39
KIP Kipapa 47.57 104⇑ *iP* **P 04 32 06.9 +1.1**
KIP pmax pmax
comp=Z,816nm,5.0s
KIP Kipapa 47.57 104 *eP* **P 04 32 08.1 +2.3**
comp=Z,521nm,1.5s
KIP LR LR
comp=Z,131µm,22.0s
TARA Tarawa 48.28 151 *eP* P 04 32 16.0 +4.8
comp=Z,253nm,1.3s
TARA LR LR
comp=Z,267µm,22.0s
BAKI Biak 49.01 201 P **P 04 32 17.6 +0.8**
comp=Z,647nm,1.8s,comp=Z,13µm
SMPI Sarmi 49.19 197 P **P 04 32 18.4 +0.2**
comp=Z,249nm,2.4s,comp=Z,10µm
UBPT Khong Chiam 49.20 247 P **P 04 32 19.6 +1.3**
LSA Lhasa 49.29 273 P **P 04 32 21.7 +2.2**
LSA sP **sP 04 32 34.6 -1.1**
LSA PP **PP 04 34 17.5 +4.1**
LSA S S 04 39 31.3 +8.1
LSA LR LR
comp=N,42µm,33.2s
LSA LR LR
comp=E,72µm,29.9s
LSA LR LR
comp=Z,120µm,28.8s
JAY Jayapura 49.32 194 P **P 04 32 20.0 +0.7**
comp=Z,98nm,1.9s,comp=Z,7µm
MYLDM Lahad Datu 49.83 225 P **P 04 32 25.0 +1.9**
MYLDM Lahad Datu 49.83 225 P **P 04 32 24.8 +1.7**
comp=Z,535nm,1.6s,comp=Z,21µmcomp=Z,274µm
TNTI Ternate 49.88 213 P **P 04 32 24.5 +1.0**
comp=Z,235nm,1.9s,comp=Z,13µmcomp=Z,166µm
KKM Kota Kinabalu 50.25 229⇑ *iP* **P 04 32 26.9 +0.5**
comp=Z,290nm,1.2s
KKM LR LR
comp=Z,40µm,20.0s
KKM Kota Kinabalu 50.25 229 P **P 04 32 28.2 +1.7**
KKM Kota Kinabalu 50.25 229 P **P 04 32 26.8 +0.4**
comp=Z,242nm,2.3s,comp=Z,13µmcomp=Z,260µm
MNI Manado 50.26 216 P **P 04 32 27.5 +1.1**
comp=Z,351nm,2.0s,comp=Z,14µmcomp=Z,196µm
POHA Pohakuloa 50.40 103 *eP* **P 04 32 28.3 +0.6**
comp=Z,303nm,0.9s
POHA LR LR
comp=Z,168µm,22.0s
IMP Imphal 50.40 266 *eP* **P 04 32 25.0 -2.5**
IMP *ex* x 04 39 44.0
BVA0 Borovoye Array 50.51 309 P **P 04 32 26.8 -1.1**
BVAR Borovoye Array 50.51 309 P **P 04 32 27.2 -0.7**
BVAR 04 33 46.5
BVAR pmax pmax
comp=Z,38nm,0.7s
BVAR MLR MLR
comp=Z,249µm,20.7s
BVAR Borovoye Array 50.51 309 P **P 04 32 27.2 -0.7**
BVAR PcP **PcP 04 33 46.5 +1.2**
BVAR P'P' 05 03 16.9
BVAR *e* 05 10 00.3
BVAR Borovoye Array 50.51 309 P **P 04 32 27.2 -0.7**
comp=Z,38nm,0.7s,baz=53,slow=7.6,SNR=104
BVAR PcP **PcP 04 33 46.5 +1.2**
comp=Z,67nm,0.7s,baz=78,slow=3.3,SNR=7.4
BVAR LR LR 04 55 31.7
comp=Z,249µm,20.7s,baz=62,slow=38
BVAR PKPPKP **P'P'df 05 03 16.9 -3.9**
comp=Z,1.2nm,0.7s,baz=217,slow=8.6,SNR=3.7
BVAR P4KPbc 05 10 00.3
comp=Z,2.2nm,0.7s,baz=81,slow=4.0,SNR=12
ALE Alert 50.53 5 P **P 04 32 27.0 -0.7**
comp=Z,826nm,1.9s,SNR=90
BRVK Borovoye 50.55 309*c iP* **P 04 32 26.8 -1.4**
BRVK pmax pmax
comp=Z,78nm,0.8s
BRVK MLR MLR
comp=Z,302µm,22.0s
BRVK Borovoye 50.55 309⇑ *iP* **P 04 32 26.4 -1.7**
comp=Z,72nm,0.8s
BRVK LR LR
comp=Z,281µm,21.0s
BRVK Borovoye 50.55 309 P **P 04 32 27.1 -1.1**
SNR=58
BRVK Borovoye 50.55 309 P **P 04 32 27.8 -0.4**
comp=Z,651nm,0.6s,SNR=42
CMMT Chiang Mai 50.96 256 P **P 04 32 33.5 +1.8**
CHTO Chiang Mai 50.96 256⇑ *iP* **P 04 32 33.0 +1.3**
CHTO pmax pmax
comp=Z,510nm,1.0s
CHTO MLR MLR
comp=Z,79µm,19.0s
CHTO Chiang Mai 50.96 256⇑ *iP* **P 04 32 33.0 +1.3**
comp=Z,510nm,1.0s
CHTO LR LR
comp=Z,79µm,19.0s
CHTO Chiang Mai 50.96 256 P **P 04 32 33.3 +1.6**
SNR=235
CHTO Chiang Mai 50.96 256 P **P 04 32 33.2 +1.5**
comp=Z,603nm,1.5s,comp=Z,23µmcomp=Z,228µm
WAMI Wamena 51.03 197 P **P 04 32 34.4 +2.3**
comp=Z,161nm,1.1s,comp=Z,10µmcomp=Z,148µm
LBMI Labuha 51.13 212 P **P 04 32 33.5 +0.6**
comp=Z,200nm,1.6s,comp=Z,10µmcomp=Z,113µm
CM31 Chiang Mai Arr 51.21 256⇑ *iP* **P 04 32 35.1 +1.5**
comp=Z,168nm,0.8s
CMAR Chiang Mai Arr 51.21 256 P **P 04 32 35.2 +1.6**
CMAR ScP **ScP 04 37 42.5 +1.0**
CMAR P'P' 05 03 10.1
CMAR *e* 05 10 06.0
CMAR Chiang Mai Arr 51.21 256 P **P 04 32 35.2 +1.6**
comp=Z,182nm,0.9s,baz=37,slow=6.8,SNR=187
CMAR ScP **ScP 04 37 42.5 +1.0**
comp=Z,21nm,1.1s,baz=24,slow=3.3,SNR=5.0
CMAR LR LR 04 57 41.8
comp=Z,78µm,19.3s,baz=54,slow=40
CMAR PKPPKP **P'P'df 05 03 10.1 -4.8**
comp=Z,1.3nm,0.3s,baz=275,slow=5.3,SNR=4.6
CMAR P4KPbc 05 10 06.0
comp=Z,0.9nm,0.3s,baz=19,slow=3.7,SNR=6.1
SHL Shillong 51.33 268⇑ *iP* **P 04 32 34.0 -0.6**
SHL *eS* **S 04 39 51.0 -0.1**
AAA Alma-Ata 51.35 296 *iP* **P 04 32 34.2 -0.3**
AAA *eS* **S 04 39 49.4 -1.5**
AAA pmax pmax
comp=Z,24µm,13.9s
AAA smax smax
comp=N,19µm,20.1s
AAA MLR MLR
comp=Z,150µm,18.0s
KMSI Kibinong 51.40 216 P **P 04 32 34.3 -0.6**
comp=Z,397nm,1.2s
FAKI Fak Fak 51.70 205 P **P 04 32 37.0 -0.2**
comp=Z,412nm,2.0s,comp=Z,12µmcomp=Z,151µm
RES Resolute Bay 51.81 18 *eP* **P 04 32 37.6 +0.3**
comp=Z,176nm,1.0s
YKW3 Yellowknife Ar 52.05 36⇑ *iP* **P 04 32 39.8 +0.5**
comp=Z,5.5nm,1.0s
YKA Yellowknife Ar 52.09 36 P **P 04 32 40.2 +0.7**
YKA S **S 04 40 02.6 +2.4**
YKA PKKKP 05 02 05.2
YKA P'P' 05 02 57.7
YKA P'P'ab P'P'ab 05 03 53.5 -8.3
YKA *e* 05 10 06.3
YKA Yellowknife Ar 52.09 36 P **P 04 32 40.2 +0.7**
comp=Z,120nm,0.8s,baz=298,slow=7.0,SNR=729
YKA S **S 04 40 02.6 +2.4**
comp=Z,2.9nm,0.9s,baz=283,slow=30,SNR=3.3
YKA P3KP 05 02 05.2
comp=Z,0.3nm,0.7s,baz=31,slow=1.8,SNR=4.7
YKA PKPPKP P'P'df 05 02 57.7 -21
comp=Z,1.5nm,0.8s,baz=144,slow=2.0,SNR=6.4
YKA PKP2ab 05 03 53.4
comp=Z,2.6nm,0.9s,baz=127,slow=4.0,SNR=7.1
YKA P4KPbc 05 10 06.3
comp=Z,0.1nm,0.6s,baz=302,slow=4.4,SNR=5.1
ULHL Ulahol 52.33 295 *i* P **P 04 32 43.5 +1.6**
ULHL Ulahol 52.33 295 P **P 04 32 43.5 +1.6**
SNR=20
MRSI Marisa 52.35 219 P **P 04 32 41.7 -0.3**
TKM2 Tokmak 2 52.38 296⇑ *iP* **P 04 32 42.1 -0.2**
TKM2 pmax pmax
comp=Z,50nm,0.6s
TKM2 MLR MLR
comp=Z,158µm,20.0s
TKM2 Tokmak 2 52.38 296⇑ *iP* **P 04 32 42.1 -0.2**
comp=Z,50nm,0.6s
TKM2 LR LR
comp=Z,158µm,20.0s
TKM2 Tokmak 2 52.38 296 P **P 04 32 43.7 +1.4**
SNR=67
AGT Agartala 52.85 267 *ex* **pP 04 32 56.0 -1.3**
AGT *ex* x 04 34 40.0
CHMS Chumysh 52.87 296 *i* P **P 04 32 46.9 +1.2**
CHMS Chumysh 52.87 296 P **P 04 32 46.9 +1.2**
SNR=29
USP Ospenovka 52.89 297 *i* P **P 04 32 47.2 +1.4**
USP Ospenovka 52.89 297 P **P 04 32 47.2 +1.4**
SNR=52
KBK Karagaybulak 52.93 296 *i* P **P 04 32 47.8 +1.5**
KBK Karagaybulak 52.93 296 P **P 04 32 47.8 +1.5**
SNR=53
KBS Kingsbay 53.02 351⇑ *iP* **P 04 32 45.1 -1.2**
KBS AMB AMB 04 32 54.4
comp=Z,189nm,1.2s
KBS *eS* **S 04 40 15.1 +2.4**
KBS AMS AMS 04 52 31.2
comp=Z,59µm,23.6s
KBS Kingsbay 53.02 351*c iP* **P 04 32 45.9 -0.4**
KBS pmax pmax
comp=Z,159nm,1.1s
KBS MLR MLR
comp=Z,55µm,17.0s
KBS Kingsbay 53.02 351 *eP* **P 04 32 45.8 -0.5**
comp=Z,100nm,0.7s
KBS LR LR
comp=Z,59µm,20.0s
FRU Bishkek 53.04 296⇑ *iP* **P 04 32 47.0 0.0**
FRU *e* 04 40 32.0
FRU *i* 04 43 48.0
FRU pmax pmax
comp=Z,342nm,3.8s
FRU MLR MLR
comp=Z,10µm,20.0s
KZA Kyzart 53.05 295 *i* P **P 04 32 49.6 +2.2**
KZA Kyzart 53.05 295 P **P 04 32 49.6 +2.2**
SNR=92
CHBT CHBT 53.10 248 P **P 04 32 49.2 +1.6**
TAPN Taplejung 53.12 273 *eP* **P 04 32 48.4 +0.4**
comp=Z,1µm,1.1s
AAK Ala-Archa 53.23 296 *i* P **P 04 32 49.7 +1.2**
AAK Ala-Archa 53.23 296⇑ *iP* **P 04 32 48.1 -0.4**
comp=Z,458nm,0.8s
AAK LR LR
comp=Z,188µm,21.0s
AAK Ala-Archa 53.23 296 P **P 04 32 49.7 +1.2**
SNR=103
AAK Ala-Archa 53.23 296 P **P 04 32 48.5 0.0**
comp=Z,740nm,0.8s,SNR=69
LUWI Luwuk 53.36 217 P **P 04 32 48.0 -1.5**
comp=Z,256nm,2.2s,comp=Z,10µmcomp=Z,163µm
SVE Sverdlovsk 53.64 317*d iP* **P 04 32 50.1 -1.0**
SVE *e* 04 33 56.6
SVE *e* 04 34 56.6
SVE *eS* **S 04 40 17.9 -3.7**
SVE pmax pmax
comp=Z,146nm,0.8s
SVE pmax pmax
comp=Z,25µm,23.6s
SVE MLR MLR
comp=E,107µm,21.0s
SVE MLR MLR
comp=N,61µm,21.0s
SVE MLR MLR
comp=Z,134µm,23.0s
ODAN Odare 53.64 272 *eP* **P 04 32 51.9 +0.1**
EKS2 Erkin-Say 53.66 296 *eP* **P 04 32 51.6 0.0**
EKS2 pmax pmax
comp=Z,112nm,0.8s
EKS2 MLR MLR
comp=Z,243µm,20.0s
EKS2 Erkin-Say 53.66 296 *eP* **P 04 32 51.6 0.0**
comp=Z,112nm,0.8s
EKS2 LR LR
comp=Z,243µm,20.0s
EKS2 Erkin-Say 53.66 296 P **P 04 32 51.4 -0.2**
SNR=98
NLAI Namlea 53.69 211 P **P 04 32 52.1 +0.3**
comp=Z,95nm,1.7s,comp=Z,9µmcomp=Z,124µm
AAI Ambon 53.72 210 P **P 04 32 52.7 +0.6**
comp=Z,462nm,1.9s,comp=Z,13µmcomp=Z,243µm
BNDI Bandanaira 53.94 207 P **P 04 32 55.1 +1.4**
comp=Z,2µm,1.9s,comp=Z,36µmcomp=Z,150µm
KSH Kashi 53.97 292⇑ *iP* P 04 32 57.8 +3.9
KSH pP pP 04 33 07.1 +1.5
KSH sP sP 04 33 11.0 +0.7
KSH PcP **PcP 04 34 00.8 +2.0**
KSH PP **PP 04 34 59.9 +4.7**
KSH ScP **ScP 04 37 55.2 +1.8**
KSH S **S 04 40 30.5 +3.7**
KSH sS sS 04 40 46.9 +0.8
KSH ScS **ScS 04 42 39.8 -0.1**
KSH SS **SS 04 44 11.0 +3.1**
KSH pmax pmax
comp=Z,19nm,0.7s
KSH pmax pmax
comp=Z,9µm,4.9s
KSH LR LR
comp=N,24µm,10.5s
KSH LR LR
comp=E,19µm,9.9s
KSH LR LR
comp=Z,208µm,36.0s
AML Almayashu 53.99 296 *i* P **P 04 32 55.7 +1.3**
AML Almayashu 53.99 296 P **P 04 32 55.7 +1.3**
SNR=80
SOKR Solikamsk 54.00 321*c iP* **P 04 32 52.6 -1.0**
SOKR 04 34 51.8
SOKR S **S 04 40 29.1 +2.9**
SOKR pmax pmax
comp=Z,160nm,1.2s
SRDT SRDT 54.02 252 P **P 04 32 55.9 +1.5**
comp=Z,290nm,3.5s,comp=Z,18µm
GUN Gumba 54.04 274 *eP* **P 04 32 54.4 -0.4**
RAMN Ramite 54.14 273 *eP* **P 04 32 55.5 +0.1**
TLE Tual 54.15 203 P **P 04 32 56.7 +1.5**
comp=Z,492nm,1.9s,comp=Z,19µm
HSP Hornsund 54.16 349 *eP* **P 04 32 55.3 +0.8**
PCI Palu 54.52 220 P P 04 33 05.6 +7.7
KKN Kakani 54.53 275 *eP* **P 04 32 58.3 0.0**
comp=Z,1µm,0.9s
PKI Pulchoki 54.58 274 *eP* **P 04 32 58.6 -0.1**
PKIN Phulchoki 54.58 275 *eP* **P 04 32 58.9 +0.2**
comp=Z,319nm,0.6s
PGC Sidney 54.68 54 *eP* **P 04 32 59.5 +0.8**
comp=Z,42nm,1.9s
PHET Kaeng Krachan 54.74 250 P **P 04 33 01.8 +2.2**
comp=Z,1µm,1.0s,comp=Z,10µm
DMN Daman 54.76 275 *eP* **P 04 33 00.3 +0.3**
comp=Z,1µm,0.9s
ARU Arti 54.83 317*c iP* **P 04 32 58.3 -1.4**
ARU 04 34 00.8
ARU 04 35 00.5

ARU PPP PPP 04 36 16.9
ARU S **S** **04 40 34.0 -3.6**
ARU 04 42 42.0
ARU SS **SS** **04 44 25.5 +5.0**
ARU pmax pmax
comp=Z,79nm,1.2s
ARU pmax pmax
comp=Z,12µm,12.0s
ARU MLR MLR
comp=Z,127µm,17.0s
ARU Arti 54.83 317 *e*P **P** **04 32 58.1 -1.6**
comp=Z,671nm,1.7s
ARU LR LR
comp=Z,150µm,21.0s
ARU Arti 54.83 317 P **P** **04 32 58.3 -1.4**
comp=Z,1µm,0.8s,SNR=34
NLWA Neilton Lookou 55.11 56 *e*P **P** **04 33 03.5 +1.5**
comp=Z,456nm,1.4s
NLWA LR LR
comp=Z,89µm,22.0s
MMPI Merauke 55.20 194 P **P** **04 33 05.2 +2.4**
comp=Z,610nm,0.4s
DANN Dangsing 55.24 276 *e*P **P** **04 33 03.8 +0.3**
comp=Z,1µm,0.8s
A05A Maple Falls 55.26 53 P **P** **04 33 03.4 +0.5**
SMKI Samarinda 55.33 223 P **P** **04 33 05.1 +1.3**
comp=Z,247nm,1.6s,comp=Z,12µm
PMG Port Moresby 55.35 185 *e*P **P** **04 33 04.4 +0.5**
comp=Z,420nm,1.5s
PMG S **S** **04 40 46.4 +1.1**
PMG Port Moresby 55.35 185 P **P** **04 33 04.2 +0.3**
comp=Z,197nm,1.9s,comp=Z,8µmcomp=Z,76µm
PMG Port Moresby 55.35 185 S **S** **04 40 46.4 +1.1**
comp=Z,3.9nm,0.3s,baz=248,slow=19,SNR=2.8
PMG LR LR 04 52 38.1
comp=Z,43µm,21.9s,baz=168,slow=32
KK31 Karatay Array 55.44 299 P **P** **04 33 03.5 -0.9**
KK31 pmax pmax
comp=Z,91nm,0.9s
KKAR Karatay Array 55.44 299 *e*P **P** **04 33 03.5 -0.9**
KKAR Karatay Array 55.44 299 *e*P **P** **04 33 03.5 -0.9**
HDW Hoodsport 55.44 55 P **P** **04 33 05.7 +1.3**
CMW Cultus Mountai 55.55 54 P **P** **04 33 06.3 +1.1**
BJO Bjornoya 55.60 346 *e*P **P** **04 33 04.1 -0.9**
KOLN Koldanda 55.71 276 *e*P **P** **04 33 07.0 +0.3**
comp=Z,1µm,0.9s
HNR Honiara 55.73 170 PFAKE 04 33 20.0 +13
HNR LR LR
comp=Z,89µm,19.0s
CAL Calcutta 55.76 268 *e*P **P** **04 33 08.5 +1.7**
CAL AMP 05 03 50.2
comp=Z,33µm,18.2s
JCW Jim Creek 55.78 54 P **P** **04 33 07.8 +1.0**
PYUN Piuthan 55.92 277 *e*P **P** **04 33 08.7 +0.4**
comp=Z,3µm,1.0s
KDI Kendari 56.06 216 P **P** **04 33 09.3 +0.3**
comp=Z,324nm,1.4s,comp=Z,13µmcomp=Z,204µm
TTSI Tana Toraja 56.42 219 P **P** **04 33 10.0 -1.6**
comp=Z,84nm,1.4s,comp=Z,7µmcomp=Z,103µm
RCM Mount Rainier- 56.64 55 P **P** **04 33 14.7 +1.4**
BOK Bokaro 56.64 271 *e*P **P** **04 33 13.8 +0.7**
BOK AMB AMB 04 33 19.0
comp=Z,772nm,1.3s
LON Longmire 56.64 55⇑ *i*P **P** **04 33 13.6 +0.6**
LON pmax pmax
comp=Z,725nm,2.3s
LON Longmire 56.64 55⇑ *i*P **P** **04 33 13.6 +0.6**
comp=Z,725nm,2.3s
NLW Nelson Butte 56.74 53 P **P** **04 33 14.7 +1.0**
WPW White Pass 56.82 55 P **P** **04 33 15.4 +1.1**
PTH Pithoragarh 56.94 280 *e*P **P** **04 33 14.9 -0.6**
PTH *ex* x 04 35 09.8
TWW Teanaway 56.96 54 P **P** **04 33 16.8 +1.5**
COR Corvallis 56.98 58 *e*P **P** **04 33 17.1 +1.8**
COR pmax pmax
comp=Z,3µm,2.2s
COR Corvallis 56.98 58 *e*P **P** **04 33 17.1 +1.8**
comp=Z,3µm,2.2s
LGTI Lohaghat 56.98 280 *ex* P 04 33 19.9 +4.4
LVZ Lovozero 56.99 336 *ce*P **P** **04 33 14.4 -0.7**
LVZ pmax pmax
comp=Z,235nm,1.3s
LVZ MLR MLR
comp=Z,124µm,22.0s
LVZ Lovozero 56.99 336⇑ *i*P **P** **04 33 13.4 -1.7**
comp=Z,194nm,1.0s
LVZ LR LR
comp=Z,69µm,20.0s
ETW Entiat 57.00 54 P **P** **04 33 16.5 +0.9**
KSM Kuching 57.24 232 *e*P **P** **04 33 18.7 +1.2**
comp=Z,254nm,1.0s
KSM LR LR
comp=Z,37µm,22.0s
KSM Kuching 57.24 232 P **P** **04 33 19.1 +1.7**
KSM Kuching 57.24 232 P **P** **04 33 18.6 +1.1**
comp=Z,301nm,1.6s,comp=Z,15µmcomp=Z,234µm
EBG Ellensburg 57.26 55 P **P** **04 33 18.6 +1.3**
SPSI Sidrap Palu 57.27 219 P **P** **04 33 17.0 -0.6**
comp=Z,240nm,2.4s,comp=Z,10µmcomp=Z,109µm
KEBM Edson Butte 57.33 60⇑ *i*P **P** **04 33 19.8 +1.9**
comp=Z,1µm,1.9s
VLL Laurance Lake 57.44 56 P **P** **04 33 20.3 +1.6**
BBSI Bau Bau 57.47 215 P **P** **04 33 21.2 +2.2**
comp=Z,323nm,1.7s,comp=Z,11µmcomp=Z,114µm
BNSI Bone 57.51 218 P **P** **04 33 19.4 +0.1**
comp=Z,293nm,1.1s,comp=Z,12µmcomp=Z,124µm
APA Apatity 57.57 336⇑ *i*P **P** **04 33 20.2 +1.1**
APA *i* 04 34 06.0
APA *i* PPP PPP 04 36 56.0
APA *i* PS **PnS** **04 41 24.0 -4.5**
APA *i* SS **SS** **04 45 04.0 +0.9**
APA pmax pmax
comp=Z,135nm,1.0s
VFP Flag Point 57.64 57 P **P** **04 33 21.8 +1.6**
KEV Kevo 57.65 340 *e*P **P** **04 33 20.0 +0.4**
KEV pmax pmax
comp=Z,96nm,0.9s
KEV MLR MLR
comp=Z,90µm,20.0s
KEV Kevo 57.65 340 *e*P **P** **04 33 20.0 +0.4**
comp=Z,96nm,0.9s
KEV LR LR
comp=Z,90µm,20.0s
KEV Kevo 57.65 340 *ep* **P** **04 33 18.1 -1.5**
comp=Z,88nm,0.7s
KBO Bosley Butte 57.77 61⇑ *i*P **P** **04 33 23.2 +2.2**
comp=Z,1µm,1.8s
STKI Sintang 57.79 230 P **P** **04 33 22.1 +0.8**
comp=Z,313nm,2.2s,comp=Z,19µmcomp=Z,123µm
DDI Dehra Dun 57.95 282 *e*P **P** **04 33 20.2 -2.2**
DDI *ex* x 04 36 53.0
DHRM DHARAMSHALA 57.96 285 *e*P **P** **04 33 21.9 -0.8**
DHRM AMB AMB 04 33 25.3
comp=Z,606nm,1.1s
SDNR Sundarnagar 57.96 284 *e*P **P** **04 33 23.0 +0.5**
SMLA Simla 58.06 283 *i*P **P** **04 33 23.8 +0.8**
AB31 Akbulak array 58.08 310 P **P** **04 33 21.7 -1.3**
AB31 pmax pmax
comp=Z,52nm,0.4s
ABKAR Akbulak array 58.08 310 *e*P **P** **04 33 21.8 -1.1**
WRD Warden 58.12 54 P **P** **04 33 23.5 +0.1**
HAWA Hanford 58.14 55 *e*P **P** **04 33 24.6 +1.2**
comp=Z,1µm,1.8s
HAWA LR LR
comp=Z,62µm,22.0s
ARCES ARCESS Array B 58.17 340 P **P** **04 33 23.3 0.0**
ARCES PcP **PcP** **04 34 15.1 +0.7**
ARCES P'P' 05 03 02.4
ARCES ⇑ *e* 05 03 13.1
ARCES P'P'ab P'P'ab 05 03 29.4 -7.0
ARCES ARCESS Array B 58.17 340 P **P** **04 33 23.3 0.0**
comp=Z,79nm,0.8s,baz=33,slow=7.7,SNR=76
ARCES PcP **PcP** **04 34 15.1 +0.7**
comp=Z,72nm,0.6s,baz=46,slow=5.2,SNR=8.4
ARCES PKPPKP P'P'df 05 03 02.4 -8.0
comp=Z,6.1nm,0.9s,baz=66,slow=9.4,SNR=4.4
ARCES PKP2bc 05 03 13.1
comp=Z,8.2nm,0.9s,baz=321,slow=1.6,SNR=5.6
ARCES PKP2ab 05 03 29.4
comp=Z,4.1nm,0.9s,baz=328,slow=4.3,SNR=2.6
ARCES LR LR 05 04 39.4
comp=Z,105µm,18.8s,baz=289,slow=42
ARE0 ARCESS Array S 58.17 340⇑ *i*P **P** **04 33 22.6 -0.7**
ARE0 *e*PcP **PcP** **04 34 14.0 -0.4**
KAPI Kappang 58.21 218 *e*P **P** **04 33 23.3 -0.9**
comp=Z,2µm,2.1s
KAPI LR LR
comp=Z,27µm,22.0s
KAPI Kappang 58.21 218 P **P** **04 33 24.0 -0.2**
SNR=29
KAPI Kappang 58.21 218 P **P** **04 33 23.3 -0.9**
comp=Z,2µm,1.1s,SNR=29
KAPI Kappang 58.21 218 P **P** **04 33 23.6 -0.6**
comp=Z,302nm,2.3s,comp=Z,14µmcomp=Z,125µm
THN Thein Dam 58.24 285 *e*P **P** **04 33 22.7 -1.6**
THN *e*S **S** **04 41 23.5 +0.1**
HUMO Hull Mountain 58.31 60 *e*P **P** **04 33 25.9 +1.1**
comp=Z,648nm,1.8s
KBKI Kotabaru 58.32 223 P **P** **04 33 24.5 -0.5**
comp=Z,227nm,1.7s,comp=Z,11µmcomp=Z,113µm
BKSI Bulukumba 58.33 218 P **P** **04 33 24.7 -0.3**
comp=Z,226nm,1.0s,comp=Z,8µmcomp=Z,110µm
KRMB Red Mountain 58.37 61 *e*P **P** **04 33 27.2 +2.0**
comp=Z,2µm,2.7s
BHK Bhakra 58.39 284 *e*P **P** **04 33 26.3 +0.9**
NEW Newport 58.41 52 *e*P **P** **04 33 26.2 +0.8**
comp=Z,548nm,1.4s
NEW LR LR
comp=Z,41µm,20.0s
NEW Newport 58.41 52⇓ P **P** **04 33 26.1 +0.8**
baz=58,SNR=130
TMCR Tamitsa 58.47 332 *e*P **P** **04 33 23.8 -1.6**
TMCR *e*S **S** **04 41 24.4 -1.0**
TMCR *e*S S 04 41 24.6 -0.8
TMCR pmax pmax
comp=Z,483nm,1.4s
PLKI Palangkaraya 58.47 226 P **P** **04 33 25.6 -0.5**
comp=Z,358nm,1.1s,comp=Z,16µmcomp=Z,147µm
VIPM Ingram Point 58.60 57 P **P** **04 33 28.5 +1.6**
VIPM Ingram Point 58.60 57 P **P** **04 33 28.4 +1.6**
A12A Yaak River Ran 58.81 50⇓ P **P** **04 33 29.7 +1.5**
baz=59,SNR=44
A12A ⇓ *S* **S** **04 41 31.8 +1.2**
baz=59
A12A ⇓ *S* **S** **04 41 31.8 +1.2**
baz=59
A12A ⇓ *S* **S** **04 41 31.8 +1.2**
baz=59
KHMM Horse Mountain 58.85 62 *e*P **P** **04 33 30.8 +2.1**
comp=Z,1µm,1.8s
YBH Yreka Blue Hor 58.97 61⇑ *i*P **P** **04 33 31.4 +1.9**
comp=Z,1µm,2.0s
DGPR DIGLIPUR 59.01 256 *e*P **P** **04 33 31.4 +1.6**
DGPR AMB AMB 04 33 36.1
comp=Z,2µm,2.8s
BBKI Banjar Baru 59.10 224 P **P** **04 33 30.1 -0.3**
comp=Z,511nm,1.6s,comp=Z,19µm
B12A Libby 59.12 51⇑ P **P** **04 33 31.5 +1.2**
baz=59,SNR=23
C11A Tepee Creek (N 59.13 52⇓ P **P** **04 33 31.5 +1.1**
baz=59,SNR=127
A13A Flathead Natio 59.48 50⇑ P **P** **04 33 33.9 +1.0**
baz=59
NDI New Delhi 59.53 281 *e*P **P** **04 33 30.5 -2.9**
NDI *ex* x 04 41 36.5
TRO Tromso 59.54 343⇑ *i*P **P** **04 33 31.9 -0.9**
TRO AMB AMB 04 33 34.8
comp=Z,232nm,1.2s
TRO *e*S **S** **04 41 35.8 -3.4**
TRO AMS AMS 04 57 08.3
comp=Z,95µm,28.7s
C12B Naegeli Ranch, 59.63 51⇑ P **P** **04 33 35.0 +1.2**
baz=59,SNR=17
KIPM Iron Peak 59.63 63 *e*P **P** **04 33 35.4 +1.3**
comp=Z,1µm,1.9s
KCPM Cahto Peak 59.64 63⇑ *i*P **P** **04 33 35.9 +1.7**
comp=Z,275nm,1.3s
WALA Waterton Lakes 59.67 49⇑ *i*P **P** **04 33 35.1 +0.9**
comp=Z,13nm,1.3s
WDC Whiskeytown Da 59.76 62⇑ *i*P **P** **04 33 36.1 +1.4**
WDC pmax pmax
comp=Z,308nm,1.4s
WDC Whiskeytown Da 59.76 62⇑ *i*P **P** **04 33 36.1 +1.4**
comp=Z,308nm,1.4s
B13A Whitefish 59.78 50⇑ P **P** **04 33 36.0 +1.1**
baz=60,SNR=293
BSMT Bassoo Peak 59.92 51 *e*P **P** **04 33 37.2 +1.2**
AGRA Agra 59.95 279 *ex* P 04 33 29.9 -6.3
A14A Double T Ranch 59.98 49⇑ P **P** **04 33 36.9 +0.6**
baz=60,SNR=159
PBKI Pangkalan Bun 60.03 228 P **P** **04 33 36.5 -0.4**
comp=Z,591nm,1.2s,comp=Z,14µmcomp=Z,147µm
BLMT Blacktail Moun 60.05 51 *e*P **P** **04 33 38.3 +1.4**
D12A Red Ives Fores 60.09 52⇑ P **P** **04 33 37.7 +0.7**
baz=60,SNR=94
C13A Hot Springs 60.14 51⇑ P **P** **04 33 38.7 +1.3**
baz=60,SNR=94
KLMR Klimovskoe 60.17 328 *ce*P **P** **04 33 36.0 -1.2**
KLMR pmax pmax
comp=Z,411nm,1.5s
KLMR pmax pmax
comp=Z,9µm,12.1s
KLMR MLR MLR
comp=Z,112µm,22.0s
COEN Coen 60.22 189 *e*P **P** **04 33 38.3 +0.3**
comp=Z,3µm,1.7s
PBA Port Blair 60.23 255 *e*P P 04 33 37.4 -0.8
IPM Ipoh 60.25 243 *e*P **P** **04 33 38.9 +0.5**
comp=Z,297nm,1.4s
IPM Ipoh 60.25 243 P **P** **04 33 39.7 +1.3**
IPM Ipoh 60.25 243 P **P** **04 33 38.8 +0.4**
comp=Z,218nm,2.2s,comp=Z,14µmcomp=Z,243µm
JTMT Jette 60.25 51 *e*P **P** **04 33 39.5 +1.3**
BMO Blue Mountains 60.31 55 *e*P **P** **04 33 39.9 +1.3**
comp=Z,1µm,2.0s
BMO LR LR
comp=Z,48µm,22.0s
MOD Modoc 60.32 59 *e*P **P** **04 33 39.4 +0.6**
YBMT Yellow Bay 60.33 51 *e*P **P** **04 33 39.7 +1.0**
comp=Z,531nm,1.7s
A15A Johnson Ranch, 60.34 49⇑ P **P** **04 33 39.0 +0.3**
baz=60,SNR=201
KUDL Kundal 60.37 281 *ex* P 04 33 33.0 -6.1
HOPS Hopland 60.38 63⇑ *i*P **P** **04 33 40.1 +1.1**
comp=Z,943nm,1.8s
B14A Maquette Ranc 60.42 50⇑ P **P** **04 33 40.5 +1.1**
baz=60,SNR=28
MMRI Maumere 60.47 214 P **P** **04 33 39.5 -0.3**
comp=Z,360nm,2.2s,comp=Z,16µmcomp=Z,152µm
C14A Swan Lake 60.53 51⇑ P **P** **04 33 41.2 +1.2**
baz=60
SWMT Swartz Lake 60.55 51 *e*P **P** **04 33 41.4 +1.2**
D13A Huson 60.55 52⇑ P **P** **04 33 41.1 +0.9**
baz=60,SNR=156
KGM Kluang 60.80 239 P **P** **04 33 43.9 +1.8**
B15A Bradely Ranch, 60.83 50⇓ P **P** **04 33 42.8 +0.7**
baz=61,SNR=243
FRIM Kepong 60.85 241 P **P** **04 33 44.2 +1.7**
KHET Khetri 60.88 281 *ex* P 04 33 37.1 -5.5
F12A Elk City 60.92 53⇓ P **P** **04 33 44.0 +1.2**
baz=61,SNR=284
A16A West Butte Ran 60.95 48⇑ P **P** **04 33 43.2 +0.3**
baz=61,SNR=164
SLMT Seeley Lake 60.98 51 *e*P **P** **04 33 44.3 +1.0**
MSO Missoula 60.99 52 *e*P **P** **04 33 44.3 +1.1**
comp=Z,984nm,1.7s
MSO LR LR
comp=Z,21µm,22.0s
MSO Missoula 60.99 52⇓ P **P** **04 33 44.4 +1.1**
baz=61,SNR=357
MCCM Marconi Confer 61.01 64⇑ *i*P **P** **04 33 44.0 +0.7**
comp=Z,98nm,0.8s
BTDF Bukit Timah Da 61.05 238 P **P** **04 33 45.6 +1.7**
comp=Z,224nm,1.6s,comp=Z,10µmcomp=Z,91µm
D14A Granath 61.08 51⇓ P **P** **04 33 44.8 +1.0**
baz=61,SNR=309
E13A Victor 61.09 52⇓ P **P** **04 33 44.7 +0.8**
baz=61,SNR=155
C15A Salmond Ranch, 61.14 50⇑ P **P** **04 33 45.8 +1.6**
baz=61,SNR=495
OHCM Honcut 61.15 62 *e*P **P** **04 33 45.0 +0.7**
JBP Jabalpur 61.15 274⇑ *i*P **P** **04 33 45.0 +0.6**
JBP *e*S **S** **04 41 59.9 -1.1**
B16A M & M Farms, S 61.22 49⇓ P **P** **04 33 45.2 +0.4**
baz=61,SNR=122
G12A Big Creek, Yel 61.26 54⇑ P **P** **04 33 46.0 +0.8**
baz=61
CHMT Chamberlain Mo 61.32 51 *e*P **P** **04 33 46.3 +0.7**
KBL Kabul 61.37 291 *e*P **P** **04 33 45.6 -0.5**
KBL pmax pmax
comp=Z,245nm,0.8s
KBL Kabul 61.37 291 *e*P **P** **04 33 45.6 -0.5**
comp=Z,245nm,0.8s
F13A Darby 61.41 53⇑ P **P** **04 33 46.8 +0.7**
baz=61,SNR=123
A17A Triple J Farms 61.42 48⇓ P **P** **04 33 46.6 +0.6**
baz=61,SNR=245
SUMG Summit 61.46 3 *e*P **P** **04 33 46.6 +0.3**
SUMG pmax pmax
comp=Z,2µm,0.9s
SUMG Summit 61.46 3 *e*P **P** **04 33 46.6 +0.3**
comp=Z,2µm,0.9s
SUMG Summit 61.46 3⇑ *i*P **P** **04 33 47.2 +0.9**
comp=Z,1µm,0.9s
SUMG
comp=Z,100µm,20.0s
SUMG Summit 61.46 3 *i* P **P'P'df** **05 03 05.5 -0.3**
E14A Clinton 61.49 52⇑ P **P** **04 33 47.6 +0.9**
baz=61,SNR=123
JOF Joensuu 61.50 333 *e*P **P** **04 33 44.2 -2.0**
JOF pmax pmax
comp=Z,123nm,0.6s
JOF Joensuu 61.50 333 *ep* **P** **04 33 44.2 -2.0**
comp=Z,123nm,0.6s
C16A Fuhringer Ranc 61.58 50⇑ P **P** **04 33 48.3 +1.1**
baz=61,SNR=379
D15A Lincoln 61.63 51⇓ P **P** **04 33 48.4 +0.8**
baz=61,SNR=77
SAC San Andreas 61.64 64 *e*P **P** **04 33 48.7 +1.1**
SAC pmax pmax
comp=Z,1µm,1.9s
SAC San Andreas 61.64 64 *e*P **P** **04 33 48.7 +1.1**
comp=Z,1µm,1.9s
STEI Steigen 61.71 343 *e*P **P** **04 33 47.1 -0.5**
STEI AMB AMB 04 33 54.1
comp=Z,145nm,1.8s
B17A L&G Farms, Che 61.77 49⇑ P **P** **04 33 49.4 +1.0**
baz=62,SNR=164
A18A Metzger Ranch, 61.88 48⇑ P **P** **04 33 49.7 +0.6**
baz=62,SNR=214
H12A Diamond D Ranc 61.88 54⇑ P **P** **04 33 50.1 +0.8**
baz=62,SNR=104
G13A Cobalt 61.90 53⇓ P **P** **04 33 50.2 +0.8**
baz=62,SNR=311
FFC Flin Flon 61.92 39 *i* P **P** **04 33 49.9 +0.7**
FFC Flin Flon 61.92 39 *e*P **P** **04 33 50.1 +0.9**
comp=Z,2µm,2.2s
FFC LR LR
comp=Z,72µm,22.0s
FFC Flin Flon 61.92 39 P **P** **04 33 50.1 +0.9**
comp=Z,1µm,1.5s
F14A Wisdom 61.93 52⇑ P **P** **04 33 50.7 +1.0**
baz=62,SNR=95
E15A Deer Lodge 61.95 51⇓ P **P** **04 33 50.6 +0.8**
baz=62,SNR=138
MFID Camas Ranch 62.03 56 *e*P **P** **04 33 51.5 +1.2**
comp=Z,1µm,2.0s
MFID Camas Ranch 62.03 56⇓ P **P** **04 33 51.4 +1.1**
baz=62,SNR=149
D16A Dana Ranch, Ca 62.16 50⇓ P **P** **04 33 52.2 +1.1**
baz=62,SNR=270
I12A Atlanta 62.19 55⇑ P **P** **04 33 52.6 +1.1**
baz=62,SNR=298
C17A Wharram Farm, 62.20 49⇑ P **P** **04 33 52.2 +0.8**
baz=62,SNR=343
HRY Holter Researc 62.21 51 *e*P **P** **04 33 52.8 +1.3**
H13A Challis 62.21 54⇓ P **P** **04 33 52.6 +1.1**
baz=62,SNR=313
TPI Tanjungpandan 62.21 232 P **P** **04 33 51.9 +0.3**
comp=Z,136nm,2.3s,comp=Z,7µmcomp=Z,114µm
G14A Jackson 62.23 53⇓ P **P** **04 33 52.1 +0.4**
baz=62,SNR=46
WCN Washoe City 62.23 61 *e*P **P** **04 33 53.1 +1.3**
WCN pmax pmax
comp=Z,2µm,2.0s
WCN Washoe City 62.23 61 *e*P **P** **04 33 53.1 +1.3**
comp=Z,2µm,2.0s
LHMI Lhok Sumawe 62.24 247 P **P** **04 33 53.6 +1.8**
comp=Z,758nm,1.2s,comp=Z,28µmcomp=Z,297µm
B18A Beardsley Farm 62.24 48⇓ P **P** **04 33 52.5 +1.0**
baz=62,SNR=297
XMAS Kiritimati 62.34 119 *e*P **P** **04 33 54.8 +2.2**
XMAS LR LR
comp=Z,97µm,22.0s
F15A Butte 62.39 52⇑ P **P** **04 33 53.9 +1.1**
baz=62,SNR=217
JMIC Jan Mayen 62.39 353 *e*P **P** **04 33 53.6 +1.5**
JMIC AMB AMB 04 34 00.1
comp=Z,1µm,2.5s
E16A East Helena 62.40 51⇑ P **P** **04 33 54.0 +1.2**
baz=62,SNR=275
LRM Limekiln Ridge 62.43 52 *e*P **P** **04 33 54.1 +1.0**
A19A Klindworth Far 62.44 47⇓ P **P** **04 33 53.5 +0.6**
baz=62,SNR=316
VIS Vishakhapatnam 62.45 267 *e*P **P** **04 33 52.7 -0.6**
EGMT Eagleton 62.48 48 *e*P **P** **04 33 54.2 +0.9**
comp=Z,939nm,1.4s
EGMT LR LR
comp=Z,55µm,22.0s
EGMT Eagleton 62.48 48⇑ P **P** **04 33 54.0 +0.8**
baz=62,SNR=213
TSI Tuntungan 62.54 244 P **P** **04 33 54.5 +0.6**
comp=Z,419nm,1.2s,comp=Z,18µmcomp=Z,317µm
D17A Six Diamond Ra 62.54 50⇑ P **P** **04 33 54.7 +1.0**
baz=62,SNR=217
PPBI Pangkal Pinang 62.56 233 P **P** **04 33 55.4 +1.4**
comp=Z,369nm,1.8s,comp=Z,20µmcomp=Z,125µm
CMB Columbia Colle 62.63 63 *e*P **P** **04 33 55.5 +1.2**
CMB pmax pmax
comp=Z,1µm,1.8s
CMB Columbia Colle 62.63 63 *e*P **P** **04 33 55.5 +1.2**
comp=Z,1µm,1.8s
B19A Brinkman Farms 62.63 48⇑ P **P** **04 33 55.3 +1.1**
baz=62,SNR=162
DLMT Dillon 62.63 52 *e*P **P** **04 33 55.3 +0.9**
comp=Z,1µm,2.0s
KMMI Kalianget 62.64 223 P **P** **04 33 54.8 +0.4**
comp=Z,247nm,2.1s,comp=Z,15µmcomp=Z,244µm
H14A Leadore 62.67 53⇓ P **P** **04 33 55.3 +0.6**
baz=62,SNR=125
I13A Wildhorse Cree 62.69 54⇑ P **P** **04 33 56.2 +1.3**
baz=62,SNR=287
AJM Ajmer 62.69 281 *e*P **P** **04 33 52.5 -2.3**
HLID Hailey 62.74 55 *e*P **P** **04 33 56.0 +0.9**
comp=Z,898nm,1.9s
HLID LR LR
comp=Z,44µm,21.0s
HLID Hailey 62.74 55⇓ P **P** **04 33 56.4 +1.3**
baz=63,SNR=212
SAO San Andreas Ge 62.76 64 *e*P **P** **04 33 55.9 +0.8**
SAO pmax pmax
comp=Z,819nm,2.0s
SAO San Andreas Ge 62.76 64 *e*P **P** **04 33 55.9 +0.8**
comp=Z,819nm,2.0s
G15A Dillon 62.82 52⇓ P **P** **04 33 56.4 +0.8**
baz=63,SNR=330
MCMT McKenzie Canyo 62.83 53 *e*P **P** **04 33 56.0 +0.2**
comp=Z,60nm,1.1s
CMBY CAMPBELL BAY 62.85 251 *e*P **P** **04 33 57.2 +1.2**
PSI Prapat 62.86 243 P **P** **04 33 56.5 +0.4**
comp=Z,243nm,1.0s,comp=Z,13µmcomp=Z,192µm
BHPL Bhopal 62.88 276 *e*P **P** **04 33 56.0 -0.1**
BHPL AMB AMB 04 34 00.6
comp=Z,881nm,0.8s
A20A Cobblestone Ra 62.88 47⇑ P **P** **04 33 56.9 +1.1**
baz=63,SNR=340
E17A Martinsdale 62.89 50⇓ P **P** **04 33 57.6 +1.5**
baz=63,SNR=289
F16A Kennard Place, 62.90 51⇑ P **P** **04 33 57.2 +1.1**
baz=63,SNR=143
SRBI Singaraja 62.96 221 P **P** **04 33 56.6 0.0**
comp=Z,492nm,1.3s,comp=Z,17µmcomp=Z,115µm
J13A Cove Ranch, Pi 62.98 55⇑ P **P** **04 33 58.1 +1.4**
baz=63,SNR=237
D18A Linhart Farms, 62.98 49⇓ P **P** **04 33 57.9 +1.3**
baz=63,SNR=73
BOZ Bozeman (W) 62.98 51 *e*P **P** **04 33 58.0 +1.3**
BOZ pmax pmax
comp=Z,2µm,1.8s
BOZ MLR MLR
comp=Z,32µm,22.0s
BOZ Bozeman (W) 62.98 51 *e*P **P** **04 33 58.0 +1.3**
comp=Z,2µm,1.8s
BOZ LR LR
comp=Z,32µm,22.0s
BOZ Bozeman (W) 62.98 51⇓ P **P** **04 33 58.3 +1.6**
baz=63,SNR=168
KHKI Kahang-Kahang 63.03 221 P **P** **04 33 56.4 -0.6**
comp=Z,482nm,0.9s,comp=Z,14µmcomp=Z,188µm

C19A Slack Wire Ran 63.04 48 ⇓P P 04 33 58.2 +1.3
baz=63,SNR=355
I14A Mackay 63.06 54 ⇓P P 04 33 58.6 +1.4
baz=63,SNR=347
BMN Battle Mountai 63.06 59⇑*iP* P 04 33 58.5 +1.2
BMN pmax pmax
comp=Z,1μm,1.8s
BMN MLR MLR
comp=Z,47μm,22.0s
BMN Battle Mountai 63.06 59⇑*iP* P 04 33 58.5 +1.2
comp=Z,1μm,1.8s
BMN LR LR
comp=Z,47μm,22.0s
H15A Lima 63.08 53 ⇓P P 04 33 58.1 +0.8
baz=63,SNR=48
BSI Banda Aceh 63.10 248 P P 04 33 57.1 -0.5
comp=Z,157nm,1.8s,comp=Z,12μmcomp=Z,256μm
B20A Solberg Farm, 63.12 47 ⇑P P 04 33 58.2 +0.9
baz=63,SNR=79
NGP Nagpur 63.13 273 *e*P P 04 33 56.2 -1.6
NGP *ex* x 04 42 19.6
G16A Moss Hill, Enn 63.15 52 ⇓P P 04 33 58.8 +0.9
baz=63,SNR=333
RGRI Rengat 63.27 238 P P 04 34 00.5 +1.8
comp=Z,628nm,1.6s,comp=Z,192μmcomp=Z,147μm
A21A Bergtoll Ranch 63.32 46 ⇑P P 04 33 59.8 +1.1
baz=63,SNR=330
E18A Harlowton 63.33 50 ⇓P P 04 34 00.4 +1.5
baz=63,SNR=169
F17A Fitzpatrick Pl 63.35 51 ⇑P P 04 34 00.3 +1.2
baz=63,SNR=188
KONS Konsvik 63.37 343 *e*P P 04 33 55.6 -3.0
KONS AMB AMB 04 34 03.2
comp=Z,269nm,1.8s
KONS AMS AMS 05 05 48.5
comp=Z,63μm,20.0s
MOR8 Moi Rana 63.37 342 *e*P P 04 33 56.9 -1.9
MOR8 AMB AMB 04 34 03.0
comp=Z,459nm,2.2s
J14A Carey 63.40 54 ⇑P P 04 34 01.4 +1.9
baz=63
BLJI Banyuglugur 63.42 223 P P 04 34 01.1 +1.5
comp=Z,1μm,1.3s,comp=Z,12μm
FLOS Flostrand 63.46 343 *e*P P 04 34 00.0 +0.8
FLOS AMB AMB 04 34 05.9
comp=Z,289nm,1.8s
BYJI Banyuwangi 63.47 222 P P 04 34 02.3 +2.3
comp=Z,1μm,1.5s
NBBI Negara 63.49 222 P P 04 34 00.2 +0.1
comp=Z,379nm,1.5s,comp=Z,11μm
D19A Cripps Ranch, 63.49 49 ⇑P P 04 34 01.0 +1.1
baz=63,SNR=148
BKNI Bangkinang 63.51 240 P P 04 34 01.4 +1.1
comp=Z,912nm,1.2s,comp=Z,19μmcomp=Z,260μm
STOK Stokkvaagen 63.53 343 *e*P P 04 33 59.0 -0.7
STOK AMB AMB 04 34 06.3
comp=Z,529nm,2.3s
STOK AMS AMS 05 05 54.8
comp=Z,86μm,20.7s
I15A Monteview 63.55 53 ⇑P P 04 34 01.5 +1.1
baz=63,SNR=63
C20A Veseth Ranch, 63.59 48 ⇑P P 04 34 01.9 +1.4
baz=63,SNR=452
QLMT Earthquake Lak 63.61 52 *e*P P 04 34 02.2 +1.3
B21A Ellsworth Farm 63.64 47 ⇑P P 04 34 01.8 +1.0
baz=63,SNR=9.9
KAF Kangasniemi 63.64 335 *e*P P 04 33 58.9 -1.6
KAF pmax pmax
comp=Z,139nm,0.7s
KAF Kangasniemi 63.64 335 *e*p P 04 33 58.9 -1.6
comp=Z,138nm,0.7s
IGBI Denpasar 63.64 221 P P 04 34 00.9 -0.2
comp=Z,96nm,1.3s
G17A Pierce Place, 63.68 51 ⇑P P 04 34 02.7 +1.4
baz=64,SNR=92
SCO Scoresbysund 63.68 358⇑*iP* P 04 34 01.3 +0.7
comp=Z,382nm,0.9s
SCO
comp=Z,46μm,18.0s
SCO Scoresbysund 63.68 358 *i* P P'P'df 05 02 50.9 -11
comp=Z,4.5nm,0.9s
NV11 Mina Array Sit 63.75 61⇑*iP* P 04 34 02.9 +1.0
H16A Russell Place, 63.79 52 ⇓P P 04 34 03.5 +1.4
baz=64,SNR=315
A22A Carney Farms, 63.82 46 ⇑P P 04 34 02.9 +0.9
baz=64,SNR=350
MLAC Mammoth Lakes 63.84 62 ⇑P P 04 34 04.1 +1.6
baz=64,SNR=35
F18A Big Timber 63.85 50 ⇓P P 04 34 03.8 +1.4
baz=64,SNR=312
D20A Manuel Ranch, 63.92 48 ⇑P P 04 34 04.2 +1.5
baz=64,SNR=310
GCMT Greycliff 63.95 50 *e*P P 04 34 04.5 +1.4
comp=Z,765nm,1.7s
GMJI Gumukmas 63.95 223 P P 04 34 04.1 +1.0
comp=Z,138nm,1.3s,comp=Z,8μmcomp=Z,110μm
J15A Blackfoot 63.96 54 ⇑P P 04 34 04.9 +1.7
baz=64,SNR=57
YMR Madison River 63.97 52⇑*iP* P 04 34 04.6 +1.3
comp=Z,2μm,1.8s
C21A Desert Coulee 63.99 47 ⇓P P 04 34 04.2 +1.1
baz=64,SNR=177
E19A Rath Farm, Rou 63.99 49 ⇓P P 04 34 04.4 +1.2
baz=64,SNR=215
ELK Elko 64.04 58 *e*P P 04 34 05.2 +1.3
K14A Jones Ranch, D 64.09 55 ⇓P P 04 34 05.7 +1.7
baz=64,SNR=254
PUL Pulkovo 64.16 331⇓*eP* P 04 34 04.5 +0.5
PUL pmax pmax
comp=Z,452nm,0.7s
PUL MLR MLR
comp=Z,101μm,21.0s
MTUM Tungsten Hills 64.18 62 *e*P P 04 34 05.8 +1.0
YFT Old Faithful 64.18 52⇑*iP* P 04 34 07.0 +2.3
comp=Z,812nm,1.7s
I16A Newdale 64.19 53 ⇓P P 04 34 06.5 +1.8
baz=64,SNR=219
FIA1 FINESS Array S 64.22 334⇑*iP* P 04 34 02.8 -1.6
FINES FINESS Array B 64.23 334 P P 04 34 03.5 -0.8
FINES P'P' 05 02 54.8
FINES P'P'ab P'P'ab 05 03 05.2 -6.3
FINES FINESS Array B 64.23 334 P P 04 34 03.5 -0.8
comp=Z,221nm,0.7s,baz=38,slow=7.2,SNR=274
FINES PKPPKP P'P'df 05 02 54.8 -5.7
comp=Z,5.1nm,0.8s,baz=150,slow=4.2,SNR=6.3
FINES PKP2ab 05 03 05.2
comp=Z,5.3nm,1.0s,baz=90,slow=5.6,SNR=4.1
FINES LR LR 05 04 51.2
comp=Z,136μm,20.2s,baz=45,slow=39
PTRM Twissleman Ran 64.23 65 *e*P P 04 34 06.3 +1.4
B22A Reddig Ranch S 64.23 46 ⇑P P 04 34 05.6 +0.9
baz=64,SNR=24
SJI Sawahan 64.30 225 P P 04 34 05.3 -0.2
comp=Z,778nm,1.5s,comp=Z,15μmcomp=Z,117μm
F19A Roth Farm, Mol 64.30 50 ⇑P P 04 34 06.3 +1.0
baz=64,SNR=285
E20A Meyer Farm, Mu 64.31 49 ⇑P P 04 34 06.6 +1.3
baz=64,SNR=193
G18A Lazy EL Ranch, 64.31 51 ⇑P P 04 34 06.2 +0.7
baz=64,SNR=44
KRKI Karangkates 64.33 224 P P 04 34 06.8 +1.2
comp=Z,1μm,1.4s,comp=Z,25μmcomp=Z,194μm
LKWY Lake 64.35 52 *e*P P 04 34 08.4 +2.6
LKWY pmax pmax
comp=Z,1μm,2.1s
LKWY MLR MLR
comp=Z,57μm,20.0s
LKWY Lake 64.35 52 *e*P P 04 34 08.4 +2.6
comp=Z,1μm,2.1s
LKWY LR LR
comp=Z,57μm,20.0s
H17A Grant Village 64.36 52 ⇓P P 04 34 08.7 +2.8
baz=64,SNR=260
A23A Redstone 64.36 45 ⇑P P 04 34 06.3 +0.8
baz=64,SNR=20
K15A Arbon 64.37 54 ⇑P P 04 34 07.9 +2.0
baz=64,SNR=132
SMRI Semarang 64.37 226 P P 04 34 06.5 +0.6
comp=Z,668nm,1.9s,comp=Z,29μmcomp=Z,210μm
L14A Malta 64.38 55 ⇓P P 04 34 07.5 +1.6
baz=64,SNR=167
RCTC Rector, Farmer 64.42 64 ⇓P P 04 34 07.0 +0.9
baz=64,SNR=22
MOS Moscow 64.43 325α*iP* P 04 34 04.8 -1.0
MOS *e* 04 34 19.7
MOS *e* 04 34 37.2
MOS *e*PPP PPP 04 37 57.5
MOS *e*S S 04 42 36.5 -4.7
MOS *e* 04 43 51.9
MOS pmax pmax
comp=Z,6μm,5.0s
MOS pmax pmax
comp=N,4μm,4.8s
MOS pmax pmax
comp=E,3μm,4.7s
MOS pmax pmax
comp=Z,227nm,1.5s
MOS MLR MLR
comp=Z,101μm,22.0s
MOS MLR MLR
comp=N,46μm,20.0s
MOS MLR MLR
comp=E,78μm,21.0s
IMW Indian Meadow 64.48 53 *e*P P 04 34 08.6 +1.8
comp=E,902nm,1.6s
J16A Bone 64.50 53 ⇑P P 04 34 08.7 +1.9
baz=64
PWJI Pagerwojo 64.53 225 P P 04 34 06.2 -0.7
comp=E,1μm,1.0s,comp=E,12μmcomp=E,113μm
D21A La Casta Ranch 64.53 48 ⇑P P 04 34 08.0 +1.2
baz=64,SNR=138
DCID1 Drake Creek 64.54 53 *e*P P 04 34 09.0 +2.0
comp=E,706nm,1.4s
TPH Tonopah 64.54 61 PFAKE 04 34 20.0 +13
TPH LR LR
comp=Z,27μm,22.0s
TIN Tinemaha 64.58 62 ⇑P P 04 34 08.3 +1.1
baz=64,SNR=21
SMMC Simmler 64.58 65 ⇑P P 04 34 08.5 +1.3
baz=64,SNR=41
RLMT Red Lodge 64.60 51⇑*iP* P 04 34 08.7 +1.3
comp=Z,570nm,1.3s
RLMT LR LR
comp=Z,39μm,22.0s
RLMT Red Lodge 64.60 51 ⇓P P 04 34 08.6 +1.3
baz=64,SNR=173
RRI2 Red Ridge 64.62 53 *e*P P 04 34 09.5 +1.9
comp=Z,367nm,0.9s
B23A Brockton 64.63 46 ⇑P P 04 34 08.0 +0.6
baz=64,SNR=174
C22A Vida 64.66 47 ⇑P P 04 34 08.0 +0.5
baz=64,SNR=84
I17A Pilgrim Ck. 64.67 52 ⇑P P 04 34 10.2 +2.3
baz=64,SNR=212
H18A Shoshone NF, C 64.67 51 ⇓P P 04 34 09.0 +1.1
baz=64,SNR=143
MOOW Moose Ponds 64.68 53⇑*iP* P 04 34 09.7 +1.7
comp=Z,929nm,1.7s
TPAW Teton Pass 64.73 53 *e*P P 04 34 10.1 +1.7
comp=Z,2μm,1.8s
F20A Billings 64.76 50 ⇓P P 04 34 09.0 +0.8
baz=65,SNR=98
K16A Soda Springs 64.80 54 ⇓P P 04 34 10.5 +1.8
baz=65,SNR=250
HVU Hansel Valley 64.81 55 *e*P P 04 34 10.1 +1.4
HVU pmax pmax
comp=Z,966nm,2.0s
HVU Hansel Valley 64.81 55 *e*P P 04 34 10.1 +1.4
comp=Z,966nm,2.0s
A24A Westby 64.82 45 ⇑P P 04 34 09.2 +0.6
baz=65,SNR=60
VES Vestal, Richgr 64.82 64 ⇑P P 04 34 08.8 +0.1
baz=65,SNR=59
E21A Keefer Ranch, 64.84 48 ⇑P P 04 34 10.0 +1.3
baz=65,SNR=84
LOHW Long Hollow 64.85 53⇑*iP* P 04 34 10.5 +1.4
comp=Z,2μm,1.8s
SNOW Snow King Moun 64.86 53 *e*P P 04 34 11.0 +1.8
comp=Z,1μm,1.7s
REDW Red Top Meadow 64.87 53 *e*P P 04 34 11.1 +1.8
comp=Z,19nm,1.6s
L15A Malad City 64.89 55 ⇓P P 04 34 10.3 +1.0
baz=65,SNR=204
TGJI Tegal 64.89 228 P P 04 34 11.2 +1.9
comp=Z,782nm,2.4s,comp=Z,18μm
D22A Cohagen 64.90 47 ⇑P P 04 34 10.2 +1.1
baz=65,SNR=140
J17A Brown Place, J 64.95 53 ⇑P P 04 34 11.4 +1.7
baz=65,SNR=226
PKM Peak Mountain 64.96 65 ⇑P P 04 34 11.0 +1.2
baz=65,SNR=22
C23A Lambert 64.97 46 ⇓P P 04 34 10.6 +1.0
baz=65,SNR=81
BJII Banjamegara 64.98 227 P P 04 34 10.8 +0.8
comp=Z,652nm,2.5s,comp=Z,19μmcomp=Z,215μm
PCJI Pacitan 64.98 225 P P 04 34 10.5 +0.6
comp=Z,264nm,1.8s,comp=Z,11μmcomp=Z,108μm
DGMT Dagmar 65.02 45 *e*P P 04 34 10.3 +0.4
DGMT comp=Z,2μm,1.8s LR LR
comp=Z,82μm,22.0s
DGMT Dagmar 65.02 45 ⇑P P 04 34 10.5 +0.6
baz=65,SNR=57
H19A Powell 65.05 51 ⇑P P 04 34 11.4 +1.2
baz=65,SNR=135
UGM Wanagama 65.07 226 *e*P P 04 34 09.9 -0.6
comp=Z,3μm,1.9s
UGM Wanagama 65.07 226 P P 04 34 11.4 +0.9
comp=Z,68nm,1.3s,comp=Z,16μmcomp=Z,165μm
YOGI Yogyakarta 65.10 226 P P 04 34 12.0 +1.4
comp=Z,923nm,1.8s,comp=Z,25μmcomp=Z,151μm
G20A Bridger 65.10 50 ⇓P P 04 34 11.0 +0.5
baz=65,SNR=103
AHID Auburn Hatcher 65.12 54 *e*P P 04 34 12.0 +1.2
comp=Z,1μm,2.0s
AHID LR LR
comp=Z,59μm,21.0s
GRAC Grapevine Rang 65.14 62 ⇑P P 04 34 12.2 +1.3
baz=65,SNR=109
KRJI Kerinci 65.19 238 P P 04 34 12.6 +1.2
comp=Z,2μm,1.0s,comp=Z,34μmcomp=Z,128μm
I18A Diamond G Ranc 65.22 52 ⇑P P 04 34 13.1 +1.6
baz=65,SNR=125
K17A Gardner Place, 65.23 54 ⇓P P 04 34 12.4 +0.9
baz=65,SNR=34
F21A Absaloka Mine, 65.28 49 ⇑P P 04 34 12.6 +0.9
baz=65,SNR=11
OBN Obninsk 65.30 325α*iP* P 04 34 10.5 -0.9
OBN *i* 04 34 44.8
OBN *i* PPP PPP 04 38 19.4
OBN *i* S S 04 42 44.9 -7.0
OBN *e*PS PnS 04 43 17.5 +2.9
OBN *i* PPS PPS 04 43 33.4
OBN *i* 04 43 52.0
OBN pmax pmax
comp=Z,4μm,3.8s
OBN pmax pmax
comp=Z,383nm,1.2s
OBN MLR MLR
comp=Z,101μm,19.0s
OBN Obninsk 65.30 325 *e*P P 04 34 11.8 +0.4
comp=Z,997nm,1.7s
OBN LR LR
comp=Z,121μm,21.0s
OBN Obninsk 65.30 325 P P 04 34 11.0 -0.4
comp=Z,1μm,0.9s,SNR=17
ISA Isabella 65.31 64 *e*P P 04 34 12.1 +0.1
ISA pmax pmax
comp=Z,536nm,1.9s
ISA Isabella 65.31 64 *e*P P 04 34 12.1 +0.1
comp=Z,536nm,1.9s
ISA Isabella 65.31 64 ⇑P P 04 34 12.0 +0.1
baz=65,SNR=83
SBC Santa Barbara 65.32 65 ⇓P P 04 34 12.9 +1.0
baz=65
NSS Namsos 65.32 342⇑*iP* P 04 34 09.6 -1.8
NSS AMS AMS 04 59 57.4
comp=Z,52μm,25.3s
R11A Troy Canyon, C 65.36 60 ⇓P P 04 34 13.2 +0.8
baz=65,SNR=306
D23A Lindsay 65.38 47 ⇑P P 04 34 13.4 +1.2
baz=65
L16A Fish Haven 65.42 54 ⇑P P 04 34 13.9 +1.1
baz=65,SNR=131
J18A Kendall Valley 65.43 53 ⇓P P 04 34 14.1 +1.2
baz=65,SNR=104
ARVC Arvin 65.43 64 ⇓P P 04 34 13.6 +0.9
baz=65,SNR=32
I19A Meeteetse 65.46 51 ⇓P P 04 34 14.2 +1.2
baz=65,SNR=117
E22A Miles City 65.49 48 ⇑P P 04 34 13.8 +0.8
baz=65,SNR=133
C24A Savage 65.54 46 ⇑P P 04 34 14.1 +0.9
baz=65,SNR=54
HWUT Hardware Ranch 65.61 55 *e*P P 04 34 15.1 +1.2
HWUT comp=Z,1μm,1.8s LR LR
comp=Z,30μm,20.0s
G21A Lodge Grass 65.63 50 ⇑P P 04 34 14.6 +0.6
baz=65,SNR=14
LEM Lembang 65.64 229 P P 04 34 16.0 +1.7
comp=Z,1μm,1.0s,comp=Z,19μmcomp=Z,221μm
BSC Santa Cruz Isl 65.65 66 ⇓P P 04 34 14.9 +0.7
baz=66,SNR=7.0
CLJI Cilicap 65.67 227 P P 04 34 15.0 +0.7
comp=Z,443nm,0.9s,comp=Z,6μmcomp=Z,103μm
MPMC Manual Prospec 65.67 63 ⇓P P 04 34 15.3 +0.9
baz=66,SNR=156
L17A Cokeville 65.68 54 ⇑P P 04 34 15.6 +1.1
baz=66,SNR=30
BLSI Bandar Lampung 65.70 232 P P 04 34 16.8 +2.2
comp=Z,488nm,0.9s,comp=Z,12μmcomp=Z,116μm
H20A Greybull 65.70 51 ⇑P P 04 34 15.0 +0.6
baz=66,SNR=54
F22A Rosebud 65.77 49 ⇓P P 04 34 15.5 +0.7
baz=66,SNR=217
E23A Ismay 65.78 48 ⇓P P 04 34 16.0 +1.2
baz=66,SNR=107
FURC Furnace Creek, 65.79 62 ⇓P P 04 34 16.2 +1.3
baz=66,SNR=163
K18A Toltan Ranch, 65.80 53 ⇑P P 04 34 16.7 +1.5
baz=66,SNR=203
DUG Dugway 65.81 57 *e*P P 04 34 16.5 +1.2
DUG pmax pmax
comp=Z,1μm,1.8s
DUG MLR MLR
comp=Z,41μm,22.0s
DUG Dugway 65.81 57 *e*P P 04 34 16.4 +1.2
comp=Z,1μm,1.8s
DUG LR LR
comp=Z,41μm,22.0s
DUG Dugway 65.81 57 ⇑P P 04 34 16.4 +1.2
baz=66,SNR=318
OSI Osito Adit 65.83 65⇑*iP* P 04 34 16.2 +0.9
comp=Z,227nm,1.0s
OSI Osito Adit 65.83 65 ⇓P P 04 34 16.4 +1.0
baz=66,SNR=11
SBJI Serang 65.84 231 P P 04 34 15.0 -0.4
comp=Z,280nm,2.7s,comp=Z,13μm
D24A Glendive 65.86 47 ⇓P P 04 34 16.5 +1.1
baz=66,SNR=120
DBJI Dramaga 65.87 230 P P 04 34 16.7 +1.1
comp=Z,454nm,0.5s,comp=Z,17μmcomp=Z,124μm
IMYA Miami 65.90 298 *e*P P 04 34 15.9 0.0
LRMC Laurel Mountai 65.92 63 ⇑P P 04 34 16.5 +0.5
baz=66,SNR=67
J19A Crowheart 65.93 52 ⇑P P 04 34 17.3 +1.3
baz=66,SNR=274
BLG Laguna Peak 65.94 65 ⇑P P 04 34 16.7 +0.7
baz=66,SNR=7.0
O15A The Old Anders 65.95 56 ⇓P P 04 34 17.5 +1.3
baz=66,SNR=65
BW06 Boulder Array 65.98 53 *e*P P 04 34 17.2 +0.8
comp=Z,1μm,1.9s
BW06 LR LR
comp=Z,34μm,22.0s
BW06 Boulder Array 65.98 53 ⇑P P 04 34 17.6 +1.2
baz=66,SNR=280
PDAR Pinedale Array 65.98 53 P P 04 34 17.1 +0.7
PDAR ⇑*e* 05 02 53.2
PDAR P'P'ab P'P'ab 05 03 05.8 +1.8
PDAR Pinedale Array 65.98 53 P P 04 34 17.1 +0.7
comp=Z,105nm,0.9s,baz=280,slow=1.5,SNR=404
PDAR LR LR 04 59 21.4
comp=Z,26μm,21.1s,baz=324,slow=32
PDAR PKP2bc 05 02 53.2
comp=Z,3.7nm,0.9s,baz=137,slow=6.5,SNR=9.9
PDAR PKP2ab 05 03 05.8
comp=Z,3.8nm,1.1s,baz=94,slow=4.9,SNR=3.8
I20A Worland 65.98 51 ⇑P P 04 34 17.5 +1.2
baz=66,SNR=197
HYB Hyderabad 65.99 270 *i* P P 04 34 15.0 -1.5
comp=Z,170nm,1.0s
HYB *e*PP PP 04 36 40.0 -1.9
HYB *e* 04 38 32.0
HYB *e*ScP 04 38 50.0
HYB *e*S S 04 43 00.0 -1.4
HYB Hyderabad 65.99 270 *e*P P 04 34 15.8 -0.7
VRHR Novokhopersk 66.00 320 *e*P P 04 34 14.7 -1.3
VRHR *e*PPP PPP 04 38 20.7
VRHR pmax pmax
comp=Z,80nm,0.7s
VRHR pmax pmax
comp=N,70nm,0.9s
VRHR pmax pmax
comp=E,30nm,1.0s
VRHR pmax pmax
comp=Z,410nm,1.3s
VRHR pmax pmax
comp=N,510nm,1.9s
VRHR pmax pmax
comp=E,500nm,1.9s
VRHR MLR MLR
comp=Z,91μm,16.0s
VRHR MLR MLR
comp=N,28μm,15.0s
VRHR MLR MLR
comp=E,50μm,17.0s
SFJD Kangerlussuaq 66.01 9⇑*iP* P 04 34 15.6 -0.1
comp=E,264nm,0.9s
SFJD LR LR
comp=Z,81μm,20.0s
SFJD Kangerlussuaq 66.01 9⇑*iP* P 04 34 15.7 -0.1
comp=Z,173nm,0.9s
SFJD
comp=Z,59μm,19.0s
SFJD Kangerlussuaq 66.01 9 *i* P P'P'df 05 02 58.0 +0.4
comp=Z,10.0nm,0.9s
CTA Charters Tower 66.01 186 S S 04 43 02.8 +1.6
comp=Z,1.2nm,0.4s,baz=130,slow=19,SNR=1.9
CTAO Charters Tower 66.01 186 *e*P P 04 34 15.9 -0.5
CTAO pmax pmax
comp=Z,613nm,1.8s
CTAO MLR MLR
comp=Z,41μm,21.0s
CTAO Charters Tower 66.01 186 *e*P P 04 34 15.9 -0.5
comp=Z,614nm,1.8s
CTAO LR LR
comp=Z,41μm,21.0s
MBSI MBSI 66.06 236 P P 04 34 18.3 +1.4
comp=Z,1μm,0.8s,comp=Z,29μm
LWLI Liwa 66.07 234 P P 04 34 16.2 -0.9
comp=Z,782nm,0.9s,comp=Z,11μmcomp=Z,115μm
ABKT Ailbek 66.08 300 P P 04 34 17.8 +1.0
comp=Z,2μm,0.9s
CTU Camp Tracy 66.10 56 *e*P P 04 34 18.7 +1.6
comp=Z,909nm,1.8s
H21A Big Horn, Sher 66.12 50 ⇑P P 04 34 18.0 +0.9
baz=66,SNR=85
EDW2 Edwards Air Fo 66.12 64 ⇓P P 04 34 18.1 +0.9
baz=66,SNR=152
G22A Birney 66.12 49 ⇓P P 04 34 18.0 +0.9
baz=66,SNR=80
CISI Cisompet, Garu 66.15 229 P P 04 34 17.8 +0.3
comp=Z,198nm,2.4s,comp=Z,9μmcomp=Z,151μm
N16A Rees Ranch, Co 66.15 55 ⇓P P 04 34 18.7 +1.2
baz=66,SNR=44
MNAI Manna 66.16 235 P P 04 34 19.2 +1.7
comp=Z,2μm,1.2s,comp=Z,17μmcomp=Z,178μm
M17A Scullys Gap (B 66.21 54 ⇓P P 04 34 18.7 +0.8
baz=66,SNR=70
KASI Kota Agung 66.24 233 P P 04 34 18.0 0.0
comp=Z,206nm,1.2s,comp=Z,8μm
E24A Baker 66.25 47 ⇑P P 04 34 18.8 +1.0
baz=66,SNR=31
L18A Fontenelle, Gr 66.27 54 ⇓P P 04 34 19.2 +1.0
baz=66,SNR=116
ISRO Mashad 66.31 298 *e*P P 04 34 19.2 +0.8
DECC Green Verdugo 66.31 65 ⇑P P 04 34 19.0 +0.5
baz=66,SNR=15
JLU Jordanelle 66.33 56 *e*P P 04 34 19.8 +1.1
comp=Z,1μm,1.9s
K19A Absolon Red Bu 66.33 52 ⇑P P 04 34 18.9 +0.3
baz=66,SNR=124
IQHU Qucahn 66.38 299 *e*P P 04 34 20.6 +1.7
J20A Shoshoni 66.40 52 ⇓P P 04 34 20.1 +1.1
baz=66,SNR=178
PASC Pasadena Art C 66.45 65 *e*P P 04 34 19.9 +0.6
comp=Z,234nm,1.3s
N17A Moffit Pass 66.46 55 ⇓P P 04 34 20.6 +1.0
baz=66,SNR=189
CGJI Cibinong 66.49 231 P P 04 34 17.8 -1.8
comp=Z,715nm,0.8s,comp=Z,8μm

MWC **Mount Wilson** 66.50 65 *e*P P 04 34 20.4 +0.6
MWC pmax pmax
comp=Z,930nm,1.9s
MWC **Mount Wilson** 66.50 65 *e*P P 04 34 20.4 +0.6
comp=Z,930nm,1.9s
IPAY **Payeh** 66.50 299 *e*P P 04 34 20.9 +1.0
H22A **Clearmont** 66.51 50 ⇑P P 04 34 20.2 +0.6
baz=66,SNR=42
IMOG **Moghan** 66.52 298 *e*P P 04 34 20.3 +0.3
SHOC **Shoshone** 66.52 62 ⇑P P 04 34 20.4 +0.7
baz=66,SNR=81
I21A **Big Trails, Te** 66.53 51 ⇓P P 04 34 20.6 +0.8
baz=66,SNR=332
P15A **Leamington** 66.53 57 ⇓P P 04 34 21.1 +1.3
baz=66,SNR=97
L19A **Farson** 66.53 53 ⇑P P 04 34 20.5 +0.6
baz=66,SNR=74
IAKL **Akhelmad** 66.55 299 *e*P P 04 34 21.0 +0.8
O16A **Springville** 66.56 56 ⇓P P 04 34 21.4 +1.3
baz=66
DAU **Daniels Canyon** 66.57 56 *e*P P 04 34 21.5 +1.2
DAU **Daniels Canyon** 66.57 56 *e*P P 04 34 21.5 +1.2
M18A **Lyman** 66.58 54 ⇑P P 04 34 21.1 +0.8
baz=66,SNR=68
ISHV **Shirvan** 66.58 300 *e*P P 04 34 21.3 +1.0
GSC **Goldstone** 66.58 63 *e*P P 04 34 20.9 +0.7
GSC pmax pmax
comp=Z,1μm,2.3s
GSC **Goldstone** 66.58 63 *e*P P 04 34 20.9 +0.7
comp=Z,1μm,2.3s
GSC **Goldstone** 66.58 63 ⇓P P 04 34 21.1 +0.9
baz=66,SNR=82
IKRD **Kardeh** 66.59 299 *e*P P 04 34 16.8 -3.6
G23A **Biddle** 66.61 49 ⇑P P 04 34 20.8 +0.7
baz=66,SNR=112
MPU **Maple Canyon** 66.61 56 *e*P P 04 34 21.6 +1.1
comp=Z,2μm,2.0s
VOR **Voronezh** 66.63 321 *e*P P 04 34 18.0 -2.0
VOR pmax pmax
comp=Z,1μm,3.0s
F24A **Ekalaka** 66.66 48 ⇓P P 04 34 21.4 +0.9
baz=66,SNR=140
FMP **Fort Macarthur** 66.69 65 ⇑P P 04 34 21.0 +0.3
baz=66
LATR **Latur** 66.70 273 *e*P P 04 34 20.0 -1.0
ISFR **Sfrayin** 66.72 300 *e*P P 04 34 22.3 +1.0
K20A **Yellowstone Ra** 66.72 52 ⇓P P 04 34 21.5 +0.4
baz=66,SNR=117
RRX **Edison Barstow** 66.74 63 ⇓P P 04 34 22.1 +1.0
baz=67,SNR=5.4
BFSC **Mount Baldy Ra** 66.74 64 ⇑P P 04 34 22.0 +0.7
baz=67,SNR=63
J21A **Lysite** 66.75 51 ⇓P P 04 34 22.1 +0.8
baz=67,SNR=64
CIS **Catalina Islan** 66.81 66 ⇓P P 04 34 22.4 +0.8
baz=67,SNR=7.7
P16A **Fountain Green** 66.86 57 ⇓P P 04 34 23.3 +1.2
baz=67,SNR=62
I22A **9 Mile Ranch,** 66.91 50 ⇓P P 04 34 23.3 +1.1
baz=67,SNR=100
SCI **San Clemente I** 67.00 66 ⇓P P 04 34 22.9 +0.1
baz=67,SNR=7.6
O17A **Robinson Place** 67.01 56 ⇑P P 04 34 24.3 +1.3
baz=67,SNR=122
ARUT **Antelope Range** 67.01 59 *e*P P 04 34 23.7 +0.7
ARUT pmax pmax
comp=Z,123nm,0.9s
ARUT **Antelope Range** 67.01 59 *e*P P 04 34 23.7 +0.7
comp=Z,123nm,0.9s
VSR **Storozhevoye** 67.01 321 *e*P P 04 34 22.4 -0.1
VSR *e*PPP PPP 04 38 27.9
VSR *e*S S 04 43 04.0 -8.8
VSR pmax pmax
comp=Z,60nm,0.7s
VSR pmax pmax
comp=N,150nm,0.8s
VSR pmax pmax
comp=E,130nm,0.8s
VSR pmax pmax
comp=Z,2μm,1.8s
VSR pmax pmax
comp=N,310nm,1.3s
VSR pmax pmax
comp=E,370nm,1.6s
VSR smax smax
comp=N,900nm,4.3s
VSR smax smax
comp=Z,620nm,6.5s
VSR smax smax
comp=E,570nm,4.1s
VSR MLR MLR
comp=Z,218μm,18.0s
VSR MLR MLR
comp=N,78μm,17.0s
VSR MLR MLR
comp=E,120μm,19.0s
G24A **Alzada** 67.03 48 ⇓P P 04 34 23.3 +0.4
baz=67,SNR=90
H23A **Clabaugh Cattl** 67.03 49 ⇑P P 04 34 23.1 +0.1
baz=67
M19A **Rock Springs** 67.04 54 ⇓P P 04 34 23.5 +0.3
baz=67,SNR=42
TUQ **Turquoise Moun** 67.04 62 ⇑P P 04 34 24.2 +1.1
baz=67,SNR=106
N18A **Larsen Ranch,** 67.10 54 ⇓P P 04 34 23.9 +0.4
baz=67,SNR=142
VORD **Divnogorie** 67.13 321 *e*P P 04 34 22.6 -0.7
VORD *e*PPP PPP 04 38 35.1
VORD pmax pmax
comp=Z,60nm,0.6s
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,20nm,0.9s
VORD pmax pmax
comp=Z,420nm,1.0s
VORD pmax pmax
comp=N,400nm,1.4s
VORD pmax pmax
comp=E,360nm,1.2s
L20A **Wamsutter** 67.16 53 ⇑P P 04 34 24.6 +0.7
baz=67,SNR=164
HEC **Hector,Ludlow** 67.19 63 ⇓P P 04 34 24.9 +0.9
baz=67,SNR=145
BBRC **Big Bear Solar** 67.19 64 ⇑P P 04 34 24.9 +0.7
baz=67,SNR=25
CCUT **Cedar City** 67.21 59 *e*P P 04 34 25.5 +1.1
comp=E,604nm,1.6s
J22A **Midwest** 67.23 51 ⇑P P 04 34 25.0 +0.7
baz=67,SNR=199
MVU **Marysvale** 67.27 58 ⇑*i*P P 04 34 25.8 +1.1
comp=E,609nm,1.9s
MVU LR LR
comp=Z,6μm,22.0s
MSU **Marysvale** 67.28 58 *e*P P 04 34 26.1 +1.4
MSU **Marysvale** 67.28 58 *e*P P 04 34 26.1 +1.4
TMUT **Trail Mountain** 67.33 57 *e*P P 04 34 26.1 +1.0
comp=Z,1μm,2.0s
K21A **Alcova** 67.34 52 ⇑P P 04 34 25.5 +0.5
baz=67,SNR=144
H24A **Dirks Ranch, A** 67.35 49 ⇓P P 04 34 25.2 +0.3
baz=67,SNR=168
O18A **Roosevelt** 67.38 55 ⇓P P 04 34 26.4 +1.2
baz=67,SNR=148
I23A **Meade Ranch, G** 67.41 50 ⇓P P 04 34 25.7 +0.3
baz=67
N19A **John Jarvie Ra** 67.43 54 ⇓P P 04 34 26.0 +0.4
baz=67,SNR=68
MURC **Murrieta** 67.45 65 ⇓P P 04 34 26.1 +0.5
baz=67,SNR=48
P17A **Butcher Ranch,** 67.48 56 ⇑P P 04 34 27.1 +1.1
baz=67,SNR=114
WRAB **Tennant Creek** 67.52 198 ⇑*i*P P 04 34 25.2 -0.8
WRAB pmax pmax
comp=Z,214nm,1.0s
WRAB MLR MLR
comp=Z,28μm,20.0s
WRAB **Tennant Creek** 67.52 198 ⇑*i*P P 04 34 25.2 -0.8
comp=Z,214nm,1.0s
WRAB LR LR
comp=Z,28μm,20.0s
WRAB **Tennant Creek** 67.52 198 P P 04 34 25.0 -1.0
comp=Z,1μm,0.9s,SNR=69
WRA **Warramunga Arr** 67.53 198 P P 04 34 25.5 -0.6
WRA S S 04 43 20.8 +1.1
WRA ⇑*e* 05 02 49.7
WRA **Warramunga Arr** 67.53 198 P P 04 34 25.5 -0.6
comp=Z,127nm,0.9s,baz=16,slow=6.7,SNR=140
WRA S S 04 43 20.8 +1.1
comp=Z,1.5nm,1.1s,baz=21,slow=13,SNR=4.6
WRA PKP2bc 05 02 49.7
comp=Z,16nm,1.1s,baz=194,slow=1.7,SNR=15
WRA LR LR 05 04 21.4
comp=Z,26μm,20.1s,baz=20,slow=36
M20A **Sweetwater, Wa** 67.59 53 ⇓P P 04 34 27.7 +1.1
baz=67,SNR=98
Q16A **Castle Valley** 67.60 57 ⇓P P 04 34 27.9 +1.1
baz=67,SNR=85
GMRC **Granite Mounta** 67.64 63 ⇑P P 04 34 27.9 +0.9
baz=68,SNR=170
P18A **Preston Nutter** 67.67 56 ⇓P P 04 34 28.3 +1.0
baz=68,SNR=175
MDND **Maddock** 67.69 44 ⇓P P 04 34 27.8 +0.9
baz=68,SNR=23
ULM **Lac du Bonnet** 67.71 40 *e*P P 04 34 27.0 0.0
comp=Z,1μm,2.3s
ULM S S 04 43 17.4 -3.9
ULM P'P' 05 02 48.2
ULM **Lac du Bonnet** 67.71 40 P P 04 34 26.9 0.0
comp=Z,53nm,0.7s,baz=311,slow=7.0,SNR=73
ULM S S 04 43 17.4 -3.9
comp=Z,2.3nm,0.5s,baz=354,slow=18,SNR=1.5
ULM PKPPKP P'P'df 05 02 48.2 -6.0
comp=Z,5.2nm,0.8s,baz=360,slow=0.8,SNR=6.8
ULM LR LR 05 07 04.9
comp=Z,39μm,20.1s,baz=196,slow=39
K22A **Casper** 67.72 51 ⇑P P 04 34 28.0 +0.5
baz=68,SNR=135
L21A **Rawlins** 67.72 52 ⇓P P 04 34 28.0 +0.5
baz=68,SNR=122
J23A **Dilts Ranch, B** 67.74 50 ⇑P P 04 34 27.9 +0.5
baz=68,SNR=23
LDFC **Landfair** 67.78 62 *e*P P 04 34 28.5 +0.7
comp=Z,2μm,1.8s
MSVF **Nonsavu** 67.84 153 *e*P P 04 34 32.0 +3.9
MSVF pmax pmax
comp=Z,86nm,0.7s
MSVF MLR MLR
comp=Z,166μm,21.0s
MSVF **Nonsavu** 67.84 153 *e*P P 04 34 32.0 +3.9
comp=Z,86nm,0.7s
MSVF LR LR
comp=Z,166μm,21.0s
SRU **San Rafael** 67.85 56 *e*P P 04 34 29.3 +1.0
SRU **San Rafael** 67.85 56 *e*P P 04 34 29.3 +1.0
comp=Z,64μm,2.1s
SRU **San Rafael** 67.85 56 ⇑P P 04 34 29.2 +0.9
baz=68,SNR=279
O19A **Miners Draw (B** 67.86 55 ⇓P P 04 34 28.9 +0.5
baz=68,SNR=116
PFO **Pinyon Flat Ob** 67.91 64 *e*P P 04 34 28.9 +0.3
comp=Z,617nm,1.7s
PFO LR LR
comp=Z,56μm,22.0s
PFO **Pinyon Flat Ob** 67.91 64 P P 04 34 28.5 -0.2
comp=Z,526nm,2.2s,SNR=34
PFO **Pinyon Flat Ob** 67.91 64 ⇓P P 04 34 29.2 +0.6
baz=68,SNR=48
I24A **Kuemmerle Ranc** 67.92 49 ⇑P P 04 34 28.8 +0.2
baz=68,SNR=40
BELC **Belle Mtn. Jos** 67.94 64 ⇑P P 04 34 29.2 +0.3
baz=68,SNR=80
M21A **Separation Pea** 67.97 53 ⇑P P 04 34 29.6 +0.6
baz=68,SNR=93
109C **Camp Elliot, M** 67.97 65 ⇑P P 04 34 29.4 +0.5
baz=68,SNR=14
MOL **Molde** 67.98 343 ⇑*i*P P 04 34 28.4 0.0
MOL AMB AMB 04 34 35.5
comp=Z,518nm,2.2s
MOL *e*S S 04 43 23.8 -0.3
MOL AMS AMS 05 00 10.5
comp=Z,60μm,30.0s
N20A **Spence Gulch,** 67.99 54 ⇑P P 04 34 30.1 +0.9
baz=68,SNR=207
RSSD **Black Hills** 68.05 49 *e*P P 04 34 29.7 +0.2
RSSD pmax pmax
comp=Z,1μm,1.8s
RSSD **Black Hills** 68.05 49 *e*P P 04 34 29.7 +0.2
comp=Z,1μm,1.8s
FITZ **Fitzroy Crossi** 68.06 207 ⇑*i*P P 04 34 29.6 +0.3
comp=Z,243nm,1.0s
DOMB **Dombas** 68.14 342 *e*P P 04 34 29.4 -0.1
DOMB AMB AMB 04 34 36.2
comp=Z,269nm,1.9s
K23A **Bowen Ranch, D** 68.14 51 ⇓P P 04 34 30.1 +0.1
baz=68,SNR=13
AFI **Afiamalu** 68.19 141 PFAKE 04 34 40.0 +10
AFI LR LR
comp=Z,96μm,22.0s
AFI **Afiamalu** 68.19 141 S S 04 43 31.6 +3.8
comp=Z,9.6nm,0.6s,baz=120,slow=20,SNR=1.6
L22A **Ellis Ranch, M** 68.19 52 ⇓P P 04 34 31.5 +1.1
baz=68,SNR=78
BHJ **Bhuj** 68.22 281 *e*P P 04 34 30.9 +0.3
BHJ AMB AMB 04 34 36.6
comp=Z,1μm,2.8s
J24A **Dixon Ranch, L** 68.26 50 ⇓P P 04 34 30.8 +0.1
baz=68,SNR=32
NEE2 **Needles Airpor** 68.29 62 ⇓P P 04 34 31.3 +0.5
baz=68,SNR=5.4
IRM **Iron Mountain** 68.36 63 ⇑P P 04 34 32.5 +1.1
baz=68,SNR=141
BAR **Barrett** 68.39 65 *e*P P 04 34 31.4 -0.1
comp=Z,938nm,2.2s
P19A **Cripple Cowboy** 68.39 55 ⇓P P 04 34 32.7 +1.0
baz=68,SNR=117
IDAH **Dahanechah** 68.40 295 *e*P P 04 34 32.3 +0.4
MONP **Monument Peak** 68.41 65 ⇑P P 04 34 32.6 +0.7
baz=68,SNR=42
N21A **Black Mountain** 68.45 53 ⇓P P 04 34 32.6 +0.4
baz=68,SNR=79
O20A **White River Ci** 68.47 54 ⇑P P 04 34 32.7 +0.5
baz=68,SNR=81
POO **Poona** 68.50 275 *ex* P 04 34 27.6 -4.9
POO *e*PCP **PcP** **04 34 57.0 -0.5**
POO *e*PP **PP** **04 37 04.0 +0.2**
POO *i* SKS **SKiKP** **04 44 27.0 +4.6**
POO *i* SCS **ScS** **04 44 30.0 +0.8**
BC3 **Big Chuckawall** 68.51 64 ⇑P P 04 34 33.1 +0.7
baz=68,SNR=83
W13A **Hualapai Mount** 68.52 61 ⇑P P 04 34 33.3 +0.7
baz=68,SNR=148
M22A **Cedar Creek Ra** 68.53 52 ⇓P P 04 34 33.1 +0.6
baz=68,SNR=162
L23A **Garrett** 68.53 51 ⇑P P 04 34 32.7 +0.1
baz=68,SNR=106
NB2 **NORSAR Subarra** 68.55 341 P P 04 34 31.6 -0.5
baz=31,slow=6.5
NB2 **NORSAR Subarra** 68.55 341 P P 04 34 31.6 -0.5
comp=Z,197nm,0.6s,baz=31,slow=6.5
NOA **NORSAR Array B** 68.55 341 P P 04 34 32.0 -0.1
NOA ⇑*e* 05 02 45.0
NOA **NORSAR Array B** 68.55 341 P P 04 34 32.0 -0.1
comp=Z,89nm,0.6s,baz=28,slow=6.3,SNR=488
NOA PKP2bc 05 02 45.0
comp=Z,7.6nm,1.0s,baz=211,slow=3.1,SNR=7.1
NOA LR LR 05 08 43.8
comp=Z,76μm,19.0s,baz=15,slow=40
K24A **Anderson Ranch** 68.60 50 ⇓P P 04 34 32.6 -0.3
baz=68,SNR=21
U15A **North Rim** 68.60 59 ⇑P P 04 34 34.3 +1.1
baz=68,SNR=250
IZAR **Zarasai** 68.66 330 *e*P P 04 34 32.9 +0.1
IZAR AMB AMB 04 34 34.3
comp=Z,89nm,1.1s
Q19A **Hogan Spring (** 68.68 56 ⇓P P 04 34 33.9 +0.5
baz=68,SNR=160
MAK **Makhachkala** 68.74 310 *c i*P P 04 34 33.9 +0.4
MAK *e**PP **pP** **04 34 48.5 +3.0**
MAK *e* 04 37 12.2
MAK *e*PPP PPP 04 38 49.1
MAK *e*S S **04 43 31.9 -1.9**
MAK *e* 04 43 50.6
MAK *e* 04 44 20.8
MAK pmax pmax
comp=Z,154nm,0.8s
MAK pmax pmax
comp=Z,9μm,5.1s
MAK pmax pmax
comp=E,108nm,0.6s
MAK pmax pmax
comp=N,153nm,0.9s
MAK smax smax
comp=E,7μm,9.2s
MAK smax smax
comp=N,7μm,9.5s
MAK MLR MLR
comp=N,206μm,24.0s
MAK MLR MLR
comp=E,346μm,22.0s
MAK MLR MLR
comp=Z,308μm,25.0s
DVTC **Desert V Tower** 68.76 65 ⇓P P 04 34 34.6 +0.7
baz=69,SNR=5.7
SWSC **Sam W. Stewart** 68.77 64 ⇓P P 04 34 34.2 +0.4
baz=69,SNR=32
NAO01 **NORSAR Array S** 68.80 341 *e*P P 04 34 32.5 -1.1
comp=Z,92nm,0.6s
P20A **De Beque** 68.81 55 ⇑P P 04 34 34.8 +0.5
baz=69,SNR=36
ISAL **Salakas** 68.84 330 *e*P P 04 34 34.0 +0.1
ISAL AMB AMB 04 34 35.7
comp=Z,109nm,1.0s
O21A **Pagoda** 68.85 54 ⇓P P 04 34 35.2 +0.6
baz=69,SNR=57
PDMCI **Parker Dam,Lak** 68.89 62 ⇑P P 04 34 35.5 +0.9
baz=69,SNR=70
M23A **Laramie** 68.97 52 ⇓P P 04 34 35.6 +0.3
baz=69,SNR=89
IIGN **Ignalina** 68.98 330 *e*P P 04 34 35.0 +0.1
IIGN AMB AMB 04 34 36.6
comp=Z,157nm,1.1s
ITEG **Tejag** 69.00 296 *e*P P 04 34 36.2 +0.7
L24A **Wheatland** 69.00 51 ⇓P P 04 34 35.8 +0.5
baz=69,SNR=13
N22A **Wattenberg Ran** 69.02 53 ⇓P P 04 34 36.6 +0.9
baz=69,SNR=81
Y12C **Blythe** 69.02 63 ⇑P P 04 34 36.4 +1.0
baz=69,SNR=47
MICGM **Minsk** 69.07 329 ⇑*i*P P 04 34 33.0 -2.4
MNK **Minsk** 69.08 329 ⇑*i*P P 04 34 33.0 -2.5
MNK *e**PP **pP** **04 34 45.0 -2.5**
MNK *e* 04 37 08.0
MNK *e*PPP PPP 04 38 52.0
MNK *e*S S 04 43 28.0 -9.5
MNK *e* 04 44 20.0
MNK *e*SS **SS** **04 48 00.0 -2.9**
MNK pmax pmax
comp=Z,1μm,1.0s
MNK pmax pmax
comp=N,520nm,1.0s
MNK pmax pmax
comp=E,220nm,1.0s
MNK pmax pmax
comp=Z,45μm,18.0s
MNK smax smax
comp=N,23μm,19.0s
MNK MLR MLR
comp=E,158μm,18.0s
MNK MLR MLR
comp=Z,264μm,18.0s
KAD **Karad** 69.10 273 *e*P P 04 34 36.6 +0.4
KAD *e*S S 04 43 36.9 -1.9
S18A **Hurst Farm, Bl** 69.11 57 ⇑P P 04 34 36.8 +0.5
baz=69,SNR=241
DZM **Mont Dzumac** 69.12 165 *e*P P 04 34 35.0 -1.1
comp=Z,420nm,1.2s
DZM *e*S S 04 43 35.3 -3.3
comp=Z,75μm,27.1s
DZM *e*SS **SS** **04 48 03.8 -2.2**
comp=Z,46μm,28.6s
DZM *e*LQ LQ 04 52 20.1
comp=Z,178μm,32.9s
DZM *e*LR LR 04 55 25.6
comp=Z,138μm,23.2s
DZM **Mont Dzumac** 69.12 165 *e*P P 04 34 36.0 0.0
DZM **Mont Dzumac** 69.12 165 *e*P P 04 34 37.3 +1.3
comp=Z,169nm,1.0s
DZM S S 04 43 41.3 +2.6
DZM **Mont Dzumac** 69.12 165 P P 04 34 37.2 +1.1
comp=Z,36nm,0.9s,baz=52,slow=8.2,SNR=13
DZM S S 04 43 41.3 +2.6
comp=Z,3.8nm,0.9s,baz=107,slow=18,SNR=2.3
NOUC **Port Laguerre** 69.13 165 *e*P P 04 34 38.9 +2.9
AGMN **Agassiz Nation** 69.13 41 *e*P P 04 34 35.6 -0.2
comp=Z,862nm,1.7s
AGMN LR LR
comp=Z,51μm,22.0s
NACGM **Naroch** 69.15 330 *e*P P 04 34 34.0 -1.8
K25A **Mack Ranch, Ha** 69.18 50 ⇓P P 04 34 36.9 +0.5
baz=69
PHWY **Pilot Hill** 69.22 52 *e*P P 04 34 37.2 +0.2
comp=Z,428nm,1.6s
N23A **Red Feather La** 69.24 52 ⇓P P 04 34 38.0 +1.0
baz=69,SNR=164
Q20A **Ridgley Place,** 69.24 55 ⇓P P 04 34 37.5 +0.5
baz=69,SNR=84
PV04 **Paradox Valley** 69.27 56 *e*P P 04 34 38.1 +1.0
GLA **Glamis** 69.30 64 *e*P P 04 34 38.2 +1.0
GLA pmax pmax
comp=Z,2μm,2.3s
GLA **Glamis** 69.30 64 *e*P P 04 34 38.2 +1.0
comp=Z,2μm,2.3s
GLA **Glamis** 69.30 64 ⇓P P 04 34 38.1 +0.8
baz=69,SNR=38
P21A **Newcastle** 69.33 54 ⇑P P 04 34 38.5 +1.0
baz=69,SNR=27
BORG **Borgarnes** 69.40 357 ⇑*i*P P 04 34 39.0 +1.8
comp=Z,686nm,1.0s
BORG LR LR
comp=Z,32μm,20.0s
BORG **Borgarnes** 69.40 357 P P 04 34 39.0 +1.8
comp=Z,4μm,1.1s,SNR=27
O22A **Kremmling** 69.40 53 ⇓P P 04 34 38.6 +0.5
baz=69,SNR=40
L25A **Engebretsen Ra** 69.44 50 ⇓P P 04 34 38.7 +0.6
baz=69,SNR=7.0
M24A **Cheyenne** 69.45 51 ⇑P P 04 34 39.3 +1.0
baz=69,SNR=90
K26A **Motz Farm, Whi** 69.48 49 ⇑P P 04 34 38.7 +0.4
baz=69
HYA **Hoyanger** 69.53 343 ⇑*i*P P 04 34 38.5 +0.4
HYA AMB AMB 04 34 43.4
comp=Z,607nm,2.0s
PV01 **Paradox Valley** 69.64 56 *e*P P 04 34 39.8 +0.3
comp=Z,51μm,1.7s
P22A **Eagle** 69.67 54 ⇓P P 04 34 40.5 +0.8
baz=70,SNR=90
R20A **Redvale** 69.71 56 ⇓P P 04 34 40.5 +0.6
baz=70,SNR=75
O23A **Lake Granby, G** 69.72 53 ⇓P P 04 34 41.2 +1.1
baz=70,SNR=82
Q21A **Lamborn Mesa,** 69.73 55 ⇓P P 04 34 40.9 +0.9
baz=70,SNR=24
WUAZ **Wupatki** 69.76 60 ⇑*i*P P 04 34 41.2 +1.0
comp=Z,865nm,1.8s
WUAZ LR LR
comp=Z,36μm,22.0s
WUAZ **Wupatki** 69.76 60 ⇓P P 04 34 41.2 +1.0
baz=70,SNR=122
Y14A **Wickenburg** 69.83 62 ⇑P P 04 34 41.5 +0.9
baz=70,SNR=136
SMCO **Snowmass** 69.84 54 *e*P P 04 34 41.6 +0.7
comp=Z,950nm,2.0s
N24A **Carr** 69.87 52 ⇓P P 04 34 41.7 +0.9
baz=70,SNR=60
M25A **Palm-Egli Farm** 69.89 51 ⇓P P 04 34 42.0 +1.1
baz=70,SNR=62
SUE **Sulen** 69.92 344 ⇑*i*P P 04 34 45.5 +5.1
SUE AMB AMB 04 34 51.6
comp=Z,678nm,1.9s
S20A **Disappointment** 69.97 56 ⇑P P 04 34 42.1 +0.5
baz=70,SNR=110
K27A **Flueckinger Fa** 69.98 49 ⇓P P 04 34 41.2 -0.1
baz=70,SNR=36
L26A **Underwood Farm** 70.00 50 ⇑P P 04 34 41.7 +0.2
baz=70,SNR=7.8
R21A **Cimarron** 70.06 55 ⇑P P 04 34 43.2 +1.1
baz=70,SNR=92
Q22A **Crested Butte,** 70.09 54 ⇑P P 04 34 43.2 +0.9
baz=70,SNR=47
113A **Mohawk Valley,** 70.15 63 ⇓P P 04 34 42.9 +0.5
baz=70,SNR=122
KONO **Kongsberg** 70.16 341 ⇑*i*P P 04 34 41.6 -0.4
KONO AMB AMB 04 34 49.1
comp=Z,406nm,2.4s
KONO *e*S S 04 43 49.6 -0.3
KONO AMS AMS 05 05 33.5
comp=Z,67μm,24.8s
KONO **Kongsberg** 70.16 341 ⇑*i*P P 04 34 41.5 -0.5
KONO pmax pmax

KONO comp=Z,2µm,2.2s MLR MLR
KONO comp=Z,89µm,22.0s
KONO Kongsberg 70.16 341⇑ *i*P **P** 04 34 41.5 -0.5
KONO comp=Z,2µm,2.2s LR LR
KONO comp=Z,89µm,22.0s
ISCO Idaho Springs 70.17 53 *e*P **P** 04 34 44.0 +1.1
ISCO pmax pmax
ISCO comp=Z,882nm,1.8s MLR MLR
ISCO comp=Z,44µm,21.0s
ISCO Idaho Springs 70.17 53 *e*P **P** 04 34 44.0 +1.1
ISCO comp=Z,882nm,1.8s LR LR
ISCO comp=Z,44µm,21.0s
ISCO Idaho Springs 70.17 53 ⇓P **P** 04 34 43.8 +1.0
baz=70,SNR=168
IANJ Anjilo 70.23 301 *e*P **P** 04 34 44.5 +1.3
O24A Longmont 70.25 52 ⇑P **P** 04 34 44.4 +1.3
baz=70,SNR=64
Z14A Wintersburg 70.26 62 ⇑P **P** 04 34 43.9 +0.9
baz=70,SNR=36
N25A Grover 70.31 51 ⇓P **P** 04 34 44.5 +1.1
baz=70,SNR=9.4
MVCO Mesa Verde 70.31 57 *e*P **P** 04 34 44.0 +0.4
MVCO comp=Z,1µm,2.0s LR LR
MVCO comp=Z,31µm,21.0s
MVCO Mesa Verde 70.31 57 ⇓P **P** 04 34 44.2 +0.6
baz=70,SNR=72
P23A Jefferson 70.34 53 ⇑P **P** 04 34 45.2 +1.3
baz=70,SNR=48
ASK Askoy 70.36 343 *e*P **P** 04 34 42.7 -0.5
ASK comp=Z,1µm,2.0s AMB AMB 04 34 47.7
M26A McRoberts Ranc 70.36 50 ⇓P **P** 04 34 44.7 +1.0
baz=70,SNR=41
L27A T5 Ranch, Ells 70.37 49 ⇓P **P** 04 34 44.1 +0.4
baz=70,SNR=16
ISHM Shahmirzad 70.37 301 *e*P **P** 04 34 45.4 +1.3
RUND Rundenannen 70.39 343 *e*P **P** 04 34 43.0 -0.4
RUND comp=Z,824nm,1.0s AMB AMB 04 34 47.4
S21A Coal Bank Pass 70.41 56 ⇑P **P** 04 34 45.4 +1.1
baz=70,SNR=211
BER Bergen 70.42 343⇑ *i*P **P** 04 34 42.6 -1.0
BER comp=Z,673nm,1.9s AMB AMB 04 34 49.8
BER comp=Z,59µm,25.7s AMS AMS 05 03 47.5
BRSD Miller 70.42 46 ⇑P **P** 04 34 43.9 0.0
baz=70,SNR=29
X16A Lo Mia Camp, P 70.46 61 ⇓P **P** 04 34 45.9 +1.4
baz=70,SNR=209
KIV Kislovodsk 70.54 314*c i*P **P** 04 34 45.4 +0.6
KIV *e* 04 37 22.2
KIV *e*PPP PPP 04 39 06.2
KIV *e*S **S** 04 43 56.0 +0.8
KIV comp=Z,2µm,3.2s pmax pmax
KIV comp=Z,337nm,1.1s pmax pmax
KIV comp=Z,128µm,18.0s MLR MLR
KIV Kislovodsk 70.54 314 *e*P **P** 04 34 45.6 +0.8
KIV comp=Z,292nm,0.7s LR LR
KIV comp=Z,100µm,19.0s
KIV Kislovodsk 70.54 314 P **P** 04 34 46.0 +1.2
SNR=88
KIV Kislovodsk 70.54 314 P **P** 04 34 45.3 +0.5
comp=Z,2µm,0.6s
EGD Espegrend 70.55 343⇑ *i*P **P** 04 34 44.0 -0.3
EGD comp=Z,1µm,1.6s AMB AMB 04 34 50.9
ODD1 Odda 70.58 342⇑ *i*P **P** 04 34 45.3 +0.6
ODD1 AMB AMB 04 34 51.9
ODD1 comp=Z,706nm,2.4s AMS AMS 05 10 12.6
comp=Z,85µm,21.2s
GOA Goa 70.59 272⇓ *i*P **P** 04 34 45.4 +0.1
GOA *ex* x 04 43 42.4
GOA *ex* x 04 43 42.5
KBZ Khabaz 70.60 313 P **P** 04 34 46.1 +1.1
KBZ S **S** 04 43 55.9 +0.3
KBZ pmax pmax
KBZ comp=Z,335nm,0.9s smax smax
KBZ comp=N,3.0nm,0.9s
KBZ Khabaz 70.60 313 P **P** 04 34 46.0 +1.1
KBZ S **S** 04 43 55.9 +0.3
KBZ P'P' 05 02 43.5
KBZ Khabaz 70.60 313 P **P** 04 34 46.0 +1.1
comp=N,335nm,0.9s,baz=66,slow=3.0,SNR=215
KBZ S **S** 04 43 55.9 +0.3
comp=N,2.6nm,0.9s,baz=260,slow=18,SNR=1.7
KBZ PKPPKP P'P'df 05 02 43.5 -5.3
comp=N,4.2nm,1.0s,baz=185,slow=4.9,SNR=4.1
KBZ LR LR 05 10 19.9
comp=N,258µm,19.1s,baz=50,slow=40
R22A Saguache, Gunn 70.61 55 ⇑P **P** 04 34 47.0 +1.5
baz=70,SNR=90
Q23A Hartsel 70.67 54 ⇑P **P** 04 34 46.9 +1.0
baz=70,SNR=51
M27A Reverse DX Ran 70.72 50 ⇑P **P** 04 34 46.5 +0.6
baz=70
P24A Kohler Place, 70.76 53 ⇑P **P** 04 34 47.4 +1.1
baz=71,SNR=35
N26A Koester Ranch, 70.77 51 ⇑P **P** 04 34 47.1 +0.9
baz=71,SNR=18
O25A Wiggins 70.78 52 ⇑P **P** 04 34 47.2 +0.8
baz=71,SNR=23
IFIR Firoozkooh 70.81 302 *e*P **P** 04 34 48.0 +1.3
SOFL Sornfelli, Far 70.86 350 *e*P **P** 04 34 46.4 +0.1
SOFL AMB AMB 04 34 49.6
SOFL comp=Z,880nm,3.3s AMS AMS 05 06 08.4
comp=Z,46µm,18.9s
SOFL Sornfelli, Far 70.86 350 P **P** 04 34 46.4 +0.1
SOFL AMB AMB 04 34 49.6
SOFL comp=Z,880nm,3.3s AMS AMS 05 06 08.4
comp=Z,46µm,18.9s
ILAS Lasjerd 70.86 301 *e*P **P** 04 34 48.7 +1.7
U20A Newcomb 70.87 57 ⇑P **P** 04 34 47.9 +0.9
baz=71,SNR=20
S22A 4UR Ranch, Cre 70.91 55 ⇓P **P** 04 34 48.5 +1.1
baz=71,SNR=161
DGRG David-gareji 70.93 310 P **P** 04 34 48.0 +0.8
Q24A Divide 71.01 53 ⇓P **P** 04 34 48.6 +0.6
baz=71,SNR=54
W18A Petrified Fore 71.01 59 ⇓P **P** 04 34 49.0 +1.1
baz=71,SNR=5.1
T21A Navajo Lake 71.02 56 ⇓P **P** 04 34 49.0 +1.1
baz=71,SNR=38
BLS5 Blasjo 71.06 342⇑ *i*P **P** 04 34 48.2 +0.7
BLS5 AMB AMB 04 34 56.0
BLS5 comp=Z,209nm,1.2s AMS AMS 05 10 46.1
comp=Z,29µm,17.9s
TBLG Delisi 71.07 311 P **P** 04 34 49.0 +1.1
EIDS Eidsvold 71.09 181 *e*P **P** 04 34 48.7 +0.8
comp=Z,169nm,1.0s
SUW Suwalki 71.11 331 *e*P **P** 04 34 47.1 -0.8
SUW comp=Z,511nm,1.1s pmax pmax
SUW Suwalki 71.11 331 *e*P **P** 04 34 47.1 -0.8
comp=Z,511nm,1.1s
SUW Suwalki 71.11 331 *i* P **P** 04 34 46.6 -1.3
SUW *e*S **S** 04 43 57.1 -4.1
SUW *e*ScS **SKSac** 04 44 44.9 -2.1
SUW LMZ LR 05 02 57.3
O26A Horse Wrangler 71.13 51 ⇓P **P** 04 34 48.8 +0.3
baz=71,SNR=30
N27A Anderson Farm, 71.15 51 ⇑P **P** 04 34 49.4 +0.9
baz=71,SNR=78
R23A Moffat 71.17 54 ⇓P **P** 04 34 50.2 +1.3
baz=71,SNR=164
P25A Willow Gulch B 71.17 52 ⇓P **P** 04 34 49.8 +1.0
baz=71,SNR=88
GOR Gori 71.22 311 P **P** 04 34 50.3 +1.5
AS31 Alice Springs 71.23 197⇑ *i*P **P** 04 34 49.1 +0.1
ASAR Alice Springs 71.24 197 P **P** 04 34 49.4 +0.5
ASAR P'P' 05 02 43.0
ASAR Alice Springs 71.24 197 P **P** 04 34 49.4 +0.5
ASAR comp=Z,49nm,0.7s,baz=10,slow=5.9,SNR=74
PKPPKP P'P'df 05 02 43.0 +5.4
ASAR comp=Z,2.2nm,0.9s,baz=151,slow=2.9,SNR=7.5
LR LR 05 07 22.2
ASAR comp=Z,23µm,19.0s,baz=11,slow=37
IDMV Damavand 71.28 302 *e*P **P** 04 34 50.4 +0.8
X18A Snowflake 71.29 60 ⇑P **P** 04 34 50.6 +1.0
baz=71,SNR=92
214A Organ Pipe Nat 71.29 63 ⇓P **P** 04 34 50.1 +0.7
baz=71,SNR=94
V20A Brimhall 71.30 58 ⇑P **P** 04 34 50.2 +0.6
baz=71,SNR=90
OGNE Ogallala 71.33 50⇑ *i*P **P** 04 34 50.1 +0.6
OGNE comp=Z,560nm,0.9s LR LR
OGNE comp=Z,36µm,20.0s
OGNE Ogallala 71.33 50 ⇓P **P** 04 34 50.3 +0.8
baz=71,SNR=36
U21A Nageezi 71.34 57 ⇓P **P** 04 34 50.7 +0.8
baz=71,SNR=127
EYMN Ely 71.36 39 *e*P **P** 04 34 49.5 0.0
EYMN comp=Z,514nm,1.3s LR LR
EYMN comp=Z,53µm,20.0s
T22A Edith 71.37 56 ⇓P **P** 04 34 51.1 +1.1
baz=71,SNR=112
S23A Nye Farm, Mont 71.41 55 ⇓P **P** 04 34 51.6 +1.3
baz=71,SNR=78
R24A Sanders Place, 71.55 54 ⇑P **P** 04 34 51.9 +0.9
baz=71,SNR=138
AKASG Malin Array Be 71.55 326 P **P** 04 34 49.4 -1.2
AKASG S S 04 43 58.4 -8.0
AKASG pmax pmax
AKASG comp=Z,130nm,0.5s MLR MLR
AKASG comp=Z,187µm,20.7s
AKASG Malin Array Be 71.55 326 P **P** 04 34 49.4 -1.2
AKASG S S 04 43 58.4 -8.0
AKASG PKKP **PKKPdf** 04 54 21.2 -0.9
AKASG Malin Array Be 71.55 326 P **P** 04 34 49.4 -1.2
comp=Z,130nm,0.5s,baz=34,slow=6.3,SNR=191
AKASG S S 04 43 58.4 -8.0
comp=Z,0.3nm,0.3s,baz=82,slow=31,SNR=2.4
AKASG PKKP **PKKPdf** 04 54 21.2 -0.9
comp=Z,0.2nm,0.3s,baz=329,slow=5.3,SNR=4.1
AKASG LR LR 05 08 33.6
comp=Z,187µm,20.7s,baz=35,slow=38
Q25A Bedland, Calha 71.55 53 ⇓P **P** 04 34 51.7 +0.6
baz=71,SNR=86
AK01 Malin Array Si 71.56 326 *e*P **P** 04 34 49.3 -1.3
KIEV Kiev 71.56 326 *e*P **P** 04 34 49.5 -1.1
KIEV pmax pmax
KIEV comp=Z,261nm,0.8s MLR MLR
KIEV comp=Z,187µm,21.0s
KIEV Kiev 71.56 326 *e*P **P** 04 34 49.5 -1.1
comp=Z,261nm,0.8s
KIEV LR LR
KIEV comp=Z,187µm,21.0s
AK02 Malin Array Si 71.59 326 *e*P **P** 04 34 49.4 -1.4
P26A Davis Ranch, A 71.59 52 ⇑P **P** 04 34 51.8 +0.6
baz=71,SNR=52
O27A Beecher Island 71.62 51 ⇑P **P** 04 34 51.9 +0.5
baz=71,SNR=44
HOMB Homborsund 71.65 340⇑ *i*P **P** 04 34 51.1 +0.1
STAV Stavanger 71.67 342 *e*P **P** 04 34 48.1 -3.1
STAV AMB AMB 04 34 54.6
comp=Z,259nm,1.1s
W20A Ramah 71.74 58 ⇑P **P** 04 34 52.9 +0.6
baz=72,SNR=117
V21A Milan 71.78 57 ⇑P **P** 04 34 53.3 +0.7
baz=72,SNR=8.8
WAL1 Walls 71.82 346⇑ *e*P **P** 04 34 52.1 +0.1
WAL1 Walls 71.82 346 P **P** 04 34 52.1 +0.1
U22A Llaves 71.84 56 ⇑P **P** 04 34 53.7 +0.8
baz=72,SNR=103
T23A Casias Ranch, 71.85 55 ⇓P **P** 04 34 53.8 +0.8
baz=72,SNR=64
IVRN Varamin 71.86 302 *e*P **P** 04 34 54.3 +1.5
LRW Lerwick 71.86 346⇑ *e*P **P** 04 34 50.8 -1.5
LRW AMB AMB 04 34 53.8
LRW comp=Z,590nm,3.2s AMS AMS 05 09 21.3
LRW comp=Z,46µm,20.6s
LRW Lerwick 71.86 346 P **P** 04 34 50.8 -1.5
LRW AMB AMB 04 34 53.8
LRW comp=Z,590nm,3.2s AMS AMS 05 09 21.3
LRW comp=Z,46µm,20.6s
IBAF Bafgh 71.86 297 *e*P **P** 04 34 53.5 +0.5
SNART Snartemo 71.88 341⇑ *i*P **P** 04 34 53.1 +0.7
SNART AMB AMB 04 34 56.0
SNART comp=Z,314nm,0.6s AMS AMS 05 09 10.1
comp=Z,71µm,22.3s
S24A Houchin Ranch, 71.90 54 ⇑P **P** 04 34 54.2 +0.9
baz=72,SNR=104
IR3 Iran Long-Peri 71.94 302 *e*P **P** 04 34 54.3 +0.9
Q26A Hugo 71.94 52 ⇓P **P** 04 34 53.8 +0.4
baz=72,SNR=75
AKH Akhalkalaki 71.95 311 P **P** 04 34 55.0 +1.6
ISFB Sefidab 72.00 301 *e*P **P** 04 34 54.3 +0.6
IMHD Mahdasht 72.01 303 *e*P **P** 04 34 55.4 +1.6
P27A Ficken Ranch, 72.02 51 ⇓P **P** 04 34 54.0 +0.2
baz=72,SNR=30
R25A Fountain Ranch 72.07 53 ⇑P **P** 04 34 54.3 +0.2
baz=72,SNR=57
ECSD EROS Data Cent 72.10 45 *e*P **P** 04 34 54.0 0.0
ECSD comp=Z,2µm,1.9s LR LR
ECSD comp=Z,72µm,22.0s
ICHK Chekchek 72.13 298 *e*P **P** 04 34 55.1 +0.4
X20A Quemado 72.15 59 ⇑P **P** 04 34 56.1 +1.3
baz=72,SNR=150
W21A San Fidel 72.25 58 ⇑P **P** 04 34 56.1 +0.7
baz=72,SNR=6.4
U23A El Rito 72.26 56 ⇓P **P** 04 34 56.6 +1.2
baz=72,SNR=214
SOC Sochi 72.30 315*c i*P **P** 04 34 55.2 0.0
SOC *e**SP **sP** 04 35 10.4 -1.5
SOC *i* S **S** 04 44 11.9 -3.3
SOC *e* 04 44 53.5
SOC *e*SSS SSS 04 52 10.1
SOC pmax pmax
SOC comp=Z,6µm,2.8s pmax pmax
SOC comp=N,65nm,0.6s pmax pmax
SOC comp=Z,280nm,0.5s pmax pmax
SOC comp=E,160nm,0.6s MLR MLR
SOC comp=N,105µm,17.0s MLR MLR
SOC comp=Z,159µm,17.0s MLR MLR
SOC comp=E,23µm,17.0s
TUC Tucson 72.30 62 *e*P **P** 04 34 55.8 +0.3
TUC comp=Z,833nm,2.1s pmax pmax
TUC comp=Z,25µm,19.0s MLR MLR
TUC Tucson 72.30 62 *e*P **P** 04 34 55.8 +0.3
TUC comp=Z,833nm,2.1s LR LR
TUC comp=Z,25µm,19.0s
S25A Robets Cordova 72.32 54 ⇑P **P** 04 34 56.1 +0.4
baz=72,SNR=52
KSCO Kaye Shedlock' 72.37 52 ⇑P **P** 04 34 56.2 +0.2
baz=72,SNR=60
IR5 Iran Long-Peri 72.38 303 *e*P **P** 04 34 57.2 +1.1
T24A Torres, Weston 72.39 55 ⇑P **P** 04 34 57.3 +1.0
baz=72,SNR=111
R26A Arlington 72.42 53 ⇑P **P** 04 34 56.8 +0.6
baz=72,SNR=127
ANN Anapa 72.50 317*c i*P **P** 04 34 56.1 -0.2
ANN *i* *PP **pP** 04 35 10.9 +2.5
ANN *e* 04 37 36.3
ANN *i* PPP PPP 04 39 21.3
ANN *i* S **S** 04 44 15.3 -2.1
ANN *i* *SS **SKSac** 04 44 53.1 -4.7
ANN *i* 04 45 08.2
ANN pmax pmax
ANN comp=N,37nm,0.6s pmax pmax
ANN comp=E,18nm,0.6s pmax pmax
ANN comp=Z,196nm,0.6s pmax pmax
ANN comp=Z,12µm,9.0s pmax pmax
ANN comp=N,5µm,9.1s pmax pmax
ANN comp=E,4µm,9.1s smax smax
ANN comp=N,11µm,11.4s smax smax
ANN comp=E,8µm,11.4s smax smax
ANN comp=Z,8µm,11.4s
IMEH Mehriz 72.59 297 *e*P **P** 04 34 57.2 -0.3
IRAZ Razeghan 72.63 303 *e*P **P** 04 34 59.2 +1.6
X21A Alamocita Cree 72.64 58 ⇓P **P** 04 34 58.8 +1.1
baz=72,SNR=222
Y20A Horse Springs, 72.66 59 ⇑P **P** 04 34 59.0 +1.2
baz=72,SNR=209
V23A Ortiz Mt. (NFS 72.67 56 ⇓P **P** 04 34 59.5 +1.6
baz=72,SNR=123
T25A Trinidad 72.71 54 ⇓P **P** 04 34 58.7 +0.6
baz=72,SNR=109
U24A Moreno Valley 72.72 55 ⇑P **P** 04 34 59.5 +1.3
baz=72,SNR=70
W22A Albuquerque 72.74 57 ⇑P **P** 04 34 59.6 +1.4
baz=73,SNR=18
BSD Bornholm Skovb 72.77 336⇑ *i*P **P** 04 34 57.4 -0.4
BSD comp=Z,94nm,1.2s
BSD comp=Z,86µm,20.0s
R27A Eads 72.80 53 ⇓P **P** 04 34 58.5 +0.1
baz=73,SNR=80
SPMN St. Paul 72.82 42 ⇓P **P** 04 34 58.2 -0.1
baz=73,SNR=65
MBWA Marble Bar 72.89 211 *e*P **P** 04 34 58.7 -0.1
MBWA comp=Z,224nm,1.0s LR LR
MBWA comp=Z,17µm,21.0s
MBWA Marble Bar 72.89 211 P **P** 04 34 59.3 +0.5
SNR=11
S26A Kim 72.89 53 ⇑P **P** 04 34 59.3 +0.2
baz=73,SNR=63
IZEF Zefreh 72.95 300 *e*P **P** 04 35 00.3 +0.7
COP Copenhagen 72.97 337⇑ *i*P **P** 04 34 59.2 +0.3
COP comp=Z,108nm,0.7s
comp=Z,46µm,23.0s
Y21A Point of Rocks 73.01 59 ⇓P **P** 04 35 01.2 +1.3
baz=73,SNR=71
BGNE Belgrade 73.03 48 ⇓P **P** 04 34 59.4 -0.3
baz=73,SNR=47
LAZ Ladron 73.05 58 *e*P **P** 04 35 01.3 +1.2
comp=Z,347nm,1.8s
X22A Bernardo 73.05 58 ⇑P **P** 04 35 01.6 +1.5
baz=73,SNR=16
ANMO Albuquerque 73.07 57 *e*P **P** 04 35 00.3 +0.1
ANMO comp=Z,653nm,2.1s LR LR
ANMO comp=Z,34µm,22.0s
Z20A Nine Sixteen R 73.08 60 ⇑P **P** 04 35 01.3 +1.1
baz=73,SNR=148
W23A Werner Place, 73.10 57 ⇑P **P** 04 35 01.3 +0.9
baz=73,SNR=42
IKLH Kolahrood 73.11 301 *e*P **P** 04 35 01.8 +1.3
MUD Monsted U'grnd 73.12 339⇑ *i*P **P** 04 35 00.3 +0.5
comp=Z,102nm,0.7s
MUD comp=Z,71µm,23.0s
T26A Comanche Natio 73.14 54 ⇑P **P** 04 35 00.5 -0.1
baz=73,SNR=108
S27A Las Animas 73.17 53 ⇑P **P** 04 35 00.8 +0.1
baz=73,SNR=45
V24A Rampart Ranch, 73.21 56 ⇑P **P** 04 35 02.3 +1.2
baz=73,SNR=67
U25A Circle Dot Ran 73.23 55 ⇓P **P** 04 35 01.6 +0.5
baz=73,SNR=99
TRD Trivandrum 73.29 265 *ex* P 04 34 54.2 -7.3
TRD *e*P pP 04 35 01.6 -12
LENM Lemitar 73.31 58 *e*P **P** 04 35 02.6 +1.0
LLD Lille Linde 73.33 337 *i* P **P** 04 35 01.4 +0.3
comp=Z,221nm,0.7s
Y22D IRIS PASSCAL I 73.41 58 ⇑P **P** 04 35 03.5 +1.3
baz=73,SNR=7.8
LPM Los Pinos Moun 73.41 58 *e*P **P** 04 35 03.1 +0.9
120A U Bar Ranch, L 73.45 60 ⇑P **P** 04 35 03.5 +1.1
baz=73,SNR=97
IGAR Gharneh 73.47 300 *e*P **P** 04 35 03.0 +0.4
Y22A Socorro 73.48 58 ⇓P **P** 04 35 03.8 +1.2
baz=73,SNR=99
X23A Hourglass Bar 73.48 57 ⇑P **P** 04 35 03.5 +0.9
baz=73,SNR=110
W24A Lazy 6 Ranch, 73.49 56 ⇑P **P** 04 35 04.1 +1.4
baz=73,SNR=143
Z21A St. Cloud Mine 73.50 59 ⇑P **P** 04 35 03.9 +1.1
baz=73,SNR=175
V25A Rancho No Teng 73.51 55 ⇑P **P** 04 35 03.7 +0.9
baz=73,SNR=72
BNM Barren Site 73.53 58 *e*P **P** 04 35 03.6 +0.6
comp=Z,524nm,1.9s
U26A Atchley Ranch, 73.61 54 ⇓P **P** 04 35 03.8 +0.4
baz=73,SNR=58
GKP Gorka Klasztor 73.67 333 *e*P **P** 04 35 03.0 -0.1
GKP *e*S **SKiKP** 04 44 26.3 -2.8
GKP *e*ScS **ScS** 04 45 08.9 -0.1
GKP LMZ LR 05 10 35.0
T27A Campo 73.71 53 ⇓P **P** 04 35 03.8 0.0
baz=74,SNR=54
RGN Rugen 73.72 336⇑ *i*P **P** 04 35 03.6 +0.3
comp=Z,454nm,1.0s
BEL Belsk 73.72 331 *i* P **P** 04 35 04.2 +0.7
BEL *e*S **SKiKP** 04 44 26.8 -2.4
BEL *e*ScS **ScS** 04 45 10.3 +0.8
BEL LMZ LR 05 04 28.4
319A Douglas 73.87 62 ⇓P **P** 04 35 05.9 +1.0
baz=74,SNR=174
SIM Simferopol' 73.93 319*c i*P **P** 04 35 04.9 +0.1
SIM *e*S **SKiKP** 04 44 29.0 -0.8
SIM pmax pmax
SIM comp=Z,16µm,18.9s MLR MLR
SIM comp=Z,106µm,18.0s
X24A Lazy VL Ranch, 73.93 57 ⇓P **P** 04 35 06.4 +1.1
baz=74,SNR=7.5
Z22A Elephant Butte 73.95 59 ⇑P **P** 04 35 06.3 +0.9
baz=74,SNR=93
220A Playas Peak, P 73.96 61 ⇑P **P** 04 35 06.5 +1.1
baz=74,SNR=151
IPIR Pirpir 73.97 300 *e*P **P** 04 35 07.1 +1.5
121A Cookes Peak, D 73.97 60 ⇓P **P** 04 35 06.6 +1.0
baz=74,SNR=167
T28A Walsh 74.01 53 ⇓P **P** 04 35 05.6 0.0
baz=74
V26A Tequesquite Ra 74.01 55 ⇓P **P** 04 35 06.1 +0.5
baz=74,SNR=72
Y23A Lovelace Mesa, 74.02 58 ⇑P **P** 04 35 06.6 +0.8
baz=74,SNR=133
W25A X Bar L Ranch, 74.04 56 ⇑P **P** 04 35 06.5 +0.7
baz=74,SNR=156
LVV L'vov 74.24 328 *e*P **P** 04 35 06.6 0.0
LVV *e*S **S** 04 44 35.6 -1.5
122A Conniff Cattle 74.32 59 ⇑P **P** 04 35 08.9 +1.3
baz=74,SNR=21
SCHQ Schefferville 74.34 22⇑ *i*P **P** 04 35 07.5 +0.4
comp=Z,1µm,1.8s
SCHQ S **S** 04 44 34.5 -3.5
SCHQ P'P' 05 02 33.2
SCHQ Schefferville 74.34 22 P **P** 04 35 07.5 +0.4
comp=Z,109nm,0.8s,baz=354,slow=6.3,SNR=98
SCHQ S **S** 04 44 34.5 -3.5
comp=Z,7.2nm,0.9s,baz=122,slow=17,SNR=14
SCHQ PKPPKP P'P'df 05 02 33.2 -10
comp=Z,2.5nm,0.8s,baz=125,slow=6.2,SNR=3.8
SCHQ LR LR 05 14 01.3
comp=Z,37µm,18.0s,baz=342,slow=41
221A Mesquite Ranch 74.34 60 ⇓P **P** 04 35 08.7 +1.1
baz=74,SNR=42
320A Kipp Ranch, An 74.36 61 ⇓P **P** 04 35 08.6 +0.8
baz=74,SNR=82
Y24A Capitan 74.39 57 ⇓P **P** 04 35 08.5 +0.5
baz=74,SNR=90
Z23A Rita Site, Whi 74.39 58 ⇓P **P** 04 35 08.6 +0.7
baz=74,SNR=79
X25A Clemmons Ranch 74.41 56 ⇓P **P** 04 35 09.1 +1.1
baz=74,SNR=26
MVH1 Achvaich 74.45 347⇑ *e*P **P** 04 35 06.8 -0.9

MVH1 **Achvaich** 74.45 347 P P 04 35 06.8 -0.9
HSIG 74.47 64 P P 04 35 08.4 +0.2
MCD **Coleburn Disti** 74.63 346⇑ eP P 04 35 08.7 +0.1
MCD **Coleburn Disti** 74.63 346 P P 04 35 08.7 +0.1
KIS **Kishinev** 74.64 323⇑ iP P 04 35 07.0 -1.9
KIS i 04 35 22.0
KIS e 04 38 00.0
KIS iS S 04 44 40.0 -1.6
KIS iPS SKSac 04 45 18.0 +4.2
KIS pmax pmax
comp=Z,4µm,2.4s
KIS pmax pmax
comp=N,2µm,2.2s
KIS pmax pmax
comp=E,1µm,2.2s
KIS pmax pmax
comp=N,7µm,12.0s
KIS pmax pmax
comp=E,4µm,12.0s
KIS pmax pmax
comp=Z,14µm,12.0s
KIS pmax pmax
comp=Z,23µm,12.0s
KIS MLR MLR
comp=Z,144µm,18.0s
KIS **Kishinev** 74.64 323⇑ iP P 04 35 07.0 -1.9
comp=Z,4µm,2.4s
KIS **Kishinev** 74.64 323 iPcP PcP 04 35 22.0 -1.1
KIS **Kishinev** 74.64 323 ePP PP 04 38 00.0 +4.6
KIS **Kishinev** 74.64 323 iPS SKSac 04 45 18.0 +4.2
KIS iSS SS 04 50 50.0 +82
KIS iSSS SSS 04 53 18.0
KIS LRM MLR 05 10 44.0
comp=Z,144µm,18.0s
KIS **Kishinev** 74.64 323⇑ iP P 04 35 09.0 +0.1
222A **Williams Famil** 74.68 60 ⇓P P 04 35 10.5 +0.9
baz=74,SNR=50
ILIN **Lien** 74.69 304 eP P 04 35 10.5 +0.7
123A **Bell Site, Whi** 74.81 59 ⇓P P 04 35 11.2 +0.9
baz=75,SNR=44
Y25A **Mesa, Roswell** 74.82 57 ⇓P P 04 35 11.0 +0.6
baz=75,SNR=104
SRIG **Santa Rosalia** 74.84 66 P P 04 35 07.9 -2.4
MME1 **Meikle Cairn** 74.84 346⇑ iP P 04 35 09.6 -0.3
MME1 **Meikle Cairn** 74.84 346 P P 04 35 09.6 -0.3
Z24A **Sheeppen Canyo** 74.85 58 ⇓P P 04 35 11.2 +0.5
baz=75,SNR=86
X26A **CR and CF Fran** 74.89 56 ⇑P P 04 35 11.3 +0.6
baz=75,SNR=68
KWP **Kalwaria Pacla** 74.89 328 ⇑P P 04 35 11.1 +0.8
KWP **Kalwaria Pacla** 74.89 328⇑ iP P 04 35 10.3 0.0
comp=Z,3µm,1.4s
KWP LR LR
comp=Z,147µm,22.0s
KWP **Kalwaria Pacla** 74.89 328⇑ iP P 04 35 11.1 +0.8
KWP **Kalwaria Pacla** 74.89 328 iP P 04 35 10.5 +0.2
KWP eS S 04 44 41.1 -3.2
KWP LMZ LR 05 09 09.7
IKOM **Komasi** 74.91 304 eP P 04 35 11.2 +0.3
V28A **Channing** 74.93 54 ⇓P P 04 35 11.0 0.0
baz=75,SNR=30
MDO **Dochfour** 74.95 347⇑ iP P 04 35 10.5 0.0
MDO **Dochfour** 74.95 347 P P 04 35 10.5 0.0
W27A **Bowe Ranch, En** 74.95 55 ⇑P P 04 35 11.4 +0.4
baz=75,SNR=68
IAS **Iasi** 75.00 324 ⇑P P 04 35 11.8 +0.8
IAS **Iasi** 75.00 324⇑ iP P 04 35 11.8 +0.8
KAC **Achnashellach** 75.03 347⇑ eP P 04 35 11.1 +0.1
KAC **Achnashellach** 75.03 347 P P 04 35 11.1 +0.1
IVIS **Veis** 75.04 304 eP P 04 35 11.9 +0.3
BSEG **Bad Segeberg** 75.09 338 eP P 04 35 11.8 +0.5
BSEG pmax pmax
comp=Z,184nm,0.8s
BSEG **Bad Segeberg** 75.09 338 eP P 04 35 11.8 +0.5
comp=Z,184nm,0.8s
SHI **Shiraz** 75.11 297 eP P 04 35 14.2 +2.1
SCIA **State Center** 75.13 44 eP P 04 35 12.2 +0.4
comp=Z,4µm,2.0s
SCIA LR LR
comp=Z,68µm,22.0s
223A **Chaparral, Ant** 75.16 59 ⇓P P 04 35 13.2 +0.9
baz=75,SNR=8.4
IDHR **Dehrash** 75.18 305 eP P 04 35 12.5 0.0
X27A **F and S Farms,** 75.23 55 ⇑P P 04 35 13.7 +1.0
baz=75,SNR=94
V29A **Stinnett** 75.24 54 ⇑P P 04 35 12.3 -0.3
baz=75,SNR=5.5
124A **Stringfield Ra** 75.24 58 ⇑P P 04 35 13.4 +0.5
baz=75,SNR=67
KPL **Plockton** 75.24 347⇑ eP P 04 35 10.5 -1.7
KPL AMB AMB 04 35 15.4
comp=Z,927nm,3.3s
KPL **Plockton** 75.24 347 P P 04 35 10.5 -1.7
KPL AMB AMB 04 35 15.4
comp=Z,927nm,3.3s
Z25A **Roswell** 75.27 57 ⇑P P 04 35 13.6 +0.6
baz=75,SNR=71
LEOM **Leova** 75.30 323 ⇑P P 04 35 13.1 +0.4
LEOM **Leova** 75.30 323⇑ iP P 04 35 13.1 +0.4
W28A **Vega** 75.30 54 ⇑P P 04 35 13.7 +0.6
baz=75,SNR=109
BANOM **Banah** 75.30 292 P P 04 35 14.1 +0.9
SNR=23
Y26A **Elida** 75.33 56 ⇑P P 04 35 13.8 +0.5
baz=75,SNR=38
IGHG **Ghaleghazi** 75.34 304 eP P 04 35 13.9 +0.4
T31A **Randall Ranch,** 75.36 52 ⇓P P 04 35 13.1 -0.3
baz=75,SNR=40
CGIG 75.38 61 P P 04 35 14.4 +0.7
RUE **Ruedersdorf** 75.40 335⇑ iP P 04 35 13.4 +0.2
comp=Z,244nm,0.8s
OJC **Ojcow** 75.43 330 eP P 04 35 13.4 0.0
OJC e 04 35 28.0
OJC e 04 38 03.9
OJC eS S 04 44 47.2 -3.0
OJC MLR MLR
comp=Z,110µm,20.2s
OJC **Ojcow** 75.43 330 eP P 04 35 13.4 0.0
comp=Z,1µm,1.5s
OJC **Ojcow** 75.43 330 eP P 04 35 13.4 0.0
OJC ePcP PcP 04 35 28.0 +1.6
OJC ePP PP 04 38 03.9 +1.9
OJC eS S 04 44 47.2 -3.0
OJC eSS SS 04 49 24.9 -15
OJC L L 05 12 15.1
comp=Z,110µm,20.2s
KSU1 **Kansas State U** 75.52 48 eP P 04 35 13.4 -0.8
comp=Z,1µm,2.2s
KSU1 LR LR
comp=Z,71µm,22.0s
BUR08 **Bucovina Ar. S** 75.58 326 eP P 04 35 14.3 -0.2
BURAR **Bucovina Array** 75.60 326 P P 04 35 14.7 +0.1
BURAR **Bucovina Array** 75.60 326⇓ iP P 04 35 14.7 +0.1
KOLS **Kolonicke sedl** 75.62 328 eP P 04 35 15.2 +0.6
KOLS eS S 04 44 46.5 -6.0
KOLS eSS SS 04 50 18.9 +36
224A **Cornudas Mount** 75.65 59 ⇓P P 04 35 16.1 +1.0
baz=76,SNR=123
Z26A **Caprock** 75.70 57 ⇓P P 04 35 16.1 +0.6
baz=76,SNR=160
W29A **Amraillo** 75.71 54 ⇓P P 04 35 15.7 +0.3
baz=76,SNR=47
Y27A **Causey** 75.74 56 ⇓P P 04 35 16.3 +0.6
baz=76,SNR=133
125A **Gardner Draw,** 75.74 58 ⇑P P 04 35 16.3 +0.6
baz=76,SNR=114
ELO **Logie Almond** 75.77 346 eP P 04 35 15.4 +0.1
ELO **Logie Almond** 75.77 346 P P 04 35 15.4 +0.1
V30A **Spur Ranch, Mi** 75.78 53 ⇓P P 04 35 15.7 -0.1
baz=76,SNR=9.5
X28A **Dimmitt** 75.83 55 ⇑P P 04 35 16.7 +0.5
baz=76,SNR=45
WBK **Wadi Bani Khal** 75.85 288 P P 04 35 20.1 +3.8
SNR=26
AMTX **Amarillo** 75.86 54⇑ iP P 04 35 16.7 +0.4
comp=Z,164nm,0.8s
AMTX LR LR
comp=Z,24µm,19.0s
AMTX **Amarillo** 75.86 54 ⇓P P 04 35 16.8 +0.5
baz=76,SNR=118
UZH **Uzhgorod** 75.87 328 eP P 04 35 15.8 -0.1
UZH e 04 35 22.0
UZH e 04 38 06.6
UZH eS S 04 44 55.6 +0.5
UZH i 04 45 22.0
UZH MLR MLR
comp=N,70µm,22.0s
UZH MLR MLR
comp=E,52µm,22.0s
UZH MLR MLR
comp=Z,52µm,22.0s
MSTX **Muleshoe** 75.90 56 ⇑P P 04 35 16.9 +0.4
baz=76,SNR=101
TESR 75.92 324⇑ iP P 04 35 16.7 +0.4
NIE **Niedzica** 75.92 330 eP P 04 35 16.7 +0.4
NIE e 04 35 29.6
NIE **Niedzica** 75.92 330 eP P 04 35 16.7 +0.4
NIE ePcP PcP 04 35 29.6 +1.0
CPRX **Cap Rock** 75.94 57 eP P 04 35 17.4 +0.6
comp=Z,40nm,1.4s
CRVS **Cervenica-Dubn** 75.95 329 eP P 04 35 17.0 +0.6
CRVS eS S 04 44 53.2 -2.9
CRVS eSS SS 04 50 08.8 +21
GHRR 75.97 324⇑ iP P 04 35 17.9 +1.3
MNTX **Cornudas Mount** 76.00 59⇑ iP P 04 35 17.5 +0.5
comp=Z,1µm,0.4s
MNTX LR LR
comp=Z,16µm,20.0s
MNTX **Cornudas Mount** 76.00 59 ⇑P P 04 35 17.5 +0.5
baz=76,SNR=191
COCO **West Island** 76.00 235 iP P 04 35 21.6 +4.6
COCO **West Island** 76.00 235 eP P 04 35 20.9 +3.9
comp=Z,4µm,2.4s
COCO LR LR
comp=Z,18µm,22.0s
COCO **West Island** 76.00 235 P P 04 35 20.6 +3.6
SNR=7.5
COCO **West Island** 76.00 235 P P 04 35 20.4 +3.4
comp=Z,2µm,1.3s,SNR=6.8
COCO **West Island** 76.00 235 P P 04 35 18.8 +1.8
comp=Z,584nm,2.0s,comp=Z,20µmcomp=Z,110µm
225A **Deer Hill, Car** 76.04 58 ⇓P P 04 35 18.0 +0.6
baz=76,SNR=60
KSP **Ksiaz** 76.06 333⇑ eP P 04 35 17.0 0.0
KSP e 04 38 10.0
KSP ePPP PPP 04 39 53.0
KSP eS S 04 44 53.5 -3.7
KSP eSS SS 04 49 55.0 +5.7
KSP MLR MLR
comp=Z,306µm,20.3s
KSP **Ksiaz** 76.06 333 eP P 04 35 17.5 +0.5
KSP eS S 04 44 54.3 -2.9
KSP LMZ LR 05 13 09.0
TLCR 76.08 322 ⇑P P 04 35 18.0 +0.8
TLCR 76.08 322⇑ iP P 04 35 18.0 +0.8
RAC **Raciborz** 76.09 331 eP P 04 35 18.0 +0.8
RAC eS S 04 44 58.3 +0.8
RAC MLR MLR
comp=E,87µm,20.0s
RAC MLR MLR
comp=Z,98µm,20.0s
ESY **Stoneypath** 76.11 345⇑ eP P 04 35 17.3 +0.1
ESY **Stoneypath** 76.11 345 P P 04 35 17.3 +0.1
ARMA **Armidale** 76.11 180 eP P 04 35 18.6 +1.2
comp=Z,147nm,0.9s
Z27A **Tatum** 76.12 56 ⇑P P 04 35 18.3 +0.5
baz=76,SNR=169
324A **Moseley Ranch,** 76.12 59 ⇑P P 04 35 18.2 +0.3
baz=76,SNR=71
126A **Clayton Basin,** 76.13 57 ⇓P P 04 35 18.0 +0.2
baz=76,SNR=47
EAB **Aberfoyle** 76.14 346⇑ iP P 04 35 17.6 +0.3
EAB **Aberfoyle** 76.14 346 P P 04 35 17.6 +0.3
SMDO **Samad** 76.15 289 P P 04 35 21.1 +3.0
SNR=19
X29A **Tulia** 76.17 55 ⇓P P 04 35 18.6 +0.5
baz=76,SNR=101
HATD **Hatta, Dubai** 76.17 291 P P 04 35 18.9 +0.8
SNR=39
MNCY **Minicoy** 76.19 268 eP P 04 35 15.9 -2.4
TRPA **Tarpa** 76.19 328⇓ iP P 04 35 18.6 +0.8
TRPA **Tarpa** 76.19 328⇑ eP P 04 35 18.9 +1.1
EDI **Edinburgh** 76.20 346⇑ eP P 04 35 16.1 -1.6
EDI AMB AMB 04 35 17.8
comp=Z,552nm,4.0s
EDI e 04 44 51.2
EDI AMS AMS 05 09 26.0
comp=Z,35µm,21.1s
EDI **Edinburgh** 76.20 346 P P 04 35 16.1 -1.6
EDI AMB AMB 04 35 17.8
comp=Z,552nm,4.0s
EDI 04 44 51.2
EDI AMS AMS 05 09 26.0
comp=Z,35µm,21.1s
BMR **Baia Mare** 76.21 327 ⇑P P 04 35 18.8 +0.9
BMR **Baia Mare** 76.21 327⇑ iP P 04 35 18.8 +0.9
GDL2 **Guadalupe Moun** 76.24 58 eP P 04 35 19.1 +0.5
Y28A **McKinney Farm,** 76.25 55 ⇓P P 04 35 18.7 +0.2
baz=76,SNR=45
W30A **Crocket Farms** 76.27 53 ⇑P P 04 35 19.2 +0.7
baz=76,SNR=33
HOQ **Hoqain** 76.27 290 P P 04 35 19.6 +0.9
SNR=37
OKC **Ostrava-Krasne** 76.31 331⇑ iP P 04 35 19.2 +0.7
OKC ex x 04 38 20.0
OKC ex x 04 40 06.0
OKC ex x 04 44 39.1
OKC eSS SS 04 50 03.2 +10
OKC AMS AMS 05 13 40.0
comp=Z,62µm,19.8s
PETR 76.32 323⇓ iP P 04 35 20.1 +1.6
ASHO **Ashiyiah** 76.32 291 P P 04 35 19.8 +0.8
SNR=32
EAU **Auchinoon** 76.32 346⇑ iP P 04 35 18.8 +0.4
EAU **Auchinoon** 76.32 346 P P 04 35 18.8 +0.4
EBL **Broad Law** 76.32 346⇑ iP P 04 35 18.5 +0.1
EBL **Broad Law** 76.32 346 P P 04 35 18.5 +0.1
NAZ **Nazwa, Dubai** 76.37 292 P P 04 35 21.0 +1.9
SNR=17
CFR **Carcaliu** 76.38 323 P P 04 35 19.1 +0.2
CFR **Carcaliu** 76.38 323⇓ iP P 04 35 18.9 0.0
VRI **Vrincioaia** 76.41 324 ⇑P P 04 35 19.9 +0.8
VRI **Vrincioaia** 76.41 324⇑ iP P 04 35 19.9 +0.8
NRDL **Niedersach Rie** 76.43 337 eP P 04 35 19.3 +0.3
comp=Z,167nm,0.9s
UPC **Upice** 76.44 333⇑ iP P 04 35 19.7 +0.5
226B **Tecolote Peak,** 76.45 58 ⇑P P 04 35 20.2 +0.5
baz=76,SNR=193
PLOR **Plostina** 76.45 324 ⇑P P 04 35 20.0 +0.6
PLOR **Plostina** 76.45 324⇑ iP P 04 35 20.0 +0.6
DPC **Dobruska-Polom** 76.47 332 eP P 04 35 19.8 +0.4
DPC pmax pmax
comp=Z,1µm,1.5s
DPC **Dobruska-Polom** 76.47 332 eP P 04 35 19.8 +0.4
comp=Z,1µm,1.5s
DPC **Dobruska-Polom** 76.47 332⇑ iP P 04 35 19.9 +0.5
DPC ePP PP 04 38 18.1 +7.3
DPC ex x 04 40 02.3
DPC ex x 04 44 42.8
DPC eSS SS 04 49 58.6 +2.8
DPC AMS AMS 05 12 50.0
comp=Z,154µm,19.6s
325A **Bean Ranch, Si** 76.48 59 ⇑P P 04 35 20.4 +0.4
baz=76,SNR=94
CLNB **Carlsbad** 76.48 58 eP P 04 35 19.8 -0.1
comp=Z,148nm,1.9s
127A **Arkansas Junct** 76.49 57 ⇑P P 04 35 20.1 +0.1
baz=76,SNR=22
PGBU **Glenifferbraes** 76.53 346⇑ eP P 04 35 19.5 0.0
PGBU AMB AMB 04 35 23.0
comp=Z,1µm,2.2s
PGBU AMS AMS 05 13 04.6
comp=Z,38µm,20.4s
PGBU **Glenifferbraes** 76.53 346 P P 04 35 19.5 0.0
PGBU AMB AMB 04 35 23.0
comp=Z,1µm,2.2s
PGBU AMS AMS 05 13 04.6
comp=Z,38µm,20.4s
PMSU **Muirshiel** 76.54 347⇑ iP P 04 35 19.8 +0.1
PMSU **Muirshiel** 76.54 347 P P 04 35 19.8 +0.1
KRLC **Kraliky** 76.56 332⇑ iP P 04 35 20.1 +0.2
KRLC **Kraliky** 76.56 332 ⇑P P 04 35 20.1 +0.2
MORC **Moravsky Berou** 76.57 331 ⇓P P 04 35 20.8 +0.8
MORC **Moravsky Berou** 76.57 331 eP P 04 35 19.7 -0.2
comp=Z,927nm,1.3s
MORC **Moravsky Berou** 76.57 331⇓ iP P 04 35 20.8 +0.8
JMDO **Jabal Madar** 76.59 288 P P 04 35 21.6 +1.1
SNR=39
Y29A **Porterfield Fa** 76.61 55 ⇑P P 04 35 20.8 +0.3
baz=76,SNR=60
Z28A **Tucker Farm, M** 76.61 56 ⇑P P 04 35 21.0 +0.4
baz=76,SNR=36
W31A **Holland Ranch,** 76.62 53 ⇓P P 04 35 21.1 +0.6
baz=76,SNR=54
X30A **Coker Ranch, T** 76.64 54 ⇑P P 04 35 20.6 0.0
baz=76,SNR=60
LIKS **Likavka** 76.66 330 eP P 04 35 21.8 +1.4
CLL **Collm** 76.67 335⇑ iP P 04 35 20.7 +0.3
CLL ePP pP 04 35 33.0 +0.4
CLL eS S 04 44 58.0 -5.8
CLL e 04 45 28.0
CLL pmax pmax
comp=Z,1µm,1.4s
CLL MLR MLR
comp=Z,105µm,20.3s
CLL **Collm** 76.67 335 eP P 04 35 20.2 -0.2
comp=Z,278nm,0.7s
CLL **Collm** 76.67 335⇑ iP P 04 35 20.7 +0.3
comp=Z,1µm,1.4s
CLL i Pmax 04 35 22.0
CLL ePIp 04 35 23.0
comp=Z,19µm,22.4s
CLL e(pP) pP 04 35 33.0 +0.4
CLL esPP 04 38 26.0
CLL ePPP PPP 04 40 00.0
CLL eS S 04 45 02.0 -1.8
CLL eScS ScS 04 45 32.0 -1.2
CLL ePPS PPS 04 45 57.0
CLL esSS 04 50 12.0
CLL esSSS 04 53 48.0
CLL e 04 54 42.0
CLL ePKPPKPdfP'P'df 05 02 33.0 -5.7
CLL Lm MLR 05 12 00.0
comp=N,64µm,21.7s
CLL Lm MLR 05 12 00.0
comp=E,51µm,19.5s
CLL Lm MLR 05 12 00.0
comp=Z,105µm,20.3s
CLL Lm(360 06 46 00.0
comp=Z,5µm,21.6s
GRER 76.70 323⇑ iP P 04 35 22.7 +2.0
BRG **Berggiesshubel** 76.76 334⇑ iP P 04 35 21.1 +0.1
BRG comp=Z,996nm,1.8s
BRG i PP PP 04 38 10.2 -3.0
BRG comp=Z,190nm,1.9s
BRG S S 04 45 06.0 +1.1
BRG SS SS 04 50 19.0 +19
BRG ePKPPKP P'P'df 05 02 25.6 -13
comp=Z,5.7nm,1.1s
BRG comp=N,84µm,20.6s
BRG comp=E,55µm,18.0s
BRG comp=Z,95µm,20.4s
BRG **Berggiesshubel** 76.76 334⇑ iP P 04 35 21.1 +0.1
BRG i 04 38 10.2
BRG S S 04 45 06.0 +1.1
BRG pmax pmax
comp=Z,996nm,1.8s
BRG pmax pmax
comp=Z,190nm,1.9s
BRG MLR MLR
comp=N,84µm,20.6s
BRG MLR MLR
comp=E,55µm,18.0s
BRG MLR MLR
comp=Z,95µm,20.4s
BRG **Berggiesshubel** 76.76 334 eP P 04 35 21.0 +0.1
comp=Z,138nm,1.0s
GLMI **Grayling** 76.77 37⇑ iP P 04 35 21.2 +0.1
comp=Z,550nm,0.9s
GLMI LR LR
comp=Z,47µm,22.0s
ESK **Eskdalemuir** 76.79 346 eP P 04 35 20.4 -0.6
ESK AMB AMB 04 35 22.8
comp=Z,615nm,3.1s
ESK AMS AMS 05 09 56.3
comp=Z,32µm,20.6s
ESK **Eskdalemuir** 76.79 346 P P 04 35 20.4 -0.6
ESK AMB AMB 04 35 22.8
comp=Z,615nm,3.1s
ESK AMS AMS 05 09 56.3
comp=Z,32µm,20.6s
ESK **Eskdalemuir** 76.79 346 iP P 04 35 21.7 +0.7
ESK **Eskdalemuir** 76.79 346 eP P 04 35 21.1 +0.1
comp=Z,1µm,1.8s
ESK LR LR
comp=Z,39µm,21.0s
ESK **Eskdalemuir** 76.79 346 P P 04 35 21.7 +0.7
comp=Z,1µm,1.1s,SNR=37
ASUD **Al Ashush, Dub** 76.83 292 P P 04 35 23.8 +2.0
SNR=12
TIRR **Tirgusor** 76.84 322 ⇑P P 04 35 22.1 +0.6
TIRR **Tirgusor** 76.84 322 eP P 04 35 21.7 +0.2
comp=Z,977nm,1.6s
TIRR **Tirgusor** 76.84 322⇑ iP P 04 35 22.1 +0.6
MALT **Malatya** 76.87 312⇑ iP P 04 35 23.1 +1.2
MALT pmax pmax
comp=Z,179nm,0.7s
MALT MLR MLR
comp=Z,185µm,20.0s
MALT **Malatya** 76.87 312⇑ iP P 04 35 23.1 +1.2
comp=Z,179nm,0.7s
MALT LR LR
comp=Z,185µm,20.0s
MALT **Malatya** 76.87 312⇑ iP P 04 35 23.1 +1.2
MALT **Malatya** 76.87 312 eP P 04 35 22.2 +0.3
DOPR **Dopca** 76.87 325⇓ iP P 04 35 23.0 +1.3
PVCC **Panska Ves** 76.87 333⇑ iP P 04 35 22.3 +0.7
PVCC ePP PP 04 38 20.0 +5.9
PVCC ex x 04 40 03.2
PVCC ex x 04 44 46.5
PVCC eSS SS 04 50 03.2 +1.5
PVCC AMS AMS 05 12 50.0
comp=Z,102µm,18.4s
425A **Indio Mountain** 76.89 59 ⇓P P 04 35 23.1 +0.9
baz=77,SNR=123
ECK **Cauldkaine Hil** 76.90 345⇑ iP P 04 35 22.0 +0.3
ECK **Cauldkaine Hil** 76.90 345 P P 04 35 22.0 +0.3
BSY **Bisya** 76.93 289 P P 04 35 23.4 +0.9
SNR=52
CLZ **Clausthal** 76.95 337 eP P 04 35 22.7 +0.6
CLZ pmax pmax
comp=Z,256nm,0.9s
CLZ **Clausthal** 76.95 337 eP P 04 35 22.7 +0.6
comp=Z,256nm,0.9s
ARQ **Aragi** 76.96 290 P P 04 35 23.6 +1.0
SNR=35
X31A **McDonald Ranch** 77.00 53 ⇓P P 04 35 23.2 +0.5
baz=77,SNR=60
227A **Bennet, Jal** 77.01 57 ⇓P P 04 35 23.3 +0.4
baz=77,SNR=14
Z29A **Hungry Hill Ra** 77.03 55 ⇓P P 04 35 23.4 +0.5
baz=77,SNR=174
Y30A **Stafford Cattl** 77.04 55 ⇑P P 04 35 23.4 +0.4
baz=77,SNR=68
128A **Castleberry Fa** 77.04 56 ⇓P P 04 35 23.4 +0.4
baz=77,SNR=108
XAL **Allendale** 77.04 345⇑ iP P 04 35 22.8 +0.3
XAL **Allendale** 77.04 345 P P 04 35 22.8 +0.3
EFOR **EFORIE** 77.05 322⇓ iP P 04 35 23.8 +1.1
PGOR **Pogoanele** 77.08 323⇑ iP P 04 35 24.6 +1.7
ISR **Istrita** 77.09 324 ⇑P P 04 35 24.2 +1.2
ISR **Istrita** 77.09 324⇑ iP P 04 35 24.2 +1.2
326A **Caldwell Ranch** 77.11 58 ⇓P P 04 35 23.9 +0.5
baz=77
CVD **Cernavoda** 77.12 322 P P P 04 35 24.4 +1.3
MDB **Medias** 77.13 325 P P P 04 35 25.1 +1.9
MDB **Medias** 77.13 325⇑ iP P P 04 35 25.0 +1.9
AMRR **Amara** 77.17 323 ⇑P P P 04 35 24.7 +1.3
AMRR **Amara** 77.17 323⇑ iP P P 04 35 24.7 +1.3
VYHS **Vyhne** 77.22 330 eP P P 04 35 23.9 +0.2
VYHS eS S S 04 45 03.7 -6.3
VYHS eSS SS 04 50 37.3 +30
IBBN **Ibbenburen** 77.23 338 eP P P 04 35 23.8 +0.3
comp=Z,357nm,0.8s
DRGR 77.24 327 ⇓P P P 04 35 24.3 +0.4
DRGR 77.24 327⇓ iP P P 04 35 24.3 +0.4
MANR **Mangalia** 77.28 322⇓ iP P P 04 35 25.0 +1.0
VRAC **Vranov** 77.29 332⇓ iP P P 04 35 25.0 +1.0
PRA **Prague** 77.32 333 ⇑P P P 04 35 23.0 -1.1
PRA S S S 04 45 10.0 -0.9
PRA ex x x 04 50 45.0
PRA AMS AMS AMS 05 13 00.0

Y31A **Rekieta Farm,** 77.33 54 ⇓P P 04 35 24.7 +0.1
baz=77,SNR=55
Z30A **Sanderson Ranc** 77.34 55 ⇓P P 04 35 24.9 +0.3
baz=77,SNR=101
PSZ **Piszkesteto** 77.34 329 ⇓P P 04 35 25.2 +0.8
PSZ **Piszkesteto** 77.34 329 *e*P P 04 35 24.1 -0.3
comp=Z,3µm,2.0s
PSZ LR LR
comp=Z,90µm,19.0s
PSZ **Piszkesteto** 77.34 329⇓*i*P P 04 35 25.2 +0.8
PSZ **Piszkesteto** 77.34 329⇑*e*P P 04 35 25.4 +1.0
228A **UT Block 9, Go** 77.34 57 ⇓P P 04 35 25.0 +0.3
baz=77,SNR=39
GCD **Castle Douglas** 77.35 346⇑*i*P P 04 35 24.3 +0.1
GCD **Castle Douglas** 77.35 346 P P 04 35 24.3 +0.1
PRU **Pruhonice** 77.36 333⇑*i*P P 04 35 24.9 +0.6
PRU *e*PP PP 04 38 21.9 +3.7
PRU *ex* x 04 40 12.6
PRU *eS* S 04 45 10.5 -0.9
PRU *eSS* SS 04 50 20.0 +11
PRU AMS AMS 05 13 00.0
comp=Z,139µm,19.1s
327A **Balmorhea Ranc** 77.36 58 ⇑P P 04 35 25.5 +0.7
baz=77
SECR 77.36 324⇑*i*P P 04 35 25.5 +1.0
BHD **Baghdad** 77.36 305 *i* x P 04 35 24.8 +0.2
BHD *i* x S 04 45 05.5 -6.4
BHD *i* x x 04 46 14.5
129A **Stewart Farms,** 77.39 56 ⇑P P 04 35 25.1 +0.2
baz=77,SNR=34
VOIR 77.44 325 ⇑P P 04 35 26.2 +1.2
VOIR 77.44 325⇑*i*P P 04 35 26.1 +1.1
KESW **Keswick, Cumbr** 77.46 345⇑*e*P P 04 35 25.4 +0.5
KESW AMB AMB 04 35 29.1
comp=Z,1µm,1.5s
KESW AMS AMS 05 10 17.5
comp=Z,39µm,21.9s
KESW **Keswick, Cumbr** 77.46 345 P P 04 35 25.4 +0.5
KESW AMB AMB 04 35 29.1
comp=Z,1µm,1.5s
KESW AMS AMS 05 10 17.5
comp=Z,39µm,21.9s
GAL1 **Galloway** 77.47 346⇑*e*P P 04 35 23.2 -1.7
GAL1 AMB AMB 04 35 26.4
comp=Z,758nm,3.0s
GAL1 AMS AMS 05 14 02.8
comp=Z,38µm,20.6s
GAL1 **Galloway** 77.47 346 P P 04 35 23.2 -1.7
GAL1 AMB AMB 04 35 26.4
comp=Z,758nm,3.0s
GAL1 AMS AMS 05 14 02.8
comp=Z,38µm,20.6s
426A **McDonald Obser** 77.54 59 ⇓P P 04 35 26.5 +0.5
baz=77,SNR=85
PSN **Preselentsi** 77.56 322 *i* P P 04 35 26.0 +0.4
SULR 77.57 323⇑*i*P P 04 35 23.3 -2.3
WMOK **Wichita Mounta** 77.59 53⇑*i*P P 04 35 26.0 0.0
WMOK pmax pmax
comp=Z,285nm,1.5s
WMOK MLR MLR
comp=Z,39µm,21.0s
WMOK **Wichita Mounta** 77.59 53⇑*i*P P 04 35 26.0 0.0
comp=Z,285nm,1.5s
WMOK LR LR
comp=Z,39µm,21.0s
TANN **Tannenbergstha** 77.61 335 *e*P P 04 35 26.2 +0.3
comp=Z,68nm,0.8s
TREC **Trest** 77.66 332⇑*i*P P 04 35 26.6 +0.5
TREC *e* 04 38 25.6
TREC *eS* S 04 45 13.9 -0.8
TREC MLR MLR
comp=Z,155µm,20.1s
TREC **Trest** 77.66 332⇑*i*P P 04 35 26.6 +0.5
TREC *e*PP PP 04 38 25.6 +4.8
TREC *ex* x 04 40 20.1
TREC *eS* S 04 45 13.9 -0.8
TREC *ex* x 04 50 34.7
TREC AMS AMS 05 13 40.0
comp=Z,155µm,20.1s
MOX **Moxa** 77.66 335 *e*P P 04 35 26.3 +0.3
MOX pmax pmax
comp=Z,507nm,1.2s
MOX MLR MLR
comp=Z,93µm,20.0s
MOX **Moxa** 77.66 335 *e*P P 04 35 26.3 +0.3
comp=Z,507nm,1.2s
MOX *e*L L 05 14 29.4
comp=Z,93µm,20.0s
ARR **Arges** 77.67 325⇑*i*P P 04 35 27.7 +1.4
SMOL **Smolenice** 77.69 331 *e*P P 04 35 27.6 +1.4
328A **Wristen Ranch,** 77.75 57 ⇑P P 04 35 27.3 +0.3
baz=78,SNR=116
Y32A **R-V Farms, Ver** 77.77 54 ⇓P P 04 35 27.1 +0.1
baz=78,SNR=33
NKC **Novy Kostel** 77.78 335⇑*i*P P 04 35 27.2 +0.5
NKC *e*PP PP 04 38 23.8 +2.0
NKC *ex* x 04 40 17.3
NKC *eS* S 04 45 08.9 -7.1
NKC *eSS* SS 04 50 25.7 +10
NKC AMS AMS 05 12 20.0
comp=Z,74µm,19.7s
WTSB **Winterswijk** 77.78 339 *e*P P 04 35 27.0 +0.4
427A **Hayter Ranch,** 77.78 58 ⇑P P 04 35 27.5 +0.3
baz=78,SNR=94
Z31A **Sharp Cattle R** 77.87 54 ⇓P P 04 35 27.7 +0.1
baz=78,SNR=74
229A **Bryant Ranch,** 77.91 56 ⇓P P 04 35 28.4 +0.6
baz=78,SNR=49
DEV **Deva** 77.92 326 P P 04 35 28.2 +0.6
DEV **Deva** 77.92 326⇑*i*P P 04 35 28.1 +0.5
BUC1 **Bucharest** 77.93 323 P P 04 35 29.1 +1.5
BUC1 **Bucharest** 77.93 323⇑*i*P P 04 35 28.8 +1.2
130A **Snyder** 77.94 55 ⇓P P 04 35 28.2 +0.2
baz=78,SNR=29
526A **Mary Lane Ranc** 77.94 59 ⇓P P 04 35 28.9 +0.7
baz=78,SNR=132
LOT **Lotru** 77.95 325⇓*i*P P 04 35 27.9 0.0
UBBA **Unterbreizbach** 77.97 336 *e*P P 04 35 27.9 +0.3
comp=Z,101nm,0.8s
BUD **Budapest** 78.02 329⇑*e*P P 04 35 29.3 +1.2
HDIL **Hopedale** 78.05 43 *e*P P 04 35 28.4 0.0
comp=Z,3µm,2.1s
HDIL LR LR
comp=Z,56µm,22.0s
UMR **Umm Al-Rimmam** 78.10 300 *e*P P 04 35 29.4 +0.6
STKA **Stephens Creek** 78.10 189⇑*i*P P 04 35 28.9 +0.4
comp=Z,126nm,1.9s
STKA S S 04 45 18.6 -0.8
STKA **Stephens Creek** 78.10 189 P P 04 35 28.8 +0.4
comp=Z,37nm,0.9s,baz=344,slow=7.6,SNR=30
STKA S S 04 45 18.6 -0.8
comp=Z,0.9nm,0.6s,baz=170,slow=19,SNR=2.5
STKA LR LR 05 10 09.9
comp=Z,44µm,21.6s,baz=9.1,slow=36
BUG **Bochum-Univer** 78.14 338 *e*P P 04 35 28.8 +0.2
comp=Z,256nm,0.8s
MIB **Mutribah** 78.15 301 *e*P P 04 35 29.6 +0.5
329A **Wagon Wheel Ra** 78.16 57 ⇑P P 04 35 29.7 +0.4
baz=78,SNR=84
527A **Woodward Ranch** 78.17 59 ⇓P P 04 35 29.9 +0.5
baz=78
BR131 **Keskin Array S** 78.19 316⇑*i*P P 04 35 29.6 +0.3
comp=Z,150nm,0.8s
BRTR **Keskin Array B** 78.19 316 P P 04 35 30.1 +0.8
BRTR **Keskin Array B** 78.19 316 P P 04 35 30.1 +0.8
comp=Z,197nm,0.8s,baz=74,slow=3.6,SNR=434
BRTR LR LR 05 16 00.0
comp=Z,69µm,18.6s,baz=3.4,slow=40
131A **Roby** 78.21 55 ⇓P P 04 35 29.9 +0.5
baz=78,SNR=46
PKSN **Nyarlorinc** 78.21 329⇓*e*P P 04 35 30.6 +1.5
HUMR **Humele** 78.22 324⇓*i*P P 04 35 28.6 -0.6
LHO **Holmfirth** 78.23 344⇑*e*P P 04 35 29.4 +0.2
LHO **Holmfirth** 78.23 344 P P 04 35 29.4 +0.2
Z32A **Haskell** 78.26 54 ⇑P P 04 35 29.8 +0.1
baz=78,SNR=66
ROTZ **Rotzenmuhle** 78.27 334 *e*P P 04 35 30.2 +0.8
comp=Z,227nm,0.9s
GMM **Mts of Mourne** 78.28 347⇑*i*P P 04 35 29.4 0.0
GMM **Mts of Mourne** 78.28 347 P P 04 35 29.4 0.0
626A **Big Bend Ranch** 78.28 60 ⇑P P 04 35 30.4 +0.4
baz=78,SNR=118
PRD **Provadia** 78.28 322 *i* P P 04 35 30.4 +0.8
428A **Kincaid Ranch,** 78.30 58 ⇓P P 04 35 30.8 +0.8
baz=78,SNR=87

PKSG 78.32 330⇓*e*P P 04 35 31.1 +1.4
TUL1 **Tulsa** 78.34 50 ⇓P P 04 35 30.2 +0.2
baz=78,SNR=54
PKS7 **Kunszentmiklos** 78.34 329⇓*e*P P 04 35 31.1 +1.3
PKS7 ⇓*e*P PcP 04 35 33.9 -5.2
230A **Sterling City** 78.37 56 ⇑P P 04 35 30.7 +0.3
baz=78,SNR=66
GZR **Gura Zlata** 78.38 326 ⇑P P 04 35 30.5 +0.3
GZR **Gura Zlata** 78.38 326⇑*i*P P 04 35 30.5 +0.3
KBD **Kabd** 78.39 300 *e*P P 04 35 31.2 +0.8
KHC **Kasperske Hory** 78.41 333 *e*P P 04 35 30.6 +0.3
KHC pmax pmax
comp=Z,897nm,1.2s
KHC **Kasperske Hory** 78.41 333 *e*P P 04 35 30.6 +0.3
comp=Z,897nm,1.2s
KHC **Kasperske Hory** 78.41 333⇑*i*P P 04 35 30.7 +0.4
KHC *e*pP pP 04 35 41.5 -0.9
KHC *e*PP PP 04 38 29.6 +2.5
KHC *ex* x 04 40 21.0
KHC *eS* S 04 45 22.3 -0.6
KHC *eSS* SS 04 50 34.1 +9.2
KHC AMS AMS 05 13 40.0
comp=Z,121µm,18.6s
KBI1 **Birley Grange** 78.44 344⇑*i*P P 04 35 30.8 +0.5
KBI1 **Birley Grange** 78.44 344 P P 04 35 30.8 +0.5
PKST **T"'s** 78.56 330 *e*P P 04 35 31.9 +0.8
QRN **Al-Qurain** 78.56 299 *e*P P 04 35 32.0 +0.6
PKS6 **Bocsa** 78.58 329⇓*e*P P 04 35 31.9 +0.8
NAY **Al-Naaiem** 78.60 300 *e*P P 04 35 32.0 +0.4
WET **Wettzell** 78.61 334 *e*P P 04 35 32.1 +0.7
WET pmax pmax
comp=Z,401nm,1.0s
WET **Wettzell** 78.61 334 *e*P P 04 35 32.1 +0.7
comp=Z,401nm,1.0s
GEC2 **GERESS Array S** 78.62 333 *e*P P 04 35 31.7 +0.2
GEC2 pmax pmax
comp=Z,140nm,0.8s
GEC2 **GERESS Array S** 78.62 333 *e*P P 04 35 31.7 +0.2
comp=Z,140nm,0.8s
GERES **GERESS Array B** 78.62 333 P P 04 35 31.8 +0.3
GERES S S 04 45 24.3 -1.0
GERES PKKPbc **PKKPbc** 04 54 24.7 -0.3
GERES P'P'ab 05 02 12.3
GERES P'P' 05 02 28.9
GERES **GERESS Array B** 78.62 333 P P 04 35 31.8 +0.3
comp=Z,167nm,0.8s,baz=32,slow=5.2,SNR=499
GERES S S 04 45 24.3 -1.0
comp=Z,0.8nm,0.8s,baz=96,slow=9.2,SNR=2.1
GERES PKKPbc **PKKPbc** 04 54 24.7 -0.3
comp=Z,1.4nm,0.7s,baz=150,slow=2.9,SNR=6.5
GERES PKP2ab 05 02 12.3
comp=Z,0.9nm,0.9s,baz=233,slow=4.2,SNR=3.6
GERES PKPPKP P'P'df 05 02 28.9 -6.4
comp=Z,1.1nm,0.9s,baz=170,slow=10,SNR=4.3
GERES LR LR 05 16 49.2
comp=Z,107µm,19.5s,baz=24,slow=41
GRF **Grafenberg Arr** 78.62 335 *e*P P 04 35 32.1 +0.7
GRF pmax pmax
comp=Z,561nm,0.8s
GRF MLR MLR
comp=Z,78µm,20.3s
GRF **Grafenberg Arr** 78.62 335 *e*P P 04 35 32.1 +0.7
comp=Z,561nm,0.8s
GRF *e*L L 05 13 34.2
comp=Z,78µm,20.3s
BZS **Buzias** 78.64 327 ⇑P P 04 35 31.6 0.0
BZS **Buzias** 78.64 327⇑*i*P P 04 35 31.5 0.0
528A **Cox Ranch, San** 78.65 58 ⇓P P 04 35 32.8 +0.8
baz=78,SNR=118
RDF **Al-Radifah** 78.65 300 *e*P P 04 35 32.7 +0.8
ABTX **Abilene, Hawle** 78.67 55 ⇑P P 04 35 32.5 +0.5
baz=78,SNR=73
330A **Mertzon** 78.68 56 ⇑P P 04 35 32.2 +0.1
baz=78,SNR=64
TIM **Timisoara** 78.69 327 P P 04 35 33.5 +1.7
TIM **Timisoara** 78.69 327⇓*i*P P 04 35 33.5 +1.7
SOP **Sopron** 78.70 331⇑*e*P P 04 35 33.2 +1.4
TXAR **Lajitas Array** 78.72 59 P P 04 35 32.8 +0.4
TXAR PKKPbc **PKKPbc** 04 54 27.6 +3.2
TXAR **Lajitas Array** 78.72 59 P P 04 35 32.8 +0.4
comp=Z,50nm,0.8s,baz=298,slow=3.9,SNR=421
TXAR PKKPbc **PKKPbc** 04 54 27.6 +3.2
comp=Z,4.1nm,0.8s,baz=147,slow=4.3,SNR=22
CONA **Conrad Observa** 78.72 331 *i* P P 04 35 32.8 +0.7
comp=Z,6µm,2.5s,SNR=374
CONA **Conrad Observa** 78.72 331 *i* P P 04 35 32.8 +0.7
comp=Z,6µm,2.5s
ZIMR 78.77 323 P P 04 35 32.8 +0.5
231A **Bronte** 78.79 56 ⇑P P 04 35 32.8 +0.1
baz=79,SNR=63
PKS2 **Kecel** 78.80 329⇓*e*P P 04 35 33.8 +1.4
627A **Terlingua Ranc** 78.80 59 ⇓P P 04 35 33.5 +0.7
baz=79,SNR=136
WME **Myndd Eilian** 78.81 346⇑*e*P P 04 35 32.3 0.0
WME **Myndd Eilian** 78.81 346 P P 04 35 32.3 0.0
429A **Davenport Ranc** 78.84 57 ⇓P P 04 35 33.2 +0.2
baz=79,SNR=75
SZH **Strazhica** 78.86 323 *i* P P 04 35 33.0 +0.2
CRAR **CRAIOVA** 78.86 325 P P 04 35 33.7 +0.9
CRAR **CRAIOVA** 78.86 325⇑*i*P P 04 35 33.2 +0.4
WPM1 **Penmaenmawr** 78.88 345⇑*i*P P 04 35 33.0 +0.3
WPM1 **Penmaenmawr** 78.88 345 P P 04 35 33.0 +0.3
WLF1 **Llynfaes** 78.93 346⇑*e*P P 04 35 31.7 -1.3
WLF1 AMB AMB 04 35 34.5
comp=Z,489nm,3.4s
WLF1 *e* 04 45 18.3
WLF1 AMS AMS 05 10 46.2
comp=Z,42µm,23.8s
WLF1 **Llynfaes** 78.93 346 P P 04 35 31.7 -1.3
WLF1 AMB AMB 04 35 34.5
comp=Z,489nm,3.4s
WLF1 04 45 18.3
WLF1 AMS AMS 05 10 46.2
comp=Z,42µm,23.8s
TNS **Taunus Mts** 78.94 337 *e*P P 04 35 33.6 +0.4
TNS pmax pmax
comp=Z,324nm,0.8s
TNS **Taunus Mts** 78.94 337 *e*P P 04 35 33.6 +0.4
comp=Z,324nm,0.8s
YRC **Rhoscolyn** 79.00 346⇑*e*P P 04 35 32.6 -0.8
YRC **Rhoscolyn** 79.00 346 P P 04 35 32.6 -0.8
529A **Stev Forest Ra** 79.01 58 ⇑P P 04 35 34.3 +0.3
baz=79,SNR=155
YLL **Llanberis** 79.04 345⇑*e*P P 04 35 33.9 +0.3
YLL **Llanberis** 79.04 345 P P 04 35 33.9 +0.3
628A **Black Gap, Mar** 79.08 59 ⇑P P 04 35 34.8 +0.5
baz=79,SNR=64
SLM **Saint Louis** 79.10 45 *e*P P 04 35 34.2 0.0
SLM pmax pmax
comp=Z,2µm,2.0s
SLM **Saint Louis** 79.10 45 *e*P P 04 35 34.2 0.0
comp=Z,2µm,2.0s
430A **Baggett Ranch,** 79.10 57 ⇓P P 04 35 34.8 +0.3
baz=79,SNR=81
FOEL **Foel Wylfa** 79.10 345⇑*e*P P 04 35 34.5 +0.6
FOEL AMB AMB 04 35 37.7
comp=Z,1µm,2.4s
FOEL AMS AMS 05 11 39.4
comp=Z,35µm,21.2s
FOEL **Foel Wylfa** 79.10 345 P P 04 35 34.5 +0.6
FOEL AMB AMB 04 35 37.7
comp=Z,1µm,2.4s
FOEL AMS AMS 05 11 39.4
comp=Z,35µm,21.2s
HGN **Heimansgroeve** 79.10 339 *e*P P 04 35 34.5 +0.5
comp=Z,3µm,1.8s
HGN *e*PP PP 04 38 40.3 +7.6
HGN *eS* S 04 45 35.4 +5.3
HGN *eSS* SS 04 51 02.0 +27
BEBN **Eben Emael** 79.14 339 P P 04 35 34.6 +0.5
PVL **Pavlikeni** 79.15 323 *i* P P 04 35 34.8 +0.5
331A **San Angelo** 79.19 56 ⇑P P 04 35 34.9 0.0
baz=79,SNR=103
232A **Coleman** 79.21 55 ⇑P P 04 35 35.2 +0.2
baz=79,SNR=45
AAM **Ann Arbor** 79.22 38 *e*P P 04 35 35.3 +0.5
AAM pmax pmax
comp=Z,691nm,1.7s
AAM MLR MLR
comp=Z,44µm,19.0s
AAM **Ann Arbor** 79.22 38 *e*P P 04 35 35.2 +0.5
comp=Z,691nm,1.7s
AAM LR LR
comp=Z,44µm,19.0s
SFIN **Scholer Farm** 79.22 42 ⇓P P 04 35 34.6 -0.2
baz=79,SNR=15
MEM **Membach** 79.23 339 P P 04 35 35.0 +0.4
JMB **Yambol** 79.23 322 P P 04 35 35.6 +0.8
JMB **Yambol** 79.23 322 *i* P P 04 35 35.4 +0.6
YRE **Yr Eifl** 79.23 346⇑*e*P P 04 35 34.4 -0.3
YRE **Yr Eifl** 79.23 346 P P 04 35 34.4 -0.3
HPIG 79.24 62 P P 04 35 34.6 -0.8
PKSM **Moragy** 79.24 329 P P 04 35 34.7 -0.1
PKSM **Moragy** 79.24 329⇑*i*P P 04 35 34.9 +0.1
PKSM **Moragy** 79.24 329⇑*e*P P 04 35 34.7 -0.1
MOA **Molln** 79.32 332 *i* P P 04 35 35.8 +0.6
comp=Z,6µm,3.0s,SNR=172
MOA **Molln** 79.32 332 *i* P P 04 35 35.8 +0.6
comp=Z,6µm,3.0s
TOD **Tromm** 79.39 336⇑*e*P P 04 35 36.1 +0.5
TOD **Tromm** 79.39 336⇑*e*P P 04 35 36.1 +0.5
HLM1 **Long Mynd** 79.40 344⇑*e*P P 04 35 36.1 +0.5
HLM1 AMB AMB 04 35 37.6
comp=Z,919nm,3.2s
HLM1 **Long Mynd** 79.40 344 P P 04 35 36.1 +0.5
HLM1 AMB AMB 04 35 37.6
comp=Z,919nm,3.2s
FORT **Forrest** 79.41 201⇑*i*P P 04 35 36.0 +0.3
comp=Z,261nm,1.0s
ARSA **Arzberg** 79.43 331 *i* P P 04 35 36.5 +0.7
comp=Z,4µm,2.6s,SNR=127
ARSA **Arzberg** 79.43 331 *i* P P 04 35 36.5 +0.7
comp=Z,4µm,2.6s
ABH **Alteburg** 79.49 337⇑*e*P P 04 35 36.5 +0.3
530A **J-C Ranch, Com** 79.51 57 ⇓P P 04 35 37.3 +0.6
baz=79,SNR=184
332A **Millersview** 79.53 56 ⇑P P 04 35 37.1 +0.4
baz=79,SNR=164
431A **Sonora** 79.55 57 ⇓P P 04 35 36.8 0.0
baz=79,SNR=108
BCLA **Clavier** 79.58 339 P P 04 35 36.8 +0.2
comp=Z,595nm,1.8s
BEHE **Becsehely** 79.68 330⇑*e*P P 04 35 37.9 +0.7
MPEP **Malo Peshtene** 79.69 324 *i* P P 04 35 37.4 +0.1
SSW **Stow on the Wo** 79.73 344⇑*i*P P 04 35 38.1 +0.7
SSW **Stow on the Wo** 79.73 344 P P 04 35 38.1 +0.7
SNF **Seneffe** 79.75 340 P P 04 35 38.0 +0.5
comp=Z,665nm,2.6s
SKP1 **Kophill** 79.75 343⇑*e*P P 04 35 37.5 0.0
SKP1 **Kophill** 79.75 343 P P 04 35 37.5 0.0
BBOO **Buckleboo** 79.76 193 *e*P P 04 35 37.9 +0.3
comp=Z,17µm,2.4s
RUP **Ruppelstein** 79.78 338⇑*e*P P 04 35 38.4 +0.6
RUP **Ruppelstein** 79.78 338⇑*e*P P 04 35 38.4 +0.6
KTD **Kalmit** 79.85 337⇑*e*P P 04 35 38.9 +0.7
KTD **Kalmit** 79.85 337⇑*e*P P 04 35 38.9 +0.7
432A **Menard** 79.87 56 ⇓P P 04 35 39.0 +0.3
baz=80,SNR=48
KOGS **Kog** 79.88 330 *i* P P 04 35 38.4 +0.1
RAO **Raoul Island** 79.88 153 PFAKE 04 35 50.0 +12
RAO LR LR
comp=Z,124µm,21.0s
ELSH **Elham, Standar** 79.88 342⇑*e*P P 04 35 39.0 +0.8
ELSH AMB AMB 04 35 41.2
comp=Z,2µm,1.2s
ELSH AMS AMS 05 13 10.2
comp=Z,67µm,21.1s
ELSH **Elham, Standar** 79.88 342 P P 04 35 39.0 +0.8
ELSH AMB AMB 04 35 41.2
comp=Z,2µm,1.2s
ELSH AMS AMS 05 13 10.2
comp=Z,67µm,21.1s
RJOB **Jochberg** 79.89 333 *e*P P 04 35 39.2 +0.8
comp=Z,267nm,0.8s
MCH1 **Michaelchurch** 79.92 344⇑*e*P P 04 35 38.5 +0.1
MCH1 AMB AMB 04 35 40.4
comp=Z,1µm,3.2s
MCH1 AMS AMS 05 05 11.3
comp=Z,38µm,28.5s
MCH1 **Michaelchurch** 79.92 344 P P 04 35 38.5 +0.1
MCH1 AMB AMB 04 35 40.4
comp=Z,1µm,3.2s
MCH1 AMS AMS 05 05 11.3
comp=Z,38µm,28.5s
531A **Rocksprings** 79.96 57 ⇑P P 04 35 39.4 +0.3
baz=80
FUR **Furstenfeldbru** 79.97 334 *e*P P 04 35 39.3 +0.5
FUR pmax pmax
comp=Z,551nm,0.9s
FUR **Furstenfeldbru** 79.97 334 *e*P P 04 35 39.3 +0.5
comp=Z,551nm,0.9s
GIVF **Givet** 79.99 339⇑*i*P P 04 35 39.3 +0.5
comp=Z,3µm,1.6s
GIVF **Givet** 79.99 339⇑*i*P P 04 35 39.3 +0.5
GIVF pmax pmax
comp=Z,3µm,1.6s
GIVF **Givet** 79.99 339⇑*i*P P 04 35 39.3 +0.5
comp=Z,3µm,1.6s
DIM **Dimitrovgrad** 80.02 322 *i* P P 04 35 39.5 +0.4
RFTA **Plano** 80.03 52 ⇑*i*P P 04 35 39.4 0.0
STU **Stuttgart** 80.04 336 *e*P P 04 35 39.7 +0.6
STU pmax pmax
comp=Z,2µm,1.9s
STU **Stuttgart** 80.04 336 *e*P P 04 35 39.5 +0.4
comp=Z,274nm,0.8s
STU **Stuttgart** 80.04 336 *e*P P 04 35 39.7 +0.6
comp=Z,2µm,1.9s
DOU **Dourbes** 80.05 339 P P 04 35 39.5 +0.4
comp=Z,408nm,2.1s
WLF **Walferdange** 80.06 338 P P 04 35 39.8 +0.6
comp=Z,780nm,2.4s
WLF **Walferdange** 80.06 338⇑*i*P P 04 35 39.4 +0.2
WLF pmax pmax
comp=Z,3µm,2.0s
WLF MLR MLR
comp=Z,126µm,21.0s
WLF **Walferdange** 80.06 338 *e*P P 04 35 39.8 +0.6
comp=Z,120nm,0.8s
WLF **Walferdange** 80.06 338⇑*i*P P 04 35 39.4 +0.2
comp=Z,3µm,2.0s
WLF LR LR
comp=Z,126µm,21.0s
SOKA **Soboth** 80.09 331⇑*i*P P 04 35 39.9 +0.4
comp=Z,4µm,2.0s
SOKA **Soboth** 80.09 331⇑*i*P P 04 35 39.9 +0.4
comp=Z,4µm,2.0s
PERS **Pernice** 80.10 331 *i* P P 04 35 39.9 +0.3
PERS *eS* S 04 45 33.8 -7.2
RAR **Rarotonga** 80.12 135 PFAKE 04 35 50.0 +10
RAR LR LR
comp=Z,75µm,22.0s
SWN1 **Swindon** 80.15 344⇑*e*P P 04 35 40.5 +0.9
SWN1 AMB AMB 04 35 43.5
comp=Z,3µm,1.3s
SWN1 AMS AMS 05 06 40.4
comp=Z,40µm,28.6s
SWN1 **Swindon** 80.15 344 P P 04 35 40.5 +0.9
SWN1 AMB AMB 04 35 43.5
comp=Z,3µm,1.3s
SWN1 AMS AMS 05 06 40.4
comp=Z,40µm,28.6s
JCT **Junction City** 80.16 56 *e*P P 04 35 40.3 +0.2
JCT pmax pmax
comp=Z,1µm,1.8s
JCT MLR MLR
comp=Z,36µm,21.0s
JCT **Junction City** 80.16 56 *e*P P 04 35 40.2 +0.2
comp=Z,1µm,1.8s
JCT LR LR
comp=Z,36µm,21.0s
JCT **Junction City** 80.16 56 ⇑P P 04 35 40.4 +0.2
baz=80,SNR=116
PGB **Panagyurishte** 80.18 323 *i* P P 04 35 40.3 +0.2
BAIF **Baives** 80.18 339⇑*i*P P 04 35 40.5 +0.7
comp=Z,2µm,1.6s
BAIF **Baives** 80.18 339⇑*i*P P 04 35 40.5 +0.7
BAIF pmax pmax
comp=Z,2µm,1.6s
BAIF **Baives** 80.18 339⇑*i*P P 04 35 40.5 +0.7
comp=Z,2µm,1.6s
WOL **Wolverton** 80.22 343⇑*e*P P 04 35 40.2 +0.2
WOL AMB AMB 04 35 43.5
comp=Z,1µm,2.8s
WOL AMS AMS 05 15 46.0
comp=Z,43µm,19.5s
WOL **Wolverton** 80.22 343 P P 04 35 40.2 +0.2
WOL AMB AMB 04 35 43.5
comp=Z,1µm,2.8s
WOL AMS AMS 05 15 46.0
comp=Z,43µm,19.5s
LANF **Langenberg** 80.24 337⇑*e*P P 04 35 40.8 +0.6

LANF Langenberg 80.24 337⇑eP P 04 35 40.8 +0.6
LANF Langenberg 80.24 337⇑eP P 04 35 40.8 +0.6
KBA Koelnbreinsper 80.29 333⇑iP P 04 35 41.4 +0.6
KBA pmax pmax
comp=Z,4µm,1.9s
KBA Koelnbreinsper 80.29 333⇑iP P 04 35 41.4 +0.6
comp=Z,4µm,1.9s,SNR=583
KBA Koelnbreinsper 80.29 333⇑iP P 04 35 41.4 +0.6
comp=Z,4µm,1.9s
SIUC Southern Illin 80.31 45 eP P 04 35 40.8 0.0
comp=Z,568nm,1.2s
PLD Plovdiv 80.33 323 P P 04 35 40.9 +0.1
PLD Plovdiv 80.33 323 iP P 04 35 40.5 -0.3
532A Rocksprings 80.36 56 ⇓P P 04 35 41.4 +0.1
baz=80,SNR=135
WHTX Lake Whitney 80.37 54 ⇑P P 04 35 41.7 +0.5
baz=80,SNR=45
KDZ Kurdzhali 80.40 322 iP P 04 35 42.2 +1.0
OBKA Obir 80.40 332 iP P 04 35 41.3 +0.1
comp=Z,6µm,2.9s,SNR=146
OBKA Obir 80.40 332 iP P 04 35 41.3 +0.1
comp=Z,6µm,2.8s
BLO Bloomington 80.45 42⇑iP P 04 35 41.1 -0.4
BLO pmax pmax
comp=Z,96nm,0.8s
BLO Bloomington 80.45 42⇑iP P 04 35 41.1 -0.4
comp=Z,96nm,0.8s
MSNY Massena 80.46 31 eP P 04 35 40.4 -1.0
comp=Z,1µm,1.0s
631A Perdido Creek 80.50 57 ⇓P P 04 35 42.2 +0.3
baz=80,SNR=128
VTS Vitosha 80.54 324 P P 04 35 42.4 +0.3
VTS Vitosha 80.54 324 ⇑P P 04 35 42.7 +0.6
VTS Vitosha 80.54 324⇑iP P 04 35 42.7 +0.6
VTS Vitosha 80.54 324 iP P 04 35 42.4 +0.3
DIVS Divibare 80.54 327 P P 04 35 41.7 -0.3
MIAR Mount Ida 80.56 49⇑iP P 04 35 42.2 0.0
MIAR pmax pmax
comp=Z,515nm,1.4s
MIAR Mount Ida 80.56 49⇑iP P 04 35 42.1 0.0
comp=Z,515nm,1.4s
MYKA Terra Mystica 80.59 332⇑iP P 04 35 42.1 -0.1
comp=Z,3µm,2.3s
MYKA Terra Mystica 80.59 332⇑iP P 04 35 42.1 -0.1
comp=Z,3µm,2.3s
STR Strasbourg 80.61 337⇑eP P 04 35 43.2 +1.0
STR Strasbourg 80.61 337⇑eP P 04 35 43.2 +1.0
STR Strasbourg 80.61 337⇑eP P 04 35 43.2 +1.0
WATA Walderalm 80.62 334⇑iP P 04 35 43.3 +0.8
WATA pmax pmax
comp=Z,2µm,1.6s
WATA Walderalm 80.62 334⇑iP P 04 35 43.3 +0.8
comp=Z,2µm,1.6s,SNR=118
WATA Walderalm 80.62 334⇑iP P 04 35 43.3 +0.8
comp=Z,2µm,1.6s
RZN Rozhen 80.67 323 iP P 04 35 43.5 +0.7
WTTA Wattenberg 80.67 334 iP P 04 35 43.7 +0.9
WTTA pmax pmax
comp=Z,6µm,2.1s
WTTA Wattenberg 80.67 334 iP P 04 35 43.7 +0.9
comp=Z,6µm,2.1s,SNR=136
WTTA Wattenberg 80.67 334 iP P 04 35 43.7 +0.9
comp=Z,6µm,2.1s
BFO Black Forest 80.68 336⇑iP P 04 35 43.0 +0.3
BFO pmax pmax
comp=Z,373nm,0.9s
BFO MLR MLR
comp=Z,60µm,20.0s
BFO Black Forest 80.68 336 eP P 04 35 42.9 +0.3
comp=Z,318nm,0.9s
BFO Black Forest 80.68 336⇑iP P 04 35 43.0 +0.3
comp=Z,374nm,0.9s
BFO LR LR
comp=Z,60µm,20.0s
BFO Black Forest 80.68 336 P P 04 35 42.3 -0.3
comp=Z,2µm,1.4s
RETA Reutte 80.73 334 iP P 04 35 43.5 +0.5
comp=Z,4µm,2.2s,SNR=204
RETA Reutte 80.73 334 iP P 04 35 43.5 +0.5
comp=Z,4µm,2.2s
ALN Alexandroupoli 80.74 321 P P 04 35 43.1 +0.1
ALN Alexandroupoli 80.74 321 eP P 04 35 44.5 +1.5
MOTA Moosalm 80.76 334 iP P 04 35 43.8 +0.6
MOTA pmax pmax
comp=Z,1µm,1.3s
MOTA Moosalm 80.76 334 iP P 04 35 43.8 +0.6
comp=Z,1µm,1.3s,SNR=301
MOTA Moosalm 80.76 334 iP P 04 35 43.8 +0.6
comp=Z,1µm,1.3s
RDO Rodhopi 80.76 322 P P 04 35 43.5 +0.4
RDO Rodhopi 80.76 322 eP P 04 35 44.3 +1.2
SPAK Spaichingen-Ko 80.76 336⇑eP P 04 35 43.4 +0.3
LJU Ljubljana 80.82 331 iP P 04 35 43.1 -0.2
LJU ePP PP 04 38 46.5 -0.5
LJU e 04 42 00.9
LJU eS S 04 45 41.1 -7.3
LJU e 04 51 41.8
LJU e 04 55 24.1
LJU e 04 57 07.6
ABTA Abfaltersbach 80.85 333 iP P 04 35 43.4 -0.2
comp=Z,2µm,2.1s,SNR=130
ABTA Abfaltersbach 80.85 333 iP P 04 35 43.4 -0.2
comp=Z,2µm,2.1s
USIN University of 80.87 44 eP P 04 35 44.0 +0.2
comp=Z,1µm,1.6s
PARMO Parma 80.88 46 eP P 04 35 44.3 +0.5
632A Uvalde 80.89 57 ⇑P P 04 35 44.7 +0.6
baz=81,SNR=71
LONY Lake Ozonia 80.89 31 eP P 04 35 43.0 -0.7
comp=Z,996nm,2.3s
LONY LR LR
comp=Z,28µm,19.0s
CDF Champ du Feu 80.90 337⇑iP P 04 35 44.4 +0.5
comp=Z,1µm,1.1s
CDF Champ du Feu 80.90 337⇑iP P 04 35 44.4 +0.5
CDF pmax pmax
comp=Z,1µm,1.1s
CDF Champ du Feu 80.90 337⇑iP P 04 35 44.4 +0.5
comp=Z,1µm,1.1s
ERPA Erie 80.91 36⇑iP P 04 35 43.9 0.0
comp=Z,135nm,0.6s
ERPA LR LR
comp=Z,47µm,22.0s
CADS Cadrg 80.92 332 iP P 04 35 42.9 -1.0
HEX Exmoor 80.96 345 eP P 04 35 44.2 +0.3
HEX Exmoor 80.96 345 P P 04 35 44.2 +0.3
ROBS Robic 80.98 332 P P 04 35 43.4 -0.7
UALR University of 81.02 48 eP P 04 35 44.6 0.0
comp=Z,1µm,2.3s
VOY Vojsko 81.04 332⇑eP P 04 35 43.6 -1.0
CAN Canberra 81.04 182⇑iP P 04 35 45.0 +0.6
CAN pmax pmax
comp=Z,63nm,1.0s
CAN MLR MLR
comp=Z,59µm,22.0s
CAN Canberra 81.04 182⇑iP P 04 35 45.0 +0.6
comp=Z,63nm,1.0s
CAN LR LR
comp=Z,59µm,22.0s
BOJS Bojanci 81.04 331 iP P 04 35 44.5 -0.1
LIBD Limburg 81.05 337⇑eP P 04 35 45.1 +0.6
LIBD Limburg 81.05 337⇑eP P 04 35 45.1 +0.6
ECH Echery 81.11 337⇑iP P 04 35 45.0 +0.1
ECH pmax pmax
comp=Z,403nm,0.8s
ECH MLR MLR
comp=Z,82µm,20.0s
ECH Echery 81.11 337⇑iP P 04 35 45.0 +0.1
comp=Z,403nm,0.8s
ECH LR LR
comp=Z,82µm,20.0s
ECH Echery 81.11 337⇑eP P 04 35 45.4 +0.5
CEY Cerknica 81.12 331 iP P 04 35 44.7 -0.3
VAL Valentia 81.15 349 eP P 04 35 44.2 -0.7
VAL Valentia 81.15 349⇓iS S 04 45 50.3 -1.1
HTL Hartland 81.15 345⇑eP P 04 35 45.7 +0.7
HTL AMB AMB 04 35 47.2
comp=Z,990nm,3.3s
HTL e 04 45 46.5
HTL AMS AMS 05 13 01.3
comp=Z,32µm,22.9s
HTL Hartland 81.15 345 P P 04 35 45.7 +0.7
HTL AMB AMB 04 35 47.2
comp=Z,990nm,3.3s
HTL 04 45 46.5
HTL AMS AMS 05 13 01.3
comp=Z,32µm,22.9s
MMB Musomiste 81.16 323 iP P 04 35 45.5 +0.2
FETA Feichten 81.16 334 iP P 04 35 45.9 +0.6
comp=Z,4µm,2.7s,SNR=204
FETA Feichten 81.16 334 iP P 04 35 46.0 +0.6
comp=Z,4µm,2.7s
DAVA Damuels 81.18 335 iP P 04 35 45.9 +0.4
comp=Z,5µm,3.0s,SNR=226
DAVA Damuels 81.18 335 iP P 04 35 45.9 +0.4
comp=Z,5µm,3.0s
ISP Isparta 81.18 317 P P 04 35 45.1 -0.5
ISP Isparta 81.18 317 P P 04 35 45.9 +0.3
ISP Isparta 81.18 317⇑iP P 04 35 45.4 -0.2
comp=Z,179nm,0.8s
ISP LR LR
comp=Z,112µm,20.0s
ISP Isparta 81.18 317⇑iP P 04 35 45.5 -0.1
PAGF Fort de Pagny 81.19 338⇑iP P 04 35 46.3 +1.0
comp=Z,466nm,0.8s
PAGF Fort de Pagny 81.19 338⇑iP P 04 35 46.3 +1.0
comp=Z,466nm,0.8s
FELD Feldberg im Sc 81.19 336⇑eP P 04 35 45.8 +0.3
ACSO Alum Creek Sta 81.20 39⇑iP P 04 35 45.2 -0.2
comp=Z,2µm,2.1s
ACSO LR LR
comp=Z,47µm,20.0s
KKB Krupnik 81.20 324 iP P 04 35 46.1 +0.6
HWQ Hawqa 81.23 311 eP P 04 35 46.4 +0.4
ALLY Allegheny Colle 81.24 37⇑iP P 04 35 45.6 -0.1
comp=Z,216nm,0.8s
HBAR Harrisburg 81.29 47 eP P 04 35 46.5 +0.5
GNAR Gosnell 81.29 46⇑iP P 04 35 46.6 +0.6
comp=Z,29µm,1.9s
PQI Presque Isle 81.30 26⇑iP P 04 35 45.5 -0.4
comp=Z,5µm,2.1s
NVR Nevrokopi 81.30 323 P P 04 35 46.4 +0.3
WCI Wyandotte Cave 81.31 42 eP P 04 35 46.1 -0.1
WCI pmax pmax
comp=Z,402nm,1.3s
WCI Wyandotte Cave 81.31 42 eP P 04 35 46.0 -0.1
comp=Z,402nm,1.3s
KAVA Kavala 81.32 322 P P 04 35 46.3 +0.2
732A Laxson Ranch, 81.36 57 ⇑P P 04 35 47.1 +0.6
baz=81,SNR=110
TRI Trieste 81.36 332⇑iP P 04 35 45.4 -0.8
TRI pmax pmax
comp=Z,241nm,0.8s
TRI Trieste 81.36 332⇑iP P 04 35 45.4 -0.8
comp=Z,241nm,0.8s
MEZF Maizieres J'vi 81.41 338⇑iP P 04 35 47.3 +0.9
comp=Z,870nm,0.7s
MEZF Maizieres J'vi 81.41 338⇑iP P 04 35 47.3 +0.9
comp=Z,870nm,0.7s
GLAT Glass 81.42 46 eP P 04 35 47.3 +0.7
THEF They Montfort 81.42 338⇑eP P 04 35 47.1 +0.6
THEF They Montfort 81.42 338⇑eP P 04 35 47.1 +0.6
THEF They Montfort 81.42 338⇑eP P 04 35 47.1 +0.6
PLE Pljevlja 81.43 327⇑iP P 04 35 47.5 +0.7
MOF Molkenrain 81.45 337⇑eP P 04 35 47.1 +0.3
MOF Molkenrain 81.45 337⇑eP P 04 35 47.1 +0.3
MOF Molkenrain 81.45 337⇑eP P 04 35 47.1 +0.3
MAIG Mazatlaan 81.46 66 P P 04 35 45.9 -1.3
HAU Haudompre 81.53 337⇑iP P 04 35 47.5 +0.4
comp=Z,422nm,0.7s
HAU eR
comp=Z,105µm,19.8s
HAU Haudompre 81.53 337⇑iP P 04 35 47.5 +0.4
HAU pmax pmax
comp=Z,422nm,0.7s
HAU Haudompre 81.53 337⇑iP P 04 35 47.5 +0.4
comp=Z,422nm,0.7s
PMOR Pomariorio Ree 81.54 122 eP P 04 35 45.2 -2.2
comp=Z,182nm,1.1s
PMOR Pomariorio Ree 81.54 122 eP P 04 35 45.2 -2.2
comp=Z,182nm,1.1s
HINF Hinteralfeld 81.56 337⇑iP P 04 35 47.6 +0.3
comp=Z,941nm,1.3s
HINF Hinteralfeld 81.56 337⇑iP P 04 35 47.6 +0.3
HINF pmax pmax
comp=Z,941nm,1.3s
HINF Hinteralfeld 81.56 337⇑iP P 04 35 47.6 +0.3
comp=Z,941nm,1.3s
UTMT University of 81.57 45 eP P 04 35 47.8 +0.3
comp=Z,599nm,1.0s
NCB Newcomb 81.58 32⇑iP P 04 35 46.8 -0.7
comp=Z,483nm,1.7s
NCB LR LR
comp=Z,22µm,21.0s
DYA Yadsworthy 81.59 344 eP P 04 35 47.4 +0.1
DYA AMB AMB 04 35 50.6
comp=Z,662nm,1.5s
DYA e 04 45 51.6
DYA AMS AMS 05 05 58.4
comp=Z,33µm,27.9s
DYA Yadsworthy 81.59 344 P P 04 35 47.4 +0.1
DYA AMB AMB 04 35 50.6
comp=Z,662nm,1.5s
DYA 04 45 51.6
DYA AMS AMS 05 05 58.4
comp=Z,33µm,27.9s
SRS Serrai 81.61 323 P P 04 35 47.7 0.0
IVA Berane 81.62 326⇑iP P 04 35 48.2 +0.4
TAOE Nuku Hiva Isla 81.62 112 eS S 04 45 51.0 -6.6
comp=Z,74µm,29.4s
TAOE eLQ LQ 04 57 05.9
comp=Z,41µm,30.8s
TAOE eLR LR 05 01 06.3
comp=Z,215µm,25.2s,baz=327
PHNC Paralimni 81.67 313 P P 04 35 50.5 +2.5
comp=Z,11nm,1.7s
BHL Bhannes 81.68 311 eP P 04 35 48.5 +0.3
SFTF Sexfontaines 81.69 338⇑iP P 04 35 48.6 +0.7
comp=Z,1µm,0.7s
SFTF Sexfontaines 81.69 338⇑iP P 04 35 48.6 +0.7
comp=Z,1µm,0.7s
BBS Basel-Blauen 81.70 336⇑eP P 04 35 48.6 +0.5
BBS Basel-Blauen 81.70 336⇑eP P 04 35 48.6 +0.5
UPM Unac-Piva 81.72 327⇑iP P 04 35 48.0 -0.4
SKO Skopje 81.78 325 P P 04 35 49.4 +0.9
SKO Skopje 81.78 325 eP P 04 35 49.6 +1.1
comp=Z,9µm,3.1s
PVY Plav 81.83 326⇑iP P 04 35 49.1 +0.1
KNT Kendrikon 81.86 323 P P 04 35 49.1 +0.1
VAY Valandovo 81.86 324 P P 04 35 49.0 0.0
VAY Valandovo 81.86 324 eP P 04 35 48.9 0.0
comp=Z,11µm,3.5s
VAH Vaihoa 81.89 122 eP P 04 35 46.0 -3.2
comp=Z,117nm,1.2s
VAH Vaihoa 81.89 122 eP P 04 35 46.0 -3.2
comp=Z,117nm,1.2s
RCY Rachaya 81.90 311 eP P 04 35 50.4 +1.0
MDV Middlebury 81.93 31 eP P 04 35 48.4 -0.8
comp=Z,7µm,0.8s
LIA Limnos Island 81.94 321 P P 04 35 49.1 -0.3
MAMC Mammari 81.95 313 P P 04 35 49.8 +0.3
SOH Sokhos 81.96 323 P P 04 35 49.3 -0.2
SOH Sokhos 81.96 323 eP P 04 35 48.9 -0.6
BCI Bajram Curri 81.98 326 eP P 04 35 47.1 -2.5
MET Memphis--Engin 81.99 47 eP P 04 35 49.9 +0.2
comp=Z,2µm,1.4s
LOMF Lomont 81.99 337⇑eP P 04 35 50.1 +0.4
LOMF Lomont 81.99 337⇑eP P 04 35 50.1 +0.4
LOMF Lomont 81.99 337⇑eP P 04 35 50.1 +0.4
PRK Paraskevi 82.00 320 P P 04 35 49.3 -0.4
PRK Paraskevi 82.00 320 eP P 04 35 50.0 +0.3
NVLJ Novalja 82.00 330 P P 04 35 48.7 -0.8
NKY Niksic 82.02 327⇑iP P 04 35 49.5 -0.4
CSS Prodhromos 82.06 313 P P 04 35 50.4 +0.3
comp=Z,6.8nm,1.4s
CSS Prodhromos 82.06 313 P P 04 35 50.5 +0.3
CSS Prodhromos 82.06 313 eP P 04 35 50.4 +0.3
comp=Z,215nm,0.8s
CSS LR LR
comp=Z,61µm,21.0s
CSS Prodhromos 82.06 313 eP P 04 35 49.8 -0.3
TUE Stuetta 82.07 335 eP P 04 35 50.6 +0.4
comp=Z,373nm,0.8s
TUE LR LR
comp=Z,69µm,20.0s
OUR Ouranopolis 82.10 322 P P 04 35 50.2 0.0
BRY Bratogost 82.11 327⇑iP P 04 35 49.9 -0.5
LBNH Lisbon 82.17 30 eP P 04 35 51.2 +0.7
LBNH pmax pmax
comp=Z,407nm,1.8s
LBNH MLR MLR
comp=Z,45µm,22.0s
LBNH Lisbon 82.17 30 eP P 04 35 51.2 +0.7
comp=Z,407nm,1.8s
LBNH LR LR
comp=Z,45µm,22.0s
SIGR SIGRI 82.21 320 P P 04 35 50.5 -0.3
KSDI Kefar Szold 82.22 310 eP P 04 35 48.9 -2.1
GRG Griva 82.24 324 P P 04 35 51.0 0.0
TTG Podgorica 82.25 327⇑iP P 04 35 50.7 -0.2
WVT Waverly 82.25 45⇑iP P 04 35 51.0 0.0
WVT pmax pmax
comp=Z,438nm,1.6s
WVT Waverly 82.25 45⇑iP P 04 35 51.0 0.0
comp=Z,438nm,1.6s
HORT Hortiatis 82.25 323 P P 04 35 50.5 -0.6
ALFC Alevga 82.27 314 P P 04 35 50.8 -0.5
comp=Z,6.3nm,0.8s
THE Thessaloniki 82.28 323 P P 04 35 50.6 -0.5
PLG Polygyros 82.29 323 P P 04 35 51.1 -0.2
PLG Polygyros 82.29 323 eP P 04 36 10.0 +19
ACCN Adirondack Com 82.29 32 eP P 04 35 50.6 -0.6
comp=Z,241nm,1.4s
PUK Puka 82.33 326 eP P 04 35 52.1 +0.6
PHP Peshkopia 82.42 325 eP P 04 35 48.5 -3.4
PHP Peshkopia 82.42 325 P P 04 35 51.7 -0.2
JSA Saint Aubin 82.43 343⇑eP P 04 35 52.3 +0.5
JSA AMB AMB 04 35 55.4
comp=Z,1µm,3.3s
JSA e 04 45 33.6
JSA AMS AMS 05 12 12.3
comp=Z,44µm,23.7s
JSA Saint Aubin 82.43 343 P P 04 35 52.3 +0.5
JSA AMB AMB 04 35 55.4
comp=Z,1µm,3.3s
JSA 04 45 33.6
JSA AMS AMS 05 12 12.3
comp=Z,44µm,23.7s
BINY Binghamton 82.44 34 eP P 04 35 51.3 -0.7
comp=Z,318nm,1.6s
BINY ePP PP 04 38 58.8 -1.7
BINY LR LR
comp=Z,34µm,19.0s
SZAC Souni-Zanaja 82.45 313 P P 04 35 53.0 +0.8
STON Ston 82.45 328 P P 04 35 50.9 -1.1
FLN La Foliniere 82.48 342⇑iP P 04 35 52.6 +0.5
comp=Z,1µm,1.1s
FLN eR
comp=Z,86µm,19.5s
FLN La Foliniere 82.48 342⇑iP P 04 35 52.6 +0.5
FLN pmax pmax
comp=Z,1µm,1.1s
FLN La Foliniere 82.48 342⇑iP P 04 35 52.6 +0.5
comp=Z,1µm,1.1s
BUM Brajici-Budva 82.50 327⇑iP P 04 35 52.1 -0.2
HNH Hanover 82.51 30 eP P 04 35 52.4 +0.1
comp=Z,1µm,1.8s
AKMC Akamas 82.51 314 P P 04 35 52.3 -0.2
HCY Herceg Novi 82.52 327⇑iP P 04 35 51.6 -0.8
LDF La Druitiere 82.56 342⇑iP P 04 35 52.8 +0.3
comp=Z,817nm,1.1s
LDF La Druitiere 82.56 342⇑iP P 04 35 52.8 +0.3
LDF pmax pmax
comp=Z,817nm,1.1s
LDF La Druitiere 82.56 342⇑iP P 04 35 52.8 +0.3
comp=Z,817nm,1.1s
PAIG Paliouri 82.56 322 P P 04 35 52.4 -0.2
PPT Papeete 82.59 125 P P 04 35 59.1 +6.2
PPT Papeete 82.59 125 P P 04 35 59.1 +6.2
comp=Z,26nm,0.8s,baz=216,slow=17,SNR=3.1
PPT LR LR 05 05 10.5
comp=Z,112µm,21.7s,baz=266,slow=30
PPT2 Papeete2 82.61 125 eP P 04 35 50.2 -2.9
comp=Z,134nm,1.4s
PPT2 eS S 04 46 00.8 -6.6
comp=Z,132µm,32.2s
PPT2 eSS SS 04 51 21.5 -8.8
comp=Z,24µm,27.0s
PPT2 eLR LR 05 01 40.9
comp=Z,232µm,22.8s,baz=324
RBK Rabkut 82.61 287 P P 04 35 53.3 0.0
SNR=34
PPCY Paphos 82.62 314 P P 04 35 52.5 -0.5
BIA Bitola 82.63 324 P P 04 35 52.2 -0.9
BIA Bitola 82.63 324 eP P 04 35 52.2 -0.9
ULC Ulcinj 82.65 326⇑iP P 04 35 52.5 -0.6
WVL Waterville 82.65 28 eP P 04 35 53.2 +0.2
comp=Z,3µm,1.8s
PAE Paea 82.66 125 eP P 04 35 50.1 -3.2
comp=Z,14nm,1.0s
PAE Paea 82.66 125 eP P 04 35 50.1 -3.2
PAE Paea 82.66 125 eP P 04 35 50.1 -3.2
comp=Z,14nm,1.0s
TIAR Tiarei 82.72 124 eP P 04 35 50.6 -3.0
comp=Z,125nm,1.0s
TIAR Tiarei 82.72 124 eP P 04 35 50.6 -3.0
comp=Z,125nm,1.0s
OXF Oxford 82.74 47 eP P 04 35 53.6 -0.1
OXF pmax pmax
comp=Z,2µm,1.7s
OXF MLR MLR
comp=Z,37µm,20.0s
OXF Oxford 82.74 47 eP P 04 35 53.6 -0.1
comp=Z,2µm,1.7s
OXF LR LR
comp=Z,37µm,20.0s
CHOS Chios island 82.80 320 P P 04 35 54.2 +0.2
CHOS Chios island 82.80 320 eP P 04 35 54.5 +0.5
FNA Florina 82.80 324 P P 04 35 53.6 -0.4
HKT Hockley 82.82 54 eP P 04 35 54.2 +0.1
HKT e 04 38 59.4
HKT pmax pmax
comp=Z,702nm,2.0s
HKT Hockley 82.82 54 eP P 04 35 54.2 +0.1
comp=Z,702nm,2.0s
HKT e 04 38 59.4
TRY Troy 82.86 32 eP P 04 35 53.9 -0.2
comp=Z,455nm,1.4s
LOR Lormes 82.86 339⇑iP P 04 35 54.7 +0.6
comp=Z,2µm,1.2s
LOR eR
comp=Z,178µm,22.5s
LOR Lormes 82.86 339⇑iP P 04 35 54.7 +0.6
comp=Z,2µm,1.2s
CABF La Chapelle 82.88 337⇑iP P 04 35 54.9 +0.6
comp=Z,271nm,0.7s
CABF La Chapelle 82.88 337⇑iP P 04 35 54.9 +0.6
CABF pmax pmax
comp=Z,271nm,0.7s
CABF La Chapelle 82.88 337⇑iP P 04 35 54.9 +0.6
comp=Z,271nm,0.7s
GRR Gorron 82.92 342⇑iP P 04 35 55.0 +0.7
comp=Z,3µm,1.4s
GRR Gorron 82.92 342⇑iP P 04 35 55.0 +0.7
GRR pmax pmax
comp=Z,3µm,1.4s
GRR Gorron 82.92 342⇑iP P 04 35 55.0 +0.7
comp=Z,3µm,1.4s
LIT Litokhoron 82.92 323 P P 04 35 53.8 -0.7
LIT Litokhoron 82.92 323 eP P 04 35 53.3 -1.2
TIR Tirane 82.93 326 eP P 04 35 55.8 +1.3
TIR Tirane 82.93 326 P P 04 35 54.5 0.0
TIR Tirane 82.93 326 eP P 04 35 54.6 0.0
TIR pmax pmax
comp=Z,896nm,1.1s
TIR MLR MLR
comp=Z,103µm,21.0s
TIR Tirane 82.93 326 eP P 04 35 54.5 0.0
comp=Z,896nm,1.1s
TIR LR LR
comp=Z,103µm,21.0s
TIR Tirane 82.93 326 eP P 04 35 51.6 -2.9
FFD Franklin Falls 82.94 30 eP P 04 35 54.5 0.0
comp=Z,994nm,1.5s
TVO Taravao 82.95 125 eP P 04 35 52.0 -2.8
comp=Z,72nm,0.8s
TVO Taravao 82.95 125 eP P 04 35 52.0 -2.8
TVO pmax pmax
comp=Z,72nm,0.8s
TVO Taravao 82.95 125 eP P 04 35 52.0 -2.8
comp=Z,72nm,0.8s
OG01 Vacheresse 82.97 336⇑eP P 04 35 55.4 +0.6
OG01 Vacheresse 82.97 336⇑eP P 04 35 55.4 +0.6
KSL Kastellorizon 82.97 316 eP P 04 35 55.5 +0.7
SSPA Standing Stone 83.02 36 eP P 04 35 54.8 -0.2
comp=Z,2µm,2.3s

PLAL **Pickwick Lake** 83.04 46 PFAKE 04 36 10.0 +15
PLAL LR LR
comp=Z,49µm,21.0s
KZN **Kozani** 83.05 324 P P 04 35 54.6 -0.7
KZN **Kozani** 83.05 324 *eP* P 04 35 54.3 -1.0
AOS **Alonnisos** 83.11 322 P P 04 35 54.4 -1.1
SSF **Saint Saulge** 83.14 339⇑*iP* P 04 35 56.2 +0.7
comp=Z,993nm,1.0s
SSF **Saint Saulge** 83.14 339⇑*iP* P 04 35 56.2 +0.7
SSF pmax pmax
comp=Z,993nm,1.0s
SSF **Saint Saulge** 83.14 339⇑*iP* P 04 35 56.2 +0.7
comp=Z,993nm,1.0s
EMMW **East Machias** 83.23 27 *eP* P 04 35 56.6 +0.6
comp=Z,1µm,1.5s
XOR **Xorichti** 83.24 322 P P 04 35 55.3 -0.9
NEST **Nestorio** 83.25 324 P P 04 35 56.2 -0.1
NEO **Neokhori** 83.27 322 *eP* P 04 35 55.8 -0.6
SKIA **Skiathos** 83.29 322 P P 04 35 55.9 -0.5
OUZ **Omahuta** 83.30 162 *eP* P 04 35 58.1 +2.0
comp=Z,321nm,1.9s
ABTO **Aybut** 83.32 288 P P 04 35 57.2 +0.3
SNR=72
SGMF **Saint Gilles** 83.40 343⇑*iP* P 04 35 57.4 +0.6
comp=Z,536nm,0.8s
SGMF **Saint Gilles** 83.40 343⇑*iP* P 04 35 57.4 +0.6
SGMF pmax pmax
comp=Z,536nm,0.8s
SGMF **Saint Gilles** 83.40 343⇑*iP* P 04 35 57.4 +0.6
comp=Z,536nm,0.8s
AVF **Avril sur Loir** 83.43 339⇑*iP* P 04 35 57.8 +0.8
comp=Z,5µm,1.7s
AVF **Avril sur Loir** 83.43 339⇑*iP* P 04 35 57.8 +0.8
AVF pmax pmax
comp=Z,5µm,1.7s
AVF **Avril sur Loir** 83.43 339⇑*iP* P 04 35 57.8 +0.8
comp=Z,5µm,1.7s
SMF **Signal de Mont** 83.44 338⇑*iP* P 04 35 58.0 +0.9
comp=Z,6µm,1.4s
SMF **Signal de Mont** 83.44 338⇑*iP* P 04 35 58.0 +0.9
SMF pmax pmax
comp=Z,6µm,1.4s
SMF **Signal de Mont** 83.44 338⇑*iP* P 04 35 58.0 +0.9
comp=Z,6µm,1.4s
KVTX **Kingsville** 83.46 57 *eP* P 04 35 58.8 +1.3
comp=Z,742nm,1.5s
KVTX LR LR
comp=Z,30µm,22.0s
ROSF **Rostrenen** 83.47 343⇑*iP* P 04 35 57.8 +0.6
comp=Z,4µm,1.8s
ROSF **Rostrenen** 83.47 343⇑*iP* P 04 35 57.8 +0.6
ROSF pmax pmax
comp=Z,4µm,1.8s
ROSF **Rostrenen** 83.47 343⇑*iP* P 04 35 57.8 +0.6
comp=Z,4µm,1.8s
THL **Klokotos Trika** 83.57 323 P P 04 35 56.0 -1.8
RSL **Roselend** 83.57 336⇑*eP* P 04 35 59.5 +1.5
RSL **Roselend** 83.57 336⇑*eP* P 04 35 59.5 +1.5
RSL **Roselend** 83.57 336⇑*eP* P 04 35 59.5 +1.5
ARG **Arkhangelos** 83.61 317 P P 04 35 58.2 +0.1
ARG **Arkhangelos** 83.61 317 *eP* P 04 35 58.8 +0.7
MRKA **Markates** 83.62 322 P P 04 35 57.3 -0.9
BST **Brest** 83.66 344⇑*eP* P 04 35 59.0 +0.9
BST **Brest** 83.66 344⇑*eP* P 04 35 59.0 +0.9
LPL **La Plagne** 83.70 336⇑*iP* P 04 35 59.9 +1.2
comp=Z,1µm,1.2s
LPL **La Plagne** 83.70 336⇑*iP* P 04 35 59.9 +1.2
LPL pmax pmax
comp=Z,1µm,1.2s
LPL **La Plagne** 83.70 336⇑*iP* P 04 35 59.9 +1.2
comp=Z,1µm,1.2s
NIS4 **Nisyros Isl.** 83.71 318 P P 04 35 58.3 -0.3
LPG **La Plagne** 83.71 336⇑*iP* P 04 36 00.0 +1.1
comp=Z,958nm,1.0s
LPG **La Plagne** 83.71 336⇑*iP* P 04 36 00.0 +1.1
LPG pmax pmax
comp=Z,958nm,1.0s
LPG **La Plagne** 83.71 336⇑*iP* P 04 36 00.0 +1.1
comp=Z,958nm,1.0s
QUA2 **Belchertown** 83.73 31 *eP* P 04 35 58.8 +0.2
comp=Z,606nm,1.6s
NIS1 **Nisyros Isl.** 83.74 318 P P 04 35 57.9 -0.9
NIS2 **Nisyros Isl.** 83.76 318 P P 04 35 58.3 -0.6
BGF **Bois d'Agland** 83.77 339⇑*iP* P 04 35 59.5 +0.7
comp=Z,675nm,0.9s
BGF **Bois d'Agland** 83.77 339⇑*iP* P 04 35 59.5 +0.7
BGF pmax pmax
comp=Z,675nm,0.9s
BGF **Bois d'Agland** 83.77 339⇑*iP* P 04 35 59.5 +0.7
comp=Z,675nm,0.9s
MRMA **Marmari** 83.81 321 P P 04 35 58.4 -0.7
HRV **Adam Dziewonsk** 83.81 31 *eP* P 04 35 58.1 -1.0
HRV pmax pmax
comp=Z,173nm,1.0s
HRV **Adam Dziewonsk** 83.81 31 *eP* P 04 35 58.1 -1.0
comp=Z,173nm,1.0s
VLO **Vlora** 83.83 325 P P 04 35 59.5 +0.4
VLC **Villacollemand** 83.84 333 PFAKE 04 36 10.0 +11
VLC LR LR
comp=Z,110µm,21.0s
RAYN **Ar Rayn** 83.85 298 P P 04 36 00.5 +0.9
comp=Z,1µm,1.5s
QUIF **Quistinic** 83.85 343⇑*iP* P 04 35 58.9 -0.2
QUIF **Quistinic** 83.85 343⇑*iP* P 04 35 58.9 -0.2
QUIF **Quistinic** 83.85 343⇑*iP* P 04 35 58.9 -0.2
ATAL **Atalanti** 83.87 322 P P 04 35 58.6 -0.8
AGG **Agios Georgios** 83.89 323 P P 04 35 58.0 -1.6
AGG **Agios Georgios** 83.89 323 *eP* P 04 35 58.8 -0.8
SWET **Sewanee** 83.90 44 *eP* P 04 35 59.4 -0.3
comp=Z,829nm,1.6s
LKR **Lokris** 83.92 322 P P 04 35 58.7 -1.0
TZTN **Tazewell** 83.95 42 *eP* P 04 35 59.9 0.0
comp=Z,643nm,1.8s
AXAR **Agios Charalam** 83.97 322 P P 04 35 58.7 -1.2
VBMS **Vicksburg** 83.97 49 *eP* P 04 36 00.8 +0.8
comp=Z,2µm,1.7s
VBMS LR LR
comp=Z,42µm,21.0s
JAN **Janina** 83.97 324 P P 04 36 00.4 +0.4
JAN **Janina** 83.97 324 *eP* P 04 36 01.0 +1.0
MAKR **Makrakomi, Fth** 83.98 323 P P 04 35 59.1 -0.9
WES **Weston** 84.00 31 *eP* P 04 36 00.3 +0.3
WES pmax pmax
comp=Z,652nm,1.2s
WES **Weston** 84.00 31 *eP* P 04 36 00.3 +0.3
comp=Z,652nm,1.2s
PTL **Penteli** 84.05 321 P P 04 35 59.2 -1.2
APE **Apeiranthos** 84.11 319 P P 04 35 59.0 -1.8
APE **Apeiranthos** 84.11 319 ⇓*P* P 04 35 59.5 -1.3
APE **Apeiranthos** 84.11 319 ⇓*iP* P 04 35 59.5 -1.3
APE **Apeiranthos** 84.11 319 *eP* P 04 35 59.0 -1.8
BNI **Bardonecchia** 84.14 336 *eP* P 04 36 01.5 +0.7
BNI pmax pmax
comp=Z,2µm,1.9s
BNI MLR MLR
comp=Z,84µm,20.0s
BNI **Bardonecchia** 84.14 336 *eP* P 04 36 01.5 +0.7
comp=Z,2µm,1.9s
BNI LR LR
comp=Z,84µm,20.0s
ATHU **Athens Univers** 84.15 321 P P 04 35 59.6 -1.3
GDM **Grand'Maison** 84.16 336⇑*eP* P 04 36 02.2 +1.2
GDM **Grand'Maison** 84.16 336⇑*eP* P 04 36 02.2 +1.2
AGO **Saint Agoulin** 84.17 339⇑*eP* P 04 36 02.0 +1.1
AGO **Saint Agoulin** 84.17 339⇑*eP* P 04 36 02.0 +1.1
ATH **Athens Observa** 84.17 321 P P 04 35 59.8 -1.2
ATH **Athens Observa** 84.17 321 *eP* P 04 36 00.0 -1.0
ATH **Athens Observa** 84.17 321 *eP* P 04 36 08.0 +7.0
TCF **Toulx Ste Croi** 84.18 339⇑*iP* P 04 36 02.0 +1.1
comp=Z,4µm,1.8s
TCF **Toulx Ste Croi** 84.18 339⇑*iP* P 04 36 02.0 +1.1
TCF pmax pmax
comp=Z,4µm,1.8s
TCF **Toulx Ste Croi** 84.18 339⇑*iP* P 04 36 02.0 +1.1
comp=Z,4µm,1.8s
ZAIG **Zacatecas** 84.19 63 P P 04 36 01.8 +0.1
EVR **Evrytania** 84.20 323 P P 04 36 00.3 -0.9
EVR **Evrytania** 84.20 323 *eP* P 04 36 00.5 -0.7
ANIG **Ahuacatlan** 84.22 66 P P 04 36 01.7 +0.1
GRN **Grenoble** 84.23 337⇑*eP* P 04 36 02.7 +1.5
GRN **Grenoble** 84.23 337⇑*eP* P 04 36 02.7 +1.5
GRN **Grenoble** 84.23 337⇑*eP* P 04 36 02.7 +1.5
PAL **Palisades** 84.26 33 *eP* P 04 36 01.3 -0.1
PAL pmax pmax
comp=Z,362nm,1.5s
PAL **Palisades** 84.26 33 *eP* P 04 36 01.2 -0.1
comp=Z,362nm,1.5s
IGT **Igoumenitsa** 84.29 324 P P 04 36 01.0 -0.5
BRNJ **Basking Ridge** 84.29 33 *eP* P 04 36 01.2 -0.2
comp=Z,46µm,1.0s
DSF **Desfina** 84.32 322 P P 04 35 59.9 -1.9
BRYW **Bryant College** 84.34 31 *eP* P 04 36 01.6 -0.1
comp=Z,2µm,1.6s
KEK **Kerkira** 84.35 325 P P 04 36 01.4 -0.4
KEK **Kerkira** 84.35 325 *eP* P 04 36 01.5 -0.4
CPCT **Cooper Cave** 84.39 43 *eP* P 04 36 01.9 -0.2
MBDF **Montbardon** 84.41 336⇑*iP* P 04 36 02.7 +0.4
comp=Z,442nm,1.0s
MBDF **Montbardon** 84.41 336⇑*iP* P 04 36 02.7 +0.4
MBDF pmax pmax
comp=Z,442nm,1.0s
MBDF **Montbardon** 84.41 336⇑*iP* P 04 36 02.7 +0.4
comp=Z,442nm,1.0s
CPNY **Central Park** 84.43 33 *eP* P 04 36 01.7 -0.5
comp=Z,485nm,1.5s
AQU **L'Aquila** 84.45 330 PFAKE 04 36 10.0 +7.6
AQU LR LR
comp=Z,101µm,22.0s
AQU **L'Aquila** 84.45 330 *eP* P 04 36 01.4 -1.0
MFF **Saint Martin d** 84.45 341⇑*iP* P 04 36 02.5 +0.3
comp=Z,193nm,0.7s
MFF **Saint Martin d** 84.45 341⇑*iP* P 04 36 02.5 +0.3
MFF pmax pmax
comp=Z,193nm,0.7s
MFF **Saint Martin d** 84.45 341⇑*iP* P 04 36 02.5 +0.3
comp=Z,193nm,0.7s
NAIG **Nisos Aigina** 84.45 321 *eP* P 04 36 00.8 -1.6
LTK **Loutraki** 84.46 322 P P 04 36 00.7 -1.7
LTK **Loutraki** 84.46 322 *eP* P 04 36 00.5 -1.9
SDMD **Soldier's Deli** 84.48 36 *eP* P 04 36 02.3 -0.2
comp=Z,352nm,1.5s
PYM **Petit Puy Mans** 84.49 339⇑*eP* P 04 36 02.9 +0.4
PYM **Petit Puy Mans** 84.49 339⇑*eP* P 04 36 02.9 +0.4
PYM **Petit Puy Mans** 84.49 339⇑*eP* P 04 36 02.9 +0.4
ORIF **Oris-en-Rattie** 84.49 336⇑*iP* P 04 36 03.8 +1.2
comp=Z,918nm,1.0s
ORIF *eR*
comp=Z,133µm,21.0s
ORIF **Oris-en-Rattie** 84.49 336⇑*iP* P 04 36 03.8 +1.2
ORIF pmax pmax
comp=Z,919nm,1.0s
ORIF **Oris-en-Rattie** 84.49 336⇑*iP* P 04 36 03.8 +1.2
comp=Z,918nm,1.0s
KALE **Kalithea** 84.50 322 P P 04 36 01.4 -1.3
LNIG **Linares** 84.51 60 P P 04 36 00.7 -2.2
SSB **Saint Sauveur** 84.52 337 *eP* P 04 36 03.5 +0.8
SSB pmax pmax
comp=Z,1µm,1.2s
SSB MLR MLR
comp=Z,78µm,20.0s
SSB **Saint Sauveur** 84.52 337 *eP* P 04 36 03.5 +0.8
comp=Z,1µm,1.2s
SSB LR LR
comp=Z,78µm,20.0s
COLF **Collangettes** 84.53 338⇑*eP* P 04 36 03.4 +0.7
COLF **Collangettes** 84.53 338⇑*eP* P 04 36 03.4 +0.7
NWAO **Narrogin (SRO)** 84.55 209 *eP* P 04 36 02.7 +0.1
comp=Z,276nm,0.9s
NWAO LR LR
comp=Z,14µm,22.0s
NWAO **Narrogin (SRO)** 84.55 209 P P 04 36 05.9 +3.3
SNR=18
TRIZ **Trizonia** 84.55 323 P P 04 36 01.1 -1.8
EFP **Efpalio** 84.57 323 P P 04 36 02.3 -0.7
EFP **Efpalio** 84.57 323 *eP* P 04 35 59.7 -3.3
KARP **Karpathos** 84.61 318 *eP* P 04 36 04.0 +0.7
SURF **Saint Ours** 84.62 336⇑*eP* P 04 36 04.3 +0.9
SURF **Saint Ours** 84.62 336⇑*eP* P 04 36 04.3 +0.9
LAKA **Lakka** 84.70 322 P P 04 36 02.9 -0.8
UPR **University Cam** 84.74 323 P P 04 36 03.5 -0.3
DID **Didima** 84.77 321 P P 04 36 01.2 -2.9
DID **Didima** 84.77 321 *eP* P 04 36 01.0 -3.1
LKD2 **Lefkada island** 84.79 324 P P 04 36 03.5 -0.6
GUR **Goura** 84.80 322 P P 04 36 02.8 -1.5
GUR **Goura** 84.80 322 *eP* P 04 36 04.1 -0.2
DIDY **Didyma** 84.81 321 P P 04 36 00.8 -3.5
BLA **Blacksburg** 84.82 39 *eP* P 04 36 04.2 -0.1
BLA pmax pmax
comp=Z,316nm,1.3s
BLA MLR MLR
comp=Z,33µm,19.0s
BLA **Blacksburg** 84.82 39 *eP* P 04 36 04.2 -0.1
comp=Z,316nm,1.3s
BLA LR LR
comp=Z,33µm,19.0s
SAOF **Saorge** 84.86 335⇑*eP* P 04 36 04.5 +0.1
SAOF **Saorge** 84.86 335⇑*eP* P 04 36 04.5 +0.1
SAOF **Saorge** 84.86 335⇑*eP* P 04 36 04.5 +0.1
VIVF **Saint-Julien-l** 84.88 337⇑*iP* P 04 36 05.8 +1.3
comp=Z,1µm,1.1s
VIVF **Saint-Julien-l** 84.88 337⇑*iP* P 04 36 05.8 +1.3
VIVF pmax pmax
comp=Z,1µm,1.1s
VIVF **Saint-Julien-l** 84.88 337⇑*iP* P 04 36 05.8 +1.3
comp=Z,1µm,1.1s
AUTN **L'Aution** 84.89 335⇑*eP* P 04 36 04.7 -0.1
AUTN **L'Aution** 84.89 335⇑*eP* P 04 36 04.7 -0.1
AUTN **L'Aution** 84.89 335⇑*eP* P 04 36 04.7 -0.1
LBL **Lubilhac** 84.91 338⇑*eP* P 04 36 05.6 +0.9
LBL **Lubilhac** 84.91 338⇑*eP* P 04 36 05.6 +0.9
LBL **Lubilhac** 84.91 338⇑*eP* P 04 36 05.6 +0.9
TOUF **Mont Tournerai** 84.92 335⇑*eP* P 04 36 05.5 +0.6
TOUF **Mont Tournerai** 84.92 335⇑*eP* P 04 36 05.5 +0.6
TOUF **Mont Tournerai** 84.92 335⇑*eP* P 04 36 05.5 +0.6
SBF **Sospel** 85.01 335⇑*iP* P 04 36 05.2 0.0
comp=Z,1µm,1.0s
SBF **Sospel** 85.01 335⇑*iP* P 04 36 05.2 0.0
SBF pmax pmax
comp=Z,1µm,1.0s
SBF **Sospel** 85.01 335⇑*iP* P 04 36 05.2 0.0
comp=Z,1µm,1.0s
CJM **Chamela** 85.02 67 P P 04 36 04.5 -1.0
MVIF **Mont Vial** 85.06 335⇑*eP* P 04 36 05.8 +0.3
MVIF **Mont Vial** 85.06 335⇑*eP* P 04 36 05.8 +0.3
MVIF **Mont Vial** 85.06 335⇑*eP* P 04 36 05.8 +0.3
RLS **Riolos of Patr** 85.07 323 P P 04 36 05.5 0.0
LRAL **Lakeview Retre** 85.13 46 *eP* P 04 36 05.4 -0.5
comp=Z,57nm,0.9s
LRAL LR LR
comp=Z,31µm,22.0s
REVF **Revere** 85.14 335⇑*eP* P 04 36 06.1 +0.3
REVF **Revere** 85.14 335⇑*eP* P 04 36 06.1 +0.3
REVF **Revere** 85.14 335⇑*eP* P 04 36 06.1 +0.3
VLX **Vlachokerasia** 85.26 322 P P 04 36 05.3 -1.3
VLX **Vlachokerasia** 85.26 322 *eP* P 04 36 02.3 -4.3
CALN **Calern** 85.27 335⇑*eP* P 04 36 06.8 +0.2
CALN **Calern** 85.27 335⇑*eP* P 04 36 06.8 +0.2
CALN **Calern** 85.27 335⇑*eP* P 04 36 06.8 +0.2
RJF **Les Rejaudoux** 85.28 339⇑*iP* P 04 36 06.6 +0.2
comp=Z,2µm,1.5s
RJF *eR*
comp=Z,170µm,23.0s
RJF **Les Rejaudoux** 85.28 339⇑*iP* P 04 36 06.6 +0.2
RJF pmax pmax
comp=Z,2µm,1.5s
RJF **Les Rejaudoux** 85.28 339⇑*iP* P 04 36 06.6 +0.2
comp=Z,2µm,1.5s
CBN **Corbin** 85.29 37 *eP* P 04 36 06.7 +0.2
comp=Z,396nm,1.3s
CBN LR LR
comp=Z,65µm,22.0s
KFL **Anninata** 85.31 323 P P 04 36 05.9 -0.8
VLS **Valsamata** 85.33 323 P P 04 36 06.3 -0.5
VLS **Valsamata** 85.33 323 *eP* P 04 36 06.8 0.0
EIL **Elat** 85.34 309 *eP* P 04 36 03.2 -3.8
AMT **Artemida-Makis** 85.41 322 P P 04 36 06.4 -0.8
SMRF **Simiane la Rot** 85.44 336⇑*iP* P 04 36 08.3 +1.0
comp=Z,3µm,1.9s
SMRF **Simiane la Rot** 85.44 336⇑*iP* P 04 36 08.3 +1.0
comp=Z,3µm,1.9s
CAF **Calviac** 85.49 339⇑*iP* P 04 36 08.3 +0.8
comp=Z,2µm,1.5s
CAF **Calviac** 85.49 339⇑*iP* P 04 36 08.3 +0.8
CAF pmax pmax
comp=Z,2µm,1.5s
CAF **Calviac** 85.49 339⇑*iP* P 04 36 08.3 +0.8
comp=Z,2µm,1.5s
JSRW **J. Sargeant Re** 85.51 37 *eP* P 04 36 07.5 -0.2
FRF **La Foret Royal** 85.52 335⇑*iP* P 04 36 07.7 +0.1
comp=Z,3µm,1.9s
FRF **La Foret Royal** 85.52 335⇑*iP* P 04 36 07.7 +0.1
FRF pmax pmax
comp=Z,3µm,1.9s
FRF **La Foret Royal** 85.52 335⇑*iP* P 04 36 07.7 +0.1
comp=Z,3µm,1.9s
VLI **Velia** 85.56 321 P P 04 36 05.5 -2.5
NPS **Neapolis** 85.56 318 P P 04 36 07.5 -0.5
NPS **Neapolis** 85.56 318 *eP* P 04 36 06.5 -1.5
ITM **Ithomi** 85.61 322 P P 04 36 07.0 -1.2
ITM **Ithomi** 85.61 322 *eP* P 04 36 07.5 -0.7
CUC **Castrocucco** 85.66 328 *eP* P 04 36 07.4 -1.1
comp=Z,202nm,1.1s
CUC LR LR
comp=Z,70µm,21.0s
CUC **Castrocucco** 85.66 328 *eP* P 04 36 06.8 -1.6
PGF **Pioggiola** 85.72 333⇑*iP* P 04 36 09.1 +0.3
comp=Z,437nm,0.8s
PGF **Pioggiola** 85.72 333⇑*iP* P 04 36 09.1 +0.3
PGF pmax pmax
comp=Z,437nm,0.8s
PGF **Pioggiola** 85.72 333⇑*iP* P 04 36 09.1 +0.3
comp=Z,437nm,0.8s
LMR **La Mourre** 85.76 335⇑*iP* P 04 36 09.4 +0.6
comp=Z,4µm,1.7s
LMR **La Mourre** 85.76 335⇑*iP* P 04 36 09.4 +0.6
LMR pmax pmax
comp=Z,4µm,1.7s
LMR **La Mourre** 85.76 335⇑*iP* P 04 36 09.4 +0.6
comp=Z,4µm,1.7s
DYR **Agios Nikonas** 85.79 321 P P 04 36 08.2 -0.9
LFF **La Frestale** 85.81 340⇑*iP* P 04 36 09.3 +0.3
comp=Z,2µm,1.5s
LFF **La Frestale** 85.81 340⇑*iP* P 04 36 09.3 +0.3
LFF pmax pmax
comp=Z,2µm,1.5s
LFF **La Frestale** 85.81 340⇑*iP* P 04 36 09.3 +0.3
comp=Z,2µm,1.5s
LASF **Ste Croix** 85.82 337⇑*iP* P 04 36 10.5 +1.3
comp=Z,3µm,1.8s
LASF **Ste Croix** 85.82 337⇑*iP* P 04 36 10.5 +1.3
comp=Z,3µm,1.8s
IDI **Anoyia** 85.88 319 P P 04 36 08.1 -1.5
IDI **Anoyia** 85.88 319 *eP* P 04 36 08.3 -1.3
comp=Z,246nm,0.7s
IDI **Anoyia** 85.88 319 *eP* P 04 36 07.7 -1.9
KYTH **Kithira** 85.88 321 *eP* P 04 36 08.0 -1.6
PYL **PYLOS** 85.93 322 P P 04 36 08.1 -1.7
PYL **PYLOS** 85.93 322 *eP* P 04 36 07.7 -2.1
TIP **Timpagrande** 86.01 326 *eP* P 04 36 10.1 -0.1
comp=Z,1µm,1.4s
TIP LR LR
comp=Z,114µm,19.0s
VAM **Vamos** 86.09 319 P P 04 36 09.2 -1.4
VAM **Vamos** 86.09 319 *eP* P 04 36 09.8 -0.8
KMSC **Kings Mountain** 86.13 41 ⇑P P 04 36 10.8 0.0
baz=86,SNR=21
BRAL **Brewton** 86.72 47 *eP* P 04 36 13.6 -0.1
comp=Z,258nm,0.9s
BRAL LR LR
comp=Z,35µm,22.0s
JSC **Jenkinsville** 86.87 41 *eP* P 04 36 15.1 +0.6
JSC **Jenkinsville** 86.87 41 *eP* P 04 36 15.1 +0.6
MTLF **Montolieu** 86.94 338⇑*iP* P 04 36 14.9 +0.3
comp=Z,905nm,1.3s
MTLF **Montolieu** 86.94 338⇑*iP* P 04 36 14.9 +0.3
MTLF pmax pmax
comp=Z,905nm,1.3s
MTLF **Montolieu** 86.94 338⇑*iP* P 04 36 14.9 +0.3
comp=Z,905nm,1.3s
MMIG **Aquila** 87.00 67 P P 04 36 14.7 -0.6
URZ **Urewera** 87.00 160 *eP* P 04 36 12.7 -1.9
comp=Z,260nm,1.7s
URZ **Urewera** 87.00 160 P P 04 36 12.7 -1.9
comp=Z,27nm,0.9s,baz=271,slow=4.0,SNR=6.9
CEL **Celeste** 87.14 327 *eP* P 04 36 15.7 -0.1
comp=Z,350nm,1.3s
CEL LR LR
comp=Z,73µm,21.0s
CEL **Celeste** 87.14 327 *eP* P 04 36 15.7 -0.1
LRDF **Laroque-de-Fa** 87.23 338⇑*eP* P 04 36 16.8 +0.7
LRDF **Laroque-de-Fa** 87.23 338⇑*eP* P 04 36 16.8 +0.7
TBI **Tubuai** 87.26 128 *eP* P 04 36 13.9 -2.4
comp=Z,160nm,0.9s
TBI *eS* S 04 46 48.1 -5.1
comp=Z,79µm,31.8s
TBI *eSS* SS 04 52 28.9 -10
comp=Z,23µm,27.5s
TBI *eLR* LR 05 03 50.5
comp=Z,175µm,31.2s,baz=321
TBI **Tubuai** 87.26 128 *eP* P 04 36 13.9 -2.4
comp=Z,160nm,0.9s
TBI *eS* S 04 46 48.1 -5.1
TBI *eSS* SS 04 52 28.9 -10
CARF **Carcanieres** 87.55 338⇑*eP* P 04 36 19.3 +1.5
CARF **Carcanieres** 87.55 338⇑*eP* P 04 36 19.3 +1.5
FILF **Fillols** 87.58 338⇑*eP* P 04 36 19.2 +1.4
FILF **Fillols** 87.58 338⇑*eP* P 04 36 19.2 +1.4
CNNC **Cliffs of the** 87.58 39 *eP* P 04 36 18.4 +0.5
comp=Z,349nm,1.4s
CNNC LR LR
comp=Z,49µm,19.0s
MLS **Moulis** 87.58 339⇑*eP* P 04 36 17.8 0.0
MLS **Moulis** 87.58 339⇑*eP* P 04 36 17.8 0.0
EPF **Esparros** 87.70 339⇑*iP* P 04 36 17.6 -0.8
comp=Z,168nm,1.1s
EPF **Esparros** 87.70 339⇑*iP* P 04 36 17.6 -0.8
EPF pmax pmax
comp=Z,168nm,1.1s
EPF **Esparros** 87.70 339⇑*iP* P 04 36 17.6 -0.8
comp=Z,168nm,1.1s
LABF **Labassere** 87.75 340⇑*eP* P 04 36 18.1 -0.5
LABF **Labassere** 87.75 340⇑*eP* P 04 36 18.1 -0.5
ORDF **Ordiarp** 87.83 340⇑*eP* P 04 36 18.7 -0.3
ORDF **Ordiarp** 87.83 340⇑*eP* P 04 36 18.7 -0.3
REYF **Montagne du Re** 87.84 340⇑*eP* P 04 36 19.5 +0.4
REYF **Montagne du Re** 87.84 340⇑*eP* P 04 36 19.5 +0.4
DGAR **Diego Garcia** 87.84 257 *eP* P 04 36 19.0 -0.3
DGAR pmax pmax
comp=Z,529nm,0.9s
DGAR MLR MLR
comp=Z,15µm,21.0s
DGAR **Diego Garcia** 87.84 257 *eP* P 04 36 19.0 -0.3
comp=Z,529nm,0.9s
DGAR LR LR
comp=Z,15µm,21.0s
DGAR **Diego Garcia** 87.84 257 P P 04 36 21.7 +2.4
SNR=6.6
DGAR **Diego Garcia** 87.84 257 P P 04 36 19.3 0.0
comp=Z,3µm,0.8s,SNR=8.7
OSSF **Osses** 87.87 341⇑*eP* P 04 36 18.1 -1.0
OSSF **Osses** 87.87 341⇑*eP* P 04 36 18.1 -1.0
RESF **Ens** 87.91 339⇑*eP* P 04 36 20.1 +0.6
RESF **Ens** 87.91 339⇑*eP* P 04 36 20.1 +0.6
VIEF **Viey** 87.92 340⇑*eP* P 04 36 19.7 +0.2
VIEF **Viey** 87.92 340⇑*eP* P 04 36 19.7 +0.2
SJPF **Ste Jean** 88.00 340⇑*iP* P 04 36 19.8 0.0
SJPF **Ste Jean** 88.00 340⇑*iP* P 04 36 19.8 0.0
SJPF **Ste Jean** 88.00 340⇑*iP* P 04 36 19.8 0.0
LARF **Larrau** 88.01 340⇑*eP* P 04 36 19.3 -0.6
LARF **Larrau** 88.01 340⇑*eP* P 04 36 19.3 -0.6
ETSF **Etsaut** 88.04 340⇑*iP* P 04 36 20.0 -0.1
comp=Z,92nm,0.6s
ETSF **Etsaut** 88.04 340⇑*iP* P 04 36 20.0 -0.1
ETSF pmax pmax
comp=Z,92nm,0.6s
ETSF **Etsaut** 88.04 340⇑*iP* P 04 36 20.0 -0.1
comp=Z,92nm,0.6s
TIGA **Tifton** 88.11 45 ⇓*P* P 04 36 20.8 +0.4
baz=88,SNR=14
DEIG **Demacu** 88.21 62 P P 04 36 21.2 -0.2
MUKL **Al Mukalla** 88.22 289 *eP* P 04 36 21.7 +0.6
NHSC **New Hope** 88.35 41 PFAKE 04 36 30.0 +8.5
NHSC LR LR
comp=Z,65µm,19.0s
VSL **Villasalto** 88.36 332 *eP* P 04 36 21.6 0.0
comp=Z,587nm,1.4s
VSL LR LR
comp=Z,56µm,21.0s
TAU **Tasmania Unive** 88.67 183 PFAKE 04 36 30.0 +7.6
TAU LR LR
comp=Z,40µm,22.0s
ZIIG **Zihuatanejo** 88.70 66 P P 04 36 22.8 -0.6
YAIG **Yautepec** 89.27 63 P P 04 36 25.2 -1.1
SNZO **South Karori** 89.39 163 PFAKE 04 36 40.0 +14

SNZO LR LR
comp=Z,52µm,19.0s
PPM Popocatepetl 89.39 63 P **P** **04 36 26.5 -0.8**
PPM Popocatepetl 89.39 63 P **P** **04 36 26.5 -0.8**
MEIG Mezcala 89.63 64 P **P** **04 36 27.5 -0.4**
WDD Wield Dalam 89.76 326 PFAKE 04 36 40.0 +12
WDD LR LR
comp=Z,57µm,20.0s
WDD Wield Dalam 89.76 326 *e*P P 04 36 24.6 -3.5
CAIG El Cayaco 89.87 65 P **P** **04 36 28.4 -0.5**
PBRG Braganca 90.42 344 *e*P **P** **04 36 30.2 -1.0**
comp=Z,165nm,2.1s
PBRG Braganca 90.42 344 *e*PP PP 04 40 06.2 +1.3
PGAV Gavieira, Arco 90.55 345 *e*S **SKSac** **04 47 01.4 +1.3**
PGAV *e*LQ LQ 05 00 33.9
PGAV *e*LR LR 05 07 35.5
comp=Z,36µm,20.0s
TPIG Tehuac#an 90.66 62 P **P** **04 36 32.5 -0.3**
PCAB Cabril 90.75 345 *e*P **P** **04 36 32.5 -0.2**
comp=Z,178nm,1.9s
RPZ Rata Peaks 91.03 166 *e*P **P** **04 36 35.4 +1.8**
comp=Z,56nm,0.9s
RPZ Rata Peaks 91.03 166 P **P** **04 36 31.7 -1.8**
comp=Z,32nm,0.8s,baz=117,slow=2.3,SNR=3.4
POLO Lamas de Olo 91.04 345 *e*P **P** **04 36 33.3 -0.8**
comp=Z,115nm,1.6s
POLO Lamas de Olo 91.04 345 *e*PP PP 04 40 12.0 +2.2
MVO Moncorvo 91.10 344 *e*P **P** **04 36 33.4 -1.0**
comp=Z,180nm,1.8s
MVO Moncorvo 91.10 344 *e*PP PP 04 40 12.1 +1.9
MVO *e*S **SKSac** **04 47 02.5 -0.7**
MVO *e*LQ LQ 05 00 24.4
MVO *e*LR LR 05 08 41.0
comp=Z,47µm,20.0s
PVRL Vila Real 91.12 345 *e*P **P** **04 36 33.8 -0.6**
comp=Z,247nm,2.0s
PTO Porto 91.41 345 *e*P **P** **04 36 34.8 -0.9**
comp=Z,210nm,1.7s
CMAH Djebel Manchou 91.61 332 P **P** **04 36 36.2 -0.6**
CAEH 'Ain El Ouahch 91.66 332 P **P** **04 36 36.0 -1.0**
PVIS Viseu 91.69 345 *e*P **P** **04 36 36.1 -1.0**
comp=Z,198nm,1.6s
PNIG Pinotepa 91.71 64 P **P** **04 36 36.8 -0.8**
KEST Kesra 91.77 330 *e*P **P** **04 36 37.7 +0.1**
KEST Kesra 91.77 330 P **P** **04 36 37.7 +0.1**
comp=Z,49nm,0.8s,baz=309,slow=1.9,SNR=158
KEST LR LR 05 21 28.5
comp=Z,34µm,21.8s,baz=331,slow=38
ESDC Sonseca Array 91.90 341 P **P** **04 36 37.0 -1.0**
ESDC PKKPbc **PKKPbc** **04 53 53.0 -0.8**
ESDC Sonseca Array 91.90 341 P **P** **04 36 37.0 -1.0**
comp=Z,15nm,0.8s,baz=5.8,slow=3.7,SNR=46
ESDC PKKPbc **PKKPbc** **04 53 53.0 -0.8**
comp=Z,1.2nm,0.7s,baz=211,slow=0.7,SNR=4.2
ESDC LR LR 05 20 15.1
comp=Z,50µm,21.9s,baz=10.0,slow=37
ESLA Sonseca Array 91.90 341 *e*P **P** **04 36 38.0 -0.1**
comp=Z,350nm,2.3s
DWPF Disney 91.90 45 *e*P **P** **04 36 38.5 +0.4**
MTE Manteigas 91.93 344 *e*P **P** **04 36 37.3 -1.0**
comp=Z,170nm,1.8s
MTE Manteigas 91.93 344 *e*PP PP 04 40 18.4 +1.5
MTE *e*S **SKSac** **04 47 06.9 -1.1**
MTE *e*LQ LQ 05 00 27.9
MTE *e*LR LR 05 09 05.3
comp=Z,66µm,20.0s
MTE Manteigas 91.93 344 *e*P **P** **04 36 37.0 -1.2**
comp=Z,64nm,0.8s
MTE LR LR
comp=Z,65µm,20.0s
CKFL Kef-Lekhel 92.05 332 P **P** **04 36 38.3 -0.6**
VHO Vista Hermosa 92.07 63 P **P** **04 36 38.6 -0.8**
PAB San Pablo 92.10 342 *e*P **P** **04 36 38.1 -1.0**
PAB pmax pmax
comp=Z,77nm,1.4s
PAB MLR MLR
comp=Z,56µm,21.0s
PAB San Pablo 92.10 342 *e*P **P** **04 36 38.1 -1.0**
comp=Z,77nm,1.4s
PAB LR LR
comp=Z,56µm,21.0s
CASM Ain Smara 92.25 332 P **P** **04 36 39.3 -0.5**
TRBA At Turbah 92.35 292 *e*P **P** **04 36 41.8 +1.0**
CTEI Djebel Teioual 92.46 332 P **P** **04 36 40.7 -0.1**
PCBR Castelo Branco 92.46 344 *e*P **P** **04 36 40.0 -0.6**
comp=Z,116nm,1.9s
PCBR Castelo Branco 92.46 344 *e*PP PP 04 40 15.6 -5.3
SET Setif 92.65 333 P **P** **04 36 42.0 +0.3**
CKHR Kef el Ahmar 92.78 333 P **P** **04 36 43.0 +0.7**
ABA Alger-Bouzarea 92.81 335 P **P** **04 36 44.0 +1.7**
PMRV Marv??o 92.84 344 *e*P **P** **04 36 41.2 -1.2**
comp=Z,105nm,1.9s
PMRV Marv??o 92.84 344 *e*PP PP 04 40 24.7 +0.7
PMRV *e*S **SKSac** **04 47 12.3 -0.7**
PMRV *e*LQ LQ 05 01 06.6
PMRV *e*LR LR 05 09 26.5
comp=Z,54µm,20.0s
PTOM Tomar 92.85 345 *e*P **P** **04 36 41.6 -0.8**
comp=Z,108nm,1.5s
ADJB Djebel Djouab 93.29 335 P **P** **04 36 45.0 +0.4**
PMTG Montargil 93.35 344 *e*P **P** **04 36 43.1 -1.6**
comp=Z,111nm,1.8s
PMTG Montargil 93.35 344 *e*PP PP 04 40 29.2 +1.3
EMHD Djebel Mahouad 93.39 335 P **P** **04 36 47.0 +1.9**
PESTR Estremoz 93.43 344 *e*P **P** **04 36 43.5 -1.6**
comp=Z,75nm,2.8s
PESTR Estremoz 93.43 344 *e*PP PP 04 40 29.8 +1.3
HUIG Huatulco 93.45 63 P **P** **04 36 43.1 -2.4**
PMAFR Mafra 93.65 345 *e*P **P** **04 36 45.1 -1.0**
comp=Z,194nm,2.6s
PMAFR Mafra 93.65 345 *e*PP PP 04 40 30.8 +0.5
EBNR Beni Rached 93.72 336 P **P** **04 36 49.0 +2.5**
EVO Evora 93.83 344 ⇑*i*P **P** **04 36 45.6 -1.3**
comp=Z,79nm,1.0s
EVO *e*R
comp=Z,84µm,20.8s
EVO Evora 93.83 344 *e*P **P** **04 36 45.7 -1.2**
comp=Z,120nm,1.9s
EVO Evora 93.83 344 *e*PP PP 04 40 31.3 -0.4
EVOP Sao Brissos 93.86 344 ⇑*i*P **P** **04 36 45.6 -1.4**
EVOP pmax pmax
comp=Z,79nm,1.0s
EVOP Sao Brissos 93.86 344 ⇑*i*P **P** **04 36 45.6 -1.4**
comp=Z,79nm,1.0s
LIS Lisbon 93.86 345 *e*P **P** **04 36 46.2 -0.9**
LIS *e*S **SKSac** **04 47 18.1 -0.5**
LIS AMS AMS 05 29 05.0
comp=E,41µm,17.5s
LIS Lisbon 93.86 345 *e*P **P** **04 36 46.2 -0.9**
LIS *e*S **SKSac** **04 47 18.1 -0.5**
LIS Lisbon 93.86 345 *e*P **P** **04 36 46.1 -0.9**
LIS *e*S **SKSac** **04 47 18.0 -0.5**
ECHA Ech Chlef 93.89 336 P P 04 36 50.5 +3.3
PBAR Barrancos 93.99 343 *e*P **P** **04 36 46.8 -0.9**
comp=E,85nm,1.6s
PBAR Barrancos 93.99 343 *e*PP PP 04 40 35.3 +2.4
EANR 'Ain N'Sour 94.16 336 P P 04 36 52.0 +3.4
PBEJ Beja 94.29 344 *e*P **P** **04 36 49.3 +0.2**
comp=E,118nm,2.1s
PNCL Nicolau / Gran 94.34 344 *e*P **P** **04 36 48.6 -0.7**
comp=E,104nm,2.3s
PNCL Nicolau / Gran 94.34 344 *e*PP PP 04 40 35.1 -0.5
TGIG 94.51 60 P **P** **04 36 49.7 -0.7**
MESJ Messejana 94.54 344 *e*P **P** **04 36 49.4 -0.8**
MESJ *e*S **SKSac** **04 47 21.8 -0.5**
MESJ AMS AMS 05 25 50.7
comp=N,40µm,21.8s
MESJ Messejana 94.54 344 *e*P **P** **04 36 49.4 -0.8**
MESJ *e*S **SKSac** **04 47 21.8 -0.5**
MESJ Messejana 94.54 344 *e*P **P** **04 36 49.3 -0.8**
MESJ *e*S **SKSac** **04 47 21.7 -0.5**
ETRT Tiaret 94.62 336 P P 04 36 55.2 +4.4
PCVE Castro Verde 94.71 344 *e*P **P** **04 36 50.1 -0.9**
comp=N,116nm,1.8s
PCVE Castro Verde 94.71 344 *e*PP PP 04 40 39.2 +0.7
PVAQ Vaqueiros 94.87 344 *e*P **P** **04 36 51.2 -0.5**
comp=N,85nm,1.7s
PVAQ Vaqueiros 94.87 344 *e*PP PP 04 40 40.5 +0.8
PVAQ *e*S **SKSac** **04 47 23.8 -0.2**
PVAQ *e*LQ LQ 05 01 58.0
PVAQ *e*LR LR 05 10 26.8
comp=N,36µm,20.0s
PTEO Sao Teotonio 94.92 344 *e*P **P** **04 36 52.8 +0.9**
comp=N,208nm,1.5s

PBDV Barranco-do-Ve 95.06 344 *e*P **P** **04 36 52.4 -0.3**
comp=N,84nm,2.0s
PBDV Barranco-do-Ve 95.06 344 *e*PP PP 04 40 41.8 +0.5
MORF Marmelete 95.14 344 *e*P **P** **04 36 52.0 -1.0**
comp=N,139nm,1.7s
MORF Marmelete 95.14 344 *e*PP PP 04 40 44.5 +2.6
MORF Marmelete 95.14 344 *e*P **P** **04 36 52.1 -1.0**
MORF *e*S **SKSac** **04 47 24.9 -0.7**
PGRA Graciosa 95.29 360 *e*P **P** **04 36 53.8 +0.2**
comp=N,275nm,1.6s
PGRA *e*SKS SKSac 04 47 45.4 +19
PGRA *e*SS **SS** **04 54 34.2 +2.7**
PGRA *e*LQ LQ 05 03 41.0
PGRA *e*LR LR 05 10 14.7
comp=N,3µm,19.5s
BBSR BB Station 95.30 30 PFAKE 04 37 10.0 +16
BBSR LR LR
comp=Z,35µm,20.0s
PFVI Vila Bisbo 95.34 344 *e*P **P** **04 36 53.5 -0.4**
comp=Z,37nm,2.6s
PFVI Vila Bisbo 95.34 344 *e*PP PP 04 40 45.9 +2.5
CCIG Comitan 95.48 60 P **P** **04 36 54.5 -0.6**
RKT Rikitea 95.56 118 *e*SKSac **SKSac** **04 47 24.0 -3.6**
comp=Z,22µm,31.0s
RKT Rikitea 95.56 118 *e*PS PS 04 49 27.1 -4.7
comp=Z,40µm,33.2s
RKT *e*SS SS 04 54 29.7 -8.6
comp=Z,43µm,27.5s
RKT *e*LR LR 05 07 34.1
comp=Z,167µm,32.2s,baz=318
ROSA Rosais 95.60 360 *e*P **P** **04 36 57.5 +2.4**
comp=Z,200nm,1.4s
ROSA *e*SKS SKSac 04 47 47.1 +19
ROSA *e*SS **SS** **04 54 42.6 +6.7**
ROSA *e*LQ LQ 05 03 41.0
ROSA *e*LR LR 05 09 45.7
comp=Z,2µm,20.1s
PMAN Manadas 95.69 360 *e*P **P** **04 36 54.7 -0.7**
comp=Z,201nm,1.6s
PCAN Candelaria 95.86 0 *e*P P 04 36 51.9 -4.4
comp=Z,66nm,1.0s
PSET Sete Cidades 96.47 358 *e*P **P** **04 37 00.0 +1.0**
comp=Z,159nm,1.2s
PSET *e*SKS SKSac 04 47 52.2 +20
PSET *e*SS **SS** **04 54 53.9 +5.7**
PSET *e*LQ LQ 05 04 00.3
PSET *e*LR LR 05 09 57.8
comp=Z,7µm,22.2s
CMLA Cha da Macela 96.52 358 *e*P **P** **04 37 00.0 +0.8**
comp=Z,174nm,1.5s
CMLA *e*SKS **S** **04 48 16.1 -0.8**
CMLA *e*SS SS 04 54 56.7 +7.8
CMLA *e*LQ LQ 05 04 02.7
CMLA *e*LR LR 05 09 52.9
comp=Z,5µm,21.1s
CMLA Cha da Macela 96.52 358 PFAKE 04 37 10.0 +11
CMLA LR LR
comp=Z,24µm,21.0s
DESE Dese 96.81 294 *e*P **P** **04 37 04.4 +3.1**
PSMN Pico do Norte, 97.26 357 *e*P **P** **04 37 00.6 -2.0**
comp=Z,104nm,1.3s
PSMN *e*SKS SKSac 04 47 48.8 +12
PSMN *e*SS SS 04 55 13.6 +14
PSMN *e*LQ LQ 05 04 24.4
PSMN *e*LR LR 05 10 00.2
comp=Z,5µm,20.5s
PSMA Santa Maria 97.27 357 *e*P **P** **04 37 02.1 -0.5**
comp=Z,148nm,1.5s
MGV Manicaragua 97.61 47 *e* **P** **04 37 02.6 -1.8**
MSEY Mahe Island 97.62 271 PFAKE 04 37 20.0 +15
MSEY LR LR
comp=Z,31µm,20.0s
MSEY Mahe Island 97.62 271 P Pdif 04 37 05.4 +0.7
SNR=10.0
MSEY Mahe Island 97.62 271 P **P** **04 37 04.1 -0.5**
comp=Z,138nm,1.7s,SNR=9.0
RTC Rabat Centre 97.99 342 PFAKE 04 37 20.0 +14
RTC LR LR
comp=Z,30µm,20.0s
TGUH Tegucigalpa,Un 100.12 58 PFAKE 04 37 30.0 +14
TGUH LR LR
comp=Z,27µm,22.0s
PMPST Porto Santo, M 100.48 350 *e*P **Pdif** **04 37 16.5 -0.6**
PMPST Porto Santo, M 100.48 350 *e*PP PP 04 41 24.1 +1.2
PMPS Porto Santo 100.50 350 *e*P **Pdif** **04 37 17.5 +0.3**
LMGC Las Mercedes 100.82 46 *e* **Pdif** **04 37 19.7 +0.9**
PMOZ Porto Moniz, M 100.84 350 *e*P **Pdif** **04 37 18.1 -0.7**
PMOZ Porto Moniz, M 100.84 350 *e*PP PP 04 41 25.6 -0.1
PMOZ *e*S **SKSac** **04 47 59.1 +4.2**
PMOZ *e*LQ LQ 05 05 17.8
PMOZ *e*LR LR 05 12 01.6
comp=Z,15µm,18.0s
PMAR Madeira 100.91 350 *e*P **Pdif** **04 37 20.3 +1.1**
FUL Funchal 100.98 350 *e*P **Pdif** **04 37 19.7 +0.4**
MOAC Moa 101.32 44 *e* **Pdif** **04 37 21.5 +0.5**
RCC Rio Carpintero 101.53 45 *e* **Pdif** **04 37 20.9 -1.0**
GTBY Guantanamo Bay 101.88 44 PFAKE 04 37 40.0 +17
GTBY LR LR
comp=Z,39µm,19.0s
MASC Masc 102.09 44 *e* **Pdif** **04 37 25.9 +1.5**
MTDJ Mount Denham 102.10 47 PFAKE 04 37 40.0 +15
MTDJ LR LR
comp=Z,28µm,19.0s
GRTK Grand Turk 102.38 40 PFAKE 04 37 40.0 +14
GRTK LR LR
comp=Z,42µm,22.0s
JTS JuntasAbangare 104.48 58 PFAKE 04 37 50.0 +15
JTS LR LR
comp=Z,18µm,21.0s
SDDR Presa de Saban 104.51 42 PFAKE 04 37 50.0 +15
SDDR LR LR
comp=Z,31µm,21.0s
TAM Tamanrasset 104.89 328 PFAKE 04 37 50.0 +13
TAM LR LR
comp=Z,32µm,21.0s
KMBO Kilima Mbogo 107.55 287 Pdif **Pdif** **04 37 50.0 +0.9**
KMBO PP **PP** **04 42 17.9 +0.8**
KMBO LR LR
comp=Z,32µm,20.0s
KMBO Kilima Mbogo 107.55 287 Pdiff **Pdif** **04 37 50.0 +0.9**
comp=Z,0.5nm,0.3s,baz=56,slow=4.1,SNR=10
KMBO PP **PP** **04 42 17.9 +0.8**
comp=Z,6.0nm,0.9s,baz=34,slow=10,SNR=4.3
SJG San Juan 107.56 38 PFAKE 04 42 10.0
SJG LR LR
comp=Z,20µm,21.0s
BCIP Isla Barro Col 108.34 54 PFAKE 04 42 10.0
BCIP LR LR
comp=Z,17µm,20.0s
RER Riviere de l'E 108.92 259 PFAKE 04 42 10.0
RER LR LR
comp=Z,16µm,21.0s
PAYG Puerto Ayora 109.64 70 PFAKE 04 42 10.0
PAYG LR LR
comp=Z,28µm,22.0s
ANWB Willy Bob 109.73 34 PFAKE 04 42 10.0
ANWB LR LR
comp=Z,24µm,21.0s
MBAR Mbarara 111.41 293 PFAKE 04 42 20.0
MBAR LR LR
comp=Z,389nm,21.0s
FDF Fort de France 112.65 35 PFAKE 04 42 20.0
FDF LR LR
comp=Z,35µm,22.0s
DRV Dumont d'Urvil 112.74 185 PP PP 04 42 36.0 -18
DRV SKKS 04 48 35.0
DRV SP **SP** **04 52 15.0 -7.5**
ABPO Ambohimpanom 113.35 266 PFAKE 04 42 20.0
ABPO LR LR
comp=Z,20µm,20.0s
BBGH Gun Hill 114.72 34 PFAKE 04 42 20.0 +10
BBGH LR LR
comp=Z,59µm,21.0s
GRGR Grenville 114.80 36 PFAKE 04 42 20.0 +9.4
GRGR LR LR
comp=Z,15µm,20.0s
ROSC El Rosal 114.96 52 PKP PKPdf 04 42 12.2 +0.8
ROSC PP **PP** **04 43 10.4 +0.4**
ROSC PKKPbc **PKKPbc** **04 52 47.7 +2.0**
ROSC PKKPab **PKKPab** **04 52 56.6 +1.6**
ROSC El Rosal 114.96 52 PKP PKPdf 04 42 12.2 +0.8
comp=Z,5.9nm,0.7s,baz=95,slow=20,SNR=4.8
ROSC PP **PP** **04 43 10.4 +0.4**
comp=Z,6.3nm,0.8s,baz=90,slow=21,SNR=4.2
ROSC PKKPbc **PKKPbc** **04 52 47.7 +2.0**
comp=Z,1.7nm,0.5s,baz=103,slow=22,SNR=4.6
ROSC PKKPab **PKKPab** **04 52 56.6 +1.6**
comp=Z,5.4nm,0.8s,baz=101,slow=22,SNR=5.2
RPN Rapa Nui 115.02 104 PFAKE 04 42 20.0 +9.5
RPN LR LR
comp=Z,69µm,22.0s
TOA0 Torodi Ar. Sit 115.14 327 *e*PKPdf **PKPdf** **04 42 10.2 -1.1**
TORD Torodi Ar. Bea 115.14 327 PKP **PKPdf** **04 42 10.6 -0.6**
TORD PP **PP** **04 43 09.9 -0.6**
TORD PKKPbc **PKKPbc** **04 52 44.9 +0.2**
TORD PKKPab **PKKPab** **04 52 56.1 +1.6**
TORD PKKP **PKKPdf** **04 53 10.6 +3.0**
TORD SKKPbc SKKPbc 04 56 21.7 -1.9
TORD Torodi Ar. Bea 115.14 327 PKP **PKPdf** **04 42 10.6 -0.6**
comp=Z,9.4nm,0.5s,baz=14,slow=2.3,SNR=69
TORD PP **PP** **04 43 09.9 -0.6**
comp=Z,13nm,0.9s,baz=9.0,slow=5.9,SNR=4.7
TORD PKKPbc **PKKPbc** **04 52 44.9 +0.2**
comp=Z,2.6nm,0.9s,baz=203,slow=2.3,SNR=8.3
TORD PKKPab **PKKPab** **04 52 56.1 +1.6**
comp=Z,3.5nm,1.0s,baz=209,slow=2.6,SNR=5.6
TORD PKKP **PKKPdf** **04 53 10.6 +3.0**
comp=Z,1.5nm,0.8s,baz=193,slow=1.8,SNR=3.1
TORD SKKPbc SKKPbc 04 56 21.7 -1.9
comp=Z,2.6nm,0.8s,baz=177,slow=4.4,SNR=4.1
OTAV Otavalo 116.35 59 *e*PKPdf **PKPdf** **04 42 11.8 -2.4**
OTAV LR LR
comp=Z,17µm,21.0s
CASY Casey 116.36 197 *e*PKPdf **PKPdf** **04 42 11.5 -0.4**
CASY LR LR
comp=Z,17µm,22.0s
PAF Port-aux-Franc 118.36 227 PFAKE 04 42 30.0 +14
PAF LR LR
comp=Z,14µm,20.0s
SACV Santiago Islan 119.11 355 PFAKE 04 42 30.0 +11
SACV LR LR
comp=Z,17µm,20.0s
ATAH Atahualpa 122.17 64 PKP **PKPdf** **04 42 25.7 +0.4**
ATAH PKKPab **PKKPab** **04 52 23.1 +0.3**
ATAH Atahualpa 122.17 64 PKP **PKPdf** **04 42 25.7 +0.4**
comp=Z,31nm,0.8s,baz=6.9,slow=0.9,SNR=17
ATAH PKKPab **PKKPab** **04 52 23.1 +0.3**
comp=Z,10nm,0.9s,baz=98,slow=4.6,SNR=4.8
VNDA Vanda 123.47 177 *e*PKPdf **PKPdf** **04 42 24.4 -0.9**
VNDA PKP **PKPdf** **04 42 24.6 -0.6**
VNDA PP **PP** **04 44 10.4 +2.4**
VNDA PKKPbc **PKKPbc** **04 52 15.7 +0.4**
VNDA SKKPbc SKKPbc 04 55 55.9 -8.5
VNDA Vanda 123.47 177 PKP **PKPdf** **04 42 24.6 -0.6**
comp=Z,24nm,0.8s,baz=322,slow=3.8,SNR=67
VNDA PP **PP** **04 44 10.4 +2.4**
comp=Z,4.4nm,0.9s,baz=27,slow=11,SNR=2.9
VNDA PKKPbc **PKKPbc** **04 52 15.7 +0.4**
comp=Z,5.2nm,0.7s,baz=228,slow=2.3,SNR=13
VNDA SKKPbc SKKPbc 04 55 55.9 -8.5
comp=Z,3.7nm,1.1s,baz=248,slow=4.2,SNR=3.1
DBIC Dimbokro 123.47 332 *e*PKPdf **PKPdf** **04 42 26.8 -0.5**
DBIC PP **PP** **04 44 02.7 -5.1**
DBIC *e* 04 44 03.0
DBIC PKKPbc **PKKPbc** **04 52 14.8 +0.5**
DBIC Dimbokro 123.47 332 PKP **PKPdf** **04 42 26.8 -0.5**
comp=Z,63nm,0.7s,baz=16,slow=2.1,SNR=64
DBIC PP **PP** **04 44 02.7 -5.1**
comp=Z,12nm,0.8s,baz=6.0,slow=7.6,SNR=2.6
DBIC PKKPbc **PKKPbc** **04 52 14.8 +0.5**
comp=Z,4.5nm,0.9s,baz=169,slow=7.4,SNR=4.3
LSZ Lusaka 123.94 284 *e*PKPdf **PKPdf** **04 42 27.9 -0.3**
LSZ PKP **PKPdf** **04 42 28.2 +0.1**
LSZ *e*PP **PP** **04 44 11.8 -0.4**
LSZ PP PP 04 44 14.0 +1.9
LSZ SKKPbc SKKPbc 04 55 51.9 -5.9
LSZ LR LR
comp=Z,37µm,22.0s
LSZ Lusaka 123.94 284 PKP **PKPdf** **04 42 28.2 +0.1**
comp=Z,38nm,0.7s,baz=35,slow=6.0,SNR=51
LSZ PP **PP** **04 44 14.0 +1.9**
comp=Z,11nm,1.0s,baz=68,slow=11,SNR=4.8
LSZ SKKPbc SKKPbc 04 55 51.9 -5.9
comp=Z,1.9nm,0.8s,baz=180,slow=3.0,SNR=2.6
LIC Lamto 123.94 332 ⇑*i*PKIKP **PKPdf** **04 42 27.7 -0.5**
comp=Z,111nm,0.7s
LIC *e*R
comp=Z,37µm,21.8s
LIC Lamto 123.94 332 ⇑*i*PKPdf **PKPdf** **04 42 27.7 -0.5**
SBA Scott Base 123.99 176 *e*PKIKP **PKPdf** **04 42 25.9 -0.4**
SBA MLR MLR
comp=Z,27µm,22.0s
SBA Scott Base 123.99 176 *e*PKPdf **PKPdf** **04 42 25.9 -0.4**
SBA LR LR
comp=Z,27µm,22.0s
NNA Nana 126.85 66 *e*PKPdf **PKPdf** **04 42 32.9 -0.8**
NNA PKP **PKPdf** **04 42 33.5 -0.2**
NNA SKKPbc SKKPbc 04 55 42.3 -5.1
NNA LR LR
comp=Z,18µm,19.0s
NNA Nana 126.85 66 PKP **PKPdf** **04 42 33.5 -0.2**
comp=Z,41nm,0.8s,baz=320,slow=4.2,SNR=15
NNA SKKPbc SKKPbc 04 55 42.3 -5.1
comp=Z,8.1nm,0.8s,baz=180,slow=8.1,SNR=3.1
MAW Mawson 131.08 211 PKP **PKPdf** **04 42 40.1 +0.1**
MAW SKPbc **SKPab** **04 46 03.0 +1.5**
MAW Mawson 131.08 211 PKP **PKPdf** **04 42 40.1 +0.1**
comp=Z,22nm,0.8s,baz=323,slow=2.9,SNR=8.6
MAW SKPbc **SKPab** **04 46 03.0 +1.5**
comp=Z,35nm,1.3s,baz=75,slow=6.4,SNR=3.3
LBTB Lobatse 132.34 277 PKPpre PKPpre 04 42 29.0
LBTB PKP **PKPdf** **04 42 43.0 -1.0**
LBTB *e*PKPdf **PKiKP** **04 42 43.8 -1.3**
LBTB PP **PP** **04 45 10.1 +2.7**
LBTB SKPbc **SKPab** **04 46 09.0 +0.6**
LBTB Lobatse 132.34 277 PKhKP PKPpre 04 42 29.0
comp=Z,5.2nm,0.7s,baz=11,slow=4.1,SNR=7.3
LBTB PKP **PKPdf** **04 42 43.0 -1.0**
comp=Z,12nm,0.7s,baz=179,slow=2.8,SNR=7.0
LBTB PP **PP** **04 45 10.1 +2.7**
comp=Z,15nm,0.8s,baz=79,slow=5.5,SNR=4.0
LBTB SKPbc **SKPab** **04 46 09.0 +0.6**
comp=Z,16nm,0.9s,baz=60,slow=8.0,SNR=2.3
SAML Samuel 132.51 50 *e*PKPdf **PKPdf** **04 42 41.9 -2.6**
SAML *e*PP **PP** **04 45 08.6 +0.8**
SAML LR LR
comp=Z,20µm,21.0s
TSUM Tsumeb 133.81 290 PKPpre PKPpre 04 42 33.1
TSUM *e*PKPdf **PKPdf** **04 42 45.9 -1.0**
TSUM *e*PP PP 04 45 08.2 -8.5
TSUM PP PP 04 45 16.1 -0.5
TSUM SKPbc **SKPbc** **04 46 13.1 +0.7**
TSUM LR LR
comp=Z,36µm,21.0s
TSUM Tsumeb 133.81 290 PKhKP PKPpre 04 42 33.1
comp=Z,3.8nm,0.6s,baz=62,slow=2.9,SNR=6.6
TSUM PKP **PKPdf** **04 42 45.8 -1.0**
comp=Z,29nm,0.8s,baz=48,slow=4.3,SNR=21
TSUM PP **PP** **04 45 16.1 -0.5**
comp=Z,7.3nm,0.8s,baz=8.5,slow=2.6,SNR=4.5
TSUM SKPbc **SKPbc** **04 46 13.1 +0.7**
comp=Z,5.6nm,0.8s,baz=56,slow=5.4,SNR=3.9
BOSA Boshof 134.84 273 PKPpre PKPpre 04 42 35.9
BOSA PKP **PKPdf** **04 42 47.0 -1.6**
BOSA *e*PKPdf **PiKiP** **04 42 48.1 -1.8**
BOSA *e*PP **PP** **04 45 19.2 -4.2**
BOSA PP PP 04 45 20.1 -3.3
BOSA SKPbc **SKPbc** **04 46 17.0 +1.5**
BOSA Boshof 134.84 273 PKhKP PKPpre 04 42 35.9
comp=Z,7.5nm,0.8s,baz=137,slow=6.1,SNR=8.8
BOSA PKP **PKPdf** **04 42 47.0 -1.6**
comp=Z,28nm,0.8s,baz=46,slow=1.5,SNR=16
BOSA PP **PP** **04 45 20.1 -3.3**
comp=Z,7.1nm,0.8s,baz=52,slow=7.8,SNR=3.0
BOSA SKPbc **SKPbc** **04 46 17.0 +1.5**
comp=Z,14nm,1.0s,baz=118,slow=1.9,SNR=3.3
LPAZ La Paz 135.57 61 PKPpre PKPpre 04 42 39.3
LPAZ *e*PKPdf **PKPdf** **04 42 50.4 -0.4**
LPAZ PKP **PKPdf** **04 42 51.1 +0.2**
LPAZ PP **PP** **04 45 30.3 +2.1**
LPAZ SKPbc **SKPbc** **04 46 19.3 +0.5**
LPAZ La Paz 135.57 61 PKhKP PKPpre 04 42 39.3
comp=Z,2.5nm,0.9s,baz=19,slow=8.7,SNR=7.1
LPAZ PKP **PKPdf** **04 42 51.1 +0.2**
comp=Z,35nm,0.8s,baz=351,slow=3.6,SNR=39
LPAZ PP **PP** **04 45 30.3 +2.1**
comp=Z,9.2nm,1.2s,baz=341,slow=5.1,SNR=2.8
LPAZ SKPbc **SKPbc** **04 46 19.3 +0.5**
comp=Z,15nm,1.1s,baz=345,slow=9.3,SNR=3.5
QSPA South Pole Qui 135.79 180 PKPpre PKPpre 04 42 36.6

QSPA				ePKPdf	PKPdf	04 42 45.5	-3.5
QSPA				PKP	PKPdf	04 42 49.6	+0.6
QSPA				PP	PP	04 45 21.6	-7.0
QSPA				SKPbc	SKPbc	04 46 17.4	+0.3
QSPA				LR	LR		
	comp=Z,33µm,22.0s						
QSPA	South Pole Qui	135.79	180	PKhKP	PKPpre	04 42 36.6	
	comp=Z,10nm,0.7s,baz=337,slow=3.0,SNR=14						
QSPA				PKP	PKPdf	04 42 49.6	+0.6
	comp=Z,69nm,1.0s,baz=357,slow=1.0,SNR=24						
QSPA				PP	PP	04 45 21.6	-7.0
	comp=Z,5.5nm,0.8s,baz=293,slow=7.7,SNR=1.4						
QSPA				SKPbc	SKPbc	04 46 17.4	+0.3
	comp=Z,17nm,1.0s,baz=328,slow=4.6,SNR=5.8						
RCBR	Riachuelo	139.40	12	ePKPdf	PKPdf	04 42 57.6	+0.3
RCBR				LR	LR		
	comp=Z,19µm,21.0s						
SIV	San Ignacio	139.47	53	PKPpre	PKPpre	04 42 46.9	
SIV				PKP	PKPdf	04 42 55.7	-1.6
SIV				PP	PP	04 45 49.4	-2.3
SIV	San Ignacio	139.47	53	PKhKP	PKPpre	04 42 46.9	
	comp=Z,5.6nm,0.6s,baz=317,slow=2.9,SNR=13						
SIV				PKP	PKPdf	04 42 55.7	-1.6
	comp=Z,25nm,0.7s,baz=332,slow=2.3,SNR=26						
SIV				PP	PP	04 45 49.4	-2.3
	comp=Z,9.9nm,0.9s,baz=5.2,slow=4.1,SNR=4.7						
SYO	Syowa Base	139.79	211⇑	eP	PKPpre	04 42 46.0	
SYO	Syowa Base	139.79	211⇓	eX	PKPdf	04 42 52.6	-3.6
SUR	Sutherland	140.15	272	PKPpre	PKPpre	04 42 51.0	
SUR				PKP	PKPdf	04 42 58.9	+0.6
SUR				LR	LR		
	comp=Z,27µm,20.0s						
SUR	Sutherland	140.15	272	PKhKP	PKPpre	04 42 51.0	
	comp=Z,13nm,0.7s,baz=114,slow=2.6,SNR=10						
SUR				PKP	PKPdf	04 42 58.9	+0.6
	comp=Z,25nm,0.7s,baz=117,slow=2.3,SNR=10						
LCO	Las Campanas	142.86	78	ePKPdf	PKPdf	04 43 00.1	-3.3
LCO				LR	LR		
	comp=Z,42µm,22.0s						
TLL	Tololo Astrono	143.50	79	eP	PKPab	04 43 00.8	0.0
SHEL	Horse Pasture	144.53	320	ePKIKP	PKPdf	04 43 06.2	-0.2
SHEL				MLR	MLR		
	comp=Z,18µm,21.0s						
SHEL	Horse Pasture	144.53	320	ePKPdf	PKPdf	04 43 06.2	-0.2
SHEL				LR	LR		
	comp=Z,18µm,21.0s						
PEL	Peldehue	145.34	83⇓	eP	PKPbc	04 43 06.4	-0.8
BDFB	Brasilia	145.50	35	PKPbc	PKPbc	04 43 08.2	0.0
BDFB	Brasilia	145.50	35	PKPbc	PKPbc	04 43 08.2	0.0
	comp=Z,57nm,0.8s,baz=334,slow=5.6,SNR=53						
CLCH	Cerro Calan	145.58	84	eP	PKPdf	04 43 04.8	-3.0
FCH	Farellones	145.71	83	eP	PKPpre	04 42 58.0	
LMEL	Las Melosas	146.06	84⇑	eP	PKPdf	04 43 08.7	0.0
CFAA	Coronel Fontan	146.13	79	PKPbc	PKPdf	04 43 08.7	0.0
CFAA				SKPbc	SKPbc	04 46 33.2	-12
CFAA	Coronel Fontan	146.13	79	PKPbc	PKPdf	04 43 08.7	0.0
	comp=Z,7.7nm,0.8s,baz=290,slow=3.2,SNR=124						
CFAA				SKPbc	SKPbc	04 46 33.2	-12
	comp=Z,0.9nm,0.8s,baz=292,slow=3.9,SNR=1.8						
CCHI	Chillan	146.21	90⇑	eP	PKPdf	04 43 08.9	+0.3
MAIT	Maitri	148.61	204	eP	PKPpre	04 43 00.9	
PLCA	Paso Flores	149.16	95	ePKPdf	PKPdf	04 43 12.9	-0.5
PLCA				PKP	PKPdf	04 43 14.0	+0.6
PLCA				ePKPbc	PKPbc	04 43 17.9	+0.1
PLCA	Paso Flores	149.16	95	PKP	PKPdf	04 43 14.0	+0.6
	comp=Z,68nm,0.8s,baz=240,slow=3.5,SNR=35						
PLCA				PKPbc	PKPbc	04 43 17.8	+0.1
	comp=Z,68nm,0.8s,baz=278,slow=3.0,SNR=67						
CPUP	Villa Florida	149.70	59	PKP	PKPdf	04 43 15.1	+0.4
CPUP				PKPbc	PKPbc	04 43 18.7	-0.6
CPUP	Villa Florida	149.70	59	PKP	PKPdf	04 43 15.1	+0.4
	comp=Z,63nm,0.7s,baz=322,slow=2.5,SNR=22						
CPUP				PKPbc	PKPbc	04 43 18.7	-0.6
	comp=Z,58nm,0.7s,baz=331,slow=2.1,SNR=23						
COYC	Coyhaique	149.81	105⇑	eP	PKPdf	04 43 12.5	-1.7
SNAA	Sanae	151.60	197	ePKPdf	PKPdf	04 43 15.7	-0.6
SNAA	Sanae	151.60	197	eP	PKPbc	04 43 22.0	-0.6
SNAA	Sanae	151.60	197	eKuril	PKPab	04 43 37.2	+5.8
SNAA	Sanae	151.60	197	epbPab	pPKPab	04 43 45.1	+1.2
SNAA	Sanae	151.60	197	esPKPab	sPKPab	04 43 52.9	+4.5
SNAA	Sanae	151.60	197	ePKPdf	PKPdf	04 43 15.0	-1.3
SNAA				ePKPbc	PKPbc	04 43 21.9	-0.7
SPB	Sao Paulo	152.80	41	ePKPdf	PKPdf	04 43 21.3	+1.9
SPB				ePKPbc	PKPbc	04 43 26.6	0.0
SPB				LR	LR		
	comp=Z,29µm,22.0s						
PMSA	Palmer Station	152.98	147	ePKPdf	PKPdf	04 43 18.2	-0.1
PMSA				ePKPbc	PKPbc	04 43 25.1	-0.6
PMSA				PKPbc	PKPbc	04 43 25.8	+0.1
PMSA				LR	LR		
	comp=Z,38µm,21.0s						
PMSA	Palmer Station	152.98	147	PKPbc	PKPbc	04 43 25.8	+0.1
	comp=Z,36nm,0.9s,baz=128,slow=4.1,SNR=9.6						
VNA2	Neumayer--Watz	153.07	195	ePKPdf	PKPdf	04 43 18.2	-0.2
	baz=119,slow=2.0						
VNA2	Neumayer--Watz	153.07	195	eP	PKPbc	04 43 26.0	+0.2
	baz=119,slow=2.0						
VNA2	Neumayer--Watz	153.07	195	eKuril	PKPab	04 43 36.9	-0.6
	baz=119,slow=2.0						
VNA2	Neumayer--Watz	153.07	195	epbPab	pPKPab	04 43 47.6	-2.4
	baz=119,slow=2.0						
VNA2	Neumayer--Watz	153.07	195	esPKPab	sPKPab	04 43 52.7	-1.8
	baz=119,slow=2.0						
VNA2	Neumayer--Watz	153.07	195	eSKPdf	SKPdf	04 46 47.3	-0.8
	baz=119,slow=2.0						
VNA3	Neumayer Olymp	153.19	193	ePKPdf	PKPdf	04 43 19.4	+0.8
VNA3	Neumayer Olymp	153.19	193	eP	PKPbc	04 43 25.9	-0.2
VNA3	Neumayer Olymp	153.19	193	eKuril	PKPab	04 43 35.9	-2.1
VNA3	Neumayer Olymp	153.19	193	epbPab	pPKPab	04 43 48.7	-1.8
VNA3	Neumayer Olymp	153.19	193	esPKPab	sPKPab	04 43 53.9	-1.1
VNA3	Neumayer Olymp	153.19	193	eSKPdf	SKPdf	04 46 47.5	-0.8
USHA	Ushuaia	153.34	124	PKPbc	PKPbc	04 43 26.4	-0.4
USHA	Ushuaia	153.34	124	PKPbc	PKPbc	04 43 26.4	-0.4
	comp=Z,28nm,0.9s,baz=314,slow=2.9,SNR=12						
VNA1	Neumayer--Stat	153.46	195	ePKPdf	PKPdf	04 43 21.0	+2.1
VNA1	Neumayer--Stat	153.46	195	eP	PKPbc	04 43 26.7	+0.1
VNA1	Neumayer--Stat	153.46	195	eKuril	PKPab	04 43 37.7	-1.4
VNA1	Neumayer--Stat	153.46	195	esPKPab	sPKPab	04 43 51.3	-4.8
VNA1	Neumayer--Stat	153.46	195	eSKPdf	SKPdf	04 46 48.1	-0.5
CAM4	Nova Friburgo	153.68	31⇑	iP	PKPdf	04 43 21.5	+0.4
CAM4				i		04 43 23.9	
CAM4				i		04 43 27.4	
CAM4				i		04 43 29.6	
CAM4				i		04 43 38.9	
CAM4				i		04 43 41.2	
CAM4				i		04 43 46.5	
CAM4				i		04 43 58.9	
CAM4				i		04 44 05.4	
CAM4				i		04 44 13.2	
TRQA	Tornquist	153.94	84	ePKPdf	PKPdf	04 43 19.7	-1.0
TRQA				LR	LR		
	comp=Z,58µm,22.0s						
LPA	La Plata	155.04	74	PKP	PKPab	04 43 45.0	-1.9
LPA				PP	PP	04 47 26.0	+2.6
LPA				PPP	PPP	04 50 59.0	
LPA				SKKS		04 54 06.0	
LPA				SDIFF		04 56 29.0	
LPA				PPP(2)		04 56 39.0	
LPA				SKKS(2)		04 57 58.0	
LPA				PPS	PPS	05 00 30.0	
LPA				SS	SS	05 07 08.0	+3.9
EFI	East Falkland	159.75	117	PFAKE		04 43 40.0	+12
EFI				LR	LR		
	comp=Z,50µm,22.0s						

FUNV 07 04:30:51.8, 5°.02N×73°.52W, h5km, MW3.7, 3D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	Capacho	3.07	23⇓	eP	Pn	04 31 41.2	-0.1
CAPV				eS	Sn	04 32 16.6	-2.0
SOCV	Socops	4.18	39⇓	eP	Pn	04 31 55.4	-1.0
SOCV				eS	Sn	04 32 41.5	-4.2
VIGV	El Vigia	4.36	29	eP	Pn	04 31 57.5	-1.3
VIGV				eS	Sn	04 32 45.3	-4.7
ELOV	Elorza	4.47	64	eP	Pn	04 31 59.0	-1.3
ELOV				eS	Sn	04 32 49.0	-3.8
QARV	Quebrada Arrib	5.95	30	eP	Pn	04 32 19.1	-1.6
QARV				eS	Sn	04 33 22.9	-6.3
SANV	Sanarito	5.95	41	eP	Pn	04 32 18.6	-2.2
SANV				eS	Sn	04 33 22.2	-7.4
CURV	Curarigua	6.09	35	eP	Pn	04 32 19.9	-2.7
DABV	Dabajuro	6.52	26	eP	Pn	04 32 26.0	-2.5
TEPV	Terepaima	6.52	41	eP	Pn	04 32 26.1	-2.5
BAUV	El Baul	6.69	54⇓	eP	Pn	04 32 27.9	-2.9
BAUV				eS	Sn	04 33 40.5	-7.0
SIQV	Siquisique	6.69	33	eP	Pn	04 32 28.6	-2.2
MAPV	Macapo	6.93	46	eP	Pn	04 32 31.7	-2.5
MONV	Montecano	7.73	27	eP	Pn	04 32 42.0	-3.1
TURV	Turiamo	7.79	46	eP	Pn	04 32 43.3	-2.7
MERV	Las Mercedes	8.31	59	eP	Pn	04 32 50.0	-3.1
FUNV	FUNVISIS	8.57	50	eP	Pn	04 32 53.9	-3.0
BIRV	Birongo	9.00	53	eP	Pn	04 32 59.8	-2.7
CUPV	Cœpira	9.15	56	eP	Pn	04 33 01.6	-3.2

IDC 07 04:32:53.6±2.1, 22°.73S×176°.01W, h0km, mb4.4/4, mb1 4.7/4, mb1mx4.2/18, mbtmp4.4/4, MS5.8/1, Ms1 5.8/1, ms1mx4.7/26, Error ellipse: s-maj=101.5km s-min=39.5km az=148.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	35.17	267	LR	LR	04 51 42.9	
	comp=Z,17µm,20.4s,baz=257,slow=32						
WRA	Warramunga Arr	46.16	264	P	P	04 41 21.8	+1.4
	1.1nm,0.9s,baz=96,slow=8.1,SNR=3.2						
PETK	Petropavlovsk-	78.90	344	P	P	04 44 58.0	-0.6
	5.3nm,0.8s,baz=144,slow=11,SNR=4.5						
ILAR	Eielson Array	90.09	12	P	P	04 45 56.8	+1.9
	0.6nm,0.4s,baz=215,slow=5.4,SNR=17						
CMAR	Chiang Mai Arr	92.60	289	P	P	04 46 06.5	-1.1
	2.6nm,0.8s,baz=116,slow=2.1,SNR=6.5						
ZALV	Zalesovo Beam	113.39	321	PKiKP	PKiKP	04 51 32.4	-0.7
	0.4nm,0.5s,baz=101,slow=2.2,SNR=3.2						
MKAR	Makanchi Array	114.07	313	PKP	PKPdf	04 51 34.5	-0.2
	0.3nm,0.5s,baz=94,slow=1.1,SNR=4.7						
BVAR	Borovoye Array	121.97	319	PKP	PKPdf	04 51 48.6	-1.1
	1.2nm,0.4s,baz=107,slow=3.2,SNR=6.3						
ARCES	ARCESS Array B	131.44	350	PKP	PKPdf	04 52 07.7	+0.4
	2.1nm,0.8s,baz=19,slow=3.1,SNR=6.0						
FINES	FINESS Array B	138.42	344	PKP	PKPdf	04 52 20.7	+0.2
	0.6nm,0.5s,baz=84,slow=4.3,SNR=3.1						
AKASG	Malin Array Be	145.85	331	PKPbc	PKPdf	04 52 32.5	-1.6
	4.1nm,0.4s,baz=44,slow=4.3,SNR=18						
BRTR	Keskin Array B	149.70	311	PKPbc	PKPbc	04 52 44.2	-1.5
	1.6nm,0.6s,baz=137,slow=4.3,SNR=11						
GERES	GERESS Array B	152.82	346	PKPbc	PKPbc	04 52 53.0	+0.4
	1.2nm,0.7s,baz=33,slow=2.3,SNR=9.1						

CSEM 07 04:34:50.6, 40°.47N×16°.20E, h27km, MD2.0/10, After ROM

ROM 07 04:34:50.6±0.2, 40°.47N×16°.20E, h27km±2km, Md2.0/10, Ml1.8/5, Error ellipse: s-maj=1.4km s-min=1.0km az=143.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTRP	Pietrapertosa	0.12	294	Pg	Pb	04 34 56.1	+0.2
PTRP				Sg	Sb	04 35 00.2	+0.7
	451nm,4.0s						
PTRP	Pietrapertosa	0.12	294	Pg	Pb	04 34 56.1	+0.2
PTRP				Sg	Sb	04 35 00.2	+0.7
	451nm,4.0s						
CRAC	Craco	0.21	121	Pg	Pb	04 34 57.1	+0.5
CRAC				Sg	Sb	04 35 01.2	+0.5
	116nm,0.6s						
CRAC	Craco	0.21	121	Pg	Pb	04 34 57.1	+0.5
CRAC				Sg	Sb	04 35 01.2	+0.5
	116nm,0.6s						
MIGL	Miglionico	0.22	54	Pg	Pb	04 34 57.0	+0.1
MIGL				Sg	Sb	04 35 01.3	+0.2
	205nm,0.3s						
MIGL	Miglionico	0.22	54	Pg	Pb	04 34 57.0	+0.1
MIGL				Sg	Sb	04 35 01.3	+0.2
	205nm,0.3s						
SCHR	S. Chirico Rap	0.29	200	Pg	Pb	04 34 58.0	+0.2
SCHR				Sg	Sb	04 35 03.4	+0.7
SCHR	S. Chirico Rap	0.29	200	Pg	Pb	04 34 58.0	+0.2
SCHR				Sg	Sb	04 35 03.4	+0.7
MCEL	Monticello	0.34	244	Pg	Pb	04 34 58.7	+0.1
MCEL				Sg	Sb	04 35 03.9	-0.1
	79nm,0.2s						
MCEL	Monticello	0.34	244	Pg	Pb	04 34 58.7	+0.1
MCEL				Sg	Sb	04 35 03.9	-0.1
	79nm,0.2s						
ACER	Acerenza	0.37	328	Pg	Pb	04 34 59.2	+0.2
ACER				Sg	Sb	04 35 05.2	+0.5
ACER	Acerenza	0.37	328	Pg	Pb	04 34 59.2	+0.2
ACER				Sg	Sb	04 35 05.2	+0.5
SIRI	Monte Sirino -	0.39	222	Pg	Pb	04 34 59.3	0.0
SIRI				Sg	Sb	04 35 05.5	+0.3
	47nm,0.2s						
SIRI	Monte Sirino -	0.39	222	Pg	Pb	04 34 59.3	0.0
SIRI				Sg	Sb	04 35 05.5	+0.3
	47nm,0.2s						
MTSN	Montesano sull	0.40	239	Pg	Pb	04 34 59.5	0.0
MTSN				Sg	Sb	04 35 05.8	+0.2
MTSN	Montesano sull	0.40	239	Pg	Pb	04 34 59.5	0.0
MTSN				Sg	Sb	04 35 05.8	+0.2
MATE	Matera	0.42	65	Pg	Pb	04 35 00.0	+0.4
MATE				Sg	Sb	04 35 05.9	+0.2
MATE	Matera	0.42	65	Pg	Pb	04 35 00.0	+0.4
MATE				Sg	Sb	04 35 05.9	+0.2
CUC	Castrocucco	0.56	212	Pg	Pb	04 35 01.8	-0.3
CUC	Castrocucco	0.56	212	Pg	Pb	04 35 01.8	-0.3

JMA 07 04:38:51.7±0.9, 46°.12N×152°.29E, h30km, M4.5
ISCJB 07 04:38:53.6±0.7, 46°.1N±0°.1×151°.9E±0°.1, h48km, mb3.7/11, Error ellipse: s-maj=21.2km s-min=5.0km az=142.2
MOS 07 04:38:54.8±1.2, 46°.21N×151°.88E, h56km, mb4.0/6, Error ellipse: s-maj=22.0km s-min=14.8km az=61.2
IDC 07 04:38:56.7±4.3, 46°.17N×151°.76E, h55km±37km, mb3.5/11, mb1 3.7/13, mb1mx3.5/24, mbtmp3.5/13, ML3.7/1, Error ellipse: s-maj=29.0km s-min=21.5km az=150.0

ISC 07 04:38:54.6±0.8, 45°.9N±0°.1×152°.1E±0°.1, h48km, n38, σ1§87/43, mb3.7/11, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	4.77	250d	iPN	Pn	04 40 05.9	+1.9
YUK				iS	Sn	04 41 02.1	+4.1
YUK				pmax	pmax		
	comp=Z,82nm,1.4s						
YUK				pmax	pmax		
	comp=N,56nm,1.4s						
YUK				pmax	pmax		
	comp=E,51nm,0.7s						
YUK				smax	smax		
	comp=N,117nm,1.3s						
YUK				smax	smax		
	comp=E,107nm,0.7s						
NEM2	Nemuro 2	5.16	243	P	Pn	04 40 09.4	+0.1
NEM2				eS	Sn	04 41 07.1	-0.5
JRA	Rausu	5.30	251	P	Pn	04 40 13.9	+2.7
SKR	Severo-Kuril's	5.53	28	ePN	Pn	04 40 12.4	-1.8
SKR				e		04 41 10.5	
JNK	Nakash	5.71	249	P	Pn	04 40 18.3	+1.4
JAK	Akkeshi	6.01	244	P	Pn	04 40 21.0	+0.1
JAK				eS	Sn	04 41 27.0	-1.4
JTKR	Abashiri--Toko	6.10	255	P	Pn	04 40 24.6	+2.5
JMP	Maruseppu	6.46	256	P	Pn	04 40 29.8	+2.7
JAR	Ashorobuto	6.46	250	P	Pn	04 40 28.9	+1.8
JAR				eS	Sn	04 41 41.8	+2.3
JOB	Onbets	6.60	246	P	Pn	04 40 29.9	+0.8
JKK2	Kamakawa 2	6.92	257	P	Pn	04 40 36.4	+3.0
ASAJ	Asahikawa	6.94	259	P	Pn	04 40 37.3	+3.6
ASAJ	Asahikawa	6.94	259	P	Pn	04 40 36.4	+2.7
	comp=E,2.0nm,0.3s,baz=17,slow=19,SNR=4.6						
JCH	Churui	7.05	246	P	Pn	04 40 35.9	+0.7
JCH				eS	Sn	04 41 52.2	-1.7
JEM	Erimo	7.50	242	P	Pn	04 40 42.9	+1.6
JNBK	Urakawa-nobuka	7.61	245	P	Pn	04 40 42.9	+0.1
JBT2	Biratori 2	7.62	250	P	Pn	04 40 43.7	+0.8
PETK	Petropavlovsk-	8.12	25	ePN	Pn	04 40 57.2	+7.4
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	8.12	25	P	Pn	04 40 49.0	-0.8
	baz=223,slow=9.9,SNR=1.9						
JNB	Noboribetsu	8.63	251	P	Pn	04 40 57.8	+1.0
JKB	Kayabe	8.91	247	P	Pn	04 41 00.4	-0.2
JKB				eS	Sn	04 42 34.5	-5.1
JANG	Nango	9.47	238	P	Pn	04 41 06.0	-2.3
JSR	Shiriuchi	9.49	247	P	Pn	04 41 08.5	-0.1
KSRS	Korea Array	19.85	254	P	Pn	04 43 23.3	0.0
	comp=Z,0.2nm,0.3s,baz=61,slow=13,SNR=4.1						
ZALV	Zalesovo Beam	42.55	306	PcP	PcP	04 48 38.0	+1.1
	comp=Z,0.4nm,0.4s,baz=73,slow=4.8,SNR=2.4						
MKAR	Makanchi Array	46.71	298	P	P	04 47 17.4	-1.2
MKAR						04 48 52.2	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	46.71	298	P	P	04 47 17.4	-1.2
	comp=Z,0.4nm,0.6s,baz=67,slow=7.2,SNR=4.3						
MKAR				PcP	PcP	04 48 52.2	+0.8
	comp=Z,0.6nm,0.7s,baz=73,slow=5.0,SNR=3.5						
YKA	Yellowknife Ar	52.06	36	P	P	04 47 59.8	+0.7
	comp=Z,0.5nm,0.7s,baz=296,slow=6.9,SNR=4.2						
ARCES	ARCESS Array B	58.45	341	P	P	04 48 44.6	-0.4
	comp=Z,1.6nm,0.8s,baz=30,slow=7.6,SNR=3.8						
FINES	FINESS Array B	64.53	334	P	P	04 49 24.2	-1.9
	comp=Z,0.7nm,0.6s,baz=36,slow=7.6,SNR=6.8						
PDAR	Pinedale Array	65.85	53	P	P	04 49 36.9	+1.7
	comp=Z,0.4nm,0.7s,baz=316,slow=2.5,SNR=3.0						
WRA	Warramunga Arr	67.44	198	P	P	04 49 46.9	+1.7
	comp=Z,0.3nm,0.3s,baz=14,slow=6.7,SNR=2.3						
NOA	NORSAR Array B	68.83	341	P	P	04 49 52.1	-1.4
	comp=Z,0.5nm,0.5s,baz=28,slow=6.6,SNR=5.8						
AKASG	Malin Array Be	71.88	326	eP	P	04 50 11.4	-0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	71.88	326	P	P	04 50 09.8	-2.4
	comp=Z,0.5nm,0.4s,baz=46,slow=5.9,SNR=4.1						
BRTR	Keskin Array B	78.54	316	P	P	04 50 51.0	+0.1
	comp=Z,0.8nm,0.8s,baz=83,slow=3.5,SNR=4.0						
TXAR	Lajitas Array	78.56	60	P	P	04 50 52.9	+1.8
	comp=Z,0.3nm,0.6s,baz=298,slow=4.8,SNR=4.2						
GERES	GERESS Array B	78.93	333	P	P	04 50 52.1	-0.8
	comp=Z,0.6nm,0.6s,baz=56,slow=3.4,SNR=4.9						

DJA 07 04:53:19.6±1.0, 0°N±4°×12°5E±°, h27km±14km, M4.0/3, MLv4.0/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	Manado	1.14	337	P	Pn	04 53 38.0	-1.8
MNI				S	Sn	04 53 54.4	-0.2
KMSI	Cibinong	1.32	278	P	Pn	04 53 43.0	+0.7
KMSI				S	Sb	04 53 59.8	-0.5
TNTI	Ternate	2.11	80	S	Sn	04 54 20.2	+1.6
LUWI	Luwuk	2.89	241	S	Sn	04 54 39.2	+1.4
NLAI	Namlea	4.03	153	P	Pn	04 54 21.4	+1.8
NLAI				S	Sn	04 55 06.9	+0.9

ISCJB 07 05:03:46.9±0.2, 42°.47N±0°.02×13°.40E±0°.02, h12km±2km, Error ellipse: s-maj=3.3km s-min=2.7km az=142.6
ROM 07 05:03:46.9±0.1, 42°.46N×13°.42E, h9km, Ml3.3/19, Error ellipse: s-maj=1.3km s-min=0.8km az=76.0
CSEM 07 05:03:47.4±0.1, 42°.46N×13°.42E, h5km, ML3.8/10, Error ellipse: s-maj=3.0km s-min=2.2km az=64.0
LDG 07 05:03:49.8±0.5, 42°.44N×13°.33E, h2km, Ml3.1/7, Error ellipse: s-maj=10.4km s-min=7.2km az=115.0

ISC 07 05:03:47.6±0.8, 42°.46N±0°.02×13°.39E±0°.02, h10km±4km, n88, σ1§25/134, 1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.07	11	Pg	Pg	05 03 49.9	-0.1
CAMP				Sg	Sg	05 03 51.0	-0.8
CAMP	Campotosto	0.07	11	Pg	Pg	05 03 49.9	-0.1
CAMP				Sg	Sg	05 03 51.0	-0.8
AQU	L'Aquila	0.11	175	Pg	Pg	05 03 50.3	-0.1
AQU				Sg	Sg	05 03 52.4	+0.1
	21µm,0.6s						
AQU	L'Aquila	0.11	175	Pg	Pg	05 03 50.3	-0.1
AQU				Sg	Sg	05 03 52.4	+0.1
	21µm,0.6s						
TERO	Teramo	0.23	45	Pg	Pg	05 03 51.9	-0.4
TERO				Sg	Sg	05 03 55.3	-0.2
	7µm,0.5s						
TERO	Teramo	0.23	45	Pg	Pg	05 03 51.9	-0.4
TERO				Sg	Sg	05 03 55.3	-0.2
	7µm,0.5s						
FAGN	Fagnano	0.24	144	Pg	Pg	05 03 52.3	-0.3
FAGN				Sg	Sg	05 03 56.4	+0.4
	9µm,0.5s						
FAGN	Fagnano	0.24	144	Pg	Pg	05 03 52.3	-0.3
FAGN				Sg	Sg	05 03 56.4	+0.4
	9µm,0.5s						
FIAM	Fiamignano	0.28	226	Pg	Pg	05 03 53.4	+0.1
FIAM				Sg	Sb	05 03 58.8	-0.7
	4µm,0.9s						
FIAM	Fiamignano	0.28	226	Pg	Pg	05 03 53.4	+0.1
FIAM				Sg	Sb	05 03 58.8	-0.7
	4µm,0.9s						
VCEL	Villa Celiera	0.34	101	Pg	Pg	05 03 54.0	-0.4
VCEL				Sg	Sg	05 03 59.7	+0.7
	6µm,0.5s						
VCEL	Villa Celiera	0.34	101	Pg	Pg	05 03 54.0	-0.4
VCEL				Sg	Sg	05 03 59.7	+0.7
	6µm,0.5s						
NRCA	Norcia	0.42	331	Pg	Pg	05 03 55.9	0.0
NRCA	Norcia	0.42	331	Pg	Pg	05 03 55.9	0.0
PTQR	Pietraquaria	0.44	179	Pg	Pg	05 03 55.6	-0.6
PTQR				Sg	Sb	05 04 03.8	-0.3
PTQR	Pietraquaria	0.44	179	Pg	Pg	05 03 55.6	-0.6
PTQR				Sg	Sb	05 04 03.8	-0.3
OFFI	Offida	0.52	25	Pg	Pg	05 03 58.1	+0.4
	32µm,0.7s						
OFFI	Offida	0.52	25	Pg	Pg	05 03 58.1	+0.4
	32µm,0.7s						
MNS	Montasola	0.53	262	Pg	Pg	05 03 57.7	-0.2
MNS				Sg	Sg	05 04 05.8	+0.9
MNS	Montasola	0.53	262	Pg	Pg	05 03 57.7	-0.2
MNS				Sg	Sg	05 04 05.8	+0.9
INTR	Introdacqua	0.59	139	Pg	Pg	05 03 58.3	-0.8
INTR				Sg	Sg	05 04 07.2	+0.4
	2µm,0.9s						
INTR	Introdacqua	0.59	139	Pg	Pg	05 03 58.3	-0.8
INTR				Sg	Sg	05 04 07.2	+0.4
	2µm,0.9s						
CERT	Cerreto	0.60	211	Pg	Pg	05 03 58.4	-0.7
	3µm,0.5s						
CERT	Cerreto	0.60	211	Pg	Pg	05 03 58.4	-0.7
	3µm,0.5s						
FDMO	Fiordimonte	0.61	339	Pg	Pg	05 03 59.1	-0.4
FDMO				Sg	Sb	05 04 08.7	-0.5
	1µm,0.3s						
FDMO	Fiordimonte	0.61	339	Pg	Pg	05 03 59.1	-0.4
FDMO				Sg	Sb	05 04 08.7	-0.5
	1µm,0.3s						
VVLD	Villa Vallelon	0.62	164	Pg	Pg	05 03 58.4	-1.1
	863nm,0.7s						
VVLD	Villa Vallelon	0.62	164	Pg	Pg	05 03 58.4	-1.1
	863nm,0.7s						
CESI	CESI - Serrava	0.65	327	Pg	Pg	05 03 59.9	-0.3
CESI				Sg	Sg	05 04 08.7	0.0
	378nm,0.3s						
CESI	CESI - Serrava	0.65	327	Pg	Pg	05 03 59.9	-0.3
CESI				Sg	Sg	05 04 08.7	0.0
	378nm,0.3s						
MTCE	Montecelio	0.65	228	Pg	Pg	05 03 59.9	-0.3
MTCE	Montecelio	0.65	228	Pg	Pg	05 03 59.9	-0.3
GUAR	Guarcino	0.67	185	Pg	Pg	05 04 00.9	+0.4
	727nm,0.7s						
GUAR	Guarcino	0.67	185	Pg	Pg	05 04 00.9	+0.4
	727nm,0.7s						
POFI	Posta Fibreno	0.78	162	Pg	Pg	05 04 02.1	-0.6
	551nm,1.1s						
POFI	Posta Fibreno	0.78	162	Pg	Pg	05 04 02.1	-0.6
	551nm,1.1s						
ASSB	Assisi San Ben	0.79	317	Pg	Pg	05 04 02.3	-0.5
ASSB				Sg	Sb	05 04 14.6	+0.4
	842nm,0.3s						
ASSB	Assisi San Ben	0.79	317	Pg	Pg	05 04 02.3	-0.5
ASSB				Sg	Sb	05 04 14.6	+0.4
	842nm,0.3s						
SDI	San Donato	0.82	157	Pg	Pg	05 04 02.2	-1.1
	204nm,0.5s						
SDI	San Donato	0.82	157	Pg	Pg	05 04 02.2	-1.1
	204nm,0.5s						
CING	Cingoli	0.92	351	Pg	Pg	05 04 04.4	-1.0
	681nm,0.2s						
CING	Cingoli	0.92	351	Pg	Pg	05 04 04.4	-1.0
	681nm,0.2s						
CERA	Filignano	0.98	151	Pg	Pg	05 04 05.0	-1.5
	520nm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CERA	Filignano	0.98	151	Pg	Pg	05 04 05.0	-1.5
	520nm,0.7s						
MGAB	Montegabbione	1.04	296	Pg	Pb	05 04 07.2	-0.5
MGAB				Sg	Sb	05 04 21.8	+0.3
	934nm,0.5s						
MGAB	Montegabbione	1.04	296	Pg	Pb	05 04 07.2	-0.5
MGAB				Sg	Sb	05 04 21.8	+0.3
	934nm,0.5s						
MIDA	Miranda	1.04	142	Pg	Pg	05 04 05.8	-1.8
	302nm,0.8s						
MIDA	Miranda	1.04	142	Pg	Pg	05 04 05.8	-1.8
	302nm,0.8s						
ARVD	Arcevia	1.09	343	Pg	Pb	05 04 07.5	-0.9
ARVD	Arcevia	1.09	343	Pg	Pb	05 04 07.5	-0.9
PIEI	Pieia	1.24	330	Pg	Pn	05 04 10.6	-0.4
	276nm,0.5s						
PIEI	Pieia	1.24	330	Pg	Pn	05 04 10.6	-0.4
	276nm,0.5s						
MS1	Monte Sant'Ang	2.05	111	ePn	Pg	05 04 27.0	+0.2
NVLJ	Novalja	2.36	27	i Pn	Pn	05 04 25.8	-0.6
NVLJ				Sn	Sn	05 04 56.2	+0.8
NVLJ	Novalja	2.36	27	i Pn	Pn	05 04 25.7	-0.6
NVLJ				Sn	Sn	05 04 56.1	+0.8
MAIM	Mastiano	2.57	305	P	Pn	05 04 30.2	+1.0
SKDS	Skadanscina	3.12	8	i Pn	Pn	05 04 36.7	-0.1
SKDS				i Sn	Sn	05 05 14.9	+0.9
SKDS	Skadanscina	3.12	8	Pn	Pn	05 04 36.7	-0.1
SKDS				i Sn	Sn	05 05 14.9	+0.9
STON	Ston	3.21	81	i Pn	Pn	05 04 38.6	+0.7
STON				Sn	Sn	05 05 16.1	0.0
STON	Ston	3.21	81	i Pn	Pn	05 04 38.6	+0.7
STON				Sn	Sn	05 05 16.1	0.0
PGF	Pioggiola	3.25	273	ePn	Pn	05 04 39.6	+1.0
PGF				eSn	Sn	05 05 19.7	+2.3
	4.4nm,0.5s						
PGF	Pioggiola	3.25	273	ePn	Pn	05 04 39.6	+1.0
PGF				eSn	Sn	05 05 19.7	+2.3
	2.2nm,0.5s						
SC2M	Scurtabo	3.41	306	P	Pn	05 04 41.6	+0.8
VOY	Vojsko	3.59	6	ePn	Pn	05 04 43.0	-0.3
VOY				e		05 04 46.4	
VOY				eSn	Sn	05 05 27.1	+1.4
VOY	Vojsko	3.59	6	ePn	Pn	05 04 43.0	-0.3
VOY				eSn	Sn	05 05 27.1	+1.4
SBF	Sospel	4.57	290	ePn	Pn	05 04 57.9	+1.1
SBF				eSn	Sn	05 05 47.9	-2.1
	12nm,0.7s						
SBF	Sospel	4.57	290	ePn	Pn	05 04 57.9	+1.1
SBF				eSn	Sn	05 05 47.9	-2.1
	6.1nm,0.7s						
FETA	Feichten	4.94	338⇓	iPn	Pn	05 05 05.0	+3.1
FETA	Feichten	4.94	338	Pn	Pn	05 05 05.0	+3.1
FRF	La Foret Royal	5.06	285	ePn	Pn	05 05 03.8	+0.3
FRF				eSn	Sn	05 05 59.4	-2.6
	4.3nm,0.5s						
FRF	La Foret Royal	5.06	285	ePn	Pn	05 05 03.8	+0.3
FRF				eSn	Sn	05 05 59.4	-2.6
	2.2nm,0.5s						
DIVS	Divibare	5.09	69	ePn	Pn	05 05 05.1	+1.2
LMR	La Mourre	5.13	282	ePn	Pn	05 05 05.0	+0.6
LMR				eSn	Sn	05 06 00.3	-3.3
	3.7nm,0.6s						
LMR	La Mourre	5.13	282	ePn	Pn	05 05 05.0	+0.6
LMR				eSn	Sn	05 06 00.3	-3.3
	1.9nm,0.6s						
MBDF	Montbardon	5.31	297	eP	Pn	05 05 09.5	+2.5
MBDF	Montbardon	5.31	297	eP	Pn	05 05 09.5	+2.5
GRUS	Gruza	5.54	73	ePn	Pn	05 05 09.3	-0.8
BARS	Barje	6.22	84	ePn	Pn	05 05 22.4	+2.9
CABF	La Chapelle	6.66	311	ePn	Pn	05 05 27.6	+2.1
CABF	La Chapelle	6.66	311	ePn	Pn	05 05 27.6	+2.1
KHC	Kasperske Hory	6.67	1	ePN	Pn	05 05 26.1	+0.5
KHC				eSN	Sn	05 06 39.2	-2.4
KHC	Kasperske Hory	6.67	1	Pn	Pn	05 05 26.1	+0.5
HINF	Hinteralfeld	7.07	321	ePn	Pn	05 05 32.3	+1.2
HINF				eSn	Sn	05 06 48.3	-3.2
	6.6nm,0.5s						
HINF	Hinteralfeld	7.07	321	ePn	Pn	05 05 32.3	+1.2
CDF	Champ du Feu	7.34	326	ePn	Pn	05 05 35.6	+0.8
CDF				eSn	Sn	05 06 55.8	-2.3
	4.2nm,0.5s						
CDF	Champ du Feu	7.34	326	ePn	Pn	05 05 35.6	+0.8
HAU	Haudompre	7.44	321	ePn	Pn	05 05 36.3	+0.1
HAU				eSn	Sn	05 06 56.0	-4.6
	8.7nm,0.5s						
HAU	Haudompre	7.44	321	ePn	Pn	05 05 36.3	+0.1

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*IDC **07** 05:23:35.8±0.7, 31.°70N×139.°00E, h288km±7km, mb3.3/9, mb1 3.3/14, mb1mx3.2/28, mbtmp3.3/14, Error ellipse: s-maj=22.8km s-min=10.1km az=68.0*
*JMA **07** 05:23:36.6±0.4, 31.°99N×139.°02E, h304km, M3.3*
ISC 07 05:23:37.9±1.1**, 32.°01N**±0.°10×**139.°01E**±0.°09**, h298**km±7km**, n29,** σ1**§12**/35**, mb3.6**/10**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.29	30	P	Pn	05 24 19.1	-0.3
	22nm,0.3s,baz=264,slow=19,SNR=3.6						
JHJ				S	S	05 24 53.0	+0.5
	43nm,0.3s,baz=256,slow=24,SNR=7.6						
JHJ2	Mitsune	1.30	31	P	Pn	05 24 20.4	+0.9
HMMJ	Hamamatsu 2	3.04	340	P	Pn	05 24 34.5	+0.7
BSO3	Boso 3	3.06	24	P	Pn	05 24 33.0	-0.6
BSO3				eS	S	05 25 17.4	-0.9
JIE	Ise	3.07	322	P	Pn	05 24 34.1	+0.1
JIE				eS	S	05 25 18.2	-0.7
BSO1	Boso 1	3.11	31	P	Pn	05 24 33.2	-0.7
BSO1				eS	S	05 25 17.7	-1.0
BSO4	Boso 4	3.18	20	P	Pn	05 24 35.2	+0.2
BSO4				eS	S	05 25 19.7	-1.0
JKN2	Miekihoku	3.20	315	P	Pn	05 24 34.8	-0.6
JOD2	Odawara 2	3.25	1	eS	S	05 25 21.6	-0.7
JNY	Yasuok	3.48	344	P	Pn	05 24 39.2	+0.8
JRY	Ryogami san	4.00	359	P	Pn	05 24 44.7	+0.8
JYT	Yasato	4.33	13	P	Pn	05 24 46.1	-1.3
JAG	Ashikaga	4.42	5	P	Pn	05 24 47.5	-1.1
JAG				eS	S	05 25 41.9	-3.4
MJAR	Matsushiro Arr	4.58	352	P	Pn	05 24 49.9	-0.5
	1.4nm,0.3s,baz=171,slow=11,SNR=9.2						
MJAR				S	S	05 25 48.1	-0.4
	0.7nm,0.3s,baz=161,slow=24,SNR=3.3						
JHO	Hitachi	4.77	15	P	Pn	05 24 51.1	-1.5
CBIJ	Chichi jima	5.62	150	P	Pn	05 24 56.1	-6.5
	10nm,0.3s,baz=290,slow=12,SNR=14						
CBIJ				S	S	05 25 59.8	-11
	27nm,0.3s,baz=308,slow=21,SNR=13						
JNU	Nakatsue	6.96	281	P	Pn	05 25 18.1	-0.6
	0.2nm,0.3s,baz=72,slow=6.4,SNR=3.8						
KSRS	Korea Array	10.62	304	P	Pn	05 26 04.2	+0.8
	0.4nm,0.3s,baz=119,slow=13,SNR=10						
USRK	Ussuriysk Arra	13.36	338	P	P	05 26 37.9	+1.1
	0.9nm,0.3s,baz=148,slow=10,SNR=11						
SONM	Songino Array	29.32	312	P	P	05 29 13.9	+0.4
	1.0nm,0.4s,baz=124,slow=8.8,SNR=12						
ZALV	Zalesovo Beam	44.01	316	P	P	05 31 16.4	+0.2
	0.4nm,0.3s,baz=94,slow=15,SNR=3.6						
MKAR	Makanchi Array	45.29	306	P	P	05 31 26.4	-0.1
	1.4nm,0.5s,baz=89,slow=10.0,SNR=18						
WRA	Warramunga Arr	51.84	186	P	P	05 32 13.9	-2.3
	0.3nm,0.3s,baz=1.3,slow=8.0,SNR=6.8						
BVAR	Borovoye Array	52.60	315	P	P	05 32 21.6	+0.2
	0.9nm,0.3s,baz=102,slow=8.8,SNR=16						
ARCES	ARCESS Array B	68.00	340	P	P	05 34 05.7	+0.8
	1.0nm,0.5s,baz=71,slow=6.6,SNR=5.6						
YKA	Yellowknife Ar	69.15	28	P	P	05 34 13.6	+1.6
	0.1nm,0.8s,baz=275,slow=7.4,SNR=2.8						
FINES	FINESS Array B	72.33	332	P	P	05 34 31.6	+0.5
	0.9nm,0.5s,baz=61,slow=5.3,SNR=14						
AKASG	Malin Array Be	77.05	322	P	P	05 34 57.0	-1.2
	0.3nm,0.3s,baz=61,slow=5.8,SNR=3.5						
BRTR	Keskin Array B	80.67	311	P	P	05 35 19.2	+0.9
	0.8nm,0.7s,baz=74,slow=5.1,SNR=4.2						

IDC 07 05:26:29.0±8.8**, 17.°46S**×**178.°38W, h515**km±88km**, mb3.1**/4**, mb1 3.4**/4**, mb1mx3.1**/18**, mbtmp3.1**/4**, Error ellipse: s-maj=102.4km s-min=32.2km az=146.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.74	259	P	P	05 33 56.4	-0.1
	0.7nm,0.4s,baz=92,slow=7.5,SNR=9.2						
WRA				PcP	PcP	05 35 27.7	-0.2
	0.4nm,0.7s,baz=88,slow=3.7,SNR=3.6						
ASAR	Alice Springs	44.94	254	P	P	05 33 57.9	-0.1
	6.5nm,0.6s,baz=86,slow=8.0,SNR=43						
ASAR				PcP	PcP	05 35 27.4	-1.1
	2.3nm,1.2s,baz=101,slow=4.9,SNR=4.2						
ILAR	Eielson Array	85.44	13	P	P	05 38 11.0	-0.4
	0.3nm,0.4s,baz=221,slow=5.3,SNR=9.9						
TXAR	Lajitas Array	85.73	58	P	P	05 38 13.9	+0.1
	0.2nm,0.7s,baz=202,slow=6.3,SNR=4.1						
BRTR	Keskin Array B	144.48	315	PKP	PKPbc	05 45 06.8	-0.1
	0.9nm,0.6s,baz=89,slow=1.3,SNR=4.9						
GERES	GERESS Array B	147.18	345	PKPbc	PKPbc	05 45 13.9	-0.3
	0.8nm,0.6s,baz=62,slow=2.3,SNR=6.5						

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*BJI **07** 05:29:41.2, 46.°26N×152.°36E, h33km, mB5.1/9, mb4.7/21, Ms5.4/8, Ms7 5.0/8*
*JMA **07** 05:29:43.0±0.6, 46.°00N×152.°26E, h30km, M4.8*
*ISCJB **07** 05:29:43.5±0.5, 46.°09N±0.°04×151.°90E±0.°04, h36km±5km, mb4.5/78, MS5.3/4, Error ellipse: s-maj=7.7km s-min=3.3km az=159.3*
*MOS **07** 05:29:44.8±0.9, 46.°17N×151.°92E, h47km, mb4.8/35, Error ellipse: s-maj=9.3km s-min=5.9km az=79.4*
*IDC **07** 05:29:44.5±5.4, 46.°16N×151.°87E, h33km±41km, mb3.9/23, mb1 4.1/26, mb1mx4.1/31, mbtmp3.9/26, ML3.9/3, Error ellipse: s-maj=18.6km s-min=12.3km az=156.0*
*SKHL **07** 05:29:45.5±2.0, 46.°09N×152.°11E, h48km±6km, mb4.8/5*
*NEIC **07** 05:29:48.0±0.6, 46.°20N×151.°86E, h60km±5km, mb4.7/43, Error ellipse: s-maj=8.1km s-min=4.2km az=161.0*
ISC 07 05:29:44.7±0.5**, 45.°94N**±0.°07×**152.°10E**±0.°05**, h37**km±1km**, n463,** σ1**§20**/490**, mb4.6**/78**, MS5.3**/4**, 118C-110D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.05	258	ePN	Pn	05 30 31.2	+0.9
KUR				eS	Sn	05 31 07.0	+1.5
KUR				pmax	pmax		
	comp=Z,950nm,1.2s						
KUR				smax	smax		
	comp=N,950nm,0.5s						
KUR				smax	smax		
	comp=E,1μm,0.5s						
KUR	Kuril'sk	3.05	258	eP	Pn	05 30 31.2	+0.9
KUR				AMB	AMB	05 30 32.0	
	comp=E,950nm,1.2s						
KUR				eS	Sn	05 31 07.0	+1.5
KUR				A	A	05 31 16.0	
	comp=E,950nm,0.5s						
KUR				A	A	05 31 16.0	
	comp=E,1μm,0.5s						
YUK	Yuzh-Kuril'sk	4.81	249d	iPN	Pn	05 30 57.6	+3.1
YUK				i S	Sn	05 31 50.2	+1.2
YUK				pmax	pmax		
	comp=N,72nm,0.5s						
YUK				pmax	pmax		
	comp=E,72nm,0.5s						
YUK				pmax	pmax		
	comp=Z,153nm,0.5s						
YUK				smax	smax		
	comp=N,134nm,0.6s						
YUK				smax	smax		
	comp=E,408nm,0.6s						
YUK	Yuzh-Kuril'sk	4.81	249⇓	iP	Pn	05 30 57.6	+3.1
YUK				AMB	AMB	05 31 03.2	
	comp=E,72nm,0.5s						
YUK				AMB	AMB	05 31 03.2	
	comp=E,153nm,0.5s						
YUK				esP	sP	05 31 14.6	
YUK				i S	Sn	05 31 50.2	+1.2
YUK				A	A	05 32 03.0	
	comp=E,134nm,0.6s						
YUK				A	A	05 32 03.0	
	comp=E,408nm,0.6s						
NEM2	Nemuro 2	5.21	243	P	Pn	05 31 00.0	0.0
NEM2				eS	Sn	05 31 56.4	-2.4
JRA	Rausu	5.34	250	P	Pn	05 31 01.9	+0.2
SKR	Severo-Kuril's	5.45	28	ePN	Pn	05 31 02.1	-1.2
SKR				pmax	pmax		
	comp=N,40nm,0.5s						
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR	Severo-Kuril's	5.45	28	eP	Pn	05 31 02.1	-1.2
SKR				AMB	AMB	05 31 03.2	
	comp=Z,40nm,0.5s						
SKR				AMB	AMB	05 31 03.2	
	comp=Z,50nm,0.5s						
SKR				eS	Sn	05 32 01.6	-3.1
SKR				A	A	05 32 23.6	
	comp=Z,50nm,0.7s						
SKR				A	A	05 32 23.6	
	comp=Z,90nm,0.7s						
JNK	Nakash	5.75	249	P	Pn	05 31 08.9	+1.4
JAK	Akkeshi	6.06	244	P	Pn	05 31 11.6	0.0
JAK				eS	Sn	05 32 17.8	-1.8
JTKR	Abashiri--Toko	6.13	254	P	Pn	05 31 15.1	+2.4
JMP	Maruseppu	6.49	256	P	Pn	05 31 20.5	+2.9
JAR	Ashorobuto	6.50	249	P	Pn	05 31 19.3	+1.6
JAR				eS	Sn	05 32 31.1	+0.5
YSS	Yuzh-Sakhalins	6.53	282⇓	ePN	Pn	05 31 19.8	+1.7
YSS	Yuzh-Sakhalins	6.53	282	ePn	Pn	05 31 19.6	+1.4
YSS	Yuzh-Sakhalins	6.53	282⇓	eP	Pn	05 31 19.8	+1.7
YSS				AMB	AMB	05 31 22.8	
	comp=Z,30nm,0.9s						
JOB	Onbets	6.65	246	P	Pn	05 31 20.5	+0.8
JOB				eS	Sn	05 32 32.2	-1.9
JKK2	Kamakawa 2	6.95	256	P	Pn	05 31 26.6	+2.7
ASAJ	Asahikawa	6.97	258	ePn	Pn	05 31 28.0	+3.7
ASAJ	Asahikawa	6.97	258	P	Pn	05 31 27.9	+3.7
ASAJ	Asahikawa	6.97	258	Pn	Pn	05 31 27.4	+3.2
	comp=Z,2.6nm,0.3s,baz=66,slow=7.5,SNR=15						
JCH	Churui	7.09	245	P	Pn	05 31 25.8	0.0
JCH				eS	Sn	05 32 42.6	-2.5
JWK2	Keihoku	7.18	269	P	Pn	05 31 31.8	+4.8
JEM	Erimo	7.54	242	P	Pn	05 31 33.4	+1.4
JEM				eS	Sn	05 32 55.5	-0.7
ERM	Erimo	7.54	242⇑	ePN	Pn	05 31 33.9	+1.9
ERM	Erimo	7.54	242	ePn	Pn	05 31 34.2	+2.2
JNBK	Urakawa-nobuka	7.65	245	P	Pn	05 31 33.3	-0.2
JNBK				eS	Sn	05 32 55.4	-3.5
JBT2	Biratori 2	7.66	249	P	Pn	05 31 33.0	-0.6
PEA0B	Petropavlovsk-	8.05	25	ePn	Pn	05 31 39.4	+0.5
PETK	Petropavlovsk-	8.05	25	PN	Pn	05 31 39.6	+0.7
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	8.05	25	Pn	Pn	05 31 39.6	+0.7
PETK	Petropavlovsk-	8.05	25	Pn	Pn	05 31 39.6	+0.7
	comp=Z,1.2nm,0.3s,baz=189,slow=14,SNR=11						
PET	Petropavlovsk	8.28	29	ePN	Pn	05 31 44.0	+2.0
PET				MLR	MLR		
	comp=Z,4μm,10.0s						
PET				MLR	MLR		
	comp=Z,7μm,13.0s						
JNB	Noboribetsu	8.67	250	P	Pn	05 31 48.5	+1.1
JKB	Kayabe	8.95	247	P	Pn	05 31 51.0	-0.3
JKB				eS	Sn	05 33 25.2	-5.6
JANG	Nango	9.52	238	P	Pn	05 31 56.7	-2.4
JANG				eS	Sn	05 33 35.7	-9.1
JTM	Tenmabayashi	9.54	241	P	Pn	05 31 57.9	-1.4
JTM				eS	Sn	05 33 37.9	-7.3
JTH	Tanohata	9.60	235	eS	Sn	05 33 37.3	-9.5
JOSM	Okushiri--Mats	9.87	252	P	Pn	05 32 03.7	-0.2
NKL	Nikolayevsk	10.34	318	eP	Pn	05 32 12.0	+1.7
NKL				AMB	AMB	05 32 15.2	
	comp=Z,17nm,1.0s						
NKL				AMB	AMB	05 32 15.2	
	comp=Z,22nm,1.0s						
JIO	Ouri	10.92	231	eS	Sn	05 34 08.8	-10
MJAR	Matsushiro Arr	14.03	233	Pn	Pn	05 32 58.8	-1.9
MJAR	Matsushiro Arr	14.03	233	Pn	Pn	05 32 58.8	-1.9
	comp=Z,0.6nm,0.3s,baz=14,slow=20,SNR=5.2						
USRK	Ussuriysk Arra	14.31	270	Pn	Pn	05 33 05.8	+1.3
	comp=Z,0.3nm,0.3s,baz=70,slow=23,SNR=5.2						
FX1	Attu Island--F	15.34	55	eP	Pn	05 33 17.9	-0.3
FX1				Sn	Sn	05 35 54.8	-12
FX1	Attu Island--F	15.34	55	Pn	Pn	05 33 18.1	-0.1
	comp=Z,2.8nm,0.3s,baz=151,slow=8.2,SNR=6.8						
FX1				Sn	Sn	05 35 54.8	-12
	comp=Z,0.8nm,0.3s,baz=227,slow=18,SNR=2.5						
MDJ	Mudanjiang	15.89	273	P	Pn	05 33 24.6	-0.8
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MDJ				LR	LR		
	comp=N,4μm,27.8s						
MDJ				LR	LR		
	comp=E,5μm,27.8s						
MDJ				LR	LR		
	comp=Z,5μm,24.0s						
SEY	Seymchan	17.03	0	eP	Pn	05 33 37.5	-2.2
CN2	Changchun	18.98	273	eP	Pn	05 34 04.7	+1.0
KSRS	Korea Array	19.89	253	P	Pn	05 34 14.2	-0.3
	comp=Z,0.2nm,0.3s,baz=59,slow=12,SNR=7.5						
KSAR	Wonju Array Be	19.92	253	P	Pn	05 34 14.2	-0.7
YAK	Yakutsk	20.64	329	eP	P	05 34 18.7	-2.0
YAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL	Bilibino	23.34	13	P	P	05 34 49.0	-0.3
BJI	Beijing	26.77	270	P	P	05 35 20.5	-0.4
NJ2	Nanjing	29.09	253	eP	P	05 35 43.1	+1.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC	Hu-ho-hao-te	29.65	275	eP	P	05 35 46.5	-0.2
HHC				pP	pP	05 35 56.0	-1.1
HHC				sP	sP	05 36 00.0	-1.5
HHC				PP	PnPn	05 36 42.3	-0.1
HHC				S	S	05 40 37.1	-2.7
HHC				pmax	pmax		
	comp=Z,35nm,0.8s						
HHC				LR	LR		
	comp=N,3μm,18.6s						
HHC				LR	LR		
	comp=E,6μm,17.9s						
HHC				LR	LR		
	comp=Z,4μm,17.1s						
SONM	Songino Array	30.95	290	P	P	05 35 56.4	-1.8
SONM	Songino Array	30.95	290	P	P	05 35 56.4	-1.8
	comp=Z,0.2nm,0.4s,baz=80,slow=3.2,SNR=2.9						
SML	Sawmill	37.04	43	eP	P	05 36 50.3	-0.4
SML				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SML	Sawmill	37.04	43	eP	P	05 36 50.3	-0.4
	comp=Z,2.6nm,0.6s						
COLA	College	37.21	38	eP	P	05 36 52.2	+0.2
COLA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
COLA	College	37.21	38	eP	P	05 36 52.2	+0.2
	comp=Z,2.4nm,0.6s						
LZH	Lanzhou	37.21	272	eP	P	05 36 52.8	+0.2
LZH				pP	pP	05 37 03.2	+0.1
LZH				sP	sP	05 37 07.3	-0.2
LZH				PP	PnPn	05 38 19.6	+1.3
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,65nm,5.4s						
LZH				LR	LR		
	comp=N,470nm,12.8s						
LZH				LR	LR		
	comp=E,470nm,12.5s						
LZH				LR	LR		
	comp=Z,700nm,16.0s						
ILAR	Eielson Array	37.62	38	P	P	05 36 54.8	-0.7
ILAR	Eielson Array	37.62	38	P	P	05 36 54.8	-0.7
	comp=Z,0.5nm,0.5s,baz=262,slow=7.2,SNR=15						
CD2	Chengdu	40.11	265	P	P	05 37 18.0	+1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2				pmax	pmax		
	comp=Z,160nm,5.6s						
GYA	Guiyang	40.85	258	P	P	05 37 24.8	+1.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZALV	Zalesovo Beam	42.52	306	P	P	05 37 35.8	-0.4
ZALV	Zalesovo Beam	42.52	306	P	P	05 37 35.8	-0.4
ZALV	Zalesovo Beam	42.52	306	P	P	05 37 35.8	-0.4
	comp=Z,0.2nm,0.3s,baz=79,slow=7.5,SNR=3.2						
INK	Inuvik	42.71	32	P	P	05 37 37.8	+0.3
INK	Inuvik	42.71	32	P	P	05 37 37.8	+0.3
	comp=Z,2.6nm,0.8s,baz=281,slow=7.4,SNR=14						
KMI	Kunming	44.40	259	P	P	05 37 50.7	-1.3
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ	Urumqi	44.56	292	P	P	05 37 54.9	+2.0
WMQ				pP	pP	05 38 05.0	+1.4
WMQ				sP	sP	05 38 09.0	+1.0
WMQ				PP	PP	05 39 40.0	+2.9
WMQ				S	S	05 44 26.0	0.0
WMQ				sS	sS	05 44 44.0	+0.3
WMQ				SS	SS	05 47 38.0	-8.2
WMQ				ScS	ScS	05 47 48.0	+0.4
WMQ				pmax	pmax		
	comp=Z,16nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,130nm,5.0s						
WMQ				LR	LR		
	comp=N,2μm,16.0s						
WMQ				LR	LR		
	comp=E,4μm,16.0s						
WMQ				LR	LR		
	comp=Z,3μm,16.0s						
DLBC	Dease Lake	46.67	45	eP	P	05 38 10.8	+1.5
MK31	Makanchi Array	46.69	298	eP	P	05 38 07.3	-2.3
MK31	Makanchi Array	46.69	298	eP	P	05 38 07.3	-2.3
MKAR	Makanchi Array	46.69	298c	eP	P	05 38 08.1	-1.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	46.69	298	eP	P	05 38 07.5	-2.2
MKAR				PcP	PcP	05 39 42.4	-0.3
MKAR	Makanchi Array	46.69	298	P	P	05 38 07.3	-2.3
	comp=Z,1.0nm,0.7s,baz=70,slow=7.6,SNR=11						
MKAR				PcP	PcP	05 39 42.4	-0.3
	comp=Z,1.8nm,0.7s,baz=67,slow=3.7,SNR=9.3						
KURK	Kurchatov	47.23	304	P	P	05 38 11.5	-2.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	47.23	304	P	P	05 38 11.5	-2.2
KURBB	Kurchatov Arra	47.32	304	P	P	05 38 11.5	-2.9
	comp=Z,1.0nm,0.5s,baz=73,slow=9.1,SNR=5.9						
BVAR	Borovoye Array	50.83	310	P	P	05 38 37.5	-3.7
BVAR						05 39 57.1	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR	Borovoye Array	50.83	310	P	P	05 38 37.5	-3.7
BVAR				PcP	PcP	05 39 57.1	-0.5
BVAR	Borovoye Array	50.83	310	P	P	05 38 37.5	-3.7
	comp=Z,0.7nm,0.5s,baz=46,slow=10,SNR=2.9						
BVAR				PcP	PcP	05 39 57.1	-0.5
	comp=Z,0.9nm,0.7s,baz=60,slow=3.6,SNR=4.5						
CMAR	Chiang Mai Arr	51.49	256	P	P	05 38 47.5	+0.9
CMAR	Chiang Mai Arr	51.49	256	P	P	05 38 47.5	+0.9
	comp=Z,1.0nm,0.4s,baz=38,slow=7.4,SNR=8.7						
RES	Resolute Bay	51.83	18	eP	P	05 38 46.8	-1.6
	comp=Z,10nm,1.5s						
RES	Resolute Bay	51.83	18	P	P	05 38 47.8	-0.6
	comp=Z,1.5nm,0.7s,baz=317,slow=7.8,SNR=12						
YKA	Yellowknife Ar	51.99	36	P	P	05 38 49.7	-0.1
YKA	Yellowknife Ar	51.99	36	P	P	05 38 49.7	-0.1
	comp=Z,2.6nm,0.7s,baz=296,slow=7.1,SNR=32						
KSH	Kashi	54.31	292	eP	P	05 39 12.0	+4.6
KSH				pP	pP	05 39 22.0	+3.7
KSH				sP	sP	05 39 26.5	+3.9
KSH				PcP	PcP	05 40 15.0	+3.9
KSH				PP	PP	05 41 16.2	+7.0
KSH				ScP	ScP	05 44 10.4	+4.1
KSH				PcS	PcS	05 44 13.4	+2.7
KSH				S	S	05 46 46.0	+3.4
KSH				sS	sS	05 47 03.0	+2.4
KSH				ScS	ScS	05 48 55.0	+1.3
KSH				SS	SS	05 50 28.1	+3.6
KSH				pmax	pmax		
	comp=Z,1.0nm,0.1s						
KSH				pmax	pmax		
	comp=Z,1μm,7.7s						
KSH				LR	LR		
	comp=N,1μm,9.5s						
KSH				LR	LR		
	comp=E,1μm,7.1s						
KSH				LR	LR		
	comp=Z,8μm,14.6s						
GUN	Gumba	54.37	275	eP	P	05 39 07.9	-0.3
RAMN	Ramite	54.46	273	eP	P	05 39 08.2	-0.6
	comp=Z,11nm,0.5s						
DANN	Dangsing	55.57	277	eP	P	05 39 16.9	+0.1
	comp=Z,25nm,0.6s						
KOLN	Koldanda	56.04	276	eP	P	05 39 20.0	-0.1

comp=Z,19nm,0.8s
PYUN Piuthan 56.26 277 eP P 05 39 21.5 -0.1
comp=Z,46nm,0.9s
ARCES ARCESS Array B 58.39 341 P P 05 39 35.1 -0.7
ARCES ARCESS Array B 58.39 341 P P 05 39 35.1 -0.7
comp=Z,2.6nm,0.8s,baz=30,slow=6.2,SNR=6.1
ABKAR Akbulak array 58.40 310 eP P 05 39 33.8 -2.4
comp=Z,1.0nm,0.5s
C11A Tepee Creek (N 58.95 52 ⇑P P 05 39 40.4 +0.3
baz=59
A13A Flathead Natio 59.31 50 ⇓P P 05 39 43.2 +0.5
baz=59
B13A Whitefish 59.61 50 ⇓P P 05 39 45.8 +1.1
baz=59
A14A Double T Ranch 59.81 49 ⇑P P 05 39 46.7 +0.6
baz=60
C13A Hot Springs 59.96 51 ⇓P P 05 39 47.9 +0.8
baz=60
A15A Johnson Ranch, 60.17 49 ⇑P P 05 39 49.1 +0.5
baz=60
C14A Swan Lake 60.36 51 ⇑P P 05 39 50.8 +1.0
baz=60
D13A Huson 60.37 52 ⇑P P 05 39 50.4 +0.4
baz=60
B15A Bradely Ranch, 60.66 50 ⇓P P 05 39 52.3 +0.4
baz=60
F12A Elk City 60.73 53 ⇓P P 05 39 53.3 +0.8
baz=60
A16A West Butte Ran 60.79 49 ⇑P P 05 39 53.5 +0.7
baz=60
SLMT Seeley Lake 60.81 51 eP P 05 39 54.2 +1.2
MSO Missoula 60.82 52 ⇓P P 05 39 53.8 +0.7
baz=60
D14A Greenough 60.90 51 ⇓P P 05 39 54.1 +0.4
baz=61,SNR=7.4
E13A Victor 60.91 52 ⇑P P 05 39 54.3 +0.6
baz=61
C15A Salmond Ranch, 60.97 50 ⇓P P 05 39 55.2 +1.1
baz=61,SNR=8.1
B16A M & M Farms, S 61.06 49 ⇑P P 05 39 55.2 +0.7
baz=61
F13A Darby 61.23 53 ⇓P P 05 39 56.2 +0.3
baz=61
A17A Triple J Farms 61.26 48 ⇑P P 05 39 56.3 +0.4
baz=61
E14A Clinton 61.31 52 ⇓P P 05 39 57.1 +0.7
baz=61
C16A Fuhringer Ranc 61.41 50 ⇑P P 05 39 57.6 +0.5
baz=61
D15A Lincoln 61.46 51 ⇓P P 05 39 57.7 +0.3
baz=61
SUMG Summit 61.56 4 eP P 05 39 57.4 -0.6
SUMG pmax pmax
comp=Z,6.0nm,0.9s
SUMG Summit 61.56 4 eP P 05 39 57.4 -0.6
comp=Z,6.3nm,0.9s
B17A L&G Farms, Che 61.61 49 ⇓P P 05 39 59.1 +0.8
baz=61
H12A Diamond D Ranc 61.69 54 ⇓P P 05 39 60.0 +0.9
baz=61
G13A Cobalt 61.71 53 ⇓P P 05 39 59.6 +0.4
baz=62,SNR=5.4
A18A Metzger Ranch, 61.72 48 ⇑P P 05 39 59.0 0.0
baz=61
JOF Joensuu 61.75 333 eP P 05 39 56.4 -2.5
JOF pmax pmax
comp=Z,1.0nm,0.5s
JOF Joensuu 61.75 333 ep P 05 39 56.4 -2.5
comp=Z,1.1nm,0.5s
E15A Deer Lodge 61.77 51 ⇑P P 05 39 60.0 +0.5
baz=62
FFC Flin Flon 61.81 39 iP P 05 40 00.7 +1.2
MFID Camas Ranch 61.83 56 ⇓P P 05 40 00.6 +0.7
baz=62
D16A Dana Ranch, Ca 61.99 50 ⇓P P 05 40 01.5 +0.5
baz=62
I12A Atlanta 62.00 55 ⇓P P 05 40 01.8 +0.7
baz=62
H13A Challis 62.02 54 ⇓P P 05 40 01.9 +0.7
baz=62,SNR=5.5
C17A Wharram Farm, 62.04 49 ⇓P P 05 40 01.6 +0.4
baz=62
B18A Beardsley Farm 62.08 48 ⇓P P 05 40 02.0 +0.5
baz=62
F15A Butte 62.22 52 ⇓P P 05 40 03.2 +0.7
baz=62
E16A East Helena 62.23 51 ⇑P P 05 40 03.3 +0.7
baz=62
LRM Limekiln Ridge 62.25 52 eP P 05 40 04.0 +1.1
comp=Z,37nm,1.1s
A19A Klindworth Far 62.28 47 ⇑P P 05 40 03.4 +0.6
baz=62
EGMT Eagleton 62.32 49 ⇑P P 05 40 04.0 +0.9
baz=62
D17A Six Diamond Ra 62.38 50 ⇑P P 05 40 04.2 +0.6
baz=62
B19A Brinkman Farms 62.48 48 ⇓P P 05 40 05.0 +0.9
baz=62
I13A Wildhorse Cree 62.50 54 ⇓P P 05 40 05.2 +0.6
baz=62
HLID Hailey 62.55 55 eP P 05 40 06.2 +1.3
comp=Z,2.3nm,1.0s
HLID Hailey 62.55 55 ⇑P P 05 40 05.3 +0.5
baz=62
G15A Dillon 62.64 52 ⇓P P 05 40 05.9 +0.5
baz=62,SNR=6.5
E17A Martinsdale 62.72 51 ⇑P P 05 40 06.6 +0.7
baz=62
A20A Cobblestone Ra 62.73 47 ⇑P P 05 40 06.5 +0.7
baz=62
J13A Cove Ranch, Pi 62.79 55 ⇓P P 05 40 07.4 +1.0
baz=62
I14A Mackay 62.87 54 ⇑P P 05 40 08.1 +1.2
baz=63,SNR=5.3
C19A Slack Wire Ran 62.88 49 ⇓P P 05 40 07.5 +0.7
baz=63
G16A Moss Hill, Enn 62.98 52 ⇑P P 05 40 08.5 +0.8
baz=63
A21A Bergtoll Ranch 63.17 46 ⇑P P 05 40 09.5 +0.8
baz=63
F17A Fitzpatrick Pl 63.17 51 ⇓P P 05 40 09.2 +0.3
baz=63
J14A Carey 63.21 55 ⇑P P 05 40 10.8 +1.6
baz=63
C20A Veseth Ranch, 63.43 48 ⇓P P 05 40 11.1 +0.7
baz=63,SNR=6.8
H16A Russell Place, 63.61 52 ⇑P P 05 40 12.8 +0.9
baz=63
A22A Carney Farms, 63.67 46 ⇓P P 05 40 12.4 +0.3
baz=63,SNR=5.5
F18A Big Timber 63.68 50 ⇓P P 05 40 12.7 +0.5
baz=63
D20A Manuel Ranch, 63.76 49 ⇑P P 05 40 13.9 +1.2
baz=64,SNR=5.0
J15A Blackfoot 63.78 54 ⇑P P 05 40 14.3 +1.4
baz=64
E19A Rath Farm, Rou 63.83 50 ⇑P P 05 40 14.4 +1.3
baz=64
C21A Desert Coulee 63.83 48 ⇑P P 05 40 13.7 +0.6
baz=64
K14A Jones Ranch, D 63.89 55 ⇑P P 05 40 14.6 +0.9
baz=64
I16A Newdale 64.00 53 ⇓P P 05 40 15.4 +0.9
baz=64
F19A Roth Farm, Mol 64.13 50 ⇑P P 05 40 16.2 +1.1
baz=64
K15A Arbon 64.17 55 ⇓P P 05 40 17.3 +1.8
baz=64
H17A Grant Village 64.18 52 ⇑P P 05 40 16.8 +1.1
baz=64
L14A Malta 64.18 56 ⇓P P 05 40 16.7 +1.1
baz=64
IMW Indian Meadow 64.30 53 eP P 05 40 18.1 +1.6
comp=Z,1.5nm,0.8s
J16A Bone 64.32 54 ⇑P P 05 40 18.2 +1.6
baz=64
D21A La Casta Ranch 64.38 48 ⇑P P 05 40 17.7 +1.0
baz=64
RRI2 Red Ridge 64.44 53 eP P 05 40 18.9 +1.5
comp=Z,7.1nm,0.8s
FINES FINESS Array B 64.47 334 P P 05 40 14.4 -2.5
FINES FINESS Array B 64.47 334 P P 05 40 14.4 -2.5
comp=Z,2.6nm,0.6s,baz=30,slow=7.6,SNR=18
B23A Brockton 64.48 46 ⇑P P 05 40 18.2 +0.8
baz=64
H18A Shoshone NF, C 64.50 51 ⇓P P 05 40 19.1 +1.4
baz=64
TPAW Teton Pass 64.55 53 eP P 05 40 19.8 +1.6
comp=Z,7.9nm,0.9s
K16A Soda Springs 64.61 54 ⇑P P 05 40 20.2 +1.7
baz=64
D22A Cohagen 64.74 48 ⇓P P 05 40 20.0 +0.9
baz=64
J17A Brown Place, J 64.77 53 ⇓P P 05 40 20.5 +1.0
baz=64
C23A Lambert 64.82 47 ⇑P P 05 40 20.6 +1.0
baz=64
G20A Bridger 64.93 50 ⇑P P 05 40 21.9 +1.4
baz=65
I18A Diamond G Ranc 65.04 52 ⇓P P 05 40 22.5 +1.2
baz=65
ISA Isabella 65.08 64 ⇓P P 05 40 22.3 +0.8
baz=65
R11A Troy Canyon, C 65.14 60 ⇓P P 05 40 22.8 +0.8
baz=65
D23A Lindsay 65.23 47 ⇑P P 05 40 23.1 +0.9
baz=65
L16A Fish Haven 65.23 55 ⇓P P 05 40 23.6 +1.1
baz=65
J18A Kendall Valley 65.25 53 ⇑P P 05 40 23.6 +0.9
baz=65
I19A Meeteetse 65.28 52 ⇑P P 05 40 23.9 +1.1
baz=65
E22A Miles City 65.33 48 ⇓P P 05 40 23.7 +0.8
baz=65
HWUT Hardware Ranch 65.42 55 eP P 05 40 24.9 +1.2
comp=Z,2.0nm,0.5s
MPMC Manual Prospec 65.44 63 ⇓P P 05 40 25.1 +1.1
baz=65
FURC Furnace Creek, 65.57 62 ⇑P P 05 40 25.8 +1.4
baz=65
F22A Rosebud 65.60 49 ⇑P P 05 40 25.7 +1.0
baz=65
DUG Dugway 65.61 57 eP P 05 40 26.4 +1.5
DUG pmax pmax
comp=Z,3.0nm,0.9s
DUG Dugway 65.61 57 eP P 05 40 26.4 +1.5
comp=Z,3.1nm,0.9s
DUG Dugway 65.61 57 ⇑P P 05 40 26.1 +1.2
baz=65
K18A Toltan Ranch, 65.61 53 ⇓P P 05 40 26.0 +1.0
baz=65
E23A Ismay 65.62 48 ⇑P P 05 40 25.7 +0.9
baz=65
J19A Crowheart 65.75 52 ⇓P P 05 40 26.5 +0.6
baz=66
BW06 Boulder Array 65.80 53 eP P 05 40 26.9 +0.7
comp=Z,1.5nm,0.6s
BW06 Boulder Array 65.80 53 ⇑P P 05 40 26.7 +0.5
baz=66
PDAR Pinedale Array 65.80 53 P P 05 40 26.2 +0.1
PDAR Pinedale Array 65.80 53 P P 05 40 26.2 +0.1
comp=Z,2.2nm,0.8s,baz=298,slow=3.2,SNR=18
EDW2 Edwards Air Fo 65.88 64 ⇓P P 05 40 28.0 +1.3
baz=66
L18A Fontenelle, Gr 66.08 54 ⇓P P 05 40 28.8 +0.8
baz=66
K19A Absolon Red Bu 66.15 53 ⇑P P 05 40 28.9 +0.5
baz=66
J20A Shoshoni 66.23 52 ⇑P P 05 40 29.4 +0.5
baz=66
N17A Mc Pass 66.27 55 ⇓P P 05 40 30.0 +0.7
baz=66,SNR=5.4
I21A Big Trails, Te 66.35 51 ⇑P P 05 40 30.5 +0.8
baz=66
O16A Springville 66.36 56 ⇑P P 05 40 30.8 +1.0
baz=66
M18A Lyman 66.39 54 ⇓P P 05 40 30.9 +0.9
baz=66
G23A Biddle 66.44 49 ⇑P P 05 40 30.7 +0.6
baz=66
F24A Ekalaka 66.50 48 ⇓P P 05 40 31.2 +0.6
baz=66
K20A Yellowstone Ra 66.54 52 ⇓P P 05 40 31.1 +0.2
baz=66
I22A 9 Mile Ranch, 66.74 50 ⇑P P 05 40 32.7 +0.6
baz=66
N18A Larsen Ranch, 66.91 55 ⇑P P 05 40 34.2 +0.9
baz=67
HEC Hector,Ludlow 66.95 63 ⇑P P 05 40 34.8 +1.3
baz=67
L20A Wamsutter 66.97 53 ⇓P P 05 40 34.1 +0.4
baz=67
J22A Midwest 67.06 51 ⇓P P 05 40 34.8 +0.6
baz=67
MSU Marysvale 67.08 58 eP P 05 40 35.8 +1.4
MSU Marysvale 67.08 58 eP P 05 40 35.8 +1.4
K21A Alcova 67.16 52 ⇑P P 05 40 35.2 +0.3
baz=67
O18A Roosevelt 67.18 55 ⇓P P 05 40 36.1 +1.1
baz=67
H24A Dirks Ranch, A 67.19 49 ⇑P P 05 40 35.1 +0.2
baz=67
N19A John Jarvie Ra 67.24 54 ⇓P P 05 40 35.8 +0.4
baz=67
P17A Butcher Ranch, 67.28 56 ⇓P P 05 40 36.8 +1.1
baz=67
Q16A Castle Valley 67.40 57 ⇑P P 05 40 37.2 +0.8
baz=67
GMRC Granite Mounta 67.40 63 ⇑P P 05 40 37.6 +1.2
baz=67
M20A Sweetwater, Wa 67.40 53 ⇓P P 05 40 37.1 +0.6
baz=67
P18A Preston Nutter 67.47 56 ⇓P P 05 40 37.7 +0.7
baz=67
WRA Warramunga Arr 67.52 198 P P 05 40 37.3 +0.3
WRA Warramunga Arr 67.52 198 P P 05 40 37.3 +0.3
comp=Z,0.5nm,0.5s,baz=15,slow=6.5,SNR=4.1
L21A Rawlins 67.54 53 ⇑P P 05 40 38.4 +1.1
baz=67
K22A Casper 67.55 51 ⇓P P 05 40 37.8 +0.5
baz=67
SRU San Rafael 67.65 57 eP P 05 40 38.8 +0.8
SRU San Rafael 67.65 57 eP P 05 40 38.8 +0.8
comp=Z,152nm,0.8s
SRU San Rafael 67.65 57 ⇑P P 05 40 38.8 +0.8
baz=67,SNR=6.3
O19A Miners Draw (B 67.67 55 ⇑P P 05 40 38.9 +0.8
baz=67
N20A Spence Gulch, 67.80 54 ⇑P P 05 40 40.0 +1.0
baz=68
RSSD Black Hills 67.89 49 eP P 05 40 40.0 +0.5
RSSD pmax pmax
comp=Z,3.0nm,0.7s
RSSD Black Hills 67.89 49 eP P 05 40 40.0 +0.5
comp=Z,2.6nm,0.7s
IRM Iron Mountain 68.13 63 ⇑P P 05 40 42.2 +1.3
baz=68
P19A Cripple Cowboy 68.19 55 ⇓P P 05 40 41.9 +0.4
baz=68
N21A Black Mountain 68.27 54 ⇓P P 05 40 42.6 +0.7
baz=68
BC3 Big Chuckawall 68.27 64 ⇓P P 05 40 42.8 +0.9
baz=68
M22A Cedar Creek Ra 68.35 53 ⇓P P 05 40 43.3 +0.8
baz=68
U15A North Rim 68.38 60 ⇑P P 05 40 44.2 +1.5
baz=68
Q19A Hogan Spring (68.48 56 ⇓P P 05 40 43.6 +0.4
baz=68,SNR=8.2
PDMCI Parker Dam,Lak 68.66 62 ⇑P P 05 40 45.7 +1.5
baz=68
NB2 NORSAR Subarra 68.77 341 P P 05 40 42.2 -2.2
comp=Z,1.7nm,0.5s,baz=27,slow=6.5
NOA NORSAR Array B 68.77 341 P P 05 40 42.9 -1.5
NOA NORSAR Array B 68.77 341 P P 05 40 42.9 -1.5
comp=Z,2.3nm,0.6s,baz=28,slow=6.3,SNR=16
N22A Wattenberg Ran 68.83 53 ⇓P P 05 40 46.6 +1.1
baz=69
S18A Hurst Farm, Bl 68.91 57 ⇑P P 05 40 46.7 +0.7
baz=69
HFS Hagfors 68.97 339 P P 05 40 44.0 -1.6
HFS Hagfors 68.97 339 P P 05 40 44.0 -1.6
comp=Z,5.7nm,0.6s,baz=38,slow=7.1,SNR=12
PV10 Paradox Valley 69.00 56 eP P 05 40 47.9 +1.3
comp=Z,118nm,0.8s
Q20A Ridgley Place, 69.04 55 ⇑P P 05 40 47.2 +0.5
baz=69
P21A Newcastle 69.14 54 ⇓P P 05 40 48.1 +0.7
baz=69
O22A Kremmling 69.22 53 ⇓P P 05 40 48.8 +0.8
baz=69
P22A Eagle 69.48 54 ⇓P P 05 40 50.0 +0.5
baz=69
R20A Redvale 69.51 56 ⇑P P 05 40 50.5 +0.8
baz=69
O23A Lake Granby, G 69.54 53 ⇑P P 05 40 50.6 +0.7
baz=69
Y14A Wickenburg 69.61 62 ⇑P P 05 40 51.3 +1.2
baz=69
S20A Disappointment 69.77 56 ⇓P P 05 40 52.4 +1.1
baz=70
R21A Cimarron 69.87 55 ⇑P P 05 40 53.1 +1.1
baz=70
Q22A Crested Butte, 69.90 55 ⇑P P 05 40 53.2 +1.0
baz=70
ISCO Idaho Springs 69.99 53 eP P 05 40 53.8 +1.1
ISCO pmax pmax
comp=Z,2.0nm,0.7s
ISCO Idaho Springs 69.99 53 eP P 05 40 53.8 +1.1
comp=Z,2.2nm,0.7s
ISCO Idaho Springs 69.99 53 ⇓P P 05 40 54.0 +1.3
baz=70
MVCO Mesa Verde 70.11 57 eP P 05 40 54.5 +1.1
comp=Z,25nm,1.9s
MVCO Mesa Verde 70.11 57 ⇓P P 05 40 54.4 +1.0
baz=70
S21A Coal Bank Pass 70.21 56 ⇓P P 05 40 55.1 +1.0
baz=70
X16A Lo Mia Camp, P 70.24 61 ⇑P P 05 40 55.7 +1.5
baz=70,SNR=5.4
R22A Saguache, Gunn 70.42 55 ⇓P P 05 40 56.4 +1.1
baz=70
Q23A Hartsel 70.48 54 ⇓P P 05 40 56.6 +0.9
baz=70
S22A 4UR Ranch, Cre 70.71 56 ⇓P P 05 40 58.0 +0.9
baz=70
KBZ Khabaz 70.91 314 P P 05 40 57.7 -0.1
KBZ pmax pmax
comp=Z,3.0nm,0.5s
KBZ Khabaz 70.91 314 P P 05 40 57.7 -0.1
KBZ Khabaz 70.91 314 P P 05 40 57.7 -0.1
comp=Z,2.6nm,0.5s,baz=231,slow=8.2,SNR=5.4
R23A Moffat 70.98 55 ⇑P P 05 40 59.8 +1.1
baz=71
N27A Anderson Farm, 70.98 51 ⇑P P 05 40 59.1 +0.6
baz=71
P25A Willow Gulch B 70.99 53 ⇑P P 05 40 59.8 +1.1
baz=71
U21A Nageezi 71.13 57 ⇓P P 05 41 00.3 +0.7
baz=71
OGNE Ogallala 71.15 50 ⇓P P 05 40 59.9 +0.4
baz=71
T22A Edith 71.17 56 ⇓P P 05 41 00.5 +0.6
baz=71
ASAR Alice Springs 71.22 198 P P 05 41 01.1 +1.3
ASAR Alice Springs 71.22 198 P P 05 41 01.1 +1.3
comp=Z,0.3nm,0.3s,baz=14,slow=6.6,SNR=3.3
R24A Sanders Place, 71.36 54 ⇓P P 05 41 02.1 +1.1
baz=71
W20A Ramah 71.53 58 ⇑P P 05 41 02.9 +0.9
baz=71
S24A Houchin Ranch, 71.71 55 ⇑P P 05 41 04.1 +0.9
baz=71
Q26A Hugo 71.76 53 ⇑P P 05 41 04.0 +0.7
baz=72
AKASG Malin Array Be 71.83 326 ceP P 05 41 01.5 -1.7
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 71.83 326 P P 05 41 00.6 -2.6
AKASG Malin Array Be 71.83 326 P P 05 41 00.6 -2.6
comp=Z,2.1nm,0.4s,baz=33,slow=6.4,SNR=7.0
KIEV Kiev 71.84 326 eP P 05 41 01.5 -1.8
KIEV pmax pmax
comp=Z,5.0nm,0.9s
KIEV Kiev 71.84 326 eP P 05 41 01.5 -1.8
comp=Z,4.8nm,0.9s
X20A Quemado 71.93 59 ⇑P P 05 41 05.5 +1.0
baz=72
U23A El Rito 72.06 56 ⇓P P 05 41 06.3 +1.1
baz=72
S25A Robets Cordova 72.14 54 ⇓P P 05 41 06.9 +1.3
baz=72
X21A Alamocita Cree 72.42 59 ⇓P P 05 41 09.1 +1.6
baz=72
Y20A Horse Springs, 72.44 59 ⇓P P 05 41 09.0 +1.4
baz=72
R27A Eads 72.61 53 ⇑P P 05 41 08.7 +0.3
baz=72
U25A Circle Dot Ran 73.03 55 ⇑P P 05 41 11.6 +0.6
baz=73
W24A Lazy 6 Ranch, 73.29 57 ⇑P P 05 41 13.6 +1.1
baz=73
319A Douglas 73.64 62 ⇑P P 05 41 15.7 +1.1
baz=74
220A Playas Peak, P 73.74 61 ⇑P P 05 41 16.0 +0.9
baz=74
Z22A Elephant Butte 73.74 59 ⇑P P 05 41 15.8 +0.7
baz=74
121A Cooks Peak, D 73.75 60 ⇑P P 05 41 16.7 +1.4
baz=74
Y23A Lovelace Mesa, 73.81 58 ⇓P P 05 41 16.9 +1.3
baz=74
W25A X Bar L Ranch, 73.84 56 ⇑P P 05 41 16.4 +0.8
baz=74
Z23A Rita Site, Whi 74.17 59 ⇑P P 05 41 18.8 +1.2
baz=74
Y24A Capitan 74.18 58 ⇑P P 05 41 18.1 +0.4
baz=74
X25A Clemmons Ranch 74.21 57 ⇓P P 05 41 18.7 +0.9
baz=74
SCHQ Schefferville 74.33 22 P P 05 41 17.4 -0.6
SCHQ Schefferville 74.33 22 P P 05 41 17.4 -0.6
comp=Z,2.2nm,0.7s,baz=255,slow=9.1,SNR=7.7
Y25A Mesa, Roswell 74.62 57 ⇑P P 05 41 21.3 +1.1
baz=74
124A Stringfield Ra 75.03 58 ⇑P P 05 41 23.1 +0.3
baz=75
KWP Kalwaria Pacla 75.15 329 eP P 05 41 22.2 -0.6
KWP pmax pmax
comp=Z,8.0nm,0.8s
KWP Kalwaria Pacla 75.15 329 eP P 05 41 22.2 -0.6
comp=Z,8.2nm,0.8s
Z26A Caprock 75.50 57 ⇑P P 05 41 26.3 +1.0
baz=75
125A Gardner Draw, 75.53 58 ⇓P P 05 41 26.5 +1.1
baz=75
Y27A Causey 75.54 56 ⇓P P 05 41 25.7 +0.2
baz=75
AMTX Amarillo 75.67 55 ⇓P P 05 41 27.2 +1.0
baz=75
MNTX Cornudas Mount 75.78 59 ⇓P P 05 41 27.9 +1.1
baz=76
BUR08 Bucovina Ar. S 75.86 326 eP P 05 41 26.1 -1.0
KOLS Kolonicke sedl 75.89 329 eP P 05 41 26.2 -0.9
Z27A Tatum 75.91 57 ⇑P P 05 41 28.1 +0.5
baz=76
CRVS Cervenica-Dubn 76.21 329 eP P 05 41 27.6 -1.3
425A Indio Mountain 76.67 60 ⇑P P 05 41 32.7 +0.6
baz=76
X31A McDonald Ranch 76.82 54 ⇑P P 05 41 33.1 +0.5
baz=76
MORC Moravsky Berou 76.82 332 eP P 05 41 31.9 -0.5
MORC pmax pmax
comp=Z,3.0nm,0.8s
MORC Moravsky Berou 76.82 332 eP P 05 41 31.9 -0.5
comp=Z,3.2nm,0.8s
Z29A Hungry Hill Ra 76.83 56 ⇓P P 05 41 33.7 +0.9
baz=77
128A Castleberry Fa 76.84 57 ⇓P P 05 41 33.0 +0.2
baz=77
326A Caldwell Ranch 76.90 59 ⇓P P 05 41 34.1 +0.9
baz=77
CLL Collm 76.91 335 iP P 05 41 31.6 -1.2
CLL pmax pmax
comp=Z,9.0nm,1.0s
CLL Collm 76.91 335 iP P 05 41 31.6 -1.2
comp=Z,9.0nm,1.0s
Z30A Sanderson Ranc 77.14 55 ⇑P P 05 41 35.0 +0.5
baz=77
VYHS Vyhne 77.48 330 eP P 05 41 36.1 0.0
328A Wristen Ranch, 77.54 58 ⇓P P 05 41 37.6 +0.8
baz=77
427A Hayter Ranch, 77.57 58 ⇓P P 05 41 37.4 +0.4
baz=77
Y32A R-V Farms, Ver 77.58 54 ⇓P P 05 41 37.0 +0.1
baz=77
526A Mary Lane Ranc 77.73 59 ⇑P P 05 41 38.7 +0.8
baz=78
130A Snyder 77.74 56 ⇑P P 05 41 38.5 +0.7
baz=78
329A Wagon Wheel Ra 77.95 57 ⇓P P 05 41 39.8 +0.7
baz=78
131A Roby 78.01 55 ⇑P P 05 41 39.5 +0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=78						
626A	Big Bend Ranch	78.07	60	⇑P	P	05 41 40.4	+0.6
	baz=78						
BR131	Keskin Array S	78.49	316	eP	P	05 41 41.2	-0.8
	comp=Z,1.7nm,0.8s						
BRTR	Keskin Array B	78.49	316	P	P	05 41 41.5	-0.5
BRTR	Keskin Array B	78.49	316	P	P	05 41 41.5	-0.5
	comp=Z,2.6nm,0.8s,baz=70,slow=4.9,SNR=14						
TXAR	Lajitas Array	78.51	60	P	P	05 41 42.9	+0.7
TXAR	Lajitas Array	78.51	60	P	P	05 41 42.9	+0.7
	comp=Z,1.8nm,0.7s,baz=299,slow=4.5,SNR=28						
627A	Terlingua Ranc	78.59	59	⇓P	P	05 41 43.4	+0.7
	baz=78						
231A	Bronte	78.59	56	⇑P	P	05 41 42.9	+0.3
	baz=78						
KHC	Kasperske Hory	78.66	334	eP	P	05 41 42.1	-0.6
KHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KHC	Kasperske Hory	78.66	334	eP	P	05 41 42.1	-0.6
	comp=Z,8.1nm,0.9s						
KHC	Kasperske Hory	78.66	334	eP	P	05 41 42.0	-0.6
GERES	GERESS Array B	78.87	333	P	P	05 41 43.0	-0.9
GERES	GERESS Array B	78.87	333	P	P	05 41 43.0	-0.9
	comp=Z,2.6nm,0.7s,baz=34,slow=5.0,SNR=17						
430A	Baggett Ranch,	78.90	57	⇑P	P	05 41 45.3	+1.0
	baz=79						
CONA	Conrad Observa	78.98	332	⇑iP	P	05 41 44.1	-0.4
	comp=Z,5.9nm,0.7s						
CONA	Conrad Observa	78.98	332	⇑iP	P	05 41 44.1	-0.4
	comp=Z,5.9nm,0.7s						
431A	Sonora	79.34	57	⇓P	P	05 41 47.5	+0.8
	baz=79						
MOA	Molln	79.57	333	⇑iP	P	05 41 46.8	-0.9
	comp=Z,6.5nm,0.9s						
MOA	Molln	79.57	333	⇑iP	P	05 41 46.8	-0.9
	comp=Z,6.5nm,0.9s						
BCLA	Clavier	79.80	339	P	P	05 41 48.1	-0.7
	comp=Z,7.2nm,1.3s						
532A	Rocksprings	80.16	57	⇑P	P	05 41 51.4	+0.3
	baz=80						
GIVF	Givet	80.22	339	eP	P	05 41 49.9	-1.1
GIVF	Givet	80.22	339	eP	P	05 41 49.9	-1.1
GIVF	Givet	80.22	339	eP	P	05 41 49.9	-1.1
631A	Perdido Creek	80.29	58	⇓P	P	05 41 52.5	+0.6
	baz=80						
SOKA	Soboth	80.35	332	⇑iP	P	05 41 50.9	-1.0
	comp=Z,6.2nm,0.9s						
SOKA	Soboth	80.35	332	⇑iP	P	05 41 50.9	-1.0
	comp=Z,6.2nm,0.9s						
BAIF	Baives	80.41	340	eP	P	05 41 51.0	-1.0
BAIF	Baives	80.41	340	eP	P	05 41 51.0	-1.0
BAIF	Baives	80.41	340	eP	P	05 41 51.0	-1.0
KBA	Koelnbreinsper	80.55	333	⇓iP	P	05 41 52.6	-0.5
KBA				pmax	pmax		
	comp=Z,13nm,1.0s						
KBA	Koelnbreinsper	80.55	333	⇓iP	P	05 41 52.6	-0.5
	comp=Z,13nm,1.0s						
KBA	Koelnbreinsper	80.55	333	⇓iP	P	05 41 52.6	-0.5
	comp=Z,13nm,1.0s						
WTTA	Wattenberg	80.91	334	⇑iP	P	05 41 54.5	-0.6
WTTA				pmax	pmax		
	comp=Z,11nm,0.7s						
WTTA	Wattenberg	80.91	334	⇑iP	P	05 41 54.5	-0.6
	comp=Z,11nm,0.7s						
WTTA	Wattenberg	80.91	334	⇑iP	P	05 41 54.5	-0.6
	comp=Z,11nm,0.7s						
MOTA	Moosalm	81.00	334	⇓iP	P	05 41 54.9	-0.6
MOTA				pmax	pmax		
	comp=Z,12nm,0.9s						
MOTA	Moosalm	81.00	334	⇓iP	P	05 41 54.9	-0.6
	comp=Z,12nm,0.9s						
MOTA	Moosalm	81.00	334	⇓iP	P	05 41 54.9	-0.6
	comp=Z,12nm,0.9s						
CDF	Champ du Feu	81.14	337	eP	P	05 41 55.0	-1.1
	comp=Z,15nm,0.8s						
CDF	Champ du Feu	81.14	337	eP	P	05 41 55.0	-1.1
CDF				pmax	pmax		
	comp=Z,15nm,0.8s						
CDF	Champ du Feu	81.14	337	eP	P	05 41 55.0	-1.1
	comp=Z,15nm,0.8s						
732A	Laxson Ranch,	81.15	58	⇑P	P	05 41 57.1	+0.7
	baz=81						
FETA	Feichten	81.41	334	⇑iP	P	05 41 57.1	-0.6
	comp=Z,4.7nm,0.9s						
FETA	Feichten	81.41	334	⇑iP	P	05 41 57.1	-0.6
	comp=Z,4.7nm,0.9s						
PAGF	Fort de Pagny	81.42	338	eP	P	05 41 56.9	-0.6
	comp=Z,8.0nm,0.6s						
PAGF	Fort de Pagny	81.42	338	eP	P	05 41 56.9	-0.6
	comp=Z,8.0nm,0.6s						
MEZF	Maizieres J'vi	81.64	339	eP	P	05 41 57.9	-0.7
MEZF	Maizieres J'vi	81.64	339	eP	P	05 41 57.9	-0.7
HAU	Haudompre	81.76	338	eP	P	05 41 58.2	-1.1
HAU	Haudompre	81.76	338	eP	P	05 41 58.2	-1.1
HAU	Haudompre	81.76	338	eP	P	05 41 58.2	-1.1
HINF	Hinteralfeld	81.80	337	eP	P	05 41 58.2	-1.4
HINF	Hinteralfeld	81.80	337	eP	P	05 41 58.2	-1.4
HINF	Hinteralfeld	81.80	337	eP	P	05 41 58.2	-1.4
SFTF	Sexfontaines	81.92	338	eP	P	05 41 59.2	-0.9
	comp=Z,40nm,1.0s						
SFTF	Sexfontaines	81.92	338	eP	P	05 41 59.2	-0.9
	comp=Z,40nm,1.0s						
LOR	Lormes	83.08	339	eP	P	05 42 05.2	-1.1
	comp=Z,9.5nm,0.8s						
LOR	Lormes	83.08	339	eP	P	05 42 05.2	-1.1
	comp=Z,9.5nm,0.8s						
CABF	La Chapelle	83.11	337	eP	P	05 42 05.4	-1.1
CABF	La Chapelle	83.11	337	eP	P	05 42 05.4	-1.1
CABF	La Chapelle	83.11	337	eP	P	05 42 05.4	-1.1
GRR	Gorron	83.13	342	eP	P	05 42 05.4	-1.0
	comp=Z,9.9nm,0.6s						
GRR	Gorron	83.13	342	eP	P	05 42 05.4	-1.0
GRR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GRR	Gorron	83.13	342	eP	P	05 42 05.4	-1.0
	comp=Z,9.9nm,0.6s						
SSF	Saint Saulge	83.36	339	eP	P	05 42 06.7	-1.0
	comp=Z,17nm,1.0s						
SSF	Saint Saulge	83.36	339	eP	P	05 42 06.7	-1.0
SSF				pmax	pmax		
	comp=Z,17nm,1.0s						
SSF	Saint Saulge	83.36	339	eP	P	05 42 06.7	-1.0
	comp=Z,17nm,1.0s						
AVF	Avril sur Loir	83.66	339	eP	P	05 42 08.3	-0.9
	comp=Z,13nm,0.8s						
AVF	Avril sur Loir	83.66	339	eP	P	05 42 08.3	-0.9
AVF				pmax	pmax		
	comp=Z,13nm,0.8s						
AVF	Avril sur Loir	83.66	339	eP	P	05 42 08.3	-0.9
	comp=Z,13nm,0.8s						
SMF	Signal de Mont	83.67	339	eP	P	05 42 08.4	-0.9
	comp=Z,30nm,1.0s						
SMF	Signal de Mont	83.67	339	eP	P	05 42 08.4	-0.9
SMF				pmax	pmax		
	comp=Z,30nm,1.0s						
SMF	Signal de Mont	83.67	339	eP	P	05 42 08.4	-0.9
	comp=Z,30nm,1.0s						
LPL	La Plagne	83.94	336	eP	P	05 42 10.5	-0.4
	comp=Z,8.8nm,0.9s						
LPL	La Plagne	83.94	336	eP	P	05 42 10.5	-0.4
LPL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LPL	La Plagne	83.94	336	eP	P	05 42 10.5	-0.4
	comp=Z,8.8nm,0.9s						
LPG	La Plagne	83.95	336	eP	P	05 42 10.7	-0.4
	comp=Z,5.8nm,0.8s						
LPG	La Plagne	83.95	336	eP	P	05 42 10.7	-0.4
LPG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LPG	La Plagne	83.95	336	eP	P	05 42 10.7	-0.4
	comp=Z,5.8nm,0.8s						
TCF	Toulx Ste Croi	84.41	340	eP	P	05 42 12.4	-0.7
	comp=Z,15nm,1.0s						
TCF	Toulx Ste Croi	84.41	340	eP	P	05 42 12.4	-0.7
TCF				pmax	pmax		
	comp=Z,15nm,1.0s						
TCF	Toulx Ste Croi	84.41	340	eP	P	05 42 12.4	-0.7
	comp=Z,15nm,1.0s						
MBDF	Montbardon	84.65	336	eP	P	05 42 13.4	-1.1
	comp=Z,4.7nm,0.8s						
MBDF	Montbardon	84.65	336	eP	P	05 42 13.4	-1.1
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MBDF	Montbardon	84.65	336	eP	P	05 42 13.4	-1.1
	comp=Z,4.7nm,0.8s						
MFF	Saint Martin d	84.66	341	eP	P	05 42 13.6	-0.7
MFF	Saint Martin d	84.66	341	eP	P	05 42 13.6	-0.7
MFF	Saint Martin d	84.66	341	eP	P	05 42 13.6	-0.7
VIVF	Saint-Julien-l	85.11	337	eP	P	05 42 16.3	-0.3
	comp=Z,14nm,1.0s						
VIVF	Saint-Julien-l	85.11	337	eP	P	05 42 16.3	-0.3
VIVF				pmax	pmax		
	comp=Z,14nm,1.0s						
VIVF	Saint-Julien-l	85.11	337	eP	P	05 42 16.3	-0.3
	comp=Z,14nm,1.0s						
CAF	Calviac	85.72	339	eP	P	05 42 19.5	-0.2
CAF	Calviac	85.72	339	eP	P	05 42 19.5	-0.2
CAF	Calviac	85.72	339	eP	P	05 42 19.5	-0.2
PGF	Pioggiola	85.97	334	eP	P	05 42 19.8	-1.3
	comp=Z,3.6nm,0.6s						
PGF	Pioggiola	85.97	334	eP	P	05 42 19.8	-1.3
PGF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PGF	Pioggiola	85.97	334	eP	P	05 42 19.8	-1.3
	comp=Z,3.6nm,0.6s						
LMR	La Mourre	86.00	336	eP	P	05 42 20.4	-0.6
	comp=Z,10.0nm,0.8s						
LMR	La Mourre	86.00	336	eP	P	05 42 20.4	-0.6
LMR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LMR	La Mourre	86.00	336	eP	P	05 42 20.4	-0.6
	comp=Z,10.0nm,0.8s						
LFF	La Frestale	86.03	340	eP	P	05 42 20.7	-0.4
LFF	La Frestale	86.03	340	eP	P	05 42 20.7	-0.4
LFF	La Frestale	86.03	340	eP	P	05 42 20.7	-0.4
TORD	Torodi Ar. Bea	115.42	328	PKP	PKPdf	05 48 20.9	-1.9
TORD	Torodi Ar. Bea	115.42	328	PKP	PKPdf	05 48 20.9	-1.9
	comp=Z,0.2nm,0.6s,baz=9.7,slow=1.9,SNR=3.9						
PLCA	Paso Flores	148.83	96	PKPbc	PKPbc	05 49 28.3	+0.4
PLCA	Paso Flores	148.83	96	PKPbc	PKPbc	05 49 28.3	+0.4
	comp=Z,1.0nm,0.7s,baz=171,slow=3.3,SNR=3.5						
CPUP	Villa Florida	149.48	60	PKPbc	PKPbc	05 49 29.7	-0.1
CPUP	Villa Florida	149.48	60	PKPbc	PKPbc	05 49 29.7	-0.1
	comp=Z,0.6nm,0.5s,baz=294,slow=8.6,SNR=3.8						

IDC 07 05:30:17.2±0.7**, 23°.48N**×**143°.27E, h62**km±6km**, mb3.7**/12**, mb1 3.8**/13**, mb1mx3.6**/27**, mbtmp3.7**/13**, Error ellipse: s-maj=24.3km s-min=10.8km az=76.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.73	345	P	Pn	05 31 11.2	-1.1
	52nm,0.3s,baz=266,slow=16,SNR=30						
CBIJ				S	Sn	05 31 52.7	-2.3
	42nm,0.3s,baz=299,slow=23,SNR=10						
CMAR	Chiang Mai Arr	41.57	272	P	P	05 37 59.5	+0.4
	1.2nm,0.5s,baz=64,slow=8.1,SNR=7.2						
CTA	Charters Tower	43.41	176	P	P	05 38 13.5	-0.5
	2.4nm,0.5s,baz=342,slow=9.3,SNR=3.9						
WRA	Warramunga Arr	44.03	192	P	P	05 38 17.6	-1.4
	0.7nm,0.3s,baz=14,slow=8.6,SNR=14						
ASAR	Alice Springs	47.74	192	P	P	05 38 46.3	-1.9
	0.6nm,0.5s,baz=8.7,slow=13,SNR=5.2						
ZALV	Zalesovo Beam	52.87	321	P	P	05 39 27.9	+1.3
	2.2nm,0.8s,baz=96,slow=1.4,SNR=9.9						
ZALV				pP	pP	05 39 42.9	+0.2
	2.0nm,0.6s,baz=107,slow=11,SNR=7.8						
MKAR	Makanchi Array	53.56	312	P	P	05 39 31.9	+0.1
	0.8nm,0.6s,baz=86,slow=9.0,SNR=7.0						
STKA	Stephens Creek	55.07	182	P	P	05 39 41.3	-1.5
	1.9nm,0.6s,baz=336,slow=12,SNR=4.4						
KURBB	Kurchatov Arra	56.29	316	P	P	05 39 53.2	+1.9
	0.8nm,0.4s,baz=93,slow=8.0,SNR=16						
ILAR	Eielson Array	60.42	28	P	P	05 40 19.9	-0.1
	0.2nm,0.9s,baz=243,slow=9.8,SNR=2.6						
ILAR				pP	pP	05 40 36.5	0.0
	0.5nm,0.7s,baz=253,slow=5.6,SNR=6.0						
BVAR	Borovoye Array	61.38	319	P	P	05 40 27.1	+0.4
	6.5nm,0.6s,baz=90,slow=8.4,SNR=23						
YKA	Yellowknife Ar	74.85	28	P	P	05 41 50.3	-0.6
	0.1nm,0.5s,baz=291,slow=5.2,SNR=2.6						
YKA				pP	pP	05 42 09.7	+1.9
	0.4nm,0.7s,baz=292,slow=5.7,SNR=5.8						
FINES	FINESS Array B	81.61	334	P	P	05 42 27.4	-0.8
	0.5nm,0.3s,baz=70,slow=6.1,SNR=5.6						
FINES				pP	pP	05 42 44.6	-0.7
	0.9nm,0.5s,baz=83,slow=6.0,SNR=2.2						
PLCA	Paso Flores	146.85	129	PKPbc	PKPbc	05 49 53.4	+0.6
	0.9nm,0.4s,baz=245,slow=1.8,SNR=5.5						

*ISCJB **07** 05:42:15.1±0.6, 45°.91N±0°.10×151°.8E±0°.1, h30km, mb3.7/21, Error ellipse: s-maj=16.5km s-min=4.6km az=145.5*
*MOS **07** 05:42:17.1±1.5, 46°.22N×151°.75E, h33km, mb4.2/11, Error ellipse: s-maj=15.4km s-min=10.0km az=60.9*
*JMA **07** 05:42:17.8±1.0, 45°.75N×151°.97E, h30km, M4.6*
*IDC **07** 05:42:21.9±2.6, 46°.04N×151°.72E, h70km±23km, mb3.4/20, mb1 3.6/25, mb1mx3.6/33, mbtmp3.5/25, Error ellipse: s-maj=24.4km s-min=13.3km az=150.0*
ISC 07 05:42:16.5±0.8**, 45°.8N**±0°.1×**151°.85E**±0°.09**, h30**km**, n51,** σ**1s71**/49**, mb3.8**/21**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.85	260	⇓iPN	Pn	05 43 03.7	+3.7
KUR				eS	Sn	05 43 36.0	+2.7
KUR				pmax	pmax		
	comp=Z,210nm,0.5s						
KUR				smax	smax		
	comp=E,970nm,0.8s						
KUR				smax	smax		
	comp=N,320nm,0.5s						
NEM2	Nemuro 2	4.99	243	P	Pn	05 43 30.3	+0.9
NEM2				eS	Sn	05 44 24.0	-2.0
JRA	Rausu	5.13	251	P	Pn	05 43 35.0	+3.8
JNK	Nakash	5.54	249	P	Pn	05 43 40.1	+3.2
SKR	Severo-Kuril's	5.66	29	ePN	Pn	05 43 37.6	-0.9
JAK	Akkeshi	5.84	244	P	Pn	05 43 42.5	+1.5
JAK				eS	Sn	05 44 44.9	-2.0
JTKR	Abashiri--Toko	5.93	255	P	Pn	05 43 45.9	+3.7
JMP	Maruseppu	6.29	256	P	Pn	05 43 51.8	+4.6
JAR	Ashorobuto	6.29	249	P	Pn	05 43 50.3	+3.1
JAR				eS	Sn	05 44 59.7	+1.7
JKK2	Kamakawa 2	6.75	257	P	Pn	05 43 57.9	+4.4
ASAJ	Asahikawa	6.78	259	P	Pn	05 43 59.1	+5.3
	comp=N,3.3nm,0.3s,baz=59,slow=11,SNR=14						
JCH	Churui	6.88	245	P	Pn	05 43 56.5	+1.2
JWK2	Keihoku	7.00	270	P	Pn	05 44 04.1	+7.1
JNBK	Urakawa-nobuka	7.44	245	P	Pn	05 44 04.4	+1.5
JNBK				eS	Sn	05 45 24.3	-1.9
JBT2	Biratori 2	7.44	249	P	Pn	05 44 05.3	+2.3
PETK	Petropavlovsk-	8.25	25	PN	Pn	05 44 17.8	+3.8
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	8.25	25	P	Pn	05 44 17.8	+3.8
	comp=Z,0.7nm,0.3s,baz=183,slow=11,SNR=7.5						
JNB	Noboribetsu	8.46	251	P	Pn	05 44 19.9	+3.0
JKB	Kayabe	8.74	247	P	Pn	05 44 21.9	+1.1
JKB				eS	Sn	05 45 53.6	-4.6
JANG	Nango	9.30	238	P	Pn	05 44 27.8	-0.7
JANG				eS	Sn	05 46 04.7	-7.3
JTM	Tenmabayashi	9.32	241	P	Pn	05 44 28.8	+0.1
JTH	Tanohata	9.38	235	eS	Sn	05 46 04.7	-9.2
MJAR	Matsushiro Arr	13.80	233	P	P	05 45 38.2	0.0
	comp=Z,0.8nm,0.3s,baz=36,slow=8.8,SNR=8.2						
USRK	Ussuriysk Arra	14.13	271	P	Pn	05 45 36.1	+1.5
	comp=Z,0.5nm,0.3s,baz=79,slow=14,SNR=6.5						
FX1	Attu Island--F	15.56	55	P	Pn	05 45 54.3	+0.8
	comp=Z,1.9nm,0.3s,baz=273,slow=19,SNR=5.4						
FX1				S	S	05 48 55.9	-3.8
	comp=Z,1.9nm,0.3s,baz=72,slow=19,SNR=2.8						
KSRS	Korea Array	19.68	253	P	P	05 46 44.1	+1.1
	comp=Z,0.1nm,0.3s,baz=58,slow=12,SNR=9.4						
SONM	Songino Array	30.83	290	P	P	05 48 29.1	-0.7
	comp=Z,0.4nm,0.8s,baz=69,slow=7.9,SNR=2.4						
ILAR	Eielson Array	37.84	38	P	P	05 49 28.4	-1.6
	comp=Z,0.1nm,0.5s,baz=272,slow=6.8,SNR=2.6						
ZALV	Zalesovo Beam	42.46	306	PcP	PcP	05 52 01.6	+0.7
	comp=Z,1.1nm,0.7s,baz=46,slow=4.3,SNR=6.4						
INK	Inuvik	42.92	32	P	P	05 50 12.9	+0.9
	comp=Z,1.3nm,0.9s,baz=285,slow=7.9,SNR=5.8						
MKAR	Makanchi Array	46.60	298	P	P	05 50 41.4	-0.2
MKAR						05 52 15.7	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	46.60	298	P	P	05 50 41.4	-0.2
	comp=Z,0.4nm,0.5s,baz=69,slow=7.2,SNR=8.0						
MKAR				PcP	PcP	05 52 15.7	+0.4
	comp=Z,1.0nm,0.8s,baz=55,slow=3.8,SNR=7.1						
KURK	Kurchatov	47.16	304	P	P	05 50 46.0	+0.1
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURBB	Kurchatov Arra	47.25	304	P	P	05 50 46.0	-0.6
	comp=Z,0.5nm,0.4s,baz=74,slow=8.5,SNR=7.3						
CMAR	Chiang Mai Arr	51.29	256	P	P	05 51 19.9	+2.0
	comp=Z,0.6nm,0.4s,baz=37,slow=7.5,SNR=5.0						
RES	Resolute Bay	52.01	18	P	P	05 51 21.9	-0.6
	comp=Z,0.2nm,0.3s,baz=239,slow=13,SNR=5.0						
YKA	Yellowknife Ar	52.21	36	P	P	05 51 24.6	+0.5
	comp=Z,0.2nm,0.4s,baz=300,slow=6.8,SNR=7.3						
ARCES	ARCESS Array B	58.46	341	P	P	05 52 08.3	-0.8
	comp=Z,2.5nm,0.8s,baz=45,slow=9.1,SNR=4.5						
FINES	FINESS Array B	64.52	334	P	P	05 52 48.4	-1.7
	comp=Z,0.7nm,0.5s,baz=91,slow=9.7,SNR=5.3						
PDAR	Pinedale Array	66.02	53	P	P	05 53 00.8	+0.4
	comp=Z,0.3nm,0.9s,baz=305,slow=4.0,SNR=2.4						
WRA	Warramunga Arr	67.33	198	P	P	05 53 10.3	+1.7
	comp=Z,0.2nm,0.4s,baz=19,slow=6.2,SNR=4.4						
NB2	NORSAR Subarra	68.84	341	P	P	05 53 16.7	-1.0
	comp=Z,0.5nm,0.4s,baz=27,slow=6.5						
NOA	NORSAR Array B	68.84	341	P	P	05 53 16.8	-0.8
	comp=Z,0.5nm,0.3s,baz=28,slow=6.5,SNR=13						
HFS	Hagfors	69.03	339	P	P	05 53 17.4	-1.5
	comp=Z,1.3nm,0.3s,baz=43,slow=2.8,SNR=16						
AKASG	Malin Array Be	71.84	326	P	P	05 53 34.0	-2.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	71.84	326	P	P	05 53 34.0	-2.1
	comp=Z,0.9nm,0.3s,baz=36,slow=6.2,SNR=5.2						
EKA	Eskdalemuir Ar	77.05	346	P	P	05 54 05.4	-0.9
	comp=Z,0.3nm,0.3s,baz=20,slow=5.1,SNR=8.5						
MLR	Muntele Rosu	77.33	324	P	P	05 54 08.3	0.0
	comp=Z,0.9nm,0.9s,baz=181,slow=7.9,SNR=3.7						
BRTR	Keskin Array B	78.47	316	P	P	05 54 15.1	+0.3
	comp=Z,0.9nm,0.7s,baz=88,slow=5.2,SNR=6.6						
TXAR	Lajitas Array	78.73	60	P	P	05 54 16.3	+0.1
	comp=Z,0.1nm,0.4s,baz=317,slow=8.6,SNR=3.0						
GERES	GERESS Array B	78.92	333	P	P	05 54 16.8	-0.2
	comp=Z,0.7nm,0.5s,baz=42,slow=4.2,SNR=6.7						

*ISK **07** 06:00:16.4, 37°.99N×30°.15E, h12km, MD2.6*
*ISCJB **07** 06:00:17.8±0.6, 38°.03N±0°.03×30°.22E±0°.04, h3km±7km, Error ellipse: s-maj=5.9km s-min=5.4km az=153.2*
*CSEM **07** 06:00:17.2±0.3, 37°.96N×30°.19E, h20km, MD2.6, Error ellipse: s-maj=7.7km s-min=5.3km az=33.0*
*DDA **07** 06:00:19.3, 38°.06N×30°.21E, h7km, MD2.9*
ISC 07 06:00:17.0±1.4**, 38°.05N**±0°.03×**30°.24E**±0°.03**, h6**km±12km**, n22,** σ**0s78**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	Isparta	0.32	135	ePG	Pg	06 00 23.6	+0.5
ISP				eSG	Sb	06 00 29.1	-1.5
ISP	Isparta	0.32	135	ePg	Pg	06 00 23.7	+0.5
ISP				eSg	Sb	06 00 29.1	-1.5
SHUT	Suhut-Afyon	0.56	26	ePG	Pb	06 00 29.5	+0.1
SHUT				eSG	Sb	06 00 38.9	+1.1
SHUT	Suhut-Afyon	0.56	26	ePg	Pb	06 00 29.5	+0.1
SHUT				eSg	Sb	06 00 38.9	+1.1
KHL	Karahalli	0.63	296	ePG	Pg	06 00 28.4	-0.6
KHL	Karahalli	0.63	296	ePg	Pg	06 00 28.4	-0.6
BCK	Bucak	0.65	154	ePG	Pg	06 00 29.2	-0.3
BCK	Bucak	0.65	154	ePg	Pg	06 00 29.2	-0.3
KHAL	Karahalli	0.67	299	i P	Pb	06 00 32.0	+0.8
KHAL				i S	Sb	06 00 41.4	+0.6
KHAL	Karahalli	0.67	299	i P	Pb	06 00 32.0	+0.8
KHAL				i S	Sb	06 00 41.4	+0.6
BOLV	Bolvadin	0.87	40	i P	Pn	06 00 35.7	-0.3
BOLV				i S	Sn	06 00 49.3	+0.1
BOLV	Bolvadin	0.87	40	i P	Pn	06 00 35.7	-0.3
BOLV				i S	Sn	06 00 49.3	+0.1
GOLH	Golhisar	0.97	214	i P	Pn	06 00 37.9	+0.6
GOLH				i S	Sn	06 00 52.0	+0.5
GOLH	Golhisar	0.97	214	i P	Pn	06 00 37.9	+0.6
ALT	Altintas	1.01	354	ePG	Pb	06 00 37.2	+0.2
ALT	Altintas	1.01	354	ePg	Pb	06 00 37.2	+0.2
KULA	Kula-Manisa	1.32	291	ePN	Pn	06 00 40.7	-1.5
KULA	Kula-Manisa	1.32	291	ePn	Pn	06 00 40.7	-1.5
TVSB	Tavsanli	1.53	337	ePN	Pn	06 00 44.6	-0.3
TVSB	Tavsanli	1.53	337	ePn	Pn	06 00 44.6	-0.3
KIZT	Kizilcal	1.54	57	ePN	Pn	06 00 44.8	-0.3
KIZT	Kizilcal	1.54	57	ePn	Pn	06 00 44.8	-0.3

*ISCJB **07** 06:00:31.0±0.7, 37°.31N±0°.03×56°.66E±0°.02, h1km±5km, mb3.8/21, MS4.8/1, Error ellipse: s-maj=4.7km s-min=3.3km az=175.7*
*THR **07** 06:00:32.6±0.4, 37°.20N×56°.43E, h6km±4km, ML3.7*
*IDC **07** 06:00:32.0±1.0, 37°.22N×56°.70E, h0km, mb3.7/17, mb1 3.9/21, mb1mx3.8/35, mbtmp3.8/21, ML3.8/4, Error ellipse: s-maj=20.3km s-min=14.2km az=173.0*
*CSEM **07** 06:00:32.5±0.1, 37°.31N×56°.65E, h2km, mb3.9/10, Error ellipse: s-maj=3.3km s-min=2.6km az=175.0*
*TEH **07** 06:00:34.2, 37°.31N×56°.65E, h11km, ML4.1*
*MOS **07** 06:00:35.7±1.5, 37°.28N×56°.82E, h33km, mb4.1/13, Error ellipse: s-maj=11.4km s-min=7.7km az=99.6*
*BJI **07** 06:00:35.4, 37°.36N×56°.91E, h12km, mb4.2/5*
*NNC **07** 06:00:43.9±3.4, 37°.96N×57°.12E, h22km±33km, mb4.0, Error ellipse: s-maj=30.4km s-min=14.1km az=45.0*
ISC 07 06:00:32.2±1.2**, 37°.25N**±0°.05×**56°.64E**±0°.02**, h0**km±9km**, n155,** σ**1s10**/155**, mb3.9**/21**, 13C-4D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRVT	Maraveh tapeh	0.60	313	ePg	Pg	06 00 43.2	-0.5
MRVT	Maraveh tapeh	0.60	313	ePg	Pg	06 00 43.2	-0.5
BJRD	Bojnurd	0.75	54	ePg	Pn	06 00 50.7	+0.5
BJRD				AML	AML	06 01 11.3	
	comp=N,2μm,0.6s						
BJRD	Bojnurd	0.75	54	ePg	Pn	06 00 50.7	+0.5
ISHV	Shirvan	0.89	71	ePg	Pg	06 00 49.7	+0.5
ISHV				e		06 01 13.5	
	comp=Z,36μm,0.3s						
ISHV	Shirvan	0.89	71	ePg	Pg	06 00 49.7	+0.5
IMND	Minoodasht	0.99	271	ePg	Pg	06 00 51.8	+0.7
IMND	Minoodasht	0.99	271	ePg	Pg	06 00 51.8	+0.7
ISFR	Sfrayin	1.10	100	⇑ePg	Pb	06 00 53.5	-0.8
ISFR				eSg	Sg	06 01 08.6	+1.0
ISFR				e		06 01 18.1	
	comp=Z,49μm,0.3s						
ISFR	Sfrayin	1.10	100	⇑ePg	Pb	06 00 53.5	-0.8
ISFR				eSg	Sg	06 01 08.6	+1.0
SHRO	Shahrood	1.36	202	ePg	Pn	06 00 56.4	-2.1
IQHU	Qucahn	1.52	96	ePn	Pb	06 01 01.4	0.0
IQHU				e		06 01 53.3	
	comp=Z,41μm,0.3s						
IQHU	Qucahn	1.52	96	ePn	Pb	06 01 01.4	0.0
IKRD	Kardeh	1.57	107	ePn	Pg	06 01 13.0	+11
IKRD				eSg	Sg	06 01 48.3	+25
IKRD				e		06 01 53.8	
	comp=Z,16μm,0.3s						
IAKL	Akhelmad	1.81	110	eSg	Sg	06 01 31.3	+0.8
IAKL				ePn	Pn	06 01 05.4	+0.5
IAKL				e		06 01 36.1	
	comp=Z,15μm,0.2s						
IPAY	Payeh	2.05	112	eSg	Sg	06 01 38.9	+0.8
IPAY				⇓ePn	Pn	06 01 08.5	+0.4
IPAY				e		06 01 43.9	
	comp=Z,14μm,0.4s						
IMOG	Moghan	2.45	117	⇑ePn	Pn	06 01 14.5	+0.8
IMOG				e		06 01 57.8	
	comp=Z,7μm,0.2s						
IMOG	Moghan	2.45	117	⇑ePn	Pn	06 01 14.5	+0.8
ISRO	Mashad	2.46	112	ePn	Pn	06 01 14.3	+0.7
ISRO				e		06 02 00.3	
	comp=Z,66μm,1.0s						
ISRO	Mashad	2.46	112	ePn	Pn	06 01 14.3	+0.7
MHI	Mashad	2.46	112	ePn	Pb	06 01 15.6	-1.7
MHI				e		06 01 59.6	
	comp=Z,7μm,0.2s						
IANJ	Anjilo	2.83	232	ePn	Pn	06 01 19.9	+1.0
IANJ				e		06 02 23.3	
	comp=Z,8μm,0.5s						
IANJ	Anjilo	2.83	232	ePn	Pn	06 01 19.9	+1.0
IMYA	Miami	2.92	107	ePn	Pn	06 01 20.7	+0.7
IMYA				eSg	Sg	06 02 06.5	+0.5

IMYA e 06 02 16.7
comp=Z,9μm,0.4s
IMYA Miami 2.92 107 ePn **Pn 06 01 20.7 +0.7**
IMYA eSg **Sg 06 02 06.5 +0.5**
ISHM Shahmirzad 3.06 243 ePn **Pn 06 01 23.1 +1.0**
ISHM e 06 01 35.6
comp=Z,7μm,0.2s
ISHM Shahmirzad 3.06 243 ePn **Pn 06 01 23.1 +1.0**
ILAS Lasjerd 3.51 239 ePn **Pn 06 01 29.0 +0.8**
ILAS e 06 01 40.6
comp=Z,4μm,0.3s
ILAS Lasjerd 3.51 239 ePn **Pn 06 01 29.0 +0.8**
IFIR Firoozkooh 3.52 244 ePn **Pn 06 01 30.5 +2.1**
IFIR e 06 01 42.9
comp=Z,6μm,0.2s
IFIR Firoozkooh 3.52 244 ePn **Pn 06 01 30.5 +2.1**
TABS Tabas 3.62 174 ePn **Pn 06 01 30.5 +1.0**
TABS Tabas 3.62 174 ePn **Pn 06 01 30.5 +1.0**
IDMV Damavand 4.08 247 ePn **Pn 06 01 36.9 +0.9**
IDMV e 06 01 51.7
comp=Z,2μm,0.2s
IDMV Damavand 4.08 247 ePn **Pn 06 01 36.9 +0.9**
IVRN Varamin 4.57 242 ePn **Pn 06 01 43.4 +0.8**
IVRN ePn **Pn 06 01 43.5 +0.8**
IVRN e 06 02 01.9
comp=Z,2μm,0.2s
IVRN Varamin 4.57 242 ePn **Pn 06 01 43.4 +0.8**
ISFB Sefidab 4.60 232 ePn **Pn 06 01 43.1 0.0**
ISFB e 06 02 02.8
comp=Z,2μm,0.3s
ISFB Sefidab 4.60 232 ePn **Pn 06 01 43.1 0.0**
ITEG Tejag 4.68 158 ePn **Pn 06 01 44.9 +0.7**
ITEG Tejag 4.68 158 ePn **Pn 06 01 44.9 +0.7**
THKV Tehran--Karaj 4.83 256 AML AML 06 03 19.2
comp=E,81nm,0.5s
THKV AML AML 06 03 24.2
comp=N,89nm,0.6s
IR3 Iran Long-Peri 4.87 250 ePn **Pn 06 01 47.3 +0.6**
IR3 eSg **Sg 06 03 06.8 -1.8**
IR3 Iran Long-Peri 4.87 250 ePn **Pn 06 01 47.3 +0.6**
IR3 eSg **Sg 06 03 06.8 -1.8**
IKOO Kooshah 5.19 157 ePn **Pn 06 01 51.8 +0.4**
IKOO e 06 03 27.9
comp=Z,5μm,0.8s
IKOO Kooshah 5.19 157 ePn **Pn 06 01 51.8 +0.4**
IDAH Dahanechah 5.22 149 ePn **Pn 06 01 52.4 +0.6**
IDAH e 06 01 55.4
comp=Z,519nm,0.1s
IDAH Dahanechah 5.22 149 ePn **Pn 06 01 52.4 +0.6**
ICHK Chekchek 5.33 201 ePn **Pn 06 01 53.6 +0.5**
ICHK e 06 02 58.5
comp=Z,946nm,0.2s
ICHK Chekchek 5.33 201 ePn **Pn 06 01 53.6 +0.5**
NASN Na'in 5.44 216 ePn **Pn 06 01 54.9 0.0**
NASN Na'in 5.44 216 ePn **Pn 06 01 54.9 0.0**
IZEF Zefreh 5.60 220 ePn **Pn 06 01 57.7 +0.7**
IZEF e 06 02 22.6
comp=Z,484nm,0.2s
IZEF Zefreh 5.60 220 ePn **Pn 06 01 57.7 +0.7**
IKLH Kolahrood 5.71 228 ePn **Pn 06 01 58.8 +0.4**
IKLH e 06 02 22.3
comp=Z,707nm,0.2s
IKLH Kolahrood 5.71 228 ePn **Pn 06 01 58.8 +0.4**
IBAF Bafgh 5.72 189 ePn **Pn 06 01 59.2 +0.7**
IBAF e 06 03 58.7
comp=Z,2μm,0.5s
IBAF Bafgh 5.72 189 ePn **Pn 06 01 59.2 +0.7**
IRAZ Razeghan 5.72 253 ePn **Pn 06 01 58.8 +0.2**
IRAZ e 06 02 30.7
comp=Z,908nm,0.5s
IRAZ Razeghan 5.72 253 ePn **Pn 06 01 58.8 +0.2**
IMEH Mehriz 6.08 197 ePn **Pn 06 02 04.1 +0.5**
IMEH e 06 03 54.7
comp=Z,2μm,0.7s
IMEH Mehriz 6.08 197 ePn **Pn 06 02 04.1 +0.5**
IGAR Gharneh 6.14 219 e 06 02 20.4
comp=Z,520nm,0.1s
IGAR ePn **Pn 06 02 05.2 +0.9**
IPIR Pirpir 6.56 228 ePn **Pn 06 02 12.8 +2.6**
IPIR e 06 02 15.1
comp=Z,1μm,0.2s
IPIR Pirpir 6.56 228 ePn **Pn 06 02 12.8 +2.6**
ISRB Sarab 7.16 277 ePn **Pn 06 02 17.7 -0.6**
ISRB e 06 02 19.1
comp=Z,4μm,0.2s
ISRB Sarab 7.16 277 ePn **Pn 06 02 17.7 -0.6**
IHRS Heris 7.68 281 ePn **Pn 06 02 24.8 -0.6**
IHRS e 06 02 26.3
comp=Z,2μm,0.2s
IHRS Heris 7.68 281 ePn **Pn 06 02 24.8 -0.6**
IBST Bostanabad 7.77 276 ePn **Pn 06 02 26.2 -0.5**
IBST e 06 02 32.1
comp=Z,244nm,0.2s
IBST Bostanabad 7.77 276 ePn **Pn 06 02 26.2 -0.5**
ITBZ Tabriz 8.37 280 ePn **Pn 06 02 34.7 -0.2**
ITBZ e 06 02 36.3
comp=Z,859nm,0.3s
ITBZ Tabriz 8.37 280 ePn **Pn 06 02 34.7 -0.2**
IMRD Marand 8.76 283 ePn **Pn 06 02 40.2 -0.1**
IMRD e 06 02 53.0
comp=Z,1μm,0.2s
IMRD Marand 8.76 283 ePn **Pn 06 02 40.2 -0.1**
KK31 Karatay Array 12.10 57 ⇑Pn **Pn 06 03 25.0 -0.9**
comp=Z,5.8nm,0.7s,baz=258,slow=18,SNR=29
KK31 ⇑Sn Sn 06 05 33.1 -8.4
comp=Z,5.8nm,0.8s,baz=188,slow=15,SNR=6.5
KK31 ⇑Lg Lg 06 06 47.5
comp=Z,30nm,1.1s,baz=34,slow=20,SNR=2.5
KK31 Karatay Array 12.10 57 Pn **Pn 06 03 25.0 -0.9**
comp=Z,5.8nm,0.7s,SNR=29
KK31 Lg Lg 06 06 47.5
comp=Z,30nm,1.1s,SNR=2.5
AB31 Akbulak array 12.23 10 Pn **Pn 06 03 26.2 -1.4**
comp=Z,4.4nm,0.8s,baz=186,slow=13,SNR=30
AB31 ⇑Sn Sn 06 05 34.7 -10
comp=Z,6.5nm,0.7s,baz=195,slow=23,SNR=4.5
AB31 Akbulak array 12.23 10 Pn **Pn 06 03 26.2 -1.4**
comp=Z,4.4nm,0.8s,baz=186,SNR=30
KIV Kislovodsk 12.53 307 eP **Pn 06 03 34.7 +2.9**
KIV pmax pmax
comp=Z,10.0nm,0.9s
AKTK Aktyubinsk 13.21 4 P **Pn 06 03 40.0 -1.0**
comp=Z,1.0nm,0.3s
AKTO Aktyubinsk 13.21 4 ⇓Pn **Pn 06 03 39.5 -1.5**
comp=Z,5.4nm,1.4s
AKTO ⇑Sn Sn 06 05 58.7 -10
comp=Z,4.1nm,1.4s
AKTO Aktyubinsk 13.21 4 P **Pn 06 03 40.0 -1.0**
AKTO 06 06 00.5
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO Aktyubinsk 13.21 4 Pn **Pn 06 03 40.0 -1.0**
comp=Z,0.9nm,0.3s,baz=184,slow=14,SNR=36
AKTO Sn Sn 06 06 00.5 -8.1
comp=Z,0.4nm,0.3s,baz=105,slow=20,SNR=3.7
AKTO Aktyubinsk 13.21 4 Pn **Pn 06 03 39.5 -1.5**
comp=Z,5.4nm,1.4s
AAK Ala-Archa 14.70 63 eP **Pn 06 03 59.5 -2.0**
AAK Ala-Archa 14.70 63 Pn **Pn 06 03 59.3 -2.2**
comp=Z,0.2nm,0.3s,baz=243,slow=11,SNR=5.8
KSH Kashi 15.33 76 P Pn 06 04 03.8 -6.1
KSH pmax pmax
comp=Z,8.0nm,0.7s
VRHR Novokhopersk 17.49 327 eP P 06 04 43.3 +4.8
VRHR pmax pmax
comp=Z,10.0nm,1.1s
VRHR pmax pmax
comp=N,9.0nm,0.5s
VRHR pmax pmax
comp=E,40nm,0.8s
ZRNK Zerenda 17.92 25 ⇓P **P 06 04 43.2 -0.1**
comp=E,8.7nm,1.4s
ZRNK Zerenda 17.92 25 P **P 06 04 43.2 -0.1**
comp=E,8.7nm,1.4s
BRTR Keskin Array B 18.17 285 P **P 06 04 47.5 +1.1**
comp=E,0.1nm,0.3s,baz=99,slow=8.0,SNR=9.2
VOSK Vostochnaya 18.44 28 ⇑P **P 06 04 46.8 -2.3**
comp=E,8.7nm,1.4s
BRVK Borovoye 18.45 27 *i* P **Pn 06 04 49.1 0.0**
BRVK pmax pmax
comp=Z,7.0nm,1.0s
BRVK Borovoye 18.45 27 *i* P **Pn 06 04 49.1 0.0**
comp=Z,7.0nm,1.0s
BVA0 Borovoye Array 18.46 27 ⇑P **P 06 04 48.5 -0.8**
comp=Z,1.9nm,0.9s,baz=206,slow=13,SNR=49
BVA0 Borovoye Array 18.46 27 P **P 06 04 48.5 -0.8**
comp=Z,1.9nm,0.9s,SNR=49
BVAR Borovoye Array 18.46 27 P **P 06 04 48.3 -1.0**
BVAR S Sn 06 08 05.6 -10
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BVAR Borovoye Array 18.46 27 P **P 06 04 48.3 -1.0**
comp=Z,1.1nm,0.3s,baz=208,slow=12,SNR=28
BVAR S Sn 06 08 05.6 -10
comp=Z,0.1nm,0.3s,baz=220,slow=24,SNR=3.7
BVAR Borovoye Array 18.46 27 P **P 06 04 48.3 -1.0**
comp=Z,1.0nm,0.3s
VORD Divnogorie 18.46 323 eP **Pn 06 04 52.0 +2.8**
VORD pmax pmax
comp=Z,5.0nm,0.4s
VORD pmax pmax
comp=N,7.0nm,0.9s
VORD pmax pmax
comp=E,10.0nm,0.9s
VSR Storozhevoye 18.68 324 eP **Pn 06 04 53.1 +1.1**
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,6.0nm,0.4s
VSR pmax pmax
comp=Z,8.0nm,0.4s
VSR Storozhevoye 18.68 324 eP **Pn 06 04 53.1 +1.1**
ARU Arti 19.23 3*d* iP **Pn 06 05 00.5 +2.0**
ARU pmax pmax
comp=Z,9.0nm,1.2s
KURBB Kurchatov Arra 20.56 43 P **P 06 05 12.3 0.0**
comp=Z,1.3nm,0.9s,baz=243,slow=10,SNR=19
KURK Kurchatov 20.66 42 ⇑P Pn 06 05 14.2 -1.4
comp=Z,12nm,1.0s
KURK Kurchatov 20.66 42 ⇑eP **P 06 05 13.9 +0.6**
KURK pmax pmax
comp=Z,12nm,1.3s
KURK Kurchatov 20.66 42 eP **P 06 05 13.9 +0.6**
comp=Z,12nm,1.3s
MK31 Makanchi Array 21.22 55 P **P 06 05 19.9 +0.4**
comp=Z,6.1nm,0.7s,baz=247,slow=9.6,SNR=56
MK31 Makanchi Array 21.22 55 P **P 06 05 19.9 +0.4**
comp=Z,6.1nm,0.7s,SNR=56
MKAR Makanchi Array 21.22 55 P **P 06 05 20.2 +0.7**
MKAR pmax pmax
comp=Z,4.0nm,0.6s
MKAR Makanchi Array 21.22 55 P **P 06 05 20.2 +0.7**
comp=Z,3.7nm,0.6s,baz=244,slow=9.4,SNR=37
MKAR Makanchi Array 21.22 55 P **P 06 05 20.2 +0.7**
comp=Z,4.0nm,0.6s
OBN Obninsk 22.49 329 P **P 06 05 37.0 +4.1**
OBN *e* 06 05 42.5
OBN *e* 06 05 53.9
OBN *e* 06 06 00.6
OBN *e* 06 06 08.1
OBN pmax pmax
comp=Z,9.0nm,1.0s
OBN MLR MLR
comp=Z,3μm,17.0s
AKASG Malin Array Be 23.71 313 P **P 06 05 44.6 -0.9**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 23.71 313 P **P 06 05 44.6 -0.9**
comp=Z,0.8nm,0.4s,baz=115,slow=8.8,SNR=2.6
MLR Muntele Rosu 24.35 299 P **P 06 05 52.6 +0.8**
comp=Z,0.8nm,0.9s,baz=59,slow=18,SNR=3.8
ZALV Zalesovo Beam 25.59 40 P **P 06 06 01.2 -1.5**
ZALV pmax pmax
comp=Z,2.0nm,0.7s
ZALV Zalesovo Beam 25.59 40 P **P 06 06 01.2 -1.5**
comp=Z,2.4nm,0.7s,baz=252,slow=9.2,SNR=11
CRVS Cervenica-Dubn 27.96 306 eP **P 06 06 26.0 +1.7**
CRVS Cervenica-Dubn 27.96 306 eP **P 06 06 26.0 +1.7**
VYHS Vyhne 29.61 304 eP **P 06 06 40.5 +1.6**
VYHS Vyhne 29.61 304 eP **P 06 06 40.5 +1.6**
FINES FINESS Array B 30.82 332 P **P 06 06 49.5 +0.1**
comp=Z,0.4nm,0.4s,baz=152,slow=8.4,SNR=4.2
FINES FINESS Array B 30.82 332 P **P 06 06 49.5 +0.1**
GERES GERESS Array B 33.03 304 P **P 06 07 10.1 +1.0**
comp=Z,0.3nm,0.4s,baz=69,slow=5.4,SNR=2.6
GERES GERESS Array B 33.03 304 P **P 06 07 10.1 +1.0**
GTA Gaotai 33.70 73 eP P 06 07 18.1 +3.0
GTA pP 06 07 22.9
GTA sP 06 07 25.2
GTA pmax pmax
comp=Z,4.0nm,1.1s
HFS Hagfors 35.50 324 P **P 06 07 31.7 +1.5**
comp=Z,1.7nm,0.7s,baz=108,slow=9.3,SNR=4.4
HFS Hagfors 35.50 324 P **P 06 07 31.7 +1.5**
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 36.44 342 P **P 06 07 37.8 -0.4**
comp=Z,1.2nm,0.7s,baz=147,slow=8.6,SNR=3.2
ARCES ARCESS Array B 36.44 342 P **P 06 07 37.8 -0.4**
comp=Z,1.0nm,0.7s
NB2 NORSAR Subarra 36.96 325 P **P 06 07 42.5 -0.3**
comp=Z,0.8nm,0.6s,baz=111,slow=8.6
NB2 NORSAR Subarra 36.96 325 P **P 06 07 42.5 -0.3**
comp=Z,0.8nm,0.6s,SNR=4.2
NOA NORSAR Array B 36.96 325 P **P 06 07 42.4 -0.4**
comp=Z,0.7nm,0.6s,baz=111,slow=8.3,SNR=4.5
NOA NORSAR Array B 36.96 325 P **P 06 07 42.4 -0.3**
comp=Z,1.0nm,0.6s
MBDF Montbardon 37.88 297 eP P 06 07 46.0 -4.9
comp=Z,5.5nm,0.7s
ULN Ulaanbaatar 38.00 57 eP **P 06 07 50.8 -1.1**
CMAR Chiang Mai Arr 41.42 105 P **P 06 08 19.3 -1.2**
comp=Z,1.2nm,0.3s,baz=309,slow=9.2,SNR=2.8
CMAR Chiang Mai Arr 41.42 105 P **P 06 08 19.3 -1.2**
comp=Z,1.0nm,0.3s
EKA Eskdalemuir Ar 43.62 314 P **P 06 08 37.8 -0.2**
comp=Z,0.6nm,0.4s,baz=94,slow=7.5,SNR=6.4
EKA Eskdalemuir Ar 43.62 314 P **P 06 08 37.8 -0.2**
comp=Z,1.0nm,0.4s
SJPF Ste Jean 43.84 296 eP P 06 08 35.3 -4.7
TIXI Tiksi 49.54 23 eP **P 06 09 25.3 +1.1**
TIXI Tiksi 49.54 23 eP **P 06 09 25.3 +1.1**
TORD Torodi Ar. Bea 54.36 259 P **P 06 10 01.3 +0.4**
comp=Z,0.3nm,0.5s,baz=51,slow=7.8,SNR=5.6
KSRS Korea Array 55.33 66 P **P 06 10 06.6 -1.0**
comp=Z,0.6nm,0.3s,baz=302,slow=7.0,SNR=3.1
KSRS Korea Array 55.33 66 P **P 06 10 06.6 -1.0**
comp=Z,1.0nm,0.3s
FRB Frobisher Bay 70.41 337 P P 06 11 50.9 +3.3
comp=Z,1.6nm,0.8s,baz=35,slow=5.2,SNR=6.8
INK Inuvik 74.48 4 P **P 06 12 13.8 +2.0**
comp=Z,0.7nm,0.9s,baz=18,slow=3.2,SNR=3.2
INK Inuvik 74.48 4 P **P 06 12 13.8 +2.0**
comp=Z,1.0nm,0.9s
ILAR Eielson Array 76.64 10 P **P 06 12 23.5 -0.8**
comp=Z,0.2nm,0.8s,baz=325,slow=4.4,SNR=3.0
ILAR Eielson Array 76.64 10 P **P 06 12 23.5 -0.8**
YKA Yellowknife Ar 80.35 356 P **P 06 12 44.3 -0.5**
comp=Z,0.2nm,0.7s,baz=0.3,slow=5.9,SNR=6.0
YKA Yellowknife Ar 80.35 356 P **P 06 12 44.3 -0.5**

MEX 07 06:04:36.0±0.7, **16.13N**×**97.28W, h12**km±9km, **MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.85**	**288**	*i* P		Pg		06 04 50.0	-2.6
PNIG				*i* S		Sg		06 05 00.8	-2.9
VHO	**Vista Hermosa**	**1.07**	**29**	*e*P		Pb		06 04 52.8	-4.0
VHO				*i* S		Sb		06 05 07.0	-4.1
HUIG	**Huatulco**	**1.19**	**107**	*i* P		Pn		06 04 55.6	-2.8
HUIG				*i* S		Sb		06 05 09.0	-4.8

IDC 07 06:07:35.3±2.2, **1.57S**×**13.51W, h0**km, **mb3.7**/5, **mb1 3.8**/6, **mb1mx3.5**/28, **mbtmp3.8**/6, **ML3.6**/1, **Error ellipse: s-maj=120.9km s-min=20.8km az=143.0, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**11.90**	**46**	Pn		Pn		06 10 25.1	-1.3
	0.4nm,0.3s,baz=215,slow=13,SNR=5.6								
DBIC				Sn		Sn		06 12 29.0	-11
	0.8nm,0.3s,baz=131,slow=21,SNR=5.2								
TORD	**Torodi Ar. Bea**	**21.01**	**45**	P		P		06 12 21.1	+0.4
	2.4nm,0.7s,baz=231,slow=10,SNR=10.0								
TORD				S		S		06 16 04.3	-11
	0.6nm,0.6s,baz=227,slow=21,SNR=4.3								
RCBR	**Riachuelo**	**22.73**	**259**	P		P		06 12 39.6	+0.3
	1.2nm,0.5s,baz=82,slow=5.3,SNR=3.7								

CPUP Villa Florida 48.75 236 P P 06 16 22.5 +0.3
0.7nm,0.5s,baz=54,slow=12,SNR=4.8
SIV San Ignacio 48.99 250 P P 06 16 23.1 -1.1
0.5nm,0.7s,baz=96,slow=9.5,SNR=3.6
FINES FINESS Array B 69.74 19 P P 06 18 47.2 +0.3
0.8nm,0.8s,baz=224,slow=7.7,SNR=2.6

ISCJB ***07*** *06:15:07.7±0.3, 42.37N±0.02×13.33E±0.03, h16km±3km, Error ellipse: s-maj=3.5km s-min=3.2km az=167.0*
CSEM ***07*** *06:15:07.8±0.1, 42.37N×13.34E, h8km, ML3.7/8, Error ellipse: s-maj=2.8km s-min=2.2km az=66.0*
ROM ***07*** *06:15:07.5±0.1, 42.38N×13.32E, h11km, Md3.0/23, Ml3.1/20, Error ellipse: s-maj=1.1km s-min=0.8km az=77.0*
LDG ***07*** *06:15:10.3±0.3, 42.45N×13.28E, h2km, Ml2.9/7, Error ellipse: s-maj=5.4km s-min=3.7km az=115.0*

ISC 07 06:15:07.3±0.8, **42.37N**±0.02×**13.31E**±0.02, **h15**km±5km, **n76,** σ1.9**15**/113, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**105**	Pg		Pg		**06 15 10.3**	**-0.1**
AQU				Sg		Sg		**06 15 11.9**	**-0.6**
	42μm,0.2s								
AQU	**L'Aquila**	**0.07**	**105**	Pg		Pg		**06 15 10.3**	**-0.1**
AQU				Sg		Sg		**06 15 11.9**	**-0.6**
	42μm,0.2s								
FIAM	**Fiamignano**	**0.17**	**233**	Pg		Pb		**06 15 12.5**	**+0.2**
FIAM				Sg		Sb		**06 15 15.5**	**-0.1**
	3μm,0.5s								
FIAM	**Fiamignano**	**0.17**	**233**	Pg		Pb		**06 15 12.5**	**+0.2**
FIAM				Sg		Sb		**06 15 15.5**	**-0.1**
	3μm,0.5s								
CAMP	**Campotosto**	**0.18**	**25**	Pg		Pg		**06 15 12.0**	**+0.2**
CAMP				Sg		Sg		**06 15 14.8**	**0.0**
CAMP	**Campotosto**	**0.18**	**25**	Pg		Pg		**06 15 12.0**	**+0.2**
CAMP				Sg		Sg		**06 15 14.8**	**0.0**
FAGN	**Fagnano**	**0.23**	**117**	Pg		Pg		**06 15 12.6**	**+0.1**
FAGN				Sg		Sb		**06 15 16.8**	**-0.4**
	8μm,0.3s								
FAGN	**Fagnano**	**0.23**	**117**	Pg		Pg		**06 15 12.6**	**+0.1**
FAGN				Sg		Sb		**06 15 16.8**	**-0.4**
	8μm,0.3s								
TERO	**Teramo**	**0.33**	**41**	Pg		Pg		**06 15 14.2**	**0.0**
TERO				Sg		Sg		**06 15 18.9**	**-0.1**
	3μm,0.5s								
TERO	**Teramo**	**0.33**	**41**	Pg		Pg		**06 15 14.2**	**0.0**
TERO				Sg		Sg		**06 15 18.9**	**-0.1**
	3μm,0.5s								
PTQR	**Pietraquaria**	**0.36**	**169**	Pg		Pb		**06 15 15.1**	**-0.3**
PTQR				Sg		Sb		**06 15 20.8**	**0.0**
PTQR	**Pietraquaria**	**0.36**	**169**	Pg		Pb		**06 15 15.1**	**-0.3**
PTQR				Sg		Sb		**06 15 20.8**	**0.0**
VCEL	**Villa Celiera**	**0.40**	**87**	Pg		Pg		**06 15 15.4**	**0.0**
VCEL				Sg		Sb		**06 15 22.3**	**+0.3**
	4μm,0.6s								
VCEL	**Villa Celiera**	**0.40**	**87**	Pg		Pg		**06 15 15.4**	**0.0**
VCEL				Sg		Sb		**06 15 22.3**	**+0.3**
	4μm,0.6s								
MNS	**Montasola**	**0.46**	**272**	Pg		Pb		**06 15 17.1**	**-0.1**
MNS				Sg		Sg		**06 15 23.2**	**+0.3**
	852nm,0.3s								
MNS	**Montasola**	**0.46**	**272**	Pg		Pb		**06 15 17.1**	**-0.1**
MNS				Sg		Sg		**06 15 23.2**	**+0.3**
	852nm,0.3s								
NRCA	**Norcia**	**0.48**	**343**	Pg		Pg		**06 15 17.2**	**+0.3**
NRCA				Sg		Sb		**06 15 24.4**	**0.0**
NRCA	**Norcia**	**0.48**	**343**	Pg		Pg		**06 15 17.2**	**+0.3**
NRCA				Sg		Sb		**06 15 24.4**	**0.0**
CERT	**Cerreto**	**0.49**	**210**	Pg		Pb		**06 15 17.6**	**0.0**
CERT				Sg		Sb		**06 15 25.0**	**+0.5**
	3μm,0.5s								
CERT	**Cerreto**	**0.49**	**210**	Pg		Pb		**06 15 17.6**	**0.0**
CERT				Sg		Sb		**06 15 25.0**	**+0.5**
	3μm,0.5s								
MTCE	**Montecelio**	**0.55**	**230**	Pg		Pb		**06 15 18.5**	**0.0**
	526nm,0.5s								
MTCE	**Montecelio**	**0.55**	**230**	Pg		Pb		**06 15 18.5**	**0.0**
	526nm,0.5s								
VVLD	**Villa Vallelon**	**0.55**	**155**	Pg		Pg		**06 15 18.1**	**-0.2**
	1μm,0.6s								
VVLD	**Villa Vallelon**	**0.55**	**155**	Pg		Pg		**06 15 18.1**	**-0.2**
	1μm,0.6s								
INTR	**Introdacqua**	**0.57**	**129**	Pg		Pg		**06 15 18.6**	**0.0**
	2μm,0.5s								
INTR	**Introdacqua**	**0.57**	**129**	Pg		Pg		**06 15 18.6**	**0.0**
	2μm,0.5s								
GUAR	**Guarcino**	**0.58**	**180**	Pg		Pg		**06 15 18.8**	**+0.1**
	772nm,0.5s								
GUAR	**Guarcino**	**0.58**	**180**	Pg		Pg		**06 15 18.8**	**+0.1**
	772nm,0.5s								
OFFI	**Offida**	**0.63**	**26**	Pg		Pb		**06 15 20.3**	**+0.3**
	5μm,0.6s								
OFFI	**Offida**	**0.63**	**26**	Pg		Pb		**06 15 20.3**	**+0.3**
	5μm,0.6s								
FDMO	**Fiordimonte**	**0.68**	**346**	Pg		Pg		**06 15 20.6**	**-0.1**
FDMO				Sg		Sb		**06 15 31.3**	**+1.1**
	515nm,0.4s								
FDMO	**Fiordimonte**	**0.68**	**346**	Pg		Pg		**06 15 20.6**	**-0.1**
FDMO				Sg		Sb		**06 15 31.3**	**+1.1**
	515nm,0.4s								
CESI	**CESI - Serrava**	**0.70**	**335**	Pg		Pg		**06 15 21.1**	**+0.1**
CESI				Sg		Sb		**06 15 31.0**	**+0.4**
CESI	**CESI - Serrava**	**0.70**	**335**	Pg		Pg		**06 15 21.1**	**+0.1**
CESI				Sg		Sb		**06 15 31.0**	**+0.4**
POFI	**Posta Fibreno**	**0.72**	**155**	Pg		Pg		**06 15 21.1**	**-0.3**
	445nm,0.8s								
POFI	**Posta Fibreno**	**0.72**	**155**	Pg		Pg		**06 15 21.1**	**-0.3**
	445nm,0.8s								
SDI	**San Donato**	**0.76**	**150**	Pg		Pg		**06 15 22.1**	**0.0**
	518nm,0.7s								
SDI	**San Donato**	**0.76**	**150**	Pg		Pg		**06 15 22.1**	**0.0**
	518nm,0.7s								
GIUL	**Giuliano Di Ro**	**0.81**	**183**	Pg		Pb		**06 15 22.8**	**-0.3**
	674nm,0.7s								
GIUL	**Giuliano Di Ro**	**0.81**	**183**	Pg		Pb		**06 15 22.8**	**-0.3**
	674nm,0.7s								
ASSB	**Assisi San Ben**	**0.82**	**325**	Pg		Pb		**06 15 23.2**	**-0.1**
	450nm,0.4s								
ASSB	**Assisi San Ben**	**0.82**	**325**	Pg		Pb		**06 15 23.2**	**-0.1**
	450nm,0.4s								
CERA	**Filignano**	**0.94**	**145**	Pg		Pb		**06 15 25.3**	**0.0**
	485nm,0.8s								
CERA	**Filignano**	**0.94**	**145**	Pg		Pb		**06 15 25.3**	**0.0**
	485nm,0.8s								
CING	**Cingoli**	**1.01**	**355**	Pg		Pb		**06 15 26.2**	**-0.2**
	428nm,0.5s								
CING	**Cingoli**	**1.01**	**355**	Pg		Pb		**06 15 26.2**	**-0.2**
	428nm,0.5s								
MIDA	**Miranda**	**1.02**	**136**	Pg		Pb		**06 15 25.7**	**-0.9**
	253nm,0.6s								
MIDA	**Miranda**	**1.02**	**136**	Pg		Pb		**06 15 25.7**	**-0.9**
	253nm,0.6s								
MGAB	**Montegabbione**	**1.03**	**302**	Pg		Pg		**06 15 27.5**	**+0.2**
	471nm,0.5s								
MGAB	**Montegabbione**	**1.03**	**302**	Pg		Pg		**06 15 27.5**	**+0.2**
	471nm,0.5s								
ARVD	**Arcevia**	**1.16**	**347**	Pg		Pb		**06 15 29.3**	**+0.3**
	241nm,0.6s								
ARVD	**Arcevia**	**1.16**	**347**	Pg		Pb		**06 15 29.3**	**+0.3**
	241nm,0.6s								
MS1	**Monte Sant'Ang**	**2.07**	**108**	*e*Pn		Pg		**06 15 46.4**	**-0.7**
NVLJ	**Novalja**	**2.47**	**27**	*i* Pn		Pn		**06 15 48.5**	**+1.5**
NVLJ				Sn		Sb		**06 16 19.2**	**-2.3**
NVLJ	**Novalja**	**2.47**	**27**	*i* Pn		Pn		**06 15 48.4**	**+1.5**
NVLJ				Sn		Sb		**06 16 19.1**	**-2.3**
MAIM	**Mastiano**	**2.57**	**308**	P		Pb		**06 15 51.7**	**-1.4**
PGF	**Pioggiola**	**3.19**	**275**	*e*Pn		Pn		**06 15 59.5**	**+2.5**
PGF				*e*Sn		Sb		**06 16 39.3**	**-3.1**
	5.9nm,0.4s								
PGF	**Pioggiola**	**3.19**	**275**	*e*Pn		Pn		**06 15 59.5**	**+2.5**
PGF				*e*Sn		Sb		**06 16 39.3**	**-3.1**
	3.0nm,0.4s								
STON	**Ston**	**3.28**	**80**	*e*Pn		Pn		**06 16 00.4**	**+2.3**
STON				Sn		Sn		**06 16 36.8**	**0.0**
STON	**Ston**	**3.28**	**80**	*e*Pn		Pn		**06 16 00.4**	**+2.3**
STON				Sn		Sn		**06 16 36.7**	**0.0**
SBF	**Sospel**	**4.55**	**291**	*e*Pn		Pn		**06 16 17.9**	**+2.3**
SBF				*e*Sn		Sn		**06 17 07.6**	**-0.6**
	8.0nm,0.5s								
SBF	**Sospel**	**4.55**	**291**	*e*Pn		Pn		**06 16 17.9**	**+2.3**
SBF				*e*Sn		Sn		**06 17 07.6**	**-0.6**
	4.0nm,0.5s								
FRF	**La Foret Royal**	**5.03**	**286**	*e*Pn		Pn		**06 16 24.0**	**+1.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FRF				eSn	Sn	06 17 19.2	-0.7
	2.4nm,0.4s						
FRF	La Foret Royal	5.03	286	ePn	Pn	06 16 24.0	+1.9
FRF				eSn	Sn	06 17 19.2	-0.7
	1.2nm,0.4s						
LMR	La Mourre	5.09	283	ePn	Pn	06 16 24.8	+1.9
LMR				eSn	Sn	06 17 19.9	-1.5
	1.9nm,0.5s						
LMR	La Mourre	5.09	283	ePn	Pn	06 16 24.8	+1.9
LMR				eSn	Sn	06 17 19.9	-1.5
	0.9nm,0.5s						
MBDF	Montbardon	5.30	299	eP	Pn	06 16 29.9	+3.9
MBDF	Montbardon	5.30	299	eP	Pn	06 16 29.9	+3.9
KHC	Kasperske Hory	6.76	2	eSN	Sn	06 18 01.8	-0.8
KHC	Kasperske Hory	6.76	2	Sn	Sn	06 18 01.8	-0.8
HINF	Hinteralfeld	7.10	322	ePn	Pn	06 16 51.9	+1.3
HINF				eSn	Sn	06 18 08.3	-2.7
	2.1nm,0.3s						
HINF	Hinteralfeld	7.10	322	ePn	Pn	06 16 51.9	+1.3
CDF	Champ du Feu	7.38	327	ePn	Pn	06 16 55.8	+1.3
CDF				eSn	Sn	06 18 14.6	-3.3
	2.1nm,0.3s						
CDF	Champ du Feu	7.38	327	ePn	Pn	06 16 55.8	+1.3
HAU	Haudompre	7.47	321	ePn	Pn	06 16 56.9	+1.2
HAU				eSn	Sn	06 18 16.2	-3.9
	3.4nm,0.3s						
HAU	Haudompre	7.47	321	ePn	Pn	06 16 56.9	+1.2

IDC 07 06:23:40.4±2.2, 23°.65S×174°.10W, h0km, mb4.0/7, mb1 4.3/7, mb1mx4.1/17, mbtmp4.0/7, Error ellipse: s-maj=101.0km s-min=28.0km az=156.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	47.40	259	P	P	06 32 16.7	-0.2
	2.7nm,0.9s,baz=97,slow=10,SNR=6.8						
WRA	Warramunga Arr	47.81	264	P	P	06 32 19.2	-0.9
	2.0nm,0.9s,baz=100,slow=8.8,SNR=6.0						
USRK	Ussuriysk Arra	83.60	324	P	P	06 36 09.8	-0.7
	3.1nm,0.9s,baz=120,slow=3.3,SNR=6.1						
TXAR	Lajitas Array	85.77	56	P	P	06 36 21.5	-0.5
	0.2nm,0.8s,baz=205,slow=7.9,SNR=2.2						
ILAR	Eielson Array	90.62	11	P	P	06 36 44.0	-0.2
	0.3nm,0.8s,baz=209,slow=4.2,SNR=4.3						
CMAR	Chiang Mai Arr	94.55	288	P	P	06 37 05.3	+1.8
	0.6nm,0.3s,baz=122,slow=3.1,SNR=6.2						
YKA	Yellowknife Ar	97.88	24	P	Pdif	06 37 18.2	+0.6
	0.3nm,0.9s,baz=241,slow=4.1,SNR=6.0						

IDC 07 06:24:22.2±1.2, 6°.52S×149°.98E, h0km, mb4.0/7, mb1 4.2/8, mb1mx3.9/19, mbtmp4.0/8, ML3.0/1, Error ellipse: s-maj=44.9km s-min=20.3km az=118.0
ISCJB 07 06:24:27.0±0.9, 6°.5S±0°.2×149°.8E±0°.2, h43km, mb3.8/6, Error ellipse: s-maj=33.7km s-min=11.1km az=35.6
NEIC 07 06:24:27.6±0.8, 6°.53S×149°.94E, h35km, mb4.1/3, Error ellipse: s-maj=28.2km s-min=12.1km az=120.0
ISC 07 06:24:28.5±1.0, 6°.5S±0°.2×149°.9E±0°.2, h43km, n19, σ0s.59/21, mb3.9/6, New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.93	223	ePn	Pn	06 25 26.6	+0.2
PMG				eSn	Sn	06 26 10.7	-0.6
PMG	Port Moresby	3.93	223	Pn	Pn	06 25 26.6	+0.2
	6.6nm,0.3s,baz=36,slow=10,SNR=22						
PMG				Sn	Sn	06 26 12.0	+0.7
	16nm,0.3s,baz=127,slow=20,SNR=16						
WRAB	Tennant Creek	20.13	227	eP	P	06 28 58.8	-0.3
	14nm,0.9s						
WRA	Warramunga Arr	20.14	227	P	P	06 28 58.9	-0.3
WRA	Warramunga Arr	20.14	227	P	P	06 28 58.9	-0.3
	8.8nm,0.8s,baz=51,slow=10,SNR=44						
ASAR	Alice Springs	22.94	220	P	P	06 29 28.3	-1.0
ASAR	Alice Springs	22.94	220	P	P	06 29 28.3	-1.0
	1.2nm,0.7s,baz=41,slow=9.3,SNR=7.4						
FITZ	Fitzroy Crossi	26.30	242	eP	P	06 30 01.8	+1.5
	4.8nm,1.0s						
FITZ	Fitzroy Crossi	26.30	242	P	P	06 30 00.6	+0.3
	2.0nm,0.6s,baz=50,slow=9.0,SNR=10						
STKA	Stephens Creek	26.37	196	eP	P	06 30 01.0	+0.1
	4.4nm,1.3s						
STKA	Stephens Creek	26.37	196	P	P	06 30 00.3	-0.5
	9.8nm,1.1s,baz=18,slow=9.5,SNR=6.4						
SONM	Songino Array	66.30	330	P	P	06 35 12.4	-0.3
SONM	Songino Array	66.30	330	P	P	06 35 12.4	-0.3
	0.4nm,0.8s,baz=132,slow=6.0,SNR=3.1						
QSPA	South Pole Qui	83.43	180	P	P	06 36 51.8	+0.4
QSPA	South Pole Qui	83.43	180	P	P	06 36 51.7	+0.4
	3.1nm,1.2s,baz=1.1,slow=11,SNR=4.6						
ILAR	Eielson Array	84.86	23	P	P	06 36 58.5	0.0
ILAR	Eielson Array	84.86	23	P	P	06 36 58.5	0.0
	0.7nm,0.9s,baz=254,slow=5.1,SNR=7.0						
TORD	Torodi Ar. Bea	148.02	284	PKPbc	PKPbc	06 44 10.5	0.0
TORD	Torodi Ar. Bea	148.02	284	PKPbc	PKPbc	06 44 10.5	0.0
	2.1nm,0.8s,baz=77,slow=2.9,SNR=12						

IDC 07 06:26:52.9±2.1, 49°.73S×116°.53E, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.9/14, mbtmp3.9/3, Error ellipse: s-maj=66.6km s-min=53.9km az=110.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	29.36	34	P	P	06 32 56.9	-0.7
	1.2nm,0.9s,baz=190,slow=10,SNR=4.7						
WRA	Warramunga Arr	32.95	32	P	P	06 33 29.7	+0.5
	1.2nm,0.9s,baz=202,slow=8.8,SNR=4.0						
CMAR	Chiang Mai Arr	69.65	342	P	P	06 38 03.9	-0.1
	0.5nm,0.3s,baz=192,slow=5.6,SNR=4.1						
PDAR	Pinedale Array	147.80	85	PKPbc	PKPbc	06 46 38.3	-1.1
	0.6nm,0.9s,baz=188,slow=2.7,SNR=4.7						
YKA	Yellowknife Ar	149.65	46	PKPbc	PKPbc	06 46 43.1	0.0
	2.2nm,1.0s,baz=277,slow=2.1,SNR=26						

IDC 07 06:31:27.8±5.5, 17°.45S×176°.00E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.7/17, mbtmp3.6/4, Error ellipse: s-maj=226.7km s-min=33.9km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.47	260	P	P	06 38 59.4	-0.9
	0.2nm,0.3s,baz=90,slow=8.0,SNR=4.2						
ASAR	Alice Springs	39.79	254	P	P	06 39 03.1	+0.3
	1.1nm,0.8s,baz=91,slow=9.3,SNR=5.0						
ILAR	Eielson Array	86.73	15	P	P	06 44 12.9	-0.3
	0.7nm,0.8s,baz=234,slow=6.0,SNR=7.9						
SONM	Songino Array	89.77	321	P	P	06 44 29.1	+0.9
	0.2nm,0.5s,baz=129,slow=4.7,SNR=3.5						
GERES	GERESS Array B	145.53	339	PKPbc	PKPdf	06 51 07.1	-1.0
	0.2nm,0.3s,baz=40,slow=2.3,SNR=6.1						

NNC 07 06:38:49.3±3.3, 36°.63N×70°.07E, h190km±31km, mb2.7, mpv3.6, 6C-1D, Error ellipse: s-maj=35.3km s-min=21.5km az=47.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.48	3	P	Pn	06 40 23.1	+0.5
	1.1nm,0.3s,baz=189,slow=14,SNR=46						
KK31				⇑S	Sn	06 41 36.7	+0.3
	2.2nm,0.4s,baz=194,slow=16,SNR=8.3						
TKM2	Tokmak 2	7.59	32	⇓P	Pn	06 40 36.8	-0.6
	9.3nm,1.2s						
AB31	Akbulak array	14.62	333	⇑P	Pn	06 42 06.3	-0.8
	0.6nm,0.5s						
VOSK	Vostochnaya	16.11	2	⇑P	P	06 42 24.6	-0.3
	1.9nm,0.7s						
AKTO	Aktyubinsk	16.31	332	⇑P	P	06 42 27.0	0.0
	0.3nm,0.5s						
ZRNK	Zerenda	16.34	358	⇑P	Pn	06 42 27.8	-0.2
	1.8nm,0.5s						
BVA0	Borovoye Array	16.40	1	⇑P	Pn	06 42 28.5	-0.1
	0.2nm,0.5s,baz=0.0,slow=0.1,SNR=6.9						

ISK 07 06:49:18.8, 37°.58N×36°.22E, h8km, MD2.7
ISCJB 07 06:49:19.9±0.6, 37°.52N±0°.06×36°.19E±0°.03, h15km, Error ellipse: s-maj=9.2km s-min=3.9km az=179.1
CSEM 07 06:49:19.4±0.2, 37°.54N×36°.21E, h10km, MD3.0, Error ellipse: s-maj=6.4km s-min=2.9km az=2.0
DDA 07 06:49:20.6, 37°.42N×36°.23E, h7km, MD3.0
ISC 07 06:49:19.9±0.9, 37°.52N±0°.05×36°.18E±0°.02, h15km, n20, σ0s.90/29, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANDN	Andirin	0.15	65	i P	Pg	06 49 23.3	-0.6
ANDN				i S	Sb	06 49 28.9	+1.5
ANDN	Andirin	0.15	65	i P	Pg	06 49 23.3	-0.6
KOZT	Kozan	0.28	262	ePG	Pg	06 49 25.7	-0.3
KOZT				eSG	Sb	06 49 31.1	-0.2
KOZT	Kozan	0.28	262	ePg	Pg	06 49 25.7	-0.3
KOZT				eSg	Sb	06 49 31.1	-0.2
AYKD	Aykdinkavak	0.51	102	i P	Pb	06 49 30.2	-0.4
AYKD				i S	Sg	06 49 36.2	-0.7
KMRS	Kahramanmaras	0.57	91	ePG	Pg	06 49 29.8	-1.4
KMRS				eSG	Sg	06 49 38.0	-0.8
KMRS	Kahramanmaras	0.57	91	ePg	Pg	06 49 29.8	-1.4
KMRS				eSg	Sg	06 49 38.1	-0.8
CEYT	Ceyhan	0.61	214	ePG	Pg	06 49 31.5	-0.4
CEYT	Ceyhan	0.61	214	ePg	Pg	06 49 31.5	-0.4
GAZ	Gaziantep	0.89	113	ePG	Pb	06 49 36.3	-0.9
GAZ	Gaziantep	0.89	113	ePg	Pb	06 49 36.3	-0.9
KUZU	Kuzuini	1.03	136	i P	Pb	06 49 39.1	-0.4
KUZU				i S	Sb	06 49 53.1	+0.2
KUZU	Kuzuini	1.03	136	i P	Pb	06 49 39.1	-0.4
KUZU				i S	Sb	06 49 53.1	+0.2
GZT	Gaziantep	1.11	98	i P	Pg	06 49 42.0	+0.6
GZT				i S	Sn	06 49 59.3	+3.0
NIG	Nigde	1.38	296	ePN	Pn	06 49 44.7	-0.1
NIG	Nigde	1.38	296	ePn	Pn	06 49 44.7	-0.1
MERS	Mersin	1.47	244	ePN	Pb	06 49 47.0	0.0
MERS	Mersin	1.47	244	ePn	Pb	06 49 47.0	0.0
URFA	Urfa	2.10	91	ePN	Pn	06 49 55.1	+0.4
URFA	Urfa	2.10	91	ePn	Pn	06 49 55.1	+0.4

IDC 07 07:02:02.6±2.1, 18°.15N×81°.62W, h0km, mb3.2/4, mb1 3.7/5, mb1mx3.5/23, mbtmp3.4/5, ML4.2/1, Error ellipse: s-maj=54.9km s-min=42.0km az=62.0, North of Honduras

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TEIG	Tepich	6.62	289	Pn	Pn	07 03 39.1	-2.1
	4.7nm,0.3s,baz=144,slow=17,SNR=14						
TEIG				Sn	Sn	07 04 50.0	-7.4
	baz=163,slow=19,SNR=1.9						
TXAR	Lajitas Array	23.01	303	P	P	07 07 10.4	+1.0
	1.6nm,0.9s,baz=125,slow=8.7,SNR=11						
PDAR	Pinedale Array	34.10	322	P	P	07 08 49.9	+0.6
	0.6nm,1.0s,baz=106,slow=9.5,SNR=3.6						
YKA	Yellowknife Ar	49.87	341	P	P	07 10 57.0	-0.4
	0.2nm,0.8s,baz=132,slow=8.4,SNR=6.8						
ILAR	Eielson Array	63.24	334	P	P	07 12 31.9	-0.7
	0.1nm,0.5s,baz=117,slow=5.6,SNR=4.2						
WRA	Warramunga Arr	146.00	261	PKPbc	PKPdf	07 21 43.9	-0.6
	2.2nm,1.2s,baz=88,slow=3.7,SNR=6.0						
ASAR	Alice Springs	146.42	254	PKPbc	PKPbc	07 21 46.1	-0.2
	0.5nm,0.6s,baz=104,slow=3.9,SNR=5.2						

CASC 07 07:08:12.6±1.8, 13°.93N×91°.63W, h24km±10km, MD3.5, ML3.1, 1C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAT	Jato	0.39	359	eP	Pn	07 08 23.2	+0.4
FUG	Fuego 3	0.92	56	eP	Pb	07 08 29.7	-0.6
FG6		0.96	49	eP	Pb	07 08 30.2	-0.8
FG6				eS	Sn	07 08 44.5	+0.3
TP2	Tecpan 2	1.04	35⇓	eP	Pn	07 08 31.2	-1.0
TP2				eS	Sb	07 08 45.9	-0.1
PCG	Pacaya	1.10	65⇑	eP	Pn	07 08 33.0	+0.1
PCG				eS	Sn	07 08 48.5	+1.0
NBG	Las Nubes	1.41	62	eP	Pb	07 08 38.1	-0.5
NBG				eS	Sb	07 08 56.3	-0.1
RBDL	Robledal	1.90	84	eP	Pn	07 08 43.6	-0.1
RBDL				eS	Sn	07 09 08.1	+1.0
RTR	El Retiro	1.93	91	eP	Pn	07 08 44.3	+0.1
RTR				eS	Sb	07 09 09.6	-1.6
SBLS	San Blas	1.95	92	eP	Pn	07 08 44.3	-0.2
SBLS				eS	Sn	07 09 09.8	+1.2
SNJE	San Jose	1.97	91	eP	Pn	07 08 44.6	-0.1
SNJE				eS	Sn	07 09 10.3	+1.4
BOQS	Boqueron	2.29	94	eP	Pn	07 08 48.9	-0.3
BOQS				eS	Sn	07 09 18.6	+1.7
SNET	Serv Nac Est T	2.34	96	AML	AML	07 09 24.0	
	comp=Z,147nm,0.2s						
LFRS	El Faro	2.51	97	eP	Pn	07 08 52.5	+0.3
LFRS				eS	Sn	07 09 22.5	+0.3
LBRS	Las Brisas	2.52	94	eP	Pn	07 08 52.1	-0.1
LBRS				eS	Sn	07 09 22.3	0.0
SNVI	San Vicente	2.73	96	eP	Pn	07 08 55.1	-0.1
SNVI				eS	Sn	07 09 28.9	+1.3

CSEM 07 07:33:36.8, 40°.54N×35°.76E, h7km, MD2.5, After DDA
DDA 07 07:33:36.8, 40°.54N×35°.76E, h7km, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HAVZ	Havza	0.54	356	i P	Pg	07 33 47.7	+0.4
HAVZ				i S	Sg	07 33 55.2	+0.9
HAVZ	Havza	0.54	356	i P	Pg	07 33 47.7	+0.4
HAVZ				i S	Sg	07 33 55.2	+0.9
CTKT	Corum	0.75	277	i P	Pg	07 33 51.2	-0.3
CTKT				i S	Sg	07 34 00.3	-1.1
CTKT	Corum	0.75	277	i P	Pg	07 33 51.2	-0.3
CTKT				i S	Sg	07 34 00.3	-1.1
ERBA	Erbaa	0.77	79	i P	Pg	07 33 51.7	0.0
ERBA				i S	Sb	07 34 02.8	-0.5
ERBA	Erbaa	0.77	79	i P	Pg	07 33 51.7	0.0
ERBA				i S	Sb	07 34 02.8	-0.5
ILGA	Ilgaz	1.64	289	i P	Pb	07 34 07.8	+0.1
ILGA				i S	Sg	07 34 30.9	+0.8
ILGA	Ilgaz	1.64	289	i P	Pb	07 34 07.8	+0.1
ILGA				i S	Sg	07 34 30.9	+0.9

IDC 07 07:34:34.5±2.7, 22°.53S×170°.54E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.9/17, mbtmp3.8/8, ML3.9/1, MS3.7/1, Ms1 3.7/1, ms1mx3.5/28, Error ellipse: s-maj=80.6km s-min=29.8km az=150.0
NOU 07 07:34:39.9±1.3, 21°.64S×170°.51E, h10km, MD3.3, ML3.4
ISC 07 07:34:41.5±1.8, 22°.4S±0°.4×170°.3E±0°.1, h33km, n12, σ1s.23/15, mb3.9/7, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	3.21	273	eP	Pn	07 35 30.9	+1.3
BAYA				eS	Sn	07 36 06.2	-0.5
DZM	Mont Dzumac	3.62	274	eP	Pn	07 35 34.7	-0.6
DZM				eS	Sn	07 36 16.7	-0.5
DZM				AMP		07 36 18.9	
	comp=Z,938nm,0.3s						
DZM	Mont Dzumac	3.62	274	Pn	Pn	07 35 34.8	-0.6
	comp=Z,8.2nm,0.3s,baz=149,slow=11,SNR=460						
DZM				Sn	Sn	07 36 16.4	-0.7
	comp=Z,18nm,0.3s,baz=121,slow=16,SNR=14						
DZM				LR	LR	07 36 35.1	
	comp=Z,1μm,21.4s,baz=309,slow=32						
NOUC	Port Laguerre	3.75	273	eP	Pn	07 35 38.2	+1.1
NOUC				eS	Sn	07 36 22.4	+2.3
NOUC				AMP		07 36 24.2	
	comp=Z,44nm,0.8s						
ASAR	Alice Springs	33.51	261	P	P	07 41 16.7	-1.5
	comp=Z,0.3nm,0.6s,baz=82,slow=9.4,SNR=7.5						
WRA	Warramunga Arr	33.62	267	P	P	07 41 17.9	-1.2
	comp=Z,0.3nm,0.6s,baz=96,slow=8.4,SNR=4.3						
MJAR	Matsushiro Arr	65.98	332	P	P	07 45 23.5	-1.1
	comp=Z,1.1nm,0.5s,baz=166,slow=6.6,SNR=3.6						
KSRS	Korea Array	71.65	326	P	P	07 45 60.0	+0.1
	comp=Z,0.6nm,0.4s,baz=153,slow=8.3,SNR=4.7						
CMAR	Chiang Mai Arr	80.72	294	P	P	07 46 52.9	+1.0
	comp=Z,0.6nm,0.3s,baz=141,slow=4.4,SNR=3.9						
SONM	Songino Array	90.32	323	P	P	07 47 38.9	-0.2
	comp=Z,0.6nm,0.8s,baz=112,slow=3.9,SNR=3.8						
ILAR	Eielson Array	92.89	17	P	P	07 47 48.6	-1.9
	comp=Z,0.2nm,0.7s,baz=230,slow=5.4,SNR=3.4						
GERES	GERESS Array B	147.71	331	PKPbc	PKPdf	07 54 21.4	+1.5
	comp=Z,1.0nm,0.7s,baz=41,slow=4.3,SNR=6.5						

MAN 07 07:45:27, 16°.20N×119°.80E, h34km, mb3.9, ML2.7, MS2.3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	0.21	31	eP	Pb	07 45 35.5	+1.6
BOLP				eS	Sb	07 45 39.5	+1.0
SCZP	Santa Cruz	0.43	165	eP	Pn	07 45 38.9	+2.0
SCZP				eS	Sn	07 45 46.0	+2.5
BCPH	Baguio City Da	0.78	76⇑	iP	Pb	07 45 43.5	+1.2
BCPH				eS	Sb	07 45 54.4	+1.5

IDC 07 07:53:03.8±0.6, 45°.99N×151°.66E, h0km, mb4.0/18, mb1 4.2/21, mb1mx4.1/28, mbtmp4.0/21, ML3.4/3, MS4.2/2, Ms1 4.2/2, ms1mx3.7/40, Error ellipse: s-maj=19.4km s-min=13.9km az=145.0
ISCJB 07 07:53:08.4±0.4, 45°.69N±0°.06×151°.80E±0°.07, h48km, mb4.3/35, MS4.4/1, Error ellipse: s-maj=10.3km s-min=3.0km az=144.1
JMA 07 07:53:08.7±0.7, 45°.81N×151°.96E, h30km, M4.8
MOS 07 07:53:09.2±1.1, 45°.94N×151°.74E, h48km, mb4.8/18, Error ellipse: s-maj=10.0km s-min=8.2km az=81.9
NEIC 07 07:53:12.9±0.9, 46°.00N×151°.61E, h65km±7km, mb4.7/15, Error ellipse: s-maj=10.6km s-min=6.1km az=149.0
ISC 07 07:53:09.9±0.5, 45°.75N±0°.09×151°.79E±0°.07, h48km, n178, σ1s.28/188, mb4.3/35, 7C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.81	261	ePN	Pn	07 53 53.5	+1.3
KUR				eS	Sn	07 54 26.8	+2.1
KUR				pmax	pmax		
	comp=Z,470nm,1.0s						
KUR				smax	smax		
	comp=N,1μm,0.5s						
KUR				smax	smax		
	comp=E,820nm,0.4s						
YUK	Yuzh-Kuril'sk	4.55	250	i PN	Pn	07 54 18.6	+2.5
YUK				i S	Sn	07 55 11.1	+3.5
YUK				pmax	pmax		
	comp=N,97nm,0.2s						
YUK				pmax	pmax		
	comp=E,101nm,0.5s						
YUK				pmax	pmax		
	comp=Z,178nm,0.5s						
YUK				smax	smax		
	comp=E,226nm,0.9s						
YUK				smax	smax		
	comp=N,215nm,0.9s						
NEM2	Nemuro 2	4.93	243	P	Pn	07 54 21.8	+0.4
NEM2				eS	Sn	07 55 16.0	-1.1
JRA	Rausu	5.07	251	P	Pn	07 54 26.1	+2.8
JNK	Nakash	5.49	249	P	Pn	07 54 31.3	+2.3
JNK				eS	Sn	07 55 32.9	+2.2
SKR	Severo-Kuril's	5.72	29	ePN	Pn	07 54 29.1	-3.0
SKR				pmax	pmax		
	comp=Z,60nm,0.7s						
JAK	Akkeshi	5.78	244	P	Pn	07 54 33.5	+0.5
JAK				eS	Sn	07 55 35.8	-2.1
JTKR	Abashiri--Toko	5.88	255	P	Pn	07 54 37.0	+2.7
JAR	Ashorobuto	6.23	250	P	Pn	07 54 41.3	+2.1
JAR				eS	Sn	07 55 50.8	+1.7
JMP	Maruseppu	6.24	257	P	Pn	07 54 42.7	+3.4
YSS	Yuzh-Sakhalins	6.37	284⇓	iPN	Pn	07 54 43.8	+2.8
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
JOB	Onbets	6.37	246	P	Pn	07 54 42.6	+1.5
JOB				eS	Sn	07 55 51.7	-0.9
JKK2	Kamakawa 2	6.70	257	P	Pn	07 54 48.4	+2.8
ASAJ	Asahikawa	6.72	259	ePn	Pn	07 54 49.6	+3.7
ASAJ	Asahikawa	6.72	259	P	Pn	07 54 49.6	+3.7
ASAJ	Asahikawa	6.72	259	Pn	Pn	07 54 49.8	+3.8
	comp=Z,4.5nm,0.3s,baz=85,slow=12,SNR=25						
ASAJ				LR	LR	07 57 25.4	
	comp=Z,832nm,20.0s,baz=14,slow=39						
JCH	Churui	6.82	246	P	Pn	07 54 47.9	+0.6
JCH				eS	Sn	07 56 00.6	-2.9
JWK2	Keihoku	6.96	270	P	Pn	07 54 55.0	+5.8
JFR	Furan	7.07	252	P	Pn	07 54 53.1	+2.4
JAB	Ashibetsu	7.18	255	P	Pn	07 54 56.1	+3.9
JEM	Erimo	7.27	242	P	Pn	07 54 55.4	+2.0
JEM				eS	Sn	07 56 15.1	+0.6
ERM	Erimo	7.27	242	ePN	Pn	07 54 56.5	+3.1
ERM	Erimo	7.27	242	ePn	Pn	07 54 56.5	+3.1
JNBK	Urakawa-nobuka	7.38	245	P	Pn	07 54 55.1	+0.2
JNBK				eS	Sn	07 56 15.5	-1.7
JBT2	Biratori 2	7.39	250	P	Pn	07 54 56.2	+1.2
JEW	Eniwo	7.96	252	P	Pn	07 55 05.4	+2.4
PETK	Petropavlovsk-	8.31	25	PN	Pn	07 55 07.7	+0.1
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	8.31	25	Pn	Pn	07 55 07.7	+0.1
PETK	Petropavlovsk-	8.31	25	Pn	Pn	07 55 07.7	+0.1
	comp=Z,0.8nm,0.3s,baz=189,slow=12,SNR=13						
JNB	Noboribetsu	8.40	251	P	Pn	07 55 09.7	+0.8
JNB				eS	Sn	07 56 41.0	-1.3
JKB	Kayabe	8.68	247	P	Pn	07 55 13.0	+0.3
JKB				eS	Sn	07 56 44.6	-4.6
JSH	Shimam	8.99	254	P	Pn	07 55 19.1	+2.1
JYM2	Yakumo 2	9.00	250	P	Pn	07 55 17.9	+0.8
JANG	Nango	9.24	238	P	Pn	07 55 17.6	-2.8
JANG				eS	Sn	07 56 54.7	-8.2
JTM	Tenmabayashi	9.26	241	P	Pn	07 55 19.9	-0.8
JTM				eS	Sn	07 56 56.0	-7.4
JTH	Tanohata	9.32	235	P	Pn	07 55 19.4	-2.1
JTH				eS	Sn	07 56 54.7	-10
JOSM	Okushiri--Mats	9.61	252	P	Pn	07 55 26.1	+0.6
OFUJ	Ofunato	10.02	232	P	Pn	07 55 29.4	-1.6
OFUJ				eS	Sn	07 57 13.6	-8.3
JRG	Rokugo	10.39	236	P	Pn	07 55 35.3	-0.8
JIO	Ouri	10.64	230	P	Pn	07 55 38.0	-1.5
JIO				eS	Sn	07 57 28.8	-8.4
MAT	Matsushiro	13.74	233	P	Pn	07 56 21.2	-0.8
MAT				eS	Sn	07 58 53.3	+0.2
MJAR	Matsushiro Arr	13.74	233	Pn	Pn	07 56 19.9	-2.0
MJAR	Matsushiro Arr	13.74	233	Pn	Pn	07 56 19.9	-2.0
	comp=Z,0.1nm,0.3s,baz=24,slow=12,SNR=7.6						
KLR	Kul'dur	13.98	292	eP	Pn	07 56 23.8	-1.3
USRK	Ussuriysk Arra	14.09	271	Pn	Pn	07 56 25.0	-1.6
	comp=Z,0.3nm,0.3s,baz=82,slow=12,SNR=8.0						
KSRS	Korea Array	19.62	253	P	P	07 57 34.9	+0.7
	comp=Z,0.6nm,0.3s,baz=59,slow=11,SNR=18						
KSAR	Wonju Array Be	19.66	253	P	P	07 57 34.9	+0.3
YAK	Yakutsk	20.69	330	eP	Pn	07 57 49.5	+1.2
YAK				pmax	pmax		
	comp=Z,30nm,0.8s						
YAK				pmax	pmax		
	comp=N,10.0nm,0.9s						
SONM	Songino Array	30.81	291	P	P	07 59 19.9	-1.1
SONM	Songino Array	30.81	291	P	P	07 59 19.9	-1.1
	comp=N,0.2nm,0.4s,baz=84,slow=7.6,SNR=3.1						
SONM				LR	LR	08 12 43.3	
	comp=N,789nm,18.6s,baz=269,slow=38						
ILAR	Eielson Array	37.90	38	P	P	08 00 21.4	-0.6
ILAR	Eielson Array	37.90	38	P	P	08 00 21.4	-0.6
	comp=N,0.3nm,0.5s,baz=261,slow=7.7,SNR=9.7						
ZALV	Zalesovo Beam	42.45	306	PcP	PcP	08 02 51.7	-0.1
	comp=N,2.1nm,0.7s,baz=82,slow=3.1,SNR=11						
INK	Inuvik	42.98	32	P	P	08 01 03.3	-0.5
INK	Inuvik	42.98	32	P	P	08 01 03.3	-0.5
	comp=N,2.4nm,0.9s,baz=291,slow=6.8,SNR=11						
MK31	Makanchi Array	46.58	298	eP	P	08 01 31.5	-1.3
MK31	Makanchi Array	46.58	298	eP	P	08 01 31.5	-1.3
MKAR	Makanchi Array	46.58	298	eP	P	08 01 32.0	-0.9
MKAR						08 03 06.8	
MKAR	Makanchi Array	46.58	298	eP	P	08 01 31.9	-0.9
MKAR				PcP	PcP	08 03 06.8	+0.6
MKAR	Makanchi Array	46.58	298	P	P	08 01 31.5	-1.3
	comp=N,1.2nm,0.7s,baz=67,slow=7.4,SNR=14						
MKAR				PcP	PcP	08 03 06.8	+0.6
	comp=N,2.0nm,0.8s,baz=62,slow=1.7,SNR=12						
BVAR	Borovoye Array	50.78	310	P	P	08 02 03.0	-1.9
BVAR						08 03 21.4	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	Borovoye Array	50.78	310	P	P	08 02 03.0	-1.9
BVAR				PcP	PcP	08 03 21.4	+0.2
BVAR	Borovoye Array	50.78	310	P	P	08 02 03.0	-1.9

	comp=Z,0.7nm,0.6s,baz=49,slow=10.0,SNR=4.2						
BVAR				PcP	**PcP**	**08 03 21.4**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=104,slow=4.6,SNR=3.8						
CMAR	**Chiang Mai Arr**	**51.24**	**256**	P	**P**	**08 02 10.2**	**+1.5**
CMAR	**Chiang Mai Arr**	**51.24**	**256**	P	**P**	**08 02 10.2**	**+1.5**
	comp=Z,1.6nm,0.5s,baz=35,slow=7.7,SNR=8.2						
YKA	**Yellowknife Ar**	**52.27**	**36**	P	**P**	**08 02 16.1**	**+0.2**
YKA	**Yellowknife Ar**	**52.27**	**36**	P	**P**	**08 02 16.1**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=298,slow=6.8,SNR=22						
AAK	**Ala-Archa**	**53.45**	**296**	P	**P**	**08 02 24.8**	**-0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	**Ala-Archa**	**53.45**	**296**	P	**P**	**08 02 24.8**	**-0.3**
AAK	**Ala-Archa**	**53.45**	**296**	P	**P**	**08 02 24.8**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=36,slow=19,SNR=4.8						
GUN	**Gumba**	**54.17**	**275**	*e*P	**P**	**08 02 31.5**	**+0.8**
RAMN	**Ramite**	**54.26**	**273**	*e*P	**P**	**08 02 32.0**	**+0.7**
KKN	**Kakani**	**54.66**	**275**	*e*P	**P**	**08 02 35.6**	**+1.4**
DMN	**Daman**	**54.89**	**275**	*e*P	**P**	**08 02 37.0**	**+1.1**
DANN	**Dangsing**	**55.38**	**277**	*e*P	**P**	**08 02 40.7**	**+1.3**
	comp=Z,36nm,0.9s						
KOLN	**Koldanda**	**55.84**	**276**	*e*P	**P**	**08 02 43.5**	**+0.8**
PYUN	**Piuthan**	**56.06**	**277**	*e*P	**P**	**08 02 45.2**	**+1.0**
	comp=Z,54nm,1.0s						
ABKAR	**Akbulak array**	**58.36**	**310**	*e*P	**P**	**08 02 58.1**	**-1.7**
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	**58.49**	**341**	P	**P**	**08 02 59.1**	**-1.3**
ARCES	**ARCESS Array B**	**58.49**	**341**	P	**P**	**08 02 59.1**	**-1.3**
	comp=Z,2.4nm,0.8s,baz=61,slow=7.6,SNR=4.2						
SLMT	**Seeley Lake**	**61.10**	**51**	*e*P	**P**	**08 03 19.9**	**+0.9**
MSO	**Missoula**	**61.10**	**51**	*e*P	**P**	**08 03 20.0**	**+1.1**
	comp=Z,1.3nm,0.6s						
SUMG	**Summit**	**61.76**	**3**	*i* P	**P**	**08 03 22.7**	**-0.6**
	comp=Z,11nm,0.8s						
FINES	**FINESS Array B**	**64.55**	**334**	P	**P**	**08 03 39.0**	**-2.3**
FINES	**FINESS Array B**	**64.55**	**334**	P	**P**	**08 03 39.0**	**-2.3**
	comp=Z,2.6nm,0.7s,baz=45,slow=8.4,SNR=7.0						
RRI2	**Red Ridge**	**64.72**	**53**	*e*P	**P**	**08 03 44.9**	**+1.7**
	comp=Z,4.6nm,0.8s						
TPAW	**Teton Pass**	**64.83**	**53**	*e*P	**P**	**08 03 46.2**	**+2.2**
	comp=Z,2.3nm,0.7s						
PDAR	**Pinedale Array**	**66.08**	**53**	P	**P**	**08 03 52.5**	**+0.6**
PDAR	**Pinedale Array**	**66.08**	**53**	P	**P**	**08 03 52.5**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=302,slow=2.9,SNR=11						
WRA	**Warramunga Arr**	**67.28**	**198**	P	**P**	**08 04 00.6**	**+1.2**
WRA	**Warramunga Arr**	**67.28**	**198**	P	**P**	**08 04 00.6**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=18,slow=6.9,SNR=9.3						
NB2	**NORSAR Subarra**	**68.87**	**341**	P	**P**	**08 04 08.0**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**68.87**	**341**	P	**P**	**08 04 07.5**	**-1.5**
NOA	**NORSAR Array B**	**68.87**	**341**	P	**P**	**08 04 07.5**	**-1.5**
	comp=Z,1.1nm,0.5s,baz=28,slow=6.4,SNR=14						
ASAR	**Alice Springs**	**70.98**	**197**	P	**P**	**08 04 24.3**	**+2.0**
ASAR	**Alice Springs**	**70.98**	**197**	P	**P**	**08 04 24.3**	**+2.0**
	comp=Z,0.4nm,0.5s,baz=14,slow=6.0,SNR=11						
AKASG	**Malin Array Be**	**71.86**	**326**	P	**P**	**08 04 26.5**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	**Malin Array Be**	**71.86**	**326**	P	**P**	**08 04 26.5**	**-0.9**
AKASG	**Malin Array Be**	**71.86**	**326**	P	**P**	**08 04 26.5**	**-0.9**
	comp=Z,1.9nm,0.4s,baz=36,slow=6.4,SNR=5.1						
LVV	**L'vov**	**74.56**	**328**	*e*P	**P**	**08 04 43.8**	**+0.5**
KWP	**Kalwaria Pacla**	**75.20**	**329**	*e*P	**P**	**08 04 47.2**	**+0.2**
KWP				pmax	pmax		
	comp=Z,13nm,1.0s						
KWP	**Kalwaria Pacla**	**75.20**	**329**	*e*P	**P**	**08 04 47.2**	**+0.2**
	comp=Z,13nm,1.0s						
KWP	**Kalwaria Pacla**	**75.20**	**329**	⇑*i*P	**P**	**08 04 46.5**	**-0.5**
BUR08	**Bucovina Ar. S**	**75.89**	**326**	*e*P	**P**	**08 04 51.0**	**-0.1**
KOLS	**Kolonicke sedl**	**75.94**	**328**	*e*P	**P**	**08 04 51.0**	**-0.3**
CRVS	**Cervenica-Dubn**	**76.26**	**329**	*e*P	**P**	**08 04 52.6**	**-0.5**
TRPA	**Tarpa**	**76.51**	**328**	⇑*i*P	**P**	**08 04 54.9**	**+0.4**
MORC	**Moravsky Berou**	**76.88**	**332**	⇑P	**P**	**08 04 57.4**	**+0.7**
MORC	**Moravsky Berou**	**76.88**	**332**	*e*P	**P**	**08 04 57.0**	**+0.3**
	comp=Z,3.8nm,0.9s						
MORC	**Moravsky Berou**	**76.88**	**332**	⇑*i*P	**P**	**08 04 57.4**	**+0.7**
CLL	**Collm**	**76.98**	**335**	⇓*i*P	**P**	**08 04 56.7**	**-0.4**
CLL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CLL	**Collm**	**76.98**	**335**	⇓*i*P	**P**	**08 04 56.7**	**-0.4**
	comp=Z,6.0nm,0.7s						
VYHS	**Vyhne**	**77.54**	**330**	*e*P	**P**	**08 04 59.9**	**-0.4**
ARR	**Arges**	**77.98**	**325**	⇑*i*P	**P**	**08 05 04.5**	**+1.6**
BRTR	**Keskin Array B**	**78.48**	**316**	P	**P**	**08 05 06.2**	**+0.3**
BRTR	**Keskin Array B**	**78.48**	**316**	P	**P**	**08 05 06.2**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=83,slow=5.5,SNR=12						
TXAR	**Lajitas Array**	**78.79**	**60**	P	**P**	**08 05 08.4**	**+0.7**
TXAR	**Lajitas Array**	**78.79**	**60**	P	**P**	**08 05 08.4**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=302,slow=5.2,SNR=7.1						
GERES	**GERESS Array B**	**78.94**	**333**	P	**P**	**08 05 07.5**	**-0.6**
GERES	**GERESS Array B**	**78.94**	**333**	P	**P**	**08 05 07.5**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=42,slow=4.2,SNR=7.7						
GIVF	**Givet**	**80.31**	**339**	*e*P	**P**	**08 05 15.4**	**0.0**
GIVF	**Givet**	**80.31**	**339**	*e*P	**P**	**08 05 15.4**	**0.0**
GIVF	**Givet**	**80.31**	**339**	*e*P	**P**	**08 05 15.4**	**0.0**
BAIF	**Baives**	**80.50**	**339**	*e*P	**P**	**08 05 16.7**	**+0.2**
	comp=Z,8.3nm,0.8s						
BAIF	**Baives**	**80.50**	**339**	*e*P	**P**	**08 05 16.7**	**+0.2**
BAIF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BAIF	**Baives**	**80.50**	**339**	*e*P	**P**	**08 05 16.7**	**+0.2**
	comp=Z,8.3nm,0.8s						
VTS	**Vitosha**	**80.85**	**324**	⇑P	**P**	**08 05 19.4**	**+0.7**
VTS	**Vitosha**	**80.85**	**324**	⇑*i*P	**P**	**08 05 19.4**	**+0.7**
CDF	**Champ du Feu**	**81.22**	**337**	*e*P	**P**	**08 05 20.5**	**0.0**
CDF	**Champ du Feu**	**81.22**	**337**	*e*P	**P**	**08 05 20.5**	**0.0**
CDF	**Champ du Feu**	**81.22**	**337**	*e*P	**P**	**08 05 20.5**	**0.0**
HINF	**Hinteralfeld**	**81.88**	**337**	*e*P	**P**	**08 05 23.6**	**-0.3**
	comp=Z,5.3nm,0.6s						
HINF	**Hinteralfeld**	**81.88**	**337**	*e*P	**P**	**08 05 23.6**	**-0.3**
HINF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HINF	**Hinteralfeld**	**81.88**	**337**	*e*P	**P**	**08 05 23.6**	**-0.3**
	comp=Z,5.3nm,0.6s						
SFTF	**Sexfontaines**	**82.01**	**338**	*e*P	**P**	**08 05 24.7**	**+0.2**
SFTF	**Sexfontaines**	**82.01**	**338**	*e*P	**P**	**08 05 24.7**	**+0.2**
LOR	**Lormes**	**83.18**	**339**	*e*P	**P**	**08 05 30.8**	**+0.2**
	comp=Z,8.4nm,0.8s						
LOR	**Lormes**	**83.18**	**339**	*e*P	**P**	**08 05 30.8**	**+0.2**
	comp=Z,8.4nm,0.8s						
CABF	**La Chapelle**	**83.19**	**337**	*e*P	**P**	**08 05 31.1**	**+0.3**
CABF	**La Chapelle**	**83.19**	**337**	*e*P	**P**	**08 05 31.1**	**+0.3**
CABF	**La Chapelle**	**83.19**	**337**	*e*P	**P**	**08 05 31.1**	**+0.3**
SSF	**Saint Saulge**	**83.46**	**339**	*e*P	**P**	**08 05 32.3**	**+0.2**
	comp=Z,12nm,1.0s						
SSF	**Saint Saulge**	**83.46**	**339**	*e*P	**P**	**08 05 32.3**	**+0.2**
SSF				pmax	pmax		
	comp=Z,12nm,1.0s						
SSF	**Saint Saulge**	**83.46**	**339**	*e*P	**P**	**08 05 32.3**	**+0.2**
	comp=Z,12nm,1.0s						
AVF	**Avril sur Loir**	**83.75**	**339**	*e*P	**P**	**08 05 34.0**	**+0.5**
	comp=Z,4.4nm,0.6s						
AVF	**Avril sur Loir**	**83.75**	**339**	*e*P	**P**	**08 05 34.0**	**+0.5**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AVF	**Avril sur Loir**	**83.75**	**339**	*e*P	**P**	**08 05 34.0**	**+0.5**
	comp=Z,4.4nm,0.6s						
SMF	**Signal de Mont**	**83.76**	**338**	*e*P	**P**	**08 05 34.0**	**+0.4**
	comp=Z,24nm,1.0s						
SMF	**Signal de Mont**	**83.76**	**338**	*e*P	**P**	**08 05 34.0**	**+0.4**
SMF				pmax	pmax		
	comp=Z,24nm,1.0s						
SMF	**Signal de Mont**	**83.76**	**338**	*e*P	**P**	**08 05 34.0**	**+0.4**
	comp=Z,24nm,1.0s						
LPG	**La Plagne**	**84.03**	**336**	*e*P	**P**	**08 05 36.2**	**+0.8**
LPG	**La Plagne**	**84.03**	**336**	*e*P	**P**	**08 05 36.2**	**+0.8**
LPG	**La Plagne**	**84.03**	**336**	*e*P	**P**	**08 05 36.2**	**+0.8**
TCF	**Toulx Ste Croi**	**84.50**	**339**	*e*P	**P**	**08 05 38.1**	**+0.7**
TCF	**Toulx Ste Croi**	**84.50**	**339**	*e*P	**P**	**08 05 38.1**	**+0.7**
TCF	**Toulx Ste Croi**	**84.50**	**339**	*e*P	**P**	**08 05 38.1**	**+0.7**
SBF	**Sospel**	**85.33**	**335**	*e*P	**P**	**08 05 41.6**	**0.0**
	comp=Z,16nm,0.8s						
SBF	**Sospel**	**85.33**	**335**	*e*P	**P**	**08 05 41.6**	**0.0**
SBF				pmax	pmax		
	comp=Z,16nm,0.8s						
SBF	**Sospel**	**85.33**	**335**	*e*P	**P**	**08 05 41.6**	**0.0**
	comp=Z,16nm,0.8s						
RJF	**Les Rejaudoux**	**85.60**	**339**	*e*P	**P**	**08 05 42.6**	**-0.3**
RJF	**Les Rejaudoux**	**85.60**	**339**	*e*P	**P**	**08 05 42.6**	**-0.3**
RJF	**Les Rejaudoux**	**85.60**	**339**	*e*P	**P**	**08 05 42.6**	**-0.3**
CAF	**Calviac**	**85.81**	**339**	*e*P	**P**	**08 05 44.1**	**+0.1**
CAF	**Calviac**	**85.81**	**339**	*e*P	**P**	**08 05 44.1**	**+0.1**
CAF	**Calviac**	**85.81**	**339**	*e*P	**P**	**08 05 44.1**	**+0.1**
PGF	**Pioggiola**	**86.04**	**333**	*e*P	**P**	**08 05 45.6**	**+0.3**
	comp=Z,5.0nm,0.8s						
PGF	**Pioggiola**	**86.04**	**333**	*e*P	**P**	**08 05 45.6**	**+0.3**
PGF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PGF	**Pioggiola**	**86.04**	**333**	*e*P	**P**	**08 05 45.6**	**+0.3**
	comp=Z,5.0nm,0.8s						
LMR	**La Mourre**	**86.08**	**335**	*e*P	**P**	**08 05 45.8**	**+0.5**
	comp=Z,8.1nm,0.7s						
LMR	**La Mourre**	**86.08**	**335**	*e*P	**P**	**08 05 45.8**	**+0.5**
LMR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LMR	**La Mourre**	**86.08**	**335**	*e*P	**P**	**08 05 45.8**	**+0.5**
	comp=Z,8.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**115.46**	**327**	PKP	**PKPdf**	**08 11 46.1**	**-0.5**
TORD	**Torodi Ar. Bea**	**115.46**	**327**	PKP	**PKPdf**	**08 11 46.1**	**-0.5**
	comp=Z,0.5nm,1.0s,baz=42,slow=2.9,SNR=3.0						
CPUP	**Villa Florida**	**149.76**	**60**	PKPbc	**PKPbc**	**08 12 54.8**	**+0.4**
CPUP	**Villa Florida**	**149.76**	**60**	PKPbc	**PKPbc**	**08 12 54.8**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=317,slow=4.3,SNR=7.3						
SNAA	**Sanae**	**151.34**	**196**	*e*P	**PKPbc**	**08 12 57.3**	**+0.5**
VNA2	**Neumayer--Watz**	**152.81**	**195**	*e*P	**PKPbc**	**08 13 01.1**	**+1.1**
	baz=179,slow=2.1						
VNA3	**Neumayer Olymp**	**152.92**	**193**	*e*P	**PKPbc**	**08 13 01.3**	**+1.0**

*ISCJB **07** 08:00:52.5±0.2, 42°.40N±0°.02×13°.39E±0°.02, h19km±3km, Error ellipse: s-maj=3.3km s-min=3.1km az=177.5*
*CSEM **07** 08:00:52.7±0.1, 42°.40N×13°.38E, h8km, ML3.8/8, Error ellipse: s-maj=3.2km s-min=2.8km az=58.0*
*LDG **07** 08:00:52.3±0.1, 42°.38N×13°.40E, h2km, Ml3.1/7, Error ellipse: s-maj=4.0km s-min=2.8km az=44.0*
*ROM **07** 08:00:52.4±0.1, 42°.38N×13°.40E, h15km±1km, Md3.1/21, Ml3.4/19, Error ellipse: s-maj=0.8km s-min=0.7km az=133.0*
*BEO **07** 08:01:40.8, 46°.35N×22°.21E, h0km*
ISC 07 08:00:53.0±0.7**, 42°.39N**±0°.02×**13°.38E**±0°.02**, h16**km±4km**, n103, σ1s.31**/138**, 22C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**153**	⇑*i*Pg	**Pg**	**08 00 55.4**	**-0.5**
AQU				Sg	**Sg**	**08 00 57.5**	**-0.3**
	41μm,0.6s						
AQU	**L'Aquila**	**0.04**	**153**	⇑*i*Pg	**Pg**	**08 00 55.4**	**-0.5**
AQU				Sg	**Sg**	**08 00 57.5**	**-0.3**
	41μm,0.6s						
CAMP	**Campotosto**	**0.15**	**9**	⇑*i*Pg	**Pg**	**08 00 56.8**	**-0.3**
CAMP				Sg	**Sg**	**08 00 59.9**	**+0.1**
CAMP	**Campotosto**	**0.15**	**9**	⇑*i*Pg	**Pg**	**08 00 56.8**	**-0.3**
FAGN	**Fagnano**	**0.20**	**129**	⇓*i*Pg	**Pg**	**08 00 57.2**	**-0.4**
FAGN				Sg	**Sg**	**08 01 00.2**	**-0.6**
FAGN	**Fagnano**	**0.20**	**129**	⇓*i*Pg	**Pg**	**08 00 57.2**	**-0.4**
FAGN				Sg	**Sg**	**08 01 00.2**	**-0.6**
FIAM	**Fiamignano**	**0.23**	**238**	⇑*i*Pg	**Pg**	**08 00 58.1**	**-0.1**
FIAM				Sg	**Sg**	**08 01 02.2**	**+0.5**
	4μm,0.7s						
FIAM	**Fiamignano**	**0.23**	**238**	⇑*i*Pg	**Pg**	**08 00 58.1**	**-0.1**
FIAM				Sg	**Sg**	**08 01 02.2**	**+0.5**
	4μm,0.7s						
TERO	**Teramo**	**0.29**	**35**	⇑*i*Pg	**Pg**	**08 00 58.5**	**-0.6**
TERO				Sg	**Sg**	**08 01 03.1**	**-0.3**
TERO	**Teramo**	**0.29**	**35**	⇑*i*Pg	**Pg**	**08 00 58.5**	**-0.6**
TERO				Sg	**Sg**	**08 01 03.1**	**-0.3**
VCEL	**Villa Celiera**	**0.34**	**89**	⇑Pg	**Pg**	**08 00 59.6**	**-0.5**
VCEL				Sg	**Sg**	**08 01 05.2**	**+0.2**
	12μm,0.3s						
VCEL	**Villa Celiera**	**0.34**	**89**	⇑Pg	**Pg**	**08 00 59.6**	**-0.5**
VCEL				Sg	**Sg**	**08 01 05.2**	**+0.2**
	12μm,0.3s						
PTQR	**Pietraquaria**	**0.37**	**177**	⇑*i*Pg	**Pg**	**08 00 59.9**	**-0.6**
PTQR				Sg	**Sb**	**08 01 06.7**	**0.0**
PTQR	**Pietraquaria**	**0.37**	**177**	⇑*i*Pg	**Pg**	**08 00 59.9**	**-0.6**
PTQR				Sg	**Sb**	**08 01 06.7**	**0.0**
MNS	**Montasola**	**0.52**	**270**	⇑*i*Pg	**Pg**	**08 01 03.1**	**-0.1**
MNS				Sg	**Sb**	**08 01 11.1**	**+0.1**
	1μm,0.3s						
MNS	**Montasola**	**0.52**	**270**	⇑*i*Pg	**Pg**	**08 01 03.1**	**-0.1**
MNS				Sg	**Sb**	**08 01 11.1**	**+0.1**
	1μm,0.3s						
CERT	**Cerreto**	**0.53**	**214**	⇑*i*Pg	**Pg**	**08 01 02.8**	**-0.7**
CERT				Sg	**Sg**	**08 01 10.6**	**+0.1**
	4μm,0.7s						
CERT	**Cerreto**	**0.53**	**214**	⇑*i*Pg	**Pg**	**08 01 02.8**	**-0.7**
CERT				Sg	**Sg**	**08 01 10.6**	**+0.1**
	4μm,0.7s						
INTR	**Introdacqua**	**0.54**	**134**	Pg	**Pg**	**08 01 02.7**	**-1.0**
INTR				Sg	**Sg**	**08 01 11.1**	**+0.1**
	3μm,0.5s						
INTR	**Introdacqua**	**0.54**	**134**	Pg	**Pg**	**08 01 02.7**	**-1.0**
INTR				Sg	**Sg**	**08 01 11.1**	**+0.1**
	3μm,0.5s						
VVLD	**Villa Vallelon**	**0.55**	**161**	Pg	**Pg**	**08 01 02.9**	**-0.9**
VVLD				Sg	**Sg**	**08 01 11.6**	**+0.5**
	2μm,0.5s						
VVLD	**Villa Vallelon**	**0.55**	**161**	Pg	**Pg**	**08 01 02.9**	**-0.9**
VVLD				Sg	**Sg**	**08 01 11.6**	**+0.5**
	2μm,0.5s						
TRTR	**Tortoreto Alta**	**0.58**	**43**	Pg	**Pg**	**08 01 04.3**	**0.0**
	3μm,0.5s						
TRTR	**Tortoreto Alta**	**0.58**	**43**	Pg	**Pg**	**08 01 04.3**	**0.0**
	3μm,0.5s						
OFFI	**Offida**	**0.59**	**22**	⇑Pg	**Pg**	**08 01 04.4**	**-0.2**
	6μm,0.6s						
OFFI	**Offida**	**0.59**	**22**	⇑Pg	**Pg**	**08 01 04.4**	**-0.2**
	6μm,0.6s						
GUAR	**Guarcino**	**0.59**	**185**	Pg	**Pg**	**08 01 03.7**	**-1.0**
	1μm,0.5s						
GUAR	**Guarcino**	**0.59**	**185**	Pg	**Pg**	**08 01 03.7**	**-1.0**
	1μm,0.5s						
MTCE	**Montecelio**	**0.60**	**233**	⇑Pg	**Pg**	**08 01 04.1**	**-0.6**
MTCE				Sg	**Sb**	**08 01 13.1**	**-0.2**
	966nm,0.8s						
MTCE	**Montecelio**	**0.60**	**233**	⇑Pg	**Pg**	**08 01 04.1**	**-0.6**
MTCE				Sg	**Sb**	**08 01 13.1**	**-0.2**
	966nm,0.8s						
POFI	**Posta Fibreno**	**0.71**	**160**	Pg	**Pg**	**08 01 05.8**	**-1.1**
	571nm,0.6s						
POFI	**Posta Fibreno**	**0.71**	**160**	Pg	**Pg**	**08 01 05.8**	**-1.1**
	571nm,0.6s						
CAFR	**Castel Frentan**	**0.74**	**102**	Pg	**Pg**	**08 01 06.4**	**-0.9**
	2μm,0.3s						
CAFR	**Castel Frentan**	**0.74**	**102**	Pg	**Pg**	**08 01 06.4**	**-0.9**
	2μm,0.3s						
SDI	**San Donato**	**0.75**	**154**	Pg	**Pg**	**08 01 06.3**	**-1.3**
SDI	**San Donato**	**0.75**	**154**	Pg	**Pg**	**08 01 06.3**	**-1.3**
GIUL	**Giuliano Di Ro**	**0.83**	**186**	Pg	**Pb**	**08 01 08.5**	**-0.6**
GIUL	**Giuliano Di Ro**	**0.83**	**186**	Pg	**Pb**	**08 01 08.5**	**-0.6**
ASSB	**Assisi San Ben**	**0.84**	**321**	Pg	**Pb**	**08 01 08.4**	**-0.9**
	741nm,0.3s						
ASSB	**Assisi San Ben**	**0.84**	**321**	Pg	**Pb**	**08 01 08.4**	**-0.9**
	741nm,0.3s						
CERA	**Filignano**	**0.92**	**149**	Pg	**Pb**	**08 01 09.3**	**-1.3**
	726nm,0.5s						
CERA	**Filignano**	**0.92**	**149**	Pg	**Pb**	**08 01 09.3**	**-1.3**
	726nm,0.5s						
SNTG	**Esanatoglia**	**0.92**	**340**	Pg	**Pb**	**08 01 09.5**	**-1.2**
	421nm,0.7s						
SNTG	**Esanatoglia**	**0.92**	**340**	Pg	**Pb**	**08 01 09.5**	**-1.2**
	421nm,0.7s						
MIDA	**Miranda**	**0.99**	**139**	Pg	**Pb**	**08 01 10.3**	**-1.5**
	447nm,0.5s						
MIDA	**Miranda**	**0.99**	**139**	Pg	**Pb**	**08 01 10.3**	**-1.5**
	447nm,0.5s						
CING	**Cingoli**	**1.00**	**352**	Pg	**Pb**	**08 01 10.7**	**-1.2**
	611nm,0.6s						
CING	**Cingoli**	**1.00**	**352**	Pg	**Pb**	**08 01 10.7**	**-1.2**
	611nm,0.6s						
FRES	**Fresagrandinar**	**1.04**	**113**	Pg	**Pb**	**08 01 11.9**	**-0.8**
	775nm,0.6s						
FRES	**Fresagrandinar**	**1.04**	**113**	Pg	**Pb**	**08 01 11.9**	**-0.8**
	775nm,0.6s						
MURB	**Monte Urbino**	**1.08**	**325**	Pg	**Pb**	**08 01 12.8**	**-0.5**
	1μm,0.5s						
MURB	**Monte Urbino**	**1.08**	**325**	Pg	**Pb**	**08 01 12.8**	**-0.5**
	1μm,0.5s						
ARVD	**Arcevia**	**1.16**	**344**	Pg	**Pn**	**08 01 13.9**	**-0.6**
	446nm,0.7s						
ARVD	**Arcevia**	**1.16**	**344**	Pg	**Pn**	**08 01 13.9**	**-0.6**
	446nm,0.7s						
MS1	**Monte Sant'Ang**	**2.03**	**109**	*e*Pn	**Pb**	**08 01 29.5**	**0.0**
NVLJ	**Novalja**	**2.43**	**26**	*i* Pn	**Pn**	**08 01 32.3**	**+0.3**
NVLJ				Sn	**Sn**	**08 02 02.2**	**+0.8**
NVLJ	**Novalja**	**2.43**	**26**	*i* Pn	**Pn**	**08 01 32.3**	**+0.3**
NVLJ				Sn	**Sn**	**08 02 02.2**	**+0.8**
CDT	**Castel del Mon**	**2.53**	**120**	*e*Pn	**Pn**	**08 01 35.3**	**+1.9**
STON	**Ston**	**3.23**	**80**	*e*Pn	**Pn**	**08 01 43.4**	**+0.4**
STON				Sn	**Sn**	**08 02 21.0**	**0.0**
STON	**Ston**	**3.23**	**80**	*e*Pn	**Pn**	**08 01 43.3**	**+0.4**
STON				Sn	**Sn**	**08 02 21.0**	**0.0**
PGF	**Pioggiola**	**3.24**	**274**	*e*Pn	**Pn**	**08 01 44.5**	**+1.2**
PGF				*e*Sn	**Sn**	**08 02 24.7**	**+3.0**
	9.1nm,0.7s						
PGF	**Pioggiola**	**3.24**	**274**	*e*Pn	**Pn**	**08 01 44.5**	**+1.2**
PGF				*e*Sn	**Sn**	**08 02 24.7**	**+3.0**
	4.6nm,0.7s						
OBKA	**Obir**	**4.21**	**11**	⇑*i*Pn	**Pn**	**08 01 56.2**	**-0.3**
OBKA	**Obir**	**4.21**	**11**	Pn	**Pn**	**08 01 56.2**	**-0.3**
SBF	**Sospel**	**4.59**	**291**	*e*Pn	**Pn**	**08 02 03.0**	**+1.2**
SBF				*e*Sn	**Sn**	**08 02 52.8**	**-2.1**
	11nm,0.6s						
SBF	**Sospel**	**4.59**	**291**	*e*Pn	**Pn**	**08 02 03.0**	**+1.2**
SBF				*e*Sn	**Sn**	**08 02 52.8**	**-2.1**
	5.6nm,0.6s						
BBLS	**Lazići**	**4.65**	**69**	*e*Pn	Pn	08 02 06.6	+4.0
BBLS	**Lazići**	**4.65**	**69**	*e*Pn	Pn	08 02 06.6	+4.0
TEKS	**Tekeris**	**4.97**	**62**	*e*Pn	**Pn**	**08 02 08.9**	**+1.9**
TEKS	**Tekeris**	**4.97**	**62**	*e*Pn	**Pn**	**08 02 08.9**	**+1.9**
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**08 02 09.1**	**+0.7**
FRF				*e*Sn	**Sn**	**08 03 04.5**	**-2.2**
	6.6nm,0.6s						
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**08 02 09.1**	**+0.7**
FRF				*e*Sn	**Sn**	**08 03 04.5**	**-2.2**
	3.3nm,0.6s						
IVAS	**Ivanjica**	**5.11**	**74**	*e*Pn	**Pn**	**08 02 10.4**	**+1.5**
IVAS	**Ivanjica**	**5.11**	**74**	*e*Pn	**Pn**	**08 02 10.4**	**+1.5**
DIVS	**Divibare**	**5.12**	**68**	*e*Pn	**Pn**	**08 02 11.3**	**+2.2**
DIVS	**Divibare**	**5.12**	**68**	*e*Pn	**Pn**	**08 02 11.3**	**+2.2**
LMR	**La Mourre**	**5.14**	**283**	*e*Pn	**Pn**	**08 02 09.8**	**+0.6**
LMR				*e*Sn	**Sn**	**08 03 05.6**	**-2.6**
	2.7nm,0.4s						
LMR	**La Mourre**	**5.14**	**283**	*e*Pn	**Pn**	**08 02 09.8**	**+0.6**
LMR				*e*Sn	**Sn**	**08 03 05.6**	**-2.6**
	1.4nm,0.4s						
MBDF	**Montbardon**	**5.34**	**298**	*e*P	**Pn**	**08 02 14.8**	**+2.6**
MBDF	**Montbardon**	**5.34**	**298**	*e*P	**Pn**	**08 02 14.8**	**+2.6**
TRUS	**Trudelj**	**5.45**	**68**	*e*Pn	**Pn**	**08 02 13.2**	**-0.3**
TRUS	**Trudelj**	**5.45**	**68**	*e*Pn	**Pn**	**08 02 13.2**	**-0.3**
GRUS	**Gruza**	**5.57**	**72**	*e*Pn	**Pn**	**08 02 13.7**	**-1.5**
GRUS	**Gruza**	**5.57**	**72**	*e*Pn	**Pn**	**08 02 13.7**	**-1.5**
LPG	**La Plagne**	**5.71**	**305**	*e*P	Pn	08 02 21.0	+3.7
SELS	**Selova**	**5.75**	**79**	*e*Pn	**Pn**	**08 02 18.7**	**+0.9**
SELS	**Selova**	**5.75**	**79**	*e*Pn	**Pn**	**08 02 18.7**	**+0.9**
CONA	**Conrad Observa**	**5.81**	**17**	⇑*i*Pn	**Pn**	**08 02 17.0**	**-1.5**
CONA	**Conrad Observa**	**5.81**	**17**	Pn	**Pn**	**08 02 17.0**	**-1.5**
BARS	**Barje**	**6.24**	**83**	*e*Pn	**Pn**	**08 02 25.7**	**+1.3**
BARS	**Barje**	**6.24**	**83**	*e*Pn	**Pn**	**08 02 25.7**	**+1.3**
CABF	**La Chapelle**	**6.71**	**311**	*e*Pn	**Pn**	**08 02 32.5**	**+1.6**
CABF	**La Chapelle**	**6.71**	**311**	*e*Pn	**Pn**	**08 02 32.5**	**+1.6**
KHC	**Kasperske Hory**	**6.75**	**1**	*e*SN	**Sn**	**08 03 46.2**	**-1.6**
KHC	**Kasperske Hory**	**6.75**	**1**	Sn	**Sn**	**08 03 46.2**	**-1.6**
ZAPS	**Zavoj**	**6.86**	**79**	*e*Pn	**Pn**	**08 02 35.7**	**+2.7**
ZAPS	**Zavoj**	**6.86**	**79**	*e*Pn	**Pn**	**08 02 35.7**	**+2.7**
HINF	**Hinteralfeld**	**7.12**	**322**	*e*Pn	**Pn**	**08 02 36.1**	**-0.4**
HINF				*e*Sn	**Sn**	**08 03 53.6**	**-3.6**
	6.8nm,0.5s						
HINF	**Hinteralfeld**	**7.12**	**322**	*e*Pn	**Pn**	**08 02 36.1**	**-0.4**
CDF	**Champ du Feu**	**7.40**	**327**	*e*Pn	**Pn**	**08 02 40.6**	**+0.3**
CDF				*e*Sn	**Sn**	**08 04 00.6**	**-3.3**
	4.6nm,0.5s						
CDF	**Champ du Feu**	**7.40**	**327**	*e*Pn	**Pn**	**08 02 40.6**	**+0.3**
HAU	**Haudompre**	**7.49**	**321**	*e*Pn	**Pn**	**08 02 42.4**	**+0.8**
HAU				*e*Sn	**Sn**	**08 04 01.1**	**-5.2**
	9.4nm,0.5s						
HAU	**Haudompre**	**7.49**	**321**	*e*Pn	**Pn**	**08 02 42.4**	**+0.8**

TRN 07 08:05:30.8, 18°.38N×61°.00W, h47km**, MD3.8, M4.1**(FDF)**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BPA	**Boggy Peak**	**1.56**	**212**	*e*P	Pn	08 05 56.8	+0.6
BPA				*e*S	Sn	08 06 16.9	+1.6
SKI	**Saint Kitts**	**1.96**	**238**	*e*P	Pn	08 06 03.1	+1.5
SKI				*e*S	Sn	08 06 27.4	+2.3
SEG	**Port Louis**	**2.02**	**194**	*e*P	Pn	08 06 03.8	+1.3
LZG	**Guadaloupe-1**	**2.35**	**199**	*e*P	Pn	08 06 08.6	+1.7
BCG	**Bois Riant Cap**	**2.36**	**195**	*e*P	Pn	08 06 09.0	+1.8
DOG	**Dongo Capester**	**2.41**	**194**	*e*P	Pn	08 06 09.8	+1.9
SCG	**Saint Claude**	**2.43**	**196**	*e*P	Pn	08 06 10.3	+2.1
PHG	**Guadaloupe-2**	**2.43**	**195**	*e*P	Pn	08 06 10.3	+2.1
MGG	**Marie-Galante**	**2.47**	**187**	*e*P	Pn	08 06 10.4	+1.8
HMG	**Houelmont**	**2.48**	**196**	*e*P	Pn	08 06 11.0	+2.2
TBG	**Guadaloupe-3**	**2.59**	**194**	*e*P	Pn	08 06 11.8	+1.6
FDF	**Fort de France**	**3.63**	**182**	*e*P	Pn	08 06 25.1	+0.4
FDF				*e*S	Sn	08 07 05.2	-1.1
MVM	**Montagne Vaucl**	**3.80**	**179**	*e*P	Pn	08 06 28.5	+1.5
MVM				*e*S	Sn	08 07 11.7	+1.1
BIM	**Bigot**	**3.84**	**181**	*e*P	Pn	08 06 29.4	+1.8
BIM				*e*S	Sn	08 07 13.6	+2.1
MCLT	**Moule a Chique**	**4.64**	**179**	*e*P	Pn	08 06 40.5	+1.9
MCLT				*e*S	Sn	08 07 30.3	-0.9
SVB	**Belmont**	**5.08**	**183**	*e*P	Pn	08 06 46.7	+2.1
SVB				*e*S	Sn	08 07 41.9	-0.2

GUC 07 08:06:56.4±0.8**, 29°.48S×70°.82W, h100**km±5km**, ML3.5, 2D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.48**	**13**	⇓*i*P	Pn	08 07 13.4	+0.9
LCO				*i* S	Sn	08 07 25.1	+0.8
LCO				AML	AML	08 07 26.3	
	comp=E,2μm,0.4s						
TLL	**Tololo Astrono**	**0.68**	**179**	*e*P	Pn	08 07 15.0	+1.0
TLL				*e*S	Sn	08 07 28.2	+1.1
TLL				AML	AML	08 07 30.5	
	comp=N,1μm,0.5s						
CMCH	**Combarbala**	**1.69**	**185**	⇓*i*P	Pn	08 07 25.4	+0.2
CMCH				*e*S	Sn	08 07 47.4	+0.4
CMCH				AML	AML	08 07 50.8	
	comp=E,1μm,0.8s						
CPCH	**Copiapo**	**2.16**	**11**	*e*P	Pn	08 07 31.2	+0.1
CPCH				*e*S	Sn	08 07 58.0	+0.4
CDCH	**Caldera**	**2.41**	**0**	*e*P	Pn	08 07 34.6	+0.3
CDCH				*e*S	Sn	08 08 03.6	+0.3
CHNG	**Los Chungos**	**2.46**	**194**	*e*P	Pn	08 07 35.6	+0.7
CHNG				*e*S	Sn	08 08 04.8	+0.2

*ISCJB **07** 08:09:08.2±0.5, 45°.50N±0°.07×152°.14E±0°.07, h30km, mb3.6/11, MS3.8/1, Error ellipse: s-maj=11.6km s-min=4.6km az=150.9*
*MOS **07** 08:09:09.2±1.4, 45°.64N×152°.22E, h42km, mb4.0/6, Error ellipse: s-maj=14.8km s-min=10.1km az=136.6*
*JMA **07** 08:09:10.5±0.5, 45°.84N×152°.10E, h30km, M4.8*
*IDC **07** 08:09:14.2±3.0, 45°.76N×151°.80E, h67km±27km, mb3.2/10, mb1 3.6/15, mb1mx3.4/29, mbtmp3.4/15, ML3.7/3, MS4.0/1, Ms1 4.0/1, ms1mx3.1/19, Error ellipse: s-maj=28.2km s-min=15.8km az=136.0*
ISC 07 08:09:10.2±0.8**, 45°.46N**±0°.10×**152°.16E**±0°.08**, h30**km**, n51, σ2s.14**/50**, mb3.6**/11**, 1C-1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.03**	**267**	PN	**Pn**	**08 09 57.0**	**+0.9**
KUR				S	**Sn**	**08 10 31.0**	**-0.4**
KUR				smax	smax		
	comp=N,530nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.71**	**255***c*	*i*PN	**Pn**	**08 10 22.1**	**+3.0**
YUK				*i* S	**Sn**	**08 11 15.0**	**+2.4**
YUK				pmax	pmax		
	comp=N,34nm,0.2s						
YUK				pmax	pmax		
	comp=Z,156nm,0.4s						
YUK				pmax	pmax		
	comp=E,78nm,0.4s						
YUK				smax	smax		
	comp=E,91nm,0.4s						
YUK				smax	smax		
	comp=N,173nm,0.5s						
NEM2	**Nemuro 2**	**5.05**	**248**	P	**Pn**	**08 10 25.2**	**+1.4**
NEM2				*e*S	**Sn**	**08 11 20.1**	**-1.0**
JRA	**Rausu**	**5.24**	**256**	P	**Pn**	**08 10 29.5**	**+3.1**
JNK	**Nakash**	**5.64**	**253**	P	**Pn**	**08 10 34.4**	**+2.5**
SKR	**Severo-Kuril's**	**5.86**	**25**	*e*PN	Pn	08 10 31.3	-3.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR				pmax	pmax		
	comp=Z,180nm,1.0s						
SKR				pmax	pmax		
	comp=N,60nm,0.8s						
SKR				pmax	pmax		
	comp=E,50nm,0.8s						
JAK	Akkeshi	5.90	248	P	Pn	08 10 37.0	+1.5
JAK				eS	Sn	08 11 40.7	-1.3
JTKR	Abashiri--Toko	6.06	259	P	Pn	08 10 40.8	+3.1
JAR	Ashorobuto	6.39	253	P	Pn	08 10 44.9	+2.7
JAR				eS	Sn	08 11 55.0	+0.9
JOB	Onbets	6.51	250	P	Pn	08 10 45.7	+1.9
JOB				eS	Sn	08 11 56.1	-0.9
YSS	Yuzh-Sakhalins	6.69	286	ePN	Pn	08 10 49.2	+2.8
JKK2	Kamakawa 2	6.89	260	P	Pn	08 10 51.9	+2.7
ASAJ	Asahikawa	6.93	262	P	Pn	08 10 53.0	+3.3
ASAJ	Asahikawa	6.93	262	P	Pn	08 10 52.2	+2.5
	comp=E,2.8nm,0.3s,baz=97,slow=13,SNR=18						
JCH	Churui	6.95	249	P	Pn	08 10 51.2	+1.3
JCH				eS	Sn	08 12 06.5	-1.3
ERM	Erimo	7.37	245	d iPN	Pn	08 10 58.6	+2.9
JNBK	Urakawa-nobuka	7.50	248	eS	Sn	08 12 18.5	-3.0
JBT2	Biratori 2	7.54	253	P	Pn	08 10 58.9	+0.9
PETK	Petropavlovsk-	8.46	23	ePN	Pn	08 11 19.2	+8.5
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	8.46	23	P	Pn	08 11 10.4	-0.2
	baz=180,slow=13,SNR=2.1						
JNB	Noboribetsu	8.56	253	P	Pn	08 11 13.3	+1.3
JKB	Kayabe	8.82	250	P	Pn	08 11 16.5	+1.0
JKB				eS	Sn	08 12 48.4	-5.4
JYM2	Yakumo 2	9.16	253	P	Pn	08 11 21.2	+1.0
JANG	Nango	9.31	241	P	Pn	08 11 22.0	-0.3
JANG				eS	Sn	08 12 59.7	-6.3
JTM	Tenmabayashi	9.35	244	P	Pn	08 11 23.2	+0.3
JTM				eS	Sn	08 13 01.6	-5.4
JTH	Tanohata	9.37	238	P	Pn	08 11 22.7	-0.4
JTH				eS	Sn	08 13 00.7	-6.7
JOSM	Okushiri--Mats	9.77	254	P	Pn	08 11 29.2	+0.6
OFUJ	Ofunato	10.05	234	P	Pn	08 11 32.8	+0.4
JRG	Rokugo	10.45	239	eS	Sn	08 13 26.9	-6.9
JIO	Ouri	10.66	233	P	Pn	08 11 41.5	+0.7
MJA0	Matsu Arr-Jizo	13.76	234	eP	Pn	08 12 24.1	+1.0
MAT	Matsushiro	13.78	235	P	Pn	08 12 24.0	+0.6
MAT				eS	Sn	08 15 01.0	+5.6
MJAR	Matsushiro Arr	13.78	235	P	Pn	08 12 23.9	+0.5
	comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=7.8						
KLR	Kul'dur	14.33	293	eP	Pn	08 12 28.8	-2.1
USRK	Ussuriysk Arra	14.36	272	P	Pn	08 12 30.1	-1.2
	comp=Z,0.1nm,0.3s,baz=76,slow=13,SNR=4.6						
KSRS	Korea Array	19.79	255	P	P	08 13 37.9	-0.1
	comp=Z,0.2nm,0.3s,baz=60,slow=10,SNR=12						
CLNS	Chul'man	20.39	314	eP	Pn	08 13 55.6	+9.0
CLNS				pmax	pmax		
	comp=Z,12nm,1.1s						
CLNS				pmax	pmax		
	comp=E,9.0nm,1.1s						
CLNS				pmax	pmax		
	comp=N,8.0nm,1.0s						
JNU	Nakatsue	20.50	240	LR	LR	08 22 07.5	
	comp=N,399nm,19.1s,baz=119,slow=38						
YAK	Yakutsk	21.07	330	eP	P	08 13 52.3	+0.7
YAK				e		08 14 03.5	
YAK				pmax	pmax		
	comp=Z,33nm,0.8s						
YAK				pmax	pmax		
	comp=N,18nm,1.1s						
YAK				pmax	pmax		
	comp=E,16nm,1.0s						
ILAR	Eielson Array	37.97	38	P	P	08 16 23.5	-1.3
	comp=E,0.4nm,1.1s,baz=258,slow=6.8,SNR=3.3						
INK	Inuvik	43.10	32	P	P	08 17 06.2	-0.8
	comp=E,0.4nm,0.5s,baz=290,slow=5.1,SNR=2.7						
MKAR	Makanchi Array	46.95	298	P	P	08 17 35.0	-3.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	46.95	298	P	P	08 17 35.0	-3.1
	comp=Z,0.6nm,0.7s,baz=71,slow=8.9,SNR=6.0						
YKA	Yellowknife Ar	52.36	36	P	P	08 18 18.7	-0.2
	comp=Z,0.1nm,0.4s,baz=297,slow=6.9,SNR=5.9						
FINES	FINESS Array B	64.92	335	P	P	08 19 43.1	-3.1
	comp=Z,1.3nm,0.6s,baz=36,slow=7.1,SNR=4.7						
PDAR	Pinedale Array	66.05	53	P	P	08 19 55.6	+1.4
	comp=Z,0.4nm,0.8s,baz=285,slow=4.3,SNR=3.0						
WRA	Warramunga Arr	67.08	198	P	P	08 20 02.5	+1.9
	comp=Z,0.6nm,0.8s,baz=18,slow=6.8,SNR=3.2						
NB2	NORSAR Subarra	69.23	341	P	P	08 20 11.4	-2.3
	comp=Z,0.3nm,0.4s,baz=30,slow=6.5						
NOA	NORSAR Array B	69.23	341	P	P	08 20 11.1	-2.6
	comp=Z,0.9nm,0.7s,baz=29,slow=6.3,SNR=5.6						
ASAR	Alice Springs	70.78	198	P	P	08 20 23.6	0.0
	comp=Z,0.1nm,0.6s,baz=15,slow=5.0,SNR=2.5						
TXAR	Lajitas Array	78.71	60	P	P	08 21 08.7	-1.1
	comp=Z,0.7nm,1.0s,baz=290,slow=3.7,SNR=4.2						

*CSEM **07** 08:10:54.4, 42°.30N×13°.48E, h10km, MD2.1/6, After ROM*
ROM 07 08:10:54.4±0.1**, 42°.30N×13°.48E, h10km, Md2.1**/6**, Ml1.5**/3**, Error ellipse: s-maj=1.6km s-min=1.3km az=10.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.08	313	Pg	Pg	08 10 57.3	+0.5
AQU				Sg	Sg	08 10 59.1	+0.5
AQU	L'Aquila	0.08	313	Pg	Pg	08 10 57.3	+0.5
AQU				Sg	Sg	08 10 59.1	+0.5
FAGN	Fagnano	0.08	114	Pg	Pg	08 10 57.5	+0.6
FAGN				Sg	Sg	08 10 58.9	+0.2
	743nm,0.3s						
FAGN	Fagnano	0.08	114	Pg	Pg	08 10 57.5	+0.6
FAGN				Sg	Sg	08 10 58.9	+0.2
	743nm,0.3s						
FIAM	Fiamignano	0.27	263	Pg	Pg	08 11 00.6	+0.5
FIAM				Sg	Sb	08 11 05.2	-1.1
	46nm,0.4s						
FIAM	Fiamignano	0.27	263	Pg	Pg	08 11 00.6	+0.5
FIAM				Sg	Sb	08 11 05.2	-1.1
	46nm,0.4s						
PTQR	Pietraquaria	0.28	192	Pg	Pg	08 11 00.9	+0.6
PTQR				Sg	Sg	08 11 05.2	+1.0
	9.0nm,0.2s						
PTQR	Pietraquaria	0.28	192	Pg	Pg	08 11 00.9	+0.6
PTQR				Sg	Sg	08 11 05.2	+1.0
	9.0nm,0.2s						
VCEL	Villa Celiera	0.28	70	Pg	Pb	08 11 01.5	-0.3
VCEL				Sg	Sb	08 11 05.7	-1.0
	58nm,0.4s						
VCEL	Villa Celiera	0.28	70	Pg	Pb	08 11 01.5	-0.3
VCEL				Sg	Sb	08 11 05.7	-1.0
	58nm,0.4s						
TERO	Teramo	0.34	16	Pg	Pg	08 11 01.4	+0.2
TERO				Sg	Sg	08 11 06.6	+0.8
	50nm,0.3s						
TERO	Teramo	0.34	16	Pg	Pg	08 11 01.4	+0.2
TERO				Sg	Sg	08 11 06.6	+0.8
	50nm,0.3s						

*CSEM **07** 08:11:18.7, 42°.46N×13°.42E, h9km, MD2.0/8, After ROM*
ROM 07 08:11:18.7±0.1**, 42°.46N×13°.42E, h9km**±1km**, Md2.0**/8**, Ml2.0**/4**, Error ellipse: s-maj=1.9km s-min=1.1km az=86.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	Campotosto	0.07	355	Pg	Pg	08 11 21.5	+0.5
CAMP				Sg	Sg	08 11 23.0	+0.3
CAMP	Campotosto	0.07	355	Pg	Pg	08 11 21.5	+0.5
CAMP				Sg	Sg	08 11 23.0	+0.3
AQU	L'Aquila	0.11	186	Pg	Pg	08 11 22.3	+0.9
AQU				Sg	Sg	08 11 23.7	+0.5
	1µm,0.2s						
AQU	L'Aquila	0.11	186	Pg	Pg	08 11 22.3	+0.9
AQU				Sg	Sg	08 11 23.7	+0.5
	1µm,0.2s						
TERO	Teramo	0.21	41	Pg	Pg	08 11 23.6	+0.5
TERO				Sg	Sg	08 11 26.9	+0.8
TERO	Teramo	0.21	41	Pg	Pg	08 11 23.6	+0.5
TERO				Sg	Sg	08 11 26.9	+0.8
FAGN	Fagnano	0.23	148	Pg	Pg	08 11 24.6	+1.1
FAGN				Sg	Sg	08 11 28.1	+1.4
FAGN	Fagnano	0.23	148	Pg	Pg	08 11 24.6	+1.1
FAGN				Sg	Sg	08 11 28.1	+1.4
FIAM	Fiamignano	0.29	229	Pg	Pg	08 11 25.3	+0.6
FIAM				Sg	Sg	08 11 29.9	+1.1
	87nm,0.4s						
FIAM	Fiamignano	0.29	229	Pg	Pg	08 11 25.3	+0.6
FIAM				Sg	Sg	08 11 29.9	+1.1
	87nm,0.4s						
NRCA	Norcia	0.43	329	Pg	Pg	08 11 27.7	+0.4
NRCA				Sg	Sb	08 11 34.4	-1.0
	60nm,0.2s						
NRCA	Norcia	0.43	329	Pg	Pg	08 11 27.7	+0.4
NRCA				Sg	Sb	08 11 34.4	-1.0
	60nm,0.2s						
OFFI	Offida	0.51	23	Pg	Pb	08 11 30.1	+0.1
OFFI	Offida	0.51	23	Pg	Pb	08 11 30.1	+0.1
MNS	Montasola	0.55	262	Pg	Pg	08 11 29.8	+0.3
MNS	Montasola	0.55	262	Pg	Pg	08 11 29.8	+0.3
INTR	Introdacqua	0.58	141	Pg	Pg	08 11 30.4	+0.4
INTR				Sg	Sb	08 11 39.4	-0.2
INTR	Introdacqua	0.58	141	Pg	Pg	08 11 30.4	+0.4
INTR				Sg	Sb	08 11 39.4	-0.2
FDMO	Fiordimonte	0.62	337	Pg	Pg	08 11 30.9	+0.1
FDMO				Sg	Sb	08 11 40.5	-0.3
	45nm,0.2s						
FDMO	Fiordimonte	0.62	337	Pg	Pg	08 11 30.9	+0.1
FDMO				Sg	Sb	08 11 40.5	-0.3
	45nm,0.2s						
ASSB	Assisi San Ben	0.81	316	Pg	Pg	08 11 34.3	0.0
ASSB				Sg	Sb	08 11 46.6	+0.5
	42nm,0.2s						
ASSB	Assisi San Ben	0.81	316	Pg	Pg	08 11 34.3	0.0
ASSB				Sg	Sb	08 11 46.6	+0.5
	42nm,0.2s						

NNC 07 08:25:25.5±3.9**, 53°.90N×85°.40E, h0km, mb4.0, mpv3.6, 5C-3D, Error ellipse: s-maj=36.0km s-min=18.0km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	5.24	235	⇓Pn	Pn	08 26 46.2	+1.2
	6.1nm,1.3s						
KURK				⇑Lg	Lg	08 28 13.3	
	7.6nm,0.7s						
MK31	Makanchi Array	7.38	197	⇑Pn	Pn	08 27 14.1	-0.4
	2.3nm,0.6s,baz=25,slow=14,SNR=69						
MK31				⇑Sn	Sn	08 28 39.4	+0.4
	3.8nm,1.1s,baz=28,slow=27,SNR=5.3						
MK31				⇑Lg	Lg	08 29 21.2	
	1.8nm,0.7s,baz=26,slow=29,SNR=4.8						
VOSK	Vostochnaya	8.72	268	⇑Pn	Pn	08 27 32.3	-0.5
	2.2nm,0.5s						
VOSK				⇓Sn	Sn	08 29 11.5	-0.2
	2.9nm,0.6s						
ZRNK	Zerenda	9.84	271	⇓Pn	Pn	08 27 48.1	+0.1
	3.6nm,0.6s						

IDC 07 08:42:48.6±1.3**, 3°.21S×135°.86E, h0km, mb3.6**/4**, mb1 3.9**/5**, mb1mx3.6**/17**, mbtmp3.7**/5**, ML3.9**/1**, Error ellipse: s-maj=59.6km s-min=26.6km az=86.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.70	185	Pn	Pn	08 46 45.2	+1.0
	0.5nm,0.3s,baz=8.2,slow=12,SNR=20						
WRA				Sn	Sn	08 49 32.4	-18
	0.1nm,0.3s,baz=9.3,slow=23,SNR=4.9						
ASAR	Alice Springs	20.42	185	P	P	08 47 27.1	-0.6
	2.5nm,0.6s,baz=7.0,slow=11,SNR=40						
MKAR	Makanchi Array	68.47	324	P	P	08 53 54.0	+1.2
	0.2nm,0.6s,baz=118,slow=6.6,SNR=2.6						
ZALV	Zalesovo Beam	70.96	331	P	P	08 54 06.4	-1.5
	0.3nm,0.4s,baz=141,slow=7.4,SNR=2.6						
ILAR	Eielson Array	87.47	25	P	P	08 55 38.8	+0.9
	0.2nm,0.8s,baz=232,slow=4.4,SNR=2.9						

*CSEM **07** 08:45:35.0±0.1, 44°.27N×11°.96E, h28km±2km, ML3.2/8, Error ellipse: s-maj=3.3km s-min=3.0km az=61.0*
*ROM **07** 08:45:35.1±0.2, 44°.23N×11°.94E, h28km±3km, Md2.6/16, Ml2.5/12, Error ellipse: s-maj=2.6km s-min=2.0km az=40.0*
ISC 07 08:45:35.1±0.9**, 44°.26N**±0°.02×**11°.94E**±0°.02**, h29**km±5km**, n64,** σ**0s.58**/97**, 14C-5D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAEN	Faenza	0.05	307	Pg	Pb	08 45 39.6	-0.3
FAEN				Sg	Sb	08 45 44.1	+0.8
FAEN	Faenza	0.05	307	Pg	Pb	08 45 39.6	-0.3
FAEN				Sg	Sb	08 45 44.1	+0.8
CMPO	Campotto Po	0.34	344	Pg	Pb	08 45 43.2	+0.3
	469nm,1.0s						
CMPO	Campotto Po	0.34	344	Pg	Pb	08 45 43.2	+0.3
	469nm,1.0s						
MTRZ	Monterenzio	0.36	290	Pg	Pn	08 45 43.9	-0.5
	251nm,0.4s						
MTRZ	Monterenzio	0.36	290	Pg	Pn	08 45 43.9	-0.5
	251nm,0.4s						
SFI	Santa Sofia	0.36	190	Pg	Pb	08 45 42.6	-0.7
SFI				Sg	Sb	08 45 49.0	+0.2
	779nm,0.3s						
SFI	Santa Sofia	0.36	190	Pg	Pb	08 45 42.6	-0.7
SFI				Sg	Sb	08 45 49.0	+0.2
	779nm,0.3s						
VMG	Vicchio	0.41	224	Pg	Pb	08 45 43.5	-0.5
VMG				Sg	Sb	08 45 50.6	+0.5
	631nm,0.8s						
VMG	Vicchio	0.41	224	Pg	Pb	08 45 43.5	-0.5
VMG				Sg	Sb	08 45 50.6	+0.5
	631nm,0.8s						
SEI	Scarperia	0.46	244	Pg	Pb	08 45 44.5	-0.4
SEI				Sg	Sn	08 45 52.8	-0.3
	358nm,0.3s						
SEI	Scarperia	0.46	244	Pg	Pb	08 45 44.5	-0.4
SEI				Sg	Sn	08 45 52.8	-0.3
	358nm,0.3s						
ASQU	Asqua	0.47	193	Pg	Pb	08 45 44.4	-0.6
ASQU				Sg	Sb	08 45 52.2	+0.4
	299nm,0.3s						
ASQU	Asqua	0.47	193	Pg	Pb	08 45 44.4	-0.6
ASQU				Sg	Sb	08 45 52.2	+0.4
	299nm,0.3s						
FNVD	Fontana Vidola	0.59	262	Pg	Pb	08 45 46.8	-0.2
FNVD				Sg	Sn	08 45 56.1	-0.3
	152nm,0.5s						
FNVD	Fontana Vidola	0.59	262	Pg	Pb	08 45 46.8	-0.2
FNVD				Sg	Sn	08 45 56.1	-0.3
	152nm,0.5s						
PARC	Parchiule	0.65	160	Pg	Pb	08 45 47.3	-0.6
	162nm,0.6s						
PARC	Parchiule	0.65	160	Pg	Pb	08 45 47.3	-0.6
	162nm,0.6s						
PESA	Pesaro	0.72	116	Pg	Pn	08 45 50.4	+1.0
	393nm,0.3s						
PESA	Pesaro	0.72	116	Pg	Pn	08 45 50.4	+1.0
	393nm,0.3s						
PZZT	Monte Pizzetto	0.78	261	Pg	Pb	08 45 50.3	+0.1
	133nm,0.8s						
PZZT	Monte Pizzetto	0.78	261	Pg	Pb	08 45 50.3	+0.1
	133nm,0.8s						
FSSB	Fossombrone	0.83	133	Pg	Pb	08 45 51.1	+0.2
	68nm,0.2s						
FSSB	Fossombrone	0.83	133	Pg	Pb	08 45 51.1	+0.2
	68nm,0.2s						
CRMI	Carmignano	0.84	236	Pg	Pb	08 45 51.4	+0.3
	84nm,0.7s						
CRMI	Carmignano	0.84	236	Pg	Pb	08 45 51.4	+0.3
	84nm,0.7s						
PIEI	Pieia	0.84	149	Pg	Pn	08 45 50.8	-0.2
PIEI				Sg	Sn	08 46 02.3	-0.2
	192nm,0.6s						
PIEI	Pieia	0.84	149	Pg	Pn	08 45 50.8	-0.2
PIEI				Sg	Sn	08 46 02.3	-0.2
	192nm,0.6s						
CAFI	Castiglion Fio	0.93	179	Pg	Pb	08 45 52.7	+0.1
	104nm,0.6s						
CAFI	Castiglion Fio	0.93	179	Pg	Pb	08 45 52.7	+0.1
	104nm,0.6s						
BDI	Bagni Di Lucca	0.98	259	Pg	Pb	08 45 55.0	+1.5
	107nm,1.0s						
BDI	Bagni Di Lucca	0.98	259	Pg	Pb	08 45 55.0	+1.5
	107nm,1.0s						
CGRP	Cima Grappa	1.62	357	⇑ePg	Pn	08 46 00.4	-1.5
CGRP				eSg	Sn	08 46 20.4	-1.6
CGRP	Cima Grappa	1.62	357	⇑ePg	Pn	08 46 00.4	-1.5
CGRP				eSg	Sn	08 46 20.4	-1.6
BALD	Monte Baldo	1.63	331	⇑ePg	Pn	08 46 02.4	+0.3
BALD	Monte Baldo	1.63	331	⇑ePg	Pn	08 46 02.4	+0.3
DDS	Dosso del Somm	1.71	342	⇑ePg	Pn	08 46 03.1	0.0
DDS	Dosso del Somm	1.71	342	⇑ePg	Pn	08 46 03.1	0.0
VARN	Col Varnada, M	1.74	4	⇓ePg	Pn	08 46 03.0	-0.4
VARN				eSg	Sn	08 46 24.4	-0.3
VARN	Col Varnada, M	1.74	4	⇓ePg	Pn	08 46 03.0	-0.4
VARN				eSg	Sn	08 46 24.4	-0.3
PANI	Panarotta	1.85	346	ePg	Pn	08 46 05.3	+0.3
PANI	Panarotta	1.85	346	ePg	Pn	08 46 05.3	+0.3
MLNI	Malnisio	1.95	14	⇓ePg	Pn	08 46 06.0	-0.3
MLNI				eSg	Sn	08 46 29.8	-0.1
MLNI	Malnisio	1.95	14	⇓ePg	Pn	08 46 06.0	-0.3
MLNI				eSg	Sn	08 46 29.8	-0.1
SKDS	Skadanscina	1.96	48	⇑iPn	Pn	08 46 05.5	-0.9
SKDS				i Sn	Sn	08 46 29.5	-0.6
SKDS							
	comp=Z,44nm,0.3s						
SKDS	Skadanscina	1.96	48	Pn	Pn	08 46 05.5	-0.9
SKDS				i Sn	Sn	08 46 29.5	-0.6
	comp=Z,44nm,0.3s						
SABO	M.te Sabotino	2.09	34	⇑ePn	Pn	08 46 07.9	-0.3
SABO	M.te Sabotino	2.09	34	⇑ePn	Pn	08 46 07.9	-0.3
NVLJ	Novalja	2.13	81	i Pn	Pn	08 46 08.7	+0.1
NVLJ				Sn	Sn	08 46 33.8	-0.3
NVLJ	Novalja	2.13	81	i Pn	Pn	08 46 08.7	+0.1
NVLJ				Sn	Sn	08 46 33.7	-0.3
COLI	Coloredo	2.13	28	⇑iPn	Pn	08 46 08.5	-0.3
COLI				i Sn	Sn	08 46 34.3	0.0
COLI	Coloredo	2.13	28	⇑iPn	Pn	08 46 08.5	-0.3
COLI				i Sn	Sn	08 46 34.3	0.0
BAD	Bernadia	2.18	25	⇑iPn	Pn	08 46 09.1	-0.4
BAD				i Sn	Sn	08 46 35.2	-0.4
BAD	Bernadia	2.18	25	⇑iPn	Pn	08 46 09.1	-0.4
BAD				i Sn	Sn	08 46 35.2	-0.4
DRE	Drenchia	2.26	32	⇑ePn	Pn	08 46 10.1	-0.5
DRE				eSn	Sn	08 46 37.2	-0.4
DRE	Drenchia	2.26	32	ePn	Pn	08 46 10.1	-0.5
DRE				eSn	Sn	08 46 37.2	-0.4
CEY	Cerknica	2.31	49	i Pn	Pn	08 46 10.5	-0.7
CEY	Cerknica	2.31	49	i Pn	Pn	08 46 10.5	-0.7
ZOU	Zoufplan	2.41	17	⇓ePn	Pn	08 46 12.9	+0.1
CRNS	Crni Vrh	2.46	41	i Pn	Pn	08 46 12.8	-0.4
CRNS				i Sn	Sn	08 46 42.8	+0.5
CRNS							
	comp=Z,13nm,0.2s						
ACOM	Acomizza, Ital	2.55	25	ePn	Pn	08 46 15.2	+0.6
ACOM	Acomizza, Ital	2.55	25	ePn	Pn	08 46 15.2	+0.6
VISS	Visnje	2.57	52	i Pn	Pn	08 46 14.8	0.0
VISS				i Sn	Sn	08 46 45.4	+0.2
VISS							
	comp=Z,4.0nm,0.1s						
VISS	Visnje	2.57	52	i Pn	Pn	08 46 14.8	0.0
VISS				i Sn	Sn	08 46 45.4	+0.2
	comp=Z,4.0nm,0.1s						

IDC 07 08:50:04.5±1.4**, 3°.40N×126°.69E, h0km, mb3.4**/5**, mb1 3.5**/5**, mb1mx3.4**/23**, mbtmp3.4**/5**, Error ellipse: s-maj=155.6km s-min=21.2km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.38	162	P	P	08 55 24.3	-0.4
	0.6nm,0.6s,baz=341,slow=10,SNR=2.7						
ASAR	Alice Springs	27.80	166	P	P	08 55 56.9	+1.3
	0.1nm,0.6s,baz=340,slow=7.9,SNR=3.4						
STKA	Stephens Creek	37.83	159	P	P	08 57 22.2	-0.8
	0.5nm,0.4s,baz=336,slow=10.0,SNR=3.1						
SONM	Songino Array	47.60	342	P	P	08 58 42.1	-0.2
	0.4nm,0.6s,baz=165,slow=7.3,SNR=3.0						
MKAR	Makanchi Array	57.80	325	P	P	08 59 57.6	-0.2
	0.4nm,0.5s,baz=120,slow=7.4,SNR=9.1						

*CSEM **07** 08:56:32.8, 42°.35N×13°.47E, h9km, MD2.2/7, After ROM*
ROM 07 08:56:32.8±0.1**, 42°.35N×13°.47E, h9km, Md2.2**/7**, Ml2.1**/3**, Error ellipse: s-maj=1.3km s-min=0.7km az=67.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	270	Pg	Pg	08 56 35.2	+0.4
AQU				Sg	Sg	08 56 36.4	+0.1
	2µm,0.3s						
AQU	L'Aquila	0.05	270	Pg	Pg	08 56 35.2	+0.4
AQU				Sg	Sg	08 56 36.4	+0.1
	2µm,0.3s						
FAGN	Fagnano	0.12	136	Pg	Pg	08 56 36.3	+0.5
FAGN				Sg	Sg	08 56 38.3	+0.5
	2µm,0.5s						
FAGN	Fagnano	0.12	136	Pg	Pg	08 56 36.3	+0.5
FAGN				Sg	Sg	08 56 38.3	+0.5
	2µm,0.5s						
CAMP	Campotosto	0.19	346	Pg	Pg	08 56 37.6	+0.6
CAMP				Sg	Sg	08 56 40.7	+0.9
CAMP	Campotosto	0.19	346	Pg	Pg	08 56 37.6	+0.6
CAMP				Sg	Sg	08 56 40.7	+0.9
VCEL	Villa Celiera	0.28	81	Pg	Pg	08 56 39.3	+0.7
VCEL				Sg	Sg	08 56 43.7	+1.2
	181nm,0.3s						
VCEL	Villa Celiera	0.28	81	Pg	Pg	08 56 39.3	+0.7
VCEL				Sg	Sg	08 56 43.7	+1.2
	181nm,0.3s						
TERO	Teramo	0.29	20	Pg	Pg	08 56 39.1	+0.4
TERO				Sg	Sb	08 56 43.9	-1.3
	158nm,0.6s						
TERO	Teramo	0.29	20	Pg	Pg	08 56 39.1	+0.4
TERO				Sg	Sb	08 56 43.9	-1.3
	158nm,0.6s						
PTQR	Pietraquaria	0.34	189	Pg	Pg	08 56 40.2	+0.6
PTQR				Sg	Sg	08 56 45.1	+0.9
	14nm,0.2s						
PTQR	Pietraquaria	0.34	189	Pg	Pg	08 56 40.2	+0.6
PTQR				Sg	Sg	08 56 45.1	+0.9
	14nm,0.2s						
INTR	Introdacqua	0.47	136	Pg	Pb	08 56 42.8	-0.6
INTR				Sg	Sb	08 56 49.9	-0.6
INTR	Introdacqua	0.47	136	Pg	Pb	08 56 42.8	-0.6
INTR				Sg	Sb	08 56 49.9	-0.6
NRCA	Norcia	0.55	331	Pg	Pg	08 56 43.9	+0.3
NRCA				Sg	Sb	08 56 51.9	-0.8
	12nm,0.2s						
NRCA	Norcia	0.55	331	Pg	Pg	08 56 43.9	+0.3
NRCA				Sg	Sb	08 56 51.9	-0.8
	12nm,0.2s						

*ISCJB **07** 09:05:09.9±0.5, 45°.87N±0°.07×151°.78E±0°.08, h30km, mb3.9/21, Error ellipse: s-maj=12.6km s-min=3.7km az=146.0*
*SKHL **07** 09:05:10.8±2.1, 45°.79N×152°.11E, h37km±4km, mb5.0/4*
*JMA **07** 09:05:12.8±0.6, 45°.80N×151°.85E, h30km, M4.9*
*MOS **07** 09:05:12.2±0.9, 45°.91N×151°.80E, h54km, mb4.3/13, Error ellipse: s-maj=13.6km s-min=9.3km az=53.1*
*IDC **07** 09:05:14.3±2.8, 45°.97N×151°.63E, h52km±24km, mb3.7/20, mb1 3.9/25, mb1mx3.9/31, mbtmp3.7/25, ML3.6/5, Error ellipse: s-maj=17.2km s-min=11.9km az=147.0*
ISC 07 09:05:11.1±0.5**, 45°.71N**±0°.08×**151°.94E**±0°.06**, h30km, n81,** σ**1s.65**/81**, mb4.0**/21**, 3C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.90	262	ePN	Pn	09 05 56.0	+0.8
KUR				eS	Sn	09 06 31.5	+2.4
KUR				pmax	pmax		
	comp=Z,190nm,0.6s						
KUR				smax	smax		
	comp=N,1µm,0.7s						
KUR				smax	smax		
	comp=E,1µm,0.8s						
KUR	Kuril'sk	2.90	262	eP	Pn	09 05 56.0	+0.8
KUR				AMB	AMB	09 05 57.0	
	comp=E,190nm,0.6s						
KUR				eS	Sn	09 06 31.5	+2.4
KUR				A	A	09 06 36.0	
	comp=E,1µm,0.8s						
KUR				A	A	09 06 36.0	
	comp=E,1µm,0.8s						
YUK	Yuzh-Kuril'sk	4.63	251	i PN	Pn	09 06 22.2	+3.3

YUK *i* S **Sn** **09 07 12.0 +0.3**
YUK pmax pmax
comp=E,58nm,0.1s
YUK pmax pmax
comp=N,71nm,0.2s
YUK pmax pmax
comp=Z,200nm,0.2s
YUK smax smax
comp=N,248nm,0.6s
YUK smax smax
comp=E,178nm,0.6s
YUK Yuzh-Kuril'sk 4.63 251 ⇑ *i*P Pn 09 06 22.3 +3.3
YUK AMB AMB 09 06 24.0
comp=E,71nm,0.2s
YUK AMB AMB 09 06 24.0
comp=E,200nm,0.2s
YUK AMB AMB 09 06 24.0
comp=E,58nm,0.1s
YUK *i* S **Sn** **09 07 12.0 +0.3**
YUK A A 09 07 27.8
comp=E,248nm,0.7s
YUK A A 09 07 27.8
comp=E,178nm,0.7s
NEM2 Nemuro 2 5.01 244 P **Pn** **09 06 25.0 +0.8**
NEM2 *e*S **Sn** **09 07 18.5 -2.5**
JRA Rausu 5.16 252 P Pn 09 06 29.9 +3.7
JRA *e*S **Sn** **09 07 27.8 +3.1**
JNK Nakash 5.57 250 P **Pn** **09 06 34.1 +2.2**
JNK *e*S **Sn** **09 07 34.6 -0.3**
SKR Severo-Kuril's 5.71 28 *e*PN **Pn** **09 06 32.7 -1.0**
SKR pmax pmax
comp=Z,80nm,0.8s
SKR Severo-Kuril's 5.71 28 *e*P **Pn** **09 06 32.7 -1.0**
SKR AMB AMB 09 06 39.7
comp=Z,80nm,0.8s
SKR *e*S Sn 09 07 32.5 -5.6
SKR A A 09 07 39.9
comp=Z,80nm,0.5s
SKR A A 09 07 39.9
comp=Z,90nm,0.5s
SKR A A 09 07 39.9
comp=Z,50nm,0.5s
JAK Akkeshi 5.86 245 P **Pn** **09 06 36.6 +0.8**
JAK *e*S **Sn** **09 07 39.0 -2.9**
JTKR Abashiri--Toko 5.97 256 P **Pn** **09 06 40.1 +2.8**
JAR Ashorobuto 6.32 250 P **Pn** **09 06 44.6 +2.4**
JAR *e*S **Sn** **09 07 53.4 +0.1**
JMP Maruseppu 6.33 257 P Pn 09 06 45.9 +3.6
JOB Onbets 6.46 247 P **Pn** **09 06 45.8 +1.8**
JOB *e*S **Sn** **09 07 56.1 -0.5**
YSS Yuzh-Sakhalins 6.48 284 ⇑ *i*PN **Pn** **09 06 47.2 +2.9**
YSS Yuzh-Sakhalins 6.48 284 ⇑ *i*P **Pn** **09 06 47.2 +2.9**
JSE Soyaes 6.64 267 P Pn 09 06 50.6 +4.1
JKK2 Kamakawa 2 6.79 258 P **Pn** **09 06 51.7 +3.0**
ASAJ Asahikawa 6.82 260 P Pn 09 06 52.4 +3.3
ASAJ Asahikawa 6.82 260 P **Pn** **09 06 52.1 +3.1**
comp=Z,4.5nm,0.3s,baz=74,slow=18,SNR=32
JCH Churui 6.90 246 P **Pn** **09 06 50.9 +0.8**
JCH *e*S **Sn** **09 08 04.7 -2.9**
JWK2 Keihoku 7.07 270 P Pn 09 06 57.8 +5.4
JFR Furan 7.16 252 P **Pn** **09 06 56.1 +2.4**
JEM Erimo 7.34 243 *e*S **Sn** **09 08 13.7 -4.7**
JNBK Urakawa-nobuka 7.46 246 P **Pn** **09 06 58.3 +0.5**
JNBK *e*S **Sn** **09 08 18.1 -3.2**
JBT2 Biratori 2 7.47 250 P **Pn** **09 06 59.2 +1.2**
JEW Eniwo 8.05 253 P **Pn** **09 07 08.3 +2.3**
PETK Petropavlovsk- 8.30 25 PN **Pn** **09 07 10.5 +1.2**
PETK pmax pmax
comp=Z,1.0nm,0.3s
PETK Petropavlovsk- 8.30 25 P **Pn** **09 07 10.5 +1.2**
comp=Z,0.5nm,0.3s,baz=198,slow=14,SNR=7.6
JNB Noboribetsu 8.49 251 P **Pn** **09 07 12.8 +0.9**
JNB *e*S **Sn** **09 08 44.5 -2.1**
JKB Kayabe 8.76 248 P **Pn** **09 07 16.0 +0.3**
JKB *e*S Sn 09 08 46.5 -6.8
JYM2 Yakumo 2 9.09 251 P **Pn** **09 07 20.9 +0.8**
JANG Nango 9.31 239 *e*S Sn 09 08 57.0 -10
JTM Tenmabayashi 9.33 242 *e*S Sn 09 09 00.5 -6.8
JSR Shiriuchi 9.34 248 P **Pn** **09 07 23.5 -0.1**
JTH Tanohata 9.38 236 *e*S Sn 09 08 58.7 -10
JOSM Okushiri--Mats 9.70 252 P **Pn** **09 07 29.0 +0.5**
NKL Nikolayevsk 10.44 320 *e*P **Pn** **09 07 39.8 +1.2**
NKL AMB AMB 09 07 42.0
comp=Z,10.0nm,1.0s
NKL AMB AMB 09 07 42.0
comp=Z,20nm,1.0s
JRG Rokugo 10.45 237 *e*S Sn 09 09 26.5 -8.3
JIO Ouri 10.69 231 *e*S Sn 09 09 29.6 -11
MJAR Matsushiro Arr 13.80 233 P **Pn** **09 08 25.1 +0.4**
comp=Z,0.3nm,0.3s,baz=25,slow=13,SNR=6.1
MAT Matsushiro 13.80 233 P **P** **09 08 35.4 +2.7**
USRK Ussuriysk Arra 14.20 271 P **Pn** **09 08 29.8 -0.1**
comp=Z,0.4nm,0.3s,baz=82,slow=14,SNR=8.4
FX1 Attu Island--F 15.56 55 P **Pn** **09 08 48.9 +0.8**
comp=Z,2.3nm,0.3s,baz=245,slow=14,SNR=6.9
KSRS Korea Array 19.71 254 P **P** **09 09 38.8 +0.8**
comp=Z,0.3nm,0.3s,baz=57,slow=10,SNR=12
SONM Songino Array 30.92 291 P **P** **09 11 24.1 -1.1**
comp=Z,0.2nm,0.4s,baz=67,slow=8.1,SNR=2.9
ILAR Eielson Array 37.87 38 P **P** **09 12 24.4 -0.4**
comp=Z,0.3nm,0.5s,baz=262,slow=7.8,SNR=13
ZALV Zalesovo Beam 42.56 306 PcP **PcP** **09 14 55.3 -0.5**
comp=Z,1.3nm,0.7s,baz=64,slow=3.4,SNR=6.5
INK Inuvik 42.97 32 P **P** **09 13 07.1 +0.2**
comp=Z,1.7nm,0.5s,baz=294,slow=7.6,SNR=18
MKAR Makanchi Array 46.70 298 P **P** **09 13 36.1 -0.9**
MKAR 09 15 09.7
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 46.70 298 P **P** **09 13 36.1 -0.9**
comp=Z,0.3nm,0.5s,baz=60,slow=7.3,SNR=3.9
MKAR PcP **PcP** **09 15 09.7 -0.5**
comp=Z,1.1nm,0.7s,baz=67,slow=3.8,SNR=6.2
KURK Kurchatov 47.27 304 P **P** **09 13 39.0 -2.3**
KURK pmax pmax
comp=Z,1.0nm,0.4s
KURBB Kurchatov Arra 47.36 304 P P 09 13 39.0 -2.9
comp=Z,0.5nm,0.4s,baz=74,slow=8.2,SNR=3.9
CMAR Chiang Mai Arr 51.33 256 P **P** **09 14 13.5 +0.8**
comp=Z,0.8nm,0.4s,baz=38,slow=8.0,SNR=8.9
YKA Yellowknife Ar 52.24 36 P **P** **09 14 19.2 +0.3**
comp=Z,0.7nm,0.4s,baz=299,slow=6.8,SNR=24
ODAN Odare 53.87 273 *e*P **P** **09 14 32.3 +0.6**
GUN Gumba 54.28 275 *e*P **P** **09 14 35.0 +0.2**
comp=Z,7.7nm,0.3s
RAMN Ramite 54.37 274 *e*P **P** **09 14 35.1 -0.3**
comp=Z,7.6nm,0.3s
DANN Dangsing 55.49 277 *e*P **P** **09 14 43.6 +0.1**
comp=Z,18nm,0.6s
KOLN Koldanda 55.95 276 *e*P **P** **09 14 46.7 -0.1**
comp=Z,15nm,0.8s
PYUN Piuthan 56.18 277 *e*P **P** **09 14 48.1 -0.2**
comp=Z,38nm,1.0s
ARCES ARCESS Array B 58.56 341 P **P** **09 15 03.1 -1.3**
comp=Z,5.5nm,1.1s,baz=57,slow=6.6,SNR=4.1
NVAR Mina Array Bea 63.64 61 P **P** **09 15 41.4 +1.9**
comp=Z,1.0nm,0.7s,baz=302,slow=7.4,SNR=8.9
FINES FINESS Array B 64.63 334 P P 09 15 42.4 -2.9
comp=Z,0.8nm,0.4s,baz=65,slow=6.6,SNR=7.8
PDAR Pinedale Array 66.02 53 P **P** **09 15 56.0 +1.0**
comp=Z,1.1nm,0.7s,baz=280,slow=1.7,SNR=10
WRA Warramunga Arr 67.27 198 P **P** **09 16 04.0 +1.3**
comp=Z,1.0nm,0.7s,baz=18,slow=6.7,SNR=9.4
NB2 NORSAR Subarra 68.94 341 P **P** **09 16 11.3 -1.6**
comp=Z,0.8nm,0.4s,baz=28,slow=6.5
NOA NORSAR Array B 68.94 341 P **P** **09 16 10.7 -2.1**
comp=Z,0.7nm,0.3s,baz=29,slow=6.4,SNR=22
ASAR Alice Springs 70.97 197 P **P** **09 16 27.3 +1.7**
comp=Z,0.4nm,0.7s,baz=17,slow=6.5,SNR=7.5
KBZ Khabaz 70.99 314 P **P** **09 16 25.1 -0.5**
KBZ pmax pmax
comp=Z,2.0nm,0.7s
KBZ Khabaz 70.99 314 P **P** **09 16 25.1 -0.5**
comp=Z,1.8nm,0.7s,baz=179,slow=2.2,SNR=3.8
AKASG Malin Array Be 71.95 326 P **P** **09 16 29.3 -2.0**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG Malin Array Be 71.95 326 P **P** **09 16 29.2 -2.0**
comp=Z,1.6nm,0.3s,baz=37,slow=6.4,SNR=5.9
MLR Muntele Rosu 77.44 324 P **P** **09 17 02.7 -0.7**
comp=Z,0.7nm,0.5s,baz=201,slow=6.7,SNR=4.2
BRTR Keskin Array B 78.58 316 P **P** **09 17 08.7 -1.1**
comp=Z,1.6nm,0.8s,baz=38,slow=5.6,SNR=8.2
TXAR Lajitas Array 78.72 60 P **P** **09 17 11.6 +0.9**
comp=Z,0.4nm,0.6s,baz=335,slow=6.0,SNR=7.0

GERES GERESS Array B 79.03 333 P **P** **09 17 10.7 -1.4**
comp=Z,0.8nm,0.4s,baz=34,slow=7.1,SNR=5.3
TORD Torodi Ar. Bea 115.55 328 PKP **PKPdf** **09 23 49.4 -1.0**
comp=Z,0.2nm,0.4s,baz=11,slow=2.6,SNR=4.5
PLCA Paso Flores 148.91 96 PKPbc **PKPbc** **09 24 55.9 +0.4**
comp=Z,1.8nm,0.8s,baz=295,slow=1.7,SNR=4.8
CPUP Villa Florida 149.69 60 PKPbc **PKPbc** **09 24 57.9 +0.2**
comp=Z,0.8nm,0.5s,baz=360,slow=3.3,SNR=4.8
SNAA Sanae 151.33 196 PKPbc **PKPbc** **09 24 60.0 -0.4**
comp=Z,0.4nm,0.6s,baz=288,slow=3.0,SNR=8.2

*ATH **07** 09:12:17.2, 36.38N×21.57E, h5km, MD3.6/10*
*CSEM **07** 09:12:20.2±0.8, 36.47N×21.76E, h2km, ML3.0/4, Error ellipse: s-maj=13.4km s-min=6.5km az=41.0*
*THE **07** 09:12:21.6, 36.49N×21.85E, h0km±5km, ML3.0/4, Error ellipse: s-maj=5.9km s-min=1.6km az=209.0*
ISC 07 09:12:20.5±2.0, **36.47N**±0.07×**21.77E**±0.06, **h8**km±9km, **n44**, σ0**58**/63, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.43**	**357**	P	**Pg**	**09 12 28.0**	**-0.8**
PYL				S	**Sg**	**09 12 35.6**	**+1.1**
PYL	**PYLOS**	**0.43**	**357**	*e*PB	**Pg**	**09 12 28.0**	**-0.8**
PYL				*e*SB	**Sg**	**09 12 35.3**	**+0.8**
PYL	**PYLOS**	**0.43**	**357**	P	**Pg**	**09 12 28.0**	**-0.8**
PYL				*e*Sb	**Sg**	**09 12 35.3**	**+0.8**
PYL				S	**Sg**	**09 12 35.6**	**+1.1**
DYR	**Agios Nikonas**	**0.54**	**57**	P	**Pg**	**09 12 30.3**	**-0.7**
DYR				S	**Sg**	**09 12 38.7**	**+0.6**
DYR	**Agios Nikonas**	**0.54**	**57**	*e*PG	**Pg**	**09 12 31.0**	**0.0**
DYR				*e*SB	**Sn**	**09 12 43.3**	**-0.6**
DYR	**Agios Nikonas**	**0.54**	**57**	P	**Pg**	**09 12 30.3**	**-0.7**
DYR	**Agios Nikonas**	**0.54**	**57**	*e*Pg	**Pg**	**09 12 31.0**	**0.0**
DYR				S	**Sg**	**09 12 38.7**	**+0.6**
DYR				*e*Sb	**Sn**	**09 12 43.3**	**-0.6**
ITM	**Ithomi**	**0.72**	**10**	P	**Pg**	**09 12 33.9**	**-0.5**
ITM				S	**Sb**	**09 12 45.1**	**-0.4**
ITM	**Ithomi**	**0.72**	**10**	*e*PB	**Pg**	**09 12 34.0**	**-0.5**
ITM				*e*SB	**Sb**	**09 12 45.2**	**-0.3**
ITM	**Ithomi**	**0.72**	**10**	*e*Pb	**Pg**	**09 12 34.0**	**-0.5**
ITM				S	**Sb**	**09 12 45.1**	**-0.4**
VLI	**Veliai**	**0.97**	**75**	P	**Pg**	**09 12 39.0**	**-0.2**
VLI				S	**Sg**	**09 12 51.3**	**-0.6**
VLI	**Veliai**	**0.97**	**75**	*e*PB	**Pg**	**09 12 39.3**	**+0.1**
VLI				*e*SB	**Sn**	**09 12 55.0**	**+0.4**
VLI	**Veliai**	**0.97**	**75**	P	**Pg**	**09 12 39.0**	**-0.2**
VLI	**Veliai**	**0.97**	**75**	*e*Pb	**Pg**	**09 12 39.3**	**+0.1**
VLI				S	**Sg**	**09 12 51.3**	**-0.6**
VLI				*e*Sb	**Sn**	**09 12 55.0**	**+0.4**
VLX	**Vlachokerasia**	**1.02**	**28**	P	**Pg**	**09 12 39.5**	**-0.7**
VLX				S	**Sb**	**09 12 54.8**	**+0.5**
VLX	**Vlachokerasia**	**1.02**	**28**	*e*PG	**Pg**	**09 12 39.5**	**-0.7**
VLX	**Vlachokerasia**	**1.02**	**28**	P	**Pg**	**09 12 39.5**	**-0.7**
VLX				S	**Sb**	**09 12 54.8**	**+0.5**
KYTH	**Kithira**	**1.04**	**100**	P	**Pg**	**09 12 40.3**	**-0.2**
KYTH	**Kithira**	**1.04**	**100**	*e*PB	**Pg**	**09 12 40.3**	**-0.2**
KYTH	**Kithira**	**1.04**	**100**	P	**Pg**	**09 12 40.3**	**-0.2**
GUR	**Goura**	**1.54**	**17**	P	**Pg**	**09 12 48.9**	**+0.5**
GUR				S	**Sg**	**09 13 10.9**	**+1.0**
GUR	**Goura**	**1.54**	**17**	*e*PG	**Pn**	**09 12 48.1**	**-0.3**
GUR	**Goura**	**1.54**	**17**	*e*Pg	**Pn**	**09 12 48.1**	**-0.3**
GUR	**Goura**	**1.54**	**17**	P	**Pn**	**09 12 48.9**	**+0.5**
GUR				S	**Sg**	**09 13 10.9**	**+1.0**
DID	**Didima**	**1.57**	**48**	P	**Pb**	**09 12 49.5**	**-0.3**
DID	**Didima**	**1.57**	**48**	*e*PG	**Pn**	**09 12 49.3**	**+0.6**
DID	**Didima**	**1.57**	**48**	P	**Pb**	**09 12 49.5**	**-0.3**
LAKA	**Lakka**	**1.78**	**5**	P	**Pb**	**09 12 53.2**	**-0.2**
LAKA	**Lakka**	**1.78**	**5**	*e*PN	**Pb**	**09 12 53.2**	**-0.2**
LAKA	**Lakka**	**1.78**	**5**	P	**Pb**	**09 12 53.2**	**-0.2**
LTK	**Loutraki**	**1.82**	**31**	P	**Pb**	**09 12 53.6**	**-0.6**
LTK	**Loutraki**	**1.82**	**31**	*e*PG	**Pb**	**09 12 53.9**	**-0.3**
LTK	**Loutraki**	**1.82**	**31**	P	**Pb**	**09 12 53.6**	**-0.6**
LTK	**Loutraki**	**1.82**	**31**	*e*Pg	**Pb**	**09 12 53.9**	**-0.3**
KALE	**Kalithea**	**1.94**	**9**	P	**Pb**	**09 12 55.2**	**-1.0**
KALE	**Kalithea**	**1.94**	**9**	*e*PG	**Pb**	**09 12 56.2**	**0.0**
KALE	**Kalithea**	**1.94**	**9**	P	**Pb**	**09 12 55.2**	**-1.0**
KALE	**Kalithea**	**1.94**	**9**	*e*Pg	**Pb**	**09 12 56.2**	**0.0**
EFP	**Efpalio**	**1.96**	**3**	P	**Pb**	**09 12 56.1**	**-0.3**
EFP	**Efpalio**	**1.96**	**3**	*e*PG	**Pb**	**09 12 56.9**	**+0.5**
EFP	**Efpalio**	**1.96**	**3**	P	**Pb**	**09 12 56.1**	**-0.3**
EFP	**Efpalio**	**1.96**	**3**	*e*Pg	**Pb**	**09 12 56.9**	**+0.5**
DSF	**Desfina**	**2.03**	**17**	P	**Pn**	**09 12 55.5**	**+0.4**
DSF	**Desfina**	**2.03**	**17**	P	**Pn**	**09 12 55.5**	**+0.4**

MEX 07 09:12:38.7±0.3, **16.01N**×**96.92W**, **h12**km±4km, **MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ISC	Time	Res
				Op		h m s	ISC
HUIG	**Huatulco**	**0.82**	**107**	*i* P	Pg	09 12 52.0	-2.5
HUIG				*i* S	Sg	09 13 02.3	-2.9
VHO	**Vista Hermosa**	**1.07**	**10**	*e*P	Pb	09 12 55.7	-3.8
VHO				*i* S	Sb	09 13 09.3	-4.3
PNIG	**Pinotepa**	**1.22**	**288**	*i* P	Pn	09 12 57.9	-3.7
PNIG				*i* S	Sb	09 13 12.8	-4.7

*ISK **07** 09:13:19.6, 37.22N×28.25E, h25km, MD2.3*
*DDA **07** 09:13:20.9, 37.21N×28.10E, h7km, MD2.7*
*ISCJB **07** 09:13:21.4±0.6, 37.19N±0.05×28.17E±0.04, h0km, Error ellipse: s-maj=7.1km s-min=3.7km az=23.5*
*CSEM **07** 09:13:21.3±0.4, 37.19N×28.19E, h1km, MD2.3, Error ellipse: s-maj=12.2km s-min=6.2km az=19.0*
ISC 07 09:13:21.1±1.0, **37.21N**±0.04×**28.13E**±0.03, **h0**km, **n14**, σ1§**19**/26, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.15**	**122**	PG	**Pg**	**09 13 24.5**	**+0.7**
YER				*e*SG	**Sg**	**09 13 28.0**	**+2.3**
YER	**Yerkesik**	**0.15**	**122**	*i* Pg	**Pg**	**09 13 24.5**	**+0.7**
YER				*e*Sg	**Sg**	**09 13 28.0**	**+2.3**
MLSB	**Milas**	**0.29**	**287**	*e*PG	**Pb**	**09 13 28.4**	**-0.8**
MLSB				*e*SG	**Sb**	**09 13 35.0**	**+0.3**
MLSB	**Milas**	**0.29**	**287**	*e*Pg	**Pb**	**09 13 28.4**	**-0.8**
MLSB				*e*Sg	**Sb**	**09 13 35.0**	**+0.3**
AYDN	**Tasoluk**	**0.49**	**336**	*i* P	**Pb**	**09 13 32.0**	**-0.6**
AYDN				*i* S	**Sg**	**09 13 38.7**	**+1.8**
AYDN	**Tasoluk**	**0.49**	**336**	*i* P	**Pb**	**09 13 32.0**	**-0.6**
AYDN				*i* S	**Sg**	**09 13 38.6**	**+1.8**
TURN	**Turunc**	**0.51**	**131**	*i* P	**Pg**	**09 13 29.8**	**-1.0**
TURN				*i* S	**Sg**	**09 13 37.2**	**-0.2**
TURN	**Turunc**	**0.51**	**131**	*i* P	**Pg**	**09 13 29.8**	**-1.0**
TURN				*i* S	**Sg**	**09 13 37.2**	**-0.2**
BDRM	**Kayabasi**	**0.56**	**255**	*i* P	**Pg**	**09 13 31.3**	**-0.6**
BDRM				*i* S	**Sg**	**09 13 39.6**	**+0.4**
BDRM	**Kayabasi**	**0.56**	**255**	*i* P	**Pg**	**09 13 31.3**	**-0.6**
BDRM				*i* S	**Sg**	**09 13 39.6**	**+0.4**
BODT	**Bodrum**	**0.67**	**257**	*e*PG	**Pb**	**09 13 35.0**	**-0.6**
BODT				*e*SG	**Sb**	**09 13 46.6**	**+1.1**
BODT	**Bodrum**	**0.67**	**257**	*e*Pg	**Pb**	**09 13 35.0**	**-0.6**
BODT				*e*Sg	**Sb**	**09 13 46.6**	**+1.1**
GOLH	**Golhisar**	**1.15**	**88**	*i* P	**Pg**	**09 13 41.2**	**-1.8**
GOLH	**Golhisar**	**1.15**	**88**	*i* P	**Pg**	**09 13 41.2**	**-1.8**

*IDC **07** 09:14:51.6±0.6, 46.05N×151.96E, h0km, mb4.1/25, mb1 4.3/27, mb1mx4.2/33, mbtmp4.1/27, ML3.7/2, Error ellipse: s-maj=17.7km s-min=13.0km az=143.0*
*JMA **07** 09:14:55.9±0.6, 46.00N×152.14E, h30km, M4.8*
*BJI **07** 09:14:55.1, 46.05N×152.27E, h48km, mB4.9/19, mb4.5/27, Ms4.6/8, Ms7 4.4/10*
*SKHL **07** 09:14:55.9±1.3, 45.91N×152.31E, h42km±4km, mb4.9/6*
*ISCJB **07** 09:14:56.4±0.3, 45.91N±0.05×151.99E±0.05, h48km, mb4.3/42, MS4.5/3, Error ellipse: s-maj=8.1km s-min=3.0km az=147.7*
*MOS **07** 09:14:57.2±1.1, 46.06N×151.97E, h53km, mb4.6/16, Error ellipse: s-maj=10.4km s-min=7.5km az=65.3*
*NEIC **07** 09:15:00.1±0.8, 46.09N×151.92E, h60km±6km, mb4.3/6, Error ellipse: s-maj=11.1km s-min=5.4km az=150.0*
ISC 07 09:14:58.2±0.5, **45.90N**±0.07×**152.10E**±0.05, **h48**km, **n161**, σ1§**56**/194, **mb4.3**/42, **MS4.6**/3, **2C-3D**, **East of Kuril Islands**

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

KUR Kuril'sk 3.05 259 *e*PN **Pn** **09 15 44.5 +0.6**
KUR *e*S **Sn** **09 16 20.0 +0.9**
KUR pmax pmax
comp=Z,610nm,0.5s
KUR smax smax
comp=E,2μm,0.9s
KUR smax smax
comp=N,1μm,0.8s
KUR Kuril'sk 3.05 259 *e*P **Pn** **09 15 44.5 +0.6**
KUR AMB AMB 09 15 45.0
comp=N,610nm,0.5s
KUR *e*S **Sn** **09 16 20.0 +0.9**
KUR A A 09 16 27.0
comp=N,1μm,0.8s
KUR A A 09 16 27.0
comp=N,2μm,0.9s
YUK Yuzh-Kuril'sk 4.80 249 *d i*PN **Pn** **09 16 07.9 0.0**
YUK *i* S **Sn** **09 17 03.0 +0.7**
YUK pmax pmax
comp=N,41nm,0.1s
YUK pmax pmax
comp=E,115nm,0.4s
YUK pmax pmax
comp=Z,198nm,0.4s
YUK smax smax
comp=N,354nm,0.7s
YUK smax smax
comp=E,276nm,0.8s
YUK Yuzh-Kuril'sk 4.80 249 ⇓ *i*P **Pn** **09 16 08.0 0.0**
YUK AMB AMB 09 16 11.4
comp=E,41nm,0.1s
YUK AMB AMB 09 16 11.4
comp=E,115nm,0.4s
YUK AMB AMB 09 16 11.4
comp=E,198nm,0.4s
YUK *i* S **Sn** **09 17 03.0 +0.7**
YUK A A 09 17 17.1
comp=E,354nm,0.8s
YUK A A 09 17 17.1
comp=E,276nm,0.8s
NEM2 Nemuro 2 5.20 243 P **Pn** **09 16 11.5 -1.9**
NEM2 *e*S **Sn** **09 17 08.2 -3.8**
JRA Rausu 5.33 251 P **Pn** **09 16 16.3 +1.1**
JRA *e*S **Sn** **09 17 16.6 +1.4**
SKR Severo-Kuril's 5.49 28 *e*PN **Pn** **09 16 15.0 -2.3**
SKR pmax pmax
comp=N,60nm,0.5s
SKR pmax pmax
comp=E,60nm,0.5s
SKR pmax pmax
comp=Z,70nm,0.5s
SKR Severo-Kuril's 5.49 28 *e*P **Pn** **09 16 15.0 -2.3**
SKR AMB AMB 09 16 19.0
comp=Z,60nm,0.5s
SKR AMB AMB 09 16 19.0
comp=Z,70nm,0.5s
SKR *e*S Sn 09 17 12.0 -7.0
SKR A A 09 17 28.0
comp=Z,100nm,0.7s
SKR A A 09 17 28.0
comp=Z,90nm,0.5s
SKR A A 09 17 28.0
comp=Z,120nm,0.5s
JNK Nakash 5.74 249 P **Pn** **09 16 20.8 -0.1**
JNK *e*S **Sn** **09 17 25.0 -0.5**
JAK Akkeshi 6.04 244 P **Pn** **09 16 23.3 -1.7**
JAK *e*S **Sn** **09 17 28.7 -4.0**
JTKR Abashiri--Toko 6.13 255 P **Pn** **09 16 27.1 +1.0**
JMP Maruseppu 6.49 256 P **Pn** **09 16 31.8 +0.7**
JAR Ashorobuto 6.49 249 P **Pn** **09 16 31.4 +0.3**
JAR *e*S **Sn** **09 17 42.1 -1.7**
YSS Yuzh-Sakhalins 6.55 283 ⇑ *i*PN **Pn** **09 16 33.8 +1.9**
YSS *e*S **Sn** **09 17 43.5 -1.6**
YSS pmax pmax
comp=Z,40nm,0.5s
YSS MLR MLR
comp=Z,300nm,16.0s
YSS Yuzh-Sakhalins 6.55 283 *e*Pn **Pn** **09 16 33.0 +1.1**
comp=Z,38nm,0.6s
YSS Yuzh-Sakhalins 6.55 283 ⇑ *i*P **Pn** **09 16 33.8 +1.9**
YSS AMB AMB 09 16 35.1
comp=Z,40nm,0.5s
YSS *e*S **Sn** **09 17 43.5 -1.6**
YSS AMS AMS 09 18 58.0
comp=Z,300nm,16.0s
JOB Onbets 6.63 246 P **Pn** **09 16 32.4 -0.7**
JKK2 Kamakawa 2 6.95 256 P **Pn** **09 16 38.6 +1.2**
ASAJ Asahikawa 6.97 259 *e*Pn **Pn** **09 16 39.5 +1.8**
ASAJ *e*Sn Sn 09 17 44.6 -11
ASAJ Asahikawa 6.97 259 P **Pn** **09 16 39.4 +1.8**
ASAJ Asahikawa 6.97 259 Pn **Pn** **09 16 39.5 +1.8**
comp=Z,8.8nm,0.3s,baz=82,slow=14,SNR=61
JCH Churui 7.08 245 P **Pn** **09 16 37.7 -1.5**
JCH *e*S **Sn** **09 17 54.1 -4.2**
JWK2 Keihoku 7.18 269 P Pn 09 16 44.8 +4.2
JFR Furan 7.32 251 P **Pn** **09 16 43.0 +0.4**
JAB Ashibetsu 7.43 255 P **Pn** **09 16 46.0 +2.0**
JEM Erimo 7.53 242 P **Pn** **09 16 44.6 -0.7**
ERM Erimo 7.53 242 *e*PN **Pn** **09 16 45.0 -0.3**
ERM Erimo 7.53 242 *e*Pn **Pn** **09 16 45.2 +0.2**
ERM *e*Sn **Sn** **09 18 13.6 +4.3**
ERM *e*Sn Sn 09 18 41.6 +32
JNBK Urakawa-nobuka 7.64 245 P **Pn** **09 16 44.9 -2.0**
JNBK *e*S **Sn** **09 18 08.1 -3.9**
JBT2 Biratori 2 7.64 249 P **Pn** **09 16 45.9 -1.0**
TYV Tymovskoe 8.01 312 *e*P **Pn** **09 16 52.0 +0.1**
TYV AMB AMB 09 16 54.5
comp=Z,11nm,0.8s
TYV AMB AMB 09 16 54.5
comp=Z,20nm,0.8s
PEA0B Petropavlovsk- 8.08 25 *e*Pn **Pn** **09 16 52.8 -0.1**
PETK Petropavlovsk- 8.08 25 PN **Pn** **09 16 52.2 -0.7**
PETK Petropavlovsk- 8.08 25 Pn **Pn** **09 16 52.2 -0.7**
PETK Petropavlovsk- 8.08 25 Pn **Pn** **09 16 52.2 -0.7**
comp=Z,0.4nm,0.3s,baz=191,slow=15,SNR=6.1
JEW Eniwo 8.22 252 P **Pn** **09 16 55.1 +0.3**
JEW *e*S **Sn** **09 18 27.4 +1.1**
JNB Noboribetsu 8.66 251 P **Pn** **09 16 59.6 -1.2**
JNB *e*S **Sn** **09 18 33.0 -4.0**
JKB Kayabe 8.94 247 P **Pn** **09 17 02.8 -1.9**
JKB *e*S Sn 09 18 36.5 -7.4
JSH Shimam 9.24 254 P **Pn** **09 17 09.1 +0.3**
JYM2 Yakumo 2 9.26 250 P **Pn** **09 17 07.6 -1.4**
JANG Nango 9.50 238 P Pn 09 17 08.2 -4.2
JANG *e*S Sn 09 18 46.7 -11
JSR Shiriuchi 9.52 247 P **Pn** **09 17 10.3 -2.3**
JTM Tenmabayashi 9.52 241 P Pn 09 17 09.6 -3.0
JTM *e*S Sn 09 18 47.5 -11
JTH Tanohata 9.58 235 *e*S Sn 09 18 48.6 -11
JOSM Okushiri--Mats 9.87 252 P **Pn** **09 17 15.3 -2.0**
OFUJ Ofunato 10.28 232 P Pn 09 17 18.5 -4.5
OFUJ *e*S Sn 09 19 06.4 -10
NKL Nikolayevsk 10.37 319 *e*P **Pn** **09 17 25.0 +0.8**
NKL AMB AMB 09 17 28.0
comp=Z,10.0nm,1.0s
NKL AMB AMB 09 17 28.0
comp=Z,20nm,1.0s
NKL AMB AMB 09 17 28.0
comp=Z,30nm,1.0s
JRG Rokugo 10.65 236 P Pn 09 17 24.9 -3.2
JIO Ouri 10.90 231 P Pn 09 17 27.7 -3.8
JIO *e*S Sn 09 19 20.6 -11
MJAR Matsushiro Arr 14.01 233 Pn **Pn** **09 18 10.5 -3.4**
MJAR Matsushiro Arr 14.01 233 Pn Pn 09 18 10.5 -3.4
comp=Z,0.4nm,0.3s,baz=23,slow=13,SNR=5.8
MAT Matsushiro 14.01 233 P Pn 09 18 10.1 -3.8
KLR Kul'dur 14.13 291 *e*P **Pn** **09 18 14.2 -1.3**
USRK Ussuriysk Arra 14.31 270 Pn **Pn** **09 18 17.4 -0.5**
comp=Z,0.5nm,0.3s,baz=84,slow=13,SNR=14
FX1 Attu Island--F 15.36 55 Pn **Pn** **09 18 32.4 +0.8**
FX1 *e*Pn **P** **09 18 34.2 -1.2**
FX1 Attu Island--F 15.36 55 Pn **Pn** **09 18 32.4 +0.8**
comp=Z,1.5nm,0.3s,baz=328,slow=17,SNR=6.1
MDJ Mudanjiang 15.90 273 P **Pn** **09 18 37.6 -1.0**
MDJ pmax pmax
comp=Z,8.0nm,1.1s
MDJ pmax pmax
comp=Z,73nm,5.2s
SEY Seymchan 17.07 0 *e*P **Pn** **09 18 51.0 -2.2**
ZEA Zeya 17.78 305 *e*P **P** **09 19 04.4 +2.1**
ZEA AMB AMB 09 19 06.8
comp=Z,11nm,1.2s
CN2 Changchun 18.99 273 *e*P **P** **09 19 15.3 -0.3**
CN2 pmax pmax

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,10.0nm,0.6s						
KSRS	Korea Array	19.88	253	P	P	09 19 25.6	+0.2
	comp=Z,0.2nm,0.3s,baz=58,slow=9.8,SNR=14						
KSAR	Wonju Array Be	19.91	253	P	P	09 19 25.6	-0.1
BILL	Bilibino	23.38	13	P	P	09 20 02.0	-0.2
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BILL	Bilibino	23.38	13	eP	P	09 20 02.1	-0.2
	comp=Z,2.0nm,0.6s						
BJI	Beijing	26.77	270	P	P	09 20 34.9	+1.5
BJI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NJ2	Nanjing	29.08	253	eP	P	09 20 55.0	+1.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC	Hu-ho-hao-te	29.66	275	eP	P	09 20 57.0	-2.3
HHC				pP	pP	09 21 11.8	0.0
HHC				sP	sP	09 21 19.1	+1.6
HHC				PP	PnPn	09 21 54.2	-1.6
HHC				S	S	09 25 45.4	-6.2
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,6.2s						
HHC				LR	LR		
	comp=N,310nm,15.5s						
HHC				LR	LR		
	comp=E,260nm,15.6s						
HHC				LR	LR		
	comp=Z,430nm,16.4s						
SONM	Songino Array	30.96	290	P	P	09 21 10.5	-0.3
SONM	Songino Array	30.96	290	P	P	09 21 10.5	-0.3
	comp=Z,0.5nm,0.7s,baz=87,slow=8.5,SNR=3.1						
WHN	Wuhan	33.04	256	P	P	09 21 34.0	+5.1
SML	Sawmill	37.07	43	eP	P	09 22 03.4	0.0
SML				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SML	Sawmill	37.07	43	eP	P	09 22 03.4	0.0
	comp=Z,1.1nm,0.7s						
LZH	Lanzhou	37.22	272	eP	P	09 22 03.0	-2.1
LZH				pP	pP	09 22 18.3	+0.5
LZH				sP	sP	09 22 25.5	+2.1
LZH				PP	PP	09 23 30.1	-0.3
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH				pmax	pmax		
	comp=Z,69nm,5.6s						
LZH				LR	LR		
	comp=N,480nm,13.0s						
LZH				LR	LR		
	comp=E,470nm,12.7s						
LZH				LR	LR		
	comp=Z,700nm,17.0s						
ILAR	Eielson Array	37.65	38	P	P	09 22 07.7	-0.6
ILAR	Eielson Array	37.65	38	P	P	09 22 07.7	-0.6
	comp=Z,0.4nm,0.7s,baz=258,slow=7.6,SNR=9.6						
GTA	Gaotai	38.41	279	eP	P	09 22 17.5	+2.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GYA	Guiyang	40.85	258	eP	P	09 22 36.0	+0.6
GYA				pP	pP	09 22 51.2	+2.9
GYA				PP	PnPn	09 24 13.8	-0.8
GYA				PcP	PcP	09 24 37.6	+2.1
GYA				ScP	ScP	09 28 21.0	0.0
GYA				S	S	09 28 40.5	-2.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZALV	Zalesovo Beam	42.55	306	PcP	PcP	09 24 40.3	-0.2
ZALV	Zalesovo Beam	42.55	306	PcP	PcP	09 24 40.3	-0.2
	comp=Z,2.1nm,0.8s,baz=85,slow=3.3,SNR=8.8						
INK	Inuvik	42.75	32	P	P	09 22 50.2	0.0
INK	Inuvik	42.75	32	P	P	09 22 50.2	0.0
	comp=Z,1.0nm,0.5s,baz=287,slow=6.7,SNR=12						
KMI	Kunming	44.40	259	P	P	09 23 03.9	-0.5
KMI				pmax	pmax		
	comp=Z,14nm,0.6s						
WMQ	Urumqi	44.58	292	P	P	09 23 05.0	-0.5
WMQ				pP	pP	09 23 20.0	+1.6
WMQ				sP	sP	09 23 28.0	+4.0
WMQ				PP	PP	09 24 50.0	+0.1
WMQ				S	S	09 29 34.0	-3.8
WMQ				sS	sS	09 30 00.0	+0.5
WMQ				pmax	pmax		
	comp=Z,17nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.0s						
WMQ				LR	LR		
	comp=N,1μm,16.0s						
WMQ				LR	LR		
	comp=E,760nm,16.0s						
WMQ				LR	LR		
	comp=Z,760nm,16.0s						
MK31	Makanchi Array	46.71	298	eP	P	09 23 19.9	-2.3
MK31	Makanchi Array	46.71	298	eP	P	09 23 19.9	-2.3
MKAR	Makanchi Array	46.71	298	P	P	09 23 20.1	-2.1
MKAR						09 24 54.9	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	46.71	298	P	P	09 23 20.1	-2.1
MKAR				eP	P	09 23 20.4	-1.8
MKAR				PcP	PcP	09 24 54.9	-0.1
MKAR	Makanchi Array	46.71	298	P	P	09 23 20.1	-2.1
	comp=Z,0.6nm,0.5s,baz=72,slow=7.1,SNR=12						
MKAR				PcP	PcP	09 24 54.9	-0.1
	comp=Z,1.7nm,0.6s,baz=64,slow=3.3,SNR=13						
LSA	Lhasa	49.62	273	P	P	09 23 44.9	-0.5
BVAR	Borovoye Array	50.86	310	P	P	09 23 51.4	-2.5
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	Borovoye Array	50.86	310	P	P	09 23 51.4	-2.5
BVAR	Borovoye Array	50.86	310	P	P	09 23 51.4	-2.5
	comp=Z,0.5nm,0.4s,baz=52,slow=9.6,SNR=3.8						
CHTO	Chiang Mai	51.24	256	eP	P	09 23 58.1	+1.0
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CHTO	Chiang Mai	51.24	256	eP	P	09 23 58.1	+1.0
	comp=Z,4.2nm,0.7s						
CMAR	Chiang Mai Arr	51.49	256	P	P	09 24 00.1	+1.2
CMAR	Chiang Mai Arr	51.49	256	P	P	09 24 00.1	+1.2
	comp=Z,2.2nm,0.7s,baz=37,slow=7.9,SNR=14						
YKA	Yellowknife Ar	52.02	36	P	P	09 24 02.5	+0.1
YKA	Yellowknife Ar	52.02	36	P	P	09 24 02.5	+0.1
	comp=Z,1.1nm,0.7s,baz=296,slow=7.0,SNR=21						
TAPN	Taplejung	53.45	273	eP	P	09 24 13.9	+0.1
ODAN	Odare	53.97	273	eP	P	09 24 17.8	+0.2
	comp=Z,5.8nm,0.3s						
KSH	Kashi	54.33	292	⇓iP	P	09 24 22.9	+3.0
KSH				pP	pP	09 24 38.2	+5.1
KSH				sP	sP	09 24 46.0	+7.3
KSH				PcP	PcP	09 25 25.9	+2.5
KSH				PP	PP	09 26 26.1	+4.2
KSH				ScP	ScP	09 29 18.1	+0.7
KSH				PcS	PcS	09 29 24.0	+1.0
KSH				S	S	09 31 54.0	-0.3
KSH				ScS	ScS	09 34 03.1	-1.9
KSH				SS	SS	09 35 36.1	-0.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KSH				pmax	pmax		
	comp=Z,130nm,3.6s						
KSH				LR	LR		
	comp=Z,360nm,4.5s						
GUN	Gumba	54.38	275	eP	P	09 24 20.6	0.0
	comp=Z,9.1nm,0.4s						
RAMN	Ramite	54.47	274	eP	P	09 24 21.1	-0.1
	comp=Z,16nm,0.4s						
PKI	Pulchoki	54.91	275	eP	P	09 24 25.0	+0.5
	comp=Z,4.4nm,0.3s						
DMN	Daman	55.10	275	eP	P	09 24 26.1	+0.3
	comp=Z,6.7nm,0.3s						
DANN	Dangsing	55.58	277	eP	P	09 24 29.6	+0.4
	comp=Z,26nm,0.6s						
KOLN	Koldanda	56.05	276	eP	P	09 24 32.7	+0.2
PYUN	Piuthan	56.27	277	eP	P	09 24 34.8	+0.8
ARCES	ARCESS Array B	58.42	341	P	P	09 24 46.6	-1.8
ARCES	ARCESS Array B	58.42	341	P	P	09 24 46.6	-1.8
	comp=Z,1.8nm,0.8s,baz=42,slow=7.3,SNR=8.4						
ABKAR	Akbulak array	58.43	310	eP	P	09 24 47.2	-1.6
	comp=Z,0.7nm,0.3s						
NVAR	Mina Array Bea	63.45	61	P	P	09 25 24.3	+1.0
NVAR	Mina Array Bea	63.45	61	P	P	09 25 24.3	+1.0
	comp=Z,0.9nm,0.8s,baz=286,slow=6.5,SNR=5.8						
RRI2	Red Ridge	64.46	53	eP	P	09 25 31.9	+2.0
	comp=Z,4.8nm,0.7s						
FINES	FINESS Array B	64.51	334	P	P	09 25 27.4	-2.1
FINES	FINESS Array B	64.51	334	P	P	09 25 27.4	-2.1
	comp=Z,2.7nm,0.6s,baz=33,slow=8.3,SNR=13						
TPAW	Teton Pass	64.57	53	eP	P	09 25 32.8	+2.2
BW06	Boulder Array	65.82	53	eP	P	09 25 39.6	+1.0
PDAR	Pinedale Array	65.82	53	P	P	09 25 38.9	+0.3
PDAR	Pinedale Array	65.82	53	P	P	09 25 38.9	+0.3
	comp=Z,1.7nm,0.8s,baz=294,slow=1.7,SNR=16						
FRB	Frobisher Bay	66.08	18	P	P	09 25 38.2	-1.4
FRB	Frobisher Bay	66.08	18	P	P	09 25 38.2	-1.4
	comp=Z,3.2nm,0.5s,baz=328,slow=9.5,SNR=22						
WRA	Warramunga Arr	67.48	198	P	P	09 25 48.9	-0.1
WRA	Warramunga Arr	67.48	198	P	P	09 25 48.9	-0.1
	comp=Z,0.4nm,0.5s,baz=15,slow=6.8,SNR=10						
SRU	San Rafael	67.67	57	eP	P	09 25 52.0	+1.6
SRU	San Rafael	67.67	57	eP	P	09 25 52.0	+1.6
	comp=Z,1μm,2.3s						
NB2	NORSAR Subarra	68.80	341	P	P	09 25 55.5	-1.5
	comp=Z,1.5nm,0.5s,baz=28,slow=6.2						
NOA	NORSAR Array B	68.80	341	P	P	09 25 55.7	-1.2
NOA	NORSAR Array B	68.80	341	P	P	09 25 55.7	-1.2
	comp=Z,2.4nm,0.5s,baz=28,slow=6.2,SNR=15						
HFS	Hagfors	69.01	339	P	P	09 25 56.5	-1.7
HFS	Hagfors	69.01	339	P	P	09 25 56.5	-1.7
	comp=Z,4.8nm,0.4s,baz=57,slow=5.3,SNR=26						
ASAR	Alice Springs	71.18	198	P	P	09 26 12.8	+0.9
ASAR	Alice Springs	71.18	198	P	P	09 26 12.8	+0.9
	comp=Z,0.4nm,0.5s,baz=14,slow=5.9,SNR=11						
AKASG	Malin Array Be	71.86	326	P	P	09 26 14.5	-1.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	Malin Array Be	71.86	326	P	P	09 26 14.4	-1.3
AKASG	Malin Array Be	71.86	326	P	P	09 26 14.4	-1.3
	comp=Z,2.3nm,0.4s,baz=35,slow=6.7,SNR=5.8						
KIEV	Kiev	71.87	326	eP	P	09 26 14.6	-1.2
KIEV	Kiev	71.87	326	eP	P	09 26 14.6	-1.2
SCHQ	Schefferville	74.36	22	P	P	09 26 29.7	-0.8
SCHQ	Schefferville	74.36	22	P	P	09 26 29.7	-0.8
	comp=Z,1.6nm,0.9s,baz=306,slow=8.7,SNR=3.9						
BUR08	Bucovina Ar. S	75.89	326	eP	P	09 26 38.5	-1.1
CLL	Collm	76.94	335	i P	P	09 26 44.4	-0.9
CLL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CLL	Collm	76.94	335	i P	P	09 26 44.4	-0.9
	comp=Z,9.0nm,1.0s						
EKA	Eskdalemuir Ar	77.00	346	P	P	09 26 44.7	-0.8
EKA	Eskdalemuir Ar	77.00	346	P	P	09 26 44.7	-0.8
	comp=Z,1.1nm,0.4s,baz=20,slow=5.2,SNR=8.1						
MLR	Muntele Rosu	77.35	324	P	P	09 26 47.5	-0.3
MLR	Muntele Rosu	77.35	324	P	P	09 26 47.5	-0.3
	comp=Z,1.3nm,0.8s,baz=252,slow=3.9,SNR=7.7						
VRAC	Vranov	77.58	332	P	P	09 26 49.1	+0.3
VRAC	Vranov	77.58	332	P	P	09 26 49.1	+0.3
	comp=Z,5.2nm,0.6s,baz=90,slow=4.0,SNR=5.1						
BRTR	Keskin Array B	78.52	316	P	P	09 26 54.8	+0.3
BRTR	Keskin Array B	78.52	316	P	P	09 26 54.8	+0.3
	comp=Z,2.3nm,0.8s,baz=66,slow=4.7,SNR=8.5						
TXAR	Lajitas Array	78.52	60	P	P	09 26 55.4	+0.8
TXAR	Lajitas Array	78.52	60	P	P	09 26 55.4	+0.8
	comp=Z,1.0nm,0.7s,baz=308,slow=4.4,SNR=15						
KHC	Kasperske Hory	78.69	334	eP	P	09 26 55.2	+0.1
KHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KHC	Kasperske Hory	78.69	334	eP	P	09 26 55.2	+0.1
	comp=Z,6.7nm,0.7s						
GERES	GERESS Array B	78.91	333	P	P	09 26 55.9	-0.5
GERES	GERESS Array B	78.91	333	P	P	09 26 55.9	-0.5
	comp=Z,1.8nm,0.7s,baz=47,slow=4.4,SNR=9.1						
MMAI	Mount Meron Ar	82.85	311	P	P	09 27 17.8	+0.2
MMAI	Mount Meron Ar	82.85	311	P	P	09 27 17.8	+0.2
	comp=Z,1.5nm,0.4s,baz=60,slow=8.5,SNR=3.2						
SNAA	Sanae	151.54	196	PKPbc	PKPbc	09 34 45.1	-0.5
SNAA	Sanae	151.54	196	PKPbc	PKPbc	09 34 45.1	-0.5
	comp=Z,0.5nm,0.8s,baz=166,slow=4.2,SNR=5.2						

*IDC **07** 09:18:06.0±0.8, 36°.49N×21°.88E, h0km, mb3.9/13, mb1 3.9/17, mb1mx3.8/33, mbtmp3.7/17, ML3.4/4, Error ellipse: s-maj=20.4km s-min=15.1km az=121.0*
*ISCJB **07** 09:18:07.5±0.9, 36°.36N±0°.04×21°.66E±0°.05, h15km±6km, mb3.8/13, Error ellipse: s-maj=6.8km s-min=5.5km az=140.9*
*ATH **07** 09:18:07.2, 36°.43N×21°.69E, h5km±3km, MD3.6/25, ML3.6*
*CSEM **07** 09:18:09.3±0.4, 36°.46N×21°.77E, h2km, ML3.7/3, Error ellipse: s-maj=8.3km s-min=5.0km az=39.0*
*THE **07** 09:18:09.7, 36°.50N×21°.80E, h0km±3km, ML3.7/3, Error ellipse: s-maj=3.7km s-min=1.1km az=193.0*
ISC 07 09:18:08.6±1.1, **36°.43N**±0°.04×**21°.73E**±0°.03, **h15**km±6km, **n121**, σ1§**24**/136, **mb3.9**/13, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL	PYLOS	0.46	1	P	Pg	09 18 16.6	-1.2
PYL				S	Sg	09 18 23.4	-0.7
PYL	PYLOS	0.46	1	ePB	Pg	09 18 16.6	-1.2
PYL				eSB	Sg	09 18 23.9	-0.2
PYL	PYLOS	0.46	1	ePb	Pg	09 18 16.6	-1.2
PYL				S	Sg	09 18 23.4	-0.7
PYL				eSb	Sg	09 18 23.9	-0.2
DYR	Agios Nikonas	0.58	56	P	Pg	09 18 19.7	-0.4
DYR				S	Sg	09 18 27.3	-0.6
DYR	Agios Nikonas	0.58	56	ePB	Pg	09 18 19.7	-0.4
DYR				eSB	Sg	09 18 28.1	+0.2
DYR	Agios Nikonas	0.58	56	P	Pg	09 18 19.7	-0.4
DYR				S	Sg	09 18 27.7	-0.2
DYR				eSb	Sg	09 18 28.1	+0.2
ITM	Ithomi	0.76	12	P	Pg	09 18 22.6	-0.8
ITM				S	Sg	09 18 32.9	-0.6
ITM	Ithomi	0.76	12	ePB	Pg	09 18 22.4	-1.0
ITM				eSB	Sg	09 18 33.2	-0.3
ITM	Ithomi	0.76	12	P	Pg	09 18 22.6	-0.8
ITM				eSb	Sg	09 18 33.2	-0.3
VLI	Veliai	1.01	73	P	Pg	09 18 27.8	-0.4
VLI				S	Sb	09 18 42.0	+1.1
VLI	Veliai	1.01	73	ePN	Pg	09 18 27.7	-0.4
VLI				eSB	Sn	09 18 42.8	+0.6
VLI	Veliai	1.01	73	P	Pg	09 18 27.8	-0.4
VLI				S	Sb	09 18 42.0	+1.1
VLI				eSb	Sn	09 18 42.8	+0.6
KYTH	Kithira	1.06	98	P	Pg	09 18 28.4	-0.7
KYTH	Kithira	1.06	98	ePN	Pg	09 18 27.9	-1.2
KYTH	Kithira	1.06	98	ePn	Pg	09 18 27.9	-1.2
KYTH	Kithira	1.06	98	P	Pg	09 18 28.4	-0.7
VLX	Vlachokerasia	1.07	29	P	Pg	09 18 28.2	-1.1
VLX				S	Sg	09 18 42.7	-0.6
VLX	Vlachokerasia	1.07	29	ePN	Pg	09 18 28.0	-1.3
VLX				eSB	Sg	09 18 42.7	-0.6
VLX	Vlachokerasia	1.07	29	P	Pg	09 18 28.2	-1.1
VLX				S	Sg	09 18 42.7	-0.6
AMT	Artemida-Makis	1.10	359	P	Pg	09 18 28.6	-1.2
AMT				S	Sb	09 18 45.1	+1.6
AMT	Artemida-Makis	1.10	359	ePB	Pg	09 18 28.6	-1.2
AMT	Artemida-Makis	1.10	359	P	Pg	09 18 28.6	-1.2
AMT				S	Sg	09 18 44.2	+0.1
GUR	Goura	1.58	18	P	Pn	09 18 37.1	+0.9
GUR	Goura	1.58	18	ePB	Pn	09 18 37.3	+1.1
GUR	Goura	1.58	18	P	Pn	09 18 37.1	+0.9
GUR				S	Sg	09 19 00.1	+0.6
DID	Didima	1.61	48	P	Pn	09 18 37.8	+1.2
DID	Didima	1.61	48	ePG	Pn	09 18 37.5	+0.9
DID	Didima	1.61	48	P	Pn	09 18 37.7	+1.2
DID				S	Sg	09 18 59.8	-0.8
RLS	Riolos of Patr	1.64	353	P	Pn	09 18 37.4	+0.6
RLS				S	Sn	09 18 59.4	+1.8
RLS	Riolos of Patr	1.64	353	P	Pn	09 18 37.4	+0.6
RLS				S	Sn	09 18 59.4	+1.8
LAKA	Lakka	1.81	6	P	Pn	09 18 40.7	+1.3
LAKA	Lakka	1.81	6	ePN	Pb	09 18 41.6	+0.1
LAKA	Lakka	1.81	6	P	Pn	09 18 40.7	+1.3
LAKA	Lakka	1.81	6	ePn	Pb	09 18 41.6	+0.1
KFL	Anninata	1.83	336	P	Pn	09 18 41.6	+2.0
KFL	Anninata	1.83	336	P	Pn	09 18 41.6	+2.0
UPR	University Cam	1.85	1	ePN	Pb	09 18 43.0	+0.9
UPR	University Cam	1.85	1	ePn	Pb	09 18 43.0	+0.9
LTK	Loutraki	1.87	31	P	Pn	09 18 41.1	+1.0
LTK	Loutraki	1.87	31	ePN	Pb	09 18 43.5	+1.0
LTK	Loutraki	1.87	31	P	Pn	09 18 41.1	+1.0
LTK	Loutraki	1.87	31	ePn	Pb	09 18 43.5	+1.0
NAIG	Nisos Aigina	1.93	46	ePN	Pb	09 18 44.6	+1.1
NAIG	Nisos Aigina	1.93	46	ePn	Pb	09 18 44.6	+1.1
TRIZ	Trizonia	1.95	8	P	Pn	09 18 43.1	+2.0
TRIZ	Trizonia	1.95	8	ePN	Pb	09 18 44.1	+0.3
TRIZ	Trizonia	1.95	8	P	Pn	09 18 43.1	+2.0
TRIZ	Trizonia	1.95	8	ePn	Pb	09 18 44.1	+0.3
VLS	Valsamata	1.96	333	P	Pn	09 18 43.7	+2.3
VLS	Valsamata	1.96	333	P	Pn	09 18 43.7	+2.3
KALE	Kalithea	1.98	9	P	Pn	09 18 43.8	+2.1
KALE	Kalithea	1.98	9	ePN	Pb	09 18 44.7	+0.3
KALE	Kalithea	1.98	9	P	Pn	09 18 43.8	+2.1
KALE	Kalithea	1.98	9	ePn	Pb	09 18 44.7	+0.3
EFP	Efpalio	2.00	4	ePN	Pb	09 18 44.9	+0.3
EFP	Efpalio	2.00	4	P	Pb	09 18 44.3	-0.3
EFP	Efpalio	2.00	4	ePn	Pb	09 18 44.9	+0.3
DSF	Desfina	2.07	18	P	Pn	09 18 44.3	+1.3
DSF	Desfina	2.07	18	P	Pn	09 18 44.2	+1.3
ATH	Athens Observa	2.21	45	ePN	Pb	09 18 47.5	-0.7
ATH	Athens Observa	2.21	45	ePn	Pb	09 18 47.5	-0.7
VAM	Vamos	2.25	116	P	Pn	09 18 47.4	+2.1
VAM	Vamos	2.25	116	P	Pn	09 18 47.4	+2.1
PTL	Penteli	2.34	46	P	Pn	09 18 47.7	+1.1
PTL	Penteli	2.34	46	ePN	Pn	09 18 49.0	+2.4
PTL	Penteli	2.34	46	P	Pn	09 18 47.7	+1.1
PTL	Penteli	2.34	46	ePn	Pn	09 18 49.0	+2.4
LKR	Lokris	2.43	24	P	Pn	09 18 48.8	+1.0
LKR	Lokris	2.43	24	ePB	Pn	09 18 49.7	+1.9
LKR	Lokris	2.43	24	P	Pn	09 18 48.8	+1.0
LKR	Lokris	2.43	24	ePb	Pn	09 18 49.7	+1.9
ATAL	Atalanti	2.48	24	P	Pn	09 18 48.9	+0.5
ATAL	Atalanti	2.48	24	P	Pn	09 18 48.9	+0.5
LKD2	Lefkada island	2.50	340	P	Pn	09 18 52.0	+3.1
LKD2	Lefkada island	2.50	340	ePN	Pn	09 18 51.9	+3.1
LKD2	Lefkada island	2.50	340	ePn	Pn	09 18 51.9	+3.1
AGG	Agios Georgios	2.63	10	P	Pn	09 18 51.5	+1.0
AGG	Agios Georgios	2.63	10	ePN	Pn	09 18 53.6	+3.1
AGG	Agios Georgios	2.63	10	P	Pn	09 18 51.5	+1.0
AGG	Agios Georgios	2.63	10	ePn	Pn	09 18 53.6	+3.1
MRKA	Markates	2.71	32	P	Pn	09 18 52.5	+0.9
MRKA	Markates	2.71	32	P	Pn	09 18 52.5	+0.9
IDI	Anoyia	2.81	113	P	Pn	09 18 54.3	+1.3
IDI	Anoyia	2.81	113	P	Pn	09 18 54.3	+1.3
NEO	Neokhori	3.10	22	ePB	Pn	09 18 59.5	+2.5
NEO	Neokhori	3.10	22	ePb	Pn	09 18 59.5	+2.5
THL	Klokotos Trika	3.13	4	ePB	Pn	09 18 59.5	+2.1
THL	Klokotos Trika	3.13	4	ePb	Pn	09 18 59.5	+2.1
XOR	Xorichti	3.15	21	P	Pn	09 18 58.1	+0.4
XOR	Xorichti	3.15	21	P	Pn	09 18 58.1	+0.4
AOS	Alonnisos	3.22	31	ePN	Pn	09 19 01.8	+3.2
AOS	Alonnisos	3.22	31	ePn	Pn	09 19 01.8	+3.2
PLG	Polygyros	4.16	18	ePN	Pn	09 19 13.7	+2.1
PLG	Polygyros	4.16	18	ePn	Pn	09 19 13.7	+2.1
SOH	Sokhos	4.56	16	ePN	Pn	09 19 20.4	+3.3
SOH	Sokhos	4.56	16	ePn	Pn	09 19 20.4	+3.3
VAY	Valandovo	4.92	7	ePn	Pn	09 19 23.0	+1.0
VAY	Valandovo	4.92	7	ePn	Pn	09 19 23.5	+1.5
MLR	Muntele Rosu	9.59	18	Pn	Pn	09 20 24.4	-1.8
	0.0nm,0.3s,baz=228,slow=20,SNR=1.7						
BRTR	Keskin Array B	9.95	67	Pn	Pn	09 20 34.5	+3.4
	0.0nm,0.3s,baz=256,slow=15,SNR=3.0						
KEST	Kesra	10.05	270	Pn	Pn	09 20 35.0	+2.5
	0.1nm,0.3s,baz=264,slow=9.7,SNR=4.7						
KEST				Sn	Sn	09 22 22.4	-2.6
	0.1nm,0.3s,baz=66,slow=20,SNR=2.0						
VYHS	Vyhne	12.24	351	ePN	Pn	09 21 03.1	+0.8
VYHS				e		09 23 14.4	
GERES	GERESS Array B	13.73	337	Pn	Pn	09 21 21.0	-1.7
	0.2nm,0.3s,baz=311,slow=26,SNR=3.0						
AKASG	Malin Array Be	15.25	18	Pn	Pn	09 21 41.2	-2.0
	0.5nm,0.3s,baz=209,slow=12,SNR=3.5						
HFS	Hagfors	24.28	350	P	P	09 23 24.5	-0.5
	2.0nm,0.4s,baz=156,slow=11,SNR=18						
FINES	FINESS Array B	25.18	5	P	P	09 23 32.2	-1.0
	2.3nm,0.6s,baz=160,slow=6.1,SNR=9.1						
EKA	Eskdalemuir Ar	25.41	326	P	P	09 23 35.6	+0.3
	1.0nm,0.6s,baz=139,slow=8.2,SNR=3.0						
NB2	NORSAR Subarra	25.52	348	P	P	09 23 35.6	-0.7
	comp=Z,1.1nm,0.7s,baz=159,slow=10						
NOA	NORSAR Array B	25.52	348	P	P	09 23 35.7	-0.7
	comp=Z,1.4nm,0.7s,baz=161,slow=9.4,SNR=7.3						
TORD	Torodi Ar. Bea	29.35	223	P	P	09 24 11.6	+0.6
	comp=Z,1.5nm,0.7s,baz=31,slow=9.1,SNR=14						
ARCES	ARCESS Array B	33.22	2	P	P	09 24 44.4	-0.3
	comp=Z,2.3nm,0.9s,baz=183,slow=9.9,SNR=6.8						
DBIC	Dimbokro	38.32	226	P	P	09 25 29.6	+0.8
	comp=Z,1.8nm,0.6s,baz=26,slow=8.3,SNR=4.4						
KURBB	Kurchatov Arra	42.51	52	P	P	09 26 01.7	-1.5
	baz=266,slow=8.5						
MKAR	Makanchi Array	45.41	57	P	P	09 26 25.0	-1.7
	comp=Z,0.7nm,0.5s,baz=281,slow=6.3,SNR=14						
ZALV	Zalesovo Beam	46.16	47	P	P	09 26 31.7	-0.7
	comp=Z,0.9nm,0.4s,baz=277,slow=8.5,SNR=4.2						
YKA	Yellowknife Ar	75.36	341	P	P	09 29 50.5	-0.5
	comp=Z,0.3nm,0.7s,baz=32,slow=5.1,SNR=9.2						
ILAR	Eielson Array	78.73	355	P	P	09 30 10.0	0.0
	comp=Z,0.3nm,0.7s,baz=4.3,slow=3.6,SNR=3.9						
KSRS	Korea Array	79.68	51	P	P	09 30 15.2	-0.5
	comp=Z,1.2nm,0.6s,baz=311,slow=5.1,SNR=5.1						
MJAR	Matsushiro Arr	86.50	46	P	P	09 30 50.6	-0.4
	comp=Z,0.4nm,0.5s,baz=314,slow=3.4,SNR=2.9						
WRA	Warramunga Arr	119.48	94	PKP	PKPdf	09 36 56.6	-1.4
	comp=Z,0.3nm,0.8s,baz=320,slow=1.5,SNR=3.7						
ASAR	Alice Springs	121.00	98	PKP	PKPdf	09 37 00.1	-0.8
	comp=Z,0.1nm,0.3s,baz=287,slow=1.6,SNR=3.8						

*CSEM **07** 09:24:42.6, 42°.47N×13°.42E, h9km, MD1.4/2, After ROM*
ROM 07 09:24:42.6±0.1, **42°.47N**×**13°.42E**, **h9**km±1km, **Md1.4**/2, **2C, Error ellipse: s-maj=1.5km s-min=0.9km az=111.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.12	187	Pg	Pg	09 24 46.0	+0.6
AQU				Sg	Sg	09 24 47.8	+0.5
AQU	L'Aquila	0.12	187	Pg	Pg	09 24 46.0	+0.6
AQU				Sg	Sg	09 24 47.8	+0.5
TERO	Teramo	0.20	42	⇑iPg	Pg	09 24 47.7	+0.8
TERO				Sg	Sg	09 24 51.1	+1.3
TERO	Teramo	0.20	42	⇑iPg	Pg	09 24 47.7	+0.8
TERO				Sg	Sg	09 24 51.1	+1.3
FAGN	Fagnano	0.24	149	Pg	Pg	09 24 48.0	+0.5
FAGN	Fagnano	0.24	149	Pg	Pg	09 24 48.0	+0.5
FIAM	Fiamignano	0.30	228	Pg	Pb	09 24 49.7	-0.7
FIAM				Sg	Sb	09 24 54.9	-0.7
FIAM	Fiamignano	0.30	228	Pg	Pb	09 24 49.7	-0.7
FIAM				Sg	Sb	09 24 54.9	-0.7
VCEL	Villa Celiera	0.32	103	Pg	Pb	09 24 50.4	-0.3
VCEL	Villa Celiera	0.32	103	Pg	Pb	09 24 50.4	-0.3
NRCA	Norcia	0.43	328	Pg	Pg	09 24 51.6	+0.5
NRCA				Sg	Sb	09 24 58.2	-1.0
NRCA	Norcia	0.43	328	Pg	Pg	09 24 51.6	+0.5
NRCA				Sg	Sb	09 24 58.2	-1.0
PTQR	Pietraquaria	0.45	182	Pg	Pb	09 24 52.3	-0.5
PTQR	Pietraquaria	0.45	182	Pg	Pb	09 24 52.3	-0.5
INTR	Introdacqua	0.58	142	Pg	Pg	09 24 54.1	+0.1
INTR	Introdacqua	0.58	142	Pg	Pg	09 24 54.1	+0.1

*ISCJB **07** 09:24:49.0±0.3, 71°.82N±0°.05×1°.2W±0°.1, h7km, mb4.2/22, MS3.9/2, Error ellipse: s-maj=8.2km s-min=4.2km az=22.5*
*IDC **07** 09:24:50.0±0.6, 71°.87N×1°.35W, h0km, mb4.0/15, mb1 4.1/22, mb1mx4.0/38, mbtmp4.0/22, ML3.7/7, MS3.9/4, Ms1 3.9/4, ms1mx3.1/48, Error ellipse: s-maj=16.6km s-min=11.1km az=38.0*
*CSEM **07** 09:24:50.1±0.1, 71°.91N×1°.33W, h2km, mb4.5/6, Error ellipse: s-maj=7.8km s-min=4.9km az=22.0*
*NEIC **07** 09:24:51.7±0.3, 71°.88N×1°.28W, h10km, mb4.5/6, Error ellipse: s-maj=8.6km s-min=5.7km az=210.0*
*BER **07** 09:24:54.9±3.2, 71°.94N×1°.30W, h15km±757km, MD2.9, ML2.7*
ISC 07 09:24:51.2±0.4, **71°.83N**±0°.06×**1°.42W**±0°.05, **h7**km, **n107**, σ1§**33**/111, **mb4.1**/22, **Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	2.42	253	Pn	Pn	09 25 30.7	-0.4
JMIC				Sn	Sn	09 25 58.0	-2.9
JMIC	Jan Mayen	2.42	253	Pn	Pn	09 25 30.7	-0.4
	6.3nm,0.3s,baz=59,slow=3.9,SNR=3.1						
JMIC				Sn	Sn	09 25 58.0	-2.9
	10nm,0.3s,baz=163,slow=20,SNR=6.0						
JMIC	Jan Mayen	2.42	253	Pn	Pn	09 25 30.7	-0.4
LOF	Lofoten	6.32	119	eP	Pn	09 26 13.8	-11
LOF				eS	Sn	09 27 19.9	-17

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCO	Scoresbysund	6.77	268	*i* P	Pn	09 26 30.7	0.0
SCO	Scoresbysund	6.77	268	*e*P	Pn	09 26 30.7	0.0
	SNR=46						
STEI	Steigen	6.93	116	*e*P	Pn	09 26 32.7	-0.3
KONS	Konsvik	7.43	129	*e*P	Pn	09 26 37.1	-2.6
KONS				*e*S	Sn	09 27 55.1	-9.0
KONS				AML	AML	09 28 01.3	
	comp=Z,8.1nm,0.5s						
STOK	Stokkvaagen	7.54	130	*e*P	Pn	09 26 40.9	-0.3
STOK				*e*S	Sn	09 27 58.9	-7.9
STOK				AML	AML	09 28 07.3	
	comp=Z,9.1nm,0.6s						
FLOS	Flostrand	7.62	129	*e*P	Pn	09 26 42.4	+0.1
FLOS				AML	AML	09 28 11.8	
	comp=Z,9.7nm,0.7s						
SPITS	Spitsbergen Ar	7.82	28	Pn	Pn	09 26 42.6	-2.5
SPITS	Spitsbergen Ar	7.82	28	Pn	Pn	09 26 42.6	-2.5
	baz=203,slow=14,SNR=52						
SPITS	Spitsbergen Ar	7.82	28	Pn	Pn	09 26 42.6	-2.5
MOR8	Moi Rana	8.02	127	*e*P	Pn	09 26 48.3	+0.5
MOR8				*e*S	Sn	09 28 12.8	-5.8
MOR8				AML	AML	09 28 16.2	
	comp=Z,6.9nm,0.3s						
MOR8	Moi Rana	8.02	127	*e*P	Pn	09 26 48.3	+0.5
	SNR=51						
KTK1	Kautokeino	8.71	97	*e*P	Pn	09 26 55.9	-1.4
KTK1	Kautokeino	8.71	97	*e*P	Pn	09 26 55.9	-1.4
	SNR=51						
ARCES	ARCESS Array B	9.17	91	Pn	Pn	09 27 01.5	-2.1
ARCES	ARCESS Array B	9.17	91	Pn	Pn	09 27 01.5	-2.1
	comp=Z,0.7nm,0.3s,baz=303,slow=12,SNR=40						
ARCES				LR	LR	09 30 14.0	
	comp=Z,337nm,20.3s,baz=304,slow=35						
ARCES	ARCESS Array B	9.17	91	Pn	Pn	09 27 01.5	-2.1
ARE0	ARCESS Array S	9.17	91	*e*Pn	Pn	09 27 03.0	-0.6
ARE0				*e*Sn	Sn	09 28 47.9	+1.1
ARE0	ARCESS Array S	9.17	91	*e*Pn	Pn	09 27 03.0	-0.6
ARE0				*e*Sn	Sn	09 28 47.9	+1.1
KEV	Kevo	9.54	89	*e*p	Pn	09 27 05.9	-2.7
	comp=Z,1.1nm,0.3s						
SUMG	Summit	11.23	291	*e*Pn	Pn	09 27 32.9	+0.8
	comp=Z,19nm,0.8s						
SUMG	Summit	11.23	291	*i* P	Pn	09 27 32.9	+0.8
SUMG	Summit	11.23	291	*i* P	Pn	09 27 33.0	+0.8
	comp=Z,20nm,0.8s						
SUMG	Summit	11.23	291	*i* P	Pn	09 27 32.9	+0.8
NOA	NORSAR Array B	11.91	149	Pn	Pn	09 27 42.4	+1.2
NOA	NORSAR Array B	11.91	149	Pn	Pn	09 27 42.4	+1.2
	comp=Z,0.5nm,0.3s,baz=337,slow=13,SNR=5.4						
NOA	NORSAR Array B	11.91	149	Pn	Pn	09 27 42.4	+1.2
HFS	Hagfors	13.19	145	Pn	Pn	09 27 58.9	+0.4
HFS	Hagfors	13.19	145	Pn	Pn	09 27 58.9	+0.4
	comp=Z,0.7nm,0.3s,baz=342,slow=9.1,SNR=15						
HFS	Hagfors	13.19	145	Pn	Pn	09 27 58.9	+0.4
KAF	Kangasniemi	14.40	118	*e*p	Pn	09 28 12.0	-3.0
	comp=Z,1.9nm,0.5s						
FINES	FINESS Array B	14.88	120	Pn	Pn	09 28 19.4	-2.2
FINES	FINESS Array B	14.88	120	Pn	Pn	09 28 19.4	-2.2
	comp=Z,0.1nm,0.3s,baz=325,slow=12,SNR=9.6						
JOF	Joensuu	15.20	109	*e*p	Pn	09 28 23.9	-1.9
	comp=Z,2.7nm,0.7s						
EKA	Eskdalemuir Ar	16.58	183	Pn	Pn	09 28 44.7	+1.0
EKA	Eskdalemuir Ar	16.58	183	Pn	Pn	09 28 44.7	+1.0
	baz=2.8,slow=11,SNR=9.0						
EKA	Eskdalemuir Ar	16.58	183	Pn	Pn	09 28 44.7	+1.0
SFJD	Kangerlussuaq	17.51	279	LR	LR	09 34 51.3	
	comp=Z,336nm,20.7s,baz=23,slow=34						
MICGM	Minsk	21.43	129	*e*P	P	09 29 39.0	-0.3
GERES	GERESS Array B	24.09	155	LR	LR	09 38 25.9	
	comp=Z,381nm,18.9s,baz=250,slow=34						
RES	Resolute Bay	24.45	320	P	P	09 30 09.9	-0.1
RES	Resolute Bay	24.45	320	P	P	09 30 09.9	-0.1
	comp=Z,1.6nm,1.1s,baz=40,slow=7.9,SNR=3.5						
RES				LR	LR	09 39 29.2	
	comp=Z,396nm,19.0s,baz=229,slow=36						
RES	Resolute Bay	24.45	320	P	P	09 30 09.9	-0.1
FRB	Frobisher Bay	25.22	286	P	P	09 30 15.1	-1.9
FRB	Frobisher Bay	25.22	286	P	P	09 30 15.1	-1.9
	comp=Z,2.0nm,0.9s,baz=0.0,slow=5.1,SNR=3.5						
FRB	Frobisher Bay	25.22	286	P	P	09 30 15.1	-1.9
AKASG	Malin Array Be	25.25	131	P	P	09 30 15.8	-1.5
AKASG	Malin Array Be	25.25	131	P	P	09 30 15.8	-1.5
	comp=Z,18nm,1.1s,baz=333,slow=9.9,SNR=8.2						
AKASG	Malin Array Be	25.25	131	P	P	09 30 15.8	-1.5
ESDC	Sonseca Array	32.25	184	P	P	09 31 21.0	+1.1
ESDC	Sonseca Array	32.25	184	P	P	09 31 21.0	+1.1
	comp=Z,0.6nm,0.4s,baz=7.7,slow=7.3,SNR=3.2						
ESDC	Sonseca Array	32.25	184	P	P	09 31 21.0	+1.1
AKTO	Aktyubinsk	33.69	97	P	P	09 31 31.6	-0.7
AKTO	Aktyubinsk	33.69	97	P	P	09 31 31.6	-0.7
	comp=Z,4.0nm,1.1s,baz=330,slow=11,SNR=6.0						
AKTO	Aktyubinsk	33.69	97	P	P	09 31 31.6	-0.7
ABKAR	Akbulak array	35.33	96	*e*P	P	09 31 46.8	+0.3
	comp=Z,7.5nm,1.0s						
ABKAR	Akbulak array	35.33	96	*e*P	P	09 31 46.8	+0.3
	comp=Z,7.5nm,1.0s						
INK	Inuvik	36.56	332	P	P	09 31 55.7	-1.1
INK	Inuvik	36.56	332	P	P	09 31 55.7	-1.1
	comp=Z,10nm,1.1s,baz=13,slow=8.0,SNR=13						
INK	Inuvik	36.56	332	P	P	09 31 55.7	-1.1
BRTR	Keskin Array B	36.63	132	P	P	09 31 59.5	+1.6
BRTR	Keskin Array B	36.63	132	P	P	09 31 59.5	+1.6
	comp=Z,3.3nm,1.0s,baz=330,slow=8.2,SNR=2.6						
BRTR	Keskin Array B	36.63	132	P	P	09 31 59.5	+1.6
YKA	Yellowknife Ar	38.41	317	P	P	09 32 12.4	-0.1
YKA				PcP	PcP	09 34 26.0	+0.5
YKA	Yellowknife Ar	38.41	317	P	P	09 32 12.4	-0.1
	comp=Z,5.1nm,1.1s,baz=23,slow=8.8,SNR=33						
YKA				PcP	PcP	09 34 26.0	+0.5
	comp=Z,0.3nm,0.8s,baz=23,slow=3.0,SNR=5.6						
YKA	Yellowknife Ar	38.41	317	P	P	09 32 12.4	-0.1
YKA	Yellowknife Ar	38.41	317	PcP	PcP	09 34 26.0	+0.5
KURK	Kurchatov	39.88	78	*e*P	P	09 32 25.4	+0.5
	comp=Z,9.6nm,1.4s						
KURK	Kurchatov	39.88	78	*e*P	P	09 32 25.4	+0.5
	comp=Z,9.6nm,1.4s						
ILAR	Eielson Array	41.66	339	P	P	09 32 39.7	+0.2
ILAR	Eielson Array	41.66	339	P	P	09 32 39.7	+0.2
	comp=Z,2.8nm,1.1s,baz=7.5,slow=6.9,SNR=25						
ILAR	Eielson Array	41.66	339	P	P	09 32 39.7	+0.2
FFC	Flin Flon	42.26	302	*e*P	P	09 32 44.9	+0.4
	comp=Z,13nm,1.1s						
FFC	Flin Flon	42.26	302	*e*P	P	09 32 44.9	+0.4
	comp=Z,13nm,1.1s						
MENT	Mentasta	43.05	336	*e*P	P	09 32 52.5	+1.6
MENT	Mentasta	43.05	336	*e*P	P	09 32 52.5	+1.6
MK31	Makanchi Array	44.48	77	*e*P	P	09 33 04.0	+1.5
MK31	Makanchi Array	44.48	77	*e*P	P	09 33 04.0	+1.5
MKAR	Makanchi Array	44.48	77	P	P	09 33 02.9	+0.4
MKAR	Makanchi Array	44.48	77	P	P	09 33 02.9	+0.4
	comp=Z,0.8nm,0.7s,baz=344,slow=6.1,SNR=7.3						
MKAR	Makanchi Array	44.48	77	P	P	09 33 02.9	+0.4
EGMT	Eagleton	50.40	304	*e*P	P	09 33 49.1	+0.5
	comp=Z,8.2nm,1.1s						
EGMT	Eagleton	50.40	304	*e*P	P	09 33 49.1	+0.5
	comp=Z,8.2nm,1.1s						
SONM	Songino Array	50.43	56	P	P	09 33 49.5	+0.5
SONM	Songino Array	50.43	56	P	P	09 33 49.5	+0.5
	comp=Z,0.4nm,0.8s,baz=333,slow=5.5,SNR=2.8						
SONM	Songino Array	50.43	56	P	P	09 33 49.5	+0.5
MSO	Missoula	52.57	307	*e*P	P	09 34 05.4	+0.5
	comp=Z,0.8nm,0.3s						
MSO	Missoula	52.57	307	*e*P	P	09 34 05.4	+0.5
	comp=Z,0.8nm,0.3s						
PDAR	Pinedale Array	55.22	302	P	P	09 34 24.4	-0.1
PDAR	Pinedale Array	55.22	302	P	P	09 34 24.4	-0.1
	comp=Z,0.3nm,0.6s,baz=60,slow=5.3,SNR=3.9						
PDAR	Pinedale Array	55.22	302	P	P	09 34 24.4	-0.1
TORD	Torodi Ar. Bea	58.68	176	P	P	09 34 49.8	+0.8
TORD	Torodi Ar. Bea	58.68	176	P	P	09 34 49.8	+0.8
	comp=Z,6.4nm,1.1s,baz=350,slow=7.4,SNR=5.0						
TORD	Torodi Ar. Bea	58.68	176	P	P	09 34 49.8	+0.8
PV01	Paradox Valley	59.28	299	*e*P	P	09 34 54.2	+1.0
	comp=Z,339nm,1.0s						
PV01	Paradox Valley	59.28	299	*e*P	P	09 34 54.2	+1.0
	comp=Z,339nm,1.0s						
MVCO	Mesa Verde	60.12	298	*e*P	P	09 34 59.6	+0.6
	comp=Z,9.5nm,1.1s						
MVCO	Mesa Verde	60.12	298	*e*P	P	09 34 59.6	+0.6
	comp=Z,9.4nm,1.1s						
TXAR	Lajitas Array	66.13	291	P	P	09 35 38.6	-0.2
TXAR	Lajitas Array	66.13	291	P	P	09 35 38.6	-0.2
	comp=Z,0.7nm,0.9s,baz=8.9,slow=6.4,SNR=4.9						
TXAR	Lajitas Array	66.13	291	P	P	09 35 38.6	-0.2
MJAR	Matsushiro Arr	68.26	34	P	P	09 35 52.0	-0.2
MJAR	Matsushiro Arr	68.26	34	P	P	09 35 52.0	-0.2
	comp=Z,0.6nm,0.5s,baz=0.0,slow=6.2,SNR=4.2						
MJAR	Matsushiro Arr	68.26	34	P	P	09 35 52.0	-0.2

*ROM **07** 09:24:56.6±0.1, 42°.34N×13°.39E, h10km±1km, Ml3.7/8, Error ellipse: s-maj=1.5km s-min=1.4km az=108.0*
*ISCJB **07** 09:24:56.6±0.2, 42°.36N±0°.02×13°.36E±0°.03, h11km±2km, mb3.7/5, Error ellipse: s-maj=3.5km s-min=3.2km az=39.0*
*IDC **07** 09:24:57.9±1.0, 42°.49N×13°.33E, h0km, mb3.7/6, mb1 3.7/11, mb1mx3.6/32, mbtmp3.6/11, ML3.4/4, Error ellipse: s-maj=19.1km s-min=13.7km az=95.0*
*CSEM **07** 09:24:57.1±0.1, 42°.34N×13°.37E, h2km, ML3.5/8, Error ellipse: s-maj=2.4km s-min=2.1km az=67.0*
*LDG **07** 09:24:59.8±0.8, 42°.44N×13°.30E, h2km, Ml3.5/8, Error ellipse: s-maj=16.3km s-min=11.9km az=123.0*
*STR **07** 09:25:02.2±9.0, 42°.61N×13°.12E, h5km, Ml3.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 07 09:24:57.5±0.8, **42°.35N**±0°.02×**13°.36E**±0°.02, **h8**km±4km, **n108**, σ**1**s**73**/143, **mb4.0**/5, **3C-3D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	82⇓	*i*Pg	Pg	09 24 58.6	-0.5
AQU				Sg	Sg	09 24 59.8	-0.4
AQU	L'Aquila	0.04	82⇓	*i*Pg	Pg	09 24 58.6	-0.5
AQU				Sg	Sg	09 24 59.8	-0.4
FAGN	Fagnano	0.19	116	Pg	Pg	09 25 01.0	-0.4
FAGN				Sg	Sg	09 25 03.7	-0.3
FAGN	Fagnano	0.19	116	Pg	Pg	09 25 01.0	-0.4
FAGN				Sg	Sg	09 25 03.7	-0.3
CAMP	Campotosto	0.19	12⇑	*i*Pg	Pg	09 25 01.3	-0.2
CAMP				Sg	Sg	09 25 04.5	+0.3
CAMP	Campotosto	0.19	12⇑	*i*Pg	Pg	09 25 01.3	-0.2
CAMP				Sg	Sg	09 25 04.5	+0.3
FIAM	Fiamignano	0.19	245	Pg	Pg	09 25 01.7	+0.2
FIAM				Sg	Sg	09 25 05.9	+1.7
FIAM	Fiamignano	0.19	245	Pg	Pg	09 25 01.7	+0.2
FIAM				Sg	Sg	09 25 05.9	+1.7
PTQR	Pietraquaria	0.33	174	Pg	Pg	09 25 03.3	-0.7
PTQR	Pietraquaria	0.33	174	Pg	Pg	09 25 03.3	-0.7
TERO	Teramo	0.33	34	Pg	Pg	09 25 03.1	-0.9
TERO				Sg	Sg	09 25 08.0	-0.4
TERO	Teramo	0.33	34	Pg	Pg	09 25 03.1	-0.9
TERO				Sg	Sg	09 25 08.0	-0.4
VCEL	Villa Celiera	0.36	83	Pg	Pg	09 25 04.5	-0.2
VCEL	Villa Celiera	0.36	83	Pg	Pg	09 25 04.5	-0.2
CERT	Cerreto	0.49	215	Pg	Pg	09 25 06.4	-0.6
CERT				Sg	Sg	09 25 13.7	+0.4
CERT	Cerreto	0.49	215	Pg	Pg	09 25 06.4	-0.6
CERT				Sg	Sg	09 25 13.7	+0.4
MNS	Montasola	0.50	274	Pg	Pg	09 25 06.9	-0.3
MNS	Montasola	0.50	274	Pg	Pg	09 25 06.9	-0.3
NRCA	Norcia	0.52	340	Pg	Pg	09 25 07.8	+0.3
NRCA	Norcia	0.52	340	Pg	Pg	09 25 07.8	+0.3
VVLD	Villa Vallelon	0.52	157	Pg	Pg	09 25 06.7	-0.9
VVLD	Villa Vallelon	0.52	157	Pg	Pg	09 25 06.7	-0.9
INTR	Introdacqua	0.53	129	Pg	Pg	09 25 07.6	-0.2
INTR				Sg	Sg	09 25 14.3	-0.4
INTR	Introdacqua	0.53	129	Pg	Pg	09 25 07.6	-0.2
INTR				Sg	Sg	09 25 14.3	-0.4
GUAR	Guarcino	0.56	183	Pg	Pg	09 25 08.3	0.0
	4μm,0.6s						
GUAR	Guarcino	0.56	183	Pg	Pg	09 25 08.3	0.0
	4μm,0.6s						
MTCE	Montecelio	0.56	235	Pg	Pg	09 25 07.8	-0.6
MTCE	Montecelio	0.56	235	Pg	Pg	09 25 07.8	-0.6
TRTR	Tortoreto Alta	0.62	42	Pg	Pg	09 25 09.5	+0.1
TRTR	Tortoreto Alta	0.62	42	Pg	Pg	09 25 09.5	+0.1
OFFI	Offida	0.63	23	Pg	Pg	09 25 10.0	+0.2
OFFI	Offida	0.63	23	Pg	Pg	09 25 10.0	+0.2
SDI	San Donato	0.72	152	Pg	Pg	09 25 10.3	-1.2
SDI	San Donato	0.72	152	Pg	Pg	09 25 10.3	-1.2
CESI	CESI - Serrava	0.73	333	Pg	Pg	09 25 11.6	-0.1
CESI	CESI - Serrava	0.73	333	Pg	Pg	09 25 11.6	-0.1
GIUL	Giuliano Di Ro	0.79	185	Pg	Pg	09 25 12.3	-0.5
	1μm,0.5s						
GIUL	Giuliano Di Ro	0.79	185	Pg	Pg	09 25 12.3	-0.5
	1μm,0.5s						
ASSB	Assisi San Ben	0.86	324	Pg	Pg	09 25 13.7	-0.4
	3μm,0.4s						
ASSB	Assisi San Ben	0.86	324	Pg	Pg	09 25 13.7	-0.4
	3μm,0.4s						
MIDA	Miranda	0.97	136	Pg	Pg	09 25 14.1	-2.1
	3μm,1.3s						
MIDA	Miranda	0.97	136	Pg	Pg	09 25 14.1	-2.1
	3μm,1.3s						
CING	Cingoli	1.03	354	Pg	Pg	09 25 15.7	-1.7
	2μm,0.5s						
CING	Cingoli	1.03	354	Pg	Pg	09 25 15.7	-1.7
	2μm,0.5s						
TOLF	Tolfa	1.05	255	Pg	Pg	09 25 17.4	-0.2
	1μm,0.8s						
TOLF	Tolfa	1.05	255	Pg	Pg	09 25 17.4	-0.2
	1μm,0.8s						
MURB	Monte Urbino	1.10	326	Pg	Pg	09 25 18.4	-0.2
	4μm,0.3s						
MURB	Monte Urbino	1.10	326	Pg	Pg	09 25 18.4	-0.2
	4μm,0.3s						
AOI	Ancona	1.21	9	Pg	Pb	09 25 19.9	-0.9
	913nm,0.5s						
AOI	Ancona	1.21	9	Pg	Pb	09 25 19.9	-0.9
	913nm,0.5s						
NVLJ	Novalja	2.47	26	*e*Pn	Pn	09 25 38.5	+0.4
NVLJ				Sn	Sn	09 26 09.7	+1.1
PGF	Pioggiola	3.23	275	*e*Pn	Pn	09 25 48.9	+0.2
PGF				*e*Sn	Sn	09 26 27.6	+0.2
	38nm,0.7s						
PGF	Pioggiola	3.23	275	*e*Pn	Pn	09 25 48.9	+0.2
PGF				*e*Sn	Sn	09 26 27.6	+0.2
	19nm,0.7s						
STON	Ston	3.25	79	*e*Pn	Pn	09 25 49.5	+0.7
STON				Sn	Sn	09 26 28.1	+0.3
STON	Ston	3.25	79	*e*Pn	Pn	09 25 49.5	+0.7
STON				Sn	Sn	09 26 28.0	+0.3
VOY	Vojsko	3.70	6	*e*Pn	Pn	09 25 55.7	+0.5
VOY				*e*		09 25 58.3	
VOY				*e*Sn	Sn	09 26 39.9	+0.9
VOY	Vojsko	3.70	6	Pn	Pn	09 25 55.7	+0.5
VOY				*e*Sn	Sn	09 26 39.9	+0.9
SAOF	Saorge	4.55	293	P	Pn	09 26 07.8	+1.1
SAOF	Saorge	4.55	293	P	Pn	09 26 07.8	+1.1
SBF	Sospel	4.59	291	*e*Pn	Pn	09 26 07.6	+0.2
SBF				*e*Sn	Sn	09 26 56.6	-4.3
	21nm,0.5s						
SBF	Sospel	4.59	291	*e*Pn	Pn	09 26 07.6	+0.2
SBF				*e*Sn	Sn	09 26 56.6	-4.3
	10nm,0.5s						
AUTN	L'Aution	4.64	293	P	Pn	09 26 09.3	+1.2
AUTN	L'Aution	4.64	293	P	Pn	09 26 09.3	+1.2
TOUF	Mont Tournerai	4.76	292	P	Pn	09 26 11.1	+1.2
TOUF	Mont Tournerai	4.76	292	P	Pn	09 26 11.1	+1.2
CALN	Calern	4.94	289	P	Pn	09 26 13.2	+1.0
CALN	Calern	4.94	289	P	Pn	09 26 13.2	+1.0
FETA	Feichten	5.03	339⇑	*i*Pg	Pn	09 26 15.2	+1.7
FETA	Feichten	5.03	339	Pg	Pn	09 26 15.2	+1.7
FRF	La Foret Royal	5.07	286	*e*Pn	Pn	09 26 13.7	-0.2
FRF				*e*Sn	Sn	09 27 08.3	-4.3
	7.2nm,0.5s						
FRF	La Foret Royal	5.07	286	*e*Pn	Pn	09 26 13.7	-0.2
FRF				*e*Sn	Sn	09 27 08.3	-4.3
	3.6nm,0.5s						
DAVOX	Davos/Dischmat	5.08	332	Pn	Pn	09 26 13.2	-1.0
	0.5nm,0.3s,baz=3.0,slow=23,SNR=3.3						
DAVOX				Sn	Sn	09 27 14.6	+1.5
	2.4nm,0.3s,baz=128,slow=19,SNR=3.8						
LMR	La Mourre	5.13	283	*e*Pn	Pn	09 26 14.2	-0.5
LMR				*e*Sn	Sn	09 27 10.3	-3.8
	6.4nm,0.5s						
LMR	La Mourre	5.13	283	*e*Pn	Pn	09 26 14.2	-0.5
LMR				*e*Sn	Sn	09 27 10.3	-3.8
	3.2nm,0.5s						
MBDF	Montbardon	5.34	299	*e*P	Pn	09 26 19.5	+1.7
MBDF	Montbardon	5.34	299	*e*P	Pn	09 26 19.5	+1.7
LPG	La Plagne	5.71	306	*e*P	Pn	09 26 25.2	+2.2
LPG				*e*Sn	Sn	09 27 23.7	-5.2
	14nm,0.6s						
LPG	La Plagne	5.71	306	*e*P	Pn	09 26 25.2	+2.2
LPG				*e*Sn	Sn	09 27 23.7	-5.2
	6.8nm,0.6s						
CONA	Conrad Observa	5.85	17⇓	*i*Pn	Pn	09 26 25.7	+1.0
CONA	Conrad Observa	5.85	17	Pn	Pn	09 26 25.7	+1.0
SMRF	Simiane la Rot	5.92	289	*e*P	Pn	09 26 26.8	+1.2
SMRF	Simiane la Rot	5.92	289	*e*P	Pn	09 26 26.8	+1.2
GERES	GERESS Array B	6.50	2	Pn	Pn	09 26 33.0	-0.6
	0.8nm,0.3s,baz=172,slow=14,SNR=10						
GERES				Sn	Sn	09 27 46.1	-1.9
	2.3nm,0.3s,baz=182,slow=20,SNR=6.6						
FELD	Feldberg im Sc	6.70	327	P	Pn	09 26 36.9	+0.6
CABF	La Chapelle	6.72	312	*e*Pn	Pn	09 26 37.0	+0.4
CABF	La Chapelle	6.72	312	*e*Pn	Pn	09 26 37.0	+0.4
KHC	Kasperske Hory	6.79	1	*e*PN	Pn	09 26 37.5	+0.1
KHC				*e*x	x	09 26 47.5	
KHC				*e*x	x	09 26 54.0	
KHC				*e*SN	Sn	09 27 50.0	-4.9
MOF	Molkenrain	7.04	323	P	Pn	09 26 41.0	-0.1
MOF	Molkenrain	7.04	323	P	Pn	09 26 41.0	-0.1
HINF	Hinteralfeld	7.14	322	*e*Pn	Pn	09 26 41.8	-0.6
HINF				*e*Sn	Sn	09 27 57.9	-5.9
	20nm,0.6s						
HINF	Hinteralfeld	7.14	322	*e*Pn	Pn	09 26 41.8	-0.6
HINF				*e*Sn	Sn	09 27 57.9	-5.9
	9.9nm,0.6s						
KEST	Kesra	7.31	207	Pn	Pn	09 26 48.8	+4.2
	1.6nm,0.3s,baz=329,slow=3.2,SNR=44						
ECH	Echery	7.31	325	P	Pn	09 26 44.9	+0.2
ECH	Echery	7.31	325	P	Pn	09 26 44.9	+0.2
CDF	Champ du Feu	7.42	327	*e*Pn	Pn	09 26 45.4	-0.8
CDF				*e*Sn	Sn	09 28 04.9	-5.7
	8.3nm,0.4s						
CDF	Champ du Feu	7.42	327	*e*Pn	Pn	09 26 45.4	-0.8
CDF				*e*Sn	Sn	09 28 04.9	-5.7
	4.2nm,0.4s						
HAU	Haudompre	7.51	321	*e*Pn	Pn	09 26 46.9	-0.5
HAU				*e*Sn	Sn	09 28 05.2	-7.6
	18nm,0.3s						
HAU	Haudompre	7.51	321	*e*Pn	Pn	09 26 46.9	-0.5
HAU				*e*Sn	Sn	09 28 05.2	-7.6
	9.0nm,0.3s						
THEF	They Montfort	7.84	321	P	Pn	09 26 52.4	+0.5
THEF	They Montfort	7.84	321	P	Pn	09 26 52.4	+0.5
MLR	Muntele Rosu	9.61	67	Pn	Pn	09 27 18.9	+2.6
	0.0nm,0.3s,baz=264,slow=18,SNR=5.1						
NOA	NORSAR Array B	18.76	357	P	Pn	09 29 18.6	+1.3
	baz=176,slow=13,SNR=1.9						
FINES	FINESS Array B	20.60	18	P	P	09 29 37.4	+0.5
	1.6nm,0.6s,baz=198,slow=8.5,SNR=2.9						
TORD	Torodi Ar. Bea	30.80	203	P	P	09 31 16.2	+2.3
	0.3nm,0.5s,baz=20,slow=8.5,SNR=7.5						
ZALV	Zalesovo Beam	47.10	50	P	P	09 33 30.1	+0.3
	0.4nm,0.3s,baz=284,slow=5.8,SNR=2.7						
MKAR	Makanchi Array	47.88	60	P	P	09 33 36.1	+0.1
	0.9nm,0.6s,baz=283,slow=6.4,SNR=6.3						
FRB	Frobisher Bay	49.64	325	P	P	09 33 50.3	+1.2
	1.2nm,0.6s,baz=265,slow=14,SNR=5.1						
YKA	Yellowknife Ar	67.50	337	P	P	09 35 53.8	+0.2
	0.2nm,0.7s,baz=38,slow=5.8,SNR=5.4						

NEIC 07 09:25:35.6, 54°.75N×161°.00W, h1km, ML3.5(AEIC)**, After AEIC., Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DOL	Dolgoi Island	0.64	309	P	Pg	09 25 48.8	+0.8
SDPT	Sand Point	0.67	26	P	Pb	09 25 49.9	-0.2
SDPT				S	Sb	09 25 59.9	0.0
DRIA	Deer Island	0.76	287	P	Pg	09 25 49.9	-0.4
HAG	Hague Volcano	0.77	318	P	Pb	09 25 51.3	-0.6
PVV	Pavlof Volcano	0.77	324	P	Pb	09 25 51.2	-0.7
PS4A	Pavlof South-4	0.78	321	P	Pg	09 25 51.2	+0.7
DT1	Dutton Round H	0.82	296	P	Pg	09 25 51.1	-0.3
DTNA	Dutton South F	0.83	299	P	Pg	09 25 51.5	0.0
DTNA				S	Sg	09 26 02.9	+0.6
FALS	False Pass	1.41	275	P	Pn	09 25 59.5	-2.8
FALS				S	Sg	09 26 17.6	-3.1
BRPK	Brown Peak	1.60	267	P	Pn	09 26 02.7	-2.3
VNWF	Veniaminof 8	1.62	30	P	Pn	09 26 05.0	-0.6
SSLS	Shishaldin Sou	1.74	270	P	Pn	09 26 05.6	-1.5
SSLS				S	Sn	09 26 29.7	-0.3
VNHG	Veniaminof 1	1.81	35	P	Pn	09 26 04.7	-3.3
SSLW	Shishaldin Wes	1.81	272	P	Pn	09 26 07.0	-1.1
WESN	West Dahl Nort	2.09	266	P	Pn	09 26 10.8	-1.0
WESE	West Dahl East	2.11	264	P	Pn	09 26 11.0	-1.1
CHGN	Chignik	2.14	42	*e*Pn	Pn	09 26 11.9	-0.4
CHGN				*e*Sn	Sn	09 26 38.8	-0.8
ANPB	Aniakchak Plen	2.56	36	P	Pn	09 26 17.6	-0.8
AKSA	Akutan Strait	2.81	259	P	Pn	09 26 20.6	-1.1
AKSA				S	Sn	09 26 55.1	-1.1
AKUT	Akutan	2.86	259	P	Pn	09 26 20.8	-1.5
AKLV	Akutan Long Va	2.96	261	P	Pn	09 26 21.9	-1.8
ZRO	Akutan Zero	2.98	259	P	Pn	09 26 22.4	-1.7
UNV	Unalaska Valle	3.35	257	P	Pn	09 26 27.0	-2.1
MTBL	Makushin Table	3.42	259	P	Pn	09 26 28.6	-1.5
MSW	Makushin Switc	3.49	258	P	Pn	09 26 29.1	-1.9
MSOM	Makushin Julie	3.61	257	P	Pn	09 26 30.4	-2.2
OKCE	Okmok Cone E	4.42	255	P	Pn	09 26 42.3	-1.6
KABR	Katmai Barrier	4.76	42	P	Pn	09 26 47.5	-1.1
NIKO	Nikolski	4.98	252	P	Pn	09 26 50.4	-1.0
OHAK	Old Harbor	4.99	57	P	Pn	09 26 48.8	-2.7
KDAK	Kodiak Island	5.58	54	P	Pn	09 26 57.6	-2.1
BRLK	Bradley Lake	7.43	43	P	Pn	09 27 22.2	-2.9
SEW	Seward	8.21	45	P	Pn	09 27 34.4	-1.4
TT01	Tatalina	8.57	15	P	Pn	09 27 38.7	-2.1
PMR	Palmer	9.28	38	*e*Pn	Pn	09 27 50.5	+0.1
PMR				*e*Sn	Sn	09 29 29.2	-6.0
TNA	Tin City	11.37	345	*e*Pn	Pn	09 28 19.0	0.0
	3.5nm,0.9s						

*STR **07** 09:25:59.6±5.4, 41°.00N×15°.95E, h10km, Ml4.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BJI **07** 09:26:25.3, 42°.31N×13°.03E, h5km, mB5.2/29, mb5.0/43, Ms5.1/26, Ms7 4.8/26*
*BEO **07** 09:26:26.5±0.9, 42°.14N×13°.02E, h10km±24km, ML5.0/1*
*CRAAG **07** 09:26:28.7, 42°.29N×13°.34E, Mb4.9*
*NEIC **07** 09:26:28.0, 42°.34N×13°.39E, h10km, mb4.9/66, ML5.0(PDG), MW4.8(USGS), MW5.0(ROM), After ROM.*
NEIC Felt [V] at L'Aquila; [IV] at Avezzano, Sulmona and Villa Adriana; [III] at Alatri, Ascoli Piceno, Cassino, Castelliri, Chieti, Fara San Martino, Guardiagrele, Lanciano, Latina, Magliano de' Marsi, Mentana, Palena, Pescara, Rieti, Rome and Viterbo. Felt throughout Abruzzo, Lazio, Marche, Molise and Umbria and in northwestern Campania, including Naples.
*LDG **07** 09:26:28.6±0.1, 42°.32N×13°.48E, h2km, Ml4.4/11, Error ellipse: s-maj=4.4km s-min=2.3km az=23.0*
*PDG **07** 09:26:28.7±0.7, 42°.26N×13°.36E, h4km±2km, MD4.8/4, ML4.7/9, Error ellipse: s-maj=1.3km s-min=1.1km az=90.0*
*ROM **07** 09:26:28.6±0.1, 42°.34N×13°.39E, h10km, Ml4.8/19, Error ellipse: s-maj=0.9km s-min=0.9km az=114.0*
*IDC **07** 09:26:28.5±0.4, 42°.41N×13°.28E, h0km, mb4.6/34, mb1 4.6/45, mb1mx4.6/49, mbtmp4.5/45, ML4.3/9, MS4.5/19, Ms1 4.5/19, ms1mx4.2/36, Error ellipse: s-maj=9.7km s-min=8.0km az=108.0*
*ISCJB **07** 09:26:28.2±0.2, 42°.39N±0°.01×13°.39E±0°.01, h4km±1km, mb4.8/122, MS4.8/34, Error ellipse: s-maj=1.8km s-min=1.3km az=12.2*
*MOS **07** 09:26:29.5±0.9, 42°.43N×13°.38E, h16km, mb5.1/54, MS4.6/27, Error ellipse: s-maj=3.4km s-min=2.8km az=90.3*
*PRU **07** 09:26:30.1, 42°.40N×13°.46E, h0km, M4.9*
*CSEM **07** 09:26:30.0±0.1, 42°.40N×13°.34E, h5km, ML4.8, Mw4.9, Error ellipse: s-maj=2.2km s-min=1.5km az=22.0*
*TEH **07** 09:26:31.0, 42°.43N×13°.38E, h13km, ML4.8*
*GEN **07** 09:26:31.9, 42°.34N×13°.39E, h10km, ML4.8*
ISC 07 09:26:30.8±0.3, **42°.36N**±0°.02×**13°.34E**±0°.02, **h14**km±1km, **n1427**, σ**1**s**28**/1588, **mb4.9**/122, **MS4.8**/34, **237C-212D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	98	*e*Pg	Pg	09 26 30.1	-3.4
AQU	L'Aquila	0.05	98	Pg	Pg	09 26 30.7	-2.8
AQU				Sg	Sg	09 26 31.9	-3.4
AQU	L'Aquila	0.05	98	*e*Pg	Pg	09 26 30.1	-3.4
CAMP	Campotosto	0.18	17⇑	*i*Pg	Pg	09 26 33.5	-1.7
CAMP				Sg	Sg	09 26 36.6	-1.6
FIAM	Fiamignano	0.19	241⇑	*i*Pg	Pg	09 26 33.9	-1.3

FIAM				Sg	Sg	09 26 37.5	-0.7
FAGN	Fagnano	0.20	117	⇑Pg	Pg	09 26 32.9	-2.5
FAGN				Sg	Sg	09 26 35.8	-2.8
TERO	Teramo	0.33	37	Pg	Pg	09 26 35.2	-2.4
TERO				Sg	Sg	09 26 41.2	-0.9
PTQR	Pietraquaria	0.34	172	⇑Pg	Pg	09 26 35.4	-2.4
VCEL	Villa Celiera	0.37	85	Pg	Pg	09 26 35.9	-2.5
GAVE	Gavelli	0.47	315	Pg	Pg	09 26 39.3	-0.8
GAVE	Gavelli	0.47	315	Pg	Pg	09 26 39.3	-0.8
MNS	Montasola	0.49	273	Pg	Pg	09 26 39.1	-1.3
MNS	Montasola	0.49	273	Pg	Pg	09 26 39.1	-1.3
CERT	Cerreto	0.49	213	⇑Pg	Pg	09 26 38.5	-2.0
CERT				Sg	Sg	09 26 46.1	-0.9
NRCA	Norcia	0.50	341	⇑Pg	Pg	09 26 39.2	-1.5
NRCA	Norcia	0.50	341	⇑Pg	Pg	09 26 39.2	-1.5
VVLD	Villa Vallelon	0.53	157	Pg	Pg	09 26 38.4	-2.9
INTR	Introdacqua	0.55	129	⇑Pg	Pg	09 26 38.7	-2.9
INTR				Sg	Sg	09 26 46.7	-2.1
MTCE	Montecelio	0.56	233	⇑Pg	Pg	09 26 40.0	-1.7
MTCE				Sg	Sg	09 26 48.6	-0.5
GUAR	Guarcino	0.57	182	Pg	Pg	09 26 39.0	-2.9
TRTR	Tortoreto Alta	0.62	43	Pg	Pg	09 26 41.7	-1.2
TRTR	Tortoreto Alta	0.62	43	Pg	Pg	09 26 41.7	-1.2
OFFI	Offida	0.63	24	Pg	Pg	09 26 41.7	-1.4
OFFI	Offida	0.63	24	Pg	Pg	09 26 41.7	-1.4
POFI	Posta Fibreno	0.70	156	Pg	Pg	09 26 42.2	-2.2
FDMO	Fiordimonte	0.70	345	⇑Pg	Pg	09 26 42.6	-1.9
FDMO	Fiordimonte	0.70	345	⇑Pg	Pg	09 26 42.6	-1.9
CESI	CESI - Serrava	0.72	334	Pg	Pg	09 26 43.1	-1.7
CESI	CESI - Serrava	0.72	334	Pg	Pg	09 26 43.1	-1.7
RMP	Rome, Mte Porz	0.72	221	Pg	Pg	09 26 42.7	-2.2
SDI	San Donato	0.74	151	⇑Pg	Pg	09 26 41.8	-3.4
MA9	Marino	0.78	221	Pg	Pg	09 26 43.3	-2.6
GIUL	Giuliano Di Ro	0.80	184	Pg	Pg	09 26 43.3	-3.1
ROM9	Roma	0.81	229	Pg	Pg	09 26 44.4	-2.1
ROM9	Roma	0.81	229	Pg	Pg	09 26 44.4	-2.1
ASSB	Assisi San Ben	0.85	324	Pg	Pg	09 26 45.6	-1.6
ASSB	Assisi San Ben	0.85	324	Pg	Pg	09 26 45.6	-1.6
SNTG	Esanatoglia	0.94	342	Pg	Pb	09 26 46.8	-2.1
SNTG	Esanatoglia	0.94	342	Pg	Pg	09 26 46.8	-2.1
MIDA	Miranda	0.99	136	Pg	Pb	09 26 46.0	-3.8
CING	Cingoli	1.02	354	Pg	Pb	09 26 48.0	-2.3
CING	Cingoli	1.02	354	Pg	Pb	09 26 48.0	-2.3
MURB	Monte Urbino	1.08	327	Pg	Pb	09 26 50.0	-1.4
MURB	Monte Urbino	1.08	327	Pg	Pb	09 26 50.0	-1.4
ARVD	Arcevia	1.17	346	Pg	Pn	09 26 50.9	-1.9
ARVD	Arcevia	1.17	346	Pg	Pn	09 26 50.9	-1.9
AOI	Ancona	1.21	9	Pg	Pn	09 26 51.0	-2.3
AOI	Ancona	1.21	9	Pg	Pn	09 26 51.0	-2.3
SGG	Gregorio Mates	1.25	141	Pg	Pn	09 26 51.7	-2.1
PIEI	Pieia	1.31	334	Pg	Pn	09 26 53.9	-0.9
PIEI	Pieia	1.31	334	Pg	Pn	09 26 53.9	-0.9
MS1	Monte Sant'Ang	2.05	108	eSn	Sb	09 27 32.1	-1.0
NVLJ	Novalja	2.47	26	iPn	Pn	09 27 10.5	-0.1
NVLJ				Sn	Sn	09 27 41.6	+1.0
NVLJ	Novalja	2.47	26	iPn	Pn	09 27 10.5	-0.1
NVLJ				Sn	Sn	09 27 41.5	+1.0
CDT	Castel del Mon	2.54	119	ePn	Pn	09 27 11.9	+0.3
CDT				eSn	Sn	09 27 43.6	+1.2
MAIM	Mastiano	2.60	308	P	Pn	09 27 14.2	+1.8
VLC	Villacollemand	2.81	311	ePn	Pn	09 27 16.4	+1.1
VLC				eSn	Sb	09 27 52.4	-2.6
VLC	Villacollemand	2.81	311	ePn	Pn	09 27 16.4	+1.1
VLC				eSn	Sb	09 27 52.4	-2.6
BAI	Bari	2.93	114	ePn	Pn	09 27 17.1	+0.2
BAI				eSn	Sn	09 27 52.5	+0.6
GRAM	Graiana	3.20	313	P	Pn	09 27 22.2	+1.5
PGF	Pioggiola	3.22	275	ePn	Pn	09 27 21.0	0.0
PGF				eSn	Sn	09 28 01.8	+2.7
	415nm,0.7s						
PGF	Pioggiola	3.22	275	eP	Pn	09 27 21.0	0.0
PGF				e		09 28 01.8	
PGF	Pioggiola	3.22	275	ePn	Pn	09 27 21.0	0.0
PGF				eSn	Sn	09 28 01.8	+2.7
PGF	Pioggiola	3.22	275	ePn	Pn	09 27 21.0	0.0
PGF				eSn	Sn	09 28 01.8	+2.7
	207nm,0.7s						
SKDS	Skadanscina	3.22	8	ePn	Pn	09 27 20.2	-0.8
SKDS	Skadanscina	3.22	8	ePn	Pn	09 27 20.2	-0.8
KNDS	Knezji Dol	3.25	13	iPn	Pn	09 27 21.1	-0.4
KNDS	Knezji Dol	3.25	13	iPn	Pn	09 27 21.1	-0.4
STON	Ston	3.26	80	iPn	Pn	09 27 21.3	-0.2
STON				Sn	Sn	09 27 58.6	-1.5
STON	Ston	3.26	80	iPn	Pn	09 27 21.2	-0.2
STON				Sn	Sn	09 27 58.5	-1.5
TRI	Trieste	3.36	5	eP	Pn	09 27 22.4	-0.5
TRI	Trieste	3.36	5	ePn	Pn	09 27 22.4	-0.5
TRI	Trieste	3.36	5	ePn	Pn	09 27 22.4	-0.5
BOJS	Bojanci	3.43	23	⇓iPn	Pn	09 27 24.4	+0.6
BOJS	Bojanci	3.43	23	⇓iPn	Pn	09 27 24.4	+0.6
SC2M	Scurtabo	3.44	308	P	Pn	09 27 24.6	+0.5
BLY	Banja Luka	3.68	48	ePn	Pn	09 27 28.8	+1.6
BLY	Banja Luka	3.68	48	ePn	Pn	09 27 28.8	+1.6
LJU	Ljubljana	3.78	13	ePn	Pn	09 27 29.3	+0.7
HCY	Herceg Novi	3.82	87	⇑iPn	Pn	09 27 28.6	-0.5
HCY				eSn	Sn	09 28 16.1	+2.2
HCY	Herceg Novi	3.82	87	⇓P	Pn	09 27 28.7	-0.5
HCY				S	Sn	09 28 14.1	+0.2
HCY	Herceg Novi	3.82	87	⇓P	Pn	09 27 28.7	-0.5
HCY				S	Sn	09 28 14.1	+0.2
HCY	Herceg Novi	3.82	87	P	Pn	09 27 28.7	-0.5
HCY				S	Sn	09 28 14.1	+0.2
HCY				eSn	Sn	09 28 16.1	+2.2
BRY	Bratogost	3.88	80	⇑iPn	Pn	09 27 29.5	-0.6
BRY				eSn	Sn	09 28 17.4	+2.0
BRY	Bratogost	3.88	80	⇑P	Pn	09 27 29.5	-0.6
BRY				S	Sn	09 28 15.9	+0.4
BRY	Bratogost	3.88	80	⇑P	Pn	09 27 29.5	-0.6
BRY				S	Sn	09 28 15.9	+0.4
BRY	Bratogost	3.88	80	⇑iPn	Pn	09 27 29.5	-0.6
BRY				S	Sn	09 28 15.9	+0.4
BRY				eSn	Sn	09 28 17.4	+2.0
TIP	Timpagrande	4.10	140	ePn	Pn	09 27 34.4	+1.2
TIP	Timpagrande	4.10	140	ePn	Pn	09 27 34.4	+1.2
PCP	Piancastagn	4.12	304	P	Pn	09 27 34.7	+1.4
BUM	Brajici-Budva	4.12	89	⇓iPn	Pn	09 27 33.0	-0.3
BUM				eSn	Sn	09 28 22.5	+1.1
BUM	Brajici-Budva	4.12	89	⇓iPn	Pn	09 27 33.0	-0.3
BUM				eSn	Sn	09 28 22.5	+1.1
VSL	Villasalto	4.15	228	ePn	Pn	09 27 32.8	-0.9
VSL				eSn	Sn	09 28 23.4	+1.5
VSL	Villasalto	4.15	228	ePn	Pn	09 27 32.8	-0.9
VSL				eSn	Sn	09 28 23.4	+1.5
UPM	Unac-Piva	4.18	77	⇑iPn	Pn	09 27 34.8	+0.5
UPM				eSn	Sn	09 28 25.3	+2.2
UPM	Unac-Piva	4.18	77	⇑iPn	Pn	09 27 34.8	+0.5
UPM				eSn	Sn	09 28 25.3	+2.2
NKY	Niksic	4.20	82	⇑iPn	Pn	09 27 34.6	+0.1
NKY				eSn	Sn	09 28 25.0	+1.6
NKY	Niksic	4.20	82	⇓P	Pn	09 27 34.6	+0.1
NKY				S	Sn	09 28 23.5	+0.1
NKY	Niksic	4.20	82	⇓P	Pn	09 27 34.6	+0.1
NKY				S	Sn	09 28 23.5	+0.1
NKY	Niksic	4.20	82	⇑iPn	Pn	09 27 34.6	+0.1
NKY				S	Sn	09 28 23.5	+0.1
NKY				eSn	Sb	09 28 25.0	-10
MYKA	Terra Mystica	4.27	3	⇓iPn	Pn	09 27 33.5	-2.0
MYKA	Terra Mystica	4.27	3	⇓iPn	Pn	09 27 33.5	-2.0
MYKA	Terra Mystica	4.27	3	⇓iPn	Pn	09 27 33.5	-2.0
PDG	Podgorica	4.38	87	⇑iPn	Pn	09 27 36.7	-0.1
PDG				eSn	Sn	09 28 28.1	+0.4
PDG	Podgorica	4.38	87	⇓iPn	Pn	09 27 36.8	-0.1
PDG				eSn	Sn	09 28 29.2	+1.5
TTG	Podgorica	4.38	87	⇓iPn	Pn	09 27 36.8	-0.1
TTG				eSn	Sn	09 28 29.2	+1.5
TTG	Podgorica	4.38	87	⇑P	Pn	09 27 36.6	-0.3
TTG				S	Sn	09 28 28.3	+0.6
TTG	Podgorica	4.38	87	⇑P	Pn	09 27 36.6	-0.3
TTG				S	Sn	09 28 28.3	+0.6
TTG	Podgorica	4.38	87	P	Pn	09 27 36.6	-0.3
TTG				S	Sn	09 28 28.3	+0.6
ULC	Ulcinj	4.41	93	⇓iPn	Pn	09 27 37.1	-0.2
ULC				eSn	Sn	09 28 29.7	+1.3
ULC	Ulcinj	4.41	93	⇓P	Pn	09 27 37.1	-0.2
ULC				S	Sn	09 28 28.2	-0.2
ULC	Ulcinj	4.41	93	⇓P	Pn	09 27 37.1	-0.2
ULC				S	Sn	09 28 28.2	-0.2
ULC	Ulcinj	4.41	93	⇓iPn	Pn	09 27 37.1	-0.2
ULC				S	Sn	09 28 28.2	-0.2

ULC				eSn	Sn	09 28 29.7	+1.3
ABTA	Abfaltersbach	4.43	353	⇑iPn	Pn	09 27 37.2	-0.4
	SNR=18						
ABTA	Abfaltersbach	4.43	353	⇑iPn	Pn	09 27 37.2	-0.4
ABTA	Abfaltersbach	4.43	353	⇑iPn	Pn	09 27 37.2	-0.4
SAOF	Saorge	4.53	293	P	Pn	09 27 39.8	+0.8
SAOF	Saorge	4.53	293	P	Pn	09 27 39.8	+0.8
SAOF	Saorge	4.53	293	P	Pn	09 27 39.8	+0.8
SAOF	Saorge	4.53	293	P	Pn	09 27 39.8	+0.8
CEL	Celeste	4.54	154	ePn	Pn	09 27 38.7	-0.4
CEL	Celeste	4.54	154	ePn	Pn	09 27 38.7	-0.4
PLE	Pljevlja	4.55	76	⇓iPn	Pn	09 27 40.4	+1.0
PLE				eSn	Sn	09 28 34.0	+1.9
PLE	Pljevlja	4.55	76	⇓P	Pn	09 27 39.9	+0.5
PLE				S	Sn	09 28 33.2	+1.1
PLE	Pljevlja	4.55	76	⇓P	Pn	09 27 39.9	+0.5
PLE				S	Sn	09 28 33.2	+1.1
PLE	Pljevlja	4.55	76	P	Pn	09 27 39.9	+0.5
PLE	Pljevlja	4.55	76	⇓iPn	Pn	09 27 40.4	+1.0
PLE				S	Sn	09 28 33.2	+1.1
PLE				eSn	Sn	09 28 34.0	+1.9
SBF	Sospel	4.58	291	ePn	Pn	09 27 40.1	+0.5
SBF				eSn	Sn	09 28 30.2	-2.4
	275nm,0.7s						
SBF	Sospel	4.58	291	eP	Pn	09 27 40.1	+0.5
SBF				e		09 28 30.2	
SBF	Sospel	4.58	291	ePn	Pn	09 27 40.1	+0.5
SBF				eSn	Sn	09 28 30.2	-2.4
SBF	Sospel	4.58	291	ePn	Pn	09 27 40.1	+0.5
SBF				eSn	Sn	09 28 30.2	-2.4
	137nm,0.7s						
REVF	Revere	4.59	290	P	Pn	09 27 40.0	+0.2
REVF	Revere	4.59	290	P	Pn	09 27 40.0	+0.2
REVF	Revere	4.59	290	P	Pn	09 27 40.0	+0.2
REVF	Revere	4.59	290	P	Pn	09 27 40.0	+0.2
AUTN	L'Aution	4.62	293	P	Pn	09 27 41.5	+1.1
AUTN	L'Aution	4.62	293	P	Pn	09 27 41.5	+1.1
AUTN	L'Aution	4.62	293	P	Pn	09 27 41.5	+1.1
AUTN	L'Aution	4.62	293	P	Pn	09 27 41.5	+1.1
KBA	Koelnbreinsper	4.72	0	⇑iP	Pn	09 27 41.8	+0.2
KBA	Koelnbreinsper	4.72	0	⇑iPn	Pn	09 27 41.8	+0.2
KBA	Koelnbreinsper	4.72	0	⇑iPn	Pn	09 27 41.8	+0.2
KBA	Koelnbreinsper	4.72	0	⇑iPn	Pn	09 27 41.8	+0.2
TOUF	Mont Tournerai	4.75	292	P	Pn	09 27 43.1	+1.0
TOUF	Mont Tournerai	4.75	292	P	Pn	09 27 43.1	+1.0
TOUF	Mont Tournerai	4.75	292	P	Pn	09 27 43.1	+1.0
TOUF	Mont Tournerai	4.75	292	P	Pn	09 27 43.1	+1.0
STV	Sant Anna di V	4.78	295	P	Pn	09 27 42.2	-0.2
MVIF	Mont Vial	4.78	291	P	Pn	09 27 43.2	+0.7
MVIF	Mont Vial	4.78	291	P	Pn	09 27 43.2	+0.7
MVIF	Mont Vial	4.78	291	P	Pn	09 27 43.2	+0.7
MVIF	Mont Vial	4.78	291	P	Pn	09 27 43.2	+0.7
BEHE	Becsehely	4.79	30	⇓e	Pn	09 27 40.5	-2.0
BEY	Berane	4.86	82	⇑iPn	Pn	09 27 44.9	+1.3
BEY				eSn	Sn	09 28 41.5	+1.7
IVA	Berane	4.86	82	⇑iPn	Pn	09 27 44.9	+1.3
IVA				eSn	Sn	09 28 41.5	+1.7
PVY	Plav	4.90	85	⇑iPn	Pn	09 27 45.1	+0.9
PVY				eSn	Sn	09 28 42.9	+2.2
CALN	Calern	4.93	289	P	Pn	09 27 45.0	+0.5
CALN	Calern	4.93	289	P	Pn	09 27 45.0	+0.5
CALN	Calern	4.93	289	P	Pn	09 27 45.0	+0.5
CALN	Calern	4.93	289	P	Pn	09 27 45.0	+0.5
SJES	Sjenica	4.96	77	⇑iPn	Pn	09 27 44.6	-0.4
TEKS	Tekeris	5.01	62	iPn	Pn	09 27 44.6	-0.9
TEKS	Tekeris	5.01	62	iPn	Pn	09 27 44.6	-0.9
FETA	Feichten	5.02	339	⇑iPn	Pn	09 27 45.9	+0.1
	SNR=15						
FETA	Feichten	5.02	339	⇑iPn	Pn	09 27 45.9	+0.1
FETA	Feichten	5.02	339	⇑iPn	Pn	09 27 45.9	+0.1
WTTA	Wattenberg	5.05	347	⇑iP	Pn	09 27 47.7	+1.4
WTTA	Wattenberg	5.05	347	⇑iPn	Pn	09 27 47.7	+1.4
	SNR=7.1						
WTTA	Wattenberg	5.05	347	⇑iPn	Pn	09 27 47.7	+1.4
WTTA	Wattenberg	5.05	347	⇑iPn	Pn	09 27 47.7	+1.4
FRF	La Foret Royal	5.05	286	ePn	Pn	09 27 45.7	-0.4
	SNR=1.0						
FRF				eSn	Sn	09 28 41.7	-2.6
	75nm,0.6s						
FRF	La Foret Royal	5.05	286	eP	Pn	09 27 45.7	-0.4
FRF				e		09 28 41.7	
FRF	La Foret Royal	5.05	286	ePn	Pn	09 27 45.7	-0.4
FRF				eSn	Sn	09 28 41.7	-2.6
FRF	La Foret Royal	5.05	286	ePn	Pn	09 27 45.7	-0.4
	SNR=1.0						
FRF				eSn	Sn	09 28 41.7	-2.6
	38nm,0.6s						
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	09 27 48.3	+1.9
DAVOX				Sn	Sn	09 28 44.4	-0.4
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	09 27 48.3	+1.9
	24nm,0.3s,baz=150,slow=17,SNR=17						
DAVOX				Sn	Sn	09 28 44.4	-0.4
	baz=301,slow=19,SNR=2.3						
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	09 27 48.3	+1.9
DAVOX				Sn	Sn	09 28 44.4	-0.4
LMR	La Mourre	5.11	283	ePn	Pn	09 27 46.7	-0.2
	SNR=1.0						
LMR				eSn	Sn	09 28 42.5	-3.3
	63nm,0.6s						
LMR	La Mourre	5.11	283	eP	Pn	09 27 46.7	-0.2
LMR				e		09 28 42.5	
LMR	La Mourre	5.11	283	ePn	Pn	09 27 46.7	-0.2
LMR				eSn	Sn	09 28 42.5	-3.3
LMR	La Mourre	5.11	283	ePn	Pn	09 27 46.7	-0.2
	SNR=1.0						
LMR				eSn	Sn	09 28 42.5	-3.3
	32nm,0.6s						
WATA	Walderalm	5.13	346	⇓iP	Pn	09 27 47.5	+0.2
WATA	Walderalm	5.13	346	⇓iPn	Pn	09 27 47.5	+0.2
	SNR=9.1						
WATA	Walderalm	5.13	346	⇓iPn	Pn	09 27 47.5	+0.2
WATA	Walderalm	5.13	346	⇓iPn	Pn	09 27 47.5	+0.2
ARSA	Arzberg	5.13	17	ePn	Pn	09 27 46.4	-0.8
ARSA	Arzberg	5.13	17	ePn	Pn	09 27 46.4	-0.8
IVAS	Ivanjica	5.14	74	⇓iPn	Pn	09 27 47.2	-0.2
IVAS	Ivanjica	5.14	74	⇓iPn	Pn	09 27 47.2	-0.2
DIVS	Divibare	5.16	68	⇑iPn	Pn	09 27 47.1	-0.6
DIVS				eSn	Sn	09 28 50.2	+3.1
DIVS	Divibare	5.16	68	⇑iPn	Pn	09 27 47.1	-0.6
DIVS				eSn	Sn	09 28 50.2	+3.1
SURF	Saint Ours	5.20	296	P	Pn	09 27 50.3	+1.9
SURF	Saint Ours	5.20	296	P	Pn	09 27 50.3	+1.9
SURF	Saint Ours	5.20	296	P	Pn	09 27 50.3	+1.9
RSP	Reno Superiore	5.21	304	P	Pn	09 27 48.4	+0.1
MOTA	Moosalm	5.23	343	⇑iP	Pn	09 27 47.8	-0.9
MOTA	Moosalm	5.23	343	⇑iPn	Pn	09 27 47.8	-0.9
	SNR=9.9						
MOTA	Moosalm	5.23	343	⇑iPn	Pn	09 27 47.8	-0.9
MOTA	Moosalm	5.23	343	⇑iPn	Pn	09 27 47.8	-0.9
MBDF	Montbardon	5.33	299	eP	Pn	09 27 52.0	+2.0
MBDF	Montbardon	5.33	299	eP	Pn	09 27 52.0	+2.0
MBDF	Montbardon	5.33	299	eP	Pn	09 27 52.0	+2.0
MBDF	Montbardon	5.33	299	eP	Pn	09 27 52.0	+2.0
RJOB	Jochberg	5.39	356	ePn	Pn	09 27 51.4	+0.6
PKSM	Moragy	5.41	43	⇑P	Pn	09 27 51.6	+0.5
PKSM	Moragy	5.41	43	⇑iP	Pn	09 27 51.5	+0.5
PKSM	Moragy	5.41	43	⇑ePn	Pn	09 27 50.1	-0.9
PKSM	Moragy	5.41	43	P	Pn	09 27 51.6	+0.5
RETA	Reutte	5.44	341	⇑iPn	Pn	09 27 53.3	+1.8
	SNR=9.7						
RETA	Reutte	5.44	341	⇑iPn	Pn	09 27 53.3	+1.8
RETA	Reutte	5.44	341	⇑iPn	Pn	09 27 53.3	+1.8
TRUS	Trudelj	5.48	68	iPn	Pn	09 27 50.3	-1.7
TRUS				eSn	Sn	09 28 56.0	+1.1
TRUS	Trudelj	5.48	68	iPn	Pn	09 27 50.3	-1.7
TRUS				eSn	Sn	09 28 56.0	+1.1
DAVA	Damuels	5.50	335	⇑iPn	Pn	09 27 54.0	+1.5
	SNR=12						
DAVA	Damuels	5.50	335	⇑iPn	Pn	09 27 54.0	+1.5
DAVA	Damuels	5.50	335	⇑iPn	Pn	09 27 54.0	+1.5
PKS9	Tamasi	5.51	38	epPn	Pn	09 27 52.6	+0.2
PKS9	Tamasi	5.51	38	eP	Pn	09 27 52.6	+0.2
BNI	Bardonecchia	5.53	301	eP	Pn	09 27 54.9	+2.2
BNI	Bardonecchia	5.53	301	ePn	Pn	09 27 54.9	+2.2
BNI	Bardonecchia	5.53	301	ePn	Pn	09 27 54.9	+2.2
MOA	Molln	5.53	6	⇑iPn	Pn	09 27 52.7	+0.1
	SNR=15						
MOA	Molln	5.53	6	⇑iPn	Pn	09 27 52.7	+0.1
MOA	Molln	5.53	6	⇑iPn	Pn	09 27 52.7	+0.1
KEK	Kerkira	5.55	116	P	Pn	09 27 53.4	+0.4
KEK	Kerkira	5.55	116	eP	Pn	09 27 53.5	+0.4

KEK	Kerkira	5.55	116	P	Pn	09 27 53.4	+0.4
GRUS	Gruza	5.61	72	⇑iPn	Pn	09 27 53.3	-0.5
GRUS	Gruza	5.61	72	⇑iPn	Pn	09 27 53.3	-0.5
LPG	La Plagne	5.70	306	eP	Pn	09 27 58.0	+2.8
LPG				eSn	Sn	09 28 57.7	-2.8
	326nm,1.0s						
LPG	La Plagne	5.70	306	eP	Pn	09 27 58.0	+2.8
LPG				e		09 28 57.7	
LPG	La Plagne	5.70	306	eP	Pn	09 27 58.0	+2.8
LPG				eSn	Sn	09 28 57.7	-2.8
LPL	La Plagne	5.72	306	eP	Pn	09 27 57.6	+2.1
LPL				eSn	Sn	09 28 57.1	-3.9
	90nm,0.7s,SNR=1.0						
LPL	La Plagne	5.72	306	eP	Pn	09 27 57.6	+2.1
LPL				e		09 28 57.1	
LPL	La Plagne	5.72	306	eP	Pn	09 27 57.6	+2.1
LPL				eSn	Sn	09 28 57.1	-3.9
LPL	La Plagne	5.72	306	eP	Pn	09 27 57.6	+2.1
SELS	Selova	5.79	79	iPn	Pn	09 27 55.7	-0.6
SELS	Selova	5.79	79	iPn	Pn	09 27 55.7	-0.6
SOP	Sopron	5.79	22	⇑ePn	Pn	09 27 55.4	-0.8
SOP	Sopron	5.79	22	⇑eP	Pn	09 27 55.4	-0.8
CONA	Conrad Observa	5.85	17	⇓iPn	Pn	09 27 56.5	-0.6
CONA	Conrad Observa	5.85	17	⇓iPn	Pn	09 27 56.5	-0.6
CONA	Conrad Observa	5.85	17	⇓iPn	Pn	09 27 56.5	-0.6
PKS2	Kecel	5.89	44	epPn	Pn	09 27 58.9	+1.3
PKS2	Kecel	5.89	44	eP	Pn	09 27 58.9	+1.3
SMRF	Simiane la Rot	5.90	288	eP	Pn	09 27 59.3	+1.5
SMRF	Simiane la Rot	5.90	288	eP	Pn	09 27 59.3	+1.5
SMRF	Simiane la Rot	5.90	288	eP	Pn	09 27 59.3	+1.5
PKST	T's	5.93	33	epPn	Pn	09 27 57.9	-0.2
PKST	T's	5.93	33	eP	Pn	09 27 57.9	-0.2
ORIF	Oris-en-Rattie	5.99	298	eP	Pn	09 28 02.5	+3.5
ORIF	Oris-en-Rattie	5.99	298	eP	Pn	09 28 02.5	+3.5
ORIF	Oris-en-Rattie	5.99	298	eP	Pn	09 28 02.5	+3.5
IGT	Igoumenitsa	6.00	116	P	Pn	09 27 59.2	0.0
IGT	Igoumenitsa	6.00	116	P	Pn	09 27 59.2	0.0
SKO	Skopje	6.03	91	P	Pn	09 28 00.2	+0.6
SKO	Skopje	6.03	91	ePn	Pn	09 28 00.2	+0.6
SKO	Skopje	6.03	91	P	Pn	09 28 00.2	+0.6
SKO	Skopje	6.03	91	ePn	Pn	09 28 00.7	+1.1
NEST	Nestorio	6.12	106	P	Pn	09 28 01.4	+0.6
NEST	Nestorio	6.12	106	P	Pn	09 28 01.4	+0.6
BIA	Bitola	6.13	100	ePn	Pn	09 28 01.6	+0.6
BIA	Bitola	6.13	100	ePn	Pn	09 28 01.5	+0.6
PKSG		6.18	34	epPn	Pn	09 28 03.4	+1.9
PKSG		6.18	34	eP	Pn	09 28 03.4	+1.9
GRN	Grenoble	6.20	300	P	Pn	09 28 04.0	+2.0
GRN	Grenoble	6.20	300	P	Pn	09 28 04.0	+2.0
GRN	Grenoble	6.20	300	P	Pn	09 28 04.0	+2.0
GRN	Grenoble	6.20	300	P	Pn	09 28 04.0	+2.0
FNA	Florina	6.23	102	P	Pn	09 28 01.5	-0.9
FNA	Florina	6.23	102	P	Pn	09 28 01.5	-0.9
BARS	Barje	6.27	83	⇑iPn	Pn	09 28 02.2	-0.7
BARS				eSn	Sn	09 29 13.2	-1.2
JAN	Janina	6.29	113	P	Pn	09 28 03.7	+0.5
JAN	Janina	6.29	113	eP	Pn	09 28 04.0	+0.8
JAN	Janina	6.29	113	P	Pn	09 28 03.7	+0.5
GEC2	GERESS Array S	6.49	2	eP	Pn	09 28 04.9	-1.0
GEC2	GERESS Array S	6.49	2	ePn	Pn	09 28 04.9	-1.0
GEC2	GERESS Array S	6.49	2	eP	Pn	09 28 04.9	-1.0
GERES	GERESS Array B	6.49	2	Pn	Pn	09 28 05.3	-0.6
GERES				Sn	Sn	09 29 17.6	-2.2
GERES	GERESS Array B	6.49	2	Pn	Pn	09 28 05.3	-0.6
	7.8nm,0.3s,baz=174,slow=12,SNR=27						
GERES				Sn	Sn	09 29 17.6	-2.2
	14nm,0.3s,baz=176,slow=22,SNR=8.6						
GERES	GERESS Array B	6.49	2	P	Pn	09 28 05.4	-0.6
	8.0nm,0.3s						
GERES				Sn	Sn	09 29 17.6	-2.2
PKSN	Nyarlorinc	6.50	44	epPn	Pn	09 28 08.4	+2.4
BUD	Budapest	6.52	36	⇑epPn	Pn	09 28 08.7	+2.5
BBS	Basel-Blauen	6.57	323	P	Pn	09 28 06.4	-0.6
BBS	Basel-Blauen	6.57	323	P	Pn	09 28 06.4	-0.6
BBS	Basel-Blauen	6.57	323	P	Pn	09 28 06.4	-0.6
LKD2	Lefkada island	6.62	120	P	Pn	09 28 07.8	+0.2
LKD2	Lefkada island	6.62	120	eP	Pn	09 28 08.6	+1.0
LKD2	Lefkada island	6.62	120	P	Pn	09 28 07.8	+0.2
KZN	Kozani	6.67	105	P	Pn	09 28 08.2	-0.2
KZN	Kozani	6.67	105	eP	Pn	09 28 09.3	+0.9
KZN	Kozani	6.67	105	P	Pn	09 28 08.2	-0.2
FELD	Feldberg im Sc	6.68	327	P	Pn	09 28 08.2	-0.4
FELD	Feldberg im Sc	6.68	327	P	Pn	09 28 08.2	-0.4
CABF	La Chapelle	6.70	312	ePn	Pn	09 28 09.3	+0.4
CABF	La Chapelle	6.70	312	eP	Pn	09 28 09.3	+0.4
CABF	La Chapelle	6.70	312	ePn	Pn	09 28 09.3	+0.4
CABF	La Chapelle	6.70	312	ePn	Pn	09 28 09.3	+0.4
VIVF	Saint-Julien-l	6.77	295	ePn	Pn	09 28 11.1	+1.4
VIVF	Saint-Julien-l	6.77	295	eP	Pn	09 28 11.1	+1.4
VIVF	Saint-Julien-l	6.77	295	ePn	Pn	09 28 11.1	+1.4
VIVF	Saint-Julien-l	6.77	295	ePn	Pn	09 28 11.1	+1.4
KHC	Kasperske Hory	6.77	1	ePN	Pn	09 28 09.0	-0.8
KHC				ex	x	09 28 18.0	
KHC				eSN	Sn	09 29 22.8	-3.9
KHC				ex	x	09 29 39.5	
KHC				AMS	AMS	09 31 00.0	
	comp=Z,4µm,11.8s						
KHC	Kasperske Hory	6.77	1	Pn	Pn	09 28 09.0	-0.8
SMOL	Smolenice	6.79	24	ePN	Pn	09 28 12.0	+2.0
SMOL				ePG	Pg	09 28 43.6	+2.9
SMOL				eSN	Sn	09 29 20.0	-7.1
SMOL	Smolenice	6.79	24	ePn	Pn	09 28 12.0	+2.0
WET	Wettzell	6.79	357	eP	Pn	09 28 10.5	+0.5
WET	Wettzell	6.79	357	ePn	Pn	09 28 10.5	+0.5
WET	Wettzell	6.79	357	eP	Pn	09 28 10.5	+0.5
BZS	Buzias	6.80	59	⇓P	Pn	09 28 11.4	+1.3
BZS	Buzias	6.80	59	⇓iP	Pn	09 28 11.4	+1.3
BZS	Buzias	6.80	59	ePn	Pn	09 28 08.9	-1.2
BZS	Buzias	6.80	59	ePn	Pn	09 28 08.9	-1.2
BZS	Buzias	6.80	59	P	Pn	09 28 11.4	+1.3
LOMF	Lomont	6.80	319	P	Pn	09 28 10.7	+0.5
LOMF	Lomont	6.80	319	P	Pn	09 28 10.7	+0.5
LOMF	Lomont	6.80	319	P	Pn	09 28 10.7	+0.5
LOMF	Lomont	6.80	319	P	Pn	09 28 10.7	+0.5
ZAPS	Zavoj	6.90	79	iPn	Pn	09 28 11.7	+0.2
ZAPS	Zavoj	6.90	79	iPn	Pn	09 28 11.7	+0.2
BFO	Black Forest	6.93	331	eP	Pn	09 28 12.2	+0.3
BFO	Black Forest	6.93	331	ePn	Pn	09 28 12.2	+0.3
BFO	Black Forest	6.93	331	ePn	Pn	09 28 11.8	-0.1
BFO				eSn	Sn	09 29 30.8	+0.2
BFO	Black Forest	6.93	331	ePn	Pn	09 28 11.8	-0.1
BFO	Black Forest	6.93	331	eP	Pn	09 28 12.2	+0.3
BFO				eSn	Sn	09 29 30.8	+0.2
VLS	Valsamata	6.94	125	P	Pn	09 28 12.8	+0.7
VLS	Valsamata	6.94	125	eP	Pn	09 28 12.8	+0.7
VLS	Valsamata	6.94	125	P	Pn	09 28 12.8	+0.7
VAY	Valandovo	6.97	95	P	Pn	09 28 11.1	-1.4
VAY	Valandovo	6.97	95	ePn	Pn	09 28 11.4	-1.1
VAY	Valandovo	6.97	95	P	Pn	09 28 11.1	-1.4
VAY	Valandovo	6.97	95	ePn	Pn	09 28 11.8	-0.7
SSB	Saint Sauveur	7.00	298	eP	Pn	09 28 15.1	+2.2
SSB				pmax	pmax		
	comp=Z,51nm,0.8s						
SSB	Saint Sauveur	7.00	298	ePn	Pn	09 28 15.1	+2.2
	comp=Z,51nm,0.8s						
SSB	Saint Sauveur	7.00	298	P	Pn	09 28 14.9	+2.0
SSB	Saint Sauveur	7.00	298	ePn	Pn	09 28 15.1	+2.2
	comp=Z,51nm,0.8s						
MOF	Molkenrain	7.03	323	P	Pn	09 28 13.0	-0.3
MOF	Molkenrain	7.03	323	P	Pn	09 28 13.0	-0.3
MOF	Molkenrain	7.03	323	P	Pn	09 28 13.0	-0.3
MOF	Molkenrain	7.03	323	P	Pn	09 28 13.0	-0.3
STU	Stuttgart	7.04	337	eP	Pn	09 28 14.1	+0.7
STU	Stuttgart	7.04	337	ePn	Pn	09 28 14.1	+0.7
STU	Stuttgart	7.04	337	ePn	Pn	09 28 14.1	+0.7
TREC	Trest	7.10	11	eP	Pn	09 28 13.1	-1.1
TREC				e		09 29 30.8	
TREC				MLR	MLR		
	comp=Z,7µm,11.8s						
TREC	Trest	7.10	11	ePN	Pn	09 28 13.1	-1.1
TREC				eSN	Sn	09 29 30.8	-3.8
TREC				AMS	AMS	09 31 10.0	
	comp=Z,7µm,11.8s						
TREC	Trest	7.10	11	Pn	Pn	09 28 13.1	-1.1
KFL	Anninata	7.11	124	P	Pn	09 28 15.3	+1.0
KFL	Anninata	7.11	124	P	Pn	09 28 15.3	+1.0
HINF	Hinteralfeld	7.13	322	ePn	Pn	09 28 13.9	-0.7
	SNR=1.0						
HINF				eSn	Sn	09 29 30.1	-5.3
	comp=Z,286nm,0.8s						
HINF	Hinteralfeld	7.13	322	eP	Pn	09 28 13.9	-0.7

HINF				e		09 29 30.1	
HINF	Hinteralfeld	7.13	322	ePn	Pn	09 28 13.9	-0.7
HINF				eSn	Sn	09 29 30.1	-5.3
HINF	Hinteralfeld	7.13	322	ePn	Pn	09 28 13.9	-0.7
	SNR=1.0						
THL	Klokotos Trika	7.13	110	eP	Pn	09 28 16.5	+1.8
PSZ	Piszkesteto	7.24	38	eP	Pn	09 28 17.3	+1.2
PSZ	Piszkesteto	7.24	38	ePn	Pn	09 28 17.3	+1.2
PSZ	Piszkesteto	7.24	38	⇑iP	Pn	09 28 16.5	+0.4
PSZ	Piszkesteto	7.24	38	⇑ePn	Pn	09 28 14.9	-1.2
PSZ	Piszkesteto	7.24	38	⇑eP	Pn	09 28 14.9	-1.2
PSZ	Piszkesteto	7.24	38	ePn	Pn	09 28 17.3	+1.2
VYHS	Vyhne	7.25	30	ePN	Pn	09 28 16.7	+0.4
VYHS				ePG	Pg	09 28 55.1	+5.6
VYHS				eSN	Sn	09 29 31.4	-6.9
VYHS				eSG	Sg	09 30 37.5	+14
VYHS	Vyhne	7.25	30	ePn	Pn	09 28 16.7	+0.4
LIT	Litokhoron	7.26	105	P	Pn	09 28 15.2	-1.2
LIT	Litokhoron	7.26	105	eP	Pn	09 28 15.6	-0.8
LIT	Litokhoron	7.26	105	P	Pn	09 28 15.2	-1.2
ECH	Echery	7.30	325	eP	Pn	09 28 15.8	-1.1
ECH				pmax	pmax		
	comp=Z,29nm,0.6s						
ECH	Echery	7.30	325	ePn	Pn	09 28 15.8	-1.1
	comp=Z,29nm,0.6s						
ECH	Echery	7.30	325	P	Pn	09 28 16.4	-0.5
ECH	Echery	7.30	325	ePn	Pn	09 28 15.8	-1.1
	comp=Z,29nm,0.6s						
EVR	Evrytania	7.30	115	P	Pn	09 28 19.2	+2.1
EVR	Evrytania	7.30	115	eP	Pn	09 28 19.1	+2.0
EVR	Evrytania	7.30	115	P	Pn	09 28 19.2	+2.1
VTS	Vitosha	7.30	85	P	Pn	09 28 17.1	-0.1
VTS	Vitosha	7.30	85	⇓P	Pn	09 28 17.1	-0.1
VTS	Vitosha	7.30	85	⇓iP	Pn	09 28 17.1	-0.1
VTS	Vitosha	7.30	85	⇑iPn	Pn	09 28 17.0	-0.1
VTS	Vitosha	7.30	85	P	Pn	09 28 17.1	-0.1
VRAC	Vranov	7.31	17	Pn	Pn	09 28 16.6	-0.5
VRAC				Sn	Sn	09 29 37.7	-2.2
VRAC	Vranov	7.31	17	⇓iP	Pn	09 28 17.0	-0.1
VRAC	Vranov	7.31	17	Pn	Pn	09 28 16.6	-0.5
	comp=Z,2.5nm,0.3s,baz=208,slow=14,SNR=6.4						
VRAC				Sn	Sn	09 29 37.7	-2.2
	comp=Z,2.8nm,0.3s,baz=288,slow=20,SNR=2.4						
VRAC				LR	LR	09 30 55.0	
	comp=Z,1µm,20.1s,baz=205,slow=37						
VRAC	Vranov	7.31	17	Pn	Pn	09 28 16.6	-0.5
VRAC	Vranov	7.31	17	P	Pn	09 28 17.0	-0.1
VRAC				Sn	Sn	09 29 37.7	-2.2
KEST	Kesra	7.31	206	ePn	Pn	09 28 20.2	+3.0
KEST				Sn	Sn	09 29 39.6	-0.4
KEST	Kesra	7.31	206	Pn	Pn	09 28 19.9	+2.7
	comp=Z,22nm,0.3s,baz=307,slow=3.9,SNR=201						
KEST				Sn	Sn	09 29 39.6	-0.4
	baz=180,slow=20,SNR=1.3						
KEST				LR	LR	09 31 18.6	
	comp=Z,2µm,19.6s,baz=347,slow=40						
KEST	Kesra	7.31	206	ePn	Pn	09 28 20.2	+3.0
KEST				Sn	Sn	09 29 39.6	-0.4
CMAH	Djebel Manchou	7.33	221	P	Pn	09 28 20.2	+2.7
CMAH	Djebel Manchou	7.33	221	P	Pn	09 28 20.2	+2.7
CDF	Champ du Feu	7.40	327	ePn	Pn	09 28 17.5	-0.9
	SNR=1.0						
CDF				eSn	Sn	09 29 36.2	-6.0
	comp=Z,117nm,0.6s						
CDF	Champ du Feu	7.40	327	eP	Pn	09 28 17.5	-0.9
CDF				e		09 29 36.2	
CDF	Champ du Feu	7.40	327	ePn	Pn	09 28 17.5	-0.9
CDF				eSn	Sn	09 29 36.2	-6.0
CDF	Champ du Feu	7.40	327	ePn	Pn	09 28 17.5	-0.9
	SNR=1.0						
THE	Thessaloniki	7.43	100	P	Pn	09 28 18.0	-0.7
THE	Thessaloniki	7.43	100	P	Pn	09 28 18.0	-0.7
ROTZ	Rotzenmuhle	7.45	354	ePn	Pn	09 28 19.0	0.0
GZR	Gura Zlata	7.46	63	⇓iP	Pn	09 28 19.4	+0.1
GZR	Gura Zlata	7.46	63	⇓iP	Pn	09 28 19.4	+0.1
MAKR	Makrakomi, Fth	7.47	114	P	Pn	09 28 21.5	+2.1
MAKR	Makrakomi, Fth	7.47	114	P	Pn	09 28 21.5	+2.1
GRA1	Grafenberg Arr	7.48	349	eP	Pn	09 28 19.1	-0.3
GRF	Grafenberg Arr	7.48	349	eP	Pn	09 28 19.1	-0.3
GRF	Grafenberg Arr	7.48	349	ePn	Pn	09 28 19.1	-0.3
CAEH	'Ain El Ouahch	7.49	224	P	Pn	09 28 21.4	+1.8
CAEH	'Ain El Ouahch	7.49	224	P	Pn	09 28 21.4	+1.8
HAU	Haudompre	7.50	321	ePn	Pn	09 28 19.0	-0.7
	SNR=1.0						
HAU				eSn	Sn	09 29 37.7	-6.8
	comp=Z,181nm,0.6s						
HAU	Haudompre	7.50	321	eP	Pn	09 28 19.0	-0.7
HAU				e		09 29 37.7	
HAU	Haudompre	7.50	321	ePn	Pn	09 28 19.0	-0.7
HAU				eSn	Sn	09 29 37.7	-6.8
HAU	Haudompre	7.50	321	ePn	Pn	09 28 19.0	-0.7
	SNR=1.0						
RLS	Riolos of Patr	7.56	122	P	Pn	09 28 22.1	+1.6
RLS	Riolos of Patr	7.56	122	eP	Pn	09 28 22.2	+1.7
RLS	Riolos of Patr	7.56	122	P	Pn	09 28 22.1	+1.6
AGG	Agios Georgios	7.60	113	P	Pn	09 28 22.6	+1.4
AGG	Agios Georgios	7.60	113	eP	Pn	09 28 22.9	+1.7
AGG	Agios Georgios	7.60	113	P	Pn	09 28 22.6	+1.4
EFP	Efpalio	7.63	118	P	Pn	09 28 23.3	+1.9
EFP	Efpalio	7.63	118	eP	Pn	09 28 23.5	+2.1
EFP	Efpalio	7.63	118	P	Pn	09 28 23.3	+1.9
UPR	University Cam	7.63	119	P	Pn	09 28 23.5	+2.0
UPR	University Cam	7.63	119	eP	Pn	09 28 23.1	+1.6
UPR	University Cam	7.63	119	P	Pn	09 28 23.5	+2.0
SOH	Sokhos	7.66	98	P	Pn	09 28 20.8	-1.2
SOH	Sokhos	7.66	98	eP	Pn	09 28 21.0	-1.0
SOH	Sokhos	7.66	98	P	Pn	09 28 20.8	-1.2
LANF	Langenberg	7.67	332	P	Pn	09 28 22.0	0.0
LANF	Langenberg	7.67	332	P	Pn	09 28 22.0	0.0
LANF	Langenberg	7.67	332	P	Pn	09 28 22.0	0.0
LANF	Langenberg	7.67	332	P	Pn	09 28 22.0	0.0
PSA1	Psathopyrgos	7.67	119	eP	Pn	09 28 23.7	+1.7
PRU	Pruhonice	7.67	6	ePN	Pn	09 28 21.2	-0.9
PRU				eSN	Sn	09 29 45.8	-3.0
PRU				AMS	AMS	09 31 30.0	
	comp=Z,4µm,14.2s						
PRU	Pruhonice	7.67	6	Pn	Pn	09 28 21.2	-0.9
SRS	Serrai	7.77	96	P	Pn	09 28 22.3	-1.1
SRS	Serrai	7.77	96	P	Pn	09 28 22.3	-1.1
TRIZ	Trizonia	7.77	118	P	Pn	09 28 25.3	+1.9
TRIZ	Trizonia	7.77	118	eP	Pn	09 28 25.4	+2.0
TRIZ	Trizonia	7.77	118	P	Pn	09 28 25.3	+1.9
LAKA	Lakka	7.78	119	P	Pn	09 28 25.3	+1.7
LAKA	Lakka	7.78	119	eP	Pn	09 28 25.4	+1.8
LAKA	Lakka	7.78	119	P	Pn	09 28 25.3	+1.7
KALE	Kalithea	7.80	118	P	Pn	09 28 25.8	+1.9
KALE	Kalithea	7.80	118	eP	Pn	09 28 25.9	+2.0
KALE	Kalithea	7.80	118	P	Pn	09 28 25.8	+1.9
THEF	They Montfort	7.83	321	P	Pn	09 28 23.6	-0.6
THEF	They Montfort	7.83	321	P	Pn	09 28 23.6	-0.6
THEF	They Montfort	7.83	321	P	Pn	09 28 23.6	-0.6
THEF	They Montfort	7.83	321	P	Pn	09 28 23.6	-0.6
LBL	Lubilhac	7.84	295	P	Pn	09 28 26.7	+2.2
LBL	Lubilhac	7.84	295	P	Pn	09 28 26.7	+2.2
LBL	Lubilhac	7.84	295	P	Pn	09 28 26.7	+2.2
LBL	Lubilhac	7.84	295	P	Pn	09 28 26.7	+2.2
CKFL	Kef-Lekhel	7.85	223	P	Pn	09 28 22.6	-2.1
CKFL	Kef-Lekhel	7.85	223	P	Pn	09 28 22.6	-2.1
PLG	Polygyros	7.86	101	P	Pn	09 28 24.2	-0.5
PLG	Polygyros	7.86	101	eP	Pn	09 28 23.6	-1.1
PLG	Polygyros	7.86	101	P	Pn	09 28 24.2	-0.5
NKC	Novy Kostel	7.90	356	ePN	Pn	09 28 24.3	-0.9
NKC				eSN	Sn	09 29 51.6	-2.7
NKC				AMS	AMS	09 31 50.0	
	comp=Z,4µm,9.7s						
NKC	Novy Kostel	7.90	356	Pn	Pn	09 28 24.3	-0.9
NKC				Sn	Sn	09 29 51.6	-2.7
NVR	Nevrokopi	7.92	94	P	Pn	09 28 25.1	-0.4
NVR	Nevrokopi	7.92	94	eP	Pn	09 28 25.4	-0.1
NVR	Nevrokopi	7.92	94	P	Pn	09 28 25.1	-0.4
AXAR	Agios Charalam	7.95	114	P	Pn	09 28 27.4	+1.5
AXAR	Agios Charalam	7.95	114	P	Pn	09 28 27.4	+1.5
MORC	Moravsky Berou	7.97	20	eP	Pn	09 28 28.2	+2.0
MORC	Moravsky Berou	7.97	20	ePn	Pn	09 28 28.2	+2.0
MORC	Moravsky Berou	7.97	20	⇑iP	Pn	09 28 26.9	+0.7
MORC	Moravsky Berou	7.97	20	ePn	Pn	09 28 27.5	+1.3
MORC	Moravsky Berou	7.97	20	eP	Pn	09 28 28.2	+2.0
FILF	Fillols	7.97	275	P	Pn	09 28 26.3	0.0
FILF	Fillols	7.97	275	P	Pn	09 28 26.3	0.0
FILF	Fillols	7.97	275	P	Pn	09 28 26.3	0.0
LRDF	Laroque-de-Fa	7.98	278	P	Pn	09 28 24.4	-1.9

LRDF	Laroque-de-Fa	7.98	278	P	Pn	09 28 24.4	-1.9
LRDF	Laroque-de-Fa	7.98	278	P	Pn	09 28 24.4	-1.9
DRGR		8.02	53	P	Pn	09 28 28.8	+1.9
DRGR		8.02	53	⇓iP	Pn	09 28 27.6	+0.7
DRGR		8.02	53	P	Pn	09 28 28.8	+1.9
SMF	Signal de Mont	8.03	305	ePn	Pn	09 28 27.0	+0.1
SMF				eSn	Sn	09 29 51.6	-5.8
	comp=Z,104nm,0.9s						
SMF	Signal de Mont	8.03	305	eP	Pn	09 28 27.0	+0.1
SMF				e		09 29 51.6	
SMF	Signal de Mont	8.03	305	ePn	Pn	09 28 27.0	+0.1
SMF				eSn	Sn	09 29 51.6	-5.8
SMF	Signal de Mont	8.03	305	ePn	Pn	09 28 27.0	+0.1
AMT	Artemida-Makis	8.04	124	eP	Pn	09 28 26.0	-1.1
XOR	Xorichti	8.04	109	P	Pn	09 28 27.9	+0.7
XOR	Xorichti	8.04	109	P	Pn	09 28 27.9	+0.7
DSF	Desfina	8.04	116	P	Pn	09 28 28.8	+1.5
DSF	Desfina	8.04	116	P	Pn	09 28 28.8	+1.5
KRLC	Kraliky	8.08	16	eP	Pn	09 28 27.2	-0.4
KRLC	Kraliky	8.08	16	Pn	Pn	09 28 27.2	-0.4
CASM	Ain Smara	8.08	223	P	Pn	09 28 25.6	-2.1
CASM	Ain Smara	8.08	223	P	Pn	09 28 25.6	-2.1
TANN	Tannenbergstha	8.08	356	ePn	Pn	09 28 27.7	0.0
NEO	Neokhori	8.09	109	eP	Pn	09 28 29.3	+1.4
LOT	Lotru	8.14	64	⇓iP	Pn	09 28 30.4	+1.8
LOT	Lotru	8.14	64	⇓iP	Pn	09 28 30.4	+1.8
PAIG	Paliouri	8.17	104	P	Pn	09 28 28.0	-0.9
PAIG	Paliouri	8.17	104	P	Pn	09 28 28.0	-0.9
PYM	Petit Puy Mans	8.18	298	P	Pn	09 28 30.9	+1.9
PYM	Petit Puy Mans	8.18	298	P	Pn	09 28 30.9	+1.9
PYM	Petit Puy Mans	8.18	298	P	Pn	09 28 30.9	+1.9
PYM	Petit Puy Mans	8.18	298	P	Pn	09 28 30.9	+1.9
PAGF	Fort de Pagny	8.18	322	ePn	Pn	09 28 28.6	-0.5
PAGF	Fort de Pagny	8.18	322	ePn	Pn	09 28 28.6	-0.5
PAGF	Fort de Pagny	8.18	322	ePn	Pn	09 28 28.6	-0.5
GUR	Goura	8.19	120	P	Pn	09 28 31.3	+2.0
GUR	Goura	8.19	120	eP	Pn	09 28 31.2	+2.0
GUR	Goura	8.19	120	P	Pn	09 28 31.3	+2.0
OKC	Ostrava-Krasne	8.19	22	ePN	Pn	09 28 28.4	-0.7
OKC				eSN	Sn	09 29 57.1	-4.3
OKC				AMS	AMS	09 32 40.0	
	comp=Z,6µm,9.5s						
OKC	Ostrava-Krasne	8.19	22	Pn	Pn	09 28 28.4	-0.7
AGO	Saint Agoulin	8.21	300	P	Pn	09 28 31.3	+1.9
AGO	Saint Agoulin	8.21	300	P	Pn	09 28 31.3	+1.9
AGO	Saint Agoulin	8.21	300	P	Pn	09 28 31.3	+1.9
PVCC	Panska Ves	8.21	6	ePN	Pn	09 28 28.1	-1.4
PVCC				eSN	Sn	09 29 57.2	-4.8
PVCC				AMS	AMS	09 31 50.0	
	comp=Z,3µm,9.3s						
PVCC	Panska Ves	8.21	6	Pn	Pn	09 28 28.1	-1.4
MTLF	Montolieu	8.23	281	ePn	Pn	09 28 29.3	-0.4
MTLF	Montolieu	8.23	281	eP	Pn	09 28 29.3	-0.4
MTLF	Montolieu	8.23	281	ePn	Pn	09 28 29.3	-0.4
MTLF	Montolieu	8.23	281	ePn	Pn	09 28 29.3	-0.4
LKR	Lokris	8.24	114	P	Pn	09 28 31.8	+1.9
LKR	Lokris	8.24	114	eP	Pn	09 28 31.9	+2.0
LKR	Lokris	8.24	114	P	Pn	09 28 31.8	+1.9
DPC	Dobruska-Polom	8.25	13	eP	Pn	09 28 28.7	-1.4
DPC	Dobruska-Polom	8.25	13	ePn	Pn	09 28 28.7	-1.4
DPC	Dobruska-Polom	8.25	13	ePN	Pn	09 28 28.6	-1.5
DPC				eSN	Sn	09 29 58.7	-4.4
DPC				AMS	AMS	09 32 00.0	
	comp=Z,6µm,14.2s						
DPC	Dobruska-Polom	8.25	13	ePn	Pn	09 28 28.7	-1.4
OUR	Ouranopolis	8.26	101	P	Pn	09 28 29.6	-0.5
OUR	Ouranopolis	8.26	101	P	Pn	09 28 29.6	-0.5
SKIA	Skiathos	8.32	109	P	Pn	09 28 32.5	+1.5
SKIA	Skiathos	8.32	109	P	Pn	09 28 32.5	+1.5
LOR	Lormes	8.33	309	ePn	Pn	09 28 30.4	-0.7
LOR				eSn	Sn	09 30 00.8	-4.2
	comp=Z,21nm,0.5s						
LOR	Lormes	8.33	309	ePn	Pn	09 28 30.4	-0.7
LOR				eSn	Sn	09 30 00.8	-4.2
LOR	Lormes	8.33	309	ePn	Pn	09 28 30.4	-0.7
MOX	Moxa	8.37	352	eP	Pn	09 28 30.1	-1.5
MOX	Moxa	8.37	352	ePn	Pn	09 28 30.1	-1.5
MOX	Moxa	8.37	352	eP	Pn	09 28 30.1	-1.5
ITM	Ithomi	8.39	125	P	Pn	09 28 32.9	+0.9
ITM	Ithomi	8.39	125	eP	Pn	09 28 34.3	+2.3
ITM	Ithomi	8.39	125	P	Pn	09 28 32.9	+0.9
PLD	Plovdiv	8.44	88	P	Pn	09 28 33.0	+0.4
PLD	Plovdiv	8.44	88	P	Pn	09 28 33.0	+0.4
PYL	PYLOS	8.47	127	P	Pn	09 28 34.4	+1.3
PYL	PYLOS	8.47	127	eP	Pn	09 28 34.6	+1.5
PYL	PYLOS	8.47	127	P	Pn	09 28 34.4	+1.3
KAVA	Kavala	8.47	96	P	Pn	09 28 32.4	-0.7
KAVA	Kavala	8.47	96	P	Pn	09 28 32.4	-0.7
VERF	Verneugheol	8.52	297	P	Pn	09 28 36.7	+3.0
VERF	Verneugheol	8.52	297	P	Pn	09 28 36.7	+3.0
BRG	Berggiesshubel	8.53	3	PN	Pn	09 28 32.6	-1.1
BRG				i		09 29 18.9	
BRG				i		09 30 04.1	
BRG				i		09 31 25.3	
	comp=Z,385nm,1.8s						
BRG							
	comp=N,3µm,12.7s						
BRG							
	comp=E,2µm,9.6s						
BRG							
	comp=Z,4µm,13.7s						
BRG	Berggiesshubel	8.53	3	P	Pn	09 28 32.6	-1.1
BRG				i		09 30 04.1	
BRG				MLR	MLR		
	comp=N,3µm,12.7s						
BRG				MLR	MLR		
	comp=E,2µm,9.6s						
BRG				MLR	MLR		
	comp=Z,4µm,13.7s						
BRG	Berggiesshubel	8.53	3	ePn	Pn	09 28 33.9	+0.2
BRG	Berggiesshubel	8.53	3	P	Pn	09 28 32.6	-1.1
RUP	Ruppelstein	8.54	331	P	Pn	09 28 32.7	-1.3
RUP	Ruppelstein	8.54	331	P	Pn	09 28 32.7	-1.3
RUP	Ruppelstein	8.54	331	P	Pn	09 28 32.7	-1.3
LTK	Loutraki	8.55	117	P	Pn	09 28 34.6	+0.5
LTK	Loutraki	8.55	117	eP	Pn	09 28 34.8	+0.7
LTK	Loutraki	8.55	117	P	Pn	09 28 34.6	+0.5
VLX	Vlachokerasia	8.55	123	P	Pn	09 28 36.3	+2.1
VLX	Vlachokerasia	8.55	123	eP	Pn	09 28 37.4	+3.2
VLX	Vlachokerasia	8.55	123	P	Pn	09 28 36.3	+2.1
CAF	Calviac	8.57	291	eP	Pn	09 28 35.8	+1.4
CAF	Calviac	8.57	291	eP	Pn	09 28 35.8	+1.4
CAF	Calviac	8.57	291	eP	Pn	09 28 35.8	+1.4
CAF	Calviac	8.57	291	eP	Pn	09 28 35.8	+1.4
NIE	Niedzica	8.57	32	eP	Pn	09 28 38.2	+3.8
NIE	Niedzica	8.57	32	eP	Pn	09 28 38.2	+3.8
NIE				eSn	Sn	09 30 22.0	+11
MRKA	Markates	8.62	112	P	Pn	09 28 36.0	+1.0
MRKA	Markates	8.62	112	P	Pn	09 28 36.0	+1.0
CRVS	Cervenica-Dubn	8.67	38	ePN	Pn	09 28 36.4	+0.7
CRVS				e		09 29 30.0	
CRVS				e		09 31 21.3	
CRVS	Cervenica-Dubn	8.67	38	ePn	Pn	09 28 36.4	+0.7
TRPA	Tarpa	8.68	45	⇓iP	Pn	09 28 36.3	+0.4
TRPA	Tarpa	8.68	45	⇓ePn	Pn	09 28 37.0	+1.1
TRPA	Tarpa	8.68	45	⇓eP	Pn	09 28 37.0	+1.1
ARR	Arges	8.70	66	⇑iP	Pn	09 28 37.6	+1.4
ARR	Arges	8.70	66	⇑iP	Pn	09 28 37.6	+1.4
SET	Setif	8.70	228	P	Pn	09 28 40.0	+3.7
KSP	Ksiaz	8.72	12	eP	Pn	09 28 35.0	-1.5
KSP				e		09 30 15.5	
KSP	Ksiaz	8.72	12	eP	Pn	09 28 35.0	-1.5
KSP				eSn	Sn	09 30 15.5	+0.9
WLF	Walferdange	8.85	328	eP	Pn	09 28 38.4	+0.2
WLF				e		09 30 17.8	
WLF				pmax	pmax		
	comp=Z,56nm,0.9s						
WLF	Walferdange	8.85	328	ePn	Pn	09 28 38.4	+0.2
	comp=Z,56nm,0.9s						
WLF				eSn	Sn	09 30 17.8	+0.2
WLF	Walferdange	8.85	328	ePn	Pn	09 28 38.3	+0.1
	comp=Z,56nm,0.9s						
WLF				eSn	Sn	09 30 17.8	+0.2
UZH	Uzhgorod	8.88	42	eP	Pn	09 28 40.2	+1.7
UZH				eS	Sn	09 30 20.2	+1.9
UZH				MLR	MLR		
	comp=N,2µm,10.0s						
UZH				MLR	MLR		
	comp=E,6µm,10.0s						
UZH				MLR	MLR		
	comp=Z,4µm,10.0s						

UZH	Uzhgorod	8.88	42	eP	Pn	09 28 40.2	+1.7
UZH				eS	Sn	09 30 20.2	+1.9
ZIMR		8.91	78	P	Pn	09 28 39.9	+0.9
ZIMR		8.91	78	P	Pn	09 28 39.9	+0.9
DYR	Agios Nikonas	8.91	126	P	Pn	09 28 40.8	+1.7
DYR	Agios Nikonas	8.91	126	P	Pn	09 28 40.8	+1.7
CLL	Collm	8.95	359	eP	Pn	09 28 46.0	+6.4
CLL				e		09 30 20.0	
CLL	Collm	8.95	359	ePn	Pn	09 28 39.0	-0.6
CLL				ePn(2)		09 28 46.0	
CLL				eSn	Sn	09 30 20.0	-0.2
CLL				eSb	Sg	09 31 11.0	-6.8
CLL				eSg	Sg	09 31 31.0	+13
	comp=E,6µm,21.7s						
CLL				e		09 31 46.0	
CLL	Collm	8.95	359	eS	Sn	09 30 20.0	-0.2
VOIR		9.00	66	⇑P	Pn	09 28 41.7	+1.4
VOIR		9.00	66	⇑iP	Pn	09 28 41.7	+1.4
VOIR		9.00	66	P	Pn	09 28 41.7	+1.4
DID	Didima	9.02	119	P	Pn	09 28 41.1	+0.6
DID	Didima	9.02	119	eP	Pn	09 28 41.2	+0.7
DID	Didima	9.02	119	P	Pn	09 28 41.1	+0.6
NAIG	Nisos Aigina	9.04	117	eP	Pn	09 28 43.2	+2.4
RJF	Les Rejaudoux	9.04	293	eP	Pn	09 28 42.7	+1.9
RJF	Les Rejaudoux	9.04	293	eP	Pn	09 28 42.7	+1.9
RJF	Les Rejaudoux	9.04	293	eP	Pn	09 28 42.7	+1.9
RJF	Les Rejaudoux	9.04	293	eP	Pn	09 28 42.7	+1.9
OJC	Ojcow	9.04	27	eP	Pn	09 28 42.8	+2.0
OJC				e		09 30 25.1	
OJC	Ojcow	9.04	27	ePn	Pn	09 28 43.2	+2.4
OJC	Ojcow	9.04	27	eP	Pn	09 28 42.8	+2.0
OJC				eSn	Sn	09 30 25.1	+2.8
OJC				eSSS	SSS	09 30 49.8	
OJC	Ojcow	9.04	27	eP	Pn	09 28 42.8	+2.0
MLS	Moulis	9.04	278	P	Pn	09 28 39.7	-1.2
MLS	Moulis	9.04	278	P	Pn	09 28 39.7	-1.2
MLS	Moulis	9.04	278	P	Pn	09 28 39.7	-1.2
KOLS	Kolonicke sedl	9.07	41	ePN	Pn	09 28 43.7	+2.5
KOLS				e		09 29 38.9	
KOLS				e		09 31 31.1	
ATH	Athens Observa	9.07	115	P	Pn	09 28 42.9	+1.6
ATH	Athens Observa	9.07	115	eP	Pn	09 28 42.9	+1.6
ATH	Athens Observa	9.07	115	P	Pn	09 28 42.9	+1.6
PTL	Penteli	9.13	115	P	Pn	09 28 42.6	+0.5
PTL	Penteli	9.13	115	eP	Pn	09 28 42.8	+0.7
PTL	Penteli	9.13	115	P	Pn	09 28 42.6	+0.5
RDO	Rodhopi	9.20	93	P	Pn	09 28 42.8	-0.2
RDO	Rodhopi	9.20	93	eP	Pn	09 28 43.0	0.0
RDO	Rodhopi	9.20	93	P	Pn	09 28 42.8	-0.2
VLI	Veliai	9.31	124	eP	Pn	09 28 47.0	+2.5
EPF	Esparros	9.60	278	ePn	Pn	09 28 47.1	-1.4
EPF	Esparros	9.60	278	eP	Pn	09 28 56.9	+8.4
EPF	Esparros	9.60	278	ePn	Pn	09 28 47.1	-1.4
ALAS	Alassa	9.60	189	i P	Pn	09 28 49.9	+1.4
	comp=E,229nm,1.6s,SNR=22						
MLR	Muntele Rosu	9.62	67	Pn	Pn	09 28 50.6	+1.7
MLR	Muntele Rosu	9.62	67	Pn	Pn	09 28 50.6	+1.7
	comp=E,0.3nm,0.3s,baz=267,slow=5.5,SNR=53						
MLR	Muntele Rosu	9.62	67	Pn	Pn	09 28 50.6	+1.7
ALN	Alexandroupoli	9.63	94	P	Pn	09 28 49.3	+0.4
ALN	Alexandroupoli	9.63	94	eP	Pn	09 28 49.3	+0.4
ALN	Alexandroupoli	9.63	94	P	Pn	09 28 49.3	+0.4
KYTH	Kithira	9.66	126	eP	Pn	09 28 52.4	+3.1
MEM	Membach	9.67	331	PN	Pn	09 28 51.0	+1.5
MEM	Membach	9.67	331	Pn	Pn	09 28 50.9	+1.5
CLZ	Clausthal	9.70	349	eP	Pn	09 28 50.6	+0.8
CLZ	Clausthal	9.70	349	ePn	Pn	09 28 50.6	+0.8
CLZ	Clausthal	9.70	349	eP	Pn	09 28 50.6	+0.8
KWP	Kalwaria Pacla	9.76	39	eP	Pn	09 28 55.1	+4.4
BCLA	Clavier	9.78	328	PN	Pn	09 28 52.1	+1.2
BCLA	Clavier	9.78	328	Pn	Pn	09 28 52.1	+1.2
DOU	Dourbes	9.82	325	PN	Pn	09 28 53.3	+1.8
DOU	Dourbes	9.82	325	Pn	Pn	09 28 53.3	+1.8
BURAR	Bucovina Array	9.92	54	P	Pn	09 28 55.2	+2.3
BUR08	Bucovina Ar. S	9.92	54	ePn	Pn	09 28 55.2	+2.2
BUR08				eSn	Sn	09 30 45.2	+1.1
BUR08	Bucovina Ar. S	9.92	54	ePn	Pn	09 28 55.2	+2.2
BUR08				eSn	Sn	09 30 45.2	+1.1
ISR	Istrita	9.95	69	⇓P	Pn	09 28 54.6	+1.3
ISR	Istrita	9.95	69	⇓iP	Pn	09 28 54.6	+1.3
ISR	Istrita	9.95	69	P	Pn	09 28 54.6	+1.3
LMSR	Misrath	10.12	172	i P	Pn	09 28 54.8	-0.8
	SNR=22						
PLOR	Plostina	10.19	65	⇑P	Pn	09 28 57.8	+1.2
PLOR	Plostina	10.19	65	⇑iP	Pn	09 28 57.8	+1.2
PLOR	Plostina	10.19	65	P	Pn	09 28 57.8	+1.2
GHAR	Gharyan	10.22	181	i P	Pn	09 28 58.3	+1.2
	comp=E,140nm,1.6s,SNR=22						
VRI	Vrincioaia	10.25	65	⇑P	Pn	09 28 58.6	+1.2
VRI	Vrincioaia	10.25	65	⇑iP	Pn	09 28 58.6	+1.2
VRI	Vrincioaia	10.25	65	P	Pn	09 28 58.6	+1.2
SNF	Seneffe	10.26	326	PN	Pn	09 29 00.2	+2.7
LVV	L'vov	10.52	41	eP	Pn	09 29 03.9	+2.9
LVV				eS	Sn	09 31 05.4	+6.8
LVV				MLR	MLR		
	comp=Z,200nm,10.0s						
AYVA	Ayvalik	10.57	102	i P	Pn	09 28 58.6	-3.2
URLA	Izmir	10.88	107	i P	Pn	09 29 06.5	+0.5
URLA	Izmir	10.88	107	i P	Pn	09 29 06.5	+0.5
CFR	Carcaliu	11.07	70	P	Pn	09 29 10.0	+1.5
CFR	Carcaliu	11.07	70	⇓iP	Pn	09 29 09.1	+0.6
CFR	Carcaliu	11.07	70	P	Pn	09 29 10.0	+1.5
BALY	Balya	11.10	99	i P	Pn	09 29 07.3	-1.8
BALY	Balya	11.10	99	i P	Pn	09 29 07.3	-1.8
TIRR	Tirgusor	11.17	74	eP	Pn	09 29 09.8	-0.1
TIRR	Tirgusor	11.17	74	ePn	Pn	09 29 09.8	-0.1
TIRR	Tirgusor	11.17	74	⇓iP	Pn	09 29 09.7	-0.1
TIRR	Tirgusor	11.17	74	ePn	Pn	09 29 09.8	-0.1
LEOM	Leova	11.43	64	P	Pn	09 29 14.8	+1.4
LEOM	Leova	11.43	64	P	Pn	09 29 14.8	+1.4
TLCR		11.54	71	⇑P	Pn	09 29 15.0	0.0
TLCR		11.54	71	⇑iP	Pn	09 29 15.0	0.0
TLCR		11.54	71	P	Pn	09 29 15.0	0.0
DURS	Dursunbey	11.77	98	i P	Pn	09 29 17.5	-0.8
DURS	Dursunbey	11.77	98	i P	Pn	09 29 17.5	-0.8
KIS	Kishinev	11.95	62	αiP	Pn	09 29 20.0	-0.6
KIS				eS	Sn	09 31 36.0	+2.3
KIS				pmax	pmax		
	comp=Z,500nm,2.0s						
KIS				pmax	pmax		
	comp=Z,1µm,3.0s						
KIS				MLR	MLR		
	comp=E,6µm,13.0s						
KIS				MLR	MLR		
	comp=Z,6µm,13.0s						
KIS				MLR	MLR		
	comp=N,3µm,14.0s						
KIS				MLR	MLR		
	comp=Z,6µm,15.0s						
KIS	Kishinev	11.95	62	⇑iP	Pn	09 29 20.0	-0.6
	comp=Z,500nm,2.0s						
KIS				eS	Sn	09 31 36.0	+2.3
KIS				LRM	MLR	09 34 54.0	
	comp=Z,6µm,13.0s						
KIS	Kishinev	11.95	62	i P	Pn	09 29 20.0	-0.6
	comp=Z,1µm,3.0s						
KIS				eS	Sn	09 31 36.0	+2.3
	comp=Z,6µm,15.0s						
AYDN	Tasoluk	12.09	108	i P	Pn	09 29 22.7	0.0
AYDN	Tasoluk	12.09	108	i P	Pn	09 29 22.7	0.0
LSHF	Shwairf	12.37	176	i P	Pn	09 29 24.7	-1.8
	comp=Z,122nm,1.4s,SNR=22						
LGHD	Ghdames	12.71	196	i P	Pn	09 29 33.5	+2.3
	comp=Z,120nm,1.3s,SNR=45						
ESDC	Sonseca Array	13.34	264	Pn	Pn	09 29 39.7	0.0
ESDC	Sonseca Array	13.34	264	Pn	Pn	09 29 39.7	0.0
	comp=Z,0.5nm,0.3s,baz=64,slow=14,SNR=15						
ESDC	Sonseca Array	13.34	264	Pn	Pn	09 29 39.7	0.0
ESLA	Sonseca Array	13.34	264	ePn	Pn	09 29 39.6	-0.1
	comp=Z,12nm,1.3s						
ESLA				eSn	Sn	09 32 06.4	-1.4
ESLA	Sonseca Array	13.34	264	ePn	Pn	09 29 39.6	-0.1
	comp=Z,12nm,1.3s						
ESLA				eSn	Sn	09 32 06.4	-1.4
SUW	Suwalki	13.36	26	eP	Pn	09 29 37.7	-2.2
SUW				pmax	pmax		
	comp=Z,44nm,0.8s						
SUW	Suwalki	13.36	26	ePn	Pn	09 29 37.7	-2.2
	comp=Z,44nm,0.8s						
SUW	Suwalki	13.36	26	ePn	Pn	09 29 37.7	-2.2
	comp=Z,44nm,0.8s						
LJFR	Jufra	13.38	171	i P	Pn	09 29 43.0	+2.7

comp=Z,123nm,1.6s,SNR=45
SEYT Eskypehyr 13.54 96 *i* P **Pn** **09 29 43.2 +0.7**
SEYT Eskypehyr 13.54 96 *i* P **Pn** **09 29 43.2 +0.7**
PAB San Pablo 13.66 264 *e*P **Pn** **09 29 44.0 -0.1**
PAB San Pablo 13.66 264 *e*Pn **Pn** **09 29 44.0 -0.1**
PAB San Pablo 13.66 264 *e*Pn **Pn** **09 29 44.0 -0.1**
AK02 Malin Array Si 13.70 47 *e*Pn **Pn** **09 29 44.7 +0.2**
AK02 Malin Array Si 13.70 47 *e*Pn **Pn** **09 29 44.7 +0.2**
KIEV Kiev 13.72 47 *e*P **Pn** **09 29 44.9 +0.1**
KIEV Kiev 13.72 47 *e*Pn **Pn** **09 29 44.9 +0.1**
KIEV Kiev 13.72 47 *e*Pn **Pn** **09 29 44.9 +0.1**
AK01 Malin Array Si 13.72 47 *e*Pn **Pn** **09 29 47.8 +3.0**
AKASG Malin Array Be 13.73 47 P **Pn** **09 29 44.8 -0.1**
AKASG MLR MLR
comp=Z,2µm,18.3s
AKASG Malin Array Be 13.73 47 Pn **Pn** **09 29 44.8 -0.1**
AKASG Malin Array Be 13.73 47 Pn **Pn** **09 29 44.8 -0.1**
comp=Z,0.4nm,0.3s,baz=234,slow=12,SNR=7.2
AKASG LR LR 09 35 41.2
comp=Z,2µm,18.3s,baz=240,slow=40
AKASG Malin Array Be 13.73 47 Pn **Pn** **09 29 44.8 -0.1**
PBRG Braganca 14.92 275 *e*P **Pn** **09 30 03.4 +2.1**
comp=Z,51nm,2.2s
MVO Moncorvo 15.25 272 *e*LR LR 09 34 15.4
comp=Z,958nm,16.0s
SIM Simferopol' 15.26 73 *e*P **P** **09 30 12.2 +1.7**
SIM pmax pmax
comp=Z,29nm,1.3s
SIM MLR MLR
comp=Z,1µm,11.0s
SIM Simferopol' 15.26 73 *e*P **P** **09 30 12.2 +1.7**
comp=Z,1µm,11.0s
IIGN Ignalina 15.48 28 *e*P **Pn** **09 30 07.2 -1.4**
BR131 Keskin Array S 15.54 93 *e*Pn **Pn** **09 30 10.0 +0.4**
comp=Z,12nm,0.9s
BR131 Keskin Array S 15.54 93 *e*Pn **Pn** **09 30 10.0 +0.4**
comp=Z,12nm,0.9s
BRTR Keskin Array B 15.54 93 Pn **Pn** **09 30 09.9 +0.4**
BRTR Keskin Array B 15.54 93 Pn **Pn** **09 30 09.9 +0.4**
comp=Z,0.1nm,0.3s,baz=284,slow=9.2,SNR=13
BRTR LR LR 09 36 23.6
comp=Z,594nm,20.2s,baz=284,slow=38
BRTR Keskin Array B 15.54 93 Pn **Pn** **09 30 09.9 +0.4**
ISAL Salakas 15.62 28 *e*P **Pn** **09 30 06.4 -4.0**
MTE Manteigas 15.80 270 *e*P **P** **09 30 19.1 +2.5**
comp=Z,41nm,1.3s
MTE *e*LR LR 09 34 54.0
comp=Z,826nm,16.0s
MTE Manteigas 15.80 270 *e*P **P** **09 30 19.1 +2.5**
comp=Z,41nm,1.3s
PMRV Marv??o 15.94 266 *e*LR LR 09 33 36.0
comp=Z,463nm,14.0s
PGAV Gavieira, Arco 16.03 276 *e*LR LR 09 34 59.7
comp=Z,975nm,18.0s
PBAR Barrancos 16.10 262 *e*P **P** **09 30 20.9 +1.0**
comp=Z,71nm,2.1s
PBAR Barrancos 16.10 262 *e*P **P** **09 30 20.9 +1.0**
comp=Z,71nm,2.1s
PESTR Estremoz 16.27 265 *e*P **P** **09 30 21.8 0.0**
comp=Z,53nm,1.8s
PESTR Estremoz 16.27 265 *e*P **P** **09 30 21.8 0.0**
comp=Z,53nm,1.8s
PMTG Montargil 16.67 266 *e*P **P** **09 30 25.9 -0.3**
comp=Z,47nm,1.1s
PMTG Montargil 16.67 266 *e*P **P** **09 30 25.9 -0.3**
comp=Z,47nm,1.1s
EKA Eskdalemuir Ar 16.86 326 Pn **Pn** **09 30 25.4 -0.8**
EKA Eskdalemuir Ar 16.86 326 Pn **Pn** **09 30 25.4 -0.8**
baz=139,slow=13,SNR=3.6
EKA Eskdalemuir Ar 16.86 326 Pn **Pn** **09 30 25.4 -0.8**
PVAQ Vaqueiros 16.89 260 *e*P **P** **09 30 29.8 +1.1**
comp=Z,49nm,1.2s
PVAQ *e*LR LR 09 33 54.5
comp=Z,892nm,20.0s
PVAQ Vaqueiros 16.89 260 *e*P **P** **09 30 29.8 +1.1**
comp=Z,49nm,1.2s
MESJ Messejana 17.09 262 *e*P **Pn** **09 30 29.0 -0.2**
MESJ AMb AMB 09 30 33.6
comp=Z,51nm,1.6s
MESJ *e*S **Sn** **09 33 39.7 +0.8**
MESJ Messejana 17.09 262 *e*P **Pn** **09 30 29.0 -0.2**
comp=Z,51nm,1.6s
MESJ *e*S **Sn** **09 33 39.7 +0.8**
MESJ Messejana 17.09 262 *e*P **Pn** **09 30 29.0 -0.2**
MESJ *e*S **Sn** **09 33 39.7 +0.8**
MESJ Messejana 17.09 262 *e*P **Pn** **09 30 29.0 -0.2**
comp=Z,51nm,1.6s
MDT Midelt 17.09 242 Pn **Pn** **09 30 29.2 -0.2**
MDT Midelt 17.09 242 Pn **Pn** **09 30 29.2 -0.2**
comp=Z,0.1nm,0.3s,baz=62,slow=14,SNR=8.2
MDT LR LR 09 36 14.3
comp=Z,586nm,21.3s,baz=348,slow=34
MDT Midelt 17.09 242 Pn **Pn** **09 30 29.2 -0.2**
CSS Prodhromos 17.25 109 *e*Pn **Pn** **09 30 31.2 -0.1**
comp=Z,103nm,1.2s
CSS Prodhromos 17.25 109 *e*Pn **Pn** **09 30 31.2 -0.1**
comp=Z,103nm,1.2s
KONO Kongsberg 17.47 354 *e*P **P** **09 30 36.1 +1.2**
KONO pmax pmax
comp=Z,180nm,2.0s
KONO Kongsberg 17.47 354 *e*Pn **P** **09 30 36.1 +1.2**
comp=Z,180nm,2.0s
KONO Kongsberg 17.47 354 *e*Pn **P** **09 30 36.1 +1.2**
comp=Z,180nm,2.0s
LIS Lisbon 17.47 265 *e*P **Pn** **09 30 33.7 -0.2**
LIS AMb AMB 09 30 42.1
comp=Z,92nm,1.4s
LIS Lisbon 17.47 265 *e*P **Pn** **09 30 33.7 -0.2**
comp=Z,92nm,1.4s
LIS Lisbon 17.47 265 *e*P **Pn** **09 30 33.7 -0.2**
LIS Lisbon 17.47 265 *e*P **Pn** **09 30 33.7 -0.2**
comp=Z,92nm,1.4s
MORF Marmelete 17.61 261 *e*P **Pn** **09 30 35.7 -0.1**
MORF *e*S **Sn** **09 33 52.9 +1.2**
MORF Marmelete 17.61 261 *e*P **Pn** **09 30 35.7 -0.1**
ANN Anapa 17.61 74 *e*P **Pn** **09 30 34.8 -0.8**
ANN *e*S **Sn** **09 33 54.4 +2.9**
ANN pmax pmax
comp=Z,215nm,1.6s
ANN MLR MLR
comp=N,812nm,15.0s
ANN MLR MLR
comp=E,1µm,15.0s
ANN MLR MLR
comp=Z,1µm,15.0s
ANN Anapa 17.61 74 *e*P **Pn** **09 30 34.8 -0.8**
comp=Z,215nm,1.6s
HFS Hagfors 17.80 1 Pn **Pn** **09 30 36.8 -1.0**
HFS Hagfors 17.80 1 Pn **Pn** **09 30 36.8 -1.0**
comp=Z,0.2nm,0.3s,baz=182,slow=11,SNR=5.9
HFS LR LR 09 38 25.3
comp=Z,1µm,19.0s,baz=182,slow=40
HFS Hagfors 17.80 1 Pn **Pn** **09 30 36.8 -1.0**
NAO01 NORSAR Array S 18.57 356 *e*P **Pn** **09 30 49.3 +2.0**
comp=Z,37nm,1.0s
NAO01 NORSAR Array S 18.57 356 *e*P **Pn** **09 30 49.3 +2.0**
comp=Z,37nm,1.0s
NB2 NORSAR Subarra 18.75 357 P **P** **09 30 49.3 +0.2**
comp=Z,19nm,1.1s,baz=176,slow=12
NB2 NORSAR Subarra 18.75 357 P **P** **09 30 49.3 +0.2**
comp=Z,19nm,1.1s,baz=176,slow=11,SNR=0.3
NOA NORSAR Array B 18.75 357 P **Pn** **09 30 49.5 0.0**
NOA NORSAR Array B 18.75 357 P **Pn** **09 30 49.5 0.0**
comp=Z,0.5nm,0.3s,baz=173,slow=12,SNR=8.9
NOA NORSAR Array B 18.75 357 P **Pn** **09 30 49.5 0.0**
comp=Z,1.0nm,0.3s
SOC Sochi 19.32 77 *e*P **Pn** **09 30 56.3 -0.2**
SOC *e* 09 34 33.1
SOC pmax pmax
comp=Z,45nm,0.9s
SOC MLR MLR
comp=Z,890nm,15.0s
SOC Sochi 19.32 77 *e*P **Pn** **09 30 56.7 +0.2**
SOC Sochi 19.32 77 *e*P **Pn** **09 30 56.3 -0.2**
comp=Z,45nm,0.9s
SOC *e*S **Sn** **09 34 33.1 +0.3**
comp=Z,890nm,15.0s
MALT Malatya 19.52 94 ||P **Pn** **09 30 58.6 -0.5**
MALT Malatya 19.52 94 *e*P **Pn** **09 30 59.0 -0.1**
comp=Z,81nm,1.3s
MALT Malatya 19.52 94 ||*i*P **Pn** **09 30 58.6 -0.5**
MALT Malatya 19.52 94 P **Pn** **09 30 58.6 -0.5**
VSR Storozhevoye 19.69 54 *e*P **P** **09 30 58.0 -1.4**
VSR *e*S S 09 34 32.2 -8.8
VSR pmax pmax
comp=Z,40nm,1.3s
VSR pmax pmax
comp=N,8.0nm,0.5s
VSR pmax pmax
comp=E,40nm,0.9s
VSR smax smax
comp=E,290nm,4.6s
VSR smax smax
comp=Z,360nm,4.2s
VSR smax smax
comp=N,180nm,5.4s
VSR MLR MLR
comp=Z,3µm,15.0s
VSR MLR MLR
comp=N,860nm,11.0s
VSR MLR MLR
comp=E,2µm,13.0s
VSR Storozhevoye 19.69 54 *e*P **P** **09 30 58.0 -1.4**
comp=E,8.0nm,0.5s
VORD Divnogorie 19.70 55 *e*P **P** **09 30 58.8 -0.7**
VORD pmax pmax
comp=E,50nm,0.6s
VORD pmax pmax
comp=Z,20nm,0.6s
VORD pmax pmax
comp=N,30nm,0.5s
VORD Divnogorie 19.70 55 *e*P **P** **09 30 58.8 -0.7**
comp=N,30nm,0.5s
MMAI Mount Meron Ar 19.75 111 P **Pn** **09 31 01.8 0.0**
MMAI Mount Meron Ar 19.75 111 P **Pn** **09 31 01.8 0.0**
comp=N,2.1nm,0.3s,baz=314,slow=9.0,SNR=18
MMAI Mount Meron Ar 19.75 111 P **Pn** **09 31 01.8 0.0**
OBN Obninsk 19.82 42|| *e*P **P** **09 30 59.9 -0.8**
OBN *i* S **Sn** **09 34 44.6 0.0**
OBN pmax pmax
comp=Z,31nm,1.2s
OBN MLR MLR
comp=Z,1µm,15.0s
OBN Obninsk 19.82 42 *e*P **P** **09 30 59.9 -0.8**
comp=Z,31nm,1.2s
OBN *i* S **Sn** **09 34 44.6 0.0**
comp=Z,1µm,15.0s
VOR Voronezh 19.87 53 *e*P **P** **09 31 00.0 -1.3**
VOR pmax pmax
comp=Z,750nm,2.4s
VOR Voronezh 19.87 53 *e*P **P** **09 31 00.0 -1.3**
comp=Z,750nm,2.4s
TAM Tamanrasset 20.58 201 *e*P Pn 09 31 11.8 +0.1
TAM pmax pmax
comp=Z,33nm,1.0s
TAM Tamanrasset 20.58 201 *e*P Pn 09 31 11.8 +0.1
comp=Z,33nm,1.0s
TAM Tamanrasset 20.58 201 *e*P Pn 09 31 11.8 +0.1
comp=Z,33nm,1.0s
FINES FINESS Array B 20.59 18 P **P** **09 31 08.6 -0.5**
FINES FINESS Array B 20.59 18 P **P** **09 31 08.6 -0.5**
comp=Z,37nm,0.8s,baz=198,slow=8.7,SNR=40
FINES LR LR 09 40 09.8
comp=Z,2µm,19.1s,baz=204,slow=40
FINES FINESS Array B 20.59 18 P **P** **09 31 08.6 -0.5**
comp=Z,2µm,19.1s
FIA1 FINESS Array S 20.59 18 *e*P **P** **09 31 08.8 -0.3**
FIA1 FINESS Array S 20.59 18 *e*P **P** **09 31 08.8 -0.3**
MOS Moscow 20.66 41 *e*P **P** **09 31 09.2 -0.6**
MOS *e* 09 31 29.5
MOS *e*S **S** **09 34 56.9 -3.2**
MOS pmax pmax
comp=Z,100nm,1.4s
MOS pmax pmax
comp=Z,121nm,1.4s
MOS MLR MLR
comp=Z,2µm,10.0s
MOS Moscow 20.66 41 *e*P **P** **09 31 09.2 -0.6**
comp=Z,121nm,1.4s
DBOC Borcka 21.09 83 *i* P **P** **09 31 16.6 +1.8**
DBOC Borcka 21.09 83 *i* P **P** **09 31 16.6 +1.8**
VRHR Novokhopersk 21.16 56 *e*P **P** **09 31 15.0 -0.3**
VRHR *e*S **S** **09 35 07.7 -2.4**
VRHR pmax pmax
comp=Z,50nm,1.2s
VRHR pmax pmax
comp=N,40nm,0.6s
VRHR pmax pmax
comp=E,40nm,0.7s
VRHR smax smax
comp=E,1µm,11.9s
VRHR smax smax
comp=Z,730nm,10.9s
VRHR smax smax
comp=N,860nm,10.6s
VRHR MLR MLR
comp=Z,2µm,13.0s
VRHR MLR MLR
comp=N,1µm,16.0s
VRHR MLR MLR
comp=E,8µm,19.0s
VRHR Novokhopersk 21.16 56 *e*P **P** **09 31 15.0 -0.3**
comp=E,40nm,0.6s
DBAD Bademkaya 21.18 84 *i* P **P** **09 31 17.0 +1.2**
DBAD Bademkaya 21.18 84 *i* P **P** **09 31 17.0 +1.2**
KAF Kangasniemi 21.24 17 *e*P **P** **09 31 13.8 -2.3**
KAF pmax pmax
comp=Z,22nm,0.8s
KAF Kangasniemi 21.24 17 *ep* **P** **09 31 13.8 -2.3**
comp=Z,22nm,0.8s
KAF Kangasniemi 21.24 17 *e*P **P** **09 31 13.8 -2.3**
comp=Z,22nm,0.8s
DDEM Demirkent 21.25 84 *i* P **P** **09 31 19.1 +2.5**
DDEM Demirkent 21.25 84 *i* P **P** **09 31 19.1 +2.5**
ASF Jabal al Asfar 21.27 111 P **P** **09 31 18.1 +1.3**
ASF Jabal al Asfar 21.27 111 P **P** **09 31 18.1 +1.3**
comp=Z,4.5nm,0.8s,baz=111,slow=2.8,SNR=7.6
ARTV Artvin 21.32 83 *i* P **P** **09 31 18.9 +1.5**
ARTV Artvin 21.32 83 *i* P **P** **09 31 18.9 +1.5**
DAGI Agillar 21.33 84 *i* P **P** **09 31 18.9 +1.5**
KIV Kislovodsk 21.42 76 *e*P **P** **09 31 18.6 +0.3**
KIV *e*S **S** **09 35 16.1 +0.4**
KIV pmax pmax
comp=Z,44nm,3.3s
KIV pmax pmax
comp=Z,189nm,1.0s
KIV MLR MLR
comp=Z,553nm,14.0s
KIV Kislovodsk 21.42 76 *e*P **P** **09 31 19.9 +1.5**
comp=Z,245nm,1.2s
KIV Kislovodsk 21.42 76 P **P** **09 31 19.9 +1.5**
SNR=41
KIV Kislovodsk 21.42 76 *e*P **P** **09 31 18.6 +0.3**
comp=Z,553nm,14.0s
KIV *e*S **S** **09 35 16.1 +0.4**
EIL Elat 21.52 119 P **P** **09 31 20.3 +1.0**
EIL Elat 21.52 119 P **P** **09 31 20.3 +1.0**
comp=Z,21nm,1.1s,baz=331,slow=8.7,SNR=10
EIL Elat 21.52 119 P **P** **09 31 20.3 +1.0**
KBZ Khabaz 21.60 76 P **P** **09 31 21.7 +1.6**
KBZ pmax pmax
comp=Z,77nm,1.1s
KBZ Khabaz 21.60 76 P **P** **09 31 21.7 +1.6**
KBZ Khabaz 21.60 76 P **P** **09 31 21.7 +1.6**
comp=Z,77nm,1.1s,baz=291,slow=8.2,SNR=44
KBZ Khabaz 21.60 76 P **P** **09 31 21.7 +1.6**
comp=Z,77nm,1.1s
ONI Oni 22.16 79 P **P** **09 31 28.1 +1.8**
ONI S **S** **09 35 33.6 +3.6**
AKH Akhalkalaki 22.42 82 P **P** **09 31 30.5 +1.4**
AKH S **S** **09 35 39.7 +4.6**
AKH Akhalkalaki 22.42 82 P **P** **09 31 30.5 +1.4**
KZR Kazreti 23.10 82 P **P** **09 31 36.6 +0.4**
KZR Kazreti 23.10 82 P **P** **09 31 36.6 +0.4**
JOF Joensuu 23.14 21 *e*P **P** **09 31 35.6 -0.7**
JOF pmax pmax
comp=Z,9.0nm,0.6s
JOF Joensuu 23.14 21 *ep* **P** **09 31 35.6 -0.7**
comp=Z,9.0nm,0.6s
JOF Joensuu 23.14 21 *e*P **P** **09 31 35.6 -0.7**
comp=Z,9.0nm,0.6s
TBLG Delisi 23.26 81 P **P** **09 31 38.3 +0.5**
TBLG S Sn 09 35 59.0 -8.7
TBLG Delisi 23.26 81 P **P** **09 31 38.3 +0.5**
DGRG David-gareji 23.79 81 P **P** **09 31 44.1 +1.1**
DGRG S Sn 09 36 09.2 -11
DGRG David-gareji 23.79 81 P **P** **09 31 44.1 +1.1**
KLMR Klimovskoe 24.36 32 *d* *i*P **P** **09 31 46.8 -1.2**
KLMR pmax pmax
comp=Z,153nm,1.3s
KLMR MLR MLR
comp=Z,2µm,13.0s
KLMR Klimovskoe 24.36 32 *i* P **P** **09 31 46.8 -1.2**
comp=Z,2µm,13.0s
MAK Makhachkala 25.04 77 *e*P **P** **09 31 51.5 -2.8**
MAK *e*S **S** **09 36 15.2 -2.8**
MAK *e*SSS SSS 09 37 20.7
MAK pmax pmax
comp=Z,167nm,1.0s
MAK MLR MLR
comp=Z,2µm,13.0s
IAZR Azarshahr 25.34 90 *e*P **P** **09 31 57.1 -0.4**
IAZR Azarshahr 25.34 90 *e*P **P** **09 31 57.1 -0.4**
IBST Bostanabad 26.01 89 *e*P **P** **09 32 02.7 -0.8**
IBST Bostanabad 26.01 89 *e*P **P** **09 32 02.7 -0.8**
BHD Baghdad 26.03 100 *ex* P **P** **09 32 04.3 +0.9**
BHD *ex* **S** **09 36 36.0 +2.1**
BHD Baghdad 26.03 100 *e*P **P** **09 32 04.3 +0.9**
BHD *e*S **S** **09 36 36.0 +2.1**
TMCR Tamitsa 26.04 25 *e*P **P** **09 31 59.3 -3.9**
TMCR pmax pmax
comp=Z,94nm,1.5s
APA Apatity 27.49 17|| *i*P **P** **09 32 16.0 -0.3**
APA MLR MLR
comp=Z,2µm,14.0s
APA Apatity 27.49 17 *i* P **P** **09 32 16.0 -0.3**
comp=Z,2µm,14.0s
ARCES ARCESS Array B 27.96 9 P **P** **09 32 20.3 -0.2**
ARCES PcP **PcP** **09 35 33.9 -1.3**
ARCES ARCESS Array B 27.96 9 P **P** **09 32 20.3 -0.2**
comp=Z,8.0nm,1.1s,baz=194,slow=10,SNR=8.6
ARCES PcP **PcP** **09 35 33.9 -1.3**
comp=Z,3.6nm,0.9s,baz=188,slow=4.4,SNR=3.9
ARCES ARCESS Array B 27.96 9 P **P** **09 32 20.3 -0.2**
comp=Z,8.0nm,1.1s
ARCES ARCESS Array B 27.96 9 PcP **PcP** **09 35 33.9 -1.3**
IRAZ Razeghan 29.15 92 *e*P **P** **09 32 32.2 +0.5**
IRAZ Razeghan 29.15 92 *e*P **P** **09 32 32.2 +0.5**
IR5 Iran Long-Peri 29.72 91 *e*P **P** **09 32 36.2 -0.4**
IR5 Iran Long-Peri 29.72 91 *e*P **P** **09 32 36.2 -0.4**
BORG Borgarnes 29.78 331 LR LR 09 45 07.4
comp=Z,348nm,19.5s,baz=114,slow=38
IVRN Varamin 30.66 91 *e*P **P** **09 32 45.1 +0.3**
IVRN Varamin 30.66 91 *e*P **P** **09 32 45.1 +0.3**
TOA0 Torodi Ar. Sit 30.81 203 *e*P **P** **09 32 46.4 +0.2**
TOA0 *e*PP **PP** **09 33 58.2 +2.4**
TOA0 *e*PcP **PcP** **09 35 42.7 -0.6**
TOA0 Torodi Ar. Sit 30.81 203 *e*P **P** **09 32 46.4 +0.2**
TORD Torodi Ar. Bea 30.81 203 P **P** **09 32 46.9 +0.7**
TORD PcP **PcP** **09 35 42.4 -0.9**
TORD Torodi Ar. Bea 30.81 203 P **P** **09 32 46.9 +0.7**
comp=Z,7.8nm,0.6s,baz=19,slow=8.7,SNR=54
TORD PcP **PcP** **09 35 42.4 -0.9**
comp=Z,1.3nm,0.7s,baz=18,slow=0.4,SNR=3.9
TORD Torodi Ar. Bea 30.81 203 P **P** **09 32 46.9 +0.7**
AKTK Aktyubinsk 31.45 60 P **P** **09 32 50.6 -0.9**
comp=Z,3.0nm,0.8s
AKTO Aktyubinsk 31.45 60 P **P** **09 32 50.6 -0.9**
AKTO pmax pmax
comp=Z,3.0nm,0.8s
AKTO Aktyubinsk 31.45 60 P **P** **09 32 50.6 -0.9**
AKTO Aktyubinsk 31.45 60 P **P** **09 32 50.6 -0.9**
comp=Z,3.1nm,0.8s,baz=273,slow=9.5,SNR=9.0
AKTO Aktyubinsk 31.45 60 P **P** **09 32 50.6 -0.9**
ISHM Shahmirzad 31.48 89 *e*Pn **P** **09 32 52.9 +0.6**
ISHM Shahmirzad 31.48 89 *e*Pn **P** **09 32 52.9 +0.6**
SOKR Solikamsk 31.60 42 *d* *i*P **P** **09 32 52.6 -0.1**
SOKR SS SS 09 39 55.6 -20
SOKR pmax pmax
comp=Z,40nm,1.3s
SOKR MLR MLR
comp=Z,820nm,13.0s
SOKR Solikamsk 31.60 42 *i* P **P** **09 32 52.6 -0.1**
comp=Z,820nm,13.0s
ARU Arti 31.98 48 *d* *i*P **P** **09 32 55.7 -0.5**
ARU 09 33 57.1
ARU S **S** **09 38 07.2 +0.2**
ARU pmax pmax
comp=Z,87nm,1.2s
ARU MLR MLR
comp=Z,2µm,15.0s
ARU Arti 31.98 48 *e*P **P** **09 32 55.6 -0.5**
comp=Z,204nm,1.7s
ARU Arti 31.98 48 *i* P **P** **09 32 55.7 -0.5**
comp=Z,87nm,1.2s
IZEF Zefreh 32.06 94 *e*P **P** **09 32 58.3 +0.9**
IZEF Zefreh 32.06 94 *e*P **P** **09 32 58.3 +0.9**
IANJ Anjilo 32.08 89 *e*P **P** **09 32 57.0 -0.5**
IANJ Anjilo 32.08 89 *e*P **P** **09 32 57.0 -0.5**
AB31 Akbulak array 32.78 62 *i* P **P** **09 33 02.6 -0.6**
AB31 Akbulak array 32.78 62 *i* P **P** **09 33 02.6 -0.6**
ABKAR Akbulak array 32.78 62 *e*P **P** **09 33 03.1 -0.1**
ABKAR Akbulak array 32.78 62 *e*P **P** **09 33 03.1 -0.1**
SVE Sverdlovsk 33.16 48 *ce*P **P** **09 33 06.6 +0.1**
SVE *e* 09 34 21.2
SVE *e*S **S** **09 38 28.3 +2.9**
SVE pmax pmax
comp=Z,86nm,1.5s
SVE MLR MLR
comp=Z,2µm,14.0s
SVE Sverdlovsk 33.16 48 *e*P **P** **09 33 06.6 +0.1**
comp=Z,86nm,1.5s
ISRV Sarvestan 34.43 99 *e*P **P** **09 33 18.6 +0.4**
ISRV Sarvestan 34.43 99 *e*P **P** **09 33 18.6 +0.4**
IBAF Bafgh 35.09 94 *e*P **P** **09 33 22.9 -0.8**
IBAF Bafgh 35.09 94 *e*P **P** **09 33 22.9 -0.8**
IAKL Akhelmad 35.20 84 *e*P **P** **09 33 25.5 +0.8**
SPITS Spitsbergen Ar 35.95 1 P **P** **09 33 29.4 -1.0**
SPITS Spitsbergen Ar 35.95 1 P **P** **09 33 29.4 -1.0**
comp=Z,22nm,1.1s,baz=188,slow=5.5,SNR=3.7
SPITS Spitsbergen Ar 35.95 1 P **P** **09 33 29.4 -1.0**
comp=Z,22nm,1.1s
BBTS Babate 37.73 232 P **P** **09 33 46.4 +0.2**
BBTS Babate 37.73 232 P **P** **09 33 46.4 +0.2**
comp=Z,65nm,1.2s,baz=42,slow=2.3,SNR=3.8
BBTS Babate 37.73 232 P **P** **09 33 46.3 +0.2**
BRVK Borovoye 38.81 54 P **P** **09 33 55.1 +0.2**
BRVK pmax pmax
comp=Z,40nm,0.9s
BRVK Borovoye 38.81 54 *e*P **P** **09 33 55.4 +0.5**
comp=Z,23nm,0.9s
BRVK Borovoye 38.81 54 P **P** **09 33 55.7 +0.8**
SNR=12
BRVK Borovoye 38.81 54 *e*P **P** **09 33 55.4 +0.5**
comp=Z,23nm,0.9s
BVA0 Borovoye Array 38.88 54 *i* P **P** **09 33 55.8 +0.3**
BVA0 pmax pmax
comp=Z,3.0nm,1.1s
BVA0 Borovoye Array 38.88 54 *i* P **P** **09 33 55.8 +0.3**
comp=Z,3.0nm,1.1s
BVAR Borovoye Array 38.88 54 LR LR 09 51 12.3
comp=Z,1µm,18.2s,baz=262,slow=38
DBIC Dimbokro 39.02 210 *e*P **P** **09 33 57.2 +0.2**
comp=Z,47nm,1.5s
DBIC Dimbokro 39.02 210 P **P** **09 33 57.3 +0.3**
comp=Z,9.6nm,1.0s,baz=8.2,slow=9.6,SNR=7.2
DBIC Dimbokro 39.02 210 *e*P **P** **09 33 57.2 +0.2**
comp=Z,47nm,1.5s
KK31 Karatay Array 41.29 69 *i* P **P** **09 34 16.0 +0.3**
KK31 pmax pmax
comp=Z,10.0nm,0.7s
KK31 Karatay Array 41.29 69 *i* P **P** **09 34 16.0 +0.3**
comp=Z,10.0nm,0.7s
KKAR Karatay Array 41.29 69 *e*P **P** **09 34 16.2 +0.5**
KKAR Karatay Array 41.29 69 *e*P **P** **09 34 16.2 +0.5**
KKAR Karatay Array 41.29 69 *e*P **P** **09 34 16.2 +0.5**
SMDO Samad 41.70 103 P **P** **09 34 19.2 -0.1**
SNR=5.5
SMDO Samad 41.70 103 P **P** **09 34 19.2 -0.1**
SNR=5.5
SFJD Kangerlussuaq 41.83 328 P **P** **09 34 19.9 +0.3**
SFJD Kangerlussuaq 41.83 328 P **P** **09 34 19.9 +0.3**
comp=Z,11nm,1.0s,baz=85,slow=7.8,SNR=3.6
SFJD Kangerlussuaq 41.83 328 P **P** **09 34 19.9 +0.3**
comp=Z,11nm,1.0s
EKS2 Erkin-Say 43.70 68 *e*P **P** **09 34 36.3 +0.9**
EKS2 pmax pmax
comp=Z,28nm,0.9s
EKS2 Erkin-Say 43.70 68 *e*P **P** **09 34 36.3 +0.9**
comp=Z,28nm,0.9s
EKS2 Erkin-Say 43.70 68 *e*P **P** **09 34 36.3 +0.9**
comp=Z,28nm,0.9s
AAK Ala-Archa 44.20 68 *d* *i*P **P** **09 34 39.4 -0.1**
AAK pmax pmax
comp=Z,37nm,1.3s
AAK Ala-Archa 44.20 68 *e*P **P** **09 34 40.2 +0.8**
comp=Z,197nm,1.4s

AAK Ala-Archa 44.20 68 *e*P P 09 34 40.2 +0.8
comp=Z,197nm,1.4s
KURBB **Kurchatov Arra** 44.31 56 LR LR 09 54 45.7
comp=Z,982nm,18.5s,baz=285,slow=38
KURK Kurchatov 44.34 56 *d* iP P 09 34 39.5 -0.7
KURK pmax pmax
comp=Z,16nm,1.3s
KURK Kurchatov 44.34 56 *e*P P 09 34 39.7 -0.5
comp=Z,21nm,1.2s
KURK Kurchatov 44.34 56 P P 09 34 40.1 -0.1
SNR=6.5
NVS Novosibirsk 45.98 49⇓ *i*P P 09 34 53.0 -0.1
NVS *i* 09 36 31.3
NVS *e*S S 09 41 39.6 +2.3
NVS pmax pmax
comp=Z,72nm,1.4s
NVS pmax pmax
comp=N,6.0nm,1.6s
NVS pmax pmax
comp=E,28nm,1.6s
NVS smax smax
comp=N,4.0nm,1.2s
NVS smax smax
comp=E,18nm,1.8s
NVS Novosibirsk 45.98 49 *i* P P 09 34 53.0 -0.1
comp=E,72nm,1.4s
NVS Novosibirsk 45.98 49 *i* PcP PcP 09 36 31.3 +1.7
KSH Kashi 46.45 71⇓ *i*P P 09 34 56.9 -0.4
KSH pP pP 09 35 02.2 +0.5
KSH sP sP 09 35 04.0 +0.6
KSH *e*PcP PcP 09 36 32.9 +1.1
KSH PP PP 09 36 46.1 -0.2
KSH ScP ScP 09 40 25.0 +0.3
KSH PcS PcS 09 40 26.0 -0.6
KSH S S 09 41 42.0 -2.9
KSH sS sS 09 41 50.1 -2.0
KSH ScS ScS 09 44 50.0 -2.1
KSH SS SS 09 45 01.2 -9.2
KSH pmax pmax
comp=Z,25nm,1.4s
KSH LR LR
comp=N,130nm,4.0s
KSH LR LR
comp=E,91nm,3.2s
KSH LR LR
comp=Z,470nm,16.9s
ZALV Zalesovo Beam 47.11 50 P P 09 35 01.9 -0.1
ZALV 09 36 52.8
ZALV pmax pmax
comp=Z,5.0nm,0.7s
ZALV pmax pmax
comp=Z,6.0nm,1.0s
ZALV MLR MLR
comp=Z,1μm,19.3s
ZALV Zalesovo Beam 47.11 50 P P 09 35 01.9 -0.1
ZALV PP PP 09 36 52.8 +0.2
ZALV Zalesovo Beam 47.11 50 P P 09 35 01.9 -0.1
comp=Z,5.3nm,0.7s,baz=282,slow=7.4,SNR=22
ZALV PP PP 09 36 52.8 +0.2
comp=Z,6.2nm,1.0s,baz=287,slow=10,SNR=5.5
ZALV LR LR 09 56 48.7
comp=Z,1μm,19.3s,baz=102,slow=39
ZALV Zalesovo Beam 47.11 50 P P 09 35 01.9 -0.1
comp=Z,5.0nm,0.7s
MK31 Makanchi Array 47.88 60 *e*P P 09 35 07.9 -0.3
MK31 *e* 09 36 36.9
MK31 Makanchi Array 47.88 60 *e*P P 09 35 07.9 -0.3
MK31 *e*PcP PcP 09 36 36.9 +0.2
MK31 Makanchi Array 47.88 60 *e*P P 09 35 07.9 -0.3
MKAR Makanchi Array 47.88 60 P P 09 35 08.1 -0.1
MKAR pmax pmax
comp=Z,8.0nm,0.7s
MKAR Makanchi Array 47.88 60 *e*P P 09 35 08.1 -0.1
MKAR Makanchi Array 47.88 60 P P 09 35 08.1 -0.1
comp=Z,8.1nm,0.7s,baz=286,slow=6.6,SNR=52
MKAR Makanchi Array 47.88 60 P P 09 35 08.1 -0.1
comp=Z,8.0nm,0.7s
KMBO Kilima Mbogo 48.37 147 LR LR 09 59 25.3
comp=Z,232nm,18.2s,baz=96,slow=41
FRB Frobisher Bay 49.62 325 P P 09 35 21.0 -0.3
FRB Frobisher Bay 49.62 325 P P 09 35 21.0 -0.3
comp=Z,3.5nm,0.7s,baz=77,slow=9.6,SNR=10
FRB Frobisher Bay 49.62 325 P P 09 35 21.0 -0.3
comp=Z,4.0nm,0.7s
SCHQ Schefferville 51.63 313 *e*P P 09 35 35.8 -0.8
comp=Z,11nm,1.0s
SCHQ Schefferville 51.63 313 P P 09 35 35.2 -1.4
comp=Z,5.8nm,0.7s,baz=81,slow=9.2,SNR=12
SCHQ Schefferville 51.63 313 *e*P P 09 35 35.8 -0.8
comp=Z,11nm,1.0s
DDI Dehra Dun 52.34 81 *e*P P 09 35 40.0 -2.3
WMQ Urumqi 52.56 61 P P 09 35 46.0 +2.2
WMQ sP sP 09 35 53.0 +3.1
WMQ PcP PcP 09 36 56.0 +2.0
WMQ PP PP 09 37 46.0 +3.4
WMQ ScP ScP 09 40 52.0 +1.3
WMQ S S 09 43 11.0 +0.7
WMQ ScS ScS 09 45 32.0 -1.2
WMQ SS SS 09 46 48.0 0.0
WMQ pmax pmax
comp=Z,35nm,1.1s
WMQ pmax pmax
comp=Z,140nm,5.0s
WMQ LR LR
comp=N,720nm,18.0s
WMQ LR LR
comp=E,760nm,18.0s
WMQ LR LR
comp=Z,690nm,18.0s
NDI New Delhi 52.61 83 *e*P P 09 35 41.0 -3.2
RES Resolute Bay 54.16 342 P P 09 35 55.8 +0.8
RES Resolute Bay 54.16 342 P P 09 35 55.8 +0.8
comp=Z,0.8nm,0.8s,baz=34,slow=7.3,SNR=3.3
RES Resolute Bay 54.16 342 P P 09 35 55.8 +0.8
comp=Z,1.0nm,0.8s
MOY Mondy 57.04 48 *e*P P 09 36 16.9 +0.8
MOY Mondy 57.04 48 *e*P P 09 36 16.9 +0.8
PYUN Piuthan 57.16 80 *e*P P 09 36 17.1 -0.4
comp=Z,389nm,1.5s
DANN Dangsing 57.59 80 *e*P P 09 36 20.0 -0.6
comp=Z,140nm,1.4s
KOLN Koldanda 57.80 80 *e*P P 09 36 21.0 -0.9
TLY Talaya 58.48 47 *e*P P 09 36 25.2 -0.9
TLY *e* 09 38 30.9
TLY *e*S S 09 44 24.9 -4.0
TLY *e*SSS SSS 09 50 44.5
TLY pmax pmax
comp=Z,38nm,1.6s
TLY MLR MLR
comp=Z,617nm,16.0s
TLY Talaya 58.48 47 *e*P P 09 36 27.5 +1.4
comp=Z,42nm,1.3s
TLY Talaya 58.48 47 P P 09 36 27.8 +1.7
SNR=16
TLY Talaya 58.48 47 *e*P P 09 36 27.5 +1.4
comp=Z,42nm,1.3s
IRK Irkutsk 58.53 46 *e*P P 09 36 26.2 -0.3
IRK pmax pmax
comp=Z,46nm,1.3s
IRK Irkutsk 58.53 46 *e*P P 09 36 26.2 -0.3
comp=Z,46nm,1.3s
ZAK Zakamensk 58.92 48⇓ *i*P P 09 36 30.0 +0.6
ZAK pmax pmax
comp=Z,8.0nm,1.6s
ZAK Zakamensk 58.92 48 *i* P P 09 36 30.0 +0.6
comp=Z,8.0nm,1.6s
LSZ Lusaka 58.96 163 *e*P P 09 36 30.1 +0.3
comp=Z,11nm,1.2s
LSZ Lusaka 58.96 163 *e*P P 09 36 30.2 +0.3
comp=Z,11nm,1.2s
DMN Daman 58.99 80 *e*P P 09 36 29.7 -0.6
KKN Kakani 59.01 79 *e*P P 09 36 29.5 -0.9
PKI Pulchoki 59.23 79 *e*P P 09 36 31.1 -1.0
GUN Gumba 59.38 79 *e*P P 09 36 32.4 -0.7
HYB Hyderabad 60.24 93 *i* P P 09 36 36.0 -2.8
RAMN Ramite 60.45 79 *e*P P 09 36 39.2 -1.2
comp=Z,59nm,1.0s
TAPN Taplejung 61.03 78 *e*P P 09 36 43.3 -1.1
ODAN Odare 61.08 79 *e*P P 09 36 43.5 -1.2
SONM Songino Array 62.00 50 P P 09 36 51.0 +0.5
SONM Songino Array 62.00 50 P P 09 36 51.0 +0.5
comp=Z,12nm,1.0s,baz=292,slow=7.6,SNR=68
SONM LR LR 10 05 40.7
comp=Z,1μm,19.0s,baz=244,slow=38
SONM Songino Array 62.00 50 P P 09 36 51.0 +0.5
comp=Z,1μm,19.0s
LSA Lhasa 62.16 74 P P 09 36 50.9 -1.3
ULN Ulaanbaatar 62.35 49 *e*P P 09 36 53.5 +0.7
comp=Z,44nm,1.6s
ULN Ulaanbaatar 62.35 49 P P 09 36 53.6 +0.7
SNR=12
ULN Ulaanbaatar 62.35 49 *e*P P 09 36 53.5 +0.7
comp=Z,44nm,1.6s
GTA Gaotai 62.63 61 *e*P P 09 36 55.2 +0.4
GTA pP pP 09 36 59.8 +0.5
GTA sP sP 09 37 02.2 +1.2
GTA S S 09 45 23.3 +0.7
GTA sS sS 09 45 31.3 +1.3
GTA SS SS 09 49 30.3 +3.9
GTA pmax pmax
comp=Z,12nm,1.3s
GTA pmax pmax
comp=Z,170nm,5.2s
GTA LR LR
comp=N,380nm,19.7s
GTA LR LR
comp=E,460nm,18.3s
GTA LR LR
comp=Z,700nm,19.5s
YAK Yakutsk 64.09 28 *e*P P 09 37 02.6 -1.3
YAK pmax pmax
comp=Z,30nm,1.0s
YAK pmax pmax
comp=N,19nm,1.4s
YAK pmax pmax
comp=E,16nm,1.2s
YAK MLR MLR
comp=Z,513nm,16.0s
YAK MLR MLR
comp=N,380nm,16.0s
YAK MLR MLR
comp=E,359nm,16.0s
YAK Yakutsk 64.09 28 *e*P P 09 37 02.6 -1.3
comp=E,513nm,16.0s
INK Inuvik 66.89 347 P P 09 37 21.0 -0.9
INK Inuvik 66.89 347 P P 09 37 21.0 -0.9
comp=E,2.8nm,1.0s,baz=17,slow=7.5,SNR=14
LZH Lanzhou 67.15 62 ⇓P P 09 37 24.6 +0.3
LZH pP pP 09 37 27.9 -0.9
LZH sP sP 09 37 29.3 -1.2
LZH PP PP 09 39 54.0 +2.1
LZH *e*S S 09 46 16.5 -1.8
LZH pmax pmax
comp=Z,52nm,1.5s
LZH pmax pmax
comp=Z,150nm,7.8s
LZH LR LR
comp=N,750nm,16.0s
LZH LR LR
comp=E,770nm,16.5s
LZH LR LR
comp=Z,790nm,18.0s
YKW3 Yellowknife Ar 67.43 337 *e*P P 09 37 25.5 0.0
comp=Z,0.2nm,1.2s
YKA Yellowknife Ar 67.48 337 P P 09 37 25.7 -0.1
YKA Yellowknife Ar 67.48 337 P P 09 37 25.7 -0.1
comp=Z,2.2nm,0.7s,baz=40,slow=5.6,SNR=60
LBTB Lobatse 67.99 168 *e*P P 09 37 30.9 +1.4
comp=Z,40nm,1.4s
BILL Bilibino 68.05 11 P P 09 37 30.0 +0.7
BILL *e* 09 37 35.4
BILL pmax pmax
comp=Z,13nm,1.7s
BILL MLR MLR
comp=Z,200nm,18.0s
BILL Bilibino 68.05 11 *e*P P 09 37 29.5 +0.2
comp=Z,3.6nm,0.8s
PALK Pallekele 68.44 100 *e*P P 09 37 31.9 -0.7
comp=Z,21nm,1.0s
FFC Flin Flon 68.72 326 *i* P P 09 37 34.2 +0.5
FFC Flin Flon 68.72 326 *e*P P 09 37 33.8 +0.1
comp=Z,10.0nm,1.0s
ULM Lac du Bonnet 69.02 320 *e*P P 09 37 35.5 -0.1
comp=Z,21nm,1.5s
ULM Lac du Bonnet 69.02 320 P P 09 37 35.0 -0.6
comp=Z,3.3nm,0.5s,baz=41,slow=7.5,SNR=6.4
HHC Hu-ho-hao-te 69.09 53 *e*P P 09 37 34.3 -2.1
HHC pP pP 09 37 39.0 -1.9
HHC sP sP 09 37 41.3 -1.3
HHC PP PP 09 40 09.0 +0.5
HHC S S 09 46 37.2 -4.1
HHC SS SS 09 51 05.2 -1.3
HHC pmax pmax
comp=Z,30nm,1.1s
HHC pmax pmax
comp=Z,390nm,6.2s
HHC LR LR
comp=N,1μm,17.8s
HHC LR LR
comp=E,1μm,18.8s
HHC LR LR
comp=Z,2μm,19.3s
COLD Coldfoot 70.02 353 *e*P P 09 37 42.5 +0.9
comp=Z,3.9nm,0.9s
SEY Seymchan 70.07 19⇓ *i*P P 09 37 42.4 +0.5
CD2 Chengdu 70.22 66 P P 09 37 42.4 -1.0
CD2 pP pP 09 37 47.1 -0.8
CD2 sP sP 09 37 49.4 -0.2
CD2 PcP PcP 09 38 05.0 -0.2
CD2 PP PP 09 40 18.8 +0.3
CD2 S S 09 46 50.8 -3.9
CD2 SKS SKSac 09 47 39.2 -5.4
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,170nm,5.4s
CD2 LR LR
comp=N,420nm,16.6s
CD2 LR LR
comp=E,660nm,17.1s
CD2 LR LR
comp=Z,520nm,14.7s
KMSC Kings Mountain 70.42 300 ⇑P P 09 37 44.0 -0.5
baz=70
BOSA Boshof 71.47 169 *e*P P 09 37 50.6 -0.2
comp=Z,28nm,1.1s
BOSA Boshof 71.47 169 P P 09 37 49.9 -1.0
comp=Z,12nm,0.8s,baz=346,slow=7.4,SNR=13
WCI Wyandotte Cave 71.58 305 *e*P P 09 37 50.9 -0.6
WCI pmax pmax
comp=Z,12nm,0.7s
WCI Wyandotte Cave 71.58 305 *e*P P 09 37 50.9 -0.6
comp=Z,12nm,0.7s
XAN Xi'an 71.69 61 P P 09 37 52.4 +0.1
XAN pP pP 09 38 01.2 +4.3
XAN pmax pmax
comp=Z,11nm,1.4s
XAN pmax pmax
comp=Z,36nm,5.8s
ILAR Eielson Array 72.08 351 P P 09 37 54.9 +0.8
ILAR Eielson Array 72.08 351 P P 09 37 54.9 +0.8
comp=Z,1.4nm,0.7s,baz=359,slow=6.0,SNR=25
BJI Beijing 72.32 52 P P 09 37 55.6 -0.3
BJI pmax pmax
comp=Z,23nm,1.5s
BJI pmax pmax
comp=Z,150nm,5.1s
TNA Tin City 72.41 1 *e*P P 09 37 57.9 +1.9
comp=Z,9.9nm,1.3s
DOT Dot Lake 72.82 350 *e*P P 09 38 00.1 +1.5
comp=Z,69nm,2.4s
KMI Kunming 73.11 71 P P 09 37 59.5 -1.6
KMI pmax pmax
comp=Z,18nm,1.4s
SDDR Presa de Saban 73.58 281 *e*P P 09 38 04.8 +1.1
comp=Z,19nm,1.1s
TRF Thorofare Moun 73.73 352 *e*P P 09 38 03.8 -0.3
comp=Z,4.5nm,0.7s
A24A Westby 73.73 322 ⇑P P 09 38 05.0 +0.8
baz=74
ECSD EROS Data Cent 73.79 315 *e*P P 09 38 04.1 -0.5
comp=Z,10.0nm,0.9s
KLR Kul'dur 73.99 37 *e*P P 09 38 02.3 -3.3
KLR pmax pmax
comp=Z,57nm,1.6s
DGMT Dagmar 74.15 322 *e*P P 09 38 07.9 +1.3
comp=Z,23nm,1.3s
DGMT Dagmar 74.15 322 ⇑P P 09 38 07.3 +0.7
baz=74
TIGA Tifton 74.22 298 ⇓P P 09 38 08.4 +1.2
baz=74
CHTO Chiang Mai 74.40 79 *e*P P 09 38 07.7 -0.8
CHTO pmax pmax
comp=Z,29nm,1.3s
CHTO Chiang Mai 74.40 79 *e*P P 09 38 07.7 -0.8
comp=Z,29nm,1.3s
CHTO Chiang Mai 74.40 79 P P 09 38 08.1 -0.4
SNR=10
BRSD Miller 74.51 317 ⇓P P 09 38 08.6 -0.1
baz=74
B23A Brockton 74.52 323 ⇓P P 09 38 09.5 +0.7
baz=74
A22A Carney Farms, 74.54 323 ⇓P P 09 38 09.4 +0.5
baz=74
CMAR Chiang Mai Arr 74.62 79 P P 09 38 09.1 -0.7
CMAR Chiang Mai Arr 74.62 79 P P 09 38 09.1 -0.7
comp=Z,6.4nm,0.8s,baz=305,slow=7.4,SNR=25
PLAL Pickwick Lake 74.77 303 *e*P P 09 38 16.8 +6.4
comp=Z,16nm,1.0s
CN2 Changchun 74.87 44 *e*P P 09 38 11.6 +0.8
CN2 *e*S S 09 47 45.7 -1.6
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,19.0s
CN2 LR LR
comp=E,300nm,19.0s
CN2 LR LR
comp=Z,300nm,20.0s
C24A Savage 74.95 322 ⇓P P 09 38 11.5 +0.2
baz=75
A21A Bergtoll Ranch 74.98 324 ⇓P P 09 38 11.1 -0.3
baz=75
GYA Guiyang 74.99 68 P P 09 38 12.7 +0.7
GYA PcP PcP 09 38 27.4 +1.7
GYA PP PP 09 41 01.6 +2.1
GYA S S 09 47 48.0 -1.5
GYA SKS SKSac 09 48 16.3 -4.5
GYA SS SS 09 52 39.0 +1.4
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,90nm,5.0s
GYA LR LR
comp=N,490nm,19.5s
GYA LR LR
comp=E,440nm,20.0s
GYA LR LR
comp=Z,480nm,19.3s
B22A Reddig Ranch S 75.09 323 ⇓P P 09 38 12.4 +0.3
baz=75
C23A Lambert 75.09 322 ⇓P P 09 38 12.9 +0.8
baz=75
D24A Glendive 75.21 321 ⇓P P 09 38 13.1 +0.3
baz=75
B21A Ellsworth Farm 75.45 324 ⇑P P 09 38 13.8 -0.3
baz=75
C22A Vida 75.45 323 ⇑P P 09 38 14.9 +0.7
baz=75
BMRM Bremner River 75.47 349 *e*P P 09 38 15.1 +1.1
comp=Z,19nm,1.1s
A20A Cobblestone Ra 75.50 324 ⇑P P 09 38 15.0 +0.5
baz=75,SNR=6.6
D23A Lindsay 75.57 322 ⇑P P 09 38 15.0 +0.1
baz=75
A19A Klindworth Far 75.82 325 ⇑P P 09 38 16.8 +0.5
baz=76,SNR=6.9
B20A Solberg Farm, 75.88 324 ⇓P P 09 38 16.0 -0.6
baz=76
C21A Desert Coulee 75.94 323 ⇑P P 09 38 17.6 +0.6
baz=76,SNR=5.7
D22A Cohagen 76.03 322 ⇓P P 09 38 18.4 +0.9
baz=76
F24A Ekalaka 76.20 320 ⇑P P 09 38 18.3 -0.3
baz=76
BGNE Belgrade 76.22 314 ⇓P P 09 38 17.9 -0.8
baz=76
B19A Brinkman Farms 76.27 325 ⇓P P 09 38 18.8 0.0
baz=76
A18A Metzger Ranch, 76.29 325 ⇑P P 09 38 19.6 +0.6
baz=76,SNR=10
MDJ Mudanjiang 76.36 41 P P 09 38 19.9 +0.5
MDJ pmax pmax
comp=Z,9.0nm,1.9s
MDJ pmax pmax
comp=Z,110nm,5.8s
C20A Veseth Ranch, 76.42 324 ⇑P P 09 38 20.5 +0.8
baz=76,SNR=13
D21A La Casta Ranch 76.46 323 ⇓P P 09 38 20.9 +0.9
baz=76,SNR=6.2
G24A Alzada 76.57 320 ⇑P P 09 38 20.5 -0.1
baz=76
A17A Triple J Farms 76.63 326 ⇓P P 09 38 21.1 +0.2
baz=76
B18A Beardsley Farm 76.67 325 ⇑P P 09 38 21.9 +0.8
baz=76,SNR=9.7
C19A Slack Wire Ran 76.86 324 ⇓P P 09 38 22.9 +0.7
baz=77,SNR=9.4
EGMT Eagleton 76.94 325 *e*P P 09 38 23.7 +0.9
comp=Z,44nm,1.4s
EGMT Eagleton 76.94 325 ⇓P P 09 38 23.6 +0.9
baz=77,SNR=14
D20A Manuel Ranch, 76.95 323 ⇑P P 09 38 23.4 +0.7
baz=77,SNR=11
KSU1 Kansas State U 77.00 311 *e*P P 09 38 23.1 0.0
comp=Z,22nm,0.9s
H24A Dirks Ranch, A 77.06 320 ⇓P P 09 38 23.1 -0.4
baz=77
F22A Rosebud 77.09 321 ⇓P P 09 38 23.1 -0.5
baz=77
G23A Biddle 77.12 321 ⇑P P 09 38 23.4 -0.4
baz=77
B17A L&G Farms, Che 77.18 325 ⇓P P 09 38 24.5 +0.5
baz=77,SNR=17
E20A Meyer Farm, Mu 77.40 323 ⇑P P 09 38 25.2 -0.1
baz=77
K27A Flueckinger Fa 77.42 317 ⇓P P 09 38 25.4 -0.1
baz=77
A15A Johnson Ranch, 77.44 327 ⇓P P 09 38 25.6 +0.1
baz=77,SNR=11
G22A Birney 77.53 321 ⇑P P 09 38 25.8 -0.3
baz=77
D18A Linhart Farms, 77.60 324 ⇓P P 09 38 27.0 +0.6
baz=77,SNR=6.6
C17A Wharram Farm, 77.68 325 ⇑P P 09 38 27.1 +0.2
baz=77,SNR=14
A14A Double T Ranch 77.72 327 ⇑P P 09 38 27.6 +0.5
baz=77,SNR=30
E19A Rath Farm, Rou 77.72 323 ⇑P P 09 38 27.0 -0.1
baz=78
USRK Ussuriysk Arra 77.84 40 P P 09 38 28.0 +0.4
comp=Z,8.9nm,1.0s,baz=302,slow=3.5,SNR=22
USRK LR LR 10 16 10.2
comp=Z,519nm,20.0s,baz=224,slow=38
WALA Waterton Lakes 77.85 328 *e*P P 09 38 28.2 +0.3
comp=Z,0.3nm,1.0s
B15A Bradely Ranch, 77.89 326 ⇑P P 09 38 27.7 -0.4
baz=78,SNR=9.4
F20A Billings 77.94 322 ⇓P P 09 38 28.2 -0.2
baz=78
C16A Fuhringer Ranc 77.96 326 ⇑P P 09 38 28.2 -0.2
baz=78
D17A Six Diamond Ra 78.02 325 ⇑P P 09 38 29.3 +0.5
baz=78,SNR=6.0
E18A Harlowton 78.14 324 ⇓P P 09 38 29.8 +0.3
baz=78
A13A Flathead Natio 78.15 328 ⇑P P 09 38 29.1 -0.3
baz=78
B14A Marquette Ranc 78.15 327 ⇓P P 09 38 29.4 -0.1
baz=78,SNR=6.4
F19A Roth Farm, Mol 78.26 323 ⇓P P 09 38 30.7 +0.5
baz=78,SNR=8.3
H21A Big Horn, Sher 78.33 321 ⇓P P 09 38 29.7 -0.8
baz=78
L26A Underwood Farm 78.33 317 ⇑P P 09 38 30.0 -0.6
baz=78
C15A Salmond Ranch, 78.34 326 ⇓P P 09 38 29.5 -1.1
baz=78
G20A Bridger 78.42 322 ⇓P P 09 38 30.3 -0.7
baz=78
D16A Dana Ranch, Ca 78.48 325 ⇑P P 09 38 31.6 +0.2
baz=78,SNR=7.2
F18A Big Timber 78.56 323 ⇑P P 09 38 32.1 +0.3
baz=78
B13A Whitefish 78.62 327 ⇓P P 09 38 32.5 +0.5
baz=78,SNR=7.3
A12A Yaak River Ran 78.63 328 ⇓P P 09 38 32.5 +0.4

baz=78,SNR=6.8
E17A **Martinsdale** 78.63 324 ⇑P P 09 38 32.6 +0.3
baz=78,SNR=5.5
TUL1 **Tulsa** 78.77 309 ⇑P P 09 38 33.2 +0.2
baz=79
C14A **Swan Lake** 78.81 327 ⇓P P 09 38 33.2 +0.1
baz=78,SNR=8.9
YBMT **Yellow Bay** 78.84 327 eP P 09 38 34.0 +0.6
comp=Z,5.8nm,1.2s
HRY **Holter Researc** 78.85 325 eP P 09 38 34.3 +0.9
BLMT **Blacktail Moun** 78.86 327 eP P 09 38 34.6 +1.1
H20A **Greybull** 78.88 321 ⇑P P 09 38 33.6 +0.1
baz=79
D15A **Lincoln** 78.88 326 ⇑P P 09 38 33.7 +0.1
baz=79
E16A **East Helena** 78.93 325 ⇑P P 09 38 33.7 -0.1
baz=79
RLMT **Red Lodge** 78.97 323 eP P 09 38 35.4 +1.2
comp=Z,23nm,1.8s
RLMT **Red Lodge** 78.97 323 ⇑P P 09 38 34.4 +0.2
baz=79
J22A **Midwest** 78.98 320 ⇓P P 09 38 33.6 -0.6
baz=79
B12A **Libby** 78.98 328 ⇑P P 09 38 34.4 +0.4
baz=79,SNR=6.0
JTMT **Jette** 79.05 327 eP P 09 38 35.1 +0.7
I21A **Big Trails, Te** 79.06 321 ⇑P P 09 38 34.3 -0.4
baz=79
SWMT **Swartz Lake** 79.12 327 eP P 09 38 35.6 +0.7
SLMT **Seeley Lake** 79.13 326 eP P 09 38 35.4 +0.5
BSMT **Bassoo Peak** 79.16 327 eP P 09 38 36.3 +1.1
H19A **Powell** 79.19 322 ⇓P P 09 38 36.0 +0.7
baz=79,SNR=5.8
C13A **Hot Springs** 79.22 327 ⇓P P 09 38 36.1 +0.7
baz=79,SNR=17
D14A **Greenough** 79.26 326 ⇑P P 09 38 35.5 -0.1
baz=79
NJ2 **Nanjing** 79.27 56 eP P 09 38 35.0 -0.8
NJ2 pmax pmax
comp=Z,40nm,1.0s
CHMT **Chamberlain Mo** 79.29 326 eP P 09 38 36.2 +0.3
O27A **Beecher Island** 79.38 315 ⇓P P 09 38 36.5 +0.1
baz=79
E15A **Deer Lodge** 79.42 325 ⇓P P 09 38 37.2 +0.7
baz=79,SNR=12
G17A **Pierce Place,** 79.47 324 ⇑P P 09 38 37.4 +0.5
baz=79
J21A **Lysite** 79.49 320 ⇓P P 09 38 37.4 +0.3
baz=79
H18A **Shoshone NF, C** 79.49 323 ⇓P P 09 38 37.4 +0.3
baz=79,SNR=6.9
F16A **Kennard Place,** 79.49 324 ⇓P P 09 38 37.5 +0.6
baz=79,SNR=8.5
C12B **Naegeli Ranch,** 79.55 328 ⇓P P 09 38 37.8 +0.7
baz=79,SNR=7.5
K22A **Casper** 79.58 319 ⇑P P 09 38 36.9 -0.6
baz=79
BOZ **Bozeman (W)** 79.60 324 eP P 09 38 38.8 +1.2
BOZ pmax pmax
comp=Z,5.0nm,1.0s
BOZ **Bozeman (W)** 79.60 324 eP P 09 38 38.8 +1.2
comp=Z,5.2nm,1.0s
BOZ **Bozeman (W)** 79.60 324 ⇓P P 09 38 38.7 +1.2
baz=79,SNR=8.2
M24A **Cheyenne** 79.63 318 ⇓P P 09 38 37.4 -0.5
baz=79
D13A **Huson** 79.64 327 ⇑P P 09 38 37.9 +0.2
baz=79
MSO **Missoula** 79.64 326 eP P 09 38 38.2 +0.5
comp=Z,4.8nm,1.1s
MSO **Missoula** 79.64 326 ⇑P P 09 38 37.7 0.0
baz=79
I19A **Meeteetse** 79.68 322 ⇓P P 09 38 37.7 -0.4
baz=79
NEW **Newport** 79.74 329 eP P 09 38 39.0 +0.8
comp=Z,12nm,1.4s
NEW **Newport** 79.74 329 ⇓P P 09 38 38.5 +0.4
baz=80,SNR=6.7
NEW **Newport** 79.74 329 P P 09 38 38.5 +0.4
comp=Z,2.8nm,0.7s,baz=20,slow=5.9,SNR=8.0
J20A **Shoshoni** 79.78 321 ⇑P P 09 38 38.2 -0.3
baz=80
E14A **Clinton** 79.78 326 ⇓P P 09 38 39.0 +0.4
baz=80,SNR=5.9
LRM **Limekiln Ridge** 79.82 325 eP P 09 38 39.9 +1.0
F15A **Butte** 79.82 325 ⇓P P 09 38 39.3 +0.5
baz=80,SNR=7.6
P27A **Ficken Ranch,** 79.90 315 ⇓P P 09 38 39.4 +0.1
baz=80
LKWY **Lake** 79.91 323 eP P 09 38 41.5 +2.1
LKWY pmax pmax
comp=Z,9.0nm,1.0s
LKWY **Lake** 79.91 323 eP P 09 38 41.5 +2.1
comp=Z,8.9nm,1.0s
G16A **Moss Hill, Enn** 80.01 324 ⇓P P 09 38 40.6 +0.8
baz=80,SNR=13
D12A **Red Ives Fores** 80.03 327 ⇓P P 09 38 39.9 +0.1
baz=80
E13A **Victor** 80.05 326 ⇑P P 09 38 40.1 +0.2
baz=80,SNR=9.6
PETK **Petropavlovsk-** 80.07 21 P P 09 38 40.2 +0.5
PETK pmax pmax
comp=Z,2.0nm,0.5s
PETK **Petropavlovsk-** 80.07 21 P P 09 38 40.2 +0.5
PETK **Petropavlovsk-** 80.07 21 P P 09 38 40.2 +0.5
comp=Z,2.0nm,0.5s,baz=77,slow=3.2,SNR=4.3
PHWY **Pilot Hill** 80.07 318 eP P 09 38 41.2 +0.8
comp=Z,4.5nm,0.8s
H17A **Grant Village** 80.12 323 ⇓P P 09 38 42.9 +2.4
baz=80
N24A **Carr** 80.14 317 ⇓P P 09 38 41.6 +1.0
baz=80
QLMT **Earthquake Lak** 80.16 324 eP P 09 38 42.4 +1.7
H16A **Russell Place,** 80.18 323 ⇑P P 09 38 42.0 +1.2
baz=80,SNR=6.5
F14A **Wisdom** 80.22 325 ⇓P P 09 38 41.4 +0.4
baz=80
O25A **Wiggins** 80.29 316 ⇓P P 09 38 41.4 +0.1
baz=80
P26A **Davis Ranch, A** 80.30 316 ⇑P P 09 38 41.7 +0.3
baz=80
I18A **Diamond G Ranc** 80.32 322 ⇑P P 09 38 41.6 0.0
baz=80
KSCO **Kaye Shedlock'** 80.33 315 ⇑P P 09 38 42.4 +0.9
baz=80,SNR=5.9
G15A **Dillon** 80.35 324 ⇓P P 09 38 42.5 +0.8
baz=80,SNR=6.4
YSS **Yuzh-Sakhalins** 80.41 32 ⇑iP P 09 38 43.3 +1.7
YSS MLR MLR
comp=Z,1μm,19.0s
YSS MLR MLR
comp=N,700nm,18.0s
YSS MLR MLR
comp=E,600nm,18.0s
K20A **Yellowstone Ra** 80.44 320 ⇓P P 09 38 41.7 -0.5
baz=80
I17A **Pilgrim Ck.** 80.49 323 ⇑P P 09 38 42.9 +0.4
baz=80,SNR=5.4
L21A **Rawlins** 80.51 319 ⇓P P 09 38 42.4 -0.2
baz=80
K19A **Absolon Red Bu** 80.55 321 ⇓P P 09 38 42.4 -0.4
baz=80
M22A **Cedar Creek Ra** 80.56 319 ⇑P P 09 38 42.6 -0.3
baz=80
N23A **Red Feather La** 80.62 318 ⇑P P 09 38 43.7 +0.4
baz=80
F13A **Darby** 80.64 326 ⇑P P 09 38 43.6 +0.5
baz=80,SNR=9.9
BDFB **Brasilia** 80.65 239 P P 09 38 43.5 +0.1
BDFB **Brasilia** 80.65 239 P P 09 38 43.5 +0.1
comp=E,7.8nm,0.9s,baz=20,slow=7.9,SNR=10
IMW **Indian Meadow** 80.67 323 eP P 09 38 45.4 +1.8
comp=E,6.4nm,1.3s
MOOW **Moose Ponds** 80.70 323 eP P 09 38 44.4 +0.8
comp=E,6.7nm,1.4s
G14A **Jackson** 80.71 325 ⇓P P 09 38 43.2 -0.5
baz=80
KSAR **Wonju Array Be** 80.72 47 P P 09 38 44.2 +0.7
KSRS **Korea Array** 80.73 47 P P 09 38 44.2 +0.7
comp=E,8.4nm,1.0s,baz=315,slow=4.5,SNR=27
KSRS LR LR 10 19 15.5
comp=E,403nm,18.3s,baz=335,slow=39
P25A **Willow Gulch B** 80.76 316 ⇑P P 09 38 44.8 +0.8
baz=80,SNR=9.8
O24A **Longmont** 80.76 317 ⇑P P 09 38 45.0 +1.0
baz=80
M21A **Separation Pea** 80.78 319 ⇑P P 09 38 43.7 -0.3
baz=80
MCMT **McKenzie Canyo** 80.78 324 eP P 09 38 44.9 +0.9
comp=E,3.5nm,1.3s
J18A **Kendall Valley** 80.79 322 ⇑P P 09 38 44.6 +0.5
baz=80,SNR=10
Q26A **Hugo** 80.86 315 ⇓P P 09 38 44.9 +0.4
baz=81
BW06 **Boulder Array** 80.92 321 ⇓P P 09 38 44.3 -0.6
baz=81
PDAR **Pinedale Array** 80.92 321 P P 09 38 44.6 -0.2
PDAR **Pinedale Array** 80.92 321 P P 09 38 44.6 -0.2
comp=E,1.4nm,0.7s,baz=40,slow=4.7,SNR=11
PDAR LR LR 10 17 16.2
comp=E,217nm,19.0s,baz=320,slow=38
I16A **Newdale** 80.93 323 ⇓P P 09 38 46.1 +1.3
baz=81
L20A **Wamsutter** 80.94 320 ⇑P P 09 38 45.3 +0.4
baz=81
N22A **Wattenberg Ran** 80.94 318 ⇓P P 09 38 45.6 +0.5
baz=81,SNR=6.3
R27A **Eads** 80.95 314 ⇑P P 09 38 45.4 +0.5
baz=81
J17A **Brown Place, J** 80.99 322 ⇑P P 09 38 45.4 +0.3
baz=81
TPAW **Teton Pass** 81.00 322 eP P 09 38 46.8 +1.6
comp=E,6.3nm,1.2s
F12A **Elk City** 81.05 326 ⇓P P 09 38 45.9 +0.5
baz=81,SNR=7.7
O23A **Lake Granby, G** 81.12 317 ⇑P P 09 38 46.6 +0.6
baz=81,SNR=5.5
G13A **Cobalt** 81.16 325 ⇑P P 09 38 45.9 0.0
baz=81
H14A **Leadore** 81.17 325 ⇓P P 09 38 46.5 +0.4
baz=81
K18A **Toltan Ranch,** 81.25 321 ⇓P P 09 38 46.1 -0.5
baz=81
M20A **Sweetwater, Wa** 81.26 320 ⇓P P 09 38 47.2 +0.5
baz=81,SNR=5.6
I15A **Monteview** 81.28 324 ⇓P P 09 38 48.2 +1.6
baz=81
ISCO **Idaho Springs** 81.28 317 eP P 09 38 47.7 +0.8
ISCO pmax pmax
comp=Z,7.0nm,0.9s
ISCO **Idaho Springs** 81.28 317 eP P 09 38 47.7 +0.8
comp=Z,7.0nm,0.9s
ISCO **Idaho Springs** 81.28 317 ⇑P P 09 38 47.4 +0.6
baz=81,SNR=9.2
R26A **Arlington** 81.28 315 ⇓P P 09 38 47.5 +0.8
baz=81,SNR=5.6
L19A **Farson** 81.35 321 ⇓P P 09 38 47.4 +0.3
baz=81
T28A **Walsh** 81.44 313 ⇓P P 09 38 47.9 +0.4
baz=81
J16A **Bone** 81.46 323 ⇑P P 09 38 48.1 +0.4
baz=81
O22A **Kremmling** 81.47 318 ⇓P P 09 38 48.2 +0.3
baz=81,SNR=6.1
N21A **Black Mountain** 81.50 319 ⇓P P 09 38 48.5 +0.5
baz=81,SNR=11
G12A **Big Creek, Yel** 81.58 326 ⇓P P 09 38 48.4 +0.2
baz=81,SNR=18
H13A **Challis** 81.59 325 ⇓P P 09 38 48.5 +0.2
baz=81
W31A **Holland Ranch,** 81.65 310 ⇓P P 09 38 48.9 +0.2
baz=81
Q24A **Divide** 81.67 316 ⇑P P 09 38 49.1 +0.1
baz=81
M19A **Rock Springs** 81.71 320 ⇑P P 09 38 49.6 +0.5
baz=82
P23A **Jefferson** 81.72 317 ⇑P P 09 38 50.3 +1.1
baz=82,SNR=6.3
J15A **Blackfoot** 81.73 323 ⇓P P 09 38 50.1 +1.1
baz=82,SNR=5.9
I14A **Mackay** 81.76 324 ⇑P P 09 38 50.4 +1.2
baz=82,SNR=22
S26A **Kim** 81.80 314 ⇓P P 09 38 49.7 +0.2
baz=82
K16A **Soda Springs** 81.80 322 ⇓P P 09 38 50.4 +0.9
baz=82
N20A **Spence Gulch,** 81.80 319 ⇑P P 09 38 50.2 +0.6
baz=82,SNR=12
R25A **Fountain Ranch** 81.84 315 ⇓P P 09 38 50.0 +0.3
baz=82
H12A **Diamond D Ranc** 81.86 325 ⇓P P 09 38 49.9 +0.2
baz=82,SNR=8.3
O21A **Pagoda** 81.89 318 ⇑P P 09 38 50.2 +0.1
baz=82
I13A **Wildhorse Cree** 82.05 325 ⇑P P 09 38 51.6 +0.8
baz=82,SNR=21
X31A **McDonald Ranch** 82.08 310 ⇑P P 09 38 50.8 0.0
baz=82
N19A **John Jarvie Ra** 82.20 320 ⇓P P 09 38 51.6 +0.1
baz=82,SNR=6.1
T26A **Comanche Natio** 82.20 314 ⇓P P 09 38 52.3 +0.6
baz=82
R24A **Sanders Place,** 82.20 316 ⇑P P 09 38 52.1 +0.5
baz=82
M18A **Lyman** 82.20 321 ⇑P P 09 38 51.9 +0.3
baz=82,SNR=5.7
Y32A **R-V Farms, Ver** 82.22 309 ⇑P P 09 38 51.8 +0.2
baz=82
J14A **Carey** 82.27 324 ⇓P P 09 38 52.7 +0.8
baz=82
S25A **Robets Cordova** 82.28 315 ⇓P P 09 38 52.6 +0.6
baz=82,SNR=8.1
O20A **White River Ci** 82.33 319 ⇑P P 09 38 52.6 +0.3
baz=82,SNR=7.3
K15A **Arbon** 82.34 323 ⇓P P 09 38 52.8 +0.6
baz=82,SNR=8.9
N18A **Larsen Ranch,** 82.37 320 ⇑P P 09 38 52.5 +0.1
baz=82,SNR=5.0
L16A **Fish Haven** 82.38 322 ⇑P P 09 38 52.9 +0.4
baz=82,SNR=8.0
P21A **Newcastle** 82.41 318 ⇓P P 09 38 53.0 +0.3
baz=82
SMCO **Snowmass** 82.44 317 eP P 09 38 53.8 +0.7
comp=Z,21nm,1.9s
M17A **Scullys Gap (B** 82.45 321 ⇓P P 09 38 52.8 -0.1
baz=82
HLID **Hailey** 82.47 325 ⇓P P 09 38 53.2 +0.3
baz=82
J13A **Cove Ranch, Pi** 82.49 324 ⇑P P 09 38 53.8 +0.8
baz=82,SNR=7.2
I12A **Atlanta** 82.58 325 ⇓P P 09 38 54.0 +0.5
baz=82,SNR=6.7
R23A **Moffat** 82.60 316 ⇓P P 09 38 54.0 +0.1
baz=82
BMO **Blue Mountains** 82.62 327 eP P 09 38 53.5 -0.1
comp=Z,16nm,0.9s
O19A **Mirrs Draw (B** 82.63 319 ⇓P P 09 38 54.1 +0.3
baz=82,SNR=9.2
Q22A **Crested Butte,** 82.64 317 ⇑P P 09 38 54.5 +0.4
baz=82,SNR=14
T25A **Trinidad** 82.66 315 ⇓P P 09 38 54.3 +0.2
baz=82
S24A **Houchin Ranch,** 82.70 315 ⇑P P 09 38 54.7 +0.4
baz=82
X30A **Coker Ranch, T** 82.72 311 ⇑P P 09 38 54.4 +0.2
baz=82
Y31A **Rekieta Farm,** 82.72 310 ⇓P P 09 38 54.0 -0.2
baz=82
K14A **Jones Ranch, D** 82.74 323 ⇓P P 09 38 55.0 +0.7
baz=82,SNR=7.1
Z32A **Haskell** 82.75 309 ⇓P P 09 38 54.0 -0.3
baz=82
LON **Longmire** 82.75 331 eP P 09 38 54.8 +0.6
LON pmax pmax
comp=Z,30nm,2.0s
LON **Longmire** 82.75 331 eP P 09 38 54.8 +0.6
comp=Z,30nm,2.0s
HWUT **Hardware Ranch** 82.76 322 eP P 09 38 54.8 +0.4
comp=Z,10nm,0.8s
L15A **Malad City** 82.82 322 ⇓P P 09 38 54.0 -0.8
baz=83
U26A **Atchley Ranch,** 82.86 314 ⇑P P 09 38 55.5 +0.5
baz=83,SNR=6.5
P20A **De Beque** 82.89 318 ⇑P P 09 38 55.2 0.0
baz=83
N17A **Moffit Pass** 82.94 321 ⇑P P 09 38 55.5 -0.1
baz=83,SNR=7.8
Q21A **Lamborn Mesa,** 83.00 318 ⇓P P 09 38 56.3 +0.5
baz=83
T24A **Torres, Weston** 83.04 315 ⇑P P 09 38 56.9 +0.7
baz=83,SNR=5.8
R22A **Saguache, Gunn** 83.05 317 ⇑P P 09 38 57.0 +0.8
baz=83,SNR=11
S23A **Nye Farm, Mont** 83.06 316 ⇓P P 09 38 56.7 +0.5
baz=83
P19A **Cripple Cowboy** 83.08 319 ⇓P P 09 38 56.5 +0.3
baz=83,SNR=5.2
O18A **Roosevelt** 83.08 320 ⇑P P 09 38 55.6 -0.5
baz=83
Z31A **Sharp Cattle R** 83.12 309 ⇑P P 09 38 56.3 0.0
baz=83
Y30A **Stafford Cattl** 83.15 310 ⇓P P 09 38 55.6 -0.9
baz=83
MFID **Camas Ranch** 83.19 325 eP P 09 38 57.5 +1.0
comp=Z,10nm,1.3s
MFID **Camas Ranch** 83.19 325 ⇓P P 09 38 57.1 +0.5
baz=83,SNR=8.2
U25A **Circle Dot Ran** 83.21 314 ⇑P P 09 38 57.8 +0.9
baz=83,SNR=15
Q20A **Ridgley Place,** 83.27 318 ⇑P P 09 38 57.3 +0.2
baz=83,SNR=5.6
N16A **Rees Ranch, Co** 83.27 321 ⇑P P 09 38 57.3 +0.2
baz=83
V26A **Tequesquite Ra** 83.33 313 ⇑P P 09 38 57.3 -0.2
baz=83
ABTX **Abilene, Hawle** 83.34 309 ⇑P P 09 38 57.3 -0.1
baz=83
R21A **Cimarron** 83.34 317 ⇑P P 09 38 57.7 0.0
baz=83
S22A **4UR Ranch, Cre** 83.46 316 ⇑P P 09 38 58.8 +0.5
baz=83,SNR=8.8
W27A **Bowe Ranch, En** 83.48 312 ⇑P P 09 38 58.2 0.0
baz=83
O17A **Robinson Place** 83.48 320 ⇑P P 09 38 58.7 +0.4
baz=83,SNR=7.6
JLU **Jordanelle** 83.50 321 eP P 09 38 59.1 +0.7
comp=Z,6.7nm,1.0s
FX1 **Attu Island--F** 83.55 12 P P 09 38 58.0 0.0
FX1 **Attu Island--F** 83.55 12 P P 09 38 58.0 0.0
comp=Z,9.2nm,0.6s,baz=291,slow=2.1,SNR=7.1
T23A **Casias Ranch,** 83.59 315 ⇓P P 09 38 59.7 +0.7
baz=83,SNR=10
U24A **Moreno Valley** 83.66 315 ⇑P P 09 39 00.4 +1.0
baz=83,SNR=6.7
V25A **Rancho No Teng** 83.74 314 ⇑P P 09 38 59.2 -0.5
baz=84
Q19A **Hogan Spring (** 83.74 319 ⇓P P 09 39 00.1 +0.6
baz=84
O16A **Springville** 83.83 321 ⇑P P 09 38 59.9 -0.2
baz=84
Y28A **McKinney Farm,** 83.88 311 ⇑P P 09 39 00.6 +0.3
baz=84
R20A **Redvale** 83.90 318 ⇓P P 09 39 00.7 +0.2
baz=84,SNR=6.3
PV04 **Paradox Valley** 84.00 318 eP P 09 39 01.4 +0.5
S21A **Coal Bank Pass** 84.01 317 ⇑P P 09 39 01.5 +0.3
baz=84,SNR=13
PV01 **Paradox Valley** 84.04 318 eP P 09 39 01.7 +0.5
comp=Z,974nm,1.2s
MPU **Maple Canyon** 84.05 321 eP P 09 39 01.6 +0.4
comp=Z,11nm,1.5s
T22A **Edith** 84.05 316 ⇑P P 09 39 01.8 +0.5
baz=84,SNR=12
P17A **Butcher Ranch,** 84.05 320 ⇓P P 09 39 00.5 -0.6
baz=84
Z29A **Hungry Hill Ra** 84.06 310 ⇑P P 09 39 01.0 -0.2
baz=84
W25A **X Bar L Ranch,** 84.12 313 ⇑P P 09 39 01.4 -0.2
baz=84
MSTX **Muleshoe** 84.13 311 ⇑P P 09 39 01.5 -0.1
baz=84
V24A **Rampart Ranch,** 84.18 314 ⇓P P 09 39 02.3 +0.3
baz=84
U23A **El Rito** 84.20 315 ⇑P P 09 39 02.6 +0.6
baz=84
231A **Bronte** 84.23 308 ⇓P P 09 39 03.0 +1.0
baz=84
SRU **San Rafael** 84.23 320 eP P 09 39 02.3 +0.2
SRU **San Rafael** 84.23 320 eP P 09 39 02.3 +0.2
comp=Z,357nm,0.9s
SRU **San Rafael** 84.23 320 ⇓P P 09 39 02.0 -0.1
baz=84,SNR=17
X26A **CR and CF Fran** 84.27 312 ⇑P P 09 39 02.3 0.0
baz=84
332A **Millersview** 84.30 308 ⇓P P 09 39 02.8 +0.4
baz=84
P16A **Fountain Green** 84.38 321 ⇓P P 09 39 02.8 -0.1
baz=84
T21A **Navajo Lake** 84.39 316 ⇑P P 09 39 02.7 -0.3
baz=84
Y27A **Causey** 84.41 312 ⇓P P 09 39 02.5 -0.5
baz=84
TMUT **Trail Mountain** 84.42 320 eP P 09 39 03.5 +0.3
comp=Z,8.0nm,1.0s
TMUT **Trail Mountain** 84.42 320 eP P 09 39 03.5 +0.3
comp=Z,8.0nm,1.0s
Z28A **Tucker Farm, M** 84.42 311 ⇓P P 09 39 02.7 -0.3
baz=84
DUG **Dugway** 84.45 322 eP P 09 39 03.8 +0.7
DUG pmax pmax
comp=Z,6.0nm,1.0s
DUG **Dugway** 84.45 322 eP P 09 39 03.8 +0.7
comp=Z,5.7nm,1.0s
DUG **Dugway** 84.45 322 ⇑P P 09 39 03.6 +0.4
baz=84,SNR=5.9
DUG **Dugway** 84.45 322 eP P 09 39 03.8 +0.7
comp=Z,5.7nm,1.0s
U22A **Llaves** 84.51 316 ⇓P P 09 39 04.5 +0.9
baz=84,SNR=12
ERM **Erimo** 84.61 35 eP P 09 39 03.2 -0.4
ERM pmax pmax
comp=Z,30nm,1.3s
ERM **Erimo** 84.61 35 eP P 09 39 03.2 -0.4
comp=Z,30nm,1.3s
129A **Stewart Farms,** 84.61 310 ⇑P P 09 39 04.6 +0.6
baz=84
W24A **Lazy 6 Ranch,** 84.64 314 ⇑P P 09 39 04.5 +0.2
baz=84
V23A **Ortiz Mt. (NFS** 84.64 315 ⇑P P 09 39 04.4 +0.1
baz=84
432A **Menard** 84.69 307 ⇑P P 09 39 04.5 +0.1
baz=84
Q16A **Castle Valley** 84.70 320 ⇓P P 09 39 04.3 -0.2
baz=84
P15A **Leamington** 84.70 321 ⇑P P 09 39 04.0 -0.4
baz=84
MVCO **Mesa Verde** 84.72 317 eP P 09 39 05.4 +0.8
comp=Z,22nm,1.5s
MVCO **Mesa Verde** 84.72 317 ⇓P P 09 39 04.8 +0.1
baz=84,SNR=5.8
MVCO **Mesa Verde** 84.72 317 eP P 09 39 05.4 +0.8
comp=Z,22nm,1.5s
230A **Sterling City** 84.72 309 ⇑P P 09 39 04.5 0.0
baz=84
331A **San Angelo** 84.75 308 ⇑P P 09 39 05.2 +0.5
baz=84
X25A **Clemmons Ranch** 84.75 313 ⇑P P 09 39 05.3 +0.5
baz=84,SNR=6.9
PSI **Prapat** 84.86 91 P P 09 39 04.3 -1.2
PSI **Prapat** 84.86 91 P P 09 39 04.3 -1.2
comp=Z,12nm,0.8s,baz=322,slow=8.2,SNR=7.7
Z27A **Tatum** 84.86 311 ⇓P P 09 39 04.7 -0.6
baz=85
U21A **Nageezi** 84.89 316 ⇓P P 09 39 05.8 +0.3
baz=85,SNR=6.7
128A **Castleberry Fa** 84.97 310 ⇑P P 09 39 06.2 +0.4
baz=85,SNR=5.5
JCT **Junction City** 84.99 307 ⇓P P 09 39 05.8 -0.1
baz=85
229A **Bryant Ranch,** 85.07 309 ⇑P P 09 39 06.1 -0.2
baz=85
W23A **Werner Place,** 85.07 314 ⇑P P 09 39 06.8 +0.3
baz=85
S18A **Hurst Farm, Bl** 85.09 318 ⇓P P 09 39 06.4 -0.1
baz=85
330A **Mertzon** 85.11 309 ⇓P P 09 39 06.6 +0.1
baz=85
X24A **Lazy VL Ranch,** 85.14 313 ⇑P P 09 39 07.2 +0.4
baz=85
Y25A **Mesa, Roswell** 85.22 313 ⇑P P 09 39 07.2 +0.1
baz=85
532A **Rocksprings** 85.31 307 ⇑P P 09 39 08.1 +0.6
baz=85
431A **Sonora** 85.31 308 ⇑P P 09 39 08.2 +0.7
baz=85,SNR=7.3
Z26A **Caprock** 85.32 312 ⇑P P 09 39 07.9 +0.4
baz=85,SNR=8.8
ANMO **Albuquerque** 85.40 314 eP P 09 39 09.1 +1.1
comp=Z,4.7nm,1.4s
ANMO **Albuquerque** 85.40 314 eP P 09 39 09.1 +1.1
comp=Z,4.7nm,1.4s
228A **UT Block 9, Go** 85.40 310 ⇓P P 09 39 08.5 +0.6
baz=85
MSU **Marysvale** 85.50 320 eP P 09 39 02.9 -5.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MSU	Marysvale	85.50	320	eP	P	09 39 02.9	-5.6
329A	Wagon Wheel Ra	85.52	309	⇓P	P	09 39 09.0	+0.4
	baz=85,SNR=6.6						
JNU	Nakatsue	85.56	48	eP	P	09 39 08.9	+0.3
	comp=Z,16nm,1.2s						
JNU	Nakatsue	85.56	48	LR	LR	10 20 53.4	
	comp=Z,470nm,18.4s,baz=42,slow=38						
JNU	Nakatsue	85.56	48	eP	P	09 39 08.9	+0.3
	comp=Z,16nm,1.2s						
430A	Baggett Ranch,	85.60	308	⇓P	P	09 39 09.3	+0.4
	baz=85,SNR=6.2						
Y24A	Capitan	85.62	313	⇑P	P	09 39 09.6	+0.4
	baz=85						
531A	Rocksprings	85.66	307	⇑P	P	09 39 09.5	+0.3
	baz=86,SNR=5.2						
632A	Uvalde	85.69	306	⇑P	P	09 39 09.9	+0.6
	baz=86						
Z25A	Roswell	85.72	312	⇑P	P	09 39 10.3	+0.7
	baz=86,SNR=6.1						
V20A	Brimhall	85.79	316	⇑P	P	09 39 10.1	+0.1
	baz=86						
126A	Clayton Basin,	85.81	311	⇓P	P	09 39 10.7	+0.7
	baz=86						
W21A	San Fidel	85.89	315	⇑P	P	09 39 11.0	+0.5
	baz=86						
Y23A	Lovelace Mesa,	85.95	313	⇓P	P	09 39 11.2	+0.4
	baz=86						
Z24A	Sheeppen Canyo	86.04	313	⇓P	P	09 39 12.0	+0.8
	baz=86						
328A	Wristen Ranch,	86.07	310	⇓P	P	09 39 11.3	0.0
	baz=86						
429A	Davenport Ranc	86.11	309	⇓P	P	09 39 11.4	0.0
	baz=86						
530A	J-C Ranch, Com	86.13	308	⇓P	P	09 39 12.3	+0.8
	baz=86,SNR=5.6						
125A	Gardner Draw,	86.15	312	⇑P	P	09 39 11.7	0.0
	baz=86						
SAML	Samuel	86.16	254	eP	P	09 39 12.2	+0.5
	comp=Z,26nm,1.4s						
SAML	Samuel	86.16	254	eP	P	09 39 12.2	+0.5
	comp=Z,26nm,1.4s						
631A	Perdido Creek	86.22	307	⇑P	P	09 39 12.4	+0.5
	baz=86,SNR=6.9						
MOD	Modoc	86.28	327	eP	P	09 39 13.4	+1.1
	comp=Z,6.7nm,1.0s						
MOD	Modoc	86.28	327	eP	P	09 39 13.4	+1.1
	comp=Z,6.7nm,1.0s						
226B	Tecolote Peak,	86.32	311	⇓P	P	09 39 12.8	+0.3
	baz=86						
W20A	Ramah	86.33	316	⇓P	P	09 39 12.8	+0.1
	baz=86						
GDL2	Guadalupe Moun	86.34	311	eP	P	09 39 13.5	+0.8
GDL2	Guadalupe Moun	86.34	311	eP	P	09 39 13.5	+0.8
X21A	Alamocita Cree	86.48	315	⇑P	P	09 39 14.3	+0.8
	baz=86						
428A	Kincaid Ranch,	86.49	309	⇓P	P	09 39 13.9	+0.6
	baz=86						
Z23A	Rita Site, Whi	86.56	313	⇓P	P	09 39 14.5	+0.7
	baz=86						
124A	Stringfield Ra	86.56	312	⇑P	P	09 39 14.6	+0.7
	baz=86						
529A	Stev Forest Ra	86.66	308	⇑P	P	09 39 14.6	+0.4
	baz=86,SNR=8.0						
MAJO	Matsushiro	86.75	41	eP	P	09 39 14.0	-0.4
MAJO				pmax	pmax		
	comp=Z,11nm,1.0s						
MAJO	Matsushiro	86.75	41	eP	P	09 39 14.0	-0.4
	comp=Z,11nm,1.0s						
MAJO	Matsushiro	86.75	41	eP	P	09 39 14.0	-0.4
	comp=Z,11nm,1.0s						
MAT	Matsushiro	86.75	41	P	P	09 39 13.4	-1.1
MJAR	Matsushiro Arr	86.75	41	P	P	09 39 13.7	-0.8
MJAR	Matsushiro Arr	86.75	41	P	P	09 39 13.7	-0.8
	comp=Z,5.0nm,1.0s,baz=316,slow=4.4,SNR=14						
MJAR				LR	LR	10 22 07.3	
	comp=Z,629nm,18.2s,baz=330,slow=38						
MJAR	Matsushiro Arr	86.75	41	P	P	09 39 13.7	-0.8
	comp=Z,629nm,18.2s						
Y21A	Point of Rocks	86.76	315	⇓P	P	09 39 15.5	+0.7
	baz=86						
326A	Caldwell Ranch	86.78	310	⇓P	P	09 39 15.1	+0.3
	baz=87						
427A	Hayter Ranch,	86.81	310	⇑P	P	09 39 15.5	+0.5
	baz=87,SNR=5.5						
Z22A	Elephant Butte	86.96	314	⇑P	P	09 39 16.0	+0.3
	baz=87						
528A	Cox Ranch, San	86.97	309	⇓P	P	09 39 16.3	+0.5
	baz=87						
Y20A	Horse Springs,	87.21	315	⇓P	P	09 39 17.1	+0.1
	baz=87						
U15A	North Rim	87.21	319	⇑P	P	09 39 16.9	-0.2
	baz=87						
MNTX	Cornudas Mount	87.28	312	⇓P	P	09 39 17.6	+0.5
	baz=87						
426A	McDonald Obser	87.30	310	⇓P	P	09 39 17.8	+0.3
	baz=87						
325A	Bean Ranch, Si	87.30	311	⇓P	P	09 39 18.4	+0.9
	baz=87						
527A	Woodward Ranch	87.45	309	⇓P	P	09 39 18.1	0.0
	baz=87						
WUAZ	Wupatki	87.48	318	⇓P	P	09 39 18.2	0.0
	baz=87						
628A	Black Gap, Mar	87.53	308	⇑P	P	09 39 19.0	+0.6
	baz=87						
324A	Moseley Ranch,	87.53	311	⇓P	P	09 39 18.9	+0.3
	baz=87						
526A	Mary Lane Ranc	87.79	310	⇓P	P	09 39 20.4	+0.6
	baz=88						
627A	Terlingua Ranc	87.84	309	⇑P	P	09 39 20.4	+0.4
	baz=88						
Z20A	Nine Sixteen R	87.94	315	⇓P	P	09 39 20.7	+0.3
	baz=88						
121A	Cookes Peak, D	87.95	314	⇓P	P	09 39 20.6	0.0
	baz=88						
TXAR	Lajitas Array	88.09	309	P	P	09 39 21.3	+0.1
TXAR	Lajitas Array	88.09	309	P	P	09 39 21.3	+0.1
	comp=Z,1.6nm,1.0s,baz=66,slow=5.0,SNR=8.9						
TXAR	Lajitas Array	88.09	309	P	P	09 39 21.3	+0.1
	comp=Z,2.0nm,1.0s						
WCN	Washoe City	88.25	325	eP	P	09 39 23.3	+1.5
WCN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
WCN	Washoe City	88.25	325	eP	P	09 39 23.3	+1.5
	comp=Z,8.4nm,1.4s						
WCN	Washoe City	88.25	325	eP	P	09 39 23.3	+1.5
	comp=Z,8.4nm,1.4s						
NVAR	Mina Array Bea	88.35	324	P	P	09 39 22.1	-0.3
NVAR	Mina Array Bea	88.35	324	P	P	09 39 22.1	-0.3
	comp=Z,0.5nm,0.7s,baz=44,slow=5.3,SNR=4.6						
NVAR	Mina Array Bea	88.35	324	P	P	09 39 22.1	-0.3
X16A	Lo Mia Camp, P	88.38	317	⇑P	P	09 39 23.3	+0.7
	baz=88						
W13A	Hualapai Mount	89.05	319	⇑P	P	09 39 25.8	0.0
	baz=89						
SHOC	Shoshone	89.53	321	⇑P	P	09 39 28.6	+0.9
	baz=89						
319A	Douglas	89.65	314	⇓P	P	09 39 28.8	+0.3
	baz=89						
TUC	Tucson	89.71	315	eP	P	09 39 29.0	+0.3
TUC				pmax	pmax		
	comp=Z,11nm,1.6s						
TUC	Tucson	89.71	315	eP	P	09 39 29.0	+0.3
	comp=Z,11nm,1.6s						
TUC	Tucson	89.71	315	eP	P	09 39 29.0	+0.3
	comp=Z,11nm,1.6s						
TUQ	Turquoise Moun	89.75	321	⇑P	P	09 39 29.5	+0.6
	baz=90						
PDMCI	Parker Dam,Lak	89.81	319	⇑P	P	09 39 29.5	+0.5
	baz=90						
Z14A	Wintersburg	89.98	318	⇑P	P	09 39 30.0	+0.2
	baz=90						
GMRC	Granite Mounta	90.16	320	⇑P	P	09 39 30.7	-0.1
	baz=90						
JHJ	Hachijo jima 2	90.25	42	LR	LR	10 24 31.9	
	comp=Z,459nm,20.5s,baz=257,slow=39						
IRM	Iron Mountain	90.42	320	⇓P	P	09 39 32.2	+0.3
	baz=90						
ISA	Isabella	90.73	323	⇓P	P	09 39 33.6	+0.2
	baz=90						
BELC	Belle Mtn. Jos	90.95	320	⇑P	P	09 39 34.8	+0.2
	baz=91						
OTAV	Otavalo	91.17	271	eP	P	09 39 38.1	+2.0
	comp=Z,36nm,1.2s						
OTAV	Otavalo	91.17	271	eP	P	09 39 38.2	+2.0
	comp=Z,36nm,1.2s						
PFO	Pinyon Flat Ob	91.49	320	⇑P	P	09 39 37.3	+0.2
	baz=91						
WRA	Warramunga Arr	125.93	85	PKP	PKPdf	09 45 31.0	-1.5
WRA	Warramunga Arr	125.93	85	PKP	PKPdf	09 45 31.0	-1.5
	comp=Z,1.2nm,0.9s,baz=322,slow=1.8,SNR=9.2						
ASAR	Alice Springs	127.85	89	PKP	PKPdf	09 45 34.4	-1.7
ASAR	Alice Springs	127.85	89	PKP	PKPdf	09 45 34.4	-1.7
	comp=Z,1.1nm,0.9s,baz=301,slow=1.3,SNR=9.9						
CTA	Charters Tower	134.71	76	PKP	PKPdf	09 45 49.5	+0.3
CTA	Charters Tower	134.71	76	PKP	PKPdf	09 45 49.5	+0.3
	comp=Z,1.7nm,0.5s,baz=262,slow=7.1,SNR=3.5						

DJA 07 09:27:50.2±0.6, 0°N±5°×12°3E±°, h70km±10km, M4.0/8, mb4.3/2, MLv3.8/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	1.00	56	P	Pn	09 28 09.6	+0.9
LUWI	Luwuk	1.12	200	P	Pn	09 28 09.5	-0.7
LUWI				S	Sn	09 28 27.0	+1.8
MRSI	Marisa	1.29	291	P	Pn	09 28 12.4	0.0
KDI	Kendari	3.99	188	P	Pn	09 28 47.0	-1.9
LBMI	Labuha	4.40	99	P	Pn	09 28 54.6	0.0
LBMI				S	Sn	09 28 55.2	-49
TTSI	Tana Toraja	4.51	228	P	Pn	09 28 56.6	+0.5
SPSI	Sidrap Palu	5.20	220	P	Pn	09 29 05.7	+0.2
	25nm,0.5s,0.1nm						
BNSI	Bone	5.34	215	P	Pn	09 29 08.1	+0.7

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*ISCJB **07** 09:30:56.4±0.3, 42°33N±0°02×13°36E±0°03, h14km±2km, mb3.5/3, Error ellipse: s-maj=3.9km s-min=3.2km az=177.0*

*IDC **07** 09:30:56.8±1.2, 42°44N×13°46E, h0km, mb3.6/4, mb1 3.8/7, mb1mx3.6/29, mbtmp3.7/7, ML3.6/3, Error ellipse: s-maj=36.7km s-min=14.2km az=96.0*

*CSEM **07** 09:30:56.8±0.1, 42°33N×13°36E, h10km, Error ellipse: s-maj=2.2km s-min=1.8km az=89.0*

*ROM **07** 09:30:56.5±0.1, 42°33N×13°37E, h10km, Ml3.8/2, Error ellipse: s-maj=1.1km s-min=1.1km az=130.0*

ISC 07 09:30:57.4±0.8, 42°34N±0°02×13°38E±0°02, h10km±4km, n59, σ0s74/82, mb3.5/3, 4C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	45	Pg	Pg	09 30 59.1	-0.3
AQU				Sg	Sg	09 31 00.5	-0.3
AQU	L'Aquila	0.03	45	Pg	Pg	09 30 59.1	-0.3
AQU				Sg	Sg	09 31 00.5	-0.3
FAGN	Fagnano	0.17	114	Pg	Pg	09 31 00.9	-0.2
FAGN				Sg	Sg	09 31 03.9	+0.2
FAGN	Fagnano	0.17	114	Pg	Pg	09 31 00.9	-0.2
FAGN				Sg	Sg	09 31 03.9	+0.2
CAMP	Campotosto	0.20	7	⇑iPg	Pg	09 31 01.4	-0.4
CAMP				Sg	Sg	09 31 04.6	-0.1
CAMP	Campotosto	0.20	7	⇑iPg	Pg	09 31 01.4	-0.4
CAMP				Sg	Sg	09 31 04.6	-0.1
FIAM	Fiamignano	0.20	251	⇑iPg	Pg	09 31 01.5	-0.3
FIAM				Sg	Sg	09 31 04.9	+0.2
FIAM	Fiamignano	0.20	251	⇑iPg	Pg	09 31 01.5	-0.3
FIAM				Sg	Sg	09 31 04.9	+0.2
PTQR	Pietraquaria	0.31	177	Pg	Pg	09 31 03.2	-0.5
PTQR	Pietraquaria	0.31	177	Pg	Pg	09 31 03.2	-0.5
TERO	Teramo	0.33	30	Pg	Pg	09 31 03.3	-0.8
TERO				Sg	Sg	09 31 09.5	+1.0
TERO	Teramo	0.33	30	Pg	Pg	09 31 03.3	-0.8
TERO				Sg	Sg	09 31 09.5	+1.0
VCEL	Villa Celiera	0.35	80	Pg	Pg	09 31 04.0	-0.4
VCEL	Villa Celiera	0.35	80	Pg	Pg	09 31 04.0	-0.4
CERT	Cerreto	0.49	217	Pg	Pg	09 31 06.1	-0.8
CERT				Sg	Sg	09 31 13.3	0.0
CERT	Cerreto	0.49	217	Pg	Pg	09 31 06.1	-0.8
CERT				Sg	Sg	09 31 13.3	0.0
VVLD	Villa Vallelon	0.50	158	Pg	Pg	09 31 06.6	-0.5
VVLD	Villa Vallelon	0.50	158	Pg	Pg	09 31 06.6	-0.5
GAVE	Gavelli	0.50	315	Pg	Pg	09 31 07.5	+0.2
GAVE	Gavelli	0.50	315	Pg	Pg	09 31 07.5	+0.2
INTR	Introdacqua	0.51	129	Pg	Pg	09 31 06.6	-0.7
INTR				Sg	Sg	09 31 14.7	+0.6
INTR	Introdacqua	0.51	129	Pg	Pg	09 31 06.6	-0.7
INTR				Sg	Sg	09 31 14.7	+0.6
MNS	Montasola	0.52	276	Pg	Pg	09 31 06.8	-0.7
MNS	Montasola	0.52	276	Pg	Pg	09 31 06.8	-0.7
NRCA	Norcia	0.53	339	Pg	Pg	09 31 07.1	-0.7
NRCA	Norcia	0.53	339	Pg	Pg	09 31 07.1	-0.7
GUAR	Guarcino	0.54	185	Pg	Pg	09 31 07.7	-0.3
GUAR	Guarcino	0.54	185	Pg	Pg	09 31 07.7	-0.3
MTCE	Montecelio	0.57	237	Pg	Pg	09 31 07.5	-0.9
MTCE	Montecelio	0.57	237	Pg	Pg	09 31 07.5	-0.9
TRTR	Tortoreto Alta	0.62	40	Pg	Pb	09 31 09.8	-0.4
TRTR	Tortoreto Alta	0.62	40	Pg	Pb	09 31 09.8	-0.4
SDI	San Donato	0.70	153	Pg	Pg	09 31 10.3	-0.7
SDI	San Donato	0.70	153	Pg	Pg	09 31 10.3	-0.7
RMP	Rome, Mte Porz	0.73	224	Pg	Pg	09 31 10.3	-1.1
	4μm,0.7s						
RMP	Rome, Mte Porz	0.73	224	Pg	Pg	09 31 10.3	-1.1
	4μm,0.7s						
FDMO	Fiordimonte	0.73	343	Pg	Pg	09 31 10.1	-1.5
FDMO				Sg	Sb	09 31 22.2	-0.1
FDMO	Fiordimonte	0.73	343	Pg	Pg	09 31 10.1	-1.5
FDMO				Sg	Sb	09 31 22.2	-0.1
CESI	CESI - Serrava	0.75	333	Pg	Pg	09 31 11.2	-0.8
CESI				Sg	Sg	09 31 21.9	0.0
CESI	CESI - Serrava	0.75	333	Pg	Pg	09 31 11.2	-0.8
CESI				Sg	Sg	09 31 21.9	0.0
RDP	Rocca di Papa	0.76	221	Pg	Pg	09 31 11.0	-1.0
RDP	Rocca di Papa	0.76	221	Pg	Pg	09 31 11.0	-1.0
GIUL	Giuliano Di Ro	0.78	187	Pg	Pg	09 31 12.1	-0.4
GIUL	Giuliano Di Ro	0.78	187	Pg	Pg	09 31 12.1	-0.4
MIDA	Miranda	0.95	136	Pg	Pg	09 31 14.1	-1.6
MIDA	Miranda	0.95	136	Pg	Pg	09 31 14.1	-1.6
BADI	Badiali	1.44	325	Pg	Pn	09 31 23.4	-0.1
	3μm,1.1s						
BADI	Badiali	1.44	325	Pg	Pn	09 31 23.4	-0.1
	3μm,1.1s						
NVLJ	Novalja	2.48	26	i Pn	Pn	09 31 37.8	+0.1
NVLJ				Sn	Sn	09 32 08.5	+0.5
NVLJ	Novalja	2.48	26	i Pn	Pn	09 31 37.8	+0.1
NVLJ				Sn	Sn	09 32 08.5	+0.5
STON	Ston	3.24	79	i Pn	Pn	09 31 48.1	0.0
STON				Sn	Sn	09 32 26.6	-0.1
STON	Ston	3.24	79	i Pn	Pn	09 31 48.1	0.0
STON				Sn	Sn	09 32 26.6	-0.1
DAVOX	Davos/Dischmat	5.10	332	Pn	Pn	09 32 15.7	+1.7
	2.2nm,0.3s,baz=153,slow=18,SNR=5.7						
DAVOX				Sn	Sn	09 33 13.5	+0.6
	0.7nm,0.3s,baz=106,slow=20,SNR=1.9						
GERES	GERESS Array B	6.51	2	Pn	Pn	09 32 33.7	+0.4
	0.6nm,0.3s,baz=176,slow=14,SNR=5.2						
GERES				Sn	Sn	09 33 45.0	-2.6
	1.1nm,0.3s,baz=202,slow=25,SNR=3.8						
KEST	Kesra	7.30	207	Pn	Pn	09 32 48.2	+4.1
	1.5nm,0.3s,baz=324,slow=3.5,SNR=21						
FINES	FINESS Array B	20.61	17	P	P	09 35 36.5	+0.1
	3.4nm,0.7s,baz=224,slow=12,SNR=5.1						
TORD	Torodi Ar. Bea	30.80	203	P	P	09 37 14.3	+1.1
	0.6nm,0.8s,baz=18,slow=8.8,SNR=4.7						
MKAR	Makanchi Array	47.87	60	P	P	09 39 35.6	+0.3
	0.5nm,0.6s,baz=280,slow=7.4,SNR=4.1						
YKA	Yellowknife Ar	67.52	337	P	P	09 41 53.1	-0.1
	0.2nm,0.7s,baz=41,slow=5.6,SNR=7.4						

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*ISCJB **07** 09:42:30.0±0.3, 42°39N±0°02×13°30E±0°03, h13km±2km, Error ellipse: s-maj=3.5km s-min=2.9km az=162.7*

*CSEM **07** 09:42:30.5±0.1, 42°39N×13°31E, h5km, ML3.5/7, Error ellipse: s-maj=2.7km s-min=2.0km az=66.0*

*ROM **07** 09:42:30.2±0.1, 42°39N×13°33E, h10km, Md2.9/28, Ml3.1/19, Error ellipse: s-maj=1.1km s-min=0.9km az=88.0*

*LDG **07** 09:42:32.8±0.5, 42°45N×13°29E, h2km, Ml3.1/6, Error ellipse: s-maj=11.4km s-min=7.1km az=112.0*

ISC 07 09:42:30.6±0.8, 42°39N±0°02×13°31E±0°02, h13km±4km, n77, σ1s07/107, 6C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.08	120	⇑Pg	Pg	09 42 32.8	-0.5
AQU				Sg	Sg	09 42 34.5	-0.8
	22μm,0.4s						
AQU	L'Aquila	0.08	120	⇑Pg	Pg	09 42 32.8	-0.5
AQU				Sg	Sg	09 42 34.5	-0.8
	22μm,0.4s						
CAMP	Campotosto	0.16	26	⇑iPg	Pg	09 42 34.2	-0.3
CAMP				Sg	Sg	09 42 37.1	-0.1
CAMP	Campotosto	0.16	26	⇑iPg	Pg	09 42 34.2	-0.3
CAMP				Sg	Sg	09 42 37.1	-0.1
FIAM	Fiamignano	0.19	229	⇑iPg	Pg	09 42 35.2	+0.3
FIAM				Sg	Sg	09 42 38.6	+0.7
	3μm,0.5s						
FIAM	Fiamignano	0.19	229	⇑iPg	Pg	09 42 35.2	+0.3
FIAM				Sg	Sg	09 42 38.6	+0.7
	3μm,0.5s						
FAGN	Fagnano	0.24	122	Pg	Pg	09 42 35.7	0.0
FAGN				Sg	Sg	09 42 39.4	+0.3
FAGN	Fagnano	0.24	122	Pg	Pg	09 42 35.7	0.0
FAGN				Sg	Sg	09 42 39.4	+0.3
TERO	Teramo	0.32	43	Pg	Pg	09 42 36.5	-0.6
TERO				Sg	Sg	09 42 41.3	-0.1
	3μm,0.3s						
TERO	Teramo	0.32	43	Pg	Pg	09 42 36.5	-0.6
TERO				Sg	Sg	09 42 41.3	-0.1
	3μm,0.3s						
PTQR	Pietraquaria	0.38	170	Pg	Pg	09 42 38.0	-0.1
PTQR				Sg	Sg	09 42 43.7	+0.5
PTQR	Pietraquaria	0.38	170	Pg	Pg	09 42 38.0	-0.1
PTQR				Sg	Sg	09 42 43.7	+0.5
VCEL	Villa Celiera	0.39	90	Pg	Pg	09 42 38.8	+0.4
VCEL	Villa Celiera	0.39	90	Pg	Pg	09 42 38.8	+0.4
GAVE	Gavelli	0.43	314	Pg	Pg	09 42 39.5	+0.3
GAVE	Gavelli	0.43	314	Pg	Pg	09 42 39.5	+0.3
NRCA	Norcia	0.47	342	Pg	Pg	09 42 39.6	-0.2
NRCA	Norcia	0.47	342	Pg	Pg	09 42 39.6	-0.2
MNS	Montasola	0.47	269	Pg	Pg	09 42 39.8	0.0
	958nm,0.6s						
MNS	Montasola	0.47	269	Pg	Pg	09 42 39.8	0.0
	958nm,0.6s						
CERT	Cerreto	0.51	209	Pg	Pg	09 42 40.3	-0.2
CERT				Sg	Sb	09 42 48.0	-0.7
	2μm,0.4s						
CERT	Cerreto	0.51	209	Pg	Pg	09 42 40.3	-0.2
CERT				Sg	Sb	09 42 48.0	-0.7
	2μm,0.4s						
MTCE	Montecelio	0.56	229	Pg	Pg	09 42 41.3	-0.3
	526nm,0.7s						
MTCE	Montecelio	0.56	229	Pg	Pg	09 42 41.3	-0.3
	526nm,0.7s						
VVLD	Villa Vallelon	0.57	156	Pg	Pg	09 42 40.9	-0.8
VVLD	Villa Vallelon	0.57	156	Pg	Pg	09 42 40.9	-0.8
INTR	Introdacqua	0.58	131	Pg	Pg	09 42 41.4	-0.6
INTR				Sg	Sg	09 42 49.5	-0.2
INTR	Introdacqua	0.58	131	Pg	Pg	09 42 41.4	-0.6
INTR				Sg	Sg	09 42 49.5	-0.2
GUAR	Guarcino	0.60	180	Pg	Pg	09 42 41.7	-0.6
	460nm,0.4s						
GUAR	Guarcino	0.60	180	Pg	Pg	09 42 41.7	-0.6
	460nm,0.4s						
OFFI	Offida	0.61	27	Pg	Pg	09 42 42.9	+0.4
	4μm,0.7s						
OFFI	Offida	0.61	27	Pg	Pg	09 42 42.9	+0.4
	4μm,0.7s						
TRTR	Tortoreto Alta	0.61	47	Pg	Pg	09 42 42.8	+0.4
	3μm,0.9s						
TRTR	Tortoreto Alta	0.61	47	Pg	Pg	09 42 42.8	+0.4
	3μm,0.9s						
FDMO	Fiordimonte	0.67	346	Pg	Pg	09 42 43.0	-0.5
FDMO				Sg	Sb	09 42 53.2	0.0
	635nm,0.2s						
FDMO	Fiordimonte	0.67	346	Pg	Pg	09 42 43.0	-0.5
FDMO				Sg	Sb	09 42 53.2	0.0
	635nm,0.2s						
CESI	CESI - Serrava	0.68	334	Pg	Pg	09 42 43.4	-0.5
CESI				Sg	Sb	09 42 54.0	+0.2
	242nm,0.3s						
CESI	CESI - Serrava	0.68	334	Pg	Pg	09 42 43.4	-0.5
CESI				Sg	Sb	09 42 54.0	+0.2
	242nm,0.3s						
POFI	Posta Fibreno	0.74	156	Pg	Pg	09 42 44.4	-0.5
	267nm,0.5s						
POFI	Posta Fibreno	0.74	156	Pg	Pg	09 42 44.4	-0.5
	267nm,0.5s						
SDI	San Donato	0.78	151	Pg	Pg	09 42 44.9	-0.7
SDI	San Donato	0.78	151	Pg	Pg	09 42 44.9	-0.7
CAFR	Castel Frentan	0.79	102	Pg	Pg	09 42 45.6	-0.2
	790nm,0.4s						
CAFR	Castel Frentan	0.79	102	Pg	Pg	09 42 45.6	-0.2
	790nm,0.4s						
ASSB	Assisi San Ben	0.81	324	Pg	Pg	09 42 45.1	-1.2
	534nm,0.3s						
ASSB	Assisi San Ben	0.81	324	Pg	Pg	09 42 45.1	-1.2
	534nm,0.3s						
GIUL	Giuliano Di Ro	0.83	183	Pg	Pb	09 42 47.0	0.0
	263nm,0.7s						
GIUL	Giuliano Di Ro	0.83	183	Pg	Pb	09 42 47.0	0.0
	263nm,0.7s						
SNTG	Esanatoglia	0.90	343	Pg	Pg	09 42 47.6	-0.5
	142nm,0.4s						
SNTG	Esanatoglia	0.90	343	Pg	Pg	09 42 47.6	-0.5
	142nm,0.4s						
CING	Cingoli	0.99	355	Pg	Pg	09 42 48.8	-0.8
	402nm,0.2s						
CING	Cingoli	0.99	355	Pg	Pg	09 42 48.8	-0.8
	402nm,0.2s						
MGAB	Montegabbione	1.03	301	Pg	Pg	09 42 50.1	-0.3
	453nm,0.5s						
MGAB	Montegabbione	1.03	301	Pg	Pg	09 42 50.1	-0.3
	453nm,0.5s						
MIDA	Miranda	1.03	137	Pg	Pg	09 42 48.7	-1.7
	225nm,0.8s						
MIDA	Miranda	1.03	137	Pg	Pg	09 42 48.7	-1.7
	225nm,0.8s						
MURB	Monte Urbino	1.04	327	Pg	Pg	09 42 50.2	-0.5
	1μm,0.3s						
MURB	Monte Urbino	1.04	327	Pg	Pg	09 42 50.2	-0.5
	1μm,0.3s						
ARVD	Arcevia	1.14	346	Pg	Pb	09 42 51.6	-0.5
	220nm,0.6s						
ARVD	Arcevia	1.14	346	Pg	Pb	09 42 51.6	-0.5
	220nm,0.6s						
MS1	Monte Sant'Ang	2.08	108	ePn	Pn	09 43 07.0	+1.8
MS1				eSn	Sg	09 43 36.2	-1.1
NVLJ	Novalja	2.45	27	i Pn	Pn	09 43 11.4	+1.2
NVLJ				Sn	Sn	09 43 41.7	+1.7
NVLJ	Novalja	2.45	27	i Pn	Pn	09 43 11.4	+1.2
NVLJ				Sn	Sn	09 43 41.7	+1.7
PGF	Pioggiola	3.19	274	ePn	Pn	09 43 22.0	+1.4
PGF				eSn	Sn	09 44 01.7	+3.1
	29nm,1.2s						
STON	Ston	3.27	80	ePn	Pn	09 43 23.6	+2.1
STON				Sn	Sn	09 44 01.6	+1.3
STON	Ston	3.27	80	ePn	Pn	09 43 23.6	+2.1
STON				Sn	Sn	09 44 01.6	+1.3
SBF	Sospel	4.55	291	ePn	Pn	09 43 40.3	+1.2
FRF	La Foret Royal	5.03	286	ePn	Pn	09 43 46.3	+0.6
FRF				eSn	Sn	09 44 41.3	-2.3
	4.2nm,0.6s						
LMR	La Mourre	5.09	283	ePn	Pn	09 43 47.2	+0.7
LMR				eSn	Sn	09 44 43.1	-2.0
	4.5nm,0.5s						
MBDF	Montbardon	5.29	298	eP	Pn	09 43 52.6	+3.1
MBDF	Montbardon	5.29	298	eP	Pn	09 43 52.6	+3.1
HINF	Hinteralfeld	7.09	322	ePn	Pn	09 44 14.3	+0.3
HINF				eSn	Sn	09 45 30.7	-3.8
	4.6nm,0.5s						
HINF	Hinteralfeld	7.09	322	ePn	Pn	09 44 14.3	+0.3
CDF	Champ du Feu	7.37	327	ePn	Pn	09 44 18.1	+0.3
CDF				eSn	Sn	09 45 38.0	-3.3
	3.4nm,0.4s						
CDF	Champ du Feu	7.37	327	ePn	Pn	09 44 18.1	+0.3
HAU	Haudompre	7.46	321	ePn	Pn	09 44 19.5	+0.4
HAU				eSn	Sn	09 45 37.6	-6.0
	4.8nm,0.4s						
HAU	Haudompre	7.46	321	ePn	Pn	09 44 19.5	+0.4

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*HEL **07** 09:47:48.1±0.5, 59°27N×27°17E, h0km, ML1.8, Explosion*

*IDC **07** 09:47:50.0±2.1, 59°41N×26°92E, h0km, mb1 3.1/4, mb1mx2.9/28, mbtmp3.0/4, ML2.5/4, Error ellipse: s-maj=19.6km s-min=12.6km az=125.0*

*NAO **07** 09:47:49.9±2.0, 59°39N×27°06E, ML2.1*

*BER **07** 09:47:49.4±4.0, 59°36N×27°15E, h0km, ML2.1(NAO), Suspected explosion*

*CSEM **07** 09:47:50.2±0.5, 59°44N×26°89E, h2km, ML1.8, Error ellipse: s-maj=8.7km s-min=6.0km az=138.0, Mining explosion.*

ISC 07 09:47:48.0±1.6, 59°35N±0°07×27°16E±0°06, h0km, n33, σ1s57/50, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VJF	Virojoki	1.21	9	PG	Pg	09 48 11.2	0.0
VJF				SG	Sb	09 48 28.3	+0.4
VJF				MSG		09 48 28.3	
	comp=Z,6.3nm,0.2s						
VJF	Virojoki	1.21	9	Pg	Pg	09 48 11.2	0.0
VJF				Sg	Sb	09 48 28.3	+0.4
PVF	Pernaja	1.37	332	PG	Pg	09 48 13.9	-0.2
PVF				SG	Sg	09 48 31.5	-0.3
PVF				MSG		09 48 31.5	
	comp=Z,2.7nm,0.4s						
PVF	Pernaja	1.37	332	Pg	Pg	09 48 13.9	-0.2
PVF				Sg	Sg	09 48 31.5	-0.3
MEF	Metsahovi	1.65	303	PG	Pn	09 48 18.5	+0.4
MEF				SG	Sn	09 48 39.5	-0.5
MEF				MSG		09 48 39.5	
	comp=Z,9.2nm,0.4s						
MEF	Metsahovi	1.65	303	Pg	Pn	09 48 18.5	+0.4
MEF				Sg	Sn	09 48 39.5	-0.5
MTSE	Matsula	1.84	251	PN	Pn	09 48 20.9	+0.1
MTSE				SG	Sn	09 48 43.2	-1.6
MTSE	Matsula	1.84	251	Pn	Pn	09 48 20.8	+0.1
FIA0	FINESS Array S	2.17	346	Pn	Pn	09 48 25.9	+0.6
	baz=162,slow=18						
FIA0				Pg	Pb	09 48 27.6	-0.5
	baz=165,slow=16						
FIA0				Lg	Lg	09 48 57.1	
	baz=165,slow=28						
FIA0				Rg	Rg	09 49 08.8	
	baz=171,slow=37						
FIA0	FINESS Array S	2.17	346	Pn	Pn	09 48 25.9	+0.6
	baz=162,slow=18						
FIA0				Pg	Pb	09 48 27.6	-0.5
	baz=165,slow=16						
FIA0				Lg	Lg	09 48 57.1	
	baz=165,slow=28						
FIA0				Rg	Rg	09 49 08.8	
	baz=171,slow=37						
FIA0	FINESS Array S	2.17	346	PN	Pn	09 48 26.1	+0.8
	baz=165						
FIA0				SG	Sb	09 48 56.6	+1.1
FIA0				MSG		09 48 56.6	
	comp=Z,4.8nm,0.2s						
FIA0				RG	Rg	09 49 08.8	
FIA0	FINESS Array S	2.17	346	Pn	Pn	09 48 26.1	+0.8
FIA0	FINESS Array S	2.17	346	Pg	Pb	09 48 27.6	-0.5
	baz=165,slow=16						
FIA0				Sg	Sb	09 48 56.6	+1.1
FIA0				Lg	Lg	09 48 57.1	
	baz=165,slow=27,SNR=2.1						
FINES	FINESS Array B	2.17	346	Pn	Pn	09 48 25.9	+0.6
	comp=Z,1.6nm,0.3s,baz=164,slow=16,SNR=54						
FINES				Lg	Lg	09 48 56.2	
	comp=Z,3.1nm,0.3s,baz=168,slow=28,SNR=23						
FINES				Rg	Rg	09 49 10.0	
	comp=Z,76nm,1.1s,baz=169,slow=30,SNR=13						
KAF	Kangasniemi	2.81	352	PN	Pn	09 48 36.0	+1.9
KAF				SG	Sg	09 49 17.0	-1.1
KAF				MSG		09 49 17.0	
	comp=Z,2.6nm,0.2s						
KAF	Kangasniemi	2.81	352	Pn	Pn	09 48 35.9	+1.9
KAF				Sg	Sg	09 49 16.9	-1.1
KEF	Keuruu	3.04	339	SG	Sb	09 49 22.8	+2.2
KEF				MSG		09 49 22.8	
	comp=Z,3.1nm,0.2s						
KEF	Keuruu	3.04	339	Sg	Sb	09 49 22.8	+2.2
RAF	Rauma	3.18	304	PN	Pn	09 48 41.1	+1.9
	baz=119						
RAF				SG	Sb	09 49 26.3	+1.9
RAF				MSG		09 49 26.3	
	comp=Z,2.0nm,0.4s						
RAF	Rauma	3.18	304	Pn	Pn	09 48 41.0	+1.9
RAF				Sg	Sb	09 49 26.3	+1.9
SUF	Sumiainen	3.42	352	SG	Sb	09 49 34.0	+2.6
SUF				MSG		09 49 34.0	
	comp=Z,2.3nm,0.4s						
AAL	Aland	3.72	286	SG	Sb	09 49 42.9	+2.9
AAL	Aland	3.72	286	Sg	Sb	09 49 42.9	+2.9
JOF	Joensuu	4.11	28	PN	Pn	09 48 54.3	+2.4
JOF	Joensuu	4.11	28	Pn	Pn	09 48 54.3	+2.4
HFS	Hagfors	6.85	282	Pn	Pn	09 49 29.5	-0.1
	baz=122,slow=14						
HFS				Sn	Sn	09 50 45.1	-3.1
	baz=92,slow=28						
HFS				Lg	Lg	09 51 19.1	
	baz=86,slow=28						
HFS	Hagfors	6.85	282	Pn	Pn	09 49 29.5	-0.1
	baz=122,slow=14						
HFS				Sn	Sn	09 50 45.1	-3.1
	baz=92,slow=28						
HFS				Lg	Lg	09 51 19.1	
	baz=86,slow=28						
HFS	Hagfors	6.85	282	Pn	Pn	09 49 28.9	-0.7
	comp=Z,0.1nm,0.3s,baz=84,slow=13,SNR=2.8						
HFS				Lg	Lg	09 51 19.1	
	comp=Z,0.5nm,0.3s,baz=98,slow=35,SNR=6.4						
HFS	Hagfors	6.85	282	Pn	Pn	09 49 29.5	-0.1
	baz=122,slow=14,SNR=4.3						
HFS				Sn	Sn	09 50 45.1	-3.1
	baz=92,slow=25,SNR=4.5						
HFS				Lg	Lg	09 51 19.1	
	baz=86,slow=24,SNR=4.1						
NOA	NORSAR Array B	8.12	289	Pn	Pn	09 49 43.5	-3.6
	comp=Z,0.1nm,0.3s,baz=175,slow=1.7,SNR=4.0						
NOA				Lg	Lg	09 51 58.8	
	comp=Z,0.2nm,0.3s,baz=153,slow=22,SNR=4.5						
ARA0	ARCESS Array S	10.25	357	Pn	Pn	09 50 14.6	-1.5
	baz=172,slow=16						
ARA0				Sn	Sn	09 52 04.9	-6.7
	baz=173,slow=28						
ARA0	ARCESS Array S	10.25	357	Pn	Pn	09 50 14.6	-1.5
	baz=172,slow=16						
ARA0				Sn	Sn	09 52 04.9	-6.7
	baz=173,slow=28						
ARCES	ARCESS Array B	10.25	357	Pn	Pn	09 50 14.5	-1.6
	comp=Z,0.1nm,0.3s,baz=173,slow=14,SNR=7.3						

*ISCJB **07** 10:14:39.2±0.4, 42°.24N±0°.02×13°.47E±0°.03, h14^{km}±4^{km}, Error ellipse: s-maj=4.0km s-min=2.9km az=167.8*
*CSEM **07** 10:14:39.4±0.1, 42°.24N×13°.47E, h10^{km}, ML3.5/7, Error ellipse: s-maj=2.3km s-min=1.7km az=71.0*
*ROM **07** 10:14:39.1±0.1, 42°.25N×13°.47E, h10^{km}, Md2.9/17, Ml2.9/18, Error ellipse: s-maj=0.9km s-min=0.7km az=67.0*
ISC 07 10:14:39.7±0.8, **42°.25N**±0°.02×**13°.47E**±0°.02, **h13**^{km}±4^{km}, **n51**, σ0^{s}68/76, **4C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	Fagnano	0.09	80	⇑Pg	Pg	10 14 42.0	-0.6
FAGN				Sg	Sg	10 14 43.6	-1.0
	40µm,0.6s						
FAGN	Fagnano	0.09	80	⇑Pg	Pg	10 14 42.0	-0.6
FAGN				Sg	Sg	10 14 43.6	-1.0
	40µm,0.6s						
AQU	L'Aquila	0.12	334	Pg	Pg	10 14 42.7	-0.2
AQU				Sg	Sg	10 14 44.8	-0.4
AQU	L'Aquila	0.12	334	Pg	Pg	10 14 42.7	-0.2
AQU				Sg	Sg	10 14 44.8	-0.4
PTQR	Pietraquaria	0.23	193	⇑*i*Pg	Pg	10 14 44.8	+0.1
PTQR				Sg	Sb	10 14 48.7	-1.2
PTQR	Pietraquaria	0.23	193	⇑*i*Pg	Pg	10 14 44.8	+0.1
PTQR				Sg	Sb	10 14 48.7	-1.2
FIAM	Fiamignano	0.26	274	Pg	Pg	10 14 45.3	+0.1
FIAM				Sg	Sb	10 14 49.7	-1.1
	3µm,0.9s						
FIAM	Fiamignano	0.26	274	Pg	Pg	10 14 45.3	+0.1
FIAM				Sg	Sb	10 14 49.7	-1.1
	3µm,0.9s						
CAMP	Campotosto	0.29	351	Pg	Pg	10 14 45.4	-0.3
CAMP				Sg	Sg	10 14 50.3	+0.5
CAMP	Campotosto	0.29	351	Pg	Pg	10 14 45.4	-0.3
CAMP				Sg	Sg	10 14 50.3	+0.5
VCEL	Villa Celiera	0.31	62	Pg	Pg	10 14 45.8	-0.3
VCEL				Sg	Sb	10 14 51.6	-0.5
	3µm,0.4s						
VCEL	Villa Celiera	0.31	62	Pg	Pg	10 14 45.8	-0.3
VCEL				Sg	Sb	10 14 51.6	-0.5
	3µm,0.4s						
TERO	Teramo	0.38	15	Pg	Pg	10 14 46.8	-0.6
TERO				Sg	Sb	10 14 53.9	-0.4
	2µm,0.5s						
TERO	Teramo	0.38	15	Pg	Pg	10 14 46.8	-0.6
TERO				Sg	Sb	10 14 53.9	-0.4
	2µm,0.5s						
VVLD	Villa Vallelon	0.40	163	Pg	Pg	10 14 47.3	-0.3
VVLD				Sg	Sg	10 14 53.2	+0.3
	1µm,0.6s						
VVLD	Villa Vallelon	0.40	163	Pg	Pg	10 14 47.3	-0.3
VVLD				Sg	Sg	10 14 53.2	+0.3
	1µm,0.6s						
INTR	Introdacqua	0.40	126	Pg	Pg	10 14 47.4	-0.3
INTR				Sg	Sg	10 14 53.5	+0.4
	2µm,0.4s						
INTR	Introdacqua	0.40	126	Pg	Pg	10 14 47.4	-0.3
INTR				Sg	Sg	10 14 53.5	+0.4
	2µm,0.4s						
GUAR	Guarcino	0.47	195	Pg	Pg	10 14 48.7	-0.3
	511nm,0.3s						
GUAR	Guarcino	0.47	195	Pg	Pg	10 14 48.7	-0.3
	511nm,0.3s						
CERT	Cerreto	0.47	231	Pg	Pg	10 14 48.8	-0.2
CERT				Sg	Sb	10 14 56.1	-0.7
	1µm,0.4s						
CERT	Cerreto	0.47	231	Pg	Pg	10 14 48.8	-0.2
CERT				Sg	Sb	10 14 56.1	-0.7
	1µm,0.4s						
POFI	Posta Fibreno	0.56	161	Pg	Pg	10 14 49.7	-1.0
POFI	Posta Fibreno	0.56	161	Pg	Pg	10 14 49.7	-1.0
MTCE	Montecelio	0.59	247	Pg	Pg	10 14 50.6	-0.6
	350nm,0.5s						
MTCE	Montecelio	0.59	247	Pg	Pg	10 14 50.6	-0.6
	350nm,0.5s						
SDI	San Donato	0.60	155	Pg	Pg	10 14 50.9	-0.4
SDI				Sg	Sb	10 14 59.9	-0.4
SDI	San Donato	0.60	155	Pg	Pg	10 14 50.9	-0.4
SDI				Sg	Sb	10 14 59.9	-0.4
MNS	Montasola	0.60	283	Pg	Pg	10 14 50.9	-0.5
	559nm,0.6s						
MNS	Montasola	0.60	283	Pg	Pg	10 14 50.9	-0.5
	559nm,0.6s						
NRCA	Norcia	0.64	336	Pg	Pg	10 14 51.6	-0.6
NRCA				Sg	Sb	10 15 01.7	+0.1
NRCA	Norcia	0.64	336	Pg	Pg	10 14 51.6	-0.6
NRCA				Sg	Sb	10 15 01.7	+0.1
CAFR	Castel Frentan	0.65	92	Pg	Pg	10 14 52.2	-0.1
	1µm,0.6s						
CAFR	Castel Frentan	0.65	92	Pg	Pg	10 14 52.2	-0.1
	1µm,0.6s						
OFFI	Offida	0.70	13	Pg	Pb	10 14 53.6	-0.2
	4µm,1.0s						
OFFI	Offida	0.70	13	Pg	Pb	10 14 53.6	-0.2
	4µm,1.0s						
GIUL	Giuliano Di Ro	0.71	193	Pg	Pg	10 14 52.7	-0.8
	329nm,0.7s						
GIUL	Giuliano Di Ro	0.71	193	Pg	Pg	10 14 52.7	-0.8
	329nm,0.7s						
RNI2	Rionero Sannit	0.75	137	Pg	Pb	10 14 54.2	-0.4
	547nm,0.6s						
RNI2	Rionero Sannit	0.75	137	Pg	Pb	10 14 54.2	-0.4
	547nm,0.6s						
CERA	Filignano	0.77	148	Pg	Pg	10 14 53.6	-1.0
	599nm,0.7s						
CERA	Filignano	0.77	148	Pg	Pg	10 14 53.6	-1.0
	599nm,0.7s						
FDMO	Fiordimonte	0.83	340	Pg	Pg	10 14 54.8	-1.0
	310nm,0.6s						
FDMO	Fiordimonte	0.83	340	Pg	Pg	10 14 54.8	-1.0
	310nm,0.6s						
MIDA	Miranda	0.84	136	Pg	Pg	10 14 54.8	-1.2
	306nm,0.5s						
MIDA	Miranda	0.84	136	Pg	Pg	10 14 54.8	-1.2
	306nm,0.5s						
CESI	CESI - Serrava	0.86	331	Pg	Pg	10 14 55.6	-0.7
	120nm,0.5s						
CESI	CESI - Serrava	0.86	331	Pg	Pg	10 14 55.6	-0.7
	120nm,0.5s						
ASSB	Assisi San Ben	0.99	323	Pg	Pb	10 14 58.2	-0.5
	207nm,0.5s						
ASSB	Assisi San Ben	0.99	323	Pg	Pb	10 14 58.2	-0.5
	207nm,0.5s						
NVLJ	Novalja	2.53	23	*e*Pn	Pn	10 15 21.3	+1.0
NVLJ				Sn	Sn	10 15 53.2	+2.2

IDC 07 10:19:06.4±1.3, **0°.70S**×**133°.18E**, **h0**^{km}, **mb3.5**/3, **mb1 3.8**/5, **mb1mx3.5**/22, **mbtmp3.5**/5, **ML3.5**/2, **Error ellipse: s-maj=60.7km s-min=16.4km az=86.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.82	203	P	Pn	10 23 28.4	+0.2
	0.1nm,0.3s,baz=28,slow=11,SNR=5.3						
FITZ				S	Sn	10 26 43.4	-16
	0.1nm,0.3s,baz=28,slow=19,SNR=2.0						
WRA	Warramunga Arr	19.16	177	P	Pn	10 23 33.0	+0.6
	0.2nm,0.3s,baz=354,slow=11,SNR=15						
WRA				S	Sn	10 26 54.7	-13
	0.0nm,0.3s,baz=352,slow=24,SNR=4.3						
ASAR	Alice Springs	22.84	178	P	P	10 24 12.7	+1.3
	0.9nm,0.4s,baz=356,slow=11,SNR=31						
ASAR				S	S	10 28 22.0	0.0
	1.0nm,1.0s,baz=0.7,slow=24,SNR=7.4						
MKAR	Makanchi Array	64.88	324	P	P	10 29 47.5	0.0
	0.4nm,0.5s,baz=111,slow=7.9,SNR=6.2						
ILAR	Eielson Array	86.33	25	P	P	10 31 49.4	-0.7
	0.2nm,0.6s,baz=252,slow=5.0,SNR=5.2						

IDC 07 10:28:34.4±6.0, **2°.02N**×**128°.32E**, **h238**^{km}±59^{km}, **mb3.1**/7, **mb1 3.2**/7, **mb1mx3.0**/22, **mbtmp3.1**/7, **Error ellipse: s-maj=71.5km s-min=13.6km az=69.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.17	187	P	P	10 32 51.0	-0.2
	0.9nm,0.5s,baz=11,slow=10,SNR=3.6						
WRA	Warramunga Arr	22.61	165	P	P	10 33 14.8	-0.3
	1.0nm,0.3s,baz=344,slow=9.9,SNR=50						
ASAR	Alice Springs	26.11	168	P	P	10 33 46.9	+0.2
	0.5nm,0.6s,baz=354,slow=7.6,SNR=13						
ASAR				PcP	PcP	10 37 07.6	-0.2
	0.3nm,0.3s,baz=359,slow=2.0,SNR=11						
STKA	Stephens Creek	35.99	161	P	P	10 35 13.1	+0.2
	0.8nm,0.3s,baz=338,slow=9.6,SNR=6.4						
SONM	Songino Array	49.42	341	P	P	10 37 00.8	+0.3
	0.3nm,0.4s,baz=152,slow=8.0,SNR=3.0						
MKAR	Makanchi Array	59.86	325	P	P	10 38 15.8	+0.7
	0.9nm,0.3s,baz=116,slow=8.1,SNR=28						
ZALV	Zalesovo Beam	62.82	333	P	P	10 38 33.3	-1.5
	0.4nm,0.3s,baz=122,slow=7.0,SNR=2.3						
TORD	Torodi Ar. Bea	124.95	287	PKP	PKPdf	10 47 06.9	-0.4
	0.1nm,0.4s,baz=90,slow=2.7,SNR=4.6						

*JMA **07** 10:34:21.1±0.6, 46°.20N×152°.20E, h30^{km}, M4.1*
*MOS **07** 10:34:27.8±1.2, 46°.15N×151°.77E, h96^{km}, mb3.9/2, Error ellipse: s-maj=36.0km s-min=26.5km az=136.3*
*IDC **07** 10:34:28.9±4.5, 46°.08N×151°.86E, h86^{km}±41^{km}, mb3.1/7, mb1 3.3/9, mb1mx3.2/27, mbtmp3.1/9, Error ellipse: s-maj=33.1km s-min=24.5km az=148.0*
ISC 07 10:34:20.8±1.1, **44°.9N**±0°.3×**152°.7E**±0°.1, **h30**^{km}, **n24**, σ2^{s}04/24, **mb3.4**/7, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	5.22	255	P	Pn	10 35 38.9	+2.1
NEM2				*e*S	Sn	10 36 37.0	+1.0
JRA	Rausu	5.50	263	P	Pn	10 35 43.1	+2.5
JNK	Nakash	5.87	260	P	Pn	10 35 47.7	+2.0
JAK	Akkeshi	6.07	255	P	Pn	10 35 50.2	+1.7
JAK				*e*S	Sn	10 36 55.6	-1.3
SKR	Severo-Kuril's	6.23	21	*e*PN	Pn	10 35 50.6	-0.1
JTKR	Abashiri--Toko	6.35	265	P	Pn	10 35 54.0	+1.7
JAR	Ashorobuto	6.62	259	P	Pn	10 35 58.2	+2.3
JAR				*e*S	Sn	10 37 10.2	-0.1
JOB	Onbets	6.70	256	P	Pn	10 35 58.8	+1.8
JCH	Churui	7.12	255	P	Pn	10 36 04.7	+1.8
JCH				*e*S	Sn	10 37 20.5	-2.3
JKK2	Kamakawa 2	7.19	265	P	Pn	10 36 05.5	+1.6
ASAJ	Asahikawa	7.25	267	P	Pn	10 36 06.1	+1.4
	0.8nm,0.3s,baz=89,slow=15,SNR=9.0						
JNBK	Urakawa-nobuka	7.67	254	P	Pn	10 36 11.7	+1.3
JNBK				*e*S	Sn	10 37 35.5	-0.7
JKB	Kayabe	9.00	255	*e*S	Sn	10 38 04.7	-4.2
JANG	Nango	9.39	245	P	Pn	10 36 35.3	+1.3
JANG				*e*S	Sn	10 38 15.7	-2.8
JTH	Tanohata	9.41	242	*e*S	Sn	10 38 17.1	-1.9
KSRS	Korea Array	20.02	257	P	Pn	10 38 54.0	+1.1
	0.1nm,0.3s,baz=57,slow=8.9,SNR=3.3						
MKAR	Makanchi Array	47.55	299	P	P	10 42 47.1	-6.2
MKAR						10 44 21.0	
MKAR	Makanchi Array	47.55	299	P	P	10 42 47.1	-6.2
	0.2nm,0.5s,baz=61,slow=6.7,SNR=3.5						
MKAR				PcP	PcP	10 44 21.0	-1.9
	0.3nm,0.7s,baz=49,slow=2.7,SNR=3.2						
YKA	Yellowknife Ar	52.60	36	P	P	10 43 28.6	-2.7
	0.1nm,0.5s,baz=297,slow=7.6,SNR=4.2						
PDAR	Pinedale Array	66.09	53	P	P	10 45 06.2	+1.0
	0.4nm,0.8s,baz=270,slow=1.8,SNR=3.5						
WRA	Warramunga Arr	66.66	199	P	P	10 45 15.3	+6.7
	0.1nm,0.5s,baz=16,slow=6.8,SNR=3.2						
NOA	NORSAR Array B	69.89	341	P	P	10 45 21.4	-7.1
	0.7nm,0.9s,baz=31,slow=5.2,SNR=3.2						
HFS	Hagfors	70.09	340	P	P	10 45 22.6	-7.0
	0.7nm,0.5s,baz=29,slow=3.3,SNR=5.3						
TXAR	Lajitas Array	78.67	60	P	P	10 46 21.4	+1.2
	0.2nm,0.5s,baz=302,slow=5.2,SNR=5.4						

*ISCJB **07** 10:44:54.3±0.4, 39°.44N±0°.03×28°.17E±0°.03, h0^{km}, Error ellipse: s-maj=5.1km s-min=3.5km az=15.0*
*ISK **07** 10:44:54.6, 39°.44N×28°.16E, h10^{km}, MD2.7*
*DDA **07** 10:44:54.9, 39°.46N×28°.14E, h7^{km}, MD2.7*
*CSEM **07** 10:44:54.5±0.2, 39°.45N×28°.17E, h1^{km}, MD2.7, Error ellipse: s-maj=4.6km s-min=3.6km az=28.0*
ISC 07 10:44:54.9±1.0, **39°.44N**±0°.03×**28°.15E**±0°.02, **h0**^{km}, **n43**, σ0^{s}81/49, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.29	313	*e*PG	Pg	10 45 01.0	+0.6
BALB				*e*SG	Sg	10 45 05.6	+1.4
BALB	Balikesir	0.29	313	*e*Pg	Pg	10 45 01.0	+0.6
BALB				*e*Sg	Sg	10 45 05.6	+1.4
DST	Dursunbey	0.40	66	*e*PG	Pg	10 45 02.8	+0.4
DST				*e*SG	Sg	10 45 08.7	+1.1
DST	Dursunbey	0.40	66	*e*Pg	Pg	10 45 02.8	+0.4
DST				*e*Sg	Sg	10 45 08.7	+1.1
BALY	Balya	0.51	306	*i* P	Pg	10 45 04.4	-0.2
BALY				*i* S	Sg	10 45 12.6	+1.4
BALY	Balya	0.51	306	*i* P	Pg	10 45 04.4	-0.2
DEMI	Demirci	0.59	132	*i* P	Pg	10 45 06.8	+0.6
DEMI	Demirci	0.59	132	*i* P	Pg	10 45 06.8	+0.6
AKS	Akhisar	0.62	205	*e*PG	Pg	10 45 07.1	+0.4
AKS	Akhisar	0.62	205	*e*Pg	Pg	10 45 07.1	+0.4
ORLT	Orhaneli	0.83	43	*e*PG	Pg	10 45 11.0	+0.2
ORLT	Orhaneli	0.83	43	*e*Pg	Pg	10 45 11.0	+0.2
EDC	Edincik	0.93	346	*e*PG	Pg	10 45 13.2	+0.5
EDC	Edincik	0.93	346	*e*Pg	Pg	10 45 13.2	+0.5
KULA	Kula-Manisa	1.01	157	*e*PG	Pg	10 45 14.5	+0.4
KULA	Kula-Manisa	1.01	157	*e*Pg	Pg	10 45 14.5	+0.4
TVSB	Tavsanli	1.01	89	*e*PG	Pg	10 45 14.3	0.0
TVSB	Tavsanli	1.01	89	*e*Pg	Pg	10 45 14.3	0.0
MDNY	Mudanya-Bursa	1.08	31	*e*PN	Pg	10 45 15.8	+0.2
MDNY	Mudanya-Bursa	1.08	31	*e*Pn	Pg	10 45 15.8	+0.2
AYVA	Ayvalik	1.14	264	*i* P	Pg	10 45 16.1	-0.6
AYVA				*i* S	Sb	10 45 33.2	+0.4
KRBG	Karabiga-Canak	1.16	326	*e*PN	Pg	10 45 16.6	-0.4
KRBG	Karabiga-Canak	1.16	326	*e*Pn	Pg	10 45 16.6	-0.4
ARMT	Armutlu	1.25	26	*e*PN	Pg	10 45 18.6	-0.2
ARMT	Armutlu	1.25	26	*e*Pn	Pg	10 45 18.6	-0.2
GEMT	Gemlik	1.27	38	*e*PN	Pg	10 45 18.9	-0.3
GEMT	Gemlik	1.27	38	*e*Pn	Pg	10 45 18.9	-0.3
BLCB	Balcova	1.36	220	*e*PN	Pg	10 45 20.3	-0.7
BLCB	Balcova	1.36	220	*e*Pn	Pg	10 45 20.3	-0.7
LPK	Lapseki	1.42	311	*e*PN	Pn	10 45 21.0	-0.9
LPK	Lapseki	1.42	311	*e*Pn	Pn	10 45 21.0	-0.9
RKY	Sarkoy-Tekirda	1.45	329	*e*PN	Pn	10 45 21.5	-0.9
RKY	Sarkoy-Tekirda	1.45	329	*e*Pn	Pn	10 45 21.5	-0.9
KHL	Karahalli	1.55	136	*e*PN	Pn	10 45 23.0	-0.7
KHL	Karahalli	1.55	136	*e*Pn	Pn	10 45 23.0	-0.7
ALT	Altintas	1.57	104	*e*PN	Pn	10 45 23.1	-0.9
ALT	Altintas	1.57	104	*e*Pn	Pn	10 45 23.2	-0.9
GELI	Tayfur-Gelibol	1.61	307	*e*PN	Pn	10 45 23.7	-0.8
GELI	Tayfur-Gelibol	1.61	307	*e*Pn	Pn	10 45 23.7	-0.8
BORA	Eskisehir	1.83	75	*i* P	Pn	10 45 25.5	-2.1
BORA	Eskisehir	1.83	75	*i* P	Pn	10 45 25.5	-2.1
ENEZ	Enez	2.01	311	*e*PN	Pn	10 45 29.7	-0.3
ENEZ	Enez	2.01	311	*e*Pn	Pn	10 45 29.7	-0.3

IDC 07 11:02:58.1±1.4, **19°.04S**×**174°.58W**, **h0**^{km}, **mb4.1**/6, **mb1 4.3**/7, **mb1mx3.9**/22, **mbtmp4.1**/7, **ML2.2**/1, **Error ellipse: s-maj=50.8km s-min=21.4km az=126.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.76	28	Pn	Pn	11 04 23.3	-1.7
	4.2nm,0.3s,baz=280,slow=11,SNR=6.7						
AFI				Sn	Sn	11 05 20.5	-11
	6.2nm,0.3s,baz=180,slow=20,SNR=3.2						
RAR	Rarotonga	14.07	101	Pn	Pn	11 06 11.1	-7.8
	2.6nm,0.3s,baz=270,slow=8.1,SNR=3.8						
URZ	Urewera	20.48	199	P	P	11 07 37.0	-0.4
	11nm,0.9s,baz=0.0,slow=7.1,SNR=4.6						
STKA	Stephens Creek	41.32	243	P	P	11 10 46.0	+0.2
	2.1nm,0.8s,baz=64,slow=5.1,SNR=3.0						
ASAR	Alice Springs	48.00	255	P	P	11 11 38.8	-0.5
	1.9nm,0.5s,baz=93,slow=7.8,SNR=49						
ASAR				PcP	PcP	11 13 06.9	-0.6
	0.5nm,0.6s,baz=101,slow=3.9,SNR=4.2						
WRA	Warramunga Arr	48.01	260	P	P	11 11 38.4	-1.0
	1.2nm,0.4s,baz=97,slow=7.5,SNR=46						
WRA				PcP	PcP	11 13 07.3	-0.2
	0.3nm,0.6s,baz=92,slow=3.4,SNR=3.3						
MJAR	Matsushiro Arr	71.02	321	P	P	11 14 18.3	+0.4
	1.5nm,0.8s,baz=146,slow=5.9,SNR=4.3						
ILAR	Eielson Array	86.21	12	P	P	11 15 40.3	-0.6
	0.7nm,0.5s,baz=229,slow=6.2,SNR=24						
BVAR	Borovoye Array	120.01	321	PKP	PKPdf	11 21 52.0	+1.5
	0.5nm,0.4s,baz=72,slow=4.7,SNR=3.4						
BRTR	Keskin Array B	148.13	316	PKPbc	PKPbc	11 22 46.0	-0.3
	1.0nm,0.6s,baz=93,slow=4.3,SNR=2.8						

IDC 07 11:06:41.5±2.2, **18°.17S**×**175°.38W**, **h209**^{km}±22^{km}, **mb3.6**/12, **mb1 3.8**/13, **mb1mx3.6**/22, **mbtmp3.6**/13, **Error ellipse: s-maj=19.9km s-min=11.6km az=115.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.47	40	P	Pn	11 08 01.9	-0.4
	21nm,0.3s,baz=179,slow=2.9,SNR=14						
AFI				S	S	11 08 59.9	-6.0
	37nm,0.3s,baz=58,slow=20,SNR=11						
URZ	Urewera	21.07	197	P	P	11 11 09.8	+0.3
	12nm,0.4s,baz=300,slow=3.3,SNR=33						
URZ				S	S	11 14 45.7	-5.5
	4.8nm,0.8s,baz=360,slow=12,SNR=6.1						
RPZ	Rata Peaks	27.92	201	P	P	11 12 12.8	+0.6
	4.2nm,0.4s,baz=72,slow=3.2,SNR=2.9						
STKA	Stephens Creek	41.04	242	P	P	11 14 04.9	+0.3
	0.9nm,0.7s,baz=80,slow=11,SNR=4.4						
WRA	Warramunga Arr	47.42	259	P	P	11 14 54.1	-1.2
	2.7nm,0.4s,baz=97,slow=7.1,SNR=74						
ASAR	Alice Springs	47.49	254	P	P	11 14 55.5	-0.5
	10nm,0.5s,baz=92,slow=8.2,SNR=138						
VNDA	Vanda	60.45	186	P	P	11 16 28.9	+0.3
	1.1nm,0.8s,baz=7.0,slow=8.3,SNR=6.1						
MJAR	Matsushiro Arr	69.87	322	P	P	11 17 29.9	+0.1
	1.9nm,0.6s,baz=148,slow=5.9,SNR=7.5						
PETK	Petropavlovsk-	74.70	344	P	P	11 17 58.3	+0.4
	2.1nm,0.6s,baz=148,slow=11,SNR=2.8						
KSRS	Korea Array	76.83	317	P	P	11 18 11.6	+1.3
	0.7nm,0.7s,baz=128,slow=6.8,SNR=3.7						
NVAR	Mina Array Bea	77.64	42	P	P	11 18 15.8	+0.6
	0.3nm,0.5s,baz=242,slow=7.8,SNR=2.9						
ILAR	Eielson Array	85.52	12	P	P	11 18 54.6	-0.9
	0.4nm,0.5s,baz=225,slow=5.9,SNR=13						
YKA	Yellowknife Ar	93.38	24	P	P	11 19 31.3	-1.2
	0.1nm,0.6s,baz=236,slow=4.4,SNR=2.6						
BRTR	Keskin Array B	146.98	317	PKPbc	PKPbc	11 25 59.4	-0.5
	1.0nm,0.7s,baz=78,slow=3.0,SNR=5.9						
TORD	Torodi Ar. Bea	174.27	150	PKPab	PKPab	11 27 57.9	-2.1
	0.7nm,1.1s,baz=177,slow=2.7,SNR=3.6						

*ISCJB **07** 11:08:22.5±0.4, 22°.26S±0°.05×63°.77W±0°.07, h528^{km},*

mb3.8/17, Error ellipse: s-maj=8.5km s-min=6.3km az=162.0
*IDC **07** 11:08:23.1±0.9, 22°16S×63°66W, h521km±9km, mb3.6/14, mb1 3.6/21, mb1mx3.5/30, mbtmp3.6/21, Error ellipse: s-maj=13.8km s-min=10.0km az=56.0*
ISC 07 11:08:23.5±0.5**, 22°17S**±0°07×**63°72W**±0°08**, h528km, n37,** σ0s70/43**, mb3.8**/17**, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIV	San Ignacio	6.64	23	P	P	11 10 07.8	+0.5
	2.1nm,0.3s,baz=219,slow=9.9,SNR=34						
SIV				S	S	11 11 31.9	-0.3
	0.4nm,0.3s,baz=248,slow=17,SNR=7.7						
CPUP	Villa Florida	7.15	127	P	P	11 10 12.2	+0.2
	16nm,0.3s,baz=298,slow=10,SNR=195						
CPUP				S	S	11 11 40.0	-0.9
	0.7nm,0.3s,baz=94,slow=19,SNR=1.2						
LPAZ	La Paz	7.19	324	P	P	11 10 13.9	+0.6
	6.3nm,0.3s,baz=141,slow=5.5,SNR=165						
LPAZ				S	S	11 11 40.8	-2.2
	0.7nm,0.3s,baz=255,slow=20,SNR=6.6						
CFAA	Coronel Fontan	10.22	202	P	P	11 10 42.4	-1.0
	0.9nm,0.3s,baz=26,slow=9.5,SNR=48						
CFAA				S	S	11 12 32.7	-5.7
	0.5nm,0.3s,baz=347,slow=19,SNR=13						
NNA	Nana	16.11	307	P	P	11 11 44.8	-0.1
	2.0nm,0.3s,baz=130,slow=9.8,SNR=7.9						
BDFB	Brasilia	16.21	69	P	P	11 11 44.8	-1.2
	3.5nm,0.3s,baz=235,slow=10,SNR=22						
PLCA	Paso Flores	19.39	196	P	P	11 12 14.7	-0.3
	0.2nm,0.3s,baz=354,slow=12,SNR=4.8						
RCBR	Riachuelo	31.41	63	P	P	11 14 02.2	+0.6
	5.2nm,0.8s,baz=239,slow=14,SNR=4.3						
SJG	San Juan	40.11	356	P	P	11 15 11.9	-1.6
	15nm,0.3s,baz=252,slow=19,SNR=5.0						
CMIG	Matias Romero	49.54	319	P	P	11 16 26.6	+0.6
	1.9nm,0.5s,baz=145,slow=8.1,SNR=3.3						
SNAA	Sanae	60.09	161	P	P	11 17 39.6	+0.4
	0.2nm,0.5s,baz=284,slow=15,SNR=7.8						
TKL	Tuckaleechee C	60.57	341	P	P	11 17 42.3	-0.5
	1.2nm,0.4s,baz=158,slow=11						
TXAR	Lajitas Array	64.05	321	P	P	11 18 06.3	+0.7
	0.2nm,0.6s,baz=152,slow=8.8,SNR=4.9						
DBIC	Dimbokro	64.36	71	P	P	11 18 07.2	-0.5
	6.0nm,0.4s,baz=227,slow=6.6,SNR=17						
TORD	Torodi Ar. Bea	73.09	68	P	P	11 19 00.2	-0.3
	17nm,0.5s,baz=257,slow=5.8,SNR=393						
SUR	Sutherland	74.05	119	P	P	11 19 06.1	+0.1
	7.8nm,1.0s,baz=196,slow=15,SNR=3.0						
TSUM	Tsumeb	75.22	105	P	P	11 19 12.4	-0.2
	3.7nm,0.7s,baz=239,slow=12,SNR=5.5						
SCHQ	Schefferville	76.74	358	P	P	11 19 20.1	+0.1
	1.7nm,0.5s,baz=185,slow=8.3,SNR=7.2						
PDAR	Pinedale Array	77.19	327	P	P	11 19 23.8	+0.6
	0.4nm,0.4s,baz=125,slow=10.0,SNR=5.2						
BOSA	Boshof	78.85	116	P	P	11 19 31.8	-0.6
	3.8nm,0.9s,baz=246,slow=8.0,SNR=3.4						
LBTB	Lobatse	80.34	113	P	P	11 19 39.5	-0.7
	0.8nm,0.3s,baz=209,slow=6.3,SNR=4.0						
ESDC	Sonseca Array	83.01	42	P	P	11 19 53.6	+0.2
	1.9nm,0.7s,baz=237,slow=5.2,SNR=6.6						
LSZ	Lusaka	86.07	105	P	P	11 20 10.1	+1.0
	1.0nm,0.6s,baz=109,slow=2.4,SNR=4.2						
YKA	Yellowknife Ar	93.49	339	P	P	11 20 42.3	+0.2
	0.3nm,0.6s,baz=124,slow=4.5,SNR=12						
ASAR	Alice Springs	131.32	202	PKP	PKPdf	11 26 36.5	+0.1
	0.1nm,0.5s,baz=143,slow=1.3,SNR=4.1						
ASAR				SKPbc	SKPbc	11 29 12.5	+0.2
	0.9nm,0.5s,baz=147,slow=3.9,SNR=20						
BVAR	Borovoye Array	133.53	37	SKP		11 29 21.1	
	0.5nm,0.4s,baz=308,slow=5.3,SNR=3.3						
WRA	Warramunga Arr	134.57	204	PKP	PKPdf	11 26 43.1	+0.5
	0.1nm,0.5s,baz=158,slow=1.7,SNR=5.2						
WRA				SKPbc	SKPbc	11 29 23.4	+0.2
	1.7nm,0.6s,baz=158,slow=2.8,SNR=37						
ZALV	Zalesovo Beam	140.36	29	PKP	PKPdf	11 26 51.5	-0.5
	2.7nm,0.6s,baz=11,slow=1.5,SNR=5.4						
ZALV				SKPbc	SKPbc	11 29 39.4	+0.8
	0.6nm,0.5s,baz=313,slow=2.5,SNR=3.8						
MKAR	Makanchi Array	143.20	40	PKP	PKPbc	11 26 55.8	+0.2
	10nm,1.0s,baz=307,slow=3.4,SNR=28						
PYUN	Piuthan	149.35	72	eP	PKPbc	11 27 13.9	+0.3
KOLN	Koldanda	149.91	73	eP	PKPbc	11 27 15.1	+0.2
	6.5nm,0.4s						
DANN	Dangsing	150.01	71	eP	PKPbc	11 27 15.7	+0.5
DMN	Daman	151.25	73	eP	PKPbc	11 27 18.2	+0.1
KKN	Kakani	151.40	72	eP	PKPbc	11 27 18.2	-0.1
	12nm,0.6s						
GUN	Gumba	151.91	72	eP	PKPbc	11 27 19.8	+0.1
RAMN	Ramite	152.62	74	eP	PKPbc	11 27 20.8	-0.3
	13nm,0.7s						
SONM	Songino Array	153.19	15	PKP	PKPdf	11 27 15.0	+1.4
	0.3nm,0.6s,baz=302,slow=3.3,SNR=3.8						
SONM				PKPbc	PKiKP	11 27 22.0	+0.4
	0.6nm,0.5s,baz=280,slow=1.1,SNR=7.1						
SONM				PKPab	PKPab	11 27 36.1	+0.2
	1.0nm,0.6s,baz=309,slow=3.8,SNR=9.5						

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*IDC **07** 11:10:33.5±0.6, 27°72N×56°71E, h0km, mb4.0/22, mb1 4.1/22, mb1mx4.0/32, mbtmp4.0/22, MS3.3/3, Ms1 3.3/3, ms1mx2.7/46, Error ellipse: s-maj=16.9km s-min=13.6km az=126.0*
*ISCJB **07** 11:10:37.0±0.3, 27°76N±0°02×56°72E±0°05, h28km, mb4.0/23, MS3.5/2, Error ellipse: s-maj=6.4km s-min=3.6km az=176.6*
*THR **07** 11:10:37.0±0.9, 27°83N×56°64E, h14km±12km, ML3.9*
*TEH **07** 11:10:38.2, 27°64N×56°45E, h28km, ML4.0*
*CSEM **07** 11:10:39.4±0.2, 27°67N×56°54E, h20km, ML4.0, Error ellipse: s-maj=7.6km s-min=4.1km az=81.0*
*OMAN **07** 11:10:43.7±0.5, 27°44N×56°88E, h36km±97km, Error ellipse: s-maj=22.6km s-min=6.9km az=4.0*
ISC 07 11:10:38.2±0.5**, 27°72N**±0°04×**56°68E**±0°06**, h28km, n92,** σ**1s58**/88**, mb4.0**/23**, 8C-4D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.30	205	⇓ePg	Pb	11 10 44.9	-0.5
IBND				eSg	Sb	11 10 50.3	0.0
IBND				e		11 10 58.7	
	comp=Z,7μm,0.2s						
IBND	Bandar-abas	0.30	205	⇓ePg	Pb	11 10 44.9	-0.5
IBND				eSg	Sb	11 10 50.3	0.0
BNDS	Bandar-Abbas	0.55	235	ePg	Pb	11 10 48.5	-1.0
BNDS				AML	AML	11 11 06.0	
	comp=N,5μm,0.6s						
BNDS				AML	AML	11 11 06.5	
	comp=E,4μm,0.5s						
BNDS	Bandar-Abbas	0.55	235	ePg	Pb	11 10 48.5	-1.0
BANOM	Banah	1.82	191	⇑P	Pn	11 11 08.8	+1.0
	SNR=92						
BANOM	Banah	1.82	191	P	Pn	11 11 08.8	+1.0
	SNR=92						
BANOM				S	Sb	11 11 34.2	+0.9
KRBR	Kerman	2.25	2	ePg	Pn	11 11 16.0	+2.1
KRBR				AML	AML	11 11 48.9	
	comp=N,2μm,0.4s						
KRBR				AML	AML	11 11 48.9	
	comp=E,2μm,0.6s						
KRBR	Kerman	2.25	2	ePg	Pn	11 11 16.0	+2.1
NAZ	Nazwa, Dubai	2.87	199	P	Pn	11 11 24.1	+2.0
HATD	Hatta, Dubai	2.92	190	⇑P	Pn	11 11 25.4	+2.5
HATD	Hatta, Dubai	2.92	190	P	Pn	11 11 24.8	+1.9
ASHO	Ashiyiah	3.08	191	⇑P	Pn	11 11 26.7	+1.7
	SNR=13						
ASHO	Ashiyiah	3.08	191	P	Pn	11 11 26.4	+1.4
	SNR=17						
FAQ	Al Faqa, Dubai	3.12	198	P	Pn	11 11 27.4	+1.9
ASUD	Al Ashush, Dub	3.31	202	⇓P	Pn	11 11 30.7	+2.5
	SNR=15						
ASUD	Al Ashush, Dub	3.31	202	P	Pn	11 11 30.5	+2.3
ISRV	Sarvestan	3.55	299	ePn	Pn	11 11 33.0	+1.3
ISRV				e		11 13 18.3	
	comp=Z,8μm,0.6s						
ISRV	Sarvestan	3.55	299	ePn	Pn	11 11 33.0	+1.3
IBAF	Bafgh	3.98	346	ePn	Pn	11 11 37.9	+0.4
IBAF				e		11 12 57.3	
	comp=Z,2μm,0.3s						
IBAF	Bafgh	3.98	346	ePn	Pn	11 11 37.9	+0.4
ZHSF	Zahedan	4.06	61	ePn	Pn	11 11 40.8	+2.2
ZHSF				AML	AML	11 12 49.9	
	comp=E,64nm,0.5s						
ZHSF				AML	AML	11 12 54.8	
	comp=N,64nm,0.6s						
ZHSF	Zahedan	4.06	61	ePn	Pn	11 11 40.8	+2.2
IMEH	Mehriz	4.08	334	ePn	Pn	11 11 41.6	+2.7
IMEH				e		11 12 33.8	
	comp=Z,1μm,0.3s						
IMEH	Mehriz	4.08	334	ePn	Pn	11 11 41.6	+2.7
HOQ	Hoqain	4.16	172	⇑P	Pn	11 11 40.4	+0.5
HOQ	Hoqain	4.16	172	P	Pn	11 11 40.4	+0.5
ARQ	Araqi	4.37	182	⇑P	Pn	11 11 44.0	+1.3
ARQ	Araqi	4.37	182	P	Pn	11 11 44.0	+1.3
SMDO	Samad	4.80	165	⇑P	Pn	11 11 50.1	+1.3
	SNR=11						
SMDO	Samad	4.80	165	P	Pn	11 11 50.1	+1.3
	SNR=11						
ICHK	Chekchek	4.92	337	ePn	Pn	11 11 53.4	+2.9
ICHK				e		11 12 42.9	
	comp=Z,1μm,0.3s						
ICHK	Chekchek	4.92	337	ePn	Pn	11 11 53.4	+2.9
BSY	Bisya	4.98	174	⇑P	Pn	11 11 52.7	+1.6
BSYO	Bisya	4.99	174	P	Pn	11 11 52.7	+1.4
IKOO	Kooshah	5.10	23	ePn	Pn	11 11 56.2	+3.2
IKOO				e		11 13 36.6	
	comp=Z,2μm,0.4s						
IKOO	Kooshah	5.10	23	ePn	Pn	11 11 56.2	+3.2
ITEG	Tejag	5.46	19	ePn	Pn	11 12 02.8	+4.9
ITEG				e		11 15 15.8	
	comp=Z,2μm,0.0s						
ITEG	Tejag	5.46	19	ePn	Pn	11 12 02.8	+4.9
JMDO	Jabal Madar	5.48	166	⇑P	Pn	11 11 59.0	+0.9
JMDO	Jabal Madar	5.48	166	P	Pn	11 11 59.0	+0.9
WBK	Wadi Bani Khal	5.50	157	⇓P	Pn	11 11 58.8	+0.5
WBK	Wadi Bani Khal	5.50	157	P	Pn	11 11 58.8	+0.5
IDAH	Dahanechah	5.71	28	ePn	Pn	11 12 06.6	+5.2
IDAH				e		11 14 03.0	
	comp=Z,2μm,0.6s						
IDAH	Dahanechah	5.71	28	ePn	Pn	11 12 06.6	+5.2
NASN	Na'in	6.07	327	ePn	Pn	11 12 07.8	+1.4
NASN	Na'in	6.07	327	ePn	Pn	11 12 07.8	+1.4
IGAR	Gharneh	6.16	320	e		11 12 17.3	
	comp=Z,562nm,0.2s						
IGAR				ePn	Pn	11 12 09.6	+2.1
IZEF	Zefreh	6.38	325	ePn	Pn	11 12 11.4	+0.8
IZEF				e		11 12 22.0	
	comp=Z,350nm,0.3s						
IZEF	Zefreh	6.38	325	ePn	Pn	11 12 11.4	+0.8
IPIR	Pirpir	7.04	316	ePn	Pn	11 12 21.0	+1.3
IKLH	Kolahrood	7.11	323	ePn	Pn	11 12 22.7	+2.1
IKLH				e		11 14 03.3	
	comp=N,422nm,0.2s						
IKLH	Kolahrood	7.11	323	ePn	Pn	11 12 22.7	+2.1
ISFB	Sefidab	7.63	331	ePn	Pn	11 12 30.5	+2.9
ISFB	Sefidab	7.63	331	ePn	Pn	11 12 30.5	+2.9
QRN	Al-Qurain	7.80	280	eP	Pn	11 12 29.6	-0.2
QRN				AML	AML	11 13 55.2	
	comp=Z,35nm,0.4s						
RDF	Al-Radifah	8.14	281	eP	Pn	11 12 33.8	-0.7
RDF				AML	AML	11 14 03.4	
	comp=Z,29nm,0.4s						
RDF	Al-Radifah	8.14	281	eP	Pn	11 12 33.8	-0.7
IVRN	Varamin	8.40	331	ePn	Pn	11 12 40.3	+2.2
IVRN	Varamin	8.40	331	ePn	Pn	11 12 40.3	+2.2
NAY	Al-Naaiem	8.44	283	eP	Pn	11 12 38.3	-0.4
NAY				AML	AML	11 14 10.8	
	comp=Z,12nm,0.4s						
NAY	Al-Naaiem	8.44	283	eP	Pn	11 12 38.3	-0.4
MIB	Mutribah	8.46	286	eP	Pn	11 12 38.3	-0.6
MIB				AML	AML	11 14 11.7	
	comp=Z,43nm,0.7s						
MIB	Mutribah	8.46	286	eP	Pn	11 12 38.3	-0.6
ASF	Jabal al Asfar	17.71	289	P	P	11 14 47.4	+3.9
	comp=Z,0.4nm,0.3s,baz=168,slow=9.9,SNR=4.7						
EIL	Elat	19.16	281	LR	LR	11 23 10.0	
	comp=Z,24nm,20.1s,baz=264,slow=39						
ATD	Arta Tunnel	20.68	222	P	Pn	11 15 19.4	+0.7
	comp=Z,5.7nm,0.4s,baz=94,slow=16,SNR=3.4						
AAK	Ala-Archa	20.75	40	P	P	11 15 16.9	0.0
	comp=Z,3.5nm,0.7s,baz=198,slow=6.4,SNR=11						
AAK				LR	LR	11 24 27.4	
	comp=Z,137nm,18.5s,baz=212,slow=40						
BRTR	Keskin Array B	22.53	308	P	P	11 15 37.0	+1.0
	comp=Z,3.6nm,0.8s,baz=129,slow=13,SNR=11						
AKTO	Aktyubinsk	22.71	2	P	P	11 15 37.7	+0.1
	comp=Z,13nm,0.6s,baz=181,slow=10,SNR=48						
BVAR	Borovoye Array	27.25	18	P	P	11 16 19.2	-0.7
	comp=Z,5.5nm,0.7s,baz=200,slow=8.5,SNR=36						
MKAR	Makanchi Array	27.69	40	P	P	11 16 23.5	-0.4
	comp=Z,0.7nm,0.6s,baz=225,slow=8.7,SNR=12						
AKASG	Malin Array Be	30.98	325	P	P	11 16 52.6	-0.3
	comp=Z,1.6nm,0.6s,baz=125,slow=7.9,SNR=3.0						
ZALV	Zalesovo Beam	33.35	30	P	P	11 17 12.9	-0.8
	comp=Z,6.0nm,0.5s,baz=244,slow=9.3,SNR=43						
KMBO	Kilima Mbogo	34.23	216	P	P	11 17 21.9	0.0
	comp=Z,0.9nm,0.5s,baz=34,slow=13,SNR=7.8						
VYHS	Vyhne	35.79	316	eP	P	11 17 41.3	+6.4
GERES	GERESS Array B	39.12	314	P	P	11 18 03.0	-0.2
	comp=Z,0.3nm,0.3s,baz=101,slow=5.2,SNR=3.4						
FINES	FINESS Array B	39.43	337	P	P	11 18 04.7	-0.7
	comp=Z,1.2nm,0.5s,baz=130,slow=10,SNR=6.5						
BSD	Bornholm Skovb	40.66	324	i P	P	11 18 13.5	-2.2
	comp=Z,14nm,0.8s						
DAVOX	Davos/Dischmat	41.13	310	P	P	11 18 22.2	+2.1
	comp=Z,4.5nm,0.5s,baz=141,slow=6.5,SNR=5.6						
SONM	Songino Array	43.27	49	P	P	11 18 37.2	-0.1
	comp=Z,0.7nm,0.8s,baz=236,slow=7.8,SNR=5.5						
HFS	Hagfors	43.52	330	P	P	11 18 38.1	-0.9
	comp=Z,0.8nm,0.4s,baz=128,slow=9.7,SNR=11						
NB2	NORSAR Subarra	45.02	331	P	P	11 18 49.5	-1.6
	comp=Z,1.9nm,0.8s,baz=116,slow=7.9						
NOA	NORSAR Array B	45.02	331	P	P	11 18 49.9	-1.2
	comp=Z,0.9nm,0.8s,baz=118,slow=7.6,SNR=4.2						
ARCES	ARCESS Array B	45.58	345	P	P	11 18 54.5	-0.8
	comp=Z,2.4nm,0.7s,baz=123,slow=6.7,SNR=3.7						
TORD	Torodi Ar. Bea	53.12	266	P	P	11 19 52.6	-1.2
	comp=Z,2.7nm,0.5s,baz=63,slow=7.5,SNR=21						
TORD				LR	LR	11 45 32.1	
	comp=Z,63nm,19.0s,baz=140,slow=40						
KSRS	Korea Array	59.53	61	P	P	11 20 37.9	-1.3
	comp=Z,0.7nm,0.6s,baz=274,slow=6.9,SNR=3.7						
TSUM	Tsumeb	60.07	223	P	P	11 20 43.5	+0.4
	comp=Z,2.4nm,0.8s,baz=45,slow=11,SNR=3.2						
BOSA	Boshof	63.60	211	P	P	11 21 06.6	-0.1
	comp=Z,1.5nm,0.4s,baz=44,slow=7.4,SNR=4.2						
ILAR	Eielson Array	86.00	10	P	P	11 23 15.3	-0.4
	comp=Z,0.2nm,0.7s,baz=328,slow=3.7,SNR=6.0						
WRA	Warramunga Arr	88.78	113	P	P	11 23 29.6	-0.2
	comp=Z,0.3nm,0.5s,baz=314,slow=4.1,SNR=11						
YKA	Yellowknife Ar	89.83	356	P	P	11 23 33.7	-0.3
	comp=Z,0.4nm,0.7s,baz=1.0,slow=5.1,SNR=14						
ASAR	Alice Springs	90.28	117	P	P	11 23 36.3	-0.5
	comp=Z,0.3nm,0.5s,baz=299,slow=4.7,SNR=9.0						

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*ISCJB **07** 11:11:22.8±0.5, 41°06N±0°03×34°52E±0°05, h8km±8km, Error ellipse: s-maj=6.4km s-min=5.1km az=163.4*
*CSEM **07** 11:11:22.8±0.1, 41°06N×34°52E, h15km, MD2.6, Error ellipse: s-maj=2.3km s-min=1.9km az=52.0*
*ISK **07** 11:11:22.2, 41°05N×34°54E, h12km, MD2.6*
*DDA **07** 11:11:23.4, 41°02N×34°47E, h7km, MD2.9*
ISC 07 11:11:22.8±1.1**, 41°05N**±0°03×**34°52E**±0°03**, h12km**±10km**, n20,** σ**0s43**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOS	Tosya	0.38	267	ePG	Pg	11 11 30.5	+0.1
TOS				eSG	Sb	11 11 36.5	-0.7
TOS	Tosya	0.38	267	ePg	Pg	11 11 30.5	+0.1
TOS				eSg	Sb	11 11 36.6	-0.7
BYBT	Boyabat	0.46	24	ePG	Pg	11 11 31.5	-0.3
BYBT				eSG	Sg	11 11 38.2	+0.3
BYBT	Boyabat	0.46	24	ePg	Pg	11 11 31.5	-0.3
BYBT				eSg	Sg	11 11 38.2	+0.3
CTKT	Corum	0.48	154	i P	Pg	11 11 32.3	+0.1
CTKT				i S	Sb	11 11 39.7	-0.5
CTKT	Corum	0.48	154	i P	Pg	11 11 32.3	+0.1
CTKT				i S	Sb	11 11 39.7	-0.5
ILGA	Ilgaz	0.61	270	i P	Pg	11 11 34.9	+0.2
ILGA	Ilgaz	0.61	270	i P	Pg	11 11 34.9	+0.2
CORM	Corum	0.88	174	ePG	Pb	11 11 39.5	-0.5
CORM				eSG	Sb	11 11 52.1	+0.4
CORM	Corum	0.88	174	ePg	Pb	11 11 39.6	-0.5
CORM				eSg	Sb	11 11 52.1	+0.4
HAVZ	Havza	0.91	88	i P	Pg	11 11 40.5	+0.2
HAVZ				i S	Sn	11 11 55.3	+0.9
HAVZ	Havza	0.91	88	i P	Pg	11 11 40.5	+0.2
HAVZ				i S	Sn	11 11 55.3	+0.9
BALT	Daday	0.98	300	eP	Pg	11 11 41.9	+0.2
BALT	Daday	0.98	300	eP	Pg	11 11 41.9	+0.2
BZK	Bozkurt	0.98	337	ePG	Pb	11 11 41.8	0.0
BZK	Bozkurt	0.98	337	ePg	Pb	11 11 41.8	0.0
KVT	Kavak	1.16	88	ePN	Pn	11 11 44.4	-0.4
KVT	Kavak	1.16	88	ePn	Pn	11 11 44.4	-0.4
YOZ	Yozgat	1.54	156	ePN	Pn	11 11 50.1	-0.1
YOZ	Yozgat	1.54	156	ePn	Pn	11 11 50.1	-0.1

IDC 07 11:18:00.8±0.8**, 53°45S**×**24°83E, h0km, mb4.0**/6**, mb1 4.1**/6**, mb1mx3.8**/22**, mbtmp4.0**/6**, MS3.4**/4**, Ms1 3.4**/4**, ms1mx3.1**/32**, 1C-1D, Error ellipse: s-maj=37.1km s-min=20.6km az=78.0, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYO	Syowa Base	17.06	162	⇑eP	Pn	11 21 57.3	-3.1
SYO	Syowa Base	17.06	162	⇓i P	Pn	11 21 58.8	-1.6
SUR	Sutherland	21.26	351	P	P	11 22 50.2	+1.5
	7.9nm,0.9s,baz=168,slow=17,SNR=2.5						
SUR				LR	LR	11 29 04.4	
	comp=Z,126nm,19.9s,baz=72,slow=31						
SNAA	Sanae	21.90	203	P	P	11 22 55.7	+0.5
	6.1nm,1.0s,baz=49,slow=11,SNR=24						
SNAA				LR	LR	11 29 00.1	
	comp=Z,38nm,20.9s,baz=197,slow=30						
BOSA	Boshof	24.82	1	LR	LR	11 31 13.9	
	comp=Z,125nm,19.2s,baz=166,slow=32						
LBTB	Lobatse	28.41	1	LR	LR	11 33 00.4	
	comp=Z,90nm,18.5s,baz=294,slow=32						
QSPA	South Pole Qui	36.77	180	P	P	11 25 09.8	0.0
	2.3nm,0.8s,baz=243,slow=5.2,SNR=11						
TORD	Torodi Ar. Bea	69.23	336	P	P	11 29 08.7	-0.6
	0.8nm,0.8s,baz=180,slow=5.9,SNR=5.5						
ASAR	Alice Springs	81.91	119	P	P	11 30 22.3	0.0
	0.8nm,0.8s,baz=214,slow=4.7,SNR=10						
WRA	Warramunga Arr	85.19	117	P	P	11 30 39.0	-0.1
	0.8nm,1.0s,baz=210,slow=4.1,SNR=6.6						
PDAR	Pinedale Array	148.24	269	PKPbc	PKPbc	11 37 46.9	-1.4
	0.5nm,0.9s,baz=122,slow=3.3,SNR=2.8						
RES	Resolute Bay	148.37	334	PKPbc	PKPbc	11 37 46.9	-0.4
	0.4nm,0.9s,baz=24,slow=10.0,SNR=3.7						
NVAR	Mina Array Bea	150.68	254	PKPbc	PKPbc	11 37 54.6	+0.1
	0.2nm,0.3s,baz=88,slow=3.1,SNR=3.4						
YKA	Yellowknife Ar	157.04	309	PKPab	PKPab	11 38 26.6	-0.8
	0.2nm,0.8s,baz=85,slow=5.2,SNR=7.3						

IDC 07 11:40:44.7±1.6**, 21°00S**×**177°32W, h0km, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/18**, mbtmp3.5**/3**, Error ellipse: s-maj=57.4km s-min=38.2km az=158.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.03	257	P	P	11 49 03.0	+0.5
	0.2nm,0.6s,baz=94,slow=8.8,SNR=5.3						
WRA	Warramunga Arr	45.17	262	P	P	11 49 03.0	-0.6
	0.2nm,0.3s,baz=95,slow=7.6,SNR=15						
ILAR	Eielson Array	88.66	13	P	P	11 53 39.6	+0.3
	0.2nm,0.5s,baz=220,slow=6.1,SNR=5.9						
TORD	Torodi Ar. Bea	172.14	173	PKPab	PKPab	12 02 18.5	-0.9
	0.2nm,0.7s,baz=180,slow=4.3,SNR=2.2						

MEX 07 11:41:55.7±0.7**, 16°87N**×**95°42W, h127km**±13km**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.27	279	i P	Pn	11 42 20.5	-0.9
VHO				i S	Sn	11 42 38.7	-2.1
HUIG	Huatulco	1.28	211	i P	Pn	11 42 19.8	-1.4
HUIG				i S	Sn	11 42 39.0	-1.6
TGIG		2.20	92	i P	Pn	11 42 31.6	-0.5
TGIG				i S	Sn	11 42 57.4	-2.6
PNIG	Pinotepa	2.64	260	i P	Pn	11 42 35.8	-1.8
PNIG				i S	Sn	11 43 07.7	-2.1
CCIG	Comitan	3.20	100	i P	Pn	11 42 44.0	-1.1
CCIG				i S	Sn	11 43 20.9	-2.3

IDC 07 11:44:33.6±1.6**, 6°12S**×**151°36E, h0km, mb3.8**/6**, mb1 4.0**/6**, mb1mx3.7**/18**, mbtmp3.7**/6**, Error ellipse: s-maj=69.3km s-min=21.7km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.29	232	Pn	Pn	11 45 57.9	+3.8
	1.0nm,0.3s,baz=36,slow=8.7,SNR=3.8						
PMG				Sn	Sn	11 46 53.6	-2.2
	2.3nm,0.3s,baz=324,slow=21,SNR=7.9						
WRA	Warramunga Arr	21.51	229	P	P	11 49 24.3	0.0
	1.6nm,0.6s,baz=53,slow=10,SNR=15						
ASAR	Alice Springs	24.22	222	P	P	11 49 52.5	+0.2
	1.7nm,0.7s,baz=53,slow=8.8,SNR=16						
FITZ	Fitzroy Crossi	27.78	242	P	P	11 50 24.2	-0.3
	1.3nm,0.7s,baz=39,slow=9.0,SNR=4.0						
SONM	Songino Array	66.69	329	P	P	11 55 26.7	+0.2
	0.2nm,0.6s,baz=140,slow=5.4,SNR=3.0						
ILAR	Eielson Array	83.91	22	P	P	11 57 04.5	-0.7
	0.9nm,0.7s,baz=248,slow=5.0,SNR=19						
YKA	Yellowknife Ar	97.25	28	P	Pdif	11 58 09.0	+0.8
	0.2nm,0.6s,baz=269,slow=4.6,SNR=4.5						
TORD	Torodi Ar. Bea	149.31	285	PKPbc	PKPbc	12 04 25.0	-0.6
	0.9nm,0.7s,baz=62,slow=3.1,SNR=6.3						

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*ISCJB **07** 11:55:52.7±0.3, 33°16S±0°03×70°71W±0°06, h86km±2km, mb4.1/10, Error ellipse: s-maj=8.9km s-min=4.4km az=2.1*
*IDC **07** 11:55:53.5±0.7, 33°14S×70°63W, h78km±5km, mb3.9/9, mb1 4.0/13, mb1mx3.9/21, mbtmp3.9/13, MS3.2/1, Ms1 3.2/1, ms1mx2.5/26, Error ellipse: s-maj=20.9km s-min=13.6km az=96.0*
*GUC **07** 11:55:53.6±0.6, 33°15S×70°76W, h74km±2km, MD4.3, ML4.6*
*NEIC **07** 11:55:53.6, 33°15S×70°76W, h74km, mb4.3/3, MD4.3(GUC), After GUC.*
NEIC Felt [III] at Valparaiso and [II] at Rancagua and Santiago.
ISC 07 11:55:53.4±0.5**, 33°15S**±0°03×**70°74W**±0°05**, h78km**±4km**, h77km:pP-P, n70,** σ**0s85**/103**, mb4.1**/10**, 8C-8D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLCH	Cerro Calan	0.30	146	AML	AML	11 56 16.8	
	comp=E,71μm,0.7s						
SAN	Santiago	0.31	169	i P	Pn	11 56 05.6	0.0
SAN				i S	Sn	11 56 14.7	+0.2
SAN	Santiago	0.31	169	i P	Pn	11 56 05.6	0.0
SAN				i S	Sn	11 56 14.7	+0.2
FSR	Penalolen	0.38	152	i P	Pn	11 56 06.5	+0.5
FSR				i S	Sn	11 56 16.1	+0.8
FSR	Penalolen	0.38	152	i P	Pn	11 56 06.5	+0.5
FSR				i S	Sn	11 56 16.1	+0.8
FSR				AML	AML	11 56 17.5	
	comp=E,8μm,0.5s						
ANTU	Antumapu	0.43	169	eP	Pn	11 56 06.5	+0.1
ANTU				i S	Sn	11 56 16.3	+0.3
ANTU	Antumapu	0.43	169	eP	Pn	11 56 06.5	+0.1
ANTU				i S	Sn	11 56 16.3	+0.3
ANTU				AML	AML	11 56 17.3	
	comp=E,53μm,0.7s						
JACH	Jahuel	0.48	15	⇑i P	Pn	11 56 07.0	+0.1
JACH				i S	Sn	11 56 17.2	+0.4
JACH	Jahuel	0.48	15	⇑i P	Pn	11 56 07.0	+0.1
JACH				i S	Sn	11 56 17.2	+0.4
PCH	Pirque	0.51	159	i P	Pn	11 56 07.5	+0.3
PCH				i S	Sn	11 56 17.7	+0.5
PCH	Pirque	0.51	159	i P	Pn	11 56 07.5	+0.3
PCH				i S	Sn	11 56 17.7	+0.5
TACH	Talagante	0.53	198	⇑i P	Pn	11 56 07.4	+0.1
TACH				i S	Sn	11 56 17.9	+0.4
TACH	Talagante	0.53	198	⇑i P	Pn	11 56 07.4	+0.1
TACH				i S	Sn	11 56 17.9	+0.4
CHCH	Chadas Angostu	0.79	175	⇑i P	Pn	11 56 10.1	+0.1
CHCH	Chadas Angostu	0.79	175	⇑i P	Pn	11 56 10.1	+0.1
LMEL	Las Melosas	0.83	148	⇓i P	Pn	11 56 11.3	+0.8
LMEL				i S	Sn	11 56 24.5	+1.3
LMEL	Las Melosas	0.83	148	⇓i P	Pn	11 56 11.3	+0.8
LMEL				i S	Sn	11 56 24.5	+1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LMEL				AML	AML	11 56 26.8	
	comp=N,30µm,0.4s						
CACH	**El Canelo**	**0.97**	**173**	⇓iP	**Pn**	**11 56 12.9**	**+0.7**
CACH	**El Canelo**	**0.97**	**173**	⇓iP	**Pn**	**11 56 12.9**	**+0.7**
LNV	**Longovilo**	**0.98**	**215**	⇓iP	**Pn**	**11 56 12.1**	**0.0**
LNV	**Longovilo**	**0.98**	**215**	⇓iP	**Pn**	**11 56 12.1**	**0.0**
CHNG	**Los Chungos**	**1.42**	**333**	⇑iP	**Pn**	**11 56 18.1**	**+0.5**
CHNG				iS	**Sn**	**11 56 36.2**	**+0.5**
CHNG	**Los Chungos**	**1.42**	**333**	⇑iP	**Pn**	**11 56 18.1**	**+0.5**
CHNG				iS	**Sn**	**11 56 36.2**	**+0.5**
CHNG				AML	AML	11 56 39.9	
	comp=N,14µm,0.3s						
TALC	**Talca**	**2.37**	**198**	⇓iP	**Pn**	**11 56 30.3**	**+0.2**
TALC				iS	**Sn**	**11 56 58.8**	**+0.6**
TALC	**Talca**	**2.37**	**198**	⇓iP	**Pn**	**11 56 30.3**	**+0.2**
TALC				iS	**Sn**	**11 56 58.8**	**+0.6**
TALC				AML	AML	11 57 07.6	
	comp=E,14µm,0.3s						
CFAA	**Coronel Fontan**	**2.61**	**55**	P	**Pn**	**11 56 34.5**	**+0.9**
CFAA				S	**Sn**	**11 57 06.2**	**+1.9**
CFAA	**Coronel Fontan**	**2.61**	**55**	P	**Pn**	**11 56 34.5**	**+0.9**
	comp=E,32nm,0.3s,baz=228,slow=12,SNR=857						
CFAA				S	**Sn**	**11 57 06.2**	**+1.9**
	comp=E,32nm,0.3s,baz=106,slow=19,SNR=11						
LCO	**Las Campanas**	**4.12**	**0**	ePn	**Pn**	**11 56 53.9**	**-0.4**
LCO				eSn	**Sn**	**11 57 43.0**	**+1.6**
PLCA	**Paso Flores**	**7.57**	**179**	ePn	**Pn**	**11 57 41.9**	**+0.8**
	comp=E,14nm,0.7s						
PLCA				eSn	**Sn**	**11 59 05.8**	**+0.4**
PLCA				S		11 59 06.9	
PLCA	**Paso Flores**	**7.57**	**179**	P	**Pn**	**11 57 40.2**	**-0.9**
	comp=E,0.7nm,0.3s,baz=350,slow=11,SNR=13						
PLCA				S	**Sn**	**11 59 06.9**	**+1.5**
	comp=E,1.2nm,0.3s,baz=3.5,slow=9.6,SNR=3.1						
TRQA	**Tornquist**	**8.65**	**127**	ePn	**Pn**	**11 57 55.5**	**-0.3**
	comp=E,108nm,1.0s						
TRQA				eSn	**Sn**	**11 59 29.8**	**-1.8**
CPUP	**Villa Florida**	**13.48**	**63**	P	Pn	11 58 56.4	-5.0
CPUP	**Villa Florida**	**13.48**	**63**	P	Pn	11 58 56.4	-5.0
	comp=E,0.7nm,0.3s,baz=224,slow=15,SNR=4.1						
LPAZ	**La Paz**	**16.95**	**9**	ePn	**P**	**11 59 47.1**	**0.0**
	comp=E,13nm,0.8s						
LPAZ	**La Paz**	**16.95**	**9**	P	**Pn**	**11 59 46.2**	**0.0**
	comp=E,0.6nm,0.3s,baz=179,slow=7.5,SNR=23						
SIV	**San Ignacio**	**19.19**	**29**	P	**P**	**12 00 09.8**	**-1.3**
SIV	**San Ignacio**	**19.19**	**29**	P	**P**	**12 00 09.8**	**-1.3**
	comp=E,1.5nm,0.3s,baz=221,slow=12,SNR=58						
SIV				LR	LR	12 08 33.0	
	comp=E,76nm,21.2s,slow=40						
USHA	**Ushuaia**	**21.74**	**176**	P	**P**	**12 00 39.3**	**+1.1**
USHA	**Ushuaia**	**21.74**	**176**	P	**P**	**12 00 39.3**	**+1.1**
	comp=E,18nm,0.9s,baz=1.0,slow=5.4,SNR=6.0						
SAML	**Samuel**	**25.07**	**18**	eP	**P**	**12 01 10.0**	**-0.8**
	comp=E,6.9nm,0.8s						
BDFB	**Brasilia**	**26.95**	**55**	P	**P**	**12 01 26.5**	**-1.4**
BDFB	**Brasilia**	**26.95**	**55**	P	**P**	**12 01 26.5**	**-1.4**
	comp=E,2.0nm,0.3s,baz=226,slow=12,SNR=4.1						
VNA3	**Neumayer Olymp**	**49.74**	**158**	eP	**P**	**12 04 37.8**	**+0.4**
VNA3	**Neumayer Olymp**	**49.74**	**158**	e	P	12 04 43.0	+5.6
VNA2	**Neumayer--Watz**	**50.38**	**158**	eP	**P**	**12 04 42.7**	**+0.5**
	baz=291,slow=8.9						
VNA2	**Neumayer--Watz**	**50.38**	**158**	e	P	12 04 49.4	+7.2
	baz=291,slow=8.9						
SNAA	**Sanae**	**51.97**	**158**	eP	**P**	**12 04 54.3**	**+0.1**
SNAA	**Sanae**	**51.97**	**158**	e	P	12 05 01.5	+7.3
SNAA	**Sanae**	**51.97**	**158**	eP	**P**	**12 04 54.3**	**+0.1**
	comp=E,18nm,1.0s						
SNAA				ePcP	**PcP**	**12 06 09.1**	**+3.5**
SNAA	**Sanae**	**51.97**	**158**	P	**P**	**12 04 54.1**	**-0.1**
	comp=E,4.7nm,0.8s,baz=282,slow=6.9,SNR=39						
QSPA	**South Pole Qui**	**57.09**	**180**	P	**P**	**12 05 31.8**	**+0.3**
QSPA	**South Pole Qui**	**57.09**	**180**	P	**P**	**12 05 31.7**	**+0.3**
	comp=E,0.9nm,0.5s,baz=132,slow=2.8,SNR=17						
TXAR	**Lajitas Array**	**69.54**	**330**	P	**P**	**12 06 54.6**	**+0.6**
TXAR				pP	**pP**	**12 07 14.3**	**0.0**
TXAR	**Lajitas Array**	**69.54**	**330**	P	**P**	**12 06 54.6**	**+0.6**
	comp=E,0.6nm,0.6s,baz=150,slow=9.3,SNR=9.5						
TXAR				pP	**pP**	**12 07 14.3**	**0.0**
	comp=E,0.4nm,0.6s,baz=149,slow=8.1,SNR=4.1						
DBIC	**Dimbokro**	**73.87**	**71**	P	**P**	**12 07 19.8**	**-0.4**
DBIC				pP	**pP**	**12 07 41.0**	**+0.3**
DBIC	**Dimbokro**	**73.87**	**71**	P	**P**	**12 07 19.8**	**-0.4**
	comp=E,2.8nm,0.8s,baz=192,slow=6.1,SNR=2.5						
DBIC				pP	**pP**	**12 07 41.0**	**+0.3**
	comp=E,3.9nm,0.7s,baz=222,slow=6.1,SNR=3.1						
BOSA	**Boshof**	**79.50**	**117**	P	**P**	**12 07 51.4**	**-0.6**
BOSA	**Boshof**	**79.50**	**117**	P	**P**	**12 07 51.4**	**-0.6**
	comp=E,2.8nm,0.7s,baz=255,slow=2.2,SNR=6.1						
TORD	**Torodi Ar. Bea**	**82.89**	**69**	P	**P**	**12 08 09.6**	**-0.4**
TORD				pP	**pP**	**12 08 29.6**	**-1.2**
TORD	**Torodi Ar. Bea**	**82.89**	**69**	P	**P**	**12 08 09.6**	**-0.4**
	comp=E,2.4nm,0.9s,baz=262,slow=4.7,SNR=13						
TORD				pP	**pP**	**12 08 29.6**	**-1.2**
	comp=E,1.5nm,0.7s,baz=284,slow=5.6,SNR=4.6						
NVAR	**Mina Array Bea**	**83.82**	**324**	P	**P**	**12 08 15.4**	**+1.0**
NVAR	**Mina Array Bea**	**83.82**	**324**	P	**P**	**12 08 15.4**	**+1.0**
	comp=E,0.3nm,0.6s,baz=165,slow=7.5,SNR=2.3						
WRA	**Warramunga Arr**	**122.03**	**208**	PKP	**PKPdf**	**12 14 38.2**	**-1.3**
WRA				pPKP	**pPKPdf**	**12 15 01.8**	**+0.3**
WRA	**Warramunga Arr**	**122.03**	**208**	PKP	**PKPdf**	**12 14 38.2**	**-1.3**
	comp=E,0.3nm,0.5s,baz=158,slow=1.7,SNR=8.1						
WRA				pPKP	**pPKPdf**	**12 15 01.8**	**+0.3**
	comp=E,0.2nm,0.5s,baz=162,slow=1.5,SNR=2.2						
ARCES	**ARCESS Array B**	**122.79**	**25**	PKP	**PKPdf**	**12 14 38.9**	**-0.5**
ARCES	**ARCESS Array B**	**122.79**	**25**	PKP	**PKPdf**	**12 14 38.9**	**-0.5**
	comp=E,2.4nm,1.0s,baz=194,slow=3.3,SNR=2.9						
ZALV	**Zalesovo Beam**	**152.92**	**33**	PKPbc	**PKPbc**	**12 15 40.9**	**-0.2**
ZALV				PKPab	**PKPab**	**12 15 50.7**	**-1.9**
ZALV				pPKPbc	**pPKPbc**	**12 16 02.7**	**-0.3**
ZALV	**Zalesovo Beam**	**152.92**	**33**	PKPbc	**PKPbc**	**12 15 40.9**	**-0.2**
	comp=E,1.7nm,0.4s,baz=297,slow=3.2,SNR=12						
ZALV				PKPab	**PKPab**	**12 15 50.7**	**-1.9**
	comp=E,0.6nm,0.3s,baz=299,slow=2.2,SNR=3.5						
ZALV				pPKPbc	**pPKPbc**	**12 16 02.7**	**-0.3**
	comp=E,1.5nm,0.5s,baz=305,slow=2.9,SNR=4.9						
MKAR	**Makanchi Array**	**155.38**	**48**	PKPab	**PKPab**	**12 16 03.8**	**+0.4**
MKAR				pPKPab	**pPKPab**	**12 16 24.8**	**+0.1**
MKAR	**Makanchi Array**	**155.38**	**48**	PKPab	**PKPab**	**12 16 03.8**	**+0.4**
	comp=E,0.3nm,0.5s,baz=282,slow=3.5,SNR=2.5						
MKAR				pPKPab	**pPKPab**	**12 16 24.8**	**+0.1**
	comp=E,0.4nm,0.6s,baz=305,slow=4.3,SNR=3.1						

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*ISCJB **07** 12:01:38.5±0.6, 33°.69N±0°.04×139°.63E±0°.07, h170km±4km, mb3.0/3, Error ellipse: s-maj=9.5km s-min=6.4km az=159.8*
*IDC **07** 12:01:39.1±0.9, 33°.73N×139°.78E, h162km±4km, mb2.9/3, mb1 3.2/6, mb1mx2.9/28, mbtmp3.1/6, MS2.5/1, Ms1 2.5/1, ms1mx2.1/7, Error ellipse: s-maj=34.5km s-min=9.7km az=74.0*
*JMA **07** 12:01:40.2±0.1, 33°.74N×139°.62E, h159km±1km, M3.2*
ISC 07 12:01:38.9±0.8**, 33°.64N**±0°.05×**139°.62E**±0°.06**, h167**km±7km**, n24, σ1s.49**/35**, mb3.0**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMY	**Miyakejima3**	**0.44**	**348**	P	**Pn**	**12 02 02.3**	**+0.4**
JMY				S	**Sn**	**12 02 19.1**	**-0.6**
JHJ	**Hachijo jima 2**	**0.54**	**165**	P	**Pn**	**12 02 03.2**	**+0.8**
	60nm,0.3s,baz=360,slow=3.7,SNR=50						
JHJ				S	**Sn**	**12 02 21.2**	**+0.9**
	174nm,0.3s,baz=74,slow=23,SNR=20						
JHJ2	**Mitsune**	**0.56**	**163**	P	**Pn**	**12 02 03.4**	**+1.0**
JHJ2				S	**Sn**	**12 02 22.2**	**+1.8**
JHCJ	**Hachijojimakas**	**0.59**	**165**	P	**Pn**	**12 02 03.8**	**+1.2**
JHCJ				S	**Sn**	**12 02 21.1**	**+0.3**
JKO	**Kozu shima**	**0.68**	**323**	P	**Pn**	**12 02 03.1**	**+0.1**
JIZS	**Izushimoda**	**1.23**	**330**	P	**Pn**	**12 02 07.5**	**+0.3**
JIZS				S	**Sn**	**12 02 27.7**	**-1.4**
BSO3	**Boso 3**	**1.37**	**32**	P	**Pn**	**12 02 08.9**	**+0.7**
BSO3				S	**Sn**	**12 02 31.6**	**+0.8**
BSO1	**Boso 1**	**1.51**	**48**	P	**Pn**	**12 02 10.2**	**+1.0**
BSO1				S	**Sn**	**12 02 34.0**	**+1.3**
TK04	**Tokai 4**	**1.63**	**297**	P	**Pn**	**12 02 11.6**	**+0.7**
TK04				S	**Sn**	**12 02 35.8**	**+0.2**
JOD2	**Odawara 2**	**1.67**	**345**	P	**Pn**	**12 02 11.8**	**+0.3**
SHZ3	**Shizuoka 3**	**1.84**	**321**	P	**Pn**	**12 02 13.8**	**+0.5**
SHZ3				S	**Sn**	**12 02 39.8**	**-0.2**
JYN	**Shimob**	**2.05**	**335**	P	**Pn**	**12 02 16.2**	**+0.5**
JRY	**Ryogami san**	**2.44**	**346**	P	**Pn**	**12 02 20.5**	**+0.4**
JIE	**Ise**	**2.53**	**288**	P	**Pn**	**12 02 21.4**	**+0.2**
JAG	**Ashikaga**	**2.78**	**357**	P	**Pn**	**12 02 23.5**	**-0.7**
MJAR	**Matsushiro Arr**	**3.11**	**339**	P	**Pn**	**12 02 27.9**	**-0.4**
	5.0nm,0.3s,baz=162,slow=11,SNR=48						
MJAR				S	**Sn**	**12 03 05.8**	**-1.1**
	1.3nm,0.3s,baz=172,slow=16,SNR=4.6						
MAT	**Matsushiro**	**3.12**	**339**	P	**Pn**	**12 02 28.2**	**-0.2**
MAT				S	**Sn**	**12 03 06.4**	**-0.5**
CBIJ	**Chichi jima**	**6.89**	**161**	P	**Pn**	**12 03 15.4**	**-2.2**
	5.4nm,0.3s,baz=141,slow=20,SNR=12						
CBIJ				S	**Sn**	**12 04 29.4**	**-5.9**
	3.7nm,0.3s,baz=306,slow=19,SNR=2.6						
JNU	**Nakatsue**	**7.33**	**268**	P	**Pn**	**12 03 24.7**	**+1.2**
	0.4nm,0.3s,baz=100,slow=6.1,SNR=4.5						
ASAJ	**Asahikawa**	**10.71**	**12**	P	**Pn**	**12 04 05.6**	**-2.2**
	1.3nm,0.3s,baz=189,slow=13,SNR=14						
USRK	**Ussuriysk Arra**	**12.09**	**333**	LR	LR	12 09 02.3	
	comp=Z,24nm,20.1s,baz=211,slow=37						
MKAR	**Makanchi Array**	**44.76**	**305**	P	**P**	**12 09 37.6**	**+1.9**
	0.2nm,0.5s,baz=81,slow=8.9,SNR=2.9						
WRA	**Warramunga Arr**	**53.52**	**186**	P	**P**	**12 10 42.8**	**+0.4**
	0.1nm,0.3s,baz=1.5,slow=7.9,SNR=9.2						
ASAR	**Alice Springs**	**57.25**	**186**	P	**P**	**12 11 10.8**	**+1.7**
	0.1nm,0.4s,baz=22,slow=11,SNR=6.0						

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*ISCJB **07** 12:03:16.5±0.4, 23°.84N±0°.02×122°.05E±0°.02, h25km±3km, Error ellipse: s-maj=4.2km s-min=2.7km az=150.7*
*JMA **07** 12:03:17.8±0.3, 23°.92N×122°.06E, h68km, M2.0*
*TAP **07** 12:03:17.5, 23°.88N×121°.99E, h36km, ML2.9, C*
ISC 07 12:03:17.1±1.0**, 23°.86N**±0°.03×**122°.01E**±0°.03**, h32**km±9km**, n34, σ0s.60**/65**, 3C, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.39**	**288**	eP	**Pb**	**12 03 26.0**	**+0.1**
	baz=279						
HWA				eS	**Sb**	**12 03 32.1**	**+0.2**
	baz=279						
TWD	**Chiawan**	**0.44**	**301**	⇑iP	**Pb**	**12 03 26.6**	**0.0**
	baz=294						
TWD				iS	**Sb**	**12 03 33.3**	**+0.1**
	baz=294						
ESL	**Shilin**	**0.53**	**265**	eP	**Pb**	**12 03 27.7**	**-0.3**
	baz=257						
ESL				eS	**Sb**	**12 03 35.6**	**0.0**
	baz=257						
ENA	**Nanau**	**0.62**	**337**	⇑iP	**Pb**	**12 03 29.3**	**-0.2**
	baz=327						
ENA				eS	**Sb**	**12 03 37.8**	**-0.3**
	baz=327						
EHY	**Hungye**	**0.72**	**241**	P	**Pb**	**12 03 31.1**	**-0.1**
	baz=250						
EHY				eS	**Sb**	**12 03 40.6**	**-0.2**
	baz=250						
WHF	**Hehuan Shan**	**0.74**	**293**	⇑iP	**Pb**	**12 03 31.1**	**-0.7**
	baz=284						
WHF				eS	**Sb**	**12 03 41.1**	**-0.6**
	baz=284						
TWC	**Suao**	**0.76**	**349**	P	**Pb**	**12 03 31.7**	**-0.2**
	baz=351						
TWC				S	**Sn**	**12 03 42.3**	**+0.3**
	baz=351						
NNS	**Nan Shan**	**0.82**	**315**	eP	**Pn**	**12 03 32.3**	**-0.2**
	baz=315						
NNS				eS	**Sb**	**12 03 43.2**	**-0.6**
	baz=315						
TWF1	**Yuli**	**0.82**	**232**	P	**Pn**	**12 03 32.5**	**+0.1**
	baz=223						
TWF1				eS	**Sb**	**12 03 43.5**	**-0.3**
	baz=223						
TWT	**Tachien**	**0.85**	**298**	P	**Pn**	**12 03 33.4**	**+0.4**
	baz=296						
TWT				S	**Sn**	**12 03 45.4**	**+0.9**
	baz=296						
ENTT	**Nioudou**	**0.88**	**333**	eP	**Pn**	**12 03 33.1**	**-0.1**
	baz=333						
ENTT				eS	**Sn**	**12 03 44.9**	**+0.1**
	baz=333						
TWE	**Neicheng**	**0.91**	**340**	eP	**Pn**	**12 03 33.8**	**+0.2**
	baz=341						
TWE				eS	**Sn**	**12 03 46.0**	**+0.3**
	baz=341						
CHKT	**Chengkung**	**0.96**	**218**	eP	**Pn**	**12 03 33.5**	**-0.7**
	baz=207						
CHKT				eS	**Sn**	**12 03 45.5**	**-1.3**
	baz=207						
NSK	**Sanguang**	**1.01**	**324**	P	**Pn**	**12 03 35.2**	**+0.2**
	baz=313						
NSK				eS	**Sn**	**12 03 47.0**	**-1.2**
	baz=313						
SMLT	**Sun Moon Lake**	**1.01**	**272**	eP	**Pn**	**12 03 35.3**	**+0.1**
	baz=270						
SMLT				eS	**Sn**	**12 03 49.0**	**+0.6**
	baz=270						
TYC	**Yuchr**	**1.05**	**273**	P	**Pn**	**12 03 35.8**	**+0.3**
	baz=271						
TYC				eS	**Sn**	**12 03 49.2**	**0.0**
	baz=271						
YOJ	**Yonaguni jima**	**1.10**	**57**	P	**Pn**	**12 03 36.7**	**+0.5**
YOJ				eS	**Sn**	**12 03 50.6**	**+0.4**
ELDTW	**Lidau**	**1.13**	**234**	eP	**Pn**	**12 03 36.6**	**-0.1**
	baz=222						
ELDTW				eS	**Sn**	**12 03 50.8**	**-0.3**
	baz=222						
ALS	**Alishan**	**1.15**	**253**	eP	**Pn**	**12 03 37.9**	**+0.7**
	baz=251						
ALS				eS	**Sn**	**12 03 52.8**	**+0.7**
	baz=251						
NSTT	**Nanjuang**	**1.20**	**310**	eP	**Pb**	**12 03 38.6**	**-0.6**
	baz=309						
NSTT				eS	**Sn**	**12 03 53.3**	**+0.5**
	baz=309						
NWF	**Wu-fen Shan**	**1.23**	**350**	eP	**Pb**	**12 03 39.1**	**-0.7**
	baz=351						
NWF				eS	**Sb**	**12 03 54.8**	**-0.5**
	baz=351						
TWQ1	**Liyutan**	**1.23**	**294**	eP	**Pn**	**12 03 38.9**	**+0.9**
	baz=292						
TWQ1				eS	**Sb**	**12 03 55.3**	**0.0**
	baz=292						
CHN5	**Tsauling**	**1.25**	**258**	eP	**Pb**	**12 03 39.8**	**-0.3**
	baz=248						
CHN5				eS	**Sb**	**12 03 55.9**	**+0.1**
	baz=248						
TWG	**Pinlang**	**1.34**	**220**	eP	**Pn**	**12 03 38.9**	**-0.6**
	baz=218						
CHN4	**Tsaushan**	**1.39**	**249**	eP	**Pb**	**12 03 41.9**	**-0.5**
	baz=247						
CHN4				eS	**Sb**	**12 04 00.2**	**+0.3**
	baz=247						
WTP	**Ta-pu**	**1.42**	**245**	eP	**Pn**	**12 03 41.7**	**+1.1**
	baz=243						
WTP				eS	**Sb**	**12 04 00.7**	**+0.1**
	baz=243						
TWK	**Hsinying**	**1.51**	**247**	eP	**Pn**	**12 03 42.3**	**+0.4**
	baz=245						
TWK				eS	**Sb**	**12 04 03.3**	**-0.1**
	baz=245						
CHN1	**Nanshi**	**1.51**	**244**	eP	**Pn**	**12 03 43.4**	**+1.5**
	baz=242						
CHN1				eS	**Sb**	**12 04 03.1**	**-0.3**
	baz=242						
IRIF	**Iriomote-Funau**	**1.65**	**73**	P	**Pn**	**12 03 44.2**	**+0.5**
IRIF				eS	**Sn**	**12 04 04.4**	**+0.6**
HATJ	**Hateruma jima**	**1.66**	**83**	P	**Pn**	**12 03 44.5**	**+0.6**
HATJ				eS	**Sn**	**12 04 03.4**	**-0.7**
SSD	**Sandimen**	**1.68**	**229**	eP	**Pn**	**12 03 45.7**	**+1.5**
	baz=221						
JKRS	**Kuro-shima**	**1.87**	**78**	P	**Pn**	**12 03 47.6**	**+0.8**
JKRS				eS	**Sn**	**12 04 10.6**	**+1.3**
JIJ	**Ishigaki jima**	**2.02**	**75**	P	**Pn**	**12 03 49.0**	**+0.2**
JIJ				S	**Sn**	**12 04 12.5**	**-0.4**
JTJ	**Tarama**	**2.58**	**72**	eS	**Sn**	**12 04 26.2**	**-0.7**

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*IDC **07** 12:07:33.8±3.2, 27°.30N×56°.93E, h0km, mb3.6/3, mb1 3.6/3, mb1mx3.2/27, mbtmp3.6/3, Error ellipse: s-maj=77.5km s-min=34.8km az=150.0*
*KISR **07** 12:07:39.5±0.4, 27°.68N×55°.98E, h34km±730km, ML3.6*
*CSEM **07** 12:07:41.5±0.7, 27°.70N×56°.53E, h20km, ML3.2, Error ellipse: s-maj=19.7km s-min=11.4km az=153.0*
ISC 07 12:07:39.4±1.3**, 27°.7N**±0°.1×**56°.57E**±0°.08**, h18**km**, n13, σ1s.46**/19**, mb3.8**/3**, Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.48**	**227**	ePg	**Pn**	**12 07 51.1**	**-0.5**
KRBR	**Kerman**	**2.25**	**4**	ePg	**Pb**	**12 08 18.6**	**-1.1**
KRBR				eSg	**Sb**	**12 08 48.6**	**+1.3**
GHIR	**Ghir-Karzin**	**3.21**	**281**	ePn	Pn	12 08 32.5	+3.4
ZHSF	**Zahedan**	**4.14**	**62**	ePn	**Pn**	**12 08 43.4**	**+1.4**
RDF	**Al-Radifah**	**8.04**	**281**	eP	**Pn**	**12 09 36.6**	**+1.3**
RDF				eS	**Sn**	**12 11 04.2**	**-1.5**
RDF				AML	AML	12 11 06.7	
	comp=Z,7.9nm,0.4s						
RDF	**Al-Radifah**	**8.04**	**281**	eP	**Pn**	**12 09 36.6**	**+1.3**
RDF				eS	**Sn**	**12 11 04.2**	**-1.5**
	comp=Z,7.9nm,0.4s						
NAY	**Al-Naaiem**	**8.34**	**283**	eP	**Pn**	**12 09 41.0**	**+1.5**
NAY				eS	**Sn**	**12 11 12.0**	**-1.3**
NAY				AML	AML	12 11 17.0	
	comp=Z,3.3nm,0.5s						
NAY	**Al-Naaiem**	**8.34**	**283**	eP	**Pn**	**12 09 41.0**	**+1.5**
NAY				eS	**Sn**	**12 11 12.0**	**-1.3**
MIB	**Mutribah**	**8.36**	**286**	eP	**Pn**	**12 09 41.2**	**+1.5**
MIB				eS	**Sn**	**12 11 12.8**	**-0.9**
MIB				AML	AML	12 11 16.2	
	comp=Z,8.9nm,0.6s						
MIB	**Mutribah**	**8.36**	**286**	eP	**Pn**	**12 09 41.2**	**+1.5**
MIB				eS	**Sn**	**12 11 12.8**	**-0.9**
BRTR	**Keskin Array B**	**22.44**	**308**	P	**P**	**12 12 40.0**	**+2.4**
	comp=Z,0.8nm,0.7s,baz=130,slow=13,SNR=3.4						
ZALV	**Zalesovo Beam**	**33.39**	**31**	P	**P**	**12 14 15.6**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=231,slow=11,SNR=3.9						
TORD	**Torodi Ar. Bea**	**53.02**	**266**	P	**P**	**12 16 55.0**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=63,slow=7.5,SNR=17						

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*AUST **07** 12:17:03.8, 3°.24S×153°.54E, h0km*
*ISCJB **07** 12:17:24.6±0.4, 4°.66S±0°.05×152°.52E±0°.07, h58km, mb4.2/23, MS3.5/5, Error ellipse: s-maj=11.3km s-min=6.0km az=30.7*
*IDC **07** 12:17:27.3±2.6, 4°.72S×152°.57E, h70km±23km, mb4.0/16, mb1 4.1/18, mb1mx4.0/25, mbtmp4.0/18, MS3.5/7, Ms1 3.5/7, ms1mx3.3/27, Error ellipse: s-maj=18.7km s-min=12.8km az=80.0*
*NEIC **07** 12:17:30.5±1.8, 4°.76S×152°.52E, h101km±16km, mb4.2/9, Error ellipse: s-maj=11.8km s-min=9.3km az=91.0*
ISC 07 12:17:26.0±0.5**, 4°.69S**±0°.07×**152°.57E**±0°.09**, h58**km**, n67, σ1s.43**/75**, mb4.3**/23**, MS3.5**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.13**	**229**	ePn	Pn	12 19 10.8	+3.2
	41nm,0.8s						
PMG				eSn	**Sn**	**12 20 27.5**	**+0.2**
PMG				S		12 20 27.5	
PMG	**Port Moresby**	**7.13**	**229**	P	**Pn**	**12 19 10.4**	**+2.8**
	8.5nm,0.3s,baz=45,slow=11,SNR=26						
PMG				S	**Sn**	**12 20 27.5**	**+0.2**
	8.0nm,0.3s,baz=175,slow=20,SNR=5.2						
CTA	**Charters Tower**	**16.50**	**201**	P	**P**	**12 21 15.8**	**+0.3**
CTA	**Charters Tower**	**16.50**	**201**	P	**P**	**12 21 15.8**	**+0.3**
	0.2nm,0.3s,baz=34,slow=14,SNR=3.6						
CTA				LR	LR	12 26 59.3	
	comp=Z,87nm,19.1s,baz=50,slow=35						
GUMO	**Guam**	**19.70**	**337**	LR	LR	12 27 47.5	
	comp=Z,152nm,21.9s,baz=90,slow=31						
QIS	**Mount Isa**	**20.19**	**218**	P	Pn	12 22 01.6	+3.1
	baz=22,SNR=4.9						
KDU	**Kakadu**	**21.38**	**247**	P	**P**	**12 22 08.1**	**-0.8**
	baz=23,SNR=11						
DZM	**Mont Dzumac**	**21.90**	**143**	P	**P**	**12 22 15.6**	**+1.1**
DZM	**Mont Dzumac**	**21.90**	**143**	P	**P**	**12 22 15.6**	**+1.1**
	8.8nm,0.6s,baz=322,slow=12,SNR=10						
RMQ	**Roma**	**21.98**	**189**	P	**P**	**12 22 16.2**	**+1.0**
	baz=24,SNR=4.8						
MTN	**Manton Dam**	**22.66**	**248**	P	**P**	**12 22 24.3**	**+1.6**
	baz=24,SNR=7.8						
QLP	**Quilpie**	**23.19**	**199**	P	**P**	**12 22 28.2**	**+0.3**
	baz=25,SNR=7.8						
WRAB	**Tennant Creek**	**23.33**	**228**	eP	**P**	**12 22 28.4**	**-0.9**
	8.2nm,0.6s						
WRAB				ePcP	**PcP**	**12 26 14.4**	**-0.6**
WRA	**Warramunga Arr**	**23.35**	**228**	P	**P**	**12 22 28.5**	**-0.9**
WRA				S	**S**	**12 26 32.2**	**-5.9**
WRA				ScP	**ScP**	**12 29 48.2**	**-0.2**
WRA	**Warramunga Arr**	**23.35**	**228**	P	**P**	**12 22 28.5**	**-0.9**
	7.7nm,0.7s,baz=53,slow=10.0,SNR=72						
WRA				S	**S**	**12 26 32.2**	**-5.9**
	0.4nm,0.6s,baz=50,slow=17,SNR=2.5						
WRA				ScP	**ScP**	**12 29 48.2**	**-0.2**
	1.1nm,1.1s,baz=51,slow=3.1,SNR=4.7						
AS31	**Alice Springs**	**26.08**	**222**	eP	**P**	**12 22 54.0**	**-0.3**
ASAR	**Alice Springs**	**26.08**	**222**	P	**P**	**12 22 53.9**	**-0.5**
ASAR				pP	**pP**	**12 23 08.1**	**-0.6**
ASAR				S	**S**	**12 27 24.3**	**+2.6**
ASAR	**Alice Springs**	**26.08**	**222**	P	**P**	**12 22 53.9**	**-0.5**
	1.0nm,0.4s,baz=55,slow=9.3,SNR=42						
ASAR				pP	**pP**	**12 23 08.1**	**-0.6**
	4.3nm,0.7s,baz=52,slow=9.5,SNR=9.8						
ASAR				S	**S**	**12 27 24.3**	**+2.6**
	0.4nm,0.9s,baz=30,slow=17,SNR=3.3						
STKA	**Stephens Creek**	**28.94**	**200**	P	**P**	**12 23 18.4**	**-1.4**
STKA	**Stephens Creek**	**28.94**	**200**	P	**P**	**12 23 18.4**	**-1.4**
	3.2nm,0.6s,baz=355,slow=12,SNR=10						
STKA				LR	LR	12 35 43.0	
	comp=Z,105nm,18.7s,baz=25,slow=38						
STKA	**Stephens Creek**	**28.94**	**200**	P	**P**	**12 23 19.3**	**-0.5**
	baz=31,SNR=6.1						
FITZ	**Fitzroy Crossi**	**29.51**	**241**	eP	**P**	**12 23 23.9**	**-1.1**
	4.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**29.51**	**241**	P	**P**	**12 23 23.8**	**-1.3**
	1.6nm,0.3s,baz=49,slow=7.8,SNR=23						
FITZ				LR	LR	12 35 17.7	
	comp=Z,49nm,18.4s,baz=206,slow=36						
FITZ	**Fitzroy Crossi**	**29.51**	**241**	P	**P**	**12 23 23.9**	**-1.1**
	baz=31,SNR=18						
CBIJ	**Chichi jima**	**33.15**	**343**	LR	LR	12 35 49.5	
	comp=Z,93nm,18.7s,baz=110,slow=33						
AFI	**Afiamalu**	**36.31**	**107**	LR	LR	12 35 28.1	
	comp=Z,434nm,20.4s,baz=224,slow=30						
MEEK	**Meekatharra**	**39.09**	**232**	P	**P**	**12 24 46.9**	**-0.9**
	baz=41,SNR=21						
NIUE	**Niue**	**39.27**	**115**	S	S	12 30 36.8	-9.5
	baz=39,SNR=3.4						
URZ	**Urewera**	**40.20**	**150**	P	**P**	**12 24 56.4**	**-0.4**
URZ	**Urewera**	**40.20**	**150**	P	**P**	**12 24 56.4**	**-0.4**
	7.8nm,0.8s,baz=263,slow=3.9,SNR=4.4						
RPZ	**Rata Peaks**	**42.16**	**160**	P	**P**	**12 25 14.1**	**+1.3**
RPZ	**Rata Peaks**	**42.16**	**160**	P	**P**	**12 25 14.1**	**+1.3**
	8.4nm,0.8s,baz=270,slow=2.0,SNR=4.2						
MORW	**Morawa**	**42.24**	**231**	P	**P**	**12 25 14.1**	**+0.4**
	baz=44,SNR=3.9						
JNU	**Nakatsue**	**42.85**	**333**	P	**P**	**12 25 19.9**	**+1.3**
JNU	**Nakatsue**	**42.85**	**333**	P	**P**	**12 25 19.9**	**+1.3**
	16nm,0.8s,baz=66,slow=6.0,SNR=13						
MJAR	**Matsushiro Arr**	**43.16**	**343**	LR	LR	12 40 55.5	
	comp=Z,45nm,20.2s,baz=115,slow=33						
KSRS	**Korea Array**	**47.79**	**333**	P	**P**	**12 25 58.9**	**+1.3**
	1.1nm,0.7s,baz=147,slow=8.0,SNR=8.4						
KSAR	**Wonju Array Be**	**47.80**	**333**	P	**P**	**12 25 58.9**	**+1.2**
CMAR	**Chiang Mai Arr**	**57.62**	**295**	P	**P**	**12 27 11.5**	**+0.9**
CMAR	**Chiang Mai Arr**	**57.62**	**295**	P	**P**	**12 27 11.5**	**+0.9**
	1.5nm,0.7s,baz=119,slow=5.2,SNR=8.5						
PETK	**Petropavlovsk-**	**57.74**	**4**	P	**P**	**12 27 09.5**	**-1.3**
PETK	**Petropavlovsk-**	**57.74**	**4**	P	**P**	**12 27 09.5**	**-1.3**
	1.0nm,0.4s,baz=185,slow=11,SNR=4.8						
SONM	**Songino Array**	**66.11**	**328**	P	**P**	**12 28 08.7**	**+1.5**
SONM	**Songino Array**	**66.11**	**328**	P	**P**	**12 28 08.7**	**+1.5**
	0.3nm,0.5s,baz=150,slow=5.3,SNR=4.6						
PMR	**Palmer**	**79.68**	**24**	eP	**P**	**12 29 26.7**	**-0.4**
	2.5nm,0.6s						
MKAR	**Makanchi Array**	**80.09**	**319**	P	**P**	**12 29 30.3**	**+0.6**
MKAR	**Makanchi Array**	**80.09**	**319**	P	**P**	**12 29 30.3**	**+0.6**
	0.4nm,0.4s,baz=96,slow=7.6,SNR=9.8						
SML	**Sawmill**	**80.12**	**24**	eP	**P**	**12 29 29.7**	**+0.2**
	1.5nm,0.5s						
TRF	**Thorofare Moun**	**80.18**	**23**	eP	**P**	**12 29 28.5**	**-1.5**
	2.4nm,0.7s						
ZALV	**Zalesovo Beam**	**80.93**	**326**	P	**P**	**12 29 33.0**	**-1.0**
ZALV	**Zalesovo Beam**	**80.93**	**326**	P	**P**	**12 29 33.0**	**-1.0**
	2.6nm,0.6s,baz=116,slow=8.3,SNR=14						
BMRM	**Bremner River**	**81.31**	**26**	eP	**P**	**12 29 37.3**	**+1.4**
COLA	**College**	**81.83**	**22**	eP	**P**	**12 29 37.6**	**-0.9**
	5.4nm,0.9s						
PAX	**Paxson**	**81.84**	**24**	eP	**P**	**12 29 38.8**	**0.0**
	1.2nm,0.6s						
ILAR	**Eielson Array**	**82.14**	**22**	P	**P**	**12 29 38.6**	**-1.5**
ILAR	**Eielson Array**	**82.14**	**22**	P	**P**	**12 29 38.6**	**-1.5**
	3.1nm,0.7s,baz=245,slow=5.4,SNR=52						
MENT	**Mentasta**	**82.55**	**24**	eP	**P**	**12 29 42.8**	**+0.4**
EGAK	**Eagle**	**84.35**	**23**	eP	**P**	**12 29 51.9**	**+0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	3.1nm,0.6s						
YKA	Yellowknife Ar	95.43	28	P	P	12 30 44.0	0.0
YKA	Yellowknife Ar	95.43	28	P	P	12 30 44.0	0.0
	0.6nm,0.5s,baz=270,slow=4.8,SNR=18						
GERES	GERESS Array B	123.84	328	PKP	PKPdf	12 36 17.2	-0.5
GERES	GERESS Array B	123.84	328	PKP	PKPdf	12 36 17.2	-0.5
	0.8nm,0.4s,baz=29,slow=2.2,SNR=6.0						
TOA0	Torodi Ar. Sit	150.05	288	ePKPdf	PKPdf	12 37 05.9	-0.2
TOA0				ePKPbc	PKPbc	12 37 10.5	-0.7
TOA0				ePKPab	PKPab	12 37 17.3	+0.1
TORD	Torodi Ar. Bea	150.05	288	PKPbc	PKPbc	12 37 10.4	-0.8
TORD				PKPab	PKPab	12 37 16.2	-0.9
TORD	Torodi Ar. Bea	150.05	288	PKPbc	PKPbc	12 37 10.4	-0.8
	1.9nm,0.6s,baz=75,slow=2.2,SNR=34						
TORD				PKPab	PKPab	12 37 16.2	-0.9
	2.7nm,0.6s,baz=72,slow=3.6,SNR=13						
BDFB	Brasilia	151.31	135	PKPbc	PKPbc	12 37 14.5	+0.2
BDFB	Brasilia	151.31	135	PKPbc	PKPbc	12 37 14.5	+0.2
	3.1nm,0.6s,baz=192,slow=2.9,SNR=3.7						

IDC 07 12:21:25.6±45.0, 16.07°S×174.10°W, h0km, mb4.2/3, mb1 4.3/3, mb1mx3.6/19, mbtmp4.2/3, Error ellipse: s-maj=855.3km s-min=176.3km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.12	240	P	P	12 29 28.2	+0.2
	0.8nm,0.5s,baz=96,slow=9.2,SNR=4.4						
WRA	Warramunga Arr	49.04	257	P	P	12 30 14.5	-0.4
	0.6nm,0.5s,baz=94,slow=7.1,SNR=16						
ASAR	Alice Springs	49.27	252	P	P	12 30 16.4	-0.1
	5.3nm,0.6s,baz=88,slow=8.4,SNR=107						

*ISCJB **07** 12:29:27.4±0.2, 42.47°N±0.02°×13.38°E±0.03°, h10km±2km, mb3.4/6, Error ellipse: s-maj=3.1km s-min=2.6km az=168.3*
*CSEM **07** 12:29:27.8±0.1, 42.47°N×13.40°E, h2km, ML3.2/7, Error ellipse: s-maj=2.1km s-min=1.6km az=79.0*
*ROM **07** 12:29:27.4±0.1, 42.46°N×13.41°E, h9km, Ml3.4/9, Error ellipse: s-maj=1.1km s-min=0.8km az=90.0*
*IDC **07** 12:29:28.1±1.1, 42.58°N×13.53°E, h0km, mb3.3/5, mb1 3.4/8, mb1mx3.4/27, mbtmp3.3/8, ML3.4/3, Error ellipse: s-maj=29.7km s-min=14.0km az=95.0*
*LDG **07** 12:29:30.7±0.4, 42.46°N×13.34°E, h2km, Ml3.2/7, Error ellipse: s-maj=7.4km s-min=5.1km az=115.0*
ISC 07 12:29:28.5±0.8, 42.47°N±0.02°×13.38°E±0.02°, h8km±4km, n117, σ1s28/156, mb3.5/6, 5C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.07	15	Pg	Pg	12 29 30.3	-0.3
CAMP				Sg	Sg	12 29 32.1	-0.1
CAMP	Campotosto	0.07	15	Pg	Pg	12 29 30.3	-0.3
CAMP				Sg	Sg	12 29 32.1	-0.1
AQU	L'Aquila	0.11	173	Pg	Pg	12 29 30.7	-0.4
AQU				Sg	Sg	12 29 32.6	-0.4
AQU	L'Aquila	0.11	173	Pg	Pg	12 29 30.7	-0.4
AQU				Sg	Sg	12 29 32.6	-0.4
TERO	Teramo	0.23	46	⇑iPg	Pg	12 29 32.3	-0.7
TERO				Sg	Sg	12 29 35.7	-0.4
TERO	Teramo	0.23	46	⇑iPg	Pg	12 29 32.3	-0.7
TERO				Sg	Sg	12 29 35.7	-0.4
FAGN	Fagnano	0.25	144	Pg	Pg	12 29 32.7	-0.8
FAGN				Sg	Sg	12 29 36.6	-0.2
FAGN	Fagnano	0.25	144	Pg	Pg	12 29 32.7	-0.8
FAGN				Sg	Sg	12 29 36.6	-0.2
FIAM	Fiamignano	0.28	225	Pg	Pg	12 29 33.8	-0.3
FIAM				Sg	Sg	12 29 39.2	+1.4
FIAM	Fiamignano	0.28	225	Pg	Pg	12 29 33.8	-0.3
FIAM				Sg	Sg	12 29 39.2	+1.4
VCEL	Villa Celiera	0.35	102	Pg	Pg	12 29 34.5	-0.8
VCEL				Sg	Sg	12 29 40.5	+0.6
VCEL	Villa Celiera	0.35	102	Pg	Pg	12 29 34.5	-0.8
VCEL				Sg	Sg	12 29 40.5	+0.6
NRCA	Norcia	0.42	332	Pg	Pg	12 29 36.3	-0.3
NRCA	Norcia	0.42	332	Pg	Pg	12 29 36.3	-0.3
GAVE	Gavelli	0.43	302	Pg	Pg	12 29 36.7	-0.1
GAVE	Gavelli	0.43	302	Pg	Pg	12 29 36.7	-0.1
PTQR	Pietraquaria	0.45	178	Pg	Pg	12 29 36.1	-1.0
PTQR				Sg	Sg	12 29 42.9	-0.1
PTQR	Pietraquaria	0.45	178	Pg	Pg	12 29 36.1	-1.0
PTQR				Sg	Sg	12 29 42.9	-0.1
OFFI	Offida	0.52	25	Pg	Pg	12 29 38.6	+0.1
OFFI				Sg	Sg	12 29 46.1	+0.8
OFFI	Offida	0.52	25	Pg	Pg	12 29 38.6	+0.1
OFFI				Sg	Sg	12 29 46.1	+0.8
TRTR	Tortoreto Alta	0.52	49	Pg	Pg	12 29 38.7	+0.2
	17μm,0.8s						
TRTR	Tortoreto Alta	0.52	49	Pg	Pg	12 29 38.7	+0.2
	17μm,0.8s						
MNS	Montasola	0.53	261	⇑Pg	Pg	12 29 38.1	-0.6
	2μm,0.5s						
MNS	Montasola	0.53	261	⇑Pg	Pg	12 29 38.1	-0.6
	2μm,0.5s						
INTR	Introdacqua	0.60	140	Pg	Pg	12 29 38.6	-1.4
INTR				Sg	Sg	12 29 48.0	+0.2
INTR	Introdacqua	0.60	140	Pg	Pg	12 29 38.6	-1.4
INTR				Sg	Sg	12 29 48.0	+0.2
CERT	Cerreto	0.60	210	Pg	Pg	12 29 38.9	-1.1
CERT	Cerreto	0.60	210	Pg	Pg	12 29 38.9	-1.1
FDMO	Fiordimonte	0.61	339	Pg	Pg	12 29 39.5	-0.7
FDMO				Sg	Sg	12 29 49.0	+0.8
FDMO	Fiordimonte	0.61	339	Pg	Pg	12 29 39.5	-0.7
FDMO				Sg	Sg	12 29 49.0	+0.8
VVLD	Villa Vallelon	0.62	163	Pg	Pg	12 29 39.5	-1.0
	2μm,0.9s						
VVLD	Villa Vallelon	0.62	163	Pg	Pg	12 29 39.5	-1.0
	2μm,0.9s						
CESI	CESI - Serrava	0.64	327	Pg	Pg	12 29 40.3	-0.6
CESI				Sg	Sb	12 29 50.5	-0.6
	634nm,0.5s						
CESI	CESI - Serrava	0.64	327	Pg	Pg	12 29 40.3	-0.6
CESI				Sg	Sb	12 29 50.5	-0.6
	634nm,0.5s						
MTCE	Montecelio	0.65	227	Pg	Pg	12 29 40.0	-1.0
	3μm,1.3s						
MTCE	Montecelio	0.65	227	Pg	Pg	12 29 40.0	-1.0
	3μm,1.3s						
GUAR	Guarcino	0.67	185	Pg	Pg	12 29 41.0	-0.5
	1μm,0.5s						
GUAR	Guarcino	0.67	185	Pg	Pg	12 29 41.0	-0.5
	1μm,0.5s						
GUMA	Gualdo di Mace	0.72	34	Pg	Pg	12 29 39.8	-2.5
	5μm,0.7s						
GUMA	Gualdo di Mace	0.72	34	Pg	Pg	12 29 39.8	-2.5
	5μm,0.7s						
CAFR	Castel Frentan	0.75	108	Pg	Pg	12 29 41.7	-1.2
	2μm,0.5s						
CAFR	Castel Frentan	0.75	108	Pg	Pg	12 29 41.7	-1.2
	2μm,0.5s						
ASSB	Assisi San Ben	0.79	317	Pg	Pg	12 29 42.8	-0.8
ASSB	Assisi San Ben	0.79	317	Pg	Pg	12 29 42.8	-0.8
POFI	Posta Fibreno	0.79	162	Pg	Pg	12 29 42.3	-1.3
POFI	Posta Fibreno	0.79	162	Pg	Pg	12 29 42.3	-1.3
SDI	San Donato	0.82	157	Pg	Pg	12 29 42.9	-1.3
	220nm,0.2s						
SDI	San Donato	0.82	157	Pg	Pg	12 29 42.9	-1.3
	220nm,0.2s						
RMP	Rome, Mte Porz	0.83	218	Pg	Pg	12 29 43.8	-0.6
	1μm,0.4s						
RMP	Rome, Mte Porz	0.83	218	Pg	Pg	12 29 43.8	-0.6
	1μm,0.4s						
SNTG	Esanatoglia	0.85	338	Pg	Pg	12 29 43.7	-1.2
SNTG	Esanatoglia	0.85	338	Pg	Pg	12 29 43.7	-1.2
GIUL	Giuliano Di Ro	0.91	186	Pg	Pg	12 29 44.8	-1.2
GIUL	Giuliano Di Ro	0.91	186	Pg	Pg	12 29 44.8	-1.2
MGAB	Montegabbione	1.04	296	Pg	Pg	12 29 47.3	-1.1
MGAB	Montegabbione	1.04	296	Pg	Pg	12 29 47.3	-1.1
ARVD	Arcevia	1.08	343	Pg	Pg	12 29 47.9	-1.3
ARVD	Arcevia	1.08	343	Pg	Pg	12 29 47.9	-1.3
AOI	Ancona	1.09	8	Pg	Pg	12 29 48.2	-1.3
AOI	Ancona	1.09	8	Pg	Pg	12 29 48.2	-1.3
LATE	Laterza	1.18	278	Pg	Pb	12 29 50.2	-0.8
LATE	Laterza	1.18	278	Pg	Pb	12 29 50.2	-0.8
PIEI	Pieia	1.24	330	Pg	Pn	12 29 50.8	-1.3
PIEI	Pieia	1.24	330	Pg	Pn	12 29 50.8	-1.3
BADI	Badiali	1.34	322	Pg	Pn	12 29 53.2	-0.2
BADI	Badiali	1.34	322	Pg	Pn	12 29 53.2	-0.2
PARC	Parchiule	1.45	325	Pg	Pn	12 29 55.1	+0.1
PARC	Parchiule	1.45	325	Pg	Pn	12 29 55.1	+0.1
MS1	Monte Sant'Ang	2.05	111	ePn	Pb	12 30 05.9	0.0
NVLJ	Novalja	2.36	27	i Pn	Pn	12 30 07.4	-0.1
NVLJ				Sn	Sn	12 30 36.9	+0.4
NVLJ	Novalja	2.36	27	i Pn	Pn	12 30 07.3	-0.1
NVLJ				Sn	Sn	12 30 36.8	+0.4
MAIM	Mastiano	2.56	305	P	Pn	12 30 10.7	+0.5
SKDS	Skadanscina	3.11	8	i Pn	Pn	12 30 17.8	0.0
SKDS				i Sn	Sn	12 30 54.7	-0.5
SKDS							
	comp=Z,34nm,0.2s						
SKDS	Skadanscina	3.11	8	Pn	Pn	12 30 17.8	0.0
SKDS				i Sn	Sn	12 30 54.7	-0.5
	comp=Z,34nm,0.2s						
STON	Ston	3.21	81	ePn	Pn	12 30 19.3	+0.2
STON				Sn	Sn	12 30 57.0	-0.5
STON	Ston	3.21	81	ePn	Pn	12 30 19.3	+0.2
STON				Sn	Sn	12 30 56.9	-0.5
GBRS	Gornja Briga	3.23	18	i Pn	Pn	12 30 19.6	+0.1
PGF	Pioggiola	3.24	273	ePn	Pn	12 30 20.2	+0.5
PGF				eSn	Sn	12 31 00.3	+1.8
	comp=Z,13nm,0.6s						
PGF	Pioggiola	3.24	273	ePn	Pn	12 30 20.2	+0.5
PGF				eSn	Sn	12 31 00.3	+1.8
	comp=Z,6.3nm,0.6s						
JAVS	Javornik	3.46	8	i Pn	Pn	12 30 22.5	-0.1
JAVS	Javornik	3.46	8	i Pn	Pn	12 30 22.5	-0.1
VOJS	Vojsko	3.58	6	i Pn	Pn	12 30 24.1	-0.2
VOJS	Vojsko	3.58	6	i Pn	Pn	12 30 24.1	-0.2
VOY	Vojsko	3.58	6	eSn	Sn	12 31 07.6	+0.7
OBKA	Obir	4.13	11	⇑iPn	Pn	12 30 32.4	+0.6
OBKA	Obir	4.13	11	Pn	Pn	12 30 32.4	+0.6
SBF	Sospel	4.57	290	ePn	Pn	12 30 38.4	+0.5
SBF				eSn	Sn	12 31 28.6	-2.6
	comp=Z,8.4nm,0.4s						
SBF	Sospel	4.57	290	ePn	Pn	12 30 38.4	+0.5
SBF				eSn	Sn	12 31 28.6	-2.6
	comp=Z,4.2nm,0.4s						
FETA	Feichten	4.93	338	⇓iPn	Pn	12 30 44.5	+1.6
	SNR=8.2						
FETA	Feichten	4.93	338	Pn	Pn	12 30 44.5	+1.6
	SNR=8.2						
DAVOX	Davos/Dischmat	4.99	331	Pn	Pn	12 30 45.7	+2.0
	comp=Z,2.2nm,0.3s,baz=151,slow=19,SNR=13						
DAVOX				Sn	Sn	12 31 44.9	+3.4
	comp=Z,0.7nm,0.3s,baz=126,slow=19,SNR=2.6						
FRF	La Foret Royal	5.06	285	ePn	Pn	12 30 45.3	+0.8
FRF				eSn	Sn	12 31 39.6	-3.5
	comp=Z,7.0nm,0.5s						
FRF	La Foret Royal	5.06	285	ePn	Pn	12 30 45.3	+0.8
FRF				eSn	Sn	12 31 39.6	-3.5
	comp=Z,3.5nm,0.5s						
LMR	La Mourre	5.12	282	ePn	Pn	12 30 45.8	+0.4
LMR				eSn	Sn	12 31 41.7	-3.0
	comp=Z,3.1nm,0.4s						
LMR	La Mourre	5.12	282	ePn	Pn	12 30 45.8	+0.4
LMR				eSn	Sn	12 31 41.7	-3.0
	comp=Z,1.5nm,0.4s						
MBDF	Montbardon	5.31	297	eP	Pn	12 30 50.0	+1.9
MBDF	Montbardon	5.31	297	eP	Pn	12 30 50.0	+1.9
MOA	Molln	5.42	6	⇓iPn	Pn	12 30 49.6	+0.1
MOA	Molln	5.42	6	Pn	Pn	12 30 49.6	+0.1
GERES	GERESS Array B	6.38	2	Pn	Pn	12 31 02.6	-0.2
	comp=Z,0.5nm,0.3s,baz=174,slow=13,SNR=9.2						
GERES				Sn	Sn	12 32 12.7	-3.2
	comp=Z,1.3nm,0.3s,baz=182,slow=21,SNR=5.6						
GERES				Lg	Lg	12 32 54.5	
	baz=169,slow=27,SNR=2.2						
KHC	Kasperske Hory	6.67	1	ePN	Pn	12 31 06.8	+0.2
KHC				ex	x	12 31 18.0	
KHC				eSN	Sn	12 32 20.1	-2.6
KHC	Kasperske Hory	6.67	1	Pn	Pn	12 31 06.8	+0.2
HINF	Hinteralfeld	7.06	321	ePn	Pn	12 31 12.7	+0.6
HINF				eSn	Sn	12 32 29.1	-3.5
	comp=Z,9.6nm,0.6s						
HINF	Hinteralfeld	7.06	321	ePn	Pn	12 31 12.7	+0.6
CDF	Champ du Feu	7.33	326	ePn	Pn	12 31 15.9	+0.1
CDF				eSn	Sn	12 32 35.9	-3.3
	comp=Z,6.6nm,0.5s						
CDF	Champ du Feu	7.33	326	ePn	Pn	12 31 15.9	+0.1
KEST	Kesra	7.42	206	Pn	Pn	12 31 21.2	+4.1
	comp=Z,0.4nm,0.3s,baz=302,slow=2.2,SNR=8.3						
HAU	Haudompre	7.44	321	ePn	Pn	12 31 17.5	+0.3
HAU				eSn	Sn	12 32 36.8	-4.9
	comp=Z,8.5nm,0.3s						
HAU	Haudompre	7.44	321	ePn	Pn	12 31 17.5	+0.3
MLR	Muntele Rosu	9.55	67	Pn	Pn	12 31 51.0	+4.8
	comp=Z,0.1nm,0.3s,baz=130,slow=23,SNR=3.2						
FINES	FINESS Array B	20.48	18	P	Pn	12 34 09.7	+1.2
	comp=Z,1.4nm,0.7s,baz=201,slow=10,SNR=4.3						
KBZ	Khabaz	21.54	77	P	P	12 34 21.6	+3.6
	comp=Z,4.8nm,0.8s,baz=286,slow=8.0,SNR=7.8						
TORD	Torodi Ar. Bea	30.92	203	P	P	12 35 46.6	+0.9
	comp=Z,0.2nm,0.5s,baz=26,slow=8.9,SNR=3.0						
ZALV	Zalesovo Beam	47.01	50	P	P	12 37 59.3	-0.6
	comp=Z,0.3nm,0.3s,baz=274,slow=3.8,SNR=2.7						
MKAR	Makanchi Array	47.80	60	P	P	12 38 06.1	-0.1
	comp=Z,0.3nm,0.7s,baz=274,slow=6.7,SNR=3.9						
SONM	Songino Array	61.91	50	P	P	12 39 49.0	+0.6
	comp=Z,0.1nm,0.4s,baz=283,slow=7.7,SNR=3.7						
YKA	Yellowknife Ar	67.40	337	P	P	12 40 24.4	+0.7
	comp=Z,0.1nm,0.7s,baz=41,slow=5.5,SNR=3.2						

MEX 07 12:33:40.4±1.0, 17.17°N×94.37°W, h178km±14km, MD3.9, Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGIG		1.25	108	i P	Pn	12 34 09.0	-1.0
TGIG				i S	Sn	12 34 30.3	-2.6
HUIG	Huatulco	2.18	230	i P	Pn	12 34 17.8	-1.6
HUIG				i S	Sn	12 34 47.7	-1.8
VHO	Vista Hermosa	2.27	268	eP	Pn	12 34 20.1	-0.4
VHO				i S	Sn	12 34 50.1	-1.6
CCIG	Comitan	2.31	112	i P	Pn	12 34 20.0	-1.1
CCIG				i S	Sn	12 34 51.1	-1.5
TPIG	Tehuac#an	3.11	294	i P	Pn	12 34 30.3	-0.3
TPIG				i S	Sn	12 35 07.0	-2.7
PNIG	Pinotepa	3.69	258	i P	Pn	12 34 35.7	-1.8
PNIG				i S	Sn	12 35 19.2	-2.9

*CSEM **07** 12:42:07.1±0.1, 42.30°N×13.38°E, h10km, ML3.5/8, Error ellipse: s-maj=2.6km s-min=2.0km az=76.0*
*ROM **07** 12:42:07.0±0.1, 42.29°N×13.39°E, h10km±1km, Md2.9/27, Ml3.1/27, Error ellipse: s-maj=1.2km s-min=1.0km az=75.0*
ISC 07 12:42:06.6±0.8, 42.29°N±0.02°×13.40°E±0.02°, h15km±5km, n70, σ0s78/95, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	4	Pg	Pg	12 42 09.7	+0.2
AQU				Sg	Sg	12 42 11.6	+0.1
AQU	L'Aquila	0.06	4	Pg	Pg	12 42 09.7	+0.2
AQU				Sg	Sg	12 42 11.6	+0.1
FAGN	Fagnano	0.14	101	Pg	Pb	12 42 10.8	-0.2
FAGN				Sg	Sb	12 42 13.6	-0.3
	12μm,0.4s						
FAGN	Fagnano	0.14	101	Pg	Pb	12 42 10.8	-0.2
FAGN				Sg	Sb	12 42 13.6	-0.3
	12μm,0.4s						
FIAM	Fiamignano	0.21	263	Pg	Pb	12 42 11.9	-0.3
FIAM				Sg	Sb	12 42 15.6	-0.3
	4μm,0.8s						
FIAM	Fiamignano	0.21	263	Pg	Pb	12 42 11.9	-0.3
FIAM				Sg	Sb	12 42 15.6	-0.3
	4μm,0.8s						
CAMP	Campotosto	0.24	2	Pg	Pb	12 42 12.2	-0.6
CAMP				Sg	Sb	12 42 17.6	+0.6
	3μm,0.4s						
CAMP	Campotosto	0.24	2	Pg	Pb	12 42 12.2	-0.6
PTQR	Pietraquaria	0.27	179	Pg	Pb	12 42 13.0	-0.2
PTQR				Sg	Sb	12 42 17.4	-0.3
PTQR	Pietraquaria	0.27	179	Pg	Pb	12 42 13.0	-0.2
PTQR				Sg	Sb	12 42 17.4	-0.3
VCEL	Villa Celiera	0.34	73	Pg	Pb	12 42 14.9	+0.4
VCEL				Sg	Sb	12 42 20.9	+1.1
	4μm,0.4s						
VCEL	Villa Celiera	0.34	73	Pg	Pb	12 42 14.9	+0.4
VCEL				Sg	Sb	12 42 20.9	+1.1
	4μm,0.4s						
TERO	Teramo	0.36	25	Pg	Pb	12 42 14.3	-0.5
TERO				Sg	Sb	12 42 20.8	+0.4
	3μm,0.6s						
TERO	Teramo	0.36	25	Pg	Pb	12 42 14.3	-0.5
TERO				Sg	Sb	12 42 20.8	+0.4
	3μm,0.6s						
VVLD	Villa Vallelon	0.45	158	Pg	Pb	12 42 15.8	-0.5
VVLD				Sg	Sb	12 42 23.9	+1.0
	2μm,0.7s						
VVLD	Villa Vallelon	0.45	158	Pg	Pb	12 42 15.8	-0.5
VVLD				Sg	Sb	12 42 23.9	+1.0
	2μm,0.7s						
CERT	Cerreto	0.46	222	Pg	Pb	12 42 16.1	-0.3
CERT				Sg	Sb	12 42 23.7	+0.6
	2μm,0.6s						
CERT	Cerreto	0.46	222	Pg	Pb	12 42 16.1	-0.3
CERT				Sg	Sb	12 42 23.7	+0.6
	2μm,0.6s						
INTR	Introdacqua	0.47	126	Pg	Pb	12 42 16.1	-0.5
INTR				Sg	Sb	12 42 23.5	+0.1
	2μm,0.8s						
INTR	Introdacqua	0.47	126	Pg	Pb	12 42 16.1	-0.5
INTR				Sg	Sb	12 42 23.5	+0.1
	2μm,0.8s						
GUAR	Guarcino	0.50	187	Pg	Pn	12 42 17.6	-1.7
GUAR				Sg	Sb	12 42 25.3	+1.0
	751nm,0.5s						
GUAR	Guarcino	0.50	187	Pg	Pn	12 42 17.6	-1.7
GUAR				Sg	Sb	12 42 25.3	+1.0
	751nm,0.5s						
MNS	Montasola	0.54	280	Pg	Pb	12 42 17.2	-0.6
	835nm,0.6s						
MNS	Montasola	0.54	280	Pg	Pb	12 42 17.2	-0.6
	835nm,0.6s						
MTCE	Montecelio	0.56	241	Pg	Pb	12 42 17.8	-0.2
	755nm,0.4s						
MTCE	Montecelio	0.56	241	Pg	Pb	12 42 17.8	-0.2
	755nm,0.4s						
NRCA	Norcia	0.58	339	Pg	Pb	12 42 18.1	-0.4
NRCA	Norcia	0.58	339	Pg	Pb	12 42 18.1	-0.4
POFI	Posta Fibreno	0.62	158	Pg	Pb	12 42 19.1	-0.1
	412nm,0.5s						
POFI	Posta Fibreno	0.62	158	Pg	Pb	12 42 19.1	-0.1
	412nm,0.5s						
TRTR	Tortoreto Alta	0.64	36	Pg	Pn	12 42 20.5	-0.7
	2μm,0.6s						
TRTR	Tortoreto Alta	0.64	36	Pg	Pn	12 42 20.5	-0.7
	2μm,0.6s						
SDI	San Donato	0.66	152	Pg	Pb	12 42 19.4	-0.4
	383nm,0.4s						
SDI	San Donato	0.66	152	Pg	Pb	12 42 19.4	-0.4
	383nm,0.4s						
OFFI	Offida	0.68	18	Pg	Pn	12 42 20.6	-1.1
	4μm,1.0s						
OFFI	Offida	0.68	18	Pg	Pn	12 42 20.6	-1.1
	4μm,1.0s						
RMP	Rome, Mte Porz	0.71	227	Pg	Pn	12 42 21.2	-0.9
	701nm,0.5s						
RMP	Rome, Mte Porz	0.71	227	Pg	Pn	12 42 21.2	-0.9
	701nm,0.5s						
CAFR	Castel Frentan	0.71	95	Pg	Pn	12 42 21.1	-1.0
	2μm,0.4s						
CAFR	Castel Frentan	0.71	95	Pg	Pn	12 42 21.1	-1.0
	2μm,0.4s						
GIUL	Giuliano Di Ro	0.74	188	Pg	Pn	12 42 21.7	-0.9
	397nm,0.5s						
GIUL	Giuliano Di Ro	0.74	188	Pg	Pn	12 42 21.7	-0.9
	397nm,0.5s						
FDMO	Fiordimonte	0.78	343	Pg	Pb	12 42 21.5	-0.3
	472nm,0.4s						
FDMO	Fiordimonte	0.78	343	Pg	Pb	12 42 21.5	-0.3
	472nm,0.4s						
CESI	CESI - Serrava	0.80	333	Pg	Pb	12 42 22.0	-0.2
	291nm,0.9s						
CESI	CESI - Serrava	0.80	333	Pg	Pb	12 42 22.0	-0.2
	291nm,0.9s						
RNI2	Rionero Sannit	0.82	136	Pg	Pn	12 42 22.9	-0.7
	785nm,0.7s						
RNI2	Rionero Sannit	0.82	136	Pg	Pn	12 42 22.9	-0.7
	785nm,0.7s						
CERA	Filignano	0.83	146	Pg	Pb	12 42 22.3	-0.5
	650nm,1.0s						
CERA	Filignano	0.83	146	Pg	Pb	12 42 22.3	-0.5
	650nm,1.0s						
MIDA	Miranda	0.91	135	Pg	Pg	12 42 23.6	-0.6
	460nm,0.9s						
MIDA	Miranda	0.91	135	Pg	Pg	12 42 23.6	-0.6
	460nm,0.9s						
ASSB	Assisi San Ben	0.93	324	Pg	Pn	12 42 24.8	-0.3
	267nm,0.5s						
ASSB	Assisi San Ben	0.93	324	Pg	Pn	12 42 24.8	-0.3
	267nm,0.5s						
SNTG	Esanatoglia	1.02	341	Pg	Pn	12 42 26.0	-0.4
	107nm,0.3s						
SNTG	Esanatoglia	1.02	341	Pg	Pn	12 42 26.0	-0.4
	107nm,0.3s						
TOLF	Tolfa	1.06	258	Pg	Pg	12 42 28.0	+0.9
	308nm,0.6s						
TOLF	Tolfa	1.06	258	Pg	Pg	12 42 28.0	+0.9
	308nm,0.6s						
CING	Cingoli	1.09	352	Pg	Pg	12 42 27.3	-0.4
	316nm,0.4s						
CING	Cingoli	1.09	352	Pg	Pg	12 42 27.3	-0.4
	316nm,0.4s						
MURB	Monte Urbino	1.16	327	Pg	Pg	12 42 29.2	+0.2
	1μm,0.7s						
MURB	Monte Urbino	1.16	327	Pg	Pg	12 42 29.2	+0.2
	1μm,0.7s						
ARVD	Arcevia	1.25	345	Pg	Pg	12 42 30.1	-0.5
	467nm,0.9s						
ARVD	Arcevia	1.25	345	Pg	Pg	12 42 30.1	-0.5
	467nm,0.9s						
MS1	Monte Sant'Ang	1.99	106	ePn	Pg	12 42 45.0	+0.3
CDT	Castel del Mon	2.47	118	ePn	Pb	12 42 49.5	-1.2
NVLJ	Novalja	2.51	25	ePn	Pb	12 42 49.0	-2.3
NVLJ				Sn	Sn	12 43 18.4	+1.1
NVLJ	Novalja	2.51	25	ePn	Pb	12 42 49.0	-2.3
NVLJ				Sn	Sn	12 43 18.3	+1.1
STON	Ston	3.23	78	ePn	Pn	12 42 58.6	+1.9
STON				Sn	Sn	12 43 35.6	+0.7
STON	Ston	3.23	78	ePn	Pn	12 42 58.6	+1.9
STON				Sn	Sn	12 43 35.6	+0.7

KRSC 07 12:45:09.9±1.1, 55.59°N×160.45°E, h180km±20km, ML3.6, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMNR	Kamenistaya	0.21	324	eP	Pn	12 45 34.9	+1.0
BZMR	Bezymyannaya	0.35	4	eP	Pn	12 45 35.1	+0.8
TUMR	Tumrok	0.35	210	i P	Pn	12 45 35.9	+1.6
TUMR				S	Sn	12 45 55.0	+2.0
BZWR	Bezymyannyi-We	0.38	4	eP	Pn	12 45 35.3	+0.9
BZWR				S	Sn	12 45 53.7	+0.3
BZGR	Bezymyannyi-Gr	0.38	22	i P	Pn	12 45 35.7	+1.4
KPT	Kopyto	0.40	341	i P	Pn	12 45 35.1	+0.7
KPT				eS	Sn	12 45 53.5	+0.1
ZLN	Zelenaya	0.47	25	i P	Pn	12 45 36.2	+1.5
LGNR	Loginova	0.51	15	eP	Pn	12 45 36.3	+1.2
CIRR	Tsirk	0.55	18	eP	Pn	12 45 36.1	+1.0
KOZ	Kozyrevsk	0.57	325	i P	Pn	12 45 35.5	+0.5
KOZ				eS	Sn	12 45 54.0	-0.4
KRSR	Krestovskiy	0.63	6	eP	Pn	12 45 35.7	+0.3
KLY	Klyuchi	0.73	9	i P	Pn	12 45 36.6	+0.8
KLY				eS	Sn	12 45 56.0	+0.1
SRDR	Sredinnyy	0.84	331	eP	Pn	12 45 36.9	+0.4
SRDR				eS	Sn	12 45 56.6	-0.6
ESO	Esso	1.04	289	i P	Pn	12 45 38.0	+0.1
ESO				eS	Sn	12 45 58.5	-1.1
MKZ	Mys Kozlova	1.27	144	eP	Pn	12 45 40.5	+0.8
MKZ				eS	Sn	12 46 02.9	+0.2
KBTR	Krutoberegovo	1.47	64	i P	Pn	12 45 42.0	+0.5
KBTR				eS	Sn	12 46 05.6	-0.4
GNL	Ganaly	2.39	219	eP	Pn	12 45 52.8	+1.3
SDLR	Sedlovina	2.49	202	P	Pn	12 45 54.4	+1.8
SPN	Mys Shipunski	2.51	186	P	Pn	12 45 52.6	-0.1
SPN				eS	Sn	12 46 23.7	-2.2
SMAR	Somma	2.52	203	P	Pn	12 45 55.3	+2.2
PET	Petropavlovsk	2.78	203	S	Sn	12 46 32.9	+1.4
BKI	Bering	3.17	95	i P	Pn	12 46 02.1	+1.6
BKI				eS	Sn	12 46 40.2	+0.2
RUS	Russkaya	3.36	201	S	Sn	12 46 42.9	-1.4
MTVR	Mutnovka	3.39	204	S	Sn	12 46 46.8	+1.5

MEX 07 12:47:01.0±1.2, 17.33°N×97.34W, h26km±31km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	0.64	114	iP	Pb	12 47 10.8	-2.9
VHO				iS	Sb	12 47 20.5	-2.0
TPIG	Tehuac#an	1.08	359	iP	Pn	12 47 17.6	-3.2
TPIG				iS	Sn	12 47 32.0	-3.2
PNIG	Pinotepa	1.20	219	eP	Pn	12 47 18.9	-3.2
PNIG				iS	Sn	12 47 34.7	-3.0
HUIG	Huatulco	1.95	143	iP	Pn	12 47 30.9	-1.6
HUIG				iS	Sn	12 47 53.0	-3.2
PPM	Popocatepetl	2.12	325	iP	Pn	12 47 33.0	-2.5
PPM				iS	Sn	12 47 58.4	-3.0
YAIG	Yautepec	2.24	313	iP	Pn	12 47 34.0	-2.7
YAIG				iS	Sn	12 48 00.7	-2.9

IDC 07 12:52:27.6±4.6, 21°.00S×176°.21W, h0km, mb4.0/2, mb1 4.2/3, mb1mx3.7/20, mbtmp4.1/3, ML2.2/1, Error ellipse: s-maj=194.2km s-min=31.8km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.22	32	Pn	Pn	12 54 29.5	+1.2
	1.8nm,0.3s,baz=222,slow=14,SNR=2.5						
AFI				Sn	Sn	12 55 58.0	-4.0
	3.3nm,0.3s,baz=294,slow=20,SNR=3.5						
ASAR	Alice Springs	46.04	257	P	P	13 00 53.7	+0.3
	1.7nm,0.8s,baz=99,slow=8.0,SNR=18						
WRA	Warramunga Arr	46.20	262	P	P	13 00 54.6	0.0
	1.3nm,0.7s,baz=95,slow=8.4,SNR=12						
AKASG	Malin Array Be	144.25	332	PKP	PKPab	13 12 03.0	-0.2
	0.7nm,0.4s,baz=45,slow=3.8,SNR=4.9						
BRTR	Keskin Array B	148.41	313	PKPbc	PKPbc	13 12 15.5	-1.0
	0.5nm,0.8s,baz=143,slow=0.7,SNR=3.0						

*BJI **07** 13:29:43.6, 7°.20S×129°.69E, h75km, mB5.1/26, mb5.2/50, Ms4.7/24, Ms7 4.4/25*
*MOS **07** 13:29:51.8±1.0, 6°.91S×129°.38E, h115km, mb5.3/25, Error ellipse: s-maj=12.9km s-min=6.3km az=119.8*
*AUST **07** 13:29:52.6±0.1, 7°.11S×129°.40E, h110km, Error ellipse: s-maj=0.6km s-min=0.5km az=238.0*
*NEIC **07** 13:29:53.7±0.8, 7°.04S×129°.36E, h126km±7km, mb5.0/29, Error ellipse: s-maj=7.0km s-min=4.6km az=59.0*
*ISCJB **07** 13:29:54.0±0.4, 7°.07S±0°.02×129°.48E±0°.03, h143km±3km, mb5.0/81, Error ellipse: s-maj=4.6km s-min=3.7km az=147.3*
*IDC **07** 13:29:54.8±1.1, 6°.96S×129°.44E, h131km±8km, mb4.6/26, mb1 4.7/27, mb1mx4.7/28, mbtmp4.6/27, MS3.9/13, Ms1 3.9/13, ms1mx3.5/33, Error ellipse: s-maj=13.5km s-min=8.4km az=66.0*
*GCMT **07** 13:29:55.5±0.3, 7°.11S×129°.40E, h134km±3km, MW5.1, Moment Tensor Solution. s17,c22; s74,c125; Moment tensor: Scale 10^{16}Nm; M_{rr}2.90±.18; $M_{\theta\theta}$-5.61±.18; $M_{\phi\phi}$2.71±.20; $M_{r\theta}$0.48±.15; $M_{\theta\phi}$-0.09±.16; $M_{\phi r}$2.47±.14; Best double couple: $M_0$5.50000×10^{16} NP1:ϕ_s304.00000°, δ56.00000°, λ146.00000°. NP2:ϕ_s55.00000°, δ62.00000°, λ39.00000°. Principal axes: T 5.2800, Plg46.0000°, Azm272.0000°; N 0.3600, Plg44.0000°, Azm85.0000°; P -5.6400, Plg4.0000°, Azm178.0000°; Data Used: II IC IU G.*
*DJA **07** 13:29:55.3±0.3, 7°S±3°×13°0E±°, h71km±17km, M5.3/21, mB5.7/19, mb5.4/21, MLv5.5/6, Mw(mB)5.2/19*
ISC 07 13:29:53.1±0.5, 7°.10S±0°.03×129°.43E±0°.04, h120km±3km, n714, σ1"23/802, mb5.1/81, 177C-148D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.60	11	P	Pn	13 30 35.6	+1.3
TLE	Tual	3.60	66	P	Pn	13 30 49.6	+2.3
TLE				S	Sn	13 31 29.8	+0.6
TLE	Tual	3.60	66	P	Pn	13 30 49.8	+2.4
	baz=3.6,SNR=683						
TLE				S	Sn	13 31 31.4	+2.2
	baz=3.6,SNR=8.3						
AAI	Ambon	3.61	340	P	Pn	13 30 49.6	+2.1
AAI	Ambon	3.61	340	P	Pn	13 30 49.9	+2.4
	baz=3.6,SNR=24						
MSAI	Masohi	3.76	352	P	Pn	13 30 52.3	+2.7
FAKI	Fak Fak	5.01	34	P	Pn	13 31 05.7	-0.6
FAKI				S	Sn	13 31 59.5	-3.8
MTN	Manton Dam	5.95	164	P	Pn	13 31 19.1	+0.1
	baz=6.0,SNR=558						
MTN				S	Sn	13 32 23.1	-2.8
	baz=6.0,SNR=4.7						
KDU	Kakadu	6.31	152	P	Pn	13 31 23.6	-0.2
	baz=6.3,SNR=949						
SWI	Sorong	6.46	17	P	Pn	13 31 25.5	-0.3
	602nm,0.9s,20µm						
SWI	Sorong	6.46	17	P	Pn	13 31 25.6	-0.3
	baz=6.5,SNR=81						
SWI				S	Sn	13 32 35.0	-3.2
	baz=6.5,SNR=11						
LBMI	Labuha	6.70	343	P	Pn	13 31 32.4	+3.3
	1µm,0.9s,9µm						
BBSI	Bau Bau	7.00	283	P	Pn	13 31 37.5	+4.3
	1µm,1.2s,14µm						
MMRI	Maumere	7.29	257	P	Pn	13 31 38.1	+1.1
	366nm,1.2s,4µm						
KDI	Kendari	7.46	294	P	Pn	13 31 42.0	+2.6
	166nm,1.1s,2µm						
TNTI	Ternate	8.09	345	P	Pn	13 31 49.3	+1.5
	370nm,0.8s,3µm						
BAKI	Biak	8.88	49	P	Pn	13 31 59.4	+0.9
	2µm,1.0s,13µm						
LUWI	Luwuk	8.96	312	P	Pn	13 32 05.3	+5.7
	150nm,1.0s,1µm						
KMSI	Cibinong	9.36	324	P	Pn	13 32 08.1	+3.0
	375nm,1.0s,6µm						
WSI	Waingapu	9.39	254	P	Pn	13 32 05.0	-0.4
	2µm,1.0s,14µm						
WSI	Waingapu	9.39	254	P	Pn	13 32 05.3	-0.1
	baz=9.4,SNR=8.9						
WSI				S	Sn	13 33 45.5	-3.8
	baz=9.4,SNR=5.2						
BKSI	Bulukumba	9.42	280	P	Pn	13 32 08.1	+2.3
	186nm,1.3s,3µm						
MNI	Manado	9.64	331	P	Pn	13 32 11.8	+2.9
	1µm,1.2s,11µm						
BNSI	Bone	9.65	286	P	Pn	13 32 12.2	+3.2
	143nm,1.5s,2µm						
WAMI	Wamena	9.78	71	P	Pn	13 32 13.2	+2.5
	379nm,0.7s,4µm						
KAPI	Kappang	9.84	282	eP	Pn	13 32 12.5	+0.9
	166nm,1.2s						
KAPI				P		13 32 12.9	
KAPI				S	Sn	13 34 06.0	+5.7
KAPI	Kappang	9.84	282	Pn	Pn	13 32 14.1	+2.5
	SNR=11						
KAPI	Kappang	9.84	282	Pn	Pn	13 32 13.9	+2.3
	634nm,1.3s,SNR=10						
KAPI	Kappang	9.84	282	P	Pn	13 32 13.6	+2.0
	119nm,1.3s,2µm						
KAPI	Kappang	9.84	282	P	Pn	13 32 12.9	+1.4
	1.1nm,0.3s,baz=110,slow=7.1,SNR=22						
KAPI				S	Sn	13 34 06.0	+5.7
	0.7nm,0.3s,baz=162,slow=19,SNR=2.1						
KAPI				LR	LR	13 35 54.6	
	comp=Z,382nm,20.1s,baz=106,slow=37						
SPSI	Sidrap Palu	10.11	287	P	Pn	13 32 16.2	+1.1
	84nm,1.1s,1µm						
MRSI	Marisa	10.60	315	P	Pn	13 32 24.9	+3.0
	118nm,1.3s,1µm						
MMPI	Merauke	10.94	98	P	Pn	13 32 26.4	+0.1
	baz=11,SNR=4.6						
MMPI				S	Sn	13 34 20.2	-6.7
	baz=11,SNR=14						
PCI	Palu	11.37	302	S	Sn	13 34 50.4	+13
	baz=11,SNR=5.7						
FITZ	Fitzroy Crossi	11.54	198	eP	Pn	13 32 31.1	-3.2
FITZ				P	P	13 32 31.4	-12
FITZ				eS	Sn	13 34 31.8	-10
FITZ	Fitzroy Crossi	11.54	198	P	Pn	13 32 31.4	-3.0
	24nm,0.3s,baz=25,slow=12,SNR=558						
FITZ				S	Sn	13 34 31.7	-10
	19nm,0.3s,baz=137,slow=23,SNR=8.2						
FITZ				LR	LR	13 37 28.9	
	comp=Z,359nm,21.2s,baz=13,slow=39						
FITZ	Fitzroy Crossi	11.54	198	P	Pn	13 32 31.1	-3.2
	baz=12,SNR=238						
FITZ				S	Sn	13 34 34.9	-6.6
	baz=12,SNR=4.3						
JAY	Jayapura	12.12	68	P	P	13 32 46.4	-3.3
	63nm,0.9s						
JAY	Jayapura	12.12	68	P	Pn	13 32 42.8	+0.7
	baz=12,SNR=6.7						
JAY				S	Sn	13 34 57.4	+1.7
	baz=12,SNR=4.1						
WRAB	Tennant Creek	13.62	160	eP	Pn	13 32 57.8	-3.8
WRAB				pmax	pmax		
	comp=Z,341nm,1.0s						
WRAB	Tennant Creek	13.62	160	eP	Pn	13 32 57.8	-3.8
	comp=Z,341nm,1.0s						
WRAB				eS	Sn	13 35 20.7	-11
WRAB	Tennant Creek	13.62	160	Pn	Pn	13 32 58.0	-3.5
	comp=Z,2µm,1.2s						
WRA	Warramunga Arr	13.63	160	P	Pn	13 32 57.9	-3.7
WRA				S	Sn	13 35 20.7	-11
WRA				ScP	ScP	13 41 38.3	-2.4
WRA				e		14 08 56.8	
WRA	Warramunga Arr	13.63	160	P	Pn	13 32 57.9	-3.7
	comp=Z,21nm,0.3s,baz=340,slow=12,SNR=212						
WRA				S	Sn	13 35 20.7	-11
	comp=Z,4.6nm,0.3s,baz=332,slow=22,SNR=5.3						
WRA				LR	LR	13 38 55.1	
	comp=Z,1µm,18.5s,baz=340,slow=39						
WRA				ScP	ScP	13 41 38.3	-2.4
	comp=Z,1.0nm,0.3s,baz=321,slow=2.3,SNR=7.2						
WRA				P3KPbc		14 08 56.8	
	baz=157,slow=3.9,SNR=6.1						
KBKI	Kotabaru	13.73	285	P	P	13 33 05.5	-2.0
	comp=Z,120nm,1.2s,comp=Z,2µm						
KHKI	Kahang-Kahang	13.75	264	P	P	13 33 09.0	+1.3
DMPH	Davao City--Mi	14.62	344	eP	P	13 33 17.4	0.0
COEN	Coen	15.13	118	eP	Pn	13 33 17.6	-3.1
	comp=Z,1µm,1.0s						
COEN	Coen	15.13	118	P	Pn	13 33 19.1	-1.7
	baz=15,SNR=20						
COEN				S	Sn	13 35 53.1	-15
	baz=15,SNR=6.5						
CTBH	Cotabato--PC H	15.14	340⇓	iP	Pn	13 33 21.0	+0.2
PALU	Palau	15.21	19	P	P	13 33 23.1	-0.8
	baz=15,SNR=7.1						
BUKP	Musuan	15.50	344	eP	P	13 33 26.6	-0.6
BUKP				eS	sP	13 33 56.8	-7.0
MYLDM	Lahad Datu	16.36	318	P	P	13 33 40.3	+3.6
QIS	Mount Isa	16.62	145	P	Pn	13 33 39.0	-0.1
	baz=17,SNR=14						
QIS				S	Sn	13 36 30.1	-14
	baz=17,SNR=18						
MBWA	Marble Bar	16.83	213	eP	Pn	13 33 39.5	-2.2
	comp=Z,53nm,0.9s						
AS31	Alice Springs	17.02	166	eP	P	13 33 43.0	-1.0
ASAR	Alice Springs	17.02	166	P	P	13 33 42.5	-1.5
ASAR				S	Sn	13 36 40.0	-14
ASAR				ScP	ScP	13 41 45.3	-1.7
ASAR				e		14 08 42.2	
ASAR	Alice Springs	17.02	166	P	P	13 33 42.5	-1.5
	comp=Z,17nm,0.3s,baz=341,slow=12,SNR=624						
ASAR				S	Sn	13 36 40.0	-14
	comp=Z,3.7nm,0.3s,baz=323,slow=20,SNR=6.3						
ASAR				LR	LR	13 40 48.2	
	comp=Z,492nm,21.9s,baz=338,slow=38						
ASAR				ScP	ScP	13 41 45.3	-1.7
	comp=Z,1.3nm,0.3s,baz=351,slow=2.0,SNR=9.1						
ASAR				P3KPbc		14 08 42.2	
	comp=Z,0.1nm,0.3s,baz=170,slow=4.4,SNR=10						
PMG	Port Moresby	17.70	99	eP	Pn	13 33 54.2	+2.0
	comp=Z,111nm,0.9s						
PMG				P	Pn	13 33 55.3	+3.1
PMG				S	S	13 36 58.2	-11
PMG	Port Moresby	17.70	99	P	Pn	13 33 55.3	+3.1
	comp=Z,9.4nm,0.3s,baz=28,slow=2.2,SNR=27						
PMG				S	S	13 36 58.2	-11
	comp=Z,2.4nm,0.3s,baz=20,slow=23,SNR=9.4						
KKM	Kota Kinabalu	18.55	314	P	Pn	13 34 02.5	0.0
KKM	Kota Kinabalu	18.55	314	P	Pn	13 34 02.4	-0.2
	baz=19,SNR=11						
KDM	Kudat	18.75	318	P	Pn	13 34 05.2	+0.4
UGM	Wanagama	18.76	266	P	P	13 34 03.3	+0.1
	baz=19,SNR=6.6						
UGM				S	Sn	13 37 34.5	-1.1
	baz=19,SNR=3.0						
GUIM	Jordan	18.88	339	eP	Pn	13 34 05.5	-0.7
BTM	Bintulu	19.26	302	P	Pn	13 34 11.1	+0.4
CUYO	Cuyo Island	19.70	335	eP	Pn	13 34 14.8	-1.1
OTRP	Odiongan	20.69	339	eP	Pn	13 34 26.8	-0.6
CTA	Charters Tower	20.81	130	P	P	13 34 26.8	+1.5
CTA				S	S	13 38 13.3	+2.4
CTA	Charters Tower	20.81	130	P	P	13 34 26.8	+1.5
	comp=Z,16nm,0.6s,baz=302,slow=13,SNR=22						
CTA				S	S	13 38 13.3	+2.4
	comp=Z,9.1nm,0.8s,baz=270,slow=20,SNR=4.1						
CTA				LR	LR	13 43 49.0	
	comp=Z,317nm,18.4s,baz=311,slow=40						
CTAO	Charters Tower	20.81	130	eP	P	13 34 26.7	+1.5
CTAO				pmax	pmax		
	comp=Z,37nm,0.9s						
CTAO	Charters Tower	20.81	130	eP	P	13 34 26.7	+1.5
	comp=Z,37nm,0.9s						
KSM	Kuching	20.89	293	P	P	13 34 25.8	-0.4
KSM	Kuching	20.89	293	P	P	13 34 25.7	-0.4
	baz=21,SNR=26						
SJMP	San Jose	21.11	337	eP	P	13 34 32.0	+3.5
GIRL	Giralia	21.28	222	P	P	13 34 32.8	+2.6
	baz=21,SNR=5.6						
LEM	Lembang	21.65	269	P	P	13 34 33.6	-0.8
	baz=22,SNR=5.1						
MEEK	Meekatharra	21.99	207	P	P	13 34 38.3	+0.6
	baz=22,SNR=17						
MEEK				S	S	13 38 32.7	-0.1
	baz=22,SNR=5.7						
LUBP	Lubang	22.62	336	eP	P	13 34 44.3	+0.2
TGY	Tagaytay City	22.69	338	P	P	13 34 45.1	+0.2
TGY	Tagaytay City	22.69	338	P	P	13 34 45.1	+0.2
	comp=Z,1µm,0.7s,baz=174,slow=3.8,SNR=34						
FORT	Forrest	23.59	183	eP	P	13 34 53.7	+0.5
	comp=Z,623nm,1.0s						
FORT	Forrest	23.59	183	P	P	13 34 54.2	+1.1
	baz=24,SNR=108						
FORT				S	S	13 38 57.6	-0.9
	baz=24,SNR=5.1						
QLP	Quilpie	23.96	146	P	P	13 34 57.9	+1.4
	baz=24,SNR=129						
BALP	Baler	23.99	341	eP	P	13 34 55.5	-1.3
CAUP	Cauayan	25.05	343	eP	P	13 35 06.1	-0.3
KMBL	Kambalda	25.15	195	P	P	13 35 08.9	+1.6
	baz=25,SNR=12						
MORW	Morawa	25.24	208	P	P	13 35 08.7	+0.6
	baz=25,SNR=48						
MORW				S	S	13 39 55.7	+31
	baz=25,SNR=3.3						
GUMO	Guam	25.64	37	LR	LR	13 44 37.2	
	comp=Z,111nm,19.9s,baz=266,slow=35						
BLDU	Ballidu	26.26	205	P	P	13 35 18.1	+0.8
	baz=26,SNR=26						
BBOO	Buckleboo	26.32	167	eP	P	13 35 18.4	+0.6
	comp=Z,634nm,0.6s						
BBOO	Buckleboo	26.32	167	P	P	13 35 18.6	+0.8
	baz=26,SNR=58						
RMQ	Roma	26.65	139	P	P	13 35 22.5	+1.6
	baz=27,SNR=5.2						
KLBR	Kellerberrin	26.70	203	P	P	13 35 22.2	+1.0
	baz=27,SNR=4.1						
MYKOM	Kota Tinggi	27.01	288	P	P	13 35 24.9	+0.7
STKA	Stephens Creek	27.14	157	eP	P	13 35 25.8	+0.6
	comp=Z,9.6nm,0.8s						
STKA				P	P	13 35 26.0	+0.8
STKA	Stephens Creek	27.14	157	P	P	13 35 26.0	+0.8
	comp=Z,50nm,0.7s,baz=328,slow=9.0,SNR=100						
STKA				LR	LR	13 47 41.3	
	comp=Z,766nm,19.4s,baz=108,slow=39						
STKA	Stephens Creek	27.14	157	P	P	13 35 26.3	+1.1
	baz=27,SNR=48						
KGM	Kluang	27.58	288	P	P	13 35 29.4	0.0
NWAO	Narrogin (SRO)	28.08	202	P	P	13 35 34.0	+0.4
NWAO	Narrogin (SRO)	28.08	202	P	P	13 35 34.0	+0.4
	comp=Z,7.7nm,0.3s,baz=37,slow=8.5,SNR=22						
NWAO				LR	LR	13 48 22.9	
	comp=Z,167nm,18.9s,baz=132,slow=39						
CMSA	Cobar Meteorol	28.67	150	P	P	13 35 40.3	+1.4
	baz=29,SNR=51						
FRIM	Kepong	29.59	289	P	P	13 35 46.9	-0.3
RKGY	Rocky Gully	29.69	201	P	P	13 35 50.5	+2.7
	baz=30,SNR=11						
HNR	Honiara	30.29	97	LR	LR	13 47 60.0	
	comp=Z,246nm,20.1s,baz=215,slow=36						
IPM	Ipoh	30.59	291	P	P	13 35 57.0	+0.9
ARMA	Armidale	31.18	141	P	P	13 36 03.3	+2.2
	baz=31,SNR=7.2						
KULM	Kulim	31.24	292	P	P	13 36 02.6	+0.8
ARPS	Mount Arapiles	31.63	161	P	P	13 36 06.8	+2.0
	baz=32,SNR=83						
PSI	Prapat	31.99	287	P	P	13 36 07.8	-0.6
PSI				PcP	PcP	13 38 55.7	-0.2
PSI	Prapat	31.99	287	P	P	13 36 07.8	-0.6
	comp=Z,114nm,0.9s,baz=132,slow=4.4,SNR=73						
PSI				PcP	PcP	13 38 55.7	-0.2
	comp=Z,9.9nm,0.8s,baz=253,slow=2.7,SNR=3.8						
PSI				LR	LR	13 50 40.2	
	comp=Z,163nm,20.3s,baz=328,slow=39						
PSI	Prapat	31.99	287	P	P	13 36 07.9	-0.6
	baz=32,SNR=43						
YNG	Young	32.23	150	P	P	13 36 12.3	+2.0
	baz=32,SNR=13						
QIZ	Qiongzhong	32.35	324	P	P	13 36 11.6	+0.2
QIZ				S	S	13 41 21.6	+4.7
QIZ				LR	LR		
	comp=Z,94nm,21.1s						
CAN	Canberra	33.35	150	eP	P	13 36 21.2	+1.2
CAN				pmax	pmax		
	comp=Z,19nm,0.8s						
CAN	Canberra	33.35	150	eP	P	13 36 21.2	+1.2
	comp=Z,19nm,0.8s						
TOO	Toolangi	33.66	157	P	P	13 36 25.4	+2.8
	baz=34,SNR=12						
CBIJ	Chichi jima	36.17	19	P	P	13 36 42.0	-2.3
CBIJ	Chichi jima	36.17	19	P	P	13 36 42.0	-2.3
	comp=Z,57nm,0.8s,baz=255,slow=20,SNR=6.7						
MOO	Moorlands	38.54	159	P	P	13 37 07.0	+2.9
	baz=39,SNR=3.8						
DZM	Mont Dzumac	38.66	117	P	P	13 37 06.7	+1.2
DZM	Mont Dzumac	38.66	117	P	P	13 37 06.7	+1.2
	comp=Z,7.7nm,0.6s,baz=200,slow=5.7,SNR=8.6						
CM31	Chiang Mai Arr	39.36	311	eP	P	13 37 11.6	+0.4
	comp=Z,10nm,0.6s						
CMAR	Chiang Mai Arr	39.36	311	P	P	13 37 11.2	0.0
CMAR				pP	pP	13 37 37.4	-0.8
CMAR				PcP	PcP	13 39 18.1	+0.6
CMAR				ScP	ScP	13 42 54.7	-0.5
CMAR	Chiang Mai Arr	39.36	311	P	P	13 37 11.2	0.0
	comp=Z,24nm,0.8s,baz=143,slow=7.4,SNR=135						
CMAR				pP	pP	13 37 37.4	-0.8
	comp=Z,6.2nm,0.7s,baz=140,slow=7.5,SNR=2.8						
CMAR				PcP	PcP	13 39 18.1	+0.6
	comp=Z,9.0nm,0.8s,baz=168,slow=2.6,SNR=16						
CMAR				ScP	ScP	13 42 54.7	-0.5
	comp=Z,3.3nm,0.7s,baz=151,slow=2.7,SNR=12						
CMAR				LR	LR	13 52 09.2	
	comp=Z,134nm,20.5s,baz=131,slow=34						
CHTO	Chiang Mai	39.58	311	eP	P	13 37 12.6	-0.4
CHTO				pmax	pmax		
	comp=Z,74nm,1.1s						
CHTO	Chiang Mai	39.58	311	eP	P	13 37 12.6	-0.4
	comp=Z,74nm,1.1s						
CHTO	Chiang Mai	39.58	311	P	P	13 37 13.4	+0.4
	SNR=18						
GYA	Guiyang	40.01	327	P	P	13 37 17.8	+1.2
GYA				pP	pP	13 37 34.8	-8.8
GYA				sP	sP	13 37 42.9	-14
GYA				PP	PnPn	13 38 54.5	-1.2
GYA				PcP	PcP	13 39 22.0	+2.5
GYA				ScP	ScP	13 43 02.3	+4.6
GYA				S	S	13 43 18.5	+4.9
GYA				sS	sS	13 43 48.9	-11
GYA				SS	SS	13 46 11.7	-4.0
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.0s						
GYA				LR	LR		
	comp=N,590nm,17.5s						
GYA				LR	LR		
	comp=E,540nm,18.0s						
GYA				LR	LR		
	comp=Z,780nm,17.3s						
WHN	Wuhan	40.12	340⇓	iP	P	13 37 17.8	+0.5
WHN				pmax	pmax		
	comp=Z,170nm,1.1s						
NJ2	Nanjing	40.22	346	eP	P	13 37 18.4	+0.3
NJ2				pmax	pmax		
	comp=Z,80nm,1.2s						
KMI	Kunming	41.24	322	P	P	13 37 27.2	+0.3
KMI				S	S	13 43 34.3	+2.1
KMI				SS	SS	13 46 32.4	-7.9
KMI				pmax	pmax		
	comp=Z,31nm,1.2s						
MJAR	Matsushiro Arr	44.19	10	P	P	13 37 48.4	-1.9
MJAR				ScP	ScP	13 43 11.3	-2.7
MJAR	Matsushiro Arr	44.19	10	P	P	13 37 48.4	-1.9
	comp=Z,12nm,0.8s,baz=191,slow=10.0,SNR=52						
MJAR				ScP	ScP	13 43 11.3	-2.7
	comp=Z,1.1nm,0.6s,baz=188,slow=5.0,SNR=5.5						
MAJO	Matsushiro	44.19	10	eP	P	13 37 48.1	-2.2
MAJO				pmax	pmax		
	comp=Z,16nm,0.8s						
MAJO	Matsushiro	44.19	10	eP	P	13 37 48.1	-2.2
	comp=Z,16nm,0.8s						
MAT	Matsushiro	44.19	10	P	P	13 37 48.3	-1.9
MAT				S	S	13 44 16.4	+1.8
KSAR	Wonju Array Be	44.33	358	P	P	13 37 51.4	+0.1
KSAR				PcP	PcP	13 39 33.5	0.0
KSAR				ScP	ScP	13 43 12.2	-2.4
KSRS	Korea Array	44.34	358	P	P	13 37 51.4	0.0
	comp=Z,4.6nm,0.7s,baz=174,slow=8.9,SNR=25						
KSRS				PcP	PcP	13 39 33.5	0.0
	comp=Z,1.5nm,0.6s,baz=178,slow=4.1,SNR=6.2						
KSRS				ScP	ScP	13 43 12.2	-2.4
	comp=Z,2.2nm,0.8s,baz=187,slow=4.2,SNR=7.3						
CD2	Chengdu	45.09	328	P	P	13 37 57.0	-0.5
CD2				pP	pP	13 38 14.4	-11
CD2				sP	sP	13 38 22.8	-16
CD2				PP	PP	13 39 44.3	-1.1
CD2				PcS	PcS	13 43 29.3	-1.1
CD2				S	S	13 44 30.6	+2.7
CD2				sS	sS	13 45 00.9	-14
CD2				SS	ScS	13 47 45.5	+2.9
CD2				pmax	pmax		
	comp=Z,60nm,0.5s						
CD2				pmax	pmax		
	comp=Z,110nm,5.4s						
CD2				LR	LR		
	comp=N,320nm,15.2s						
CD2				LR	LR		
	comp=Z,260nm,20.6s						
XAN	Xi'an	45.29	336	P	P	13 37 57.4	-1.7
XAN				pP	pP	13 38 20.0	-6.6
XAN				pmax	pmax		
	comp=Z,14nm,1.0s						
XAN				pmax	pmax		
	comp=Z,20nm,6.5s						
IMP	Imphal	46.90	314	ex	P	13 38 08.0	-3.9
BJI	Beijing	48.48	346	P	P	13 38 22.9	-0.8
BJI				pmax	pmax		
	comp=Z,71nm,0.6s						
SHL	Shillong	48.85	313	eP	P	13 38 26.0	-1.1
LZH	Lanzhou	49.23	332	⇑P	P	13 38 29.4	-0.3
LZH				pP	pP	13 38 47.5	-10
LZH				sP	sP	13 38 56.0	-15
LZH				PcP	PcP	13 39 50.2	-0.9
LZH				PP	PP	13 40 25.0	+0.2
LZH				ScP	ScP	13 43 35.5	+0.1
LZH				sS	sS	13 45 59.5	-15
LZH				pmax	pmax		
	comp=Z,34nm,1.5s						
LZH				pmax	pmax		
	comp=Z,120nm,5.6s						
LZH				LR	LR		
	comp=N,330nm,14.5s						
LZH				LR	LR		
	comp=E,350nm,15.0s						
LZH				LR	LR		
	comp=Z,520nm,17.2s						
VLA	Vladivostok	50.03	2⇓	eP	P	13 38 34.5	-0.9
VLA				S	S	13 45 37.3	0.0
VLA				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC	Hu-ho-hao-te	50.46	342	eP	P	13 38 39.1	+0.2
HHC				pP	pP	13 38 57.9	-9.0
HHC				sP	sP	13 39 06.8	-13
HHC				PP	PP	13 40 37.8	+1.9
HHC				S	S	13 45 47.4	+3.8

HHC sS sS 13 46 21.0 -11
HHC SS **SS** **13 49 20.3 +1.0**
HHC pmax pmax
comp=Z,58nm,1.0s
HHC pmax pmax
comp=Z,240nm,7.5s
HHC LR LR
comp=N,210nm,14.9s
HHC LR LR
comp=E,360nm,15.1s
HHC LR LR
comp=Z,290nm,14.0s
CN2 Changchun 50.79 356 *e*P **P** **13 38 40.5 -0.7**
CN2 *e*S S 13 45 54.7 +6.9
CN2 SS **SS** **13 49 23.0 -1.2**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 LR LR
comp=N,200nm,17.0s
CN2 LR LR
comp=E,200nm,17.0s
CN2 LR LR
comp=Z,200nm,16.0s
USRK Ussuriysk Arra 51.11 2 P **P** **13 38 42.9 -0.7**
comp=Z,13nm,0.8s,baz=188,slow=7.8,SNR=22
MDJ Mudanjiang 51.48 0 P **P** **13 38 46.0 -0.3**
MDJ pP pP 13 39 01.2 -13
MDJ PcP **PcP** **13 39 58.9 0.0**
MDJ PP **PP** **13 40 40.3 -4.5**
MDJ S **S** **13 45 53.5 -3.7**
MDJ pmax pmax
comp=Z,11nm,1.0s
MDJ pmax pmax
comp=Z,63nm,4.8s
MDJ LR LR
comp=Z,80nm,48.7s
RPZ Rata Peaks 51.51 142 *e*P **P** **13 38 48.4 +1.8**
RPZ P **P** **13 38 48.6 +2.0**
RPZ Rata Peaks 51.51 142 P **P** **13 38 48.6 +2.0**
comp=Z,33nm,0.8s,baz=270,slow=3.0,SNR=15
LSA Lhasa 51.88 317 P **P** **13 38 50.3 +0.2**
LSA pmax pmax
comp=Z,50nm,1.2s
ODAN Odare 52.90 311 *e*P **P** **13 38 56.9 -0.5**
comp=Z,208nm,0.6s
TAPN Taplejung 52.93 312 *e*P **P** **13 38 57.3 -0.4**
comp=Z,156nm,0.5s
RAMN Ramite 53.53 311 *e*P **P** **13 39 03.0 +0.9**
comp=Z,583nm,0.6s
GTA Gaotai 53.79 332 ⇑P **P** **13 39 03.5 -0.1**
GTA pP pP 13 39 19.3 -13
GTA PcP **PcP** **13 40 09.0 +1.0**
GTA ScP **ScP** **13 43 54.8 -0.2**
GTA S **S** **13 46 31.7 +2.5**
GTA SS **SS** **13 50 13.3 +1.3**
GTA pmax pmax
comp=Z,33nm,1.0s
GTA pmax pmax
comp=Z,75nm,5.5s
GTA LR LR
comp=N,130nm,17.8s
GTA LR LR
comp=E,100nm,18.5s
GTA LR LR
comp=Z,71nm,16.2s
GUN Gumba 54.59 312 *e*P **P** **13 39 09.4 -0.5**
comp=Z,421nm,0.7s
PKI Pulchoki 54.76 311 *e*P **P** **13 39 10.3 -0.8**
comp=Z,147nm,0.6s
PKIN Phulchoki 54.77 311 *e*P **P** **13 39 10.7 -0.4**
comp=Z,45nm,0.5s
KKN Kakani 54.97 311 *e*P **P** **13 39 11.9 -0.6**
comp=Z,172nm,0.7s
DMN Daman 55.01 311 *e*P **P** **13 39 12.4 -0.4**
comp=Z,304nm,1.0s
YSS Yuzh-Sakhalins 55.10 11 ⇑*i*P **P** **13 39 13.2 +0.5**
HYB Hyderabad 55.85 296 *i*P **P** **13 39 16.0 -2.7**
KLR Kul'dur 56.13 2 *e*P P 13 39 16.6 -3.5
KOLN Koldanda 56.23 310 *e*P **P** **13 39 21.0 -0.5**
comp=Z,219nm,0.7s
DANN Dangsing 56.41 311 *e*P **P** **13 39 22.1 -0.7**
comp=Z,211nm,0.9s
PYUN Piuthan 56.86 310 *e*P **P** **13 39 25.5 -0.4**
comp=Z,932nm,1.0s
ULN Ulaanbaatar 58.19 342 *e*P **P** **13 39 35.0 +0.2**
comp=Z,15nm,0.6s
ULN Ulaanbaatar 58.19 342 P **P** **13 39 35.0 +0.2**
SNR=12
SONM Songino Array 58.36 342 P **P** **13 39 36.1 +0.1**
SONM PcP **PcP** **13 40 25.1 -0.5**
SONM ScP **ScP** **13 44 13.3 -1.6**
SONM Songino Array 58.36 342 P **P** **13 39 36.1 +0.1**
comp=Z,13nm,0.6s,baz=156,slow=6.2,SNR=86
SONM PcP **PcP** **13 40 25.1 -0.5**
comp=Z,5.8nm,0.8s,baz=190,slow=1.9,SNR=4.4
SONM ScP **ScP** **13 44 13.3 -1.6**
comp=Z,2.2nm,1.0s,baz=191,slow=2.6,SNR=6.6
ZAK Zakamensk 61.57 341 ⇓*i*P **P** **13 39 57.0 -0.8**
ZAK *e* 13 40 36.9
ZAK pmax pmax
comp=Z,5.0nm,1.3s
NDI New Delhi 61.60 308 *ex* P 13 39 53.0 -5.3
DDI Dehra Dun 61.70 310 *ex* P 13 39 55.5 -3.6
DDI *ex* x 13 40 08.5
TLY Talaya 62.59 342 *e*P **P** **13 40 03.6 -0.9**
TLY pmax pmax
comp=Z,8.0nm,0.7s
TLY Talaya 62.59 342 *e*P **P** **13 40 04.9 +0.4**
comp=Z,6.9nm,0.6s
TLY Talaya 62.59 342 P **P** **13 40 05.1 +0.6**
SNR=7.2
TLY Talaya 62.59 342 P **P** **13 40 05.2 +0.7**
comp=Z,72nm,0.7s,SNR=6.4
WMQ Urumqi 63.17 327 P **P** **13 40 09.0 +0.4**
WMQ pP pP 13 40 25.0 -13
WMQ PcP **PcP** **13 40 46.0 +1.0**
WMQ PP **PP** **13 42 30.0 +0.9**
WMQ ScP 13 44 42.0
WMQ S **S** **13 48 34.0 +3.4**
WMQ ScS **ScS** **13 49 52.0 +1.7**
WMQ SS **SS** **13 52 41.0 +1.9**
WMQ pmax pmax
comp=Z,87nm,1.0s
WMQ pmax pmax
comp=Z,210nm,5.0s
WMQ LR LR
comp=N,190nm,20.0s
WMQ LR LR
comp=E,230nm,20.0s
WMQ LR LR
comp=Z,91nm,20.0s
MOY Mondy 63.42 341 *e*P **P** **13 40 10.5 +0.4**
MOY pmax pmax
comp=Z,42nm,2.3s
PETK Petropavlovsk- 64.60 18 P **P** **13 40 17.7 +0.1**
PETK Petropavlovsk- 64.60 18 P **P** **13 40 17.7 +0.1**
PETK Petropavlovsk- 64.60 18 P **P** **13 40 17.7 +0.1**
comp=Z,11nm,0.9s,baz=175,slow=4.7,SNR=17
KSH Kashi 67.71 318 ⇑*i*P **P** **13 40 38.1 +0.1**
KSH pP PcP 13 40 58.3 -5.7
KSH PcP **pP** **13 41 03.9 -3.6**
KSH sP sP 13 41 05.9 -15
KSH PP **PP** **13 43 09.6 +0.7**
KSH PcS 13 45 08.1
KSH S **S** **13 49 29.0 +2.8**
KSH sS sS 13 50 02.2 -15
KSH ScS **ScS** **13 50 26.0 +0.3**
KSH SS **SS** **13 53 53.0 +3.1**
KSH pmax pmax
comp=Z,89nm,1.0s
KSH LR LR
comp=Z,120nm,4.6s
MK31 Makanchi Array 68.00 327 *i*P **P** **13 40 38.7 -0.8**
MK31 pmax pmax
comp=Z,50nm,0.7s
MK31 Makanchi Array 68.00 327 *e*P **P** **13 40 39.2 -0.3**
MKAR Makanchi Array 68.00 327 P **P** **13 40 39.3 -0.2**
MKAR Makanchi Array 68.00 327 P **P** **13 40 39.2 -0.2**
MKAR Makanchi Array 68.00 327 P **P** **13 40 39.2 -0.2**
comp=Z,50nm,0.8s,baz=128,slow=7.4,SNR=311
YAK Yakutsk 68.92 0*c* *i*P **P** **13 40 44.4 -0.5**
YAK *e**PP **PcP** **13 41 10.2 +1.8**
YAK *e* 13 43 15.7
YAK *e*PPP PPP 13 44 55.8
YAK *e*S **S** **13 49 36.7 -2.7**
YAK *e**SS **SKiKP** **13 50 21.1 -3.2**
YAK *e* 13 50 37.3
YAK *e*SS **SS** **13 54 04.3 -3.2**
YAK pmax pmax
comp=Z,52nm,0.8s
YAK pmax pmax
comp=N,12nm,1.0s
YAK pmax pmax
comp=Z,82nm,4.2s
YAK pmax pmax
comp=N,78nm,5.6s
YAK pmax pmax
comp=E,46nm,3.5s
YAK smax smax
comp=N,34nm,1.7s
YAK smax smax
comp=E,48nm,1.7s
YAK Yakutsk 68.92 0 *e*P **P** **13 40 44.4 -0.5**
comp=E,74nm,0.8s
KZA Kyzart 69.49 320 *i*P **P** **13 40 51.0 +1.7**
KZA Kyzart 69.49 320 P **P** **13 40 51.0 +1.7**
SNR=5.6
TKM2 Tokmak 2 69.70 321 *i*P **P** **13 40 50.7 +0.3**
TKM2 Tokmak 2 69.70 321 *e*P **P** **13 40 50.4 0.0**
comp=E,45nm,0.8s
TKM2 Tokmak 2 69.70 321 P **P** **13 40 50.7 +0.3**
SNR=15
KBK Karagaybulak 69.97 320 *i*P **P** **13 40 53.4 +1.4**
KBK Karagaybulak 69.97 320 P **P** **13 40 53.4 +1.4**
SNR=13
UCH Uchtor 70.03 320 *i*P **P** **13 40 54.4 +1.7**
UCH Uchtor 70.03 320 P **P** **13 40 54.4 +1.7**
SNR=6.5
AAK Ala-Archa 70.25 320*c* *i*P **P** **13 40 54.0 +0.3**
AAK pmax pmax
comp=Z,91nm,0.8s
AAK Ala-Archa 70.25 320 *e*P **P** **13 40 53.1 -0.6**
comp=Z,195nm,0.9s
AAK P **P** **13 40 53.9 +0.2**
AAK Ala-Archa 70.25 320 P **P** **13 40 55.5 +1.8**
SNR=9.4
AAK Ala-Archa 70.25 320 P **P** **13 40 54.9 +1.2**
comp=Z,245nm,0.9s,SNR=22
AAK Ala-Archa 70.25 320 P **P** **13 40 53.9 +0.2**
comp=Z,28nm,0.7s,baz=121,slow=5.8,SNR=76
CHMS Chumysh 70.27 321 P **P** **13 40 53.7 +0.1**
SNR=13
KBL Kabul 70.39 310 *e*P **P** **13 40 54.6 -0.2**
KBL pmax pmax
comp=Z,37nm,0.9s
KBL Kabul 70.39 310 *e*P **P** **13 40 54.6 -0.2**
comp=Z,37nm,0.9s
KBL Kabul 70.39 310 P **P** **13 40 55.3 +0.6**
baz=70,SNR=8.7
AML Almayashu 70.51 319 *i*P **P** **13 40 56.0 +0.4**
AML Almayashu 70.51 319 P **P** **13 40 56.0 +0.4**
SNR=43
USP Ospenovka 70.57 321 *i*P **P** **13 40 55.5 +0.1**
USP Ospenovka 70.57 321 P **P** **13 40 55.5 +0.1**
SNR=46
EKS2 Erkin-Say 70.72 320 *e*P **P** **13 40 57.3 +0.8**
EKS2 pmax pmax
comp=Z,53nm,0.9s
EKS2 Erkin-Say 70.72 320 *e*P **P** **13 40 57.3 +0.8**
comp=Z,53nm,0.9s
EKS2 Erkin-Say 70.72 320 P **P** **13 40 57.4 +0.9**
SNR=24
ZALV Zalesovo Beam 71.42 334 P **P** **13 40 59.2 -1.1**
ZALV Zalesovo Beam 71.42 334 P **P** **13 40 59.1 -1.1**
ZALV P'P' 14 08 54.3
ZALV Zalesovo Beam 71.42 334 P **P** **13 40 59.1 -1.1**
comp=Z,25nm,0.9s,baz=117,slow=4.5,SNR=87
ZALV PKPPKP **P'P'df** **14 08 54.3 +2.6**
comp=Z,0.2nm,0.3s,baz=289,slow=4.5,SNR=3.9
SEY Seymchan 72.01 11 ⇑*i*P **P** **13 41 04.0 +0.4**
KURK Kurchatov 72.31 329*c* *i*P **P** **13 41 05.0 -0.6**
KURK pmax pmax
comp=Z,91nm,1.0s
KURK Kurchatov 72.31 329 *e*P **P** **13 41 05.2 -0.5**
comp=Z,68nm,0.8s
KURK Kurchatov 72.31 329 P **P** **13 41 05.6 0.0**
SNR=24
KURK Kurchatov 72.31 329 P **P** **13 41 05.9 +0.3**
comp=Z,503nm,0.9s,SNR=65
VNDA Vanda 72.42 173 *e*P **P** **13 41 06.6 +0.7**
VNDA P **P** **13 41 06.8 +0.8**
VNDA Vanda 72.42 173 P **P** **13 41 06.8 +0.8**
comp=Z,3.5nm,0.6s,baz=325,slow=6.7,SNR=4.5
NVS Novosibirsk 72.71 334 ⇑*i*P **P** **13 41 06.2 -1.7**
NVS *e**PP **PcP** **13 41 27.0 +2.4**
NVS *e*S S 13 50 15.1 -8.4
NVS pmax pmax
comp=N,16nm,1.3s
NVS pmax pmax
comp=E,18nm,1.3s
NVS pmax pmax
comp=Z,37nm,1.3s
NVS smax smax
comp=N,8.0nm,1.9s
NVS smax smax
comp=E,14nm,1.9s
KK31 Karatay Array 73.04 319 *i*P **P** **13 41 09.7 -0.5**
KK31 pmax pmax
comp=Z,55nm,1.2s
KKAR Karatay Array 73.04 319 *e*P **P** **13 41 09.6 -0.6**
KKAR pmax pmax
comp=Z,27nm,0.9s
KKAR Karatay Array 73.04 319 *e*P **P** **13 41 09.6 -0.6**
comp=Z,27nm,0.9s
MAW Mawson 74.65 201 P **P** **13 41 20.3 +1.2**
MAW Mawson 74.65 201 P **P** **13 41 20.3 +1.2**
comp=Z,10nm,0.8s,baz=77,slow=11,SNR=5.3
MAW LR LR 14 09 50.7
comp=Z,169nm,20.7s,baz=251,slow=32
SMDO Samad 75.87 296 P **P** **13 41 27.2 +0.1**
SNR=5.5
HOQ Hoqain 76.66 296 P **P** **13 41 31.7 +0.2**
SNR=8.4
VOSK Vostochnaya 77.38 328 P **P** **13 41 33.5 -1.4**
VOSK pmax pmax
comp=Z,15nm,0.7s
BVA0 Borovoye Array 77.84 328 *i*P **P** **13 41 36.9 -0.5**
BVAR Borovoye Array 77.84 328 P **P** **13 41 36.7 -0.7**
BVAR Borovoye Array 77.84 328 P **P** **13 41 36.7 -0.7**
BVAR Borovoye Array 77.84 328 P **P** **13 41 36.7 -0.7**
comp=Z,10nm,0.7s,baz=136,slow=7.2,SNR=49
BRVK Borovoye 77.92 328*c* *i*P **P** **13 41 37.1 -0.7**
BRVK pmax pmax
comp=Z,17nm,0.7s
BRVK Borovoye 77.92 328 *e*P **P** **13 41 36.7 -1.1**
comp=Z,17nm,0.7s
BRVK Borovoye 77.92 328 P **P** **13 41 37.6 -0.2**
SNR=8.1
BRVK Borovoye 77.92 328 P **P** **13 41 37.5 -0.3**
comp=Z,150nm,0.7s,SNR=12
BANOM Banah 78.11 298 P **P** **13 41 40.8 +1.2**
SNR=5.2
BILL Bilibino 79.34 13 P **P** **13 41 48.0 +2.7**
AB31 Akbulak array 82.23 322 *i*P **P** **13 42 00.2 -0.9**
AB31 pmax pmax
comp=Z,17nm,0.6s
ABKAR Akbulak array 82.23 322 *e*P **P** **13 42 00.1 -1.0**
comp=Z,21nm,0.6s
GAMB Gambell 83.23 23 *e*P **P** **13 42 05.7 -0.2**
comp=Z,5.2nm,0.7s
SYO Syowa Base 83.36 201⇓*e*P **P** **13 42 05.6 -1.0**
AKTO Aktyubinsk 83.81 322 P **P** **13 42 08.6 -0.6**
AKTO Aktyubinsk 83.81 322 P **P** **13 42 08.6 -0.6**
AKTO Aktyubinsk 83.81 322 P **P** **13 42 08.6 -0.6**
comp=Z,28nm,1.0s,baz=108,slow=5.1,SNR=47
SVE Sverdlovsk 84.56 329⇑*i*P **P** **13 42 12.8 0.0**
SVE pmax pmax
comp=Z,58nm,1.0s
ARU Arti 85.49 328*d* *i*P **P** **13 42 16.1 -1.4**
ARU 13 45 33.7
ARU S S 13 52 31.6 -7.3
ARU pmax pmax
comp=Z,37nm,1.0s
ARU Arti 85.49 328 *e*P **P** **13 42 15.4 -2.0**
comp=Z,35nm,0.9s
ARU Arti 85.49 328 P **P** **13 42 16.2 -1.3**
comp=Z,206nm,0.7s,SNR=11
UMR Umm Al-Rimmam 86.31 300 *e*P **P** **13 42 20.3 -1.8**
UMR AMb AMB 13 42 23.5
comp=Z,78nm,0.8s
RDF Al-Radifah 86.34 300 *e*P **P** **13 42 20.8 -1.5**
RDF AMb AMB 13 42 23.6
comp=Z,85nm,0.8s
MIB Mutribah 86.67 300 *e*P **P** **13 42 21.9 -2.0**
MIB AMb AMB 13 42 25.7
comp=Z,116nm,0.9s
RAYN Ar Rayn 87.27 294 P **P** **13 42 26.5 -0.5**
comp=Z,366nm,0.8s,SNR=22
SOKR Solikamsk 87.42 331*d* *i*P **P** **13 42 25.6 -1.1**
SOKR pmax pmax
comp=Z,30nm,1.5s
ATD Arta Tunnel 88.07 282 P **P** **13 42 31.9 +0.9**
ATD Arta Tunnel 88.07 282 P **P** **13 42 31.9 +0.9**
comp=Z,4.3nm,0.3s,baz=105,slow=20,SNR=4.6
KMBO Kilima Mbogo 92.02 269 P **P** **13 42 50.1 +0.4**
KMBO Kilima Mbogo 92.02 269 P **P** **13 42 50.1 +0.4**
comp=Z,5.6nm,1.0s,baz=55,slow=6.3,SNR=9.1
MAIT Maitri 92.11 197 *e*P P 13 42 38.8 -10
KBZ Khabaz 92.35 314 P **P** **13 42 50.9 +0.7**
KBZ Khabaz 92.35 314 P **P** **13 42 50.9 +0.7**
KBZ Khabaz 92.35 314 P **P** **13 42 50.9 +0.7**
comp=Z,2.0nm,0.5s,baz=104,slow=12,SNR=4.1
SML Sawmill 92.55 28 *e*P **P** **13 42 49.6 -1.2**
SML pmax pmax
comp=Z,5.0nm,1.3s
SML Sawmill 92.55 28 *e*P **P** **13 42 49.6 -1.2**
comp=Z,4.5nm,1.3s
COLD Coldfoot 92.78 23 *e*P **P** **13 42 51.2 -0.5**
comp=Z,4.9nm,0.9s
ILAR Eielson Array 93.68 25 P **P** **13 42 53.5 -2.4**
ILAR PKKPbc **PKKPdf** **14 00 00.1 -1.4**
ILAR Eielson Array 93.68 25 P **P** **13 42 53.5 -2.4**
comp=Z,3.0nm,0.8s,baz=252,slow=4.6,SNR=53
ILAR PKKPbc **PKKPdf** **14 00 00.1 -1.4**
comp=Z,0.7nm,0.8s,baz=31,slow=1.7,SNR=11
PAX Paxson 94.04 27 *e*P **P** **13 42 57.2 -0.5**
PAX pmax pmax
comp=Z,5.0nm,0.9s
PAX Paxson 94.04 27 *e*P **P** **13 42 57.2 -0.5**
comp=Z,4.8nm,0.9s
DOT Dot Lake 94.76 27 *e*P **P** **13 43 00.1 -0.8**
comp=Z,2.1nm,0.8s
MENT Mentasta 94.83 27 *e*P **P** **13 43 00.9 -0.4**
MENT *e*pP pP 13 43 20.2 -12
SNAA Sanae 95.43 194 *e*P **P** **13 43 04.9 +0.9**
ASF Jabal al Asfar 95.87 302 P **P** **13 43 07.2 +0.4**
ASF Jabal al Asfar 95.87 302 P **P** **13 43 07.2 +0.4**
comp=Z,1.3nm,0.5s,baz=111,slow=18,SNR=3.6
KLMR Klimovskoe 96.10 331 *e*P P 13 43 03.0 -4.0
KLMR *e* 13 47 02.5
KLMR pmax pmax
comp=Z,27nm,1.5s
TMCR Tamitsa 96.95 334 *e*P P 13 43 02.9 -7.8
TMCR pmax pmax
comp=Z,19nm,0.7s
VNA2 Neumayer--Watz 97.01 193 *e*P Pdif 13 43 12.2 +1.1
baz=140,slow=4.0
VNA3 Neumayer Olymp 97.27 192 *e*P Pdif 13 43 17.2 +4.9
OBN Obninsk 97.41 325⇓*e*P **P** **13 43 11.3 -1.7**
OBN pmax pmax
comp=Z,16nm,0.7s
LSZ Lusaka 98.89 253 *e*P **P** **13 43 20.2 -0.6**
comp=Z,4.1nm,0.8s
BOSA Boshof 98.92 240 PKiKP **PKiKP** **13 47 54.2 +3.1**
BOSA Boshof 98.92 240 PKiKP **PKiKP** **13 47 54.2 +3.1**
comp=Z,1.3nm,0.4s,baz=101,slow=2.9,SNR=4.9
BRTR Keskin Array B 98.94 309 P **P** **13 43 19.2 -1.3**
BRTR Keskin Array B 98.94 309 P **P** **13 43 19.2 -1.3**
comp=Z,0.8nm,0.7s,baz=131,slow=6.5,SNR=4.5
BRTR LR LR 14 30 12.7
comp=Z,17nm,19.8s,baz=197,slow=37
ARCES ARCESS Array B 101.47 340 P **Pdif** **13 43 29.2 -1.7**
ARCES PKiKP **PKiKP** **13 47 54.2 -0.1**
ARCES PKKPbc **PKKPbc** **13 59 37.8 -4.0**
ARCES ARCESS Array B 101.47 340 P **Pdif** **13 43 29.2 -1.7**
comp=Z,7.1nm,0.8s,baz=88,slow=6.2,SNR=15
ARCES PKiKP **PKiKP** **13 47 54.2 -0.1**
comp=Z,5.9nm,1.0s,baz=152,slow=2.9,SNR=4.8
ARCES PKKPbc **PKKPbc** **13 59 37.8 -4.0**
comp=Z,1.0nm,0.7s,baz=201,slow=1.5,SNR=6.7
ARE0 ARCESS Array S 101.47 340 *e*Pdif **Pdif** **13 43 29.7 -1.2**
AKASG Malin Array Be 101.92 320 P **Pdif** **13 43 31.1 -2.2**
AKASG Malin Array Be 101.92 320 P **Pdif** **13 43 31.1 -2.2**
AKASG Malin Array Be 101.92 320 P **Pdif** **13 43 31.1 -2.2**
comp=Z,2.3nm,0.7s,baz=72,slow=4.8,SNR=4.7
FINES FINESS Array B 102.58 331 P **Pdif** **13 43 33.6 -2.3**
FINES PKiKP **PKiKP** **13 47 56.0 -0.5**
FINES FINESS Array B 102.58 331 P **Pdif** **13 43 33.6 -2.3**
comp=Z,1.5nm,0.8s,baz=66,slow=4.8,SNR=6.2
FINES PKiKP **PKiKP** **13 47 56.0 -0.5**
comp=Z,1.3nm,0.6s,baz=80,slow=2.1,SNR=6.2
MLR Muntele Rosu 104.48 315 PKiKP **PKiKP** **13 47 59.8 -0.8**
MLR Muntele Rosu 104.48 315 PKiKP **PKiKP** **13 47 59.8 -0.8**
comp=Z,0.8nm,0.8s,baz=181,slow=3.4,SNR=4.0
CRVS Cervenica-Dubn 107.11 319 PDIF **Pdif** **13 43 59.8 +3.3**
YKA Yellowknife Ar 108.09 26 Pdif **Pdif** **13 43 59.9 -0.6**
YKA PKiKP **PKiKP** **13 48 06.1 -0.5**
YKA SKP 13 51 28.3
YKA PKKPbc **PKKPbc** **13 59 18.1 -3.4**
YKA PKKP **PKKPab** **13 59 33.0 +0.1**
YKA Yellowknife Ar 108.09 26 Pdiff **Pdif** **13 43 59.8 -0.6**
comp=Z,0.1nm,0.6s,baz=292,slow=4.6,SNR=3.7
YKA PKiKP **PKiKP** **13 48 06.1 -0.5**
comp=Z,0.8nm,0.6s,baz=292,slow=1.5,SNR=24
YKA SKP 13 51 28.3
comp=Z,0.3nm,0.6s,baz=294,slow=2.2,SNR=5.4
YKA PKKPbc **PKKPbc** **13 59 18.0 -3.4**
comp=Z,0.9nm,0.7s,baz=107,slow=3.1,SNR=19
YKA PKKP **PKKPab** **13 59 33.0 +0.1**
comp=Z,0.3nm,0.8s,baz=100,slow=2.8,SNR=3.5
HFS Hagfors 108.78 332 Pdif **Pdif** **13 44 01.5 -2.1**
HFS PKiKP **PKiKP** **13 48 06.9 -1.1**
HFS Hagfors 108.78 332 Pdiff **Pdif** **13 44 01.5 -2.1**
comp=Z,1.0nm,0.7s,baz=91,slow=5.8,SNR=5.4
HFS PKiKP **PKiKP** **13 48 06.9 -1.1**
comp=Z,0.8nm,0.7s,baz=150,slow=6.3,SNR=4.1
NB2 NORSAR Subarra 109.61 333 P Pdif 13 43 56.4 -11
comp=Z,2.6nm,1.1s,baz=68,slow=4.6
NOA NORSAR Array B 109.61 333 Pdif **Pdif** **13 44 06.2 -1.1**
NOA PKiKP **PKiKP** **13 48 09.2 -0.4**
NOA NORSAR Array B 109.61 333 Pdiff **Pdif** **13 44 06.2 -1.1**
comp=Z,1.1nm,0.8s,baz=66,slow=4.5,SNR=3.8
NOA PKiKP **PKiKP** **13 48 09.2 -0.4**
comp=Z,1.3nm,0.8s,baz=262,slow=3.2,SNR=5.1
NVAR Mina Array Bea 111.80 52 PKiKP **PKiKP** **13 48 15.2 +0.6**
NVAR PKKPab **PKKPab** **13 59 17.2 0.0**
NVAR Mina Array Bea 111.80 52 PKiKP **PKiKP** **13 48 15.2 +0.6**
comp=Z,0.5nm,0.7s,baz=285,slow=1.8,SNR=4.4
NVAR PKKPab **PKKPab** **13 59 17.2 0.0**
comp=Z,0.7nm,0.7s,baz=106,slow=4.8,SNR=6.7
GERES GERESS Array B 112.13 320 PKiKP **PKiKP** **13 48 14.4 -0.4**
GERES PP **PP** **13 49 02.1 +1.4**
GERES GERESS Array B 112.13 320 PKiKP **PKiKP** **13 48 14.4 -0.4**
comp=Z,2.1nm,0.5s,baz=55,slow=1.7,SNR=17
GERES PP **PP** **13 49 02.1 +1.4**
comp=Z,0.5nm,0.5s,baz=100,slow=6.9,SNR=4.7
A13A Flathead Natio 112.39 40 ⇓PKiKP **PKiKP** **13 48 15.7 +0.4**
baz=112
B13A Whitefish 112.50 40 ⇑PKiKP **PKiKP** **13 48 14.9 -0.5**
baz=112
C13A Hot Springs 112.61 41 ⇑PKiKP **PKiKP** **13 48 15.6 -0.1**
baz=113
F12A Elk City 112.63 43 ⇓PKiKP **PKiKP** **13 48 16.0 +0.1**
baz=113
MFID Camas Ranch 112.75 46 ⇑PKiKP **PKiKP** **13 48 16.4 +0.2**
baz=113
MPMC Manual Prospec 112.78 54 ⇑PKiKP **PKiKP** **13 48 16.9 +0.3**
baz=113
BFSC Mount Baldy Ra 112.89 56 ⇓PKiKP **PKiKP** **13 48 16.8 +0.1**
baz=113
A14A Double T Ranch 113.00 40 ⇑PKiKP **PKiKP** **13 48 17.1 +0.6**
baz=113
I12A Atlanta 113.17 45 ⇑PKiKP **PKiKP** **13 48 17.8 +0.8**
baz=113
E13A Victor 113.18 42 ⇓PKiKP **PKiKP** **13 48 17.3 +0.4**
baz=113
H12A Diamond D Ranc 113.19 44 ⇑PKiKP **PKiKP** **13 48 17.6 +0.5**
baz=113
A15A Johnson Ranch, 113.44 39 ⇑PKiKP **PKiKP** **13 48 17.3 0.0**
baz=113
D14A Greenough 113.47 42 ⇓PKiKP **PKiKP** **13 48 17.4 -0.1**
baz=114
G13A Cobalt 113.49 44 ⇑PKiKP **PKiKP** **13 48 17.8 +0.2**
baz=114
H13A Challis 113.60 44 ⇓PKiKP **PKiKP** **13 48 18.4 +0.6**
baz=114
E14A Clinton 113.66 42 ⇓PKiKP **PKiKP** **13 48 18.1 +0.2**

baz=114
CHMT Chamberlain Mo 113.68 42 ePKiKP PKiKP 13 48 17.7 -0.3
HLID Hailey 113.73 45 ⇑PKiKP PKiKP 13 48 19.1 +1.0
baz=114
B15A Bradely Ranch, 113.74 40 ⇑PKiKP PKiKP 13 48 17.8 -0.1
baz=114
I13A Wildhorse Cree 113.85 45 ⇓PKiKP PKiKP 13 48 19.4 +1.0
baz=114
C15A Salmond Ranch, 113.86 41 ⇑PKiKP PKiKP 13 48 18.2 0.0
baz=114
HEC Hector,Ludlow 113.89 55 ⇑PKiKP PKiKP 13 48 19.2 +0.7
baz=114
R11A Troy Canyon, C 113.92 51 ⇑PKiKP PKiKP 13 48 19.3 +0.6
baz=114
J13A Cove Ranch, Pi 113.93 46 ⇓PKiKP PKiKP 13 48 19.0 +0.5
baz=114
PFO Pinyon Flat Ob 113.96 56 ⇑PKiKP PKiKP 13 48 19.3 +0.5
baz=114
D15A Lincoln 114.13 41 ⇓PKiKP PKiKP 13 48 19.0 +0.3
baz=114
H14A Leadore 114.20 44 ⇑PKiKP PKiKP 13 48 19.2 +0.1
baz=114
B16A M & M Farms, S 114.25 40 ⇓PKiKP PKPdf 13 48 18.7 -0.1
baz=114
BELC Belle Mtn. Jos 114.28 56 ⇑PKiKP PKiKP 13 48 19.8 +0.3
baz=114
I14A Mackay 114.32 45 ⇑PKiKP PKiKP 13 48 20.0 +0.7
baz=114
C16A Fuhringer Ranc 114.41 40 ⇑PKiKP PKPdf 13 48 19.2 0.0
baz=114
GMRC Granite Mounta 114.45 55 ⇓PKiKP PKiKP 13 48 20.1 +0.4
baz=114
F15A Butte 114.48 43 ⇑PKiKP PKiKP 13 48 19.8 +0.3
baz=114
G15A Dillon 114.66 43 ⇑PKiKP PKiKP 13 48 20.2 +0.3
baz=115
H15A Lima 114.70 44 ⇑PKiKP PKPdf 13 48 20.5 +0.5
baz=115
A17A Triple J Farms 114.72 39 ⇑PKiKP PKPdf 13 48 20.0 +0.3
baz=115
D16A Dana Ranch, Ca 114.77 41 ⇑PKiKP PKPdf 13 48 20.1 +0.2
baz=115
BC3 Big Chuckawall 114.78 56 ⇓PKiKP PKiKP 13 48 21.0 +0.6
baz=115
B17A L&G Farms, Che 114.87 40 ⇑PKiKP PKiKP 13 48 19.8 -0.2
baz=115
IRM Iron Mountain 114.95 56 ⇑PKiKP PKPdf 13 48 21.0 +0.5
baz=115
F16A Kennard Place, 115.08 43 ⇑PKiKP PKPdf 13 48 20.8 +0.3
baz=115
C17A Wharram Farm, 115.09 40 ⇑PKiKP PKiKP 13 48 20.2 -0.3
baz=115
G16A Moss Hill, Enn 115.11 43 ⇑PKiKP PKPdf 13 48 21.3 +0.5
baz=115
DAVOX Davos/Dischmat 115.19 319 PKP PKPdf 13 48 20.4 -0.4
DAVOX Davos/Dischmat 115.19 319 PKP PKPdf 13 48 20.4 -0.4
comp=Z,3.0nm,0.5s,baz=222,slow=13,SNR=5.1
A18A Metzger Ranch, 115.26 39 ⇑PKiKP PKPdf 13 48 21.0 +0.3
baz=115
K15A Arbon 115.28 46 ⇑PKiKP PKPdf 13 48 21.6 +0.5
baz=115
D17A Six Diamond Ra 115.29 41 ⇑PKiKP PKPdf 13 48 21.2 +0.3
baz=115
E17A Martinsdale 115.39 42 ⇑PKiKP PKPdf 13 48 21.7 +0.4
baz=115
B18A Beardsley Farm 115.48 39 ⇑PKiKP PKPdf 13 48 21.4 +0.3
baz=115
L15A Malad City 115.55 47 ⇑PKiKP PKPdf 13 48 22.0 +0.3
baz=116
EGMT Eagleton 115.61 40 ⇓PKiKP PKPdf 13 48 22.0 +0.5
baz=116
H16A Russell Place, 115.64 44 ⇑PKiKP PKPdf 13 48 22.1 +0.3
baz=116
DUG Dugway 115.66 49 ⇓PKiKP PKiKP 13 48 22.7 +0.8
baz=116
F17A Fitzpatrick Pl 115.69 42 ⇓PKiKP PKPdf 13 48 22.4 +0.6
baz=116
I16A Newdale 115.70 45 ⇑PKiKP PKiKP 13 48 22.6 +0.7
baz=116
PDMCI Parker Dam,Lak 115.76 55 ⇓PKiKP PKiKP 13 48 22.7 +0.7
baz=116
J16A Bone 115.78 45 ⇑PKiKP PKiKP 13 48 22.8 +0.7
baz=116
W13A Hualapai Mount 115.83 54 ⇓PKiKP PKiKP 13 48 23.1 +0.6
baz=116
A19A Klindworth Far 115.94 39 ⇑PKiKP PKPdf 13 48 21.8 -0.2
baz=116
E18A Harlowton 115.98 41 ⇑PKiKP PKiKP 13 48 22.4 +0.1
baz=116
C19A Slack Wire Ran 116.16 40 ⇓PKiKP PKiKP 13 48 22.9 +0.3
baz=116
L16A Fish Haven 116.23 47 ⇑PKiKP PKiKP 13 48 23.4 +0.4
baz=116
113A Mohawk Valley, 116.31 57 ⇓PKiKP PKiKP 13 48 24.0 +0.9
baz=116
F18A Big Timber 116.32 42 ⇑PKiKP PKiKP 13 48 23.6 +0.6
baz=116
I17A Pilgrim Ck. 116.32 44 ⇑PKiKP PKiKP 13 48 24.0 +0.8
baz=116
SNOW Snow King Moun 116.33 45 ePKPdf PKPdf 13 48 24.6 +1.3
J17A Brown Place, J 116.38 45 ⇓PKiKP PKiKP 13 48 24.1 +0.8
baz=116
D19A Cripps Ranch, 116.46 40 ⇑PKiKP PKPdf 13 48 23.1 -0.1
baz=116
A20A Cobblestone Ra 116.47 38 ⇓PKiKP PKiKP 13 48 23.2 +0.1
baz=116
B20A Solberg Farm, 116.56 39 ⇑PKiKP PKiKP 13 48 23.4 +0.1
baz=116
E19A Rath Farm, Rou 116.75 41 ⇑PKiKP PKiKP 13 48 23.9 +0.2
baz=117
HINF Hinteralfeld 116.80 320 ePKIKP PKPdf 13 48 22.8 -0.9
comp=Z,8.3nm,0.5s
HINF Hinteralfeld 116.80 320 ePKIKP PKPdf 13 48 22.8 -0.9
HINF Hinteralfeld 116.80 320 ePKPdf PKPdf 13 48 22.8 -0.9
C20A Veseth Ranch, 116.83 40 ⇓PKiKP PKiKP 13 48 23.9 +0.1
baz=117
F19A Roth Farm, Mol 116.84 42 ⇓PKiKP PKiKP 13 48 24.2 +0.2
baz=117
U15A North Rim 116.86 53 ⇓PKiKP PKiKP 13 48 25.5 +0.9
baz=117
I18A Diamond G Ranc 116.91 44 ⇓PKiKP PKiKP 13 48 24.8 +0.5
baz=117
J18A Kendall Valley 116.91 45 ⇑PKiKP PKiKP 13 48 24.8 +0.5
baz=117
M17A Scullys Gap (B 116.93 47 ⇓PKiKP PKiKP 13 48 24.6 +0.2
baz=117
N17A Moffit Pass 116.94 48 ⇓PKiKP PKiKP 13 48 24.8 +0.3
baz=117
D20A Manuel Ranch, 116.96 40 ⇓PKiKP PKiKP 13 48 24.4 +0.3
baz=117
PGF Pioggiola 117.01 314 ePKIKP PKPdf 13 48 23.2 -1.2
comp=Z,3.9nm,0.6s
PGF Pioggiola 117.01 314 ePKIKP PKPdf 13 48 23.2 -1.2
PGF Pioggiola 117.01 314 ePKPdf PKPdf 13 48 23.2 -1.2
A21A Bergtoll Ranch 117.04 38 ⇓PKiKP PKPdf 13 48 23.9 -0.2
baz=117
K18A Toltan Ranch, 117.06 46 ⇑PKiKP PKiKP 13 48 25.2 +0.6
baz=117
GIVF Givet 117.19 323 ePKIKP PKPdf 13 48 24.1 -0.2
GIVF Givet 117.19 323 ePKIKP PKPdf 13 48 24.1 -0.2
GIVF Givet 117.19 323 ePKPdf PKPdf 13 48 24.1 -0.2
Q16A Castle Valley 117.19 50 ⇓PKiKP PKiKP 13 48 25.4 +0.4
baz=117
H19A Powell 117.19 43 ⇑PKiKP PKiKP 13 48 25.4 +0.6
baz=117
O17A Robinson Place 117.20 48 ⇓PKiKP PKiKP 13 48 25.3 +0.3
baz=117
214A Organ Pipe Nat 117.23 58 ⇓PKiKP PKPdf 13 48 24.9 -0.1
baz=117
L18A Fontenelle, Gr 117.26 46 ⇓PKiKP PKiKP 13 48 25.6 +0.6
baz=117
C21A Desert Coulee 117.36 39 ⇑PKiKP PKiKP 13 48 25.0 +0.2
baz=117
BW06 Boulder Array 117.36 45 ⇓PKiKP PKiKP 13 48 25.3 +0.1
baz=117
PDAR Pinedale Array 117.36 45 PKP PKPdf 13 48 25.2 0.0
PDAR SKP 13 51 48.1
PDAR PKKPbc PKKPbc 13 58 48.9 -1.3
PDAR Pinedale Array 117.36 45 PKP PKPdf 13 48 25.2 0.0
comp=Z,2.0nm,0.7s,baz=244,slow=1.1,SNR=17
PDAR SKP 13 51 48.1
comp=Z,0.8nm,0.8s,baz=63,slow=0.3,SNR=4.9
PDAR PKKPbc PKKPbc 13 58 48.9 -1.3
comp=Z,1.0nm,0.9s,baz=92,slow=7.4,SNR=4.9
I19A Meeteetse 117.38 44 ⇓PKiKP PKiKP 13 48 25.6 +0.4
baz=117
P17A Butcher Ranch, 117.38 49 ⇑PKiKP PKiKP 13 48 25.8 +0.5
baz=117

F20A Billings 117.39 42 ⇑PKiKP PKiKP 13 48 25.6 +0.6
baz=117
G20A Bridger 117.53 42 ⇑PKiKP PKiKP 13 48 25.8 +0.5
baz=118
J19A Crowheart 117.57 45 ⇑PKiKP PKiKP 13 48 25.8 +0.3
baz=118
SRU San Rafael 117.63 49 ePKIKP PKPdf 13 48 25.8 0.0
SRU San Rafael 117.63 49 ePKPdf PKPdf 13 48 25.8 0.0
SRU San Rafael 117.63 49 ⇓PKiKP PKiKP 13 48 26.1 +0.3
baz=118
A22A Carney Farms, 117.65 38 ⇑PKiKP PKiKP 13 48 25.8 +0.5
baz=118
LPG La Plagne 117.65 318 ⇑iPKIKP PKPdf 13 48 25.4 -0.3
comp=Z,7.2nm,0.5s
LPG La Plagne 117.65 318 ⇑iPKIKP PKPdf 13 48 25.4 -0.3
LPG La Plagne 117.65 318 ⇑iPKPdf PKPdf 13 48 25.4 -0.3
LPL La Plagne 117.66 318 ⇑iPKIKP PKPdf 13 48 25.3 -0.4
comp=Z,10nm,0.5s
LPL La Plagne 117.66 318 ⇑iPKIKP PKPdf 13 48 25.3 -0.4
LPL La Plagne 117.66 318 ⇑iPKPdf PKPdf 13 48 25.3 -0.4
L19A Farson 117.70 46 ⇓PKiKP PKiKP 13 48 26.3 +0.5
baz=118
D21A La Casta Ranch 117.70 40 ⇓PKiKP PKiKP 13 48 26.1 +0.5
baz=118
CABF La Chapelle 117.71 319 ⇑iPKIKP PKPdf 13 48 25.3 -0.3
comp=Z,23nm,0.6s
CABF La Chapelle 117.71 319 ⇑iPKIKP PKPdf 13 48 25.3 -0.3
CABF La Chapelle 117.71 319 ⇑iPKPdf PKPdf 13 48 25.3 -0.3
WUAZ Wupatki 117.77 54 ePKPdf PKPdf 13 48 26.9 +0.8
WUAZ Wupatki 117.77 54 ⇓PKiKP PKPdf 13 48 26.9 +0.8
baz=118
K19A Absolon Red Bu 117.85 45 ⇑PKiKP PKiKP 13 48 26.1 0.0
baz=118
B22A Reddig Ranch S 117.87 38 ⇓PKiKP PKiKP 13 48 26.2 +0.4
baz=118
MBDF Montbardon 117.89 317 ePKIKP PKPdf 13 48 25.9 -0.2
comp=Z,5.6nm,0.7s
MBDF Montbardon 117.89 317 ePKIKP PKPdf 13 48 25.9 -0.2
MBDF Montbardon 117.89 317 ePKPdf PKPdf 13 48 25.9 -0.2
H20A Greybull 117.92 43 ⇑PKiKP PKiKP 13 48 26.5 +0.4
baz=118
X16A Lo Mia Camp, P 117.94 55 ⇑PKiKP PKiKP 13 48 26.7 +0.2
baz=118
I20A Worland 118.00 44 ⇓PKiKP PKiKP 13 48 26.4 +0.2
baz=118
M19A Rock Springs 118.01 47 ⇓PKiKP PKiKP 13 48 26.9 +0.4
baz=118
C22A Vida 118.15 39 ⇓PKiKP PKiKP 13 48 26.7 +0.3
baz=118
D22A Cohagen 118.19 40 ⇓PKiKP PKiKP 13 48 27.2 +0.8
baz=118
J20A Shoshoni 118.22 44 ⇑PKiKP PKiKP 13 48 27.3 +0.5
baz=118
K20A Yellowstone Ra 118.25 45 ⇑PKiKP PKiKP 13 48 27.0 +0.1
baz=118
S18A Hurst Farm, Bl 118.38 51 ⇑PKiKP PKiKP 13 48 27.5 +0.2
baz=118
B23A Brockton 118.42 38 ⇑PKiKP PKiKP 13 48 27.1 +0.2
baz=118
ORIF Oris-en-Rattie 118.43 318 ePKIKP PKPdf 13 48 25.5 -1.5
comp=Z,7.1nm,0.6s
ORIF Oris-en-Rattie 118.43 318 ePKIKP PKPdf 13 48 25.5 -1.5
ORIF Oris-en-Rattie 118.43 318 ePKPdf PKPdf 13 48 25.5 -1.5
KEST Kesra 118.43 307 PKP PKPdf 13 48 27.3 0.0
KEST Kesra 118.43 307 PKP PKPdf 13 48 27.3 0.0
comp=Z,1.1nm,0.6s,baz=101,slow=0.3,SNR=4.7
L20A Wamsutter 118.45 46 ⇓PKiKP PKiKP 13 48 27.5 +0.2
baz=118
H21A Big Horn, Sher 118.52 43 ⇓PKiKP PKiKP 13 48 27.4 +0.1
baz=118
C23A Lambert 118.56 39 ⇓PKiKP PKiKP 13 48 27.8 +0.6
baz=118
E22A Miles City 118.60 40 ⇑PKiKP PKiKP 13 48 27.9 +0.6
baz=119
I21A Big Trails, Te 118.62 44 ⇓PKiKP PKiKP 13 48 27.7 +0.2
baz=119
Q19A Hogan Spring (118.62 49 ⇓PKiKP PKiKP 13 48 27.6 0.0
baz=119
F22A Rosebud 118.64 41 ⇑PKiKP PKiKP 13 48 27.9 +0.5
baz=119
P19A Cripple Cowboy 118.65 49 ⇓PKiKP PKiKP 13 48 28.2 +0.4
baz=119
J21A Lysite 118.66 44 ⇑PKiKP PKiKP 13 48 27.7 0.0
baz=119
M20A Sweetwater, Wa 118.71 46 ⇑PKiKP PKiKP 13 48 28.3 +0.4
baz=119
D23A Lindsay 118.79 39 ⇑PKiKP PKiKP 13 48 28.3 +0.6
baz=119
G22A Birney 118.81 42 ⇓PKiKP PKiKP 13 48 28.3 +0.5
baz=119
A24A Westby 118.83 37 ⇓PKiKP PKiKP 13 48 28.3 +0.7
baz=119
N20A Spence Gulch, 118.85 47 ⇓PKiKP PKiKP 13 48 28.8 +0.6
baz=119
LOR Lormes 118.89 321 ePKIKP PKPdf 13 48 27.2 -0.5
LOR Lormes 118.89 321 ePKPdf PKPdf 13 48 27.2 -0.5
DGMT Dagmar 118.91 38 ⇓PKiKP PKiKP 13 48 28.6 +0.8
baz=119
SMRF Simiane la Rot 118.95 317 ePKIKP PKPdf 13 48 27.4 -0.6
comp=Z,3.7nm,0.5s
SMRF Simiane la Rot 118.95 317 ePKPdf PKPdf 13 48 27.4 -0.6
H22A Clearmont 118.99 42 ⇑PKiKP PKPdf 13 48 27.9 -0.2
baz=119
K21A Alcova 119.02 45 ⇑PKiKP PKPdf 13 48 28.4 0.0
baz=119
SMF Signal de Mont 119.14 320 ePKIKP PKPdf 13 48 27.5 -0.7
SMF Signal de Mont 119.14 320 ePKIKP PKPdf 13 48 27.5 -0.7
SMF Signal de Mont 119.14 320 ePKPdf PKPdf 13 48 27.5 -0.7
L21A Rawlins 119.15 46 ⇓PKiKP PKiKP 13 48 28.7 0.0
baz=119
SSF Saint Saulge 119.19 321 ⇑iPKIKP PKPdf 13 48 27.9 -0.4
comp=Z,15nm,0.8s
SSF Saint Saulge 119.19 321 ⇑iPKIKP PKPdf 13 48 27.9 -0.4
SSF Saint Saulge 119.19 321 ⇑iPKPdf PKPdf 13 48 27.9 -0.4
VIVF Saint-Julien-l 119.25 318 ePKIKP PKPdf 13 48 28.0 -0.5
comp=Z,8.5nm,0.6s
VIVF Saint-Julien-l 119.25 318 ePKIKP PKPdf 13 48 28.0 -0.5
VIVF Saint-Julien-l 119.25 318 ePKPdf PKPdf 13 48 28.0 -0.5
M21A Separation Pea 119.27 46 ⇓PKiKP PKiKP 13 48 29.0 0.0
baz=119
J22A Midwest 119.31 44 ⇓PKiKP PKPdf 13 48 28.6 -0.2
baz=119
Q20A Ridgley Place, 119.35 49 ⇑PKiKP PKiKP 13 48 29.8 +0.6
baz=119
AVF Avril sur Loir 119.39 320 ⇑iPKIKP PKPdf 13 48 28.0 -0.6
comp=Z,5.3nm,0.6s
AVF Avril sur Loir 119.39 320 ⇑iPKIKP PKPdf 13 48 28.0 -0.6
AVF Avril sur Loir 119.39 320 ⇑iPKPdf PKPdf 13 48 28.0 -0.6
N21A Black Mountain 119.41 47 ⇑PKiKP PKiKP 13 48 29.6 +0.3
baz=119
G23A Biddle 119.41 42 ⇑PKiKP PKiKP 13 48 29.3 +0.4
baz=119
R20A Redvale 119.49 50 ⇓PKiKP PKiKP 13 48 30.0 +0.5
baz=120
K22A Casper 119.53 45 ⇑PKiKP PKPdf 13 48 29.3 0.0
baz=120
S20A Disappointment 119.60 50 ⇓PKiKP PKiKP 13 48 30.1 +0.3
baz=120
E24A Baker 119.60 40 ⇑PKiKP PKiKP 13 48 30.1 +0.8
baz=120
O21A Pagoda 119.60 48 ⇓PKiKP PKiKP 13 48 30.2 +0.5
baz=120
MVCO Mesa Verde 119.65 51 ⇓PKiKP PKiKP 13 48 30.7 +0.9
baz=120
F24A Ekalaka 119.79 41 ⇓PKiKP PKiKP 13 48 29.8 +0.1
baz=120
BGF Bois d'Agland 119.80 320 ⇑iPKIKP PKPdf 13 48 29.3 -0.2
comp=Z,18nm,0.7s
BGF Bois d'Agland 119.80 320 ⇑iPKIKP PKPdf 13 48 29.3 -0.2
BGF Bois d'Agland 119.80 320 ⇑iPKPdf PKPdf 13 48 29.3 -0.2
P21A Newcastle 119.82 48 ⇑PKiKP PKiKP 13 48 30.7 +0.5
baz=120
U20A Newcomb 119.84 52 ⇑PKiKP PKiKP 13 48 30.7 +0.5
baz=120
M22A Cedar Creek Ra 119.88 46 ⇓PKiKP PKiKP 13 48 30.5 +0.3
baz=120
Q21A Lamborn Mesa, 119.92 49 ⇓PKiKP PKiKP 13 48 31.1 +0.8
baz=120
V20A Brimhall 120.02 53 ⇑PKiKP PKiKP 13 48 31.2 +0.6
baz=120
R21A Cimarron 120.07 50 ⇑PKiKP PKiKP 13 48 31.3 +0.6
baz=120
S21A Coal Bank Pass 120.08 50 ⇑PKiKP PKiKP 13 48 31.8 +1.0
baz=120
H24A Dirks Ranch, A 120.13 42 ⇓PKiKP PKPdf 13 48 30.2 -0.1
baz=120
W20A Ramah 120.15 53 ⇓PKiKP PKiKP 13 48 31.6 +0.7

baz=120
N22A Wattenberg Ran 120.17 47 ⇓PKiKP PKiKP 13 48 31.2 +0.4
baz=120
L23A Garrett 120.28 45 ⇓PKiKP PKiKP 13 48 31.0 +0.1
baz=120
X20A Quemado 120.29 54 ⇓PKiKP PKiKP 13 48 32.2 +1.0
baz=120
O22A Kremmling 120.30 47 ⇓PKiKP PKiKP 13 48 31.2 +0.1
baz=120
319A Douglas 120.30 58 ⇑PKiKP PKiKP 13 48 32.1 +1.0
baz=120
P22A Eagle 120.31 48 ⇓PKiKP PKiKP 13 48 31.8 +0.8
baz=120
TCF Toulx Ste Croi 120.31 320 ⇑iPKIKP PKPdf 13 48 30.2 -0.3
comp=Z,11nm,0.8s
TCF Toulx Ste Croi 120.31 320 ⇑iPKIKP PKPdf 13 48 30.2 -0.3
TCF Toulx Ste Croi 120.31 320 ⇑iPKPdf PKPdf 13 48 30.2 -0.3
Q22A Crested Butte, 120.41 49 ⇓PKiKP PKiKP 13 48 32.4 +1.0
baz=120
T21A Navajo Lake 120.45 51 ⇓PKiKP PKiKP 13 48 32.1 +0.7
baz=120
M23A Laramie 120.48 46 ⇑PKiKP PKiKP 13 48 31.5 +0.2
baz=120
U21A Nageezi 120.50 52 ⇑PKiKP PKiKP 13 48 32.5 +0.9
baz=120
Z20A Nine Sixteen R 120.52 56 ⇓PKiKP PKiKP 13 48 32.6 +1.0
baz=120
Y20A Horse Springs, 120.53 55 ⇓PKiKP PKiKP 13 48 32.4 +0.7
baz=120
120A U Bar Ranch, L 120.61 56 ⇓PKiKP PKiKP 13 48 32.5 +0.7
baz=121
R22A Saguache, Gunn 120.71 50 ⇓PKiKP PKiKP 13 48 33.1 +1.1
baz=121
RSSD Black Hills 120.71 42 ePKIKP PKPdf 13 48 30.9 -0.7
RSSD Black Hills 120.71 42 ePKPdf PKPdf 13 48 30.9 -0.7
O23A Lake Granby, G 120.74 47 ⇑PKiKP PKPdf 13 48 31.7 -0.2
baz=121
LDF La Druitiere 120.75 323 ePKIKP PKPdf 13 48 30.6 -0.6
LDF La Druitiere 120.75 323 ePKIKP PKPdf 13 48 30.6 -0.6
LDF La Druitiere 120.75 323 ePKPdf PKPdf 13 48 30.6 -0.6
S22A 4UR Ranch, Cre 120.79 50 ⇑PKiKP PKiKP 13 48 33.2 +1.1
baz=121
220A Playas Peak, P 120.83 57 ⇓PKiKP PKiKP 13 48 33.0 +0.8
baz=121
W21A San Fidel 120.83 53 ⇓PKiKP PKiKP 13 48 32.6 +0.4
baz=121
X21A Alamocita Cree 120.88 54 ⇓PKiKP PKiKP 13 48 33.3 +0.9
baz=121
FLN La Foliniere 120.89 324 ePKIKP PKPdf 13 48 31.0 -0.5
FLN La Foliniere 120.89 324 ePKIKP PKPdf 13 48 31.0 -0.5
FLN La Foliniere 120.89 324 ePKPdf PKPdf 13 48 31.0 -0.5
T22A Edith 120.93 51 ⇓PKiKP PKiKP 13 48 32.9 +0.5
baz=121
CAF Calviac 120.95 319 ePKIKP PKPdf 13 48 31.3 -0.5
comp=Z,9.0nm,0.8s
CAF Calviac 120.95 319 ePKIKP PKPdf 13 48 31.3 -0.5
CAF Calviac 120.95 319 ePKPdf PKPdf 13 48 31.3 -0.5
P23A Jefferson 121.06 48 ⇓PKiKP PKiKP 13 48 33.0 +0.3
baz=121
Y21A Point of Rocks 121.07 55 ⇑PKiKP PKiKP 13 48 33.1 +0.3
baz=121
ISCO Idaho Springs 121.09 48 ⇓PKiKP PKiKP 13 48 33.1 +0.4
baz=121
U22A Llaves 121.14 52 ⇑PKiKP PKiKP 13 48 34.1 +1.3
baz=121
RJF Les Rejaudoux 121.15 319 ePKIKP PKPdf 13 48 31.4 -0.7
RJF Les Rejaudoux 121.15 319 ePKIKP PKPdf 13 48 31.4 -0.7
RJF Les Rejaudoux 121.15 319 ePKPdf PKPdf 13 48 31.4 -0.7
Q23A Hartsel 121.20 49 ⇑PKiKP PKiKP 13 48 33.9 +1.0
baz=121
GRR Gorron 121.28 323 ePKIKP PKPdf 13 48 31.4 -0.8
GRR Gorron 121.28 323 ePKIKP PKPdf 13 48 31.4 -0.8
GRR Gorron 121.28 323 ePKPdf PKPdf 13 48 31.4 -0.8
N24A Carr 121.29 46 ⇑PKiKP PKiKP 13 48 33.1 +0.2
baz=121
121A Cookes Peak, D 121.31 56 ⇑PKiKP PKiKP 13 48 34.1 +0.9
baz=121
R23A Moffat 121.42 49 ⇓PKiKP PKiKP 13 48 34.1 +0.7
baz=121
MTLF Montolieu 121.46 317 ⇑iPKIKP PKPdf 13 48 32.4 -0.4
MTLF Montolieu 121.46 317 ⇑iPKIKP PKPdf 13 48 32.4 -0.4
MTLF Montolieu 121.46 317 ⇑iPKPdf PKPdf 13 48 32.4 -0.4
X22A Bernardo 121.49 54 ⇓PKiKP PKiKP 13 48 34.6 +1.2
baz=122
T23A Casias Ranch, 121.59 51 ⇓PKiKP PKiKP 13 48 34.7 +0.9
baz=122
MFF Saint Martin d 121.66 321 ⇑iPKIKP PKPdf 13 48 32.6 -0.4
comp=Z,17nm,0.7s
MFF Saint Martin d 121.66 321 ⇑iPKIKP PKPdf 13 48 32.6 -0.4
MFF Saint Martin d 121.66 321 ⇑iPKPdf PKPdf 13 48 32.6 -0.4
Y22A Socorro 121.66 54 ⇑PKiKP PKiKP 13 48 34.6 +0.8
baz=122
U23A El Rito 121.67 52 ⇑PKiKP PKiKP 13 48 34.6 +0.7
baz=122
LFF La Frestale 121.80 319 ePKIKP PKPdf 13 48 32.5 -0.8
LFF La Frestale 121.80 319 ePKIKP PKPdf 13 48 32.5 -0.8
LFF La Frestale 121.80 319 ePKPdf PKPdf 13 48 32.5 -0.8
Z22A Elephant Butte 121.82 55 ⇓PKiKP PKiKP 13 48 35.0 +0.9
baz=122
V23A Ortiz Mt. (NFS 121.83 52 ⇓PKiKP PKiKP 13 48 35.1 +1.0
baz=122
LPM Los Pinos Moun 121.84 54 ePKPdf PKPdf 13 48 34.5 +0.5
BNM Barren Site 121.88 54 ePKPdf PKPdf 13 48 34.6 +0.5
R24A Sanders Place, 121.95 49 ⇓PKiKP PKiKP 13 48 34.7 +0.4
baz=122
222A Williams Famil 121.97 57 ⇑PKiKP PKiKP 13 48 34.9 +0.5
baz=122
W23A Werner Place, 122.01 53 ⇓PKiKP PKiKP 13 48 35.7 +1.2
baz=122
X23A Hourglass Bar 122.13 54 ⇓PKiKP PKiKP 13 48 35.6 +0.8
baz=122
P25A Willow Gulch B 122.24 47 ⇑PKiKP PKiKP 13 48 35.5 +0.7
baz=122
T24A Torres, Weston 122.33 50 ⇓PKiKP PKiKP 13 48 35.7 +0.5
baz=122
SGMF Saint Gilles 122.34 324 ePKIKP PKPdf 13 48 33.7 -0.6
SGMF Saint Gilles 122.34 324 ePKIKP PKPdf 13 48 33.7 -0.6
SGMF Saint Gilles 122.34 324 ePKPdf PKPdf 13 48 33.7 -0.6
Q25A Bedland, Calha 122.37 48 ⇓PKiKP PKiKP 13 48 35.6 +0.5
baz=122
Y23A Lovelace Mesa, 122.40 54 ⇑PKiKP PKiKP 13 48 36.0 +0.7
baz=122
Z23A Rita Site, Whi 122.42 55 ⇑PKiKP PKiKP 13 48 36.0 +0.8
baz=122
V24A Rampart Ranch, 122.55 52 ⇑PKiKP PKiKP 13 48 36.6 +1.0
baz=122
W24A Lazy 6 Ranch, 122.58 53 ⇓PKiKP PKiKP 13 48 36.6 +1.0
baz=123
R25A Fountain Ranch 122.59 49 ⇑PKiKP PKiKP 13 48 35.9 +0.4
baz=123
O26A Horse Wrangler 122.61 46 ⇑PKiKP PKiKP 13 48 35.5 0.0
baz=123
S25A Robets Cordova 122.63 50 ⇑PKiKP PKiKP 13 48 36.0 +0.4
baz=123
X24A Lazy VL Ranch, 122.73 53 ⇓PKiKP PKiKP 13 48 36.2 +0.3
baz=123
M27A Reverse DX Ran 122.80 45 ⇑PKiKP PKiKP 13 48 36.4 +0.7
baz=123
T25A Trinidad 122.81 50 ⇓PKiKP PKiKP 13 48 36.4 +0.3
baz=123
P26A Davis Ranch, A 122.82 47 ⇓PKiKP PKiKP 13 48 36.2 +0.3
baz=123
ULM Lac du Bonnet 122.84 33 PKP PKPdf 13 48 34.2 -0.9
ULM SKP 13 51 57.9
ULM Lac du Bonnet 122.84 33 PKP PKPdf 13 48 34.2 -0.9
comp=Z,3.0nm,0.4s,baz=279,slow=2.6,SNR=8.6
ULM SKP 13 51 57.9
comp=Z,1.0nm,0.4s,baz=134,slow=2.3,SNR=3.2
Y24A Capitan 122.90 54 ⇓PKiKP PKiKP 13 48 37.1 +0.8
baz=123
Q26A Hugo 122.91 48 ⇑PKiKP PKiKP 13 48 36.8 +0.7
baz=123
N27A Anderson Farm, 122.96 45 ⇑PKiKP PKiKP 13 48 36.2 +0.1
baz=123
U25A Circle Dot Ran 123.03 51 ⇑PKiKP PKiKP 13 48 37.2 +0.7
baz=123
V25A Rancho No Teng 123.03 52 ⇑PKiKP PKiKP 13 48 37.4 +0.9
baz=123
R26A Arlington 123.17 49 ⇓PKiKP PKiKP 13 48 37.0 +0.4
baz=123
124A Stringfield Ra 123.19 55 ⇑PKiKP PKiKP 13 48 37.7 +0.7
baz=123
224A Cornudas Mount 123.28 56 ⇓PKiKP PKiKP 13 48 37.2 +0.1
baz=123
W25A X Bar L Ranch, 123.33 52 ⇑PKiKP PKiKP 13 48 37.4 +0.3
baz=123
S26A Kim 123.37 49 ⇑PKiKP PKiKP 13 48 37.5 +0.5

	baz=123						
T26A	Comanche Natio	123.42	50	⇑PKiKP	PKiKP	13 48 37.7	+0.5
	baz=123						
324A	Moseley Ranch,	123.46	57	⇓PKiKP	PKiKP	13 48 37.8	+0.4
	baz=124						
MNTX	Cornudas Mount	123.48	57	*e*PKPdf	PKPdf	13 48 37.5	+0.5
MNTX	Cornudas Mount	123.48	57	⇓PKiKP	PKiKP	13 48 37.9	+0.6
	baz=124						
Y25A	Mesa, Roswell	123.50	54	⇑PKiKP	PKiKP	13 48 37.8	+0.4
	baz=124						
U26A	Atchley Ranch,	123.54	51	⇑PKiKP	PKiKP	13 48 37.8	+0.3
	baz=124						
Z25A	Roswell	123.64	55	⇓PKiKP	PKiKP	13 48 38.4	+0.7
	baz=124						
R27A	Eads	123.65	48	⇓PKiKP	PKiKP	13 48 37.8	+0.3
	baz=124						
125A	Gardner Draw,	123.85	55	⇑PKiKP	PKiKP	13 48 38.4	+0.3
	baz=124						
225A	Deer Hill, Car	123.85	56	⇓PKiKP	PKiKP	13 48 38.4	+0.2
	baz=124						
SJPF	Ste Jean	123.85	318	*e*PKIKP	PKPdf	13 48 37.0	-0.4
SJPF	Ste Jean	123.85	318	*e*PKIKP	PKPdf	13 48 37.0	-0.4
SJPF	Ste Jean	123.85	318	*e*PKPdf	PKPdf	13 48 37.0	-0.4
325A	Bean Ranch, Si	123.90	57	⇓PKiKP	PKiKP	13 48 38.4	+0.1
	baz=124						
425A	Indio Mountain	124.03	58	⇓PKiKP	PKiKP	13 48 38.8	+0.3
	baz=124						
X26A	CR and CF Fran	124.03	53	⇓PKiKP	PKiKP	13 48 38.3	-0.1
	baz=124						
T27A	Campo	124.11	50	⇓PKiKP	PKiKP	13 48 38.8	+0.3
	baz=124						
126A	Clayton Basin,	124.37	55	⇑PKiKP	PKiKP	13 48 39.1	0.0
	baz=124						
226B	Tecolote Peak,	124.40	56	⇓PKiKP	PKiKP	13 48 39.3	+0.1
	baz=124						
W27A	Bowe Ranch, En	124.47	52	⇑PKiKP	PKiKP	13 48 39.3	0.0
	baz=124						
T28A	Walsh	124.55	49	⇓PKiKP	PKiKP	13 48 39.7	+0.3
	baz=124						
X27A	F and S Farms,	124.56	53	⇓PKiKP	PKiKP	13 48 39.7	+0.2
	baz=125						
Y27A	Causey	124.73	54	⇓PKiKP	PKiKP	13 48 39.9	+0.1
	baz=125						
326A	Caldwell Ranch	124.74	57	⇓PKiKP	PKiKP	13 48 40.2	+0.3
	baz=125						
Z27A	Tatum	124.85	54	⇓PKiKP	PKiKP	13 48 40.5	+0.5
	baz=125						
426A	McDonald Obser	124.85	58	⇓PKiKP	PKiKP	13 48 40.4	+0.1
	baz=125						
526A	Mary Lane Ranc	124.94	58	⇓PKiKP	PKiKP	13 48 40.6	+0.2
	baz=125						
MSTX	Muleshoe	125.02	53	⇓PKiKP	PKiKP	13 48 40.6	+0.2
	baz=125						
626A	Big Bend Ranch	125.02	59	⇓PKiKP	PKiKP	13 48 40.6	+0.2
	baz=125						
X28A	Dimmitt	125.31	52	⇑PKiKP	PKiKP	13 48 41.1	+0.2
	baz=125						
427A	Hayter Ranch,	125.33	57	⇑PKiKP	PKiKP	13 48 41.4	+0.3
	baz=125						
V29A	Stinnett	125.41	51	⇓PKiKP	PKiKP	13 48 41.4	+0.4
	baz=125						
TXAR	Lajitas Array	125.47	59	PKP	PKPdf	13 48 41.8	+0.8
TXAR				SKPbc	SKiKP	13 51 45.3	-21
TXAR	Lajitas Array	125.47	59	PKP	PKPdf	13 48 41.8	+0.8
	comp=Z,2.4nm,0.7s,baz=292,slow=2.1,SNR=15						
TXAR				SKPbc	SKiKP	13 51 45.3	-21
	comp=Z,0.8nm,0.6s,baz=264,slow=3.5,SNR=5.3						
AMTX	Amarillo	125.60	52	⇑PKiKP	PKiKP	13 48 41.4	0.0
	baz=126						
128A	Castleberry Fa	125.63	55	⇑PKiKP	PKPdf	13 48 41.4	+0.2
	baz=126						
627A	Terlingua Ranc	125.67	59	⇓PKiKP	PKiKP	13 48 42.0	+0.2
	baz=126						
328A	Wristen Ranch,	125.69	56	⇑PKiKP	PKiKP	13 48 41.9	+0.2
	baz=126						
X29A	Tulia	125.72	52	⇑PKiKP	PKiKP	13 48 41.9	+0.2
	baz=126						
BGNE	Belgrade	125.77	43	⇓PKiKP	PKiKP	13 48 41.6	0.0
	baz=126						
Y29A	Porterfield Fa	125.92	53	⇓PKiKP	PKiKP	13 48 42.4	+0.3
	baz=126						
428A	Kincaid Ranch,	125.96	57	⇓PKiKP	PKiKP	13 48 42.4	+0.1
	baz=126						
528A	Cox Ranch, San	126.02	58	⇑PKiKP	PKiKP	13 48 42.5	0.0
	baz=126						
Z29A	Hungry Hill Ra	126.07	54	⇓PKiKP	PKiKP	13 48 42.8	+0.4
	baz=126						
V30A	Spur Ranch, Mi	126.09	51	⇑PKiKP	PKiKP	13 48 43.0	+0.6
	baz=126						
628A	Black Gap, Mar	126.09	59	⇑PKiKP	PKiKP	13 48 42.7	+0.1
	baz=126						
129A	Stewart Farms,	126.12	55	⇓PKiKP	PKiKP	13 48 42.6	0.0
	baz=126						
329A	Wagon Wheel Ra	126.35	56	⇓PKiKP	PKiKP	13 48 43.0	0.0
	baz=126						
229A	Bryant Ranch,	126.36	55	⇑PKiKP	PKiKP	13 48 43.1	+0.1
	baz=126						
T31A	Randall Ranch,	126.39	49	⇑PKiKP	PKiKP	13 48 43.0	+0.1
	baz=126						
529A	Stev Forest Ra	126.50	58	⇑PKiKP	PKiKP	13 48 43.4	+0.1
	baz=126						
Z30A	Sanderson Ranc	126.53	54	⇓PKiKP	PKiKP	13 48 43.2	-0.1
	baz=126						
Y30A	Stafford Cattl	126.53	53	⇑PKiKP	PKiKP	13 48 43.7	+0.4
	baz=126						
429A	Davenport Ranc	126.65	57	⇑PKiKP	PKiKP	13 48 43.7	0.0
	baz=127						
W31A	Holland Ranch,	126.85	51	⇓PKiKP	PKiKP	13 48 44.1	+0.2
	baz=127						
130A	Snyder	126.86	54	⇓PKiKP	PKiKP	13 48 44.0	0.0
	baz=127						
Y31A	Rekieta Farm,	127.01	53	⇓PKiKP	PKiKP	13 48 44.5	+0.2
	baz=127						
X31A	McDonald Ranch	127.01	52	⇑PKiKP	PKiKP	13 48 44.4	+0.1
	baz=127						
330A	Mertzon	127.03	56	⇓PKiKP	PKiKP	13 48 44.4	0.0
	baz=127						
430A	Baggett Ranch,	127.15	57	⇑PKiKP	PKiKP	13 48 44.5	-0.1
	baz=127						
ESDC	Sonseca Array	127.18	315	PP	PP	13 50 43.4	-0.7
ESDC	Sonseca Array	127.18	315	PP	PP	13 50 43.4	-0.7
	comp=Z,5.1nm,0.8s,baz=58,slow=7.0,SNR=13						
530A	J-C Ranch, Com	127.23	57	⇓PKiKP	PKiKP	13 48 45.1	+0.3
	baz=127						
SPMN	St. Paul	127.31	37	⇓PKiKP	PKiKP	13 48 44.4	0.0
	baz=127						
231A	Bronte	127.58	55	⇓PKiKP	PKiKP	13 48 45.3	-0.1
	baz=128						
331A	San Angelo	127.67	56	⇓PKiKP	PKiKP	13 48 45.5	-0.1
	baz=128						
431A	Sonora	127.70	57	⇓PKiKP	PKiKP	13 48 45.8	+0.1
	baz=128						
Z32A	Haskell	127.83	53	⇑PKiKP	PKiKP	13 48 45.9	0.0
	baz=128						
531A	Rocksprings	127.89	57	⇑PKiKP	PKiKP	13 48 46.4	+0.3
	baz=128						
631A	Perdido Creek	128.06	58	⇓PKiKP	PKiKP	13 48 46.9	+0.4
	baz=128						
232A	Coleman	128.14	55	⇑PKiKP	PKiKP	13 48 46.8	+0.2
	baz=128						
332A	Millersview	128.21	55	⇑PKiKP	PKiKP	13 48 46.5	-0.2
	baz=128						
TOA0	Torodi Ar. Sit	128.27	281	*e*PKPdf	PKPdf	13 48 46.2	-0.3
TORD	Torodi Ar. Bea	128.27	281	PKP	PKPdf	13 48 46.4	-0.1
TORD				SKPbc	SKiKP	13 51 53.0	-19
TORD	Torodi Ar. Bea	128.27	281	PKP	PKPdf	13 48 46.4	-0.1
	comp=Z,7.9nm,1.0s,baz=80,slow=1.9,SNR=30						
TORD				SKPbc	SKiKP	13 51 53.0	-19
	comp=Z,3.8nm,0.9s,baz=78,slow=3.5,SNR=9.6						
432A	Menard	128.32	56	⇑PKiKP	PKiKP	13 48 46.9	-0.1
	baz=128						
JCT	Junction City	128.42	57	*e*PKIKP	PKPdf	13 48 46.5	0.0
JCT	Junction City	128.42	57	*e*PKPdf	PKPdf	13 48 46.5	0.0
JCT	Junction City	128.42	57	⇑PKiKP	PKiKP	13 48 47.3	+0.1
	baz=128						
532A	Rocksprings	128.44	57	⇓PKiKP	PKiKP	13 48 47.1	-0.1
	baz=128						
632A	Uvalde	128.70	58	⇑PKiKP	PKiKP	13 48 48.0	+0.2
	baz=129						
732A	Laxson Ranch,	128.75	59	⇑PKiKP	PKiKP	13 48 47.9	+0.1
	baz=129						
PLCA	Paso Flores	128.97	160	*e*PKPdf	PKPdf	13 48 48.6	+1.2
PLCA				PKP	PKPdf	13 48 48.8	+1.4
PLCA	Paso Flores	128.97	160	PKP	PKPdf	13 48 48.8	+1.4
	comp=Z,4.9nm,0.7s,baz=214,slow=3.2,SNR=12						
TUL1	Tulsa	129.73	49	⇑PKiKP	PKiKP	13 48 49.7	+0.2
	baz=130						
MDT	Midelt	130.33	307	SKPbc	SKPab	13 52 01.2	-1.4
MDT	Midelt	130.33	307	SKPbc	SKPab	13 52 01.2	-1.4
	comp=Z,6.9nm,0.8s,baz=77,slow=6.5,SNR=6.8						
SCHQ	Schefferville	130.64	12	PKP	PKPdf	13 48 50.4	+0.4
SCHQ				SKPbc	SKPbc	13 52 00.4	-2.6
SCHQ	Schefferville	130.64	12	PKP	PKPdf	13 48 50.4	+0.4
	comp=Z,2.3nm,0.9s,baz=304,slow=10,SNR=3.8						
SCHQ				SKPbc	SKPbc	13 52 00.4	-2.6
	comp=Z,3.0nm,0.6s,baz=3.1,slow=3.0,SNR=7.5						
DBIC	Dimbokro	134.63	272	PKPpre	PKPpre	13 48 48.0	
DBIC				PKP	PKPdf	13 48 58.9	+0.3
DBIC				*e*PKPdf	PKiKP	13 48 59.7	-0.4
DBIC				SKPbc	SKPbc	13 52 15.6	-2.4
DBIC	Dimbokro	134.63	272	PKhKP	PKPpre	13 48 48.0	
	comp=Z,2.4nm,0.7s,baz=321,slow=6.5,SNR=4.3						
DBIC				PKP	PKPdf	13 48 58.9	+0.3
	comp=Z,5.4nm,0.6s,baz=332,slow=3.7,SNR=7.6						
DBIC				SKPbc	SKPbc	13 52 15.6	-2.4
	comp=Z,9.4nm,0.7s,baz=67,slow=5.3,SNR=14						
LIC	Lamto	134.77	272	*e*PKIKP	PKPdf	13 48 57.9	-1.0
	comp=Z,34nm,1.0s						
LIC	Lamto	134.77	272	*e*PKPdf	PKPdf	13 48 57.9	-1.0
KMSC	Kings Mountain	140.29	41	⇑PKiKP	PKiKP	13 49 10.1	-0.9
	baz=140						
BBTS	Babate	145.77	286	PKPbc	PKPab	13 49 19.8	-0.1
BBTS	Babate	145.77	286	PKPbc	PKPab	13 49 19.8	-0.1
	comp=Z,115nm,0.7s,baz=243,slow=0.1,SNR=25						
JTS	JuntasAbangare	145.88	82	*e*PKPbc	PKPab	13 49 20.7	+0.3
CPUP	Villa Florida	146.13	169	PKPbc	PKPbc	13 49 20.1	0.0
CPUP				SKPbc	SKPbc	13 52 47.0	-1.4
CPUP	Villa Florida	146.13	169	PKPbc	PKPbc	13 49 20.1	0.0
	comp=Z,14nm,0.6s,baz=175,slow=1.7,SNR=51						
CPUP				SKPbc	SKPbc	13 52 47.0	-1.4
	comp=Z,1.3nm,0.5s,baz=175,slow=3.2,SNR=3.9						
NNA	Nana	147.72	126	*e*PKPbc	PKPbc	13 49 25.7	+0.7
LPAZ	La Paz	150.98	143	*e*PKPdf	PKPdf	13 49 29.1	+1.2
LPAZ				PKPbc	PKiKP	13 49 34.2	-0.1
LPAZ				*e*PKPbc	PKPbc	13 49 34.8	+1.1
LPAZ				PKPab	PKPab	13 49 42.0	+0.5
LPAZ	La Paz	150.98	143	PKP	PKPdf	13 49 29.1	+1.2
	comp=Z,5.0nm,0.9s,baz=259,slow=1.0,SNR=17						
LPAZ				PKPbc	PKiKP	13 49 34.2	-0.1
	comp=Z,16nm,0.8s,baz=32,slow=5.9,SNR=30						
LPAZ				PKPab	PKPab	13 49 42.0	+0.5
	comp=Z,5.9nm,0.5s,baz=79,slow=1.7,SNR=7.9						

CSEM 07 13:34:36.9, 39°.43N×26°.28E, h20km, MD2.6, After ATH

ATH 07 13:34:36.9, 39°.43N×26°.28E, h20km±2km, MD2.6/4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	Paraskevi	0.18	182	*e*PB	Pb	13 34 41.8	0.0
PRK	Paraskevi	0.18	182	*e*Pb	Pb	13 34 41.8	0.0
LIA	Limnos Island	0.97	299	*e*PN	Pn	13 34 55.3	0.0
LIA				*e*SN	Sn	13 35 09.1	+0.6
LIA	Limnos Island	0.97	299	*e*Pn	Pn	13 34 55.3	0.0
LIA				*e*Sn	Sn	13 35 09.1	+0.6
CHOS	Chios island	1.06	190	*e*PN	Pn	13 34 57.2	+0.5
CHOS				*e*SN	Sn	13 35 11.7	+0.8
CHOS	Chios island	1.06	190	*e*Pn	Pn	13 34 57.2	+0.5
CHOS				*e*Sn	Sn	13 35 11.7	+0.8
ALN	Alexandroupoli	1.48	353	*e*PN	Pb	13 35 04.9	+1.2
ALN				*e*SN	Sb	13 35 24.1	+2.1
ALN	Alexandroupoli	1.48	353	*e*Pn	Pb	13 35 04.9	+1.2
ALN				*e*Sn	Sb	13 35 24.1	+2.1

CSEM 07 13:46:14.0, 42°.46N×13°.43E, h10km, MD2.4/3, After ROM

ROM 07 13:46:14.0±0.1, 42°.46N×13°.43E, h10km±1km, Md2.4/3, Ml2.2/4, Error ellipse: s-maj=2.8km s-min=1.2km az=110.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.11	192	Pg	Pg	13 46 17.4	+0.6
AQU				Sg	Sg	13 46 19.4	+0.6
AQU	L'Aquila	0.11	192	Pg	Pg	13 46 17.4	+0.6
AQU				Sg	Sg	13 46 19.4	+0.6
TERO	Teramo	0.21	38	Pg	Pg	13 46 19.0	+0.6
TERO				Sg	Sg	13 46 22.5	+1.1
TERO	Teramo	0.21	38	Pg	Pg	13 46 19.0	+0.6
TERO				Sg	Sg	13 46 22.5	+1.1
FIAM	Fiamignano	0.30	231	Pg	Pb	13 46 21.1	-0.6
FIAM				Sg	Sg	13 46 25.1	+0.7
	257nm,0.5s						
FIAM	Fiamignano	0.30	231	Pg	Pb	13 46 21.1	-0.6
FIAM				Sg	Sg	13 46 25.1	+0.7
	257nm,0.5s						
NRCA	Norcia	0.44	328	Pg	Pg	13 46 22.9	+0.1
NRCA				Sg	Sg	13 46 29.7	+0.9
	215nm,0.1s						
NRCA	Norcia	0.44	328	Pg	Pg	13 46 22.9	+0.1
NRCA				Sg	Sg	13 46 29.7	+0.9
	215nm,0.1s						
INTR	Introdacqua	0.57	142	Pg	Pg	13 46 25.4	+0.2
	245nm,0.3s						
INTR	Introdacqua	0.57	142	Pg	Pg	13 46 25.4	+0.2
	245nm,0.3s						
FDMO	Fiordimonte	0.63	336	Pg	Pg	13 46 26.3	0.0
	34nm,0.3s						
FDMO	Fiordimonte	0.63	336	Pg	Pg	13 46 26.3	0.0
	34nm,0.3s						
CESI	CESI - Serrava	0.67	325	Pg	Pg	13 46 26.9	-0.2
CESI				Sg	Sb	13 46 37.2	-0.2
CESI	CESI - Serrava	0.67	325	Pg	Pg	13 46 26.9	-0.2
CESI				Sg	Sb	13 46 37.2	-0.2

IDC 07 13:49:46.3±2.5, 41°.24N×19°.20E, h0km, mb3.7/6, mb1 3.6/9, mb1mx3.5/29, mbtmp3.6/9, ML3.0/2, MS2.8/2, Ms1 2.8/2, ms1mx2.0/46, Error ellipse: s-maj=41.8km s-min=18.8km az=19.0

CSEM 07 13:49:52.1±0.1, 41°.46N×19°.47E, h10km, ML3.2, Error ellipse: s-maj=3.0km s-min=2.7km az=167.0

ROM 07 13:49:52.0±0.1, 41°.41N×19°.44E, h10km, Ml3.5/14, Error ellipse: s-maj=1.2km s-min=0.9km az=10.0

ISCJB 07 13:49:52.9±0.4, 41°.46N±0°.02×19°.46E±0°.02, h24km±4km, mb3.6/5, MS2.9/1, Error ellipse: s-maj=3.4km s-min=2.9km az=29.5

THE 07 13:49:52.8, 41°.48N×19°.50E, h10km±1km, ML3.2/3, Error ellipse: s-maj=1.7km s-min=1.0km az=323.0

PDG 07 13:49:52.1±0.3, 41°.45N×19°.54E, h11km, MD3.3/2, ML3.1/9, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0

BEO 07 13:49:53.3±1.4, 41°.47N×19°.59E, h18km±4km, ML3.2/9

SKO 07 13:49:53.1, 41°.45N×19°.52E, h14km, M2.8, ML3.3

ISC 07 13:49:52.6±0.9, 41°.44N±0°.02×19°.47E±0°.02, h23km±7km, n148, $\sigma 1^{s}41$/191, mb3.8/5, 21C-21D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.31	106	P	Pb	13 49 59.0	-0.6
TIR	Tirane	0.31	106	*e*P	Pb	13 49 59.1	-0.6
TIR	Tirane	0.31	106	*e*Pg	Pb	13 49 59.5	-0.2
TIR				*e*Sg	Sb	13 50 04.5	0.0
TIR	Tirane	0.31	106	Pg	Pb	13 49 59.1	-0.6
TIR				Sg	Sb	13 50 04.5	0.0
TIR	Tirane	0.31	106	P	Pb	13 49 59.0	-0.6
TIR				*e*Sg	Sb	13 50 04.5	0.0
ULC	Ulcinj	0.55	342	⇓*i*Pg	Pb	13 50 03.1	-0.6
ULC				*e*Sg	Sb	13 50 11.6	+0.3
ULC	Ulcinj	0.55	342	⇓*i*Pg	Pb	13 50 03.1	-0.6
ULC				*e*Sg	Sb	13 50 11.6	+0.3
PHP	Peshkopia	0.77	71	P	Pb	13 50 06.1	-1.3
PHP				S	Sb	13 50 17.4	-0.1
PHP	Peshkopia	0.77	71	P	Pb	13 50 06.1	-1.3
PHP				S	Sb	13 50 17.4	-0.1
BUM	Brajici-Budva	0.97	334	⇑*i*Pg	Pn	13 50 10.8	0.0
BUM				*e*Sg	Sn	13 50 26.0	+2.1
BUM	Brajici-Budva	0.97	334	⇑*i*Pg	Pn	13 50 10.8	0.0
BUM				*e*Sg	Sn	13 50 26.0	+2.1
TTG	Podgorica	1.00	351	⇑*i*Pg	Pb	13 50 10.9	-0.5
TTG				*e*Sg	Sn	13 50 26.2	+1.5
PDG	Podgorica	1.01	351	*e*Pg	Pb	13 50 10.7	-0.7
PDG				*e*Sg	Sn	13 50 26.0	+1.3
PDG	Podgorica	1.01	351	Pg	Pb	13 50 11.1	-0.3
PDG				Sg	Sn	13 50 25.6	+0.9
	1μm,0.7s						
PDG	Podgorica	1.01	351	*e*Pg	Pb	13 50 10.7	-0.7
PDG				Sg	Sn	13 50 25.6	+0.9
	1μm,0.7s						
PVY	Plav	1.21	17	⇓*i*Pg	Pn	13 50 14.0	-0.3
PVY				*e*Sg	Sb	13 50 32.4	+2.1
PVY	Plav	1.21	17	⇓*i*Pg	Pn	13 50 14.0	-0.3
PVY				*e*Sg	Sb	13 50 32.4	+2.1
HCY	Herceg Novi	1.25	325	⇓*i*Pg	Pb	13 50 15.5	0.0
HCY				*e*Sg	Sb	13 50 34.7	+3.6
HCY	Herceg Novi	1.25	325	⇓*i*Pg	Pb	13 50 15.5	0.0
HCY				*e*Sg	Sb	13 50 34.7	+3.6
NKY	Niksic	1.42	346	⇓*i*Pg	Pb	13 50 18.2	-0.3
NKY				*e*Sg	Sb	13 50 39.2	+3.0
NKY	Niksic	1.42	346	⇓*i*Pg	Pb	13 50 18.2	-0.3
NKY				*e*Sg	Sb	13 50 39.2	+3.0
BIA	Bitola	1.46	106	P	Pb	13 50 18.6	-0.5
BIA				S	Sb	13 50 38.4	+1.1
BIA	Bitola	1.46	106	*i* Pg	Pb	13 50 19.1	0.0
BIA				*e*Sg	Sb	13 50 38.3	+1.0
BIA	Bitola	1.46	106	P	Pb	13 50 18.6	-0.5
BIA	Bitola	1.46	106	*i* Pg	Pb	13 50 19.1	0.0
BIA				S	Sb	13 50 38.4	+1.1
BEY	Berane	1.47	12	⇓*i*Pg	Pb	13 50 18.5	-0.8
BEY				*e*Sg	Sb	13 50 41.0	+3.4
IVA	Berane	1.47	12	⇓*i*Pg	Pb	13 50 18.5	-0.8
IVA				*e*Sg	Sb	13 50 41.0	+3.4
SKO	Skopje	1.57	69	P	Pb	13 50 20.7	-0.3
SKO				S	Sb	13 50 41.8	+1.4
SKO	Skopje	1.57	69	*e*Pg	Pb	13 50 20.9	-0.1
SKO				*e*Sg	Sb	13 50 42.4	+2.0
SKO				*e*Lg	Lg	13 50 43.2	
	comp=E,705nm,1.1s						
SKO				*e*Lg	Lg	13 50 43.8	
	comp=N,573nm,0.7s						
SKO	Skopje	1.57	69	P	Pb	13 50 20.7	-0.3
SKO	Skopje	1.57	69	*e*Pg	Pb	13 50 21.4	+0.4
SKO				S	Sb	13 50 41.8	+1.4
SKO				*e*Sg	Sn	13 50 42.9	+4.3
SKO				*e*Lg	Lg	13 50 44.3	
	comp=N,573nm,0.7s						
NEST	Nestorio	1.57	130	P	Pb	13 50 20.6	-0.5
NEST				S	Sb	13 50 41.7	+1.1
NEST	Nestorio	1.57	130	P	Pb	13 50 20.6	-0.5
NEST				S	Sb	13 50 41.7	+1.1
FNA	Florina	1.58	114	P	Pb	13 50 21.0	-0.2
FNA				S	Sb	13 50 40.9	+0.1
FNA	Florina	1.58	114	*e*P	Pb	13 50 20.7	-0.5
FNA	Florina	1.58	114	P	Pb	13 50 21.0	-0.2
FNA				S	Sb	13 50 40.9	+0.1
BRY	Bratogost	1.62	335	*e*Pn	Pb	13 50 21.6	-0.3
BRY				*e*Sn	Sb	13 50 44.6	+2.6
BRY	Bratogost	1.62	335	*e*Pn	Pb	13 50 21.6	-0.3
BRY				*e*Sn	Sb	13 50 44.6	+2.6
KEK	Kerkira	1.74	172	P	Pn	13 50 22.7	+1.3
KEK				S	Sb	13 50 46.1	+0.8
KEK	Kerkira	1.74	172	Pn	Pn	13 50 22.6	+1.2
	comp=N,240nm,0.4s						
KEK	Kerkira	1.74	172	P	Pn	13 50 22.7	+1.3
KEK				S	Sb	13 50 46.1	+0.8
UPM	Unac-Piva	1.81	347	⇓*i*Pn	Pb	13 50 24.9	-0.4
UPM				*e*Sn	Sb	13 50 49.9	+2.2
UPM	Unac-Piva	1.81	347	⇓*i*Pn	Pb	13 50 24.9	-0.4
UPM				*e*Sn	Sb	13 50 49.9	+2.2
PLE	Pljevlja	1.89	358	⇓*i*Pn	Pb	13 50 25.9	-0.7
PLE				*e*Sn	Sb	13 50 51.0	+1.1
PLE	Pljevlja	1.89	358	⇓*i*Pn	Pb	13 50 25.9	-0.7
PLE				*e*Sn	Sb	13 50 51.0	+1.1
NOCI	Noci	1.93	251	Pn	Pn	13 50 25.1	+1.1
	comp=N,633nm,0.4s						
NOCI	Noci	1.93	251	Pn	Pn	13 50 25.1	+1.1
	comp=N,633nm,0.4s						
STON	Ston	1.95	318	*e*Pn	Pn	13 50 23.8	-0.4
STON				Sn	Sn	13 50 49.0	+1.0
STON	Ston	1.95	318	*e*Pn	Pn	13 50 23.8	-0.4
STON				Sn	Sn	13 50 48.9	+1.0
BAI	Bari	1.98	261	*e*Pn	Pn	13 50 25.9	+1.2
BAI				*e*Sn	Sn	13 50 48.5	-0.2
SELS	Selova	2.16	34	*e*Pn	Pn	13 50 27.2	0.0
IVAS	Ivanjica	2.20	13	*i* Pn	Pn	13 50 28.5	+0.7
IVAS	Ivanjica	2.20	13	*i* Pn	Pn	13 50 28.5	+0.7
BARS	Barje	2.22	51	⇑*i*Pn	Pn	13 50 28.8	+0.7
BARS	Barje	2.22	51	⇑*i*Pn	Pn	13 50 28.8	+0.7
AMUR	Altamura	2.23	257	Pn	Pn	13 50 29.0	+0.9
	comp=N,207nm,0.5s						
AMUR	Altamura	2.23	257	Pn	Pn	13 50 29.0	+0.9
	comp=N,207nm,0.5s						
MATE	Matera	2.23	250	Pn	Pn	13 50 29.2	+1.0
	comp=N,265nm,0.5s						
MATE	Matera	2.23	250	Pn	Pn	13 50 29.2	+1.0
	comp=N,265nm,0.5s						
GRG	Griva	2.26	101	P	Pn	13 50 29.8	+1.2
GRG	Griva	2.26	101	*e*P	Pn	13 50 29.8	+1.2
GRG	Griva	2.26	101	P	Pn	13 50 29.8	+1.2
VAY	Valandovo	2.34	92	P	Pn	13 50 30.5	+0.9
VAY	Valandovo	2.34	92	*e*Pn	Pn	13 50 30.1	+0.5
VAY				*e*Sn	Sn	13 50 58.0	+0.5
VAY				*e*Lg	Lg	13 51 03.6	
	comp=E,86nm,0.7s						
VAY				*e*Lg	Lg	13 51 07.4	
	comp=N,127nm,0.7s						
VAY	Valandovo	2.34	92	P	Pn	13 50 30.5	+0.9
VAY				*e*Sn	Sn	13 50 58.4	+0.9
VAY				*e*Lg	Lg	13 51 01.8	
	comp=N,127nm,0.7s						
BBLS	Lazići	2.43	359	*e*Pn	Pb	13 50 33.4	-2.3
BBLS	Lazići	2.43	359	*e*Pn	Pb	13 50 33.4	-2.3
CDT	Castel del Mon	2.44	263	*e*Pn	Pn	13 50 32.1	+1.1
CDT				*e*Sn	Sb	13 51 06.0	+0.7
MIGL	Miglionico	2.44	251	Pn	Pn	13 50 32.2	+1.2
MIGL	Miglionico	2.44	251	Pn	Pn	13 50 32.2	+1.2
MRVN	Minervino Murg	2.50	262	Pn	Pn	13 50 32.8	+1.0
	comp=N,124nm,0.5s						
MRVN	Minervino Murg	2.50	262	Pn	Pn	13 50 32.8	+1.0
	comp=N,124nm,0.5s						
GRUS	Gruza	2.62	20	⇑*i*Pn	Pn	13 50 34.0	+0.5
GRUS	Gruza	2.62	20	⇑*i*Pn	Pn	13 50 34.0	+0.5
LIT	Litokhoron	2.65	119	*e*P	Pn	13 50 35.8	+1.8
MS1	Monte Sant'Ang	2.66	277	*e*Pn	Pn	13 50 35.1	+1.0
MSAG	Monte S. Angel	2.69	277	Pn	Pn	13 50 35.1	+0.6
	comp=N,240nm,0.4s						
MSAG	Monte S. Angel	2.69	277	Pn	Pn	13 50 35.1	+0.6
	comp=N,240nm,0.4s						
DIVS	Divibare	2.69	8	P	Pn	13 50 34.8	+0.3
DIVS	Divibare	2.69	8	⇑*i*Pn	Pn	13 50 34.9	+0.4
DIVS	Divibare	2.69	8	⇑*i*Pn	Pn	13 50 34.9	+0.4
THL	Klokotos Trika	2.69	133	*e*P	Pn	13 50 36.4	+1.9
ACER	Acerenza	2.74	257	Pn	Pn	13 50 36.9	+1.7
	comp=N,498nm,0.7s						
ACER	Acerenza	2.74	257	Pn	Pn	13 50 36.9	+1.7
	comp=N,498nm,0.7s						
LKD2	Lefkada island	2.80	161	P	Pn	13 50 37.1	+1.2
LKD2	Lefkada island	2.80	161	*e*P	Pn	13 50 37.4	+1.5
LKD2	Lefkada island	2.80	161	P	Pn	13 50 37.1	+1.2
PIPA	Pietrapaola	2.81	227	Pn	Pn	13 50 37.0	+0.9
	comp=N,295nm,0.4s						
PIPA	Pietrapaola	2.81	227	Pn	Pn	13 50 37.0	+0.9
	comp=N,295nm,0.4s						
SGRT	San Giovanni R	2.81	278	Pn	Pn	13 50 36.6	+0.4
	comp=N,139nm,0.6s						
SGRT	San Giovanni R	2.81	278	Pn	Pn	13 50 36.6	+0.4
	comp=N,139nm,0.6s						
TRUS	Trudelj	2.87	14	⇑*i*Pn	Pn	13 50 36.3	-0.6
TRUS	Trudelj	2.87	14	⇑*i*Pn	Pn	13 50 36.3	-0.6
SOH	Sokhos	3.00	101	*e*P	Pn	13 50 39.9	+1.2
SIRI	Monte Sirino -	3.01	247	Pn	Pn	13 50 40.2	+1.3
	comp=N,104nm,0.4s						
SIRI	Monte Sirino -	3.01	247	Pn	Pn	13 50 40.2	+1.3
	comp=N,104nm,0.4s						
BOLS	Boljevac	3.01	37	*e*Pn	Pn	13 50 38.2	-0.7
BOLS	Boljevac	3.01	37	*e*Pn	Pn	13 50 38.2	-0.7
VTS	Vitosha	3.02	66	P	Pn	13 50 40.3	+1.2
VTS	Vitosha	3.02	66	⇑*i*P	Pn	13 50 40.8	+1.7
VTS	Vitosha	3.02	66	⇑*i*Pn	Pn	13 50 40.4	+1.3
VTS	Vitosha	3.02	66	P	Pn	13 50 40.3	+1.2
MTSN	Montesano sull	3.05	249	Pn	Pn	13 50 40.8	+1.3
	comp=N,122nm,0.8s						
MTSN	Montesano sull	3.05	249	Pn	Pn	13 50 40.8	+1.3
	comp=N,122nm,0.8s						
TIP	Timpagrande	3.06	223	Pn	Pn	13 50 40.6	+0.9
	comp=N,88nm,0.8s						
TIP	Timpagrande	3.06	223	Pn	Pn	13 50 40.6	+0.9
	comp=N,88nm,0.8s						
EVR	Evrytania	3.09	144	*e*P	Pn	13 50 42.8	+2.8
TEKS	Tekeris	3.11	1	⇑*i*Pn	Pn	13 50 40.5	+0.2
TEKS	Tekeris	3.11	1	⇑*i*Pn	Pn	13 50 40.5	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLG	Polygyros	3.19	108	eP	Pn	13 50 43.0	+1.6
SERS	Sersale	3.21	223	Pn	Pn	13 50 42.0	+0.3
	comp=N,52nm,0.6s						
SERS	Sersale	3.21	223	Pn	Pn	13 50 42.0	+0.3
	comp=N,52nm,0.6s						
AGG	Agios Georgios	3.26	137	eP	Pn	13 50 45.1	+2.8
NVR	Nevrokopi	3.31	90	eP	Pn	13 50 44.5	+1.6
EFP	Efpalio	3.54	147	eP	Pb	13 50 59.2	+4.6
GUR	Goura	4.14	147	eP	Pb	13 51 13.8	+9.0
BZS	Buzias	4.46	20	⇑iP	Pn	13 50 59.1	+0.3
BZS	Buzias	4.46	20	⇑iP	Pn	13 50 59.1	+0.3
NVLJ	Novalja	4.60	314	Sn	Sn	13 51 52.7	-0.6
NVLJ	Novalja	4.60	314	Sn	Sn	13 51 52.6	-0.6
GZR	Gura Zlata	4.63	30	⇓iP	Pn	13 51 01.6	+0.4
GZR	Gura Zlata	4.63	30	⇓iP	Pn	13 51 01.6	+0.4
LOT	Lotru	5.09	37	⇑iP	Pn	13 51 08.4	+0.9
LOT	Lotru	5.09	37	⇑iP	Pn	13 51 08.4	+0.9
DRGR		5.84	22	⇓iP	Pb	13 51 38.3	+4.6
KYTH	Kithira	5.85	150	P	Pn	13 51 21.2	+3.3
KYTH	Kithira	5.85	150	P	Pn	13 51 21.2	+3.3
VOY	Vojsko	6.12	321	ePn	Pn	13 51 22.4	+0.8
VOY				e		13 51 34.2	
VOY				eSn	Sn	13 52 29.2	-1.7
VOY	Vojsko	6.12	321	Pn	Pn	13 51 22.4	+0.8
MLR	Muntele Rosu	6.21	47	Pn	Pn	13 51 25.5	+2.5
	comp=N,0.2nm,0.3s,baz=159,slow=16,SNR=11						
MLR				Sn	Sn	13 52 33.7	+0.4
	comp=N,0.2nm,0.3s,baz=145,slow=16,SNR=2.5						
PSZ	Piszkesteto	6.49	3	⇓iP	Pn	13 51 29.6	+2.9
PSZ	Piszkesteto	6.49	3	⇓iP	Pn	13 51 29.6	+2.9
PLOR	Plostina	6.83	47	⇑iP	Pn	13 51 33.3	+2.0
PLOR	Plostina	6.83	47	⇑iP	Pn	13 51 33.3	+2.0
VRI	Vrincioaia	6.88	47	⇓iP	Pn	13 51 30.8	-1.2
VRI	Vrincioaia	6.88	47	⇓iP	Pn	13 51 30.8	-1.2
VYHS	Vyhne	7.07	357	ePN	Pn	13 51 42.5	+7.9
VYHS				eSN	Sn	13 52 59.7	+5.4
CRVS	Cervenica-Dubn	7.60	10	ePN	Pn	13 51 44.0	+2.1
CRVS	Cervenica-Dubn	7.60	10	ePn	Pn	13 51 44.0	+2.1
KOLS	Kolonicke sedl	7.75	14	ePN	Pn	13 51 47.5	+3.5
GERES	GERESS Array B	8.45	333	Pn	Pn	13 51 52.9	-0.8
	comp=N,0.1nm,0.3s,baz=154,slow=16,SNR=2.6						
GERES				Sn	Sn	13 53 25.4	-2.9
	comp=N,0.1nm,0.3s,baz=155,slow=24,SNR=2.3						
GERES				LR	LR	13 55 38.8	
	comp=N,40nm,19.8s,baz=282,slow=41						
HFS	Hagfors	19.06	351	P	P	13 54 10.0	-3.0
	comp=N,0.1nm,0.3s,baz=167,slow=8.6,SNR=3.2						
FINES	FINESS Array B	20.43	9	P	P	13 54 26.6	-1.3
	comp=N,1.4nm,0.5s,baz=181,slow=10,SNR=7.5						
FINES				LR	LR	14 03 17.2	
	comp=N,45nm,18.9s,baz=310,slow=39						
BVAR	Borovoye Array	35.73	53	P	P	13 56 49.1	-0.2
	comp=N,1.0nm,0.7s,baz=262,slow=8.2,SNR=6.0						
ZALV	Zalesovo Beam	44.18	50	P	P	13 57 58.4	-0.9
	comp=N,1.5nm,0.6s,baz=279,slow=9.1,SNR=11						
MKAR	Makanchi Array	44.36	61	P	P	13 58 00.1	-0.9
	comp=N,1.9nm,0.7s,baz=283,slow=6.9,SNR=15						
SONM	Songino Array	59.05	52	P	P	13 59 49.7	-1.0
	comp=N,0.2nm,0.8s,baz=289,slow=9.0,SNR=4.2						
YKA	Yellowknife Ar	70.06	339	P	P	14 01 00.8	-1.4
	comp=N,0.1nm,0.5s,baz=37,slow=5.1,SNR=3.5						

JMA 07 14:01:41.3, 39.°16N×140.°83E, h7km±1km, M0.9, Eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JRG	Rokugo	0.28	327	P	Pg	14 01 47.0	+0.1
JRG				S	Sg	14 01 51.2	+0.6
JMK	Ichinoseki	0.37	124	P	Pg	14 01 48.3	-0.2
JMK				S	Sg	14 01 53.4	+0.1
JYK	Kaneyama	0.44	237	P	Pg	14 01 49.8	0.0
JYK				S	Sg	14 01 55.8	+0.2
JOM	Ohasama	0.48	49	P	Pg	14 01 50.3	-0.2
JOM				S	Sg	14 01 56.5	-0.3
JOU	Okura	0.80	189	S	Sg	14 02 07.6	+0.3
JIO	Ouri	0.81	150	P	Pg	14 01 56.7	-0.2
JIO				S	Sg	14 02 07.4	-0.1

CSEM 07 14:07:21.8±0.7, 36.°92N×28.°31E, h14km±7km, MD2.4, Error ellipse: s-maj=9.6km s-min=6.5km az=173.0
ISCJB 07 14:07:22.4±0.7, 36.°94N±0.°05×28.°27E±0.°04, h9km±7km, Error ellipse: s-maj=8.5km s-min=5.0km az=16.2
ISK 07 14:07:23.0, 37.°08N×28.°24E, h22km, MD2.4
DDA 07 14:07:23.2, 36.°98N×28.°23E, h7km, MD2.8
ISC 07 14:07:22.4±0.9, 36.°97N±0.°05×28.°29E±0.°03, h14km±8km, n15, σ0.s58/25, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.17	359	ePG	Pb	14 07 27.1	-0.2
YER				eSG	Sg	14 07 30.2	+1.0
YER	Yerkesik	0.17	359	ePg	Pb	14 07 27.1	-0.2
YER				eSg	Sg	14 07 30.2	+1.0
TURN	Turunc	0.27	111	i P	Pg	14 07 27.6	-0.5
TURN				i S	Sg	14 07 31.3	-0.6
TURN	Turunc	0.27	111	i P	Pg	14 07 27.6	-0.5
TURN				i S	Sg	14 07 31.3	-0.6
MLSB	Milas	0.52	309	ePG	Pg	14 07 32.2	-0.4
MLSB				eSG	Sg	14 07 39.1	-0.5
MLSB	Milas	0.52	309	ePg	Pg	14 07 32.2	-0.4
MLSB				eSg	Sg	14 07 39.1	-0.5
BDRM	Kayabasi	0.68	278	i P	Pg	14 07 35.2	-0.4
BDRM				i S	Sb	14 07 45.2	-0.2
BDRM	Kayabasi	0.68	278	i P	Pg	14 07 35.2	-0.4
FETY	Fethiye	0.72	117	ePG	Pn	14 07 39.3	+1.1
AYDN	Tasoluk	0.76	335	i P	Pn	14 07 38.7	-0.1
AYDN				i S	Sb	14 07 48.3	+0.5
AYDN	Tasoluk	0.76	335	i P	Pn	14 07 38.7	-0.1
BODT	Bodrum	0.79	277	ePG	Pb	14 07 38.0	+0.1
BODT				eSG	Sb	14 07 49.0	+0.6
BODT	Bodrum	0.79	277	ePg	Pb	14 07 38.0	+0.1
BODT				eSg	Sb	14 07 49.0	+0.6
DENT	Denizli	0.98	37	ePG	Pb	14 07 41.1	-0.1
DENT	Denizli	0.98	37	ePg	Pb	14 07 41.1	-0.1

MOS 07 14:07:25.4±1.0, 52.°00N×98.°70E, h10km, mb4.3/1, Error ellipse: s-maj=73.6km s-min=37.1km az=163.6, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ORL	Orlik	0.87	51	ePG	Pg	14 07 41.5	-0.9
ORL				e		14 07 52.9	
ORL				pmax	pmax		
	comp=Z,306nm,0.2s						
ORL				smax	smax		
	comp=N,518nm,0.6s						
MOY	Mondy	1.46	102	ePG	Pn	14 07 52.2	+0.2
MOY				e		14 08 11.4	
MOY				pmax	pmax		
	comp=Z,84nm,0.4s						
MOY				smax	smax		
	comp=N,804nm,0.2s						
ARS	Arshan	2.31	91	ePN	Pn	14 08 05.2	+1.7
ARS				e		14 08 38.7	
ARS				pmax	pmax		
	comp=Z,77nm,0.3s						
ARS				smax	smax		
	comp=E,882nm,0.8s						
TLY	Talaya	3.08	94	ePN	Pn	14 08 14.1	-0.1
TLY				e		14 08 20.2	
TLY				e		14 08 59.7	
TLY				pmax	pmax		
	comp=Z,18nm,0.4s						
TLY				smax	smax		
	comp=N,127nm,0.6s						
IRK	Irkutsk	3.44	84	ePN	Pb	14 08 26.8	+0.3
IRK				e		14 09 10.6	
IRK				pmax	pmax		
	comp=Z,66nm,0.1s						
IRK				smax	smax		
	comp=N,487nm,0.6s						
OGRR	Ongureny	5.64	70	ePN	Pb	14 09 07.1	+3.2
OGRR				e		14 10 19.1	
OGRR				pmax	pmax		
	comp=Z,13nm,1.2s						
OGRR				smax	smax		
	comp=E,68nm,1.3s						

IDC 07 14:18:27.8±9.1, 6.°04S×154.°87E, h293km±80km, mb3.0/4, mb1 3.3/5, mb1mx3.0/18, mbtmp3.1/5, Error ellipse: s-maj=171.5km s-min=30.2km az=125.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.34	246	P	Pn	14 20 25.7	+0.1
	0.2nm,0.3s,baz=72,slow=9.6,SNR=3.4						
PMG				S	S	14 22 13.4	+12
	1.9nm,0.3s,baz=92,slow=20,SNR=6.5						
WRA	Warramunga Arr	24.27	233	P	P	14 23 19.7	+0.6
	0.6nm,0.5s,baz=59,slow=9.5,SNR=2.9						
ASAR	Alice Springs	26.72	227	P	P	14 23 40.7	-0.4
	0.4nm,0.4s,baz=60,slow=9.3,SNR=6.5						
ILAR	Eielson Array	82.54	22	P	P	14 30 17.2	-0.6
	0.2nm,0.7s,baz=253,slow=5.3,SNR=3.3						
YKA	Yellowknife Ar	95.55	28	P	P	14 31 19.9	+0.4
	0.1nm,0.5s,baz=264,slow=4.2,SNR=3.1						

BJI 07 14:20:03.5, 8.°62S×123.°28E, h236km, mB4.5/16, mb4.4/28
ISCJB 07 14:20:10.7±0.3, 7.°98S±0.°03×122.°95E±0.°03, h253km±3km, mb4.3/46, Error ellipse: s-maj=5.2km s-min=4.8km az=38.4
IDC 07 14:20:10.9±1.3, 7.°90S×122.°94E, h237km±12km, mb4.1/22, mb1 4.1/26, mb1mx4.1/29, mbtmp4.1/26, Error ellipse: s-maj=13.4km s-min=7.0km az=69.0
NEIC 07 14:20:10.3±0.7, 7.°92S×122.°93E, h234km±7km, mb4.5/15, Error ellipse: s-maj=8.2km s-min=4.4km az=57.0
DJA 07 14:20:12.8±0.2, 8°S±2°×12°3E±°, h226km±4km, M4.5/52, mB5.1/22, mb4.7/52, MLv4.6/16, Mw(mB)4.5/22
ISC 07 14:20:10.3±0.4, 7.°97S±0.°04×122.°94E±0.°05, h234km±3km, n159, σ1.s56/205, mb4.4/46, 1C, Flores Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMRI	Maumere	0.96	226	P	Pn	14 20 45.0	+1.6
BBSI	Bau Bau	2.49	352	P	Pn	14 20 57.7	+1.3
WSI	Waingapu	3.11	237	P	Pn	14 21 04.6	+1.6
BKSI	Bulukumba	3.83	313	P	Pn	14 21 12.1	+0.6
KDI	Kendari	3.99	355	P	Pn	14 21 13.3	-0.1
KAPI	Kappang	4.31	313	eP	Pn	14 21 17.8	+0.6
KAPI	Kappang	4.31	313	P	Pn	14 21 17.5	+0.3
KAPI	Kappang	4.31	313	P	Pn	14 21 17.7	+0.5
	2.4nm,0.3s,baz=134,slow=10.0,SNR=23						
BNSI	Bone	4.52	321	P	Pn	14 21 21.7	+1.9
SPSI	Sidrap Palu	5.07	321	P	Pn	14 21 28.9	+2.3
	42nm,0.8s,454nm0.1nm						
TTSI	Tana Toraja	5.79	327	P	Pn	14 21 37.1	+1.6
	79nm,0.9s,845nm0.3nm						
AAI	Ambon	6.74	51	P	Pn	14 21 49.4	+1.8
	31nm,1.1s,3µm0.1nm						
LUWI	Luwuk	6.88	359	P	Pn	14 21 49.2	-0.2
	88nm,0.8s,0.2nm						
KHKI	Kahang-Kahang	7.26	266	P	Pn	14 21 56.8	+2.6
	29nm,1.0s,0.4nm						
MSAI	Masohi	7.53	53	P	Pn	14 21 57.6	0.0
	8.7nm,0.8s,415nm0.1nm						
BNDI	Bandanaira	7.73	64	P	Pn	14 22 05.8	+5.6
	132nm,0.6s,2µm0.5nm						
IGBI	Denpasar	7.75	263	P	Pn	14 22 02.0	+1.5
	65nm,1.0s,1.4nm						
MRSI	Marisa	8.45	353	P	Pn	14 22 09.6	+0.2
	24nm,0.9s						
KMSI	Cibinong	8.55	7	P	Pn	14 22 12.0	+1.3
LBMI	Labuha	8.58	32	P	Pn	14 22 12.9	+1.8
	93nm,0.9s,817nm						
KMMI	Kalianget	8.94	275	P	Pn	14 22 18.8	+3.2
	60nm,1.3s						
BBKI	Banjar Baru	9.21	299	P	Pn	14 22 21.9	+2.8
	34nm,1.3s						
BLJI	Banyuglugur	9.26	271	P	Pn	14 22 22.6	+2.9
	50nm,1.0s						
SMKI	Samarinda	9.40	322	P	Pn	14 22 24.8	+3.2
	74nm,0.3s,3µm						
GMJI	Gumukmas	9.40	267	P	P	14 22 26.1	-2.9
	36nm,2.1s						
MNI	Manado	9.54	12	P	Pn	14 22 26.9	+3.6
	52nm,0.8s						
TNTI	Ternate	9.74	27	P	Pn	14 22 26.6	+0.7
	107nm,1.1s,1µm						
TLE	Tual	10.01	77	P	P	14 22 34.0	-1.8
	43nm,0.9s						
KRKI	Karangkates	10.38	268	P	Pn	14 22 36.6	+2.6
	226nm,0.5s						
FITZ	Fitzroy Crossi	10.41	166	eP	Pn	14 22 33.1	-1.2
	24nm,0.6s						
FITZ				eS	S	14 24 26.1	-5.1
FITZ				S	S	14 24 27.8	-3.4
FITZ	Fitzroy Crossi	10.41	166	P	Pn	14 22 34.3	-0.1
	1.9nm,0.3s,baz=6.4,slow=9.3,SNR=48						
FITZ				S	S	14 24 27.8	-3.4
	17nm,0.3s,baz=111,slow=18,SNR=7.5						
FAKI	Fak Fak	10.54	62	P	P	14 22 39.3	-2.4
	36nm,0.6s						
SWI	Sorong	10.89	50	P	P	14 22 43.9	-1.7
	29nm,0.8s						
PWJI	Pagerwojo	11.02	269	P	Pn	14 22 44.2	+2.1
	70nm,0.5s,2µm						
SJI	Sawahan	11.07	270	P	Pn	14 22 44.5	+1.7
	179nm,0.5s,4µm						
PCJI	Pacitan	11.64	268	P	Pn	14 22 49.8	-0.2
	231nm,0.5s,5µm						
UGM	Wanagama	12.29	269	P	P	14 23 03.8	+2.5
	156nm,1.4s						
SMRI	Semarang	12.42	273	P	P	14 23 05.3	+2.6
	116nm,0.7s						
BJII	Banjamegara	13.12	272	P	P	14 23 13.0	+2.5
	48nm,0.8s						
MBWA	Marble Bar	13.48	193	eP	Pn	14 23 12.3	-0.3
	91nm,0.7s						
MBWA				e		14 23 16.6	
TGJI	Tegal	13.74	274	P	Pn	14 23 15.6	-0.4
	44nm,1.1s						
KPJI	Karang Pucung	13.89	272	P	P	14 23 23.6	+4.6
	2µm,0.8s						
STKI	Sintang	13.93	304	P	P	14 23 22.0	+2.6
	32nm,1.1s,5µm						
BAKI	Biak	14.75	64	P	P	14 23 30.8	+2.3
	63nm,0.8s						
CISI	Cisompet, Garu	14.99	271	P	P	14 23 30.7	-0.5
	78nm,0.4s,3µm						
CBJI	Citeko	16.03	274	P	P	14 23 43.4	+0.8
	202nm,0.9s						
TPI	Tanjungpandan	16.07	288	P	Pn	14 23 46.0	+1.9
	19nm,1.1s						
DBJI	Dramaga	16.12	274	P	Pn	14 23 45.9	+1.2
	55nm,0.8s						
WRA	Warramunga Arr	16.24	138	P	P	14 23 45.4	+0.5
WRA				S	S	14 26 44.1	+0.8
WRA	Warramunga Arr	16.24	138	P	P	14 23 45.4	+0.5
	8.3nm,0.3s,baz=316,slow=12,SNR=88						
WRA				S	S	14 26 44.1	+0.8
	3.2nm,0.3s,baz=319,slow=22,SNR=13						
WRAB	Tennant Creek	16.24	138	eP	P	14 23 45.1	+0.2
	47nm,0.9s						
WRAB				eS	S	14 26 42.6	-0.7
CGJI	Cibinong	17.16	273	P	P	14 23 53.6	-1.3
	86nm,0.5s,2µm						
MMPI	Merauke	17.28	93	P	Pn	14 24 01.1	+2.8
	404nm,1.1s,9µm						
PPBI	Pangkal Pinang	17.69	288	P	Pn	14 24 02.3	-0.9
	33nm,0.8s,8µm						
AS31	Alice Springs	18.82	147	eP	P	14 24 14.3	+1.3
AS31				e		14 24 18.3	
ASAR	Alice Springs	18.82	147	P	P	14 24 13.7	+0.8
ASAR				S	S	14 27 35.2	+0.6
ASAR				ScP	ScP	14 31 40.2	-2.5
ASAR	Alice Springs	18.82	147	P	P	14 24 13.7	+0.8
	4.0nm,0.3s,baz=331,slow=12,SNR=215						
ASAR				S	S	14 27 35.2	+0.6
	0.1nm,0.3s,baz=321,slow=19,SNR=4.9						
ASAR				ScP	ScP	14 31 40.2	-2.5
	0.4nm,0.3s,baz=348,slow=2.3,SNR=7.3						
COEN	Coen	20.73	108	P	P	14 24 33.0	-0.5
BTDF	Bukit Timah Da	21.24	295	P	P	14 24 40.0	+1.4
	31nm,1.2s,247nm						
PMG	Port Moresby	23.99	95	P	P	14 25 04.2	+0.2
PMG	Port Moresby	23.99	95	P	P	14 25 03.8	-0.1
	5.3nm,0.7s,baz=304,slow=7.3,SNR=3.5						
NWAO	Narrogin (SRO)	25.39	191	P	P	14 25 17.1	+0.7
NWAO	Narrogin (SRO)	25.39	191	P	P	14 25 17.1	+0.7
	5.6nm,0.4s,baz=22,slow=7.4,SNR=14						
PSI	Prapat	26.23	293	P	P	14 25 23.4	-1.0
PSI	Prapat	26.23	293	P	P	14 25 23.4	-1.0
	4.9nm,0.6s,baz=146,slow=7.3,SNR=3.3						
STKA	Stephens Creek	29.46	146	eP	P	14 25 53.5	+0.9
	2.0nm,0.6s						
STKA	Stephens Creek	29.46	146	P	P	14 25 53.7	+1.1
	9.0nm,0.5s,baz=319,slow=8.7,SNR=30						
CMAR	Chiang Mai Arr	35.35	318	P	P	14 26 44.4	+0.4
CMAR				PcP	PcP	14 29 09.7	+0.9
CMAR				ScP	ScP	14 32 32.4	+0.1
CMAR	Chiang Mai Arr	35.35	318	P	P	14 26 44.4	+0.4
	2.2nm,0.5s,baz=145,slow=7.0,SNR=17						
CMAR				PcP	PcP	14 29 09.7	+0.9
	3.6nm,0.6s,baz=173,slow=2.9,SNR=23						
CMAR				ScP	ScP	14 32 32.4	+0.1
	0.4nm,0.4s,baz=177,slow=3.6,SNR=5.1						
HNR	Honiara	36.60	95	P	P	14 26 55.3	+0.7
HNR	Honiara	36.60	95	P	P	14 26 55.3	+0.7
	22nm,0.3s,baz=204,slow=10.0,SNR=1.7						
GYA	Guiyang	37.69	336	eP	P	14 27 05.0	+1.3
GYA				pP	pP	14 27 54.8	+3.0
GYA				sP	sP	14 28 21.0	+2.5
GYA				PP	PnPn	14 28 40.6	+1.3
GYA				PcP	PcP	14 29 17.4	+1.6
GYA				S	ScP	14 32 39.0	-1.9
GYA				ScP	S	14 32 40.8	+4.6
GYA				PcS	PcS	14 33 04.5	-0.6
GYA				ScS	ScS	14 36 49.6	-0.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMI	Kunming	38.32	330	P	P	14 27 10.3	+1.2
KMI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
WHN	Wuhan	39.16	348	⇑P	P	14 27 16.9	+1.2
NJ2	Nanjing	39.98	355	eP	P	14 27 24.1	+1.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2	Chengdu	42.80	335	P	P	14 27 45.5	+0.1
CD2				PP	PP	14 29 30.4	+0.3
CD2				PcP	PcP	14 29 33.1	+0.9
CD2				PcS	PcS	14 33 24.5	-0.4
CD2				S	S	14 33 54.4	+2.7
CD2				SS	SS	14 37 05.9	-7.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,80nm,5.4s						
KSAR	Wonju Array Be	45.41	6	P	P	14 28 05.5	-0.4
KSAR				PcP	PcP	14 29 41.2	+0.4
KSRS	Korea Array	45.42	6	P	P	14 28 05.5	-0.5
	comp=Z,1.1nm,0.6s,baz=183,slow=9.0,SNR=12						
KSRS				PcP	PcP	14 29 41.2	+0.3
	comp=Z,1.1nm,0.6s,baz=178,slow=4.0,SNR=6.4						
MAT	Matsushiro	46.54	17	P	P	14 28 13.8	-0.9
MAT				S	S	14 34 42.0	-3.2
MJAR	Matsushiro Arr	46.54	17	P	P	14 28 13.8	-0.9
MJAR	Matsushiro Arr	46.54	17	P	P	14 28 13.8	-0.9
	comp=Z,2.3nm,0.4s,baz=195,slow=9.1,SNR=18						
LZH	Lanzhou	47.36	339	eP	P	14 28 21.7	+0.5
LZH				pP	pP	14 29 11.5	+0.1
LZH				sP	sP	14 29 36.8	-0.8
LZH				PP	PP	14 30 15.0	+0.2
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,75nm,5.2s						
BJI	Beijing	48.17	353	P	P	14 28 30.7	+3.6
BJI				pmax	pmax		
	comp=Z,19nm,0.5s						
TAPN	Taplejung	48.95	317	eP	P	14 28 33.1	-0.6
	comp=Z,44nm,0.4s						
RAMN	Ramite	49.45	316	eP	P	14 28 37.4	0.0
	comp=Z,74nm,0.6s						
HHC	Hu-ho-hao-te	49.69	349	eP	P	14 28 39.5	+0.7
HHC				PcP	PcP	14 29 56.2	-0.1
HHC				PP	PP	14 30 38.4	+2.5
HHC				ScP	ScP	14 33 25.8	-3.6
HHC				PcS	PcS	14 33 51.6	-1.9
HHC				S	S	14 35 28.6	-0.8
HHC				ScS	ScS	14 38 01.0	-4.6
HHC				SS	SS	14 39 03.1	-2.1
HHC				pmax	pmax		
	comp=Z,30nm,0.7s						
HHC				pmax	pmax		
	comp=Z,300nm,6.0s						
GUN	Gumba	50.55	316	eP	P	14 28 45.2	-0.6
	comp=Z,64nm,0.4s						
HYB	Hyderabad	50.59	300	i P	P	14 28 44.0	-1.9
PKI	Pulchoki	50.66	316	eP	P	14 28 45.8	-0.8
	comp=Z,55nm,0.3s						
PKIN	Phulchoki	50.67	316	eP	P	14 28 46.3	-0.3
	comp=Z,20nm,0.3s						
KKN	Kakani	50.88	316	eP	P	14 28 48.3	+0.2
	comp=Z,26nm,0.4s						
DMN	Daman	50.89	315	eP	P	14 28 48.2	0.0
	comp=Z,33nm,0.5s						
CN2	Changchun	51.57	2	eP	P	14 28 56.9	+4.3
GTA	Gaotai	51.78	337	eP	P	14 28 55.4	+0.9
GTA				pP	pP	14 29 44.8	-0.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KOLN	Koldanda	52.05	315	eP	P	14 28 56.2	-0.5
	comp=Z,44nm,0.5s						
DANN	Dangsing	52.28	315	eP	P	14 28 57.8	-0.8
	comp=Z,139nm,0.5s						
USRK	Ussuriysk Arra	52.56	8	P	P	14 28 59.5	-0.4
	comp=Z,4.6nm,0.4s,baz=194,slow=6.7,SNR=17						
PYUN	Piuthan	52.67	314	eP	P	14 29 01.6	+0.3
	comp=Z,78nm,0.5s						
MDJ	Mudanjiang	52.68	6	P	P	14 29 00.2	-0.6
MDJ				pP	pP	14 29 50.4	-1.7
MDJ				sP	sP	14 30 16.2	-1.8
MDJ				S	S	14 36 14.1	+4.2
MDJ				pmax	pmax		
	comp=Z,11nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,47nm,6.4s						
MDJ				LR	LR		
	comp=N,31nm,29.1s						
MDJ				LR	LR		
	comp=E,42nm,27.9s						
MDJ				LR	LR		
	comp=Z,53nm,18.6s						
ASAJ	Asahikawa	54.81	17	P	P	14 29 16.4	+0.2
ASAJ	Asahikawa	54.81	17	P	P	14 29 16.4	+0.2
	comp=Z,4.1nm,0.6s,baz=257,slow=5.3,SNR=9.7						
RPZ	Rata Peaks	54.95	139	P	P	14 29 18.8	+1.5
RPZ	Rata Peaks	54.95	139	P	P	14 29 18.8	+1.5
	comp=Z,9.3nm,0.8s,baz=240,slow=8.1,SNR=3.3						
ULN	Ulaanbaatar	57.34	347	eP	P	14 29 34.0	-0.2
	comp=Z,1.9nm,0.9s						
SONM	Songino Array	57.45	347	P	P	14 29 34.2	-0.7
SONM				PcP	PcP	14 30 25.8	-0.1
SONM	Songino Array	57.45	347	P	P	14 29 34.2	-0.7
	comp=Z,1.1nm,0.6s,baz=162,slow=8.4,SNR=12						
SONM				PcP	PcP	14 30 25.8	-0.1
	comp=Z,0.9nm,0.6s,baz=160,slow=4.7,SNR=3.9						
WMQ	Urumqi	60.62	331	P	P	14 29 57.7	+1.0
WMQ				pmax	pmax		
	comp=Z,17nm,1.0s						
KSH	Kashi	64.17	321	P	P	14 30 20.6	+0.2
KSH				PcP	PcP	14 30 53.5	+0.3
KSH				pP	pP	14 31 12.2	-1.6
KSH				sP	sP	14 31 36.0	-3.1
KSH				PP	PP	14 32 47.3	+2.5
KSH				ScP		14 34 32.0	
KSH				PcS		14 34 55.1	
KSH				S	S	14 38 39.0	+0.3
KSH				ScS	SKSac	14 39 49.1	-2.2
KSH				SS	SS	14 42 55.2	+2.3
KSH				pmax	pmax		
	comp=Z,33nm,0.6s						
KSH				LR	LR		
	comp=Z,240nm,4.9s						
MK31	Makanchi Array	65.40	331	eP	P	14 30 27.8	-0.1
MKAR	Makanchi Array	65.40	331	P	P	14 30 27.5	-0.4
MKAR	Makanchi Array	65.40	331	P	P	14 30 27.5	-0.4
	comp=Z,4.6nm,0.5s,baz=134,slow=5.5,SNR=39						
KBL	Kabul	66.16	313	eP	P	14 30 33.1	-0.3
	comp=Z,32nm,0.6s						
TKM2	Tokmak 2	66.44	324	eP	P	14 30 35.1	+0.1
	comp=Z,26nm,1.8s						
AAK	Ala-Archa	66.92	323	eP	P	14 30 38.1	+0.2
	comp=Z,59nm,0.6s						
EKS2	Erkin-Say	67.37	323	eP	P	14 30 41.4	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,13nm,1.1s						
PETK	Petropavlovsk-	67.62	22	P	P	14 30 42.4	+0.6
PETK	Petropavlovsk-	67.62	22	P	P	14 30 42.4	+0.6
	comp=Z,3.8nm,0.5s,baz=244,slow=1.2,SNR=28						
ZALV	Zalesovo Beam	69.54	337	P	P	14 30 52.5	-1.1
ZALV	Zalesovo Beam	69.54	337	P	P	14 30 52.5	-1.1
	comp=Z,8.0nm,0.5s,baz=134,slow=5.0,SNR=19						
KKAR	Karatay Array	69.59	322	eP	P	14 30 53.5	-0.8
	comp=Z,4.9nm,0.9s						
KURK	Kurchatov	69.86	332	eP	P	14 30 55.3	-0.4
	comp=Z,4.2nm,0.6s						
YAK	Yakutsk	69.98	3	eP	P	14 30 55.2	-1.0
	comp=Z,11nm,0.6s						
VNDA	Vanda	72.42	172	P	P	14 31 11.9	+1.3
VNDA	Vanda	72.42	172	P	P	14 31 11.9	+1.3
	comp=Z,0.6nm,0.6s,baz=313,slow=8.1,SNR=6.3						
FX1	Attu Island--F	74.07	29	P	P	14 31 20.4	-0.2
FX1	Attu Island--F	74.07	29	P	P	14 31 20.4	-0.2
	comp=Z,6.1nm,0.5s,baz=218,slow=6.8,SNR=7.2						
BRVK	Borovoye	75.35	330	eP	P	14 31 27.3	-0.6
ABKAR	Akbulak array	79.01	324	eP	P	14 31 48.0	-0.4
	comp=Z,1.6nm,0.4s						
RDF	Al-Radifah	81.21	301	eP	P	14 32 00.2	-0.3
NAY	Al-Naaiem	81.55	301	eP	P	14 32 02.1	-0.2
NAY				AMb	AMB	14 32 03.9	
	comp=Z,16nm,1.0s						
MIB	Mutribah	81.60	302	eP	P	14 32 02.7	+0.2
MIB				AMb	AMB	14 32 03.8	
	comp=Z,25nm,0.8s						
BILL	Bilibino	81.75	15	P	P	14 32 02.1	-0.4
	comp=Z,2.1nm,0.4s						
QSPA	South Pole Qui	82.02	180	P	P	14 32 05.4	+1.2
QSPA	South Pole Qui	82.02	180	P	P	14 32 05.4	+1.2
	comp=Z,2.2nm,0.6s,baz=292,slow=1.8,SNR=15						
KBZ	Khabaz	88.32	314	P	P	14 32 35.9	+0.3
KBZ	Khabaz	88.32	314	P	P	14 32 35.9	+0.3
	comp=Z,5.9nm,0.8s,baz=96,slow=9.2,SNR=11						
BOSA	Boshof	92.91	241	P	P	14 32 57.6	+0.2
BOSA	Boshof	92.91	241	P	P	14 32 57.6	+0.2
	comp=Z,3.3nm,0.8s,baz=105,slow=4.7,SNR=5.1						
BR131	Keskin Array S	94.49	309	eP	P	14 33 04.0	-0.5
	comp=Z,1.2nm,0.7s						
BRTR	Keskin Array B	94.49	309	P	P	14 33 04.2	-0.3
BRTR	Keskin Array B	94.49	309	P	P	14 33 04.2	-0.3
	comp=Z,1.8nm,0.7s,baz=135,slow=4.0,SNR=10						
ILAR	Eielson Array	97.22	26	P	P	14 33 13.6	-2.5
ILAR	Eielson Array	97.22	26	P	P	14 33 13.6	-2.5
	comp=Z,0.3nm,0.6s,baz=259,slow=5.9,SNR=6.0						
ARCES	ARCESS Array B	100.02	339	P	Pdif	14 33 28.1	-0.4
ARCES	ARCESS Array B	100.02	339	P	Pdif	14 33 28.1	-0.4
	comp=Z,3.8nm,1.0s,baz=95,slow=3.2,SNR=3.9						
YKA	Yellowknife Ar	111.64	25	PKiKP	PKiKP	14 38 15.4	-1.2
YKA	Yellowknife Ar	111.64	25	PKiKP	PKiKP	14 38 15.4	-1.2
	comp=Z,0.3nm,0.7s,baz=300,slow=1.6,SNR=8.2						
NVAR	Mina Array Bea	117.36	51	PKP	PKPdf	14 38 28.7	0.0
NVAR	Mina Array Bea	117.36	51	PKP	PKPdf	14 38 28.7	0.0
	comp=Z,0.2nm,0.3s,baz=262,slow=2.6,SNR=3.5						
TORD	Torodi Ar. Bea	122.11	280	PKP	PKPdf	14 38 37.5	-0.6
TORD	Torodi Ar. Bea	122.11	280	PKP	PKPdf	14 38 37.5	-0.6
	comp=Z,1.4nm,0.6s,baz=14,slow=2.3,SNR=12						
PDAR	Pinedale Array	122.50	44	PKP	PKPdf	14 38 38.7	+0.3
PDAR	Pinedale Array	122.50	44	PKP	PKPdf	14 38 38.7	+0.3
	comp=Z,0.3nm,0.5s,baz=151,slow=2.8,SNR=3.7						
DBIC	Dimbokro	128.23	272	PKP	PKPdf	14 38 50.3	+0.4
DBIC	Dimbokro	128.23	272	PKP	PKPdf	14 38 50.3	+0.4
	comp=Z,0.5nm,0.3s,baz=135,slow=2.9,SNR=3.6						
CPUP	Villa Florida	145.91	180	PKPbc	PKPdf	14 39 22.3	+0.3
CPUP	Villa Florida	145.91	180	PKPbc	PKPdf	14 39 22.3	+0.3
	comp=Z,1.7nm,0.5s,baz=185,slow=3.0,SNR=8.1						
LPAZ	La Paz	153.53	156	PKPab	PKPab	14 39 56.8	+0.8
LPAZ	La Paz	153.53	156	PKPab	PKPab	14 39 56.8	+0.8
	comp=Z,1.0nm,0.5s,baz=200,slow=1.9,SNR=4.7						

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*CSEM **07** 14:30:16.1, 43°.62N×12°.16E, h10km, MD1.9/7, After ROM*

ROM 07 14:30:16.1±0.0**, 43°.62N×12°.16E, h10km, Md1.9**/7**, Ml1.5**/6**, Error ellipse: s-maj=0.7km s-min=0.5km az=30.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PARC	Parchiule	0.07	68	Pg	Pg	14 30 18.8	+0.5
PARC				Sg	Sg	14 30 20.3	+0.4
	329nm,0.2s						
PARC	Parchiule	0.07	68	Pg	Pg	14 30 18.8	+0.5
PARC				Sg	Sg	14 30 20.3	+0.4
	329nm,0.2s						
BADI	Badiali	0.13	151	Pg	Pg	14 30 19.8	+0.6
BADI				Sg	Sg	14 30 22.2	+0.9
	288nm,0.1s						
BADI	Badiali	0.13	151	Pg	Pg	14 30 19.8	+0.6
BADI				Sg	Sg	14 30 22.2	+0.9
	288nm,0.1s						
CRE	Caprese Michel	0.15	268	Pg	Pg	14 30 20.0	+0.4
CRE				Sg	Sg	14 30 22.7	+0.7
	119nm,0.2s						
CRE	Caprese Michel	0.15	268	Pg	Pg	14 30 20.0	+0.4
CRE				Sg	Sg	14 30 22.7	+0.7
	119nm,0.2s						
PIEI	Pieia	0.29	108	Pg	Pg	14 30 22.6	+0.6
PIEI				Sg	Sb	14 30 27.3	-1.1
	141nm,0.1s						
PIEI	Pieia	0.29	108	Pg	Pg	14 30 22.6	+0.6
PIEI				Sg	Sb	14 30 27.3	-1.1
	141nm,0.1s						
ASQU	Asqua	0.32	303	Pg	Pg	14 30 22.9	+0.3
ASQU				Sg	Sb	14 30 28.3	-1.0
	19nm,0.2s						
ASQU	Asqua	0.32	303	Pg	Pg	14 30 22.9	+0.3
ASQU				Sg	Sb	14 30 28.3	-1.0
	19nm,0.2s						
CAFI	Castiglion Fio	0.33	205	Pg	Pg	14 30 23.3	+0.6
CAFI				Sg	Sb	14 30 28.5	-0.9
	46nm,0.1s						
CAFI	Castiglion Fio	0.33	205	Pg	Pg	14 30 23.3	+0.6
CAFI				Sg	Sb	14 30 28.5	-0.9
	46nm,0.1s						
SFI	Santa Sofia	0.36	322	Pg	Pg	14 30 23.7	+0.4
SFI				Sg	Sb	14 30 29.7	-0.7
	18nm,0.3s						
SFI	Santa Sofia	0.36	322	Pg	Pg	14 30 23.7	+0.4
SFI				Sg	Sb	14 30 29.7	-0.7
	18nm,0.3s						

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*JMA **07** 14:31:48.9±0.2, 25°.17N×122°.62E, h26km, M2.7*
*ISCJB **07** 14:31:49.5±0.4, 24°.12N±0°.03×122°.32E±0°.02, h34km±22km, Error ellipse: s-maj=4.7km s-min=2.9km az=162.7*
*TAP **07** 14:31:49.4, 24°.18N×122°.28E, h53km, ML3.5, C*

ISC 07 14:31:50.1±5.4**, 24°.12N**±0°.03×**122°.30E**±0°.02**, h37**km±5km**, n44,** σ1§**05**/82**, 3C-6D, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.59	301	⇓iP	Pn	14 32 01.7	-0.5
	baz=304						
ENA				eS	Sn	14 32 10.4	-0.1
	baz=304						
TWC	Suao	0.64	320	⇓iP	Pn	14 32 01.8	-0.9
	baz=318						
TWC				eS	Sn	14 32 10.6	-0.9
	baz=318						
TWD	Chiawan	0.65	266	P	Pn	14 32 02.2	-0.6
	baz=253						
TWD				eS	Sn	14 32 11.1	-0.7
	baz=253						
HWA	Hwalien	0.65	257	P	Pn	14 32 02.7	-0.2
	baz=251						
HWA				eS	Sn	14 32 12.5	+0.6
	baz=251						
YOJ	Yonaguni jima	0.73	62	P	Pn	14 32 03.5	-0.3
YOJ				eS	Sn	14 32 14.0	+0.3
TWE	Neicheng	0.83	316	⇓iP	Pn	14 32 05.0	-0.2
	baz=307						
TWE				eS	Sn	14 32 16.1	-0.1
	baz=307						
ENTT	Nioudou	0.84	308	P	Pn	14 32 05.1	-0.3
	baz=306						
ENTT				S	Sn	14 32 16.5	-0.2
	baz=306						
ESL	Shilin	0.85	249	⇓iP	Pn	14 32 05.0	-0.6
	baz=237						
ESL				S	Sn	14 32 16.1	-0.7
	baz=237						
NNS	Nan Shan	0.90	291	eP	Pn	14 32 05.9	-0.5
	baz=287						
NNS				eS	Sn	14 32 18.0	-0.3
	baz=287						
TWB1	Santiao Chiao	0.93	342	P	Pn	14 32 05.4	-1.1
	baz=343						
TWB1				eS	Sn	14 32 16.8	-1.8
	baz=343						
WHF	Hehuan Shan	0.95	271	P	Pn	14 32 06.6	-0.6
	baz=257						
WHF				eS	Sn	14 32 19.2	-0.6
	baz=257						
NSK	Sanguang	1.02	303	⇓iP	Pn	14 32 07.6	-0.3
	baz=301						
NSK				S	Sn	14 32 20.2	-0.8
	baz=301						
TWT	Tachien	1.04	277	eP	Pn	14 32 08.3	+0.1
	baz=264						
TWT				eS	Sn	14 32 21.7	+0.1
	baz=264						
NWF	Wu-fen Shan	1.05	333	eP	Pn	14 32 07.5	-0.8
	baz=344						
NWF				eS	Sn	14 32 20.7	-1.1
	baz=344						
EHY	Hungye	1.09	236	eP	Pn	14 32 08.1	-0.6
	baz=232						
EHY				eS	Sn	14 32 22.5	-0.1
	baz=232						
TWF1	Yuli	1.20	230	⇑iP	Pn	14 32 10.0	-0.3
	baz=238						
TWF1				eS	Sn	14 32 24.6	-0.7
	baz=238						
TWS1	Kuangyinshan	1.26	321	eP	Pn	14 32 10.0	-1.1
	baz=332						
NSTT	Nanjuang	1.29	293	P	Pn	14 32 11.9	+0.5
	baz=292						
NSTT				S	Sn	14 32 27.5	0.0
	baz=292						
SMLT	Sun Moon Lake	1.30	260	⇓iP	Pn	14 32 12.2	+0.4
	baz=249						
SMLT				S	Sn	14 32 27.9	-0.1
	baz=249						
TWY	Chenhua	1.31	331	eP	Pn	14 32 12.8	+1.0
	baz=342						
IRIF	Iriomote-Funau	1.32	81	P	Pn	14 32 11.5	-0.4
IRIF				eS	Sn	14 32 28.3	0.0
CHKT	Chengkung	1.33	220	⇑P	Pn	14 32 11.3	-0.8
	baz=210						
CHKT				eS	Sn	14 32 26.7	-1.9
	baz=210						
TYC	Yuchr	1.34	261	i P	Pn	14 32 12.6	+0.4
	baz=251						
TYC				eS	Sn	14 32 28.4	-0.3
	baz=251						
HATJ	Hateruma jima	1.38	93	P	Pn	14 32 15.5	+2.8
HATJ				eS	Sn	14 32 34.3	+4.7
TWQ1	Liyutan	1.41	279	eP	Pn	14 32 13.9	+0.7
	baz=276						
TWQ1				eS	Sn	14 32 31.5	+0.9
	baz=276						
NSY	Sanyi	1.44	282	eP	Pn	14 32 14.0	+0.5
	baz=279						
TCU	Taichung	1.48	271	eP	Pn	14 32 15.2	+1.0
	baz=268						
TCU				eS	Sn	14 32 33.8	+1.4
	baz=268						
WNT	Mingjian	1.50	261	eP	Pn	14 32 15.0	+0.6
	baz=248						
WNT				eS	Sn	14 32 33.3	+0.6
	baz=248						
ALS	Alishan	1.50	246	eP	Pn	14 32 15.4	+0.7
	baz=235						
ALS				eS	Sn	14 32 33.1	-0.1
	baz=235						
ELDTW	Lidau	1.50	232	⇑P	Pn	14 32 14.0	-0.6
	baz=221						
ELDTW				eS	Sn	14 32 32.6	-0.3
	baz=221						
JKRS	Kuro-shima	1.56	86	P	Pn	14 32 15.5	+0.2
JKRS				S	Sn	14 32 34.6	+0.3
CHN5	Tsauling	1.58	251	eP	Pn	14 32 16.4	+0.9
	baz=247						
CHN5				eS	Sn	14 32 35.6	+0.8
	baz=247						
WGK	Gukeng	1.65	255	eP	Pn	14 32 17.0	+0.6
	baz=241						
WGK				eS	Sn	14 32 38.1	+1.7
	baz=241						
JIJ	Ishigaki jima	1.70	82	P	Pn	14 32 16.6	-0.5
JIJ				S	Sn	14 32 36.8	-0.8
TWG	Pinlang	1.72	221	eP	Pn	14 32 16.4	-1.1
	baz=225						
CHN4	Tsaushan	1.75	244	eP	Pn	14 32 19.3	+1.5
	baz=234						
CHN4				eS	Sn	14 32 40.8	+2.0
	baz=234						
WTP	Ta-pu	1.78	241	eP	Pn	14 32 18.9	+0.7
	baz=237						
WTP				eS	Sn	14 32 40.2	+0.5
	baz=237						
TWK	Hsinying	1.87	243	eP	Pn	14 32 20.6	+1.0
	baz=240						
TWK				eS	Sn	14 32 42.9	+1.0
	baz=240						
CHN1	Nanshi	1.88	240	eP	Pn	14 32 20.7	+1.1
	baz=237						
CHN1				eS	Sn	14 32 43.9	+1.8
	baz=237						
ECL	Taimali	1.96	219	eP	Pn	14 32 19.6	-1.1
	baz=223						
ECL				eS	Sn	14 32 43.4	-0.7
	baz=223						
SSD	Sandimen	2.06	229	eP	Pn	14 32 22.1	0.0
	baz=225						
SSD				eS	Sn	14 32 46.4	-0.1
	baz=225						
LAY	Lan-yu	2.19	199	eP	Pn	14 32 22.5	-1.4
	baz=196						
LAY				eS	Sn	14 32 46.4	-3.3
	baz=196						
EAST	Anshuo	2.19	218	eP	Pn	14 32 23.9	-0.1
	baz=215						
EAST				eS	Sn	14 32 48.6	-1.2
	baz=215						
SCZT	Fangliau	2.33	222	eP	Pn	14 32 27.0	+1.2
	baz=217						

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*NIED **07** 14:32:00, 32°.50N×141°.80E, h5km, Mw4.1 Best double couple: M0 1.41000×10^15 NP1:φs349.00000°, δ64.00000°, λ77.00000°. NP2:φs198.00000°, δ29.00000°, λ115.00000°.*
*ISCJB **07** 14:32:13.6±1.4, 32°.37N±0°.04×141°.95E±0°.06, h22km±10km, mb4.2/28, Error ellipse: s-maj=9.2km s-min=5.4km az=150.8*
*JMA **07** 14:32:13.3±0.4, 32°.47N×141°.79E, h0km, M3.9*
*NEIC **07** 14:32:18.8±0.4, 32°.26N×141°.80E, mb4.5/6, MW4.0(NIED), Error ellipse: s-maj=12.7km s-min=6.9km az=64.0*
*IDC **07** 14:32:19.1±0.5, 32°.27N×141°.78E, h48km±4km, mb3.8/18, mb1 3.9/21, mb1mx3.9/31, mbtmp3.8/21, MS3.1/3, Ms1 3.1/3, ms1mx2.4/54, Error ellipse: s-maj=15.7km s-min=8.4km az=47.0*

ISC 07 14:32:18.5±0.5**, 32°.33N**±0°.05×**141°.89E**±0°.07**, h46**km±4km**, h45**km**:pP-P, n79,** σ1§**41**/110**, mb4.3**/28**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	1.92	293	P	Pn	14 32 45.5	-3.2
JHJ2	Mitsune	1.92	294	P	Pn	14 32 45.7	-3.0
JHJ2				S	Sn	14 33 10.0	-1.6
JHJ	Hachijo jima 2	1.94	294	P	Pn	14 32 46.5	-2.6
	132nm,0.3s,baz=124,slow=14,SNR=62						
JHJ				S	Sn	14 33 11.1	-1.2
	77nm,0.3s,baz=108,slow=20,SNR=4.4						
JHJ				LR	LR	14 33 33.5	
	comp=Z,388nm,19.6s,baz=255,slow=40						
BSO1	Boso 1	2.44	342	P	Pn	14 32 53.4	-2.0
BSO1				S	Sn	14 33 22.1	-1.6
BSO3	Boso 3	2.72	335	P	Pn	14 32 57.4	-2.1
BSO4	Boso 4	2.95	334	P	Pn	14 33 00.9	-1.9
KTR	Katsuura	3.10	335	S	Sn	14 33 37.9	-2.8
JOD2	Odawara 2	3.74	322	P	Pn	14 33 11.1	-2.7
JOD2				eS	Sn	14 33 54.5	-2.1
JYN	Shimob	4.21	319	P	Pn	14 33 18.8	-1.4
JYN				eS	Sn	14 34 08.5	+0.3
JRY	Ryogami san	4.43	327	P	Pn	14 33 21.4	-1.9
JRY				eS	Sn	14 34 12.8	-0.8
JAG	Ashikaga	4.55	334	P	Pn	14 33 22.7	-2.2
JAG				S	Sn	14 34 13.4	-3.1
JIE	Ise	4.80	297	P	Pn	14 33 26.7	-1.6
MJAR	Matsushiro Arr	5.18	325	P	Pn	14 33 32.1	-1.5
MJAR				S	Sn	14 34 31.5	-0.6
MJAR	Matsushiro Arr	5.18	325	P	Pn	14 33 32.1	-1.5
	3.0nm,0.3s,baz=156,slow=12,SNR=32						
MJAR				S	Sn	14 34 31.5	-0.6
	1.4nm,0.3s,baz=160,slow=18,SNR=4.5						
MJAR				LR	LR	14 35 35.7	
	comp=Z,197nm,18.2s,baz=185,slow=38						
MAJO	Matsushiro	5.19	325	eP	Pn	14 33 32.1	-1.5
	15nm,0.6s						
MAT	Matsushiro	5.19	325	P	Pn	14 33 32.1	-1.5
MAT				S	Sn	14 34 29.8	-2.4
MAT	Matsushiro	5.19	325	P	Pn	14 33 32.2	-1.4
CBIJ	Chichi jima	5.23	177	P	Pn	14 33 32.0	-2.1
CBIJ				S	Sn	14 34 29.3	-3.9
CBIJ	Chichi jima	5.23	177	P	Pn	14 33 32.0	-2.1
	23nm,0.3s,baz=352,slow=15,SNR=33						
CBIJ				S	Sn	14 34 29.3	-3.9
	24nm,0.3s,baz=287,slow=19,SNR=4.9						
CBIJ				LR	LR	14 35 28.1	
	comp=Z,177nm,18.9s,baz=320,slow=37						
JFT	Otama	5.33	347	P	Pn	14 33 33.1	-2.5
JFT				eS	Sn	14 34 30.7	-4.9
JWZ	Kozaga	5.33	285	P	Pn	14 33 34.4	-1.2
ERM	Erimo	9.72	6	eP	Pn	14 34 33.6	-2.1
ERM				eS	Sn	14 36 06.1	-17
ASAJ	Asahikawa	11.78	2	eP	Pn	14 35 01.1	-2.7
ASAJ				S	Sn	14 37 04.1	-10
ASAJ	Asahikawa	11.78	2	P	Pn	14 35 00.7	-3.1
	1.2nm,0.3s,baz=165,slow=16,SNR=15						
ASAJ				S	Sn	14 37 04.1	-10
	0.2nm,0.3s,baz=159,slow=15,SNR=3.5						
KSRS	Korea Array	12.55	298	P	Pn	14 35 15.7	+1.3
	0.1nm,0.3s,baz=104,slow=13,SNR=7.7						
KSRS				LR	LR	14 40 09.0	
	comp=Z,101nm,18.3s,baz=156,slow=38						
KSAR	Wonju Array Be	12.58	298	P	Pn	14 35 15.7	+1.0
ULN	Ulaanbaatar	30.53	311	eP	P	14 38 28.9	+1.3
	8.0nm,0.8s						
SONM	Songino Array	30.94	310	P	P	14 38 32.5	+1.3
SONM				pP	pP	14 38 45.4	+2.0
SONM	Songino Array	30.94	310	P	P	14 38 32.5	+1.3
	2.6nm,0.6s,baz=110,slow=8.5,SNR=27						
SONM				pP	pP	14 38 45.4	+2.0
	2.6nm,0.6s,baz=91,slow=7.7,SNR=10						
ZALV	Zalesovo Beam	45.47	316	P	P	14 40 32.6	-0.3
ZALV				PcP	PcP	14 42 11.5	+0.2
ZALV	Zalesovo Beam	45.47	316	P	P	14 40 32.6	-0.3
	1.0nm,0.5s,baz=111,slow=8.1,SNR=4.9						
ZALV				PcP	PcP	14 42 11.5	+0.2
	0.7nm,0.5s,baz=86,slow=4.5,SNR=3.5						
MK31	Makanchi Array	47.07	306	eP	P	14 40 45.9	+0.2
MK31				e		14 40 58.5	
MKAR	Makanchi Array	47.07	306	P	P	14 40 45.5	-0.2
MKAR				pP	pP	14 40 59.2	+0.9
MKAR	Makanchi Array	47.07	306	P	P	14 40 45.5	-0.2
	2.9nm,0.7s,baz=89,slow=7.0,SNR=14						
MKAR				pP	pP	14 40 59.2	+0.9
	5.1nm,0.7s,baz=90,slow=9.8,SNR=14						
KURK	Kurchatov	49.24	311	eP	P	14 41 01.2	-1.1
	5.4nm,0.6s						
KURBB	Kurchatov Arra	49.30	311	P	P	14 41 02.5	-0.3
	3.5nm,0.5s,baz=89,slow=7.9,SNR=20						
WRAB	Tennant Creek	52.47	189	eP	P	14 41 26.6	-0.3
	7.7nm,1.2s						
WRAB				e		14 41 39.2	
WRA	Warramunga Arr	52.48	189	P	P	14 41 26.5	-0.5
WRA				pP	pP	14 41 39.9	+0.2
WRA	Warramunga Arr	52.48	189	P	P	14 41 26.5	-0.5
	3.5nm,0.5s,baz=5.7,slow=7.7,SNR=40						
WRA				pP	pP	14 41 39.9	+0.2
	5.4nm,0.6s,baz=7.9,slow=7.9,SNR=15						
AAK	Ala-Archa	53.18	302	P	P	14 41 31.9	-0.3
AAK				pP	pP	14 41 46.1	+1.1
AAK	Ala-Archa	53.18	302	P	P	14 41 31.9	-0.3
	1.0nm,0.6s,baz=79,slow=5.2,SNR=2.7						
AAK				pP	pP	14 41 46.1	+1.1
	1.4nm,0.8s,baz=2.2,slow=23,SNR=2.6						
ILAR	Eielson Array	53.29	30	P	P	14 41 33.0	+0.5
ILAR	Eielson Array	53.29	30	P	P	14 41 33.0	+0.5
	0.3nm,0.6s,baz=260,slow=6.2,SNR=6.1						
BVAR	Borovoye Array	54.10	315	P	P	14 41 38.3	-0.3
BVAR				pP	pP	14 41 51.7	+0.3
BVAR	Borovoye Array	54.10	315	P	P	14 41 38.3	-0.3
	2.5nm,0.7s,baz=100,slow=7.4,SNR=14						
BVAR				pP	pP	14 41 51.7	+0.3
	2.0nm,0.6s,baz=89,slow=9.2,SNR=7.2						
BRVK	Borovoye	54.16	315	eP	P	14 41 38.8	-0.2
	1.8nm,0.6s						
KKAR	Karatay Array	55.92	303	eP	P	14 41 51.5	-0.4
	2.8nm,0.7s						
KKAR				epP	pP	14 42 04.9	+0.2
ASAR	Alice Springs	56.21	189	P	P	14 41 53.5	-0.5
ASAR				pP	pP	14 42 06.8	0.0
ASAR	Alice Springs	56.21	189	P	P	14 41 53.5	-0.5
	0.4nm,0.5s,baz=3.0,slow=6.2,SNR=18						
ASAR				pP	pP	14 42 06.8	0.0
	0.9nm,0.6s,baz=2.0,slow=7.5,SNR=7.2						
ABKAR	Akbulak array	61.33	312	eP	P	14 42 29.0	-0.3
	1.8nm,0.4s						
AKTO	Aktyubinsk	62.16	314	P	P	14 42 35.2	+0.2
AKTO	Aktyubinsk	62.16	314	P	P	14 42 35.2	+0.2
	1.4nm,0.6s,baz=78,slow=9.2,SNR=8.2						
YKA	Yellowknife Ar	67.69	29	P	P	14 43 11.6	+1.0
YKA	Yellowknife Ar	67.69	29	P	P	14 43 11.6	+1.0
	0.3nm,0.6s,baz=296,slow=6.5,SNR=5.7						
FINES	FINESS Array B	73.16	333	P	P	14 43 44.2	+0.2
FINES	FINESS Array B	73.16	333	P	P	14 43 44.3	+0.2
	1.2nm,0.6s,baz=72,slow=6.2,SNR=6.0						
KBZ	Khabaz	74.30	312	P	P	14 43 51.5	+0.5
KBZ	Khabaz	74.30	312	P	P	14 43 51.5	+0.5
	1.6nm,0.4s,baz=45,slow=4.3,SNR=4.2						
NVAR	Mina Array Bea	77.51	52	P	P	14 44 11.1	+1.3
NVAR	Mina Array Bea	77.51	52	P	P	14 44 11.1	+1.3
	0.4nm,0.6s,baz=343,slow=5.0,SNR=2.1						
MIB	Mutribah	78.18	298	eP	P	14 44 12.8	-0.6
MIB				AMb	AMB	14 44 18.3	
	comp=Z,4.8nm,0.7s						
AKASG	Malin Array Be	78.27	323	P	P	14 44 13.5	0.0
AKASG	Malin Array Be	78.27	323	P	P	14 44 13.5	0.0
	comp=Z,1.0nm,0.5s,baz=49,slow=6.3,SNR=4.7						
RDF	Al-Radifah	78.47	297	eP	P	14 44 14.1	-0.9
RDF				AMb	AMB	14 44 18.2	
	comp=Z,6.2nm,0.9s						
HFS	Hagfors	78.53	336	P	P	14 44 15.1	+0.4
HFS	Hagfors	78.53	336	P	P	14 44 15.1	+0.4
	comp=Z,3.3nm,0.9s,baz=62,slow=7.2,SNR=3.2						
NAY	Al-Naaiem	78.54	297	eP	P	14 44 14.6	-0.7
NAY				AMb	AMB	14 44 22.1	
	comp=Z,5.0nm,1.1s						
NB2	NORSAR Subarra	78.67	338	P	P	14 44 15.6	0.0
	comp=Z,0.2nm,0.7s,baz=48,slow=5.9						
NOA	NORSAR Array B	78.67	338	P	P	14 44 16.0	+0.4
NOA				pP	pP	14 44 29.3	+0.3
NOA	NORSAR Array B	78.67	338	P	P	14 44 16.0	+0.4
	comp=Z,2.0nm,0.8s,baz=42,slow=5.5,SNR=7.6						
NOA				pP	pP	14 44 29.3	+0.3
	comp=Z,2.5nm,0.9s,baz=41,slow=5.4,SNR=6.3						
PDAR	Pinedale Array	80.69	45	P	P	14 44 31.8	+4.7
PDAR	Pinedale Array	80.69	45	P	P	14 44 31.8	+4.7
	comp=Z,0.3nm,0.6s,baz=302,slow=5.2,SNR=3.5						
BRTR	Keskin Array B	82.28	312	P	P	14 44 36.0	+0.5
BRTR				pP	pP	14 44 49.6	+0.7
BRTR	Keskin Array B	82.28	312	P	P	14 44 36.0	+0.5
	comp=Z,1.2nm,0.8s,baz=127,slow=5.5,SNR=6.8						
BRTR				pP	pP	14 44 49.6	+0.7
	comp=Z,1.0nm,0.7s,baz=115,slow=4.5,SNR=4.7						
CLL	Collm	85.37	331	eP	P	14 44 51.0	+0.2
CLL				epP	pP	14 45 04.0	-0.3
TORD	Torodi Ar. Bea	120.88	313	PKP	PKPdf	14 51 06.3	-0.2
TORD	Torodi Ar. Bea	120.88	313	PKP	PKPdf	14 51 06.3	-0.2
	comp=Z,0.2nm,0.5s,baz=19,slow=1.1,SNR=6.4						
LPAZ	La Paz	148.46	67	PKPbc	PKPbc	14 52 01.9	+0.4
LPAZ				pPKPbc	pPKPbc	14 52 15.9	+0.4
LPAZ	La Paz	148.46	67	PKPbc	PKPbc	14 52 01.9	+0.4
	comp=Z,0.6nm,0.5s,baz=117,slow=2.3,SNR=2.6						
LPAZ				pPKPbc	pPKPbc	14 52 15.9	+0.4
	comp=Z,1.4nm,0.8s,baz=344,slow=1.4,SNR=3.1						

WEL 07 14:39:22.9±0.3**, 38°.68S×178°.47E, h28**km±2km**, ML3.8**/6, **1C, Error ellipse: s-maj=3.0km s-min=1.2km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	**Carnagh Statio**	**0.28**	**313**	⇑P*	Pb	14 39 29.9	-0.1
PRGZ	**Paritu Road**	**0.52**	**242**	P*	Pb	14 39 33.7	0.0
PRGZ				S*	Sn	14 39 42.1	-0.5
PUZ	**Puketiti**	**0.63**	**344**	P*	Pb	14 39 35.1	-0.4
PUZ				S*	Sn	14 39 44.9	-0.3
MHGZ	**Mahia Peninsul**	**0.65**	**223**	P*	Pb	14 39 35.7	0.0
KNZ	**Kokohu**	**0.71**	**241**	P*	Pb	14 39 36.3	-0.5
MWZ	**Matawai**	**0.82**	**295**	PN	Pb	14 39 37.9	-0.7
MWZ				SN	Sb	14 39 49.4	+0.1
RAHZ	**Arahi**	**1.11**	**257**	PN	Pn	14 39 42.5	-0.2
MXZ	**Matakaoa Point**	**1.12**	**353**	PN	Pn	14 39 43.1	+0.3
KAHZ	**Kahuranaki**	**1.67**	**228**	PN	Pn	14 39 50.5	+0.1
PXZ	**Pawanui**	**1.84**	**222**	PN	Pn	14 39 51.1	-1.5
BHHZ	**Black Hill Sta**	**2.04**	**246**	PN	Pn	14 39 54.9	-0.7
PRHZ	**Porangahau**	**2.13**	**221**	PN	Pn	14 39 54.9	-1.8
MOVZ	**Moawhango**	**2.24**	**250**	PN	Pn	14 39 58.6	+0.3
TSZ	**Takapari Road**	**2.38**	**234**	PN	Pn	14 39 58.7	-1.5
BFZ	**Birch Farm**	**2.63**	**220**	PN	Pn	14 40 01.4	-2.3
MTW	**Mount Morrison**	**3.37**	**222**	*e*PN	Pn	14 40 10.6	-3.1
CTZ	**Chatham Island**	**6.26**	**145**	PN	Pn	14 40 54.2	+0.8

*NIED **07** 14:49:00, 45°.90N×151°.80E, h38km, Mw4.4 Best double couple: $M_0$4.99000×10[15] NP1:ϕ_s334.00000°, δ81.00000°, λ42.00000°. NP2:ϕ_s235.00000°, δ49.00000°, λ168.00000°.*
*SKHL **07** 14:49:57.4±0.7, 45°.73N×152°.11E, h53km±8km, mb4.9/7, Ms3.9/4*
*NEIC **07** 14:49:58.5±0.3, 45°.99N×151°.62E, mb4.9/37, Error ellipse: s-maj=7.6km s-min=4.2km az=144.0*
*MOS **07** 14:49:58.4±1.1, 45°.98N×151°.55E, h45km, mb4.9/27, Error ellipse: s-maj=8.6km s-min=6.1km az=91.2*
*ISCJB **07** 14:49:58.9±0.5, 45°.89N±0°.04×151°.67E±0°.03, h49km±4km, mb4.6/84, MS3.8/20, Error ellipse: s-maj=6.8km s-min=3.0km az=164.8*
*IDC **07** 14:49:58.5±0.7, 46°.00N×151°.61E, h30km±5km, mb4.1/27, mb1 4.3/30, mb1mx4.3/35, mbtmp4.1/30, ML3.9/3, MS3.8/15, Ms1 3.8/15, ms1mx3.5/46, Error ellipse: s-maj=16.5km s-min=11.3km az=154.0*
*BJI **07** 14:49:59.0, 45°.93N×151°.84E, h59km, mB4.8/26, mb4.7/38, Ms4.2/21, Ms7 3.9/23*
*JMA **07** 14:49:59.2±0.8, 45°.91N×151°.76E, h30km, M5.0*
ISC 07 14:50:01.3±0.4**, 45°.86N**±0°.06×**151°.71E**±0°.04**, h60**km±2km**, h59**km**:pP-P, n432,** σ1s.41/488**, mb4.6**/84**, MS3.9**/20, **83C-80D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.77**	**258**	⇑*i*PN	**Pn**	**14 50 42.3**	**-0.8**
KUR				*e*S	**Sn**	**14 51 15.5**	**+0.1**
KUR				pmax	pmax		
	comp=Z,460nm,0.5s						
KUR				pmax	pmax		
	comp=N,320nm,0.8s						
KUR				pmax	pmax		
	comp=E,270nm,0.3s						
KUR				pmax	pmax		
	comp=N,6μm,2.0s						
KUR				pmax	pmax		
	comp=E,3μm,1.4s						
KUR				smax	smax		
	comp=N,2μm,0.5s						
KUR				smax	smax		
	comp=E,760nm,0.5s						
KUR	**Kuril'sk**	**2.77**	**258**	⇑*i*P	**Pn**	**14 50 42.3**	**-0.8**
KUR				AMB	AMB	14 50 47.0	
	comp=E,270nm,0.3s						
KUR				AMB	AMB	14 50 47.0	
	comp=E,460nm,0.5s						
KUR				AMB	AMB	14 50 47.0	
	comp=E,320nm,0.8s						
KUR				*e*S	**Sn**	**14 51 15.5**	**+0.1**
KUR				A	A	14 51 19.0	
	comp=E,3μm,1.4s						
KUR				A	A	14 51 19.0	
	comp=E,6μm,2.0s						
KUR				A	A	14 51 23.2	
	comp=E,2μm,0.5s						
KUR				A	A	14 51 23.2	
	comp=E,760nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.53**	**248**	*d i*PN	**Pn**	**14 51 07.6**	**+0.3**
YUK				*i* S	**Sn**	**14 52 00.7**	**+2.1**
YUK				pmax	pmax		
	comp=E,82nm,0.5s						
YUK				pmax	pmax		
	comp=Z,174nm,0.5s						
YUK				pmax	pmax		
	comp=N,32nm,0.2s						
YUK				smax	smax		
	comp=E,495nm,0.6s						
YUK				smax	smax		
	comp=N,116nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.53**	**248**	⇓*i*P	**Pn**	**14 51 07.6**	**+0.3**
YUK				AMB	AMB	14 51 10.7	
	comp=N,82nm,0.5s						
YUK				AMB	AMB	14 51 10.7	
	comp=N,174nm,0.5s						
YUK				AMB	AMB	14 51 10.7	
	comp=N,32nm,0.2s						
YUK				*i* S	**Sn**	**14 52 00.8**	**+2.1**
YUK				A	A	14 52 07.5	
	comp=N,116nm,0.6s						
YUK				A	A	14 52 07.5	
	comp=N,495nm,0.6s						
NEM2	**Nemuro 2**	**4.94**	**242**	P	**Pn**	**14 51 11.3**	**-1.5**
NEM2				*e*S	**Sn**	**14 52 04.8**	**-3.7**
JRA	**Rausu**	**5.06**	**250**	P	**Pn**	**14 51 15.4**	**+1.0**
JNK	**Nakash**	**5.47**	**248**	P	**Pn**	**14 51 20.2**	**0.0**
JNK				*e*S	**Sn**	**14 52 21.8**	**0.0**
SKR	**Severo-Kuril's**	**5.65**	**30**	*e*PN	**Pn**	**14 51 19.5**	**-3.0**
SKR				pmax	pmax		
	comp=N,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR	**Severo-Kuril's**	**5.65**	**30**	*e*P	**Pn**	**14 51 19.5**	**-3.0**
SKR				AMB	AMB	14 51 21.5	
	comp=Z,60nm,0.5s						
SKR				AMB	AMB	14 51 21.5	
	comp=Z,80nm,0.5s						
SKR				*e*S	Sn	14 52 18.0	-8.0
SKR				A	A	14 52 22.2	
	comp=Z,200nm,0.2s						
SKR				A	A	14 52 22.2	
	comp=Z,80nm,0.5s						
SKR				A	A	14 52 22.2	
	comp=Z,60nm,0.5s						
JAK	**Akkeshi**	**5.78**	**243**	P	**Pn**	**14 51 23.1**	**-1.2**
JTKR	**Abashiri--Toko**	**5.85**	**254**	P	**Pn**	**14 51 26.3**	**+1.0**
JMP	**Maruseppu**	**6.21**	**256**	P	**Pn**	**14 51 31.6**	**+1.3**
JAR	**Ashorobuto**	**6.22**	**248**	P	**Pn**	**14 51 31.1**	**+0.7**
YSS	**Yuzh-Sakhalins**	**6.29**	**283**	⇓*i*PN	**Pn**	**14 51 33.5**	**+2.2**
YSS				*e*S	**Sn**	**14 52 43.8**	**+2.2**
YSS				pmax	pmax		
	comp=E,30nm,0.8s						
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
YSS				MLR	MLR		
	comp=Z,900nm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.29**	**283**	⇓*i*P	**Pn**	**14 51 33.5**	**+2.2**
YSS				AMB	AMB	14 51 34.8	
	comp=Z,40nm,0.8s						
YSS				AMB	AMB	14 51 34.8	
	comp=Z,30nm,0.8s						
YSS				*e*S	**Sn**	**14 52 43.8**	**+2.2**
YSS				*e*LR	LR	14 53 32.0	
YSS				AMS	AMS	14 53 36.0	
	comp=Z,900nm,16.0s						
YSS				AMS	AMS	14 53 36.0	
	comp=Z,500nm,16.0s						
JOB	**Onbets**	**6.37**	**245**	P	**Pn**	**14 51 31.8**	**-0.6**
JKK2	**Kamakawa 2**	**6.67**	**256**	P	**Pn**	**14 51 38.2**	**+1.6**
ASAJ	**Asahikawa**	**6.69**	**258**	*e*P	**Pn**	**14 51 39.4**	**+2.5**
	comp=Z,57nm,1.0s						
ASAJ	**Asahikawa**	**6.69**	**258**	P	**Pn**	**14 51 39.4**	**+2.5**
ASAJ	**Asahikawa**	**6.69**	**258**	Pn	**Pn**	**14 51 39.6**	**+2.8**
	comp=Z,3.2nm,0.3s,baz=92,slow=15,SNR=36						
ASAJ				LR	LR	14 54 14.7	
	comp=Z,706nm,20.3s,baz=82,slow=38						
JCH	**Churui**	**6.81**	**245**	P	**Pn**	**14 51 37.4**	**-1.1**
JCH				*e*S	**Sn**	**14 52 51.0**	**-3.7**
JFR	**Furan**	**7.05**	**251**	P	**Pn**	**14 51 42.6**	**+0.8**
ERM	**Erimo**	**7.27**	**241**	*i* PN	**Pn**	**14 51 44.9**	**+0.2**
ERM	**Erimo**	**7.27**	**241**	*e*P	**Pn**	**14 51 44.6**	**-0.1**
	comp=Z,77nm,0.6s						
UGL	**Uglegorsk**	**7.28**	**300**	*e*PN	**Pn**	**14 51 47.0**	**+2.1**
UGL				*e*		14 53 13.0	
UGL				pmax	pmax		
	comp=Z,78nm,0.8s						
UGL				MLR	MLR		
	comp=N,300nm,18.0s						
UGL				MLR	MLR		
	comp=E,700nm,18.0s						
UGL	**Uglegorsk**	**7.28**	**300**	*e*P	**Pn**	**14 51 47.0**	**+2.1**
UGL				AMB	AMB	14 51 51.0	
	comp=E,78nm,0.8s						
UGL				*e*L	L	14 53 40.0	
UGL				AMS	AMS	14 54 50.0	
	comp=E,300nm,18.0s						
UGL				AMS	AMS	14 54 50.0	
	comp=E,700nm,18.0s						
JNBK	**Urakawa-nobuka**	**7.37**	**244**	P	**Pn**	**14 51 44.7**	**-1.5**
JBT2	**Biratori 2**	**7.38**	**249**	P	**Pn**	**14 51 45.7**	**-0.5**
TYV	**Tymovskoe**	**7.83**	**313**	*e*P	**Pn**	**14 51 53.0**	**+0.6**
TYV				AMB	AMB	14 51 54.0	
	comp=E,22nm,1.0s						
TYV				AMB	AMB	14 51 54.0	
	comp=E,31nm,1.0s						
TYV				AMS	AMS	14 54 44.0	
	comp=E,1μm,20.0s						
TYV				AMS	AMS	14 54 44.0	
	comp=E,800nm,18.0s						
JEW	**Eniwo**	**7.95**	**251**	P	**Pn**	**14 51 55.0**	**+1.0**
PEA0B	**Petropavlovsk-**	**8.23**	**26**	P	**Pn**	**14 51 56.5**	**-1.4**
PETK	**Petropavlovsk-**	**8.23**	**26**	PN	**Pn**	**14 51 59.0**	**+1.1**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**8.23**	**26**	Pn	**Pn**	**14 51 59.0**	**+1.1**
PETK	**Petropavlovsk-**	**8.23**	**26**	Pn	**Pn**	**14 51 59.0**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=193,slow=13,SNR=22						
JNB	**Noboribetsu**	**8.38**	**250**	P	**Pn**	**14 51 59.6**	**-0.4**
JKB	**Kayabe**	**8.67**	**247**	P	**Pn**	**14 52 02.5**	**-1.4**
JKB				*e*S	Sn	14 53 33.2	-6.9
JSH	**Shimam**	**8.97**	**253**	P	**Pn**	**14 52 08.6**	**+0.7**
JYM2	**Yakumo 2**	**8.99**	**249**	P	**Pn**	**14 52 07.8**	**-0.4**
JANG	**Nango**	**9.25**	**237**	P	Pn	14 52 08.3	-3.6
JANG				*e*S	Sn	14 53 44.2	-10
JSR	**Shiriuchi**	**9.25**	**246**	P	**Pn**	**14 52 10.3**	**-1.5**
JTM	**Tenmabayashi**	**9.26**	**241**	P	**Pn**	**14 52 09.8**	**-2.2**
JTM				*e*S	Sn	14 53 44.4	-10
JTH	**Tanohata**	**9.33**	**234**	P	Pn	14 52 09.0	-4.0
JTH				*e*S	Sn	14 53 46.3	-10
OKH	**Okha**	**9.56**	**327**	*e*P	**Pn**	**14 52 17.8**	**+1.8**
JOSM	**Okushiri--Mats**	**9.59**	**251**	P	**Pn**	**14 52 15.7**	**-0.8**
OFUJ	**Ofunato**	**10.04**	**231**	P	Pn	14 52 18.9	-3.7
OFUJ				*e*S	Sn	14 54 04.0	-10
NKL	**Nikolayevsk**	**10.22**	**320**	*i* P	**Pn**	**14 52 27.0**	**+2.0**
NKL				AMB	AMB	14 52 29.8	
	comp=Z,20nm,1.0s						
NKL				AMB	AMB	14 52 29.8	
	comp=Z,30nm,1.0s						
NKL				AMB	AMB	14 52 29.8	
	comp=Z,40nm,1.0s						
NKL				*e*L	L	14 55 28.0	
NKL				AMS	AMS	14 56 52.0	
	comp=Z,400nm,17.0s						
NKL				AMS	AMS	14 56 52.0	
	comp=Z,800nm,17.0s						
JRG	**Rokugo**	**10.40**	**236**	P	**Pn**	**14 52 25.0**	**-2.6**
JRG				*e*S	Sn	14 54 13.6	-8.9
TEY	**Ternei**	**10.65**	**271**	*e*P	Pn	14 52 38.0	+7.1
JIO	**Ouri**	**10.66**	**230**	P	Pn	14 52 27.8	-3.4
JIO				*e*S	Sn	14 54 16.8	-12
MAJO	**Matsushiro**	**13.77**	**232**	*e*P	Pn	14 53 10.3	-3.1
MAJO				pmax	pmax		
	comp=Z,27nm,0.7s						
MAJO	**Matsushiro**	**13.77**	**232**	*e*P	Pn	14 53 10.3	-3.1
	comp=Z,27nm,0.7s						
MAJO				*e*		14 53 22.0	
MJAR	**Matsushiro Arr**	**13.77**	**232**	Pn	**Pn**	**14 53 10.5**	**-3.0**
MJAR	**Matsushiro Arr**	**13.77**	**232**	Pn	**Pn**	**14 53 10.5**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=26,slow=12,SNR=26						
KLR	**Kul'dur**	**13.89**	**291**	*e*P	**Pn**	**14 53 13.2**	**-1.8**
KLR				MLR	MLR		
	comp=Z,800nm,14.0s						
USRK	**Ussuriysk Arra**	**14.04**	**270**	Pn	**Pn**	**14 53 17.3**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=80,slow=13,SNR=14						
USRK				LR	LR	14 58 50.3	
	comp=Z,383nm,18.1s,baz=61,slow=38						
FX1	**Attu Island--F**	**15.61**	**55**	*e*P	**Pn**	**14 53 36.4**	**-0.9**
FX1	**Attu Island--F**	**15.61**	**55**	Pn	**Pn**	**14 53 36.0**	**-1.3**
	comp=Z,2.0nm,0.3s,baz=65,slow=20,SNR=8.7						
MDJ	**Mudanjiang**	**15.62**	**273**	P	**Pn**	**14 53 37.0**	**-0.6**
MDJ				S	**Sn**	**14 56 27.6**	**-2.0**
MDJ				SS	**SnSn**	**14 56 49.2**	**+6.4**
MDJ				pmax	pmax		
	comp=Z,22nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,86nm,8.6s						
MDJ				LR	LR		
	comp=N,70nm,25.9s						
MDJ				LR	LR		
	comp=E,160nm,26.9s						
MDJ				LR	LR		
	comp=Z,260nm,20.9s						
SEY	**Seymchan**	**17.11**	**1**	*i* P	**Pn**	**14 53 52.2**	**-3.8**
ZEA	**Zeya**	**17.58**	**305**	*e*P	**Pn**	**14 53 59.3**	**-2.6**
ZEA				AMB	AMB	14 54 02.2	
	comp=Z,23nm,1.0s						
CN2	**Changchun**	**18.71**	**273**	*e*P	**Pn**	**14 54 15.2**	**-0.5**
CN2				*e*S	**Sn**	**14 57 38.2**	**-6.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,18.0s						
CN2				LR	LR		
	comp=E,300nm,18.0s						
CN2				LR	LR		
	comp=Z,300nm,21.0s						
KSRS	**Korea Array**	**19.60**	**253**	P	**P**	**14 54 24.1**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=60,slow=11,SNR=42						
KSRS				LR	LR	15 01 02.4	
	comp=Z,173nm,21.4s,baz=262,slow=34						
KSAR	**Wonju Array Be**	**19.64**	**253**	P	**P**	**14 54 24.1**	**-0.7**
CLNS	**Chul'man**	**19.89**	**313**	*e*P	**P**	**14 54 27.3**	**-0.2**
CLNS				*e*S	S	14 57 57.4	-11
CLNS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,3.0nm,0.7s						
CLNS				pmax	pmax		
	comp=N,5.0nm,0.9s						
CLNS				smax	smax		
	comp=N,27nm,11.4s						
CLNS				smax	smax		
	comp=E,228nm,15.5s						
CLNS				MLR	MLR		
	comp=Z,237nm,16.0s						
CLNS				MLR	MLR		
	comp=E,324nm,14.0s						
CLNS				MLR	MLR		
	comp=N,156nm,17.0s						
JNU	**Nakatsue**	**20.43**	**239**	P	**P**	**14 54 34.5**	**+0.9**
JNU	**Nakatsue**	**20.43**	**239**	P	**P**	**14 54 34.5**	**+0.9**
	comp=N,8.8nm,0.8s,baz=35,slow=12,SNR=5.3						
JNU				LR	LR	15 02 26.0	
	comp=N,157nm,20.3s,baz=47,slow=37						
INCN	**Inchon**	**20.45**	**255**	P	Pn	14 54 35.0	-1.4
	comp=N,30nm,0.8s						
YAK	**Yakutsk**	**20.57**	**330**	*e*P	Pn	14 54 38.7	+1.2
YAK				*e**PP	pP	14 54 57.8	+10
YAK				*e*S	**S**	**14 58 21.5**	**+0.3**
YAK				*e*		14 58 47.2	
YAK				*e**SS	sS	14 58 50.7	+8.3
YAK				*e*		15 06 03.0	
YAK				pmax	pmax		
	comp=Z,51nm,0.9s						
YAK				pmax	pmax		
	comp=N,18nm,1.0s						
YAK				pmax	pmax		
	comp=E,22nm,1.3s						
YAK				smax	smax		
	comp=N,126nm,5.0s						
YAK				smax	smax		
	comp=E,85nm,4.8s						
YAK	**Yakutsk**	**20.57**	**330**	*e*P	**P**	**14 54 33.9**	**-0.9**
	comp=E,65nm,0.8s						
SNY	**Shenyang**	**20.64**	**269**	⇓P	**P**	**14 54 36.3**	**+0.7**
SNY				S	**S**	**14 58 21.7**	**-1.1**
SNY				pmax	pmax		
	comp=Z,14nm,1.0s						
SNY				LR	LR		
	comp=N,140nm,15.0s						
SNY				LR	LR		
	comp=E,220nm,15.3s						
SNY				LR	LR		
	comp=Z,330nm,15.6s						
BILL	**Bilibino**	**23.48**	**14**	P	**P**	**14 55 04.0**	**-1.2**
BILL				MLR	MLR		
	comp=Z,100nm,18.0s						
BILL	**Bilibino**	**23.48**	**14**	P	**P**	**14 55 02.6**	**-2.6**
	comp=Z,2.3nm,0.7s						
BJI	**Beijing**	**26.50**	**270**	P	**P**	**14 55 35.4**	**+2.6**
BJI				S	**S**	**14 59 59.9**	**-2.6**
BJI				pmax	pmax		
	comp=Z,16nm,0.9s						
BJI				LR	LR		
	comp=N,140nm,21.0s						
BJI				LR	LR		
	comp=E,280nm,17.1s						
BJI				LR	LR		
	comp=Z,180nm,20.6s						
NJ2	**Nanjing**	**28.80**	**253**	*e*P	**P**	**14 55 55.4**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC	**Hu-ho-hao-te**	**29.39**	**275**	*e*P	**P**	**14 55 58.3**	**-0.5**
HHC				pP	**pP**	**14 56 12.8**	**-0.7**
HHC				sP	**sP**	**14 56 20.4**	**-0.2**
HHC				PP	**PnPn**	**14 56 54.7**	**-0.2**
HHC				S	**S**	**15 00 45.3**	**-3.0**
HHC				SS	**SnSn**	**15 02 19.1**	**-0.6**
HHC				pmax	pmax		
	comp=Z,39nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,5.2s						
HHC				LR	LR		
	comp=N,280nm,14.1s						
HHC				LR	LR		
	comp=E,400nm,16.7s						
HHC				LR	LR		
	comp=Z,590nm,12.8s						
SONM	**Songino Array**	**30.72**	**290**	P	**P**	**14 56 09.7**	**-0.8**
SONM				PcP	**PcP**	**14 59 07.0**	**+0.1**
SONM	**Songino Array**	**30.72**	**290**	P	**P**	**14 56 09.7**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=64,slow=7.1,SNR=7.3						
SONM				PcP	**PcP**	**14 59 07.0**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=120,slow=1.8,SNR=3.7						
SONM				LR	LR	15 09 25.3	
	comp=Z,154nm,19.1s,baz=83,slow=38						
TLY	**Talaya**	**31.73**	**298**	*i* P	**P**	**14 56 17.3**	**-1.9**
ZAK	**Zakamensk**	**32.18**	**296**	*e*P	**P**	**14 56 20.8**	**-2.5**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GUMO	**Guam**	**32.68**	**192**	LR	LR	15 06 32.2	
	comp=Z,115nm,21.9s,baz=68,slow=30						
WHN	**Wuhan**	**32.76**	**255**	P	**P**	**14 56 29.0**	**+0.6**
XAN	**Xi'an**	**34.47**	**265**	P	**P**	**14 56 43.9**	**+0.6**
XAN				pP	**pP**	**14 56 55.8**	**-2.4**
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,33nm,5.8s						
SEW	**Seward**	**36.85**	**46**	*e*P	P	14 56 53.0	-10
LZH	**Lanzhou**	**36.94**	**272**	*e*P	**P**	**14 57 05.5**	**+0.9**
LZH				pP	**pP**	**14 57 20.7**	**+1.1**
LZH				sP	**sP**	**14 57 28.0**	**+1.4**
LZH				PP	**PnPn**	**14 58 32.4**	**+2.1**
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,78nm,4.8s						
LZH				LR	LR		
	comp=N,400nm,13.0s						
LZH				LR	LR		
	comp=E,400nm,13.5s						
LZH				LR	LR		
	comp=Z,510nm,17.3s						
SML	**Sawmill**	**37.28**	**43**	*e*P	**P**	**14 57 06.1**	**-1.0**
SML				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SML	**Sawmill**	**37.28**	**43**	*e*P	**P**	**14 57 06.1**	**-1.0**
	comp=Z,1.4nm,0.7s						
COLA	**College**	**37.44**	**38**	*i* P	**P**	**14 57 07.0**	**-1.2**
ILAR	**Eielson Array**	**37.85**	**38**	P	**P**	**14 57 11.2**	**-0.5**
ILAR	**Eielson Array**	**37.85**	**38**	P	**P**	**14 57 11.2**	**-0.5**
	comp=Z,0.8nm,0.9s,baz=260,slow=7.5,SNR=10						
ILAR				LR	LR	15 11 33.4	
	comp=Z,21nm,22.0s,baz=272,slow=34						
GTA	**Gaotai**	**38.15**	**279**	*e*P	**P**	**14 57 15.0**	**+0.3**
GTA				pP	**pP**	**14 57 30.3**	**+0.5**
GTA				sP	**sP**	**14 57 37.4**	**+0.7**
GTA				PcP	**PcP**	**14 59 29.8**	**+1.4**
GTA				S	**S**	**15 03 03.4**	**-0.3**
GTA				sS	**sS**	**15 03 29.3**	**+0.2**
GTA				SS	**SnSn**	**15 05 44.4**	**-7.4**
GTA				pmax	pmax		
	comp=Z,31nm,6.2s						
GTA				LR	LR		
	comp=N,100nm,16.6s						
GTA				LR	LR		
	comp=E,120nm,15.7s						
GTA				LR	LR		
	comp=Z,160nm,16.4s						
CD2	**Chengdu**	**39.83**	**265**	P	**P**	**14 57 26.4**	**-2.4**
CD2				pP	**pP**	**14 57 41.7**	**-2.2**
CD2				PP	**PnPn**	**14 59 02.9**	**-1.9**
CD2				PcS	**PcS**	**15 03 21.4**	**-2.7**
CD2				S	**S**	**15 03 25.7**	**-3.2**
CD2				SS	**SS**	**15 06 17.2**	**-10**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,170nm,6.1s						
GYA	**Guiyang**	**40.57**	**257**	⇑*i*P	**P**	**14 57 35.4**	**+0.4**
GYA				pP	**pP**	**14 57 51.2**	**+1.1**
GYA				sP	**sP**	**14 57 59.5**	**+2.4**
GYA				PP	**PnPn**	**14 59 14.0**	**+0.4**
GYA				PcP	**PcP**	**14 59 38.8**	**+2.6**
GYA				ScP	**ScP**	**15 03 22.0**	**+1.7**
GYA				S	**S**	**15 03 41.6**	**+1.5**
GYA				sS	**sS**	**15 04 07.8**	**+2.0**
GYA				ScS	**ScS**	**15 07 34.1**	**-1.0**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
ZALV	**Zalesovo Beam**	**42.34**	**306**	PcP	**PcP**	**14 59 41.7**	**+0.3**
ZALV	**Zalesovo Beam**	**42.34**	**306**	PcP	**PcP**	**14 59 41.7**	**+0.3**
	comp=Z,4.6nm,0.8s,baz=66,slow=3.6,SNR=19						
ZALV				LR	LR	15 16 35.0	
	comp=Z,241nm,18.6s,baz=71,slow=38						
QIZ	**Qiongzhong**	**43.60**	**246**	P	**P**	**14 58 00.7**	**+1.1**
QIZ				S	**S**	**15 04 27.8**	**+3.1**
QIZ				pmax	pmax		
	comp=Z,34nm,1.5s						
QIZ				LR	LR		
	comp=Z,200nm,26.0s						
KMI	**Kunming**	**44.12**	**259**	P	**P**	**14 58 05.1**	**+1.1**
KMI				pP	**pP**	**14 58 21.0**	**+1.7**
KMI				sP	**sP**	**14 58 25.8**	**-0.4**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
WMQ	**Urumqi**	**44.34**	**291**	P	**P**	**14 58 06.8**	**+1.4**
WMQ				pP	**pP**	**14 58 22.8**	**+2.1**
WMQ				sP	**sP**	**14 58 29.8**	**+2.2**
WMQ				PP	**PP**	**14 59 51.8**	**+2.3**
WMQ				ScP	**ScP**	**15 03 35.8**	**+0.6**
WMQ				S	**S**	**15 04 34.8**	**-0.4**
WMQ				SS	SS	15 07 45.8	-9.5
WMQ				ScS	**ScS**	**15 07 56.8**	**-1.0**
WMQ				pmax	pmax		
	comp=Z,18nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,210nm,5.0s						
WMQ				LR	LR		

comp=N,140nm,16.0s
WMQ LR LR
comp=E,130nm,16.0s
WMQ LR LR
comp=Z,87nm,16.0s
MK31 Makanchi Array 46.48 298 *e*P **P 14 58 20.9 -1.3**
MK31 Makanchi Array 46.48 298 *e*P **P 14 58 20.9 -1.3**
MKAR Makanchi Array 46.48 298 P **P 14 58 21.3 -1.0**
MKAR 14 59 56.3
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR MLR MLR
comp=Z,162nm,18.1s
MKAR Makanchi Array 46.48 298 P **P 14 58 21.2 -1.0**
MKAR PcP **PcP 14 59 56.3 +0.5**
MKAR Makanchi Array 46.48 298 P **P 14 58 21.2 -1.0**
comp=Z,1.5nm,0.7s,baz=69,slow=8.3,SNR=18
MKAR PcP **PcP 14 59 56.3 +0.5**
comp=Z,2.4nm,0.8s,baz=55,slow=3.4,SNR=12
MKAR LR LR 15 19 03.5
comp=Z,162nm,18.1s,baz=12,slow=38
KURK Kurchatov 47.05 304 *e*P **P 14 58 23.9 -2.6**
KURK pmax pmax
comp=Z,2.0nm,0.8s
KURK Kurchatov 47.05 304 P **P 14 58 26.6 +0.1**
KURK PcP **PcP 14 59 58.5 +0.9**
KURBB Kurchatov Arra 47.14 304 P **P 14 58 26.6 -0.6**
comp=Z,0.6nm,0.3s,baz=74,slow=8.2,SNR=8.2
KURBB PcP **PcP 14 59 58.5 +0.6**
comp=Z,0.9nm,0.2s,baz=76,slow=3.8,SNR=7.0
KURBB LR LR 15 19 00.7
comp=Z,53nm,21.3s,baz=70,slow=37
LSA Lhasa 49.35 273 P **P 14 58 46.7 +1.6**
BVAR Borovoye Array 50.67 309 P **P 14 58 53.8 -0.4**
BVAR 15 00 11.0
BVAR pmax pmax
comp=Z,1.0nm,0.8s
BVAR MLR MLR
comp=Z,161nm,19.8s
BVAR Borovoye Array 50.67 309 P **P 14 58 53.8 -0.4**
BVAR PcP **PcP 15 00 11.0 +0.2**
BVAR Borovoye Array 50.67 309 P **P 14 58 53.8 -0.4**
comp=Z,1.3nm,0.8s,baz=56,slow=9.1,SNR=5.7
BVAR PcP **PcP 15 00 11.0 +0.2**
comp=Z,1.7nm,0.9s,baz=84,slow=4.6,SNR=6.2
BVAR LR LR 15 22 04.2
comp=Z,161nm,19.8s,baz=69,slow=38
BRVK Borovoye 50.71 310 *i*P **P 14 58 52.6 -1.9**
BRVK pmax pmax
comp=Z,2.0nm,0.9s
CHTO Chiang Mai 50.96 256 *e*P **P 14 58 57.9 +1.1**
CHTO pmax pmax
comp=Z,12nm,1.0s
CHTO Chiang Mai 50.96 256 *e*P **P 14 58 57.9 +1.1**
comp=Z,12nm,1.0s
CMAR Chiang Mai Arr 51.21 256 P **P 14 59 00.3 +1.6**
CMAR Chiang Mai Arr 51.21 256 P **P 14 59 00.4 +1.6**
comp=Z,5.5nm,0.9s,baz=34,slow=7.6,SNR=29
CMAR LR LR 15 21 37.9
comp=Z,37nm,19.8s,baz=253,slow=37
YKA Yellowknife Ar 52.22 36 P **P 14 59 05.7 +0.1**
YKA PcP **PcP 15 00 16.9 +0.5**
YKA Yellowknife Ar 52.22 36 P **P 14 59 05.7 +0.1**
comp=Z,1.9nm,0.7s,baz=297,slow=7.0,SNR=25
YKA PcP **PcP 15 00 16.9 +0.5**
comp=Z,0.7nm,0.9s,baz=297,slow=5.6,SNR=3.9
TAPN Taplejung 53.17 273 *e*P **P 14 59 14.0 +0.5**
comp=Z,16nm,0.9s
AAK Ala-Archa 53.35 296 *i*P **P 14 59 13.9 -0.6**
AAK pmax pmax
comp=Z,7.0nm,0.8s
AAK Ala-Archa 53.35 296 *e*P **P 14 59 14.4 -0.2**
comp=Z,16nm,0.9s
AAK Ala-Archa 53.35 296 P **P 14 59 14.3 -0.3**
comp=Z,2.6nm,0.8s,baz=45,slow=5.4,SNR=8.2
AAK LR LR 15 23 16.7
comp=Z,122nm,19.0s,baz=30,slow=38
KSH Kashi 54.09 292 P P 14 59 27.0 +7.1
KSH pP pP 14 59 42.3 +6.7
KSH sP sP 14 59 50.0 +7.6
KSH *e*PcP PcP 15 00 30.5 +6.4
KSH PP PP 15 01 30.0 +8.4
KSH ScP **ScP 15 04 22.0 +5.2**
KSH PcS **PcS 15 04 28.0 +4.4**
KSH S S 15 06 58.1 +6.2
KSH sS sS 15 07 25.5 +7.0
KSH ScS **ScS 15 09 07.0 +3.2**
KSH SS **SS 15 10 40.1 +6.5**
KSH pmax pmax
comp=Z,2.0nm,0.3s
KSH LR LR
comp=Z,270nm,4.7s
GUN Gumba 54.10 275 *e*P **P 14 59 21.2 +0.8**
RAMN Ramite 54.20 273 *e*P **P 14 59 21.8 +0.8**
comp=Z,48nm,0.9s
KKN Kakani 54.60 275 *e*P **P 14 59 24.8 +1.0**
comp=Z,35nm,0.9s
PKI Pulchoki 54.64 275 *e*P **P 14 59 25.0 +0.7**
DMN Daman 54.83 275 *e*P **P 14 59 26.6 +1.0**
comp=Z,41nm,1.0s
ARU Arti 55.01 317 *d i*P **P 14 59 26.0 -0.1**
ARU 15 01 25.1
ARU S **S 15 07 03.7 +0.2**
ARU SS **SS 15 10 43.0 -4.1**
ARU pmax pmax
comp=Z,6.0nm,1.2s
ARU Arti 55.01 317 *e*P **P 14 59 26.8 +0.6**
comp=Z,2.6nm,0.8s
DANN Dangsing 55.31 277 *e*P **P 14 59 30.4 +1.3**
comp=Z,59nm,0.9s
KKAR Karatay Array 55.57 299 P **P 14 59 29.3 -1.1**
KKAR Karatay Array 55.57 299 P **P 14 59 29.3 -1.1**
KOLN Koldanda 55.78 276 *e*P **P 14 59 33.5 +1.2**
comp=Z,36nm,0.9s
PYUN Piuthan 56.00 277 *e*P **P 14 59 34.9 +1.0**
comp=Z,106nm,1.0s
ABKAR Akbulak array 58.24 310 *e*P **P 14 59 47.4 -1.8**
comp=Z,1.1nm,0.4s
ARCES ARCESS Array B 58.37 341 P **P 14 59 49.2 -0.6**
ARCES ARCESS Array B 58.37 341 P **P 14 59 49.2 -0.6**
comp=Z,1.7nm,0.7s,baz=30,slow=9.3,SNR=4.8
NEW Newport 58.49 52 ⇓P **P 14 59 50.8 -0.2**
baz=58
C11A Tepee Creek (N 59.21 52 ⇓P **P 14 59 56.9 +0.9**
baz=59,SNR=5.1
A13A Flathead Natio 59.56 50 ⇑P **P 14 59 58.5 0.0**
baz=59
B13A Whitefish 59.87 50 ⇑P **P 15 00 01.5 +0.9**
baz=60,SNR=5.6
BSMT Bassoo Peak 60.00 51 *e*P **P 15 00 02.6 +1.0**
comp=Z,2.5nm,1.1s
A14A Double T Ranch 60.07 49 ⇓P **P 15 00 02.5 +0.5**
baz=60
C13A Hot Springs 60.22 51 ⇑P **P 15 00 03.7 +0.7**
baz=60
KLMR Klimovskoe 60.36 329 *e*P **P 15 00 01.1 -2.5**
KLMR pmax pmax
comp=Z,13nm,1.4s
A15A Johnson Ranch, 60.43 49 ⇑P **P 15 00 04.5 +0.1**
baz=60
B14A Marquette Ranc 60.51 50 ⇓P **P 15 00 06.1 +1.1**
baz=60,SNR=6.0
D13A Huson 60.63 51 ⇓P **P 15 00 06.4 +0.6**
baz=60
SWMT Swartz Lake 60.63 51 *e*P **P 15 00 06.9 +1.0**
comp=Z,3.4nm,1.1s
B15A Bradely Ranch, 60.92 49 ⇑P **P 15 00 08.4 +0.6**
baz=61
F12A Elk City 61.00 53 ⇓P **P 15 00 09.6 +1.2**
baz=61,SNR=5.3
A16A West Butte Ran 61.04 48 ⇓P **P 15 00 08.4 -0.2**
baz=61
SLMT Seeley Lake 61.07 51 *e*P **P 15 00 09.5 +0.6**
comp=Z,10nm,1.2s
MSO Missoula 61.08 51 ⇓P **P 15 00 09.4 +0.6**
baz=61
D14A Greenough 61.16 51 ⇑P **P 15 00 10.2 +0.8**
baz=61,SNR=10.0
E13A Victor 61.18 52 ⇓P **P 15 00 10.1 +0.6**
baz=61
C15A Salmond Ranch, 61.22 50 ⇑P **P 15 00 11.1 +1.2**
baz=61,SNR=11
B16A M & M Farms, S 61.31 49 ⇓P **P 15 00 11.2 +0.8**
baz=61
KBL Kabul 61.48 291 *e*P **P 15 00 11.1 -0.8**
KBL pmax pmax
comp=Z,8.0nm,0.9s
KBL Kabul 61.48 291 *e*P **P 15 00 11.1 -0.8**
comp=Z,7.8nm,0.9s
F13A Darby 61.49 53 ⇑P **P 15 00 12.3 +0.6**
baz=61
A17A Triple J Farms 61.51 48 ⇓P **P 15 00 12.5 +0.8**
baz=61
E14A Clinton 61.57 52 ⇑P **P 15 00 13.0 +0.8**
baz=61
SUMG Summit 61.65 3 *e*P **P 15 00 12.7 0.0**
SUMG pmax pmax
comp=Z,30nm,0.9s
SUMG Summit 61.65 3 *e*P **P 15 00 12.7 0.0**
comp=Z,30nm,0.9s
C16A Fuhringer Ranc 61.67 50 ⇓P **P 15 00 13.6 +0.8**
baz=61
JOF Joensuu 61.70 333 *e*P **P 15 00 11.0 -1.6**
JOF pmax pmax
comp=Z,1.0nm,0.6s
JOF Joensuu 61.70 333 *e*p **P 15 00 11.0 -1.6**
comp=Z,1.4nm,0.6s
D15A Lincoln 61.72 51 ⇓P **P 15 00 13.7 +0.5**
baz=61
B17A L&G Farms, Che 61.87 49 ⇓P **P 15 00 14.8 +0.7**
baz=62
H12A Diamond D Ranc 61.96 54 ⇓P **P 15 00 15.2 +0.3**
baz=62
A18A Metzger Ranch, 61.97 48 ⇑P **P 15 00 15.1 +0.3**
baz=62
G13A Cobalt 61.97 53 ⇑P **P 15 00 15.8 +0.8**
baz=62,SNR=8.2
E15A Deer Lodge 62.03 51 ⇑P **P 15 00 16.0 +0.7**
baz=62
MFID Camas Ranch 62.10 55 ⇓P **P 15 00 16.6 +0.8**
baz=62
D16A Dana Ranch, Ca 62.25 50 ⇓P **P 15 00 17.9 +1.1**
baz=62,SNR=5.8
I12A Atlanta 62.26 55 ⇑P **P 15 00 18.1 +1.1**
baz=62,SNR=6.2
H13A Challis 62.29 54 ⇓P **P 15 00 17.8 +0.7**
baz=62,SNR=5.8
C17A Wharram Farm, 62.29 49 ⇓P **P 15 00 17.7 +0.7**
baz=62,SNR=6.5
G14A Jackson 62.31 53 ⇑P **P 15 00 17.6 +0.2**
baz=62
B18A Beardsley Farm 62.34 48 ⇑P **P 15 00 18.0 +0.8**
baz=62
F15A Butte 62.48 52 ⇑P **P 15 00 19.2 +0.8**
baz=62
E16A East Helena 62.49 51 ⇓P **P 15 00 18.9 +0.5**
baz=62
A19A Klindworth Far 62.53 47 ⇓P **P 15 00 19.4 +0.9**
baz=62,SNR=6.3
EGMT Eagleton 62.58 48 *e*P **P 15 00 19.4 +0.5**
comp=Z,13nm,1.4s
EGMT Eagleton 62.58 48 ⇓P **P 15 00 19.7 +0.8**
baz=62
D17A Six Diamond Ra 62.63 50 ⇑P **P 15 00 20.0 +0.6**
baz=62
B19A Brinkman Farms 62.73 48 ⇑P **P 15 00 20.7 +0.9**
baz=62,SNR=5.6
H14A Leadore 62.75 53 ⇑P **P 15 00 20.4 +0.2**
baz=62
I13A Wilhorse Cree 62.77 54 ⇓P **P 15 00 21.3 +0.9**
baz=62
HLID Hailey 62.82 55 ⇓P **P 15 00 21.4 +0.7**
baz=63
G15A Dillon 62.90 52 ⇑P **P 15 00 22.1 +0.9**
baz=63
E17A Martinsdale 62.98 50 ⇑P **P 15 00 22.8 +1.1**
baz=63,SNR=5.4
A20A Cobblestone Ra 62.98 47 ⇑P **P 15 00 22.3 +0.7**
baz=63,SNR=5.4
J13A Cove Ranch, Pi 63.05 55 ⇓P **P 15 00 23.4 +1.1**
baz=63
BOZ Bozeman (W) 63.07 51 ⇑P **P 15 00 23.4 +1.2**
baz=63,SNR=6.1
C19A Slack Wire Ran 63.13 48 ⇓P **P 15 00 23.7 +1.2**
baz=63
I14A Mackay 63.13 54 ⇑P **P 15 00 24.1 +1.3**
baz=63,SNR=6.0
B20A Solberg Farm, 63.21 47 ⇑P **P 15 00 24.1 +1.0**
baz=63
G16A Moss Hill, Enn 63.24 52 ⇑P **P 15 00 24.4 +1.0**
baz=63,SNR=7.9
E18A Harlowton 63.41 50 ⇓P **P 15 00 25.3 +0.8**
baz=63
A21A Bergtoll Ranch 63.42 46 ⇑P **P 15 00 25.4 +1.0**
baz=63,SNR=6.9
F17A Fitzpatrick Pl 63.43 51 ⇑P **P 15 00 25.7 +1.0**
baz=63
D19A Cripps Ranch, 63.58 49 ⇓P **P 15 00 26.6 +1.0**
baz=63
C20A Veseth Ranch, 63.69 48 ⇑P **P 15 00 27.2 +1.1**
baz=63,SNR=10.0
NVAR Mina Array Bea 63.71 61 P **P 15 00 28.0 +1.3**
NVAR pP **pP 15 00 38.1 -4.7**
NVAR Mina Array Bea 63.71 61 P **P 15 00 28.0 +1.3**
comp=Z,1.2nm,0.7s,baz=294,slow=5.2,SNR=7.6
NVAR pP **pP 15 00 38.1 -4.7**
comp=Z,2.1nm,0.8s,baz=284,slow=5.8,SNR=6.0
KAF Kangasniemi 63.83 335 *e*P **P 15 00 25.5 -1.3**
KAF pmax pmax
comp=Z,3.0nm,0.8s
KAF Kangasniemi 63.83 335 *e*p **P 15 00 25.5 -1.3**
comp=Z,2.8nm,0.8s
H16A Russell Place, 63.87 52 ⇓P **P 15 00 28.8 +1.1**
baz=64
A22A Carney Farms, 63.92 46 ⇑P **P 15 00 28.6 +0.9**
baz=64
F18A Big Timber 63.94 50 ⇓P **P 15 00 29.2 +1.2**
baz=64
D20A Manuel Ranch, 64.02 48 ⇑P **P 15 00 29.6 +1.2**
baz=64
J15A Blackfoot 64.04 54 ⇑P **P 15 00 29.8 +1.1**
baz=64
E19A Rath Farm, Rou 64.08 49 ⇓P **P 15 00 29.9 +1.1**
baz=64
C21A Desert Coulee 64.08 47 ⇓P **P 15 00 29.8 +1.0**
baz=64
FINES FINESS Array B 64.42 334 P **P 15 00 30.1 -0.6**
FINES FINESS Array B 64.42 334 P **P 15 00 30.1 -0.6**
comp=Z,4.3nm,0.8s,baz=58,slow=7.2,SNR=10
J16A Bone 64.58 53 ⇓P **P 15 00 33.9 +1.5**
baz=64,SNR=5.7
D21A La Casta Ranch 64.63 48 ⇑P **P 15 00 33.8 +1.4**
baz=64
RLMT Red Lodge 64.69 51 ⇓P **P 15 00 34.3 +1.3**
baz=64
RRI2 Red Ridge 64.70 53 *e*P **P 15 00 34.4 +1.2**
comp=Z,6.1nm,0.8s
B23A Brockton 64.73 46 ⇑P **P 15 00 34.3 +1.3**
baz=64
I17A Pilgrim Ck. 64.75 52 ⇓P **P 15 00 35.1 +1.7**
baz=64
K16A Soda Springs 64.88 54 ⇓P **P 15 00 36.1 +1.8**
baz=65
D22A Cohagen 65.00 47 ⇓P **P 15 00 35.8 +1.0**
baz=65
J17A Brown Place, J 65.03 53 ⇓P **P 15 00 36.3 +1.0**
baz=65
G20A Bridger 65.19 50 ⇑P **P 15 00 36.8 +0.7**
baz=65
R11A Troy Canyon, C 65.42 60 ⇓P **P 15 00 38.4 +0.6**
baz=65
OBN Obninsk 65.49 325 P **P 15 00 38.0 +0.3**
OBN pmax pmax
comp=Z,7.0nm,0.5s
L16A Fish Haven 65.49 54 ⇑P **P 15 00 39.5 +1.2**
baz=65
J18A Kendall Valley 65.51 53 ⇑P **P 15 00 39.1 +0.7**
baz=65
I19A Meeteetse 65.54 51 ⇓P **P 15 00 39.8 +1.2**
baz=65
MPMC Manual Prospec 65.72 63 ⇓P **P 15 00 40.6 +0.8**
baz=66
FURC Furnace Creek, 65.84 62 ⇑P **P 15 00 41.4 +1.1**
baz=66
K18A Toltan Ranch, 65.87 53 ⇑P **P 15 00 42.1 +1.4**
baz=66
DUG Dugway 65.88 57 ⇓P **P 15 00 41.7 +1.0**
baz=66
D24A Glendive 65.97 47 ⇓P **P 15 00 42.0 +1.0**
baz=66
J19A Crowheart 66.01 52 ⇓P **P 15 00 42.7 +1.2**
baz=66
O15A The Old Anders 66.02 56 ⇓P **P 15 00 42.9 +1.2**
baz=66
BW06 Boulder Array 66.06 53 ⇓P **P 15 00 42.6 +0.6**
baz=66
PDAR Pinedale Array 66.06 53 P **P 15 00 42.4 +0.4**
PDAR Pinedale Array 66.06 53 P **P 15 00 42.4 +0.4**
comp=Z,2.4nm,0.8s,baz=291,slow=2.0,SNR=18
EDW2 Edwards Air Fo 66.16 64 ⇑P **P 15 00 43.4 +0.9**
baz=66
H21A Big Horn, Sher 66.21 50 ⇑P **P 15 00 43.5 +0.8**
baz=66
J20A Shoshoni 66.49 52 ⇓P **P 15 00 45.2 +0.7**
baz=66
N17A Moffit Pass 66.53 55 ⇑P **P 15 00 46.1 +1.0**
baz=66
I21A Big Trails, Te 66.61 51 ⇑P **P 15 00 46.3 +0.9**
baz=66
O16A Springville 66.63 56 ⇑P **P 15 00 46.4 +0.8**
baz=66
J22A Midwest 67.32 51 ⇓P **P 15 00 50.8 +0.9**
baz=67
WRA Warramunga Arr 67.36 198 P **P 15 00 50.7 +0.7**
WRA pP pP 15 00 59.8 -6.5
WRA Warramunga Arr 67.36 198 P **P 15 00 50.7 +0.7**
comp=Z,1.6nm,0.7s,baz=17,slow=6.8,SNR=5.6
WRA pP pP 15 00 59.8 -6.5
comp=Z,2.2nm,0.8s,baz=19,slow=6.6,SNR=4.7
K21A Alcova 67.42 52 ⇑P **P 15 00 50.8 +0.3**
baz=67
H24A Dirks Ranch, A 67.44 49 ⇓P **P 15 00 50.5 -0.1**
baz=67
N20A Spence Gulch, 68.06 54 ⇓P **P 15 00 55.2 +0.6**
baz=68
IRM Iron Mountain 68.41 63 ⇓P **P 15 00 57.8 +1.1**
baz=68
P19A Cripple Cowboy 68.46 55 ⇑P **P 15 00 57.9 +0.8**
baz=68
M22A Cedar Creek Ra 68.61 52 ⇑P **P 15 00 59.2 +1.1**
baz=68
U15A North Rim 68.66 59 ⇓P **P 15 00 59.4 +0.9**
baz=68
NB2 NORSAR Subarra 68.75 341 P **P 15 00 57.4 -0.9**
comp=Z,1.0nm,0.5s,baz=28,slow=6.2
NOA NORSAR Array B 68.75 341 P **P 15 00 57.6 -0.7**
NOA NORSAR Array B 68.75 341 P **P 15 00 57.6 -0.7**
comp=Z,3.4nm,0.7s,baz=29,slow=6.3,SNR=16
HFS Hagfors 68.94 339 P **P 15 00 58.4 -1.1**
HFS Hagfors 68.94 339 P **P 15 00 58.4 -1.1**
comp=Z,2.7nm,0.4s,baz=51,slow=4.7,SNR=21
HFS LR LR 15 35 58.9
comp=Z,263nm,20.2s,baz=236,slow=40
S18A Hurst Farm, Bl 69.18 57 ⇓P **P 15 01 02.1 +0.4**
baz=69
P22A Eagle 69.75 54 ⇓P **P 15 01 06.0 +0.8**
baz=70
Q21A Lamborn Mesa, 69.81 55 ⇑P **P 15 01 06.4 +0.9**
baz=70
S20A Disappointment 70.04 56 ⇑P **P 15 01 07.6 +0.6**
baz=70
R21A Cimarron 70.14 55 ⇑P **P 15 01 07.9 +0.4**
baz=70
Q22A Crested Butte, 70.17 54 ⇓P **P 15 01 08.0 +0.2**
baz=70
ISCO Idaho Springs 70.25 53 ⇓P **P 15 01 08.8 +0.5**
baz=70
S21A Coal Bank Pass 70.48 56 ⇓P **P 15 01 10.2 +0.5**
baz=70
KBZ Khabaz 70.77 313 P **P 15 01 10.6 -0.3**
KBZ pmax pmax
comp=Z,3.0nm,0.2s
KBZ Khabaz 70.77 313 P **P 15 01 10.6 -0.3**
KBZ Khabaz 70.77 313 P **P 15 01 10.6 -0.3**
comp=Z,3.4nm,0.2s,baz=148,slow=4.8,SNR=9.7
S22A 4UR Ranch, Cre 70.98 55 ⇑P **P 15 01 13.5 +0.7**
baz=71
ASAR Alice Springs 71.06 197 P **P 15 01 14.5 +1.6**
ASAR Alice Springs 71.06 197 P **P 15 01 14.5 +1.6**
comp=Z,0.7nm,0.8s,baz=2.8,slow=5.7,SNR=4.6
AKASG Malin Array Be 71.74 326 P **P 15 01 16.3 -0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 71.74 326 P **P 15 01 16.3 -0.4**
AKASG Malin Array Be 71.74 326 P **P 15 01 16.3 -0.4**
comp=Z,1.3nm,0.4s,baz=34,slow=5.9,SNR=9.3
KIEV Kiev 71.75 326 *e*P **P 15 01 15.7 -1.0**
KIEV *e* 15 01 29.2
KIEV pmax pmax
comp=Z,8.0nm,1.1s
KIEV Kiev 71.75 326 *e*P **P 15 01 15.7 -1.0**
comp=Z,7.8nm,1.1s
KIEV *e* 15 01 29.2
AK01 Malin Array Si 71.75 326 *e*P **P 15 01 16.2 -0.5**
AK02 Malin Array Si 71.78 326 *e*P **P 15 01 16.2 -0.7**
ANMO Albuquerque 73.13 57 LR LR 15 32 15.5
comp=Z,206nm,18.5s,baz=251,slow=35
319A Douglas 73.92 62 ⇓P **P 15 01 30.9 +0.7**
baz=74
220A Playas Peak, P 74.02 61 ⇑P **P 15 01 31.3 +0.5**
baz=74
121A Cookes Peak, D 74.03 60 ⇑P **P 15 01 31.7 +0.8**
baz=74
W25A X Bar L Ranch, 74.11 56 ⇓P **P 15 01 31.4 +0.2**
baz=74
OJC Ojcow 75.62 330 *e*P **P 15 01 39.9 +0.4**
OJC Ojcow 75.62 330 *e*P **P 15 01 39.9 +0.4**
BUR08 Bucovina Ar. S 75.77 326 *e*P **P 15 01 40.5 -0.1**
Z26A Caprock 75.77 57 ⇑P **P 15 01 41.4 +0.6**
baz=76
125A Gardner Draw, 75.81 58 ⇑P **P 15 01 41.6 +0.6**
baz=76
KOLS Kolonicke sedl 75.82 328 *e*P **P 15 01 40.7 +0.1**
MNTX Cornudas Mount 76.06 59 ⇓P **P 15 01 42.6 +0.3**
baz=76
CRVS Cervenica-Dubn 76.14 329 *e*P **P 15 01 42.5 0.0**
Z27A Tatum 76.18 56 ⇑P **P 15 01 42.8 -0.3**
baz=76
226B Tecolote Peak, 76.51 58 ⇑P **P 15 01 45.9 +0.9**
baz=76
325A Bean Ranch, Si 76.54 59 ⇑P **P 15 01 45.6 +0.3**
baz=76
UPC Upice 76.63 333 *e*P **P 15 01 45.7 +0.5**
DPC Dobruska-Polom 76.67 332 *e*P **P 15 01 45.9 +0.4**
MORC Moravsky Berou 76.76 331 *e*P **P 15 01 46.4 +0.4**
MORC pmax pmax
comp=Z,11nm,1.0s
MORC Moravsky Berou 76.76 331 *e*P **P 15 01 46.4 +0.4**
comp=Z,11nm,1.0s
CLL Collm 76.86 335 ⇑ *i*P **P 15 01 46.2 -0.3**
CLL pmax pmax
comp=Z,11nm,0.8s
CLL Collm 76.86 335 ⇑ *i*P **P 15 01 46.2 -0.3**
comp=Z,11nm,0.8s
425A Indio Mountain 76.94 59 ⇓P **P 15 01 47.5 0.0**
baz=77
MLR Muntele Rosu 77.22 324 P **P 15 01 49.2 +0.4**
MLR Muntele Rosu 77.22 324 P **P 15 01 49.2 +0.4**
comp=Z,1.7nm,0.8s,baz=154,slow=8.1,SNR=9.8
Z30A Sanderson Ranc 77.41 55 ⇓P **P 15 01 50.1 +0.1**
baz=77
VYHS Vyhne 77.42 330 *e*P **P 15 01 50.2 +0.5**
VRAC Vranov 77.48 332 P **P 15 01 50.3 +0.3**
VRAC Vranov 77.48 332 P **P 15 01 50.3 +0.3**
comp=Z,7.6nm,0.8s,baz=19,slow=5.2,SNR=8.0
PSZ Piszkesteto 77.53 329 P **P 15 01 48.8 -1.6**
PSZ pmax pmax
comp=Z,6.0nm,0.8s
PSZ Piszkesteto 77.53 329 P **P 15 01 48.8 -1.6**
comp=Z,5.7nm,0.8s
PRU Pruhonice 77.55 333 *e*P **P 15 01 51.0 +0.6**
328A Wristen Ranch, 77.81 57 ⇓P **P 15 01 52.5 +0.2**
baz=78
427A Hayter Ranch, 77.85 58 ⇓P **P 15 01 52.7 +0.2**
baz=78
SMOL Smolenice 77.89 331 *e*P **P 15 01 53.7 +1.4**
NKC Novy Kostel 77.98 335 *e*P **P 15 01 53.7 +0.9**
MIB Mutribah 78.29 301 *e*P **P 15 01 55.1 +0.3**
MIB AMb AMB 15 01 56.4
comp=Z,40nm,1.0s
626A Big Bend Ranch 78.34 60 ⇑P **P 15 01 55.7 +0.5**
baz=78
BR131 Keskin Array S 78.36 316 *e*P **P 15 01 55.7 +0.4**
comp=Z,3.3nm,0.8s
BRTR Keskin Array B 78.36 316 P **P 15 01 55.7 +0.4**
BRTR Keskin Array B 78.36 316 P **P 15 01 55.7 +0.4**
comp=Z,4.3nm,0.9s,baz=64,slow=4.9,SNR=20
KHC Kasperske Hory 78.61 333 *e*P **P 15 01 56.3 0.0**
KHC pmax pmax
comp=Z,11nm,0.9s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KHC	Kasperske Hory	78.61	333	eP	P	15 01 56.3	0.0
	comp=Z,11nm,0.9s						
KHC	Kasperske Hory	78.61	333	eP	P	15 01 56.5	+0.2
NAY	Al-Naaiem	78.75	300	eP	P	15 01 57.2	-0.1
NAY				AMb	AMB	15 01 59.4	
	comp=Z,13nm,1.0s						
TXAR	Lajitas Array	78.78	59	P	P	15 01 58.3	+0.6
TXAR				pP	PcP	15 02 07.2	+0.9
TXAR	Lajitas Array	78.78	59	P	P	15 01 58.3	+0.6
	comp=Z,1.0nm,0.8s,baz=305,slow=4.4,SNR=6.5						
TXAR				pP	PcP	15 02 07.2	+0.9
	comp=Z,1.1nm,0.7s,baz=306,slow=4.0,SNR=7.6						
RDF	Al-Radifah	78.79	300	eP	P	15 01 57.9	+0.3
RDF				AMb	AMB	15 02 00.1	
	comp=Z,36nm,1.2s						
GERES	GERESS Array B	78.82	333	P	P	15 01 57.4	-0.2
GERES	GERESS Array B	78.82	333	P	P	15 01 57.4	-0.2
	comp=Z,3.1nm,0.8s,baz=37,slow=5.2,SNR=18						
CONA	Conrad Observa	78.92	331	⇑iP	P	15 01 58.4	+0.3
	comp=Z,14nm,1.2s						
CONA	Conrad Observa	78.92	331	⇑iP	P	15 01 58.4	+0.3
	comp=Z,14nm,1.2s						
529A	Stev Forest Ra	79.07	58	⇑P	P	15 02 00.1	+0.9
	baz=79						
232A	Coleman	79.28	55	⇑P	P	15 02 00.2	-0.1
	baz=79						
MEM	Membach	79.43	339	P	P	15 02 00.9	+0.2
	comp=Z,13nm,1.2s						
530A	J-C Ranch, Com	79.58	57	⇓P	P	15 02 02.4	+0.5
	baz=79						
BCLA	Clavier	79.78	339	P	P	15 02 01.9	-0.7
	comp=Z,12nm,2.9s						
MPEP	Malo Peshtene	79.88	324	eP	P	15 02 02.4	-0.9
GIVF	Givet	80.19	339	eP	P	15 02 04.8	0.0
	comp=Z,25nm,1.0s						
GIVF	Givet	80.19	339	eP	P	15 02 04.8	0.0
GIVF				pmax	pmax		
	comp=Z,25nm,1.0s						
GIVF	Givet	80.19	339	eP	P	15 02 04.8	0.0
	comp=Z,25nm,1.0s						
SOKA	Soboth	80.29	331	⇓iP	P	15 02 05.7	+0.2
	comp=Z,11nm,1.0s						
SOKA	Soboth	80.29	331	⇓iP	P	15 02 05.7	+0.2
	comp=Z,11nm,1.0s						
PERS	Pernice	80.30	331	iP	P	15 02 05.8	+0.3
BAIF	Baives	80.38	339	eP	P	15 02 05.8	-0.1
BAIF	Baives	80.38	339	eP	P	15 02 05.8	-0.1
BAIF	Baives	80.38	339	eP	P	15 02 05.8	-0.1
KBA	Koelnbreinsper	80.49	333	⇑iP	P	15 02 07.4	+0.7
KBA				pmax	pmax		
	comp=Z,20nm,1.0s						
KBA	Koelnbreinsper	80.49	333	⇑iP	P	15 02 07.4	+0.7
	comp=Z,20nm,1.0s						
KBA	Koelnbreinsper	80.49	333	⇑iP	P	15 02 07.4	+0.7
	comp=Z,20nm,1.0s						
631A	Perdido Creek	80.56	57	⇓P	P	15 02 07.8	+0.5
	baz=80						
VTS	Vitosha	80.73	324	eP	P	15 02 07.3	-0.8
GCIS	Gornji Cirnik	80.79	331	iP	P	15 02 08.4	+0.3
GCIS	Gornji Cirnik	80.79	331	iP	P	15 02 08.4	+0.3
WATA	Walderalm	80.82	334	⇑iP	P	15 02 09.2	+0.7
WATA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WATA	Walderalm	80.82	334	⇑iP	P	15 02 09.2	+0.7
	comp=Z,9.7nm,0.7s						
WATA	Walderalm	80.82	334	⇑iP	P	15 02 09.2	+0.7
	comp=Z,9.7nm,0.7s						
LEGS	Legarje	80.83	331	iP	P	15 02 08.1	-0.3
LEGS	Legarje	80.83	331	iP	P	15 02 08.1	-0.2
RZN	Rozhen	80.85	323	eP	P	15 02 08.9	+0.1
WTTA	Wattenberg	80.86	334	⇓iP	P	15 02 09.2	+0.5
WTTA				pmax	pmax		
	comp=Z,16nm,1.0s						
WTTA	Wattenberg	80.86	334	⇓iP	P	15 02 09.2	+0.5
	comp=Z,16nm,1.0s						
WTTA	Wattenberg	80.86	334	⇓iP	P	15 02 09.2	+0.5
	comp=Z,16nm,1.0s						
RETA	Reutte	80.93	334	⇑iP	P	15 02 09.4	+0.5
	comp=Z,5.9nm,0.7s						
RETA	Reutte	80.93	334	⇑iP	P	15 02 09.4	+0.5
	comp=Z,5.9nm,0.7s						
MOTA	Moosalm	80.95	334	⇓iP	P	15 02 09.5	+0.3
MOTA				pmax	pmax		
	comp=Z,12nm,0.8s						
MOTA	Moosalm	80.95	334	⇓iP	P	15 02 09.5	+0.3
	comp=Z,12nm,0.8s						
MOTA	Moosalm	80.95	334	⇓iP	P	15 02 09.5	+0.3
	comp=Z,12nm,0.8s						
CDF	Champ du Feu	81.10	337	eP	P	15 02 09.8	-0.1
	comp=Z,25nm,1.0s						
CDF	Champ du Feu	81.10	337	eP	P	15 02 09.8	-0.1
CDF				pmax	pmax		
	comp=Z,25nm,1.0s						
CDF	Champ du Feu	81.10	337	eP	P	15 02 09.8	-0.1
	comp=Z,25nm,1.0s						
CEY	Cerknica	81.31	331	iP	P	15 02 10.3	-0.7
PAGF	Fort de Pagny	81.39	338	eP	P	15 02 11.7	+0.5
	comp=Z,11nm,0.9s						
PAGF	Fort de Pagny	81.39	338	eP	P	15 02 11.7	+0.5
	comp=Z,11nm,0.9s						
PMOR	Pomariorio Ree	81.40	122	eT	T	16 31 44.0	
	comp=Z,10.0nm,0.2s						
MEZF	Maizieres J'vi	81.61	338	eP	P	15 02 12.9	+0.5
MEZF	Maizieres J'vi	81.61	338	eP	P	15 02 12.9	+0.5
HAU	Haudompre	81.72	337	eP	P	15 02 12.8	-0.3
HAU	Haudompre	81.72	337	eP	P	15 02 12.8	-0.3
HAU	Haudompre	81.72	337	eP	P	15 02 12.8	-0.3
HINF	Hinteralfeld	81.76	337	eP	P	15 02 13.8	+0.5
HINF	Hinteralfeld	81.76	337	eP	P	15 02 13.8	+0.5
HINF	Hinteralfeld	81.76	337	eP	P	15 02 13.8	+0.5
DAVOX	Davos/Dischmat	81.83	335	P	P	15 02 14.2	+0.3
DAVOX	Davos/Dischmat	81.83	335	P	P	15 02 14.2	+0.3
	comp=Z,3.3nm,0.7s,baz=30,slow=5.6,SNR=5.2						
SFTF	Sexfontaines	81.89	338	⇑iP	P	15 02 14.0	+0.1
	comp=Z,52nm,1.0s						
SFTF	Sexfontaines	81.89	338	⇑iP	P	15 02 14.0	+0.1
	comp=Z,52nm,1.0s						
TUE	Stuetta	82.27	335	eP	P	15 02 16.4	+0.2
	comp=Z,5.4nm,0.8s						
PPT2	Papeete2	82.46	125	eLR	LR	15 28 18.4	
	comp=Z,92nm,22.0s						
MMAI	Mount Meron Ar	82.66	311	P	P	15 02 19.1	+0.8
MMAI	Mount Meron Ar	82.66	311	P	P	15 02 19.1	+0.8
	comp=Z,9.5nm,0.9s,baz=46,slow=6.2,SNR=6.4						
LOR	Lormes	83.06	339	⇑iP	P	15 02 20.2	+0.2
	comp=Z,23nm,1.0s						
LOR	Lormes	83.06	339	⇑iP	P	15 02 20.2	+0.2
	comp=Z,23nm,1.0s						
CABF	La Chapelle	83.07	337	eP	P	15 02 19.6	-0.6
	comp=Z,11nm,0.9s						
CABF	La Chapelle	83.07	337	eP	P	15 02 19.6	-0.6
CABF				pmax	pmax		
	comp=Z,11nm,0.9s						
CABF	La Chapelle	83.07	337	eP	P	15 02 19.6	-0.6
	comp=Z,11nm,0.9s						
SSF	Saint Saulge	83.34	339	eP	P	15 02 21.7	+0.2
	comp=Z,17nm,1.0s						
SSF	Saint Saulge	83.34	339	eP	P	15 02 21.7	+0.2
SSF				pmax	pmax		
	comp=Z,17nm,1.0s						
SSF	Saint Saulge	83.34	339	eP	P	15 02 21.7	+0.2
	comp=Z,17nm,1.0s						
AVF	Avril sur Loir	83.63	339	⇑iP	P	15 02 23.3	+0.4
	comp=Z,38nm,1.2s						
AVF	Avril sur Loir	83.63	339	⇑iP	P	15 02 23.3	+0.4
AVF				pmax	pmax		
	comp=Z,38nm,1.2s						
AVF	Avril sur Loir	83.63	339	⇑iP	P	15 02 23.3	+0.4
	comp=Z,38nm,1.2s						
SMF	Signal de Mont	83.64	338	eP	P	15 02 23.4	+0.4
	comp=Z,60nm,1.2s						
SMF	Signal de Mont	83.64	338	eP	P	15 02 23.4	+0.4
SMF				pmax	pmax		
	comp=Z,60nm,1.2s						
SMF	Signal de Mont	83.64	338	eP	P	15 02 23.4	+0.4
	comp=Z,60nm,1.2s						
LPG	La Plagne	83.91	336	eP	P	15 02 25.5	+0.7
LPG	La Plagne	83.91	336	eP	P	15 02 25.5	+0.7
LPG	La Plagne	83.91	336	eP	P	15 02 25.5	+0.7
SBF	Sospel	85.20	335	eP	P	15 02 29.7	-1.4
	comp=Z,40nm,1.2s						
SBF	Sospel	85.20	335	eP	P	15 02 29.7	-1.4
SBF				pmax	pmax		
	comp=Z,40nm,1.2s						
SBF	Sospel	85.20	335	eP	P	15 02 29.7	-1.4
	comp=Z,40nm,1.2s						
CAF	Calviac	85.69	339	eP	P	15 02 33.5	+0.1
CAF	Calviac	85.69	339	eP	P	15 02 33.5	+0.1
CAF	Calviac	85.69	339	eP	P	15 02 33.5	+0.1
TBI	Tubuai	87.11	128	eLR	LR	15 29 54.5	
	comp=Z,84nm,31.5s						
TBI				eT	T	16 38 53.1	
	comp=Z,6.5nm,0.3s						
KEST	Kesra	91.97	330	P	P	15 03 03.9	+0.5
KEST	Kesra	91.97	330	P	P	15 03 03.9	+0.5
	comp=Z,1.6nm,0.9s,baz=336,slow=4.2,SNR=4.0						
TORD	Torodi Ar. Bea	115.34	327	PKP	PKPdf	15 08 35.7	-0.6
TORD	Torodi Ar. Bea	115.34	327	PKP	PKPdf	15 08 35.7	-0.6
	comp=Z,0.3nm,0.7s,baz=20,slow=2.7,SNR=2.5						
PLCA	Paso Flores	149.09	96	PKPbc	PKPbc	15 09 43.0	+0.6
PLCA	Paso Flores	149.09	96	PKPbc	PKPbc	15 09 43.0	+0.6
	comp=Z,1.9nm,0.8s,baz=286,slow=1.9,SNR=5.0						
CPUP	Villa Florida	149.75	60	PKPbc	PKPbc	15 09 44.4	+0.2
CPUP	Villa Florida	149.75	60	PKPbc	PKPbc	15 09 44.4	+0.2
	comp=Z,1.2nm,0.5s,baz=250,slow=2.9,SNR=6.7						
SNAA	Sanae	151.43	197	eP	PKPbc	15 09 47.1	+0.2
VNA2	Neumayer--Watz	152.90	195	eP	PKPbc	15 09 50.9	+0.7
	baz=93,slow=1.6						
VNA2	Neumayer--Watz	152.90	195	eKuril	PKPab	15 10 00.2	-1.4
	baz=93,slow=1.6						
VNA3	Neumayer Olymp	153.01	193	eP	PKPbc	15 09 49.6	-0.8
VNA3	Neumayer Olymp	153.01	193	eKuril	PKPab	15 10 01.8	-0.3

ISCJB 07 14:53:29.0±0.6, 5°.88S±0°.04×128°.73E±0°.07, h264km, mb3.0/4, Error ellipse: s-maj=10.0km s-min=5.8km az=171.1
AUST 07 14:53:32.9±0.0, 5°.92S×129°.02E, h305km, Error ellipse: s-maj=1.5km s-min=1.3km az=248.0
IDC 07 14:53:35.8±3.6, 5°.95S×129°.18E, h330km±42km, mb2.7/4, mb1 3.2/8, mb1mx3.1/20, mbtmp3.1/8, Error ellipse: s-maj=30.5km s-min=11.3km az=81.0
ISC 07 14:53:31.2±0.7, 5°.89S±0°.06×128°.94E±0°.10, h264km, n18, σ1s80/20, mb3.0/4, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAI	Ambon	2.31	341	P	Pn	14 54 24.9	+7.2
	baz=2.4,SNR=3.7						
TLE	Tual	3.79	86	P	Pn	14 54 37.8	+4.5
	baz=3.7,SNR=34						
TLE				S	S	14 55 23.3	+0.6
	baz=3.7,SNR=7.7						
SWI	Sorong	5.50	25	P	Pn	14 54 56.5	+2.9
	baz=5.5,SNR=19						
SWI				S	S	14 56 00.1	+0.5
	baz=5.5,SNR=4.4						
MTN	Manton Dam	7.24	163	P	Pn	14 55 16.6	+1.4
	baz=7.2,SNR=20						
MTN				S	S	14 56 39.4	+0.6
	baz=7.2,SNR=5.3						
KDU	Kakadu	7.60	153	P	Pn	14 55 20.9	+1.2
	baz=7.6,SNR=27						
PCI	Palu	10.34	298	P	Pn	14 55 48.6	-5.4
	baz=10,SNR=3.9						
PCI				S	S	14 57 33.9	-16
	baz=10,SNR=5.0						
FITZ	Fitzroy Crossi	12.56	195	P	P	14 56 23.5	+0.2
	1.1nm,0.3s,baz=27,slow=11,SNR=18						
FITZ				S	S	14 58 40.7	-0.5
	0.7nm,0.3s,baz=116,slow=24,SNR=6.9						
FITZ	Fitzroy Crossi	12.56	195	P	P	14 56 24.0	+0.7
	baz=13,SNR=5.3						
FITZ				S	S	14 58 44.7	+3.5
	baz=13,SNR=3.8						
WRA	Warramunga Arr	14.93	160	P	P	14 56 49.1	-0.5
	1.9nm,0.3s,baz=341,slow=12,SNR=48						
WRA				S	S	14 59 27.9	-6.4
	0.3nm,0.3s,baz=333,slow=21,SNR=5.8						
COEN	Coen	16.15	121	P	P	14 57 03.0	+0.1
	baz=16,SNR=5.1						
ASAR	Alice Springs	18.31	165	P	P	14 57 26.6	+0.1
	1.2nm,0.3s,baz=340,slow=11,SNR=90						
ASAR				S	S	15 00 37.6	-4.2
	0.2nm,0.3s,baz=349,slow=23,SNR=9.7						
UGM	Wanagama	18.39	263	S	S	15 00 26.3	-17
	baz=18,SNR=4.0						
PMG	Port Moresby	18.39	102	P	P	14 57 25.6	-1.8
	0.3nm,0.3s,baz=326,slow=7.3,SNR=2.1						
MEEK	Meekatharra	22.86	204	P	P	14 58 10.9	-1.2
	baz=23,SNR=7.5						
MJAR	Matsushiro Arr	43.09	11	P	P	15 01 03.5	-2.2
	0.4nm,0.3s,baz=193,slow=10,SNR=4.5						
KSRS	Korea Array	43.13	359	P	P	15 01 04.9	-1.0
	0.5nm,0.5s,baz=180,slow=9.7,SNR=3.7						
SONM	Songino Array	57.06	342	P	P	15 02 49.6	-0.6
	0.2nm,0.6s,baz=165,slow=6.1,SNR=3.1						
MKAR	Makanchi Array	66.72	327	P	P	15 03 53.7	-0.5
	0.1nm,0.3s,baz=116,slow=6.7,SNR=4.6						

CSEM 07 14:59:09.7, 58°.83N×11°.23E, h0km, ML1.0, Mining explosion. After UPP
UPP 07 14:59:09.7, 58°.83N×11°.23E, h0km, ML1.0, Mining explosion., Sweden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STRU	Stroemstad	0.21	354	P	Pg	14 59 13.8	+0.1
STRU				S	Sg	14 59 16.7	+0.3
VANU	Vaenersborg	0.56	127	P	Pg	14 59 20.2	-0.1
VANU				S	Sg	14 59 27.6	+0.1
TJOU	Tjoern	0.83	165	P	Pg	14 59 25.5	0.0
FINU	Finntorp	0.87	48	P	Pg	14 59 26.3	0.0
NASU	Vaermlandsnaes	1.02	84	P	Pg	14 59 28.7	-0.6
BORU	Boraas	1.45	145	P	Pn	14 59 36.0	-1.1
FKPU	Falk	1.47	116	P	Pn	14 59 36.7	-0.8

CSEM 07 15:01:06.3±0.1, 42°.30N×13°.46E, h2km, ML2.3/10, Error ellipse: s-maj=3.3km s-min=2.5km az=75.0
ROM 07 15:01:05.2±0.1, 42°.31N×13°.47E, h10km, Md2.1/11, Ml2.0/8, Error ellipse: s-maj=0.9km s-min=0.7km az=61.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	307	Pg	Pg	15 01 07.8	+0.4
AQU				Sg	Sg	15 01 09.4	+0.4
	996nm,0.4s						
AQU	L'Aquila	0.07	307	Pg	Pg	15 01 07.8	+0.4
AQU				Sg	Sg	15 01 09.4	+0.4
	996nm,0.4s						
FAGN	Fagnano	0.10	120	Pg	Pg	15 01 08.2	+0.4
FAGN				Sg	Sg	15 01 10.2	+0.6
	1µm,0.3s						
FAGN	Fagnano	0.10	120	Pg	Pg	15 01 08.2	+0.4
FAGN				Sg	Sg	15 01 10.2	+0.6
	1µm,0.3s						
CAMP	Campotosto	0.23	348	Pg	Pg	15 01 10.6	+0.5
CAMP				Sg	Sg	15 01 14.7	+1.3
	202nm,0.9s						
CAMP	Campotosto	0.23	348	Pg	Pg	15 01 10.6	+0.5
CAMP				Sg	Sg	15 01 14.7	+1.3
	202nm,0.9s						
FIAM	Fiamignano	0.27	260	Pg	Pg	15 01 11.5	+0.7
FIAM				Sg	Sb	15 01 15.9	-1.2
	225nm,0.6s						
FIAM	Fiamignano	0.27	260	Pg	Pg	15 01 11.5	+0.7
FIAM				Sg	Sb	15 01 15.9	-1.2
	225nm,0.6s						
VCEL	Villa Celiera	0.28	73	Pg	Pb	15 01 12.1	-0.5
VCEL				Sg	Sb	15 01 16.4	-1.2
	264nm,0.5s						
VCEL	Villa Celiera	0.28	73	Pg	Pb	15 01 12.1	-0.5
VCEL				Sg	Sb	15 01 16.4	-1.2
	264nm,0.5s						
PTQR	Pietraquaria	0.30	190	Pg	Pg	15 01 11.8	+0.5
PTQR				Sg	Sb	15 01 17.0	-0.9
	27nm,0.2s						
PTQR	Pietraquaria	0.30	190	Pg	Pg	15 01 11.8	+0.5
PTQR				Sg	Sb	15 01 17.0	-0.9
	27nm,0.2s						
TERO	Teramo	0.32	17	Pg	Pg	15 01 12.0	+0.2
TERO				Sg	Sg	15 01 17.3	+1.1
	206nm,0.7s						
TERO	Teramo	0.32	17	Pg	Pg	15 01 12.0	+0.2
TERO				Sg	Sg	15 01 17.3	+1.1
	206nm,0.7s						
INTR	Introdacqua	0.44	133	Pg	Pg	15 01 14.6	+0.6
INTR				Sg	Sb	15 01 21.4	-0.6
	134nm,0.6s						
INTR	Introdacqua	0.44	133	Pg	Pg	15 01 14.6	+0.6
INTR				Sg	Sb	15 01 21.4	-0.6
	134nm,0.6s						
VVLD	Villa Vallelon	0.46	166	Pg	Pg	15 01 14.3	0.0
VVLD				Sg	Sb	15 01 21.5	-1.0
	57nm,0.3s						
VVLD	Villa Vallelon	0.46	166	Pg	Pg	15 01 14.3	0.0
VVLD				Sg	Sb	15 01 21.5	-1.0
	57nm,0.3s						
CERT	Cerreto	0.52	225	Pg	Pg	15 01 15.6	+0.3
CERT	Cerreto	0.52	225	Pg	Pg	15 01 15.6	+0.3
NRCA	Norcia	0.58	333	Pg	Pg	15 01 16.8	+0.1
NRCA				Sg	Sb	15 01 26.0	-0.1
	75nm,0.1s						
NRCA	Norcia	0.58	333	Pg	Pg	15 01 16.8	+0.1
NRCA				Sg	Sb	15 01 26.0	-0.1
	75nm,0.1s						
SDI	San Donato	0.66	157	Pg	Pg	15 01 18.4	+0.4
	25nm,0.2s						
SDI	San Donato	0.66	157	Pg	Pg	15 01 18.4	+0.4
	25nm,0.2s						

IDC 07 15:02:36.1±1.4, 4°.04N×127°.11E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/23, mbtmp3.5/5, 1D, Error ellipse: s-maj=105.9km s-min=18.9km az=73.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	4.25	318	⇓iP	Pb	15 03 49.1	-2.7
FITZ	Fitzroy Crossi	22.05	184	P	P	15 07 32.6	0.0
	0.8nm,0.7s,baz=5.6,slow=12,SNR=4.2						
WRA	Warramunga Arr	24.87	164	P	P	15 08 00.8	+0.1
	1.8nm,0.8s,baz=344,slow=9.7,SNR=8.8						
ASAR	Alice Springs	28.33	167	P	P	15 08 31.8	-0.1
	0.1nm,0.4s,baz=341,slow=11,SNR=3.3						
SONM	Songino Array	47.12	341	P	P	15 11 10.4	+0.2
	0.3nm,0.4s,baz=146,slow=8.7,SNR=3.0						
MKAR	Makanchi Array	57.52	325	P	P	15 12 27.0	-0.4
	0.3nm,0.3s,baz=119,slow=7.5,SNR=14						

IDC 07 15:03:09.1±4.6, 20°.33S×178°.38W, h568km±50km, mb3.0/10, mb1 3.3/11, mb1mx3.2/19, mbtmp3.0/11, Error ellipse: s-maj=46.3km s-min=21.5km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.26	260	P	P	15 06 10.1	-0.9
	0.1nm,0.3s,baz=88,slow=17,SNR=1.9						
STKA	Stephens Creek	37.54	244	P	P	15 09 35.2	-0.5
	0.9nm,0.4s,baz=98,slow=10,SNR=4.5						
ASAR	Alice Springs	44.21	257	P	P	15 10 28.9	+0.1
	4.6nm,0.5s,baz=96,slow=7.6,SNR=21						
ASAR				PcP	PcP	15 12 01.2	+0.2
	0.5nm,0.6s,baz=96,slow=3.5,SNR=3.8						
WRA	Warramunga Arr	44.27	262	P	P	15 10 28.8	-0.5
	1.8nm,0.3s,baz=97,slow=7.7,SNR=12						
FITZ	Fitzroy Crossi	52.70	262	P	P	15 11 32.0	+0.3
	1.3nm,0.5s,baz=135,slow=4.2,SNR=6.4						
MJAR	Matsushiro Arr	69.86	324	P	P	15 13 23.2	-0.3
	0.3nm,0.4s,baz=205,slow=2.6,SNR=3.2						
PETK	Petropavlovsk-	76.02	345	P	P	15 13 58.6	+0.3
	1.6nm,0.7s,baz=130,slow=7.1,SNR=6.5						
NVAR	Mina Array Bea	81.15	44	P	P	15 14 26.9	+0.6
	0.2nm,0.3s,baz=225,slow=10,SNR=3.4						
TXAR	Lajitas Array	87.27	57	P	P	15 14 56.6	+0.3
	0.2nm,0.6s,baz=215,slow=11,SNR=2.6						
ILAR	Eielson Array	88.23	13	P	P	15 14 59.1	-0.8
	0.4nm,0.5s,baz=216,slow=5.9,SNR=10						
PDAR	Pinedale Array	89.08	43	P	P	15 15 04.6	0.0
	0.5nm,0.6s,baz=195,slow=6.2,SNR=4.2						
CMAR	Chiang Mai Arr	89.72	290	P	P	15 15 10.2	+2.4
	0.5nm,0.4s,baz=122,slow=4.3,SNR=4.5						
MKAR	Makanchi Array	110.83	314	PKiKP	PKiKP	15 20 37.1	-0.9
	0.2nm,0.7s,baz=107,slow=1.5,SNR=3.1						
BVAR	Borovoye Array	118.72	320	PKP	PKPdf	15 20 52.4	-0.5
	0.5nm,0.4s,baz=108,slow=4.8,SNR=4.3						
HFS	Hagfors	139.32	351	PKhKP	PKPpre	15 21 24.4	
	0.5nm,0.4s,baz=305,slow=5.2,SNR=5.4						
AKASG	Malin Array Be	142.70	331	PKP	PKPdf	15 21 35.0	-3.0
	2.1nm,0.6s,baz=44,slow=4.2,SNR=9.5						
BRTR	Keskin Array B	146.47	312	PKPbc	PKPbc	15 21 47.6	+0.1
	0.6nm,0.6s,baz=114,slow=3.5,SNR=5.1						

IDC 07 15:03:51.2±0.8, 0°.55N×135°.02E, h0km, mb4.0/11, mb1 4.1/11, mb1mx4.0/24, mbtmp4.0/11, MS3.4/2, Ms1 3.4/2, ms1mx2.7/29, Error ellipse: s-maj=37.3km s-min=11.9km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.37	182	P	P	15 08 29.1	-0.6
	42nm,0.8s,baz=2.1,slow=11,SNR=88						
FITZ	Fitzroy Crossi	20.70	206	P	P	15 08 33.1	-0.1
	3.3nm,0.6s,baz=20,slow=11,SNR=8.9						
CTA	Charters Tower	23.27	152	P	P	15 09 00.4	-0.3
	7.1nm,0.7s,baz=346,slow=12,SNR=8.7						
ASAR	Alice Springs	24.09	183	P	P	15 09 08.6	-0.1
	31nm,0.8s,baz=9.5,slow=11,SNR=185						
ASAR				S	S	15 13 29.4	+1.9
	1.0nm,0.9s,baz=6.9,slow=20,SNR=5.8						
ASAR				LR	LR	15 18 38.1	
	comp=Z,41nm,19.1s,baz=354,slow=37						
HNR	Honiara	26.73	112	LR	LR	15 19 38.9	
	comp=Z,199nm,19.3s,baz=306,slow=36						
STKA	Stephens Creek	32.84	170	P	P	15 10 26.5	-0.3
	1.4nm,0.4s,baz=349,slow=7.9,SNR=8.9						
CMAR	Chiang Mai Arr	39.64	299	P	P	15 11 24.0	-1.1
	0.6nm,0.6s,baz=122,slow=7.5,SNR=7.3						
SONM	Songino Array	53.25	336	P	P	15 13 12.0	+0.2
	0.3nm,0.6s,baz=137,slow=5.4,SNR=2.7						
MKAR	Makanchi Array	64.98	323	P	P	15 14 33.6	+0.5
	0.8nm,0.6s,baz=114,slow=7.7,SNR=9.7						
ZALV	Zalesovo Beam	67.30	331	P	P	15 14 47.6	-0.2
	0.2nm,0.3s,baz=128,slow=9.3,SNR=2.5						
KURBB	Kurchatov Arra	68.96	325	P	P	15 14 58.4	+0.1
	1.3nm,0.6s,baz=114,slow=5.8,SNR=4.3						
BVAR	Borovoye Array	74.55	326	P	P	15 15 32.3	+0.3
	1.8nm,0.7s,baz=110,slow=6.5,SNR=11						
ILAR	Eielson Array	84.44	25	P	P	15 16 25.3	-0.2
	0.2nm,0.6s,baz=270,slow=5.3,SNR=3.5						

ISCJB 07 15:13:58.4±0.4, 14°.21N±0°.05×90°.35W±0°.04, h10km, mb4.0/16, MS4.0/18, Error ellipse: s-maj=7.9km s-min=3.9km az=29.5
IDC 07 15:13:58.4±0.7, 14°.19N×90°.31W, h0km, mb3.9/11, mb1 4.1/14, mb1mx4.1/26, mbtmp3.9/14, ML4.0/4, MS3.9/19, Ms1 4.0/19, ms1mx3.8/33, Error ellipse: s-maj=22.5km s-min=12.0km az=62.0
NEIC 07 15:13:59.8±0.4, 14°.21N×90°.40W, h10km, mb4.4/8, MD4.7(GCG), Error ellipse: s-maj=13.2km s-min=7.3km az=54.0
NEIC Felt [IV] at Guatemala. Also felt at Amatitlan, Antigua Guatemala, Barberena and San Jose Pinula.
ISC 07 15:13:59.6±0.5, 14°.21N±0°.06×90°.37W±0°.05, h10km, n146, σ1s17/129, mb4.0/16, MS4.0/18, 34C-47D, Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	3.01	93	ePn	Pn	15 14 49.1	+1.8
TGUH				ePg	Pg	15 14 58.1	+0.8
TGUH				eSg	Sg	15 15 38.0	+1.8
CMIG	Matias Romero	5.21	304	Pn	Pn	15 15 18.1	+0.4
CMIG				Sn	Sn	15 16 21.0	+3.2
CMIG				Lg	Lg	15 16 38.4	
CMIG	Matias Romero	5.21	304	Pn	Pn	15 15 18.1	+0.4
	4.8nm,0.3s,baz=123,slow=12,SNR=14						
CMIG				Sn	Sn	15 16 21.0	+3.2
	13nm,0.3s,baz=100,slow=19,SNR=6.4						
CMIG				Lg	Lg	15 16 38.4	
	28nm,0.3s,baz=247,slow=23,SNR=12						
TEIG	Tepich	6.31	18	ePn	Pn	15 15 31.3	-1.5
	499nm,0.9s						
TEIG				Sn	Sn	15 16 45.9	+1.1
TEIG				Lg	Lg	15 17 19.3	
TEIG	Tepich	6.31	18	Pn	Pn	15 15 32.5	-0.2
	14nm,0.3s,baz=196,slow=12,SNR=38						
TEIG				Sn	Sn	15 16 45.9	+1.1
	25nm,0.3s,baz=249,slow=22,SNR=3.2						
TEIG				Lg	Lg	15 17 19.3	

21nm,0.3s,baz=90,slow=20,SNR=9.0
JTS JuntasAbangare 6.57 126 *e*Pn **Pn 15 15 39.2 +2.8**
JTS Lg Lg 15 17 22.1
JTS JuntasAbangare 6.57 126 Pn **Pn 15 15 36.4 0.0**
0.5nm,0.3s,baz=299,slow=13,SNR=2.2
JTS Lg Lg 15 17 22.1
0.6nm,0.3s,baz=308,slow=19,SNR=4.2
732A Laxson Ranch, 16.97 330 ⇑P **P 15 17 57.8 -1.3**
baz=17,SNR=11
632A Uvalde 17.54 332 ⇑P **P 15 18 05.3 -0.2**
baz=18
631A Perdido Creek 17.83 330 ⇑P **P 15 18 08.9 +0.2**
baz=18,SNR=11
532A Rocksprings 18.12 333 ⇓P **P 15 18 12.6 +0.7**
baz=18,SNR=10
TIGA Tifton 18.24 19 ⇓P **P 15 18 15.5 +2.3**
baz=19
JCT Junction City 18.38 333 P **Pn 15 18 10.7 -4.0**
6.2nm,0.4s
531A Rocksprings 18.44 331 ⇓P **Pn 15 18 16.1 +0.6**
baz=18
432A Menard 18.71 334 ⇑P **Pn 15 18 19.2 +0.3**
baz=19,SNR=9.2
530A J-C Ranch, Com 18.81 329 ⇑P **Pn 15 18 20.8 +0.8**
baz=19,SNR=13
WHTX Lake Whitney 18.85 341 ⇑P **Pn 15 18 20.8 +0.4**
baz=19
431A Sonora 18.91 332 ⇓P **Pn 15 18 22.5 +1.3**
baz=19
628A Black Gap, Mar 19.11 325 ⇑P **Pn 15 18 24.1 +0.5**
baz=19,SNR=17
332A Millersview 19.13 335 ⇓P **Pn 15 18 24.5 +0.7**
baz=19,SNR=21
529A Stev Forest Ra 19.24 327 ⇓P **Pn 15 18 25.7 +0.5**
baz=19,SNR=11
430A Baggett Ranch, 19.29 331 ⇑P **Pn 15 18 26.5 +0.7**
baz=19,SNR=11
331A San Angelo 19.36 333 ⇑P **Pn 15 18 26.8 +0.2**
baz=19
627A Terlingua Ranc 19.37 324 ⇓P **Pn 15 18 27.3 +0.5**
baz=19,SNR=9.7
TXAR Lajitas Array 19.44 323 P **Pn 15 18 28.4 +0.7**
TXAR Lajitas Array 19.44 323 P **Pn 15 18 28.4 +0.7**
0.2nm,0.3s,baz=159,slow=13,SNR=16
TXAR LR LR 15 26 02.2
comp=Z,187nm,19.9s,baz=280,slow=37
429A Davenport Ranc 19.48 329 ⇓P **Pn 15 18 28.8 +0.7**
baz=20,SNR=12
232A Coleman 19.54 336 ⇓P **Pn 15 18 28.5 -0.3**
baz=20,SNR=6.7
528A Cox Ranch, San 19.57 326 ⇓P **Pn 15 18 29.3 +0.1**
baz=20,SNR=11
330A Mertzon 19.78 332 ⇓P **Pn 15 18 31.2 -0.4**
baz=20
231A Bronte 19.85 334 ⇓P **Pn 15 18 32.2 -0.3**
baz=20
626A Big Bend Ranch 19.88 322 ⇓P **Pn 15 18 32.5 -0.3**
baz=20,SNR=17
428A Kincaid Ranch, 19.96 327 ⇓P **Pn 15 18 33.1 -0.8**
baz=20
527A Woodward Ranch 20.02 325 ⇓P **P 15 18 32.7 -0.1**
baz=20
SDV Santo Domingo 20.04 103 *e*P Pn 15 18 37.0 +1.9
0.4nm,1.0s
230A Sterling City 20.16 333 ⇑P Pn 15 18 35.2 -0.9
baz=20
ABTX Abilene, Hawle 20.19 337 ⇑P Pn 15 18 36.1 -0.4
baz=20
526A Mary Lane Ranc 20.22 323 ⇓P Pn 15 18 36.4 -0.7
baz=20,SNR=18
329A Wagon Wheel Ra 20.23 330 ⇑P Pn 15 18 36.1 -0.9
baz=20
427A Hayter Ranch, 20.44 326 ⇑P Pn 15 18 38.2 -1.3
baz=20
131A Roby 20.52 335 ⇑P Pn 15 18 38.9 -1.6
baz=21
328A Wristen Ranch, 20.55 328 ⇑P Pn 15 18 39.7 -1.1
baz=21,SNR=17
UALR University of 20.55 355 P P 15 18 32.7 -5.7
20nm,0.8s
426A McDonald Obser 20.65 325 ⇓P Pn 15 18 40.5 -1.7
baz=21,SNR=23
130A Snyder 20.70 334 ⇑P Pn 15 18 40.7 -1.8
baz=21
Z32A Haskell 20.74 338 ⇓P Pn 15 18 42.2 -0.7
baz=21,SNR=8.7
Z31A Sharp Cattle R 21.00 337 ⇓P Pn 15 18 44.2 -1.7
baz=21,SNR=6.0
228A UT Block 9, Go 21.04 330 ⇓P **P 15 18 44.3 +0.5**
baz=21
326A Caldwell Ranch 21.11 326 ⇓P **P 15 18 45.6 +1.0**
baz=21,SNR=18
129A Stewart Farms, 21.12 332 ⇑P **P 15 18 45.2 +0.4**
baz=21
LPIG La Paz 21.23 301 LR LR 15 27 19.6
comp=Z,62nm,18.1s,baz=122,slow=38
425A Indio Mountain 21.28 323 ⇑P **P 15 18 46.4 -0.2**
baz=21,SNR=12
SWET Sewanee 21.29 10 *e*P **P 15 18 47.1 +0.6**
28nm,1.3s
Y32A R-V Farms, Ver 21.35 339 ⇓P **P 15 18 48.1 +1.0**
baz=21
Z30A Sanderson Ranc 21.36 335 ⇓P **P 15 18 48.1 +0.8**
baz=21,SNR=6.1
128A Castleberry Fa 21.40 331 ⇓P **P 15 18 47.7 0.0**
baz=21,SNR=9.7
Z29A Hungry Hill Ra 21.59 333 ⇓P **P 15 18 50.1 +0.4**
baz=22
Y31A Rekieta Farm, 21.61 337 ⇓P **P 15 18 50.7 +0.8**
baz=22
325A Bean Ranch, Si 21.70 324 ⇓P **P 15 18 51.7 +0.6**
baz=22,SNR=13
226B Tecolote Peak, 21.80 327 ⇓P **P 15 18 53.0 +0.9**
baz=22,SNR=6.8
Z28A Tucker Farm, M 21.91 332 ⇓P **P 15 18 54.0 +0.7**
baz=22
324A Moseley Ranch, 22.05 324 ⇓P **P 15 18 55.0 +0.2**
baz=22
TKL Tuckaleechee C 22.16 14 P **P 15 18 57.6 +1.8**
TKL Tuckaleechee C 22.16 14 P **P 15 18 57.6 +1.8**
6.5nm,0.8s,baz=205,slow=14,SNR=1.8
TKL LR LR 15 29 37.6
comp=Z,203nm,18.9s,baz=177,slow=42
126A Clayton Basin, 22.18 328 ⇑P **P 15 18 55.8 -0.3**
baz=22
225A Deer Hill, Car 22.18 326 ⇓P **P 15 18 56.9 +0.7**
baz=22,SNR=9.4
MNTX Cornudas Mount 22.18 324 ⇓P **P 15 18 55.9 -0.1**
baz=22,SNR=8.3
Z27A Tatum 22.32 331 ⇓P **P 15 18 58.4 +0.8**
baz=22,SNR=5.8
125A Gardner Draw, 22.52 327 ⇓P **P 15 19 00.3 +0.6**
baz=23,SNR=5.6
224A Cornudas Mount 22.54 325 ⇑P **P 15 18 59.9 -0.2**
baz=23
Z26A Caprock 22.66 329 ⇑P **P 15 19 01.6 +0.3**
baz=23
MSTX Muleshoe 22.66 332 ⇓P **P 15 19 01.5 +0.3**
baz=23
Y27A Causey 22.76 332 ⇓P **P 15 19 02.7 +0.4**
baz=23
124A Stringfield Ra 22.98 326 ⇓P **P 15 19 05.8 +1.1**
baz=23,SNR=8.6
Z25A Roswell 23.03 328 ⇓P **P 15 19 05.3 +0.1**
baz=23
Z24A Sheeppen Canyo 23.41 327 ⇓P **P 15 19 09.0 -0.1**
baz=24
Y25A Mesa, Roswell 23.53 329 ⇓P **P 15 19 09.8 -0.4**
baz=24
SJG San Juan 23.57 77 LR LR 15 27 53.4
comp=Z,418nm,19.8s,baz=103,slow=36
W27A Bowe Ranch, En 23.71 333 ⇑P **P 15 19 11.6 -0.4**
baz=24
221A Mesquite Ranch 23.82 321 ⇑P **P 15 19 13.5 +0.4**
baz=24
Z23A Rita Site, Whi 23.83 325 ⇓P **P 15 19 13.4 +0.3**
baz=24
Y24A Capitan 23.91 328 ⇑P **P 15 19 12.9 -1.1**
baz=24
121A Cookes Peak, D 24.19 322 ⇑P **P 15 19 17.3 +0.7**
baz=24
WCI Wyandotte Cave 24.19 8 *e*P **P 15 19 16.7 +0.3**
21nm,0.8s
220A Playas Peak, P 24.21 320 ⇑P **P 15 19 16.8 0.0**
baz=24
Z22A Elephant Butte 24.23 324 ⇑P **P 15 19 17.7 +0.8**
baz=24
Y23A Lovelace Mesa, 24.24 327 ⇓P **P 15 19 18.2 +1.1**
baz=24
ATAH Atahualpa 24.31 150 LR LR 15 25 58.9
comp=Z,117nm,21.8s,baz=354,slow=30
319A Douglas 24.34 318 ⇑P **P 15 19 18.5 +0.5**
baz=24
X24A Lazy VL Ranch, 24.41 329 ⇑P **P 15 19 19.7 +1.1**
baz=24
W25A X Bar L Ranch, 24.47 331 ⇓P **P 15 19 19.4 +0.3**
baz=24
120A U Bar Ranch, L 24.71 321 ⇓P **P 15 19 21.0 -0.3**
baz=25
BNM Barren Site 24.71 326 P **P 15 19 24.7 +3.3**
2.5nm,0.9s
Y22A Socorro 24.74 325 ⇓P **P 15 19 21.7 +0.2**
baz=25
W24A Lazy 6 Ranch, 24.91 330 ⇑P **P 15 19 23.8 +0.6**
baz=25
V25A Rancho No Teng 25.05 332 ⇓P **P 15 19 24.2 -0.1**
baz=25
Z20A Nine Sixteen R 25.08 322 ⇑P **P 15 19 24.9 +0.3**
baz=25
U26A Atchley Ranch, 25.13 334 ⇓P **P 15 19 25.8 +0.8**
baz=25
Y21A Point of Rocks 25.18 324 ⇑P **P 15 19 25.1 -0.6**
baz=25
Y20A Horse Springs, 25.51 323 ⇑P **P 15 19 29.5 +0.8**
baz=26,SNR=6.5
X21A Alamocita Cree 25.57 325 ⇑P **P 15 19 29.3 +0.1**
baz=26
PDAR Pinedale Array 32.91 334 P **P 15 20 35.1 +0.7**
PDAR Pinedale Array 32.91 334 P **P 15 20 35.1 +0.7**
0.2nm,0.3s,baz=147,slow=12,SNR=2.5
NVAR Mina Array Bea 34.52 320 P **P 15 20 49.4 +1.0**
NVAR Mina Array Bea 34.52 320 P **P 15 20 49.4 +1.0**
0.4nm,0.3s,baz=133,slow=10.0,SNR=5.6
NVAR LR LR 15 36 40.1
comp=Z,429nm,20.0s,baz=230,slow=40
SAML Samuel 35.45 129 *e*P **P 15 20 55.1 -1.4**
3.9nm,0.9s
MCMT McKenzie Canyo 36.00 332 *e*P **P 15 21 00.4 -0.7**
1.3nm,0.8s
ULM Lac du Bonnet 36.22 354 P **P 15 21 01.6 -1.0**
ULM Lac du Bonnet 36.22 354 P **P 15 21 01.6 -1.0**
1.2nm,0.5s,baz=207,slow=7.9,SNR=3.1
ULM LR LR 15 38 27.2
comp=Z,187nm,18.6s,baz=72,slow=40
LPAZ La Paz 37.43 143 P **P 15 21 14.6 +0.5**
LPAZ La Paz 37.43 143 P **P 15 21 14.6 +0.5**
0.5nm,0.5s,baz=337,slow=9.8,SNR=2.3
LPAZ LR LR 15 37 08.9
comp=Z,126nm,21.2s,baz=45,slow=37
NEW Newport 40.52 332 LR LR 15 42 04.9
comp=Z,188nm,18.6s,baz=281,slow=42
SIV San Ignacio 41.70 135 P **P 15 21 49.1 +0.1**
SIV San Ignacio 41.70 135 P **P 15 21 49.1 +0.1**
1.6nm,0.8s,baz=312,slow=8.0,SNR=6.7
SCHQ Scheffville 44.49 19 *e*P **P 15 22 11.6 +0.6**
9.3nm,0.9s
SCHQ Scheffville 44.49 19 P **P 15 22 11.7 +0.6**
6.7nm,0.7s,baz=215,slow=7.2,SNR=14
SCHQ LR LR 15 40 39.3
comp=Z,364nm,19.2s,baz=87,slow=36
YKA Yellowknife Ar 51.20 346 P **P 15 23 02.2 -0.7**
YKA Yellowknife Ar 51.20 346 P **P 15 23 02.2 -0.7**
2.9nm,0.9s,baz=144,slow=8.0,SNR=38
YKW3 Yellowknife Ar 51.26 346 *e*P **P 15 23 01.9 -1.5**
BDFB Brasília 51.31 124 LR LR 15 47 50.7
comp=Z,185nm,21.1s,baz=168,slow=40
CPUP Villa Florida 51.54 141 P **P 15 23 05.3 -0.6**
CPUP Villa Florida 51.54 141 P **P 15 23 05.3 -0.6**
0.3nm,0.3s,baz=300,slow=6.9,SNR=1.7
DLBC Dease Lake 53.12 335 LR LR 15 46 39.0
comp=Z,226nm,20.4s,baz=142,slow=37
PLCA Paso Flores 57.67 162 P **P 15 23 50.2 -0.2**
PLCA Paso Flores 57.67 162 P **P 15 23 50.2 -0.2**
0.9nm,0.6s,baz=337,slow=7.7,SNR=2.6
ILAR Eielson Array 63.27 336 P **P 15 24 28.6 +0.3**
ILAR Eielson Array 63.27 336 P **P 15 24 28.6 +0.3**
1.6nm,1.0s,baz=146,slow=4.2,SNR=8.7
ILAR LR LR 15 57 34.5
comp=Z,194nm,19.6s,baz=122,slow=41
PPT Papeete 66.40 243 LR LR 15 46 11.8
comp=Z,81nm,20.5s,baz=9.7,slow=29
PPT2 Papeete2 66.41 243 *e*LR LR 15 44 44.7
187nm,28.0s
TBI Tubuai 68.80 238 *e*LR LR 15 46 02.7
153nm,33.2s
ESDC Sonseca Array 78.34 52 LR LR 15 57 48.5
comp=Z,83nm,20.5s,baz=230,slow=34
NOA NORSAR Array B 83.20 29 LR LR 16 00 53.0
comp=Z,63nm,20.9s,baz=60,slow=34
DBIC Dimbokro 84.06 85 LR LR 15 57 32.3
comp=Z,119nm,19.6s,baz=312,slow=31
GERES GERESS Array B 88.43 40 LR LR 16 06 06.9
comp=Z,80nm,18.7s,baz=86,slow=35
TORD Torodi Ar. Bea 88.79 77 LR LR 16 00 20.6
comp=Z,110nm,20.4s,baz=240,slow=31
HHC Hu-ho-hao-te 121.57 341 *e*PKP **PKPdf 15 32 52.2 -1.9**
HHC PP **PP 15 34 26.8 +2.0**
HHC PKS **PKSdf 15 36 27.4 -3.5**
HHC SKS **SKSdf 15 40 02.7 -3.8**
HHC SKKS SKKSac 15 41 17.3 -8.6
HHC SS **SS 15 50 55.6 -4.1**
WMQ Urumqi 122.22 2 PKP **PKPdf 15 32 54.4 -0.8**
LZH Lanzhou 128.20 345 *e*PKP **PKPdf 15 33 06.0 -1.0**
LZH sPKP 15 33 10.3
WRA Warramunga Arr 136.98 256 PKP **PKPdf 15 33 23.8 +0.1**
WRA Warramunga Arr 136.98 256 PKP **PKPdf 15 33 23.8 +0.1**
0.4nm,0.8s,baz=80,slow=1.4,SNR=5.6
ASAR Alice Springs 137.23 250 PKP **PKPdf 15 33 24.7 +0.6**
ASAR Alice Springs 137.23 250 PKP **PKPdf 15 33 24.7 +0.6**
0.4nm,0.9s,baz=78,slow=2.3,SNR=3.2
FITZ Fitzroy Crossi 145.24 259 PKPbc **PKPdf 15 33 37.9 -0.6**
FITZ Fitzroy Crossi 145.24 259 PKPbc **PKPdf 15 33 37.9 -0.6**
4.7nm,0.9s,baz=91,slow=1.6,SNR=6.9
CMAR Chiang Mai Arr 146.26 344 PKPbc **PKPab 15 33 41.3 -0.8**
CMAR Chiang Mai Arr 146.26 344 PKPbc **PKPab 15 33 41.3 -0.8**
0.2nm,0.3s,baz=23,slow=3.2,SNR=3.5

SFS ***07*** *15:18:37.0,37.°85N×17.°70W,h0km,ML5.2*
LDG ***07*** *15:18:38.3±0.1,37.°51N×17.°35W,h2km,Ml5.3/12,ms3.8, Error ellipse: s-maj=5.5km s-min=3.9km az=162.0*
BJI ***07*** *15:18:39.1,37.°89N×17.°82W,h7km,mB5.3/21,mb4.9/32, Ms5.1/17,Ms7 4.9/18*
IGIL ***07*** *15:18:40.1,37.°65N×17.°50W,h2km,ML5.3*
MOS ***07*** *15:18:40.1±0.8,37.°69N×17.°47W,h10km,mb5.1/75,Error ellipse: s-maj=9.0km s-min=3.3km az=135.0*
CSEM ***07*** *15:18:40.2±0.1,37.°65N×17.°34W,h2km,mb5.0/83,Mw5.2, Error ellipse: s-maj=3.8km s-min=2.8km az=173.0*
IDC ***07*** *15:18:40.3±0.4,37.°68N×17.°48W,h0km,mb4.7/33, mb1 4.8/34,mb1mx4.7/40,mbtmp4.7/34,ML4.7/1,MS4.2/14, Ms1 4.2/14,ms1mx3.8/48,Error ellipse: s-maj=12.1km s-min=9.5km az=140.0*
ISCJB ***07*** *15:18:40.0±0.1,37.°56N±0.°02×17.°30W±0.°01,h13km, mb4.9/180,MS4.2/37,Error ellipse: s-maj=2.8km s-min=1.5km az=175.1*
NEIC ***07*** *15:18:41.9±0.2,37.°66N×17.°39W,h10km,mb5.0/91,Error ellipse: s-maj=5.9km s-min=2.9km az=167.0*
MDD ***07*** *15:18:42.0±1.4,37.°74N×17.°49W,h27km±21km,mb5.6/39, Error ellipse: s-maj=17.5km s-min=6.8km az=112.0, PRXIMO*
PDA ***07*** *15:18:43.3±8.0,37.°60N×17.°45W,h14km±999km,ML6.6*
SZGRF ***07*** *15:18:44.7,37.°11N×16.°24W,h10km,mb5.1,MS3.7, Azores-Cape St. Vincent Ridge*
INMG ***07*** *15:18:45.2±2.4,37.°77N×17.°51W,h10km,ML5.0,Error ellipse: s-maj=5.6km s-min=3.5km az=139.0*
GCMT ***07*** *15:18:45.9±0.3,37.°67N×17.°47W,h35km±1km,MW5.0, Moment Tensor Solution. s42,c58; s71,c107; Moment tensor: Scale 10¹⁶Nm; Mrr-2.03±.24; Mθθ-0.41±.16; Mφφ2.44±.17; Mrθ-0.74±.21; Mθφ-4.01±.13; Mφr0.36±.18; Best double couple: M0 4.40000×10¹⁶ NP1:φs9.00000°, δ74.00000°,λ-8.00000°. NP2:φs102.00000°,δ82.00000°, λ-164.00000°. Principal axes: T 5.3400, Plg6.0000°, Azm235.0000°; N -1.9800, Plg72.0000°, Azm127.0000°; P -3.3600, Plg17.0000°, Azm326.0000°; Data Used: II IU IC G.*
BGS ***07*** *15:18:46.4±2.5,37.°77N×16.°51W,h5km,mb5.3*
CNRM ***07*** *15:19:02.6,37.°06N×15.°79W,h30km,MD4.4*
ISC 07 15:18:42.5±0.4,**37.°63N**±0.°04×**17.°41W**±0.°03,**h14**km±2km,

h14km:pP-P,n1280,σ1§41/1290,mb5.0/181,MS4.2/37,
151C-160D,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMPST	**Porto Santo, M**	**4.63**	**169**	*i* Pn	**Pn**	**15 19 51.4**	**-0.6**
PMPST				*e*Sn	Sn	15 20 37.6	-7.9
PMPST				A	A	15 20 40.7	
	2μm,0.4s						
PMPST				*e*T	T	15 24 05.5	
PMPS	**Porto Santo**	**4.65**	**169**	*e*Pn	**Pn**	**15 19 51.6**	**-0.6**
PMPS				*e*Sn	Sn	15 20 36.8	-9.1
PMPS				A	A	15 20 45.4	
	2μm,0.4s						
PMPS	**Porto Santo**	**4.65**	**169**	⇓P	**Pn**	**15 19 51.4**	**-0.8**
PMPS				S	Sn	15 20 36.8	-9.1
	964nm,0.4s						
PMPS	**Porto Santo**	**4.65**	**169**	*e*Pn	**Pn**	**15 19 51.6**	**-0.6**
PMOZ	**Porto Moniz, M**	**4.80**	**178**	*i* Pn	**Pn**	**15 19 54.2**	**-0.2**
PMOZ				*e*Sn	Sn	15 20 41.3	-8.6
PMOZ				A	A	15 20 44.3	
	13μm,0.5s						
PMOZ				*e*T	T	15 24 28.6	
PMAR	**Madeira**	**4.91**	**175**	*e*Pn	**Pn**	**15 19 55.5**	**-0.6**
PMAR				*e*Sn	Sn	15 20 43.4	-9.4
PMAR				A	A	15 20 47.9	
	6μm,0.3s						
PMAR				*e*T	T	15 24 36.0	
PMAR	**Madeira**	**4.91**	**175**	P	**Pn**	**15 19 55.5**	**-0.6**
PMAR				S	Sn	15 20 43.4	-9.4
	3μm,0.3s						
PMAR	**Madeira**	**4.91**	**175**	P	**Pn**	**15 19 55.5**	**-0.6**
FUL	**Funchal**	**4.99**	**175**	*e*Pn	**Pn**	**15 19 56.7**	**-0.2**
FUL				*e*Sn	Sn	15 20 45.1	-9.3
FUL				A	A	15 20 52.3	
	4μm,0.3s						
FUL				*e*T	T	15 24 43.0	
FUL	**Funchal**	**4.99**	**175**	P	**Pn**	**15 19 56.7**	**-0.2**
FUL				S	Sn	15 20 45.1	-9.3
	2μm,0.3s						
PSMN	**Pico do Norte,**	**6.13**	**266**	*i* P	Pn	15 20 08.3	-4.4
PSMN				*e*S	Sn	15 21 10.6	-12
PSMN				A	A	15 21 14.4	
	446nm,0.3s						
PSMN				*e*T	T	15 25 25.4	
PSMA	**Santa Maria**	**6.19**	**266**	*i* P	Pn	15 20 09.1	-4.3
PSMA				*e*S	Sn	15 21 14.2	-10
PSMA				A	A	15 21 19.9	
	746nm,0.5s						
PSMA				*e*T	T	15 25 21.3	
CMLA	**Cha da Macela**	**6.44**	**274**	*e*P	**Pn**	**15 20 14.8**	**-2.0**
CMLA	**Cha da Macela**	**6.44**	**274**	*e*P	Pn	15 20 13.0	-3.8
CMLA				pmax	pmax		
	comp=Z,834nm,0.6s						
CMLA	**Cha da Macela**	**6.44**	**274**	*e*P	Pn	15 20 13.0	-3.8
	comp=Z,834nm,0.6s						
CMLA	**Cha da Macela**	**6.44**	**274**	Pn	Pn	15 20 13.1	-3.8
	comp=Z,7μm,0.7s,SNR=14						
CMLA	**Cha da Macela**	**6.44**	**274**	*e*P	**Pn**	**15 20 14.8**	**-2.0**
PMAFR	**Mafra**	**6.53**	**76**	*e*Pn	**Pn**	**15 20 16.0**	**-2.1**
PMAFR				*e*Sn	Sn	15 21 25.2	-7.1
PMAFR				A	A	15 21 30.9	
	comp=Z,3μm,0.5s						
PMAFR				*e*T	T	15 26 22.4	
PMAFR	**Mafra**	**6.53**	**76**	*e*Pn	**Pn**	**15 20 16.0**	**-2.1**
PDA	**Ponta Delgada**	**6.55**	**274**	*e*P	**Pn**	**15 20 17.5**	**-0.8**
PDA				*e*S	Sn	15 21 23.0	-10
PDA				A	A	15 21 28.3	
	comp=Z,900nm,0.4s						
PDA	**Ponta Delgada**	**6.55**	**274**	*e*P	**Pn**	**15 20 17.5**	**-0.8**
PSET	**Sete Cidades**	**6.59**	**274**	*e*P	**Pn**	**15 20 17.9**	**-1.1**
PSET				*e*S	Sn	15 21 25.7	-8.2
PSET				A	A	15 21 33.5	
	comp=Z,2μm,0.5s						
PSET	**Sete Cidades**	**6.59**	**274**	*e*P	**Pn**	**15 20 17.9**	**-1.1**
LIS	**Lisbon**	**6.60**	**78**	*e*P	**Pn**	**15 20 16.8**	**-2.2**
LIS				*e*S	Sn	15 21 26.3	-7.7
LIS				AML	AML	15 21 28.6	
	comp=E,2μm,0.5s						
LIS	**Lisbon**	**6.60**	**78**	*e*Pn	**Pn**	**15 20 16.8**	**-2.2**
LIS				*e*Sn	Sn	15 21 26.3	-7.7
LIS	**Lisbon**	**6.60**	**78**	*e*P	**Pn**	**15 20 16.7**	**-2.2**
LIS	**Lisbon**	**6.60**	**78**	P	**Pn**	**15 20 16.8**	**-2.2**
LIS				S	Sn	15 21 26.3	-7.7
LIS	**Lisbon**	**6.60**	**78**	*e*Pn	**Pn**	**15 20 16.8**	**-2.2**
PFVI	**Vila Bisbo**	**6.85**	**92**	*i* Pn	**Pn**	**15 20 20.1**	**-2.4**
PFVI				*e*Sn	Sn	15 21 31.0	-9.3
PFVI				A	A	15 21 49.7	
	comp=E,37nm,0.5s						
PFVI				*e*T	T	15 26 48.3	
PTEO	**Sao Teotonio**	**6.90**	**88**	*e*Pn	**Pn**	**15 20 20.9**	**-2.2**
PTEO				*e*Sn	Sn	15 21 31.5	-10
PTEO				A	A	15 21 37.7	
	comp=E,2μm,0.6s						
PTEO				*e*T	T	15 26 47.2	
PTEO	**Sao Teotonio**	**6.90**	**88**	P	**Pn**	**15 20 20.9**	**-2.2**
PTEO				S	Sn	15 21 31.5	-10
	comp=E,1μm,0.6s						
PTEO	**Sao Teotonio**	**6.90**	**88**	P	**Pn**	**15 20 20.9**	**-2.2**
MORF	**Marmelete**	**6.97**	**90**	*i* Pn	**Pn**	**15 20 21.7**	**-2.5**
MORF				*e*Sn	Sn	15 21 35.1	-8.2
MORF				A	A	15 21 39.7	
	comp=E,914nm,0.7s						
MORF				*e*T	T	15 26 41.4	
MORF	**Marmelete**	**6.97**	**90**	*e*P	**Pn**	**15 20 21.6**	**-2.6**
MORF	**Marmelete**	**6.97**	**90**	⇑P	**Pn**	**15 20 21.7**	**-2.5**
MORF				S	Sn	15 21 35.1	-8.2
	comp=E,914nm,0.7s						
MORF	**Marmelete**	**6.97**	**90**	P	**Pn**	**15 20 21.7**	**-2.5**
PNCL	**Nicolau / Gran**	**7.04**	**83**	*e*Pn	**Pn**	**15 20 22.2**	**-2.9**
PNCL				*e*Sn	Sn	15 21 35.5	-9.4
PNCL				A	A	15 21 41.9	
	comp=E,2μm,0.4s						
PNCL				*e*T	T	15 26 36.3	
PNCL	**Nicolau / Gran**	**7.04**	**83**	*e*Pn	**Pn**	**15 20 22.2**	**-2.9**
ALMR	**Almeirim**	**7.10**	**75**	*e*P	**Pn**	**15 20 23.5**	**-2.4**
ALMR				*e*S	Sn	15 21 38.2	-8.2
ALMR				AML	AML	15 21 41.0	
	comp=E,4μm,0.5s						
ALMR	**Almeirim**	**7.10**	**75**	*e*P	**Pn**	**15 20 23.5**	**-2.4**
ALMR				*e*S	Sn	15 21 38.2	-8.2
ALMR	**Almeirim**	**7.10**	**75**	*e*P	**Pn**	**15 20 23.4**	**-2.4**
ALMR	**Almeirim**	**7.10**	**75**	P	**Pn**	**15 20 23.5**	**-2.4**
ALMR				S	Sn	15 21 38.2	-8.2
ALMR	**Almeirim**	**7.10**	**75**	P	**Pn**	**15 20 23.5**	**-2.4**
MESJ	**Messejana**	**7.29**	**86**	*e*P	**Pn**	**15 20 25.6**	**-2.8**
MESJ				*e*S	Sn	15 21 42.1	-8.8
MESJ				AML	AML	15 21 45.9	
	comp=N,2μm,0.4s						
MESJ	**Messejana**	**7.29**	**86**	*e*P	**Pn**	**15 20 25.6**	**-2.8**
MESJ				*e*S	Sn	15 21 42.1	-8.8
MESJ	**Messejana**	**7.29**	**86**	*e*P	**Pn**	**15 20 25.6**	**-2.8**
MESJ	**Messejana**	**7.29**	**86**	P	**Pn**	**15 20 25.6**	**-2.8**
MESJ				S	Sn	15 21 42.1	-8.8
MESJ	**Messejana**	**7.29**	**86**	P	**Pn**	**15 20 25.6**	**-2.8**
PTOM	**Tomar**	**7.32**	**72**	*e*Pn	**Pn**	**15 20 26.5**	**-2.4**
PTOM				*e*Sn	Sn	15 21 44.1	-7.6
PTOM				A	A	15 21 52.7	
	comp=N,830nm,0.8s						
PTOM	**Tomar**	**7.32**	**72**	P	**Pn**	**15 20 26.5**	**-2.4**
PTOM				S	Sn	15 21 44.1	-7.6
	comp=N,415nm,0.8s						
PTOM	**Tomar**	**7.32**	**72**	P	**Pn**	**15 20 26.5**	**-2.4**
PMTG	**Montargil**	**7.36**	**76**	*e*Pn	**Pn**	**15 20 27.3**	**-2.2**
PMTG				*e*Sn	Sn	15 21 44.0	-8.7
PMTG				A	A	15 21 47.2	
	comp=N,614nm,0.5s						
PMTG				*e*T	T	15 26 39.3	
PMTG	**Montargil**	**7.36**	**76**	*e*Pn	**Pn**	**15 20 27.3**	**-2.2**
EVOP	**Sao Brissos**	**7.38**	**80**	*e*P	**Pn**	**15 20 26.6**	**-3.1**
EVOP	**Sao Brissos**	**7.38**	**80**	*e*Pn	**Pn**	**15 20 26.6**	**-3.1**
EVOP				*e*Sn	Sn	15 21 42.9	-10
EVOP	**Sao Brissos**	**7.38**	**80**	*e*Pn	**Pn**	**15 20 26.6**	**-3.1**
	baz=269						
PCVE	**Castro Verde**	**7.44**	**87**	*e*Pn	**Pn**	**15 20 27.6**	**-2.9**
PCVE				*e*Sn	Sn	15 21 45.9	-8.7
PCVE				A	A	15 21 50.9	
	comp=N,714nm,0.4s						
PCVE				*e*T	T	15 27 04.1	
PCVE	**Castro Verde**	**7.44**	**87**	⇑P	**Pn**	**15 20 27.6**	**-2.9**
PCVE				S	Sn	15 21 45.9	-8.7
	comp=N,714nm,0.4s						
PCVE	**Castro Verde**	**7.44**	**87**	P	**Pn**	**15 20 27.6**	**-2.9**

EVO Evora 7.47 80 *e*Pn Pn 15 20 26.6 -4.3
baz=269
EVO *e*Sn Sn 15 21 42.9 -12
comp=N,2µm,0.4s
EVO *e*R
comp=N,1µm,24.2s
EVO Evora 7.47 80 *e*Pn **Pn 15 20 28.3 -2.6**
EVO *e*Sn Sn 15 21 46.8 -8.6
EVO A A 15 21 49.7
comp=N,789nm,0.7s
EVO Evora 7.47 80 P **Pn 15 20 28.3 -2.6**
EVO S Sn 15 21 46.8 -8.6
comp=N,789nm,0.7s
EVO Evora 7.47 80 P **Pn 15 20 28.3 -2.6**
PBDV Barranco-do-Ve 7.55 90 *e*Pn **Pn 15 20 29.8 -2.3**
PBDV *e*Sn Sn 15 21 49.7 -7.8
PBDV A A 15 21 59.4
comp=N,595nm,0.6s
PBDV *e*T T 15 27 10.0
PBDV Barranco-do-Ve 7.55 90 P **Pn 15 20 29.8 -2.3**
PBDV S Sn 15 21 49.7 -7.8
comp=N,595nm,0.6s
PBDV Barranco-do-Ve 7.55 90 P **Pn 15 20 29.8 -2.3**
PBEJ Beja 7.56 84 *e*Pn **Pn 15 20 29.4 -2.9**
PBEJ *e*Sn Sn 15 21 49.0 -8.8
PBEJ A A 15 21 52.8
comp=N,568nm,0.5s
PBEJ Beja 7.56 84 P **Pn 15 20 29.4 -2.9**
PBEJ S Sn 15 21 49.0 -8.8
comp=N,284nm,0.5s
PBEJ Beja 7.56 84 P **Pn 15 20 29.4 -2.9**
PTO Porto 7.67 60 *e*Pn **Pn 15 20 31.1 -2.5**
PTO *e*Sn Sn 15 21 51.2 -9.0
PTO Porto 7.67 60 P **Pn 15 20 31.1 -2.5**
PTO S Sn 15 21 51.2 -9.0
PTO Porto 7.67 60 P **Pn 15 20 31.1 -2.5**
PVAQ Vaqueiros 7.71 89 *e*Pn **Pn 15 20 31.8 -2.4**
PVAQ *e*Sn Sn 15 21 53.0 -8.3
PVAQ A A 15 21 58.1
comp=N,690nm,0.6s
PVAQ *e*T T 15 27 16.8
PVAQ Vaqueiros 7.71 89 P **Pn 15 20 31.8 -2.4**
PVAQ S Sn 15 21 53.0 -8.3
comp=N,690nm,0.6s
PVAQ Vaqueiros 7.71 89 P **Pn 15 20 31.8 -2.4**
ADH Angra Heroismo 7.81 281 *i* P **Pn 15 20 34.5 -1.1**
ADH *e*S Sn 15 21 50.9 -13
ADH A A 15 21 55.8
comp=N,228nm,0.4s
PESTR Estremoz 7.82 78 *e*Pn **Pn 15 20 33.8 -2.1**
PESTR *e*Sn Sn 15 21 54.7 -10
PESTR A A 15 22 02.7
comp=N,635nm,0.5s
PESTR Estremoz 7.82 78 P **Pn 15 20 33.8 -2.1**
PESTR S Sn 15 21 54.7 -10
comp=N,635nm,0.5s
PESTR Estremoz 7.82 78 P **Pn 15 20 33.8 -2.1**
PVIS Viseu 8.01 64 *e*Pn **Pn 15 20 35.6 -2.8**
PVIS *e*Sn Sn 15 21 58.3 -10
PVIS A A 15 22 13.1
comp=N,207nm,0.7s
PVIS Viseu 8.01 64 P **Pn 15 20 35.6 -2.8**
PVIS S Sn 15 21 58.3 -10
comp=N,103nm,0.7s
PVIS Viseu 8.01 64 P **Pn 15 20 35.6 -2.8**
PMRV Marv??o 8.05 74 *e*Pn **Pn 15 20 36.5 -2.5**
PMRV *e*Sn Sn 15 22 00.9 -9.0
PMRV A A 15 22 05.5
comp=N,596nm,0.4s
PMRV Marv??o 8.05 74 ⇑P **Pn 15 20 36.5 -2.5**
PMRV S Sn 15 22 00.9 -9.0
comp=N,596nm,0.4s
PMRV Marv??o 8.05 74 P **Pn 15 20 36.5 -2.5**
PCBR Castelo Branco 8.07 71 *e*Pn **Pn 15 20 36.6 -2.6**
PCBR *e*Sn Sn 15 21 59.8 -10
PCBR A A 15 22 04.0
comp=N,376nm,0.7s
PCBR Castelo Branco 8.07 71 P **Pn 15 20 36.6 -2.6**
PCBR S Sn 15 21 59.8 -10
comp=N,188nm,0.7s
PCBR Castelo Branco 8.07 71 P **Pn 15 20 36.6 -2.6**
EZAM Zamans 8.07 53 P Pn 15 20 36.1 -3.2
comp=N,350nm,0.3s,SNR=7.9
EZAM S Sn 15 21 58.9 -11
comp=N,186nm,0.2s,SNR=7.9
EZAM Zamans 8.07 53 P Pn 15 20 36.1 -3.2
comp=N,350nm,0.3s,SNR=7.9
MTE Manteigas 8.16 67 *e*Pn **Pn 15 20 37.5 -3.0**
MTE *e*Sn Sn 15 22 03.2 -9.4
MTE A A 15 22 08.5
comp=N,561nm,0.4s
MTE Manteigas 8.16 67 *e*P Pn 15 20 37.2 -3.3
comp=N,217nm,0.6s
MTE Manteigas 8.16 67 P **Pn 15 20 37.5 -3.0**
MTE S Sn 15 22 03.2 -9.4
comp=N,280nm,0.4s
MTE Manteigas 8.16 67 P **Pn 15 20 37.5 -3.0**
PBAR Barrancos 8.22 83 *e*Pn **Pn 15 20 38.3 -2.9**
PBAR *e*Sn Sn 15 22 04.4 -9.4
PBAR A A 15 22 09.8
comp=N,813nm,0.5s
PBAR Barrancos 8.22 83 P **Pn 15 20 38.3 -2.9**
PBAR S Sn 15 22 04.4 -9.4
comp=N,813nm,0.5s
PBAR Barrancos 8.22 83 P **Pn 15 20 38.3 -2.9**
PGAV Gavieira, Arco 8.26 56 *e*Pn **Pn 15 20 38.8 -3.1**
PGAV *e*Sn Sn 15 22 04.8 -10
PGAV A A 15 22 09.8
comp=N,390nm,0.4s
PGAV *e*T T 15 27 04.4
PGAV Gavieira, Arco 8.26 56 *e*Pn **Pn 15 20 38.8 -3.1**
PCAB Cabril 8.30 58 *e*Pn **Pn 15 20 39.7 -2.7**
PCAB *e*Sn Sn 15 22 06.8 -9.1
PCAB A A 15 22 17.9
comp=N,319nm,0.4s
PCAB *e*T T 15 27 17.6
PCAB Cabril 8.30 58 P **Pn 15 20 39.7 -2.7**
PCAB S Sn 15 22 06.8 -9.1
comp=N,159nm,0.4s
PCAB Cabril 8.30 58 P **Pn 15 20 39.7 -2.7**
POLO Lamas de Olo 8.32 60 *e*Pn **Pn 15 20 40.1 -2.6**
POLO *e*Sn Sn 15 22 05.7 -11
POLO A A 15 22 19.5
comp=N,109nm,0.5s
POLO Lamas de Olo 8.32 60 *e*Pn **Pn 15 20 40.1 -2.6**
PVRL Vila Real 8.33 61 *e*Pn **Pn 15 20 40.5 -2.4**
PVRL *e*Sn Sn 15 22 04.4 -12
PVRL A A 15 22 13.8
comp=N,193nm,0.2s
PVRL Vila Real 8.33 61 P **Pn 15 20 40.5 -2.4**
PVRL S Sn 15 22 04.4 -12
comp=N,97nm,0.2s
PVRL Vila Real 8.33 61 P **Pn 15 20 40.5 -2.4**
EMAZ Mazaricos 8.35 48 P Pn 15 20 39.8 -3.3
comp=N,248nm,0.2s,SNR=81
EMAZ S Sn 15 22 06.3 -11
comp=N,398nm,0.4s,SNR=42
EMAZ Mazaricos 8.35 48 P Pn 15 20 39.8 -3.3
comp=N,248nm,0.2s,SNR=81
PGRA Graciosa 8.43 283 *e*P **Pn 15 20 43.2 -0.9**
PGRA *e*S Sn 15 22 09.8 -9.2
PGRA A A 15 22 16.1
comp=N,378nm,0.6s
PGRA Graciosa 8.43 283 *e*P **Pn 15 20 43.2 -0.9**
PMAN Manadas 8.48 280 *i* P **Pn 15 20 43.4 -1.4**
PMAN *e*S Sn 15 22 06.6 -14
PMAN A A 15 22 12.2
comp=N,115nm,0.5s
EMIN Mina Concepcio 8.51 86 P **Pn 15 20 43.4 -1.9**
comp=N,60nm,0.3s,SNR=178
EMIN S Sn 15 22 10.8 -10
comp=N,297nm,0.4s,SNR=7.9
EMIN Mina Concepcio 8.51 86 P **Pn 15 20 43.4 -1.9**
comp=N,60nm,0.3s,SNR=178
STS Santiago 8.56 49 ⇓P Pn 15 20 42.6 -3.4
comp=N,113nm,0.2s,SNR=18
STS S Sn 15 22 11.8 -11
comp=N,109nm,0.2s,SNR=7.9
STS Santiago 8.56 49 P Pn 15 20 42.6 -3.4
comp=N,113nm,0.2s,SNR=18
ROSA Rosais 8.60 281 *e*P **Pn 15 20 45.5 -1.0**
ROSA *e*S Sn 15 22 10.3 -13
ROSA A A 15 22 13.4
comp=N,142nm,0.4s
ROSA Rosais 8.60 281 *e*P **Pn 15 20 45.5 -1.0**
PICO Pico 8.73 279 *e*P **Pn 15 20 47.0 -1.4**
PICO *e*S Sn 15 22 17.7 -8.9
PICO Pico 8.73 279 *e*P **Pn 15 20 47.0 -1.4**
MVO Moncorvo 8.78 63 *e*Pn **Pn 15 20 46.0 -3.0**
MVO *e*Sn Sn 15 22 18.2 -9.4
MVO A A 15 22 24.0
comp=N,491nm,0.5s
MVO Moncorvo 8.78 63 *e*Pn **Pn 15 20 46.0 -3.0**
PCAN Candelaria 8.78 279 *i* P **Pn 15 20 47.5 -1.5**
PCAN *e*S Sn 15 22 19.1 -8.6
PCAN A A 15 22 26.7
comp=N,237nm,0.4s
JHA Jbel Lahdid 8.80 130 P **Pn 15 20 50.0 +0.7**
JHA S Sn 15 22 08.0 -20
JHA Jbel Lahdid 8.80 130 P **Pn 15 20 50.0 +0.7**
JHA *i* S Sn 15 22 08.0 -20
HOR Horta 8.89 279 *e*P **Pn 15 20 49.2 -1.3**
HOR *e*S Sn 15 22 22.0 -8.5
HOR Horta 8.89 279 *e*P **Pn 15 20 49.2 -1.3**
CALA Caldeira 8.95 280 *i* P **Pn 15 20 50.2 -1.2**
CALA *e*S Sn 15 22 21.5 -11
PCED Cedros 8.96 280 *i* P **Pn 15 20 49.9 -1.5**
PCED *e*S Sn 15 22 21.9 -10
PCED A A 15 22 27.0
comp=N,59nm,0.3s
EHIG Higuera 9.06 182 P **Pn 15 20 52.4 -0.5**
comp=N,120nm,0.3s,SNR=7.9
EHIG S Sn 15 22 19.1 -16
comp=N,1µm,0.4s,SNR=7.9
EHIG Higuera 9.06 182 P **Pn 15 20 52.4 -0.5**
comp=N,120nm,0.3s,SNR=7.9
EFAM Famara 9.08 158 P **Pn 15 20 51.8 -1.3**
comp=N,84nm,0.3s,SNR=7.9
EFAM S Sn 15 22 25.9 -9.2
comp=N,64nm,0.4s,SNR=7.9
EFAM Famara 9.08 158 P **Pn 15 20 51.8 -1.3**
comp=N,84nm,0.3s,SNR=7.9
EBAJ Bajamar 9.11 174 ⇑P **Pn 15 20 52.4 -1.1**
comp=N,133nm,0.6s,SNR=18
EBAJ S Sn 15 22 21.7 -14
comp=N,189nm,0.5s,SNR=7.9
EBAJ Bajamar 9.11 174 P **Pn 15 20 52.4 -1.1**
comp=N,133nm,0.6s,SNR=18
EPLA Plasencia 9.17 71 P **Pn 15 20 51.2 -3.1**
comp=N,71nm,0.3s,SNR=48
EPLA S Sn 15 22 27.3 -10
comp=N,855nm,0.7s,SNR=12
EPLA Plasencia 9.17 71 P **Pn 15 20 51.2 -3.1**
comp=N,71nm,0.3s,SNR=48
CNIL Conil 9.17 94 P **Pn 15 20 54.9 +0.6**
CNIL S **Sn 15 22 33.0 -4.2**
ERUA La Rua 9.20 56 P **Pn 15 20 51.7 -3.0**
comp=N,177nm,0.4s,SNR=7.9
ERUA S Sn 15 22 28.0 -10
comp=N,23nm,0.1s,SNR=7.9
ERUA La Rua 9.20 56 P **Pn 15 20 51.7 -3.0**
comp=N,177nm,0.4s,SNR=7.9
PBRG Braganca 9.21 60 *e*Pn **Pn 15 20 51.9 -3.0**
PBRG *e*Sn Sn 15 22 29.1 -9.3
PBRG A A 15 22 36.1
comp=N,149nm,0.4s
PBRG Braganca 9.21 60 P **Pn 15 20 51.9 -3.0**
PBRG S Sn 15 22 29.1 -9.3
comp=N,74nm,0.4s
PBRG Braganca 9.21 60 P **Pn 15 20 51.9 -3.0**
ESPR Espera 9.24 91 P **Pn 15 20 53.2 -2.1**
comp=N,128nm,0.3s,SNR=72
ESPR S Sn 15 22 31.1 -8.0
comp=N,2µm,0.6s,SNR=6.0
ESPR Espera 9.24 91 P **Pn 15 20 53.2 -2.1**
comp=N,128nm,0.3s,SNR=72
ECAL Calabor 9.27 59 P **Pn 15 20 53.0 -2.8**
comp=N,151nm,0.3s,SNR=117
ECAL S Sn 15 22 30.1 -10
comp=N,386nm,0.3s,SNR=5.1
ECAL Calabor 9.27 59 P **Pn 15 20 53.0 -2.8**
comp=N,151nm,0.3s,SNR=117
RTC Rabat Centre 9.31 110 P **Pn 15 20 54.0 -2.2**
RTC S Sn 15 22 20.0 -21
RTC Rabat Centre 9.31 110 P **Pn 15 20 54.0 -2.2**
RTC *i* S Sn 15 22 20.0 -21
CIA Chichaoua 9.35 128 P **Pn 15 20 57.0 +0.2**
CIA S Sn 15 22 21.0 -21
CIA Chichaoua 9.35 128 P **Pn 15 20 57.0 +0.2**
CIA *i* S Sn 15 22 21.0 -21
CRAJ Montana Rajada 9.37 176 P **Pn 15 20 55.7 -1.6**
comp=N,18nm,0.2s,SNR=4.0
CRAJ S Sn 15 22 30.2 -13
comp=N,464nm,0.3s,SNR=7.9
CRAJ Montana Rajada 9.37 176 P **Pn 15 20 55.7 -1.6**
comp=N,18nm,0.2s,SNR=4.0
CCAN Las Canadas 9.41 176 P **Pn 15 20 56.0 -1.9**
comp=N,139nm,0.8s,SNR=22
CCAN S Sn 15 22 28.3 -16
comp=N,48nm,0.4s,SNR=7.9
CCAN Las Canadas 9.41 176 P **Pn 15 20 56.0 -1.9**
comp=N,139nm,0.8s,SNR=22
CFUE Fuerteventura 9.42 161 P **Pn 15 20 55.6 -2.2**
comp=N,100nm,0.2s,SNR=7.9
CFUE S Sn 15 22 32.2 -11
comp=N,244nm,0.2s,SNR=7.9
CFUE Fuerteventura 9.42 161 P **Pn 15 20 55.6 -2.2**
comp=N,100nm,0.2s,SNR=7.9
EGOM La Gomera 9.45 179 P **Pn 15 20 55.7 -2.4**
comp=N,74nm,0.3s,SNR=20
EGOM S Sn 15 22 26.4 -18
comp=N,959nm,0.4s,SNR=6.8
EGOM La Gomera 9.45 179 P **Pn 15 20 55.7 -2.4**
comp=N,74nm,0.3s,SNR=20
LIJA Lijar 9.60 91 P **Pn 15 20 58.3 -2.0**
LIJA S Sn 15 22 39.8 -8.1
LIJA Lijar 9.60 91 P **Pn 15 20 58.3 -2.0**
CFTV Fuerteventura 9.61 162 P **Pn 15 20 58.7 -1.7**
comp=N,54nm,0.3s,SNR=30
CFTV S Sn 15 22 35.6 -13
comp=N,27nm,0.2s,SNR=7.9
CFTV Fuerteventura 9.61 162 P **Pn 15 20 58.7 -1.7**
comp=N,54nm,0.3s,SNR=30
EJIF Jimena Fronter 9.62 93 P **Pn 15 20 59.6 -0.9**
comp=N,101nm,0.6s,SNR=7.9
EJIF S Sn 15 22 40.7 -7.6
comp=N,146nm,0.5s,SNR=7.9
EJIF Jimena Fronter 9.62 93 P **Pn 15 20 59.6 -0.9**
comp=N,101nm,0.6s,SNR=7.9
EOSO Osorio 9.66 170 P **Pn 15 20 59.7 -1.4**
comp=N,31nm,0.3s,SNR=6.8
EOSO S Sn 15 22 35.8 -14
comp=N,74nm,0.3s,SNR=4.7
EOSO Osorio 9.66 170 P **Pn 15 20 59.7 -1.4**
comp=N,31nm,0.3s,SNR=6.8
EPON Pontenova 9.66 51 ⇑P Pn 15 20 57.5 -3.5
comp=N,86nm,0.3s,SNR=18
EPON S Sn 15 22 36.5 -13
comp=N,162nm,0.3s,SNR=4.6
EPON Pontenova 9.66 51 P Pn 15 20 57.5 -3.5
comp=N,86nm,0.3s,SNR=18
AFS Agadir Fac de 9.73 135 P **Pn 15 21 02.0 0.0**
AFS S Sn 15 22 33.0 -18
AFS Agadir Fac de 9.73 135 P **Pn 15 21 02.0 0.0**
AFS *i* S Sn 15 22 33.0 -18
ECEU Ceuta 9.81 97 P **Pn 15 21 02.9 -0.2**
comp=N,21nm,0.3s,SNR=7.9
ECEU S Sn 15 22 43.2 -10
comp=N,115nm,0.5s,SNR=7.9
ECEU Ceuta 9.81 97 P **Pn 15 21 02.9 -0.2**
comp=N,21nm,0.3s,SNR=7.9
REAL Reales 9.82 93 P **Pn 15 21 02.6 -0.7**
REAL S Sn 15 22 47.1 -6.3
REAL Reales 9.82 93 P **Pn 15 21 02.7 -0.7**
EMIJ Mijas 10.15 92 P **Pn 15 21 05.9 -1.9**
comp=N,40nm,0.4s,SNR=17
EMIJ S Sn 15 22 53.6 -7.8
comp=N,466nm,1.0s,SNR=6.9
EMIJ Mijas 10.15 92 P **Pn 15 21 05.9 -1.9**
comp=N,40nm,0.4s,SNR=17
YBT Youssef Ben Ta 10.18 137 P **Pn 15 21 10.0 +1.9**
YBT S Sn 15 22 42.0 -20
YBT Youssef Ben Ta 10.18 137 *i* P **Pn 15 21 10.0 +1.9**
YBT *i* S Sn 15 22 42.0 -20
EMAL Malaga-Limoner 10.39 91 P **Pn 15 21 10.1 -0.9**
EMAL S Sn 15 22 59.3 -7.9
EMAL Malaga-Limoner 10.39 91 P **Pn 15 21 10.1 -0.9**
PAB San Pablo 10.40 75 *e*P **Pn 15 21 08.2 -3.1**
PAB pmax pmax
comp=Z,105nm,0.4s
PAB San Pablo 10.40 75 *e*P **Pn 15 21 08.2 -3.1**
comp=Z,104nm,0.4s
PAB *e*S Sn 15 22 56.9 -11
PAB San Pablo 10.40 75 *e*P **Pn 15 21 08.2 -3.1**
comp=Z,104nm,0.4s
ELUQ Luque 10.43 86 P **Pn 15 21 09.5 -2.1**
comp=Z,55nm,0.3s,SNR=7.9
ELUQ S Sn 15 22 56.6 -12
comp=Z,108nm,0.2s,SNR=7.9
ELUQ Luque 10.43 86 P **Pn 15 21 09.5 -2.1**
comp=Z,55nm,0.3s,SNR=7.9
TZC Tazercounte 10.50 118 P **Pn 15 21 13.0 +0.3**
TZC S Sn 15 22 47.0 -23
TZC Tazercounte 10.50 118 P **Pn 15 21 13.0 +0.3**
TZC *i* S Sn 15 22 47.0 -23
ELOJ Sierra Loja 10.56 89 P **Pn 15 21 11.6 -1.8**
comp=Z,22nm,0.3s,SNR=7.9
ELOJ S Sn 15 23 03.9 -7.7
comp=Z,69nm,0.3s,SNR=7.9
ELOJ Sierra Loja 10.56 89 P **Pn 15 21 11.6 -1.8**
comp=Z,22nm,0.3s,SNR=7.9
KIB El Ksiba 10.59 115 P **Pn 15 21 13.0 -0.9**
KIB S Sn 15 22 51.0 -21
KIB El Ksiba 10.59 115 P **Pn 15 21 13.0 -0.9**
KIB *i* S Sn 15 22 51.0 -21
ESDC Sonseca Array 10.71 75 Pn Pn 15 21 11.9 -3.6
ESDC Sn Sn 15 23 04.7 -11
ESDC Sonseca Array 10.71 75 P Pn 15 21 12.2 -3.3
comp=Z,47nm,0.2s,baz=268,slow=13,SNR=61
ESDC S Sn 15 23 06.1 -9.1
comp=Z,68nm,0.4s,baz=264,slow=24,SNR=14
ESDC Sonseca Array 10.71 75 Pn Pn 15 21 11.9 -3.6
comp=Z,31nm,0.3s,baz=267,slow=13,SNR=94
ESDC Sn Sn 15 23 04.7 -11
comp=Z,54nm,0.3s,baz=260,slow=23,SNR=14
ESDC Sonseca Array 10.71 75 Pn Pn 15 21 11.9 -3.6
ESDC Sonseca Array 10.71 75 P Pn 15 21 12.2 -3.3
comp=Z,47nm,0.2s,slow=13,SNR=61
ESLA Sonseca Array 10.71 75 *e*P Pn 15 21 11.8 -3.7
comp=Z,78nm,1.0s
ESLA *e*S Sn 15 23 04.0 -11
ESLA Sonseca Array 10.71 75 *e*P Pn 15 21 11.8 -3.7
comp=Z,78nm,1.0s
GUD Guadarrama 10.73 70 P **Pn 15 21 12.9 -2.9**
comp=Z,38nm,0.6s,SNR=44
GUD S Sn 15 23 03.3 -12
comp=Z,148nm,0.5s,SNR=7.9
GUD Guadarrama 10.73 70 P **Pn 15 21 12.9 -2.9**
comp=Z,38nm,0.6s,SNR=44
EBAN Banos Encina 10.78 83 P Pn 15 21 13.2 -3.2
comp=Z,84nm,0.3s,SNR=34
EBAN S Sn 15 23 05.3 -12
comp=Z,480nm,0.7s,SNR=12
EBAN Banos Encina 10.78 83 P Pn 15 21 13.2 -3.2
comp=Z,84nm,0.3s,SNR=34
ERON Agron 10.85 89 P **Pn 15 21 15.4 -2.1**
comp=Z,58nm,0.6s,SNR=7.9
ERON S Sn 15 23 10.4 -8.4
comp=Z,124nm,0.5s,SNR=7.9
ERON Agron 10.85 89 P **Pn 15 21 15.4 -2.1**
comp=Z,58nm,0.6s,SNR=7.9
EARI Arriondas 10.88 55 P **Pn 15 21 15.6 -2.1**
comp=Z,81nm,0.3s,SNR=212
EARI S Sn 15 23 09.3 -10
comp=Z,236nm,0.8s,SNR=7.9
EARI Arriondas 10.88 55 P **Pn 15 21 15.6 -2.1**
comp=Z,81nm,0.3s,SNR=212
ECOG Cogollos-Vega 11.01 88 P **Pn 15 21 17.7 -2.0**
comp=Z,87nm,0.5s,SNR=7.9
ECOG S Sn 15 23 13.8 -8.9
comp=Z,148nm,0.4s,SNR=7.9
ECOG Cogollos-Vega 11.01 88 P **Pn 15 21 17.7 -2.0**
comp=Z,87nm,0.5s,SNR=7.9
EGUA Guajares 11.07 90 S Sn 15 23 15.7 -8.2
comp=Z,616nm,0.6s,SNR=7.9
EQUE Quentar 11.12 88 ⇑P **Pn 15 21 19.4 -1.7**
comp=Z,69nm,0.4s,SNR=18
EQUE S Sn 15 23 15.5 -10
comp=Z,384nm,0.9s,SNR=7.9
EQUE Quentar 11.12 88 P **Pn 15 21 19.4 -1.7**
comp=Z,69nm,0.4s,SNR=18
EQES Quesada 11.36 85 P **Pn 15 21 21.7 -2.7**
comp=Z,53nm,0.4s,SNR=12
EQES S Sn 15 23 18.9 -12
comp=Z,184nm,0.5s,SNR=7.9
EQES Quesada 11.36 85 P **Pn 15 21 21.7 -2.7**
comp=Z,53nm,0.4s,SNR=12
MDT Midelt 11.51 111 Pn **Pn 15 21 25.4 -1.1**
MDT Sn Sn 15 23 24.5 -11
MDT Midelt 11.51 111 Pn **Pn 15 21 25.4 -1.1**
comp=Z,5.4nm,0.3s,baz=310,slow=15,SNR=40
MDT Sn Sn 15 23 24.5 -11
comp=Z,60nm,0.3s,baz=195,slow=20,SNR=20
MDT LR LR 15 25 18.9
comp=Z,642nm,19.6s,baz=311,slow=34
MDT Midelt 11.51 111 Pn **Pn 15 21 25.4 -1.1**
EBER Berja 11.60 89 P **Pn 15 21 25.7 -2.0**
comp=Z,55nm,0.4s,SNR=11
EBER S Sn 15 23 26.7 -10
comp=Z,261nm,0.5s,SNR=55
EBER Berja 11.60 89 P **Pn 15 21 25.7 -2.0**
comp=Z,55nm,0.4s,SNR=11
EHUE Huescar 11.74 85 P **Pn 15 21 28.4 -1.2**
comp=Z,86nm,0.9s,SNR=7.9
EHUE S Sn 15 23 29.2 -11
comp=Z,122nm,0.6s,SNR=7.9
EHUE Huescar 11.74 85 P **Pn 15 21 28.4 -1.2**
comp=Z,86nm,0.9s,SNR=7.9
EVIA Vianos 11.79 81 P **Pn 15 21 27.1 -3.1**
comp=Z,194nm,0.5s,SNR=33
EVIA S Sn 15 23 27.2 -14
comp=Z,234nm,0.5s,SNR=5.9
EVIA Vianos 11.79 81 P **Pn 15 21 27.1 -3.1**
comp=Z,194nm,0.5s,SNR=33
ELAN Lanestosa 12.02 58 ⇓P **Pn 15 21 32.0 -1.3**
comp=Z,214nm,0.7s,SNR=18
ELAN S Sn 15 23 37.1 -10
comp=Z,129nm,0.7s,SNR=7.9
ELAN Lanestosa 12.02 58 P **Pn 15 21 32.0 -1.3**
comp=Z,214nm,0.7s,SNR=18
ZFT Errachidia 12.09 114 P **Pn 15 21 34.0 -0.5**
ZFT S Sn 15 23 25.0 -24
ZFT Errachidia 12.09 114 P **Pn 15 21 34.0 -0.5**
ZFT *i* S Sn 15 23 25.0 -24
ENIJ Nijar 12.13 88 P **Pn 15 21 32.0 -2.8**
comp=Z,61nm,0.5s,SNR=7.9
ENIJ S Sn 15 23 31.6 -18
comp=Z,46nm,0.4s,SNR=7.9
ENIJ Nijar 12.13 88 P **Pn 15 21 32.0 -2.8**
comp=Z,61nm,0.5s,SNR=7.9
ETOR Torete 12.32 70 P **Pn 15 21 35.0 -2.6**
comp=Z,281nm,1.2s,SNR=57
ETOR S Sn 15 23 43.9 -11
comp=Z,314nm,1.4s,SNR=7.9
ETOR Torete 12.32 70 P **Pn 15 21 35.0 -2.6**
comp=Z,281nm,1.2s,SNR=57
ETOB Tobarra 12.53 81 P Pn 15 21 37.0 -3.4
comp=Z,76nm,0.7s,SNR=17
ETOB S Sn 15 23 46.8 -13
comp=Z,375nm,1.1s,SNR=7.9
ETOB Tobarra 12.53 81 P Pn 15 21 37.0 -3.4
comp=Z,76nm,0.7s,SNR=17
EMUR La Murta 12.80 84 P **Pn 15 21 41.0 -3.1**
comp=Z,74nm,0.7s,SNR=9.2
EMUR S Sn 15 23 53.4 -13
comp=Z,132nm,0.6s,SNR=7.9
EMUR La Murta 12.80 84 P **Pn 15 21 41.0 -3.1**
comp=Z,74nm,0.7s,SNR=9.2
ECHE Chera 13.01 76 P **Pn 15 21 44.4 -2.5**
comp=Z,54nm,0.5s,SNR=15
ECHE S Sn 15 23 58.1 -13
comp=Z,78nm,0.5s,SNR=7.9
ECHE Chera 13.01 76 P **Pn 15 21 44.4 -2.5**
comp=Z,54nm,0.5s,SNR=15
CART Cartagena 13.01 85 P Pn 15 21 43.5 -3.4
CART S Sn 15 23 55.9 -16
CART Cartagena 13.01 85 P Pn 15 21 43.5 -3.4
IUNC Unciti 13.19 62 P **Pn 15 21 47.9 -1.4**
comp=Z,83nm,0.4s,SNR=17
IUNC S Sn 15 24 05.0 -11
comp=Z,114nm,0.4s,SNR=7.9
IUNC Unciti 13.19 62 P **Pn 15 21 47.9 -1.4**
comp=Z,83nm,0.4s,SNR=17
IZUN Zunzarren 13.25 62 P **Pn 15 21 48.8 -1.4**
comp=Z,80nm,0.7s,SNR=23
IZUN S Sn 15 24 05.9 -12

	comp=Z,37nm,0.3s,SNR=7.9						
IZUN	Zunzarren	13.25	62	P	Pn	15 21 48.8	-1.4
	comp=Z,80nm,0.7s,SNR=23						
ELIZ	Elizondo	13.30	60	P	Pn	15 21 49.8	-1.0
	comp=Z,38nm,0.3s,SNR=24						
ELIZ	Elizondo	13.30	60	P	Pn	15 21 49.8	-1.0
	comp=Z,38nm,0.3s,SNR=24						
IPRE	Itoiz	13.31	62	P	Pn	15 21 49.8	-1.1
	comp=Z,17nm,0.4s,SNR=7.9						
IPRE				S	Sn	15 24 10.9	-7.7
	comp=Z,26nm,0.5s,SNR=4.0						
IPRE	Itoiz	13.31	62	P	Pn	15 21 49.8	-1.1
	comp=Z,17nm,0.4s,SNR=7.9						
AFON	Font Roja	13.32	80	P	Pn	15 21 49.3	-1.9
	comp=Z,21nm,0.5s,SNR=6.0						
AFON				S	Sn	15 24 07.5	-12
	comp=Z,41nm,0.4s,SNR=7.9						
AFON	Font Roja	13.32	80	P	Pn	15 21 49.3	-1.9
	comp=Z,21nm,0.5s,SNR=6.0						
IEPA	Eparoz	13.36	62	P	Pn	15 21 51.0	-0.7
	comp=Z,216nm,0.9s,SNR=7.9						
IEPA				S	Sn	15 24 09.4	-11
	comp=Z,80nm,0.5s,SNR=7.9						
IEPA	Eparoz	13.36	62	P	Pn	15 21 51.0	-0.7
	comp=Z,216nm,0.9s,SNR=7.9						
EORO	Oroz-Betelu	13.37	62	P	Pn	15 21 50.4	-1.3
	comp=Z,52nm,0.4s,SNR=34						
EORO				S	Sn	15 24 08.7	-12
	comp=Z,109nm,0.8s,SNR=7.9						
EORO	Oroz-Betelu	13.37	62	P	Pn	15 21 50.4	-1.3
	comp=Z,52nm,0.4s,SNR=34						
IELO	Elcoad	13.40	62	P	Pn	15 21 50.9	-1.3
	comp=Z,189nm,0.8s,SNR=7.9						
IELO				S	Sn	15 24 10.2	-11
	comp=Z,53nm,0.4s,SNR=7.9						
IELO	Elcoad	13.40	62	P	Pn	15 21 50.9	-1.3
	comp=Z,189nm,0.8s,SNR=7.9						
EMOS	Mosqueruela	13.46	73	P	Pn	15 21 50.7	-2.4
	comp=Z,258nm,0.8s,SNR=21						
EMOS				S	Sn	15 24 09.3	-13
	comp=Z,201nm,0.6s,SNR=7.9						
EMOS	Mosqueruela	13.46	73	P	Pn	15 21 50.7	-2.4
	comp=Z,258nm,0.8s,SNR=21						
SJPF	Ste Jean	13.49	61	ePn	Pn	15 21 51.4	-2.0
SJPF				eSn	Sn	15 24 11.1	-12
	comp=Z,62nm,0.4s						
SJPF	Ste Jean	13.49	61	eP	Pn	15 21 51.4	-2.0
SJPF	Ste Jean	13.49	61	ePn	Pn	15 21 51.4	-2.0
SJPF				eSn	Sn	15 24 11.1	-12
SJPF	Ste Jean	13.49	61	P	Pn	15 21 51.4	-2.0
OSSF	Osses	13.51	60	eP	Pn	15 21 52.3	-1.4
OSSF	Osses	13.51	60	eP	Pn	15 21 52.3	-1.4
OSSF	Osses	13.51	60	eP	Pn	15 21 52.3	-1.4
EBEN	Beniarda	13.57	80	P	Pn	15 21 53.8	-0.7
	comp=Z,13nm,0.7s,SNR=7.9						
EBEN				S	Sn	15 24 16.3	-8.7
	comp=Z,144nm,1.6s,SNR=7.9						
EBEN	Beniarda	13.57	80	P	Pn	15 21 53.8	-0.7
	comp=Z,13nm,0.7s,SNR=7.9						
LARF	Larrau	13.63	62	eP	Pn	15 21 54.3	-1.1
LARF	Larrau	13.63	62	eP	Pn	15 21 54.3	-1.1
LARF	Larrau	13.63	62	eP	Pn	15 21 54.3	-1.1
ESAC	San Caprasio	13.67	67	P	Pn	15 21 53.3	-2.6
	comp=Z,153nm,0.5s,SNR=17						
ESAC				S	Sn	15 24 16.9	-11
	comp=Z,152nm,0.3s,SNR=7.9						
ESAC	San Caprasio	13.67	67	P	Pn	15 21 53.3	-2.6
	comp=Z,153nm,0.5s,SNR=17						
ORDF	Ordiarp	13.73	61	eP	Pn	15 21 56.1	-0.5
ORDF	Ordiarp	13.73	61	eP	Pn	15 21 56.1	-0.5
ORDF	Ordiarp	13.73	61	eP	Pn	15 21 56.1	-0.5
ETSF	Etsaut	13.89	63	ePn	Pn	15 21 56.9	-2.1
ETSF				eSn	Sn	15 24 19.1	-14
	comp=Z,81nm,0.6s						
ETSF	Etsaut	13.89	63	eP	Pn	15 21 56.9	-2.1
ETSF	Etsaut	13.89	63	ePn	Pn	15 21 56.9	-2.1
ETSF				eSn	Sn	15 24 19.1	-14
ETSF	Etsaut	13.89	63	P	Pn	15 21 56.9	-2.1
REYF	Montagne du Re	14.06	62	eP	Pn	15 21 59.8	-1.5
REYF	Montagne du Re	14.06	62	eP	Pn	15 21 59.8	-1.5
ERTA	Horta de San J	14.14	71	P	Pn	15 21 59.8	-2.5
	comp=Z,36nm,0.6s,SNR=9.0						
ERTA				S	Sn	15 24 26.3	-13
	comp=Z,149nm,1.0s,SNR=7.9						
VIEF	Viey	14.30	63	eP	Pn	15 22 02.2	-2.4
VIEF	Viey	14.30	63	eP	Pn	15 22 02.2	-2.4
LABF	Labassere	14.38	62	eP	Pn	15 22 03.8	-1.8
LABF	Labassere	14.38	62	eP	Pn	15 22 03.8	-1.8
RESF	Ens	14.51	64	eP	Pn	15 22 05.5	-1.9
RESF	Ens	14.51	64	eP	Pn	15 22 05.5	-1.9
EPF	Esparros	14.56	63	ePn	Pn	15 22 06.2	-1.9
EPF				eSn	Sn	15 24 36.7	-13
	comp=Z,46nm,0.4s						
EPF	Esparros	14.56	63	eP	Pn	15 22 06.2	-1.9
EPF	Esparros	14.56	63	ePn	Pn	15 22 06.2	-1.9
EPF				eSn	Sn	15 24 36.7	-13
EPF	Esparros	14.56	63	ePn	Pn	15 22 06.2	-1.9
QUIF	Quistinic	14.64	41	ePn	Pn	15 22 05.0	-4.1
QUIF				eSn	Sn	15 24 34.5	-16
	comp=Z,202nm,0.6s						
QUIF	Quistinic	14.64	41	eP	Pn	15 22 05.0	-4.1
QUIF	Quistinic	14.64	41	ePn	Pn	15 22 05.0	-4.1
QUIF				eSn	Sn	15 24 34.5	-16
QUIF	Quistinic	14.64	41	ePn	Pn	15 22 05.0	-4.1
EPOB	Poblet	14.75	70	P	Pn	15 22 08.8	-1.9
	comp=Z,16nm,0.5s,SNR=6.4						
EPOB				S	Sn	15 24 41.2	-13
	comp=Z,101nm,1.4s,SNR=7.9						
EIBI	Ibiza	14.79	79	S	Sn	15 24 42.5	-12
	comp=Z,20nm,0.5s,SNR=7.9						
ROSF	Rostrenen	14.86	39	ePn	Pn	15 22 07.3	-4.7
ROSF				eSn	Sn	15 24 39.6	-17
	comp=Z,179nm,0.5s						
ROSF	Rostrenen	14.86	39	eP	Pn	15 22 07.3	-4.7
ROSF	Rostrenen	14.86	39	ePn	Pn	15 22 07.3	-4.7
ROSF				eSn	Sn	15 24 39.6	-17
CSOR	Sort	14.97	66	P	Pn	15 22 11.4	-2.3
	comp=Z,374nm,1.3s,SNR=14						
CSOR				S	Sn	15 24 48.3	-11
	comp=Z,48nm,0.5s,SNR=7.9						
MLS	Moulis	15.08	64	eP	Pn	15 22 16.8	+1.7
MLS	Moulis	15.08	64	eP	Pn	15 22 16.8	+1.7
MLS	Moulis	15.08	64	eP	Pn	15 22 16.8	+1.7
SGMF	Saint Gilles	15.17	41	ePn	Pn	15 22 12.0	-4.2
SGMF	Saint Gilles	15.17	41	eP	Pn	15 22 15.4	-0.8
SGMF				eSn	Sn	15 24 47.6	-16
	comp=Z,173nm,0.5s						
SGMF	Saint Gilles	15.17	41	eP	Pn	15 22 12.0	-4.2
SGMF	Saint Gilles	15.17	41	ePn	Pn	15 22 12.0	-4.2
SGMF				eP	Pn	15 22 15.4	-0.8
SGMF				eSn	Sn	15 24 47.6	-16
SGMF	Saint Gilles	15.17	41	ePn	Pn	15 22 12.0	-4.2
EMIR	Miracle	15.17	68	P	Pn	15 22 13.8	-2.6
	comp=Z,47nm,0.6s,SNR=7.8						
EMIR				S	Sn	15 24 50.9	-13
	comp=Z,36nm,0.5s,SNR=7.9						
LFF	La Frestale	15.46	56	ePn	Pn	15 22 15.7	-4.3
LFF	La Frestale	15.46	56	eP	Pn	15 22 15.7	-4.3
LFF	La Frestale	15.46	56	ePn	Pn	15 22 15.7	-4.3
LFF	La Frestale	15.46	56	ePn	Pn	15 22 15.7	-4.3
CLLI	Llivia	15.60	66	P	Pn	15 22 20.6	-1.5
	comp=Z,58nm,1.0s,SNR=17						
CLLI				S	Sn	15 25 02.8	-12
	comp=Z,88nm,1.1s,SNR=7.9						
MFF	Saint Martin d	15.61	50	ePn	Pn	15 22 18.0	-3.9
MFF				eSn	Sn	15 24 58.2	-16
	comp=Z,98nm,0.7s						
MFF	Saint Martin d	15.61	50	eP	Pn	15 22 18.0	-3.9
MFF	Saint Martin d	15.61	50	ePn	Pn	15 22 18.0	-3.9
MFF				eSn	Sn	15 24 58.2	-16
MFF	Saint Martin d	15.61	50	ePn	Pn	15 22 18.0	-3.9
CARF	Carcanieres	15.75	65	eP	Pn	15 22 22.3	-1.6
CARF	Carcanieres	15.75	65	eP	Pn	15 22 22.3	-1.6
CFON	Fontmartina	15.82	69	P	Pn	15 22 22.1	-2.6
	comp=Z,26nm,0.4s,SNR=14						
CFON				S	Sn	15 25 06.6	-13
	comp=Z,23nm,0.3s,SNR=4.0						
JSA	Saint Aubin	15.96	39	eP	Pn	15 22 24.2	-2.3
JSA				AMB	AMB	15 22 27.7	
	comp=Z,98nm,2.0s						
JSA				e		15 25 03.0	
JSA	Saint Aubin	15.96	39	P	Pn	15 22 24.2	-2.3
JSA				AMB	AMB	15 22 27.7	
	comp=Z,98nm,2.0s						
JSA						15 25 03.0	
DYA	Yadsworthy	16.02	33	eP	Pn	15 22 25.1	-2.1
DYA				AMB	AMB	15 22 29.9	
	comp=Z,106nm,1.3s						
DYA	Yadsworthy	16.02	33	P	Pn	15 22 25.1	-2.1
DYA				AMB	AMB	15 22 29.9	
	comp=Z,106nm,1.3s						
FILF	Fillols	16.05	66	eP	Pn	15 22 25.0	-2.7
FILF	Fillols	16.05	66	eP	Pn	15 22 25.0	-2.7
RJF	Les Rejaudoux	16.10	56	ePn	Pn	15 22 24.4	-3.9
RJF				eSn	Sn	15 25 12.9	-14
	comp=Z,50nm,0.6s						
RJF				eR			
	comp=Z,656nm,22.5s						
RJF	Les Rejaudoux	16.10	56	eP	Pn	15 22 24.4	-3.9
RJF	Les Rejaudoux	16.10	56	ePn	Pn	15 22 24.4	-3.9
RJF				eSn	Sn	15 25 12.9	-14
RJF	Les Rejaudoux	16.10	56	ePn	Pn	15 22 24.4	-3.9
GRR	Gorron	16.15	43	eSn	Sn	15 25 11.1	-17
	comp=Z,138nm,0.5s						
HTL	Hartland	16.21	30	eP	Pn	15 22 27.7	-2.0
HTL				AMB	AMB	15 22 34.7	
	comp=Z,85nm,1.5s						
HTL				e		15 25 10.2	
HTL	Hartland	16.21	30	P	Pn	15 22 27.7	-2.0
HTL				AMB	AMB	15 22 34.7	
	comp=Z,85nm,1.5s						
HTL						15 25 10.2	
CAF	Calviac	16.33	57	eSn	Sn	15 25 18.0	-14
	comp=Z,23nm,0.5s						
HEX	Exmoor	16.55	31	eP	Pn	15 22 32.0	-2.0
HEX	Exmoor	16.55	31	P	Pn	15 22 32.0	-2.0
FLN	La Foliniere	16.57	42	ePn	Pn	15 22 31.3	-3.0
	baz=225						
FLN				eSn	Sn	15 25 24.5	-14
	comp=Z,112nm,0.5s						
FLN				eR			
	comp=Z,509nm,25.5s						
FLN	La Foliniere	16.57	42	eP	Pn	15 22 31.3	-3.0
FLN	La Foliniere	16.57	42	ePn	Pn	15 22 31.3	-3.0
FLN				eSn	Sn	15 25 24.5	-14
FLN	La Foliniere	16.57	42	ePn	Pn	15 22 31.3	-3.0
	baz=225						
LDF	La Druitiere	16.67	43	ePn	Pn	15 22 32.5	-3.1
LDF	La Druitiere	16.67	43	eP	Pn	15 22 32.5	-3.1
LDF	La Druitiere	16.67	43	ePn	Pn	15 22 32.5	-3.1
LDF	La Druitiere	16.67	43	ePn	Pn	15 22 32.5	-3.1
TCF	Toulx Ste Croi	16.93	53	eP	Pn	15 22 35.4	-3.5
TCF	Toulx Ste Croi	16.93	53	eP	Pn	15 22 35.4	-3.5
TCF	Toulx Ste Croi	16.93	53	eP	Pn	15 22 35.4	-3.5
LBL	Lubilhac	17.22	57	eP	Pn	15 22 40.6	-2.0
LBL	Lubilhac	17.22	57	eP	Pn	15 22 40.6	-2.0
LBL	Lubilhac	17.22	57	eP	Pn	15 22 40.6	-2.0
LBL	Lubilhac	17.22	57	eP	Pn	15 22 40.6	-2.0
PYM	Petit Puy Mans	17.24	56	eP	Pn	15 22 39.6	-3.2
PYM	Petit Puy Mans	17.24	56	eP	Pn	15 22 39.6	-3.2
PYM	Petit Puy Mans	17.24	56	eP	Pn	15 22 39.6	-3.2
AGO	Saint Agoulin	17.43	55	eP	Pn	15 22 42.1	-3.0
AGO	Saint Agoulin	17.43	55	eP	Pn	15 22 42.1	-3.0
MCH1	Michaelchurch	17.58	31	eP	Pn	15 22 46.5	-0.4
MCH1				AMB	AMB	15 22 51.3	
	comp=Z,110nm,1.3s						
MCH1				e		15 25 43.4	
MCH1	Michaelchurch	17.58	31	P	Pn	15 22 46.5	-0.4
MCH1				AMB	AMB	15 22 51.3	
	comp=Z,110nm,1.3s						
MCH1						15 25 43.4	
MCH1	Michaelchurch	17.58	31	eP	Pn	15 22 46.5	-0.4
SWN1	Swindon	17.73	34	eP	P	15 22 49.4	-0.1
SWN1				AMB	AMB	15 22 54.2	
	comp=Z,255nm,1.5s						
SWN1				e		15 25 46.2	
SWN1	Swindon	17.73	34	P	P	15 22 49.4	-0.1
SWN1				AMB	AMB	15 22 54.2	
	comp=Z,255nm,1.5s						
SWN1						15 25 46.2	
SWN1	Swindon	17.73	34	eP	P	15 22 49.4	-0.1
WOL	Wolverton	17.85	35	eP	Pn	15 22 49.7	-0.5
WOL				AMB	AMB	15 22 50.8	
	comp=Z,78nm,1.6s						
WOL	Wolverton	17.85	35	P	Pn	15 22 49.7	-0.5
WOL				AMB	AMB	15 22 50.8	
	comp=Z,78nm,1.6s						
WOL	Wolverton	17.85	35	eP	Pn	15 22 49.7	-0.5
AVF	Avril sur Loir	17.85	53	eP	Pn	15 22 47.6	-2.7
AVF	Avril sur Loir	17.85	53	eP	Pn	15 22 47.6	-2.7
AVF	Avril sur Loir	17.85	53	eP	Pn	15 22 47.6	-2.7
AVF	Avril sur Loir	17.85	53	eP	Pn	15 22 47.6	-2.7
YRC	Rhoscolyn	17.98	26	eP	Pn	15 22 51.3	-0.5
YRC	Rhoscolyn	17.98	26	P	Pn	15 22 51.3	-0.5
YRC	Rhoscolyn	17.98	26	eP	Pn	15 22 51.3	-0.5
HLM1	Long Mynd	18.02	30	eP	Pn	15 22 52.2	-0.2
HLM1				AMB	AMB	15 22 56.1	
	comp=Z,103nm,1.1s						
HLM1				e		15 25 54.3	
HLM1	Long Mynd	18.02	30	P	Pn	15 22 52.2	-0.2
HLM1				AMB	AMB	15 22 56.1	
	comp=Z,103nm,1.1s						
HLM1						15 25 54.3	
HLM1	Long Mynd	18.02	30	eP	Pn	15 22 52.2	-0.2
SSW	Stow on the Wo	18.04	32	eP	P	15 22 53.1	+0.2
SSW	Stow on the Wo	18.04	32	P	P	15 22 53.1	+0.2
SSW	Stow on the Wo	18.04	32	eP	P	15 22 53.1	+0.2
SSF	Saint Saulge	18.06	52	eP	Pn	15 22 51.4	-1.4
SSF	Saint Saulge	18.06	52	eP	Pn	15 22 51.4	-1.4
SSF	Saint Saulge	18.06	52	eP	Pn	15 22 51.4	-1.4
SSF	Saint Saulge	18.06	52	eP	Pn	15 22 51.4	-1.4
VIVF	Saint-Julien-l	18.07	60	eP	Pn	15 22 52.3	-0.8
VIVF	Saint-Julien-l	18.07	60	eP	Pn	15 22 52.3	-0.8
VIVF	Saint-Julien-l	18.07	60	eP	Pn	15 22 52.3	-0.8
VIVF	Saint-Julien-l	18.07	60	eP	Pn	15 22 52.3	-0.8
WLF1	Llynfaes	18.08	26	eP	P	15 22 54.5	+1.2
WLF1				AMB	AMB	15 22 56.9	
	comp=Z,83nm,1.0s						
WLF1	Llynfaes	18.08	26	P	P	15 22 54.5	+1.2
WLF1				AMB	AMB	15 22 56.9	
	comp=Z,83nm,1.0s						
WLF1	Llynfaes	18.08	26	eP	P	15 22 54.5	+1.2
SSB	Saint Sauveur	18.11	58	eP	Pn	15 22 52.6	-0.9
SSB	Saint Sauveur	18.11	58	eP	Pn	15 22 52.6	-0.9
SSB				eP	Pn	15 22 52.7	-0.8
SSB	Saint Sauveur	18.11	58	eP	Pn	15 22 52.7	-0.8
SSB	Saint Sauveur	18.11	58	eP	Pn	15 22 52.6	-0.9
FOEL	Foel Wylfa	18.19	28	eP	Pn	15 22 54.0	-0.4
FOEL				AMB	AMB	15 22 58.1	
	comp=Z,75nm,1.1s						
FOEL	Foel Wylfa	18.19	28	P	Pn	15 22 54.0	-0.4
FOEL				AMB	AMB	15 22 58.1	
	comp=Z,75nm,1.1s						
FOEL	Foel Wylfa	18.19	28	eP	Pn	15 22 54.0	-0.4
WME	Myndd Eilian	18.20	26	eP	Pn	15 22 53.5	-0.9
WME	Myndd Eilian	18.20	26	P	Pn	15 22 53.5	-0.9
WME	Myndd Eilian	18.20	26	eP	Pn	15 22 53.5	-0.9
WPM1	Penmaenmawr	18.22	27	eP	P	15 22 55.9	+0.9
WPM1	Penmaenmawr	18.22	27	P	P	15 22 55.9	+0.9
WPM1	Penmaenmawr	18.22	27	eP	P	15 22 55.9	+0.9
SET	Setif	18.29	88	P	P	15 22 58.0	+2.0
SKP1	Kophill	18.32	34	eP	Pn	15 22 55.7	-0.2
SKP1	Kophill	18.32	34	P	Pn	15 22 55.7	-0.2
SKP1	Kophill	18.32	34	eP	Pn	15 22 55.7	-0.2
LOR	Lormes	18.36	52	eP	Pn	15 22 55.0	-1.6
	baz=246						
LOR				eR			
	comp=Z,517nm,19.2s						
LOR	Lormes	18.36	52	eP	Pn	15 22 55.0	-1.6
LOR	Lormes	18.36	52	eP	Pn	15 22 55.0	-1.6
	baz=246						
SMRF	Simiane la Rot	18.49	63	eP	P	15 22 57.5	-0.5
SMRF	Simiane la Rot	18.49	63	eP	P	15 22 57.5	-0.5
SMRF	Simiane la Rot	18.49	63	eP	P	15 22 57.5	-0.5
GRN	Grenoble	18.91	59	eP	Pn	15 23 03.8	+0.5
GRN	Grenoble	18.91	59	eP	Pn	15 23 03.8	+0.5
GRN	Grenoble	18.91	59	eP	Pn	15 23 03.8	+0.5
ORIF	Oris-en-Rattie	18.92	60	eP	P	15 23 03.1	+0.3
ORIF				eR			
	comp=Z,1μm,17.8s						
ORIF	Oris-en-Rattie	18.92	60	eP	P	15 23 03.1	+0.3
ORIF	Oris-en-Rattie	18.92	60	eP	P	15 23 03.1	+0.3
ORIF	Oris-en-Rattie	18.92	60	eP	P	15 23 03.1	+0.3
KBI1	Birley Grange	19.12	30	eP	Pn	15 23 05.5	-0.2
KBI1	Birley Grange	19.12	30	P	Pn	15 23 05.5	-0.2
KBI1	Birley Grange	19.12	30	eP	Pn	15 23 05.5	-0.2
CASM	Ain Smara	19.14	87	P	P	15 23 05.6	+0.3
CASM	Ain Smara	19.14	87	P	P	15 23 05.6	+0.3
GDM	Grand'Maison	19.15	59	eP	Pn	15 23 07.2	+0.9
GDM	Grand'Maison	19.15	59	eP	Pn	15 23 07.2	+0.9
LHO	Holmfirth	19.21	29	eP	P	15 23 04.0	-1.8
LHO	Holmfirth	19.21	29	P	P	15 23 04.0	-1.8
LHO	Holmfirth	19.21	29	eP	P	15 23 04.0	-1.8
CKFL	Kef-Lekhel	19.30	86	P	Pn	15 23 09.5	+1.4
CAEH	'Ain El Ouahch	19.33	85	P	P	15 23 07.9	+0.6
CAEH	'Ain El Ouahch	19.33	85	P	P	15 23 07.9	+0.6
CALN	Calern	19.38	64	eP	Pn	15 23 09.0	0.0
CALN	Calern	19.38	64	eP	Pn	15 23 09.0	0.0
CALN	Calern	19.38	64	eP	Pn	15 23 09.0	0.0
SURF	Saint Ours	19.46	62	eP	Pn	15 23 11.0	+0.9
SURF	Saint Ours	19.46	62	eP	Pn	15 23 11.0	+0.9
SFTF	Sexfontaines	19.47	50	eP	P	15 23 09.1	+0.3
	baz=234						
SFTF	Sexfontaines	19.47	50	eP	P	15 23 09.1	+0.3
SFTF	Sexfontaines	19.47	50	eP	P	15 23 09.1	+0.3
	baz=234						
BNI	Bardonecchia	19.50	60	eP	Pn	15 23 11.6	+1.1
BNI				pmax	pmax		
	comp=Z,77nm,1.4s						
BNI	Bardonecchia	19.50	60	eP	Pn	15 23 11.6	+1.1
	comp=Z,77nm,1.4s						
CABF	La Chapelle	19.55	55	eP	P	15 23 10.1	+0.4
CABF	La Chapelle	19.55	55	eP	P	15 23 10.1	+0.4
CABF	La Chapelle	19.55	55	eP	P	15 23 10.1	+0.4
CABF	La Chapelle	19.55	55	eP	P	15 23 10.1	+0.4
KESW	Keswick, Cumbr	19.58	25	eP	Pn	15 23 10.6	-0.6
KESW				AMB	AMB	15 23 14.3	
	comp=Z,181nm,1.1s						
KESW	Keswick, Cumbr	19.58	25	P	Pn	15 23 10.6	-0.6
KESW				AMB	AMB	15 23 14.3	
	comp=Z,181nm,1.1s						
KESW	Keswick, Cumbr	19.58	25	eP	Pn	15 23 10.6	-0.6
MVIF	Mont Vial	19.59	64	eP	Pn	15 23 11.4	-0.2
MVIF	Mont Vial	19.59	64	eP	Pn	15 23 11.4	-0.2
MVIF	Mont Vial	19.59	64	eP	Pn	15 23 11.4	-0.2
MEZF	Maizieres J'vi	19.61	49	eP	P	15 23 10.7	+0.5
	baz=235						
MEZF	Maizieres J'vi	19.61	49	eP	P	15 23 10.7	+0.5
MEZF	Maizieres J'vi	19.61	49	eP	P	15 23 10.7	+0.5
	baz=235						
TOUF	Mont Tournerai	19.68	63	eP	Pn	15 23 12.3	-0.4
TOUF	Mont Tournerai	19.68	63	eP	Pn	15 23 12.3	-0.4
TOUF	Mont Tournerai	19.68	63	eP	Pn	15 23 12.3	-0.4
REVF	Revere	19.72	64	eP	Pn	15 23 12.6	-0.4
REVF	Revere	19.72	64	eP	Pn	15 23 12.6	-0.4
REVF	Revere	19.72	64	eP	Pn	15 23 12.6	-0.4
AUTN	L'Aution	19.80	63	eP	Pn	15 23 13.5	-0.7
AUTN	L'Aution	19.80	63	eP	Pn	15 23 13.5	-0.7
AUTN	L'Aution	19.80	63	eP	Pn	15 23 13.5	-0.7
AUTN	L'Aution	19.80	63	eP	Pn	15 23 13.5	-0.7
CMAH	Djebel Manchou	19.81	85	P	P	15 23 12.8	+0.2
CMAH	Djebel Manchou	19.81	85	P	P	15 23 12.8	+0.2
BAIF	Baives	19.85	44	eP	Pn	15 23 13.8	-0.6
BAIF	Baives	19.85	44	eP	Pn	15 23 13.8	-0.6
BAIF	Baives	19.85	44	eP	Pn	15 23 13.8	-0.6
BAIF	Baives	19.85	44	eP	Pn	15 23 13.8	-0.6
SAOF	Saorge	19.89	64	eP	Pn	15 23 14.6	-0.5
SAOF	Saorge	19.89	64	eP	Pn	15 23 14.6	-0.5
SAOF	Saorge	19.89	64	eP	Pn	15 23 14.6	-0.5
PAGF	Fort de Pagny	20.04	50	eP	P	15 23 15.3	+0.4
	baz=235						
PAGF	Fort de Pagny	20.04	50	eP	P	15 23 15.3	+0.4
PAGF	Fort de Pagny	20.04	50	eP	P	15 23 15.3	+0.4
	baz=235						
ECK	Cauldkaine Hil	20.06	24	eP	P	15 23 15.8	+0.7
ECK	Cauldkaine Hil	20.06	24	P	P	15 23 15.8	+0.7
ECK	Cauldkaine Hil	20.06	24	eP	P	15 23 15.8	+0.7
THEF	They Montfort	20.06	51	eP	P	15 23 15.4	+0.2
THEF	They Montfort	20.06	51	eP	P	15 23 15.4	+0.2
THEF	They Montfort	20.06	51	eP	P	15 23 15.4	+0.2
THEF	They Montfort	20.06	51	eP	P	15 23 15.4	+0.2
DOU	Dourbes	20.08	45	P	P	15 23 16.2	+0.8
	comp=Z,230nm,1.5s						
XAL	Allendale	20.11	26	eP	P	15 23 15.4	-0.2
XAL	Allendale	20.11	26	P	P	15 23 15.4	-0.2
XAL	Allendale	20.11	26	eP	P	15 23 15.4	-0.2
SNF	Seneffe	20.12	43	P	P	15 23 16.4	+0.6
	comp=Z,135nm,1.7s						
ESK	Eskdalemuir	20.14	24	eP	Pn	15 23 17.1	-0.8
ESK	Eskdalemuir	20.14	24	P	Pn	15 23 17.1	-0.8
ESK	Eskdalemuir	20.14	24	eP	Pn	15 23 17.0	-0.9
ESK				pmax	pmax		
	comp=Z,45nm,0.9s						
ESK	Eskdalemuir	20.14	24	eP	Pn	15 23 17.0	-0.9
	comp=Z,45nm,0.9s						
ESK	Eskdalemuir	20.14	24	Pn	Pn	15 23 17.7	-0.2
	comp=Z,269nm,1.4s,SNR=6.4						
ESK	Eskdalemuir	20.14	24	eP	Pn	15 23 17.0	-0.9
	comp=Z,45nm,0.9s						
EKA	Eskdalemuir Ar	20.17	24	P	Pn	15 23 17.3	-0.9
EKA				S	S	15 26 46.9	-15
EKA	Eskdalemuir Ar	20.17	24	P	Pn	15 23 17.3	-0.9
	comp=Z,56nm,1.0s,baz=207,slow=8.4,SNR=35						
EKA				S	S	15 26 46.9	-15
	comp=Z,4.1nm,0.6s,baz=210,slow=24,SNR=5.3						
EKA	Eskdalemuir Ar	20.17	24	P	Pn	15 23 17.3	-0.9
	comp=Z,56nm,1.0s						
GIVF	Givet	20.21	45	eP	P	15 23 17.6	+0.8
GIVF	Givet	20.21	45	eP	P	15 23 17.6	+0.8
GIVF	Givet	20.21	45	eP	P	15 23 17.6	+0.8
GIVF	Givet	20.21	45	eP	P	15 23 17.6	+0.8
LOMF	Lomont	20.27	54	eP	P	15 23 18.2	+0.7
LOMF	Lomont	20.27	54	eP	P	15 23 18.2	+0.7
LOMF	Lomont	20.27	54	eP	P	15 23 18.2	+0.7
LOMF	Lomont	20.27	54	eP	P	15 23 18.2	+0.7
HINF	Hinteralfeld	20.45	52	eP	P	15 23 19.8	+0.4
HINF	Hinteralfeld	20.45	52	eP	P	15 23 19.8	+0.4
HINF	Hinteralfeld	20.45	52	eP	P	15 23 19.8	+0.4
HINF	Hinteralfeld	20.45	52	eP	P	15 23 19.8	+0.4
EAB	Aberfoyle	20.53	21	eP	Pn	15 23 21.5	-0.9
EAB	Aberfoyle	20.53	21	P	Pn	15 23 21.5	-0.9
EAB	Aberfoyle	20.53	21	eP	Pn	15 23 21.5	-0.9
EBL	Broad Law	20.57	24	eP	P	15 23 21.1	+0.5
EBL	Broad Law	20.57	24	P	P	15 23 21.1	+0.5
EBL	Broad Law	20.57	24	eP	P	15 23 21.1	+0.5
MOF	Molkenrain	20.64	53	eP	P	15 23 22.0	+0.5
MOF	Molkenrain	20.64	53	eP	P	15 23 22.0	+0.5
MOF	Molkenrain	20.64	53	eP	P	15 23 22.0	+0.5
MOF	Molkenrain	20.64	53	eP	P	15 23 22.0	+0.5
BCLA	Clavier	20.64	44	P	P	15 23 21.2	-0.2
	comp=Z,130nm,1.7s						
BBS	Basel-Blauen	20.74	54	eP	P	15 23 23.1	+0.5
BBS	Basel-Blauen	20.74	54	eP	P	15 23 23.1	+0.5
BBS	Basel-Blauen	20.74	54	eP	P	15 23 23.1	+0.5
PGF	Pioggiola	20.75	68	eP	P	15 23 22.5	-0.4
PGF	Pioggiola	20.75	68	eP	P	15 23 22.5	-0.4
PGF	Pioggiola	20.75	68	eP	P	15 23 22.5	-0.4
PGF	Pioggiola	20.75	68	eP	P	15 23 22.5	-0.4
WLF	Walferdange	20.77	47	P	P	15 23 23.2	+0.4
	comp=Z,284nm,1.5s						
WLF	Walferdange	20.77	47	eP	P	15 23 22.9	+0.1
WLF				pmax	pmax		
	comp=Z,456nm,1.3s						
WLF	Walferdange	20.77	47	eP	P	15 23 23.4	+0.6
	comp=Z,112nm,0.9s						
WLF	Walferdange	20.77	47	eP	P	15 23 22.9	+0.1
	comp=Z,456nm,1.3s						
WLF	Walferdange	20.77	47	eP	P	15 23 22.9	+0.1
	comp=Z,456nm,1.3s						
ECH	Echery	20.78	52	eP	P	15 23 23.1	+0.1
ECH				e		15 23 23.4	
ECH				pmax	pmax		
	comp=Z,92nm,1.1s						
ECH	Echery	20.78	52	eP	P	15 23 23.1	+0.1
	comp=Z,92nm,1.1s						
ECH				eP	Pn	15 23 23.4	-2.1
ECH	Echery	20.78	52	eP	P	15 23 23.4	+0.4
ECH	Echery	20.78	52	eP	P	15 23 23.1	+0.1
	comp=Z,92nm,1.1s						
ESY	Stoneypath	20.83	24	eP	P	15 23 24.1	+0.6
ESY	Stoneypath	20.83	24	P	P	15 23 24.1	+0.6
CDF	Champ du Feu	20.93	51	eP	P	15 23 24.7	0.0
CDF	Champ du Feu	20.93	51	eP	P	15 23 24.7	0.0
CDF	Champ du Feu	20.93	51	eP	P	15 23 24.7	0.0
VSL	Villasalto	21.00	77	eP	P	15 23 25.8	+0.3
	comp=Z,48nm,1.0s						
BEBN	Eben Emael	21.03	44	P	P	15 23 25.9	+0.3
	comp=Z,32nm,0.8s						
LIBD	Limburg	21.04	52	eP	P	15 23 26.3	+0.6

LIBD Limburg 21.04 52 eP P 15 23 26.3 +0.6
MEM Membach 21.12 45 P P 15 23 26.4 -0.2
comp=Z,62nm,1.2s
KSB Sheil Bridge 21.14 18 eP P 15 23 28.5 +1.7
KSB Sheil Bridge 21.14 18 P P 15 23 28.5 +1.7
HGN Heimansgroeve 21.16 44 eP P 15 23 27.1 +0.1
comp=Z,169nm,1.2s
HGN eS S 15 27 19.5 -2.3
HGN eL L 15 31 16.3
comp=Z,583nm,16.5s
FELD Feldberg im Sc 21.20 53 eP P 15 23 27.9 +0.3
RUP Ruppelstein 21.31 48 eP P 15 23 28.7 0.0
RUP Ruppelstein 21.31 48 eP P 15 23 28.7 0.0
KAC Achnashellach 21.43 18 eP P 15 23 33.1 +3.3
KAC Achnashellach 21.43 18 P P 15 23 33.1 +3.3
LANF Langenberg 21.47 50 eP P 15 23 30.7 +0.3
LANF Langenberg 21.47 50 eP P 15 23 30.7 +0.3
LANF Langenberg 21.47 50 eP P 15 23 30.7 +0.3
KEST Kesra 21.52 87 eP P 15 23 30.9 -0.2
KEST S S 15 27 27.7 -1.7
KEST Kesra 21.52 87 P P 15 23 30.9 -0.2
comp=Z,62nm,1.0s,baz=224,slow=5.5,SNR=75
KEST S S 15 27 27.7 -1.7
comp=Z,0.8nm,0.9s,baz=278,slow=18,SNR=3.2
KEST Kesra 21.52 87 S S 15 27 27.7 -1.7
BFO Black Forest 21.55 52 eP P 15 23 32.1 +0.7
BFO pmax pmax
comp=Z,50nm,0.8s
BFO Black Forest 21.55 52 eP P 15 23 32.1 +0.7
comp=Z,50nm,0.8s
BFO Black Forest 21.55 52 eP P 15 23 31.9 +0.5
comp=Z,328nm,1.4s
BFO Black Forest 21.55 52 P P 15 23 32.0 +0.7
comp=Z,846nm,1.2s,SNR=50
TUE Stuetta 21.66 57 eP P 15 23 33.9 +1.3
comp=Z,129nm,1.2s
ABH Alteburg 21.68 48 eP P 15 23 32.4 -0.2
SPAK Spaichingen-Ko 21.77 53 eP P 15 23 34.3 +0.6
KTD Kalmit 21.77 49 eP P 15 23 33.8 +0.2
KTD Kalmit 21.77 49 eP P 15 23 33.8 +0.2
VLC Villacollemand 21.94 64 eP P 15 23 36.5 +1.0
MCD Coleburn Disti 22.04 21 eP P 15 23 36.6 +0.2
MCD Coleburn Disti 22.04 21 P P 15 23 36.6 +0.2
DAVOX Davos/Dischmat 22.09 57 P P 15 23 38.4 +1.1
DAVOX Davos/Dischmat 22.09 57 P P 15 23 38.4 +1.1
comp=Z,36nm,0.7s,baz=255,slow=8.8,SNR=47
BUG Bochum--Univer 22.22 44 eP P 15 23 39.1 +0.7
comp=Z,34nm,0.9s
DAVA Damuels 22.23 56⇑iP P 15 23 39.6 +0.9
comp=Z,107nm,1.1s,SNR=20
DAVA Damuels 22.23 56⇑iP P 15 23 39.6 +0.9
comp=Z,107nm,1.1s
DAVA Damuels 22.23 56 P P 15 23 39.6 +0.9
comp=Z,107nm,1.1s,SNR=20
WTSB Winterswijk 22.23 42 eP P 15 23 38.8 +0.3
STU Stuttgart 22.25 51 eP P 15 23 38.2 -0.6
STU pmax pmax
comp=Z,121nm,1.0s
STU Stuttgart 22.25 51 eP P 15 23 40.3 +1.6
comp=Z,49nm,0.9s
STU Stuttgart 22.25 51 eP P 15 23 38.1 -0.6
comp=Z,121nm,1.0s
TOD Tromm 22.31 49 eP P 15 23 38.8 -0.6
TOD Tromm 22.31 49 eP P 15 23 38.8 -0.6
FETA Feichten 22.72 57⇑iP P 15 23 44.6 +0.6
comp=Z,68nm,0.8s,SNR=66
FETA Feichten 22.72 57⇑iP P 15 23 44.6 +0.6
comp=Z,68nm,0.8s
FETA Feichten 22.72 57 P P 15 23 44.6 +0.6
comp=Z,68nm,0.8s,SNR=66
RETA Reutte 22.86 56⇑iP P 15 23 45.7 +0.4
comp=Z,62nm,1.4s,SNR=18
RETA Reutte 22.86 56⇑iP P 15 23 45.7 +0.4
comp=Z,62nm,1.4s
RETA Reutte 22.86 56 P P 15 23 45.7 +0.4
comp=Z,62nm,1.4s,SNR=18
BBTS Babate 22.89 178 P P 15 23 48.1 +2.4
BBTS Babate 22.89 178 P P 15 23 48.1 +2.4
comp=Z,8.5nm,0.6s,baz=333,slow=11,SNR=1.7
BBTS LR LR 15 31 20.7
comp=Z,231nm,19.6s,baz=99,slow=33
IBBN Ibbenburen 22.91 42 eP P 15 23 46.5 +0.8
comp=Z,63nm,0.9s
MOTA Moosalm 23.05 56⇑iP P 15 23 47.6 +0.2
MOTA pmax pmax
comp=Z,26nm,0.6s
MOTA Moosalm 23.05 56⇑iP P 15 23 47.6 +0.2
comp=Z,26nm,0.6s,SNR=16
MOTA Moosalm 23.05 56⇑iP P 15 23 47.6 +0.2
comp=Z,26nm,0.6s
MOTA Moosalm 23.05 56 P P 15 23 47.6 +0.2
comp=Z,26nm,0.6s,SNR=16
WATA Walderalm 23.35 56⇑iP P 15 23 50.6 +0.1
WATA pmax pmax
comp=Z,73nm,0.8s
WATA Walderalm 23.35 56⇑iP P 15 23 50.6 +0.1
comp=Z,73nm,0.8s,SNR=25
WATA Walderalm 23.35 56⇑iP P 15 23 50.6 +0.1
comp=Z,73nm,0.8s
WATA Walderalm 23.35 56 P P 15 23 50.6 +0.1
comp=Z,73nm,0.8s,SNR=25
FUR Furstenfeldbru 23.37 54 eP P 15 23 51.4 +0.9
FUR Furstenfeldbru 23.37 54 eP P 15 23 51.4 +0.9
comp=Z,1μm,1.9s
WTTA Wattenberg 23.38 56⇓iP P 15 23 51.0 +0.2
WTTA pmax pmax
comp=Z,147nm,0.8s
WTTA Wattenberg 23.38 56⇓iP P 15 23 51.0 +0.2
comp=Z,147nm,0.8s,SNR=59
WTTA Wattenberg 23.38 56⇓iP P 15 23 51.0 +0.2
comp=Z,147nm,0.8s
WTTA Wattenberg 23.38 56 P P 15 23 51.0 +0.2
comp=Z,147nm,0.8s,SNR=59
UBBA Unterbreizbach 23.49 47 eP P 15 23 53.2 +1.7
comp=Z,136nm,1.6s
LGHD Ghdames 23.51 101 iP P 15 23 51.7 -0.4
comp=Z,82nm,0.8s,SNR=33
LGHD eS S 15 28 06.1 +0.6
SNR=30
GRFO Grafenberg 23.81 50 eP P 15 23 54.6 -0.1
GRFO pmax pmax
comp=Z,108nm,1.0s
GRFO Grafenberg 23.81 50 eP P 15 23 54.6 -0.1
comp=Z,108nm,1.0s
GRF Grafenberg Arr 23.81 50 eP P 15 23 54.8 0.0
GRF pmax pmax
comp=Z,53nm,0.9s
GRF MLR MLR
comp=Z,200nm,20.7s
GRF Grafenberg Arr 23.81 50 eP P 15 23 54.8 0.0
comp=Z,53nm,0.9s
GRF eL L 15 31 24.2
comp=Z,183nm,20.7s
ABTA Abfaltersbach 23.85 58⇓iP P 15 23 54.5 -0.7
comp=Z,79nm,1.2s,SNR=29
ABTA Abfaltersbach 23.85 58⇓iP P 15 23 54.5 -0.7
comp=Z,79nm,1.2s
ABTA Abfaltersbach 23.85 58 P P 15 23 54.5 -0.7
comp=Z,79nm,1.2s,SNR=29
AQU L'Aquila 24.00 69 eP P 15 23 57.8 +1.2
comp=Z,135nm,0.9s
CLZ Clausthal 24.13 45 eP P 15 23 58.9 +1.1
CLZ pmax pmax
comp=Z,22nm,0.9s
CLZ Clausthal 24.13 45 eP P 15 23 58.9 +1.1
comp=Z,22nm,0.9s
ALAS Alassa 24.13 93 iP P 15 23 58.7 +0.8
comp=Z,154nm,1.3s,SNR=28
ALAS eS S 15 28 16.0 +0.7
SNR=29
RJOB Jochberg 24.25 56 eP P 15 23 59.3 +0.3
comp=Z,116nm,0.8s
NRDL Niedersach Rie 24.27 43 eP P 15 24 00.3 +1.4
comp=Z,49nm,0.9s
MOX Moxa 24.38 48 eP P 15 24 00.9 +0.9
MOX pmax pmax
comp=Z,48nm,0.8s
MOX MLR MLR
comp=Z,400nm,18.2s
MOX Moxa 24.38 48 eP P 15 24 00.9 +0.9
comp=Z,48nm,0.8s
MOX eL L 15 33 29.6
comp=Z,410nm,18.2s
ROTZ Rotzenmuhle 24.44 51 eP P 15 24 01.4 +0.8
comp=Z,33nm,0.9s
KBA Koelnbreinsper 24.47 58⇓iP P 15 24 00.6 -0.5
KBA pmax pmax
comp=Z,50nm,0.6s
KBA Koelnbreinsper 24.47 58⇓iP P 15 24 00.6 -0.5
comp=Z,50nm,0.7s,SNR=38
KBA Koelnbreinsper 24.47 58⇓iP P 15 24 00.6 -0.5
comp=Z,50nm,0.6s
KBA Koelnbreinsper 24.47 58 P P 15 24 00.6 -0.5
comp=Z,50nm,0.7s,SNR=38
TRI Trieste 24.53 61 eP P 15 24 00.7 -0.7
TRI pmax pmax
comp=Z,55nm,0.8s
TRI Trieste 24.53 61 eP P 15 24 00.7 -0.7
comp=Z,55nm,0.8s
CADS Cadrg 24.59 60 iP P 15 24 01.3 -0.7
MYKA Terra Mystica 24.59 59⇑iP P 15 24 01.6 -0.5
comp=Z,72nm,0.9s
MYKA Terra Mystica 24.59 59⇑iP P 15 24 01.6 -0.5
comp=Z,72nm,0.9s
MYKA Terra Mystica 24.59 59 P P 15 24 01.6 -0.5
comp=Z,72nm,0.9s
TAM Tamanrasset 24.64 120 eP P 15 24 04.1 +1.3
TAM pmax pmax
comp=Z,30nm,1.3s
TAM Tamanrasset 24.64 120 eP P 15 24 04.1 +1.3
comp=Z,30nm,1.3s
VOY Vojsko 24.66 60 eP P 15 24 01.9 -0.9
WET Wettzell 24.67 53 eP P 15 24 02.4 -0.3
WET pmax pmax
comp=Z,72nm,1.2s
WET Wettzell 24.67 53 eP P 15 24 02.4 -0.3
comp=Z,72nm,1.2s
NKC Novy Kostel 24.73 50 eP P 15 24 03.6 +0.3
NKC eS S 15 28 30.3 +5.5
NKC AMS AMS 15 34 10.0
comp=Z,500nm,16.7s
TANN Tannenbergstha 24.80 49 eP P 15 24 04.6 +0.6
comp=Z,21nm,0.8s
BSEG Bad Segeberg 25.06 41 eP P 15 24 07.4 +1.3
BSEG pmax pmax
comp=Z,170nm,1.2s
BSEG Bad Segeberg 25.06 41 eP P 15 24 07.4 +1.3
comp=Z,170nm,1.2s
LJU Ljubljana 25.10 60 iP P 15 24 06.7 0.0
KHC Kasperske Hory 25.11 53 eP P 15 24 06.3 -0.4
KHC pmax pmax
comp=Z,28nm,0.9s
KHC Kasperske Hory 25.11 53 eP P 15 24 06.3 -0.4
comp=Z,28nm,0.9s
KHC Kasperske Hory 25.11 53 eP P 15 24 06.6 -0.1
KHC ex x 15 25 10.0
KHC eS S 15 28 31.1 +0.3
KHC AMS AMS 15 37 40.0
comp=Z,500nm,14.7s
KHC Kasperske Hory 25.11 53 P P 15 24 06.6 -0.1
KHC S S 15 28 31.1 +0.3
GEC2 GERESS Array S 25.11 54 eP P 15 24 07.3 +0.5
GEC2 pmax pmax
comp=Z,75nm,1.0s
GEC2 GERESS Array S 25.11 54 eP P 15 24 07.3 +0.5
comp=Z,75nm,1.0s
GERES GERESS Array B 25.11 54 P P 15 24 07.0 +0.2
GERES GERESS Array B 25.11 54 P P 15 24 07.0 +0.2
comp=Z,44nm,0.8s,baz=260,slow=8.0,SNR=134
OBKA Obir 25.19 59⇑iP P 15 24 07.1 -0.4
comp=Z,108nm,0.8s,SNR=52
OBKA Obir 25.19 59⇑iP P 15 24 07.1 -0.4
comp=Z,108nm,0.8s
OBKA Obir 25.19 59 P P 15 24 07.1 -0.4
comp=Z,108nm,0.8s,SNR=52
MOA Molln 25.24 56⇑iP P 15 24 07.2 -0.7
comp=Z,164nm,0.8s,SNR=99
MOA Molln 25.24 56⇑iP P 15 24 07.2 -0.7
comp=Z,164nm,0.8s
MOA Molln 25.24 56 P P 15 24 07.2 -0.7
comp=Z,164nm,0.8s,SNR=99
PDKS Podkum 25.43 60 iP P 15 24 09.7 +0.1
CLL Collm 25.43 48⇑iP P 15 24 09.8 +0.3
CLL eS S 15 28 38.0 +2.2
CLL pmax pmax
comp=Z,78nm,1.2s
CLL Collm 25.43 48 eP P 15 24 10.0 +0.5
comp=Z,32nm,1.0s
CLL Collm 25.43 48⇑iP P 15 24 09.8 +0.3
comp=Z,78nm,1.2s
CLL eS S 15 28 38.0 +2.2
BOJS Bojanci 25.54 62 iP P 15 24 10.7 +0.1
SOKA Soboth 25.54 59⇓iP P 15 24 09.8 -0.9
comp=Z,48nm,1.0s
SOKA Soboth 25.54 59⇓iP P 15 24 09.8 -0.9
comp=Z,48nm,1.0s
SOKA Soboth 25.54 59 P P 15 24 09.8 -0.9
comp=Z,48nm,1.0s
GHAR Gharyan 25.55 93 iP P 15 24 12.4 +1.5
comp=Z,97nm,1.8s,SNR=28
GHAR eS S 15 28 40.8 +2.7
SNR=29
PERS Pernice 25.59 59 iP P 15 24 10.2 -1.0
BRG Berggiesshubel 25.84 49 iP P 15 24 13.6 +0.3
comp=Z,41nm,0.9s
BRG e 15 31 04.1
comp=Z,2.0nm,0.8s
BRG comp=N,514nm,13.0s
BRG comp=E,340nm,15.5s
BRG comp=Z,369nm,14.3s
BRG Berggiesshubel 25.84 49 iP P 15 24 13.6 +0.3
BRG pmax pmax
comp=Z,41nm,0.9s
BRG MLR MLR
comp=N,514nm,13.0s
BRG MLR MLR
comp=E,340nm,15.5s
BRG MLR MLR
comp=Z,369nm,14.3s
BRG Berggiesshubel 25.84 49 eP P 15 24 13.9 +0.6
comp=Z,24nm,0.8s
MUD Monsted U'grnd 25.86 35⇑iP P 15 24 16.0 +2.7
comp=Z,46nm,0.7s
CUC Castrocucco 25.91 74 eP P 15 24 14.0 -0.1
comp=Z,28nm,0.9s
PRU Pruhonice 25.95 51 eP P 15 24 14.5 +0.3
PRU eS S 15 28 45.2 +1.2
PRU AMS AMS 15 39 00.0
comp=Z,300nm,15.4s
ARSA Arzberg 25.97 58⇑iP P 15 24 13.3 -1.2
comp=Z,24nm,1.3s,SNR=11
ARSA Arzberg 25.97 58⇑iP P 15 24 13.3 -1.2
comp=Z,24nm,1.3s
ARSA Arzberg 25.97 58 P P 15 24 13.3 -1.2
comp=Z,24nm,1.3s,SNR=11
PVCC Panska Ves 26.12 50 eP P 15 24 16.3 +0.5
PVCC AMS AMS 15 35 00.0
comp=Z,600nm,16.0s
CEL Celeste 26.19 78 eP P 15 24 15.2 -1.4
comp=Z,18nm,0.7s
RUE Ruedersdorf 26.31 46 eP P 15 24 18.4 +1.0
comp=Z,54nm,0.8s
CONA Conrad Observa 26.31 56⇓iP P 15 24 16.9 -0.8
comp=Z,15nm,0.9s,SNR=16
CONA Conrad Observa 26.31 56⇓iP P 15 24 16.9 -0.8
comp=Z,15nm,0.9s
CONA Conrad Observa 26.31 56 P P 15 24 16.9 -0.8
comp=Z,15nm,0.9s,SNR=16
KOGS Kog 26.34 60 iP P 15 24 17.4 -0.5
TREC Trest 26.36 53 eP P 15 24 17.7 -0.3
TREC eS S 15 28 57.2 +6.6
TREC MLR MLR
comp=Z,500nm,18.6s
TREC Trest 26.36 53 eP P 15 24 17.7 -0.3
TREC ex x 15 24 30.3
TREC eS S 15 28 57.2 +6.6
TREC AMS AMS 15 35 30.0
comp=Z,500nm,18.6s
TREC Trest 26.36 53 P P 15 24 17.7 -0.3
TIP Timpagrande 26.73 76 eP P 15 24 20.0 -1.6
comp=Z,90nm,1.3s
UPC Upice 27.00 51 eP P 15 24 24.6 +0.9
VRAC Vranov 27.07 54 P P 15 24 24.5 +0.1
VRAC Vranov 27.07 54 iP P 15 24 24.9 +0.5
VRAC Vranov 27.07 54 P P 15 24 24.5 +0.1
comp=Z,48nm,1.0s,baz=259,slow=10,SNR=16
VRAC Vranov 27.07 54 iP P 15 24 24.9 +0.5
DPC Dobruska-Polom 27.14 51 eP P 15 24 25.2 +0.1
DPC epP pP 15 24 36.0 +6.5
DPC AMS AMS 15 36 50.0
comp=Z,400nm,15.2s
BORG Borgarnes 27.25 356 LR LR 15 32 24.0
comp=Z,306nm,19.5s,baz=16,slow=30
KSP Ksiaz 27.26 50⇑eP P 15 24 26.6 +0.5
KSP eS S 15 29 07.0 +2.3
KSP Ksiaz 27.26 50 eP P 15 24 26.7 +0.6
LSHF Shwairf 27.29 97 iP P 15 24 27.0 +0.4
comp=Z,51nm,0.3s,SNR=28
SMOL Smolenice 27.45 55 eP P 15 24 28.3 +0.5
MORC Moravsky Berou 27.77 53 P P 15 24 31.2 +0.4
MORC Moravsky Berou 27.77 53 eP P 15 24 30.4 -0.4
comp=Z,16nm,1.0s
MORC Moravsky Berou 27.77 53⇓iP P 15 24 31.0 +0.2
MORC Moravsky Berou 27.77 53 eP P 15 24 30.5 -0.3
PKSM Moragy 27.96 61 ⇓P P 15 24 32.6 +0.1
PKSM Moragy 27.96 61⇓iP P 15 24 32.5 +0.1
PKSM Moragy 27.96 61⇑e P 15 24 32.5 +0.1
PKSM Moragy 27.96 61⇓iP P 15 24 32.5 +0.1
OKC Ostrava-Krasne 28.17 53 eP P 15 24 34.1 -0.1
OKC eS S 15 29 22.3 +3.3
OKC AMS AMS 15 39 20.0
comp=Z,300nm,15.1s
BUD Budapest 28.36 58⇓e P 15 24 36.3 +0.4
VYHS Vyhne 28.37 56 eP P 15 24 35.2 -0.8
GKP Gorka Klasztor 28.55 46 eP P 15 24 39.1 +1.6
LJFR Jufra 28.90 97 iP P 15 24 41.3 +0.3
comp=Z,43nm,1.0s,SNR=28
PSZ Piszkesteto 28.99 57 P P 15 24 42.3 +0.6
PSZ Piszkesteto 28.99 57 eP P 15 24 41.8 +0.2
comp=Z,46nm,1.4s
PSZ Piszkesteto 28.99 57⇓iP P 15 24 42.2 +0.6
PSZ Piszkesteto 28.99 57⇓e P 15 24 42.4 +0.7
PSZ Piszkesteto 28.99 57⇓iP P 15 24 42.2 +0.6
OJC Ojcow 29.29 53 eP P 15 24 45.2 +1.0
OJC Ojcow 29.29 53 eP P 15 24 45.2 +1.0
LUMB Murzuk 29.48 103 iP P 15 24 44.7 -1.4
comp=Z,29nm,0.3s,SNR=28
NB2 NORSAR Subarra 29.50 28 P P 15 24 46.3 +0.2
comp=Z,6.7nm,0.8s,baz=230,slow=9.3
NB2 NORSAR Subarra 29.50 28 P P 15 24 46.3 +0.2
comp=Z,6.7nm,0.8s,SNR=3.3
NOA NORSAR Array B 29.50 28 P P 15 24 46.2 +0.2
NOA NORSAR Array B 29.50 28 P P 15 24 46.2 +0.2
comp=Z,5.7nm,0.8s,baz=231,slow=8.9,SNR=12
NOA LR LR 15 36 05.0
comp=Z,246nm,19.0s,baz=255,slow=35
TOA0 Torodi Ar. Sit 29.75 140 eP P 15 24 48.0 -0.6
TORD Torodi Ar. Bea 29.75 140 P P 15 24 48.8 +0.3
TORD Torodi Ar. Bea 29.75 140 P P 15 24 48.8 +0.3
comp=Z,4.0nm,0.8s,baz=318,slow=11,SNR=27
TORD LR LR 15 36 53.3
comp=Z,1μm,18.0s,baz=325,slow=37
HFS Hagfors 29.93 31 P P 15 24 49.8 0.0
HFS Hagfors 29.93 31 P P 15 24 49.8 0.0
comp=Z,5.0nm,0.6s,baz=217,slow=7.0,SNR=22
SKO Skopje 29.98 69 eP P 15 24 51.2 +0.8
BZS Buzias 30.00 62 ⇓P P 15 24 51.3 +0.7
BZS Buzias 30.00 62 ⇓iP P 15 24 51.3 +0.7
BZS Buzias 30.00 62 ⇓iP P 15 24 51.3 +0.7
CRVS Cervenica-Dubn 30.15 56 eP P 15 24 52.1 +0.3
BOLS Boljevac 30.25 66⇑iP P 15 24 51.4 -1.4
UZH Uzhgorod 30.66 56 eP P 15 24 56.2 -0.1
KOLS Kolonicke sedl 30.68 56 eP P 15 24 56.8 +0.2
TRPA Tarpa 30.78 57⇓eP P 15 24 57.9 +0.6
DRGR 30.81 60 ⇓P P 15 24 58.3 +0.6
DRGR 30.81 60 ⇓iP P 15 24 58.3 +0.6
DRGR 30.81 60 ⇓iP P 15 24 58.3 +0.6
GZR Gura Zlata 30.82 63 ⇓P P 15 24 58.0 +0.2
GZR Gura Zlata 30.82 63 ⇓iP P 15 24 58.0 +0.2
GZR Gura Zlata 30.82 63 ⇓iP P 15 24 58.0 +0.2
VAY Valandovo 30.89 71 eP P 15 24 58.6 +0.2
KWP Kalwaria Pacla 31.05 54 eP P 15 25 01.0 +1.2
KWP pmax pmax
comp=Z,11nm,0.9s
KWP Kalwaria Pacla 31.05 54 eP P 15 25 01.0 +1.2
comp=Z,11nm,0.9s
KWP Kalwaria Pacla 31.05 54⇓iP P 15 25 00.9 +1.2
KWP Kalwaria Pacla 31.05 54⇓iP P 15 25 00.9 +1.2
VTS Vitosha 31.24 68 ⇓P P 15 25 02.4 +0.7
VTS Vitosha 31.24 68 ⇓iP P 15 25 02.4 +0.7
VTS Vitosha 31.24 68 ⇓iP P 15 25 02.4 +0.7
LVV L'vov 31.93 54 eP P 15 25 07.8 +0.3
ARR Arges 32.13 63⇓iP P 15 25 10.1 +0.7
ARR Arges 32.13 63⇓iP P 15 25 10.1 +0.7
SUW Suwalki 32.15 46 eP P 15 25 09.5 +0.2
SUW Suwalki 32.15 46 eP P 15 25 09.5 +0.2
comp=Z,320nm,1.0s
SUW Suwalki 32.15 46 eP P 15 25 09.6 +0.2
SUW Suwalki 32.15 46 eP P 15 25 09.7 +0.3
VOIR 32.42 62 ⇑P P 15 25 13.0 +1.1
VOIR 32.42 62 ⇑iP P 15 25 13.0 +1.1
VOIR 32.42 62 ⇑iP P 15 25 13.0 +1.1
BUR08 Bucovina Ar. S 32.54 58 eP P 15 25 12.8 -0.2
DBIC Dimbokro 32.87 157 eP P 15 25 16.4 +0.5
comp=Z,27nm,1.0s
DBIC P P 15 25 16.6 +0.6
DBIC Dimbokro 32.87 157 P P 15 25 16.6 +0.6
comp=Z,19nm,0.9s,baz=325,slow=9.8,SNR=25
DBIC LR LR 15 38 29.3
comp=Z,476nm,18.2s,baz=323,slow=36
TESR 33.51 60⇑iP P 15 25 21.6 +0.2
TESR 33.51 60⇑iP P 15 25 21.6 +0.2
PLOR Plostina 33.53 62 ⇓P P 15 25 22.0 +0.4
PLOR Plostina 33.53 62 ⇓iP P 15 25 22.0 +0.4
PLOR Plostina 33.53 62 ⇓iP P 15 25 22.0 +0.4
VRI Vrincioaia 33.58 62 ⇓P P 15 25 22.2 +0.2
VRI Vrincioaia 33.58 62 ⇓iP P 15 25 22.2 +0.2
VRI Vrincioaia 33.58 62 ⇓iP P 15 25 22.2 +0.2
APE Apeiranthos 33.92 78 ⇓P P 15 25 26.0 +0.9
APE Apeiranthos 33.92 78 ⇓iP P 15 25 26.0 +0.9
APE Apeiranthos 33.92 78 ⇓iP P 15 25 26.0 +0.9
ISAL Salakas 34.17 44 eP P 15 25 27.4 +0.4
ISAL AMB AMB 15 25 29.2
comp=Z,28nm,1.0s
IIGN Ignalina 34.18 45 eP P 15 25 27.5 +0.5
IIGN AMB AMB 15 25 29.4
comp=Z,31nm,1.2s
IZAR Zarasai 34.28 44 eP P 15 25 28.4 +0.5
IZAR AMB AMB 15 25 30.2
comp=Z,40nm,1.1s
NACGM Naroch 34.40 45 e P 15 25 27.0 -1.9
CFR Carcaliu 34.60 63 ⇑P P 15 25 30.6 -0.2
CFR Carcaliu 34.60 63⇑iP P 15 25 30.6 -0.2
CFR Carcaliu 34.60 63⇑iP P 15 25 30.6 -0.2
TIRR Tirgusor 34.86 64 ⇑P P 15 25 32.8 -0.2
TIRR Tirgusor 34.86 64⇑iP P 15 25 32.8 -0.2
TIRR Tirgusor 34.86 64⇑iP P 15 25 32.8 -0.2
SFJD Kangerlussuaq 34.90 338 eP P 15 25 32.1 -1.0
comp=Z,23nm,0.8s
SFJD P P 15 25 32.4 -0.7
SFJD Kangerlussuaq 34.90 338 iP P 15 25 32.5 -0.6
comp=Z,15nm,0.8s
SFJD Kangerlussuaq 34.90 338 P P 15 25 32.4 -0.7
comp=Z,15nm,0.8s,baz=133,slow=7.9,SNR=8.2
SFJD Kangerlussuaq 34.90 338 iP P 15 25 32.6 -0.6
comp=Z,15nm,0.8s,SNR=28
TLCR 35.08 63 ⇑P P 15 25 34.6 -0.4
TLCR 35.08 63⇑iP P 15 25 34.6 -0.4
TLCR 35.08 63⇑iP P 15 25 34.6 -0.4
AK02 Malin Array Si 35.31 53 eP P 15 25 36.7 -0.1
KIEV Kiev 35.31 53 eP P 15 25 36.6 -0.3
KIEV pmax pmax
comp=Z,83nm,0.9s
KIEV Kiev 35.31 53 eP P 15 25 36.5 -0.3
comp=Z,83nm,0.9s
AK01 Malin Array Si 35.31 53 eP P 15 25 36.6 -0.3
AKASG Malin Array Be 35.32 53 P P 15 25 36.9 -0.1
AKASG pmax pmax
comp=Z,34nm,0.8s
AKASG Malin Array Be 35.32 53 P P 15 25 36.9 -0.1
AKASG Malin Array Be 35.32 53 P P 15 25 36.9 -0.1
comp=Z,34nm,0.8s,baz=263,slow=8.3,SNR=17
FINES FINESS Array B 35.90 34 P P 15 25 41.8 0.0
FINES FINESS Array B 35.90 34 P P 15 25 41.8 0.0
comp=Z,5.7nm,0.5s,baz=252,slow=7.0,SNR=59
FINES LR LR 15 40 08.4
comp=Z,520nm,18.5s,baz=90,slow=36
FIA1 FINESS Array S 35.91 34 eP P 15 25 41.6 -0.3
KAF Kangasniemi 36.25 33 eP P 15 25 43.2 -1.6
KAF pmax pmax
comp=Z,7.0nm,0.5s
KAF Kangasniemi 36.25 33 ep P 15 25 43.2 -1.6

SCHQ **Schefferville** 37.37 314 eP P 15 25 53.6 -0.9
comp=Z,13nm,0.6s
SCHQ **Schefferville** 37.37 314 P P 15 25 53.6 -0.9
comp=Z,15nm,0.7s,baz=96,slow=10,SNR=24
JOF **Joensuu** 38.71 33 eP P 15 26 04.6 -1.0
JOF pmax pmax
comp=Z,7.0nm,0.6s
JOF **Joensuu** 38.71 33 ep P 15 26 04.6 -1.0
comp=Z,7.4nm,0.6s
JOF **Joensuu** 38.71 33 eP P 15 26 04.6 -1.0
comp=Z,7.4nm,0.6s
SIM **Simferopol'** 38.84 62 eP P 15 26 04.0 -3.0
SIM eS S 15 31 58.0 -6.3
SIM MLR MLR
comp=Z,200nm,13.0s
ARCES **ARCESS Array B** 39.32 22 P P 15 26 10.2 -0.4
ARCES **ARCESS Array B** 39.32 22 P P 15 26 10.2 -0.4
comp=Z,4.5nm,0.5s,baz=230,slow=8.1,SNR=33
ARCES LR LR 15 40 10.7
comp=Z,216nm,20.8s,baz=65,slow=33
ARE0 **ARCESS Array S** 39.32 22 eP P 15 26 10.1 -0.6
BR131 **Keskin Array S** 39.47 71 eP P 15 26 12.1 -0.4
comp=Z,5.4nm,0.8s
BRTR **Keskin Array B** 39.47 71 P P 15 26 13.0 +0.5
BRTR **Keskin Array B** 39.47 71 P P 15 26 13.0 +0.5
comp=Z,7.2nm,0.8s,baz=267,slow=6.6,SNR=35
OBN **Obninsk** 40.01 46 α iP P 15 26 16.7 +0.1
OBN e*PP pP 15 26 19.3 -1.7
OBN *SP sP 15 26 21.0 -1.8
OBN 15 27 54.0
OBN eS S 15 32 18.6 -2.9
OBN e 15 35 42.8
OBN pmax pmax
comp=Z,99nm,1.7s
OBN MLR MLR
comp=Z,200nm,14.0s
OBN **Obninsk** 40.01 46 eP P 15 26 16.6 +0.1
comp=Z,103nm,1.4s
MOS **Moscow** 40.65 45 eP P 15 26 20.4 -1.4
MOS e 15 27 58.9
MOS pmax pmax
comp=Z,200nm,1.7s
MOS pmax pmax
comp=Z,146nm,1.6s
ANN **Anapa** 41.20 62 eP P 15 26 24.1 -2.4
ANN eS S 15 32 37.5 -1.9
ANN pmax pmax
comp=Z,53nm,2.0s
VSR **Storozhevoye** 41.60 52 eP P 15 26 30.0 +0.2
VSR pmax pmax
comp=E,50nm,1.1s
VSR pmax pmax
comp=Z,40nm,1.1s
VSR pmax pmax
comp=N,8.0nm,1.2s
VORD **Divnogorie** 41.70 53 eP P 15 26 30.8 +0.3
VORD pmax pmax
comp=Z,30nm,0.9s
VORD pmax pmax
comp=N,10.0nm,1.0s
VORD pmax pmax
comp=E,70nm,1.1s
TMCR **Tamitsa** 41.94 33 eP P 15 26 26.2 -6.1
TMCR pmax pmax
comp=Z,57nm,1.2s
KLMR **Klimovskoe** 42.08 38 eP P 15 26 32.5 -1.0
KLMR pmax pmax
comp=Z,48nm,0.9s
KLMR MLR MLR
comp=Z,390nm,17.0s
SOC **Sochi** 43.04 63 eP P 15 26 41.4 -0.2
SOC eS S 15 33 06.6 -0.1
SOC pmax pmax
comp=Z,46nm,0.9s
SOC MLR MLR
comp=Z,108nm,14.0s
VRHR **Novokhopersk** 43.16 52 eP P 15 26 42.0 -0.4
VRHR pmax pmax
comp=Z,40nm,1.3s
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,1.5s
MALT **Malatya** 43.44 71 eP P 15 26 45.0 0.0
MALT pmax pmax
comp=Z,20nm,1.1s
MALT **Malatya** 43.44 71 eP P 15 26 45.0 0.0
comp=Z,20nm,1.1s
MALT **Malatya** 43.44 71 $\Downarrow$ iP P 15 26 46.2 +1.2
MALT **Malatya** 43.44 71 $\Downarrow$ iP P 15 26 46.2 +1.2
KIV **Kislovodsk** 45.06 62 eP P 15 26 58.1 +0.2
KIV eS S 15 33 38.6 +2.3
KIV pmax pmax
comp=Z,10.0nm,1.0s
KIV MLR MLR
comp=Z,89nm,17.0s
KBZ **Khabaz** 45.26 62 P P 15 26 59.9 +0.5
KBZ pmax pmax
comp=Z,17nm,1.0s
KBZ **Khabaz** 45.26 62 P P 15 26 59.9 +0.5
KBZ **Khabaz** 45.26 62 P P 15 26 59.9 +0.5
comp=Z,16nm,1.0s,baz=285,slow=8.0,SNR=16
ONI **Oni** 45.94 64 P P 15 27 03.9 -0.9
AKH **Akhalkalaki** 46.29 65 P P 15 27 08.3 +0.5
AKH **Akhalkalaki** 46.29 65 P P 15 27 08.3 +0.5
SJG **San Juan** 46.70 259 P P 15 27 11.2 +0.2
SJG **San Juan** 46.70 259 P P 15 27 11.2 +0.2
comp=Z,6.4nm,0.4s,baz=18,slow=16,SNR=2.0
ALE **Alert** 47.43 353 P P 15 27 15.9 0.0
comp=Z,62nm,0.7s,SNR=5.1
MAK **Makhachkala** 48.70 62 eP P 15 27 20.8 -5.4
MAK e 15 29 22.3
MAK eS S 15 34 21.7 -6.5
MAK eSS SS 15 37 52.6 -5.6
MAK pmax pmax
comp=Z,201nm,1.3s
MAK MLR MLR
comp=Z,200nm,16.0s
SDDR **Presa de Saban** 50.25 264 eP P 15 27 38.8 +0.4
comp=Z,17nm,0.9s
SDDR e 15 27 45.7
SDDR **Presa de Saban** 50.25 264 eP P 15 27 38.8 +0.4
comp=Z,17nm,0.9s
KMSC **Kings Mountain** 50.62 288 $\Downarrow$ P P 15 27 40.7 -0.4
baz=50
SOKR **Solikamsk** 50.70 39 d iP P 15 27 42.0 +0.8
SOKR S S 15 34 55.9 +0.3
SOKR pmax pmax
comp=Z,20nm,0.7s
SOKR MLR MLR
comp=Z,330nm,21.0s
SOKR **Solikamsk** 50.70 39 i P P 15 27 42.0 +0.8
comp=Z,20nm,0.7s
RES **Resolute Bay** 50.81 340 eP P 15 27 41.2 -0.7
comp=Z,8.3nm,0.9s
RES **Resolute Bay** 50.81 340 eP P 15 27 41.2 -0.7
comp=Z,8.3nm,0.9s
ARU **Arti** 52.23 43 eP P 15 27 52.9 +0.2
ARU pmax pmax
comp=Z,36nm,1.1s
ARU **Arti** 52.23 43 eP P 15 27 52.9 +0.2
comp=Z,36nm,1.1s
ARU **Arti** 52.23 43 P P 15 27 53.7 +1.0
comp=Z,142nm,0.8s,SNR=11
ARU **Arti** 52.23 43 eP P 15 27 52.9 +0.2
comp=Z,36nm,1.1s
SFIN **Scholer Farm** 52.92 296 $\Downarrow$ P P 15 27 57.1 -1.0
baz=53
WCI **Wyandotte Cave** 53.13 293 eP P 15 27 59.6 -0.2
WCI pmax pmax
comp=Z,14nm,0.8s
WCI **Wyandotte Cave** 53.13 293 eP P 15 27 59.5 -0.2
comp=Z,14nm,0.8s
WCI **Wyandotte Cave** 53.13 293 eP P 15 27 59.6 -0.2
comp=Z,14nm,0.8s
SVE **Sverdlovsk** 53.25 42 $\Uparrow$ iP P 15 28 01.5 +1.2
SVE pmax pmax
comp=Z,33nm,1.1s
SVE **Sverdlovsk** 53.25 42 i P P 15 28 01.5 +1.2
comp=Z,33nm,1.1s
AKTK **Aktyubinsk** 53.47 50 P P 15 28 02.1 +0.1
comp=Z,2.0nm,1.0s
AKTO **Aktyubinsk** 53.47 50 P P 15 28 02.1 +0.1
AKTO pmax pmax
comp=Z,2.0nm,1.0s
MIB **Mutribah** 53.48 78 eP P 15 28 02.3 -0.1
MIB AMb AMB 15 28 03.5
comp=Z,37nm,1.2s
MIB **Mutribah** 53.48 78 eP P 15 28 02.3 -0.1
comp=Z,37nm,1.2s
NAY **Al-Naaiem** 53.66 79 eP P 15 28 03.3 -0.4
NAY AMb AMB 15 28 04.7
comp=Z,22nm,0.9s
NAY **Al-Naaiem** 53.66 79 eP P 15 28 03.3 -0.4
comp=Z,22nm,0.9s
UMR **Umm Al-Rimmam** 53.89 78 eP P 15 28 05.6 +0.2
UMR **Umm Al-Rimmam** 53.89 78 eP P 15 28 05.6 +0.2
RDF **Al-Radifah** 54.05 79 eP P 15 28 06.4 -0.1
RDF AMb AMB 15 28 07.8
comp=Z,35nm,1.4s
RDF **Al-Radifah** 54.05 79 eP P 15 28 06.4 -0.1
comp=Z,35nm,1.4s
AB31 **Akbulak array** 55.02 51 iP P 15 28 13.3 0.0
AB31 pmax pmax
comp=Z,1.0nm,0.4s
AB31 **Akbulak array** 55.02 51 i P P 15 28 13.3 0.0
comp=Z,1.0nm,0.4s
ABKAR **Akbulak array** 55.02 51 eP P 15 28 13.1 -0.2
comp=Z,3.5nm,0.7s
ABKAR **Akbulak array** 55.02 51 eP P 15 28 13.1 -0.2
comp=Z,3.5nm,0.7s
SPMN **St. Paul** 55.13 304 $\Uparrow$ P P 15 28 13.4 -0.8
baz=55
ULM **Lac du Bonnet** 55.38 310 P P 15 28 15.2 -0.7
ULM **Lac du Bonnet** 55.38 310 P P 15 28 15.2 -0.7
comp=Z,6.7nm,0.6s,baz=62,slow=7.5,SNR=14
ULM **Lac du Bonnet** 55.38 310 P P 15 28 15.2 -0.7
comp=Z,7.0nm,0.6s
PLAL **Pickwick Lake** 55.75 290 P P 15 28 21.3 +2.6
comp=Z,39nm,1.0s
AGMN **Agassiz Nation** 56.03 308 eP P 15 28 19.8 -0.8
comp=Z,11nm,1.0s
AGMN **Agassiz Nation** 56.03 308 eP P 15 28 19.8 -0.8
comp=Z,11nm,1.0s
FFC **Flin Flon** 57.40 317 i P P 15 28 30.3 +0.1
FFC **Flin Flon** 57.40 317 eP P 15 28 29.9 -0.3
comp=Z,13nm,1.2s
FFC **Flin Flon** 57.40 317 i P P 15 28 30.3 +0.1
MDND **Maddock** 58.53 309 $\Downarrow$ P P 15 28 37.0 -1.3
baz=58
ZRNK **Zerenda** 59.06 45 P P 15 28 41.7 -0.2
ZRNK **Zerenda** 59.06 45 P P 15 28 41.7 -0.2
BRVK **Borovoye** 59.73 44 c iP P 15 28 47.1 +0.6
BRVK pmax pmax
comp=Z,17nm,1.3s
BRVK **Borovoye** 59.73 44 eP P 15 28 47.0 +0.6
comp=Z,9.0nm,0.8s
BRVK **Borovoye** 59.73 44 P P 15 28 47.5 +1.0
comp=Z,65nm,1.3s,SNR=8.6
BRVK **Borovoye** 59.73 44 eP P 15 28 47.0 +0.6
comp=Z,9.0nm,0.8s
BVA0 **Borovoye Array** 59.80 44 i P P 15 28 47.7 +0.7
BVA0 **Borovoye Array** 59.80 44 i P P 15 28 47.7 +0.7
BGNE **Belgrade** 60.22 301 $\Uparrow$ P P 15 28 48.9 -1.2
baz=60
VOSK **Vostochnaya** 60.25 44 P P 15 28 49.0 -1.1
VOSK pmax pmax
comp=Z,9.0nm,1.0s
VOSK **Vostochnaya** 60.25 44 P P 15 28 49.0 -1.1
comp=Z,9.0nm,1.0s
BDFB **Brasilia** 60.30 214 P P 15 28 51.0 +0.1
BDFB **Brasilia** 60.30 214 P P 15 28 51.0 +0.1
comp=Z,1.6nm,0.6s,baz=17,slow=11,SNR=2.7
BDFB **Brasilia** 60.30 214 P P 15 28 51.0 +0.1
comp=Z,2.0nm,0.6s
YKW3 **Yeknknife Ar** 60.48 328 eP P 15 28 50.2 -1.3
comp=Z,0.2nm,1.2s
YKW3 **Yellowknife Ar** 60.48 328 eP P 15 28 50.2 -1.3
comp=Z,0.2nm,1.2s
YKA **Yellowknife Ar** 60.51 328 P P 15 28 50.8 -0.9
YKA **Yellowknife Ar** 60.51 328 P P 15 28 50.7 -0.9
comp=Z,4.8nm,0.7s,baz=67,slow=7.0,SNR=67
YKA **Yellowknife Ar** 60.51 328 P P 15 28 50.8 -0.9
TUL1 **Tulsa** 61.00 295 $\Downarrow$ P P 15 28 54.3 -1.1
baz=61
DGMT **Dagmar** 61.09 311 eP P 15 28 56.2 +0.3
comp=Z,39nm,1.1s
DGMT **Dagmar** 61.09 311 $\Downarrow$ P P 15 28 55.7 -0.2
baz=61
DGMT **Dagmar** 61.09 311 eP P 15 28 56.2 +0.3
comp=Z,39nm,1.1s
B23A **Brockton** 61.57 311 $\Downarrow$ P P 15 28 59.8 +0.6
baz=61
D24A **Glendive** 61.75 309 $\Downarrow$ P P 15 29 00.8 +0.4
baz=62
A22A **Carney Farms,** 61.89 312 $\Uparrow$ P P 15 29 01.4 0.0
baz=62
C23A **Lambert** 61.98 310 $\Downarrow$ P P 15 29 01.7 -0.2
baz=62
B22A **Reddig Ranch S** 62.25 311 $\Uparrow$ P P 15 29 03.5 -0.2
baz=62
D23A **Lindsay** 62.27 310 $\Uparrow$ P P 15 29 04.1 +0.2
baz=62
C22A **Vida** 62.42 310 $\Downarrow$ P P 15 29 04.7 -0.2
baz=62
A21A **Bergtoll Ranch** 62.49 312 $\Uparrow$ P P 15 29 05.0 -0.4
baz=62
B21A **Ellsworth Farm** 62.80 312 $\Downarrow$ P P 15 29 07.7 +0.3
baz=63
D22A **Cohagen** 62.87 310 $\Uparrow$ P P 15 29 08.4 +0.5
baz=63
SAML **Samuel** 63.05 233 eP P 15 29 08.7 -0.7
comp=Z,7.3nm,1.1s
SAML **Samuel** 63.05 233 eP P 15 29 08.7 -0.7
comp=Z,7.3nm,1.1s
C21A **Desert Coulee** 63.12 311 $\Downarrow$ P P 15 29 09.4 -0.1
baz=63
A20A **Cobblestone Ra** 63.13 312 $\Downarrow$ P P 15 29 09.0 -0.6
baz=63
T31A **Randall Ranch,** 63.22 297 $\Downarrow$ P P 15 29 10.2 -0.2
baz=63
B20A **Solberg Farm,** 63.39 312 $\Uparrow$ P P 15 29 11.1 -0.2
baz=63
D21A **La Casta Ranch** 63.41 310 $\Downarrow$ P P 15 29 11.2 -0.3
baz=63
B19A **Brinkman Farms** 63.92 312 $\Uparrow$ P P 15 29 14.3 -0.6
baz=64,SNR=7.5
WHTX **Lake Whitney** 64.08 291 $\Uparrow$ P P 15 29 15.2 -0.8
baz=64
KK31 **Karatay Array** 64.21 54 i P P 15 29 16.4 -0.4
KK31 pmax pmax
comp=Z,9.0nm,1.0s
KK31 **Karatay Array** 64.21 54 i P P 15 29 16.4 -0.4
comp=Z,9.0nm,1.0s
KKAR **Karatay Array** 64.21 54 eP P 15 29 16.3 -0.5
KKAR pmax pmax
comp=Z,5.0nm,0.8s
KKAR **Karatay Array** 64.21 54 eP P 15 29 16.3 -0.5
comp=Z,5.0nm,0.8s
KKAR **Karatay Array** 64.21 54 eP P 15 29 16.3 -0.5
comp=Z,5.0nm,0.8s
A18A **Meyer Ranch,** 64.23 313 $\Uparrow$ P P 15 29 16.0 -0.9
baz=64,SNR=5.9
K23A **Bowen Ranch, D** 64.57 305 $\Downarrow$ P P 15 29 17.4 -1.9
baz=64
EGMT **Eagleton** 64.61 312 eP P 15 29 19.2 -0.2
comp=Z,18nm,1.0s
EGMT **Eagleton** 64.61 312 eP P 15 29 19.2 -0.2
comp=Z,18nm,1.0s
X31A **McDonald Ranch** 64.62 295 $\Uparrow$ P P 15 29 18.9 -0.8
baz=64
A17A **Triple J Farms** 64.72 313 $\Downarrow$ P P 15 29 19.8 -0.3
baz=64,SNR=12
Z32A **Haskell** 64.91 294 $\Uparrow$ P P 15 29 20.8 -0.8
baz=65
B17A **L&G Farms, Che** 65.09 313 $\Uparrow$ P P 15 29 22.0 -0.5
baz=65
P25A **Willow Gulch B** 65.16 302 $\Uparrow$ P P 15 29 22.8 -0.5
baz=65
H20A **Greybull** 65.24 308 $\Uparrow$ P P 15 29 22.9 -0.7
baz=65
KURK **Kurchatov** 65.40 44 d iP P 15 29 23.6 -0.7
KURK pmax pmax
comp=Z,27nm,1.3s
KURK **Kurchatov** 65.40 44 eP P 15 29 24.4 +0.1
comp=Z,22nm,1.1s
KURK **Kurchatov** 65.40 44 P P 15 29 24.5 +0.1
comp=Z,98nm,0.9s,SNR=5.8
KURK **Kurchatov** 65.40 44 i P P 15 29 23.6 -0.7
comp=Z,27nm,1.3s
E18A **Harlowton** 65.41 311 $\Uparrow$ P P 15 29 24.2 -0.5
baz=65
J21A **Lysite** 65.45 307 $\Downarrow$ P P 15 29 24.6 -0.6
baz=65
B16A **M & M Farms, S** 65.56 313 $\Downarrow$ P P 15 29 25.0 -0.5
baz=65
W29A **Amraillo** 65.57 296 $\Downarrow$ P P 15 29 25.5 -0.4
baz=65
D17A **Six Diamond Ra** 65.58 312 $\Uparrow$ P P 15 29 25.3 -0.5
baz=65
I20A **Worland** 65.59 308 $\Downarrow$ P P 15 29 25.4 -0.5
baz=65
F18A **Big Timber** 65.61 310 $\Uparrow$ P P 15 29 25.5 -0.5
baz=65
GCMT **Greycliff** 65.64 310 eP P 15 29 26.1 -0.1
comp=Z,10nm,0.8s
GCMT **Greycliff** 65.64 310 eP P 15 29 26.1 -0.1
comp=Z,10nm,0.8s
NVS **Novosibirsk** 65.72 39 eP P 15 29 26.1 -0.3
NVS pmax pmax
comp=N,4.0nm,1.1s
NVS pmax pmax
comp=E,7.0nm,1.1s
NVS pmax pmax
comp=Z,32nm,1.1s
NVS **Novosibirsk** 65.72 39 eP P 15 29 26.1 -0.3
232A **Coleman** 65.74 292 $\Downarrow$ P P 15 29 26.0 -1.0
baz=66
J20A **Shoshoni** 65.85 307 $\Downarrow$ P P 15 29 26.9 -0.7
baz=66
A15A **Johnson Ranch,** 65.87 314 $\Downarrow$ P P 15 29 26.8 -0.8
baz=66,SNR=16
C16A **Fuhringer Ranc** 65.88 313 $\Uparrow$ P P 15 29 27.1 -0.6
baz=66,SNR=11
E17A **Martinsdale** 66.03 311 $\Uparrow$ P P 15 29 28.2 -0.5
baz=66
332A **Millersview** 66.07 292 $\Downarrow$ P P 15 29 27.9 -1.1
baz=66
B15A **Bradely Ranch,** 66.10 313 $\Uparrow$ P P 15 29 27.8 -1.3
baz=66,SNR=5.5
D16A **Dana Ranch, Ca** 66.15 312 $\Downarrow$ P P 15 29 28.6 -0.8
baz=66,SNR=10.0
F17A **Fitzpatrick Pl** 66.18 310 $\Uparrow$ P P 15 29 29.2 -0.5
baz=66
M21A **Separation Pea** 66.25 305 $\Downarrow$ P P 15 29 30.5 +0.1
baz=66
S25A **Robets Cordova** 66.26 300 $\Downarrow$ P P 15 29 30.6 +0.2
baz=66
A14A **Double T Ranch** 66.26 314 $\Uparrow$ P P 15 29 29.6 -0.6
baz=66
K20A **Yellowstone Ra** 66.36 306 $\Uparrow$ P P 15 29 30.4 -0.5
baz=66
E16A **East Helena** 66.48 311 $\Uparrow$ P P 15 29 31.2 -0.3
baz=66
HRY **Holter Researc** 66.48 312 eP P 15 29 31.5 -0.1
comp=Z,10nm,0.8s
HRY **Holter Researc** 66.48 312 eP P 15 29 31.5 -0.1
comp=Z,10nm,0.8s
EKS2 **Erkin-Say** 66.52 54 eP P 15 29 33.1 +1.2
EKS2 pmax pmax
comp=Z,20nm,1.4s
EKS2 **Erkin-Say** 66.52 54 eP P 15 29 33.1 +1.2
comp=Z,20nm,1.4s
EKS2 **Erkin-Say** 66.52 54 eP P 15 29 33.1 +1.2
comp=Z,20nm,1.4s
Z29A **Hungry Hill Ra** 66.55 295 $\Downarrow$ P P 15 29 31.3 -0.8
baz=66
JCT **Junction City** 66.57 291 eP P 15 29 31.8 -0.5
JCT pmax pmax
comp=Z,19nm,0.9s
JCT **Junction City** 66.57 291 eP P 15 29 31.8 -0.5
comp=Z,19nm,0.9s
JCT **Junction City** 66.57 291 $\Uparrow$ P P 15 29 31.8 -0.5
baz=66
JCT **Junction City** 66.57 291 eP P 15 29 31.8 -0.5
comp=Z,19nm,0.9s
W27A **Bowe Ranch, En** 66.60 297 $\Uparrow$ P P 15 29 31.8 -0.8
baz=66
D15A **Lincoln** 66.72 312 $\Downarrow$ P P 15 29 32.9 -0.3
baz=66,SNR=9.3
V26A **Tequesquite Ra** 66.74 298 $\Downarrow$ P P 15 29 32.9 -0.6
baz=67
532A **Rocksprings** 66.83 291 $\Uparrow$ P P 15 29 33.2 -0.8
baz=67
A13A **Flathead Natio** 66.84 315 $\Uparrow$ P P 15 29 32.7 -1.2
baz=67
U25A **Circle Dot Ran** 66.87 299 $\Uparrow$ P P 15 29 35.0 +0.6
baz=67,SNR=12
BOZ **Bozeman (W)** 66.90 310 eP P 15 29 34.5 +0.2
BOZ pmax pmax
comp=Z,10.0nm,1.0s
BOZ **Bozeman (W)** 66.90 310 eP P 15 29 34.5 +0.2
comp=Z,10.0nm,1.0s
BOZ **Bozeman (W)** 66.90 310 $\Downarrow$ P P 15 29 34.2 -0.1
comp=Z,67,SNR=5.7
BOZ **Bozeman (W)** 66.90 310 eP P 15 29 34.5 +0.2
comp=Z,9.9nm,1.0s
R23A **Moffat** 66.94 301 $\Downarrow$ P P 15 29 35.2 +0.4
baz=67,SNR=5.6
MSTX **Muleshoe** 66.95 296 $\Downarrow$ P P 15 29 34.4 -0.4
baz=67
T24A **Torres, Weston** 66.98 300 $\Downarrow$ P P 15 29 34.6 -0.5
baz=67
ZAA0 **Zalesovo Array** 66.98 39 eP P 15 29 34.8 +0.3
ZAA0 **Zalesovo Array** 66.98 39 eP P 15 29 34.8 +0.3
ZALV **Zalesovo Beam** 66.98 39 P P 15 29 34.9 +0.4
ZALV pmax pmax
comp=Z,18nm,0.8s
ZALV **Zalesovo Beam** 66.98 39 P P 15 29 34.9 +0.4
ZALV **Zalesovo Beam** 66.98 39 P P 15 29 34.9 +0.4
comp=Z,18nm,0.8s,baz=306,slow=6.9,SNR=91
ZALV **Zalesovo Beam** 66.98 39 P P 15 29 34.9 +0.4
comp=Z,18nm,0.8s
129A **Stewart Farms,** 66.98 294 $\Downarrow$ P P 15 29 34.6 -0.3
baz=67
AAK **Ala-Archa** 66.99 53 eP P 15 29 35.1 +0.1
AAK pmax pmax
comp=Z,31nm,1.0s
AAK **Ala-Archa** 66.99 53 eP P 15 29 35.1 +0.1
comp=Z,31nm,1.0s
AAK **Ala-Archa** 66.99 53 eP P 15 29 35.1 +0.1
comp=Z,31nm,1.0s
Z28A **Tucker Farm, M** 67.02 295 $\Uparrow$ P P 15 29 34.5 -0.7
baz=67
632A **Uvalde** 67.06 290 $\Downarrow$ P P 15 29 35.0 -0.4
baz=67
431A **Sonora** 67.06 292 $\Uparrow$ P P 15 29 35.1 -0.4
baz=67
PDAR **Pinedale Array** 67.08 307 LR LR 15 57 07.0
comp=Z,176nm,18.8s,baz=72,slow=34
330A **Mertzon** 67.11 293 $\Uparrow$ P P 15 29 35.1 -0.7
baz=67
E15A **Deer Lodge** 67.11 312 $\Downarrow$ P P 15 29 35.2 -0.4
baz=67
I17A **Pilgrim Ck.** 67.13 308 $\Uparrow$ P P 15 29 35.1 -0.8
baz=67
H16A **Russell Place,** 67.15 309 $\Downarrow$ P P 15 29 35.9 -0.1
baz=67,SNR=6.7
B13A **Whitefish** 67.17 314 $\Uparrow$ P P 15 29 35.2 -0.6
baz=67
SLMT **Seeley Lake** 67.19 313 P P 15 29 35.8 -0.3
comp=Z,4.5nm,1.0s
SLMT **Seeley Lake** 67.19 313 P P 15 29 35.8 -0.3
comp=Z,4.5nm,1.0s
CHMT **Chamberlain Mo** 67.22 312 eP P 15 29 36.2 -0.2
comp=Z,7.6nm,1.0s
CHMT **Chamberlain Mo** 67.22 312 eP P 15 29 36.2 -0.2
comp=Z,7.6nm,1.0s
G16A **Moss Hill, Enn** 67.22 310 $\Downarrow$ P P 15 29 36.0 -0.4
baz=67
OTAV **Otavalo** 67.24 252 eP P 15 29 37.4 +0.2
comp=Z,29nm,0.9s
OTAV **Otavalo** 67.24 252 eP P 15 29 37.4 +0.2
comp=Z,29nm,0.9s
D14A **Greenough** 67.28 313 $\Downarrow$ P P 15 29 36.2 -0.5
baz=67
531A **Rocksprings** 67.29 291 $\Downarrow$ P P 15 29 36.5 -0.4
baz=67
SIV **San Ignacio** 67.30 226 P P 15 29 37.2 +0.3
SIV **San Ignacio** 67.30 226 P P 15 29 37.2 +0.3
comp=Z,3.7nm,0.7s,baz=76,slow=5.4,SNR=17
SIV **San Ignacio** 67.30 226 P P 15 29 37.2 +0.3
V25A **Rancho No Teng** 67.30 298 $\Downarrow$ P P 15 29 36.8 -0.3
baz=67
LRM **Limekiln Ridge** 67.31 311 P P 15 29 36.9 -0.1
comp=Z,40nm,0.9s
LRM **Limekiln Ridge** 67.31 311 P P 15 29 36.9 -0.1
comp=Z,40nm,0.9s
Q22A **Crested Butte,** 67.33 302 $\Downarrow$ P P 15 29 36.6 -0.8
baz=67

X26A	CR and CF Fran	67.39	297	⇑P	P	15 29 36.7	-0.9
	baz=67						
K18A	Toltan Ranch,	67.45	307	⇑P	P	15 29 36.9	-1.1
	baz=67						
M19A	Rock Springs	67.47	306	⇓P	P	15 29 37.6	-0.5
	baz=67						
430A	Baggett Ranch,	67.47	292	⇓P	P	15 29 37.7	-0.4
	baz=67						
SNOW	Snow King Moun	67.48	308	P	P	15 29 37.9	-0.3
	comp=Z,8.9nm,0.6s						
SNOW	Snow King Moun	67.48	308	P	P	15 29 37.9	-0.3
	comp=Z,8.9nm,0.6s						
J17A	Brown Place, J	67.50	308	⇑P	P	15 29 38.3	+0.1
	baz=67,SNR=5.9						
W25A	X Bar L Ranch,	67.51	298	⇓P	P	15 29 38.9	+0.6
	baz=67						
A12A	Yaak River Ran	67.54	315	⇓P	P	15 29 37.6	-0.6
	baz=67						
R22A	Saguache, Gunn	67.56	302	⇑P	P	15 29 39.6	+0.8
	baz=67						
C13A	Hot Springs	67.59	314	⇓P	P	15 29 38.0	-0.5
	baz=67,SNR=6.3						
732A	Laxson Ranch,	67.60	290	⇓P	P	15 29 38.8	0.0
	baz=68						
Z27A	Tatum	67.60	295	⇓P	P	15 29 38.8	-0.1
	baz=67						
E14A	Clinton	67.62	312	⇓P	P	15 29 38.8	0.0
	baz=67						
BSMT	Bassoo Peak	67.62	314	*e*P	P	15 29 38.1	-0.8
	comp=Z,1.4nm,0.7s						
BSMT	Bassoo Peak	67.62	314	*e*P	P	15 29 38.1	-0.8
	comp=Z,1.4nm,0.7s						
DLMT	Dillon	67.63	311	*e*P	P	15 29 39.1	+0.2
	comp=Z,18nm,1.0s						
DLMT	Dillon	67.63	311	*e*P	P	15 29 39.1	+0.2
	comp=Z,18nm,1.0s						
329A	Wagon Wheel Ra	67.66	293	⇑P	P	15 29 38.9	-0.3
	baz=68						
MSO	Missoula	67.67	312	*e*P	P	15 29 39.0	-0.1
	comp=Z,4.5nm,1.0s						
MSO	Missoula	67.67	312	⇑P	P	15 29 39.3	+0.2
	baz=67						
MSO	Missoula	67.67	312	*e*P	P	15 29 39.0	-0.1
	comp=Z,4.5nm,1.0s						
G15A	Dillon	67.67	310	⇑P	P	15 29 39.3	+0.1
	baz=67						
B12A	Libby	67.75	315	⇓P	P	15 29 39.2	-0.4
	baz=68,SNR=5.8						
L18A	Fontenelle, Gr	67.82	306	⇓P	P	15 29 40.4	+0.2
	baz=68						
V24A	Rampart Ranch,	67.82	299	⇓P	P	15 29 40.8	+0.4
	baz=68						
D13A	Huson	67.83	313	⇑P	P	15 29 39.8	-0.3
	baz=68,SNR=5.6						
S22A	4UR Ranch, Cre	67.85	301	⇑P	P	15 29 40.5	-0.2
	baz=68						
530A	J-C Ranch, Com	67.88	292	⇓P	P	15 29 40.5	-0.1
	baz=68						
K17A	Gardner Place,	67.95	308	⇑P	P	15 29 41.0	-0.1
	baz=68						
P20A	De Beque	68.00	303	⇑P	P	15 29 41.6	+0.2
	baz=68						
E13A	Victor	68.01	312	⇓P	P	15 29 41.3	0.0
	baz=68						
127A	Arkansas Junct	68.04	295	⇓P	P	15 29 41.6	-0.1
	baz=68						
429A	Davenport Ranc	68.04	292	⇑P	P	15 29 41.4	-0.3
	baz=68						
H15A	Lima	68.05	310	⇓P	P	15 29 41.8	+0.2
	baz=68						
MCMT	McKenzie Canyo	68.06	310	*e*P	P	15 29 42.3	+0.5
	comp=Z,2.1nm,0.9s						
MCMT	McKenzie Canyo	68.06	310	*e*P	P	15 29 42.3	+0.5
	comp=Z,2.1nm,0.9s						
N18A	Larsen Ranch,	68.07	305	⇑P	P	15 29 41.7	-0.2
	baz=68						
C12B	Naegeli Ranch,	68.09	314	⇓P	P	15 29 41.9	+0.2
	baz=68						
J16A	Bone	68.11	308	⇑P	P	15 29 42.3	+0.2
	baz=68						
Z26A	Caprock	68.17	296	⇑P	P	15 29 42.8	+0.2
	baz=68						
G14A	Jackson	68.21	311	⇓P	P	15 29 43.1	+0.4
	baz=68,SNR=8.7						
Q20A	Ridgley Place,	68.22	303	⇑P	P	15 29 42.6	-0.1
	baz=68						
328A	Wristen Ranch,	68.31	293	⇑P	P	15 29 43.0	-0.4
	baz=68						
K16A	Soda Springs	68.33	308	⇓P	P	15 29 43.5	+0.1
	baz=68						
Y25A	Mesa, Roswell	68.34	297	⇓P	P	15 29 43.1	-0.5
	baz=68						
F13A	Darby	68.44	312	⇑P	P	15 29 43.8	-0.2
	baz=68,SNR=5.1						
M17A	Scullys Gap (B	68.45	306	⇓P	P	15 29 44.2	-0.1
	baz=68						
C11A	Tepee Creek (N	68.47	314	⇓P	P	15 29 43.6	-0.4
	baz=68,SNR=9.0						
H14A	Leadore	68.49	310	⇓P	P	15 29 45.1	+0.7
	baz=68						
X24A	Lazy VL Ranch,	68.53	298	⇓P	P	15 29 45.5	+0.6
	baz=68,SNR=6.8						
529A	Stev Forest Ra	68.54	292	⇑P	P	15 29 44.9	+0.1
	baz=68,SNR=5.6						
S21A	Coal Bank Pass	68.55	301	⇑P	P	15 29 45.9	+0.8
	baz=68,SNR=7.6						
J15A	Blackfoot	68.56	309	⇑P	P	15 29 45.3	+0.5
	baz=68,SNR=7.0						
428A	Kincaid Ranch,	68.57	293	⇑P	P	15 29 45.3	+0.3
	baz=68						
L16A	Fish Haven	68.66	307	⇓P	P	15 29 45.1	-0.4
	baz=68,SNR=5.1						
NEW	Newport	68.72	315	*e*P	P	15 29 43.8	-1.8
	comp=Z,12nm,1.0s						
NEW	Newport	68.72	315	⇓P	P	15 29 45.0	-0.6
	baz=68,SNR=7.4						
NEW	Newport	68.72	315	*e*P	P	15 29 43.8	-1.8
	comp=Z,12nm,1.0s						
W23A	Werner Place,	68.72	298	⇑P	P	15 29 46.7	+0.6
	baz=68						
G13A	Cobalt	68.75	311	⇓P	P	15 29 45.9	-0.1
	baz=68,SNR=11						
Y24A	Capitan	68.87	297	⇑P	P	15 29 47.5	+0.5
	baz=69,SNR=10						
I14A	Mackay	68.90	310	⇓P	P	15 29 47.2	+0.2
	baz=69						
226B	Tecolote Peak,	68.93	295	⇓P	P	15 29 47.5	+0.3
	baz=69						
528A	Cox Ranch, San	68.94	292	⇑P	P	15 29 47.3	-0.1
	baz=69						
HWUT	Hardware Ranch	68.96	307	*e*P	P	15 29 46.4	-1.0
	comp=Z,19nm,0.8s						
HWUT	Hardware Ranch	68.96	307	*e*P	P	15 29 46.4	-1.0
	comp=Z,19nm,0.8s						
125A	Gardner Draw,	68.98	295	⇓P	P	15 29 47.9	+0.4
	baz=69						
K15A	Arbon	69.00	308	⇑P	P	15 29 47.8	+0.2
	baz=69						
F12A	Elk City	69.01	312	⇑P	P	15 29 47.1	-0.5
	baz=69,SNR=7.7						
427A	Hayter Ranch,	69.03	293	⇓P	P	15 29 47.7	-0.2
	baz=69						
H13A	Challis	69.05	311	⇑P	P	15 29 48.2	+0.4
	baz=69						
X23A	Hourglass Bar	69.06	298	⇓P	P	15 29 48.9	+0.7
	baz=69						
DLBC	Dease Lake	69.11	329	*e*P	P	15 29 48.2	+0.3
DLBC	Dease Lake	69.11	329	*e*P	P	15 29 48.2	+0.3
O17A	Robinson Place	69.17	305	⇑P	P	15 29 49.2	+0.4
	baz=69						
326A	Caldwell Ranch	69.20	294	⇓P	P	15 29 49.5	+0.6
	baz=69						
N16A	Rees Ranch, Co	69.26	306	⇑P	P	15 29 49.5	+0.2
	baz=69						
MVCO	Mesa Verde	69.26	301	⇑P	P	15 29 50.1	+0.7
	baz=69						
L15A	Malad City	69.27	307	⇑P	P	15 29 49.4	+0.1
	baz=69						
Y23A	Lovelace Mesa,	69.30	297	⇓P	P	15 29 50.2	+0.5
	baz=69						
I13A	Wildhorse Cree	69.32	310	⇑P	P	15 29 50.5	+0.9
	baz=69,SNR=13						
628A	Black Gap, Mar	69.37	292	⇑P	P	15 29 50.0	0.0
	baz=69,SNR=5.2						
225A	Deer Hill, Car	69.39	295	⇓P	P	15 29 50.7	+0.5
	baz=69						
H12A	Diamond D Ranc	69.42	311	⇓P	P	15 29 50.3	+0.1
	baz=69,SNR=9.4						
K14A	Jones Ranch, D	69.47	308	⇓P	P	15 29 50.8	+0.3
	baz=69						
COLD	Coldfoot	69.51	342	*e*P	P	15 29 50.0	-0.1
	comp=Z,8.1nm,0.9s						
COLD	Coldfoot	69.51	342	*e*P	P	15 29 50.0	-0.1
	comp=Z,8.1nm,0.9s						
MK31	Makanchi Array	69.52	46	*i* P	P	15 29 50.6	0.0
MK31				pmax	pmax		
	comp=Z,20nm,1.2s						
MK31	Makanchi Array	69.52	46	*e*P	P	15 29 50.4	-0.2
MK31	Makanchi Array	69.52	46	*e*P	P	15 29 50.4	-0.2
MKAR	Makanchi Array	69.52	46	P	P	15 29 50.8	+0.2
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MKAR	Makanchi Array	69.52	46	P	P	15 29 50.8	+0.2
MKAR	Makanchi Array	69.52	46	P	P	15 29 50.8	+0.2
	comp=Z,8.5nm,0.9s,baz=300,slow=5.3,SNR=57						
MKAR	Makanchi Array	69.52	46	P	P	15 29 50.8	+0.2
	comp=Z,9.0nm,0.9s						
124A	Stringfield Ra	69.53	296	⇑P	P	15 29 51.5	+0.4
	baz=69,SNR=8.5						
P17A	Butcher Ranch,	69.56	304	⇓P	P	15 29 51.1	0.0
	baz=69						
KSH	Kashi	69.57	55	⇑*i*P	P	15 29 50.7	-0.4
KSH				pP	pP	15 29 55.7	-0.1
KSH				sP	sP	15 29 57.7	+0.1
KSH				PcP	PcP	15 30 14.6	+0.4
KSH				PP	PP	15 32 26.7	+2.2
KSH				S	S	15 38 56.4	-2.4
KSH				ScS	SKSac	15 39 47.5	-3.9
KSH				SS	SS	15 43 24.9	-1.0
KSH				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,230nm,3.5s						
KSH				LR	LR		
	comp=Z,160nm,4.7s						
426A	McDonald Obser	69.58	293	⇑P	P	15 29 51.5	0.0
	baz=69						
BNM	Barren Site	69.59	298	*e*P	P	15 29 52.2	+0.7
	comp=Z,6.0nm,1.0s						
BNM	Barren Site	69.59	298	*e*P	P	15 29 52.2	+0.7
	comp=Z,6.0nm,1.0s						
SRU	San Rafael	69.61	304	⇓P	P	15 29 51.5	+0.1
	baz=69						
J13A	Cove Ranch, Pi	69.63	309	⇑P	P	15 29 52.0	+0.5
	baz=69						
HVU	Hansel Valley	69.63	307	*e*P	P	15 29 51.1	-0.4
HVU				pmax	pmax		
	comp=Z,11nm,0.9s						
HVU	Hansel Valley	69.63	307	*e*P	P	15 29 51.1	-0.4
	comp=Z,11nm,0.9s						
HVU	Hansel Valley	69.63	307	*e*P	P	15 29 51.1	-0.4
	comp=Z,11nm,0.9s						
O16A	Springville	69.66	305	⇑P	P	15 29 51.6	-0.2
	baz=69						
HLID	Hailey	69.69	310	*e*P	P	15 29 52.0	+0.2
	comp=Z,5.5nm,0.9s						
HLID	Hailey	69.69	310	⇑P	P	15 29 52.4	+0.6
	baz=70,SNR=7.1						
HLID	Hailey	69.69	310	*e*P	P	15 29 52.0	+0.2
	comp=Z,5.5nm,0.9s						
U20A	Newcomb	69.72	301	⇑P	P	15 29 52.7	+0.5
	baz=70						
627A	Terlingua Ranc	69.76	292	⇑P	P	15 29 52.5	+0.1
	baz=70,SNR=5.1						
325A	Bean Ranch, Si	69.89	294	⇓P	P	15 29 52.9	-0.4
	baz=70						
224A	Cornudas Mount	69.91	295	⇓P	P	15 29 52.7	-0.7
	baz=70						
Y22A	Socorro	69.94	298	⇓P	P	15 29 53.0	-0.6
	baz=70						
TMUT	Trail Mountain	69.96	304	*e*P	P	15 29 53.1	-0.7
	comp=Z,12nm,1.0s						
TMUT	Trail Mountain	69.96	304	*e*P	P	15 29 53.1	-0.7
	comp=Z,12nm,1.0s						
V20A	Brimhall	69.99	300	⇓P	P	15 29 53.6	-0.3
	baz=70						
I12A	Atlanta	70.00	310	⇓P	P	15 29 54.0	+0.2
	baz=70						
MNTX	Cornudas Mount	70.01	295	⇑P	P	15 29 53.3	-0.5
	baz=70						
S18A	Hurst Farm, Bl	70.02	303	⇑P	P	15 29 53.6	-0.5
	baz=70						
TXAR	Lajitas Array	70.03	292	P	P	15 29 54.1	0.0
TXAR	Lajitas Array	70.03	292	P	P	15 29 54.1	0.0
	comp=Z,3.5nm,0.9s,baz=77,slow=6.6,SNR=14						
TXAR				LR	LR	15 56 41.0	
	comp=Z,144nm,20.5s,baz=335,slow=33						
TXAR	Lajitas Array	70.03	292	P	P	15 29 54.1	0.0
	comp=Z,4.0nm,0.9s						
425A	Indio Mountain	70.21	294	⇑P	P	15 29 55.5	+0.3
	baz=70,SNR=5.2						
324A	Moseley Ranch,	70.22	295	⇑P	P	15 29 54.8	-0.5
	baz=70						
X21A	Alamocita Cree	70.24	299	⇑P	P	15 29 56.8	+1.3
	baz=70,SNR=8.0						
626A	Big Bend Ranch	70.25	292	⇓P	P	15 29 56.3	+0.8
	baz=70						
Z22A	Elephant Butte	70.31	297	⇓P	P	15 29 56.5	+0.7
	baz=70						
W20A	Ramah	70.38	300	⇑P	P	15 29 56.7	+0.4
	baz=70						
Y21A	Point of Rocks	70.40	298	⇓P	P	15 29 57.0	+0.6
	baz=70						
P15A	Leamington	70.51	305	⇓P	P	15 29 57.3	+0.4
	baz=70						
DUG	Dugway	70.51	306	*e*P	P	15 29 56.5	-0.4
DUG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DUG	Dugway	70.51	306	*e*P	P	15 29 56.5	-0.4
	comp=Z,9.9nm,0.9s						
DUG	Dugway	70.51	306	⇑P	P	15 29 56.7	-0.2
	baz=70,SNR=7.0						
DUG	Dugway	70.51	306	*e*P	P	15 29 56.5	-0.4
	comp=Z,9.9nm,0.9s						
ILAR	Eielson Array	70.55	339	P	P	15 29 56.4	-0.1
ILAR	Eielson Array	70.55	339	P	P	15 29 56.4	-0.1
	comp=Z,2.7nm,0.7s,baz=30,slow=5.3,SNR=43						
ILAR	Eielson Array	70.55	339	P	P	15 29 56.4	-0.1
	comp=Z,3.0nm,0.7s						
DOT	Dot Lake	70.57	338	*e*P	P	15 29 57.1	+0.4
	comp=Z,3.8nm,1.0s						
DOT	Dot Lake	70.57	338	*e*P	P	15 29 57.1	+0.4
	comp=Z,3.8nm,1.0s						
MFID	Camas Ranch	70.63	310	⇓P	P	15 29 57.5	-0.1
	baz=70						
X20A	Quemado	70.69	299	⇑P	P	15 29 59.1	+1.0
	baz=70						
Z21A	St. Cloud Mine	70.78	298	⇑P	P	15 29 59.6	+0.9
	baz=71						
Y20A	Horse Springs,	70.95	298	⇓P	P	15 30 00.4	+0.6
	baz=71						
MENT	Mentasta	71.00	337	*e*P	P	15 30 00.1	+0.8
MENT	Mentasta	71.00	337	*e*P	P	15 30 00.1	+0.8
222A	Williams Famil	71.02	296	⇑P	P	15 30 01.1	+1.0
	baz=71						
W18A	Petrified Fore	71.23	300	⇑P	P	15 30 02.1	+0.6
	baz=71						
121A	Cookes Peak, D	71.28	297	⇑P	P	15 30 02.2	+0.4
	baz=71						
PAX	Paxson	71.50	338	*e*P	P	15 30 02.5	0.0
PAX				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PAX	Paxson	71.50	338	*e*P	P	15 30 02.5	0.0
	comp=Z,3.4nm,0.8s						
PAX	Paxson	71.50	338	*e*P	P	15 30 02.5	0.0
	comp=Z,3.4nm,0.8s						
Z20A	Nine Sixteen R	71.53	298	⇓P	P	15 30 03.4	+0.2
	baz=71						
X18A	Snowflake	71.70	300	⇓P	P	15 30 04.9	+0.6
	baz=72						
LPAZ	La Paz	71.75	232	P	P	15 30 05.2	+0.1
LPAZ	La Paz	71.75	232	P	P	15 30 05.2	+0.1
	comp=Z,1.0nm,0.5s,baz=8.6,slow=6.6,SNR=5.0						
LPAZ	La Paz	71.75	232	P	P	15 30 05.2	+0.1
	comp=Z,1.0nm,0.5s						
120A	U Bar Ranch, L	71.87	297	⇑P	P	15 30 05.8	+0.6
	baz=72						
ATAH	Atahualpa	72.11	246	P	P	15 30 07.2	0.0
ATAH	Atahualpa	72.11	246	P	P	15 30 07.2	0.0
	comp=Z,2.9nm,0.5s,baz=53,slow=8.1,SNR=3.2						
WUAZ	Wupatki	72.13	301	⇑P	P	15 30 07.1	+0.3
	baz=72						
220A	Playas Peak, P	72.14	297	⇓P	P	15 30 07.3	+0.3
	baz=72						
LON	Longmire	72.20	316	*e*P	P	15 30 05.8	-1.1
LON				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LON	Longmire	72.20	316	*e*P	P	15 30 05.8	-1.1
	comp=Z,6.8nm,1.1s						
LON	Longmire	72.20	316	*e*P	P	15 30 05.8	-1.1
	comp=Z,6.8nm,1.1s						
U15A	North Rim	72.24	302	⇓P	P	15 30 07.7	+0.1
	baz=72						
TRF	Thorofare Moun	72.52	340	*e*P	P	15 30 07.8	-0.8
	comp=Z,6.8nm,0.8s						
TRF	Thorofare Moun	72.52	340	*e*P	P	15 30 07.8	-0.8
	comp=Z,6.8nm,0.8s						
BMRM	Bremner River	72.74	336	*e*P	P	15 30 10.1	+0.2
	comp=Z,23nm,1.0s						
BMRM	Bremner River	72.74	336	*e*P	P	15 30 10.1	+0.2
	comp=Z,23nm,1.0s						
X16A	Lo Mia Camp, P	72.79	300	⇑P	P	15 30 11.5	+0.8
	baz=73						
319A	Douglas	72.97	297	⇓P	P	15 30 12.5	+0.6
	baz=73						
SML	Sawmill	73.26	338	*e*P	P	15 30 13.5	+0.6
SML				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SML	Sawmill	73.26	338	*e*P	P	15 30 13.5	+0.6
	comp=Z,4.3nm,0.9s						
SML	Sawmill	73.26	338	*e*P	P	15 30 13.5	+0.6
	comp=Z,4.3nm,0.9s						
R11A	Troy Canyon, C	73.33	306	⇓P	P	15 30 13.4	-0.5
	baz=73,SNR=5.8						
CPUP	Villa Florida	73.85	217	P	P	15 30 16.6	0.0
CPUP	Villa Florida	73.85	217	P	P	15 30 16.6	0.0
	comp=Z,2.2nm,0.6s,baz=32,slow=6.5,SNR=11						
CPUP				LR	LR	16 03 12.7	
	comp=Z,175nm,18.4s,baz=196,slow=36						
CPUP	Villa Florida	73.85	217	P	P	15 30 16.6	0.0
	comp=Z,175nm,18.4s						
W13A	Hualapai Mount	74.06	302	⇓P	P	15 30 17.4	-0.9
	baz=74						
WMQ	Urumqi	74.35	47	P	P	15 30 21.0	+1.4
WMQ				PcP	PcP	15 30 36.0	+1.6
WMQ				PP	PP	15 33 09.0	+3.8
WMQ				S	S	15 39 55.0	+1.5
WMQ				ScS	ScS	15 40 30.0	-0.1
WMQ				SS	SS	15 44 44.0	+5.4
WMQ				pmax	pmax		
	comp=Z,18nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,120nm,6.0s						
WMQ				LR	LR		
	comp=N,380nm,18.0s						
WMQ				LR	LR		
	comp=E,320nm,18.0s						
WMQ				LR	LR		
	comp=Z,240nm,18.0s						
Z14A	Wintersburg	74.41	300	⇑P	P	15 30 21.0	+0.9
	baz=74						
TNA	Tin City	74.61	348	*e*P	P	15 30 21.9	+1.3
	comp=Z,6.9nm,0.9s						
TNA	Tin City	74.61	348	*e*P	P	15 30 21.9	+1.3
	comp=Z,6.9nm,0.9s						
BILL	Bilibino	74.61	359	P	P	15 30 21.0	+0.4
BILL				*e*		15 30 26.3	
BILL						15 30 32.0	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BILL	Bilibino	74.61	359	*e*P	P	15 30 21.2	+0.6
	comp=Z,8.6nm,1.0s						
BILL	Bilibino	74.61	359	P	P	15 30 21.0	+0.4
	comp=Z,6.0nm,1.3s						
PDMCI	Parker Dam,Lak	74.69	302	⇑P	P	15 30 22.3	+0.6
	baz=74						
NVAR	Mina Array Bea	75.02	307	P	P	15 30 23.8	0.0
NVAR	Mina Array Bea	75.02	307	P	P	15 30 23.8	0.0
	comp=Z,0.2nm,0.3s,baz=79,slow=4.7,SNR=3.8						
NVAR	Mina Array Bea	75.02	307	P	P	15 30 23.8	0.0
214A	Organ Pipe Nat	75.13	299	⇓P	P	15 30 24.5	+0.2
	baz=75						
FURC	Furnace Creek,	75.24	305	⇑P	P	15 30 25.6	+0.8
	baz=75						
113A	Mohawk Valley,	75.32	300	⇑P	P	15 30 26.0	+0.7
	baz=75						
GMRC	Granite Mounta	75.44	303	⇑P	P	15 30 26.7	+0.6
	baz=75						
IRM	Iron Mountain	75.45	302	⇓P	P	15 30 26.9	+0.7
	baz=75						
GSC	Goldstone	75.89	304	⇑P	P	15 30 29.5	+0.7
	baz=76						
MPMC	Manual Prospec	75.89	305	⇑P	P	15 30 29.8	+1.0
	baz=76						
BC3	Big Chuckawall	75.95	302	⇓P	P	15 30 29.6	+0.5
	baz=76						
MOY	Mondy	76.08	34	*e*P	P	15 30 30.7	+1.2
BELC	Belle Mtn. Jos	76.12	302	⇓P	P	15 30 30.7	+0.6
	baz=76						
PFO	Pinyon Flat Ob	76.66	302	⇓P	P	15 30 33.9	+0.7
	baz=76						
ISA	Isabella	76.77	305	⇑P	P	15 30 34.5	+0.8
	baz=77						
GAMB	Gambell	76.89	349	*e*P	P	15 30 34.0	+0.4
	comp=Z,20nm,1.6s						
BOSA	Boshof	77.08	142	P	P	15 30 35.4	+0.1
BOSA	Boshof	77.08	142	P	P	15 30 35.4	+0.1
	comp=Z,4.7nm,0.9s,baz=22,slow=6.2,SNR=5.0						
BOSA				LR	LR	16 05 46.1	
	comp=Z,143nm,18.4s,baz=115,slow=37						
YAK	Yakutsk	77.18	15	*e*P	P	15 30 39.5	+4.2
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK	Yakutsk	77.18	15	*e*P	P	15 30 37.6	+2.3
	comp=Z,11nm,0.4s						
TLY	Talaya	77.24	33	*e*P	P	15 30 36.3	+0.3
TLY				pmax	pmax		
	comp=Z,10.0nm,1.8s						
TLY				MLR	MLR		
	comp=Z,213nm,17.0s						
TLY	Talaya	77.24	33	*e*P	P	15 30 37.3	+1.3
	comp=Z,3.8nm,0.8s						
ZAK	Zakamensk	78.02	34	⇓*i*P	P	15 30 40.9	+0.5
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SEY	Seymchan	79.44	5	*e*P	P	15 30 47.4	-0.5
PYUN	Piuthan	80.89	62	*e*P	P	15 30 56.7	+0.1
	comp=Z,63nm,1.1s						
SONM	Songino Array	81.28	34	P	P	15 30 58.8	+0.6
SONM				PP	PP	15 34 01.8	-1.3
SONM	Songino Array	81.28	34	P	P	15 30 58.8	+0.6
	comp=Z,7.1nm,0.9s,baz=316,slow=5.7,SNR=48						
SONM				PP	PP	15 34 01.8	-1.3
	comp=Z,2.2nm,0.9s,baz=313,slow=8.5,SNR=4.9						
DANN	Dangsing	81.28	61	*e*P	P	15 30 58.7	-0.1
	comp=Z,44nm,0.8s						
KOLN	Koldanda	81.52	62	*e*P	P	15 30 58.7	-1.3
ULN	Ulaanbaatar	81.55	34	*e*P	P	15 31 00.5	+0.8
	comp=Z,12nm,1.0s						
DMN	Daman	82.67	61	*e*P	P	15 31 06.2	+0.1
KKN	Kakani	82.68	61	*e*P	P	15 31 06.0	0.0
	comp=Z,26nm,0.7s						
PKIN	Phulchoki	82.89	61	*e*P	P	15 31 07.1	-0.1
	comp=Z,13nm,0.7s						
PKI	Pulchoki	82.90	61	*e*P	P	15 31 07.1	-0.3
	comp=Z,19nm,0.7s						
GUN	Gumba	83.01	60	*e*P	P	15 31 08.2	+0.2
	comp=Z,50nm,0.8s						
GTA	Gaotai	84.08	44	*e*P	P	15 31 13.6	+0.6
GTA				pP	pP	15 31 18.3	+0.5
GTA				sP	sP	15 31 20.7	+1.2
GTA				PP	PP	15 34 31.0	+4.6
GTA				S	S	15 41 38.9	+1.7
GTA				sS	sS	15 41 47.2	+2.0
GTA				pmax	pmax		
	comp=Z,11nm,1.2s						
GTA				pmax	pmax		
	comp=Z,56nm,4.3s						
GTA				LR	LR		
	comp=N,160nm,17.3s						
GTA				LR	LR		
	comp=E,160nm,17.1s						
GTA				LR	LR		
	comp=Z,130nm,17.1s						
RAMN	Ramite	84.11	61	*e*P	P	15 31 13.0	-0.5
HYB	Hyderabad	84.14	73	*i* P	P	15 31 12.0	-1.5
TAPN	Taplejung	84.62	60	*e*P	P	15 31 16.0	-0.2
	comp=Z,14nm,0.9s						
ODAN	Odare	84.72	60	*e*P	P	15 31 16.6	+0.1
SHL	Shillong	88.62	59	*e*P	P	15 31 35.5	-0.1
LZH	Lanzhou	88.69	44	*e*P	P	15 31 37.0	+1.3

LZH				pP	**pP**	**15 31 40.3**	**-0.2**
LZH				sP	**sP**	**15 31 41.7**	**-0.6**
LZH				PP	**PP**	**15 35 07.2**	**+3.5**
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
LZH				pmax	pmax		
	comp=Z,75nm,9.0s						
LZH				LR	LR		
	comp=N,210nm,17.0s						
LZH				LR	LR		
	comp=E,230nm,17.5s						
LZH				LR	LR		
	comp=Z,300nm,19.2s						
HHC	**Hu-ho-hao-te**	**89.01**	**36**	*e*P	**P**	**15 31 34.5**	**-2.5**
HHC				pP	**PcP**	**15 31 38.8**	**+0.3**
HHC				sP	**sP**	**15 31 41.5**	**-2.1**
HHC				PP	**PP**	**15 35 06.8**	**+0.8**
HHC				SKS	**SKSac**	**15 42 01.8**	**-4.7**
HHC				S	**SKKSac**	**15 42 19.5**	**+1.4**
HHC				SS	**SS**	**15 48 15.9**	**-0.6**
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,260nm,5.6s						
HHC				LR	LR		
	comp=N,600nm,18.5s						
HHC				LR	LR		
	comp=E,820nm,19.2s						
HHC				LR	LR		
	comp=Z,500nm,17.1s						
BJI	**Beijing**	**91.75**	**34**	P	**P**	**15 31 49.1**	**-0.6**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PLCA	**Paso Flores**	**91.91**	**217**	LR	LR	16 13 47.2	
	comp=Z,127nm,19.9s,baz=218,slow=36						
CN2	**Changchun**	**92.23**	**26**	*e*P	**P**	**15 31 51.7**	**-0.1**
CN2				*e*S	**S**	**15 42 50.2**	**-4.0**
CN2				SS	**SS**	**15 49 02.4**	**0.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,200nm,22.0s						
CN2				LR	LR		
	comp=E,200nm,22.0s						
CN2				LR	LR		
	comp=Z,700nm,22.0s						
CD2	**Chengdu**	**92.43**	**47**	P	**P**	**15 31 50.5**	**-2.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
CD2				pmax	pmax		
	comp=Z,160nm,5.8s						
USRK	**Ussuriysk Arra**	**93.97**	**22**	P	**P**	**15 32 00.2**	**+0.5**
	comp=Z,1.6nm,0.9s,baz=12,slow=4.6,SNR=2.8						
KMI	**Kunming**	**96.01**	**52**	P	**P**	**15 32 08.4**	**-1.4**
KMI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GYA	**Guiyang**	**97.43**	**48**	P	**P**	**15 32 15.0**	**-1.1**
GYA				PP	**PP**	**15 36 14.2**	**+1.8**
GYA				SKS	**SKSac**	**15 42 51.8**	**-1.6**
GYA				S	**S**	**15 43 35.0**	**-5.4**
GYA				SS	**SS**	**15 50 17.6**	**-0.2**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,550nm,20.5s						
GYA				LR	LR		
	comp=E,500nm,21.0s						
GYA				LR	LR		
	comp=Z,490nm,20.3s						
KSRS	**Korea Array**	**98.71**	**27**	LR	LR	16 18 45.7	
	comp=Z,87nm,18.9s,baz=148,slow=36						
NJ2	**Nanjing**	**99.56**	**37**	*e*P	**Pdif**	**15 32 25.4**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WRA	**Warramunga Arr**	**149.78**	**62**	PKPbc	**PKPbc**	**15 38 31.9**	**-0.4**
WRA				PKPab	**PKPab**	**15 38 37.4**	**-0.3**
WRA	**Warramunga Arr**	**149.78**	**62**	PKPbc	**PKPbc**	**15 38 31.9**	**-0.4**
	comp=Z,2.1nm,0.9s,baz=315,slow=2.7,SNR=12						
WRA				PKPab	**PKPab**	**15 38 37.4**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=320,slow=3.3,SNR=17						
WRAB	**Tennant Creek**	**149.78**	**62**	*e*PKP2	**PKPbc**	**15 38 31.6**	**-0.8**
WRAB	**Tennant Creek**	**149.78**	**62**	*e*PKPbc	**PKPbc**	**15 38 31.6**	**-0.8**
WRAB				*e*PKPab	**PKPab**	**15 38 36.8**	**-0.9**
AS31	**Alice Springs**	**151.80**	**69**	*e*PKPbc	**PKPbc**	**15 38 36.7**	**-0.4**
ASAR	**Alice Springs**	**151.80**	**69**	PKPbc	**PKPbc**	**15 38 36.6**	**-0.4**
ASAR				PKPab	**PKPab**	**15 38 46.0**	**0.0**
ASAR	**Alice Springs**	**151.80**	**69**	PKPbc	**PKPbc**	**15 38 36.6**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=310,slow=1.6,SNR=27						
ASAR				PKPab	**PKPab**	**15 38 46.0**	**0.0**
	comp=Z,3.0nm,0.6s,baz=313,slow=3.4,SNR=16						

*ATH **07** 15:21:33.7, 36°.85N×26°.64E, h5km, MD3.2/5*
*ISK **07** 15:21:35.8, 36°.66N×26°.35E, h4km, MD2.9*
*DDA **07** 15:21:35.5, 36°.74N×26°.36E, h7km, MD3.1*
*ISCJB **07** 15:21:36.8±0.8, 36°.73N±0°.05×26°.38E±0°.03, h0km±6km, Error ellipse: s-maj=8.0km s-min=4.2km az=166.7*
*CSEM **07** 15:21:37.2±0.3, 36°.74N×26°.40E, h2km, MD2.9, Error ellipse: s-maj=8.9km s-min=4.9km az=147.0*
ISC 07 15:21:35.6±1.3**, 36°.75N**±0°.04×**26°.32E**±0°.03**, h1**km±12km**, n37,** σ1s.**06**/44**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APE	**Apeiranthos**	**0.71**	**297**	*e*PG	**Pb**	**15 21 51.3**	**+0.5**
APE				*e*SG	**Sb**	**15 22 02.5**	**+1.4**
APE	**Apeiranthos**	**0.71**	**297**	*e*PB	**Pb**	**15 21 51.1**	**+0.3**
APE				*e*SB	**Sn**	**15 22 03.6**	**-0.9**
APE	**Apeiranthos**	**0.71**	**297**	*e*Pg	**Pb**	**15 21 51.1**	**+0.3**
APE				*e*Sg	**Sn**	**15 22 03.6**	**-0.9**
BODT	**Bodrum**	**0.85**	**68**	*e*PG	**Pb**	**15 21 53.2**	**0.0**
BODT				*e*SG	**Sb**	**15 22 05.8**	**+0.6**
BODT	**Bodrum**	**0.85**	**68**	*e*Pg	**Pb**	**15 21 53.2**	**0.0**
BODT				*e*Sg	**Sb**	**15 22 05.8**	**+0.6**
BDRM	**Kayabasi**	**0.95**	**70**	*i* P	**Pb**	**15 21 54.9**	**0.0**
BDRM				*i* S	**Sb**	**15 22 07.8**	**-0.3**
BDRM	**Kayabasi**	**0.95**	**70**	*i* P	**Pb**	**15 21 54.9**	**0.0**
BDRM				*i* S	**Sb**	**15 22 07.8**	**-0.3**
GCAM	**G?zelcaml?**	**1.20**	**37**	*i* P	**Pg**	**15 21 58.1**	**-0.4**
GCAM				*i* S	**Sg**	**15 22 14.2**	**+0.2**
GCAM	**G?zelcaml?**	**1.20**	**37**	*i* P	**Pg**	**15 21 58.1**	**-0.4**
GCAM				*i* S	**Sg**	**15 22 14.2**	**+0.2**
MLSB	**Milas**	**1.28**	**64**	*e*PN	**Pb**	**15 22 01.3**	**+0.7**
MLSB				*e*SN	**Sn**	**15 22 19.9**	**+1.3**
MLSB	**Milas**	**1.28**	**64**	*e*Pn	**Pb**	**15 22 01.3**	**+0.7**
MLSB				*e*Sn	**Sn**	**15 22 19.9**	**+1.3**
AYDN	**Tasoluk**	**1.54**	**53**	*i* P	**Pn**	**15 22 03.2**	**-1.1**
AYDN				*i* S	**Sg**	**15 22 25.8**	**+0.7**
AYDN	**Tasoluk**	**1.54**	**53**	*i* P	**Pn**	**15 22 03.2**	**-1.1**
AYDN				*i* S	**Sg**	**15 22 25.8**	**+0.7**
ARG	**Arkhangelos**	**1.55**	**110**	*e*PB	Pn	15 21 59.2	-5.1
ARG	**Arkhangelos**	**1.55**	**110**	*e*Pb	Pn	15 21 59.2	-5.1
NPS	**Neapolis**	**1.59**	**201**	*e*PG	**Pg**	**15 22 07.0**	**+0.9**
NPS	**Neapolis**	**1.59**	**201**	*e*Pb	**Pg**	**15 22 07.0**	**+0.9**
YER	**Yerkesik**	**1.62**	**76**	*e*PN	**Pb**	**15 22 05.8**	**-0.5**
YER	**Yerkesik**	**1.62**	**76**	*e*Pn	**Pb**	**15 22 05.8**	**-0.5**
CHOS	**Chios island**	**1.65**	**353**	*e*PB	**Pn**	**15 22 04.0**	**-1.8**
CHOS	**Chios island**	**1.65**	**353**	*e*Pb	**Pn**	**15 22 04.0**	**-1.8**
BLCB	**Balcova**	**1.73**	**19**	*e*PN	**Pb**	**15 22 08.9**	**+0.7**
BLCB	**Balcova**	**1.73**	**19**	*e*Pn	**Pb**	**15 22 08.9**	**+0.7**
IZM	**Izmir**	**1.81**	**24**	*e*PN	**Pb**	**15 22 09.7**	**+0.1**
IZM	**Izmir**	**1.81**	**24**	*e*Pn	**Pb**	**15 22 09.7**	**+0.1**
TURN	**Turunc**	**1.83**	**85**	*i* P	Pn	15 22 04.2	-4.0
TURN	**Turunc**	**1.83**	**85**	*i* P	Pn	15 22 04.2	-4.0
IDI	**Anoyia**	**1.86**	**219**	*e*PG	Pg	15 22 13.1	+1.8
IDI	**Anoyia**	**1.86**	**219**	*e*Pg	Pg	15 22 13.1	+1.8
VAM	**Vamos**	**2.18**	**233**	*e*PN	**Pg**	**15 22 16.8**	**-0.6**
VAM	**Vamos**	**2.18**	**233**	*e*Pn	**Pg**	**15 22 16.8**	**-0.6**
FETY	**Fethiye**	**2.22**	**92**	*e*PN	**Pb**	**15 22 14.2**	**-2.4**
FETY	**Fethiye**	**2.22**	**92**	*e*Pn	**Pb**	**15 22 14.2**	**-2.4**
AKS	**Akhisar**	**2.43**	**29**	*e*PN	**Pb**	**15 22 18.6**	**-1.6**
AKS	**Akhisar**	**2.43**	**29**	*e*Pn	**Pb**	**15 22 18.6**	**-1.6**
KULA	**Kula-Manisa**	**2.56**	**46**	*e*PN	**Pn**	**15 22 20.0**	**+1.6**
KULA	**Kula-Manisa**	**2.56**	**46**	*e*Pn	**Pn**	**15 22 20.0**	**+1.6**

*ISCJB **07** 15:33:19.9±0.5, 22°.88N±0°.03×122°.55E±0°.02, h23km, Error ellipse: s-maj=4.7km s-min=2.6km az=155.5*
*JMA **07** 15:33:21.9±0.3, 22°.88N×122°.69E, h66km*
*TAP **07** 15:33:22.1, 22°.89N×122°.37E, h83km±1km, ML3.0, D*
ISC 07 15:33:19.3±1.1**, 22°.82N**±0°.04×**122°.56E**±0°.03**, h23**km**, n37,** σ1s.**04**/70**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**1.14**	**284**	*e*P	**Pn**	**15 33 39.5**	**-0.3**
	baz=284						
CHKT				*e*S	**Sb**	**15 33 52.8**	**-1.7**
	baz=284						
LAY	**Lan-yu**	**1.22**	**230**	*e*P	**Pn**	**15 33 41.2**	**+0.3**
	baz=221						
LAY				*e*S	**Sn**	**15 33 55.5**	**-1.2**
	baz=221						
TWF1	**Yuli**	**1.28**	**295**	P	**Pn**	**15 33 42.1**	**+0.4**
	baz=295						
TWF1				S	**Sn**	**15 33 57.1**	**-1.1**
	baz=295						
EHY	**Hungye**	**1.33**	**301**	P	**Pn**	**15 33 42.8**	**+0.3**
	baz=300						
EHY				*e*S	**Sn**	**15 33 58.3**	**-1.1**
	baz=300						
TWG	**Pinlang**	**1.37**	**270**	*e*P	**Pn**	**15 33 44.3**	**+1.3**
	baz=267						
TWG				*e*S	**Sn**	**15 34 00.4**	**-0.1**
	baz=267						
ESL	**Shilin**	**1.43**	**314**	*e*P	**Pn**	**15 33 43.5**	**-0.4**
	baz=319						
ESL				*e*S	**Sn**	**15 33 58.6**	**-3.4**
	baz=319						
ELDTW	**Lidau**	**1.47**	**285**	*e*P	**Pn**	**15 33 45.0**	**+0.5**
	baz=290						
ELDTW				*e*S	**Sn**	**15 34 01.6**	**-1.5**
	baz=290						
ECL	**Taimali**	**1.50**	**262**	*e*P	**Pn**	**15 33 45.5**	**+0.7**
	baz=257						
ECL				*e*S	**Sn**	**15 34 02.7**	**-1.0**
	baz=257						
TWD	**Chiawan**	**1.53**	**325**	*e*P	**Pn**	**15 33 45.8**	**+0.5**
	baz=333						
EAST	**Anshuo**	**1.64**	**255**	*e*P	**Pn**	**15 33 48.4**	**+1.6**
	baz=256						
EAST				*e*S	**Sn**	**15 34 06.1**	**-1.1**
	baz=256						
HATJ	**Hateruma jima**	**1.68**	**43**	P	**Pn**	**15 33 47.9**	**+0.7**
HATJ				*e*S	**Sn**	**15 34 07.5**	**-0.5**
YOJ	**Yonaguni jima**	**1.68**	**14**	P	**Pn**	**15 33 48.6**	**+1.3**
YOJ				*e*S	**Sn**	**15 34 08.7**	**+0.5**
ALS	**Alishan**	**1.75**	**293**	*e*P	**Pb**	**15 33 50.4**	**-0.6**
	baz=296						
ALS				*e*S	**Sn**	**15 34 09.9**	**-0.5**
	baz=296						
ENA	**Nanau**	**1.77**	**335**	*e*P	**Pn**	**15 33 49.2**	**+0.7**
	baz=336						
ENA				*e*S	**Sn**	**15 34 09.9**	**-0.3**
	baz=336						
WHF	**Hehuan Shan**	**1.77**	**318**	*e*P	**Pn**	**15 33 49.8**	**+0.8**
	baz=326						
WHF				*e*S	**Sn**	**15 34 10.0**	**-1.0**
	baz=326						
SSD	**Sandimen**	**1.78**	**268**	*e*P	**Pn**	**15 33 50.5**	**+1.8**
	baz=265						
SSD				*e*S	**Sn**	**15 34 10.5**	**-0.1**
	baz=265						
WTP	**Ta-pu**	**1.84**	**284**	*e*P	**Pb**	**15 33 51.8**	**-0.5**
	baz=282						
WTP				*e*S	**Sn**	**15 34 13.2**	**+1.0**
	baz=282						
SCZT	**Fangliau**	**1.85**	**256**	*e*P	**Pb**	**15 33 52.5**	**+0.1**
	baz=252						
IRIF	**Iriomote-Funau**	**1.85**	**35**	P	**Pn**	**15 33 50.4**	**+0.8**
IRIF				*e*S	**Sn**	**15 34 11.6**	**-0.7**
SMLT	**Sun Moon Lake**	**1.85**	**305**	*e*P	**Pn**	**15 33 50.7**	**+0.9**
	baz=308						
SMLT				*e*S	**Sn**	**15 34 11.5**	**-1.1**
	baz=308						
CHN4	**Tsaushan**	**1.89**	**287**	*e*P	**Pn**	**15 33 52.1**	**+1.9**
	baz=286						
CHN4				*e*S	**Sn**	**15 34 13.6**	**+0.4**
	baz=286						
TWC	**Suao**	**1.89**	**340**	*e*P	**Pn**	**15 33 50.9**	**+0.7**
	baz=349						
TWC				*e*S	**Sn**	**15 34 12.9**	**-0.4**
	baz=349						
CHN5	**Tsauling**	**1.90**	**294**	*e*P	**Pb**	**15 33 53.1**	**-0.2**
	baz=303						
CHN5				*e*S	**Sb**	**15 34 15.9**	**-0.6**
	baz=303						
TYC	**Yuchr**	**1.90**	**305**	*e*P	**Pn**	**15 33 51.1**	**+0.8**
	baz=311						
TYC				*e*S	**Sn**	**15 34 13.1**	**-0.4**
	baz=311						
CHN1	**Nanshi**	**1.91**	**281**	*e*P	**Pb**	**15 33 53.2**	**-0.2**
	baz=285						
CHN1				*e*S	**Sn**	**15 34 15.5**	**+1.8**
	baz=285						
JKRS	**Kuro-shima**	**1.94**	**43**	P	**Pn**	**15 33 51.9**	**+1.1**
JKRS				*e*S	**Sn**	**15 34 13.9**	**-0.5**
NNS	**Nan Shan**	**1.94**	**326**	*e*P	**Pn**	**15 33 52.4**	**+1.4**
	baz=324						
NNS				*e*S	**Sn**	**15 34 14.7**	**-0.1**
	baz=324						
TWK	**Hsinying**	**1.96**	**283**	*e*P	**Pn**	**15 33 52.8**	**+1.6**
	baz=290						
TWK				*e*S	**Sb**	**15 34 18.4**	**+0.1**
	baz=290						
ENTT	**Nioudou**	**2.03**	**333**	*e*P	**Pn**	**15 33 52.9**	**+0.9**
	baz=337						
ENTT				*e*S	**Sn**	**15 34 16.9**	**+0.2**
	baz=337						
WGK	**Gukeng**	**2.03**	**295**	*e*P	**Pb**	**15 33 55.8**	**+0.4**
	baz=304						
CHN3	**Shinhua**	**2.04**	**278**	*e*P	**Pn**	**15 33 53.5**	**+1.3**
	baz=276						
CHN3				*e*S	**Sn**	**15 34 17.7**	**+0.7**
	baz=276						
TWE	**Neicheng**	**2.06**	**337**	*e*P	**Pn**	**15 33 53.6**	**+1.1**
	baz=341						
TWE				*e*S	**Sn**	**15 34 17.8**	**+0.3**
	baz=341						
JIJ	**Ishigaki jima**	**2.11**	**43**	P	**Pn**	**15 33 53.8**	**+0.6**
JIJ				*e*S	**Sn**	**15 34 17.3**	**-1.5**
NSK	**Sanguang**	**2.15**	**329**	*e*P	**Pn**	**15 33 55.3**	**+1.5**
	baz=332						
NSK				*e*S	**Sn**	**15 34 19.8**	**0.0**
	baz=332						
TWQ1	**Liyutan**	**2.23**	**313**	*e*P	**Pn**	**15 33 56.4**	**+1.4**
	baz=328						
NSTT	**Nanjuang**	**2.30**	**322**	*e*P	**Pn**	**15 33 57.7**	**+1.9**
	baz=313						
NSTT				*e*S	**Sn**	**15 34 23.4**	**0.0**
	baz=313						
JTJ	**Tarama**	**2.67**	**47**	P	**Pn**	**15 34 01.8**	**+0.9**
JTJ				*e*S	**Sn**	**15 34 31.8**	**-0.7**

IDC 07 15:54:31.9±5.7**, 30°.23S**×**177°.86W, h0**km**, mb3.6**/3**, mb1 3.7**/3**, mb1mx3.5**/18**, mbtmp3.6**/3**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.9**/22**, Error ellipse: s-maj=217.3km s-min=53.4km az=149.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.63**	**257**	P	P	16 01 23.1	+0.1
	1.7nm,0.9s,baz=102,slow=9.3,SNR=2.3						
ASAR	**Alice Springs**	**43.24**	**267**	P	P	16 02 35.4	+0.1
	0.3nm,0.6s,baz=108,slow=7.5,SNR=8.8						
WRA	**Warramunga Arr**	**44.21**	**272**	P	P	16 02 42.3	-0.7
	0.3nm,0.3s,baz=111,slow=8.1,SNR=4.6						
FITZ	**Fitzroy Crossi**	**52.48**	**270**	LR	LR	16 25 12.0	
	comp=Z,63nm,19.4s,baz=22,slow=35						
FINES	**FINESS Array B**	**145.03**	**340**	PKPbc	PKPbc	16 14 09.0	-0.8
	0.9nm,0.6s,baz=346,slow=2.9,SNR=4.8						

*CSEM **07** 16:00:31.7±0.5, 41°.44N×19°.56E, h2km, ML2.4, Error ellipse: s-maj=9.3km s-min=5.3km az=34.0*
*TIR **07** 16:00:31.6±0.3, 41°.46N×19°.57E, h20km±400km, ML3.2*
*PDG **07** 16:00:32.5±0.3, 41°.49N×19°.57E, h11km, ML2.5/9, Error ellipse: s-maj=0.7km s-min=0.7km az=0.0*
*BEO **07** 16:00:34.6±0.3, 41°.58N×19°.85E, h5km±4km, ML2.4/2*
ISC 07 16:00:32.4±1.2**, 41°.48N**±0°.04×**19°.56E**±0°.03**, h13**km±9km**, n41,** σ0s.**85**/72**, 10C-9D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.26**	**120**	*e*Pg	**Pg**	**16 00 37.9**	**0.0**
TIR				*e*Sg	**Sb**	**16 00 43.7**	**+0.2**
TIR	**Tirane**	**0.26**	**120**	*e*Pg	**Pg**	**16 00 37.9**	**0.0**
TIR				*e*Sg	**Sb**	**16 00 43.7**	**+0.2**
ULC	**Ulcinj**	**0.54**	**334**⇓	*i*Pg	**Pg**	**16 00 42.6**	**-0.4**
ULC				*e*Sg	**Sb**	**16 00 51.7**	**+0.2**
ULC	**Ulcinj**	**0.54**	**334**⇓	*i*Pg	**Pg**	**16 00 42.6**	**-0.4**
ULC				*e*Sg	**Sb**	**16 00 51.7**	**+0.2**
PUK	**Puka**	**0.61**	**24**	*e*PG	**Pg**	**16 00 44.4**	**-0.1**
PUK				*e*SG	**Sb**	**16 00 53.9**	**+0.1**
PUK	**Puka**	**0.61**	**24**	*e*Pg	**Pg**	**16 00 44.4**	**-0.1**
	SNR=91						
PUK				*e*Sg	**Sb**	**16 00 53.9**	**+0.1**
	SNR=91						
PHP	**Peshkopia**	**0.69**	**72**	*e*PG	**Pg**	**16 00 45.5**	**-0.4**
PHP				*e*SG	**Sb**	**16 00 55.9**	**0.0**
PHP	**Peshkopia**	**0.69**	**72**	*e*Pg	**Pg**	**16 00 45.5**	**-0.4**
	SNR=90						
PHP				*e*Sg	**Sb**	**16 00 55.9**	**0.0**
	SNR=90						
BUM	**Brajici-Budva**	**0.96**	**329**⇓	*i*Pg	**Pg**	**16 00 50.9**	**-0.1**
BUM				*e*Sg	**Sn**	**16 01 05.9**	**+0.5**
BUM	**Brajici-Budva**	**0.96**	**329**⇓	*i*Pg	**Pg**	**16 00 50.9**	**-0.1**
BUM				*e*Sg	**Sn**	**16 01 05.9**	**+0.5**
BCI	**Bajram Curri**	**0.96**	**23**	*e*PG	**Pg**	**16 00 50.6**	**-0.4**
BCI				*e*SG	**Sg**	**16 01 03.5**	**-0.1**
BCI	**Bajram Curri**	**0.96**	**23**	*e*Pg	**Pg**	**16 00 50.6**	**-0.4**
	SNR=90						
BCI				*e*Sg	**Sg**	**16 01 03.5**	**-0.1**
TTG	**Podgorica**	**0.98**	**347**⇓	*i*Pg	**Pg**	**16 00 50.9**	**-0.4**
TTG				*e*Sg	**Sn**	**16 01 05.8**	**+0.2**
PDG	**Podgorica**	**0.98**	**347**	*e*Pg	**Pg**	**16 00 50.9**	**-0.4**
PDG				*e*Sg	**Sn**	**16 01 05.4**	**-0.3**
PDG	**Podgorica**	**0.98**	**347**	*e*Pg	**Pg**	**16 00 50.9**	**-0.4**
PDG				*e*Sg	**Sn**	**16 01 05.4**	**-0.3**
PVY	**Plav**	**1.15**	**15**⇓	*i*Pg	**Pb**	**16 00 53.4**	**-0.9**
PVY				*e*Sg	**Sn**	**16 01 11.5**	**+1.3**
PVY	**Plav**	**1.15**	**15**⇓	*i*Pg	**Pb**	**16 00 53.4**	**-0.9**
PVY				*e*Sg	**Sn**	**16 01 11.5**	**+1.3**
HCY	**Herceg Novi**	**1.25**	**321**⇑	*i*Pg	**Pn**	**16 00 55.1**	**-0.6**
HCY				*e*Sg	**Sg**	**16 01 14.2**	**+1.3**
HCY	**Herceg Novi**	**1.25**	**321**⇑	*i*Pg	**Pn**	**16 00 55.1**	**-0.6**
HCY				*e*Sg	**Sg**	**16 01 14.2**	**+1.3**
NKY	**Niksic**	**1.40**	**343**⇓	*i*Pg	**Pn**	**16 00 58.0**	**+0.2**
NKY				*e*Sg	**Sg**	**16 01 19.4**	**+1.9**
NKY	**Niksic**	**1.40**	**343**⇓	*i*Pg	**Pn**	**16 00 58.0**	**+0.2**
NKY				*e*Sg	**Sg**	**16 01 19.4**	**+1.9**
BEY	**Berane**	**1.41**	**10**⇑	*i*Pg	**Pb**	**16 00 58.6**	**-0.2**
BEY				*e*Sg	**Sg**	**16 01 20.2**	**+2.2**
IVA	**Berane**	**1.41**	**10**⇑	*i*Pg	**Pb**	**16 00 58.6**	**-0.2**
IVA				*e*Sg	**Sg**	**16 01 20.2**	**+2.2**
BRY	**Bratogost**	**1.61**	**332**⇑	*i*Pn	**Pn**	**16 01 01.2**	**+0.4**
BRY				*e*Sn	**Sg**	**16 01 24.6**	**+0.2**
BRY	**Bratogost**	**1.61**	**332**⇑	*i*Pn	**Pn**	**16 01 01.2**	**+0.4**
BRY				*e*Sn	**Sg**	**16 01 24.6**	**+0.2**
UPM	**Unac-Piva**	**1.79**	**344**⇑	*i*Pn	**Pb**	**16 01 04.8**	**-0.5**
UPM				*e*Sn	**Sg**	**16 01 29.4**	**-0.7**
UPM	**Unac-Piva**	**1.79**	**344**⇑	*i*Pn	**Pb**	**16 01 04.8**	**-0.5**
UPM				*e*Sn	**Sg**	**16 01 29.4**	**-0.7**
SJES	**Sjenica**	**1.81**	**10**	*e*Sg	**Sb**	**16 01 29.1**	**+1.0**
SJES	**Sjenica**	**1.81**	**10**	*e*Sg	**Sb**	**16 01 29.1**	**+1.0**
PLE	**Pljevlja**	**1.85**	**356**⇑	*i*Pn	**Pb**	**16 01 05.8**	**-0.5**
PLE				*e*Sn	**Sg**	**16 01 30.8**	**-1.3**
PLE	**Pljevlja**	**1.85**	**356**⇑	*i*Pn	**Pb**	**16 01 05.8**	**-0.5**
PLE				*e*Sn	**Sg**	**16 01 30.8**	**-1.3**
SELS	**Selova**	**2.09**	**33**	*e*Pn	**Pn**	**16 01 06.7**	**-0.5**
IVAS	**Ivanjica**	**2.14**	**12**	*e*Pn	**Pn**	**16 01 08.4**	**+0.4**
IVAS				*e*Sg	**Sb**	**16 01 37.5**	**-0.2**
IVAS	**Ivanjica**	**2.14**	**12**	*e*Pn	**Pn**	**16 01 08.4**	**+0.4**
IVAS				*e*Sg	**Sb**	**16 01 37.5**	**-0.2**
BARS	**Barje**	**2.14**	**51**	*e*Pn	**Pn**	**16 01 08.4**	**+0.5**
BBLS	**Lazići**	**2.39**	**357**	*e*Pn	**Pb**	**16 01 14.6**	**-0.8**
BBLS	**Lazići**	**2.39**	**357**	*e*Pn	**Pb**	**16 01 14.6**	**-0.8**
GRUS	**Gruza**	**2.55**	**19**	*e*Pn	**Pn**	**16 01 14.0**	**+0.4**
GRUS	**Gruza**	**2.55**	**19**	*e*Pn	**Pn**	**16 01 14.0**	**+0.4**
DIVS	**Divibare**	**2.64**	**7**	*e*Pn	**Pb**	**16 01 17.3**	**-2.3**
DIVS	**Divibare**	**2.64**	**7**	*e*Pn	**Pb**	**16 01 17.3**	**-2.3**

*DDA **07** 16:03:17.8, 40°.37N×27°.83E, h7km, MD2.9*
*ISCJB **07** 16:03:18.3±0.4, 40°.34N±0°.03×27°.86E±0°.03, h7km±4km, Error ellipse: s-maj=5.3km s-min=4.3km az=17.1*
*CSEM **07** 16:03:18.5±0.1, 40°.32N×27°.86E, h8km, MD2.8, Error ellipse: s-maj=2.7km s-min=2.2km az=16.0*
*ISK **07** 16:03:18.0, 40°.30N×27°.84E, h7km, MD2.8*
ISC 07 16:03:18.1±0.9**, 40°.33N**±0°.03×**27°.83E**±0°.02**, h10**km±5km**, n40,** σ0s.**46**/50**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDC	**Edincik**	**0.04**	**53**	PG	**Pg**	**16 03 20.8**	**+0.8**
EDC	**Edincik**	**0.04**	**53**	*i* Pg	**Pg**	**16 03 20.8**	**+0.8**
BNT	**Bandirma**	**0.08**	**67**	PG	**Pg**	**16 03 19.9**	**-0.5**
BNT				*e*SG	**Sg**	**16 03 21.5**	**-0.6**
BNT	**Bandirma**	**0.08**	**67**	*i* Pg	**Pg**	**16 03 19.9**	**-0.5**
BNT				*e*Sg	**Sg**	**16 03 21.5**	**-0.6**
GONE	**Gonen-Balikesi**	**0.30**	**201**	*e*PG	**Pg**	**16 03 24.2**	**+0.1**
GONE	**Gonen-Balikesi**	**0.30**	**201**	*e*Pg	**Pg**	**16 03 24.2**	**+0.1**
KRBG	**Karabiga-Canak**	**0.41**	**280**	*e*PG	**Pg**	**16 03 26.2**	**+0.1**
KRBG				*e*SG	**Sb**	**16 03 33.2**	**-0.6**
KRBG	**Karabiga-Canak**	**0.41**	**280**	*e*Pg	**Pg**	**16 03 26.3**	**+0.1**
KRBG				*e*Sg	**Sb**	**16 03 33.2**	**-0.6**
BALY	**Balya**	**0.60**	**195**	*i* P	**Pb**	**16 03 30.3**	**-0.6**
BALY				*i* S	**Sb**	**16 03 40.5**	**+1.0**
BALY	**Balya**	**0.60**	**195**	*i* P	**Pb**	**16 03 30.3**	**-0.6**
BALY				*i* S	**Sb**	**16 03 40.5**	**+1.0**
RKY	**Sarkoy-Tekirda**	**0.61**	**306**	*e*PG	**Pb**	**16 03 30.4**	**-0.6**
RKY				*e*SG	**Sb**	**16 03 40.1**	**+0.4**
RKY	**Sarkoy-Tekirda**	**0.61**	**306**	*e*Pg	**Pb**	**16 03 30.4**	**-0.6**
RKY				*e*Sg	**Sb**	**16 03 40.1**	**+0.4**
MFT	**Murefte**	**0.62**	**318**	*e*PG	**Pb**	**16 03 31.0**	**-0.2**
MFT	**Murefte**	**0.62**	**318**	*e*Pg	**Pb**	**16 03 31.0**	**-0.2**
MDNY	**Mudanya-Bursa**	**0.81**	**87**	*e*PG	**Pg**	**16 03 33.3**	**-0.4**
MDNY	**Mudanya-Bursa**	**0.81**	**87**	*e*Pg	**Pg**	**16 03 33.3**	**-0.4**
LPK	**Lapseki**	**0.82**	**274**	*e*PG	**Pb**	**16 03 34.6**	**+0.1**
LPK	**Lapseki**	**0.82**	**274**	*e*Pg	**Pb**	**16 03 34.6**	**+0.1**
ARMT	**Armutlu**	**0.83**	**73**	*e*PG	**Pg**	**16 03 34.1**	**+0.1**
ARMT	**Armutlu**	**0.83**	**73**	*e*Pg	**Pg**	**16 03 34.2**	**+0.1**
DURS	**Dursunbey**	**0.88**	**145**	*i* P	**Pb**	**16 03 35.3**	**-0.2**
DURS				*i* S	**Sb**	**16 03 48.1**	**+0.7**
DURS	**Dursunbey**	**0.88**	**145**	*i* P	**Pb**	**16 03 35.3**	**-0.2**
DURS				*i* S	**Sb**	**16 03 48.1**	**+0.7**
DST	**Dursunbey**	**0.94**	**140**	*e*PG	**Pg**	**16 03 36.0**	**-0.3**
DST	**Dursunbey**	**0.94**	**140**	*e*Pg	**Pg**	**16 03 36.0**	**-0.3**
SLVT	**Silivri**	**0.95**	**18**	*e*PG	**Pb**	**16 03 37.0**	**+0.3**
SLVT	**Silivri**	**0.95**	**18**	*e*Pg	**Pb**	**16 03 37.0**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.04**	**274**	*e*PG	**Pn**	**16 03 39.0**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.04**	**274**	*e*Pg	**Pn**	**16 03 39.0**	**+0.2**
CTKS	**Kestanelik-??a**	**1.05**	**29**	*e*PG	**Pn**	**16 03 38.9**	**0.0**
CTKS	**Kestanelik-??a**	**1.05**	**29**	*e*Pg	**Pn**	**16 03 38.9**	**0.0**
GEMT	**Gemlik**	**1.05**	**84**	*e*PG	**Pb**	**16 03 38.2**	**-0.2**
GEMT	**Gemlik**	**1.05**	**84**	*e*Pg	**Pb**	**16 03 38.2**	**-0.2**
BGKT	**Bogazkoy**	**1.12**	**40**	*e*PN	**Pn**	**16 03 39.9**	**0.0**
BGKT	**Bogazkoy**	**1.12**	**40**	*e*Pn	**Pn**	**16 03 39.9**	**0.0**
YLV	**Yalova**	**1.21**	**78**	*e*PN	**Pg**	**16 03 41.7**	**+0.4**
YLV	**Yalova**	**1.21**	**78**	*e*Pn	**Pg**	**16 03 41.7**	**+0.4**
TVSB	**Tavsanli**	**1.53**	**124**	*e*PN	**Pn**	**16 03 45.9**	**+0.2**
TVSB	**Tavsanli**	**1.53**	**124**	*e*Pn	**Pn**	**16 03 45.9**	**+0.2**
EDRB	**Edirne**	**1.73**	**332**	*e*PN	**Pb**	**16 03 49.9**	**-0.1**
EDRB	**Edirne**	**1.73**	**332**	*e*Pn	**Pb**	**16 03 49.9**	**-0.1**

*JMA **07** 16:17:43.5±0.3, 22°.75N×122°.81E, h77km, M2.3*
*TAP **07** 16:17:43.0, 22°.64N×122°.60E, h58km±1km, ML3.3, D*
ISC 07 16:17:41.6±1.9**, 22°.63N**±0°.05×**122°.71E**±0°.04**, h31**km±18km**, n43,** σ1s.**24**/77**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**1.22**	**241**	*i* P	**Pn**	**16 18 02.6**	**+0.1**
	baz=238						
LAY				*i* S	**Sn**	**16 18 16.8**	**-1.3**
	baz=238						
CHKT	**Chengkung**	**1.32**	**291**	P	**Pn**	**16 18 03.5**	**-0.4**
	baz=298						
CHKT				S	**Sn**	**16 18 18.3**	**-2.1**
	baz=298						
TWF1	**Yuli**	**1.48**	**299**	P	**Pn**	**16 18 06.0**	**-0.1**
	baz=309						
TWF1				*e*S	**Sn**	**16 18 23.1**	**-1.4**
	baz=309						
TWG	**Pinlang**	**1.52**	**277**	*i* P	**Pn**	**16 18 07.4**	**+0.8**
	baz=283						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TWG				S	Sn	16 18 24.6	-0.7
	baz=283						
EHY	**Hungye**	**1.54**	**305**	P	**Pn**	**16 18 06.8**	**-0.1**
	baz=312						
EHY				S	**Sn**	**16 18 24.4**	**-1.5**
	baz=312						
ECL	**Taimali**	**1.62**	**269**	P	**Pn**	**16 18 08.5**	**+0.5**
	baz=280						
ECL				*e*S	**Sn**	**16 18 26.4**	**-1.4**
	baz=280						
ELDTW	**Lidau**	**1.65**	**290**	*e*P	**Pn**	**16 18 08.4**	**-0.1**
	baz=291						
ELDTW				*e*S	**Sn**	**16 18 27.4**	**-1.4**
	baz=291						
ESL	**Shilin**	**1.66**	**315**	*e*P	**Pn**	**16 18 07.8**	**-0.7**
	baz=318						
ESL				*e*S	**Sn**	**16 18 25.5**	**-3.3**
	baz=318						
TAW	**Tawu**	**1.70**	**261**	*e*P	**Pn**	**16 18 10.6**	**+1.6**
	baz=249						
EAST	**Anshuo**	**1.74**	**262**	*e*P	**Pn**	**16 18 10.9**	**+1.3**
	baz=251						
EAST				S	**Sn**	**16 18 30.9**	**+0.1**
	baz=251						
HATJ	**Hateruma jima**	**1.74**	**35**	P	**Pn**	**16 18 10.3**	**+0.7**
HATJ				*e*S	**Sn**	**16 18 30.2**	**-0.5**
TWD	**Chiawan**	**1.77**	**325**	*e*P	**Pn**	**16 18 09.3**	**-0.6**
	baz=337						
TWD				*e*S	**Sn**	**16 18 30.7**	**-0.7**
	baz=337						
YOJ	**Yonaguni jima**	**1.84**	**9**	P	**Pn**	**16 18 12.1**	**+1.1**
YOJ				*e*S	**Sn**	**16 18 33.0**	**-0.3**
TWK1	**Hengchun**	**1.89**	**249**	*e*P	**Pn**	**16 18 11.2**	**-0.5**
	baz=254						
TWK1				*e*S	**Sn**	**16 18 34.5**	**0.0**
	baz=254						
SSD	**Sandimen**	**1.92**	**274**	*e*P	**Pn**	**16 18 13.4**	**+1.3**
	baz=278						
SSD				*e*S	**Sn**	**16 18 34.6**	**-0.6**
	baz=278						
HEN	**Hengchun**	**1.93**	**251**	*e*P	**Pn**	**16 18 10.7**	**-1.5**
	baz=250						
IRIF	**Iriomote-Funau**	**1.94**	**29**	P	**Pn**	**16 18 12.8**	**+0.5**
IRIF				*e*S	**Sn**	**16 18 35.9**	**+0.3**
SCZT	**Fangliau**	**1.95**	**263**	*e*P	**Pn**	**16 18 14.4**	**+1.9**
	baz=252						
SCZT				*e*S	**Sn**	**16 18 36.5**	**+0.6**
	baz=252						
ALS	**Alishan**	**1.96**	**297**	*e*P	**Pn**	**16 18 14.1**	**+1.2**
	baz=307						
ALS				*e*S	**Sn**	**16 18 34.9**	**-1.6**
	baz=307						
ENA	**Nanau**	**2.00**	**334**	*e*P	**Pn**	**16 18 13.4**	**+0.3**
	baz=329						
ENA				*e*S	**Sn**	**16 18 36.5**	**-0.6**
	baz=329						
JKRS	**Kuro-shima**	**2.00**	**37**	P	**Pn**	**16 18 13.9**	**+0.8**
JKRS				*e*S	**Sn**	**16 18 36.5**	**-0.6**
WHF	**Hehuan Shan**	**2.00**	**319**	*e*P	**Pn**	**16 18 13.9**	**+0.2**
	baz=322						
WHF				*e*S	**Sn**	**16 18 36.5**	**-1.4**
	baz=322						
WTP	**Ta-pu**	**2.02**	**288**	*e*P	**Pn**	**16 18 15.9**	**+2.3**
	baz=290						
WTP				*e*S	**Sn**	**16 18 39.5**	**+1.7**
	baz=290						
CHN4	**Tsaushan**	**2.08**	**291**	*e*P	**Pn**	**16 18 15.8**	**+1.6**
	baz=292						
SMLT	**Sun Moon Lake**	**2.08**	**307**	*e*P	**Pn**	**16 18 14.6**	**+0.2**
	baz=315						
SMLT				*e*S	**Sn**	**16 18 37.5**	**-1.7**
	baz=315						
CHN1	**Nanshi**	**2.08**	**286**	*e*P	**Pn**	**16 18 16.5**	**+2.2**
	baz=292						
CHN1				*e*S	**Sn**	**16 18 39.7**	**+0.4**
	baz=292						
CHN5	**Tsauling**	**2.10**	**298**	*e*P	**Pn**	**16 18 17.0**	**+2.3**
	baz=307						
CHN5				*e*S	**Sn**	**16 18 41.9**	**+2.1**
	baz=307						
TWM1	**Shoushan**	**2.12**	**276**	*e*P	**Pb**	**16 18 19.1**	**-0.2**
	baz=275						
TWC	**Suao**	**2.12**	**338**	P	**Pn**	**16 18 15.7**	**+0.9**
	baz=341						
TWC				*e*S	**Sn**	**16 18 39.5**	**-0.6**
	baz=341						
TYC	**Yuchr**	**2.12**	**307**	*e*P	**Pn**	**16 18 16.0**	**+1.1**
	baz=316						
TWT	**Tachien**	**2.14**	**319**	*e*P	**Pn**	**16 18 16.0**	**+0.7**
	baz=321						
TWT				*e*S	**Sn**	**16 18 40.0**	**-0.9**
	baz=321						
TWK	**Hsinying**	**2.14**	**288**	*e*P	**Pn**	**16 18 17.2**	**+2.0**
	baz=298						
JIJ	**Ishigaki jima**	**2.17**	**37**	P	**Pn**	**16 18 15.9**	**+0.4**
JIJ				*e*S	**Sn**	**16 18 40.0**	**-1.4**
NNS	**Nan Shan**	**2.18**	**326**	*e*P	**Pn**	**16 18 16.5**	**+0.7**
	baz=336						
NNS				*e*S	**Sn**	**16 18 40.7**	**-1.0**
	baz=336						
CHN3	**Shinhua**	**2.21**	**282**	*e*P	**Pb**	**16 18 20.3**	**-0.5**
	baz=283						
WGK	**Gukeng**	**2.23**	**298**	*e*P	**Pn**	**16 18 18.8**	**+2.4**
	baz=310						
WNT	**Mingjian**	**2.24**	**304**	*e*P	**Pn**	**16 18 19.0**	**+2.6**
	baz=315						
ENTT	**Nioudou**	**2.25**	**333**	*e*P	**Pn**	**16 18 17.7**	**+1.0**
	baz=335						
ENTT				*e*S	**Sn**	**16 18 42.9**	**-0.6**
	baz=335						
TWE	**Neicheng**	**2.29**	**336**	*e*P	**Pn**	**16 18 18.1**	**+1.0**
	baz=339						
TWE				*e*S	**Sn**	**16 18 43.9**	**-0.4**
	baz=339						
NSK	**Sanguang**	**2.38**	**329**	*e*P	**Pn**	**16 18 19.6**	**+1.1**
	baz=332						
NSK				*e*S	**Sn**	**16 18 46.1**	**-0.6**
	baz=332						
TWQ1	**Liyutan**	**2.46**	**314**	*e*P	**Pn**	**16 18 20.3**	**+0.7**
	baz=322						
TWQ1				*e*S	**Sn**	**16 18 50.0**	**+1.4**
	baz=322						
NSTT	**Nanjuang**	**2.53**	**322**	*e*P	**Pn**	**16 18 21.9**	**+1.4**
	baz=332						
NSTT				*e*S	**Sn**	**16 18 50.4**	**+0.1**
	baz=332						
JTJ	**Tarama**	**2.71**	**42**	P	**Pn**	**16 18 23.8**	**+0.8**
JTJ				*e*S	**Sn**	**16 18 54.1**	**-0.6**

IDC 07 16:18:47.6±2.0**, 15°.36S**×**176°.76W, h0km, mb3.9**/4**, mb1 4.3**/4**, mb1mx3.8**/19**, mbtmp3.9**/4**, Error ellipse: s-maj=117.8km s-min=27.1km az=150.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.70**	**257**	P	P	16 27 18.8	+0.1
	0.6nm,0.4s,baz=91,slow=7.0,SNR=8.5						
ASAR	**Alice Springs**	**47.05**	**252**	P	P	16 27 21.1	-0.3
	2.8nm,0.4s,baz=90,slow=7.6,SNR=105						
ILAR	**Eielson Array**	**83.07**	**12**	P	P	16 31 14.6	-0.1
	0.4nm,0.4s,baz=222,slow=5.6,SNR=9.0						
TXAR	**Lajitas Array**	**83.30**	**57**	P	P	16 31 17.0	+0.2
	0.4nm,0.7s,baz=224,slow=5.2,SNR=5.6						

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*ISCJB **07** 16:20:39.6±0.5, 11°.57N±0°.03×61°.84W±0°.03, h100km±6km, Error ellipse: s-maj=5.5km s-min=4.4km az=12.1*
*TRN **07** 16:20:39.5, 11°.62N×61°.74W, h102km, MD3.5*
*FUNV **07** 16:20:41.2, 11°.57N×61°.68W, h53km, MW3.5*
ISC 07 16:20:39.5±1.3**, 11°.57N**±0°.03×**61°.81W**±0°.04**, h104km**±10km**, n30, σ1s27**/47**, 2C-4D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRW	**Mount Saint Ca**	**0.61**	**14**	⇓*e*P	**Pn**	**16 20 57.0**	**+0.4**
GRHS	**Sauteurs**	**0.67**	**15**	⇑*e*P	**Pn**	**16 20 57.3**	**+0.2**
GRHS				*e*S	**Sn**	**16 21 09.4**	**-0.7**
GRIC	**Isle de Caille**	**0.75**	**17**	*e*P	**Pn**	**16 20 58.1**	**+0.4**
GRIC				*e*S	**Sn**	**16 21 11.4**	**+0.1**
GRSS	**Sisters**	**0.75**	**15**	⇑*e*P	**Pn**	**16 20 58.1**	**+0.4**
GRSS				*e*S	**Sn**	**16 21 12.2**	**+0.8**
GUIV	**Guiria**	**1.00**	**204**	⇓*i*P	**Pn**	**16 20 59.7**	**-0.5**
GUIV				*e*S	**Sn**	**16 21 13.6**	**-2.2**
TRN	**Trinidad (W)**	**1.00**	**156**	*e*P	**Pn**	**16 21 01.8**	**+1.6**
TRN				*e*S	**Sn**	**16 21 17.0**	**+1.3**
TPR	**Prospect**	**1.09**	**110**	*e*P	**Pn**	**16 21 01.1**	**0.0**
TPR				*e*S	**Sn**	**16 21 17.2**	**-0.2**
BOT	**Bacolet**	**1.15**	**110**	*e*P	**Pn**	**16 21 02.3**	**+0.5**
BOT				*e*S	**Sn**	**16 21 19.3**	**+0.7**
TOSP	**Speyside**	**1.28**	**102**	*e*P	**Pn**	**16 21 03.7**	**+0.3**
TOSP				*e*S	**Sn**	**16 21 21.3**	**-0.1**
TPP	**Pointe-a-Pierr**	**1.29**	**164**	*e*P	**Pn**	**16 21 05.5**	**+2.0**
TPP				*e*S	**Sn**	**16 21 22.6**	**+1.0**
TBH	**Brigand Hill**	**1.30**	**146**	*e*P	**Pn**	**16 21 05.1**	**+1.5**
TBH				*e*S	**Sn**	**16 21 23.4**	**+1.5**
ITEV	**Isla Los Testi**	**1.31**	**261**	⇓*i*P	**Pn**	**16 21 03.9**	**+0.2**
ITEV				*e*S	**Sn**	**16 21 21.3**	**-0.6**
CRUV	**Carupano**	**1.66**	**238**	*e*P	**Pn**	**16 21 08.6**	**+0.7**
CRUV				*e*S	**Sn**	**16 21 28.8**	**-0.6**
SVB	**Belmont**	**1.78**	**18**	*e*P	**Pn**	**16 21 10.0**	**+0.5**
SVB				*e*S	**Sn**	**16 21 31.9**	**-0.3**
MCLT	**Moule a Chique**	**2.29**	**22**	*e*P	**Pn**	**16 21 16.5**	**+0.5**
MCLT				*e*S	**Sn**	**16 21 43.4**	**-0.6**
ORIV	**Oritupano**	**2.94**	**212**	*e*P	**Pn**	**16 21 26.2**	**+1.7**
ORIV				*e*S	**Sn**	**16 21 58.3**	**-0.9**
PCRV	**Puerto La Cruz**	**3.10**	**244**	*e*P	**Pn**	**16 21 28.1**	**+1.4**
RIOV	**Rio Grande**	**3.48**	**180**	*e*P	**Pn**	**16 21 32.6**	**+0.9**
RIOV				*e*S	**Sn**	**16 22 09.0**	**-3.2**
PRGV	**PARIAGUAN**	**3.94**	**225**	*e*P	**Pn**	**16 21 39.0**	**+1.0**
GURV	**El Guri**	**3.99**	**198**	*e*P	**Pn**	**16 21 38.8**	**+0.1**
GURV				*e*S	**Sn**	**16 22 22.1**	**-2.4**
CUPV	**Cœpira**	**4.18**	**249**	*e*P	**Pn**	**16 21 43.7**	**+2.4**
ORCV	**Isla La Orchil**	**4.30**	**274**	*e*P	**Pn**	**16 21 43.8**	**+1.0**
BIRV	**Birongo**	**4.51**	**256**	*e*P	**Pn**	**16 21 47.6**	**+1.9**
LUEV	**Luepa**	**5.70**	**176**	⇓*e*P	**Pn**	**16 22 00.6**	**-1.3**
TURV	**Turiamo**	**6.02**	**260**	*e*P	**Pn**	**16 22 06.8**	**+0.6**
BAUV	**El Baul**	**6.66**	**248**	*e*P	**Pn**	**16 22 15.9**	**+1.1**
MAPV	**Macapo**	**6.75**	**256**	*e*P	**Pn**	**16 22 18.1**	**+2.0**
TEPV	**Terepaima**	**7.42**	**258**	*e*P	**Pn**	**16 22 26.8**	**+1.6**
MONV	**Montecano**	**8.00**	**274**	*e*P	**Pn**	**16 22 34.5**	**+1.5**
SOCV	**Socops**	**9.49**	**251**	*e*P	**Pn**	**16 22 53.9**	**+0.6**

IDC 07 16:27:42.9±3.6**, 22°.11S**×**175°.70W, h0km, mb3.9**/5**, mb1 4.1**/5**, mb1mx3.7**/19**, mbtmp3.9**/5**, Error ellipse: s-maj=119.6km s-min=37.2km az=134.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.07**	**246**	P	P	16 35 12.7	+0.9
	1.9nm,0.8s,baz=101,slow=5.2,SNR=2.9						
ASAR	**Alice Springs**	**46.26**	**258**	P	P	16 36 09.4	-1.1
	1.5nm,0.7s,baz=100,slow=7.1,SNR=26						
WRA	**Warramunga Arr**	**46.52**	**263**	P	P	16 36 11.6	-0.9
	0.6nm,0.5s,baz=103,slow=7.8,SNR=5.4						
MJAR	**Matsushiro Arr**	**72.78**	**323**	P	P	16 39 13.4	+0.1
	0.7nm,0.8s,baz=176,slow=6.1,SNR=4.4						
CMAR	**Chiang Mai Arr**	**92.67**	**289**	P	P	16 40 59.2	+1.9
	0.6nm,0.8s,baz=80,slow=1.5,SNR=4.6						
AKASG	**Malin Array Be**	**145.45**	**332**	PKPbc	PKPbc	16 47 21.1	-1.6
	0.2nm,0.3s,baz=36,slow=3.8,SNR=4.0						
BRTR	**Keskin Array B**	**149.51**	**312**	PKPbc	PKPbc	16 47 33.7	-0.9
	0.5nm,0.8s,baz=114,slow=1.7,SNR=3.1						

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*ISCJB **07** 16:31:44.5±0.7, 38°.75N±0°.03×40°.12E±0°.05, h3km±8km, Error ellipse: s-maj=6.8km s-min=5.1km az=161.3*
*ISK **07** 16:31:44.5, 38°.78N×40°.13E, h4km, MD2.8*
*DDA **07** 16:31:45.4, 38°.70N×40°.20E, h7km, MD2.9*
*CSEM **07** 16:31:46.0±0.5, 38°.74N×40°.00E, h5km, MD2.8, Error ellipse: s-maj=12.9km s-min=11.1km az=144.0*
ISC 07 16:31:44.4±1.3**, 38°.78N**±0°.03×**40°.15E**±0°.03**, h5km**±13km**, n17, σ1s15**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.28**	**70**	*e*Pg	**Pn**	**16 31 54.4**	**-0.9**
BINT				*e*Sg	**Sb**	**16 32 01.6**	**+4.4**
BNGB	**Bingˆ¶l**	**0.47**	**63**	*e*PG	**Pb**	**16 31 54.4**	**-0.7**
BNGB				*e*SG	**Sb**	**16 32 01.6**	**-0.8**
SVRC	**Sivrice-ELAZID**	**0.77**	**239**	*e*PG	**Pb**	**16 31 59.7**	**-0.7**
SVRC	**Sivrice-ELAZID**	**0.77**	**239**	*e*Pg	**Pb**	**16 31 59.7**	**-0.7**
BNGL	**BINGOL**	**0.80**	**77**	*i* P	Pg	16 31 49.4	-11
BNGL				*i* S	Sg	16 32 02.9	-7.2
DIYA	**Diyarbakir**	**0.85**	**181**	*i* P	**Pg**	**16 32 00.7**	**0.0**
DIYA				*i* S	**Sg**	**16 32 12.3**	**+0.5**
DIYA	**Diyarbakir**	**0.85**	**181**	*i* P	**Pg**	**16 32 00.7**	**0.0**
DIYA				*i* S	**Sg**	**16 32 12.3**	**+0.5**
ERZN	**Erzincan**	**0.87**	**338**	*e*PG	**Pg**	**16 32 01.1**	**0.0**
ERZN				*e*SG	**Sb**	**16 32 14.4**	**+0.2**
EZC	**Erzincan**	**1.15**	**328**	*e*PN	**Pn**	**16 32 07.1**	**-0.2**
EZC	**Erzincan**	**1.15**	**328**	*e*Pg	Pg	16 32 01.1	-5.4
EZC	**Erzincan**	**1.15**	**328**	*e*Pn	**Pn**	**16 32 07.1**	**-0.2**
EZC				*e*Sg	Sg	16 32 14.4	-7.0
BEST	**Besiri**	**1.25**	**135**	*i* P	**Pg**	**16 32 07.7**	**-0.6**
BEST				*i* S	**Sg**	**16 32 24.7**	**+0.2**
ILIC	**ilic-Erzincan**	**1.40**	**299**	*e*PN	**Pg**	**16 32 11.4**	**+0.2**
ILIC	**ilic-Erzincan**	**1.40**	**299**	*e*Pn	**Pg**	**16 32 11.5**	**+0.2**
MALT	**Malatya**	**1.43**	**252**	*e*PN	**Pg**	**16 32 11.8**	**+0.1**
MALT	**Malatya**	**1.43**	**252**	*e*Pn	**Pg**	**16 32 11.8**	**+0.1**
MARD	**Mardin**	**1.54**	**161**	*i* P	**Pn**	**16 32 12.6**	**-0.1**
MARD				*i* S	**Sn**	**16 32 33.0**	**-0.1**

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*TIR **07** 16:43:30.1±2.4, 41°.45N×19°.56E, h33km±14km, ML3.1*
*CSEM **07** 16:43:49.8±0.7, 41°.37N×19°.56E, h2km, ML3.1, Error ellipse: s-maj=11.3km s-min=5.9km az=30.0*
*PDG **07** 16:43:54.1±0.2, 41°.58N×19°.51E, h11km, ML2.1/6, Error ellipse: s-maj=0.8km s-min=0.7km az=90.0*
ISC 07 16:43:48.5±1.9**, 41°.28N**±0°.09×**19°.59E**±0°.04**, h25km**±10km**, n27, σ1s29**/51**, 4C-7D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.22**	**71**	*e*PG	**Pb**	**16 43 53.1**	**-1.3**
TIR				*e*SG	**Sb**	**16 44 03.1**	**+4.6**
TIR	**Tirane**	**0.22**	**71**	*e*Pg	**Pb**	**16 43 53.1**	**-1.3**
ULC	**Ulcinj**	**0.73**	**340**	⇓*i*Pg	**Pb**	**16 44 02.4**	**-0.3**
ULC				*e*Sg	**Sb**	**16 44 09.3**	**-3.0**
ULC	**Ulcinj**	**0.73**	**340**	⇓*i*Pg	**Pb**	**16 44 02.4**	**-0.3**
ULC				*e*Sg	**Sb**	**16 44 09.3**	**-3.0**
PHP	**Peshkopia**	**0.76**	**57**	*e*PG	**Pb**	**16 44 02.9**	**-0.3**
PHP				*e*SG	**Sn**	**16 44 14.7**	**+0.2**
PHP	**Peshkopia**	**0.76**	**57**	*e*Pg	**Pb**	**16 44 02.9**	**-0.3**
	SNR=3.0						
PHP				*e*Sg	**Sn**	**16 44 14.7**	**+0.2**
	SNR=3.0						
PUK	**Puka**	**0.80**	**17**	*e*PG	**Pb**	**16 44 03.7**	**-0.1**
PUK				*e*SG	**Sb**	**16 44 14.1**	**-0.2**
PUK	**Puka**	**0.80**	**17**	*e*Pg	**Pb**	**16 44 03.7**	**-0.1**
	SNR=5.0						
PUK				*e*Sg	**Sb**	**16 44 14.1**	**-0.2**
	SNR=5.0						
BCI	**Bajram Curri**	**1.15**	**18**	*e*PG	**Pn**	**16 44 08.1**	**-1.0**
BCI				*e*SG	**Sn**	**16 44 24.6**	**+0.6**
BCI	**Bajram Curri**	**1.15**	**18**	*e*Pg	**Pn**	**16 44 08.1**	**-1.0**
	SNR=95						
BCI				*e*Sg	**Sn**	**16 44 24.6**	**+0.6**
	SNR=95						
TTG	**Podgorica**	**1.18**	**348**	⇓*i*Pg	**Pb**	**16 44 10.8**	**+0.6**
TTG				*e*Sg	**Sn**	**16 44 24.0**	**-0.7**
PDG	**Podgorica**	**1.18**	**348**	*e*Pg	**Pb**	**16 44 09.7**	**-0.5**
PDG				*e*Sg	**Sn**	**16 44 25.2**	**+0.5**
PVY	**Plav**	**1.35**	**12**	⇓*i*Pg	**Pb**	**16 44 13.8**	**+0.6**
PVY				*e*Sg	**Sb**	**16 44 31.1**	**+1.1**
PVY	**Plav**	**1.35**	**12**	⇓*i*Pg	**Pb**	**16 44 13.8**	**+0.6**
PVY				*e*Sg	**Sb**	**16 44 31.1**	**+1.1**
HCY	**Herceg Novi**	**1.43**	**325**	*e*Pg	**Pb**	**16 44 15.1**	**+0.7**
HCY				*e*Sg	**Sb**	**16 44 33.1**	**+0.9**
HCY	**Herceg Novi**	**1.43**	**325**	*e*Pg	**Pb**	**16 44 15.1**	**+0.7**
HCY				*e*Sg	**Sb**	**16 44 33.1**	**+0.9**
NKY	**Niksic**	**1.60**	**344**	⇑*i*Pg	**Pb**	**16 44 18.4**	**+1.0**
NKY				*e*Sg	**Sb**	**16 44 37.9**	**+0.7**
NKY	**Niksic**	**1.60**	**344**	⇑*i*Pg	**Pb**	**16 44 18.4**	**+1.0**
NKY				*e*Sg	**Sb**	**16 44 37.9**	**+0.7**
BEY	**Berane**	**1.61**	**8**	⇓*i*Pg	**Pb**	**16 44 18.5**	**+0.9**
BEY				*e*Sg	**Sb**	**16 44 39.6**	**+2.0**
IVA	**Berane**	**1.61**	**8**	⇓*i*Pg	**Pb**	**16 44 18.5**	**+0.9**
IVA				*e*Sg	**Sb**	**16 44 39.6**	**+2.0**
BRY	**Bratogost**	**1.80**	**335**	⇑*i*Pg	**Pb**	**16 44 21.9**	**+1.0**
BRY				*e*Sg	**Sb**	**16 44 44.0**	**+0.9**
BRY	**Bratogost**	**1.80**	**335**	⇑*i*Pg	**Pb**	**16 44 21.9**	**+1.0**
BRY				*e*Sg	**Sb**	**16 44 44.0**	**+0.9**
UPM	**Unac-Piva**	**1.99**	**346**	*e*Pn	**Pb**	**16 44 24.9**	**+0.7**
UPM				*e*Sn	**Sb**	**16 44 48.8**	**+0.2**
UPM	**Unac-Piva**	**1.99**	**346**	*e*Pn	**Pb**	**16 44 24.9**	**+0.7**
UPM				*e*Sn	**Sb**	**16 44 48.8**	**+0.2**
BARS	**Barje**	**2.26**	**46**	*e*Pn	**Pb**	**16 44 29.5**	**+0.8**
IVAS	**Ivanjica**	**2.34**	**10**	*e*Pn	**Pb**	**16 44 29.6**	**-0.4**
IVAS				*e*Sg	**Sb**	**16 44 57.7**	**-0.7**
GRUS	**Gruza**	**2.74**	**17**	*e*Pn	**Pb**	**16 44 34.4**	**-2.4**

IDC 07 16:59:25.7±3.4**, 23°.12S**×**177°.90W, h0km, mb4.3**/3**, mb1 4.5**/3**, mb1mx3.8**/18**, mbtmp4.3**/3**, Error ellipse: s-maj=172.2km s-min=45.4km az=150.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.80**	**247**	P	P	17 06 35.2	-0.2
	1.0nm,0.5s,baz=90,slow=13,SNR=5.2						
ASAR	**Alice Springs**	**44.07**	**259**	P	P	17 07 35.3	-0.5
	3.3nm,0.8s,baz=96,slow=7.6,SNR=17						
WRA	**Warramunga Arr**	**44.39**	**265**	P	P	17 07 38.6	+0.2
	7.8nm,0.7s,baz=102,slow=8.2,SNR=21						
MKAR	**Makanchi Array**	**113.05**	**313**	PKiKP	PKiKP	17 18 04.0	-0.9
	0.2nm,0.8s,baz=92,slow=1.2,SNR=2.8						
BRTR	**Keskin Array B**	**148.62**	**309**	PKPbc	PKPbc	17 19 14.6	-0.5
	0.3nm,0.6s,baz=95,slow=4.5,SNR=2.5						
MMAI	**Mount Meron Ar**	**149.12**	**296**	PKPbc	PKPbc	17 19 16.2	-0.2
	1.8nm,0.5s,baz=72,slow=5.4,SNR=4.5						

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*AUST **07** 17:02:48.8±0.4, 8°.52S×120°.03E, h85km, Error ellipse: s-maj=1.1km s-min=0.8km az=39.0*
*ISCJB **07** 17:02:50.9±0.5, 8°.16S±0°.04×119°.87E±0°.06, h201km, mb3.7/3, Error ellipse: s-maj=8.7km s-min=5.3km az=157.5*
*DJA **07** 17:02:53.7±0.9, 8°S±4°×12°0E±°, h116km±14km, M3.9/7, mb4.0/1, MLv3.9/7*
*IDC **07** 17:02:56.4±3.2, 7°.85S×120°.50E, h225km±33km, mb3.4/4, mb1 3.5/5, mb1mx3.1/22, mbtmp3.3/5, Error ellipse: s-maj=89.7km s-min=9.8km az=53.0*
ISC 07 17:02:51.6±0.7**, 8°.22S**±0°.06×**119°.83E**±0°.07**, h201km, n28, σ2s28**/28**, mb3.5**/3**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.51**	**162**	P	Pn	17 03 20.7	-4.8
WSI				S	S	17 03 43.9	-7.7
WSI	**Waingapu**	**1.51**	**162**	S	S	17 03 20.6	-31
	baz=1.2,SNR=21						
MMRI	**Maumere**	**2.41**	**100**	P	**Pn**	**17 03 37.2**	**+2.6**
MMRI				S	**S**	**17 04 02.5**	**-5.0**
BKSI	**Bulukumba**	**2.90**	**6**	P	**Pn**	**17 03 38.1**	**-2.1**
BKSI				S	**S**	**17 04 15.6**	**-1.9**
KAPI	**Kappang**	**3.19**	**359**	P	**Pn**	**17 03 41.2**	**-2.4**
BBSI	**Bau Bau**	**3.84**	**45**	P	**Pn**	**17 03 50.8**	**-0.8**
KHKI	**Kahang-Kahang**	**4.18**	**268**	P	**Pn**	**17 03 53.6**	**-2.2**
SPSI	**Sidrap Palu**	**4.23**	**359**	P	**Pn**	**17 03 56.8**	**+0.4**
BBKI	**Banjar Baru**	**6.86**	**313**	P	**Pn**	**17 04 30.4**	**+0.3**
UGM	**Wanagama**	**9.22**	**271**	P	**Pn**	**17 05 00.6**	**-0.4**
	baz=9.4,SNR=4.4						
FITZ	**Fitzroy Crossi**	**11.33**	**151**	P	**Pn**	**17 05 26.7**	**-1.3**
	baz=11,SNR=87						
FITZ				S	**S**	**17 07 29.5**	**-4.9**
	baz=11,SNR=3.4						
MTN	**Manton Dam**	**12.02**	**113**	P	**Pn**	**17 05 34.9**	**-2.0**
	baz=12,SNR=73						
MTN				S	S	17 07 38.9	-12
	baz=12,SNR=14						
TLE	**Tual**	**13.06**	**79**	P	**Pn**	**17 05 49.9**	**-0.1**
	baz=13,SNR=3.5						
KDU	**Kakadu**	**13.20**	**111**	P	**Pn**	**17 05 50.4**	**-1.3**
	baz=13,SNR=17						
WRA	**Warramunga Arr**	**18.25**	**131**	P	**P**	**17 06 51.1**	**+0.9**
	1.1nm,0.3s,baz=304,slow=12,SNR=19						
WRA				S	**S**	**17 10 05.5**	**-3.0**
	1.0nm,0.3s,baz=296,slow=21,SNR=12						
MEEK	**Meekatharra**	**18.35**	**183**	P	**Pn**	**17 06 53.9**	**+0.1**
	baz=18,SNR=6.9						
MEEK				S	**S**	**17 10 09.5**	**-1.0**
	baz=18,SNR=14						
ASAR	**Alice Springs**	**20.44**	**140**	P	**P**	**17 07 15.0**	**+1.3**
	2.4nm,0.3s,baz=326,slow=12,SNR=98						
ASAR				S	**S**	**17 10 52.0**	**+0.5**
	1.4nm,0.7s,baz=327,slow=23,SNR=7.7						
MORW	**Morawa**	**21.04**	**189**	P	P	17 07 39.9	+20
	baz=21,SNR=6.6						
MORW				S	S	17 11 11.8	+9.4
	baz=21,SNR=4.5						
BLDU	**Ballidu**	**22.47**	**187**	S	S	17 11 45.9	+20
	baz=22,SNR=4.6						
QIS	**Mount Isa**	**22.70**	**125**	S	**S**	**17 11 30.4**	**+0.7**
	baz=22,SNR=5.2						
COEN	**Coen**	**23.59**	**106**	P	**P**	**17 07 47.2**	**+2.7**
	baz=23,SNR=7.5						
GSI	**Gunungsitoli**	**24.13**	**292**	P	P	17 08 03.5	+14
	baz=24,SNR=8.4						
GSI				S	S	17 12 04.7	+12
	baz=24,SNR=13						
BBOO	**Buckleboo**	**28.72**	**151**	P	**P**	**17 08 32.6**	**+2.4**
	baz=28,SNR=9.2						
STKA	**Stephens Creek**	**31.04**	**142**	P	**P**	**17 08 53.5**	**+2.8**
	4.1nm,0.5s,baz=314,slow=9.3,SNR=17						
STKA	**Stephens Creek**	**31.04**	**142**	P	**P**	**17 08 53.5**	**+2.8**
	baz=31,SNR=14						
NFK	**Norfolk Island**	**49.65**	**121**	P	P	17 11 30.2	+7.0
	baz=49,SNR=4.2						
MKAR	**Makanchi Array**	**64.15**	**332**	P	**P**	**17 13 06.7**	**+2.0**
	0.4nm,0.5s,baz=156,slow=7.1,SNR=9.5						
ZALV	**Zalesovo Beam**	**68.62**	**339**	P	**P**	**17 13 34.1**	**+1.4**
	0.3nm,0.3s,baz=154,slow=7.2,SNR=2.8						

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*CSEM **07** 17:07:24.9, 42°.37N×13°.36E, h9km, MD2.5/17, After ROM*
ROM 07 17:07:24.9±0.1**, 42°.37N**×**13°.36E, h9km**±1km**, Md2.5**/17**, Ml2.3**/17**, Error ellipse: s-maj=1.7km s-min=1.4km az=79.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**108**	Pg	Pg	17 07 27.2	+0.4
AQU				Sg	Sg	17 07 28.5	+0.4
	8µm,0.3s						
AQU	**L'Aquila**	**0.04**	**108**	Pg	Pg	17 07 27.2	+0.4
AQU				Sg	Sg	17 07 28.5	+0.4
	8µm,0.3s						
CAMP	**Campotosto**	**0.17**	**13**	Pg	Pg	17 07 29.3	+0.5
CAMP				Sg	Sg	17 07 32.3	+0.8
	818nm,0.5s						
CAMP	**Campotosto**	**0.17**	**13**	Pg	Pg	17 07 29.3	+0.5
CAMP				Sg	Sg	17 07 32.3	+0.8
	818nm,0.5s						
FAGN	**Fagnano**	**0.20**	**120**	Pg	Pg	17 07 29.7	+0.6
FAGN				Sg	Sg	17 07 33.0	+1.1
	2µm,0.4s						
FAGN	**Fagnano**	**0.20**	**120**	Pg	Pg	17 07 29.7	+0.6
FAGN				Sg	Sg	17 07 33.0	+1.1
	2µm,0.4s						
FIAM	**Fiamignano**	**0.20**	**241**	Pg	Pg	17 07 29.8	+0.5
FIAM				Sg	Sg	17 07 32.9	+0.7
	1µm,0.5s						
FIAM	**Fiamignano**	**0.20**	**241**	Pg	Pg	17 07 29.8	+0.5
FIAM				Sg	Sg	17 07 32.9	+0.7
	1µm,0.5s						
TERO	**Teramo**	**0.32**	**35**	Pg	Pg	17 07 31.2	-0.1
TERO				Sg	Sg	17 07 35.9	+0.3
	1µm,0.7s						
TERO	**Teramo**	**0.32**	**35**	Pg	Pg	17 07 31.2	-0.1
TERO				Sg	Sg	17 07 35.9	+0.3
	1µm,0.7s						
LNSS	**Leonessa**	**0.33**	**316**	Pg	Pg	17 07 31.8	+0.1
LNSS				Sg	Sb	17 07 38.1	-0.6
	401nm,0.4s						
LNSS	**Leonessa**	**0.33**	**316**	Pg	Pg	17 07 31.8	+0.1
LNSS				Sg	Sb	17 07 38.1	-0.6
	401nm,0.4s						
PTQR	**Pietraquaria**	**0.34**	**174**	Pg	Pg	17 07 31.9	0.0
PTQR				Sg	Sg	17 07 36.8	+0.3
	78nm,0.4s						
PTQR	**Pietraquaria**	**0.34**	**174**	Pg	Pg	17 07 31.9	0.0
PTQR				Sg	Sg	17 07 36.8	+0.3
	78nm,0.4s						
VCEL	**Villa Celiera**	**0.36**	**85**	Pg	Pb	17 07 33.2	-0.4
VCEL				Sg	Sb	17 07 39.5	0.0
	725nm,0.6s						
VCEL	**Villa Celiera**	**0.36**	**85**	Pg	Pb	17 07 33.2	-0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCEL				Sg	Sb	17 07 39.5	0.0
	725nm,0.6s						
CERT	Cerreto	0.50	214	Pg	Pg	17 07 34.5	-0.2
CERT				Sg	Sg	17 07 41.8	+0.4
	372nm,0.4s						
CERT	Cerreto	0.50	214	Pg	Pg	17 07 34.5	-0.2
CERT				Sg	Sg	17 07 41.8	+0.4
	372nm,0.4s						
MNS	Montasola	0.50	272	Pg	Pb	17 07 36.0	+0.1
	148nm,0.4s						
MNS	Montasola	0.50	272	Pg	Pb	17 07 36.0	+0.1
	148nm,0.4s						
NRCA	Norcia	0.50	339	Pg	Pg	17 07 34.8	0.0
NRCA				Sg	Sb	17 07 42.6	-0.9
	160nm,0.1s						
NRCA	Norcia	0.50	339	Pg	Pg	17 07 34.8	0.0
NRCA				Sg	Sb	17 07 42.6	-0.9
	160nm,0.1s						
VVLD	Villa Vallelon	0.53	158	Pg	Pg	17 07 35.7	+0.3
	133nm,0.5s						
VVLD	Villa Vallelon	0.53	158	Pg	Pg	17 07 35.7	+0.3
	133nm,0.5s						
INTR	Introdacqua	0.54	131	Pg	Pb	17 07 36.1	-0.5
INTR				Sg	Sb	17 07 43.7	-0.9
	157nm,0.5s						
INTR	Introdacqua	0.54	131	Pg	Pb	17 07 36.1	-0.5
INTR				Sg	Sb	17 07 43.7	-0.9
	157nm,0.5s						
MTCE	Montecelio	0.57	233	Pg	Pb	17 07 37.0	-0.1
	99nm,0.7s						
MTCE	Montecelio	0.57	233	Pg	Pb	17 07 37.0	-0.1
	99nm,0.7s						
GUAR	Guarcino	0.57	183	Pg	Pb	17 07 37.4	+0.3
	98nm,0.4s						
GUAR	Guarcino	0.57	183	Pg	Pb	17 07 37.4	+0.3
	98nm,0.4s						
FDMO	Fiordimonte	0.70	344	Pg	Pg	17 07 38.7	+0.2
	67nm,0.4s						
FDMO	Fiordimonte	0.70	344	Pg	Pg	17 07 38.7	+0.2
	67nm,0.4s						
CESI	CESI - Serrava	0.72	333	Pg	Pg	17 07 39.0	0.0
	49nm,0.4s						
CESI	CESI - Serrava	0.72	333	Pg	Pg	17 07 39.0	0.0
	49nm,0.4s						
SDI	San Donato	0.74	153	Pg	Pb	17 07 39.8	-0.2
	30nm,0.4s						
SDI	San Donato	0.74	153	Pg	Pb	17 07 39.8	-0.2
	30nm,0.4s						
GIUL	Giuliano Di Ro	0.81	185	Pg	Pb	17 07 41.3	+0.1
	88nm,0.8s						
GIUL	Giuliano Di Ro	0.81	185	Pg	Pb	17 07 41.3	+0.1
	88nm,0.8s						
ASSB	Assisi San Ben	0.85	323	Pg	Pg	17 07 41.1	-0.3
	71nm,0.4s						
ASSB	Assisi San Ben	0.85	323	Pg	Pg	17 07 41.1	-0.3
	71nm,0.4s						

MEX 07 17:12:10.8±0.6**, 17°.16N×99°.75W, h49**km±7km**, MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	Acapulco	0.31	199	*i* P	Pn	17 12 18.8	-1.2
ACX				*i* S	Sn	17 12 25.1	-1.3
CAIG	El Cayaco	0.51	257	*i* P	Pn	17 12 20.2	-1.8
CAIG				*i* S	Sn	17 12 28.1	-2.0
MEIG	Mezcala	0.77	9	*e*P	Pn	17 12 23.7	-1.9
MEIG				*i* S	Sn	17 12 34.2	-2.1
ARIG	Puente Sto Nin	1.25	333	*e*P	Pn	17 12 30.3	-1.6
ARIG				*i* S	Sn	17 12 46.0	-1.6
PNIG	Pinotepa	1.73	116	*e*P	Pn	17 12 37.6	-1.0
PNIG				*i* S	Sn	17 12 57.7	-1.9
PPM	Popocatepetl	2.17	29	*i* P	Pn	17 12 43.2	-2.1
PPM				*i* S	Sn	17 13 08.7	-2.7

*OMAN **07** 17:32:41.1±99.0, 33°.37N×47°.32E, h98km, Error ellipse: s-maj=65.2km s-min=5.3km az=336.0*
*IDC **07** 17:32:49.8±0.6, 32°.76N×47°.83E, h0km, mb4.1/24, mb1 4.2/29, mb1mx4.2/35, mbtmp4.1/29, ML3.8/5, MS3.8/7, Ms1 3.7/7, ms1mx3.3/48, Error ellipse: s-maj=16.3km s-min=11.5km az=173.0*
*BJI **07** 17:32:49.3, 32°.70N×47°.00E, h42km, mB5.0/17, mb4.5/29, Ms4.7/9, Ms7 4.4/10*
*NEIC **07** 17:32:50.2±0.3, 32°.59N×47°.77E, h10km, mb4.7/28, ML4.4(THR), MN4.5(TEH), Error ellipse: s-maj=6.4km s-min=3.0km az=3.0*
*CSEM **07** 17:32:51.2±0.1, 32°.52N×47°.85E, h15km, mb4.7/38, Ms4.6, Error ellipse: s-maj=4.5km s-min=2.9km az=11.0*
*TEH **07** 17:32:51.6, 32°.52N×47°.83E, h5km, ML4.5*
*MOS **07** 17:32:52.2±1.4, 32°.62N×47°.79E, h33km, mb4.5/30, Error ellipse: s-maj=7.2km s-min=4.4km az=119.5*
*THR **07** 17:32:52.5±0.6, 32°.71N×48°.00E, h14km±7km, ML4.3*
ISC 07 17:32:50.3±0.8**, 32°.58N**±0°.03×**47°.84E**±0°.03**, h4**km±4km**, n514, σ1s.59**/528**, mb4.5**/82**, MS4.2**/7**, 16C-18D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	0.94	120	*e*Pg	Pb	17 33 09.6	+0.3
SHGR				AML	AML	17 33 45.3	
	comp=E,11µm,0.6s						
SHGR	Shooshtar-Gavs	0.94	120	P	Pb	17 33 09.0	-0.3
SHGR	Shooshtar-Gavs	0.94	120	P	Pb	17 33 09.0	-0.3
IKOM	Komasi	1.61	350	*e*Pn	Pn	17 33 19.6	-0.2
IKOM				*e*		17 33 21.8	
	comp=Z,93µm,0.1s						
IKOM				*e*Sg	Sg	17 33 43.6	+1.4
IKOM	Komasi	1.61	350	*e*Pn	Pn	17 33 19.6	-0.2
IKOM				*e*Sg	Sg	17 33 43.6	+1.4
IGHG	Ghaleghazi	2.04	329	*e*Pn	Pb	17 33 27.5	-0.7
IGHG				*e*		17 33 29.9	
	comp=Z,34µm,0.1s						
IGHG				*e*Sg	Sg	17 33 56.4	+0.5
IGHG	Ghaleghazi	2.04	329	*e*Pn	Pb	17 33 27.5	-0.7
IGHG				*e*Sg	Sg	17 33 56.4	+0.5
IVIS	Veis	2.11	337	*e*Pn	Pn	17 33 27.8	+1.2
IVIS				*e*		17 33 31.2	
	comp=Z,25µm,0.2s						
IVIS	Veis	2.11	337	*e*Pn	Pn	17 33 27.8	+1.2
IDHR	Dehrash	2.43	331	*e*Pn	Pn	17 33 31.9	+0.8
IDHR				*e*		17 33 35.8	
	comp=Z,52µm,0.2s						
IDHR				*e*Sg	Sg	17 34 09.5	+0.9
IDHR	Dehrash	2.43	331	*e*Pn	Pn	17 33 31.9	+0.8
IDHR				*e*Sg	Sg	17 34 09.5	+0.9
ILIN	Lien	2.44	343	*e*Pn	Pn	17 33 32.4	+1.1
ILIN				*e*		17 34 13.9	
	comp=Z,13µm,0.2s						
ILIN	Lien	2.44	343	*e*Pn	Pn	17 33 32.4	+1.1
SNGE	Sanandaj	2.54	351	*e*Pn	Pn	17 33 33.9	+1.3
SNGE				AML	AML	17 34 16.0	
	comp=E,1µm,0.7s						
SNGE	Sanandaj	2.54	351	P	Pn	17 33 33.0	+0.4
SNGE	Sanandaj	2.54	351	P	Pn	17 33 33.0	+0.4
IPIR	Pirpir	2.58	87	*e*Pn	Pn	17 33 34.6	+1.4
IPIR				*e*		17 34 16.5	
	comp=Z,19µm,0.3s						
IPIR	Pirpir	2.58	87	*e*Pn	Pn	17 33 34.6	+1.4
MIB	Mutribah	2.80	189	*e*P	Pn	17 33 38.4	+2.4
MIB				AML	AML	17 34 16.3	
	comp=Z,488nm,0.5s						
MIB	Mutribah	2.80	189	*e*P	Pn	17 33 38.4	+2.4
BHD	Baghdad	2.99	284	*e*x	Pn	17 33 37.9	-0.6
BHD				*e*x	Pg	17 33 47.0	-0.6
BHD				*e*x	Sn	17 34 14.0	-0.8
BHD	Baghdad	2.99	284	P	Pb	17 33 42.0	-2.1
BHD				S	Sb	17 34 19.0	-2.0
BHD	Baghdad	2.99	284	*e*Pn	Pn	17 33 37.9	-0.6
BHD				*e*Sn	Sn	17 34 14.0	-0.8
UMR	Umm Al-Rimmam	3.02	182	*e*P	Pn	17 33 40.8	+1.8
UMR	Umm Al-Rimmam	3.02	182	*e*P	Pn	17 33 40.8	+1.8
IKLH	Kolahrood	3.23	76	Pn	Pn	17 33 43.1	+1.0
IKLH	Kolahrood	3.23	76	*e*Pn	Pn	17 33 43.2	+1.1
IKLH				*e*		17 34 43.8	
	comp=Z,12µm,0.4s						
IKLH	Kolahrood	3.23	76	*e*Pn	Pn	17 33 43.2	+1.1
IRAZ	Razeghan	3.31	31	*e*Pn	Pn	17 33 44.7	+1.5
IRAZ				*e*Sg	Sg	17 34 36.2	-0.4
IRAZ				*e*		17 34 52.5	
	comp=Z,20µm,0.6s						
IRAZ	Razeghan	3.31	31	*e*Pn	Pn	17 33 44.7	+1.5
IRAZ				*e*Sg	Sg	17 34 36.2	-0.4
NAY	Al-Naaiem	3.36	189	*e*P	Pn	17 33 45.8	+2.1
NAY	Al-Naaiem	3.36	189	*e*P	Pn	17 33 45.8	+2.1
KBD	Kabd	3.40	182	*e*P	Pn	17 33 45.7	+1.5
KBD				AML	AML	17 34 41.6	
	comp=Z,162nm,0.4s						
KBD	Kabd	3.40	182	*e*P	Pn	17 33 45.7	+1.5
IR5	Iran Long-Peri	3.48	40	*e*Pn	Pn	17 33 46.5	+1.1
IR5	Iran Long-Peri	3.48	40	*e*Pn	Pn	17 33 46.5	+1.1
IGAR	Gharneh	3.56	92	*e*Pn	Pn	17 33 47.6	+1.0
IGAR				*e*		17 33 51.5	
	comp=Z,7µm,0.1s						
RDF	Al-Radifah	3.65	184	*e*P	Pn	17 33 50.0	+2.3
RDF				AML	AML	17 34 37.9	
	comp=Z,468nm,0.5s						
RDF	Al-Radifah	3.65	184	*e*P	Pn	17 33 50.0	+2.3
IZEF	Zefreh	3.80	84	Pn	Pn	17 33 50.7	+0.8
IZEF	Zefreh	3.80	84	*e*Pn	Pn	17 33 50.7	+0.8
IZEF				*e*		17 34 05.5	
	comp=Z,5µm,0.2s						
IZEF	Zefreh	3.80	84	*e*Pn	Pn	17 33 50.7	+0.8
QRN	Al-Qurain	3.83	179	*e*P	Pn	17 33 52.3	+2.2
QRN				AML	AML	17 34 38.9	
	comp=Z,354nm,0.5s						
IMHD	Mahdasht	3.88	36	Pn	Pn	17 33 51.9	+0.9
IMHD	Mahdasht	3.88	36	*e*Pn	Pn	17 33 51.9	+0.9
IMHD				*e*		17 34 57.0	
	comp=Z,9µm,0.5s						
IMHD	Mahdasht	3.88	36	*e*Pn	Pn	17 33 51.9	+0.9
IR3	Iran Long-Peri	3.92	42	*e*Pn	Pn	17 33 52.4	+1.0
IR3	Iran Long-Peri	3.92	42	*e*Pn	Pn	17 33 52.4	+1.0
IVRN	Varamin	4.04	52	*e*Pn	Pn	17 33 54.1	+1.1
IVRN				*e*		17 34 07.3	
	comp=Z,18µm,0.6s						
IVRN	Varamin	4.04	52	*e*Pn	Pn	17 33 54.1	+1.1
THKV	Tehran--Karaj	4.17	36	*e*Pn	Pn	17 33 55.8	+0.8
THKV	Tehran--Karaj	4.17	36	P	Pn	17 33 55.0	0.0
THKV	Tehran--Karaj	4.17	36	P	Pn	17 33 55.0	0.0
NASN	Na'in	4.20	86	*e*PN5		17 33 56.4	
NASN	Na'in	4.20	86	P	Pn	17 33 56.0	+0.5
NASN	Na'in	4.20	86	P	Pn	17 33 56.0	+0.5
DAMV	Damavand	4.58	47	*e*PN5		17 34 01.4	
DAMV				*e*Sg	Sb	17 35 08.7	+1.5
DAMV	Damavand	4.58	47	P	Pn	17 34 01.0	+0.3
DAMV	Damavand	4.58	47	P	Pn	17 34 01.0	+0.3
IDMV	Damavand	4.59	48	⇑*e*Pn	Pn	17 34 01.3	+0.5
IDMV				*e*		17 35 34.6	
	comp=Z,6µm,0.4s						
IDMV	Damavand	4.59	48	⇑*e*Pn	Pn	17 34 01.3	+0.5
SHI	Shiraz	4.97	125	*e*Pn	Pn	17 34 06.4	+0.5
SHI				*e*		17 35 12.1	
	comp=E,4µm,0.2s						
SHI	Shiraz	4.97	125	*e*Pn	Pn	17 34 06.4	+0.5
ILAS	Lasjerd	5.09	55	*e*		17 34 11.2	
	comp=Z,4µm,0.3s						
ILAS				*e*Pn	Pn	17 34 08.3	+0.6
IFIR	Firoozkooh	5.09	52	*e*		17 34 29.6	
	comp=Z,1µm,0.2s						
IFIR				*e*Pn	Pn	17 34 08.4	+0.7
IBST	Bostanabad	5.17	352	*e*		17 34 33.0	
	comp=Z,541nm,0.3s						
IBST				*e*Pn	Pn	17 34 09.7	+1.0
ISRB	Sarab	5.23	359	*e*Pn	Pn	17 34 10.8	+1.2
ISRB				*e*		17 34 48.8	
	comp=Z,3µm,0.6s						
ISRB	Sarab	5.23	359	*e*Pn	Pn	17 34 10.8	+1.2
IAZR	Azarshahr	5.31	344	Pn	Pn	17 34 11.7	+1.1
IAZR	Azarshahr	5.31	344	*e*Pn	Pn	17 34 11.8	+1.1
IAZR				*e*		17 34 31.4	
	comp=Z,2µm,0.2s						
IAZR	Azarshahr	5.31	344	Pn	Pn	17 34 11.7	+1.1
MSL	Mosul	5.45	316	P	Pn	17 34 15.0	+2.6
MSL				S	Sn	17 35 18.0	+2.3
ISRV	Sarvestan	5.54	124	*e*Pn	Pn	17 34 13.7	-0.2
ISRV				*e*		17 36 28.6	
	comp=Z,3µm,0.5s						
ISRV	Sarvestan	5.54	124	*e*Pn	Pn	17 34 13.7	-0.2
ISHM	Shahmirzad	5.55	53	Pn	Pn	17 34 14.8	+0.8
ISHM	Shahmirzad	5.55	53	*e*Pn	Pn	17 34 14.9	+0.9
ISHM				*e*		17 34 35.2	
	comp=Z,5µm,0.3s						
ISHM	Shahmirzad	5.55	53	*e*Pn	Pn	17 34 14.9	+0.9
ICHK	Chekchek	5.57	92	Pn	Pn	17 34 14.5	+0.3
ICHK	Chekchek	5.57	92	*e*Pn	Pn	17 34 14.5	+0.3
ICHK				*e*		17 36 09.2	
	comp=Z,2µm,0.4s						
ICHK	Chekchek	5.57	92	*e*Pn	Pn	17 34 14.5	+0.3
IHRS	Heris	5.76	354	*e*Pn	Pn	17 34 18.0	+1.1
IHRS				*e*		17 34 52.0	
	comp=Z,1µm,0.5s						
IHRS	Heris	5.76	354	*e*Pn	Pn	17 34 18.0	+1.1
CUKT	Cukurca	5.81	324	*e*PN	Pn	17 34 18.6	+1.1
IANJ	Anjilo	5.81	59	*e*Pn	Pn	17 34 17.1	-0.4
IANJ				*e*		17 34 20.2	
	comp=Z,2µm,0.3s						
IANJ	Anjilo	5.81	59	*e*Pn	Pn	17 34 17.1	-0.4
IMEH	Mehriz	5.88	100	*e*Pn	Pn	17 34 18.3	-0.2
IMEH				*e*		17 36 19.8	
	comp=Z,1µm,0.5s						
IMEH	Mehriz	5.88	100	*e*Pn	Pn	17 34 18.3	-0.2
IMRD	Marand	6.36	345	*e*Pn	Pn	17 34 26.2	+1.1
IMRD				*e*		17 35 02.0	
	comp=Z,1µm,0.4s						
IMRD	Marand	6.36	345	*e*Pn	Pn	17 34 26.2	+1.1
IBAF	Bafgh	6.63	97	Pn	Pn	17 34 28.9	+0.1
IBAF	Bafgh	6.63	97	*e*Pn	Pn	17 34 29.0	+0.1
IBAF				*e*		17 34 34.4	
	comp=Z,995nm,0.2s						
IBAF	Bafgh	6.63	97	*e*Pn	Pn	17 34 29.0	+0.1
CLDR	Caldiran	7.28	335	*e*PN	Pn	17 34 44.8	+7.1
BTMT	Batman	7.63	319	*e*PN	Pn	17 34 41.0	-1.4
BNGB	Bingˆ¶l	8.64	320	*e*PN	Pn	17 34 57.2	+0.9
URFA	Urfa	8.84	306	*e*PN	Pn	17 34 58.9	-0.2
EZM	Erzurum	8.98	326	*e*PN	Pn	17 35 03.7	+2.5
SVRC	Sivrice-ELAZID	9.04	312	*e*PN	Pn	17 35 02.0	+0.1
IBND	Bandar-abas	9.11	122	*e*Pn	Pn	17 35 01.4	-1.3
IBND				*e*		17 36 57.5	
	comp=Z,3µm,0.1s						
IBND	Bandar-abas	9.11	122	*e*Pn	Pn	17 35 01.4	-1.3
ASF	Jabal al Asfar	9.26	270	Pn	Pn	17 35 03.4	-1.4
ASF				Sn	Sn	17 36 42.9	-6.7
ASF				Lg	Lg	17 37 54.7	
ASF	Jabal al Asfar	9.26	270	Pn	Pn	17 35 03.4	-1.4
	comp=Z,2.6nm,0.3s,baz=325,slow=7.5,SNR=15						
ASF				Sn	Sn	17 36 42.9	-6.7
	comp=Z,2.3nm,0.3s,baz=131,slow=6.0,SNR=1.8						
ASF				Lg	Lg	17 37 54.7	
	comp=Z,1.7nm,0.3s,baz=154,slow=23,SNR=1.8						
ASF				LR	LR	17 39 18.5	
	comp=Z,178nm,21.8s,baz=128,slow=42						
IKOO	Kooshah	9.43	88	*e*		17 35 53.2	
	comp=Z,429nm,0.5s						
IKOO				*e*Pn	Pn	17 35 07.0	-0.3
ISFR	Sfrayin	9.47	59	*e*Pn	Pn	17 35 08.0	+0.2
ISFR	Sfrayin	9.47	59	*e*Pn	Pn	17 35 08.0	+0.2
MALT	Malatya	9.57	309	*e*PN	Pn	17 35 08.0	-1.0
MALT	Malatya	9.57	309	*e*P	Pn	17 35 08.0	-1.0
MALT				pmax	pmax		
	comp=Z,44nm,1.4s						
MALT	Malatya	9.57	309	*e*Pn	Pn	17 35 08.0	-1.0
	comp=Z,44nm,1.4s						
MALT	Malatya	9.57	309	*e*P	Pn	17 35 08.0	-1.0
	comp=Z,44nm,1.4s						
MYA	Malataya	9.58	309	*e*PN	Pn	17 35 07.8	-1.4
ERZN	Erzincan	9.59	319	*e*PN	Pn	17 35 07.8	-1.5
IKRD	Kardeh	9.73	62	*e*Pn	Pn	17 35 21.7	+10
IKRD				*e*		17 35 44.0	
	comp=Z,190nm,0.4s						
IKRD	Kardeh	9.73	62	*e*Pn	Pn	17 35 21.7	+10
IAKL	Akhelmad	9.85	63	Pn	Pn	17 35 13.1	0.0
IAKL	Akhelmad	9.85	63	*e*Pn	Pn	17 35 13.2	+0.1
BANOM	Banah	9.93	130	P	Pn	17 35 12.1	-1.8
	SNR=18						
BANOM	Banah	9.93	130	P	Pn	17 35 12.1	-1.8
	SNR=18						
BAYT	Ayd˜–ntepe-Bay	9.95	324	*e*PN	Pn	17 35 15.1	+0.8
IPAY	Payeh	9.98	64	*e*Pn	Pn	17 35 14.8	0.0
IPAY				*e*		17 35 27.7	
	comp=Z,131nm,0.2s						
IPAY	Payeh	9.98	64	*e*Pn	Pn	17 35 14.8	0.0
ILIC	ilic-Erzincan	10.16	315	*e*PN	Pn	17 35 16.8	-0.4
NAZ	Nazwa, Dubai	10.21	136	P	Pn	17 35 16.6	-1.2
	SNR=28						
NAZ	Nazwa, Dubai	10.21	136	P	Pn	17 35 16.5	-1.3
KMRS	Kahramanmaras	10.22	302	*e*PN	Pn	17 35 17.6	-0.3
ISRO	Mashad	10.30	66	*e*Pn	Pn	17 35 19.0	0.0
ISRO	Mashad	10.30	66	*e*Pn	Pn	17 35 19.0	0.0
ASUD	Al Ashush, Dub	10.30	138	P	Pn	17 35 18.6	-0.4
	SNR=20						
ASUD	Al Ashush, Dub	10.30	138	P	Pn	17 35 18.2	-0.8
DARE	Darende-Malaty	10.33	308	*e*PN	Pn	17 35 18.4	-1.1
FAQ	Al Faqa, Dubai	10.36	137	P	Pn	17 35 18.2	-1.6
MAK	Makhachkala	10.37	359	*e*P	Pn	17 35 17.3	-2.5
MAK				*e*S	Sn	17 37 09.8	-6.6
MAK				pmax	pmax		
	comp=Z,200nm,1.1s						
MAK				MLR	MLR		
	comp=Z,421nm,14.0s						
MMAI	Mount Meron Ar	10.48	276	Pn	Pn	17 35 20.2	-1.2
MMAI				Lg	Lg	17 38 33.2	
MMAI	Mount Meron Ar	10.48	276	Pn	Pn	17 35 20.2	-1.2
	comp=Z,0.7nm,0.3s,baz=91,slow=18,SNR=6.1						
MMAI				Lg	Lg	17 38 33.3	
	comp=Z,1.5nm,0.3s,baz=160,slow=37,SNR=2.1						
MMAI				LR	LR	17 40 20.5	
	comp=Z,242nm,18.0s,baz=35,slow=43						
MMAI	Mount Meron Ar	10.48	276	Pn	Pn	17 35 20.2	-1.2
HATD	Hatta, Dubai	10.61	135	P	Pn	17 35 21.4	-1.9
	SNR=36						
HATD	Hatta, Dubai	10.61	135	P	Pn	17 35 21.6	-1.7
ASHO	Ashiyiah	10.68	135	P	Pn	17 35 22.1	-2.1
	SNR=67						
ASHO	Ashiyiah	10.68	135	P	Pn	17 35 22.1	-2.1
	SNR=67						
IMYA	Miami	10.79	66	*e*Pn	Pn	17 35 25.8	-0.1
IMYA				*e*		17 36 00.9	
	comp=Z,232nm,0.4s						
IMYA	Miami	10.79	66	*e*Pn	Pn	17 35 25.8	-0.1
KOZT	Kozan	10.99	300	*e*PN	Pn	17 35 29.9	+1.5
EIL	Elat	11.42	259	Pn	Pn	17 35 33.4	-0.9
EIL				Lg	Lg	17 39 02.5	
EIL	Elat	11.42	259	Pn	Pn	17 35 33.4	-0.9
	comp=Z,1.1nm,0.3s,baz=44,slow=9.0,SNR=4.2						
EIL				Lg	Lg	17 39 02.5	
	comp=Z,1.4nm,0.3s,baz=40,slow=9.5,SNR=3.1						
EIL	Elat	11.42	259	Pn	Pn	17 35 33.3	-0.9
RSDY	Resadiye-TOKAT	11.50	316	*e*P	Pn	17 35 34.0	-1.4
KBZ	Khabaz	11.79	342	P	Pn	17 35 38.7	-0.5
KBZ				MLR	MLR		
	comp=Z,318nm,21.7s						
KBZ	Khabaz	11.79	342	Pn	Pn	17 35 38.7	-0.5
KBZ	Khabaz	11.79	342	Pn	Pn	17 35 38.7	-0.5
	comp=Z,0.1nm,0.3s,baz=210,slow=8.1,SNR=2.5						
KBZ				LR	LR	17 40 33.4	
	comp=Z,318nm,21.7s,baz=151,slow=40						
KBZ	Khabaz	11.79	342	P	Pn	17 35 38.7	-0.5
	comp=Z,318nm,21.7s						
ARQ	Araqi	11.98	138	P	Pn	17 35 40.4	-1.6
	SNR=28						
ARQ	Araqi	11.98	138	P	Pn	17 35 40.4	-1.6
	SNR=28						
KIV	Kislovodsk	12.05	342	*e*P	Pn	17 35 39.5	-3.5
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,78nm,9.0s						
CSS	Prodhromos	12.30	285	Pn	Pn	17 35 47.6	+1.2
CSS	Prodhromos	12.30	285	Pn	Pn	17 35 47.6	+1.2
SOC	Sochi	12.70	332	*e*P	Pn	17 35 54.3	+2.6
SOC				*e*		17 38 14.2	
SOC				pmax	pmax		
	comp=Z,17nm,0.9s						
SOC				MLR	MLR		
	comp=Z,506nm,14.0s						
SOC	Sochi	12.70	332	*e*P	Pn	17 35 54.3	+2.6
	comp=Z,17nm,0.9s						
SOC				*e*S	Sn	17 38 14.2	+0.6
	comp=Z,506nm,14.0s						
BSY	Bisya	12.83	137	P	Pn	17 35 51.4	-2.3
	SNR=15						
BSYO	Bisya	12.87	137	P	Pn	17 35 51.4	-2.7
	SNR=15						
SMDO	Samad	13.09	134	⇓P	Pn	17 35 54.7	-2.6
	SNR=16						
SMDO	Samad	13.09	134	P	Pn	17 35 54.7	-2.6
	SNR=16						
BR131	Keskin Array S	13.50	306	*e*Pn	Pn	17 36 04.2	+1.4
	comp=Z,2.5nm,0.6s						
BR131	Keskin Array S	13.50	306	*e*Pn	Pn	17 36 04.2	+1.4
	comp=Z,2.5nm,0.6s						
BRTR	Keskin Array B	13.50	306	Pn	Pn	17 36 05.2	+2.4
BRTR	Keskin Array B	13.50	306	Pn	Pn	17 36 05.2	+2.4
	comp=Z,0.1nm,0.3s,baz=130,slow=11,SNR=22						
BRTR	Keskin Array B	13.50	306	P	Pn	17 36 05.2	+2.4
ANN	Anapa	14.64	329	*e*P	Pn	17 36 19.1	+0.9
ANN				pmax	pmax		
	comp=Z,47nm,1.5s						
ABTO	Aybut	15.95	161	P	Pn	17 36 31.4	-4.3
	SNR=5.3						
RBK	Rabkut	16.08	158	⇑P	Pn	17 36 32.8	-4.6
	SNR=12						
KBL	Kabul	17.78	78	*e*P	P	17 36 59.6	-0.3
KBL				pmax	pmax		
	comp=Z,46nm,1.3s						
KBL	Kabul	17.78	78	*e*Pn	P	17 36 59.6	-0.3
	comp=Z,46nm,1.3s						
KBL	Kabul	17.78	78	*e*P	P	17 36 59.6	-0.3
	comp=Z,46nm,1.3s						
ABKAR	Akbulak array	18.96	25	*e*P	P	17 37 10.9	-1.6
	comp=Z,3.8nm,0.6s						
ABKAR	Akbulak array	18.96	25	*e*P	P	17 37 10.9	-1.6
	comp=Z,3.8nm,0.6s						
VRHR	Novokhopersk	19.06	348	*e*P	Pn	17 37 14.9	+0.7
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=N,40nm,0.8s						
VRHR				pmax	pmax		
	comp=E,30nm,0.7s						
VRHR	Novokhopersk	19.06	348	*e*P	Pn	17 37 14.9	+0.7
	comp=E,40nm,0.8s						
TIRR	Tirgusor	19.22	314	⇓P	Pn	17 37 16.7	+0.4
TIRR	Tirgusor	19.22	314	⇓*i*P	Pn	17 37 16.7	+0.4
TIRR	Tirgusor	19.22	314	P	Pn	17 37 16.7	+0.4
IDI	Anoyia	19.23	284	*e*P	P	17 37 15.7	+0.1
	comp=E,44nm,0.9s						
IDI	Anoyia	19.23	284	*e*P	P	17 37 15.7	+0.1
	comp=E,44nm,0.9s						
PRD	Provadia	19.25	309	*e*P	Pn	17 37 18.7	+2.0
AKTK	Aktyubinsk	19.36	20	P	P	17 37 15.2	-1.7
AKTO	Aktyubinsk	19.36	20	P	P	17 37 15.2	-1.7
AKTO	Aktyubinsk	19.36	20	P	P	17 37 15.2	-1.7
AKTO				ScP	ScP	17 45 16.8	+1.3
AKTO	Aktyubinsk	19.36	20	P	P	17 37 15.2	-1.7
	comp=E,0.2nm,0.3s,baz=215,slow=14,SNR=8.5						
AKTO				ScP	ScP	17 45 16.8	+1.3
	comp=E,0.1nm,0.3s,baz=358,slow=5.3,SNR=4.9						
AKTO	Aktyubinsk	19.36	20	P	P	17 37 15.2	-1.7
VORD	Divnogorie	19.42	344	*e*P	P	17 37 17.9	+0.4
VORD				pmax	pmax		
	comp=N,30nm,0.8s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VORD				pmax	pmax		
	comp=E,30nm,0.9s						
VORD	Divnogorie	19.42	344	*e*P	P	17 37 17.9	+0.4
VSR	Storozhevoye	19.68	344	*e*P	P	17 37 19.9	-0.4
VSR				pmax	pmax		
	comp=Z,3µm,1.0s						
VSR				pmax	pmax		
	comp=N,6µm,1.3s						
VSR				pmax	pmax		
	comp=E,40nm,1.1s						
VSR	Storozhevoye	19.68	344	*e*P	P	17 37 19.9	-0.4
	comp=E,6µm,1.3s						
CFR	Carcaliu	19.77	315	⇓P	Pn	17 37 23.1	+0.2
CFR	Carcaliu	19.77	315	⇓*i*P	Pn	17 37 23.0	+0.2
CFR	Carcaliu	19.77	315	P	Pn	17 37 23.1	+0.2
SZH	Strazhica	20.25	308	*e*P	P	17 37 26.6	0.0
SZH	Strazhica	20.25	308	*e*P	P	17 37 26.6	0.0
KKAR	Karatay Array	20.70	53	*e*P	P	17 37 32.0	+0.4
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KKAR	Karatay Array	20.70	53	*e*P	P	17 37 31.9	+0.4
	comp=Z,4.2nm,0.5s						
KKAR	Karatay Array	20.70	53	*e*P	P	17 37 32.0	+0.4
	comp=Z,4.2nm,0.5s						
VRI	Vrincioaia	20.98	315	⇓P	Pn	17 37 36.0	-1.1

VRI Vrincioaia 20.98 315 ⇓*iP* Pn 17 37 36.0 -1.1
VRI Vrincioaia 20.98 315 P Pn 17 37 36.0 -1.1
PLOR Plostina 21.02 315 ⇑P **P** 17 37 38.3 +3.3
PLOR Plostina 21.02 315 ⇑*iP* **P** 17 37 38.3 +3.3
MLR Muntele Rosu 21.26 314 P **P** 17 37 39.6 +1.9
MLR Muntele Rosu 21.26 314 P **P** 17 37 39.6 +1.9
comp=Z,5.5nm,0.7s,baz=90,slow=1.5,SNR=34
MLR Muntele Rosu 21.26 314 P **P** 17 37 39.6 +1.9
comp=Z,6.0nm,0.7s
TESR 21.37 317 ⇓*iP* **P** 17 37 40.8 +2.1
TESR 21.37 317 ⇓*iP* **P** 17 37 40.8 +2.1
HUMR Humele 21.41 310 ⇑*iP* **P** 17 37 40.8 +1.6
HUMR Humele 21.41 310 ⇑*iP* **P** 17 37 40.8 +1.6
MPEP Malo Peshtene 21.76 307 *eP* **P** 17 37 44.5 +1.6
VOIR 21.78 313 ⇑P **P** 17 37 45.2 +1.9
VOIR 21.78 313 ⇑*iP* **P** 17 37 45.2 +1.9
VOIR 21.78 313 P **P** 17 37 45.2 +1.9
DOPR Dopca 21.83 314 ⇓*iP* **P** 17 37 45.3 +1.6
DOPR Dopca 21.83 314 ⇓*iP* **P** 17 37 45.3 +1.6
VAY Valandovo 21.94 301 *eP* **P** 17 37 45.9 +1.1
VAY Valandovo 21.94 301 *eP* **P** 17 37 46.4 +1.5
AK02 Malin Array Si 22.70 328 *eP* **P** 17 37 49.2 -3.7
AK01 Malin Array Si 22.72 328 *eP* **P** 17 37 49.6 -3.5
AKASG Malin Array Be 22.72 328 P **P** 17 37 50.6 -2.5
AKASG Malin Array Be 22.72 328 P **P** 17 37 50.5 -2.5
AKASG Malin Array Be 22.72 328 P **P** 17 37 50.5 -2.5
comp=Z,3.7nm,0.6s,baz=136,slow=9.4,SNR=12
AKASG Malin Array Be 22.72 328 P **P** 17 37 50.6 -2.5
KIEV Kiev 22.72 328 *eP* **P** 17 37 50.0 -3.2
KIEV pmax pmax
comp=Z,10.0nm,0.6s
KIEV Kiev 22.72 328 *eP* **P** 17 37 50.0 -3.2
comp=Z,9.8nm,0.6s
BIA Bitola 22.77 299 *eP* **P** 17 37 56.7 +2.7
BIA Bitola 22.77 299 *eP* **P** 17 37 56.6 +2.7
EKS2 Erkin-Say 22.80 56 *eP* **P** 17 37 52.9 -1.3
EKS2 pmax pmax
comp=Z,19nm,1.3s
EKS2 Erkin-Say 22.80 56 *eP* **P** 17 37 52.9 -1.3
comp=Z,19nm,1.3s
EKS2 Erkin-Say 22.80 56 *eP* **P** 17 37 52.9 -1.3
comp=Z,19nm,1.3s
BUR08 Bucovina Ar. S 22.82 318 *eP* **P** 17 37 53.8 -0.5
BUR08 Bucovina Ar. S 22.82 318 *eP* **P** 17 37 53.8 -0.5
SKO Skopje 22.93 302 *eP* **P** 17 37 54.8 -0.7
SKO Skopje 22.93 302 *eP* **P** 17 37 55.2 -0.2
AAK Ala-Archa 23.30 57 P **P** 17 37 59.9 +0.5
AAK pmax pmax
comp=Z,4.0nm,0.9s
AAK MLR MLR
comp=Z,218nm,19.2s
AAK Ala-Archa 23.30 57 P **P** 17 37 59.9 +0.5
AAK Ala-Archa 23.30 57 P **P** 17 37 59.9 +0.5
comp=Z,4.1nm,0.9s,baz=232,slow=14,SNR=8.9
AAK LR LR 17 48 38.3
comp=Z,218nm,19.2s,baz=17,slow=41
AAK Ala-Archa 23.30 57 P **P** 17 37 59.9 +0.5
comp=Z,218nm,19.2s
OBN Obninsk 23.89 344 ⇑*eP* **P** 17 38 05.1 +0.3
OBN 17 38 32.0
OBN pmax pmax
comp=Z,38nm,1.2s
OBN MLR MLR
comp=Z,100nm,18.0s
OBN Obninsk 23.89 344 P **P** 17 38 03.4 -1.5
OBN Obninsk 23.89 344 *eP* **P** 17 38 05.1 +0.3
comp=Z,38nm,1.2s
BZS Buzias 24.03 310 ⇑P **P** 17 38 08.2 +1.8
BZS Buzias 24.03 310 ⇑*iP* **P** 17 38 08.2 +1.8
BZS Buzias 24.03 310 P **P** 17 38 08.2 +1.8
TRPA Tarpa 24.60 317 ⇓*eP* **P** 17 38 14.5 +3.0
ARU Arti 24.98 14 *dP* **P** 17 38 14.7 -0.2
ARU 17 38 46.3
ARU S **S** 17 42 36.1 -3.0
ARU pmax pmax
comp=Z,10.0nm,1.0s
ARU Arti 24.98 14 *eP* **P** 17 38 14.0 -0.9
comp=Z,7.7nm,0.8s
ARU Arti 24.98 14 *iP* **P** 17 38 14.7 -0.2
comp=Z,10.0nm,1.0s
UZH Uzhgorod 24.99 317 *eP* P 17 38 20.6 +5.5
UZH *e* 17 38 27.4
KOLS Kolonicke sedl 25.16 318 *eP* **P** 17 38 17.1 +0.5
KOLS *ep* **pP** 17 38 21.2 +3.5
KWP Kalwaria Pacla 25.29 320 *eP* **P** 17 38 16.9 -0.9
KWP pmax pmax
comp=Z,53nm,1.1s
KWP Kalwaria Pacla 25.29 320 *eP* **P** 17 38 16.9 -0.9
comp=Z,52nm,1.1s
KWP Kalwaria Pacla 25.29 320 ⇑*iP* **P** 17 38 22.4 +4.6
KWP Kalwaria Pacla 25.29 320 *eP* **P** 17 38 16.9 -0.9
comp=Z,53nm,1.1s
CRVS Cervenica-Dubn 25.61 317 *eP* **P** 17 38 19.1 -1.6
CRVS *ep* **pP** 17 38 23.9 +2.1
CRVS Cervenica-Dubn 25.61 317 *eP* **P** 17 38 19.1 -1.6
comp=Z,23nm,1.3s
SVE Sverdlovsk 25.80 16 *eP* **P** 17 38 21.4 -1.0
SVE pmax pmax
comp=Z,11nm,1.2s
SVE Sverdlovsk 25.80 16 *eP* **P** 17 38 21.4 -1.0
comp=Z,11nm,1.2s
TIP Timpagrande 25.95 293 *eP* **P** 17 38 22.9 -1.0
comp=Z,7.1nm,0.7s
TIP Timpagrande 25.95 293 *eP* **P** 17 38 22.9 -1.0
comp=Z,7.1nm,0.7s
BRVK Borovoye 26.07 32 *eP* **P** 17 38 22.4 -2.4
BRVK pmax pmax
comp=Z,4.0nm,0.8s
BRVK Borovoye 26.07 32 *eP* **P** 17 38 22.4 -2.4
comp=Z,3.9nm,0.8s
BRVK Borovoye 26.07 32 *eP* **P** 17 38 22.4 -2.4
comp=Z,4.0nm,0.8s
PSZ Piszkesteto 26.07 314 *eP* **P** 17 38 25.7 +0.7
PSZ pmax pmax
comp=Z,33nm,1.0s
PSZ Piszkesteto 26.07 314 *eP* **P** 17 38 25.7 +0.7
comp=Z,33nm,1.0s
PSZ Piszkesteto 26.07 314 ⇑*iP* **P** 17 38 26.7 +1.7
PSZ Piszkesteto 26.07 314 ⇓*eP* **P** 17 38 29.6 +4.6
PSZ Piszkesteto 26.07 314 *eP* **P** 17 38 25.7 +0.7
comp=Z,33nm,1.0s
BVAR Borovoye Array 26.09 32 P **P** 17 38 23.8 -1.2
BVAR pmax pmax
comp=Z,2.0nm,0.5s
BVAR pmax pmax
comp=N,3.0nm,0.8s
BVAR MLR MLR
comp=Z,141nm,19.3s
BVAR Borovoye Array 26.09 32 P **P** 17 38 23.8 -1.2
BVAR ScP **ScP** 17 45 34.5 +1.5
BVAR Borovoye Array 26.09 32 P **P** 17 38 23.8 -1.2
comp=Z,2.0nm,0.5s,baz=226,slow=7.8,SNR=19
BVAR ScP **ScP** 17 45 34.5 +1.5
comp=Z,2.9nm,0.8s,baz=219,slow=1.9,SNR=14
BVAR LR LR 17 50 13.5
comp=Z,141nm,19.2s,baz=83,slow=40
BVAR Borovoye Array 26.09 32 P **P** 17 38 23.8 -1.2
comp=Z,141nm,19.3s
PKSM Moragy 26.18 310 ⇑P **P** 17 38 26.0 +0.1
PKSM Moragy 26.18 310 ⇑*iP* **P** 17 38 26.0 +0.1
PKSM Moragy 26.18 310 ⇓*eP* **P** 17 38 25.8 -0.1
PKSM Moragy 26.18 310 ⇓*eP* **P** 17 38 25.8 -0.1
CEL Celeste 26.56 291 *eP* **P** 17 38 29.9 +0.4
comp=Z,23nm,1.0s
CEL Celeste 26.56 291 *eP* **P** 17 38 29.9 +0.4
comp=Z,23nm,1.0s
NACGM Naroch 26.80 333 *e* **P** 17 38 31.0 -0.4
VYHS Vyhne 26.96 315 *eP* **P** 17 38 33.0 +0.1
VYHS *ep* **pP** 17 38 36.3 +2.3
OJC Ojcow 27.20 319 *eP* **P** 17 38 37.9 +2.8
OJC Ojcow 27.20 319 *eP* **P** 17 38 37.9 +2.8
IIGN Ignalina 27.35 333 *eP* **P** 17 38 35.6 -0.7
IIGN AMB AMB 17 38 40.8
comp=Z,11nm,1.2s
IIGN Ignalina 27.35 333 *eP* **P** 17 38 35.6 -0.7
comp=Z,11nm,1.2s,SNR=28
BEHE Becsehely 27.48 309 ⇓*eP* P 17 38 43.6 +6.0
ISAL Salakas 27.55 333 *eP* **P** 17 38 37.4 -0.7
ISAL AMB AMB 17 38 41.3
comp=Z,12nm,1.3s
ISAL Salakas 27.55 333 *eP* **P** 17 38 37.4 -0.7
comp=Z,12nm,1.3s,SNR=28
IZAR Zarasai 27.64 333 *eP* **P** 17 38 38.2 -0.6
IZAR AMB AMB 17 38 43.3
comp=Z,9.6nm,1.0s
SUW Suwalki 27.69 328 *eP* **P** 17 38 38.1 -1.3
SUW Suwalki 27.69 328 *eP* **P** 17 38 38.1 -1.3
comp=Z,51nm,0.9s
SUW Suwalki 27.69 328 *eP* **P** 17 38 38.1 -1.3
comp=Z,51nm,0.9s
SMOL Smolenice 27.82 314 *epP* pP 17 38 43.9 +2.2
OKC Ostrava-Krasne 27.96 317 *eP* **P** 17 38 43.7 +1.9
OKC Ostrava-Krasne 27.96 317 P **P** 17 38 43.7 +1.9
SOP Sopron 28.04 312 ⇓*eP* **P** 17 38 45.4 +2.8
MORC Moravsky Berou 28.28 316 *eP* **P** 17 38 44.6 -0.2
MORC pmax pmax
comp=Z,4.0nm,0.9s
MORC Moravsky Berou 28.28 316 *eP* **P** 17 38 44.6 -0.2
comp=Z,4.2nm,0.9s
MORC Moravsky Berou 28.28 316 *eP* **P** 17 38 44.6 -0.2
comp=Z,4.2nm,0.9s
VRAC Vranov 28.64 315 P **P** 17 38 48.0 0.0
VRAC Vranov 28.64 315 P **P** 17 38 48.0 0.0
comp=Z,3.1nm,0.8s,baz=91,slow=10.0,SNR=4.2
VRAC Vranov 28.64 315 P **P** 17 38 48.0 0.0
KLMR Klimovskoe 28.80 352 *eP* **P** 17 38 48.9 -0.3
KLMR pmax pmax
comp=Z,36nm,1.5s
KURBB Kurchatov Arra 28.89 42 P **P** 17 38 49.9 -0.2
comp=Z,2.1nm,0.9s,baz=250,slow=8.9,SNR=8.3
KURK Kurchatov 28.98 42 P **P** 17 38 49.9 -1.0
KURK pmax pmax
comp=Z,2.0nm,0.9s
KURK Kurchatov 28.98 42 P **P** 17 38 49.9 -1.0
KURK Kurchatov 28.98 42 P **P** 17 38 49.9 -1.0
DPC Dobruska-Polom 29.24 317 *eP* **P** 17 38 55.6 +2.3
UPC Upice 29.48 317 *eP* **P** 17 38 58.2 +2.8
MK31 Makanchi Array 29.80 51 *eP* **P** 17 38 56.7 -1.6
MK31 Makanchi Array 29.80 51 *eP* **P** 17 38 56.7 -1.6
MK31 Makanchi Array 29.80 51 *eP* **P** 17 38 56.7 -1.6
MKAR Makanchi Array 29.80 51 P **P** 17 38 57.8 -0.6
MKAR 17 45 45.2
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MKAR Makanchi Array 29.80 51 P **P** 17 38 57.8 -0.6
MKAR ScP **ScP** 17 45 45.2 +0.6
MKAR Makanchi Array 29.80 51 P **P** 17 38 57.8 -0.6
comp=Z,2.0nm,0.5s,baz=248,slow=8.7,SNR=26
MKAR ScP **ScP** 17 45 45.2 +0.6
comp=Z,1.1nm,0.9s,baz=269,slow=4.9,SNR=7.4
MKAR Makanchi Array 29.80 51 P **P** 17 38 57.8 -0.6
GERES GERESS Array B 30.23 313 P **P** 17 39 01.2 -1.0
GERES ScP **ScP** 17 45 48.4 +2.4
GERES GERESS Array B 30.23 313 P **P** 17 39 01.2 -1.0
comp=Z,1.3nm,0.5s,baz=108,slow=8.3,SNR=9.6
GERES ScP **ScP** 17 45 48.4 +2.4
comp=Z,0.2nm,0.4s,baz=207,slow=2.7,SNR=3.7
GERES GERESS Array B 30.23 313 P **P** 17 39 01.2 -1.0
PVCC Panska Ves 30.33 316 *eP* **P** 17 39 04.0 +1.1
PVCC Panska Ves 30.33 316 P **P** 17 39 04.0 +1.1
KHC Kasperske Hory 30.41 313 *eP* **P** 17 39 04.4 +0.7
KHC pmax pmax
comp=Z,3.0nm,0.9s
KHC Kasperske Hory 30.41 313 *eP* **P** 17 39 04.4 +0.7
comp=Z,3.3nm,0.9s
KHC Kasperske Hory 30.41 313 *eP* **P** 17 39 04.8 +1.1
KHC Kasperske Hory 30.41 313 *eP* **P** 17 39 04.4 +0.7
comp=Z,3.3nm,0.9s
BRG Berggiesshubel 30.84 316 *eP* P 17 39 10.8 +3.4
comp=Z,6.2nm,1.1s
BRG Berggiesshubel 30.84 316 *eP* P 17 39 10.8 +3.4
BRG pmax pmax
comp=Z,6.0nm,1.1s
NKC Novy Kostel 31.48 315 *eP* **P** 17 39 15.7 +2.6
CLL Collm 31.55 317 *iP* **P** 17 39 15.3 +1.7
CLL pmax pmax
comp=Z,8.0nm,1.3s
CLL Collm 31.55 317 *i* pP **P** 17 39 15.3 +1.7
comp=Z,8.0nm,1.3s
CLL *e*PPP PPP 17 40 27.0
GRFO Grafenberg 32.05 313 P **P** 17 39 16.4 -1.7
GRFO pmax pmax
comp=Z,8.0nm,0.9s
GRFO Grafenberg 32.05 313 P **P** 17 39 16.4 -1.7
comp=Z,8.4nm,0.9s
GRFO Grafenberg 32.05 313 P **P** 17 39 16.4 -1.7
comp=Z,8.4nm,0.9s
PGF Pioggiola 32.11 299 *eP* **P** 17 39 16.4 -2.4
comp=Z,83nm,1.5s
PGF Pioggiola 32.11 299 *eP* **P** 17 39 16.4 -2.4
PGF Pioggiola 32.11 299 *eP* **P** 17 39 16.4 -2.4
comp=Z,83nm,1.5s
PGF Pioggiola 32.11 299 *eP* P 17 39 16.4 -2.4
comp=Z,42nm,1.5s
JOF Joensuu 32.12 346 *eP* **P** 17 39 16.3 -2.2
JOF pmax pmax
comp=Z,6.0nm,0.7s
JOF Joensuu 32.12 346 *ep* **P** 17 39 16.3 -2.2
comp=Z,5.7nm,0.7s
DAVOX Davos/Dischmat 32.14 307 P **P** 17 39 20.9 +1.8
DAVOX Davos/Dischmat 32.14 307 P **P** 17 39 20.9 +1.8
comp=Z,1.5nm,0.4s,baz=91,slow=8.4,SNR=3.9
DAVOX Davos/Dischmat 32.14 307 P **P** 17 39 20.9 +1.8
FINES FINESS Array B 32.14 340 P **P** 17 39 16.9 -1.8
FINES FINESS Array B 32.14 340 P **P** 17 39 16.9 -1.8
comp=Z,3.8nm,0.5s,baz=144,slow=10,SNR=18
FINES FINESS Array B 32.14 340 P **P** 17 39 16.9 -1.8
KAF Kangasniemi 32.62 341 *eP* **P** 17 39 21.0 -1.9
KAF pmax pmax
comp=Z,5.0nm,0.6s
KAF Kangasniemi 32.62 341 *ep* **P** 17 39 21.0 -1.9
comp=Z,4.7nm,0.6s
WMQ Urumqi 32.98 58 P **P** 17 39 27.5 +1.1
WMQ pP pP 17 39 39.5 +12
WMQ sP sP 17 39 45.5 +18
WMQ PP **PP** 17 40 38.5 -2.2
WMQ PcP **PcP** 17 42 11.5 +1.1
WMQ S **S** 17 44 40.5 -4.7
WMQ sS sS 17 45 00.5 +13
WMQ pmax pmax
comp=Z,12nm,0.8s
WMQ pmax pmax
comp=Z,67nm,4.0s
WMQ LR LR
comp=N,160nm,6.0s
WMQ LR LR
comp=E,150nm,6.0s
WMQ LR LR
comp=Z,200nm,8.0s
NVS Novosibirsk 33.36 38 *eP* **P** 17 39 29.1 -0.3
NVS pmax pmax
comp=Z,7.0nm,1.4s
NVS pmax pmax
comp=N,2.0nm,1.1s
NVS pmax pmax
comp=E,3.0nm,1.1s
SBF Sospel 33.37 302 *eP* **P** 17 39 28.0 -1.8
comp=E,68nm,0.9s
SBF Sospel 33.37 302 *eP* **P** 17 39 28.0 -1.8
SBF Sospel 33.37 302 *eP* **P** 17 39 28.0 -1.8
comp=E,68nm,0.9s
SBF Sospel 33.37 302 *eP* **P** 17 39 28.0 -1.8
comp=E,34nm,0.9s
ZAA0 Zalesovo Array 33.80 40 *eP* **P** 17 39 31.9 -1.5
ZAA0 Zalesovo Array 33.80 40 *eP* **P** 17 39 31.9 -1.5
ZALV Zalesovo Beam 33.80 40 P **P** 17 39 31.9 -1.5
ZALV pmax pmax
comp=Z,3.0nm,0.5s
ZALV pmax pmax
comp=N,1.0nm,0.6s
ZALV Zalesovo Beam 33.80 40 P **P** 17 39 31.9 -1.5
ZALV ScP **ScP** 17 45 58.1 +0.2
ZALV Zalesovo Beam 33.80 40 P **P** 17 39 31.9 -1.5
comp=N,2.5nm,0.5s,baz=246,slow=8.6,SNR=15
ZALV ScP **ScP** 17 45 58.1 +0.2
comp=N,1.0nm,0.6s,baz=244,slow=5.0,SNR=5.7
ZALV Zalesovo Beam 33.80 40 P **P** 17 39 31.9 -1.5
MBDF Montbardon 33.94 303 *eP* **P** 17 39 33.6 -1.3
comp=N,22nm,0.7s
MBDF Montbardon 33.94 303 *eP* **P** 17 39 33.6 -1.3
MBDF pmax pmax
comp=Z,22nm,0.7s
MBDF Montbardon 33.94 303 *eP* **P** 17 39 33.6 -1.3
comp=Z,22nm,0.7s
MBDF Montbardon 33.94 303 *eP* **P** 17 39 33.6 -1.3
comp=Z,11nm,0.7s
BNI Bardonecchia 34.05 304 *eP* **P** 17 39 34.2 -1.6
BNI pmax pmax
comp=Z,35nm,0.8s
BNI Bardonecchia 34.05 304 *eP* **P** 17 39 34.1 -1.6
comp=Z,35nm,0.8s
LPG La Plagne 34.05 304 *eP* **P** 17 39 34.5 -1.5
comp=Z,37nm,0.8s
LPG La Plagne 34.05 304 *eP* **P** 17 39 34.5 -1.5
LPG La Plagne 34.05 304 *eP* **P** 17 39 34.5 -1.5
comp=Z,37nm,0.8s
LPG La Plagne 34.05 304 *eP* **P** 17 39 34.5 -1.5
comp=Z,18nm,0.8s
LPL La Plagne 34.07 304 *eP* **P** 17 39 34.4 -1.6
comp=Z,59nm,1.0s
LPL La Plagne 34.07 304 *eP* **P** 17 39 34.4 -1.6
LPL La Plagne 34.07 304 *eP* **P** 17 39 34.4 -1.6
comp=Z,59nm,1.0s
LPL La Plagne 34.07 304 *eP* **P** 17 39 34.4 -1.6
comp=Z,29nm,1.0s
HINF Hinteralfeld 34.37 308 *eP* **P** 17 39 36.3 -2.1
HINF Hinteralfeld 34.37 308 *eP* **P** 17 39 36.3 -2.1
HINF Hinteralfeld 34.37 308 *eP* **P** 17 39 36.3 -2.1
HINF Hinteralfeld 34.37 308 *eP* **P** 17 39 36.3 -2.1
ORIF Oris-en-Rattie 34.59 303 *eP* **P** 17 39 38.4 -2.0
comp=Z,18nm,1.0s
ORIF Oris-en-Rattie 34.59 303 *eP* **P** 17 39 38.4 -2.0
ORIF pmax pmax
comp=Z,18nm,1.0s
ORIF Oris-en-Rattie 34.59 303 *eP* **P** 17 39 38.4 -2.0
comp=Z,18nm,1.0s
ORIF Oris-en-Rattie 34.59 303 *eP* **P** 17 39 38.4 -2.0
comp=Z,8.8nm,1.0s
CABF La Chapelle 34.67 306 *eP* **P** 17 39 39.8 -1.3
comp=Z,56nm,1.1s
CABF La Chapelle 34.67 306 *eP* **P** 17 39 39.8 -1.3
CABF La Chapelle 34.67 306 *eP* **P** 17 39 39.8 -1.3
comp=Z,56nm,1.1s
CABF La Chapelle 34.67 306 *eP* **P** 17 39 39.8 -1.3
comp=Z,28nm,1.1s
PAGF Fort de Pagny 35.25 309 *eP* **P** 17 39 44.2 -1.7
PAGF Fort de Pagny 35.25 309 *eP* **P** 17 39 44.2 -1.7
PAGF Fort de Pagny 35.25 309 *eP* **P** 17 39 44.2 -1.7
VIVF Saint-Julien-l 35.44 303 *eP* **P** 17 39 45.7 -2.0
VIVF Saint-Julien-l 35.44 303 *eP* **P** 17 39 45.7 -2.0
VIVF Saint-Julien-l 35.44 303 *eP* **P** 17 39 45.7 -2.0
VIVF Saint-Julien-l 35.44 303 *eP* **P** 17 39 45.7 -2.0
HFS Hagfors 35.54 331 P **P** 17 39 46.5 -1.8
HFS Hagfors 35.54 331 P **P** 17 39 46.4 -1.8
comp=Z,5.2nm,0.4s,baz=129,slow=11,SNR=7.3
HFS Hagfors 35.54 331 P **P** 17 39 46.5 -1.8
SFTF Sexfontaines 35.63 309 *eP* **P** 17 39 47.2 -2.1
comp=Z,15nm,0.8s
SFTF Sexfontaines 35.63 309 *eP* **P** 17 39 47.2 -2.1
comp=Z,15nm,0.8s
SFTF Sexfontaines 35.63 309 *eP* **P** 17 39 47.2 -2.1
comp=Z,7.3nm,0.8s
SMF Signal de Mont 36.21 306 *eP* **P** 17 39 52.4 -1.8
comp=Z,77nm,1.2s
SMF Signal de Mont 36.21 306 *eP* **P** 17 39 52.4 -1.8
SMF Signal de Mont 36.21 306 *eP* **P** 17 39 52.4 -1.8
comp=Z,77nm,1.2s
SMF Signal de Mont 36.21 306 *eP* **P** 17 39 52.4 -1.8
comp=Z,38nm,1.2s
LOR Lormes 36.27 307 *eP* **P** 17 39 52.5 -2.3
comp=Z,16nm,1.1s
LOR Lormes 36.27 307 *eP* **P** 17 39 52.5 -2.3
comp=Z,16nm,1.1s
LOR Lormes 36.27 307 *eP* **P** 17 39 52.5 -2.3
comp=Z,7.8nm,1.1s
SSF Saint Saulge 36.49 307 *eP* **P** 17 39 54.7 -1.9
comp=Z,23nm,1.1s
SSF Saint Saulge 36.49 307 *eP* **P** 17 39 54.7 -1.9
SSF pmax pmax
comp=Z,23nm,1.1s
SSF Saint Saulge 36.49 307 *eP* **P** 17 39 54.7 -1.9
comp=Z,23nm,1.1s
SSF Saint Saulge 36.49 307 *eP* **P** 17 39 54.7 -1.9
comp=Z,12nm,1.1s
BAIF Baives 36.52 312 *eP* **P** 17 39 54.9 -1.9
BAIF Baives 36.52 312 *eP* **P** 17 39 54.9 -1.9
BAIF Baives 36.52 312 *eP* **P** 17 39 54.9 -1.9
BAIF Baives 36.52 312 *eP* **P** 17 39 54.9 -1.9
AVF Avril sur Loir 36.56 306 *eP* **P** 17 39 55.1 -2.1
comp=Z,26nm,1.1s
AVF Avril sur Loir 36.56 306 *eP* **P** 17 39 55.1 -2.1
AVF pmax pmax
comp=Z,26nm,1.1s
AVF Avril sur Loir 36.56 306 *eP* **P** 17 39 55.1 -2.1
comp=Z,26nm,1.1s
AVF Avril sur Loir 36.56 306 *eP* **P** 17 39 55.1 -2.1
comp=Z,13nm,1.1s
BGF Bois d'Agland 36.88 306 *eP* **P** 17 39 58.1 -1.8
BGF Bois d'Agland 36.88 306 *eP* **P** 17 39 58.1 -1.8
BGF Bois d'Agland 36.88 306 *eP* **P** 17 39 58.1 -1.8
BGF Bois d'Agland 36.88 306 *eP* **P** 17 39 58.1 -1.8
NB2 NORSAR Subarra 37.06 331 P **P** 17 39 59.4 -2.0
comp=Z,2.1nm,0.7s,baz=125,slow=8.6
NB2 NORSAR Subarra 37.06 331 P **ScP** 17 46 10.9 +1.2
comp=Z,0.1nm,0.7s,baz=74,slow=5.6
NB2 NORSAR Subarra 37.06 331 P **P** 17 39 59.4 -2.0
comp=Z,2.1nm,0.7s,SNR=7.8
NOA NORSAR Array B 37.06 331 P **P** 17 39 59.6 -1.7
NOA NORSAR Array B 37.06 331 P **P** 17 39 59.6 -1.7
comp=Z,1.4nm,0.6s,baz=124,slow=8.5,SNR=7.9
NOA NORSAR Array B 37.06 331 P **P** 17 39 59.7 -1.7
NAO01 NORSAR Array S 37.09 331 P **P** 17 40 00.6 -0.9
NAO01 NORSAR Array S 37.09 331 P **P** 17 40 00.6 -0.9
TCF Toulx Ste Croi 37.29 305 *eP* **P** 17 40 01.6 -1.9
comp=Z,34nm,1.3s
TCF Toulx Ste Croi 37.29 305 *eP* **P** 17 40 01.6 -1.9
TCF pmax pmax
comp=Z,34nm,1.3s
TCF Toulx Ste Croi 37.29 305 *eP* **P** 17 40 01.6 -1.9
comp=Z,34nm,1.3s
TCF Toulx Ste Croi 37.29 305 *eP* **P** 17 40 01.6 -1.9
comp=Z,17nm,1.3s
MFF Saint Martin d 38.94 305 *eP* **P** 17 40 15.1 -2.2
MFF Saint Martin d 38.94 305 *eP* **P** 17 40 15.1 -2.2
MFF Saint Martin d 38.94 305 *eP* **P** 17 40 15.1 -2.2
MFF Saint Martin d 38.94 305 *eP* **P** 17 40 15.1 -2.2
ARCES ARCESS Array B 39.07 348 P **P** 17 40 16.1 -2.0
ARCES ARCESS Array B 39.07 348 P **P** 17 40 16.2 -2.0
comp=Z,1.6nm,0.4s,baz=150,slow=9.8,SNR=14
ARCES ARCESS Array B 39.07 348 P **P** 17 40 16.1 -2.0
ARE0 ARCESS Array S 39.07 348 P **P** 17 40 15.2 -3.0
LDF La Druitiere 39.09 309 *eP* **P** 17 40 17.2 -1.4
comp=Z,11nm,0.7s
LDF La Druitiere 39.09 309 *eP* **P** 17 40 17.2 -1.4
LDF pmax pmax
comp=Z,11nm,0.7s
LDF La Druitiere 39.09 309 *eP* **P** 17 40 17.2 -1.4
comp=Z,11nm,0.7s
LDF La Druitiere 39.09 309 *eP* **P** 17 40 17.2 -1.4
comp=Z,5.6nm,0.7s
FLN La Foliniere 39.35 309 *eP* **P** 17 40 18.3 -2.4
FLN La Foliniere 39.35 309 *eP* **P** 17 40 18.3 -2.4
FLN La Foliniere 39.35 309 *eP* **P** 17 40 18.3 -2.4
FLN La Foliniere 39.35 309 *eP* **P** 17 40 18.3 -2.4
ESDC Sonseca Array 41.95 295 P **P** 17 40 43.0 +0.6
ESDC Sonseca Array 41.95 295 P **P** 17 40 43.0 +0.6
comp=Z,1.0nm,0.4s,baz=73,slow=8.4,SNR=8.0
ESDC Sonseca Array 41.95 295 P **P** 17 40 43.0 +0.6
ESLA Sonseca Array 41.95 295 P **P** 17 40 40.7 -1.7
ESLA Sonseca Array 41.95 295 P **P** 17 40 40.7 -1.7
EKA Eskdalemuir Ar 41.98 318 P **P** 17 40 42.1 -0.2
EKA Eskdalemuir Ar 41.98 318 P **P** 17 40 42.1 -0.2
comp=Z,1.7nm,0.5s,baz=100,slow=9.5,SNR=3.8
EKA LR LR 17 59 03.2
comp=Z,6μm,21.8s,baz=150,slow=38
EKA Eskdalemuir Ar 41.98 318 P **P** 17 40 42.1 -0.2
GTA Gaotai 42.12 66 *eP* **P** 17 40 44.8 +0.9
GTA pP pP 17 40 57.1 +12
GTA sP sP 17 41 02.7 +17
GTA pmax pmax
comp=Z,4.0nm,1.7s
ZAK Zakamensk 44.09 49 *eP* **P** 17 41 00.2 +0.6
ZAK pmax pmax
comp=Z,1.0nm,1.2s
LZH Lanzhou 45.84 69 *eP* **P** 17 41 15.5 +1.6
LZH pmax pmax
comp=Z,14nm,1.3s
SONM Songino Array 46.15 53 P **P** 17 41 15.4 -0.7
SONM Songino Array 46.15 53 P **P** 17 41 15.4 -0.7
comp=Z,1.1nm,0.7s,baz=278,slow=9.7,SNR=12
SONM Songino Array 46.15 53 P **P** 17 41 15.4 -0.7
TOA0 Torodi Ar. Sit 46.30 256 P **P** 17 41 16.1 -1.3

TOA0	Torodi Ar. Sit	46.30	256	P	P	17 41 16.1	-1.3
TORD	Torodi Ar. Bea	46.30	256	P	P	17 41 16.3	-1.2
TORD				ScP	ScP	17 46 51.0	+3.9
TORD	Torodi Ar. Bea	46.30	256	P	P	17 41 16.3	-1.2
	comp=Z,1.5nm,0.6s,baz=53,slow=8.1,SNR=10						
TORD				ScP	ScP	17 46 51.0	+3.9
	comp=Z,0.5nm,0.8s,baz=32,slow=3.5,SNR=3.2						
TORD	Torodi Ar. Bea	46.30	256	P	P	17 41 16.3	-1.2
ULN	Ulaanbaatar	46.59	53	eP	P	17 41 18.5	-1.1
	comp=Z,4.7nm,0.8s						
ULN	Ulaanbaatar	46.59	53	eP	P	17 41 18.5	-1.1
	comp=Z,4.7nm,0.8s						
SPITS	Spitsbergen Ar	47.71	352	LR	LR	18 02 52.9	
	comp=Z,259nm,18.6s,baz=150,slow=38						
CMAR	Chiang Mai Arr	47.79	94	P	P	17 41 27.4	-1.7
CMAR				ScP	ScP	17 46 56.5	+3.1
CMAR	Chiang Mai Arr	47.79	94	P	P	17 41 27.4	-1.7
	comp=Z,0.7nm,0.7s,baz=293,slow=8.6,SNR=4.7						
CMAR				ScP	ScP	17 46 56.4	+3.1
	comp=Z,1.1nm,1.0s,baz=273,slow=6.0,SNR=5.3						
CMAR	Chiang Mai Arr	47.79	94	P	P	17 41 27.4	-1.7
KMI	Kunming	48.22	84	P	P	17 41 34.1	+1.5
KMI				pP	pP	17 41 47.5	+14
KMI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
JMIC	Jan Mayen	48.72	339	LR	LR	18 03 11.8	
	comp=Z,331nm,18.4s,baz=128,slow=38						
XAN	Xi'an	50.39	71	P	P	17 41 51.5	+2.6
XAN				pP	pP	17 42 03.9	+14
XAN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,18nm,5.4s						
HHC	Hu-ho-hao-te	50.75	61	eP	P	17 41 49.8	-1.9
HHC				pP	pP	17 42 02.3	+9.5
HHC				sP	sP	17 42 07.6	+14
HHC				PP	PP	17 43 47.3	-0.3
HHC				S	S	17 48 59.2	-8.7
HHC				sS	sS	17 49 21.5	+12
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,6.7s						
HHC				LR	LR		
	comp=N,330nm,16.7s						
HHC				LR	LR		
	comp=E,240nm,16.3s						
HHC				LR	LR		
	comp=Z,310nm,15.7s						
GYA	Guiyang	51.00	81	eP	P	17 41 55.0	+1.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DBIC	Dimbokro	55.24	254	P	P	17 42 24.7	-0.3
DBIC	Dimbokro	55.24	254	P	P	17 42 25.3	+0.3
	comp=Z,2.5nm,0.9s,baz=30,slow=7.5,SNR=2.9						
DBIC	Dimbokro	55.24	254	P	P	17 42 24.7	-0.3
TIXI	Tiksi	56.63	22	eP	P	17 42 36.4	+2.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.3s						
IPM	Ipoh	56.91	108	eP	P	17 42 33.3	-3.7
	comp=Z,10nm,0.8s						
IPM	Ipoh	56.91	108	eP	P	17 42 33.3	-3.7
	comp=Z,10nm,0.8s						
YAK	Yakutsk	58.05	33	eP	P	17 42 46.7	+2.4
YAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SUMG	Summit	58.16	339	eP	P	17 42 46.9	+1.5
SUMG				pmax	pmax		
	comp=Z,16nm,1.1s						
SUMG	Summit	58.16	339	eP	P	17 42 46.9	+1.5
	comp=Z,16nm,1.1s						
SUMG	Summit	58.16	339	eP	P	17 42 46.8	+1.4
	comp=Z,16nm,1.1s						
NJ2	Nanjing	58.92	70	eP	P	17 42 50.0	-0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2	Changchun	59.95	55	eP	P	17 42 58.8	+1.1
LBTB	Lobatse	61.08	203	P	P	17 43 09.8	+4.1
MDJ	Mudanjiang	62.51	53	P	P	17 43 13.9	-1.2
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,42nm,5.5s						
KSAR	Wonju Array Be	63.86	61	P	P	17 43 22.5	-1.7
KSAR	Wonju Array Be	63.86	61	P	P	17 43 22.5	-1.7
KSRS	Korea Array	63.88	61	P	P	17 43 22.5	-1.8
	comp=Z,1.7nm,0.8s,baz=283,slow=7.0,SNR=8.8						
USRK	Ussuriysk Arra	64.27	53	P	P	17 43 25.3	-1.4
	comp=Z,2.4nm,0.8s,baz=309,slow=6.8,SNR=4.1						
BOSA	Boshof	64.53	202	P	P	17 43 30.8	+2.1
BOSA	Boshof	64.53	202	P	P	17 43 30.8	+2.1
	comp=Z,3.8nm,0.8s,baz=347,slow=5.5,SNR=5.3						
SEY	Seymchan	67.69	29	eP	P	17 43 47.7	-0.8
BILL	Bilibino	69.80	21	P	P	17 44 05.0	+3.5
BILL				e		17 44 13.6	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
YSS	Yuzh-Sakhalins	70.07	47	eP	P	17 43 55.0	-8.5
YSS				e		17 44 05.5	
ILAR	Eielson Array	82.28	6	P	P	17 45 11.8	-1.0
ILAR	Eielson Array	82.28	6	P	P	17 45 11.8	-1.0
	comp=Z,0.6nm,0.9s,baz=339,slow=4.1,SNR=5.9						
ILAR	Eielson Array	82.28	6	P	P	17 45 11.8	-1.0
YKA	Yellowknife Ar	84.21	352	P	P	17 45 19.1	-3.5
YKA	Yellowknife Ar	84.21	352	P	P	17 45 19.1	-3.5
	comp=Z,0.1nm,0.4s,baz=12,slow=5.2,SNR=3.7						
WRA	Warramunga Arr	97.66	109	P	P	17 46 25.7	-1.0
WRA	Warramunga Arr	97.66	109	P	P	17 46 25.7	-1.0
	comp=Z,0.5nm,0.7s,baz=311,slow=4.0,SNR=2.9						
WRA	Warramunga Arr	97.66	109	P	P	17 46 25.7	-1.0
ASAR	Alice Springs	99.25	112	P	Pdif	17 46 32.4	-1.4
ASAR	Alice Springs	99.25	112	P	Pdif	17 46 32.4	-1.4
	comp=Z,0.3nm,0.6s,baz=305,slow=4.5,SNR=9.3						
ASAR	Alice Springs	99.25	112	P	Pdif	17 46 32.4	-1.4

*CSEM **07** 17:34:07.1, 42°.49N×13°.42E, h11^{km}, After ROM*
ROM 07 17:34:07.1±0.1**, 42°.49N×13°.42E, h11**^{km}±2^{km}**, Ml1.5**/2**,**
Error ellipse: s-maj=1.4km s-min=1.4km az=64.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.05	350	Pg	Pg	17 34 09.9	+0.4
CAMP				Sg	Sg	17 34 11.2	-0.1
CAMP	Campotosto	0.05	350	Pg	Pg	17 34 09.9	+0.4
CAMP				Sg	Sg	17 34 11.2	-0.1
AQU	L'Aquila	0.14	186	Pg	Pg	17 34 10.8	+0.4
AQU				Sg	Sg	17 34 13.6	+0.8
AQU	L'Aquila	0.14	186	Pg	Pg	17 34 10.8	+0.4
AQU				Sg	Sg	17 34 13.6	+0.8
TERO	Teramo	0.19	45	Pg	Pb	17 34 12.2	-0.5
TERO				Sg	Sg	17 34 15.4	+1.1
	47nm,0.2s						
TERO	Teramo	0.19	45	Pg	Pb	17 34 12.2	-0.5
TERO				Sg	Sg	17 34 15.4	+1.1
	47nm,0.2s						
LNSS	Leonessa	0.30	292	Pg	Pg	17 34 13.6	+0.2
LNSS				Sg	Sg	17 34 18.3	+0.6
LNSS	Leonessa	0.30	292	Pg	Pg	17 34 13.6	+0.2
LNSS				Sg	Sg	17 34 18.3	+0.6
FIAM	Fiamignano	0.31	226	Pg	Pb	17 34 14.9	0.0
FIAM				Sg	Sg	17 34 18.8	+0.8
FIAM	Fiamignano	0.31	226	Pg	Pb	17 34 14.9	0.0
FIAM				Sg	Sg	17 34 18.8	+0.8
VCEL	Villa Celiera	0.33	107	Pg	Pg	17 34 13.8	0.0
VCEL				Sg	Sg	17 34 18.8	+0.5
	60nm,0.3s						
VCEL	Villa Celiera	0.33	107	Pg	Pg	17 34 13.8	0.0
VCEL				Sg	Sg	17 34 18.8	+0.5
	60nm,0.3s						
NRCA	Norcia	0.41	327	Pg	Pg	17 34 15.6	+0.2
NRCA				Sg	Sg	17 34 21.7	+0.7
NRCA	Norcia	0.41	327	Pg	Pg	17 34 15.6	+0.2
NRCA				Sg	Sg	17 34 21.7	+0.7
CERT	Cerreto	0.63	211	Pg	Pg	17 34 18.8	-0.6
CERT	Cerreto	0.63	211	Pg	Pg	17 34 18.8	-0.6

*CSEM **07** 17:35:05.5, 42°.33N×13°.49E, h10^{km}, After ROM*
ROM 07 17:35:05.5±0.1**, 42°.33N×13°.49E, h10**^{km}**, Ml2.0**/14**, Error ellipse: s-maj=1.1km s-min=0.8km az=63.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	293	Pg	Pg	17 35 08.1	+0.3
AQU				Sg	Sg	17 35 09.6	+0.2
	1μm,0.4s						
AQU	L'Aquila	0.07	293	Pg	Pg	17 35 08.1	+0.3
AQU				Sg	Sg	17 35 09.6	+0.2
	1μm,0.4s						
FAGN	Fagnano	0.09	130	Pg	Pg	17 35 08.6	+0.5
FAGN				Sg	Sg	17 35 10.5	+0.6
	382nm,0.3s						
FAGN	Fagnano	0.09	130	Pg	Pg	17 35 08.6	+0.5
FAGN				Sg	Sg	17 35 10.5	+0.6
	382nm,0.3s						
CAMP	Campotosto	0.22	345	Pg	Pg	17 35 10.9	+0.7
CAMP				Sg	Sg	17 35 14.1	+0.7
CAMP	Campotosto	0.22	345	Pg	Pg	17 35 10.9	+0.7
CAMP				Sg	Sg	17 35 14.1	+0.7
VCEL	Villa Celiera	0.27	75	Pg	Pg	17 35 11.8	+0.6
VCEL				Sg	Sb	17 35 16.5	-1.0
VCEL	Villa Celiera	0.27	75	Pg	Pg	17 35 11.8	+0.6
VCEL				Sg	Sb	17 35 16.5	-1.0
FIAM	Fiamignano	0.28	258	Pg	Pg	17 35 11.9	+0.6
FIAM				Sg	Sb	17 35 16.5	-1.2
	263nm,0.3s						
FIAM	Fiamignano	0.28	258	Pg	Pg	17 35 11.9	+0.6
FIAM				Sg	Sb	17 35 16.5	-1.2
	263nm,0.3s						
TERO	Teramo	0.31	16	Pg	Pg	17 35 12.1	+0.3
TERO				Sg	Sg	17 35 16.8	+0.8
	280nm,0.3s						
TERO	Teramo	0.31	16	Pg	Pg	17 35 12.1	+0.3
TERO				Sg	Sg	17 35 16.8	+0.8
	280nm,0.3s						
PTQR	Pietraquaria	0.31	192	Pg	Pg	17 35 11.8	-0.1
PTQR				Sg	Sb	17 35 17.5	-1.1
	56nm,0.2s						
PTQR	Pietraquaria	0.31	192	Pg	Pg	17 35 11.8	-0.1
PTQR				Sg	Sb	17 35 17.5	-1.1
	56nm,0.2s						
LNSS	Leonessa	0.43	310	Pg	Pb	17 35 14.8	-0.6
	173nm,0.8s						
LNSS	Leonessa	0.43	310	Pg	Pb	17 35 14.8	-0.6
	173nm,0.8s						
INTR	Introdacqua	0.44	135	Pg	Pg	17 35 14.7	+0.4
INTR				Sg	Sb	17 35 22.0	-0.3
	223nm,0.3s						
INTR	Introdacqua	0.44	135	Pg	Pg	17 35 14.7	+0.4
INTR				Sg	Sb	17 35 22.0	-0.3
	223nm,0.3s						
VVLD	Villa Vallelon	0.47	168	Pg	Pg	17 35 14.9	+0.1
VVLD				Sg	Sg	17 35 21.8	+0.8
	105nm,0.3s						
VVLD	Villa Vallelon	0.47	168	Pg	Pg	17 35 14.9	+0.1
VVLD				Sg	Sg	17 35 21.8	+0.8
	105nm,0.3s						
CERT	Cerreto	0.53	225	Pg	Pg	17 35 16.2	+0.2
	183nm,0.6s						
CERT	Cerreto	0.53	225	Pg	Pg	17 35 16.2	+0.2
	183nm,0.6s						
GUAR	Guarcino	0.55	194	Pg	Pg	17 35 16.5	+0.3
	72nm,0.4s						
GUAR	Guarcino	0.55	194	Pg	Pg	17 35 16.5	+0.3
	72nm,0.4s						
NRCA	Norcia	0.58	332	Pg	Pg	17 35 16.9	+0.1
NRCA				Sg	Sb	17 35 25.7	-0.5
NRCA	Norcia	0.58	332	Pg	Pg	17 35 16.9	+0.1
NRCA				Sg	Sb	17 35 25.7	-0.5
MNS	Montasola	0.60	276	Pg	Pg	17 35 17.4	+0.2
	35nm,0.3s						
MNS	Montasola	0.60	276	Pg	Pg	17 35 17.4	+0.2
	35nm,0.3s						
OFFI	Offida	0.62	14	Pg	Pb	17 35 18.2	-0.4
	206nm,0.6s						
OFFI	Offida	0.62	14	Pg	Pb	17 35 18.2	-0.4
	206nm,0.6s						
MTCE	Montecelio	0.63	241	Pg	Pg	17 35 18.0	+0.2
MTCE	Montecelio	0.63	241	Pg	Pg	17 35 18.0	+0.2
SDI	San Donato	0.66	159	Pg	Pg	17 35 18.6	+0.2
	40nm,0.2s						
SDI	San Donato	0.66	159	Pg	Pg	17 35 18.6	+0.2
	40nm,0.2s						
FDMO	Fiordimonte	0.77	338	Pg	Pg	17 35 20.2	-0.2
	35nm,0.2s						
FDMO	Fiordimonte	0.77	338	Pg	Pg	17 35 20.2	-0.2
	35nm,0.2s						
GIUL	Giuliano Di Ro	0.79	193	Pg	Pb	17 35 21.7	+0.3
	35nm,0.8s						
GIUL	Giuliano Di Ro	0.79	193	Pg	Pb	17 35 21.7	+0.3
	35nm,0.8s						
CESI	CESI - Serrava	0.80	328	Pg	Pg	17 35 21.2	+0.1
	20nm,0.3s						
CESI	CESI - Serrava	0.80	328	Pg	Pg	17 35 21.2	+0.1
	20nm,0.3s						
CERA	Filignano	0.83	151	Pg	Pg	17 35 21.0	-0.6
CERA	Filignano	0.83	151	Pg	Pg	17 35 21.0	-0.6
MIDA	Miranda	0.89	140	Pg	Pg	17 35 22.2	-0.6
MIDA	Miranda	0.89	140	Pg	Pg	17 35 22.2	-0.6
ASSB	Assisi San Ben	0.94	320	Pg	Pb	17 35 24.2	+0.2
	25nm,0.2s						
ASSB	Assisi San Ben	0.94	320	Pg	Pb	17 35 24.2	+0.2
	25nm,0.2s						

*CSEM **07** 17:35:41.5, 42°.31N×13°.49E, h16^{km}, After ROM*
ROM 07 17:35:41.5±0.1**, 42°.31N×13°.49E, h16**^{km}±2^{km}**, Ml2.4**/4**, 2C,**
Error ellipse: s-maj=1.6km s-min=1.2km az=57.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.08	304	Pg	Pg	17 35 44.8	0.0
AQU				Sg	Sg	17 35 47.2	+0.2
AQU	L'Aquila	0.08	304	Pg	Pg	17 35 44.8	0.0
AQU				Sg	Sg	17 35 47.2	+0.2
FAGN	Fagnano	0.08	123	Pg	Pg	17 35 45.0	+0.1
FAGN				Sg	Sg	17 35 47.6	+0.6
FAGN	Fagnano	0.08	123	Pg	Pg	17 35 45.0	+0.1
FAGN				Sg	Sg	17 35 47.6	+0.6
CAMP	Campotosto	0.23	345	Pg	Pg	17 35 46.9	-0.1
CAMP				Sg	Sg	17 35 51.0	+0.3
CAMP	Campotosto	0.23	345	Pg	Pg	17 35 46.9	-0.1
CAMP				Sg	Sg	17 35 51.0	+0.3
VCEL	Villa Celiera	0.27	72	Pg	Pg	17 35 47.9	+0.3
VCEL				Sg	Sb	17 35 53.0	+0.2
VCEL	Villa Celiera	0.27	72	Pg	Pg	17 35 47.9	+0.3
VCEL				Sg	Sb	17 35 53.0	+0.2
FIAM	Fiamignano	0.28	261	Pg	Pg	17 35 47.6	-0.1
FIAM				Sg	Sg	17 35 52.3	+0.4
FIAM	Fiamignano	0.28	261	Pg	Pg	17 35 47.6	-0.1
FIAM				Sg	Sg	17 35 52.3	+0.4
PTQR	Pietraquaria	0.30	193	Pg	Pg	17 35 48.0	0.0
PTQR				Sg	Sb	17 35 53.1	-0.2
PTQR	Pietraquaria	0.30	193	Pg	Pg	17 35 48.0	0.0
PTQR				Sg	Sb	17 35 53.1	-0.2
TERO	Teramo	0.32	15⥣	iPg	Pg	17 35 48.2	-0.2
TERO				Sg	Sg	17 35 53.4	+0.3
TERO	Teramo	0.32	15⥣	iPg	Pg	17 35 48.2	-0.2
TERO				Sg	Sg	17 35 53.4	+0.3
INTR	Introdacqua	0.43	134	Pg	Pg	17 35 49.8	-0.5
INTR				Sg	Sg	17 35 56.5	+0.2
INTR	Introdacqua	0.43	134	Pg	Pg	17 35 49.8	-0.5
INTR				Sg	Sg	17 35 56.5	+0.2
LNSS	Leonessa	0.44	311	Pg	Pg	17 35 50.7	+0.1
LNSS	Leonessa	0.44	311	Pg	Pg	17 35 50.7	+0.1
VVLD	Villa Vallelon	0.45	167	Pg	Pg	17 35 50.5	-0.2
VVLD	Villa Vallelon	0.45	167	Pg	Pg	17 35 50.5	-0.2
CERT	Cerreto	0.52	226	Pg	Pg	17 35 51.5	-0.5
CERT				Sg	Sb	17 36 00.5	+0.7
CERT	Cerreto	0.52	226	Pg	Pg	17 35 51.5	-0.5
CERT				Sg	Sb	17 36 00.5	+0.7
NRCA	Norcia	0.59	332	Pg	Pg	17 35 52.4	-0.9
NRCA				Sg	Sg	17 36 01.1	-0.2
NRCA	Norcia	0.59	332	Pg	Pg	17 35 52.4	-0.9
NRCA				Sg	Sg	17 36 01.1	-0.2
MNS	Montasola	0.60	277	Pg	Pb	17 35 54.1	+0.3
MNS	Montasola	0.60	277	Pg	Pb	17 35 54.1	+0.3
MTCE	Montecelio	0.62	243	Pg	Pg	17 35 53.8	-0.1
MTCE				Sg	Sb	17 36 03.4	+0.8
MTCE	Montecelio	0.62	243	Pg	Pg	17 35 53.8	-0.1
MTCE				Sg	Sb	17 36 03.4	+0.8
OFFI	Offida	0.64	13	Pg	Pb	17 35 54.6	+0.3
OFFI	Offida	0.64	13	Pg	Pb	17 35 54.6	+0.3
GIUL	Giuliano Di Ro	0.77	193	Pg	Pb	17 35 55.3	-1.3
GIUL	Giuliano Di Ro	0.77	193	Pg	Pb	17 35 55.3	-1.3
CESI	CESI - Serrava	0.82	328	Pg	Pb	17 35 56.5	-0.9
	137nm,0.4s						
CESI	CESI - Serrava	0.82	328	Pg	Pb	17 35 56.5	-0.9
	137nm,0.4s						
ASSB	Assisi San Ben	0.95	320	Pg	Pg	17 36 00.1	0.0
ASSB	Assisi San Ben	0.95	320	Pg	Pg	17 36 00.1	0.0
CING	Cingoli	1.09	349	Pg	Pn	17 36 02.3	+0.2
CING	Cingoli	1.09	349	Pg	Pn	17 36 02.3	+0.2
LATE	Laterza	1.28	284	Pg	Pb	17 36 05.6	+0.3
LATE	Laterza	1.28	284	Pg	Pb	17 36 05.6	+0.3
SACS	San Casciano d	1.28	295	Pg	Pb	17 36 05.8	+0.4
	95nm,0.6s						

*CSEM **07** 17:36:38.9, 42°.37N×13°.35E, h11^{km}, After ROM*
ROM 07 17:36:38.9±0.1**, 42°.37N×13°.35E, h11**^{km}±1^{km}**, Ml1.8**/1**,**
Error ellipse: s-maj=1.7km s-min=1.2km az=79.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	109	Pg	Pg	17 36 41.5	+0.5
AQU				Sg	Sg	17 36 42.8	+0.3
AQU	L'Aquila	0.04	109	Pg	Pg	17 36 41.5	+0.5
AQU				Sg	Sg	17 36 42.8	+0.3
CAMP	Campotosto	0.17	14	Pg	Pg	17 36 43.3	+0.4
CAMP				Sg	Sg	17 36 46.3	+0.6
CAMP	Campotosto	0.17	14	Pg	Pg	17 36 43.3	+0.4
CAMP				Sg	Sg	17 36 46.3	+0.6
FAGN	Fagnano	0.20	120	Pg	Pb	17 36 44.1	-0.6
FAGN				Sg	Sg	17 36 47.6	+1.4
FAGN	Fagnano	0.20	120	Pg	Pb	17 36 44.1	-0.6
FAGN				Sg	Sg	17 36 47.6	+1.4
FIAM	Fiamignano	0.20	240	Pg	Pg	17 36 43.9	+0.6
FIAM				Sg	Sg	17 36 47.1	+0.8
FIAM	Fiamignano	0.20	240	Pg	Pg	17 36 43.9	+0.6
FIAM				Sg	Sg	17 36 47.1	+0.8
TERO	Teramo	0.32	36	Pg	Pg	17 36 45.5	+0.1
TERO				Sg	Sg	17 36 50.2	+0.5
TERO	Teramo	0.32	36	Pg	Pg	17 36 45.5	+0.1
TERO				Sg	Sg	17 36 50.2	+0.5
LNSS	Leonessa	0.33	316	Pg	Pg	17 36 46.2	+0.5
LNSS				Sg	Sb	17 36 51.5	-1.0
LNSS	Leonessa	0.33	316	Pg	Pg	17 36 46.2	+0.5
LNSS				Sg	Sb	17 36 51.5	-1.0
PTQR	Pietraquaria	0.35	174	Pg	Pg	17 36 45.5	-0.5
PTQR				Sg	Sg	17 36 51.6	+0.9
PTQR	Pietraquaria	0.35	174	Pg	Pg	17 36 45.5	-0.5
PTQR				Sg	Sg	17 36 51.6	+0.9
VCEL	Villa Celiera	0.36	85	Pg	Pb	17 36 47.6	0.0
VCEL	Villa Celiera	0.36	85	Pg	Pb	17 36 47.6	0.0
NRCA	Norcia	0.50	340	Pg	Pg	17 36 49.1	+0.3
NRCA				Sg	Sb	17 36 56.5	-0.8
NRCA	Norcia	0.50	340	Pg	Pg	17 36 49.1	+0.3
NRCA				Sg	Sb	17 36 56.5	-0.8
CERT	Cerreto	0.50	213	Pg	Pg	17 36 48.8	0.0
CERT	Cerreto	0.50	213	Pg	Pg	17 36 48.8	0.0
INTR	Introdacqua	0.54	131	Pg	Pg	17 36 49.7	+0.1
INTR	Introdacqua	0.54	131	Pg	Pg	17 36 49.7	+0.1
CESI	CESI - Serrava	0.72	333	Pg	Pg	17 36 52.0	-0.9
	37nm,0.4s						
CESI	CESI - Serrava	0.72	333	Pg	Pg	17 36 52.0	-0.9
	37nm,0.4s						

*IDC **07** 17:44:39.9±1.4, 24°.19S×176°.72W, h0^{km}, mb4.2/8, mb1 4.4/9, mb1mx4.2/20, mbtmp4.3/9, ML4.0/1, Error ellipse: s-maj=43.5km s-min=27.2km az=120.0*
*NEIC **07** 17:44:41.7±1.3, 24°.64S×176°.09W, h35^{km}, mb4.7/4, Error ellipse: s-maj=31.9km s-min=17.8km az=88.0*
ISC 07 17:44:41.8±0.9**, 24°.8S**±0°.1×**176°.1W**±0°.2**, h35**^{km}**, n42,**
σ**1.37**/32**, mb4.3**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.92	321	ePn	Pn	17 46 49.6	+1.3
	35nm,1.0s						
AFI	Afiamalu	11.62	21	ePn	Pn	17 47 10.6	-15
AFI				eSn	Sn	17 49 02.0	-32
AFI				Sn	Sn	17 49 06.7	-27
AFI	Afiamalu	11.62	21	Pn	Pn	17 47 12.1	-13
	2.3nm,0.3s,baz=15,slow=12,SNR=4.2						
AFI				Sn	Sn	17 49 06.7	-27
	2.0nm,0.3s,baz=35,slow=21,SNR=3.1						
URZ	Urewera	14.56	202	Pn	P	17 48 10.8	-0.5
URZ				Sn	Sn	17 50 40.8	-4.6
URZ	Urewera	14.56	202	Pn	P	17 48 10.8	-0.5
	0.7nm,0.3s,baz=330,slow=21,SNR=3.3						
URZ				Sn	Sn	17 50 40.8	-4.6
	0.1nm,0.3s,baz=116,slow=20,SNR=1.1						
RAR	Rarotonga	15.47	80	ePn	Pn	17 48 00.2	-17
TBI	Tubuai	24.37	92	eLR	LR	17 55 27.7	
	92nm,22.2s						
PPT2	Papeete2	25.74	79	eLR	LR	17 56 00.0	
	81nm,21.5s						
CTAO	Charters Tower	35.02	270	eP	P	17 51 31.8	+0.5
	21nm,1.2s						
STKA	Stephens Creek	37.68	249	eP	P	17 51 53.6	-0.3
	0.3nm,0.6s						
STKA	Stephens Creek	37.68	249	P	P	17 51 54.9	+1.0
	1.3nm,0.6s,baz=86,slow=15,SNR=5.8						
PMG	Port Moresby	38.15	287	eP	P	17 51 56.6	-1.4
	15nm,1.1s						
AS31	Alice Springs	45.37	261	eP	P	17 52 57.0	0.0
ASAR	Alice Springs	45.37	261	P	P	17 52 56.4	-0.7
ASAR	Alice Springs	45.37	261	P	P	17 52 56.4	-0.7
	4.0nm,1.0s,baz=90,slow=6.3,SNR=46						
WRAB	Tennant Creek	45.86	266	eP	P	17 52 59.8	-1.2
	4.8nm,0.9s						
WRA	Warramunga Arr	45.87	266	P	P	17 53 00.3	-0.7
WRA	Warramunga Arr	45.87	266	P	P	17 53 00.3	-0.7
	3.2nm,0.6s,baz=102,slow=8.1,SNR=22						
MIDW	Midway	52.77	359	P	P	17 53 45.3	-8.0
VNDA	Vanda	53.77	186	P	P	17 54 07.4	+7.2
QSPA	South Pole Qui	65.25	180	eP	P	17 55 20.2	+0.6
	5.2nm,1.0s						
MJAR	Matsushiro Arr	74.72	323	P	P	17 56 16.1	-1.9
MJAR	Matsushiro Arr	74.72	323	P	P	17 56 16.1	-1.9
	1.7nm,0.7s,baz=168,slow=6.5,SNR=10						
MAJO	Matsushiro	74.72	323	P	P	17 56 15.1	-2.9
PETK	Petropavlovsk-	80.90	344	P	P	17 56 50.8	-1.1
PETK	Petropavlovsk-	80.90	344	P	P	17 56 50.8	-1.1
	2.1nm,0.9s,baz=187,slow=9.0,SNR=4.6						
KSRS	Korea Array	81.27	318	P	P	17 56 53.9	-0.4
	1.4nm,0.9s,baz=151,slow=7.3,SNR=7.5						
KSAR	Wonju Array Be	81.29	318	P	P	17 56 53.9	-0.5
USRK	Ussuriysk Arra	83.51	325	P	P	17 57 05.4	-0.4
	1.7nm,0.7s,baz=180,slow=1.5,SNR=4.6						
SNAA	Sanae	83.64	178	eP	P	17 57 09.4	+3.1
VNA3	Neumayer Olymp	83.71	176	eP	P	17 57 06.7	+0.1
VNA2	Neumayer--Watz	84.17	176	eP	P	17 57 07.6	-1.4
	baz=190,slow=3.5						
CMAR	Chiang Mai Arr	93.18	289	P	P	17 57 54.6	+1.7
CMAR	Chiang Mai Arr	93.18	289	P	P	17 57 54.6	+1.7
	2.1nm,0.8s,baz=130,slow=3.6,SNR=17						
HFS	Hagfors	144.07	352	PKPpre	PKPpre	18 04 08.1	
HFS				PKP	PKPdf	18 04 14.2	+1.1
HFS	Hagfors	144.07	352	PKhKP	PKPpre	18 04 08.1	
	1.4nm,0.8s,baz=46,slow=4.2,SNR=3.4						
HFS				PKP	PKPdf	18 04 14.2	+1.1
	0.9nm,0.6s,baz=37,slow=3.6,SNR=4.1						
AKASG	Malin Array Be	147.63	329	PKPbc	PKPbc	18 04 22.4	+0.2
AKASG	Malin Array Be	147.63	329	PKPbc	PKPbc	18 04 22.4	+0.2
	2.3nm,0.5s,baz=43,slow=4.3,SNR=9.8						
MMAI	Mount Meron Ar	151.32	294	PKPbc	PKPbc	18 04 35.0	+2.9
MMAI	Mount Meron Ar	151.32	294	PKPbc	PKPbc	18 04 35.0	+2.9
	4.0nm,0.8s,baz=110,slow=7.4,SNR=4.7						
TORD	Torodi Ar. Bea	168.19	170	PKPab	PKPab	18 06 00.2	+6.8
TORD	Torodi Ar. Bea	168.19	170	PKPab	PKPab	18 06 00.2	+6.8
	0.2nm,0.6s,baz=248,slow=1.6,SNR=2.9						

*CSEM **07** 17:46:59.0, 42°.24N×13°.45E, h10^{km}, After ROM*
ROM 07 17:46:59.0±0.1**, 42°.24N×13°.45E, h10**^{km}±1^{km}**, Ml1.6**/3**, 2C,**
Error ellipse: s-maj=1.3km s-min=1.1km az=104.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.10	77⥣	iPg	Pg	17 47 02.2	+0.5
FAGN				Sg	Sg	17 47 04.3	+0.6

	453nm,0.5s						
FAGN	**Fagnano**	**0.10**	**77**	⇑iPg	Pg	17 47 02.2	+0.5
FAGN				Sg	Sg	17 47 04.3	+0.6
	453nm,0.5s						
AQU	**L'Aquila**	**0.12**	**342**	Pg	Pg	17 47 02.0	+0.1
AQU				Sg	Sg	17 47 04.8	+0.8
AQU	**L'Aquila**	**0.12**	**342**	Pg	Pg	17 47 02.0	+0.1
AQU				Sg	Sg	17 47 04.8	+0.8
PTQR	**Pietraquaria**	**0.22**	**189**	Pg	Pg	17 47 04.6	+0.8
PTQR				Sg	Sg	17 47 08.4	+1.4
PTQR	**Pietraquaria**	**0.22**	**189**	Pg	Pg	17 47 04.6	+0.8
PTQR				Sg	Sg	17 47 08.4	+1.4
FIAM	**Fiamignano**	**0.25**	**276**	Pg	Pg	17 47 04.8	+0.6
FIAM				Sg	Sg	17 47 09.0	+1.2
FIAM	**Fiamignano**	**0.25**	**276**	Pg	Pg	17 47 04.8	+0.6
FIAM				Sg	Sg	17 47 09.0	+1.2
CAMP	**Campotosto**	**0.29**	**354**	Pg	Pb	17 47 06.1	-0.5
CAMP				Sg	Sg	17 47 09.6	+0.3
CAMP	**Campotosto**	**0.29**	**354**	Pg	Pb	17 47 06.1	-0.5
CAMP				Sg	Sg	17 47 09.6	+0.3
VCEL	**Villa Celiera**	**0.33**	**62**	Pg	Pg	17 47 06.3	+0.6
VCEL				Sg	Sb	17 47 12.3	-0.3
	46nm,0.4s						
VCEL	**Villa Celiera**	**0.33**	**62**	Pg	Pg	17 47 06.3	+0.6
VCEL				Sg	Sb	17 47 12.3	-0.3
	46nm,0.4s						
VVLD	**Villa Vallelon**	**0.39**	**161**	Pg	Pg	17 47 07.4	+0.5
VVLD	**Villa Vallelon**	**0.39**	**161**	Pg	Pg	17 47 07.4	+0.5
TERO	**Teramo**	**0.40**	**17**	Pg	Pg	17 47 07.1	+0.2
TERO				Sg	Sg	17 47 13.3	+1.0
	33nm,0.5s						
TERO	**Teramo**	**0.40**	**17**	Pg	Pg	17 47 07.1	+0.2
TERO				Sg	Sg	17 47 13.3	+1.0
	33nm,0.5s						
INTR	**Introdacqua**	**0.41**	**124**	Pg	Pg	17 47 07.2	0.0
INTR				Sg	Sg	17 47 13.7	+1.0
INTR	**Introdacqua**	**0.41**	**124**	Pg	Pg	17 47 07.2	0.0
INTR				Sg	Sg	17 47 13.7	+1.0
CERT	**Cerreto**	**0.46**	**230**	Pg	Pg	17 47 08.3	+0.3
CERT				Sg	Sb	17 47 15.7	-0.4
CERT	**Cerreto**	**0.46**	**230**	Pg	Pg	17 47 08.3	+0.3
CERT				Sg	Sb	17 47 15.7	-0.4
LNSS	**Leonessa**	**0.47**	**320**	Pg	Pb	17 47 09.2	-0.4
LNSS	**Leonessa**	**0.47**	**320**	Pg	Pb	17 47 09.2	-0.4
NRCA	**Norcia**	**0.64**	**337**	Pg	Pg	17 47 11.6	0.0
NRCA				Sg	Sb	17 47 21.7	+0.2
NRCA	**Norcia**	**0.64**	**337**	Pg	Pg	17 47 11.6	0.0
NRCA				Sg	Sb	17 47 21.7	+0.2

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*STR **07** 17:47:21.0±4.0, 41.°62N×15.°01E, h10^{km}, Ml5.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*BJI **07** 17:47:34.5, 42.°64N×13.°37E, h4^{km}, mB5.4/42, mb5.3/61, Ms5.8/65, Ms7 5.5/61*

*IDC **07** 17:47:35.5±0.3, 42.°37N×13.°46E, h0^{km}, mb5.1/37, mb1 5.2/49, mb1mx5.2/49, mbtmp5.1/49, ML4.9/11, MS5.3/37, Ms1 5.3/37, ms1mx5.2/44, Error ellipse: s-maj=6.9km s-min=5.8km az=105.0*

*ISCJB **07** 17:47:36.7±0.2, 42.°349N±0.°007×13.°499E±0.°008, h13^{km}±1^{km}, mb5.3/249, MS5.4/201, Error ellipse: s-maj=1.3km s-min=1.0km az=22.6*

*LDG **07** 17:47:36.0±0.1, 42.°39N×13.°55E, h2^{km}, Ml5.3/13, Error ellipse: s-maj=2.8km s-min=2.0km az=47.0*

*MOS **07** 17:47:36.3±1.1, 42.°37N×13.°43E, h14^{km}, mb5.6/87, MS5.3/65, Error ellipse: s-maj=3.2km s-min=2.5km az=97.2*

*NEIC **07** 17:47:37.0, 42.°28N×13.°46E, h15^{km}, mb5.4/161, ME5.4, MS5.4/135, MW5.5, MW5.5, ML5.7(STR), ML5.6(PDG), ML5.3(LDG), MW5.6(ROM) Broadband fault plane solution: P waves. NP1:ϕ_s335.00000°, δ60.00000°, λ-40.00000°. NP2:ϕ_s88.00000°, δ56.00000°, λ-143.00000°. Principal axes: T Plg2.0000°, Azm32.0000°; N Plg0.0000°, Azm0.0000°; P Plg48.0000°, Azm300.0000°; Moment Tensor Solution. s70 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.96; $M_{\theta\theta}$0.22; $M_{\phi\phi}$0.74; $M_{r\theta}$-0.61; $M_{\theta\phi}$-1.33; $M_{\phi r}$-0.75; Best double couple: $M_0$1.90000×10^{17} NP1:ϕ_s106.00000°, δ56.00000°, λ-146.00000°. NP2:ϕ_s355.00000°, δ63.00000°, λ-40.00000°. Principal axes: T 1.8500, Plg4.0000°, Azm52.0000°; N 0.0200, Plg43.0000°, Azm146.0000°; P -1.8700, Plg46.0000°, Azm317.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism. After ROM.*

NEIC One person was killed and additional damage to buildings in L'Aquila. Felt [VI] at L'Aquila and Manoppello; [V] at Alatri, Camerino, Celano, Penne, Pratola Peligna, Roseto degli Abruzzi, Sambuceto, Sulmona and Teramo; [IV] at Ancona, Ascoli Piceno, Avezzano, Cassino, Chieti, Colleferro, Falconara Maritima, Fermo, Francavilla al Mare, Frosinone, Guidonia, Lanciano, Lariano, Latina, Macerata, Mentana, Monterotondo, Montesilvano, Pesaro, Pescara, Rieti, Rome, San Benedetto del Tronto, Sora, Termoli and Terni. Felt throughout central Italy; as far north and northwest as Belluno and Parma and as far southeast as Bari and Lamezia Terme. Also felt along the northern coast of Sicily.

*PDA **07** 17:47:37.6, 42.°32N×13.°42E, h13^{km}, mb5.4*

*PDG **07** 17:47:37.4±0.4, 42.°32N×13.°44E, h20^{km}, MD5.6/9, ML5.5/9, Error ellipse: s-maj=0.8km s-min=1.6km az=0.0*

*ROM **07** 17:47:37.3±0.0, 42.°30N×13.°49E, h17^{km}±1^{km}, Ml5.4/54, Error ellipse: s-maj=1.0km s-min=0.8km az=74.0*

*CRAAG **07** 17:47:37.4, 42.°33N×13.°46E, Mb5.5*

*CSEM **07** 17:47:37.9±0.1, 42.°35N×13.°45E, h10^{km}, mb5.4/50, Ms5.3, Mw5.4, Error ellipse: s-maj=1.5km s-min=1.2km az=28.0*

*SFS **07** 17:47:38.0, 42.°35N×13.°41E, h13^{km}, ML5.6*

*PRU **07** 17:47:38.6, 42.°43N×13.°57E, h0^{km}, M5.4*

*BEO **07** 17:47:40.8±0.7, 42.°57N×13.°71E, h0^{km}, ML5.8/8*

*BGS **07** 17:47:40.0±1.9, 42.°40N×13.°07E, h10^{km}, mb5.4, MS5.2*

*GCMT **07** 17:47:42.8±0.1, 42.°31N×13.°39E, h17^{km}, MW5.5, Moment Tensor Solution. s74,c139; s13,c13; Moment tensor: Scale 10^{17}Nm; M_{rr}-1.51±.03; $M_{\theta\theta}$0.84±.03; $M_{\phi\phi}$0.67±.03; $M_{r\theta}$-1.11±.08; $M_{\theta\phi}$-1.55±.02; $M_{\phi r}$-1.08±.08; Best double couple: $M_0$2.50000×10^{17} NP1:ϕ_s345.00000°, δ55.00000°, λ-41.00000°. NP2:ϕ_s101.00000°, δ57.00000°, λ-138.00000°. Principal axes: T 2.3100, Plg1.0000°, Azm223.0000°; N 0.4300, Plg38.0000°, Azm132.0000°; P -2.7400, Plg52.0000°, Azm314.0000°; Data Used: II IU IC G. Surface waves: sta= 94, comp=196, per= 50.*

ISC 07 17:47:38.0±0.2, **42.°32N**±0.°01×**13.°47E**±0.°01, **h16**^{km}±1^{km}, **h15**^{km}**:pP-P, n2422,** σ**1.30**/2698, **mb5.4**/249, **MS5.4**/201, **405C-383D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**304**	ePg	**Pg**	**17 47 40.4**	**-0.8**
AQU				eSg	**Sg**	**17 47 43.4**	**+0.2**
AQU	**L'Aquila**	**0.07**	**304**	⇓iP	**Pg**	**17 47 40.8**	**-0.4**
AQU	**L'Aquila**	**0.07**	**304**	⇓ePg	**Pg**	**17 47 40.8**	**-0.4**
AQU				Sg	**Sg**	**17 47 43.3**	**+0.1**
AQU	**L'Aquila**	**0.07**	**304**	ePg	**Pg**	**17 47 40.4**	**-0.8**
AQU				Sg	**Sg**	**17 47 43.3**	**+0.1**
FAGN	**Fagnano**	**0.10**	**122**	⇓ePg	**Pg**	**17 47 41.0**	**-0.5**
FAGN				Sg	**Sg**	**17 47 43.2**	**-0.5**
FAGN	**Fagnano**	**0.10**	**122**	⇓ePg	**Pg**	**17 47 41.0**	**-0.5**
FAGN				Sg	**Sg**	**17 47 43.2**	**-0.5**
CAMP	**Campotosto**	**0.22**	**348**	Pg	**Pg**	**17 47 42.8**	**-0.4**
CAMP				Sg	**Sg**	**17 47 47.1**	**+0.3**
CAMP	**Campotosto**	**0.22**	**348**	Pg	**Pg**	**17 47 42.8**	**-0.4**
CAMP				Sg	**Sg**	**17 47 47.1**	**+0.3**
FIAM	**Fiamignano**	**0.27**	**260**	⇑ePg	**Pg**	**17 47 43.6**	**-0.3**
FIAM				Sg	**Sg**	**17 47 48.3**	**+0.3**
FIAM	**Fiamignano**	**0.27**	**260**	⇑ePg	**Pg**	**17 47 43.6**	**-0.3**
FIAM				Sg	**Sg**	**17 47 48.3**	**+0.3**
VCEL	**Villa Celiera**	**0.28**	**74**	⇑ePg	**Pg**	**17 47 43.9**	**-0.3**
VCEL				Sg	**Sb**	**17 47 49.3**	**-0.1**
VCEL	**Villa Celiera**	**0.28**	**74**	⇑ePg	**Pg**	**17 47 43.9**	**-0.3**
VCEL				Sg	**Sb**	**17 47 49.3**	**-0.1**
PTQR	**Pietraquaria**	**0.30**	**191**	⇓iPg	**Pg**	**17 47 44.0**	**-0.4**
PTQR	**Pietraquaria**	**0.30**	**191**	⇓iPg	**Pg**	**17 47 44.0**	**-0.4**
TERO	**Teramo**	**0.32**	**17**	⇑ePg	**Pg**	**17 47 44.2**	**-0.6**
TERO				Sg	**Sg**	**17 47 49.6**	**+0.2**
TERO	**Teramo**	**0.32**	**17**	⇑ePg	**Pg**	**17 47 44.2**	**-0.6**
TERO				Sg	**Sg**	**17 47 49.6**	**+0.2**
LNSS	**Leonessa**	**0.43**	**312**	⇓ePg	**Pg**	**17 47 46.0**	**-0.8**
LNSS				Sg	**Sg**	**17 47 53.3**	**+0.6**
LNSS	**Leonessa**	**0.43**	**312**	⇓ePg	**Pg**	**17 47 46.0**	**-0.8**
LNSS				Sg	**Sg**	**17 47 53.3**	**+0.6**
INTR	**Introdacqua**	**0.44**	**134**	P	**Pg**	**17 47 45.9**	**-1.1**
INTR				S	**Sg**	**17 47 52.9**	**-0.2**
INTR	**Introdacqua**	**0.44**	**134**	⇓ePg	**Pg**	**17 47 45.9**	**-1.1**
INTR				Sg	**Sg**	**17 47 52.6**	**-0.4**
INTR	**Introdacqua**	**0.44**	**134**	⇓ePg	**Pg**	**17 47 45.9**	**-1.1**
INTR				S	**Sg**	**17 47 52.8**	**-0.2**
VVLD	**Villa Vallelon**	**0.46**	**166**	P	**Pg**	**17 47 46.4**	**-0.9**
VVLD	**Villa Vallelon**	**0.46**	**166**	⇓ePg	**Pg**	**17 47 46.3**	**-1.0**
VVLD				Sg	**Sg**	**17 47 53.4**	**-0.1**
VVLD	**Villa Vallelon**	**0.46**	**166**	P	**Pg**	**17 47 46.4**	**-0.9**
VVLD				Sg	**Sg**	**17 47 53.4**	**-0.1**
CERT	**Cerreto**	**0.52**	**225**	P	**Pg**	**17 47 47.5**	**-0.9**
CERT				S	**Sn**	**17 48 01.9**	**+2.5**
CERT	**Cerreto**	**0.52**	**225**	⇑iPg	**Pg**	**17 47 47.5**	**-0.9**
CERT				Sg	**Sg**	**17 47 55.2**	**-0.1**
CERT	**Cerreto**	**0.52**	**225**	⇑iPg	**Pg**	**17 47 47.5**	**-0.9**
CERT				Sg	**Sg**	**17 47 55.2**	**-0.1**
CERT				S	**Sn**	**17 48 01.9**	**+2.5**
GUAR	**Guarcino**	**0.54**	**193**	⇑ePg	**Pg**	**17 47 47.8**	**-0.9**
GUAR				Sg	**Sg**	**17 47 55.5**	**-0.4**
GUAR	**Guarcino**	**0.54**	**193**	⇑ePg	**Pg**	**17 47 47.8**	**-0.9**
GUAR				Sg	**Sg**	**17 47 55.5**	**-0.4**
GAVE	**Gavelli**	**0.57**	**311**	Pg	**Pg**	**17 47 49.4**	**+0.1**
GAVE	**Gavelli**	**0.57**	**311**	Pg	**Pg**	**17 47 49.4**	**+0.1**
NRCA	**Norcia**	**0.58**	**333**	P	**Pg**	**17 47 48.3**	**-1.2**
NRCA				S	**Sg**	**17 47 57.2**	**0.0**
NRCA	**Norcia**	**0.58**	**333**	⇓ePg	**Pg**	**17 47 48.3**	**-1.2**
NRCA				Sg	**Sg**	**17 47 57.3**	**0.0**
	158µm,0.3s						
NRCA	**Norcia**	**0.58**	**333**	⇓ePg	**Pg**	**17 47 48.3**	**-1.2**
NRCA				Sg	**Sg**	**17 47 57.3**	**0.0**
	158µm,0.3s						
TRTR	**Tortoreto Alta**	**0.59**	**33**	⇑ePg	**Pg**	**17 47 49.7**	**0.0**
TRTR	**Tortoreto Alta**	**0.59**	**33**	⇑ePg	**Pg**	**17 47 49.7**	**0.0**
MNS	**Montasola**	**0.59**	**277**	⇑ePg	**Pg**	**17 47 48.8**	**-0.9**
MNS	**Montasola**	**0.59**	**277**	⇑ePg	**Pg**	**17 47 48.8**	**-0.9**
MTCE	**Montecelio**	**0.62**	**242**	P	**Pg**	**17 47 49.2**	**-0.9**
MTCE				S	**Sn**	**17 48 02.3**	**+0.5**
MTCE	**Montecelio**	**0.62**	**242**	⇑ePg	**Pg**	**17 47 49.3**	**-0.9**
MTCE	**Montecelio**	**0.62**	**242**	⇑ePg	**Pg**	**17 47 49.3**	**-0.9**
MTCE				S	**Sn**	**17 48 02.3**	**+0.5**
OFFI	**Offida**	**0.64**	**14**	⇑ePg	**Pg**	**17 47 50.3**	**-0.3**
OFFI	**Offida**	**0.64**	**14**	⇑ePg	**Pg**	**17 47 50.3**	**-0.3**
CAFR	**Castel Frentan**	**0.65**	**98**	⇑ePg	**Pg**	**17 47 50.1**	**-0.8**
CAFR	**Castel Frentan**	**0.65**	**98**	⇑ePg	**Pg**	**17 47 50.1**	**-0.8**
SDI	**San Donato**	**0.66**	**157**	P	**Pg**	**17 47 49.4**	**-1.5**
SDI	**San Donato**	**0.66**	**157**	P	**Pg**	**17 47 49.4**	**-1.5**
SDI	**San Donato**	**0.66**	**157**	⇓iPg	**Pg**	**17 47 49.4**	**-1.5**
SDI	**San Donato**	**0.66**	**157**	⇓iPg	**Pg**	**17 47 49.4**	**-1.5**
CESX	**Cesi**	**0.72**	**294**	Pg	**Pg**	**17 47 51.6**	**-0.6**
	310µm,1.3s						
CESX	**Cesi**	**0.72**	**294**	Pg	**Pg**	**17 47 51.6**	**-0.6**
	310µm,1.3s						
RMP	**Rome, Mte Porz**	**0.77**	**229**	⇑ePg	**Pg**	**17 47 51.8**	**-1.2**
	608µm,1.5s						
RMP	**Rome, Mte Porz**	**0.77**	**229**	⇑ePg	**Pg**	**17 47 51.8**	**-1.2**
	608µm,1.5s						
FDMO	**Fiordimonte**	**0.77**	**338**	⇓ePg	**Pg**	**17 47 51.5**	**-1.6**
FDMO				Sg	**Sb**	**17 48 03.6**	**+0.1**
	163µm,0.6s						
FDMO	**Fiordimonte**	**0.77**	**338**	⇓ePg	**Pg**	**17 47 51.5**	**-1.6**
FDMO				Sg	**Sb**	**17 48 03.6**	**+0.1**
	163µm,0.6s						
GIUL	**Giuliano Di Ro**	**0.78**	**192**	⇑ePg	**Pg**	**17 47 51.9**	**-1.3**
	272µm,0.9s						
GIUL	**Giuliano Di Ro**	**0.78**	**192**	⇑ePg	**Pg**	**17 47 51.9**	**-1.3**
	272µm,0.9s						
RDP	**Rocca di Papa**	**0.79**	**226**	⇑ePg	**Pb**	**17 47 52.4**	**-1.1**
RDP	**Rocca di Papa**	**0.79**	**226**	⇑ePg	**Pb**	**17 47 52.4**	**-1.1**
RNI2	**Rionero Sannit**	**0.80**	**140**	⇓ePg	**Pb**	**17 47 52.0**	**-1.6**
	265µm,0.8s						
RNI2	**Rionero Sannit**	**0.80**	**140**	⇓ePg	**Pb**	**17 47 52.0**	**-1.6**
	265µm,0.8s						
CESI	**CESI - Serrava**	**0.81**	**329**	⇓ePg	**Pb**	**17 47 52.2**	**-1.5**
CESI				Sg	**Sg**	**17 48 04.8**	**+0.4**
	121µm,0.6s						
CESI	**CESI - Serrava**	**0.81**	**329**	⇓ePg	**Pb**	**17 47 52.2**	**-1.5**
CESI				Sg	**Sg**	**17 48 04.8**	**+0.4**
	121µm,0.6s						
MA9	**Marino**	**0.82**	**228**	⇑ePg	**Pb**	**17 47 52.6**	**-1.3**
	194µm,0.6s						
MA9	**Marino**	**0.82**	**228**	⇑ePg	**Pb**	**17 47 52.6**	**-1.3**
	194µm,0.6s						
GUMA	**Gualdo di Mace**	**0.82**	**24**	Pg	**Pb**	**17 47 51.7**	**-2.2**
GUMA	**Gualdo di Mace**	**0.82**	**24**	Pg	**Pb**	**17 47 51.7**	**-2.2**
ROM9	**Roma**	**0.86**	**236**	⇑ePg	**Pb**	**17 47 53.9**	**-0.8**
ROM9	**Roma**	**0.86**	**236**	⇑ePg	**Pb**	**17 47 53.9**	**-0.8**
MIDA	**Miranda**	**0.89**	**139**	⇓ePg	**Pb**	**17 47 53.2**	**-2.0**
	89µm,0.7s						
MIDA	**Miranda**	**0.89**	**139**	⇓ePg	**Pb**	**17 47 53.2**	**-2.0**
	89µm,0.7s						
ASSB	**Assisi San Ben**	**0.94**	**321**	Pg	**Pb**	**17 47 54.8**	**-1.3**
ASSB	**Assisi San Ben**	**0.94**	**321**	Pg	**Pb**	**17 47 54.8**	**-1.3**
FRES	**Fresagrandinar**	**0.95**	**111**	⇓ePg	**Pb**	**17 47 54.4**	**-1.8**
	462µm,1.2s						
FRES	**Fresagrandinar**	**0.95**	**111**	⇓ePg	**Pb**	**17 47 54.4**	**-1.8**
	462µm,1.2s						
TRIV	**Trivento**	**0.97**	**124**	⇓ePg	**Pb**	**17 47 54.8**	**-1.7**
	111µm,1.2s						
TRIV	**Trivento**	**0.97**	**124**	⇓ePg	**Pb**	**17 47 54.8**	**-1.7**
	111µm,1.2s						
CING	**Cingoli**	**1.08**	**349**	Pg	**Pb**	**17 47 57.0**	**-1.4**
	205µm,1.3s						
CING	**Cingoli**	**1.08**	**349**	Pg	**Pb**	**17 47 57.0**	**-1.4**
	205µm,1.3s						
TOLF	**Tolfa**	**1.12**	**257**	⇑ePg	**Pb**	**17 47 58.2**	**-0.9**
	61µm,0.7s						
TOLF	**Tolfa**	**1.12**	**257**	⇑ePg	**Pb**	**17 47 58.2**	**-0.9**
	61µm,0.7s						
MGAB	**Montegabbione**	**1.17**	**301**	Pg	**Pn**	**17 47 59.8**	**0.0**
MGAB	**Montegabbione**	**1.17**	**301**	Pg	**Pn**	**17 47 59.8**	**0.0**
AOI	**Ancona**	**1.24**	**4**	⇑ePg	**Pn**	**17 47 59.9**	**-0.8**
	184µm,1.1s						
AOI	**Ancona**	**1.24**	**4**	⇑ePg	**Pn**	**17 47 59.9**	**-0.8**
	184µm,1.1s						
PTRJ	**Pietraroja**	**1.24**	**140**	Pg	**Pn**	**17 47 59.1**	**-1.7**
PTRJ	**Pietraroja**	**1.24**	**140**	Pg	**Pn**	**17 47 59.1**	**-1.7**
ARVD	**Arcevia**	**1.24**	**342**	Pg	**Pn**	**17 48 00.1**	**-0.7**
	130µm,0.9s						
ARVD	**Arcevia**	**1.24**	**342**	Pg	**Pn**	**17 48 00.1**	**-0.7**
	130µm,0.9s						
LATE	**Laterza**	**1.27**	**284**	⇓ePn	**Pn**	**17 48 01.4**	**+0.2**
	20µm,1.1s						
LATE	**Laterza**	**1.27**	**284**	⇓ePn	**Pn**	**17 48 01.4**	**+0.2**
	20µm,1.1s						
SACS	**San Casciano d**	**1.27**	**295**	⇓ePn	**Pn**	**17 48 01.5**	**+0.2**
	236µm,1.1s						
SENI	**Senigallia**	**1.40**	**353**	Pn	**Pb**	**17 48 04.1**	**+0.3**
	217µm,1.5s						
SENI	**Senigallia**	**1.40**	**353**	Pn	**Pb**	**17 48 04.1**	**+0.3**
	217µm,1.5s						
CDCA	**Citt' di Caste**	**1.46**	**322**	Pn	**Pn**	**17 48 03.9**	**+0.2**
	114µm,1.0s						
CDCA	**Citt' di Caste**	**1.46**	**322**	Pn	**Pn**	**17 48 03.9**	**+0.2**
	114µm,1.0s						
CAFI	**Castiglion Fio**	**1.50**	**313**	⇓iPn	**Pn**	**17 48 04.5**	**+0.1**
CAFI	**Castiglion Fio**	**1.50**	**313**	⇓iPn	**Pn**	**17 48 04.5**	**+0.1**
VENT	**Ventotene**	**1.52**	**181**	Pn	**Pn**	**17 48 03.8**	**-0.8**
	43µm,0.9s						
VENT	**Ventotene**	**1.52**	**181**	Pn	**Pn**	**17 48 03.8**	**-0.8**
	43µm,0.9s						
ARCI	**Arcidosso**	**1.57**	**291**	⇓Pn	**Pn**	**17 48 06.1**	**+0.7**
	29µm,1.0s						
ARCI	**Arcidosso**	**1.57**	**291**	⇓Pn	**Pn**	**17 48 06.1**	**+0.7**
	29µm,1.0s						
MOCO	**Biccari - m.te**	**1.57**	**126**	Pn	**Pb**	**17 48 06.9**	**+0.1**
	56µm,1.3s						
PARC	**Parchiule**	**1.61**	**326**	⇓ePn	**Pn**	**17 48 06.3**	**+0.4**
	132µm,0.9s						
PARC	**Parchiule**	**1.61**	**326**	⇓ePn	**Pn**	**17 48 06.3**	**+0.4**
	132µm,0.9s						
MRB1	**Monte Rocchett**	**1.64**	**136**	⇓ePn	**Pn**	**17 48 06.8**	**+0.6**
	57µm,0.8s						
MRB1	**Monte Rocchett**	**1.64**	**136**	⇓ePn	**Pn**	**17 48 06.8**	**+0.6**
	57µm,0.8s						
PESA	**Pesaro**	**1.69**	**344**	Pn	**Pb**	**17 48 08.5**	**-0.2**
	124µm,0.6s						
PESA	**Pesaro**	**1.69**	**344**	Pn	**Pb**	**17 48 08.5**	**-0.2**
	124µm,0.6s						
CRE	**Caprese Michel**	**1.72**	**320**	⇓ePn	**Pn**	**17 48 07.5**	**+0.1**
	12µm,0.8s						
CRE	**Caprese Michel**	**1.72**	**320**	⇓ePn	**Pn**	**17 48 07.5**	**+0.1**
	12µm,0.8s						
MAON	**Monte Argentar**	**1.74**	**274**	⇓ePn	**Pn**	**17 48 07.6**	**0.0**
	55µm,1.3s						
MAON	**Monte Argentar**	**1.74**	**274**	⇓ePn	**Pn**	**17 48 07.6**	**0.0**
	55µm,1.3s						
SGTA	**Sant Agata di**	**1.84**	**129**	⇓ePn	**Pb**	**17 48 10.8**	**-0.6**
	17µm,1.1s						
SGTA	**Sant Agata di**	**1.84**	**129**	⇓ePn	**Pb**	**17 48 10.8**	**-0.6**
	17µm,1.1s						
MSAG	**Monte S. Angel**	**1.91**	**108**	⇑ePn	**Pn**	**17 48 10.4**	**+0.3**
	9µm,0.7s						
MSAG	**Monte S. Angel**	**1.91**	**108**	⇑ePn	**Pn**	**17 48 10.4**	**+0.3**
	9µm,0.7s						
ASQU	**Asqua**	**1.93**	**321**	⇓ePn	**Pn**	**17 48 10.0**	**-0.3**
	48µm,0.9s						
ASQU	**Asqua**	**1.93**	**321**	⇓ePn	**Pn**	**17 48 10.0**	**-0.3**
	48µm,0.9s						
SFI	**Santa Sofia**	**1.98**	**324**	⇓ePn	**Pn**	**17 48 11.0**	**0.0**
	169µm,1.9s						
SFI	**Santa Sofia**	**1.98**	**324**	⇓ePn	**Pn**	**17 48 11.0**	**0.0**
	169µm,1.9s						
CASP	**Castiglione de**	**1.98**	**285**	⇓iPn	**Pn**	**17 48 11.2**	**+0.2**
CASP	**Castiglione de**	**1.98**	**285**	⇓iPn	**Pn**	**17 48 11.2**	**+0.2**
MCRV	**Calabrutti - M**	**1.99**	**140**	Pn	**Pn**	**17 48 11.4**	**+0.2**
	72µm,1.9s						
MCRV	**Calabrutti - M**	**1.99**	**140**	Pn	**Pn**	**17 48 11.4**	**+0.2**
	72µm,1.9s						
MRLC	**Muro Lucano**	**2.17**	**135**	Pn	**Pn**	**17 48 14.1**	**+0.5**
	36µm,1.4s						
MRLC	**Muro Lucano**	**2.17**	**135**	Pn	**Pn**	**17 48 14.1**	**+0.5**
	36µm,1.4s						
CDRU	**Civita di Ruta**	**2.29**	**142**	⇓ePn	**Pn**	**17 48 15.6**	**+0.4**
	6µm,0.7s						
CDRU	**Civita di Ruta**	**2.29**	**142**	⇓ePn	**Pn**	**17 48 15.6**	**+0.4**
	6µm,0.7s						
PALZ	**Palazzo San Ge**	**2.31**	**126**	Pn	**Pn**	**17 48 16.3**	**+0.8**
	34µm,0.9s						
PALZ	**Palazzo San Ge**	**2.31**	**126**	Pn	**Pn**	**17 48 16.3**	**+0.8**
	34µm,0.9s						
MRVN	**Minervino Murg**	**2.39**	**121**	⇑iPn	**Pn**	**17 48 17.2**	**+0.6**
	12µm,0.9s						
MRVN	**Minervino Murg**	**2.39**	**121**	⇑iPn	**Pn**	**17 48 17.2**	**+0.6**
	12µm,0.9s						
CDT	**Castel del Mon**	**2.43**	**120**	ePn	**Pn**	**17 48 17.8**	**+0.6**
NVLJ	**Novalja**	**2.46**	**24**	iPn	**Pn**	**17 48 17.6**	**0.0**
NVLJ				Sn	**Sn**	**17 48 49.0**	**+1.7**
MAIM	**Mastiano**	**2.71**	**307**	⇓iPn	**Pn**	**17 48 21.5**	**+0.6**
	8µm,0.7s						
MAIM	**Mastiano**	**2.71**	**307**	⇓iPn	**Pn**	**17 48 21.5**	**+0.6**
	8µm,0.7s						
MAIM	**Mastiano**	**2.71**	**307**	P	**Pn**	**17 48 22.4**	**+1.5**
BDI	**Bagni Di Lucca**	**2.73**	**311**	⇓ePn	**Pn**	**17 48 21.5**	**+0.2**
	22µm,1.5s						
BDI	**Bagni Di Lucca**	**2.73**	**311**	⇓ePn	**Pn**	**17 48 21.5**	**+0.2**
	22µm,1.5s						
AMUR	**Altamura**	**2.74**	**120**	⇑ePn	**Pn**	**17 48 22.1**	**+0.8**
	24µm,1.3s						
AMUR	**Altamura**	**2.74**	**120**	⇑ePn	**Pn**	**17 48 22.1**	**+0.8**
	24µm,1.3s						
MIGL	**Miglionico**	**2.81**	**127**	⇑ePn	**Pn**	**17 48 23.7**	**+1.3**
	60µm,1.1s						
MIGL	**Miglionico**	**2.81**	**127**	⇑ePn	**Pn**	**17 48 23.7**	**+1.3**
	60µm,1.1s						
BAI	**Bari**	**2.82**	**114**	ePn	**Pn**	**17 48 23.6**	**+1.1**
BAI				eSn	**Sn**	**17 48 57.6**	**+1.5**
VLC	**Villacollemand**	**2.91**	**310**	⇓iPn	**Pn**	**17 48 23.9**	**+0.1**
VLC	**Villacollemand**	**2.91**	**310**	⇓ePn	**Pn**	**17 48 24.1**	**+0.3**
	40µm,1.9s						
VLC	**Villacollemand**	**2.91**	**310**	⇓iPn	**Pn**	**17 48 23.9**	**+0.1**
CUC	**Castrocucco**	**2.92**	**142**	ePn	**Pn**	**17 48 23.8**	**-0.1**
CUC	**Castrocucco**	**2.92**	**142**	ePn	**Pn**	**17 48 23.8**	**-0.1**
MATE	**Matera**	**2.94**	**123**	⇑iPn	**Pn**	**17 48 25.1**	**+1.0**
	11µm,0.7s						
MATE	**Matera**	**2.94**	**123**	⇑iPn	**Pn**	**17 48 25.1**	**+1.0**
	11µm,0.7s						
NOCI	**Noci**	**3.10**	**118**	⇑iPn	**Pn**	**17 48 27.1**	**+0.8**
	6µm,0.7s						
NOCI	**Noci**	**3.10**	**118**	⇑iPn	**Pn**	**17 48 27.1**	**+0.8**
	6µm,0.7s						
STON	**Ston**	**3.17**	**79**	iPn	**Pn**	**17 48 27.4**	**+0.2**
STON				Sn	**Sn**	**17 49 04.0**	**-0.7**
STON	**Ston**	**3.17**	**79**	iPn	**Pn**	**17 48 27.4**	**+0.2**
STON				Sn	**Sn**	**17 49 04.0**	**-0.7**
SKDS	**Skadanscina**	**3.25**	**7**	⇑iPn	**Pn**	**17 48 28.3**	**-0.1**
SKDS				iSn	**Sn**	**17 49 06.3**	**-0.5**
SKDS							
	comp=Z,25µm,1.3s						
SKDS	**Skadanscina**	**3.25**	**7**	Pn	**Pn**	**17 48 28.3**	**-0.1**
SKDS				iSn	**Sn**	**17 49 06.3**	**-0.5**
	comp=Z,25µm,1.3s						
OSPF	**L'Ospedale**	**3.26**	**260**	P	**Pn**	**17 48 28.2**	**-0.4**
OSPF	**L'Ospedale**	**3.26**	**260**	P	**Pn**	**17 48 28.2**	**-0.4**
OSPF	**L'Ospedale**	**3.26**	**260**	P	**Pn**	**17 48 28.2**	**-0.4**
KNDS	**Knezji Dol**	**3.28**	**11**	⇑iPn	**Pn**	**17 48 29.0**	**+0.2**
KNDS				iSn	**Sn**	**17 49 08.0**	**+0.5**
KNDS							
	comp=Z,33µm,1.4s						
KNDS	**Knezji Dol**	**3.28**	**11**	⇑iPn	**Pn**	**17 48 29.0**	**+0.2**
KNDS				iSn	**Sn**	**17 49 08.0**	**+0.5**
	comp=Z,33µm,1.4s						
GRAM	**Graiana**	**3.30**	**312**	P	**Pn**	**17 48 28.0**	**-1.1**
SBPO	**S.Benedetto Po**	**3.30**	**327**	⇓ePn	**Pn**	**17 48 30.9**	**+1.9**
	comp=Z,66µm,1.2s						
SBPO	**S.Benedetto Po**	**3.30**	**327**	⇓ePn	**Pn**	**17 48 30.9**	**+1.9**
	comp=Z,66µm,1.2s						
PGF	**Pioggiola**	**3.32**	**275**	ePn	**Pn**	**17 48 30.2**	**+0.8**
PGF				eSn	**Sn**	**17 49 08.9**	**+0.3**
	comp=Z,2µm,0.7s,SNR=1.0						
PGF	**Pioggiola**	**3.32**	**275**	eP	**Pn**	**17 48 30.2**	**+0.8**
PGF				e		17 49 08.9	
PGF	**Pioggiola**	**3.32**	**275**	ePn	**Pn**	**17 48 30.2**	**+0.8**
PGF				eSn	**Sn**	**17 49 08.9**	**+0.3**
PGF	**Pioggiola**	**3.32**	**275**	ePn	**Pn**	**17 48 30.2**	**+0.8**
PGF				eSn	**Sn**	**17 49 08.9**	**+0.3**
	comp=Z,903nm,0.7s,SNR=1.0						
GBRS	**Gornja Briga**	**3.35**	**16**	⇑iPn	**Pn**	**17 48 30.2**	**+0.3**
GBRS				eSn	**Sn**	**17 49 09.9**	**+0.5**
	comp=Z,23µm,1.4s						
CODM	**Codolo**	**3.36**	**309**	P	**Pn**	**17 48 29.4**	**-0.5**
TRI	**Trieste**	**3.40**	**3**	⇑eP	**Pn**	**17 48 29.9**	**-0.4**
TRI	**Trieste**	**3.40**	**3**	⇑ePn	**Pn**	**17 48 29.9**	**-0.4**
TRI	**Trieste**	**3.40**	**3**	⇑ePn	**Pn**	**17 48 30.0**	**-0.4**
	comp=Z,11µm,0.8s						
TRI	**Trieste**	**3.40**	**3**	⇑ePn	**Pn**	**17 48 29.9**	**-0.4**
BOJS	**Bojanci**	**3.44**	**21**	⇑iPn	**Pn**	**17 48 31.4**	**+0.5**
BOJS				eSn	**Sn**	**17 49 11.6**	**+0.3**
BOJS							
	comp=Z,50µm,2.6s						
BOJS	**Bojanci**	**3.44**	**21**	⇑iPn	**Pn**	**17 48 31.4**	**+0.5**
BOJS	**Bojanci**	**3.44**	**21**	⇑iPn	**Pn**	**17 48 31.4**	**+0.5**
BOJS				eSn	**Sn**	**17 49 11.6**	**+0.3**
	comp=Z,50µm,2.6s						
CEY	**Cerknica**	**3.49**	**11**	⇑iPn	**Pn**	**17 48 31.6**	**-0.1**
CEY				iSn	**Sn**	**17 49 12.5**	**-0.2**
CEY							
	comp=Z,22µm,1.6s						
CEY	**Cerknica**	**3.49**	**11**	⇑iPn	**Pn**	**17 48 31.6**	**-0.1**
CEY				iSn	**Sn**	**17 49 12.5**	**-0.2**
	comp=Z,22µm,1.6s						
SC2M	**Scurtabo**	**3.55**	**307**	⇓ePn	**Pn**	**17 48 33.6**	**+1.1**
	comp=Z,4µm,0.7s						
SC2M	**Scurtabo**	**3.55**	**307**	P	**Pn**	**17 48 33.3**	**+0.8**
SC2M	**Scurtabo**	**3.55**	**307**	⇓ePn	**Pn**	**17 48 33.6**	**+1.1**
	comp=Z,4µm,0.7s						
JAVS	**Javornik**	**3.60**	**7**	⇑iPn	**Pn**	**17 48 33.2**	**-0.1**
JAVS				eSn	**Sn**	**17 49 15.2**	**-0.3**
JAVS							
	comp=Z,22µm,1.4s						
JAVS	**Javornik**	**3.60**	**7**	⇑iPn	**Pn**	**17 48 33.2**	**-0.1**
JAVS				eSn	**Sn**	**17 49 15.2**	**-0.3**
	comp=Z,22µm,1.4s						
VISS	**Visnje**	**3.62**	**15**	⇑iPn	**Pn**	**17 48 33.7**	**+0.2**
VISS				eSn	**Sn**	**17 49 15.2**	**-0.7**
VISS							
	comp=Z,31µm,1.9s						
VISS	**Visnje**	**3.62**	**15**	⇑iPn	**Pn**	**17 48 33.7**	**+0.2**
VISS				eSn	**Sn**	**17 49 15.2**	**-0.7**
	comp=Z,31µm,1.9s						
BLY	**Banja Luka**	**3.63**	**47**	ePn	**Pn**	**17 48 35.1**	**+1.5**
BLY	**Banja Luka**	**3.63**	**47**	ePn	**Pn**	**17 48 35.1**	**+1.5**
HCY	**Herceg Novi**	**3.72**	**86**	⇑iPn	**Pn**	**17 48 35.2**	**+0.3**
HCY				eSn	**Sn**	**17 49 19.3**	**+0.9**
HCY	**Herceg Novi**	**3.72**	**86**	⇑P	**Pn**	**17 48 35.5**	**+0.7**
HCY				S	**Sn**	**17 49 20.5**	**+2.1**

HCY	Herceg Novi	3.72	86	⇑P	Pn	17 48 35.5	+0.7
HCY				S	Sn	17 49 20.5	+2.1
HCY	Herceg Novi	3.72	86	⇑iPn	Pn	17 48 35.2	+0.3
HCY	Herceg Novi	3.72	86	P	Pn	17 48 35.5	+0.7
HCY				eSn	Sn	17 49 19.3	+0.9
HCY				S	Sn	17 49 20.5	+2.1
VOJS	Vojsko	3.73	4	⇑iPn	Pn	17 48 34.8	-0.2
VOJS				iSn	Sn	17 49 17.4	-1.2
VOJS							
	comp=Z,31µm,2.0s						
VOJS	Vojsko	3.73	4	⇑iPn	Pn	17 48 34.8	-0.2
VOJS				iSn	Sn	17 49 17.4	-1.2
	comp=Z,31µm,2.0s						
CGRP	Cima Grappa	3.76	342	⇓iPn	Pn	17 48 34.1	-1.5
CGRP	Cima Grappa	3.76	342	⇓iPn	Pn	17 48 34.1	-1.5
BRY	Bratogost	3.78	79	ePn	Pn	17 48 36.4	+0.5
BRY				eSn	Sn	17 49 21.8	+1.7
BRY	Bratogost	3.78	79	⇑P	Pn	17 48 36.3	+0.5
BRY				S	Sn	17 49 21.8	+1.7
BRY	Bratogost	3.78	79	⇑P	Pn	17 48 36.3	+0.5
BRY				S	Sn	17 49 21.8	+1.7
BRY	Bratogost	3.78	79	ePn	Pn	17 48 36.4	+0.5
BRY				eSn	Sn	17 49 21.8	+1.7
SISC	Sisak	3.79	33	ePn	Pn	17 48 36.0	+0.3
SISC				Sn	Sn	17 49 21.7	+1.8
SISC	Sisak	3.79	33	ePn	Pn	17 48 36.0	+0.3
SISC				Sn	Sn	17 49 21.6	+1.8
CRES	Cresnjev	3.79	21	⇑iPn	Pn	17 48 36.3	+0.5
CRES				eSn	Sn	17 49 20.5	+0.5
CRES							
	comp=Z,31µm,2.1s						
CRES	Cresnjev	3.79	21	⇑iPn	Pn	17 48 36.3	+0.5
CRES				eSn	Sn	17 49 20.5	+0.5
	comp=Z,31µm,2.1s						
LJU	Ljubljana	3.80	11	⇑iPn	Pn	17 48 36.6	+0.6
LJU				iSn	Sn	17 49 20.7	+0.3
LJU							
	comp=Z,17µm,1.0s						
LJU	Ljubljana	3.80	11	⇑iPn	Pn	17 48 36.6	+0.6
LJU				iSn	Sn	17 49 20.7	+0.3
	comp=Z,17µm,1.0s						
CRNS	Crni Vrh	3.81	8	⇑iPn	Pn	17 48 36.4	+0.4
CRNS				iSn	Sn	17 49 20.8	+0.3
CRNS							
	comp=Z,15µm,1.2s						
LEGS	Legarje	3.87	19	⇑iPn	Pn	17 48 37.2	+0.4
LEGS				eSn	Sn	17 49 22.5	+0.6
LEGS	Legarje	3.87	19	⇑iPn	Pn	17 48 37.2	+0.4
LEGS				eSn	Sn	17 49 22.5	+0.6
GCIS	Gornji Cirnik	3.87	23	⇑iPn	Pn	17 48 37.4	+0.5
GCIS				eSn	Sn	17 49 22.3	+0.2
GCIS							
	comp=Z,23µm,1.8s						
GCIS	Gornji Cirnik	3.87	23	⇑iPn	Pn	17 48 37.4	+0.5
GCIS				eSn	Sn	17 49 22.3	+0.2
	comp=Z,23µm,1.8s						
VNDS	Vrh nad Dolski	3.88	13	⇑iPn	Pn	17 48 37.6	+0.4
VNDS				iSn	Sn	17 49 21.9	-0.5
VNDS							
	comp=Z,46µm,2.1s						
PDKS	Podkum	3.90	16	⇑iPn	Pn	17 48 37.8	+0.5
PDKS				eSn	Sn	17 49 24.2	+1.4
PDKS							
	comp=Z,31µm,1.6s						
PDKS	Podkum	3.90	16	⇑iPn	Pn	17 48 37.8	+0.5
PDKS				eSn	Sn	17 49 24.2	+1.4
	comp=Z,31µm,1.6s						
CADS	Cadrg	3.92	3	⇑iPn	Pn	17 48 37.4	-0.1
CADS				iSn	Sn	17 49 21.9	-1.3
CADS							
	comp=Z,18µm,1.6s						
CADS	Cadrg	3.92	3	⇑iPn	Pn	17 48 37.4	-0.1
CADS				iSn	Sn	17 49 21.9	-1.3
	comp=Z,18µm,1.6s						
CESS	Cesta pri Krsk	3.93	21	⇑iPn	Pn	17 48 38.2	+0.5
CESS				eSn	Sn	17 49 23.5	+0.1
CESS							
	comp=Z,34µm,1.9s						
CESS	Cesta pri Krsk	3.93	21	⇑iPn	Pn	17 48 38.2	+0.5
CESS				eSn	Sn	17 49 23.5	+0.1
	comp=Z,34µm,1.9s						
ROBS	Robic	3.93	0	⇑iPn	Pn	17 48 37.6	-0.1
ROBS				eSn	Sn	17 49 21.6	-1.8
ROBS							
	comp=Z,23µm,1.9s						
ROBS	Robic	3.93	0	⇑iPn	Pn	17 48 37.6	-0.1
ROBS				eSn	Sn	17 49 21.6	-1.8
	comp=Z,23µm,1.9s						
SALO	Salr	3.93	328	⇓iPn	Pn	17 48 38.3	+0.6
	comp=Z,28µm,1.2s						
SALO	Salr	3.93	328	⇓iPn	Pn	17 48 38.3	+0.6
	comp=Z,28µm,1.2s						
CTI	Castel Tesino	3.95	341	⇓ePn	Pn	17 48 38.3	+0.1
	comp=Z,5µm,0.6s						
CTI	Castel Tesino	3.95	341	⇓ePn	Pn	17 48 38.3	+0.1
	comp=Z,5µm,0.6s						
GOLS	Golise	4.00	22	iPn	Pn	17 48 39.1	+0.4
GOLS				eSn	Sn	17 49 26.3	+1.0
GOLS							
	comp=Z,27µm,1.6s						
GOLS	Golise	4.00	22	iPn	Pn	17 48 39.1	+0.4
GOLS				eSn	Sn	17 49 26.3	+1.0
	comp=Z,27µm,1.6s						
TIP	Timpagrande	4.01	140	ePn	Pn	17 48 40.8	+1.9
TIP	Timpagrande	4.01	140	ePn	Pn	17 48 40.8	+1.9
GORS	Gorjuse	4.02	5	⇑iPn	Pn	17 48 38.9	-0.1
GORS				iSn	Sn	17 49 25.4	-0.4
GORS							
	comp=Z,13µm,1.1s						
GORS	Gorjuse	4.02	5	⇑iPn	Pn	17 48 38.9	-0.1
GORS				iSn	Sn	17 49 25.4	-0.4
	comp=Z,13µm,1.1s						
BUM	Brajici-Budva	4.02	88	⇓iPn	Pn	17 48 39.8	+0.8
BUM				eSn	Sn	17 49 26.6	+0.8
BUM	Brajici-Budva	4.02	88	⇓iPn	Pn	17 48 39.8	+0.8
BUM				eSn	Sn	17 49 26.6	+0.8
MOZS	Mozjanca	4.04	10	⇑iPn	Pn	17 48 39.7	+0.5
MOZS				eSn	Sn	17 49 25.9	-0.2
MOZS							
	comp=Z,51µm,2.2s						
MOZS	Mozjanca	4.04	10	⇑iPn	Pn	17 48 39.7	+0.5
MOZS				eSn	Sn	17 49 26.0	-0.2
	comp=Z,51µm,2.2s						
DOBS	Dobrina	4.09	20	⇑iPn	Pn	17 48 40.1	+0.2
DOBS				eSn	Sn	17 49 29.2	+1.7
DOBS	Dobrina	4.09	20	⇑iPn	Pn	17 48 40.1	+0.2
DOBS				eSn	Sn	17 49 29.2	+1.7
UPM	Unac-Piva	4.10	76	ePn	Pn	17 48 41.4	+1.2
UPM				eSn	Sn	17 49 29.6	+1.7
UPM	Unac-Piva	4.10	76	ePn	Pn	17 48 41.4	+1.2
UPM				eSn	Sn	17 49 29.6	+1.7
NKY	Niksic	4.11	81	⇑iPn	Pn	17 48 41.1	+0.8
NKY				eSn	Sn	17 49 28.9	+0.9
NKY	Niksic	4.11	81	⇑P	Pn	17 48 40.9	+0.6
NKY				S	Sn	17 49 29.6	+1.6
NKY	Niksic	4.11	81	⇑P	Pn	17 48 40.9	+0.6
NKY				S	Sn	17 49 29.6	+1.6
NKY	Niksic	4.11	81	⇑iPn	Pn	17 48 41.1	+0.8
NKY				eSn	Sn	17 49 28.9	+0.9
NKY				S	Sn	17 49 29.6	+1.6
VSL	Villasalto	4.19	229	ePn	Pn	17 48 40.5	-0.9
VSL	Villasalto	4.19	229	ePn	Pn	17 48 40.5	-0.9
OBKA	Obir	4.26	10	iPn	Pn	17 48 42.6	+0.3
	SNR=452						
OBKA	Obir	4.26	10	iPn	Pn	17 48 42.6	+0.3
OBKA	Obir	4.26	10	Pn	Pn	17 48 42.6	+0.3
	SNR=452						
PDG	Podgorica	4.29	87	ePn	Pn	17 48 43.9	+1.3
PDG				eSn	Sn	17 49 32.3	+0.1
PDG	Podgorica	4.29	87	⇑iPn	Pn	17 48 43.9	+1.3
	comp=Z,4µm,0.9s						
PDG	Podgorica	4.29	87	⇑iPn	Pn	17 48 43.5	+1.0
PDG				eSn	Sn	17 49 32.8	+0.6
TTG	Podgorica	4.29	87	⇑iPn	Pn	17 48 43.5	+1.0
TTG				eSn	Sn	17 49 32.8	+0.6
TTG	Podgorica	4.29	87	⇑P	Pn	17 48 43.6	+1.0
TTG				S	Sn	17 49 33.3	+1.1
TTG	Podgorica	4.29	87	⇑P	Pn	17 48 43.6	+1.0
TTG				S	Sn	17 49 33.3	+1.1
TTG	Podgorica	4.29	87	P	Pn	17 48 43.6	+1.0
TTG				S	Sn	17 49 33.3	+1.1
ULC	Ulcinj	4.30	93	⇑iPn	Pn	17 48 43.2	+0.3
ULC				eSn	Sn	17 49 33.4	+0.6
ULC	Ulcinj	4.30	93	⇑P	Pn	17 48 43.6	+0.7
ULC				S	Sn	17 49 34.4	+1.6
ULC	Ulcinj	4.30	93	⇑P	Pn	17 48 43.6	+0.7
ULC				S	Sn	17 49 34.4	+1.6
ULC	Ulcinj	4.30	93	⇑iPn	Pn	17 48 43.2	+0.3
ULC	Ulcinj	4.30	93	P	Pn	17 48 43.6	+0.7
ULC				eSn	Sn	17 49 33.4	+0.6
ULC				S	Sn	17 49 34.4	+1.6
MYKA	Terra Mystica	4.31	2	⇑iPn	Pn	17 48 43.8	+0.7
MYKA				⇓iSn	Sn	17 49 34.3	+1.2
MYKA	Terra Mystica	4.31	2	⇑iPn	Pn	17 48 43.8	+0.7
MYKA				iSn	Sn	17 49 34.3	+1.2
MYKA	Terra Mystica	4.31	2	Pn	Pn	17 48 43.8	+0.7
MYKA				Sn	Sn	17 49 34.3	+1.2
MSRU	Castanea	4.34	158	Pn	Pn	17 48 44.7	+1.4
	comp=Z,5µm,2.4s						
MSRU	Castanea	4.34	158	Pn	Pn	17 48 44.7	+1.4
	comp=Z,5µm,2.4s						
SCTE	Santa Cesarea	4.38	119	⇑iPn	Pn	17 48 45.1	+1.1
	comp=Z,24µm,1.4s						
SCTE	Santa Cesarea	4.38	119	⇑iPn	Pn	17 48 45.1	+1.1
	comp=Z,24µm,1.4s						
GROS	Grobnik	4.39	19	⇑iPn	Pn	17 48 44.0	-0.1
GROS				eSn	Sn	17 49 32.5	-2.5
GROS							
	comp=Z,20µm,2.0s						
GROS	Grobnik	4.39	19	⇑iPn	Pn	17 48 44.0	-0.1
GROS				eSn	Sn	17 49 32.5	-2.5
	comp=Z,20µm,2.0s						
MDI	Monti di Nese	4.39	323	⇓ePn	Pn	17 48 44.1	-0.1
	comp=Z,6µm,1.3s						
MDI	Monti di Nese	4.39	323	⇓ePn	Pn	17 48 44.1	-0.1
	comp=Z,6µm,1.3s						
KOSI	Kohlern	4.41	341	⇓iPn	Pn	17 48 45.1	+0.7
	comp=Z,6µm,0.6s						
KOSI	Kohlern	4.41	341	⇓iPn	Pn	17 48 45.1	+0.7
	comp=Z,6µm,0.6s						
CEL	Celeste	4.46	155	ePn	Pn	17 48 46.3	+1.3
CEL	Celeste	4.46	155	ePn	Pn	17 48 46.3	+1.3
PLE	Pljevlja	4.47	75	⇓iPn	Pn	17 48 46.9	+1.7
PLE				eSn	Sn	17 49 38.6	+1.7
PLE	Pljevlja	4.47	75	⇓P	Pn	17 48 46.6	+1.4
PLE				S	Sn	17 49 38.1	+1.2
PLE	Pljevlja	4.47	75	⇓P	Pn	17 48 46.6	+1.4
PLE				S	Sn	17 49 38.1	+1.2
PLE	Pljevlja	4.47	75	P	Pn	17 48 46.6	+1.4
PLE	Pljevlja	4.47	75	⇓iPn	Pn	17 48 46.9	+1.7
PLE				S	Sn	17 49 38.1	+1.2
PLE				eSn	Sn	17 49 38.6	+1.7
PERS	Pernice	4.47	15	⇑iPn	Pn	17 48 45.4	+0.1
PERS				eSn	Sn	17 49 36.0	-1.0
PERS							
	comp=Z,14µm,1.6s						
PERS	Pernice	4.47	15	⇑iPn	Pn	17 48 45.4	+0.1
PERS				eSn	Sn	17 49 36.0	-1.0
	comp=Z,14µm,1.6s						
ABTA	Abfaltersbach	4.48	352	⇑iPn	Pn	17 48 46.1	+0.7
	SNR=1939						
ABTA				⇑iSn	Sn	17 49 37.0	-0.2
ABTA	Abfaltersbach	4.48	352	⇑iPn	Pn	17 48 46.1	+0.7
ABTA				iSn	Sn	17 49 37.0	-0.2
ABTA	Abfaltersbach	4.48	352	Pn	Pn	17 48 46.1	+0.7
	SNR=1000						
ABTA				Sn	Sn	17 49 37.0	-0.2
BISS	Bistriski jare	4.49	15	⇑iPn	Pn	17 48 45.5	+0.1
BISS				eSn	Sn	17 49 35.8	-1.5
BISS	Bistriski jare	4.49	15	⇑iPn	Pn	17 48 45.5	+0.1
BISS				eSn	Sn	17 49 35.8	-1.5
SOKA	Soboth	4.50	14	⇑iPn	Pn	17 48 45.8	+0.2
SOKA	Soboth	4.50	14	⇑iPn	Pn	17 48 45.8	+0.2
SOKA	Soboth	4.50	14	Pn	Pn	17 48 45.8	+0.2
KOGS	Kog	4.58	25	⇑iPn	Pn	17 48 46.5	-0.2
KOGS				eSn	Sn	17 49 41.6	+2.0
KOGS							
	comp=Z,65µm,3.0s						
KOGS	Kog	4.58	25	⇑iPn	Pn	17 48 46.5	-0.2
KOGS				eSn	Sn	17 49 41.6	+2.0
	comp=Z,65µm,3.0s						
BBLS	Lazići	4.61	68	ePn	Pn	17 48 49.2	+2.1
BBLS	Lazići	4.61	68	ePn	Pn	17 48 49.2	+2.1
SAOF	Saorge	4.64	293	P	Pn	17 48 48.3	+0.8
SAOF	Saorge	4.64	293	P	Pn	17 48 48.3	+0.8
SAOF	Saorge	4.64	293	P	Pn	17 48 48.3	+0.8
SAOF	Saorge	4.64	293	P	Pn	17 48 48.3	+0.8
SBF	Sospel	4.69	291	ePn	Pn	17 48 48.6	+0.4
	SNR=1.0						
SBF				eSn	Sn	17 49 38.7	-3.5
	comp=Z,1µm,0.6s						
SBF	Sospel	4.69	291	eP	Pn	17 48 48.6	+0.4
SBF				e		17 49 38.7	
SBF	Sospel	4.69	291	ePn	Pn	17 48 48.6	+0.4
SBF				eSn	Sn	17 49 38.7	-3.5
SBF	Sospel	4.69	291	ePn	Pn	17 48 48.6	+0.4
	SNR=1.0						
SBF				eSn	Sn	17 49 38.7	-3.5
	comp=Z,693nm,0.6s						
REVF	Revere	4.70	290	P	Pn	17 48 48.9	+0.6
REVF	Revere	4.70	290	P	Pn	17 48 48.9	+0.6
REVF	Revere	4.70	290	P	Pn	17 48 48.9	+0.6
REVF	Revere	4.70	290	P	Pn	17 48 48.9	+0.6
AUTN	L'Aution	4.73	293	P	Pn	17 48 49.9	+1.0
AUTN	L'Aution	4.73	293	P	Pn	17 48 49.9	+1.0
AUTN	L'Aution	4.73	293	P	Pn	17 48 49.9	+1.0
AUTN	L'Aution	4.73	293	P	Pn	17 48 49.9	+1.0
RISI	Rein	4.74	348	⇓ePn	Pn	17 48 50.0	+1.0
	comp=Z,8µm,0.6s						
RISI	Rein	4.74	348	⇓ePn	Pn	17 48 50.0	+1.0
	comp=Z,8µm,0.6s						
KBA	Koelnbreinsper	4.76	359	iP	Pn	17 48 50.2	+0.9
KBA				i		17 49 44.9	
KBA	Koelnbreinsper	4.76	359	iPn	Pn	17 48 50.2	+0.9
	SNR=659						
KBA				⇑iSn	Sn	17 49 44.9	+0.6
KBA	Koelnbreinsper	4.76	359	iPn	Pn	17 48 50.2	+0.9
KBA				iSn	Sn	17 49 44.9	+0.6
KBA	Koelnbreinsper	4.76	359	iP	Pn	17 48 50.2	+0.9
KBA				iS	Sn	17 49 44.9	+0.6
BEY	Berane	4.77	81	ePn	Pn	17 48 51.8	+2.4
BEY				eSn	Sn	17 49 45.5	+1.1
IVA	Berane	4.77	81	ePn	Pn	17 48 51.8	+2.4
IVA				eSn	Sn	17 49 45.5	+1.1
BEHE	Becsehely	4.78	29	⇓epPn	Pb	17 48 57.3	-4.1
PVY	Plav	4.81	85	⇓iPn	Pn	17 48 51.9	+2.0
PVY				eSn	Sn	17 49 46.3	+1.0
PVY	Plav	4.81	85	⇓iPn	Pn	17 48 51.9	+2.0
PVY				eSn	Sn	17 49 46.3	+1.0
TOUF	Mont Tournerai	4.86	293	P	Pn	17 48 51.9	+1.2
TOUF	Mont Tournerai	4.86	293	P	Pn	17 48 51.9	+1.2
TOUF	Mont Tournerai	4.86	293	P	Pn	17 48 51.9	+1.2
TOUF	Mont Tournerai	4.86	293	P	Pn	17 48 51.9	+1.2
TIR	Tirane	4.87	99	P	Pn	17 48 51.2	+0.5
TIR	Tirane	4.87	99	P	Pn	17 48 51.2	+0.5
SJES	Sjenica	4.88	77	ePn	Pn	17 48 51.9	+1.1
SJES				eSn	Sn	17 49 45.1	-1.9
MVIF	Mont Vial	4.89	291	P	Pn	17 48 51.9	+0.9
MVIF	Mont Vial	4.89	291	P	Pn	17 48 51.9	+0.9
MVIF	Mont Vial	4.89	291	P	Pn	17 48 51.9	+0.9
MVIF	Mont Vial	4.89	291	P	Pn	17 48 51.9	+0.9
TEKS	Tekeris	4.94	61	ePn	Pn	17 48 51.6	0.0
TEKS	Tekeris	4.94	61	ePn	Pn	17 48 51.6	0.0
CALN	Calern	5.04	289	P	Pn	17 48 54.0	+1.0
CALN	Calern	5.04	289	P	Pn	17 48 54.0	+1.0
CALN	Calern	5.04	289	P	Pn	17 48 54.0	+1.0
CALN	Calern	5.04	289	P	Pn	17 48 54.0	+1.0
IVAS	Ivanjica	5.06	73	ePn	Pn	17 48 54.6	+1.3
IVAS	Ivanjica	5.06	73	ePn	Pn	17 48 54.6	+1.3
DIVS	Divibare	5.08	67	P	Pn	17 48 54.6	+0.9
DIVS	Divibare	5.08	67	⇑iPn	Pn	17 48 54.2	+0.5
DIVS	Divibare	5.08	67	⇑iPn	Pn	17 48 54.2	+0.5
DIVS	Divibare	5.08	67	P	Pn	17 48 54.6	+0.9
FETA	Feichten	5.09	338	⇓iPn	Pn	17 48 54.6	+0.8
	SNR=626						
FETA				⇑iSn	Sn	17 49 53.5	+1.0
FETA	Feichten	5.09	338	⇓iPn	Pn	17 48 54.6	+0.8
FETA				iSn	Sn	17 49 53.5	+1.0
FETA	Feichten	5.09	338	Pn	Pn	17 48 54.6	+0.8
	SNR=626						
FETA				Sn	Sn	17 49 53.5	+1.0
TUE	Stuetta	5.10	326	⇓iPn	Pn	17 48 54.1	+0.1
	comp=Z,902nm,0.6s						
TUE				eSn	Sn	17 49 47.1	-5.5
TUE	Stuetta	5.10	326	⇓iPn	Pn	17 48 54.1	+0.1
	comp=Z,902nm,0.6s						
TUE				eSn	Sn	17 49 47.1	-5.5
WTTA	Wattenberg	5.12	346	iP	Pn	17 48 55.6	+1.4
WTTA	Wattenberg	5.12	346	iPn	Pn	17 48 55.6	+1.4
	SNR=233						
WTTA	Wattenberg	5.12	346	iPn	Pn	17 48 55.6	+1.4
WTTA	Wattenberg	5.12	346	iP	Pn	17 48 55.6	+1.4
ARSA	Arzberg	5.14	16	⇑iPn	Pn	17 48 54.4	0.0
	SNR=121						
ARSA	Arzberg	5.14	16	⇑iPn	Pn	17 48 54.4	0.0
ARSA	Arzberg	5.14	16	Pn	Pn	17 48 54.4	0.0
	SNR=121						
DAVOX	Davos/Dischmat	5.15	331	Pn	Pn	17 48 55.2	+0.6
DAVOX				Sn	Sn	17 49 54.5	+0.6
DAVOX	Davos/Dischmat	5.15	331	Pn	Pn	17 48 55.2	+0.6
	comp=Z,50nm,0.3s,baz=141,slow=11,SNR=212						
DAVOX				Sn	Sn	17 49 54.4	+0.6
	comp=Z,49nm,0.3s,baz=283,slow=21,SNR=7.9						
DAVOX	Davos/Dischmat	5.15	331	Pn	Pn	17 48 55.2	+0.6
DAVOX				S	Sn	17 49 54.4	+0.6
	comp=Z,49nm,0.3s						
FRF	La Foret Royal	5.16	286	ePn	Pn	17 48 54.9	+0.2
FRF				eSn	Sn	17 49 49.0	-4.9
	comp=Z,529nm,0.7s						
FRF	La Foret Royal	5.16	286	eP	Pn	17 48 54.9	+0.2
FRF				e		17 49 49.0	
FRF	La Foret Royal	5.16	286	ePn	Pn	17 48 54.9	+0.2
FRF				eSn	Sn	17 49 49.0	-4.9
FRF	La Foret Royal	5.16	286	ePn	Pn	17 48 54.9	+0.2
WATA	Walderalm	5.20	346	⇓iP	Pn	17 48 56.8	+1.5
WATA	Walderalm	5.20	346	⇓iPn	Pn	17 48 56.8	+1.5
	SNR=242						
WATA	Walderalm	5.20	346	⇓iPn	Pn	17 48 56.8	+1.5
WATA	Walderalm	5.20	346	iP	Pn	17 48 56.8	+1.5
LMR	La Mourre	5.22	284	ePn	Pn	17 48 55.4	-0.1
LMR				eSn	Sn	17 49 49.9	-5.4
	comp=Z,388nm,0.7s						
LMR	La Mourre	5.22	284	eP	Pn	17 48 55.4	-0.1
LMR				e		17 49 49.9	
LMR	La Mourre	5.22	284	ePn	Pn	17 48 55.4	-0.1
LMR				eSn	Sn	17 49 49.9	-5.4
LMR	La Mourre	5.22	284	ePn	Pn	17 48 55.4	-0.1
PHP	Peshkopia	5.23	95	P	Pn	17 48 56.0	+0.4
PHP	Peshkopia	5.23	95	P	Pn	17 48 56.0	+0.4
MOTA	Moosalm	5.30	342	⇓iP	Pn	17 48 58.3	+1.5
MOTA	Moosalm	5.30	342	⇓iPn	Pn	17 48 58.2	+1.5
	SNR=428						
MOTA	Moosalm	5.30	342	⇓iPn	Pn	17 48 58.2	+1.5
MOTA	Moosalm	5.30	342	Pn	Pn	17 48 58.2	+1.5
	SNR=428						
SURF	Saint Ours	5.31	296	P	Pn	17 48 59.0	+2.1
SURF	Saint Ours	5.31	296	P	Pn	17 48 59.0	+2.1
SURF	Saint Ours	5.31	296	P	Pn	17 48 59.0	+2.1
PKSM	Moragy	5.38	42	⇑P	Pn	17 48 58.8	+1.2
PKSM	Moragy	5.38	42	⇑iP	Pn	17 48 58.8	+1.2
PKSM	Moragy	5.38	42	ePn	Pn	17 48 57.2	-0.4
PKSM	Moragy	5.38	42	⇓epPn	Pn	17 49 01.9	+4.3
PKSM	Moragy	5.38	42	ePn	Pn	17 48 57.2	-0.4
PKSM	Moragy	5.38	42	P	Pn	17 48 58.8	+1.2
TRUS	Trudelj	5.41	67	⇑iPn	Pn	17 48 57.6	-0.4
TRUS	Trudelj	5.41	67	⇑iPn	Pn	17 48 57.6	-0.4
MBDF	Montbardon	5.44	299	eP	Pn	17 48 59.9	+1.4
MBDF	Montbardon	5.44	299	eP	Pn	17 48 59.9	+1.4
MBDF	Montbardon	5.44	299	eP	Pn	17 48 59.9	+1.4
MBDF	Montbardon	5.44	299	eP	Pn	17 48 59.9	+1.4
RJOB	Jochberg	5.44	355	ePn	Pn	17 48 59.8	+1.3
KEK	Kerkira	5.45	116	P	Pn	17 49 00.0	+1.4
KEK	Kerkira	5.45	116	eP	Pn	17 48 59.9	+1.4
KEK	Kerkira	5.45	116	P	Pn	17 49 00.0	+1.4
PKS9	Tamasi	5.48	37	⇓ePn	Pn	17 48 59.5	+0.5
PKS9	Tamasi	5.48	37	⇓eP	Pn	17 48 59.5	+0.5
RETA	Reutte	5.52	341	⇓iPn	Pn	17 49 01.0	+1.4
	SNR=108						
RETA				⇓iSn	Sn	17 50 04.6	+1.9
RETA	Reutte	5.52	341	⇓iPn	Pn	17 49 01.0	+1.4
RETA				iSn	Sn	17 50 04.6	+1.9
RETA	Reutte	5.52	341	Pn	Pn	17 49 01.0	+1.4
	SNR=108						
GRUS	Gruza	5.53	71	⇑iPn	Pn	17 49 00.4	+0.7
GRUS				eSn	Sn	17 49 59.2	-3.7
MOA	Molln	5.56	6	iPn	Pn	17 49 01.0	+0.9
	SNR=583						
MOA				⇑iSn	Sn	17 50 04.0	+0.3
MOA	Molln	5.56	6	iPn	Pn	17 49 01.0	+0.9
MOA				iSn	Sn	17 50 04.0	+0.3
MOA	Molln	5.56	6	Pn	Pn	17 49 01.0	+0.9
	SNR=583						
MOA				Sn	Sn	17 50 04.0	+0.3
DAVA	Damuels	5.59	334	⇓iPn	Pn	17 49 02.0	+1.4
	SNR=443						
DAVA				⇑iSn	Sn	17 50 05.8	+1.2
DAVA	Damuels	5.59	334	⇓iPn	Pn	17 49 02.0	+1.4
DAVA				iSn	Sn	17 50 05.8	+1.2
DAVA	Damuels	5.59	334	Pn	Pn	17 49 02.0	+1.4
	SNR=443						
DAVA				Sn	Sn	17 50 05.8	+1.2
BNI	Bardonecchia	5.63	301	⇓eP	Pn	17 49 02.4	+1.1
BNI				pmax	pmax		
	comp=Z,805nm,1.0s						
BNI	Bardonecchia	5.63	301	⇓ePn	Pn	17 49 02.4	+1.1
	comp=Z,805nm,1.0s						
BNI	Bardonecchia	5.63	301	eP	Pn	17 49 02.4	+1.1
	comp=Z,805nm,1.0s						
BEO	Beograd	5.66	62	ePn	Pn	17 49 01.6	+0.1
SELS	Selova	5.70	78	ePn	Pn	17 49 02.5	+0.4
SOP	Sopron	5.79	21	⇓ePn	Pn	17 49 04.1	+0.8
SOP	Sopron	5.79	21	⇓eP	Pn	17 49 04.1	+0.8
LPG	La Plagne	5.80	305	eP	Pn	17 49 05.4	+1.7
LPG				eSn	Sn	17 50 03.6	-6.5
	comp=Z,935nm,0.7s,SNR=1.0						
LPG	La Plagne	5.80	305	eP	Pn	17 49 05.4	+1.7
LPG				e		17 50 03.6	
LPG	La Plagne	5.80	305	eP	Pn	17 49 05.4	+1.7
LPG				eSn	Sn	17 50 03.6	-6.5
LPG	La Plagne	5.80	305	eP	Pn	17 49 05.4	+1.7
LPL	La Plagne	5.83	306	eP	Pn	17 49 05.5	+1.5
LPL				eSn	Sn	17 50 03.4	-7.1
	comp=Z,2µm,1.0s						
LPL	La Plagne	5.83	306	eP	Pn	17 49 05.5	+1.5
LPL				e		17 50 03.4	
LPL	La Plagne	5.83	306	eP	Pn	17 49 05.5	+1.5
LPL				eSn	Sn	17 50 03.4	-7.1
LPL	La Plagne	5.83	306	eP	Pn	17 49 05.5	+1.5
PKS2	Kecel	5.86	43	ePn	Pn	17 49 06.4	+2.2
PKS2	Kecel	5.86	43	eP	Pn	17 49 06.4	+2.2
CONA	Conrad Observa	5.86	16	iPn	Pn	17 49 04.3	0.0
	SNR=462						
CONA				⇑iSn	Sn	17 50 12.0	+0.8
CONA	Conrad Observa	5.86	16	iPn	Pn	17 49 04.3	0.0
CONA				iSn	Sn	17 50 12.0	+0.8
CONA	Conrad Observa	5.86	16	Pn	Pn	17 49 04.3	0.0
	SNR=462						
CONA				Sn	Sn	17 50 12.0	+0.8
IGT	Igoumenitsa	5.89	116	P	Pn	17 49 06.1	+1.4
IGT	Igoumenitsa	5.89	116	P	Pn	17 49 06.1	+1.4
PKST	Tˆ's	5.91	32	⇓ePn	Pn	17 49 05.5	+0.6
PKST	Tˆ's	5.91	32	⇓eP	Pn	17 49 05.5	+0.6
SKO	Skopje	5.93	91	P	Pn	17 49 06.8	+1.6
SKO	Skopje	5.93	91	iPn	Pn	17 49 06.9	+1.6
SKO				eSg	Sn	17 50 09.1	-3.7
SKO	Skopje	5.93	91	ePn	Pn	17 49 07.2	+2.0
SKO				eSn	Sn	17 50 12.4	-0.5
SKO	Skopje	5.93	91	iPn	Pn	17 49 01.3	-3.9
SKO	Skopje	5.93	91	P	Pn	17 49 06.8	+1.6
SKO				eSg	Sn	17 50 01.6	-11
SVIS	Svilajnac	5.98	68	ePn	Pn	17 49 06.1	+0.3
RSL	Roselend	5.98	307	P	Pn	17 49 09.3	+3.3
NEST	Nestorio	6.01	106	P	Pn	17 49 08.3	+1.9
NEST	Nestorio	6.01	106	P	Pn	17 49 08.3	+1.9
SMRF	Simiane la Rot	6.01	289	eP	Pn	17 49 08.1	+1.7
SMRF	Simiane la Rot	6.01	289	eP	Pn	17 49 08.1	+1.7
SMRF	Simiane la Rot	6.01	289	eP	Pn	17 49 08.1	+1.7
BIA	Bitola	6.02	100	P	Pn	17 49 07.2	+0.8
BIA	Bitola	6.02	100	iPn	Pn	17 49 07.3	+0.8
BIA				eSg	Sn	17 50 11.0	-4.2
BIA	Bitola	6.02	100	iPn	Pn	17 49 07.3	+0.8
BIA				eSg	Sn	17 50 10.9	-4.2
FUR	Furstenfeldbru	6.05	346	eP	Pn	17 49 08.7	+1.8
FUR	Furstenfeldbru	6.05	346	ePn	Pn	17 49 08.7	+1.8
FUR	Furstenfeldbru	6.05	346	eP	Pn	17 49 08.7	+1.8
GDM	Grand'Maison	6.06	301	P	Pn	17 49 10.5	+3.4
ORIF	Oris-en-Rattie	6.09	298	eP	Pn	17 49 10.6	+3.1

ORIF	Oris-en-Rattie	6.09	298	eP	Pn	17 49 10.6	+3.1
ORIF	Oris-en-Rattie	6.09	298	eP	Pn	17 49 10.6	+3.1
ORIF	Oris-en-Rattie	6.09	298	eP	Pn	17 49 10.6	+3.1
PKS6	Bocsa	6.11	43	ePn	Pn	17 49 08.8	+1.2
PKS6	Bocsa	6.11	43	eP	Pn	17 49 08.8	+1.2
FNA	Florina	6.12	102	P	Pn	17 49 08.9	+1.0
FNA	Florina	6.12	102	eP	Pn	17 49 08.7	+0.8
FNA	Florina	6.12	102	P	Pn	17 49 08.9	+1.0
PKSG		6.16	33	⇓ePn	Pn	17 49 08.6	+0.3
PKSG		6.16	33	⇓eP	Pn	17 49 08.6	+0.3
BARS	Barje	6.18	83	⇑iPn	Pn	17 49 09.7	+1.1
BARS				eSn	Sn	17 50 15.7	-3.3
JAN	Janina	6.18	113	P	Pn	17 49 10.3	+1.6
JAN	Janina	6.18	113	eP	Pn	17 49 10.5	+1.8
JAN	Janina	6.18	113	P	Pn	17 49 10.3	+1.6
PKS7	Kunszentmiklos	6.23	39	ePn	Pn	17 49 10.7	+1.5
PKS7	Kunszentmiklos	6.23	39	eP	Pn	17 49 10.7	+1.5
GRN	Grenoble	6.31	300	P	Pn	17 49 14.5	+4.0
OG26	St.-Nazaire-De	6.36	294	P	Pn	17 49 14.5	+3.3
OG26	St.-Nazaire-De	6.36	294	P	Pn	17 49 14.5	+3.3
BOLS	Boljevac	6.39	73	ePn	Pn	17 49 10.8	-0.7
PKSN	Nyarlorinc	6.46	43	⇓ePn	Pn	17 49 14.3	+1.8
PKSN	Nyarlorinc	6.46	43	⇓eP	Pn	17 49 14.3	+1.8
WDD	Wield Dalam	6.49	172	ePn	Pn	17 49 14.2	+1.3
	comp=Z,238nm,0.8s						
BUD	Budapest	6.50	35	⇓ePn	Pn	17 49 14.1	+1.2
BUD	Budapest	6.50	35	⇓eP	Pn	17 49 14.1	+1.2
LKD2	Lefkada island	6.51	120	P	Pn	17 49 14.9	+1.7
LKD2	Lefkada island	6.51	120	eP	Pn	17 49 15.2	+2.0
LKD2	Lefkada island	6.51	120	P	Pn	17 49 14.9	+1.7
GEC2	GERESS Array S	6.53	1	eP	Pn	17 49 13.4	-0.1
GEC2	GERESS Array S	6.53	1	ePn	Pn	17 49 13.4	-0.1
GEC2	GERESS Array S	6.53	1	eP	Pn	17 49 13.4	-0.1
GERES	GERESS Array B	6.53	1	Pn	Pn	17 49 13.3	-0.2
GERES				Sn	Sn	17 50 27.4	-0.3
GERES	GERESS Array B	6.53	1	Pn	Pn	17 49 13.3	-0.2
	comp=Z,25nm,0.3s,baz=178,slow=13,SNR=456						
GERES				Sn	Sn	17 50 27.4	-0.3
	comp=Z,125nm,0.3s,baz=176,slow=23,SNR=10						
GERES				LR	LR	17 51 52.7	
	comp=Z,6µm,21.6s,baz=177,slow=40						
GERES	GERESS Array B	6.53	1	P	Pn	17 49 13.3	-0.2
	comp=Z,25nm,0.3s						
GERES				S	Sn	17 50 27.4	-0.3
	comp=Z,6µm,21.6s						
KZN	Kozani	6.56	105	P	Pn	17 49 14.6	+0.6
KZN	Kozani	6.56	105	eP	Pn	17 49 15.2	+1.2
KZN	Kozani	6.56	105	P	Pn	17 49 14.6	+0.6
BBS	Basel-Blauen	6.66	323	P	Pn	17 49 14.9	-0.4
BBS	Basel-Blauen	6.66	323	P	Pn	17 49 14.9	-0.4
BBS	Basel-Blauen	6.66	323	P	Pn	17 49 14.9	-0.4
SPAK	Spaichingen-Ko	6.66	332	P	Pn	17 49 15.7	+0.4
SPAK	Spaichingen-Ko	6.66	332	P	Pn	17 49 15.7	+0.4
BZS	Buzias	6.74	58	⇓iP	Pn	17 49 16.9	+0.6
BZS	Buzias	6.74	58	ePn	Pn	17 49 16.2	-0.1
BZS	Buzias	6.74	58	⇓iP	Pn	17 49 16.9	+0.6
FELD	Feldberg im Sc	6.77	327	P	Pn	17 49 16.2	-0.7
FELD				S	Sn	17 50 32.3	-1.4
FELD	Feldberg im Sc	6.77	327	P	Pn	17 49 16.2	-0.7
SMOL	Smolenice	6.79	23	ePN	Pn	17 49 16.6	-0.4
SMOL	Smolenice	6.79	23	ePn	Pn	17 49 16.6	-0.4
ZAPS	Zavoj	6.81	79	ePn	Pn	17 49 18.7	+1.4
ZAPS				eSn	Sn	17 50 32.2	-2.2
CABF	La Chapelle	6.81	312	ePn	Pn	17 49 17.2	-0.1
	SNR=1.0						
CABF	La Chapelle	6.81	312	eP	Pn	17 49 17.2	-0.1
CABF	La Chapelle	6.81	312	ePn	Pn	17 49 17.2	-0.1
CABF	La Chapelle	6.81	312	ePn	Pn	17 49 17.2	-0.1
	SNR=1.0						
KHC	Kasperske Hory	6.81	1	eP	Pn	17 49 16.8	-0.6
KHC				e		17 50 28.0	
KHC				pmax	pmax		
	comp=Z,472nm,0.8s						
KHC	Kasperske Hory	6.81	1	ePn	Pn	17 49 16.8	-0.6
	comp=Z,472nm,0.8s						
KHC				eSn	Sn	17 50 28.0	-6.6
KHC	Kasperske Hory	6.81	1	ePN	Pn	17 49 16.9	-0.5
KHC				eSN	Sn	17 50 31.9	-2.7
KHC				AMS	AMS	17 52 20.0	
	comp=Z,20µm,11.7s						
KHC	Kasperske Hory	6.81	1	Pn	Pn	17 49 16.9	-0.5
KHC				Sn	Sn	17 50 31.9	-2.7
GRG	Griva	6.83	99	P	Pn	17 49 17.5	0.0
GRG	Griva	6.83	99	eP	Pn	17 49 17.7	+0.2
GRG	Griva	6.83	99	P	Pn	17 49 17.5	0.0
VLS	Valsamata	6.83	125	P	Pn	17 49 18.9	+1.3
VLS	Valsamata	6.83	125	eP	Pn	17 49 19.2	+1.6
VLS	Valsamata	6.83	125	P	Pn	17 49 18.9	+1.3
WET	Wettzell	6.84	357	eP	Pn	17 49 17.2	-0.5
WET	Wettzell	6.84	357	ePn	Pn	17 49 17.2	-0.5
WET	Wettzell	6.84	357	eP	Pn	17 49 17.2	-0.5
VAY	Valandovo	6.87	95	P	Pn	17 49 17.5	-0.6
VAY	Valandovo	6.87	95	i Pn	Pn	17 49 18.1	+0.1
VAY				eSg	Sn	17 50 34.1	-1.8
VAY				eLg	Lg	17 50 35.3	
	comp=N,3µm,0.9s						
VAY				eLg	Lg	17 50 35.3	
	comp=E,2µm,0.8s						
VAY	Valandovo	6.87	95	P	Pn	17 49 17.5	-0.6
VAY	Valandovo	6.87	95	i Pn	Pn	17 49 18.6	+0.5
VAY				eSg	Sn	17 50 34.6	-1.3
VAY				eLg	Lg	17 50 35.8	
	comp=E,2µm,0.8s						
VIVF	Saint-Julien-l	6.88	295	ePn	Pn	17 49 19.6	+1.4
	SNR=1.0						
VIVF	Saint-Julien-l	6.88	295	eP	Pn	17 49 19.6	+1.4
VIVF	Saint-Julien-l	6.88	295	ePn	Pn	17 49 19.6	+1.4
VIVF	Saint-Julien-l	6.88	295	ePn	Pn	17 49 19.6	+1.4
	SNR=1.0						
LOMF	Lomont	6.90	319	P	Pn	17 49 18.3	-0.3
LOMF	Lomont	6.90	319	P	Pn	17 49 18.3	-0.3
LOMF	Lomont	6.90	319	P	Pn	17 49 18.3	-0.3
LOMF	Lomont	6.90	319	P	Pn	17 49 18.3	-0.3
DJES	Djerdap	6.99	67	ePn	Pn	17 49 20.1	+0.4
DJES				eSn	Sn	17 50 35.6	-3.2
KFL	Anninata	7.00	124	P	Pn	17 49 21.6	+1.7
KFL	Anninata	7.00	124	P	Pn	17 49 21.6	+1.7
BFO	Black Forest	7.02	331	eP	Pn	17 49 19.6	-0.6
BFO	Black Forest	7.02	331	ePn	Pn	17 49 19.6	-0.6
BFO	Black Forest	7.02	331	⇓ePn	Pn	17 49 19.2	-1.0
	comp=E,553nm,0.8s						
BFO	Black Forest	7.02	331	Pn	Pn	17 49 19.7	-0.5
	comp=E,2µm,0.5s,SNR=84						
BFO	Black Forest	7.02	331	eP	Pn	17 49 19.6	-0.6
THL	Klokotos Trika	7.03	110	P	Pn	17 49 20.9	+0.7
THL	Klokotos Trika	7.03	110	eP	Pn	17 49 21.2	+1.0
THL	Klokotos Trika	7.03	110	P	Pn	17 49 20.9	+0.7
RMGR	Halanga-Turnu	7.10	68	⇓iP	Pn	17 49 23.4	+2.1
RMGR	Halanga-Turnu	7.10	68	⇓iP	Pn	17 49 23.4	+2.1
SSB	Saint Sauveur	7.11	298	⇓iP	Pn	17 49 22.5	+1.1
SSB				pmax	pmax		
	comp=Z,454nm,0.9s						
SSB	Saint Sauveur	7.11	298	⇓iPn	Pn	17 49 22.5	+1.1
	comp=Z,454nm,0.9s						
SSB				P	Pn	17 49 23.0	+1.6
SSB	Saint Sauveur	7.11	298	i P	Pn	17 49 22.5	+1.1
	comp=Z,454nm,0.9s						
STU	Stuttgart	7.12	337	eP	Pn	17 49 22.2	+0.7
STU	Stuttgart	7.12	337	ePn	Pn	17 49 22.2	+0.7
STU	Stuttgart	7.12	337	⇓ePn	Pn	17 49 20.6	-0.9
	comp=Z,754nm,0.8s						
STU	Stuttgart	7.12	337	eP	Pn	17 49 22.2	+0.7
TREC	Trest	7.12	11	eP	Pn	17 49 21.2	-0.3
TREC				e		17 50 39.1	
TREC				MLR	MLR		
	comp=Z,59µm,13.1s						
TREC	Trest	7.12	11	ePN	Pn	17 49 21.2	-0.3
TREC				eSN	Sn	17 50 39.1	-3.0
TREC				AMS	AMS	17 52 20.0	
	comp=Z,59µm,13.1s						
TREC	Trest	7.12	11	Pn	Pn	17 49 21.2	-0.3
TREC				Sn	Sn	17 50 39.1	-3.0
MOF	Molkenrain	7.12	323	P	Pn	17 49 20.9	-0.7
MOF	Molkenrain	7.12	323	P	Pn	17 49 20.9	-0.7
MOF	Molkenrain	7.12	323	P	Pn	17 49 20.9	-0.7
MOF	Molkenrain	7.12	323	P	Pn	17 49 20.9	-0.7
KNT	Kendrikon	7.14	96	P	Pn	17 49 22.0	+0.1
KNT	Kendrikon	7.14	96	P	Pn	17 49 22.0	+0.1
LIT	Litokhoron	7.15	105	P	Pn	17 49 22.1	+0.1
LIT	Litokhoron	7.15	105	eP	Pn	17 49 22.3	+0.3
LIT	Litokhoron	7.15	105	P	Pn	17 49 22.1	+0.1
LIBD	Limburg	7.15	327	P	Pn	17 49 21.8	-0.2

LIBD				S	Sn	17 50 43.3	+0.4
LIBD	Limburg	7.15	327	P	Pn	17 49 21.8	-0.2
LIBD				S	Sn	17 50 43.3	+0.4
LIBD	Limburg	7.15	327	P	Pn	17 49 21.8	-0.2
LIBD				S	Sn	17 50 43.3	+0.4
EVR	Evrytania	7.19	115	P	Pn	17 49 24.9	+2.3
EVR	Evrytania	7.19	115	eP	Pn	17 49 24.5	+1.9
EVR	Evrytania	7.19	115	P	Pn	17 49 24.9	+2.3
VTS	Vitosha	7.21	85	P	Pn	17 49 23.5	+0.7
VTS	Vitosha	7.21	85	⇑iP	Pn	17 49 24.1	+1.2
VTS	Vitosha	7.21	85	⇑iPn	Pn	17 49 24.0	+1.2
VTS				eSn	Sn	17 50 40.6	-3.8
VTS	Vitosha	7.21	85	P	Pn	17 49 23.5	+0.7
PSZ	Piszkesteto	7.21	37	P	Pn	17 49 23.9	+1.1
PSZ	Piszkesteto	7.21	37	ePn	Pn	17 49 22.0	-0.8
	comp=Z,1µm,1.4s						
PSZ	Piszkesteto	7.21	37	⇑iP	Pn	17 49 23.2	+0.4
PSZ	Piszkesteto	7.21	37	⇓ePn	Pn	17 49 22.9	+0.1
PSZ	Piszkesteto	7.21	37	P	Pn	17 49 23.9	+1.1
HINF	Hinteralfeld	7.22	322	ePn	Pn	17 49 22.0	-1.0
	SNR=1.0						
HINF				eSn	Sn	17 50 38.7	-6.0
	comp=Z,4µm,1.1s						
HINF	Hinteralfeld	7.22	322	eP	Pn	17 49 22.0	-1.0
HINF				e		17 50 38.7	
HINF	Hinteralfeld	7.22	322	ePn	Pn	17 49 22.0	-1.0
HINF				eSn	Sn	17 50 38.7	-6.0
HINF	Hinteralfeld	7.22	322	ePn	Pn	17 49 22.0	-1.0
	SNR=1.0						
VYHS	Vyhne	7.24	30	ePN	Pn	17 49 23.2	+0.1
VYHS				eSN	Sn	17 50 41.6	-3.4
VYHS				e		17 51 33.5	
VYHS	Vyhne	7.24	30	ePn	Pn	17 49 23.3	+0.1
LASF	Ste Croix	7.25	287	ePn	Pn	17 49 23.4	+0.1
	SNR=1.0						
LASF	Ste Croix	7.25	287	ePn	Pn	17 49 23.4	+0.1
LASF	Ste Croix	7.25	287	ePn	Pn	17 49 23.4	+0.1
	SNR=1.0						
KEST	Kesra	7.32	207	Pn	Pn	17 49 27.6	+3.2
KEST				Sn	Sn	17 50 47.7	+0.6
KEST	Kesra	7.32	207	Pn	Pn	17 49 27.6	+3.2
	comp=Z,19nm,0.3s,baz=328,slow=3.9,SNR=266						
KEST				Sn	Sn	17 50 47.7	+0.6
	baz=250,slow=15,SNR=0.7						
KEST				LR	LR	17 52 31.7	
	comp=Z,28µm,18.1s,baz=131,slow=40						
VRAC	Vranov	7.32	16	Pn	Pn	17 49 24.5	+0.2
VRAC				Sn	Sn	17 50 45.3	-1.8
VRAC				Lg	Lg	17 51 25.4	
VRAC	Vranov	7.32	16	⇑iP	Pn	17 49 24.7	+0.4
VRAC	Vranov	7.32	16	Pn	Pn	17 49 24.5	+0.2
	comp=Z,11nm,0.3s,baz=202,slow=13,SNR=54						
VRAC				Sn	Sn	17 50 45.3	-1.8
	comp=Z,8.3nm,0.3s,baz=132,slow=21,SNR=1.3						
VRAC				Lg	Lg	17 51 25.4	
	comp=Z,8.9nm,0.3s,baz=104,slow=14,SNR=4.1						
VRAC				LR	LR	17 52 12.4	
	comp=Z,9µm,20.3s,baz=201,slow=38						
VRAC	Vranov	7.32	16	ePn	Pn	17 49 23.6	-0.7
VRAC	Vranov	7.32	16	P	Pn	17 49 24.7	+0.4
THE	Thessaloniki	7.32	100	P	Pn	17 49 24.0	-0.3
THE	Thessaloniki	7.32	100	eP	Pn	17 49 24.2	-0.1
THE	Thessaloniki	7.32	100	P	Pn	17 49 24.0	-0.3
MAHO	Mahon	7.36	254	eP	Pn	17 49 25.3	+0.5
MAKR	Makrakomi, Fth	7.36	114	P	Pn	17 49 27.1	+2.2
MAKR	Makrakomi, Fth	7.36	114	P	Pn	17 49 27.1	+2.2
CMAH	Djebel Manchou	7.36	221	P	Pn	17 49 27.2	+2.2
CMAH	Djebel Manchou	7.36	221	P	Pn	17 49 27.2	+2.2
ECH	Echery	7.39	325	eP	Pn	17 49 24.1	-1.2
ECH				e		17 50 42.3	
ECH				pmax	pmax		
	comp=Z,340nm,0.6s						
ECH	Echery	7.39	325	ePn	Pn	17 49 24.1	-1.2
	comp=Z,340nm,0.6s						
ECH				P	Pn	17 49 24.6	-0.6
ECH				eSn	Sn	17 50 42.3	-6.5
ECH	Echery	7.39	325	P	Pn	17 49 24.6	-0.6
ECH	Echery	7.39	325	eP	Pn	17 49 24.1	-1.2
	comp=Z,340nm,0.6s						
HORT	Hortiatis	7.43	100	P	Pn	17 49 25.3	-0.6
HORT	Hortiatis	7.43	100	P	Pn	17 49 25.3	-0.6
RLS	Riolos of Patr	7.45	122	P	Pn	17 49 28.4	+2.3
RLS	Riolos of Patr	7.45	122	eP	Pn	17 49 28.7	+2.6
RLS	Riolos of Patr	7.45	122	P	Pn	17 49 28.4	+2.3
AGG	Agios Georgios	7.49	113	P	Pn	17 49 28.1	+1.4
AGG	Agios Georgios	7.49	113	eP	Pn	17 49 28.1	+1.4
AGG	Agios Georgios	7.49	113	P	Pn	17 49 28.1	+1.4
CDF	Champ du Feu	7.49	327	ePn	Pn	17 49 25.7	-1.0
CDF				eSn	Sn	17 50 45.2	-6.2
	comp=Z,4µm,1.2s						
CDF	Champ du Feu	7.49	327	eP	Pn	17 49 25.7	-1.0
CDF				e		17 50 45.2	
CDF	Champ du Feu	7.49	327	ePn	Pn	17 49 25.7	-1.0
CDF				eSn	Sn	17 50 45.2	-6.2
CDF	Champ du Feu	7.49	327	ePn	Pn	17 49 25.7	-1.0
ROTZ	Rotzenmuhle	7.50	354	ePn	Pn	17 49 26.2	-0.6
EFP	Efpalio	7.52	118	P	Pn	17 49 29.5	+2.5
EFP	Efpalio	7.52	118	eP	Pn	17 49 29.5	+2.5
EFP	Efpalio	7.52	118	P	Pn	17 49 29.5	+2.5
UPR	University Cam	7.52	120	P	Pn	17 49 29.9	+2.9
UPR	University Cam	7.52	120	eP	Pn	17 49 30.8	+3.8
UPR	University Cam	7.52	120	P	Pn	17 49 29.9	+2.9
CAEH	'Ain El Ouahch	7.53	225	P	Pn	17 49 28.7	+1.5
CAEH	'Ain El Ouahch	7.53	225	P	Pn	17 49 28.7	+1.5
GRFO	Grafenberg	7.54	349	eP	Pn	17 49 26.9	-0.4
GRFO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GRFO	Grafenberg	7.54	349	ePn	Pn	17 49 26.9	-0.4
	comp=Z,4.7nm,0.8s						
GRFO	Grafenberg	7.54	349	eP	Pn	17 49 26.9	-0.4
	comp=Z,5.0nm,0.8s						
GRA1	Grafenberg Arr	7.54	349	eP	Pn	17 49 26.5	-0.8
GRF	Grafenberg Arr	7.54	349	eP	Pn	17 49 26.5	-0.8
GRF	Grafenberg Arr	7.54	349	ePn	Pn	17 49 26.5	-0.8
SOH	Sokhos	7.56	98	P	Pn	17 49 27.4	-0.2
SOH	Sokhos	7.56	98	eP	Pn	17 49 27.8	+0.2
SOH	Sokhos	7.56	98	P	Pn	17 49 27.4	-0.2
HAU	Haudompre	7.59	321	ePn	Pn	17 49 27.1	-1.0
	SNR=1.0						
HAU				eSn	Sn	17 50 45.2	-8.6
	comp=Z,4µm,0.9s						
HAU	Haudompre	7.59	321	eP	Pn	17 49 27.1	-1.0
HAU				e		17 50 45.2	
HAU	Haudompre	7.59	321	ePn	Pn	17 49 27.1	-1.0
HAU				eSn	Sn	17 50 45.2	-8.6
HAU	Haudompre	7.59	321	ePn	Pn	17 49 27.1	-1.0
	SNR=1.0						
ABSA	Djebel Ababsia	7.62	220	P	Pn	17 49 30.6	+2.1
ABSA	Djebel Ababsia	7.62	220	P	Pn	17 49 30.6	+2.1
TRIZ	Trizonia	7.66	118	P	Pn	17 49 31.2	+2.3
TRIZ	Trizonia	7.66	118	P	Pn	17 49 31.2	+2.3
DEV	Deva	7.67	59	⇑P	Pn	17 49 30.4	+1.4
DEV	Deva	7.67	59	⇑iP	Pn	17 49 30.4	+1.4
DEV	Deva	7.67	59	P	Pn	17 49 30.4	+1.4
SRS	Serrai	7.67	96	P	Pn	17 49 28.6	-0.4
SRS	Serrai	7.67	96	P	Pn	17 49 28.6	-0.4
LAKA	Lakka	7.67	119	eP	Pn	17 49 31.7	+2.6
KALE	Kalithea	7.69	118	eP	Pn	17 49 32.3	+2.9
PRU	Pruhonice	7.71	5	ePN	Pn	17 49 29.0	-0.6
PRU				eSN	Sn	17 50 51.8	-4.7
PRU				AMS	AMS	17 52 50.0	
	comp=Z,29µm,16.4s						
PRU	Pruhonice	7.71	5	Pn	Pn	17 49 29.0	-0.6
PLG	Polygyros	7.75	101	P	Pn	17 49 29.7	-0.5
PLG	Polygyros	7.75	101	eP	Pn	17 49 30.2	0.0
PLG	Polygyros	7.75	101	P	Pn	17 49 29.7	-0.5
COLF	Collangettes	7.75	298	P	Pn	17 49 31.7	+1.5
COLF	Collangettes	7.75	298	P	Pn	17 49 31.7	+1.5
LANF	Langenberg	7.75	331	P	Pn	17 49 30.2	0.0
LANF	Langenberg	7.75	331	P	Pn	17 49 30.2	0.0
LANF	Langenberg	7.75	331	P	Pn	17 49 30.2	0.0
LANF	Langenberg	7.75	331	P	Pn	17 49 30.2	0.0
PRA	Prague	7.78	5	PN	Pn	17 49 30.0	-0.6
PRA				ex	x	17 49 47.0	
PRA				ex	x	17 51 09.0	
CRAR	CRAIOVA	7.79	72	P	Pn	17 49 31.8	+1.1
CRAR	CRAIOVA	7.79	72	P	Pn	17 49 31.8	+1.1
LIKS	Likavka	7.80	28	ePN	Pn	17 49 34.6	+3.8
NVR	Nevrokopi	7.82	94	P	Pn	17 49 31.6	+0.5
NVR	Nevrokopi	7.82	94	eP	Pn	17 49 31.9	+0.8
NVR	Nevrokopi	7.82	94	P	Pn	17 49 31.6	+0.5
AXAR	Agios Charalam	7.84	114	P	Pn	17 49 33.3	+1.8

AXAR	Agios Charalam	7.84	114	P	Pn	17 49 33.3	+1.8
CKFL	Kef-Lekhel	7.89	224	P	Pn	17 49 37.0	+4.8
THEF	They Montfort	7.92	321	P	Pn	17 49 31.9	-0.6
THEF	They Montfort	7.92	321	P	Pn	17 49 31.9	-0.6
THEF	They Montfort	7.92	321	P	Pn	17 49 31.9	-0.6
THEF	They Montfort	7.92	321	P	Pn	17 49 31.9	-0.6
AMT	Artemida-Makis	7.93	124	P	Pn	17 49 35.0	+2.3
AMT	Artemida-Makis	7.93	124	eP	Pn	17 49 37.1	+4.4
AMT	Artemida-Makis	7.93	124	P	Pn	17 49 35.0	+2.3
XOR	Xorichti	7.93	109	P	Pn	17 49 32.3	-0.4
XOR	Xorichti	7.93	109	P	Pn	17 49 32.3	-0.4
DSF	Desfina	7.94	116	P	Pn	17 49 33.6	+0.8
DSF	Desfina	7.94	116	P	Pn	17 49 33.6	+0.8
NKC	Novy Kostel	7.95	355	ePN	Pn	17 49 33.1	+0.2
NKC				eSN	Sn	17 50 58.2	-4.3
NKC	Novy Kostel	7.95	355	Pn	Pn	17 49 33.1	+0.2
LBL	Lubilhac	7.95	295	P	Pn	17 49 34.9	+1.9
LBL	Lubilhac	7.95	295	P	Pn	17 49 34.9	+1.9
DRGR		7.97	53	⇓P	Pn	17 49 35.6	+2.4
DRGR		7.97	53	⇓iP	Pn	17 49 35.6	+2.4
DRGR		7.97	53	P	Pn	17 49 35.6	+2.4
MORC	Moravsky Berou	7.98	19	⇓P	Pn	17 49 34.5	+1.2
MORC	Moravsky Berou	7.98	19	ePn	Pn	17 49 33.2	-0.1
	comp=Z,321nm,0.9s						
MORC	Moravsky Berou	7.98	19	⇓iP	Pn	17 49 34.5	+1.2
MORC	Moravsky Berou	7.98	19	ePn	Pn	17 49 33.0	-0.3
MORC	Moravsky Berou	7.98	19	P	Pn	17 49 34.5	+1.2
TOD	Tromm	7.98	338	P	Pn	17 49 32.6	-0.7
PAIG	Paliouri	8.07	104	P	Pn	17 49 33.6	-0.9
PAIG	Paliouri	8.07	104	eP	Pn	17 49 34.1	-0.4
PAIG	Paliouri	8.07	104	P	Pn	17 49 33.6	-0.9
LOT	Lotru	8.07	64	⇑iP	Pn	17 49 37.0	+2.4
LOT	Lotru	8.07	64	⇑iP	Pn	17 49 37.0	+2.4
FILF	Fillols	8.08	275	P	Pn	17 49 35.0	+0.3
FILF	Fillols	8.08	275	P	Pn	17 49 35.0	+0.3
FILF	Fillols	8.08	275	P	Pn	17 49 35.0	+0.3
GUR	Goura	8.08	120	P	Pn	17 49 36.8	+2.0
GUR	Goura	8.08	120	eP	Pn	17 49 37.0	+2.2
GUR	Goura	8.08	120	P	Pn	17 49 36.8	+2.0
LRDF	Laroque-de-Fa	8.09	278	P	Pn	17 49 33.8	-1.0
LRDF	Laroque-de-Fa	8.09	278	P	Pn	17 49 33.8	-1.0
LRDF	Laroque-de-Fa	8.09	278	P	Pn	17 49 33.8	-1.0
CASM	Ain Smara	8.12	224	P	Pn	17 49 38.9	+3.6
CASM	Ain Smara	8.12	224	P	Pn	17 49 38.9	+3.6
LKR	Lokris	8.13	114	P	Pn	17 49 36.6	+1.2
LKR	Lokris	8.13	114	eP	Pn	17 49 36.7	+1.3
LKR	Lokris	8.13	114	P	Pn	17 49 36.6	+1.2
TANN	Tannenbergstha	8.13	355	ePn	Pn	17 49 35.0	-0.4
SMF	Signal de Mont	8.13	305	ePn	Pn	17 49 34.8	-0.6
	SNR=1.0						
SMF				eSn	Sn	17 50 59.4	-7.6
	comp=Z,974nm,0.8s						
SMF	Signal de Mont	8.13	305	eP	Pn	17 49 34.8	-0.6
SMF				e		17 50 59.4	
SMF	Signal de Mont	8.13	305	ePn	Pn	17 49 34.8	-0.6
SMF				eSn	Sn	17 50 59.4	-7.6
SMF	Signal de Mont	8.13	305	ePn	Pn	17 49 34.8	-0.6
	SNR=1.0						
OUR	Ouranopolis	8.15	101	P	Pn	17 49 35.1	-0.6
OUR	Ouranopolis	8.15	101	P	Pn	17 49 35.1	-0.6
OKC	Ostrava-Krasne	8.19	22	ePN	Pn	17 49 35.8	-0.4
OKC				AMS	AMS	17 53 40.0	
	comp=Z,40µm,14.5s						
OKC	Ostrava-Krasne	8.19	22	Pn	Pn	17 49 35.8	-0.4
SKIA	Skiathos	8.21	109	P	Pn	17 49 36.3	-0.2
SKIA	Skiathos	8.21	109	P	Pn	17 49 36.3	-0.2
PVCC	Panska Ves	8.25	5	ePN	Pn	17 49 36.7	-0.3
PVCC				eSN	Sn	17 51 05.1	-4.7
PVCC				AMS	AMS	17 53 10.0	
	comp=Z,26µm,14.4s						
PVCC	Panska Ves	8.25	5	Pn	Pn	17 49 36.7	-0.3
DPC	Dobruska-Polom	8.27	13	ePN	Pn	17 49 36.5	-0.9
DPC				eSN	Sn	17 51 06.6	-3.9
DPC				AMS	AMS	17 53 10.0	
	comp=Z,43µm,14.8s						
DPC	Dobruska-Polom	8.27	13	Pn	Pn	17 49 36.5	-0.9
PAGF	Fort de Pagny	8.28	322	ePn	Pn	17 49 36.6	-0.8
	baz=140						
PAGF	Fort de Pagny	8.28	322	ePn	Pn	17 49 36.6	-0.8
PAGF	Fort de Pagny	8.28	322	ePn	Pn	17 49 36.6	-0.8
	baz=140						
PYM	Petit Puy Mans	8.28	298	P	Pn	17 49 38.9	+1.3
PYM	Petit Puy Mans	8.28	298	P	Pn	17 49 38.9	+1.3
PYM	Petit Puy Mans	8.28	298	P	Pn	17 49 38.9	+1.3
PYM	Petit Puy Mans	8.28	298	P	Pn	17 49 38.9	+1.3
ITM	Ithomi	8.29	125	P	Pn	17 49 39.4	+1.8
ITM	Ithomi	8.29	125	eP	Pn	17 49 39.9	+2.3
ITM	Ithomi	8.29	125	P	Pn	17 49 39.4	+1.8
AGO	Saint Agoulin	8.32	300	P	Pn	17 49 38.9	+0.9
AGO	Saint Agoulin	8.32	300	P	Pn	17 49 38.9	+0.9
MTLF	Montolieu	8.34	281	ePn	Pn	17 49 38.1	-0.1
MTLF	Montolieu	8.34	281	eP	Pn	17 49 38.1	-0.1
MTLF	Montolieu	8.34	281	ePn	Pn	17 49 38.1	-0.1
MTLF	Montolieu	8.34	281	ePn	Pn	17 49 38.1	-0.1
PLD	Plovdiv	8.34	88	P	Pn	17 49 40.0	+1.8
PLD	Plovdiv	8.34	88	⇑iPn	Pn	17 49 39.6	+1.4
PLD	Plovdiv	8.34	88	P	Pn	17 49 40.0	+1.8
PYL	PYLOS	8.37	128	P	Pn	17 49 39.9	+1.3
PYL	PYLOS	8.37	128	eP	Pn	17 49 40.4	+1.8
PYL	PYLOS	8.37	128	P	Pn	17 49 39.9	+1.3
SFTF	Sexfontaines	8.37	318	ePn	Pn	17 49 37.7	-0.9
	baz=130						
SFTF				eSn	Sn	17 51 04.0	-8.7
	comp=Z,3µm,1.5s						
SFTF	Sexfontaines	8.37	318	ePn	Pn	17 49 37.7	-0.9
SFTF				eSn	Sn	17 51 04.0	-8.7
SFTF	Sexfontaines	8.37	318	ePn	Pn	17 49 37.7	-0.9
	baz=130						
KAVA	Kavala	8.37	95	P	Pn	17 49 38.6	-0.1
KAVA	Kavala	8.37	95	P	Pn	17 49 38.6	-0.1
UPC	Upice	8.38	11	ePN	Pn	17 49 38.3	-0.5
UPC				eSN	Sn	17 51 07.7	-5.3
UPC	Upice	8.38	11	Pn	Pn	17 49 38.3	-0.5
CARF	Carcanieres	8.41	277	P	Pn	17 49 38.8	-0.5
CARF	Carcanieres	8.41	277	P	Pn	17 49 38.8	-0.5
CARF	Carcanieres	8.41	277	P	Pn	17 49 38.8	-0.5
RAC	Raciborz	8.43	21	eP	Pn	17 49 43.0	+3.6
MOX	Moxa	8.43	352	eP	Pn	17 49 38.7	-0.8
MOX	Moxa	8.43	352	ePn	Pn	17 49 38.7	-0.8
MOX	Moxa	8.43	352	eP	Pn	17 49 38.7	-0.8
LTK	Loutraki	8.44	117	P	Pn	17 49 40.1	+0.5
LTK	Loutraki	8.44	117	eP	Pn	17 49 40.8	+1.2
LTK	Loutraki	8.44	117	P	Pn	17 49 40.1	+0.5
LOR	Lormes	8.44	309	ePn	Pn	17 49 38.6	-1.0
	baz=127,SNR=1.0						
LOR				eSn	Sn	17 51 09.9	-4.6
	comp=Z,271nm,0.6s						
LOR	Lormes	8.44	309	ePn	Pn	17 49 38.6	-1.0
LOR				eSn	Sn	17 51 09.9	-4.6
LOR	Lormes	8.44	309	ePn	Pn	17 49 38.6	-1.0
	baz=127,SNR=1.0						
VLX	Vlachokerasia	8.44	123	P	Pn	17 49 42.9	+3.1
VLX	Vlachokerasia	8.44	123	eP	Pn	17 49 42.6	+2.8
VLX	Vlachokerasia	8.44	123	P	Pn	17 49 42.9	+3.1
AVF	Avril sur Loir	8.50	305	ePn	Pn	17 49 39.0	-1.4
	SNR=1.0						
AVF	Avril sur Loir	8.50	305	eP	Pn	17 49 39.0	-1.4
AVF	Avril sur Loir	8.50	305	ePn	Pn	17 49 39.0	-1.4
AVF	Avril sur Loir	8.50	305	ePn	Pn	17 49 39.0	-1.4
	SNR=1.0						
AOS	Alonnisos	8.50	108	P	Pn	17 49 40.2	-0.3
AOS	Alonnisos	8.50	108	P	Pn	17 49 40.2	-0.3
MRKA	Markates	8.51	112	P	Pn	17 49 40.7	+0.1
MRKA	Markates	8.51	112	P	Pn	17 49 40.7	+0.1
SSF	Saint Saulge	8.54	307	ePn	Pn	17 49 39.9	-1.1
	SNR=1.0						
SSF	Saint Saulge	8.54	307	eP	Pn	17 49 39.9	-1.1
SSF	Saint Saulge	8.54	307	ePn	Pn	17 49 39.9	-1.1
SSF	Saint Saulge	8.54	307	ePn	Pn	17 49 39.9	-1.1
	SNR=1.0						
NIE	Niedzica	8.55	32	eP	Pn	17 49 44.2	+3.0
NIE				e		17 51 23.2	
NIE	Niedzica	8.55	32	eP	Pn	17 49 44.2	+3.0
NIE				eSn	Sn	17 51 23.2	+5.9
MEZF	Maizieres J'vi	8.56	319	ePn	Pn	17 49 40.4	-0.9
	baz=142,SNR=1.0						
MEZF	Maizieres J'vi	8.56	319	ePn	Pn	17 49 40.4	-0.9
MEZF	Maizieres J'vi	8.56	319	ePn	Pn	17 49 40.4	-0.9
	baz=142,SNR=1.0						
BRG	Berggiesshubel	8.56	2	ePN	Pn	17 49 40.9	-0.4
BRG				e		17 50 59.8	

BRG	Berggiesshubel	8.56	2	SN	Sn	17 51 12.2	-5.4
BRG				SG		17 52 34.1	
	comp=Z,3µm,1.6s						
BRG							
	comp=N,19µm,17.6s						
BRG							
	comp=E,46µm,13.7s						
BRG							
	comp=Z,22µm,10.4s						
BRG	Berggiesshubel	8.56	2	eP	Pn	17 49 40.9	-0.4
BRG						17 51 12.2	
BRG				smax	smax		
	comp=N,3µm,1.6s						
BRG				MLR	MLR		
	comp=N,19µm,17.6s						
BRG				MLR	MLR		
	comp=E,46µm,13.7s						
BRG				MLR	MLR		
	comp=Z,22µm,10.4s						
BRG	Berggiesshubel	8.56	2	ePn	Pn	17 49 41.2	-0.1
BRG	Berggiesshubel	8.56	2	eP	Pn	17 49 40.9	-0.4
ARR	Arges	8.62	66	⇑iP	Pn	17 49 44.8	+2.6
ARR	Arges	8.62	66	⇑iP	Pn	17 49 44.8	+2.6
RUP	Ruppelstein	8.63	331	P	Pn	17 49 42.5	+0.3
RUP	Ruppelstein	8.63	331	P	Pn	17 49 42.5	+0.3
RUP	Ruppelstein	8.63	331	P	Pn	17 49 42.5	+0.3
VERF	Verneugheol	8.63	297	P	Pn	17 49 44.4	+2.1
VERF	Verneugheol	8.63	297	P	Pn	17 49 44.4	+2.1
VERF	Verneugheol	8.63	297	P	Pn	17 49 44.4	+2.1
CRVS	Cervenica-Dubn	8.64	38	ePN	Pn	17 49 43.4	+1.0
CRVS				ePG		17 50 28.5	
CRVS				e		17 52 27.5	
CRVS	Cervenica-Dubn	8.64	38	ePn	Pn	17 49 43.4	+1.0
TRPA	Tarpa	8.64	45	⇑iP	Pn	17 49 43.5	+1.2
TRPA	Tarpa	8.64	45	⇓e	Pn	17 49 44.0	+1.7
TRPA	Tarpa	8.64	45	⇑iP	Pn	17 49 43.5	+1.2
HUMR	Humele	8.66	71	⇑iP	Pn	17 49 43.7	+1.0
HUMR	Humele	8.66	71	⇑iP	Pn	17 49 43.7	+1.0
CAF	Calviac	8.68	291	eP	Pn	17 49 44.3	+1.4
CAF				eSn	Sn	17 51 12.7	-7.7
	comp=Z,169nm,1.1s,SNR=1.0						
CAF	Calviac	8.68	291	eP	Pn	17 49 44.3	+1.4
CAF				e		17 51 12.7	
CAF	Calviac	8.68	291	eP	Pn	17 49 44.3	+1.4
CAF				eSn	Sn	17 51 12.7	-7.7
CAF	Calviac	8.68	291	eP	Pn	17 49 44.3	+1.4
BGF	Bois d'Agland	8.70	303	ePn	Pn	17 49 43.0	-0.2
	SNR=1.0						
BGF	Bois d'Agland	8.70	303	eP	Pn	17 49 43.0	-0.2
BGF	Bois d'Agland	8.70	303	ePn	Pn	17 49 43.0	-0.2
BGF	Bois d'Agland	8.70	303	ePn	Pn	17 49 43.0	-0.2
	SNR=1.0						
MDB	Medias	8.71	60	⇑P	Pn	17 49 44.7	+1.3
MDB	Medias	8.71	60	⇑iP	Pn	17 49 44.7	+1.3
MDB	Medias	8.71	60	P	Pn	17 49 44.7	+1.3
SET	Setif	8.74	228	P	Pn	17 49 49.0	+5.1
KSP	Ksiaz	8.75	12	⇓eP	Pn	17 49 43.9	+0.1
KSP				e		17 51 18.9	
KSP	Ksiaz	8.75	12	eP	Pn	17 49 43.7	-0.1
KSP	Ksiaz	8.75	12	eP	Pn	17 49 43.9	+0.1
DYR	Agios Nikonas	8.81	126	P	Pn	17 49 46.5	+1.8
DYR	Agios Nikonas	8.81	126	eP	Pn	17 49 47.4	+2.7
DYR	Agios Nikonas	8.81	126	P	Pn	17 49 46.5	+1.8
ZIMR		8.82	77	P	Pn	17 49 46.6	+1.8
ZIMR		8.82	77	P	Pn	17 49 46.6	+1.8
UBBA	Unterbreizbach	8.83	346	ePn	Pn	17 49 44.7	-0.2
UZH	Uzhgorod	8.84	41	d iP	Pn	17 49 46.2	+1.1
UZH				eS	Sn	17 51 26.2	+1.8
UZH				MLR	MLR		
	comp=Z,22µm,11.0s						
UZH	Uzhgorod	8.84	41	i P	Pn	17 49 46.2	+1.1
	comp=Z,22µm,11.0s						
UZH				eS	Sn	17 51 26.2	+1.8
BMR	Baia Mare	8.89	50	P	Pn	17 49 48.4	+2.6
BMR	Baia Mare	8.89	50	⇓iP	Pn	17 49 47.8	+2.0
BMR	Baia Mare	8.89	50	P	Pn	17 49 48.4	+2.6
DID	Didima	8.91	119	P	Pn	17 49 47.1	+1.0
DID	Didima	8.91	119	eP	Pn	17 49 47.4	+1.3
DID	Didima	8.91	119	P	Pn	17 49 47.1	+1.0
VOIR		8.92	66	⇑P	Pn	17 49 49.2	+2.9
VOIR		8.92	66	⇑iP	Pn	17 49 49.2	+2.9
VOIR		8.92	66	P	Pn	17 49 49.2	+2.9
WLF	Walferdange	8.94	328	PN	Pn	17 49 46.9	+0.4
WLF				SN	Sn	17 51 27.9	+1.1
	comp=N,294nm,0.9s						
WLF	Walferdange	8.94	328	eP	Pn	17 49 46.2	-0.2
WLF				pmax	pmax		
	comp=Z,220nm,0.6s						
WLF	Walferdange	8.94	328	ePn	Pn	17 49 44.6	-1.8
WLF	Walferdange	8.94	328	ePn	Pn	17 49 46.2	-0.2
	comp=Z,220nm,0.6s						
WLF	Walferdange	8.94	328	eP	Pn	17 49 46.2	-0.2
	comp=Z,220nm,0.6s						
WLF	Walferdange	8.94	328	Pn	Pn	17 49 46.8	+0.4
WLF				Sn	Sn	17 51 27.8	+1.1
	comp=Z,294nm,0.9s						
ATH	Athens Observa	8.96	116	eP	Pn	17 49 48.4	+1.6
TCF	Toulx Ste Croi	9.00	300	ePn	Pn	17 49 47.8	+0.5
	SNR=1.0						
TCF	Toulx Ste Croi	9.00	300	eP	Pn	17 49 47.8	+0.5
TCF	Toulx Ste Croi	9.00	300	ePn	Pn	17 49 47.8	+0.5
TCF	Toulx Ste Croi	9.00	300	ePn	Pn	17 49 47.8	+0.5
	SNR=1.0						
CLL	Collm	9.00	358	eP	Pn	17 49 51.0	+3.7
CLL				e		17 51 23.0	
CLL	Collm	9.00	358	ePn	Pn	17 49 46.7	-0.6
CLL	Collm	9.00	358	ePn	Pn	17 49 48.0	+0.7
CLL				ePn(2)		17 49 51.0	
CLL				eSn	Sn	17 51 23.0	-5.2
CLL				eSb1		17 51 58.0	
CLL				i Sg		17 52 40.0	
	comp=E,40µm,22.0s						
CLL				Lmax		17 53 00.0	
PTL	Penteli	9.02	115	P	Pn	17 49 48.5	+0.8
PTL	Penteli	9.02	115	eP	Pn	17 49 48.8	+1.1
PTL	Penteli	9.02	115	P	Pn	17 49 48.5	+0.8
OJC	Ojcow	9.03	27	eP	Pn	17 49 50.8	+3.1
OJC				e		17 51 30.7	
OJC	Ojcow	9.03	27	eP	Pn	17 49 50.8	+3.1
OJC				eSn	Sn	17 51 30.7	+1.6
OJC				eSSS	SSS	17 51 56.2	
OJC	Ojcow	9.03	27	eS	Sn	17 51 30.7	+1.6
KOLS	Kolonicke sedl	9.04	40	ePN	Pn	17 49 48.9	+1.1
KOLS				e		17 52 37.1	
KOLS	Kolonicke sedl	9.04	40	ePn	Pn	17 49 48.9	+1.1
RJF	Les Rejaudoux	9.15	293	eP	Pn	17 49 50.9	+1.6
RJF	Les Rejaudoux	9.15	293	eP	Pn	17 49 50.9	+1.6
RJF	Les Rejaudoux	9.15	293	eP	Pn	17 49 50.9	+1.6
RJF	Les Rejaudoux	9.15	293	eP	Pn	17 49 50.9	+1.6
MLS	Moulis	9.15	278	P	Pn	17 49 48.3	-1.1
MLS	Moulis	9.15	278	P	Pn	17 49 48.3	-1.1
MLS	Moulis	9.15	278	P	Pn	17 49 48.3	-1.1
LIA	Limnos Island	9.16	101	P	Pn	17 49 47.1	-2.4
LIA	Limnos Island	9.16	101	eP	Pn	17 49 49.5	0.0
VLI	Veliai	9.20	124	P	Pn	17 49 52.6	+2.5
VLI	Veliai	9.20	124	eP	Pn	17 49 52.8	+2.7
VLI	Veliai	9.20	124	P	Pn	17 49 52.6	+2.5
DOPR	Dopca	9.31	63	⇓iP	Pn	17 49 54.2	+2.6
DOPR	Dopca	9.31	63	⇓iP	Pn	17 49 54.2	+2.6
MRMA	Marmari	9.37	113	P	Pn	17 49 52.1	-0.2
MRMA	Marmari	9.37	113	P	Pn	17 49 52.1	-0.2
SECR		9.52	69	⇑iP	Pn	17 49 57.1	+2.6
SECR		9.52	69	⇑iP	Pn	17 49 57.1	+2.6
ALN	Alexandroupoli	9.53	94	P	Pn	17 49 54.3	-0.2
ALN	Alexandroupoli	9.53	94	eP	Pn	17 49 55.1	+0.6
ALN	Alexandroupoli	9.53	94	P	Pn	17 49 54.3	-0.2
MLR	Muntele Rosu	9.54	66	Pn	Pn	17 49 56.9	+2.0
MLR	Muntele Rosu	9.54	66	Pn	Pn	17 49 56.9	+2.0
	comp=E,4.3nm,0.3s,baz=248,slow=5.1,SNR=349						
MLR	Muntele Rosu	9.54	66	P	Pn	17 49 56.9	+2.0
	comp=E,4.0nm,0.3s						
KYTH	Kithira	9.55	126	P	Pn	17 49 57.1	+2.2
KYTH	Kithira	9.55	126	P	Pn	17 49 57.1	+2.2
SULR		9.59	71	⇑iP	Pn	17 49 54.5	-0.8
SULR		9.59	71	⇑iP	Pn	17 49 54.5	-0.8
LFF	La Frestale	9.60	290	eP	Pn	17 49 57.0	+1.5
LFF	La Frestale	9.60	290	eP	Pn	17 49 57.0	+1.5
LFF	La Frestale	9.60	290	eP	Pn	17 49 57.0	+1.5
LFF	La Frestale	9.60	290	eP	Pn	17 49 57.0	+1.5
ENEZ	Enez	9.64	95	eP	Pn	17 49 56.5	+0.5
EPF	Esparros	9.70	279	ePn	Pn	17 49 56.0	-1.0
EPF	Esparros	9.70	279	eP	Pn	17 49 56.0	-1.0
EPF	Esparros	9.70	279	ePn	Pn	17 49 56.0	-1.0
EPF	Esparros	9.70	279	ePn	Pn	17 49 56.0	-1.0
JMB	Yambol	9.70	85	P	Pn	17 49 57.9	+1.0
JMB	Yambol	9.70	85	P	Pn	17 49 57.9	+1.0
RESF	Ens	9.71	277	P	Pn	17 49 57.7	+0.6
RESF	Ens	9.71	277	P	Pn	17 49 57.7	+0.6
RESF	Ens	9.71	277	P	Pn	17 49 57.7	+0.6
KWP	Kalwaria Pacla	9.73	38	⇓P	Pn	17 49 59.9	+2.6
KWP	Kalwaria Pacla	9.73	38	ePn	Pn	17 49 59.2	+1.9
	comp=E,963nm,1.1s						
KWP	Kalwaria Pacla	9.73	38	⇓iP	Pn	17 49 59.9	+2.6
KWP	Kalwaria Pacla	9.73	38	ePb	Pn	17 50 00.1	+2.8
KWP				eP		17 50 03.0	
KWP	Kalwaria Pacla	9.73	38	P	Pn	17 49 59.9	+2.6
MEM	Membach	9.76	331	PN	Pn	17 49 59.4	+1.7
MEM				SN	Sn	17 51 46.5	-0.4
	comp=E,161nm,0.9s						
MEM	Membach	9.76	331	Pn	Pn	17 49 59.3	+1.7
MEM				Sn	Sn	17 51 46.4	-0.4
	comp=E,161nm,0.9s						
ABA	Alger-Bouzarea	9.76	239	P	Pn	17 49 59.5	+1.8
ABA	Alger-Bouzarea	9.76	239	P	Pn	17 49 59.5	+1.8
CLZ	Clausthal	9.76	349	eP	Pn	17 49 58.1	+0.4
CLZ	Clausthal	9.76	349	ePn	Pn	17 49 58.1	+0.4
CLZ	Clausthal	9.76	349	eP	Pn	17 49 58.1	+0.4
GIVF	Givet	9.82	325	ePn	Pn	17 49 59.1	+0.6
	SNR=1.0						
GIVF	Givet	9.82	325	eP	Pn	17 49 59.1	+0.6
GIVF	Givet	9.82	325	ePn	Pn	17 49 59.1	+0.6
GIVF	Givet	9.82	325	ePn	Pn	17 49 59.1	+0.6
	SNR=1.0						
BURAR	Bucovina Array	9.86	54	P	Pn	17 50 02.0	+2.8
BUR08	Bucovina Ar. S	9.87	53	⇑ePn	Pn	17 50 00.9	+1.6
BCLA	Clavier	9.87	328	PN	Pn	17 50 00.4	+1.2
BCLA				SN	Sn	17 51 44.8	-4.8
	comp=E,152nm,0.0s						
BCLA	Clavier	9.87	328	Pn	Pn	17 50 00.4	+1.2
EDRB	Edirne	9.88	88	eP	Pn	17 50 00.2	+0.8
SIGR	SIGRI	9.89	104	P	Pn	17 49 59.5	0.0
SIGR	SIGRI	9.89	104	P	Pn	17 49 59.5	0.0
LABF	Labassere	9.90	279	P	Pn	17 49 58.4	-1.3
LABF	Labassere	9.90	279	P	Pn	17 49 58.4	-1.3
LABF	Labassere	9.90	279	P	Pn	17 49 58.4	-1.3
DOU	Dourbes	9.91	325	PN	Pn	17 50 00.7	+0.9
DOU				SN	Sn	17 51 49.8	-0.8
	comp=E,140nm,0.9s						
DOU	Dourbes	9.91	325	Pn	Pn	17 50 00.6	+0.9
DOU				Sn	Sn	17 51 49.8	-0.8
	comp=E,140nm,0.9s						
HGN	Heimansgroeve	9.91	331	eP	Pn	17 50 02.3	+2.5
HGN				eL	L	17 54 32.6	
	comp=E,27µm,19.0s						
VIEF	Viey	9.94	278	P	Pn	17 50 01.2	+1.0
VIEF	Viey	9.94	278	P	Pn	17 50 01.2	+1.0
VIEF	Viey	9.94	278	P	Pn	17 50 01.2	+1.0
GELI	Tayfur-Gelibol	9.96	97	eP	Pn	17 50 00.5	0.0
EZN	Ezine	10.02	100	eP	Pn	17 50 02.0	+0.7
BEBN	Eben Emael	10.03	330	PN	Pn	17 50 03.9	+2.5
BEBN				SN	Sn	17 51 50.1	-3.5
	comp=E,69nm,0.0s						
BEBN	Eben Emael	10.03	330	Pn	Pn	17 50 03.8	+2.5
BAIF	Baives	10.05	324	ePn	Pn	17 50 00.2	-1.5
	SNR=1.0						
BAIF	Baives	10.05	324	eP	Pn	17 50 00.2	-1.5
BAIF	Baives	10.05	324	ePn	Pn	17 50 00.2	-1.5
BAIF	Baives	10.05	324	ePn	Pn	17 50 00.2	-1.5
	SNR=1.0						
LMSR	Misrath	10.06	173	i P	Pn	17 50 06.1	+4.2
	comp=E,240nm,1.4s,SNR=46						
BUG	Bochum--Univer	10.06	337	eP	Pn	17 50 04.9	+3.1
BUG	Bochum--Univer	10.06	337	ePn	Pn	17 50 04.9	+3.1
PLOR	Plostina	10.12	65	⇑P	Pn	17 50 04.3	+1.7
PLOR	Plostina	10.12	65	⇑iP	Pn	17 50 04.3	+1.7
PLOR	Plostina	10.12	65	P	Pn	17 50 04.3	+1.7
RUE	Ruedersdorf	10.17	1	ePn	Pn	17 50 01.6	-1.6
	comp=E,79nm,0.6s						
VRI	Vrincioaia	10.17	65	⇑P	Pn	17 50 05.2	+1.8
VRI	Vrincioaia	10.17	65	⇑iP	Pn	17 50 05.2	+1.8
VRI	Vrincioaia	10.17	65	P	Pn	17 50 05.2	+1.8
LPK	Lapseki	10.18	97	eP	Pn	17 50 03.9	+0.4
PRK	Paraskevi	10.18	103	eP	Pn	17 50 03.9	+0.4
EMHD	Djebel Mahouad	10.19	237	P	Pn	17 50 07.0	+3.3
EMHD	Djebel Mahouad	10.19	237	P	Pn	17 50 07.0	+3.3
GRER		10.22	68	⇓iP	Pn	17 50 06.2	+2.2
GRER		10.22	68	⇓iP	Pn	17 50 06.2	+2.2
REYF	Montagne du Re	10.24	279	P	Pn	17 50 05.7	+1.3
REYF	Montagne du Re	10.24	279	P	Pn	17 50 05.7	+1.3
REYF	Montagne du Re	10.24	279	P	Pn	17 50 05.7	+1.3
TESR		10.31	62	⇑iP	Pn	17 50 08.1	+2.8
TESR		10.31	62	⇑iP	Pn	17 50 08.1	+2.8
AMRR	Amara	10.34	73	P	Pn	17 50 07.3	+1.7
AMRR	Amara	10.34	73	P	Pn	17 50 07.3	+1.7
SNF	Seneffe	10.36	325	PN	Pn	17 50 06.2	+0.3
SNF	Seneffe	10.36	325	Pn	Pn	17 50 06.1	+0.3
ETSF	Etsaut	10.37	278	ePn	Pn	17 50 07.3	+1.2
	SNR=1.0						
ETSF	Etsaut	10.37	278	eP	Pn	17 50 07.3	+1.2
ETSF	Etsaut	10.37	278	ePn	Pn	17 50 07.3	+1.2
ETSF	Etsaut	10.37	278	ePn	Pn	17 50 07.3	+1.2
	SNR=1.0						
CHOS	Chios island	10.37	108	P	Pn	17 50 06.5	+0.3
CHOS	Chios island	10.37	108	eP	Pn	17 50 07.0	+0.8
CHOS	Chios island	10.37	108	P	Pn	17 50 06.5	+0.3
RKY	Sarkoy-Tekirda	10.41	94	eP	Pn	17 50 07.3	+0.6
NRDL	Niedersach Rie	10.43	349	ePn	Pn	17 50 09.2	+2.4
MFT	Murefte	10.46	94	eP	Pn	17 50 07.6	+0.2
LVV	L'vov	10.48	41	eP	Pn	17 50 11.0	+3.4
LVV				eS	Sn	17 51 57.4	-7.3
LVV				MLR	MLR		
	comp=E,8µm,11.0s						
LVV				MLR	MLR		
	comp=Z,12µm,11.0s						
LVV				MLR	MLR		
	comp=N,9µm,12.0s						
KRBG	Karabiga-Canak	10.57	96	eP	Pn	17 50 09.4	+0.6
TKR	Tekirdag	10.61	92	eP	Pn	17 50 09.8	+0.5
APE	Apeiranthos	10.66	115	eP	Pn	17 50 10.7	+0.5
APE	Apeiranthos	10.66	115	⇓P	Pn	17 50 10.6	+0.5
APE	Apeiranthos	10.66	115	⇓iP	Pn	17 50 10.6	+0.5
APE	Apeiranthos	10.66	115	eP	Pn	17 50 11.1	+0.9
APE	Apeiranthos	10.66	115	P	Pn	17 50 10.6	+0.5
WTSB	Winterswijk	10.66	337	eP	Pn	17 50 13.9	+3.9
LARF	Larrau	10.68	279	P	Pn	17 50 10.3	0.0
LARF	Larrau	10.68	279	P	Pn	17 50 10.3	0.0
LARF	Larrau	10.68	279	P	Pn	17 50 10.3	0.0
GHRR		10.68	65	⇑iP	Pn	17 50 12.5	+2.2
GHRR		10.68	65	⇑iP	Pn	17 50 12.5	+2.2
CRLT	Corlu	10.73	92	eP	Pn	17 50 11.7	+0.7
BEL	Belsk	10.74	25	eP	Pn	17 50 15.8	+4.7
VAM	Vamos	10.84	126	P	Pn	17 50 14.5	+2.0
VAM	Vamos	10.84	126	eP	Pn	17 50 14.3	+1.8
VAM	Vamos	10.84	126	P	Pn	17 50 14.5	+2.0
SJPF	Ste Jean	10.85	279	ePn	Pn	17 50 13.2	+0.6
SJPF	Ste Jean	10.85	279	eP	Pn	17 50 13.2	+0.6
SJPF	Ste Jean	10.85	279	ePn	Pn	17 50 13.2	+0.6
SJPF	Ste Jean	10.85	279	ePn	Pn	17 50 13.2	+0.6
GONE	Gonen-Balikesi	10.95	97	eP	Pn	17 50 14.9	+0.9
CFR	Carcaliu	10.99	70	⇓iP	Pn	17 50 14.8	+0.3
CFR	Carcaliu	10.99	70	⇓iP	Pn	17 50 14.8	+0.3
EDC	Edincik	11.00	95	eP	Pn	17 50 15.4	+0.7
EBNR	Beni Rached	11.03	241	P	Pn	17 50 17.0	+1.8
EBNR	Beni Rached	11.03	241	P	Pn	17 50 17.0	+1.8
BNT	Bandirma	11.04	95	eP	Pn	17 50 15.6	+0.4
SLVT	Silivri	11.06	91	eP	Pn	17 50 16.9	+1.3
BLCB	Balcova	11.07	106	eP	Pn	17 50 17.4	+1.7
CTYL	Yal??k??y-??at	11.08	89	eP	Pn	17 50 17.1	+1.4
TIRR	Tirgusor	11.08	74	P	Pn	17 50 16.9	+1.1
TIRR	Tirgusor	11.08	74	⇑ePn	Pn	17 50 14.9	-0.9
	comp=N,85nm,0.7s						
TIRR	Tirgusor	11.08	74	⇑iP	Pn	17 50 16.8	+1.0
TIRR	Tirgusor	11.08	74	P	Pn	17 50 16.9	+1.1
IAS	Iasi	11.14	59	P	Pn	17 50 19.5	+3.0
IAS	Iasi	11.14	59	P	Pn	17 50 19.5	+3.0
BALB	Balikesir	11.21	99	eP	Pn	17 50 17.8	+0.2
ECHA	Ech Chlef	11.22	241	P	Pn	17 50 21.0	+3.2
ECHA	Ech Chlef	11.22	241	P	Pn	17 50 21.0	+3.2
IZM	Izmir	11.22	106	eP	Pn	17 50 19.6	+1.7
GKP	Gorka Klasztor	11.24	12	eP	Pn	17 50 19.6	+1.6
GKP	Gorka Klasztor	11.24	12	eP	Pn	17 50 19.6	+1.6
CTKS	Kestanelik-??a	11.28	90	eP	Pn	17 50 19.6	+1.0
IDI	Anoyia	11.33	125	P	Pn	17 50 19.4	+0.1
IDI	Anoyia	11.33	125	ePn	Pn	17 50 19.8	+0.5
	comp=N,194nm,1.1s						
IDI				eSn	Sn	17 52 16.9	-8.8
IDI	Anoyia	11.33	125	P	Pn	17 50 19.4	+0.1
LEOM	Leova	11.36	64	P	Pn	17 50 21.4	+1.9
LEOM	Leova	11.36	64	P	Pn	17 50 21.4	+1.9
LDF	La Druitiere	11.42	308	ePn	Pn	17 50 18.6	-1.8
LDF	La Druitiere	11.42	308	eP	Pn	17 50 18.6	-1.8
LDF	La Druitiere	11.42	308	ePn	Pn	17 50 18.6	-1.8
LDF	La Druitiere	11.42	308	ePn	Pn	17 50 18.6	-1.8
AKS	Akhisar	11.43	103	eP	Pn	17 50 22.1	+1.5
TLCR		11.46	70	⇑P	Pn	17 50 22.0	+1.0
TLCR		11.46	70	⇑iP	Pn	17 50 22.0	+1.0
TLCR		11.46	70	P	Pn	17 50 22.0	+1.0
BGKT	Bogazkoy	11.49	91	eP	Pn	17 50 22.5	+1.1
LSRT	Sirt	11.50	166	i P	Pn	17 50 24.2	+2.6
	comp=N,240nm,1.4s,SNR=46						
EANR	'Ain N'Sour	11.52	241	P	Pn	17 50 25.0	+3.2
EANR	'Ain N'Sour	11.52	241	P	Pn	17 50 25.0	+3.2
ARMT	Armutlu	11.68	93	eP	Pn	17 50 24.2	+0.1
FLN	La Foliniere	11.71	308	ePn	Pn	17 50 22.5	-1.9
	baz=120,SNR=1.0						
FLN	La Foliniere	11.71	308	eP	Pn	17 50 22.5	-1.9
FLN	La Foliniere	11.71	308	ePn	Pn	17 50 22.5	-1.9
ISK	Istanbul-Kandi	11.72	91	eP	Pn	17 50 24.8	+0.3
ETRT	Tiaret	11.74	238	P	Pn	17 50 28.0	+3.1
ETRT	Tiaret	11.74	238	P	Pn	17 50 28.0	+3.1
MDNY	Mudanya-Bursa	11.75	94	eP	Pn	17 50 25.4	+0.5
GRR	Gorron	11.76	306	ePn	Pn	17 50 23.4	-1.7
	SNR=1.0						
GRR	Gorron	11.76	306	eP	Pn	17 50 23.4	-1.7
GRR	Gorron	11.76	306	ePn	Pn	17 50 23.4	-1.7
GRR	Gorron	11.76	306	ePn	Pn	17 50 23.4	-1.7
	SNR=1.0						
DST	Dursunbey	11.77	98	eP	Pn	17 50 26.1	+0.9
NPS	Neapolis	11.80	123	eP	Pn	17 50 27.4	+1.8
BSEG	Bad Segeberg	11.81	351	eP	Pn	17 50 26.5	+0.8
BSEG	Bad Segeberg	11.81	351	ePn	Pn	17 50 26.5	+0.8
BSEG	Bad Segeberg	11.81	351	eP	Pn	17 50 26.5	+0.8
BODT	Bodrum	11.88	112	eP	Pn	17 50 29.5	+2.8
KIS	Kishinev	11.88	62	α iP	Pn	17 50 26.5	-0.2
KIS				eS	Sn	17 52 46.0	+7.1
KIS				pmax	pmax		
	comp=N,800nm,2.0s						
KIS				pmax	pmax		
	comp=Z,2µm,2.0s						
KIS				pmax	pmax		
	comp=E,3.0nm,2.4s						
KIS				pmax	pmax		
	comp=N,2µm,4.0s						
KIS				pmax	pmax		
	comp=E,4µm,4.0s						
KIS				pmax	pmax		
	comp=Z,3µm,4.0s						
KIS				MLR	MLR		
	comp=N,14µm,14.0s						
KIS				MLR	MLR		
	comp=E,38µm,14.0s						
KIS				MLR	MLR		
	comp=Z,46µm,14.0s						
KIS				MLR	MLR		
	comp=Z,51µm,16.0s						
KIS	Kishinev	11.88	62	⇑iP	Pn	17 50 26.5	-0.2
	comp=Z,2µm,2.0s						
KIS				eS	Sn	17 52 46.0	+7.1
KIS				LRM	MLR	17 55 54.0	
	comp=Z,51µm,16.0s						
KIS	Kishinev	11.88	62	i P	Pn	17 50 26.5	-0.2
GEMT	Gemlik	11.96	94	eP	Pn	17 50 28.6	+0.8
YLV	Yalova	12.06	93	eP	Pn	17 50 29.6	+0.3
MLSB	Milas	12.09	110	eP	Pn	17 50 35.2	+5.7
SILT	Sile	12.14	90	eP	Pn	17 50 31.6	+1.3
KULA	Kula-Manisa	12.18	103	eP	Pn	17 50 31.8	+0.8
ELSH	Elham, Standar	12.22	321	AMS	AMS	17 56 11.2	
	comp=Z,29µm,19.3s						
HRT	Hereke	12.22	92	eP	Pn	17 50 32.3	+0.8
RGN	Rugen	12.24	360	ePn	Pn	17 50 34.8	+3.2
	comp=Z,584nm,1.1s						
LSHF	Shwairf	12.32	177	i P	Pn	17 50 35.7	+2.9
	comp=Z,310nm,2.3s,SNR=45						
TVSB	Tavsanli	12.44	98	eP	Pn	17 50 35.2	+0.8
CAVI	Cavuskoy	12.50	94	eP	Pn	17 50 36.0	+0.7
YER	Yerkesik	12.52	110	eP	Pn	17 50 38.5	+2.9
SPNC	Sapanca-Adapaz	12.73	92	eP	Pn	17 50 38.6	+0.3
SGMF	Saint Gilles	12.74	303	ePn	Pn	17 50 36.8	-1.7
SGMF	Saint Gilles	12.74	303	eP	Pn	17 50 36.8	-1.7
SGMF	Saint Gilles	12.74	303	ePn	Pn	17 50 36.8	-1.7
SGMF	Saint Gilles	12.74	303	ePn	Pn	17 50 36.8	-1.7
DENT	Denizli	12.76	106	eP	Pn	17 50 40.1	+1.3
BSD	Bornholm Skovb	12.84	4	⇑iP	Pn	17 50 41.1	+1.3
	comp=Z,61nm,0.8s						
BSD							
	comp=Z,13µm,13.0s						
BSD	Bornholm Skovb	12.84	4	⇑iP	Pn	17 50 41.2	+1.4
	comp=Z,225nm,1.0s,SNR=45						
ARG	Arkhangelos	12.88	113	eP	Pn	17 50 45.5	+5.1
JSA	Saint Aubin	12.89	308	eP	Pn	17 50 39.7	-0.8
JSA				AMB	AMB	17 50 43.8	
	comp=Z,68nm,1.7s						
JSA				AMS	AMS	17 56 19.4	
	comp=Z,14µm,11.9s						
JSA	Saint Aubin	12.89	308	P	Pn	17 50 39.7	-0.8
JSA				AMB	AMB	17 50 43.8	
	comp=Z,68nm,1.7s						
JSA				AMS	AMS	17 56 19.4	
	comp=Z,14µm,11.9s						
JSA	Saint Aubin	12.89	308	eP	Pn	17 50 39.7	-0.8
GULT	Gulveren	12.94	93	eP	Pn	17 50 43.5	+2.2
QUIF	Quistinic	13.01	301	ePn	Pn	17 50 39.5	-2.6
	SNR=1.0						
QUIF	Quistinic	13.01	301	eP	Pn	17 50 39.5	-2.6
QUIF	Quistinic	13.01	301	ePn	Pn	17 50 39.5	-2.6
ALT	Altintas	13.04	99	eP	Pn	17 50 43.1	+0.4
LLD	Lille Linde	13.05	357	i P	Pn	17 50 44.0	+1.4
	comp=Z,225nm,1.0s						
LLD	Lille Linde	13.05	357	i P	Pn	17 50 44.0	+1.4
	comp=Z,225nm,1.0s						
ROSF	Rostrenen	13.22	303	ePn	Pn	17 50 39.5	-5.5
ROSF	Rostrenen	13.22	303	eP	Pn	17 50 39.5	-5.5
ROSF	Rostrenen	13.22	303	ePn	Pn	17 50 39.5	-5.5
FETY	Fethiye	13.32	110	eP	Pn	17 50 49.2	+2.8
SUW	Suwalki	13.36	26	⇑iP	Pn	17 50 47.5	+0.7
SUW				pmax	pmax		
	comp=Z,469nm,1.3s						
SUW	Suwalki	13.36	26	⇑iPn	Pn	17 50 47.5	+0.7
	comp=Z,470nm,1.3s						
SUW	Suwalki	13.36	26	eP	Pn	17 50 48.0	+1.2
SUW	Suwalki	13.36	26	i P	Pn	17 50 47.5	+0.7
	comp=Z,469nm,1.3s						
COP	Copenhagen	13.40	357	i P	Pn	17 50 47.8	+0.5
	comp=Z,58nm,1.0s						
COP	Copenhagen	13.40	357	i P	Pn	17 50 47.8	+0.5
	comp=Z,58nm,1.0s,SNR=45						
ESDC	Sonseca Array	13.44	264	Pn	Pn	17 50 47.8	-0.2
ESDC	Sonseca Array	13.44	264	Pn	Pn	17 50 47.8	-0.2
	comp=Z,1.4nm,0.3s,baz=68,slow=14,SNR=89						
ESDC				LR	LR	17 56 06.3	
	comp=Z,10µm,19.1s,baz=75,slow=38						
ESLA	Sonseca Array	13.44	264	ePn	Pn	17 50 45.6	-2.4
	comp=Z,156nm,1.7s						
ESKT	Eskisehir	13.44	96	eP	Pn	17 50 49.6	+1.5
MDUB	Mudurnu	13.44	92	eP	Pn	17 50 48.7	+0.6
KDZE	Karadeniz Ereo	13.45	88	eP	P	17 51 00.9	+3.4
WOL	Wolverton	13.48	317	eP	Pn	17 50 47.2	-1.3
WOL				AMB	AMB	17 50 52.7	
	comp=Z,446nm,1.1s						
WOL				AMS	AMS	17 57 13.3	
	comp=Z,13µm,12.5s						
WOL	Wolverton	13.48	317	P	Pn	17 50 47.2	-1.3
WOL				AMB	AMB	17 50 52.7	
	comp=Z,446nm,1.1s						
WOL				AMS	AMS	17 57 13.3	
	comp=Z,13µm,12.5s						
WOL	Wolverton	13.48	317	eP	Pn	17 50 47.2	-1.3
SKP1	Kophill	13.52	319	eP	Pn	17 50 47.9	-1.1
SKP1	Kophill	13.52	319	P	Pn	17 50 47.9	-1.1
SKP1	Kophill	13.52	319	eP	Pn	17 50 47.9	-1.1
SHUT	Suhut-Afyon	13.54	100	eP	Pn	17 50 50.0	+0.5
AK02	Malin Array Si	13.65	47	ePn	Pn	17 50 50.9	-0.1
KIEV	Kiev	13.68	47	⇑eP	Pn	17 50 50.1	-1.1
KIEV				pmax	pmax		
	comp=Z,260nm,1.4s						
KIEV	Kiev	13.68	47	⇑ePn	Pn	17 50 50.1	-1.1
	comp=Z,260nm,1.4s						

KIEV **Kiev** 13.68 47 *e*P Pn 17 50 50.1 -1.1
comp=Z,260nm,1.4s
AK01 **Malin Array Si** 13.68 47 *e*Pn Pn 17 50 51.5 +0.3
AKASG **Malin Array Be** 13.69 47 P Pn 17 50 51.5 +0.1
AKASG 17 53 28.5
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG smax smax
comp=N,1.0nm,0.3s
AKASG **Malin Array Be** 13.69 47 Pn Pn 17 50 51.5 +0.1
AKASG Sn Sn 17 53 28.5 +5.5
AKASG **Malin Array Be** 13.69 47 Pn Pn 17 50 51.5 +0.1
comp=N,2.4nm,0.3s,baz=233,slow=12,SNR=19
AKASG Sn Sn 17 53 28.5 +5.5
comp=N,0.5nm,0.3s,baz=333,slow=44,SNR=1.4
AKASG **Malin Array Be** 13.69 47 P Pn 17 50 51.5 +0.1
comp=N,2.0nm,0.3s
PAB **San Pablo** 13.76 264 *e*P Pn 17 50 51.3 -1.1
PAB pmax pmax
comp=Z,93nm,1.2s
PAB **San Pablo** 13.76 264 *e*Pn Pn 17 50 51.3 -1.1
comp=Z,93nm,1.2s
ISP **Isparta** 13.80 103 *e*P Pn 17 50 54.8 +1.7
ISP **Isparta** 13.80 103 *e*P P 17 50 58.2 -3.3
ISP **Isparta** 13.80 103 *e*Pn P 17 50 58.2 -3.3
ISP **Isparta** 13.80 103 *e*P P 17 50 58.2 -3.3
ELL **Elmali** 13.84 108 *e*P Pn 17 50 55.9 +2.2
SWN1 **Swindon** 13.89 317 *e*P Pn 17 50 53.5 -0.6
SWN1 AMB AMB 17 51 01.2
comp=Z,326nm,1.8s
SWN1 AMS AMS 17 57 27.4
comp=Z,15μm,13.1s
SWN1 **Swindon** 13.89 317 P Pn 17 50 53.5 -0.6
SWN1 AMB AMB 17 51 01.2
comp=Z,326nm,1.8s
SWN1 AMS AMS 17 57 27.4
comp=Z,15μm,13.1s
SWN1 **Swindon** 13.89 317 *e*P Pn 17 50 53.5 -0.6
SVRH **Sivrihisar-ESK** 13.95 96 *e*P Pn 17 50 55.8 +0.6
BCK **Bucak** 14.00 105 *e*P Pn 17 50 56.9 +1.1
SSW **Stow on the Wo** 14.18 318 *e*P Pn 17 50 57.0 -1.1
SSW **Stow on the Wo** 14.18 318 P Pn 17 50 57.0 -1.1
SSW **Stow on the Wo** 14.18 318 *e*P Pn 17 50 57.0 -1.1
ANTB **Antalya** 14.30 107 *e*P Pn 17 51 01.3 +1.5
SAFT **Safranbolu** 14.38 88 *e*P Pn 17 51 02.6 +1.7
KIZT **Kizilcat** 14.40 98 *e*P Pn 17 51 02.8 +1.5
MUD **Monsted U'grnd** 14.42 350 *i* P Pn 17 51 02.9 +1.6
comp=Z,52nm,0.9s
DYA **Yadsworthy** 14.47 310 AMB AMB 17 51 13.6
comp=Z,191nm,1.5s
DYA AMS AMS 17 57 37.8
comp=Z,10μm,10.7s
DYA **Yadsworthy** 14.47 310 AMB AMB 17 51 13.6
comp=Z,191nm,1.5s
DYA AMS AMS 17 57 37.8
comp=Z,10μm,10.7s
MCH1 **Michaelchurch** 14.78 317 *e*P Pn 17 51 04.2 -2.0
MCH1 AMB AMB 17 51 16.4
comp=Z,105nm,1.2s
MCH1 AMS AMS 17 57 56.7
comp=Z,15μm,13.0s
MCH1 **Michaelchurch** 14.78 317 P Pn 17 51 04.2 -2.0
MCH1 AMB AMB 17 51 16.4
comp=Z,105nm,1.2s
MCH1 AMS AMS 17 57 56.7
comp=Z,15μm,13.0s
MCH1 **Michaelchurch** 14.78 317 *e*P Pn 17 51 04.2 -2.0
KBI1 **Birley Grange** 14.84 323 *e*P Pn 17 51 06.3 -0.9
KBI1 **Birley Grange** 14.84 323 P Pn 17 51 06.3 -0.9
KBI1 **Birley Grange** 14.84 323 *e*P Pn 17 51 06.3 -0.9
LADK **Ladik-KONYA** 14.99 100 *e*P Pn 17 51 09.5 +0.1
HLM1 **Long Mynd** 15.02 318 *e*P Pn 17 51 09.9 +0.4
HLM1 AMB AMB 17 51 15.3
comp=Z,114nm,1.4s
HLM1 **Long Mynd** 15.02 318 P Pn 17 51 09.9 +0.4
HLM1 AMB AMB 17 51 15.3
comp=Z,114nm,1.4s
PBRG **Braganca** 15.03 275 *e*P Pn 17 51 09.9 +0.2
comp=Z,287nm,1.8s
HTL **Hartland** 15.05 311 AMS AMS 17 58 11.7
comp=Z,10μm,14.1s
AFSR **Afˆar-Bala (A** 15.10 94 *e*P Pn 17 51 11.0 +0.2
SIM **Simferopol**[k] 15.17 73*c* *i*P Pn 17 51 08.9 -2.7
SIM *e*S Sn 17 53 53.0 -6.3
SIM pmax pmax
comp=Z,89nm,1.1s
SIM MLR MLR
comp=Z,7μm,12.0s
LHO **Holmfirth** 15.18 323 *e*P Pn 17 51 10.7 -1.0
LHO **Holmfirth** 15.18 323 P Pn 17 51 10.7 -1.0
LHO **Holmfirth** 15.18 323 *e*P Pn 17 51 10.7 -1.0
CANT **Cankiri** 15.20 90 *e*P Pn 17 51 13.2 +1.2
BZK **Bozkurt** 15.24 84 *e*P Pn 17 51 10.7 -1.7
HSA **Swansea** 15.24 314 *e*P Pn 17 51 13.1 +0.6
HSA **Swansea** 15.24 314 P Pn 17 51 13.1 +0.6
HSA **Swansea** 15.24 314 *e*P Pn 17 51 13.1 +0.6
NACGM **Naroch** 15.32 30 *e*P Pn 17 51 12.0 -1.5
MVO **Moncorvo** 15.35 273 *e*P Pn 17 51 13.2 -0.8
comp=Z,395nm,1.8s
MVO *e*LR LR 17 55 53.3
comp=Z,15μm,18.0s
FOEL **Foel Wylfa** 15.40 319 *e*P Pn 17 51 14.3 -0.2
FOEL AMB AMB 17 51 24.4
comp=Z,138nm,1.5s
FOEL AMS AMS 17 58 11.6
comp=Z,22μm,16.2s
FOEL **Foel Wylfa** 15.40 319 P Pn 17 51 14.3 -0.2
FOEL AMB AMB 17 51 24.4
comp=Z,138nm,1.5s
FOEL AMS AMS 17 58 11.6
comp=Z,22μm,16.2s
TOS **Tosya** 15.41 88 *e*P P 17 51 18.6 -0.8
MNK **Minsk** 15.44 33⇑ *i*P Pn 17 51 12.0 -3.0
MNK *e*S Sn 17 54 03.0 -2.5
MNK pmax pmax
comp=Z,620nm,1.2s
MNK pmax pmax
comp=E,930nm,1.8s
MNK pmax pmax
comp=N,1μm,1.5s
MNK MLR MLR
comp=E,26μm,11.0s
MNK MLR MLR
comp=N,64μm,15.0s
MNK MLR MLR
comp=Z,93nm,14.0s
BR131 **Keskin Array S** 15.44 93 *e*Pn Pn 17 51 15.7 +0.4
comp=Z,23nm,0.8s
BRTR **Keskin Array B** 15.44 93 Pn Pn 17 51 15.8 +0.5
BRTR **Keskin Array B** 15.44 93 Pn Pn 17 51 15.8 +0.5
comp=Z,0.5nm,0.3s,baz=276,slow=11,SNR=36
BRTR LR LR 17 57 54.7
comp=Z,6μm,18.3s,baz=285,slow=40
MICGM **Minsk** 15.46 33⇑ *i*P Pn 17 51 12.0 -3.2
IIGN **Ignalina** 15.47 28 *e*P Pn 17 51 15.5 +0.1
IIGN AMB AMB 17 51 23.6
comp=Z,209nm,1.2s
KAMT **Kaman** 15.60 94 *e*P P 17 51 19.6 -1.8
ISAL **Salakas** 15.62 28 *e*P Pn 17 51 17.0 -0.3
ISAL AMB AMB 17 51 25.1
comp=Z,89nm,1.1s
IZAR **Zarasai** 15.80 27 *e*P Pn 17 51 19.4 -0.3
IZAR AMB AMB 17 51 29.9
comp=Z,106nm,1.3s
SULT **Sultanhani-AKS** 15.84 98 *e*P Pn 17 51 21.0 +0.6
POLO **Lamas de Olo** 15.88 274 *e*P Pn 17 51 20.7 -0.2
comp=Z,216nm,1.8s
BYBT **Boyabat** 15.88 86 *e*P P 17 51 23.2 -1.2
MTE **Manteigas** 15.90 270 *e*P Pn 17 51 20.3 -0.8
comp=Z,240nm,1.4s
MTE *e*LR LR 17 56 13.7
comp=Z,23μm,18.0s
MTE **Manteigas** 15.90 270 *e*Pn Pn 17 51 19.1 -2.0
comp=Z,162nm,1.1s
WPM1 **Penmaenmawr** 15.96 319 *e*P Pn 17 51 20.5 -1.3
WPM1 **Penmaenmawr** 15.96 319 P Pn 17 51 20.5 -1.3
PCBR **Castelo Branco** 15.99 268 *e*P Pn 17 51 22.3 +0.1
comp=Z,238nm,1.6s
PCAB **Cabril** 15.99 275 *e*P P 17 51 26.6 +0.8
comp=Z,418nm,2.1s
PCAB **Cabril** 15.99 275 *e*P P 17 51 26.6 +0.8
comp=Z,418nm,2.1s
PMRV **Marv??o** 16.04 267 *e*P Pn 17 51 22.9 0.0
comp=Z,148nm,1.9s
PMRV *e*LR LR 17 56 16.4
comp=Z,13μm,18.0s
CORM **Corum** 16.05 91 *e*P Pn 17 51 24.1 +1.0
YRE **Yr Eifl** 16.05 318 *e*P Pn 17 51 22.1 -0.9
YRE **Yr Eifl** 16.05 318 P Pn 17 51 22.1 -0.9
YRE **Yr Eifl** 16.05 318 *e*P Pn 17 51 22.1 -0.9
PGAV **Gavieira, Arco** 16.13 276 *e*P Pn 17 51 24.4 +0.2
comp=Z,645nm,1.7s
PGAV *e*LR LR 17 56 22.2
comp=Z,17μm,16.0s
LUMB **Murzuk** 16.17 176 *i* P P 17 51 30.6 +2.8
comp=Z,880nm,1.3s,SNR=42
PBAR **Barrancos** 16.19 262 *e*P Pn 17 51 25.9 +1.1
comp=Z,493nm,1.8s
DIKM **Dikmen** 16.21 85 *e*P P 17 51 28.1 0.0
WLF1 **Llynfaes** 16.22 319 AMS AMS 17 58 36.8
comp=Z,18μm,16.4s
SFS **San Fernando** 16.28 255 *e*P P 17 51 30.2 +1.2
PESTR **Estremoz** 16.36 265 *e*P Pn 17 51 27.7 +0.7
comp=Z,326nm,1.8s
KESW **Keswick, Cumbr** 16.43 324 *e*P Pn 17 51 27.2 -0.6
KESW AMB AMB 17 51 35.6
comp=Z,166nm,2.1s
KESW AMS AMS 17 58 40.3
comp=Z,9μm,14.7s
KESW **Keswick, Cumbr** 16.43 324 P Pn 17 51 27.2 -0.6
KESW AMB AMB 17 51 35.6
comp=Z,166nm,2.1s
KESW AMS AMS 17 58 40.3
comp=Z,9μm,14.7s
SNART **Snartemo** 16.52 348 *e*P P 17 51 32.0 +0.6
SNART AMB AMB 17 51 35.5
comp=Z,246nm,1.6s
SNART *e* 17 53 07.9
NIG **Nigde** 16.67 98 *e*P P 17 51 34.9 +1.4
PTOM **Tomar** 16.74 268 *e*P P 17 51 33.1 -0.9
comp=Z,532nm,1.0s
PTOM **Tomar** 16.74 268 *e*P P 17 51 33.1 -0.9
comp=Z,532nm,1.0s
LEF **Lefka** 16.75 109 *e*P Pn 17 51 30.8 -1.2
PMTG **Montargil** 16.77 266 *e*P Pn 17 51 32.3 +0.2
comp=Z,652nm,1.7s
EVO **Evora** 16.79 264 *e*P Pn 17 51 33.3 +0.9
comp=Z,261nm,1.6s
EVO **Evora** 16.79 264 *e*P Pn 17 51 33.3 +0.9
comp=Z,261nm,1.6s
ECK **Cauldkaine Hil** 16.84 326 *e*P Pn 17 51 33.0 +0.1
ECK **Cauldkaine Hil** 16.84 326 P Pn 17 51 33.0 +0.1
ECK **Cauldkaine Hil** 16.84 326 *e*P Pn 17 51 33.0 +0.1
PBEJ **Beja** 16.86 262 *e*P P 17 51 36.0 +0.7
comp=Z,165nm,2.0s
PBEJ **Beja** 16.86 262 *e*P P 17 51 36.0 +0.7
comp=Z,165nm,2.0s
KVT **Kavak** 16.90 87 *e*P Pn 17 51 34.5 +0.6
EKA **Eskdalemuir Ar** 16.96 326 Pn Pn 17 51 33.9 -0.5
EKA **Eskdalemuir Ar** 16.96 326 Pn Pn 17 51 33.9 -0.5
baz=132,slow=15,SNR=19
ESK **Eskdalemuir** 16.96 326 *e*P Pn 17 51 35.0 +0.5
ESK AMB AMB 17 51 41.0
comp=Z,118nm,1.8s
ESK AMS AMS 17 59 06.1
comp=Z,6μm,16.6s
ESK **Eskdalemuir** 16.96 326 P Pn 17 51 35.0 +0.5
ESK AMB AMB 17 51 41.0
comp=Z,118nm,1.8s
ESK AMS AMS 17 59 06.1
comp=Z,6μm,16.6s
ESK **Eskdalemuir** 16.96 326 *e*P P 17 51 35.8 -0.6
ESK pmax pmax
comp=Z,47nm,0.8s
ESK **Eskdalemuir** 16.96 326 *e*Pn P 17 51 35.8 -0.6
comp=Z,48nm,0.8s
ESK **Eskdalemuir** 16.96 326 *e*P Pn 17 51 35.0 +0.5
PVAQ **Vaqueiros** 16.98 260 *e*P Pn 17 51 34.9 0.0
comp=Z,360nm,1.5s
PVAQ *e*LR LR 17 56 39.9
comp=Z,6μm,20.0s
MERS **Mersin** 17.10 102 *e*P P 17 51 37.9 -0.2
PCVE **Castro Verde** 17.13 261 *e*P P 17 51 40.0 +1.7
comp=Z,328nm,1.7s
PCVE **Castro Verde** 17.13 261 *e*P P 17 51 40.0 +1.7
comp=Z,328nm,1.7s
CSS **Prodhromos** 17.14 109 *e*P Pn 17 51 37.5 +0.6
CSS **Prodhromos** 17.14 109 *e*Pn Pn 17 51 37.4 +0.4
comp=Z,99nm,0.9s
ESY **Stoneypath** 17.15 328 *e*P Pn 17 51 37.3 +0.5
ESY **Stoneypath** 17.15 328 P Pn 17 51 37.3 +0.5
ESY **Stoneypath** 17.15 328 *e*P Pn 17 51 37.3 +0.5
MDT **Midelt** 17.16 242 P Pn 17 51 38.0 +0.7
MDT **Midelt** 17.16 242 P Pn 17 51 38.0 +0.7
comp=Z,0.2nm,0.3s,baz=60,slow=11,SNR=15
MDT LR LR 17 57 21.6
comp=Z,8μm,21.5s,baz=44,slow=34
PBDV **Barranco-do-Ve** 17.20 260 *e*P P 17 51 41.2 +2.0
comp=Z,300nm,1.7s
PBDV **Barranco-do-Ve** 17.20 260 *e*P P 17 51 41.2 +2.0
comp=Z,300nm,1.7s
EBL **Broad Law** 17.21 327 *e*P P 17 51 38.6 -0.5
EBL **Broad Law** 17.21 327 P P 17 51 38.6 -0.5
EBL **Broad Law** 17.21 327 *e*P P 17 51 38.7 -0.5
PNCL **Nicolau / Gran** 17.31 263 *e*P P 17 51 41.8 +1.5
comp=Z,186nm,2.0s
PNCL **Nicolau / Gran** 17.31 263 *e*P P 17 51 41.8 +1.5
comp=Z,186nm,2.0s
GAL1 **Galloway** 17.32 323 *e*P Pn 17 51 38.8 -0.1
GAL1 AMB AMB 17 51 43.3
comp=Z,114nm,1.6s
GAL1 AMS AMS 17 59 17.0
comp=Z,11μm,14.6s
GAL1 **Galloway** 17.32 323 P Pn 17 51 38.8 -0.1
GAL1 AMB AMB 17 51 43.3
comp=Z,114nm,1.6s
GAL1 AMS AMS 17 59 17.0
comp=Z,11μm,14.6s
GAL1 **Galloway** 17.32 323 *e*P Pn 17 51 38.8 -0.1
BNN **Bunyan** 17.33 94 *e*P P 17 51 41.1 +0.3
EDI **Edinburgh** 17.38 327 *e*P Pn 17 51 40.2 +0.6
EDI AMB AMB 17 51 45.6
comp=Z,339nm,1.6s
EDI AMS AMS 17 59 28.4
comp=Z,6μm,14.1s
EDI **Edinburgh** 17.38 327 P Pn 17 51 40.2 +0.6
EDI AMB AMB 17 51 45.6
comp=Z,339nm,1.6s
EDI AMS AMS 17 59 28.4
comp=Z,6μm,14.1s
EDI **Edinburgh** 17.38 327 *e*P Pn 17 51 40.2 +0.6
ZFT **Errachidia** 17.49 240 *i* P Pn 17 51 42.0 +0.5
KONO **Kongsberg** 17.52 353⇓ *i*P P 17 51 43.0 +0.6
KONO *e*S Sn 17 54 58.6 +2.7
KONO AMS AMS 17 59 42.5
comp=Z,5μm,19.1s
KONO **Kongsberg** 17.52 353 *e*P Pn 17 51 41.5 +0.1
KONO pmax pmax
comp=Z,397nm,1.3s
KONO **Kongsberg** 17.52 353 *e*Pn Pn 17 51 41.5 +0.1
comp=Z,397nm,1.3s
KONO **Kongsberg** 17.52 353 *e*P Pn 17 51 41.5 +0.1
comp=Z,397nm,1.3s
ANN **Anapa** 17.53 74 *e*P Pn 17 51 39.3 -2.3
ANN *i* S S 17 55 02.2 -2.0
ANN pmax pmax
comp=Z,364nm,1.4s
ANN MLR MLR
comp=N,9μm,12.0s
ANN MLR MLR
comp=E,6μm,12.0s
ANN MLR MLR
comp=Z,9μm,12.0s
LIS **Lisbon** 17.56 266 *e*P P 17 51 43.0 -0.1
LIS AMb AMB 17 51 55.7
comp=Z,337nm,1.7s
LIS **Lisbon** 17.56 266 *e*P P 17 51 43.0 -0.1
comp=Z,337nm,1.7s
LIS **Lisbon** 17.56 266 *e*P P 17 51 42.9 -0.1
LIS **Lisbon** 17.56 266 *e*P P 17 51 43.0 -0.1
comp=Z,337nm,1.7s
PMAFR **Mafra** 17.59 267 *e*P P 17 51 43.9 +0.5
comp=Z,137nm,1.5s
PMAFR **Mafra** 17.59 267 *e*P P 17 51 43.9 +0.5
comp=Z,137nm,1.5s
PTEO **Sao Teotonio** 17.66 262 *e*P P 17 51 44.5 +0.3
comp=Z,417nm,1.6s
PTEO **Sao Teotonio** 17.66 262 *e*P P 17 51 44.5 +0.3
comp=Z,417nm,1.6s
MORF **Marmelete** 17.70 261 *e*P P 17 51 45.8 +1.1
comp=Z,324nm,1.7s
MORF **Marmelete** 17.70 261 *e*P P 17 51 44.6 -0.1
MORF *e*S Sn 17 55 02.5 +1.7
MORF **Marmelete** 17.70 261 *e*P P 17 51 44.6 -0.1
KOZT **Kozan** 17.80 98 *e*P P 17 51 45.7 -0.1
PGBU **Glenifferbraes** 17.83 325 AMS AMS 18 00 13.9
comp=Z,6μm,16.0s
HFS **Hagfors** 17.84 0 P Pn 17 51 44.6 -0.8
HFS S Sn 17 55 01.2 -2.6
HFS **Hagfors** 17.84 0 P Pn 17 51 44.6 -0.8
comp=Z,1.6nm,0.3s,baz=183,slow=8.8,SNR=49
HFS S Sn 17 55 01.2 -2.6
comp=Z,0.1nm,0.3s,baz=106,slow=11,SNR=1.0
HFS LR LR 17 59 30.4
comp=Z,6μm,18.4s,baz=181,slow=40
HFS **Hagfors** 17.84 0 P Pn 17 51 44.6 -0.8
comp=Z,2.0nm,0.3s
PFVI **Vila Bisbo** 17.90 261 *e*P P 17 51 48.4 +1.5
comp=Z,79nm,2.6s
PFVI **Vila Bisbo** 17.90 261 *e*P P 17 51 48.4 +1.5
comp=Z,79nm,2.6s
RTC **Rabat Centre** 17.99 249 Pn P 17 51 47.8 -0.1
RSDY **Resadiye-TOKAT** 18.00 88 *e*P P 17 51 48.4 +0.4
EAB **Aberfoyle** 18.03 326 *e*P Pn 17 51 47.8 +0.1
EAB **Aberfoyle** 18.03 326 P Pn 17 51 47.8 +0.1
EAB **Aberfoyle** 18.03 326 *e*P Pn 17 51 47.8 +0.1
ODD1 **Odda** 18.12 349 *e*P P 17 51 50.1 +1.0
ODD1 AMB AMB 17 51 56.6
comp=Z,367nm,2.8s
ODD1 **Odda** 18.12 349 *e*P P 17 51 50.1 +1.0
comp=Z,367nm,2.8s,SNR=46
MME1 **Meikle Cairn** 18.30 331 *e*P P 17 51 51.4 +0.2
MME1 **Meikle Cairn** 18.30 331 P P 17 51 51.4 +0.2
MME1 **Meikle Cairn** 18.30 331 *e*P P 17 51 51.4 +0.2
NC602 **NORSAR Array S** 18.48 357 *e*P Pn 17 51 53.7 +0.5
NC602 **NORSAR Array S** 18.48 357 *e*P Pn 17 51 53.7 +0.5
SNR=40
KMRS **Kahramanmaras** 18.58 97 *e*P Pn 17 51 56.2 +1.6
MCD **Coleburn Disti** 18.61 331 *e*P Pn 17 51 55.0 +0.3
MCD **Coleburn Disti** 18.61 331 P Pn 17 51 55.0 +0.3
MCD **Coleburn Disti** 18.61 331 *e*P Pn 17 51 55.0 +0.3
NAO01 **NORSAR Array S** 18.62 356 *e*Pn P 17 51 54.1 -0.6
comp=Z,78nm,0.7s
DARE **Darende-Malaty** 18.64 94 *e*P Pn 17 51 56.5 +1.1
VAL **Valentia** 18.71 309 *e*P P 17 51 53.4 -2.3
BER **Bergen** 18.77 347 *e*P P 17 51 55.3 -0.9
BER AMS AMS 18 02 05.5
comp=Z,7μm,11.1s
BER **Bergen** 18.77 347 *e*P P 17 51 55.3 -0.9
SNR=40
RUND **Rundenannen** 18.79 347 *e*P Pn 17 51 59.8 +2.8
RUND AMB AMB 17 52 01.8
comp=Z,112nm,1.4s
NB2 **NORSAR Subarra** 18.80 357 P P 17 51 55.9 -0.7
baz=175,slow=11
NB2 **NORSAR Subarra** 18.80 357 P P 17 51 55.9 -0.7
comp=Z,9nm,0.8s,baz=175,slow=11
NB2 **NORSAR Subarra** 18.80 357 P P 17 51 55.9 -0.7
baz=175,slow=11,SNR=40
NOA **NORSAR Array B** 18.80 357 P P 17 51 56.1 -0.5
NOA S Sn 17 55 27.7 +0.7
NOA **NORSAR Array B** 18.80 357 P P 17 51 56.1 -0.5
comp=Z,2.1nm,0.3s,baz=176,slow=11,SNR=128
NOA S Sn 17 55 27.7 +0.7
baz=54,slow=2.1,SNR=1.4
NOA LR LR 18 00 20.0
comp=Z,5μm,18.0s,baz=180,slow=41
NOA **NORSAR Array B** 18.80 357 P P 17 51 56.1 -0.5
comp=Z,2.0nm,0.3s
ASK **Askoy** 18.88 347 *e*P P 17 51 56.3 -1.1
KSB **Sheil Bridge** 19.16 328 *e*P P 17 52 00.9 +0.3
KSB **Sheil Bridge** 19.16 328 P P 17 52 00.9 +0.3
KSB **Sheil Bridge** 19.16 328 *e*P P 17 52 00.9 +0.3
SOC **Sochi** 19.23 77*c* *i*P P 17 52 01.0 -0.4
SOC *e* 17 55 37.8
SOC pmax pmax
comp=Z,245nm,0.9s
SOC MLR MLR
comp=Z,8μm,17.0s
SOC MLR MLR
comp=N,7μm,17.0s
SOC MLR MLR
comp=E,891nm,17.0s
SOC **Sochi** 19.23 77 *i* P P 17 52 01.0 -0.4
comp=E,245nm,0.9s
SOC *e*S Sn 17 55 37.8 +0.3
comp=E,7μm,17.0s
KAC **Achnashellach** 19.31 328 *e*P Pn 17 52 02.9 -0.4
KAC **Achnashellach** 19.31 328 P Pn 17 52 02.9 -0.4
KAC **Achnashellach** 19.31 328 *e*P Pn 17 52 02.9 -0.4
BHL **Bhannes** 19.33 108 *e*P Pn 17 52 06.2 +2.4
BHL **Bhannes** 19.33 108 *e*P Pn 17 52 06.2 +2.4
HWQ **Hawqa** 19.34 107 *e*P Pn 17 52 06.5 +2.6
KPL **Plockton** 19.34 328 *e*P P 17 52 01.9 -0.6
KPL AMB AMB 17 52 09.5
comp=Z,256nm,4.2s
KPL AMS AMS 18 00 40.6
comp=Z,6μm,14.5s
KPL **Plockton** 19.34 328 P P 17 52 01.9 -0.6
KPL AMB AMB 17 52 09.5
comp=Z,256nm,4.2s
KPL AMS AMS 18 00 40.6
comp=Z,6μm,14.5s
KPL **Plockton** 19.34 328 *e*P P 17 52 01.9 -0.6
MALT **Malatya** 19.42 94 *e*P Pn 17 52 05.8 +0.9
MALT pmax pmax
comp=Z,127nm,1.2s
MALT **Malatya** 19.42 94 *e*P Pn 17 52 05.8 +0.9
comp=Z,127nm,1.2s
MALT **Malatya** 19.42 94 *e*P Pn 17 52 05.8 +0.9
comp=Z,127nm,1.2s
VSR **Storozhevoye** 19.64 54 *e*P P 17 52 05.0 -0.8
VSR *e*S S 17 55 43.1 -3.6
VSR pmax pmax
comp=E,40nm,0.8s
VSR pmax pmax
comp=Z,110nm,0.8s
VSR pmax pmax
comp=N,2μm,0.9s
VSR smax smax
comp=N,58μm,4.6s
VSR smax smax
comp=Z,108μm,4.3s
VSR smax smax
comp=E,1μm,3.3s
VSR MLR MLR
comp=E,15μm,19.0s
VSR MLR MLR
comp=Z,15μm,19.0s
VSR **Storozhevoye** 19.64 54 *e*P P 17 52 05.0 -0.8
comp=Z,2μm,0.9s
MMAI **Mount Meron Ar** 19.64 111 P Pn 17 52 07.4 -0.1
MMAI S S 17 55 45.9 -1.3
MMAI **Mount Meron Ar** 19.64 111 P Pn 17 52 07.4 -0.1
comp=Z,2.2nm,0.3s,baz=309,slow=8.5,SNR=31
MMAI S S 17 55 45.9 -1.3
comp=Z,1.1nm,0.3s,baz=256,slow=41,SNR=1.9
MMAI LR LR 18 01 40.9
comp=Z,3μm,19.2s,baz=310,slow=43
VORD **Divnogorie** 19.64 55 *e*P P 17 52 05.0 -0.9
VORD *e*S S 17 55 40.3 -6.5
VORD pmax pmax
comp=Z,70nm,0.9s
VORD pmax pmax
comp=N,8.0nm,0.6s
VORD pmax pmax
comp=E,70nm,0.8s
VORD smax smax
comp=E,870nm,3.7s
VORD smax smax
comp=Z,3μm,6.0s
VORD smax smax
comp=N,790nm,2.3s
VORD MLR MLR
comp=Z,16μm,14.0s
VORD MLR MLR
comp=N,6μm,9.0s
VORD MLR MLR
comp=E,16μm,15.0s
VORD **Divnogorie** 19.64 55 *e*P P 17 52 05.0 -0.9
comp=E,8.0nm,0.6s
RCY **Rachaya** 19.68 109 *e*P Pn 17 52 08.7 +0.7
RCY **Rachaya** 19.68 109 *e*P Pn 17 52 08.7 +0.7
OBN **Obninsk** 19.79 42α *i*P P 17 52 06.2 -1.1
OBN *i* S S 17 55 41.4 -8.2
OBN pmax pmax

comp=Z,202nm,1.2s
OBN MLR MLR
comp=Z,10µm,16.0s
OBN Obninsk 19.79 42 eP P 17 52 06.0 -1.3
comp=Z,213nm,0.8s
OBN Obninsk 19.79 42 P P 17 52 06.3 -1.1
comp=Z,1µm,0.8s,SNR=23
OBN Obninsk 19.79 42 i P P 17 52 06.2 -1.1
comp=Z,202nm,1.2s
VOR Voronezh 19.81 53 eP P 17 52 06.0 -1.7
VOR eS S 17 55 46.0 -4.2
VOR pmax pmax
comp=Z,750nm,1.2s
VOR Voronezh 19.81 53 eP P 17 52 06.0 -1.7
comp=Z,750nm,1.2s
LKFR Kufra 19.83 153 i P Pn 17 52 09.9 +0.2
comp=Z,406nm,1.4s,SNR=35
DOMB Dombas 19.93 354 eP Pn 17 52 11.5 +0.8
LRW Lerwick 19.98 338 eP P 17 52 10.0 +0.6
LRW AMS AMS 18 02 33.5
comp=Z,10µm,14.2s
LRW Lerwick 19.98 338 P P 17 52 10.0 +0.6
LRW AMS AMS 18 02 33.5
comp=Z,10µm,14.2s
LRW Lerwick 19.98 338 eP P 17 52 10.0 +0.6
PUL Pulkovo 20.32 25 eP P 17 52 13.1 -0.1
PUL pmax pmax
comp=Z,391nm,1.3s
PUL MLR MLR
comp=Z,21µm,17.0s
PUL Pulkovo 20.32 25 eP P 17 52 13.1 -0.1
comp=Z,21µm,17.0s
TAM Tamanrasset 20.57 201⇓eP Pn 17 52 18.7 +0.1
TAM pmax pmax
comp=Z,167nm,1.1s
TAM MLR MLR
comp=Z,15µm,19.0s
TAM Tamanrasset 20.57 201⇓eP Pn 17 52 18.7 0.0
comp=Z,167nm,1.1s
TAM LR LR
comp=Z,15µm,19.0s
TAM Tamanrasset 20.57 201 eP Pn 17 52 18.7 +0.1
comp=Z,15µm,19.0s
MOL Molde 20.59 352 eP P 17 52 15.9 -0.1
MOL eS S 17 56 06.5 +1.0
MOL Molde 20.59 352 eP P 17 52 15.9 -0.1
SNR=39
MOL eS S 17 56 06.4 +1.0
SNR=42
FINES FINESS Array B 20.60 17 P P 17 52 16.1 -0.1
FINES S S 17 56 02.7 -3.0
FINES FINESS Array B 20.60 17 P P 17 52 16.1 -0.1
comp=Z,297nm,0.8s,baz=187,slow=9.0,SNR=376
FINES S S 17 56 02.7 -3.0
comp=Z,2.6nm,0.8s,baz=60,slow=27,SNR=0.9
FINES LR LR 18 01 14.9
comp=Z,13µm,21.8s,baz=210,slow=40
FINES FINESS Array B 20.60 17 P P 17 52 16.1 -0.1
comp=Z,297nm,0.8s
FIA1 FINESS Array S 20.60 17 eP P 17 52 15.9 -0.3
MOS Moscow 20.62 41 eP P 17 52 16.7 +0.2
MOS e 17 52 37.2
MOS eS S 17 56 03.9 -2.3
MOS pmax pmax
comp=Z,166nm,0.8s
MOS pmax pmax
comp=E,115nm,0.6s
MOS MLR MLR
comp=Z,12µm,10.0s
MOS Moscow 20.62 41 eP P 17 52 16.7 +0.2
comp=Z,166nm,0.8s
CIA Chichaoua 20.70 246 i P Pn 17 52 20.0 0.0
TBLU Trondheim 21.05 356⇓iP P 17 52 23.4 +2.3
TBLU AMS AMS 18 02 00.7
comp=Z,6µm,12.3s
TBLU Trondheim 21.05 356⇓iP P 17 52 23.4 +2.3
SNR=39
JHA Jbel Lahdid 21.07 247 i P P 17 52 21.0 -0.6
VRHR Novokhopersk 21.10 56 eP P 17 52 22.3 +0.6
VRHR eS S 17 56 13.8 -2.0
VRHR pmax pmax
comp=Z,250nm,0.6s
VRHR pmax pmax
comp=N,60nm,0.5s
VRHR pmax pmax
comp=E,340nm,1.0s
VRHR smax smax
comp=E,2µm,2.5s
VRHR smax smax
comp=Z,2µm,5.9s
VRHR smax smax
comp=N,1µm,2.3s
VRHR MLR MLR
comp=Z,16µm,13.0s
VRHR MLR MLR
comp=N,4µm,9.0s
VRHR MLR MLR
comp=E,9µm,11.0s
VRHR Novokhopersk 21.10 56 eP P 17 52 22.3 +0.6
comp=E,60nm,0.5s
ASF Jabal al Asfar 21.16 111 P P 17 52 24.2 +1.6
ASF S Sn 17 56 28.7 +4.3
ASF Jabal al Asfar 21.16 111 P P 17 52 24.2 +1.6
comp=E,16nm,0.9s,baz=162,slow=5.6,SNR=18
ASF S Sn 17 56 28.7 +4.3
comp=E,2.0nm,0.8s,baz=278,slow=22,SNR=1.3
ASF LR LR 18 02 47.5
comp=E,3µm,18.7s,baz=184,slow=43
KAF Kangasniemi 21.25 17 eP P 17 52 21.4 -1.8
KAF pmax pmax
comp=Z,98nm,0.7s
KAF Kangasniemi 21.25 17 ep P 17 52 21.4 -1.8
comp=Z,98nm,0.7s
KAF Kangasniemi 21.25 17 eP P 17 52 21.4 -1.8
comp=Z,98nm,0.7s
KIV Kislovodsk 21.34 76 eP P 17 52 25.5 +1.1
KIV eS S 17 56 22.6 +1.8
KIV pmax pmax
comp=Z,455nm,1.1s
KIV MLR MLR
comp=Z,4µm,14.0s
KIV Kislovodsk 21.34 76 eP P 17 52 25.2 +0.8
comp=Z,359nm,0.9s
KIV LR LR
comp=Z,6µm,22.0s
KIV Kislovodsk 21.34 76 Pn P 17 52 25.5 +1.1
comp=Z,2µm,1.2s,SNR=47
KIV Kislovodsk 21.34 76 eP P 17 52 25.5 +1.1
comp=Z,4µm,14.0s
KIV eS S 17 56 22.6 +1.8
EIL Elat 21.41 119 P P 17 52 26.3 +1.2
EIL S S 17 56 18.3 -3.9
EIL Elat 21.41 119 P P 17 52 26.3 +1.2
comp=Z,23nm,0.9s,baz=336,slow=8.0,SNR=21
EIL S S 17 56 18.3 -3.9
comp=Z,10nm,0.6s,baz=8.5,slow=15,SNR=5.3
KBZ Khabaz 21.51 76 P P 17 52 28.0 +1.9
KBZ S Sn 17 56 29.7 -2.7
KBZ pmax pmax
comp=Z,96nm,0.8s
KBZ smax smax
comp=N,7.0nm,0.9s
KBZ Khabaz 21.51 76 P P 17 52 28.0 +1.9
KBZ S Sn 17 56 29.7 -2.7
KBZ Khabaz 21.51 76 P P 17 52 28.0 +1.9
comp=N,96nm,0.8s,baz=278,slow=8.5,SNR=77
KBZ S Sn 17 56 29.7 -2.7
comp=N,7.3nm,0.9s,baz=286,slow=6.2,SNR=1.9
KBZ Khabaz 21.51 76 P P 17 52 28.0 +1.9
comp=N,96nm,0.8s
ONI Oni 22.07 79 P P 17 52 34.8 +2.5
ONI S Sn 17 56 45.9 -0.2
ONI Oni 22.07 79 P P 17 52 34.8 +2.5
NSS Namsos 22.27 358⇓iP P 17 52 32.8 -1.3
NSS eS S 17 56 36.3 -2.0
NSS AMS AMS 18 02 10.3
comp=Z,3µm,19.9s
NSS Namsos 22.27 358⇓iP P 17 52 32.8 -1.3
SNR=38
YBT Youssef Ben Ta 22.27 243 i P P 17 52 36.5 +2.1
AKH Akhalkalaki 22.32 82 P P 17 52 37.1 +2.0
AKH S S 17 56 46.0 +5.8
AKH Akhalkalaki 22.32 82 P P 17 52 37.1 +2.0
GOR Gori 22.66 80 P P 17 52 41.0 +2.5
GOR Gori 22.66 80 P P 17 52 41.0 +2.5
KZR Kazreti 23.01 82 P P 17 52 44.0 +1.8
KZR Kazreti 23.01 82 P P 17 52 44.0 +1.8
JOF Joensuu 23.14 21 eP P 17 52 42.8 -0.5
JOF pmax pmax
comp=Z,119nm,0.6s
JOF Joensuu 23.14 21 ep P 17 52 42.8 -0.5
comp=Z,119nm,0.6s
JOF Joensuu 23.14 21 eP P 17 52 42.8 -0.5
comp=Z,119nm,0.6s
TBLG Delisi 23.17 81 P P 17 52 45.5 +1.6
TBLG S Sn 17 57 06.0 -6.3
TBLG Delisi 23.17 81 P P 17 52 45.5 +1.6
DGRG David-gareji 23.70 81 P P 17 52 51.8 +2.7
DGRG S Sn 17 57 17.0 -7.9
DGRG David-gareji 23.70 81 P P 17 52 51.8 +2.7
MOR8 Moi Rana 23.91 1 eP P 17 52 51.7 +0.9
MOR8 AMB AMB 17 52 55.2
comp=Z,282nm,1.0s
MOR8 Moi Rana 23.91 1 eP P 17 52 51.7 +0.9
comp=Z,282nm,1.0s,SNR=32
STOK Stokkvaagen 24.07 360 eP P 17 52 53.2 +1.0
STOK eP P 17 52 53.2 +1.0
FLOS Flostrand 24.07 360 eP P 17 52 53.1 +0.8
KLMR Klimovskoe 24.34 31d iP P 17 52 54.4 -0.5
KLMR eS S 17 57 15.0 +1.7
KLMR pmax pmax
comp=Z,273nm,4.2s
KLMR pmax pmax
comp=Z,418nm,1.4s
KLMR MLR MLR
comp=Z,16µm,15.0s
KLMR Klimovskoe 24.34 31 i P P 17 52 54.4 -0.5
comp=Z,16µm,15.0s
KLMR eS S 17 57 15.0 +1.7
MAK Makhachkala 24.95 77 eP P 17 53 03.2 +2.7
MAK i 17 53 36.0
MAK ePPP PPP 17 53 45.3
MAK eS S 17 57 28.3 +5.0
MAK pmax pmax
comp=Z,974nm,2.1s
MAK MLR MLR
comp=Z,13µm,14.0s
MAK Makhachkala 24.95 77 eP P 17 53 03.2 +2.7
comp=Z,974nm,2.1s
STEI Steigen 25.69 2 eP P 17 53 07.2 +0.3
PMAR Madeira 25.82 258 eP P 17 53 10.9 +2.2
comp=Z,1µm,2.0s
PMAR Madeira 25.82 258 eP P 17 53 10.9 +2.2
comp=Z,1µm,2.0s
LOF Lofoten 25.87 0 eP P 17 52 56.5 -12
BHD Baghdad 25.92 100 i x P 17 53 08.0 -1.4
BHD i x x 17 56 38.7
BHD i x S 17 57 39.0 0.0
BHD i x x 17 58 49.7
BHD i x x 18 01 31.5
BHD i x x 18 02 55.5
BHD Baghdad 25.92 100 i P P 17 53 08.0 -1.4
PMOZ Porto Moniz, M 25.97 259 eP P 17 53 11.8 +1.7
PMOZ eLR LR 17 58 04.4
comp=Z,3µm,22.0s
PMOZ Porto Moniz, M 25.97 259 eP P 17 53 11.8 +1.7
TMCR Tamitsa 26.04 25 eP P 17 53 08.7 -1.4
TMCR pmax pmax
comp=Z,242nm,1.1s
TMCR Tamitsa 26.04 25 eP P 17 53 08.7 -1.4
comp=Z,242nm,1.1s
KTK1 Kautokeino 27.25 8 eP P 17 53 11.1 -10
KTK1 eS S 17 57 55.2 -4.1
KTK1 AMS AMS 18 04 57.8
comp=Z,16µm,10.8s
APA Apatity 27.50 16⇓iP P 17 53 22.0 -1.4
APA eS S 17 58 00.0 -3.3
APA pmax pmax
comp=Z,124nm,1.4s
APA MLR MLR
comp=Z,22µm,16.0s
APA Apatity 27.50 16 i P P 17 53 22.0 -1.4
comp=Z,124nm,1.4s
TRO Tromso 27.53 4 eP P 17 53 23.7 +0.2
TRO AMB AMB 17 53 32.7
comp=Z,267nm,1.9s
TRO eS S 17 58 03.2 -0.4
TRO AMS AMS 18 06 08.7
comp=Z,4µm,11.0s
TRO Tromso 27.53 4 eP P 17 53 23.7 +0.2
comp=Z,267nm,1.9s,SNR=32
TRO eS S 17 58 03.2 -0.4
SNR=32
ARCES ARCESS Array B 27.99 9 P P 17 53 27.0 -0.7
ARCES PcP PcP 17 56 44.3 +2.1
ARCES ARCESS Array B 27.99 9 P P 17 53 27.0 -0.7
comp=Z,32nm,0.8s,baz=184,slow=8.5,SNR=86
ARCES PcP PcP 17 56 44.3 +2.1
comp=Z,11nm,0.9s,baz=209,slow=2.2,SNR=3.6
ARCES LR LR 18 05 14.5
comp=Z,5µm,20.3s,baz=199,slow=38
ARCES ARCESS Array B 27.99 9 P P 17 53 27.0 -0.7
comp=Z,32nm,0.8s
ARCES ARCESS Array B 27.99 9 PcP PcP 17 56 44.3 +2.1
comp=Z,5µm,20.3s
ARE0 ARCESS Array S 27.99 9⇓iP P 17 53 26.9 -0.8
ARE0 ARCESS Array S 27.99 9⇓eP P 17 53 26.6 -1.2
ARE0 ARCESS Array S 27.99 9⇓iP P 17 53 26.9 -0.8
SNR=31
LVZ Lovozero 28.04 17⇑iP P 17 53 28.9 +0.7
LVZ pmax pmax
comp=Z,175nm,1.7s
LVZ Lovozero 28.04 17 eP P 17 53 28.4 +0.1
comp=Z,498nm,1.8s
LVZ LR LR
comp=Z,16µm,20.0s
LVZ Lovozero 28.04 17 i P P 17 53 28.9 +0.7
comp=Z,175nm,1.7s
KEV Kevo 28.38 10 eP P 17 53 30.8 -0.3
KEV pmax pmax
comp=Z,112nm,1.5s
KEV MLR MLR
comp=Z,9µm,19.0s
KEV Kevo 28.38 10 eP P 17 53 30.8 -0.3
comp=Z,112nm,1.5s
KEV LR LR
comp=Z,9µm,19.0s
KEV Kevo 28.38 10 ep P 17 53 29.9 -1.2
comp=Z,6.8nm,0.5s
KEV Kevo 28.38 10 eP P 17 53 30.8 -0.3
comp=Z,9µm,19.0s
BORG Borgarnes 29.87 331 P P 17 53 45.0 +0.6
BORG LR LR
comp=Z,5µm,20.0s
BORG Borgarnes 29.87 331 P P 17 53 45.0 +0.6
comp=Z,17nm,1.1s,baz=109,slow=18,SNR=2.4
BORG Borgarnes 29.87 331 P P 17 53 45.0 +0.6
comp=Z,17nm,1.1s
MIB Mutribah 29.89 104 eP P 17 53 45.3 +0.3
MIB AMb AMB 17 53 57.6
comp=Z,111nm,1.2s
MIB Mutribah 29.89 104 eP P 17 53 45.3 +0.3
comp=Z,111nm,1.2s
PSMN Pico do Norte, 29.96 273 eP P 17 53 44.6 -0.9
comp=Z,188nm,1.1s
PSMN eLQ LQ 18 02 38.8
PSMN Pico do Norte, 29.96 273 eP P 17 53 44.6 -0.9
comp=Z,188nm,1.1s
PSMA Santa Maria 30.01 273 eP P 17 53 45.1 -0.8
comp=Z,245nm,1.1s
CMLA Cha da Macela 30.02 274 eLQ LQ 18 03 55.7
CMLA Cha da Macela 30.02 274 PFAKE 17 54 00.0 +14
CMLA LR LR
comp=Z,7µm,19.0s
PDA Ponta Delgada 30.13 275 eP P 17 53 48.4 +1.4
PDA Ponta Delgada 30.13 275 eP P 17 53 48.4 +1.4
NAY Al-Naaiem 30.13 105 eP P 17 53 47.3 +0.2
NAY AMb AMB 17 54 03.0
comp=Z,28nm,1.1s
NAY Al-Naaiem 30.13 105 eP P 17 53 47.3 +0.2
comp=Z,28nm,1.1s
PSET Sete Cidades 30.14 275 eP P 17 53 46.1 -1.1
PSET Sete Cidades 30.14 275 eP P 17 53 46.1 -1.1
UMR Umm Al-Rimmam 30.30 104 eP P 17 53 49.1 +0.6
UMR AMb AMB 17 54 05.2
comp=Z,83nm,1.7s
UMR Umm Al-Rimmam 30.30 104 eP P 17 53 49.2 +0.6
comp=Z,83nm,1.7s
RDF Al-Radifah 30.54 105 eP P 17 53 50.9 +0.2
RDF AMb AMB 17 54 02.8
comp=Z,69nm,1.5s
RDF Al-Radifah 30.54 105 eP P 17 53 50.9 +0.2
comp=Z,69nm,1.5s
JMIC Jan Mayen 30.78 346 eP P 17 53 53.4 +1.0
JMIC Jan Mayen 30.78 346 eP P 17 53 53.4 +1.0
SNR=31
TOA0 Torodi Ar. Sit 30.81 203⇓iP P 17 53 53.3 +0.1
TORD Torodi Ar. Bea 30.81 203 P P 17 53 53.5 +0.3
TORD PcP PcP 17 56 49.5 -0.8
TORD S S 17 58 51.2 -4.9
TORD Torodi Ar. Bea 30.81 203 P P 17 53 53.5 +0.3
comp=Z,49nm,0.8s,baz=16,slow=8.1,SNR=92
TORD PcP PcP 17 56 49.5 -0.8
comp=Z,4.2nm,0.8s,baz=324,slow=2.8,SNR=4.2
TORD S S 17 58 51.2 -4.9
comp=Z,1.6nm,1.0s,baz=13,slow=4.1,SNR=2.2
TORD LR LR 18 07 33.5
comp=Z,11µm,20.3s,baz=15,slow=39
AKTK Aktyubinsk 31.38 59 P P 17 53 57.7 -0.2
comp=Z,16nm,0.7s
AKTK S S 17 59 05.5 +0.9
comp=Z,4µm,19.5s
AKTO Aktyubinsk 31.38 59 P P 17 53 57.7 -0.2
AKTO S S 17 59 05.5 +0.9
AKTO pmax pmax
comp=Z,16nm,0.7s
AKTO smax smax
comp=N,6.0nm,1.0s
AKTO MLR MLR
comp=Z,4µm,19.5s
AKTO Aktyubinsk 31.38 59 P P 17 53 57.7 -0.2
AKTO S S 17 59 05.5 +0.9
AKTO Aktyubinsk 31.38 59 P P 17 53 57.7 -0.2
comp=Z,16nm,0.7s,baz=274,slow=8.5,SNR=80
AKTO S S 17 59 05.5 +0.9
comp=Z,5.5nm,1.0s,baz=92,slow=15,SNR=1.8
AKTO LR LR 18 08 32.4
comp=Z,4µm,19.5s,baz=118,slow=40
SOKR Solikamsk 31.57 42d iP P 17 53 59.2 -0.2
SOKR S S 17 59 06.1 -1.0
SOKR pmax pmax
comp=Z,60nm,0.8s
SOKR MLR MLR
comp=Z,13µm,23.0s
SOKR Solikamsk 31.57 42 i P P 17 53 59.2 -0.2
comp=Z,60nm,0.8s
SOKR S S 17 59 06.1 -1.0
comp=Z,13µm,23.0s
ROSA Rosais 31.69 278 eP P 17 54 01.1 +0.3
comp=Z,169nm,1.1s
ROSA eLQ LQ 18 03 16.1
ROSA Rosais 31.69 278 eP P 17 54 01.1 +0.3
comp=Z,169nm,1.1s
ARU Arti 31.94 48c iP P 17 54 02.5 -0.2
ARU PPP PPP 17 55 14.6
ARU S S 17 59 12.9 -0.2
ARU pmax pmax
comp=Z,180nm,1.0s
ARU MLR MLR
comp=Z,17µm,16.0s
ARU Arti 31.94 48 eP P 17 54 02.4 -0.4
comp=Z,336nm,1.2s
ARU LR LR
comp=Z,15µm,19.0s
ARU Arti 31.94 48 P P 17 54 02.7 0.0
comp=Z,1µm,0.8s,SNR=83
ARU Arti 31.94 48 i P P 17 54 02.5 -0.2
comp=Z,180nm,1.0s
ARU S S 17 59 12.9 -0.2
comp=Z,17µm,16.0s
BJO Bjornoya 32.39 3 eP P 17 54 07.3 +0.8
BJO Bjornoya 32.39 3 eP P 17 54 07.3 +0.8
SNR=31
RAYN Ar Rayn 32.51 115 P P 17 54 09.7 +1.6
comp=Z,38nm,1.2s,SNR=5.8
AB31 Akbulak array 32.71 62 i P P 17 54 09.3 -0.3
AB31 pmax pmax
comp=Z,23nm,0.9s
AB31 Akbulak array 32.71 62 i P P 17 54 09.3 -0.3
comp=Z,23nm,0.9s
ABKAR Akbulak array 32.71 62 eP P 17 54 09.3 -0.3
comp=Z,14nm,0.8s
SVE Sverdlovsk 33.12 48c iP P 17 54 13.8 +0.7
SVE eS S 17 59 30.9 -0.6
SVE pmax pmax
comp=Z,230nm,1.3s
SVE pmax pmax
comp=Z,230nm,12.7s
SVE MLR MLR
comp=Z,16µm,15.0s
SVE MLR MLR
comp=E,11µm,16.0s
SVE Sverdlovsk 33.12 48 i P P 17 54 13.8 +0.7
comp=E,230nm,12.7s
SVE eS S 17 59 30.9 -0.6
comp=E,16µm,15.0s
SCO Scoresbysund 33.40 339 i P P 17 54 16.8 +1.4
comp=E,15nm,1.0s
SCO
comp=Z,2µm,14.0s
SCO Scoresbysund 33.40 339 i P P 17 54 16.8 +1.4
comp=Z,15nm,1.0s
ABKT Ailbek 34.12 82 P P 17 54 23.9 +1.8
comp=Z,445nm,0.9s,SNR=20
HSP Hornsund 34.81 1 eP P 17 54 29.7 +2.2
SPA0 Spitsbergen Ar 35.99 1 eP P 17 54 38.8 +1.0
SPA0 Spitsbergen Ar 35.99 1 eP P 17 54 38.8 +1.0
SNR=30
SPITS Spitsbergen Ar 35.99 1 P P 17 54 38.6 +0.9
SPITS Spitsbergen Ar 35.99 1 P P 17 54 38.6 +0.9
comp=Z,120nm,1.1s,baz=149,slow=13,SNR=30
SPITS Spitsbergen Ar 35.99 1 P P 17 54 38.6 +0.9
comp=Z,120nm,1.1s
KBS Kingsbay 36.73 360⇓iP P 17 54 45.4 +1.4
KBS ePP PP 17 56 10.4 +2.9
KBS eS S 18 00 26.1 -0.5
KBS AMS AMS 18 12 27.0
comp=Z,3µm,13.5s
KBS Kingsbay 36.73 360d iP P 17 54 45.6 +1.6
KBS pmax pmax
comp=Z,163nm,1.7s
KBS Kingsbay 36.73 360 eP P 17 54 45.2 +1.2
comp=Z,142nm,1.4s
KBS LR LR
comp=Z,3µm,19.0s
KBS Kingsbay 36.73 360 i P P 17 54 45.6 +1.6
comp=Z,163nm,1.7s
BBTS Babate 37.78 232 P P 17 54 53.7 +0.1
BBTS Babate 37.78 232 P P 17 54 53.7 +0.1
comp=Z,103nm,0.9s,baz=19,slow=1.8,SNR=10
DESE Dese 38.57 136 i P P 17 55 03.2 +2.7
BANOM Banah 38.60 101 P P 17 55 01.4 +1.0
SNR=8.9
BANOM Banah 38.60 101 P P 17 55 00.7 +0.2
SNR=12
ASUD Al Ashush, Dub 38.67 104 P P 17 55 02.4 +1.4
NAZ Nazwa, Dubai 38.70 103 P P 17 55 02.4 +1.2
SNR=11
NAZ Nazwa, Dubai 38.70 103 P P 17 55 02.4 +1.2
SNR=11
BRVK Borovoye 38.75 54d iP P 17 55 02.4 +1.0
BRVK pmax pmax
comp=Z,60nm,0.6s
BRVK Borovoye 38.75 54⇓iP P 17 55 02.3 +1.0
comp=Z,97nm,0.8s
BRVK ePP PP 17 56 30.6 +0.6
BRVK LR LR
comp=Z,3µm,20.0s
BRVK Borovoye 38.75 54 P P 17 55 02.9 +1.5
SNR=53
BRVK Borovoye 38.75 54 P P 17 55 02.4 +1.0
comp=Z,735nm,0.9s,SNR=72
BRVK Borovoye 38.75 54 i P P 17 55 02.4 +1.0
comp=Z,60nm,0.6s
FAQ Al Faqa, Dubai 38.79 103 P P 17 55 02.8 +0.8
BVA0 Borovoye Array 38.82 54 P P 17 55 01.5 -0.5
BVA0 Borovoye Array 38.82 54 P P 17 55 01.5 -0.5
BVAR Borovoye Array 38.82 54 P P 17 55 02.7 +0.7
BVAR S S 18 00 58.2 -0.6
BVAR pmax pmax
comp=Z,25nm,0.8s
BVAR smax smax
comp=N,1.0nm,1.0s
BVAR Borovoye Array 38.82 54 P P 17 55 02.7 +0.7
BVAR S S 18 00 58.2 -0.6
BVAR Borovoye Array 38.82 54 P P 17 55 02.7 +0.7
comp=N,25nm,0.8s,baz=259,slow=7.1,SNR=142

BVAR S **S** **18 00 58.2 -0.6**
comp=N,1.0nm,1.0s,baz=220,slow=46,SNR=1.4
BVAR Borovoye Array 38.82 54 P **P** **17 55 02.7 +0.7**
comp=N,25nm,0.8s
SUMG Summit 38.98 338 *e*P **P** **17 55 04.3 +0.8**
SUMG pmax pmax
comp=Z,37nm,0.9s
SUMG Summit 38.98 338 *e*P **P** **17 55 04.3 +0.8**
comp=Z,37nm,0.9s
SUMG Summit 38.98 338 *i* P **P** **17 55 04.3 +0.8**
comp=Z,29nm,0.9s
SUMG Summit 38.98 338 *e*P **P** **17 55 04.3 +0.8**
comp=Z,37nm,0.9s
DBIC Dimbokro 39.04 210 *e*P **P** **17 55 03.6 -0.5**
DBIC Dimbokro 39.04 210 *e*P **P** **17 55 03.7 -0.5**
comp=Z,75nm,1.0s
DBIC S **S** **18 01 03.2 +0.5**
DBIC Dimbokro 39.04 210 P **P** **17 55 04.0 -0.1**
comp=Z,68nm,1.0s,baz=4.7,slow=9.4,SNR=30
DBIC S **S** **18 01 03.2 +0.5**
comp=Z,3.1nm,1.0s,baz=190,slow=20,SNR=1.7
DBIC LR LR 18 12 09.6
comp=Z,4μm,18.9s,baz=0.7,slow=38
DBIC Dimbokro 39.04 210 P **P** **17 55 04.0 -0.1**
comp=Z,68nm,1.0s
HATD Hatta, Dubai 39.13 103 P **P** **17 55 05.7 +0.8**
SNR=24
HATD Hatta, Dubai 39.13 103 P **P** **17 55 05.7 +0.8**
SNR=24
ASHO Ashiyiah 39.16 103 P **P** **17 55 05.2 0.0**
SNR=24
ASHO Ashiyiah 39.16 103 P **P** **17 55 04.9 -0.3**
SNR=13
ATD Arta Tunnel 39.95 132 P **P** **17 55 12.8 +1.0**
ATD Arta Tunnel 39.95 132 P **P** **17 55 12.8 +1.0**
comp=Z,16nm,0.8s,baz=4.5,slow=7.8,SNR=6.4
FURI Furi 39.99 139 *i* P **P** **17 55 14.6 +2.2**
ARQ Araqi 40.32 104 P **P** **17 55 15.6 +0.8**
SNR=19
ARQ Araqi 40.32 104 P **P** **17 55 15.6 +0.8**
SNR=19
HOQ Hoqain 40.74 103 P **P** **17 55 18.1 -0.2**
SNR=14
HOQ Hoqain 40.74 103 P **P** **17 55 18.1 -0.2**
SNR=14
KK31 Karatay Array 41.21 69 P **P** **17 55 23.1 +1.1**
KK31 pmax pmax
comp=Z,93nm,1.1s
KK31 Karatay Array 41.21 69 P **P** **17 55 23.1 +1.1**
comp=Z,93nm,1.1s
KKAR Karatay Array 41.21 69 *e*P **P** **17 55 23.0 +1.0**
KKAR pmax pmax
comp=Z,51nm,0.8s
KKAR Karatay Array 41.21 69 *e*P **P** **17 55 23.0 +1.0**
comp=Z,51nm,0.8s
KKAR Karatay Array 41.21 69 *e*P **P** **17 55 23.0 +1.0**
comp=Z,51nm,0.8s
SMDO Samad 41.60 103 P **P** **17 55 25.9 +0.5**
SNR=20
SMDO Samad 41.60 103 P **P** **17 55 25.9 +0.5**
SNR=20
SFJD Kangerlussuaq 41.92 328 *e*P **P** **17 55 26.6 -0.7**
SFJD LR LR
comp=Z,89nm,1.0s
comp=Z,3μm,19.0s
SFJD Kangerlussuaq 41.92 328⇓ *i*P **P** **17 55 26.7 -0.7**
SFJD
comp=Z,49nm,0.9s
comp=Z,2μm,17.0s
SFJD Kangerlussuaq 41.92 328 P **P** **17 55 27.1 -0.2**
comp=Z,29nm,0.8s,baz=84,slow=8.7,SNR=18
SFJD Kangerlussuaq 41.92 328 P **P** **17 55 27.1 -0.2**
comp=Z,29nm,0.8s
SACV Santiago Islan 41.92 241 PFAKE 17 55 40.0 +12
SACV LR LR
comp=Z,2μm,19.0s
JMDO Jabal Madar 42.06 104 P **P** **17 55 29.5 +0.4**
SNR=7.9
JMDO Jabal Madar 42.06 104 P **P** **17 55 29.5 +0.4**
SNR=7.9
KBL Kabul 43.55 81 *e*P **P** **17 55 42.3 +1.0**
KBL pmax pmax
comp=Z,21nm,1.0s
KBL Kabul 43.55 81 *e*P **P** **17 55 42.3 +1.0**
comp=Z,21nm,1.0s
KBL Kabul 43.55 81 *e*P **P** **17 55 42.3 +1.0**
comp=Z,21nm,1.0s
EKS2 Erkin-Say 43.62 68 *e*P **P** **17 55 43.0 +1.3**
EKS2 pmax pmax
comp=Z,114nm,0.9s
EKS2 MLR MLR
comp=Z,4μm,19.0s
EKS2 Erkin-Say 43.62 68 *e*P **P** **17 55 43.0 +1.3**
comp=Z,114nm,0.9s
EKS2 LR LR
comp=Z,4μm,19.0s
EKS2 Erkin-Say 43.62 68 P **P** **17 55 43.4 +1.7**
SNR=42
EKS2 Erkin-Say 43.62 68 *e*P **P** **17 55 43.0 +1.3**
comp=Z,4μm,19.0s
AML Almayashu 43.75 69 P **P** **17 55 44.7 +1.6**
SNR=8.6
USP Ospenovka 43.90 67 *i* P **P** **17 55 44.4 +0.5**
USP Ospenovka 43.90 67 P **P** **17 55 44.4 +0.5**
SNR=12
USP Ospenovka 43.90 67 *i* P **P** **17 55 44.4 +0.5**
AAK Ala-Archa 44.12 68*c i*P **P** **17 55 47.1 +1.3**
AAK pmax pmax
comp=Z,139nm,1.3s
AAK Ala-Archa 44.12 68 *e*P **P** **17 55 46.9 +1.1**
comp=Z,484nm,1.3s
AAK *e*PP **PP** **17 57 27.2 -1.2**
AAK PP **PcP** **17 57 29.7 -1.0**
AAK LR LR
comp=Z,4μm,19.0s
AAK Ala-Archa 44.12 68 P **P** **17 55 47.8 +2.0**
SNR=13
AAK Ala-Archa 44.12 68 P **P** **17 55 47.6 +1.8**
SNR=13
AAK Ala-Archa 44.12 68 P **P** **17 55 47.0 +1.3**
comp=Z,270nm,0.9s,SNR=13
AAK Ala-Archa 44.12 68 P **P** **17 55 47.4 +1.6**
comp=Z,27nm,0.9s,baz=255,slow=4.7,SNR=50
AAK PP **PcP** **17 57 29.7 -1.0**
comp=Z,17nm,1.0s,baz=288,slow=16,SNR=2.7
AAK Ala-Archa 44.12 68 *i* P **P** **17 55 47.1 +1.3**
comp=Z,139nm,1.3s
CHMS Chumysh 44.17 67 *i* P **P** **17 55 47.2 +1.2**
CHMS Chumysh 44.17 67 P **P** **17 55 47.2 +1.2**
SNR=8.2
CHMS Chumysh 44.17 67 *i* P **P** **17 55 47.2 +1.2**
KURBB Kurchatov Arra 44.25 56 P **P** **17 55 46.4 -0.1**
comp=Z,19nm,1.0s,baz=290,slow=9.6,SNR=70
KURBB PP **PcP** **17 57 31.9 +1.2**
comp=Z,8.8nm,0.8s,baz=292,slow=10,SNR=4.6
KURK Kurchatov 44.28 56*d i*P **P** **17 55 46.8 +0.1**
KURK pmax pmax
comp=Z,88nm,1.7s
KURK Kurchatov 44.28 56 *e*P **P** **17 55 46.5 -0.2**
comp=Z,57nm,1.1s
KURK *e*PP **PP** **17 57 28.2 -1.6**
KURK PP **PcP** **17 57 31.9 +1.1**
KURK LR LR
comp=Z,2μm,20.0s
KURK Kurchatov 44.28 56 P **P** **17 55 47.3 +0.6**
SNR=26
KURK Kurchatov 44.28 56 P **P** **17 55 46.6 -0.1**
comp=Z,250nm,1.1s,SNR=28
KURK Kurchatov 44.28 56 *i* P **P** **17 55 46.8 +0.1**
comp=Z,88nm,1.7s
KBK Karagaybulak 44.43 68 *i* P **P** **17 55 49.6 +1.3**
KBK Karagaybulak 44.43 68 P **P** **17 55 49.5 +1.3**
SNR=8.2
KBK Karagaybulak 44.43 68 *i* P **P** **17 55 49.6 +1.3**
TKM2 Tokmak 2 44.77 67 PFAKE 17 56 00.0 +8.9
TKM2 LR LR
comp=Z,4μm,19.0s
KZA Kyzart 44.85 68 *i* P **P** **17 55 54.2 +2.3**
KZA Kyzart 44.85 68 P **P** **17 55 54.2 +2.3**
SNR=16
KZA Kyzart 44.85 68 *i* P **P** **17 55 54.2 +2.3**
MBAR Mbarara 45.48 155 *e*P **P** **17 55 57.9 +1.2**
MBAR Mbarara 45.48 155 P **P** **17 55 56.7 -0.1**
MBAR PP **PP** **17 57 45.7 +2.4**
MBAR Mbarara 45.48 155 P **P** **17 55 56.7 -0.1**
comp=Z,1.8nm,0.2s,baz=323,slow=12,SNR=11
MBAR PP **PP** **17 57 45.7 +2.4**
comp=Z,3.2nm,0.2s,baz=254,slow=19,SNR=3.5
MBAR Mbarara 45.48 155 P **P** **17 55 56.7 -0.1**
AAA Alma-Ata 45.57 66 *e*P P 17 56 03.3 +6.2
AAA *e*S S 18 02 46.2 +7.5
AAA pmax pmax
comp=Z,600nm,4.3s
AAA smax smax
comp=E,2μm,13.2s
AAA MLR MLR
comp=Z,5μm,23.0s
NVS Novosibirsk 45.93 49⇑ *i*P **P** **17 56 00.2 +0.5**
NVS *e* 17 57 52.1
NVS *e*S **S** **18 02 43.9 +0.5**
NVS *e* 18 05 55.0
NVS pmax pmax
comp=E,43nm,1.3s
NVS pmax pmax
comp=Z,124nm,1.3s
NVS pmax pmax
comp=N,8.0nm,0.9s
NVS smax smax
comp=N,41nm,2.3s
NVS smax smax
comp=E,96nm,2.3s
NVS Novosibirsk 45.93 49 *i* P **P** **17 56 00.2 +0.5**
comp=E,8.0nm,0.9s
KSH Kashi 46.37 71 P **P** **17 56 03.0 -0.6**
KSH pP **pP** **17 56 07.9 -0.7**
KSH sP **sP** **17 56 09.9 -0.6**
KSH PcP **PcP** **17 57 39.0 +0.5**
KSH PP **PP** **17 57 52.2 -0.2**
KSH ScP **ScP** **18 01 31.1 0.0**
KSH PcS **PcS** **18 01 32.4 -0.8**
KSH S **S** **18 02 48.1 -2.4**
KSH sS **sS** **18 02 56.0 -2.6**
KSH ScS **ScS** **18 05 56.0 -2.3**
KSH SS SS 18 06 05.8 -10
KSH pmax pmax
comp=Z,8.0nm,1.0s
KSH LR LR
comp=N,5μm,14.8s
KSH LR LR
comp=E,1μm,12.4s
KSH LR LR
comp=Z,3μm,22.9s
ALE Alert 46.47 350 P **P** **17 56 04.0 +0.3**
comp=Z,121nm,1.1s,SNR=16
NIL Nilore 47.05 80 PFAKE 17 56 20.0 +11
NIL LR LR
comp=Z,28nm,19.0s
ZAA0 Zalesovo Array 47.06 50 *e*P **P** **17 56 08.3 -0.3**
ZAA0 *e*PP **PP** **17 57 58.4 -0.7**
ZALV Zalesovo Beam 47.06 50 P **P** **17 56 08.8 +0.2**
ZALV 17 57 58.8
ZALV S **S** **18 02 58.9 -0.7**
ZALV pmax pmax
comp=Z,19nm,0.9s
ZALV pmax pmax
comp=Z,15nm,0.8s
ZALV MLR MLR
comp=Z,15μm,18.1s
ZALV Zalesovo Beam 47.06 50 P **P** **17 56 08.8 +0.2**
ZALV PP **PP** **17 57 58.8 -0.3**
ZALV S **S** **18 02 58.9 -0.7**
ZALV Zalesovo Beam 47.06 50 P **P** **17 56 08.8 +0.2**
comp=Z,19nm,0.9s,baz=292,slow=7.8,SNR=94
ZALV PP **PP** **17 57 58.8 -0.3**
comp=Z,15nm,0.8s,baz=292,slow=11,SNR=4.9
ZALV S **S** **18 02 58.9 -0.7**
comp=Z,0.3nm,0.3s,baz=78,slow=29,SNR=1.5
ZALV LR LR 18 18 00.4
comp=Z,15μm,18.1s,baz=288,slow=39
ZALV Zalesovo Beam 47.06 50 P **P** **17 56 08.8 +0.2**
comp=Z,19nm,0.9s
MK31 Makanchi Array 47.82 60 P **P** **17 56 14.9 +0.2**
MK31 pmax pmax
comp=Z,19nm,0.7s
MK31 Makanchi Array 47.82 60⇓ *i*P **P** **17 56 14.9 +0.2**
MK31 Makanchi Array 47.82 60 P **P** **17 56 14.9 +0.2**
comp=Z,19nm,0.7s
MKAR Makanchi Array 47.82 60 P **P** **17 56 15.0 +0.3**
MKAR 17 58 06.6
MKAR pmax pmax
comp=Z,22nm,0.6s
MKAR pmax pmax
comp=Z,4.0nm,0.8s
MKAR MLR MLR
comp=Z,3μm,18.0s
MKAR Makanchi Array 47.82 60 P **P** **17 56 15.0 +0.3**
MKAR PP **PP** **17 58 06.6 +0.3**
MKAR Makanchi Array 47.82 60 P **P** **17 56 15.0 +0.3**
comp=Z,22nm,0.6s,baz=286,slow=6.8,SNR=395
MKAR PP **PP** **17 58 06.6 +0.3**
comp=Z,4.2nm,0.8s,baz=271,slow=7.0,SNR=1.8
MKAR LR LR 18 18 19.9
comp=Z,3μm,18.0s,baz=285,slow=39
MKAR Makanchi Array 47.82 60 P **P** **17 56 15.0 +0.3**
comp=Z,22nm,0.6s
KMBO Kilima Mbogo 48.28 147 *e*P **P** **17 56 19.6 +0.9**
KMBO Kilima Mbogo 48.28 147 *e*P **P** **17 56 19.7 +0.9**
comp=Z,65nm,2.0s
KMBO Kilima Mbogo 48.28 147 P **P** **17 56 20.7 +1.9**
SNR=8.1
KMBO Kilima Mbogo 48.28 147 P **P** **17 56 19.9 +1.1**
comp=Z,1.9nm,0.7s,baz=51,slow=23,SNR=11
KMBO LR LR 18 20 17.8
comp=Z,1μm,18.3s,baz=290,slow=41
KMBO Kilima Mbogo 48.28 147 P **P** **17 56 19.9 +1.1**
comp=Z,1μm,18.3s
DHRM DHARAMSHALA 49.97 80 *e*P **P** **17 56 31.8 +0.2**
DHRM AMB AMB 17 56 38.5
comp=Z,115nm,1.7s
BHJ Bhuj 49.98 94 *ex* P 17 56 37.4 +5.8
BHJ AMB AMB 17 56 47.1
comp=Z,132nm,0.0s
SMLA Simla 51.18 81 *e*P **P** **17 56 38.4 -2.0**
SMLA AMB AMB 17 56 46.4
comp=Z,52nm,1.2s
SCHQ Schefferville 51.73 313 *e*P **P** **17 56 42.9 -1.4**
comp=Z,50nm,0.8s
SCHQ Schefferville 51.73 313 P **P** **17 56 43.2 -1.1**
comp=Z,26nm,0.6s,baz=67,slow=7.1,SNR=49
SCHQ LR LR 18 17 43.7
comp=Z,4μm,19.7s,baz=188,slow=35
WMQ Urumqi 52.50 61 P **P** **17 56 51.0 +0.7**
WMQ sP **sP** **17 56 58.0 +0.8**
WMQ PcP **PcP** **17 58 01.0 +0.4**
WMQ PP **PP** **17 58 51.0 +2.1**
WMQ ScP **ScP** **18 01 57.0 -0.1**
WMQ S **S** **18 04 16.0 -0.1**
WMQ sS **sS** **18 04 24.0 -0.3**
WMQ ScS **ScS** **18 06 37.0 -2.5**
WMQ SS **SS** **18 07 53.0 -0.8**
WMQ pmax pmax
comp=Z,2μm,5.0s
WMQ LR LR
comp=N,6μm,16.0s
WMQ LR LR
comp=E,4μm,16.0s
WMQ LR LR
comp=Z,5μm,16.0s
NDI New Delhi 52.51 83 *e*P P 17 56 47.0 -3.5
RES Resolute Bay 54.23 342 *e*P **P** **17 57 02.8 +0.4**
comp=Z,26nm,1.3s
RES Resolute Bay 54.23 342 *e*P **P** **17 57 02.8 +0.4**
comp=Z,26nm,1.3s
BHPL Bhopal 55.75 89 *e*P **P** **17 57 12.8 -1.5**
POO Poona 55.96 96 *e*P P 17 57 12.0 -3.8
KAD Karad 56.98 96 *ex* P 17 57 26.9 +3.9
MOY Mondy 56.99 48 *e*P **P** **17 57 24.2 +1.4**
MOY pmax pmax
comp=Z,43nm,3.1s
MOY Mondy 56.99 48 *e*P **P** **17 57 24.2 +1.4**
comp=Z,43nm,3.1s
PYUN Piuthan 57.07 80 *e*P **P** **17 57 23.9 +0.1**
comp=Z,598nm,1.3s
DANN Dangsing 57.49 80 *e*P **P** **17 57 26.9 0.0**
TIXI Tiksi 57.62 20 PFAKE 17 57 40.0 +13
TIXI LR LR
comp=Z,2μm,21.0s
JBP Jabalpur 57.69 87⇑ *i*P **P** **17 57 27.0 -0.9**
JBP *ex* x 18 05 21.8
KOLN Koldanda 57.70 80 *e*P **P** **17 57 28.0 -0.3**
comp=Z,74nm,1.0s
TLY Talaya 58.43 47 *e*P **P** **17 57 33.1 +0.3**
TLY *e* 17 59 42.6
TLY *e*PPP PPP 18 01 02.1
TLY *e*S **S** **18 05 34.0 -1.1**
TLY *e*SS **SS** **18 09 22.2 -4.5**
TLY *e*SSS SSS 18 11 54.9
TLY pmax pmax
comp=Z,35nm,1.0s
TLY MLR MLR
comp=Z,3μm,15.0s
TLY Talaya 58.43 47 *e*P **P** **17 57 33.7 +0.9**
TLY LR LR
comp=Z,4μm,20.0s
TLY Talaya 58.43 47 P **P** **17 57 34.9 +2.1**
SNR=10
TLY Talaya 58.43 47 P **P** **17 57 34.4 +1.6**
comp=Z,196nm,0.9s,SNR=12
TLY Talaya 58.43 47 *e*P **P** **17 57 33.1 +0.3**
comp=Z,35nm,1.0s
IRK Irkutsk 58.49 46 *e*P **P** **17 57 33.2 0.0**
IRK *e* 17 59 44.4
IRK *e* 18 01 05.6
IRK *e*S **S** **18 05 38.3 +2.5**
IRK pmax pmax
comp=Z,88nm,2.7s
ZAK Zakamensk 58.88 48 *e*P **P** **17 57 37.3 +1.3**
ZAK pmax pmax
comp=Z,11nm,1.5s
LSZ Lusaka 58.89 163 *e*P **P** **17 57 36.4 +0.1**
LSZ Lusaka 58.89 163 *e*P **P** **17 57 36.6 +0.2**
comp=Z,12nm,0.8s
LSZ LR LR
comp=Z,2μm,19.0s
DMN Daman 58.89 80 *e*P **P** **17 57 36.5 -0.1**
comp=Z,276nm,1.2s
KKN Kakani 58.92 79 *e*P **P** **17 57 36.2 -0.6**
comp=Z,74nm,0.8s
PKIN Phulchoki 59.12 79 *e*P **P** **17 57 37.8 -0.5**
comp=Z,46nm,0.9s
PKI Pulchoki 59.14 79 *e*P **P** **17 57 37.9 -0.5**
comp=Z,247nm,1.3s
GUN Gumba 59.29 79 *e*P **P** **17 57 39.2 -0.3**
comp=Z,289nm,1.0s
LBNH Lisbon 59.40 304 PFAKE 17 57 50.0 +10
LBNH LR LR
comp=Z,3μm,20.0s
HYB Hyderabad 60.14 93 *e*P **P** **17 57 43.8 -1.2**
MDV Middlebury 60.29 304 *e*P **P** **17 57 46.0 +0.3**
comp=Z,9μm,1.0s
MSEY Mahe Island 60.33 130 *e*P **P** **17 57 46.3 0.0**
comp=Z,45nm,1.4s
MSEY LR LR
comp=Z,689nm,20.0s
MSEY Mahe Island 60.33 130 P **P** **17 57 47.1 +0.8**
SNR=6.0
RAMN Ramite 60.36 79 *e*P **P** **17 57 46.1 -0.6**
comp=Z,127nm,0.8s
SHEL Horse Pasture 60.63 201 PFAKE 17 58 00.0 +12
SHEL LR LR
comp=Z,2μm,21.0s
LONY Lake Ozonia 60.82 305 PFAKE 17 58 00.0 +11
LONY LR LR
comp=Z,3μm,19.0s
BBSR BB Station 60.92 289 PFAKE 17 58 00.0 +10
BBSR LR LR
comp=Z,2μm,20.0s
ACCN Adirondack Com 60.92 304 *e*P **P** **17 57 50.6 +0.6**
comp=Z,55nm,1.3s
TAPN Taplejung 60.94 78 *e*P **P** **17 57 50.4 -0.3**
comp=Z,228nm,1.2s
NCB Newcomb 60.95 304 PFAKE 17 58 00.0 +10
NCB LR LR
comp=Z,2μm,22.0s
ODAN Odare 60.99 79 *e*P **P** **17 57 50.3 -0.7**
comp=Z,132nm,1.0s
TSUM Tsumeb 61.33 176 *e*P **P** **17 57 50.6 -2.4**
TSUM Tsumeb 61.33 176 *e*P **P** **17 57 54.6 +1.6**
comp=Z,40nm,1.7s
TSUM LR LR
comp=Z,3μm,20.0s
BOK Bokaro 61.68 83 *e*P **P** **17 57 54.3 -1.2**
BOK AMB AMB 17 57 55.4
comp=Z,69nm,0.8s
SONM Songino Array 61.95 50 P **P** **17 57 57.9 +0.8**
SONM S **S** **18 06 19.2 -1.3**
SONM ⇑*e* 18 27 10.7
SONM Songino Array 61.95 50 P **P** **17 57 57.9 +0.8**
comp=Z,18nm,0.9s,baz=286,slow=8.0,SNR=137
SONM S **S** **18 06 19.2 -1.3**
comp=Z,0.1nm,0.4s,baz=66,slow=9.8,SNR=1.1
SONM LR LR 18 27 02.4
comp=Z,10μm,20.0s,baz=303,slow=38
SONM PKP2bc 18 27 10.7
comp=Z,1.1nm,1.2s,baz=151,slow=3.4,SNR=4.1
LSA Lhasa 62.07 74 P **P** **17 57 59.1 +0.5**
LSA pP **pP** **17 58 07.3 +3.7**
LSA sP **sP** **17 58 09.2 +0.9**
LSA SS **SS** **18 10 24.1 -1.4**
LSA LR LR
comp=E,2μm,21.0s
LSA LR LR
comp=Z,3μm,20.3s
ULN Ulaanbaatar 62.31 49⇓ *i*P **P** **17 58 00.1 +0.6**
comp=Z,47nm,1.3s
ULN LR LR
comp=Z,8μm,19.0s
ULN Ulaanbaatar 62.31 49 P **P** **17 58 00.8 +1.3**
SNR=22
CPNY Central Park 62.50 301 *e*P **P** **17 58 00.6 -0.1**
comp=Z,67nm,1.2s
GTA Gaotai 62.56 61⇓P **P** **17 58 02.2 +0.9**
GTA pP **pP** **17 58 06.8 +0.4**
GTA sP **sP** **17 58 09.2 +0.9**
GTA PP **PP** **18 00 22.3 +3.7**
GTA S **S** **18 06 30.8 +2.3**
GTA sS **sS** **18 06 38.7 +1.8**
GTA SS **SS** **18 10 37.2 +5.1**
GTA pmax pmax
comp=Z,18nm,1.5s
GTA pmax pmax
comp=Z,370nm,5.7s
GTA LR LR
comp=N,2μm,19.5s
GTA LR LR
comp=E,3μm,19.0s
GTA LR LR
comp=Z,4μm,17.1s
BINY Binghamton 62.99 303 *e*P **P** **17 58 03.7 -0.3**
comp=Z,93nm,1.6s
BINY LR LR
comp=Z,3μm,21.0s
CIT Chita 63.44 43 *e*P **P** **17 58 07.5 +0.7**
CIT *e* 17 58 11.9
CIT pmax pmax
comp=Z,82nm,2.0s
YAK Yakutsk 64.08 28*d i*P **P** **17 58 10.7 -0.1**
YAK *e* 17 58 42.8
YAK *e* 18 00 33.3
YAK *e*PPP PPP 18 02 00.4
YAK *e*S **S** **18 06 41.6 -4.8**
YAK *e**SS sS 18 07 17.5 +23
YAK *e* 18 07 55.3
YAK pmax pmax
comp=Z,80nm,1.1s
YAK pmax pmax
comp=N,49nm,1.5s
YAK pmax pmax
comp=E,39nm,1.2s
YAK pmax pmax
comp=Z,53nm,2.9s
YAK pmax pmax
comp=N,96nm,3.2s
YAK pmax pmax
comp=E,55nm,3.6s
YAK smax smax
comp=N,91nm,3.2s
YAK smax smax
comp=E,291nm,4.0s
YAK Yakutsk 64.08 28⇓ *i*P **P** **17 58 10.3 -0.5**
comp=E,114nm,1.1s
YAK LR LR
comp=Z,3μm,20.0s
CAL Calcutta 64.23 82 *ex* **P** **17 58 09.5 -2.8**
CAL *ex* **S** **18 06 52.8 +3.4**
SHL Shillong 65.01 77 *e*P **P** **17 58 16.5 -1.2**
SSPA Standing Stone 65.06 303 *e*P **P** **17 58 17.4 -0.1**
comp=Z,88nm,1.2s

ERPA Erie 65.49 305 PFAKE 17 58 30.0 +10
ERPA LR LR
comp=Z,2μm,20.0s
RCBR Riachuelo 65.62 236 eP P 17 58 22.0 +0.5
comp=Z,89nm,1.3s
RCBR LR LR
comp=Z,2μm,20.0s
CLNS Chul'man 65.70 34 eP P 17 58 21.2 -0.3
CLNS e*PP pP 17 58 30.8 +4.2
CLNS e 17 58 55.7
CLNS eS S 18 07 02.9 -3.8
CLNS pmax pmax
comp=Z,36nm,1.2s
CLNS pmax pmax
comp=E,10.0nm,1.3s
CLNS pmax pmax
comp=N,16nm,1.4s
CLNS smax smax
comp=E,292nm,12.6s
CLNS smax smax
comp=N,93nm,14.8s
CLNS MLR MLR
comp=N,6μm,16.0s
CLNS MLR MLR
comp=Z,10μm,17.0s
CLNS MLR MLR
comp=E,5μm,13.0s
ALLY Alegheny Colle 65.86 305 eP P 17 58 22.0 -0.8
comp=E,72nm,1.0s
MSNA Messina 66.13 163 eP P 17 58 24.4 -0.1
MSNA AMB AMB 17 58 25.9
comp=Z,35nm,2.8s
CBN Corbin 66.14 301 PFAKE 17 58 40.0 +15
CBN LR LR
comp=Z,3μm,22.0s
GLMI Grayling 66.61 310 PFAKE 17 58 40.0 +12
GLMI LR LR
comp=Z,2μm,21.0s
JSRW J. Sargeant Re 66.76 300 eP P 17 58 28.8 +0.3
IMP Imphal 66.96 77 eP P 17 58 29.0 -1.1
LZH Lanzhou 67.08 62 ⇓P P 17 58 32.2 +1.4
LZH pP pP 17 58 37.0 +1.0
LZH sP sP 17 58 39.3 +1.4
LZH PP PP 18 01 01.5 +3.2
LZH S S 18 07 23.3 -1.0
LZH sS sS 18 07 31.5 -1.2
LZH pmax pmax
comp=Z,74nm,1.3s
LZH pmax pmax
comp=Z,420nm,8.6s
LZH LR LR
comp=N,2μm,13.1s
LZH LR LR
comp=E,2μm,15.5s
LZH LR LR
comp=Z,3μm,16.0s
YKW3 Yellowknife Ar 67.51 337 eP P 17 58 32.7 -0.2
comp=Z,2.6nm,1.5s
ANWB Willy Bob 67.53 274 PFAKE 17 58 40.0 +6.3
ANWB LR LR
comp=Z,561nm,21.0s
YKA Yellowknife Ar 67.56 337 P P 17 58 33.2 0.0
YKA ⇑e 18 26 57.5
YKA Yellowknife Ar 67.56 337 P P 17 58 33.2 0.0
comp=Z,26nm,0.9s,baz=42,slow=6.3,SNR=97
YKA PKP2bc 18 26 57.5
comp=Z,0.5nm,0.9s,baz=232,slow=2.8,SNR=6.7
AAM Ann Arbor 67.58 307 PFAKE 17 58 40.0 +6.3
AAM LR LR
comp=Z,3μm,20.0s
LBTB Lobatse 67.92 168 eP P 17 58 36.0 0.0
LBTB AMB AMB 17 58 42.5
comp=Z,60nm,4.9s
LBTB Lobatse 67.92 168 eP P 17 58 35.9 -0.1
comp=Z,44nm,1.1s
BILL Bilibino 68.08 11⇓iP P 17 58 36.8 +0.4
BILL e 17 58 55.7
BILL eS S 18 07 37.3 +2.4
BILL pmax pmax
comp=Z,44nm,1.2s
BILL MLR MLR
comp=Z,2μm,17.0s
BILL Bilibino 68.08 11⇓iP P 17 58 36.8 +0.4
comp=Z,58nm,1.1s
BILL LR LR
comp=Z,2μm,19.0s
CNNC Cliffs of the 68.23 298 PFAKE 17 58 50.0 +12
CNNC LR LR
comp=Z,2μm,19.0s
BTO Baotou 68.25 55 eP P 17 58 38.3 +0.2
PALK Pallekele 68.34 100 eP P 17 58 38.4 -0.5
comp=Z,31nm,1.0s
PALK Pallekele 68.34 100 P P 17 58 39.2 +0.3
SNR=8.3
PALK Pallekele 68.34 100 P P 17 58 38.2 -0.7
comp=Z,128nm,1.4s,SNR=5.0
COWI Conover 68.34 313 eP P 17 58 38.5 0.0
comp=Z,70nm,1.2s
COWI LR LR
comp=Z,3μm,22.0s
EYMN Ely 68.42 316 eP P 17 58 38.1 -0.8
comp=Z,45nm,1.0s
EYMN LR LR
comp=Z,3μm,19.0s
ACSO Alum Creek Sta 68.43 305 eP P 17 58 38.9 -0.2
comp=Z,155nm,1.2s
ACSO LR LR
comp=Z,3μm,22.0s
BLA Blacksburg 68.67 301 eP P 17 58 40.6 -0.1
BLA pmax pmax
comp=Z,27nm,0.9s
BLA MLR MLR
comp=Z,2μm,19.0s
BLA Blacksburg 68.67 301 eP P 17 58 40.6 -0.1
comp=Z,27nm,0.9s
BLA LR LR
comp=Z,2μm,19.0s
BBGH Gun Hill 68.75 269 PFAKE 17 58 50.0 +8.6
BBGH LR LR
comp=Z,1μm,21.0s
FFC Flin Flon 68.81 326 i P P 17 58 41.8 +0.6
FFC Flin Flon 68.81 326⇓iP P 17 58 41.3 0.0
comp=Z,49nm,1.0s
FFC LR LR
comp=Z,4μm,21.0s
FFC Flin Flon 68.81 326 P P 17 58 41.2 0.0
comp=Z,250nm,0.9s,SNR=24
FDF Fort de France 68.91 271 PFAKE 17 58 50.0 +7.5
FDF LR LR
comp=Z,848nm,20.0s
KSR Koster 68.95 167 eP P 17 58 38.9 -3.6
KSR AMB AMB 17 58 42.3
comp=Z,22nm,4.7s
HHC Hu-ho-hao-te 69.03 54 eP P 17 58 41.8 -1.2
HHC pP pP 17 58 46.5 -1.6
HHC sP sP 17 58 48.8 -1.2
HHC PP PP 18 01 16.7 +1.7
HHC S S 18 07 42.8 -4.6
HHC SS SS 18 12 10.0 -2.4
HHC pmax pmax
comp=Z,40nm,1.3s
HHC pmax pmax
comp=Z,570nm,5.5s
HHC LR LR
comp=N,8μm,17.9s
HHC LR LR
comp=E,10μm,18.6s
HHC LR LR
comp=Z,17μm,17.7s
SLR Silverton 69.08 166 eP P 17 58 43.9 +0.6
SLR AMB AMB 17 58 50.1
comp=Z,78nm,4.8s
ULM Lac du Bonnet 69.11 320 P P 17 58 42.8 -0.4
ULM Lac du Bonnet 69.11 320 P P 17 58 42.8 -0.4
comp=Z,17nm,0.5s,baz=54,slow=5.9,SNR=24
ULM LR LR 18 27 28.7
comp=Z,3μm,20.5s,baz=58,slow=35
ERPM east rand prop 69.67 166 eP P 17 58 46.1 -0.8
ERPM AMB AMB 17 58 51.3
comp=Z,47nm,3.4s
COLD Coldfoot 70.08 353 eP P 17 58 49.5 +0.7
comp=Z,49nm,1.3s
SEY Seymchan 70.08 19⇓iP P 17 58 50.2 +1.3
PRYS Parys 70.08 167 eP P 17 58 48.9 -0.5
PRYS AMB AMB 17 58 54.9
comp=Z,36nm,3.6s

CD2 Chengdu 70.14 66 ⇑P P 17 58 51.2 +1.3
CD2 pP pP 17 58 55.9 +0.9
CD2 sP sP 17 58 58.2 +1.3
CD2 PcP PcP 17 59 13.6 +1.8
CD2 PP PP 18 01 27.9 +3.1
CD2 S S 18 08 00.1 -0.5
CD2 sS sS 18 08 07.6 -1.5
CD2 SKS SKSac 18 08 47.7 -3.1
CD2 SS SS 18 12 30.6 +0.7
CD2 pmax pmax
comp=Z,60nm,1.0s
CD2 pmax pmax
comp=Z,380nm,5.2s
CD2 LR LR
comp=N,2μm,17.1s
CD2 LR LR
comp=E,3μm,18.1s
CD2 LR LR
comp=Z,3μm,16.2s
AGMN Agassiz Nation 70.41 318 eP P 17 58 50.6 -0.5
comp=Z,20nm,0.9s
AGMN LR LR
comp=Z,3μm,20.0s
SJG San Juan 70.47 277 PFAKE 17 59 00.0 +8.0
SJG LR LR
comp=Z,1μm,20.0s
KMSC Kings Mountain 70.52 300 ⇑P P 17 58 51.9 -0.2
baz=70
SFIN Scholer Farm 70.80 307 ⇓P P 17 58 52.6 -1.1
baz=71
OBIP Obispado Ponce 70.85 277 eP P 17 58 53.7 -0.6
SPMN St. Paul 70.87 314 ⇓P P 17 58 53.8 -0.3
baz=71
GRGR Grenville 70.96 269 PFAKE 17 59 10.0 +15
GRGR LR LR
comp=Z,688nm,19.0s
JSC Jenkinsville 71.01 299 eP P 17 58 53.7 -1.4
JSC Jenkinsville 71.01 299 eP P 17 58 53.7 -1.4
NHSC New Hope 71.03 298 eP P 17 58 54.5 -0.8
comp=Z,358nm,1.3s
NHSC LR LR
comp=Z,2μm,20.0s
TZTN Tazewell 71.06 302 eP P 17 58 55.2 -0.1
comp=Z,34nm,1.1s
BLO Bloomington 71.22 306 eP P 17 58 55.5 -0.8
BLO pmax pmax
comp=Z,47nm,1.0s
BLO Bloomington 71.22 306 eP P 17 58 55.5 -0.8
comp=Z,47nm,1.0s
EGAK Eagle 71.40 349 PFAKE 17 59 10.0 +13
EGAK LR LR
comp=Z,887nm,21.0s
BOSA Boshof 71.41 169 eP P 17 58 56.4 -1.0
BOSA AMB AMB 17 58 59.3
comp=Z,37nm,0.8s
BOSA Boshof 71.41 169 eP P 17 58 56.5 -0.9
comp=Z,39nm,0.8s
BOSA Boshof 71.41 169 P P 17 58 57.1 -0.4
comp=Z,32nm,0.7s,baz=356,slow=6.2,SNR=52
BOSA LR LR 18 33 52.0
comp=Z,2μm,18.9s,baz=357,slow=39
SEK Senekal 71.49 167 eP P 17 58 57.8 -0.2
SEK AMB AMB 17 59 04.3
comp=Z,48nm,1.4s
XAN Xi'an 71.62 61 P P 17 58 59.4 +0.5
XAN sP sP 17 59 06.4 +0.5
XAN PcP PcP 17 59 18.3 +0.2
XAN PP PP 18 01 39.4 +1.9
XAN S S 18 08 16.4 -1.3
XAN ScS SKSac 18 09 01.0 -0.9
XAN SS SS 18 12 52.7 +0.2
XAN pmax pmax
comp=Z,22nm,1.5s
XAN pmax pmax
comp=Z,85nm,7.1s
XAN LR LR
comp=N,1μm,16.7s
XAN LR LR
comp=E,610nm,15.6s
XAN LR LR
comp=Z,780nm,18.6s
WCI Wyandotte Cave 71.68 305 eP P 17 58 58.8 -0.4
WCI pmax pmax
comp=Z,138nm,1.4s
WCI Wyandotte Cave 71.68 305 eP P 17 58 58.8 -0.4
comp=Z,138nm,1.4s
TKL Tuckaleechee C 71.75 302 eP P 17 58 59.0 -0.6
HDIL Hopedale 71.97 309 eP P 17 59 00.1 -0.6
comp=Z,36nm,0.8s
HDIL LR LR
comp=Z,2μm,20.0s
GRTK Grand Turk 71.97 283 PFAKE 17 59 10.0 +9.0
GRTK LR LR
comp=Z,1μm,20.0s
ILAR Eielson Array 72.14 351 P P 17 59 01.6 +0.2
ILAR Eielson Array 72.14 351 P P 17 59 01.6 +0.2
comp=Z,15nm,1.0s,baz=4.7,slow=4.9,SNR=70
ILAR LR LR 18 33 21.2
comp=Z,758nm,20.5s,baz=179,slow=38
COLA College 72.15 352 eP P 17 59 02.6 +1.2
COLA pmax pmax
comp=Z,22nm,1.0s
COLA MLR MLR
comp=Z,852nm,20.0s
COLA College 72.15 352 eP P 17 59 02.6 +1.2
comp=Z,22nm,1.0s
COLA LR LR
comp=Z,852nm,20.0s
BJI Beijing 72.26 52 P P 17 59 03.1 +0.6
BJI PP PP 18 01 45.2 +2.5
BJI S S 18 08 22.9 -1.9
BJI pmax pmax
comp=Z,39nm,1.5s
BJI LR LR
comp=N,6μm,16.0s
BJI LR LR
comp=E,5μm,16.0s
BJI LR LR
comp=Z,5μm,20.7s
BJT Baijiatuau 72.27 52 PFAKE 17 59 10.0 +7.4
BJT LR LR
comp=Z,7μm,20.0s
CPCT Cooper Cave 72.36 302 eP P 17 59 02.9 -0.3
TNA Tin City 72.45 1⇓iP P 17 59 05.0 +1.8
comp=Z,78nm,1.2s
MDND Maddock 72.55 319 ⇓P P 17 59 03.7 -0.5
baz=72
USIN University of 72.68 306 eP P 17 59 04.2 -0.9
comp=Z,69nm,0.9s
DOT Dot Lake 72.88 350⇓iP P 17 59 07.0 +1.2
comp=Z,61nm,1.5s
DGAR Diego Garcia 72.95 117 PFAKE 17 59 20.0 +13
DGAR LR LR
comp=Z,545nm,19.0s
KMI Kunming 73.03 71 P P 17 59 07.5 -0.1
KMI pP pP 17 59 11.9 -0.9
KMI sP sP 17 59 13.8 -0.9
KMI PP PP 18 01 51.2 +1.2
KMI S S 18 08 31.0 -3.5
KMI SKS SKSac 18 09 08.8 -4.3
KMI pmax pmax
comp=Z,26nm,1.8s
KMI pmax pmax
comp=Z,320nm,6.0s
KMI LR LR
comp=N,1μm,19.2s
KMI LR LR
comp=E,1μm,18.4s
KMI LR LR
comp=Z,2μm,19.9s
SCIA State Center 73.30 312 eP P 17 59 07.8 -0.9
comp=Z,44nm,1.1s
SCIA LR LR
comp=Z,2μm,20.0s
DGPR DIGLIPUR 73.49 87 eP P 17 59 08.6 -1.6
DGPR AMB AMB 17 59 11.5
comp=Z,29nm,1.2s
MENT Mentasta 73.51 349 eP P 17 59 10.8 +1.2
SDDR Presa de Saban 73.68 281⇓eP P 17 59 11.7 +0.4
comp=Z,139nm,1.3s
SDDR LR LR
comp=Z,2μm,19.0s
PAX Paxson 73.71 350 eP P 17 59 11.1 +0.2
PAX pmax pmax
comp=Z,46nm,1.3s
PAX Paxson 73.71 350 eP P 17 59 11.1 +0.2

comp=Z,46nm,1.3s
SLM Saint Louis 73.78 308 eP P 17 59 10.8 -0.7
SLM Saint Louis 73.78 308 eP P 17 59 10.8 -0.7
SIUC Southern Illin 73.78 306 eP P 17 59 10.2 -1.3
comp=Z,56nm,1.1s
TRF Thorofare Moun 73.79 352⇓eP P 17 59 10.5 -0.9
comp=Z,35nm,0.8s
A24A Westby 73.83 322 ⇓P P 17 59 12.7 +0.9
baz=74
ECSD EROS Data Cent 73.89 315⇓iP P 17 59 11.7 -0.4
comp=Z,41nm,1.0s
ECSD LR LR
comp=Z,3μm,19.0s
KLR Kul'dur 73.97 37 eP P 17 59 09.4 -3.0
KLR eS S 18 08 43.5 -0.3
KLR eSS SS 18 13 33.0 +5.7
KLR pmax pmax
comp=E,50nm,1.8s
KLR pmax pmax
comp=Z,150nm,1.8s
KLR MLR MLR
comp=E,5μm,14.5s
KLR MLR MLR
comp=Z,16μm,14.5s
WVT Waverly 73.97 304 eP P 17 59 10.8 -1.9
WVT pmax pmax
comp=Z,79nm,1.3s
WVT Waverly 73.97 304 eP P 17 59 10.8 -1.9
comp=Z,79nm,1.3s
GAMB Gambell 74.17 2⇓iP P 17 59 13.8 +0.4
comp=Z,30nm,1.2s
A23A Redstone 74.20 323 ⇑P P 17 59 14.4 +0.6
baz=74
DGMT Dagmar 74.25 322 eP P 17 59 15.3 +1.2
comp=Z,115nm,1.2s
DGMT LR LR
comp=Z,2μm,19.0s
DGMT Dagmar 74.25 322 ⇑P P 17 59 15.2 +1.0
baz=74
CHTO Chiang Mai 74.31 79⇓iP P 17 59 14.0 -0.9
CHTO pmax pmax
comp=Z,67nm,1.4s
CHTO MLR MLR
comp=Z,1μm,20.0s
CHTO Chiang Mai 74.31 79⇓iP P 17 59 14.0 -0.9
comp=Z,67nm,1.4s
CHTO LR LR
comp=Z,1μm,20.0s
CHTO Chiang Mai 74.31 79 P P 17 59 14.8 -0.1
SNR=15
TIGA Tifton 74.32 298 ⇑P P 17 59 16.5 +1.7
baz=74
CM31 Chiang Mai Arr 74.53 79 eP P 17 59 15.5 -0.7
comp=Z,12nm,0.8s
CMAR Chiang Mai Arr 74.53 79 P P 17 59 15.7 -0.5
CMAR S S 18 08 50.9 -0.2
CMAR Chiang Mai Arr 74.53 79 P P 17 59 15.7 -0.5
comp=Z,8.8nm,0.7s,baz=305,slow=7.2,SNR=48
CMAR S S 18 08 50.9 -0.2
comp=Z,0.3nm,0.8s,baz=225,slow=30,SNR=2.9
CMAR LR LR 18 38 51.3
comp=Z,1μm,20.8s,baz=142,slow=41
BRSD Miller 74.61 317 ⇓P P 17 59 15.9 -0.4
baz=74
B23A Brockton 74.61 323 ⇓P P 17 59 17.2 +0.9
baz=74
A22A Carney Farms, 74.64 323 ⇓P P 17 59 16.9 +0.5
baz=74,SNR=26
SUR Sutherland 74.64 174 P P 17 59 17.2 +0.6
SUR LR LR
comp=Z,3μm,19.0s
CN2 Changchun 74.83 44 eP P 17 59 18.3 +0.8
CN2 epP pP 17 59 23.1 +0.4
CN2 esP sP 17 59 25.3 +0.7
CN2 eS S 18 08 56.1 +2.4
CN2 SS SS 18 13 41.9 +1.2
CN2 pmax pmax
comp=Z,70nm,1.0s
CN2 LR LR
comp=N,5μm,15.0s
CN2 LR LR
comp=E,4μm,15.0s
CN2 LR LR
comp=Z,8μm,17.0s
PLAL Pickwick Lake 74.88 304⇓iP P 17 59 23.6 +5.6
comp=Z,112nm,1.3s
PLAL LR LR
comp=Z,3μm,20.0s
GYA Guiyang 74.92 68⇑iP P 17 59 18.2 -0.3
GYA pmax pmax
comp=Z,30nm,1.0s
C24A Savage 75.04 322 ⇓P P 17 59 19.7 +0.9
baz=75
A21A Bergtoll Ranch 75.08 324 ⇓P P 17 59 18.9 -0.1
baz=75,SNR=11
DLBC Dease Lake 75.11 341⇓eP P 17 59 20.4 +1.4
B22A Reddig Ranch S 75.19 323 ⇓P P 17 59 20.3 +0.6
baz=75,SNR=17
SML Sawmill 75.19 351⇓iP P 17 59 19.6 +0.2
SML pmax pmax
comp=Z,19nm,1.0s
SML Sawmill 75.19 351⇓iP P 17 59 19.6 +0.2
comp=Z,19nm,1.0s
C23A Lambert 75.19 322 ⇑P P 17 59 20.4 +0.8
baz=75
D24A Glendive 75.30 321 ⇑P P 17 59 21.0 +0.7
baz=75
SKAG Skagway 75.36 344 eP P 17 59 20.7 +0.4
comp=Z,80nm,1.3s
LRAL Lakeview Retre 75.48 301 eP P 17 59 21.0 -0.5
comp=Z,26nm,0.8s
LRAL LR LR
comp=Z,1μm,21.0s
PMR Palmer 75.49 352⇓eP P 17 59 21.2 +0.2
PMR pmax pmax
comp=Z,50nm,1.2s
PMR Palmer 75.49 352⇓eP P 17 59 21.2 +0.2
comp=Z,50nm,1.2s
BMRM Bremner River 75.53 349⇓eP P 17 59 22.1 +0.8
comp=Z,187nm,1.3s
DIV Divide 75.53 350 eP P 17 59 22.2 +0.8
comp=Z,30nm,0.9s
B21A Ellsworth Farm 75.54 324 ⇑P P 17 59 21.7 0.0
baz=75
C22A Vida 75.55 323 ⇓P P 17 59 22.0 +0.3
baz=75,SNR=16
A20A Cobblestone Ra 75.60 324 ⇑P P 17 59 22.1 +0.1
baz=75,SNR=15
D23A Lindsay 75.67 322 ⇓P P 17 59 23.2 +0.8
baz=75
E24A Baker 75.70 321 ⇓P P 17 59 23.3 +0.6
baz=75
GTBY Guantanamo Bay 75.85 284 PFAKE 17 59 30.0 +6.2
GTBY LR LR
comp=Z,1μm,20.0s
A19A Klindworth Far 75.91 325 ⇓P P 17 59 24.3 +0.5
baz=76,SNR=24
PNL Peninsula 75.94 346 eP P 17 59 24.6 +0.9
comp=Z,81nm,0.9s
B20A Solberg Farm, 75.97 324 ⇓P P 17 59 24.8 +0.7
baz=76,SNR=20
OXF Oxford 76.01 304 eP P 17 59 23.2 -1.3
OXF pmax pmax
comp=Z,150nm,1.2s
OXF MLR MLR
comp=Z,2μm,21.0s
OXF Oxford 76.01 304 eP P 17 59 23.2 -1.3
comp=Z,150nm,1.2s
OXF LR LR
comp=Z,2μm,21.0s
C21A Desert Coulee 76.03 323 ⇑P P 17 59 25.0 +0.6
baz=76,SNR=14
HBAR Harrisburg 76.08 305 eP P 17 59 24.8 0.0
D22A Cohagen 76.13 322 ⇑P P 17 59 25.9 +0.9
baz=76,SNR=21
DL2 Dalian 76.16 50 P P 17 59 25.4 +0.2
DL2 pmax pmax
comp=Z,10.0nm,1.3s
DL2 pmax pmax
comp=Z,130nm,6.1s
DL2 LR LR
comp=N,3μm,15.6s
DL2 LR LR
comp=E,2μm,15.6s
DL2 LR LR
comp=Z,4μm,17.8s
E23A Ismay 76.21 321 ⇑P P 17 59 26.0 +0.4

	baz=76						
F24A	**Ekalaka**	**76.30**	**321**	⇓P	**P**	**17 59 26.5**	**+0.5**
	baz=76						
BGNE	**Belgrade**	**76.33**	**314**	⇓P	**P**	**17 59 26.0**	**-0.3**
	baz=76						
MDJ	**Mudanjiang**	**76.33**	**41**	P	**P**	**17 59 25.3**	**-0.8**
MDJ				pP	**pP**	**17 59 28.7**	**-2.6**
MDJ				PP	**PP**	**18 02 14.8**	**-2.2**
MDJ				S	**S**	**18 09 09.7**	**-0.6**
MDJ				pmax	pmax		
	comp=Z,15nm,2.1s						
MDJ				pmax	pmax		
	comp=Z,210nm,10.2s						
MDJ				LR	LR		
	comp=N,940nm,31.1s						
MDJ				LR	LR		
	comp=E,1µm,28.4s						
MDJ				LR	LR		
	comp=Z,2µm,28.4s						
B19A	**Brinkman Farms**	**76.36**	**325**	⇑P	**P**	**17 59 27.0**	**+0.6**
	baz=76,SNR=13						
A18A	**Metzger Ranch,**	**76.39**	**325**	⇑P	**P**	**17 59 27.0**	**+0.6**
	baz=76,SNR=22						
C20A	**Veseth Ranch,**	**76.52**	**324**	⇑P	**P**	**17 59 27.9**	**+0.7**
	baz=76,SNR=54						
E22A	**Miles City**	**76.55**	**322**	⇑P	**P**	**17 59 27.7**	**+0.2**
	baz=76						
D21A	**La Casta Ranch**	**76.56**	**323**	⇑P	**P**	**17 59 28.3**	**+0.8**
	baz=76						
G24A	**Alzada**	**76.66**	**320**	⇑P	**P**	**17 59 28.1**	**0.0**
	baz=76						
A17A	**Triple J Farms**	**76.72**	**326**	⇓P	**P**	**17 59 28.8**	**+0.4**
	baz=76,SNR=7.0						
B18A	**Beardsley Farm**	**76.76**	**325**	⇑P	**P**	**17 59 29.3**	**+0.7**
	baz=76,SNR=24						
BRAL	**Brewton**	**76.85**	**300**	PFAKE		17 59 40.0	+11
BRAL				LR	LR		
	comp=Z,2µm,21.0s						
C19A	**Slack Wire Ran**	**76.96**	**324**	⇓P	**P**	**17 59 30.5**	**+0.8**
	baz=77,SNR=28						
SEW	**Seward**	**76.98**	**351**	*e*P	**P**	**17 59 29.7**	**+0.3**
	comp=Z,38nm,1.1s						
E21A	**Keefer Ranch,**	**76.99**	**322**	⇓P	**P**	**17 59 30.6**	**+0.7**
	baz=77						
EGMT	**Eagleton**	**77.04**	**325**	⇓*i*P	**P**	**17 59 30.9**	**+0.8**
	comp=Z,122nm,0.9s						
EGMT				LR	LR		
	comp=Z,2µm,20.0s						
EGMT	**Eagleton**	**77.04**	**325**	⇑P	**P**	**17 59 31.1**	**+0.9**
	baz=77,SNR=37						
D20A	**Manuel Ranch,**	**77.05**	**323**	⇓P	**P**	**17 59 31.0**	**+0.7**
	baz=77,SNR=20						
A16A	**West Butte Ran**	**77.09**	**326**	⇑P	**P**	**17 59 30.5**	**0.0**
	baz=77,SNR=16						
KSU1	**Kansas State U**	**77.11**	**311**	*e*P	**P**	**17 59 29.6**	**-1.1**
	comp=Z,89nm,1.0s						
KSU1				LR	LR		
	comp=Z,2µm,19.0s						
H24A	**Dirks Ranch, A**	**77.16**	**320**	⇑P	**P**	**17 59 30.5**	**-0.5**
	baz=77						
F22A	**Rosebud**	**77.19**	**321**	⇓P	**P**	**17 59 31.3**	**+0.2**
	baz=77						
G23A	**Biddle**	**77.22**	**321**	⇑P	**P**	**17 59 31.4**	**+0.1**
	baz=77,SNR=10						
B17A	**L&G Farms, Che**	**77.27**	**326**	⇑P	**P**	**17 59 32.0**	**+0.6**
	baz=77,SNR=21						
D19A	**Cripps Ranch,**	**77.32**	**324**	⇑P	**P**	**17 59 32.2**	**+0.4**
	baz=77,SNR=11						
RSSD	**Black Hills**	**77.37**	**319**	*e*P	**P**	**17 59 31.4**	**-0.9**
RSSD				pmax	pmax		
	comp=Z,24nm,1.3s						
RSSD	**Black Hills**	**77.37**	**319**	*e*P	**P**	**17 59 31.4**	**-0.9**
	comp=Z,24nm,1.3s						
WHN	**Wuhan**	**77.38**	**60**	⇑*i*P	**P**	**17 59 32.7**	**+0.4**
WHN				S	**S**	**18 09 18.0**	**-4.1**
WHN				pmax	pmax		
	comp=Z,230nm,1.9s						
WHN				pmax	pmax		
	comp=Z,530nm,9.5s						
WHN				LR	LR		
	comp=N,3µm,12.0s						
WHN				LR	LR		
	comp=E,970nm,12.8s						
WHN				LR	LR		
	comp=Z,4µm,15.5s						
WRAK	**Wrangell Islan**	**77.48**	**341**	PFAKE		17 59 40.0	+7.6
WRAK				LR	LR		
	comp=Z,1µm,19.0s						
E20A	**Meyer Farm, Mu**	**77.49**	**323**	⇑P	**P**	**17 59 33.3**	**+0.5**
	baz=77						
K27A	**Flueckinger Fa**	**77.52**	**317**	⇑P	**P**	**17 59 33.4**	**+0.3**
	baz=77						
A15A	**Johnson Ranch,**	**77.53**	**327**	⇓P	**P**	**17 59 33.0**	**0.0**
	baz=77,SNR=28						
B16A	**M & M Farms, S**	**77.56**	**326**	⇑P	**P**	**17 59 33.3**	**+0.2**
	baz=77						
F21A	**Absaloka Mine,**	**77.56**	**322**	⇑P	**P**	**17 59 33.1**	**0.0**
	baz=77						
UALR	**University of**	**77.62**	**306**	*e*P	**P**	**17 59 33.4**	**-0.1**
	comp=Z,39nm,1.2s						
G22A	**Birney**	**77.63**	**321**	⇓P	**P**	**17 59 33.6**	**0.0**
	baz=77						
D18A	**Linhart Farms,**	**77.70**	**324**	⇑P	**P**	**17 59 34.9**	**+1.0**
	baz=77,SNR=16						
H23A	**Clabaugh Cattl**	**77.70**	**320**	⇑P	**P**	**17 59 33.3**	**-0.7**
	baz=77						
C17A	**Wharram Farm,**	**77.77**	**325**	⇑P	**P**	**17 59 34.8**	**+0.5**
	baz=78,SNR=36						
USRK	**Ussuriysk Arra**	**77.80**	**40**	P	**P**	**17 59 34.3**	**-0.1**
	comp=Z,16nm,1.0s,baz=290,slow=4.3,SNR=44						
USRK				LR	LR	18 37 22.6	
	comp=Z,4µm,18.4s,baz=104,slow=38						
E19A	**Rath Farm, Rou**	**77.82**	**323**	⇑P	**P**	**17 59 35.2**	**+0.6**
	baz=78,SNR=11						
I24A	**Kuemmerle Ranc**	**77.85**	**319**	⇓P	**P**	**17 59 35.0**	**+0.1**
	baz=78						
WALA	**Waterton Lakes**	**77.94**	**328**	*e*P	**P**	**17 59 35.2**	**-0.1**
	comp=Z,1.6nm,1.1s						
B15A	**Bradely Ranch,**	**77.99**	**327**	⇑P	**P**	**17 59 35.2**	**-0.4**
	baz=78,SNR=12						
K26A	**Motz Farm, Whi**	**78.00**	**318**	⇑P	**P**	**17 59 35.6**	**-0.1**
	baz=78						
L27A	**T5 Ranch, Ells**	**78.01**	**317**	⇑P	**P**	**17 59 35.9**	**+0.1**
	baz=78						
F20A	**Billings**	**78.04**	**322**	⇑P	**P**	**17 59 36.2**	**+0.4**
	baz=78						
G21A	**Lodge Grass**	**78.05**	**322**	⇓P	**P**	**17 59 35.9**	**-0.1**
	baz=78						
C16A	**Fuhringer Ranc**	**78.05**	**326**	⇑P	**P**	**17 59 35.7**	**-0.2**
	baz=78,SNR=11						
D17A	**Six Diamond Ra**	**78.11**	**325**	⇑P	**P**	**17 59 36.8**	**+0.5**
	baz=78,SNR=19						
H22A	**Clearmont**	**78.12**	**321**	⇓P	**P**	**17 59 36.5**	**+0.2**
	baz=78,SNR=7.1						
I23A	**Meade Ranch, G**	**78.18**	**320**	⇓P	**P**	**17 59 36.6**	**-0.2**
	baz=78						
E18A	**Harlowton**	**78.23**	**324**	⇑P	**P**	**17 59 38.0**	**+1.0**
	baz=78,SNR=11						
VBMS	**Vicksburg**	**78.23**	**303**	PFAKE		17 59 50.0	+13
VBMS				LR	LR		
	comp=Z,3µm,20.0s						
B14A	**Marquette Ranc**	**78.24**	**327**	⇑P	**P**	**17 59 36.9**	**0.0**
	baz=78,SNR=23						
J24A	**Dixon Ranch, L**	**78.26**	**319**	⇓P	**P**	**17 59 37.5**	**+0.3**
	baz=78						
F19A	**Roth Farm, Mol**	**78.35**	**323**	⇑P	**P**	**17 59 38.4**	**+0.8**
	baz=78,SNR=25						
K25A	**Mack Ranch, Ha**	**78.41**	**318**	⇑P	**P**	**17 59 38.5**	**+0.5**
	baz=78						
H21A	**Big Horn, Sher**	**78.42**	**321**	⇓P	**P**	**17 59 38.0**	**0.0**
	baz=78						
C15A	**Salmond Ranch,**	**78.43**	**326**	⇑P	**P**	**17 59 37.6**	**-0.4**
	baz=78						
L26A	**Underwood Farm**	**78.44**	**317**	⇓P	**P**	**17 59 38.6**	**+0.5**
	baz=78						
M27A	**Reverse DX Ran**	**78.46**	**316**	⇓P	**P**	**17 59 38.8**	**+0.6**
	baz=78						
G20A	**Bridger**	**78.51**	**322**	⇓P	**P**	**17 59 38.9**	**+0.4**
	baz=78,SNR=17						
MIAR	**Mount Ida**	**78.51**	**306**	*e*P	**P**	**17 59 38.7**	**+0.2**
MIAR				pmax	pmax		
	comp=Z,54nm,1.2s						
MIAR	**Mount Ida**	**78.51**	**306**	*e*P	**P**	**17 59 38.7**	**+0.2**
	comp=Z,54nm,1.2s						
VLA	**Vladivostok**	**78.56**	**41**	⇓*i*P	**P**	**17 59 37.9**	**-0.7**
VLA				*e*		17 59 46.7	
VLA				S	**S**	**18 09 34.0**	**-0.4**
VLA				pmax	pmax		

	comp=Z,66nm,1.6s						
D16A	**Dana Ranch, Ca**	**78.57**	**325**	⇑P	**P**	**17 59 39.5**	**+0.6**
	baz=78,SNR=17						
J23A	**Dilts Ranch, B**	**78.64**	**319**	⇓P	**P**	**17 59 39.3**	**0.0**
	baz=78						
F18A	**Big Timber**	**78.66**	**323**	⇓P	**P**	**17 59 40.0**	**+0.7**
	baz=78,SNR=12						
MTDJ	**Mount Denham**	**78.69**	**284**	PFAKE		17 59 50.0	+10
MTDJ				LR	LR		
	comp=Z,1µm,20.0s						
OGNE	**Ogallala**	**78.70**	**316**	*e*P	**P**	**17 59 39.0**	**-0.6**
	comp=Z,61nm,1.2s						
OGNE				LR	LR		
	comp=Z,2µm,20.0s						
OGNE	**Ogallala**	**78.70**	**316**	⇓P	**P**	**17 59 39.8**	**+0.2**
	baz=78						
B13A	**Whitefish**	**78.71**	**328**	⇑P	**P**	**17 59 40.1**	**+0.6**
	baz=78,SNR=20						
A12A	**Yaak River Ran**	**78.72**	**329**	⇑P	**P**	**17 59 39.9**	**+0.4**
	baz=78,SNR=9.3						
E17A	**Martinsdale**	**78.72**	**324**	⇑P	**P**	**17 59 40.4**	**+0.6**
	baz=78,SNR=14						
GCMT	**Greycliff**	**78.72**	**323**	P	P	17 59 34.7	-5.0
	comp=Z,16nm,0.6s						
K24A	**Anderson Ranch**	**78.79**	**319**	⇓P	**P**	**17 59 40.2**	**0.0**
	baz=78						
L25A	**Engebretsen Ra**	**78.79**	**318**	⇑P	**P**	**17 59 40.2**	**+0.1**
	baz=78						
TUL1	**Tulsa**	**78.87**	**309**	⇑P	**P**	**17 59 40.0**	**-0.5**
	baz=79						
M26A	**McRoberts Ranc**	**78.89**	**317**	⇑P	**P**	**17 59 41.6**	**+0.9**
	baz=79						
YBMT	**Yellow Bay**	**78.93**	**327**	*e*P	**P**	**17 59 40.6**	**-0.2**
	comp=Z,27nm,1.2s						
HRY	**Holter Researc**	**78.94**	**325**	*e*P	**P**	**17 59 40.8**	**-0.1**
	comp=Z,29nm,1.0s						
BLMT	**Blacktail Moun**	**78.96**	**327**	*e*P	**P**	**17 59 41.3**	**+0.3**
	comp=Z,72nm,1.2s						
D15A	**Lincoln**	**78.97**	**326**	⇑P	**P**	**17 59 41.3**	**+0.2**
	baz=79,SNR=11						
H20A	**Greybull**	**78.97**	**322**	⇑P	**P**	**17 59 40.9**	**-0.1**
	baz=79						
E16A	**East Helena**	**79.02**	**325**	⇑P	**P**	**17 59 41.9**	**+0.6**
	baz=79,SNR=11						
G18A	**Lazy EL Ranch,**	**79.05**	**323**	⇑P	**P**	**17 59 41.7**	**+0.1**
	baz=79						
N27A	**Anderson Farm,**	**79.06**	**316**	⇓P	**P**	**17 59 41.9**	**+0.3**
	baz=79						
RLMT	**Red Lodge**	**79.06**	**323**	*e*P	**P**	**17 59 42.2**	**+0.5**
	comp=Z,56nm,1.4s						
RLMT				LR	LR		
	comp=Z,2µm,22.0s						
RLMT	**Red Lodge**	**79.06**	**323**	⇓P	**P**	**17 59 42.5**	**+0.9**
	baz=79,SNR=13						
B12A	**Libby**	**79.07**	**328**	⇑P	**P**	**17 59 41.9**	**+0.5**
	baz=79						
F17A	**Fitzpatrick Pl**	**79.07**	**324**	⇓P	**P**	**17 59 42.7**	**+1.1**
	baz=79,SNR=8.3						
J22A	**Midwest**	**79.08**	**320**	⇓P	**P**	**17 59 41.0**	**-0.7**
	baz=79,SNR=11						
JTMT	**Jette**	**79.14**	**327**	*e*P	**P**	**17 59 41.9**	**-0.1**
	comp=Z,44nm,1.2s						
I21A	**Big Trails, Te**	**79.16**	**321**	⇓P	**P**	**17 59 42.0**	**-0.2**
	baz=79,SNR=14						
K23A	**Bowen Ranch, D**	**79.16**	**319**	⇓P	**P**	**17 59 42.0**	**-0.2**
	baz=79						
NJ2	**Nanjing**	**79.21**	**56**	*e*P	**P**	**17 59 42.0**	**-0.4**
NJ2				pP	**pP**	**17 59 45.0**	**-2.6**
NJ2				sP	**sP**	**17 59 47.0**	**-2.5**
NJ2				PP	**PP**	**18 02 41.1**	**-0.4**
NJ2				S	**S**	**18 09 41.5**	**-0.2**
NJ2				sS	**sS**	**18 09 47.0**	**-3.3**
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,280nm,9.8s						
NJ2				LR	LR		
	comp=N,2µm,27.0s						
NJ2				LR	LR		
	comp=E,2µm,25.4s						
NJ2				LR	LR		
	comp=Z,2µm,26.4s						
SWMT	**Swartz Lake**	**79.21**	**327**	*e*P	**P**	**17 59 41.8**	**-0.5**
	comp=Z,20nm,0.9s						
SLMT	**Seeley Lake**	**79.22**	**326**	*e*P	**P**	**17 59 41.7**	**-0.7**
	comp=Z,35nm,1.2s						
BSMT	**Bassoo Peak**	**79.25**	**327**	*e*P	**P**	**17 59 42.7**	**0.0**
	comp=Z,19nm,0.9s						
H19A	**Powell**	**79.28**	**322**	⇑P	**P**	**17 59 43.6**	**+0.8**
	baz=79,SNR=7.0						
C13A	**Hot Springs**	**79.31**	**327**	⇑P	**P**	**17 59 43.7**	**+1.0**
	baz=79,SNR=29						
D14A	**Greenough**	**79.35**	**326**	⇓P	**P**	**17 59 43.1**	**0.0**
	baz=79,SNR=12						
L24A	**Wheatland**	**79.36**	**318**	⇑P	**P**	**17 59 43.6**	**+0.4**
	baz=79						
M25A	**Palm-Egli Farm**	**79.37**	**317**	⇓P	**P**	**17 59 44.0**	**+0.7**
	baz=79,SNR=8.7						
CHMT	**Chamberlain Mo**	**79.38**	**326**	*e*P	**P**	**17 59 43.4**	**0.0**
	comp=Z,35nm,1.5s						
N26A	**Koester Ranch,**	**79.40**	**316**	⇓P	**P**	**17 59 44.1**	**+0.7**
	baz=79						
I20A	**Worland**	**79.44**	**321**	⇑P	**P**	**17 59 43.6**	**-0.1**
	baz=79						
O27A	**Beecher Island**	**79.48**	**316**	⇓P	**P**	**17 59 44.4**	**+0.5**
	baz=79						
E15A	**Deer Lodge**	**79.51**	**325**	⇓P	**P**	**17 59 44.8**	**+0.7**
	baz=79,SNR=23						
G17A	**Pierce Place,**	**79.56**	**324**	⇓P	**P**	**17 59 45.6**	**+1.3**
	baz=79,SNR=9.0						
KDAK	**Kodiak Island**	**79.58**	**352**	*e*P	**P**	**17 59 44.6**	**+0.7**
	comp=Z,105nm,1.2s						
KDAK				LR	LR		
	comp=Z,1µm,19.0s						
KDAK	**Kodiak Island**	**79.58**	**352**	P	**P**	**17 59 45.0**	**+1.1**
	comp=Z,364nm,1.3s,SNR=9.0						
H18A	**Shoshone NF, C**	**79.59**	**323**	⇓P	**P**	**17 59 45.1**	**+0.6**
	baz=79,SNR=11						
F16A	**Kennard Place,**	**79.59**	**324**	⇓P	**P**	**17 59 45.2**	**+0.8**
	baz=79,SNR=7.7						
J21A	**Lysite**	**79.59**	**320**	⇑P	**P**	**17 59 44.4**	**-0.2**
	baz=79,SNR=9.2						
C12B	**Naegeli Ranch,**	**79.64**	**328**	⇓P	**P**	**17 59 45.2**	**+0.6**
	baz=79						
K22A	**Casper**	**79.67**	**320**	⇓P	**P**	**17 59 44.5**	**-0.5**
	baz=79,SNR=8.4						
L23A	**Garrett**	**79.68**	**319**	⇓P	**P**	**17 59 44.2**	**-0.9**
	baz=79						
BOZ	**Bozeman (W)**	**79.70**	**324**	*e*P	**P**	**17 59 45.8**	**+0.8**
BOZ				pmax	pmax		
	comp=Z,50nm,1.3s						
BOZ				MLR	MLR		
	comp=Z,2µm,22.0s						
BOZ	**Bozeman (W)**	**79.70**	**324**	*e*P	**P**	**17 59 45.8**	**+0.8**
	comp=Z,50nm,1.3s						
BOZ				LR	LR		
	comp=Z,2µm,22.0s						
BOZ	**Bozeman (W)**	**79.70**	**324**	⇓P	**P**	**17 59 46.1**	**+1.1**
	baz=79,SNR=37						
D13A	**Huson**	**79.73**	**327**	⇓P	**P**	**17 59 45.6**	**+0.5**
	baz=79,SNR=33						
M24A	**Cheyenne**	**79.73**	**318**	⇑P	**P**	**17 59 46.3**	**+0.9**
	baz=80						
MSO	**Missoula**	**79.73**	**326**	*e*P	**P**	**17 59 45.0**	**-0.2**
	comp=Z,29nm,1.3s						
MSO				LR	LR		
	comp=Z,2µm,19.0s						
MSO	**Missoula**	**79.73**	**326**	⇑P	**P**	**17 59 45.2**	**+0.1**
	baz=80,SNR=12						
SDV	**Santo Domingo**	**79.74**	**273**	*e*P	**P**	**17 59 45.8**	**0.0**
	comp=Z,0.4nm,1.0s						
SDV				LR	LR		
	comp=Z,1.0nm,21.0s						
I19A	**Meeteetse**	**79.78**	**322**	⇑P	**P**	**17 59 46.2**	**+0.6**
	baz=80,SNR=13						
NEW	**Newport**	**79.83**	**329**	*e*P	**P**	**17 59 45.9**	**+0.3**
	comp=Z,37nm,1.2s						
NEW				LR	LR		
	comp=Z,2µm,22.0s						
NEW	**Newport**	**79.83**	**329**	⇑P	**P**	**17 59 45.9**	**+0.3**
	baz=80,SNR=9.3						
N25A	**Grover**	**79.85**	**317**	⇓P	**P**	**17 59 46.9**	**+0.9**
	baz=80						
O26A	**Horse Wrangler**	**79.88**	**316**	⇓P	**P**	**17 59 46.2**	**+0.2**
	baz=80						
E14A	**Clinton**	**79.88**	**326**	⇓P	**P**	**17 59 46.5**	**+0.5**
	baz=80,SNR=12						
J20A	**Shoshoni**	**79.88**	**321**	⇑P	**P**	**17 59 46.3**	**+0.3**

	baz=80,SNR=13						
PNT	**Penticton**	**79.89**	**331**	P	**P**	**17 59 46.8**	**+1.0**
PNT	**Penticton**	**79.89**	**331**	P	**P**	**17 59 46.8**	**+1.0**
LRM	**Limekiln Ridge**	**79.91**	**325**	*e*P	**P**	**17 59 46.3**	**0.0**
	comp=Z,234nm,1.1s						
F15A	**Butte**	**79.91**	**325**	⇑P	**P**	**17 59 46.9**	**+0.6**
	baz=80,SNR=20						
INCN	**Inchon**	**79.96**	**48**	*e*P	**P**	**17 59 47.1**	**+0.8**
	comp=Z,58nm,1.0s						
INCN				LR	LR		
	comp=Z,2µm,20.0s						
INCN	**Inchon**	**79.96**	**48**	P	**P**	**17 59 47.2**	**+0.8**
	SNR=6.7						
P27A	**Ficken Ranch,**	**80.00**	**315**	⇑P	**P**	**17 59 46.9**	**+0.2**
	baz=80						
LKWY	**Lake**	**80.00**	**323**	*e*P	**P**	**17 59 48.7**	**+1.8**
LKWY				pmax	pmax		
	comp=Z,59nm,1.1s						
LKWY				MLR	MLR		
	comp=Z,4µm,19.0s						
LKWY	**Lake**	**80.00**	**323**	*e*P	**P**	**17 59 48.7**	**+1.8**
	comp=Z,59nm,1.1s						
LKWY				LR	LR		
	comp=Z,4µm,19.0s						
K21A	**Alcova**	**80.04**	**320**	⇓P	**P**	**17 59 46.5**	**-0.5**
	baz=80						
PEA0B	**Petropavlovsk-**	**80.07**	**21**	*e*P	**P**	**17 59 46.4**	**-0.3**
PETK	**Petropavlovsk-**	**80.07**	**21**	P	**P**	**17 59 46.9**	**+0.2**
PETK				pmax	pmax		
	comp=Z,24nm,1.1s						
PETK				MLR	MLR		
	comp=Z,3µm,18.6s						
PETK	**Petropavlovsk-**	**80.07**	**21**	P	**P**	**17 59 46.9**	**+0.2**
PETK	**Petropavlovsk-**	**80.07**	**21**	P	**P**	**17 59 46.9**	**+0.2**
	comp=Z,24nm,1.1s,baz=9.2,slow=4.7,SNR=10						
PETK				LR	LR	18 40 29.1	
	comp=Z,3µm,18.6s,baz=328,slow=40						
L22A	**Ellis Ranch, M**	**80.10**	**319**	⇓P	**P**	**17 59 47.9**	**+0.5**
	baz=80						
G16A	**Moss Hill, Enn**	**80.10**	**324**	⇑P	**P**	**17 59 48.5**	**+1.2**
	baz=80,SNR=33						
E13A	**Victor**	**80.14**	**326**	⇑P	**P**	**17 59 47.7**	**+0.4**
	baz=80,SNR=7.6						
PHWY	**Pilot Hill**	**80.17**	**318**	*e*P	**P**	**17 59 47.3**	**-0.6**
	comp=Z,32nm,0.9s						
YMR	**Madison River**	**80.17**	**323**	*e*P	**P**	**17 59 49.0**	**+1.3**
	comp=Z,68nm,1.3s						
M23A	**Laramie**	**80.18**	**318**	⇑P	**P**	**17 59 48.1**	**+0.3**
	baz=80						
OHAK	**Old Harbor**	**80.20**	**353**	*e*P	**P**	**17 59 46.6**	**-0.7**
	comp=Z,78nm,1.2s						
H17A	**Grant Village**	**80.22**	**323**	⇑P	**P**	**17 59 50.0**	**+2.0**
	baz=80,SNR=7.4						
T31A	**Randall Ranch,**	**80.23**	**312**	⇑P	**P**	**17 59 48.0**	**+0.1**
	baz=80,SNR=6.8						
N24A	**Carr**	**80.24**	**317**	⇑P	**P**	**17 59 49.2**	**+1.1**
	baz=80						
QLMT	**Earthquake Lak**	**80.25**	**324**	*e*P	**P**	**17 59 48.7**	**+0.6**
	comp=Z,8.2nm,1.4s						
H16A	**Russell Place,**	**80.27**	**324**	⇑P	**P**	**17 59 49.7**	**+1.4**
	baz=80,SNR=20						
YFT	**Old Faithful**	**80.29**	**323**	*e*P	**P**	**17 59 47.8**	**-0.6**
	comp=Z,54nm,1.2s						
F14A	**Wisdom**	**80.31**	**325**	⇓P	**P**	**17 59 48.9**	**+0.5**
	baz=80						
DLMT	**Dillon**	**80.34**	**325**	*e*P	**P**	**17 59 48.9**	**+0.4**
	comp=Z,43nm,1.0s						
O25A	**Wiggins**	**80.39**	**316**	⇑P	**P**	**17 59 49.3**	**+0.4**
	baz=80						
YSS	**Yuzh-Sakhalins**	**80.39**	**33**	κ *i*P	**P**	**17 59 50.0**	**+1.5**
YSS				*e**SP	**sP**	**17 59 55.0**	**-0.6**
YSS				*e*S	**S**	**18 09 55.0**	**+1.3**
YSS				pmax	pmax		
	comp=Z,290nm,1.2s						
YSS				MLR	MLR		
	comp=N,4µm,17.0s						
YSS				MLR	MLR		
	comp=E,5µm,17.0s						
YSS				MLR	MLR		
	comp=Z,7µm,17.0s						
YSS	**Yuzh-Sakhalins**	**80.39**	**33**	⇓*i*P	**P**	**17 59 48.9**	**+0.4**
	comp=Z,273nm,1.2s						
YSS				LR	LR		
	comp=Z,2µm,20.0s						
P26A	**Davis Ranch, A**	**80.40**	**316**	⇑P	**P**	**17 59 49.6**	**+0.7**
	baz=80,SNR=9.5						
J19A	**Crowheart**	**80.40**	**321**	⇑P	**P**	**17 59 49.2**	**+0.3**
	baz=80,SNR=7.2						
PET	**Petropavlovsk**	**80.40**	**20**	*e*P	**P**	**17 59 49.3**	**+0.9**
PET				*e*		18 02 59.6	
PET				*e*S	**S**	**18 09 53.7**	**+0.1**
PET				pmax	pmax		
	comp=Z,200nm,13.2s						
PET				MLR	MLR		
	comp=Z,4µm,20.0s						
PET	**Petropavlovsk**	**80.40**	**20**	PFAKE		18 00 00.0	+12
PET				LR	LR		
	comp=Z,3µm,19.0s						
I18A	**Diamond G Ranc**	**80.41**	**322**	⇓P	**P**	**17 59 50.0**	**+1.0**
	baz=80,SNR=8.4						
KSCO	**Kaye Shedlock'**	**80.43**	**315**	⇑P	**P**	**17 59 49.8**	**+0.7**
	baz=80,SNR=8.8						
G15A	**Dillon**	**80.45**	**325**	⇑P	**P**	**17 59 50.1**	**+1.0**
	baz=80,SNR=13						
K20A	**Yellowstone Ra**	**80.54**	**321**	⇑P	**P**	**17 59 49.4**	**-0.3**
	baz=80						
I17A	**Pilgrim Ck.**	**80.59**	**323**	⇓P	**P**	**17 59 51.6**	**+1.6**
	baz=80,SNR=10.0						
L21A	**Rawlins**	**80.60**	**320**	⇓P	**P**	**17 59 49.8**	**-0.3**
	baz=80,SNR=7.4						
K19A	**Absolon Red Bu**	**80.64**	**321**	⇓P	**P**	**17 59 49.5**	**-0.7**
	baz=80,SNR=10						
M22A	**Cedar Creek Ra**	**80.66**	**319**	⇑P	**P**	**17 59 50.5**	**+0.1**
	baz=80						
KSAR	**Wonju Array Be**	**80.67**	**47**	P	**P**	**17 59 50.7**	**+0.5**
KSRS	**Korea Array**	**80.68**	**47**	P	**P**	**17 59 50.7**	**+0.4**
	comp=Z,12nm,1.0s,baz=324,slow=4.8,SNR=49						
KSRS				LR	LR	18 35 04.3	
	comp=Z,676nm,19.7s,baz=153,slow=35						
BDFB	**Brasilia**	**80.71**	**239**	P	**P**	**17 59 51.2**	**+0.5**
BDFB	**Brasilia**	**80.71**	**239**	P	**P**	**17 59 51.2**	**+0.5**
	comp=Z,34nm,0.9s,baz=41,slow=5.4,SNR=30						
BDFB				LR	LR	18 38 18.5	
	comp=Z,1µm,18.0s,baz=41,slow=38						
N23A	**Red Feather La**	**80.72**	**318**	⇓P	**P**	**17 59 51.5**	**+0.7**
	baz=80,SNR=19						
F13A	**Darby**	**80.73**	**326**	⇑P	**P**	**17 59 51.0**	**+0.5**
	baz=80,SNR=34						
IMW	**Indian Meadow**	**80.77**	**323**	*e*P	**P**	**17 59 52.2**	**+1.2**
	comp=Z,26nm,1.1s						
MOOW	**Moose Ponds**	**80.80**	**323**	*e*P	**P**	**17 59 51.8**	**+0.7**
	comp=Z,70nm,1.7s						
G14A	**Jackson**	**80.80**	**325**	⇓P	**P**	**17 59 51.6**	**+0.5**
	baz=80						
LOHW	**Long Hollow**	**80.84**	**322**	*e*P	**P**	**17 59 52.0**	**+0.7**
	comp=Z,32nm,1.5s						
P25A	**Willow Gulch B**	**80.86**	**316**	⇑P	**P**	**17 59 52.3**	**+0.9**
	baz=81,SNR=24						
O24A	**Longmont**	**80.86**	**317**	⇓P	**P**	**17 59 52.3**	**+0.8**
	baz=81						
MCMT	**McKenzie Canyo**	**80.87**	**325**	*e*P	**P**	**17 59 52.3**	**+0.8**
	comp=Z,14nm,1.1s						
M21A	**Separation Pea**	**80.87**	**319**	⇑P	**P**	**17 59 51.5**	**-0.1**
	baz=81						
J18A	**Kendall Valley**	**80.89**	**322**	⇑P	**P**	**17 59 52.1**	**+0.5**
	baz=81,SNR=37						
H15A	**Lima**	**80.95**	**324**	⇓P	**P**	**17 59 53.0**	**+1.1**
	baz=81						
Q26A	**Hugo**	**80.96**	**315**	⇓P	**P**	**17 59 52.5**	**+0.5**
	baz=81						
BW06	**Boulder Array**	**81.02**	**321**	*e*P	**P**	**17 59 51.7**	**-0.7**
	comp=Z,8.7nm,0.9s						
BW06				LR	LR		
	comp=Z,3µm,21.0s						
BW06	**Boulder Array**	**81.02**	**321**	⇓P	**P**	**17 59 52.0**	**-0.4**
	baz=81,SNR=16						
PDAR	**Pinedale Array**	**81.02**	**321**	P	**P**	**17 59 51.9**	**-0.5**
PDAR				PP	**PP**	**18 02 57.1**	**+0.6**
PDAR	**Pinedale Array**	**81.02**	**321**	P	**P**	**17 59 51.8**	**-0.5**
	comp=Z,7.3nm,0.9s,baz=44,slow=4.5,SNR=19						
PDAR				PP	**PP**	**18 02 57.1**	**+0.6**
	comp=Z,2.1nm,1.0s,baz=57,slow=6.6,SNR=3.3						
PDAR				LR	LR	18 34 22.7	
	comp=Z,2µm,21.8s,baz=41,slow=35						
I16A	**Newdale**	**81.03**	**323**	⇓P	**P**	**17 59 54.2**	**+1.9**
	baz=81,SNR=8.3						
L20A	**Wamsutter**	**81.03**	**320**	⇑P	**P**	**17 59 52.6**	**+0.2**
	baz=81,SNR=15						

N22A Wattenberg Ran 81.04 318 ⇓P P 17 59 53.1 +0.6
baz=81,SNR=18
R27A Eads 81.05 314 ⇓P P 17 59 53.0 +0.6
baz=81,SNR=12
J17A Brown Place, J 81.08 322 ⇑P P 17 59 53.6 +1.0
baz=81,SNR=8.2
TPAW Teton Pass 81.09 323 *e*P P 17 59 53.6 +0.8
comp=Z,44nm,1.4s
DCID1 Drake Creek 81.11 323 *e*P P 17 59 53.7 +0.9
comp=Z,62nm,1.2s
F12A Elk City 81.14 326 ⇑P P 17 59 53.0 +0.2
baz=81,SNR=29
REDW Red Top Meadow 81.15 322 P P 17 59 50.3 -2.7
comp=Z,0.5nm,1.3s
OD2 Odessa Site #2 81.16 329 P P 17 59 53.7 +1.0
O23A Lake Granby, G 81.22 318 ⇑P P 17 59 54.2 +0.7
baz=81
P24A Kohler Place, 81.24 316 ⇑P P 17 59 54.1 +0.7
baz=81
G13A Cobalt 81.25 325 ⇓P P 17 59 53.8 +0.4
baz=81,SNR=11
H14A Leadore 81.26 325 ⇓P P 17 59 54.6 +1.0
baz=81,SNR=12
SSE Sheshan 81.31 56 P P 17 59 53.9 +0.2
SSE sP **sP** 17 59 58.6 -2.2
SSE S **S** 18 10 01.8 -2.0
SSE SS **SS** 18 15 18.4 -0.3
SSE pmax pmax
comp=Z,43nm,0.8s
SSE pmax pmax
comp=Z,180nm,4.1s
SSE LR LR
comp=N,1μm,16.2s
SSE LR LR
comp=E,2μm,16.2s
SSE LR LR
comp=Z,2μm,15.6s
K18A Toltan Ranch, 81.34 322 ⇑P P 17 59 54.3 +0.3
baz=81,SNR=8.3
Q25A Bedland, Calha 81.34 316 ⇑P P 17 59 54.4 +0.3
baz=81
M20A Sweetwater, Wa 81.36 320 ⇓P P 17 59 54.6 +0.5
baz=81,SNR=19
RRI2 Red Ridge 81.37 323 *e*P P 17 59 55.1 +0.9
comp=Z,52nm,1.3s
I15A Monteview 81.37 324 ⇓P P 17 59 55.7 +1.7
baz=81
ISCO Idaho Springs 81.38 317 *e*P P 17 59 54.8 +0.4
ISCO pmax pmax
comp=Z,46nm,1.0s
ISCO MLR MLR
comp=Z,2μm,19.0s
ISCO Idaho Springs 81.38 317 *e*P P 17 59 54.8 +0.4
comp=Z,46nm,1.0s
ISCO LR LR
comp=Z,2μm,19.0s
ISCO Idaho Springs 81.38 317 ⇑P P 17 59 55.0 +0.6
baz=81,SNR=24
R26A Arlington 81.38 315 ⇑P P 17 59 54.8 +0.6
baz=81,SNR=16
WMOK Wichita Mounta 81.42 310 *e*P P 17 59 54.5 +0.2
WMOK pmax pmax
comp=Z,32nm,1.0s
WMOK MLR MLR
comp=Z,924nm,21.0s
WMOK Wichita Mounta 81.42 310 *e*P P 17 59 54.5 +0.2
comp=Z,32nm,1.0s
WMOK LR LR
comp=Z,924nm,21.0s
L19A Farson 81.44 321 ⇑P P 17 59 54.6 +0.1
baz=81
T28A Walsh 81.55 313 ⇓P P 17 59 55.5 +0.4
baz=81,SNR=8.0
S27A Las Animas 81.55 314 ⇓P P 17 59 55.7 +0.6
baz=81
J16A Bone 81.56 323 ⇓P P 17 59 56.4 +1.2
baz=81,SNR=24
O22A Kremmling 81.57 318 ⇑P P 17 59 55.9 +0.5
baz=81,SNR=29
N21A Black Mountain 81.60 319 ⇓P P 17 59 56.3 +0.9
baz=81,SNR=32
K17A Gardner Place, 81.66 322 ⇓P P 17 59 56.1 +0.5
baz=81
E09A Wood Farm, Sta 81.67 329 P P 17 59 55.8 +0.4
H13A Challis 81.68 325 ⇑P P 17 59 56.4 +0.7
baz=81,SNR=15
AHID Auburn Hatcher 81.73 322 *e*P P 17 59 56.6 +0.6
comp=Z,53nm,1.2s
AHID LR LR
comp=Z,2μm,20.0s
V30A Spur Ranch, Mi 81.76 311 ⇑P P 17 59 56.6 +0.5
baz=82
W31A Holland Ranch, 81.76 311 ⇓P P 17 59 56.4 +0.3
baz=82
Q24A Divide 81.77 316 ⇓P P 17 59 56.9 +0.4
baz=82,SNR=10
PGC Sidney 81.79 333 *e*P P 17 59 56.4 +0.4
comp=Z,4.2nm,1.1s
M19A Rock Springs 81.81 320 ⇓P P 17 59 56.8 +0.2
baz=82
P23A Jefferson 81.82 317 ⇓P P 17 59 57.8 +1.1
baz=82,SNR=25
J15A Blackfoot 81.83 323 ⇓P P 17 59 58.4 +2.0
baz=82,SNR=18
I14A Mackay 81.85 324 ⇓P P 17 59 58.1 +1.5
baz=82,SNR=47
K16A Soda Springs 81.90 323 ⇓P P 17 59 57.6 +0.7
baz=82,SNR=8.0
L18A Fontenelle, Gr 81.90 321 ⇓P P 17 59 57.2 +0.2
baz=82,SNR=12
N20A Spence Gulch, 81.90 319 ⇑P P 17 59 57.9 +0.9
baz=82,SNR=38
S26A Kim 81.90 314 ⇓P P 17 59 57.4 +0.5
baz=82,SNR=7.5
T27A Campo 81.92 314 ⇑P P 17 59 57.4 +0.4
baz=82
R25A Fountain Ranch 81.94 315 ⇑P P 17 59 57.5 +0.4
baz=82,SNR=8.4
H12A Diamond D Ranc 81.95 325 ⇓P P 17 59 57.5 +0.4
baz=82,SNR=23
QIZ Qiongzhong 81.98 72 P P 17 59 57.4 0.0
QIZ sP **sP** 18 00 02.1 -2.4
QIZ PP **PP** 18 03 04.7 -0.1
QIZ S **S** 18 10 11.1 0.0
QIZ sS **SKSac** 18 10 17.5 +0.1
QIZ pmax pmax
comp=Z,140nm,4.5s
QIZ LR LR
comp=Z,500nm,27.2s
O21A Pagoda 81.99 318 ⇓P P 17 59 58.1 +0.6
baz=82,SNR=7.5
P22A Eagle 82.11 318 ⇓P P 17 59 58.7 +0.6
baz=82,SNR=14
W30A Crocket Farms 82.12 311 ⇑P P 17 59 58.4 +0.4
baz=82
V29A Stinnett 82.14 312 ⇓P P 17 59 58.3 +0.2
baz=82
I13A Wildhorse Cree 82.15 325 ⇑P P 17 59 59.6 +1.4
baz=82,SNR=65
L17A Cokeville 82.15 322 ⇑P P 17 59 58.2 0.0
baz=82,SNR=9.1
Q23A Hartsel 82.17 317 ⇓P P 17 59 58.9 +0.4
baz=82,SNR=7.2
X31A McDonald Ranch 82.18 310 ⇑P P 17 59 58.5 +0.2
baz=82
N19A John Jarvie Ra 82.30 320 ⇓P P 17 59 59.3 +0.3
baz=82,SNR=14
T26A Comanche Natio 82.30 314 ⇑P P 17 59 59.7 +0.5
baz=82,SNR=7.1
HAWA Hanford 82.30 329 *e*P P 17 59 58.6 -0.1
comp=Z,81nm,1.4s
HAWA LR LR
comp=Z,1μm,19.0s
M18A Lyman 82.30 321 ⇑P P 17 59 59.2 +0.1
baz=82
R24A Sanders Place, 82.30 316 ⇑P P 17 59 60.0 +0.9
baz=82,SNR=8.5
Y32A R-V Farms, Ver 82.33 309 ⇓P P 17 59 59.4 +0.3
baz=82,SNR=6.1
S25A Robets Cordova 82.38 315 ⇓P P 18 00 00.2 +0.7
baz=82,SNR=20
O20A White River Ci 82.43 319 ⇑P P 18 00 00.1 +0.3
baz=82,SNR=10
K15A Arbon 82.44 323 ⇑P P 18 00 00.4 +0.7
baz=82
N18A Larsen Ranch, 82.47 320 ⇓P P 18 00 00.1 +0.1
baz=82,SNR=18
L16A Fish Haven 82.47 322 ⇑P P 18 00 00.3 +0.3
baz=82,SNR=30
P21A Newcastle 82.51 318 ⇑P P 18 00 00.8 +0.6
baz=82,SNR=11
SMCO Snowmass 82.54 317 *e*P P 18 00 01.2 +0.6
comp=Z,24nm,1.2s
M17A Scullys Gap (B 82.55 321 ⇑P P 18 00 00.6 +0.2
baz=82,SNR=8.8
HLID Hailey 82.56 325 *e*P P 18 00 00.3 0.0
HLID comp=Z,10nm,1.0s LR LR
comp=Z,2μm,22.0s
HLID Hailey 82.56 325 ⇑P P 18 00 01.2 +0.9
baz=82,SNR=17
J13A Cove Ranch, Pi 82.59 324 ⇑P P 18 00 01.4 +0.9
baz=82,SNR=11
V28A Channing 82.61 312 ⇑P P 18 00 00.5 -0.2
baz=82
WHTX Lake Whitney 82.62 307 ⇓P P 18 00 00.4 -0.2
baz=82
ASAJ Asahikawa 82.63 34 *e*P P 18 00 00.1 -0.3
comp=Z,27nm,1.3s
ASAJ Asahikawa 82.63 34 LR LR 18 40 45.2
comp=Z,2μm,19.5s,baz=160,slow=39
R23A Moffat 82.70 316 ⇑P P 18 00 02.0 +0.7
baz=82,SNR=17
BMO Blue Mountains 82.71 327 *e*P P 18 00 00.6 -0.4
BMO comp=Z,65nm,1.0s LR LR
comp=Z,2μm,20.0s
O19A Miners Draw (B 82.73 319 ⇑P P 18 00 01.6 +0.3
baz=82,SNR=19
Q22A Crested Butte, 82.75 317 ⇑P P 18 00 02.0 +0.4
baz=82,SNR=34
T25A Trinidad 82.76 315 ⇓P P 18 00 02.1 +0.6
baz=82,SNR=11
W29A Amraillo 82.76 312 ⇑P P 18 00 01.8 +0.3
baz=82
TRW Toppenish Ridg 82.76 330 P P 18 00 02.6 +1.5
WPW White Pass 82.79 331 P P 18 00 02.2 +0.8
S24A Houchin Ranch, 82.80 315 ⇑P P 18 00 02.1 +0.2
baz=82,SNR=11
X30A Coker Ranch, T 82.82 311 ⇑P P 18 00 02.2 +0.5
baz=83,SNR=9.8
Y31A Rekieta Farm, 82.83 310 ⇑P P 18 00 01.7 0.0
baz=83
K14A Jones Ranch, D 82.84 323 ⇑P P 18 00 02.6 +0.9
baz=83
Z32A Haskell 82.85 309 ⇓P P 18 00 02.0 +0.2
baz=83,SNR=9.7
HWUT Hardware Ranch 82.86 322 *e*P P 18 00 02.1 +0.2
comp=Z,65nm,1.0s
HWUT LR LR
comp=Z,3μm,20.0s
L15A Malad City 82.91 323 ⇓P P 18 00 02.6 +0.4
baz=83,SNR=7.0
AMTX Amarillo 82.95 311 PFAKE 18 00 10.0 +7.6
AMTX LR LR
comp=Z,2μm,19.0s
AMTX Amarillo 82.95 311 ⇓P P 18 00 02.7 +0.3
baz=83
U26A Atchley Ranch, 82.96 314 ⇓P P 18 00 02.9 +0.3
baz=83,SNR=16
W28A Vega 82.97 312 ⇑P P 18 00 02.3 -0.2
baz=83
P20A De Beque 82.99 319 ⇑P P 18 00 02.5 -0.1
baz=83,SNR=10
NLWA Neilton Lookou 83.02 332 *e*P P 18 00 03.5 +1.0
comp=Z,61nm,1.2s
NLWA LR LR
comp=Z,4μm,21.0s
N17A Moffit Pass 83.04 321 ⇓P P 18 00 02.7 -0.3
baz=83,SNR=22
HKT Hockley 83.09 304 *e*P P 18 00 03.1 +0.1
HKT pmax pmax
comp=Z,30nm,1.5s
HKT Hockley 83.09 304 *e*P P 18 00 03.1 +0.1
comp=Z,30nm,1.5s
Q21A Lamborn Mesa, 83.10 318 ⇓P P 18 00 04.0 +0.8
baz=83,SNR=5.8
T24A Torres, Weston 83.15 315 ⇑P P 18 00 04.8 +1.1
baz=83,SNR=20
R22A Saguache, Gunn 83.15 317 ⇓P P 18 00 04.8 +1.1
baz=83,SNR=26
S23A Nye Farm, Mont 83.16 316 ⇑P P 18 00 04.4 +0.7
baz=83
P19A Cripple Cowboy 83.18 319 ⇑P P 18 00 03.7 0.0
baz=83,SNR=16
O18A Roosevelt 83.18 320 ⇑P P 18 00 03.5 -0.1
baz=83
Z31A Sharp Cattle R 83.23 309 ⇑P P 18 00 04.0 +0.2
baz=83,SNR=9.0
Y30A Stafford Cattl 83.25 310 ⇓P P 18 00 03.8 -0.2
baz=83
HVU Hansel Valley 83.27 323 *e*P P 18 00 04.1 +0.1
HVU pmax pmax
comp=Z,26nm,1.1s
HVU Hansel Valley 83.27 323 *e*P P 18 00 04.1 +0.1
comp=Z,26nm,1.1s
L14A Malta 83.27 323 ⇓P P 18 00 04.5 +0.5
baz=83,SNR=11
MFID Camas Ranch 83.28 325 *e*P P 18 00 03.8 -0.2
comp=Z,63nm,1.3s
MFID Camas Ranch 83.28 325 ⇓P P 18 00 04.5 +0.5
baz=83,SNR=12
X29A Tulia 83.28 311 ⇑P P 18 00 04.1 -0.1
baz=83
U25A Circle Dot Ran 83.31 314 ⇓P P 18 00 05.2 +0.8
baz=83,SNR=36
Q20A Ridgley Place, 83.37 318 ⇓P P 18 00 04.6 0.0
baz=83,SNR=8.0
V26A Tesuque Ra 83.43 313 ⇑P P 18 00 04.8 -0.1
baz=83,SNR=8.2
ABTX Abilene, Hawle 83.44 309 ⇑P P 18 00 05.0 0.0
baz=83
R21A Cimarron 83.44 317 ⇑P P 18 00 05.7 +0.6
baz=83,SNR=11
X28A Dimmitt 83.51 311 ⇑P P 18 00 05.3 0.0
baz=83
S22A 4UR Ranch, Cre 83.56 316 ⇑P P 18 00 06.4 +0.7
baz=83,SNR=30
FX1 Attu Island--F 83.57 12 *e*P P 18 00 05.8 +0.6
W27A Bowe Ranch, En 83.58 312 ⇓P P 18 00 05.8 +0.1
baz=83
JLU Jordanelle 83.60 321 *e*P P 18 00 06.2 +0.4
comp=Z,36nm,1.2s
DAU Daniels Canyon 83.66 321 *e*P P 18 00 06.5 +0.3
DAU pmax pmax
comp=Z,27nm,1.0s
DAU Daniels Canyon 83.66 321 *e*P P 18 00 06.5 +0.3
comp=Z,27nm,1.0s
T23A Jonas Ranch, 83.69 316 ⇓P P 18 00 07.3 +0.9
baz=83,SNR=14
Y29A Porterfield Fa 83.70 311 ⇓P P 18 00 05.9 -0.4
baz=84
U24A Moreno Valley 83.77 315 ⇓P P 18 00 08.0 +1.2
baz=84
Z30A Sanderson Ranc 83.81 310 ⇑P P 18 00 06.6 -0.2
baz=84
131A Roby 83.84 309 ⇑P P 18 00 07.2 +0.2
baz=84
Q19A Hogan Spring (83.84 319 ⇓P P 18 00 06.8 -0.2
baz=84
V25A Rancho No Teng 83.84 314 ⇑P P 18 00 07.3 +0.1
baz=84,SNR=7.1
X27A F and S Farms, 83.91 312 ⇑P P 18 00 07.3 -0.1
baz=84
QZH Quanzhou 83.93 62 ⇓*i*P P 18 00 09.0 +1.5
QZH S S 18 10 30.4 -0.4
QZH pmax pmax
comp=Z,450nm,2.5s
QZH LR LR
comp=N,2μm,14.6s
QZH LR LR
comp=E,1μm,11.2s
QZH LR LR
comp=Z,3μm,16.0s
O16A Springville 83.93 321 ⇓P P 18 00 07.9 +0.4
baz=84,SNR=14
232A Coleman 83.98 308 ⇑P P 18 00 08.1 +0.4
baz=84
Y28A McKinney Farm, 83.99 311 ⇑P P 18 00 07.7 -0.1
baz=84
R20A Redvale 84.00 318 ⇓P P 18 00 08.2 +0.3
baz=84,SNR=13
YUK Yuzh-Kuril'sk 84.03 32 *i*P P 18 00 05.2 -2.4
YUK *i*S S 18 10 26.7 -4.5
YUK pmax pmax
comp=Z,679nm,1.9s
YUK pmax pmax
comp=E,176nm,1.3s
YUK pmax pmax
comp=N,44nm,1.3s
YUK pmax pmax
comp=Z,252nm,1.3s
YUK MLR MLR
comp=Z,4μm,22.0s
YUK MLR MLR
comp=E,1μm,22.0s
YUK MLR MLR
comp=N,3μm,22.0s
PV04 Paradox Valley 84.10 318 *e*P P 18 00 08.5 +0.1
S21A Coal Bank Pass 84.11 317 ⇓P P 18 00 09.1 +0.5
baz=84,SNR=33
PV01 Paradox Valley 84.14 318 *e*P P 18 00 08.8 +0.1
comp=N,3μm,1.0s
MPU Maple Canyon 84.14 321 *e*P P 18 00 08.7 +0.1
comp=N,25nm,1.1s
P17A Butcher Ranch, 84.15 320 ⇑P P 18 00 08.5 -0.1
baz=84
T22A Edith 84.15 316 ⇑P P 18 00 09.8 +1.0
baz=84,SNR=25
Z29A Hungry Hill Ra 84.16 310 ⇑P P 18 00 08.7 +0.1
baz=84
PV10 Paradox Valley 84.18 318 *e*P P 18 00 09.3 +0.4
comp=N,2μm,0.9s
130A Snyder 84.23 309 ⇓P P 18 00 09.4 +0.5
baz=84
W25A X Bar L Ranch, 84.23 313 ⇑P P 18 00 09.6 +0.6
baz=84,SNR=8.8
MSTX Muleshoe 84.23 311 ⇓P P 18 00 09.0 0.0
baz=84
S20A Disappointment 84.27 317 ⇑P P 18 00 09.7 +0.4
baz=84,SNR=20
V24A Rampart Ranch, 84.28 314 ⇑P P 18 00 10.3 +0.9
baz=84,SNR=9.5
VIPM Ingram Point 84.30 329 P P 18 00 10.7 +1.4
VIPM Ingram Point 84.30 329 P P 18 00 10.7 +1.4
U23A El Rito 84.31 315 ⇑P P 18 00 10.2 +0.6
baz=84
O15A The Old Anders 84.32 322 ⇓P P 18 00 10.1 +0.7
baz=84
SRU San Rafael 84.33 320 *e*P P 18 00 09.0 -0.6
SRU San Rafael 84.33 320 *e*P P 18 00 09.0 -0.6
comp=N,2μm,1.0s
SRU San Rafael 84.33 320 ⇑P P 18 00 09.4 -0.1
baz=84,SNR=30
231A Bronte 84.33 309 ⇑P P 18 00 09.9 +0.5
baz=84
X26A CR and CF Fran 84.37 313 ⇓P P 18 00 10.3 +0.6
baz=84,SNR=8.9
KULM Kulim 84.39 88 *e*P P 18 00 09.1 -0.8
comp=N,186nm,1.5s
KULM LR LR
comp=Z,792nm,21.0s
332A Millersview 84.40 308 ⇓P P 18 00 10.4 +0.5
baz=84,SNR=5.3
P16A Fountain Green 84.48 321 ⇑P P 18 00 10.7 +0.4
baz=84
T21A Navajo Lake 84.49 316 ⇑P P 18 00 10.9 +0.5
baz=84
TMUT Trail Mountain 84.51 320 *e*P P 18 00 10.7 +0.1
comp=Z,34nm,1.0s
Z28A Tucker Farm, M 84.52 311 ⇑P P 18 00 10.9 +0.4
baz=84
DUG Dugway 84.55 322 *e*P P 18 00 11.1 +0.5
DUG pmax pmax
comp=Z,25nm,1.0s
DUG MLR MLR
comp=Z,2μm,19.0s
DUG Dugway 84.55 322 *e*P P 18 00 11.1 +0.5
comp=Z,25nm,1.0s
DUG LR LR
comp=Z,2μm,19.0s
DUG Dugway 84.55 322 ⇑P P 18 00 10.8 +0.2
baz=84,SNR=15
ERM Erimo 84.58 35 *e*P P 18 00 10.6 +0.1
ERM pmax pmax
comp=Z,58nm,1.3s
ERM Erimo 84.58 35 *e*P P 18 00 10.4 -0.1
comp=Z,46nm,1.0s
ERM LR LR
comp=Z,5μm,19.0s
U22A Llaves 84.61 316 ⇑P P 18 00 11.9 +0.8
baz=84,SNR=15
129A Stewart Farms, 84.72 310 ⇑P P 18 00 11.6 +0.1
baz=84,SNR=7.1
W24A Lazy 6 Ranch, 84.74 314 ⇑P P 18 00 12.5 +0.7
baz=84,SNR=7.2
V23A Ortiz Mt. (NFS 84.75 315 ⇓P P 18 00 13.0 +1.2
baz=84
Q16A Castle Valley 84.79 320 ⇑P P 18 00 11.7 -0.2
baz=84,SNR=8.7
P15A Leamington 84.80 321 ⇑P P 18 00 12.2 +0.3
baz=84
432A Menard 84.80 308 ⇑P P 18 00 12.3 +0.4
baz=85,SNR=9.0
MVCO Mesa Verde 84.81 317 *e*P P 18 00 12.8 +0.7
comp=Z,34nm,1.1s
MVCO LR LR
comp=Z,3μm,20.0s
MVCO Mesa Verde 84.81 317 ⇑P P 18 00 12.3 +0.2
baz=85,SNR=8.4
230A Sterling City 84.83 309 ⇓P P 18 00 12.4 +0.4
baz=85
Y26A Elida 84.85 312 ⇑P P 18 00 12.6 +0.3
baz=85
X25A Clemmons Ranch 84.85 313 ⇓P P 18 00 12.9 +0.7
baz=85
331A San Angelo 84.86 308 ⇓P P 18 00 12.5 +0.4
baz=85,SNR=5.7
TEIG Tepich 84.91 293 PFAKE 18 00 20.0 +7.5
TEIG LR LR
comp=Z,1μm,20.0s
Z27A Tatum 84.97 311 ⇓P P 18 00 12.7 0.0
baz=85,SNR=6.8
U21A Nageezi 84.99 316 ⇓P P 18 00 13.5 +0.5
baz=85
128A Castleberry Fa 85.07 310 ⇓P P 18 00 13.4 +0.1
baz=85,SNR=8.1
JCT Junction City 85.09 307 *e*P P 18 00 13.4 +0.1
JCT pmax pmax
comp=Z,44nm,1.1s
JCT MLR MLR
comp=Z,2μm,22.0s
JCT Junction City 85.09 307 *e*P P 18 00 13.4 +0.1
comp=Z,44nm,1.1s
JCT LR LR
comp=Z,2μm,22.0s
JCT Junction City 85.09 307 ⇑P P 18 00 13.8 +0.4
baz=85
ROSC El Rosal 85.14 272 P P 18 00 14.3 +0.1
ROSC El Rosal 85.14 272 P P 18 00 14.3 +0.1
comp=Z,5.4nm,0.4s,baz=87,slow=24,SNR=8.8
ROSC LR LR 18 33 40.4
comp=Z,2μm,21.9s,baz=9.3,slow=32
229A Bryant Ranch, 85.17 310 ⇑P P 18 00 13.9 +0.1
baz=85
W23A Werner Place, 85.17 314 ⇓P P 18 00 14.6 +0.7
baz=85
S18A Hurst Farm, Bl 85.19 318 ⇓P P 18 00 13.7 -0.3
baz=85,SNR=12
ELK Elko 85.20 323 *e*P P 18 00 15.2 +1.3
IPM Ipoh 85.20 88 *e*P P 18 00 13.1 -0.9
comp=Z,59nm,1.4s
IPM Ipoh 85.20 88 P P 18 00 13.7 -0.4
330A Mertzon 85.22 309 ⇓P P 18 00 14.5 +0.5
baz=85
X24A Lazy VL Ranch, 85.24 314 ⇓P P 18 00 14.6 +0.4
baz=85
Y25A Mesa, Roswell 85.33 313 ⇓P P 18 00 15.0 +0.4
baz=85,SNR=10
532A Rocksprings 85.41 307 ⇑P P 18 00 15.4 +0.5
baz=85,SNR=13
431A Sonora 85.42 308 ⇓P P 18 00 15.9 +0.9
baz=85,SNR=17
Z26A Caprock 85.42 312 ⇑P P 18 00 15.5 +0.5
baz=85,SNR=22
V21A Milan 85.46 316 ⇓P P 18 00 15.8 +0.5
baz=85
U20A Newcomb 85.47 317 ⇑P P 18 00 15.8 +0.5
baz=85
ANMO Albuquerque 85.50 314 *e*P P 18 00 16.3 +0.8
comp=Z,19nm,1.3s
ANMO LR LR
comp=Z,3μm,20.0s
228A UT Block 9, Go 85.51 310 ⇓P P 18 00 15.5 0.0

baz=85
JNU Nakatsue 85.51 48 eP P 18 00 15.8 +0.4
comp=Z,52nm,1.5s
127A Arkansas Junct 85.52 311 ⇑P P 18 00 15.6 0.0
baz=85
MSU Marysvale 85.59 320 eP P 18 00 16.6 +0.6
MSU pmax pmax
comp=Z,27nm,1.2s
MSU Marysvale 85.59 320 eP P 18 00 16.6 +0.6
comp=Z,27nm,1.2s
MVU Marysvale 85.62 320 eP P 18 00 16.8 +0.7
comp=Z,18nm,1.1s
MVU LR LR
comp=Z,2µm,19.0s
W22A Albuquerque 85.62 315 ⇑P P 18 00 17.1 +1.0
baz=85
329A Wagon Wheel Ra 85.62 309 ⇓P P 18 00 16.5 +0.5
baz=85,SNR=13
X23A Hourglass Bar 85.63 314 ⇓P P 18 00 16.9 +0.7
baz=85
430A Baggett Ranch, 85.71 308 ⇓P P 18 00 17.2 +0.7
baz=86,SNR=13
Y24A Capitan 85.73 313 ⇑P P 18 00 17.1 +0.4
baz=86,SNR=10
531A Rocksprings 85.76 308 ⇑P P 18 00 17.0 +0.2
baz=86,SNR=14
TATO Taipei 85.78 60 PFAKE 18 00 30.0 +13
TATO LR LR
comp=Z,1µm,21.0s
632A Uvalde 85.79 307 ⇓P P 18 00 17.4 +0.6
baz=86,SNR=7.3
Z25A Roswell 85.82 312 ⇑P P 18 00 17.6 +0.5
baz=86,SNR=9.5
V20A Brimhall 85.89 316 ⇓P P 18 00 17.6 +0.2
baz=86
126A Clayton Basin, 85.91 311 ⇓P P 18 00 17.8 +0.3
baz=86
YHNB Yeheng 85.93 60 eP P 18 00 18.6 +1.0
comp=Z,49nm,1.1s
YHNB LR LR
comp=Z,1µm,20.0s
227A Bennet, Jal 85.98 311 ⇓P P 18 00 18.6 +0.8
baz=86
W21A San Fidel 85.99 315 ⇓P P 18 00 18.7 +0.7
baz=86
Y23A Lovelace Mesa, 86.06 314 ⇓P P 18 00 19.1 +0.8
baz=86,SNR=9.0
LPM Los Pinos Moun 86.08 314 eP P 18 00 19.3 +0.9
X22A Bernardo 86.13 314 ⇓P P 18 00 19.3 +0.7
baz=86
328A Wristen Ranch, 86.18 310 ⇑P P 18 00 19.0 +0.2
baz=86,SNR=9.7
BNM Barren Site 86.20 314 eP P 18 00 19.9 +0.9
comp=Z,44nm,1.6s
429A Davenport Ranc 86.21 309 ⇓P P 18 00 19.0 +0.1
baz=86,SNR=6.1
530A J-C Ranch, Com 86.24 308 ⇓P P 18 00 19.5 +0.5
baz=86,SNR=13
SAML Samuel 86.25 254 eP P 18 00 18.8 -0.4
comp=Z,198nm,1.6s
SAML LR LR
comp=Z,1µm,20.0s
125A Gardner Draw, 86.26 312 ⇓P P 18 00 19.2 0.0
baz=86,SNR=14
LAZ Ladron 86.28 315 eP P 18 00 20.6 +1.2
comp=Z,13nm,1.4s
BMN Battle Mountai 86.32 325 PFAKE 18 00 30.0 +11
BMN LR LR
comp=Z,2µm,22.0s
631A Perdido Creek 86.33 307 ⇓P P 18 00 19.9 +0.4
baz=86,SNR=19
SPB Sao Paulo 86.34 233 PFAKE 18 00 30.0 +11
SPB LR LR
comp=Z,1µm,19.0s
BCIP Isla Barro Col 86.34 279 PFAKE 18 00 30.0 +10
BCIP LR LR
comp=Z,543nm,21.0s
LENM Lemitar 86.37 314 eP P 18 00 19.4 -0.4
comp=Z,12nm,1.2s
MOD Modoc 86.37 327 eP P 18 00 20.1 +0.5
comp=Z,41nm,1.2s
Y22D IRIS PASSCAL I 86.41 314 ⇓P P 18 00 20.7 +0.8
baz=86
226B Tecolote Peak, 86.42 311 ⇑P P 18 00 20.3 +0.3
baz=86,SNR=9.0
W20A Ramah 86.43 316 ⇓P P 18 00 19.9 -0.2
baz=86
GDL2 Guadalupe Moun 86.44 311 eP P 18 00 20.4 +0.3
comp=Z,33nm,1.1s
732A Laxson Ranch, 86.47 306 ⇑P P 18 00 20.7 +0.6
baz=86
FRIM Kepong 86.47 89 P P 18 00 20.5 +0.2
Y22A Socorro 86.54 314 ⇑P P 18 00 21.3 +0.6
baz=86,SNR=5.5
327A Balmorhea Ranc 86.57 310 ⇑P P 18 00 21.5 +0.8
baz=86
X21A Alamocita Cree 86.58 315 ⇑P P 18 00 21.4 +0.5
baz=86,SNR=9.5
428A Kincaid Ranch, 86.59 309 ⇑P P 18 00 21.6 +0.7
baz=86
Z23A Rita Site, Whi 86.66 313 ⇑P P 18 00 21.6 +0.4
baz=86,SNR=6.8
124A Stringfield Ra 86.67 312 ⇑P P 18 00 21.6 +0.2
baz=86
MAT Matsushiro 86.71 42 P P 18 00 20.5 -0.7
MAT S S **18 10 57.8 -0.2**
MAJO Matsushiro 86.71 42 eP P 18 00 20.5 -0.7
MAJO pmax pmax
comp=Z,109nm,1.6s
MAJO MLR MLR
comp=Z,4µm,20.0s
MAJO Matsushiro 86.71 42 eP P 18 00 20.5 -0.7
comp=Z,109nm,1.6s
MAJO LR LR
comp=Z,4µm,20.0s
MJAR Matsushiro Arr 86.71 42 P P 18 00 20.7 -0.5
MJAR Matsushiro Arr 86.71 42 P P 18 00 20.7 -0.5
comp=Z,13nm,1.1s,baz=307,slow=5.6,SNR=43
MJAR LR LR 18 43 19.4
comp=Z,4µm,18.2s,baz=325,slow=39
225A Deer Hill, Car 86.76 312 ⇓P P 18 00 21.5 -0.3
baz=86
529A Stev Forest Ra 86.77 309 ⇑P P 18 00 22.3 +0.6
baz=86,SNR=16
ARUT Antelope Range 86.77 321 P P 18 00 22.1 +0.4
ARUT pmax pmax
comp=Z,14nm,1.0s
ARUT Antelope Range 86.77 321 P P 18 00 22.1 +0.4
comp=Z,14nm,1.0s
HUMO Hull Mountain 86.81 329 eP P 18 00 21.5 -0.1
comp=Z,22nm,1.2s
Y21A Point of Rocks 86.86 315 ⇑P P 18 00 23.1 +0.8
baz=87
X20A Quemado 86.88 315 ⇑P P 18 00 22.8 +0.4
baz=87
326A Caldwell Ranch 86.89 310 ⇓P P 18 00 22.7 +0.4
baz=87
427A Hayter Ranch, 86.91 310 ⇑P P 18 00 22.9 +0.5
baz=87,SNR=12
CCUT Cedar City 86.92 320 eP P 18 00 22.3 -0.2
comp=Z,12nm,1.0s
Z22A Elephant Butte 87.06 314 ⇓P P 18 00 23.1 -0.1
baz=87,SNR=9.8
W18A Petrified Fore 87.07 317 ⇑P P 18 00 23.2 0.0
baz=87
528A Cox Ranch, San 87.07 309 ⇓P P 18 00 23.7 +0.4
baz=87,SNR=12
123A Bell Site, Whi 87.16 313 ⇓P P 18 00 24.0 +0.4
baz=87
224A Cornudas Mount 87.18 312 ⇓P P 18 00 23.9 +0.1
baz=87
R11A Troy Canyon, C 87.31 322 ⇓P P 18 00 24.4 +0.1
baz=87
U15A North Rim 87.31 319 ⇓P P 18 00 24.5 0.0
baz=87,SNR=9.3
Y20A Horse Springs, 87.31 315 ⇑P P 18 00 24.8 +0.3
baz=87,SNR=10
Z21A St. Cloud Mine 87.40 314 ⇑P P 18 00 25.4 +0.5
baz=87
426A McDonald Obser 87.40 310 ⇓P P 18 00 25.4 +0.4
baz=87,SNR=14
325A Bean Ranch, Si 87.40 311 ⇑P P 18 00 25.0 +0.1
baz=87
122A Conniff Cattle 87.51 313 ⇑P P 18 00 26.0 +0.7
baz=87
WUAZ Wupatki 87.58 318 eP P 18 00 25.2 -0.5
comp=Z,30nm,1.3s
WUAZ LR LR
comp=Z,2µm,20.0s
WUAZ Wupatki 87.58 318 ⇓P P 18 00 26.2 +0.6
baz=87
628A Black Gap, Mar 87.63 309 ⇑P P 18 00 26.5 +0.7
baz=87,SNR=9.6
324A Moseley Ranch, 87.64 312 ⇑P P 18 00 25.6 -0.3
baz=87,SNR=8.2
X18A Snowflake 87.64 316 ⇓P P 18 00 26.3 +0.3
baz=87
425A Indio Mountain 87.85 311 ⇓P P 18 00 27.1 +0.1
baz=88
526A Mary Lane Ranc 87.89 310 ⇓P P 18 00 28.2 +1.0
baz=88,SNR=8.0
627A Terlingua Ranc 87.95 309 ⇑P P 18 00 28.0 +0.5
baz=88,SNR=7.4
222A Williams Famil 88.02 313 ⇓P P 18 00 28.4 +0.6
baz=88
Z20A Nine Sixteen R 88.04 315 ⇓P P 18 00 28.7 +0.8
baz=88,SNR=12
121A Cookes Peak, D 88.06 314 ⇓P P 18 00 28.3 +0.3
baz=88
TXAR Lajitas Array 88.19 309 P P 18 00 29.2 +0.6
TXAR Lajitas Array 88.19 309 P P 18 00 29.2 +0.6
comp=Z,1.9nm,0.6s,baz=66,slow=4.3,SNR=25
TXAR LR LR 18 40 54.9
comp=Z,1µm,18.8s,baz=5.0,slow=36
TPH Tonopah 88.27 323 PFAKE 18 00 40.0 +11
TPH LR LR
comp=Z,2µm,19.0s
626A Big Bend Ranch 88.30 309 ⇓P P 18 00 29.8 +0.7
baz=88,SNR=7.8
NV11 Mina Array Sit 88.38 324 eP P 18 00 28.4 -1.1
TGUH Tegucigalpa,Un 88.41 287 P P 18 00 26.1 -3.5
TGUH LR LR
comp=Z,2µm,20.0s
NVAR Mina Array Bea 88.45 324 P P 18 00 29.9 +0.1
NVAR PP PP 18 03 51.6 -5.3
NVAR PKKPbc **PKKPbc 18 18 14.8 +4.3**
NVAR Mina Array Bea 88.45 324 P P 18 00 29.9 +0.1
comp=Z,1.1nm,0.4s,baz=79,slow=4.8,SNR=4.7
NVAR PP PP 18 03 51.6 -5.3
comp=Z,0.3nm,0.3s,baz=35,slow=11,SNR=3.3
NVAR PKKPbc **PKKPbc 18 18 14.8 +4.3**
comp=Z,0.4nm,0.3s,baz=126,slow=4.0,SNR=3.6
221A Mesquite Ranch 88.46 313 ⇓P P 18 00 30.4 +0.6
baz=88
X16A Lo Mia Camp, P 88.48 317 ⇓P P 18 00 30.6 +0.6
baz=88
120A U Bar Ranch, L 88.50 314 ⇓P P 18 00 30.7 +0.6
baz=88
KGM Kluang 88.54 89 P P 18 00 30.7 +0.4
JOW Kunigami 88.67 54 eP P 18 00 27.1 -3.6
220A Playas Peak, P 88.94 314 ⇓P P 18 00 32.3 +0.1
baz=89
W13A Hualapai Mount 89.15 319 ⇑P P 18 00 33.6 +0.4
baz=89
JTS JuntasAbangare 89.31 283 PFAKE 18 00 40.0 +6.1
JTS LR LR
comp=Z,2µm,20.0s
KIPM Iron Peak 89.42 328 eP P 18 00 34.2 0.0
comp=Z,48nm,1.2s
LDFC Landfair 89.75 320 P P 18 00 33.5 -2.3
319A Douglas 89.75 314 ⇑P P 18 00 36.6 +0.7
baz=90
TUC Tucson 89.81 316 eP P 18 00 35.2 -1.0
TUC pmax pmax
comp=Z,24nm,1.1s
TUC MLR MLR
comp=Z,2µm,20.0s
TUC Tucson 89.81 316 eP P 18 00 35.2 -1.0
comp=Z,24nm,1.1s
TUC LR LR
comp=Z,2µm,20.0s
PDMCI Parker Dam,Lak 89.91 319 ⇑P P 18 00 37.4 +0.9
baz=90
MPMC Manual Prospec 90.05 322 ⇑P P 18 00 37.4 0.0
baz=90
Z14A Wintersburg 90.08 318 ⇓P P 18 00 37.6 +0.3
baz=90
JHJ Hachijo jima 2 90.22 43 LR LR 18 45 34.0
comp=Z,2µm,19.9s,baz=95,slow=39
GMRC Granite Mounta 90.25 320 ⇓P P 18 00 37.5 -0.8
baz=90
IRM Iron Mountain 90.52 320 ⇓P P 18 00 39.9 +0.5
baz=90
HEC Hector,Ludlow 90.53 321 ⇑P P 18 00 39.1 -0.4
baz=90
Y12C Blythe 90.55 319 ⇓P P 18 00 39.7 +0.3
baz=90
ISA Isabella 90.83 323 ⇑P P 18 00 41.3 +0.5
baz=90
BC3 Big Chuckawall 91.07 320 ⇓P P 18 00 41.9 -0.1
baz=91
214A Organ Pipe Nat 91.14 317 ⇓P P 18 00 41.9 -0.3
baz=91
EDW2 Edwards Air Fo 91.26 322 ⇓P P 18 00 43.0 +0.2
baz=91
GLA Glamis 91.26 319 ⇑P P 18 00 43.6 +0.8
baz=91
OTAV Otavalo 91.27 271 eP P 18 00 42.6 -1.0
comp=Z,110nm,1.1s
OTAV LR LR
comp=Z,1µm,22.0s
PFO Pinyon Flat Ob 91.59 320 eP P 18 00 44.6 +0.1
comp=Z,23nm,1.1s
PFO LR LR
comp=Z,3µm,20.0s
PFO Pinyon Flat Ob 91.59 320 ⇑P P 18 00 44.6 +0.1
baz=91
MURC Murrieta 91.95 321 ⇓P P 18 00 46.5 +0.5
baz=92
MONP Monument Peak 92.16 320 ⇓P P 18 00 46.3 -0.9
baz=92
COCO West Island 93.26 103 PFAKE 18 01 00.0 +7.9
COCO LR LR
comp=Z,733nm,21.0s
KSM Kuching 94.08 84 PFAKE 18 01 10.0 +14
KSM LR LR
comp=Z,553nm,21.0s
KSM Kuching 94.08 84 P P 18 00 56.3 +0.3
CPUP Villa Florida 94.42 238 P P 18 00 56.3 -0.9
CPUP Villa Florida 94.42 238 P P 18 00 56.3 -0.9
comp=Z,0.5nm,0.4s,baz=20,slow=5.9,SNR=3.2
CPUP LR LR 18 45 08.4
comp=Z,2µm,19.0s,baz=35,slow=37
LPAZ La Paz 94.76 252 eP P 18 00 57.8 -1.9
comp=Z,14nm,1.2s
LPAZ PP **PP 18 04 45.3 -3.2**
LPAZ La Paz 94.76 252 P P 18 00 58.4 -1.3
comp=Z,4.7nm,1.0s,baz=28,slow=5.4,SNR=15
LPAZ PP **PP 18 04 45.3 -3.2**
comp=Z,4.5nm,1.2s,baz=46,slow=10.0,SNR=8.6
LPAZ LR LR 18 40 23.1
comp=Z,819nm,21.4s,baz=222,slow=33
KKM Kota Kinabalu 95.31 77 PFAKE 18 01 10.0 +8.2
KKM LR LR
comp=Z,893nm,21.0s
KKM Kota Kinabalu 95.31 77 P P 18 00 50.8 -11
CBIJ Chichi jima 96.29 44 LR LR 18 48 54.5
comp=Z,2µm,19.5s,baz=310,slow=38
NNA Nana 98.19 261 PFAKE 18 01 20.0 +5.3
NNA LR LR
comp=Z,1µm,21.0s
LVC Limon Verde 99.53 248 PFAKE 18 01 30.0 +9.2
LVC LR LR
comp=Z,44nm,21.0s
PAYG Puerto Ayora 100.62 279 PFAKE 18 01 40.0 +14
PAYG LR LR
comp=Z,463nm,19.0s
DAV Davao City (W) 101.24 70 PFAKE 18 01 40.0 +12
DAV LR LR
comp=Z,1µm,19.0s
LCO Las Campanas 104.93 244 PFAKE 18 01 50.0 +5.3
LCO LR LR
comp=Z,2µm,20.0s
TRQA Tornquist 105.35 232 PFAKE 18 06 10.0
TRQA LR LR
comp=Z,1µm,20.0s
KAPI Kappang 105.39 83 PFAKE 18 06 10.0
KAPI LR LR
comp=Z,361nm,20.0s
EFI East Falkland 112.25 220 PFAKE 18 06 20.0
EFI LR LR
comp=Z,2µm,20.0s
VNA2 Neumayer--Watz 113.93 187 eP PP 18 07 09.0 -0.6
baz=23,slow=8.2
VNA3 Neumayer Olymp 114.46 188 eP PP 18 07 12.9 -0.4
MBWA Marble Bar 115.75 96 PFAKE 18 06 30.0 +10
MBWA LR LR
comp=Z,435nm,20.0s
FITZ Fitzroy Crossi 118.25 89 PKP **PKPdf 18 06 24.0 -0.7**
FITZ Fitzroy Crossi 118.25 89 PKP **PKPdf 18 06 24.0 -0.7**
comp=Z,1.0nm,0.8s,baz=188,slow=7.1,SNR=2.4
FITZ Fitzroy Crossi 118.25 89 PKIKP **PKPdf 18 06 24.0 -0.7**
NWAO Narrogin (SRO) 120.75 108 PFAKE 18 06 40.0 +11
NWAO LR LR
comp=Z,345nm,20.0s
JOHN Johnston Islan 121.18 3 PFAKE 18 06 40.0 +9.5
JOHN LR LR
comp=Z,5.0nm,22.0s
PMSA Palmer Station 122.51 210 PFAKE 18 06 40.0 +8.6
PMSA LR LR
comp=Z,2µm,21.0s
WRA Warramunga Arr 125.83 85 PKP **PKPdf 18 06 37.8 -1.5**
WRA PP **PP 18 08 30.1 -2.2**
WRA Warramunga Arr 125.83 85 PKP **PKPdf 18 06 37.8 -1.5**
comp=Z,2.2nm,1.1s,baz=299,slow=2.9,SNR=8.8
WRA PP **PP 18 08 30.1 -2.2**
comp=Z,1.4nm,1.1s,baz=305,slow=7.8,SNR=4.5
WRA Warramunga Arr 125.83 85 PP PP 18 08 30.0 -2.2
WRAB Tennant Creek 125.83 85 ePKIKP **PKPdf 18 06 37.8 -1.5**
WRAB MLR MLR
comp=Z,436nm,22.0s
WRAB Tennant Creek 125.83 85 ePKPdf **PKPdf 18 06 37.8 -1.5**
WRAB LR LR
comp=Z,436nm,22.0s
WRAB Tennant Creek 125.83 85 ePKIKP **PKPdf 18 06 37.8 -1.5**
ASAR Alice Springs 127.75 89 PKP **PKPdf 18 06 41.8 -1.1**
ASAR Alice Springs 127.75 89 PKP **PKPdf 18 06 41.8 -1.1**
comp=Z,1.2nm,0.7s,baz=308,slow=1.6,SNR=14
ASAR Alice Springs 127.75 89 PKIKP **PKPdf 18 06 41.8 -1.1**
PMG Port Moresby 127.91 65 PKPdf **PKPdf 18 06 44.5 +1.1**
PMG LR LR
comp=Z,637nm,20.0s
PMG Port Moresby 127.91 65 PKIKP **PKPdf 18 06 44.5 +1.1**
QSPA South Pole Qui 132.17 180 PFAKE 18 07 00.0 +10
QSPA LR LR
comp=Z,1µm,22.0s
TARA Tarawa 132.73 29 PFAKE 18 07 00.0 +7.4
TARA LR LR
comp=Z,2µm,21.0s
CTA Charters Tower 134.63 76 PKP **PKPdf 18 06 58.1 +2.2**
CTA Charters Tower 134.63 76 PKP **PKPdf 18 06 58.1 +2.2**
comp=Z,4.1nm,0.9s,baz=57,slow=1.9,SNR=3.1
CTA Charters Tower 134.63 76 ePKIKP **PKPdf 18 06 58.2 +2.2**
CTAO Charters Tower 134.63 76 PFAKE 18 07 10.0 +14
CTAO LR LR
comp=Z,494nm,20.0s
HNR Honiara 135.99 52 PFAKE 18 07 10.0 +11
HNR LR LR
comp=Z,861nm,19.0s
STKA Stephens Creek 137.91 93 PKPpre PKPpre 18 06 52.2
STKA ePKPpre PKPpre 18 06 54.8
STKA PKP **PKPdf 18 07 00.5 -1.2**
STKA Stephens Creek 137.91 93 PKhKP PKPpre 18 06 52.2
comp=Z,2.8nm,0.9s,baz=255,slow=10,SNR=3.8
STKA PKP **PKPdf 18 07 00.5 -1.2**
comp=Z,3.0nm,0.7s,baz=279,slow=4.8,SNR=5.1
DRV Dumont d'Urvil 142.29 148 L L 18 48 00.0
VNDA Vanda 142.38 169 PKPpre PKPpre 18 07 04.0
VNDA PKP **PKPdf 18 07 08.1 -0.4**
VNDA Vanda 142.38 169 PKhKP PKPpre 18 07 04.0
comp=Z,0.9nm,0.6s,baz=266,slow=9.2,SNR=3.1
VNDA PKP **PKPdf 18 07 08.1 -0.4**
comp=Z,1.2nm,0.7s,baz=300,slow=1.4,SNR=5.6
SBA Scott Base 142.74 171 PFAKE 18 07 20.0 +11
SBA LR LR
comp=Z,931nm,20.0s
CAN Canberra 144.97 94 PFAKE 18 07 20.0 +5.7
CAN LR LR
comp=Z,582nm,20.0s
TAU Tasmania Unive 146.36 107 ePKIKP **PKPdf 18 07 15.1 -1.3**
TAU MLR MLR
comp=Z,558nm,19.0s
TAU Tasmania Unive 146.36 107 ePKPdf **PKPdf 18 07 15.1 -1.3**
TAU LR LR
comp=Z,558nm,19.0s
PMOR Pomariorio Ree 148.40 324 ePKPbc **PKPdf 18 07 20.6 +0.1**
comp=Z,106nm,1.2s
DZM Mont Dzumac 149.70 57 ePKPbc **PKPdf 18 07 23.9 +1.2**
comp=Z,220nm,1.5s
DZM eLR LR 18 56 50.2
comp=Z,944nm,22.1s
DZM Mont Dzumac 149.70 57 ePKPbc **PKPbc 18 07 28.3 +1.0**
DZM Mont Dzumac 149.70 57 ePKPbc **PKPbc 18 07 28.3 +1.0**
AFI Afiamalu 151.33 11 ePKPbc **PKPbc 18 07 31.7 +0.3**
AFI ePKPab **PKPab 18 07 37.5 -1.8**
AFI LR LR
comp=Z,2µm,19.0s
AFI Afiamalu 151.33 11 PKPbc **PKPbc 18 07 32.0 +0.7**
comp=Z,12nm,0.4s,baz=286,slow=6.1,SNR=5.9
AFI PKPab **PKPab 18 07 37.5 -1.8**
comp=Z,17nm,0.4s,baz=320,slow=3.6,SNR=6.3
PPT Papeete 151.40 324 PKPab **PKPab 18 07 42.0 +2.5**
PPT Papeete 151.40 324 PKPab **PKPab 18 07 42.0 +2.5**
comp=Z,14nm,0.4s,baz=63,slow=20,SNR=3.6
PPT Papeete 151.40 324 PKPab **PKPab 18 07 42.0 +2.5**
PPT2 Papeete2 151.42 324 ePKPbc **PKPdf 18 07 28.2 +2.8**
comp=Z,57nm,1.3s
PPT2 eLR LR 18 57 48.5
comp=Z,1µm,24.2s
TVO Taravao 151.45 324 ePKPbc **PKPdf 18 07 26.2 +0.8**
comp=Z,78nm,0.9s
MSVF Nonsavu 152.19 33 PFAKE 18 07 40.0 -2.9
MSVF LR LR
comp=Z,3µm,19.0s
TBI Tubuai 156.34 318 eLR LR 19 00 05.2
comp=Z,971nm,22.0s
RAO Raoul Island 164.04 39 PFAKE 18 07 50.0 +9.5
RAO LR LR
comp=Z,1µm,21.0s

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*IDC **07** 18:11:53.5±0.8,22.96N×125.13E, h0km, mb3.6/10, mb1 3.8/12, mb1mx3.7/26, mbtmp3.6/12, ML3.2/2, Error ellipse: s-maj=26.1km s-min=16.9km az=75.0*
*ISCJB **07** 18:11:54.2±0.5,23.02N±0.03×125.15E±0.04, h24km, mb3.5/10, Error ellipse: s-maj=5.2km s-min=4.4km az=27.7*
*JMA **07** 18:11:57.4±0.2,23.07N×124.98E, h56km, M3.7*
ISC 07 18:11:57.0±0.8,23.09N±0.06×125.11E±0.05, h24km, n32, σ1§68/44, mb3.7/10, 1D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKRS	**Kuro-shima**	**1.53**	**319**	P	**Pn**	**18 12 22.2**	**-0.6**
JKRS				S	**Sn**	**18 12 40.5**	**-1.4**
HATJ	**Hateruma jima**	**1.54**	**309**	P	**Pn**	**18 12 21.9**	**-1.0**
HATJ				S	**Sn**	**18 12 39.2**	**-3.0**
JIJ	**Ishigaki jima**	**1.55**	**325**	P	**Pn**	**18 12 22.3**	**-0.8**
JIJ				S	**Sn**	**18 12 40.3**	**-2.1**
JTJ	**Tarama**	**1.59**	**346**	P	**Pn**	**18 12 23.7**	**+0.1**
JTJ				S	**Sn**	**18 12 43.6**	**+0.2**
JOGS	**Gusukube**	**1.69**	**9**	P	**Pn**	**18 12 25.4**	**+0.5**
JOGS				eS	**Sn**	**18 12 46.1**	**+0.3**
JMJ	**Miyako jima 2**	**1.73**	**5**	P	**Pn**	**18 12 26.3**	**+0.8**
JMJ				S	**Sb**	**18 12 47.9**	**-1.4**
IRIF	**Iriomote-Funau**	**1.77**	**315**	P	**Pn**	**18 12 25.3**	**-0.8**
IRIF				S	**Sn**	**18 12 46.3**	**-1.7**
YOJ	**Yonaguni jima**	**2.36**	**306**	P	**Pn**	**18 12 33.4**	**-0.8**
YOJ				S	**Sn**	**18 12 59.4**	**-3.1**
JKE	**Kume jima 2**	**3.56**	**25**	P	**Pn**	**18 12 50.1**	**-0.7**
JKE				S	**Sn**	**18 13 30.6**	**-1.6**
JJT2	**Tamagusuku 2**	**3.87**	**38**	P	**Pn**	**18 12 54.9**	**-0.1**
JJT2				S	**Sn**	**18 13 38.5**	**-1.2**
JAGN	**Aguni-jima**	**3.99**	**29**	P	**Pn**	**18 12 56.1**	**-0.5**
JAGN				eS	**Sn**	**18 13 40.9**	**-1.7**
JOW	**Kunigami**	**4.70**	**37**	P	**Pn**	**18 13 06.3**	**-0.2**
JOW				S	**Sn**	**18 13 57.2**	**-3.1**
JIH	**Iheya**	**4.71**	**33**	P	**Pn**	**18 13 05.8**	**-0.7**
JIH				S	**Sn**	**18 13 57.1**	**-3.2**
JTK	**Tokunoshima**	**5.82**	**36**	P	**Pn**	**18 13 21.2**	**-0.6**
JTK				eS	**Sn**	**18 14 22.7**	**-5.2**
JMZ	**Minamidaito 2**	**6.19**	**63**	P	**Pn**	**18 13 24.1**	**-2.8**
JMZ				eS	Sn	18 14 28.8	-8.2
JAMN	**Amaminishikomi**	**6.31**	**35**	P	**Pn**	**18 13 26.8**	**-1.7**
PALP	**Palanan**	**6.50**	**203**	⇓P	Pn	18 13 27.3	-3.9
PALP				eS	Sn	18 14 34.7	-10
ABRA	**Dolores**	**6.80**	**218**	eP	Pn	18 13 32.3	-3.1
CAUP	**Cauayan**	**6.85**	**207**	eP	**Pn**	**18 13 33.8**	**-2.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BALP	Baler	8.03	205	eP	Pn	18 13 49.4	-2.8
KSRS	Korea Array	14.52	9	Pn	Pn	18 15 21.2	+0.3
	0.1nm,0.3s,baz=185,slow=12,SNR=4.8						
MJAR	Matsushiro Arr	17.55	37	P	P	18 16 01.8	+0.8
	0.1nm,0.3s,baz=214,slow=15,SNR=3.4						
CMAR	Chiang Mai Arr	24.88	264	P	P	18 17 19.2	+1.1
	0.5nm,0.9s,baz=71,slow=6.8,SNR=4.0						
SONM	Songino Array	28.87	333	P	P	18 17 54.6	+0.8
	0.2nm,0.4s,baz=148,slow=9.7,SNR=4.1						
MKAR	Makanchi Array	41.64	315	P	P	18 19 44.4	+1.0
	0.5nm,0.4s,baz=100,slow=9.0,SNR=27						
ZALV	Zalesovo Beam	43.14	326	P	P	18 19 55.6	+0.2
	1.2nm,0.6s,baz=120,slow=8.7,SNR=8.3						
WRA	Warramunga Arr	43.71	167	P	P	18 19 59.0	-1.3
	0.7nm,0.4s,baz=347,slow=9.0,SNR=9.8						
ASAR	Alice Springs	47.25	169	P	P	18 20 27.6	-0.8
	0.5nm,0.5s,baz=353,slow=8.2,SNR=21						
ASAR				PcP	PcP	18 21 58.9	-0.6
	0.6nm,0.7s,baz=342,slow=3.0,SNR=5.1						
ILAR	Eielson Array	68.53	27	P	P	18 22 58.9	+1.7
	0.3nm,0.8s,baz=259,slow=5.6,SNR=3.8						
FINES	FINESS Array B	74.19	330	P	P	18 23 32.1	+0.7
	0.4nm,0.4s,baz=195,slow=34,SNR=3.1						
BRTR	Keskin Array B	76.71	308	P	P	18 23 47.4	+0.9
	0.6nm,0.6s,baz=101,slow=6.4,SNR=4.1						
YKA	Yellowknife Ar	82.55	24	P	P	18 24 18.6	+1.0
	0.2nm,0.4s,baz=300,slow=5.3,SNR=6.2						

*CSEM **07** 18:18:19.0, 42.30N×13.46E, h9km, After ROM*

ROM 07 18:18:19.0±0.1**, 42.30N×13.46E, h9**km±1km**, Ml1.7**/3**, Error ellipse: s-maj=1.8km s-min=1.3km az=54.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	321	Pg	Pg	18 18 21.7	+0.5
AQU				Sg	Sg	18 18 23.2	+0.3
AQU	L'Aquila	0.07	321	Pg	Pg	18 18 21.7	+0.5
AQU				Sg	Sg	18 18 23.2	+0.3
FAGN	Fagnano	0.10	110	Pg	Pg	18 18 22.0	+0.5
FAGN				Sg	Sg	18 18 24.0	+0.7
FAGN	Fagnano	0.10	110	Pg	Pg	18 18 22.0	+0.5
FAGN				Sg	Sg	18 18 24.0	+0.7
CAMP	Campotosto	0.24	350	Pg	Pg	18 18 24.5	+0.4
CAMP				Sg	Sg	18 18 28.2	+0.6
CAMP	Campotosto	0.24	350	Pg	Pg	18 18 24.5	+0.4
CAMP				Sg	Sg	18 18 28.2	+0.6
FIAM	Fiamignano	0.26	263	Pg	Pg	18 18 25.1	+0.7
FIAM				Sg	Sb	18 18 29.8	-0.9
FIAM	Fiamignano	0.26	263	Pg	Pg	18 18 25.1	+0.7
FIAM				Sg	Sb	18 18 29.8	-0.9
PTQR	Pietraquaria	0.28	190	Pg	Pg	18 18 25.3	+0.6
PTQR				Sg	Sg	18 18 29.7	+1.1
PTQR	Pietraquaria	0.28	190	Pg	Pg	18 18 25.3	+0.6
PTQR				Sg	Sg	18 18 29.7	+1.1
VCEL	Villa Celiera	0.29	71	Pg	Pb	18 18 26.9	+0.3
	101nm,0.3s						
VCEL	Villa Celiera	0.29	71	Pg	Pb	18 18 26.9	+0.3
	101nm,0.3s						
TERO	Teramo	0.34	18	Pg	Pg	18 18 26.1	+0.2
TERO				Sg	Sg	18 18 31.3	+0.8
TERO	Teramo	0.34	18	Pg	Pg	18 18 26.1	+0.2
TERO				Sg	Sg	18 18 31.3	+0.8
INTR	Introdacqua	0.43	131	Pg	Pg	18 18 28.1	+0.5
INTR				Sg	Sb	18 18 35.4	-0.3
INTR	Introdacqua	0.43	131	Pg	Pg	18 18 28.1	+0.5
INTR				Sg	Sb	18 18 35.4	-0.3
LNSS	Leonessa	0.44	314	Pg	Pb	18 18 28.7	-0.4
LNSS				Sg	Sb	18 18 35.9	0.0
	51nm,0.5s						
LNSS	Leonessa	0.44	314	Pg	Pb	18 18 28.7	-0.4
LNSS				Sg	Sb	18 18 35.9	0.0
	51nm,0.5s						
VVLD	Villa Vallelon	0.44	165	Pg	Pg	18 18 27.9	+0.1
VVLD				Sg	Sb	18 18 34.9	-1.0
VVLD	Villa Vallelon	0.44	165	Pg	Pg	18 18 27.9	+0.1
VVLD				Sg	Sb	18 18 34.9	-1.0
NRCA	Norcia	0.59	334	Pg	Pg	18 18 30.5	-0.2
NRCA				Sg	Sb	18 18 40.0	-0.3
	32nm,0.1s						
NRCA	Norcia	0.59	334	Pg	Pg	18 18 30.5	-0.2
NRCA				Sg	Sb	18 18 40.0	-0.3
	32nm,0.1s						

*DDA **07** 18:26:29.3, 36.79N×26.37E, h1km, MD3.4*
*IDC **07** 18:26:31.9±2.2, 37.39N×26.01E, h0km, mb3.3/2, mb1 3.2/3, mb1mx3.0/26, mbtmp3.2/3, ML2.6/1, Error ellipse: s-maj=194.9km s-min=24.4km az=147.0*
*ATH **07** 18:26:32.1, 36.98N×26.64E, h20km, MD3.2/8*
*ISK **07** 18:26:33.8, 36.85N×26.54E, h61km, MD3.6*
*CSEM **07** 18:26:33.0±0.2, 36.87N×26.57E, h8km, MD3.6, Error ellipse: s-maj=4.4km s-min=3.1km az=170.0*
*ISCJB **07** 18:26:33.2±0.9, 36.89N±0.03×26.54E±0.03, h13km±7km, mb3.2/2, Error ellipse: s-maj=5.0km s-min=4.0km az=169.8*

ISC 07 18:26:33.0±1.2**, 36.88N**±0.03×**26.53E**±0.02**, h7**km±9km**, n87,** σ0s92/102**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.75	75	i P	Pg	18 26 46.9	-0.6
BDRM				i S	Sg	18 26 57.2	-0.1
BDRM	Kayabasi	0.75	75	i P	Pg	18 26 46.9	-0.6
APE	Apeiranthos	0.82	284	ePG	Pn	18 26 50.5	-0.7
APE				eSG	Sn	18 27 02.7	-0.9
APE	Apeiranthos	0.82	284	ePN	Pb	18 26 49.7	0.0
APE				eSN	Sb	18 27 01.8	+0.7
APE	Apeiranthos	0.82	284	ePn	Pb	18 26 49.7	0.0
APE	Apeiranthos	0.82	284	ePg	Pn	18 26 50.5	-0.7
APE				eSn	Sb	18 27 01.8	+0.7
APE				eSg	Sn	18 27 02.7	-0.9
GCAM	G?zelcaml?	0.99	34	i P	Pg	18 26 50.7	-1.4
GCAM				i S	Sn	18 27 06.5	-1.2
GCAM	G?zelcaml?	0.99	34	i P	Pg	18 26 50.7	-1.4
GCAM				i S	Sn	18 27 06.5	-1.2
MLSB	Milas	1.08	67	ePN	Pg	18 26 53.3	-0.4
MLSB				eSN	Sb	18 27 08.3	-0.1
MLSB	Milas	1.08	67	ePn	Pg	18 26 53.3	-0.4
MLSB				eSn	Sb	18 27 08.3	-0.1
AYDN	Tasoluk	1.33	54	i P	Pn	18 26 57.5	-0.6
AYDN				i S	Sg	18 27 19.2	+3.4
AYDN	Tasoluk	1.33	54	i P	Pn	18 26 57.5	-0.6
KARP	Karpathos	1.42	159	ePN	Pn	18 26 59.5	+0.1
KARP				eSN	Sg	18 27 20.0	+1.2
KARP	Karpathos	1.42	159	ePn	Pn	18 26 59.5	+0.1
KARP				eSn	Sg	18 27 20.0	+1.2
YER	Yerkesik	1.43	79	ePN	Pn	18 26 58.3	-1.1
YER	Yerkesik	1.43	79	ePn	Pn	18 26 58.3	-1.1
ARG	Arkhangelos	1.45	117	ePN	Pn	18 26 58.8	-0.8
ARG				eSN	Sb	18 27 18.8	-0.1
ARG	Arkhangelos	1.45	117	ePn	Pn	18 26 58.8	-0.8
URLA	Izmir	1.48	2	i P	Pn	18 26 59.3	-0.9
URLA				i S	Sg	18 27 20.4	-0.2
URLA	Izmir	1.48	2	i P	Pn	18 26 59.3	-0.9
URLA				i S	Sg	18 27 20.4	-0.2
CHOS	Chios island	1.55	346	ePN	Pn	18 26 59.9	-1.3
CHOS	Chios island	1.55	346	ePn	Pn	18 26 59.9	-1.3
BLCB	Balcova	1.56	15	ePN	Pn	18 27 00.8	-0.4
BLCB	Balcova	1.56	15	ePn	Pn	18 27 00.8	-0.4
IZM	Izmir	1.62	21	ePN	Pn	18 27 01.4	-0.7
IZM	Izmir	1.62	21	ePn	Pn	18 27 01.5	-0.7
TURN	Turunc	1.66	90	i P	Pn	18 26 57.9	-4.7
TURN				i S	Sn	18 27 15.1	-9.1
TURN	Turunc	1.66	90	i P	Pn	18 26 57.9	-4.7
NPS	Neapolis	1.78	205	ePN	Pb	18 27 05.3	-0.7
NPS	Neapolis	1.78	205	ePn	Pb	18 27 05.3	-0.7
FETY	Fethiye	2.06	96	ePN	Pn	18 27 07.4	-0.8
FETY	Fethiye	2.06	96	ePn	Pn	18 27 07.4	-0.8
DENT	Denizli	2.18	66	ePN	Pn	18 27 09.2	-0.6
DENT	Denizli	2.18	66	ePn	Pn	18 27 09.2	-0.6
AKHS	Akhisar	2.24	27	i P	Pg	18 27 15.7	-0.3
AKHS				i S	Sg	18 27 47.9	+2.9
AKS	Akhisar	2.24	27	ePN	Pn	18 27 10.3	-0.3
AKS	Akhisar	2.24	27	ePn	Pn	18 27 10.3	-0.3
KULA	Kula-Manisa	2.35	45	ePN	Pn	18 27 11.6	-0.5
KULA	Kula-Manisa	2.35	45	ePn	Pn	18 27 11.6	-0.5
PRK	Paraskevi	2.37	355	ePB	Pn	18 27 10.8	-1.6
PRK	Paraskevi	2.37	355	ePb	Pn	18 27 10.8	-1.6
VAM	Vamos	2.39	233	ePB	Pb	18 27 14.8	-1.6
VAM	Vamos	2.39	233	ePb	Pb	18 27 14.8	-1.6
PTL	Penteli	2.42	300	ePN	Pn	18 27 13.2	+0.1
PTL	Penteli	2.42	300	ePn	Pn	18 27 13.2	+0.1
ATH	Athens Observa	2.49	297	ePN	Pn	18 27 14.2	+0.2
ATH	Athens Observa	2.49	297	ePn	Pn	18 27 14.2	+0.2
NAIG	Nisos Aigina	2.58	291	ePN	Pn	18 27 16.0	+0.8
NAIG	Nisos Aigina	2.58	291	ePn	Pn	18 27 16.0	+0.8
DID	Didima	2.70	284	ePN	Pn	18 27 17.6	+0.6
DID	Didima	2.70	284	ePn	Pn	18 27 17.6	+0.6
ELL	Elmali	2.71	92	ePN	Pn	18 27 16.7	-0.5
ELL	Elmali	2.71	92	ePn	Pn	18 27 16.7	-0.5
DEMI	Demirci	2.77	38	i P	Pg	18 27 25.5	-0.6
KHL	Karahalli	2.78	58	ePN	Pn	18 27 18.1	0.0
KHL	Karahalli	2.78	58	ePn	Pn	18 27 18.1	0.0
EZN	Ezine	2.95	357	ePN	Pn	18 27 20.7	+0.4
EZN	Ezine	2.95	357	ePn	Pn	18 27 20.7	+0.4
BALB	Balikesir	2.95	21	ePN	Pn	18 27 20.8	+0.4
BALB	Balikesir	2.95	21	ePn	Pn	18 27 20.8	+0.4
LTK	Loutraki	3.06	293	ePN	Pn	18 27 22.2	+0.4
LTK	Loutraki	3.06	293	ePn	Pn	18 27 22.2	+0.4
GONE	Gonen-Balikesi	3.29	16	ePN	Pn	18 27 24.5	-0.5
GONE	Gonen-Balikesi	3.29	16	ePn	Pn	18 27 24.5	-0.5
BCK	Bucak	3.29	79	ePN	Pn	18 27 24.8	-0.3
BCK	Bucak	3.29	79	ePn	Pn	18 27 24.8	-0.3
TVSB	Tavsanli	3.45	41	ePN	Pn	18 27 27.4	+0.1
TVSB	Tavsanli	3.45	41	ePn	Pn	18 27 27.4	+0.1
LPK	Lapseki	3.49	3	ePN	Pn	18 27 28.1	+0.3
LPK	Lapseki	3.49	3	ePn	Pn	18 27 28.1	+0.3
GUR	Goura	3.50	289	ePN	Pn	18 27 29.2	+1.2
GUR	Goura	3.50	289	ePn	Pn	18 27 29.2	+1.2
GELI	Tayfur-Gelibol	3.51	359	ePN	Pn	18 27 27.9	-0.2
GELI	Tayfur-Gelibol	3.51	359	ePn	Pn	18 27 27.9	-0.2
KRBG	Karabiga-Canak	3.56	9	ePN	Pn	18 27 28.7	0.0
KRBG	Karabiga-Canak	3.56	9	ePn	Pn	18 27 28.7	0.0
RKY	Sarkoy-Tekirda	3.84	7	ePN	Pn	18 27 32.1	-0.5
RKY	Sarkoy-Tekirda	3.84	7	ePn	Pn	18 27 32.1	-0.5
ENEZ	Enez	3.86	356	ePN	Pn	18 27 32.6	-0.2
ENEZ	Enez	3.86	356	ePn	Pn	18 27 32.6	-0.2
ARMT	Armutlu	4.11	26	ePN	Pn	18 27 37.1	+0.9
ARMT	Armutlu	4.11	26	ePn	Pn	18 27 37.1	+0.9
CAVI	Cavuskoy	4.21	37	ePN	Pn	18 27 38.7	+1.0
CAVI	Cavuskoy	4.21	37	ePn	Pn	18 27 38.7	+1.0
BRTR	Keskin Array B	6.27	61	Pn	Pn	18 28 08.6	+2.5
	0.1nm,0.3s,baz=254,slow=14,SNR=4.1						
BRTR				Sn	Sn	18 29 20.5	+2.4
	0.1nm,0.3s,baz=276,slow=14,SNR=2.8						
TORD	Torodi Ar. Bea	32.45	230	P	P	18 33 03.9	-0.1
	0.2nm,0.5s,baz=38,slow=8.5,SNR=5.2						
MKAR	Makanchi Array	41.91	58	P	P	18 34 24.8	+0.7
	0.4nm,0.7s,baz=272,slow=7.0,SNR=4.9						

*BJI **07** 18:37:59.0, 45.71N×152.58E, h40km, mB5.0/12, mb4.5/24, Ms4.5/8, Ms7 4.3/8*
*JMA **07** 18:38:02.0±0.5, 46.07N×152.28E, h30km, M4.8*
*MOS **07** 18:38:02.8±0.9, 46.05N×151.93E, h38km, mb4.8/27, Error ellipse: s-maj=9.9km s-min=6.0km az=84.7*
*ISCJB **07** 18:38:03.8±0.5, 45.99N±0.04×151.92E±0.03, h48km±5km, mb4.5/70, MS4.2/3, Error ellipse: s-maj=6.7km s-min=3.3km az=164.4*
*SKHL **07** 18:38:04.4±1.4, 46.02N×152.26E, h62km±15km, mb4.9/6, Ms4.3/1, msh5.5/1*
*NEIC **07** 18:38:05.5±0.6, 46.08N×151.86E, h48km±5km, mb4.7/36, Error ellipse: s-maj=8.8km s-min=4.6km az=149.0*
*IDC **07** 18:38:07.3±2.5, 46.16N×151.84E, h63km±22km, mb3.8/19, mb1 4.1/24, mb1mx4.0/28, mbtmp3.9/24, MS4.1/1, Ms1 4.1/1, ms1mx3.2/44, Error ellipse: s-maj=18.2km s-min=11.6km az=153.0*

ISC 07 18:38:04.4±0.3**, 46.06N**±0.06×**151.91E**±0.04**, h39**km±2km**, n461,** σ1s10/472**, mb4.5**/70**, MS4.2**/3**, 94C-104D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.95	255	ePN	Pn	18 38 51.2	+2.6
KUR				eS	Sn	18 39 25.3	+2.6
KUR				pmax	pmax		
	comp=Z,340nm,0.7s						
KUR				pmax	pmax		
	comp=N,90nm,0.3s						
KUR				pmax	pmax		
	comp=E,190nm,1.0s						
KUR				smax	smax		
	comp=N,1μm,0.5s						
KUR				smax	smax		
	comp=E,970nm,0.8s						
KUR				smax	smax		
	comp=N,5μm,2.0s						
KUR	Kuril'sk	2.95	255	eP	Pn	18 38 51.2	+2.6
KUR				AMB	AMB	18 38 51.8	
	comp=N,340nm,0.7s						
KUR				AMB	AMB	18 38 51.8	
	comp=N,190nm,1.0s						
KUR				AMB	AMB	18 38 51.8	
	comp=N,90nm,0.3s						
KUR				eS	Sn	18 39 25.3	+2.6
KUR				A	A	18 39 30.0	
	comp=N,1μm,0.7s						
KUR				A	A	18 39 30.0	
	comp=N,970nm,0.7s						
KUR				A	A	18 39 34.0	
	comp=N,5μm,2.0s						
YUK	Yuzh-Kuril'sk	4.74	247	i PN	Pn	18 39 16.0	+2.8
YUK				i S	Sn	18 40 09.9	+3.1
YUK				pmax	pmax		
	comp=E,77nm,0.4s						
YUK				pmax	pmax		
	comp=Z,211nm,0.4s						
YUK				pmax	pmax		
	comp=N,39nm,0.2s						
YUK				smax	smax		
	comp=E,456nm,0.6s						
YUK				smax	smax		
	comp=N,131nm,0.6s						
YUK	Yuzh-Kuril'sk	4.74	247⇓	iP	Pn	18 39 16.0	+2.8
YUK				AMB	AMB	18 39 22.7	
	comp=N,39nm,0.2s						
YUK				AMB	AMB	18 39 22.7	
	comp=N,77nm,0.4s						
YUK				AMB	AMB	18 39 22.7	
	comp=N,211nm,0.4s						
YUK				i S	Sn	18 40 09.9	+3.1
YUK				A	A	18 40 22.5	
	comp=N,131nm,0.6s						
YUK				A	A	18 40 22.5	
	comp=N,456nm,0.6s						
NEM2	Nemuro 2	5.15	241	P	Pn	18 39 19.2	+0.3
NEM2				eS	Sn	18 40 16.7	-0.3
JRA	Rausu	5.26	249	P	Pn	18 39 23.9	+3.6
JRA				eS	Sn	18 40 25.0	+5.4
SKR	Severo-Kuril's	5.41	30	ePN	Pn	18 39 20.5	-1.9
SKR				pmax	pmax		
	comp=Z,80μm,0.5s						
SKR				pmax	pmax		
	comp=N,60nm,0.5s						
SKR	Severo-Kuril's	5.41	30	eP	Pn	18 39 20.5	-1.9
SKR				AMB	AMB	18 39 22.4	
	comp=N,60nm,0.5s						
SKR				AMB	AMB	18 39 22.4	
	comp=N,80nm,0.5s						
SKR				eS	Sn	18 40 19.0	-4.4
SKR				A	A	18 40 22.5	
	comp=N,220nm,1.0s						
SKR				A	A	18 40 22.5	
	comp=N,200nm,0.7s						
SKR				A	A	18 40 22.5	
	comp=N,100nm,0.7s						
SKR				AMS	AMS	18 46 16.0	
	comp=N,3μm,18.0s						
SKR				AMS	AMS	18 46 16.0	
	comp=N,2μm,18.0s						
SKR				AMS	AMS	18 46 16.0	
	comp=N,3μm,18.0s						
JNK	Nakash	5.68	247	P	Pn	18 39 28.3	+2.2
JNK				eS	Sn	18 40 32.7	+2.7
JAK	Akkeshi	5.99	242	P	Pn	18 39 30.9	+0.5
JAK				eS	Sn	18 40 38.4	+0.7
JTKR	Abashiri--Toko	6.04	253	P	Pn	18 39 34.5	+3.4
YSS	Yuzh-Sakhalins	6.38	281⇑	iPN	Pn	18 39 40.9	+5.2
YSS				eS	Sn	18 40 52.8	+5.6
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS	Yuzh-Sakhalins	6.38	281⇑	iP	Pn	18 39 40.9	+5.2
YSS				AMB	AMB	18 39 42.0	
	comp=Z,30nm,0.8s						
YSS				eS	Sn	18 40 52.8	+5.6
JMP	Maruseppu	6.39	254	P	Pn	18 39 40.1	+4.1
JAR	Ashorobuto	6.42	247	P	Pn	18 39 39.0	+2.7
JAR				eS	Sn	18 40 51.6	+3.3
JOB	Onbets	6.58	244	P	Pn	18 39 39.7	+1.3
JOB				eS	Sn	18 40 52.7	+0.6
JKK2	Kamakawa 2	6.85	255	P	Pn	18 39 46.2	+3.9
ASAJ	Asahikawa	6.87	257	ePn	Pn	18 39 46.7	+4.3
	comp=Z,52nm,1.0s						
ASAJ				S	Sn	18 41 15.7	+16
ASAJ	Asahikawa	6.87	257	P	Pn	18 39 47.0	+4.5
ASAJ	Asahikawa	6.87	257	P	Pn	18 39 46.7	+4.3
	comp=Z,7.2nm,0.3s,baz=93,slow=13,SNR=99						
ASAJ				S	Sn	18 41 15.7	+16
	baz=207,slow=34,SNR=1.5						
JCH	Churui	7.03	244	P	Pn	18 39 45.2	+0.6
JCH				eS	Sn	18 41 00.1	-3.0
JFR	Furan	7.25	250	P	Pn	18 39 50.1	+2.4
UGL	Uglegorsk	7.31	298	S	Sn	18 41 16.5	+6.5
UGL				pmax	pmax		
	comp=Z,57nm,0.4s						
UGL				smax	smax		
	comp=N,49nm,0.4s						
UGL				smax	smax		
	comp=E,130nm,0.4s						
JAB	Ashibetsu	7.35	253	P	Pn	18 39 53.6	+4.6
JEM	Erimo	7.49	240	P	Pn	18 39 53.1	+2.2
ERM	Erimo	7.49	240	ePN	Pn	18 39 53.3	+2.4
ERM				pmax	pmax		
	comp=Z,66nm,0.6s						
ERM	Erimo	7.49	240	ePn	Pn	18 39 53.3	+2.4
	comp=Z,66nm,0.6s						
JBT2	Biratori 2	7.58	248	P	Pn	18 39 53.4	+1.2
JNBK	Urakawa-nobuka	7.58	243	P	Pn	18 39 52.4	+0.1
TYV	Tymovskoe	7.80	311	eP	Pn	18 39 59.0	+3.8
TYV				AMB	AMB	18 40 09.0	
	comp=Z,22nm,1.0s						
TYV				AMB	AMB	18 40 09.0	
	comp=Z,44nm,1.0s						
PEA0B	Petropavlovsk-	8.00	26	ePn	Pn	18 39 59.2	+1.4
PETK	Petropavlovsk-	8.00	26	PN	Pn	18 39 58.7	+0.8
PETK				S	Sn	18 41 40.5	+14
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	8.00	26	P	Pn	18 39 58.6	+0.8
PETK				S	Sn	18 41 40.5	+14
PETK	Petropavlovsk-	8.00	26	P	Pn	18 39 58.6	+0.8
	comp=Z,1.0nm,0.3s,baz=179,slow=12,SNR=16						
PETK				S	Sn	18 41 40.5	+14
	comp=Z,0.1nm,0.3s,baz=191,slow=15,SNR=2.3						
JEW	Eniwo	8.14	250	P	Pn	18 40 03.0	+3.1
JEW				eS	Sn	18 41 37.4	+6.8
JNB	Noboribetsu	8.58	249	P	Pn	18 40 07.2	+1.3
JNB				eS	Sn	18 41 41.5	+0.1
JKB	Kayabe	8.88	246	P	Pn	18 40 10.5	+0.5
JKB				eS	Sn	18 41 44.9	-3.7
JSH	Shimam	9.16	252	P	Pn	18 40 16.5	+2.7
JYM2	Yakumo 2	9.19	249	P	Pn	18 40 15.5	+1.3
JSR	Shiriuchi	9.46	246	P	Pn	18 40 19.1	+1.2
JANG	Nango	9.47	237	P	Pn	18 40 15.8	-2.4
JTM	Tenmabayashi	9.48	240	P	Pn	18 40 17.7	-0.5
JTM				eS	Sn	18 41 56.0	-7.4
JTH	Tanohata	9.56	234	P	Pn	18 40 16.7	-2.7
JOSM	Okushiri--Mats	9.79	250	P	Pn	18 40 23.0	+0.6
NKL	Nikolayevsk	10.16	318	i P	Pn	18 40 32.0	+4.5
NKL				AMB	AMB	18 40 34.0	
	comp=Z,20nm,1.0s						
NKL				AMB	AMB	18 40 34.0	
	comp=Z,35nm,1.0s						
OFUJ	Ofunato	10.27	231	P	Pn	18 40 26.8	-2.3
JRG	Rokugo	10.63	235	P	Pn	18 40 32.2	-1.7
JIO	Ouri	10.90	230	P	Pn	18 40 35.4	-2.2
JIO				eS	Sn	18 42 30.2	-8.0
KLR	Kul'dur	13.95	290	eP	Pn	18 41 20.3	+1.0
MAJO	Matsushiro	13.99	232	eP	Pn	18 41 18.5	-1.5
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MAJO	Matsushiro	13.99	232	ePn	Pn	18 41 18.5	-1.5
	comp=Z,4.5nm,0.4s						
MAT	Matsushiro	13.99	232	P	Pn	18 41 20.1	+0.1
MJAR	Matsushiro Arr	13.99	232	P	Pn	18 41 18.8	-1.2
MJAR	Matsushiro Arr	13.99	232	P	Pn	18 41 18.8	-1.2
	comp=Z,0.3nm,0.3s,baz=29,slow=13,SNR=9.9						
USRK	Ussuriysk Arra	14.18	270	P	Pn	18 41 23.7	+1.3
	comp=Z,0.6nm,0.3s,baz=71,slow=14,SNR=6.2						
FX1	Attu Island--F	15.38	56	P	Pn	18 41 38.9	+0.5
FX1				S	Sn	18 44 16.8	-11
FX1	Attu Island--F	15.38	56	P	Pn	18 41 38.9	+0.5
	comp=Z,2.2nm,0.3s,baz=90,slow=18,SNR=9.6						
FX1				S	Sn	18 44 16.8	-11
	comp=Z,2.7nm,0.3s,baz=36,slow=22,SNR=5.7						
MDJ	Mudanjiang	15.75	273	P	Pn	18 41 43.8	+0.6
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SEY	Seymchan	16.91	1	ceP	Pn	18 41 57.6	-0.2
ZEA	Zeya	17.58	305	eP	Pn	18 42 05.1	-1.0
ZEA				AMB	AMB	18 42 06.7	
	comp=Z,11nm,1.2s						
KSRS	Korea Array	19.79	253	P	Pn	18 42 33.5	+0.5
	comp=Z,0.3nm,0.3s,baz=58,slow=12,SNR=15						
KSAR	Wonju Array Be	19.82	253	P	Pn	18 42 33.5	+0.1
YAK	Yakutsk	20.47	329	eP	P	18 42 38.3	-0.1
YAK				e*PP	pP	18 42 54.2	+6.0
YAK				eS	S	18 46 21.1	-4.0
YAK				e		18 46 47.4	
YAK				e*SS	sS	18 46 55.6	+15
YAK				e		18 53 58.3	
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=E,12nm,1.1s						
YAK				smax	smax		
	comp=N,66nm,4.1s						
YAK				smax	smax		
	comp=E,49nm,4.4s						
YAK	Yakutsk	20.47	329	eP	P	18 42 37.4	-0.9
	comp=E,33nm,1.0s						
BILL	Bilibino	23.26	14	P	P	18 43 09.0	+1.1
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BJI	Beijing	26.64	270	P	P	18 43 39.1	0.0
BJI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC	Hu-ho-hao-te	29.51	275	eP	P	18 44 04.3	-0.6
HHC				pP	pP	18 44 13.9	-1.9
HHC				sP	sP	18 44 18.0	-2.5
HHC				PP	PnPn	18 45 00.2	+0.1
HHC				S	S	18 48 55.2	-1.7
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,880nm,7.6s						
HHC				LR	LR		
	comp=N,560nm,16.9s						
HHC				LR	LR		
	comp=E,540nm,16.3s						
HHC				LR	LR		
	comp=Z,690nm,16.7s						
SONM	Songino Array	30.78	290	P	P	18 44 16.6	+0.5
SONM				PcP	PcP	18 47 12.8	+0.2
SONM	Songino Array	30.78	290	P	P	18 44 16.6	+0.5
	comp=Z,0.6nm,1.1s,baz=83,slow=13,SNR=3.5						
SONM				PcP	PcP	18 47 12.8	+0.2
	comp=Z,0.1nm,0.3s,baz=39,slow=2.8,SNR=3.6						
SML	Sawmill	37.05	43	eP	P	18 45 09.9	-0.2
SML				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SML	Sawmill	37.05	43	eP	P	18 45 09.9	-0.2
	comp=Z,3.0nm,0.9s						
LZH	Lanzhou	37.07	272	eP	P	18 45 12.0	+1.2
LZH				pP	pP	18 45 22.5	+0.7
LZH				sP	sP	18 45 26.6	+0.1
LZH				ePP	PnPn	18 46 38.7	+2.5
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH				pmax	pmax		
	comp=Z,51nm,5.3s						
LZH				LR	LR		
	comp=N,220nm,13.0s						

LZH LR LR
comp=E,230nm,12.5s
LZH LR LR
comp=Z,300nm,17.2s
COLA College 37.20 38 ⇓*i*P P 18 45 12.1 +0.8
ILAR Eielson Array 37.61 38 P **P 18 45 14.7 -0.2**
ILAR Eielson Array 37.61 38 P **P 18 45 14.7 -0.2**
comp=Z,1.0nm,0.8s,baz=266,slow=6.6,SNR=11
GTA Gaotai 38.25 279 *e*P P 18 45 25.3 +4.6
GTA pP pP 18 45 28.8 -2.9
GTA pmax pmax
comp=Z,2.0nm,0.9s
CD2 Chengdu 39.99 265 P **P 18 45 34.1 -1.1**
CD2 pmax pmax
comp=Z,10.0nm,0.4s
CD2 pmax pmax
comp=Z,120nm,4.7s
GYA Guiyang 40.75 257 *e*P **P 18 45 42.0 +0.4**
GYA pmax pmax
comp=Z,10.0nm,1.0s
ZALV Zalesovo Beam 42.34 306 PcP **PcP 18 47 47.5 +0.6**
ZALV Zalesovo Beam 42.34 306 PcP **PcP 18 47 47.5 +0.6**
comp=Z,0.8nm,0.4s,baz=47,slow=2.6,SNR=9.5
ZALV LR LR 19 04 50.2
comp=Z,233nm,19.1s,baz=90,slow=38
KMI Kunming 44.29 259 P **P 18 46 11.5 +1.0**
KMI pP **pP 18 46 21.4 -0.3**
KMI sP **sP 18 46 25.1 -1.2**
KMI pmax pmax
comp=Z,5.0nm,1.1s
WMQ Urumqi 44.40 291 *e*P **P 18 46 13.0 +2.0**
WMQ pmax pmax
comp=Z,16nm,1.0s
MK31 Makanchi Array 46.52 297 *e*P **P 18 46 26.5 -1.2**
MK31 *e* 18 47 58.6
MK31 Makanchi Array 46.52 297 *e*P **P 18 46 26.5 -1.2**
MK31 *e*PcP **PcP 18 47 58.6 -2.9**
MKAR Makanchi Array 46.52 297 P **P 18 46 26.3 -1.4**
MKAR 18 48 01.8
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 46.52 297 P **P 18 46 26.3 -1.4**
MKAR PcP **PcP 18 48 01.8 +0.2**
MKAR Makanchi Array 46.52 297 P **P 18 46 26.3 -1.4**
comp=Z,0.6nm,0.4s,baz=66,slow=6.3,SNR=23
MKAR PcP **PcP 18 48 01.8 +0.2**
comp=Z,1.2nm,0.7s,baz=63,slow=4.0,SNR=6.1
KURK Kurchatov 47.05 304 *e*P **P 18 46 29.6 -2.1**
KURK pmax pmax
comp=Z,2.0nm,0.7s
KURK Kurchatov 47.05 304 *e*P **P 18 46 29.6 -2.1**
comp=Z,1.7nm,0.7s
LSA Lhasa 49.48 273 P **P 18 46 52.5 +1.2**
CHTO Chiang Mai 51.14 256 *e*P **P 18 47 02.4 -1.0**
CHTO pmax pmax
comp=Z,1.0nm,0.4s
CHTO Chiang Mai 51.14 256 *e*P **P 18 47 02.4 -1.0**
comp=Z,1.5nm,0.4s
CMAR Chiang Mai Arr 51.39 256 P **P 18 47 05.8 +0.5**
CMAR Chiang Mai Arr 51.39 256 P **P 18 47 05.8 +0.5**
comp=Z,0.7nm,0.4s,baz=29,slow=7.7,SNR=9.1
YKA Yellowknife Ar 51.98 36 P **P 18 47 09.7 +0.6**
YKA Yellowknife Ar 51.98 36 P **P 18 47 09.6 +0.6**
comp=Z,1.8nm,0.6s,baz=297,slow=7.1,SNR=35
TAPN Taplejung 53.30 273 *e*P **P 18 47 20.9 +1.1**
comp=Z,3.2nm,0.3s
GUN Gumba 54.23 275 *e*P **P 18 47 27.4 +0.8**
comp=Z,11nm,0.4s
RAMN Ramite 54.32 273 *e*P **P 18 47 27.9 +0.7**
comp=Z,15nm,0.3s
KKN Kakani 54.72 275 *e*P **P 18 47 31.3 +1.3**
comp=Z,8.1nm,0.6s
PKI Pulchoki 54.76 275 *e*P **P 18 47 31.1 +0.7**
comp=Z,4.4nm,0.4s
PKIN Phulchoki 54.77 275 *e*P **P 18 47 31.5 +1.1**
DMN Daman 54.95 275 *e*P **P 18 47 33.0 +1.3**
comp=Z,13nm,0.5s
DANN Dangsing 55.42 277 *e*P **P 18 47 36.4 +1.2**
comp=Z,17nm,0.5s
KOLN Koldanda 55.89 276 *e*P **P 18 47 39.2 +0.8**
comp=Z,16nm,0.7s
PYUN Piuthan 56.11 277 *e*P **P 18 47 41.0 +1.0**
comp=Z,30nm,0.7s
KEV Kevo 57.71 340 *e*P **P 18 47 48.0 -2.4**
KEV Kevo 57.71 340 *e*p **P 18 47 48.0 -2.4**
comp=Z,0.4nm,0.4s
ABKAR Akbulak array 58.23 310 *e*P **P 18 47 53.3 -1.1**
comp=Z,1.1nm,0.4s
ARCES ARCESS Array B 58.23 341 P **P 18 47 54.6 +0.5**
ARCES ARCESS Array B 58.23 341 P **P 18 47 54.6 +0.5**
comp=Z,0.5nm,0.3s,baz=37,slow=6.8,SNR=16
B13A Whitefish 59.63 50 ⇑P **P 18 48 05.2 +1.0**
baz=59
C13A Hot Springs 59.99 51 ⇓P **P 18 48 07.7 +1.0**
baz=60
BMO Blue Mountains 60.16 55 P **P 18 48 08.9 +1.0**
comp=Z,0.4nm,0.5s
A15A Johnson Ranch, 60.20 49 ⇑P **P 18 48 08.3 +0.2**
baz=60
D13A Huson 60.40 52 ⇓P **P 18 48 09.8 +0.2**
baz=60
SWMT Swartz Lake 60.40 51 *e*P **P 18 48 09.7 +0.1**
comp=Z,3.8nm,1.3s
B15A Bradely Ranch, 60.69 50 ⇓P **P 18 48 11.7 +0.2**
baz=60
F12A Elk City 60.77 53 ⇓P **P 18 48 13.3 +1.2**
baz=60
MSO Missoula 60.85 52 ⇑P **P 18 48 13.3 +0.7**
baz=61
D14A Greenough 60.93 51 ⇑P **P 18 48 13.5 +0.3**
baz=61,SNR=9.2
E13A Victor 60.95 52 ⇓P **P 18 48 13.9 +0.6**
baz=61
C15A Salmond Ranch, 60.99 50 ⇓P **P 18 48 14.4 +0.8**
baz=61,SNR=6.0
F13A Darby 61.26 53 ⇑P **P 18 48 15.8 +0.3**
baz=61
A17A Triple J Farms 61.28 48 ⇑P **P 18 48 15.0 -0.4**
baz=61
E14A Clinton 61.34 52 ⇑P **P 18 48 16.3 +0.3**
baz=61
C16A Fuhringer Ranc 61.44 50 ⇓P **P 18 48 17.5 +0.9**
baz=61,SNR=5.2
SUMG Summit 61.45 4 *e*P **P 18 48 15.3 -1.3**
SUMG pmax pmax
comp=Z,11nm,1.0s
SUMG Summit 61.45 4 *e*P **P 18 48 15.3 -1.3**
comp=Z,11nm,1.0s
D15A Lincoln 61.49 51 ⇑P **P 18 48 17.5 +0.5**
baz=61
KBL Kabul 61.54 291 *e*P **P 18 48 17.1 -0.5**
KBL pmax pmax
comp=Z,4.0nm,0.5s
KBL Kabul 61.54 291 *e*P **P 18 48 17.1 -0.5**
comp=Z,3.9nm,0.5s
JOF Joensuu 61.58 333 *e*P P 18 48 13.7 -3.5
JOF pmax pmax
comp=Z,2.0nm,0.5s
JOF Joensuu 61.58 333 *e*p P 18 48 13.7 -3.5
comp=Z,1.7nm,0.5s
B17A L&Q Farms, Che 61.63 49 ⇑P **P 18 48 18.4 +0.6**
baz=61
H12A Diamond D Ranc 61.73 54 ⇑P **P 18 48 18.8 0.0**
baz=62
A18A Metzger Ranch, 61.74 48 ⇓P **P 18 48 18.6 +0.1**
baz=62
G13A Cobalt 61.74 53 ⇓P **P 18 48 18.1 -0.7**
baz=62,SNR=7.5
E15A Deer Lodge 61.80 51 ⇓P **P 18 48 19.5 +0.4**
baz=62
FFC Flin Flon 61.80 39 *i*P **P 18 48 20.1 +1.3**
D16A Dana Ranch, Ca 62.02 50 ⇑P **P 18 48 21.6 +1.0**
baz=62,SNR=6.2
H13A Challis 62.06 54 ⇓P **P 18 48 20.6 -0.3**
baz=62,SNR=5.4
C17A Wharram Farm, 62.06 49 ⇑P **P 18 48 21.3 +0.5**
baz=62,SNR=5.6
B18A Beardsley Farm 62.10 48 ⇓P **P 18 48 21.6 +0.6**
baz=62
F15A Butte 62.25 52 ⇓P **P 18 48 22.8 +0.6**
baz=62,SNR=6.6
E16A East Helena 62.26 51 ⇓P **P 18 48 22.8 +0.7**
baz=62
LRM Limekiln Ridge 62.28 52 *e*P **P 18 48 22.9 +0.4**
comp=Z,44nm,0.9s
A19A Klindworth Far 62.30 47 ⇓P **P 18 48 22.9 +0.6**
baz=62
EGMT Eagleton 62.34 49 *e*P **P 18 48 22.2 -0.4**
comp=Z,6.5nm,0.7s
D17A Six Diamond Ra 62.40 50 ⇓P **P 18 48 23.4 +0.3**
baz=62
B19A Brinkman Farms 62.49 48 ⇓P **P 18 48 24.3 +0.7**
baz=62
H14A Leadore 62.52 53 ⇓P **P 18 48 24.3 +0.3**
baz=62
I13A Wildhorse Cree 62.54 54 ⇓P **P 18 48 24.6 +0.4**
baz=62
HLID Hailey 62.59 55 ⇑P **P 18 48 25.2 +0.7**
baz=62
G15A Dillon 62.67 52 ⇑P **P 18 48 25.9 +0.9**
baz=62
MCMT McKenzie Canyo 62.68 53 *e*P **P 18 48 24.8 -0.3**
comp=Z,0.6nm,0.8s
E17A Martinsdale 62.74 50 ⇑P **P 18 48 26.3 +0.8**
baz=62,SNR=6.1
A20A Cobblestone Ra 62.75 47 ⇓P **P 18 48 25.7 +0.4**
baz=62
BOZ Bozeman (W) 62.84 52 ⇑P **P 18 48 26.9 +0.8**
baz=63
C19A Slack Wire Ran 62.90 48 ⇓P **P 18 48 26.8 +0.5**
baz=63,SNR=5.2
I14A Mackay 62.91 54 ⇓P **P 18 48 27.8 +1.2**
baz=63
G16A Moss Hill, Enn 63.01 52 ⇑P **P 18 48 27.7 +0.5**
baz=63,SNR=7.9
A21A Bergtoll Ranch 63.18 46 ⇓P **P 18 48 29.0 +0.8**
baz=63
E18A Harlowton 63.18 50 ⇓P **P 18 48 29.2 +0.9**
baz=63
F17A Fitzpatrick Pl 63.20 51 ⇓P **P 18 48 29.5 +1.0**
baz=63
C20A Veseth Ranch, 63.45 48 ⇓P **P 18 48 31.1 +1.2**
baz=63,SNR=9.0
NVAR Mina Array Bea 63.50 61 P **P 18 48 31.4 +0.8**
NVAR Mina Array Bea 63.50 61 P **P 18 48 31.4 +0.8**
comp=Z,2.8nm,0.7s,baz=296,slow=7.9,SNR=6.8
H16A Russell Place, 63.64 52 ⇑P **P 18 48 32.2 +0.7**
baz=63
A22A Carney Farms, 63.69 46 ⇑P **P 18 48 32.5 +1.0**
baz=63
F18A Big Timber 63.71 50 ⇑P **P 18 48 33.1 +1.3**
baz=64
KAF Kangasniemi 63.72 335 *e*P **P 18 48 29.2 -2.2**
KAF pmax pmax
comp=Z,1.0nm,0.5s
KAF Kangasniemi 63.72 335 *e*p **P 18 48 29.2 -2.2**
comp=Z,1.1nm,0.5s
D20A Manuel Ranch, 63.78 49 ⇓P **P 18 48 33.3 +1.1**
baz=64
J15A Blackfoot 63.81 54 ⇓P **P 18 48 33.8 +1.2**
baz=64
E19A Rath Farm, Rou 63.85 49 ⇑P **P 18 48 33.1 +0.5**
baz=64
F19A Roth Farm, Mol 64.16 50 ⇓P **P 18 48 35.3 +0.6**
baz=64
K15A Arbon 64.21 55 ⇑P **P 18 48 36.6 +1.4**
baz=64
FINES FINESS Array B 64.31 334 P **P 18 48 34.2 -1.0**
FINES FINESS Array B 64.31 334 P **P 18 48 34.2 -1.0**
comp=Z,1.8nm,0.4s,baz=40,slow=6.8,SNR=40
IMW Indian Meadow 64.33 53 P **P 18 48 37.2 +1.1**
comp=Z,3.5nm,0.9s
D21A La Casta Ranch 64.39 48 ⇑P **P 18 48 37.4 +1.2**
baz=64
RLMT Red Lodge 64.46 51 ⇓P **P 18 48 38.4 +1.6**
baz=64
RRI2 Red Ridge 64.47 53 *e*P **P 18 48 38.1 +1.1**
comp=Z,8.0nm,0.8s
B23A Brockton 64.50 46 ⇑P **P 18 48 38.3 +1.5**
baz=64
H18A Shoshone NF, C 64.53 51 ⇑P **P 18 48 38.2 +0.8**
baz=64
A24A Westby 64.68 45 ⇑P **P 18 48 38.6 +0.6**
baz=64
D22A Cohagen 64.76 48 ⇑P **P 18 48 39.6 +1.0**
baz=64
C23A Lambert 64.84 47 ⇑P **P 18 48 39.4 +0.3**
baz=65
DGMT Dagmar 64.89 46 ⇑P **P 18 48 39.8 +0.5**
baz=65
G20A Bridger 64.96 50 ⇓P **P 18 48 39.4 -0.6**
baz=65
I18A Diamond G Ranc 65.08 52 ⇓P **P 18 48 42.3 +1.3**
baz=65
ISA Isabella 65.14 64 ⇑P **P 18 48 41.4 +0.1**
baz=65
J18A Kendall Valley 65.28 53 ⇓P **P 18 48 43.4 +1.1**
baz=65
E22A Miles City 65.35 48 ⇑P **P 18 48 43.2 +0.7**
baz=65
MPMC Manual Prospec 65.50 63 ⇓P **P 18 48 44.7 +0.9**
baz=65
L17A Cokeville 65.53 54 ⇓P **P 18 48 44.9 +1.0**
baz=65
F22A Rosebud 65.63 49 ⇓P **P 18 48 45.1 +0.9**
baz=65
E23A Ismay 65.64 48 ⇓P **P 18 48 45.4 +1.1**
baz=65
K18A Tolan Ranch, 65.64 53 ⇓P **P 18 48 45.5 +0.9**
baz=65
DUG Dugway 65.65 57 ⇑P **P 18 48 45.2 +0.7**
baz=65,SNR=5.1
D24A Glendive 65.73 47 ⇓P **P 18 48 45.6 +0.7**
baz=66
BW06 Boulder Array 65.83 53 ⇓P **P 18 48 46.2 +0.4**
baz=66,SNR=6.1
PDAR Pinedale Array 65.83 53 P **P 18 48 46.5 +0.7**
PDAR Pinedale Array 65.83 53 P **P 18 48 46.5 +0.7**
comp=Z,3.1nm,0.8s,baz=299,slow=1.9,SNR=24
EDW2 Edwards Air Fo 65.95 64 ⇓P **P 18 48 48.0 +1.5**
baz=66
H21A Big Horn, Sher 65.97 50 ⇑P **P 18 48 47.0 +0.4**
baz=66
G22A Birney 65.98 49 ⇑P **P 18 48 47.6 +1.1**
baz=66
L18A Fontenelle, Gr 66.11 54 ⇓P **P 18 48 48.4 +0.8**
baz=66
K19A Absolon Red Bu 66.19 53 ⇓P **P 18 48 48.3 +0.3**
baz=66
J20A Shoshoni 66.26 52 ⇓P **P 18 48 49.2 +0.8**
baz=66
N17A Moffit Pass 66.31 55 ⇑P **P 18 48 49.8 +0.9**
baz=66,SNR=5.1
I21A Big Trails, Te 66.38 51 ⇑P **P 18 48 50.2 +0.9**
baz=66
GSC Goldstone 66.42 63 ⇓P **P 18 48 50.4 +0.9**
baz=66
M18A Lyman 66.42 54 ⇓P **P 18 48 50.5 +0.9**
baz=66
G23A Biddle 66.47 49 ⇑P **P 18 48 50.5 +0.8**
baz=66
F24A Ekalaka 66.52 48 ⇑P **P 18 48 51.0 +0.9**
baz=66
J22A Midwest 67.09 51 ⇓P **P 18 48 54.4 +0.7**
baz=67
K21A Alcova 67.19 52 ⇑P **P 18 48 55.0 +0.5**
baz=67
H24A Dirks Ranch, A 67.21 49 ⇑P **P 18 48 54.9 +0.5**
baz=67
M20A Sweetwater, Wa 67.44 53 ⇓P **P 18 48 56.7 +0.6**
baz=67
GMRC Granite Mounta 67.47 63 ⇑P **P 18 48 57.0 +0.7**
baz=67
L21A Rawlins 67.58 52 ⇑P **P 18 48 57.3 +0.4**
baz=67
K22A Casper 67.58 51 ⇓P **P 18 48 57.4 +0.5**
baz=67
ULM Lac du Bonnet 67.59 40 P **P 18 48 56.4 -0.2**
ULM Lac du Bonnet 67.59 40 P **P 18 48 56.4 -0.2**
comp=Z,1.9nm,0.5s,baz=218,slow=3.6,SNR=4.3
WRA Warramunga Arr 67.59 198 P **P 18 48 56.8 0.0**
WRA Warramunga Arr 67.59 198 P **P 18 48 56.8 0.0**
comp=Z,0.5nm,0.5s,baz=14,slow=6.7,SNR=3.3
SRU San Rafael 67.69 56 *e*P **P 18 48 58.3 +0.6**
SRU San Rafael 67.69 56 *e*P **P 18 48 58.2 +0.6**
comp=Z,84nm,0.6s
M21A Separation Pea 67.82 53 ⇓P **P 18 48 59.1 +0.6**
baz=68
N20A Spence Gulch, 67.84 54 ⇑P **P 18 48 59.5 +0.9**
baz=68,SNR=5.2
IRM Iron Mountain 68.19 63 ⇓P **P 18 49 01.6 +0.9**
baz=68
P19A Cripple Cowboy 68.23 55 ⇓P **P 18 49 01.8 +0.7**
baz=68
BC3 Big Chuckawall 68.34 64 ⇑P **P 18 49 02.5 +0.8**
baz=68
W13A Hualapai Mount 68.35 62 ⇑P **P 18 49 02.2 +0.3**
baz=68
M22A Cedar Creek Ra 68.38 52 ⇑P **P 18 49 02.4 +0.3**
baz=68
U15A North Rim 68.44 60 ⇓P **P 18 49 03.4 +0.9**
baz=68
Q19A Hogan Spring (68.53 56 ⇓P **P 18 49 03.4 +0.6**
baz=68
NB2 NORSAR Subarra 68.61 341 P **P 18 49 02.1 -0.7**
comp=Z,1.2nm,0.4s,baz=28,slow=6.2
NOA NORSAR Array B 68.61 341 P **P 18 49 01.5 -1.3**
NOA NORSAR Array B 68.61 341 P **P 18 49 01.5 -1.3**
comp=Z,1.9nm,0.5s,baz=28,slow=6.3,SNR=36
PDMCI Parker Dam,Lak 68.73 62 ⇑P **P 18 49 05.0 +1.1**
baz=68
M23A Laramie 68.82 52 ⇓P **P 18 49 05.1 +0.4**
baz=69
S18A Hurst Farm, Bl 68.95 57 ⇓P **P 18 49 05.9 +0.2**
baz=69
P21A Newcastle 69.18 54 ⇑P **P 18 49 07.6 +0.6**
baz=69
O22A Kremmling 69.25 53 ⇓P **P 18 49 08.1 +0.6**
baz=69
M24A Cheyenne 69.31 51 ⇑P **P 18 49 08.8 +1.0**
baz=69
O23A Lake Granby, G 69.57 53 ⇓P **P 18 49 10.7 +1.2**
baz=69
WUAZ Wupatki 69.60 60 ⇑P **P 18 49 10.4 +0.8**
baz=69
S20A Disappointment 69.81 56 ⇓P **P 18 49 11.2 +0.2**
baz=70
R21A Cimarron 69.91 55 ⇓P **P 18 49 12.3 +0.7**
baz=70,SNR=5.1
Q22A Crested Butte, 69.94 55 ⇑P **P 18 49 12.4 +0.6**
baz=70
ISCO Idaho Springs 70.02 53 ⇓P **P 18 49 12.5 +0.2**
baz=70
MVCO Mesa Verde 70.15 57 ⇓P **P 18 49 13.6 +0.5**
baz=70
S21A Coal Bank Pass 70.25 56 ⇓P **P 18 49 14.0 +0.3**
baz=70
X16A Lo Mia Camp, P 70.30 61 ⇓P **P 18 49 14.7 +0.8**
baz=70
KBZ Khabaz 70.73 313 P **P 18 49 15.6 -0.5**
KBZ pmax pmax
comp=Z,2.0nm,0.5s
KBZ Khabaz 70.73 313 P **P 18 49 15.6 -0.5**
KBZ Khabaz 70.73 313 P **P 18 49 15.6 -0.5**
comp=Z,2.3nm,0.5s,baz=122,slow=2.4,SNR=15
R23A Moffat 71.02 55 ⇑P **P 18 49 19.1 +0.8**
baz=71
P25A Willow Gulch B 71.03 53 ⇑P **P 18 49 18.7 +0.5**
baz=71
214A Organ Pipe Nat 71.12 63 ⇑P **P 18 49 19.2 +0.5**
baz=71
V20A Brimhall 71.14 58 ⇓P **P 18 49 19.5 +0.5**
baz=71
OGNE Ogallala 71.18 50 ⇓P **P 18 49 19.7 +0.7**
baz=71
ASAR Alice Springs 71.29 197 P **P 18 49 20.2 +0.6**
ASAR Alice Springs 71.29 197 P **P 18 49 20.2 +0.6**
comp=Z,0.3nm,0.6s,baz=13,slow=6.0,SNR=4.9
AKASG Malin Array Be 71.65 326 P **P 18 49 20.5 -1.1**
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKASG Malin Array Be 71.65 326 P **P 18 49 20.4 -1.1**
AKASG Malin Array Be 71.65 326 P **P 18 49 20.4 -1.1**
comp=Z,2.5nm,0.4s,baz=37,slow=6.4,SNR=8.4
KIEV Kiev 71.66 326 ⇑*e*P **P 18 49 21.1 -0.5**
R25A Fountain Ranch 71.92 54 ⇑P **P 18 49 23.4 -0.2**
baz=72
ECSD EROS Data Cent 71.97 45 *e*P **P 18 49 22.4 -1.2**
comp=Z,14nm,1.6s
T24A Torres, Weston 72.23 55 ⇑P **P 18 49 26.1 +0.4**
baz=72
R26A Arlington 72.28 53 ⇓P **P 18 49 26.3 +0.6**
baz=72
T25A Trinidad 72.55 54 ⇓P **P 18 49 27.5 0.0**
baz=72
T26A Comanche Natio 72.99 54 ⇓P **P 18 49 30.0 -0.1**
baz=73
U25A Circle Dot Ran 73.08 55 ⇓P **P 18 49 31.3 +0.7**
baz=73
W24A Lazy 6 Ranch, 73.34 56 ⇑P **P 18 49 33.0 +0.8**
baz=73
319A Douglas 73.70 62 ⇑P **P 18 49 35.0 +0.7**
baz=74
220A Playas Peak, P 73.80 61 ⇑P **P 18 49 36.1 +1.3**
baz=74
121A Cookes Peak, D 73.81 60 ⇑P **P 18 49 35.9 +1.0**
baz=74
Y23A Lovelace Mesa, 73.86 58 ⇓P **P 18 49 35.7 +0.5**
baz=74
W25A X Bar L Ranch, 73.88 56 ⇓P **P 18 49 35.7 +0.4**
baz=74
Y24A Capitan 74.23 57 ⇓P **P 18 49 37.5 +0.1**
baz=74
SCHQ Schefferville 74.27 22 P **P 18 49 37.2 +0.2**
SCHQ Schefferville 74.27 22 P **P 18 49 37.2 +0.2**
comp=Z,1.2nm,0.4s,baz=322,slow=8.7,SNR=7.2
LVV L'vov 74.34 328 *e*P P 18 49 46.2 +8.7
Y25A Mesa, Roswell 74.66 57 ⇓P **P 18 49 40.4 +0.6**
baz=74
X26A CR and CF Fran 74.73 56 ⇓P **P 18 49 39.8 -0.5**
baz=74
124A Stringfield Ra 75.08 58 ⇓P **P 18 49 42.3 -0.1**
baz=75
Z26A Caprock 75.55 57 ⇓P **P 18 49 44.7 -0.3**
baz=75
125A Gardner Draw, 75.58 58 ⇑P **P 18 49 45.5 +0.4**
baz=75
KOLS Kolonicke sedl 75.72 328 *e*P **P 18 49 45.7 +0.2**
MSTX Muleshoe 75.75 56 ⇑P **P 18 49 46.3 +0.2**
baz=76
Z27A Tatum 75.96 57 ⇑P **P 18 49 47.5 +0.2**
baz=76
TESR 76.03 324 ⇑*i*P **P 18 49 47.4 +0.1**
CRVS Cervenica-Dubn 76.04 329 *e*P **P 18 49 47.4 0.0**
226B Tecolote Peak, 76.29 58 ⇑P **P 18 49 49.7 +0.5**
baz=76
TRPA Tarpa 76.29 328 ⇓*i*P **P 18 49 49.4 +0.7**
CFR Carcaliu 76.49 323 ⇑P **P 18 49 49.9 0.0**
CFR Carcaliu 76.49 323 ⇑P **P 18 49 49.9 0.0**
VRI Vrincioaia 76.52 324 ⇓P **P 18 49 50.8 +0.7**
VRI Vrincioaia 76.52 324 ⇓*i*P **P 18 49 50.8 +0.7**
UPC Upice 76.52 333 *e*P **P 18 49 52.4 +2.4**
DPC Dobruska-Polom 76.56 333 *e*P **P 18 49 51.1 +0.8**
MORC Moravsky Berou 76.66 332 ⇑P **P 18 49 50.2 -0.7**
MORC Moravsky Berou 76.66 332 ⇑*i*P **P 18 49 50.2 -0.7**
425A Indio Mountain 76.73 59 ⇓P **P 18 49 52.1 +0.4**
baz=76
CLL Collm 76.74 335 ⇑*i*P **P 18 49 51.0 -0.2**
CLL pmax pmax
comp=Z,12nm,1.3s
CLL Collm 76.74 335 ⇑*i*P **P 18 49 51.0 -0.2**
comp=Z,12nm,1.3s
Z29A Hungry Hill Ra 76.87 56 ⇓P **P 18 49 53.0 +0.6**
baz=77
326A Caldwell Ranch 76.95 58 ⇓P **P 18 49 52.6 -0.3**
baz=77
MALT Malatya 77.00 312 ⇑P **P 18 49 54.6 +1.5**
MALT Malatya 77.00 312 ⇑*i*P **P 18 49 54.6 +1.5**
MLR Muntele Rosu 77.14 324 ⇓*i*P **P 18 49 54.3 +0.5**
Z30A Sanderson Ranc 77.18 55 ⇓P **P 18 49 54.0 -0.1**
baz=77
VYHS Vyhne 77.32 330 *e*P **P 18 49 54.8 +0.2**
VRAC Vranov 77.37 332 ⇓*i*P **P 18 49 55.2 +0.3**
PRU Pruhonice 77.44 333 *e*P **P 18 49 55.0 -0.2**
VOIR 77.55 325 ⇓P **P 18 49 56.9 +0.9**
VOIR 77.55 325 ⇓*i*P **P 18 49 56.9 +0.9**
328A Wristen Ranch, 77.59 58 ⇑P **P 18 49 56.8 +0.3**
baz=77
427A Hayter Ranch, 77.62 58 ⇑P **P 18 49 56.8 +0.1**
baz=77
Z31A Sharp Cattle R 77.72 55 ⇑P **P 18 49 57.3 +0.2**
baz=78
SMOL Smolenice 77.78 331 *e*P **P 18 49 58.6 +1.5**
526A Mary Lane Ranc 77.78 59 ⇓P **P 18 49 57.7 0.0**
baz=78
329A Wagon Wheel Ra 78.00 57 ⇓P **P 18 49 59.1 +0.3**
baz=78
Z32A Haskell 78.11 54 ⇓P **P 18 49 59.3 +0.1**
baz=78
626A Big Bend Ranch 78.12 60 ⇓P **P 18 49 59.5 0.0**
baz=78
MIB Mutribah 78.31 301 *e*P **P 18 49 59.9 -0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MIB				AMb	AMB	18 50 01.8	
	comp=Z,20nm,1.1s						
BR131	Keskin Array S	78.31	316	eP	P	18 50 00.5	0.0
	comp=Z,1.8nm,0.7s						
BRTR	Keskin Array B	78.31	316	P	P	18 50 01.2	+0.8
BRTR	Keskin Array B	78.31	316	P	P	18 50 01.2	+0.8
	comp=Z,3.0nm,0.9s,baz=92,slow=3.9,SNR=16						
KHC	Kasperske Hory	78.49	334	eP	P	18 50 01.0	-0.1
KHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KHC	Kasperske Hory	78.49	334	eP	P	18 50 01.0	-0.1
	comp=Z,7.3nm,1.0s						
KHC	Kasperske Hory	78.49	334	eP	P	18 50 01.5	+0.4
TXAR	Lajitas Array	78.56	60	P	P	18 50 02.1	+0.2
TXAR	Lajitas Array	78.56	60	P	P	18 50 02.1	+0.2
	comp=Z,1.5nm,0.6s,baz=307,slow=4.1,SNR=13						
GERES	GERESS Array B	78.70	333	P	P	18 50 02.4	0.0
GERES	GERESS Array B	78.70	333	P	P	18 50 02.4	0.0
	comp=Z,1.7nm,0.6s,baz=34,slow=5.0,SNR=16						
NAY	Al-Naaiem	78.76	300	eP	P	18 50 01.9	-1.0
NAY				AMb	AMB	18 50 04.4	
	comp=Z,12nm,1.1s						
CONA	Conrad Observa	78.81	332	⇑iP	P	18 50 03.7	+0.8
	comp=Z,10nm,1.5s						
CONA	Conrad Observa	78.81	332	⇑iP	P	18 50 03.7	+0.8
	comp=Z,10nm,1.5s						
RDF	Al-Radifah	78.81	300	eP	P	18 50 02.3	-0.9
RDF				AMb	AMB	18 50 05.6	
	comp=Z,40nm,1.5s						
430A	Baggett Ranch,	78.95	57	⇓P	P	18 50 03.9	0.0
	baz=79						
431A	Sonora	79.39	57	⇓P	P	18 50 06.1	-0.3
	baz=79						
ARSA	Arzberg	79.52	331	⇑iP	P	18 50 07.1	+0.4
	comp=Z,6.3nm,1.2s						
ARSA	Arzberg	79.52	331	⇑iP	P	18 50 07.1	+0.4
	comp=Z,6.3nm,1.3s						
BCLA	Clavier	79.64	339	P	P	18 50 07.0	-0.3
GIVF	Givet	80.06	339	eP	P	18 50 09.4	-0.2
GIVF	Givet	80.06	339	eP	P	18 50 09.4	-0.2
GIVF	Givet	80.06	339	eP	P	18 50 09.4	-0.2
SOKA	Soboth	80.18	331	⇑iP	P	18 50 10.6	+0.2
	comp=Z,9.9nm,1.2s						
SOKA	Soboth	80.18	331	⇑iP	P	18 50 10.6	+0.2
	comp=Z,9.9nm,1.2s						
PERS	Pernice	80.19	331	iP	P	18 50 10.5	0.0
GROS	Grobnik	80.21	331	iP	P	18 50 10.5	-0.1
BAIF	Baives	80.25	340	eP	P	18 50 10.6	0.0
	comp=Z,13nm,0.9s						
BAIF	Baives	80.25	340	eP	P	18 50 10.6	0.0
BAIF				pmax	pmax		
	comp=Z,13nm,0.9s						
BAIF	Baives	80.25	340	eP	P	18 50 10.6	0.0
	comp=Z,13nm,0.9s						
KBA	Koelnbreinsper	80.38	333	⇑iP	P	18 50 12.3	+0.7
KBA				pmax	pmax		
	comp=Z,11nm,0.9s						
KBA	Koelnbreinsper	80.38	333	⇑iP	P	18 50 12.3	+0.7
	comp=Z,11nm,0.9s						
KBA	Koelnbreinsper	80.38	333	⇑iP	P	18 50 12.3	+0.7
	comp=Z,11nm,0.9s						
GOLS	Golise	80.56	331	iP	P	18 50 12.2	-0.2
VTS	Vitosha	80.65	324	⇓P	P	18 50 13.6	+0.5
VTS	Vitosha	80.65	324	⇓iP	P	18 50 13.6	+0.5
GCIS	Gornji Cirnik	80.69	331	iP	P	18 50 12.9	-0.1
WATA	Walderalm	80.70	334	⇓iP	P	18 50 13.6	+0.3
WATA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
WATA	Walderalm	80.70	334	⇓iP	P	18 50 13.6	+0.3
	comp=Z,3.7nm,0.5s						
WATA	Walderalm	80.70	334	⇓iP	P	18 50 13.6	+0.3
	comp=Z,3.7nm,0.5s						
WTTA	Wattenberg	80.75	334	⇑iP	P	18 50 14.2	+0.6
WTTA				pmax	pmax		
	comp=Z,13nm,0.9s						
WTTA	Wattenberg	80.75	334	⇑iP	P	18 50 14.2	+0.6
	comp=Z,13nm,0.9s						
WTTA	Wattenberg	80.75	334	⇑iP	P	18 50 14.2	+0.6
	comp=Z,13nm,0.9s						
BFO	Black Forest	80.76	336	iP	P	18 50 14.2	+0.8
RETA	Reutte	80.81	334	⇑iP	P	18 50 14.1	+0.3
	comp=Z,6.8nm,1.1s						
RETA	Reutte	80.81	334	⇑iP	P	18 50 14.1	+0.3
	comp=Z,6.8nm,1.1s						
MOTA	Moosalm	80.84	334	⇓iP	P	18 50 14.3	+0.3
MOTA				pmax	pmax		
	comp=Z,12nm,1.0s						
MOTA	Moosalm	80.84	334	⇓iP	P	18 50 14.3	+0.3
	comp=Z,12nm,1.0s						
MOTA	Moosalm	80.84	334	⇓iP	P	18 50 14.3	+0.3
	comp=Z,12nm,1.0s						
CDF	Champ du Feu	80.97	337	eP	P	18 50 14.6	0.0
	comp=Z,11nm,0.9s						
CDF	Champ du Feu	80.97	337	eP	P	18 50 14.6	0.0
CDF				pmax	pmax		
	comp=Z,11nm,0.9s						
CDF	Champ du Feu	80.97	337	eP	P	18 50 14.6	0.0
	comp=Z,11nm,0.9s						
PAGF	Fort de Pagny	81.25	338	eP	P	18 50 16.5	+0.5
	comp=Z,4.1nm,0.7s						
PAGF	Fort de Pagny	81.25	338	eP	P	18 50 16.5	+0.5
	comp=Z,4.1nm,0.7s						
MEZF	Maizieres J'vi	81.48	338	eP	P	18 50 17.5	+0.3
MEZF	Maizieres J'vi	81.48	338	eP	P	18 50 17.5	+0.3
HAU	Haudompre	81.60	337	eP	P	18 50 17.7	-0.2
HAU	Haudompre	81.60	337	eP	P	18 50 17.7	-0.2
HAU	Haudompre	81.60	337	eP	P	18 50 17.7	-0.2
HINF	Hinteralfeld	81.63	337	eP	P	18 50 17.6	-0.5
HINF	Hinteralfeld	81.63	337	eP	P	18 50 17.6	-0.5
HINF	Hinteralfeld	81.63	337	eP	P	18 50 17.6	-0.5
SFTF	Sexfontaines	81.76	338	eP	P	18 50 18.7	0.0
	comp=Z,25nm,0.8s						
SFTF	Sexfontaines	81.76	338	eP	P	18 50 18.7	0.0
	comp=Z,25nm,0.8s						
FLN	La Foliniere	82.54	342	eP	P	18 50 22.7	0.0
FLN	La Foliniere	82.54	342	eP	P	18 50 22.7	0.0
FLN	La Foliniere	82.54	342	eP	P	18 50 22.7	0.0
LDF	La Druitiere	82.62	342	eP	P	18 50 23.4	+0.2
LDF	La Druitiere	82.62	342	eP	P	18 50 23.4	+0.2
LDF	La Druitiere	82.62	342	eP	P	18 50 23.4	+0.2
LOR	Lormes	82.92	339	eP	P	18 50 24.9	+0.1
	comp=Z,9.2nm,0.7s						
LOR	Lormes	82.92	339	eP	P	18 50 24.9	+0.1
	comp=Z,9.2nm,0.7s						
GRR	Gorron	82.97	342	eP	P	18 50 25.0	0.0
GRR	Gorron	82.97	342	eP	P	18 50 25.0	0.0
GRR	Gorron	82.97	342	eP	P	18 50 25.0	0.0
SSF	Saint Saulge	83.21	339	eP	P	18 50 26.3	+0.1
SSF	Saint Saulge	83.21	339	eP	P	18 50 26.3	+0.1
SSF	Saint Saulge	83.21	339	eP	P	18 50 26.3	+0.1
AVF	Avril sur Loir	83.50	339	eP	P	18 50 27.9	+0.2
	comp=Z,7.4nm,0.6s						
AVF	Avril sur Loir	83.50	339	eP	P	18 50 27.9	+0.2
AVF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AVF	Avril sur Loir	83.50	339	eP	P	18 50 27.9	+0.2
	comp=Z,7.4nm,0.6s						
SMF	Signal de Mont	83.51	338	eP	P	18 50 28.1	+0.3
	comp=Z,42nm,1.2s						
SMF	Signal de Mont	83.51	338	eP	P	18 50 28.1	+0.3
SMF				pmax	pmax		
	comp=Z,42nm,1.2s						
SMF	Signal de Mont	83.51	338	eP	P	18 50 28.1	+0.3
	comp=Z,42nm,1.2s						
ROSF	Rostrenen	83.52	344	eP	P	18 50 27.4	-0.4
ROSF	Rostrenen	83.52	344	eP	P	18 50 27.4	-0.4
ROSF	Rostrenen	83.52	344	eP	P	18 50 27.4	-0.4
LPL	La Plagne	83.77	336	eP	P	18 50 30.1	+0.6
LPL	La Plagne	83.77	336	eP	P	18 50 30.1	+0.6
LPL	La Plagne	83.77	336	eP	P	18 50 30.1	+0.6
LPG	La Plagne	83.79	336	eP	P	18 50 30.3	+0.7
	comp=Z,5.1nm,0.6s						
LPG	La Plagne	83.79	336	eP	P	18 50 30.3	+0.7
LPG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LPG	La Plagne	83.79	336	eP	P	18 50 30.3	+0.7
	comp=Z,5.1nm,0.6s						
BGF	Bois d'Agland	83.84	339	eP	P	18 50 29.6	+0.1
BGF	Bois d'Agland	83.84	339	eP	P	18 50 29.6	+0.1
BGF	Bois d'Agland	83.84	339	eP	P	18 50 29.6	+0.1
QUIF	Quistinic	83.90	343	eP	P	18 50 28.7	-1.1
QUIF	Quistinic	83.90	343	eP	P	18 50 28.7	-1.1
QUIF	Quistinic	83.90	343	eP	P	18 50 28.7	-1.1
TCF	Toulx Ste Croi	84.25	339	eP	P	18 50 32.0	+0.4
	comp=Z,18nm,1.1s						
TCF	Toulx Ste Croi	84.25	339	eP	P	18 50 32.0	+0.4
TCF				pmax	pmax		
	comp=Z,18nm,1.1s						
TCF	Toulx Ste Croi	84.25	339	eP	P	18 50 32.0	+0.4
	comp=Z,18nm,1.1s						
MFF	Saint Martin d	84.51	341	eP	P	18 50 32.6	-0.3
MFF	Saint Martin d	84.51	341	eP	P	18 50 32.6	-0.3
MFF	Saint Martin d	84.51	341	eP	P	18 50 32.6	-0.3
ORIF	Oris-en-Rattie	84.56	336	eP	P	18 50 33.9	+0.6
ORIF	Oris-en-Rattie	84.56	336	eP	P	18 50 33.9	+0.6
ORIF	Oris-en-Rattie	84.56	336	eP	P	18 50 33.9	+0.6
VIVF	Saint-Julien-l	84.95	337	eP	P	18 50 36.1	+0.9
VIVF	Saint-Julien-l	84.95	337	eP	P	18 50 36.1	+0.9
VIVF	Saint-Julien-l	84.95	337	eP	P	18 50 36.1	+0.9
SBF	Sospel	85.08	335	eP	P	18 50 35.7	-0.2
SBF	Sospel	85.08	335	eP	P	18 50 35.7	-0.2
SBF	Sospel	85.08	335	eP	P	18 50 35.7	-0.2
RJF	Les Rejaudoux	85.34	340	eP	P	18 50 37.3	+0.2
RJF	Les Rejaudoux	85.34	340	eP	P	18 50 37.3	+0.2
RJF	Les Rejaudoux	85.34	340	eP	P	18 50 37.3	+0.2
CAF	Calviac	85.56	339	eP	P	18 50 38.7	+0.4
CAF	Calviac	85.56	339	eP	P	18 50 38.7	+0.4
CAF	Calviac	85.56	339	eP	P	18 50 38.7	+0.4
PGF	Pioggiola	85.81	333	eP	P	18 50 39.4	-0.2
	comp=Z,14nm,1.0s						
PGF	Pioggiola	85.81	333	eP	P	18 50 39.4	-0.2
PGF				pmax	pmax		
	comp=Z,14nm,1.0s						
PGF	Pioggiola	85.81	333	eP	P	18 50 39.4	-0.2
	comp=Z,14nm,1.0s						
LMR	La Mourre	85.84	335	eP	P	18 50 39.8	+0.2
	comp=Z,27nm,1.1s						
LMR	La Mourre	85.84	335	eP	P	18 50 39.8	+0.2
LMR				pmax	pmax		
	comp=Z,27nm,1.1s						
LMR	La Mourre	85.84	335	eP	P	18 50 39.8	+0.2
	comp=Z,27nm,1.1s						
DRV	Dumont d'Urvil	112.76	185	R		19 00 00.0	
TORD	Torodi Ar. Bea	115.24	328	PKP	PKPdf	18 56 41.1	-0.7
TORD	Torodi Ar. Bea	115.24	328	PKP	PKPdf	18 56 41.1	-0.7
	comp=Z,0.2nm,0.4s,baz=8.6,slow=1.2,SNR=3.0						
VNA2	Neumayer--Watz	153.12	195	eP	PKPab	18 58 06.9	-1.2
	baz=51,slow=1.8						
VNA3	Neumayer Olymp	153.23	193	eP	PKPab	18 58 07.2	-1.4

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*CSEM **07** 18:47:48.4, 42°.30N×13°.50E, h10km, After ROM*
ROM 07 18:47:48.4±0.1**, 42°.30N×13°.50E, h10**km±1km**, Ml1.4**/1**, Error ellipse: s-maj=2.8km s-min=1.3km az=20.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.07	116	Pg	Pg	18 47 51.0	+0.3
FAGN				Sg	Sg	18 47 52.5	+0.2
FAGN	Fagnano	0.07	116	Pg	Pg	18 47 51.0	+0.3
FAGN				Sg	Sg	18 47 52.5	+0.2
AQU	L'Aquila	0.09	309	Pg	Pg	18 47 51.3	+0.4
AQU				Sg	Sg	18 47 53.5	+0.8
AQU	L'Aquila	0.09	309	Pg	Pg	18 47 51.3	+0.4
AQU				Sg	Sg	18 47 53.5	+0.8
VCEL	Villa Celiera	0.27	69	Pg	Pb	18 47 55.1	-0.5
VCEL				Sg	Sg	18 47 58.9	+1.0
	49nm,0.6s						
VCEL	Villa Celiera	0.27	69	Pg	Pb	18 47 55.1	-0.5
VCEL				Sg	Sg	18 47 58.9	+1.0
	49nm,0.6s						
FIAM	Fiamignano	0.28	264	Pg	Pg	18 47 54.6	+0.3
FIAM				Sg	Sb	18 47 59.6	-1.1
FIAM	Fiamignano	0.28	264	Pg	Pg	18 47 54.6	+0.3
FIAM				Sg	Sb	18 47 59.6	-1.1
INTR	Introdacqua	0.42	133	Pg	Pg	18 47 57.2	+0.5
INTR				Sg	Sb	18 48 04.2	-0.3
INTR	Introdacqua	0.42	133	Pg	Pg	18 47 57.2	+0.5
INTR				Sg	Sb	18 48 04.2	-0.3

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*BJI **07** 19:02:00.9, 24°.00N×109°.00W, h10km, mB5.7/2, mb5.1/1, Ms5.0/2, Ms7 4.7/2*
*ISCJB **07** 19:02:02.5±0.5, 24°.15N±0°.05×108°.92W±0°.04, h10km, mb4.4/20, MS4.1/6, Error ellipse: s-maj=7.3km s-min=3.8km az=28.6*
*NEIC **07** 19:02:02.3±0.7, 24°.03N×109°.12W, h10km, mb4.6/40, Error ellipse: s-maj=11.1km s-min=7.5km az=217.0*
NEIC Felt at Cabo San Lucas and Los Cabos, Baja California Sur.
*IDC **07** 19:02:03.1±1.0, 24°.29N×109°.62W, h0km, mb4.0/5, mb1 4.1/8, mb1mx3.9/24, mbtmp3.8/8, ML3.9/2, MS3.8/5, Ms1 3.8/5, ms1mx3.4/49, Error ellipse: s-maj=23.2km s-min=13.7km az=136.0*
*MEX **07** 19:02:06.8±0.3, 24°.39N×108°.97W, h13km±6km, MD4.5*
ISC 07 19:02:03.0±0.6**, 24°.17N**±0°.06×**109°.11W**±0°.05**, h10**km**, n274,** σ**1§67**/243**, mb4.5**/20**, MS4.1**/6**, 71C-91D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	La Paz	1.09	267	Pn	Pb	19 02 20.4	-3.7
LPIG				Sn	Sg	19 02 31.5	-6.8
LPIG	La Paz	1.09	267	Pn	Pb	19 02 20.4	-3.7
	12nm,0.3s,baz=85,slow=1.0,SNR=66						
LPIG				Sn	Sg	19 02 31.5	-6.8
	42nm,0.3s,baz=186,slow=4.4,SNR=42						
MAIG	Mazatlaan	2.65	111	iP	Pn	19 02 46.0	+0.2
MAIG				iS	Sn	19 03 16.3	-1.7
MAIG	Mazatlaan	2.65	111	iP	Pn	19 02 46.0	+0.2
MAIG				iS	Sn	19 03 16.3	-1.7
HPIG		4.16	48	iP	Pn	19 03 04.4	-2.4
HPIG				iS	Sn	19 03 49.1	-6.5
HPIG		4.16	48	iP	Pn	19 03 04.4	-2.4
HPIG				iS	Sn	19 03 49.1	-6.5
SRIG	Santa Rosalia	4.22	319	eP	Pn	19 03 07.3	-0.1
SRIG				iS	Sn	19 03 55.1	-1.7
SRIG	Santa Rosalia	4.22	319	eP	Pn	19 03 07.3	-0.1
SRIG				iS	Sn	19 03 55.1	-1.7
HSIG		5.11	342	iP	Pn	19 03 18.8	-0.8
HSIG				iS	Sn	19 04 14.3	-4.4
HSIG		5.11	342	iP	Pn	19 03 18.8	-0.8
HSIG				iS	Sn	19 04 14.3	-4.4
ANIG	Ahuacatlan	5.25	125	iP	Pn	19 03 20.1	-1.7
ANIG	Ahuacatlan	5.25	125	iP	Pn	19 03 20.1	-1.7
ZAIG	Zacatecas	6.17	102	iP	Pn	19 03 34.7	+0.2
ZAIG				iS	Sn	19 04 42.7	-2.7
ZAIG	Zacatecas	6.17	102	iP	Pn	19 03 34.7	+0.2
ZAIG				iS	Sn	19 04 42.7	-2.7
CGIG		6.26	9	iP	Pn	19 03 34.0	-1.6
CGIG				iS	Sn	19 04 41.0	-6.3
CGIG		6.26	9	iP	Pn	19 03 34.0	-1.6
CGIG				iS	Sn	19 04 41.0	-6.3
TXAR	Lajitas Array	7.08	42	Pn	Pn	19 03 44.6	-2.3
TXAR				Pg	Pg	19 04 12.6	-6.1
TXAR				Sn	Sn	19 05 03.3	-4.3
TXAR				Lg	Lg	19 05 47.0	
TXAR	Lajitas Array	7.08	42	Pn	Pn	19 03 44.6	-2.3
	0.6nm,0.3s,baz=222,slow=14,SNR=13						
TXAR				Pg	Pg	19 04 12.6	-6.1
	0.3nm,0.3s,baz=192,slow=16,SNR=5.1						
TXAR				Sn	Sn	19 05 03.3	-4.3
	0.3nm,0.3s,baz=234,slow=25,SNR=3.8						
TXAR				Lg	Lg	19 05 47.0	
	0.4nm,0.3s,baz=220,slow=31,SNR=4.1						
TXAR				LR	LR	19 06 01.8	
	comp=Z,349nm,21.3s,baz=190,slow=33						
319A	Douglas	7.18	359	⇓P	Pn	19 03 47.8	-0.4
	baz=7.4,SNR=6.2						
627A	Terlingua Ranc	7.34	43	⇓P	Pn	19 03 48.1	-2.4
	baz=7.5						
526A	Mary Lane Ranc	7.38	36	⇓P	Pn	19 03 49.2	-1.9
	baz=7.5						
425A	Indio Mountain	7.54	28	⇓P	Pn	19 03 52.1	-1.2
	baz=7.7,SNR=7.5						
628A	Black Gap, Mar	7.68	45	⇓P	Pn	19 03 53.0	-2.0
	baz=7.8,SNR=5.2						
220A	Playas Peak, P	7.73	4	⇑P	Pn	19 03 55.4	-0.4
	baz=7.9,SNR=9.0						
324A	Moseley Ranch,	7.93	23	⇓P	Pn	19 03 57.5	-1.1
	baz=8.1						
TUC	Tucson	8.25	350	ePn	Pn	19 04 01.6	-1.2
120A	U Bar Ranch, L	8.36	3	⇑P	Pn	19 04 05.4	+0.9
	baz=8.5,SNR=10						
326A	Caldwell Ranch	8.45	31	⇑P	Pn	19 04 04.8	-0.9
	baz=8.6						
428A	Kincaid Ranch,	8.68	40	⇑P	Pn	19 04 07.0	-1.8
	baz=8.8						
225A	Deer Hill, Car	8.77	25	⇓P	Pn	19 04 09.5	-0.7
	baz=8.9						
LNIG	Linares	8.81	83	eP	Pn	19 04 09.6	-1.0
LNIG				iS	Sn	19 05 55.3	+5.3
LNIG	Linares	8.81	83	eP	Pn	19 04 09.6	-1.0
LNIG				iS	Sn	19 05 55.3	+5.3
Z20A	Nine Sixteen R	8.93	3	⇓P	Pn	19 04 14.5	+2.3
	baz=9.1						
429A	Davenport Ranc	9.08	43	⇓P	Pn	19 04 14.4	+0.1
	baz=9.2						
Z21A	St. Cloud Mine	9.20	8	⇓P	Pn	19 04 16.5	+0.5
	baz=9.4						
631A	Perdido Creek	9.24	54	⇓P	Pn	19 04 14.8	-1.7
	baz=9.3						
Z22A	Elephant Butte	9.25	11	⇓P	Pn	19 04 17.1	+0.4
	baz=9.4,SNR=5.9						
125A	Gardner Draw,	9.32	24	⇓P	Pn	19 04 18.6	+0.9
	baz=9.5						
113A	Mohawk Valley,	9.50	336	⇓P	Pn	19 04 21.1	+1.2
	baz=9.6						
531A	Rocksprings	9.69	50	⇓P	Pn	19 04 21.9	-0.7
	baz=9.8						
Y20A	Horse Springs,	9.73	4	⇑P	Pn	19 04 25.1	+1.8
	baz=9.9,SNR=9.3						
632A	Uvalde	9.88	55	⇓P	Pn	19 04 23.5	-1.7
	baz=10.0						
Y21A	Point of Rocks	9.89	7	⇓P	Pn	19 04 26.7	+1.2
	baz=10,SNR=8.4						
Y22A	Socorro	9.92	10	⇑P	Pn	19 04 27.1	+1.3
	baz=10						
Y23A	Lovelace Mesa,	10.09	15	⇑P	Pn	19 04 29.8	+1.5
	baz=10						
Z26A	Caprock	10.13	25	⇓P	Pn	19 04 29.5	+0.9
	baz=10						
LENM	Lemitar	10.14	10	ePn	Pn	19 04 30.1	+1.2
	19nm,1.5s						
GLA	Glamis	10.18	332	ePn	Pn	19 04 33.2	+3.9
BNM	Barren Site	10.18	12	ePn	Pn	19 04 27.9	-1.6
	5.6nm,1.0s						
X21A	Alamocita Cree	10.31	6	⇓P	Pn	19 04 33.2	+1.9
	baz=10,SNR=8.5						
LPM	Los Pinos Moun	10.34	12	Pn	Pn	19 04 29.4	-2.2
	19nm,1.7s						
LAZ	Ladron	10.34	9	ePn	Pn	19 04 33.2	+1.5
	7.6nm,1.0s						
X18A	Snowflake	10.35	356	⇓P	Pn	19 04 34.0	+2.2
	baz=10,SNR=6.3						
X20A	Quemado	10.35	3	⇓P	Pn	19 04 34.2	+2.4
	baz=10						
X16A	Lo Mia Camp, P	10.41	349	⇓P	Pn	19 04 34.1	+1.4
	baz=11						
DVTC	Desert V Tower	10.46	326	⇑P	Pn	19 04 34.0	+0.9
	baz=11						
X22A	Bernardo	10.46	10	⇑P	Pn	19 04 34.8	+1.5
	baz=11						
Z27A	Tatum	10.48	28	⇑P	Pn	19 04 33.8	+0.3
	baz=11						
Y12C	Blythe	10.66	335	⇑P	Pn	19 04 37.5	+1.7
	baz=11						
MONP	Monument Peak	10.80	325	⇑P	Pn	19 04 38.2	+0.1
	baz=11						
X24A	Lazy VL Ranch,	10.85	16	⇓P	Pn	19 04 39.5	+1.0
	baz=11						
W18A	Petrified Fore	10.93	357	⇓P	Pn	19 04 42.0	+2.3
	baz=11						
BC3	Big Chuckawall	10.96	331	⇓P	Pn	19 04 41.5	+1.4
	baz=11						
332A	Millersview	10.97	47	⇑P	Pn	19 04 39.4	-0.8
	baz=11						
W21A	San Fidel	10.99	6	⇑P	Pn	19 04 42.5	+2.0
	baz=11						
ANMO	Albuquerque	10.99	12	ePn	Pn	19 04 40.5	-0.1
ANMO				Lg	Lg	19 07 53.7	
ANMO	Albuquerque	10.99	12	Pn	Pn	19 04 41.9	+1.4
	baz=170,slow=16,SNR=4.4						
ANMO				Lg	Lg	19 07 53.7	
	0.0nm,0.3s,baz=56,slow=23,SNR=3.2						
IRM	Iron Mountain	11.27	333	⇓P	Pn	19 04 46.2	+2.0
	baz=11						
PFO	Pinyon Flat Ob	11.39	327	ePn	Pn	19 04 47.0	+1.0
	30nm,1.5s						
PFO	Pinyon Flat Ob	11.39	327	⇑P	Pn	19 04 47.6	+1.6
	baz=12						
Z30A	Sanderson Ranc	11.47	36	⇓P	Pn	19 04 47.2	+0.2
	baz=12						
WUAZ	Wupatki	11.48	351	⇑P	Pn	19 04 49.4	+2.2
	baz=12						
V25A	Rancho No Teng	12.27	17	⇓P	Pn	19 04 59.9	+1.9
	baz=12						
U21A	Nageezi	12.29	6	⇓P	Pn	19 05 00.4	+2.1
	baz=12						
Z32A	Haskell	12.42	41	⇓P	Pn	19 05 00.8	+0.8
	baz=12						
U15A	North Rim	12.53	348	⇓P	Pn	19 05 05.1	+3.4
	baz=13,SNR=6.0						
U25A	Circle Dot Ran	12.85	17	⇓P	Pn	19 05 07.6	+1.7
	baz=13						
T22A	Edith	12.95	8	⇓P	Pn	19 05 10.1	+2.7
	baz=13,SNR=7.2						
GSC	Goldstone	12.95	331	ePn	Pn	19 05 12.0	+4.8
GSC	Goldstone	12.95	331	⇑P	Pn	19 05 09.2	+2.0
	baz=13						
MVCO	Mesa Verde	13.01	2	Pn	Pn	19 05 11.3	+3.1
	41nm,1.4s						
U26A	Atchley Ranch,	13.04	20	⇑P	Pn	19 05 10.2	+1.7
	baz=13						
X31A	McDonald Ranch	13.11	35	⇓P	Pn	19 05 09.2	-0.2
	baz=13						
T24A	Torres, Weston	13.33	14	⇑P	Pn	19 05 14.0	+1.4
	baz=14						
S21A	Coal Bank Pass	13.50	4	⇓P	Pn	19 05 17.2	+2.2
	baz=14,SNR=9.5						
S18A	Hurst Farm, Bl	13.50	357	⇓P	Pn	19 05 18.0	+3.1
	baz=14						
S20A	Disappointment	13.64	3	⇑P	Pn	19 05 19.8	+3.0
	baz=14						
S22A	4UR Ranch, Cre	13.68	8	⇓P	Pn	19 05 20.5	+3.1
	baz=14						
CCUT	Cedar City	13.83	346	ePn	P	19 05 24.1	-3.8
	89nm,1.7s						
MPMC	Manual Prospec	13.89	331	⇑P	Pn	19 05 23.1	+3.0
	baz=14						
PV01	Paradox Valley	13.93	2	Pn	Pn	19 05 24.2	+3.4
FURC	Furnace Creek,	13.96	333	⇑P	Pn	19 05 24.3	+3.4
	baz=14						
R22A	Saguache, Gunn	14.16	8	⇓P	Pn	19 05 26.6	+2.6
	baz=14						
R21A	Cimarron	14.22	5	⇓P	Pn	19 05 27.2	+2.4
	baz=14						
T28A	Walsh	14.24	23	⇑P	Pn	19 05 26.1	+1.2
	baz=14						
S26A	Kim	14.26	18	⇓P	Pn	19 05 26.8	+1.7
	baz=14						
R23A	Moffat	14.26	11	⇓P	Pn	19 05 27.6	+2.2
	baz=14						
R25A	Fountain Ranch	14.53	15	⇑P	Pn	19 05 31.9	+2.9
	baz=15						
MSU	Marysvale	14.54	350	Pn	P	19 05 34.5	-1.2
	11nm,1.0s						
Q19A	Hogan Spring (	14.74	360	⇓P	Pn	19 05 34.6	+2.8
	baz=15						
Q22A	Crested Butte,	14.77	7	⇑P	Pn	19 05 35.1	+2.7
	baz=15						
Q16A	Castle Valley	14.81	354	⇑P	Pn	19 05 35.8	+3.0
	baz=15						
SRU	San Rafael	14.95	356	ePn	Pn	19 05 37.1	+2.5
	440nm,1.2s						
SRU	San Rafael	14.95	356	⇑P	Pn	19 05 37.4	+2.8
	baz=15						
SMCO	Snowmass	15.08	6	ePn	P	19 05 43.2	+1.3
	34nm,1.1s						
R11A	Troy Canyon, C	15.18	340	⇓P	P	19 05 40.7	-2.1
	baz=15						
TMUT	Trail Mountain	15.19	354	ePn	P	19 05 40.9	-2.2
	147nm,2.7s						
Q25A	Bedland, Calha	15.27	15	⇓P	P	19 05 41.6	-2.3
	baz=16						
P17A	Butcher Ranch,	15.32	355	⇓P	P	19 05 43.0	-1.4
	baz=16						
P23A	Jefferson	15.41	10	⇓P	Pn	19 05 43.4	+2.5
	baz=16						
P19A	Cripple Cowboy	15.42	0	⇑P	P	19 05 43.4	-2.1
	baz=16						
ISCO	Idaho Springs	15.87	10	ePn	Pn	19 05 47.6	+0.8
	56nm,1.5s						

ISCO	Idaho Springs	15.87	10	⇓P	P	19 05 49.1	-1.4
	baz=16,SNR=8.0						
MPU	Maple Canyon	15.95	353	*e*Pn	P	19 05 53.7	+2.4
	51nm,1.4s						
O22A	Kremmling	16.09	7	⇑P	P	19 05 52.9	-0.2
	baz=16,SNR=7.5						
P26A	Davis Ranch, A	16.10	16	⇓P	P	19 05 52.2	-0.8
	baz=16						
NVAR	Mina Array Bea	16.23	333	Pn	Pn	19 05 50.3	-1.1
NVAR	Mina Array Bea	16.23	333	Pn	Pn	19 05 50.3	-1.1
	0.1nm,0.3s,baz=140,slow=5.7,SNR=3.2						
DUG	Dugway	16.28	350	Pn	Pn	19 05 51.3	-0.7
	40nm,1.2s						
DAU	Daniels Canyon	16.30	354	Pn	P	19 05 54.9	-0.5
	42nm,0.3s						
JLU	Jordanelle	16.51	354	*e*Pn	P	19 05 59.2	+1.6
	164nm,2.2s						
N21A	Black Mountain	16.60	4	⇑P	P	19 05 59.3	+0.6
	baz=17						
N19A	John Jarvie Ra	16.68	360	⇑P	P	19 06 00.6	+1.1
	baz=17						
N22A	Wattenberg Ran	16.74	7	⇑P	P	19 06 00.8	+0.6
	baz=17,SNR=7.2						
O26A	Horse Wrangler	16.76	16	⇓P	P	19 06 00.6	+0.3
	baz=17,SNR=5.8						
N18A	Larsen Ranch,	16.77	359	⇑P	P	19 06 01.6	+1.1
	baz=17,SNR=5.7						
CMB	Columbia Colle	16.84	328	*e*P	P	19 06 02.9	+1.8
	25nm,1.4s						
MIAR	Mount Ida	17.02	49	*e*Pn	P	19 06 02.2	-0.9
	24nm,1.3s						
ELK	Elko	17.31	344	*e*Pn	P	19 06 06.3	-0.2
HWUT	Hardware Ranch	17.51	354	*e*Pn	P	19 06 08.7	0.0
	45nm,1.2s						
WCN	Washoe City	17.57	332	*e*Pn	P	19 06 10.6	+1.3
	17nm,1.2s						
BMN	Battle Mountai	17.59	339	*e*Pn	P	19 06 09.4	-0.1
	35nm,1.6s						
L18A	Fontenelle, Gr	17.73	358	⇑P	P	19 06 12.4	+1.4
	baz=18						
M25A	Palm-Egli Farm	17.73	13	⇓P	P	19 06 11.9	+0.9
	baz=18						
HVU	Hansel Valley	17.83	351	*e*Pn	P	19 06 12.0	-0.1
	277nm,2.4s						
L19A	Farson	17.89	359	⇓P	P	19 06 14.4	+1.6
	baz=18						
L16A	Fish Haven	17.91	354	⇑P	P	19 06 14.5	+1.5
	baz=18,SNR=6.6						
L22A	Ellis Ranch, M	17.96	6	⇑P	P	19 06 15.5	+2.0
	baz=18						
L23A	Garrett	18.12	8	⇑P	P	19 06 17.2	+1.7
	baz=18						
L14A	Malta	18.15	350	⇑P	P	19 06 18.3	+2.7
	baz=18						
K18A	Toltan Ranch,	18.44	358	⇑P	Pn	19 06 20.6	+1.6
	baz=19						
BW06	Boulder Array	18.56	359	⇑P	Pn	19 06 22.0	+1.6
	baz=19,SNR=14						
PDAR	Pinedale Array	18.56	359	P	Pn	19 06 20.5	+0.1
PDAR	Pinedale Array	18.56	359	P	Pn	19 06 20.5	+0.1
	0.1nm,0.3s,baz=159,slow=13,SNR=10						
K22A	Casper	18.56	6	⇓P	Pn	19 06 22.0	+1.6
	baz=19						
K19A	Absolon Red Bu	18.61	1	⇓P	Pn	19 06 22.0	+1.0
	baz=19,SNR=9.7						
AHID	Auburn Hatcher	18.62	355	P	Pn	19 06 22.6	+1.4
	78nm,1.7s						
K14A	Jones Ranch, D	18.64	351	⇑P	Pn	19 06 23.6	+2.3
	baz=19,SNR=11						
K15A	Arbon	18.69	352	⇑P	Pn	19 06 24.5	+2.6
	baz=19						
K23A	Bowen Ranch, D	18.76	8	⇑P	Pn	19 06 24.7	+1.8
	baz=19						
J18A	Kendall Valley	19.01	358	P	Pn	19 06 27.1	+1.1
	baz=19,SNR=9.0						
J19A	Crowheart	19.05	0	⇓P	Pn	19 06 28.6	+2.3
	baz=19						
J20A	Shoshoni	19.16	2	⇓P	Pn	19 06 29.6	+2.1
	baz=19						
J16A	Bone	19.17	354	⇑P	Pn	19 06 30.1	+2.3
	baz=19						
RRI2	Red Ridge	19.22	355	*e*P	Pn	19 06 32.1	+3.7
	75nm,1.4s						
J22A	Midwest	19.32	6	⇓P	Pn	19 06 30.5	+0.9
	baz=20,SNR=14						
TPAW	Teton Pass	19.34	356	*e*P	Pn	19 06 30.1	+0.3
	58nm,1.6s						
J15A	Blackfoot	19.38	353	⇓P	Pn	19 06 31.8	+1.6
	baz=20						
I18A	Diamond G Ranc	19.50	358	⇓P	Pn	19 06 32.4	+0.6
	baz=20,SNR=15						
MOOW	Moose Ponds	19.58	356	P	Pn	19 06 33.6	+0.9
	63nm,1.8s						
J13A	Cove Ranch, Pi	19.63	349	⇓P	Pn	19 06 34.3	+1.0
	baz=20						
I21A	Big Trails, Te	19.65	4	⇓P	Pn	19 06 34.2	+0.7
	baz=20						
I17A	Pilgrim Ck.	19.74	357	⇓P	Pn	19 06 35.2	+0.5
	baz=20						
I20A	Worland	19.75	2	⇓P	Pn	19 06 35.5	+0.8
	baz=20,SNR=10						
I19A	Meeteetse	19.82	0	⇑P	Pn	19 06 36.0	+0.4
	baz=20						
HLID	Hailey	19.83	349	*e*P	Pn	19 06 36.2	+0.5
	28nm,1.4s						
HLID	Hailey	19.83	349	⇓P	Pn	19 06 36.5	+0.8
	baz=20						
MFID	Camas Ranch	19.98	346	*e*P	Pn	19 06 37.2	-0.2
	18nm,1.2s						
MOD	Modoc	19.99	335	*e*P	Pn	19 06 37.4	-0.2
	41nm,1.6s						
I14A	Mackay	20.03	351	⇑P	Pn	19 06 39.2	+1.0
	baz=20						
I13A	Wildhorse Cree	20.12	349	⇓P	Pn	19 06 40.1	+0.8
	baz=20,SNR=13						
H20A	Greybull	20.29	2	⇑P	Pn	19 06 41.6	+0.6
	baz=20						
RSSD	Black Hills	20.34	11	*e*P	Pn	19 06 41.2	-0.5
	24nm,1.3s						
LKWY	Lake	20.38	357	*e*P	P	19 06 40.6	+0.4
	32nm,1.2s						
H18A	Shoshone NF, C	20.47	359	⇑P	Pn	19 06 44.5	+1.2
	baz=21,SNR=5.9						
H22A	Clearmont	20.50	6	⇓P	Pn	19 06 44.5	+0.9
	baz=21,SNR=7.3						
H16A	Russell Place,	20.56	356	⇑P	Pn	19 06 44.2	-0.2
	baz=21						
H15A	Lima	20.61	353	⇓P	Pn	19 06 45.3	+0.5
	baz=21,SNR=15						
H14A	Leadore	20.70	351	⇑P	Pn	19 06 46.1	+0.2
	baz=21,SNR=14						
QLMT	Earthquake Lak	20.70	355	*e*P	Pn	19 06 46.8	+0.7
H13A	Challis	20.78	350	⇑P	Pn	19 06 46.1	-0.7
	baz=21,SNR=16						
MCMT	McKenzie Canyo	20.84	353	*e*P	Pn	19 06 47.6	-0.1
	6.8nm,0.7s						
YBH	Yreka Blue Hor	20.86	330	P	Pn	19 06 52.5	+4.8
YBH	Yreka Blue Hor	20.86	330	P	Pn	19 06 52.5	+4.8
	1.6nm,0.7s,baz=144,slow=6.2,SNR=3.5						
H24A	Dirks Ranch, A	20.87	9	⇓P	Pn	19 06 46.6	-1.2
	baz=21,SNR=9.9						
H12A	Diamond D Ranc	20.87	348	⇓P	Pn	19 06 47.4	-0.5
	baz=21,SNR=14						
RLMT	Red Lodge	20.91	360	*e*P	Pn	19 06 49.0	+0.6
	61nm,1.6s						
RLMT	Red Lodge	20.91	360	⇓P	Pn	19 06 48.5	+0.1
	baz=21,SNR=13						
G20A	Bridger	21.02	2	P	P	19 06 50.3	+3.4
	baz=21,SNR=22						
G21A	Lodge Grass	21.07	4	⇓P	P	19 06 49.1	+1.7
	baz=21						
G18A	Lazy EL Ranch,	21.11	359	⇓P	P	19 06 48.9	+1.0
	baz=21,SNR=14						
G16A	Moss Hill, Enn	21.13	355	⇑P	P	19 06 49.9	+1.8
	baz=21						
G22A	Birney	21.13	6	⇓P	P	19 06 49.4	+1.3
	baz=21						
G15A	Dillon	21.13	353	⇑P	P	19 06 49.3	+1.1
	baz=21						
G23A	Biddle	21.20	7	⇓P	P	19 06 50.5	+1.6
	baz=21						
G13A	Cobalt	21.29	350	⇓P	P	19 06 52.5	+2.6
	baz=22						
DLMT	Dillon	21.34	353	*e*P	P	19 06 50.0	-0.4
	243nm,2.1s						
F19A	Roth Farm, Mol	21.64	0	⇑P	P	19 06 55.3	+1.7
	baz=22						
BMO	Blue Mountains	21.69	344	*e*P	P	19 06 56.5	+2.3
	16nm,1.3s						
F18A	Big Timber	21.70	359	⇑P	P	19 06 55.8	+1.6
	baz=22						
F24A	Ekalaka	21.96	9	⇑P	P	19 06 57.8	+0.8
	baz=22						
F13A	Darby	21.98	350	⇓P	P	19 06 58.7	+1.3
	baz=22						
ECSD	EROS Data Cent	22.05	25	P	P	19 06 58.2	+0.2
	106nm,2.1s						
F12A	Elk City	22.11	349	⇓P	P	19 07 00.3	+1.7
	baz=22,SNR=6.3						
E19A	Rath Farm, Rou	22.25	1	⇓P	P	19 07 01.1	+1.0
	baz=22,SNR=9.7						
E20A	Meyer Farm, Mu	22.30	2	⇑P	P	19 07 01.7	+1.0
	baz=22						
E18A	Harlowton	22.36	359	⇑P	P	19 07 03.1	+1.7
	baz=23,SNR=11						
E22A	Miles City	22.37	6	⇑P	P	19 07 02.7	+1.4
	baz=23						
E23A	Ismay	22.49	7	⇑P	P	19 07 03.8	+1.1
	baz=23						
KEBM	Edson Butte	22.50	330	*e*P	P	19 07 04.3	+1.5
	272nm,1.5s						
D20A	Manuel Ranch,	22.89	2	⇓P	P	19 07 08.2	+1.3
	baz=23						
D19A	Cripps Ranch,	22.95	0	⇓P	P	19 07 09.1	+1.6
	baz=23						
D18A	Linhart Farms,	22.99	359	⇑P	P	19 07 09.3	+1.4
	baz=23						
D22A	Cohagen	23.05	5	⇓P	P	19 07 10.5	+1.9
	baz=23,SNR=13						
D13A	Huson	23.28	351	⇑P	P	19 07 11.7	+0.8
	baz=24						
SLMT	Seeley Lake	23.29	352	P	P	19 07 14.1	+3.0
	43nm,1.5s						
C17A	Wharram Farm,	23.45	357	⇓P	P	19 07 13.8	+1.1
	baz=24						
C20A	Veseth Ranch,	23.52	2	⇑P	P	19 07 14.1	+0.8
	baz=24,SNR=14						
C19A	Slack Wire Ran	23.52	0	⇓P	P	19 07 13.9	+0.6
	baz=24,SNR=9.3						
SWMT	Swartz Lake	23.62	352	*e*P	P	19 07 15.1	+0.8
	26nm,1.5s						
C21A	Desert Coulee	23.67	3	⇓P	P	19 07 16.3	+1.6
	baz=24						
C22A	Vida	23.67	5	⇑P	P	19 07 15.7	+1.0
	baz=24,SNR=9.5						
C23A	Lambert	23.80	7	⇓P	P	19 07 17.5	+1.6
	baz=24,SNR=9.6						
EGMT	Eagleton	23.82	359	*e*P	P	19 07 19.1	+2.9
	120nm,1.8s						
EGMT	Eagleton	23.82	359	⇑P	P	19 07 17.8	+1.6
	baz=24						
JTMT	Jette	23.89	351	*e*P	P	19 07 16.6	-0.3
YBMT	Yellow Bay	23.97	352	*e*P	P	19 07 17.9	+0.2
	6.6nm,1.1s						
CPCT	Cooper Cave	24.05	56	*e*P	P	19 07 17.3	-1.2
B17A	L&G Farms, Che	24.11	357	⇑P	P	19 07 19.9	+0.9
	baz=24						
B18A	Beardsley Farm	24.19	359	⇑P	P	19 07 20.9	+1.3
	baz=24						
B22A	Reddig Ranch S	24.21	5	⇑P	P	19 07 21.0	+1.1
	baz=24						
B19A	Brinkman Farms	24.24	0	⇓P	P	19 07 20.6	+0.5
	baz=24						
B15A	Bradely Ranch,	24.25	354	⇓P	P	19 07 20.8	+0.5
	baz=24						
B13A	Whitefish	24.53	351	⇑P	P	19 07 23.3	+0.5
	baz=25						
DGMT	Dagmar	24.57	8	P	P	19 07 24.1	+1.0
	36nm,1.4s						
A20A	Cobblestone Ra	24.68	2	⇓P	P	19 07 24.6	+0.4
	baz=25						
TKL	Tuckaleechee C	24.70	57	LR	LR	19 17 57.0	
	comp=Z,388nm,20.9s,baz=96,slow=38						
A19A	Klindworth Far	24.72	1	⇑P	P	19 07 25.2	+0.7
	baz=25,SNR=8.9						
LON	Longmire	24.73	339	*e*P	P	19 07 23.8	-0.9
	11nm,1.1s						
A17A	Triple J Farms	24.76	358	⇓P	P	19 07 25.8	+0.9
	baz=25						
A21A	Bergtoll Ranch	24.84	3	⇑P	P	19 07 25.9	+0.3
	baz=25,SNR=6.8						
NEW	Newport	24.87	347	P	P	19 07 25.0	-0.8
	15nm,1.2s						
NEW	Newport	24.87	347	⇓P	P	19 07 26.5	+0.6
	baz=25						
NEW	Newport	24.87	347	P	P	19 07 26.5	+0.6
	1.2nm,0.5s,baz=105,slow=12,SNR=3.3						
A22A	Carney Farms,	24.91	5	⇓P	P	19 07 27.2	+1.0
	baz=25,SNR=9.6						
A15A	Johnson Ranch,	24.93	354	⇓P	P	19 07 28.0	+1.6
	baz=25,SNR=9.0						
WALA	Waterton Lakes	25.13	353	*e*P	P	19 07 30.5	+2.2
	0.7nm,1.3s						
AGMN	Agassiz Nation	26.27	20	*e*P	P	19 07 44.8	+6.3
	18nm,1.2s						
JTS	JuntasAbangare	26.82	117	LR	LR	19 18 18.8	
	comp=Z,163nm,21.9s,baz=39,slow=36						
ULM	Lac du Bonnet	28.00	18	*e*P	P	19 07 54.6	+0.6
	15nm,1.3s						
ULM	Lac du Bonnet	28.00	18	P	P	19 07 56.1	+2.1
	2.6nm,0.7s,baz=205,slow=5.8,SNR=4.8						
FFC	Flin Flon	30.98	8	*e*P	P	19 08 22.1	+1.7
	19nm,1.4s						
YKA	Yellowknife Ar	38.49	356	P	P	19 09 24.3	-0.8
YKA	Yellowknife Ar	38.49	356	P	P	19 09 24.3	-0.8
	1.1nm,0.9s,baz=174,slow=7.7,SNR=19						
ROSC	El Rosal	38.58	114	LR	LR	19 29 02.2	
	comp=Z,97nm,18.3s,baz=3.2,slow=41						
SKAG	Skagway	39.78	339	P	P	19 09 35.0	-1.0
ILAR	Eielson Array	47.37	339	P	P	19 10 37.6	+0.6
ILAR	Eielson Array	47.37	339	P	P	19 10 37.6	+0.6
	1.0nm,0.9s,baz=150,slow=6.7,SNR=11						
TRF	Thorofare Moun	47.73	336	*e*P	P	19 10 38.8	-1.2
	38nm,1.5s						
CPUP	Villa Florida	70.88	132	P	P	19 13 26.3	+5.8
CPUP	Villa Florida	70.88	132	P	P	19 13 26.3	+5.8
	2.0nm,0.9s,baz=248,slow=4.3,SNR=3.5						
ESDC	Sonseca Array	85.72	48	LR	LR	19 50 08.2	
	comp=Z,106nm,18.6s,baz=330,slow=34						
MJAR	Matsushiro Arr	92.42	312	P	P	19 15 14.2	-0.1
MJAR	Matsushiro Arr	92.42	312	P	P	19 15 14.2	-0.1
	0.8nm,1.0s,baz=84,slow=3.3,SNR=2.6						
CN2	Changchun	95.89	324	*e*P	P	19 15 28.5	-1.6
HHC	Hu-ho-hao-te	105.08	329	*e*Pdif	Pdif	19 16 10.6	-0.8
HHC				PP	PP	19 20 34.4	+3.2
HHC				S	Sdif	19 28 03.5	-2.8
HHC				SS	SS	19 35 28.4	+3.1
HHC				AMB	AMB		
	comp=Z,290nm,9.8s						
HHC				LR	LR		
	comp=N,210nm,19.2s						
HHC				LR	LR		
	comp=E,220nm,20.8s						
HHC				LR	LR		
	comp=Z,280nm,19.0s						
XAN	Xi'an	111.75	327	PKP	PKiKP	19 20 35.1	-3.5
LZH	Lanzhou	112.46	332	*e*PKP	PKiKP	19 20 34.0	-6.1
LZH				sPKP		19 20 38.5	
LZH				LR	LR		
	comp=N,130nm,18.1s						
LZH				LR	LR		
	comp=E,120nm,18.0s						
LZH				LR	LR		
	comp=Z,160nm,20.3s						
WRA	Warramunga Arr	121.47	261	PKP	PKPdf	19 20 56.7	-0.8
WRA	Warramunga Arr	121.47	261	PKP	PKPdf	19 20 56.7	-0.8
	comp=Z,0.5nm,0.7s,baz=30,slow=1.2,SNR=6.4						
ASAR	Alice Springs	122.85	257	PKP	PKPdf	19 20 58.9	-1.2
ASAR	Alice Springs	122.85	257	PKP	PKPdf	19 20 58.9	-1.2
	comp=Z,0.6nm,1.0s,baz=120,slow=2.4,SNR=4.8						
CMAR	Chiang Mai Arr	129.57	325	PKP	PKPdf	19 21 13.9	+0.9
CMAR	Chiang Mai Arr	129.57	325	PKP	PKPdf	19 21 13.9	+0.9
	comp=Z,0.6nm,1.0s,baz=338,slow=1.0,SNR=3.4						

*ISCJB **07** 19:14:07.4±0.6, 46°.09N±0°.10×152°.0E±0°.1, h48km, mb3.6/12, Error ellipse: s-maj=17.5km s-min=3.9km az=142.6*

*JMA **07** 19:14:07.3±0.7, 45°.99N×152°.22E, h30km, M4.4*

*MOS **07** 19:14:08.7±1.1, 46°.29N×151°.95E, h52km, mb4.1/6, Error ellipse: s-maj=16.4km s-min=10.6km az=50.2*

*IDC **07** 19:14:12.9±2.8, 46°.32N×151°.88E, h71km±22km, mb3.4/12, mb1 3.6/16, mb1mx3.5/28, mbtmp3.4/16, Error ellipse: s-maj=31.3km s-min=13.4km az=151.0*

ISC 07 19:14:08.8±0.8**, 46°.0N**±0°.1×**152°.0E**±0°.1**, h48km, n41, σ1s.83/52, mb3.6**/12**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.03	257	PN	Pn	19 14 53.9	-0.3
KUR				*e*S	Sn	19 15 31.5	+2.3
KUR				smax	smax		
	comp=N,530nm,0.6s						
KUR				smax	smax		
	comp=E,300nm,0.5s						
YUK	Yuzh-Kuril'sk	4.80	248	*i* PN	Pn	19 15 20.2	+1.7
YUK				*i* S	Sn	19 16 14.1	+1.2
YUK				pmax	pmax		
	comp=N,18nm,0.1s						
YUK				pmax	pmax		
	comp=Z,65nm,0.4s						
YUK				pmax	pmax		
	comp=E,21nm,0.1s						
YUK				smax	smax		
	comp=N,70nm,0.4s						
YUK				smax	smax		
	comp=E,99nm,0.8s						
NEM2	Nemuro 2	5.21	242	P	Pn	19 15 23.5	-0.6
NEM2				*e*S	Sn	19 16 19.6	-3.2
JRA	Rausu	5.33	250	P	Pn	19 15 28.1	+2.4
SKR	Severo-Kuril's	5.41	29	*e*PN	Pn	19 15 24.5	-2.3
SKR				*e*S	Sn	19 16 23.0	-4.7
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax	smax		
	comp=N,70nm,0.7s						
SKR				smax	smax		
	comp=Z,70nm,0.7s						
SKR				smax	smax		
	comp=E,30nm,0.5s						
JNK	Nakash	5.75	248	P	Pn	19 15 32.4	+0.9
JNK				*e*S	Sn	19 16 36.9	+0.8
JAK	Akkeshi	6.05	243	P	Pn	19 15 35.2	-0.5
JAK				*e*S	Sn	19 16 40.8	-2.8
JTKR	Abashiri--Toko	6.12	254	P	Pn	19 15 39.2	+2.7
YSS	Yuzh-Sakhalins	6.49	282	*e*PN	Pn	19 15 45.0	+3.4
JAR	Ashorobuto	6.49	248	P	Pn	19 15 43.1	+1.4
JAR				*e*S	Sn	19 16 55.2	+0.8
JOB	Onbets	6.64	245	P	Pn	19 15 44.0	+0.3
JOB				*e*S	Sn	19 16 55.9	-2.2
JKK2	Kamakawa 2	6.93	255	P	Pn	19 15 50.7	+2.9
ASAJ	Asahikawa	6.95	258	P	Pn	19 15 51.6	+3.6
	comp=E,0.9nm,0.3s,baz=67,slow=31,SNR=13						
ASAJ				S	Sn	19 17 22.6	+17
	baz=238,slow=3.9,SNR=2.2						
JCH	Churui	7.09	245	P	Pn	19 15 49.7	-0.2
JCH				*e*S	Sn	19 17 05.6	-3.5
JEM	Erimo	7.54	241	P	Pn	19 15 57.1	+1.0
JNBK	Urakawa-nobuka	7.65	244	P	Pn	19 15 56.7	-0.8
PETK	Petropavlovsk-	8.00	25	PN	Pn	19 16 01.8	-0.6
PETK				S	Sn	19 17 31.5	+0.1
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				smax	smax		
	comp=N,1.0nm,0.3s						
PETK	Petropavlovsk-	8.00	25	P	Pn	19 16 01.8	-0.6
	comp=N,0.6nm,0.3s,baz=185,slow=12,SNR=3.0						
PETK				S	Sn	19 17 31.4	+0.1
	comp=N,0.6nm,0.3s,baz=40,slow=49,SNR=2.8						
JNB	Noboribetsu	8.65	250	P	Pn	19 16 12.0	+0.7
JNB				*e*S	Sn	19 17 45.3	-2.2
JKB	Kayabe	8.94	247	P	Pn	19 16 14.8	-0.5
JKB				*e*S	Sn	19 17 49.2	-5.4
JANG	Nango	9.53	238	P	Pn	19 16 20.1	-3.2
JOSM	Okushiri--Mats	9.86	251	P	Pn	19 16 27.7	-0.1
MJAR	Matsushiro Arr	14.04	233	P	P	19 17 33.6	+2.1
	comp=N,0.1nm,0.3s,baz=32,slow=9.0,SNR=4.1						
FX1	Attu Island--F	15.33	56	P	Pn	19 17 42.4	+0.6
	comp=N,0.4nm,0.3s,baz=266,slow=12,SNR=3.4						
KSRS	Korea Array	19.87	253	P	Pn	19 18 38.3	+0.6
	comp=N,0.1nm,0.3s,baz=53,slow=11,SNR=2.7						
YAK	Yakutsk	20.57	329	*e*P	Pn	19 18 46.9	+1.1
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
ILAR	Eielson Array	37.59	38	P	P	19 21 18.7	+0.4
	comp=Z,0.2nm,0.7s,baz=266,slow=7.3,SNR=3.7						
ZALV	Zalesovo Beam	42.45	306	P	P	19 21 58.3	-0.3
ZALV	Zalesovo Beam	42.45	306	P	P	19 21 58.3	-0.3
	comp=Z,0.2nm,0.3s,baz=41,slow=9.6,SNR=2.5						
MKAR	Makanchi Array	46.63	298	P	P	19 22 32.0	-0.1
MKAR						19 24 03.8	
MKAR	Makanchi Array	46.63	298	P	P	19 22 31.9	-0.1
	comp=Z,0.3nm,0.7s,baz=68,slow=6.9,SNR=5.0						
MKAR				PcP	PcP	19 24 03.8	-1.5
	comp=Z,0.3nm,0.7s,baz=46,slow=3.5,SNR=3.9						
CMAR	Chiang Mai Arr	51.47	256	P	P	19 23 11.2	+1.8
	comp=Z,0.4nm,0.6s,baz=39,slow=5.8,SNR=5.7						
YKA	Yellowknife Ar	51.96	36	P	P	19 23 13.2	+0.7
	comp=Z,0.5nm,0.6s,baz=296,slow=7.1,SNR=8.7						
ARCES	ARCESS Array B	58.31	341	P	P	19 23 58.1	0.0
	comp=Z,1.3nm,0.7s,baz=51,slow=7.1,SNR=3.5						
FINES	FINESS Array B	64.40	334	P	P	19 24 37.2	-2.1
	comp=Z,1.2nm,0.7s,baz=26,slow=7.1,SNR=8.0						
PDAR	Pinedale Array	65.78	53	P	P	19 24 50.0	+1.0
	comp=Z,0.8nm,0.9s,baz=325,slow=2.2,SNR=5.0						
NB2	NORSAR Subarra	68.69	341	P	P	19 25 06.3	-0.5
	comp=Z,0.2nm,0.8s,baz=32,slow=6.5						
NOA	NORSAR Array B	68.69	341	P	P	19 25 05.9	-1.0
	comp=Z,1.0nm,0.7s,baz=28,slow=6.3,SNR=5.6						
BRTR	Keskin Array B	78.42	316	P	P	19 26 04.5	0.0
	comp=Z,0.7nm,0.8s,baz=66,slow=3.0,SNR=4.6						
TXAR	Lajitas Array	78.50	60	P	P	19 26 06.3	+1.3
	comp=Z,0.4nm,0.6s,baz=326,slow=8.1,SNR=4.5						
GERES	GERESS Array B	78.80	333	P	P	19 26 06.2	-0.1
	comp=Z,0.3nm,0.4s,baz=30,slow=6.1,SNR=4.2						

*CSEM **07** 19:19:49.9±0.3, 37°.50N×21°.07E, h2km, MD3.0, Error ellipse: s-maj=5.5km s-min=3.1km az=58.0*

*THE **07** 19:19:50.5, 37°.49N×21°.08E, h0km±3km, ML3.3/2, Error ellipse: s-maj=3.8km s-min=0.8km az=220.0*

*ATH **07** 19:19:50.1, 37°.51N×21°.09E, h12km±1km, MD3.0/10, ML2.9*

ISC 07 19:19:50.1±1.1**, 37°.49N**±0°.03×**21°.05E**±0°.03**, h12km**±9km**, n79, σ1s.19**/107**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMT	Artemida-Makis	0.53	86	P	Pg	19 20 00.4	+0.1
AMT				S	Sb	19 20 08.1	-0.7
AMT	Artemida-Makis	0.53	86	*e*PB	Pg	19 20 00.0	-0.3
AMT				*e*SB	Sg	19 20 06.9	-0.4
AMT	Artemida-Makis	0.53	86	*e*Pb	Pg	19 20 00.0	-0.3
AMT	Artemida-Makis	0.53	86	P	Pg	19 20 00.4	+0.1
AMT				*e*Sb	Sg	19 20 06.9	-0.4
AMT				S	Sb	19 20 07.4	-1.4
KFL	Anninata	0.65	341	P	Pg	19 20 02.9	+0.2
KFL				S	Sb	19 20 13.6	+1.2
KFL	Anninata	0.65	341	P	Pg	19 20 02.7	0.0
KFL				S	Sg	19 20 12.5	+1.2
RLS	Riolos of Patr	0.65	30	P	Pg	19 20 02.5	-0.3
RLS				S	Sb	19 20 12.7	+0.3
RLS	Riolos of Patr	0.65	30	*e*PB	Pg	19 20 02.2	-0.6
RLS				*e*SB	Sg	19 20 11.4	0.0
RLS	Riolos of Patr	0.65	30	*e*Pb	Pg	19 20 02.2	-0.6
RLS	Riolos of Patr	0.65	30	P	Pg	19 20 02.5	-0.3
RLS				S	Sg	19 20 10.9	-0.5
RLS				*e*Sb	Sg	19 20 11.4	0.0
ITM	Ithomi	0.77	114	P	Pg	19 20 04.7	-0.2
ITM				S	Sb	19 20 15.8	+0.1
ITM	Ithomi	0.77	114	*e*PB	Pg	19 20 04.6	-0.3
ITM				*e*SB	Sg	19 20 14.9	0.0
ITM	Ithomi	0.77	114	*e*Pb	Pg	19 20 04.6	-0.3
ITM				*e*Sb	Sg	19 20 14.9	0.0
ITM				S	Sb	19 20 15.7	+0.1
VLS	Valsamata	0.77	332	P	Pg	19 20 05.1	0.0
VLS				S	Sb	19 20 16.6	+0.6
VLS	Valsamata	0.77	332	*e*PG	Pg	19 20 05.0	0.0
VLS				*e*SB	Sb	19 20 16.7	+0.7
VLS	Valsamata	0.77	332	*e*Pg	Pg	19 20 05.0	0.0
VLS				S	Sb	19 20 16.6	+0.6
PYL	PYLOS	0.81	137	P	Pg	19 20 05.6	-0.2
PYL	PYLOS	0.81	137	*e*PG	Pg	19 20 05.1	-0.7
PYL	PYLOS	0.81	137	*e*Pg	Pg	19 20 05.1	-0.7
PYL	PYLOS	0.81	137	P	Pg	19 20 05.4	-0.4
LAKA	Lakka	1.05	44	*e*PG	Pg	19 20 08.7	-1.5
LAKA	Lakka	1.05	44	P	Pg	19 20 08.8	-1.5
LAKA				S	Sg	19 20 23.9	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VLX	Vlachokerasia	1.06	96	P	Pg	19 20 09.2	-1.4
VLX				S	Sb	19 20 25.1	+0.7
VLX	Vlachokerasia	1.06	96	*e*PB	Pg	19 20 09.5	-1.1
VLX	Vlachokerasia	1.06	96	*e*Pb	Pg	19 20 09.5	-1.1
VLX				S	Sb	19 20 25.1	+0.7
GUR	Goura	1.12	66	P	Pg	19 20 10.0	-1.5
GUR				S	Sb	19 20 26.3	+0.4
GUR	Goura	1.12	66	*e*PG	Pg	19 20 10.1	-1.5
GUR	Goura	1.12	66	*e*Pg	Pg	19 20 10.1	-1.5
GUR				S	Sb	19 20 26.7	+0.8
EFP	Efpalio	1.15	36	P	Pg	19 20 11.2	-1.0
EFP	Efpalio	1.15	36	*e*PG	Pg	19 20 10.8	-1.4
EFP	Efpalio	1.15	36	*e*Pg	Pg	19 20 10.8	-1.4
EFP	Efpalio	1.15	36	P	Pg	19 20 11.2	-1.0
EFP				S	Sb	19 20 27.6	+0.8
TRIZ	Trizonia	1.19	43	P	Pg	19 20 11.7	-1.2
TRIZ	Trizonia	1.19	43	P	Pg	19 20 11.7	-1.2
KALE	Kalithea	1.24	44	*e*PN	Pg	19 20 12.5	-1.5
KALE	Kalithea	1.24	44	P	Pg	19 20 12.1	-1.9
KALE	Kalithea	1.24	44	*e*Pn	Pg	19 20 12.5	-1.5
KALE				S	Sn	19 20 31.3	+1.3
DYR	Agios Nikonas	1.26	125	*e*PG	Pg	19 20 13.2	-1.0
DYR	Agios Nikonas	1.26	125	P	Pg	19 20 13.0	-1.3
DYR	Agios Nikonas	1.26	125	*e*Pg	Pg	19 20 13.3	-1.0
LKD2	Lefkada island	1.33	347	P	Pg	19 20 14.5	-1.1
LKD2	Lefkada island	1.33	347	P	Pg	19 20 14.5	-1.1
DSF	Desfina	1.48	51	P	Pn	19 20 16.8	+0.2
DSF	Desfina	1.48	51	P	Pn	19 20 16.9	+0.3
DSF				S	Sn	19 20 38.2	+2.2
EVR	Evrytania	1.54	23	P	Pn	19 20 18.3	+0.8
EVR	Evrytania	1.54	23	*e*PB	Pn	19 20 18.9	+1.4
EVR	Evrytania	1.54	23	P	Pn	19 20 18.3	+0.8
EVR	Evrytania	1.54	23	*e*Pb	Pn	19 20 18.9	+1.4
LTK	Loutraki	1.61	70	P	Pn	19 20 19.2	+1.0
LTK	Loutraki	1.61	70	*e*PG	Pn	19 20 19.3	+1.0
LTK	Loutraki	1.61	70	*e*Pg	Pn	19 20 19.3	+1.0
LTK	Loutraki	1.61	70	P	Pn	19 20 19.6	+1.3
LTK				S	Sg	19 20 41.9	+0.1
VLI	Veliai	1.69	117	*e*PB	Pb	19 20 21.8	+0.6
VLI	Veliai	1.69	117	*e*Pb	Pb	19 20 21.8	+0.6
DID	Didima	1.74	89	P	Pn	19 20 21.0	+0.9
DID	Didima	1.74	89	*e*PN	Pn	19 20 21.2	+1.1
DID	Didima	1.74	89	*e*Pn	Pn	19 20 21.2	+1.1
DID				S	Sg	19 20 46.0	0.0
AGG	Agios Georgios	1.83	33	P	Pn	19 20 22.6	+1.3
AGG	Agios Georgios	1.83	33	P	Pn	19 20 22.6	+1.3
LKR	Lokris	1.92	52	P	Pn	19 20 24.3	+1.7
LKR	Lokris	1.92	52	*e*PN	Pn	19 20 24.3	+1.7
LKR	Lokris	1.92	52	P	Pn	19 20 24.3	+1.7
NAIG	Nisos Aigina	1.95	81	*e*PN	Pn	19 20 24.4	+1.4
NAIG	Nisos Aigina	1.95	81	*e*Pn	Pn	19 20 24.4	+1.4
KYTH	Kithira	2.00	127	*e*PN	Pb	19 20 25.9	-0.5
KYTH	Kithira	2.00	127	*e*Pn	Pb	19 20 25.9	-0.5
IGT	Igoumenitsa	2.11	345	P	Pn	19 20 27.0	+1.8
IGT	Igoumenitsa	2.11	345	P	Pn	19 20 27.0	+1.8
ATH	Athens Observa	2.17	76	*e*PN	Pn	19 20 28.0	+2.1
ATH	Athens Observa	2.17	76	*e*Pn	Pn	19 20 28.0	+2.1
THL	Klokotos Trika	2.20	20	P	Pn	19 20 28.0	+1.6
THL	Klokotos Trika	2.20	20	P	Pn	19 20 28.0	+1.6
PTL	Penteli	2.30	75	*e*PN	Pn	19 20 29.6	+1.8
PTL	Penteli	2.30	75	*e*Pn	Pn	19 20 29.6	+1.8
MRKA	Markates	2.34	58	P	Pn	19 20 29.8	+1.5
MRKA	Markates	2.34	58	P	Pn	19 20 29.8	+1.5
STON	Ston	5.95	336	*i* Pn	Pn	19 21 16.8	-1.1
STON				Sn	Sn	19 22 22.5	-3.5
STON	Ston	5.95	336	*i* Pn	Pn	19 21 16.8	-1.1
STON	Ston	5.95	336	Sn	Sn	19 22 22.5	-3.5

IDC 07 19:20:49.5±3.2**,34°.31S**×**179°.08W,h0km,mb3.8**/3**, mb1 4.0**/4**,mb1mx3.7**/19**,mbtmp3.9**/4**,ML3.9**/1**,MS3.9**/1**, Ms1 3.9**/1**,ms1mx3.3**/30**,Error ellipse: s-maj=72.3km s-min=36.7km az=118.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	5.00	217	Pn	Pn	19 22 06.2	+0.4
	4.1nm,0.3s,baz=312,slow=15,SNR=16						
URZ				Sn	Sn	19 23 03.8	-0.5
	2.6nm,0.3s,baz=173,slow=21,SNR=7.9						
ASAR	Alice Springs	42.15	272	P	P	19 28 44.2	+0.3
	1.3nm,0.7s,baz=113,slow=7.6,SNR=27						
WRA	Warramunga Arr	43.49	277	P	P	19 28 54.5	-0.3
	0.3nm,0.3s,baz=118,slow=7.6,SNR=5.0						
FITZ	Fitzroy Crossi	51.56	274	P	P	19 29 57.2	-0.4
	1.6nm,0.9s,baz=153,slow=4.5,SNR=3.4						
JHJ	Hachijo jima 2	77.40	326	LR	LR	20 02 01.0	
	comp=Z,70nm,21.2s,baz=74,slow=32						
FINES	FINESS Array B	148.44	337	PKPbc	PKPbc	19 40 36.5	-0.7
	2.2nm,0.9s,baz=38,slow=5.4,SNR=4.2						

*CSEM **07** 19:20:54.4±0.1,42°.36N×13°.49E,h10km,ML2.3/7,Error ellipse: s-maj=3.9km s-min=2.1km az=66.0*

ROM 07 19:20:54.1±0.1**,42°.35N**×**13°.49E,h9km**±1km**,Ml1.9**/12**, Error ellipse: s-maj=1.9km s-min=1.1km az=64.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	278	Pg	Pg	19 20 56.6	+0.5
AQU				Sg	Sg	19 20 58.3	+0.7
	2μm,0.4s						
AQU	L'Aquila	0.06	278	Pg	Pg	19 20 56.6	+0.5
AQU				Sg	Sg	19 20 58.3	+0.7
	2μm,0.4s						
FAGN	Fagnano	0.11	137	Pg	Pg	19 20 57.0	+0.3
FAGN				Sg	Sg	19 20 59.0	+0.4
	969nm,0.3s						
FAGN	Fagnano	0.11	137	Pg	Pg	19 20 57.0	+0.3
FAGN				Sg	Sg	19 20 59.0	+0.4
	969nm,0.3s						
CAMP	Campotosto	0.20	343	Pg	Pg	19 20 58.8	+0.4
CAMP				Sg	Sg	19 21 02.4	+1.1
	205nm,0.6s						
CAMP	Campotosto	0.20	343	Pg	Pg	19 20 58.8	+0.4
CAMP				Sg	Sg	19 21 02.4	+1.1
	205nm,0.6s						
FIAM	Fiamignano	0.28	254	Pg	Pg	19 21 00.5	+0.6
FIAM				Sg	Sb	19 21 05.3	-1.3
	171nm,0.7s						
FIAM	Fiamignano	0.28	254	Pg	Pg	19 21 00.5	+0.6
FIAM				Sg	Sb	19 21 05.3	-1.3
	171nm,0.7s						
PTQR	Pietraquaria	0.33	191	Pg	Pg	19 21 01.2	+0.5
PTQR				Sg	Sg	19 21 06.3	+1.1
	27nm,0.2s						
PTQR	Pietraquaria	0.33	191	Pg	Pg	19 21 01.2	+0.5
PTQR				Sg	Sg	19 21 06.3	+1.1
	27nm,0.2s						
LNSS	Leonessa	0.42	308	Pg	Pg	19 21 02.7	+0.2
	149nm,0.7s						
LNSS	Leonessa	0.42	308	Pg	Pg	19 21 02.7	+0.2
	149nm,0.7s						
INTR	Introdacqua	0.46	137	Pg	Pg	19 21 03.3	+0.2
INTR				Sg	Sb	19 21 11.2	-0.3
	169nm,0.8s						
INTR	Introdacqua	0.46	137	Pg	Pg	19 21 03.3	+0.2
INTR				Sg	Sb	19 21 11.2	-0.3
	169nm,0.8s						
VVLD	Villa Vallelon	0.48	168	Pg	Pg	19 21 04.2	+0.5
VVLD				Sg	Sb	19 21 11.9	-0.4
	101nm,0.5s						
VVLD	Villa Vallelon	0.48	168	Pg	Pg	19 21 04.2	+0.5
VVLD				Sg	Sb	19 21 11.9	-0.4
	101nm,0.5s						
CERT	Cerreto	0.55	224	Pg	Pb	19 21 05.4	-0.6
	108nm,0.4s						
CERT	Cerreto	0.55	224	Pg	Pb	19 21 05.4	-0.6
	108nm,0.4s						
NRCA	Norcia	0.56	331	Pg	Pg	19 21 05.1	0.0
NRCA	Norcia	0.56	331	Pg	Pg	19 21 05.1	0.0
GUAR	Guarcino	0.56	193	Pg	Pb	19 21 06.5	+0.2
	90nm,1.0s						
GUAR	Guarcino	0.56	193	Pg	Pb	19 21 06.5	+0.2
	90nm,1.0s						
OFFI	Offida	0.61	14	Pg	Pb	19 21 07.2	+0.2
OFFI	Offida	0.61	14	Pg	Pb	19 21 07.2	+0.2
SDI	San Donato	0.68	159	Pg	Pg	19 21 07.2	-0.1
	20nm,0.2s						
SDI	San Donato	0.68	159	Pg	Pg	19 21 07.2	-0.1
	20nm,0.2s						
FDMO	Fiordimonte	0.75	337	Pg	Pg	19 21 08.6	-0.1
	24nm,0.3s						
FDMO	Fiordimonte	0.75	337	Pg	Pg	19 21 08.6	-0.1
	24nm,0.3s						
CESI	CESI - Serrava	0.79	327	Pg	Pg	19 21 09.1	-0.3
	9.0nm,0.6s						
CESI	CESI - Serrava	0.79	327	Pg	Pg	19 21 09.1	-0.3
	9.0nm,0.6s						
MIDA	Miranda	0.91	141	Pg	Pg	19 21 11.0	-0.7
	22nm,0.4s						
MIDA	Miranda	0.91	141	Pg	Pg	19 21 11.0	-0.7
	22nm,0.4s						
ASSB	Assisi San Ben	0.93	319	Pg	Pg	19 21 11.7	-0.3
	17nm,0.4s						
ASSB	Assisi San Ben	0.93	319	Pg	Pg	19 21 11.7	-0.3
	17nm,0.4s						

*IDC **07** 19:23:22.9±0.5,22°.91S×174°.70W,h0km,mb4.5/19, mb1 4.7/20,mb1mx4.7/23,mbtmp4.5/20,ML4.4/1,MS4.0/5, Ms1 4.1/5,ms1mx3.7/32,Error ellipse: s-maj=20.0km s-min=14.7km az=134.0*

*ISCJB **07** 19:23:26.6±0.3,22°.96S±0°.07×174°.79W±0°.06,h36km, mb4.7/39,MS4.2/6,Error ellipse: s-maj=10.4km s-min=6.9km az=148.8*

*AUST **07** 19:23:28.0±4.4,22°.62S×174°.06W,h76km,Error ellipse: s-maj=3.7km s-min=1.5km az=335.0*

*NEIC **07** 19:23:29.3±1.8,23°.08S×174°.70W,h51km±15km,mb4.9/21, Error ellipse: s-maj=11.9km s-min=8.4km az=142.0*

ISC 07 19:23:28.0±0.4**,23°.02S**±0°.08×**174°.62W**±0°.08**,h36km, n139,**σ1§**44**/136**,mb4.8**/39**,MS4.1**/6**,7C-2D,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.88	49	S	Sn	19 25 41.1	-18
	baz=5.2,SNR=6.4						
RAO	Raoul Island	6.88	205	Pn	Pn	19 24 59.3	-7.0
MSVF	Nonsavu	8.65	306	*e*Pn	Pn	19 25 32.6	+1.9
	73nm,1.3s						
AFI	Afiamalu	9.45	17	*e*Pn	Pn	19 25 33.0	-8.7
AFI				*e*Sn	Sn	19 26 58.3	-29
AFI				Sn	Sn	19 27 10.8	-16
AFI	Afiamalu	9.45	17	Pn	Pn	19 25 34.0	-7.7
	7.6nm,0.3s,baz=28,slow=7.0,SNR=7.1						
AFI				Sn	Sn	19 27 10.8	-16
	15nm,0.3s,baz=238,slow=22,SNR=3.7						
RAR	Rarotonga	13.88	85	*e*Pn	Pn	19 26 33.4	-8.8
RAR				Sn	Sn	19 28 53.6	-21
RAR	Rarotonga	13.88	85	Pn	Pn	19 26 33.6	-8.6
	9.5nm,0.3s,baz=247,slow=9.1,SNR=24						
RAR				Sn	Sn	19 28 53.6	-21
	6.5nm,0.3s,baz=94,slow=18,SNR=7.0						
URZ	Urewera	16.76	203	*e*Pn	Pn	19 27 18.2	-1.7
URZ				Sn	Sn	19 30 09.6	-15
URZ	Urewera	16.76	203	Pn	P	19 27 22.0	+0.1
	1.4nm,0.3s,baz=17,slow=2.0,SNR=5.6						
URZ				Sn	Sn	19 30 09.6	-15
	0.9nm,0.3s,baz=19,slow=20,SNR=3.4						
DZM	Mont Dzumac	17.52	269	P	P	19 27 33.2	+2.8
DZM	Mont Dzumac	17.52	269	P	P	19 27 33.2	+2.8
	0.5nm,0.3s,baz=66,slow=22,SNR=4.4						
RPZ	Rata Peaks	23.79	206	P	P	19 28 38.7	+1.3
RPZ	Rata Peaks	23.79	206	P	P	19 28 38.7	+1.3
	13nm,0.6s,baz=39,slow=15,SNR=5.3						
PPT	Papeete	24.09	82	LR	LR	19 36 53.5	
	comp=Z,522nm,18.9s,baz=80,slow=34						
EIDS	Eidsvold	31.32	259	P	P	19 29 43.3	-1.8
	24nm,1.1s						
RMQ	Roma	33.37	256	P	P	19 30 03.4	+0.4
	baz=34,SNR=5.0						
CMSA	Cobar Meteorol	36.12	248	P	P	19 30 25.8	-0.9
	baz=37,SNR=16						
CTA	Charters Tower	36.44	267	P	P	19 30 28.8	-0.8
CTA	Charters Tower	36.44	267	P	P	19 30 28.8	-0.8
	14nm,0.5s,baz=99,slow=10,SNR=39						
CTA				LR	LR	19 42 00.0	
	comp=Z,348nm,19.4s,baz=103,slow=31						
CTAO	Charters Tower	36.44	267	*e*P	P	19 30 28.1	-1.5
	11nm,0.5s						
QLP	Quilpie	37.41	256	P	P	19 30 37.0	-0.7
	baz=38,SNR=14						
PMG	Port Moresby	38.98	284	*e*P	P	19 30 49.4	-1.7
	30nm,1.1s						
STKA	Stephens Creek	39.63	247	*e*P	P	19 30 55.3	-1.0
	0.8nm,0.6s						
STKA	Stephens Creek	39.63	247	P	P	19 30 55.5	-0.8
	4.6nm,0.6s,baz=82,slow=8.7,SNR=15						
STKA	Stephens Creek	39.63	247	P	P	19 30 55.5	-0.8
	baz=40,SNR=11						
QIS	Mount Isa	42.45	264	S	S	19 38 04.1	+25
	baz=43,SNR=6.1						
BBOO	Buckleboo	44.33	246	P	P	19 31 33.1	-1.6
	baz=45,SNR=6.2						
AS31	Alice Springs	47.05	259	*e*P	P	19 31 55.0	-1.4
ASAR	Alice Springs	47.05	259	P	P	19 31 54.9	-1.5
ASAR	Alice Springs	47.05	259	P	P	19 31 54.9	-1.5
	5.8nm,0.8s,baz=97,slow=7.0,SNR=66						
WRAB	Tennant Creek	47.40	264	*e*P	P	19 31 56.6	-2.5
	12nm,0.8s						
WRA	Warramunga Arr	47.41	264	P	P	19 31 57.6	-1.6
WRA	Warramunga Arr	47.41	264	P	P	19 31 57.6	-1.6
	12nm,0.7s,baz=100,slow=7.9,SNR=47						
KDU	Kakadu	51.16	272	P	P	19 32 26.3	-1.6
	baz=52,SNR=8.9						
KDU				S	S	19 39 43.0	-0.8
	baz=52,SNR=4.3						
MTN	Manton Dam	52.35	271	S	S	19 39 42.5	-18
	baz=53,SNR=3.1						
SBA	Scott Base	55.60	185	*e*P	P	19 33 03.2	+3.7
	217nm,2.9s						
VNDA	Vanda	55.72	186	P	P	19 33 03.0	+2.6
VNDA	Vanda	55.72	186	P	P	19 33 03.0	+2.6
	1.5nm,1.0s,baz=1.3,slow=7.7,SNR=5.3						
FITZ	Fitzroy Crossi	55.83	263	*e*P	P	19 33 01.4	-0.7
	29nm,1.4s						
FITZ	Fitzroy Crossi	55.83	263	P	P	19 33 01.7	-0.4
	3.1nm,0.5s,baz=115,slow=4.4,SNR=20						
FITZ	Fitzroy Crossi	55.83	263	P	P	19 33 01.7	-0.4
	baz=56,SNR=7.2						
SWI	Sorong	56.93	285	P	P	19 33 09.4	-0.6
	baz=57,SNR=7.2						
KLBR	Kellerberrin	59.87	246	P	P	19 33 30.1	-0.2
	baz=60,SNR=9.0						
MEEK	Meekatharra	60.09	252	P	P	19 33 31.0	-0.9
	baz=61,SNR=3.1						
MBWA	Marble Bar	60.39	258	P	P	19 33 33.5	-0.6
BLDU	Ballidu	60.93	247	P	P	19 33 37.4	-0.2
	baz=62,SNR=15						
MORW	Morawa	61.80	248	P	P	19 33 43.6	+0.1
	baz=62,SNR=14						
WSI	Waingapu	63.41	270	P	P	19 34 03.1	+8.7
	baz=64,SNR=4.4						
KKM	Kota Kinabalu	73.43	284	P	P	19 34 57.2	0.0
MJAR	Matsushiro Arr	74.10	322	P	P	19 35 00.8	+0.2
MJAR	Matsushiro Arr	74.10	322	P	P	19 35 00.8	+0.2
	3.3nm,0.9s,baz=163,slow=5.9,SNR=8.8						
MAJO	Matsushiro	74.11	322	P	P	19 34 53.9	-6.6
	18nm,1.4s						
MAT	Matsushiro	74.11	322	P	P	19 35 00.3	-0.2
KSM	Kuching	76.86	277	*e*P	P	19 35 16.4	-0.5
	7.4nm,0.8s						
ASAJ	Asahikawa	77.45	330	P	P	19 35 21.7	+2.3
ASAJ	Asahikawa	77.45	330	P	P	19 35 21.7	+2.3
	12nm,1.0s,baz=207,slow=2.3,SNR=6.0						
ISA	Isabella	78.91	44	*e*P	P	19 35 28.7	+0.8
	6.6nm,1.1s						
CMB	Columbia Colle	79.24	41	*e*P	P	19 35 28.7	-0.8
	7.8nm,1.2s						
PETK	Petropavlovsk-	79.53	343	P	P	19 35 31.2	+0.4
PETK	Petropavlovsk-	79.53	343	P	P	19 35 31.2	+0.4
	13nm,1.0s,baz=141,slow=7.3,SNR=7.5						
MAW	Mawson	80.25	199	P	P	19 35 36.2	+1.7
MAW	Mawson	80.25	199	P	P	19 35 36.2	+1.7
	3.5nm,0.6s,baz=89,slow=4.5,SNR=7.3						
NVAR	Mina Array Bea	80.75	41	P	P	19 35 39.0	+1.0
NVAR	Mina Array Bea	80.75	41	P	P	19 35 39.0	+1.0
	2.9nm,0.6s,baz=224,slow=8.2,SNR=8.1						
KSRS	Korea Array	80.85	317	P	P	19 35 39.8	+1.6
	3.2nm,0.9s,baz=141,slow=5.9,SNR=13						
KSAR	Wonju Array Be	80.87	317	P	P	19 35 39.8	+1.5
USRK	Ussuriysk Arra	82.81	324	P	P	19 35 47.3	-1.0
	3.4nm,0.9s,baz=64,slow=8.7,SNR=14						
USRK				LR	LR	20 09 31.3	
	comp=Z,154nm,20.0s,baz=293,slow=34						
ARUT	Antelope Range	83.42	44	*e*P	P	19 35 52.2	+0.3
	7.6nm,1.1s						
MVU	Marysvale	84.62	44	*e*P	P	19 35 59.4	+1.3
	12nm,1.2s						
SYO	Syowa Base	84.94	192⇓	*e*P	P	19 35 58.6	-0.4
PLCA	Paso Flores	85.27	132	*e*P	P	19 35 59.5	-1.8
	11nm,1.4s						
PLCA	Paso Flores	85.27	132	P	P	19 36 00.9	-0.4
	4.1nm,1.1s,baz=267,slow=8.7,SNR=3.2						
BMO	Blue Mountains	85.38	37	*e*P	P	19 36 01.4	-0.2
	9.7nm,1.5s						
SNAA	Sanae	85.39	177	*e*P	P	19 36 02.1	+0.8
SNAA	Sanae	85.39	177	*e*P	P	19 36 00.9	-0.4
	16nm,1.4s						
VNA3	Neumayer Olymp	85.41	175	*e*P	P	19 36 02.1	+0.8
VNA3	Neumayer Olymp	85.41	175	*e*	P	19 36 14.4	+13
TXAR	Lajitas Array	85.81	56	P	P	19 36 03.9	-0.2
TXAR	Lajitas Array	85.81	56	P	P	19 36 03.9	-0.2
	7.7nm,1.1s,baz=214,slow=6.0,SNR=23						
VNA2	Neumayer--Watz	85.88	176	*e*P	P	19 36 05.0	+1.3
	baz=206,slow=4.2						
VNA2	Neumayer--Watz	85.88	176	*e*	P	19 36 16.9	+13
	baz=206,slow=4.2						
BNM	Barren Site	86.04	50	*e*P	P	19 36 05.5	+0.2
	25nm,2.0s						
SRU	San Rafael	86.05	45	*e*P	P	19 36 05.0	-0.1
LPM	Los Pinos Moun	86.12	50	*e*P	P	19 36 06.0	+0.4
	6.5nm,1.2s						
ANMO	Albuquerque	86.57	50	*e*P	P	19 36 07.5	-0.4
	8.7nm,1.2s						
GDL2	Guadalupe Moun	86.69	53	*e*P	P	19 36 09.1	+0.7
	14nm,1.0s						
KULM	Kulim	87.21	277	P	P	19 36 11.7	+0.5
PSI	Prapat	87.82	274	P	P	19 36 14.8	+0.5
	baz=88,SNR=4.1						
RRI2	Red Ridge	87.93	41	P	P	19 36 12.4	-1.9
	4.0nm,1.1s						
TRF	Thorofare Moun	88.29	11	*e*P	P	19 36 13.0	-2.4
	13nm,1.4s						
GSI	Gunungsitoli	88.48	272	P	P	19 36 13.1	-4.2
	baz=89,SNR=3.7						
PDAR	Pinedale Array	88.68	42	P	P	19 36 17.1	-0.8
PDAR	Pinedale Array	88.68	42	P	P	19 36 17.1	-0.8
	1.7nm,1.0s,baz=222,slow=3.6,SNR=5.7						
ILAR	Eielson Array	90.10	12	P	P	19 36 23.8	+0.2
ILAR	Eielson Array	90.10	12	P	P	19 36 23.8	+0.2
	4.1nm,1.0s,baz=216,slow=5.5,SNR=20						
CFAA	Coronel Fontan	91.09	125	LR	LR	20 10 09.8	
	comp=Z,21nm,18.6s,baz=22,slow=31						
HHC	Hu-ho-hao-te	93.36	313	*e*P	P	19 36 37.8	-1.6
HHC				pP	pP	19 36 54.9	+4.0
HHC				sP	sP	19 37 01.7	+6.7
HHC				PP	PP	19 40 25.0	+0.9
HHC				SKS	SKSac	19 47 05.3	-5.8
HHC				S	S	19 47 38.2	-6.4
HHC				sS	sS	19 48 07.2	+3.5
HHC				SS	SS	19 53 59.4	-2.6
HHC				pmax	pmax		
	comp=Z,25nm,1.0s						
HHC				pmax	pmax		
	comp=Z,290nm,5.6s						
HHC				LR	LR		
	comp=N,190nm,17.7s						
HHC				LR	LR		
	comp=E,230nm,19.6s						
HHC				LR	LR		
	comp=Z,240nm,17.3s						
CMAR	Chiang Mai Arr	93.90	288	P	P	19 36 44.0	+1.7
CMAR	Chiang Mai Arr	93.90	288	P	P	19 36 44.0	+1.7
	comp=Z,0.9nm,0.9s,baz=123,slow=2.7,SNR=7.9						
YKA	Yellowknife Ar	97.50	24	P	P	19 36 57.2	-0.4
YKA	Yellowknife Ar	97.50	24	P	P	19 36 57.2	-0.4
	comp=Z,0.1nm,0.4s,baz=231,slow=4.1,SNR=5.3						
LPAZ	La Paz	98.21	112	LR	LR	20 12 56.7	
	comp=Z,58nm,19.0s,baz=102,slow=30						
MKAR	Makanchi Array	115.20	312	PKP	PKPdf	19 42 05.4	-0.1
MKAR	Makanchi Array	115.20	312	PKP	PKPdf	19 42 05.4	-0.1
	comp=Z,0.2nm,0.7s,baz=169,slow=0.7,SNR=2.9						
BVAR	Borovoye Array	123.02	319	PKP	PKPdf	19 42 18.6	-1.6
BVAR	Borovoye Array	123.02	319	PKP	PKPdf	19 42 18.6	-1.6
	comp=Z,0.5nm,0.6s,baz=54,slow=2.6,SNR=5.9						
ARCES	ARCESS Array B	131.93	351	PKP	PKPdf	19 42 36.8	0.0
ARCES	ARCESS Array B	131.93	351	PKP	PKPdf	19 42 36.8	0.0
	comp=Z,0.9nm,0.6s,baz=11,slow=1.2,SNR=7.8						
FINES	FINESS Array B	139.03	345	PKP	PKPdf	19 42 49.4	-0.8
FINES	FINESS Array B	139.03	345	PKP	PKPdf	19 42 49.4	-0.8
	comp=Z,0.5nm,0.6s,baz=183,slow=32,SNR=3.0						
HFS	Hagfors	142.45	353	PKP	PKPdf	19 42 51.7	-4.7
HFS	Hagfors	142.45	353	PKP	PKPdf	19 42 51.7	-4.7
	comp=Z,2.2nm,0.9s,baz=74,slow=5.4,SNR=7.4						
SUW	Suwalki	146.26	341	*e*PKP	PKPab	19 43 05.2	+0.1
AKASG	Malin Array Be	146.71	332	PKPbc	PKPbc	19 43 05.6	-0.2
AKASG	Malin Array Be	146.71	332	PKPbc	PKPbc	19 43 05.6	-0.2
	comp=Z,3.1nm,0.6s,baz=39,slow=3.6,SNR=12						
AK02	Malin Array Si	146.75	332	*e*PKPbc	PKPbc	19 43 05.0	-0.9
EKA	Eskdalemuir Ar	147.11	9	PKPbc	PKPbc	19 43 06.8	+0.1
EKA	Eskdalemuir Ar	147.11	9	PKPbc	PKPbc	19 43 06.8	+0.1
	comp=Z,3.1nm,0.8s,baz=328,slow=3.0,SNR=3.5						
KWP	Kalwaria Pacla	150.14	337	*e*PKPbc	PKPbc	19 43 14.2	-0.6
BUR08	Bucovina Ar. S	150.75	332	*e*PKPbc	PKPbc	19 43 13.9	-2.5
BRTR	Keskin Array B	150.85	311	PKPbc	PKPbc	19 43 17.1	0.0
BRTR				PKPab	PKPab	19 43 25.2	+0.9
BRTR	Keskin Array B	150.85	311	PKPbc	PKPbc	19 43 17.1	0.0
	comp=Z,1.7nm,0.8s,baz=129,slow=4.0,SNR=8.3						
BRTR				PKPab	PKPab	19 43 25.2	+0.9
	comp=Z,1.5nm,0.9s,baz=101,slow=6.4,SNR=3.6						
KOLS	Kolonicke sedl	150.88	337	*e*PKP	PKPbc	19 43 17.7	+1.1
CLL	Collm	151.15	350⇓	*i*PKPbc	PKPbc	19 43 17.4	+0.3
	comp=Z,25nm,1.4s						
CLL				*e*pPKPbc	pPKPbc	19 43 30.0	+1.2
CRVS	Cervenica-Dubn	151.20	338	*e*PKP	PKPbc	19 43 18.0	+0.7
UPC	Upice	151.33	346⇑	*i*PKPBC	PKPbc	19 43 18.7	+1.1
DPC	Dobruska-Polom	151.41	345⇑	*i*PKPBC	PKPbc	19 43 19.0	+1.2
DPC				*e*PKPAB	PKPab	19 43 26.9	+0.8
OKC	Ostrava-Krasne	151.41	343⇑	*e*PKPBC	PKPbc	19 43 18.4	+0.6
PVCC	Panska Ves	151.62	348⇑	*e*PKPBC	PKPbc	19 43 19.5	+1.3
PRU	Pruhonice	152.14	347⇑	*e*PKPBC	PKPbc	19 43 19.3	-0.1
NKC	Novy Kostel	152.28	350⇑	*e*PKPBC	PKPbc	19 43 19.4	-0.4
VRAC	Vranov	152.31	344	PKPbc	PKPbc	19 43 20.6	+0.7
VRAC	Vranov	152.31	344	PKPbc	PKPbc	19 43 20.6	+0.7
	comp=Z,0.9nm,0.3s,baz=0.0,slow=2.0,SNR=3.4						
VYHS	Vyhne	152.42	340	*e*PKP	PKPbc	19 43 20.8	+0.7
KHC	Kasperske Hory	153.14	348⇑	*e*PKPBC	PKPbc	19 43 22.7	+0.9
GERES	GERESS Array B	153.39	348	PKPbc	PKPbc	19 43 22.4	0.0
GERES				PKPab	PKPab	19 43 35.2	+0.7
GERES	GERESS Array B	153.39	348	PKPbc	PKPbc	19 43 22.4	0.0
	comp=Z,0.6nm,0.7s,baz=332,slow=2.0,SNR=6.1						
GERES				PKPab	PKPab	19 43 35.2	+0.7
	comp=Z,0.2nm,0.5s,baz=333,slow=1.5,SNR=5.4						
TORD	Torodi Ar. Bea	169.58	160	PKP	PKPdf	19 43 32.5	0.0
TORD				PKPab	PKPab	19 44 46.3	+0.7
TORD	Torodi Ar. Bea	169.58	160	PKP	PKPdf	19 43 32.5	0.0
	comp=Z,0.4nm,0.7s,baz=240,slow=2.8,SNR=2.9						
TORD				PKPab	PKPab	19 44 46.3	+0.7
	comp=Z,0.5nm,0.8s,baz=189,slow=1.8,SNR=3.6						

*ISCJB **07** 19:37:17.7±0.5,51°.19N±0°.06×178°.31W±0°.04,h45km, mb3.7/17,Error ellipse: s-maj=8.7km s-min=3.7km az=173.4*

*NEIC **07** 19:37:19.4,51°.23N×178°.32W,h16km,ML3.8(AEIC),After AEIC.*

*IDC **07** 19:37:21.4±3.1,51°.46N×178°.39W,h61km±25km,mb3.4/17, mb1 3.6/19,mb1mx3.5/33,mbtmp3.5/19,ML3.4/2,Error ellipse: s-maj=23.4km s-min=12.2km az=160.0*

ISC 07 19:37:19.5±0.6**,51°.35N**±0°.09×**178°.35W**±0°.03**,h45km,n46,** σ1§**03**/53**,mb3.8**/17**,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GALAA	Gareloi Lava P	0.49	328	P	Pn	19 37 31.1	+0.7
GAEA	Gareloi East	0.50	331	P	Pn	19 37 31.2	+0.7
TASE	Tanaga Southea	0.53	22	P	Pn	19 37 31.3	+0.4
GANE	Gareloi Northe	0.54	331	P	Pn	19 37 31.1	+0.1
TANO	Tanaga North	0.59	14	P	Pn	19 37 31.3	-0.3
TAFP	Tanaga Falls P	0.60	22	P	Pn	19 37 32.1	+0.3
TAFP				S	Sn	19 37 42.0	+1.5
KIMD	Kanaga Island	0.81	59	P	Pn	19 37 34.5	-0.1
KIKV	Kanaga Island	0.91	54	P	Pn	19 37 36.0	+0.1
CERAA	Semis' Rag'd T	1.35	295	P	Pn	19 37 42.5	+0.6
CERB	Semis' Cerberu	1.39	296	P	Pn	19 37 43.4	+1.0
CERB				S	Sn	19 38 02.2	+2.6
CESW	Semis' Southwe	1.41	294	P	Pn	19 37 43.2	+0.4
CEAP	Semis' Anvil P	1.45	298	P	Pn	19 37 44.3	+1.1
AMKA	Amchitka	1.47	272	P	Pn	19 37 42.7	-0.8

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA				S	Sn	19 38 03.3	+1.7
GSCK	Great Sitkin C	1.52	63	P	Pn	19 37 44.9	+0.7
GSTD	Great Sitkin T	1.55	62	P	Pn	19 37 45.2	+0.6
GSTD				S	Sn	19 38 05.4	+1.8
LSSE	Little Sitkin	2.01	288	P	Pn	19 37 52.2	+1.3
LSSA	Little Sitkin	2.04	288	P	Pn	19 37 52.9	+1.5
LSNW	Little Sitkin	2.05	289	P	Pn	19 37 52.8	+1.3
KOKL	Mount Kliuchef	2.75	68	P	Pn	19 38 03.0	+1.9
KOFP	Korovin Flat P	2.80	69	P	Pn	19 38 03.5	+1.7
FX1	Attu Island--F	5.45	290	P	Pn	19 38 39.5	+1.4
FX1	Attu Island--F	5.45	290	P	Pn	19 38 38.8	+0.7
	2.0nm,0.3s,baz=192,slow=9.1,SNR=21						
FX1				S	Sn	19 39 41.0	+1.6
	2.7nm,0.3s,baz=278,slow=22,SNR=3.0						
NIKO	Nikolski	6.07	71	P	Pn	19 38 47.2	+0.6
OKTU	Okmok Mt. Tuli	6.64	68	P	Pn	19 38 55.7	+1.3
MREP	Makushin Rep't	7.49	66	P	Pn	19 39 07.4	+1.3
KDAK	Kodiak Island	16.21	57	P	Pn	19 41 02.5	-1.2
	1.0nm,0.3s,baz=320,slow=4.6,SNR=23						
ILAR	Eielson Array	21.09	38	P	P	19 41 59.4	-0.4
	0.2nm,0.3s,baz=236,slow=8.9,SNR=8.2						
INK	Inuvik	27.32	35	P	P	19 42 59.7	+0.1
	0.3nm,0.3s,baz=260,slow=5.8,SNR=4.3						
INK				PcP	PcP	19 46 17.5	-0.1
	0.4nm,0.4s,baz=252,slow=4.9,SNR=4.0						
USRK	Ussuriysk Arra	33.57	278	P	P	19 43 54.6	-0.3
	1.5nm,0.6s,baz=135,slow=39,SNR=4.7						
MJAR	Matsushiro Arr	34.06	261	P	P	19 44 00.1	+0.8
	0.9nm,0.6s,baz=47,slow=5.4,SNR=3.0						
YKA	Yellowknife Ar	35.05	46	P	P	19 44 07.9	+0.3
	0.2nm,0.3s,baz=284,slow=7.6,SNR=5.5						
YKA				PcP	PcP	19 46 38.9	+0.6
	0.2nm,0.4s,baz=284,slow=3.1,SNR=5.3						
PDAR	Pinedale Array	46.05	72	P	P	19 45 39.2	+0.4
	0.9nm,0.5s,baz=340,slow=2.6,SNR=12						
SONM	Songino Array	46.91	297	P	P	19 45 45.6	+0.2
	0.2nm,0.5s,baz=52,slow=7.9,SNR=6.0						
SPITS	Spitsbergen Ar	50.42	356	P	P	19 46 11.2	-0.6
	3.9nm,0.8s,baz=48,slow=5.8,SNR=7.8						
ZALV	Zalesovo Beam	54.26	314	PcP	PcP	19 47 44.4	+0.2
	0.6nm,0.6s,baz=63,slow=2.6,SNR=3.6						
ARCES	ARCESS Array B	58.17	350	P	P	19 47 06.9	-1.3
	2.4nm,1.0s,baz=18,slow=7.7,SNR=7.4						
MKAR	Makanchi Array	60.27	309	P	P	19 47 22.2	-0.8
	0.3nm,0.4s,baz=48,slow=7.3,SNR=9.8						
BVAR	Borovoye Array	61.09	320	P	P	19 47 27.8	-0.8
	0.6nm,0.3s,baz=51,slow=6.6,SNR=7.1						
FINES	FINESS Array B	65.88	347	P	P	19 47 58.2	-1.6
	0.4nm,0.4s,baz=38,slow=7.2,SNR=4.7						
NOA	NORSAR Array B	67.70	355	P	P	19 48 11.3	-0.3
	0.7nm,0.8s,baz=10.0,slow=6.4,SNR=2.9						
HFS	Hagfors	68.45	354	P	P	19 48 15.6	-0.6
	0.5nm,0.4s,baz=19,slow=9.4,SNR=5.1						
CMAR	Chiang Mai Arr	71.30	276	P	P	19 48 34.2	-0.2
	0.5nm,0.7s,baz=24,slow=6.7,SNR=4.1						
WRA	Warramunga Arr	82.19	224	P	P	19 49 35.2	-0.4
	0.3nm,0.6s,baz=264,slow=36,SNR=5.1						
ASAR	Alice Springs	85.66	223	P	P	19 49 53.4	+0.2
	0.6nm,0.8s,baz=22,slow=6.2,SNR=5.3						
TORD	Torodi Ar. Bea	115.78	360	PKP	PKPdf	19 55 56.2	-1.0
	0.2nm,0.5s,baz=344,slow=2.9,SNR=4.3						
BOSA	Boshof	151.20	313	PKPbc	PKPbc	19 57 08.0	+0.3
	1.4nm,0.5s,baz=352,slow=8.7,SNR=6.6						

*CSEM **07** 19:38:20.0, 42°27N×13°49E, h10km, After ROM*

ROM 07 19:38:20.0±0.1**, 42°27N×13°49E, h10km, Ml1.8**/3**, Error ellipse: s-maj=1.2km s-min=1.1km az=80.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.07	96	Pg	Pg	19 38 22.7	+0.3
FAGN				Sg	Sg	19 38 24.3	+0.2
	819nm,0.2s						
FAGN	Fagnano	0.07	96	Pg	Pg	19 38 22.7	+0.3
FAGN				Sg	Sg	19 38 24.3	+0.2
	819nm,0.2s						
PTQR	Pietraquaria	0.26	195	Pg	Pg	19 38 26.1	+0.7
PTQR				Sg	Sg	19 38 30.1	+1.0
	11nm,0.3s						
PTQR	Pietraquaria	0.26	195	Pg	Pg	19 38 26.1	+0.7
PTQR				Sg	Sg	19 38 30.1	+1.0
	11nm,0.3s						
FIAM	Fiamignano	0.28	269	Pg	Pg	19 38 26.3	+0.5
FIAM				Sg	Sb	19 38 30.9	-1.2
	78nm,0.5s						
FIAM	Fiamignano	0.28	269	Pg	Pg	19 38 26.3	+0.5
FIAM				Sg	Sb	19 38 30.9	-1.2
	78nm,0.5s						
TERO	Teramo	0.36	13	Pg	Pg	19 38 27.7	+0.4
TERO				Sg	Sg	19 38 33.2	+1.1
	93nm,0.4s						
TERO	Teramo	0.36	13	Pg	Pg	19 38 27.7	+0.4
TERO				Sg	Sg	19 38 33.2	+1.1
	93nm,0.4s						
INTR	Introdacqua	0.40	130	Pg	Pg	19 38 28.7	+0.6
INTR				Sg	Sb	19 38 34.6	-1.0
	97nm,0.3s						
INTR	Introdacqua	0.40	130	Pg	Pg	19 38 28.7	+0.6
INTR				Sg	Sb	19 38 34.6	-1.0
	97nm,0.3s						

*CSEM **07** 19:38:48.9, 42°51N×13°38E, h10km, After ROM*

ROM 07 19:38:48.9±0.1**, 42°51N×13°38E, h10**km±1km**, Ml1.9**/4**, Error ellipse: s-maj=2.1km s-min=1.7km az=62.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.03	36	Pg	Pg	19 38 51.4	+0.5
CAMP				Sg	Sg	19 38 52.7	+0.4
	91nm,0.6s						
CAMP	Campotosto	0.03	36	Pg	Pg	19 38 51.4	+0.5
CAMP				Sg	Sg	19 38 52.7	+0.4
	91nm,0.6s						
AQU	L'Aquila	0.16	175	Pg	Pg	19 38 53.6	+1.2
AQU				Sg	Sg	19 38 55.3	+0.5
	528nm,0.3s						
AQU	L'Aquila	0.16	175	Pg	Pg	19 38 53.6	+1.2
AQU				Sg	Sg	19 38 55.3	+0.5
	528nm,0.3s						
TERO	Teramo	0.20	55	Pg	Pg	19 38 53.6	+0.4
TERO				Sg	Sg	19 38 56.8	+0.7
	96nm,0.3s						
TERO	Teramo	0.20	55	Pg	Pg	19 38 53.6	+0.4
TERO				Sg	Sg	19 38 56.8	+0.7
	96nm,0.3s						
LNSS	Leonessa	0.27	290	Pg	Pg	19 38 55.0	+0.5
LNSS				Sg	Sb	19 38 59.7	-1.2
	95nm,0.8s						
LNSS	Leonessa	0.27	290	Pg	Pg	19 38 55.0	+0.5
LNSS				Sg	Sb	19 38 59.7	-1.2
	95nm,0.8s						
FAGN	Fagnano	0.28	148	Pg	Pg	19 38 54.9	+0.2
FAGN				Sg	Sg	19 38 59.8	+1.2
FAGN	Fagnano	0.28	148	Pg	Pg	19 38 54.9	+0.2
FAGN				Sg	Sg	19 38 59.8	+1.2
VCEL	Villa Celiera	0.36	108	Pg	Pb	19 38 57.0	-0.6
VCEL				Sg	Sb	19 39 03.2	-0.2
	336nm,0.3s						
VCEL	Villa Celiera	0.36	108	Pg	Pb	19 38 57.0	-0.6
VCEL				Sg	Sb	19 39 03.2	-0.2
	336nm,0.3s						
NRCA	Norcia	0.38	329	Pg	Pg	19 38 56.9	+0.3
NRCA				Sg	Sb	19 39 03.1	-0.9
NRCA	Norcia	0.38	329	Pg	Pg	19 38 56.9	+0.3
NRCA				Sg	Sb	19 39 03.1	-0.9

*CSEM **07** 20:07:43.6, 42°28N×13°48E, h10km, After ROM*

ROM 07 20:07:43.6±0.1**, 42°28N×13°48E, h10km, Ml1.5**/4**, Error ellipse: s-maj=1.1km s-min=1.0km az=49.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.08	101	Pg	Pg	20 07 46.5	+0.5
FAGN				Sg	Sg	20 07 48.0	+0.3
	1μm,0.6s						
FAGN	Fagnano	0.08	101	Pg	Pg	20 07 46.5	+0.5
FAGN				Sg	Sg	20 07 48.0	+0.3
	1μm,0.6s						
AQU	L'Aquila	0.09	322	Pg	Pg	20 07 46.1	-0.1
AQU				Sg	Sg	20 07 48.7	+0.7
	196nm,0.4s						
AQU	L'Aquila	0.09	322	Pg	Pg	20 07 46.1	-0.1
AQU				Sg	Sg	20 07 48.7	+0.7
	196nm,0.4s						
CAMP	Campotosto	0.26	348	Pg	Pb	20 07 49.9	-0.7
CAMP				Sg	Sg	20 07 53.9	+1.1
CAMP	Campotosto	0.26	348	Pg	Pb	20 07 49.9	-0.7
CAMP				Sg	Sg	20 07 53.9	+1.1
PTQR	Pietraquaria	0.27	193	Pg	Pb	20 07 49.9	-0.7
PTQR				Sg	Sb	20 07 54.1	-1.2
	11nm,0.3s						
PTQR	Pietraquaria	0.27	193	Pg	Pb	20 07 49.9	-0.7
PTQR				Sg	Sb	20 07 54.1	-1.2
	11nm,0.3s						
FIAM	Fiamignano	0.27	267	Pg	Pg	20 07 49.9	+0.7
FIAM				Sg	Sb	20 07 54.3	-1.2
	40nm,0.2s						
FIAM	Fiamignano	0.27	267	Pg	Pg	20 07 49.9	+0.7
FIAM				Sg	Sb	20 07 54.3	-1.2
	40nm,0.2s						
VCEL	Villa Celiera	0.29	67	Pg	Pb	20 07 50.7	-0.4
VCEL				Sg	Sb	20 07 55.0	-1.2
	101nm,0.5s						
VCEL	Villa Celiera	0.29	67	Pg	Pb	20 07 50.7	-0.4
VCEL				Sg	Sb	20 07 55.0	-1.2
	101nm,0.5s						
TERO	Teramo	0.35	15	Pg	Pg	20 07 51.3	+0.6
TERO				Sg	Sg	20 07 56.5	+1.0
TERO	Teramo	0.35	15	Pg	Pg	20 07 51.3	+0.6
TERO				Sg	Sg	20 07 56.5	+1.0
INTR	Introdacqua	0.41	130	Pg	Pg	20 07 52.3	+0.4
INTR				Sg	Sb	20 07 58.8	-0.8
INTR	Introdacqua	0.41	130	Pg	Pg	20 07 52.3	+0.4
INTR				Sg	Sb	20 07 58.8	-0.8
LNSS	Leonessa	0.46	315	Pg	Pb	20 07 53.9	-0.1
	31nm,0.4s						
LNSS	Leonessa	0.46	315	Pg	Pb	20 07 53.9	-0.1
	31nm,0.4s						
CERT	Cerreto	0.50	228	Pg	Pg	20 07 53.6	+0.2
CERT	Cerreto	0.50	228	Pg	Pg	20 07 53.6	+0.2

*BJI **07** 20:12:49.3, 61°50N×149°90W, h30km, mB4.9/15, mb4.9/35, Ms4.8/12, Ms7 4.4/14*

*MOS **07** 20:12:50.6±0.9, 61°63N×150°09W, h28km, mb5.2/40, Error ellipse: s-maj=11.3km s-min=4.6km az=93.7*

*ISCJB **07** 20:12:53.5±0.2, 61°55N±0°01×149°95W±0°03, h50km±1km, mb4.7/138, MS3.8/17, Error ellipse: s-maj=2.7km s-min=2.0km az=36.0*

*IDC **07** 20:12:54.2±0.5, 61°48N×150°11W, h48km±4km, mb4.3/26, mb1 4.5/31, mb1mx4.4/33, mbtmp4.3/31, MS3.8/16, Ms1 3.8/16, ms1mx3.5/50, Error ellipse: s-maj=9.3km s-min=8.9km az=85.0*

*NEIC **07** 20:12:55.4, 61°45N×149°74W, h33km, mb4.8/82, ML4.5(AEIC), MW4.6(USGS), After AEIC.*

NEIC Felt [IV] at Anchorage, Chugiak and Eagle River; [III] at Big Lake, Elmendorf AFB, Fort Richardson, Girdwood, Palmer, Wasilla and Willow; [II] at Houston, Seward and Talkeetna. Also felt at Cooper Landing, Kenai, Moose Pass, Soldotna, Sterling, Sutton, Trapper Creek and Whittier.

ISC 07 20:12:53.5±0.2**, 61°51N**±0°03×**149°88W**±0°03**, h41**km±2km**, h40**km**:pP-P, n735,** σ1°**30**/793**, mb4.8**/138**, MS3.7**/17**, 181C-151D, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMR	Palmer	0.37	76	P	Pn	20 13 02.8	+0.2
PMR				S	Sn	20 13 09.2	+0.3
PMR	Palmer	0.37	76	P	Pn	20 13 02.8	+0.2
PMR				S	Sn	20 13 09.2	+0.3
RC01	Rabbit Creek A	0.43	171	P	Pn	20 13 03.9	+0.6
RC01				S	Sn	20 13 10.9	+0.8
SML	Sawmill	0.80	67	P	Pn	20 13 08.4	+0.1
SML				S	Sn	20 13 19.2	+0.1
SML	Sawmill	0.80	67	P	Pn	20 13 08.4	+0.1
SML				S	Sn	20 13 19.2	+0.1
TRAP	Trapper Creek	0.85	348	P	Pn	20 13 10.3	+1.3
SKT	Skwentna	0.92	302	P	Pn	20 13 11.5	+1.6
CUT	Chulitna	0.92	349	P	Pn	20 13 11.3	+1.4
STLK	Strandline Lak	0.94	270	P	Pn	20 13 12.1	+1.9
NKA	Nikishka	1.01	221	P	Pn	20 13 13.9	+2.7
SLKM	Skilak Lake	1.02	190	P	Pn	20 13 11.9	+0.6
SLKM	Skilak Lake	1.02	190	P	Pn	20 13 11.9	+0.6
SPU	Mount Spurr	1.10	254	P	Pn	20 13 14.0	+1.6
BGL	Barrier Glacie	1.23	260	P	Pn	20 13 16.3	+2.0
SEW	Seward	1.43	171	P	Pn	20 13 17.0	+0.2
SEW				S	Sn	20 13 35.9	+1.6
DFR	Drift River	1.65	237	P	Pn	20 13 21.9	+1.9
PPLA	Purkeypile	1.76	323	P	Pn	20 13 23.6	+2.0
BRLK	Bradley Lake	1.82	196	P	Pn	20 13 23.3	+1.0
BRLK				S	Sn	20 13 46.8	+2.7
KLU	Klutina	1.90	89	P	Pn	20 13 24.0	+0.6
TRF	Thorofare Moun	1.96	355	P	Pn	20 13 26.0	+1.6
DHY	Denali Highway	1.96	36	P	Pn	20 13 26.1	+1.7
RND	Reindeer	1.96	14	P	Pn	20 13 26.4	+2.1
RND	Reindeer	1.96	14	P	Pn	20 13 26.4	+2.1
DIV	Divide	2.02	99	P	Pn	20 13 25.4	+0.3
ILIM	Iliamna	2.08	228	P	Pn	20 13 27.9	+2.0
INE	Iliamna NE	2.13	228	P	Pn	20 13 28.8	+2.2
EYAK	Cordova Ski Ar	2.23	114	P	Pn	20 13 28.0	+0.2
MCK	McKinley	2.27	11	P	Pn	20 13 31.2	+2.7
MCK	McKinley	2.27	11	P	Pn	20 13 31.2	+2.7
HARP	HAARP	2.41	66	P	Pn	20 13 32.1	+1.7
OPT	Oil Point	2.49	223	P	Pn	20 13 33.6	+2.2
SGAM	Sherman Glacie	2.49	112	P	Pn	20 13 31.6	+0.1
PAX	Paxson	2.53	53	P	Pn	20 13 34.6	+2.5
PAX	Paxson	2.53	53	P	Pn	20 13 34.6	+2.5
BMRM	Bremner River	2.61	100	P	Pn	20 13 33.2	+0.1
CHUM	Lake Minchumin	2.63	336	P	Pn	20 13 35.7	+2.3
GOAT	Goat Mountain	2.67	108	P	Pn	20 13 34.0	-0.1
MID	Middleton Isla	2.73	138	P	Pn	20 13 35.6	+1.0
MID	Middleton Isla	2.73	138	P	Pn	20 13 35.6	+1.0
WASW	Wrangell South	2.75	79	P	Pn	20 13 36.4	+1.1
AUP	Augustine Pinn	2.78	221	P	Pn	20 13 37.8	+2.3
AUP	Augustine Pinn	2.78	221	P	Pn	20 13 37.8	+2.3
AUW	Augustine West	2.79	221	P	Pn	20 13 37.8	+2.3
DDM	Donnelly Dome	2.94	37	P	Pn	20 13 40.3	+2.5
WRH	Wood River Hil	3.08	15	P	Pn	20 13 41.3	+1.7
NEA	Nenana	3.10	6	P	Pn	20 13 42.2	+2.4
NICHA	Nichawak Mount	3.16	111	P	Pn	20 13 40.5	-0.1
HDA	Harding Lake	3.20	23	P	Pn	20 13 43.5	+2.3
TT01	Tatalina	3.20	299	P	Pn	20 13 43.5	+2.3
BERG	Berg Lake	3.21	108	P	Pn	20 13 41.0	-0.4
MENT	Mentasta	3.22	61	*e*Pn	Pn	20 13 42.5	+0.9
MENT				*e*Sn	Sn	20 14 27.8	+9.2
CCB	Clear Creek Bu	3.29	16	P	Pn	20 13 43.9	+1.5
KHIT	Khitrov Hills	3.40	105	P	Pn	20 13 43.7	-0.4
GRIN	Grindle Hills	3.43	108	P	Pn	20 13 44.6	+0.2
DOT	Dot Lake	3.44	49	P	Pn	20 13 48.0	+3.4
COLA	College	3.50	14	P	Pn	20 13 47.0	+1.7
COLA	College	3.50	14	P	Pn	20 13 47.0	+1.7
MDM	Murphy Dome	3.54	11	P	Pn	20 13 47.6	+1.7
ILAR	Eielson Array	3.55	21	P	Pn	20 13 47.4	+1.4
ILAR				S	Sn	20 14 33.1	+6.6
ILAR	Eielson Array	3.55	21	P	Pn	20 13 47.4	+1.4
	5.8nm,0.3s,baz=201,slow=14,SNR=151						
ILAR				S	Sn	20 14 33.1	+6.6
	65nm,0.3s,baz=203,slow=18,SNR=5.5						
IL1	Eielson Array	3.55	21	P	Pn	20 13 48.2	+2.3
MLY	Manley	3.56	354	P	Pn	20 13 48.2	+2.1
BALM	Baldy	3.67	94	P	Pn	20 13 47.8	0.0
BALM	Baldy	3.67	94	P	Pn	20 13 47.8	0.0
GLM	Gilmore Dome	3.67	17	P	Pn	20 13 50.7	+3.0
BARK	Barkley Ridge	3.77	104	P	Pn	20 13 49.3	+0.2
ISLE	Juniper Island	3.78	101	P	Pn	20 13 49.8	+0.5
BAGL	Bagley Icefiel	3.93	102	P	Pn	20 13 52.1	+0.9
KDAK	Kodiak Island	3.98	201	P	Pn	20 13 51.9	0.0
KDAK				P		20 13 52.1	
KDAK	Kodiak Island	3.98	201	P	Pn	20 13 52.1	+0.2
	9.3nm,0.3s,baz=47,slow=9.1,SNR=86						
KDAK				S	Sn	20 14 35.0	-2.3
	61nm,0.3s,baz=96,slow=17,SNR=7.1						
KDAK				LR	LR	20 15 38.7	
	comp=Z,879nm,21.6s,baz=54,slow=42						
KAWH	Katmai	3.99	220	P	Pn	20 13 53.9	+1.7
BCA3	Beaver Creek A	4.09	64	P	Pn	20 13 54.6	+1.2
KAKN	Katmai Knife C	4.14	221	P	Pn	20 13 55.7	+1.5
KCE	Katmai Mt Cerb	4.23	222	P	Pn	20 13 57.5	+2.2
KABU	Katmai Buttres	4.24	222	P	Pn	20 13 57.3	+1.8
KABR	Katmai Barrier	4.25	219	P	Pn	20 13 57.0	+1.3
KELA	Mount Kelaz	4.26	226	P	Pn	20 13 57.5	+1.6
TABL	Table Mountain	4.39	100	P	Pn	20 13 58.2	+0.5
PRP	Porcupine Dome	4.47	24	P	Pn	20 14 02.1	+3.3
GCSA	Galena City Sc	4.54	319	P	Pn	20 14 02.1	+2.5
OHAK	Old Harbor	4.64	204	P	Pn	20 14 00.7	-0.2
SAMH	Samovar Hills	4.66	103	P	Pn	20 14 02.5	+1.1
IM3	Indian Mountai	4.81	341	P	Pn	20 14 05.0	+1.8
EGAK	Eagle	5.14	47	*e*Pn	Pn	20 14 08.6	+0.8
	257nm,0.6s						
DAWY	Dawson	5.45	57	P	Pn	20 14 13.7	+1.5
PNL	Peninsula	5.49	105	P	Pn	20 14 13.4	+0.8
COLD	Coldfoot	5.75	359	P	Pn	20 14 19.2	+3.1
HYT	Haines Junctio	6.03	91	P	Pn	20 14 21.1	+0.9
AZAC	Aniakchak	6.30	227	P	Pn	20 14 25.7	+1.8
BM3	Burnt Mountain	6.36	19	P	Pn	20 14 26.5	+2.0
CHGN	Chignik	6.84	224	*e*Pn	Pn	20 14 31.5	+0.5
WHY	Whitehorse	7.32	90	P	Pn	20 14 38.0	+0.2
SKAG	Skagway	7.47	100	P	Pn	20 14 39.4	-0.4
BESE	Bessie Mountai	8.07	105	P	Pn	20 14 47.5	-0.5
SDPT	Sand Point	8.30	227	*e*Pn	Pn	20 14 52.4	+1.3
	100nm,0.8s						
TNA	Tin City	9.01	305	*e*Pn	Pn	20 15 04.3	+3.6
	150nm,0.5s						
TNA				*e*Sn	Sn	20 16 38.6	-2.1
INK	Inuvik	9.71	38	P	Pn	20 15 12.8	+2.5
INK				S	Sn	20 17 01.7	+4.0
INK	Inuvik	9.71	38	P	Pn	20 15 12.8	+2.5
	0.6nm,0.3s,baz=239,slow=17,SNR=10						
INK				S	Sn	20 17 01.7	+4.0
	2.1nm,0.3s,baz=208,slow=10,SNR=6.4						
INK				LR	LR	20 19 14.0	
	comp=Z,674nm,18.7s,baz=38,slow=39						
GAMB	Gambell	10.28	292	*e*Pn	Pn	20 15 20.8	+2.7
	53nm,0.6s						
WRAK	Wrangell Islan	10.37	112	*e*Pn	Pn	20 15 19.2	-0.2
	22nm,0.5s						
DLBC	Dease Lake	10.40	98	*e*Pn	Pn	20 15 16.6	-3.3
DLBC	Dease Lake	10.40	98	P	Pn	20 15 20.3	+0.3
	0.9nm,0.3s,baz=314,slow=15,SNR=5.8						
DLBC				LR	LR	20 19 30.9	
	comp=Z,739nm,21.5s,baz=329,slow=38						
CRAG	Craig	10.63	117	*e*Pn	Pn	20 15 22.2	-0.8
AKUT	Akutan	11.22	236	*e*Pn	Pn	20 15 31.5	+0.5
UNV	Unalaska Valle	11.72	237	*e*Pn	Pn	20 15 39.1	+1.2
NIKO	Nikolski	13.32	239	*e*Pn	Pn	20 16 00.9	+1.2
BBB	Bella Bella	15.06	118	P	Pn	20 16 23.1	+0.1
BBB	Bella Bella	15.06	118	P	Pn	20 16 23.1	+0.1
	0.2nm,0.3s,baz=299,slow=13,SNR=2.8						
YKW3	Yellowknife Ar	16.45	71	*e*Pn	Pn	20 16 40.7	-0.2
	0.2nm,0.8s						
YKA	Yellowknife Ar	16.47	71	P	Pn	20 16 39.9	-1.3
YKA				PcP	PcP	20 21 29.3	-1.2
YKA	Yellowknife Ar	16.47	71	P	Pn	20 16 39.8	-1.3
	0.4nm,0.3s,baz=281,slow=11,SNR=31						
YKA				PcP	PcP	20 21 29.3	-1.2
	0.2nm,0.3s,baz=284,slow=1.4,SNR=7.6						
BILL	Bilibino	19.41	308	*i* P	Pn	20 17 18.4	+1.3
BILL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BILL	Bilibino	19.41	308	*e*Pn	Pn	20 17 17.5	+0.4
	comp=Z,8.3nm,0.8s						
AMKA	Amchitka	19.63	253	*e*P	P	20 17 18.1	-0.1
PGC	Sidney	19.68	119	*e*P	P	20 17 19.9	+1.2
	comp=Z,1.0nm,1.0s						
NLWA	Neilton Lookou	20.50	122	*e*P	P	20 17 29.5	+1.8
	comp=Z,23nm,1.0s						
FX1	Attu Island--F	21.53	263	P	P	20 17 37.1	-1.6
FX1	Attu Island--F	21.53	263	P	P	20 17 37.1	-1.6
	comp=Z,10nm,0.4s,baz=320,slow=4.2,SNR=43						
FX1				LR	LR	20 26 42.3	
	comp=Z,110nm,19.4s,baz=228,slow=39						
LON	Longmire	21.86	120	*e*P	P	20 17 43.6	+1.2
LON				pmax	pmax		
	comp=Z,17nm,1.1s						
LON	Longmire	21.86	120	*e*P	P	20 17 43.6	+1.2
	comp=Z,17nm,1.1s						
NEW	Newport	22.73	111	P	P	20 17 53.3	+1.7
NEW	Newport	22.73	111	⇓P	P	20 17 53.5	+1.9
	baz=23,SNR=6.0						
NEW	Newport	22.73	111	P	P	20 17 53.3	+1.7
	comp=Z,6.8nm,0.7s,baz=322,slow=7.6,SNR=13						
NEW				LR	LR	20 26 50.0	
	comp=Z,260nm,19.9s,baz=292,slow=37						
A12A	Yaak River Ran	22.91	108	⇑P	P	20 17 55.0	+1.5
	baz=23						
RES	Resolute Bay	23.20	34	*e*P	P	20 17 55.5	-0.7
	comp=Z,7.6nm,0.6s						
RES	Resolute Bay	23.20	34	P	P	20 17 56.4	+0.2
	comp=Z,2.0nm,0.5s,baz=250,slow=13,SNR=15						
B12A	Libby	23.27	108	⇓P	P	20 17 59.0	+1.8
	baz=23						
WALA	Waterton Lakes	23.62	105	*e*P	P	20 18 01.5	+0.9
	comp=Z,0.3nm,0.6s						
B13A	Whitefish	23.85	107	⇑P	P	20 18 03.8	+1.1
	baz=24,SNR=9.4						
C12B	Naegeli Ranch,	23.88	110	⇑P	P	20 18 04.5	+1.5
	baz=24						
BLMT	Blacktail Moun	24.17	108	*e*P	P	20 18 06.5	+0.7
	comp=Z,7.4nm,0.6s						
A15A	Johnson Ranch,	24.22	104	⇑P	P	20 18 06.8	+0.6
	baz=24,SNR=10.0						
C13A	Hot Springs	24.32	108	⇑P	P	20 18 07.9	+0.9
	baz=24						
JTMT	Jette	24.40	108	*e*P	P	20 18 08.9	+1.1
	comp=Z,7.7nm,1.1s						
B14A	Marquette Ranc	24.41	106	⇓P	P	20 18 08.8	+0.8
	baz=24,SNR=13						
D12A	Red Ives Fores	24.43	110	⇑P	P	20 18 09.0	+0.9
	baz=24						
YBMT	Yellow Bay	24.44	107	*e*P	P	20 18 09.1	+1.0
	comp=Z,8.5nm,1.1s						
SWMT	Swartz Lake	24.70	108	*e*P	P	20 18 11.3	+0.8
	comp=Z,4.9nm,1.0s						
B15A	Bradely Ranch,	24.78	105	⇑P	P	20 18 11.8	+0.6
	baz=25,SNR=24						
SLMT	Seeley Lake	25.13	108	*e*P	P	20 18 15.6	+1.2
	comp=Z,3.4nm,0.8s						
C15A	Salmond Ranch,	25.15	106	⇑P	P	20 18 15.7	+1.1
	baz=25,SNR=10						
A17A	Triple J Farms	25.20	102	⇓P	P	20 18 16.1	+1.2
	baz=25						
MSO	Missoula	25.24	109	*e*P	P	20 18 15.2	-0.2
	comp=Z,2.8nm,0.7s						
MSO	Missoula	25.24	109	⇑P	P	20 18 16.2	+0.8
	baz=25						
D14A	Greenough	25.25	108	⇑P	P	20 18 16.4	+0.9
	baz=25,SNR=12						
BMO	Blue Mountains	25.28	116	*e*P	P	20 18 16.8	+1.1
	comp=Z,6.8nm,1.0s						
E13A	Victor	25.42	110	⇑P	P	20 18 17.9	+0.9
	baz=25						
F12A	Elk City	25.46	112	⇑P	P	20 18 18.4	+0.9
	baz=25,SNR=9.2						
CHMT	Chamberlain Mo	25.49	108	*e*P	P	20 18 18.1	+0.3
	comp=Z,7.3nm,1.2s						
C16A	Fuhringer Ranc	25.52	105	⇑P	P	20 18 18.7	+0.8
	baz=25,SNR=7.0						
B17A	L&G Farms, Che	25.61	103	⇓P	P	20 18 19.5	+0.8
	baz=25,SNR=11						
A18A	Metzger Ranch,	25.61	101	⇑P	P	20 18 19.5	+0.8
	baz=25						
FFC	Flin Flon	25.67	83	*i* P	P	20 18 20.6	+1.5
FFC	Flin Flon	25.67	83	*e*P	P	20 18 19.5	+0.4
	comp=Z,9.7nm,1.5s						
YBH	Yreka Blue Hor	25.68	128	P	P	20 18 21.4	+2.1
YBH	Yreka Blue Hor	25.68	128	P	P	20 18 21.4	+2.1
	comp=Z,7.7nm,0.9s,baz=285,slow=3.2,SNR=12						
YBH				LR	LR	20 26 36.4	
	comp=Z,165nm,20.1s,baz=251,slow=32						
D15A	Lincoln	25.73	107	⇓P	P	20 18 20.6	+0.7
	baz=26,SNR=6.2						
E14A	Clinton	25.75	109	⇓P	P	20 18 20.7	+0.6
	baz=26,SNR=9.3						
F13A	Darby	25.85	111	⇑P	P	20 18 22.1	+1.1
	baz=26,SNR=11						
B18A	Beardsley Farm	26.02	102	⇑P	P	20 18 22.8	+0.4
	baz=26						
C17A	Wharram Farm,	26.10	104	⇑P	P	20 18 24.3	+1.2
	baz=26						
A19A	Klindworth Far	26.13	100	⇓P	P	20 18 24.3	+0.9
	baz=26,SNR=6.2						
E15A	Deer Lodge	26.13	108	⇑P	P	20 18 24.0	+0.5
	baz=26						

SEY Seymchan 26.18 299 ⇓iP P 20 18 24.5 +0.9
D16A Dana Ranch, Ca 26.18 106 ⇑P P 20 18 24.7 +0.7
baz=26,SNR=6.0
F14A Wisdom 26.27 110 ⇓P P 20 18 25.9 +1.1
baz=26
EGMT Eagleton 26.29 102 eP P 20 18 25.7 +0.9
comp=Z,25nm,0.9s
EGMT ePcP PcP 20 21 49.7 -0.3
EGMT Eagleton 26.29 102 ⇓P P 20 18 25.9 +1.0
baz=26,SNR=11
B19A Brinkman Farms 26.36 101 ⇓P P 20 18 26.4 +0.9
baz=26,SNR=6.1
G13A Cobalt 26.43 112 ⇑P P 20 18 27.3 +1.0
baz=26,SNR=11
MOD Modoc 26.46 124 eP P 20 18 27.8 +1.3
comp=Z,10nm,1.0s
D17A Six Diamond Ra 26.49 105 ⇓P P 20 18 27.1 +0.3
baz=26,SNR=9.3
E16A East Helena 26.49 107 ⇓P P 20 18 28.0 +1.2
baz=26
A20A Cobblestone Ra 26.55 99 ⇑P P 20 18 28.1 +0.9
baz=26,SNR=5.9
H12A Diamond D Ranc 26.59 114 ⇑P P 20 18 28.6 +1.0
baz=26
F15A Butte 26.64 109 ⇑P P 20 18 29.1 +0.9
baz=26
G14A Jackson 26.66 111 ⇑P P 20 18 29.1 +0.7
baz=26,SNR=5.5
LRM Limekiln Ridge 26.67 109 eP P 20 18 29.4 +0.8
comp=Z,28nm,0.5s
C19A Slack Wire Ran 26.83 102 ⇑P P 20 18 31.0 +1.3
baz=27,SNR=8.1
H13A Challis 26.84 113 ⇓P P 20 18 30.9 +1.0
baz=27,SNR=11
D18A Linhart Farms, 26.87 104 ⇓P P 20 18 31.6 +1.5
baz=27
E17A Martinsdale 26.92 106 ⇓P P 20 18 31.7 +1.0
baz=27
A21A Bergtoll Ranch 26.95 98 ⇑P P 20 18 32.0 +1.3
baz=27,SNR=7.6
MFID Camas Ranch 27.07 116 eP P 20 18 33.0 +1.1
comp=Z,7.5nm,0.7s
MFID Camas Ranch 27.07 116 ⇑P P 20 18 33.3 +1.3
baz=27,SNR=7.1
F16A Kennard Place, 27.08 108 ⇑P P 20 18 33.3 +1.3
baz=27
G15A Dillon 27.16 110 ⇓P P 20 18 33.9 +1.1
baz=27
BOZ Bozeman (W) 27.18 108 ⇑P P 20 18 34.2 +1.2
baz=27,SNR=6.7
H14A Leadore 27.19 112 ⇓P P 20 18 34.1 +1.0
baz=27
E18A Harlowton 27.28 105 ⇓P P 20 18 34.9 +1.1
baz=27
D19A Cripps Ranch, 27.32 103 ⇑P P 20 18 35.7 +1.5
baz=27
C20A Veseth Ranch, 27.34 101 ⇑P P 20 18 35.5 +1.3
baz=27
I13A Wildhorse Cree 27.41 113 ⇓P P 20 18 36.2 +1.1
baz=27,SNR=47
G16A Moss Hill, Enn 27.42 109 ⇑P P 20 18 36.5 +1.3
baz=27,SNR=6.5
A22A Carney Farms, 27.42 97 ⇑P P 20 18 36.4 +1.4
baz=27
F17A Fitzpatrick Pl 27.43 107 ⇑P P 20 18 36.7 +1.5
baz=27
H15A Lima 27.51 111 ⇓P P 20 18 37.1 +1.1
baz=27,SNR=6.0
HLID Hailey 27.56 114 eP P 20 18 37.4 +1.0
comp=Z,4.8nm,0.7s
HLID Hailey 27.56 114 ⇑P P 20 18 37.4 +1.0
baz=27,SNR=11
C21A Desert Coulee 27.68 100 ⇓P P 20 18 38.7 +1.4
baz=28
I14A Mackay 27.69 113 ⇑P P 20 18 38.6 +1.0
baz=28,SNR=14
D20A Manuel Ranch, 27.72 102 ⇑P P 20 18 39.1 +1.4
baz=28
J13A Cove Ranch, Pi 27.80 114 ⇓P P 20 18 39.9 +1.4
baz=28
G17A Pierce Place, 27.84 107 ⇓P P 20 18 40.4 +1.6
baz=28
F18A Big Timber 27.86 106 ⇓P P 20 18 40.2 +1.1
baz=28
B22A Reddig Ranch S 27.87 98 ⇑P P 20 18 40.5 +1.5
baz=28
E19A Rath Farm, Rou 27.88 104 ⇑P P 20 18 40.4 +1.3
baz=28
QLMT Earthquake Lak 27.90 109 eP P 20 18 41.1 +1.6
comp=Z,1.3nm,0.9s
H16A Russell Place, 28.08 109 ⇓P P 20 18 42.0 +0.9
baz=28,SNR=9.1
B23A Brockton 28.23 97 ⇓P P 20 18 43.7 +1.5
baz=28
F19A Roth Farm, Mol 28.26 105 ⇓P P 20 18 43.6 +1.0
baz=28,SNR=5.2
D21A La Casta Ranch 28.28 101 ⇓P P 20 18 43.9 +1.3
baz=28
C22A Vida 28.32 99 ⇑P P 20 18 44.4 +1.4
baz=28
G18A Lazy EL Ranch, 28.38 106 ⇑P P 20 18 44.8 +1.1
baz=28,SNR=5.6
A24A Westby 28.38 95 ⇑P P 20 18 44.8 +1.3
baz=28
J15A Blackfoot 28.56 112 ⇓P P 20 18 46.1 +0.8
baz=28
D22A Cohagen 28.60 100 ⇓P P 20 18 47.2 +1.7
baz=28
C23A Lambert 28.61 98 ⇑P P 20 18 46.5 +0.9
baz=28,SNR=5.2
I16A Newdale 28.61 110 ⇑P P 20 18 47.1 +1.3
baz=28
RLMT Red Lodge 28.66 106 eP P 20 18 48.1 +1.8
comp=Z,16nm,0.8s
RLMT Red Lodge 28.66 106 ⇓P P 20 18 48.4 +2.1
baz=28,SNR=16
PETK Petropavlovsk- 28.79 277 P P 20 18 46.7 -0.3
PETK Petropavlovsk- 28.79 277 P P 20 18 46.7 -0.3
PETK Petropavlovsk- 28.79 277 P P 20 18 46.7 -0.3
comp=Z,3.1nm,0.7s,baz=98,slow=7.6,SNR=4.1
PETK LR LR 20 29 32.6
comp=Z,108nm,21.8s,baz=244,slow=35
H18A Shoshone NF, C 28.82 107 ⇑P P 20 18 49.4 +1.7
baz=29
IMW Indian Meadow 28.84 110 eP P 20 18 50.0 +2.1
comp=Z,16nm,0.8s
K14A Jones Ranch, D 28.92 114 ⇑P P 20 18 50.8 +2.3
baz=29,SNR=8.9
DCID1 Drake Creek 28.97 110 P P 20 18 50.5 +1.5
comp=Z,17nm,0.6s
I17A Pilgrim Ck. 28.99 109 ⇓P P 20 18 51.2 +2.0
baz=29
J16A Bone 29.03 111 ⇓P P 20 18 51.0 +1.4
baz=29,SNR=7.5
G20A Bridger 29.07 105 ⇓P P 20 18 51.3 +1.5
baz=29,SNR=6.4
RRI2 Red Ridge 29.10 111 eP P 20 18 52.1 +1.8
comp=Z,16nm,0.7s
RRI2 ePcP PcP 20 21 57.5 +0.3
TPAW Teton Pass 29.16 110 eP P 20 18 52.5 +1.8
comp=Z,11nm,0.8s
LOHW Long Hollow 29.22 110 eP P 20 18 52.8 +1.6
comp=Z,4.0nm,0.7s
LOHW ePcP PcP 20 21 57.5 +0.1
E22A Miles City 29.23 101 ⇑P P 20 18 52.5 +1.4
baz=29
J17A Brown Place, J 29.36 110 ⇓P P 20 18 54.3 +1.8
baz=29
K16A Soda Springs 29.39 112 ⇓P P 20 18 54.7 +2.0
baz=29
D24A Glendive 29.50 98 ⇓P P 20 18 55.2 +1.6
baz=29
I18A Diamond G Ranc 29.50 109 ⇑P P 20 18 55.4 +1.6
baz=29,SNR=7.1
ELK Elko 29.51 119 eP P 20 18 55.3 +1.5
G21A Lodge Grass 29.54 104 ⇑P P 20 18 55.2 +1.2
baz=29
I19A Meeteetse 29.62 107 ⇑P P 20 18 56.0 +1.3
baz=29
L15A Malad City 29.70 114 ⇑P P 20 18 57.1 +1.6
baz=30
HVU Hansel Valley 29.71 114 P P 20 18 57.3 +1.7
HVU pmax pmax
comp=Z,10.0nm,0.7s
HVU Hansel Valley 29.71 114 P P 20 18 57.3 +1.7
comp=Z,9.6nm,0.7s
J18A Kendall Valley 29.80 109 ⇑P P 20 18 58.1 +1.7
baz=30,SNR=13

E24A Baker 29.91 99 ⇑P P 20 18 58.8 +1.6
baz=30
H21A Big Horn, Sher 30.07 104 ⇓P P 20 18 60.0 +1.3
baz=30
L16A Fish Haven 30.11 113 ⇑P P 20 19 00.6 +1.5
baz=30,SNR=9.3
NVAR Mina Array Bea 30.23 125 P P 20 19 01.7 +1.5
NVAR Mina Array Bea 30.23 125 P P 20 19 01.7 +1.5
comp=Z,5.6nm,0.7s,baz=313,slow=8.6,SNR=9.5
NVAR LR LR 20 29 11.6
comp=Z,174nm,20.1s,baz=188,slow=32
K18A Toltan Ranch, 30.24 110 ⇓P P 20 19 02.2 +1.9
baz=30,SNR=6.2
L17A Cokeville 30.29 112 ⇑P P 20 19 02.2 +1.4
baz=30
BW06 Boulder Array 30.35 109 ⇑P P 20 19 02.8 +1.5
baz=30,SNR=11
PDAR Pinedale Array 30.35 109 P P 20 19 02.6 +1.3
PDAR PcP PcP 20 22 00.1 -0.3
PDAR Pinedale Array 30.35 109 P P 20 19 02.6 +1.3
comp=Z,5.6nm,0.6s,baz=319,slow=4.6,SNR=48
PDAR PcP PcP 20 22 00.1 -0.3
comp=Z,2.4nm,0.8s,baz=278,slow=0.1,SNR=7.7
PDAR LR LR 20 31 06.6
comp=Z,189nm,20.8s,baz=8.4,slow=36
HWUT Hardware Ranch 30.38 113 eP P 20 19 03.0 +1.5
comp=Z,4.5nm,0.7s
G23A Bridle 30.41 102 ⇑P P 20 19 02.4 +0.9
baz=30
J20A Shoshoni 30.57 107 ⇑P P 20 19 05.0 +2.0
baz=30
I21A Big Trails, Te 30.57 106 ⇑P P 20 19 04.6 +1.4
baz=30
K19A Absolon Red Bu 30.63 109 ⇓P P 20 19 04.7 +1.1
baz=30
G24A Alzada 30.77 101 ⇓P P 20 19 05.7 +1.0
baz=31
L18A Fontenelle, Gr 30.81 111 ⇓P P 20 19 06.8 +1.5
baz=31
J21A Lysite 30.86 106 ⇓P P 20 19 07.1 +1.4
baz=31,SNR=14
I22A 9 Mile Ranch, 30.89 105 ⇑P P 20 19 07.6 +1.7
baz=31,SNR=8.9
M17A Scullys Gap (B 30.89 112 ⇓P P 20 19 07.3 +1.3
baz=31
L19A Farson 30.97 110 ⇓P P 20 19 07.8 +1.0
baz=31
K20A Yellowstone Ra 30.99 108 ⇑P P 20 19 07.9 +1.1
baz=31
DUG Dugway 31.00 116 ⇑P P 20 19 08.3 +1.4
baz=31
H24A Dirks Ranch, A 31.14 102 ⇓P P 20 19 09.5 +1.5
baz=31
TIXI Tiksi 31.19 323 eP P 20 19 07.5 -0.6
TIXI e 20 22 00.0
TIXI pmax pmax
comp=Z,3.0nm,0.8s
TIXI Tiksi 31.19 323 eP P 20 19 07.5 -0.6
comp=Z,2.8nm,0.8s
TIXI ePcP PcP 20 21 60.0 -1.7
MDND Maddock 31.24 93 ⇑P P 20 19 10.1 +1.4
baz=31
N17A Moffit Pass 31.25 113 ⇑P P 20 19 10.6 +1.4
baz=31
J22A Midwest 31.26 105 ⇓P P 20 19 10.7 +1.6
baz=31,SNR=8.8
ULM Lac du Bonnet 31.38 86 P P 20 19 11.0 +1.1
ULM PcP PcP 20 22 02.3 -0.3
ULM Lac du Bonnet 31.38 86 P P 20 19 11.0 +1.1
comp=Z,19nm,0.7s,baz=308,slow=8.5,SNR=29
ULM PcP PcP 20 22 02.3 -0.3
comp=Z,3.9nm,0.6s,baz=322,slow=3.5,SNR=5.6
ULM LR LR 20 31 53.8
comp=Z,188nm,19.2s,baz=359,slow=36
R11A Troy Canyon, C 31.38 122 ⇓P P 20 19 11.8 +1.5
baz=31,SNR=11
L20A Wamsutter 31.51 109 ⇑P P 20 19 12.3 +0.9
baz=31,SNR=7.0
K21A Alcova 31.51 107 ⇑P P 20 19 12.6 +1.1
baz=31,SNR=5.7
O16A Springville 31.55 115 ⇑P P 20 19 13.2 +1.4
baz=31
N18A Larsen Ranch, 31.73 112 ⇑P P 20 19 14.7 +1.3
baz=32,SNR=13
I24A Kuemmerle Ranc 31.78 103 ⇑P P 20 19 14.9 +1.2
baz=32
K22A Casper 31.83 106 ⇓P P 20 19 15.4 +1.2
baz=32
RSSD Black Hills 31.86 102 eP P 20 19 15.9 +1.4
RSSD e 20 22 04.0
RSSD pmax pmax
comp=Z,6.0nm,0.4s
RSSD Black Hills 31.86 102 eP P 20 19 15.9 +1.4
comp=Z,5.6nm,0.4s
RSSD ePcP PcP 20 22 04.0 -0.3
L21A Rawlins 31.98 108 ⇑P P 20 19 17.1 +1.5
baz=32
M20A Sweetwater, Wa 31.99 109 ⇑P P 20 19 17.3 +1.6
baz=32,SNR=7.8
N19A John Jarvie Ra 32.02 111 ⇑P P 20 19 17.0 +1.1
baz=32,SNR=7.1
O18A Roosevelt 32.16 113 ⇓P P 20 19 19.2 +2.1
baz=32,SNR=5.0
J24A Dixon Ranch, L 32.17 103 ⇓P P 20 19 18.5 +1.4
baz=32
M21A Separation Pea 32.27 108 ⇓P P 20 19 19.4 +1.2
baz=32,SNR=11
L22A Ellis Ranch, M 32.36 107 ⇑P P 20 19 21.1 +2.2
baz=32
N20A Spence Gulch, 32.48 110 ⇓P P 20 19 21.9 +1.9
baz=32,SNR=54
P17A Butcher Ranch, 32.49 115 ⇑P P 20 19 21.4 +1.4
baz=32
FURC Furnace Creek, 32.49 125 ⇑P P 20 19 21.7 +1.9
baz=32
O19A Miners Draw (B 32.53 112 ⇑P P 20 19 21.9 +1.6
baz=32
ISA Isabella 32.58 128 ⇑P P 20 19 22.3 +1.6
baz=32
MPMC Manual Prospec 32.61 126 ⇑P P 20 19 23.0 +1.9
baz=32,SNR=6.2
L23A Garrett 32.63 106 ⇓P P 20 19 22.4 +1.1
baz=32,SNR=8.6
MVU Marysvale 32.66 117 eP P 20 19 23.3 +1.7
comp=Z,16nm,1.3s
MSU Marysvale 32.67 117 eP P 20 19 23.6 +2.0
MSU pmax pmax
comp=Z,4.0nm,0.6s
MSU Marysvale 32.67 117 eP P 20 19 23.6 +2.0
comp=Z,3.9nm,0.6s
AGMN Agassiz Nation 32.72 89 eP P 20 19 22.6 +0.8
comp=Z,22nm,0.6s
ARUT Antelope Range 32.75 120 eP P 20 19 23.6 +1.3
ARUT pmax pmax
comp=Z,8.0nm,0.8s
ARUT Antelope Range 32.75 120 eP P 20 19 23.6 +1.3
comp=Z,7.7nm,0.8s
Q16A Castle Valley 32.76 116 ⇑P P 20 19 24.2 +1.7
baz=33
PKM Peak Mountain 32.77 130 ⇑P P 20 19 24.6 +2.2
baz=33
M22A Cedar Creek Ra 32.78 108 ⇓P P 20 19 24.2 +1.6
baz=33
N21A Black Mountain 32.87 109 ⇓P P 20 19 24.8 +1.3
baz=33,SNR=8.2
SRU San Rafael 32.88 115 eP P 20 19 24.9 +1.4
SRU San Rafael 32.88 115 eP P 20 19 24.9 +1.4
comp=Z,555nm,0.8s
SRU San Rafael 32.88 115 ⇑P P 20 19 25.3 +1.9
baz=33,SNR=19
CCUT Cedar City 32.98 120 eP P 20 19 26.0 +1.6
comp=Z,7.5nm,0.8s
O20A White River Ci 33.05 111 ⇓P P 20 19 26.4 +1.4
baz=33
M23A Laramie 33.13 107 ⇑P P 20 19 26.7 +1.1
baz=33
P19A Cripple Cowboy 33.13 112 ⇓P P 20 19 27.2 +1.5
baz=33,SNR=27
N22A Wattenberg Ran 33.32 108 ⇑P P 20 19 28.8 +1.4
baz=33,SNR=8.4
O21A Pagoda 33.33 110 ⇓P P 20 19 28.8 +1.3
baz=33
K26A Motz Farm, Whi 33.34 103 ⇓P P 20 19 28.9 +1.6
baz=33
P20A De Beque 33.50 112 ⇑P P 20 19 29.9 +1.1
baz=33
GSC Goldstone 33.54 126 ⇓P P 20 19 31.0 +1.9
baz=33,SNR=6.9

M24A Cheyenne 33.54 106 ⇑P P 20 19 30.6 +1.4
baz=33
Q19A Hogan Spring (33.56 113 ⇑P P 20 19 30.2 +0.9
baz=33,SNR=6.6
O22A Kremmling 33.79 109 ⇑P P 20 19 32.4 +0.9
baz=34
Q20A Ridgley Place, 33.99 112 ⇑P P 20 19 33.9 +0.8
baz=34
O23A Lake Granby, G 34.04 108 ⇓P P 20 19 35.1 +1.4
baz=34,SNR=7.1
BFSC Mount Baldy Ra 34.15 128 ⇑P P 20 19 36.5 +2.0
baz=34
P22A Eagle 34.16 110 ⇓P P 20 19 35.5 +0.8
baz=34,SNR=5.7
S18A Hurst Farm, Bl 34.29 115 ⇓P P 20 19 36.7 +0.9
baz=34
Q21A Lamborn Mesa, 34.41 112 ⇓P P 20 19 38.1 +1.3
baz=34
GMRC Granite Mounta 34.44 125 ⇓P P 20 19 38.4 +1.4
baz=34,SNR=7.1
ISCO Idaho Springs 34.51 108 ⇑P P 20 19 39.2 +1.5
baz=34
PV01 Paradox Valley 34.55 113 eP P 20 19 39.2 +1.2
comp=Z,2µm,0.7s
R20A Redvale 34.59 113 ⇓P P 20 19 39.6 +1.3
baz=34,SNR=10
Q22A Crested Butte, 34.69 111 ⇑P P 20 19 40.7 +1.4
baz=34
R21A Cimarron 34.80 112 ⇑P P 20 19 41.5 +1.2
baz=35,SNR=10.0
W13A Hualapai Mount 34.87 123 ⇑P P 20 19 41.9 +1.1
baz=35,SNR=6.9
S20A Disappointment 34.89 113 ⇓P P 20 19 42.0 +1.0
baz=35,SNR=10
IRM Iron Mountain 35.19 125 ⇑P P 20 19 45.2 +1.8
baz=35,SNR=6.0
OGNE Ogallala 35.25 103 ⇓P P 20 19 45.9 +2.1
baz=35
R22A Saguache, Gunn 35.27 111 ⇑P P 20 19 46.1 +1.8
baz=35,SNR=12
S21A Coal Bank Pass 35.28 113 ⇑P P 20 19 45.8 +1.4
baz=35,SNR=5.8
MVCO Mesa Verde 35.35 114 eP P 20 19 45.5 +0.6
comp=Z,7.6nm,0.7s
MVCO Mesa Verde 35.35 114 ⇓P P 20 19 46.0 +1.2
baz=35,SNR=5.8
P25A Willow Gulch B 35.40 107 ⇑P P 20 19 46.9 +1.6
baz=35
PDMCI Parker Dam,Lak 35.47 124 ⇓P P 20 19 47.7 +2.1
baz=35
BC3 Big Chuckawall 35.51 126 ⇓P P 20 19 48.2 +2.0
baz=35
WUAZ Wupatki 35.55 119 eP P 20 19 48.5 +1.9
comp=Z,19nm,0.9s
WUAZ Wupatki 35.55 119 ⇓P P 20 19 48.5 +1.9
baz=35,SNR=11
S22A 4UR Ranch, Cre 35.64 112 ⇓P P 20 19 49.0 +1.5
baz=36,SNR=12
ECSD EROS Data Cent 35.67 95 eP P 20 19 47.6 +0.2
comp=Z,3.4nm,0.6s
R23A Moffat 35.72 110 ⇓P P 20 19 49.6 +1.4
baz=36
P26A Davis Ranch, A 35.74 106 ⇓P P 20 19 49.7 +1.5
baz=36
YAK Yakutsk 35.76 307 eP P 20 19 47.1 -0.8
YAK pmax pmax
comp=Z,15nm,0.6s
YAK Yakutsk 35.76 307 eP P 20 19 47.1 -0.8
comp=Z,15nm,0.6s
Y12C Blythe 35.80 124 ⇑P P 20 19 50.3 +1.9
baz=36
MONP Monument Peak 35.82 128 ⇓P P 20 19 50.7 +1.8
baz=36
T21A Navajo Lake 35.95 113 ⇑P P 20 19 51.6 +1.5
baz=36
R24A Sanders Place, 36.01 109 ⇑P P 20 19 51.9 +1.4
baz=36,SNR=5.7
SWSC Sam W. Stewart 36.01 127 ⇑P P 20 19 52.0 +1.7
baz=36
U20A Newcomb 36.04 115 ⇓P P 20 19 52.6 +1.9
baz=36
GLA Glamis 36.29 125 ⇑P P 20 19 55.0 +2.2
baz=36
SPMN St. Paul 36.38 90 ⇑P P 20 19 54.5 +1.0
baz=36
S24A Houchin Ranch, 36.45 110 ⇑P P 20 19 56.2 +1.8
baz=36,SNR=5.4
R25A Fountain Ranch 36.45 109 ⇑P P 20 19 56.1 +1.8
baz=36
X16A Lo Mia Camp, P 36.46 120 ⇓P P 20 19 56.2 +1.8
baz=36,SNR=7.1
V20A Brimhall 36.55 115 ⇓P P 20 19 56.8 +1.7
baz=36
W18A Petrified Fore 36.58 118 ⇑P P 20 19 57.4 +2.0
baz=36
R26A Arlington 36.71 108 ⇓P P 20 19 58.0 +1.6
baz=36
Z14A Wintersburg 36.76 123 ⇑P P 20 19 58.8 +2.1
baz=37
S25A Robets Cordova 36.78 109 ⇓P P 20 19 58.8 +1.6
baz=37,SNR=12
V21A Milan 36.90 114 ⇑P P 20 20 00.1 +1.9
baz=37
113A Mohawk Valley, 36.96 124 ⇓P P 20 20 00.4 +2.0
baz=37
T24A Torres, Weston 36.99 110 ⇓P P 20 20 00.7 +1.7
baz=37
X18A Snowflake 36.99 118 ⇑P P 20 20 00.9 +2.0
baz=37
R27A Eads 37.02 107 ⇓P P 20 20 00.9 +1.8
baz=37
W20A Ramah 37.10 116 ⇓P P 20 20 01.6 +1.7
baz=37,SNR=15
T25A Trinidad 37.22 110 ⇑P P 20 20 02.5 +1.6
baz=37
S26A Kim 37.25 108 ⇓P P 20 20 02.5 +1.4
baz=37,SNR=7.1
W21A San Fidel 37.48 115 ⇓P P 20 20 04.3 +1.2
baz=37
T26A Comanche Natio 37.56 109 ⇑P P 20 20 05.1 +1.4
baz=37,SNR=5.1
U25A Circle Dot Ran 37.84 110 ⇑P P 20 20 08.1 +2.0
baz=38,SNR=27
X21A Alamocita Cree 37.99 116 ⇓P P 20 20 09.1 +1.7
baz=38,SNR=8.7
V24A Rampart Ranch, 38.01 112 ⇓P P 20 20 09.2 +1.6
baz=38
214A Organ Pipe Nat 38.05 124 ⇓P P 20 20 09.5 +1.8
baz=38,SNR=6.4
T27A Campo 38.05 108 ⇑P P 20 20 09.4 +1.6
baz=38
W23A Werner Place, 38.09 113 ⇑P P 20 20 09.8 +1.6
baz=38
U26A Atchley Ranch, 38.14 110 ⇓P P 20 20 10.5 +1.9
baz=38,SNR=11
Y20A Horse Springs, 38.19 117 ⇓P P 20 20 10.5 +1.3
baz=38
V25A Rancho No Teng 38.21 111 ⇑P P 20 20 10.9 +1.7
baz=38
X22A Bernardo 38.27 115 ⇓P P 20 20 11.7 +2.0
baz=38
T28A Walsh 38.28 107 ⇓P P 20 20 11.4 +1.7
baz=38
SUMG Summit 38.37 27 eP P 20 20 11.3 +0.9
SUMG pmax pmax
comp=Z,10.0nm,0.7s
SUMG Summit 38.37 27 eP P 20 20 11.3 +0.9
comp=Z,9.7nm,0.7s
SUMG Summit 38.37 27 iP P 20 20 10.7 +0.3
comp=Z,11nm,0.8s
SUMG i 20 24 52.2
W24A Lazy 6 Ranch, 38.38 112 ⇓P P 20 20 12.3 +1.7
baz=38
Y21A Point of Rocks 38.41 116 ⇓P P 20 20 12.6 +1.7
baz=38
V26A Tequesquite Ra 38.62 110 ⇓P P 20 20 14.3 +1.7
baz=38,SNR=13
Y22A Socorro 38.77 115 ⇑P P 20 20 15.5 +1.5
baz=39
Z20A Nine Sixteen R 38.78 118 ⇑P P 20 20 15.8 +1.8
baz=39
W25A X Bar L Ranch, 38.80 111 ⇓P P 20 20 16.1 +2.0
baz=39
SFJD Kangerlussuaq 39.05 38 iP P 20 20 15.8 +0.2
comp=Z,17nm,0.7s
Y23A Lovelace Mesa, 39.18 114 ⇑P P 20 20 19.1 +1.7
baz=39,SNR=5.1
120A U Bar Ranch, L 39.25 118 ⇓P P 20 20 19.9 +2.0

baz=39
X25A **Clemmons Ranch** 39.29 112 ⇑P P 20 20 20.2 +2.0
baz=39
Z22A **Elephant Butte** 39.36 116 ⇓P P 20 20 20.5 +1.7
baz=39,SNR=8.1
Y24A **Capitan** 39.45 114 ⇓P P 20 20 21.5 +1.9
baz=39
121A **Cookes Peak, D** 39.62 117 ⇑P P 20 20 22.5 +1.5
baz=40
X26A **CR and CF Fran** 39.65 111 ⇓P P 20 20 22.8 +1.6
baz=40
Z23A **Rita Site, Whi** 39.67 115 ⇑P P 20 20 23.2 +1.8
baz=40
Y25A **Mesa, Roswell** 39.78 113 ⇑P P 20 20 23.7 +1.4
baz=40,SNR=6.4
220A **Playas Peak, P** 39.85 119 ⇑P P 20 20 24.6 +1.6
baz=40,SNR=7.0
X27A **F and S Farms,** 39.88 110 ⇑P P 20 20 24.6 +1.5
baz=40
Z24A **Sheeppen Canyo** 39.99 114 ⇓P P 20 20 25.6 +1.5
baz=40,SNR=6.5
319A **Douglas** 40.00 120 ⇓P P 20 20 25.7 +1.6
baz=40
Z25A **Roswell** 40.31 113 ⇓P P 20 20 28.4 +1.7
baz=40
124A **Stringfield Ra** 40.49 115 ⇑P P 20 20 30.0 +1.7
baz=40
Y27A **Causey** 40.49 111 ⇑P P 20 20 29.6 +1.4
baz=40
MSTX **Muleshoe** 40.60 111 ⇑P P 20 20 30.4 +1.4
baz=40
Z26A **Caprock** 40.65 113 ⇑P P 20 20 30.8 +1.3
baz=40,SNR=6.0
X29A **Tulia** 40.68 109 ⇓P P 20 20 31.2 +1.6
baz=40
125A **Gardner Draw,** 40.87 114 ⇑P P 20 20 32.9 +1.6
baz=41,SNR=6.4
Z27A **Tatum** 40.95 112 ⇑P P 20 20 32.9 +1.0
baz=41
224A **Cornudas Mount** 40.99 115 ⇓P P 20 20 33.9 +1.6
baz=41
225A **Deer Hill, Car** 41.27 114 ⇑P P 20 20 36.2 +1.5
baz=41,SNR=7.0
X31A **McDonald Ranch** 41.31 107 ⇑P P 20 20 36.4 +1.6
baz=41
SCHQ **Schefferville** 41.47 60 P P 20 20 35.9 0.0
SCHQ **Schefferville** 41.47 60 P P 20 20 35.9 0.0
comp=Z,5.9nm,0.9s,baz=293,slow=7.0,SNR=6.8
324A **Moseley Ranch,** 41.55 116 ⇓P P 20 20 38.3 +1.4
baz=41,SNR=5.2
226B **Tecolote Peak,** 41.58 114 ⇓P P 20 20 38.6 +1.5
baz=41
Z29A **Hungry Hill Ra** 41.67 110 ⇓P P 20 20 38.9 +1.1
baz=42,SNR=5.6
325A **Bean Ranch, Si** 41.83 115 ⇓P P 20 20 40.5 +1.2
baz=42
128A **Castleberry Fa** 41.86 111 ⇓P P 20 20 40.6 +1.2
baz=42
227A **Bennet, Jal** 42.02 113 ⇑P P 20 20 42.1 +1.4
baz=42
Y32A **R-V Farms, Ver** 42.08 107 ⇑P P 20 20 42.7 +1.6
baz=42
326A **Caldwell Ranch** 42.31 114 ⇓P P 20 20 44.4 +1.3
baz=42
425A **Indio Mountain** 42.33 116 ⇑P P 20 20 45.0 +1.8
baz=42,SNR=16
426A **McDonald Obser** 42.85 115 ⇑P P 20 20 48.6 +1.1
baz=43,SNR=8.3
427A **Hayter Ranch,** 42.97 114 ⇑P P 20 20 49.7 +1.3
baz=43,SNR=6.4
329A **Wagon Wheel Ra** 43.05 112 ⇑P P 20 20 50.6 +1.5
baz=43
230A **Sterling City** 43.10 111 ⇓P P 20 20 50.7 +1.3
baz=43
SCO **Scoresbysund** 43.33 23 *i* P P 20 20 50.2 -0.5
comp=Z,5.3nm,0.9s
526A **Mary Lane Ranc** 43.34 115 ⇓P P 20 20 53.0 +1.5
baz=43,SNR=7.8
428A **Kincaid Ranch,** 43.39 113 ⇓P P 20 20 53.1 +1.3
baz=43
KLR **Kul'dur** 43.44 291 *eP* P 20 20 49.0 -2.9
330A **Mertzon** 43.48 111 ⇑P P 20 20 53.3 +0.8
baz=43
ERM **Erimo** 43.53 275 *eP* P 20 20 54.1 +1.5
ERM **Erimo** 43.53 275 *eP* P 20 20 54.1 +1.5
232A **Coleman** 43.76 109 ⇓P P 20 20 55.4 +0.7
baz=44,SNR=8.1
626A **Big Bend Ranch** 43.76 116 ⇑P P 20 20 56.4 +1.6
baz=44
429A **Davenport Ranc** 43.82 112 ⇓P P 20 20 56.2 +1.0
baz=44,SNR=6.2
528A **Cox Ranch, San** 43.83 114 ⇓P P 20 20 56.9 +1.5
baz=44,SNR=10
430A **Baggett Ranch,** 43.98 112 ⇓P P 20 20 57.6 +1.1
baz=44
332A **Millersview** 44.14 110 ⇑P P 20 20 59.3 +1.6
baz=44
TXAR **Lajitas Array** 44.16 115 P P 20 20 59.4 +1.4
TXAR PcP PP 20 22 42.5 +1.3
TXAR **Lajitas Array** 44.16 115 P P 20 20 59.4 +1.4
comp=Z,3.0nm,0.7s,baz=331,slow=6.5,SNR=19
TXAR PcP PP 20 22 42.5 +1.3
comp=Z,1.4nm,0.6s,baz=32,slow=3.3,SNR=6.5
TXAR LR LR 20 41 51.8
comp=Z,86nm,21.4s,baz=185,slow=39
627A **Terlingua Ranc** 44.17 115 ⇑P P 20 20 59.6 +1.5
baz=44,SNR=8.7
431A **Sonora** 44.35 111 ⇑P P 20 21 00.4 +1.0
baz=44,SNR=7.9
628A **Black Gap, Mar** 44.36 114 ⇓P P 20 21 01.1 +1.5
baz=44,SNR=5.7
530A **J-C Ranch, Com** 44.48 112 ⇑P P 20 21 02.1 +1.6
baz=44
WHTX **Lake Whitney** 44.67 107 ⇓P P 20 21 03.3 +1.3
baz=44
531A **Rocksprings** 44.82 111 ⇓P P 20 21 04.7 +1.5
baz=45,SNR=5.1
JCT **Junction City** 44.88 110 *eP* P 20 21 04.0 +0.3
JCT *e* 20 22 44.3
JCT pmax pmax
comp=Z,14nm,0.7s
JCT **Junction City** 44.88 110 *eP* P 20 21 04.0 +0.3
comp=Z,14nm,0.7s
JCT *e*PcP PcP 20 22 44.3 -0.4
JCT **Junction City** 44.88 110 ⇑P P 20 21 04.7 +1.0
baz=45,SNR=5.4
532A **Rocksprings** 45.14 111 ⇓P P 20 21 06.7 +1.0
baz=45,SNR=7.6
631A **Perdido Creek** 45.45 112 ⇑P P 20 21 08.9 +0.8
baz=45,SNR=5.9
632A **Uvalde** 45.72 111 ⇑P P 20 21 11.3 +1.0
baz=46
732A **Laxson Ranch,** 46.30 112 ⇓P P 20 21 16.3 +1.5
baz=46
USRK **Ussuriysk Arra** 47.10 286 P P 20 21 20.1 -0.9
comp=Z,1.4nm,0.6s,baz=32,slow=11,SNR=5.3
MDJ **Mudanjiang** 47.89 288 P P 20 21 29.2 +2.2
MDJ pmax pmax
comp=Z,5.0nm,1.1s
BLA **Blacksburg** 48.49 87 *eP* P 20 21 31.6 -0.2
BLA pmax pmax
comp=Z,36nm,0.8s
BLA **Blacksburg** 48.49 87 *eP* P 20 21 31.6 -0.2
comp=Z,36nm,0.8s
KEV **Kevo** 49.01 1 *eP* P 20 21 34.5 -0.8
KEV pmax pmax
comp=Z,1.0nm,0.2s
KEV **Kevo** 49.01 1 *ep* P 20 21 34.5 -0.8
comp=Z,1.0nm,0.2s
ARCES **ARCESS Array B** 49.20 2 P P 20 21 36.9 0.0
ARCES PcP PcP 20 22 59.1 -0.2
ARCES **ARCESS Array B** 49.20 2 P P 20 21 36.9 0.0
comp=Z,2.3nm,0.7s,baz=11,slow=7.4,SNR=8.5
ARCES PcP PcP 20 22 59.1 -0.2
comp=Z,4.2nm,0.6s,baz=6.1,slow=4.2,SNR=7.0
ARCES LR LR 20 41 28.6
comp=Z,78nm,19.0s,baz=7.2,slow=35
MAJO **Matsushiro** 50.20 275 *eP* P 20 21 44.9 +0.1
MAJO pmax pmax
comp=Z,8.0nm,0.8s
MAJO **Matsushiro** 50.20 275 *eP* P 20 21 44.9 +0.1
comp=Z,7.9nm,0.8s
MAT **Matsushiro** 50.20 275 P P 20 21 44.7 -0.1
MJAR **Matsushiro Arr** 50.20 275 P P 20 21 44.9 0.0
MJAR **Matsushiro Arr** 50.20 275 P P 20 21 44.9 0.0
comp=Z,2.3nm,0.7s,baz=12,slow=6.5,SNR=17
CN2 **Changchun** 50.39 291 *eP* P 20 21 46.1 -0.1
CN2 pmax pmax
comp=Z,20nm,1.0s
TLY **Talaya** 52.98 312 *eP* P 20 22 05.3 -0.1
TLY pmax pmax
comp=Z,3.0nm,0.6s
TLY **Talaya** 52.98 312 *eP* P 20 22 05.3 -0.1
comp=Z,2.8nm,0.6s
MOY **Mondy** 53.93 313 *eP* P 20 22 13.8 +1.3
ZAK **Zakamensk** 54.18 311 ⇓*i*P P 20 22 14.5 +0.1
ZAK *e* 20 23 18.4
ZAK pmax pmax
comp=Z,2.0nm,0.9s
KSRS **Korea Array** 54.32 284 P P 20 22 16.1 +0.8
comp=Z,10nm,0.7s,baz=29,slow=6.9,SNR=66
KSRS LR LR 20 44 35.9
comp=Z,85nm,21.9s,baz=246,slow=35
KSAR **Wonju Array Be** 54.35 284 P P 20 22 16.1 +0.6
ULN **Ulaanbaatar** 54.85 307 *eP* P 20 22 19.4 +0.1
comp=Z,10nm,0.8s
SONM **Songino Array** 55.12 307 P P 20 22 22.2 +1.0
SONM **Songino Array** 55.12 307 P P 20 22 22.2 +1.0
comp=Z,13nm,0.7s,baz=34,slow=7.5,SNR=148
SONM LR LR 20 47 21.9
comp=Z,98nm,19.1s,baz=322,slow=38
JOF **Joensuu** 55.89 359 *eP* P 20 22 24.5 -1.8
JOF pmax pmax
comp=Z,2.0nm,0.5s
JOF **Joensuu** 55.89 359 *ep* P 20 22 24.5 -1.8
comp=Z,2.1nm,0.5s
KAF **Kangasniemi** 56.67 2 *eP* P 20 22 31.6 -0.3
KAF pmax pmax
comp=Z,2.0nm,0.6s
KAF **Kangasniemi** 56.67 2 *ep* P 20 22 31.6 -0.3
comp=Z,1.9nm,0.6s
NB2 **NORSAR Subarra** 56.92 11 P P 20 22 33.0 -0.8
comp=Z,3.8nm,0.6s,baz=349,slow=7.4
NOA **NORSAR Array B** 56.92 11 P P 20 22 33.3 -0.5
NOA **NORSAR Array B** 56.92 11 P P 20 22 33.3 -0.5
comp=Z,4.1nm,0.6s,baz=350,slow=7.0,SNR=28
ZAA0 **Zalesovo Array** 57.04 325 *eP* P 20 22 33.6 -1.1
ZAA0 *e* 20 22 47.9
ZALV **Zalesovo Beam** 57.04 325 P P 20 22 33.9 -0.7
ZALV *PP pP 20 22 47.5 +1.0
ZALV **Zalesovo Beam** 57.04 325 P P 20 22 33.9 -0.7
ZALV pP pP 20 22 47.5 +1.0
ZALV **Zalesovo Beam** 57.04 325 P P 20 22 33.9 -0.7
comp=Z,2.3nm,0.4s,baz=31,slow=7.1,SNR=25
ZALV pP pP 20 22 47.5 +1.0
comp=Z,2.8nm,0.5s,baz=22,slow=7.0,SNR=6.9
NAO01 **NORSAR Array S** 57.08 11 *eP* P 20 22 34.2 -0.7
FINES **FINESS Array B** 57.33 2 P P 20 22 36.0 -0.5
FINES **FINESS Array B** 57.33 2 P P 20 22 36.0 -0.5
comp=Z,4.3nm,0.5s,baz=2.2,slow=9.2,SNR=63
SOKR **Solikamsk** 57.51 344 *eP* P 20 22 35.7 -2.1
SOKR pmax pmax
comp=Z,20nm,1.0s
KLMR **Klimovskoe** 57.75 355 *eP* P 20 22 38.4 -1.1
KLMR pmax pmax
comp=Z,40nm,1.4s
HHC **Hu-ho-hao-te** 58.83 299 *eP* P 20 22 48.6 +1.1
HHC pP pP 20 22 58.7 -0.7
HHC sP sP 20 23 02.7 -1.5
HHC PP PP 20 25 00.2 +2.8
HHC S S 20 30 48.7 -1.1
HHC sS sS 20 31 05.3 -4.3
HHC SS SS 20 34 43.0 +0.2
HHC pmax pmax
comp=Z,29nm,1.0s
HHC pmax pmax
comp=Z,230nm,5.0s
HHC LR LR
comp=N,250nm,17.5s
HHC LR LR
comp=E,250nm,17.0s
HHC LR LR
comp=Z,280nm,19.4s
SVE **Sverdlovsk** 59.61 341 ⇓*i*P P 20 22 52.8 +0.3
SVE pmax pmax
comp=Z,18nm,0.9s
ARU **Arti** 60.30 342 *eP* P 20 22 56.9 -0.4
ARU pmax pmax
comp=Z,12nm,0.6s
ARU **Arti** 60.30 342 *eP* P 20 22 56.9 -0.4
comp=Z,12nm,0.6s
BRVK **Borovoye** 61.41 334 ⇑*i*P P 20 23 04.0 -0.9
BRVK pmax pmax
comp=Z,14nm,1.7s
BRVK **Borovoye** 61.41 334 *eP* P 20 23 02.9 -2.0
comp=Z,3.2nm,0.6s
KURK **Kurchatov** 61.62 327 *d*⇓P P 20 23 05.3 -0.9
KURK pmax pmax
comp=Z,9.0nm,1.0s
KURK **Kurchatov** 61.62 327 *eP* P 20 23 05.6 -0.7
comp=Z,4.1nm,0.6s
KURK *e*PP PP 20 25 13.8 -7.8
NJ2 **Nanjing** 62.97 288 *eP* P 20 23 19.1 +3.5
NJ2 pmax pmax
comp=Z,20nm,1.2s
OBN **Obninsk** 63.61 356 *k*⇓P P 20 23 19.5 0.0
OBN *e*PP pP 20 23 27.2 -4.3
OBN *SP sP 20 23 34.0 -2.2
OBN pmax pmax
comp=Z,65nm,1.2s
OBN **Obninsk** 63.61 356 *eP* P 20 23 19.4 0.0
comp=Z,35nm,0.8s
MK31 **Makanchi Array** 64.18 323 *ce*P P 20 23 22.1 -1.3
MK31 pmax pmax
comp=Z,4.0nm,0.6s
MK31 **Makanchi Array** 64.18 323 *eP* P 20 23 22.2 -1.2
MKAR **Makanchi Array** 64.18 323 P P 20 23 22.2 -1.2
MKAR *PP pP 20 23 36.7 +1.2
MKAR 20 25 40.1
MKAR **Makanchi Array** 64.18 323 P P 20 23 22.2 -1.2
MKAR pP pP 20 23 36.7 +1.2
MKAR PP PP 20 25 40.0 -4.2
MKAR **Makanchi Array** 64.18 323 P P 20 23 22.2 -1.2
comp=Z,3.3nm,0.5s,baz=31,slow=6.6,SNR=95
MKAR pP pP 20 23 36.7 +1.2
comp=Z,3.3nm,0.5s,baz=35,slow=7.2,SNR=9.6
MKAR PP PP 20 25 40.0 -4.2
comp=Z,2.0nm,0.9s,baz=48,slow=9.9,SNR=4.0
GTA **Gaotai** 64.79 307 P P 20 23 28.1 +0.5
GTA pP pP 20 23 35.8 -3.9
GTA sP sP 20 23 39.1 -5.3
GTA S S 20 32 04.3 -0.9
GTA sS sS 20 32 17.4 -7.9
GTA SS SS 20 36 17.0 +1.0
GTA pmax pmax
comp=Z,16nm,0.9s
GTA pmax pmax
comp=Z,90nm,5.0s
GTA LR LR
comp=N,130nm,16.1s
GTA LR LR
comp=E,80nm,16.2s
GTA LR LR
comp=Z,160nm,15.9s
WMQ **Urumqi** 65.20 318 P P 20 23 34.7 +4.5
WMQ pmax pmax
comp=Z,25nm,1.2s
LZH **Lanzhou** 66.06 302 *eP* P 20 23 36.0 +0.1
LZH pP pP 20 23 46.5 -1.5
LZH sP sP 20 23 50.6 -2.2
LZH *PP PP 20 26 04.2 +3.0
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,45nm,8.3s
LZH LR LR
comp=N,170nm,15.0s
LZH LR LR
comp=E,180nm,14.7s
LZH LR LR
comp=Z,220nm,18.3s
WHN **Wuhan** 66.29 290 *eP* P 20 23 36.7 -0.5
CLL **Collm** 66.70 12 ⇓*i*P P 20 23 39.3 -0.3
CLL pmax pmax
comp=Z,15nm,1.5s
CLL **Collm** 66.70 12 ⇓*i*P P 20 23 39.3 -0.3
comp=Z,15nm,1.5s
BAIF **Baives** 66.86 18 *eP* P 20 23 40.6 0.0
comp=Z,6.5nm,0.6s
BAIF **Baives** 66.86 18 *eP* P 20 23 40.6 0.0
BAIF pmax pmax
comp=Z,7.0nm,0.6s
BAIF **Baives** 66.86 18 *eP* P 20 23 40.6 0.0
comp=Z,6.5nm,0.6s
GIVF **Givet** 66.91 17 *eP* P 20 23 40.7 -0.2
GIVF **Givet** 66.91 17 *eP* P 20 23 40.7 -0.2
GIVF **Givet** 66.91 17 *eP* P 20 23 40.7 -0.2
AB31 **Akbulak array** 67.02 339 *ce*P P 20 23 41.0 -0.7
AB31 pmax pmax
comp=Z,11nm,0.7s
ABKAR **Akbulak array** 67.02 339 *eP* P 20 23 41.2 -0.4
comp=Z,8.8nm,0.6s
ABKAR *eP*cP PcP 20 24 09.5 -0.3
BRG **Berggiesshubel** 67.22 11 *eP* P 20 23 43.1 +0.3
comp=Z,11nm,1.0s
BRG **Berggiesshubel** 67.22 11 *eP* P 20 23 43.2 +0.3
BRG pmax pmax
comp=Z,11nm,1.0s
FLN **La Foliniere** 67.36 21 *eP* P 20 23 43.3 -0.5
FLN *eR*
comp=Z,202nm,19.8s
FLN **La Foliniere** 67.36 21 *eP* P 20 23 43.3 -0.5
FLN **La Foliniere** 67.36 21 *eP* P 20 23 43.3 -0.5
VRHR **Novokhopersk** 67.37 352 *eP* P 20 23 42.2 -1.6
VRHR pmax pmax
comp=Z,10.0nm,0.7s
VRHR pmax pmax
comp=N,5.0nm,0.6s
VRHR pmax pmax
comp=E,5.0nm,0.6s
VSR **Storozhevoye** 67.39 354 *eP* P 20 23 43.4 -0.6
KSP **Ksiaz** 67.45 9 *eP* P 20 23 45.0 +0.6
LDF **La Druitiere** 67.59 21 *eP* P 20 23 44.7 -0.6
comp=E,10nm,0.8s
LDF **La Druitiere** 67.59 21 *eP* P 20 23 44.7 -0.6
LDF pmax pmax
comp=Z,10.0nm,0.8s
LDF **La Druitiere** 67.59 21 *eP* P 20 23 44.7 -0.6
comp=Z,10nm,0.8s
PVCC **Panska Ves** 67.62 11 *eP* P 20 23 45.9 +0.5
VORD **Divnogorie** 67.64 354 *eP* P 20 23 44.9 -0.6
VORD pmax pmax
comp=Z,20nm,0.8s
VORD pmax pmax
comp=N,40nm,0.6s
VORD pmax pmax
comp=E,20nm,0.5s
GRR **Gorron** 67.66 22 *eP* P 20 23 45.4 -0.3
comp=E,22nm,0.8s
GRR **Gorron** 67.66 22 *eP* P 20 23 45.4 -0.3
GRR pmax pmax
comp=Z,22nm,0.8s
GRR **Gorron** 67.66 22 *eP* P 20 23 45.4 -0.3
comp=Z,22nm,0.8s
NKC **Novy Kostel** 67.71 12 *eP* P 20 23 46.7 +0.7
UPC **Upice** 67.77 10 *eP* P 20 23 46.7 +0.4
DPC **Dobruska-Polom** 67.95 9 *eP* P 20 23 48.3 +0.8
AKASG **Malin Array Be** 68.14 1 P P 20 23 48.3 -0.3
AKASG **Malin Array Be** 68.14 1 P P 20 23 48.3 -0.3
comp=Z,15nm,0.4s,baz=359,slow=6.3,SNR=66
KIEV **Kiev** 68.15 1 *eP* P 20 23 48.0 -0.7
KIEV pmax pmax
comp=Z,27nm,0.4s
KIEV **Kiev** 68.15 1 *eP* P 20 23 48.0 -0.7
comp=Z,27nm,0.4s
AK01 **Malin Array Si** 68.15 1 *eP* P 20 23 48.1 -0.6
PRU **Pruhonice** 68.16 11 *eP* P 20 23 49.3 +0.5
AK02 **Malin Array Si** 68.18 1 *eP* P 20 23 48.3 -0.6
OJC **Ojcow** 68.32 7 *eP* P 20 23 50.0 +0.2
OJC **Ojcow** 68.32 7 *eP* P 20 23 50.0 +0.2
MEZF **Maizieres J'vi** 68.50 18 *eP* P 20 23 50.9 -0.1
comp=Z,16nm,0.8s
MEZF **Maizieres J'vi** 68.50 18 *eP* P 20 23 50.9 -0.1
comp=Z,16nm,0.8s
PAGF **Fort de Pagny** 68.55 17 *eP* P 20 23 51.5 +0.2
comp=Z,4.3nm,0.6s
PAGF **Fort de Pagny** 68.55 17 *eP* P 20 23 51.5 +0.2
comp=Z,4.3nm,0.6s
OKC **Ostrava-Krasne** 68.59 8 *eP* P 20 23 52.2 +0.7
MORC **Moravsky Berou** 68.61 9 ⇑P P 20 23 52.2 +0.5
MORC **Moravsky Berou** 68.61 9 *eP* P 20 23 51.2 -0.5
comp=Z,10nm,0.8s
MORC **Moravsky Berou** 68.61 9 ⇑*i*P P 20 23 52.2 +0.5
CDF **Champ du Feu** 68.90 16 *eP* P 20 23 53.4 -0.2
comp=Z,13nm,0.9s
CDF **Champ du Feu** 68.90 16 *eP* P 20 23 53.4 -0.2
CDF pmax pmax
comp=Z,13nm,0.9s
CDF **Champ du Feu** 68.90 16 *eP* P 20 23 53.4 -0.2
comp=Z,13nm,0.9s
KHC **Kasperske Hory** 68.92 12 *eP* P 20 23 53.9 +0.3
KHC pmax pmax
comp=Z,20nm,1.4s
KHC **Kasperske Hory** 68.92 12 *eP* P 20 23 53.9 +0.3
comp=Z,20nm,1.4s
KHC **Kasperske Hory** 68.92 12 *eP* P 20 23 54.4 +0.8
LVV **L'vov** 68.92 4 *eP* P 20 23 53.2 -0.3
TREC **Trest** 68.92 10 *eP* P 20 23 53.9 +0.3
TREC **Trest** 68.92 10 *eP* P 20 23 53.9 +0.3
VRAC **Vranov** 69.00 9 ⇓*i*P P 20 23 54.8 +0.7
KWP **Kalwaria Pacla** 69.05 5 ⇑P P 20 23 55.1 +0.7
KWP **Kalwaria Pacla** 69.05 5 *eP* P 20 23 54.6 +0.2
comp=Z,10nm,0.6s
KWP **Kalwaria Pacla** 69.05 5 ⇑*i*P P 20 23 55.1 +0.7
HAU **Haudompre** 69.17 17 *eP* P 20 23 54.9 -0.3
comp=Z,11nm,0.7s
HAU *eR*
comp=Z,135nm,21.0s
HAU **Haudompre** 69.17 17 *eP* P 20 23 54.9 -0.3
HAU pmax pmax
comp=Z,11nm,0.7s
HAU **Haudompre** 69.17 17 *eP* P 20 23 54.9 -0.3
comp=Z,11nm,0.7s
GERES **GERESS Array B** 69.21 12 P P 20 23 56.0 +0.5
GERES **GERESS Array B** 69.21 12 P P 20 23 56.0 +0.5
comp=Z,4.2nm,1.0s,baz=354,slow=4.2,SNR=22
GERES LR LR 20 55 57.0
comp=Z,111nm,19.5s,baz=188,slow=37
HINF **Hinteralfeld** 69.43 17 *eP* P 20 23 56.4 -0.4
comp=Z,10nm,0.8s
HINF **Hinteralfeld** 69.43 17 *eP* P 20 23 56.4 -0.4
HINF pmax pmax
comp=Z,11nm,0.8s
HINF **Hinteralfeld** 69.43 17 *eP* P 20 23 56.4 -0.4
comp=Z,10nm,0.8s
LOR **Lormes** 69.53 19 *eP* P 20 23 57.1 -0.3
comp=Z,18nm,0.9s
LOR *eR*
comp=Z,108nm,19.8s
LOR **Lormes** 69.53 19 *eP* P 20 23 57.1 -0.3
comp=Z,18nm,0.9s
USP **Ospenovka** 69.58 327 *i* P P 20 23 56.7 -1.1
USP **Ospenovka** 69.58 327 P P 20 23 56.7 -1.1
SNR=5.7
TKM2 **Tokmak 2** 69.61 326 *eP* P 20 23 57.8 -0.4
TKM2 pmax pmax
comp=Z,9.0nm,0.9s
TKM2 **Tokmak 2** 69.61 326 *eP* P 20 23 57.8 -0.4
comp=Z,8.6nm,0.9s
SSF **Saint Saulge** 69.68 19 *eP* P 20 23 58.1 -0.2
comp=Z,23nm,1.1s
SSF **Saint Saulge** 69.68 19 *eP* P 20 23 58.1 -0.2
SSF pmax pmax
comp=Z,23nm,1.1s
SSF **Saint Saulge** 69.68 19 *eP* P 20 23 58.1 -0.2
comp=Z,23nm,1.1s
CRVS **Cervenica-Dubn** 69.72 6 *eP* P 20 23 58.7 +0.1
CRVS *e* 20 58 13.7
KOLS **Kolonicke sedl** 69.73 6 *eP* P 20 23 59.4 +0.8
CHMS **Chumysh** 69.76 327 *i* P P 20 23 59.2 +0.2
CHMS **Chumysh** 69.76 327 P P 20 23 59.1 +0.2
SNR=9.2
SMOL **Smolenice** 69.86 9 *eP* P 20 24 00.5 +1.1
AVF **Avril sur Loir** 69.92 19 *eP* P 20 23 59.3 -0.4
AVF **Avril sur Loir** 69.92 19 *eP* P 20 23 59.3 -0.4
AVF **Avril sur Loir** 69.92 19 *eP* P 20 23 59.3 -0.4
VYHS **Vyhne** 69.97 8 *eP* P 20 24 00.7 +0.6
KBK **Karagaybulak** 70.03 326 *i* P P 20 24 00.9 +0.1
KBK **Karagaybulak** 70.03 326 P P 20 24 00.9 +0.1
SNR=9.1
SMF **Signal de Mont** 70.13 19 *eP* P 20 24 00.5 -0.6
SMF **Signal de Mont** 70.13 19 *eP* P 20 24 00.5 -0.6
SMF **Signal de Mont** 70.13 19 *eP* P 20 24 00.5 -0.6
AAK **Ala-Archa** 70.17 327 *i* P P 20 24 01.3 -0.3
AAK **Ala-Archa** 70.17 327 *eP* P 20 24 01.4 -0.3
comp=Z,41nm,0.8s
AAK **Ala-Archa** 70.17 327 P P 20 24 01.7 +0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	SNR=8.7						
CONA	Conrad Observa	70.31	10	⇑iP	P	20 24 03.1	+0.8
	comp=Z,16nm,0.9s,SNR=15						
CONA	Conrad Observa	70.31	10	⇑iP	P	20 24 03.1	+0.8
	comp=Z,16nm,0.9s						
EKS2	Erkin-Say	70.33	327	eP	P	20 24 02.5	0.0
EKS2				e		20 24 15.8	
EKS2				pmax	pmax		
	comp=Z,18nm,0.8s						
EKS2	Erkin-Say	70.33	327	eP	P	20 24 02.5	0.0
	comp=Z,18nm,0.8s						
EKS2				e		20 24 15.8	
EKS2	Erkin-Say	70.33	327	P	P	20 24 02.8	+0.2
	SNR=10						
CABF	La Chapelle	70.50	17	eP	P	20 24 03.5	0.0
	comp=Z,12nm,0.6s						
CABF	La Chapelle	70.50	17	eP	P	20 24 03.5	0.0
CABF				pmax	pmax		
	comp=Z,13nm,0.6s						
CABF	La Chapelle	70.50	17	eP	P	20 24 03.5	0.0
	comp=Z,12nm,0.6s						
TRPA	Tarpa	70.54	5	⇓iP	P	20 24 04.4	+0.9
TRPA	Tarpa	70.54	5	⇓eS	P	20 24 04.1	+0.6
WTTA	Wattenberg	70.56	13	⇑iP	P	20 24 04.3	+0.4
WTTA				pmax	pmax		
	comp=Z,19nm,1.0s						
WTTA	Wattenberg	70.56	13	⇑iP	P	20 24 04.3	+0.4
	comp=Z,19nm,1.0s,SNR=7.8						
WTTA	Wattenberg	70.56	13	⇑iP	P	20 24 04.3	+0.4
	comp=Z,19nm,1.0s						
CD2	Chengdu	70.58	299	P	P	20 24 02.8	-1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2				pmax	pmax		
	comp=Z,120nm,4.6s						
SOP	Sopron	70.61	10	⇓eS	P	20 24 04.9	+0.9
PSZ	Piszkesteto	70.62	7	eP	P	20 24 05.1	+1.0
PSZ				pmax	pmax		
	comp=Z,23nm,0.9s						
PSZ	Piszkesteto	70.62	7	eP	P	20 24 05.1	+1.0
	comp=Z,23nm,0.9s						
PSZ	Piszkesteto	70.62	7	⇑iP	P	20 24 05.2	+1.0
PSZ	Piszkesteto	70.62	7	⇓e	P	20 24 04.9	+0.8
FETA	Feichten	70.70	14	⇑iP	P	20 24 05.8	+1.0
	comp=Z,11nm,1.1s						
FETA	Feichten	70.70	14	⇑iP	P	20 24 05.8	+1.0
	comp=Z,11nm,1.1s						
KK31	Karatay Array	70.73	330	c iP	P	20 24 03.6	-1.2
KK31				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KKAR	Karatay Array	70.73	330	eP	P	20 24 04.0	-0.8
KKAR				e		20 24 18.0	
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KKAR	Karatay Array	70.73	330	eP	P	20 24 04.0	-0.8
	comp=Z,7.0nm,0.8s						
KKAR				e		20 24 18.0	
AML	Almayashu	70.85	327	i P	P	20 24 06.5	+0.5
AML	Almayashu	70.85	327	P	P	20 24 06.5	+0.5
	SNR=8.7						
KBA	Koelnbreinsper	70.92	12	i P	P	20 24 07.0	+0.9
KBA				pmax	pmax		
	comp=Z,30nm,0.9s						
KBA	Koelnbreinsper	70.92	12	i P	P	20 24 07.0	+0.9
	comp=Z,30nm,0.9s,SNR=18						
KBA	Koelnbreinsper	70.92	12	i P	P	20 24 07.0	+0.9
	comp=Z,30nm,0.9s						
ARSA	Arzberg	70.96	10	⇑iP	P	20 24 07.2	+1.0
	comp=Z,7.7nm,0.9s						
ARSA	Arzberg	70.96	10	⇑iP	P	20 24 07.2	+1.0
	comp=Z,7.7nm,0.9s						
TUE	Stuetta	71.07	15	eP	P	20 24 07.1	0.0
	comp=Z,3.4nm,0.6s						
BUR08	Bucovina Ar. S	71.13	4	eP	P	20 24 07.4	+0.1
BURAR	Bucovina Array	71.16	4	⇑iP	P	20 24 07.8	+0.3
SOKA	Soboth	71.48	11	⇑iP	P	20 24 10.0	+0.6
	comp=Z,10.0nm,0.9s						
SOKA	Soboth	71.48	11	⇑iP	P	20 24 10.0	+0.6
	comp=Z,10.0nm,0.9s						
PERS	Pernice	71.53	11	eP	P	20 24 10.5	+0.8
OBKA	Obir	71.60	11	⇑iP	P	20 24 10.5	+0.3
	SNR=21						
OBKA	Obir	71.60	11	⇑iP	P	20 24 10.5	+0.3
LPL	La Plagne	71.67	17	eP	P	20 24 10.6	-0.1
LPL	La Plagne	71.67	17	eP	P	20 24 10.6	-0.1
LPL	La Plagne	71.67	17	eP	P	20 24 10.6	-0.1
LPG	La Plagne	71.69	17	eP	P	20 24 11.1	+0.2
LPG	La Plagne	71.69	17	eP	P	20 24 11.1	+0.2
LPG	La Plagne	71.69	17	eP	P	20 24 11.1	+0.2
GORS	Gorjuse	71.74	12	i P	P	20 24 11.0	0.0
CADS	Cadrg	71.81	12	eP	P	20 24 11.1	-0.2
BEHE	Becsehely	71.84	10	⇑eS	P	20 24 12.6	+1.2
VIVF	Saint-Julien-l	72.01	19	eP	P	20 24 12.3	-0.2
VIVF	Saint-Julien-l	72.01	19	eP	P	20 24 12.3	-0.2
VIVF	Saint-Julien-l	72.01	19	eP	P	20 24 12.3	-0.2
PKSM	Moragy	72.23	8	⇓eS	P	20 24 14.1	+0.3
TESR		72.30	3	⇑iP	P	20 24 14.1	-0.1
LEOM	Leova	72.36	1	⇑P	P	20 24 14.3	-0.2
LEOM	Leova	72.36	1	⇑iP	P	20 24 14.3	-0.2
BOJS	Bojanci	72.67	11	i P	P	20 24 16.6	+0.2
KSH	Kashi	72.67	324	⇓iP	P	20 24 19.2	+2.5
KSH				pP	pP	20 24 27.0	-1.9
KSH				sP	sP	20 24 30.0	-3.6
KSH				PcP	PcP	20 24 37.1	+3.1
KSH				PP	PP	20 27 03.0	+5.0
KSH				SKS	SKSac	20 34 18.1	-0.2
KSH				ScS	ScS	20 34 22.0	+1.5
KSH				SS	SS	20 38 25.0	+7.6
KSH				pmax	pmax		
	comp=Z,14nm,0.6s						
KSH				LR	LR		
	comp=Z,210nm,5.5s						
VRI	Vrincioaia	72.94	2	⇑P	P	20 24 18.3	+0.2
VRI	Vrincioaia	72.94	2	⇑iP	P	20 24 18.3	+0.2
PLOR	Plostina	72.96	3	⇓P	P	20 24 18.9	+0.7
PLOR	Plostina	72.96	3	⇓iP	P	20 24 18.9	+0.7
BZS	Buzias	73.01	6	⇑P	P	20 24 18.7	+0.3
BZS	Buzias	73.01	6	⇑iP	P	20 24 18.7	+0.3
ETSF	Etsaut	73.01	23	eP	P	20 24 18.8	+0.2
	comp=Z,16nm,0.9s						
ETSF	Etsaut	73.01	23	eP	P	20 24 18.8	+0.2
ETSF				pmax	pmax		
	comp=Z,16nm,0.9s						
ETSF	Etsaut	73.01	23	eP	P	20 24 18.8	+0.2
	comp=Z,16nm,0.9s						
MTLF	Montolieu	73.08	21	eP	P	20 24 18.7	-0.2
MTLF	Montolieu	73.08	21	eP	P	20 24 18.7	-0.2
MTLF	Montolieu	73.08	21	eP	P	20 24 18.7	-0.2
GYA	Guiyang	73.21	294	eP	P	20 24 23.3	+3.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GZR	Gura Zlata	73.29	5	⇑P	P	20 24 20.7	+0.5
GZR	Gura Zlata	73.29	5	⇑iP	P	20 24 20.7	+0.5
MLR	Muntele Rosu	73.30	3	⇑iP	P	20 24 20.7	+0.4
ARR	Arges	73.39	4	⇑iP	P	20 24 21.2	+0.5
TLCR		73.66	1	⇓P	P	20 24 22.3	+0.1
TLCR		73.66	1	⇓iP	P	20 24 22.3	+0.1
CFR	Carcaliu	73.66	1	⇓P	P	20 24 22.1	-0.1
CFR	Carcaliu	73.66	1	⇓iP	P	20 24 22.0	-0.1
TIRR	Tirgusor	74.38	1	⇓P	P	20 24 26.6	+0.1
TIRR	Tirgusor	74.38	1	eP	P	20 24 26.2	-0.2
	comp=Z,19nm,1.2s						
TIRR	Tirgusor	74.38	1	⇓iP	P	20 24 26.5	+0.1
KIV	Kislovodsk	74.40	351	eP	P	20 24 26.7	0.0
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
KIV	Kislovodsk	74.40	351	eP	P	20 24 26.4	-0.3
	comp=Z,10nm,0.7s						
KBZ	Khabaz	74.61	350	P	P	20 24 28.5	+0.7
KBZ	Khabaz	74.61	350	P	P	20 24 28.5	+0.7
KBZ				pP	PcP	20 24 42.7	+0.8
KBZ	Khabaz	74.61	350	P	P	20 24 28.5	+0.7
	comp=Z,8.3nm,1.0s,baz=257,slow=5.2,SNR=15						
KBZ				pP	PcP	20 24 42.7	+0.8
	comp=Z,6.6nm,0.9s,baz=300,slow=4.1,SNR=6.4						
PGF	Pioggiola	74.89	16	eP	P	20 24 29.3	-0.3
	comp=Z,24nm,1.0s						
PGF	Pioggiola	74.89	16	eP	P	20 24 29.3	-0.3
PGF				pmax	pmax		
	comp=Z,24nm,1.0s						
PGF	Pioggiola	74.89	16	eP	P	20 24 29.3	-0.3
	comp=Z,24nm,1.0s						
ESDC	Sonseca Array	75.43	27	P	P	20 24 33.1	+0.4
ESDC				pP	PcP	20 24 46.8	+1.1
ESDC	Sonseca Array	75.43	27	P	P	20 24 33.1	+0.4
	comp=Z,5.5nm,0.7s,baz=341,slow=5.5,SNR=31						
ESDC				pP	PcP	20 24 46.8	+1.1
	comp=Z,2.3nm,0.8s,baz=340,slow=5.4,SNR=4.9						
KMI	Kunming	76.07	297	P	P	20 24 37.9	+1.1
KMI				pP	pP	20 24 50.8	+1.7
KMI				sP	sP	20 24 55.3	+1.5
KMI				S	S	20 34 17.6	+0.3
KMI				sS	sS	20 34 37.8	+0.1
KMI				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,110nm,5.2s						
KMI				LR	LR		
	comp=Z,30nm,29.4s						
SKO	Skopje	76.63	7	eP	P	20 24 40.1	+0.7
VAY	Valandovo	77.34	6	eP	P	20 24 43.0	-0.4
BIA	Bitola	77.58	7	eP	P	20 24 43.9	-0.9
CUC	Castrocucco	78.18	11	eP	P	20 24 46.8	-1.4
	comp=Z,2.0nm,0.7s						
BR131	Keskin Array S	79.08	357	eP	P	20 24 52.5	-0.7
	comp=Z,6.3nm,1.0s						
BR131				e		20 25 07.5	
BRTR	Keskin Array B	79.08	357	P	P	20 24 53.2	0.0
BRTR				pP	pP	20 25 07.0	+1.4
BRTR	Keskin Array B	79.08	357	P	P	20 24 53.2	0.0
	comp=Z,4.2nm,0.9s,baz=14,slow=3.7,SNR=26						
BRTR				pP	pP	20 25 07.0	+1.4
	comp=Z,5.8nm,1.0s,baz=20,slow=3.9,SNR=11						
KEST	Kesra	81.64	17	P	P	20 25 06.8	-0.2
KEST	Kesra	81.64	17	P	P	20 25 06.8	-0.2
	comp=Z,4.4nm,0.9s,baz=246,slow=2.1,SNR=12						
CHTO	Chiang Mai	83.27	297	eP	P	20 25 14.3	-1.3
CHTO	Chiang Mai	83.27	297	eP	P	20 25 14.3	-1.3
	comp=Z,1.5nm,0.8s						
CMAR	Chiang Mai Arr	83.58	297	P	P	20 25 16.6	-0.7
CMAR	Chiang Mai Arr	83.58	297	P	P	20 25 16.6	-0.7
	comp=Z,6.6nm,0.8s,baz=5.3,slow=6.0,SNR=61						
CMAR				LR	LR	21 05 11.5	
	comp=Z,33nm,18.4s,baz=268,slow=38						
MIB	Mutribah	87.95	345	eP	P	20 25 38.5	-0.2
MIB				AMb	AMB	20 25 39.2	
	comp=Z,17nm,0.7s						
KBD	Kabd	88.52	345	eP	P	20 25 41.0	-0.3
KBD				AMb	AMB	20 25 48.6	
	comp=Z,14nm,0.7s						
RDF	Al-Radifah	88.78	345	eP	P	20 25 42.4	-0.3
RDF				AMb	AMB	20 25 44.9	
	comp=Z,15nm,1.3s						
SHEL	Horse Pasture	127.85	46	i PKIKP	PKPdf	20 31 59.4	+5.1
BOSA	Boshof	146.95	8	ePKPdf	PKPdf	20 32 29.7	+0.6
BOSA				PKPbc	PKPdf	20 32 30.3	+1.3
BOSA				pPKPbc	pPKPbc	20 32 44.7	+0.9
BOSA				e		20 32 45.2	
BOSA	Boshof	146.95	8	PKPbc	PKPdf	20 32 30.3	+1.3
	comp=Z,8.9nm,0.9s,baz=8.3,slow=2.8,SNR=13						
BOSA				pPKPbc	pPKPbc	20 32 44.7	+0.8
	comp=Z,6.9nm,0.7s,baz=353,slow=3.1,SNR=5.2						
QSPA	South Pole Qui	151.32	180	PKP	PKPdf	20 32 32.1	-2.6
QSPA				PKPbc	PKPbc	20 32 40.6	-0.2
QSPA	South Pole Qui	151.32	180	PKP	PKPdf	20 32 32.1	-2.6
	comp=Z,1.2nm,0.7s,baz=292,slow=5.1,SNR=6.3						
QSPA				PKPbc	PKPbc	20 32 40.6	-0.2
	comp=Z,18nm,0.8s,baz=37,slow=0.6,SNR=71						

*ISCJB **07** 20:21:38.8±1.0, 38°.35N±0°.03×26°.40E±0°.05, h7km±5km, Error ellipse: s-maj=7.1km s-min=5.2km az=163.5*
*CSEM **07** 20:21:38.7±0.1, 38°.34N×26°.40E, h5km, MD3.1, Error ellipse: s-maj=3.2km s-min=2.2km az=72.0*
*ISK **07** 20:21:38.5, 38°.35N×26°.42E, h9km, MD2.9*
*DDA **07** 20:21:39.7, 38°.36N×26°.51E, h14km, MD3.1*
ISC 07 20:21:39.0±1.2**, 38°.36N**±0°.03×**26°.41E**±0°.04**, h10**km±7km**,**
n38, σ0.52/56**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.15	88	i P	Pg	20 21 42.5	+0.1
URLA				i S	Sg	20 21 44.9	+0.1
URLA	Izmir	0.15	88	i P	Pg	20 21 42.5	+0.1
URLA				i S	Sg	20 21 44.9	+0.1
BLCB	Balcova	0.50	86	ePG	Pg	20 21 48.4	-0.3
BLCB				eSG	Sg	20 21 56.0	+0.6
BLCB	Balcova	0.50	86	ePg	Pg	20 21 48.4	-0.3
BLCB				eSg	Sg	20 21 56.0	+0.6
IZM	Izmir	0.67	86	ePG	Pg	20 21 51.8	-0.3
IZM				eSG	Sb	20 22 01.8	-0.5
IZM	Izmir	0.67	86	ePg	Pg	20 21 51.8	-0.3
IZM				eSg	Sb	20 22 01.8	-0.5
GCAM	G?zelcaml?	0.93	135	i P	Pg	20 21 56.8	0.0
GCAM				i S	Sb	20 22 09.7	+0.3
GCAM	G?zelcaml?	0.93	135	i P	Pg	20 21 56.8	0.0
GCAM				i S	Sb	20 22 09.7	+0.3
AYVA	Ayvalik	0.98	13	i P	Pg	20 21 57.7	-0.1
AYVA				i S	Sb	20 22 10.9	0.0
AYVA	Ayvalik	0.98	13	i P	Pg	20 21 57.7	-0.1
AYVA				i S	Sb	20 22 10.9	0.0
AKHS	Akhisar	1.22	64	i P	Pn	20 22 02.0	-0.1
AKHS				i S	Sb	20 22 16.9	-1.0
AKHS	Akhisar	1.22	64	i P	Pn	20 22 02.0	-0.1
AKHS				i S	Sb	20 22 16.9	-1.0
AKS	Akhisar	1.22	64	ePN	Pb	20 22 02.1	0.0
AKS				eSN	Sn	20 22 19.5	+0.8
AKS	Akhisar	1.22	64	ePn	Pb	20 22 02.1	0.0
AKS				eSn	Sn	20 22 19.5	+0.8
AYDN	Tasoluk	1.35	120	i P	Pn	20 22 03.7	-0.3
AYDN				i S	Sb	20 22 21.6	-0.3
AYDN	Tasoluk	1.35	120	i P	Pn	20 22 03.7	-0.3
AYDN				i S	Sb	20 22 21.6	-0.3
APE	Apeiranthos	1.46	209	ePN	Pn	20 22 05.7	+0.2
APE	Apeiranthos	1.46	209	ePn	Pn	20 22 05.7	+0.2
EZN	Ezine	1.47	358	ePN	Pn	20 22 05.8	+0.3
EZN	Ezine	1.47	358	ePn	Pn	20 22 05.8	+0.3
BODT	Bodrum	1.48	151	ePN	Pn	20 22 05.7	0.0
BODT	Bodrum	1.48	151	ePn	Pn	20 22 05.7	0.0
MLSB	Milas	1.52	134	ePN	Pn	20 22 06.3	+0.1
MLSB	Milas	1.52	134	ePn	Pn	20 22 06.3	+0.1
BALY	Balya	1.67	34	i P	Pn	20 22 08.4	0.0
BALY				i S	Sb	20 22 31.3	+0.2
BALY	Balya	1.67	34	i P	Pn	20 22 08.4	0.0
BALY				i S	Sb	20 22 31.3	+0.2
BALB	Balikesir	1.72	41	ePN	Pn	20 22 09.6	+0.6
BALB	Balikesir	1.72	41	ePn	Pn	20 22 09.6	+0.6
KULA	Kula-Manisa	1.78	84	ePN	Pn	20 22 10.3	+0.5
KULA	Kula-Manisa	1.78	84	ePn	Pn	20 22 10.3	+0.5
GONE	Gonen-Balikesi	1.96	30	ePN	Pn	20 22 13.0	+0.8
GONE	Gonen-Balikesi	1.96	30	ePn	Pn	20 22 13.0	+0.8
LPK	Lapseki	2.03	8	ePN	Pn	20 22 13.8	+0.5
LPK	Lapseki	2.03	8	ePn	Pn	20 22 13.8	+0.5
GELI	Tayfur-Gelibol	2.04	1	ePN	Pn	20 22 13.9	+0.6
GELI	Tayfur-Gelibol	2.04	1	ePn	Pn	20 22 13.9	+0.6
KRBG	Karabiga-Canak	2.15	18	ePN	Pb	20 22 16.5	-1.5
KRBG	Karabiga-Canak	2.15	18	ePn	Pb	20 22 16.5	-1.5

*CSEM **07** 20:21:39.2, 42°.45N×13°.38E, h10km, After ROM*
ROM 07 20:21:39.2±0.1**, 42°.45N**×**13°.38E, h10**km±1km**, Ml1.6**/8**,**
Error ellipse: s-maj=1.7km s-min=1.2km az=72.0,
Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.09	12	Pg	Pg	20 21 42.3	+0.4
CAMP				Sg	Sg	20 21 44.1	+0.2
	153nm,0.5s						
CAMP	Campotosto	0.09	12	Pg	Pg	20 21 42.3	+0.4
CAMP				Sg	Sg	20 21 44.1	+0.2
	153nm,0.5s						
AQU	L'Aquila	0.09	171	Pg	Pg	20 21 42.2	+0.4
AQU				Sg	Sg	20 21 44.2	+0.5
	277nm,0.3s						
AQU	L'Aquila	0.09	171	Pg	Pg	20 21 42.2	+0.4
AQU				Sg	Sg	20 21 44.2	+0.5
	277nm,0.3s						
FAGN	Fagnano	0.23	140	Pg	Pb	20 21 45.5	-0.1
FAGN				Sg	Sg	20 21 47.9	+0.5
FAGN	Fagnano	0.23	140	Pg	Pb	20 21 45.5	-0.1
FAGN				Sg	Sg	20 21 47.9	+0.5
TERO	Teramo	0.24	43	Pg	Pg	20 21 44.3	0.0
TERO				Sg	Sg	20 21 48.0	+0.3
	69nm,0.2s						
TERO	Teramo	0.24	43	Pg	Pg	20 21 44.3	0.0
TERO				Sg	Sg	20 21 48.0	+0.3
	69nm,0.2s						
FIAM	Fiamignano	0.27	228	Pg	Pg	20 21 45.2	+0.4
FIAM				Sg	Sg	20 21 49.3	+0.8
	44nm,0.5s						
FIAM	Fiamignano	0.27	228	Pg	Pg	20 21 45.2	+0.4
FIAM				Sg	Sg	20 21 49.3	+0.8
	44nm,0.5s						
LNSS	Leonessa	0.30	302	Pg	Pg	20 21 46.0	+0.6
LNSS				Sg	Sb	20 21 51.1	-0.8
	53nm,0.2s						
LNSS	Leonessa	0.30	302	Pg	Pg	20 21 46.0	+0.6
LNSS				Sg	Sb	20 21 51.1	-0.8
	53nm,0.2s						
VCEL	Villa Celiera	0.34	98	Pg	Pb	20 21 46.9	-0.7
VCEL				Sg	Sb	20 21 52.6	-0.6
	71nm,0.5s						
VCEL	Villa Celiera	0.34	98	Pg	Pb	20 21 46.9	-0.7
VCEL				Sg	Sb	20 21 52.6	-0.6
	71nm,0.5s						
PTQR	Pietraquaria	0.42	178	Pg	Pb	20 21 48.6	-0.3
PTQR				Sg	Sg	20 21 54.3	+0.9
PTQR	Pietraquaria	0.42	178	Pg	Pb	20 21 48.6	-0.3
PTQR				Sg	Sg	20 21 54.3	+0.9
NRCA	Norcia	0.43	333	Pg	Pg	20 21 48.1	+0.2
NRCA				Sg	Sb	20 21 54.8	-1.0
	52nm,0.1s						
NRCA	Norcia	0.43	333	Pg	Pg	20 21 48.1	+0.2
NRCA				Sg	Sb	20 21 54.8	-1.0
	52nm,0.1s						
OFFI	Offida	0.54	24	Pg	Pb	20 21 50.6	-0.2
	75nm,0.4s						
OFFI	Offida	0.54	24	Pg	Pb	20 21 50.6	-0.2
	75nm,0.4s						
CERT	Cerreto	0.58	211	Pg	Pg	20 21 50.4	-0.2
CERT	Cerreto	0.58	211	Pg	Pg	20 21 50.4	-0.2
INTR	Introdacqua	0.58	138	Pg	Pg	20 21 50.5	-0.1
INTR				Sg	Sb	20 21 59.4	-0.6
INTR	Introdacqua	0.58	138	Pg	Pg	20 21 50.5	-0.1
INTR				Sg	Sb	20 21 59.4	-0.6
FDMO	Fiordimonte	0.63	340	Pg	Pg	20 21 51.7	+0.2
FDMO	Fiordimonte	0.63	340	Pg	Pg	20 21 51.7	+0.2
CESI	CESI - Serrava	0.66	328	Pg	Pg	20 21 52.1	0.0
CESI	CESI - Serrava	0.66	328	Pg	Pg	20 21 52.1	0.0

*CSEM **07** 20:22:00.4, 42°.29N×13°.47E, h8km, After ROM*
ROM 07 20:22:00.4±0.1**, 42°.29N**×**13°.47E, h8**km±1km**, Ml1.7**/3**,**
Error ellipse: s-maj=1.8km s-min=1.4km az=48.0,
Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.08	319	Pg	Pg	20 22 03.0	+0.4
AQU				Sg	Sg	20 22 04.6	+0.4
	277nm,0.3s						
AQU	L'Aquila	0.08	319	Pg	Pg	20 22 03.0	+0.4
AQU				Sg	Sg	20 22 04.6	+0.4
	277nm,0.3s						
FAGN	Fagnano	0.09	108	Pg	Pg	20 22 03.3	+0.6
FAGN				Sg	Sg	20 22 04.7	+0.4
FAGN	Fagnano	0.09	108	Pg	Pg	20 22 03.3	+0.6
FAGN				Sg	Sg	20 22 04.7	+0.4
FIAM	Fiamignano	0.27	265	Pg	Pg	20 22 06.7	+0.8
FIAM				Sg	Sg	20 22 10.5	+1.0
	44nm,0.5s						
FIAM	Fiamignano	0.27	265	Pg	Pg	20 22 06.7	+0.8
FIAM				Sg	Sg	20 22 10.5	+1.0
	44nm,0.5s						
PTQR	Pietraquaria	0.28	191	Pg	Pb	20 22 07.3	-0.4
PTQR				Sg	Sg	20 22 10.8	+1.0
PTQR	Pietraquaria	0.28	191	Pg	Pb	20 22 07.3	-0.4
PTQR				Sg	Sg	20 22 10.8	+1.0
TERO	Teramo	0.34	16	Pg	Pg	20 22 07.4	+0.1
TERO				Sg	Sg	20 22 13.2	+1.3
	69nm,0.2s						
TERO	Teramo	0.34	16	Pg	Pg	20 22 07.4	+0.1
TERO				Sg	Sg	20 22 13.2	+1.3
	69nm,0.2s						
INTR	Introdacqua	0.43	131	Pg	Pg	20 22 09.3	+0.4
INTR				Sg	Sb	20 22 16.1	-0.9
INTR	Introdacqua	0.43	131	Pg	Pg	20 22 09.3	+0.4
INTR				Sg	Sb	20 22 16.1	-0.9
CERT	Cerreto	0.50	227	Pg	Pb	20 22 11.6	+0.1
CERT	Cerreto	0.50	227	Pg	Pb	20 22 11.6	+0.1
NRCA	Norcia	0.60	334	Pg	Pg	20 22 12.6	+0.4
NRCA				Sg	Sb	20 22 21.8	-0.2
	52nm,0.1s						
NRCA	Norcia	0.60	334	Pg	Pg	20 22 12.6	+0.4
NRCA				Sg	Sb	20 22 21.8	-0.2
	52nm,0.1s						

*ISCJB **07** 20:24:53.7±0.5, 39°.19N±0°.03×16°.87E±0°.05, h17km±4km, Error ellipse: s-maj=7.4km s-min=3.7km az=22.4*
*CSEM **07** 20:24:54.1±0.2, 39°.18N×16°.79E, h20km, ML3.8/6, Error ellipse: s-maj=5.4km s-min=2.8km az=113.0*
*ROM **07** 20:24:54.0±0.1, 39°.19N×16°.81E, h15km±1km, Ml3.2/28, Error ellipse: s-maj=2.6km s-min=1.4km az=98.0*
ISC 07 20:24:54.0±0.8**, 39°.19N**±0°.02×**16°.81E**±0°.03**, h16**km±4km**,**
n73, σ0.55/88**, 12C-2D, Southern Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TIP	Timpagrande	0.04	260	eP	Pg	20 24 56.6	-0.4
	3μm,0.4s						
TIP	Timpagrande	0.04	260	⇓iPg	Pg	20 24 56.9	-0.1
TIP				Sg	Sg	20 24 58.9	-0.1
	13μm,0.8s						
TIP	Timpagrande	0.04	260	⇓iPg	Pg	20 24 56.9	-0.1
TIP				Sg	Sg	20 24 58.9	-0.1
	13μm,0.8s						
SERS	Sersale	0.17	211	⇑iPg	Pg	20 24 58.6	+0.1
SERS				Sg	Sg	20 25 01.8	+0.4
	10μm,0.6s						
SERS	Sersale	0.17	211	⇑iPg	Pg	20 24 58.6	+0.1
SERS				Sg	Sg	20 25 01.8	+0.4
	10μm,0.6s						
PIPA	Pietrapaola	0.30	2	⇑iPg	Pg	20 25 00.3	-0.1
PIPA				Sg	Sb	20 25 05.8	+0.1
	16μm,0.3s						
PIPA	Pietrapaola	0.30	2	⇑iPg	Pg	20 25 00.3	-0.1
PIPA				Sg	Sb	20 25 05.8	+0.1
	16μm,0.3s						
CARO	Carolei	0.46	279	Pg	Pg	20 25 02.6	-0.6
CARO				Sg	Sg	20 25 10.0	+0.5
	5μm,0.5s						
CARO	Carolei	0.46	279	Pg	Pg	20 25 02.6	-0.6
CARO				Sg	Sg	20 25 10.0	+0.5
	5μm,0.5s						
GRI	Girifalco	0.47	220	Pg	Pg	20 25 03.0	-0.4
GRI				Sg	Sb	20 25 11.2	+0.6
	2μm,0.7s						
GRI	Girifalco	0.47	220	Pg	Pg	20 25 03.0	-0.4
GRI				Sg	Sb	20 25 11.2	+0.6
	2μm,0.7s						
PLAC	Placanica	0.79	201	Pg	Pb	20 25 08.6	-0.7
	1μm,0.8s						
PLAC	Placanica	0.79	201	Pg	Pb	20 25 08.6	-0.7
	1μm,0.8s						
ORI	Oriolo Calabro	0.92	343	Pg	Pb	20 25 10.5	-1.1
ORI	Oriolo Calabro	0.92	343	Pg	Pb	20 25 10.5	-1.1
JOPP	Joppolo	0.92	231	Pg	Pb	20 25 11.3	-0.3
JOPP				Sg	Sb	20 25 23.7	+0.1
	484nm,0.4s						
JOPP	Joppolo	0.92	231	Pg	Pb	20 25 11.3	-0.3
JOPP				Sg	Sb	20 25 23.7	+0.1
	484nm,0.4s						
CUC	Castrocucco	1.11	317	Pg	Pn	20 25 14.7	-0.2
	376nm,0.4s						
CUC	Castrocucco	1.11	317	Pg	Pn	20 25 14.7	-0.2
	376nm,0.4s						
SCHR	S. Chirico Rap	1.16	331	Pg	Pb	20 25 16.1	+0.4
	156nm,0.6s						
SCHR	S. Chirico Rap	1.16	331	Pg	Pb	20 25 16.1	+0.4
	156nm,0.6s						
CRAC	Craco	1.21	347	Pg	Pn	20 25 16.0	-0.3
	986nm,0.9s						
CRAC	Craco	1.21	347	Pg	Pn	20 25 16.0	-0.3
	986nm,0.9s						
SIRI	Monte Sirino -	1.23	324	Pg	Pb	20 25 17.4	+0.5
	307nm,0.4s						
SIRI	Monte Sirino -	1.23	324	Pg	Pb	20 25 17.4	+0.5
	307nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
MSCL	Scilla	1.24	220⇑	iPg	Pg	20 25 17.7	-0.2
	542nm,0.6s						
MSCL	Scilla	1.24	220⇑	iPg	Pg	20 25 17.7	-0.2
	542nm,0.6s						
SOI	Samo	1.26	208	Pg	Pb	20 25 17.7	+0.4
	272nm,0.8s						
SOI	Samo	1.26	208	Pg	Pb	20 25 17.7	+0.4
	272nm,0.8s						
MTSN	Montesano sull	1.35	323	Pg	Pb	20 25 18.7	-0.3
	416nm,0.9s						
MTSN	Montesano sull	1.35	323	Pg	Pb	20 25 18.7	-0.3
	416nm,0.9s						
MSRU	Castanea	1.37	228	Pg	Pn	20 25 18.7	+0.3
	1μm,1.3s						
MSRU	Castanea	1.37	228	Pg	Pn	20 25 18.7	+0.3
	1μm,1.3s						
MCEL	Monticello	1.38	326	Pg	Pn	20 25 18.2	-0.4
	201nm,0.6s						
MCEL	Monticello	1.38	326	Pg	Pn	20 25 18.2	-0.4
	201nm,0.6s						
MPAZ	Palizzi	1.38	207⇑	iPg	Pb	20 25 19.8	+0.4
	366nm,0.9s						
MPAZ	Palizzi	1.38	207⇑	iPg	Pb	20 25 19.8	+0.4
	366nm,0.9s						
BULG	Bulgheria - Ca	1.42	309	Pg	Pn	20 25 19.5	+0.3
	288nm,0.5s						
BULG	Bulgheria - Ca	1.42	309	Pg	Pn	20 25 19.5	+0.3
	288nm,0.5s						
MIGL	Miglionico	1.45	349	Pg	Pb	20 25 20.6	+0.1
	685nm,0.8s						
MIGL	Miglionico	1.45	349	Pg	Pb	20 25 20.6	+0.1
	685nm,0.8s						
PTRP	Pietrapertosa	1.45	337	Pg	Pg	20 25 22.5	+0.5
	233nm,3.2s						
PTRP	Pietrapertosa	1.45	337	Pg	Pg	20 25 22.5	+0.5
	233nm,3.2s						
MATE	Matera	1.47	357	Pg	Pb	20 25 20.7	-0.1
	398nm,0.7s						
MATE	Matera	1.47	357	Pg	Pb	20 25 20.7	-0.1
	398nm,0.7s						
MILZ	Milazzo	1.53	234	Pg	Pn	20 25 20.9	+0.3
	367nm,0.5s						
MILZ	Milazzo	1.53	234	Pg	Pn	20 25 20.9	+0.3
	367nm,0.5s						
SCTE	Santa Cesarea	1.56	55	Pg	Pn	20 25 21.0	0.0
	473nm,0.9s						
SCTE	Santa Cesarea	1.56	55	Pg	Pn	20 25 21.0	0.0
	473nm,0.9s						
NOCI	Noci	1.61	7⇑	iPg	Pn	20 25 22.3	+0.5
	318nm,0.7s						
NOCI	Noci	1.61	7⇑	iPg	Pn	20 25 22.3	+0.5
	318nm,0.7s						
LLI	Lipari	1.63	244	Pg	Pb	20 25 22.9	-0.7
	2μm,0.6s						
LLI	Lipari	1.63	244	Pg	Pb	20 25 22.9	-0.7
	2μm,0.6s						
VPL	Vulcano Piano	1.64	241	Pg	Pn	20 25 22.4	+0.3
	677nm,0.6s						
VPL	Vulcano Piano	1.64	241	Pg	Pn	20 25 22.4	+0.3
	677nm,0.6s						
MRVN	Minervino Murg	1.93	346	Pn	Pn	20 25 27.1	+0.9
	72nm,0.6s						
MRVN	Minervino Murg	1.93	346	Pn	Pn	20 25 27.1	+0.9
	72nm,0.6s						
KEK	Kerkira	2.38	76⇑	iPn	Pn	20 25 32.7	+0.4
	34nm,0.6s						
KEK	Kerkira	2.38	76⇑	iPn	Pn	20 25 32.7	+0.4
	34nm,0.6s						
HAVL	Avola	2.59	211	Pn	Pn	20 25 35.2	0.0
	52nm,0.6s						
HAVL	Avola	2.59	211	Pn	Pn	20 25 35.2	0.0
	52nm,0.6s						
SGRT	San Giovanni R	2.69	343	Pn	Pn	20 25 37.9	+1.2
SGRT	San Giovanni R	2.69	343	Pn	Pn	20 25 37.9	+1.2
PUK	Puka	3.70	38	ePN	Pn	20 25 50.4	-0.1
PUK	Puka	3.70	38	ePn	Pn	20 25 50.4	-0.1
STON	Ston	3.75	10	ePn	Pn	20 25 51.0	0.0
STON				Sn	Sn	20 26 33.2	-1.6
BCI	Bajram Curri	4.03	37	ePN	Pn	20 25 55.6	+0.6
BCI	Bajram Curri	4.03	37	ePn	Pn	20 25 55.6	+0.6
DIVS	Divibare	5.46	25	ePn	Pn	20 26 13.0	-1.7
GRUS	Gruza	5.54	31	ePn	Pn	20 26 16.0	+0.3
NVLJ	Novalja	5.56	346	ePn	Pn	20 26 16.8	+0.8
NVLJ				Sn	Sn	20 27 19.4	-0.3
NVLJ	Novalja	5.56	346	ePn	Pn	20 26 16.8	+0.8
NVLJ				Sn	Sn	20 27 19.3	-0.3
ZAPS	Zavoj	6.00	45	ePn	Pn	20 26 23.1	+1.0

*CSEM **07** 20:30:41.9±0.6, 36°.41N×21°.69E, h2km, ML3.2, Error ellipse: s-maj=9.6km s-min=5.3km az=40.0*
*ATH **07** 20:30:42.1, 36°.42N×21°.70E, h5km±2km, MD3.1/15, ML3.0*
*THE **07** 20:30:43.9, 36°.49N×21°.74E, h0km±2km, ML3.5/2, Error ellipse: s-maj=3.2km s-min=0.8km az=223.0*
ISC 07 20:30:42.4±1.6, **36°.41N**±0°.05×**21°.69E**±0°.05, **h8**km±12km, **n56**, σ**0s.51**/83, **Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
PYL	PYLOS	0.48	5	P	Pg	20 30 51.5	-0.3
PYL				S	Sg	20 30 57.8	-0.3
PYL	PYLOS	0.48	5	ePB	Pg	20 30 51.5	-0.3
PYL				eSB	Sg	20 30 58.7	+0.6
PYL	PYLOS	0.48	5	ePb	Pg	20 30 51.5	-0.3
PYL				S	Sg	20 30 58.1	0.0
PYL				eSb	Sg	20 30 58.7	+0.6
DYR	Agios Nikonas	0.62	56	P	Pg	20 30 54.6	+0.1
DYR				S	Sg	20 31 03.1	+0.5
DYR	Agios Nikonas	0.62	56	ePB	Pg	20 30 54.5	+0.1
DYR	Agios Nikonas	0.62	56	ePb	Pg	20 30 54.5	+0.1
DYR				S	Sg	20 31 03.1	+0.5
ITM	Ithomi	0.79	14	P	Pg	20 30 57.3	-0.3
ITM				S	Sg	20 31 07.8	0.0
ITM	Ithomi	0.79	14	ePB	Pg	20 30 57.4	-0.2
ITM				eSB	Sg	20 31 08.2	+0.4
ITM	Ithomi	0.79	14	P	Pg	20 30 57.3	-0.3
ITM				eSb	Sg	20 31 08.3	+0.4
VLI	Veliai	1.05	73	P	Pg	20 31 02.4	-0.1
VLI				S	Sb	20 31 16.8	0.0
VLI	Veliai	1.05	73	ePG	Pg	20 31 01.9	-0.6
VLI				eSB	Sb	20 31 16.7	0.0
VLI	Veliai	1.05	73	ePg	Pg	20 31 01.9	-0.6
VLI	Veliai	1.05	73	P	Pg	20 31 02.3	-0.2
VLI				S	Sb	20 31 16.5	-0.2
KYTH	Kithira	1.09	97	P	Pn	20 31 03.8	-0.3
KYTH	Kithira	1.09	97	ePB	Pg	20 31 03.1	-0.3
KYTH	Kithira	1.09	97	ePb	Pg	20 31 03.1	-0.3
KYTH	Kithira	1.09	97	P	Pn	20 31 03.8	-0.3
VLX	Vlachokerasia	1.10	30	P	Pg	20 31 02.9	-0.7
VLX				S	Sg	20 31 17.9	0.0
VLX	Vlachokerasia	1.10	30	ePN	Pg	20 31 02.8	-0.8
VLX				eSB	Sb	20 31 18.5	+0.1
VLX	Vlachokerasia	1.10	30	P	Pg	20 31 02.9	-0.7
VLX				S	Sg	20 31 17.9	0.0
VLX				eSb	Sb	20 31 18.5	+0.1
AMT	Artemida-Makis	1.12	1	P	Pg	20 31 03.5	-0.3
AMT				S	Sb	20 31 18.9	+0.1
AMT	Artemida-Makis	1.12	1	ePN	Pg	20 31 03.2	-0.6
AMT				eSB	Sb	20 31 19.2	+0.4
AMT	Artemida-Makis	1.12	1	ePn	Pg	20 31 03.2	-0.6
AMT	Artemida-Makis	1.12	1	P	Pg	20 31 03.5	-0.3
AMT				S	Sb	20 31 18.8	0.0
AMT				eSb	Sb	20 31 19.2	+0.4
GUR	Goura	1.61	19	P	Pn	20 31 11.5	+0.3
GUR	Goura	1.61	19	ePG	Pb	20 31 12.0	-0.4
GUR				eSB	Sg	20 31 34.8	+0.7
GUR	Goura	1.61	19	P	Pn	20 31 11.5	+0.3
GUR				S	Sg	20 31 34.0	-0.1
GUR				eSb	Sg	20 31 34.8	+0.7
DID	Didima	1.65	48	P	Pb	20 31 12.6	-0.5
DID				S	Sb	20 31 34.8	+0.7
DID	Didima	1.65	48	ePG	Pb	20 31 12.8	-0.3
DID				eSB	Sg	20 31 36.1	+0.7
DID	Didima	1.65	48	P	Pn	20 31 11.8	0.0
DID	Didima	1.65	48	ePg	Pb	20 31 12.8	-0.3
DID				S	Sb	20 31 34.8	+0.7
DID				eSb	Sg	20 31 36.1	+0.7
RLS	Riolos of Patr	1.65	354	ePB	Pg	20 31 13.6	-0.5
RLS	Riolos of Patr	1.65	354	ePb	Pg	20 31 13.6	-0.5
LAKA	Lakka	1.84	7	ePN	Pb	20 31 16.4	+0.1
LAKA	Lakka	1.84	7	ePn	Pb	20 31 16.4	+0.1
LTK	Loutraki	1.90	32	P	Pn	20 31 16.2	+1.0
LTK	Loutraki	1.90	32	ePG	Pb	20 31 17.4	0.0
LTK	Loutraki	1.90	32	P	Pb	20 31 16.4	-1.0
LTK	Loutraki	1.90	32	ePg	Pb	20 31 17.4	0.0
NAIG	Nisos Aigina	1.97	46	ePG	Pb	20 31 18.3	-0.2
NAIG	Nisos Aigina	1.97	46	ePg	Pb	20 31 18.3	-0.2
VLS	Valsamata	1.97	334	ePG	Pb	20 31 18.6	+0.1
VLS	Valsamata	1.97	334	ePg	Pb	20 31 18.6	+0.1
KALE	Kalithea	2.01	10	ePN	Pb	20 31 19.6	+0.4
KALE	Kalithea	2.01	10	ePn	Pb	20 31 19.6	+0.4
EFP	Efpalio	2.02	5	ePG	Pb	20 31 19.5	+0.2
EFP	Efpalio	2.02	5	P	Pb	20 31 18.6	-0.7
EFP	Efpalio	2.02	5	ePg	Pb	20 31 19.5	+0.2
ATH	Athens Observa	2.24	45	ePN	Pb	20 31 23.0	-0.2
VAM	Vamos	2.27	116	ePN	Pb	20 31 23.6	0.0
VAM	Vamos	2.27	116	ePn	Pb	20 31 23.6	0.0
PTL	Penteli	2.38	46	ePN	Pb	20 31 24.6	-1.0
LKR	Lokris	2.46	25	ePN	Pb	20 31 25.3	-1.6
LKR	Lokris	2.46	25	ePn	Pb	20 31 25.3	-1.6
EVR	Evrytania	2.50	2	ePN	Pb	20 31 27.0	-0.7
EVR	Evrytania	2.50	2	ePn	Pb	20 31 27.0	-0.7

FUNV 07 20:32:21.0, 6°.62N×72°.75W, h134km, MW3.5, 9D, Northern Colombia

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
CAPV	Capacho	1.31	19⇓	iP	Pn	20 32 46.8	-0.8
CAPV				eS	Sn	20 33 06.0	-1.9
SOCV	Socops	2.50	49⇓	eP	Pn	20 33 01.4	0.0
VIGV	El Vigia	2.60	32⇓	eP	Pn	20 33 01.3	-1.4
QARV	Quebrada Arrib	4.19	32⇓	iP	Pn	20 33 22.7	-0.8
SANV	Sanarito	4.28	48⇓	eP	Pn	20 33 22.8	-1.9
CURV	Curarigua	4.36	39⇓	eP	Pn	20 33 23.5	-2.2
TEPV	Terepaima	4.84	46⇓	eP	Pn	20 33 30.2	-1.8
BAUV	El Baul	5.20	63⇓	eP	Pn	20 33 34.9	-2.0
MAPV	Macapo	5.31	53⇓	eP	Pn	20 33 36.5	-1.9
TURV	Turiamo	6.17	52	eP	Pn	20 33 47.6	-2.2
MERV	Las Mercedes	6.90	67	eP	Pn	20 33 56.7	-3.0
BIRV	Birongo	7.46	59	eP	Pn	20 34 04.8	-2.5
CUPV	Cœpira	7.69	63	eP	Pn	20 34 07.8	-2.5

*PRU **07** 20:37:53.6, 16°.70S×175°.75W, h30km*
*ISCJB **07** 20:38:21.6±0.7, 15°.6S±0°.2×175°.2W±0°.2, h262km, mb3.8/9, Error ellipse: s-maj=37.9km s-min=13.1km az=148.1*
*IDC **07** 20:38:24.9±1.2, 15°.80S×174°.89W, h287km±11km, mb3.6/9, mb1 3.9/10, mb1mx3.6/21, mbtmp3.6/10, Error ellipse: s-maj=27.2km s-min=12.8km az=147.0*
ISC 07 20:38:22.5±0.7, **15°.8S**±0°.2×**175°.1W**±0°.1, **h262**km, **n21**, σ**1s.21**/21, **mb3.7**/9, **6C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
AFI	Afiamalu	3.72	61	P	Pn	20 39 25.8	+2.0
	24nm,0.3s,baz=352,slow=2.1,SNR=15						
AFI				S	S	20 40 14.4	+1.9
	42nm,0.3s,baz=53,slow=23,SNR=14						
STKA	Stephens Creek	42.42	240	P	P	20 45 53.5	+1.6
	1.5nm,0.7s,baz=74,slow=7.4,SNR=3.1						
WRA	Warramunga Arr	48.14	257	P	P	20 46 38.5	+1.6
	1.5nm,0.6s,baz=90,slow=7.6,SNR=13						
ASAR	Alice Springs	48.42	252	P	P	20 46 40.1	+1.2
	9.4nm,0.6s,baz=87,slow=7.8,SNR=167						
QSPA	South Pole Qui	74.30	180	P	P	20 49 30.9	-0.2
	1.9nm,0.8s,baz=339,slow=1.4,SNR=6.9						
NVAR	Mina Array Bea	75.71	43	P	P	20 49 39.4	-0.3
	3.1nm,0.7s,baz=228,slow=9.5,SNR=6.7						
TXAR	Lajitas Array	82.19	57	P	P	20 50 14.4	-0.5
	1.5nm,0.9s,baz=211,slow=6.9,SNR=8.7						
ILAR	Eielson Array	83.11	12	P	P	20 50 17.6	-1.0
	1.1nm,0.7s,baz=219,slow=6.2,SNR=9.1						
PDAR	Pinedale Array	83.64	42	P	P	20 50 20.9	-1.2
	2.6nm,0.6s,baz=209,slow=3.5,SNR=25						
YKA	Yellowknife Ar	91.08	24	P	P	20 50 55.9	-1.0
	0.6nm,0.8s,baz=239,slow=4.6,SNR=8.1						
ARCES	ARCESS Array B	124.71	351	PKP	PKPdf	20 56 48.8	-1.6
	1.7nm,0.6s,baz=48,slow=1.8,SNR=10.0						
UPC	Upice	144.18	348⇑	iPKP	PKPab	20 57 25.7	+0.2
DPC	Dobruska-Polom	144.26	347	ePKP	PKPab	20 57 26.1	+0.2
OKC	Ostrava-Krasne	144.33	345⇑	ePKP	PKPab	20 57 26.2	+0.1
PRU	Pruhonice	144.96	349⇑	ePKP	PKPbc	20 57 28.1	-0.2
NKC	Novy Kostel	145.06	351⇑	ePKP	PKPdf	20 57 28.1	-0.5
BRTR	Keskin Array B	145.35	319	PKPbc	PKPdf	20 57 29.9	+0.2
	1.4nm,0.8s,baz=88,slow=3.1,SNR=11						
KHC	Kasperske Hory	145.95	350⇑	iPKP	PKPbc	20 57 31.4	0.0
GERES	GERESS Array B	146.21	349	PKPbc	PKPbc	20 57 31.8	-0.5
	1.1nm,0.6s,baz=5.0,slow=3.1,SNR=12						
CONA	Conrad Observa	146.65	347⇑	iPKPdf	PKPbc	20 57 33.6	+0.1
	5.0nm,0.8s						
TORD	Torodi Ar. Bea	175.98	130	PKPab	PKPab	20 59 40.6	-2.3
	0.3nm,0.5s,baz=255,slow=3.7,SNR=2.8						

*ISCJB **07** 20:40:46.1±0.2, 42°.35N±0°.02×13°.34E±0°.02, h13km±2km, Error ellipse: s-maj=3.2km s-min=2.7km az=143.6*
*CSEM **07** 20:40:46.5±0.1, 42°.37N×13°.36E, h2km, ML3.7/8, Error ellipse: s-maj=2.7km s-min=2.3km az=47.0*
*ROM **07** 20:40:46.3±0.1, 42°.35N×13°.35E, h9km±1km, Ml3.0/21, Error ellipse: s-maj=1.5km s-min=1.2km az=68.0*
*LDG **07** 20:40:49.5±0.5, 42°.45N×13°.28E, h2km, Ml2.7/6, Error ellipse: s-maj=9.9km s-min=6.3km az=109.0*
ISC 07 20:40:47.0±0.7, **42°.37N**±0°.02×**13°.36E**±0°.02, **h12**km±4km, **n95**, σ**1s.26**/130, **22C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
AQU	L'Aquila	0.03	124⇓	ePg	Pg	20 40 48.6	-0.7
AQU				Sg	Sg	20 40 49.9	-1.0
	53μm,0.4s						
AQU	L'Aquila	0.03	124⇓	ePg	Pg	20 40 48.6	-0.7
AQU				Sg	Sg	20 40 49.9	-1.0
	53μm,0.4s						
CAMP	Campotosto	0.17	12⇑	iPg	Pg	20 40 50.6	-0.3
CAMP				Sg	Sg	20 40 53.7	0.0
	3μm,0.3s						
CAMP	Campotosto	0.17	12⇑	iPg	Pg	20 40 50.6	-0.3
CAMP				Sg	Sg	20 40 53.7	0.0
	3μm,0.3s						
FAGN	Fagnano	0.20	123	Pg	Pg	20 40 50.9	-0.4
FAGN				Sg	Sg	20 40 54.5	+0.2
	7μm,0.3s						
FAGN	Fagnano	0.20	123	Pg	Pg	20 40 50.9	-0.4
FAGN				Sg	Sg	20 40 54.5	+0.2
	7μm,0.3s						
FIAM	Fiamignano	0.21	240⇑	iPg	Pg	20 40 51.0	-0.6
FIAM				Sg	Sg	20 40 54.3	-0.5
	4μm,0.3s						
FIAM	Fiamignano	0.21	240⇑	iPg	Pg	20 40 51.0	-0.6
FIAM				Sg	Sg	20 40 54.3	-0.5
	4μm,0.3s						
TERO	Teramo	0.31	35⇑	iPg	Pg	20 40 52.7	-0.6
TERO				Sg	Sb	20 40 59.9	+0.4
TERO	Teramo	0.31	35⇑	iPg	Pg	20 40 52.7	-0.6
LNSS	Leonessa	0.33	314	Pg	Pg	20 40 53.3	-0.5
LNSS				Sg	Sg	20 40 58.7	+0.4
	2μm,0.2s						
LNSS	Leonessa	0.33	314	Pg	Pg	20 40 53.3	-0.5
LNSS				Sg	Sg	20 40 58.7	+0.4
	2μm,0.2s						
PTQR	Pietraquaria	0.35	176	Pg	Pg	20 40 53.3	-0.8
PTQR				Sg	Sg	20 40 58.6	-0.2
PTQR	Pietraquaria	0.35	176	Pg	Pg	20 40 53.3	-0.8
PTQR				Sg	Sg	20 40 58.6	-0.2
VCEL	Villa Celiera	0.35	86	Pg	Pg	20 40 53.6	-0.6
VCEL				Sg	Sb	20 41 00.7	-0.2
VCEL	Villa Celiera	0.35	86	Pg	Pg	20 40 53.6	-0.6
VCEL				Sg	Sb	20 41 00.7	-0.2
NRCA	Norcia	0.50	338⇑	iPg	Pg	20 40 56.1	-0.7
NRCA				Sg	Sb	20 41 04.9	-0.1
	1μm,0.1s						
NRCA	Norcia	0.50	338⇑	iPg	Pg	20 40 56.1	-0.7
MNS	Montasola	0.51	272	Pg	Pg	20 40 55.9	-1.0
	639nm,0.4s						
MNS	Montasola	0.51	272	Pg	Pg	20 40 55.9	-1.0
	639nm,0.4s						
CERT	Cerreto	0.51	214	Pg	Pg	20 40 55.9	-1.1
	2μm,0.4s						
CERT	Cerreto	0.51	214	Pg	Pg	20 40 55.9	-1.1
	2μm,0.4s						
VVLD	Villa Vallelon	0.54	159⇑	iPg	Pg	20 40 56.5	-1.0
VVLD	Villa Vallelon	0.54	159⇑	iPg	Pg	20 40 56.5	-1.0
INTR	Introdacqua	0.54	132	Pg	Pg	20 40 56.7	-0.9
INTR				Sg	Sb	20 41 05.9	-0.3
	839nm,0.3s						
INTR	Introdacqua	0.54	132	Pg	Pg	20 40 56.7	-0.9
INTR				Sg	Sb	20 41 05.9	-0.3
	839nm,0.3s						
GUAR	Guarcino	0.58	184⇑	iPg	Pg	20 40 58.7	+0.4
	584nm,0.3s						
GUAR	Guarcino	0.58	184⇑	iPg	Pg	20 40 58.7	+0.4
	584nm,0.3s						
MTCE	Montecelio	0.58	233	Pg	Pg	20 40 57.1	-1.2
	432nm,0.3s						
MTCE	Montecelio	0.58	233	Pg	Pg	20 40 57.1	-1.2
	432nm,0.3s						
TRTR	Tortoreto Alta	0.59	43⇑	iPg	Pb	20 40 59.2	-0.1
	6μm,1.1s						
TRTR	Tortoreto Alta	0.59	43⇑	iPg	Pb	20 40 59.2	-0.1
	6μm,1.1s						
FDMO	Fiordimonte	0.69	343⇑	iPg	Pg	20 40 59.5	-1.0
FDMO				Sg	Sb	20 41 10.9	+0.3
	345nm,0.2s						
FDMO	Fiordimonte	0.69	343⇑	iPg	Pg	20 40 59.5	-1.0
FDMO				Sg	Sb	20 41 10.9	+0.3
	345nm,0.2s						
CESI	CESI - Serrava	0.72	332	Pg	Pg	20 41 00.3	-0.6
	129nm,0.3s						
CESI	CESI - Serrava	0.72	332	Pg	Pg	20 41 00.3	-0.6
	129nm,0.3s						
CAFR	Castel Frentan	0.74	101⇑	iPg	Pg	20 41 00.8	-0.6
CAFR	Castel Frentan	0.74	101⇑	iPg	Pg	20 41 00.8	-0.6
RDP	Rocca di Papa	0.78	218	Pg	Pg	20 41 01.4	-0.7
	1μm,0.4s						
RDP	Rocca di Papa	0.78	218	Pg	Pg	20 41 01.4	-0.7
	1μm,0.4s						
GUMA	Gualdo di Mace	0.81	31	Pg	Pg	20 41 00.4	-2.2
GUMA				Sg	Sg	20 41 10.9	-2.3
GUMA	Gualdo di Mace	0.81	31	Pg	Pg	20 41 00.4	-2.2
GUMA				Sg	Sg	20 41 10.9	-2.3
GIUL	Giuliano Di Ro	0.82	186	Pg	Pg	20 41 01.7	-1.1
	249nm,0.5s						
GIUL	Giuliano Di Ro	0.82	186	Pg	Pg	20 41 01.7	-1.1
	249nm,0.5s						
CERA	Filignano	0.92	148	Pg	Pg	20 41 03.6	-1.1
CERA	Filignano	0.92	148	Pg	Pg	20 41 03.6	-1.1
MIDA	Miranda	0.99	137	Pg	Pb	20 41 04.5	-1.6
	176nm,0.5s						
MIDA	Miranda	0.99	137	Pg	Pb	20 41 04.5	-1.6
	176nm,0.5s						
CING	Cingoli	1.01	353	Pg	Pb	20 41 05.6	-0.9
CING				Sg	Sn	20 41 21.1	-0.1
	305nm,0.6s						
CING	Cingoli	1.01	353	Pg	Pb	20 41 05.6	-0.9
CING				Sg	Sn	20 41 21.1	-0.1
	305nm,0.6s						
MGAB	Montegabbione	1.07	301	Pg	Pb	20 41 07.2	-0.3
MGAB	Montegabbione	1.07	301	Pg	Pb	20 41 07.2	-0.3
TRIV	Trivento	1.07	124	Pg	Pb	20 41 07.3	-0.2
TRIV	Trivento	1.07	124	Pg	Pb	20 41 07.3	-0.2
LATE	Laterza	1.18	282	Pg	Pb	20 41 08.7	-0.6
	37nm,1.0s						
LATE	Laterza	1.18	282	Pg	Pb	20 41 08.7	-0.6
	37nm,1.0s						
AOI	Ancona	1.19	8	Pg	Pn	20 41 09.1	-0.4
AOI	Ancona	1.19	8	Pg	Pn	20 41 09.1	-0.4
PIEI	Pieia	1.31	333	Pg	Pn	20 41 11.2	0.0
	131nm,0.7s						
PIEI	Pieia	1.31	333	Pg	Pn	20 41 11.2	0.0
	131nm,0.7s						
CIGN	Sant'Elia a Pi	1.35	122⇑	iPg	Pn	20 41 10.8	-0.9
CIGN	Sant'Elia a Pi	1.35	122⇑	iPg	Pn	20 41 10.8	-0.9
FSSB	Fossombrone	1.39	342⇑	iPn	Pn	20 41 12.6	+0.4
	321nm,0.3s						
FSSB	Fossombrone	1.39	342⇑	iPn	Pn	20 41 12.6	+0.4
	321nm,0.3s						
CAFI	Castiglion Fio	1.40	313	Pn	Pb	20 41 13.5	+0.3
	183nm,1.2s						
CAFI	Castiglion Fio	1.40	313	Pn	Pb	20 41 13.5	+0.3
	183nm,1.2s						
MS1	Monte Sant'Ang	2.03	108	ePn	Pb	20 41 24.0	+0.1
NVLJ	Novalja	2.45	26	i Pn	Pn	20 41 27.7	+0.9
NVLJ				Sn	Sn	20 41 58.0	+1.3
NVLJ	Novalja	2.45	26	i Pn	Pn	20 41 27.6	+0.9
NVLJ				Sn	Sn	20 41 57.9	+1.3
MAIM	Mastiano	2.61	307	P	Pn	20 41 29.3	+0.4
PGF	Pioggiola	3.23	275	ePn	Pn	20 41 38.5	+0.8
PGF				eSn	Sn	20 42 18.5	+2.3
	5.1nm,0.5s						
PGF	Pioggiola	3.23	275	ePn	Pn	20 41 38.5	+0.8
PGF				eSn	Sn	20 42 18.5	+2.3
	2.5nm,0.5s						
STON	Ston	3.24	80	ePn	Pn	20 41 38.5	+0.9
STON				Sn	Sn	20 42 17.1	+1.0
STON	Ston	3.24	80	ePn	Pn	20 41 38.5	+0.9
STON				Sn	Sn	20 42 17.0	+1.0
SBF	Sospel	4.59	291	ePn	Pn	20 41 57.2	+1.0
SBF				eSn	Sn	20 42 46.9	-2.6
	3.1nm,0.5s						
SBF	Sospel	4.59	291	ePn	Pn	20 41 57.2	+1.0
SBF				eSn	Sn	20 42 46.9	-2.6
	1.5nm,0.5s						
FRF	La Foret Royal	5.07	286	ePn	Pn	20 42 03.1	+0.3
FRF				eSn	Sn	20 42 58.1	-3.2
	0.5nm,0.2s						
FRF	La Foret Royal	5.07	286	ePn	Pn	20 42 03.1	+0.3
FRF				eSn	Sn	20 42 58.1	-3.2
	0.2nm,0.2s						
IVAS	Ivanjica	5.12	74	ePn	Pn	20 42 04.7	+1.1
LMR	La Mourre	5.13	283	ePn	Pn	20 42 03.7	+0.1
LMR	La Mourre	5.13	283	ePn	Pn	20 42 03.7	+0.1
DIVS	Divibare	5.14	68	ePn	Pn	20 42 07.9	+4.1
MBDF	Montbardon	5.34	298	eP	Pn	20 42 08.9	+2.3
MBDF	Montbardon	5.34	298	eP	Pn	20 42 08.9	+2.3
LPG	La Plagne	5.71	305	eP	Pn	20 42 14.7	+2.9
LPG	La Plagne	5.71	305	eP	Pn	20 42 14.7	+2.9
BARS	Barje	6.25	83	ePn	Pn	20 42 20.6	+1.5
KHC	Kasperske Hory	6.76	1	ePN	Pn	20 42 30.0	+4.0
KHC				eSN	Sn	20 43 42.2	-0.7
KHC	Kasperske Hory	6.76	1	Sn	Sn	20 43 42.2	-0.7
HINF	Hinteralfeld	7.13	322	ePn	Pn	20 42 31.0	-0.1
HINF				eSn	Sn	20 43 46.7	-5.3
	1.3nm,0.3s						
HINF	Hinteralfeld	7.13	322	ePn	Pn	20 42 31.0	-0.1
VTS	Vitosha	7.28	85	ePn	Pn	20 42 33.4	+0.1
CDF	Champ du Feu	7.40	327	ePn	Pn	20 42 34.7	-0.2
CDF				eSn	Sn	20 43 54.3	-4.5
	1.2nm,0.4s						
CDF	Champ du Feu	7.40	327	ePn	Pn	20 42 34.7	-0.2
HAU	Haudompre	7.50	321	ePn	Pn	20 42 36.4	+0.2
HAU				eSn	Sn	20 43 54.8	-6.3
	2.9nm,0.5s						

*NIED **07** 20:46:00, 45°.90N×152°.10E, h11km, Mw4.3 Best double couple: $M_0$2.85000×10^{15} NP1:φs263.00000°, δ72.00000°, λ86.00000°. NP2:φs97.00000°, δ19.00000°, λ103.00000°.*
*IDC **07** 20:46:30.6±0.5, 45°.88N×151°.99E, h0km, mb4.0/20, mb1 4.2/24, mb1mx4.2/31, mbtmp4.0/24, ML3.7/4, MS3.4/7, Ms1 3.4/7, ms1mx3.0/51, Error ellipse: s-maj=16.5km s-min=12.1km az=141.0*
*ISCJB **07** 20:46:32.9±0.6, 45°.64N±0°.04×152°.13E±0°.05, h36km±5km, mb4.3/49, MS3.9/10, Error ellipse: s-maj=8.4km s-min=4.2km az=146.0*
*JMA **07** 20:46:34.8±0.5, 45°.88N×152°.07E, h30km, M4.9*
*MOS **07** 20:46:34.8±1.0, 45°.84N×152°.05E, h43km, mb4.4/24, Error ellipse: s-maj=8.7km s-min=7.1km az=83.8*
*NEIC **07** 20:46:35.0±2.2, 45°.84N×151°.96E, h31km±16km, mb4.5/15, Error ellipse: s-maj=10.9km s-min=6.2km az=144.0*
*SKHL **07** 20:46:35.1±0.3, 45°.83N×152°.18E, h40km±6km, mb4.9/5, Ms3.9/1, msh5.3/1*
*BJI **07** 20:46:37.6, 45°.71N×151°.70E, h60km, mB4.9/25, mb4.6/32, Ms4.4/18, Ms7 4.1/20*
ISC 07 20:46:38.0±0.5, **45°.80N**±0°.04×**151°.93E**±0°.04, **h59**km±3km, **n201**, σ**1s.42**/234, **mb4.3**/49, **MS3.7**/10, **14C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
KUR	Kuril'sk	2.91	260	ePN	Pn	20 47 21.4	-0.4
KUR				eS	Sn	20 47 55.9	+0.4
KUR				pmax	pmax		
	comp=N,100nm,0.7s						
KUR				pmax	pmax		
	comp=E,130nm,0.7s						
KUR				pmax	pmax		

comp=Z,340nm,0.7s
KUR smax smax
comp=N,3µm,0.8s
KUR smax smax
comp=E,1µm,0.5s
KUR smax smax
comp=N,5µm,2.0s
KUR smax smax
comp=E,3µm,4.0s
KUR Kuril'sk 2.91 260 *e*P **Pn 20 47 21.4 -0.4**
KUR AMB AMB 20 47 23.5
comp=E,100nm,0.7s
KUR AMB AMB 20 47 23.5
comp=E,130nm,0.7s
KUR AMB AMB 20 47 23.5
comp=E,340nm,0.7s
KUR *e*S **Sn 20 47 55.9 +0.4**
KUR A A 20 48 04.0
comp=E,5µm,3.0s
KUR A A 20 48 04.0
comp=E,3µm,3.0s
KUR A A 20 48 04.0
comp=E,3µm,0.7s
KUR A A 20 48 04.0
comp=E,1µm,0.7s
YUK Yuzh-Kuril'sk 4.66 250 *d i*PN **Pn 20 47 46.1 +0.4**
YUK *i* S **Sn 20 48 39.8 +1.4**
YUK pmax pmax
comp=E,48nm,0.2s
YUK pmax pmax
comp=N,49nm,0.2s
YUK pmax pmax
comp=Z,238nm,0.4s
YUK smax smax
comp=E,171nm,0.4s
YUK smax smax
comp=N,406nm,0.7s
YUK Yuzh-Kuril'sk 4.66 250 ⇓ *i*P **Pn 20 47 46.2 +0.5**
YUK AMB AMB 20 47 53.0
comp=N,238nm,0.4s
YUK AMB AMB 20 47 53.0
comp=N,49nm,0.2s
YUK AMB AMB 20 47 53.0
comp=N,48nm,0.2s
YUK *i* S **Sn 20 48 39.8 +1.4**
YUK A A 20 48 56.1
comp=N,406nm,0.5s
YUK A A 20 48 56.1
comp=N,171nm,0.5s
NEM2 Nemuro 2 5.04 243 P **Pn 20 47 49.2 -1.8**
NEM2 *e*S **Sn 20 48 44.2 -3.7**
JRA Rausu 5.18 251 P **Pn 20 47 53.7 +0.8**
JRA *e*S **Sn 20 48 52.9 +1.6**
JNK Nakash 5.60 249 P **Pn 20 47 58.4 -0.2**
JNK *e*S **Sn 20 49 01.6 +0.1**
SKR Severo-Kuril's 5.63 28 *e*PN Pn 20 47 55.5 -3.5
SKR pmax pmax
comp=N,50nm,0.5s
SKR pmax pmax
comp=Z,80nm,0.5s
SKR Severo-Kuril's 5.63 28 *e*P Pn 20 47 55.5 -3.5
SKR AMB AMB 20 47 56.5
comp=Z,50nm,0.5s
SKR AMB AMB 20 47 56.5
comp=Z,80nm,0.5s
JAK Akkeshi 5.89 244 P **Pn 20 48 00.7 -1.9**
JAK *e*S **Sn 20 49 05.7 -3.0**
JTKR Abashiri--Toko 5.98 255 P **Pn 20 48 04.7 +0.8**
JAR Ashorobuto 6.34 250 P **Pn 20 48 09.2 +0.4**
JAR *e*S **Sn 20 49 20.6 +0.7**
JMP Maruseppu 6.34 257 P **Pn 20 48 10.3 +1.5**
YSS Yuzh-Sakhalins 6.45 284 *e*PN **Pn 20 48 12.2 +2.0**
YSS MLR MLR
comp=Z,400nm,16.0s
YSS Yuzh-Sakhalins 6.45 284 *e*Pn **Pn 20 48 10.2 0.0**
comp=Z,21nm,0.4s
YSS Yuzh-Sakhalins 6.45 284 *e*P **Pn 20 48 12.2 +2.0**
YSS *e*S **Sn 20 49 20.0 -2.4**
YSS *e*LQ LQ 20 49 48.0
YSS AMS AMS 20 50 48.0
comp=Z,400nm,16.0s
JOB Onbets 6.48 246 P **Pn 20 48 09.9 -0.8**
JOB *e*S **Sn 20 49 22.3 -1.0**
JKK2 Kamakawa 2 6.80 257 P **Pn 20 48 16.3 +1.2**
ASAJ Asahikawa 6.83 259 *e*Pn **Pn 20 48 17.2 +1.7**
comp=Z,21nm,0.6s
ASAJ Asahikawa 6.83 259 P **Pn 20 48 17.4 +1.9**
ASAJ Asahikawa 6.83 259 Pn **Pn 20 48 17.4 +1.9**
comp=Z,8.3nm,0.3s,baz=79,slow=21,SNR=85
JCH Churui 6.93 246 P **Pn 20 48 15.0 -1.8**
JCH *e*S **Sn 20 49 30.9 -3.3**
JFR Furan 7.18 252 P **Pn 20 48 20.6 +0.3**
JAB Ashibetsu 7.29 255 P **Pn 20 48 23.5 +1.7**
JEM Erimo 7.38 242 P **Pn 20 48 22.5 -0.4**
ERM Erimo 7.38 242 *d i*PN **Pn 20 48 22.4 -0.5**
ERM Erimo 7.38 242 *e*Pn **Pn 20 48 22.7 -0.3**
comp=Z,84nm,0.6s
ERM *e*Sn Sn 20 49 38.1 -7.1
JNBK Urakawa-nobuka 7.49 245 P **Pn 20 48 22.6 -1.9**
JBT2 Biratori 2 7.50 250 P **Pn 20 48 23.8 -0.8**
TYV Tymovskoe 7.99 313 *e*P **Pn 20 48 31.0 -0.2**
TYV AMB AMB 20 48 45.5
comp=Z,13nm,0.8s
TYV *e*S **Sn 20 49 56.0 -4.0**
TYV A A 20 50 02.0
comp=Z,33nm,0.8s
TYV A A 20 50 02.0
comp=Z,13nm,0.8s
JEW Eniwo 8.07 252 P **Pn 20 48 33.1 +0.6**
PETK Petropavlovsk- 8.22 25 *e*PN **Pn 20 48 32.9 -1.6**
PETK pmax pmax
comp=Z,1.0nm,0.3s
PETK Petropavlovsk- 8.22 25 Pn **Pn 20 48 32.7 -1.8**
PETK Petropavlovsk- 8.22 25 Pn **Pn 20 48 32.7 -1.8**
comp=Z,0.7nm,0.3s,baz=181,slow=13,SNR=9.5
PETK LR LR 20 51 46.3
comp=Z,172nm,19.6s,baz=36,slow=39
JNB Noboribetsu 8.51 251 P **Pn 20 48 37.5 -0.9**
JNB *e*S **Sn 20 50 10.8 -2.1**
JKB Kayabe 8.79 247 P **Pn 20 48 40.8 -1.5**
JKB *e*S Sn 20 50 13.5 -6.3
JSH Shimam 9.10 254 P **Pn 20 48 46.9 +0.4**
JYM2 Yakumo 2 9.11 250 P **Pn 20 48 45.5 -1.2**
JANG Nango 9.35 238 P Pn 20 48 45.9 -4.0
JANG *e*S Sn 20 50 24.5 -9.0
JTM Tenmabayashi 9.37 242 P **Pn 20 48 47.6 -2.6**
JTM *e*S Sn 20 50 26.9 -7.1
JSR Shiriuchi 9.37 247 P **Pn 20 48 48.4 -1.8**
JTH Tanohata 9.43 235 P Pn 20 48 46.8 -4.2
JTH *e*S Sn 20 50 25.7 -10
JOSM Okushiri--Mats 9.72 252 P **Pn 20 48 53.4 -1.6**
OFUJ Ofunato 10.12 232 P Pn 20 48 56.6 -3.9
OFUJ *e*S Sn 20 50 42.9 -10
NKL Nikolayevsk 10.37 319 *e*P **Pn 20 49 05.2 +1.5**
NKL AMB AMB 20 49 07.8
comp=Z,20nm,1.0s
NKL *e*L L 20 52 22.0
NKL AMS AMS 20 53 27.0
comp=Z,400nm,16.0s
NKL AMS AMS 20 53 27.0
comp=Z,500nm,16.0s
JRG Rokugo 10.49 236 P Pn 20 49 02.4 -3.2
JIO Ouri 10.74 231 P Pn 20 49 05.3 -3.7
JIO *e*S Sn 20 50 57.1 -11
JYA Atsumi 11.56 236 P Pn 20 49 17.2 -3.0
MJA0 Matsu Arr-Jizo 13.83 233 *e*P Pn 20 49 47.6 -3.5
MJA0 pmax pmax
comp=Z,1.0nm,0.3s
MAJO Matsushiro 13.85 233 *e*P Pn 20 49 47.2 -4.2
MAJO pmax pmax
comp=Z,15nm,0.6s
MAJO Matsushiro 13.85 233 *e*Pn Pn 20 49 47.1 -4.2
comp=Z,16nm,0.6s
MAT Matsushiro 13.85 233 P Pn 20 49 48.2 -3.1
MAT S **Sn 20 52 24.0 +0.5**
MJAR Matsushiro Arr 13.85 233 Pn Pn 20 49 47.6 -3.7
MJAR Matsushiro Arr 13.85 233 Pn Pn 20 49 47.6 -3.7
comp=Z,0.8nm,0.3s,baz=27,slow=13,SNR=25
KLR Kul'dur 14.05 291 *e*P **Pn 20 49 55.8 +1.8**
USRK Ussuriysk Arra 14.19 271 Pn **Pn 20 49 55.5 -0.2**
comp=Z,0.7nm,0.3s,baz=82,slow=12,SNR=14
USRK LR LR 20 55 07.9
comp=Z,114nm,20.8s,baz=20,slow=36
FX1 Attu Island--F 15.51 55 Pn **Pn 20 50 10.5 -2.4**
comp=Z,1.0nm,0.3s,baz=328,slow=9.5,SNR=4.0
FX1 LR LR 20 55 21.7
comp=Z,34nm,19.6s,baz=215,slow=34
MDJ Mudanjiang 15.78 274 P **Pn 20 50 15.7 -0.6**
MDJ pP pP 20 50 26.0 -5.8
MDJ S **Sn 20 53 11.8 +1.6**
MDJ pmax pmax
comp=Z,8.0nm,0.8s
MDJ pmax pmax
comp=Z,52nm,5.6s
MDJ LR LR
comp=N,79nm,22.2s
MDJ LR LR
comp=E,44nm,24.1s
MDJ LR LR
comp=Z,62nm,24.1s
SEY Seymchan 17.17 1 *e*P **Pn 20 50 31.6 -1.9**
ZEA Zeya 17.74 306 *e*P **Pn 20 50 38.1 -2.5**
ZEA AMB AMB 20 50 40.5
comp=Z,25nm,1.2s
CN2 Changchun 18.87 273 *e*P **Pn 20 50 53.7 -0.7**
CN2 *e*S **S 20 54 22.9 -1.6**
CN2 pmax pmax
comp=Z,20nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,15.0s
CN2 LR LR
comp=E,200nm,15.0s
CN2 LR LR
comp=Z,200nm,17.0s
KSRS Korea Array 19.73 254 P **Pn 20 51 03.5 -1.2**
comp=Z,0.4nm,0.3s,baz=62,slow=11,SNR=17
KSAR Wonju Array Be 19.77 254 P **P 20 51 03.5 +0.4**
JNU Nakatsue 20.53 239 P **P 20 51 11.1 -0.4**
JNU Nakatsue 20.53 239 P **P 20 51 11.1 -0.4**
comp=Z,3.3nm,0.7s,baz=351,slow=3.2,SNR=4.0
YAK Yakutsk 20.70 330 *e*P Pn 20 51 15.5 -0.3
YAK *e*PP pP 20 51 27.4 +1.6
YAK *e*S **S 20 55 00.2 -0.4**
YAK *e* 20 55 21.6
YAK *e*SS sS 20 55 31.9 +10
YAK pmax pmax
comp=Z,61nm,0.8s
YAK pmax pmax
comp=N,27nm,1.0s
YAK pmax pmax
comp=E,30nm,1.2s
YAK smax smax
comp=N,14nm,1.3s
YAK smax smax
comp=E,26nm,1.5s
YAK Yakutsk 20.70 330 *e*P Pn 20 51 17.2 +1.3
comp=E,95nm,0.8s
BILL Bilibino 23.50 14 P **P 20 51 41.0 -1.2**
BILL *e* 20 51 47.3
BILL MLR MLR
comp=Z,200nm,16.0s
BILL Bilibino 23.50 14 P **P 20 51 38.7 -3.6**
comp=Z,5.7nm,1.0s
BJI Beijing 26.65 270 P **P 20 52 13.8 +2.8**
BJI pmax pmax
comp=Z,10.0nm,0.7s
BJI pmax pmax
comp=Z,180nm,4.7s
BJI LR LR
comp=N,81nm,16.6s
BJI LR LR
comp=E,150nm,19.1s
BJI LR LR
comp=Z,73nm,21.8s
TIXI Tiksi 28.16 345 *e*P **P 20 52 23.1 -1.1**
TIXI pmax pmax
comp=Z,10.0nm,1.2s
NJ2 Nanjing 28.93 253 *e*P **P 20 52 30.1 -1.4**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
HHC Hu-ho-hao-te 29.55 275 *e*P **P 20 52 36.5 -0.5**
HHC pP **pP 20 52 51.4 -0.2**
HHC sP **sP 20 52 58.6 +0.1**
HHC PP **PnPn 20 53 34.8 +1.1**
HHC S **S 20 57 25.9 -1.8**
HHC sS **sS 20 57 50.0 -2.5**
HHC SS **SnSn 20 59 02.8 +2.5**
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,96nm,5.7s
HHC LR LR
comp=N,150nm,13.7s
HHC LR LR
comp=E,250nm,15.1s
HHC LR LR
comp=Z,340nm,15.2s
ULN Ulaanbaatar 30.45 290 P **P 20 52 45.9 +1.0**
SONM Songino Array 30.88 290 P **P 20 52 49.4 +0.6**
SONM Songino Array 30.88 290 P **P 20 52 49.4 +0.6**
comp=Z,0.5nm,0.6s,baz=78,slow=6.8,SNR=6.7
SONM LR LR 21 06 18.0
comp=Z,87nm,19.2s,baz=53,slow=38
TLY Talaya 31.89 298 *e*P **P 20 52 56.6 -0.9**
TLY Talaya 31.89 298 *e*P **P 20 52 56.3 -0.9**
WHN Wuhan 32.90 256 P **P 20 53 05.3 -1.1**
LZH Lanzhou 37.10 272 *e*P **P 20 53 44.3 +1.5**
LZH pP **pP 20 53 59.5 +1.9**
LZH sP **sP 20 54 07.0 +2.6**
LZH PP **PnPn 20 55 12.6 +3.6**
LZH pmax pmax
comp=Z,16nm,1.1s
LZH pmax pmax
comp=Z,73nm,5.6s
LZH LR LR
comp=N,400nm,13.0s
LZH LR LR
comp=E,400nm,13.5s
LZH LR LR
comp=Z,480nm,17.6s
SML Sawmill 37.22 43 *e*P **P 20 53 42.6 -0.8**
SML pmax pmax
comp=Z,1.0nm,0.7s
SML Sawmill 37.22 43 *e*P **P 20 53 42.6 -0.8**
comp=Z,1.2nm,0.7s
ILAR Eielson Array 37.80 38 P **P 20 53 46.8 -1.4**
ILAR Eielson Array 37.80 38 P **P 20 53 46.8 -1.4**
comp=Z,0.3nm,0.7s,baz=264,slow=7.9,SNR=4.5
GTA Gaotai 38.31 280 *e*P **P 20 53 54.8 +1.9**
GTA pP **pP 20 54 10.7 +2.9**
GTA sP **sP 20 54 17.5 +2.9**
GTA PcP **PcP 20 56 07.3 +1.6**
GTA S **ScP 20 59 46.9 -1.4**
GTA sS sS 21 00 13.1 +4.9
GTA pmax pmax
comp=Z,4.0nm,0.9s
GTA pmax pmax
comp=Z,170nm,5.9s
GTA LR LR
comp=N,82nm,17.1s
GTA LR LR
comp=E,100nm,16.2s
GTA LR LR
comp=Z,100nm,18.1s
CD2 Chengdu 39.98 265 P **P 20 54 05.1 -1.7**
CD2 pP **pP 20 54 20.4 -1.4**
CD2 sP **sP 20 54 27.6 -1.0**
CD2 PP **PnPn 20 55 41.6 -1.8**
CD2 PcP **PcP 20 56 10.3 -0.7**
CD2 PcS **PcS 21 00 00.1 -1.4**
CD2 S **S 21 00 04.5 -3.6**
CD2 sS **sS 21 00 30.6 -2.8**
CD2 SS SS 21 02 56.0 -11
CD2 pmax pmax
comp=Z,10.0nm,0.4s
CD2 pmax pmax
comp=Z,120nm,5.2s
GYA Guiyang 40.71 258 P **P 20 54 11.8 -1.1**
GYA pP **pP 20 54 28.6 +0.7**
GYA sP **sP 20 54 36.4 +1.7**
GYA PP **PnPn 20 55 51.0 -1.0**
GYA PcP **PcP 20 56 13.2 -0.3**
GYA ScP **ScP 20 59 55.7 -2.1**
GYA S **S 21 00 17.8 -1.3**
GYA SS SS 21 03 13.4 -7.9
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,5.2s
GYA LR LR
comp=N,450nm,17.5s
GYA LR LR
comp=E,400nm,18.0s
GYA LR LR
comp=Z,430nm,17.3s
ZALV Zalesovo Beam 42.50 306 P **P 20 54 27.7 +0.5**
ZALV 20 56 20.0
ZALV MLR MLR
comp=Z,111nm,19.0s
ZALV Zalesovo Beam 42.50 306 P **P 20 54 27.7 +0.5**
ZALV PcP **PcP 20 56 20.0 +1.2**
ZALV Zalesovo Beam 42.50 306 P **P 20 54 27.7 +0.5**
comp=Z,0.3nm,0.4s,baz=83,slow=4.8,SNR=3.1
ZALV PcP **PcP 20 56 20.0 +1.2**
comp=Z,2.2nm,0.8s,baz=74,slow=2.2,SNR=13
ZALV LR LR 21 13 09.3
comp=Z,111nm,19.0s,baz=66,slow=38
INK Inuvik 42.89 32 P **P 20 54 30.1 0.0**
INK Inuvik 42.89 32 P **P 20 54 30.1 0.0**
comp=Z,1.5nm,0.8s,baz=301,slow=9.6,SNR=6.3
KMI Kunming 44.26 259 P **P 20 54 42.0 +0.1**
KMI pmax pmax
comp=Z,6.0nm,1.2s
WMQ Urumqi 44.51 292 P **P 20 54 45.5 +2.0**
WMQ pmax pmax
comp=Z,17nm,1.0s
MK31 Makanchi Array 46.65 298 *e*P **P 20 54 59.0 -1.4**
MK31 *e* 20 56 32.5
MK31 Makanchi Array 46.65 298 *e*P **P 20 54 59.0 -1.4**
MK31 *e*PcP **PcP 20 56 32.5 -0.7**
MKAR Makanchi Array 46.65 298 *e*P **P 20 55 00.7 +0.4**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 46.65 298 P **P 20 54 59.6 -0.7**
MKAR PcP **PcP 20 56 34.0 +0.8**
MKAR Makanchi Array 46.65 298 P **P 20 54 59.6 -0.7**
comp=Z,1.0nm,0.6s,baz=68,slow=8.9,SNR=9.8
MKAR PcP **PcP 20 56 34.0 +0.8**
comp=Z,2.0nm,0.6s,baz=62,slow=3.7,SNR=13
MKAR LR LR 21 15 37.7
comp=Z,83nm,18.3s,baz=21,slow=38
LSA Lhasa 49.50 273 P **P 20 55 24.2 +1.1**
STCH Steam Cracks 50.67 103 P P 20 55 25.5 -6.1
BVAR Borovoye Array 50.83 310 P **P 20 55 33.9 +1.7**
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR MLR MLR
comp=Z,80nm,20.5s
BVAR Borovoye Array 50.83 310 P **P 20 55 33.9 +1.7**
BVAR Borovoye Array 50.83 310 P **P 20 55 33.9 +1.7**
comp=Z,1.0nm,0.6s,baz=44,slow=9.9,SNR=5.6
BVAR LR LR 21 18 38.0
comp=Z,80nm,20.4s,baz=96,slow=38
BRVK Borovoye 50.87 310 *e*P **P 20 55 32.5 0.0**
BRVK pmax pmax
comp=Z,1.0nm,0.9s
CHTO Chiang Mai 51.10 256 *e*P **P 20 55 35.4 +0.7**
CHTO pmax pmax
comp=Z,5.0nm,0.9s
CHTO Chiang Mai 51.10 256 *e*P **P 20 55 35.4 +0.7**
comp=Z,5.1nm,0.9s
CM31 Chiang Mai Arr 51.34 256 *e*P **P 20 55 34.7 -1.8**
comp=Z,2.4nm,0.8s
CMAR Chiang Mai Arr 51.34 256 P **P 20 55 38.0 +1.4**
CMAR Chiang Mai Arr 51.34 256 P **P 20 55 38.0 +1.4**
comp=Z,2.3nm,0.7s,baz=39,slow=7.4,SNR=24
RES Resolute Bay 51.99 18 *e*P **P 20 55 40.1 -0.5**
comp=Z,3.4nm,1.0s
RES Resolute Bay 51.99 18 P **P 20 55 40.7 +0.1**
comp=Z,2.7nm,1.0s,baz=272,slow=7.8,SNR=5.8
YKA Yellowknife Ar 52.17 36 P **P 20 55 42.4 +0.3**
YKA Yellowknife Ar 52.17 36 P **P 20 55 42.4 +0.3**
comp=Z,1.1nm,0.7s,baz=295,slow=7.2,SNR=15
AAK Ala-Archa 53.52 296 *e*P **P 20 55 52.7 +0.1**
AAK Ala-Archa 53.52 296 *e*P **P 20 55 52.7 +0.1**
EKS2 Erkin-Say 53.95 297 *e*P **P 20 55 56.1 +0.4**
EKS2 Erkin-Say 53.95 297 *e*P **P 20 55 56.1 +0.4**
KSH Kashi 54.25 292 P P 20 56 03.6 +5.7
KSH pP pP 20 56 19.2 +5.7
KSH sP sP 20 56 26.1 +5.9
KSH PcP **PcP 20 57 05.4 +3.9**
KSH PP PP 20 58 08.4 +8.5
KSH ScP **ScP 21 00 55.6 +1.1**
KSH PcS **PcS 21 01 03.4 +2.3**
KSH S S 21 03 38.0 +6.9
KSH sS sS 21 04 05.4 +8.1
KSH ScS **ScS 21 05 43.8 +1.9**
KSH SS SS 21 07 21.1 +8.0
KSH pmax pmax
comp=Z,230nm,4.0s
KSH LR LR
comp=N,120nm,4.9s
KSH LR LR
comp=E,120nm,4.1s
KSH LR LR
comp=Z,400nm,6.6s
ABKAR Akbulak array 58.40 310 *e*P **P 20 56 26.4 -0.8**
comp=Z,2.3nm,0.5s
KULM Kulim 59.92 244 P **P 20 56 38.9 +0.9**
comp=Z,2.9nm,0.7s
KBL Kabul 61.65 291 *e*P **P 20 56 48.6 -1.3**
KBL pmax pmax
comp=Z,4.0nm,0.8s
KBL Kabul 61.65 291 *e*P **P 20 56 48.5 -1.3**
comp=Z,3.7nm,0.8s
SUMG Summit 61.70 4 *e*P **P 20 56 49.8 0.0**
SUMG pmax pmax
comp=Z,9.0nm,1.0s
SUMG Summit 61.70 4 *e*P **P 20 56 49.8 0.0**
comp=Z,9.1nm,1.0s
JOF Joensuu 61.82 333 *e*P **P 20 56 51.6 +1.4**
JOF pmax pmax
comp=Z,3.0nm,0.5s
JOF Joensuu 61.82 333 *ep* **P 20 56 51.6 +1.4**
comp=Z,2.9nm,0.5s
LRM Limekiln Ridge 62.43 52 *e*P **P 20 56 55.4 +0.4**
comp=Z,27nm,0.8s
KAF Kangasniemi 63.95 335 *e*P P 20 57 00.7 -3.7
KAF pmax pmax
comp=Z,1.0nm,0.6s
KAF Kangasniemi 63.95 335 *ep* P 20 57 00.7 -3.7
comp=Z,1.1nm,0.6s
FINES FINESS Array B 64.54 334 P **P 20 57 08.2 -0.1**
FINES FINESS Array B 64.54 334 P **P 20 57 08.2 -0.1**
comp=Z,4.0nm,0.6s,baz=37,slow=10,SNR=7.0
RRI2 Red Ridge 64.61 53 *e*P **P 20 57 11.0 +1.5**
comp=Z,6.7nm,0.8s
DUG Dugway 65.78 57 *e*P **P 20 57 17.3 +0.4**
DUG pmax pmax
comp=Z,4.0nm,1.0s
DUG Dugway 65.78 57 *e*P **P 20 57 17.3 +0.4**
comp=Z,3.6nm,1.0s
PDAR Pinedale Array 65.97 53 P **P 20 57 18.4 +0.1**
PDAR Pinedale Array 65.97 53 P **P 20 57 18.4 +0.1**
comp=Z,2.3nm,0.8s,baz=298,slow=2.1,SNR=12
WRA Warramunga Arr 67.35 198 P **P 20 57 27.4 +0.7**
WRA Warramunga Arr 67.35 198 P **P 20 57 27.4 +0.7**
comp=Z,2.7nm,0.8s,baz=17,slow=6.5,SNR=13
NB2 NORSAR Subarra 68.86 341 P **P 20 57 35.0 -0.8**
comp=Z,1.6nm,0.7s,baz=28,slow=6.5
NOA NORSAR Array B 68.86 341 P **P 20 57 35.1 -0.8**
NOA NORSAR Array B 68.86 341 P **P 20 57 35.1 -0.8**
comp=Z,1.8nm,0.6s,baz=29,slow=6.2,SNR=9.7
KBZ Khabaz 70.92 314 P **P 20 57 49.8 +1.1**
KBZ pmax pmax
comp=Z,2.0nm,0.8s
KBZ Khabaz 70.92 314 P **P 20 57 49.8 +1.1**
KBZ Khabaz 70.92 314 P **P 20 57 49.8 +1.1**
comp=Z,2.3nm,0.8s,baz=0.0,slow=7.1,SNR=5.9
ASAR Alice Springs 71.05 197 P **P 20 57 51.6 +2.0**
ASAR Alice Springs 71.05 197 P **P 20 57 51.6 +2.0**
comp=Z,1.3nm,0.6s,baz=12,slow=5.6,SNR=23
AKASG Malin Array Be 71.87 326 P **P 20 57 51.5 -2.9**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 71.87 326 P **P 20 57 51.5 -2.9**
AKASG Malin Array Be 71.87 326 P **P 20 57 51.5 -2.9**
comp=Z,1.7nm,0.6s,baz=35,slow=6.0,SNR=3.7
KWP Kalwaria Pacla 75.21 329 *e*P **P 20 58 14.0 0.0**
KWP pmax pmax
comp=Z,13nm,1.3s

KWP Kalwaria Pacla 75.21 329 eP P 20 58 14.0 0.0
comp=Z,13nm,1.3s
BUR08 Bucovina Ar. S 75.90 326 eP P 20 58 18.1 0.0
BURAR Bucovina Array 75.92 326⇓iP P 20 58 18.6 +0.4
KOLS Kolonicke sedl 75.95 328 eP P 20 58 18.2 0.0
KOLS e 21 36 45.0
TESR 76.25 325⇓iP P 20 58 20.1 +0.1
CRVS Cervenica-Dubn 76.27 329 eP P 20 58 20.5 +0.4
TRPA Tarpa 76.52 328⇑iP P 20 58 22.5 +1.1
CFR Carcaliu 76.70 323 ⇓P P 20 58 23.2 +0.7
CFR Carcaliu 76.70 323⇓iP P 20 58 23.1 +0.6
VRI Vrincioaia 76.74 324 ⇑P P 20 58 24.7 +1.9
VRI Vrincioaia 76.74 324⇑iP P 20 58 24.7 +1.9
MORC Moravsky Berou 76.89 332 ⇑P P 20 58 24.3 +0.7
MORC Moravsky Berou 76.89 332⇑iP P 20 58 24.3 +0.7
CLL Collm 76.98 335 eP P 20 58 24.0 0.0
CLL pmax pmax
comp=Z,3.0nm,0.6s
CLL Collm 76.98 335 eP P 20 58 24.0 0.0
comp=Z,3.0nm,0.6s
MALT Malatya 77.19 312 ⇑P P 20 58 27.4 +1.9
MALT Malatya 77.19 312⇑iP P 20 58 27.4 +1.9
MLR Muntele Rosu 77.36 324⇑iP P 20 58 27.5 +1.1
VYHS Vyhne 77.55 330 eP P 20 58 27.5 +0.3
VRAC Vranov 77.61 332⇑iP P 20 58 28.1 +0.5
STKA Stephens Creek 77.88 189 P P 20 58 30.5 +1.5
STKA Stephens Creek 77.88 189 P P 20 58 30.5 +1.5
comp=Z,2.7nm,1.1s,baz=184,slow=12,SNR=4.5
ARR Arges 77.99 325⇑iP P 20 58 31.5 +1.6
MIB Mutribah 78.45 301 eP P 20 58 32.7 +0.1
MIB AMb AMB 20 58 34.6
comp=Z,12nm,0.7s
BR131 Keskin Array S 78.51 316 eP P 20 58 33.1 +0.2
comp=Z,1.1nm,0.7s
BRTR Keskin Array B 78.51 316 P P 20 58 32.8 -0.2
BRTR Keskin Array B 78.51 316 P P 20 58 32.8 -0.2
comp=Z,1.1nm,0.7s,baz=93,slow=4.4,SNR=8.7
TXAR Lajitas Array 78.68 60 P P 20 58 34.6 +0.7
TXAR Lajitas Array 78.68 60 P P 20 58 34.6 +0.7
comp=Z,1.9nm,0.7s,baz=324,slow=4.5,SNR=12
KHC Kasperske Hory 78.73 334 eP P 20 58 34.4 +0.6
NAY Al-Naaiem 78.91 301 eP P 20 58 34.9 -0.1
NAY AMb AMB 20 58 43.3
comp=Z,3.4nm,0.9s
GERES GERESS Array B 78.94 333 P P 20 58 35.1 +0.1
GERES GERESS Array B 78.94 333 P P 20 58 35.1 +0.1
comp=Z,1.4nm,0.7s,baz=33,slow=5.1,SNR=12
RDF Al-Radifah 78.95 300 eP P 20 58 35.8 +0.4
RDF AMb AMB 20 58 45.6
comp=Z,13nm,0.9s
BZS Buzias 78.97 327 ⇑P P 20 58 35.0 -0.1
BZS Buzias 78.97 327⇑iP P 20 58 35.0 -0.1
VTS Vitosha 80.87 324 ⇑P P 20 58 46.1 +0.5
VTS Vitosha 80.87 324⇑iP P 20 58 46.1 +0.5
QSPA South Pole Qui 135.54 180 PKP PKPdf 21 05 51.8 +1.7
QSPA South Pole Qui 135.54 180 PKP PKPdf 21 05 51.8 +1.7
comp=Z,0.9nm,0.5s,baz=224,slow=15,SNR=11
PLCA Paso Flores 148.93 96 PKPbc PKPbc 21 06 19.6 +0.9
PLCA Paso Flores 148.93 96 PKPbc PKPbc 21 06 19.6 +0.9
comp=Z,2.5nm,0.8s,baz=284,slow=4.7,SNR=5.9
CPUP Villa Florida 149.65 60 PKPbc PKPbc 21 06 20.9 +0.1
CPUP Villa Florida 149.65 60 PKPbc PKPbc 21 06 20.9 +0.1
comp=Z,0.5nm,0.3s,baz=11,slow=5.2,SNR=5.1
SNAA Sanae 151.41 196 eP PKPbc 21 06 24.1 +0.3
SNAA Sanae 151.41 196 ePKPbc PKPbc 21 06 23.6 -0.1
SNAA Sanae 151.41 196 PKPbc PKPbc 21 06 24.2 +0.5
comp=Z,1.2nm,0.6s,baz=180,slow=2.7,SNR=18
VNA2 Neumayer--Watz 152.88 195 eP PKPbc 21 06 27.8 +0.8
baz=63,slow=0.9
VNA3 Neumayer Olymp 152.99 193 eP PKPbc 21 06 27.5 +0.3

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*IDC **07** 20:50:09.8±0.7, 14°.32N×90°.45W, h0km, mb4.3/15, mb1 4.5/18, mb1mx4.4/28, mbtmp4.3/18, ML4.5/4, MS4.0/21, Ms1 4.0/21, ms1mx3.8/46, Error ellipse: s-maj=24.8km s-min=12.2km az=62.0*

*ISCJB **07** 20:50:10.7±0.4, 14°.35N±0°.03×90°.46W±0°.03, h20km±3km, mb4.4/35, MS4.0/21, Error ellipse: s-maj=6.2km s-min=3.1km az=35.7*

*CASC **07** 20:50:10.6±3.3, 14°.47N×90°.50W, h35km, MD4.1, ML4.3, mb4.6(NEIC)*

*NEIC **07** 20:50:10.9±0.5, 14°.40N×90°.38W, h10km, mb4.6/28, Error ellipse: s-maj=14.4km s-min=6.5km az=55.0*

NEIC Felt [V] at Fraijanes; [IV] at Guatemala and San Catarina Pinula; [II] at Antigua Guatemala. Also felt at Cuilapa, Mixco, San Jose, San Jose Pinula, Villa Canales, Villa Nueva and in Escuintla, Retalhuleu, Sacatepequez and Santa Rosa.

ISC 07 20:50:11.6±0.8**, 14°.33N**±0°.03×**90°.43W**±0°.03**, h17**km±5km**, n242, σ1§44**/241**, mb4.5**/35**, MS4.0**/21**, 67C-60D, Guatemala**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
IXG Ixpaco 0.15 190⇑iP Pg 20 50 14.4 -1.4
PCG Pacaya 0.19 291 eP Pg 20 50 14.1 -2.3
NBG Las Nubes 0.27 17⇑iP Pg 20 50 16.5 -1.2
GCG Guatemala City 0.28 339 eP Pg 20 50 16.1 -1.7
GCG eS Sg 20 50 20.8 -1.2
FUG Fuego 3 0.42 287⇑eP Pg 20 50 18.0 -2.2
FG6 0.50 298 eP Pg 20 50 19.5 -2.1
RBDL Robledal 0.75 106⇑iP Pb 20 50 25.0 -1.3
RTR El Retiro 0.87 119 eP Pb 20 50 27.4 -1.0
SBLS San Blas 0.92 122 eP Pb 20 50 28.3 -0.9
SNJE San Jose 0.92 120 eP Pb 20 50 28.2 -1.0
MRL Marmol 1.02 44 eP Pb 20 50 30.1 -0.9
MTO2 Montecristo 2 1.04 86⇑eP Pb 20 50 29.7 -1.5
JAT Jato 1.17 270⇑iP Pn 20 50 32.4 -0.8
BOQS Boqueron 1.26 118 eP Pn 20 50 34.2 -0.4
SNET Serv Nac Est T 1.32 118 eP Pn 20 50 35.0 -0.4
SNET eS Sg 20 50 54.4 -0.1
SNET AML AML 20 51 02.1
comp=Z,5μm,0.3s
LFU La Fuente 1.40 114 eP Pn 20 50 36.8 +0.3
LBRS Las Brisas 1.47 113 eP Pn 20 50 37.5 +0.1
SNVI San Vicente 1.70 114 eP Pn 20 50 41.0 +0.3
THIG 1.87 288 P Pn 20 50 42.3 -0.6
THIG S Sb 20 51 08.6 +0.1
CAHU Cacacuatique 2.22 104 eP Pb 20 50 50.2 -1.2
CAHU eS Sb 20 51 20.8 +2.0
CCIG Comitan 2.55 320 P Pn 20 50 52.8 +0.4
CCIG S Sb 20 51 29.4 +1.2
TGUH Tegucigalpa,Un 3.07 95 ePn Pn 20 50 57.9 -1.5
TGIG 3.56 314 P Pn 20 51 06.3 +0.1
TGIG S Sb 20 51 53.6 -3.7
CMIG Matias Romero 5.10 303 Pn Pn 20 51 28.2 +0.9
CMIG Sn Sn 20 52 30.2 +4.4
CMIG Lg Lg 20 52 44.6
CMIG Matias Romero 5.10 303 Pn Pn 20 51 28.2 +0.9
comp=Z,7.3nm,0.3s,baz=105,slow=8.8,SNR=29
CMIG Sn Sn 20 52 30.2 +4.4
comp=Z,2.0nm,0.3s,baz=22,slow=19,SNR=3.3
CMIG Lg Lg 20 52 44.6
comp=Z,16nm,0.3s,baz=44,slow=17,SNR=4.3
CMIG LR LR 20 53 41.3
comp=Z,3μm,18.7s,baz=117,slow=42
HUIG Huatulco 5.67 285 P Pn 20 51 34.1 -1.0
TEIG Tepich 6.22 19 ePn Pn 20 51 42.4 -0.3
comp=Z,520nm,0.7s
TEIG Sn Sn 20 52 55.4 +2.0
TEIG Lg Lg 20 53 22.7
TEIG Tepich 6.22 19 Pn Pn 20 51 43.0 +0.4
comp=Z,50nm,0.3s,baz=204,slow=5.2,SNR=55
TEIG Sn Sn 20 52 55.4 +2.0
comp=Z,34nm,0.3s,baz=10,slow=22,SNR=10
TEIG Lg Lg 20 53 22.7
comp=Z,20nm,0.3s,baz=53,slow=17,SNR=3.9
VHO Vista Hermosa 6.66 295 P Pn 20 51 50.1 +1.2
VHO S Sn 20 53 07.8 +3.2
JTS JuntasAbangare 6.69 126 ePn Pn 20 51 50.7 +1.6
comp=Z,27nm,0.6s
JTS Lg Lg 20 53 31.8
JTS JuntasAbangare 6.69 126 Pn Pn 20 51 51.4 +2.3
comp=Z,2.7nm,0.3s,baz=301,slow=14,SNR=9.9
JTS Lg Lg 20 53 31.8
comp=Z,1.3nm,0.3s,baz=139,slow=14,SNR=5.1
JTS LR LR 20 55 00.1
comp=Z,1μm,20.6s,baz=143,slow=43
PNIG Pinotepa 7.71 286 P Pn 20 52 02.3 -0.9
TPIG Tehuac#an 7.80 302 P Pn 20 52 04.6 0.0
BCIP Isla Barro Col 11.57 115 Pn Pn 20 52 52.8 -3.3

comp=Z,100nm,1.2s
MTDJ Mount Denham 12.97 71 ePn P 20 53 23.1 -2.8
MTDJ eSn Sn 20 55 31.7 -7.8
HKT Hockley 16.33 343 ePn P 20 54 01.8 -1.2
comp=Z,17nm,1.2s
732A Laxson Ranch, 16.84 330 ⇑P Pn 20 54 07.2 +0.5
baz=17,SNR=14
632A Uvalde 17.41 332 ⇓P P 20 54 14.6 -0.5
baz=17,SNR=7.4
631A Perdido Creek 17.71 330 ⇑P P 20 54 18.3 0.0
baz=18,SNR=14
VBMS Vicksburg 17.81 360 P Pn 20 54 15.5 -3.2
comp=Z,62nm,0.9s
532A Rocksprings 17.99 332 ⇑P P 20 54 22.8 +1.2
baz=18,SNR=16
JCT Junction City 18.25 333 eP P 20 54 25.9 +1.5
comp=Z,28nm,1.0s
JCT Junction City 18.25 333 ⇑P P 20 54 26.0 +1.7
baz=18,SNR=5.4
531A Rocksprings 18.32 331 ⇓P P 20 54 26.4 +1.3
baz=18,SNR=10
OTAV Otavalo 18.34 139 eP P 20 54 27.9 +2.0
comp=Z,55nm,1.0s
432A Menard 18.59 334 ⇑P Pn 20 54 29.8 +1.4
baz=19,SNR=7.3
530A J-C Ranch, Com 18.69 329 ⇑P Pn 20 54 31.0 +1.4
baz=19,SNR=21
WHTX Lake Whitney 18.72 341 ⇓P Pn 20 54 31.4 +1.4
baz=19
431A Sonora 18.78 332 ⇓P Pn 20 54 31.5 +0.7
baz=19,SNR=22
SDDR Presa de Saban 18.91 73 eP Pn 20 54 34.7 +2.4
comp=Z,20nm,1.2s
628A Black Gap, Mar 18.98 325 ⇓P Pn 20 54 34.3 +1.2
baz=19,SNR=15
332A Millersview 19.01 335 ⇑P Pn 20 54 34.3 +0.9
baz=19,SNR=34
529A Stev Forest Ra 19.12 327 ⇓P Pn 20 54 35.9 +1.1
baz=19,SNR=13
430A Baggett Ranch, 19.16 331 ⇓P Pn 20 54 36.1 +0.7
baz=19,SNR=14
331A San Angelo 19.23 333 ⇓P Pn 20 54 36.0 -0.2
baz=19,SNR=10
627A Terlingua Ranc 19.24 324 ⇓P Pn 20 54 37.6 +1.3
baz=19,SNR=29
TXAR Lajitas Array 19.31 323 P Pn 20 54 37.8 +0.6
TXAR Lajitas Array 19.31 323 P Pn 20 54 37.8 +0.6
comp=Z,0.4nm,0.3s,baz=145,slow=11,SNR=18
TXAR LR LR 21 02 12.0
comp=Z,204nm,18.9s,baz=180,slow=37
429A Davenport Ranc 19.35 329 ⇑P Pn 20 54 38.2 +0.6
baz=19,SNR=17
232A Coleman 19.41 336 ⇓P Pn 20 54 37.8 -0.5
baz=19,SNR=15
528A Cox Ranch, San 19.45 326 ⇓P P 20 54 38.0 +0.4
baz=20
RFTA Plano 19.46 344 P P 20 54 36.3 -1.2
330A Mertzon 19.65 332 ⇑P P 20 54 40.2 +0.4
baz=20,SNR=12
231A Bronte 19.73 334 ⇑P P 20 54 40.9 +0.4
baz=20,SNR=7.8
626A Big Bend Ranch 19.75 322 ⇑P Pn 20 54 43.1 +0.7
baz=20,SNR=17
428A Kincaid Ranch, 19.84 327 ⇓P Pn 20 54 43.3 -0.2
baz=20,SNR=9.7
230A Sterling City 20.03 333 ⇑P P 20 54 44.1 +0.2
baz=20
ABTX Abilene, Hawle 20.06 337 ⇑P Pn 20 54 45.1 -0.9
baz=20
329A Wagon Wheel Ra 20.10 330 ⇑P P 20 54 45.2 +0.5
baz=20,SNR=8.6
526A Mary Lane Ranc 20.10 323 ⇓P Pn 20 54 46.7 0.0
baz=20,SNR=36
SDV Santo Domingo 20.12 103 eP Pn 20 54 46.9 -0.2
comp=Z,0.8nm,0.9s
427A Hayter Ranch, 20.31 326 ⇑P Pn 20 54 48.1 -1.0
baz=20,SNR=9.0
MIAR Mount Ida 20.33 353 eP P 20 54 47.2 +0.2
comp=Z,31nm,1.0s
MIAR eS S 20 58 20.2 -14
131A Roby 20.40 335 ⇑P P 20 54 48.8 +0.9
baz=20
229A Bryant Ranch, 20.41 331 ⇑P P 20 54 48.5 +0.4
baz=20
328A Wristen Ranch, 20.42 328 ⇓P P 20 54 49.1 +0.9
baz=20,SNR=26
UALR University of 20.43 355 eP P 20 54 48.8 +0.6
comp=Z,34nm,0.8s
426A McDonald Obser 20.52 325 ⇓P Pn 20 54 50.5 -1.2
baz=20,SNR=24
130A Snyder 20.57 334 ⇑P P 20 54 49.9 +0.1
baz=21
Z32A Haskell 20.61 338 ⇑P P 20 54 51.1 +1.0
baz=21,SNR=12
Z31A Sharp Cattle R 20.87 337 ⇓P P 20 54 53.3 +0.3
baz=21,SNR=22
228A UT Block 9, Go 20.91 330 ⇑P P 20 54 53.6 +0.1
baz=21,SNR=8.1
326A Caldwell Ranch 20.99 326 ⇓P P 20 54 54.7 +0.4
baz=21,SNR=16
129A Stewart Farms, 21.00 332 ⇑P P 20 54 54.4 0.0
baz=21
LPIG La Paz 21.12 300 LR LR 21 03 03.9
comp=Z,92nm,18.2s,baz=55,slow=37
425A Indio Mountain 21.15 323 ⇑P P 20 54 57.2 +1.0
baz=21,SNR=29
227A Bennet, Jal 21.17 328 ⇑P P 20 54 56.5 +0.2
baz=21
SWET Sewanee 21.19 10 eP P 20 54 56.7 +0.3
comp=Z,49nm,1.2s
Y32A R-V Farms, Ver 21.23 339 ⇓P P 20 54 57.1 +0.3
baz=21,SNR=6.1
Z30A Sanderson Ranc 21.23 335 ⇑P P 20 54 56.4 -0.5
baz=21,SNR=12
128A Castleberry Fa 21.27 331 ⇓P P 20 54 58.0 +0.6
baz=21,SNR=18
Z29A Hungry Hill Ra 21.46 333 ⇑P P 20 54 58.9 -0.4
baz=22
Y31A Rekieta Farm, 21.48 337 ⇑P P 20 55 00.1 +0.5
baz=22,SNR=21
325A Bean Ranch, Si 21.58 324 ⇑P P 20 55 00.9 +0.2
baz=22,SNR=18
Y30A Stafford Cattl 21.66 336 ⇑P P 20 55 02.0 +0.6
baz=22
226B Tecolote Peak, 21.68 327 ⇑P P 20 55 02.3 +0.6
baz=22,SNR=12
WMOK Wichita Mounta 21.68 341 eP P 20 54 59.2 -2.4
comp=Z,16nm,1.0s
Z28A Tucker Farm, M 21.78 332 ⇑P P 20 55 03.3 +0.4
baz=22,SNR=5.4
WVT Waverly 21.84 6 P P 20 55 04.2 +0.9
comp=Z,19nm,1.0s
GDL2 Guadalupe Moun 21.88 327 eP P 20 55 05.0 +1.0
comp=Z,24nm,1.1s
324A Moseley Ranch, 21.93 324 ⇓P P 20 55 04.4 0.0
baz=22,SNR=17
Y29A Porterfield Fa 21.96 334 ⇑P P 20 55 04.3 -0.4
baz=22
X31A McDonald Ranch 21.98 339 ⇓P P 20 55 04.7 -0.2
baz=22
TUL1 Tulsa 22.03 348 ⇓P P 20 55 05.3 0.0
baz=22
126A Clayton Basin, 22.05 328 ⇑P P 20 55 05.7 0.0
baz=22
225A Deer Hill, Car 22.06 326 ⇓P P 20 55 06.5 +0.6
baz=22,SNR=14
TKL Tuckaleechee C 22.07 15 P P 20 55 07.1 +1.3
TKL Tuckaleechee C 22.07 15 P P 20 55 07.1 +1.3
comp=Z,20nm,1.1s,baz=194,slow=14,SNR=2.3
TKL LR LR 21 03 46.1
comp=Z,258nm,20.9s,baz=183,slow=37
X30A Coker Ranch, T 22.15 337 ⇑P P 20 55 07.0 +0.3
baz=22,SNR=7.8
Z27A Tatum 22.19 331 ⇑P P 20 55 06.8 -0.4
baz=22,SNR=9.9
125A Gardner Draw, 22.39 327 ⇓P P 20 55 08.8 -0.6
baz=22
224A Cornudas Mount 22.42 325 ⇑P P 20 55 09.4 -0.3
baz=22,SNR=15
W31A Holland Ranch, 22.47 339 ⇓P P 20 55 11.0 +0.8
baz=22
Z26A Caprock 22.53 329 ⇓P P 20 55 10.9 0.0
baz=23
MSTX Muleshoe 22.53 332 ⇓P P 20 55 10.2 -0.7
baz=23
Y27A Causey 22.64 332 ⇑P P 20 55 11.9 -0.1
baz=23
AMTX Amarillo 22.85 336 eP P 20 55 12.7 -1.5

comp=Z,22nm,0.8s
AMTX Amarillo 22.85 336 ⇑P P 20 55 14.1 -0.1
baz=23
124A Stringfield Ra 22.85 326 ⇑P P 20 55 14.4 0.0
baz=23,SNR=13
Z25A Roswell 22.91 328 ⇓P P 20 55 13.8 -1.1
baz=23
Y26A Elida 22.98 330 ⇓P P 20 55 14.6 -1.0
baz=23
W29A Amraillo 23.04 336 ⇓P P 20 55 15.6 -0.7
baz=23
Z24A Sheeppen Canyo 23.29 327 ⇓P P 20 55 17.7 -1.1
baz=23
SIUC Southern Illin 23.32 2 eP P 20 55 18.9 0.0
comp=Z,82nm,1.1s
Y25A Mesa, Roswell 23.40 329 ⇓P P 20 55 19.3 -0.7
baz=23
W27A Bowe Ranch, En 23.58 333 ⇑P P 20 55 20.4 -1.2
baz=24
SJG San Juan 23.61 78 P P 20 55 24.5 +2.6
comp=Z,13nm,0.7s
SJG San Juan 23.61 78 P P 20 55 25.7 +3.8
comp=Z,5.7nm,0.3s,baz=315,slow=7.1,SNR=5.2
SJG LR LR 21 04 14.1
comp=Z,459nm,20.3s,baz=265,slow=36
USIN University of 23.67 5 eP P 20 55 21.6 -0.7
comp=Z,129nm,1.3s
221A Mesquite Ranch 23.69 321 ⇓P P 20 55 22.7 -0.1
baz=24,SNR=7.3
Z23A Rita Site, Whi 23.70 325 ⇓P P 20 55 22.4 -0.4
baz=24,SNR=5.8
Y24A Capitan 23.79 328 ⇓P P 20 55 23.5 -0.2
baz=24
X25A Clemmons Ranch 23.87 330 ⇓P P 20 55 23.9 -0.6
baz=24
121A Cookes Peak, D 24.06 322 ⇓P P 20 55 25.4 -0.9
baz=24
220A Playas Peak, P 24.09 320 ⇓P P 20 55 25.8 -0.7
baz=24
WCI Wyandotte Cave 24.09 8 eP P 20 55 25.7 -0.6
comp=Z,26nm,0.8s
Z22A Elephant Butte 24.11 324 ⇑P P 20 55 26.1 -0.6
baz=24,SNR=6.1
Y23A Lovelace Mesa, 24.11 327 ⇑P P 20 55 26.2 -0.6
baz=24
ATAH Atahualpa 24.44 150 P P 20 55 36.7 +6.6
ATAH Atahualpa 24.44 150 P P 20 55 36.7 +6.6
comp=Z,6.1nm,0.7s,baz=336,slow=10.0,SNR=4.6
ATAH LR LR 21 04 06.7
comp=Z,334nm,21.6s,baz=358,slow=34
LPM Los Pinos Moun 24.71 326 eP P 20 55 31.8 -0.5
comp=Z,2.1nm,0.8s
W24A Lazy 6 Ranch, 24.79 330 ⇓P P 20 55 33.0 0.0
baz=25
V25A Rancho No Teng 24.92 332 ⇓P P 20 55 33.7 -0.5
baz=25
U26A Atchley Ranch, 25.00 334 ⇑P P 20 55 35.1 +0.2
baz=25
LAZ Ladron 25.05 326 eP P 20 55 35.7 +0.3
comp=Z,8.6nm,1.5s
Y21A Point of Rocks 25.06 324 ⇑P P 20 55 35.8 +0.3
baz=25
KSU1 Kansas State U 25.27 349 eP P 20 55 36.1 -1.0
comp=Z,25nm,0.9s
U25A Circle Dot Ran 25.29 333 ⇑P P 20 55 37.8 +0.3
baz=25
Y20A Horse Springs, 25.39 323 ⇑P P 20 55 38.9 +0.4
baz=25
X21A Alamocita Cree 25.44 325 ⇑P P 20 55 39.6 +0.6
baz=26
X20A Quemado 25.91 324 ⇑P P 20 55 43.1 -0.2
baz=26
SFIN Scholer Farm 26.12 6 ⇑P P 20 55 44.3 -0.4
baz=26
S25A Robets Cordova 26.36 334 ⇑P P 20 55 47.8 +0.6
baz=26
R25A Fountain Ranch 26.72 335 ⇓P P 20 55 50.2 -0.1
baz=27
U21A Nageezi 26.87 328 ⇓P P 20 55 52.3 +0.4
baz=27
WUAZ Wupatki 28.27 322 ⇓P P 20 56 05.0 +0.6
baz=28
W13A Hualapai Mount 29.56 319 ⇓P P 20 56 16.9 +1.0
baz=30
TCUT Toone Canyon 32.34 330 eP P 20 56 46.0 +5.6
comp=Z,15nm,0.7s
E24A Baker 34.18 343 ⇓P P 20 56 55.6 -0.5
baz=34
MDND Maddock 34.28 349 ⇑P P 20 56 56.7 -0.2
baz=34
NVAR Mina Array Bea 34.40 319 P P 20 56 58.7 +0.4
NVAR Mina Array Bea 34.40 319 P P 20 56 58.7 +0.4
comp=Z,2.5nm,0.7s,baz=133,slow=10,SNR=6.3
NVAR LR LR 21 12 39.4
comp=Z,397nm,19.5s,baz=42,slow=39
E23A Ismay 34.42 342 ⇓P P 20 56 58.1 -0.1
baz=34
RLMT Red Lodge 34.60 336 ⇓P P 20 56 59.4 -0.6
baz=35
D24A Glendive 34.69 343 ⇓P P 20 57 00.3 -0.3
baz=35
G18A Lazy EL Ranch, 34.88 336 ⇑P P 20 57 01.8 -0.6
baz=35
F18A Big Timber 35.43 337 ⇓P P 20 57 06.0 -1.0
baz=36
E19A Rath Farm, Rou 35.55 338 ⇑P P 20 57 06.7 -1.3
baz=36
C23A Lambert 35.56 343 ⇓P P 20 57 07.5 -0.5
baz=36
SAML Samuel 35.57 129 eP P 20 57 05.5 -2.9
comp=Z,10nm,1.0s
C22A Vida 35.71 342 ⇓P P 20 57 08.9 -0.4
baz=36
MCMT McKenzie Canyo 35.87 332 eP P 20 57 08.9 -2.1
comp=Z,1.3nm,0.6s
DGMT Dagmar 35.90 344 eP P 20 57 09.6 -1.3
comp=Z,17nm,0.8s
DGMT Dagmar 35.90 344 ⇑P P 20 57 10.6 -0.3
baz=36
ULM Lac du Bonnet 36.10 354 P P 20 57 14.9 +2.4
ULM Lac du Bonnet 36.10 354 P P 20 57 14.9 +2.4
comp=Z,5.9nm,1.0s,baz=185,slow=9.7,SNR=4.9
ULM LR LR 21 14 36.2
comp=Z,176nm,18.5s,baz=118,slow=41
D19A Cripps Ranch, 36.18 339 ⇑P P 20 57 13.1 -0.3
baz=36
B22A Reddig Ranch S 36.24 342 ⇑P P 20 57 13.5 -0.4
baz=36
A24A Westby 36.27 345 ⇑P P 20 57 13.3 -0.7
baz=36
H13A Challis 36.32 331 ⇓P P 20 57 14.3 -0.4
baz=36
F15A Butte 36.51 334 ⇓P P 20 57 16.1 -0.2
baz=36
D17A Six Diamond Ra 36.84 337 ⇓P P 20 57 18.7 -0.3
baz=37
A22A Carney Farms, 36.84 343 ⇓P P 20 57 18.7 -0.3
baz=37
EGMT Eagleton 37.23 338 ⇑P P 20 57 21.6 -0.7
baz=37
G12A Big Creek, Yel 37.24 331 ⇓P P 20 57 22.0 -0.6
baz=37
F13A Darby 37.28 332 ⇑P P 20 57 22.0 -0.8
baz=37
A20A Cobblestone Ra 37.35 341 ⇑P P 20 57 22.7 -0.6
baz=37
D15A Lincoln 37.47 335 ⇓P P 20 57 24.4 -0.1
baz=38
LPAZ La Paz 37.56 143 eP P 20 57 25.9 -0.1
comp=Z,5.8nm,1.2s
LPAZ La Paz 37.56 143 P P 20 57 26.3 +0.3
comp=Z,2.7nm,0.9s,baz=332,slow=9.0,SNR=7.8
LPAZ LR LR 21 13 29.4
comp=Z,272nm,20.7s,baz=322,slow=37
F12A Elk City 37.68 331 ⇓P P 20 57 25.9 -0.3
baz=38
E13A Victor 37.71 333 ⇓P P 20 57 26.1 -0.4
baz=38
D12A Red Ives Fores 38.70 333 ⇓P P 20 57 34.0 -0.8
baz=39
B13A Whitefish 39.33 335 ⇑P P 20 57 39.5 -0.5
baz=39
B12A Libby 39.88 334 ⇑P P 20 57 44.4 -0.1
baz=40
NEW Newport 40.40 332 LR LR 21 16 30.5
comp=Z,219nm,22.0s,baz=285,slow=39
FFC Flin Flon 41.31 350 eP P 20 57 55.2 -1.0
comp=Z,16nm,1.3s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIV	San Ignacio	41.82	135	P	P	20 58 00.4	-0.5
SIV	San Ignacio	41.82	135	P	P	20 58 00.4	-0.5
	comp=Z,6.1nm,1.0s,baz=313,slow=11,SNR=12						
SIV				LR	LR	21 15 09.2	
	comp=Z,254nm,20.0s,slow=36						
SCHQ	Schefferville	44.40	19	eP	P	20 58 16.6	-4.7
	comp=Z,19nm,1.0s						
SCHQ	Schefferville	44.40	19	P	P	20 58 22.4	+1.1
	comp=Z,5.1nm,0.7s,baz=219,slow=8.5,SNR=7.6						
YKA	Yellowknife Ar	51.07	346	P	P	20 59 12.3	-0.5
YKA	Yellowknife Ar	51.07	346	P	P	20 59 12.3	-0.5
	comp=Z,9.8nm,0.9s,baz=148,slow=7.9,SNR=104						
YKW3	Yellowknife Ar	51.13	346	eP	P	20 59 12.6	-0.8
	comp=Z,0.3nm,1.0s						
BDFB	Brasilia	51.42	124	LR	LR	21 21 58.4	
	comp=Z,212nm,18.5s,baz=77,slow=37						
CPUP	Villa Florida	51.67	141	P	P	20 59 19.1	+1.3
CPUP	Villa Florida	51.67	141	P	P	20 59 19.1	+1.3
	comp=Z,0.4nm,0.4s,baz=311,slow=12,SNR=4.2						
CPUP				LR	LR	21 22 54.2	
	comp=Z,153nm,19.2s,baz=320,slow=38						
FRB	Frobisher Bay	51.67	12	LR	LR	21 22 29.9	
	comp=Z,213nm,18.5s,baz=228,slow=38						
RCBR	Riachuelo	57.67	106	LR	LR	21 27 34.6	
	comp=Z,220nm,18.4s,baz=300,slow=39						
PLCA	Paso Flores	57.80	162	P	P	21 00 03.6	+1.4
PLCA	Paso Flores	57.80	162	P	P	21 00 03.6	+1.4
	comp=Z,4.8nm,1.1s,baz=343,slow=6.7,SNR=5.5						
PLCA				LR	LR	21 19 21.9	
	comp=Z,136nm,21.3s,baz=96,slow=30						
RES	Resolute Bay	60.41	359	eP	P	21 00 18.6	-1.1
	comp=Z,4.8nm,0.8s						
RES	Resolute Bay	60.41	359	P	P	21 00 19.1	-0.6
	comp=Z,4.1nm,0.7s,baz=186,slow=7.9,SNR=7.3						
RES				LR	LR	21 28 23.2	
	comp=Z,180nm,18.7s,baz=243,slow=38						
INK	Inuvik	60.57	343	P	P	21 00 20.6	-0.2
INK	Inuvik	60.57	343	P	P	21 00 20.6	-0.2
	comp=Z,6.7nm,1.0s,baz=128,slow=8.8,SNR=17						
ILAR	Eielson Array	63.15	336	P	P	21 00 39.1	+0.8
ILAR	Eielson Array	63.15	336	P	P	21 00 39.1	+0.8
	comp=Z,1.8nm,1.0s,baz=118,slow=4.8,SNR=14						
ILAR				LR	LR	21 28 55.9	
	comp=Z,123nm,21.6s,baz=121,slow=37						
SUMG	Summit	65.52	15	eP	P	21 00 57.4	+3.1
	comp=Z,12nm,1.0s						
PPT	Papeete	66.39	243	LR	LR	21 24 44.5	
	comp=Z,102nm,18.7s,baz=9.2,slow=31						
PPT2	Papeete2	66.40	243	eLR	LR	21 20 48.3	
	comp=Z,228nm,28.0s						
TBI	Tubuai	68.81	238	eLR	LR	21 21 55.3	
	comp=Z,185nm,33.0s						
ESDC	Sonseca Array	78.32	52	P	P	21 02 13.2	+2.0
ESDC	Sonseca Array	78.32	52	P	P	21 02 13.2	+2.0
	comp=Z,1.8nm,0.7s,baz=291,slow=5.3,SNR=10						
NB2	NORSAR Subarra	83.13	29	P	P	21 02 36.8	+0.2
	comp=Z,8.3nm,1.2s,baz=289,slow=5.3						
NOA	NORSAR Array B	83.13	29	P	P	21 02 39.5	+2.9
NOA	NORSAR Array B	83.13	29	P	P	21 02 39.5	+2.9
	comp=Z,2.3nm,1.0s,baz=286,slow=5.0,SNR=3.3						
GERES	GERESS Array B	88.38	40	P	P	21 03 02.4	-0.6
GERES	GERESS Array B	88.38	40	P	P	21 03 02.4	-0.6
	comp=Z,0.3nm,0.5s,baz=289,slow=9.2,SNR=2.9						
MLR	Muntele Rosu	97.36	39	LR	LR	21 45 09.9	
	comp=Z,39nm,19.3s,baz=260,slow=34						
MDJ	Mudanjiang	110.98	331	Pdif	Pdif	21 04 43.0	-2.0
MDJ				LR	LR		
	comp=Z,36nm,30.1s						
CN2	Changchun	113.52	332	ePKP	PKiKP	21 08 50.1	+0.9
HHC	Hu-ho-hao-te	121.44	341	ePKP	PKPdf	21 09 02.4	-2.3
HHC				PP	PP	21 10 37.2	+2.3
HHC				PKS	PKSdf	21 12 38.1	-3.3
HHC				SKS	SKSdf	21 16 09.9	-6.5
HHC				SKKS	SKKSac	21 17 25.1	-10
HHC				SS	SS	21 27 04.6	-3.7
HHC				AMB	AMB		
	comp=Z,180nm,8.1s						
HHC				LR	LR		
	comp=N,190nm,19.8s						
HHC				LR	LR		
	comp=E,200nm,20.2s						
HHC				LR	LR		
	comp=Z,170nm,19.9s						
WMQ	Urumqi	122.11	2	PKP	PKPdf	21 09 03.6	-2.2
KSH	Kashi	124.96	13	ePKP	PKPdf	21 09 13.5	+2.0
KSH				sPKP		21 09 27.5	
KSH				PP	PP	21 11 05.4	+6.9
KSH				PKS	PKSdf	21 12 48.1	-0.2
KSH				SKS	SKSdf	21 16 19.1	-4.0
KSH				SKKS	SKKSac	21 17 53.4	-4.5
KSH				SS	SS	21 27 54.2	+1.5
KSH				AMB	AMB		
	comp=Z,97nm,4.4s						
KSH				LR	LR		
	comp=Z,220nm,6.5s						
LZH	Lanzhou	128.08	345	ePKP	PKPdf	21 09 12.5	-5.1
LZH				sPKP		21 09 33.9	
LZH				LR	LR		
	comp=N,140nm,18.0s						
LZH				LR	LR		
	comp=E,120nm,18.0s						
LZH				LR	LR		
	comp=Z,180nm,20.1s						
CD2	Chengdu	133.00	343	PKP	PKPdf	21 09 24.0	-2.9
WRA	Warramunga Arr	136.95	256	PKP	PKPdf	21 09 34.0	-0.5
WRA	Warramunga Arr	136.95	256	PKP	PKPdf	21 09 34.0	-0.5
	comp=Z,0.8nm,0.8s,baz=89,slow=2.3,SNR=4.4						
ASAR	Alice Springs	137.21	251	PKP	PKPdf	21 09 37.0	+2.1
ASAR	Alice Springs	137.21	251	PKP	PKPdf	21 09 37.0	+2.1
	comp=Z,1.0nm,1.0s,baz=109,slow=1.9,SNR=4.2						
CMAR	Chiang Mai Arr	146.14	344	PKPbc	PKPab	21 09 54.0	+1.5
CMAR	Chiang Mai Arr	146.14	344	PKPbc	PKPab	21 09 54.0	+1.5
	comp=Z,0.7nm,0.8s,baz=321,slow=4.0,SNR=6.1						

CSEM 07 21:00:42.6, 42°.21N×13°.50E, h10km, After ROM
ROM 07 21:00:42.6±0.1, 42°.21N×13°.50E, h10km±1km, Ml2.0/1, Error ellipse: s-maj=1.9km s-min=1.4km az=122.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.08	49	Pg	Pg	21 00 45.2	+0.1
FAGN				Sg	Sg	21 00 46.9	0.0
FAGN	Fagnano	0.08	49	Pg	Pg	21 00 45.2	+0.1
FAGN				Sg	Sg	21 00 46.9	0.0
AQU	L'Aquila	0.16	333	Pg	Pb	21 00 47.3	-0.5
AQU				Sg	Sg	21 00 49.7	+0.9
AQU	L'Aquila	0.16	333	Pg	Pb	21 00 47.3	-0.5
AQU				Sg	Sg	21 00 49.7	+0.9
PTQR	Pietraquaria	0.20	201	Pg	Pb	21 00 47.8	-0.8
PTQR				Sg	Sg	21 00 51.4	+1.4
	15nm,0.4s						
PTQR	Pietraquaria	0.20	201	Pg	Pb	21 00 47.8	-0.8
PTQR				Sg	Sg	21 00 51.4	+1.4
	15nm,0.4s						
FIAM	Fiamignano	0.29	281	Pg	Pg	21 00 48.8	+0.2
FIAM				Sg	Sg	21 00 53.4	+0.8
FIAM	Fiamignano	0.29	281	Pg	Pg	21 00 48.8	+0.2
FIAM				Sg	Sg	21 00 53.4	+0.8
VCEL	Villa Celiera	0.31	54	Pg	Pg	21 00 49.7	+0.6
VCEL				Sg	Sg	21 00 54.4	+1.0
	171nm,0.5s						
VCEL	Villa Celiera	0.31	54	Pg	Pg	21 00 49.7	+0.6
VCEL				Sg	Sg	21 00 54.4	+1.0
	171nm,0.5s						
CAMP	Campotosto	0.33	348	Pg	Pg	21 00 50.0	+0.6
CAMP				Sg	Sb	21 00 55.4	-0.9
CAMP	Campotosto	0.33	348	Pg	Pg	21 00 50.0	+0.6
CAMP				Sg	Sb	21 00 55.4	-0.9

CSEM 07 21:01:26.6, 42°.36N×13°.35E, h10km, MD1.8/9, After ROM
ROM 07 21:01:26.6±0.1, 42°.36N×13°.35E, h10km, Md1.8/9, Ml1.9/5, Error ellipse: s-maj=1.3km s-min=1.1km az=114.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	96	Pg	Pg	21 01 29.1	+0.4
AQU				Sg	Sg	21 01 30.5	+0.4
AQU	L'Aquila	0.04	96	Pg	Pg	21 01 29.1	+0.4
AQU				Sg	Sg	21 01 30.5	+0.4
CAMP	Campotosto	0.18	14	Pg	Pg	21 01 31.1	+0.4
CAMP				Sg	Sg	21 01 34.3	+0.7
CAMP	Campotosto	0.18	14	Pg	Pg	21 01 31.1	+0.4
CAMP				Sg	Sg	21 01 34.3	+0.7
FIAM	Fiamignano	0.20	243	Pg	Pg	21 01 31.4	+0.5
FIAM				Sg	Sg	21 01 34.7	+0.9
FIAM	Fiamignano	0.20	243	Pg	Pg	21 01 31.4	+0.5
FIAM				Sg	Sg	21 01 34.7	+0.9
FAGN	Fagnano	0.20	118	Pg	Pg	21 01 31.5	+0.6
FAGN				Sg	Sg	21 01 34.8	+1.0
	402nm,0.4s						
FAGN	Fagnano	0.20	118	Pg	Pg	21 01 31.5	+0.6
FAGN				Sg	Sg	21 01 34.8	+1.0
	402nm,0.4s						
TERO	Teramo	0.33	35	Pg	Pg	21 01 33.1	-0.1
TERO				Sg	Sg	21 01 38.0	+0.4
	83nm,0.5s						
TERO	Teramo	0.33	35	Pg	Pg	21 01 33.1	-0.1
TERO				Sg	Sg	21 01 38.0	+0.4
	83nm,0.5s						
PTQR	Pietraquaria	0.34	174	Pg	Pg	21 01 33.7	+0.2
PTQR				Sg	Sg	21 01 38.9	+0.8
PTQR	Pietraquaria	0.34	174	Pg	Pg	21 01 33.7	+0.2
PTQR				Sg	Sg	21 01 38.9	+0.8
VCEL	Villa Celiera	0.36	84	Pg	Pb	21 01 35.0	-0.3
	171nm,0.5s						
VCEL	Villa Celiera	0.36	84	Pg	Pb	21 01 35.0	-0.3
	171nm,0.5s						
CERT	Cerreto	0.49	214	Pg	Pg	21 01 36.2	-0.1
CERT				Sg	Sg	21 01 43.8	+0.9
CERT	Cerreto	0.49	214	Pg	Pg	21 01 36.2	-0.1
CERT				Sg	Sg	21 01 43.8	+0.9
MNS	Montasola	0.50	273	Pg	Pg	21 01 36.8	+0.4
	24nm,0.4s						
MNS	Montasola	0.50	273	Pg	Pg	21 01 36.8	+0.4
	24nm,0.4s						
NRCA	Norcia	0.51	340	Pg	Pg	21 01 36.9	+0.3
NRCA				Sg	Sb	21 01 44.9	-0.3
	50nm,0.1s						
NRCA	Norcia	0.51	340	Pg	Pg	21 01 36.9	+0.3
NRCA				Sg	Sb	21 01 44.9	-0.3
	50nm,0.1s						
INTR	Introdacqua	0.54	130	Pg	Pb	21 01 37.9	-0.3
INTR				Sg	Sb	21 01 45.8	-0.3
INTR	Introdacqua	0.54	130	Pg	Pb	21 01 37.9	-0.3
INTR				Sg	Sb	21 01 45.8	-0.3

CSEM 07 21:14:17.0±0.1, 42°.39N×13°.33E, h19km, ML2.7/10, Error ellipse: s-maj=2.0km s-min=1.4km az=71.0
ROM 07 21:14:17.3±0.1, 42°.39N×13°.32E, h10km, Ml2.1/23, 2C, Error ellipse: s-maj=0.9km s-min=0.7km az=82.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	125	Pg	Pg	21 14 20.3	+0.6
AQU				Sg	Sg	21 14 21.9	+0.5
	4μm,0.3s						
AQU	L'Aquila	0.07	125	Pg	Pg	21 14 20.3	+0.6
AQU				Sg	Sg	21 14 21.9	+0.5
	4μm,0.3s						
CAMP	Campotosto	0.15	24⇑	iPg	Pg	21 14 21.5	+0.5
CAMP				Sg	Sg	21 14 24.1	+0.5
	618nm,0.5s						
CAMP	Campotosto	0.15	24⇑	iPg	Pg	21 14 21.5	+0.5
CAMP				Sg	Sg	21 14 24.1	+0.5
	618nm,0.5s						
FIAM	Fiamignano	0.20	231	Pg	Pg	21 14 22.3	+0.6
FIAM				Sg	Sg	21 14 25.6	+1.0
	257nm,0.4s						
FIAM	Fiamignano	0.20	231	Pg	Pg	21 14 22.3	+0.6
FIAM				Sg	Sg	21 14 25.6	+1.0
	257nm,0.4s						
FAGN	Fagnano	0.23	123	Pg	Pg	21 14 22.9	+0.7
FAGN				Sg	Sg	21 14 27.3	+1.8
	1μm,0.3s						
FAGN	Fagnano	0.23	123	Pg	Pg	21 14 22.9	+0.7
FAGN				Sg	Sg	21 14 27.3	+1.8
	1μm,0.3s						
LNSS	Leonessa	0.30	315	Pg	Pg	21 14 23.9	+0.4
LNSS				Sg	Sg	21 14 28.7	+1.1
	473nm,0.5s						
LNSS	Leonessa	0.30	315	Pg	Pg	21 14 23.9	+0.4
LNSS				Sg	Sg	21 14 28.7	+1.1
	473nm,0.5s						
TERO	Teramo	0.31	42	Pg	Pg	21 14 23.8	+0.2
TERO				Sg	Sg	21 14 28.4	+0.6
	380nm,0.2s						
TERO	Teramo	0.31	42	Pg	Pg	21 14 23.8	+0.2
TERO				Sg	Sg	21 14 28.4	+0.6
	380nm,0.2s						
PTQR	Pietraquaria	0.38	171	Pg	Pg	21 14 25.2	+0.3
PTQR				Sg	Sb	21 14 31.1	-1.0
	36nm,0.2s						
PTQR	Pietraquaria	0.38	171	Pg	Pg	21 14 25.2	+0.3
PTQR				Sg	Sb	21 14 31.1	-1.0
	36nm,0.2s						
VCEL	Villa Celiera	0.38	90	Pg	Pg	21 14 25.6	+0.5
VCEL				Sg	Sg	21 14 31.3	+1.0
	235nm,0.4s						
VCEL	Villa Celiera	0.38	90	Pg	Pg	21 14 25.6	+0.5
VCEL				Sg	Sg	21 14 31.3	+1.0
	235nm,0.4s						
NRCA	Norcia	0.47	341	Pg	Pg	21 14 26.7	+0.1
NRCA				Sg	Sg	21 14 33.6	+0.7
	57nm,0.2s						
NRCA	Norcia	0.47	341	Pg	Pg	21 14 26.7	+0.1
NRCA				Sg	Sg	21 14 33.6	+0.7
	57nm,0.2s						
MNS	Montasola	0.48	269	Pg	Pg	21 14 26.7	0.0
	72nm,0.6s						
MNS	Montasola	0.48	269	Pg	Pg	21 14 26.7	0.0
	72nm,0.6s						
CERT	Cerreto	0.51	210	Pg	Pg	21 14 27.5	+0.1
	179nm,0.3s						
CERT	Cerreto	0.51	210	Pg	Pg	21 14 27.5	+0.1
	179nm,0.3s						
VVLD	Villa Vallelon	0.57	157	Pg	Pg	21 14 28.4	-0.1
	89nm,0.4s						
VVLD	Villa Vallelon	0.57	157	Pg	Pg	21 14 28.4	-0.1
	89nm,0.4s						
MTCE	Montecelio	0.57	230	Pg	Pb	21 14 29.2	-0.2
	35nm,0.4s						
MTCE	Montecelio	0.57	230	Pg	Pb	21 14 29.2	-0.2
	35nm,0.4s						
INTR	Introdacqua	0.58	131	Pg	Pg	21 14 28.6	0.0
	83nm,0.4s						
INTR	Introdacqua	0.58	131	Pg	Pg	21 14 28.6	0.0
	83nm,0.4s						
GUAR	Guarcino	0.60	181	Pg	Pg	21 14 29.1	+0.1
	44nm,0.3s						
GUAR	Guarcino	0.60	181	Pg	Pg	21 14 29.1	+0.1
	44nm,0.3s						
OFFI	Offida	0.60	26	Pg	Pb	21 14 30.0	+0.1
	315nm,0.7s						
OFFI	Offida	0.60	26	Pg	Pb	21 14 30.0	+0.1
	315nm,0.7s						
FDMO	Fiordimonte	0.67	345	Pg	Pg	21 14 30.1	-0.2
	71nm,0.2s						
FDMO	Fiordimonte	0.67	345	Pg	Pg	21 14 30.1	-0.2
	71nm,0.2s						
CESI	CESI - Serrava	0.68	333	Pg	Pg	21 14 30.5	-0.2
	27nm,0.2s						
CESI	CESI - Serrava	0.68	333	Pg	Pg	21 14 30.5	-0.2
	27nm,0.2s						
POFI	Posta Fibreno	0.73	157	Pg	Pg	21 14 31.7	+0.1
	27nm,0.7s						
POFI	Posta Fibreno	0.73	157	Pg	Pg	21 14 31.7	+0.1
	27nm,0.7s						
GUMA	Gualdo di Mace	0.81	34	Pg	Pg	21 14 30.7	-2.3
GUMA	Gualdo di Mace	0.81	34	Pg	Pg	21 14 30.7	-2.3
ASSB	Assisi San Ben	0.81	323	Pg	Pg	21 14 32.7	-0.4
	52nm,0.2s						
ASSB	Assisi San Ben	0.81	323	Pg	Pg	21 14 32.7	-0.4
	52nm,0.2s						
GIUL	Giuliano Di Ro	0.84	184	Pg	Pg	21 14 33.0	-0.5
	27nm,0.7s						
GIUL	Giuliano Di Ro	0.84	184	Pg	Pg	21 14 33.0	-0.5
	27nm,0.7s						
CING	Cingoli	0.99	355	Pg	Pg	21 14 35.9	-0.5
	47nm,0.2s						
CING	Cingoli	0.99	355	Pg	Pg	21 14 35.9	-0.5
	47nm,0.2s						
MIDA	Miranda	1.02	137	Pg	Pg	21 14 35.9	-1.2
	19nm,0.7s						
MIDA	Miranda	1.02	137	Pg	Pg	21 14 35.9	-1.2
	19nm,0.7s						
MGAB	Montegabbione	1.03	301	Pg	Pg	21 14 37.1	-0.2
MGAB	Montegabbione	1.03	301	Pg	Pg	21 14 37.1	-0.2
MURB	Monte Urbino	1.05	326	Pg	Pg	21 14 37.4	-0.2
	132nm,0.3s						
MURB	Monte Urbino	1.05	326	Pg	Pg	21 14 37.4	-0.2
	132nm,0.3s						
ARVD	Arcevia	1.14	346	Pg	Pb	21 14 38.5	-0.6
	31nm,0.8s						
ARVD	Arcevia	1.14	346	Pg	Pb	21 14 38.5	-0.6
	31nm,0.8s						
PIEI	Pieia	1.28	333	Pg	Pb	21 14 41.6	+0.1
	33nm,0.3s						
PIEI	Pieia	1.28	333	Pg	Pb	21 14 41.6	+0.1
	33nm,0.3s						

GEN 07 21:15:09.3, 43°.95N×12°.23E, h4km, ML2.6
LDG 07 21:15:11.7±0.1, 44°.34N×12°.05E, h10km, Ml2.9/12, Error ellipse: s-maj=3.8km s-min=3.4km az=53.0
ISCJB 07 21:15:12.4±0.3, 44°.29N±0°.02×11°.94E±0°.02, h33km±3km, Error ellipse: s-maj=3.4km s-min=2.6km az=153.8
CSEM 07 21:15:12.7±0.1, 44°.25N×11°.98E, h30km, ML2.8/12, Error ellipse: s-maj=3.0km s-min=2.5km az=133.0
ROM 07 21:15:13.1±0.2, 44°.23N×11°.93E, h23km±3km, Md2.4/14, Ml2.5/12, Error ellipse: s-maj=3.4km s-min=2.6km az=35.0
ISC 07 21:15:12.4±0.8, 44°.27N±0°.02×11°.98E±0°.02, h28km±5km, n119, σ1s.10/181, 26C-10D, Northern Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRSN	Barisano	0.07	78	Pg	Pb	21 15 17.3	+0.1
BRSN				Sg	Sb	21 15 19.9	-0.6
	1.0nm,0.2s						
BRSN	Barisano	0.07	78	ePg	Pb	21 15 17.3	+0.1
BRSN				Sg	Sb	21 15 19.9	-0.6
	1.0nm,0.2s						
FAEN	Faenza	0.08	286	Pg	Pb	21 15 17.0	-0.2
FAEN				Sg	Sb	21 15 21.6	+1.1
FAEN	Faenza	0.08	286	ePg	Pb	21 15 17.0	-0.2
FAEN				eSg	Sb	21 15 21.6	+1.1
CMPO	Campotto Po	0.34	338	Pg	Pb	21 15 20.6	+0.5
CMPO	Campotto Po	0.34	338	ePg	Pb	21 15 20.6	+0.5
BLLA	Bellaria	0.38	109	Pg	Pn	21 15 21.6	-0.4
	263nm,0.3s						
BLLA	Bellaria	0.38	109	Pg	Pn	21 15 21.6	-0.4
	263nm,0.3s						
SFI	Santa Sofia	0.38	195	Pg	Pb	21 15 19.9	-0.9
SFI				Sg	Sb	21 15 26.0	-0.5
	978nm,0.4s						
SFI	Santa Sofia	0.38	195	ePg	Pb	21 15 19.9	-0.9
SFI				Sg	Sb	21 15 26.0	-0.5
	978nm,0.4s						
MTRZ	Monterenzio	0.38	286⇑	iPg	Pb	21 15 21.3	+0.4
	262nm,0.5s						
MTRZ	Monterenzio	0.38	286⇑	iPg	Pb	21 15 21.3	+0.4
	262nm,0.5s						
VMG	Vicchio	0.44	226	Pg	Pb	21 15 20.9	-0.9
VMG				Sg	Sb	21 15 27.7	-0.4
	307nm,0.2s						
VMG	Vicchio	0.44	226	ePg	Pb	21 15 20.9	-0.9
VMG				Sg	Sb	21 15 27.7	-0.4
	307nm,0.2s						
RSM	Repubblica di	0.48	135⇑	iPg	Pn	21 15 23.0	-0.5
RSM				Sg	Sn	21 15 30.9	-0.1
	7.0nm,0.2s						
RSM	Repubblica di	0.48	135⇑	iPg	Pn	21 15 23.0	-0.5
RSM				eSg	Sn	21 15 30.9	-0.1
ASQU	Asqua	0.49	196	Pg	Pb	21 15 21.8	-0.8
ASQU				Sg	Sb	21 15 30.1	+0.5
	368nm,0.4s						
ASQU	Asqua	0.49	196	ePg	Pb	21 15 21.8	-0.8
ASQU				Sg	Sb	21 15 30.1	+0.5
	368nm,0.4s						
SEI	Scarperia	0.50	245⇑	iPg	Pb	21 15 21.8	-0.9
SEI				Sg	Sb	21 15 30.1	+0.4
	822nm,0.4s						
SEI	Scarperia	0.50	245⇑	iPg	Pb	21 15 21.8	-0.9
SEI				Sg	Sb	21 15 30.1	+0.4
	822nm,0.4s						
FIU	Minerbio Fiu	0.51	317	Pg	Pn	21 15 24.5	+0.7
	646nm,0.3s						
FIU	Minerbio Fiu	0.51	317	Pg	Pn	21 15 24.5	+0.7
	646nm,0.3s						
FNVD	Fontana Vidola	0.62	261	Pg	Pb	21 15 24.2	-0.6
FNVD				Sg	Sb	21 15 34.5	+1.2
FNVD	Fontana Vidola	0.62	261	ePg	Pb	21 15 24.2	-0.6
FNVD				eSg	Sb	21 15 34.5	+1.2
PARC	Parchiule	0.65	163	Pg	Pb	21 15 25.0	-0.2
PARC				Sg	Sn	21 15 35.9	+0.8
	186nm,0.4s						
PARC	Parchiule	0.65	163	Pg	Pb	21 15 25.0	-0.2
PARC				Sg	Sn	21 15 35.9	+0.8
	186nm,0.4s						
CRE	Caprese Michel	0.65	182	Pg	Pb	21 15 24.7	-0.6
	114nm,0.3s						
CRE	Caprese Michel	0.65	182	Pg	Pb	21 15 24.7	-0.6
	114nm,0.3s						
PESA	Pesaro	0.70	118	Pg	Pn	21 15 27.9	+1.4
	345nm,0.2s						
PESA	Pesaro	0.70	118	Pg	Pn	21 15 27.9	+1.4
	345nm,0.2s						
ZCCA	Zocca	0.72	277	Pg	Pb	21 15 27.8	+1.3
	63nm,0.7s						
ZCCA	Zocca	0.72	277	Pg	Pb	21 15 27.8	+1.3
	63nm,0.7s						
ADRI	Adria, Italy	0.77	2⇑	ePg	Pn	21 15 28.4	+1.0
ADRI				eSg	Sn	21 15 40.5	+2.4
ADRI	Adria, Italy	0.77	2⇑	ePg	Pn	21 15 28.4	+1.0
ADRI				eSg	Sn	21 15 40.5	+2.4
BADI	Badiali	0.78	166	Pg	Pb	21 15 27.1	-0.3
BADI				Sg	Sn	21 15 39.9	+1.5
	288nm,0.5s						
BADI	Badiali	0.78	166	Pg	Pb	21 15 27.1	-0.3
BADI				Sg	Sn	21 15 39.9	+1.5
	288nm,0.5s						
FSSB	Fossombrone	0.81	135	Pg	Pn	21 15 28.7	+0.6
FSSB	Fossombrone	0.81	135	Pg	Pn	21 15 28.7	+0.6
CAFI	Castiglion Fio	0.94	181	Pg	Pb	21 15 29.8	-0.3
	128nm,0.4s						
CAFI	Castiglion Fio	0.94	181	Pg	Pb	21 15 29.8	-0.3
	128nm,0.4s						
BDI	Bagni Di Lucca	1.02	259	Pg	Pn	21 15 31.8	+0.9
	69nm,0.4s						
BDI	Bagni Di Lucca	1.02	259	Pg	Pn	21 15 31.8	+0.9
	69nm,0.4s						
MAIM	Mastiano	1.13	252	P	Pn	21 15 32.2	-0.2
MAIM				S	Sn	21 15 47.9	+1.0
GRAM	Graiana	1.39	280	P	Pn	21 15 37.8	+1.8
GRAM				S	Sb	21 15 57.3	+2.2
CODM	Codolo	1.53	275	P	Pn	21 15 39.3	+1.3
CODM				S	Sn	21 16 00.0	+3.0
CGRP	Cima Grappa	1.62	356⇓	ePg	Pn	21 15 37.8	-1.4
CGRP				eSg	Sn	21 15 58.0	-1.2
CGRP	Cima Grappa	1.62	356⇓	ePg	Pn	21 15 37.8	-1.4
CGRP				eSg	Sn	21 15 58.0	-1.2
BALD	Monte Baldo	1.64	330⇓	ePg	Pn	21 15 39.6	+0.1
BALD	Monte Baldo	1.64	330⇓	ePg	Pn	21 15 39.6	+0.1
DDS	Dosso del Somm	1.71	341⇓	ePn	Pn	21 15 40.5	0.0
DDS	Dosso del Somm	1.71	341⇓	ePn	Pn	21 15 40.5	0.0
SC2M	Scurtabo	1.76	275	P	Pn	21 15 42.7	+1.6
PANI	Panarotta	1.84	345⇓	ePn	Pn	21 15 42.7	+0.3
PANI	Panarotta	1.84	345⇓	ePn	Pn	21 15 42.7	+0.3
SKDS	Skadanscina	1.93	48	i Pn	Pn	21 15 42.9	-0.5
SKDS	Skadanscina	1.93	48	Pn	Pn	21 15 42.9	-0.5
MLNI	Malnisio	1.93	13⇑	ePn	Pn	21 15 43.4	-0.1
MLNI				eSn	Sn	21 16 07.4	+0.5
MLNI	Malnisio	1.93	13⇑	ePn	Pn	21 15 43.4	-0.1
MLNI				eSn	Sn	21 16 07.4	+0.5
RNI	Roncone	1.96	332	ePn	Pn	21 15 44.4	+0.5
RNI	Roncone	1.96	332	ePn	Pn	21 15 44.4	+0.5
SABO	M.te Sabotino	2.06	33⇑	ePn	Pn	21 15 45.3	+0.1
SABO				eSn	Sn	21 16 10.6	+0.6
SABO	M.te Sabotino	2.06	33⇑	ePn	Pn	21 15 45.3	+0.1
SABO				eSn	Sn	21 16 10.6	+0.6
NVLJ	Novalja	2.09	81	i Pn	Pn	21 15 46.2	+0.6
NVLJ				Sn	Sn	21 16 11.2	+0.5
NVLJ	Novalja	2.09	81	i Pn	Pn	21 15 46.2	+0.6
NVLJ				Sn	Sn	21 16 11.2	+0.5
COLI	Coloredo	2.11	27⇑	ePn	Pn	21 15 46.0	+0.1
COLI				eSn	Sn	21 16 11.6	+0.4
COLI	Coloredo	2.11	27⇑	ePn	Pn	21 15 46.0	+0.1
COLI				eSn	Sn	21 16 11.6	+0.4
BAD	Bernadia	2.16	24⇑	ePn	Pn	21 15 46.5	-0.1

BAD				eSn	Sn	21 16 12.6	+0.1
BAD	Bernadia	2.16	24	⇑ePn	Pn	21 15 46.5	-0.1
BAD				eSn	Sn	21 16 12.6	+0.1
VINO	Villanova	2.19	24	⇑ePn	Pn	21 15 46.9	-0.1
VINO				eSn	Sn	21 16 13.2	0.0
VINO	Villanova	2.19	24	⇑ePn	Pn	21 15 46.9	-0.1
VINO				eSn	Sn	21 16 13.2	0.0
JAVS	Javornik	2.20	42	i Pn	Pn	21 15 46.8	-0.4
JAVS	Javornik	2.20	42	i Pn	Pn	21 15 46.8	-0.4
VOY	Vojsko	2.22	37	ePn	Pn	21 15 47.0	-0.5
VOY				e		21 15 52.5	
VOY				eSn	Sn	21 16 13.9	-0.2
VOY	Vojsko	2.22	37	ePn	Pn	21 15 47.0	-0.5
VOY				eSn	Sn	21 16 13.9	-0.2
KOSI	Kohlern	2.23	349	⇑ePn	Pn	21 15 48.6	+0.9
DRE	Drenchia	2.24	31	⇑ePn	Pn	21 15 47.6	-0.1
DRE				eSn	Sn	21 16 14.7	+0.3
DRE	Drenchia	2.24	31	⇑ePn	Pn	21 15 47.6	-0.1
DRE				eSn	Sn	21 16 14.7	+0.3
ZOU	Zoufplan	2.39	17	⇓ePn	Pn	21 15 50.4	+0.4
PCP	Piancastagn	2.48	278	P	Pn	21 15 52.6	+1.7
ABSI	Aberstueckl	2.50	350	⇓ePn	Pn	21 15 52.1	+0.7
ABTA	Abfaltersbach	2.51	8	⇑ePn	Pn	21 15 52.4	+1.0
	SNR=7.7						
ABTA	Abfaltersbach	2.51	8	Pn	Pn	21 15 52.4	+1.0
	SNR=7.7						
ACOM	Acomizza, Ital	2.52	25	⇑ePn	Pn	21 15 52.7	+1.0
ACOM	Acomizza, Ital	2.52	25	⇑ePn	Pn	21 15 52.7	+1.0
MOSI	Grossmontoni	2.55	337	⇑ePn	Pn	21 15 54.0	+1.8
RISI	Rein	2.68	1	ePn	Pn	21 15 56.0	+2.1
ROSI	Rosskopf	2.69	352	ePn	Pn	21 15 55.4	+1.4
PGF	Pioggiola	2.77	233	ePn	Pn	21 15 56.3	+1.3
	SNR=1.0						
PGF				eSn	Sn	21 16 28.4	+0.8
	15nm,0.3s,SNR=1.0						
PGF	Pioggiola	2.77	233	ePn	Pn	21 15 56.3	+1.3
	SNR=1.0						
PGF				eSn	Sn	21 16 28.4	+0.8
	7.4nm,0.3s,SNR=1.0						
OBKA	Obir	2.88	38	⇑ePn	Pn	21 15 56.9	+0.3
	SNR=6.3						
OBKA	Obir	2.88	38	Pn	Pn	21 15 56.9	+0.3
	SNR=6.3						
SBF	Sospel	3.30	265	ePn	Pn	21 16 03.4	+1.1
	SNR=1.0						
SBF				eSn	Sn	21 16 40.6	0.0
	7.0nm,0.3s,SNR=1.0						
SBF	Sospel	3.30	265	ePn	Pn	21 16 03.4	+1.1
	SNR=1.0						
SBF				eSn	Sn	21 16 40.6	0.0
	3.5nm,0.3s,SNR=1.0						
LPG	La Plagne	3.91	290	ePn	Pn	21 16 10.3	-0.6
	SNR=1.0						
LPG				eSn	Sn	21 16 54.4	-1.7
	4.5nm,0.5s,SNR=1.0						
LPG	La Plagne	3.91	290	ePn	Pn	21 16 10.3	-0.6
	SNR=1.0						
LPG				eSn	Sn	21 16 54.4	-1.7
	2.2nm,0.5s,SNR=1.0						
FRF	La Foret Royal	3.92	261	ePn	Pn	21 16 11.4	+0.7
	SNR=1.0						
FRF				eSn	Sn	21 16 55.5	-0.2
	2.9nm,0.3s,SNR=1.0						
FRF	La Foret Royal	3.92	261	ePn	Pn	21 16 11.4	+0.7
	SNR=1.0						
FRF				eSn	Sn	21 16 55.5	-0.2
	1.5nm,0.3s,SNR=1.0						
LMR	La Mourre	4.07	259	ePn	Pn	21 16 13.8	+1.0
	SNR=1.0						
LMR				eSn	Sn	21 16 57.0	-2.5
	2.1nm,0.3s,SNR=1.0						
LMR	La Mourre	4.07	259	ePn	Pn	21 16 13.8	+1.0
	SNR=1.0						
LMR				eSn	Sn	21 16 57.0	-2.5
	1.0nm,0.3s,SNR=1.0						
ORIF	Oris-en-Rattie	4.41	281	ePn	Pn	21 16 16.9	-0.6
	SNR=1.0						
ORIF				eSn	Sn	21 17 06.3	-1.6
	2.5nm,0.4s,SNR=1.0						
ORIF	Oris-en-Rattie	4.41	281	ePn	Pn	21 16 16.9	-0.6
	SNR=1.0						
ORIF				eSn	Sn	21 17 06.3	-1.6
	1.2nm,0.4s,SNR=1.0						
CABF	La Chapelle	4.76	302	ePn	Pn	21 16 21.8	-0.6
	SNR=1.0						
CABF				eSn	Sn	21 17 14.1	-2.6
	5.0nm,0.8s,SNR=1.0						
CABF	La Chapelle	4.76	302	ePn	Pn	21 16 21.8	-0.6
	SNR=1.0						
CABF				eSn	Sn	21 17 14.1	-2.6
	2.5nm,0.8s,SNR=1.0						
KHC	Kasperske Hory	4.99	12	ePN	Pn	21 16 25.9	+0.5
KHC				ex	x	21 16 38.0	
KHC				eSN	Sn	21 17 19.9	-2.2
KHC	Kasperske Hory	4.99	12	Pn	Pn	21 16 25.9	+0.5
KHC				Sn	Sn	21 17 19.9	-2.2
HINF	Hinteralfeld	5.03	317	ePn	Pn	21 16 24.8	-1.2
	SNR=1.0						
HINF				eSn	Sn	21 17 18.6	-4.7
	5.4nm,0.3s,SNR=1.0						
HINF	Hinteralfeld	5.03	317	eSn	Sn	21 17 18.6	-4.7
	2.7nm,0.3s,SNR=1.0						
HINF	Hinteralfeld	5.03	317	ePn	Pn	21 16 24.8	-1.2
	SNR=1.0						
VIVF	Saint-Julien-l	5.25	279	ePn	Pn	21 16 28.9	-0.2
	SNR=1.0						
VIVF				eSn	Sn	21 17 27.6	-1.1
	2.7nm,0.4s,SNR=1.0						
VIVF	Saint-Julien-l	5.25	279	ePn	Pn	21 16 28.9	-0.2
	SNR=1.0						
VIVF				eSn	Sn	21 17 27.6	-1.1
	1.4nm,0.4s,SNR=1.0						
CDF	Champ du Feu	5.27	324	ePn	Pn	21 16 29.4	0.0
	SNR=1.0						
CDF				eSn	Sn	21 17 24.1	-5.1
	2.7nm,0.3s,SNR=1.0						
CDF	Champ du Feu	5.27	324	ePn	Pn	21 16 29.4	0.0
	SNR=1.0						
CDF				eSn	Sn	21 17 24.1	-5.1
	1.4nm,0.3s,SNR=1.0						
HAU	Haudompre	5.41	316	ePn	Pn	21 16 31.4	+0.2
	SNR=1.0						
HAU				eSn	Sn	21 17 28.6	-4.0
	22nm,0.4s,SNR=1.0						
HAU	Haudompre	5.41	316	eSn	Sn	21 17 28.6	-4.0
	11nm,0.4s,SNR=1.0						
HAU	Haudompre	5.41	316	ePn	Pn	21 16 31.4	+0.2
	SNR=1.0						
LOR	Lormes	6.42	301	ePn	Pn	21 16 44.9	-0.2
	SNR=1.0						
LOR				eSn	Sn	21 17 53.7	-3.8
	3.1nm,0.3s,SNR=1.0						
LOR	Lormes	6.42	301	ePn	Pn	21 16 44.9	-0.2
	SNR=1.0						
BGF	Bois d'Agland	6.82	293	ePn	Pn	21 16 52.0	+1.4
	SNR=1.0						
BGF	Bois d'Agland	6.82	293	ePn	Pn	21 16 52.0	+1.4
	SNR=1.0						

*ISCJB **07** 21:15:31.6±0.8, 19°.19S±0°.05×70°.15W±0°.09, h67km±5km, mb3.9/5, Error ellipse: s-maj=15.2km s-min=7.1km az=17.1*
*GUC **07** 21:15:32.6±0.8, 19°.24S×70°.16W, h54km±5km, ML4.1*
*NEIC **07** 21:15:32.6, 19°.24S×70°.16W, h54km, mb4.0/2, After GUC.*
NEIC Felt [III] at Arica, Camarones, Codpa and Cuya.
*IDC **07** 21:15:37.8±5.8, 19°.22S×69°.85W, h97km±37km, mb3.7/4, mb1 3.8/7, mb1mx3.6/20, mbtmp3.7/7, Error ellipse: s-maj=68.9km s-min=29.7km az=36.0*
ISC 07 21:15:33.1±1.0, **19°.25S**±0°.05×**70°.14W**±0°.09, **h61**km±8km, **n28**, σ**1s.26**/38, **mb4.2**/5, **2C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.34	178	eP	Pn	21 15 43.1	-0.7
PSGC				eS	Sn	21 15 50.6	-0.9
PSGC	Pisagua	0.34	178	eP	Pn	21 15 43.1	-0.7
PSGC				eS	Sn	21 15 50.6	-0.9
PSGC				AML	AML	21 15 52.0	
	comp=E,12μm,0.5s						
MNMC	Miæe Miæ	0.53	77	⇓iP	Pn	21 15 45.3	-0.5
MNMC				iS	Sn	21 15 54.4	-0.5
MNMC	Miæe Miæ	0.53	77	⇓iP	Pn	21 15 45.3	-0.5
MNMC				iS	Sn	21 15 54.4	-0.5
MNMC				AML	AML	21 15 58.7	
	comp=E,13μm,0.2s						
PB11	Plate Boundary	0.68	138	⇓iP	Pn	21 15 47.5	+0.2
PB11				iS	Sn	21 15 58.5	+0.8
PB11	Plate Boundary	0.68	138	⇓iP	Pn	21 15 47.5	+0.2
PB11				iS	Sn	21 15 58.5	+0.8
PB11				AML	AML	21 15 59.3	
	comp=E,90μm,0.4s						
HMBC	Humberston	1.04	167	⇑iP	Pn	21 15 51.8	-0.1
HMBC				eS	Sn	21 16 06.4	+0.6
HMBC	Humberston	1.04	167	⇑iP	Pn	21 15 51.8	-0.1
HMBC				eS	Sn	21 16 06.4	+0.6
HMBC				AML	AML	21 16 09.2	
	comp=E,5μm,0.4s						
PB01	Plate Boundary	1.88	161	eP	Pn	21 16 03.6	+0.5
PB01				iS	Sn	21 16 27.4	+1.6
PB01	Plate Boundary	1.88	161	eP	Pn	21 16 03.6	+0.5
PB01				iS	Sn	21 16 27.4	+1.6
PB01				AML	AML	21 16 34.4	
	comp=N,1μm,0.2s						
PB07	Plate Boundary	2.47	175	eP	Pn	21 16 12.2	+1.0
PB07	Plate Boundary	2.47	175	eP	Pn	21 16 12.2	+1.0
PB07				AML	AML	21 16 55.9	
	comp=E,912nm,0.4s						
LPAZ	La Paz	3.52	33	ePn	Pn	21 16 28.9	+3.0
LPAZ	La Paz	3.52	33	P	Pn	21 16 29.2	+3.3
	comp=E,7.2nm,0.3s,baz=203,slow=6.7,SNR=104						
SIV	San Ignacio	9.23	71	P	Pn	21 17 43.3	-0.3
	comp=E,3.5nm,0.3s,baz=279,slow=9.8,SNR=37						
LCO	Las Campanas	9.73	183	ePn	Pn	21 17 49.3	-1.3
LCO				eSn	Sn	21 19 33.7	-4.7
SAML	Samuel	12.26	34	ePn	Pn	21 18 24.0	-1.0
	comp=E,1.7nm,0.5s						
SAML				eSn	Sn	21 20 39.0	-1.2
CPUP	Villa Florida	13.75	123	P	Pn	21 18 45.6	+0.5
	comp=E,0.4nm,0.3s,baz=304,slow=15,SNR=5.0						
TRQA	Tornquist	20.04	161	eP	P	21 20 01.3	+0.2
	comp=E,4.5nm,0.9s						
BDFB	Brasilia	21.41	84	P	P	21 20 16.7	+0.5
	comp=E,1.9nm,0.5s,baz=240,slow=8.1,SNR=3.7						
BCIP	Isla Barro Col	29.82	340	P	P	21 21 35.7	+1.2
RCBR	Riachuelo	35.89	73	eP	P	21 22 27.5	-0.3
	comp=E,3.1nm,0.8s						
DBIC	Dimbokro	69.23	75	P	P	21 26 33.2	-0.9
	comp=E,3.1nm,1.0s,baz=135,slow=2.9,SNR=2.9						
TORD	Torodi Ar. Bea	77.71	71	P	P	21 27 22.5	-1.4
	comp=E,0.6nm,0.5s,baz=256,slow=5.4,SNR=12						
YKA	Yellowknife Ar	88.70	341	P	P	21 28 19.6	+0.2
	comp=E,1.0nm,0.7s,baz=135,slow=4.9,SNR=21						
ZALV	Zalesovo Beam	140.38	23	PKP	PKPdf	21 34 55.8	+0.7
	comp=E,0.4nm,0.4s,baz=306,slow=3.4,SNR=2.9						
MKAR	Makanchi Array	144.44	33	PKP	PKPbc	21 35 01.5	+0.3
	comp=E,0.3nm,0.8s,baz=307,slow=3.2,SNR=3.1						
SONM	Songino Array	151.35	5	PKPbc	PKPbc	21 35 20.9	+0.8
	comp=E,0.5nm,0.5s,baz=318,slow=1.6,SNR=7.6						

*CSEM **07** 21:19:11.8±0.7, 36°.08N×27°.08E, h2km, MD3.1, Error ellipse: s-maj=14.1km s-min=11.9km az=39.0*
*ISK **07** 21:19:12.2, 36°.11N×27°.14E, h9km, MD2.9*
*DDA **07** 21:19:22.2, 36°.64N×27°.53E, h7km, MD3.1*
ISC 07 21:19:10.4±2.5, **36°.0N**±0°.1×**27°.13E**±0°.05, **h8**km±12km, **n19**, σ**0s.90**/26, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BODT	Bodrum	1.06	8	ePG	Pn	21 19 31.1	-0.4
BODT				eSG	Sn	21 19 45.0	-1.4
BODT	Bodrum	1.06	8	ePg	Pn	21 19 31.1	-0.4
BODT				eSg	Sn	21 19 45.0	-1.4
BDRM	Kayabasi	1.08	13	iP	Pg	21 19 30.4	-0.8
BDRM				iS	Sn	21 19 46.7	-0.3
BDRM	Kayabasi	1.08	13	iP	Pg	21 19 30.4	-0.8
BDRM				iS	Sn	21 19 46.7	-0.3
MLSB	Milas	1.38	22	ePN	Pg	21 19 36.9	0.0
MLSB				eSN	Sg	21 19 55.1	+0.3
MLSB	Milas	1.38	22	ePn	Pg	21 19 36.9	0.0
MLSB				eSn	Sg	21 19 55.1	+0.3
YER	Yerkesik	1.45	39	ePN	Pg	21 19 37.9	-0.4
YER	Yerkesik	1.45	39	ePn	Pg	21 19 37.9	-0.4
TURN	Turunc	1.46	54	iP	Pn	21 19 33.1	-3.9
TURN				iS	Sn	21 19 47.5	-8.9
APE	Apeiranthos	1.67	310	ePN	Pb	21 19 41.6	+0.3
APE	Apeiranthos	1.67	310	ePn	Pb	21 19 41.6	+0.3
FETY	Fethiye	1.69	68	ePN	Pb	21 19 42.3	+0.5
FETY	Fethiye	1.69	68	ePn	Pb	21 19 42.3	+0.5
GOLH	Golhisar	2.30	57	eP	Pb	21 19 52.8	+0.5
GOLH				iS	Sb	21 20 21.3	+0.4
GOLH	Golhisar	2.30	57	eP	Pb	21 19 52.8	+0.5
GOLH				iS	Sb	21 20 21.3	+0.4
ELL	Elmali	2.36	71	ePN	Pb	21 19 51.8	-1.4
ELL	Elmali	2.36	71	ePn	Pb	21 19 51.8	-1.4
KULA	Kula-Manisa	2.78	26	ePN	Pn	21 19 57.0	+1.8
KULA	Kula-Manisa	2.78	26	ePn	Pn	21 19 57.0	+1.8

*IDC **07** 21:22:43.9±1.3, 36°.53N×21°.82E, h0km, mb3.5/6, mb1 3.5/6, mb1mx3.3/29, mbtmp3.5/6, Error ellipse: s-maj=41.0km s-min=24.1km az=130.0*
*ISCJB **07** 21:22:45.1±0.8, 36°.39N±0°.03×21°.69E±0°.04, h8km±5km, mb3.4/6, Error ellipse: s-maj=6.0km s-min=4.8km az=142.1*
*ATH **07** 21:22:45.3, 36°.40N×21°.70E, h16km±1km, MD3.6/29, ML3.4*
*CSEM **07** 21:22:46.1±0.3, 36°.42N×21°.73E, h5km, ML3.7, Error ellipse: s-maj=6.6km s-min=4.1km az=37.0*
*THE **07** 21:22:46.9, 36°.46N×21°.76E, h0km±4km, ML3.6/3, Error ellipse: s-maj=4.7km s-min=1.1km az=212.0*
ISC 07 21:22:46.3±1.4, **36°.45N**±0°.04×**21°.74E**±0°.04, **h13**km±8km, **n103**, σ**1s.06**/127, **mb3.6**/6, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL	PYLOS	0.44	0	P	Pg	21 22 54.6	-0.5
PYL				S	Sg	21 23 01.6	+0.6
PYL	PYLOS	0.44	0	ePB	Pg	21 22 54.6	-0.5
PYL				eSB	Sb	21 23 02.0	-0.5
PYL	PYLOS	0.44	0	P	Pg	21 22 54.6	-0.5
PYL				S	Sg	21 23 01.6	+0.6
PYL				eSb	Sb	21 23 02.0	-0.5
DYR	Agios Nikonas	0.57	57	P	Pb	21 22 57.7	-0.4
DYR				S	Sb	21 23 06.2	+0.1
DYR	Agios Nikonas	0.57	57	ePB	Pg	21 22 57.3	-0.1
DYR				eSN	Sb	21 23 06.0	-0.1
DYR	Agios Nikonas	0.57	57	ePb	Pg	21 22 57.3	-0.1
DYR	Agios Nikonas	0.57	57	P	Pb	21 22 57.7	-0.4
DYR				S	Sb	21 23 06.2	+0.1
ITM	Ithomi	0.74	12	P	Pg	21 23 00.6	-0.1
ITM				S	Sb	21 23 11.3	+0.2
ITM	Ithomi	0.74	12	ePN	Pg	21 23 00.6	-0.1
ITM				eSN	Sb	21 23 11.4	+0.3
ITM	Ithomi	0.74	12	ePn	Pg	21 23 00.6	-0.1
ITM				S	Sb	21 23 11.3	+0.2
ITM				eSn	Sb	21 23 11.4	+0.3
VLI	Veliai	1.00	74	P	Pb	21 23 05.8	+0.4
VLI				S	Sb	21 23 19.1	+0.6
VLI	Veliai	1.00	74	ePN	Pb	21 23 05.8	+0.4
VLI				eSN	Sn	21 23 20.2	+0.3
VLI	Veliai	1.00	74	P	Pb	21 23 05.4	0.0
VLI	Veliai	1.00	74	ePn	Pb	21 23 05.8	+0.4
VLI				S	Sb	21 23 19.1	+0.6
VLI				eSn	Sn	21 23 20.2	+0.3
VLX	Vlachokerasia	1.05	29	P	Pg	21 23 06.0	-0.6
VLX				S	Sn	21 23 21.3	0.0
VLX	Vlachokerasia	1.05	29	ePN	Pg	21 23 05.9	-0.6
VLX				eSN	Sn	21 23 22.0	+0.7
VLX	Vlachokerasia	1.05	29	P	Pg	21 23 06.0	-0.6
VLX				S	Sb	21 23 20.9	+0.8
VLX				eSn	Sn	21 23 22.0	+0.7
KYTH	Kithira	1.06	99	P	Pg	21 23 06.3	-0.4
KYTH	Kithira	1.06	99	ePN	Pg	21 23 06.1	-0.6
KYTH	Kithira	1.06	99	P	Pg	21 23 06.3	-0.4
AMT	Artemida-Makis	1.08	359	P	Pb	21 23 07.1	+0.3
AMT				S	Sn	21 23 22.8	+0.8
AMT	Artemida-Makis	1.08	359	ePN	Pg	21 23 06.3	-0.8
AMT				eSN	Sn	21 23 22.7	+0.8
AMT	Artemida-Makis	1.08	359	ePn	Pg	21 23 06.3	-0.8
AMT	Artemida-Makis	1.08	359	P	Pb	21 23 07.1	+0.3
AMT				S	Sn	21 23 22.8	+0.8
GUR	Goura	1.56	18	P	Pb	21 23 14.9	-0.1
GUR	Goura	1.56	18	ePN	Pn	21 23 14.6	+0.8
GUR	Goura	1.56	18	ePn	Pn	21 23 14.6	+0.8
GUR	Goura	1.56	18	P	Pb	21 23 14.9	-0.1
GUR				S	Sg	21 23 35.8	-0.7
DID	Didima	1.59	48	P	Pb	21 23 15.7	+0.1
DID	Didima	1.59	48	ePN	Pb	21 23 15.4	-0.2
DID	Didima	1.59	48	ePn	Pb	21 23 15.4	-0.2
DID	Didima	1.59	48	P	Pb	21 23 15.7	+0.1
DID				S	Sg	21 23 38.3	+0.7
RLS	Riolos of Patr	1.62	352	P	Pn	21 23 15.1	+0.6
RLS	Riolos of Patr	1.62	352	ePN	Pb	21 23 16.4	+0.4
RLS	Riolos of Patr	1.62	352	P	Pn	21 23 15.1	+0.6
RLS	Riolos of Patr	1.62	352	ePn	Pb	21 23 16.4	+0.4
LAKA	Lakka	1.79	6	ePN	Pb	21 23 19.4	+0.4
LAKA	Lakka	1.79	6	P	Pb	21 23 19.1	+0.1
LAKA	Lakka	1.79	6	ePn	Pb	21 23 19.4	+0.4
LAKA				S	Sb	21 23 41.5	+0.1
KFL	Anninata	1.82	336	P	Pn	21 23 17.4	+0.1
LTK	Loutraki	1.85	32	P	Pn	21 23 19.0	+1.3
LTK	Loutraki	1.85	32	ePN	Pb	21 23 19.2	-0.7
LTK	Loutraki	1.85	32	P	Pn	21 23 19.0	+1.3
LTK	Loutraki	1.85	32	ePn	Pb	21 23 19.3	-0.7
LTK				S	Sb	21 23 43.9	+0.9
NAIG	Nisos Aigina	1.91	46	ePN	Pb	21 23 20.8	-0.2
NAIG	Nisos Aigina	1.91	46	ePn	Pb	21 23 20.8	-0.2
TRIZ	Trizonia	1.93	8	P	Pn	21 23 19.9	+1.2
TRIZ	Trizonia	1.93	8	ePN	Pb	21 23 21.0	-0.3
TRIZ	Trizonia	1.93	8	P	Pn	21 23 19.9	+1.2
TRIZ	Trizonia	1.93	8	ePn	Pb	21 23 21.0	-0.3
VLS	Valsamata	1.95	332	ePN	Pn	21 23 20.3	+1.2
VLS	Valsamata	1.95	332	ePN	Pn	21 23 20.4	+1.3
VLS	Valsamata	1.95	332	ePn	Pn	21 23 20.4	+1.3
KALE	Kalithea	1.96	9	ePN	Pb	21 23 21.5	-0.4
KALE	Kalithea	1.96	9	ePn	Pb	21 23 21.5	-0.4
EFP	Efpalio	1.98	4	P	Pn	21 23 20.6	+1.2
EFP	Efpalio	1.98	4	ePN	Pb	21 23 21.2	-0.8
EFP	Efpalio	1.98	4	P	Pn	21 23 20.6	+1.2
EFP	Efpalio	1.98	4	ePn	Pb	21 23 21.3	-0.8
DSF	Desfina	2.05	18	P	Pn	21 23 21.6	+1.1
DSF	Desfina	2.05	18	P	Pn	21 23 21.8	+1.3
ATH	Athens Observa	2.19	46	ePB	Pn	21 23 23.7	+1.4
ATH	Athens Observa	2.19	46	ePb	Pn	21 23 23.7	+1.4
VAM	Vamos	2.25	117	ePN	Pn	21 23 24.3	+1.1
VAM	Vamos	2.25	117	ePn	Pn	21 23 24.3	+1.1
PTL	Penteli	2.33	46	P	Pn	21 23 25.8	+1.5
PTL	Penteli	2.33	46	ePN	Pn	21 23 25.4	+1.1
PTL	Penteli	2.33	46	ePn	Pn	21 23 25.4	+1.1
PTL	Penteli	2.33	46	P	Pn	21 23 25.8	+1.5
LKR	Lokris	2.41	24	P	Pn	21 23 26.0	+0.6
LKR	Lokris	2.41	24	P	Pn	21 23 26.0	+0.6
AXAR	Agios Charalam	2.42	17	P	Pb	21 23 28.1	-1.6
AXAR	Agios Charalam	2.42	17	P	Pb	21 23 28.1	-1.6
EVR	Evrytania	2.46	1	ePB	Pn	21 23 28.3	+2.1
EVR	Evrytania	2.46	1	ePb	Pn	21 23 28.3	+2.1
LKD2	Lefkada island	2.49	340	ePN	Pn	21 23 27.7	+1.2
LKD2	Lefkada island	2.49	340	ePn	Pn	21 23 27.7	+1.2
AGG	Agios Georgios	2.61	10	ePN	Pn	21 23 30.1	+2.0
AGG	Agios Georgios	2.61	10	ePn	Pn	21 23 30.1	+2.0
IDI	Anoyia	2.81	113	ePN	Pn	21 23 31.9	+1.0
IDI	Anoyia	2.81	113	ePn	Pn	21 23 31.9	+1.0
THL	Klokotos Trika	3.12	4	ePN	Pn	21 23 36.9	+1.8
THL	Klokotos Trika	3.12	4	ePn	Pn	21 23 36.9	+1.8
AOS	Alonnisos	3.20	31	ePN	Pn	21 23 37.6	+1.4
AOS	Alonnisos	3.20	31	ePn	Pn	21 23 37.6	+1.4
JAN	Janina	3.28	348	ePN	Pn	21 23 39.6	+2.3
JAN	Janina	3.28	348	ePn	Pn	21 23 39.6	+2.3
KEK	Kerkira	3.60	335	ePN	Pn	21 23 44.3	+2.6
KEK	Kerkira	3.60	335	ePn	Pn	21 23 44.3	+2.6
LIT	Litokhoron	3.69	9	ePN	Pn	21 23 45.3	+2.3
LIT	Litokhoron	3.69	9	ePn	Pn	21 23 45.3	+2.3
PLG	Polygyros	4.14	18	ePN	Pn	21 23 51.2	+2.1
PLG	Polygyros	4.14	18	ePn	Pn	21 23 51.3	+2.1
BARS	Barje	6.36	0	ePn	Pn	21 24 20.0	+0.4
GRUS	Gruza	7.47	354	ePn	Pn	21 24 33.9	-1.0
BRTR	Keskin Array B	9.93	67	Pn	Pn	21 25 15.4	+6.7
	0.1nm,0.3s,baz=243,slow=13,SNR=2.9						
VYHS	Vyhne	12.22	351	ePN	Pn	21 25 33.3	-6.7
VYHS				ePG		21 26 40.0	
HFS	Hagfors	24.26	350	P	P	21 28 01.5	-1.3
	0.9nm,0.4s,baz=165,slow=13,SNR=10						
FINES	FINESS Array B	25.16	5	P	P	21 28 10.0	-1.0
	1.1nm,0.6s,baz=157,slow=12,SNR=6.7						
TORD	Torodi Ar. Bea	29.36	223	P	P	21 28 49.6	+0.5
	0.4nm,0.7s,baz=32,slow=8.9,SNR=2.9						
KURBB	Kurchatov Arra	42.50	52	P	P	21 30 39.5	-1.5
	0.4nm,0.8s,baz=278,slow=9.2,SNR=3.8						
MKAR	Makanchi Array	45.40	57	P	P	21 31 03.5	-1.0
	0.3nm,0.6s,baz=270,slow=7.4,SNR=7.3						
ZALV	Zalesovo Beam	46.14	47	P	P	21 31 08.9	-1.2
	0.5nm,0.5s,baz=266,slow=8.7,SNR=4.0						

*STR **07** 21:34:17.4±6.2, 41°.80N×14°.74E, h10km, Ml4.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*ISCJB **07** 21:34:29.9±0.2, 42°.42N±0°.01×13°.35E±0°.01, h8km±1km, mb4.4/54, MS3.9/20, Error ellipse: s-maj=2.0km s-min=1.5km az=30.4*
*NEIC **07** 21:34:29.0, 42°.38N×13°.38E, h7km, mb4.6/18, MW4.5(ROM), After ROM.*
NEIC Felt [III] at Rome. Also felt at Ascoli Piceno, Caserta, Chieti, Martinsicuro and Ofena.
*ROM **07** 21:34:29.7±0.1, 42°.36N×13°.37E, h10km, Ml4.3/26, Error ellipse: s-maj=1.0km s-min=0.8km az=89.0*
*CSEM **07** 21:34:30.7±0.1, 42°.41N×13°.35E, h2km, mb4.5/23, ML4.6/9, Mw4.5, Error ellipse: s-maj=2.3km s-min=1.9km az=22.0*
*PRU **07** 21:34:30.9, 42°.42N×13°.36E, h0km, M4.6*
*IDC **07** 21:34:30.9±0.6, 42°.53N×13°.33E, h0km, mb4.1/19, mb1 4.2/29, mb1mx4.2/38, mbtmp4.1/29, ML4.1/7, MS3.7/19, Ms1 3.7/19, ms1mx3.5/50, Error ellipse: s-maj=12.7km s-min=9.8km az=101.0*
*LDG **07** 21:34:30.1±0.2, 42°.31N×13°.43E, h2km, Ml4.0/12, Error ellipse: s-maj=5.4km s-min=4.1km az=39.0*
*PDG **07** 21:34:30.4±0.5, 42°.37N×13°.37E, h8km, ML4.2/9, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*BEO **07** 21:34:30.2±0.9, 42°.45N×13°.25E, h0km, ML4.4/1*
*MOS **07** 21:34:30.6±1.1, 42°.49N×13°.36E, h12km, mb4.7/28, Error ellipse: s-maj=4.0km s-min=2.9km az=95.9*
*BJI **07** 21:34:31.1, 42°.44N×12°.58E, h37km, mB4.9/14, mb4.7/35, Ms4.9/11, Ms7 4.5/11*
ISC 07 21:34:31.6±0.5, **42°.38N**±0°.01×**13°.36E**±0°.01, **h9**km±2km, **n802**, σ**1s.63**/933, **mb4.6**/54, **MS3.9**/20, **81C-41D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	132	⇓iP	Pg	21 34 32.1	-1.4
AQU				S	Sg	21 34 33.2	-1.6
AQU	L'Aquila	0.04	132	⇑iP	Pg	21 34 31.9	-1.6
AQU	L'Aquila	0.04	132	⇓iPg	Pg	21 34 32.1	-1.4
AQU				Sg	Sg	21 34 33.1	-1.7
AQU	L'Aquila	0.04	132	⇓iPg	Pg	21 34 32.1	-1.4
AQU				Sg	Sg	21 34 33.1	-1.7
CAMP	Campotosto	0.16	13	⇑iPg	Pg	21 34 34.1	-1.1
CAMP				Sg	Sg	21 34 37.0	-0.6
	146μm,0.7s						
CAMP	Campotosto	0.16	13	⇑iPg	Pg	21 34 34.1	-1.1
CAMP				Sg	Sg	21 34 37.0	-0.6
	146μm,0.7s						
FAGN	Fagnano	0.20	125	⇑ePg	Pg	21 34 34.8	-1.0
FAGN				Sg	Sg	21 34 37.5	-1.2
FAGN	Fagnano	0.20	125	⇑ePg	Pg	21 34 34.8	-1.0
FAGN				Sg	Sg	21 34 37.5	-1.2
FIAM	Fiamignano	0.21	238	P	Pg	21 34 35.0	-1.1
FIAM				S	Sg	21 34 38.5	-0.6
FIAM	Fiamignano	0.21	238	⇑ePg	Pg	21 34 35.0	-1.1
FIAM				Sg	Sg	21 34 38.5	-0.6
	99μm,1.1s						
FIAM	Fiamignano	0.21	238	⇑ePg	Pg	21 34 35.0	-1.1
FIAM				Sg	Sg	21 34 38.5	-0.6
	99μm,1.1s						
TERO	Teramo	0.30	37	P	Pg	21 34 36.2	-1.5
TERO				S	Sg	21 34 39.8	-1.9
TERO	Teramo	0.30	37	Pg	Pg	21 34 36.2	-1.5
TERO				Sg	Sg	21 34 41.1	-0.6
	50μm,0.5s						
TERO	Teramo	0.30	37	Pg	Pg	21 34 36.2	-1.5
TERO				S	Sg	21 34 39.8	-1.9
TERO				Sg	Sg	21 34 41.1	-0.6

	50µm,0.5s						
LNSS	**Leonessa**	**0.32**	**313**	Pg	**Pg**	**21 34 37.0**	**-1.1**
LNSS				Sg	**Sg**	**21 34 42.7**	**+0.2**
	51µm,0.6s						
LNSS	**Leonessa**	**0.32**	**313**	Pg	**Pg**	**21 34 37.0**	**-1.1**
VCEL	**Villa Celiera**	**0.36**	**88**	Pg	**Pg**	**21 34 37.3**	**-1.4**
VCEL				Sg	**Sg**	**21 34 43.6**	**+0.2**
	130µm,0.8s						
VCEL	**Villa Celiera**	**0.36**	**88**	Pg	**Pg**	**21 34 37.3**	**-1.4**
VCEL				Sg	**Sg**	**21 34 43.6**	**+0.2**
	130µm,0.8s						
PTQR	**Pietraquaria**	**0.36**	**175**	P	**Pg**	**21 34 37.1**	**-1.6**
PTQR	**Pietraquaria**	**0.36**	**175**	⇑*i*Pg	**Pg**	**21 34 37.1**	**-1.6**
PTQR	**Pietraquaria**	**0.36**	**175**	P	**Pg**	**21 34 37.2**	**-1.6**
GAVE	**Gavelli**	**0.46**	**312**	Pg	**Pg**	**21 34 40.0**	**-0.7**
GAVE	**Gavelli**	**0.46**	**312**	Pg	**Pg**	**21 34 40.0**	**-0.7**
NRCA	**Norcia**	**0.49**	**338**	P	**Pg**	**21 34 39.6**	**-1.6**
NRCA				S	**Sg**	**21 34 47.7**	**+0.1**
NRCA	**Norcia**	**0.49**	**338**	Pg	**Pg**	**21 34 39.6**	**-1.6**
NRCA				Sg	**Sg**	**21 34 47.7**	**+0.1**
	10µm,0.2s						
NRCA	**Norcia**	**0.49**	**338**	Pg	**Pg**	**21 34 39.6**	**-1.6**
MNS	**Montasola**	**0.50**	**271**	P	**Pg**	**21 34 39.9**	**-1.5**
MNS				S	**Sb**	**21 34 50.3**	**+0.1**
MNS	**Montasola**	**0.50**	**271**	P	**Pg**	**21 34 39.9**	**-1.5**
MNS				S	**Sb**	**21 34 50.3**	**+0.1**
MNS	**Montasola**	**0.50**	**271**	⇑*e*Pg	**Pg**	**21 34 39.8**	**-1.6**
	21µm,1.0s						
MNS	**Montasola**	**0.50**	**271**	P	**Pg**	**21 34 39.9**	**-1.6**
MNS				S	**Sb**	**21 34 50.3**	**+0.1**
CERT	**Cerreto**	**0.52**	**213**	P	**Pg**	**21 34 39.9**	**-1.8**
CERT				S	**Sb**	**21 34 49.9**	**-0.6**
CERT	**Cerreto**	**0.52**	**213**	⇑*e*Pg	**Pg**	**21 34 39.8**	**-1.8**
	37µm,0.7s						
CERT	**Cerreto**	**0.52**	**213**	P	**Pg**	**21 34 39.9**	**-1.8**
CERT				S	**Sb**	**21 34 49.9**	**-0.6**
VVLD	**Villa Vallelon**	**0.55**	**159**	Pg	**Pg**	**21 34 40.1**	**-2.2**
	19µm,0.9s						
VVLD	**Villa Vallelon**	**0.55**	**159**	Pg	**Pg**	**21 34 40.1**	**-2.2**
	19µm,0.9s						
INTR	**Introdacqua**	**0.55**	**132**	Pg	**Pg**	**21 34 40.5**	**-1.8**
INTR				Sg	**Sg**	**21 34 49.3**	**-0.2**
	29µm,0.8s						
INTR	**Introdacqua**	**0.55**	**132**	Pg	**Pg**	**21 34 40.5**	**-1.8**
INTR				Sg	**Sg**	**21 34 49.3**	**-0.2**
	29µm,0.8s						
MTCE	**Montecelio**	**0.58**	**232**	⇑*e*Pg	**Pg**	**21 34 41.1**	**-1.8**
	21µm,1.5s						
MTCE	**Montecelio**	**0.58**	**232**	⇑*e*Pg	**Pg**	**21 34 41.1**	**-1.8**
	21µm,1.5s						
GUAR	**Guarcino**	**0.59**	**184**	Pg	**Pg**	**21 34 41.0**	**-2.0**
	10µm,0.7s						
GUAR	**Guarcino**	**0.59**	**184**	Pg	**Pg**	**21 34 41.0**	**-2.0**
	10µm,0.7s						
OFFI	**Offida**	**0.60**	**23**	P	**Pg**	**21 34 42.6**	**-0.7**
OFFI				S	**Sb**	**21 34 53.7**	**+0.7**
OFFI	**Offida**	**0.60**	**23**	⇑*e*Pg	**Pg**	**21 34 42.6**	**-0.7**
	139µm,0.5s						
OFFI	**Offida**	**0.60**	**23**	⇑*e*Pg	**Pg**	**21 34 42.6**	**-0.7**
	139µm,0.5s						
OFFI				S	**Sb**	**21 34 53.7**	**+0.7**
FDMO	**Fiordimonte**	**0.69**	**343**	P	**Pg**	**21 34 43.1**	**-1.8**
FDMO				S	**Sg**	**21 34 53.8**	**-0.1**
FDMO	**Fiordimonte**	**0.69**	**343**	Pg	**Pg**	**21 34 43.1**	**-1.8**
	8µm,0.9s						
FDMO	**Fiordimonte**	**0.69**	**343**	Pg	**Pg**	**21 34 43.1**	**-1.8**
	8µm,0.9s						
FDMO				S	**Sg**	**21 34 53.8**	**-0.1**
CESI	**CESI - Serrava**	**0.71**	**332**	P	**Pg**	**21 34 43.7**	**-1.6**
CESI				S	**Sb**	**21 34 55.7**	**-0.4**
CESI	**CESI - Serrava**	**0.71**	**332**	Pg	**Pg**	**21 34 43.6**	**-1.7**
	3µm,0.7s						
CESI	**CESI - Serrava**	**0.71**	**332**	Pg	**Pg**	**21 34 43.6**	**-1.7**
	3µm,0.7s						
CESI				S	**Sb**	**21 34 55.7**	**-0.4**
POFI	**Posta Fibreno**	**0.71**	**158**	Pg	**Pg**	**21 34 43.0**	**-2.4**
	6µm,0.7s						
POFI	**Posta Fibreno**	**0.71**	**158**	Pg	**Pg**	**21 34 43.0**	**-2.4**
	6µm,0.7s						
RMP	**Rome, Mte Porz**	**0.75**	**221**	Pg	**Pg**	**21 34 44.0**	**-2.1**
	13µm,1.0s						
RMP	**Rome, Mte Porz**	**0.75**	**221**	Pg	**Pg**	**21 34 44.0**	**-2.1**
	13µm,1.0s						
RDP	**Rocca di Papa**	**0.79**	**218**	Pg	**Pg**	**21 34 44.6**	**-2.2**
	14µm,0.6s						
RDP	**Rocca di Papa**	**0.79**	**218**	Pg	**Pg**	**21 34 44.6**	**-2.2**
	14µm,0.6s						
MA9	**Marino**	**0.80**	**221**	Pg	**Pg**	**21 34 45.2**	**-1.9**
	8µm,0.6s						
MA9	**Marino**	**0.80**	**221**	Pg	**Pg**	**21 34 45.2**	**-1.9**
	8µm,0.6s						
GIUL	**Giuliano Di Ro**	**0.83**	**186**	Pg	**Pg**	**21 34 45.1**	**-2.5**
	9µm,0.9s						
GIUL	**Giuliano Di Ro**	**0.83**	**186**	Pg	**Pg**	**21 34 45.1**	**-2.5**
	9µm,0.9s						
ASSB	**Assisi San Ben**	**0.84**	**322**	Pg	**Pg**	**21 34 46.1**	**-1.7**
	10µm,0.8s						
ASSB	**Assisi San Ben**	**0.84**	**322**	Pg	**Pg**	**21 34 46.1**	**-1.7**
	10µm,0.8s						
FRES	**Fresagrandinar**	**1.05**	**112**	Pg	**Pg**	**21 34 49.2**	**-2.7**
FRES	**Fresagrandinar**	**1.05**	**112**	Pg	**Pg**	**21 34 49.2**	**-2.7**
MGAB	**Montegabbione**	**1.06**	**300**	Pg	**Pg**	**21 34 50.3**	**-1.8**
MGAB	**Montegabbione**	**1.06**	**300**	Pg	**Pg**	**21 34 50.3**	**-1.8**
ARVD	**Arcevia**	**1.16**	**345**	Pg	**Pb**	**21 34 51.5**	**-2.3**
	10µm,0.8s						
ARVD	**Arcevia**	**1.16**	**345**	Pg	**Pb**	**21 34 51.5**	**-2.3**
	10µm,0.8s						
AOI	**Ancona**	**1.18**	**9**	Pg	**Pb**	**21 34 52.0**	**-2.3**
	9µm,0.9s						
AOI	**Ancona**	**1.18**	**9**	Pg	**Pb**	**21 34 52.0**	**-2.3**
	9µm,0.9s						
FSSB	**Fossombrone**	**1.38**	**342**	Pg	**Pn**	**21 34 55.6**	**-1.5**
	9µm,0.5s						
FSSB	**Fossombrone**	**1.38**	**342**	Pg	**Pn**	**21 34 55.6**	**-1.5**
	9µm,0.5s						
VENT	**Ventotene**	**1.59**	**178**	Pg	**Pn**	**21 34 58.0**	**-1.9**
	4µm,1.4s						
PESA	**Pesaro**	**1.60**	**346**	Pg	**Pn**	**21 34 59.9**	**-0.3**
	9µm,0.8s						
PESA	**Pesaro**	**1.60**	**346**	Pg	**Pn**	**21 34 59.9**	**-0.3**
	9µm,0.8s						
MS1	**Monte Sant'Ang**	**2.04**	**109**	*e*Pn	**Pn**	**21 35 06.3**	**+0.1**
MS1				*e*Sn	**Sg**	**21 35 37.3**	**+0.2**
NVLJ	**Novalja**	**2.44**	**26**	*i* Pn	**Pn**	**21 35 10.8**	**-0.9**
NVLJ				Sn	**Sn**	**21 35 41.6**	**0.0**
NVLJ	**Novalja**	**2.44**	**26**	*i* Pn	**Pn**	**21 35 10.7**	**-0.9**
NVLJ				Sn	**Sn**	**21 35 41.6**	**0.0**
CDT	**Castel del Mon**	**2.54**	**120**	*e*Pn	**Pn**	**21 35 14.4**	**+1.4**
CDT				*e*Sn	**Sb**	**21 35 47.6**	**-1.1**
MAIM	**Mastiano**	**2.60**	**307**	P	**Pn**	**21 35 14.4**	**+0.6**
VLC	**Villacollemand**	**2.81**	**310**	*e*Pn	**Pn**	**21 35 17.2**	**+0.5**
VLC				*e*Sn	**Sn**	**21 35 51.0**	**+0.3**
VLC	**Villacollemand**	**2.81**	**310**	*e*Pn	**Pn**	**21 35 17.2**	**+0.5**
VLC				*e*Sn	**Sn**	**21 35 51.0**	**+0.3**
BAI	**Bari**	**2.92**	**115**	*e*Pn	**Pn**	**21 35 19.1**	**+0.8**
BAI				*e*Sn	**Sn**	**21 35 56.1**	**+2.6**
CUC	**Castrocucco**	**3.02**	**141**	*e*Pn	**Pn**	**21 35 19.7**	**0.0**
CUC	**Castrocucco**	**3.02**	**141**	*e*Pn	**Pn**	**21 35 19.7**	**0.0**
OSPF	**L'Ospedale**	**3.19**	**258**	P	**Pn**	**21 35 21.2**	**-0.8**
OSPF	**L'Ospedale**	**3.19**	**258**	P	**Pn**	**21 35 21.2**	**-0.8**
OSPF	**L'Ospedale**	**3.19**	**258**	P	**Pn**	**21 35 21.2**	**-0.8**
GRAM	**Graiana**	**3.19**	**312**	P	**Pn**	**21 35 23.0**	**+0.9**
SKDS	**Skadanscina**	**3.20**	**8**	⇑*i*Pn	**Pn**	**21 35 21.0**	**-1.1**
SKDS				*i* Sn	**Sn**	**21 35 59.7**	**-0.7**
SKDS							
	comp=Z,535nm,0.8s						
SKDS	**Skadanscina**	**3.20**	**8**	Pn	**Pn**	**21 35 21.0**	**-1.1**
SKDS				*i* Sn	**Sn**	**21 35 59.7**	**-0.7**
	comp=Z,535nm,0.8s						
KNDS	**Knezji Dol**	**3.23**	**13**	⇑*i*Pn	**Pn**	**21 35 21.9**	**-0.7**
KNDS				*e*Sn	**Sn**	**21 36 02.3**	**+1.0**
KNDS							
	comp=Z,706nm,0.6s						
KNDS	**Knezji Dol**	**3.23**	**13**	⇑*i*Pn	**Pn**	**21 35 21.9**	**-0.7**
KNDS				*e*Sn	**Sn**	**21 36 02.3**	**+1.0**
	comp=Z,706nm,0.6s						
PGF	**Pioggiola**	**3.23**	**274**	*e*Pn	**Pn**	**21 35 22.5**	**-0.1**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**21 36 02.6**	**+1.3**
	comp=Z,198nm,0.9s						
PGF	**Pioggiola**	**3.23**	**274**	*e*P	**Pn**	**21 35 22.5**	**-0.1**
PGF				*e*		21 36 02.6	
PGF	**Pioggiola**	**3.23**	**274**	*e*Pn	**Pn**	**21 35 22.5**	**-0.1**
PGF				*e*Sn	**Sn**	**21 36 02.6**	**+1.3**

PGF	**Pioggiola**	**3.23**	**274**	*e*Pn	**Pn**	**21 35 22.5**	**-0.1**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**21 36 02.6**	**+1.3**
	comp=Z,99nm,0.9s						
STON	**Ston**	**3.24**	**80**	*i* Pn	**Pn**	**21 35 22.1**	**-0.5**
STON				Sn	**Sn**	**21 36 01.2**	**-0.1**
STON	**Ston**	**3.24**	**80**	*i* Pn	**Pn**	**21 35 22.1**	**-0.5**
STON				Sn	**Sn**	**21 36 01.2**	**-0.1**
CODM	**Codolo**	**3.25**	**309**	P	**Pn**	**21 35 23.6**	**+0.7**
GBRS	**Gornja Briga**	**3.32**	**18**	⇑*i*Pn	**Pn**	**21 35 23.2**	**-0.6**
TRI	**Trieste**	**3.34**	**5**	*e*P	**Pn**	**21 35 22.2**	**-1.8**
TRI	**Trieste**	**3.34**	**5**	*e*Pn	**Pn**	**21 35 22.2**	**-1.8**
TRI				*e*Pg	**Pg**	**21 35 33.9**	**-1.7**
TRI				S	**Sg**	**21 36 16.0**	**-2.9**
TRI	**Trieste**	**3.34**	**5**	*e*P	**Pn**	**21 35 22.2**	**-1.8**
BOJS	**Bojanci**	**3.41**	**23**	⇑*i*Pn	**Pn**	**21 35 24.5**	**-0.5**
BOJS	**Bojanci**	**3.41**	**23**	⇑*i*Pn	**Pn**	**21 35 24.4**	**-0.5**
BOJS	**Bojanci**	**3.41**	**23**	⇑*i*Pn	**Pn**	**21 35 24.4**	**-0.5**
SC2M	**Scurtabo**	**3.44**	**307**	P	**Pn**	**21 35 26.0**	**+0.5**
BLY	**Banja Luka**	**3.65**	**48**	⇑*i*Pn	**Pn**	**21 35 28.5**	**+0.2**
BLY	**Banja Luka**	**3.65**	**48**	⇑*i*Pn	**Pn**	**21 35 28.5**	**+0.2**
VOY	**Vojsko**	**3.67**	**6**	*e*Pn	**Pn**	**21 35 27.1**	**-1.5**
VOY	**Vojsko**	**3.67**	**6**	*e*Pn	**Pn**	**21 35 27.1**	**-1.5**
CRNS	**Crni Vrh**	**3.75**	**10**	⇑*i*Pn	**Pn**	**21 35 29.1**	**-0.7**
CRNS				*e*Sn	**Sn**	**21 36 14.4**	**+0.3**
CRNS							
	comp=Z,500nm,1.1s						
LJU	**Ljubljana**	**3.76**	**13**	⇑*i*Pn	**Pn**	**21 35 29.6**	**-0.2**
LJU				*i* Sn	**Sn**	**21 36 13.5**	**-0.6**
LJU							
	comp=Z,962nm,1.2s						
LJU	**Ljubljana**	**3.76**	**13**	⇑*i*Pn	**Pn**	**21 35 29.6**	**-0.2**
LJU				*i* Sn	**Sn**	**21 36 13.5**	**-0.6**
	comp=Z,962nm,1.2s						
SISC	**Sisak**	**3.78**	**34**	*e*Pn	**Pn**	**21 35 30.9**	**+0.8**
SISC				Sn	**Sn**	**21 36 15.0**	**+0.4**
SISC	**Sisak**	**3.78**	**34**	*e*Pn	**Pn**	**21 35 30.8**	**+0.8**
SISC				Sn	**Sn**	**21 36 14.9**	**+0.4**
HCY	**Herceg Novi**	**3.80**	**87**	⇑*i*Pn	**Pn**	**21 35 30.4**	**0.0**
HCY				*e*Sn	**Sn**	**21 36 16.6**	**+1.4**
HCY	**Herceg Novi**	**3.80**	**87**	⇑*i*Pn	**Pn**	**21 35 30.4**	**0.0**
HCY				*e*Sn	**Sn**	**21 36 16.6**	**+1.4**
BRY	**Bratogost**	**3.86**	**81**	⇓*i*Pn	**Pn**	**21 35 31.1**	**-0.1**
BRY				*e*Sn	**Sn**	**21 36 18.4**	**+1.7**
BRY	**Bratogost**	**3.86**	**81**	⇓*i*Pn	**Pn**	**21 35 31.1**	**-0.1**
BRY				*e*Sn	**Sn**	**21 36 18.4**	**+1.7**
BUM	**Brajici-Budva**	**4.10**	**89**	⇓*i*Pn	**Pn**	**21 35 34.9**	**+0.3**
BUM				*e*Sn	**Sn**	**21 36 23.8**	**+1.1**
BUM	**Brajici-Budva**	**4.10**	**89**	⇓*i*Pn	**Pn**	**21 35 34.9**	**+0.3**
BUM				*e*Sn	**Sn**	**21 36 23.8**	**+1.1**
TIP	**Timpagrande**	**4.11**	**140**	*e*Pn	**Pn**	**21 35 37.6**	**+2.9**
TIP	**Timpagrande**	**4.11**	**140**	*e*Pn	**Pn**	**21 35 37.6**	**+2.9**
PCP	**Piancastagn**	**4.12**	**303**	P	**Pn**	**21 35 34.5**	**-0.2**
UPM	**Unac-Piva**	**4.16**	**77**	⇑*i*Pn	**Pn**	**21 35 36.0**	**+0.5**
UPM				*e*Sn	**Sn**	**21 36 25.6**	**+1.2**
UPM	**Unac-Piva**	**4.16**	**77**	⇑*i*Pn	**Pn**	**21 35 36.0**	**+0.5**
UPM				*e*Sn	**Sn**	**21 36 25.6**	**+1.2**
VSL	**Villasalto**	**4.17**	**228**	*e*Pn	**Pn**	**21 35 34.9**	**-0.6**
VSL				Sn	**Sn**	**21 36 22.8**	**-1.6**
VSL	**Villasalto**	**4.17**	**228**	*e*Pn	**Pn**	**21 35 34.9**	**-0.6**
VSL				Sn	**Sn**	**21 36 22.8**	**-1.6**
NKY	**Niksic**	**4.18**	**82**	⇑*i*Pn	**Pn**	**21 35 36.4**	**+0.7**
NKY				*e*Sn	**Sn**	**21 36 25.6**	**+0.9**
NKY	**Niksic**	**4.18**	**82**	⇑*i*Pn	**Pn**	**21 35 36.4**	**+0.7**
NKY				*e*Sn	**Sn**	**21 36 25.6**	**+0.9**
OBKA	**Obir**	**4.21**	**11**	*i* Pn	**Pn**	**21 35 35.6**	**-0.5**
	SNR=46						
OBKA	**Obir**	**4.21**	**11**	*i* Pn	**Pn**	**21 35 35.6**	**-0.5**
OBKA	**Obir**	**4.21**	**11**	*i* Pn	**Pn**	**21 35 35.6**	**-0.5**
MYKA	**Terra Mystica**	**4.25**	**3**	⇓*i*Pn	**Pn**	**21 35 36.3**	**-0.3**
MYKA	**Terra Mystica**	**4.25**	**3**	⇓*i*Pn	**Pn**	**21 35 36.3**	**-0.3**
MYKA	**Terra Mystica**	**4.25**	**3**	⇓*i*Pn	**Pn**	**21 35 36.3**	**-0.3**
PDG	**Podgorica**	**4.37**	**87**	⇑*i*Pn	**Pn**	**21 35 38.4**	**+0.3**
PDG				*e*Sn	**Sn**	**21 36 30.0**	**+1.0**
PDG	**Podgorica**	**4.37**	**87**	⇓*i*Pn	**Pn**	**21 35 38.4**	**+0.3**
PDG				*e*Sn	**Sn**	**21 36 30.0**	**+1.0**
TTG	**Podgorica**	**4.37**	**87**	⇓*i*Pn	**Pn**	**21 35 38.4**	**+0.3**
TTG				*e*Sn	**Sn**	**21 36 30.0**	**+1.0**
ULC	**Ulcinj**	**4.39**	**93**	⇓*i*Pn	**Pn**	**21 35 38.9**	**+0.4**
ULC				*e*Sn	**Sn**	**21 36 30.1**	**+0.3**
ULC	**Ulcinj**	**4.39**	**93**	⇓*i*Pn	**Pn**	**21 35 38.9**	**+0.4**
ULC				*e*Sn	**Sn**	**21 36 30.1**	**+0.3**
ABTA	**Abfaltersbach**	**4.41**	**352**	*i* Pn	**Pn**	**21 35 38.6**	**-0.2**
	SNR=197						
ABTA	**Abfaltersbach**	**4.41**	**352**	*i* Pn	**Pn**	**21 35 38.6**	**-0.2**
ABTA	**Abfaltersbach**	**4.41**	**352**	*i* Pn	**Pn**	**21 35 38.6**	**-0.2**
SOKA	**Soboth**	**4.46**	**15**	⇑*i*Pn	**Pn**	**21 35 39.0**	**-0.5**
SOKA	**Soboth**	**4.46**	**15**	⇑*i*Pn	**Pn**	**21 35 39.0**	**-0.5**
SOKA	**Soboth**	**4.46**	**15**	⇑*i*Pn	**Pn**	**21 35 39.0**	**-0.5**
PLE	**Pljevlja**	**4.53**	**76**	*e*Pn	**Pn**	**21 35 41.7**	**+1.2**
PLE				*e*Sn	**Sn**	**21 36 34.3**	**+0.9**
PLE	**Pljevlja**	**4.53**	**76**	*e*Pn	**Pn**	**21 35 41.7**	**+1.2**
PLE				*e*Sn	**Sn**	**21 36 34.3**	**+0.9**
SAOF	**Saorge**	**4.54**	**293**	P	**Pn**	**21 35 41.1**	**+0.6**
SAOF	**Saorge**	**4.54**	**293**	P	**Pn**	**21 35 41.1**	**+0.6**
SAOF	**Saorge**	**4.54**	**293**	P	**Pn**	**21 35 41.1**	**+0.6**
SAOF	**Saorge**	**4.54**	**293**	P	**Pn**	**21 35 41.1**	**+0.6**
CEL	**Celeste**	**4.55**	**154**	*e*Pn	**Pn**	**21 35 41.0**	**+0.3**
CEL	**Celeste**	**4.55**	**154**	*e*Pn	**Pn**	**21 35 41.0**	**+0.3**
SBF	**Sospel**	**4.58**	**291**	*e*Pn	**Pn**	**21 35 41.1**	**-0.1**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**21 36 31.5**	**-3.0**
	comp=Z,112nm,0.7s						
SBF	**Sospel**	**4.58**	**291**	*e*P	**Pn**	**21 35 41.1**	**-0.1**
SBF				*e*		21 36 31.5	
SBF	**Sospel**	**4.58**	**291**	*e*Pn	**Pn**	**21 35 41.1**	**-0.1**
SBF				*e*Sn	**Sn**	**21 36 31.5**	**-3.0**
SBF	**Sospel**	**4.58**	**291**	*e*Pn	**Pn**	**21 35 41.1**	**-0.1**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**21 36 31.5**	**-3.0**
	comp=Z,56nm,0.7s						
REVF	**Revere**	**4.60**	**289**	P	**Pn**	**21 35 41.5**	**+0.2**
REVF	**Revere**	**4.60**	**289**	P	**Pn**	**21 35 41.5**	**+0.2**
REVF	**Revere**	**4.60**	**289**	P	**Pn**	**21 35 41.5**	**+0.2**
REVF	**Revere**	**4.60**	**289**	P	**Pn**	**21 35 41.5**	**+0.2**
AUTN	**L'Aution**	**4.63**	**292**	P	**Pn**	**21 35 42.8**	**+0.9**
AUTN	**L'Aution**	**4.63**	**292**	P	**Pn**	**21 35 42.8**	**+0.9**
AUTN	**L'Aution**	**4.63**	**292**	P	**Pn**	**21 35 42.8**	**+0.9**
AUTN	**L'Aution**	**4.63**	**292**	P	**Pn**	**21 35 42.8**	**+0.9**
BBLS	**Lazići**	**4.67**	**69**	*e*Pn	**Pn**	**21 35 42.9**	**+0.6**
BBLS	**Lazići**	**4.67**	**69**	*e*Pn	**Pn**	**21 35 42.9**	**+0.6**
KBA	**Koelnbreinsper**	**4.70**	**360**	⇓*i*P	**Pn**	**21 35 42.5**	**-0.3**
KBA	**Koelnbreinsper**	**4.70**	**360**	⇓*i*Pn	**Pn**	**21 35 42.5**	**-0.3**
	SNR=57						
KBA	**Koelnbreinsper**	**4.70**	**360**	⇓*i*Pn	**Pn**	**21 35 42.5**	**-0.3**
KBA	**Koelnbreinsper**	**4.70**	**360**	*i* P	**Pn**	**21 35 42.5**	**-0.3**
TOUF	**Mont Tournerai**	**4.76**	**292**	P	**Pn**	**21 35 44.6**	**+0.9**
TOUF	**Mont Tournerai**	**4.76**	**292**	P	**Pn**	**21 35 44.6**	**+0.9**
TOUF	**Mont Tournerai**	**4.76**	**292**	P	**Pn**	**21 35 44.6**	**+0.9**
TOUF	**Mont Tournerai**	**4.76**	**292**	P	**Pn**	**21 35 44.6**	**+0.9**
BEHE	**Becsehely**	**4.76**	**30**	*e*pPn	**Pn**	**21 35 45.2**	**+1.6**
BEHE	**Becsehely**	**4.76**	**30**	*e*P	**Pn**	**21 35 45.2**	**+1.6**
FUORN	**Ofenpass-Fuorn**	**4.78**	**333**	*e*Pn	**Pn**	**21 35 45.4**	**+1.3**
FUORN				*e*Sn	**Sn**	**21 36 40.6**	**+0.9**
FUORN	**Ofenpass-Fuorn**	**4.78**	**333**	*e*Pn	**Pn**	**21 35 45.4**	**+1.3**
FUORN				*e*Sn	**Sn**	**21 36 40.6**	**+0.9**
MVIF	**Mont Vial**	**4.79**	**291**	P	**Pn**	**21 35 46.0**	**+1.9**
MVIF	**Mont Vial**	**4.79**	**291**	P	**Pn**	**21 35 46.0**	**+1.9**
MVIF	**Mont Vial**	**4.79**	**291**	P	**Pn**	**21 35 46.0**	**+1.9**
MVIF	**Mont Vial**	**4.79**	**291**	P	**Pn**	**21 35 46.0**	**+1.9**
BEY	**Berane**	**4.84**	**82**	*e*Pn	**Pn**	**21 35 46.0**	**+1.2**
BEY				*e*Sn	**Sn**	**21 36 42.3**	**+1.3**
IVA	**Berane**	**4.84**	**82**	*e*Pn	**Pn**	**21 35 46.0**	**+1.2**
IVA				*e*Sn	**Sn**	**21 36 42.3**	**+1.3**
PUK	**Puka**	**4.86**	**92**	*e*P	**Pn**	**21 35 45.6**	**+0.6**
PUK	**Puka**	**4.86**	**92**	*e*P	**Pn**	**21 35 45.6**	**+0.6**
PVY	**Plav**	**4.88**	**85**	*e*Pn	**Pn**	**21 35 46.6**	**+1.2**
PVY				*e*Sn	**Sn**	**21 36 43.0**	**+0.9**
CALN	**Calern**	**4.94**	**288**	P	**Pn**	**21 35 46.7**	**+0.6**
CALN	**Calern**	**4.94**	**288**	P	**Pn**	**21 35 46.7**	**+0.6**
CALN	**Calern**	**4.94**	**288**	P	**Pn**	**21 35 46.7**	**+0.6**
CALN	**Calern**	**4.94**	**288**	P	**Pn**	**21 35 46.7**	**+0.6**
TIR	**Tirane**	**4.97**	**100**	*e*P	**Pn**	**21 35 46.7**	**+0.3**
TIR	**Tirane**	**4.97**	**100**	P	**Pn**	**21 35 48.7**	**+2.3**
TIR	**Tirane**	**4.97**	**100**	⇑*i*Pn	**Pn**	**21 35 46.5**	**+0.1**
TIR				*e*Sn	**Sn**	**21 36 44.1**	**+0.2**
TIR	**Tirane**	**4.97**	**100**	⇑*i*Pn	**Pn**	**21 35 46.5**	**+0.1**
TIR	**Tirane**	**4.97**	**100**	P	**Pn**	**21 35 48.7**	**+2.3**
TIR				*e*Sn	**Sn**	**21 36 44.1**	**+0.2**
BCI	**Bajram Curri**	**4.97**	**88**	*e*P	**Pn**	**21 35 47.7**	**+1.3**

BCI	**Bajram Curri**	**4.97**	**88**	*e*P	**Pn**	**21 35 47.7**	**+1.3**
TEKS	**Tekeris**	**4.99**	**62**	*e*Pn	**Pn**	**21 35 46.0**	**-0.6**
TEKS	**Tekeris**	**4.99**	**62**	*e*Pn	**Pn**	**21 35 46.0**	**-0.6**
TUE	**Stuetta**	**5.00**	**326**	*e*Pn	**Pn**	**21 35 47.2**	**+0.2**
TUE				*e*Sn	**Sn**	**21 36 43.6**	**-1.4**
TUE	**Stuetta**	**5.00**	**326**	*e*Pn	**Pn**	**21 35 47.2**	**+0.2**
TUE				*e*Sn	**Sn**	**21 36 43.6**	**-1.4**
FETA	**Feichten**	**5.00**	**339**	⇑*i*Pn	**Pn**	**21 35 48.0**	**+1.0**
	SNR=73						
FETA	**Feichten**	**5.00**	**339**	⇑*i*Pn	**Pn**	**21 35 48.0**	**+1.0**
FETA	**Feichten**	**5.00**	**339**	⇑*i*Pn	**Pn**	**21 35 48.0**	**+1.0**
WTTA	**Wattenberg**	**5.03**	**346**	*i* P	**Pn**	**21 35 48.6**	**+1.1**
WTTA	**Wattenberg**	**5.03**	**346**	*i* Pn	**Pn**	**21 35 48.6**	**+1.1**
	SNR=45						
WTTA	**Wattenberg**	**5.03**	**346**	*i* Pn	**Pn**	**21 35 48.6**	**+1.1**
WTTA	**Wattenberg**	**5.03**	**346**	*i* P	**Pn**	**21 35 48.6**	**+1.1**
DAVOX	**Davos/Dischmat**	**5.05**	**332**	Pn	**Pn**	**21 35 49.7**	**+2.0**
DAVOX				Sn	**Sn**	**21 36 47.5**	**+1.2**
DAVOX	**Davos/Dischmat**	**5.05**	**332**	Pn	**Pn**	**21 35 49.7**	**+2.0**
	comp=Z,10nm,0.3s,baz=156,slow=17,SNR=63						
DAVOX				Sn	**Sn**	**21 36 47.5**	**+1.2**
	comp=Z,6.6nm,0.3s,baz=303,slow=21,SNR=5.6						
DAVOX	**Davos/Dischmat**	**5.05**	**332**	P	**Pn**	**21 35 49.7**	**+2.0**
	comp=Z,10.0nm,0.3s						
DAVOX				S	**Sn**	**21 36 47.5**	**+1.2**
	comp=Z,7.0nm,0.3s						
FRF	**La Foret Royal**	**5.07**	**286**	*e*Pn	**Pn**	**21 35 47.1**	**-0.6**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**21 36 41.4**	**-4.9**
	comp=Z,24nm,0.6s						
FRF	**La Foret Royal**	**5.07**	**286**	*e*P	**Pn**	**21 35 47.1**	**-0.6**
FRF				*e*		21 36 41.4	
FRF	**La Foret Royal**	**5.07**	**286**	*e*Pn	**Pn**	**21 35 47.1**	**-0.6**
FRF				*e*Sn	**Sn**	**21 36 41.4**	**-4.9**
FRF	**La Foret Royal**	**5.07**	**286**	*e*Pn	**Pn**	**21 35 47.1**	**-0.6**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**21 36 41.4**	**-4.9**
	comp=Z,12nm,0.6s						
ARSA	**Arzberg**	**5.11**	**17**	*i* Pn	**Pn**	**21 35 47.4**	**-0.9**
	SNR=41						
ARSA	**Arzberg**	**5.11**	**17**	*i* Pn	**Pn**	**21 35 47.4**	**-0.9**
ARSA	**Arzberg**	**5.11**	**17**	⇑*i*Pn	**Pn**	**21 35 46.8**	**-1.5**
ARSA	**Arzberg**	**5.11**	**17**	*i* Pn	**Pn**	**21 35 47.4**	**-0.9**
WATA	**Walderalm**	**5.11**	**346**	⇓*i*P	**Pn**	**21 35 49.9**	**+1.4**
WATA	**Walderalm**	**5.11**	**346**	⇓*i*Pn	**Pn**	**21 35 49.9**	**+1.4**
	SNR=57						
WATA	**Walderalm**	**5.11**	**346**	⇓*i*Pn	**Pn**	**21 35 49.9**	**+1.4**
WATA	**Walderalm**	**5.11**	**346**	*i* P	**Pn**	**21 35 49.9**	**+1.4**
IVAS	**Ivanjica**	**5.12**	**74**	*e*Pn	**Pn**	**21 35 48.6**	**0.0**
IVAS				*e*Sn	**Sn**	**21 36 47.8**	**-0.1**
IVAS	**Ivanjica**	**5.12**	**74**	*e*Pn	**Pn**	**21 35 48.6**	**0.0**
IVAS				*e*Sn	**Sn**	**21 36 47.8**	**-0.1**
LMR	**La Mourre**	**5.12**	**283**	*e*Pn	**Pn**	**21 35 47.8**	**-0.7**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**21 36 43.7**	**-4.1**
	comp=Z,28nm,0.7s						
LMR	**La Mourre**	**5.12**	**283**	*e*P	**Pn**	**21 35 47.8**	**-0.7**
LMR				*e*		21 36 43.7	
LMR	**La Mourre**	**5.12**	**283**	*e*Pn	**Pn**	**21 35 47.8**	**-0.7**
LMR				*e*Sn	**Sn**	**21 36 43.7**	**-4.1**
LMR	**La Mourre**	**5.12**	**283**	*e*Pn	**Pn**	**21 35 47.8**	**-0.7**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**21 36 43.7**	**-4.1**
	comp=Z,14nm,0.7s						
DIVS	**Divibare**	**5.14**	**68**	⇑*i*Pn	**Pn**	**21 35 48.4**	**-0.4**
DIVS	**Divibare**	**5.14**	**68**	⇑*i*Pn	**Pn**	**21 35 48.4**	**-0.4**
SURF	**Saint Ours**	**5.21**	**296**	P	**Pn**	**21 35 52.6**	**+2.7**
SURF	**Saint Ours**	**5.21**	**296**	P	**Pn**	**21 35 52.6**	**+2.7**
SURF	**Saint Ours**	**5.21**	**296**	P	**Pn**	**21 35 52.6**	**+2.7**
MOTA	**Moosalm**	**5.21**	**343**	⇓*i*P	**Pn**	**21 35 51.3**	**+1.4**
MOTA	**Moosalm**	**5.21**	**343**	⇓*i*Pn	**Pn**	**21 35 51.3**	**+1.4**
	SNR=84						
MOTA	**Moosalm**	**5.21**	**343**	⇓*i*Pn	**Pn**	**21 35 51.3**	**+1.4**
MOTA	**Moosalm**	**5.21**	**343**	*i* P	**Pn**	**21 35 51.3**	**+1.4**
PHP	**Peshkopia**	**5.32**	**95**	*e*P	**Pn**	**21 35 51.9**	**+0.7**
PHP	**Peshkopia**	**5.32**	**95**	P	**Pn**	**21 35 52.4**	**+1.1**
PHP	**Peshkopia**	**5.32**	**95**	P	**Pn**	**21 35 52.4**	**+1.1**
MBDF	**Montbardon**	**5.33**	**298**	*e*P	**Pn**	**21 35 52.8**	**+1.3**
MBDF	**Montbardon**	**5.33**	**298**	*e*P	**Pn**	**21 35 52.8**	**+1.3**
MBDF	**Montbardon**	**5.33**	**298**	*e*P	**Pn**	**21 35 52.8**	**+1.3**
MBDF	**Montbardon**	**5.33**	**298**	*e*P	**Pn**	**21 35 52.8**	**+1.3**
RJOB	**Jochberg**	**5.37**	**356**	*e*Pn	**Pn**	**21 35 52.0**	**0.0**
PKSM	**Moragy**	**5.39**	**43**	⇑*i*P	**Pn**	**21 35 53.5**	**+1.4**
PKSM	**Moragy**	**5.39**	**43**	*e*Pn	**Pn**	**21 35 50.5**	**-1.6**
PKSM	**Moragy**	**5.39**	**43**	⇑*e*Pn	**Pn**	**21 35 50.8**	**-1.3**
PKSM	**Moragy**	**5.39**	**43**	*e*Pn	**Pn**	**21 35 50.5**	**-1.6**
PKSM	**Moragy**	**5.39**	**43**	⇑*e*P	**Pn**	**21 35 50.8**	**-1.3**
RETA	**Reutte**	**5.43**	**341**	*i* Pn	**Pn**	**21 35 54.4**	**+1.6**
	SNR=19						
RETA	**Reutte**	**5.43**	**341**	*i* Pn	**Pn**	**21 35 54.4**	**+1.6**
RETA	**Reutte**	**5.43**	**341**	*i* Pn	**Pn**	**21 35 54.4**	**+1.6**
TRUS	**Trudelj**	**5.46**	**68**	⇑*i*Pn	**Pn**	**21 35 51.7**	**-1.5**
TRUS	**Trudelj**	**5.46**	**68**	⇑*i*Pn	**Pn**	**21 35 51.7**	**-1.5**
PKS9	**Tamasi**	**5.48**	**38**	*e*pPn	**Pn**	**21 35 52.7**	**-0.7**
PKS9	**Tamasi**	**5.48**	**38**	*e*P	**Pn**	**21 35 52.7**	**-0.7**
DAVA	**Damuels**	**5.49**	**334**	⇑*i*Pn	**Pn**	**21 35 55.2**	**+1.5**
	SNR=44						
DAVA	**Damuels**	**5.49**	**334**	⇑*i*Pn	**Pn**	**21 35 55.2**	**+1.5**
DAVA	**Damuels**	**5.49**	**334**	⇑*i*Pn	**Pn**	**21 35 55.2**	**+1.5**
MOA	**Molln**	**5.50**	**6**	⇑*i*Pn	**Pn**	**21 35 53.6**	**-0.2**
	SNR=41						
MOA	**Molln**	**5.50**	**6**	⇑*i*Pn	**Pn**	**21 35 53.6**	**-0.2**
MOA	**Molln**	**5.50**	**6**	⇑*i*Pn	**Pn**	**21 35 53.6**	**-0.2**
BNI	**Bardonecchia**	**5.53**	**301**	*e*P	**Pn**	**21 35 56.4**	**+2.2**
BNI				*e*		21 37 01.6	
BNI	**Bardonecchia**	**5.53**	**301**	*e*Pn	**Pn**	**21 35 56.4**	**+2.2**
BNI				*e*Sn	**Sn**	**21 37 01.6**	**+3.6**
KEK	**Kerkira**	**5.55**	**117**	P	**Pn**	**21 35 55.4**	**+1.0**
GRUS	**Gruza**	**5.59**	**72**	⇑*i*Pn	**Pn**	**21 35 54.7**	**-0.2**
GRUS	**Gruza**	**5.59**	**72**	⇑*i*Pn	**Pn**	**21 35 54.7**	**-0.2**
LPG	**La Plagne**	**5.70**	**305**	*e*P	**Pn**	**21 35 58.4**	**+1.7**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**21 36 57.3**	**-5.0**
	comp=Z,53nm,0.7s						
LPG	**La Plagne**	**5.70**	**305**	*e*P	**Pn**	**21 35 58.4**	**+1.7**
LPG				*e*		21 36 57.3	
LPG	**La Plagne**	**5.70**	**305**	*e*P	**Pn**	**21 35 58.4**	**+1.7**
LPG				*e*Sn	**Sn**	**21 36 57.3**	**-5.0**
LPG	**La Plagne**	**5.70**	**305**	*e*P	**Pn**	**21 35 58.4**	**+1.7**
	SNR=1.0						
LPL	**La Plagne**	**5.72**	**305**	*e*P	**Pn**	**21 35 58.6**	**+1.7**
LPL				*e*Sn	**Sn**	**21 36 57.4**	**-5.4**
	comp=Z,44nm,0.7s						
LPL	**La Plagne**	**5.72**	**305**	*e*P	**Pn**	**21 35 58.6**	**+1.7**
LPL				*e*		21 36 57.4	
LPL	**La Plagne**	**5.72**	**305**	*e*P	**Pn**	**21 35 58.6**	**+1.7**
LPL				*e*Sn	**Sn**	**21 36 57.4**	**-5.4**
LPL	**La Plagne**	**5.72**	**305**	*e*P	**Pn**	**21 35 58.6**	**+1.7**
SOP	**Sopron**	**5.76**	**22**	*e*pPn	**Pn**	**21 35 56.7**	**-0.6**
SOP	**Sopron**	**5.76**	**22**	*e*P	**Pn**	**21 35 56.7**	**-0.6**
SELS	**Selova**	**5.77**	**79**	*e*Pn	**Pn**	**21 35 56.8**	**-0.6**
SELS	**Selova**	**5.77**	**79**	*e*Pn	**Pn**	**21 35 56.8**	**-0.6**
CONA	**Conrad Observa**	**5.82**	**17**	⇓*i*Pn	**Pn**	**21 35 57.2**	**-1.0**
	SNR=57						
CONA	**Conrad Observa**	**5.82**	**17**	⇓*i*Pn	**Pn**	**21 35 57.2**	**-1.0**
CONA	**Conrad Observa**	**5.82**	**17**	⇓*i*Pn	**Pn**	**21 35 57.2**	**-1.0**
SENIN	**Lac Senin/Sane**	**5.89**	**315**	*e*Pn	**Pn**	**21 36 01.0**	**+1.7**
SENIN				*e*Sn	**Sn**	**21 37 08.3**	**+1.3**
SENIN	**Lac Senin/Sane**	**5.89**	**315**	*e*Pn	**Pn**	**21 36 01.0**	**+1.7**
SENIN				*e*Sn	**Sn**	**21 37 08.3**	**+1.3**
PKST	**T^'s**	**5.90**	**33**	*e*Pn	**Pn**	**21 35 58.4**	**-0.8**
PKST	**T^'s**	**5.90**	**33**	*e*P	**Pn**	**21 35 58.4**	**-0.8**
SMRF	**Simiane la Rot**	**5.91**	**288**	*e*P	**Pn**	**21 36 00.3**	**+0.9**
SMRF	**Simiane la Rot**	**5.91**	**288**	*e*P	**Pn**	**21 36 00.3**	**+0.9**
SMRF	**Simiane la Rot**	**5.91**	**288**	*e*P	**Pn**	**21 36 00.3**	**+0.9**
GDM	**Grand'Maison**	**5.95**	**301**	P	Pn	21 36 03.7	+3.6
GDM	**Grand'Maison**	**5.95**	**301**	P	Pn	21 36 03.7	+3.6
FUR	**Furstenfeldbru**	**5.97**	**346**	*e*P	**Pn**	**21 36 01.0**	**+0.9**
FUR	**Furstenfeldbru**	**5.97**	**346**	*e*Pn	**Pn**	**21 36 01.0**	**+0.9**
FUR	**Furstenfeldbru**	**5.97**	**346**	*e*P	**Pn**	**21 36 01.0**	**+0.9**
ORIF	**Oris-en-Rattie**	**5.99**	**298**	*e*P	Pn	21 36 03.8	+3.3
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**21 37 04.5**	**-4.7**
	comp=Z,49nm,0.7s						
ORIF	**Oris-en-Rattie**	**5.99**	**298**	*e*P	Pn	21 36 03.8	+3.3
ORIF				*e*		21 37 04.5	
ORIF	**Oris-en-Rattie**	**5.99**	**298**	*e*P	Pn	21 36 03.8	+3.3
ORIF				*e*Sn	**Sn**	**21 37 04.5**	**-4.7**
SKO	**Skopje**	**6.02**	**91**	*e*Pn	**Pn**	**21 36 01.6**	**+0.8**
SKO	**Skopje**	**6.02**	**91**	*e*Pn	**Pn**	**21 36 01.2**	**+0.4**
SKO	**Skopje**	**6.02**	**91**	*e*Pn	**Pn**	**21 36 01.1**	**+0.3**
SVIS	**Svilajnac**	**6.03**	**69**	*e*Pn	**Pn**	**21 36 00.3**	**-0.7**

BIA	Bitola	6.11	100	ePn	Pn	21 36 02.4	+0.1
BIA	Bitola	6.11	100	ePn	Pn	21 36 02.3	+0.1
PKS6	Bocsa	6.12	44	epPn	Pn	21 36 01.7	-0.5
PKS6	Bocsa	6.12	44	eP	Pn	21 36 01.7	-0.5
PKSG		6.15	34	epPn	Pn	21 36 02.3	-0.3
PKSG		6.15	34	eP	Pn	21 36 02.3	-0.3
GRN	Grenoble	6.21	300	P	Pn	21 36 06.9	+3.4
GRN	Grenoble	6.21	300	P	Pn	21 36 06.9	+3.4
GRN	Grenoble	6.21	300	P	Pn	21 36 06.9	+3.4
FNA	Florina	6.22	102	P	Pn	21 36 04.3	+0.7
FNA	Florina	6.22	102	eP	Pn	21 36 04.0	+0.4
PKS7	Kunszentmiklos	6.23	40	epPn	Pn	21 36 02.6	-1.1
PKS7	Kunszentmiklos	6.23	40	eP	Pn	21 36 02.6	-1.1
BARS	Barje	6.25	83	⇑iPn	Pn	21 36 04.1	0.0
BARS				eSn	Sn	21 37 13.9	-1.8
JAN	Janina	6.28	113	eP	Pn	21 36 05.8	+1.3
BOLS	Boljevac	6.45	74	ePn	Pn	21 36 05.2	-1.6
BOLS	Boljevac	6.45	74	ePn	Pn	21 36 05.2	-1.6
GEC2	GERESS Array S	6.47	2	eP	Pn	21 36 05.8	-1.3
GEC2	GERESS Array S	6.47	2	ePn	Pn	21 36 05.8	-1.3
GEC2	GERESS Array S	6.47	2	eP	Pn	21 36 05.8	-1.3
GERES	GERESS Array B	6.47	2	Pn	Pn	21 36 05.7	-1.3
GERES				Sn	Sn	21 37 16.9	-4.1
GERES	GERESS Array B	6.47	2	Pn	Pn	21 36 05.7	-1.3
	comp=Z,2.3nm,0.3s,baz=172,slow=13,SNR=60						
GERES				Sn	Sn	21 37 16.9	-4.1
	comp=Z,6.0nm,0.3s,baz=176,slow=23,SNR=6.0						
GERES	GERESS Array B	6.47	2	P	Pn	21 36 05.7	-1.3
	comp=Z,2.0nm,0.3s						
PKSN	Nyarlorinc	6.47	44	epPn	Pn	21 36 09.9	+2.9
BUD	Budapest	6.49	36	epPn	Pn	21 36 08.6	+1.3
BUD	Budapest	6.49	36	eP	Pn	21 36 08.6	+1.3
BBS	Basel-Blauen	6.56	323	P	Pn	21 36 09.8	+1.5
BBS	Basel-Blauen	6.56	323	P	Pn	21 36 09.8	+1.5
BBS	Basel-Blauen	6.56	323	P	Pn	21 36 09.8	+1.5
LKD2	Lefkada island	6.61	120	P	Pn	21 36 10.1	+1.1
KZN	Kozani	6.66	105	eP	Pn	21 36 12.6	+2.9
FELD	Feldberg im Sc	6.67	327	P	Pn	21 36 09.3	-0.6
FELD	Feldberg im Sc	6.67	327	P	Pn	21 36 09.3	-0.6
CABF	La Chapelle	6.70	312	ePn	Pn	21 36 10.5	+0.2
CABF	La Chapelle	6.70	312	eP	Pn	21 36 10.5	+0.2
CABF	La Chapelle	6.70	312	ePn	Pn	21 36 10.5	+0.2
CABF	La Chapelle	6.70	312	ePn	Pn	21 36 10.5	+0.2
KHC	Kasperske Hory	6.75	1	eP	Pn	21 36 09.7	-1.2
KHC				e		21 37 25.7	
KHC	Kasperske Hory	6.75	1	ePn	Pn	21 36 09.7	-1.2
KHC				eSn	Sn	21 37 25.7	-2.2
KHC	Kasperske Hory	6.75	1	ePN	Pn	21 36 09.3	-1.6
KHC				ex	x	21 36 20.5	
KHC				eSN	Sn	21 37 24.5	-3.4
KHC				ex	x	21 37 49.5	
KHC				AMS	AMS	21 39 00.0	
	comp=Z,700nm,13.2s						
KHC	Kasperske Hory	6.75	1	eP	Pn	21 36 09.7	-1.2
KHC				eS	Sn	21 37 25.7	-2.2
SMOL	Smolenice	6.77	24	eSN	Sn	21 37 14.5	-14
WET	Wettzell	6.77	357	eP	Pn	21 36 10.0	-1.2
WET	Wettzell	6.77	357	ePn	Pn	21 36 10.0	-1.2
WET	Wettzell	6.77	357	eP	Pn	21 36 10.0	-1.2
VIVF	Saint-Julien-l	6.77	294	ePn	Pn	21 36 12.8	+1.6
	SNR=1.0						
VIVF	Saint-Julien-l	6.77	294	eP	Pn	21 36 12.8	+1.6
VIVF	Saint-Julien-l	6.77	294	ePn	Pn	21 36 12.8	+1.6
VIVF	Saint-Julien-l	6.77	294	ePn	Pn	21 36 12.8	+1.6
	SNR=1.0						
BZS	Buzias	6.78	59	⇓iP	Pn	21 36 12.9	+1.7
BZS	Buzias	6.78	59	ePn	Pn	21 36 11.0	-0.2
BZS	Buzias	6.78	59	ePn	Pn	21 36 11.0	-0.2
LOMF	Lomont	6.80	319	P	Pn	21 36 11.7	+0.1
LOMF	Lomont	6.80	319	P	Pn	21 36 11.7	+0.1
LOMF	Lomont	6.80	319	P	Pn	21 36 11.7	+0.1
LOMF	Lomont	6.80	319	P	Pn	21 36 11.7	+0.1
ZAPS	Zavoj	6.88	79	ePn	Pn	21 36 13.2	+0.6
ZAPS	Zavoj	6.88	79	ePn	Pn	21 36 13.2	+0.6
GRG	Griva	6.92	99	P	Pn	21 36 13.1	-0.2
GRG	Griva	6.92	99	eP	Pn	21 36 13.0	-0.2
BFO	Black Forest	6.92	331	eP	Pn	21 36 12.6	-0.6
BFO	Black Forest	6.92	331	ePn	Pn	21 36 12.6	-0.6
BFO	Black Forest	6.92	331	ePn	Pn	21 36 12.3	-0.9
	comp=Z,54nm,0.9s						
BFO				eSn	Sn	21 37 30.7	-1.4
BFO	Black Forest	6.92	331	eP	Pn	21 36 12.6	-0.6
BFO				eSn	Sn	21 37 30.7	-1.4
VLS	Valsamata	6.94	125	P	Pn	21 36 14.7	+1.2
VAY	Valandovo	6.96	96	ePn	Pn	21 36 12.9	-0.8
VAY	Valandovo	6.96	96	ePn	Pn	21 36 13.4	-0.3
SSB	Saint Sauveur	7.00	297	eP	Pn	21 36 13.9	-0.5
SSB						21 37 30.9	
SSB				pmax	pmax		
	comp=Z,18nm,0.7s						
SSB	Saint Sauveur	7.00	297	ePn	Pn	21 36 13.9	-0.5
	comp=Z,18nm,0.7s						
SSB				Sn	Sn	21 37 30.9	-3.2
SSB	Saint Sauveur	7.00	297	eP	Pn	21 36 13.9	-0.5
	comp=Z,18nm,0.7s						
MOF	Molkenrain	7.02	323	P	Pn	21 36 14.3	-0.4
MOF	Molkenrain	7.02	323	P	Pn	21 36 14.3	-0.4
MOF	Molkenrain	7.02	323	P	Pn	21 36 14.3	-0.4
MOF	Molkenrain	7.02	323	P	Pn	21 36 14.3	-0.4
STU	Stuttgart	7.03	337	eP	Pn	21 36 13.0	-1.6
STU				e		21 37 34.0	
STU	Stuttgart	7.03	337	ePn	Pn	21 36 13.0	-1.6
STU				eSn	Sn	21 37 34.0	-0.6
STU	Stuttgart	7.03	337	eP	Pn	21 36 13.0	-1.6
STU				eS	Sn	21 37 34.0	-0.6
TREC	Trest	7.07	11	eP	Pn	21 36 14.2	-1.1
TREC				e		21 37 31.1	
TREC				MLR	MLR		
	comp=Z,900nm,16.5s						
TREC	Trest	7.07	11	ePN	Pn	21 36 14.2	-1.1
TREC				eSN	Sn	21 37 31.1	-4.7
TREC				AMS	AMS	21 39 10.0	
	comp=Z,900nm,16.5s						
TREC	Trest	7.07	11	Pn	Pn	21 36 14.2	-1.1
KFL	Anninata	7.10	124	P	Pn	21 36 17.3	+1.6
HINF	Hinteralfeld	7.12	322	ePn	Pn	21 36 14.5	-1.5
HINF				eSn	Sn	21 37 31.4	-5.6
	comp=Z,164nm,1.0s						
HINF	Hinteralfeld	7.12	322	eP	Pn	21 36 14.5	-1.5
HINF				e		21 37 31.4	
HINF	Hinteralfeld	7.12	322	ePn	Pn	21 36 14.5	-1.5
HINF				eSn	Sn	21 37 31.4	-5.6
HINF	Hinteralfeld	7.12	322	ePn	Pn	21 36 14.5	-1.5
THL	Klokotos Trika	7.13	110	P	Pn	21 36 17.5	+1.5
THL	Klokotos Trika	7.13	110	eP	Pn	21 36 18.3	+2.3
LASF	Ste Croix	7.14	287	ePn	Pn	21 36 16.0	-0.3
	SNR=1.0						
LASF	Ste Croix	7.14	287	ePn	Pn	21 36 16.0	-0.3
LASF	Ste Croix	7.14	287	ePn	Pn	21 36 16.0	-0.3
	SNR=1.0						
PSZ	Piszkesteto	7.21	38	eP	Pn	21 36 14.6	-2.6
PSZ	Piszkesteto	7.21	38	ePn	Pn	21 36 14.6	-2.6
PSZ	Piszkesteto	7.21	38	⇑iP	Pn	21 36 16.2	-1.0
PSZ	Piszkesteto	7.21	38	⇓ePn	Pn	21 36 17.4	+0.2
PSZ	Piszkesteto	7.21	38	eP	Pn	21 36 14.6	-2.6
VYHS	Vyhne	7.22	30	ePN	Pn	21 36 17.8	+0.4
VYHS				ePG	Pg	21 36 58.5	+8.6
VYHS				eSN	Sn	21 37 34.3	-5.2
VYHS				e		21 38 33.5	
VYHS	Vyhne	7.22	30	ePn	Pn	21 36 17.8	+0.4
KNT	Kendrikon	7.23	97	P	Pn	21 36 17.3	-0.2
LIT	Litokhoron	7.25	105	P	Pn	21 36 17.9	+0.2
LIT	Litokhoron	7.25	105	eP	Pn	21 36 18.0	+0.2
VTS	Vitosha	7.28	85	P	Pn	21 36 19.1	+0.8
VTS	Vitosha	7.28	85	⇑P	Pn	21 36 19.3	+1.0
VTS	Vitosha	7.28	85	⇑iP	Pn	21 36 19.3	+1.0
VTS	Vitosha	7.28	85	⇑iPn	Pn	21 36 18.5	+0.2
VTS	Vitosha	7.28	85	⇑iPn	Pn	21 36 18.5	+0.2
VTS	Vitosha	7.28	85	P	Pn	21 36 19.3	+1.0
VRAC	Vranov	7.29	17	Pn	Pn	21 36 17.3	-0.9
VRAC	Vranov	7.29	17	⇑iP	Pn	21 36 17.4	-0.9
VRAC	Vranov	7.29	17	Pn	Pn	21 36 17.3	-0.9
	comp=Z,1.3nm,0.3s,baz=208,slow=14,SNR=11						
VRAC				LR	LR	21 39 18.7	
	comp=Z,588nm,19.3s,baz=207,slow=40						
VRAC	Vranov	7.29	17	P	Pn	21 36 17.3	-0.9
	comp=Z,1.0nm,0.3s						
ECH	Echery	7.29	325	eP	Pn	21 36 16.5	-1.8
ECH				e		21 37 38.1	
ECH				pmax	pmax		
	comp=Z,24nm,0.6s						

ECH	Echery	7.29	325	ePn	Pn	21 36 16.5	-1.8
	comp=Z,24nm,0.6s						
ECH				eSn	Sn	21 37 38.1	-3.0
ECH	Echery	7.29	325	P	Pn	21 36 17.7	-0.6
ECH	Echery	7.29	325	ePn	Pn	21 36 16.5	-1.8
	comp=Z,24nm,0.6s						
ECH	Echery	7.29	325	P	Pn	21 36 17.7	-0.6
ECH				eS	Sn	21 37 38.1	-3.0
EVR	Evrytania	7.30	116	P	Pn	21 36 20.8	+2.3
EVR	Evrytania	7.30	116	eP	Pn	21 36 20.7	+2.3
KEST	Kesra	7.34	206	ePn	Pn	21 36 23.1	+4.0
KEST	Kesra	7.34	206	Pn	Pn	21 36 22.7	+3.7
	comp=Z,3.6nm,0.3s,baz=309,slow=4.2,SNR=69						
KEST				LR	LR	21 39 25.1	
	comp=Z,231nm,19.6s,baz=339,slow=39						
CDF	Champ du Feu	7.39	327	ePn	Pn	21 36 18.8	-1.0
CDF				eSn	Sn	21 37 38.7	-5.1
	comp=Z,45nm,0.6s,SNR=1.0						
CDF	Champ du Feu	7.39	327	eP	Pn	21 36 18.8	-1.0
CDF				e		21 37 38.7	
CDF	Champ du Feu	7.39	327	ePn	Pn	21 36 18.8	-1.0
CDF				eSn	Sn	21 37 38.7	-5.1
CDF	Champ du Feu	7.39	327	ePn	Pn	21 36 18.8	-1.0
THE	Thessaloniki	7.42	100	eP	Pn	21 36 20.5	+0.5
ROTZ	Rotzenmuhle	7.43	354	ePn	Pn	21 36 19.6	-0.6
GZR	Gura Zlata	7.44	63	⇓iP	Pn	21 36 21.6	+1.2
GRA1	Grafenberg Arr	7.46	349	eP	Pn	21 36 20.1	-0.5
GRF	Grafenberg Arr	7.46	349	eP	Pn	21 36 20.1	-0.5
GRF	Grafenberg Arr	7.46	349	ePn	Pn	21 36 20.1	-0.5
GRFO	Grafenberg	7.46	349	eP	Pn	21 36 18.1	-2.5
GRFO				e		21 37 39.3	
GRFO	Grafenberg	7.46	349	ePn	Pn	21 36 18.1	-2.5
GRFO				eSn	Sn	21 37 39.3	-6.0
GRFO	Grafenberg	7.46	349	eP	Pn	21 36 18.1	-2.5
MAKR	Makrakomi, Fth	7.46	114	P	Pn	21 36 23.4	+2.7
HAU	Haudompre	7.49	321	ePn	Pn	21 36 20.2	-0.9
HAU				eSn	Sn	21 37 38.8	-7.3
	comp=Z,70nm,0.5s,SNR=1.0						
HAU	Haudompre	7.49	321	eP	Pn	21 36 20.2	-0.9
HAU				e		21 37 38.8	
HAU	Haudompre	7.49	321	ePn	Pn	21 36 20.2	-0.9
HAU				eSn	Sn	21 37 38.8	-7.3
HAU	Haudompre	7.49	321	ePn	Pn	21 36 20.2	-0.9
RLS	Riolos of Patr	7.56	122	eP	Pn	21 36 24.3	+2.4
AGG	Agios Georgios	7.59	113	eP	Pn	21 36 24.9	+2.4
EFP	Efpalio	7.62	118	eP	Pn	21 36 25.5	+2.7
SOH	Sokhos	7.65	98	P	Pn	21 36 23.1	-0.2
SOH	Sokhos	7.65	98	eP	Pn	21 36 22.9	-0.4
PRU	Pruhonice	7.65	6	ePN	Pn	21 36 22.1	-1.1
PRU				eSN	Sn	21 37 44.3	-5.7
PRU				AMS	AMS	21 39 30.0	
	comp=Z,700nm,16.4s						
PRU	Pruhonice	7.65	6	Pn	Pn	21 36 22.1	-1.1
DEV	Deva	7.71	60	P	Pn	21 36 25.4	+1.5
DEV	Deva	7.71	60	⇑iP	Pn	21 36 27.0	+3.1
DEV	Deva	7.71	60	P	Pn	21 36 25.4	+1.5
SRS	Serrai	7.75	96	P	Pn	21 36 24.2	-0.5
LAKA	Lakka	7.78	119	eP	Pn	21 36 28.1	+3.1
KALE	Kalithea	7.79	118	eP	Pn	21 36 29.7	+4.4
THEF	They Montfort	7.82	321	P	Pn	21 36 25.2	-0.3
THEF	They Montfort	7.82	321	P	Pn	21 36 25.2	-0.3
THEF	They Montfort	7.82	321	P	Pn	21 36 25.2	-0.3
THEF	They Montfort	7.82	321	P	Pn	21 36 25.2	-0.3
PLG	Polygyros	7.84	101	P	Pn	21 36 25.2	-0.7
PLG	Polygyros	7.84	101	eP	Pn	21 36 25.8	-0.1
NKC	Novy Kostel	7.88	356	ePN	Pn	21 36 25.0	-1.4
NKC				eSN	Sn	21 37 50.9	-4.7
NKC				AMS	AMS	21 39 40.0	
	comp=Z,800nm,15.8s						
NKC	Novy Kostel	7.88	356	Pn	Pn	21 36 25.0	-1.4
NVR	Nevrokopi	7.91	94	eP	Pn	21 36 27.1	+0.3
MORC	Moravsky Berou	7.95	20	⇑P	Pn	21 36 28.0	+0.7
MORC	Moravsky Berou	7.95	20	ePn	Pn	21 36 26.1	-1.2
MORC				eSn	Sn	21 37 57.0	-0.3
MORC	Moravsky Berou	7.95	20	⇑iP	Pn	21 36 28.0	+0.7
MORC	Moravsky Berou	7.95	20	ePn	Pn	21 36 26.1	-1.2
MORC	Moravsky Berou	7.95	20	P	Pn	21 36 28.0	+0.7
MORC				eSn	Sn	21 37 57.0	-0.3
DRGR		8.00	53	⇓P	Pn	21 36 30.1	+2.1
DRGR		8.00	53	⇓iP	Pn	21 36 30.1	+2.1
DRGR		8.00	53	P	Pn	21 36 30.1	+2.1
SMF	Signal de Mont	8.03	305	ePn	Pn	21 36 28.5	+0.1
	SNR=1.0						
SMF				eSn	Sn	21 37 52.4	-6.8
	comp=Z,43nm,0.8s						
SMF	Signal de Mont	8.03	305	eP	Pn	21 36 28.5	+0.1
SMF				e		21 37 52.4	
SMF	Signal de Mont	8.03	305	ePn	Pn	21 36 28.5	+0.1
SMF				eSn	Sn	21 37 52.4	-6.8
SMF	Signal de Mont	8.03	305	ePn	Pn	21 36 28.5	+0.1
	SNR=1.0						
XOR	Xorichti	8.04	109	P	Pn	21 36 28.8	+0.3
TANN	Tannenbergstha	8.06	356	ePn	Pn	21 36 28.9	0.0
LOT	Lotru	8.12	64	⇓iP	Pn	21 36 31.6	+1.9
OKC	Ostrava-Krasne	8.16	22	ePN	Pn	21 36 28.8	-1.4
OKC				eSN	Sn	21 37 57.6	-4.9
OKC				AMS	AMS	21 40 30.0	
	comp=Z,700nm,11.2s						
OKC	Ostrava-Krasne	8.16	22	Pn	Pn	21 36 28.8	-1.4
PAIG	Paliouri	8.16	104	eP	Pn	21 36 31.1	+0.9
PAGF	Fort de Pagny	8.18	322	ePn	Pn	21 36 30.3	-0.1
PAGF	Fort de Pagny	8.18	322	ePn	Pn	21 36 30.3	-0.1
PAGF	Fort de Pagny	8.18	322	ePn	Pn	21 36 30.3	-0.1
GUR	Goura	8.18	120	P	Pn	21 36 32.3	+1.6
GUR	Goura	8.18	120	eP	Pn	21 36 33.0	+2.3
PVCC	Panska Ves	8.19	5	ePN	Pn	21 36 29.2	-1.4
PVCC				eSN	Sn	21 37 58.5	-4.7
PVCC				AMS	AMS	21 39 50.0	
	comp=Z,600nm,15.6s						
PVCC	Panska Ves	8.19	5	Pn	Pn	21 36 29.2	-1.4
DPC	Dobruska-Polom	8.23	13	eP	Pn	21 36 29.3	-1.9
DPC				e		21 38 03.1	
DPC	Dobruska-Polom	8.23	13	ePn	Pn	21 36 29.3	-1.9
DPC				eSn	Sn	21 38 03.1	-1.2
DPC	Dobruska-Polom	8.23	13	ePN	Pn	21 36 29.2	-1.9
DPC				eSN	Sn	21 37 59.5	-4.7
DPC				AMS	AMS	21 40 00.0	
	comp=Z,700nm,12.6s						
DPC	Dobruska-Polom	8.23	13	eP	Pn	21 36 29.3	-1.9
DPC				eS	Sn	21 38 03.1	-1.2
LKR	Lokris	8.23	114	eP	Pn	21 36 34.8	+3.6
MTLF	Montolieu	8.24	280	ePn	Pn	21 36 31.1	-0.3
	SNR=1.0						
MTLF	Montolieu	8.24	280	eP	Pn	21 36 31.1	-0.3
MTLF	Montolieu	8.24	280	ePn	Pn	21 36 31.1	-0.3
MTLF	Montolieu	8.24	280	ePn	Pn	21 36 31.1	-0.3
	SNR=1.0						
UPC	Upice	8.33	12	ePN	Pn	21 36 31.5	-1.0
UPC				eSN	Sn	21 38 01.9	-4.8
UPC	Upice	8.33	12	Pn	Pn	21 36 31.5	-1.0
LOR	Lormes	8.33	309	ePn	Pn	21 36 31.4	-1.2
	baz=123						
LOR				eSn	Sn	21 38 01.3	-5.5
	comp=Z,17nm,0.6s						
LOR	Lormes	8.33	309	ePn	Pn	21 36 31.4	-1.2
LOR				eSn	Sn	21 38 01.3	-5.5
LOR	Lormes	8.33	309	ePn	Pn	21 36 31.4	-1.2
	baz=123						
MOX	Moxa	8.35	352	eP	Pn	21 36 32.1	-0.7
MOX	Moxa	8.35	352	ePn	Pn	21 36 32.1	-0.7
MOX	Moxa	8.35	352	eP	Pn	21 36 32.1	-0.7
AVF	Avril sur Loir	8.39	305	ePn	Pn	21 36 33.1	-0.3
	SNR=1.0						
AVF	Avril sur Loir	8.39	305	eP	Pn	21 36 33.1	-0.3
AVF	Avril sur Loir	8.39	305	ePn	Pn	21 36 33.1	-0.3
AVF	Avril sur Loir	8.39	305	ePn	Pn	21 36 33.1	-0.3
	SNR=1.0						
SSF	Saint Saulge	8.43	307	ePn	Pn	21 36 33.3	-0.6
SSF	Saint Saulge	8.43	307	eP	Pn	21 36 33.3	-0.6
SSF	Saint Saulge	8.43	307	ePn	Pn	21 36 33.3	-0.6
SSF	Saint Saulge	8.43	307	ePn	Pn	21 36 33.3	-0.6
MEZF	Maizieres J'vi	8.46	319	ePn	Pn	21 36 33.6	-0.6
	baz=148,SNR=1.0						
MEZF	Maizieres J'vi	8.46	319	ePn	Pn	21 36 33.6	-0.6
MEZF	Maizieres J'vi	8.46	319	ePn	Pn	21 36 33.6	-0.6
	baz=148,SNR=1.0						
BRG	Berggiesshubel	8.50	2	PN	Pn	21 36 34.1	-0.8
BRG				i		21 37 06.7	
BRG				i		21 38 07.9	
BRG				i		21 39 02.0	
	comp=Z,48nm,1.2s						
BRG							

	comp=N,486nm,9.3s						
BRG							
	comp=E,443nm,16.9s						
BRG							
	comp=Z,656nm,12.0s						
BRG	Berggiesshubel	8.50	2	P	Pn	21 36 34.1	-0.8
BRG				i		21 38 07.9	
BRG				MLR	MLR		
	comp=N,486nm,9.3s						
BRG				MLR	MLR		
	comp=E,443nm,16.9s						
BRG				MLR	MLR		
	comp=Z,656nm,12.0s						
BRG	Berggiesshubel	8.50	2	P	Pn	21 36 34.1	-0.8
BRG				iS	Sn	21 38 07.9	-3.0
	comp=Z,656nm,12.0s						
RUP	Ruppelstein	8.53	331	P	Pn	21 36 35.5	+0.2
RUP	Ruppelstein	8.53	331	P	Pn	21 36 35.5	+0.2
RUP	Ruppelstein	8.53	331	P	Pn	21 36 35.5	+0.2
LTK	Loutraki	8.54	117	eP	Pn	21 36 39.3	+3.8
NIE	Niedzica	8.54	32	eP	Pn	21 36 38.8	+3.3
NIE	Niedzica	8.54	32	eP	Pn	21 36 38.8	+3.3
VLX	Vlachokerasia	8.55	123	eP	Pn	21 36 39.6	+3.9
CAF	Calviac	8.58	291	eP	Pn	21 36 36.7	+0.8
	SNR=1.0						
CAF	Calviac	8.58	291	eP	Pn	21 36 36.7	+0.8
CAF	Calviac	8.58	291	eP	Pn	21 36 36.7	+0.8
CAF	Calviac	8.58	291	eP	Pn	21 36 36.7	+0.8
	SNR=1.0						
BGF	Bois d'Agland	8.60	303	ePn	Pn	21 36 36.1	-0.1
	SNR=1.0						
BGF	Bois d'Agland	8.60	303	eP	Pn	21 36 36.1	-0.1
BGF	Bois d'Agland	8.60	303	ePn	Pn	21 36 36.1	-0.1
BGF	Bois d'Agland	8.60	303	ePn	Pn	21 36 36.1	-0.1
	SNR=1.0						
CRVS	Cervenica-Dubn	8.64	38	ePN	Pn	21 36 37.8	+1.0
CRVS				ePG	Pg	21 37 22.9	+5.9
CRVS				e		21 39 23.9	
CRVS	Cervenica-Dubn	8.64	38	ePn	Pn	21 36 37.8	+1.0
TRPA	Tarpa	8.65	45	⇑iP	Pn	21 36 40.2	+3.3
TRPA	Tarpa	8.65	45	⇓ePn	Pn	21 36 38.0	+1.1
TRPA	Tarpa	8.65	45	⇓eP	Pn	21 36 38.0	+1.1
ARR	Arges	8.67	66	⇑iP	Pn	21 36 38.9	+1.6
KSP	Ksiaz	8.70	12	eP	Pn	21 36 36.1	-1.5
KSP	Ksiaz	8.70	12	eP	Pn	21 36 36.1	-1.5
WLF	Walferdange	8.84	328	PN	Pn	21 36 41.3	+1.9
WLF				SN	Sn	21 38 20.6	+1.4
	comp=E,15nm,0.0s						
WLF	Walferdange	8.84	328	eP	Pn	21 36 36.5	-3.0
WLF				e		21 38 12.5	
WLF	Walferdange	8.84	328	ePn	Pn	21 36 40.7	+1.2
WLF	Walferdange	8.84	328	ePn	Pn	21 36 36.5	-3.0
WLF				eSn	Sn	21 38 12.5	-6.7
WLF	Walferdange	8.84	328	eP	Pn	21 36 36.5	-3.0
WLF				Sn	Sn	21 38 20.5	+1.4
UZH	Uzhgorod	8.85	42	eP	Pn	21 36 42.4	+2.8
UZH				eS	Sn	21 38 22.4	+3.0
CLL	Collm	8.93	359	eP	Pn	21 36 40.0	-0.8
CLL				e		21 38 12.0	
CLL	Collm	8.93	359	ePn	Pn	21 36 40.8	0.0
CLL	Collm	8.93	359	ePn	Pn	21 36 40.0	-0.8
CLL				eSn	Sn	21 38 12.0	-9.4
CLL				eSg	Sg	21 39 28.0	+10
	comp=E,1μm,21.5s						
CLL				Lmax		21 40 00.0	
CLL				L	L	21 40 12.0	
	comp=Z,500nm,19.2s						
CLL	Collm	8.93	359	eP	Pn	21 36 40.0	-0.8
VOIR		8.97	66	P	Pn	21 36 45.1	+3.7
VOIR		8.97	66	⇓iP	Pn	21 36 45.2	+3.8
DID	Didima	9.01	119	eP	Pn	21 36 43.2	+1.3
OJC	Ojcow	9.01	27	eP	Pn	21 36 42.5	+0.6
OJC	Ojcow	9.01	27	ePn	Pn	21 36 42.5	+0.6
OJC	Ojcow	9.01	27	eP	Pn	21 36 42.5	+0.6
RJF	Les Rejaudoux	9.04	293	eP	Pn	21 36 44.0	+1.7
	SNR=1.0						
RJF	Les Rejaudoux	9.04	293	eP	Pn	21 36 44.0	+1.7
RJF	Les Rejaudoux	9.04	293	eP	Pn	21 36 44.0	+1.7
RJF	Les Rejaudoux	9.04	293	eP	Pn	21 36 44.0	+1.7
	SNR=1.0						
PTL	Penteli	9.12	115	eP	Pn	21 36 47.3	+3.8
VLI	Veliai	9.31	124	eP	Pn	21 36 50.3	+4.3
MLR	Muntele Rosu	9.60	67	Pn	Pn	21 36 51.3	+1.3
MLR	Muntele Rosu	9.60	67	⇑iP	Pn	21 36 51.7	+1.7
MLR	Muntele Rosu	9.60	67	Pn	Pn	21 36 51.3	+1.3
	baz=262,slow=11						
MLR	Muntele Rosu	9.60	67	P	Pn	21 36 51.3	+1.3
MEM	Membach	9.66	331	PN	Pn	21 36 53.3	+2.6
KWP	Kalwaria Pacla	9.73	39	⇑P	Pn	21 36 54.2	+2.4
KWP	Kalwaria Pacla	9.73	39	ePn	Pn	21 36 53.9	+2.1
	comp=Z,48nm,1.0s						
KWP	Kalwaria Pacla	9.73	39	⇑iP	Pn	21 36 54.2	+2.4
BCLA	Clavier	9.77	328	PN	Pn	21 36 54.0	+1.7
BCLA				SN	Sn	21 38 38.3	-3.7
	comp=N,7.7nm,1.0s						
DOU	Dourbes	9.81	325	PN	Pn	21 36 56.8	+4.0
DOU				SN	Sn	21 38 45.1	+2.1
	comp=N,7.5nm,0.7s						
BUR08	Bucovina Ar. S	9.89	54	ePn	Pn	21 36 53.9	-0.2
BUR08	Bucovina Ar. S	9.89	54	ePn	Pn	21 36 53.8	-0.2
BAIF	Baives	9.95	324	ePn	Pn	21 36 53.9	-0.8
	SNR=1.0						
BAIF	Baives	9.95	324	eP	Pn	21 36 53.9	-0.8
BAIF	Baives	9.95	324	ePn	Pn	21 36 53.9	-0.8
BAIF	Baives	9.95	324	ePn	Pn	21 36 53.9	-0.8
	SNR=1.0						
PLOR	Plostina	10.17	66	⇑P	Pn	21 36 59.1	+1.4
PLOR	Plostina	10.17	66	⇑iP	Pn	21 36 59.1	+1.4
PLOR	Plostina	10.17	66	P	Pn	21 36 59.1	+1.4
VRI	Vrincioaia	10.22	66	⇑P	Pn	21 36 59.7	+1.2
VRI	Vrincioaia	10.22	66	⇑iP	Pn	21 36 59.7	+1.2
VRI	Vrincioaia	10.22	66	P	Pn	21 36 59.7	+1.2
PRK	Paraskevi	10.28	103	eP	Pn	21 37 02.8	+3.6
TESR		10.36	62	⇑iP	Pn	21 37 03.0	+2.7
LVV	L'vov	10.49	41	eP	Pn	21 37 04.6	+2.5
LVV				eS	Sn	21 39 05.2	+5.5
LVV				MLR	MLR		
	comp=N,200nm,11.0s						
LVV				MLR	MLR		
	comp=E,200nm,11.0s						
LVV				MLR	MLR		
	comp=Z,200nm,11.0s						
CFR	Carcaliu	11.04	70	P	Pn	21 37 11.0	+1.3
CFR	Carcaliu	11.04	70	⇓iP	Pn	21 37 10.8	+1.1
CFR	Carcaliu	11.04	70	P	Pn	21 37 11.0	+1.3
TIRR	Tirgusor	11.15	74	ePn	Pn	21 37 09.0	-2.1
	comp=Z,8.8nm,0.8s						
TIRR	Tirgusor	11.15	74	⇑iP	Pn	21 37 11.2	+0.1
TIRR	Tirgusor	11.15	74	ePn	Pn	21 37 09.0	-2.1
	comp=Z,8.8nm,0.8s						
TLCR		11.52	71	⇓P	Pn	21 37 17.0	+0.8
TLCR		11.52	71	⇓iP	Pn	21 37 17.0	+0.8
TLCR		11.52	71	P	Pn	21 37 17.0	+0.8
KIS	Kishinev	11.93	62	eP	Pn	21 37 21.0	-0.8
KIS	Kishinev	11.93	62	eP	Pn	21 37 21.0	-0.8
KIS				LRM	MLR	21 42 54.0	
	comp=Z,500nm,14.0s						
KIS	Kishinev	11.93	62	eP	Pn	21 37 21.0	-0.8
SUW	Suwalki	13.34	26	eP	Pn	21 37 41.9	+0.9
SUW	Suwalki	13.34	26	ePn	Pn	21 37 41.9	+0.9
SUW	Suwalki	13.34	26	eP	Pn	21 37 41.9	+0.9
ESDC	Sonseca Array	13.36	264	Pn	Pn	21 37 42.1	+0.7
ESDC	Sonseca Array	13.36	264	Pn	Pn	21 37 42.1	+0.7
	comp=Z,0.2nm,0.3s,baz=65,slow=14,SNR=6.6						
ESDC				LR	LR	21 42 50.9	
	comp=Z,191nm,18.7s,baz=40,slow=38						
ESDC	Sonseca Array	13.36	264	Pn	Pn	21 37 42.1	+0.7
KIEV	Kiev	13.69	47	eP	Pn	21 37 45.1	-0.7
KIEV	Kiev	13.69	47	ePn	Pn	21 37 45.1	-0.7
KIEV	Kiev	13.69	47	eP	Pn	21 37 45.1	-0.7
AKASG	Malin Array Be	13.71	47	P	Pn	21 37 45.7	-0.3
AKASG	Malin Array Be	13.71	47	Pn	Pn	21 37 45.7	-0.3
AKASG	Malin Array Be	13.71	47	Pn	Pn	21 37 45.7	-0.3
	comp=Z,0.3nm,0.3s,baz=237,slow=13,SNR=4.6						
AKASG	Malin Array Be	13.71	47	P	Pn	21 37 45.7	-0.3
SIM	Simferopol'	15.24	73	eP	Pn	21 38 03.9	-3.0
SIM				MLR	MLR		
	comp=Z,100nm,12.0s						
MNK	Minsk	15.43	33	eP	Pn	21 38 07.0	-2.3
MICGM	Minsk	15.45	33	e	Pn	21 38 07.0	-2.5
IIGN	Ignalina	15.46	28	eP	Pn	21 38 09.5	-0.2
IIGN				AMB	AMB	21 38 12.0	
	comp=Z,18nm,1.1s						

BR131 Keskin Array S 15.53 93 ePn Pn 21 38 09.2 -1.6
comp=Z,3.0nm,0.8s
BR131 Keskin Array S 15.53 93 ePn Pn 21 38 09.2 -1.6
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 15.53 93 Pn Pn 21 38 10.9 +0.1
BRTR Keskin Array B 15.53 93 Pn Pn 21 38 10.9 +0.1
comp=Z,0.1nm,0.3s,baz=257,slow=13,SNR=6.9
BRTR Keskin Array B 15.53 93 Pn Pn 21 38 10.9 +0.1
ISAL Salakas 15.60 28 eP Pn 21 38 11.2 -0.3
ISAL AMB AMB 21 38 14.8
comp=Z,9.0nm,1.4s
IZAR Zarasai 15.78 28 eP Pn 21 38 13.1 -0.8
IZAR AMB AMB 21 38 15.8
comp=Z,11nm,0.6s
EKA Eskdalemuir Ar 16.86 326 Pn P 21 38 30.7 +1.0
EKA Eskdalemuir Ar 16.86 326 Pn P 21 38 30.7 +1.0
baz=128,slow=13,SNR=3.5
EKA Eskdalemuir Ar 16.86 326 P P 21 38 30.7 +1.0
MDT Midelt 17.12 242 P P 21 38 36.3 +3.4
MDT Midelt 17.12 242 P P 21 38 36.3 +3.4
comp=Z,0.1nm,0.3s,baz=63,slow=6.8,SNR=2.3
MDT LR LR 21 44 19.2
comp=Z,76nm,19.1s,baz=38,slow=34
ANN Anapa 17.59 74 eP Pn 21 38 35.9 -1.0
ANN eS Sn 21 41 47.9 -4.9
ANN pmax pmax
comp=Z,35nm,1.8s
ANN MLR MLR
comp=E,144nm,18.0s
ANN MLR MLR
comp=Z,262nm,18.0s
ANN Anapa 17.59 74 eP Pn 21 38 35.9 -1.0
comp=Z,35nm,1.8s
HFS Hagfors 17.78 1 P P 21 38 39.4 -0.5
HFS Hagfors 17.78 1 P P 21 38 39.4 -0.5
comp=Z,0.1nm,0.3s,baz=182,slow=11,SNR=4.1
HFS LR LR 21 46 18.6
comp=Z,199nm,20.1s,baz=185,slow=40
HFS Hagfors 17.78 1 P P 21 38 39.4 -0.5
comp=Z,199nm,20.1s
NAO01 NORSAR Array S 18.55 356 eP P 21 38 46.0 -2.4
comp=Z,16nm,1.0s
NAO01 NORSAR Array S 18.55 356 eP P 21 38 46.0 -2.4
comp=Z,16nm,1.0s
NOA NORSAR Array B 18.73 357 P Pn 21 38 50.5 -0.3
NOA NORSAR Array B 18.73 357 P Pn 21 38 50.5 -0.3
comp=Z,0.3nm,0.3s,baz=175,slow=12,SNR=6.7
NOA LR LR 21 46 56.2
comp=Z,192nm,18.0s,baz=180,slow=40
NOA NORSAR Array B 18.73 357 P Pn 21 38 50.5 -0.3
comp=Z,192nm,18.0s
SOC Sochi 19.30 77 eP Pn 21 38 59.0 +1.3
SOC e 21 42 34.7
SOC pmax pmax
comp=Z,22nm,0.7s
SOC MLR MLR
comp=Z,143nm,14.0s
SOC Sochi 19.30 77 eP Pn 21 38 59.0 +1.3
comp=Z,22nm,0.7s
SOC eS S 21 42 34.7 -0.4
comp=Z,143nm,14.0s
MALT Malatya 19.51 94 eP P 21 38 56.2 -3.0
MALT pmax pmax
comp=Z,9.0nm,0.9s
MALT Malatya 19.51 94 eP P 21 38 56.2 -3.0
comp=Z,9.5nm,0.9s
VSR Storozhevoye 19.67 54 eP Pn 21 39 01.3 -0.8
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR pmax pmax
comp=N,20nm,1.3s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR Storozhevoye 19.67 54 eP Pn 21 39 01.3 -0.8
comp=E,20nm,1.3s
MMAI Mount Meron Ar 19.74 111 P Pn 21 39 04.6 +1.4
MMAI Mount Meron Ar 19.74 111 P Pn 21 39 04.6 +1.4
comp=E,0.3nm,0.3s,baz=324,slow=14,SNR=3.5
OBN Obninsk 19.79 42 P P 21 39 02.0 0.0
OBN eS Sn 21 42 45.5 -0.3
OBN pmax pmax
comp=Z,23nm,1.2s
OBN MLR MLR
comp=Z,200nm,18.0s
OBN Obninsk 19.79 42 P P 21 39 02.0 0.0
comp=Z,23nm,1.2s
OBN eS Sn 21 42 45.5 -0.3
comp=Z,200nm,18.0s
FINES FINESS Array B 20.57 18 P P 21 39 09.7 -0.7
FINES FINESS Array B 20.57 18 P P 21 39 09.7 -0.7
comp=Z,42nm,1.2s,baz=191,slow=8.9,SNR=17
FINES FINESS Array B 20.57 18 P P 21 39 09.7 -0.7
comp=Z,42nm,1.2s
FIA1 FINESS Array S 20.57 18 eP P 21 39 08.3 -2.1
FIA1 FINESS Array S 20.57 18 eP P 21 39 08.3 -2.1
TAM Tamanrasset 20.60 201 eP Pn 21 39 13.5 0.0
TAM pmax pmax
comp=Z,13nm,1.1s
TAM Tamanrasset 20.60 201 eP Pn 21 39 13.5 0.0
comp=Z,13nm,1.1s
TAM Tamanrasset 20.60 201 eP Pn 21 39 13.5 0.0
comp=Z,13nm,1.1s
MOS Moscow 20.63 41 eP P 21 39 06.3 -4.8
VRHR Novokhopersk 21.13 56 eP P 21 39 16.7 +0.1
VRHR pmax pmax
comp=Z,30nm,1.0s
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,30nm,0.8s
VRHR Novokhopersk 21.13 56 eP P 21 39 16.7 +0.1
comp=E,20nm,0.6s
KAF Kangasniemi 21.21 17 eP P 21 39 15.5 -1.8
KAF pmax pmax
comp=Z,7.0nm,0.7s
KAF Kangasniemi 21.21 17 ep P 21 39 15.5 -1.8
comp=Z,6.8nm,0.7s
KAF Kangasniemi 21.21 17 eP P 21 39 15.5 -1.8
comp=Z,7.0nm,0.7s
ASF Jabal al Asfar 21.26 111 P P 21 39 20.1 +1.9
ASF Jabal al Asfar 21.26 111 P P 21 39 20.1 +1.9
comp=Z,2.5nm,0.9s,baz=319,slow=11,SNR=3.9
KIV Kislovodsk 21.40 76d iP P 21 39 20.8 +1.1
KIV eS S 21 43 16.2 -1.0
KIV pmax pmax
comp=Z,25nm,0.9s
KIV MLR MLR
comp=Z,65nm,15.0s
KIV Kislovodsk 21.40 76 eP P 21 39 21.2 +1.5
comp=Z,22nm,0.9s
KIV Kislovodsk 21.40 76 i P P 21 39 20.8 +1.1
comp=Z,25nm,0.9s
KIV eS S 21 43 16.2 -1.0
comp=Z,65nm,15.0s
KBZ Khabaz 21.58 76 P P 21 39 22.3 +0.9
KBZ pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 21.58 76 P P 21 39 22.3 +0.9
KBZ Khabaz 21.58 76 P P 21 39 22.3 +0.9
comp=Z,10nm,0.9s,baz=295,slow=7.0,SNR=16
KBZ Khabaz 21.58 76 P P 21 39 22.3 +0.9
comp=Z,10.0nm,0.9s
ONI Oni 22.14 79 P P 21 39 32.0 +4.4
AKH Akhalkalaki 22.40 82 P P 21 39 33.5 +3.0
GOR Gori 22.73 81 P P 21 39 37.7 +3.8
JOF Joensuu 23.11 21 eP P 21 39 37.0 -0.6
JOF pmax pmax
comp=Z,8.0nm,0.7s
JOF Joensuu 23.11 21 ep P 21 39 37.0 -0.6
comp=Z,8.3nm,0.7s
JOF Joensuu 23.11 21 eP P 21 39 37.0 -0.6
comp=Z,8.0nm,0.7s
TBLG Delisi 23.24 81 P P 21 39 46.8 +7.6
DGRG David-gareji 23.77 81 P P 21 39 47.9 +3.5
KLMR Klimovskoe 24.33 32 eP P 21 39 47.9 -1.5
KLMR pmax pmax
comp=Z,37nm,1.4s
KLMR MLR MLR
comp=Z,339nm,16.0s
KLMR Klimovskoe 24.33 32 eP P 21 39 47.9 -1.5
comp=Z,339nm,16.0s
TMCR Tamitsa 26.01 25 eP P 21 40 01.7 -2.9
TMCR pmax pmax
comp=Z,23nm,1.3s
BHD Baghdad 26.02 100 ex P 21 40 09.3 +4.4
BHD ex x 21 44 47.0

ARCES ARCESS Array B 27.94 9 P P 21 40 21.0 -0.9
ARCES ARCESS Array B 27.94 9 P P 21 40 21.0 -0.9
comp=Z,5.4nm,1.1s,baz=179,slow=12,SNR=4.9
ARCES LR LR 21 51 28.9
comp=Z,77nm,21.0s,baz=195,slow=37
ARCES ARCESS Array B 27.94 9 P P 21 40 21.0 -0.9
comp=Z,77nm,21.0s
TOA0 Torodi Ar. Sit 30.84 203 eP P 21 40 45.7 -2.3
TOA0 Torodi Ar. Sit 30.84 203 eP P 21 40 45.7 -2.3
TORD Torodi Ar. Bea 30.84 203 P P 21 40 49.8 +1.8
TORD Torodi Ar. Bea 30.84 203 P P 21 40 49.8 +1.8
comp=Z,2.3nm,0.8s,baz=18,slow=8.4,SNR=24
TORD LR LR 21 54 33.7
comp=Z,183nm,19.1s,baz=25,slow=39
TORD Torodi Ar. Bea 30.84 203 P P 21 40 49.8 +1.8
ARU Arti 31.96 48d iP P 21 40 57.2 -0.3
ARU 21 41 58.7
ARU S S 21 46 06.2 -2.5
ARU pmax pmax
comp=Z,31nm,1.2s
ARU Arti 31.96 48 eP P 21 40 57.0 -0.6
comp=Z,24nm,0.9s
ARU Arti 31.96 48 i P P 21 40 57.2 -0.3
comp=Z,31nm,1.2s
ABKAR Akbulak array 32.75 62 eP P 21 41 01.9 -2.8
comp=Z,3.4nm,0.9s
SVE Sverdlovsk 33.14 48⇓iP P 21 41 08.6 +0.7
SVE pmax pmax
comp=Z,36nm,1.5s
SVE MLR MLR
comp=Z,211nm,15.0s
SVE Sverdlovsk 33.14 48 i P P 21 41 08.6 +0.7
comp=Z,211nm,15.0s
SPITS Spitsbergen Ar 35.93 1 LR LR 21 56 01.2
comp=Z,114nm,21.3s,baz=220,slow=36
BRVK Borovoye 38.78 54ceP P 21 41 57.1 +0.8
BRVK pmax pmax
comp=Z,19nm,1.3s
BRVK Borovoye 38.78 54 eP P 21 41 57.5 +1.2
comp=Z,15nm,1.1s
BRVK Borovoye 38.78 54 eP P 21 41 57.1 +0.8
comp=Z,19nm,1.3s
BVAR Borovoye Array 38.85 54 LR LR 21 58 53.5
comp=Z,150nm,18.9s,baz=76,slow=38
DBIC Dimbokro 39.05 210 LR LR 21 58 41.7
comp=Z,70nm,21.7s,baz=308,slow=37
KKAR Karatay Array 41.27 69 eP P 21 42 19.9 +2.8
KKAR Karatay Array 41.27 69 eP P 21 42 19.9 +2.8
EKS2 Erkin-Say 43.67 68 eP P 21 42 40.5 +3.7
EKS2 pmax pmax
comp=Z,22nm,1.1s
EKS2 Erkin-Say 43.67 68 eP P 21 42 40.5 +3.7
comp=Z,22nm,1.1s
AAK Ala-Archa 44.18 68 eP P 21 42 42.2 +1.3
AAK pmax pmax
comp=Z,51nm,1.3s
AAK Ala-Archa 44.18 68 eP P 21 42 42.1 +1.3
comp=Z,51nm,1.3s
AAK Ala-Archa 44.18 68 LR LR 22 04 30.8
comp=Z,204nm,18.5s,baz=318,slow=41
AAK Ala-Archa 44.18 68 eP P 21 42 42.2 +1.3
comp=Z,51nm,1.3s
KURBB Kurchatov Arra 44.28 56 LR LR 22 02 17.9
comp=Z,81nm,19.9s,baz=285,slow=38
KURK Kurchatov 44.31 56ceP P 21 42 42.1 +0.5
KURK pmax pmax
comp=Z,10.0nm,1.3s
KURK Kurchatov 44.31 56 eP P 21 42 44.2 +2.6
comp=Z,16nm,1.5s
KURK Kurchatov 44.31 56 eP P 21 42 42.1 +0.5
comp=Z,10.0nm,1.3s
NVS Novosibirsk 45.95 49 eP P 21 42 55.1 +0.5
NVS pmax pmax
comp=E,11nm,1.5s
NVS pmax pmax
comp=Z,23nm,1.5s
NVS Novosibirsk 45.95 49 eP P 21 42 55.1 +0.5
KSH Kashi 46.43 71 P P 21 42 58.7 0.0
KSH PcP PcP 21 44 35.8 +2.4
KSH PP PP 21 44 47.6 0.0
KSH PcS PcS 21 48 28.9 +0.7
KSH S S 21 49 45.6 -1.1
KSH SS ScS 21 53 02.3 +8.1
KSH pmax pmax
comp=Z,7.0nm,1.2s
KSH pmax pmax
comp=Z,57nm,2.4s
KSH LR LR
comp=N,230nm,6.2s
KSH LR LR
comp=E,190nm,4.8s
KSH LR LR
comp=Z,290nm,6.5s
ZAA0 Zalesovo Array 47.08 50 eP P 21 42 60.0 -3.5
ZAA0 ePP PP 21 44 52.1 -1.7
ZALV Zalesovo Beam 47.08 50 P P 21 43 03.9 +0.4
ZALV 21 44 53.2
ZALV pmax pmax
comp=Z,2.0nm,0.7s
ZALV pmax pmax
comp=Z,2.0nm,0.9s
ZALV Zalesovo Beam 47.08 50 P P 21 43 03.9 +0.4
ZALV PP PP 21 44 53.1 -0.7
ZALV Zalesovo Beam 47.08 50 P P 21 43 03.9 +0.4
comp=Z,1.7nm,0.7s,baz=295,slow=8.0,SNR=11
ZALV PP PP 21 44 53.1 -0.7
comp=Z,1.9nm,0.9s,baz=289,slow=9.2,SNR=4.5
ZALV Zalesovo Beam 47.08 50 P P 21 43 03.9 +0.4
comp=Z,2.0nm,0.7s
ZALV Zalesovo Beam 47.08 50 PP PP 21 44 53.2 -0.7
MK31 Makanchi Array 47.86 60 eP P 21 43 07.7 -2.0
MK31 Makanchi Array 47.86 60 eP P 21 43 07.7 -2.0
MK31 Makanchi Array 47.86 60 eP P 21 43 07.7 -2.0
MKAR Makanchi Array 47.86 60 P P 21 43 09.9 +0.2
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR MLR MLR
comp=Z,94nm,18.8s
MKAR Makanchi Array 47.86 60 P P 21 43 09.9 +0.2
MKAR Makanchi Array 47.86 60 P P 21 43 09.9 +0.2
comp=Z,2.0nm,0.7s,baz=289,slow=6.8,SNR=29
MKAR LR LR 22 06 53.5
comp=Z,94nm,18.8s,baz=322,slow=41
MKAR Makanchi Array 47.86 60 P P 21 43 09.9 +0.2
comp=Z,94nm,18.8s
SCHQ Schefferville 51.63 313 P P 21 43 38.0 -0.2
SCHQ Schefferville 51.63 313 P P 21 43 38.0 -0.2
comp=Z,2.5nm,0.7s,baz=98,slow=7.1,SNR=5.1
SCHQ Schefferville 51.63 313 P P 21 43 38.0 -0.2
WMQ Urumqi 52.54 61 P P 21 43 48.0 +2.7
WMQ PcP PcP 21 44 58.0 +2.5
WMQ PP PP 21 45 48.0 +4.1
WMQ S S 21 51 13.0 +0.9
WMQ ScS ScS 21 53 34.0 -1.3
WMQ SS SS 21 54 50.0 +0.3
WMQ pmax pmax
comp=Z,12nm,1.0s
WMQ pmax pmax
comp=Z,100nm,5.0s
WMQ LR LR
comp=N,430nm,16.0s
WMQ LR LR
comp=E,350nm,16.0s
WMQ LR LR
comp=Z,270nm,16.0s
TIXI Tiksi 57.59 20 eP P 21 44 21.7 +0.5
TIXI pmax pmax
comp=Z,9.0nm,1.1s
TIXI Tiksi 57.59 20 eP P 21 44 21.7 +0.5
comp=Z,8.5nm,1.1s
TIXI Tiksi 57.59 20 eP P 21 44 21.7 +0.5
comp=Z,8.5nm,1.1s
TLY Talaya 58.45 47 eP P 21 44 28.1 +0.5
TLY pmax pmax
comp=Z,12nm,1.2s
TLY Talaya 58.45 47 eP P 21 44 26.0 -1.6
comp=Z,17nm,1.2s
TLY Talaya 58.45 47 eP P 21 44 28.1 +0.5
comp=Z,12nm,1.2s
ZAK Zakamensk 58.90 48 eP P 21 44 28.2 -2.6
ZAK pmax pmax
comp=Z,3.0nm,1.5s
SONM Songino Array 61.98 50 P P 21 44 52.7 +0.7
SONM Songino Array 61.98 50 P P 21 44 52.7 +0.7
comp=Z,7.6nm,1.1s,baz=287,slow=6.0,SNR=27
SONM LR LR 22 14 24.2

comp=Z,95nm,18.4s,baz=147,slow=39
SONM Songino Array 61.98 50 P P 21 44 52.7 +0.7
comp=Z,95nm,18.4s
LSA Lhasa 62.13 74 P P 21 44 53.3 -0.4
ULN Ulaanbaatar 62.33 49 eP P 21 44 52.3 -2.0
comp=Z,8.1nm,1.2s
ULN Ulaanbaatar 62.33 49 eP P 21 44 52.3 -2.0
comp=Z,8.1nm,1.2s
GTA Gaotai 62.60 61 eP P 21 44 56.6 +0.3
GTA pmax pmax
comp=Z,2.0nm,0.9s
YAK Yakutsk 64.06 28 eP P 21 45 04.6 -0.8
YAK pmax pmax
comp=Z,16nm,1.0s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK Yakutsk 64.06 28 eP P 21 45 04.6 -0.8
comp=E,7.0nm,1.0s
INK Inuvik 66.88 347 P P 21 45 23.2 -0.2
INK Inuvik 66.88 347 P P 21 45 23.2 -0.2
comp=E,0.6nm,0.6s,baz=25,slow=2.9,SNR=3.8
INK Inuvik 66.88 347 P P 21 45 23.2 -0.2
comp=E,1.0nm,0.6s
LZH Lanzhou 67.12 62 eP P 21 45 22.5 -3.3
LZH ePP PP 21 47 51.6 -1.7
LZH pmax pmax
comp=Z,18nm,1.3s
LZH pmax pmax
comp=Z,55nm,7.8s
LZH LR LR
comp=N,260nm,15.0s
LZH LR LR
comp=E,230nm,16.2s
LZH LR LR
comp=Z,290nm,18.0s
YKA Yellowknife Ar 67.47 337 P P 21 45 27.1 -0.2
YKA Yellowknife Ar 67.47 337 P P 21 45 27.1 -0.2
comp=Z,0.8nm,0.6s,baz=40,slow=5.6,SNR=19
YKA Yellowknife Ar 67.47 337 P P 21 45 27.1 -0.2
comp=Z,1.0nm,0.6s
BILL Bilibino 68.03 11 P P 21 45 33.0 +2.2
BILL e 21 45 38.4
BILL pmax pmax
comp=Z,7.0nm,1.2s
BILL Bilibino 68.03 11 P P 21 45 33.0 +2.2
comp=Z,7.0nm,1.2s
FFC Flin Flon 68.71 326 i P P 21 45 37.5 +2.2
FFC Flin Flon 68.71 326 i P P 21 45 37.5 +2.2
HHC Hu-ho-hao-te 69.06 54 eP P 21 45 37.5 -0.3
HHC PcP PcP 21 46 02.2 +0.3
HHC PP PP 21 48 12.4 +2.5
HHC ScP 21 50 05.6
HHC S S 21 54 40.7 -2.4
HHC SS SS 21 59 06.5 -1.7
HHC pmax pmax
comp=Z,22nm,1.0s
HHC pmax pmax
comp=Z,240nm,6.8s
HHC LR LR
comp=N,260nm,16.7s
HHC LR LR
comp=E,380nm,15.2s
HHC LR LR
comp=Z,340nm,16.9s
SEY Seymchan 70.04 19ceP P 21 45 43.2 -0.2
CD2 Chengdu 70.19 66 P P 21 45 45.5 +0.6
CD2 pP pP 21 45 51.7 +3.8
CD2 PP PP 21 48 21.6 +1.7
CD2 S S 21 54 51.6 -5.0
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,80nm,6.0s
BOSA Boshof 71.49 169 P P 21 45 53.2 +0.6
BOSA Boshof 71.49 169 P P 21 45 53.2 +0.6
comp=Z,4.8nm,0.8s,baz=349,slow=5.3,SNR=7.1
BOSA LR LR 22 21 23.0
comp=Z,60nm,18.1s,baz=350,slow=39
XAN Xi'an 71.67 61 P P 21 45 54.4 +0.6
XAN pP pP 21 46 01.1 +4.3
XAN pmax pmax
comp=Z,3.0nm,1.3s
XAN pmax pmax
comp=Z,25nm,5.3s
ILAR Eielson Array 72.07 351 P P 21 45 56.8 +1.1
ILAR Eielson Array 72.07 351 P P 21 45 56.8 +1.1
comp=Z,0.6nm,1.0s,baz=7.1,slow=6.8,SNR=4.2
BJI Beijing 72.29 52 P P 21 45 57.6 +0.2
BJI pmax pmax
comp=Z,12nm,0.4s
KMI Kunming 73.09 71 P P 21 46 03.9 +1.2
KMI pmax pmax
comp=Z,4.0nm,1.0s
KLR Kul'dur 73.97 37 eP P 21 46 02.8 -4.3
CHTO Chiang Mai 74.38 79 eP P 21 46 07.1 -2.9
CHTO pmax pmax
comp=Z,13nm,1.6s
CHTO Chiang Mai 74.38 79 eP P 21 46 07.1 -2.9
comp=Z,13nm,1.6s
CMAR Chiang Mai Arr 74.60 79 P P 21 46 10.6 -0.8
CMAR Chiang Mai Arr 74.60 79 P P 21 46 10.6 -0.8
comp=Z,1.2nm,0.8s,baz=305,slow=5.9,SNR=11
CMAR LR LR 22 27 16.7
comp=Z,45nm,18.4s,baz=315,slow=42
CN2 Changchun 74.84 44 eP P 21 46 12.1 -0.2
CN2 pmax pmax
comp=Z,10.0nm,0.9s
GYA Guiyang 74.97 68 eP P 21 46 13.8 +0.3
GYA pmax pmax
comp=Z,10.0nm,0.8s
MDJ Mudanjiang 76.34 41 P P 21 46 20.8 -0.1
MDJ S S 21 56 00.2 -5.5
MDJ pmax pmax
comp=Z,3.0nm,1.8s
MDJ pmax pmax
comp=Z,60nm,5.3s
MDJ LR LR
comp=N,53nm,24.8s
MDJ LR LR
comp=E,43nm,24.8s
MDJ LR LR
comp=Z,93nm,21.6s
USRK Ussuriysk Arra 77.81 40 P P 21 46 29.1 0.0
comp=Z,1.3nm,0.7s,baz=316,slow=8.0,SNR=6.0
USRK LR LR 22 24 34.1
comp=Z,68nm,19.2s,baz=89,slow=39
JTMT Jette 79.04 327 eP P 21 46 33.4 -2.7
comp=Z,1.8nm,0.8s
YSS Yuzh-Sakhalins 80.38 32 eP P 21 46 45.0 +1.8
BDFB Brasilia 80.67 239 P P 21 46 45.9 +0.7
BDFB Brasilia 80.67 239 P P 21 46 45.9 +0.7
comp=Z,2.2nm,0.6s,baz=50,slow=7.9,SNR=2.7
KSAR Wonju Array Be 80.69 47 P P 21 46 45.1 +0.1
KSRS Korea Array 80.70 47 P P 21 46 45.1 0.0
comp=Z,2.0nm,0.9s,baz=320,slow=3.5,SNR=12
PDAR Pinedale Array 80.92 321 P P 21 46 48.0 +1.5
PDAR Pinedale Array 80.92 321 P P 21 46 48.0 +1.5
comp=Z,0.6nm,0.9s,baz=27,slow=3.6,SNR=3.8
BMO Blue Mountains 82.61 327 eP P 21 46 52.1 -3.0
comp=Z,5.0nm,1.0s
MJAR Matsushiro Arr 86.72 41 P P 21 47 16.7 +0.7
MJAR Matsushiro Arr 86.72 41 P P 21 47 16.7 +0.7
comp=Z,0.6nm,0.6s,baz=306,slow=4.7,SNR=5.2
MJAR LR LR 22 29 10.4
comp=Z,75nm,21.2s,baz=315,slow=38
LPAZ La Paz 94.70 252 eP P 21 47 52.9 -1.3
comp=Z,1.5nm,0.4s
ASAR Alice Springs 127.83 89 PKP PKPdf 21 53 38.0 +0.2
ASAR Alice Springs 127.83 89 PKP PKPdf 21 53 38.0 +0.2
comp=Z,0.3nm,0.3s,baz=312,slow=1.2,SNR=5.9

CSEM ***07*** *21:38:33.5, 42.°37N×13.°38E, h10km, After ROM*

ROM 07 21:38:33.5±0.1**, 42.°37N×13.°38E, h10km, Ml2.4**/4**, 2C,**
Error ellipse: s-maj=1.0km s-min=1.0km az=122.0,
Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AQU L'Aquila 0.03 131 Pg Pg 21 38 35.7 +0.3
AQU Sg Sg 21 38 36.8 0.0
3μm,0.1s
AQU L'Aquila 0.03 131 Pg Pg 21 38 35.7 +0.3
AQU Sg Sg 21 38 36.8 0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	3µm,0.1s						
CAMP	Campotosto	0.17	9	Pg	Pg	21 38 37.9	+0.6
CAMP				Sg	Sg	21 38 40.8	+0.8
	524nm,0.3s						
CAMP	Campotosto	0.17	9	Pg	Pg	21 38 37.9	+0.6
CAMP				Sg	Sg	21 38 40.8	+0.8
	524nm,0.3s						
FAGN	Fagnano	0.19	124	Pg	Pg	21 38 38.5	+0.9
FAGN				Sg	Sg	21 38 41.5	+1.1
	2µm,0.7s						
FAGN	Fagnano	0.19	124	Pg	Pg	21 38 38.5	+0.9
FAGN				Sg	Sg	21 38 41.5	+1.1
	2µm,0.7s						
FIAM	Fiamignano	0.22	242	⇑iPg	Pg	21 38 38.8	+0.6
FIAM				Sg	Sg	21 38 42.6	+1.3
	233nm,0.4s						
FIAM	Fiamignano	0.22	242	⇑iPg	Pg	21 38 38.8	+0.6
FIAM				Sg	Sg	21 38 42.6	+1.3
	233nm,0.4s						
TERO	Teramo	0.30	34	Pg	Pg	21 38 39.9	+0.2
TERO				Sg	Sg	21 38 44.6	+0.7
TERO	Teramo	0.30	34	Pg	Pg	21 38 39.9	+0.2
TERO				Sg	Sg	21 38 44.6	+0.7
LNSS	Leonessa	0.34	313	Pg	Pg	21 38 40.9	+0.5
LNSS				Sg	Sb	21 38 46.4	-1.0
LNSS	Leonessa	0.34	313	Pg	Pg	21 38 40.9	+0.5
LNSS				Sg	Sb	21 38 46.4	-1.0
VCEL	Villa Celiera	0.35	86	Pg	Pb	21 38 41.4	-0.5
VCEL				Sg	Sb	21 38 47.2	-0.4
VCEL	Villa Celiera	0.35	86	Pg	Pb	21 38 41.4	-0.5
VCEL				Sg	Sb	21 38 47.2	-0.4
PTQR	Pietraquaria	0.35	177	Pg	Pg	21 38 40.8	+0.2
PTQR				Sg	Sg	21 38 46.3	+1.0
	21nm,0.2s						
PTQR	Pietraquaria	0.35	177	Pg	Pg	21 38 40.8	+0.2
PTQR				Sg	Sg	21 38 46.3	+1.0
	21nm,0.2s						
NRCA	Norcia	0.50	337	Pg	Pg	21 38 43.6	+0.2
NRCA				Sg	Sb	21 38 51.3	-0.7
	395nm,0.1s						
NRCA	Norcia	0.50	337	Pg	Pg	21 38 43.6	+0.2
NRCA				Sg	Sb	21 38 51.3	-0.7
	395nm,0.1s						
MNS	Montasola	0.52	272	Pg	Pg	21 38 43.9	+0.3
MNS				Sg	Sb	21 38 51.6	-0.7
MNS	Montasola	0.52	272	Pg	Pg	21 38 43.9	+0.3
MNS				Sg	Sb	21 38 51.6	-0.7

*ISCJB **07** 21:39:06.8±0.2, 42.°38N±0.°02×13.°32E±0.°02, h9^{km}±1^{km}, mb3.6/6, MS3.4/1, Error ellipse: s-maj=2.7km s-min=2.2km az=30.4*
*IDC **07** 21:39:07.0±1.2, 42.°42N×13.°19E, h0^{km}, mb3.6/7, mb1 3.8/11, mb1mx3.7/30, mbtmp3.6/11, ML3.4/4, MS3.5/1, Ms1 3.5/1, ms1mx2.0/50, Error ellipse: s-maj=21.1km s-min=19.5km az=71.0*
*ROM **07** 21:39:06.7±0.1, 42.°36N×13.°36E, h10^{km}, Ml3.8/17, Error ellipse: s-maj=1.1km s-min=0.9km az=83.0*
*CSEM **07** 21:39:07.5±0.1, 42.°36N×13.°31E, h2^{km}, ML4.3/6, Error ellipse: s-maj=2.6km s-min=2.1km az=22.0*
*PDG **07** 21:39:08.1±0.9, 42.°39N×13.°37E, h6^{km}±1^{km}, ML3.6/9, Error ellipse: s-maj=1.1km s-min=1.4km az=0.0*
*BEO **07** 21:39:08.3±0.8, 42.°29N×13.°23E, h12^{km}±17^{km}, ML3.8/1*
*PRU **07** 21:39:08.4, 42.°39N×13.°48E, h0^{km}*
*LDG **07** 21:39:09.3±0.7, 42.°43N×13.°30E, h2^{km}, Ml3.5/10, Error ellipse: s-maj=13.1km s-min=10.9km az=106.0*
ISC 07 21:39:07.7±0.7**, 42.°36N**±0.°02×**13.°33E**±0.°02**, h10**^{km}±4^{km}**, n191, σ1^{s}73**/265**, mb3.7**/6**, 21C-18D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	101	Pg	Pg	21 39 09.1	-0.6
AQU				Sg	Sg	21 39 10.4	-0.8
	156µm,0.5s						
AQU	L'Aquila	0.05	101	Pg	Pg	21 39 09.1	-0.6
AQU				Sg	Sg	21 39 10.4	-0.8
	156µm,0.5s						
CAMP	Campotosto	0.18	18	⇑iPg	Pg	21 39 11.2	-0.4
CAMP				Sg	Sg	21 39 14.3	0.0
	61µm,0.6s						
CAMP	Campotosto	0.18	18	⇑iPg	Pg	21 39 11.2	-0.4
CAMP				Sg	Sg	21 39 14.3	0.0
	61µm,0.6s						
FIAM	Fiamignano	0.19	239	⇑iPg	Pg	21 39 11.7	0.0
FIAM				Sg	Sg	21 39 15.0	+0.6
FIAM	Fiamignano	0.19	239	⇑iPg	Pg	21 39 11.7	0.0
FIAM				Sg	Sg	21 39 15.0	+0.6
FAGN	Fagnano	0.21	118	Pg	Pg	21 39 11.5	-0.6
FAGN				Sg	Sg	21 39 15.0	-0.1
	48µm,0.5s						
FAGN	Fagnano	0.21	118	Pg	Pg	21 39 11.5	-0.6
FAGN				Sg	Sg	21 39 15.0	-0.1
	48µm,0.5s						
LNSS	Leonessa	0.32	318	Pg	Pg	21 39 14.0	-0.2
LNSS				Sg	Sb	21 39 19.7	-1.3
	32µm,0.5s						
LNSS	Leonessa	0.32	318	Pg	Pg	21 39 14.0	-0.2
LNSS				Sg	Sb	21 39 19.7	-1.3
	32µm,0.5s						
TERO	Teramo	0.33	38	Pg	Pg	21 39 13.2	-1.0
TERO				Sg	Sg	21 39 18.2	-0.4
TERO	Teramo	0.33	38	Pg	Pg	21 39 13.2	-1.0
TERO				Sg	Sg	21 39 18.2	-0.4
PTQR	Pietraquaria	0.34	171	Pg	Pg	21 39 13.9	-0.7
PTQR	Pietraquaria	0.34	171	Pg	Pg	21 39 13.9	-0.7
VCEL	Villa Celiera	0.38	85	Pg	Pg	21 39 14.3	-0.9
	83µm,0.8s						
VCEL	Villa Celiera	0.38	85	Pg	Pg	21 39 14.3	-0.9
	83µm,0.8s						
MNS	Montasola	0.48	273	Pg	Pg	21 39 16.7	-0.4
MNS	Montasola	0.48	273	Pg	Pg	21 39 16.7	-0.4
CERT	Cerreto	0.49	212	Pg	Pg	21 39 16.5	-0.7
CERT				Sg	Sg	21 39 24.1	+0.4
CERT	Cerreto	0.49	212	Pg	Pg	21 39 16.5	-0.7
CERT				Sg	Sg	21 39 24.1	+0.4
NRCA	Norcia	0.50	341	Pg	Pg	21 39 16.6	-0.8
NRCA				Sg	Sg	21 39 24.6	+0.7
	3µm,0.2s						
NRCA	Norcia	0.50	341	Pg	Pg	21 39 16.6	-0.8
NRCA				Sg	Sg	21 39 24.6	+0.7
	3µm,0.2s						
VVLD	Villa Vallelon	0.54	156	Pg	Pg	21 39 17.0	-1.1
VVLD	Villa Vallelon	0.54	156	Pg	Pg	21 39 17.0	-1.1
INTR	Introdacqua	0.55	129	Pg	Pg	21 39 17.2	-1.2
INTR				Sg	Sg	21 39 25.4	-0.3
	7µm,1.0s						
INTR	Introdacqua	0.55	129	Pg	Pg	21 39 17.2	-1.2
INTR				Sg	Sg	21 39 25.4	-0.3
	7µm,1.0s						
MTCE	Montecelio	0.56	232	Pg	Pg	21 39 17.8	-0.6
	3µm,0.7s						
MTCE	Montecelio	0.56	232	Pg	Pg	21 39 17.8	-0.6
	3µm,0.7s						
GUAR	Guarcino	0.57	181	iPg	Pg	21 39 17.8	-0.9
	7µm,0.6s						
GUAR	Guarcino	0.57	181	iPg	Pg	21 39 17.8	-0.9
	7µm,0.6s						
TRTR	Tortoreto Alta	0.62	44	Pg	Pg	21 39 19.6	-0.1
	25µm,0.9s						
TRTR	Tortoreto Alta	0.62	44	Pg	Pg	21 39 19.6	-0.1
	25µm,0.9s						
OFFI	Offida	0.63	24	Pg	Pg	21 39 20.0	+0.2
OFFI	Offida	0.63	24	Pg	Pg	21 39 20.0	+0.2
FDMO	Fiordimonte	0.70	345	Pg	Pg	21 39 20.2	-0.9
FDMO				Sg	Sg	21 39 30.4	+0.1
FDMO	Fiordimonte	0.70	345	Pg	Pg	21 39 20.2	-0.9
FDMO				Sg	Sg	21 39 30.4	+0.1
CESI	CESI - Serrava	0.71	334	Pg	Pg	21 39 20.7	-0.8
	1µm,0.6s						
CESI	CESI - Serrava	0.71	334	Pg	Pg	21 39 20.7	-0.8
	1µm,0.6s						
GIUL	Giuliano Di Ro	0.81	184	Pg	Pg	21 39 22.3	-0.9
	830nm,0.5s						
GIUL	Giuliano Di Ro	0.81	184	Pg	Pg	21 39 22.3	-0.9
	830nm,0.5s						
SNTG	Esanatoglia	0.94	342	Pg	Pg	21 39 24.5	-1.2
SNTG	Esanatoglia	0.94	342	Pg	Pg	21 39 24.5	-1.2
MGAB	Montegabbione	1.05	302	Pg	Pg	21 39 27.5	-0.4
MGAB	Montegabbione	1.05	302	Pg	Pg	21 39 27.5	-0.4
LATE	Laterza	1.16	283	Pg	Pb	21 39 29.4	-0.4
LATE	Laterza	1.16	283	Pg	Pb	21 39 29.4	-0.4
AOI	Ancona	1.20	9	Pg	Pb	21 39 29.2	-1.4
	2µm,0.9s						
AOI	Ancona	1.20	9	Pg	Pb	21 39 29.2	-1.4
	2µm,0.9s						
PIEI	Pieia	1.31	334	Pg	Pn	21 39 31.3	-0.8
	924nm,0.8s						
PIEI	Pieia	1.31	334	Pg	Pn	21 39 31.3	-0.8
	924nm,0.8s						
FSSB	Fossombrone	1.39	343	Pg	Pn	21 39 32.8	-0.4
	9µm,0.5s						
FSSB	Fossombrone	1.39	343	Pg	Pn	21 39 32.8	-0.4
	9µm,0.5s						
VENT	Ventotene	1.57	178	Pg	Pn	21 39 35.5	-0.1
	821nm,1.2s						
VENT	Ventotene	1.57	178	Pg	Pn	21 39 35.5	-0.1
	821nm,1.2s						
PESA	Pesaro	1.62	347	Pg	Pb	21 39 37.1	-0.5
	927nm,0.5s						
PESA	Pesaro	1.62	347	Pg	Pb	21 39 37.1	-0.5
	927nm,0.5s						
CSNT	Castellina Chi	1.86	307	Pn	Pb	21 39 40.8	-1.1
	250nm,1.1s						
CSNT	Castellina Chi	1.86	307	Pn	Pb	21 39 40.8	-1.1
	250nm,1.1s						
CASP	Castiglione de	1.87	284	Pg	Pn	21 39 39.7	-0.1
MS1	Monte Sant'Ang	2.05	108	ePn	Pb	21 39 44.2	-0.9
NVLJ	Novalja	2.47	26	ePn	Pn	21 39 47.6	-0.3
NVLJ				Sn	Sn	21 40 18.6	+0.4
NVLJ	Novalja	2.47	26	ePn	Pn	21 39 47.6	-0.3
NVLJ				Sn	Sn	21 40 18.5	+0.4
CDT	Castel del Mon	2.55	119	ePn	Pn	21 39 50.1	+1.0
CDT				eSn	Sb	21 40 23.3	-1.6
BAI	Bari	2.94	114	ePn	Pn	21 39 55.6	+1.2
BAI				eSn	Sn	21 40 32.5	+2.8
PGF	Pioggiola	3.21	275	ePn	Pn	21 39 58.9	+0.6
PGF				eSn	Sn	21 40 38.7	+2.0
	53nm,0.7s						
PGF	Pioggiola	3.21	275	ePn	Pn	21 39 58.9	+0.6
PGF				eSn	Sn	21 40 38.7	+2.0
	26nm,0.7s						
STON	Ston	3.26	80	iPn	Pn	21 39 59.0	0.0
STON				Sn	Sn	21 40 37.8	0.0
STON	Ston	3.26	80	iPn	Pn	21 39 58.9	0.0
STON				Sn	Sn	21 40 37.7	0.0
BOJS	Bojanci	3.43	23	ePn	Pn	21 40 02.5	+1.3
BOJS				eSn	Sn	21 40 43.3	+1.3
BOJS	Bojanci	3.43	23	ePn	Pn	21 40 02.5	+1.3
BOJS				eSn	Sn	21 40 43.3	+1.3
BLY	Banja Luka	3.68	48	ePn	Pn	21 40 07.4	+2.8
BLY				eSn	Sn	21 40 51.8	+3.8
BLY	Banja Luka	3.68	48	ePn	Pn	21 40 07.4	+2.8
BLY				eSn	Sn	21 40 51.8	+3.8
VOY	Vojsko	3.69	6	ePn	Pn	21 40 05.4	+0.5
VOY				eSn	Sn	21 40 49.7	+1.2
VOY	Vojsko	3.69	6	ePn	Pn	21 40 05.4	+0.5
VOY				eSn	Sn	21 40 49.7	+1.2
HCY	Herceg Novi	3.82	87	⇓iPn	Pn	21 40 08.0	+1.4
HCY				eSn	Sn	21 40 53.4	+1.7
HCY	Herceg Novi	3.82	87	⇓iPn	Pn	21 40 08.0	+1.4
HCY				eSn	Sn	21 40 53.4	+1.7
BRY	Bratogost	3.88	80	⇑iPn	Pn	21 40 08.6	+1.1
BRY				eSn	Sn	21 40 55.4	+2.2
BRY	Bratogost	3.88	80	⇑iPn	Pn	21 40 08.6	+1.1
BRY				eSn	Sn	21 40 55.4	+2.2
BUM	Brajici-Budva	4.12	89	⇑iPn	Pn	21 40 12.4	+1.6
BUM				eSn	Sn	21 41 01.9	+2.7
BUM	Brajici-Budva	4.12	89	⇑iPn	Pn	21 40 12.4	+1.6
BUM				eSn	Sn	21 41 01.9	+2.7
UPM	Unac-Piva	4.19	77	⇑iPn	Pn	21 40 13.0	+1.2
UPM				eSn	Sn	21 41 03.2	+2.3
UPM	Unac-Piva	4.19	77	⇑iPn	Pn	21 40 13.0	+1.2
UPM				eSn	Sn	21 41 03.2	+2.3
NKY	Niksic	4.20	82	⇓iPn	Pn	21 40 13.5	+1.5
NKY				eSn	Sn	21 41 03.8	+2.6
NKY	Niksic	4.20	82	⇓iPn	Pn	21 40 13.5	+1.5
NKY				eSn	Sn	21 41 03.8	+2.6
PDG	Podgorica	4.39	87	ePn	Pn	21 40 15.2	+0.8
PDG				eSn	Sn	21 41 06.3	+0.8
PDG	Podgorica	4.39	87	ePn	Pn	21 40 15.2	+0.8
PDG				eSn	Sn	21 41 07.7	+2.2
TTG	Podgorica	4.39	87	⇓iPn	Pn	21 40 16.1	+1.7
TTG				eSn	Sn	21 41 07.7	+2.2
ULC	Ulcinj	4.41	93	⇓iPn	Pn	21 40 15.8	+1.0
ULC				eSn	Sn	21 41 08.2	+2.0
ULC	Ulcinj	4.41	93	⇓iPn	Pn	21 40 15.8	+1.0
ULC				eSn	Sn	21 41 08.2	+2.0
ABTA	Abfaltersbach	4.42	353	⇓iPn	Pn	21 40 15.7	+0.8
	SNR=16						
ABTA	Abfaltersbach	4.42	353	Pn	Pn	21 40 15.7	+0.8
	SNR=16						
PLE	Pljevlja	4.56	76	⇓iPn	Pn	21 40 18.9	+2.1
PLE				eSn	Sn	21 41 12.2	+2.3
PLE	Pljevlja	4.56	76	⇓iPn	Pn	21 40 18.9	+2.1
PLE				eSn	Sn	21 41 12.2	+2.3
SBF	Sospel	4.57	291	ePn	Pn	21 40 17.5	+0.6
SBF				eSn	Sn	21 41 07.3	-2.8
	24nm,0.7s						
SBF	Sospel	4.57	291	ePn	Pn	21 40 17.5	+0.6
SBF				eSn	Sn	21 41 07.3	-2.8
	12nm,0.7s						
KBA	Koelnbreinsper	4.71	0	⇑iPn	Pn	21 40 18.9	-0.1
KBA	Koelnbreinsper	4.71	0	Pn	Pn	21 40 18.9	-0.1
BEY	Berane	4.87	82	ePn	Pn	21 40 23.4	+2.3
BEY				eSn	Sn	21 41 19.7	+2.2
IVA	Berane	4.87	82	ePn	Pn	21 40 23.4	+2.3
IVA				eSn	Sn	21 41 19.7	+2.2
PVY	Plav	4.91	85	ePn	Pn	21 40 24.1	+2.5
PVY				eSn	Sn	21 41 21.0	+2.5
PVY	Plav	4.91	85	ePn	Pn	21 40 24.1	+2.5
PVY				eSn	Sn	21 41 21.0	+2.5
TIR	Tirane	4.98	100	⇓iPn	Pn	21 40 23.5	+0.9
TIR				eSn	Sn	21 41 20.0	-0.2
TIR	Tirane	4.98	100	⇓iPn	Pn	21 40 23.5	+0.9
TIR				eSn	Sn	21 41 20.0	-0.2
WTTA	Wattenberg	5.05	347	⇑iPn	Pn	21 40 25.9	+2.3
	SNR=7.1						
WTTA	Wattenberg	5.05	347	Pn	Pn	21 40 25.9	+2.3
	SNR=7.1						
FRF	La Foret Royal	5.05	286	ePn	Pn	21 40 23.7	+0.2
FRF				eSn	Sn	21 41 18.5	-3.4
	12nm,0.8s						
FRF	La Foret Royal	5.05	286	ePn	Pn	21 40 23.7	+0.2
FRF				eSn	Sn	21 41 18.5	-3.4
	5.9nm,0.8s						
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	21 40 23.8	0.0
	3.1nm,0.3s,baz=155,slow=18,SNR=8.5						
DAVOX				Sn	Sn	21 41 26.8	+4.5
	2.9nm,0.3s,baz=309,slow=23,SNR=3.5						
LMR	La Mourre	5.11	283	ePn	Pn	21 40 24.3	0.0
LMR				eSn	Sn	21 41 19.3	-4.0
	14nm,0.7s						
LMR	La Mourre	5.11	283	ePn	Pn	21 40 24.3	0.0
LMR				eSn	Sn	21 41 19.3	-4.0
	6.9nm,0.7s						
WATA	Walderalm	5.13	347	⇑iPn	Pn	21 40 26.9	+2.3
	SNR=10						
WATA	Walderalm	5.13	347	Pn	Pn	21 40 26.9	+2.3
	SNR=10						
ARSA	Arzberg	5.13	17	ePn	Pn	21 40 26.4	+1.8
ARSA				eSn	Sn	21 41 24.0	+0.1
ARSA	Arzberg	5.13	17	ePn	Pn	21 40 26.4	+1.8
ARSA				eSn	Sn	21 41 24.0	+0.1
IVAS	Ivanjica	5.15	74	ePn	Pn	21 40 25.9	+1.0
IVAS				eSn	Sn	21 41 24.1	-0.3
IVAS	Ivanjica	5.15	74	ePn	Pn	21 40 25.9	+1.0
IVAS				eSn	Sn	21 41 24.1	-0.3
DIVS	Divibare	5.17	68	ePn	Pn	21 40 27.0	+1.9
DIVS				eSn	Sn	21 41 23.7	-1.1
DIVS	Divibare	5.17	68	ePn	Pn	21 40 27.0	+1.9
DIVS				eSn	Sn	21 41 23.7	-1.1
MBDF	Montbardon	5.32	299	eP	Pn	21 40 29.5	+2.2
MBDF	Montbardon	5.32	299	eP	Pn	21 40 29.5	+2.2
TRUS	Trudelj	5.49	68	ePn	Pn	21 40 29.0	-0.5
TRUS	Trudelj	5.49	68	ePn	Pn	21 40 29.0	-0.5
GRUS	Gruza	5.61	72	ePn	Pn	21 40 31.8	+0.6
GRUS	Gruza	5.61	72	ePn	Pn	21 40 31.8	+0.6
LPG	La Plagne	5.69	306	eP	Pn	21 40 35.2	+2.7
LPG				eSn	Sn	21 41 33.8	-4.3
	12nm,0.7s						
LPG	La Plagne	5.69	306	eP	Pn	21 40 35.2	+2.7
LPL	La Plagne	5.71	306	eP	Pn	21 40 35.4	+2.6
LPL				eSn	Sn	21 41 33.6	-4.9
	8.9nm,0.6s						
LPL	La Plagne	5.71	306	eP	Pn	21 40 35.4	+2.6
SELS	Selova	5.79	79	eSn	Sn	21 41 41.1	+0.9
SELS	Selova	5.79	79	eSn	Sn	21 41 41.1	+0.9
SMRF	Simiane la Rot	5.90	288	eP	Pn	21 40 37.0	+1.9
SMRF	Simiane la Rot	5.90	288	eP	Pn	21 40 37.0	+1.9
ORIF	Oris-en-Rattie	5.98	298	eP	Pn	21 40 40.1	+3.8
SKO	Skopje	6.04	91	ePn	Pn	21 40 38.0	+0.9
SKO	Skopje	6.04	91	ePn	Pn	21 40 38.4	+1.3
BIA	Bitola	6.13	100	ePn	Pn	21 40 38.8	+0.3
BIA	Bitola	6.13	100	ePn	Pn	21 40 38.7	+0.3
BARS	Barje	6.28	83	ePn	Pn	21 40 40.9	+0.5
BARS	Barje	6.28	83	ePn	Pn	21 40 40.9	+0.5
BOLS	Boljevac	6.48	74	⇑iPn	Pn	21 40 42.5	-0.6
BOLS	Boljevac	6.48	74	⇑iPn	Pn	21 40 42.5	-0.6
GERES	GERESS Array B	6.49	2	Pn	Pn	21 40 43.6	+0.3
	0.4nm,0.3s,baz=184,slow=11,SNR=8.7						
GERES				Sn	Sn	21 41 56.1	-1.3
	2.8nm,0.3s,baz=176,slow=22,SNR=12						
CABF	La Chapelle	6.70	312	ePn	Pn	21 40 46.7	+0.5
CABF	La Chapelle	6.70	312	ePn	Pn	21 40 46.7	+0.5
VIVF	Saint-Julien-l	6.76	295	ePn	Pn	21 40 48.8	+1.8
VIVF	Saint-Julien-l	6.76	295	ePn	Pn	21 40 48.8	+1.8
KHC	Kasperske Hory	6.77	1	ePN	Pn	21 40 47.0	-0.1
KHC				eSN	Sn	21 42 01.2	-3.1
BZS	Buzias	6.80	59	ePn	Pn	21 40 49.4	+1.9
BZS	Buzias	6.80	59	ePn	Pn	21 40 49.4	+1.9
ZAPS	Zavoj	6.90	79	⇑iPn	Pn	21 40 50.9	+2.0
ZAPS	Zavoj	6.90	79	⇑iPn	Pn	21 40 50.9	+2.0
VAY	Valandovo	6.98	95	ePn	Pn	21 40 49.5	-0.4
VAY	Valandovo	6.98	95	ePn	Pn	21 40 50.0	+0.1
TREC	Trest	7.09	12	eSN	Sn	21 42 10.1	-2.1
TREC	Trest	7.09	12	Sn	Sn	21 42 10.1	-2.1
HINF	Hinteralfeld	7.12	322	ePn	Pn	21 40 51.3	-0.7
HINF				eSn	Sn	21 42 07.8	-5.1
	20nm,0.7s						
HINF	Hinteralfeld	7.12	322	ePn	Pn	21 40 51.3	-0.7
VYHS	Vyhne	7.25	30	ePN	Pn	21 41 00.3	+6.6
VYHS				eSN	Sn	21 42 08.2	-7.8
VTS	Vitosha	7.31	85	⇓iP	Pn	21 40 56.0	+1.4
VTS	Vitosha	7.31	85	⇓iPn	Pn	21 40 55.8	+1.2
VTS				eSn	Sn	21 42 15.3	-2.4
VTS	Vitosha	7.31	85	⇓iPn	Pn	21 40 55.8	+1.2
VTS	Vitosha	7.31	85	⇓iP	Pn	21 40 56.0	+1.4
KEST	Kesra	7.31	206	Pn	Pn	21 40 59.3	+4.6
	1.5nm,0.3s,baz=308,slow=3.4,SNR=26						
CDF	Champ du Feu	7.40	327	ePn	Pn	21 40 55.2	-0.6
CDF				eSn	Sn	21 42 14.6	-5.2
	33nm,0.8s						
CDF	Champ du Feu	7.40	327	ePn	Pn	21 40 55.2	-0.6
HAU	Haudompre	7.49	321	ePn	Pn	21 40 56.5	-0.5
HAU				eSn	Sn	21 42 15.3	-6.7
	20nm,0.5s						
HAU	Haudompre	7.49	321	ePn	Pn	21 40 56.5	-0.5
PRU	Pruhonice	7.67	6	eSN	Sn	21 42 23.4	-3.0
PRU	Pruhonice	7.67	6	Sn	Sn	21 42 23.4	-3.0
NKC	Novy Kostel	7.89	356	eSN	Sn	21 42 28.8	-3.1
NKC	Novy Kostel	7.89	356	Sn	Sn	21 42 28.8	-3.1
LOR	Lormes	8.33	309	ePn	Pn	21 41 08.1	-0.4
LOR				eSn	Sn	21 42 37.6	-5.0
	5.6nm,0.5s						
LOR	Lormes	8.33	309	ePn	Pn	21 41 08.1	-0.4
ARR	Arges	8.70	66	⇓iP	Pn	21 41 16.3	+2.7
ARR	Arges	8.70	66	⇓iP	Pn	21 41 16.3	+2.7
CLL	Collm	8.95	359	eSn	Sn	21 42 52.0	-5.8
CLL				eSg	Sg	21 44 03.0	+8.3
MLR	Muntele Rosu	9.62	67	⇑iP	Pn	21 41 29.1	+2.8
MLR	Muntele Rosu	9.62	67	Pn	Pn	21 41 28.9	+2.6
	0.1nm,0.3s,baz=188,slow=9.3,SNR=4.7						
MLR	Muntele Rosu	9.62	67	⇑iP	Pn	21 41 29.1	+2.8
CFR	Carcaliu	11.07	70	⇑iP	Pn	21 41 48.0	+2.0
CFR	Carcaliu	11.07	70	⇑iP	Pn	21 41 48.0	+2.0
BRTR	Keskin Array B	15.55	93	Pn	P	21 42 53.8	+2.4
	0.0nm,0.3s,baz=294,slow=9.3,SNR=4.2						
NOA	NORSAR Array B	18.75	357	P	Pn	21 43 26.9	-0.1
	0.1nm,0.3s,baz=167,slow=14,SNR=3.1						
FINES	FINESS Array B	20.59	18	P	P	21 43 47.3	+0.7
	2.4nm,0.8s,baz=193,slow=7.8,SNR=6.0						
KBZ	Khabaz	21.60	76	P	P	21 44 00.9	+3.3
	3.9nm,1.0s,baz=306,slow=10,SNR=5.3						
TORD	Torodi Ar. Bea	30.81	203	P	P	21 45 24.9	+1.1
	0.8nm,0.8s,baz=20,slow=8.3,SNR=5.3						
AKTO	Aktyubinsk	31.45	60	LR	LR	21 58 55.3	
	comp=Z,84nm,18.5s,baz=85,slow=38						
ZALV	Zalesovo Beam	47.11	50	P	P	21 47 39.7	+0.1
	0.4nm,0.3s,baz=280,slow=4.0,SNR=3.0						
MKAR	Makanchi Array	47.88	60	P	P	21 47 46.6	+0.8
	0.8nm,0.6s,baz=274,slow=7.9,SNR=11						
SONM	Songino Array	62.00	50	P	P	21 49 29.1	+1.1
	0.4nm,1.0s,baz=264,slow=8.3,SNR=4.3						
YKA	Yellowknife Ar	67.48	337	P	P	21 50 03.4	+0.1
	0.2nm,0.6s,baz=41,slow=5.5,SNR=4.4						

*ISCJB **07** 21:39:34.4±0.6, 22.°12N±0.°03×120.°44E±0.°03, h56^{km}±4^{km}, Error ellipse: s-maj=5.7km s-min=3.9km az=138.0*
*TAP **07** 21:39:34.6, 22.°13N×120.°44E, h46^{km}, ML3.5, D*
*JMA **07** 21:39:36.3±0.4, 22.°03N×120.°72E, h128^{km}, M2.8*
ISC 07 21:39:34.1±1.7**, 22.°07N**±0.°06×**120.°38E**±0.°05**, h52**^{km}±8^{km}**, n54, σ0^{s}75**/98**, 3C-11D, Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWP	Hsiaoliuchiu	0.27	357	eP	Pn	21 39 43.3	+0.1
	baz=343						
TWP				eS	Sn	21 39 49.4	-0.3
	baz=343						
HEN	Hengchun	0.34	101	⇑iP	Pn	21 39 43.8	0.0
	baz=114						
HEN				S	Sn	21 39 51.0	+0.4
	baz=114						
SCZT	Fangliau	0.37	37	⇓iP	Pn	21 39 43.5	-0.6
	baz=36						
SCZT				S	Sn	21 39 49.9	-1.3
	baz=36						
TWK1	Hengchun	0.41	108	⇑iP	Pn	21 39 44.6	+0.1
	baz=118						
TWK1				iS	Sn	21 39 52.3	+0.3
	baz=118						
KAU	Kaohsiung	0.50	352	P	Pn	21 39 45.7	+0.2
	baz=345						
KAU				eS	Sn	21 39 54.4	+0.8
	baz=345						
TSEB	Hengchuen, Pin	0.51	109	iP	Pn	21 39 45.4	-0.2
	baz=120						
TSEB				S	Sn	21 39 54.1	+0.2
	baz=120						
EAST	Anshuo	0.53	54	⇓iP	Pn	21 39 45.9	0.0
	baz=57						
EAST				iS	Sn	21 39 53.7	-0.7
	baz=57						
TAW	Tawu	0.56	59	P	Pn	21 39 46.0	-0.2
	baz=62						
TAW				S	Sn	21 39 54.0	-0.8
	baz=62						
SGLT	Jiouru	0.66	9	eP	Pn	21 39 48.2	+0.7
	baz=5.0						
SGLT				eS	Sn	21 39 59.2	+2.1
	baz=5.0						
SSD	Sandimen	0.71	19	⇓iP	Pn	21 39 48.0	-0.2
	baz=16						
SSD				S	Sn	21 39 57.5	-0.8
	baz=16						
ECL	Taimali	0.74	45	⇓iP	Pn	21 39 48.6	+0.1
	baz=46						
ECL				S	Sn	21 39 57.7	-1.3
	baz=46						
TWM1	Shoushan	0.75	3	eP	Pn	21 39 49.3	+0.7
	baz=359						
TAI1	Yung-k'ang	0.97	352	eP	Pn	21 39 51.6	0.0
	baz=348						
TAI1				eS	Sn	21 40 04.7	+0.3
	baz=348						
TTN	Taitung	0.98	46	eP	Pn	21 39 52.4	+0.7
	baz=46						
TTN				eS	Sn	21 40 04.6	0.0
	baz=46						
TWG	Pinlang	0.98	41	iP	Pn	21 39 52.2	+0.5
	baz=40						
TWG				iS	Sn	21 40 04.0	-0.6
	baz=40						
CHN3	Shinhua	1.00	359	eP	Pn	21 39 52.5	+0.6
	baz=355						
CHN3				eS	Sn	21 40 06.3	+1.3
	baz=355						
LAY	Lan-yu	1.09	92	P	Pn	21 39 52.8	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=95						
LAY				eS	Sn	21 40 06.8	-0.3
	baz=95						
SCLT	Jiali	1.11	351	eP	Pn	21 39 53.4	0.0
	baz=348						
SCLT				eS	Sn	21 40 07.9	+0.2
	baz=348						
CHN1	Nanshi	1.12	7	⇓iP	Pn	21 39 53.6	+0.1
	baz=4.0						
CHN1				eS	Sn	21 40 07.7	-0.2
	baz=4.0						
WTP	Ta-pu	1.19	10	⇓iP	Pn	21 39 54.5	0.0
	baz=8.0						
WTP				eS	Sn	21 40 09.6	0.0
	baz=8.0						
TWK	Hsinying	1.19	5	P	Pn	21 39 54.7	+0.1
	baz=2.0						
TWK				S	Sn	21 40 09.7	-0.1
	baz=2.0						
ELDTW	Lidau	1.26	28	P	Pn	21 39 56.0	+0.4
	baz=27						
ELDTW				eS	Sn	21 40 11.0	-0.4
	baz=27						
CHN8	Yiju	1.28	353	eP	Pn	21 39 53.5	-2.2
	baz=350						
CHN4	Tsaushan	1.29	9	⇓iP	Pn	21 39 55.8	0.0
	baz=6.0						
CHN4				S	Sn	21 40 11.7	-0.3
	baz=6.0						
CHKT	Chengkung	1.37	42	P	Pn	21 39 57.3	+0.4
	baz=41						
CHKT				eS	Sn	21 40 13.7	-0.2
	baz=41						
CHY	Chiayi	1.42	2	eP	Pn	21 39 57.4	-0.1
	baz=359						
CHN2	Minshiung	1.46	3	eP	Pn	21 39 58.0	-0.1
	baz=1.0						
CHN2				eS	Sn	21 40 16.2	+0.2
	baz=1.0						
ALS	Alishan	1.48	15	⇓iP	Pn	21 39 59.0	+0.3
	baz=14						
ALS				eS	Sn	21 40 15.9	-1.3
	baz=14						
TWF1	Yuli	1.53	33	P	Pn	21 39 59.7	+0.6
	baz=33						
TWF1				S	Sn	21 40 17.9	0.0
	baz=33						
CHN5	Tsauling	1.54	10	⇓iP	Pn	21 39 59.3	-0.1
	baz=8.0						
CHN5				eS	Sn	21 40 18.0	-0.3
	baz=8.0						
WSF	Szhu	1.57	355	⇑iP	Pn	21 39 59.4	-0.2
	baz=352						
WSF				S	Sn	21 40 18.0	-0.7
	baz=352						
WGK	Gukeng	1.61	6	P	Pn	21 40 00.3	+0.1
	baz=4.0						
WGK				eS	Sn	21 40 19.7	-0.2
	baz=4.0						
EHY	Hungye	1.67	31	P	Pn	21 40 01.9	+0.9
	baz=30						
EHY				eS	Sn	21 40 21.0	-0.4
	baz=30						
PNG	Penghu	1.67	333	eP	Pn	21 39 59.9	-1.1
	baz=330						
PNG				eS	Sn	21 40 21.2	-0.2
	baz=330						
WTCT	Ta-ch'eng	1.79	357	eP	Pn	21 40 02.5	-0.1
	baz=355						
WNT	Mingjian	1.82	9	eP	Pn	21 40 02.9	-0.1
	baz=7.0						
WNT				eS	Sn	21 40 24.6	-0.3
	baz=7.0						
SMLT	Sun Moon Lake	1.86	15	⇓iP	Pn	21 40 04.2	+0.5
	baz=13						
SMLT				eS	Sn	21 40 25.4	-0.8
	baz=13						
TYC	Yuchr	1.88	13	⇓iP	Pn	21 40 04.2	+0.4
	baz=12						
TYC				S	Sn	21 40 26.6	+0.3
	baz=12						
ESL	Shilin	1.99	29	eP	Pn	21 40 06.3	+1.0
	baz=28						
ESL				eS	Sn	21 40 28.7	-0.4
	baz=28						
WHF	Hehuan Shan	2.22	21	eP	Pn	21 40 09.6	+0.7
	baz=20						
WHF				eS	Sn	21 40 34.0	-1.3
	baz=20						
TWT	Tachien	2.29	18	eP	Pn	21 40 10.3	+0.6
	baz=17						
TWT				eS	Sn	21 40 35.8	-0.9
	baz=17						
TWQ1	Liyutan	2.29	9	eP	Pn	21 40 10.1	+0.6
	baz=8.0						
TWQ1				eS	Sn	21 40 35.4	-1.2
	baz=8.0						
NSTT	Nanjuang	2.61	13	P	Pn	21 40 14.4	+0.6
	baz=11						
NSTT				eS	Sn	21 40 42.9	-1.5
	baz=11						
NSK	Sanguang	2.74	19	eP	Pn	21 40 16.1	+0.3
	baz=18						
NSK				eS	Sn	21 40 45.5	-2.2
	baz=18						
ENTT	Nioudou	2.78	23	eP	Pn	21 40 17.4	+1.2
	baz=22						
ENTT				eS	Sn	21 40 47.4	-1.2
	baz=22						
TWC	Suao	2.86	28	eP	Pn	21 40 18.5	+1.2
	baz=27						
TWE	Neicheng	2.89	24	eP	Pn	21 40 18.8	+1.1
	baz=23						
KNM	Kinmen	2.94	323	eP	Pn	21 40 18.8	+0.4
	baz=318						
YOJ	Yonaguni jima	3.39	45	P	Pn	21 40 26.3	+1.7
HATJ	Hateruma jima	3.72	57	P	Pn	21 40 30.0	+0.9
IRIF	Iriomote-Funau	3.82	53	P	Pn	21 40 31.3	+0.9
IRIF				eS	Sn	21 41 14.3	+0.3
JKRS	Kuro-shima	3.98	56	P	Pn	21 40 33.5	+0.9
JKRS				eS	Sn	21 41 17.6	-0.3
JIJ	Ishigaki jima	4.14	56	P	Pn	21 40 35.4	+0.5
JIJ				eS	Sn	21 41 20.3	-1.8
JTJ	Tarama	4.72	56	P	Pn	21 40 43.7	+0.9
JTJ				eS	Sn	21 41 35.4	-0.9

*ISCJB **07** 21:46:01.0±0.7, 24°.03S±0°.06×66°.66W±0°.08, h202km±12km, mb3.5/2, Error ellipse: s-maj=12.2km s-min=9.5km az=169.3*

*IDC **07** 21:46:01.8±1.8, 24°.07S×66°.57W, h198km±17km, mb3.4/2, mb1 3.4/7, mb1mx3.3/20, mbtmp3.3/7, Error ellipse: s-maj=21.8km s-min=19.5km az=92.0*

*GUC **07** 21:46:03.3±0.6, 23°.72S×67°.08W, h245km±22km, MD3.8*

ISC 07 21:46:01.5±0.9**, 24°.01S**±0°.08×**66°.63W**±0°.08**, h195**km±13km**, n17, σ1s.22**/24**, 5C, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.52	303	eP	x	21 47 02.9	
LVC				eS	x	21 47 36.5	
PB06	Plate Boundary	3.00	295	⇑eP	Pn	21 46 52.6	+1.6
PB06				eS	Sn	21 47 29.4	-0.2
PB09	Plate Boundary	3.26	312	⇑eP	Pn	21 46 56.2	+2.0
PB09				eS	Sn	21 47 36.2	+0.8
CEN1	Los Morros	3.33	280	eP	Pn	21 46 55.5	+0.6
CEN1				eS	Sn	21 47 36.7	0.0
MACH	Maria Elena	3.40	301	eS	Sn	21 47 37.5	-0.9
ANCH	Antofagasta	3.48	275	⇑iP	Pn	21 46 57.8	+1.2
ANCH				eS	Sn	21 47 38.2	-1.5
MECH	Mejillones	3.62	284	⇑eP	Pn	21 46 59.7	+1.4
MECH				iS	Sn	21 47 42.1	-0.7
PB07	Plate Boundary	3.77	306	⇑eP	Pn	21 47 01.3	+0.9
PB07				eS	Sn	21 47 44.5	-2.0
PB11	Plate Boundary	5.08	326	eP	Pn	21 47 16.7	-0.2
PB11				eS	Sn	21 48 13.8	-2.5
CFAA	Coronel Fontan	7.70	190	P	Pn	21 47 50.1	-0.7
	0.1nm,0.3s,baz=18,slow=7.2,SNR=29						
CFAA				S	Sn	21 49 11.0	-6.8
	0.8nm,0.3s,baz=262,slow=17,SNR=16						
LPAZ	La Paz	7.81	349	P	Pn	21 47 54.1	+1.2
	0.6nm,0.3s,baz=160,slow=5.1,SNR=18						
LPAZ				S	Sn	21 49 20.4	-1.0
	0.1nm,0.3s,baz=244,slow=18,SNR=3.2						
CPUP	Villa Florida	8.74	107	P	Pn	21 48 04.3	0.0
	1.2nm,0.3s,baz=272,slow=11,SNR=28						
SIV	San Ignacio	9.53	34	P	Pn	21 48 14.5	-0.3
	0.5nm,0.3s,baz=220,slow=15,SNR=12						
BDFB	Brasilia	19.38	68	P	P	21 50 13.4	+0.7
	0.6nm,0.3s,baz=239,slow=10,SNR=6.8						
TORD	Torodi Ar. Bea	76.26	69	P	P	21 57 28.4	-0.6
	0.8nm,0.5s,baz=257,slow=5.6,SNR=24						
PDAR	Pinedale Array	77.33	329	P	P	21 57 35.5	+0.8
	0.8nm,0.8s,baz=139,slow=8.4,SNR=2.4						
ASAR	Alice Springs	128.59	204	PKP	PKPdf	22 04 45.8	-0.3
	0.7nm,0.7s,baz=130,slow=1.9,SNR=9.6						

*ISCJB **07** 21:49:25.4±1.0, 16°.04N±0°.04×96°.54W±0°.03, h14km±6km, mb4.6/80, MS4.0/16, Error ellipse: s-maj=6.6km s-min=3.2km az=26.6*

*IDC **07** 21:49:27.6±0.7, 16°.00N×96°.49W, h26km±3km, mb4.1/22, mb1 4.2/24, mb1mx4.2/32, mbtmp4.1/24, ML4.2/2, MS3.9/16, Ms1 3.9/16, ms1mx3.7/30, Error ellipse: s-maj=14.1km s-min=10.5km az=67.0*

*MEX **07** 21:49:27.7±0.4, 15°.83N×96°.73W, h29km±6km, MD4.5*

*NEIC **07** 21:49:28.0, 15°.82N×96°.65W, h20km, mb4.7/67, MD4.8(MEX), After MEX.*

NEIC Felt [III] at Puerto Escondido and [II] at Oaxaca. Also felt at Huatulco.

ISC 07 21:49:27.1±0.6**, 15°.88N**±0°.04×**96°.68W**±0°.04**, h25**km±3km**, h25**km**:pP-P, n526, σ1s.25**/507**, mb4.6**/81**, MS3.9**/16**, 156C-165D, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.56	102	iP	Pb	21 49 37.5	-0.9
HUIG				iS	Sb	21 49 46.0	0.0
VHO	Vista Hermosa	1.18	357	iP	Pn	21 49 46.8	-1.5
VHO				iS	Sn	21 50 02.1	-1.6
PNIG	Pinotepa	1.48	290	iP	Pn	21 49 50.0	-2.2
PNIG				iS	Sn	21 50 08.0	-2.8
CMIG	Matias Romero	2.10	55	Pn	Pn	21 49 58.2	-2.5
CMIG				Lg	Lg	21 50 27.4	
CMIG	Matias Romero	2.10	55	eP	Pn	21 49 59.5	-1.2
CMIG				iS	Sn	21 50 25.3	-0.7
CMIG	Matias Romero	2.10	55	Pn	Pn	21 49 58.2	-2.5
	56nm,0.3s,baz=231,slow=9.5,SNR=60						
CMIG				Pg	Pb	21 50 05.4	+0.9
	603nm,0.3s,baz=236,slow=15,SNR=242						
CMIG				Lg	Lg	21 50 27.4	
	1µm,0.3s,baz=29,slow=19,SNR=16						
TPIG	Tehuac#an	2.60	346	eP	Pn	21 50 07.7	-0.1
TPIG				iS	Sn	21 50 37.4	-1.4
TGIG		3.53	75	eP	Pn	21 50 19.8	-0.6
TGIG				iS	Sn	21 51 00.4	-1.1
CAIG	El Cayaco	3.63	289	eP	Pn	21 50 20.4	-1.4
CAIG				iS	Sn	21 51 00.3	-3.5
YAIG	Yautepec	3.74	323	iP	Pn	21 50 23.2	-0.2
YAIG				iS	Sn	21 51 05.4	-1.3
CHVM	Chichinautzin	3.96	324	iP	Pn	21 50 24.9	-1.8
CHVM				iS	Sn	21 51 10.2	-2.4
ARIG	Puente Sto Nin	4.24	305	iP	Pn	21 50 29.1	-1.1
ARIG				iS	Sn	21 51 16.3	-2.7
THIG		4.37	102	eP	Pn	21 50 31.4	-0.5
THIG				iS	Sn	21 51 20.2	-1.8
CCIG	Comitan	4.38	84	iP	Pn	21 50 32.0	-0.4
CCIG				iS	Sn	21 51 22.3	-0.4
ZIIG	Zihuatanejo	4.89	291	iP	Pn	21 50 38.4	-0.8
ZIIG				iS	Sn	21 51 33.0	-2.1
ANIG	Ahuacatlan	9.04	306	iP	Pn	21 51 38.0	+1.8
TEIG	Tepich	9.08	60	ePn	Pn	21 51 34.5	-2.2
TEIG				Sn	Sn	21 53 09.4	-8.8
TEIG				eSn	Sn	21 53 11.2	-7.0
TEIG	Tepich	9.08	60	Pn	Pn	21 51 34.5	-2.2
	17nm,0.3s,baz=263,slow=2.6,SNR=48						
TEIG				Sn	Sn	21 53 09.4	-8.8
	11nm,0.3s,baz=180,slow=20,SNR=3.2						
TEIG				LR	LR	21 55 34.2	
	comp=Z,581nm,18.6s,baz=4.4,slow=41						
TGUH	Tegucigalpa,Un	9.27	100	ePn	Pn	21 51 39.9	+0.6
	48nm,0.9s						
TGUH				eSn	Sn	21 53 23.1	+0.3
JTS	JuntasAbangare	12.70	115	ePn	Pn	21 52 26.3	0.0
	20nm,0.7s						
JTS	JuntasAbangare	12.70	115	Pn	Pn	21 52 29.4	+3.1
	2.0nm,0.3s,baz=293,slow=18,SNR=5.3						
732A	Laxson Ranch,	13.14	347	⇓P	Pn	21 52 32.1	-0.2
	baz=13						
632A	Uvalde	13.86	349	⇓P	Pn	21 52 41.5	-0.5
	baz=14						
631A	Perdido Creek	13.93	346	⇑P	Pn	21 52 43.7	+0.6
	baz=14						
HKT	Hockley	14.02	3	ePn	Pn	21 52 44.3	+0.2
HKT				eSn	Sn	21 55 22.6	+3.6
532A	Rocksprings	14.48	349	⇑P	Pn	21 52 50.5	-0.1
	baz=15						
531A	Rocksprings	14.65	347	⇓P	Pn	21 52 52.0	-0.9
	baz=15,SNR=9.5						
628A	Black Gap, Mar	14.70	338	⇑P	Pn	21 52 54.3	+0.8
	baz=15						
JCT	Junction City	14.81	349	ePn	Pn	21 52 57.4	+2.4
JCT				eS	S	21 55 58.2	+1.8
JCT	Junction City	14.81	349	⇓P	Pn	21 52 55.3	+0.3
	baz=15,SNR=6.5						
530A	J-C Ranch, Com	14.83	344	⇓P	Pn	21 52 55.7	+0.4
	baz=15						
627A	Terlingua Ranc	14.85	337	⇓P	Pn	21 52 56.8	+1.2
	baz=15						
TXAR	Lajitas Array	14.85	336	Pn	Pn	21 52 56.9	+1.2
TXAR	Lajitas Array	14.85	336	Pn	Pn	21 52 56.9	+1.2
	0.1nm,0.3s,baz=155,slow=14,SNR=11						
TXAR				LR	LR	21 59 06.9	
	comp=Z,359nm,18.7s,baz=5.0,slow=39						
529A	Stev Forest Ra	15.06	341	⇓P	Pn	21 52 59.2	+0.8
	baz=15						
431A	Sonora	15.16	347	⇑P	Pn	21 52 59.9	+0.1
	baz=15						
432A	Menard	15.19	350	⇑P	Pn	21 52 59.3	-0.9
	baz=15,SNR=8.0						
626A	Big Bend Ranch	15.24	335	⇑P	Pn	21 53 02.4	+1.6
	baz=15						
528A	Cox Ranch, San	15.28	340	⇓P	Pn	21 53 02.0	+0.6
	baz=15						
430A	Baggett Ranch,	15.41	345	⇓P	Pn	21 53 02.9	-0.1
	baz=16,SNR=16						
429A	Davenport Ranc	15.43	343	⇑P	Pn	21 53 03.0	-0.3
	baz=16,SNR=8.5						
526A	Mary Lane Ranc	15.66	336	⇑P	Pn	21 53 08.0	+1.6
	baz=16						
332A	Millersview	15.68	350	⇓P	Pn	21 53 05.7	-0.8
	baz=16						
331A	San Angelo	15.73	348	⇓P	Pn	21 53 07.2	+0.1
	baz=16,SNR=9.6						
428A	Kincaid Ranch,	15.76	341	⇑P	Pn	21 53 08.8	+1.2
	baz=16,SNR=10						
330A	Mertzon	15.99	346	⇑P	Pn	21 53 10.4	-0.1
	baz=16,SNR=16						
427A	Hayter Ranch,	16.12	339	⇑P	Pn	21 53 12.5	+0.3
	baz=16,SNR=7.4						
232A	Coleman	16.16	351	⇑P	Pn	21 53 11.7	-1.0
	baz=16						
426A	McDonald Obser	16.18	337	⇑P	Pn	21 53 13.8	+0.7
	baz=16,SNR=9.0						
329A	Wagon Wheel Ra	16.27	344	⇓P	Pn	21 53 14.3	+0.2
	baz=16						
231A	Bronte	16.32	349	⇓P	Pn	21 53 13.9	-0.8
	baz=16						
328A	Wristen Ranch,	16.41	341	⇓P	Pn	21 53 15.9	0.0
	baz=16						
230A	Sterling City	16.44	347	⇑P	Pn	21 53 15.8	-0.4
	baz=17						
425A	Indio Mountain	16.67	334	⇓P	Pn	21 53 19.0	-0.2
	baz=17,SNR=9.5						
229A	Bryant Ranch,	16.68	345	⇑P	Pn	21 53 18.2	-1.1
	baz=17						
326A	Caldwell Ranch	16.75	338	⇓P	Pn	21 53 19.9	-0.3
	baz=17,SNR=8.9						
ABTX	Abilene, Hawle	16.88	351	⇓P	Pn	21 53 19.8	-2.0
	baz=17						
228A	UT Block 9, Go	17.03	343	⇑P	Pn	21 53 23.0	-0.8
	baz=17,SNR=14						
131A	Roby	17.05	349	⇑P	Pn	21 53 22.4	-1.6
	baz=17						
130A	Snyder	17.09	348	⇑P	Pn	21 53 23.2	-1.2
	baz=17						
227A	Bennet, Jal	17.15	341	⇑P	Pn	21 53 24.1	-1.1
	baz=17						
325A	Bean Ranch, Si	17.17	335	⇓P	Pn	21 53 25.5	-0.1
	baz=17,SNR=8.8						
129A	Stewart Farms,	17.32	345	⇓P	Pn	21 53 25.9	-1.4
	baz=18						
324A	Moseley Ranch,	17.45	334	⇑P	Pn	21 53 28.7	-0.3
	baz=18,SNR=15						
128A	Castleberry Fa	17.48	343	⇑P	Pn	21 53 28.2	-1.1
	baz=18,SNR=9.3						
226B	Tecolote Peak,	17.50	338	⇑P	Pn	21 53 28.5	-1.1
	baz=18,SNR=5.7						
Z32A	Haskell	17.53	352	⇑P	Pn	21 53 28.0	-1.9
	baz=18						
CLNB	Carlsbad	17.57	339	ePn	P	21 53 32.4	+1.0
	6.1nm,0.7s						
Z31A	Sharp Cattle R	17.64	350	⇑P	Pn	21 53 28.7	-2.5
	baz=18						
GDL2	Guadalupe Moun	17.68	338	eP	P	21 53 32.5	-0.2
225A	Deer Hill, Car	17.77	337	⇑P	Pn	21 53 31.4	-1.6
	baz=18,SNR=8.2						
Z30A	Sanderson Ranc	17.79	348	⇑P	Pn	21 53 31.3	-1.8
	baz=18						
Z29A	Hungry Hill Ra	17.89	346	⇓P	Pn	21 53 31.9	-2.5
	baz=18,SNR=14						
126A	Clayton Basin,	17.97	340	⇓P	Pn	21 53 34.1	-1.3
	baz=18						
224A	Cornudas Mount	18.02	335	⇓P	Pn	21 53 35.5	-0.6
	baz=18						
Z28A	Tucker Farm, M	18.08	344	⇓P	Pn	21 53 34.1	-2.7
	baz=18,SNR=6.8						
125A	Gardner Draw,	18.20	338	⇑P	Pn	21 53 37.5	-0.8
	baz=18						
Y32A	R-V Farms, Ver	18.21	353	⇑P	Pn	21 53 35.9	-2.4
	baz=18						
CPRX	Cap Rock	18.27	340	eP	Pn	21 53 39.1	-0.1
	26nm,0.9s						
Y31A	Rekieta Farm,	18.29	350	⇓P	Pn	21 53 37.3	-1.9
	baz=18						
Y30A	Stafford Cattl	18.32	349	⇑P	P	21 53 37.3	-2.3
	baz=18						
Z27A	Tatum	18.33	342	⇓P	P	21 53 38.8	-1.1
	baz=18,SNR=25						
Z26A	Caprock	18.53	340	⇑P	P	21 53 40.6	-1.3
	baz=19						
124A	Stringfield Ra	18.54	336	⇓P	P	21 53 41.9	-0.3
	baz=19,SNR=15						
222A	Williams Famil	18.73	331	⇓P	Pn	21 53 45.2	+0.5
	baz=19,SNR=12						
Z25A	Roswell	18.79	339	⇓P	P	21 53 44.2	-0.6
	baz=19						
MIAR	Mount Ida	18.79	8	eP	P	21 53 43.2	-1.5
	79nm,1.0s						
MIAR				eS	Sn	21 57 14.7	-0.2
MSTX	Muleshoe	18.83	344	⇓P	P	21 53 44.5	-0.8
	baz=19						
Y27A	Causey	18.85	343	⇓P	P	21 53 44.5	-1.0
	baz=19,SNR=6.0						
X30A	Coker Ranch, T	18.86	349	⇑P	P	21 53 44.1	-1.4
	baz=19						
WMOK	Wichita Mounta	18.87	355	eP	P	21 53 43.9	-1.7
	15nm,0.8s						
WMOK				eS	S	21 57 21.6	+2.9
X31A	McDonald Ranch	18.90	352	⇑P	P	21 53 44.0	-2.0
	baz=19						
221A	Mesquite Ranch	18.97	330	⇓P	Pn	21 53 47.4	-0.2
	baz=19						
X29A	Tulia	19.03	347	⇓P	P	21 53 46.7	-0.7
	baz=19						
Z24A	Sheeppen Canyo	19.06	337	⇑P	Pn	21 53 48.5	-0.3
	baz=19,SNR=11						
Y26A	Elida	19.08	342	⇓P	P	21 53 47.9	-0.1
	baz=19						
LRAL	Lakeview Retre	19.20	25	ePn	P	21 53 48.6	-0.6
	40nm,1.5s						
X28A	Dimmitt	19.21	346	⇑P	P	21 53 49.7	+0.3
	baz=19						
UALR	University of	19.21	11	ePn	P	21 53 48.3	-1.0
	42nm,0.8s						
319A	Douglas	19.24	326	⇑P	Pn	21 53 51.4	+0.6
	baz=19						
220A	Playas Peak, P	19.25	328	⇑P	Pn	21 53 51.7	+0.6
	baz=19,SNR=7.8						
Z23A	Rita Site, Whi	19.34	335	⇑P	Pn	21 53 51.6	-0.5
	baz=20,SNR=13						
Y25A	Mesa, Roswell	19.36	340	⇓P	Pn	21 53 52.1	-0.2
	baz=20						
121A	Cookes Peak, D	19.40	331	⇓P	Pn	21 53 53.3	+0.4
	baz=20						
W31A	Holland Ranch,	19.44	352	⇑P	P	21 53 51.6	-0.3
	baz=20						
AMTX	Amarillo	19.45	348	⇓P	P	21 53 51.9	-0.1
	baz=20						
W30A	Crocket Farms	19.53	350	⇑P	P	21 53 53.5	+0.5
	baz=20						
TIGA	Tifton	19.55	35	⇑P	P	21 53 52.5	-0.6
	baz=20						
X27A	F and S Farms,	19.55	344	⇓P	P	21 53 53.3	+0.1
	baz=20						
Y24A	Capitan	19.62	338	⇑P	Pn	21 53 54.8	-0.7
	baz=20						
Z22A	Elephant Butte	19.64	334	⇓P	Pn	21 53 55.3	-0.3
	baz=20						
X26A	CR and CF Fran	19.66	342	⇑P	P	21 53 54.8	+0.4
	baz=20						
W29A	Amraillo	19.67	348	⇓P	P	21 53 54.4	0.0
	baz=20						
120A	U Bar Ranch, L	19.82	329	⇓P	Pn	21 53 57.8	0.0
	baz=20						
Y23A	Lovelace Mesa,	19.86	337	⇓P	Pn	21 53 57.7	-0.6
	baz=20						
X25A	Clemmons Ranch	19.90	340	⇓P	P	21 53 57.5	+0.5
	baz=20						
W28A	Vega	19.92	347	⇓P	P	21 53 56.8	-0.4
	baz=20						
W27A	Bowe Ranch, En	19.94	344	⇓P	P	21 53 57.2	-0.2
	baz=20						
TUL1	Tulsa	19.96	2	⇑P	P	21 53 56.7	-0.8
	baz=20						
Z21A	St. Cloud Mine	20.00	332	⇓P	Pn	21 53 59.6	-0.3
	baz=20						
V30A	Spur Ranch, Mi	20.12	350	⇓P	P	21 53 59.1	-0.2
	baz=20						
X24A	Lazy VL Ranch,	20.20	339	⇑P	P	21 54 00.9	+0.6
	baz=20						
Y22A	Socorro	20.23	335	⇑P	Pn	21 54 01.9	-0.8
	baz=20						
Z20A	Nine Sixteen R	20.26	330	⇑P	P	21 54 01.9	+0.9
	baz=20						
BNM	Barren Site	20.28	336	eP	P	21 54 02.0	+0.8
	20nm,0.9s						
HBAR	Harrisburg	20.32	14	eP	P	21 54 00.9	-0.4
V29A	Stinnett	20.37	349	⇑P	P	21 54 01.3	-0.8
	baz=20						
V28A	Channing	20.40	347	⇑P	P	21 54 02.0	-0.4
	baz=20						
LPM	Los Pinos Moun	20.42	336	ePn	Pn	21 54 04.3	-0.7
LENM	Lemitar	20.43	335	ePn	Pn	21 54 04.2	-0.9
W25A	X Bar L Ranch,	20.48	342	⇑P	P	21 54 02.5	-0.7
	baz=21						
X23A	Hourglass Bar	20.49	337	⇑P	P	21 54 03.8	+0.3
	baz=21						
PLAL	Pickwick Lake	20.52	21	eP	Pn	21 54 06.0	+0.1
	21nm,0.7s						
Y21A	Point of Rocks	20.59	333	⇓P	P	21 54 05.8	+1.2
	baz=21						
LAZ	Ladron	20.70	335	eP	Pn	21 54 07.2	-1.0
	49nm,1.4s						
X22A	Bernardo	20.74	335	⇓P	P	21 54 06.8	+0.6
	baz=21						
W24A	Lazy 6 Ranch,	20.77	339	⇑P	P	21 54 06.5	-0.1
	baz=21						
TUC	Tucson	20.78	324	eP	Pn	21 54 08.6	-0.4
	19nm,0.9s						
Y20A	Horse Springs,	20.82	332	⇑P	Pn	21 54 08.5	-1.2
	baz=21						
V26A	Tequesquite Ra	20.82	344	⇓P	P	21 54 06.5	-0.5
	baz=21						
ANMO	Albuquerque	20.91	337	eP	P	21 54 08.5	+0.5
ANMO	Albuquerque	20.91	337	P	P	21 54 08.2	+0.2
	5.4nm,0.8s,baz=148,slow=13,SNR=13						
ANMO				LR	LR	22 03 05.3	
	comp=Z,417nm,19.5s,baz=12,slow=39						
W23A	Werner Place,	20.99	338	⇓P	P	21 54 09.6	+0.7
	baz=21						
HALT	Halls	20.99	17	eP	P	21 54 06.4	-2.3
X21A	Alamocita Cree	21.01	334	⇓P	P	21 54 10.4	+1.3
	baz=21						
V25A	Rancho No Teng	21.10	342	⇓P	P	21 54 09.9	-0.1
	baz=21						
V24A	Rampart Ranch,	21.20	340	⇑P	P	21 54 12.2	+1.0
	baz=21						

T31A **Randall Ranch,** 21.30 353 ⇑P P 21 54 12.2 +0.2
baz=21
U26A **Atchley Ranch,** 21.37 344 ⇑P P 21 54 12.6 -0.4
baz=22
X20A **Quemado** 21.40 332 ⇑P P 21 54 14.9 +1.6
baz=22
SWET **Sewanee** 21.52 25 eP P 21 54 11.2 -3.3
24nm,0.7s
V23A **Ortiz Mt. (NFS** 21.52 339 ⇓P P 21 54 15.0 +0.4
baz=22
W21A **San Fidel** 21.53 335 ⇑P P 21 54 15.1 +0.4
baz=22
U25A **Circle Dot Ran** 21.56 343 ⇓P P 21 54 14.9 -0.1
baz=22
WVT **Waverly** 21.65 20 eP P 21 54 13.0 -2.7
25nm,0.6s
T28A **Walsh** 21.70 348 ⇓P P 21 54 15.9 -0.4
baz=22
214A **Organ Pipe Nat** 21.71 320 ⇓P P 21 54 17.8 +1.3
baz=22
T27A **Campo** 21.76 347 ⇓P P 21 54 16.2 -0.9
baz=22
W20A **Ramah** 21.89 333 ⇑P P 21 54 19.7 +1.0
baz=22
X18A **Snowflake** 22.07 330 ⇓P P 21 54 21.8 +1.3
baz=22
T26A **Comanche Natio** 22.07 345 ⇓P P 21 54 20.2 -0.4
baz=22
T25A **Trinidad** 22.25 344 ⇑P P 21 54 22.0 -0.4
baz=22
CPCT **Cooper Cave** 22.32 27 eP P 21 54 22.3 -0.6
U22A **Llaves** 22.33 338 ⇑P P 21 54 23.6 +0.2
baz=22
T24A **Torres, Weston** 22.38 342 ⇓P P 21 54 23.7 -0.2
baz=22
S27A **Las Animas** 22.40 347 ⇓P P 21 54 23.2 -0.7
baz=22
V20A **Brimhall** 22.45 334 ⇓P P 21 54 25.0 +0.4
baz=23
S26A **Kim** 22.47 346 ⇑P P 21 54 24.2 -0.5
baz=23
U21A **Nageezi** 22.68 337 ⇑P P 21 54 27.6 +0.7
baz=23
SIUC **Southern Illin** 22.72 15 eP P 21 54 26.6 -0.6
34nm,0.9s
X16A **Lo Mia Camp, P** 22.73 327 ⇓P P 21 54 28.6 +1.0
baz=23
S25A **Robets Cordova** 22.75 344 ⇑P P 21 54 27.3 -0.4
baz=23
Z14A **Wintersburg** 22.78 323 ⇓P P 21 54 30.2 +2.3
baz=23
TKL **Tuckaleechee C** 22.82 28 eP P 21 54 28.2 -0.1
TKL **Tuckaleechee C** 22.82 28 P P 21 54 28.1 -0.2
13nm,0.9s,baz=210,slow=7.6,SNR=7.2
TKL LR LR 22 03 58.5
comp=Z,161nm,21.3s,baz=82,slow=38
113A **Mohawk Valley,** 22.86 320 ⇑P P 21 54 30.2 +1.6
baz=23
T22A **Edith** 22.92 339 ⇑P P 21 54 30.1 +0.5
baz=23
S24A **Houchin Ranch,** 22.95 342 ⇓P P 21 54 29.6 -0.3
baz=23
R27A **Eads** 22.96 348 ⇑P P 21 54 29.4 -0.4
baz=23
U20A **Newcomb** 22.97 335 ⇑P P 21 54 30.6 +0.6
baz=23
R26A **Arlington** 23.11 346 ⇑P P 21 54 31.0 -0.4
baz=23
T21A **Navajo Lake** 23.12 337 ⇓P P 21 54 32.3 +0.6
baz=23
KSU1 **Kansas State U** 23.13 0 eP P 21 54 31.1 -0.3
34nm,0.6s
R25A **Fountain Ranch** 23.17 345 ⇑P P 21 54 31.4 -0.6
baz=23
S23A **Nye Farm, Mont** 23.25 341 ⇓P P 21 54 33.5 +0.6
baz=23
R24A **Sanders Place,** 23.47 343 ⇑P P 21 54 36.2 +1.2
baz=24
S22A **4UR Ranch, Cre** 23.55 340 ⇑P P 21 54 35.7 -0.3
baz=24
WUAZ **Wupatki** 23.56 329 eP P 21 54 37.5 +1.6
23nm,0.6s
WUAZ **Wupatki** 23.56 329 ⇓P P 21 54 36.7 +0.8
baz=24
KMSC **Kings Mountain** 23.60 33 ⇓P P 21 54 35.5 -0.6
baz=24
R23A **Moffat** 23.64 342 ⇓P P 21 54 36.7 -0.1
baz=24
MVCO **Mesa Verde** 23.68 336 eP P 21 54 39.3 +2.1
24nm,1.0s
MVCO **Mesa Verde** 23.68 336 ⇓P P 21 54 37.9 +0.7
baz=24
GLA **Glamis** 23.70 319 eP P 21 54 38.7 +1.5
14nm,0.9s
GLA **Glamis** 23.70 319 ⇓P P 21 54 39.1 +1.9
baz=24
Q26A **Hugo** 23.73 347 ⇓P P 21 54 36.9 -0.5
baz=24
OTAV **Otavalo** 23.78 129 eP P 21 54 50.0 +11
S21A **Coal Bank Pass** 23.81 338 ⇑P P 21 54 38.7 +0.2
baz=24
Q25A **Bedland, Calha** 23.89 345 ⇓P P 21 54 39.0 0.0
baz=24
Y12C **Blythe** 23.99 321 ⇓P P 21 54 41.6 +1.8
baz=24
WCI **Wyandotte Cave** 24.07 20 eP P 21 54 38.5 -2.1
73nm,0.9s
PDMCI **Parker Dam,Lak** 24.15 323 ⇑P P 21 54 43.9 +2.7
baz=24
Q24A **Divide** 24.16 344 ⇑P P 21 54 41.9 +0.2
baz=24
S20A **Disappointment** 24.17 337 ⇓P P 21 54 42.3 +0.5
baz=24
DVTC **Desert V Tower** 24.27 317 ⇓P P 21 54 45.0 +2.5
baz=24
P26A **Davis Ranch, A** 24.30 347 ⇓P P 21 54 42.8 -0.1
baz=24
Q23A **Hartsel** 24.30 342 ⇑P P 21 54 43.7 +0.7
baz=24
R21A **Cimarron** 24.36 339 ⇑P P 21 54 44.3 +0.8
baz=24
P25A **Willow Gulch B** 24.43 346 ⇑P P 21 54 44.2 +0.2
baz=25
R20A **Redvale** 24.50 337 ⇑P P 21 54 44.5 -0.2
baz=25
BC3 **Big Chuckawall** 24.50 320 ⇓P P 21 54 46.4 +1.8
baz=25
PV01 **Paradox Valley** 24.52 337 eP P 21 54 46.4 +1.5
3um,1.2s
ROSC **El Rosal** 24.53 114 P P 21 54 46.6 +1.2
ROSC **El Rosal** 24.53 114 P P 21 54 46.6 +1.2
6.4nm,0.5s,baz=102,slow=19,SNR=2.3
W13A **Hualapai Mount** 24.57 324 ⇑P P 21 54 47.1 +1.6
baz=25
Q22A **Crested Butte,** 24.59 341 ⇓P P 21 54 45.7 0.0
baz=25
MONP **Monument Peak** 24.62 317 ⇑P P 21 54 47.3 +1.4
baz=25
IRM **Iron Mountain** 24.65 321 ⇓P P 21 54 46.5 +0.5
baz=25
S18A **Hurst Farm, Bl** 24.70 334 ⇑P P 21 54 46.7 0.0
baz=25
U15A **North Rim** 24.73 329 ⇑P P 21 54 47.4 +0.5
baz=25
P23A **Jefferson** 24.74 343 ⇑P P 21 54 46.4 -0.6
baz=25
Q21A **Lamborn Mesa,** 24.79 339 ⇑P P 21 54 48.4 +1.1
baz=25
BLO **Bloomington** 24.85 19 eP P 21 54 45.9 -1.7
45nm,0.7s
PV04 **Paradox Valley** 24.87 337 eP P 21 54 50.1 +2.0
SMCO **Snowmass** 24.90 341 eP P 21 54 50.6 +2.0
34nm,1.3s
O26A **Horse Wrangler** 24.95 348 ⇓P P 21 54 49.6 +1.0
baz=25
O25A **Wiggins** 25.00 346 ⇓P P 21 54 49.3 +0.2
baz=25
BELC **Belle Mtn. Jos** 25.07 320 ⇑P P 21 54 49.9 +0.1
baz=25
ISCO **Idaho Springs** 25.07 344 eP P 21 54 51.0 +1.0
19nm,0.9s
ISCO **Idaho Springs** 25.07 344 ⇑P P 21 54 50.7 +0.7
baz=25
PFO **Pinyon Flat Ob** 25.10 318 eP P 21 54 51.0 +0.9
8.6nm,0.9s
PFO **Pinyon Flat Ob** 25.10 318 ⇑P P 21 54 52.0 +1.8
baz=25
Q20A **Ridgley Place,** 25.14 338 ⇓P P 21 54 52.0 +1.5
baz=25
N27A **Anderson Farm,** 25.35 350 ⇓P P 21 54 52.3 0.0
baz=26
GMRC **Granite Mounta** 25.38 321 ⇓P P 21 54 54.6 +2.0
baz=26
OGNE **Ogallala** 25.40 351 eP P 21 54 53.9 +1.2
56nm,1.0s
OGNE **Ogallala** 25.40 351 ⇓P P 21 54 52.8 +0.1
baz=26
Q19A **Hogan Spring (** 25.50 337 ⇓P P 21 54 54.7 +1.0
baz=26
O23A **Lake Granby, G** 25.54 343 ⇑P P 21 54 54.6 +0.4
baz=26
P20A **De Beque** 25.66 339 ⇑P P 21 54 56.3 +1.1
baz=26
O22A **Kremmling** 25.67 342 ⇓P P 21 54 56.3 +0.9
baz=26
SFIN **Scholer Farm** 25.79 17 ⇑P P 21 54 54.6 -1.5
baz=26
HEC **Hector,Ludlow** 25.82 321 ⇓P P 21 54 58.9 +2.4
baz=26
N24A **Carr** 25.85 346 ⇓P P 21 54 57.0 +0.1
baz=26
P19A **Cripple Cowboy** 25.99 338 ⇑P P 21 54 59.3 +1.0
baz=26
SCIA **State Center** 26.10 6 eP P 21 54 57.9 -1.0
47nm,0.7s
SRU **San Rafael** 26.13 335 eP P 21 54 59.9 +0.4
493nm,0.9s
SRU **San Rafael** 26.13 335 ⇑P P 21 55 00.6 +1.1
baz=26
CCUT **Cedar City** 26.14 329 eP P 21 55 00.9 +1.3
90nm,3.0s
O20A **White River Ci** 26.18 340 ⇑P P 21 55 01.1 +1.2
baz=26
N23A **Red Feather La** 26.18 344 ⇑P P 21 55 01.1 +1.0
baz=26
Q16A **Castle Valley** 26.24 334 ⇑P P 21 55 03.2 +2.7
baz=26
N22A **Wattenberg Ran** 26.24 343 ⇓P P 21 55 02.3 +1.7
baz=26
M25A **Palm-Egli Farm** 26.25 347 ⇑P P 21 55 01.8 +1.4
baz=26
CIS **Catalina Islan** 26.26 316 ⇓P P 21 55 03.4 +2.9
baz=26
BFSC **Mount Baldy Ra** 26.27 318 ⇑P P 21 55 03.0 +2.3
baz=26
MSU **Marysvale** 26.34 332 eP P 21 55 04.3 +2.9
MVU **Marysvale** 26.35 332 eP P 21 55 06.3 +4.8
23nm,1.7s
GSC **Goldstone** 26.43 321 ⇑P P 21 55 03.5 +1.4
baz=26
N21A **Black Mountain** 26.51 341 ⇑P P 21 55 05.3 +2.3
baz=27
P17A **Butcher Ranch,** 26.53 335 ⇓P P 21 55 03.9 +0.9
baz=27
TMUT **Trail Mountain** 26.57 334 eP P 21 55 11.8 +8.3
13nm,0.8s
L26A **Underwood Farm** 26.64 349 ⇓P P 21 55 04.0 +0.1
baz=27
N20A **Spence Gulch,** 26.82 340 ⇓P P 21 55 07.0 +1.3
baz=27
M22A **Cedar Creek Ra** 26.84 343 ⇓P P 21 55 06.9 +1.0
baz=27
ACSO **Alum Creek Sta** 27.03 24 eP P 21 55 05.2 -2.1
14nm,0.9s
M21A **Separation Pea** 27.24 342 ⇓P P 21 55 10.3 +0.7
baz=27
FURC **Furnace Creek,** 27.25 323 ⇓P P 21 55 11.1 +1.8
baz=27
L23A **Garrett** 27.27 345 ⇑P P 21 55 10.4 +0.6
baz=27
K25A **Mack Ranch, Ha** 27.34 348 ⇓P P 21 55 10.8 +0.5
baz=28
MPMC **Manual Prospec** 27.34 321 ⇓P P 21 55 11.7 +1.3
baz=28
N18A **Larsen Ranch,** 27.42 338 ⇑P P 21 55 12.6 +1.5
baz=28
DAU **Daniels Canyon** 27.53 335 eP P 21 55 14.3 +2.1
L21A **Rawlins** 27.57 343 ⇑P P 21 55 12.9 +0.5
baz=28
ECSD **EROS Data Cent** 27.76 0 eP P 21 55 14.8 +1.0
12nm,0.8s
N17A **Moffit Pass** 27.82 337 ⇓P P 21 55 14.8 0.0
baz=28
K22A **Casper** 27.98 344 ⇓P P 21 55 15.0 -1.1
baz=28
K21A **Alcova** 28.16 343 ⇓P P 21 55 17.1 -0.5
baz=28
M17A **Scullys Gap (B** 28.22 337 ⇑P P 21 55 18.1 -0.1
baz=28
L18A **Fontenelle, Gr** 28.39 339 ⇑P P 21 55 19.8 +0.1
baz=28
M16A **Huntsville** 28.45 336 ⇓P P 21 55 20.4 +0.1
baz=29
HWUT **Hardware Ranch** 28.67 336 eP P 21 55 28.6 +6.4
5.5nm,0.8s
K19A **Absolon Red Bu** 28.80 341 ⇓P P 21 55 23.7 +0.3
baz=29
RSSD **Black Hills** 28.83 349 eP P 21 55 17.9 -5.8
10.0nm,0.7s
L17A **Cokeville** 28.84 338 ⇓P P 21 55 24.1 +0.3
baz=29
J21A **Lysite** 28.87 344 ⇑P P 21 55 24.3 +0.3
baz=29
L16A **Fish Haven** 28.97 337 ⇓P P 21 55 26.1 +1.2
baz=29
BW06 **Boulder Array** 28.98 340 eP P 21 55 25.8 +0.8
5.9nm,1.1s
BW06 **Boulder Array** 28.98 340 ⇓P P 21 55 25.9 +0.9
baz=29
PDAR **Pinedale Array** 28.98 340 P P 21 55 25.8 +0.8
PDAR PcP PcP 21 58 32.2 -1.2
PDAR **Pinedale Array** 28.98 340 P P 21 55 25.8 +0.8
1.5nm,0.8s,baz=136,slow=9.9,SNR=12
PDAR PcP PcP 21 58 32.2 -1.2
0.6nm,0.8s,baz=130,slow=6.4,SNR=2.5
K18A **Toltan Ranch,** 29.02 339 ⇑P P 21 55 26.2 +0.8
baz=29
J20A **Shoshoni** 29.06 343 ⇑P P 21 55 25.9 +0.3
baz=29
I22A **9 Mile Ranch,** 29.14 345 ⇓P P 21 55 26.2 -0.1
baz=29
ATAH **Atahualpa** 29.17 140 LR LR 22 05 34.7
comp=Z,124nm,19.1s,baz=62,slow=33
SJG **San Juan** 29.26 81 LR LR 22 06 22.7
comp=Z,121nm,20.7s,baz=270,slow=35
I21A **Big Trails, Te** 29.27 344 ⇓P P 21 55 27.9 +0.5
baz=29
J19A **Crowheart** 29.27 341 ⇓P P 21 55 27.8 +0.3
baz=29
HVU **Hansel Valley** 29.30 335 eP P 21 55 30.2 +2.4
5.7nm,0.8s
L15A **Malad City** 29.33 336 ⇓P P 21 55 29.4 +1.4
baz=30
K17A **Gardner Place,** 29.43 338 ⇑P P 21 55 30.4 +1.4
baz=30
NVAR **Mina Array Bea** 29.43 324 P P 21 55 31.4 +2.3
NVAR PcP PcP 21 58 35.5 +0.9
NVAR **Mina Array Bea** 29.43 324 P P 21 55 31.4 +2.3
4.9nm,0.7s,baz=142,slow=9.0,SNR=13
NVAR PcP PcP 21 58 35.5 +0.9
2.1nm,0.8s,baz=165,slow=3.7,SNR=3.1
NVAR LR LR 22 06 53.3
comp=Z,304nm,20.7s,baz=46,slow=36
SPMN **St. Paul** 29.43 6 ⇓P P 21 55 27.9 -0.8
baz=30
H23A **Clabaugh Cattl** 29.52 347 ⇓P P 21 55 30.0 +0.3
baz=30
J18A **Kendall Valley** 29.52 340 ⇓P P 21 55 31.1 +1.2
baz=30
H24A **Dirks Ranch, A** 29.53 349 ⇓P P 21 55 30.3 +0.6
baz=30
I20A **Worland** 29.62 343 ⇑P P 21 55 31.8 +1.2
baz=30
L14A **Malta** 29.70 335 ⇑P P 21 55 33.1 +1.7
baz=30
H22A **Clearmont** 29.77 346 ⇓P P 21 55 32.8 +1.0
baz=30
MTP **Monte Pirata** 29.83 81 P P 21 55 26.5 -6.0
I18A **Diamond G Ranc** 29.90 341 ⇓P P 21 55 33.8 +0.6
baz=30
I19A **Meeteetse** 29.95 342 ⇓P P 21 55 34.6 +1.1
baz=30
H21A **Big Horn, Sher** 29.96 345 ⇓P P 21 55 34.6 +1.0
baz=30
K15A **Arbon** 29.97 336 ⇑P P 21 55 35.5 +1.8
baz=30
SNOW **Snow King Moun** 29.99 339 eP P 21 55 36.1 +2.1
19nm,0.9s
G24A **Alzada** 30.07 349 ⇑P P 21 55 35.1 +0.7
baz=30
LOHW **Long Hollow** 30.08 340 eP P 21 55 35.7 +1.0
9.3nm,0.9s
H20A **Greybull** 30.08 344 ⇓P P 21 55 35.7 +1.1
baz=30
RRI2 **Red Ridge** 30.09 338 eP P 21 55 36.1 +1.2
5.6nm,0.8s
J16A **Bone** 30.13 338 ⇓P P 21 55 36.5 +1.3
baz=30
G23A **Biddle** 30.13 348 ⇓P P 21 55 35.4 +0.4
baz=30
MOOW **Moose Ponds** 30.24 340 eP P 21 55 37.5 +1.4
5.5nm,1.0s
I17A **Pilgrim Ck.** 30.34 340 ⇑P P 21 55 38.2 +1.1
baz=30
G22A **Birney** 30.34 346 ⇑P P 21 55 37.1 +0.2
baz=30
IMW **Indian Meadow** 30.44 339 eP P 21 55 39.8 +1.8
4.6nm,0.9s
H19A **Powell** 30.52 343 ⇑P P 21 55 39.9 +1.4
baz=31
J15A **Blackfoot** 30.54 337 ⇑P P 21 55 40.2 +1.5
baz=31
G21A **Lodge Grass** 30.57 345 ⇓P P 21 55 39.6 +0.7
baz=31
F24A **Ekalaka** 30.57 349 ⇑P P 21 55 39.3 +0.4
baz=31
I16A **Newdale** 30.61 339 ⇑P P 21 55 40.9 +1.5
baz=31
H18A **Shoshone NF, C** 30.73 342 ⇑P P 21 55 41.0 +0.5
baz=31
G20A **Bridger** 30.82 344 ⇑P P 21 55 41.6 +0.5
baz=31
F22A **Rosebud** 30.87 347 ⇑P P 21 55 41.9 +0.4
baz=31
RLMT **Red Lodge** 31.02 343 eP P 21 55 43.2 +0.2
12nm,0.8s
RLMT **Red Lodge** 31.02 343 ⇑P P 21 55 43.4 +0.4
baz=31
J13A **Cove Ranch, Pi** 31.22 335 ⇓P P 21 55 46.7 +1.9
baz=31
H16A **Russell Place,** 31.26 340 ⇓P P 21 55 45.5 +0.4
baz=31
G18A **Lazy EL Ranch,** 31.28 342 ⇑P P 21 55 45.6 +0.4
baz=31
I14A **Mackay** 31.38 336 ⇓P P 21 55 47.2 +1.0
baz=32
E22A **Miles City** 31.43 348 ⇓P P 21 55 46.6 +0.2
baz=32
HLID **Hailey** 31.45 335 eP P 21 55 48.5 +1.6
5.0nm,0.9s
HLID **Hailey** 31.45 335 ⇑P P 21 55 47.9 +1.0
baz=32
F19A **Roth Farm, Mol** 31.60 344 ⇓P P 21 55 48.3 +0.3
baz=32
I13A **Wildhorse Cree** 31.63 336 ⇑P P 21 55 50.0 +1.7
baz=32
H15A **Lima** 31.67 338 ⇑P P 21 55 49.8 +1.1
baz=32
D24A **Glendive** 31.78 350 ⇑P P 21 55 49.6 +0.1
baz=32
F18A **Big Timber** 31.86 343 ⇑P P 21 55 50.6 +0.3
baz=32
G16A **Moss Hill, Enn** 31.91 340 ⇑P P 21 55 51.7 +1.0
baz=32
MCMT **McKenzie Canyo** 31.92 338 eP P 21 55 52.8 +1.8
3.5nm,0.9s
H14A **Leadore** 31.93 337 ⇓P P 21 55 52.7 +1.6
baz=32
MFID **Camas Ranch** 31.93 333 ⇑P P 21 55 52.6 +1.7
baz=32
MDND **Maddock** 31.96 356 ⇑P P 21 55 50.9 -0.1
baz=32
E20A **Meyer Farm, Mu** 31.99 345 ⇓P P 21 55 52.1 +0.8
baz=32
D23A **Lindsay** 31.99 349 ⇓P P 21 55 51.5 +0.1
baz=32
G15A **Dillon** 32.09 339 ⇑P P 21 55 53.8 +1.4
baz=32
E19A **Rath Farm, Rou** 32.12 344 ⇓P P 21 55 53.4 +0.9
baz=32
F17A **Fitzpatrick Pl** 32.14 342 ⇓P P 21 55 54.0 +1.2
baz=32
D22A **Cohagen** 32.16 348 ⇓P P 21 55 53.4 +0.6
baz=32
BOZ **Bozeman (W)** 32.22 340 eP P 21 55 54.8 +1.3
2.6nm,0.9s
BOZ **Bozeman (W)** 32.22 340 ⇑P P 21 55 54.5 +1.1
baz=32
H13A **Challis** 32.22 336 ⇑P P 21 55 55.0 +1.4
baz=32
DLMT **Dillon** 32.29 339 eP P 21 55 55.9 +1.8
18nm,0.8s
AGMN **Agassiz Nation** 32.33 1 eP P 21 55 53.2 -1.0
19nm,0.7s
F16A **Kennard Place,** 32.34 340 ⇓P P 21 55 55.7 +1.2
baz=32
H12A **Diamond D Ranc** 32.45 335 ⇑P P 21 55 56.9 +1.3
baz=33
G14A **Jackson** 32.50 338 ⇓P P 21 55 57.4 +1.3
baz=33
E18A **Harlowton** 32.52 343 ⇓P P 21 55 56.7 +0.6
baz=33
D20A **Manuel Ranch,** 32.54 345 ⇑P P 21 55 56.8 +0.6
baz=33
C23A **Lambert** 32.59 349 ⇑P P 21 55 56.7 +0.1
baz=33
LRM **Limekiln Ridge** 32.65 339 eP P 21 55 59.0 +1.7
G13A **Cobalt** 32.66 337 ⇑P P 21 55 58.5 +1.1
baz=33
C22A **Vida** 32.67 348 ⇑P P 21 55 57.9 +0.7
baz=33
F15A **Butte** 32.68 339 ⇑P P 21 55 58.0 +0.4
baz=33
E17A **Martinsdale** 32.70 342 ⇑P P 21 55 58.4 +0.6
baz=33
D19A **Cripps Ranch,** 32.79 345 ⇓P P 21 55 58.8 +0.4
baz=33
MOD **Modoc** 32.95 327 eP P 21 56 01.3 +1.3
33nm,1.9s
F14A **Wisdom** 32.96 338 ⇑P P 21 56 01.3 +1.3
baz=33
C21A **Desert Coulee** 32.99 347 ⇓P P 21 56 00.9 +0.7
baz=33
E16A **East Helena** 33.02 341 ⇑P P 21 56 01.5 +1.0
baz=33
D18A **Linhart Farms,** 33.07 344 ⇓P P 21 56 01.5 +0.7
baz=33
C20A **Veseth Ranch,** 33.09 346 ⇓P P 21 56 01.9 +1.0
baz=33
G12A **Big Creek, Yel** 33.12 336 ⇓P P 21 56 02.5 +1.1
baz=33
HRY **Holter Researc** 33.23 341 eP P 21 56 03.9 +1.7
E15A **Deer Lodge** 33.24 340 ⇑P P 21 56 03.2 +0.8
baz=33
D17A **Six Diamond Ra** 33.28 342 ⇓P P 21 56 03.8 +1.1
baz=33
F13A **Darby** 33.29 337 ⇑P P 21 56 04.3 +1.4
baz=33
C19A **Slack Wire Ran** 33.37 345 ⇓P P 21 56 04.5 +1.1
baz=34
D16A **Dana Ranch, Ca** 33.42 341 ⇓P P 21 56 04.9 +1.0
baz=34
E14A **Clinton** 33.52 339 ⇓P P 21 56 06.0 +1.1
baz=34
F12A **Elk City** 33.61 336 ⇑P P 21 56 07.4 +1.8
baz=34
BMO **Blue Mountains** 33.72 333 eP P 21 56 07.3 +0.8
8.0nm,1.4s
C17A **Wharram Farm,** 33.73 343 ⇑P P 21 56 07.8 +1.1
baz=34
D15A **Lincoln** 33.74 340 ⇓P P 21 56 08.3 +1.5
baz=34
B20A **Solberg Farm,** 33.78 346 ⇓P P 21 56 07.6 +0.7
baz=34
E13A **Victor** 33.79 338 ⇓P P 21 56 09.0 +1.9
baz=34
EGMT **Eagleton** 33.81 344 ⇓P P 21 56 08.4 +1.0
baz=34
CHMT **Chamberlain Mo** 33.87 339 eP P 21 56 08.8 +0.8
A22A **Carney Farms,** 33.87 349 ⇑P P 21 56 08.9 +1.1
baz=34
B19A **Brinkman Farms** 34.01 345 ⇑P P 21 56 10.6 +1.6
baz=34
MSO **Missoula** 34.03 339 eP P 21 56 10.8 +1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	3.4nm,0.7s						
A21A	**Bergtoll Ranch**	**34.07**	**348**	⇑P	**P**	**21 56 10.7**	**+1.3**
	baz=34						
D14A	**Greenough**	**34.10**	**339**	⇓P	**P**	**21 56 10.9**	**+1.0**
	baz=34						
B18A	**Beardsley Farm**	**34.16**	**344**	⇑P	**P**	**21 56 11.3**	**+1.0**
	baz=34						
A20A	**Cobblestone Ra**	**34.17**	**347**	⇓P	**P**	**21 56 11.1**	**+0.8**
	baz=34						
C16A	**Fuhringer Ranc**	**34.17**	**342**	⇓P	**P**	**21 56 11.2**	**+0.7**
	baz=34						
SLMT	**Seeley Lake**	**34.24**	**339**	*e*P	**P**	**21 56 12.2**	**+1.2**
ULM	**Lac du Bonnet**	**34.28**	**1**	*e*P	**P**	**21 56 08.9**	**-2.4**
	5.3nm,0.7s						
ULM	**Lac du Bonnet**	**34.28**	**1**	P	**P**	**21 56 09.6**	**-1.6**
	3.6nm,0.7s,baz=182,slow=7.0,SNR=6.7						
B17A	**L&G Farms, Che**	**34.34**	**343**	⇓P	**P**	**21 56 12.5**	**+0.6**
	baz=34						
A19A	**Klindworth Far**	**34.40**	**346**	⇓P	**P**	**21 56 13.2**	**+0.8**
	baz=35						
C15A	**Salmond Ranch,**	**34.41**	**341**	⇓P	**P**	**21 56 13.5**	**+0.9**
	baz=35						
D13A	**Huson**	**34.44**	**338**	⇓P	**P**	**21 56 14.1**	**+1.3**
	baz=35						
SWMT	**Swartz Lake**	**34.64**	**339**	*e*P	**P**	**21 56 15.8**	**+1.3**
A18A	**Metzger Ranch,**	**34.66**	**345**	⇓P	**P**	**21 56 15.5**	**+0.9**
	baz=35						
C14A	**Swan Lake**	**34.78**	**340**	⇑P	**P**	**21 56 16.5**	**+0.8**
	baz=35						
B15A	**Bradely Ranch,**	**34.88**	**341**	⇑P	**P**	**21 56 17.4**	**+0.9**
	baz=35						
A17A	**Triple J Farms**	**34.91**	**344**	⇑P	**P**	**21 56 17.5**	**+0.7**
	baz=35						
JTMT	**Jette**	**34.94**	**339**	*e*P	**P**	**21 56 18.6**	**+1.5**
YBMT	**Yellow Bay**	**34.95**	**340**	*e*P	**P**	**21 56 18.4**	**+1.1**
	6.3nm,0.5s						
C13A	**Hot Springs**	**34.98**	**339**	⇓P	**P**	**21 56 18.6**	**+1.1**
	baz=35						
B14A	**Marquette Ranc**	**35.14**	**341**	⇓P	**P**	**21 56 19.7**	**+0.9**
	baz=35						
A15A	**Johnson Ranch,**	**35.52**	**342**	⇓P	**P**	**21 56 22.8**	**+0.7**
	baz=36						
B13A	**Whitefish**	**35.55**	**339**	⇓P	**P**	**21 56 23.2**	**+0.9**
	baz=36						
B12A	**Libby**	**36.01**	**338**	⇓P	**P**	**21 56 27.3**	**+1.1**
	baz=36						
NEW	**Newport**	**36.40**	**337**	⇑P	**P**	**21 56 30.5**	**+0.9**
	baz=36						
A12A	**Yaak River Ran**	**36.43**	**339**	⇑P	**P**	**21 56 30.8**	**+1.0**
	baz=37						
LON	**Longmire**	**37.20**	**331**	*e*P	**P**	**21 56 37.6**	**+1.3**
	16nm,1.6s						
FFC	**Flin Flon**	**38.98**	**355**	*e*P	**P**	**21 56 50.6**	**-0.6**
	8.3nm,1.0s						
LPAZ	**La Paz**	**42.61**	**137**	P	**P**	**21 57 23.0**	**+0.7**
LPAZ	**La Paz**	**42.61**	**137**	P	**P**	**21 57 23.0**	**+0.7**
	1.1nm,0.9s,baz=342,slow=7.7,SNR=4.6						
LPAZ				LR	LR	22 13 35.0	
	comp=Z,82nm,21.5s,baz=278,slow=34						
SCHQ	**Schefferville**	**45.19**	**24**	P	**P**	**21 57 40.2**	**-1.7**
SCHQ	**Schefferville**	**45.19**	**24**	P	**P**	**21 57 40.2**	**-1.7**
	5.1nm,0.8s,baz=253,slow=10,SNR=7.3						
SCHQ				LR	LR	22 20 46.1	
	comp=Z,140nm,19.2s,baz=18,slow=42						
SIV	**San Ignacio**	**47.31**	**130**	P	**P**	**21 57 58.6**	**-0.4**
SIV	**San Ignacio**	**47.31**	**130**	P	**P**	**21 57 58.6**	**-0.4**
	2.4nm,0.8s,baz=306,slow=9.6,SNR=7.2						
YKA	**Yellowknife Ar**	**48.24**	**349**	P	**P**	**21 58 04.7**	**-1.0**
YKA	**Yellowknife Ar**	**48.24**	**349**	P	**P**	**21 58 04.6**	**-1.0**
	2.3nm,0.8s,baz=154,slow=7.3,SNR=34						
YKW3	**Yellowknife Ar**	**48.30**	**349**	*e*P	**P**	**21 58 05.1**	**-1.0**
	0.1nm,0.7s						
DLBC	**Dease Lake**	**49.15**	**338**	P	**P**	**21 58 12.8**	**+0.1**
DLBC	**Dease Lake**	**49.15**	**338**	P	**P**	**21 58 12.8**	**+0.1**
	1.4nm,0.3s,baz=135,slow=7.1,SNR=3.2						
FRB	**Frobisher Bay**	**51.61**	**16**	P	**P**	**21 58 30.9**	**-0.3**
FRB	**Frobisher Bay**	**51.61**	**16**	P	**P**	**21 58 30.9**	**-0.3**
	2.1nm,0.8s,baz=182,slow=9.0,SNR=4.5						
RKT	**Rikitea**	**53.91**	**225**	*e*T	T	22 56 34.9	
	47nm,0.3s						
CFAA	**Coronel Fontan**	**54.54**	**150**	P	**P**	**21 58 53.9**	**+0.7**
CFAA	**Coronel Fontan**	**54.54**	**150**	P	**P**	**21 58 53.9**	**+0.7**
	0.6nm,0.8s,baz=327,slow=6.3,SNR=7.2						
EGAK	**Eagle**	**57.32**	**339**	*e*P	**P**	**21 59 12.1**	**-0.6**
	4.9nm,0.8s						
BDFB	**Brasilia**	**57.35**	**121**	P	**P**	**21 59 11.7**	**-2.1**
BDFB	**Brasilia**	**57.35**	**121**	P	**P**	**21 59 11.7**	**-2.1**
	1.5nm,0.4s,baz=286,slow=9.8,SNR=4.5						
INK	**Inuvik**	**57.40**	**345**	P	**P**	**21 59 12.7**	**-0.4**
INK				pP	**pP**	**21 59 21.1**	**+0.1**
INK	**Inuvik**	**57.40**	**345**	P	**P**	**21 59 12.7**	**-0.4**
	4.2nm,0.8s,baz=129,slow=8.7,SNR=18						
INK				pP	**pP**	**21 59 21.1**	**+0.1**
	4.9nm,0.7s,baz=129,slow=8.0,SNR=11						
DOT	**Dot Lake**	**57.71**	**337**	*e*P	**P**	**21 59 15.8**	**+0.2**
	8.1nm,1.2s						
PAX	**Paxson**	**57.89**	**336**	*e*P	**P**	**21 59 17.4**	**+0.5**
	4.6nm,0.9s						
RES	**Resolute Bay**	**58.81**	**1**	*e*P	**P**	**21 59 22.3**	**-0.7**
RES	**Resolute Bay**	**58.81**	**1**	P	**P**	**21 59 21.9**	**-1.0**
	2.4nm,1.1s,baz=162,slow=8.6,SNR=4.8						
PMOR	**Pomariorio Ree**	**59.17**	**241**	*e*T	T	23 03 04.9	
	2.9nm,0.2s						
ILAR	**Eielson Array**	**59.36**	**337**	P	**P**	**21 59 26.9**	**-0.1**
ILAR	**Eielson Array**	**59.36**	**337**	P	**P**	**21 59 26.9**	**-0.1**
	3.9nm,0.9s,baz=132,slow=4.6,SNR=36						
ILAR				LR	LR	22 27 01.5	
	comp=Z,145nm,18.9s,baz=179,slow=38						
COLA	**College**	**59.76**	**337**	*e*P	**P**	**21 59 29.1**	**-0.6**
	5.8nm,0.9s						
SPU	**Mount Spurr**	**59.81**	**333**	*e*P	**P**	**21 59 30.6**	**+0.4**
TRF	**Thorofare Moun**	**60.03**	**335**	*e*P	**P**	**21 59 31.5**	**-0.3**
	17nm,0.9s						
PLCA	**Paso Flores**	**61.33**	**158**	*e*P	P	21 59 51.9	+11
PLCA	**Paso Flores**	**61.33**	**158**	P	**P**	**21 59 41.4**	**+0.6**
	5.6nm,0.9s,baz=325,slow=6.3,SNR=6.5						
PLCA				pP	**pP**	**21 59 49.4**	**+0.7**
	6.3nm,1.1s,baz=312,slow=7.5,SNR=5.5						
PPT2	**Papeete2**	**61.84**	**240**	*e*LR	LR	22 18 05.4	
	124nm,25.5s						
TBI	**Tubuai**	**64.67**	**234**	*e*T	T	23 10 00.1	
	7.9nm,0.2s						
BILL	**Bilibino**	**78.02**	**338**	*e*P	**P**	**22 01 23.0**	**-0.2**
	3.5nm,0.8s						
EVOP	**Sao Brissos**	**79.18**	**53**	*e*P	P	22 01 36.8	+6.7
	19nm,1.0s						
EVO	**Evora**	**79.26**	**53**	*e*P	P	22 01 36.8	+6.2
	19nm,1.0s						
EVO				*e*R			
	156nm,20.5s						
ESDC	**Sonseca Array**	**82.08**	**51**	P	**P**	**22 01 45.6**	**-0.1**
ESDC				pP	**pP**	**22 01 53.1**	**-0.8**
ESDC	**Sonseca Array**	**82.08**	**51**	P	**P**	**22 01 45.6**	**-0.1**
	0.2nm,0.4s,baz=288,slow=4.4,SNR=4.9						
ESDC				pP	**pP**	**22 01 53.1**	**-0.8**
	2.0nm,0.7s,baz=291,slow=4.6,SNR=6.8						
ESDC				LR	LR	22 35 09.2	
	comp=Z,102nm,19.8s,baz=265,slow=34						
GRR	**Gorron**	**82.08**	**42**	*e*P	P	22 01 52.1	+6.6
	30nm,0.9s						
GRR	**Gorron**	**82.08**	**42**	*e*P	P	22 01 52.1	+6.6
	30nm,0.9s						
FLN	**La Foliniere**	**82.23**	**42**	*e*P	P	22 01 53.0	+6.7
	25nm,0.8s						
FLN				*e*R			
	125nm,18.2s						
FLN	**La Foliniere**	**82.23**	**42**	*e*P	P	22 01 53.0	+6.7
	25nm,0.8s						
LDF	**La Druitiere**	**82.50**	**42**	*e*P	P	22 01 54.4	+6.7
	65nm,1.3s						
LDF	**La Druitiere**	**82.50**	**42**	*e*P	P	22 01 54.4	+6.7
	65nm,1.3s						
ETSF	**Etsaut**	**83.74**	**47**	*e*P	P	22 02 00.9	+6.6
ETSF	**Etsaut**	**83.74**	**47**	*e*P	P	22 02 00.9	+6.6
LFF	**La Frestale**	**84.08**	**45**	*e*P	P	22 02 02.3	+6.4
	25nm,0.9s						
LFF	**La Frestale**	**84.08**	**45**	*e*P	P	22 02 02.3	+6.4
	25nm,0.9s						
NB2	**NORSAR Subarra**	**84.62**	**28**	P	P	22 02 06.2	+7.8
	comp=Z,1.7nm,0.7s,baz=297,slow=5.1						
NOA	**NORSAR Array B**	**84.62**	**28**	P	**P**	**22 01 58.0**	**-0.4**
NOA				pP	**pP**	**22 02 06.5**	**0.0**
NOA	**NORSAR Array B**	**84.62**	**28**	P	**P**	**22 01 58.0**	**-0.4**
	comp=Z,2.1nm,1.0s,baz=295,slow=5.0,SNR=2.9						
NOA				pP	**pP**	**22 02 06.5**	**0.0**
	comp=Z,5.8nm,1.0s,baz=298,slow=4.9,SNR=9.1						
NOA				LR	LR	22 37 07.2	
	comp=Z,36nm,20.6s,baz=210,slow=34						
AVF	**Avril sur Loir**	**85.27**	**43**	*e*P	P	22 02 07.9	+6.0
AVF	**Avril sur Loir**	**85.27**	**43**	*e*P	P	22 02 07.9	+6.0
SSF	**Saint Saulge**	**85.29**	**42**	*e*P	P	22 02 08.1	+6.1
	comp=Z,27nm,1.3s						
SSF	**Saint Saulge**	**85.29**	**42**	*e*P	P	22 02 08.1	+6.1
	comp=Z,27nm,1.3s						
LOR	**Lormes**	**85.45**	**42**	*e*P	P	22 02 09.3	+6.5
	comp=Z,14nm,1.0s						
LOR				*e*R			
	comp=Z,77nm,22.5s						
LOR	**Lormes**	**85.45**	**42**	*e*P	P	22 02 09.3	+6.5
	comp=Z,14nm,1.0s						
MTLF	**Montolieu**	**85.56**	**46**	*e*P	P	22 02 10.1	+6.7
	comp=Z,34nm,1.2s						
MTLF	**Montolieu**	**85.56**	**46**	*e*P	P	22 02 10.1	+6.7
	comp=Z,34nm,1.2s						
ARCES	**ARCESS Array B**	**85.74**	**17**	LR	LR	22 40 43.9	
	comp=Z,65nm,20.4s,baz=340,slow=36						
MEZF	**Maizieres J'vi**	**85.81**	**41**	*e*P	P	22 02 11.2	+6.6
	comp=Z,26nm,0.9s						
MEZF	**Maizieres J'vi**	**85.81**	**41**	*e*P	P	22 02 11.2	+6.6
	comp=Z,26nm,0.9s						
SFTF	**Sexfontaines**	**85.90**	**41**	*e*P	P	22 02 11.5	+6.5
SFTF	**Sexfontaines**	**85.90**	**41**	*e*P	P	22 02 11.5	+6.5
PAGF	**Fort de Pagny**	**86.22**	**41**	*e*P	P	22 02 13.3	+6.7
PAGF	**Fort de Pagny**	**86.22**	**41**	*e*P	P	22 02 13.3	+6.7
HAU	**Haudompre**	**86.80**	**41**	*e*P	P	22 02 15.9	+6.4
	comp=Z,10.0nm,0.8s						
HAU				*e*R			
	comp=Z,81nm,22.2s						
HAU	**Haudompre**	**86.80**	**41**	*e*P	P	22 02 15.9	+6.4
	comp=Z,10.0nm,0.8s						
HINF	**Hinteralfeld**	**87.18**	**41**	*e*P	P	22 02 17.6	+6.2
HINF	**Hinteralfeld**	**87.18**	**41**	*e*P	P	22 02 17.6	+6.2
CDF	**Champ du Feu**	**87.24**	**40**	*e*P	P	22 02 19.0	+7.3
CDF	**Champ du Feu**	**87.24**	**40**	*e*P	P	22 02 19.0	+7.3
FINES	**FINESS Array B**	**90.67**	**24**	LR	LR	22 44 46.6	
	comp=Z,54nm,19.1s,baz=331,slow=37						
GERES	**GERESS Array B**	**90.98**	**38**	P	**P**	**22 02 27.7**	**-1.6**
GERES				pP	**pP**	**22 02 37.2**	**-0.3**
GERES	**GERESS Array B**	**90.98**	**38**	P	**P**	**22 02 27.7**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=289,slow=6.1,SNR=4.3						
GERES				pP	**pP**	**22 02 37.2**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=294,slow=6.7,SNR=3.9						
GERES				LR	LR	22 44 13.5	
	comp=Z,92nm,18.2s,baz=89,slow=36						
TORD	**Torodi Ar. Bea**	**94.30**	**75**	P	**P**	**22 02 43.5**	**-1.7**
TORD	**Torodi Ar. Bea**	**94.30**	**75**	P	**P**	**22 02 43.5**	**-1.7**
	comp=Z,0.4nm,0.9s,baz=305,slow=4.3,SNR=2.2						
URZ	**Urewera**	**96.76**	**232**	*e*P	pP	22 03 11.2	+7.2
AKASG	**Malin Array Be**	**98.56**	**31**	LR	LR	22 47 17.0	
	comp=Z,49nm,21.6s,baz=65,slow=35						
BJI	**Beijing**	**116.51**	**332**	PKP	**PKPdf**	**22 08 11.7**	**+2.5**
HHC	**Hu-ho-hao-te**	**117.77**	**336**	*e*PKP	**PKPdf**	**22 08 12.7**	**+0.9**
HHC				sPKP		22 08 27.1	
HHC				PP	**PP**	**22 09 27.7**	**+3.7**
HHC				PKS	**PKSdf**	**22 11 47.8**	**-0.8**
HHC				SKS	**SKSdf**	**22 15 19.8**	**-2.8**
HHC				SKKS	SKKSac	22 16 17.2	-7.2
HHC				SS	**SS**	**22 25 31.3**	**-3.4**
HHC				AMB	AMB		
	comp=Z,150nm,7.9s						
HHC				LR	LR		
	comp=N,150nm,20.5s						
HHC				LR	LR		
	comp=E,110nm,19.6s						
HHC				LR	LR		
	comp=Z,180nm,20.9s						
WMQ	**Urumqi**	**120.45**	**356**	PKP	**PKPdf**	**22 08 20.0**	**+3.2**
LZH	**Lanzhou**	**124.78**	**340**	*e*PKP	**PKPdf**	**22 08 30.0**	**+4.5**
LZH				sPKP		22 08 44.6	
LZH				LR	LR		
	comp=N,140nm,17.9s						
LZH				LR	LR		
	comp=E,130nm,18.1s						
LZH				LR	LR		
	comp=Z,170nm,20.0s						
STKA	**Stephens Creek**	**124.99**	**242**	PKP	**PKPdf**	**22 08 25.3**	**-0.4**
STKA	**Stephens Creek**	**124.99**	**242**	PKP	**PKPdf**	**22 08 25.3**	**-0.4**
	comp=Z,4.1nm,0.7s,baz=64,slow=4.4,SNR=6.8						
CD2	**Chengdu**	**129.49**	**337**	PKP	**PKPdf**	**22 08 37.0**	**+2.5**
WRA	**Warramunga Arr**	**131.43**	**257**	PKP	**PKPdf**	**22 08 37.9**	**-0.4**
WRA	**Warramunga Arr**	**131.43**	**257**	PKP	**PKPdf**	**22 08 37.9**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=80,slow=2.2,SNR=5.2						
ASAR	**Alice Springs**	**131.97**	**252**	PKPpre	PKPpre	22 08 35.0	
ASAR				PKP	**PKPdf**	**22 08 39.6**	**+0.3**
ASAR	**Alice Springs**	**131.97**	**252**	PKhKP	PKPpre	22 08 35.0	
	comp=Z,0.7nm,0.6s,baz=99,slow=2.9,SNR=2.9						
ASAR				PKP	**PKPdf**	**22 08 39.6**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=119,slow=3.1,SNR=4.9						
GYA	**Guiyang**	**132.18**	**331**	*e*Pdif	**Pdif**	**22 05 34.8**	**+0.8**
GYA				PKP	**PKiKP**	**22 08 41.5**	**+0.7**
GYA				sPKP		22 08 56.7	
GYA				PP	**PP**	**22 11 05.4**	**+4.8**
GYA				AMB	AMB		
	comp=Z,80nm,7.6s						
KMI	**Kunming**	**135.06**	**335**	PKP	**PKPdf**	**22 08 46.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**142.57**	**335**	PKPpre	PKPpre	22 08 54.3	
CMAR				PKP	**PKPdf**	**22 08 58.6**	**-0.3**
CMAR	**Chiang Mai Arr**	**142.57**	**335**	PKhKP	PKPpre	22 08 54.3	
	comp=Z,1.3nm,0.6s,baz=0.2,slow=3.0,SNR=11						
CMAR				PKP	**PKPdf**	**22 08 58.6**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=331,slow=1.2,SNR=6.9						
HYB	**Hyderabad**	**146.58**	**8**	*i* PKP	**PKPdf**	**22 09 06.0**	**+0.1**

AUST ***07*** *21:58:27.8, 27°.45S×177°.58W, h450km*
ISCJB ***07*** *21:58:31.8±0.5, 27°.33S±0°.07×179°.08W±0°.09, h400km, mb3.8/10, Error ellipse: s-maj=10.6km s-min=9.5km az=2.1*
IDC ***07*** *21:58:31.9±2.4, 27°.08S×179°.12W, h390km±24km, mb3.6/9, mb1 3.9/10, mb1mx3.7/17, mbtmp3.6/10, Error ellipse: s-maj=23.0km s-min=12.5km az=160.0*
ISC 07 21:58:32.3±0.7, **27°.41S**±0°.10×**178°.9W**±0°.1, **h400**km, **n35**, σ**1s.23**/35, **mb3.8**/10, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**11.32**	**196**	P	**Pn**	**22 01 05.3**	**-0.2**
	4.0nm,0.3s,baz=325,slow=2.7,SNR=15						
URZ				S	**S**	**22 03 08.8**	**-1.2**
	8.1nm,0.3s,baz=264,slow=22,SNR=19						
DZM	**Mont Dzumac**	**14.32**	**289**	P	**P**	**22 01 39.1**	**+1.5**
	4.7nm,0.3s,baz=97,slow=12,SNR=8.5						
AFI	**Afiamalu**	**14.99**	**28**	S	S	22 04 13.6	-11
	3.3nm,0.3s,baz=221,slow=19,SNR=4.0						
EIDS	**Eidsvold**	**26.92**	**267**	P	**P**	**22 03 40.2**	**+1.1**
	baz=28,SNR=4.2						
RMQ	**Roma**	**28.79**	**264**	P	**P**	**22 03 57.7**	**+2.1**
	baz=30,SNR=5.0						
STKA	**Stephens Creek**	**34.48**	**253**	P	**P**	**22 04 45.0**	**+0.5**
	1.6nm,0.5s,baz=92,slow=13,SNR=6.8						
STKA	**Stephens Creek**	**34.48**	**253**	P	**P**	**22 04 45.5**	**+0.9**
	baz=36,SNR=5.1						
COEN	**Coen**	**37.74**	**283**	P	**P**	**22 05 13.3**	**+1.2**
	baz=39,SNR=19						
QIS	**Mount Isa**	**38.37**	**271**	P	**P**	**22 05 17.7**	**+0.5**
	baz=40,SNR=5.4						
ASAR	**Alice Springs**	**42.54**	**264**	P	**P**	**22 05 50.1**	**-0.8**
	3.3nm,0.4s,baz=100,slow=6.7,SNR=47						
ASAR				S	**S**	**22 11 43.0**	**-0.1**
	0.7nm,1.0s,baz=121,slow=15,SNR=4.1						
WRA	**Warramunga Arr**	**43.25**	**269**	P	**P**	**22 05 55.4**	**-1.2**
	19nm,0.6s,baz=108,slow=7.5,SNR=61						
WRA				S	**S**	**22 11 51.8**	**-1.5**
	0.5nm,0.7s,baz=107,slow=13,SNR=2.5						
FORT	**Forrest**	**46.10**	**253**	P	**P**	**22 06 17.7**	**-0.9**
	baz=47,SNR=8.6						
KDU	**Kakadu**	**47.66**	**278**	P	**P**	**22 06 29.0**	**-1.6**
	baz=49,SNR=20						
MTN	**Manton Dam**	**48.77**	**277**	P	**P**	**22 06 37.5**	**-1.5**
	baz=50,SNR=3.8						
FITZ	**Fitzroy Crossi**	**51.61**	**268**	P	**P**	**22 06 59.4**	**-0.6**
	baz=53,SNR=12						
MEEK	**Meekatharra**	**55.11**	**255**	P	**P**	**22 07 24.0**	**-1.1**
	baz=56,SNR=6.7						
MORW	**Morawa**	**56.65**	**252**	P	**P**	**22 07 35.2**	**-0.6**
	baz=58,SNR=4.4						
QSPA	**South Pole Qui**	**62.69**	**180**	P	P	22 08 19.3	+3.3
	1.8nm,0.7s,baz=14,slow=3.1,SNR=9.5						
MJAR	**Matsushiro Arr**	**75.33**	**326**	P	**P**	**22 09 32.2**	**-0.8**
	1.8nm,0.8s,baz=162,slow=6.2,SNR=4.7						
SNAA	**Sanae**	**81.16**	**179**	*e*P	**P**	**22 10 05.8**	**+1.7**
VNA3	**Neumayer Olymp**	**81.33**	**177**	*e*P	**P**	**22 10 06.7**	**+1.7**
KSRS	**Korea Array**	**81.55**	**320**	P	**P**	**22 10 08.0**	**+1.5**
	0.9nm,0.6s,baz=134,slow=6.7,SNR=4.8						
VNA2	**Neumayer--Watz**	**81.76**	**177**	*e*P	**P**	**22 10 09.2**	**+2.0**
	baz=191,slow=5.8						
VNA1	**Neumayer--Stat**	**81.99**	**177**	*e*P	**P**	**22 10 10.4**	**+2.1**
NVAR	**Mina Array Bea**	**86.61**	**43**	P	**P**	**22 10 31.8**	**-0.2**
	3.0nm,0.7s,baz=196,slow=7.4,SNR=6.4						
TXAR	**Lajitas Array**	**91.47**	**58**	P	**P**	**22 10 55.3**	**+0.6**
	0.7nm,0.8s,baz=206,slow=5.4,SNR=5.1						
PDAR	**Pinedale Array**	**94.53**	**44**	P	**P**	**22 11 08.3**	**-0.3**
	0.5nm,0.7s,baz=242,slow=3.9,SNR=3.6						
ILAR	**Eielson Array**	**95.20**	**13**	P	**P**	**22 11 10.1**	**-0.8**
	0.4nm,1.0s,baz=224,slow=3.8,SNR=2.9						
MKAR	**Makanchi Array**	**115.22**	**311**	PKP	**PKPdf**	**22 16 25.2**	**-1.5**
	0.2nm,0.7s,baz=94,slow=4.3,SNR=3.4						
AKTO	**Aktyubinsk**	**131.47**	**314**	SKPbc	**SKPab**	**22 19 46.8**	**+1.0**
	1.6nm,0.8s,baz=94,slow=5.9,SNR=5.0						
FINES	**FINESS Array B**	**142.07**	**341**	PKhKP	PKPpre	22 17 12.2	
	3.1nm,1.1s,baz=46,slow=5.5,SNR=6.9						
NB2	**NORSAR Subarra**	**145.68**	**351**	PKP	**PKPbc**	**22 17 23.6**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=21,slow=3.1						
NOA	**NORSAR Array B**	**145.68**	**351**	PKPbc	**PKPbc**	**22 17 23.9**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=12,slow=4.5,SNR=3.6						
AKASG	**Malin Array Be**	**148.41**	**325**	PKPbc	**PKPbc**	**22 17 30.9**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=46,slow=6.6,SNR=5.3						
BRTR	**Keskin Array B**	**150.38**	**303**	PKPbc	**PKPbc**	**22 17 37.1**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=188,slow=7.1,SNR=3.6						

IDC ***07*** *21:59:25.9±1.1, 51°.59N×93°.69E, h0km, mb3.7/6, mb1 3.6/11, mb1mx3.5/33, mbtmp3.6/11, ML3.3/5, Error ellipse: s-maj=25.5km s-min=15.3km az=167.0*
MOS ***07*** *21:59:26.0±1.8, 51°.39N×93°.71E, h13km, mb4.0/4, Error ellipse: s-maj=20.2km s-min=12.6km az=21.8*
ASRS ***07*** *21:59:28.5±1.4, 51°.46N×93°.51E, h15km, Ms3.2/4*
NNC ***07*** *21:59:29.7±6.9, 51°.52N×93°.47E, h17km±29km, mb3.5, mpv3.9, Error ellipse: s-maj=43.0km s-min=23.1km az=78.0*
ISC 07 21:59:28.4±0.8, **51°.36N**±0°.07×**93°.80E**±0°.05, **h10**km, **n38**, σ**1s.90**/29, **mb3.5**/8, **4C-4D**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERR	**Cheremushki**	**2.09**	**316**	*i* Pn	**Pn**	**22 00 02.4**	**-1.1**
CERR				*i* Pg	Pb	22 00 03.1	-3.3
CERR				*i* Sg	**Sn**	**22 00 28.9**	**-0.7**
CERR	**Cheremushki**	**2.09**	**316**	*i* PN	**Pn**	**22 00 02.4**	**-1.1**
CERR				*i*		22 00 28.9	
AKAR	**Aktash**	**4.05**	**257**	*e*Pn	**Pn**	**22 00 30.5**	**0.0**
AKAR				*e*Pg	**Pb**	**22 00 38.5**	**-1.4**
AKAR				*e*Sg	**Sb**	**22 01 30.7**	**+1.8**
AKAR	**Aktash**	**4.05**	**257**	*e*PN	**Pn**	**22 00 30.5**	**0.0**
AKAR				*e*		22 00 38.5	
AKAR				*e*		22 01 30.7	
ELT	**Yel'tsovka**	**5.01**	**295**	*e*Sg	**Sb**	**22 01 56.7**	**+0.4**
UKR	**Ust'-Kan**	**5.70**	**269**	*e*Pg	**Pb**	**22 01 07.7**	**-0.1**
UKR				*e*Sg	**Sb**	**22 02 21.7**	**+5.5**
UKR	**Ust'-Kan**	**5.70**	**269**	*e*PN	**Pb**	**22 01 07.7**	**-0.1**
UKR				*e*		22 02 21.7	
ZALV	**Zalesovo Beam**	**6.04**	**299**	*e*PN	**Pn**	**22 00 56.1**	**-1.7**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**6.04**	**299**	Pn	Pn	22 00 55.7	-2.1
	comp=Z,1.3nm,0.3s,baz=115,slow=11,SNR=21						
ZALV				Lg	Lg	22 02 26.5	
	comp=Z,5.1nm,0.3s,baz=116,slow=28,SNR=5.5						
ZAK	**Zakamensk**	**6.08**	**96**	*e*PN	Pn	22 00 57.6	-0.8
ZAK				*e*		22 01 15.2	
ZAK				pmax	pmax		
	comp=Z,23nm,1.0s						
TLY	**Talaya**	**6.16**	**83**	⇑*i*PN	**Pb**	**22 01 16.0**	**+0.4**
IRK	**Irkutsk**	**6.56**	**78**	*e*PN	Pb	22 01 21.5	-1.0
IRK				*e*		22 02 45.6	
IRK				pmax	pmax		
	comp=Z,38nm,0.2s						
IRK				smax	smax		
	comp=N,307nm,1.1s						
NVS	**Novosibirsk**	**7.25**	**303**	*e*Pg	**Pb**	**22 01 35.0**	**+0.8**
NVS				*e*Sg	**Sb**	**22 03 05.8**	**+5.2**
NVS	**Novosibirsk**	**7.25**	**303**	*e*P	Pn	22 01 24.6	+10
MK31	**Makanchi Array**	**8.83**	**243**	⇓Pn	**Pn**	**22 01 35.0**	**-1.0**
	comp=N,1.5nm,0.5s,baz=53,slow=14,SNR=64						
MK31				⇓Pg	Pg	22 02 09.0	-8.4
	comp=N,4.9nm,0.6s,baz=60,slow=14,SNR=5.6						
MK31				⇑Lg	Lg	22 04 05.5	
	comp=N,44nm,1.1s,baz=0.0,slow=0.1,SNR=6.9						
MKAR	**Makanchi Array**	**8.83**	**243**	P	**Pn**	**22 01 35.3**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**8.83**	**243**	Pn	**Pn**	**22 01 35.2**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=55,slow=15,SNR=61						
MKAR				Pg	Pg	22 02 00.1	-17
	comp=Z,0.7nm,0.3s,baz=62,slow=12,SNR=6.3						
MKAR				Lg	Lg	22 04 08.6	
	comp=Z,1.0nm,0.3s,baz=50,slow=32,SNR=5.8						
SONM	**Songino Array**	**8.91**	**108**	Pn	**Pn**	**22 01 39.2**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=297,slow=14,SNR=5.8						
SONM				Pg	Pg	22 02 06.1	-13
	comp=Z,0.6nm,0.3s,baz=296,slow=18,SNR=20						
SONM				Lg	Lg	22 04 08.1	
	comp=Z,0.9nm,0.3s,baz=302,slow=30,SNR=5.7						
KURK	**Kurchatov**	**9.59**	**272**	⇓Pn	**Pn**	**22 01 45.4**	**-0.9**
	comp=Z,2.2nm,0.6s						
KURK				⇑Lg	Lg	22 04 26.1	
	comp=Z,47nm,1.0s						
KURK	**Kurchatov**	**9.59**	**272**	P	Pn	22 01 44.5	-1.8
KURBB	**Kurchatov Arra**	**9.66**	**272**	Pn	Pn	22 01 44.5	-2.8
	comp=Z,0.1nm,0.3s,baz=80,slow=16,SNR=12						
KURBB				Lg	Lg	22 04 25.5	
	comp=Z,0.2nm,0.3s,baz=80,slow=30,SNR=13						
VOSK	**Vostochnaya**	**14.10**	**284**	⇓P	Pn	22 02 45.2	-2.7
BVA0	**Borovoye Array**	**14.44**	**286**	P	Pn	22 02 49.8	-2.9
	comp=Z,0.1nm,0.8s,baz=90,slow=13,SNR=5.3						
BVAR	**Borovoye Array**	**14.44**	**286**	P	Pn	22 02 50.5	-2.1
BVAR	**Borovoye Array**	**14.44**	**286**	Pn	Pn	22 02 50.5	-2.1
	comp=Z,0.2nm,0.3s,baz=84,slow=15,SNR=2.8						
ZRNK	**Zerenda**	**15.28**	**286**	⇑P	**Pn**	**22 03 01.2**	**-2.8**
AAK	**Ala-Archa**	**15.76**	**244**	P	**Pn**	**22 03 09.7**	**-0.8**
AAK	**Ala-Archa**	**15.76**	**244**	Pn	**Pn**	**22 03 09.7**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=42,slow=16,SNR=4.0						
AB31	**Akbulak array**	**21.61**	**278**	P	**P**	**22 04 15.8**	**-2.6**
	comp=Z,0.3nm,0.5s,baz=72,slow=11,SNR=24						
AKTO	**Aktyubinsk**	**22.45**	**282**	P	**P**	**22 04 26.4**	**-0.9**
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKTO	**Aktyubinsk**	**22.45**	**282**	P	**P**	**22 04 26.4**	**-0.9**
	comp=Z,4.1nm,0.8s,baz=89,slow=7.2,SNR=12						
USRK	**Ussuriysk Arra**	**26.41**	**91**	P	**P**	**22 05 04.4**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=291,slow=9.7,SNR=4.3						
FINES	**FINESS Array B**	**37.11**	**313**	P	P	22 06 34.9	-3.7
	comp=Z,1.1nm,0.9s,baz=72,slow=10,SNR=3.2						
AKASG	**Malin Array Be**	**39.43**	**295**	P	P	22 06 55.7	-2.5
AKASG	**Malin Array Be**	**39.43**	**295**	P	P	22 06 55.7	-2.5
	comp=Z,0.3nm,0.3s,baz=59,slow=8.7,SNR=2.7						
BRTR	**Keskin Array B**	**42.56**	**279**	P	**P**	**22 07 24.4**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=81,slow=7.6,SNR=7.1						
NOA	**NORSAR Array B**	**43.95**	**316**	P	**P**	**22 07 35.4**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=63,slow=7.8,SNR=3.3						
TORD	**Torodi Ar. Bea**	**81.16**	**280**	P	P	22 11 41.6	-2.7
	comp=Z,0.3nm,0.8s,baz=27,slow=4.6,SNR=2.0						

ISCJB ***07*** *22:09:28.7±0.3, 42°.27N±0°.02×13°.49E±0°.03, h11km±4km, Error ellipse: s-maj=3.8km s-min=2.6km az=160.1*
CSEM ***07*** *22:09:28.9±0.1, 42°.27N×13°.49E, h8km, ML3.5/8, Error ellipse: s-maj=2.9km s-min=2.0km az=70.0*
ROM ***07*** *22:09:28.5±0.1, 42°.27N×13°.50E, h10km, Md2.9/5, Ml2.8/16, Error ellipse: s-maj=1.0km s-min=0.7km az=52.0*
ISC 07 22:09:28.5±0.8, **42°.27N**±0°.02×**13°.51E**±0°.02, **h13**km±5km, **n55**, σ**0s.66**/87, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.06**	**91**	Pg	**Pg**	**22 09 31.1**	**0.0**
FAGN				Sg	**Sg**	**22 09 32.4**	**-0.5**
	38μm,0.4s						
FAGN	**Fagnano**	**0.06**	**91**	Pg	**Pg**	**22 09 31.1**	**0.0**
FAGN				Sg	**Sg**	**22 09 32.4**	**-0.5**
	38μm,0.4s						
AQU	**L'Aquila**	**0.12**	**318**	Pg	**Pg**	**22 09 31.7**	**0.0**
AQU				Sg	**Sg**	**22 09 33.8**	**-0.2**
AQU	**L'Aquila**	**0.12**	**318**	Pg	**Pg**	**22 09 31.7**	**0.0**
AQU				Sg	**Sg**	**22 09 33.8**	**-0.2**
PTQR	**Pietraquaria**	**0.26**	**198**	Pg	**Pb**	**22 09 34.5**	**-0.5**

PTQR				Sg	Sb	22 09 39.4	0.0
PTQR	**Pietraquaria**	**0.26**	**198**	Pg	**Pb**	**22 09 34.5**	**-0.5**
PTQR				Sg	**Sb**	**22 09 39.4**	**0.0**
CAMP	**Campotosto**	**0.28**	**345**	Pg	**Pb**	**22 09 35.3**	**-0.2**
CAMP				Sg	**Sg**	**22 09 38.8**	**+0.5**
CAMP	**Campotosto**	**0.28**	**345**	Pg	**Pb**	**22 09 35.3**	**-0.2**
CAMP				Sg	**Sg**	**22 09 38.8**	**+0.5**
VCEL	**Villa Celiera**	**0.28**	**63**	Pg	**Pb**	**22 09 34.9**	**-0.6**
VCEL				Sg	**Sb**	**22 09 39.8**	**-0.3**
VCEL	**Villa Celiera**	**0.28**	**63**	Pg	**Pb**	**22 09 34.9**	**-0.6**
VCEL				Sg	**Sb**	**22 09 39.8**	**-0.3**
FIAM	**Fiamignano**	**0.29**	**270**	Pg	**Pb**	**22 09 34.9**	**-0.7**
FIAM				Sg	**Sb**	**22 09 39.4**	**-1.0**
FIAM	**Fiamignano**	**0.29**	**270**	Pg	**Pb**	**22 09 34.9**	**-0.7**
FIAM				Sg	**Sb**	**22 09 39.4**	**-1.0**
TERO	**Teramo**	**0.36**	**11**	Pg	**Pb**	**22 09 36.1**	**-0.8**
TERO				Sg	**Sg**	**22 09 41.2**	**+0.4**
TERO	**Teramo**	**0.36**	**11**	Pg	**Pb**	**22 09 36.1**	**-0.8**
TERO				Sg	**Sg**	**22 09 41.2**	**+0.4**
INTR	**Introdacqua**	**0.39**	**131**	Pg	**Pb**	**22 09 36.9**	**-0.4**
INTR				Sg	**Sb**	**22 09 43.1**	**-0.2**
INTR	**Introdacqua**	**0.39**	**131**	Pg	**Pb**	**22 09 36.9**	**-0.4**
INTR				Sg	**Sb**	**22 09 43.1**	**-0.2**
VVLD	**Villa Vallelon**	**0.41**	**168**	Pg	**Pb**	**22 09 37.0**	**-0.6**
VVLD				Sg	**Sb**	**22 09 43.0**	**-0.7**
	1μm,0.6s						
VVLD	**Villa Vallelon**	**0.41**	**168**	Pg	**Pb**	**22 09 37.0**	**-0.6**
VVLD				Sg	**Sb**	**22 09 43.0**	**-0.7**
	1μm,0.6s						
LNSS	**Leonessa**	**0.48**	**314**	Pg	**Pb**	**22 09 38.1**	**-0.8**
LNSS				Sg	**Sb**	**22 09 45.8**	**-0.2**
	798nm,0.6s						
LNSS	**Leonessa**	**0.48**	**314**	Pg	**Pb**	**22 09 38.1**	**-0.8**
LNSS				Sg	**Sb**	**22 09 45.8**	**-0.2**
	798nm,0.6s						
GUAR	**Guarcino**	**0.49**	**197**	Pg	**Pb**	**22 09 38.5**	**-0.6**
	557nm,0.3s						
GUAR	**Guarcino**	**0.49**	**197**	Pg	**Pb**	**22 09 38.5**	**-0.6**
	557nm,0.3s						
CERT	**Cerreto**	**0.50**	**231**	Pg	**Pb**	**22 09 38.5**	**-0.7**
CERT				Sg	**Sb**	**22 09 46.2**	**-0.3**
	1μm,0.6s						
CERT	**Cerreto**	**0.50**	**231**	Pg	**Pb**	**22 09 38.5**	**-0.7**
CERT				Sg	**Sb**	**22 09 46.2**	**-0.3**
	1μm,0.6s						
POFI	**Posta Fibreno**	**0.57**	**164**	Pg	**Pb**	**22 09 39.8**	**-0.6**
POFI	**Posta Fibreno**	**0.57**	**164**	Pg	**Pb**	**22 09 39.8**	**-0.6**
SDI	**San Donato**	**0.60**	**158**	Pg	**Pb**	**22 09 40.6**	**-0.3**
SDI				Sg	**Sb**	**22 09 50.2**	**+0.9**
	364nm,0.4s						
SDI	**San Donato**	**0.60**	**158**	Pg	**Pb**	**22 09 40.6**	**-0.3**
SDI				Sg	**Sb**	**22 09 50.2**	**+0.9**
	364nm,0.4s						
MTCE	**Montecelio**	**0.62**	**247**	Pg	**Pg**	**22 09 40.4**	**-0.1**
	211nm,0.6s						
MTCE	**Montecelio**	**0.62**	**247**	Pg	**Pg**	**22 09 40.4**	**-0.1**
	211nm,0.6s						
MNS	**Montasola**	**0.62**	**281**	Pg	**Pg**	**22 09 40.4**	**-0.2**
	239nm,0.4s						
MNS	**Montasola**	**0.62**	**281**	Pg	**Pg**	**22 09 40.4**	**-0.2**
	239nm,0.4s						
NRCA	**Norcia**	**0.64**	**333**	Pg	**Pg**	**22 09 40.8**	**-0.1**
NRCA				Sg	**Sb**	**22 09 50.7**	**+0.3**
	294nm,0.2s						
NRCA	**Norcia**	**0.64**	**333**	Pg	**Pg**	**22 09 40.8**	**-0.1**
NRCA				Sg	**Sb**	**22 09 50.7**	**+0.3**
	294nm,0.2s						
OFFI	**Offida**	**0.68**	**11**	Pg	**Pb**	**22 09 42.5**	**+0.3**
	1μm,0.6s						
OFFI	**Offida**	**0.68**	**11**	Pg	**Pb**	**22 09 42.5**	**+0.3**
	1μm,0.6s						
RMP	**Rome, Mte Porz**	**0.75**	**233**	Pg	**Pb**	**22 09 43.4**	**0.0**
	414nm,0.6s						
RMP	**Rome, Mte Porz**	**0.75**	**233**	Pg	**Pb**	**22 09 43.4**	**0.0**
	414nm,0.6s						
CERA	**Filignano**	**0.77**	**150**	Pg	**Pg**	**22 09 43.1**	**-0.3**
CERA				Sg	**Sb**	**22 09 54.8**	**+0.6**
	479nm,0.8s						
CERA	**Filignano**	**0.77**	**150**	Pg	**Pg**	**22 09 43.1**	**-0.3**
CERA				Sg	**Sb**	**22 09 54.8**	**+0.6**
	479nm,0.8s						
FDMO	**Fiordimonte**	**0.83**	**338**	Pg	**Pg**	**22 09 44.2**	**-0.3**
FDMO				Sg	**Sb**	**22 09 56.3**	**+0.4**
	127nm,0.3s						
FDMO	**Fiordimonte**	**0.83**	**338**	Pg	**Pg**	**22 09 44.2**	**-0.3**
FDMO				Sg	**Sb**	**22 09 56.3**	**+0.4**
	127nm,0.3s						
MIDA	**Miranda**	**0.84**	**138**	Pg	**Pg**	**22 09 44.3**	**-0.4**
	258nm,0.3s						
MIDA	**Miranda**	**0.84**	**138**	Pg	**Pg**	**22 09 44.3**	**-0.4**
	258nm,0.3s						
CESI	**CESI - Serrava**	**0.86**	**329**	Pg	**Pg**	**22 09 44.4**	**-0.7**
	70nm,0.6s						
CESI	**CESI - Serrava**	**0.86**	**329**	Pg	**Pg**	**22 09 44.4**	**-0.7**
	70nm,0.6s						
VAGA	**Valle Agricola**	**1.01**	**147**	Pg	**Pg**	**22 09 47.4**	**-0.6**
	123nm,0.6s						
VAGA	**Valle Agricola**	**1.01**	**147**	Pg	**Pg**	**22 09 47.4**	**-0.6**
	123nm,0.6s						
SNTG	**Esanatoglia**	**1.07**	**337**	Pg	**Pg**	**22 09 48.3**	**-0.8**
	46nm,0.4s						
SNTG	**Esanatoglia**	**1.07**	**337**	Pg	**Pg**	**22 09 48.3**	**-0.8**
	46nm,0.4s						
ARVD	**Arcevia**	**1.30**	**342**	Pn	**Pg**	**22 09 53.0**	**-0.5**
	105nm,0.9s						
ARVD	**Arcevia**	**1.30**	**342**	Pn	**Pg**	**22 09 53.0**	**-0.5**
	105nm,0.9s						
MS1	**Monte Sant'Ang**	**1.90**	**106**	*e*Pn	**Pg**	**22 10 04.0**	**-0.9**
NVLJ	**Novalja**	**2.50**	**23**	*i* Pn	**Pn**	**22 10 10.5**	**+1.6**
NVLJ				Sn	**Sb**	**22 10 41.7**	**-2.2**
NVLJ	**Novalja**	**2.50**	**23**	*i* Pn	**Pn**	**22 10 10.4**	**+1.6**
NVLJ				Sn	**Sb**	**22 10 41.7**	**-2.2**

IDC 07 22:23:06.0±11.0**, 7°.07S**×**128°.26E, h250**km±124km**,
mb3.1**/1**, mb1 3.1**/4**, mb1mx2.9**/20**, mbtmp3.0**/4**, Error ellipse: s-maj=88.3km s-min=42.5km az=42.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.26**	**193**	P	Pn	22 25 40.6	+0.2
	0.5nm,0.3s,baz=32,slow=12,SNR=8.9						
FITZ				S	S	22 27 46.3	+0.1
	0.5nm,0.3s,baz=63,slow=11,SNR=4.2						
WRA	**Warramunga Arr**	**14.09**	**156**	P	Pn	22 26 14.2	-1.1
	0.4nm,0.3s,baz=327,slow=14,SNR=6.0						
WRA				S	S	22 28 41.9	-9.4
	0.5nm,0.3s,baz=338,slow=22,SNR=5.0						
ASAR	**Alice Springs**	**17.36**	**162**	P	P	22 26 52.1	+0.3
	0.3nm,0.3s,baz=342,slow=9.8,SNR=17						
MKAR	**Makanchi Array**	**67.36**	**328**	P	P	22 33 34.3	0.0
	0.3nm,0.3s,baz=111,slow=9.8,SNR=15						

*CSEM **07** 22:28:57.4, 42°.45N×13°.44E, h11km, After ROM*
ROM 07 22:28:57.4±0.1**, 42°.45N**×**13°.44E, h11**km±2km**, Ml2.0**/1**, 2C, Error ellipse: s-maj=1.7km s-min=1.6km az=94.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.09**	**347**⇑	*i*Pg	Pg	22 29 00.6	+0.4
CAMP				Sg	Sg	22 29 02.3	+0.1
CAMP	**Campotosto**	**0.09**	**347**⇑	*i*Pg	Pg	22 29 00.6	+0.4
CAMP				Sg	Sg	22 29 02.3	+0.1
AQU	**L'Aquila**	**0.10**	**195**	Pg	Pg	22 29 00.9	+0.7
AQU				Sg	Sg	22 29 02.9	+0.7
AQU	**L'Aquila**	**0.10**	**195**	Pg	Pg	22 29 00.9	+0.7
AQU				Sg	Sg	22 29 02.9	+0.7
TERO	**Teramo**	**0.21**	**35**	Pg	Pg	22 29 02.6	+0.6
TERO				Sg	Sg	22 29 06.0	+0.8
TERO	**Teramo**	**0.21**	**35**	Pg	Pg	22 29 02.6	+0.6
TERO				Sg	Sg	22 29 06.0	+0.8
FIAM	**Fiamignano**	**0.30**	**233**	Pg	Pg	22 29 03.1	-0.5
FIAM	**Fiamignano**	**0.30**	**233**	Pg	Pg	22 29 03.1	-0.5
LNSS	**Leonessa**	**0.33**	**298**	Pg	Pg	22 29 04.6	+0.3
LNSS				Sg	Sg	22 29 09.8	+1.0
LNSS	**Leonessa**	**0.33**	**298**	Pg	Pg	22 29 04.6	+0.3
LNSS				Sg	Sg	22 29 09.8	+1.0
NRCA	**Norcia**	**0.45**	**328**	Pg	Pg	22 29 06.6	+0.1
NRCA				Sg	Sg	22 29 13.3	+0.7
	629nm,0.1s						
NRCA	**Norcia**	**0.45**	**328**	Pg	Pg	22 29 06.6	+0.1
NRCA				Sg	Sg	22 29 13.3	+0.7
	629nm,0.1s						
FDMO	**Fiordimonte**	**0.64**	**336**	Pg	Pg	22 29 10.1	+0.1
FDMO				Sg	Sb	22 29 19.4	-0.4
	67nm,0.4s						
FDMO	**Fiordimonte**	**0.64**	**336**	Pg	Pg	22 29 10.1	+0.1
FDMO				Sg	Sb	22 29 19.4	-0.4
	67nm,0.4s						

*ISCJB **07** 22:29:50.9±0.2, 42°.27N±0°.02×13°.47E±0°.03, h7km±3km, Error ellipse: s-maj=3.3km s-min=2.6km az=151.1*
*ROM **07** 22:29:50.8±0.1, 42°.28N×13°.48E, h10km±1km, Ml3.1/34, Error ellipse: s-maj=1.2km s-min=0.9km az=56.0*
*CSEM **07** 22:29:51.0±0.1, 42°.28N×13°.48E, h8km, ML3.8/11, Error ellipse: s-maj=2.2km s-min=1.5km az=62.0*
ISC 07 22:29:51.4±0.8**, 42°.28N**±0°.02×**13°.48E**±0°.02**, h9**km±5km**, n87, σ0s.73**/113**, 9C-2D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.08**	**99**⇑	*i*Pg	**Pg**	**22 29 53.4**	**-0.2**
FAGN				Sg	**Sg**	**22 29 55.1**	**-0.1**
	102μm,0.3s						
FAGN	**Fagnano**	**0.08**	**99**⇑	*i*Pg	**Pg**	**22 29 53.4**	**-0.2**
FAGN				Sg	**Sg**	**22 29 55.1**	**-0.1**
	102μm,0.3s						
AQU	**L'Aquila**	**0.09**	**323**⇑	*e*Pg	**Pg**	**22 29 53.8**	**0.0**
AQU				Sg	**Sg**	**22 29 55.6**	**+0.1**
	11μm,0.6s						
AQU	**L'Aquila**	**0.09**	**323**⇑	*e*Pg	**Pg**	**22 29 53.8**	**0.0**
AQU				Sg	**Sg**	**22 29 55.6**	**+0.1**
	11μm,0.6s						
CAMP	**Campotosto**	**0.26**	**349**	Pg	**Pg**	**22 29 56.6**	**-0.1**
CAMP				Sg	**Sg**	**22 30 00.9**	**+0.6**
	2μm,0.7s						
CAMP	**Campotosto**	**0.26**	**349**	Pg	**Pg**	**22 29 56.6**	**-0.1**
CAMP				Sg	**Sg**	**22 30 00.9**	**+0.6**
	2μm,0.7s						
PTQR	**Pietraquaria**	**0.26**	**193**	Pg	**Pg**	**22 29 56.9**	**+0.2**
PTQR	**Pietraquaria**	**0.26**	**193**	Pg	**Pg**	**22 29 56.9**	**+0.2**
FIAM	**Fiamignano**	**0.27**	**268**	Pg	**Pg**	**22 29 57.0**	**+0.2**
FIAM				Sg	**Sg**	**22 30 01.5**	**+1.1**
	8μm,0.8s						
FIAM	**Fiamignano**	**0.27**	**268**	Pg	**Pg**	**22 29 57.0**	**+0.2**
FIAM				Sg	**Sg**	**22 30 01.5**	**+1.1**
	8μm,0.8s						
VCEL	**Villa Celiera**	**0.29**	**67**⇓	*e*Pg	**Pg**	**22 29 57.1**	**-0.2**
VCEL				Sg	**Sg**	**22 30 02.0**	**+0.8**
	6μm,0.5s						
VCEL	**Villa Celiera**	**0.29**	**67**⇓	*e*Pg	**Pg**	**22 29 57.1**	**-0.2**
VCEL				Sg	**Sg**	**22 30 02.0**	**+0.8**
	6μm,0.5s						
TERO	**Teramo**	**0.36**	**15**	Pg	**Pg**	**22 29 57.9**	**-0.5**
TERO				Sg	**Sg**	**22 30 03.5**	**+0.3**
	2μm,0.6s						
TERO	**Teramo**	**0.36**	**15**	Pg	**Pg**	**22 29 57.9**	**-0.5**
TERO				Sg	**Sg**	**22 30 03.5**	**+0.3**
	2μm,0.6s						
INTR	**Introdacqua**	**0.41**	**130**⇑	*e*Pg	**Pg**	**22 29 59.3**	**-0.2**
INTR				Sg	**Sg**	**22 30 05.7**	**+0.7**
	6μm,0.7s						
INTR	**Introdacqua**	**0.41**	**130**⇑	*e*Pg	**Pg**	**22 29 59.3**	**-0.2**
INTR				Sg	**Sg**	**22 30 05.7**	**+0.7**
	6μm,0.7s						
VVLD	**Villa Vallelon**	**0.42**	**165**	Pg	**Pg**	**22 29 59.4**	**-0.2**
VVLD				Sg	**Sg**	**22 30 06.1**	**+0.9**
	3μm,0.7s						
VVLD	**Villa Vallelon**	**0.42**	**165**	Pg	**Pg**	**22 29 59.4**	**-0.2**
VVLD				Sg	**Sg**	**22 30 06.1**	**+0.9**
	3μm,0.7s						
LNSS	**Leonessa**	**0.46**	**315**⇑	*e*Pg	**Pg**	**22 30 00.1**	**-0.2**
	3μm,0.7s						
LNSS	**Leonessa**	**0.46**	**315**⇑	*e*Pg	**Pg**	**22 30 00.1**	**-0.2**
	3μm,0.7s						
CERT	**Cerreto**	**0.49**	**228**	Pg	**Pg**	**22 30 00.7**	**-0.3**
CERT				Sg	**Sg**	**22 30 08.2**	**+0.7**
	3μm,0.4s						
CERT	**Cerreto**	**0.49**	**228**	Pg	**Pg**	**22 30 00.7**	**-0.3**
CERT				Sg	**Sg**	**22 30 08.2**	**+0.7**
	3μm,0.4s						
GUAR	**Guarcino**	**0.50**	**194**	Pg	**Pg**	**22 30 00.8**	**-0.3**
	1μm,0.3s						
GUAR	**Guarcino**	**0.50**	**194**	Pg	**Pg**	**22 30 00.8**	**-0.3**
	1μm,0.3s						
POFI	**Posta Fibreno**	**0.59**	**163**	Pg	**Pg**	**22 30 02.2**	**-0.6**
POFI	**Posta Fibreno**	**0.59**	**163**	Pg	**Pg**	**22 30 02.2**	**-0.6**
MNS	**Montasola**	**0.60**	**280**	Pg	**Pg**	**22 30 02.4**	**-0.6**
	1μm,1.0s						
MNS	**Montasola**	**0.60**	**280**	Pg	**Pg**	**22 30 02.4**	**-0.6**
	1μm,1.0s						
MTCE	**Montecelio**	**0.60**	**245**	Pg	**Pg**	**22 30 02.6**	**-0.5**
	1μm,0.6s						
MTCE	**Montecelio**	**0.60**	**245**	Pg	**Pg**	**22 30 02.6**	**-0.5**
	1μm,0.6s						
NRCA	**Norcia**	**0.62**	**334**	Pg	**Pg**	**22 30 02.6**	**-0.7**
NRCA				Sg	**Sg**	**22 30 12.0**	**+0.6**
	629nm,0.1s						
NRCA	**Norcia**	**0.62**	**334**	Pg	**Pg**	**22 30 02.6**	**-0.7**
NRCA				Sg	**Sg**	**22 30 12.0**	**+0.6**
	629nm,0.1s						
TRTR	**Tortoreto Alta**	**0.62**	**31**	Pg	**Pb**	**22 30 04.1**	**-0.3**
	4μm,0.8s						
TRTR	**Tortoreto Alta**	**0.62**	**31**	Pg	**Pb**	**22 30 04.1**	**-0.3**
	4μm,0.8s						
SDI	**San Donato**	**0.62**	**156**	Pg	**Pg**	**22 30 03.0**	**-0.4**
SDI	**San Donato**	**0.62**	**156**	Pg	**Pg**	**22 30 03.0**	**-0.4**
CAFR	**Castel Frentan**	**0.65**	**94**	Pg	**Pg**	**22 30 03.8**	**-0.1**
	4μm,0.4s						
CAFR	**Castel Frentan**	**0.65**	**94**	Pg	**Pg**	**22 30 03.8**	**-0.1**
	4μm,0.4s						
OFFI	**Offida**	**0.67**	**13**	Pg	**Pg**	**22 30 04.6**	**+0.2**
	3μm,0.6s						
OFFI	**Offida**	**0.67**	**13**	Pg	**Pg**	**22 30 04.6**	**+0.2**
	3μm,0.6s						
GIUL	**Giuliano Di Ro**	**0.74**	**193**	Pg	**Pg**	**22 30 04.9**	**-0.7**
	559nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.74**	**193**	Pg	**Pg**	**22 30 04.9**	**-0.7**
	559nm,0.6s						
RNI2	**Rionero Sannit**	**0.77**	**139**	Pg	**Pg**	**22 30 05.7**	**-0.4**
RNI2	**Rionero Sannit**	**0.77**	**139**	Pg	**Pg**	**22 30 05.7**	**-0.4**
RDP	**Rocca di Papa**	**0.77**	**228**	Pg	**Pg**	**22 30 06.1**	**-0.1**
	2μm,0.5s						
RDP	**Rocca di Papa**	**0.77**	**228**	Pg	**Pg**	**22 30 06.1**	**-0.1**
	2μm,0.5s						
CERA	**Filignano**	**0.79**	**149**	Pg	**Pg**	**22 30 05.7**	**-0.9**
	1μm,0.8s						
CERA	**Filignano**	**0.79**	**149**	Pg	**Pg**	**22 30 05.7**	**-0.9**
	1μm,0.8s						
FDMO	**Fiordimonte**	**0.81**	**339**	Pg	**Pg**	**22 30 06.1**	**-0.9**
	414nm,0.6s						
FDMO	**Fiordimonte**	**0.81**	**339**	Pg	**Pg**	**22 30 06.1**	**-0.9**
	414nm,0.6s						
CESI	**CESI - Serrava**	**0.84**	**330**	Pg	**Pg**	**22 30 06.6**	**-1.0**
	186nm,0.5s						
CESI	**CESI - Serrava**	**0.84**	**330**	Pg	**Pg**	**22 30 06.6**	**-1.0**
	186nm,0.5s						
MIDA	**Miranda**	**0.86**	**137**	Pg	**Pg**	**22 30 06.9**	**-1.0**
MIDA				Sg	**Sb**	**22 30 20.0**	**-0.3**
	738nm,0.3s						
MIDA	**Miranda**	**0.86**	**137**	Pg	**Pg**	**22 30 06.9**	**-1.0**
MIDA				Sg	**Sb**	**22 30 20.0**	**-0.3**
	738nm,0.3s						
TRIV	**Trivento**	**0.95**	**122**	Pg	**Pg**	**22 30 08.9**	**-0.7**
	493nm,0.9s						
TRIV	**Trivento**	**0.95**	**122**	Pg	**Pg**	**22 30 08.9**	**-0.7**
	493nm,0.9s						
ASSB	**Assisi San Ben**	**0.97**	**322**	Pg	**Pg**	**22 30 09.2**	**-0.9**
	714nm,0.9s						
ASSB	**Assisi San Ben**	**0.97**	**322**	Pg	**Pg**	**22 30 09.2**	**-0.9**
	714nm,0.9s						
VAGA	**Valle Agricola**	**1.03**	**146**	Pg	**Pg**	**22 30 10.1**	**-1.1**
	395nm,0.8s						
VAGA	**Valle Agricola**	**1.03**	**146**	Pg	**Pg**	**22 30 10.1**	**-1.1**
	395nm,0.8s						
SNTG	**Esanatoglia**	**1.05**	**338**	Pg	**Pg**	**22 30 10.4**	**-1.2**
	206nm,0.6s						
SNTG	**Esanatoglia**	**1.05**	**338**	Pg	**Pg**	**22 30 10.4**	**-1.2**
	206nm,0.6s						
BSSO	**Busso**	**1.11**	**131**	Pg	**Pb**	**22 30 11.6**	**-1.2**
	393nm,0.7s						
BSSO	**Busso**	**1.11**	**131**	Pg	**Pb**	**22 30 11.6**	**-1.2**
	393nm,0.7s						
CING	**Cingoli**	**1.12**	**349**	Pg	**Pb**	**22 30 11.7**	**-1.2**
	291nm,0.7s						
CING	**Cingoli**	**1.12**	**349**	Pg	**Pb**	**22 30 11.7**	**-1.2**
	291nm,0.7s						
TOLF	**Tolfa**	**1.12**	**259**	Pg	**Pg**	**22 30 12.1**	**-0.8**
TOLF	**Tolfa**	**1.12**	**259**	Pg	**Pg**	**22 30 12.1**	**-0.8**
AOI	**Ancona**	**1.27**	**4**	Pn	**Pg**	**22 30 15.9**	**+0.1**
	289nm,0.9s						
AOI	**Ancona**	**1.27**	**4**	Pn	**Pg**	**22 30 15.9**	**+0.1**
	289nm,0.9s						
ARVD	**Arcevia**	**1.28**	**342**	Pn	**Pn**	**22 30 14.7**	**-0.8**
	426nm,0.8s						
ARVD	**Arcevia**	**1.28**	**342**	Pn	**Pn**	**22 30 14.7**	**-0.8**
	426nm,0.8s						
SACS	**San Casciano d**	**1.29**	**297**	Pn	**Pb**	**22 30 15.8**	**-0.1**
	433nm,1.3s						
PIEI	**Pieia**	**1.43**	**331**	Pn	**Pn**	**22 30 17.7**	**0.0**
	139nm,0.7s						
PIEI	**Pieia**	**1.43**	**331**	Pn	**Pn**	**22 30 17.7**	**0.0**
	139nm,0.7s						
CAFI	**Castiglion Fio**	**1.53**	**314**	Pn	**Pg**	**22 30 20.3**	**-0.4**
	194nm,1.0s						
CAFI	**Castiglion Fio**	**1.53**	**314**	Pn	**Pg**	**22 30 20.3**	**-0.4**
	194nm,1.0s						
MAON	**Monte Argentar**	**1.75**	**276**	Pn	**Pn**	**22 30 22.0**	**+0.1**
	81nm,1.0s						
MAON	**Monte Argentar**	**1.75**	**276**	Pn	**Pn**	**22 30 22.0**	**+0.1**
	81nm,1.0s						
SGRT	**San Giovanni R**	**1.77**	**106**	Pn	**Pn**	**22 30 22.7**	**+0.4**
	189nm,0.6s						
SGRT	**San Giovanni R**	**1.77**	**106**	Pn	**Pn**	**22 30 22.7**	**+0.4**
	189nm,0.6s						
NVLJ	**Novalja**	**2.50**	**24**	*e*Pn	**Pn**	**22 30 32.6**	**+0.3**
NVLJ				Sn	**Sn**	**22 31 04.5**	**+1.7**
STON	**Ston**	**3.17**	**78**	*e*Pn	**Pn**	**22 30 41.8**	**+0.3**
STON				Sn	**Sn**	**22 31 21.1**	**+1.6**
VOY	**Vojsko**	**3.76**	**4**	*e*Pn	**Pn**	**22 30 52.4**	**+2.7**
VOY				*e*		22 30 56.2	
VOY				*e*Sn	**Sn**	**22 31 35.9**	**+1.7**
ABTA	**Abfaltersbach**	**4.52**	**352**⇑	*i*Pn	**Pn**	**22 31 00.6**	**+0.4**
KHC	**Kasperske Hory**	**6.85**	**1**	*e*PN	Pn	22 31 36.0	+3.9
KHC				*e*PG	**Pg**	**22 32 01.5**	**-1.1**
KHC				*e*SN	**Sn**	**22 32 49.5**	**-0.7**
KHC	**Kasperske Hory**	**6.85**	**1**	Pn	Pn	22 31 36.0	+3.9
KHC				Sn	**Sn**	**22 32 49.5**	**-0.7**

*ISCJB **07** 22:43:42.5±0.2, 42°.32N±0°.02×13°.50E±0°.03, h11km±2km, Error ellipse: s-maj=3.3km s-min=2.7km az=148.7*
*ROM **07** 22:43:42.5±0.1, 42°.32N×13°.49E, h9km±1km, Ml3.0/32, Error ellipse: s-maj=1.2km s-min=0.9km az=44.0*
*CSEM **07** 22:43:42.8±0.1, 42°.33N×13°.50E, h2km, ML3.6/9, Error ellipse: s-maj=2.7km s-min=1.9km az=57.0*
*LDG **07** 22:43:47.5±0.5, 42°.45N×13°.32E, h2km, Ml2.8/7, Error ellipse: s-maj=9.5km s-min=6.5km az=115.0*
ISC 07 22:43:41.5±0.7**, 42°.33N**±0°.01×**13°.45E**±0°.02**, h18**km±2km**, n110, σ1s.13**/132**, 1C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.05**	**307**	Pg	**Pg**	**22 43 45.0**	**+0.1**
AQU				Sg	**Sg**	**22 43 46.6**	**-0.6**
	20μm,0.3s						
AQU	**L'Aquila**	**0.05**	**307**	Pg	**Pg**	**22 43 45.0**	**+0.1**
AQU				Sg	**Sg**	**22 43 46.6**	**-0.6**
	20μm,0.3s						
FAGN	**Fagnano**	**0.11**	**121**	Pg	**Pg**	**22 43 45.3**	**-0.1**
FAGN				Sg	**Sb**	**22 43 47.6**	**+1.4**
	24μm,0.5s						
FAGN	**Fagnano**	**0.11**	**121**	Pg	**Pg**	**22 43 45.3**	**-0.1**
FAGN				Sg	**Sb**	**22 43 47.6**	**+1.4**
	24μm,0.5s						
CAMP	**Campotosto**	**0.21**	**351**	Pg	**Pb**	**22 43 47.6**	**+0.8**
CAMP				Sg	**Sb**	**22 43 51.0**	**+0.7**
	3μm,0.6s						
CAMP	**Campotosto**	**0.21**	**351**	Pg	**Pb**	**22 43 47.6**	**+0.8**
CAMP				Sg	**Sb**	**22 43 51.0**	**+0.7**
	3μm,0.6s						
FIAM	**Fiamignano**	**0.26**	**257**	Pg	**Pb**	**22 43 48.9**	**+1.4**
FIAM				Sg	**Sb**	**22 43 53.6**	**+2.0**
	8μm,1.0s						
FIAM	**Fiamignano**	**0.26**	**257**	Pg	**Pb**	**22 43 48.9**	**+1.4**
FIAM				Sg	**Sb**	**22 43 53.6**	**+2.0**
	8μm,1.0s						
VCEL	**Villa Celiera**	**0.30**	**76**	Pg	**Pb**	**22 43 48.5**	**+0.1**
VCEL				Sg	**Sb**	**22 43 53.5**	**+0.6**
	4μm,0.4s						
VCEL	**Villa Celiera**	**0.30**	**76**	Pg	**Pb**	**22 43 48.5**	**+0.1**
VCEL				Sg	**Sb**	**22 43 53.5**	**+0.6**
	4μm,0.4s						
PTQR	**Pietraquaria**	**0.30**	**187**	Pg	**Pb**	**22 43 49.2**	**+0.7**
PTQR				Sg	**Sb**	**22 43 54.5**	**+1.3**
PTQR	**Pietraquaria**	**0.30**	**187**	Pg	**Pb**	**22 43 49.2**	**+0.7**
PTQR				Sg	**Sb**	**22 43 54.5**	**+1.3**
TERO	**Teramo**	**0.32**	**21**	Pg	**Pb**	**22 43 49.0**	**+0.3**
TERO				Sg	**Sb**	**22 43 54.9**	**+1.3**
	4μm,0.7s						
TERO	**Teramo**	**0.32**	**21**	Pg	**Pb**	**22 43 49.0**	**+0.3**
TERO				Sg	**Sb**	**22 43 54.9**	**+1.3**
	4μm,0.7s						
LNSS	**Leonessa**	**0.41**	**312**	Pg	**Pb**	**22 43 51.2**	**+0.8**
	2μm,0.5s						
LNSS	**Leonessa**	**0.41**	**312**	Pg	**Pb**	**22 43 51.2**	**+0.8**
	2μm,0.5s						
INTR	**Introdacqua**	**0.46**	**133**	Pg	**Pb**	**22 43 51.4**	**+0.2**
INTR				Sg	**Sb**	**22 43 58.3**	**+0.6**
	3μm,0.3s						
INTR	**Introdacqua**	**0.46**	**133**	Pg	**Pb**	**22 43 51.4**	**+0.2**
INTR				Sg	**Sb**	**22 43 58.3**	**+0.6**
	3μm,0.3s						
VVLD	**Villa Vallelon**	**0.47**	**164**	Pg	**Pb**	**22 43 51.8**	**+0.4**
VVLD				Sg	**Sb**	**22 43 59.5**	**+1.5**
	2μm,0.6s						
VVLD	**Villa Vallelon**	**0.47**	**164**	Pg	**Pb**	**22 43 51.8**	**+0.4**
VVLD				Sg	**Sb**	**22 43 59.5**	**+1.5**
	2μm,0.6s						
CERT	**Cerreto**	**0.51**	**223**	Pg	**Pn**	**22 43 53.0**	**-1.0**
CERT				Sg	**Sn**	**22 44 01.5**	**-0.9**
CERT	**Cerreto**	**0.51**	**223**	Pg	**Pn**	**22 43 53.0**	**-1.0**
CERT				Sg	**Sn**	**22 44 01.5**	**-0.9**
GUAR	**Guarcino**	**0.54**	**191**	Pg	**Pb**	**22 43 53.2**	**+0.7**
	741nm,0.4s						
GUAR	**Guarcino**	**0.54**	**191**	Pg	**Pb**	**22 43 53.2**	**+0.7**
	741nm,0.4s						
NRCA	**Norcia**	**0.57**	**334**	Pg	**Pb**	**22 43 53.7**	**+0.7**
NRCA				Sg	**Sb**	**22 44 02.7**	**+2.0**
	560nm,0.2s						
NRCA	**Norcia**	**0.57**	**334**	Pg	**Pb**	**22 43 53.7**	**+0.7**
NRCA				Sg	**Sb**	**22 44 02.7**	**+2.0**
	560nm,0.2s						
MNS	**Montasola**	**0.58**	**276**	Pg	**Pn**	**22 43 54.1**	**-0.8**
	812nm,0.9s						
MNS	**Montasola**	**0.58**	**276**	Pg	**Pn**	**22 43 54.1**	**-0.8**
	812nm,0.9s						
MTCE	**Montecelio**	**0.61**	**240**	Pg	**Pn**	**22 43 55.0**	**-0.3**
	1μm,1.1s						
MTCE	**Montecelio**	**0.61**	**240**	Pg	**Pn**	**22 43 55.0**	**-0.3**
	1μm,1.1s						
OFFI	**Offida**	**0.63**	**16**	Pg	**Pn**	**22 43 55.9**	**+0.2**
	3μm,0.8s						
OFFI	**Offida**	**0.63**	**16**	Pg	**Pn**	**22 43 55.9**	**+0.2**
	3μm,0.8s						
POFI	**Posta Fibreno**	**0.64**	**162**	Pg	**Pb**	**22 43 54.4**	**+0.3**
	332nm,0.4s						
POFI	**Posta Fibreno**	**0.64**	**162**	Pg	**Pb**	**22 43 54.4**	**+0.3**
	332nm,0.4s						
CAFR	**Castel Frentan**	**0.67**	**98**	Pg	**Pn**	**22 43 55.7**	**-0.4**
	2μm,0.7s						
CAFR	**Castel Frentan**	**0.67**	**98**	Pg	**Pn**	**22 43 55.7**	**-0.4**
	2μm,0.7s						
SDI	**San Donato**	**0.67**	**156**	Pg	**Pb**	**22 43 55.2**	**+0.5**
SDI	**San Donato**	**0.67**	**156**	Pg	**Pb**	**22 43 55.2**	**+0.5**
RMP	**Rome, Mte Porz**	**0.76**	**228**	Pg	**Pn**	**22 43 58.3**	**+0.9**
	575nm,0.4s						
RMP	**Rome, Mte Porz**	**0.76**	**228**	Pg	**Pn**	**22 43 58.3**	**+0.9**
	575nm,0.4s						
FDMO	**Fiordimonte**	**0.76**	**339**	Pg	**Pg**	**22 43 57.1**	**+0.6**
	235nm,0.4s						
FDMO	**Fiordimonte**	**0.76**	**339**	Pg	**Pg**	**22 43 57.1**	**+0.6**
	235nm,0.4s						
GIUL	**Giuliano Di Ro**	**0.78**	**191**	Pg	**Pn**	**22 43 57.7**	**0.0**
	720nm,1.1s						
GIUL	**Giuliano Di Ro**	**0.78**	**191**	Pg	**Pn**	**22 43 57.7**	**0.0**
	720nm,1.1s						
CESI	**CESI - Serrava**	**0.79**	**329**	Pg	**Pn**	**22 43 57.7**	**-0.2**
	148nm,0.4s						
CESI	**CESI - Serrava**	**0.79**	**329**	Pg	**Pn**	**22 43 57.7**	**-0.2**
	148nm,0.4s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RNI2	Rionero Sannit	0.81	140	Pg	Pn	22 43 57.8	-0.4
RNI2	Rionero Sannit	0.81	140	Pg	Pn	22 43 57.8	-0.4
CERA	Filignano	0.84	150	Pg	Pg	22 43 57.7	-0.2
	512nm,0.4s						
CERA	Filignano	0.84	150	Pg	Pg	22 43 57.7	-0.2
	512nm,0.4s						
MIDA	Miranda	0.91	139	Pg	Pg	22 43 58.9	-0.3
MIDA	Miranda	0.91	139	Pg	Pg	22 43 58.9	-0.3
ASSB	Assisi San Ben	0.93	321	Pg	Pn	22 44 00.4	+0.7
	405nm,0.8s						
ASSB	Assisi San Ben	0.93	321	Pg	Pn	22 44 00.4	+0.7
	405nm,0.8s						
TRIV	Trivento	0.99	124	Pg	Pn	22 44 00.5	-0.1
	269nm,0.7s						
TRIV	Trivento	0.99	124	Pg	Pn	22 44 00.5	-0.1
	269nm,0.7s						
SNTG	Esanatoglia	1.00	338	Pg	Pg	22 44 01.4	+0.4
	272nm,0.7s						
SNTG	Esanatoglia	1.00	338	Pg	Pg	22 44 01.4	+0.4
	272nm,0.7s						
CING	Cingoli	1.07	350	Pg	Pg	22 44 02.9	+0.7
	322nm,0.6s						
CING	Cingoli	1.07	350	Pg	Pg	22 44 02.9	+0.7
	322nm,0.6s						
VAGA	Valle Agricola	1.08	147	Pg	Pg	22 44 02.2	-0.3
	221nm,0.6s						
VAGA	Valle Agricola	1.08	147	Pg	Pg	22 44 02.2	-0.3
	221nm,0.6s						
TOLF	Tolfa	1.11	257	Pg	Pg	22 44 04.6	+1.6
	239nm,0.8s						
TOLF	Tolfa	1.11	257	Pg	Pg	22 44 04.6	+1.6
	239nm,0.8s						
MGAB	Montegabbione	1.15	301	Pg	Pg	22 44 04.7	+0.9
MGAB	Montegabbione	1.15	301	Pg	Pg	22 44 04.7	+0.9
AOI	Ancona	1.23	5	Pn	Pg	22 44 06.4	+1.1
AOI	Ancona	1.23	5	Pn	Pg	22 44 06.4	+1.1
ARVD	Arcevia	1.23	342	Pn	Pg	22 44 05.6	+0.3
	249nm,0.7s						
ARVD	Arcevia	1.23	342	Pn	Pg	22 44 05.6	+0.3
	249nm,0.7s						
PTRJ	Pietraroja	1.25	140	Pg	Pg	22 44 05.5	-0.2
	446nm,0.5s						
PTRJ	Pietraroja	1.25	140	Pg	Pg	22 44 05.5	-0.2
	446nm,0.5s						
PIEI	Pieia	1.39	331	Pn	Pg	22 44 08.6	+0.3
	119nm,0.7s						
PIEI	Pieia	1.39	331	Pn	Pg	22 44 08.6	+0.3
	119nm,0.7s						
BADI	Badiali	1.48	324	Pn	Pg	22 44 11.1	+1.0
	260nm,1.0s						
BADI	Badiali	1.48	324	Pn	Pg	22 44 11.1	+1.0
	260nm,1.0s						
ARCI	Arcidosso	1.55	290	Pn	Pg	22 44 12.9	+1.5
	131nm,1.7s						
ARCI	Arcidosso	1.55	290	Pn	Pg	22 44 12.9	+1.5
	131nm,1.7s						
PARC	Parchiule	1.59	326	Pn	Pg	22 44 12.8	+0.6
	314nm,1.2s						
PARC	Parchiule	1.59	326	Pn	Pg	22 44 12.8	+0.6
	314nm,1.2s						
SGRT	San Giovanni R	1.80	108	Pn	Pg	22 44 15.2	-0.9
	109nm,0.6s						
SGRT	San Giovanni R	1.80	108	Pn	Pg	22 44 15.2	-0.9
	109nm,0.6s						
MSAG	Monte S. Angel	1.93	108	Pn	Pb	22 44 16.8	+0.6
	180nm,0.7s						
MSAG	Monte S. Angel	1.93	108	Pn	Pb	22 44 16.8	+0.6
	180nm,0.7s						
MS1	Monte Sant'Ang	1.96	108	ePn	Pg	22 44 18.9	-0.2
NVLJ	Novalja	2.46	24	ePn	Pb	22 44 23.6	-1.7
NVLJ				Sn	Sb	22 44 54.6	-0.7
NVLJ	Novalja	2.46	24	ePn	Pb	22 44 23.6	-1.7
NVLJ				Sn	Sb	22 44 54.5	-0.7
MAIM	Mastiano	2.69	307	P	Pb	22 44 27.3	-1.8
STON	Ston	3.18	79	ePn	Pn	22 44 32.6	+2.0
STON				Sn	Sn	22 45 08.6	+0.4
STON	Ston	3.18	79	ePn	Pn	22 44 32.6	+2.0
STON				Sn	Sn	22 45 08.5	+0.4
PGF	Pioggiola	3.30	275	ePn	Pb	22 44 36.7	-3.0
PGF				eSn	Sb	22 45 16.9	-2.7
	5.6nm,0.6s						
PGF	Pioggiola	3.30	275	ePn	Pb	22 44 36.7	-3.0
PGF				eSn	Sb	22 45 16.9	-2.7
	2.8nm,0.6s						
ABTA	Abfaltersbach	4.47	352	⇑iPn	Pn	22 44 51.8	+3.3
ABTA	Abfaltersbach	4.47	352	Pn	Pn	22 44 51.8	+3.3
SBF	Sospel	4.67	291	ePn	Pn	22 44 55.3	+4.2
SBF				eSn	Sn	22 45 45.6	+0.7
	16nm,0.8s						
SBF	Sospel	4.67	291	ePn	Pn	22 44 55.3	+4.2
SBF				eSn	Sn	22 45 45.6	+0.7
	7.8nm,0.8s						
FRF	La Foret Royal	5.15	286	ePn	Pn	22 45 02.1	+4.4
FRF				eSn	Sn	22 45 56.0	-0.6
	0.5nm,0.2s						
FRF	La Foret Royal	5.15	286	ePn	Pn	22 45 02.1	+4.4
LMR	La Mourre	5.21	284	ePn	Pn	22 45 02.2	+3.7
LMR				eSn	Sn	22 45 57.9	-0.1
	4.3nm,0.6s						
LMR	La Mourre	5.21	284	ePn	Pn	22 45 02.2	+3.7
LMR				eSn	Sn	22 45 57.9	-0.1
	2.2nm,0.6s						
MBDF	Montbardon	5.42	299	eP	Pn	22 45 07.2	+5.7
MBDF	Montbardon	5.42	299	eP	Pn	22 45 07.2	+5.7
KHC	Kasperske Hory	6.81	1	ePN	Pn	22 45 24.6	+4.1
KHC				eSN	Sn	22 46 39.3	+1.8
KHC	Kasperske Hory	6.81	1	Pn	Pn	22 45 24.6	+4.1
KHC				Sn	Sn	22 46 39.3	+1.8
HINF	Hinteralfeld	7.21	322	ePn	Pn	22 45 29.7	+3.7
HINF				eSn	Sn	22 46 45.6	-1.8
	1.4nm,0.3s						
HINF	Hinteralfeld	7.21	322	ePn	Pn	22 45 29.7	+3.7
CDF	Champ du Feu	7.48	327	ePn	Pn	22 45 32.6	+2.8
CDF				eSn	Sn	22 46 52.4	-1.7
	0.9nm,0.3s						
CDF	Champ du Feu	7.48	327	ePn	Pn	22 45 32.6	+2.8
HAU	Haudompre	7.58	321	ePn	Pn	22 45 34.1	+3.0
HAU				eSn	Sn	22 46 53.6	-2.9
	3.1nm,0.4s						
HAU	Haudompre	7.58	321	ePn	Pn	22 45 34.1	+3.0

*CSEM **07** 22:46:56.5, 42°.28N×13°.49E, h10km, After ROM*
ROM 07 22:46:56.5±0.1, **42°.28N×13°.49E, h10**km±1km, **Ml2.0**/1, **Error ellipse: s-maj=1.6km s-min=1.2km az=44.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.07	98	Pg	Pg	22 46 59.1	+0.3
FAGN				Sg	Sg	22 47 00.8	+0.4
FAGN	Fagnano	0.07	98	Pg	Pg	22 46 59.1	+0.3
FAGN				Sg	Sg	22 47 00.8	+0.4
AQU	L'Aquila	0.10	320	Pg	Pg	22 46 59.5	+0.3
AQU				Sg	Sg	22 47 01.3	+0.2
AQU	L'Aquila	0.10	320	Pg	Pg	22 46 59.5	+0.3
AQU				Sg	Sg	22 47 01.3	+0.2
PTQR	Pietraquaria	0.26	195	Pg	Pg	22 47 02.6	+0.7
PTQR				Sg	Sb	22 47 06.9	-1.3
PTQR	Pietraquaria	0.26	195	Pg	Pg	22 47 02.6	+0.7
PTQR				Sg	Sb	22 47 06.9	-1.3
CAMP	Campotosto	0.27	347	Pg	Pb	22 47 03.3	-0.4
CAMP				Sg	Sg	22 47 06.5	+0.6
CAMP	Campotosto	0.27	347	Pg	Pb	22 47 03.3	-0.4
CAMP				Sg	Sg	22 47 06.5	+0.6
FIAM	Fiamignano	0.28	268	Pg	Pg	22 47 02.7	+0.5
FIAM				Sg	Sg	22 47 07.1	+1.0
FIAM	Fiamignano	0.28	268	Pg	Pg	22 47 02.7	+0.5
FIAM				Sg	Sg	22 47 07.1	+1.0
VCEL	Villa Celiera	0.29	65	Pg	Pg	22 47 02.9	+0.5
VCEL				Sg	Sb	22 47 07.7	-1.3
VCEL	Villa Celiera	0.29	65	Pg	Pg	22 47 02.9	+0.5
VCEL				Sg	Sb	22 47 07.7	-1.3
TERO	Teramo	0.36	14	Pg	Pg	22 47 04.3	+0.6
TERO				Sg	Sg	22 47 09.3	+0.8
TERO	Teramo	0.36	14	Pg	Pg	22 47 04.3	+0.6
TERO				Sg	Sg	22 47 09.3	+0.8
INTR	Introdacqua	0.41	130	Pg	Pg	22 47 05.2	+0.6
INTR				Sg	Sb	22 47 11.4	-0.9
	114nm,0.3s						
INTR	Introdacqua	0.41	130	Pg	Pg	22 47 05.2	+0.6
INTR				Sg	Sb	22 47 11.4	-0.9
	114nm,0.3s						
LNSS	Leonessa	0.47	315	Pg	Pb	22 47 06.9	-0.1
LNSS				Sg	Sb	22 47 14.0	-0.2
LNSS	Leonessa	0.47	315	Pg	Pb	22 47 06.9	-0.1
LNSS				Sg	Sb	22 47 14.0	-0.2
MNS	Montasola	0.61	281	Pg	Pb	22 47 09.2	-0.2
MNS	Montasola	0.61	281	Pg	Pb	22 47 09.2	-0.2
NRCA	Norcia	0.62	334	Pg	Pg	22 47 09.0	+0.3
NRCA				Sg	Sb	22 47 18.1	-0.5
NRCA	Norcia	0.62	334	Pg	Pg	22 47 09.0	+0.3
NRCA				Sg	Sb	22 47 18.1	-0.5

IGQ 07 22:48:22.7, 3°.10S×81°.00W, h12km±135km, **Mb4.0, Ms3.8, 2C-1D, Error ellipse: s-maj=21.8km s-min=4.3km az=21.3, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARNL	Arenillas	1.03	116	⇑S	Sb	22 48 54.4	-1.6
ARNL	Arenillas	1.03	116	⇑P	Pb	22 48 41.6	-0.9
CHIS	Cerro-Chispas-	2.05	8	S	Sn	22 49 23.4	+0.7
CHIS	Cerro-Chispas-	2.05	8	P	Pn	22 48 58.3	+1.2
IGUA	Igualata	2.85	56	P	Pn	22 49 09.4	+0.9
MACE	Macas	2.92	73	P	Pn	22 49 11.3	+2.2
ARRY	Arrayan	2.99	58	P	Pn	22 49 11.2	+0.9
PAT1	Patacocha	3.01	58	P	Pn	22 49 11.9	+1.3
BULB	Ulba Tungurahu	3.07	58	P	Pn	22 49 13.8	+2.4
PISA	Pisayambo	3.31	52	P	Pn	22 49 17.7	+3.0
BMOR	Cotopaxi Volca	3.46	47	P	Pn	22 49 20.1	+3.1
CAMI	Rancho Maria	3.46	46	P	Pn	22 49 20.1	+3.2
BNAS	Cotopaxi Volca	3.49	46	P	Pb	22 49 21.1	-3.8
MOV1	Cotopaxi Vol s	3.49	47	P	Pn	22 49 20.1	+2.7
BREF	Cotopaxi Volca	3.52	47	P	Pn	22 49 21.2	+3.4
BTAM	Cotopaxi Volca	3.54	47	P	Pn	22 49 21.6	+3.5
VC1	Cotopaxi 1	3.56	47	P	Pn	22 49 21.4	+3.1
GGP	Refugio Guagua	3.77	40	P	Pn	22 49 24.3	+3.1
PINO	Pino	3.77	39	⇓P	Pn	22 49 23.8	+2.5

CASC 07 23:04:17.8±4.4, **14°.37N×90°.56W, h35**km, **MD3.5, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	Pacaya	0.05	297	eP	Pn	23 04 21.4	-2.6
GCG	Guatemala City	0.22	7	eP	Pn	23 04 24.2	-0.9
GCG				eS	Sn	23 04 30.1	+0.1
IXG	Ixpaco	0.22	152	eP	Pn	23 04 22.4	-2.7
FUG	Fuego 3	0.28	286	eP	Pn	23 04 25.3	-0.5
NBG	Las Nubes	0.30	44	eP	Pn	23 04 23.3	-2.8
NBG				eS	Sn	23 04 29.1	-2.7
FG6		0.36	301	eP	Pn	23 04 27.0	0.0
FG6				eS	Sn	23 04 36.3	+3.0
RBDL	Robledal	0.89	107	eP	Pn	23 04 32.8	-1.2
RTR	El Retiro	1.00	118	eP	Pn	23 04 35.0	-0.6
SBLS	San Blas	1.05	120	eP	Pn	23 04 35.8	-0.5
SNJE	San Jose	1.05	118	eP	Pn	23 04 35.8	-0.6
MRL	Marmol	1.09	50	eP	Pn	23 04 37.6	+0.8
MRL				eS	Sn	23 04 55.2	+4.4
MTO2	Montecristo 2	1.16	88	eP	Pn	23 04 37.8	-0.1
MTO2				eS	Sn	23 04 55.3	+2.6
BOQS	Boqueron	1.39	117	eP	Pn	23 04 42.2	+1.2
LFU	La Fuente	1.53	114	eP	Pn	23 04 44.7	+1.9
LBRS	Las Brisas	1.60	113	eP	Pn	23 04 44.9	+1.1
SNVI	San Vicente	1.83	114	eP	Pn	23 04 49.5	+2.4
SNVI				eS	Sn	23 05 16.8	+7.7
CAHU	Cacacuatique	2.36	104	eP	Pn	23 04 57.4	+3.1
CAHU				eS	Sn	23 05 29.9	+7.7

*ISCJB **07** 23:04:22.7±0.5, 24°.79N±0°.03×122°.44E±0°.02, h2km±4km, Error ellipse: s-maj=5.1km s-min=3.1km az=10.3*
*JMA **07** 23:04:24.5±0.1, 25°.02N×122°.80E, h0km, M2.7*
*TAP **07** 23:04:24.4, 24°.80N×122°.32E, h11km, ML3.4, C*
ISC 07 23:04:22.2±1.2, **24°.78N**±0°.03×**122°.48E**±0°.02, **h1**km±11km, **n31**, σ0s.**60**/54, **1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.50	297	i P	Pg	23 04 32.5	+0.7
	baz=304						
TWB1				i S	Sg	23 04 38.0	-0.2
	baz=304						
YOJ	Yonaguni jima	0.58	123	P	Pb	23 04 36.2	+1.1
YOJ				S	Sb	23 04 44.3	+0.4
TWC	Suao	0.60	254	⇓iP	Pg	23 04 33.8	+0.1
	baz=253						
TWC				eS	Sg	23 04 40.7	-0.6
	baz=253						
ILA	Ilan	0.66	269	eP	Pb	23 04 36.7	+0.2
	baz=266						
NWF	Wu-fen Shan	0.70	295	i P	Pb	23 04 36.8	-0.4
	baz=298						
NWF				i S	Sg	23 04 45.3	+0.7
	baz=298						
TWE	Neicheng	0.74	266	P	Pg	23 04 36.5	+0.2
	baz=261						
TWE				S	Sg	23 04 45.3	-0.6
	baz=261						
ENA	Nanau	0.76	243	eP	Pg	23 04 36.9	+0.3
	baz=234						
ENA				eS	Sg	23 04 45.8	-0.7
	baz=234						
ENTT	Nioudou	0.84	261	eP	Pg	23 04 38.7	+0.4
	baz=256						
ENTT				eS	Sg	23 04 48.8	-0.4
	baz=256						
PCYT	Pengchaiyu	0.92	337	eP	Pg	23 04 40.5	+0.5
	baz=345						
PCYT				eS	Sb	23 04 53.1	-0.7
	baz=345						
TWY	Chenhua	0.94	302	eP	Pb	23 04 41.3	0.0
	baz=306						
TWY				eS	Sg	23 04 52.4	0.0
	baz=306						
TWS1	Kuangyinshan	1.01	289	eP	Pb	23 04 42.2	-0.4
	baz=290						
TWS1				eS	Sg	23 04 54.7	-0.1
	baz=290						
NSK	Sanguang	1.02	265	P	Pg	23 04 42.0	+0.2
	baz=261						
NSK				S	Sg	23 04 53.7	-1.4
	baz=261						
NNS	Nan Shan	1.06	252	P	Pg	23 04 43.0	+0.5
	baz=246						
NNS				eS	Sg	23 04 55.9	-0.4
	baz=246						
TWD	Chiawan	1.06	229	P	Pb	23 04 43.0	-0.3
	baz=231						
TWD				eS	Sg	23 04 56.3	-0.1
	baz=231						
IRIF	Iriomote-Funau	1.22	111	P	Pg	23 04 45.4	-0.2
WHF	Hehuan Shan	1.27	241	P	Pg	23 04 46.7	+0.1
	baz=234						
WHF				eS	Sg	23 05 02.0	-1.1
	baz=234						
TWT	Tachien	1.30	246	eP	Pn	23 04 47.9	+0.2
	baz=235						
TWT				eS	Sg	23 05 03.4	-0.5
	baz=235						
NSTT	Nanjuang	1.35	264	eP	Pg	23 04 47.9	-0.2
	baz=261						
NSTT				eS	Sg	23 05 05.0	-0.6
	baz=261						
ESL	Shilin	1.35	225	eP	Pb	23 04 48.5	+0.2
	baz=237						
ESL				eS	Sn	23 05 06.7	-0.1
	baz=237						
HATJ	Hateruma jima	1.41	120	eS	Sg	23 05 07.3	-0.1
JKRS	Kuro-shima	1.50	111	eS	Sg	23 05 08.9	-1.4
JIJ	Ishigaki jima	1.57	105	P	Pn	23 04 50.9	-0.3
NSY	Sanyi	1.60	257	eP	Pb	23 04 52.6	-0.1
	baz=254						
NSY				eS	Sb	23 05 13.6	+0.2
	baz=254						
TWQ1	Liyutan	1.61	255	eP	Pn	23 04 52.3	+0.5
	baz=251						
TWQ1				eS	Sb	23 05 13.6	0.0
	baz=251						
EHY	Hungye	1.65	220	eP	Pg	23 04 54.8	+1.0
	baz=196						
EHY				eS	Sn	23 05 13.2	-1.0
	baz=196						
SMLT	Sun Moon Lake	1.69	239	eP	Pb	23 04 54.2	0.0
	baz=233						
SMLT				eS	Sg	23 05 17.1	+0.5
	baz=233						
TYC	Yuchr	1.71	240	eP	Pn	23 04 53.8	+0.6
	baz=235						
TYC				eS	Sn	23 05 15.8	0.0
	baz=235						
TWF1	Yuli	1.78	217	eP	Pn	23 04 53.7	-0.5
	baz=211						
ALS	Alishan	1.98	231	eP	Pn	23 04 58.0	+0.8
	baz=208						
CHN5	Tsauling	2.02	235	eP	Pb	23 04 59.2	-0.6
	baz=230						
CHN5				eS	Sb	23 05 25.5	0.0
	baz=230						
CHN4	Tsaushan	2.23	231	eP	Pn	23 05 01.9	+1.5
	baz=208						

IDC 07 23:08:38.3±0.8, **3°.39N×126°.35E, h0**km, **mb3.8**/10, **mb1 3.9**/10, **mb1mx3.8**/26, **mbtmp3.8**/10, **MS3.3**/1, **Ms1 3.3**/1, **ms1mx2.2**/38, **Error ellipse: s-maj=70.7km s-min=14.6km az=72.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.37	182	P	P	23 13 29.4	+1.9
	1.5nm,0.4s,baz=5.0,slow=6.9,SNR=6.0						
WRA	Warramunga Arr	24.48	162	P	P	23 13 57.8	-1.6
	2.7nm,0.4s,baz=343,slow=9.9,SNR=11						
ASAR	Alice Springs	27.89	165	P	P	23 14 29.9	-0.2
	0.4nm,0.5s,baz=355,slow=16,SNR=5.1						
JHJ	Hachijo jima 2	32.13	22	LR	LR	23 25 18.7	
	comp=Z,48nm,20.3s,baz=243,slow=31						
KSRS	Korea Array	33.93	2	P	P	23 15 23.8	+0.6
	0.8nm,0.5s,baz=179,slow=9.4,SNR=4.8						
STKA	Stephens Creek	37.95	159	P	P	23 15 58.4	+0.6
	2.5nm,0.7s,baz=355,slow=7.7,SNR=5.7						
SONM	Songino Array	47.49	342	P	P	23 17 15.7	+0.4
	0.2nm,0.5s,baz=161,slow=10,SNR=2.1						
MKAR	Makanchi Array	57.61	326	P	P	23 18 30.6	+0.3
	0.6nm,0.4s,baz=118,slow=7.9,SNR=20						
MKAR				PcP	PcP	23 19 23.1	-0.4
	0.2nm,0.5s,baz=122,slow=5.6,SNR=2.0						
ZALV	Zalesovo Beam	60.71	333	P	P	23 18 50.4	-1.1
	0.2nm,0.3s,baz=107,slow=8.0,SNR=3.0						
BVAR	Borovoye Array	67.39	327	P	P	23 19 36.0	+0.6
	1.1nm,0.8s,baz=126,slow=7.5,SNR=6.2						
AKTO	Aktyubinsk	73.69	322	P	P	23 20 12.9	-1.1
	1.0nm,0.9s,baz=96,slow=18,SNR=4.2						

*NAO **07** 23:09:15.5±4.1, 76°.87N×15°.86E, h14km±19km, ML2.2*
*ISCJB **07** 23:09:17.8±1.5, 77°.1N±0°.1×1°5E±°, h10km, Error ellipse: s-maj=36.6km s-min=6.5km az=152.2*
*BER **07** 23:09:19.3±2.3, 77°.00N×16°.51E, h20km±15km, ML2.2(NAO)*
*CSEM **07** 23:09:19.3±0.7, 77°.12N×15°.00E, h5km, ML2.2, Error ellipse: s-maj=12.8km s-min=7.9km az=172.0*
ISC 07 23:09:18.5±1.6, **77°.07N**±0°.07×**15°.7E**±0°.2, **h10**km, **n7**, σ0s.**74**/12, **Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	Hornsund	0.08	211	i Pg	Pg	23 09 20.7	0.0
HSP				eSg	Sg	23 09 22.0	-0.3
SPA0	Spitsbergen Ar	1.12	7	Pg	Pb	23 09 40.4	+0.5
	baz=170,slow=18						
SPA0				Lg	Lg	23 09 57.0	
	baz=176,slow=28						
SPA0	Spitsbergen Ar	1.12	7	Pg	Pb	23 09 40.4	+0.5
	baz=170,slow=18						
SPA0				Lg	Lg	23 09 57.0	
	baz=176,slow=28						
SPA0	Spitsbergen Ar	1.12	7	Pg	Pb	23 09 40.4	+0.5
	baz=170,slow=16,SNR=96						
SPA0				Lg	Lg	23 09 57.0	
	baz=176,slow=26,SNR=7.3						
KBS	Kingsbay	2.02	339	Pn	Pn	23 09 52.6	0.0
KBS				Pg	Pb	23 09 56.2	+1.0
KBS				Sn	Sn	23 10 16.8	-1.1
KBS				Lg	Lg	23 10 24.4	
KBS	Kingsbay	2.02	339	Pn	Pn	23 09 52.6	0.0
KBS				Pg	Pb	23 09 56.2	+1.0
KBS				Sn	Sn	23 10 16.8	-1.1
KBS				Lg	Lg	23 10 24.4	
KBS	Kingsbay	2.02	339	Pn	Pn	23 09 52.6	0.0
	SNR=55						

*ISK **07** 23:17:52.6, 37°.82N×29°.09E, h8km, MD2.7*
*ISCJB **07** 23:17:53.1±0.5, 37°.84N±0°.03×29°.07E±0°.04, h3km±6km, Error ellipse: s-maj=6.2km s-min=3.8km az=23.1*
*CSEM **07** 23:17:53.0±0.1, 37°.84N×29°.08E, h5km, MD2.7, Error ellipse: s-maj=4.1km s-min=2.4km az=117.0*
*DDA **07** 23:17:53, 37°.83N×29°.08E, h6km, MD2.7*
ISC 07 23:17:53.0±1.0, **37°.84N**±0°.02×**29°.07E**±0°.03, **h5**km±9km, **n34**, σ0s.**32**/49, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.09	199	PG	Pg	23 17 55.1	0.0
DENT	Denizli	0.09	199	i Pg	Pg	23 17 55.1	0.0
DNZL	Cakiroluk	0.15	187	i P	Pg	23 17 56.0	-0.2
DNZL				i S	Sg	23 17 58.5	+0.2
DNZL	Cakiroluk	0.15	187	i P	Pg	23 17 56.0	-0.2
DNZL				i S	Sg	23 17 58.5	+0.2
KHL	Karahalli	0.60	36	ePG	Pg	23 18 04.8	+0.2
KHL	Karahalli	0.60	36	ePg	Pg	23 18 04.8	+0.2
KHAL	Karahalli	0.62	32	i P	Pg	23 18 04.7	-0.4
KHAL	Karahalli	0.62	32	i P	Pg	23 18 04.7	-0.4
GOLH	Golhisar	0.72	147	i P	Pb	23 18 08.1	0.0
GOLH				i S	Sb	23 18 18.1	-0.2
GOLH	Golhisar	0.72	147	i P	Pb	23 18 08.1	0.0
GOLH				i S	Sb	23 18 18.1	-0.2
KULA	Kula-Manisa	0.74	334	ePG	Pb	23 18 07.9	-0.6
KULA				eSG	Sb	23 18 19.0	0.0
KULA	Kula-Manisa	0.74	334	ePg	Pb	23 18 07.9	-0.6
KULA				eSg	Sb	23 18 19.0	0.0
YER	Yerkesik	0.94	222	ePG	Pg	23 18 11.1	0.0
YER				eSG	Sb	23 18 24.6	-0.1
YER	Yerkesik	0.94	222	ePg	Pg	23 18 11.1	0.0
YER				eSg	Sb	23 18 24.6	-0.1
AYDN	Tasoluk	0.96	260	i P	Pb	23 18 12.0	-0.2
AYDN				i S	Sb	23 18 25.0	-0.2
AYDN	Tasoluk	0.96	260	i P	Pb	23 18 12.0	-0.2
AYDN				i S	Sb	23 18 25.0	-0.2
MLSB	Milas	1.16	242	ePN	Pb	23 18 15.6	0.0
MLSB	Milas	1.16	242	ePn	Pb	23 18 15.6	0.0
DEMI	Demirci	1.23	347	i P	Pg	23 18 16.5	-0.2
DEMI				i S	Sb	23 18 32.9	-0.2
DEMI	Demirci	1.23	347	i P	Pg	23 18 16.5	-0.2
DEMI				i S	Sb	23 18 32.9	-0.2
GDZ	Gediz	1.29	14	i P	Pg	23 18 18.2	+0.5
GDZ				i S	Sn	23 18 36.0	+0.5
GDZ	Gediz	1.29	14	i P	Pg	23 18 18.2	+0.5
GDZ				i S	Sn	23 18 36.0	+0.5
SHUT	Suhut-Afyon	1.37	58	ePN	Pn	23 18 18.4	-0.4
SHUT	Suhut-Afyon	1.37	58	ePn	Pn	23 18 18.4	-0.4
ALT	Altintas	1.46	34	ePN	Pn	23 18 19.9	-0.2
ALT	Altintas	1.46	34	ePn	Pn	23 18 20.0	-0.2
BDRM	Kayabasi	1.51	240	i P	Pn	23 18 20.1	-0.6
BDRM				i S	Sg	23 18 42.3	+0.8
BDRM	Kayabasi	1.51	240	i P	Pn	23 18 20.1	-0.6
BODT	Bodrum	1.60	241	ePN	Pn	23 18 22.1	+0.1
BODT	Bodrum	1.60	241	ePn	Pn	23 18 22.1	+0.1
TVSB	Tavsanli	1.64	11	ePN	Pn	23 18 22.5	0.0
TVSB	Tavsanli	1.64	11	ePn	Pn	23 18 22.5	0.0
DST	Dursunbey	1.79	349	ePN	Pn	23 18 24.8	+0.1
DST	Dursunbey	1.79	349	ePn	Pn	23 18 24.8	+0.1

*ISCJB **07** 23:17:53.9±0.3, 51°.55N±0°.02×16°.15E±0°.03, h0km, Error ellipse: s-maj=2.7km s-min=2.6km az=44.5*
*CSEM **07** 23:17:55.9±0.1, 51°.54N×16°.14E, h2km, ML3.7/8, Error ellipse: s-maj=3.1km s-min=2.6km az=80.0*
*IPEC **07** 23:17:56.1±0.3, 51°.51N×16°.27E, h0km, ML2.8/3, Error ellipse: s-maj=2.0km s-min=1.5km az=33.0*
*PRU **07** 23:17:57.4, 51°.47N×16°.13E, h0km, Felt In Harrachov*
*IDC **07** 23:17:57.9±1.2, 51°.49N×15°.98E, h0km, mb1 3.2/4, mb1mx3.1/26, mbtmp3.1/4, ML2.8/4, Error ellipse: s-maj=19.1km s-min=9.9km az=123.0*
*VIE **07** 23:17:59.6±0.6, 51°.25N×16°.12E, h0km, mb2.4/3, ML3.2/4,*

Error ellipse: s-maj=3.6km s-min=3.3km az=173.0 64 km WNW of Wroclaw Suspected Mining induced.
*BGR **07** 23:18:00.5±0.4, 51.36N×16.00E, h1km, ML3.1/12, Error ellipse: s-maj=10.0km s-min=3.3km az=19.0*
*UPP **07** 23:18:02.1, 51.96N×15.75E, h0km, ML2.2, Suspected Mining explosion.*
ISC 07 23:17:55.2±0.7, **51.58N**±0.03×**16.13E**±0.02, **h0km, n78,** σ**0.99**/127, **5C, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.75**	**172**	*e*Pg	**Pg**	**23 18 09.8**	**+0.4**
KSP				*e*Sg	**Sg**	**23 18 19.2**	**0.0**
KSP	**Ksiaz**	**0.75**	**172**	*e*Pg	**Pg**	**23 18 09.9**	**+0.4**
KSP				*e*Sg	**Sg**	**23 18 19.0**	**-0.2**
KSP	**Ksiaz**	**0.75**	**172**	*e*Pg	**Pg**	**23 18 09.4**	**-0.1**
	baz=359						
KSP				Sg	**Sg**	**23 18 19.2**	**0.0**
UPC	**Upice**	**1.08**	**184**	*e*PG	**Pg**	**23 18 16.0**	**+0.2**
UPC				*e*SG	**Sg**	**23 18 29.1**	**-0.7**
	comp=Z,116nm,0.5s						
UPC	**Upice**	**1.08**	**184**	Pg	**Pg**	**23 18 16.0**	**+0.2**
UPC				Sg	**Sg**	**23 18 29.1**	**-0.7**
	116nm,0.5s						
DPC	**Dobruska-Polom**	**1.24**	**174**	*e*Pg	**Pg**	**23 18 18.8**	**-0.1**
DPC				*e*Sg	**Sg**	**23 18 33.9**	**-1.0**
DPC	**Dobruska-Polom**	**1.24**	**174**	*e*PG	**Pg**	**23 18 18.7**	**-0.2**
DPC				*e*SG	**Sg**	**23 18 34.0**	**-1.0**
	comp=Z,100nm,0.3s						
DPC	**Dobruska-Polom**	**1.24**	**174**	Pg	**Pg**	**23 18 18.8**	**-0.1**
DPC				Sg	**Sg**	**23 18 34.0**	**-1.0**
	100nm,0.3s						
PVCC	**Panska Ves**	**1.45**	**224**	*e*PG	**Pg**	**23 18 22.8**	**0.0**
PVCC				*e*SG	**Sn**	**23 18 42.2**	**0.0**
	comp=Z,276nm,0.2s						
PVCC	**Panska Ves**	**1.45**	**224**	Pg	**Pg**	**23 18 22.8**	**0.0**
PVCC	**Panska Ves**	**1.45**	**224**	*e*Pn	**Pb**	**23 18 23.3**	**+0.4**
	baz=47						
PVCC				*e*Sg	**Sg**	**23 18 41.7**	**+0.2**
	baz=47						
BRG	**Berggiesshubel**	**1.55**	**243**	PN	**Pn**	**23 18 24.0**	**0.0**
BRG				PG	**Pg**	**23 18 25.2**	**+0.4**
BRG				SG	**Sg**	**23 18 45.5**	**+0.6**
	193nm,0.4s						
BRG	**Berggiesshubel**	**1.55**	**243**	*e*Pn	**Pg**	**23 18 25.1**	**+0.3**
BRG				*e*Sg	**Sg**	**23 18 45.1**	**+0.2**
BRG	**Berggiesshubel**	**1.55**	**243**	Pn	**Pg**	**23 18 25.1**	**+0.3**
BRG				Sg	**Sg**	**23 18 45.1**	**+0.2**
FBE	**Freiberg**	**1.87**	**250**	*e*Pn	**Pg**	**23 18 30.8**	**-0.1**
FBE				*e*Sg	**Sg**	**23 18 54.8**	**-0.3**
FBE	**Freiberg**	**1.87**	**250**	Pn	**Pg**	**23 18 30.8**	**-0.1**
FBE				Sg	**Sg**	**23 18 54.8**	**-0.3**
PRU	**Pruhonice**	**1.89**	**213**	*e*PG	**Pb**	**23 18 30.6**	**+0.1**
PRU				*e*SG	**Sb**	**23 18 54.5**	**-0.1**
	comp=Z,108nm,0.3s						
PRU	**Pruhonice**	**1.89**	**213**	Pg	**Pb**	**23 18 30.6**	**+0.1**
PRU				Sg	**Sb**	**23 18 54.5**	**-0.1**
	108nm,0.3s						
CLL	**Collm**	**1.98**	**263**	*e*Pn	**Pg**	**23 18 33.3**	**+0.3**
CLL				*e*Sg	**Sg**	**23 18 59.7**	**+1.1**
CLL	**Collm**	**1.98**	**263**	*e*Pn	**Pn**	**23 18 30.0**	**+0.1**
CLL				*e*Pg	**Pg**	**23 18 33.0**	**0.0**
CLL				*e*		23 18 36.0	
MORC	**Moravsky Berou**	**2.02**	**153**	*e*Pn	**Pg**	**23 18 33.8**	**0.0**
MORC	**Moravsky Berou**	**2.02**	**153**	⇑*i*P	**Pn**	**23 18 30.3**	**-0.2**
MORC				*e*Sg	**Sn**	**23 18 55.8**	**-0.7**
OKC	**Ostrava-Krasne**	**2.17**	**143**	*e*Pn	**Pb**	**23 18 35.9**	**+0.7**
OKC				*e*Sg	**Sb**	**23 19 03.3**	**+0.7**
OKC	**Ostrava-Krasne**	**2.17**	**143**	*e*PG	**Pb**	**23 18 36.0**	**+0.7**
OKC				*e*SG	**Sb**	**23 19 03.7**	**+1.1**
	comp=Z,54nm,0.5s						
OKC	**Ostrava-Krasne**	**2.17**	**143**	Pg	**Pb**	**23 18 36.0**	**+0.7**
OKC				Sg	**Sb**	**23 19 03.3**	**+0.7**
VRAC	**Vranov**	**2.30**	**172**	Pn	**Pn**	**23 18 35.4**	**+1.1**
	2.4nm,0.3s,baz=346,slow=14,SNR=17						
VRAC				Sn	**Sb**	**23 19 05.7**	**-0.7**
	5.3nm,0.3s,baz=76,slow=20,SNR=11						
VRAC	**Vranov**	**2.30**	**172**	*e*Pn	**Pn**	**23 18 34.1**	**-0.2**
	baz=355						
VRAC				*e*Sg	**Sb**	**23 19 05.7**	**-0.7**
	76nm,0.6s,baz=355						
TREC	**Trest**	**2.33**	**190**	*e*PN	**Pn**	**23 18 35.9**	**+1.2**
TREC				*e*SG	**Sb**	**23 19 08.2**	**+0.9**
	comp=Z,49nm,0.4s						
TREC	**Trest**	**2.33**	**190**	Pn	**Pn**	**23 18 35.9**	**+1.2**
TREC				Sg	**Sb**	**23 19 08.2**	**+0.9**
	49nm,0.4s						
KRUC	**Moravsky**	**2.53**	**176**	*e*Pn	**Pn**	**23 18 37.1**	**-0.4**
	baz=358						
KRUC				*e*Sg	**Sb**	**23 19 12.7**	**-0.4**
	21nm,0.2s,baz=358						
TANN	**Tannenbergstha**	**2.60**	**245**	*e*Pn	**Pn**	**23 18 39.7**	**+1.3**
TANN				*e*Sg	**Sg**	**23 19 18.0**	**-0.5**
TANN	**Tannenbergstha**	**2.60**	**245**	Pn	**Pn**	**23 18 39.7**	**+1.3**
TANN				Sg	**Sg**	**23 19 18.0**	**-0.5**
OJC	**Ojcow**	**2.69**	**119**	*e*Pn	**Pg**	**23 18 47.4**	**+0.7**
OJC				*e*Sg	**Sg**	**23 19 23.3**	**+1.6**
OJC	**Ojcow**	**2.69**	**119**	*e*Pg	**Pg**	**23 18 47.4**	**+0.6**
OJC				*e*Sg	**Sg**	**23 19 22.4**	**+0.7**
OJC	**Ojcow**	**2.69**	**119**	*e*Pg	**Pg**	**23 18 47.4**	**+0.7**
OJC				Sg	**Sg**	**23 19 23.3**	**+1.6**
NKC	**Novy Kostel**	**2.69**	**241**	*e*PG	**Pg**	**23 18 46.0**	**-0.8**
NKC				*e*SG	**Sg**	**23 19 21.8**	**+0.1**
	comp=Z,112nm,0.6s						
NKC	**Novy Kostel**	**2.69**	**241**	Pg	**Pg**	**23 18 46.0**	**-0.8**
NKC				Sg	**Sg**	**23 19 21.8**	**+0.1**
	112nm,0.6s						
KHC	**Kasperske Hory**	**2.95**	**215**	*e*PN	**Pn**	**23 18 44.0**	**+0.7**
KHC				*e*PG	**Pb**	**23 18 49.5**	**+0.9**
KHC				*e*SN	**Sn**	**23 19 18.5**	**-0.9**
KHC				*e*SG	**Sg**	**23 19 28.4**	**-1.5**
	comp=Z,41nm,0.7s						
KHC	**Kasperske Hory**	**2.95**	**215**	Pn	**Pn**	**23 18 44.0**	**+0.7**
MOX	**Moxa**	**3.00**	**253**	*e*Pg	**Pg**	**23 18 53.8**	**+1.3**
MOX	**Moxa**	**3.00**	**253**	Pg	**Pg**	**23 18 53.8**	**+1.3**
ROTZ	**Rotzenmuhle**	**3.09**	**235**	*e*Pn	**Pn**	**23 18 46.0**	**+0.8**
ROTZ	**Rotzenmuhle**	**3.09**	**235**	Pn	**Pn**	**23 18 46.0**	**+0.8**
GEC2	**GERESS Array S**	**3.15**	**211**	*e*Pn	**Pn**	**23 18 47.3**	**+1.1**
GEC2	**GERESS Array S**	**3.15**	**211**	Pn	**Pn**	**23 18 47.3**	**+1.1**
GERES	**GERESS Array B**	**3.15**	**211**	Pn	**Pn**	**23 18 46.8**	**+0.6**
	0.8nm,0.3s,baz=27,slow=12,SNR=23						
GERES				Pg	**Pb**	**23 18 53.4**	**+1.3**
	2.4nm,0.3s,baz=30,slow=16,SNR=24						
GERES				Lg	Lg	23 19 31.4	
	5.8nm,0.3s,baz=38,slow=24,SNR=14						
SMOL	**Smolenice**	**3.19**	**164**	*e*	**Pg**	**23 18 55.8**	**-0.4**
SMOL	**Smolenice**	**3.19**	**164**	*e*SG	**Sg**	**23 19 36.9**	**-0.5**
SMOL	**Smolenice**	**3.19**	**164**	*e*Sg	**Sg**	**23 19 36.9**	**-0.5**
WET	**Wettzell**	**3.21**	**222**	*e*Pn	**Pn**	**23 18 47.5**	**+0.7**
WET	**Wettzell**	**3.21**	**222**	Pn	**Pn**	**23 18 47.5**	**+0.7**
NIE	**Niedzica**	**3.44**	**127**	*e*P	**Pg**	**23 19 00.2**	**-0.8**
NIE				*e*s	**Sg**	**23 19 44.5**	**-1.1**
VYHS	**Vyhne**	**3.55**	**150**	*e*PN	**Pn**	**23 18 52.1**	**+0.6**
VYHS				*e*		23 19 03.5	
VYHS	**Vyhne**	**3.55**	**150**	*e*Pn	**Pn**	**23 18 52.1**	**+0.6**
VYHS				*e*Sg	**Sg**	**23 19 49.3**	**+0.1**
CLZ	**Clausthal**	**3.59**	**276**	*e*Pn	**Pn**	**23 18 53.7**	**+1.6**
CLZ	**Clausthal**	**3.59**	**276**	Pn	**Pn**	**23 18 53.7**	**+1.6**
BSD	**Bornholm Skovb**	**3.61**	**349**	*i* P	**Pn**	**23 18 52.5**	**+0.2**
BSD				*e*S	**Sn**	**23 19 32.8**	**-2.8**
BSD	**Bornholm Skovb**	**3.61**	**349**	*i* P	**Pn**	**23 18 52.5**	**+0.2**
BSD				*e*S	**Sn**	**23 19 32.8**	**-2.8**
GRA1	**Grafenberg Arr**	**3.65**	**241**	Pn	**Pn**	**23 18 54.9**	**+1.9**
GRF	**Grafenberg Arr**	**3.65**	**241**	*e*Pn	**Pn**	**23 18 54.9**	**+1.9**
CONA	**Conrad Observa**	**3.66**	**183**	⇑*i*Pn	**Pn**	**23 18 52.8**	**-0.3**
CONA				⇑*i*Sg	**Sg**	**23 19 50.1**	**-2.7**
	30nm,0.4s						
MOA	**Molln**	**3.93**	**199**	⇑*i*Pn	**Pn**	**23 18 57.3**	**+0.6**
MOA				⇑*i*Sg	**Sg**	**23 19 58.9**	**-2.4**
	44nm,0.6s						
MOA	**Molln**	**3.93**	**199**	Pn	**Pn**	**23 18 57.3**	**+0.6**
MOA				Sg	**Sg**	**23 19 58.9**	**-2.4**
	44nm,0.6s						
CRVS	**Cervenica-Dubn**	**4.35**	**126**	*e*PN	**Pn**	**23 19 03.8**	**+1.3**
CRVS				*e*		23 19 19.3	
CRVS	**Cervenica-Dubn**	**4.35**	**126**	*e*Pn	**Pn**	**23 19 03.8**	**+1.3**
CRVS				*e*Sg	**Sg**	**23 20 15.4**	**+0.6**
BLEU	**Blekinge**	**4.73**	**358**	P	**Pn**	**23 19 08.5**	**+0.8**
BLEU				S	**Sn**	**23 19 59.9**	**-3.3**
KOLS	**Kolonicke sedl**	**4.75**	**122**	*e*PN	**Pn**	**23 19 08.5**	**+0.5**
KOLS				*e*		23 19 27.1	
KOLS	**Kolonicke sedl**	**4.75**	**122**	*e*Pn	**Pn**	**23 19 08.5**	**+0.5**
KOLS				*e*Sg	**Sg**	**23 20 25.8**	**-1.9**
BJUU	**Bjuv**	**4.86**	**339**	P	**Pn**	**23 19 09.4**	**0.0**
DEL	**Delary**	**5.07**	**346**	P	**Pn**	**23 19 12.7**	**+0.3**
VXJU	**Vaexsjoe**	**5.39**	**353**	P	**Pn**	**23 19 17.6**	**+0.8**
OSKU	**Oskarshamn**	**5.62**	**360**	P	**Pn**	**23 19 21.0**	**+1.1**
BYXU	**Byxelkrok**	**5.74**	**5**	P	**Pn**	**23 19 22.6**	**+1.1**
FABU	**Falkenberg**	**5.78**	**341**	P	**Pn**	**23 19 23.0**	**+0.9**
EKSU	**Eksjoe**	**6.02**	**356**	P	**Pn**	**23 19 26.3**	**+0.9**
DAVOX	**Davos/Dischmat**	**6.32**	**223**	Lg	Lg	23 21 15.6	
	0.5nm,0.3s,baz=275,slow=18,SNR=3.1						
AKASG	**Malin Array Be**	**8.28**	**91**	Pn	**Pn**	**23 19 55.8**	**-0.7**
	1.1nm,0.3s,baz=282,slow=12,SNR=4.3						
FINES	**FINESS Array B**	**11.29**	**25**	Pn	**Pn**	**23 20 38.0**	**+0.4**
	0.1nm,0.3s,baz=208,slow=13,SNR=5.1						
FINES				Sn	Sn	23 22 35.4	-8.9
	0.3nm,0.3s,baz=208,slow=20,SNR=6.7						

IDC 07 23:37:17.4±1.2, **11.59S**×**65.63E, h0km, mb3.6**/10, **mb1 3.8**/10, **mb1mx3.6**/27, **mbtmp3.6**/10, **MS3.4**/4, **Ms1 3.5**/4, **ms1mx3.0**/35, **Error ellipse: s-maj=37.6km s-min=26.6km az=25.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**30.02**	**288**	P	P	23 43 28.9	+0.3
	1.4nm,0.9s,baz=67,slow=7.9,SNR=4.1						
BRTR	**Keskin Array B**	**59.08**	**332**	P	P	23 47 20.2	+0.5
	0.9nm,1.0s,baz=173,slow=11,SNR=4.5						
MKAR	**Makanchi Array**	**60.01**	**13**	P	P	23 47 25.4	-0.4
	0.4nm,0.8s,baz=204,slow=7.8,SNR=4.5						
KURBB	**Kurchatov Arra**	**62.97**	**9**	P	P	23 47 45.8	+0.1
	0.3nm,0.3s,baz=202,slow=6.4,SNR=3.6						
BVAR	**Borovoye Array**	**64.49**	**3**	P	P	23 47 55.8	+0.1
	0.5nm,0.7s,baz=151,slow=6.8,SNR=4.1						
ASAR	**Alice Springs**	**65.65**	**111**	P	P	23 48 04.1	+0.1
	0.8nm,0.8s,baz=275,slow=6.3,SNR=6.9						
ZALV	**Zalesovo Beam**	**67.30**	**12**	P	P	23 48 13.6	-0.1
	0.2nm,0.4s,baz=197,slow=4.5,SNR=3.0						
SONM	**Songino Array**	**69.36**	**28**	P	P	23 48 27.6	+0.5
	0.4nm,0.8s,baz=215,slow=6.8,SNR=4.1						
SONM				LR	LR	00 18 25.2	
	comp=Z,29nm,19.4s,baz=177,slow=36						
DBIC	**Dimbokro**	**72.42**	**281**	LR	LR	00 18 11.5	
	comp=Z,49nm,18.6s,baz=92,slow=34						
GERES	**GERESS Array B**	**75.57**	**328**	P	P	23 49 02.8	-1.2
	0.1nm,0.3s,baz=110,slow=12,SNR=3.6						
KSRS	**Korea Array**	**76.01**	**47**	LR	LR	00 20 02.3	
	comp=Z,13nm,20.1s,baz=180,slow=34						
JNU	**Nakatsue**	**76.36**	**52**	LR	LR	00 21 09.2	
	comp=Z,23nm,18.6s,baz=36,slow=34						
ESDC	**Sonseca Array**	**82.14**	**313**	P	P	23 49 40.6	+0.3
	0.2nm,0.3s,baz=100,slow=4.4,SNR=5.8						
YKA	**Yellowknife Ar**	**129.18**	**0**	PKP	PKPdf	23 56 26.0	-1.3
	0.2nm,0.8s,baz=14,slow=2.4,SNR=6.3						
PDAR	**Pinedale Array**	**148.66**	**353**	PKPbc	PKPbc	23 57 06.8	-0.3
	0.9nm,0.6s,baz=92,slow=3.7,SNR=8.5						
NVAR	**Mina Array Bea**	**153.04**	**7**	PKPbc	PKPbc	23 57 17.9	+0.3
	1.3nm,0.5s,baz=2.4,slow=2.2,SNR=3.4						

*CSEM **07** 23:43:18.4, 42.47N×13.41E, h11km, After ROM*
ROM 07 23:43:18.4±0.1, **42.47N**×**13.41E, h11**km±2km, **Ml2.1**/7, **Error ellipse: s-maj=2.6km s-min=1.8km az=71.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**358**	Pg	Pg	23 43 21.2	+0.2
CAMP				Sg	Sg	23 43 23.1	+0.2
	225nm,0.6s						
CAMP	**Campotosto**	**0.07**	**358**	Pg	Pg	23 43 21.2	+0.2
CAMP				Sg	Sg	23 43 23.1	+0.2
	225nm,0.6s						
AQU	**L'Aquila**	**0.11**	**184**	Pg	Pg	23 43 21.4	0.0
AQU				Sg	Sg	23 43 24.5	+0.9
AQU	**L'Aquila**	**0.11**	**184**	Pg	Pg	23 43 21.4	0.0
AQU				Sg	Sg	23 43 24.5	+0.9
TERO	**Teramo**	**0.21**	**42**	Pg	Pg	23 43 23.3	+0.3
TERO				Sg	Sg	23 43 26.9	+0.8
	207nm,0.6s						
TERO	**Teramo**	**0.21**	**42**	Pg	Pg	23 43 23.3	+0.3
TERO				Sg	Sg	23 43 26.9	+0.8
	207nm,0.6s						
FAGN	**Fagnano**	**0.24**	**148**	Pg	Pg	23 43 23.9	+0.4
FAGN				Sg	Sg	23 43 26.8	-0.1
FAGN	**Fagnano**	**0.24**	**148**	Pg	Pg	23 43 23.9	+0.4
FAGN				Sg	Sg	23 43 26.8	-0.1
FIAM	**Fiamignano**	**0.29**	**228**	Pg	Pb	23 43 25.6	-0.2
	278nm,0.8s						
FIAM	**Fiamignano**	**0.29**	**228**	Pg	Pb	23 43 25.6	-0.2
	278nm,0.8s						
LNSS	**Leonessa**	**0.31**	**296**	Pg	Pg	23 43 25.0	+0.2
LNSS				Sg	Sg	23 43 29.8	+0.7
	83nm,0.5s						
LNSS	**Leonessa**	**0.31**	**296**	Pg	Pg	23 43 25.0	+0.2
LNSS				Sg	Sg	23 43 29.8	+0.7
	83nm,0.5s						
VCEL	**Villa Celiera**	**0.33**	**103**	Pg	Pb	23 43 26.1	-0.3
	259nm,0.7s						
VCEL	**Villa Celiera**	**0.33**	**103**	Pg	Pb	23 43 26.1	-0.3
	259nm,0.7s						
NRCA	**Norcia**	**0.43**	**329**	Pg	Pg	23 43 27.1	+0.1
NRCA				Sg	Sg	23 43 33.6	+0.8
	25nm,0.2s						
NRCA	**Norcia**	**0.43**	**329**	Pg	Pg	23 43 27.1	+0.1
NRCA				Sg	Sg	23 43 33.6	+0.8
	25nm,0.2s						
OFFI	**Offida**	**0.51**	**23**	Pg	Pb	23 43 29.7	+0.3
	125nm,0.7s						
OFFI	**Offida**	**0.51**	**23**	Pg	Pb	23 43 29.7	+0.3
	125nm,0.7s						
INTR	**Introdacqua**	**0.58**	**141**	Pg	Pg	23 43 30.1	+0.2
INTR				Sg	Sg	23 43 37.9	+0.2
	158nm,0.6s						
INTR	**Introdacqua**	**0.58**	**141**	Pg	Pg	23 43 30.1	+0.2
INTR				Sg	Sg	23 43 37.9	+0.2
	158nm,0.6s						
CERT	**Cerreto**	**0.61**	**212**	Pg	Pg	23 43 30.1	-0.2
	200nm,0.4s						
CERT	**Cerreto**	**0.61**	**212**	Pg	Pg	23 43 30.1	-0.2
	200nm,0.4s						

*CSEM **07** 23:43:52.1, 42.37N×13.35E, h9km, After ROM*
ROM 07 23:43:52.1±0.1, **42.37N**×**13.35E, h9**km±1km, **Ml2.1**/9, **Error ellipse: s-maj=1.5km s-min=1.4km az=75.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**114**	Pg	Pg	23 43 54.3	+0.3
AQU				Sg	Sg	23 43 55.6	+0.3
AQU	**L'Aquila**	**0.04**	**114**	Pg	Pg	23 43 54.3	+0.3
AQU				Sg	Sg	23 43 55.6	+0.3
CAMP	**Campotosto**	**0.17**	**16**	Pg	Pg	23 43 56.4	+0.5
CAMP				Sg	Sg	23 43 59.5	+1.0
	225nm,0.6s						
CAMP	**Campotosto**	**0.17**	**16**	Pg	Pg	23 43 56.4	+0.5
CAMP				Sg	Sg	23 43 59.5	+1.0
	225nm,0.6s						
FIAM	**Fiamignano**	**0.20**	**239**	Pg	Pg	23 43 56.8	+0.4
FIAM				Sg	Sg	23 44 00.0	+0.7
	278nm,0.8s						
FIAM	**Fiamignano**	**0.20**	**239**	Pg	Pg	23 43 56.8	+0.4
FIAM				Sg	Sg	23 44 00.0	+0.7
	278nm,0.8s						
FAGN	**Fagnano**	**0.21**	**121**	Pg	Pg	23 43 56.6	+0.2
FAGN				Sg	Sg	23 44 00.9	+1.5
FAGN	**Fagnano**	**0.21**	**121**	Pg	Pg	23 43 56.6	+0.2
FAGN				Sg	Sg	23 44 00.9	+1.5
TERO	**Teramo**	**0.32**	**37**	Pg	Pg	23 43 58.4	-0.1
TERO				Sg	Sg	23 44 03.3	+0.5
	230nm,0.6s						
TERO	**Teramo**	**0.32**	**37**	Pg	Pg	23 43 58.4	-0.1
TERO				Sg	Sg	23 44 03.3	+0.5
	230nm,0.6s						
LNSS	**Leonessa**	**0.32**	**316**	Pg	Pb	23 43 59.6	-0.6
LNSS				Sg	Sb	23 44 04.6	-1.1
	124nm,0.5s						
LNSS	**Leonessa**	**0.32**	**316**	Pg	Pb	23 43 59.6	-0.6
LNSS				Sg	Sb	23 44 04.6	-1.1
	124nm,0.5s						
PTQR	**Pietraquaria**	**0.35**	**173**	Pg	Pb	23 44 00.9	+0.2
PTQR				Sg	Sb	23 44 05.3	-1.1
	102nm,0.3s						
PTQR	**Pietraquaria**	**0.35**	**173**	Pg	Pb	23 44 00.9	+0.2
PTQR				Sg	Sb	23 44 05.3	-1.1
	102nm,0.3s						
VCEL	**Villa Celiera**	**0.37**	**86**	Pg	Pb	23 44 00.3	-0.7
VCEL				Sg	Sb	23 44 06.5	-0.5
	259nm,0.7s						
VCEL	**Villa Celiera**	**0.37**	**86**	Pg	Pb	23 44 00.3	-0.7
VCEL				Sg	Sb	23 44 06.5	-0.5
	259nm,0.7s						
MNS	**Montasola**	**0.49**	**272**	Pg	Pb	23 44 03.0	0.0
	146nm,0.6s						
MNS	**Montasola**	**0.49**	**272**	Pg	Pb	23 44 03.0	0.0
	146nm,0.6s						
CERT	**Cerreto**	**0.50**	**213**	Pg	Pb	23 44 02.6	-0.6
	140nm,0.4s						
CERT	**Cerreto**	**0.50**	**213**	Pg	Pb	23 44 02.6	-0.6
	140nm,0.4s						
VVLD	**Villa Vallelon**	**0.54**	**158**	Pg	Pb	23 44 03.8	-0.1
VVLD				Sg	Sg	23 44 10.7	+0.8
	237nm,0.8s						
VVLD	**Villa Vallelon**	**0.54**	**158**	Pg	Pb	23 44 03.8	-0.1
VVLD				Sg	Sg	23 44 10.7	+0.8
	237nm,0.8s						
INTR	**Introdacqua**	**0.55**	**131**	Pg	Pg	23 44 02.9	0.0
	135nm,0.6s						
INTR	**Introdacqua**	**0.55**	**131**	Pg	Pg	23 44 02.9	0.0
	135nm,0.6s						

*CSEM **07** 23:44:35.4, 42.24N×13.47E, h10km, After ROM*
ROM 07 23:44:35.4±0.1, **42.24N**×**13.47E, h10km, Ml2.4**/26, **Error ellipse: s-maj=1.0km s-min=0.8km az=82.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.09**	**76**	Pg	Pg	23 44 38.2	+0.3
FAGN				Sg	Sg	23 44 39.8	+0.1
	10µm,0.4s						
FAGN	**Fagnano**	**0.09**	**76**	Pg	Pg	23 44 38.2	+0.3
FAGN				Sg	Sg	23 44 39.8	+0.1
	10µm,0.4s						
AQU	**L'Aquila**	**0.12**	**336**	Pg	Pg	23 44 38.9	+0.5
AQU				Sg	Sg	23 44 41.1	+0.6
	4µm,0.9s						
AQU	**L'Aquila**	**0.12**	**336**	Pg	Pg	23 44 38.9	+0.5
AQU				Sg	Sg	23 44 41.1	+0.6
	4µm,0.9s						
PTQR	**Pietraquaria**	**0.23**	**193**	Pg	Pg	23 44 41.1	+0.9
PTQR				Sg	Sg	23 44 44.5	+1.0
	102nm,0.3s						
PTQR	**Pietraquaria**	**0.23**	**193**	Pg	Pg	23 44 41.1	+0.9
PTQR				Sg	Sg	23 44 44.5	+1.0
	102nm,0.3s						
FIAM	**Fiamignano**	**0.26**	**275**	Pg	Pg	23 44 41.6	+0.7
FIAM				Sg	Sb	23 44 45.9	-1.2
	752nm,0.8s						
FIAM	**Fiamignano**	**0.26**	**275**	Pg	Pg	23 44 41.6	+0.7
FIAM				Sg	Sb	23 44 45.9	-1.2
	752nm,0.8s						
CAMP	**Campotosto**	**0.29**	**351**	Pg	Pg	23 44 41.7	+0.2
CAMP				Sg	Sg	23 44 46.2	+0.5
	384nm,0.6s						
CAMP	**Campotosto**	**0.29**	**351**	Pg	Pg	23 44 41.7	+0.2
CAMP				Sg	Sg	23 44 46.2	+0.5
	384nm,0.6s						
VCEL	**Villa Celiera**	**0.31**	**61**	Pg	Pg	23 44 42.1	+0.2
VCEL				Sg	Sb	23 44 47.9	-0.7
	778nm,0.7s						
VCEL	**Villa Celiera**	**0.31**	**61**	Pg	Pg	23 44 42.1	+0.2
VCEL				Sg	Sb	23 44 47.9	-0.7
	778nm,0.7s						
VVLD	**Villa Vallelon**	**0.39**	**163**	Pg	Pg	23 44 43.6	+0.4
VVLD				Sg	Sg	23 44 49.3	+0.8
	385nm,0.8s						
VVLD	**Villa Vallelon**	**0.39**	**163**	Pg	Pg	23 44 43.6	+0.4
VVLD				Sg	Sg	23 44 49.3	+0.8
	385nm,0.8s						
TERO	**Teramo**	**0.39**	**15**	Pg	Pg	23 44 43.2	0.0
TERO				Sg	Sg	23 44 49.3	+0.8
	667nm,0.6s						
TERO	**Teramo**	**0.39**	**15**	Pg	Pg	23 44 43.2	0.0
TERO				Sg	Sg	23 44 49.3	+0.8
	667nm,0.6s						
INTR	**Introdacqua**	**0.40**	**125**	Pg	Pg	23 44 43.7	+0.3
INTR				Sg	Sb	23 44 50.2	-0.8
	451nm,0.6s						
INTR	**Introdacqua**	**0.40**	**125**	Pg	Pg	23 44 43.7	+0.3
INTR				Sg	Sb	23 44 50.2	-0.8
	451nm,0.6s						
GUAR	**Guarcino**	**0.46**	**195**	Pg	Pg	23 44 45.0	+0.4
	153nm,0.5s						
GUAR	**Guarcino**	**0.46**	**195**	Pg	Pg	23 44 45.0	+0.4
	153nm,0.5s						
CERT	**Cerreto**	**0.47**	**231**	Pg	Pg	23 44 45.1	+0.5
CERT				Sg	Sg	23 44 51.2	+0.3
	401nm,0.4s						
CERT	**Cerreto**	**0.47**	**231**	Pg	Pg	23 44 45.1	+0.5
CERT				Sg	Sg	23 44 51.2	+0.3
	401nm,0.4s						
LNSS	**Leonessa**	**0.48**	**319**	Pg	Pg	23 44 45.5	+0.6
	290nm,0.5s						
LNSS	**Leonessa**	**0.48**	**319**	Pg	Pg	23 44 45.5	+0.6
	290nm,0.5s						
POFI	**Posta Fibreno**	**0.56**	**161**	Pg	Pg	23 44 46.7	+0.4
	112nm,0.8s						
POFI	**Posta Fibreno**	**0.56**	**161**	Pg	Pg	23 44 46.7	+0.4
	112nm,0.8s						
MTCE	**Montecelio**	**0.58**	**248**	Pg	Pg	23 44 46.9	+0.1
	92nm,0.4s						
MTCE	**Montecelio**	**0.58**	**248**	Pg	Pg	23 44 46.9	+0.1
	92nm,0.4s						
SDI	**San Donato**	**0.59**	**154**	Pg	Pg	23 44 47.1	+0.1
	115nm,0.4s						
SDI	**San Donato**	**0.59**	**154**	Pg	Pg	23 44 47.1	+0.1
	115nm,0.4s						
MNS	**Montasola**	**0.60**	**284**	Pg	Pg	23 44 47.2	+0.1
	146nm,0.6s						
MNS	**Montasola**	**0.60**	**284**	Pg	Pg	23 44 47.2	+0.1
	146nm,0.6s						
NRCA	**Norcia**	**0.65**	**336**	Pg	Pg	23 44 47.9	-0.1
	25nm,0.2s						
NRCA	**Norcia**	**0.65**	**336**	Pg	Pg	23 44 47.9	-0.1
	25nm,0.2s						
CAFR	**Castel Frentan**	**0.65**	**91**	Pg	Pb	23 44 48.6	-0.3
	403nm,0.5s						
CAFR	**Castel Frentan**	**0.65**	**91**	Pg	Pb	23 44 48.6	-0.3
	403nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.70**	**193**	Pg	Pg	23 44 49.1	0.0
	94nm,0.8s						
GIUL	**Giuliano Di Ro**	**0.70**	**193**	Pg	Pg	23 44 49.1	0.0
	94nm,0.8s						
OFFI	**Offida**	**0.71**	**13**	Pg	Pb	23 44 49.7	-0.2
	626nm,0.7s						
OFFI	**Offida**	**0.71**	**13**	Pg	Pb	23 44 49.7	-0.2
	626nm,0.7s						
RMP	**Rome, Mte Porz**	**0.72**	**233**	Pg	Pg	23 44 49.4	+0.1
	164nm,0.5s						
RMP	**Rome, Mte Porz**	**0.72**	**233**	Pg	Pg	23 44 49.4	+0.1
	164nm,0.5s						
RDP	**Rocca di Papa**	**0.74**	**229**	Pg	Pb	23 44 50.6	+0.1
	335nm,0.6s						
RDP	**Rocca di Papa**	**0.74**	**229**	Pg	Pb	23 44 50.6	+0.1
	335nm,0.6s						
RNI2	**Rionero Sannit**	**0.74**	**136**	Pg	Pb	23 44 50.4	-0.2
	115nm,0.6s						
RNI2	**Rionero Sannit**	**0.74**	**136**	Pg	Pb	23 44 50.4	-0.2
	115nm,0.6s						
CERA	**Filignano**	**0.77**	**147**	Pg	Pg	23 44 50.0	-0.3
	109nm,0.5s						
CERA	**Filignano**	**0.77**	**147**	Pg	Pg	23 44 50.0	-0.3
	109nm,0.5s						
MIDA	**Miranda**	**0.84**	**136**	Pg	Pg	23 44 51.1	-0.6
	65nm,0.4s						
MIDA	**Miranda**	**0.84**	**136**	Pg	Pg	23 44 51.1	-0.6
	65nm,0.4s						
FDMO	**Fiordimonte**	**0.84**	**341**	Pg	Pg	23 44 51.3	-0.4
	79nm,0.6s						
FDMO	**Fiordimonte**	**0.84**	**341**	Pg	Pg	23 44 51.3	-0.4
	79nm,0.6s						
CESI	**CESI - Serrava**	**0.87**	**331**	Pg	Pg	23 44 52.1	-0.1
	29nm,0.5s						
CESI	**CESI - Serrava**	**0.87**	**331**	Pg	Pg	23 44 52.1	-0.1
	29nm,0.5s						
ASSB	**Assisi San Ben**	**1.00**	**323**	Pg	Pg	23 44 54.2	-0.5
	74nm,0.7s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASSB	Assisi San Ben	1.00	323	Pg	Pg	23 44 54.2	-0.5
	74nm,0.7s						
SNTG	Esanatoglia	1.08	339	Pg	Pg	23 44 55.9	-0.4
	17nm,0.4s						
SNTG	Esanatoglia	1.08	339	Pg	Pg	23 44 55.9	-0.4
	17nm,0.4s						
CING	Cingoli	1.15	350	Pg	Pb	23 44 57.2	-0.3
	49nm,0.4s						
CING	Cingoli	1.15	350	Pg	Pb	23 44 57.2	-0.3
	49nm,0.4s						
ARVD	Arcevia	1.31	343	Pg	Pg	23 45 00.5	-0.2
	31nm,0.6s						
ARVD	Arcevia	1.31	343	Pg	Pg	23 45 00.5	-0.2
	31nm,0.6s						

IDC 07 23:55:57.8±3.8, 30°.33N×41°.71W, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/30, mbtmp3.6/4, MS3.3/2, Ms1 3.3/2, ms1mx2.7/34, Error ellipse: s-maj=135.2km s-min=30.3km az=30.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SADO	Sadowa	32.68	307	LR	LR	00 13 58.3	
	comp=Z,65nm,19.6s,baz=199,slow=33						
TKL	Tuckaleechee C	35.48	290	LR	LR	00 14 46.7	
	comp=Z,31nm,20.9s,baz=36,slow=32						
TORD	Torodi Ar. Bea	43.49	103	P	P	00 04 03.0	-0.3
	0.6nm,1.0s,baz=295,slow=6.6,SNR=4.3						
BRTR	Keskin Array B	60.76	59	P	P	00 06 11.8	+0.1
	0.7nm,0.9s,baz=260,slow=8.2,SNR=3.7						
INK	Inuvik	62.85	335	P	P	00 06 24.0	-1.1
	0.5nm,0.5s,baz=90,slow=8.1,SNR=3.1						
ILAR	Eielson Array	69.08	334	P	P	00 07 06.4	+1.1
	0.7nm,1.0s,baz=58,slow=4.4,SNR=6.1						

ISCJB 08 00:01:31.9±0.5, 46°.20N±0°.02×111°.33W±0°.03, h4km±5km, Error ellipse: s-maj=3.9km s-min=3.3km az=175.6
NEIC 08 00:01:32.0, 46°.20N×111°.34W, h2km, ML3.0(BUT), After BUT.
ISC 08 00:01:32.2±1.0, 46°.20N±0°.02×111°.34W±0°.03, h8km±9km, n17, σ0s.55/30, 9C-11D, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
E16A	East Helena	0.40	325	⇑P	Pg	00 01 39.9	-0.2
	baz=0.4						
E16A				⇑S	Sg	00 01 45.4	0.0
	baz=0.4						
E16A				⇑S	Sg	00 01 45.4	0.0
	baz=0.4						
E17A	Martinsdale	0.42	52	⇑P	Pg	00 01 40.3	-0.2
	baz=0.4						
E17A				⇑S	Sg	00 01 46.2	0.0
	baz=0.4						
E17A				⇑S	Sg	00 01 46.2	0.0
	baz=0.4						
F16A	Kennard Place,	0.46	205	⇓P	Pg	00 01 41.1	-0.1
	baz=0.5						
F16A				⇓S	Sg	00 01 47.4	+0.1
	baz=0.5						
F16A				⇓S	Sg	00 01 47.4	+0.1
	baz=0.5						
F17A	Fitzpatrick Pl	0.56	122	⇓P	Pg	00 01 43.1	0.0
	baz=0.6						
F17A				⇓S	Sg	00 01 51.0	+0.6
	baz=0.6						
F17A				⇓S	Sg	00 01 51.0	+0.6
	baz=0.6						
BOZ	Bozeman (W)	0.59	200	eP	Pg	00 01 43.2	-0.4
BOZ				eS	Sg	00 01 51.9	+0.5
BOZ	Bozeman (W)	0.59	200	⇑S	Sg	00 01 52.1	+0.7
	baz=0.6						
HRY	Holter Researc	0.61	327	ePg	Pg	00 01 43.6	-0.4
HRY				eSg	Sg	00 01 52.5	+0.5
G16A	Moss Hill, Enn	1.03	199	⇑S	Sg	00 02 04.4	-0.9
	baz=1.0						
F18A	Big Timber	1.17	104	⇑S	Sg	00 02 09.5	-0.4
	baz=1.2						
DLMT	Dillon	1.22	227	eP	Pn	00 01 56.1	+0.4
DLMT				eS	Sg	00 02 11.7	+0.4
QLMT	Earthquake Lak	1.37	183	eP	Pn	00 01 57.8	-0.2
QLMT				eS	Sg	00 02 15.3	-1.1
D18A	Linhart Farms,	1.45	46	⇓Sb	Sb	00 02 17.9	-0.4
	baz=1.5						
C17A	Wharram Farm,	1.48	15	⇓Sb	Sb	00 02 18.6	-0.6
	baz=1.5						
CHMT	Chamberlain Mo	1.50	299	eP	Pb	00 02 00.6	+0.2
CHMT				eS	Sn	00 02 19.4	-0.1
G18A	Lazy EL Ranch,	1.53	125	⇓Sb	Sn	00 02 19.4	-0.8
	baz=1.5						
C16A	Fuhringer Ranc	1.62	350	⇓Sb	Sn	00 02 23.0	+0.5
	baz=1.6						
RLMT	Red Lodge	1.81	126	⇓Sb	Sn	00 02 28.7	+1.4
	baz=1.8						

IDC 08 00:07:17.6±1.5, 10°.39N×69°.38W, h0km, mb3.3/2, mb1 3.8/4, mb1mx3.5/26, mbtmp3.7/4, MS3.7/1, Ms1 3.7/1, ms1mx2.7/21, Error ellipse: s-maj=41.3km s-min=32.9km az=130.0
ISCJB 08 00:07:18.3±0.5, 10°.33N±0°.03×69°.48W±0°.03, h19km±6km, mb3.3/2, MS3.7/1, Error ellipse: s-maj=5.8km s-min=4.8km az=23.9
FUNV 08 00:07:18.1, 10°.31N×69°.50W, h3km, MW3.4
ISC 08 00:07:18.0±1.2, 10°.31N±0°.04×69°.48W±0°.03, h7km±10km, n24, σ0s.70/28, 1C-4D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEPV	Terepaima	0.45	141	⇓iP	Pg	00 07 27.0	+0.4
TEPV				eS	Sb	00 07 34.4	-0.8
SIQV	Siquisique	0.47	316	⇓iP	Pg	00 07 26.8	-0.3
SIQV				eS	Sg	00 07 33.9	+0.7
CURV	Curarigua	0.56	238	⇑iP	Pg	00 07 27.9	-0.9
CURV				eS	Sg	00 07 36.5	+0.4
SANV	Sanarito	0.81	184	⇓eP	Pg	00 07 33.1	-0.5
SANV				eS	Sg	00 07 44.5	+0.4
JACV	Jacura	1.00	39	eP	Pb	00 07 37.6	-0.1
QARV	Quebrada Arrib	1.03	264	eP	Pg	00 07 38.2	+0.4
QARV				eS	Sg	00 07 51.3	0.0
MAPV	Macapo	1.11	115	eP	Pg	00 07 38.5	-0.8
DABV	Dabajuro	1.29	298	eP	Pg	00 07 42.1	-0.6
TURV	Turiamo	1.62	85	eP	Pn	00 07 46.8	-0.2
MONV	Montecano	1.70	344	⇓eP	Pn	00 07 47.9	-0.3
BAUV	El Baul	1.96	134	eP	Pn	00 07 52.4	+0.7
VIGV	El Vigia	2.37	232	eP	Pn	00 07 56.5	-0.8
SOCV	Socops	2.43	214	eP	Pn	00 07 58.3	+0.1
FUNV	FUNVISIS	2.63	86	eP	Pn	00 08 00.9	-0.1
BIRV	Birongo	3.16	87	eP	Pn	00 08 08.1	-0.1
ELOV	Elorza	3.29	180	eP	Pn	00 08 10.1	+0.1
MERV	Las Mercedes	3.31	108	eP	Pn	00 08 10.3	+0.1
CUPV	Cœpira	3.64	94	eP	Pn	00 08 14.9	0.0
CAPV	Capacho	3.71	229	eP	Pn	00 08 15.7	-0.2
ROSC	El Rosal	7.25	222	Pn	Pn	00 09 07.3	+2.6
	1.6nm,0.3s,baz=90,slow=20,SNR=3.7						
ROSC				Sn	Sn	00 10 38.4	+11
	1.6nm,0.3s,baz=239,slow=23,SNR=3.5						
SJG	San Juan	8.40	22	Pn	Pn	00 09 20.0	-0.2
	3.9nm,0.3s,baz=210,slow=16,SNR=3.9						
YBH	Yreka Blue Hor	56.03	314	LR	LR	00 42 57.7	
	comp=Z,66nm,20.3s,baz=176,slow=38						
YKA	Yellowknife Ar	61.32	338	P	P	00 17 34.3	+0.2
	0.1nm,0.5s,baz=124,slow=7.5,SNR=5.4						
TORD	Torodi Ar. Bea	69.54	80	P	P	00 18 28.1	-0.1
	0.4nm,0.7s,baz=283,slow=6.0,SNR=8.2						

CSEM 08 00:09:05.4, 42°.29N×13°.47E, h10km, After ROM
ROM 08 00:09:05.4±0.1, 42°.29N×13°.47E, h10km, Ml1.6/4, Error ellipse: s-maj=1.5km s-min=1.3km az=27.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.08	320	Pg	Pg	00 09 08.3	+0.5
AQU				Sg	Sg	00 09 09.7	+0.2
AQU	L'Aquila	0.08	320	Pg	Pg	00 09 08.3	+0.5
AQU				Sg	Sg	00 09 09.7	+0.2
FAGN	Fagnano	0.09	108	Pg	Pg	00 09 08.4	+0.5
FAGN				Sg	Sg	00 09 10.0	+0.3
FAGN	Fagnano	0.09	108	Pg	Pg	00 09 08.4	+0.5
FAGN				Sg	Sg	00 09 10.0	+0.3
FIAM	Fiamignano	0.26	265	Pg	Pg	00 09 11.6	+0.7
FIAM				Sg	Sb	00 09 15.9	-1.2
	106nm,1.0s						
FIAM	Fiamignano	0.26	265	Pg	Pg	00 09 11.6	+0.7
FIAM				Sg	Sb	00 09 15.9	-1.2
	106nm,1.0s						
PTQR	Pietraquaria	0.28	191	Pg	Pb	00 09 12.3	-0.3
PTQR				Sg	Sb	00 09 16.2	-1.2
	9.0nm,0.2s						
PTQR	Pietraquaria	0.28	191	Pg	Pb	00 09 12.3	-0.3
PTQR				Sg	Sb	00 09 16.2	-1.2
	9.0nm,0.2s						
VCEL	Villa Celiera	0.29	70	Pg	Pb	00 09 12.7	-0.3
VCEL				Sg	Sg	00 09 16.5	+1.0
	83nm,0.3s						
VCEL	Villa Celiera	0.29	70	Pg	Pb	00 09 12.7	-0.3
VCEL				Sg	Sg	00 09 16.5	+1.0
	83nm,0.3s						
TERO	Teramo	0.34	17	Pg	Pg	00 09 13.0	+0.6
TERO				Sg	Sg	00 09 18.0	+1.0
	34nm,0.2s						
TERO	Teramo	0.34	17	Pg	Pg	00 09 13.0	+0.6
TERO				Sg	Sg	00 09 18.0	+1.0
	34nm,0.2s						
INTR	Introdacqua	0.43	131	Pg	Pg	00 09 14.2	+0.3
INTR				Sg	Sb	00 09 21.1	-0.7
	48nm,0.3s						
INTR	Introdacqua	0.43	131	Pg	Pg	00 09 14.2	+0.3
INTR				Sg	Sb	00 09 21.1	-0.7
	48nm,0.3s						
VVLD	Villa Vallelon	0.44	165	Pg	Pg	00 09 14.4	+0.3
VVLD				Sg	Sg	00 09 20.9	+0.9
VVLD	Villa Vallelon	0.44	165	Pg	Pg	00 09 14.4	+0.3
VVLD				Sg	Sg	00 09 20.9	+0.9

CSEM 08 00:09:29.2, 42°.30N×13°.47E, h10km, After ROM
ROM 08 00:09:29.2±0.1, 42°.30N×13°.47E, h10km, Ml1.9/1, Error ellipse: s-maj=1.4km s-min=1.1km az=36.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	320	Pg	Pg	00 09 32.1	+0.5
AQU				Sg	Sg	00 09 33.5	+0.2
AQU	L'Aquila	0.07	320	Pg	Pg	00 09 32.1	+0.5
AQU				Sg	Sg	00 09 33.5	+0.2
FAGN	Fagnano	0.09	109	Pg	Pg	00 09 32.2	+0.4
FAGN				Sg	Sg	00 09 33.8	+0.1
FAGN	Fagnano	0.09	109	Pg	Pg	00 09 32.2	+0.4
FAGN				Sg	Sg	00 09 33.8	+0.1
CAMP	Campotosto	0.24	350	Pg	Pg	00 09 34.8	+0.4
CAMP				Sg	Sg	00 09 38.0	+0.1
CAMP	Campotosto	0.24	350	Pg	Pg	00 09 34.8	+0.4
CAMP				Sg	Sg	00 09 38.0	+0.1
FIAM	Fiamignano	0.26	264	Pg	Pg	00 09 35.3	+0.6
FIAM				Sg	Sb	00 09 40.0	-0.8
FIAM	Fiamignano	0.26	264	Pg	Pg	00 09 35.3	+0.6
FIAM				Sg	Sb	00 09 40.0	-0.8
PTQR	Pietraquaria	0.28	190	Pg	Pg	00 09 35.5	+0.5
PTQR				Sg	Sg	00 09 39.9	+1.0
PTQR	Pietraquaria	0.28	190	Pg	Pg	00 09 35.5	+0.5
PTQR				Sg	Sg	00 09 39.9	+1.0
VCEL	Villa Celiera	0.29	71	Pg	Pb	00 09 36.5	-0.3
VCEL				Sg	Sb	00 09 40.8	-1.0
	138nm,0.3s						
VCEL	Villa Celiera	0.29	71	Pg	Pb	00 09 36.5	-0.3
VCEL				Sg	Sb	00 09 40.8	-1.0
	138nm,0.3s						
TERO	Teramo	0.34	17	Pg	Pg	00 09 36.3	+0.2
TERO				Sg	Sg	00 09 41.8	+1.1
TERO	Teramo	0.34	17	Pg	Pg	00 09 36.3	+0.2
TERO				Sg	Sg	00 09 41.8	+1.1
INTR	Introdacqua	0.43	131	Pg	Pg	00 09 38.1	+0.3
INTR				Sg	Sb	00 09 44.9	-0.8
INTR	Introdacqua	0.43	131	Pg	Pg	00 09 38.1	+0.3
INTR				Sg	Sb	00 09 44.9	-0.8
LNSS	Leonessa	0.44	314	Pg	Pg	00 09 38.5	+0.5
LNSS	Leonessa	0.44	314	Pg	Pg	00 09 38.5	+0.5
VVLD	Villa Vallelon	0.44	165	Pg	Pg	00 09 38.1	+0.1
VVLD				Sg	Sg	00 09 44.8	+0.9
VVLD	Villa Vallelon	0.44	165	Pg	Pg	00 09 38.1	+0.1
VVLD				Sg	Sg	00 09 44.8	+0.9
CAFR	Castel Frentan	0.66	96	Pg	Pb	00 09 42.6	-0.2
CAFR	Castel Frentan	0.66	96	Pg	Pb	00 09 42.6	-0.2

IDC 08 00:11:02.2±2.0, 0°.23S×133°.18E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.6/21, mbtmp3.8/4, ML3.9/1, MS4.0/1, Ms1 4.0/1, ms1mx2.5/33, Error ellipse: s-maj=96.1km s-min=18.8km az=77.0
AUST 08 00:11:17.2, 1°.49S×130°.50E, h5km
ISC 08 00:11:11.0±1.8, 0°.8S±0°.1×131°.9E±0°.1, h35km, n10, σ2s.72/8, mb4.0/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	0.60	259	P	Pn	00 11 31.8	+8.6
	baz=1.0,SNR=34						
SWI				S	Sn	00 11 54.0	+22
	baz=1.0,SNR=7.0						
TLE	Tual	4.93	170	P	Pn	00 12 24.8	+2.0
	baz=4.7,SNR=3.0						
TLE				S	Sn	00 13 28.6	+10
	baz=4.7,SNR=3.9						
KDU	Kakadu	11.88	177	P	Pn	00 13 58.9	+0.9
	baz=11,SNR=5.1						
PCI	Palu	12.02	269	P	Pn	00 13 54.8	-5.1
	baz=11,SNR=64						
PCI				S	Sn	00 16 12.7	-0.2
	baz=11,SNR=7.3						
MTN	Manton Dam	12.04	183	P	Pn	00 14 02.9	+2.8
	baz=11,SNR=6.8						
WRA	Warramunga Arr	19.23	173	P	P	00 15 32.1	-0.2
	0.4nm,0.3s,baz=356,slow=11,SNR=12						
WRA				S	S	00 19 03.6	-4.8
	0.1nm,0.3s,baz=357,slow=25,SNR=3.6						
ASAR	Alice Springs	22.87	175	P	P	00 16 11.9	+0.3
	2.6nm,0.4s,baz=353,slow=9.0,SNR=54						
ASAR				S	S	00 20 27.7	+8.7
	0.2nm,0.3s,baz=355,slow=25,SNR=2.5						
STKA	Stephens Creek	32.30	164	P	P	00 17 33.5	-3.3
	1.7nm,0.7s,baz=336,slow=9.7,SNR=4.3						
DZM	Mont Dzumac	39.79	125	LR	LR	00 32 52.4	
	comp=Z,216nm,19.3s,baz=194,slow=34						
MKAR	Makanchi Array	64.14	324	P	P	00 21 41.1	-0.9
	0.1nm,0.4s,baz=112,slow=8.0,SNR=3.0						

IDC 08 00:22:09.7±1.3, 22°.64S×174°.68W, h0km, mb4.2/13, mb1 4.4/13, mb1mx4.3/20, mbtmp4.2/13, MS3.7/5, Ms1 3.7/5, ms1mx3.4/34, Error ellipse: s-maj=52.4km s-min=22.2km az=149.0
ISCJB 08 00:22:11.5±0.6, 22°.70S±0°.09×174°.7W±0°.1, h22km, mb4.3/20, MS3.9/3, Error ellipse: s-maj=14.5km s-min=12.1km az=17.1
NEIC 08 00:22:17.1±1.8, 22°.72S×174°.76W, h54km±14km, mb4.6/8, Error ellipse: s-maj=13.0km s-min=9.6km az=94.0
ISC 08 00:22:13.2±0.6, 22°.6S±0°.1×174°.7W±0°.1, h22km, n60, σ1s.08/45, mb4.4/18, MS3.9/3, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.35	304	ePn	Pn	00 24 17.0	+3.9
	29nm,0.8s						
AFI	Afiamalu	9.03	18	ePn	Pn	00 24 19.9	-2.5
AFI				Sn	Sn	00 25 48.3	-15
AFI	Afiamalu	9.03	18	Pn	Pn	00 24 15.9	-6.6
	1.6nm,0.3s,baz=194,slow=12,SNR=2.1						
AFI				Sn	Sn	00 25 48.3	-15
	5.0nm,0.3s,baz=16,slow=20,SNR=2.7						
AFI				LR	LR	00 27 19.1	
	comp=Z,143nm,20.7s,baz=82,slow=34						
RAR	Rarotonga	13.90	87	ePn	Pn	00 25 20.0	-8.9
RAR				Sn	Sn	00 27 38.0	-25
RAR	Rarotonga	13.90	87	Pn	Pn	00 25 18.9	-10
	6.9nm,0.3s,baz=267,slow=6.3,SNR=11						
RAR				Sn	Sn	00 27 38.0	-25
	0.8nm,0.3s,baz=90,slow=3.0,SNR=3.2						
RAR				LR	LR	00 29 10.9	
	comp=Z,250nm,19.4s,baz=297,slow=30						
URZ	Urewera	17.17	202	ePn	Pn	00 26 09.7	-2.0
	40nm,1.2s						
DZM	Mont Dzumac	17.48	268	eLR	LR	00 30 28.9	
	150nm,21.4s						
PPT2	Papeete2	24.07	83	eLR	LR	00 32 45.1	
	197nm,25.0s						
CTAO	Charters Tower	36.41	266	eP	P	00 29 16.2	-0.2
	4.2nm,0.7s						
STKA	Stephens Creek	39.76	247	P	P	00 29 44.0	-0.5
STKA	Stephens Creek	39.76	247	P	P	00 29 44.0	-0.5
	1.4nm,0.8s,baz=93,slow=4.8,SNR=4.0						
STKA				LR	LR	00 44 29.3	
	comp=Z,88nm,18.6s,baz=24,slow=34						
COEN	Coen	40.82	275	eP	P	00 29 53.5	0.0
	41nm,0.8s						
AS31	Alice Springs	47.09	258	eP	P	00 30 42.8	-1.0
ASAR	Alice Springs	47.09	258	P	P	00 30 43.2	-0.6
ASAR	Alice Springs	47.09	258	P	P	00 30 43.2	-0.6
	2.9nm,0.7s,baz=97,slow=7.7,SNR=34						
ASAR				LR	LR	00 50 08.1	
	comp=Z,119nm,18.6s,baz=175,slow=36						
WRAB	Tennant Creek	47.40	263	eP	P	00 30 44.7	-1.5
	7.1nm,0.9s						
WRA	Warramunga Arr	47.41	263	P	P	00 30 45.2	-1.2
WRA	Warramunga Arr	47.41	263	P	P	00 30 45.2	-1.2
	3.2nm,0.8s,baz=100,slow=8.2,SNR=15						
VNDA	Vanda	56.17	186	eP	P	00 31 50.6	-0.3
	2.0nm,0.9s						
MBWA	Marble Bar	60.44	258	eP	P	00 32 20.9	-0.6
	14nm,0.9s						
QSPA	South Pole Qui	67.53	180	eP	P	00 33 08.0	+0.4
	8.5nm,1.0s						
MJAR	Matsushiro Arr	73.71	322	P	P	00 33 45.0	-0.5
MJAR	Matsushiro Arr	73.71	322	P	P	00 33 45.0	-0.5
	2.0nm,0.6s,baz=172,slow=5.9,SNR=6.0						
NACB	Ninganchiao	77.39	303	eP	P	00 34 06.5	-0.3
PETK	Petropavlovsk-	79.08	343	P	P	00 34 15.8	+0.3
PETK	Petropavlovsk-	79.08	343	P	P	00 34 15.8	+0.3
	5.4nm,0.7s,baz=147,slow=9.5,SNR=8.1						
KSRS	Korea Array	80.48	317	P	P	00 34 22.8	-0.6
	0.5nm,0.3s,baz=139,slow=9.5,SNR=3.9						
KSAR	Wonju Array Be	80.50	317	P	P	00 34 22.8	-0.8
USRK	Ussuriysk Arra	82.41	324	P	P	00 34 35.6	+2.1
	2.0nm,0.7s,baz=128,slow=3.2,SNR=5.6						
TXAR	Lajitas Array	85.60	56	P	P	00 34 49.7	-0.6
TXAR	Lajitas Array	85.60	56	P	P	00 34 49.7	-0.6
	0.7nm,0.9s,baz=224,slow=6.5,SNR=6.7						
PLCA	Paso Flores	85.61	132	LR	LR	01 07 30.3	
	comp=Z,90nm,18.4s,baz=84,slow=32						
SNAA	Sanae	85.85	177	eP	P	00 34 53.4	+2.5
SNAA	Sanae	85.85	177	e	P	00 35 03.1	+12
SNAA	Sanae	85.85	177	eP	P	00 34 49.8	-1.1
	3.8nm,1.0s						
VNA3	Neumayer Olymp	85.87	175	eP	P	00 34 51.4	+0.5
VNA3	Neumayer Olymp	85.87	175	e	P	00 35 02.8	+12
VNA2	Neumayer--Watz	86.35	176	eP	P	00 34 57.0	+3.7
	baz=204,slow=4.2						
VNA2	Neumayer--Watz	86.35	176	e	P	00 35 05.6	+12
	baz=204,slow=4.2						
KULM	Kulim	87.11	277	P	P	00 34 58.1	+0.2
ILAR	Eielson Array	89.66	12	P	P	00 35 09.4	+0.6
ILAR	Eielson Array	89.66	12	P	P	00 35 09.4	+0.6
	0.6nm,0.8s,baz=211,slow=5.2,SNR=8.4						
CMAR	Chiang Mai Arr	93.71	288	P	P	00 35 30.8	+2.1
CMAR	Chiang Mai Arr	93.71	288	P	P	00 35 30.8	+2.1
	1.3nm,0.4s,baz=132,slow=3.3,SNR=9.0						
INK	Inuvik	95.47	14	P	P	00 35 35.6	0.0
INK	Inuvik	95.47	14	P	P	00 35 35.6	0.0
	0.5nm,0.9s,baz=167,slow=3.1,SNR=3.0						
YKA	Yellowknife Ar	97.10	24	P	Pdif	00 35 43.9	+0.6
YKA	Yellowknife Ar	97.10	24	P	Pdif	00 35 43.8	+0.6
	0.1nm,0.3s,baz=250,slow=4.3,SNR=3.9						
SONM	Songino Array	99.34	318	P	Pdif	00 35 55.0	+1.2
SONM	Songino Array	99.34	318	P	Pdif	00 35 55.0	+1.2
	0.2nm,0.5s,baz=134,slow=4.2,SNR=2.6						
MKAR	Makanchi Array	114.86	312	PKP	PKPdf	00 40 51.9	-0.3
MKAR	Makanchi Array	114.86	312	PKP	PKPdf	00 40 51.9	-0.3
	0.2nm,0.6s,baz=117,slow=1.9,SNR=2.7						
ARCES	ARCESS Array B	131.47	351	PKP	PKPdf	00 41 24.5	+1.2
ARCES	ARCESS Array B	131.47	351	PKP	PKPdf	00 41 24.5	+1.2
	0.8nm,0.6s,baz=93,slow=2.4,SNR=3.9						
AKASG	Malin Array Be	146.28	332	PKPbc	PKPbc	00 41 51.5	-0.4
AKASG	Malin Array Be	146.28	332	PKPbc	PKPbc	00 41 51.5	-0.4
	3.2nm,0.7s,baz=39,slow=4.0,SNR=12						
BRTR	Keskin Array B	150.51	312	PKPbc	PKPbc	00 42 03.9	+0.3
BRTR	Keskin Array B	150.51	312	PKPbc	PKPbc	00 42 03.9	+0.3
	0.9nm,0.9s,baz=74,slow=5.3,SNR=5.3						
GERES	GERESS Array B	152.93	348	PKPbc	PKPbc	00 42 09.4	+0.7
GERES	GERESS Array B	152.93	348	PKPbc	PKPbc	00 42 09.4	+0.7
	0.6nm,0.7s,baz=38,slow=6.8,SNR=5.6						

WEL 08 00:35:37.3±0.3, 38°.53S×175°.89E, h163km±2km, ML3.8/15, 18C-2D, Error ellipse: s-maj=3.1km s-min=2.6km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WATZ	Wairara	0.22	214	⇑PN	Pn	00 35 58.9	-0.3
WATZ				SN	Sn	00 36 15.0	-1.1
RITZ	Rihia Road	0.45	183	PN	Pn	00 35 59.9	0.0
KRVZ	Karewarewa	0.60	199	PN	Pn	00 35 59.9	-0.8
WTVZ	West Tongariro	0.64	202	⇑PN	Pn	00 36 00.8	-0.1
TWVZ	Taurewa	0.65	213	⇑PN	Pn	00 36 00.9	-0.1
OTVZ	Oturere	0.66	196	SN	Sn	00 36 20.1	+0.5
NGZ	Ngauruhoe	0.69	199	PN	Pn	00 36 01.3	+0.1
WPVZ	Whakapapa	0.73	202	PN	Pn	00 36 00.3	-1.2
TUVZ	Tukino	0.77	194	PN	Pn	00 36 01.8	+0.1
FWVZ	Far West T-bar	0.78	200	⇑PN	Pn	00 36 01.9	0.0
BKZ	Black Stump Fm	0.79	144	PN	Pn	00 36 01.4	-0.5
BKZ				SN	Sn	00 36 19.6	-1.2
TRVZ	Turoa	0.82	199	PN	Pn	00 36 02.3	+0.1
WNVZ	Wahianoa	0.83	196	PN	Pn	00 36 02.3	+0.1
PKVZ	Pokaka	0.88	209	⇑PN	Pn	00 36 02.4	0.0
MOVZ	Moawhango	0.89	187	⇑PN	Pn	00 36 02.3	-0.2
MOVZ				SN	Sn	00 36 20.6	-1.4
NMHZ	Naumai	0.92	129	PN	Pn	00 36 03.1	+0.4
NMHZ				SN	Sn	00 36 23.0	+0.7
MTVZ	Mangateitei	0.92	201	⇑PN	Pn	00 36 02.8	+0.1
BHHZ	Black Hill Sta	0.97	172	⇑PN	Pn	00 36 02.9	-0.2
BHHZ				SN	Sn	00 36 21.6	-1.5
URZ	Urewera	0.99	75	PN	Pn	00 36 01.3	-1.9
VRZ	Vera Road	1.07	236	⇑PN	Pn	00 36 03.9	+0.1
MCHZ	McNeill Hill	1.11	146	PN	Pn	00 36 04.8	+0.6
MCHZ				SN	Sn	00 36 25.5	+0.5
MWZ	Matawai	1.30	82	PN	Pn	00 36 04.3	-1.6
PNHZ	Pukenui	1.41	170	PN	Pn	00 36 06.8	-0.1
WAZ	Wanganui	1.42	210	⇑PN	Pn	00 36 07.1	+0.1
CKHZ	Cape Kidnapper	1.46	141	PN	Pn	00 36 07.6	+0.2
KNZ	Kokohu	1.48	110	PN	Pn	00 36 06.7	-0.8
KAHZ	Kahuranaki	1.48	149	PN	Pn	00 36 08.0	+0.3
TSZ	Takapari Road	1.53	178	⇑PN	Pn	00 36 08.1	-0.1
WPHZ	Waipukurau	1.60	165	⇑PN	Pn	00 36 08.7	-0.1
PRGZ	Paritu Road	1.61	105	PN	Pn	00 36 08.0	-0.9
PXZ	Pawanui	1.68	154	PN	Pn	00 36 09.6	0.0
MHGZ	Mahia Peninsul	1.69	112	PN	Pn	00 36 09.3	-0.5
DVHZ	Dannevirke	1.79	173	PN	Pn	00 36 10.4	-0.5
CNGZ	Carnagh Statio	1.82	89	PN	Pn	00 36 10.1	-1.1
PRHZ	Porangahau	1.83	162	PN	Pn	00 36 11.0	-0.3
POWZ	Post Office Ro	1.87	183	PN	Pn	00 36 11.2	-0.5
PUZ	Puketiti	1.91	77	PN	Pn	00 36 09.9	-2.3
MRZ	Mangatainoka R	2.15	186	⇑PN	Pn	00 36 14.0	-0.9
BFZ	Birch Farm	2.17	173	PN	Pn	00 36 14.4	-0.7
TIWZ	Tintock	2.25	180	⇑PN	Pn	00 36 15.2	-0.9
OGWZ	Otaki Gorge	2.36	193	⇑PN	Pn	00 36 16.3	-0.9
HOWZ	Holdsworth Sta	2.39	187	PN	Pn	00 36 16.4	-1.3
KIW	Kapiti Island	2.45	198	PN	Pn	00 36 17.1	-1.4
TMWZ	Te Maipa	2.58	180	PN	Pn	00 36 18.7	-1.3
MTW	Mount Morrison	2.65	186	⇑PN	Pn	00 36 19.2	-1.6
DUWZ	D'Urville Isla	2.74	213	PN	Pn	00 36 20.3	-1.5
TRWZ	Traveller	2.88	183	PN	Pn	00 36 22.1	-1.4
PAWZ	Paruwai Farm	2.88	187	⇓PN	Pn	00 36 21.9	-1.6
WEL	Wellington	2.89	197	PN	Pn	00 36 21.9	-1.8
SNZO	South Karori	2.93	198	PN	Pn	00 36 22.3	-1.9
MSWZ	Moikau Station	2.93	190	PN	Pn	00 36 22.3	-1.9
TCW	Tory Channel	2.96	204	PN	Pn	00 36 22.9	-1.7
BHW	Baring Head	2.98	195	PN	Pn	00 36 23.0	-1.9
PLWZ	Palliser	3.08	189	⇑PN	Pn	00 36 24.0	-2.1
TUWZ	Tuamarina	3.27	207	PN	Pn	00 36 26.3	-2.0
NNZ	Nelson	3.31	215	⇓PN	Pn	00 36 26.7	-2.3
QRZ	Quartz Range	3.47	227	PN	Pn	00 36 28.0	-3.0
BSWZ	Blackbirch Sta	3.54	205	PN	Pn	00 36 30.0	-1.9
THZ	Tophouse	3.96	214	PN	Pn	00 36 34.6	-2.9
KHZ	Kahutara	4.28	204	⇑PN	Pn	00 36 39.0	-2.4
DSZ	Denniston Nort	4.49	223	PN	Pn	00 36 40.9	-3.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LTZ	Lake Taylor	5.07	212	PN	Pn	00 36 48.2	-3.5
MQZ	McQueen's Vall	5.73	204	PN	Pn	00 36 56.0	-4.3
RPZ	Rata Peaks	6.34	214	PN	Pn	00 37 04.9	-3.7
FOZ	Fox Glacier	6.88	221	PN	Pn	00 37 10.7	-4.9
LBZ	Lake Benmore	7.26	214	PN	Pn	00 37 15.9	-4.7
ODZ	Otahua Downs	7.60	209	PN	Pn	00 37 21.5	-3.7
JCZ	Jackson Bay	7.72	222	PN	Pn	00 37 22.9	-3.9

*CSEM **08** 00:36:17.0, 42.21N×48.24E, h22km, mb3.9, After OBN*

MOS 08 00:36:17.0±1.1**, 42.21N×48.24E, h22km, mb3.9**/1**, 1C, Error ellipse: s-maj=15.6km s-min=8.9km az=127.8, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRN	Derbent	0.19	159	ePG	Pb	00 36 22.5	0.0
DRN				eS	Sb	00 36 30.2	+3.9
DRN				pmax	pmax		
	comp=Z,174nm,0.2s						
DRN	Derbent	0.19	159	ePg	Pb	00 36 22.5	0.0
	comp=Z,174nm,0.2s						
DRN				eSg	Sb	00 36 30.2	+3.9
URKR	Urkarakh	0.45	265	i PG	Pb	00 36 26.0	-0.4
URKR				i S	Sn	00 36 35.0	-0.9
URKR				pmax	pmax		
	comp=Z,67nm,0.2s						
URKR	Urkarakh	0.45	265	i Pg	Pb	00 36 26.0	-0.4
	comp=Z,67nm,0.2s						
URKR				i Sg	Sn	00 36 35.0	-0.9
SGKR	Sergokala	0.50	301	ePG	Pn	00 36 34.5	+5.6
SGKR	Sergokala	0.50	301	ePg	Pn	00 36 34.5	+5.6
KSMR	Kasumkent	0.61	188	i PG	Pn	00 36 30.5	0.0
KSMR				eS	Sn	00 36 45.0	+5.3
KSMR				pmax	pmax		
	comp=Z,202nm,0.1s						
KSMR	Kasumkent	0.61	188	i Pg	Pn	00 36 30.5	0.0
	comp=Z,202nm,0.1s						
KSMR				eSg	Sn	00 36 45.0	+5.3
MNSR	Manas	0.62	322	ePG	Pn	00 36 35.2	+4.7
MNSR				eS	Sn	00 36 44.8	+4.9
MNSR				pmax	pmax		
	comp=Z,180nm,0.2s						
MNSR	Manas	0.62	322	ePg	Pn	00 36 35.2	+4.7
	comp=Z,180nm,0.2s						
MNSR				eSg	Sn	00 36 44.8	+4.9
AKT	Akhty	0.82	208	ePG	Pn	00 36 34.5	+1.1
AKT				eS	Sn	00 36 49.5	+4.5
AKT				pmax	pmax		
	comp=Z,73nm,0.2s						
AKT	Akhty	0.82	208	ePg	Pn	00 36 34.5	+1.1
	comp=Z,73nm,0.2s						
AKT				eSg	Sn	00 36 49.5	+4.5
KMKR	Kumukh	0.85	265	ePG	Pb	00 36 33.0	-0.4
KMKR				eS	Sn	00 36 49.0	+3.1
KMKR				pmax	pmax		
	comp=Z,44nm,0.4s						
KMKR	Kumukh	0.85	265	ePg	Pb	00 36 33.0	-0.4
	comp=Z,44nm,0.4s						
KMKR				eSg	Sn	00 36 49.0	+3.1
MAK	Makhachkala	0.93	325c	i PG	Pb	00 36 31.1	-3.3
MAK				e		00 36 44.0	
MAK				pmax	pmax		
	comp=Z,78nm,0.9s						
MAK				smax	smax		
	comp=E,226nm,0.5s						
MAK	Makhachkala	0.93	325	i Pg	Pb	00 36 31.1	-3.3
	comp=E,78nm,0.9s						
MAK				eSg	Sb	00 36 44.0	-2.2
ARKR	Arakani	1.00	294	PG	Pb	00 36 34.0	-1.8
ARKR				eS	Sn	00 36 51.0	+1.7
ARKR	Arakani	1.00	294	Pg	Pb	00 36 34.0	-1.8
ARKR				eSg	Sn	00 36 51.0	+1.7
KRNR	Karanay	1.16	303	ePG	Pn	00 36 35.5	-2.6
KRNR				i S	Sb	00 36 53.2	-0.1
KRNR				pmax	pmax		
	comp=Z,34nm,0.2s						
KRNR	Karanay	1.16	303	ePg	Pn	00 36 35.5	-2.6
	comp=Z,34nm,0.2s						
KRNR				i Sg	Sb	00 36 53.2	-0.1
XNZR	Khunzakh	1.18	287	ePG	Pn	00 36 38.5	0.0
XNZR				eS	Sn	00 36 56.5	+2.4
XNZR	Khunzakh	1.18	287	ePg	Pn	00 36 38.5	0.0
XNZR				eSg	Sn	00 36 56.5	+2.4
DBC	Dubki	1.32	308	i PG	Pn	00 36 37.6	-2.6
DBC				i S	Sn	00 36 56.8	-0.4
DBC	Dubki	1.32	308	i Pg	Pn	00 36 37.6	-2.6
DBC				i Sg	Sn	00 36 56.8	-0.4
DLMR	Dylym	1.47	307	ePG	Pn	00 36 41.5	-0.7
DLMR				eS	Sb	00 37 03.6	+1.8
DLMR				pmax	pmax		
	comp=Z,104nm,0.2s						
DLMR	Dylym	1.47	307	ePg	Pn	00 36 41.5	-0.7
	comp=Z,104nm,0.2s						
DLMR				eSg	Sb	00 37 03.6	+1.8
DGRG	David-gareji	2.27	251	P	Pb	00 36 58.1	+0.7
DGRG				S	Sb	00 37 32.2	+7.1

*CSEM **08** 00:43:44.9, 42.30N×13.48E, h10km, After ROM*

ROM 08 00:43:44.9±0.1**, 42.30N×13.48E, h10km, Ml1.4**/3**, Error ellipse: s-maj=1.0km s-min=0.6km az=37.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.08	314	Pg	Pg	00 43 47.7	+0.4
AQU				Sg	Sg	00 43 49.5	+0.4
AQU	L'Aquila	0.08	314	Pg	Pg	00 43 47.7	+0.4
AQU				Sg	Sg	00 43 49.5	+0.4
FAGN	Fagnano	0.09	113	Pg	Pg	00 43 47.8	+0.4
FAGN				Sg	Sg	00 43 49.4	+0.2
	1µm,0.3s						
FAGN	Fagnano	0.09	113	Pg	Pg	00 43 47.8	+0.4
FAGN				Sg	Sg	00 43 49.4	+0.2
	1µm,0.3s						
CAMP	Campotosto	0.24	348	Pg	Pg	00 43 50.8	+0.7
CAMP				Sg	Sg	00 43 54.5	+0.9
	30nm,0.4s						
CAMP	Campotosto	0.24	348	Pg	Pg	00 43 50.8	+0.7
CAMP				Sg	Sg	00 43 54.5	+0.9
	30nm,0.4s						
FIAM	Fiamignano	0.27	263	Pg	Pg	00 43 51.1	+0.6
FIAM				Sg	Sg	00 43 55.5	+1.2
	95nm,0.8s						
FIAM	Fiamignano	0.27	263	Pg	Pg	00 43 51.1	+0.6
FIAM				Sg	Sg	00 43 55.5	+1.2
	95nm,0.8s						
PTQR	Pietraquaria	0.28	192	Pg	Pg	00 43 50.9	+0.1
PTQR				Sg	Sb	00 43 56.2	-0.9
PTQR	Pietraquaria	0.28	192	Pg	Pg	00 43 50.9	+0.1
PTQR				Sg	Sb	00 43 56.2	-0.9
VCEL	Villa Celiera	0.28	71	Pg	Pg	00 43 51.5	+0.7
VCEL				Sg	Sb	00 43 56.5	-0.8
VCEL	Villa Celiera	0.28	71	Pg	Pg	00 43 51.5	+0.7
VCEL				Sg	Sb	00 43 56.5	-0.8
TERO	Teramo	0.34	16	Pg	Pg	00 43 51.9	+0.2
TERO	Teramo	0.34	16	Pg	Pg	00 43 51.9	+0.2
INTR	Introdacqua	0.43	132	Pg	Pg	00 43 53.7	+0.2
INTR				Sg	Sb	00 44 00.3	-1.0
INTR	Introdacqua	0.43	132	Pg	Pg	00 43 53.7	+0.2
INTR				Sg	Sb	00 44 00.3	-1.0
VVLD	Villa Vallelon	0.44	166	Pg	Pg	00 43 54.2	+0.5
VVLD	Villa Vallelon	0.44	166	Pg	Pg	00 43 54.2	+0.5
NRCA	Norcia	0.60	333	Pg	Pg	00 43 56.7	0.0
	23nm,0.1s						
NRCA	Norcia	0.60	333	Pg	Pg	00 43 56.7	0.0
	23nm,0.1s						

*CSEM **08** 00:44:41.7, 42.28N×13.41E, h11km, After ROM*

ROM 08 00:44:41.7±0.1**, 42.28N×13.41E, h11km, Ml1.8**/8**, Error ellipse: s-maj=1.2km s-min=0.9km az=52.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	353	Pg	Pg	00 44 44.5	+0.3
AQU				Sg	Sg	00 44 46.3	+0.3
AQU	L'Aquila	0.07	353	Pg	Pg	00 44 44.5	+0.3
AQU				Sg	Sg	00 44 46.3	+0.3
FAGN	Fagnano	0.13	97	Pg	Pg	00 44 45.2	+0.3
FAGN				Sg	Sg	00 44 48.6	+1.4
	1µm,0.4s						
FAGN	Fagnano	0.13	97	Pg	Pg	00 44 45.2	+0.3
FAGN				Sg	Sg	00 44 48.6	+1.4
	1µm,0.4s						
FIAM	Fiamignano	0.22	266	Pg	Pg	00 44 47.1	+0.6
FIAM				Sg	Sg	00 44 50.8	+1.1
	211nm,0.7s						
FIAM	Fiamignano	0.22	266	Pg	Pg	00 44 47.1	+0.6
FIAM				Sg	Sg	00 44 50.8	+1.1
	211nm,0.7s						
CAMP	Campotosto	0.25	359	Pg	Pg	00 44 47.7	+0.6
CAMP				Sg	Sb	00 44 52.3	-0.8
CAMP	Campotosto	0.25	359	Pg	Pg	00 44 47.7	+0.6
CAMP				Sg	Sb	00 44 52.3	-0.8
PTQR	Pietraquaria	0.26	182	Pg	Pg	00 44 47.6	+0.4
PTQR				Sg	Sg	00 44 51.9	+1.1
	34nm,0.2s						
PTQR	Pietraquaria	0.26	182	Pg	Pg	00 44 47.6	+0.4
PTQR				Sg	Sg	00 44 51.9	+1.1
	34nm,0.2s						
VCEL	Villa Celiera	0.34	70	Pg	Pg	00 44 49.0	+0.4
	204nm,0.8s						
VCEL	Villa Celiera	0.34	70	Pg	Pg	00 44 49.0	+0.4
	204nm,0.8s						
TERO	Teramo	0.37	22	Pg	Pg	00 44 48.8	-0.4
TERO				Sg	Sg	00 44 54.8	+0.6
	121nm,0.3s						
TERO	Teramo	0.37	22	Pg	Pg	00 44 48.8	-0.4
TERO				Sg	Sg	00 44 54.8	+0.6
	121nm,0.3s						
LNSS	Leonessa	0.42	319	Pg	Pb	00 44 51.0	-0.4
	54nm,0.3s						
LNSS	Leonessa	0.42	319	Pg	Pb	00 44 51.0	-0.4
	54nm,0.3s						
VVLD	Villa Vallelon	0.44	159	Pg	Pg	00 44 50.4	-0.1
VVLD	Villa Vallelon	0.44	159	Pg	Pg	00 44 50.4	-0.1
INTR	Introdacqua	0.46	126	Pg	Pg	00 44 50.7	-0.1
INTR				Sg	Sb	00 44 58.1	-0.6
INTR	Introdacqua	0.46	126	Pg	Pg	00 44 50.7	-0.1
INTR				Sg	Sb	00 44 58.1	-0.6
CERT	Cerreto	0.46	224	Pg	Pg	00 44 51.1	+0.2
CERT	Cerreto	0.46	224	Pg	Pg	00 44 51.1	+0.2
MNS	Montasola	0.55	281	Pg	Pg	00 44 52.4	-0.2
	25nm,0.6s						
MNS	Montasola	0.55	281	Pg	Pg	00 44 52.4	-0.2
	25nm,0.6s						
NRCA	Norcia	0.59	338	Pg	Pg	00 44 53.2	-0.2
	50nm,0.1s						
NRCA	Norcia	0.59	338	Pg	Pg	00 44 53.2	-0.2
	50nm,0.1s						
SDI	San Donato	0.64	153	Pg	Pg	00 44 54.1	-0.2
	18nm,0.3s						
SDI	San Donato	0.64	153	Pg	Pg	00 44 54.1	-0.2
	18nm,0.3s						
FDMO	Fiordimonte	0.79	342	Pg	Pg	00 44 56.8	-0.3
FDMO	Fiordimonte	0.79	342	Pg	Pg	00 44 56.8	-0.3
CESI	CESI - Serrava	0.81	333	Pg	Pg	00 44 57.3	-0.3
	5.0nm,0.4s						
CESI	CESI - Serrava	0.81	333	Pg	Pg	00 44 57.3	-0.3
	5.0nm,0.4s						

*NIED **08** 00:59:00, 46.00N×152.10E, h35km, Mw4.9 Best double couple: $M_0$2.23000×10^{16} NP1:ϕ_s6.00000°, δ68.00000°, λ67.00000°. NP2:ϕ_s235.00000°, δ31.00000°, λ135.00000°.*

*BGS **08** 00:59:01.6±1.8, 44.40N×155.48E, h40km, mb5.3*

*BJI **08** 00:59:08.8, 46.30N×152.18E, h30km, mB5.0/39, mb5.1/53, Ms4.5/44, Ms7 4.3/49*

*JMA **08** 00:59:12.0±0.8, 46.05N×152.12E, h30km, M5.5*

*ISCJB **08** 00:59:13.4±0.4, 46.13N±0.02×151.64E±0.02, h42km±3km, mb5.2/287, MS4.4/54, Error ellipse: s-maj=4.1km s-min=1.9km az=165.0*

*MOS **08** 00:59:13.1±1.0, 46.17N×151.54E, h44km, mb5.4/107, MS4.3/26, Error ellipse: s-maj=8.0km s-min=6.0km az=78.3*

*IDC **08** 00:59:13.8±2.4, 46.20N×151.54E, h33km±17km, mb4.6/38, mb1 4.8/42, mb1mx4.8/43, mbtmp4.7/42, ML4.6/4, MS4.2/28, Ms1 4.2/28, ms1mx4.0/42, Error ellipse: s-maj=11.3km s-min=8.6km az=145.0*

*SKHL **08** 00:59:13.3±0.2, 46.05N×152.09E, h35km±1km, mb5.7/3, mbh5.6/1, Ms4.5/3, msh5.5/3*

*NEIC **08** 00:59:15.4±0.5, 46.16N×151.57E, h46km±4km, mb5.2/179, Error ellipse: s-maj=3.8km s-min=2.2km az=160.0*

*GCMT **08** 00:59:18.5±0.3, 46.11N×151.90E, h46km±1km, MW5.0, Moment Tensor Solution. s50,c68; s80,c116; Moment tensor: Scale 10^{16}Nm; M_{rr}3.36±.15; $M_{\theta\theta}$-1.24±.11; $M_{\phi\phi}$-2.13±.11; $M_{r\theta}$0.70±.10; $M_{\theta\phi}$-2.47±.08; $M_{\phi r}$1.93±.09; Best double couple: $M_0$4.30000×10^{16} NP1:ϕ_s234.00000°, δ33.00000°, λ111.00000°. NP2:ϕ_s28.00000°, δ60.00000°, λ77.00000°. Principal axes: T 3.9700, Plg72.0000°, Azm267.0000°; N 0.6800, Plg11.0000°, Azm35.0000°; P -4.6600, Plg14.0000°, Azm128.0000°; Data Used: II IU IC G CN.*

*SZGRF **08** 00:59:19.4, 47.73N×150.14E, h33km, mb5.3, MS4.2, Kuril Islands, Russia*

ISC 08 00:59:13.5±0.3**, 46.11N**±0.04×**151.73E**±0.03**, h32km**±1km**, h31km:pP-P, n1352, σ1.10**/1454**, mb5.2**/287**, MS4.3**/56**, 349C-231D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.85	253	ePN	Pn	00 59 59.0	+2.2
KUR	Kuril'sk	2.85	253	eP	Pn	00 59 59.0	+2.2
KUR				A	A	01 00 46.0	
	24µm,3.0s						
KUR				A	A	01 00 46.0	
	30µm,3.0s						
YUK	Yuzh-Kuril'sk	4.65	246	i PN	Pn	01 00 24.5	+3.1
YUK				i S	Sn	01 01 18.2	+3.9
YUK				pmax	pmax		
	comp=E,278nm,0.4s						
YUK				pmax	pmax		
	comp=Z,573nm,0.8s						
YUK				pmax	pmax		
	comp=N,233nm,0.4s						
YUK				smax	smax		
	comp=E,896nm,0.7s						
YUK				smax	smax		
	comp=N,2µm,0.7s						
YUK	Yuzh-Kuril'sk	4.65	246	⇑ i P	Pn	01 00 24.6	+3.1
YUK				AMB	AMB	01 00 28.0	
	comp=N,233nm,0.4s						
YUK				AMB	AMB	01 00 28.0	
	comp=N,278nm,0.4s						
YUK				AMB	AMB	01 00 28.0	
	comp=N,573nm,0.8s						
YUK				i sP	sP	01 00 40.9	
YUK				i S	Sn	01 01 18.2	+3.9
YUK				A	A	01 01 22.4	
	comp=N,2µm,0.6s						
YUK				A	A	01 01 22.4	
	comp=N,896nm,0.6s						
NEM2	Nemuro 2	5.08	239	⇑P	Pn	01 00 28.0	+0.7
NEM2				eS	Sn	01 01 24.3	-0.5
JRA	Rausu	5.17	247	P	Pn	01 00 31.9	+3.3
SKR	Severo-Kuril's	5.42	31	ePN	Pn	01 00 31.5	-0.6
SKR				S	Sn	01 01 36.0	+2.6
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR				smax	smax		
	comp=N,2µm,4.0s						
SKR				smax	smax		
	comp=E,2µm,4.0s						
SKR				smax	smax		
	comp=N,300nm,0.9s						
SKR				smax	smax		
	comp=E,210nm,0.4s						
SKR	Severo-Kuril's	5.42	31	eP	Pn	01 00 31.5	-0.6
SKR				AMB	AMB	01 00 34.0	
	comp=E,90nm,0.5s						
SKR				sP	sP	01 00 49.5	
SKR				eS	Sn	01 01 36.0	+2.6
SKR				A	A	01 01 40.0	
	comp=E,2µm,4.0s						
SKR				A	A	01 01 57.6	
	comp=E,950nm,0.7s						
SKR				A	A	01 01 57.6	
	comp=E,210nm,0.7s						
SKR				A	A	01 01 57.6	
	comp=E,300nm,0.7s						
JNK	Nakash	5.59	246	⇑P	Pn	01 00 37.4	+3.0
JNK				eS	Sn	01 01 40.5	+2.9
JAK	Akkeshi	5.92	241	⇑P	Pn	01 00 40.0	+1.1
JAK				eS	Sn	01 01 45.2	-0.3
JTKR	Abashiri--Toko	5.94	252	⇑P	Pn	01 00 43.0	+3.7
YSS	Yuzh-Sakhalins	6.25	281	⇓ePN	Pn	01 00 48.9	+5.4
YSS				eS	Sn	01 01 56.0	+2.2
YSS				pmax	pmax		
	comp=Z,470nm,0.9s						
YSS				MLR	MLR		
	comp=E,2µm,18.0s						
YSS				MLR	MLR		
	comp=Z,3µm,18.0s						
YSS				MLR	MLR		
	comp=N,2µm,17.0s						
YSS	Yuzh-Sakhalins	6.25	281	ePn	Pn	01 00 48.2	+4.8
YSS	Yuzh-Sakhalins	6.25	281	⇓eP	Pn	01 00 48.9	+5.4
YSS				AMB	AMB	01 00 51.1	
	comp=N,470nm,0.9s						
YSS				esP	sP	01 01 05.0	
YSS				eS	Sn	01 01 56.0	+2.2
YSS				AMS	AMS	01 03 03.0	
	comp=N,2µm,18.0s						
YSS				AMS	AMS	01 03 03.0	
	comp=N,2µm,18.0s						
YSS				AMS	AMS	01 03 03.0	
	comp=N,3µm,18.0s						
JMP	Maruseppu	6.29	253	P	Pn	01 00 48.2	+4.1
JAR	Ashorobuto	6.33	246	P	Pn	01 00 48.1	+3.4
JAR				eS	Sn	01 01 58.1	+2.2
JOB	Onbets	6.50	243	P	Pn	01 00 48.8	+2.0
JOB				eS	Sn	01 02 00.5	+0.7
JSE	Soyaes	6.53	263	P	Pn	01 00 52.0	+4.7
JKK2	Kamakawa 2	6.75	254	P	Pn	01 00 54.8	+4.4
ASAJ	Asahikawa	6.77	256	⇑ePn	Pn	01 00 55.4	+4.9
ASAJ	Asahikawa	6.77	256	P	Pn	01 00 55.5	+4.9
ASAJ	Asahikawa	6.77	256	Pn	Pn	01 00 55.4	+4.9
	comp=N,16nm,0.3s,baz=80,slow=11,SNR=102						
ASAJ				LR	LR	01 03 31.2	
	comp=N,3µm,20.2s,baz=354,slow=39						
JWK2	Keihoku	6.93	267	P	Pn	01 01 00.0	+7.2
JCH	Churui	6.94	243	P	Pn	01 00 54.0	+1.0
JCH				eS	Sn	01 02 10.2	-0.7
JFR	Furan	7.16	249	P	Pn	01 00 59.3	+3.4
UGL	Uglegorsk	7.18	298	⇓i PN	Pn	01 01 01.8	+5.6
UGL				S	Sn	01 02 23.0	+6.5
UGL				pmax	pmax		
	comp=Z,540nm,0.5s						
UGL				smax	smax		
	comp=N,170nm,0.6s						
UGL				smax	smax		
	comp=Z,130nm,0.6s						
UGL				smax	smax		
	comp=E,220nm,0.7s						
UGL				MLR	MLR		
	comp=Z,2.0nm,17.0s						
UGL				MLR	MLR		
	comp=N,3µm,20.0s						
UGL	Uglegorsk	7.18	298	⇓i P	Pn	01 01 01.8	+5.6
UGL				AMB	AMB	01 01 03.0	
	comp=N,540nm,0.5s						
UGL				eS	Sn	01 02 23.0	+6.5
UGL				A	A	01 02 25.5	
	comp=N,170nm,0.7s						
UGL				A	A	01 02 25.5	
	comp=N,220nm,0.7s						
UGL				A	A	01 02 25.5	
	comp=N,130nm,0.7s						
UGL				eL	L	01 02 54.0	
UGL				AMS	AMS	01 03 46.0	
	comp=N,3µm,18.0s						
UGL				AMS	AMS	01 03 46.0	
	comp=N,2µm,18.0s						
JSS	Shosan	7.18	260	P	Pn	01 01 03.6	+7.4
JAB	Ashibetsu	7.25	252	P	Pn	01 01 02.3	+5.1
ERM	Erimo	7.41	239	⇑i PN	Pn	01 01 01.9	+2.5
ERM	Erimo	7.41	239	ePn	Pn	01 01 01.9	+2.5
ERM				eSn	Sn	01 02 23.9	+1.6
ERM	Erimo	7.41	239	Pn	Pn	01 01 01.5	+2.1
	comp=N,2µm,0.5s,SNR=54						
JEM	Erimo	7.41	240	P	Pn	01 01 00.6	+1.2
JEM				eS	Sn	01 02 21.0	-1.3
JBT2	Biratori 2	7.49	247	P	Pn	01 01 02.2	+1.7
JHR	Hokuryu	7.49	255	P	Pn	01 01 05.8	+5.3
JNBK	Urakawa-nobuka	7.50	242	P	Pn	01 01 01.1	+0.4
TYV	Tymovskoe	7.68	312	eP	Pn	01 01 07.5	+4.5
TYV				AMB	AMB	01 01 09.2	
	comp=N,55nm,0.8s						
TYV				AMB	AMB	01 01 09.2	
	comp=N,66nm,0.8s						
TYV				AMB	AMB	01 01 09.2	
	comp=N,103nm,0.8s						
TYV				AMB	AMB	01 01 12.0	
	comp=N,500nm,2.0s						
TYV				AMS	AMS	01 03 47.0	
	comp=N,2µm,18.0s						
TYV				AMS	AMS	01 03 47.0	
	comp=N,4µm,20.0s						
PEA0B	Petropavlovsk-	8.00	27	ePn	Pn	01 01 10.3	+2.9
PEA0B				eSn	Sn	01 02 38.1	+1.4
PETK	Petropavlovsk-	8.00	27	PN	Pn	01 01 10.3	+2.9
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,766nm,19.5s						
PETK	Petropavlovsk-	8.00	27	Pn	Pn	01 01 10.3	+2.9
PETK	Petropavlovsk-	8.00	27	Pn	Pn	01 01 10.3	+2.9
	comp=Z,1.7nm,0.3s,baz=178,slow=12,SNR=27						
PETK				LR	LR	01 04 13.9	
	comp=Z,766nm,19.5s,baz=57,slow=38						
JEW	Eniwo	8.05	250	⇓P	Pn	01 01 11.7	+3.5
PET	Petropavlovsk	8.25	30	ePN	Pn	01 01 12.7	+1.9
PET				MLR	MLR		
	comp=Z,800nm,18.0s						
PET				MLR	MLR		
	comp=Z,900nm,11.0s						
JNB	Noboribetsu	8.49	248	P	Pn	01 01 16.6	+2.4
JNB				eS	Sn	01 02 49.4	+0.5
JKB	Kayabe	8.79	245	⇓P	Pn	01 01 19.0	+0.7
JKB				eS	Sn	01 02 52.3	-4.0
JSH	Shimam	9.06	252	P	Pn	01 01 25.0	+3.0
JYM2	Yakumo 2	9.10	248	P	Pn	01 01 24.1	+1.6
OKH	Okha	9.36	326	ePN	Pn	01 01 30.2	+4.1
OKH				eS	Sn	01 03 14.2	+4.1
OKH				pmax	pmax		
	comp=Z,1µm,1.8s						
OKH				smax	smax		
	comp=Z,1µm,15.0s						
OKH	Okha	9.36	326	eP	Pn	01 01 30.2	+4.1
OKH				eP		01 01 30.8	
OKH				AMB	AMB	01 01 31.2	
	comp=Z,300nm,0.9s						
OKH				AMB	AMB	01 01 32.0	
	comp=Z,1µm,1.8s						
OKH				eS	Sn	01 03 14.2	+4.1
OKH				eS		01 03 14.5	
OKH				eLQ	LQ	01 04 00.0	
OKH				AMS	AMS	01 05 14.0	
	comp=Z,1µm,15.0s						
OKH				AMS	AMS	01 05 14.0	
	comp=Z,1µm,14.0s						
OKH				AMS	AMS	01 05 14.0	
	comp=Z,2µm,14.0s						
JSR	Shiriuchi	9.37	245	P	Pn	01 01 26.5	+0.2
JANG	Nango	9.40	236	P	Pn	01 01 24.8	-2.0
JANG				eS	Sn	01 03 04.0	-7.4
JTM	Tenmabayashi	9.40	239	P	Pn	01 01 26.2	-0.5
JTM				eS	Sn	01 03 03.3	-8.0
JTH	Tanohata	9.50	233	P	Pn	01 01 25.8	-2.3
JTH				eS	Sn	01 03 03.9	-10
JOSM	Okushiri--Mats	9.69	250	P	Pn	01 01 32.1	+1.4
NKL	Nikolayevsk	10.04	319	eP	Pn	01 01 40.0	+4.6
NKL				⇓i P		01 01 42.0	
NKL				AMB	AMB	01 01 43.8	
	comp=Z,110nm,1.0s						
NKL				AMB	AMB	01 01 43.8	
	comp=Z,140nm,1.0s						
NKL				AMB	AMB	01 01 43.8	
	comp=Z,270nm,1.0s						
NKL				AMB	AMB	01 01 44.0	
	comp=Z,1µm,2.0s						
NKL				AMB	AMB	01 01 44.0	
	comp=Z,500nm,3.0s						
NKL				A	A	01 03 48.0	
	comp=Z,450nm,8.0s						

NKL eL L 01 04 34.0
NKL AMS AMS 01 05 46.0
comp=Z,1µm,17.0s
NKL AMS AMS 01 05 46.0
comp=Z,900nm,17.0s
NKL AMS AMS 01 05 46.0
comp=Z,2µm,19.0s
OFUJ Ofunato 10.21 230 P **Pn 01 01 35.8 -2.0**
OFUJ eS Sn 01 03 23.2 -8.0
JRG Rokugo 10.56 234 P **Pn 01 01 41.5 -1.1**
TEY Ternei 10.66 270 eP Pn 01 01 50.0 +6.0
TEY AMB AMB 01 01 50.3
comp=Z,20nm,0.9s
TEY AMB AMB 01 01 50.3
comp=Z,17nm,0.9s
TEY eL L 01 04 56.0
JIO Ouri 10.84 229 P **Pn 01 01 43.9 -2.6**
JIO eS Sn 01 03 37.2 -9.4
JYA Atsumi 11.63 234 P **Pn 01 01 56.2 -1.1**
JFK Kawauchi 11.91 227 P **Pn 01 01 59.1 -2.0**
JFK eS Sn 01 04 03.9 -9.0
JAW Awa shima 11.99 235 P **Pn 01 02 01.1 -1.0**
JSD Sado 12.84 236 P **Pn 01 02 12.5 -1.3**
KLR Kul'dur 13.82 290 eP **Pn 01 02 28.4 +1.4**
KLR pmax pmax
comp=E,86nm,1.2s
KLR pmax pmax
comp=Z,73nm,1.2s
KLR MLR MLR
comp=Z,2µm,14.0s
MJAR Matsushiro Arr 13.94 231 Pn **Pn 01 02 27.1 -1.6**
MJAR Matsushiro Arr 13.94 231 Pn **Pn 01 02 27.1 -1.6**
comp=Z,1.5nm,0.3s,baz=30,slow=13,SNR=73
MAJO Matsushiro 13.94 231 eP **Pn 01 02 27.6 -1.2**
MAJO Matsushiro 13.94 231 ePn **Pn 01 02 27.6 -1.2**
MAJO e 01 02 38.1
USRK Ussuriysk Arra 14.06 269 Pn **Pn 01 02 31.5 +1.2**
comp=Z,3.5nm,0.3s,baz=81,slow=13,SNR=52
USRK LR LR 01 07 56.9
comp=Z,1µm,19.3s,baz=66,slow=38
JNG Nsakai 14.09 231 P **Pn 01 02 29.8 -1.2**
FX1 Attu Island--F 15.45 56 ePn **Pn 01 02 49.5 +0.6**
FX1 eSn **Sn 01 05 32.6 -6.2**
FX1 Attu Island--F 15.45 56 Pn **Pn 01 02 49.6 +0.6**
comp=Z,8.0nm,0.3s,baz=282,slow=4.0,SNR=29
FX1 Sn Sn 01 05 28.3 -11
comp=Z,2.7nm,0.3s,baz=72,slow=20,SNR=5.0
FX1 LR LR 01 07 49.4
comp=Z,334nm,18.1s,baz=78,slow=33
MDJ Mudanjiang 15.63 272 P **Pn 01 02 53.0 +1.7**
MDJ S **Sn 01 05 48.7 +5.3**
MDJ ScP **ScP 01 11 22.9 0.0**
MDJ PcS **PcS 01 11 27.0 +0.5**
MDJ ScS **ScS 01 15 02.6 +1.3**
MDJ pmax pmax
comp=Z,54nm,0.9s
MDJ pmax pmax
comp=Z,260nm,6.2s
MDJ LR LR
comp=N,240nm,14.6s
MDJ LR LR
comp=E,730nm,19.1s
MDJ LR LR
comp=Z,1µm,16.8s
JHJ Hachijo jima 2 15.89 219 Pn **Pn 01 02 55.4 +0.7**
comp=Z,3.8nm,0.3s,baz=74,slow=16,SNR=7.8
JHJ LR LR 01 09 12.9
comp=Z,208nm,18.4s,baz=57,slow=38
SEY Seymchan 16.86 1 *ce*P **P 01 03 08.3 -0.4**
ZEA Zeya 17.45 305 eP **Pn 01 03 13.2 -1.1**
ZEA AMB AMB 01 03 17.1
comp=Z,52nm,0.8s
ZEA AMB AMB 01 03 17.1
comp=Z,56nm,0.8s
ZEA AMB AMB 01 03 17.1
comp=Z,47nm,1.0s
ZEA AMB AMB 01 03 20.0
comp=Z,300nm,7.0s
ZEA AMB AMB 01 03 20.0
comp=Z,200nm,7.0s
CN2 Changchun 18.72 272 eP **P 01 03 29.5 +0.2**
CN2 *ep*P **pP 01 03 37.0 -0.7**
CN2 eS **Sn 01 06 51.5 -6.7**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,700nm,16.0s
CN2 LR LR
comp=E,600nm,16.0s
CN2 LR LR
comp=Z,800nm,17.0s
KSRS Korea Array 19.70 252 P **P 01 03 40.5 +0.5**
comp=Z,4.9nm,0.3s,baz=58,slow=11,SNR=104
KSRS PcP **PcP 01 07 58.8 +0.8**
comp=Z,0.2nm,0.3s,baz=24,slow=0.8,SNR=11
KSRS LR LR 01 10 19.2
comp=Z,594nm,21.3s,baz=140,slow=34
KSAR Wonju Array Be 19.73 252 P **P 01 03 40.5 +0.1**
KSAR PcP **PcP 01 07 58.8 +0.8**
CLNS Chul'man 19.73 313 eP **Pn 01 03 41.8 -0.1**
CLNS pmax pmax
comp=Z,14nm,0.7s
CLNS pmax pmax
comp=N,7.0nm,1.2s
CLNS pmax pmax
comp=E,6.0nm,0.9s
CLNS MLR MLR
comp=Z,776nm,17.0s
CLNS MLR MLR
comp=N,519nm,16.0s
CLNS MLR MLR
comp=E,609nm,19.0s
YAK Yakutsk 20.36 329 eP Pn 01 03 49.7 +0.4
YAK e*PP pP 01 04 02.3 +6.8
YAK e 01 04 08.5
YAK eS **S 01 07 34.8 +1.5**
YAK e*SS sS 01 07 55.1 +8.4
YAK eSS **SnSn 01 07 59.7 +7.7**
YAK e 01 15 10.7
YAK pmax pmax
comp=N,104nm,1.2s
YAK pmax pmax
comp=E,74nm,0.9s
YAK pmax pmax
comp=Z,301nm,0.8s
YAK pmax pmax
comp=Z,87nm,0.7s
YAK pmax pmax
comp=E,123nm,1.5s
YAK pmax pmax
comp=N,143nm,1.6s
YAK smax smax
comp=N,85nm,1.9s
YAK smax smax
comp=E,145nm,2.7s
YAK Yakutsk 20.36 329 eP **P 01 03 47.7 +0.6**
comp=E,358nm,0.8s
CBIJ Chichi jima 20.44 205 P **P 01 03 49.0 +0.8**
CBIJ Chichi jima 20.44 205 P **P 01 03 49.0 +0.8**
comp=E,82nm,0.8s,baz=27,slow=6.8,SNR=3.4
INCN Inchon 20.54 254 ePn Pn 01 03 50.8 -0.8
comp=E,145nm,0.8s
INCN Inchon 20.54 254 P Pn 01 03 51.0 -0.6
SNR=11
JNU Nakatsue 20.57 238 P **P 01 03 49.0 -0.7**
JNU eP Pn 01 03 50.0 -2.0
JNU Nakatsue 20.57 238 P **P 01 03 49.0 -0.7**
comp=E,8.1nm,0.9s,baz=61,slow=7.4,SNR=4.2
JNU LR LR 01 11 57.4
comp=E,575nm,21.8s,baz=42,slow=37
SNY Shenyang 20.66 268 ⇓P **P 01 03 51.0 +0.5**
SNY S **S 01 07 35.3 -4.2**
SNY pmax pmax
comp=Z,27nm,0.8s
SNY LR LR
comp=N,380nm,15.3s
SNY LR LR
comp=E,810nm,16.5s
SNY LR LR
comp=Z,930nm,18.0s
BILL Bilibino 23.23 14 *ce*P **P 01 04 17.3 -0.3**
BILL *e* 01 04 48.7
BILL *e* 01 08 05.5
BILL eS **S 01 08 26.3 -0.9**
BILL pmax pmax
comp=Z,13nm,1.1s
BILL MLR MLR
comp=Z,500nm,17.0s
BILL Bilibino 23.23 14 eP **P 01 04 17.0 -0.6**
comp=Z,11nm,0.9s
BILL ePcP **PcP 01 08 04.2 -0.2**
DL2 Dalian 23.23 263 P **P 01 04 17.5 -0.4**
DL2 S **S 01 08 27.1 -0.6**
DL2 pmax pmax
comp=Z,30nm,0.7s
DL2 pmax pmax
comp=Z,90nm,4.5s
DL2 LR LR
comp=N,120nm,17.2s
DL2 LR LR
comp=E,150nm,18.1s
DL2 LR LR
comp=Z,210nm,18.9s
BJI Beijing 26.52 270 P **P 01 04 50.6 +2.6**
BJI S **S 01 09 17.6 -2.5**
BJI sS **sS 01 09 32.6 -2.5**
BJI pmax pmax
comp=Z,27nm,0.9s
BJI pmax pmax
comp=Z,170nm,5.0s
BJI LR LR
comp=N,340nm,17.0s
BJI LR LR
comp=E,880nm,17.8s
BJI LR LR
comp=Z,600nm,19.7s
JOW Kunigami 26.78 232 eP **P 01 04 51.3 +0.8**
comp=Z,26nm,0.9s
TIXI Tiksi 27.82 345 ePcP **PcP 01 08 14.2 -0.4**
NJ2 Nanjing 28.90 253 eP **P 01 05 10.5 +1.1**
NJ2 pP **pP 01 05 15.2 -3.3**
NJ2 sP **sP 01 05 18.6 -3.7**
NJ2 PP **PnPn 01 06 03.6 +2.3**
NJ2 S **S 01 09 56.5 -1.2**
NJ2 pmax pmax
comp=Z,30nm,0.9s
NJ2 pmax pmax
comp=Z,120nm,5.6s
NJ2 LR LR
comp=N,260nm,12.1s
NJ2 LR LR
comp=E,670nm,16.6s
NJ2 LR LR
comp=Z,560nm,15.7s
TNA Tin City 29.09 34 eP **P 01 05 11.4 +0.7**
comp=Z,6.9nm,0.9s
HHC Hu-ho-hao-te 29.39 274 eP **P 01 05 11.7 -2.1**
HHC pP **pP 01 05 21.2 -1.8**
HHC sP **sP 01 05 25.3 -1.5**
HHC PP **PnPn 01 06 06.7 -1.4**
HHC S **S 01 10 00.6 -4.9**
HHC pmax pmax
comp=Z,33nm,0.9s
HHC pmax pmax
comp=Z,260nm,6.0s
HHC LR LR
comp=N,780nm,14.7s
HHC LR LR
comp=E,1µm,15.9s
HHC LR LR
comp=Z,1µm,15.5s
ULN Ulaanbaatar 30.21 290 eP **P 01 05 21.3 +0.2**
comp=Z,6.3nm,1.0s
ULN ePcP **PcP 01 08 21.1 -0.2**
SONM Songino Array 30.65 290 P **P 01 05 24.1 -0.9**
SONM PcP **PcP 01 08 22.1 -0.4**
SONM ScP **ScP 01 12 00.8 -1.7**
SONM Songino Array 30.65 290 P **P 01 05 24.1 -0.9**
comp=Z,4.6nm,0.8s,baz=71,slow=8.7,SNR=15
SONM PcP **PcP 01 08 22.1 -0.4**
comp=Z,5.8nm,0.8s,baz=118,slow=1.9,SNR=10
SONM ScP **ScP 01 12 00.8 -1.7**
comp=Z,0.7nm,0.8s,baz=110,slow=0.7,SNR=4.0
SONM LR LR 01 18 48.0
comp=Z,569nm,18.4s,baz=66,slow=38
TLY Talaya 31.63 298 eP **P 01 05 33.1 -0.3**
TLY *e* 01 08 24.4
TLY pmax pmax
comp=Z,6.0nm,0.7s
TLY Talaya 31.63 298 eP **P 01 05 33.8 +0.4**
comp=Z,6.9nm,0.8s
ZAK Zakamensk 32.09 296 eP **P 01 05 36.2 -1.3**
ZAK *e* 01 08 26.2
ZAK *e* 01 10 38.0
ZAK pmax pmax
comp=Z,3.0nm,1.2s
WHN Wuhan 32.84 255 ⇓*i*P **P 01 05 44.9 +0.7**
WHN pP pP 01 05 59.7 +6.3
WHN S **S 01 11 01.1 +1.6**
WHN pmax pmax
comp=Z,100nm,0.8s
WHN LR LR
comp=Z,690nm,15.2s
GUMO Guam 32.93 192 LR LR 01 19 26.4
comp=Z,306nm,18.4s,baz=60,slow=37
SSLB Suanglung 33.32 239 eP **P 01 05 49.0 +0.5**
comp=Z,23nm,0.9s
TPUB Ta-pu 33.88 238 eP **P 01 05 54.0 +0.7**
comp=Z,75nm,0.8s
TWG Pinlang 33.99 237 eP **P 01 05 54.3 0.0**
comp=Z,369nm,1.1s
XAN Xi'an 34.51 265 P **P 01 05 59.1 +0.3**
XAN pP **pP 01 06 08.4 +0.5**
XAN sP **sP 01 06 11.9 +0.1**
XAN PP **PnPn 01 07 14.4 +0.1**
XAN PcP **PcP 01 08 36.9 +3.7**
XAN S **S 01 11 21.1 -4.2**
XAN ScS **ScS 01 16 16.2 -2.7**
XAN pmax pmax
comp=Z,18nm,1.2s
XAN pmax pmax
comp=Z,23nm,5.1s
XAN LR LR
comp=N,280nm,17.2s
XAN LR LR
comp=E,64nm,16.5s
XAN LR LR
comp=Z,120nm,17.6s
OHAK Old Harbor 34.92 51 eP **P 01 06 02.0 0.0**
comp=Z,262nm,2.4s
OHAK *ep*P **pP 01 06 10.8 -0.4**
KDAK Kodiak Island 35.24 50 eP **P 01 06 03.0 -1.7**
comp=Z,19nm,0.9s
KDAK P **P 01 06 03.9 -0.8**
KDAK PcP **PcP 01 08 35.0 +0.2**
KDAK Kodiak Island 35.24 50 P **P 01 06 03.9 -0.8**
comp=Z,12nm,0.8s,baz=277,slow=6.5,SNR=14
KDAK PcP **PcP 01 08 35.0 +0.2**
comp=Z,5.6nm,0.8s,baz=284,slow=4.2,SNR=3.3
SPU Mount Spurr 35.33 44 eP **P 01 06 06.5 +1.0**
TRF Thorofare Moun 36.15 40 eP **P 01 06 11.6 -1.0**
comp=Z,8.3nm,0.8s
TRF ePcP **PcP 01 08 36.6 -1.1**
COLD Coldfoot 36.39 34 eP **P 01 06 15.3 +0.8**
comp=Z,11nm,1.0s
PMR Palmer 36.72 43 eP **P 01 06 18.0 +0.7**
PMR pmax pmax
comp=Z,8.0nm,0.6s
PMR Palmer 36.72 43 eP **P 01 06 18.0 +0.7**
comp=Z,8.1nm,0.6s
LZH Lanzhou 36.95 272 eP **P 01 06 20.8 +1.0**
LZH pP **pP 01 06 29.3 +0.2**
LZH sP **sP 01 06 34.5 +1.6**
LZH PP **PP 01 07 43.5 -0.7**
LZH PcP **PcP 01 08 42.4 +1.8**
LZH eS **S 01 12 01.2 -1.8**
LZH sS **sS 01 12 15.5 -2.7**
LZH pmax pmax
comp=Z,62nm,1.1s
LZH pmax pmax
comp=Z,240nm,5.1s
LZH LR LR
comp=N,2µm,15.8s
LZH LR LR
comp=E,1µm,15.1s
LZH LR LR
comp=Z,2µm,18.4s
SML Sawmill 37.09 43 eP **P 01 06 21.0 +0.5**
SML pmax pmax
comp=Z,12nm,0.7s
SML Sawmill 37.09 43 *e*P **P 01 06 21.0 +0.5**
comp=Z,12nm,0.7s
COLA College 37.23 38 eP **P 01 06 21.8 +0.2**
COLA pmax pmax
comp=Z,24nm,1.1s
COLA College 37.23 38 *e*P **P 01 06 21.8 +0.2**
comp=Z,24nm,1.1s
ILAR Eielson Array 37.64 38 P **P 01 06 24.8 -0.4**
ILAR PcP **PcP 01 08 40.9 -1.1**
ILAR Eielson Array 37.64 38 P **P 01 06 24.8 -0.4**
comp=Z,3.0nm,0.6s,baz=256,slow=7.3,SNR=50
ILAR PcP **PcP 01 08 40.9 -1.1**
comp=Z,1.6nm,0.8s,baz=281,slow=4.3,SNR=4.4
ILAR LR LR 01 23 58.5
comp=Z,174nm,18.4s,baz=307,slow=39
GTA Gaotai 38.13 279 ⇑P **P 01 06 30.0 +0.3**
GTA pP **pP 01 06 39.8 +0.8**
GTA sP **sP 01 06 43.5 +0.7**
GTA PcP **PcP 01 08 45.5 +1.4**
GTA S **S 01 12 18.7 -2.0**
GTA sS **sS 01 12 34.9 -1.1**
GTA pmax pmax
comp=Z,7.0nm,1.5s
GTA pmax pmax
comp=Z,57nm,3.8s
GTA LR LR
comp=N,290nm,17.1s
GTA LR LR
comp=E,300nm,18.1s
GTA LR LR
comp=Z,380nm,17.3s
PAX Paxson 38.34 41 eP **P 01 06 32.3 +1.1**
PAX *e* 01 08 44.7
PAX pmax pmax
comp=Z,8.0nm,1.2s
PAX Paxson 38.34 41 eP **P 01 06 32.3 +1.1**
comp=Z,7.8nm,1.2s
PAX ePcP **PcP 01 08 44.7 +0.4**
DOT Dot Lake 38.92 40 eP **P 01 06 35.6 -0.3**
comp=Z,4.9nm,0.8s
BMRM Bremner River 38.95 44 eP **P 01 06 37.2 +0.9**
comp=Z,18nm,0.9s
MENT Mentasta 39.14 41 eP **P 01 06 37.7 -0.1**
CD2 Chengdu 39.87 265 ⇑P **P 01 06 44.8 +0.5**
CD2 pP **pP 01 06 53.9 +0.3**
CD2 sP **sP 01 06 57.8 +0.4**
CD2 PP **PnPn 01 08 20.7 +1.2**
CD2 PcP **PcP 01 08 51.9 +2.3**
CD2 PcS **PcS 01 12 40.7 +0.8**
CD2 S **S 01 12 46.0 -1.0**
CD2 sS **sS 01 13 01.1 -1.2**
CD2 pmax pmax
comp=Z,150nm,5.8s
CD2 LR LR
comp=N,310nm,16.2s
CD2 LR LR
comp=E,250nm,21.5s
CD2 LR LR
comp=Z,490nm,15.9s
EGAK Eagle 40.09 38 eP **P 01 06 45.0 -0.6**
comp=Z,21nm,1.1s
GYA Guiyang 40.64 257 ⇑*i*P **P 01 06 50.8 0.0**
GYA pP **pP 01 07 01.2 +1.1**
GYA PP **PnPn 01 08 28.9 +0.2**
GYA PcP **PcP 01 08 53.4 +1.2**
GYA ScP **ScP 01 12 40.6 +1.4**
GYA S **S 01 12 57.9 -0.8**
GYA pmax pmax
comp=Z,50nm,1.0s
GYA pmax pmax
comp=Z,130nm,4.8s
GYA LR LR
comp=N,750nm,18.2s
GYA LR LR
comp=E,600nm,18.4s
GYA LR LR
comp=Z,730nm,17.9s
ZAA0 Zalesovo Array 42.21 306 eP **P 01 07 01.5 -1.6**
ZALV Zalesovo Beam 42.21 306 P **P 01 07 00.7 -2.5**
ZALV 01 08 56.9
ZALV MLR MLR
comp=Z,946nm,18.9s
ZALV Zalesovo Beam 42.21 306 P **P 01 07 00.7 -2.5**
ZALV PcP **PcP 01 08 56.9 +0.2**
ZALV Zalesovo Beam 42.21 306 P **P 01 07 00.7 -2.5**
comp=Z,1.5nm,0.5s,baz=60,slow=6.2,SNR=9.8
ZALV PcP **PcP 01 08 56.9 +0.2**
comp=Z,18nm,0.8s,baz=64,slow=3.4,SNR=34
ZALV LR LR 01 25 47.3
comp=Z,946nm,18.9s,baz=238,slow=38
INK Inuvik 42.70 32 P **P 01 07 07.7 +0.8**
INK Inuvik 42.70 32 P **P 01 07 07.7 +0.8**
comp=Z,30nm,0.7s,baz=277,slow=7.5,SNR=143
QIZ Qiongzhong 43.72 246 P **P 01 07 16.1 +0.3**
QIZ S **S 01 13 43.9 0.0**
QIZ pmax pmax
comp=Z,23nm,2.5s
QIZ LR LR
comp=Z,300nm,22.9s
KMI Kunming 44.19 259 P **P 01 07 20.3 +0.6**
KMI pP **pP 01 07 29.5 +0.4**
KMI sP **sP 01 07 33.1 +0.2**
KMI PP **PcP 01 09 04.9 +0.7**
KMI S **S 01 13 48.7 -2.4**
KMI sS **sS 01 14 05.3 -1.2**
KMI SS SS 01 16 59.7 -10
KMI pmax pmax
comp=Z,24nm,0.9s
KMI pmax pmax
comp=Z,140nm,3.1s
KMI LR LR
comp=N,230nm,15.1s
KMI LR LR
comp=E,230nm,14.7s
KMI LR LR
comp=Z,220nm,13.2s
WMQ Urumqi 44.27 291 P **P 01 07 20.0 0.0**
WMQ pP **pP 01 07 30.0 +0.6**
WMQ sP **sP 01 07 34.0 +0.8**
WMQ PP **PcP 01 09 04.0 0.0**
WMQ PcS **PcS 01 12 57.0 -0.2**
WMQ S **S 01 13 49.0 -2.6**
WMQ sS **sS 01 14 06.0 -1.0**
WMQ pmax pmax
comp=Z,19nm,0.8s
WMQ pmax pmax
comp=Z,90nm,5.0s
WMQ LR LR
comp=N,340nm,17.0s
WMQ LR LR
comp=E,280nm,16.0s
WMQ LR LR
comp=Z,300nm,18.0s
MK31 Makanchi Array 46.38 297 *i*P **P 01 07 35.1 -1.6**
MK31 pmax pmax
comp=Z,9.0nm,0.5s
MK31 Makanchi Array 46.38 297 eP **P 01 07 35.1 -1.6**
MK31 ePcP **PcP 01 09 11.1 -0.2**
MKAR Makanchi Array 46.38 297 P **P 01 07 35.2 -1.5**
MKAR 01 09 11.3
MKAR pmax pmax
comp=Z,10.0nm,0.8s
MKAR MLR MLR
comp=Z,605nm,19.6s
MKAR Makanchi Array 46.38 297 P **P 01 07 35.2 -1.5**
MKAR eP **P 01 07 35.5 -1.3**
MKAR PcP **PcP 01 09 11.3 +0.1**
MKAR ScP **ScP 01 13 00.4 -1.7**
MKAR Makanchi Array 46.38 297 P **P 01 07 35.2 -1.5**
comp=Z,10nm,0.8s,baz=68,slow=6.9,SNR=54
MKAR PcP **PcP 01 09 11.3 +0.1**
comp=Z,13nm,0.8s,baz=60,slow=3.3,SNR=14
MKAR ScP **ScP 01 13 00.4 -1.7**
comp=Z,2.3nm,0.8s,baz=64,slow=5.5,SNR=8.1
MKAR LR LR 01 28 07.1
comp=Z,605nm,19.6s,baz=58,slow=38
DLBC Dease Lake 46.72 45 P **P 01 07 40.9 +1.7**
DLBC Dease Lake 46.72 45 P **P 01 07 40.9 +1.7**
comp=Z,8.6nm,0.8s,baz=302,slow=7.8,SNR=13
KURK Kurchatov 46.92 304 *c i*P **P 01 07 38.5 -2.3**
KURK pmax pmax
comp=Z,12nm,0.8s
KURK Kurchatov 46.92 304 eP **P 01 07 38.9 -1.8**
comp=Z,11nm,0.7s
KURK P **P 01 07 39.4 -1.3**

KURK **Kurchatov** 46.92 304 P **P** 01 07 39.3 -1.5
SNR=7.5
KURK **Kurchatov** 46.92 304 P **P** 01 07 38.1 -2.7
comp=Z,105nm,0.6s,SNR=19
KURBB **Kurchatov Arra** 47.01 304 P **P** 01 07 39.4 -2.0
comp=Z,9.4nm,0.6s,baz=71,slow=8.4,SNR=56
LSA **Lhasa** 49.35 273 P **P** 01 08 01.8 +1.4
LSA pmax pmax
comp=Z,100nm,0.7s
VOSK **Vostochnaya** 50.34 309 P **P** 01 08 04.9 -2.2
VOSK pmax pmax
comp=Z,9.0nm,0.6s
ALE **Alert** 50.47 5 P **P** 01 08 07.0 -0.6
comp=Z,62nm,0.7s,SNR=6.4
BVAR **Borovoye Array** 50.52 309 P **P** 01 08 06.5 -2.0
BVAR 01 09 25.9
BVAR pmax pmax
comp=Z,6.0nm,0.6s
BVAR **Borovoye Array** 50.52 309 P **P** 01 08 06.5 -2.0
BVAR PcP **PcP** 01 09 25.9 -0.1
BVAR **Borovoye Array** 50.52 309 P **P** 01 08 06.5 -2.0
comp=Z,5.8nm,0.6s,baz=49,slow=7.5,SNR=25
BVAR PcP **PcP** 01 09 25.9 -0.1
comp=Z,9.1nm,0.7s,baz=65,slow=2.4,SNR=13
BRVK **Borovoye** 50.57 309 *c iP* **P** 01 08 06.6 -2.1
BRVK pmax pmax
comp=Z,14nm,0.8s
BRVK **Borovoye** 50.57 309 *eP* **P** 01 08 06.6 -2.1
comp=Z,12nm,0.8s
BRVK ePcP **PcP** 01 09 26.4 +0.2
BRVK **Borovoye** 50.57 309 P **P** 01 08 07.6 -1.1
SNR=5.6
BRVK **Borovoye** 50.57 309 P **P** 01 08 07.2 -1.5
comp=Z,104nm,0.7s,SNR=12
CHTO **Chiang Mai** 51.04 256 *eP* **P** 01 08 13.1 +0.4
CHTO pmax pmax
comp=Z,45nm,0.8s
CHTO **Chiang Mai** 51.04 256 *eP* **P** 01 08 13.1 +0.4
comp=Z,45nm,0.8s
CHTO **Chiang Mai** 51.04 256 P **P** 01 08 13.6 +0.9
SNR=18
CMAR **Chiang Mai Arr** 51.29 256 P **P** 01 08 13.8 -0.8
CMAR PcP **PcP** 01 09 30.3 +1.0
CMAR **Chiang Mai Arr** 51.29 256 P **P** 01 08 13.8 -0.8
comp=Z,20nm,0.7s,baz=35,slow=7.5,SNR=90
CMAR PcP **PcP** 01 09 30.3 +1.0
comp=Z,4.9nm,0.7s,baz=12,slow=3.4,SNR=6.5
CMAR LR LR 01 31 24.1
comp=Z,210nm,18.8s,baz=65,slow=38
ZRNK **Zerenda** 51.30 310 *i P* **P** 01 08 12.0 -2.3
ZRNK pmax pmax
comp=Z,10.0nm,0.7s
RES **Resolute Bay** 51.74 18 *eP* **P** 01 08 17.1 -0.2
comp=Z,7.7nm,0.8s
RES P **P** 01 08 17.3 +0.1
RES PcP **PcP** 01 09 30.2 +0.1
RES **Resolute Bay** 51.74 18 P **P** 01 08 17.3 +0.1
comp=Z,5.6nm,0.6s,baz=304,slow=11,SNR=25
RES PcP **PcP** 01 09 30.2 +0.1
comp=Z,3.6nm,0.7s,baz=315,slow=2.9,SNR=2.4
YKW3 **Yellowknife Ar** 51.97 36 *eP* **P** 01 08 18.8 -0.3
comp=Z,0.5nm,0.8s
YKW3 ePcP **PcP** 01 09 30.4 -0.8
YKA **Yellowknife Ar** 52.00 36 P **P** 01 08 19.8 +0.4
YKA PcP **PcP** 01 09 31.4 +0.1
YKA **Yellowknife Ar** 52.00 36 P **P** 01 08 19.7 +0.4
comp=Z,16nm,0.7s,baz=296,slow=7.0,SNR=233
YKA PcP **PcP** 01 09 31.4 +0.1
comp=Z,3.1nm,0.8s,baz=298,slow=3.9,SNR=8.0
ULHL **Ulahol** 52.37 295 *i P* **P** 01 08 22.4 -0.2
ULHL **Ulahol** 52.37 295 P **P** 01 08 22.4 -0.2
SNR=10.0
TKM2 **Tokmak 2** 52.42 296 *i P* P 01 08 19.0 -4.0
TKM2 **Tokmak 2** 52.42 296 P P 01 08 19.1 -4.0
SNR=9.8
USP **Ospenovka** 52.92 297 *i P* **P** 01 08 25.8 -0.7
USP **Ospenovka** 52.92 297 P **P** 01 08 25.8 -0.7
SNR=30
KBK **Karagaybulak** 52.96 296 *i P* **P** 01 08 26.7 -0.3
KBK **Karagaybulak** 52.96 296 P **P** 01 08 26.7 -0.3
SNR=12
SPITS **Spitsbergen Ar** 53.07 350 P **P** 01 08 26.1 -1.0
SPITS **Spitsbergen Ar** 53.07 350 P **P** 01 08 26.1 -1.0
comp=Z,1.5nm,0.4s,baz=28,slow=8.8,SNR=12
KZA **Kyzart** 53.08 295 *i P* **P** 01 08 28.5 +0.3
KZA **Kyzart** 53.08 295 P **P** 01 08 28.5 +0.3
SNR=14
TAPN **Taplejung** 53.18 273 *eP* **P** 01 08 29.5 +0.6
comp=Z,69nm,0.6s
AAK **Ala-Archa** 53.26 296 *eP* **P** 01 08 28.0 -1.2
AAK pmax pmax
comp=Z,68nm,0.8s
AAK **Ala-Archa** 53.26 296 *eP* **P** 01 08 28.0 -1.2
comp=Z,68nm,0.8s
AAK **Ala-Archa** 53.26 296 P **P** 01 08 28.4 -0.8
SNR=5.2
AAK **Ala-Archa** 53.26 296 P **P** 01 08 28.0 -1.2
comp=Z,113nm,0.9s,SNR=16
SVE **Sverdlovsk** 53.65 317 *eP* **P** 01 08 30.0 -1.6
SVE pmax pmax
comp=Z,16nm,0.6s
EKS2 **Erkin-Say** 53.69 296 *eP* **P** 01 08 31.9 -0.4
EKS2 pmax pmax
comp=Z,17nm,0.7s
EKS2 **Erkin-Say** 53.69 296 *eP* **P** 01 08 31.9 -0.4
comp=Z,17nm,0.7s
EKS2 **Erkin-Say** 53.69 296 P **P** 01 08 33.6 +1.3
SNR=13
ODAN **Odare** 53.71 272 *eP* **P** 01 08 33.6 +0.9
KSH **Kashi** 54.01 292 P P 01 08 38.3 +3.6
KSH pP pP 01 08 47.8 +3.6
KSH sP sP 01 08 52.1 +4.1
KSH PcP **PcP** 01 09 43.0 +3.5
KSH PP **PP** 01 10 41.1 +5.2
KSH ScP **ScP** 01 13 37.0 +2.0
KSH PcS **PcS** 01 13 41.1 +2.2
KSH S **S** 01 16 10.1 +1.6
KSH sS sS 01 16 27.0 +2.7
KSH ScS **ScS** 01 18 20.9 -0.7
KSH SS **SS** 01 19 51.0 +1.4
KSH pmax pmax
comp=Z,14nm,0.7s
KSH LR LR
comp=N,240nm,7.0s
KSH LR LR
comp=E,290nm,6.1s
KSH LR LR
comp=Z,460nm,6.8s
AML **Almayashu** 54.03 296 *i P* **P** 01 08 36.1 +1.0
AML **Almayashu** 54.03 296 P **P** 01 08 36.1 +1.0
SNR=11
GUN **Gumba** 54.10 275 *eP* **P** 01 08 35.9 +0.2
comp=Z,163nm,0.9s
RAMN **Ramite** 54.20 273 *eP* **P** 01 08 36.5 +0.2
comp=Z,215nm,0.7s
KKN **Kakani** 54.59 275 *eP* **P** 01 08 39.9 +0.7
comp=Z,142nm,0.7s
PKI **Pulchoki** 54.64 275 *eP* **P** 01 08 39.9 +0.3
PKIN **Phulchoki** 54.64 275 *eP* **P** 01 08 39.8 +0.2
DMN **Daman** 54.83 275 *eP* **P** 01 08 41.5 +0.6
comp=Z,202nm,0.9s
ARU **Arti** 54.83 317 *d iP* **P** 01 08 38.4 -1.8
ARU *PP **pP** 01 08 53.6 +3.8
ARU *e* 01 09 40.6
ARU 01 10 39.9
ARU S **S** 01 16 15.3 -3.5
ARU SS SKiKP 01 19 52.7 +7.9
ARU pmax pmax
comp=Z,11nm,0.6s
ARU MLR MLR
comp=Z,310nm,16.0s
ARU **Arti** 54.83 317 *eP* **P** 01 08 38.6 -1.7
comp=Z,14nm,0.6s
ARU ePcP **PcP** 01 09 42.0 -0.2
ARU **Arti** 54.83 317 P **P** 01 08 38.3 -1.9
comp=Z,152nm,0.6s,SNR=10
NLWA **Neilton Lookou** 55.02 56 *eP* **P** 01 08 43.5 +1.7
comp=Z,15nm,0.9s
DANN **Dangsing** 55.30 276 *eP* **P** 01 08 45.1 +0.8
comp=Z,285nm,0.7s
PMG **Port Moresby** 55.42 185 P **P** 01 08 45.8 +1.0
PMG ScS ScS 01 18 32.9 +1.3
PMG **Port Moresby** 55.42 185 P **P** 01 08 45.8 +1.0
comp=Z,12nm,0.7s,baz=67,slow=2.2,SNR=4.7
PMG ScS ScS 01 18 32.9 +1.3
comp=Z,4.8nm,0.5s,baz=2.9,slow=8.5,SNR=2.7

KK31 **Karatay Array** 55.47 299 *ceP* **P** 01 08 43.9 -1.1
KK31 pmax pmax
comp=Z,4.0nm,0.5s
KKAR **Karatay Array** 55.47 299 *eP* **P** 01 08 44.1 -1.0
KKAR **Karatay Array** 55.47 299 *eP* **P** 01 08 44.1 -1.0
KOLN **Koldanda** 55.77 276 *eP* **P** 01 08 48.2 +0.6
comp=Z,200nm,0.8s
PYUN **Piuthan** 55.98 277 *eP* **P** 01 08 49.8 +0.6
comp=Z,543nm,1.0s
DAG **Damarkhs Havn** 57.24 357 ⇑ *iP* **P** 01 08 56.3 -0.8
comp=Z,7.5nm,0.7s
KSM **Kuching** 57.33 232 *eP* **P** 01 08 59.9 +1.3
comp=Z,15nm,0.8s
APA **Apatity** 57.54 336 ⇓ *iP* **P** 01 08 59.8 +0.4
APA MLR MLR
comp=Z,400nm,13.0s
KEV **Kevo** 57.62 340 *ep* **P** 01 08 59.1 -0.8
comp=Z,6.0nm,0.7s
HAWA **Hanford** 58.05 55 *eP* **P** 01 09 04.1 +0.8
comp=Z,64nm,0.8s
AB31 **Akbulak array** 58.10 310 *i P* **P** 01 09 02.3 -1.3
AB31 pmax pmax
comp=Z,4.0nm,0.3s
ABKAR **Akbulak array** 58.10 310 *eP* **P** 01 09 02.3 -1.3
ARCES **ARCESS Array B** 58.14 340 P **P** 01 09 03.0 -0.5
ARCES PcP **PcP** 01 09 54.1 -0.7
ARCES **ARCESS Array B** 58.14 340 P **P** 01 09 03.0 -0.5
comp=Z,9.8nm,0.9s,baz=50,slow=6.2,SNR=15
ARCES PcP **PcP** 01 09 54.1 -0.7
comp=Z,6.8nm,0.6s,baz=42,slow=5.5,SNR=9.3
ARCES LR LR 01 40 14.6
comp=Z,180nm,18.4s,baz=181,slow=42
NEW **Newport** 58.32 52 *eP* **P** 01 09 06.1 +0.9
comp=Z,14nm,1.0s
NEW PcP **PcP** 01 09 56.6 +0.6
NEW **Newport** 58.32 52 ⇑P **P** 01 09 05.5 +0.4
baz=58,SNR=7.9
NEW **Newport** 58.32 52 P **P** 01 09 05.6 +0.4
comp=Z,7.6nm,0.8s,baz=306,slow=7.8,SNR=11
NEW PcP **PcP** 01 09 56.6 +0.6
comp=Z,3.7nm,0.8s,baz=297,slow=4.5,SNR=3.5
AKTO **Aktyubinsk** 58.44 312 P **P** 01 09 04.9 -1.0
AKTO 01 09 56.2
AKTO pmax pmax
comp=Z,3.0nm,0.6s
AKTO **Aktyubinsk** 58.44 312 P **P** 01 09 04.9 -1.0
AKTO PcP **PcP** 01 09 56.2 -0.1
AKTO **Aktyubinsk** 58.44 312 P **P** 01 09 04.9 -1.0
comp=Z,2.8nm,0.6s,baz=67,slow=8.4,SNR=12
AKTO PcP **PcP** 01 09 56.2 -0.1
comp=Z,11nm,0.7s,baz=70,slow=3.4,SNR=11
TMCR **Tamitsa** 58.45 332 *eP* **P** 01 09 06.7 +1.0
TMCR pmax pmax
comp=Z,18nm,0.5s
A12A **Yaak River Ran** 58.73 50 ⇓P **P** 01 09 08.8 +0.7
baz=58
YBH **Yreka Blue Hor** 58.89 61 P **P** 01 09 10.9 +1.6
YBH **Yreka Blue Hor** 58.89 61 P **P** 01 09 10.9 +1.6
comp=Z,3.9nm,0.6s,baz=0.0,slow=4.0,SNR=14
C11A **Tepee Creek (N** 59.04 52 ⇑P **P** 01 09 10.9 +0.7
baz=59
KTK1 **Kautokeino** 59.06 341 *eP* P 01 09 00.4 -10
A13A **Flathead Natio** 59.39 50 ⇑P **P** 01 09 13.5 +0.8
baz=59
TRO **Tromso** 59.51 343 *eP* **P** 01 09 13.1 +0.1
C12B **Naegeli Ranch,** 59.54 51 ⇓P **P** 01 09 14.6 +0.9
baz=59
WALA **Waterton Lakes** 59.58 50 *eP* **P** 01 09 14.7 +0.6
comp=Z,0.7nm,1.2s
NDI **New Delhi** 59.59 281 *eP* **P** 01 09 11.5 -2.7
B13A **Whitefish** 59.69 50 ⇑P **P** 01 09 15.9 +1.1
baz=60,SNR=17
BSMT **Bassoo Peak** 59.83 51 *eP* **P** 01 09 15.7 -0.2
KULM **Kulim** 59.94 244 *eP* **P** 01 09 17.6 +0.9
comp=Z,29nm,0.7s
BLMT **Blacktail Moun** 59.96 51 *eP* **P** 01 09 17.8 +1.0
D12A **Red Ives Fores** 60.00 52 ⇑P **P** 01 09 17.0 +0.1
baz=60
C13A **Hot Springs** 60.05 51 ⇓P **P** 01 09 18.1 +0.9
baz=60,SNR=7.1
KLMR **Klimovskoe** 60.15 328 *eP* **P** 01 09 15.0 -2.6
KLMR *eS* **S** 01 17 31.5 +3.0
JTMT **Jette** 60.17 51 *eP* **P** 01 09 18.8 +0.7
BMO **Blue Mountains** 60.22 55 *eP* **P** 01 09 19.6 +1.1
comp=Z,13nm,1.1s
MOD **Modoc** 60.23 59 *eP* **P** 01 09 19.9 +1.3
comp=Z,22nm,1.1s
YBMT **Yellow Bay** 60.24 51 *eP* **P** 01 09 20.1 +1.4
comp=Z,16nm,1.4s
A15A **Johnson Ranch,** 60.25 49 ⇓P **P** 01 09 18.7 +0.1
baz=60,SNR=13
B14A **Marquette Ranc** 60.34 50 ⇓P **P** 01 09 20.0 +0.7
baz=59,SNR=14
C14A **Swan Lake** 60.44 51 ⇓P **P** 01 09 20.7 +0.8
baz=60
SWMT **Swartz Lake** 60.46 51 *eP* **P** 01 09 21.0 +0.9
D13A **Huson** 60.46 52 ⇓P **P** 01 09 20.7 +0.6
baz=60,SNR=8.3
B15A **Bradely Ranch,** 60.74 50 ⇑P **P** 01 09 22.3 +0.3
baz=61,SNR=12
F12A **Elk City** 60.83 53 ⇓P **P** 01 09 23.6 +1.0
baz=61,SNR=21
A16A **West Butte Ran** 60.86 49 ⇓P **P** 01 09 22.7 -0.2
baz=61
SLMT **Seeley Lake** 60.90 51 *eP* **P** 01 09 24.0 +0.8
MSO **Missoula** 60.91 52 *eP* **P** 01 09 23.8 +0.6
comp=Z,18nm,0.9s
MSO **Missoula** 60.91 52 ⇑P **P** 01 09 23.9 +0.8
baz=61
D14A **Greenough** 60.99 51 ⇓P **P** 01 09 24.3 +0.6
baz=61,SNR=33
E13A **Victor** 61.01 52 ⇓P **P** 01 09 24.3 +0.5
baz=61,SNR=8.1
C15A **Salmond Ranch,** 61.05 50 ⇑P **P** 01 09 25.1 +1.0
baz=61,SNR=42
OHCM **Honcut** 61.07 62 *eP* **P** 01 09 24.9 +0.7
B16A **M & M Farms, S** 61.13 49 ⇑P **P** 01 09 24.8 +0.2
baz=61
G12A **Big Creek, Yel** 61.17 54 ⇑P **P** 01 09 25.4 +0.3
baz=61
CHMT **Chamberlain Mo** 61.23 51 *eP* **P** 01 09 25.8 +0.3
F13A **Darby** 61.33 53 ⇓P **P** 01 09 26.5 +0.5
baz=61,SNR=17
A17A **Triple J Farms** 61.33 48 ⇑P **P** 01 09 26.2 +0.2
baz=61,SNR=9.5
SUMG **Summit** 61.40 3 *eP* **P** 01 09 26.0 -0.4
SUMG pmax pmax
comp=Z,86nm,0.8s
SUMG **Summit** 61.40 3 *eP* **P** 01 09 26.0 -0.4
comp=Z,86nm,0.8s
SUMG **Summit** 61.40 3 ⇑ *iP* **P** 01 09 26.5 +0.1
comp=Z,75nm,0.9s
E14A **Clinton** 61.40 52 ⇓P **P** 01 09 27.3 +0.8
baz=61
KBL **Kabul** 61.41 291 *eP* **P** 01 09 26.4 -0.4
KBL pmax pmax
comp=Z,39nm,0.6s
KBL **Kabul** 61.41 291 *eP* **P** 01 09 26.4 -0.4
comp=Z,39nm,0.6s
JOF **Joensuu** 61.48 333 *ep* **P** 01 09 24.1 -2.5
comp=Z,13nm,0.6s
C16A **Fuhringer Ranc** 61.49 50 ⇓P **P** 01 09 27.8 +0.8
baz=61,SNR=28
D15A **Lincoln** 61.55 51 ⇑P **P** 01 09 28.1 +0.6
baz=61,SNR=8.2
B17A **L&G Farms, Che** 61.69 49 ⇓P **P** 01 09 28.8 +0.5
baz=62,SNR=15
A18A **Metzger Ranch,** 61.79 48 ⇓P **P** 01 09 29.1 +0.1
baz=62,SNR=7.0
H12A **Diamond D Ranc** 61.79 54 ⇑P **P** 01 09 29.6 +0.3
baz=62,SNR=18
G13A **Cobalt** 61.81 53 ⇓P **P** 01 09 29.7 +0.4
baz=62,SNR=47
FFC **Flin Flon** 61.84 39 *i P* **P** 01 09 29.7 +0.6
FFC **Flin Flon** 61.84 39 *eP* **P** 01 09 29.4 +0.3
comp=Z,16nm,0.8s
FFC **Flin Flon** 61.84 39 P **P** 01 09 29.8 +0.6
comp=Z,121nm,0.8s,SNR=9.4
F14A **Wisdom** 61.84 52 ⇓P **P** 01 09 30.0 +0.5
baz=62
E15A **Deer Lodge** 61.86 51 ⇓P **P** 01 09 30.2 +0.6
baz=62,SNR=18
MFID **Camas Ranch** 61.94 56 *eP* **P** 01 09 31.1 +0.9
comp=Z,10.0nm,0.9s
MFID **Camas Ranch** 61.94 56 ⇓P **P** 01 09 31.0 +0.9
baz=62,SNR=6.1
D16A **Dana Ranch, Ca** 62.07 50 ⇑P **P** 01 09 31.8 +0.7
baz=62,SNR=25
I12A **Atlanta** 62.10 55 ⇑P **P** 01 09 32.2 +0.9
baz=62
C17A **Wharram Farm,** 62.12 49 ⇓P **P** 01 09 31.5 +0.3
baz=62,SNR=32
HRY **Holter Researc** 62.12 51 *eP* **P** 01 09 32.4 +1.0
H13A **Challis** 62.12 54 ⇑P **P** 01 09 31.9 +0.5
baz=62,SNR=26
G14A **Jackson** 62.15 53 ⇑P **P** 01 09 31.7 0.0
baz=62,SNR=8.2
WCN **Washoe City** 62.15 61 *eP* **P** 01 09 33.0 +1.3
WCN pmax pmax
comp=Z,11nm,0.9s
WCN **Washoe City** 62.15 61 *eP* **P** 01 09 33.0 +1.3
comp=Z,11nm,0.9s
B18A **Beardsley Farm** 62.15 48 ⇓P **P** 01 09 32.1 +0.7
baz=62,SNR=16
F15A **Butte** 62.30 52 ⇑P **P** 01 09 33.4 +0.8
baz=62,SNR=30
E16A **East Helena** 62.31 51 ⇓P **P** 01 09 33.4 +0.8
baz=62,SNR=17
LRM **Limekiln Ridge** 62.34 52 *eP* **P** 01 09 33.8 +0.8
A19A **Klindworth Far** 62.35 47 ⇓P **P** 01 09 33.3 +0.6
baz=62,SNR=19
EGMT **Eagleton** 62.40 49 *eP* **P** 01 09 33.8 +0.6
comp=Z,41nm,1.1s
EGMT **Eagleton** 62.40 49 ⇓P **P** 01 09 33.6 +0.5
baz=62,SNR=19
D17A **Six Diamond Ra** 62.46 50 ⇑P **P** 01 09 34.2 +0.6
baz=62,SNR=17
CMB **Columbia Colle** 62.54 63 *eP* **P** 01 09 35.2 +1.0
CMB pmax pmax
comp=Z,14nm,0.8s
CMB **Columbia Colle** 62.54 63 *eP* **P** 01 09 35.2 +1.0
comp=Z,14nm,0.8s
B19A **Brinkman Farms** 62.55 48 ⇑P **P** 01 09 34.8 +0.8
baz=62,SNR=15
DLMT **Dillon** 62.55 52 *eP* **P** 01 09 35.3 +1.1
comp=Z,27nm,1.6s
H14A **Leadore** 62.59 53 ⇓P **P** 01 09 35.0 +0.4
baz=62,SNR=6.2
I13A **Wildhorse Cree** 62.60 54 ⇓P **P** 01 09 35.5 +0.8
baz=62,SNR=24
HLID **Hailey** 62.66 55 *eP* **P** 01 09 35.6 +0.6
comp=Z,13nm,1.1s
HLID **Hailey** 62.66 55 ⇑P **P** 01 09 35.9 +0.9
baz=62,SNR=17
G15A **Dillon** 62.73 52 ⇑P **P** 01 09 36.1 +0.5
baz=63,SNR=28
MCMT **McKenzie Canyo** 62.74 53 *eP* **P** 01 09 36.1 +0.4
comp=Z,4.9nm,0.9s
A20A **Cobblestone Ra** 62.80 47 ⇑P **P** 01 09 36.4 +0.7
baz=63,SNR=21
E17A **Martinsdale** 62.80 50 ⇓P **P** 01 09 37.1 +1.2
baz=63,SNR=27
F16A **Kennard Place,** 62.81 51 ⇓P **P** 01 09 36.9 +0.9
baz=63,SNR=13
J13A **Cove Ranch, Pi** 62.89 55 ⇓P **P** 01 09 37.7 +1.1
baz=63,SNR=13
BOZ **Bozeman (W)** 62.90 52 *eP* **P** 01 09 37.8 +1.2
BOZ pmax pmax
comp=Z,48nm,1.6s
BOZ **Bozeman (W)** 62.90 52 *eP* **P** 01 09 37.8 +1.2
comp=Z,48nm,1.6s
BOZ **Bozeman (W)** 62.90 52 ⇓P **P** 01 09 37.7 +1.1
baz=63
D18A **Linhart Farms,** 62.90 49 ⇑P **P** 01 09 37.4 +0.9
baz=63
C19A **Slack Wire Ran** 62.95 48 ⇓P **P** 01 09 37.8 +1.0
baz=63,SNR=29
I14A **Mackay** 62.97 54 ⇓P **P** 01 09 38.3 +1.2
baz=63,SNR=33
BMN **Battle Mountai** 62.97 59 *eP* **P** 01 09 38.5 +1.3
BMN pmax pmax
comp=Z,21nm,0.8s
BMN **Battle Mountai** 62.97 59 *eP* **P** 01 09 38.5 +1.3
comp=Z,21nm,0.8s
H15A **Lima** 62.99 53 ⇑P **P** 01 09 37.5 +0.3
baz=63
B20A **Solberg Farm,** 63.03 47 ⇓P **P** 01 09 37.9 +0.6
baz=63,SNR=15
G16A **Moss Hill, Enn** 63.07 52 ⇓P **P** 01 09 38.5 +0.8
baz=63,SNR=38
A21A **Bergtoll Ranch** 63.23 46 ⇓P **P** 01 09 39.5 +0.9
baz=63,SNR=26
E18A **Harlowton** 63.24 50 ⇓P **P** 01 09 39.8 +1.0
baz=63,SNR=9.3
F17A **Fitzpatrick Pl** 63.26 51 ⇓P **P** 01 09 39.8 +0.9
baz=63,SNR=12
J14A **Carey** 63.31 54 ⇓P **P** 01 09 41.0 +1.6
baz=63
MOR8 **Moi Rana** 63.34 342 *eP* **P** 01 09 37.1 -1.9
MOR8 AMB AMB 01 09 39.3
comp=Z,22nm,0.9s
D19A **Cripps Ranch,** 63.40 49 ⇑P **P** 01 09 40.6 +0.8
baz=63,SNR=7.4
C20A **Veseth Ranch,** 63.50 48 ⇑P **P** 01 09 41.4 +1.0
baz=63,SNR=32
QLMT **Earthquake Lak** 63.52 52 *eP* **P** 01 09 42.0 +1.1
NVAR **Mina Array Bea** 63.58 61 P **P** 01 09 42.0 +0.8
NVAR **Mina Array Bea** 63.58 61 P **P** 01 09 42.0 +0.8
comp=Z,13nm,0.7s,baz=287,slow=7.7,SNR=27
G17A **Pierce Place,** 63.59 51 ⇓P **P** 01 09 42.4 +1.2
baz=63,SNR=5.9
KAF **Kangasniemi** 63.61 335 *ep* **P** 01 09 38.4 -2.4
comp=Z,11nm,0.6s
SCO **Scoresbysund** 63.63 358 *i P* **P** 01 09 41.3 +0.5
comp=Z,17nm,1.1s
NV11 **Mina Array Sit** 63.66 61 *eP* **P** 01 09 42.5 +0.8
H16A **Russell Place,** 63.70 52 ⇓P **P** 01 09 43.0 +1.0
baz=64,SNR=24
A22A **Carney Farms,** 63.73 46 ⇓P **P** 01 09 42.5 +0.6
baz=64,SNR=31
MLAC **Mammoth Lakes** 63.75 62 ⇓P **P** 01 09 43.9 +1.4
baz=64
F18A **Big Timber** 63.77 50 ⇓P **P** 01 09 43.3 +1.0
baz=64,SNR=21
D20A **Manuel Ranch,** 63.84 49 ⇓P **P** 01 09 43.8 +1.1
baz=64,SNR=29
GCMT **Greycliff** 63.87 50 *eP* **P** 01 09 44.1 +1.1
comp=Z,16nm,1.1s
J15A **Blackfoot** 63.88 54 ⇑P **P** 01 09 44.6 +1.5
baz=64,SNR=17
YMR **Madison River** 63.88 52 *eP* **P** 01 09 43.5 +0.3
comp=Z,36nm,1.4s
YMR *ep*P pP 01 10 00.8 +7.9
C21A **Desert Coulee** 63.90 47 ⇓P **P** 01 09 43.9 +0.9
baz=64,SNR=9.3
E19A **Rath Farm, Rou** 63.90 49 ⇓P **P** 01 09 44.1 +1.0
baz=64,SNR=15
ELK **Elko** 63.95 58 *eP* **P** 01 09 44.7 +0.9
comp=Z,7.4nm,0.9s
K14A **Jones Ranch, D** 64.00 55 ⇓P **P** 01 09 45.2 +1.3
baz=64,SNR=7.8
I16A **Newdale** 64.10 53 ⇑P **P** 01 09 46.0 +1.4
baz=64
PTRM **Twissleman Ran** 64.14 65 *eP* P 01 09 50.6 +5.7
B22A **Reddig Ranch S** 64.15 46 ⇓P **P** 01 09 45.5 +0.9
baz=64
FIA1 **FINESS Array S** 64.20 334 *eP* **P** 01 09 43.4 -1.3
FINES **FINESS Array B** 64.20 334 P **P** 01 09 43.3 -1.4
FINES PcP **PcP** 01 10 19.1 -0.3
FINES **FINESS Array B** 64.20 334 P **P** 01 09 43.3 -1.4
comp=Z,20nm,0.6s,baz=33,slow=7.7,SNR=103
FINES PcP **PcP** 01 10 19.1 -0.3
comp=Z,7.1nm,0.7s,baz=46,slow=5.5,SNR=5.1
F19A **Roth Farm, Mol** 64.21 50 ⇑P **P** 01 09 46.1 +0.9
baz=64,SNR=19
E20A **Meyer Farm, Mu** 64.22 49 ⇑P **P** 01 09 46.2 +1.0
baz=64
G18A **Lazy EL Ranch,** 64.23 51 ⇓P **P** 01 09 46.0 +0.6
baz=64
LKWY **Lake** 64.26 52 *eP* **P** 01 09 48.4 +2.7
LKWY pmax pmax
comp=Z,12nm,0.8s
LKWY **Lake** 64.26 52 *eP* **P** 01 09 48.4 +2.7
comp=Z,12nm,0.8s
H17A **Grant Village** 64.27 52 ⇓P **P** 01 09 47.9 +2.1
baz=64,SNR=15
K15A **Arbon** 64.28 55 ⇑P **P** 01 09 47.3 +1.5
baz=64,SNR=11
L14A **Malta** 64.29 55 ⇑P **P** 01 09 47.1 +1.3
baz=64
IMW **Indian Meadow** 64.39 53 *eP* **P** 01 09 47.9 +1.3
comp=Z,16nm,0.9s
J16A **Bone** 64.42 54 ⇑P **P** 01 09 48.2 +1.5
baz=64,SNR=29
D21A **La Casta Ranch** 64.45 48 ⇓P **P** 01 09 47.4 +0.7

baz=64,SNR=5.9
DCID1 Drake Creek 64.45 53 *e*P P 01 09 42.8 -4.1
comp=Z,40nm,1.1s
RLMT Red Lodge 64.51 51 *e*P **P 01 09 48.4 +1.1**
comp=Z,25nm,1.2s
RLMT Red Lodge 64.51 51 ⇑P **P 01 09 48.3 +1.1**
baz=64
RRI2 Red Ridge 64.53 53 *e*P **P 01 09 49.0 +1.5**
comp=Z,41nm,0.8s
B23A Brockton 64.54 46 ⇓P **P 01 09 47.8 +0.6**
baz=64,SNR=5.5
I17A Pilgrim Ck. 64.58 52 ⇑P **P 01 09 49.6 +1.8**
baz=64
H18A Shoshone NF, C 64.59 51 ⇓P **P 01 09 48.8 +0.9**
baz=64,SNR=14
MOOW Moose Ponds 64.59 53 *e*P **P 01 09 49.2 +1.3**
comp=Z,14nm,1.0s
TPAW Teton Pass 64.65 53 *e*P **P 01 09 49.9 +1.6**
comp=Z,34nm,0.9s
K16A Soda Springs 64.72 54 ⇑P **P 01 09 50.1 +1.5**
baz=64,SNR=22
HVU Hansel Valley 64.72 55 *e*P **P**
HVU pmax pmax **01 09 49.6 +0.9**
comp=Z,11nm,0.9s
HVU Hansel Valley 64.72 55 *e*P **P 01 09 49.5 +0.9**
comp=Z,11nm,0.9s
A24A Westby 64.73 45 ⇑P **P 01 09 48.8 +0.4**
baz=64
VES Vestal, Richgr 64.73 64 ⇑P **P 01 09 48.9 +0.3**
baz=65
E21A Keefer Ranch, 64.75 48 ⇑P **P 01 09 49.5 +0.9**
baz=64
LOHW Long Hollow 64.76 53 *e*P **P 01 09 49.5 +0.5**
comp=Z,20nm,1.2s
SNOW Snow King Moun 64.77 53 *e*P **P 01 09 51.1 +2.0**
comp=Z,24nm,1.0s
REDW Red Top Meadow 64.78 53 *e*P **P 01 09 51.1 +1.9**
comp=Z,0.4nm,1.0s
D22A Cohagen 64.81 48 ⇑P **P 01 09 49.8 +0.8**
baz=65,SNR=9.6
J17A Brown Place, J 64.86 53 ⇑P **P 01 09 51.0 +1.4**
baz=65,SNR=23
PKM Peak Mountain 64.87 65 ⇑P **P 01 09 50.7 +0.9**
baz=65
C23A Lambert 64.89 46 ⇓P **P 01 09 50.1 +0.6**
baz=65,SNR=6.5
DGMT Dagmar 64.94 45 *e*P **P 01 09 49.9 +0.1**
comp=Z,32nm,0.6s
DGMT Dagmar 64.94 45 ⇓P **P 01 09 50.2 +0.5**
baz=65
H19A Powell 64.96 51 ⇑P **P 01 09 51.1 +1.0**
baz=65,SNR=6.2
G20A Bridger 65.01 50 ⇓P **P 01 09 50.7 +0.2**
baz=65,SNR=15
AHID Auburn Hatcher 65.03 54 *e*P **P 01 09 52.0 +1.2**
comp=Z,16nm,1.1s
GRAC Grapevine Rang 65.05 62 ⇓P **P 01 09 52.1 +1.4**
baz=65
I18A Diamond G Ranc 65.14 52 ⇑P **P 01 09 52.7 +1.2**
baz=65,SNR=12
K17A Gardner Place, 65.14 54 ⇑P **P 01 09 52.1 +0.7**
baz=65
ISA Isabella 65.23 64 ⇑P **P 01 09 52.2 +0.2**
baz=65
R11A Troy Canyon, C 65.27 60 ⇑P **P 01 09 53.1 +0.8**
baz=65,SNR=26
OBN Obninsk 65.29 325 ⇑ *i*P **P**
OBN *e* 01 10 22.9
OBN *e*SS SS 01 22 37.5 -7.7
OBN pmax pmax **01 09 51.1 -0.8**
comp=Z,14nm,0.6s
OBN MLR MLR
comp=Z,200nm,19.0s
D23A Lindsay 65.29 47 ⇑P **P 01 09 53.0 +0.8**
baz=65,SNR=5.8
L16A Fish Haven 65.33 55 ⇓P **P 01 09 53.6 +1.0**
baz=65,SNR=16
J18A Kendall Valley 65.34 53 ⇑P **P 01 09 53.7 +0.9**
baz=65,SNR=9.6
I19A Meeteetse 65.37 52 ⇑P **P 01 09 53.8 +0.9**
baz=65,SNR=13
E22A Miles City 65.40 48 ⇓P **P 01 09 53.5 +0.6**
baz=65,SNR=9.0
C24A Savage 65.45 46 ⇑P **P 01 09 53.9 +0.7**
baz=65
HWUT Hardware Ranch 65.52 55 *e*P **P 01 09 54.9 +1.0**
comp=Z,39nm,1.4s
G21A Lodge Grass 65.55 50 ⇓P **P 01 09 54.1 +0.3**
baz=65
MPMC Manual Prospec 65.58 63 ⇓P **P 01 09 55.3 +0.9**
baz=66
L17A Cokeville 65.59 54 ⇓P **P 01 09 55.1 +0.8**
baz=65,SNR=13
H20A Greybull 65.61 51 ⇓P **P 01 09 54.6 +0.3**
baz=65
M16A Huntsville 65.67 55 ⇑P **P 01 09 55.6 +0.7**
baz=66
F22A Rosebud 65.68 49 ⇑P **P 01 09 55.3 +0.6**
baz=66,SNR=13
E23A Ismay 65.69 48 ⇓P **P 01 09 55.6 +0.8**
baz=66,SNR=10.0
FURC Furnace Creek, 65.71 62 ⇓P **P 01 09 56.0 +1.1**
baz=66,SNR=5.6
K18A Toltan Ranch, 65.71 53 ⇓P **P 01 09 56.2 +1.1**
baz=66,SNR=18
DUG Dugway 65.72 57 *e*P **P**
DUG pmax pmax **01 09 56.2 +1.0**
comp=Z,23nm,0.9s
DUG Dugway 65.72 57 *e*P **P 01 09 56.2 +1.0**
comp=Z,23nm,0.9s
DUG Dugway 65.72 57 ⇓P **P 01 09 56.2 +1.0**
baz=66
OSI Osito Adit 65.75 65 *e*P **P 01 09 56.7 +1.4**
comp=Z,14nm,0.3s
OSI *e*pP pP 01 10 11.6 +6.5
OSI Osito Adit 65.75 65 ⇓P **P 01 09 56.3 +1.0**
baz=66
D24A Glendive 65.78 47 ⇓P **P 01 09 56.1 +0.8**
baz=66,SNR=10
J19A Crowheart 65.84 52 ⇓P **P 01 09 56.8 +0.9**
baz=66,SNR=15
BW06 Boulder Array 65.89 53 *e*P **P 01 09 56.9 +0.5**
comp=Z,21nm,0.9s
BW06 Boulder Array 65.89 53 ⇑P **P 01 09 56.9 +0.5**
baz=66
PDAR Pinedale Array 65.89 53 P **P 01 09 56.8 +0.5**
PDAR Pinedale Array 65.89 53 P **P 01 09 56.8 +0.5**
comp=Z,15nm,0.8s,baz=293,slow=1.8,SNR=118
I20A Worland 65.90 51 ⇓P **P 01 09 57.2 +1.0**
baz=66,SNR=12
SFJD Kangerlussuaq 65.94 9 P **P 01 09 55.1 -0.7**
SFJD Kangerlussuaq 65.94 9 *i* P **P 01 09 55.7 -0.2**
comp=Z,8.4nm,1.0s
SFJD Kangerlussuaq 65.94 9 P **P**
comp=Z,10nm,0.9s,baz=339,slow=9.4,SNR=4.2
SFJD LR LR 01 41 47.7
comp=Z,142nm,18.5s,baz=342,slow=39
VRHR Novokhopersk 66.00 320 *e*P **P 01 09 54.6 -1.9**
VRHR *e**PP **pP 01 10 09.7 +3.4**
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,20nm,0.7s
VRHR pmax pmax
comp=N,6.0nm,0.5s
VRHR MLR MLR
comp=Z,260nm,15.0s
VRHR MLR MLR
comp=N,190nm,24.0s
VRHR MLR MLR
comp=E,200nm,22.0s
H21A Big Horn, Sher 66.03 50 ⇑P **P 01 09 57.6 +0.5**
baz=66,SNR=21
EDW2 Edwards Air Fo 66.03 64 ⇓P **P 01 09 58.0 +0.8**
baz=66
G22A Birney 66.03 49 ⇑P **P 01 09 57.3 +0.3**
baz=66,SNR=8.3
HYB Hyderabad 66.05 271 *i* P **P 01 09 56.0 -1.4**
CTA Charters Tower 66.07 186 LR LR 01 35 44.5
comp=E,98nm,20.6s,baz=50,slow=33
ABKT Ailbek 66.10 300 P **P 01 09 57.9 +0.4**
comp=E,299nm,0.6s,SNR=15
M17A Scullys Gap (B 66.12 55 ⇓P **P 01 09 58.2 +0.5**
baz=66,SNR=5.7
E24A Baker 66.16 47 ⇓P **P 01 09 58.2 +0.5**
baz=66
L18A Fontenelle, Gr 66.18 54 ⇑P **P 01 09 58.7 +0.5**
baz=66,SNR=11

DECC Green Verdugo 66.23 65 ⇓P **P 01 09 59.1 +0.7**
baz=66
JLU Jordanelle 66.24 56 *e*P **P 01 09 59.9 +1.3**
comp=E,18nm,1.2s
K19A Absolon Red Bu 66.25 52 ⇓P **P 01 09 58.5 -0.1**
baz=66,SNR=8.7
J20A Shoshoni 66.31 52 ⇓P **P 01 09 59.6 +0.7**
baz=66,SNR=16
N17A Moffit Pass 66.37 55 ⇑P **P 01 10 00.1 +0.6**
baz=66,SNR=14
H22A Clearmont 66.42 50 ⇑P **P 01 09 59.8 +0.3**
baz=66
I21A Big Trails, Te 66.44 51 ⇓P **P 01 10 00.3 +0.6**
baz=66,SNR=28
P15A Leamington 66.44 57 ⇑P **P 01 10 00.7 +0.9**
baz=66
L19A Farson 66.44 53 ⇓P **P 01 10 01.0 +1.1**
baz=66,SNR=5.4
DAU Daniels Canyon 66.48 56 *e*P **P 01 10 01.7 +1.5**
DAU Daniels Canyon 66.48 56 *e*P **P 01 10 01.7 +1.5**
M18A Lyman 66.49 54 ⇑P **P 01 10 00.6 +0.5**
baz=66,SNR=6.7
GSC Goldstone 66.50 63 *e*P **P 01 10 00.8 +0.7**
GSC pmax pmax
comp=Z,12nm,1.0s
GSC Goldstone 66.50 63 *e*P **P 01 10 00.8 +0.7**
comp=Z,12nm,1.0s
GSC Goldstone 66.50 63 ⇑P **P 01 10 00.6 +0.5**
baz=66
G23A Biddle 66.52 49 ⇓P **P 01 10 00.4 +0.3**
baz=66
MPU Maple Canyon 66.52 56 *e*P **P 01 10 01.7 +1.4**
comp=E,18nm,0.8s
F24A Ekalaka 66.57 48 ⇑P **P 01 10 00.6 +0.1**
baz=66
K20A Yellowstone Ra 66.64 52 ⇓P **P 01 10 00.9 -0.1**
baz=66
BFSC Mount Baldy Ra 66.66 64 ⇓P **P 01 10 01.8 +0.6**
baz=66
J21A Lysite 66.67 51 ⇑P **P 01 10 01.5 +0.3**
baz=66,SNR=11
I22A 9 Mile Ranch, 66.82 50 ⇓P **P 01 10 02.7 +0.6**
baz=67,SNR=12
SCI San Clemente I 66.92 66 ⇑P **P 01 10 03.6 +0.8**
baz=67
O17A Robinson Place 66.92 56 ⇓P **P 01 10 03.8 +0.9**
baz=67
G24A Alzada 66.94 48 ⇓P **P 01 10 02.8 0.0**
baz=67
M19A Rock Springs 66.95 54 ⇑P **P 01 10 03.3 +0.2**
baz=67
TUQ Turquoise Moun 66.96 62 ⇓P **P 01 10 03.8 +0.7**
baz=67
VSR Storozhevoye 67.01 321 *e*P **P 01 10 02.2 -0.8**
VSR *e**PP **pP 01 10 15.6 +2.8**
N18A Larsen Ranch, 67.01 54 ⇓P **P 01 10 03.7 +0.2**
baz=67
L20A Wamsutter 67.07 53 ⇑P **P 01 10 04.4 +0.6**
baz=67,SNR=6.5
HEC Hector,Ludlow 67.10 63 ⇓P **P 01 10 04.8 +0.8**
baz=67
BBRC Big Bear Solar 67.11 64 ⇓P **P 01 10 05.3 +1.1**
baz=67
CCUT Cedar City 67.13 59 *e*P **P 01 10 05.3 +1.1**
comp=Z,12nm,1.0s
VORD Divnogorie 67.13 321 *e*P **P 01 10 03.1 -0.7**
VORD *e**PP **pP 01 10 16.4 +2.9**
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.7s
VORD MLR MLR
comp=Z,390nm,17.0s
VORD MLR MLR
comp=N,360nm,21.0s
VORD MLR MLR
comp=E,190nm,13.0s
J22A Midwest 67.15 51 ⇓P **P 01 10 04.5 +0.3**
baz=67,SNR=23
MVU Marysvale 67.18 58 *e*P **P 01 10 05.9 +1.3**
MSU Marysvale 67.19 58 *e*P **P 01 10 06.0 +1.3**
MSU Marysvale 67.19 58 *e*P **P 01 10 06.0 +1.3**
TMUT Trail Mountain 67.24 57 *e*P **P 01 10 06.2 +1.1**
comp=E,15nm,0.9s
K21A Alova 67.25 52 ⇑P **P 01 10 05.1 +0.1**
baz=67
H24A Dirks Ranch, A 67.26 49 ⇑P **P 01 10 04.9 0.0**
baz=67
O18A Roosevelt 67.29 55 ⇑P **P 01 10 06.2 +0.9**
baz=67,SNR=12
N19A John Jarvie Ra 67.35 54 ⇓P **P 01 10 05.8 +0.2**
baz=67
MURC Murrieta 67.36 65 ⇓P **P 01 10 06.0 +0.4**
baz=67
P17A Butcher Ranch, 67.40 56 ⇑P **P 01 10 06.5 +0.6**
baz=67,SNR=11
M20A Sweetwater, Wa 67.50 53 ⇑P **P 01 10 07.3 +0.7**
baz=67,SNR=7.9
Q16A Castle Valley 67.52 57 ⇓P **P 01 10 07.6 +0.9**
baz=67,SNR=8.7
GMRC Granite Mounta 67.55 63 ⇓P **P 01 10 07.5 +0.7**
baz=67
P18A Preston Nutter 67.58 56 ⇓P **P 01 10 07.9 +0.7**
baz=67
WRAB Tennant Creek 67.60 198 *e*P **P**
WRAB pmax pmax **01 10 06.0 -1.0**
comp=Z,13nm,0.8s
WRAB Tennant Creek 67.60 198 *e*P **P 01 10 06.0 -1.0**
comp=Z,13nm,0.8s
WRAB Tennant Creek 67.60 198 P **P 01 10 06.9 -0.1**
comp=Z,102nm,1.0s,SNR=5.5
MDND Maddock 67.60 44 ⇑P **P 01 10 07.3 +0.4**
baz=67
WRA Warramunga Arr 67.61 198 P **P 01 10 06.6 -0.5**
WRA Warramunga Arr 67.61 198 P **P 01 10 06.6 -0.5**
comp=Z,12nm,0.9s,baz=15,slow=6.6,SNR=29
ULM Lac du Bonnet 67.62 40 *e*P **P 01 10 06.3 -0.6**
comp=Z,7.4nm,0.6s
ULM Lac du Bonnet 67.62 40 P **P**
comp=Z,9.1nm,0.6s,baz=319,slow=7.0,SNR=19
ULM LR LR 01 39 31.9
comp=Z,70nm,18.4s,baz=311,slow=36
K22A Casper 67.64 51 ⇓P **P 01 10 07.4 +0.1**
baz=67,SNR=9.7
L21A Rawlins 67.64 52 ⇑P **P 01 10 07.6 +0.2**
baz=68,SNR=10.0
J23A Dilts Ranch, B 67.65 50 ⇑P **P 01 10 07.5 +0.1**
baz=68
LDFC Landfair 67.69 62 *e*pP pP 01 10 24.6 +7.0
SRU San Rafael 67.76 56 *e*P **P 01 10 09.0 +0.7**
SRU San Rafael 67.76 56 *e*P **P 01 10 09.0 +0.7**
comp=Z,944nm,0.9s
SRU San Rafael 67.76 56 ⇓P **P 01 10 08.9 +0.7**
baz=68
O19A Miners Draw (B 67.77 55 ⇓P **P 01 10 08.6 +0.4**
baz=68
I24A Kuemmerle Ranc 67.83 49 ⇓P **P 01 10 08.8 +0.3**
baz=68
BELC Belle Mtn. Jos 67.85 64 ⇓P **P 01 10 09.0 +0.2**
baz=68
M21A Separation Pea 67.88 53 ⇑P **P 01 10 09.3 +0.3**
baz=68
109C Camp Elliot, M 67.89 65 ⇑P **P 01 10 09.6 +0.7**
baz=68
N20A Spence Gulch, 67.90 54 ⇓P **P 01 10 09.9 +0.8**
baz=68
RSSD Black Hills 67.96 49 *e*P **P**
RSSD pmax pmax **01 10 08.6 -0.8**
comp=Z,28nm,1.1s
RSSD Black Hills 67.96 49 *e*P **P 01 10 08.6 -0.8**
comp=Z,28nm,1.1s
K23A Bowen Ranch, D 68.05 51 ⇑P **P 01 10 10.0 +0.1**
baz=68
L22A Ellis Ranch, M 68.10 52 ⇑P **P 01 10 11.2 +0.8**
baz=68
FITZ Fitzroy Crossi 68.14 207 *e*P **P 01 10 10.6 +0.2**
comp=Z,19nm,0.8s
FITZ *e*pP PcP 01 10 28.3 -7.9
J24A Dixon Ranch, L 68.17 50 ⇑P **P 01 10 10.8 +0.1**
baz=68
IRM Iron Mountain 68.28 63 ⇓P **P 01 10 12.1 +0.8**
baz=68
P19A Cripple Cowboy 68.30 55 ⇓P **P 01 10 12.1 +0.4**
baz=68
BAR Barrett 68.30 65 *e*P **P 01 10 12.0 +0.5**
comp=Z,6.5nm,0.7s

O20A White River Ci 68.38 54 ⇓P **P 01 10 12.4 +0.2**
baz=68
BC3 Big Chuckawall 68.42 64 ⇓P **P 01 10 13.0 +0.6**
baz=68
W13A Hualapai Mount 68.43 62 ⇓P **P 01 10 12.9 +0.4**
baz=68
M22A Cedar Creek Ra 68.44 52 ⇓P **P 01 10 12.8 +0.3**
baz=68
L23A Garrett 68.45 51 ⇓P **P 01 10 12.3 -0.2**
baz=68
U15A North Rim 68.51 60 ⇑P **P 01 10 14.1 +1.0**
baz=68
NB2 NORSAR Subarra 68.52 341 P **P 01 10 11.3 -1.1**
comp=Z,20nm,0.8s,baz=27,slow=6.5
NOA NORSAR Array B 68.52 341 P **P 01 10 11.4 -1.0**
NOA NORSAR Array B 68.52 341 P **P 01 10 11.4 -1.0**
comp=Z,14nm,0.7s,baz=28,slow=6.3,SNR=59
NOA LR LR 01 44 09.5
comp=Z,160nm,19.3s,baz=25,slow=39
POO Poona 68.56 275 *e*P **P 01 10 11.0 -2.3**
Q19A Hogan Spring (68.60 56 ⇓P **P 01 10 13.7 +0.3**
baz=68
IZAR Zarasai 68.64 330 *e*P **P 01 10 12.8 -0.4**
IZAR AMB AMB 01 10 14.1
comp=Z,8.4nm,0.7s
DVTC Desert V Tower 68.68 65 ⇓P **P 01 10 14.6 +0.7**
baz=69
NC602 NORSAR Array S 68.71 340 *e*P **P 01 10 11.9 -1.7**
P20A De Beque 68.73 55 ⇓P **P 01 10 14.5 +0.2**
baz=69
MAK Makhachkala 68.76 310 *e*P **P 01 10 13.4 -0.7**
MAK *e*S **S 01 19 10.5 -4.7**
MAK *e* 01 20 06.4
MAK pmax pmax
comp=Z,162nm,1.1s
MAK MLR MLR
comp=Z,532nm,20.0s
O21A Pagoda 68.76 54 ⇓P **P 01 10 14.9 +0.3**
baz=69
NAO01 NORSAR Array S 68.77 341 *e*P **P 01 10 13.1 -0.8**
comp=Z,5.2nm,0.6s
NAO01 *e*pP pP 01 10 30.7 +7.0
PDMCI Parker Dam,Lak 68.81 62 ⇓P **P 01 10 15.3 +0.8**
baz=69
ISAL Salakas 68.83 330 *e*P **P 01 10 13.8 -0.5**
ISAL AMB AMB 01 10 16.5
comp=Z,12nm,1.0s
M23A Laramie 68.88 52 ⇓P **P 01 10 15.3 0.0**
baz=69
N22A Wattenberg Ran 68.93 53 ⇓P **P 01 10 16.4 +0.8**
baz=69
Y12C Blythe 68.94 63 ⇑P **P 01 10 16.2 +0.8**
baz=69
IIGN Ignalina 68.97 330 *e*P **P 01 10 14.7 -0.5**
IIGN AMB AMB 01 10 16.4
comp=Z,16nm,0.8s
S18A Hurst Farm, Bl 69.03 57 ⇓P **P 01 10 16.6 +0.4**
baz=69
AGMN Agassiz Nation 69.04 41 *e*P **P 01 10 15.3 -0.5**
comp=Z,17nm,1.0s
NACGM Naroch 69.13 330 *e* **P 01 10 14.0 -2.2**
PHWY Pilot Hill 69.14 52 *e*P **P 01 10 17.3 +0.4**
comp=Z,12nm,1.4s
N23A Red Feather La 69.15 52 ⇓P **P 01 10 17.8 +0.8**
baz=69
Q20A Ridgley Place, 69.15 55 ⇑P **P 01 10 17.1 +0.2**
baz=69
DZM Mont Dzumac 69.16 165 *e*LR LR 01 31 10.7
comp=Z,197nm,23.2s
PV04 Paradox Valley 69.18 56 *e*P **P 01 10 18.1 +1.0**
GLA Glamis 69.21 64 *e*P **P 01 10 18.0 +0.8**
GLA pmax pmax
comp=Z,15nm,0.9s
GLA Glamis 69.21 64 *e*P **P 01 10 18.0 +0.8**
comp=Z,15nm,0.9s
GLA Glamis 69.21 64 ⇑P **P 01 10 17.9 +0.7**
baz=69
P21A Newcastle 69.25 54 ⇑P **P 01 10 18.2 +0.7**
baz=69
O22A Kremmling 69.32 53 ⇑P **P 01 10 18.5 +0.5**
baz=69
L25A Engebretsen Ra 69.36 50 ⇑P **P 01 10 18.1 +0.1**
baz=69
M24A Cheyenne 69.37 51 ⇓P **P 01 10 19.2 +1.0**
baz=69
K26A Motz Farm, Whi 69.39 49 ⇑P **P 01 10 18.1 -0.1**
baz=69
PV01 Paradox Valley 69.55 56 *e*P **P 01 10 19.9 +0.4**
comp=Z,725nm,0.8s
P22A Eagle 69.59 54 ⇓P **P 01 10 20.3 +0.6**
baz=69
R20A Redvale 69.62 56 ⇓P **P 01 10 20.4 +0.5**
baz=70
O23A Lake Granby, G 69.63 53 ⇑P **P 01 10 20.8 +0.8**
baz=69
Q21A Lamborn Mesa, 69.64 55 ⇓P **P 01 10 20.6 +0.6**
baz=70
WUAZ Wupatki 69.67 60 *e*P **P 01 10 20.8 +0.6**
comp=Z,11nm,1.0s
WUAZ Wupatki 69.67 60 ⇑P **P 01 10 21.1 +0.9**
baz=70
SMCO Snowmass 69.75 54 *e*P **P 01 10 21.4 +0.5**
comp=Z,16nm,0.8s
N24A Carr 69.78 52 ⇑P **P 01 10 21.4 +0.7**
baz=70
M25A Palm-Egli Farm 69.81 51 ⇓P **P 01 10 21.3 +0.4**
baz=70
S20A Disappointment 69.88 56 ⇑P **P 01 10 21.9 +0.4**
baz=70
R21A Cimarron 69.98 55 ⇑P **P 01 10 22.9 +0.8**
baz=70
Q22A Crested Butte, 70.00 55 ⇑P **P 01 10 23.0 +0.7**
baz=70
113A Mohawk Valley, 70.06 63 ⇑P **P 01 10 22.9 +0.6**
baz=70
ISCO Idaho Springs 70.08 53 *e*P **P 01 10 23.6 +0.8**
ISCO pmax pmax
comp=Z,13nm,0.8s
ISCO Idaho Springs 70.08 53 *e*P **P 01 10 23.6 +0.8**
comp=Z,13nm,0.8s
ISCO Idaho Springs 70.08 53 ⇓P **P 01 10 23.6 +0.8**
baz=70
KONO Kongsberg 70.12 341 *e*P **P 01 10 22.3 0.0**
O24A Longmont 70.16 53 ⇑P **P 01 10 23.9 +0.8**
baz=70
Z14A Wintersburg 70.17 62 ⇓P **P 01 10 23.6 +0.6**
baz=70
MVCO Mesa Verde 70.22 57 *e*P **P 01 10 24.2 +0.6**
comp=Z,14nm,0.8s
MVCO Mesa Verde 70.22 57 ⇓P **P 01 10 24.3 +0.7**
baz=70
P23A Jefferson 70.25 54 ⇑P **P 01 10 25.0 +1.1**
baz=70
M26A McRoberts Ranc 70.28 50 ⇓P **P 01 10 24.2 +0.4**
baz=70
ASK Askoy 70.32 343 *e*P **P 01 10 22.4 -1.0**
S21A Coal Bank Pass 70.32 56 ⇑P **P 01 10 25.3 +1.0**
baz=70
RUND Rundenannen 70.35 343 *e*P **P 01 10 23.0 -0.7**
RUND AMB AMB 01 10 23.9
comp=Z,57nm,0.6s
X16A Lo Mia Camp, P 70.38 61 ⇑P **P 01 10 25.7 +1.1**
baz=70
BER Bergen 70.38 343 *e*P **P 01 10 22.3 -1.5**
R22A Saguache, Gunn 70.53 55 ⇑P **P 01 10 26.7 +1.2**
baz=70
ODD1 Odda 70.55 342 *e*P **P 01 10 25.2 +0.3**
KIV Kislovodsk 70.55 314 *e*P **P 01 10 26.0 +0.7**
KIV *e**PP **PcP 01 10 44.9 -1.5**
KIV *e*S **S 01 19 35.9 -0.7**
KIV pmax pmax
comp=Z,39nm,0.9s
KIV MLR MLR
comp=Z,281nm,19.0s
KIV Kislovodsk 70.55 314 *e*P **P 01 10 26.1 +0.7**
comp=Z,34nm,0.7s
KIV Kislovodsk 70.55 314 P **P 01 10 26.9 +1.6**
SNR=7.5
KIV Kislovodsk 70.55 314 P **P 01 10 26.6 +1.3**
comp=Z,291nm,0.7s,SNR=15
Q23A Hartsel 70.58 54 ⇓P **P 01 10 26.8 +0.9**
baz=70
KBZ Khabaz 70.61 313 P **P 01 10 25.3 -0.2**
KBZ pmax pmax
comp=Z,27nm,0.6s
KBZ MLR MLR
comp=Z,498nm,19.0s

KBZ **Khabaz** 70.61 313 P P 01 10 25.3 -0.2
KBZ **Khabaz** 70.61 313 P P 01 10 25.3 -0.2
comp=Z,27nm,0.6s,baz=77,slow=3.8,SNR=124
KBZ LR LR 01 45 55.2
comp=Z,498nm,19.0s,baz=46,slow=40
P24A **Kohler Place,** 70.67 53 ⇓P P 01 10 27.2 +0.9
baz=70
N26A **Koester Ranch,** 70.68 51 ⇑P P 01 10 27.0 +0.8
baz=70
U20A **Newcomb** 70.78 57 ⇓P P 01 10 27.5 +0.5
baz=71
S22A **4UR Ranch, Cre** 70.82 55 ⇑P P 01 10 28.3 +1.0
baz=71
Q24A **Divide** 70.92 53 ⇑P P 01 10 28.3 +0.3
baz=71
T21A **Navajo Lake** 70.93 56 ⇑P P 01 10 28.3 +0.4
baz=71
DGRG **David-gareji** 70.95 310 P P 01 10 29.0 +1.3
BLS5 **Blasjo** 71.03 342 *e*P P 01 10 28.0 +0.2
O26A **Horse Wrangler** 71.04 51 ⇓P P 01 10 28.8 +0.4
baz=71
N27A **Anderson Farm,** 71.06 51 ⇓P P 01 10 29.1 +0.5
baz=71
R23A **Moffat** 71.08 54 ⇓P P 01 10 29.8 +0.9
baz=71
TBLG **Delisi** 71.08 311 P P 01 10 29.8 +1.3
P25A **Willow Gulch B** 71.09 52 ⇓P P 01 10 29.4 +0.7
baz=71
SUW **Suwalki** 71.09 331 *e*P P 01 10 27.5 -0.8
SUW pmax pmax
comp=Z,35nm,1.0s
SUW **Suwalki** 71.09 331 *e*P P 01 10 27.5 -0.8
comp=Z,35nm,1.0s
SUW **Suwalki** 71.09 331 *e*P P 01 10 27.3 -1.0
ONI **Oni** 71.14 312 P P 01 10 30.1 +1.2
X18A **Snowflake** 71.20 60 ⇑P P 01 10 30.1 +0.6
baz=71
214A **Organ Pipe Nat** 71.21 63 ⇓P P 01 10 30.0 +0.6
baz=71
V20A **Brimhall** 71.21 58 ⇑P P 01 10 30.1 +0.5
baz=71
GOR **Gori** 71.23 311 P P 01 10 30.6 +1.2
OGNE **Ogallala** 71.24 50 *e*P P 01 10 29.9 +0.3
comp=Z,72nm,0.9s
OGNE **Ogallala** 71.24 50 ⇑P P 01 10 29.7 +0.2
baz=71
U21A **Nageezi** 71.25 57 ⇑P P 01 10 30.2 +0.3
baz=71
EYMN **Ely** 71.27 39 *e*P P 01 10 29.3 -0.2
comp=Z,22nm,1.0s
T22A **Edith** 71.28 56 ⇓P P 01 10 30.9 +0.8
baz=71
AS31 **Alice Springs** 71.31 197 *e*P P 01 10 30.4 +0.5
ASAR **Alice Springs** 71.31 197 P P 01 10 30.1 +0.2
ASAR **Alice Springs** 71.31 197 P P 01 10 30.1 +0.2
comp=Z,5.0nm,0.7s,baz=11,slow=5.9,SNR=39
ASAR LR LR 01 39 04.3
comp=Z,114nm,18.9s,baz=356,slow=34
R24A **Sanders Place,** 71.46 54 ⇑P P 01 10 31.7 +0.7
baz=71
Q25A **Bedland, Calha** 71.46 53 ⇓P P 01 10 31.3 +0.2
baz=71
KZR **Kazreti** 71.50 311 P P 01 10 31.8 +0.7
P26A **Davis Ranch, A** 71.50 52 ⇑P P 01 10 31.3 0.0
baz=71
O27A **Beecher Island** 71.53 51 ⇑P P 01 10 31.5 +0.2
baz=71
AKASG **Malin Array Be** 71.54 326 P P 01 10 29.7 -1.3
AKASG pmax pmax
comp=Z,18nm,0.5s
AKASG MLR MLR
comp=Z,341nm,20.5s
AKASG **Malin Array Be** 71.54 326 P P 01 10 29.7 -1.3
AKASG **Malin Array Be** 71.54 326 P P 01 10 29.7 -1.3
comp=Z,18nm,0.5s,baz=33,slow=6.2,SNR=56
AKASG LR LR 01 44 18.7
comp=Z,341nm,20.4s,baz=35,slow=38
KIEV **Kiev** 71.55 326 *e*P P 01 10 29.6 -1.5
KIEV pmax pmax
comp=Z,28nm,0.6s
KIEV **Kiev** 71.55 326 *e*P P 01 10 29.6 -1.5
comp=Z,28nm,0.6s
AK01 **Malin Array Si** 71.55 326 *e*P P 01 10 29.4 -1.7
AK02 **Malin Array Si** 71.58 326 *e*P P 01 10 30.0 -1.3
W20A **Ramah** 71.65 58 ⇑P P 01 10 32.8 +0.5
baz=72
PALK **Pallekele** 71.66 261 *e*P P 01 10 32.6 +0.3
comp=Z,16nm,0.8s
V21A **Milan** 71.69 57 ⇑P P 01 10 33.1 +0.6
baz=72
U22A **Llaves** 71.75 56 ⇓P P 01 10 33.5 +0.7
baz=72
T23A **Casias Ranch,** 71.76 55 ⇓P P 01 10 33.2 +0.2
baz=72
S24A **Houchin Ranch,** 71.81 54 ⇑P P 01 10 33.9 +0.6
baz=72
SNART **Snartemo** 71.85 341 *e*P P 01 10 30.9 -1.8
SNART AMB AMB 01 10 31.8
comp=Z,41nm,0.6s
Q26A **Hugo** 71.86 53 ⇑P P 01 10 33.5 +0.2
baz=72
AKH **Akhalkalaki** 71.97 311 P P 01 10 34.9 +0.9
R25A **Fountain Ranch** 71.98 54 ⇑P P 01 10 34.3 +0.1
baz=72
ECSD **EROS Data Cent** 72.01 45 *e*P P 01 10 33.8 -0.3
comp=Z,32nm,1.0s
X20A **Quemado** 72.06 59 ⇓P P 01 10 35.5 +0.8
baz=72
U23A **El Rito** 72.17 56 ⇑P P 01 10 36.2 +0.9
baz=72
TUC **Tucson** 72.22 62 *e*P P 01 10 35.8 +0.3
TUC pmax pmax
comp=Z,9.0nm,1.1s
TUC **Tucson** 72.22 62 *e*P P 01 10 35.8 +0.3
comp=Z,9.2nm,1.1s
S25A **Robets Cordova** 72.24 54 ⇑P P 01 10 35.9 +0.2
baz=72
KSCO **Kaye Shedlock'** 72.29 52 ⇓P P 01 10 36.3 +0.4
baz=72
T24A **Torres, Weston** 72.30 55 ⇓P P 01 10 36.6 +0.4
baz=72
SOC **Sochi** 72.30 315 *e*P P 01 10 34.6 -1.1
SOC *e* 01 13 19.5
SOC *e*PPP PPP 01 14 57.6
SOC *e*S S 01 19 51.9 -4.6
SOC *e**SS sS 01 20 25.6 +13
SOC *e*SS SS 01 24 29.9 -3.9
SOC pmax pmax
comp=Z,22nm,0.4s
SOC MLR MLR
comp=Z,358nm,17.0s
R26A **Arlington** 72.34 53 ⇑P P 01 10 36.3 +0.1
baz=72
ANN **Anapa** 72.50 317 *e*P P 01 10 36.9 0.0
ANN *e**PP PcP 01 10 57.7 +3.2
ANN *e* 01 13 20.5
ANN *e*S S 01 19 58.8 0.0
ANN *e**SS sS 01 20 25.6 +11
ANN pmax pmax
comp=Z,40nm,0.9s
X21A **Alamocita Cree** 72.55 58 ⇓P P 01 10 38.8 +1.1
baz=72
Y20A **Horse Springs,** 72.57 59 ⇑P P 01 10 39.0 +1.2
baz=72
V23A **Ortiz Mt. (NFS** 72.58 56 ⇑P P 01 10 39.0 +1.1
baz=72
T25A **Trinidad** 72.62 54 ⇓P P 01 10 38.4 +0.4
baz=72
R27A **Eads** 72.71 53 ⇑P P 01 10 38.3 -0.1
baz=72
SPMN **St. Paul** 72.73 42 ⇑P P 01 10 38.0 -0.3
baz=72
BSD **Bornholm Skovb** 72.75 336 *i*P P 01 10 37.6 -0.6
comp=Z,13nm,0.7s
S26A **Kim** 72.81 53 ⇓P P 01 10 39.0 0.0
baz=73
Y21A **Point of Rocks** 72.92 59 ⇓P P 01 10 41.0 +1.1
baz=73
BGNE **Belgrade** 72.94 48 ⇓P P 01 10 39.6 0.0
baz=73
X22A **Bernardo** 72.97 58 ⇓P P 01 10 41.2 +1.1
baz=73
ANMO **Albuquerque** 72.98 57 *e*P P 01 10 40.9 +0.7
comp=Z,6.4nm,0.9s
ANMO **Albuquerque** 72.98 57 LR LR 01 42 51.8
comp=Z,70nm,18.2s,baz=327,slow=36
Z20A **Nine Sixteen R** 72.99 60 ⇑P P 01 10 41.0 +0.7
baz=73
W23A **Werner Place,** 73.01 57 ⇑P P 01 10 41.1 +0.7
baz=73
T26A **Comanche Natio** 73.05 54 ⇓P P 01 10 40.2 -0.3
baz=73
S27A **Las Animas** 73.08 53 ⇑P P 01 10 40.5 -0.2
baz=73
MUD **Monsted U'grnd** 73.09 339 *i*P P 01 10 40.7 +0.6
comp=Z,10nm,0.6s
V24A **Rampart Ranch,** 73.12 56 ⇑P P 01 10 42.0 +0.9
baz=73
U25A **Circle Dot Ran** 73.14 55 ⇓P P 01 10 41.4 +0.3
baz=73
120A **U Bar Ranch, L** 73.36 60 ⇑P P 01 10 43.4 +1.0
baz=73
Y22A **Socorro** 73.39 58 ⇑P P 01 10 43.4 +0.8
baz=73
X23A **Hourglass Bar** 73.39 57 ⇑P P 01 10 43.4 +0.8
baz=73
W24A **Lazy 6 Ranch,** 73.41 56 ⇑P P 01 10 43.7 +1.0
baz=73
Z21A **St. Cloud Mine** 73.41 59 ⇑P P 01 10 43.9 +1.1
baz=73
V25A **Rancho No Teng** 73.42 55 ⇓P P 01 10 43.5 +0.7
baz=73
U26A **Atchley Ranch,** 73.52 55 ⇓P P 01 10 43.5 +0.1
baz=73
T27A **Campo** 73.62 53 ⇑P P 01 10 43.5 -0.4
baz=73
GKP **Gorka Klasztor** 73.65 333 *e*P P 01 10 43.1 -0.4
BEL **Belsk** 73.71 331 *e*P P 01 10 44.0 +0.1
319A **Douglas** 73.78 62 ⇓P P 01 10 45.8 +0.9
baz=74
X24A **Lazy VL Ranch,** 73.85 57 ⇓P P 01 10 46.2 +0.9
baz=74
Z22A **Elephant Butte** 73.87 59 ⇓P P 01 10 46.1 +0.8
baz=74
220A **Playas Peak, P** 73.88 61 ⇓P P 01 10 46.2 +0.7
baz=74
121A **Cookes Peak, D** 73.88 60 ⇑P P 01 10 46.6 +1.0
baz=74
T28A **Walsh** 73.92 53 ⇓P P 01 10 45.2 -0.4
baz=74
V26A **Tequesquite Ra** 73.92 55 ⇑P P 01 10 45.8 +0.1
baz=74
Y23A **Lovelace Mesa,** 73.93 58 ⇑P P 01 10 46.5 +0.7
baz=74
W25A **X Bar L Ranch,** 73.95 56 ⇑P P 01 10 46.3 +0.5
baz=74
LVV **L'vov** 74.23 328 *e*P P 01 10 46.1 -0.9
LVV *e* 01 11 01.9
LVV MLR MLR
comp=N,100nm,21.0s
LVV MLR MLR
comp=E,100nm,21.0s
LVV MLR MLR
comp=Z,200nm,21.0s
122A **Conniff Cattle** 74.24 59 ⇑P P 01 10 48.9 +1.4
baz=74
SCHQ **Schefferville** 74.26 22 *e*P P 01 10 47.4 +0.3
comp=Z,12nm,0.7s
SCHQ **Schefferville** 74.26 22 P P 01 10 46.9 -0.3
comp=Z,10nm,0.7s,baz=341,slow=6.0,SNR=33
SCHQ LR LR 01 43 15.3
comp=Z,161nm,21.9s,baz=328,slow=36
320A **Kipp Ranch, An** 74.27 61 ⇓P P 01 10 48.5 +0.7
baz=74
Y24A **Capitan** 74.30 57 ⇓P P 01 10 48.4 +0.4
baz=74
Z23A **Rita Site, Whi** 74.30 58 ⇑P P 01 10 48.4 +0.6
baz=74
X25A **Clemmons Ranch** 74.32 56 ⇓P P 01 10 48.9 +0.8
baz=74
MVH1 **Achvaich** 74.41 347 *e*P P 01 10 46.9 -1.0
MVH1 **Achvaich** 74.41 347 P P 01 10 46.9 -1.0
MCD **Coleburn Disti** 74.59 346 *e*P P 01 10 48.6 -0.4
MCD **Coleburn Disti** 74.59 346 P P 01 10 48.6 -0.4
KIS **Kishinev** 74.63 323 *e*P P 01 10 47.0 -2.4
KIS MLR MLR
comp=Z,500nm,18.0s
KIS **Kishinev** 74.63 323 *e*P P 01 10 47.0 -2.4
KIS LRM MLR 01 46 24.0
comp=Z,500nm,18.0s
KIS **Kishinev** 74.63 323 ⇑*i*P P 01 10 49.2 -0.2
Y25A **Mesa, Roswell** 74.73 57 ⇓P P 01 10 50.7 +0.3
baz=75
Z24A **Sheeppen Canyo** 74.76 58 ⇓P P 01 10 51.1 +0.5
baz=75
X26A **CR and CF Fran** 74.80 56 ⇑P P 01 10 51.0 +0.3
baz=75
W27A **Bowe Ranch, En** 74.86 55 ⇑P P 01 10 51.9 +0.8
baz=75
KWP **Kalwaria Pacla** 74.87 328 *e*P P 01 10 53.5 +2.7
KWP pmax pmax
comp=Z,70nm,0.8s
KWP **Kalwaria Pacla** 74.87 328 *e*P P 01 10 53.5 +2.7
comp=Z,70nm,0.8s
KWP **Kalwaria Pacla** 74.87 328 ⇓*i*P P 01 10 51.0 +0.2
KWP **Kalwaria Pacla** 74.87 328 *e*P P 01 10 51.0 +0.2
MDO **Dochfour** 74.91 347 ⇑*e*P P 01 10 50.1 -0.7
MDO **Dochfour** 74.91 347 P P 01 10 50.1 -0.7
KAC **Achnashellach** 74.99 347 ⇑*e*P P 01 10 50.8 -0.5
KAC **Achnashellach** 74.99 347 P P 01 10 50.8 -0.5
SCIA **State Center** 75.04 44 *e*P P 01 10 51.8 0.0
comp=Z,44nm,0.9s
BSEG **Bad Segeberg** 75.06 338 *e*P P 01 10 51.8 +0.1
BSEG pmax pmax
comp=Z,17nm,0.8s
BSEG **Bad Segeberg** 75.06 338 *e*P P 01 10 51.8 +0.1
comp=Z,17nm,0.8s
X27A **F and S Farms,** 75.14 55 ⇓P P 01 10 53.1 +0.3
baz=75
124A **Stringfield Ra** 75.16 58 ⇓P P 01 10 53.3 +0.3
baz=75
Z25A **Roswell** 75.18 57 ⇑P P 01 10 53.5 +0.5
baz=75
W28A **Vega** 75.21 54 ⇓P P 01 10 53.4 +0.4
baz=75
Y26A **Elida** 75.24 56 ⇓P P 01 10 53.6 +0.3
baz=75
T31A **Randall Ranch,** 75.28 52 ⇑P P 01 10 52.5 -0.8
baz=75
LEOM **Leova** 75.29 323 P P 01 10 53.4 +0.2
LEOM **Leova** 75.29 323 ⇑*i*P P 01 10 53.4 +0.2
KSB **Sheil Bridge** 75.29 347 ⇑*e*P P 01 10 52.7 -0.3
KSB **Sheil Bridge** 75.29 347 P P 01 10 52.7 -0.3
BANOM **Banah** 75.34 292 P P 01 10 54.3 +0.4
SNR=6.0
OJC **Ojcow** 75.41 330 ⇑*i*P P 01 10 53.9 +0.1
OJC **Ojcow** 75.41 330 *e*P P 01 10 53.8 0.0
comp=Z,46nm,1.1s
OJC **Ojcow** 75.41 330 *i*P P 01 10 53.9 +0.1
KSU1 **Kansas State U** 75.44 48 *e*P P 01 10 53.3 -0.9
comp=Z,18nm,0.7s
224A **Cornudas Mount** 75.56 59 ⇓P P 01 10 55.6 +0.4
baz=75
BUR08 **Bucovina Ar. S** 75.57 326 *e*P P 01 10 54.9 -0.1
BURAR **Bucovina Array** 75.59 326 ⇑*i*P P 01 10 54.7 -0.3
KOLS **Kolonicke sedl** 75.61 328 *e*P P 01 10 55.0 0.0
Z26A **Caprock** 75.61 57 ⇓P P 01 10 55.8 +0.3
baz=75
W29A **Amraillo** 75.62 54 ⇑P P 01 10 56.0 +0.5
baz=75
Y27A **Causey** 75.65 56 ⇑P P 01 10 56.0 +0.3
baz=76
125A **Gardner Draw,** 75.66 58 ⇓P P 01 10 56.1 +0.4
baz=76
V30A **Spur Ranch, Mi** 75.69 53 ⇓P P 01 10 56.2 +0.4
baz=76
X28A **Dimmitt** 75.75 55 ⇑P P 01 10 56.4 +0.3
baz=76
AMTX **Amarillo** 75.77 54 *e*P P 01 10 56.5 +0.2
comp=Z,29nm,0.8s
AMTX **Amarillo** 75.77 54 ⇑P P 01 10 56.7 +0.4
baz=76
MSTX **Muleshoe** 75.81 56 ⇑P P 01 10 56.6 +0.1
baz=76
UZH **Uzhgorod** 75.86 328 ⇑*i*P P 01 10 55.9 -0.5
UZH *e* 01 11 09.5
UZH *e* 01 11 12.7
NIE **Niedzica** 75.91 330 *e*P P 01 10 57.3 +0.6
NIE *e* 01 11 02.0
NIE **Niedzica** 75.91 330 *e*P P 01 10 57.3 +0.6
NIE *e* 01 11 02.0
TESR 75.91 324 ⇑*i*P P 01 10 56.5 -0.3
CRVS **Cervenica-Dubn** 75.93 329 *e*P P 01 10 56.9 0.0
225A **Deer Hill, Car** 75.95 58 ⇓P P 01 10 57.7 +0.3
baz=76
GHRR 75.97 324 ⇓*i*P P 01 10 57.0 -0.1
Z27A **Tatum** 76.03 56 ⇓P P 01 10 58.0 +0.2
baz=76
324A **Moseley Ranch,** 76.03 59 ⇑P P 01 10 58.2 +0.2
baz=76
KSP **Ksiaz** 76.04 333 *e*P P 01 10 57.3 -0.1
KSP **Ksiaz** 76.04 333 *e*P P 01 10 56.9 -0.5
126A **Clayton Basin,** 76.04 57 ⇓P P 01 10 58.1 +0.2
baz=76
ESY **Stoneypath** 76.07 345 *e*P P 01 10 57.1 -0.4
ESY **Stoneypath** 76.07 345 P P 01 10 57.1 -0.4
TLCR 76.08 322 P P 01 10 57.8 +0.1
TLCR 76.08 322 ⇓*i*P P 01 10 58.0 +0.3
X29A **Tulia** 76.08 55 ⇑P P 01 10 58.4 +0.3
baz=76
EAB **Aberfoyle** 76.10 346 *e*P P 01 10 56.8 -0.8
EAB **Aberfoyle** 76.10 346 P P 01 10 56.8 -0.8
GDL2 **Guadalupe Moun** 76.16 58 *e*P P 01 10 59.0 +0.5
GDL2 *e*pP pP 01 11 08.3 -0.1
Y28A **McKinney Farm,** 76.16 55 ⇓P P 01 10 58.5 0.0
baz=76
TRPA **Tarpa** 76.18 328 ⇑*i*P P 01 10 59.1 +0.9
TRPA **Tarpa** 76.18 328 ⇑*e*P P 01 10 58.7 +0.5
HATD **Hatta, Dubai** 76.22 291 P P 01 10 59.6 +0.7
SNR=9.4
EBL **Broad Law** 76.28 346 *e*P P 01 10 58.3 -0.4
EBL **Broad Law** 76.28 346 P P 01 10 58.3 -0.4
OKC **Ostrava-Krasne** 76.30 331 *e*P P 01 10 59.2 +0.3
PETR 76.31 324 ⇓*i*P P 01 10 59.5 +0.5
HOQ **Hoqain** 76.32 290 P P 01 10 60.0 +0.5
SNR=8.4
226B **Tecolote Peak,** 76.36 58 ⇑P P 01 11 00.1 +0.4
baz=76
ASHO **Ashiyiah** 76.36 291 P P 01 11 00.4 +0.7
SNR=7.0
CFR **Carcaliu** 76.37 323 P P 01 10 59.3 -0.1
CFR **Carcaliu** 76.37 323 ⇑*i*P P 01 10 59.1 -0.3
325A **Bean Ranch, Si** 76.39 59 ⇓P P 01 11 00.1 +0.1
baz=76
VRI **Vrincioaia** 76.40 324 P P 01 11 00.1 +0.5
VRI **Vrincioaia** 76.40 324 ⇑*i*P P 01 11 00.0 +0.5
NRDL **Niedersach Rie** 76.41 337 *e*P P 01 10 59.3 -0.1
comp=Z,12nm,0.8s
UPC **Upice** 76.42 333 *e*P P 01 10 59.8 +0.2
UPC *e*pP PcP 01 11 13.8 +2.5
PLOR **Plostina** 76.45 324 ⇓*i*P P 01 11 00.3 +0.4
DPC **Dobruska-Polom** 76.45 332 *e*P P 01 11 00.2 +0.3
DPC pmax pmax
comp=Z,35nm,1.1s
DPC **Dobruska-Polom** 76.45 332 *e*P P 01 11 00.2 +0.3
comp=Z,35nm,1.1s
DPC **Dobruska-Polom** 76.45 332 *e*P P 01 11 00.1 +0.3
DPC *e*pP PcP 01 11 13.8 +2.3
DPC AMS AMS 01 48 40.0
comp=Z,300nm,15.8s
PGBU **Glenifferbraes** 76.49 346 *e*P P 01 10 59.8 -0.1
PGBU AMB AMB 01 11 07.2
comp=Z,138nm,2.1s
PGBU **Glenifferbraes** 76.49 346 P P 01 10 59.8 -0.1
PGBU AMB AMB 01 11 07.2
comp=Z,138nm,2.1s
Z28A **Tucker Farm, M** 76.53 56 ⇑P P 01 11 00.9 +0.3
baz=76
W31A **Holland Ranch,** 76.53 53 ⇑P P 01 11 00.6 +0.1
baz=76
X30A **Coker Ranch, T** 76.55 54 ⇑P P 01 11 00.9 +0.2
baz=76
MORC **Moravsky Berou** 76.55 331 *e*P P 01 11 00.3 -0.1
MORC **Moravsky Berou** 76.55 331 *e*P P 01 11 00.3 -0.1
MORC **Moravsky Berou** 76.55 331 ⇑*i*P P 01 10 59.9 -0.5
JMDO **Jabal Madar** 76.64 288 P P 01 11 02.2 +0.9
SNR=6.3
CLL **Collm** 76.64 335 ⇑*i*P P 01 11 00.5 -0.3
CLL pmax pmax
comp=Z,61nm,1.3s
CLL **Collm** 76.64 335 *e*P P 01 11 00.4 -0.3
comp=Z,22nm,0.7s
CLL **Collm** 76.64 335 ⇑*i*P P 01 11 00.5 -0.3
comp=Z,61nm,1.3s
CLL Lm MLR 01 47 00.0
comp=N,100nm,21.2s
CLL Lm MLR 01 47 00.0
comp=E,100nm,21.4s
CLL Lm MLR 01 47 00.0
comp=Z,200nm,20.5s
GRER 76.70 323 ⇓*i*P P 01 11 01.2 0.0
BRG **Berggiesshubel** 76.74 334 *e*P P 01 11 01.1 -0.3
comp=Z,10nm,0.8s
BRG *e* 01 11 07.2
comp=Z,3.2nm,0.6s
BRG
comp=N,277nm,26.1s
BRG
comp=E,116nm,20.7s
BRG
comp=Z,344nm,20.7s
BRG **Berggiesshubel** 76.74 334 *e*P P 01 11 01.1 -0.3
BRG *e* 01 11 07.2
BRG pmax pmax
comp=Z,10.0nm,0.9s
BRG MLR MLR
comp=N,277nm,26.1s
BRG MLR MLR
comp=E,116nm,20.7s
BRG MLR MLR
comp=Z,344nm,20.7s
ESK **Eskdalemuir** 76.75 346 ⇑*e*P P 01 11 00.9 -0.5
ESK AMB AMB 01 11 09.3
comp=Z,95nm,3.7s
ESK **Eskdalemuir** 76.75 346 P P 01 11 00.9 -0.5
ESK AMB AMB 01 11 09.3
comp=Z,95nm,3.7s
425A **Indio Mountain** 76.80 59 ⇓P P 01 11 02.6 +0.3
baz=77
TIRR **Tirgusor** 76.83 322 *e*P P 01 11 02.0 0.0
TIRR pmax pmax
comp=Z,25nm,1.0s
TIRR **Tirgusor** 76.83 322 *e*P P 01 11 02.0 0.0
comp=Z,25nm,1.0s
TIRR **Tirgusor** 76.83 322 ⇑*i*P P 01 11 02.1 0.0
PVCC **Panska Ves** 76.85 334 *e*P P 01 11 02.2 +0.2
PVCC AMS AMS 01 49 00.0
comp=Z,300nm,16.6s
ECK **Cauldkaine Hil** 76.86 346 *e*P P 01 11 01.2 -0.8
ECK **Cauldkaine Hil** 76.86 346 P P 01 11 01.2 -0.8
DOPR **Dopca** 76.86 325 ⇑*i*P P 01 11 03.1 +0.9
MALT **Malatya** 76.88 312 *e*P P 01 11 03.0 +0.5
MALT pmax pmax
comp=Z,27nm,0.7s
MALT **Malatya** 76.88 312 *e*P P 01 11 03.0 +0.5
comp=Z,27nm,0.7s
MALT **Malatya** 76.88 312 ⇑*i*P P 01 11 03.7 +1.2
MALT **Malatya** 76.88 312 *e*P P 01 11 03.7 +1.2
X31A **McDonald Ranch** 76.92 53 ⇓P P 01 11 02.7 0.0
baz=77
CLZ **Clausthal** 76.92 337 *e*P P 01 11 02.8 +0.4
CLZ pmax pmax
comp=Z,19nm,0.8s
CLZ **Clausthal** 76.92 337 *e*P P 01 11 02.8 +0.4
comp=Z,19nm,0.8s
227A **Bennet, Jal** 76.92 57 ⇑P P 01 11 03.5 +0.6
baz=77
Z29A **Hungry Hill Ra** 76.94 56 ⇓P P 01 11 03.1 +0.2
baz=77
Y30A **Stafford Cattl** 76.95 55 ⇓P P 01 11 02.9 -0.1
baz=77
128A **Castleberry Fa** 76.95 56 ⇑P P 01 11 03.1 +0.1
baz=77
BSY **Bisya** 76.97 289 P P 01 11 04.1 +0.9
SNR=7.8
326A **Caldwell Ranch** 77.02 58 ⇓P P 01 11 03.5 +0.1
baz=77
MLR **Muntele Rosu** 77.03 324 ⇑*i*P P 01 11 03.5 +0.2
PGOR **Pogoanele** 77.07 323 ⇓*i*P P 01 11 04.5 +1.2
AMRR **Amara** 77.17 323 ⇓*i*P P 01 11 04.3 +0.4
VYHS **Vyhne** 77.21 330 *e*P P 01 11 04.5 +0.4
DRGR 77.23 327 P P 01 11 04.5 +0.2
DRGR 77.23 327 ⇑*i*P P 01 11 04.2 -0.1
Y31A **Rekieta Farm,** 77.25 54 ⇑P P 01 11 04.7 +0.1
baz=77
Z30A **Sanderson Ranc** 77.25 55 ⇑P P 01 11 04.6 0.0
baz=77
228A **UT Block 9, Go** 77.25 57 ⇑P P 01 11 05.0 +0.2

baz=77
VRAC Vranov 77.27 332⇑*iP* P 01 11 05.2 +0.8
129A Stewart Farms, 77.30 56⇑P P 01 11 05.0 0.0
baz=77
PSZ Piszkesteto 77.32 329 *eP* P 01 11 05.3 +0.5
PSZ pmax pmax
comp=Z,36nm,1.0s
PSZ Piszkesteto 77.32 329 *eP* P 01 11 05.3 +0.5
comp=Z,36nm,1.0s
PSZ Piszkesteto 77.32 329⇑*iP* P 01 11 05.4 +0.6
PSZ Piszkesteto 77.32 329⇑*eP* P 01 11 04.7 -0.1
PRU Pruhonice 77.33 333 *eP* P 01 11 04.9 +0.2
PRU *ePCP* pP 01 11 13.5 -1.2
PRU AMS AMS 01 49 00.0
comp=Z,300nm,16.4s
KESW Keswick, Cumbr 77.43 345 *eP* P 01 11 05.0 -0.2
KESW AMB AMB 01 11 06.2
comp=Z,105nm,1.1s
KESW Keswick, Cumbr 77.43 345 P P 01 11 05.0 -0.2
KESW AMB AMB 01 11 06.2
comp=Z,105nm,1.1s
VOIR 77.44 325 P P 01 11 06.3 +0.8
VOIR 77.44 325⇑*iP* P 01 11 06.0 +0.5
426A McDonald Obser 77.46 59⇑P P 01 11 05.9 -0.1
baz=77
WMOK Wichita Mounta 77.50 53 *eP* P 01 11 06.1 +0.1
WMOK pmax pmax
comp=Z,13nm,0.9s
WMOK Wichita Mounta 77.50 53 *eP* P 01 11 06.1 +0.1
comp=Z,13nm,0.9s
SULR 77.56 323⇑*iP* P 01 11 03.7 -2.4
TANN Tannenbergstha 77.59 335 *eP* P 01 11 06.2 -0.1
comp=Z,6.0nm,0.7s
MOX Moxa 77.64 335 *eP* P 01 11 06.4 0.0
MOX pmax pmax
comp=Z,10.0nm,0.7s
MOX MLR MLR
comp=Z,100nm,20.9s
MOX Moxa 77.64 335 *eP* P 01 11 06.4 0.0
comp=Z,10.0nm,0.7s
MOX *eL* L 01 49 54.5
comp=Z,140nm,20.9s
TREC Trest 77.64 332 *eP* P 01 11 06.6 +0.1
TREC MLR MLR
comp=Z,300nm,21.5s
TREC Trest 77.64 332 *eP* P 01 11 06.6 +0.1
TREC AMS AMS 01 48 20.0
comp=Z,300nm,21.5s
ARR Arges 77.66 325⇓*iP* P 01 11 07.9 +1.2
328A Wristen Ranch, 77.66 58⇓P P 01 11 07.2 +0.2
baz=78
SMOL Smolenice 77.67 331 *eP* P 01 11 07.6 +0.9
Y32A R-V Farms, Ver 77.68 54⇓P P 01 11 06.8 -0.1
baz=78
427A Hayter Ranch, 77.70 58⇓P P 01 11 07.3 +0.1
baz=78
WTSB Winterswijk 77.75 339 *eP* P 01 11 06.8 -0.2
NKC Novy Kostel 77.76 335 *eP* P 01 11 06.5 -0.6
Z31A Sharp Cattle R 77.79 55⇑P P 01 11 07.4 -0.3
baz=78
229A Bryant Ranch, 77.82 57⇓P P 01 11 08.1 +0.2
baz=78
130A Snyder 77.85 56⇑P P 01 11 07.9 0.0
baz=78
526A Mary Lane Ranc 77.86 59⇑P P 01 11 08.5 +0.3
baz=78
DEV Deva 77.91 326 P P 01 11 08.7 +0.7
DEV Deva 77.91 326⇓*iP* P 01 11 08.7 +0.7
LOT Lotru 77.94 325⇑*iP* P 01 11 07.8 -0.5
UBBA Unterbreizbach 77.94 336 *eP* P 01 11 08.1 +0.1
comp=Z,7.0nm,0.7s
HDIL Hopedale 77.96 43 *eP* P 01 11 08.4 0.0
comp=Z,32nm,0.7s
BUD Budapest 78.00 329⇑*eP* P 01 11 08.8 +0.3
329A Wagon Wheel Ra 78.07 57⇓P P 01 11 09.5 +0.3
baz=78
527A Woodward Ranch 78.08 59⇓P P 01 11 09.5 +0.1
baz=78
BUG Bochum--Univer 78.11 338 *eP* P 01 11 08.9 -0.1
comp=Z,17nm,0.8s
131A Roby 78.12 55⇓P P 01 11 09.5 0.0
baz=78
UMR Umm Al-Rimmam 78.13 300 *eP* P 01 11 09.5 0.0
UMR AMb AMB 01 11 10.6
comp=Z,216nm,0.7s
STKA Stephens Creek 78.17 189 P P 01 11 09.7 +0.4
STKA Stephens Creek 78.17 189 P P 01 11 09.7 +0.4
comp=Z,3.5nm,0.7s,baz=350,slow=8.4,SNR=7.9
Z32A Haskell 78.17 54⇑P P 01 11 09.4 -0.4
baz=78
MIB Mutribah 78.17 301 *eP* P 01 11 09.8 +0.1
MIB AMb AMB 01 11 10.9
comp=Z,278nm,0.8s
BR131 Keskin Array S 78.19 316 *eP* P 01 11 09.5 -0.4
comp=Z,19nm,0.8s
BRTR Keskin Array B 78.19 316 P P 01 11 09.9 +0.1
BRTR Keskin Array B 78.19 316 P P 01 11 09.9 +0.1
comp=Z,22nm,0.8s,baz=76,slow=4.6,SNR=136
BRTR LR LR 01 51 34.9
comp=Z,177nm,18.1s,baz=209,slow=40
626A Big Bend Ranch 78.20 60⇑P P 01 11 10.3 +0.2
baz=78
428A Kincaid Ranch, 78.21 58⇓P P 01 11 10.4 +0.3
baz=78
ROTZ Rotzenmuhle 78.24 335 *eP* P 01 11 10.3 +0.5
comp=Z,16nm,0.9s
TUL1 Tulsa 78.25 50⇓P P 01 11 10.1 0.0
baz=78
230A Sterling City 78.28 56⇑P P 01 11 10.5 +0.1
baz=78
PKSG 78.31 330⇓*eP* P 01 11 10.8 +0.6
PKS7 Kunszentmiklos 78.33 329⇓*eP* P 01 11 10.8 +0.5
GZR Gura Zlata 78.37 326 P P 01 11 10.7 0.0
GZR Gura Zlata 78.37 326⇑*iP* P 01 11 10.6 -0.1
KHC Kasperske Hory 78.39 333 *eP* P 01 11 10.3 -0.4
KHC pmax pmax
comp=Z,41nm,0.9s
KHC Kasperske Hory 78.39 333 *eP* P 01 11 10.3 -0.4
comp=Z,41nm,0.9s
KHC Kasperske Hory 78.39 333 *eP* P 01 11 10.7 0.0
KHC *ex* x 01 11 28.1
KHC AMS AMS 01 49 40.0
comp=Z,300nm,16.9s
KBI1 Birley Grange 78.41 344⇑*eP* P 01 11 10.3 -0.3
KBI1 Birley Grange 78.41 344 P P 01 11 10.3 -0.3
KBD Kabd 78.42 300 *eP* P 01 11 10.9 -0.1
KBD AMb AMB 01 11 12.4
comp=Z,101nm,0.9s
ANTO Ankara 78.48 317 *eP* P 01 11 11.8 +0.4
ANTO pmax pmax
comp=Z,48nm,0.8s
ANTO Ankara 78.48 317 *eP* P 01 11 11.8 +0.4
comp=Z,48nm,0.8s
PKST T`s 78.54 330⇓*eP* P 01 11 11.9 +0.4
528A Cox Ranch, San 78.56 58⇓P P 01 11 12.5 +0.4
baz=78
PKS6 Bocsa 78.56 329⇓*eP* P 01 11 13.9 +2.3
ABTX Abilene, Hawle 78.58 55⇑P P 01 11 12.1 0.0
baz=78
QRN Al-Qurain 78.59 300 *eP* P 01 11 12.1 +0.1
QRN AMb AMB 01 11 12.9
comp=Z,218nm,0.8s
WET Wettzell 78.59 334 *eP* P 01 11 12.3 +0.5
WET pmax pmax
comp=Z,25nm,0.9s
WET Wettzell 78.59 334 *eP* P 01 11 12.3 +0.5
comp=Z,25nm,0.9s
330A Mertzon 78.60 56⇓P P 01 11 12.0 -0.1
baz=78
GEC2 GERESS Array S 78.60 333 *eP* P 01 11 11.8 -0.1
GEC2 pmax pmax
comp=Z,13nm,0.8s
GEC2 GERESS Array S 78.60 333 *eP* P 01 11 11.8 -0.1
comp=Z,13nm,0.8s
GERES GERESS Array B 78.60 333 P P 01 11 11.9 0.0
GERES GERESS Array B 78.60 333 P P 01 11 11.9 0.0
comp=Z,14nm,0.7s,baz=32,slow=5.3,SNR=113
GERES LR LR 01 50 07.7
comp=Z,191nm,18.1s,baz=184,slow=39
GRF Grafenberg Arr 78.60 335 *eP* P 01 11 12.2 +0.4
GRF pmax pmax
comp=Z,42nm,0.8s
GRF MLR MLR
comp=Z,100nm,21.1s
GRF Grafenberg Arr 78.60 335 *eP* P 01 11 12.2 +0.4
comp=Z,42nm,0.8s
GRF *eL* L 01 49 08.0
comp=Z,147nm,21.1s
GRFO Grafenberg 78.60 335 *eP* P 01 11 11.5 -0.3
GRFO pmax pmax
comp=Z,54nm,0.8s
GRFO Grafenberg 78.60 335 *eP* P 01 11 11.5 -0.3
comp=Z,54nm,0.8s
BZS Buzias 78.63 327 P P 01 11 11.8 -0.2
BZS Buzias 78.63 327⇑*iP* P 01 11 11.6 -0.4
NAY Al-Naaiem 78.63 300 *eP* P 01 11 12.1 -0.2
NAY AMb AMB 01 11 13.4
comp=Z,96nm,0.9s
TXAR Lajitas Array 78.64 60 P P 01 11 12.6 +0.1
TXAR Lajitas Array 78.64 60 P P 01 11 12.6 +0.1
comp=Z,8.6nm,0.7s,baz=302,slow=4.1,SNR=110
RDF Al-Radifah 78.68 300 *eP* P 01 11 12.8 +0.2
SOP Sopron 78.69 331⇑*eP* P 01 11 13.1 +0.8
231A Bronte 78.70 56⇑P P 01 11 12.5 -0.2
baz=78
CONA Conrad Observa 78.71 331 *i* P P 01 11 13.0 +0.5
comp=Z,31nm,0.7s,SNR=24
CONA Conrad Observa 78.71 331 *i* P P 01 11 13.0 +0.5
comp=Z,31nm,0.7s
627A Terlingua Ranc 78.72 59⇓P P 01 11 13.0 +0.1
baz=79
429A Davenport Ranc 78.75 57⇑P P 01 11 12.8 -0.2
baz=79
ZIMR 78.77 323 P P 01 11 12.6 -0.2
PKS2 Kecel 78.78 329⇓*eP* P 01 11 12.9 +0.1
SZH Strazhica 78.85 323 *eP* P 01 11 12.0 -1.3
CRAR CRAIOVA 78.86 325 P P 01 11 14.0 +0.7
CRAR CRAIOVA 78.86 325⇑*iP* P 01 11 13.9 +0.7
TNS Taunus Mts 78.91 337 *eP* P 01 11 13.6 +0.1
TNS pmax pmax
comp=Z,26nm,0.8s
TNS Taunus Mts 78.91 337 *eP* P 01 11 13.6 +0.1
comp=Z,26nm,0.8s
529A Stev Forest Ra 78.92 58⇑P P 01 11 14.1 +0.1
baz=79
628A Black Gap, Mar 78.99 59⇑P P 01 11 14.2 -0.2
baz=79
430A Baggett Ranch, 79.02 57⇓P P 01 11 14.3 -0.1
baz=79
PKS9 Tamasi 79.03 329⇓*eP* P 01 11 13.9 -0.3
FOEL Foel Wylfa 79.07 345 *eP* P 01 11 13.0 -1.3
FOEL AMB AMB 01 11 13.6
comp=Z,85nm,2.5s
FOEL Foel Wylfa 79.07 345 P P 01 11 13.0 -1.3
FOEL AMB AMB 01 11 13.6
comp=Z,85nm,2.5s
HGN Heimansgroeve 79.08 339 *eP* P 01 11 13.9 -0.4
comp=Z,36nm,0.8s
331A San Angelo 79.10 56⇑P P 01 11 14.8 -0.1
baz=79
BEBN Eben Emael 79.11 339 P P 01 11 14.8 +0.2
comp=Z,18nm,1.1s
232A Coleman 79.12 55⇑P P 01 11 15.0 0.0
baz=79
MEM Membach 79.20 339 P P 01 11 14.9 -0.1
comp=Z,35nm,1.1s
JMB Yambol 79.23 322 P P 01 11 15.1 -0.2
JMB Yambol 79.23 322 *eP* P 01 11 15.2 -0.1
PKSM Moragy 79.23 329⇓*iP* P 01 11 14.5 -0.8
PKSM Moragy 79.23 329⇓*eP* P 01 11 14.5 -0.8
MOA Molln 79.30 332⇑*iP* P 01 11 15.6 -0.1
comp=Z,25nm,0.8s,SNR=19
MOA Molln 79.30 332⇑*iP* P 01 11 15.6 -0.1
comp=Z,25nm,0.8s
TOD Tromm 79.37 336 *eP* P 01 11 15.8 -0.2
TOD Tromm 79.37 336 *eP* P 01 11 15.8 -0.2
ARSA Arzberg 79.41 331⇑*iP* P 01 11 16.5 +0.2
comp=Z,18nm,1.1s,SNR=13
ARSA Arzberg 79.41 331⇑*iP* P 01 11 16.5 +0.2
comp=Z,18nm,1.1s
FVM French Village 79.42 45 *eP* P 01 11 16.5 0.0
FVM pmax pmax
comp=Z,19nm,1.0s
FVM French Village 79.42 45 *eP* P 01 11 16.5 0.0
comp=Z,19nm,1.0s
530A J-C Ranch, Com 79.42 57⇓P P 01 11 16.8 +0.1
baz=79
332A Millersview 79.44 56⇓P P 01 11 16.6 -0.1
baz=79
431A Sonora 79.46 57⇓P P 01 11 16.7 -0.2
baz=79
ABH Alteburg 79.46 337 *eP* P 01 11 16.5 0.0
BCLA Clavier 79.55 339 P P 01 11 16.8 -0.1
comp=Z,27nm,1.2s
BEHE Becsehely 79.66 330⇑*eP* P 01 11 16.8 -0.8
MPEP Malo Peshtene 79.68 324 *eP* P 01 11 17.6 -0.2
SNF Seneffe 79.72 340 P P 01 11 17.7 -0.1
comp=Z,13nm,1.0s
RUP Ruppelstein 79.76 338 *eP* P 01 11 18.0 -0.2
RUP Ruppelstein 79.76 338 *eP* P 01 11 18.0 -0.2
432A Menard 79.79 56⇓P P 01 11 18.5 -0.2
baz=80
RJOB Jochberg 79.86 333 *eP* P 01 11 19.2 +0.4
comp=Z,23nm,0.8s
531A Rocksprings 79.88 57⇓P P 01 11 19.0 -0.1
baz=80
MCH1 Michaelchurch 79.88 344 *eP* P 01 11 17.4 -1.3
MCH1 AMB AMB 01 11 17.9
comp=Z,74nm,3.3s
MCH1 Michaelchurch 79.88 344 P P 01 11 17.4 -1.3
MCH1 AMB AMB 01 11 17.9
comp=Z,74nm,3.3s
FUR Furstenfeldbru 79.95 334 *eP* P 01 11 19.5 +0.3
FUR pmax pmax
comp=Z,49nm,0.9s
FUR Furstenfeldbru 79.95 334 *eP* P 01 11 19.5 +0.3
comp=Z,49nm,0.9s
GIVF Givet 79.96 339 *eP* P 01 11 19.0 -0.2
comp=Z,44nm,0.9s
GIVF Givet 79.96 339 *eP* P 01 11 19.0 -0.2
GIVF pmax pmax
comp=Z,44nm,0.9s
GIVF Givet 79.96 339 *eP* P 01 11 19.0 -0.2
comp=Z,44nm,0.9s
STU Stuttgart 80.01 336 *eP* P 01 11 19.2 -0.3
STU pmax pmax
comp=Z,34nm,0.8s
STU Stuttgart 80.01 336 *eP* P 01 11 19.6 +0.1
comp=Z,24nm,0.8s
STU Stuttgart 80.01 336 *eP* P 01 11 19.2 -0.3
comp=Z,34nm,0.8s
DOU Dourbes 80.02 339 P P 01 11 19.3 -0.2
comp=Z,23nm,1.8s
WLF Walferdange 80.03 338 P P 01 11 20.0 +0.4
WLF Walferdange 80.03 338 *eP* P 01 11 21.6 +2.0
comp=Z,10.0nm,0.8s
SOKA Soboth 80.07 331⇑*iP* P 01 11 19.6 -0.4
comp=Z,53nm,1.1s
SOKA Soboth 80.07 331⇑*iP* P 01 11 19.6 -0.4
comp=Z,53nm,1.1s
JCT Junction City 80.08 56 *eP* P 01 11 19.9 -0.3
JCT pmax pmax
comp=Z,20nm,1.1s
JCT Junction City 80.08 56 *eP* P 01 11 19.9 -0.3
comp=Z,20nm,1.1s
JCT Junction City 80.08 56⇑P P 01 11 20.0 -0.3
baz=80
PERS Pernice 80.08 331 *i* P P 01 11 19.7 -0.3
BAIF Baives 80.15 339⇑*iP* P 01 11 20.1 -0.1
comp=Z,70nm,1.1s
BAIF Baives 80.15 339⇑*iP* P 01 11 20.1 -0.1
BAIF pmax pmax
comp=Z,70nm,1.1s
BAIF Baives 80.15 339⇑*iP* P 01 11 20.1 -0.1
comp=Z,70nm,1.1s
PGB Panagyurishte 80.18 324 *eP* P 01 11 20.0 -0.6
WOL Wolverton 80.19 343 *eP* P 01 11 19.9 -0.5
WOL AMB AMB 01 11 20.7
comp=Z,121nm,2.0s
WOL Wolverton 80.19 343 P P 01 11 19.9 -0.5
WOL AMB AMB 01 11 20.7
comp=Z,121nm,2.0s
LANF Langenberg 80.21 337 *eP* P 01 11 20.5 -0.1
LANF Langenberg 80.21 337 *eP* P 01 11 20.5 -0.1
LANF Langenberg 80.21 337 *eP* P 01 11 20.5 -0.1
SIUC Southern Illin 80.23 45 *eP* P 01 11 21.0 +0.2
comp=Z,36nm,1.0s
KBA Koelnbreinsper 80.27 333⇑*iP* P 01 11 21.4 +0.2
KBA pmax pmax
comp=Z,73nm,0.8s
KBA Koelnbreinsper 80.27 333⇑*iP* P 01 11 21.3 +0.2
comp=Z,72nm,0.8s,SNR=31
KBA Koelnbreinsper 80.27 333⇑*iP* P 01 11 21.4 +0.2
comp=Z,72nm,0.8s
532A Rocksprings 80.28 57⇑P P 01 11 21.1 -0.3
baz=80
WHTX Lake Whitney 80.28 54⇓P P 01 11 21.1 -0.1
baz=80
PLD Plovdiv 80.32 323 P P 01 11 20.9 -0.4
PLD Plovdiv 80.32 323 *eP* P 01 11 20.4 -0.9
OBKA Obir 80.38 332⇑*iP* P 01 11 21.1 -0.5
comp=Z,17nm,0.8s,SNR=16
OBKA Obir 80.38 332⇑*iP* P 01 11 21.1 -0.5
comp=Z,17nm,0.8s
KDZ Kurdzhali 80.39 322 *eP* P 01 11 21.5 -0.2
631A Perdido Creek 80.41 57⇑P P 01 11 22.0 0.0
baz=80
MIAR Mount Ida 80.47 50 *eP* P 01 11 21.7 -0.5
MIAR pmax pmax
comp=Z,22nm,1.0s
MIAR Mount Ida 80.47 50 *eP* P 01 11 21.7 -0.5
comp=Z,22nm,1.0s
DIVS Divibare 80.53 327 P P 01 11 21.5 -1.0
VTS Vitosha 80.53 324 P P 01 11 21.7 -0.9
VTS Vitosha 80.53 324⇑*iP* P 01 11 22.8 +0.2
VTS Vitosha 80.53 324 *eP* P 01 11 21.8 -0.9
MYKA Terra Mystica 80.57 332⇑*iP* P 01 11 22.0 -0.6
comp=Z,24nm,1.1s
MYKA Terra Mystica 80.57 332⇑*iP* P 01 11 22.0 -0.6
comp=Z,24nm,1.1s
WATA Walderalm 80.60 334⇑*iP* P 01 11 23.2 +0.3
WATA pmax pmax
comp=Z,38nm,0.6s
WATA Walderalm 80.60 334⇑*iP* P 01 11 23.2 +0.3
comp=Z,38nm,0.6s,SNR=12
WATA Walderalm 80.60 334⇑*iP* P 01 11 23.2 +0.3
comp=Z,38nm,0.6s
WTTA Wattenberg 80.64 334⇑*iP* P 01 11 23.4 +0.2
WTTA pmax pmax
comp=Z,71nm,0.7s
WTTA Wattenberg 80.64 334⇑*iP* P 01 11 23.4 +0.2
comp=Z,71nm,0.7s,SNR=49
WTTA Wattenberg 80.64 334⇑*iP* P 01 11 23.4 +0.2
comp=Z,71nm,0.7s
BFO Black Forest 80.66 336 *eP* P 01 11 23.0 0.0
BFO pmax pmax
comp=Z,28nm,0.9s
BFO Black Forest 80.66 336 *eP* P 01 11 23.0 0.0
comp=Z,28nm,0.9s
BFO Black Forest 80.66 336 *eP* P 01 11 22.8 -0.3
comp=Z,40nm,0.9s
BFO Black Forest 80.66 336 P P 01 11 22.2 -0.8
comp=Z,237nm,0.9s,SNR=13
RZN Rozhen 80.66 323 *eP* P 01 11 22.3 -1.0
RETA Reutte 80.71 334⇑*iP* P 01 11 23.1 -0.3
comp=Z,42nm,1.0s,SNR=31
RETA Reutte 80.71 334⇑*iP* P 01 11 23.1 -0.3
comp=Z,42nm,1.0s
MOTA Moosalm 80.74 334⇑*iP* P 01 11 23.8 +0.2
MOTA pmax pmax
comp=Z,81nm,1.0s
MOTA Moosalm 80.74 334⇑*iP* P 01 11 23.8 +0.2
comp=Z,81nm,1.0s,SNR=12
MOTA Moosalm 80.74 334⇑*iP* P 01 11 23.8 +0.2
comp=Z,81nm,1.0s
SPAK Spaichingen-Ko 80.74 336 *eP* P 01 11 23.4 -0.1
ALN Alexandroupoli 80.74 321 P P 01 11 22.5 -1.0
ALN Alexandroupoli 80.74 321 *eP* P 01 11 22.7 -0.8
USIN University of 80.78 44 *eP* P 01 11 24.5 +0.7
comp=Z,38nm,1.0s
632A Uvalde 80.80 57⇑P P 01 11 24.3 +0.2
baz=81
ABTA Abfaltersbach 80.83 333⇑*iP* P 01 11 23.1 -0.9
comp=Z,21nm,1.0s,SNR=11
ABTA Abfaltersbach 80.83 333⇑*iP* P 01 11 23.1 -0.9
comp=Z,21nm,1.0s
CDF Champ du Feu 80.88 337⇑*iP* P 01 11 24.1 -0.2
comp=Z,104nm,0.9s
CDF Champ du Feu 80.88 337⇑*iP* P 01 11 24.1 -0.2
CDF pmax pmax
comp=Z,104nm,0.9s
CDF Champ du Feu 80.88 337⇑*iP* P 01 11 24.1 -0.2
comp=Z,104nm,0.9s
VISS Visnje 80.90 331 *i* P P 01 11 23.4 -1.0
BOJS Bojanci 81.03 331 *i* P P 01 11 24.3 -0.6
JAVS Javornik 81.08 332 *i* P P 01 11 24.0 -1.4
ECH Echery 81.09 337 *eP* P 01 11 25.5 +0.2
ECH pmax pmax
comp=Z,43nm,0.9s
ECH Echery 81.09 337 *eP* P 01 11 25.5 +0.2
comp=Z,43nm,0.9s
ECH Echery 81.09 337 *eP* P 01 11 25.0 -0.3
FETA Feichten 81.14 334⇓*iP* P 01 11 25.9 +0.1
comp=Z,28nm,0.9s,SNR=21
FETA Feichten 81.14 334⇓*iP* P 01 11 25.9 +0.1
comp=Z,28nm,0.9s
DAVA Damuels 81.16 335⇑*iP* P 01 11 25.6 -0.3
comp=Z,47nm,0.8s,SNR=24
DAVA Damuels 81.16 335⇑*iP* P 01 11 25.6 -0.3
comp=Z,47nm,0.8s
MMB Musomiste 81.16 323 *eP* P 01 11 25.1 -0.7
PAGF Fort de Pagny 81.16 338⇑*iP* P 01 11 26.0 +0.4
comp=Z,56nm,0.8s
PAGF Fort de Pagny 81.16 338⇑*iP* P 01 11 26.0 +0.4
comp=Z,56nm,0.8s
FELD Feldberg im Sc 81.16 336 *eP* P 01 11 25.6 -0.3
ISP Isparta 81.19 317 *eP* P 01 11 25.8 -0.3
ISP pmax pmax
comp=Z,23nm,0.8s
ISP Isparta 81.19 317 *eP* P 01 11 25.8 -0.3
comp=Z,23nm,0.8s
KKB Krupnik 81.19 324 *eP* P 01 11 25.7 -0.3
WCI Wyandotte Cave 81.22 43 *eP* P 01 11 26.0 -0.2
WCI pmax pmax
comp=Z,22nm,1.1s
WCI Wyandotte Cave 81.22 43 *eP* P 01 11 26.0 -0.2
comp=Z,22nm,1.1s
732A Laxson Ranch, 81.27 58⇑P P 01 11 27.0 +0.4
baz=81
NVR Nevrokopi 81.30 323 P P 01 11 25.6 -1.0
NVR Nevrokopi 81.30 323 *eP* P 01 11 25.3 -1.3
KAVA Kavala 81.32 322 P P 01 11 25.8 -0.8
TRI Trieste 81.35 332 *eP* P 01 11 25.4 -1.3
TRI pmax pmax
comp=Z,31nm,0.9s
TRI Trieste 81.35 332 *eP* P 01 11 25.4 -1.3
comp=Z,31nm,0.9s
MEZF Maizieres J'vi 81.38 338⇑*iP* P 01 11 27.1 +0.3
comp=Z,152nm,0.9s
MEZF Maizieres J'vi 81.38 338⇑*iP* P 01 11 27.1 +0.3
comp=Z,152nm,0.9s
THEF They Montfort 81.39 338 *eP* P 01 11 26.9 0.0
THEF They Montfort 81.39 338 *eP* P 01 11 26.9 0.0
THEF They Montfort 81.39 338 *eP* P 01 11 26.9 0.0
PLE Pljevlja 81.42 327⇑*iP* P 01 11 26.3 -1.0
MOF Molkenrain 81.43 337 *eP* P 01 11 26.8 -0.4
MOF Molkenrain 81.43 337 *eP* P 01 11 26.8 -0.4
MOF Molkenrain 81.43 337 *eP* P 01 11 26.8 -0.4
HAU Haudompre 81.50 337⇑*iP* P 01 11 27.2 -0.3
comp=Z,53nm,0.8s
HAU *eR*
comp=Z,187nm,20.5s
HAU Haudompre 81.50 337⇑*iP* P 01 11 27.2 -0.3
HAU pmax pmax
comp=Z,53nm,0.8s
HAU Haudompre 81.50 337⇑*iP* P 01 11 27.2 -0.3
comp=Z,53nm,0.8s
PMOR Pomariorio Ree 81.52 122 *eT* T 02 40 39.8
comp=Z,39nm,0.2s
HINF Hinteralfeld 81.53 337⇑*iP* P 01 11 27.2 -0.5
comp=Z,42nm,0.9s
HINF Hinteralfeld 81.53 337⇑*iP* P 01 11 27.2 -0.5
HINF pmax pmax
comp=Z,42nm,0.9s
HINF Hinteralfeld 81.53 337⇑*iP* P 01 11 27.2 -0.5
comp=Z,42nm,0.9s
SRS Serrai 81.61 323 P P 01 11 27.0 -1.2
FUORN Ofenpass-Fuorn 81.64 334 *eP* P 01 11 28.9 +0.4
SFTF Sexfontaines 81.66 338⇑*iP* P 01 11 28.3 0.0
comp=Z,173nm,0.8s
SFTF Sexfontaines 81.66 338⇑*iP* P 01 11 28.3 0.0
comp=Z,173nm,0.8s
BBS Basel-Blauen 81.68 336 *eP* P 01 11 28.4 -0.1
BBS Basel-Blauen 81.68 336 *eP* P 01 11 28.4 -0.1
UPM Unac-Piva 81.71 327⇑*iP* P 01 11 27.6 -1.3
SKO Skopje 81.77 325 *i* P P 01 11 28.3 -0.7
KNT Kendrikon 81.86 324 P P 01 11 28.6 -0.9
VAY Valandovo 81.86 324 P P 01 11 28.6 -0.9

VAY Valandovo 81.86 324 *i* P P 01 11 28.3 -1.2
LIA Limnos Island 81.94 321 P P 01 11 29.1 -0.8
LIA Limnos Island 81.94 321 *e*P P 01 11 21.6 -8.3
LOMF Lomont 81.97 337 *e*P P 01 11 30.0 -0.1
LOMF Lomont 81.97 337 *e*P P 01 11 30.0 -0.1
LOMF Lomont 81.97 337 *e*P P 01 11 30.0 -0.1
NKY Niksic 82.01 327⇑*i*P P 01 11 29.3 -1.1
TUE Stuetta 82.05 335 *e*P P 01 11 30.6 -0.1
comp=Z,39nm,0.8s
CSS Prodhromos 82.07 313 *e*P P 01 11 30.0 -0.7
comp=Z,33nm,0.8s
OUR Ouranopolis 82.09 322 P P 01 11 29.2 -1.5
BRY Bratogost 82.10 327⇑*i*P P 01 11 29.6 -1.3
WVT Waverly 82.16 45 *e*P P 01 11 30.5 -0.6
WVT pmax pmax
comp=Z,6.0nm,0.9s
WVT Waverly 82.16 45 *e*P P 01 11 30.5 -0.6
comp=Z,6.2nm,0.9s
GRG Griva 82.23 324 P P 01 11 30.3 -1.2
TTG Podgorica 82.23 327 *e*P P 01 11 30.6 -0.8
PLG Polygyros 82.28 323 P P 01 11 30.9 -0.9
PLG Polygyros 82.28 323 *e*P P 01 11 30.1 -1.7
PHP Peshkopia 82.41 325 P P 01 11 31.1 -1.3
FLN La Foliniere 82.45 342⇑*i*P P 01 11 32.3 -0.1
comp=Z,82nm,0.9s
FLN *e*R
comp=Z,181nm,21.0s
FLN La Foliniere 82.45 342⇑*i*P P 01 11 32.3 -0.1
FLN pmax pmax
comp=Z,82nm,0.9s
FLN La Foliniere 82.45 342⇑*i*P P 01 11 32.3 -0.1
comp=Z,82nm,0.9s
BUM Brajici-Budva 82.48 327⇑*i*P P 01 11 31.8 -1.0
HCY Herceg Novi 82.51 327⇑*i*P P 01 11 31.8 -1.1
LDF La Druitiere 82.53 342⇑*i*P P 01 11 32.6 -0.3
comp=Z,104nm,1.2s
LDF La Druitiere 82.53 342⇑*i*P P 01 11 32.6 -0.3
LDF pmax pmax
comp=Z,104nm,1.2s
LDF La Druitiere 82.53 342⇑*i*P P 01 11 32.6 -0.3
comp=Z,104nm,1.2s
PAIG Paliouri 82.56 322 P P 01 11 32.3 -0.8
PPT Papeete 82.57 125 LR LR 01 38 58.9
comp=Z,275nm,21.8s,baz=209,slow=29
PPT2 Papeete2 82.59 125 *e*LR LR 01 37 23.9
comp=Z,342nm,23.5s,baz=325
BIA Bitola 82.62 324 *i* P P 01 11 32.1 -1.4
ULC Ulcinj 82.64 326⇑*i*P P 01 11 32.6 -1.0
TIAR Tiarei 82.69 125 *e*T T 02 42 08.2
comp=Z,11nm,0.3s
SENIN Lac Senin/Sane 82.74 336 *e*P P 01 11 34.3 0.0
LOR Lormes 82.83 339 *e*P P 01 11 34.3 -0.2
comp=Z,118nm,0.9s
LOR *e*R
comp=Z,293nm,22.5s
LOR Lormes 82.83 339 *e*P P 01 11 34.3 -0.2
comp=Z,118nm,0.9s
CABF La Chapelle 82.85 337 *e*P P 01 11 34.7 0.0
comp=Z,32nm,0.8s
CABF La Chapelle 82.85 337 *e*P P 01 11 34.7 0.0
CABF pmax pmax
comp=Z,33nm,0.8s
CABF La Chapelle 82.85 337 *e*P P 01 11 34.7 0.0
comp=Z,32nm,0.8s
GRR Gorron 82.89 342⇑*i*P P 01 11 34.7 0.0
comp=Z,134nm,1.0s
GRR Gorron 82.89 342⇑*i*P P 01 11 34.7 0.0
GRR Gorron 82.89 342⇑*i*P P 01 11 34.7 0.0
comp=Z,134nm,1.0s
AOS Alonnisos 83.10 322 P P 01 11 34.1 -1.9
SSF Saint Saulge 83.11 339⇑*i*P P 01 11 35.9 0.0
comp=Z,46nm,0.8s
SSF Saint Saulge 83.11 339⇑*i*P P 01 11 35.9 0.0
SSF pmax pmax
comp=Z,46nm,0.8s
SSF Saint Saulge 83.11 339⇑*i*P P 01 11 35.9 0.0
comp=Z,46nm,0.8s
HYF Humbligny 83.13 339⇑*i*P P 01 11 36.4 +0.4
HYF Humbligny 83.13 339⇑*i*P P 01 11 36.4 +0.4
XOR Xorichti 83.23 322 P P 01 11 34.8 -1.9
NEST Nestorio 83.24 324 P P 01 11 35.8 -1.0
NEO Neokhori 83.27 322 *e*P P 01 11 35.7 -1.2
SGMF Saint Gilles 83.37 343 *e*P P 01 11 37.2 0.0
comp=Z,182nm,1.4s
SGMF Saint Gilles 83.37 343 *e*P P 01 11 37.2 0.0
SGMF Saint Gilles 83.37 343 *e*P P 01 11 37.2 0.0
comp=Z,182nm,1.4s
AVF Avril sur Loir 83.40 339⇑*i*P P 01 11 37.6 +0.2
comp=Z,147nm,1.1s
AVF Avril sur Loir 83.40 339⇑*i*P P 01 11 37.6 +0.2
AVF Avril sur Loir 83.40 339⇑*i*P P 01 11 37.6 +0.2
comp=Z,147nm,1.1s
SMF Signal de Mont 83.41 338⇑*i*P P 01 11 37.6 +0.1
comp=Z,238nm,1.0s
SMF Signal de Mont 83.41 338⇑*i*P P 01 11 37.6 +0.1
SMF Signal de Mont 83.41 338⇑*i*P P 01 11 37.6 +0.1
comp=Z,238nm,1.0s
ROSF Rostrenen 83.43 344⇑*i*P P 01 11 37.6 +0.1
comp=Z,78nm,1.2s
ROSF Rostrenen 83.43 344⇑*i*P P 01 11 37.6 +0.1
ROSF pmax pmax
comp=Z,79nm,1.2s
ROSF Rostrenen 83.43 344⇑*i*P P 01 11 37.6 +0.1
comp=Z,78nm,1.2s
RSL Roselend 83.55 336 *e*P P 01 11 39.4 +1.0
MRKA Markates 83.61 322 P P 01 11 37.2 -1.5
LPL La Plagne 83.67 336⇑*i*P P 01 11 39.6 +0.5
comp=Z,59nm,0.9s
LPL La Plagne 83.67 336⇑*i*P P 01 11 39.6 +0.5
LPL pmax pmax
comp=Z,59nm,0.9s
LPL La Plagne 83.67 336⇑*i*P P 01 11 39.6 +0.5
comp=Z,59nm,0.9s
MEH Mehetia 83.68 124 *e*T T 02 43 22.2
comp=Z,114nm,0.3s
LPG La Plagne 83.69 336⇑*i*P P 01 11 39.8 +0.5
comp=Z,71nm,0.9s
LPG La Plagne 83.69 336⇑*i*P P 01 11 39.8 +0.5
LPG pmax pmax
comp=Z,71nm,0.9s
LPG La Plagne 83.69 336⇑*i*P P 01 11 39.8 +0.5
comp=Z,71nm,0.9s
BGF Bois d'Agland 83.75 339⇑*i*P P 01 11 39.4 +0.2
comp=Z,34nm,0.8s
BGF Bois d'Agland 83.75 339⇑*i*P P 01 11 39.4 +0.2
BGF pmax pmax
comp=Z,34nm,0.8s
BGF Bois d'Agland 83.75 339⇑*i*P P 01 11 39.4 +0.2
comp=Z,34nm,0.8s
QUIF Quistinic 83.81 343 *e*P P 01 11 38.4 -1.1
QUIF Quistinic 83.81 343 *e*P P 01 11 38.4 -1.1
QUIF Quistinic 83.81 343 *e*P P 01 11 38.4 -1.1
SWET Sewanee 83.81 44 *e*P P 01 11 39.2 -0.5
comp=Z,21nm,0.8s
RAYN Ar Rayn 83.88 298 P P 01 11 40.0 -0.3
comp=Z,95nm,0.6s,SNR=21
AGG Agios Georgios 83.89 323 *e*P P 01 11 37.7 -2.4
LKR Lokris 83.91 322 P P 01 11 37.8 -2.4
LKR Lokris 83.91 322 *e*P P 01 11 38.3 -1.9
JAN Janina 83.96 324 P P 01 11 39.4 -1.1
JAN Janina 83.96 324 *e*P P 01 11 39.4 -1.1
BNI Bardonecchia 84.11 336 *e*P P 01 11 41.7 +0.4
BNI pmax pmax
comp=Z,18nm,0.8s
BNI Bardonecchia 84.11 336 *e*P P 01 11 41.7 +0.4
comp=Z,18nm,0.8s
AGO Saint Agoulin 84.14 339 *e*P P 01 11 41.5 +0.2
AGO Saint Agoulin 84.14 339 *e*P P 01 11 41.5 +0.2
TCF Toulx Ste Croi 84.15 339 *e*P P 01 11 41.6 +0.3
comp=Z,86nm,1.0s
TCF Toulx Ste Croi 84.15 339 *e*P P 01 11 41.6 +0.3
TCF pmax pmax
comp=Z,86nm,1.0s
TCF Toulx Ste Croi 84.15 339 *e*P P 01 11 41.6 +0.3
comp=Z,86nm,1.0s
IGT Igoumenitsa 84.28 324 P P 01 11 39.9 -2.1
CPCT Cooper Cave 84.30 43 *e*P P 01 11 42.2 0.0
KEK Kerkira 84.34 325 P P 01 11 41.1 -1.2
MBDF Montbardon 84.39 336⇑*i*P P 01 11 42.6 -0.1
comp=Z,38nm,0.9s
MBDF Montbardon 84.39 336⇑*i*P P 01 11 42.6 -0.1
MBDF pmax pmax
comp=Z,38nm,0.9s
MBDF Montbardon 84.39 336⇑*i*P P 01 11 42.6 -0.1
comp=Z,38nm,0.9s

MFF Saint Martin d 84.42 341⇑*i*P P 01 11 42.2 -0.4
comp=Z,24nm,0.8s
MFF Saint Martin d 84.42 341⇑*i*P P 01 11 42.2 -0.4
MFF pmax pmax
comp=Z,24nm,0.8s
MFF Saint Martin d 84.42 341⇑*i*P P 01 11 42.2 -0.4
comp=Z,24nm,0.8s
NAIG Nisos Aigina 84.45 321 *e*P P 01 11 39.0 -3.9
PYM Petit Puy Mans 84.46 339 *e*P P 01 11 43.3 +0.4
PYM Petit Puy Mans 84.46 339 *e*P P 01 11 43.3 +0.4
PYM Petit Puy Mans 84.46 339 *e*P P 01 11 43.3 +0.4
ORIF Oris-en-Rattie 84.46 336⇑*i*P P 01 11 43.6 +0.6
comp=Z,67nm,0.7s
ORIF *e*R
comp=Z,232nm,20.8s
ORIF Oris-en-Rattie 84.46 336⇑*i*P P 01 11 43.6 +0.6
ORIF pmax pmax
comp=Z,67nm,0.7s
ORIF Oris-en-Rattie 84.46 336⇑*i*P P 01 11 43.6 +0.6
comp=Z,67nm,0.7s
SSB Saint Sauveur 84.50 337 *e*P P 01 11 42.9 -0.2
SSB pmax pmax
comp=Z,62nm,0.9s
SSB Saint Sauveur 84.50 337 *e*P P 01 11 42.9 -0.2
comp=Z,62nm,0.9s
SSB Saint Sauveur 84.50 337 *e*P P 01 11 43.3 +0.2
EFP Efpalio 84.57 323 P P 01 11 41.9 -1.6
SAOF Saorge 84.83 335 *e*P P 01 11 43.7 -1.1
SAOF Saorge 84.83 335 *e*P P 01 11 43.7 -1.1
SAOF Saorge 84.83 335 *e*P P 01 11 43.7 -1.1
VIVF Saint-Julien-l 84.85 337⇑*i*P P 01 11 45.4 +0.5
comp=Z,106nm,1.0s
VIVF Saint-Julien-l 84.85 337⇑*i*P P 01 11 45.4 +0.5
VIVF pmax pmax
comp=Z,106nm,1.0s
VIVF Saint-Julien-l 84.85 337⇑*i*P P 01 11 45.4 +0.5
comp=Z,106nm,1.0s
AUTN L'Aution 84.86 335 *e*P P 01 11 46.2 +1.0
LBL Lubilhac 84.88 338 *e*P P 01 11 45.6 +0.5
LBL Lubilhac 84.88 338 *e*P P 01 11 45.6 +0.5
LBL Lubilhac 84.88 338 *e*P P 01 11 45.6 +0.5
TOUF Mont Tournerai 84.90 335 *e*P P 01 11 45.0 -0.3
TOUF Mont Tournerai 84.90 335 *e*P P 01 11 45.0 -0.3
TOUF Mont Tournerai 84.90 335 *e*P P 01 11 45.0 -0.3
OG26 St.-Nazaire-De 84.94 337 *e*P P 01 11 46.1 +0.8
SBF Sospel 84.98 335 *e*P P 01 11 45.2 -0.4
comp=Z,115nm,1.1s
SBF Sospel 84.98 335 *e*P P 01 11 45.2 -0.4
SBF pmax pmax
comp=Z,115nm,1.1s
SBF Sospel 84.98 335 *e*P P 01 11 45.2 -0.4
comp=Z,115nm,1.1s
MVIF Mont Vial 85.04 335 *e*P P 01 11 45.7 -0.3
MVIF Mont Vial 85.04 335 *e*P P 01 11 45.7 -0.3
MVIF Mont Vial 85.04 335 *e*P P 01 11 45.7 -0.3
RLS Riolos of Patr 85.06 323 P P 01 11 44.5 -1.5
RLS Riolos of Patr 85.06 323 *e*P P 01 11 43.9 -2.1
REVF Revere 85.12 335 *e*P P 01 11 44.6 -1.6
REVF Revere 85.12 335 *e*P P 01 11 44.6 -1.6
REVF Revere 85.12 335 *e*P P 01 11 44.6 -1.6
CALN Calern 85.25 335 *e*P P 01 11 46.6 -0.4
CALN Calern 85.25 335 *e*P P 01 11 46.6 -0.4
CALN Calern 85.25 335 *e*P P 01 11 46.6 -0.4
RJF Les Rejaudoux 85.25 339⇑*i*P P 01 11 47.2 +0.4
comp=Z,98nm,1.3s
RJF *e*R
comp=Z,293nm,22.8s
RJF Les Rejaudoux 85.25 339⇑*i*P P 01 11 47.2 +0.4
RJF pmax pmax
comp=Z,98nm,1.3s
RJF Les Rejaudoux 85.25 339⇑*i*P P 01 11 47.2 +0.4
comp=Z,98nm,1.3s
KFL Anninata 85.30 323 P P 01 11 46.4 -0.8
VLS Valsamata 85.33 323 P P 01 11 45.4 -1.9
VLS Valsamata 85.33 323 *e*P P 01 11 45.5 -1.9
EIL Elat 85.35 309 *e*P P 01 11 47.9 +0.3
SMRF Simiane la Rot 85.42 336 *e*P P 01 11 48.2 +0.5
comp=Z,126nm,1.6s
SMRF Simiane la Rot 85.42 336 *e*P P 01 11 48.2 +0.5
comp=Z,126nm,1.6s
CAF Calviac 85.47 339⇑*i*P P 01 11 48.8 +0.9
comp=Z,52nm,1.0s
CAF Calviac 85.47 339⇑*i*P P 01 11 48.8 +0.9
CAF pmax pmax
comp=Z,52nm,1.0s
CAF Calviac 85.47 339⇑*i*P P 01 11 48.8 +0.9
comp=Z,52nm,1.0s
FRF La Foret Royal 85.49 335 *e*P P 01 11 47.8 -0.2
FRF La Foret Royal 85.49 335 *e*P P 01 11 47.8 -0.2
FRF La Foret Royal 85.49 335 *e*P P 01 11 47.8 -0.2
ITM Ithomi 85.61 322 *e*P P 01 11 44.6 -4.2
CUC Castrocucco 85.64 328 *e*P P 01 11 47.5 -1.4
PGF Pioggiola 85.70 333⇑*i*P P 01 11 48.9 -0.4
comp=Z,64nm,1.1s
PGF Pioggiola 85.70 333⇑*i*P P 01 11 48.9 -0.4
PGF pmax pmax
comp=Z,64nm,1.1s
PGF Pioggiola 85.70 333⇑*i*P P 01 11 48.9 -0.4
comp=Z,64nm,1.1s
LMR La Mourre 85.74 335 *e*P P 01 11 49.3 0.0
comp=Z,125nm,1.1s
LMR La Mourre 85.74 335 *e*P P 01 11 49.3 0.0
LMR pmax pmax
comp=Z,125nm,1.1s
LMR La Mourre 85.74 335 *e*P P 01 11 49.3 0.0
comp=Z,125nm,1.1s
LFF La Frestale 85.78 340 *e*P P 01 11 49.1 -0.3
comp=Z,59nm,1.1s
LFF La Frestale 85.78 340 *e*P P 01 11 49.1 -0.3
LFF pmax pmax
comp=Z,59nm,1.1s
LFF La Frestale 85.78 340 *e*P P 01 11 49.1 -0.3
comp=Z,59nm,1.1s
LASF Ste Croix 85.79 337⇑*i*P P 01 11 50.4 +0.8
comp=Z,55nm,1.0s
LASF Ste Croix 85.79 337⇑*i*P P 01 11 50.4 +0.8
comp=Z,55nm,1.0s
IDI Anoyia 85.88 319 *e*P P 01 11 48.8 -1.4
comp=Z,487nm,2.9s
TIP Timpagrande 86.00 327 *e*P P 01 11 50.1 -0.7
comp=Z,68nm,1.2s
KMSC Kings Mountain 86.04 41 ⇑P P 01 11 50.5 -0.5
baz=86
OSPF L'Ospedale 86.44 333 *e*P P 01 11 52.5 -0.4
OSPF L'Ospedale 86.44 333 *e*P P 01 11 52.5 -0.4
MTLF Montolieu 86.91 338 *e*P P 01 11 54.7 -0.3
MTLF Montolieu 86.91 338 *e*P P 01 11 54.7 -0.3
MTLF Montolieu 86.91 338 *e*P P 01 11 54.7 -0.3
CEL Celeste 87.13 327 *e*P P 01 11 55.1 -1.1
TBI Tubuai 87.25 128 *e*LR LR 01 39 33.0
comp=Z,236nm,26.5s,baz=319
TBI *e*T T 02 47 49.8
comp=Z,11nm,0.3s
EPF Esparros 87.67 339⇑*i*P P 01 11 57.4 -1.4
comp=Z,9.9nm,0.7s
EPF Esparros 87.67 339⇑*i*P P 01 11 57.4 -1.4
EPF pmax pmax
comp=Z,9.0nm,0.7s
EPF Esparros 87.67 339⇑*i*P P 01 11 57.4 -1.4
comp=Z,8.9nm,0.7s
SJPF Ste Jean 87.97 341 *e*P P 01 11 59.0 -1.2
SJPF Ste Jean 87.97 341 *e*P P 01 11 59.0 -1.2
SJPF Ste Jean 87.97 341 *e*P P 01 11 59.0 -1.2
ETSF Etsaut 88.01 340 *e*P P 01 11 59.9 -0.6
ETSF Etsaut 88.01 340 *e*P P 01 11 59.9 -0.6
ETSF Etsaut 88.01 340 *e*P P 01 11 59.9 -0.6
TIGA Tifton 88.02 45 ⇓P P 01 12 01.0 +0.4
baz=88
KEST Kesra 91.76 330 P P 01 12 17.6 -0.5
KEST Kesra 91.76 330 P P 01 12 17.6 -0.5
comp=Z,4.7nm,0.9s,baz=325,slow=8.5,SNR=7.1
KEST LR LR 01 55 42.0
comp=Z,78nm,21.3s,baz=332,slow=37
ESDC Sonseca Array 91.86 341 P P 01 12 17.1 -1.3
ESDC Sonseca Array 91.86 341 P P 01 12 17.1 -1.3
comp=Z,0.4nm,0.4s,baz=6.9,slow=3.9,SNR=7.5
ESDC LR LR 01 56 56.7
comp=Z,100nm,18.4s,baz=275,slow=38
MDT Midelt 98.57 340 P P 01 12 48.4 -0.9
MDT Midelt 98.57 340 P P 01 12 48.4 -0.9
comp=Z,1.5nm,0.8s,baz=14,slow=4.2,SNR=2.5
TORD Torodi Ar. Bea 115.13 327 PKP PKPdf 01 17 50.8 -1.0
TORD PKKPbc PKKPbc 01 28 29.6 +4.3
TORD Torodi Ar. Bea 115.13 327 PKP PKPdf 01 17 50.8 -1.0
comp=Z,1.4nm,0.5s,baz=14,slow=2.3,SNR=29
TORD PKKPbc PKKPbc 01 28 29.6 +4.3
comp=Z,0.4nm,0.8s,baz=198,slow=5.4,SNR=4.7
DBIC Dimbokro 123.45 332 PKP PKPdf 01 18 07.0 -0.9
DBIC Dimbokro 123.45 332 PKP PKPdf 01 18 07.0 -0.9
comp=Z,9.3nm,0.8s,baz=19,slow=2.4,SNR=16
VNDA Vanda 123.52 177 PKP PKPdf 01 18 05.6 -0.4
VNDA Vanda 123.52 177 PKP PKPdf 01 18 05.6 -0.4
comp=Z,1.4nm,0.7s,baz=318,slow=4.7,SNR=8.7
LIC Lamto 123.92 332⇑*i*PKIKP PKPdf 01 18 07.7 -1.1
comp=Z,16nm,0.7s
LIC *e*R
comp=Z,123nm,18.5s
LIC Lamto 123.92 332⇑*i*PKPdf PKPdf 01 18 07.7 -1.1
BOSA Boshof 134.90 274 PKPpre PKPpre 01 18 25.8
BOSA PKP PKiKP 01 18 30.2 -0.5
BOSA Boshof 134.90 274 PKhKP PKPpre 01 18 25.8
comp=Z,3.4nm,0.9s,baz=156,slow=10,SNR=5.5
BOSA PKP PKiKP 01 18 30.2 -0.5
comp=Z,3.4nm,0.8s,baz=67,slow=0.8,SNR=6.1
LPAZ La Paz 135.48 61 *e*PKPdf PKPdf 01 18 29.6 -1.6
LPAZ PKP PKPdf 01 18 30.2 -1.1
LPAZ La Paz 135.48 61 PKP PKPdf 01 18 30.2 -1.1
comp=Z,3.2nm,0.8s,baz=13,slow=5.2,SNR=13
BDFB Brasilia 145.41 35 PKPbc PKPbc 01 18 47.9 -0.6
BDFB Brasilia 145.41 35 PKPbc PKPbc 01 18 47.9 -0.6
comp=Z,7.2nm,0.8s,baz=307,slow=2.5,SNR=13
CFAA Coronel Fontan 146.05 79 PKPbc PKPdf 01 18 49.1 0.0
CFAA Coronel Fontan 146.05 79 PKPbc PKPdf 01 18 49.1 0.0
comp=Z,0.8nm,0.7s,baz=309,slow=3.3,SNR=18
MAIT Maitri 148.69 204 *e*P PKPdf 01 18 44.0 -8.2
PLCA Paso Flores 149.10 95 *e*PKPdf PKPdf 01 18 52.9 -1.1
PLCA PKP PKPdf 01 18 53.1 -0.8
PLCA PKPbc PKPbc 01 18 57.9 -0.2
PLCA *e*PKPbc PKPbc 01 18 58.0 -0.2
PLCA Paso Flores 149.10 95 PKP PKPdf 01 18 53.1 -0.8
comp=Z,12nm,0.8s,baz=222,slow=1.3,SNR=6.3
PLCA PKPbc PKPbc 01 18 57.9 -0.2
comp=Z,12nm,0.8s,baz=265,slow=2.3,SNR=27
CPUP Villa Florida 149.61 60 PKP PKPdf 01 18 54.5 -0.5
CPUP PKPbc PKPbc 01 18 59.4 -0.3
CPUP Villa Florida 149.61 60 PKP PKPdf 01 18 54.5 -0.5
comp=Z,6.8nm,0.6s,baz=315,slow=2.9,SNR=2.7
CPUP PKPbc PKPbc 01 18 59.4 -0.3
comp=Z,12nm,0.8s,baz=307,slow=2.6,SNR=27
SNAA Sanae 151.67 197 *e*P PKPbc 01 19 02.5 -0.8
SNAA Sanae 151.67 197 PKPbc PKPbc 01 19 02.3 -1.0
SNAA Sanae 151.67 197 PKPbc PKPbc 01 19 02.3 -1.0
comp=Z,3.3nm,0.6s,baz=191,slow=1.9,SNR=60
VNA2 Neumayer--Watz 153.14 195 *e*P PKPbc 01 19 06.3 -0.2
VNA2 Neumayer--Watz 153.14 195 *e*Kuril pPKPbc 01 19 18.6 +1.7
VNA2 Neumayer--Watz 153.14 195 *e*Kuril PKPab 01 19 21.4 +3.0
VNA2 Neumayer--Watz 153.14 195 *e*pPKPab pPKPab 01 19 26.2 -2.3
VNA2 Neumayer--Watz 153.14 195 *e*sPKPab sPKPab 01 19 33.9 +1.8
VNA2 Neumayer--Watz 153.14 195 *e*PP PP 01 22 53.4 +1.1
VNA3 Neumayer Olymp 153.26 193 *e*P PKPbc 01 19 06.2 -0.6
VNA3 Neumayer Olymp 153.26 193 *e*Kuril pPKPbc 01 19 18.9 +1.7
VNA3 Neumayer Olymp 153.26 193 *e*Kuril PKPab 01 19 21.5 +2.6
VNA3 Neumayer Olymp 153.26 193 *e*pPKPab pPKPab 01 19 30.3 +1.3
VNA3 Neumayer Olymp 153.26 193 *e*sPKPab sPKPab 01 19 33.4 +0.8
VNA3 Neumayer Olymp 153.26 193 *e*PP PP 01 22 53.3 +0.4
VNA1 Neumayer--Stat 153.53 195 *e*Kuril PKPab 01 19 20.3 +0.3

ISCJB ***08*** *01:13:19.6±0.6, 35°.36N±0°.05×140°.37E±0°.08, h39km±5km, mb3.4/4, Error ellipse: s-maj=12.7km s-min=5.6km az=148.7*
JMA ***08*** *01:13:19.9±0.2, 35°.43N×140°.37E, h27km±2km, M3.3*
JMA Felt II J1.
IDC ***08*** *01:13:20.6±4.7, 35°.31N×140°.45E, h34km±39km, mb3.3/4, mb1 3.7/7, mb1mx3.4/28, mbtmp3.6/7, ML4.0/3, Error ellipse: s-maj=36.9km s-min=18.4km az=75.0*
ISC 08 01:13:19.9±1.0, 35°.39N±0°.06×140°.41E±0°.07, h29km±6km, n17, σ1°93/23, mb3.4/4, 1C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JCN	Nagara	0.17	280	⇓P		Pb	01 13 25.4	-0.3
JCN				S		Sb	01 13 30.0	+0.4
KTR	Katsuura	0.25	197	⇑P		Pb	01 13 26.5	-0.1
KTR				*e*S		Sb	01 13 31.4	+0.2
BSO4	Boso 4	0.40	188	P		Pn	01 13 29.4	-0.2
BSO4				S		Sn	01 13 38.1	+2.0
BSO3	Boso 3	0.59	172	⇓P		Pn	01 13 32.0	-0.1
BSO2	Boso 2	0.70	156	*e*S		Sn	01 13 43.0	-0.1
JYT	Yasato	0.85	348	P		Pn	01 13 34.4	-1.5
BSO1	Boso 1	0.87	147	⇓P		Pn	01 13 35.3	-0.3
BSO1				*e*S		Sb	01 13 48.4	+1.2
JIM2	Oshima 3	1.04	230	P		Pn	01 13 37.4	-1.2
JOD2	Odawara 2	1.08	264	P		Pn	01 13 38.2	-0.9
MJAR	Matsushiro Arr	2.12	303	Pn		Pn	01 13 54.5	+1.1
	8.3nm,0.3s,baz=119,slow=11,SNR=24							
MAT	Matsushiro	2.12	303	P		Pn	01 13 54.6	+1.2
MAT				*e*S		Sn	01 14 19.3	+0.5
JHJ	Hachijo jima 2	2.32	193	Pn		Pn	01 13 55.2	-0.9
	114nm,0.3s,baz=18,slow=17,SNR=31							
JHJ				Sn		Sn	01 14 21.6	-2.0
	93nm,0.3s,baz=86,slow=22,SNR=12							
CBIJ	Chichi jima	8.41	169	Pn		Pn	01 15 18.6	-1.2
	11nm,0.3s,baz=331,slow=19,SNR=7.2							
ZALV	Zalesovo Beam	42.44	314	P		P	01 21 12.3	+0.5
	0.4nm,0.4s,baz=101,slow=7.7,SNR=4.0							
MKAR	Makanchi Array	44.32	303	P		P	01 21 27.4	+0.3
	0.4nm,0.7s,baz=83,slow=9.3,SNR=5.0							
ILAR	Eielson Array	51.32	32	P		P	01 22 21.4	+0.3
	0.2nm,0.6s,baz=271,slow=6.3,SNR=4.4							
WRA	Warramunga Arr	55.33	187	P		P	01 22 50.5	-0.4
	0.4nm,0.4s,baz=4.0,slow=7.2,SNR=2.7							

IDC 08 01:16:10.8±12.0, 12°.59S×167°.10E, h226km±107km, mb3.5/8, mb1 3.6/8, mb1mx3.4/21, mbtmp3.5/8, Error ellipse: s-maj=56.7km s-min=33.3km az=95.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	21.34	247	P		P	01 20 41.1	+0.5
	4.1nm,0.7s,baz=81,slow=14,SNR=4.9							
STKA	Stephens Creek	30.30	227	P		P	01 22 02.0	+0.9
	1.0nm,0.5s,baz=56,slow=7.3,SNR=5.5							
WRA	Warramunga Arr	32.25	253	P		P	01 22 17.9	-0.6
	1.0nm,0.5s,baz=83,slow=9.1,SNR=4.6							
ASAR	Alice Springs	33.34	246	P		P	01 22 27.2	-0.6
	0.6nm,0.5s,baz=72,slow=9.4,SNR=9.4							
SONM	Songino Array	80.69	323	P		P	01 27 58.4	-0.5
	0.2nm,0.5s,baz=130,slow=4.4,SNR=3.1							
ILAR	Eielson Array	84.55	18	P		P	01 28 17.9	-0.3
	2.1nm,0.6s,baz=224,slow=5.0,SNR=47							
MKAR	Makanchi Array	95.55	317	P		P	01 29 10.8	+0.5
	0.5nm,0.6s,baz=92,slow=6.3,SNR=6.3							
SNAA	Sanae	95.66	183	P		P	01 29 09.2	-1.2
	0.2nm,0.6s,baz=200,slow=12,SNR=5.1							
ARCES	ARCESS Array B	118.15	346	PKP		PKPdf	01 34 30.5	+0.2
	1.2nm,0.5s,baz=53,slow=2.2,SNR=11							
ESDC	Sonseca Array	151.89	345	PKPbc		PKPbc	01 35 40.0	+0.7
	0.2nm,0.3s,baz=6.5,slow=1.5,SNR=4.5							

ISCJB ***08*** *01:20:30.6±0.2, 15°.74N±0°.03×93°.78W±0°.03, h80km, mb4.5/84, Error ellipse: s-maj=5.2km s-min=2.4km az=35.8*
CASC ***08*** *01:20:30.6±3.0, 16°.05N×93°.98W, h33km±999km, MD4.5, mb4.7(NEIC)*
IDC ***08*** *01:20:31.0±0.6, 15°.80N×93°.77W, h78km±4km, mb4.1/18, mb1 4.3/20, mb1mx4.2/27, mbtmp4.1/20, MS3.4/6, Ms1 3.4/6, ms1mx3.1/34, Error ellipse: s-maj=16.3km s-min=6.6km az=50.0*
NEIC ***08*** *01:20:31.9±0.5, 15°.75N×93°.72W, h84km±4km, mb4.7/71, MD4.5(MEX), Error ellipse: s-maj=6.9km s-min=4.0km az=220.0*
NEIC Felt at Tonala and Tuxtla Gutierrez.
MEX ***08*** *01:20:32.3±0.5, 15°.69N×94°.01W, h17km±19km, MD4.5*
BJI ***08*** *01:20:36.5, 16°.00N×93°.30W, h131km, mB5.0/3*
ISC 08 01:20:30.9±0.4, 15°.71N±0°.04×93°.93W±0°.03, h81km±3km, n578, σ1°68/608, mb4.6/85, 182C-161D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TGIG		1.31	36	*i* P		Pn	01 20 53.9	0.0

TGIG *i* S **Sn** **01 21 09.5 -1.7**
TGIG **1.31 36** *i* P **Pn** **01 20 53.9 0.0**
TGIG *i* S **Sn** **01 21 09.5 -1.7**
CMIG **Matias Romero** **1.65 326** P **Pn** **01 20 58.1 0.0**
CMIG S **Sn** **01 21 18.9 0.0**
CMIG **Matias Romero** **1.65 326** P **Pn** **01 20 58.1 0.0**
115nm,0.3s,baz=154,slow=13,SNR=1482
CMIG S **Sn** **01 21 18.9 0.0**
855nm,0.3s,baz=130,slow=17,SNR=51
CMIG LR LR 01 21 39.4
comp=Z,461nm,18.0s,baz=188,slow=41
THIG **1.79 116** *i* P **Pn** **01 21 00.1 +0.1**
THIG *e*S **Sn** **01 21 21.9 -0.3**
THIG **1.79 116** *i* P **Pn** **01 21 00.1 +0.1**
THIG *e*S **Sn** **01 21 21.9 -0.3**
CCIG **Comitan** **1.81 72** *i* P **Pn** **01 21 00.8 +0.3**
CCIG *e*S **Sn** **01 21 22.7 -0.2**
CCIG **Comitan** **1.81 72** *i* P **Pn** **01 21 00.8 +0.3**
CCIG *e*S **Sn** **01 21 22.7 -0.2**
HUIG **Huatulco** **2.10 272** *i* P **Pn** **01 21 02.7 -1.4**
HUIG *i* S **Sn** **01 21 25.7 -3.8**
HUIG **Huatulco** **2.10 272** *i* P **Pn** **01 21 02.7 -1.4**
HUIG *i* S **Sn** **01 21 25.7 -3.8**
JAT **Jato** **2.61 122** *e*P **Pn** **01 21 12.8 +1.8**
VHO **Vista Hermosa** **3.01 297** *i* P **Pn** **01 21 18.0 +1.4**
VHO *i* S **Sn** **01 21 50.6 -1.2**
VHO **Vista Hermosa** **3.01 297** *e*P **Pn** **01 21 17.4 +0.8**
VHO *i* S **Sn** **01 21 50.6 -1.2**
FG6 **3.16 111** *e*P **Pn** **01 21 21.4 +2.7**
FG6 *e*S **Sn** **01 22 00.0 +4.6**
FUG **Fuego 3** **3.23 112** *e*P **Pn** **01 21 22.5 +2.9**
PCG **Pacaya** **3.46 112** *e*P Pn 01 21 25.9 +3.2
PCG *e*S Sn 01 22 13.4 +10
NBG **Las Nubes** **3.63 107** *e*P **Pn** **01 21 27.1 +2.0**
PNIG **Pinotepa** **4.09 280** *i* P **Pn** **01 21 30.6 -0.5**
PNIG *i* S **Sn** **01 22 17.2 -0.7**
PNIG **Pinotepa** **4.09 280** *i* P **Pn** **01 21 30.6 -0.5**
PNIG *i* S **Sn** **01 22 17.2 -0.7**
MRL **Marmol** **4.14 98** *e*P **Pn** **01 21 32.2 +0.4**
MRL *e*S **Sn** **01 22 17.9 -1.3**
TPIG **Tehuac#an** **4.25 310** *i* P **Pn** **01 21 34.8 +1.4**
TPIG *e*S **Sn** **01 22 21.1 -0.7**
TPIG **Tehuac#an** **4.25 310** *i* P **Pn** **01 21 33.3 -0.1**
TPIG *e*S **Sn** **01 22 21.1 -0.7**
LBRS **Las Brisas** **5.12 112** *i* P Pn 01 21 49.2 +4.0
LBRS *e*S Sn 01 22 51.0 +8.1
PPM **Popocatepetl** **5.59 307** *i* P Pn 01 21 57.5 +5.5
PPM *e*S **Sn** **01 22 54.8 -0.4**
PPM **Popocatepetl** **5.59 307** *i* P **Pn** **01 21 51.2 -0.8**
PPM *e*S **Sn** **01 22 54.8 -0.4**
ACX **Acapulco** **5.81 282** *i* P **Pn** **01 21 54.8 +0.3**
ACX *e*S **Sn** **01 23 00.2 +0.4**
ACX **Acapulco** **5.81 282** *i* P **Pn** **01 21 54.8 +0.3**
ACX *e*S **Sn** **01 23 00.2 +0.4**
YAIG **Yautepec** **5.82 303** *i* P **Pn** **01 21 57.7 +2.8**
YAIG *i* S **Sn** **01 22 59.9 -0.5**
YAIG **Yautepec** **5.82 303** *i* P **Pn** **01 21 57.7 +2.8**
YAIG *i* S **Sn** **01 22 59.9 -0.5**
CAIG **El Cayaco** **6.23 283** *i* P **Pn** **01 22 00.6 +0.4**
CAIG *e*S **Sn** **01 23 09.3 -0.7**
CAIG **El Cayaco** **6.23 283** *i* P **Pn** **01 22 00.6 +0.4**
CAIG *e*S **Sn** **01 23 09.3 -0.7**
TGUH **Tegucigalpa,Un** **6.64 103** *e*Pn **Pn** **01 22 06.8 +1.0**
112nm,0.6s
ARIG **Puente Sto Nin** **6.65 293** *i* P **Pn** **01 22 06.1 +0.1**
ARIG *e*S **Sn** **01 23 19.8 -0.6**
TEIG **Tepich** **7.00 49** *e*Pn **Pn** **01 22 09.4 -1.3**
TEIG *e*Sn **Sn** **01 23 23.0 -5.9**
TEIG **Tepich** **7.00 49** P **Pn** **01 22 09.7 -1.1**
229nm,0.3s,baz=243,slow=6.7,SNR=240
TEIG S **Sn** **01 23 26.2 -2.7**
126nm,0.3s,baz=235,slow=16,SNR=15
TEIG LR LR 01 25 33.5
comp=Z,237nm,18.2s,baz=58,slow=44
ZIIG **Zihuatanejo** **7.47 286** *i* P **Pn** **01 22 18.7 +1.6**
ZIIG *e*S **Sn** **01 23 39.9 -0.4**
ZIIG **Zihuatanejo** **7.47 286** *i* P **Pn** **01 22 18.7 +1.6**
ZIIG *e*S **Sn** **01 23 39.9 -0.4**
JTS **JuntasAbangare** **10.27 121** *e*Pn **Pn** **01 22 56.7 +1.2**
JTS S **Sn** **01 24 48.3 -0.6**
JTS **JuntasAbangare** **10.27 121** P **Pn** **01 22 55.9 +0.5**
5.8nm,0.3s,baz=320,slow=15,SNR=12
JTS S **Sn** **01 24 48.3 -0.6**
0.7nm,0.3s,baz=306,slow=19,SNR=1.7
732A **Laxson Ranch,** **14.11 338** ⇓P **Pn** **01 23 47.9 +1.0**
baz=14,SNR=12
HKT **Hockley** **14.28 353** *e*Pn **Pn** **01 23 49.1 0.0**
632A **Uvalde** **14.75 340** ⇑P **Pn** **01 23 56.1 +0.8**
baz=15,SNR=11
631A **Perdido Creek** **14.95 337** ⇓P **Pn** **01 23 59.4 +1.6**
baz=15,SNR=5.3
532A **Rocksprings** **15.36 340** ⇑P **P** **01 24 05.0 -1.1**
baz=16,SNR=19
531A **Rocksprings** **15.62 338** ⇑P **P** **01 24 07.9 -1.0**
baz=16,SNR=23
JCT **Junction City** **15.65 341** *e*Pn **Pn** **01 24 08.0 +1.1**
22nm,0.5s
JCT *e*Sn **Sn** **01 26 57.1 -2.5**
530A **J-C Ranch, Com** **15.90 336** ⇓P **P** **01 24 11.4 -0.7**
baz=16,SNR=9.9
628A **Black Gap, Mar** **16.00 330** ⇓P **P** **01 24 13.7 +0.5**
baz=16,SNR=23
432A **Menard** **16.02 341** ⇑P **P** **01 24 12.7 -0.7**
baz=16,SNR=20
431A **Sonora** **16.11 339** ⇓P **P** **01 24 14.2 -0.1**
baz=16,SNR=13
627A **Terlingua Ranc** **16.21 329** ⇓P **P** **01 24 16.2 +0.5**
baz=16,SNR=24
529A **Stev Forest Ra** **16.24 333** ⇓P **P** **01 24 16.3 +0.4**
baz=16,SNR=5.8
TXAR **Lajitas Array** **16.26 328** P **P** **01 24 16.0 -0.1**
TXAR **Lajitas Array** **16.26 328** P **P** **01 24 16.0 -0.1**
0.3nm,0.3s,baz=148,slow=12,SNR=28
TXAR LR LR 01 31 27.4
comp=Z,56nm,21.9s,baz=185,slow=40
430A **Baggett Ranch,** **16.43 337** ⇓P **P** **01 24 18.6 +0.7**
baz=16,SNR=18
332A **Millersview** **16.48 342** ⇓P **P** **01 24 19.3 +0.9**
baz=17,SNR=11
WHTX **Lake Whitney** **16.52 349** ⇑P **Pn** **01 24 18.3 +0.7**
baz=17
528A **Cox Ranch, San** **16.52 332** ⇓P **P** **01 24 21.3 +2.3**
baz=17,SNR=15
429A **Davenport Ranc** **16.54 335** ⇑P **P** **01 24 19.8 +0.6**
baz=17,SNR=41
331A **San Angelo** **16.62 340** ⇑P **P** **01 24 21.0 +1.0**
baz=17,SNR=16
626A **Big Bend Ranch** **16.67 327** ⇓P **P** **01 24 23.3 +2.6**
baz=17,SNR=28
VBMS **Vicksburg** **16.72 10** *e*Pn **Pn** **01 24 18.7 -1.3**
68nm,0.8s
527A **Woodward Ranch** **16.89 330** ⇑P **P** **01 24 25.6 +2.4**
baz=17
232A **Coleman** **16.93 343** ⇓P **P** **01 24 24.2 +0.8**
baz=17,SNR=13
428A **Kincaid Ranch,** **16.96 333** ⇓P **P** **01 24 26.0 +2.2**
baz=17,SNR=11
330A **Mertzon** **16.97 338** ⇑P **P** **01 24 26.0 +2.1**
baz=17,SNR=17
526A **Mary Lane Ranc** **17.06 329** ⇓P **P** **01 24 27.0 +2.0**
baz=17,SNR=41
231A **Bronte** **17.17 341** ⇑P **P** **01 24 27.7 +1.7**
baz=17,SNR=11
329A **Wagon Wheel Ra** **17.34 336** ⇓P **P** **01 24 29.3 +1.3**
baz=17,SNR=11
230A **Sterling City** **17.38 339** ⇑P **P** **01 24 29.8 +1.4**
baz=18,SNR=35
427A **Hayter Ranch,** **17.39 332** ⇓P **P** **01 24 31.0 +2.5**
baz=18,SNR=16
426A **McDonald Obser** **17.53 330** ⇓P **P** **01 24 32.2 +2.0**
baz=18,SNR=53
328A **Wristen Ranch,** **17.58 334** ⇓P **Pn** **01 24 32.6 +1.9**
baz=18,SNR=21
ABTX **Abilene, Hawle** **17.62 344** ⇓P **Pn** **01 24 31.8 +0.7**
baz=18,SNR=10
229A **Bryant Ranch,** **17.70 337** ⇓P **Pn** **01 24 33.4 +1.2**
baz=18,SNR=11
131A **Roby** **17.88 342** ⇑P **Pn** **01 24 34.9 +0.6**
baz=18,SNR=8.7
130A **Snyder** **17.98 340** ⇓P **Pn** **01 24 36.3 +0.8**
baz=18,SNR=5.9
326A **Caldwell Ranch** **18.04 331** ⇓P **Pn** **01 24 38.1 +1.8**
baz=18,SNR=26
425A **Indio Mountain** **18.10 328** ⇑P **Pn** **01 24 38.7 +1.7**
baz=18,SNR=29
228A **UT Block 9, Go** **18.14 336** ⇓P **Pn** **01 24 38.5 +1.0**
baz=18,SNR=9.3
Z32A **Haskell** **18.22 345** ⇓P **Pn** **01 24 39.0 +0.6**
baz=18,SNR=17
129A **Stewart Farms,** **18.32 338** ⇑P **Pn** **01 24 40.1 +0.5**
baz=18,SNR=13
227A **Bennet, Jal** **18.33 334** ⇑P **Pn** **01 24 41.3 +1.5**
baz=18,SNR=8.2
LRAL **Lakeview Retre** **18.35 19** *e*Pn **P** **01 24 37.6 -1.5**
11nm,0.8s
Z31A **Sharp Cattle R** **18.41 343** ⇑P **Pn** **01 24 40.6 -0.1**
baz=18,SNR=9.3
128A **Castleberry Fa** **18.54 337** ⇑P **Pn** **01 24 42.6 +0.3**
baz=19,SNR=18
325A **Bean Ranch, Si** **18.57 329** ⇓P **Pn** **01 24 43.4 +0.7**
baz=19,SNR=14
Z30A **Sanderson Ranc** **18.67 341** ⇓P **P** **01 24 43.3 +0.7**
baz=19,SNR=16
MIAR **Mount Ida** **18.76 1** *e*P **P** **01 24 43.9 +0.4**
24nm,0.8s
226B **Tecolote Peak,** **18.77 332** ⇑P **Pn** **01 24 46.2 +1.2**
baz=19,SNR=23
Z29A **Hungry Hill Ra** **18.84 339** ⇑P **Pn** **01 24 45.5 -0.3**
baz=19,SNR=13
324A **Moseley Ranch,** **18.88 328** ⇓P **Pn** **01 24 47.1 +0.7**
baz=19,SNR=26
Y32A **R-V Farms, Ver** **18.88 346** ⇑P **Pn** **01 24 46.4 +0.1**
baz=19,SNR=5.7
127A **Arkansas Junct** **18.93 335** ⇓P **Pn** **01 24 47.1 +0.1**
baz=19,SNR=11
GDL2 **Guadalupe Moun** **18.96 332** *e*P **Pn** **01 24 48.5 +1.1**
UALR **University of** **19.04 4** *e*P **P** **01 24 45.8 -0.7**
39nm,0.9s
Y31A **Rekieta Farm,** **19.05 344** ⇑P **Pn** **01 24 47.8 -0.5**
baz=19,SNR=15
225A **Deer Hill, Car** **19.10 331** ⇓P **Pn** **01 24 49.6 +0.5**
baz=19,SNR=18
Z28A **Tucker Farm, M** **19.10 338** ⇑P **Pn** **01 24 49.2 +0.2**
baz=19,SNR=41
Y30A **Stafford Cattl** **19.15 342** ⇓P **Pn** **01 24 49.3 -0.2**
baz=19
OXF **Oxford** **19.16 11** *e*P **P** **01 24 45.5 -2.2**
68nm,1.2s
126A **Clayton Basin,** **19.19 333** ⇓P **Pn** **01 24 50.8 +0.8**
baz=19,SNR=18
Y29A **Porterfield Fa** **19.37 340** ⇓P **Pn** **01 24 51.9 -0.2**
baz=20,SNR=18
224A **Cornudas Mount** **19.41 329** ⇓P **Pn** **01 24 53.0 +0.3**
baz=20,SNR=28
Z27A **Tatum** **19.44 336** ⇑P **Pn** **01 24 52.7 -0.3**
baz=20,SNR=60
WMOK **Wichita Mounta** **19.44 348** *e*P **P** **01 24 51.1 +0.2**
6.5nm,0.4s
125A **Gainer Draw,** **19.48 332** ⇑P **Pn** **01 24 53.5 0.0**
baz=20,SNR=26
X31A **McDonald Ranch** **19.61 345** ⇑P **Pn** **01 24 54.4 -0.5**
baz=20,SNR=30
Y28A **McKinney Farm,** **19.61 339** ⇓P **Pn** **01 24 54.4 -0.6**
baz=20,SNR=49
X30A **Coker Ranch, T** **19.67 343** ⇓P **Pn** **01 24 55.0 -0.7**
baz=20,SNR=19
Z26A **Caprock** **19.71 334** ⇓P **Pn** **01 24 55.7 -0.4**
baz=20,SNR=20
MSTX **Muleshoe** **19.85 338** ⇑P **P** **01 24 56.9 +1.4**
baz=20,SNR=24
124A **Stringfield Ra** **19.89 330** ⇑P **Pn** **01 24 58.3 0.0**
baz=20,SNR=22
Y27A **Causey** **19.92 337** ⇓P **P** **01 24 57.5 +1.2**
baz=20,SNR=9.5
X29A **Tulia** **19.92 341** ⇑P **P** **01 24 57.3 +1.1**
baz=20,SNR=8.8
Z25A **Roswell** **20.03 333** ⇑P Pn 01 24 59.2 -0.7
baz=20
W31A **Holland Ranch,** **20.13 346** ⇓P **P** **01 24 59.1 +0.7**
baz=20,SNR=12
X28A **Dimmitt** **20.15 340** ⇑P **P** **01 24 59.6 +0.9**
baz=20
Y26A **Elida** **20.21 336** ⇑P **P** **01 25 01.0 +1.6**
baz=20,SNR=9.1
123A **Bell Site, Whi** **20.23 329** ⇓P Pn 01 25 01.8 -0.4
baz=20,SNR=9.8
222A **Williams Famil** **20.25 326** ⇓P Pn 01 25 02.3 -0.2
baz=20,SNR=8.7
AMTX **Amarillo** **20.32 341** *e*P **P** **01 25 01.7 +1.1**
58nm,0.6s
AMTX **Amarillo** **20.32 341** ⇓P **P** **01 25 01.6 +1.1**
baz=20,SNR=40
Z24A **Sheeppen Canyo** **20.37 332** ⇑P Pn 01 25 04.0 0.0
baz=20,SNR=29
320A **Kipp Ranch, An** **20.48 322** ⇑P Pn 01 25 05.9 +0.5
baz=21
W29A **Amarillo** **20.53 342** ⇓P **P** **01 25 03.8 +1.0**
baz=21,SNR=19
221A **Mesquite Ranch** **20.55 325** ⇑P Pn 01 25 06.3 +0.3
baz=21,SNR=11
Y25A **Mesa, Roswell** **20.57 334** ⇓P Pn 01 25 05.7 -0.6
baz=21,SNR=72
X27A **F and S Farms,** **20.58 338** ⇑P **P** **01 25 04.6 +1.2**
baz=21,SNR=24
122A **Conniff Cattle** **20.66 327** ⇑P Pn 01 25 07.2 -0.2
baz=21
SWET **Sewanee** **20.70 19** *e*P **P** **01 25 04.0 -0.6**
44nm,0.8s
SWET *e*pP pP 01 25 31.6 +11
Z23A **Rita Site, Whi** **20.72 330** ⇓P Pn 01 25 07.9 -0.2
baz=21,SNR=37
X26A **CR and CF Fran** **20.76 336** ⇑P **P** **01 25 06.8 +1.5**
baz=21,SNR=16
W28A **Vega** **20.83 341** ⇓P **P** **01 25 07.2 +1.1**
baz=21,SNR=7.1
V30A **Spur Ranch, Mi** **20.86 344** ⇓P **P** **01 25 07.5 +1.1**
baz=21
220A **Playas Peak, P** **20.89 323** ⇑P Pn 01 25 10.0 -0.1
baz=21,SNR=32
Y24A **Capitan** **20.90 332** ⇓P Pn 01 25 09.7 -0.5
baz=21,SNR=76
W27A **Bowe Ranch, En** **20.94 339** ⇓P **P** **01 25 08.7 +1.4**
baz=21,SNR=20
121A **Cookes Peak, D** **20.95 326** ⇓P Pn 01 25 10.8 0.0
baz=21,SNR=38
319A **Douglas** **20.96 321** ⇓P Pn 01 25 11.0 +0.1
baz=21,SNR=8.5
WVT **Waverly** **21.05 14** *e*P **P** **01 25 08.8 +0.5**
12nm,0.6s
X25A **Clemmons Ranch** **21.08 335** ⇓P **P** **01 25 11.0 +2.3**
baz=21,SNR=24
Z22A **Elephant Butte** **21.08 328** ⇑P **P** **01 25 11.5 +2.7**
baz=21,SNR=18
Y23A **Lovelace Mesa,** **21.18 331** ⇑P **P** **01 25 12.8 +2.9**
baz=21,SNR=51
V29A **Stinnett** **21.19 343** ⇓P **P** **01 25 11.5 +1.6**
baz=21
V28A **Channing** **21.29 341** ⇓P **P** **01 25 12.4 +1.4**
baz=21,SNR=8.0
120A **U Bar Ranch, L** **21.43 324** ⇑P **P** **01 25 16.2 +3.7**
baz=21,SNR=13
X24A **Lazy VL Ranch,** **21.44 333** ⇓P **P** **01 25 14.9 +2.3**
baz=22,SNR=25
Z21A **St. Cloud Mine** **21.48 327** ⇑P **P** **01 25 16.3 +3.1**
baz=22,SNR=15
W25A **X Bar L Ranch,** **21.60 336** ⇑P **P** **01 25 16.5 +2.2**
baz=22,SNR=29
Y22A **Socorro** **21.62 329** ⇑P **P** **01 25 17.2 +2.6**
baz=22,SNR=32
BNM **Barren Site** **21.63 330** *e*P **P** **01 25 17.4 +2.6**
27nm,1.1s
OTAV **Otavalo** **21.68 134** *e*P **P** **01 25 17.4 +1.8**
23nm,0.9s
Y22D **IRIS PASSCAL I** **21.71 330** ⇑P **P** **01 25 18.5 +2.9**
baz=22
JSC **Jenkinsville** **21.73 29** *e*P **P** **01 25 12.2 -3.3**
LPM **Los Pinos Moun** **21.77 331** *e*P **P** **01 25 18.8 +2.6**
X23A **Hourglass Bar** **21.78 332** ⇑P **P** **01 25 18.6 +2.3**
baz=22,SNR=24
LENM **Lemitar** **21.81 330** *e*P **P** **01 25 19.4 +2.8**
Z20A **Nine Sixteen R** **21.83 325** ⇓P **P** **01 25 20.5 +3.7**
baz=22,SNR=8.4
TKL **Tuckaleechee C** **21.84 23** *e*P **P** **01 25 15.6 -1.1**
TKL **Tuckaleechee C** **21.84 23** P **P** **01 25 16.1 -0.7**
6.2nm,0.7s,baz=181,slow=12,SNR=4.1
TKL LR LR 01 34 01.8
comp=Z,66nm,21.3s,baz=46,slow=37
SDDR **Presa de Saban** **21.85 78** *e*P **P** **01 25 13.9 -3.1**
23nm,1.2s
V26A **Tequesquite Ra** **21.86 338** ⇑P **P** **01 25 18.8 +1.7**
baz=22
T31A **Randall Ranch,** **21.90 348** ⇑P **P** **01 25 18.1 +0.7**
baz=22,SNR=7.7
W24A **Lazy 6 Ranch,** **21.98 334** ⇓P **P** **01 25 20.2 +1.8**
baz=22,SNR=20
Y21A **Point of Rocks** **22.03 328** ⇑P **P** **01 25 21.8 +2.7**
baz=22,SNR=12
ROSC **El Rosal** **22.07 117** P **P** **01 25 20.2 +0.4**
ROSC **El Rosal** **22.07 117** P **P** **01 25 20.2 +0.4**
6.3nm,0.5s,baz=275,slow=23,SNR=5.7
LAZ **Ladron** **22.08 330** *e*P **P** **01 25 22.4 +2.8**
3.4nm,0.9s
X22A **Bernardo** **22.11 330** ⇑P **P** **01 25 22.6 +2.8**
baz=22
V25A **Rancho No Teng** **22.20 336** ⇑P **P** **01 25 22.6 +1.8**
baz=22,SNR=17
ANMO **Albuquerque** **22.21 332** *e*P **P** **01 25 22.8 +1.9**
7.8nm,0.8s
ANMO **Albuquerque** **22.21 332** P **P** **01 25 22.9 +1.9**
8.3nm,0.7s,baz=146,slow=12,SNR=41
W23A **Werner Place,** **22.25 333** ⇑P **P** **01 25 23.4 +2.0**
baz=22,SNR=8.4
Y20A **Horse Springs,** **22.32 327** ⇑P **P** **01 25 24.7 +2.5**
baz=22,SNR=16
V24A **Rampart Ranch,** **22.36 335** ⇓P **P** **01 25 24.3 +1.7**
baz=22,SNR=14
U26A **Atchley Ranch,** **22.38 339** ⇓P **P** **01 25 24.0 +1.2**
baz=22,SNR=22
X21A **Alamocita Cree** **22.44 329** ⇓P **P** **01 25 25.8 +2.3**
baz=23,SNR=13
W22A **Albuquerque** **22.50 331** ⇓P **P** **01 25 26.8 +2.8**
baz=23
T28A **Walsh** **22.53 343** ⇑P **P** **01 25 24.9 +0.7**
baz=23,SNR=8.9
TUC **Tucson** **22.53 320** *e*P **P** **01 25 26.9 +2.7**
28nm,1.4s
U25A **Circle Dot Ran** **22.62 338** ⇑P **P** **01 25 26.8 +1.5**
baz=23,SNR=21
T27A **Campo** **22.65 341** ⇑P **P** **01 25 26.0 +0.4**
baz=23,SNR=17
TZTN **Tazewell** **22.71 22** *e*P P 01 25 19.1 -7.0
30nm,1.4s
TZTN *e*pP pP 01 25 43.8 +1.2
V23A **Ortiz Mt. (NFS** **22.76 333** ⇓P **P** **01 25 29.0 +2.3**
baz=23,SNR=24
USIN **University of** **22.85 13** *e*P **P** **01 25 26.2 -1.2**
USIN *e*pP **pP** **01 25 46.8 +2.9**
X20A **Quemado** **22.87 328** ⇓P **P** **01 25 30.6 +2.6**
baz=23
W21A **San Fidel** **22.91 330** ⇑P **P** **01 25 30.3 +2.0**
baz=23
T26A **Comanche Natio** **23.03 340** ⇓P **P** **01 25 30.4 +0.9**
baz=23,SNR=14
U23A **El Rito** **23.26 334** ⇓P **P** **01 25 33.9 +2.2**
baz=23,SNR=18
S27A **Las Animas** **23.28 342** ⇓P **P** **01 25 33.0 +1.2**
baz=23,SNR=20
T25A **Trinidad** **23.28 338** ⇓P **P** **01 25 34.0 +2.1**
baz=23,SNR=21
W20A **Ramah** **23.33 329** ⇓P **P** **01 25 35.4 +3.0**
baz=24,SNR=26
S26A **Kim** **23.40 341** ⇑P **P** **01 25 34.3 +1.4**
baz=24,SNR=11
WCI **Wyandotte Cave** **23.42 15** *e*P **P** **01 25 31.2 -1.7**
WCI *e*pP **pP** **01 25 51.0 +0.9**
KSU1 **Kansas State U** **23.42 355** *e*P **P** **01 25 32.8 0.0**
20nm,0.9s
T24A **Torres, Weston** **23.46 337** ⇑P **P** **01 25 36.2 +2.7**
baz=24,SNR=39
V21A **Milan** **23.46 331** ⇑P **P** **01 25 35.7 +2.2**
baz=24
U22A **Llaves** **23.58 333** ⇓P **P** **01 25 37.0 +2.3**
baz=24,SNR=9.9
214A **Organ Pipe Nat** **23.60 317** ⇑P **P** **01 25 38.5 +3.9**
baz=24,SNR=5.1
X18A **Snowflake** **23.64 325** ⇓P **P** **01 25 37.9 +2.9**
baz=24,SNR=10
S25A **Robets Cordova** **23.76 339** ⇑P **P** **01 25 38.8 +2.7**
baz=24,SNR=25
T23A **Casias Ranch,** **23.80 335** ⇓P **P** **01 25 38.8 +2.2**
baz=24
R27A **Eads** **23.81 343** ⇓P **P** **01 25 38.3 +1.9**
baz=24,SNR=15
V20A **Brimhall** **23.85 330** ⇓P **P** **01 25 39.8 +2.8**
baz=24
W18A **Petrified Fore** **23.96 327** ⇓P **P** **01 25 40.8 +2.8**
baz=24
U21A **Nageezi** **23.98 332** ⇓P **P** **01 25 40.7 +2.5**
baz=24,SNR=11
R26A **Arlington** **24.02 341** ⇓P **P** **01 25 40.7 +2.4**
baz=24,SNR=20
S24A **Houchin Ranch,** **24.02 338** ⇓P **P** **01 25 41.1 +2.5**
baz=24
T22A **Edith** **24.14 334** ⇑P **P** **01 25 42.1 +2.5**
baz=24,SNR=15
R25A **Fountain Ranch** **24.14 340** ⇓P **P** **01 25 42.1 +2.6**
baz=24,SNR=7.7
CNNC **Cliffs of the** **24.18 34** *e*P P 01 25 45.6 +5.9
36nm,0.5s
BLO **Bloomington** **24.26 14** *e*P **P** **01 25 38.8 -1.5**
BLO *e*pP **pP** **01 25 59.0 +0.3**
U20A **Newcomb** **24.34 330** ⇑P **P** **01 25 44.2 +2.8**
baz=24
S23A **Nye Farm, Mont** **24.37 336** ⇑P **P** **01 25 43.7 +2.0**
baz=24
T21A **Navajo Lake** **24.39 333** ⇑P **P** **01 25 44.4 +2.5**
baz=24,SNR=8.1
X16A **Lo Mia Camp, P** **24.40 323** ⇑P **P** **01 25 45.1 +3.2**
baz=24,SNR=13
KSCO **Kaye Shedlock'** **24.43 343** ⇓P **P** **01 25 44.2 +2.1**
baz=24,SNR=6.8
R24A **Sanders Place,** **24.50 338** ⇓P **P** **01 25 45.0 +2.2**
baz=25,SNR=15
Z14A **Wintersburg** **24.59 319** ⇑P **P** **01 25 47.7 +4.3**
baz=25,SNR=6.7
Q26A **Hugo** **24.61 342** ⇓P **P** **01 25 46.1 +2.3**
baz=25,SNR=11
R23A **Moffat** **24.73 337** ⇑P **P** **01 25 47.2 +2.2**
baz=25,SNR=11
S22A **4UR Ranch, Cre** **24.73 335** ⇓P **P** **01 25 47.2 +2.1**
baz=25,SNR=6.4
113A **Mohawk Valley,** **24.74 317** ⇑P **P** **01 25 48.8 +4.0**
baz=25,SNR=5.9
Q25A **Bedland Calha** **24.83 341** ⇑P **P** **01 25 47.9 +2.1**
baz=25,SNR=9.0
P27A **Ficken Ranch,** **24.93 344** ⇑P **P** **01 25 48.7 +2.1**
baz=25,SNR=7.6
MVCO **Mesa Verde** **25.01 332** *e*P **P** **01 25 50.1 +2.6**
12nm,0.8s
MVCO **Mesa Verde** **25.01 332** ⇑P **P** **01 25 49.8 +2.3**
baz=25,SNR=10
S21A **Coal Bank Pass** **25.07 333** ⇑P **P** **01 25 50.4 +2.2**
baz=25,SNR=12
HDIL **Hopedale** **25.08 8** *e*P **P** **01 25 46.4 -1.4**
HDIL *e*pP pP 01 26 17.0 +11
R22A **Saguache, Gunn** **25.12 336** ⇑P **P** **01 25 50.6 +2.0**
baz=25,SNR=8.0
P26A **Davis Ranch, A** **25.15 343** ⇓P **P** **01 25 50.9 +2.2**
baz=25,SNR=9.2
WUAZ **Wupatki** **25.15 325** ⇓P **P** **01 25 52.2 +3.5**
baz=25
Q24A **Divide** **25.17 339** ⇓P **P** **01 25 51.2 +2.1**
baz=25
P25A **Willow Gulch B** **25.35 341** ⇓P **P** **01 25 52.6 +2.1**
baz=26,SNR=6.3
Q23A **Hartsel** **25.36 338** ⇓P **P** **01 25 53.0 +2.2**
baz=26
S20A **Disappointment** **25.46 333** ⇑P **P** **01 25 54.2 +2.6**
baz=26,SNR=6.0
O27A **Beecher Island** **25.50 345** ⇑P **P** **01 25 53.2 +1.3**
baz=26
R21A **Cimarron** **25.56 335** ⇓P **P** **01 25 54.6 +2.1**
baz=26
GLA **Glamis** **25.61 316** *e*P P 01 25 58.6 +5.8
14nm,0.8s
GLA **Glamis** **25.61 316** ⇑P **P** **01 25 56.5 +3.7**
baz=26
Q22A **Crested Butte,** **25.73 336** ⇑P **P** **01 25 56.2 +2.1**
baz=26,SNR=7.5
R20A **Redvale** **25.76 333** ⇑P **P** **01 25 57.0 +2.7**
baz=26,SNR=6.9
P23A **Jefferson** **25.78 338** ⇑P **P** **01 25 56.9 +2.2**
baz=26,SNR=11
PV01 **Paradox Valley** **25.80 333** *e*P **P** **01 25 57.4 +2.7**
1μm,1.1s
O25A **Wiggins** **25.89 342** ⇑P **P** **01 25 56.6 +1.3**
baz=26
PDMCI **Parker Dam,Lak** **25.95 319** ⇓P **P** **01 25 58.7 +2.9**
baz=26
Q21A **Lamborn Mesa,** **25.97 335** ⇑P **P** **01 25 58.4 +2.2**

baz=26
SMCO **Snowmass** 26.03 336 *e*P P 01 25 59.2 +2.3
16nm,1.1s
ISCO **Idaho Springs** 26.08 339 *e*P P 01 25 59.4 +2.1
14nm,1.3s
ISCO **Idaho Springs** 26.08 339 ⇑P P 01 25 59.3 +2.0
baz=26,SNR=8.8
N27A **Anderson Farm,** 26.10 345 ⇑P P 01 25 59.3 +2.1
baz=26,SNR=7.1
S18A **Hurst Farm, Bl** 26.10 330 ⇑P P 01 25 59.6 +2.2
baz=26
OGNE **Ogallala** 26.11 346 ⇓P P 01 25 58.9 +1.6
baz=26
SCIA **State Center** 26.11 1 *e*P P 01 25 56.8 -0.4
41nm,0.6s
SCIA *e* 01 26 16.0
SCIA epP pP 01 26 27.6 +12
PV04 **Paradox Valley** 26.16 333 *e*P P 01 26 00.7 +2.8
P22A **Eagle** 26.31 337 ⇑P P 01 26 01.1 +1.9
baz=26
W13A **Hualapai Mount** 26.32 321 ⇑P P 01 26 02.0 +2.6
baz=26
U15A **North Rim** 26.32 325 ⇑P P 01 26 02.2 +2.7
baz=26
Q20A **Ridgley Place,** 26.37 334 ⇓P P 01 26 02.0 +2.3
baz=26
BC3 **Big Chuckawall** 26.39 316 ⇑P P 01 26 02.8 +2.8
baz=26
IRM **Iron Mountain** 26.51 318 ⇓P P 01 26 03.7 +2.9
baz=27
P21A **Newcastle** 26.51 336 ⇑P P 01 26 03.1 +2.1
baz=27
O23A **Lake Granby, G** 26.55 339 ⇑P P 01 26 02.9 +1.3
baz=27
O22A **Kremmling** 26.73 338 ⇓P P 01 26 04.5 +1.4
baz=27
Q19A **Hogan Spring (** 26.78 333 ⇑P P 01 26 05.4 +2.0
baz=27
P20A **De Beque** 26.87 335 ⇑P P 01 26 06.1 +1.9
baz=27
M25A **Palm-Egli Farm** 27.09 343 ⇑P P 01 26 07.4 +1.3
baz=27
GMRC **Granite Mounta** 27.22 318 ⇓P P 01 26 10.0 +2.6
baz=27
N22A **Wattenberg Ran** 27.26 339 ⇑P P 01 26 10.0 +2.1
baz=27
O20A **White River Ci** 27.35 336 ⇑P P 01 26 10.5 +2.0
baz=28
SRU **San Rafael** 27.48 331 *e*P P 01 26 12.1 +2.4
2µm,2.7s
SRU **San Rafael** 27.48 331 ⇓P P 01 26 11.4 +1.6
baz=28
MURC **Murrieta** 27.54 315 ⇓P P 01 26 13.6 +3.4
baz=28
N21A **Black Mountain** 27.61 337 ⇑P P 01 26 13.3 +2.3
baz=28,SNR=6.7
M23A **Laramie** 27.62 341 ⇑P P 01 26 12.6 +1.6
baz=28
Q16A **Castle Valley** 27.63 330 ⇑P P 01 26 14.0 +2.9
baz=28
HEC **Hector,Ludlow** 27.68 318 ⇑P P 01 26 15.1 +3.6
baz=28
CCUT **Cedar City** 27.73 325 *e*P P 01 26 15.5 +3.5
4.8nm,1.0s
L25A **Engebretsen Ra** 27.73 344 ⇑P P 01 26 13.6 +1.7
baz=28
P18A **Preston Nutter** 27.77 332 ⇓P P 01 26 15.2 +2.7
baz=28,SNR=6.5
O19A **Miners Draw (B** 27.84 335 ⇓P P 01 26 14.9 +2.0
baz=28
M22A **Cedar Creek Ra** 27.85 339 ⇓P P 01 26 14.8 +1.7
baz=28
N20A **Spence Gulch,** 27.95 336 ⇑P P 01 26 16.1 +2.1
baz=28,SNR=6.8
ECSD **EROS Data Cent** 28.02 356 *e*P P 01 26 13.8 -0.5
21nm,1.3s
O18A **Roosevelt** 28.19 333 ⇓P P 01 26 18.4 +2.4
baz=28,SNR=6.1
L23A **Garrett** 28.20 341 ⇓P P 01 26 17.7 +1.6
baz=28
M21A **Separation Pea** 28.29 338 ⇑P P 01 26 19.3 +2.3
baz=28,SNR=16
N19A **John Jarvie Ra** 28.37 335 ⇓P P 01 26 19.4 +1.8
baz=28
O17A **Robinson Place** 28.45 332 ⇑P P 01 26 20.4 +2.0
baz=29
M20A **Sweetwater, Wa** 28.49 337 ⇑P P 01 26 20.8 +2.1
baz=29
L21A **Rawlins** 28.61 339 ⇓P P 01 26 21.6 +1.8
baz=29,SNR=7.5
N18A **Larsen Ranch,** 28.64 335 ⇑P P 01 26 22.0 +2.0
baz=29,SNR=6.8
EDW2 **Edwards Air Fo** 28.81 316 ⇑P P 01 26 24.4 +3.0
baz=29
K22A **Casper** 28.94 341 ⇑P P 01 26 24.2 +1.6
baz=29
L20A **Wamsutter** 29.00 338 ⇑P P 01 26 24.9 +1.7
baz=29
N17A **Moffit Pass** 29.10 333 ⇑P P 01 26 26.6 +2.3
baz=29
M18A **Lyman** 29.18 335 ⇑P P 01 26 26.1 +1.3
baz=29
SPMN **St. Paul** 29.43 2 ⇑P P 01 26 26.1 -0.7
baz=30
M17A **Scullys Gap (B** 29.47 334 ⇓P P 01 26 29.1 +1.7
baz=30
R11A **Troy Canyon, C** 29.53 324 ⇓P P 01 26 30.6 +2.7
baz=30
L18A **Fontenelle, Gr** 29.58 335 ⇓P P 01 26 30.0 +1.6
baz=30,SNR=5.4
J22A **Midwest** 29.61 341 ⇑P P 01 26 30.3 +1.7
baz=30
M16A **Huntsville** 29.76 333 ⇓P P 01 26 32.1 +2.2
baz=30
J21A **Lysite** 29.86 340 ⇓P P 01 26 32.7 +1.8
baz=30,SNR=9.1
K19A **Absolon Red Bu** 29.89 338 ⇑P P 01 26 32.8 +1.7
baz=30
HWUT **Hardware Ranch** 29.96 333 *e*P P 01 26 33.7 +2.0
39nm,2.5s
I22A **9 Mile Ranch,** 30.05 342 ⇓P P 01 26 34.1 +1.6
baz=30
J20A **Shoshoni** 30.09 339 ⇑P P 01 26 34.7 +2.0
baz=30
VES **Vestal, Richgr** 30.09 316 ⇑P P 01 26 36.2 +3.4
baz=30
PDAR **Pinedale Array** 30.11 337 P P 01 26 34.5 +1.4
PDAR **Pinedale Array** 30.11 337 P P 01 26 34.5 +1.4
2.7nm,0.8s,baz=141,slow=9.6,SNR=14
BW06 **Boulder Array** 30.11 337 *e*P P 01 26 34.7 +1.6
39nm,2.5s
BW06 **Boulder Array** 30.11 337 ⇑P P 01 26 34.6 +1.6
baz=30
K18A **Toltan Ranch,** 30.18 336 ⇓P P 01 26 36.0 +2.2
baz=30,SNR=15
I21A **Big Trails, Te** 30.23 341 ⇑P P 01 26 35.6 +1.6
baz=30
L16A **Fish Haven** 30.24 334 ⇓P P 01 26 35.9 +1.7
baz=30,SNR=13
H24A **Dirks Ranch, A** 30.31 345 ⇑P P 01 26 35.7 +1.1
baz=30,SNR=8.4
J19A **Crowheart** 30.35 338 ⇑P P 01 26 36.3 +1.2
baz=30
RCTC **Rector, Farmer** 30.47 317 ⇓P P 01 26 39.6 +3.5
baz=31
I20A **Worland** 30.63 340 ⇑P P 01 26 39.3 +1.8
baz=31
K17A **Gardner Place,** 30.63 335 ⇓P P 01 26 39.9 +2.2
baz=31
HVU **Hansel Valley** 30.64 332 *e*P P 01 26 40.9 +3.2
6.8nm,1.0s
L15A **Malad City** 30.65 332 ⇑P P 01 26 39.6 +1.9
baz=31
H22A **Clearmont** 30.65 342 ⇓P P 01 26 39.0 +1.3
baz=31,SNR=5.5
MTUM **Tungsten Hills** 30.66 319 epP pP 01 27 10.8 +14
J18A **Kendall Valley** 30.66 337 ⇑P P 01 26 39.5 +1.5
baz=31,SNR=8.2
AHID **Auburn Hatcher** 30.72 335 *e*P P 01 26 41.9 +3.5
42nm,1.8s
G24A **Alzada** 30.82 345 ⇑P P 01 26 40.0 +0.8
baz=31
H21A **Big Horn, Sher** 30.89 342 ⇑P P 01 26 40.9 +1.1
baz=31
G23A **Biddle** 30.95 344 ⇓P P 01 26 41.3 +1.0
baz=31,SNR=8.5
K16A **Soda Springs** 30.98 334 ⇓P P 01 26 42.8 +2.2
baz=31
I19A **Meeteetse** 31.00 339 ⇑P P 01 26 43.2 +2.3
baz=31,SNR=7.0
J17A **Brown Place, J** 31.06 336 ⇑P P 01 26 43.7 +2.3
baz=31,SNR=26
H20A **Greybull** 31.06 340 ⇑P P 01 26 42.7 +1.4
baz=31,SNR=5.6
REDW **Red Top Meadow** 31.12 336 *e*P P 01 26 44.5 +2.5
0.4nm,1.0s
SNOW **Snow King Moun** 31.16 336 *e*P P 01 26 44.6 +2.2
41nm,0.8s
NVAR **Mina Array Bea** 31.18 321 P P 01 26 44.5 +2.0
NVAR PcP PcP 01 29 36.8 +0.9
NVAR **Mina Array Bea** 31.18 321 P P 01 26 44.5 +2.0
9.2nm,0.7s,baz=136,slow=8.9,SNR=22
NVAR PcP PcP 01 29 36.7 +0.9
1.3nm,0.5s,baz=116,slow=3.1,SNR=3.1
G22A **Birney** 31.21 343 ⇑P P 01 26 43.2 +0.6
baz=31,SNR=5.8
LOHW **Long Hollow** 31.23 336 *e*P P 01 26 44.9 +1.9
16nm,0.9s
K15A **Arbon** 31.26 333 ⇓P P 01 26 45.2 +2.0
baz=31,SNR=5.6
TPAW **Teton Pass** 31.26 336 *e*P P 01 26 45.2 +1.9
21nm,1.0s
RRI2 **Red Ridge** 31.29 335 *e*P P 01 26 45.8 +2.2
20nm,1.1s
F24A **Ekalaka** 31.31 346 ⇓P P 01 26 44.4 +0.9
baz=31
J16A **Bone** 31.35 335 ⇑P P 01 26 45.9 +2.0
baz=32,SNR=8.9
MOOW **Moose Ponds** 31.40 336 *e*P P 01 26 46.5 +2.1
12nm,0.9s
K14A **Jones Ranch, D** 31.43 332 ⇑P P 01 26 46.5 +1.9
baz=32
DCID1 **Drake Creek** 31.44 336 *e*P P 01 26 47.4 +2.6
23nm,1.1s
G21A **Lodge Grass** 31.48 342 ⇑P P 01 26 45.7 +0.7
baz=32
I17A **Pilgrim Ck.** 31.48 337 ⇑P P 01 26 47.4 +2.3
baz=32,SNR=9.5
H19A **Powell** 31.55 339 ⇑P P 01 26 47.7 +2.1
baz=32,SNR=8.5
IMW **Indian Meadow** 31.60 336 *e*P P 01 26 48.4 +2.1
10nm,1.0s
G20A **Bridger** 31.79 341 ⇑P P 01 26 49.0 +1.4
baz=32,SNR=7.0
H18A **Shoshone NF, C** 31.79 338 ⇑P P 01 26 49.7 +1.8
baz=32,SNR=42
J15A **Blackfoot** 31.79 334 ⇓P P 01 26 49.5 +1.7
baz=32
I16A **Newdale** 31.80 336 ⇑P P 01 26 49.7 +1.8
baz=32,SNR=6.7
E24A **Baker** 31.95 346 ⇓P P 01 26 50.1 +1.0
baz=32,SNR=6.2
LKWY **Lake** 31.96 337 *e*P P 01 26 52.7 +3.3
7.6nm,0.6s
RLMT **Red Lodge** 32.05 339 *e*P P 01 26 51.6 +1.5
21nm,1.5s
RLMT **Red Lodge** 32.05 339 ⇓P P 01 26 51.3 +1.2
baz=32,SNR=8.9
E23A **Ismay** 32.13 345 ⇑P P 01 26 51.2 +0.6
baz=32
J14A **Carey** 32.20 333 ⇓P P 01 26 53.3 +1.9
baz=32
EYMN **Ely** 32.20 3 *e*P P 01 26 49.2 -1.9
E22A **Miles City** 32.24 344 ⇑P P 01 26 52.2 +0.7
baz=32,SNR=7.3
G18A **Lazy EL Ranch,** 32.32 339 ⇑P P 01 26 53.3 +0.9
baz=32,SNR=7.4
MDND **Maddock** 32.39 353 ⇑P P 01 26 53.0 +0.3
baz=32
H16A **Russell Place,** 32.40 337 ⇓P P 01 26 55.1 +1.9
baz=32
D24A **Glendive** 32.48 347 ⇑P P 01 26 54.8 +1.1
baz=33,SNR=10.0
AGMN **Agassiz Nation** 32.53 358 *e*P P 01 26 53.1 -1.0
23nm,1.0s
J13A **Cove Ranch, Pi** 32.55 332 ⇑P P 01 26 56.4 +1.9
baz=33
QLMT **Earthquake Lak** 32.58 337 *e*P P 01 26 57.8 +3.1
F19A **Roth Farm, Mol** 32.58 340 ⇑P P 01 26 55.7 +1.0
baz=33,SNR=6.7
E21A **Keefer Ranch,** 32.64 343 ⇑P P 01 26 56.1 +1.0
baz=33
I14A **Mackay** 32.66 333 ⇓P P 01 26 57.9 +2.5
baz=33
G17A **Pierce Place,** 32.74 338 ⇓P P 01 26 58.6 +2.6
baz=33
D23A **Lindsay** 32.74 346 ⇓P P 01 26 57.4 +1.4
baz=33
HLID **Hailey** 32.79 332 *e*P P 01 26 58.9 +2.3
4.8nm,1.0s
HLID **Hailey** 32.79 332 ⇓P P 01 26 58.5 +1.9
baz=33,SNR=7.3
H15A **Lima** 32.88 335 ⇓P P 01 26 59.4 +2.0
baz=33,SNR=5.4
F18A **Big Timber** 32.88 340 ⇓P P 01 26 58.5 +1.2
baz=33,SNR=11
C24A **Savage** 32.90 347 ⇑P P 01 26 58.4 +1.1
baz=33,SNR=11
E20A **Meyer Farm, Mu** 32.91 342 ⇓P P 01 26 59.1 +1.6
baz=33
I13A **Wildhorse Cree** 32.94 333 ⇑P P 01 27 00.3 +2.4
baz=33
D22A **Cohagen** 32.96 345 ⇑P P 01 26 59.1 +1.3
baz=33,SNR=27
G16A **Moss Hill, Enn** 33.05 337 ⇓P P 01 27 01.3 +2.5
baz=33,SNR=6.7
E19A **Rath Farm, Rou** 33.07 341 ⇑P P 01 27 00.0 +1.1
baz=33,SNR=7.9
D21A **La Casta Ranch** 33.09 344 ⇓P P 01 27 00.6 +1.6
baz=33
MCMT **McKenzie Canyo** 33.13 335 *e*P P 01 27 02.2 +2.5
11nm,1.1s
H14A **Leadore** 33.18 334 ⇓P P 01 27 02.3 +2.4
baz=33,SNR=5.6
F17A **Fitzpatrick Pl** 33.21 338 ⇓P P 01 27 02.1 +2.0
baz=33,SNR=30
G15A **Dillon** 33.27 336 ⇓P P 01 27 03.2 +2.5
baz=33,SNR=18
I12A **Atlanta** 33.30 332 ⇑P P 01 27 03.3 +2.3
baz=33
C23A **Lambert** 33.33 346 ⇓P P 01 27 02.6 +1.6
baz=33,SNR=8.0
BOZ **Bozeman (W)** 33.34 337 *e*P P 01 27 03.3 +2.0
10nm,1.3s
BOZ **Bozeman (W)** 33.34 337 ⇑P P 01 27 03.4 +2.1
baz=34
C22A **Vida** 33.44 345 ⇑P P 01 27 03.7 +1.7
baz=34
D20A **Manuel Ranch,** 33.44 342 ⇑P P 01 27 03.6 +1.5
baz=34,SNR=7.3
F16A **Kennard Place,** 33.46 337 ⇑P P 01 27 04.2 +2.0
baz=34,SNR=5.1
DLMT **Dillon** 33.47 336 *e*P P 01 27 05.1 +2.7
22nm,0.9s
H13A **Challis** 33.51 333 ⇑P P 01 27 05.1 +2.3
baz=34
E18A **Harlowton** 33.53 340 ⇓P P 01 27 04.4 +1.5
baz=34,SNR=16
G14A **Jackson** 33.72 335 ⇑P P 01 27 06.6 +1.9
baz=34,SNR=13
DGMT **Dagmar** 33.74 348 ⇓P P 01 27 05.6 +1.0
baz=34
E17A **Martinsdale** 33.76 339 ⇓P P 01 27 06.8 +1.8
baz=34,SNR=9.1
H12A **Diamond D Ranc** 33.76 333 ⇓P P 01 27 07.5 +2.5
baz=34,SNR=14
LRM **Limekiln Ridge** 33.80 336 *e*P P 01 27 07.5 +2.1
LRM *e* 01 27 26.9
C21A **Desert Coulee** 33.82 344 ⇓P P 01 27 06.6 +1.3
baz=34,SNR=8.2
F15A **Butte** 33.83 336 ⇑P P 01 27 07.8 +2.2
baz=34,SNR=17
B23A **Brockton** 33.90 347 ⇑P P 01 27 07.3 +1.3
baz=34
G13A **Cobalt** 33.92 334 ⇑P P 01 27 08.4 +2.1
baz=34,SNR=7.7
C20A **Veseth Ranch,** 33.97 343 ⇑P P 01 27 08.1 +1.5
baz=34,SNR=7.0
D18A **Linhart Farms,** 34.05 341 ⇑P P 01 27 08.9 +1.5
baz=34
E16A **East Helena** 34.11 338 ⇓P P 01 27 10.0 +2.0
baz=34,SNR=23
C19A **Slack Wire Ran** 34.29 342 ⇑P P 01 27 10.7 +1.3
baz=34,SNR=5.5
D17A **Six Diamond Ra** 34.30 340 ⇑P P 01 27 11.0 +1.4
baz=34,SNR=16
HRY **Holter Researc** 34.32 338 *e*P P 01 27 11.5 +1.7
A23A **Redstone** 34.35 347 ⇓P P 01 27 11.0 +1.1
baz=34
E15A **Deer Lodge** 34.38 337 ⇑P P 01 27 11.9 +1.6
baz=34,SNR=9.5
G12A **Big Creek, Yel** 34.42 333 ⇑P P 01 27 12.5 +1.8
baz=34
ULM **Lac du Bonnet** 34.48 358 P P 01 27 09.6 -1.4
ULM PcP PcP 01 29 44.1 -0.3
ULM **Lac du Bonnet** 34.48 358 P P 01 27 09.6 -1.4
12nm,0.7s,baz=178,slow=9.4,SNR=18
ULM PcP PcP 01 29 44.1 -0.3
1.6nm,0.7s,baz=175,slow=5.0,SNR=4.2
D16A **Dana Ranch, Ca** 34.49 339 ⇓P P 01 27 12.8 +1.6
baz=35,SNR=9.8
F13A **Darby** 34.52 335 ⇓P P 01 27 13.2 +1.6
baz=35,SNR=8.9
A22A **Carney Farms,** 34.61 346 ⇑P P 01 27 13.4 +1.3
baz=35,SNR=8.5
B20A **Solberg Farm,** 34.63 343 ⇑P P 01 27 13.4 +1.1
baz=35
E14A **Clinton** 34.70 336 ⇑P P 01 27 14.8 +1.8
baz=35
C17A **Wharram Farm,** 34.74 340 ⇓P P 01 27 14.8 +1.4
baz=35,SNR=19
EGMT **Eagleton** 34.77 341 *e*P P 01 27 15.3 +1.8
18nm,1.2s
EGMT **Eagleton** 34.77 341 ⇑P P 01 27 14.7 +1.2
baz=35,SNR=5.8
D15A **Lincoln** 34.85 338 ⇑P P 01 27 15.4 +1.0
baz=35,SNR=7.7
A21A **Bergtoll Ranch** 34.85 345 ⇑P P 01 27 15.7 +1.5
baz=35,SNR=13
F12A **Elk City** 34.89 334 ⇓P P 01 27 16.4 +1.7
baz=35,SNR=17
B19A **Brinkman Farms** 34.91 342 ⇑P P 01 27 15.9 +1.2
baz=35,SNR=11
E13A **Victor** 34.99 335 ⇑P P 01 27 17.3 +1.7
baz=35,SNR=11
A20A **Cobblestone Ra** 35.01 344 ⇓P P 01 27 16.8 +1.2
baz=35,SNR=14
CHMT **Chamberlain Mo** 35.02 337 *e*P P 01 27 17.5 +1.7
B18A **Beardsley Farm** 35.10 342 ⇓P P 01 27 17.8 +1.4
baz=35
BMO **Blue Mountains** 35.12 331 *e*P P 01 27 18.4 +1.8
14nm,1.8s
MSO **Missoula** 35.21 336 *e*P P 01 27 19.0 +1.5
6.6nm,1.0s
MSO **Missoula** 35.21 336 ⇑P P 01 27 19.1 +1.7
baz=35
C16A **Fuhringer Ranc** 35.22 339 ⇑P P 01 27 19.1 +1.6
baz=35,SNR=21
D14A **Greenough** 35.25 337 ⇑P P 01 27 19.0 +1.2
baz=35,SNR=9.7
A19A **Klindworth Far** 35.28 343 ⇑P P 01 27 19.4 +1.5
baz=35,SNR=16
B17A **L&G Farms, Che** 35.33 340 ⇓P P 01 27 19.5 +1.1
baz=35
SLMT **Seeley Lake** 35.38 337 *e*P P 01 27 20.2 +1.3
C15A **Salmond Ranch,** 35.50 338 ⇓P P 01 27 21.3 +1.4
baz=36,SNR=9.3
A18A **Metzger Ranch,** 35.59 342 ⇓P P 01 27 21.6 +1.1
baz=36,SNR=6.9
D13A **Huson** 35.63 336 ⇑P P 01 27 22.1 +1.1
baz=36,SNR=13
B16A **M & M Farms, S** 35.74 340 ⇓P P 01 27 23.1 +1.3
baz=36
SWMT **Swartz Lake** 35.80 337 *e*P P 01 27 23.9 +1.5
A17A **Triple J Farms** 35.87 341 ⇓P P 01 27 24.3 +1.3
baz=36
C14A **Swan Lake** 35.91 337 ⇓P P 01 27 24.8 +1.3
baz=36
B15A **Bradely Ranch,** 35.94 339 ⇓P P 01 27 25.1 +1.5
baz=36
D12A **Red Ives Fores** 35.96 335 ⇑P P 01 27 24.8 +1.0
baz=36
YBMT **Yellow Bay** 36.09 337 *e*P P 01 27 26.5 +1.5
5.9nm,0.8s
JTMT **Jette** 36.10 337 *e*P P 01 27 26.0 +0.9
B14A **Marquette Ranc** 36.24 338 ⇑P P 01 27 27.4 +1.2
baz=36
BLMT **Blacktail Moun** 36.35 337 *e*P P 01 27 29.2 +1.9
A15A **Johnson Ranch,** 36.57 339 ⇓P P 01 27 30.1 +1.1
baz=37,SNR=9.2
B13A **Whitefish** 36.69 337 ⇓P P 01 27 31.2 +1.3
baz=37,SNR=13
C11A **Tepee Creek (N** 36.96 335 ⇑P P 01 27 33.5 +1.3
baz=37
A13A **Flathead Natio** 37.13 338 ⇓P P 01 27 34.9 +1.1
baz=37
B12A **Libby** 37.20 336 ⇓P P 01 27 35.9 +1.6
baz=37
A12A **Yaak River Ran** 37.60 336 ⇑P P 01 27 39.4 +1.7
baz=38
NEW **Newport** 37.65 334 ⇓P P 01 27 39.6 +1.5
baz=38
SAML **Samuel** 39.09 127 *e*P P 01 27 48.4 -2.1
6.4nm,0.9s
SAML *e* 01 28 07.9
FFC **Flin Flon** 39.43 353 *e*P P 01 27 52.8 0.0
14nm,0.6s
LPAZ **La Paz** 40.73 140 *e*P P 01 28 04.4 -0.3
2.6nm,1.0s
LPAZ **La Paz** 40.73 140 P P 01 28 04.7 0.0
1.7nm,0.8s,baz=345,slow=4.4,SNR=6.0
LPAZ LR LR 01 42 31.6
comp=Z,59nm,20.9s,baz=322,slow=32
SCHQ **Schefferville** 44.31 22 PcP PcP 01 30 15.3 -0.2
SCHQ **Schefferville** 44.31 22 PcP PcP 01 30 15.3 -0.2
4.7nm,0.8s,baz=315,slow=1.4,SNR=4.3
SIV **San Ignacio** 45.22 133 P P 01 28 39.9 -0.5
SIV PcP PcP 01 30 19.3 0.0
SIV **San Ignacio** 45.22 133 P P 01 28 39.9 -0.5
9.0nm,0.7s,baz=314,slow=7.9,SNR=50
SIV PcP PcP 01 30 19.3 0.0
2.2nm,0.8s,baz=288,slow=3.2,SNR=3.6
LVC **Limon Verde** 45.29 147 *e*P P 01 28 41.4 +0.4
0.3nm,0.7s
YKA **Yellowknife Ar** 48.95 347 P P 01 29 08.9 +0.2
YKA pP pP 01 29 26.2 -2.4
YKA sP sP 01 29 36.7 -1.0
YKA PcP PcP 01 30 31.8 +0.1
YKA **Yellowknife Ar** 48.95 347 P P 01 29 08.9 +0.2
13nm,0.6s,baz=153,slow=7.4,SNR=287
YKA pP pP 01 29 26.2 -2.4
3.9nm,0.8s,baz=151,slow=7.1,SNR=4.6
YKA sP sP 01 29 36.7 -1.0
3.4nm,0.5s,baz=154,slow=7.2,SNR=5.4
YKA PcP PcP 01 30 31.7 +0.1
1.1nm,0.8s,baz=153,slow=3.7,SNR=5.5
YKW3 **Yellowknife Ar** 49.01 347 *e*P P 01 29 09.2 0.0
0.3nm,0.6s
LCO **Las Campanas** 49.81 153 *e*P P 01 29 16.8 +0.8
12nm,1.0s
CFAA **Coronel Fontan** 53.12 152 P P 01 29 41.2 +0.8
CFAA pP pP 01 30 00.7 +0.2
CFAA **Coronel Fontan** 53.12 152 P P 01 29 41.2 +0.8
0.2nm,0.7s,baz=341,slow=10,SNR=8.1
CFAA pP pP 01 30 00.7 +0.2
0.3nm,0.6s,baz=334,slow=6.7,SNR=3.4
CPUP **Villa Florida** 54.89 139 P P 01 29 52.1 -1.2
CPUP pP pP 01 30 14.1 +0.5
CPUP **Villa Florida** 54.89 139 P P 01 29 52.1 -1.2
0.3nm,0.3s,baz=310,slow=8.7,SNR=5.7
CPUP pP pP 01 30 14.1 +0.5
1.0nm,0.6s,baz=312,slow=7.7,SNR=2.0
BDFB **Brasilia** 55.01 122 P P 01 29 54.2 -0.3
BDFB **Brasilia** 55.01 122 P P 01 29 54.2 -0.3
5.2nm,0.6s,baz=284,slow=8.4,SNR=12
DOT **Dot Lake** 58.91 336 *e*P P 01 30 23.0 +1.7
15nm,1.5s
RES **Resolute Bay** 58.98 360 *e*P P 01 30 20.9 -0.6
6.5nm,0.6s
PAX **Paxson** 59.13 335 *e*P P 01 30 23.7 +0.8
4.0nm,0.7s
PAX epP pP 01 30 45.0 +1.6
KDAK **Kodiak Island** 60.29 328 P P 01 30 32.2 +1.4
KDAK **Kodiak Island** 60.29 328 P P 01 30 32.2 +1.4
3.3nm,0.7s,baz=103,slow=7.8,SNR=7.2
ILAR **Eielson Array** 60.54 337 P P 01 30 33.0 +0.6
ILAR pP pP 01 30 53.5 +0.5
ILAR **Eielson Array** 60.54 337 P P 01 30 33.0 +0.6
2.8nm,0.8s,baz=150,slow=4.2,SNR=32
ILAR pP pP 01 30 53.5 +0.5
1.8nm,0.7s,baz=135,slow=5.5,SNR=5.8
COLA **College** 60.95 337 *e*P P 01 30 35.9 +0.7
6.8nm,1.0s

SPU	Mount Spurr	61.19	332	eP	P	01 30 38.3	+1.3
RCBR	Riachuelo	61.30	106	eP	P	01 30 38.4	0.0
	11nm,0.9s						
TRF	Thorofare Moun	61.30	335	eP	P	01 30 38.6	+0.7
	11nm,0.8s						
COLD	Coldfoot	62.87	339	eP	P	01 30 49.4	+1.4
	3.8nm,0.9s						
PPT	Papeete	64.05	241	LR	LR	01 52 41.2	
	comp=Z,107nm,21.8s,baz=0.8,slow=30						
EVOP	Sao Brissos	77.16	53	eP	P	01 32 15.7	-0.3
	3.6nm,0.7s						
EVO	Evora	77.25	53	eP	P	01 32 15.7	-0.8
	3.6nm,0.7s						
BILL	Bilibino	79.18	338	eP	P	01 32 27.4	+0.7
	8.4nm,1.0s						
GRR	Gorron	80.43	42	eP	P	01 32 33.5	-0.3
	14nm,0.7s						
GRR	Gorron	80.43	42	eP	P	01 32 33.5	-0.3
	14nm,0.7s						
LFF	La Frestale	82.31	46	eP	P	01 32 43.4	-0.4
LFF	La Frestale	82.31	46	eP	P	01 32 43.4	-0.4
TCF	Toulx Ste Croi	82.96	44	eP	P	01 32 46.5	-0.7
	4.6nm,0.7s						
TCF	Toulx Ste Croi	82.96	44	eP	P	01 32 46.5	-0.7
	4.6nm,0.7s						
NB2	NORSAR Subarra	83.53	28	P	P	01 32 50.3	+0.5
	comp=Z,5.8nm,0.8s,baz=292,slow=5.3						
NOA	NORSAR Array B	83.53	28	P	P	01 32 50.0	+0.1
NOA	NORSAR Array B	83.53	28	P	P	01 32 50.0	+0.1
	comp=Z,5.4nm,0.9s,baz=291,slow=5.2,SNR=14						
NOA				LR	LR	02 06 40.0	
	comp=Z,25nm,21.8s,baz=195,slow=33						
AVF	Avril sur Loir	83.59	43	eP	P	01 32 49.4	-0.9
AVF	Avril sur Loir	83.59	43	eP	P	01 32 49.4	-0.9
SSF	Saint Saulge	83.61	43	eP	P	01 32 49.8	-0.7
SSF	Saint Saulge	83.61	43	eP	P	01 32 49.8	-0.7
MTLF	Montolieu	83.75	47	eP	P	01 32 50.5	-0.8
MTLF	Montolieu	83.75	47	eP	P	01 32 50.5	-0.8
LOR	Lormes	83.79	43	eP	P	01 32 50.8	-0.6
LOR	Lormes	83.79	43	eP	P	01 32 50.8	-0.6
SMF	Signal de Mont	83.95	43	eP	P	01 32 51.4	-0.8
SMF	Signal de Mont	83.95	43	eP	P	01 32 51.4	-0.8
MEZF	Maizieres J'vi	84.20	41	eP	P	01 32 53.3	-0.1
	comp=Z,8.4nm,0.6s						
MEZF	Maizieres J'vi	84.20	41	eP	P	01 32 53.3	-0.1
	comp=Z,8.4nm,0.6s						
SFTF	Sexfontaines	84.28	42	eP	P	01 32 53.0	-0.9
	comp=Z,6.0nm,0.5s						
SFTF	Sexfontaines	84.28	42	eP	P	01 32 53.0	-0.9
	comp=Z,6.0nm,0.5s						
PAGF	Fort de Pagny	84.61	41	eP	P	01 32 55.7	+0.2
	comp=Z,0.8nm,0.5s						
PAGF	Fort de Pagny	84.61	41	eP	P	01 32 55.7	+0.2
	comp=Z,0.8nm,0.5s						
ARCES	ARCESS Array B	85.10	18	P	P	01 32 57.8	+0.2
ARCES	ARCESS Array B	85.10	18	P	P	01 32 57.8	+0.2
	comp=Z,3.4nm,0.5s,baz=292,slow=5.3,SNR=27						
HAU	Haudompre	85.18	42	eP	P	01 32 58.3	-0.1
	comp=Z,8.3nm,0.7s						
HAU	Haudompre	85.18	42	eP	P	01 32 58.3	-0.1
	comp=Z,8.3nm,0.7s						
HINF	Hinteralfeld	85.56	42	eP	P	01 33 00.0	-0.3
	comp=Z,3.8nm,0.5s						
HINF	Hinteralfeld	85.56	42	eP	P	01 33 00.0	-0.3
	comp=Z,3.8nm,0.5s						
CDF	Champ du Feu	85.64	41	eP	P	01 33 00.5	-0.3
CDF	Champ du Feu	85.64	41	eP	P	01 33 00.5	-0.3
ORIF	Oris-en-Rattie	85.82	45	eP	P	01 33 01.3	-0.5
ORIF	Oris-en-Rattie	85.82	45	eP	P	01 33 01.3	-0.5
LPL	La Plagne	86.21	44	eP	P	01 33 03.6	-0.2
LPL	La Plagne	86.21	44	eP	P	01 33 03.6	-0.2
LPG	La Plagne	86.23	44	eP	P	01 33 03.6	-0.4
LPG	La Plagne	86.23	44	eP	P	01 33 03.6	-0.4
MBDF	Montbardon	86.48	45	eP	P	01 33 05.4	+0.3
MBDF	Montbardon	86.48	45	eP	P	01 33 05.4	+0.3
LMR	La Mourre	86.75	46	eP	P	01 33 06.1	-0.1
	comp=Z,21nm,0.9s						
LMR	La Mourre	86.75	46	eP	P	01 33 06.1	-0.1
	comp=Z,21nm,0.9s						
FRF	La Foret Royal	86.77	46	eP	P	01 33 06.1	-0.2
FRF	La Foret Royal	86.77	46	eP	P	01 33 06.1	-0.2
DBIC	Dimbokro	87.33	84	eP	P	01 33 09.1	-0.5
	comp=Z,44nm,1.8s						
GERES	GERESS Array B	89.46	39	P	P	01 33 17.8	-1.3
GERES	GERESS Array B	89.46	39	P	P	01 33 17.8	-1.3
	comp=Z,0.8nm,0.7s,baz=290,slow=4.0,SNR=8.0						
FINES	FINESS Array B	89.74	25	P	P	01 33 19.5	-0.5
FINES	FINESS Array B	89.74	25	P	P	01 33 19.5	-0.5
	comp=Z,1.6nm,0.6s,baz=331,slow=3.3,SNR=10.0						
MORC	Moravsky Berou	91.35	37	eP	P	01 33 26.1	-1.8
	comp=Z,4.7nm,1.0s						
TOA0	Torodi Ar. Sit	91.78	76	eP	P	01 33 29.3	-1.1
TORD	Torodi Ar. Bea	91.78	76	P	P	01 33 28.2	-2.2
TORD	Torodi Ar. Bea	91.78	76	P	P	01 33 28.2	-2.2
	comp=Z,0.5nm,0.7s,baz=293,slow=5.8,SNR=4.3						
MK31	Makanchi Array	117.69	3	ePKPdf	PKPdf	01 39 07.4	-0.5
MKAR	Makanchi Array	117.69	3	PKP	PKPdf	01 39 07.0	-1.0
MKAR	Makanchi Array	117.69	3	PKP	PKPdf	01 39 07.0	-1.0
	comp=Z,0.4nm,0.8s,baz=318,slow=1.6,SNR=4.6						
HHC	Hu-ho-hao-te	118.95	338	ePKP	PKPdf	01 39 04.0	-6.6
HHC				sPKP		01 40 03.2	
HHC				AMB	AMB		
	comp=Z,170nm,8.7s						
WMQ	Urumqi	120.74	359	PKP	PKPdf	01 39 13.0	-0.9
BOSA	Boshof	122.76	114	PKP	PKPdf	01 39 17.7	-0.5
BOSA				ePKPdf	PKiKP	01 39 18.4	-0.1
BOSA	Boshof	122.76	114	PKP	PKPdf	01 39 17.7	-0.5
	comp=Z,2.9nm,0.8s,baz=357,slow=4.2,SNR=6.3						
LSZ	Lusaka	124.38	98	ePKPdf	PKPdf	01 39 22.0	+0.4
LZH	Lanzhou	125.81	342	ePKP	PKPdf	01 39 19.0	-5.0
LZH				sPKP		01 40 06.7	
STKA	Stephens Creek	127.25	242	PKP	PKPdf	01 39 27.1	+0.6
STKA	Stephens Creek	127.25	242	PKP	PKPdf	01 39 27.1	+0.6
	comp=Z,1.1nm,0.7s,baz=222,slow=4.0,SNR=4.5						
CD2	Chengdu	130.62	340	PKP	PKPdf	01 39 31.8	-1.4
GYA	Guiyang	133.55	334	ePdif	Pdif	01 36 35.6	-1.4
GYA				PKP	PKPdf	01 39 37.4	-1.5
GYA				sPKP		01 40 27.5	
GYA				PP	PP	01 42 11.0	+4.5
GYA				AMB	AMB		
	comp=Z,90nm,7.9s						
WRAB	Tennant Creek	133.97	257	ePKPdf	PKPdf	01 39 40.3	+0.7
WRA	Warramunga Arr	133.98	257	PKP	PKPdf	01 39 40.3	+0.6
WRA	Warramunga Arr	133.98	257	PKP	PKPdf	01 39 40.3	+0.6
	comp=Z,1.4nm,0.7s,baz=74,slow=2.1,SNR=7.9						
ASAR	Alice Springs	134.45	252	PKP	PKPdf	01 39 41.2	+0.7
ASAR	Alice Springs	134.45	252	PKP	PKPdf	01 39 41.2	+0.7
	comp=Z,1.0nm,0.8s,baz=87,slow=1.7,SNR=8.7						
CMAR	Chiang Mai Arr	143.76	339	PKP	PKPbc	01 39 56.1	+0.8
CMAR	Chiang Mai Arr	143.76	339	PKP	PKPbc	01 39 56.1	+0.8
	comp=Z,1.1nm,0.3s,baz=342,slow=3.0,SNR=6.8						
KAPI	Kappang	145.26	284	ePKPbc	PKPbc	01 39 59.7	-0.4
HYB	Hyderabad	146.25	13	i PKP	PKPdf	01 40 01.0	-0.9
KSM	Kuching	150.58	303	ePKPbc	PKPbc	01 40 15.0	+0.5

*CSEM **08** 01:27:34.3±0.4, 33.°27N×35.°36E, h12^{km}, ML3.0, Error ellipse: s-maj=7.0km s-min=4.3km az=69.0*
*NSSC **08** 01:27:34.5±1.4, 33.°31N×35.°39E, h10^{km}±7^{km}, MD0.9, ML1.5*
*ISCJB **08** 01:27:35.0±1.2, 33.°30N±0.°04×35.°41E±0.°06, h11^{km}±6^{km}, Error ellipse: s-maj=9.6km s-min=6.5km az=153.4*
*GRAL **08** 01:27:35.8±0.3, 33.°28N×35.°39E, h1^{km}±38^{km}, MD3.0*
ISC 08 01:27:34.0±1.4, **33.°25N**±0.°05×**35.°37E**±0.°06, **h16**^{km}±9^{km}, **n17, σ0s38**/30, **Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATL	Matarih	0.24	352	eP	Pg	01 27 39.7	+0.3
MATL	Matarih	0.24	352	eP	Pg	01 27 39.7	+0.3
RCY	Rachaya	0.46	58	eP	Pg	01 27 43.6	+0.3
RCY				eS	Sg	01 27 49.3	-0.3
BRBR	Barbar	0.51	72	eP	Pg	01 27 44.7	+0.4
BRBR				eS	Sg	01 27 50.9	-0.4
BRBR				AML	AML	01 27 53.4	
	comp=E,79nm,0.6s						
BRBR				AML	AML	01 27 54.2	
	comp=N,53nm,0.3s						
BRBR	Barbar	0.51	72	eP	Pg	01 27 44.7	+0.4
	SNR=91						
BRBR				eS	Sg	01 27 50.8	-0.4
	comp=N,53nm,0.3s,SNR=98						
BHL	Bhannes	0.69	20	eP	Pg	01 27 47.7	+0.1
BHL				eS	Sg	01 27 56.4	-0.4
BHL	Bhannes	0.69	20	eP	Pg	01 27 47.7	+0.1
BHL				eS	Sg	01 27 56.4	-0.4
TCHB	Talchebab	0.77	139	eP	Pb	01 27 49.1	0.0
TCHB				eS	Sn	01 28 01.5	-0.1
TCHB				AML	AML	01 28 04.2	
	comp=N,62nm,0.2s						
TCHB				AML	AML	01 28 08.3	
	comp=E,39nm,0.4s						
TCHB	Talchebab	0.77	139	eP	Pb	01 27 49.1	0.0
	SNR=90						
TCHB				eS	Sn	01 28 01.5	-0.1
	comp=E,39nm,0.4s,SNR=62						
TOTH	TOTAH	0.89	83	eP	Pb	01 27 51.6	+0.4
TOTH				eS	Sb	01 28 02.4	-0.6
TOTH				AML	AML	01 28 07.5	
	comp=E,13nm,0.4s						
TOTH				AML	AML	01 28 26.0	
	comp=N,11nm,0.6s						
TOTH	TOTAH	0.89	83	eP	Pb	01 27 51.6	+0.4
	SNR=66						
TOTH				eS	Sb	01 28 02.4	-0.6
	comp=N,11nm,0.6s,SNR=62						
HWQ	Hawqa	1.13	25	eP	Pb	01 27 55.5	+0.2
HWQ	Hawqa	1.13	25	eP	Pb	01 27 55.5	+0.2
SALA	Sala	1.27	115	eP	Pn	01 27 57.2	-0.1
SALA				eS	Sn	01 28 14.9	+0.8
SALA				AML	AML	01 28 19.8	
	comp=E,2.2nm,0.3s						
SALA				AML	AML	01 28 21.5	
	comp=N,14nm,0.5s						
SALA	Sala	1.27	115	eP	Pn	01 27 57.2	-0.1
	SNR=66						
SALA				eS	Sn	01 28 14.9	+0.8
	comp=N,14nm,0.5s,SNR=62						
ZALF	Zalf	1.68	101	eP	Pb	01 28 04.8	+0.1
ZALF				eS	Sb	01 28 25.4	-0.2
ZALF				AML	AML	01 28 29.5	
	comp=N,7.2nm,0.2s						
ZALF				AML	AML	01 28 30.3	
	comp=E,7.5nm,0.5s						
ZALF	Zalf	1.68	101	eP	Pb	01 28 04.8	+0.1
	SNR=51						
ZALF				eS	Sb	01 28 25.4	-0.2
	comp=E,7.5nm,0.5s,SNR=49						

*VIE **08** 01:57:37.7±0.6, 43.°98N×16.°74E, h10^{km}, mb2.5/6, ML2.6/7, Error ellipse: s-maj=7.0km s-min=4.5km az=43.0 56 km NNE of Split*
*PDG **08** 01:57:40.4±0.3, 44.°17N×16.°40E, h3^{km}±1^{km}, ML2.9/8, Error ellipse: s-maj=0.8km s-min=1.2km az=0.0*
*CSEM **08** 01:57:40.9±0.2, 44.°21N×16.°39E, h2^{km}, ML2.9/8, Error ellipse: s-maj=8.3km s-min=3.5km az=46.0*
ISC 08 01:57:40.2±1.3, **44.°13N**±0.°03×**16.°39E**±0.°03, **h5**^{km}±12^{km}, **n48, σ1s39**/77, **15C-9D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVLJ	Novalja	1.17	292	ePg	Pb	01 58 01.6	-1.3
NVLJ				Sg	Sn	01 58 21.3	+1.6
NVLJ	Novalja	1.17	292	ePg	Pb	01 58 01.6	-1.3
NVLJ				Sg	Sn	01 58 21.2	+1.6
SISC	Sisak	1.34	359	ePn	Pg	01 58 06.0	+0.1
SISC				Sn	Sg	01 58 25.1	+1.9
SISC	Sisak	1.34	359	ePn	Pg	01 58 05.9	+0.1
SISC				Sn	Sg	01 58 25.1	+1.9
STON	Ston	1.58	142	⇓iPn	Pn	01 58 06.9	-1.9
STON				Sn	Sb	01 58 30.6	+0.5
BOJS	Bojanci	1.59	330	i Pn	Pb	01 58 09.2	-1.0
BOJS				i Sn	Sg	01 58 33.6	+2.2
BOJS							
	comp=Z,44nm,0.5s						
BOJS	Bojanci	1.59	330	Pn	Pb	01 58 09.1	-1.0
BOJS				i Sn	Sg	01 58 33.6	+2.2
	comp=Z,44nm,0.5s						
BRY	Bratogost	1.99	127	⇑iPn	Pb	01 58 15.7	-1.2
BRY				eSn	Sg	01 58 44.9	+0.9
BRY	Bratogost	1.99	127	⇑iPn	Pb	01 58 15.7	-1.2
BRY				eSn	Sg	01 58 44.9	+0.9
UPM	Unac-Piva	2.05	116	ePn	Pb	01 58 16.9	-1.0
UPM				eSn	Sg	01 58 46.0	+0.1
UPM	Unac-Piva	2.05	116	ePn	Pb	01 58 16.9	-1.0
UPM				eSn	Sg	01 58 46.0	+0.1
BBLS	Lazići	2.19	96	ePn	Pg	01 58 21.4	-0.7
HCY	Herceg Novi	2.28	137	⇑iPn	Pb	01 58 19.9	-1.8
HCY				eSn	Sb	01 58 52.1	+1.9
HCY	Herceg Novi	2.28	137	⇑iPn	Pb	01 58 19.9	-1.8
HCY				eSn	Sb	01 58 52.1	+1.9
TEKS	Tekeris	2.29	78	ePn	Pb	01 58 19.9	-2.1
NKY	Niksic	2.31	124	⇑iPn	Pb	01 58 20.8	-1.5
NKY				eSn	Sb	01 58 52.4	+1.2
NKY	Niksic	2.31	124	⇑iPn	Pb	01 58 20.8	-1.5
NKY				eSn	Sb	01 58 52.4	+1.2
PLE	Pljevlja	2.31	109	⇓iPn	Pn	01 58 20.1	+1.0
PLE				eSn	Sb	01 58 52.5	+1.1
PLE	Pljevlja	2.31	109	⇓iPn	Pn	01 58 20.1	+1.0
PLE				eSn	Sb	01 58 52.5	+1.1
JAVS	Javornik	2.42	318	i Pn	Pb	01 58 21.6	-2.6
JAVS				i Sn	Sb	01 58 53.9	-0.4
JAVS							
	comp=Z,12nm,0.3s						
JAVS	Javornik	2.42	318	i Pn	Pb	01 58 21.6	-2.6
MS1	Monte Sant'Ang	2.45	188	ePn	Pb	01 58 23.5	-1.2
MS1				eSn	Sb	01 58 53.7	-1.5
BUM	Brajici-Budva	2.59	134	⇑iPn	Pn	01 58 23.9	+1.2
BUM				eSn	Sb	01 58 59.2	0.0
BUM	Brajici-Budva	2.59	134	⇑iPn	Pn	01 58 23.9	+1.2
BUM				eSn	Sb	01 58 59.2	0.0
DIVS	Divibare	2.59	89	ePn	Pb	01 58 26.9	-0.3
VOY	Vojsko	2.60	318	ePn	Pn	01 58 23.9	+1.0
VOY				eSn	Sb	01 58 58.2	-1.3
VOY	Vojsko	2.60	318	ePn	Pn	01 58 23.9	+1.0
VOY				eSn	Sb	01 58 58.2	-1.3
PDG	Podgorica	2.69	128	⇓iPn	Pb	01 58 26.4	-2.4
PDG				eSn	Sb	01 59 00.7	-1.5
TTG	Podgorica	2.69	128	⇓iPn	Pb	01 58 26.4	-2.4
TTG				eSn	Sb	01 59 00.7	-1.5
OBKA	Obir	2.71	332	⇓ePn	Pn	01 58 24.9	+0.4
	SNR=12						
OBKA				⇑iSn	Sb	01 59 00.8	-2.0
OBKA	Obir	2.71	332	Pn	Pn	01 58 24.9	+0.4
	SNR=12						
OBKA				Sn	Sb	01 59 00.8	-2.0
SOKA	Soboth	2.72	340	⇓iPn	Pn	01 58 24.2	-0.4
SOKA	Soboth	2.72	340	Pn	Pn	01 58 24.2	-0.4
IVAS	Ivanjica	2.78	100	ePn	Pn	01 58 24.5	-0.9
TRUS	Trudelj	2.89	87	ePn	Pb	01 58 30.7	-1.5
ULC	Ulcinj	3.01	135	⇑iPn	Pn	01 58 30.6	+2.1
ULC				eSn	Sb	01 59 09.9	-1.4
ULC	Ulcinj	3.01	135	⇑iPn	Pn	01 58 30.6	+2.1
ULC				eSn	Sb	01 59 09.9	-1.4
GRUS	Gruza	3.13	93	ePn	Pn	01 58 30.4	+0.3
ARSA	Arzberg	3.18	349	⇑iPn	Pn	01 58 30.6	-0.3
	SNR=9.5						
ARSA	Arzberg	3.18	349	Pn	Pn	01 58 30.6	-0.3
	SNR=9.5						
CONA	Conrad Observa	3.82	355	⇑iPn	Pn	01 58 39.4	-0.3
CONA	Conrad Observa	3.82	355	Pn	Pn	01 58 39.4	-0.3
MOA	Molln	4.00	339	⇓iPn	Pn	01 58 43.0	+0.8
MOA				⇑iSn	Sb	01 59 33.1	-6.8
MOA	Molln	4.00	339	Pn	Pn	01 58 43.0	+0.8
MOA				Sn	Sb	01 59 33.1	-6.8
BARS	Barje	4.16	107	ePn	Pn	01 58 44.9	+0.6
MOTA	Moosalm	4.90	313	⇓iPn	Pn	01 58 55.8	+1.2
MOTA				⇑iSn	Sn	01 59 56.4	+4.6
MOTA	Moosalm	4.90	313	Pn	Pn	01 58 55.8	+1.2
MOTA				Sn	Sn	01 59 56.4	+4.6
VTS	Vitosha	5.20	105	ePn	Pn	01 58 57.4	-1.4

*ISCJB **08** 01:57:43.7±0.5, 49.°66S±0.°06×126.°1E±0.°2, h10^{km}, mb4.4/15, MS3.9/14, Error ellipse: s-maj=17.1km s-min=8.2km az=14.5*
*IDC **08** 01:57:44.0±0.7, 49.°64S×126.°03E, h0^{km}, mb4.4/10, mb1 4.6/11, mb1mx4.4/17, mbtmp4.5/11, ML3.1/1, MS3.9/15, Ms1 3.9/15, ms1mx3.7/29, Error ellipse: s-maj=34.8km s-min=14.6km az=99.0*
*NEIC **08** 01:57:45.5±0.4, 49.°63S×125.°92E, h10^{km}, mb4.7/7, Error ellipse: s-maj=13.5km s-min=8.1km az=106.0*
ISC 08 01:57:45.3±0.5, **49.°67S**±0.°08×**125.°9E**±0.°1, **h10**^{km}, **n52, σ1s15**/45, **mb4.4**/15, **MS3.8**/14, **Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	17.93	336	P	P	02 01 56.4	+1.1
NWAO	Narrogin (SRO)	17.93	336	P	P	02 01 56.4	+1.1
	3.3nm,0.3s,baz=150,slow=5.7,SNR=22						
NWAO				LR	LR	02 07 11.7	
	comp=Z,681nm,19.9s,baz=320,slow=32						
BBOO	Buckleboo	18.46	28	eP	P	02 02 00.8	-0.3
	1μm,1.7s						
DRV	Dumont d'Urvil	18.51	162	P	P	02 01 58.0	-3.4
DRV				L	L	02 05 00.0	
DRV				R		02 06 00.0	
FORT	Forrest	18.94	6	eP	P	02 02 06.5	+0.2
	41nm,0.7s						
STKA	Stephens Creek	21.30	39	P	P	02 02 31.5	-0.5
STKA	Stephens Creek	21.30	39	P	P	02 02 31.5	-0.5
	4.1nm,0.5s,baz=199,slow=9.8,SNR=13						
STKA				LR	LR	02 09 19.4	
	comp=Z,249nm,19.2s,baz=204,slow=33						
CAN	Canberra	22.14	58	eP	P	02 02 41.3	+0.2
	14nm,0.9s						
ASAR	Alice Springs	26.70	16	P	P	02 03 23.9	-0.8
ASAR	Alice Springs	26.70	16	P	P	02 03 23.9	-0.8
	14nm,0.7s,baz=192,slow=8.8,SNR=125						
ASAR				LR	LR	02 13 34.6	
	comp=Z,62nm,18.8s,baz=189,slow=36						
AS31	Alice Springs	26.70	16	eP	P	02 03 23.6	-1.1
WRA	Warramunga Arr	30.41	16	P	P	02 03 56.6	-1.1
WRA	Warramunga Arr	30.41	16	P	P	02 03 56.6	-1.1
	2.0nm,0.5s,baz=195,slow=11,SNR=12						
WRA				LR	LR	02 15 59.0	
	comp=Z,95nm,18.5s,baz=190,slow=36						
WRAB	Tennant Creek	30.43	16	eP	P	02 03 56.8	-1.1
	5.4nm,0.9s						
VNDA	Vanda	31.09	166	eP	P	02 04 02.9	-0.3
	8.7nm,0.8s						
VNDA	Vanda	31.09	166	P	P	02 04 03.0	-0.1
	9.2nm,0.8s,baz=318,slow=9.0,SNR=45						
VNDA				LR	LR	02 15 32.0	
	comp=Z,473nm,18.6s,baz=323,slow=34						
RPZ	Rata Peaks	31.15	97	LR	LR	02 13 57.0	
	comp=Z,378nm,18.8s,baz=90,slow=31						
FITZ	Fitzroy Crossi	31.49	360	LR	LR	02 15 47.4	
	comp=Z,161nm,18.8s,baz=187,slow=34						
CTA	Charters Tower	33.68	36	LR	LR	02 17 10.9	
	comp=Z,184nm,19.0s,baz=42,slow=35						
QSPA	South Pole Qui	40.45	180	P	P	02 05 23.9	+0.2
QSPA	South Pole Qui	40.45	180	P	P	02 05 23.9	+0.2
	13nm,1.0s,baz=340,slow=4.9,SNR=17						
QSPA				LR	LR	02 21 02.8	
	comp=Z,143nm,21.5s,baz=166,slow=35						
DZM	Mont Dzumac	42.09	64	eP	P	02 05 38.9	+1.4
	12nm,0.9s						
KAPI	Kappang	44.80	351	LR	LR	02 22 19.6	
	comp=Z,95nm,20.1s,baz=347,slow=33						
SNAA	Sanae	53.67	198	eP	P	02 07 07.5	+0.9
SNAA	Sanae	53.67	198	eP	P	02 07 07.3	+0.7
	12nm,1.0s						
SNAA	Sanae	53.67	198	P	P	02 07 07.5	+0.9
	2.6nm,1.0s,baz=152,slow=8.5,SNR=18						
VNA2	Neumayer--Watz	55.15	197	eP	P	02 07 18.4	+1.1
	baz=153,slow=7.5						
VNA3	Neumayer Olymp	55.31	196	eP	P	02 07 19.2	+0.8
DAV	Davao City (W)	56.50	360	LR	LR	02 30 39.4	
	comp=Z,77nm,18.9s,baz=204,slow=35						
PSI	Prapat	57.22	327	P	P	02 07 29.8	-3.0
PSI	Prapat	57.22	327	P	P	02 07 29.8	-3.0
	9.3nm,0.9s,baz=152,slow=6.2,SNR=5.5						
PMSA	Palmer Station	65.63	175	LR	LR	02 36 40.9	
	comp=Z,209nm,18.5s,baz=352,slow=36						
CMAR	Chiang Mai Arr	71.91	333	P	P	02 09 09.1	+0.5
CMAR	Chiang Mai Arr	71.91	333	P	P	02 09 09.1	+0.5
	0.8nm,0.3s,baz=189,slow=5.3,SNR=7.0						
CMAR				LR	LR	02 42 27.0	
	comp=Z,84nm,18.3s,baz=161,slow=37						
BOSA	Boshof	75.14	243	P	P	02 09 27.5	-0.4
BOSA	Boshof	75.14	243	P	P	02 09 27.5	-0.4
	1.1nm,0.6s,baz=135,slow=7.1,SNR=4.4						
BOSA				LR	LR	02 35 21.2	
	comp=Z,70nm,18.5s,baz=262,slow=30						
LBTB	Lobatse	77.64	246	eP	P	02 09 42.8	+0.7
	9.5nm,1.2s						
MJAR	Matsushiro Arr	86.53	10	P	P	02 10 27.4	-0.6
MJAR	Matsushiro Arr	86.53	10	P	P	02 10 27.4	-0.6
	2.4nm,0.9s,baz=201,slow=8.0,SNR=5.8						
KSAR	Wonju Array Be	86.75	2	P	P	02 10 30.1	+1.0
KSRS	Korea Array	86.76	2	P	P	02 10 30.1	+1.0
	1.6nm,0.7s,baz=195,slow=6.6,SNR=8.6						
KMBO	Kilima Mbogo	88.28	270	LR	LR	02 41 41.8	
	comp=Z,69nm,18.0s,baz=95,slow=30						
TORD	Torodi Ar. Bea	121.85	252	PKP	PKPdf	02 16 40.9	+1.1
TORD	Torodi Ar. Bea	121.85	252	PKP	PKPdf	02 16 40.9	+1.1
	0.3nm,0.9s,baz=147,slow=2.8,SNR=2.9						
TXAR	Lajitas Array	137.59	100	PKP	PKPdf	02 17 10.8	+1.4
TXAR	Lajitas Array	137.59	100	PKP	PKPdf	02 17 10.8	+1.4
	0.3nm,0.7s,baz=189,slow=3.3,SNR=4.7						
NAO01	NORSAR Array S	142.88	313	ePKPdf	PKPdf	02 17 18.5	+0.7
YKA	Yellowknife Ar	145.26	45	PKPbc	PKPab	02 17 21.8	0.0
YKA	Yellowknife Ar	145.26	45	PKPbc	PKPab	02 17 21.8	0.0
	3.8nm,0.7s,baz=267,slow=3.8,SNR=61						
YKW3	Yellowknife Ar	145.26	45	ePKPbc	PKPab	02 17 21.8	0.0
RES	Resolute Bay	149.71	20	ePKPbc	PKPbc	02 17 33.4	-0.2
FFC	Flin Flon	150.68	62	ePKPbc	PKPbc	02 17 37.0	+0.5

*NEIC **08** 02:17:11.3, 18.°67N×65.°79W, h68^{km}, MD3.3(RSPR), After RSPR.*
RSPR 08 02:17:11.3, 18.°67N×65.°79W, h67^{km}±2^{km}, **MD3.3**/12, **30C-11D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBYP	Canovanas	0.40	189	⇓eP	Pn	02 17 22.4	-0.6
CBYP	Canovanas	0.40	189	eS	Sn	02 17 31.3	-0.3
CBYP	Canovanas	0.40	189	⇓eP	Pn	02 17 22.4	-0.6
CBYP				eS	Sn	02 17 31.3	-0.3
CBYP	Canovanas	0.40	189	⇓eP	Pn	02 17 22.4	-0.6
CBYP				eS	Sn	02 17 31.3	-0.3
HUMP	Col San Antoni	0.53	186	⇑eP	Pn	02 17 23.4	-0.8
HUMP	Col San Antoni	0.53	186	eS	Sn	02 17 32.8	-0.7
HUMP	Col San Antoni	0.53	186	⇑eP	Pn	02 17 23.4	-0.8
HUMP				eS	Sn	02 17 32.8	-0.7
HUMP	Col San Antoni	0.53	186	⇑eP	Pn	02 17 23.4	-0.8
HUMP				eS	Sn	02 17 32.8	-0.7
MTP	Monte Pirata	0.61	158	⇑eP	Pn	02 17 24.5	-0.6
MTP	Monte Pirata	0.61	158	eS	Sn	02 17 34.6	-0.6
MTP	Monte Pirata	0.61	158	⇑eP	Pn	02 17 24.5	-0.6
MTP				eS	Sn	02 17 34.6	-0.6
MTP	Monte Pirata	0.61	158	⇑eP	Pn	02 17 24.5	-0.6
MTP				eS	Sn	02 17 34.6	-0.6
CPD	Cerro la Pandu	0.64	191	⇑eP	Pn	02 17 24.4	-1.0
CPD	Cerro la Pandu	0.64	191	eS	Sn	02 17 35.2	-0.6
CPD	Cerro la Pandu	0.64	191	⇑eP	Pn	02 17 24.4	-1.0
CPD				eS	Sn	02 17 35.2	-0.6
CPD	Cerro la Pandu	0.64	191	⇑eP	Pn	02 17 24.4	-1.0
CPD				eS	Sn	02 17 35.2	-0.6
SJG	San Juan	0.65	212	⇓eP	Pn	02 17 24.8	-0.7
SJG	San Juan	0.65	212	eS	Sn	02 17 35.7	-0.2
SJG	San Juan	0.65	212	⇑eP	Pn	02 17 24.8	-0.7
SJG	San Juan	0.65	212	⇑eP	Pn	02 17 24.8	-0.7
SJG				eS	Sn	02 17 35.7	-0.2
SJG	San Juan	0.65	212	⇑eP	Pn	02 17 24.8	-0.7
SJG	San Juan	0.65	212	⇓eP	Pn	02 17 24.8	-0.7
SJG				eS	Sn	02 17 35.7	-0.2
STVI	Saint Thomas	0.86	112	⇓eP	Pn	02 17 27.4	-0.4
STVI	Saint Thomas	0.86	112	eS	Sn	02 17 40.1	0.0
STVI	Saint Thomas	0.86	112	⇓eP	Pn	02 17 27.4	-0.4
STVI				eS	Sn	02 17 40.1	0.0
STVI	Saint Thomas	0.86	112	⇓eP	Pn	02 17 27.4	-0.4
STVI				eS	Sn	02 17 40.7	+0.6
CELP	Cerrillos	0.95	232	⇑eP	Pn	02 17 28.4	-0.7
CELP				eS	Sn	02 17 42.0	-0.3
CELP	Cerrillos	0.95	232	⇑eP	Pn	02 17 28.4	-0.7
CELP				eS	Sn	02 17 42.0	-0.3
CELP	Cerrillos	0.95	232	⇑eP	Pn	02 17 28.4	-0.7
CELP				eS	Sn	02 17 42.4	+0.1
AOPR	Arecibo Observ	0.97	251	⇑eP	Pn	02 17 28.5	-0.8
AOPR	Arecibo Observ	0.97	251	eS	Sn	02 17 41.8	-0.9
AOPR	Arecibo Observ	0.97	251	⇑eP	Pn	02 17 28.5	-0.8
AOPR				eS	Sn	02 17 41.8	-0.9
AOPR	Arecibo Observ	0.97	251	⇑eP	Pn	02 17 28.5	-0.8
AOPR				eS	Sn	02 17 41.8	-0.9

OBIP	**Obispado Ponce**	**0.99**	**231**⇑	*e*P	Pn	02 17 29.2	-0.3
OBIP	**Obispado Ponce**	**0.99**	**231**	*e*S	Sn	02 17 42.8	-0.4
OBIP	**Obispado Ponce**	**0.99**	**231**⇑	*e*P	Pn	02 17 29.2	-0.3
OBIP				*e*S	Sn	02 17 42.8	-0.4
OBIP	**Obispado Ponce**	**0.99**	**231**⇑	*e*P	Pn	02 17 29.2	-0.3
OBIP				*e*S	Sn	02 17 42.8	-0.4
LRS	**Lares**	**1.07**	**250**⇑	*e*P	Pn	02 17 29.4	-1.1
LRS				*e*S	Sn	02 17 44.1	-0.9
LRS	**Lares**	**1.07**	**250**⇑	*e*P	Pn	02 17 29.4	-1.1
LRS				*e*S	Sn	02 17 44.1	-0.9
LRS	**Lares**	**1.07**	**250**⇑	*e*P	Pn	02 17 29.4	-1.1
LRS				*e*S	Sn	02 17 44.7	-0.2
TBVI	**Tortola**	**1.14**	**102**⇑	*e*P	Pn	02 17 30.6	-0.9
TBVI	**Tortola**	**1.14**	**102**⇑	*e*P	Pn	02 17 30.6	-0.9
TBVI	**Tortola**	**1.14**	**102**⇑	*e*P	Pn	02 17 30.6	-0.9
AGPR	**Aguadilla, PR**	**1.27**	**261**⇓	*e*P	Pn	02 17 32.5	-0.7
AGPR	**Aguadilla, PR**	**1.27**	**261**	*e*S	Sn	02 17 49.1	-0.4
AGPR	**Aguadilla, PR**	**1.27**	**261**⇓	*e*P	Pn	02 17 32.5	-0.7
AGPR				*e*S	Sn	02 17 49.1	-0.4
AGPR	**Aguadilla, PR**	**1.27**	**261**⇓	*e*P	Pn	02 17 32.5	-0.7
AGPR				*e*S	Sn	02 17 49.1	-0.4
LSP	**Las Mesas**	**1.32**	**248**	*e*Pn	Pn	02 17 33.4	-0.5
LSP				*e*Sn	Sn	02 17 50.8	0.0
CRPR	**Cabo Rojo, PR**	**1.41**	**242**⇑	*e*P	Pn	02 17 34.8	-0.3
CRPR	**Cabo Rojo, PR**	**1.41**	**242**	*e*S	Sn	02 17 52.5	-0.4
CRPR	**Cabo Rojo, PR**	**1.41**	**242**⇑	*e*P	Pn	02 17 34.8	-0.3
CRPR				*e*S	Sn	02 17 52.5	-0.4
CRPR	**Cabo Rojo, PR**	**1.41**	**242**⇑	*e*P	Pn	02 17 34.8	-0.3
CRPR				*e*S	Sn	02 17 52.5	-0.4

IDC 08 02:19:04.8±2.0**, 7.°00S×127.°36E, h0**km**, mb3.5**/1**, mb1 4.2**/4**, mb1mx3.7**/20**, mbtmp3.9**/4**, ML3.9**/3**, MS4.4**/1**, Ms1 4.4**/1**, ms1mx2.6**/29**, Error ellipse: s-maj=91.2km s-min=27.3km az=72.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.16**	**188**	Pn	Pn	02 21 47.4	+1.6
	0.7nm,0.3s,baz=8.7,slow=13,SNR=16						
FITZ				Sn	Sn	02 23 38.3	-13
	1.1nm,0.3s,baz=84,slow=18,SNR=6.2						
WRA	**Warramunga Arr**	**14.54**	**153**	Pn	Pn	02 22 31.6	-0.4
	0.4nm,0.3s,baz=328,slow=12,SNR=8.0						
WRA				Sn	Sn	02 24 57.4	-17
	1.2nm,0.3s,baz=330,slow=22,SNR=6.9						
ASAR	**Alice Springs**	**17.72**	**160**	P	Pn	02 23 12.1	-1.2
	0.7nm,0.3s,baz=336,slow=11,SNR=32						
ASAR				S	Sn	02 26 14.5	-17
	0.3nm,0.3s,baz=348,slow=26,SNR=4.7						
ASAJ	**Asahikawa**	**52.71**	**14**	LR	LR	02 46 49.3	
	comp=Z,385nm,21.9s,baz=75,slow=32						
MKAR	**Makanchi Array**	**66.82**	**328**	P	P	02 29 58.5	0.0
	0.3nm,0.5s,baz=122,slow=6.7,SNR=5.8						

IDC 08 02:21:35.3±2.7**, 8.°24N×103.°90W, h0**km**, mb3.8**/6**, mb1 4.1**/6**, mb1mx3.9**/19**, mbtmp3.8**/6**, MS3.9**/16**, Ms1 3.9**/16**, ms1mx3.7**/38**, Error ellipse: s-maj=105.2km s-min=26.7km az=60.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**12.44**	**44**	LR	LR	02 28 03.2	
	comp=Z,1µm,21.8s,baz=199,slow=31						
LPIG	**La Paz**	**16.93**	**339**	LR	LR	02 30 31.5	
	comp=Z,38nm,20.7s,baz=174,slow=32						
TEIG	**Tepich**	**19.25**	**50**	LR	LR	02 32 27.0	
	comp=Z,396nm,19.6s,baz=272,slow=34						
TXAR	**Lajitas Array**	**20.99**	**1**	P	P	02 26 21.6	+1.1
	2.4nm,0.9s,baz=178,slow=12,SNR=22						
TXAR				LR	LR	02 33 52.2	
	comp=Z,529nm,19.6s,baz=0.0,slow=35						
ATAH	**Atahualpa**	**29.66**	**120**	LR	LR	02 37 06.5	
	comp=Z,292nm,20.6s,baz=299,slow=31						
TKL	**Tuckaleechee C**	**32.92**	**31**	LR	LR	02 41 44.0	
	comp=Z,129nm,19.2s,baz=260,slow=37						
NNA	**Nana**	**33.58**	**126**	LR	LR	02 38 50.0	
	comp=Z,104nm,19.0s,baz=323,slow=31						
PDAR	**Pinedale Array**	**34.75**	**353**	P	P	02 28 28.1	+0.4
	2.4nm,0.9s,baz=167,slow=9.2,SNR=11						
RPN	**Rapa Nui**	**35.55**	**188**	LR	LR	02 39 38.4	
	comp=Z,331nm,19.0s,baz=354,slow=30						
SADO	**Sadowa**	**42.26**	**26**	LR	LR	02 47 05.5	
	comp=Z,92nm,19.8s,baz=179,slow=36						
ULM	**Lac du Bonnet**	**42.41**	**8**	P	P	02 29 30.4	-1.2
	1.0nm,0.4s,baz=170,slow=6.1,SNR=3.9						
ULM				LR	LR	02 47 22.7	
	comp=Z,172nm,18.9s,baz=23,slow=36						
LPAZ	**La Paz**	**42.98**	**125**	P	P	02 29 37.5	0.0
	3.7nm,1.1s,baz=322,slow=8.3,SNR=5.3						
LPAZ				LR	LR	02 42 43.9	
	comp=Z,32nm,21.9s,baz=81,slow=30						
PPT2	**Papeete2**	**51.91**	**240**	*e*LR	LR	02 45 38.8	
	230nm,23.5s						
TBI	**Tubuai**	**54.49**	**234**	*e*LR	LR	02 46 53.3	
	244nm,26.2s						
YKA	**Yellowknife Ar**	**54.72**	**354**	P	P	02 31 05.3	-0.8
	0.4nm,0.9s,baz=161,slow=7.6,SNR=6.5						
SCHQ	**Schefferville**	**55.04**	**25**	LR	LR	02 56 21.2	
	comp=Z,126nm,18.3s,baz=49,slow=38						
PLCA	**Paso Flores**	**57.60**	**150**	LR	LR	02 48 21.6	
	comp=Z,114nm,19.9s,baz=176,slow=28						
ILAR	**Eielson Array**	**63.96**	**341**	P	P	02 32 10.2	+0.1
	0.5nm,0.6s,baz=142,slow=4.6,SNR=7.1						
URZ	**Urewera**	**86.50**	**231**	LR	LR	03 02 55.1	
	comp=Z,147nm,18.4s,baz=348,slow=29						
NOA	**NORSAR Array B**	**94.60**	**26**	LR	LR	03 16 02.6	
	comp=Z,38nm,19.8s,baz=240,slow=34						
ARCES	**ARCESS Array B**	**95.03**	**16**	LR	LR	03 17 05.6	
	comp=Z,79nm,21.5s,baz=332,slow=35						
HFS	**Hagfors**	**96.10**	**26**	LR	LR	03 16 23.4	
	comp=Z,74nm,20.4s,baz=46,slow=34						

*IDC **08** 02:23:43.9±0.7, 10.°72S×161.°82E, h33km±5km, mb4.2/14, mb1 4.4/16, mb1mx4.3/20, mbtmp4.2/16, ML4.6/2, MS3.7/11, Ms1 3.7/11, ms1mx3.6/28, Error ellipse: s-maj=21.9km s-min=14.7km az=122.0*
*NEIC **08** 02:23:43.9±0.4, 10.°71S×161.°97E, mb4.6/11, Error ellipse: s-maj=10.2km s-min=8.3km az=121.0*
*ISCJB **08** 02:23:44.5±0.4, 10.°83S±0.°05×161.°95E±0.°06, h54km, mb4.3/21, MS3.7/9, Error ellipse: s-maj=9.0km s-min=6.5km az=148.3*
*AUST **08** 02:24:48.3, 12.°59S×158.°84E, h450km*
ISC 08 02:23:45.1±0.4**, 10.°68S**±0.°06×**161.°99E**±0.°07**, h54**km**, n71, σ2.°06**/71**, mb4.4**/20**, MS3.8**/9**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.36**	**302**	*e*Pn	**Pn**	**02 24 22.0**	**+0.7**
HNR				*e*Sn	**Sn**	**02 24 51.2**	**+2.1**
DZM	**Mont Dzumac**	**12.11**	**160**	Pn	**Pn**	**02 26 35.1**	**+0.1**
DZM				Sn	**Sn**	**02 28 46.3**	**-2.3**
DZM	**Mont Dzumac**	**12.11**	**160**	Pn	**Pn**	**02 26 35.1**	**+0.1**
	2.5nm,0.3s,baz=355,slow=16,SNR=38						
DZM				Sn	**Sn**	**02 28 46.3**	**-2.3**
	1.1nm,0.3s,baz=342,slow=21,SNR=3.6						
DZM				LR	LR	02 29 56.5	
	comp=Z,341nm,21.9s,baz=2.9,slow=31						
PMG	**Port Moresby**	**14.65**	**274**	Pn	**Pn**	**02 27 10.6**	**+1.2**
PMG	**Port Moresby**	**14.65**	**274**	Pn	**Pn**	**02 27 10.6**	**+1.2**
	0.7nm,0.3s,baz=48,slow=7.8,SNR=5.4						
CTA	**Charters Tower**	**17.80**	**236**	P	**Pn**	**02 27 48.9**	**-0.3**
CTA	**Charters Tower**	**17.80**	**236**	P	**Pn**	**02 27 48.9**	**-0.3**
	1.9nm,0.3s,baz=61,slow=13,SNR=20						
CTA				LR	LR	02 33 39.7	
	comp=Z,205nm,19.6s,baz=48,slow=34						
CTAO	**Charters Tower**	**17.80**	**236**	*e*P	**P**	**02 27 51.2**	**+1.9**
	39nm,0.9s						
EIDS	**Eidsvold**	**17.90**	**214**	P	**P**	**02 27 54.3**	**+4.0**
	baz=15,SNR=4.6						
COEN	**Coen**	**18.66**	**258**	*e*P	**P**	**02 27 54.6**	**-4.2**
	137nm,0.9s						
COEN	**Coen**	**18.66**	**258**	P	**Pn**	**02 28 02.9**	**+3.3**
	baz=15,SNR=4.5						
RMQ	**Roma**	**20.08**	**217**	P	Pn	02 28 17.5	+1.1
	baz=17,SNR=20						
MMPI	**Merauke**	**21.41**	**274**	S	S	02 31 56.5	-27
	baz=19,SNR=3.6						
ARMA	**Armidale**	**21.88**	**205**	S	S	02 31 36.2	-56
	baz=19,SNR=4.8						
QLP	**Quilpie**	**23.04**	**224**	P	**P**	**02 28 46.2**	**+0.3**
	baz=20,SNR=4.3						
QLP				S	S	02 31 53.8	-59
	baz=20,SNR=5.2						
AFI	**Afiamalu**	**25.83**	**100**	LR	LR	02 37 29.4	
	comp=Z,278nm,20.1s,baz=285,slow=32						
WRAB	**Tennant Creek**	**28.16**	**248**	*e*P	**P**	**02 29 32.3**	**-0.2**
	11nm,1.1s						
WRA	**Warramunga Arr**	**28.17**	**248**	P	**P**	**02 29 31.9**	**-0.8**
WRA	**Warramunga Arr**	**28.17**	**248**	P	**P**	**02 29 31.9**	**-0.8**
	2.6nm,0.7s,baz=76,slow=9.4,SNR=10						
STKA	**Stephens Creek**	**28.29**	**219**	P	**P**	**02 29 33.8**	**+0.3**
STKA	**Stephens Creek**	**28.29**	**219**	P	**P**	**02 29 33.8**	**+0.3**
	3.4nm,0.8s,baz=16,slow=12,SNR=5.0						
STKA				LR	LR	02 40 40.7	
	comp=Z,336nm,18.7s,baz=25,slow=36						
KDU	**Kakadu**	**28.96**	**263**	P	P	02 29 24.9	-15
	baz=26,SNR=8.7						
ASAR	**Alice Springs**	**29.70**	**241**	P	**P**	**02 29 45.4**	**-0.9**
ASAR	**Alice Springs**	**29.70**	**241**	P	**P**	**02 29 45.4**	**-0.9**
	0.8nm,0.4s,baz=69,slow=9.0,SNR=8.5						
ASAR				LR	LR	02 41 11.4	
	comp=Z,209nm,19.5s,baz=353,slow=36						
URZ	**Urewera**	**30.63**	**156**	LR	LR	02 40 29.4	
	comp=Z,164nm,20.1s,baz=324,slow=33						
RPZ	**Rata Peaks**	**33.84**	**168**	LR	LR	02 41 01.6	
	comp=Z,174nm,19.7s,baz=294,slow=31						
FITZ	**Fitzroy Crossi**	**35.92**	**254**	*e*P	**P**	**02 30 40.1**	**-0.4**
	11nm,0.9s						
FITZ	**Fitzroy Crossi**	**35.92**	**254**	P	**P**	**02 30 39.8**	**-0.7**
	7.4nm,0.6s,baz=90,slow=6.6,SNR=17						
FITZ	**Fitzroy Crossi**	**35.92**	**254**	P	**P**	**02 30 40.3**	**-0.3**
	baz=32,SNR=7.1						
MBWA	**Marble Bar**	**41.83**	**250**	*e*P	**P**	**02 31 29.7**	**-0.2**
	17nm,0.9s						
PCI	**Palu**	**42.98**	**280**	P	P	02 31 45.5	+6.0
	baz=40,SNR=7.7						
MEEK	**Meekatharra**	**43.81**	**243**	P	**P**	**02 31 46.8**	**+0.8**
	baz=40,SNR=11						
MJAR	**Matsushiro Arr**	**52.03**	**336**	pP	pP	02 32 59.7	-4.1
MJAR	**Matsushiro Arr**	**52.03**	**336**	pP	pP	02 32 59.7	-4.1
	2.1nm,0.7s,baz=165,slow=8.8,SNR=3.5						
KSRS	**Korea Array**	**57.55**	**328**	pP	**pP**	**02 33 40.2**	**-3.7**
	1.3nm,0.6s,baz=140,slow=7.1,SNR=3.6						
KSRS				LR	LR	02 55 27.3	
	comp=Z,40nm,18.2s,baz=6.2,slow=33						
KSAR	**Wonju Array Be**	**57.57**	**328**	pP	pP	02 33 40.2	-3.8
USRK	**Ussuriysk Arra**	**61.03**	**336**	pP	pP	02 34 04.2	-3.7
	6.9nm,1.0s,baz=154,slow=6.7,SNR=5.9						
PETK	**Petropavlovsk-**	**63.64**	**357**	pP	pP	02 34 22.1	-3.2
PETK	**Petropavlovsk-**	**63.64**	**357**	pP	**pP**	**02 34 22.1**	**-3.2**
	3.5nm,0.8s,baz=148,slow=8.7,SNR=3.9						
PETK				LR	LR	03 00 52.3	
	comp=Z,37nm,19.9s,baz=307,slow=35						
VNDA	**Vanda**	**66.83**	**180**	*e*P	**P**	**02 34 32.1**	**+1.4**
	5.0nm,0.8s						
VNDA	**Vanda**	**66.83**	**180**	P	**P**	**02 34 32.1**	**+1.4**
	5.9nm,0.7s,baz=354,slow=7.5,SNR=30						
CMAR	**Chiang Mai Arr**	**68.59**	**295**	pP	pP	02 34 54.2	-3.7
CMAR	**Chiang Mai Arr**	**68.59**	**295**	pP	**pP**	**02 34 54.2**	**-3.7**
	1.0nm,0.3s,baz=121,slow=3.2,SNR=2.2						
CMAR				LR	LR	03 06 52.0	
	comp=Z,23nm,18.6s,baz=235,slow=38						
ULN	**Ulaanbaatar**	**75.87**	**325**	*e*P	**P**	**02 35 25.9**	**0.0**
	7.7nm,1.3s						
ULN				*e*pP	**PcP**	**02 35 37.4**	**-0.8**
SONM	**Songino Array**	**76.22**	**325**	P	**P**	**02 35 29.4**	**+1.5**
SONM				pP	**PcP**	**02 35 39.5**	**-0.2**
SONM	**Songino Array**	**76.22**	**325**	P	**P**	**02 35 29.4**	**+1.5**
	1.0nm,0.7s,baz=146,slow=6.3,SNR=8.4						
SONM				pP	**PcP**	**02 35 39.5**	**-0.2**
	3.7nm,0.7s,baz=135,slow=5.5,SNR=16						
SONM				LR	LR	03 07 18.4	
	comp=Z,53nm,19.2s,baz=117,slow=34						
KDAK	**Kodiak Island**	**77.64**	**23**	P	**P**	**02 35 38.2**	**+2.8**
KDAK	**Kodiak Island**	**77.64**	**23**	P	**P**	**02 35 38.2**	**+2.8**
	6.2nm,0.7s,baz=237,slow=3.6,SNR=9.7						
BILL	**Bilibino**	**78.58**	**2**	*e*P	**P**	**02 35 42.9**	**+2.4**
	13nm,1.2s						
BILL				*e*pP	**pP**	**02 35 53.0**	**-2.8**
QSPA	**South Pole Qui**	**79.32**	**180**	P	**P**	**02 35 45.8**	**+0.9**
QSPA	**South Pole Qui**	**79.32**	**180**	P	**P**	**02 35 45.8**	**+0.9**
	3.9nm,1.0s,baz=319,slow=4.2,SNR=13						
TRF	**Thorofare Moun**	**82.38**	**20**	*e*P	**P**	**02 36 01.8**	**+0.6**
	4.7nm,1.1s						
MAW	**Mawson**	**83.66**	**202**	P	**P**	**02 36 08.2**	**+0.7**
MAW	**Mawson**	**83.66**	**202**	P	**P**	**02 36 08.2**	**+0.7**
	3.2nm,0.8s,baz=92,slow=6.6,SNR=4.1						
COLA	**College**	**84.13**	**19**	*e*P	**P**	**02 36 10.8**	**+1.0**
	6.4nm,1.0s						
COLA				*e*pP	**pP**	**02 36 22.0**	**-3.3**
ILAR	**Eielson Array**	**84.38**	**20**	P	**P**	**02 36 12.8**	**+1.7**
ILAR				pP	**pP**	**02 36 23.4**	**-3.3**
ILAR				PP	**PP**	**02 39 29.6**	**+2.7**
ILAR	**Eielson Array**	**84.38**	**20**	P	**P**	**02 36 12.8**	**+1.7**
	1.0nm,0.6s,baz=247,slow=4.9,SNR=15						
ILAR				pP	**pP**	**02 36 23.4**	**-3.3**
	1.4nm,0.7s,baz=243,slow=5.5,SNR=7.8						
ILAR				PP	**PP**	**02 39 29.6**	**+2.7**
	0.3nm,0.6s,baz=243,slow=5.1,SNR=4.9						
DOT	**Dot Lake**	**84.64**	**21**	*e*P	**P**	**02 36 15.1**	**+2.5**
	1.0nm,0.7s						
NVAR	**Mina Array Bea**	**88.63**	**51**	P	**P**	**02 36 35.2**	**+2.4**
NVAR	**Mina Array Bea**	**88.63**	**51**	P	**P**	**02 36 35.2**	**+2.4**
	1.1nm,0.4s,baz=238,slow=5.2,SNR=5.3						
MK31	**Makanchi Array**	**90.74**	**317**	*e*P	**P**	**02 36 42.3**	**0.0**
MKAR	**Makanchi Array**	**90.74**	**317**	P	**P**	**02 36 43.1**	**+0.8**
MKAR				pP	**pP**	**02 36 53.2**	**-4.7**
MKAR	**Makanchi Array**	**90.74**	**317**	P	**P**	**02 36 43.1**	**+0.8**
	0.4nm,0.6s,baz=97,slow=5.8,SNR=3.5						
MKAR				pP	**pP**	**02 36 53.2**	**-4.7**
	2.2nm,0.7s,baz=97,slow=6.0,SNR=9.6						
YKA	**Yellowknife Ar**	**96.36**	**28**	P	**P**	**02 37 08.8**	**+1.1**
YKA				pP	**pP**	**02 37 20.1**	**-3.2**
YKA	**Yellowknife Ar**	**96.36**	**28**	P	**P**	**02 37 08.8**	**+1.1**
	0.8nm,0.6s,baz=260,slow=4.7,SNR=23						
YKA				pP	**pP**	**02 37 20.1**	**-3.2**
	0.8nm,0.7s,baz=257,slow=4.8,SNR=9.4						
SNAA	**Sanae**	**97.21**	**185**	P	Pdif	02 37 12.0	+0.3
SNAA	**Sanae**	**97.21**	**185**	P	Pdif	02 37 12.0	+0.3
	0.6nm,0.8s,baz=198,slow=6.4,SNR=4.4						
ARCES	**ARCESS Array B**	**115.03**	**344**	PKP	**PKPdf**	**02 42 19.9**	**+0.3**
ARCES	**ARCESS Array B**	**115.03**	**344**	PKP	**PKPdf**	**02 42 19.9**	**+0.3**
	1.4nm,0.8s,baz=48,slow=2.3,SNR=8.8						
CPUP	**Villa Florida**	**126.96**	**135**	PKP	**PKPdf**	**02 42 44.1**	**+0.4**
CPUP	**Villa Florida**	**126.96**	**135**	PKP	**PKPdf**	**02 42 44.1**	**+0.4**
	0.5nm,0.5s,baz=272,slow=3.4,SNR=4.6						

IDC 08 02:35:58.3±25.0**, 23.°42S×173.°80W, h0**km**, mb4.2**/4**, mb1 4.3**/4**, mb1mx3.9**/19**, mbtmp4.2**/4**, Error ellipse: s-maj=470.1km s-min=143.5km az=78.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.17**	**267**	P	P	02 43 12.3	+1.0
	4.9nm,1.0s,baz=94,slow=14,SNR=3.5						
STKA	**Stephens Creek**	**40.17**	**248**	P	P	02 43 34.4	-2.0
	1.1nm,0.5s,baz=94,slow=12,SNR=4.7						
ASAR	**Alice Springs**	**47.71**	**259**	P	P	02 44 37.0	-0.2
	1.2nm,0.4s,baz=89,slow=7.3,SNR=20						
WRA	**Warramunga Arr**	**48.11**	**264**	P	P	02 44 40.8	+0.5
	1.8nm,0.3s,baz=101,slow=7.9,SNR=4.7						

*CSEM **08** 02:45:51.6, 42.°37N×13.°40E, h9km, After ROM*
ROM 08 02:45:51.6±0.1**, 42.°37N×13.°40E, h9**km**, Ml2.1**/5**, 2D, Error ellipse: s-maj=1.2km s-min=1.0km az=50.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.01**	**160**⇓	*i*Pg	Pg	02 45 53.6	+0.3
AQU				Sg	Sg	02 45 54.4	-0.1
AQU	**L'Aquila**	**0.01**	**160**⇓	*i*Pg	Pg	02 45 53.6	+0.3
AQU				Sg	Sg	02 45 54.4	-0.1
CAMP	**Campotosto**	**0.17**	**3**	Pg	Pg	02 45 56.1	+0.7
CAMP				Sg	Sg	02 45 59.0	+0.9
CAMP	**Campotosto**	**0.17**	**3**	Pg	Pg	02 45 56.1	+0.7
CAMP				Sg	Sg	02 45 59.0	+0.9
FAGN	**Fagnano**	**0.17**	**126**	Pg	Pg	02 45 56.2	+0.8
FAGN				Sg	Sg	02 45 59.5	+1.6
FAGN	**Fagnano**	**0.17**	**126**	Pg	Pg	02 45 56.2	+0.8
FAGN				Sg	Sg	02 45 59.5	+1.6
FIAM	**Fiamignano**	**0.23**	**245**	Pg	Pg	02 45 57.1	+0.7
FIAM				Sg	Sg	02 46 01.0	+1.3
	206nm,0.5s						
FIAM	**Fiamignano**	**0.23**	**245**	Pg	Pg	02 45 57.1	+0.7
FIAM				Sg	Sg	02 46 01.0	+1.3
	206nm,0.5s						
TERO	**Teramo**	**0.30**	**31**	Pg	Pg	02 45 58.0	+0.3
TERO				Sg	Sg	02 46 02.7	+0.9
TERO	**Teramo**	**0.30**	**31**	Pg	Pg	02 45 58.0	+0.3
TERO				Sg	Sg	02 46 02.7	+0.9
VCEL	**Villa Celiera**	**0.33**	**85**	Pg	Pb	02 45 59.2	-0.6
VCEL				Sg	Sb	02 46 04.3	-1.1
VCEL	**Villa Celiera**	**0.33**	**85**	Pg	Pb	02 45 59.2	-0.6
VCEL				Sg	Sb	02 46 04.3	-1.1
PTQR	**Pietraquaria**	**0.34**	**179**	Pg	Pg	02 45 58.8	+0.3
PTQR				Sg	Sg	02 46 04.3	+1.1
	27nm,0.2s						
PTQR	**Pietraquaria**	**0.34**	**179**	Pg	Pg	02 45 58.8	+0.3
PTQR				Sg	Sg	02 46 04.3	+1.1
	27nm,0.2s						
LNSS	**Leonessa**	**0.35**	**312**	Pg	Pg	02 45 59.4	+0.6
LNSS				Sg	Sb	02 46 05.5	-0.5
	214nm,0.5s						
LNSS	**Leonessa**	**0.35**	**312**	Pg	Pg	02 45 59.4	+0.6
LNSS				Sg	Sb	02 46 05.5	-0.5
	214nm,0.5s						
NRCA	**Norcia**	**0.51**	**336**	Pg	Pg	02 46 02.1	+0.4
NRCA				Sg	Sb	02 46 10.0	-0.5
	108nm,0.1s						
NRCA	**Norcia**	**0.51**	**336**	Pg	Pg	02 46 02.1	+0.4
NRCA				Sg	Sb	02 46 10.0	-0.5
	108nm,0.1s						
CERT	**Cerreto**	**0.52**	**217**	Pg	Pg	02 46 02.0	+0.2
	116nm,0.4s						
CERT	**Cerreto**	**0.52**	**217**	Pg	Pg	02 46 02.0	+0.2
	116nm,0.4s						
INTR	**Introdacqua**	**0.52**	**133**	Pg	Pg	02 46 02.1	+0.3
INTR				Sg	Sb	02 46 10.2	-0.5
	109nm,0.6s						
INTR	**Introdacqua**	**0.52**	**133**	Pg	Pg	02 46 02.1	+0.3
INTR				Sg	Sb	02 46 10.2	-0.5
	109nm,0.6s						

*CSEM **08** 02:46:24.8, 42.°46N×13.°42E, h11km, After ROM*
ROM 08 02:46:24.8±0.1**, 42.°46N×13.°42E, h11**km**, Ml2.0**/1**, Error ellipse: s-maj=1.6km s-min=1.0km az=115.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**354**	Pg	Pg	02 46 27.8	+0.4
CAMP				Sg	Sg	02 46 29.5	+0.2
CAMP	**Campotosto**	**0.07**	**354**	Pg	Pg	02 46 27.8	+0.4
CAMP				Sg	Sg	02 46 29.5	+0.2
AQU	**L'Aquila**	**0.11**	**187**	Pg	Pb	02 46 28.7	-0.4
AQU				Sg	Sg	02 46 30.2	+0.4
AQU	**L'Aquila**	**0.11**	**187**	Pg	Pb	02 46 28.7	-0.4
AQU				Sg	Sg	02 46 30.2	+0.4
TERO	**Teramo**	**0.21**	**40**	Pg	Pg	02 46 29.9	+0.5
TERO				Sg	Sg	02 46 33.3	+0.8
TERO	**Teramo**	**0.21**	**40**	Pg	Pg	02 46 29.9	+0.5
TERO				Sg	Sg	02 46 33.3	+0.8
FIAM	**Fiamignano**	**0.30**	**229**	Pg	Pg	02 46 31.5	+0.5
FIAM				Sg	Sb	02 46 36.3	-1.0
FIAM	**Fiamignano**	**0.30**	**229**	Pg	Pg	02 46 31.5	+0.5
FIAM				Sg	Sb	02 46 36.3	-1.0
LNSS	**Leonessa**	**0.31**	**297**	Pg	Pg	02 46 31.5	+0.2
LNSS				Sg	Sg	02 46 36.5	+0.9
LNSS	**Leonessa**	**0.31**	**297**	Pg	Pg	02 46 31.5	+0.2
LNSS				Sg	Sg	02 46 36.5	+0.9
NRCA	**Norcia**	**0.43**	**329**	Pg	Pg	02 46 33.6	+0.1
NRCA				Sg	Sg	02 46 40.2	+0.9
NRCA	**Norcia**	**0.43**	**329**	Pg	Pg	02 46 33.6	+0.1
NRCA				Sg	Sg	02 46 40.2	+0.9
FDMO	**Fiordimonte**	**0.62**	**337**	Pg	Pg	02 46 36.9	-0.1
	61nm,0.3s						
FDMO	**Fiordimonte**	**0.62**	**337**	Pg	Pg	02 46 36.9	-0.1
	61nm,0.3s						

IDC 08 02:48:22.0±2.0**, 17.°24S×178.°97W, h538**km±28km**, mb3.1**/7**, mb1 3.4**/9**, mb1mx3.2**/21**, mbtmp3.2**/9**, Error ellipse: s-maj=78.1km s-min=14.4km az=151.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.68**	**65**	P	P	02 50 16.1	-0.2
	3.8nm,0.3s,baz=179,slow=9.8,SNR=4.2						
DZM	**Mont Dzumac**	**14.55**	**248**	P	P	02 51 28.5	+1.4
	1.0nm,0.3s,baz=83,slow=23,SNR=8.1						
STKA	**Stephens Creek**	**38.49**	**240**	P	P	02 54 57.9	-0.4
	1.5nm,0.4s,baz=104,slow=11,SNR=11						
WRA	**Warramunga Arr**	**44.23**	**259**	P	P	02 55 43.8	-0.1
	0.7nm,0.5s,baz=92,slow=6.9,SNR=6.0						
ASAR	**Alice Springs**	**44.46**	**254**	P	P	02 55 45.4	-0.3
	7.5nm,0.5s,baz=89,slow=8.2,SNR=109						
ILAR	**Eielson Array**	**85.36**	**13**	P	P	03 00 01.5	-0.5
	0.3nm,0.3s,baz=225,slow=5.2,SNR=9.6						
TXAR	**Lajitas Array**	**86.09**	**58**	P	P	03 00 06.8	+0.4
	0.6nm,0.7s,baz=213,slow=6.1,SNR=9.4						
PDAR	**Pinedale Array**	**87.24**	**44**	P	P	03 00 11.2	-0.5
	0.4nm,0.5s,baz=202,slow=3.8,SNR=3.0						
YKA	**Yellowknife Ar**	**93.95**	**25**	P	P	03 00 41.7	-0.2
	0.2nm,0.7s,baz=243,slow=4.5,SNR=3.5						
BRTR	**Keskin Array B**	**143.94**	**315**	PKP	PKPbc	03 06 56.0	0.0
	1.1nm,0.8s,baz=110,slow=2.3,SNR=7.6						
GERES	**GERESS Array B**	**146.83**	**345**	PKPbc	PKPbc	03 07 03.8	-0.2
	1.0nm,0.5s,baz=5.6,slow=2.1,SNR=7.3						

*KRSC **08** 02:54:12.5±0.9, 53.°75N×169.°19E, h20km±20km, ML4.3*
*IDC **08** 02:54:13.6±0.8, 54.°25N×169.°27E, h0km, mb3.5/7, mb1 3.7/9, mb1mx3.6/28, mbtmp3.5/9, ML3.7/2, Error ellipse: s-maj=22.2km s-min=11.6km az=25.0*
*ISCJB **08** 02:54:14.8±0.5, 53.°98N±0.°08×169.°12E±0.°06, h25km, mb3.4/7, Error ellipse: s-maj=11.3km s-min=4.4km az=9.3*
*MOS **08** 02:54:15.5±1.2, 54.°16N×169.°18E, h29km, mb4.4/2, Error ellipse: s-maj=20.9km s-min=17.1km az=31.9*
ISC 08 02:54:16.6±0.8**, 54.°02N**±0.°09×**169.°18E**±0.°06**, h25**km**, n26, σ1.°47**/37**, mb3.3**/7**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.21**	**304**	PN	**Pn**	**02 54 50.4**	**-1.2**
BKI				S	**Sn**	**02 55 18.5**	**+0.4**
BKI	**Bering**	**2.21**	**304**	*e*P	**Pn**	**02 54 50.4**	**-1.2**
BKI				*i* S	**Sn**	**02 55 18.5**	**+0.4**
FX1	**Attu Island--F**	**2.64**	**114**	Pn	**Pn**	**02 54 56.8**	**-0.7**
	64nm,0.3s,baz=316,slow=5.8,SNR=222						
FX1				Sn	**Sn**	**02 55 28.6**	**-0.1**
	72nm,0.3s,baz=164,slow=23,SNR=8.3						
MKZ	**Mys Kozlova**	**4.40**	**280**	PN	**Pn**	**02 55 20.7**	**-1.0**
MKZ	**Mys Kozlova**	**4.40**	**280**	*e*P	**Pn**	**02 55 20.7**	**-1.0**
MKZ				*i* S	**Sn**	**02 56 09.0**	**-3.1**
TUMR	**Tumrok**	**5.40**	**287**	*e*P	**Pn**	**02 55 35.9**	**+0.4**
KMNR	**Kamenistaya**	**5.45**	**292**	*e*P	**Pn**	**02 55 37.8**	**+1.6**
KMNR				*i* S	**Sn**	**02 56 40.4**	**+2.3**
KII	**Karymskiy**	**5.74**	**274**	*e*P	**Pn**	**02 55 41.2**	**+1.1**
KII				*i* S	**Sn**	**02 56 44.5**	**-0.7**
SDLR	**Sedlovina**	**6.17**	**267**	*e*P	**Pn**	**02 55 47.1**	**+1.0**
UGLR	**Uglovaya**	**6.22**	**267**	*e*P	**Pn**	**02 55 47.3**	**+0.5**
SMAR	**Somma**	**6.22**	**267**	*e*P	**Pn**	**02 55 47.2**	**+0.3**
AVH	**Avacha**	**6.26**	**267**	*e*P	**Pn**	**02 55 48.3**	**+1.0**
AVH				*i* S	**Sn**	**02 56 58.5**	**+0.5**
RUS	**Russkaya**	**6.60**	**260**	PN	**Pn**	**02 55 51.5**	**-0.4**
RUS	**Russkaya**	**6.60**	**260**	*e*P	**Pn**	**02 55 51.5**	**-0.4**
RUS				*i* S	**Sn**	**02 57 02.9**	**-3.4**
GNL	**Ganaly**	**6.66**	**272**	*e*P	**Pn**	**02 55 53.8**	**+1.0**
GNL				*i* S	**Sn**	**02 57 07.0**	**-0.9**
MTVR	**Mutnovka**	**6.78**	**261**	*e*P	**Pn**	**02 55 54.0**	**-0.5**
MTVR				*i* S	**Sn**	**02 57 07.6**	**-3.3**
PETK	**Petropavlovsk-**	**6.90**	**267**	PN	**Pn**	**02 55 57.9**	**+1.8**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**6.90**	**267**	Pn	**Pn**	**02 55 57.9**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=82,slow=20,SNR=5.8						
PETK				Sn	**Sn**	**02 57 13.2**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=95,slow=18,SNR=3.6						
ILAR	**Eielson Array**	**24.28**	**46**	P	**P**	**02 59 30.2**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=258,slow=7.8,SNR=10						
YKA	**Yellowknife Ar**	**38.71**	**46**	P	**P**	**03 01 37.1**	**-0.9**
	comp=Z,0.1nm,0.5s,baz=293,slow=8.2,SNR=2.8						
SONM	**Songino Array**	**38.89**	**287**	P	**P**	**03 01 41.3**	**+1.5**

	comp=Z,0.3nm,0.5s,baz=54,slow=8.8,SNR=4.6						
MKAR	**Makanchi Array**	**52.51**	**300**	P	**P**	**03 03 26.7**	**-0.6**
MKAR	**Makanchi Array**	**52.51**	**300**	P	**P**	**03 03 26.7**	**-0.6**
	comp=Z,0.1nm,0.5s,baz=61,slow=7.7,SNR=2.3						
ARCES	**ARCESS Array B**	**53.95**	**345**	P	**P**	**03 03 36.6**	**-0.9**
	comp=Z,6.1nm,1.1s,baz=35,slow=9.6,SNR=4.4						
WRA	**Warramunga Arr**	**79.52**	**213**	P	**P**	**03 06 22.5**	**+1.6**
	comp=Z,0.5nm,0.7s,baz=23,slow=5.4,SNR=3.3						
ASAR	**Alice Springs**	**83.14**	**212**	P	**P**	**03 06 42.6**	**+2.6**
	comp=Z,0.3nm,0.5s,baz=12,slow=4.8,SNR=5.4						

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*ISCJB **08** 03:00:34.6±0.2, 42°.29N±0°.02×13°.47E±0°.02, h8km±2km, mb3.7/6, Error ellipse: s-maj=2.7km s-min=2.2km az=35.8*
*LDG **08** 03:00:34.0±0.1, 42°.28N×13°.49E, h2km, Ml3.1/8, Error ellipse: s-maj=3.6km s-min=2.8km az=51.0*
*ROM **08** 03:00:34.6±0.1, 42°.29N×13°.46E, h9km, Ml3.6/33, Error ellipse: s-maj=1.1km s-min=0.8km az=57.0*
*BEO **08** 03:00:35.9±1.0, 42°.36N×13°.45E, h0km, ML3.7/3*
*IDC **08** 03:00:35.9±0.9, 42°.43N×13°.36E, h0km, mb3.6/7, mb1 3.8/14, mb1mx3.7/32, mbtmp3.6/14, ML3.4/6, Error ellipse: s-maj=16.2km s-min=13.5km az=100.0*
*CSEM **08** 03:00:35.2±0.1, 42°.28N×13°.44E, h2km, ML4.1/5, Error ellipse: s-maj=2.8km s-min=2.2km az=33.0*
*PRU **08** 03:00:36.0, 42°.42N×13°.71E, h0km*
ISC 08 03:00:35.7±0.7, **42°.30N**±0°.02×**13°.45E**±0°.02, **h8**km±4km, **n218**, σ1.48/252, **mb3.8**/6, **28C-19D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**328**	⇑iP	**Pg**	**03 00 37.2**	**-0.4**
AQU	**L'Aquila**	**0.06**	**328**	Pg	**Pg**	**03 00 37.2**	**-0.4**
AQU				Sg	**Sg**	**03 00 38.6**	**-0.4**
	45µm,0.3s						
AQU	**L'Aquila**	**0.06**	**328**	⇑iP	**Pg**	**03 00 37.2**	**-0.4**
AQU				Sg	**Sg**	**03 00 38.6**	**-0.4**
	45µm,0.3s						
FAGN	**Fagnano**	**0.11**	**108**	Pg	**Pg**	**03 00 37.6**	**-0.6**
FAGN				Sg	**Sg**	**03 00 39.7**	**-0.2**
FAGN	**Fagnano**	**0.11**	**108**	Pg	**Pg**	**03 00 37.6**	**-0.6**
FAGN				Sg	**Sg**	**03 00 39.7**	**-0.2**
CAMP	**Campotosto**	**0.24**	**353**	Pg	**Pg**	**03 00 40.1**	**-0.4**
CAMP				Sg	**Sg**	**03 00 43.9**	**+0.1**
	20µm,0.8s						
CAMP	**Campotosto**	**0.24**	**353**	Pg	**Pg**	**03 00 40.1**	**-0.4**
CAMP				Sg	**Sg**	**03 00 43.9**	**+0.1**
	20µm,0.8s						
FIAM	**Fiamignano**	**0.25**	**263**	Pg	**Pg**	**03 00 40.7**	**0.0**
FIAM				Sg	**Sg**	**03 00 45.1**	**+1.1**
FIAM	**Fiamignano**	**0.25**	**263**	Pg	**Pg**	**03 00 40.7**	**0.0**
FIAM				Sg	**Sg**	**03 00 45.1**	**+1.1**
PTQR	**Pietraquaria**	**0.28**	**187**	⇑iPg	**Pg**	**03 00 40.9**	**-0.4**
PTQR	**Pietraquaria**	**0.28**	**187**	⇑iPg	**Pg**	**03 00 40.9**	**-0.4**
VCEL	**Villa Celiera**	**0.31**	**72**	⇑iPg	**Pg**	**03 00 41.2**	**-0.6**
VCEL				Sg	**Sg**	**03 00 46.6**	**+0.7**
VCEL	**Villa Celiera**	**0.31**	**72**	⇑iPg	**Pg**	**03 00 41.2**	**-0.6**
VCEL				Sg	**Sg**	**03 00 46.6**	**+0.7**
TERO	**Teramo**	**0.34**	**20**	Pg	**Pg**	**03 00 41.6**	**-0.9**
TERO				Sg	**Sg**	**03 00 46.8**	**-0.2**
TERO	**Teramo**	**0.34**	**20**	Pg	**Pg**	**03 00 41.6**	**-0.9**
TERO				Sg	**Sg**	**03 00 46.8**	**-0.2**
LNSS	**Leonessa**	**0.43**	**315**	Pg	**Pg**	**03 00 43.5**	**-0.6**
	16µm,0.7s						
LNSS	**Leonessa**	**0.43**	**315**	Pg	**Pg**	**03 00 43.5**	**-0.6**
	16µm,0.7s						
INTR	**Introdacqua**	**0.45**	**130**	Pg	**Pg**	**03 00 43.5**	**-0.9**
INTR				Sg	**Sg**	**03 00 50.3**	**+0.1**
INTR	**Introdacqua**	**0.45**	**130**	Pg	**Pg**	**03 00 43.5**	**-0.9**
INTR				Sg	**Sg**	**03 00 50.3**	**+0.1**
VVLD	**Villa Vallelon**	**0.45**	**163**	Pg	**Pg**	**03 00 43.5**	**-0.9**
	8µm,1.1s						
VVLD	**Villa Vallelon**	**0.45**	**163**	Pg	**Pg**	**03 00 43.5**	**-0.9**
	8µm,1.1s						
CERT	**Cerreto**	**0.49**	**225**	Pg	**Pg**	**03 00 44.6**	**-0.6**
CERT				Sg	**Sg**	**03 00 52.5**	**+0.8**
	14µm,0.8s						
CERT	**Cerreto**	**0.49**	**225**	Pg	**Pg**	**03 00 44.6**	**-0.6**
CERT				Sg	**Sg**	**03 00 52.5**	**+0.8**
	14µm,0.8s						
GUAR	**Guarcino**	**0.52**	**191**	Pg	**Pg**	**03 00 44.8**	**-0.9**
	6µm,1.0s						
GUAR	**Guarcino**	**0.52**	**191**	Pg	**Pg**	**03 00 44.8**	**-0.9**
	6µm,1.0s						
MNS	**Montasola**	**0.57**	**279**	Pg	**Pg**	**03 00 46.0**	**-0.8**
	4µm,0.6s						
MNS	**Montasola**	**0.57**	**279**	Pg	**Pg**	**03 00 46.0**	**-0.8**
	4µm,0.6s						
NRCA	**Norcia**	**0.59**	**335**	Pg	**Pg**	**03 00 46.1**	**-1.0**
NRCA				Sg	**Sg**	**03 00 55.3**	**+0.5**
	3µm,0.7s						
NRCA	**Norcia**	**0.59**	**335**	Pg	**Pg**	**03 00 46.1**	**-1.0**
NRCA				Sg	**Sg**	**03 00 55.3**	**+0.5**
	3µm,0.7s						
MTCE	**Montecelio**	**0.59**	**242**	Pg	**Pg**	**03 00 46.4**	**-0.7**
	4µm,0.7s						
MTCE	**Montecelio**	**0.59**	**242**	Pg	**Pg**	**03 00 46.4**	**-0.7**
	4µm,0.7s						
POFI	**Posta Fibreno**	**0.61**	**161**	Pg	**Pg**	**03 00 46.3**	**-1.3**
	4µm,1.1s						
POFI	**Posta Fibreno**	**0.61**	**161**	Pg	**Pg**	**03 00 46.3**	**-1.3**
	4µm,1.1s						
TRTR	**Tortoreto Alta**	**0.61**	**34**	Pg	**Pg**	**03 00 47.6**	**0.0**
	29µm,0.9s						
TRTR	**Tortoreto Alta**	**0.61**	**34**	Pg	**Pg**	**03 00 47.6**	**0.0**
	29µm,0.9s						
SDI	**San Donato**	**0.65**	**155**	⇑iPg	**Pg**	**03 00 46.8**	**-1.4**
SDI	**San Donato**	**0.65**	**155**	⇑iPg	**Pg**	**03 00 46.8**	**-1.4**
OFFI	**Offida**	**0.66**	**15**	Pg	**Pg**	**03 00 48.2**	**-0.2**
	20µm,0.6s						
OFFI	**Offida**	**0.66**	**15**	Pg	**Pg**	**03 00 48.2**	**-0.2**
	20µm,0.6s						
CAFR	**Castel Frentan**	**0.67**	**96**	⇓ePg	**Pg**	**03 00 48.0**	**-0.6**
	5µm,0.7s						
CAFR	**Castel Frentan**	**0.67**	**96**	⇓ePg	**Pg**	**03 00 48.0**	**-0.6**
	5µm,0.7s						
RMP	**Rome, Mte Porz**	**0.74**	**229**	Pg	**Pg**	**03 00 48.8**	**-1.1**
	3µm,0.7s						
RMP	**Rome, Mte Porz**	**0.74**	**229**	Pg	**Pg**	**03 00 48.8**	**-1.1**
	3µm,0.7s						
GIUL	**Giuliano Di Ro**	**0.76**	**191**	⇓ePg	**Pg**	**03 00 48.9**	**-1.3**
	2µm,1.1s						
GIUL	**Giuliano Di Ro**	**0.76**	**191**	⇓ePg	**Pg**	**03 00 48.9**	**-1.3**
	2µm,1.1s						
FDMO	**Fiordimonte**	**0.78**	**340**	⇓ePg	**Pg**	**03 00 49.3**	**-1.5**
	1µm,0.5s						
FDMO	**Fiordimonte**	**0.78**	**340**	⇓ePg	**Pg**	**03 00 49.3**	**-1.5**
	1µm,0.5s						
RNI2	**Rionero Sannit**	**0.80**	**138**	Pg	**Pg**	**03 00 50.0**	**-1.0**
	424nm,0.5s						
RNI2	**Rionero Sannit**	**0.80**	**138**	Pg	**Pg**	**03 00 50.0**	**-1.0**
	424nm,0.5s						
CESI	**CESI - Serrava**	**0.81**	**331**	Pg	**Pg**	**03 00 50.1**	**-1.2**
	927nm,0.7s						
CESI	**CESI - Serrava**	**0.81**	**331**	Pg	**Pg**	**03 00 50.1**	**-1.2**
	927nm,0.7s						
CERA	**Filignano**	**0.82**	**149**	⇓ePg	**Pg**	**03 00 49.8**	**-1.7**
	3µm,0.7s						
CERA	**Filignano**	**0.82**	**149**	⇓ePg	**Pg**	**03 00 49.8**	**-1.7**
	3µm,0.7s						
MIDA	**Miranda**	**0.89**	**137**	Pg	**Pg**	**03 00 50.9**	**-1.9**
	2µm,1.0s						
MIDA	**Miranda**	**0.89**	**137**	Pg	**Pg**	**03 00 50.9**	**-1.9**
	2µm,1.0s						
ASSB	**Assisi San Ben**	**0.94**	**322**	Pg	**Pg**	**03 00 52.7**	**-1.1**
	4µm,1.1s						
ASSB	**Assisi San Ben**	**0.94**	**322**	Pg	**Pg**	**03 00 52.7**	**-1.1**
	4µm,1.1s						
TRIV	**Trivento**	**0.98**	**123**	Pg	**Pg**	**03 00 53.1**	**-1.4**
	2µm,1.1s						
TRIV	**Trivento**	**0.98**	**123**	Pg	**Pg**	**03 00 53.1**	**-1.4**
	2µm,1.1s						
SNTG	**Esanatoglia**	**1.02**	**339**	Pg	**Pg**	**03 00 53.6**	**-1.8**
SNTG	**Esanatoglia**	**1.02**	**339**	Pg	**Pg**	**03 00 53.6**	**-1.8**
VAGA	**Valle Agricola**	**1.06**	**146**	⇓ePg	**Pg**	**03 00 54.1**	**-2.0**
	1µm,0.8s						
VAGA	**Valle Agricola**	**1.06**	**146**	⇓ePg	**Pg**	**03 00 54.1**	**-2.0**
	1µm,0.8s						
CING	**Cingoli**	**1.09**	**350**	Pg	**Pg**	**03 00 54.8**	**-1.9**
	1µm,0.7s						
CING	**Cingoli**	**1.09**	**350**	Pg	**Pg**	**03 00 54.8**	**-1.9**
	1µm,0.7s						
TOLF	**Tolfa**	**1.10**	**258**	Pg	**Pg**	**03 00 55.3**	**-1.5**
	1µm,1.0s						
TOLF	**Tolfa**	**1.10**	**258**	Pg	**Pg**	**03 00 55.3**	**-1.5**
	1µm,1.0s						
BSSO	**Busso**	**1.14**	**131**	⇓ePg	**Pb**	**03 00 55.5**	**-2.2**
	2µm,1.4s						
BSSO	**Busso**	**1.14**	**131**	⇓ePg	**Pb**	**03 00 55.5**	**-2.2**
	2µm,1.4s						
MGAB	**Montegabbione**	**1.16**	**302**	Pg	**Pb**	**03 00 57.0**	**-1.1**
	2µm,0.5s						
MGAB	**Montegabbione**	**1.16**	**302**	Pg	**Pb**	**03 00 57.0**	**-1.1**
	2µm,0.5s						
MURB	**Monte Urbino**	**1.18**	**325**	Pg	**Pb**	**03 00 56.9**	**-1.5**
	4µm,0.8s						
MURB	**Monte Urbino**	**1.18**	**325**	Pg	**Pb**	**03 00 56.9**	**-1.5**
	4µm,0.8s						
ARVD	**Arcevia**	**1.25**	**343**	⇓ePn	**Pn**	**03 00 57.6**	**-2.0**
AOI	**Ancona**	**1.25**	**5**	Pn	**Pn**	**03 00 58.1**	**-1.5**
	2µm,0.9s						
AOI	**Ancona**	**1.25**	**5**	Pn	**Pn**	**03 00 58.1**	**-1.5**
	2µm,0.9s						
SACS	**San Casciano d**	**1.26**	**296**	Pn	**Pn**	**03 00 59.4**	**-0.4**
	1µm,0.8s						
BADI	**Badiali**	**1.50**	**324**	Pn	**Pn**	**03 01 03.0**	**0.0**
	1µm,0.7s						
BADI	**Badiali**	**1.50**	**324**	Pn	**Pn**	**03 01 03.0**	**0.0**
	1µm,0.7s						
CAFI	**Castiglion Fio**	**1.50**	**314**	Pn	**Pn**	**03 01 03.0**	**0.0**
	822nm,0.9s						
CAFI	**Castiglion Fio**	**1.50**	**314**	Pn	**Pn**	**03 01 03.0**	**0.0**
	822nm,0.9s						
ARCI	**Arcidosso**	**1.56**	**291**	Pn	**Pn**	**03 01 04.3**	**+0.4**
	490nm,1.4s						
ARCI	**Arcidosso**	**1.56**	**291**	Pn	**Pn**	**03 01 04.3**	**+0.4**
	490nm,1.4s						
PARC	**Parchiule**	**1.61**	**327**	Pn	**Pn**	**03 01 04.7**	**+0.1**
	2µm,0.9s						
PARC	**Parchiule**	**1.61**	**327**	Pn	**Pn**	**03 01 04.7**	**+0.1**
	2µm,0.9s						
MAON	**Monte Argentar**	**1.72**	**275**	Pn	**Pn**	**03 01 05.6**	**-0.4**
	200nm,0.7s						
MAON	**Monte Argentar**	**1.72**	**275**	Pn	**Pn**	**03 01 05.6**	**-0.4**
	200nm,0.7s						
SGRT	**San Giovanni R**	**1.79**	**107**	Pn	**Pn**	**03 01 06.6**	**-0.5**
	747nm,0.9s						
SGRT	**San Giovanni R**	**1.79**	**107**	Pn	**Pn**	**03 01 06.6**	**-0.5**
	747nm,0.9s						
MS1	**Monte Sant'Ang**	**1.95**	**107**	ePn	**Pn**	**03 01 10.0**	**+0.8**
CDT	**Castel del Mon**	**2.44**	**119**	ePn	**Pb**	**03 01 20.9**	**+1.0**
NVLJ	**Novalja**	**2.49**	**24**	i Pn	**Pn**	**03 01 16.0**	**-0.6**
NVLJ				Sn	**Sb**	**03 01 49.2**	**-2.3**
NVLJ	**Novalja**	**2.49**	**24**	i Pn	**Pn**	**03 01 15.9**	**-0.6**
NVLJ				Sn	**Sb**	**03 01 49.2**	**-2.3**
MAIM	**Mastiano**	**2.70**	**308**	P	**Pn**	**03 01 20.0**	**+0.5**
CRDM	**Cardoso**	**2.77**	**309**	P	**Pn**	**03 01 21.0**	**+0.5**
STON	**Ston**	**3.19**	**78**	i Pn	**Pn**	**03 01 26.2**	**0.0**
STON	**Ston**	**3.19**	**78**	i Pn	**Pn**	**03 01 26.2**	**0.0**
SKDS	**Skadanscina**	**3.27**	**7**	i Pn	**Pn**	**03 01 26.6**	**-0.8**
SKDS				i Sn	**Sn**	**03 02 08.4**	**+1.9**
SKDS							
	comp=Z,75nm,0.6s						
SKDS	**Skadanscina**	**3.27**	**7**	Pn	**Pn**	**03 01 26.6**	**-0.8**
SKDS				i Sn	**Sn**	**03 02 08.4**	**+1.9**
	comp=Z,75nm,0.6s						
GRAM	**Graiana**	**3.30**	**313**	P	**Pn**	**03 01 29.2**	**+1.5**
PGF	**Pioggiola**	**3.30**	**276**	ePn	**Pn**	**03 01 28.9**	**+1.0**
PGF				eSn	**Sn**	**03 02 09.0**	**+1.6**
	comp=Z,12nm,0.5s						
PGF	**Pioggiola**	**3.30**	**276**	ePn	**Pn**	**03 01 28.9**	**+1.0**
PGF				eSn	**Sn**	**03 02 09.0**	**+1.6**
	comp=Z,6.2nm,0.5s						
CODM	**Codolo**	**3.35**	**310**	P	**Pn**	**03 01 29.7**	**+1.2**
BOJS	**Bojanci**	**3.46**	**22**	i Pn	**Pn**	**03 01 31.2**	**+1.3**
BOJS	**Bojanci**	**3.46**	**22**	i Pn	**Pn**	**03 01 31.2**	**+1.3**
JAVS	**Javornik**	**3.62**	**7**	i Pn	**Pn**	**03 01 32.2**	**0.0**
JAVS	**Javornik**	**3.62**	**7**	i Pn	**Pn**	**03 01 32.2**	**0.0**
BLY	**Banja Luka**	**3.66**	**47**	ePn	**Pn**	**03 01 33.3**	**+0.7**
BLY	**Banja Luka**	**3.66**	**47**	ePn	**Pn**	**03 01 33.3**	**+0.7**
VOY	**Vojsko**	**3.75**	**5**	ePn	**Pn**	**03 01 33.7**	**-0.2**
VOY				e		03 01 51.2	
VOY				eSn	**Sn**	**03 02 17.9**	**-0.4**
VOY	**Vojsko**	**3.75**	**5**	ePn	**Pn**	**03 01 33.7**	**-0.2**
VOY				eSn	**Sn**	**03 02 17.9**	**-0.4**
PDG	**Podgorica**	**4.30**	**86**	ePn	**Pn**	**03 01 42.4**	**+0.9**
PDG				eSn	**Sn**	**03 02 32.5**	**+0.6**
PDG	**Podgorica**	**4.30**	**86**	ePn	**Pn**	**03 01 42.4**	**+0.9**
PDG				eSn	**Sn**	**03 02 32.5**	**+0.6**
ABTA	**Abfaltersbach**	**4.50**	**352**	⇑iPn	**Pn**	**03 01 44.9**	**+0.6**
	SNR=46						
ABTA	**Abfaltersbach**	**4.50**	**352**	Pn	**Pn**	**03 01 44.9**	**+0.6**
	SNR=46						
SBF	**Sospel**	**4.67**	**292**	ePn	**Pn**	**03 01 47.2**	**+0.6**
SBF				eSn	**Sn**	**03 02 37.2**	**-3.9**
	comp=Z,2.4nm,0.4s						
SBF	**Sospel**	**4.67**	**292**	ePn	**Pn**	**03 01 47.2**	**+0.6**
SBF				eSn	**Sn**	**03 02 37.2**	**-3.9**
	comp=Z,1.2nm,0.4s						
KBA	**Koelnbreinsper**	**4.78**	**359**	⇑iPn	**Pn**	**03 01 48.7**	**+0.5**
	SNR=16						
KBA	**Koelnbreinsper**	**4.78**	**359**	Pn	**Pn**	**03 01 48.7**	**+0.5**
	SNR=16						
TIR	**Tirane**	**4.89**	**99**	ePn	**Pn**	**03 01 49.9**	**+0.4**
TIR	**Tirane**	**4.89**	**99**	ePn	**Pn**	**03 01 49.9**	**+0.4**
IVAS	**Ivanjica**	**5.08**	**73**	ePn	**Pn**	**03 01 52.2**	**-0.1**
IVAS				eSn	**Sn**	**03 02 49.5**	**-1.8**
IVAS	**Ivanjica**	**5.08**	**73**	ePn	**Pn**	**03 01 52.2**	**-0.1**
IVAS				eSn	**Sn**	**03 02 49.5**	**-1.8**
FETA	**Feichten**	**5.10**	**339**	⇑iPn	**Pn**	**03 01 53.9**	**+1.2**
	SNR=13						
FETA	**Feichten**	**5.10**	**339**	Pn	**Pn**	**03 01 53.9**	**+1.2**
	SNR=13						
DIVS	**Divibare**	**5.11**	**67**	ePn	**Pn**	**03 01 53.2**	**+0.5**
DIVS	**Divibare**	**5.11**	**67**	ePn	**Pn**	**03 01 53.2**	**+0.5**
WTTA	**Wattenberg**	**5.13**	**346**	⇑iPn	**Pn**	**03 01 53.9**	**+0.9**
WTTA	**Wattenberg**	**5.13**	**346**	Pn	**Pn**	**03 01 53.9**	**+0.9**
FRF	**La Foret Royal**	**5.15**	**286**	ePn	**Pn**	**03 01 53.4**	**+0.3**
FRF				eSn	**Sn**	**03 02 48.4**	**-4.4**
	comp=Z,3.2nm,0.5s						
FRF	**La Foret Royal**	**5.15**	**286**	ePn	**Pn**	**03 01 53.4**	**+0.3**
FRF				eSn	**Sn**	**03 02 48.4**	**-4.4**
	comp=Z,1.6nm,0.5s						
DAVOX	**Davos/Dischmat**	**5.16**	**332**	Pn	**Pn**	**03 01 55.4**	**+2.1**
	comp=Z,2.5nm,0.3s,baz=153,slow=18,SNR=28						
DAVOX				Sn	**Sn**	**03 02 57.4**	**+4.2**
	comp=Z,1.5nm,0.3s,baz=126,slow=10,SNR=5.9						
LMR	**La Mourre**	**5.21**	**284**	ePn	**Pn**	**03 01 54.0**	**+0.1**
LMR				eSn	**Sn**	**03 02 49.8**	**-4.4**
	comp=Z,1.8nm,0.4s						
LMR	**La Mourre**	**5.21**	**284**	ePn	**Pn**	**03 01 54.0**	**+0.1**
LMR				eSn	**Sn**	**03 02 49.8**	**-4.4**
	comp=Z,0.9nm,0.4s						
MOTA	**Moosalm**	**5.31**	**343**	⇓iPn	**Pn**	**03 01 56.5**	**+1.0**
	SNR=13						
MOTA	**Moosalm**	**5.31**	**343**	Pn	**Pn**	**03 01 56.5**	**+1.0**
	SNR=13						
MBDF	**Montbardon**	**5.43**	**299**	eP	**Pn**	**03 01 59.3**	**+2.2**
MBDF	**Montbardon**	**5.43**	**299**	eP	**Pn**	**03 01 59.3**	**+2.2**
TRUS	**Trudelj**	**5.43**	**67**	ePn	**Pn**	**03 01 55.7**	**-1.3**
TRUS	**Trudelj**	**5.43**	**67**	ePn	**Pn**	**03 01 55.7**	**-1.3**
RJOB	**Jochberg**	**5.46**	**355**	ePn	**Pn**	**03 01 58.3**	**+0.9**
RETA	**Reutte**	**5.53**	**341**	⇓iPn	**Pn**	**03 02 00.2**	**+1.8**
	SNR=11						
RETA	**Reutte**	**5.53**	**341**	Pn	**Pn**	**03 02 00.2**	**+1.8**
	SNR=11						
GRUS	**Gruza**	**5.55**	**71**	ePn	**Pn**	**03 01 58.9**	**+0.2**
GRUS	**Gruza**	**5.55**	**71**	ePn	**Pn**	**03 01 58.9**	**+0.2**
MOA	**Molln**	**5.58**	**6**	⇑iPn	**Pn**	**03 01 59.7**	**+0.6**
	SNR=9.3						
MOA	**Molln**	**5.58**	**6**	Pn	**Pn**	**03 01 59.7**	**+0.6**
	SNR=9.3						
SELS	**Selova**	**5.72**	**78**	ePn	**Pn**	**03 02 00.6**	**-0.4**
SELS	**Selova**	**5.72**	**78**	ePn	**Pn**	**03 02 00.6**	**-0.4**
LPG	**La Plagne**	**5.80**	**306**	eP	**Pn**	**03 02 05.1**	**+2.8**
LPG	**La Plagne**	**5.80**	**306**	eP	**Pn**	**03 02 05.1**	**+2.8**
LPL	**La Plagne**	**5.82**	**306**	eP	**Pn**	**03 02 05.3**	**+2.8**
LPL	**La Plagne**	**5.82**	**306**	eP	**Pn**	**03 02 05.3**	**+2.8**
SMRF	**Simiane la Rot**	**6.00**	**289**	eP	**Pn**	**03 02 06.6**	**+1.8**
SMRF	**Simiane la Rot**	**6.00**	**289**	eP	**Pn**	**03 02 06.6**	**+1.8**
BIA	**Bitola**	**6.04**	**100**	ePn	**Pn**	**03 02 07.7**	**+2.3**
BIA	**Bitola**	**6.04**	**100**	ePn	**Pn**	**03 02 07.7**	**+2.3**
BARS	**Barje**	**6.20**	**82**	ePn	**Pn**	**03 02 07.0**	**-0.6**
GEC2	**GERESS Array S**	**6.55**	**1**	ePn	**Pn**	**03 02 12.1**	**-0.4**
GERES	**GERESS Array B**	**6.55**	**1**	Pn	**Pn**	**03 02 12.0**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=179,slow=13,SNR=26						
GERES				Sn	**Sn**	**03 03 25.5**	**-1.9**
	comp=Z,1.2nm,0.3s,baz=180,slow=24,SNR=3.6						
BZS	**Buzias**	**6.76**	**58**	⇑iP	**Pn**	**03 02 17.5**	**+2.2**
BZS	**Buzias**	**6.76**	**58**	ePn	**Pn**	**03 02 16.3**	**+1.0**
BZS	**Buzias**	**6.76**	**58**	ePn	**Pn**	**03 02 16.3**	**+1.0**
BZS	**Buzias**	**6.76**	**58**	⇑iP	**Pn**	**03 02 17.5**	**+2.2**
ZAPS	**Zavoj**	**6.83**	**79**	ePn	**Pn**	**03 02 16.8**	**+0.6**
ZAPS				eSn	**Sn**	**03 03 31.8**	**-2.4**
ZAPS	**Zavoj**	**6.83**	**79**	ePn	**Pn**	**03 02 16.8**	**+0.6**
KHC	**Kasperske Hory**	**6.83**	**1**	ePN	**Pn**	**03 02 15.5**	**-0.8**
KHC				ex	x	03 02 26.0	
KHC				ex	x	03 02 45.5	
KHC				eSN	**Sn**	**03 03 30.2**	**-4.0**
KHC				ex	x	03 03 50.5	
WET	**Wettzell**	**6.86**	**357**	ePn	**Pn**	**03 02 15.7**	**-0.9**
VAY	**Valandovo**	**6.89**	**95**	ePn	**Pn**	**03 02 18.3**	**+1.3**
VAY	**Valandovo**	**6.89**	**95**	ePn	**Pn**	**03 02 18.7**	**+1.7**
BFO	**Black Forest**	**7.03**	**331**	ePn	**Pn**	**03 02 20.4**	**+1.5**
HINF	**Hinteralfeld**	**7.22**	**322**	ePn	**Pn**	**03 02 21.2**	**-0.5**
HINF				eSn	Sn	03 03 37.7	-6.2
	comp=Z,16nm,0.6s						
HINF	**Hinteralfeld**	**7.22**	**322**	ePn	**Pn**	**03 02 21.2**	**-0.5**
VTS	**Vitosha**	**7.23**	**84**	⇓iP	**Pn**	**03 02 23.5**	**+1.7**
VTS	**Vitosha**	**7.23**	**84**	ePn	**Pn**	**03 02 22.5**	**+0.7**
VTS	**Vitosha**	**7.23**	**84**	ePn	**Pn**	**03 02 22.5**	**+0.7**
VTS	**Vitosha**	**7.23**	**84**	⇓iP	**Pn**	**03 02 23.5**	**+1.7**
VYHS	**Vyhne**	**7.26**	**30**	ePN	**Pn**	**03 02 22.3**	**+0.2**
VYHS				eSN	Sn	03 03 38.3	-6.5
VYHS	**Vyhne**	**7.26**	**30**	ePn	**Pn**	**03 02 22.3**	**+0.2**
KEST	**Kesra**	**7.29**	**207**	Pn	Pn	03 02 26.8	+4.1
	comp=Z,0.4nm,0.3s,baz=18,slow=9.6,SNR=18						
GZR	**Gura Zlata**	**7.42**	**62**	⇑iP	**Pn**	**03 02 26.6**	**+2.3**
GZR	**Gura Zlata**	**7.42**	**62**	⇑iP	**Pn**	**03 02 26.6**	**+2.3**
CDF	**Champ du Feu**	**7.50**	**327**	ePn	**Pn**	**03 02 24.8**	**-0.6**
CDF				eSn	**Sn**	**03 03 44.7**	**-6.0**
	comp=Z,20nm,1.0s						
CDF	**Champ du Feu**	**7.50**	**327**	ePn	**Pn**	**03 02 24.8**	**-0.6**
HAU	**Haudompre**	**7.60**	**321**	ePn	**Pn**	**03 02 26.5**	**-0.2**
HAU				eSn	Sn	03 03 45.3	-7.7
	comp=Z,18nm,0.5s						
HAU	**Haudompre**	**7.60**	**321**	ePn	**Pn**	**03 02 26.5**	**-0.2**
MORC	**Moravsky Berou**	**8.00**	**19**	⇑iP	Pn	03 02 36.2	+3.9
LOT	**Lotru**	**8.09**	**64**	⇑iP	**Pn**	**03 02 34.0**	**+0.4**
LOT	**Lotru**	**8.09**	**64**	⇑iP	**Pn**	**03 02 34.0**	**+0.4**
OKC	**Ostrava-Krasne**	**8.21**	**22**	AMS	AMS	03 06 40.0	
	comp=Z,200nm,10.8s						
DPC	**Dobruska-Polom**	**8.29**	**13**	AMS	AMS	03 06 00.0	
	comp=Z,200nm,11.3s						
MOX	**Moxa**	**8.44**	**352**	ePn	**Pn**	**03 02 38.5**	**+0.2**
BRG	**Berggiesshubel**	**8.58**	**2**	e(P)	**Pn**	**03 02 40.9**	**+0.7**
	comp=Z,3.8nm,0.8s						
BRG				e		03 04 15.9	
	comp=Z,7.7nm,1.1s						
BRG				e		03 05 34.3	
	comp=Z,27nm,1.9s						
ARR	**Arges**	**8.65**	**65**	⇑iP	**Pn**	**03 02 43.7**	**+2.5**
ARR	**Arges**	**8.65**	**65**	⇑iP	**Pn**	**03 02 43.7**	**+2.5**
CRVS	**Cervenica-Dubn**	**8.66**	**38**	ePN	**Pn**	**03 02 39.4**	**-2.0**
CLL	**Collm**	**9.02**	**358**	eSn	**Sn**	**03 04 25.0**	**-2.8**
CLL				eSb		03 04 58.0	
CLL				eSg		03 05 37.0	
MLR	**Muntele Rosu**	**9.57**	**66**	⇑iP	**Pn**	**03 02 56.8**	**+2.9**
MLR	**Muntele Rosu**	**9.57**	**66**	Pn	**Pn**	**03 02 56.6**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=189,slow=7.6,SNR=23						
MLR	**Muntele Rosu**	**9.57**	**66**	⇑iP	**Pn**	**03 02 56.8**	**+2.9**
KWP	**Kalwaria Pacla**	**9.76**	**38**	⇑iP	Pn	03 03 01.1	+4.8
KWP	**Kalwaria Pacla**	**9.76**	**38**	eP	Pn	03 03 01.3	+5.0
BURAR	**Bucovina Array**	**9.89**	**53**	⇑iP	Pn	03 03 01.6	+3.4
PLOR	**Plostina**	**10.14**	**65**	⇓iP	**Pn**	**03 03 03.6**	**+2.0**
PLOR	**Plostina**	**10.14**	**65**	⇓iP	**Pn**	**03 03 03.6**	**+2.0**
CFR	**Carcaliu**	**11.01**	**70**	⇑iP	**Pn**	**03 03 14.0**	**+0.5**
CFR	**Carcaliu**	**11.01**	**70**	⇑iP	**Pn**	**03 03 14.0**	**+0.5**
ESDC	**Sonseca Array**	**13.41**	**265**	Pn	**Pn**	**03 03 45.9**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=74,slow=13,SNR=4.1						
BRTR	**Keskin Array B**	**15.46**	**93**	Pn	**P**	**03 04 17.7**	**-1.1**
	comp=Z,0.0nm,0.3s,baz=298,slow=8.9,SNR=3.0						
HFS	**Hagfors**	**17.86**	**0**	P	**P**	**03 04 45.0**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=178,slow=16,SNR=2.8						
NOA	**NORSAR Array B**	**18.82**	**357**	P	**Pn**	**03 04 56.3**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=176,slow=11,SNR=5.9						
FINES	**FINESS Array B**	**20.63**	**17**	P	**P**	**03 05 14.8**	**-0.5**
	comp=Z,4.2nm,0.9s,baz=191,slow=28,SNR=7.4						
KBZ	**Khabaz**	**21.54**	**76**	P	**P**	**03 05 26.8**	**+1.6**
	comp=Z,4.5nm,1.0s,baz=295,slow=8.0,SNR=7.2						
TORD	**Torodi Ar. Bea**	**30.79**	**203**	P	**P**	**03 06 53.3**	**+1.5**
	comp=Z,0.7nm,0.6s,baz=13,slow=7.8,SNR=9.1						
MKAR	**Makanchi Array**	**47.84**	**60**	P	**P**	**03 09 14.2**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=285,slow=6.5,SNR=11						
SONM	**Songino Array**	**61.98**	**50**	P	**P**	**03 10 56.8**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=299,slow=6.5,SNR=7.7						
YKA	**Yellowknife Ar**	**67.57**	**337**	P	**P**	**03 11 32.8**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=43,slow=5.9,SNR=11						
ILAR	**Eielson Array**	**72.16**	**351**	P	**P**	**03 12 02.4**	**+1.9**
	comp=Z,0.4nm,0.9s,baz=5.3,slow=4.9,SNR=5.9						

IDC 08 03:03:56.6±10.0, **22°.82S**×**179°.37W, h502**km±48km, **mb3.6**/3, **mb1 3.8**/3, **mb1mx3.2**/18, **mbtmp3.6**/3, **Error ellipse: s-maj=134.2km s-min=93.1km az=106.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.67**	**247**	P	P	03 10 12.0	0.0
	3.2nm,0.4s,baz=91,slow=11,SNR=17						
ASAR	**Alice Springs**	**42.79**	**259**	P	P	03 11 09.6	-0.2
	6.1nm,0.7s,baz=101,slow=7.8,SNR=60						
ASAR				ScP	ScP	03 15 52.4	-0.5
	0.6nm,0.8s,baz=87,slow=4.1,SNR=4.5						
WRA	**Warramunga Arr**	**43.07**	**265**	P	P	03 11 11.8	-0.2
	3.6nm,0.3s,baz=102,slow=8.4,SNR=33						
VNA3	**Neumayer Olymp**	**85.91**	**177**	esP	sP	03 18 38.5	+14
VNA2	**Neumayer--Watz**	**86.34**	**177**	esP	sP	03 18 40.2	+13
	baz=287,slow=5.4						
HFS	**Hagfors**	**141.60**	**350**	PKP	PKPdf	03 22 29.0	-0.9
	1.8nm,0.9s,baz=352,slow=2.9,SNR=7.9						

IDC 08 03:04:10.4±1.7, **39°.02N**×**14°.79E, h292**km±18km, **mb3.1**/9, **mb1 3.2**/16, **mb1mx3.1**/35, **mbtmp3.1**/16, **Error ellipse: s-maj=21.1km s-min=13.0km az=119.0, Tyrrhenian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEST	**Kesra**	**5.43**	**235**	P	Pn	03 05 32.6	-0.3
	0.1nm,0.3s,baz=45,slow=7.1,SNR=4.0						
DAVOX	**Davos/Dischmat**	**8.55**	**337**	P	Pn	03 06 12.6	+1.8
	0.2nm,0.3s,baz=147,slow=17,SNR=3.3						
GERES	**GERESS Array B**	**9.86**	**356**	P	Pn	03 06 27.5	+0.7
	0.3nm,0.3s,baz=166,slow=12,SNR=4.8						
VRAC	**Vranov**	**10.37**	**7**	P	Pn	03 06 34.1	+1.2
	0.5nm,0.3s,baz=190,slow=11,SNR=4.4						
MLR	**Muntele Rosu**	**10.49**	**48**	P	Pn	03 06 34.0	-0.7
	0.1nm,0.3s,baz=204,slow=16,SNR=2.7						
ESDC	**Sonseca Array**	**14.53**	**279**	P	Pn	03 07 23.5	0.0
	0.3nm,0.3s,baz=80,slow=12,SNR=11						
AKASG	**Malin Array Be**	**15.50**	**36**	P	P	03 07 33.0	-0.1
	2.5nm,0.3s,baz=228,slow=10,SNR=11						
EKA	**Eskdalemuir Ar**	**20.28**	**329**	P	P	03 08 22.7	-1.6
	1.1nm,0.3s,baz=144,slow=11,SNR=5.3						
HFS	**Hagfors**	**21.15**	**358**	P	P	03 08 32.1	-0.8
	1.9nm,0.5s,baz=190,slow=13,SNR=16						
NB2	**NORSAR Subarra**	**22.16**	**355**	P	P	03 08 42.0	-0.2
	comp=Z,0.6nm,0.4s,baz=171,slow=11						
NOA	**NORSAR Array B**	**22.16**	**355**	P	P	03 08 41.9	-0.3
	comp=Z,0.7nm,0.5s,baz=160,slow=9.6,SNR=4.4						
FINES	**FINESS Array B**	**23.52**	**14**	P	P	03 08 54.8	+0.3
	comp=Z,1.5nm,0.3s,baz=184,slow=8.3,SNR=32						
TORD	**Torodi Ar. Bea**	**28.25**	**208**	P	P	03 09 37.0	-0.3
	comp=Z,0.4nm,0.6s,baz=18,slow=9.8,SNR=9.3						
ARCES	**ARCESS Array B**	**31.11**	**7**	P	P	03 10 01.3	-0.5
	comp=Z,1.4nm,0.8s,baz=190,slow=9.1,SNR=25						
MKAR	**Makanchi Array**	**48.67**	**58**	P	P	03 12 25.5	+0.1
	comp=Z,0.3nm,0.3s,baz=276,slow=8.1,SNR=5.2						
SCHQ	**Schefferville**	**54.75**	**316**	P	P	03 13 10.1	+0.1
	comp=Z,0.7nm,0.3s,baz=83,slow=18,SNR=5.4						
YKA	**Yellowknife Ar**	**70.99**	**338**	P	P	03 14 57.2	+1.1
	comp=Z,0.3nm,0.5s,baz=39,slow=5.9,SNR=11						

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*CSEM **08** 03:04:46.2, 42°.25N×13°.48E, h10km, After ROM*
ROM 08 03:04:46.2±0.1, **42°.25N**×**13°.48E, h10**km, **Ml2.4**/2, **Error ellipse: s-maj=0.9km s-min=0.6km az=61.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.08**	**79**	Pg	Pg	03 04 49.1	+0.5

FAGN				Sg	Sg	03 04 50.5	+0.2
FAGN	**Fagnano**	**0.08**	**79**	Pg	Pg	03 04 49.1	+0.5
FAGN				Sg	Sg	03 04 50.5	+0.2
AQU	**L'Aquila**	**0.12**	**332**	Pg	Pg	03 04 49.6	+0.5
AQU				Sg	Sg	03 04 51.6	+0.4
AQU	**L'Aquila**	**0.12**	**332**	Pg	Pg	03 04 49.6	+0.5
AQU				Sg	Sg	03 04 51.6	+0.4
PTQR	**Pietraquaria**	**0.24**	**194**	Pg	Pg	03 04 52.0	+0.8
PTQR				Sg	Sg	03 04 55.9	+1.4
PTQR	**Pietraquaria**	**0.24**	**194**	Pg	Pg	03 04 52.0	+0.8
PTQR				Sg	Sg	03 04 55.9	+1.4
FIAM	**Fiamignano**	**0.27**	**274**	Pg	Pg	03 04 52.3	+0.5
FIAM				Sg	Sg	03 04 56.6	+1.1
FIAM	**Fiamignano**	**0.27**	**274**	Pg	Pg	03 04 52.3	+0.5
FIAM				Sg	Sg	03 04 56.6	+1.1
CAMP	**Campotosto**	**0.29**	**350**	Pg	Pg	03 04 52.7	+0.5
CAMP				Sg	Sg	03 04 57.3	+1.0
CAMP	**Campotosto**	**0.29**	**350**	Pg	Pg	03 04 52.7	+0.5
CAMP				Sg	Sg	03 04 57.3	+1.0
VCEL	**Villa Celiera**	**0.31**	**62**	Pg	Pb	03 04 53.3	-0.7
VCEL				Sg	Sb	03 04 58.0	-1.2
VCEL	**Villa Celiera**	**0.31**	**62**	Pg	Pb	03 04 53.3	-0.7
VCEL				Sg	Sb	03 04 58.0	-1.2
TERO	**Teramo**	**0.38**	**14**	Pg	Pg	03 04 54.1	+0.2
TERO				Sg	Sb	03 05 00.5	-0.8
TERO	**Teramo**	**0.38**	**14**	Pg	Pg	03 04 54.1	+0.2
TERO				Sg	Sb	03 05 00.5	-0.8
VVLD	**Villa Vallelon**	**0.40**	**164**	Pg	Pg	03 04 54.5	+0.4
VVLD				Sg	Sb	03 05 00.7	-1.0
VVLD	**Villa Vallelon**	**0.40**	**164**	Pg	Pg	03 04 54.5	+0.4
VVLD				Sg	Sb	03 05 00.7	-1.0
INTR	**Introdacqua**	**0.40**	**127**	Pg	Pg	03 04 54.6	+0.4
INTR				Sg	Sb	03 05 00.7	-1.1
INTR	**Introdacqua**	**0.40**	**127**	Pg	Pg	03 04 54.6	+0.4
INTR				Sg	Sb	03 05 00.7	-1.1
LNSS	**Leonessa**	**0.48**	**318**	Pg	Pb	03 04 56.4	-0.5
LNSS				Sg	Sb	03 05 03.9	-0.3
LNSS	**Leonessa**	**0.48**	**318**	Pg	Pb	03 04 56.4	-0.5
LNSS				Sg	Sb	03 05 03.9	-0.3
MTCE	**Montecelio**	**0.59**	**248**	Pg	Pg	03 04 57.9	+0.2
MTCE	**Montecelio**	**0.59**	**248**	Pg	Pg	03 04 57.9	+0.2
MNS	**Montasola**	**0.60**	**283**	Pg	Pg	03 04 57.8	-0.2
MNS	**Montasola**	**0.60**	**283**	Pg	Pg	03 04 57.8	-0.2
NRCA	**Norcia**	**0.64**	**335**	Pg	Pg	03 04 58.5	-0.3
NRCA				Sg	Sb	03 05 08.1	-0.7
NRCA	**Norcia**	**0.64**	**335**	Pg	Pg	03 04 58.5	-0.3
NRCA				Sg	Sb	03 05 08.1	-0.7
MIDA	**Miranda**	**0.84**	**136**	Pg	Pg	03 05 02.6	+0.1
MIDA	**Miranda**	**0.84**	**136**	Pg	Pg	03 05 02.6	+0.1

*BJI **08** 03:06:19.2, 8°.44S×75°.18W, h146km, mB5.0/4*
*ISCJB **08** 03:06:21.0±0.8, 7°.90S±0°.04×74°.34W±0°.05, h151km±7km, mb4.5/96, Error ellipse: s-maj=9.3km s-min=4.5km az=136.0*
*NEIC **08** 03:06:22.4±0.1, 7°.94S×74°.34W, mb4.7/72, Error ellipse: s-maj=5.4km s-min=3.3km az=54.0*
NEIC Felt [II] at Contamana and Pucallpa.
*IDC **08** 03:06:22.6±0.4, 7°.90S×74°.39W, h153km±3km, mb4.2/21, mb1 4.4/25, mb1mx4.3/29, mbtmp4.2/25, MS3.2/2, Ms1 3.2/2, ms1mx2.7/39, Error ellipse: s-maj=12.2km s-min=8.1km az=56.0*
ISC 08 03:06:22.3±0.3**, 7°.95S**±0°.04×**74°.45W**±0°.06**, h153**km±2km**, h152km:pP-P, n564,** σ**1.09**/639**, mb4.6**/96**, 163C-176D, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.99**	**281**	P	**Pn**	**03 07 22.4**	**-0.5**
ATAH				S	**Sn**	**03 08 07.5**	**-2.5**
ATAH	**Atahualpa**	**3.99**	**281**	P	**Pn**	**03 07 22.4**	**-0.5**
	138nm,0.3s,baz=85,slow=3.9,SNR=1483						
ATAH				S	**Sn**	**03 08 07.5**	**-2.5**
	145nm,0.3s,baz=229,slow=23,SNR=7.0						
ATAH				LR	LR	03 08 49.0	
	comp=Z,448nm,20.7s,baz=140,slow=36						
NNA	**Nana**	**4.65**	**210**	*e*Pn	**Pn**	**03 07 31.1**	**-0.1**
NNA				*e*Sn	**Sn**	**03 08 22.6**	**-2.4**
NNA	**Nana**	**4.65**	**210**	P	**Pn**	**03 07 31.3**	**+0.2**
	28nm,0.3s,baz=11,slow=6.2,SNR=47						
NNA				S	**Sn**	**03 08 21.7**	**-3.2**
	128nm,0.3s,baz=130,slow=22,SNR=18						
OTAV	**Otavalo**	**9.06**	**334**	*e*Pn	**Pn**	**03 08 30.8**	**+0.5**
LPAZ	**La Paz**	**10.33**	**144**	*e*Pn	**Pn**	**03 08 46.3**	**-1.0**
LPAZ	**La Paz**	**10.33**	**144**	P	**Pn**	**03 08 46.3**	**-1.0**
	2.4nm,0.3s,baz=325,slow=9.8,SNR=73						
LPAZ				LR	LR	03 13 07.4	
	comp=Z,82nm,20.8s,baz=224,slow=39						
SAML	**Samuel**	**11.19**	**96**	*e*Pn	**Pn**	**03 08 55.6**	**-2.4**
	0.2nm,0.9s						
ROSC	**El Rosal**	**12.72**	**1**	*e*Pn	**Pn**	**03 09 17.8**	**-0.6**
ROSC	**El Rosal**	**12.72**	**1**	P	**P**	**03 09 21.9**	**-1.6**
	1.1nm,0.3s,baz=97,slow=19,SNR=4.5						
SIV	**San Ignacio**	**15.33**	**123**	P	**Pn**	**03 09 51.3**	**+0.5**
SIV	**San Ignacio**	**15.33**	**123**	P	**Pn**	**03 09 51.3**	**+0.5**
	2.2nm,0.3s,baz=307,slow=11,SNR=90						
LCO	**Las Campanas**	**21.24**	**171**	*e*P	**P**	**03 10 57.5**	**+0.9**
	13nm,0.6s						
CFAA	**Coronel Fontan**	**24.24**	**167**	P	**P**	**03 11 26.0**	**+0.8**
CFAA	**Coronel Fontan**	**24.24**	**167**	P	**P**	**03 11 26.0**	**+0.8**
	1.2nm,0.7s,baz=342,slow=10,SNR=5.8						
CPUP	**Villa Florida**	**24.47**	**140**	P	**P**	**03 11 26.2**	**-1.1**
CPUP	**Villa Florida**	**24.47**	**140**	P	**P**	**03 11 26.2**	**-1.1**
	12nm,0.9s,baz=311,slow=12,SNR=26						
BDFB	**Brasilia**	**26.96**	**109**	P	**P**	**03 11 49.5**	**-0.5**
BDFB				pP	**pP**	**03 12 22.9**	**+1.1**
BDFB	**Brasilia**	**26.96**	**109**	P	**P**	**03 11 49.5**	**-0.5**
	5.7nm,0.7s,baz=274,slow=12,SNR=11						
BDFB				pP	**pP**	**03 12 22.9**	**+1.1**
	9.0nm,0.7s,baz=256,slow=9.3,SNR=7.1						
LRS	**Lares**	**27.14**	**16**	*e*P	**P**	**03 11 51.6**	**+0.2**
SJG	**San Juan**	**27.16**	**18**	*e*P	**P**	**03 11 50.7**	**-0.9**
	36nm,1.3s						
SJG				pP	**pP**	**03 12 23.6**	**+0.1**
SJG	**San Juan**	**27.16**	**18**	P	**P**	**03 11 51.6**	**+0.1**
	12nm,0.3s,baz=189,slow=4.5,SNR=11						
SJG				pP	**pP**	**03 12 23.6**	**+0.1**
	13nm,0.6s,baz=162,slow=2.4,SNR=2.5						
TEIG	**Tepich**	**31.13**	**334**	*e*P	**P**	**03 12 27.1**	**+0.5**
	54nm,1.2s						
TRQA	**Tornquist**	**32.02**	**161**	*e*P	**P**	**03 12 34.1**	**-0.2**
	24nm,1.4s						
PLCA	**Paso Flores**	**32.83**	**175**	*e*P	**P**	**03 12 42.6**	**+1.2**
	8.5nm,0.8s						
PLCA				PcP	**PcP**	**03 15 23.8**	**+1.0**
PLCA	**Paso Flores**	**32.83**	**175**	P	**P**	**03 12 42.3**	**+0.9**
	7.8nm,0.6s,baz=346,slow=10,SNR=33						
PLCA				PcP	**PcP**	**03 15 23.8**	**+1.0**
	0.7nm,0.6s,baz=347,slow=2.5,SNR=4.0						
RCBR	**Riachuelo**	**38.32**	**89**	*e*P	**P**	**03 13 29.6**	**+1.0**
	8.9nm,0.8s						
RCBR				pP	**pP**	**03 14 02.6**	**+0.9**
RCBR	**Riachuelo**	**38.32**	**89**	P	**P**	**03 13 29.3**	**+0.7**
	8.2nm,0.7s,baz=251,slow=9.0,SNR=10						
RCBR				pP	**pP**	**03 14 02.6**	**+0.9**
	5.9nm,0.7s,baz=239,slow=5.9,SNR=2.9						
KMSC	**Kings Mountain**	**43.35**	**352**	⇓P	**P**	**03 14 10.5**	**+1.1**
	baz=44						
732A	**Laxson Ranch,**	**44.00**	**327**	⇑P	**P**	**03 14 16.0**	**+1.3**
	baz=44,SNR=6.9						
TKL	**Tuckaleechee C**	**44.26**	**349**	*e*P	**P**	**03 14 16.8**	**+0.2**
632A	**Uvalde**	**44.52**	**328**	⇓P	**P**	**03 14 20.5**	**+1.7**
	baz=45,SNR=21						
631A	**Perdido Creek**	**44.86**	**327**	⇓P	**P**	**03 14 22.7**	**+1.1**
	baz=45,SNR=23						
532A	**Rocksprings**	**45.07**	**328**	⇓P	**P**	**03 14 24.7**	**+1.4**
	baz=45,SNR=9.1						
JCT	**Junction City**	**45.30**	**329**	⇓P	**P**	**03 14 26.0**	**+1.0**
	baz=46						
WHTX	**Lake Whitney**	**45.39**	**332**	⇑P	**P**	**03 14 27.0**	**+1.4**
	baz=46						
531A	**Rocksprings**	**45.44**	**328**	⇓P	**P**	**03 14 27.5**	**+1.3**
	baz=46,SNR=6.0						
432A	**Menard**	**45.61**	**329**	⇑P	**P**	**03 14 28.7**	**+1.2**
	baz=46						
530A	**J-C Ranch, Com**	**45.85**	**327**	⇓P	**P**	**03 14 30.6**	**+1.2**
	baz=46						
431A	**Sonora**	**45.88**	**328**	⇑P	**P**	**03 14 30.7**	**+1.1**
	baz=46,SNR=10						
MIAR	**Mount Ida**	**45.98**	**338**	*e*P	**P**	**03 14 29.6**	**-0.6**
332A	**Millersview**	**46.00**	**329**	⇑P	**P**	**03 14 31.6**	**+1.2**
	baz=46,SNR=14						
628A	**Black Gap, Mar**	**46.20**	**325**	⇑P	**P**	**03 14 33.5**	**+1.4**
	baz=46,SNR=8.0						
331A	**San Angelo**	**46.28**	**329**	⇓P	**P**	**03 14 33.7**	**+1.0**
	baz=46,SNR=13						
430A	**Baggett Ranch,**	**46.29**	**328**	⇑P	**P**	**03 14 33.8**	**+1.0**
	baz=46,SNR=12						
529A	**Stev Forest Ra**	**46.31**	**326**	⇑P	**P**	**03 14 34.3**	**+1.3**
	baz=46,SNR=8.1						
232A	**Coleman**	**46.36**	**330**	⇓P	**P**	**03 14 34.4**	**+1.2**
	baz=47,SNR=12						
627A	**Terlingua Ranc**	**46.47**	**324**	⇓P	**P**	**03 14 35.6**	**+1.3**
	baz=47						
429A	**Davenport Ranc**	**46.52**	**327**	⇑P	**P**	**03 14 35.9**	**+1.3**
	baz=47,SNR=9.1						
TXAR	**Lajitas Array**	**46.54**	**324**	P	**P**	**03 14 35.7**	**+0.9**
TXAR				pP	**pP**	**03 15 09.0**	**0.0**
TXAR				PcP	**PcP**	**03 16 07.2**	**+0.6**
TXAR	**Lajitas Array**	**46.54**	**324**	P	**P**	**03 14 35.7**	**+0.9**
	1.8nm,0.6s,baz=148,slow=9.2,SNR=33						
TXAR				pP	**pP**	**03 15 09.0**	**0.0**
	0.7nm,0.6s,baz=148,slow=8.6,SNR=2.8						
TXAR				PcP	**PcP**	**03 16 07.2**	**+0.6**
	0.7nm,0.7s,baz=98,slow=4.1,SNR=3.7						
528A	**Cox Ranch, San**	**46.66**	**326**	⇓P	**P**	**03 14 36.6**	**+0.9**
	baz=47,SNR=7.9						
231A	**Bronte**	**46.73**	**329**	⇑P	**P**	**03 14 37.0**	**+0.8**
	baz=47						
330A	**Mertzon**	**46.75**	**328**	⇓P	**P**	**03 14 37.1**	**+0.8**
	baz=47,SNR=8.0						
ABTX	**Abilene, Hawle**	**46.95**	**331**	⇑P	**P**	**03 14 39.0**	**+1.1**
	baz=47,SNR=6.5						
626A	**Big Bend Ranch**	**46.97**	**324**	⇑P	**P**	**03 14 39.4**	**+1.2**
	baz=47,SNR=28						
USHA	**Ushuaia**	**47.00**	**175**	P	**P**	**03 14 38.3**	**+0.5**
USHA	**Ushuaia**	**47.00**	**175**	P	**P**	**03 14 38.3**	**+0.5**
	11nm,0.8s,baz=12,slow=5.2,SNR=6.1						
428A	**Kincaid Ranch,**	**47.03**	**326**	⇓P	**P**	**03 14 40.0**	**+1.4**
	baz=47						
230A	**Sterling City**	**47.10**	**329**	⇓P	**P**	**03 14 40.4**	**+1.3**
	baz=47						
527A	**Woodward Ranch**	**47.11**	**325**	⇓P	**P**	**03 14 40.6**	**+1.3**
	baz=47						
329A	**Wagon Wheel Ra**	**47.24**	**327**	⇑P	**P**	**03 14 40.9**	**+0.8**
	baz=48,SNR=7.1						
526A	**Mary Lane Ranc**	**47.32**	**324**	⇑P	**P**	**03 14 42.0**	**+1.0**
	baz=48,SNR=8.8						
131A	**Roby**	**47.36**	**330**	⇓P	**P**	**03 14 42.1**	**+1.1**
	baz=48						
Z32A	**Haskell**	**47.43**	**331**	⇑P	**P**	**03 14 42.8**	**+1.2**
	baz=48,SNR=5.4						
229A	**Bryant Ranch,**	**47.52**	**328**	⇑P	**P**	**03 14 43.2**	**+0.9**
	baz=48						
427A	**Hayter Ranch,**	**47.52**	**326**	⇓P	**P**	**03 14 43.7**	**+1.2**
	baz=48						
130A	**Snyder**	**47.59**	**329**	⇓P	**P**	**03 14 43.6**	**+0.8**
	baz=48,SNR=5.0						
328A	**Wristen Ranch,**	**47.60**	**327**	⇓P	**P**	**03 14 44.0**	**+1.0**
	baz=48,SNR=6.5						
426A	**McDonald Obser**	**47.74**	**325**	⇑P	**P**	**03 14 45.1**	**+0.9**
	baz=48						
Z31A	**Sharp Cattle R**	**47.76**	**331**	⇓P	**P**	**03 14 45.3**	**+1.2**
	baz=48,SNR=7.5						
Y32A	**R-V Farms, Ver**	**47.99**	**332**	⇓P	**P**	**03 14 47.2**	**+1.3**
	baz=48						
TUL1	**Tulsa**	**48.03**	**337**	⇑P	**P**	**03 14 46.6**	**+0.4**
	baz=48						
228A	**UT Block 9, Go**	**48.05**	**327**	⇓P	**P**	**03 14 47.1**	**+0.6**
	baz=48						
129A	**Stewart Farms,**	**48.07**	**329**	⇑P	**P**	**03 14 47.4**	**+0.8**
	baz=48,SNR=8.7						
326A	**Caldwell Ranch**	**48.20**	**326**	⇓P	**P**	**03 14 48.6**	**+1.0**
	baz=48,SNR=5.8						
Z30A	**Sanderson Ranc**	**48.22**	**330**	⇑P	**P**	**03 14 48.9**	**+1.3**
	baz=48,SNR=28						
WMOK	**Wichita Mounta**	**48.29**	**333**	*e*P	**P**	**03 14 48.0**	**-0.2**
	3.6nm,0.8s						
Y31A	**Rekieta Farm,**	**48.34**	**331**	⇑P	**P**	**03 14 49.8**	**+1.2**
	baz=49,SNR=7.4						
227A	**Bennet, Jal**	**48.35**	**327**	⇓P	**P**	**03 14 50.1**	**+1.4**
	baz=49,SNR=5.6						
425A	**Indio Mountain**	**48.38**	**324**	⇑P	**P**	**03 14 50.1**	**+1.1**
	baz=49,SNR=11						
128A	**Castleberry Fa**	**48.39**	**328**	⇑P	**P**	**03 14 49.6**	**+0.5**
	baz=49,SNR=7.1						
Z29A	**Hungry Hill Ra**	**48.49**	**329**	⇑P	**P**	**03 14 50.7**	**+0.9**
	baz=49,SNR=6.0						
Y30A	**Stafford Cattl**	**48.58**	**330**	⇑P	**P**	**03 14 51.4**	**+0.9**
	baz=49						
X31A	**McDonald Ranch**	**48.75**	**332**	⇓P	**P**	**03 14 52.8**	**+1.1**
	baz=49,SNR=12						
325A	**Bean Ranch, Si**	**48.80**	**325**	⇓P	**P**	**03 14 52.9**	**+0.6**
	baz=49,SNR=6.7						
Z28A	**Tucker Farm, M**	**48.86**	**329**	⇓P	**P**	**03 14 53.3**	**+0.6**
	baz=49						
226B	**Tecolote Peak,**	**48.88**	**326**	⇑P	**P**	**03 14 54.3**	**+1.5**
	baz=49,SNR=6.4						
127A	**Arkansas Junct**	**48.90**	**327**	⇓P	**P**	**03 14 53.7**	**+0.8**
	baz=49						
Y29A	**Porterfield Fa**	**48.95**	**330**	⇓P	**P**	**03 14 54.2**	**+0.9**
	baz=49,SNR=8.4						
X30A	**Coker Ranch, T**	**49.03**	**331**	⇑P	**P**	**03 14 54.8**	**+0.9**
	baz=49,SNR=11						
GDL2	**Guadalupe Moun**	**49.08**	**326**	*e*pP	pP	03 15 36.6	+7.7
324A	**Moseley Ranch,**	**49.15**	**324**	⇓P	**P**	**03 14 55.3**	**+0.4**
	baz=49,SNR=7.0						
126A	**Clayton Basin,**	**49.23**	**327**	⇓P	**P**	**03 14 56.8**	**+1.4**
	baz=50,SNR=7.5						
225A	**Deer Hill, Car**	**49.27**	**326**	⇑P	**P**	**03 14 57.2**	**+1.4**
	baz=50,SNR=10						
Y28A	**McKinney Farm,**	**49.28**	**329**	⇑P	**P**	**03 14 56.5**	**+0.6**
	baz=50						
Z27A	**Tatum**	**49.31**	**328**	⇑P	**P**	**03 14 56.6**	**+0.5**
	baz=50,SNR=9.1						
X29A	**Tulia**	**49.43**	**330**	⇑P	**P**	**03 14 57.6**	**+0.7**
	baz=50,SNR=7.3						
125A	**Gardner Draw,**	**49.59**	**326**	⇑P	**P**	**03 14 59.1**	**+0.9**
	baz=50,SNR=11						
MSTX	**Muleshoe**	**49.59**	**329**	⇑P	**P**	**03 14 58.6**	**+0.4**
	baz=50,SNR=6.2						
224A	**Cornudas Mount**	**49.64**	**325**	⇑P	**P**	**03 14 59.0**	**+0.4**
	baz=50,SNR=7.5						
Z26A	**Caprock**	**49.69**	**327**	⇑P	**P**	**03 14 60.0**	**+1.0**
	baz=50,SNR=12						
Y27A	**Causey**	**49.73**	**328**	⇑P	**P**	**03 14 59.6**	**+0.4**
	baz=50,SNR=6.8						
X28A	**Dimmitt**	**49.74**	**330**	⇑P	**P**	**03 14 59.9**	**+0.6**
	baz=50						
AMTX	**Amarillo**	**49.77**	**330**	⇑P	**P**	**03 14 60.0**	**+0.5**
	baz=50						
BINY	**Binghamton**	**49.93**	**359**	*e*P	**P**	**03 15 01.7**	**+1.2**
	499nm,2.9s						
W29A	**Amraillo**	**49.95**	**331**	⇑P	**P**	**03 15 01.0**	**+0.1**
	baz=50						
124A	**Stringfield Ra**	**50.06**	**326**	⇓P	**P**	**03 15 03.3**	**+1.4**
	baz=50,SNR=6.0						
Z25A	**Roswell**	**50.09**	**327**	⇓P	**P**	**03 15 03.2**	**+1.2**
	baz=50						
Y26A	**Elida**	**50.10**	**328**	⇑P	**P**	**03 15 03.2**	**+1.1**
	baz=50						
HDIL	**Hopedale**	**50.17**	**345**	*e*P	**P**	**03 15 00.9**	**-1.4**
	20nm,0.7s						
X27A	**F and S Farms,**	**50.29**	**329**	⇓P	**P**	**03 15 04.2**	**+0.7**
	baz=50,SNR=6.4						
Z24A	**Sheeppen Canyo**	**50.48**	**326**	⇑P	**P**	**03 15 06.2**	**+1.1**
	baz=51,SNR=11						
Y25A	**Mesa, Roswell**	**50.57**	**327**	⇓P	**P**	**03 15 06.1**	**+0.6**
	baz=51						
222A	**Williams Famil**	**50.57**	**324**	⇓P	**P**	**03 15 07.0**	**+1.4**
	baz=51,SNR=10						
X26A	**CR and CF Fran**	**50.58**	**328**	⇓P	**P**	**03 15 06.7**	**+1.0**
	baz=51						
W27A	**Bowe Ranch, En**	**50.60**	**329**	⇑P	**P**	**03 15 06.6**	**+0.8**
	baz=51,SNR=6.6						
T31A	**Randall Ranch,**	**50.66**	**334**	⇓P	**P**	**03 15 06.8**	**+0.7**
	baz=51						
Z23A	**Rita Site, Whi**	**50.92**	**325**	⇑P	**P**	**03 15 09.6**	**+1.4**
	baz=51,SNR=7.4						
122A	**Conniff Cattle**	**50.94**	**324**	⇓P	**P**	**03 15 10.0**	**+1.6**
	baz=51						
Y24A	**Capitan**	**50.97**	**327**	⇑P	**P**	**03 15 09.9**	**+1.2**
	baz=51,SNR=6.4						
220A	**Playas Peak, P**	**51.28**	**322**	⇓P	**P**	**03 15 12.0**	**+1.0**
	baz=52,SNR=7.3						
121A	**Cookes Peak, D**	**51.28**	**323**	⇓P	**P**	**03 15 12.2**	**+1.2**
	baz=52						
Y23A	**Lovelace Mesa,**	**51.31**	**326**	⇑P	**P**	**03 15 12.0**	**+0.8**
	baz=52,SNR=7.4						
Z22A	**Elephant Butte**	**51.33**	**325**	⇓P	**P**	**03 15 12.5**	**+1.2**
	baz=52						
W25A	**X Bar L Ranch,**	**51.44**	**328**	⇑P	**P**	**03 15 12.5**	**+0.5**
	baz=52,SNR=6.2						
X24A	**Lazy VL Ranch,**	**51.45**	**327**	⇑P	**P**	**03 15 13.1**	**+0.8**
	baz=52						
V26A	**Tequesquite Ra**	**51.54**	**329**	⇓P	**P**	**03 15 13.6**	**+0.8**
	baz=52,SNR=10.0						
Z21A	**St. Cloud Mine**	**51.77**	**324**	⇑P	**P**	**03 15 16.0**	**+1.3**
	baz=52,SNR=6.2						
T28A	**Walsh**	**51.78**	**332**	⇓P	**P**	**03 15 15.5**	**+0.9**
	baz=52						
120A	**U Bar Ranch, L**	**51.80**	**323**	⇓P	**P**	**03 15 16.0**	**+1.2**
	baz=52						
Y22A	**Socorro**	**51.83**	**325**	⇓P	**P**	**03 15 16.2**	**+1.1**
	baz=52						
X23A	**Hourglass Bar**	**51.87**	**327**	⇓P	**P**	**03 15 16.3**	**+0.9**
	baz=52,SNR=10						
W24A	**Lazy 6 Ranch,**	**51.93**	**328**	⇓P	**P**	**03 15 16.4**	**+0.6**
	baz=52,SNR=7.2						
U26A	**Atchley Ranch,**	**51.99**	**330**	⇑P	**P**	**03 15 17.1**	**+0.9**
	baz=52,SNR=6.2						
V25A	**Rancho No Teng**	**52.00**	**329**	⇓P	**P**	**03 15 17.0**	**+0.7**
	baz=52,SNR=7.0						
T27A	**Campo**	**52.02**	**331**	⇓P	**P**	**03 15 17.2**	**+0.9**
	baz=52						
Z20A	**Nine Sixteen R**	**52.17**	**323**	⇓P	**P**	**03 15 19.0**	**+1.4**
	baz=52,SNR=8.4						
V24A	**Rampart Ranch,**	**52.25**	**328**	⇑P	**P**	**03 15 19.2**	**+1.0**
	baz=52,SNR=8.7						
LAZ	**Ladron**	**52.27**	**326**	*e*P	**P**	**03 15 19.2**	**+0.9**
	2.7nm,1.2s						
Y21A	**Point of Rocks**	**52.28**	**325**	⇓P	**P**	**03 15 19.9**	**+1.5**
	baz=52						
W23A	**Werner Place,**	**52.29**	**327**	⇓P	**P**	**03 15 19.3**	**+0.9**
	baz=52						
ANMO	**Albuquerque**	**52.29**	**327**	*e*P	**P**	**03 15 19.3**	**+0.8**
	6.1nm,1.0s						
U25A	**Circle Dot Ran**	**52.33**	**329**	⇓P	**P**	**03 15 19.4**	**+0.7**
	baz=53,SNR=7.0						
T26A	**Comanche Natio**	**52.53**	**331**	⇑P	**P**	**03 15 21.3**	**+1.1**
	baz=53						
Y20A	**Horse Springs,**	**52.61**	**324**	⇓P	**P**	**03 15 22.2**	**+1.3**
	baz=53						
X21A	**Alamocita Cree**	**52.66**	**325**	⇑P	**P**	**03 15 23.0**	**+1.7**
	baz=53,SNR=12						
V23A	**Ortiz Mt. (NFS**	**52.74**	**327**	⇑P	**P**	**03 15 23.3**	**+1.5**
	baz=53						
S26A	**Kim**	**52.83**	**331**	⇑P	**P**	**03 15 23.6**	**+1.3**
	baz=53,SNR=8.1						
T25A	**Trinidad**	**52.91**	**330**	⇓P	**P**	**03 15 24.1**	**+1.2**
	baz=53,SNR=6.5						
TUC	**Tucson**	**52.95**	**321**	*e*P	**P**	**03 15 23.4**	**+0.2**
	2.9nm,0.8s						
R27A	**Eads**	**53.04**	**332**	⇓P	**P**	**03 15 24.7**	**+0.9**
	baz=53,SNR=7.9						
X20A	**Quemado**	**53.14**	**325**	⇓P	**P**	**03 15 26.0**	**+1.3**
	baz=53						
T24A	**Torres, Weston**	**53.17**	**329**	⇑P	**P**	**03 15 26.3**	**+1.3**
	baz=53						
U23A	**El Rito**	**53.19**	**328**	⇓P	**P**	**03 15 26.2**	**+1.1**
	baz=53,SNR=5.7						
S25A	**Robets Cordova**	**53.33**	**330**	⇓P	**P**	**03 15 26.9**	**+0.9**
	baz=54,SNR=8.8						
R26A	**Arlington**	**53.36**	**332**	⇑P	**P**	**03 15 27.0**	**+0.9**
	baz=54,SNR=9.2						
KSCO	**Kaye Shedlock'**	**53.55**	**333**	⇑P	**P**	**03 15 28.9**	**+1.3**
	baz=54						
W20A	**Ramah**	**53.56**	**325**	⇓P	**P**	**03 15 28.9**	**+1.1**
	baz=54						
V21A	**Milan**	**53.58**	**326**	⇑P	**P**	**03 15 29.2**	**+1.3**
	baz=54						
U22A	**Llaves**	**53.58**	**327**	⇑P	**P**	**03 15 29.2**	**+1.3**
	baz=54,SNR=6.4						
T23A	**Casias Ranch,**	**53.65**	**329**	⇑P	**P**	**03 15 29.6**	**+1.2**
	baz=54,SNR=5.8						
S24A	**Houchin Ranch,**	**53.70**	**330**	⇓P	**P**	**03 15 30.2**	**+1.4**
	baz=54						
BGNE	**Belgrade**	**53.72**	**338**	⇓P	**P**	**03 15 28.9**	**+0.3**
	baz=54,SNR=6.0						
Q26A	**Hugo**	**53.89**	**332**	⇓P	**P**	**03 15 30.8**	**+0.7**
	baz=54						
X18A	**Snowflake**	**53.97**	**324**	⇑P	**P**	**03 15 31.9**	**+1.2**
	baz=54,SNR=7.8						
214A	**Organ Pipe Nat**	**54.00**	**319**	⇓P	**P**	**03 15 32.1**	**+1.3**
	baz=54,SNR=7.7						
V20A	**Brimhall**	**54.03**	**326**	⇑P	**P**	**03 15 32.3**	**+1.1**
	baz=54						
U21A	**Nageezi**	**54.05**	**327**	⇓P	**P**	**03 15 32.6**	**+1.3**
	baz=54						
T22A	**Edith**	**54.08**	**328**	⇑P	**P**	**03 15 32.9**	**+1.3**
	baz=54						
Q25A	**Bedland, Calha**	**54.23**	**331**	⇓P	**P**	**03 15 33.0**	**+0.4**
	baz=54						
W18A	**Petrified Fore**	**54.26**	**324**	⇑P	**P**	**03 15 34.3**	**+1.4**
	baz=54						
P26A	**Davis Ranch, A**	**54.32**	**333**	⇑P	**P**	**03 15 34.6**	**+1.4**
	baz=55						
T21A	**Navajo Lake**	**54.40**	**327**	⇓P	**P**	**03 15 35.2**	**+1.3**
	baz=55						
R23A	**Moffat**	**54.43**	**330**	⇑P	**P**	**03 15 35.4**	**+1.3**
	baz=55						
O27A	**Beecher Island**	**54.45**	**334**	⇓P	**P**	**03 15 35.5**	**+1.5**
	baz=55						
U20A	**Newcomb**	**54.48**	**326**	⇑P	**P**	**03 15 35.5**	**+1.1**
	baz=55						
S22A	**4UR Ranch, Cre**	**54.60**	**329**	⇓P	**P**	**03 15 36.4**	**+1.0**
	baz=55,SNR=5.9						
P25A	**Willow Gulch B**	**54.66**	**332**	⇓P	**P**	**03 15 36.9**	**+1.2**
	baz=55,SNR=6.3						
X16A	**Lo Mia Camp, P**	**54.78**	**322**	⇑P	**P**	**03 15 38.2**	**+1.6**
	baz=55,SNR=9.0						
OGNE	**Ogallala**	**54.88**	**335**	⇓P	**P**	**03 15 38.0**	**+1.0**
	baz=55						
R22A	**Saguache, Gunn**	**54.92**	**329**	⇓P	**P**	**03 15 39.1**	**+1.4**
	baz=55,SNR=6.6						
S21A	**Coal Bank Pass**	**55.03**	**328**	⇓P	**P**	**03 15 39.1**	**+0.6**
	baz=55						
MVCO	**Mesa Verde**	**55.08**	**327**	⇓P	**P**	**03 15 39.5**	**+0.8**
	baz=55						
ECSD	**EROS Data Cent**	**55.23**	**341**	*e*P	**P**	**03 15 38.4**	**-1.0**
	5.1nm,0.8s						
P23A	**Jefferson**	**55.35**	**331**	⇑P	**P**	**03 15 41.9**	**+1.1**
	baz=56						
R21A	**Cimarron**	**55.44**	**329**	⇓P	**P**	**03 15 42.6**	**+1.3**
	baz=56,SNR=7.6						
SPMN	**St. Paul**	**55.45**	**344**	⇓P	**P**	**03 15 40.3**	**-0.6**
	baz=56						
S20A	**Disappointment**	**55.46**	**328**	⇑P	**P**	**03 15 42.7**	**+1.2**
	baz=56,SNR=11						
Q22A	**Crested Butte,**	**55.49**	**329**	⇓P	**P**	**03 15 43.0**	**+1.3**
	baz=56,SNR=5.5						
WUAZ	**Wupatki**	**55.49**	**324**	⇓P	**P**	**03 15 43.2**	**+1.5**
	baz=56						
M27A	**Reverse DX Ran**	**55.51**	**335**	⇑P	**P**	**03 15 42.5**	**+0.9**
	baz=56,SNR=5.1						
O24A	**Longmont**	**55.57**	**332**	⇓P	**P**	**03 15 43.6**	**+1.5**
	baz=56						
ISCO	**Idaho Springs**	**55.57**	**331**	*e*P	**P**	**03 15 43.4**	**+1.1**
	3.8nm,0.8s						
ISCO	**Idaho Springs**	**55.57**	**331**	⇓P	**P**	**03 15 43.2**	**+0.9**
	baz=56,SNR=5.4						
R20A	**Redvale**	**55.74**	**328**	⇓P	**P**	**03 15 45.1**	**+1.7**
	baz=56,SNR=7.0						
SMCO	**Snowmass**	**55.76**	**330**	*e*P	**P**	**03 15 45.1**	**+1.4**
	4.4nm,0.8s						
PV01	**Paradox Valley**	**55.80**	**328**	*e*P	**P**	**03 15 45.1**	**+1.2**
	474nm,1.0s						
P22A	**Eagle**	**55.97**	**330**	⇑P	**P**	**03 15 46.5**	**+1.4**
	baz=56,SNR=8.7						
O23A	**Lake Granby, G**	**56.04**	**331**	⇑P	**P**	**03 15 47.0**	**+1.3**
	baz=56,SNR=15						
N24A	**Carr**	**56.04**	**332**	⇓P	**P**	**03 15 46.9**	**+1.4**
	baz=56						
M25A	**Palm-Egli Farm**	**56.16**	**333**	⇑P	**P**	**03 15 47.6**	**+1.3**
	baz=56						
L26A	**Underwood Farm**	**56.22**	**335**	⇑P	**P**	**03 15 47.9**	**+1.3**
	baz=56						
S18A	**Hurst Farm, Bl**	**56.24**	**326**	⇑P	**P**	**03 15 48.0**	**+0.9**
	baz=56,SNR=9.0						
P21A	**Newcastle**	**56.26**	**330**	⇑P	**P**	**03 15 48.4**	**+1.3**
	baz=56,SNR=8.3						
Q20A	**Ridgley Place,**	**56.26**	**329**	⇓P	**P**	**03 15 47.6**	**+0.5**
	baz=56						
O22A	**Kremmling**	**56.30**	**331**	⇑P	**P**	**03 15 48.3**	**+0.7**
	baz=56,SNR=6.1						
PDMCI	**Parker Dam,Lak**	**56.36**	**321**	⇑P	**P**	**03 15 48.8**	**+1.2**
	baz=57						
K27A	**Flueckinger Fa**	**56.42**	**336**	⇓P	**P**	**03 15 49.4**	**+1.4**
	baz=57						

M24A	Cheyenne	56.53	333	⇑P	P	03 15 50.5	+1.6
	baz=57						
U15A	North Rim	56.66	324	⇑P	P	03 15 51.4	+1.3
	baz=57,SNR=6.3						
PHWY	Pilot Hill	56.68	332	eP	P	03 15 51.0	+0.9
	6.9nm,0.9s						
PHWY				epP	pP	03 16 34.6	+8.9
N22A	Wattenberg Ran	56.76	331	⇓P	P	03 15 52.0	+1.3
	baz=57						
Q19A	Hogan Spring (	56.77	328	⇓P	P	03 15 51.8	+1.2
	baz=57,SNR=15						
BC3	Big Chuckawall	56.79	319	⇑P	P	03 15 52.0	+1.2
	baz=57						
IRM	Iron Mountain	56.91	320	⇓P	P	03 15 53.0	+1.4
	baz=57						
M23A	Laramie	56.94	332	⇑P	P	03 15 52.9	+1.1
	baz=57,SNR=6.1						
O20A	White River Ci	57.12	329	⇓P	P	03 15 54.3	+1.2
	baz=57,SNR=5.3						
P19A	Cripple Cowboy	57.12	329	⇑P	P	03 15 54.1	+0.9
	baz=57,SNR=9.0						
N21A	Black Mountain	57.24	330	⇓P	P	03 15 55.2	+1.1
	baz=58,SNR=7.6						
L23A	Garrett	57.44	333	⇑P	P	03 15 56.3	+1.0
	baz=58,SNR=5.1						
K24A	Anderson Ranch	57.53	334	⇑P	P	03 15 57.4	+1.5
	baz=58						
SRU	San Rafael	57.55	327	eP	P	03 15 57.1	+0.9
	184nm,0.8s						
SRU	San Rafael	57.55	327	⇑P	P	03 15 56.8	+0.6
	baz=58,SNR=6.5						
GMRC	Granite Mounta	57.63	320	⇑P	P	03 15 57.7	+1.0
	baz=58,SNR=5.3						
N20A	Spence Gulch,	57.66	330	⇓P	P	03 15 57.9	+0.9
	baz=58,SNR=8.3						
EYMN	Ely	57.66	347	eP	P	03 15 56.4	-0.1
	12nm,1.1s						
O19A	Miners Draw (B	57.69	329	⇑P	P	03 15 58.1	+1.0
	baz=58,SNR=11						
L22A	Ellis Ranch, M	57.71	332	⇓P	P	03 15 58.9	+1.6
	baz=58						
Q16A	Castle Valley	57.77	327	⇑P	P	03 15 58.9	+1.2
	baz=58						
P18A	Preston Nutter	57.78	328	⇓P	P	03 15 59.0	+1.1
	baz=58						
M21A	Separation Pea	57.81	331	⇓P	P	03 15 59.5	+1.5
	baz=58						
MURC	Murrieta	57.90	318	⇑P	P	03 15 59.9	+1.3
	baz=58						
K23A	Bowen Ranch, D	57.91	333	⇑P	P	03 15 59.8	+1.2
	baz=58						
P17A	Butcher Ranch,	57.93	327	⇑P	P	03 15 59.6	+0.8
	baz=58,SNR=5.2						
CCUT	Cedar City	58.05	324	eP	P	03 16 01.7	+1.9
	4.5nm,1.0s						
L21A	Rawlins	58.09	331	⇑P	P	03 16 00.8	+0.9
	baz=58,SNR=5.4						
M20A	Sweetwater, Wa	58.12	331	⇓P	P	03 16 01.3	+1.2
	baz=58						
O18A	Roosevelt	58.12	328	⇑P	P	03 16 01.4	+1.3
	baz=58						
N19A	John Jarvie Ra	58.16	329	⇑P	P	03 16 01.1	+0.8
	baz=58,SNR=9.4						
K22A	Casper	58.23	333	⇓P	P	03 16 01.7	+0.8
	baz=58,SNR=5.8						
RSSD	Black Hills	58.33	335	eP	P	03 16 02.5	+0.9
	9.1nm,1.0s						
O17A	Robinson Place	58.45	328	⇑P	P	03 16 03.7	+1.2
	baz=59						
N18A	Larsen Ranch,	58.47	329	⇓P	P	03 16 03.9	+1.3
	baz=59,SNR=6.0						
K21A	Alcova	58.56	332	⇑P	P	03 16 04.2	+1.1
	baz=59,SNR=10						
GSC	Goldstone	58.69	320	eP	P	03 16 05.7	+1.7
	5.0nm,0.8s						
GSC	Goldstone	58.69	320	⇓P	P	03 16 05.3	+1.2
	baz=59						
MPU	Maple Canyon	58.80	327	eP	P	03 16 06.1	+1.2
	4.6nm,0.9s						
J22A	Midwest	58.81	333	⇓P	P	03 16 05.5	+0.6
	baz=59,SNR=11						
O16A	Springville	58.87	327	⇑P	P	03 16 06.2	+0.9
	baz=59						
M18A	Lyman	59.01	329	⇓P	P	03 16 07.1	+0.8
	baz=59						
N17A	Moffit Pass	59.05	328	⇓P	P	03 16 08.6	+1.9
	baz=59,SNR=6.3						
H24A	Dirks Ranch, A	59.06	335	⇓P	P	03 16 06.7	+0.3
	baz=59,SNR=6.1						
K20A	Yellowstone Ra	59.09	331	⇓P	P	03 16 07.2	+0.5
	baz=59,SNR=9.2						
AGMN	Agassiz Nation	59.11	343	eP	P	03 16 06.0	-0.6
	16nm,0.8s						
AGMN				epP	pP	03 16 42.0	-0.3
JLU	Jordanelle	59.12	328	eP	P	03 16 08.4	+1.3
	9.3nm,1.0s						
L19A	Farson	59.16	330	⇑P	P	03 16 08.2	+0.9
	baz=59,SNR=9.0						
I22A	9 Mile Ranch,	59.20	333	⇓P	P	03 16 08.0	+0.5
	baz=59,SNR=14						
EDW2	Edwards Air Fo	59.20	319	⇓P	P	03 16 08.3	+0.8
	baz=59						
J21A	Lysite	59.20	332	⇓P	P	03 16 08.5	+1.0
	baz=59,SNR=11						
M17A	Scullys Gap (B	59.35	329	⇓P	P	03 16 09.0	+0.4
	baz=60,SNR=5.0						
O15A	The Old Anders	59.44	327	⇑P	P	03 16 10.7	+1.5
	baz=60						
K19A	Absolon Red Bu	59.45	331	⇑P	P	03 16 09.7	+0.4
	baz=60,SNR=11						
G24A	Alzada	59.48	336	⇓P	P	03 16 09.9	+0.6
	baz=60,SNR=6.1						
I21A	Big Trails, Te	59.49	333	⇓P	P	03 16 10.0	+0.5
	baz=60,SNR=8.9						
J20A	Shoshoni	59.50	332	⇓P	P	03 16 10.6	+1.1
	baz=60,SNR=8.3						
DUG	Dugway	59.56	327	eP	P	03 16 11.2	+1.2
	11nm,0.8s						
DUG				epP	pP	03 16 47.5	+1.6
DUG	Dugway	59.56	327	⇓P	P	03 16 11.3	+1.3
	baz=60,SNR=16						
MPMC	Manual Prospec	59.60	320	⇓P	P	03 16 11.4	+0.9
	baz=60						
M16A	Huntsville	59.73	328	⇓P	P	03 16 11.8	+0.6
	baz=60						
PDAR	Pinedale Array	59.75	331	P	P	03 16 11.4	0.0
PDAR				PcP	PcP	03 16 56.5	-0.2
PDAR	Pinedale Array	59.75	331	P	P	03 16 11.4	0.0
	2.5nm,0.6s,baz=134,slow=7.7,SNR=17						
PDAR				PcP	PcP	03 16 56.5	-0.2
	1.7nm,0.5s,baz=124,slow=5.9,SNR=8.1						
BW06	Boulder Array	59.75	331	eP	P	03 16 11.7	+0.3
	12nm,1.4s						
BW06	Boulder Array	59.75	331	⇓P	P	03 16 12.0	+0.6
	baz=60,SNR=7.5						
G23A	Biddle	59.77	335	⇓P	P	03 16 12.0	+0.7
	baz=60,SNR=8.2						
RKT	Rikitea	59.84	248	eT	T	03 16 13.5	
	7.2nm,0.3s						
RKT	Rikitea	59.84	248	eTT		03 16 13.5	
MDND	Maddock	59.85	341	⇓P	P	03 16 12.3	+0.7
	baz=60						
J19A	Crowheart	59.89	331	⇓P	P	03 16 12.9	+0.7
	baz=60,SNR=8.1						
R11A	Troy Canyon, C	59.89	323	⇑P	P	03 16 13.7	+1.4
	baz=60,SNR=7.9						
K18A	Toltan Ranch,	59.89	330	⇑P	P	03 16 13.4	+1.0
	baz=60,SNR=9.7						
HWUT	Hardware Ranch	59.91	328	eP	P	03 16 12.8	+0.4
	14nm,0.6s						
F24A	Ekalaka	59.91	336	⇓P	P	03 16 12.7	+0.5
	baz=60,SNR=8.7						
L17A	Cokeville	59.91	329	⇓P	P	03 16 12.9	+0.5
	baz=60,SNR=13						
I20A	Worland	59.98	332	⇓P	P	03 16 13.5	+0.8
	baz=60,SNR=7.8						
ISA	Isabella	59.99	319	⇑P	P	03 16 14.0	+1.1
	baz=60						
H21A	Big Horn, Sher	60.02	334	⇓P	P	03 16 13.4	+0.3
	baz=60						
L16A	Fish Haven	60.13	329	⇓P	P	03 16 14.4	+0.5
	baz=60,SNR=12						
G22A	Birney	60.17	335	⇓P	P	03 16 14.6	+0.6
	baz=60,SNR=6.2						
J18A	Kendall Valley	60.31	331	⇓P	P	03 16 15.8	+0.6
	baz=60,SNR=20						
H20A	Greybull	60.34	333	⇓P	P	03 16 15.4	+0.2
	baz=61,SNR=27						
K17A	Gardner Place,	60.41	330	⇑P	P	03 16 16.2	+0.4
	baz=61,SNR=6.3						
E24A	Baker	60.44	337	⇑P	P	03 16 16.5	+0.7
	baz=61						
I19A	Meeteetse	60.45	332	⇓P	P	03 16 16.6	+0.5
	baz=61						
G21A	Lodge Grass	60.56	334	⇑P	P	03 16 17.3	+0.6
	baz=61						
I18A	Diamond G Ranc	60.58	331	⇓P	P	03 16 17.6	+0.6
	baz=61,SNR=13						
F22A	Rosebud	60.60	335	⇑P	P	03 16 17.3	+0.4
	baz=61						
L15A	Malad City	60.62	328	⇓P	P	03 16 17.7	+0.5
	baz=61,SNR=13						
HVU	Hansel Valley	60.66	328	eP	P	03 16 18.6	+1.0
	8.2nm,1.0s						
J17A	Brown Place, J	60.76	330	⇑P	P	03 16 19.0	+0.8
	baz=61,SNR=9.9						
E23A	Ismay	60.79	336	⇓P	P	03 16 18.4	+0.2
	baz=61,SNR=5.2						
K16A	Soda Springs	60.81	329	⇑P	P	03 16 19.2	+0.7
	baz=61						
SNOW	Snow King Moun	60.86	330	eP	P	03 16 19.7	+0.8
	5.0nm,0.8s						
ULM	Lac du Bonnet	60.88	344	eP	P	03 16 17.9	-0.7
	12nm,0.8s						
ULM				pP	pP	03 16 53.6	-1.0
ULM	Lac du Bonnet	60.88	344	P	P	03 16 17.6	-1.1
	7.4nm,0.6s,baz=159,slow=10.0,SNR=14						
ULM				pP	pP	03 16 53.7	-1.0
	14nm,0.9s,baz=157,slow=7.5,SNR=8.5						
LOHW	Long Hollow	60.89	331	eP	P	03 16 19.8	+0.7
	5.1nm,0.8s						
D24A	Glendive	60.91	337	⇑P	P	03 16 20.1	+1.1
	baz=61						
H19A	Powell	60.93	332	⇓P	P	03 16 20.0	+0.7
	baz=61						
TPAW	Teton Pass	60.97	330	eP	P	03 16 20.4	+0.7
	4.0nm,0.7s						
G20A	Bridger	61.00	333	⇑P	P	03 16 19.9	+0.2
	baz=61,SNR=14						
RRI2	Red Ridge	61.05	330	eP	P	03 16 20.9	+0.7
	13nm,0.8s						
MOOW	Moose Ponds	61.06	331	eP	P	03 16 20.9	+0.6
	3.1nm,0.7s						
I17A	Pilgrim Ck.	61.11	331	⇓P	P	03 16 21.7	+1.2
	baz=61,SNR=8.5						
J16A	Bone	61.14	330	⇓P	P	03 16 21.6	+0.8
	baz=61,SNR=7.2						
K15A	Arbon	61.18	329	⇓P	P	03 16 22.2	+1.2
	baz=61						
H18A	Shoshone NF, C	61.25	332	⇓P	P	03 16 22.2	+0.7
	baz=62,SNR=5.5						
IMW	Indian Meadow	61.27	331	eP	P	03 16 22.3	+0.6
	8.2nm,0.7s						
ELK	Elko	61.29	326	eP	P	03 16 22.7	+0.9
	2.3nm,0.8s						
C24A	Savage	61.29	337	⇓P	P	03 16 22.8	+1.4
	baz=62						
D23A	Lindsay	61.30	337	⇓P	P	03 16 22.9	+1.3
	baz=62						
RLMT	Red Lodge	61.40	333	eP	P	03 16 23.0	+0.5
	8.5nm,1.0s						
RLMT	Red Lodge	61.40	333	⇑P	P	03 16 23.2	+0.7
	baz=62,SNR=8.0						
K14A	Jones Ranch, D	61.41	328	⇓P	P	03 16 23.2	+0.7
	baz=62,SNR=6.4						
H17A	Grant Village	61.46	331	⇓P	P	03 16 24.1	+1.1
	baz=62,SNR=6.1						
LKWY	Lake	61.51	331	eP	P	03 16 25.2	+2.0
	8.3nm,0.7s						
I16A	Newdale	61.52	330	⇑P	P	03 16 24.1	+0.9
	baz=62,SNR=7.6						
NVAR	Mina Array Bea	61.58	322	P	P	03 16 24.6	+0.8
NVAR				pP	pP	03 17 01.4	+1.4
NVAR	Mina Array Bea	61.58	322	P	P	03 16 24.6	+0.8
	2.8nm,0.7s,baz=129,slow=7.1,SNR=15						
NVAR				pP	pP	03 17 01.4	+1.4
	2.0nm,0.7s,baz=147,slow=5.4,SNR=5.6						
D22A	Cohagen	61.67	336	⇓P	P	03 16 25.6	+1.6
	baz=62,SNR=30						
G18A	Lazy EL Ranch,	61.69	333	⇓P	P	03 16 25.1	+0.8
	baz=62,SNR=17						
C23A	Lambert	61.81	337	⇑P	P	03 16 26.2	+1.3
	baz=62,SNR=6.4						
F19A	Roth Farm, Mol	61.82	333	⇑P	P	03 16 26.0	+0.9
	baz=62,SNR=15						
YMR	Madison River	61.85	331	eP	P	03 16 26.8	+1.3
	20nm,0.7s						
D21A	La Casta Ranch	61.93	335	⇓P	P	03 16 27.4	+1.5
	baz=62,SNR=13						
E20A	Meyer Farm, Mu	61.97	334	⇓P	P	03 16 27.1	+1.1
	baz=62,SNR=18						
DGMT	Dagmar	61.98	338	⇑P	P	03 16 27.4	+1.3
	baz=62						
H16A	Russell Place,	62.01	331	⇓P	P	03 16 28.2	+1.6
	baz=62,SNR=28						
C22A	Vida	62.03	337	⇓P	P	03 16 27.7	+1.2
	baz=62,SNR=9.3						
GCMT	Greycliff	62.09	333	eP	P	03 16 27.7	+0.6
	19nm,1.0s						
J14A	Carey	62.14	329	⇓P	P	03 16 28.7	+1.3
	baz=62						
QLMT	Earthquake Lak	62.20	331	eP	P	03 16 29.8	+1.9
F18A	Big Timber	62.20	333	⇓P	P	03 16 28.7	+1.0
	baz=62,SNR=24						
E19A	Rath Farm, Rou	62.22	334	⇑P	P	03 16 28.7	+0.9
	baz=62,SNR=9.5						
G17A	Pierce Place,	62.23	332	⇑P	P	03 16 29.1	+1.1
	baz=62						
B23A	Brockton	62.27	338	⇑P	P	03 16 29.5	+1.5
	baz=62,SNR=11						
A24A	Westby	62.29	338	⇑P	P	03 16 29.5	+1.4
	baz=62						
D20A	Manuel Ranch,	62.43	335	⇓P	P	03 16 30.3	+1.2
	baz=63,SNR=12						
J13A	Cove Ranch, Pi	62.53	328	⇑P	P	03 16 30.9	+0.9
	baz=63,SNR=7.5						
I14A	Mackay	62.54	329	⇓P	P	03 16 31.3	+1.3
	baz=63,SNR=8.3						
C21A	Desert Coulee	62.58	336	⇑P	P	03 16 31.4	+1.3
	baz=63,SNR=28						
H15A	Lima	62.63	330	⇑P	P	03 16 32.1	+1.4
	baz=63						
F17A	Fitzpatrick Pl	62.63	332	⇑P	P	03 16 31.9	+1.3
	baz=63,SNR=11						
G16A	Moss Hill, Enn	62.67	331	⇓P	P	03 16 32.1	+1.2
	baz=63,SNR=6.2						
HLID	Hailey	62.77	328	eP	P	03 16 32.7	+1.0
	5.3nm,1.0s						
HLID				epP	PcP	03 17 09.6	+0.8
HLID	Hailey	62.77	328	⇑P	P	03 16 32.7	+1.0
	baz=63,SNR=7.6						
E18A	Harlowton	62.80	333	⇓P	P	03 16 32.7	+1.1
	baz=63,SNR=12						
D19A	Cripps Ranch,	62.81	334	⇑P	P	03 16 32.5	+0.8
	baz=63,SNR=7.9						
C20A	Veseth Ranch,	62.87	335	⇓P	P	03 16 32.6	+0.7
	baz=63,SNR=6.1						
I13A	Wildhorse Cree	62.87	329	⇑P	P	03 16 33.3	+1.0
	baz=63,SNR=12						
SCHQ	Schefferville	62.88	5	P	P	03 16 31.4	-0.5
SCHQ				epP	pP	03 17 08.2	+0.1
SCHQ	Schefferville	62.88	5	P	P	03 16 31.4	-0.5
	4.6nm,0.7s,baz=192,slow=4.9,SNR=8.0						
SCHQ				pP	pP	03 17 07.3	-0.8
	7.0nm,0.6s,baz=186,slow=6.2,SNR=6.1						
MCMT	McKenzie Canyo	62.88	330	eP	P	03 16 33.2	+0.8
	4.3nm,1.2s						
MCMT				epP	pP	03 17 07.7	-0.9
BOZ	Bozeman (W)	62.89	332	⇑P	P	03 16 33.3	+0.9
	baz=63,SNR=7.0						
G15A	Dillon	62.95	331	⇑P	P	03 16 33.7	+1.0
	baz=63,SNR=5.8						
H14A	Leadore	62.99	330	⇑P	P	03 16 34.3	+1.3
	baz=63,SNR=17						
F16A	Kennard Place,	62.99	332	⇑P	P	03 16 34.0	+1.1
	baz=63,SNR=9.2						
B21A	Ellsworth Farm	63.03	336	⇑P	P	03 16 34.3	+1.2
	baz=63						
A22A	Carney Farms,	63.06	337	⇓P	P	03 16 34.4	+1.1
	baz=63,SNR=8.0						
E17A	Martinsdale	63.14	333	⇑P	P	03 16 35.2	+1.2
	baz=63,SNR=16						
D18A	Linhart Farms,	63.23	334	⇑P	P	03 16 35.5	+1.0
	baz=64,SNR=10						
I12A	Atlanta	63.31	328	⇓P	P	03 16 36.3	+1.1
	baz=64,SNR=9.9						
C19A	Slack Wire Ran	63.32	335	⇑P	P	03 16 36.0	+0.9
	baz=64,SNR=18						
H13A	Challis	63.40	329	⇓P	P	03 16 36.8	+1.1
	baz=64,SNR=7.3						
LRM	Limekiln Ridge	63.41	331	eP	P	03 16 36.8	+0.9
MFID	Camas Ranch	63.42	327	eP	P	03 16 37.4	+1.6
	23nm,1.0s						
MFID				epP	pP	03 17 12.3	+0.2
MFID	Camas Ranch	63.42	327	⇑P	P	03 16 37.2	+1.4
	baz=64,SNR=11						
B20A	Solberg Farm,	63.45	336	⇑P	P	03 16 36.6	+0.8
	baz=64,SNR=13						
F15A	Butte	63.45	331	⇓P	P	03 16 36.8	+0.7
	baz=64						
A21A	Bergtoll Ranch	63.45	337	⇓P	P	03 16 36.7	+0.9
	baz=64,SNR=6.4						
G14A	Jackson	63.48	330	⇑P	P	03 16 36.9	+0.6
	baz=64						
E16A	East Helena	63.57	332	⇓P	P	03 16 37.6	+0.8
	baz=64						
D17A	Six Diamond Ra	63.59	333	⇑P	P	03 16 37.7	+0.8
	baz=64,SNR=13						
H12A	Diamond D Ranc	63.69	329	⇓P	P	03 16 38.8	+1.2
	baz=64,SNR=11						
A20A	Cobblestone Ra	63.76	336	⇓P	P	03 16 38.8	+1.0
	baz=64,SNR=6.7						
G13A	Cobalt	63.76	330	⇑P	P	03 16 39.3	+1.2
	baz=64,SNR=9.8						
HRY	Holter Researc	63.78	332	eP	P	03 16 39.2	+1.1
B19A	Brinkman Farms	63.84	335	⇑P	P	03 16 39.5	+1.1
	baz=64,SNR=17						
EGMT	Eagleton	63.85	334	eP	P	03 16 38.9	+0.4
	13nm,0.8s						
EGMT	Eagleton	63.85	334	⇓P	P	03 16 39.3	+0.8
	baz=64,SNR=12						
F14A	Wisdom	63.85	331	⇓P	P	03 16 39.5	+0.8
	baz=64,SNR=5.1						
D16A	Dana Ranch, Ca	63.88	333	⇑P	P	03 16 40.1	+1.3
	baz=64,SNR=13						
E15A	Deer Lodge	63.94	332	⇑P	P	03 16 40.0	+0.8
	baz=64,SNR=6.4						
C17A	Wharram Farm,	63.99	334	⇑P	P	03 16 40.2	+0.8
	baz=64,SNR=13						
A19A	Klindworth Far	64.13	336	⇓P	P	03 16 41.1	+0.8
	baz=64,SNR=21						
B18A	Beardsley Farm	64.14	335	⇑P	P	03 16 41.4	+1.1
	baz=64,SNR=16						
F13A	Darby	64.30	330	⇑P	P	03 16 42.5	+0.9
	baz=64,SNR=8.1						
G12A	Big Creek, Yel	64.33	329	⇑P	P	03 16 42.6	+0.7
	baz=65						
D15A	Lincoln	64.34	332	⇑P	P	03 16 43.3	+1.5
	baz=65,SNR=6.4						
E14A	Clinton	64.34	331	⇑P	P	03 16 42.9	+1.1
	baz=65,SNR=9.8						
B17A	L&G Farms, Che	64.50	334	⇓P	P	03 16 43.4	+0.7
	baz=65						
C16A	Fuhringer Ranc	64.55	333	⇑P	P	03 16 44.2	+1.1
	baz=65,SNR=12						
E13A	Victor	64.69	331	⇑P	P	03 16 45.2	+1.2
	baz=65,SNR=11						
F12A	Elk City	64.74	330	⇓P	P	03 16 45.4	+1.0
	baz=65,SNR=9.7						
D14A	Greenough	64.83	332	⇑P	P	03 16 45.8	+0.8
	baz=65,SNR=6.5						
MSO	Missoula	64.85	331	eP	P	03 16 46.1	+1.0
	9.7nm,0.8s						
MSO				epP	pP	03 17 22.3	+0.8
MSO	Missoula	64.85	331	⇓P	P	03 16 46.5	+1.4
	baz=65,SNR=23						
C15A	Salmond Ranch,	64.92	333	⇑P	P	03 16 47.0	+1.5
	baz=65,SNR=15						
MOD	Modoc	64.94	324	eP	P	03 16 46.9	+1.1
	6.1nm,0.8s						
SLMT	Seeley Lake	64.94	332	eP	P	03 16 46.7	+1.0
A17A	Triple J Farms	64.96	335	⇓P	P	03 16 46.5	+0.8
	baz=65,SNR=13						
B16A	M & M Farms, S	64.99	334	⇑P	P	03 16 46.7	+0.8
	baz=65,SNR=8.7						
BMO	Blue Mountains	65.17	328	eP	P	03 16 47.5	+0.3
	23nm,2.3s						
D13A	Huson	65.29	331	⇑P	P	03 16 48.8	+1.0
	baz=66,SNR=6.0						
B15A	Bradely Ranch,	65.30	333	⇑P	P	03 16 48.7	+0.8
	baz=66						
A16A	West Butte Ran	65.34	334	⇑P	P	03 16 49.1	+0.9
	baz=66,SNR=13						
SWMT	Swartz Lake	65.37	332	eP	P	03 16 49.8	+1.3
C14A	Swan Lake	65.44	332	⇓P	P	03 16 50.1	+1.3
	baz=66						
YBMT	Yellow Bay	65.63	332	eP	P	03 16 51.0	+0.9
	5.6nm,0.6s						
B14A	Marquette Ranc	65.65	333	⇓P	P	03 16 51.2	+0.9
	baz=66,SNR=21						
JTMT	Jette	65.67	332	eP	P	03 16 51.0	+0.6
D12A	Red Ives Fores	65.69	331	⇑P	P	03 16 51.0	+0.5
	baz=66						
C13A	Hot Springs	65.76	331	⇑P	P	03 16 52.3	+1.4
	baz=66,SNR=15						
A15A	Johnson Ranch,	65.86	333	⇓P	P	03 16 51.9	+0.3
	baz=66						
BLMT	Blacktail Moun	65.90	332	eP	P	03 16 53.4	+1.5
BSMT	Bassoo Peak	65.99	331	eP	P	03 16 53.7	+1.2
B13A	Whitefish	66.21	332	⇓P	P	03 16 54.9	+1.2
	baz=66						
C12B	Naegeli Ranch,	66.21	331	⇓P	P	03 16 55.3	+1.5
	baz=66,SNR=9.9						
KHMM	Horse Mountain	66.40	321	eP	P	03 16 56.2	+1.0
	12nm,0.8s						
WALA	Waterton Lakes	66.45	333	eP	P	03 16 55.8	+0.5
	0.4nm,0.8s						
FFC	Flin Flon	66.57	343	eP	P	03 16 55.5	-0.3
A13A	Flathead Natio	66.59	333	⇑P	P	03 16 57.6	+1.4
	baz=67,SNR=18						
C11A	Tepee Creek (N	66.68	331	⇓P	P	03 16 58.0	+1.3
	baz=67,SNR=26						
B12A	Libby	66.80	332	⇓P	P	03 16 58.8	+1.3
	baz=67						
A12A	Yaak River Ran	67.16	332	⇓P	P	03 17 01.2	+1.4
	baz=67,SNR=10						
NEW	Newport	67.40	331	eP	P	03 17 01.7	+0.5
	8.1nm,0.8s						
NEW				epP	pP	03 17 39.2	+1.3
NEW	Newport	67.40	331	⇑P	P	03 17 01.8	+0.6
	baz=68,SNR=10.0						
NLWA	Neilton Lookou	70.31	327	eP	P	03 17 21.1	+1.9
	12nm,0.8s						
LIC	Lamto	70.65	81	eP	P	03 17 21.2	-0.7
	7.6nm,0.4s						
LIC	Lamto	70.65	81	eP	P	03 17 21.2	-0.7
	7.6nm,0.4s						
PGC	Sidney	70.85	328	eP	P	03 17 23.7	+1.3
	0.6nm,1.0s						
DBIC	Dimbokro	70.90	80	eP	P	03 17 23.0	-0.4
	14nm,0.7s						
DBIC				pP	pP	03 17 59.4	-1.1
DBIC	Dimbokro	70.90	80	P	P	03 17 22.8	-0.6
	15nm,0.5s,baz=245,slow=6.7,SNR=44						
DBIC				pP	pP	03 17 59.4	-1.1
	4.4nm,0.8s,baz=203,slow=12,SNR=1.8						
VNA3	Neumayer Olymp	74.54	162	eP	P	03 17 45.0	+1.1
VNA3	Neumayer Olymp	74.54	162	ePcP	PcP	03 17 54.4	-3.2
VNA3	Neumayer Olymp	74.54	162	epP	pP	03 18 20.5	-0.7
VNA3	Neumayer Olymp	74.54	162	ePP	PP	03 20 32.5	+0.1
VNA1	Neumayer--Stat	74.76	162	eP	P	03 17 46.9	+1.8
VNA2	Neumayer--Watz	75.12	162	eP	P	03 17 48.4	+1.2
	baz=287,slow=5.4						
VNA2	Neumayer--Watz	75.12	162	ePcP	PcP	03 17 59.7	-0.4
	baz=287,slow=5.4						
VNA2	Neumayer--Watz	75.12	162	epP	pP	03 18 24.3	-0.3
	baz=287,slow=5.4						
VNA2	Neumayer--Watz	75.12	162	ePP	PP	03 20 36.0	-1.3
	baz=287,slow=5.4						
YKA	Yellowknife Ar	76.72	342	P	P	03 17 55.7	-0.5
YKA				pP	pP	03 18 32.5	-1.4
YKA	Yellowknife Ar	76.72	342	P	P	03 17 55.7	-0.5
	2.5nm,0.6s,baz=140,slow=6.3,SNR=60						
YKA				pP	pP	03 18 32.5	-1.4
	4.1nm,0.8s,baz=143,slow=5.9,SNR=9.2						
SNAA	Sanae	76.75	162	eP	P	03 17 57.4	+0.9
SNAA	Sanae	76.75	162	ePcP	PcP	03 18 09.8	+2.6
SNAA	Sanae	76.75	162	epP	pP	03 18 33.4	-0.6
SNAA	Sanae	76.75	162	eP	P	03 17 56.3	-0.2
	15nm,0.9s						
YKW3	Yellowknife Ar	76.77	342	eP	P	03 17 56.0	-0.6
	0.1nm,1.0s						
YKW3				ePcP	PcP	03 18 07.3	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
YKW3				epP	pP	03 18 34.6	+0.5
EVOP	Sao Brissos	76.90	48	eP	P	03 17 56.1	-1.7
	10.0nm,0.7s						
EVO	Evora	76.98	48	eP	P	03 17 56.1	-2.2
	10.0nm,0.7s						
TOA0	Torodi Ar. Sit	78.47	75	eP	P	03 18 05.6	-1.4
TOA0				epP	pP	03 18 41.9	-2.8
TORD	Torodi Ar. Bea	78.47	75	P	P	03 18 05.3	-1.7
TORD				pP	pP	03 18 43.5	-1.2
TORD	Torodi Ar. Bea	78.47	75	P	P	03 18 05.3	-1.7
	3.0nm,0.4s,baz=262,slow=5.3,SNR=116						
TORD				pP	pP	03 18 43.5	-1.2
	3.8nm,0.8s,baz=284,slow=5.8,SNR=4.1						
ESDC	Sonseca Array	80.33	48	P	P	03 18 17.2	+0.5
ESDC	Sonseca Array	80.33	48	P	P	03 18 17.2	+0.5
	1.9nm,0.8s,baz=256,slow=5.3,SNR=9.6						
SJPF	Ste Jean	83.36	45	eP	P	03 18 32.4	0.0
	42nm,1.1s						
SJPF	Ste Jean	83.36	45	eP	P	03 18 32.4	0.0
	42nm,1.1s						
RES	Resolute Bay	83.45	355	eP	P	03 18 32.3	+0.2
	3.6nm,0.9s						
SUMG	Summit	83.66	10	eP	P	03 18 33.9	+0.1
	14nm,0.9s						
SUMG				epP	pP	03 19 11.9	0.0
SUMG	Summit	83.66	10	i P	P	03 18 33.9	+0.1
	9.2nm,0.9s						
SUMG				i		03 19 11.5	
ETSF	Etsaut	83.76	45	eP	P	03 18 34.5	0.0
	26nm,1.0s						
ETSF	Etsaut	83.76	45	eP	P	03 18 34.5	0.0
	26nm,1.0s						
TAM	Tamanrasset	83.91	66	eP	P	03 18 36.5	+0.7
	3.5nm,0.7s						
TAM				epP	pP	03 19 13.1	-0.8
EPF	Esparros	84.43	45	eP	P	03 18 37.9	0.0
EPF	Esparros	84.43	45	eP	P	03 18 37.9	0.0
MFF	Saint Martin d	85.11	42	eP	P	03 18 40.5	-0.6
	11nm,0.7s						
MFF	Saint Martin d	85.11	42	eP	P	03 18 40.5	-0.6
	11nm,0.7s						
GRR	Gorron	85.18	40	eP	P	03 18 41.1	-0.3
	26nm,0.8s						
GRR	Gorron	85.18	40	eP	P	03 18 41.1	-0.3
	26nm,0.8s						
LFF	La Frestale	85.24	44	eP	P	03 18 41.8	0.0
	42nm,1.0s						
LFF	La Frestale	85.24	44	eP	P	03 18 41.8	0.0
	42nm,1.0s						
LDF	La Druitiere	85.71	40	eP	P	03 18 43.2	-0.8
LDF	La Druitiere	85.71	40	eP	P	03 18 43.2	-0.8
CAF	Calviac	86.14	44	eP	P	03 18 45.8	-0.5
	7.5nm,0.6s						
CAF	Calviac	86.14	44	eP	P	03 18 45.8	-0.5
	7.5nm,0.6s						
INK	Inuvik	86.46	341	P	P	03 18 47.3	0.0
INK				pP	pP	03 19 25.6	0.0
INK	Inuvik	86.46	341	P	P	03 18 47.3	0.0
	4.7nm,0.8s,baz=103,slow=3.6,SNR=26						
INK				pP	pP	03 19 25.6	0.0
	6.2nm,0.8s,baz=119,slow=5.2,SNR=9.5						
EGAK	Eagle	87.50	337	eP	P	03 18 52.4	+0.1
	8.3nm,1.0s						
SMF	Signal de Mont	87.77	42	eP	P	03 18 52.8	-1.3
SMF	Signal de Mont	87.77	42	eP	P	03 18 52.8	-1.3
ORIF	Oris-en-Rattie	88.77	44	eP	P	03 18 58.7	-0.3
	12nm,0.6s						
ORIF	Oris-en-Rattie	88.77	44	eP	P	03 18 58.7	-0.3
	12nm,0.6s						
LMR	La Mourre	88.88	46	eP	P	03 18 59.2	-0.2
	58nm,1.2s						
LMR	La Mourre	88.88	46	eP	P	03 18 59.2	-0.2
	58nm,1.3s						
VNDA	Vanda	89.16	190	eP	P	03 19 01.3	+1.2
	3.9nm,1.0s						
VNDA	Vanda	89.16	190	P	P	03 19 01.1	+1.0
	1.0nm,0.9s,baz=132,slow=2.2,SNR=9.0						
GIVF	Givet	89.22	39	eP	P	03 19 00.0	-0.8
	15nm,0.7s						
GIVF	Givet	89.22	39	eP	P	03 19 00.0	-0.8
	15nm,0.7s						
TSUM	Tsumeb	89.33	109	eP	P	03 19 02.2	0.0
	4.1nm,0.8s						
SML	Sawmill	89.45	333	eP	P	03 19 02.0	+0.3
	5.1nm,0.7s						
SML				epP	pP	03 19 41.5	+1.2
LPL	La Plagne	89.48	44	eP	P	03 19 02.2	-0.3
	8.8nm,0.7s						
LPL	La Plagne	89.48	44	eP	P	03 19 02.2	-0.3
	8.8nm,0.6s						
LPG	La Plagne	89.49	44	eP	P	03 19 02.3	-0.3
	16nm,0.9s						
LPG	La Plagne	89.49	44	eP	P	03 19 02.3	-0.3
	16nm,0.9s						
KEST	Kesra	89.59	54	P	P	03 19 04.5	+1.5
KEST	Kesra	89.59	54	P	P	03 19 04.5	+1.5
	1.7nm,0.7s,baz=240,slow=8.7,SNR=8.0						
ILAR	Eielson Array	89.78	336	P	P	03 19 03.0	-0.1
ILAR				pP	pP	03 19 41.6	0.0
ILAR				PP	PP	03 22 36.4	-1.1
ILAR	Eielson Array	89.78	336	P	P	03 19 03.0	-0.1
	2.6nm,0.9s,baz=97,slow=5.9,SNR=6.7						
ILAR				pP	pP	03 19 41.7	0.0
	4.2nm,0.9s,baz=126,slow=3.3,SNR=5.3						
ILAR				PP	PP	03 22 36.4	-1.1
	0.5nm,0.8s,baz=104,slow=7.1,SNR=4.1						
COLA	College	90.20	336	eP	P	03 19 05.2	+0.2
	12nm,0.9s						
DAG	Danmarks Havn	90.32	11	i P	P	03 19 04.6	-0.8
	2.5nm,0.8s						
DAG				i		03 19 42.9	
KDAK	Kodiak Island	90.40	328	P	P	03 19 05.8	-0.3
KDAK	Kodiak Island	90.40	328	P	P	03 19 05.8	-0.3
	8.0nm,0.7s,baz=204,slow=5.2,SNR=7.0						
CDF	Champ du Feu	90.43	41	eP	P	03 19 05.6	-1.0
CDF	Champ du Feu	90.43	41	eP	P	03 19 05.6	-1.0
SYO	Syowa Base	90.98	161	⇓eP	P	03 19 08.0	-0.7
NB2	NORSAR Subarra	94.80	29	P	P	03 19 26.9	+0.5
	comp=Z,1.2nm,0.7s,baz=262,slow=4.6						
NOA	NORSAR Array B	94.80	29	P	P	03 19 26.8	+0.4
NOA	NORSAR Array B	94.80	29	P	P	03 19 26.8	+0.4
	comp=Z,1.4nm,0.8s,baz=259,slow=4.5,SNR=4.7						
AKTO	Aktyubinsk	122.23	34	PKP	PKPdf	03 24 59.9	+0.8
AKTO				pPKP	pPKPdf	03 25 39.0	-0.5
AKTO	Aktyubinsk	122.23	34	PKP	PKPdf	03 24 59.9	+0.8
	comp=Z,1.3nm,0.6s,baz=292,slow=10,SNR=5.7						
AKTO				pPKP	pPKPdf	03 25 39.0	-0.5
	comp=Z,1.6nm,0.7s,baz=12,slow=3.2,SNR=3.9						
ABKAR	Akbulak array	123.91	34	ePKPdf	PKPdf	03 25 03.2	+0.9
ABKAR				epPKPdf	pPKPdf	03 25 44.0	+1.3
BRVK	Borovoye	126.71	26	ePKPdf	PKPdf	03 25 08.3	+0.7
BVAR	Borovoye Array	126.78	26	PKP	PKPdf	03 25 07.8	+0.1
BVAR				pPKP	pPKPdf	03 25 49.5	+1.4
BVAR	Borovoye Array	126.78	26	PKP	PKPdf	03 25 07.8	+0.1
	comp=Z,1.5nm,0.7s,baz=270,slow=2.9,SNR=8.3						
BVAR				pPKP	pPKPdf	03 25 49.5	+1.4
	comp=Z,2.4nm,0.8s,baz=321,slow=2.0,SNR=6.3						
STKA	Stephens Creek	127.53	219	PKP	PKPdf	03 25 09.8	0.0
STKA				pPKP	pPKPdf	03 25 51.1	+0.9
STKA	Stephens Creek	127.53	219	PKP	PKPdf	03 25 09.8	0.0
	comp=Z,5.9nm,0.6s,baz=106,slow=1.9,SNR=26						
STKA				pPKP	pPKPdf	03 25 51.1	+0.9
	comp=Z,2.6nm,0.7s,baz=80,slow=6.1,SNR=3.2						
ZALV	Zalesovo Beam	131.18	16	PKP	PKPdf	03 25 16.5	+0.5
ZALV				pPKP	pPKPdf	03 25 57.1	+0.7
ZALV	Zalesovo Beam	131.18	16	PKP	PKPdf	03 25 16.5	+0.5
	comp=Z,6.4nm,0.8s,baz=266,slow=2.1,SNR=26						
ZALV				pPKP	pPKPdf	03 25 57.1	+0.7
	comp=Z,7.8nm,0.7s,baz=285,slow=1.6,SNR=12						
CTAO	Charters Tower	131.21	235	ePKPdf	PKPdf	03 25 17.0	-0.1
KURK	Kurchatov	131.88	23	PKP	PKPdf	03 25 17.9	+0.4
KURK				ePKPdf	PKiKP	03 25 18.2	-0.3
KURK				pPKP	pPKPdf	03 25 58.0	+0.1
KURK				epPKPdf	pPKPdf	03 25 59.1	+1.3
KURBB	Kurchatov Arra	131.91	23	PKP	PKPdf	03 25 17.9	+0.3
	comp=Z,1.2nm,0.5s,baz=313,slow=2.6,SNR=24						
KURBB				pPKP	pPKPdf	03 25 57.9	0.0
	comp=Z,4.1nm,0.8s,baz=316,slow=2.6,SNR=16						
AAK	Ala-Archa	135.97	33	PKP	PKPdf	03 25 27.2	+1.6
AAK				pPKP	pPKPdf	03 26 06.8	+0.8
AAK	Ala-Archa	135.97	33	PKP	PKPdf	03 25 27.2	+1.6
	comp=Z,1.1nm,0.7s,baz=202,slow=6.7,SNR=6.2						
AAK				pPKP	pPKPdf	03 26 06.8	+0.8
	comp=Z,2.6nm,0.8s,baz=122,slow=3.4,SNR=4.8						
MK31	Makanchi Array	136.48	23	ePKPdf	PKPdf	03 25 26.4	+0.1
MK31				epPKPdf	pPKPdf	03 26 07.7	+1.0
MKAR	Makanchi Array	136.48	23	PKP	PKPdf	03 25 26.6	+0.3
MKAR				pPKP	pPKPdf	03 26 07.3	+0.6
MKAR	Makanchi Array	136.48	23	PKP	PKPdf	03 25 26.6	+0.3
	comp=Z,1.6nm,0.7s,baz=338,slow=1.6,SNR=17						
MKAR				pPKP	pPKPdf	03 26 07.3	+0.6
	comp=Z,2.5nm,0.7s,baz=348,slow=1.3,SNR=13						
COEN	Coen	136.78	240	ePKPdf	PKPdf	03 25 27.9	+0.3
AS31	Alice Springs	138.10	221	ePKPdf	PKPdf	03 25 30.0	0.0
ASAR	Alice Springs	138.10	221	PKPpre	PKPpre	03 25 22.6	
ASAR				PKP	PKPdf	03 25 30.1	+0.2
ASAR				pPKP	pPKPdf	03 26 11.5	+1.1
ASAR	Alice Springs	138.10	221	PKhKP	PKPpre	03 25 22.7	
	comp=Z,0.9nm,0.6s,baz=124,slow=1.8,SNR=7.3						
ASAR				PKP	PKPdf	03 25 30.1	+0.2
	comp=Z,3.9nm,0.6s,baz=121,slow=2.1,SNR=24						
ASAR				pPKP	pPKPdf	03 26 11.5	+1.1
	comp=Z,1.4nm,0.7s,baz=117,slow=2.1,SNR=3.1						
MJAR	Matsushiro Arr	138.85	319	PKPpre	PKPpre	03 25 23.6	
MJAR				PKP	PKPdf	03 25 31.1	+0.1
MJAR	Matsushiro Arr	138.85	319	PKhKP	PKPpre	03 25 23.7	
	comp=Z,1.2nm,0.9s,baz=140,slow=1.3,SNR=3.3						
MJAR				PKP	PKPdf	03 25 31.1	+0.1
	comp=Z,1.6nm,0.8s,baz=203,slow=0.9,SNR=5.1						
KSH	Kashi	138.89	35	ePKP	PKPdf	03 25 28.1	-3.0
KSH				sPKP		03 26 27.6	
KSH				PP	PP	03 28 26.2	+2.2
KSH				PKS	PKSdf	03 29 01.6	-5.7
KSH				SKS	SKSdf	03 32 19.8	-7.8
KSH				LR	LR		
	comp=N,47nm,3.5s						
KSH				LR	LR		
	comp=E,49nm,3.9s						
KSH				LR	LR		
	comp=Z,280nm,6.2s						
ULN	Ulaanbaatar	140.21	358	ePKPdf	PKPdf	03 25 32.5	-0.8
SONM	Songino Array	140.25	359	PKPpre	PKPpre	03 25 26.8	
SONM				PKP	PKPdf	03 25 33.7	+0.4
SONM				pPKP	pPKPdf	03 26 14.6	+0.8
SONM	Songino Array	140.25	359	PKhKP	PKPpre	03 25 26.8	
	comp=Z,0.2nm,0.5s,baz=101,slow=28,SNR=3.9						
SONM				PKP	PKPdf	03 25 33.7	+0.4
	comp=Z,1.0nm,0.6s,baz=305,slow=1.6,SNR=6.8						
SONM				pPKP	pPKPdf	03 26 14.6	+0.8
	comp=Z,1.0nm,0.6s,baz=17,slow=1.4,SNR=3.6						
CN2	Changchun	140.28	337	ePKP	PKPdf	03 25 31.7	-1.6
WRAB	Tennant Creek	140.36	225	ePKPpre	PKPpre	03 25 28.0	
WRAB				ePKPdf	PKPdf	03 25 34.6	+0.4
WRA	Warramunga Arr	140.36	225	PKPpre	PKPpre	03 25 26.3	
WRA				PKP	PKPdf	03 25 34.4	+0.2
WRA				pPKP	pPKPdf	03 26 15.0	+0.4
WRA	Warramunga Arr	140.36	225	PKhKP	PKPpre	03 25 26.3	
	comp=Z,1.4nm,0.4s,baz=132,slow=2.6,SNR=17						
WRA				PKP	PKPdf	03 25 34.4	+0.2
	comp=Z,5.9nm,0.5s,baz=132,slow=1.7,SNR=24						
WRA				pPKP	pPKPdf	03 26 15.0	+0.4
	comp=Z,3.4nm,0.7s,baz=135,slow=1.7,SNR=5.0						
KSRS	Korea Array	144.31	329	PKP	PKPab	03 25 38.5	-0.4
	comp=Z,3.8nm,0.9s,baz=48,slow=3.1,SNR=15						
KSRS				pPKP	pPKPdf	03 26 22.4	+1.3
	comp=Z,2.3nm,0.8s,baz=39,slow=1.9,SNR=3.9						
KSAR	Wonju Array Be	144.34	329	PKP	PKPab	03 25 38.5	-0.5
KSAR				pPKP	pPKPdf	03 26 22.4	+1.3
JNU	Nakatsue	145.70	320	PKPbc	PKPdf	03 25 42.5	-0.8
JNU	Nakatsue	145.70	320	PKPbc	PKPdf	03 25 42.5	-0.8
	comp=Z,11nm,0.8s,baz=100,slow=9.7,SNR=8.3						
HHC	Hu-ho-hao-te	146.81	352	ePKPbc	PKPdf	03 25 41.0	-4.0
HHC				pPKP	pPKPdf	03 26 23.3	-2.1
HHC				sPKP		03 26 40.3	
HHC				PP	PP	03 29 12.0	+1.2
HHC				PKS	PKSdf	03 29 14.2	-6.1
HHC				SKS	SKSdf	03 32 31.2	-8.6
HHC				SKKS	SKKSac	03 35 44.6	-4.5
HHC				AMB	AMB		
	comp=Z,200nm,8.8s						
FITZ	Fitzroy Crossi	147.38	217	ePKPdf	PKPdf	03 25 47.0	+0.6
FITZ				ePKPbc	PKPbc	03 25 49.5	+0.4
FITZ				epPKPdf	pPKPdf	03 26 30.2	+3.3
MBWA	Marble Bar	147.89	205	ePKPbc	PKPbc	03 25 50.2	-0.1
GTA	Gaotai	148.26	8	⇓PKPbc	PKPbc	03 25 51.3	+0.4
GTA				PKPab	PKPab	03 26 00.3	+6.0
LZH	Lanzhou	151.95	3	ePKPbc	PKPdf	03 25 51.6	-1.8
CD2	Chengdu	157.10	4	PKP	PKPdf	03 25 58.6	-1.9
GYA	Guiyang	161.56	357	ePKP	PKPdf	03 26 04.8	-1.1
GYA				pPKP	pPKPdf	03 26 44.0	-2.5
GYA				sPKP		03 27 01.5	
GYA				PKS	PKSdf	03 29 35.6	-3.7
GYA				PP	PP	03 30 35.4	+2.0
GYA				AMB	AMB		
	comp=Z,80nm,8.0s						
KMI	Kunming	162.72	9	PKP	PKPdf	03 26 04.9	-2.3
CMAR	Chiang Mai Arr	167.74	31	PKP	PKPdf	03 26 11.8	+0.5
CMAR				pPKP	pPKPdf	03 26 52.9	+0.9
CMAR				PKPab	PKPab	03 27 19.1	+0.7
CMAR				pPKPab	pPKPab	03 27 58.6	+1.4
CMAR	Chiang Mai Arr	167.74	31	PKP	PKPdf	03 26 11.8	+0.5
	comp=Z,1.5nm,0.7s,baz=278,slow=2.0,SNR=7.3						
CMAR				pPKP	pPKPdf	03 26 52.9	+0.9
	comp=Z,0.7nm,0.4s,baz=282,slow=1.8,SNR=1.9						
CMAR				PKPab	PKPab	03 27 19.1	+0.7
	comp=Z,2.1nm,0.6s,baz=316,slow=5.6,SNR=8.7						
CMAR				pPKPab	pPKPab	03 27 58.6	+1.4
	comp=Z,0.7nm,0.3s,baz=325,slow=6.5,SNR=1.8						

IDC 08 03:27:40.0±2.5**, 20°.28S×68°.43W, h133**km±22km**, mb3.1**/3**, mb1 3.3**/7**, mb1mx3.2**/20**, mbtmp3.1**/7**, Error ellipse: s-maj=30.1km s-min=22.6km az=86.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.98	4	P	Pn	03 28 40.0	-0.4
	1.6nm,0.3s,baz=188,slow=6.3,SNR=34						
SIV	San Ignacio	8.19	60	P	Pn	03 29 35.7	-0.4
	0.5nm,0.3s,baz=247,slow=14,SNR=7.3						
CFAA	Coronel Fontan	11.28	179	P	Pn	03 30 09.7	-7.8
	0.0nm,0.3s,baz=351,slow=13,SNR=3.1						
CFAA				S	Sn	03 32 09.7	-12
	0.0nm,0.3s,baz=230,slow=18,SNR=3.6						
CPUP	Villa Florida	11.84	123	P	Pn	03 30 24.8	+0.1
	0.6nm,0.3s,baz=294,slow=15,SNR=10						
BDFB	Brasilia	19.95	80	P	P	03 32 03.2	+1.2
	0.3nm,0.3s,baz=258,slow=9.3,SNR=3.7						
PLCA	Paso Flores	20.47	185	P	P	03 32 07.3	-0.1
	0.7nm,0.3s,baz=0.0,slow=12,SNR=7.0						
TORD	Torodi Ar. Bea	76.52	70	P	P	03 39 15.6	-0.4
	0.3nm,0.4s,baz=247,slow=5.3,SNR=20						
YKA	Yellowknife Ar	90.19	340	P	P	03 40 25.2	+0.4
	0.1nm,0.5s,baz=139,slow=4.3,SNR=3.1						
YKA				pP	pP	03 40 55.0	-3.8
	0.3nm,0.7s,baz=133,slow=5.2,SNR=5.7						

IDC 08 03:28:58.8±4.2**, 15°.60S×71°.54W, h142**km±12km**, mb3.8**/2**, mb1 3.6**/4**, mb1mx3.2**/21**, mbtmp3.6**/4**, Error ellipse: s-maj=156.5km s-min=11.8km az=23.0, Southern Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.35	102	P	Pn	03 29 50.6	-0.6
	3.4nm,0.3s,baz=291,slow=8.0,SNR=28						
LPAZ				S	Sn	03 30 31.9	+0.2
	1.2nm,0.3s,baz=152,slow=23,SNR=10						
NNA	Nana	6.28	304	P	Pn	03 30 30.2	+0.9
	3.9nm,0.3s,baz=141,slow=12,SNR=9.7						
NNA				S	Sn	03 31 39.8	-0.2
	3.2nm,0.3s,baz=220,slow=19,SNR=5.8						
DBIC	Dimbokro	69.63	77	P	P	03 39 52.8	-0.5
	1.5nm,0.6s,baz=243,slow=6.0,SNR=4.9						
TORD	Torodi Ar. Bea	77.86	73	P	P	03 40 41.6	+0.4
	1.4nm,0.7s,baz=251,slow=4.6,SNR=16						

IDC 08 03:44:09.2±0.9**, 9°.66S×156°.09E, h0**km**, mb4.0**/9**, mb1 4.2**/9**, mb1mx4.0**/19**, mbtmp3.9**/9**, MS3.4**/8**, Ms1 3.4**/8**, ms1mx3.1**/28**, Error ellipse: s-maj=38.7km s-min=20.3km az=123.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	14.06	221	LR	LR	03 52 03.1	
	comp=Z,87nm,20.0s,baz=50,slow=34						
WRA	Warramunga Arr	23.36	242	P	P	03 49 19.8	+0.3
	5.9nm,0.8s,baz=66,slow=9.7,SNR=22						
ASAR	Alice Springs	25.36	234	P	P	03 49 38.0	-0.2
	2.7nm,0.9s,baz=64,slow=10.0,SNR=16						
GUMO	Guam	25.64	334	LR	LR	03 57 46.9	
	comp=Z,101nm,18.8s,baz=91,slow=32						
STKA	Stephens Creek	25.88	209	P	P	03 49 43.6	+0.8
	3.0nm,0.8s,baz=30,slow=13,SNR=8.5						
STKA				LR	LR	03 59 46.6	
	comp=Z,103nm,20.0s,baz=25,slow=36						
FITZ	Fitzroy Crossi	30.69	251	LR	LR	04 03 05.2	
	comp=Z,34nm,21.3s,baz=271,slow=37						
KSRS	Korea Array	53.78	332	LR	LR	04 13 16.7	
	comp=Z,20nm,20.0s,baz=134,slow=32						
PETK	Petropavlovsk-	62.53	1	LR	LR	04 16 44.7	
	comp=Z,48nm,20.9s,baz=347,slow=31						
SONM	Songino Array	72.15	327	P	P	03 55 35.6	-0.2
	0.4nm,0.6s,baz=142,slow=4.9,SNR=5.2						
QSPA	South Pole Qui	80.33	180	P	P	03 56 21.3	-0.8
	3.0nm,1.1s,baz=335,slow=6.3,SNR=3.9						
ILAR	Eielson Array	85.44	21	P	P	03 56 47.9	-0.5
	0.8nm,1.0s,baz=266,slow=4.0,SNR=6.2						
MKAR	Makanchi Array	86.11	319	P	P	03 56 51.9	-0.3
	0.4nm,0.8s,baz=99,slow=6.6,SNR=4.0						
AAK	Ala-Archa	90.35	313	LR	LR	04 36 07.5	
	comp=Z,15nm,18.1s,baz=81,slow=34						
NVAR	Mina Array Bea	92.51	52	P	P	03 57 23.2	+0.4
	0.6nm,0.8s,baz=258,slow=4.5,SNR=2.8						
BVAR	Borovoye Array	95.06	323	LR	LR	04 37 40.7	
	comp=Z,26nm,18.9s,baz=90,slow=34						
YKA	Yellowknife Ar	98.17	28	P	Pdif	03 57 48.8	+0.9
	0.2nm,0.9s,baz=258,slow=5.0,SNR=3.2						

*CSEM **08** 03:59:31.0±0.5, 37°.78N×17°.14W, h10km, ML4.1/6, Error ellipse: s-maj=11.8km s-min=3.1km az=138.0*
*MDD **08** 03:59:34.5±2.2, 37°.55N×17°.22W, h0km, mb3.9/1, Error ellipse: s-maj=28.3km s-min=10.0km az=137.0, PRXIMO*
*INMG **08** 03:59:39.5±1.2, 37°.59N×17°.42W, h10km, ML2.9, Error ellipse: s-maj=10.3km s-min=3.9km az=128.0*
ISC 08 03:59:30.6±1.8**, 37°.79N**±0°.07×**17°.2W**±0°.1**, h10**km**, n92, σ1**s**.03**/92**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMPST	Porto Santo, M	4.75	172	ePn	Pn	04 00 43.1	+0.8
PMPST				eSn	Sn	04 01 27.9	-10
PMPST	Porto Santo, M	4.75	172	ePn	Pn	04 00 43.1	+0.8
PMPS	Porto Santo	4.77	172	ePn	Pn	04 00 43.2	+0.6
PMPS				eSn	Sn	04 01 29.3	-8.7
PMPS	Porto Santo	4.77	172	P	Pn	04 00 43.1	+0.5
PMPS				S	Sn	04 01 27.9	-10
PMPS	Porto Santo	4.77	172	ePn	Pn	04 00 43.2	+0.6
PMAR	Madeira	5.06	178	ePn	Pn	04 00 46.7	0.0
PMAR				eSn	Sn	04 01 34.0	-12
PMAR				A	A	04 01 38.0	
	19nm,0.2s						
PMAR	Madeira	5.06	178	P	Pn	04 00 46.7	0.0
PMAR				S	Sn	04 01 34.0	-12
	9.6nm,0.2s						
PMAR	Madeira	5.06	178	P	Pn	04 00 46.7	0.0
FUL	Funchal	5.14	177	ePn	Pn	04 00 47.4	-0.2
FUL				eSn	Sn	04 01 35.3	-12
FUL				A	A	04 01 36.9	
	17nm,0.1s						
FUL	Funchal	5.14	177	P	Pn	04 00 47.4	-0.2
FUL				S	Sn	04 01 35.3	-12
	8.4nm,0.1s						
PMAFR	Mafra	6.30	77	eSn	Sn	04 02 17.5	+1.9
PMAFR				A	A	04 02 22.0	
	28nm,0.2s						
PMAFR	Mafra	6.30	77	eSn	Sn	04 02 17.5	+1.9
	28nm,0.2s						
PFVI	Vila Bisbo	6.66	93	ePn	Pn	04 01 13.8	+5.2
PFVI				eSn	Sn	04 02 24.0	-0.6
PTEO	Sao Teotonio	6.70	90	ePn	Pn	04 01 14.7	+5.7
PTEO				eSn	Sn	04 02 25.0	-0.4
PTEO				A	A	04 02 30.1	
	9.2nm,0.5s						
PTEO	Sao Teotonio	6.70	90	P	Pn	04 01 14.7	+5.7
PTEO				S	Sn	04 02 25.0	-0.4
	4.6nm,0.5s						
MORF	Marmelete	6.78	92	eSn	Sn	04 02 27.6	+0.1
MORF				A	A	04 02 32.3	
	6.2nm,0.4s						
MORF	Marmelete	6.78	92	S	Sn	04 02 27.6	+0.1
	6.2nm,0.4s						
MORF	Marmelete	6.78	92	S	Sn	04 02 27.6	+0.1
	6.2nm,0.4s						
PNCL	Nicolau / Gran	6.83	85	ePn	Pn	04 01 16.1	+5.3
PNCL				eSn	Sn	04 02 29.4	+0.8
PNCL				A	A	04 02 31.4	
	8.6nm,0.3s						
ALMR	Almeirim	6.87	76	eS	Sn	04 02 32.2	+2.5
ALMR	Almeirim	6.87	76	S	Sn	04 02 32.2	+2.5
ALMR	Almeirim	6.87	76	S	Sn	04 02 32.2	+2.5
MESJ	Messejana	7.08	87	eS	Sn	04 02 34.8	0.0
PTOM	Tomar	7.08	72	eSn	Sn	04 02 36.9	+2.0
PTOM				A	A	04 02 39.8	
	11nm,0.2s						
PTOM	Tomar	7.08	72	S	Sn	04 02 36.9	+2.0
	5.6nm,0.2s						
PTOM	Tomar	7.08	72	S	Sn	04 02 36.9	+2.0
	5.6nm,0.2s						
PMTG	Montargil	7.13	77	eSn	Sn	04 02 37.4	+1.4
PMTG				A	A	04 02 40.3	
	5.2nm,0.3s						
PMTG	Montargil	7.13	77	eSn	Sn	04 02 37.4	+1.4
	5.2nm,0.3s						
PCVE	Castro Verde	7.24	88	ePn	Pn	04 01 22.5	+6.1
PCVE				eSn	Sn	04 02 38.2	-0.4
PCVE				A	A	04 02 43.4	
	2.9nm,0.2s						
PCVE	Castro Verde	7.24	88	P	Pn	04 01 22.5	+6.1
PCVE				S	Sn	04 02 38.2	-0.4
	2.9nm,0.2s						
EVO	Evora	7.25	81	eSn	Sn	04 02 39.8	+0.9
EVO	Evora	7.25	81	S	Sn	04 02 39.8	+0.9
EVO	Evora	7.25	81	S	Sn	04 02 39.8	+0.9
PBEJ	Beja	7.35	85	eSn	Sn	04 02 41.3	-0.3
PBEJ				A	A	04 02 46.4	
	4.8nm,0.2s						
PBEJ	Beja	7.35	85	S	Sn	04 02 41.3	-0.3
	2.4nm,0.2s						
PBEJ	Beja	7.35	85	S	Sn	04 02 41.3	-0.3
	2.4nm,0.2s						
PBDV	Barranco-do-Ve	7.36	91	ePn	Pn	04 01 23.3	+5.2
PBDV				eSn	Sn	04 02 43.1	+1.4
PBDV				A	A	04 02 50.1	
	3.2nm,0.3s						
PBDV	Barranco-do-Ve	7.36	91	P	Pn	04 01 23.3	+5.2
PBDV				S	Sn	04 02 43.1	+1.4
	3.2nm,0.3s						
PVAQ	Vaqueiros	7.51	90	ePn	Pn	04 01 26.4	+6.2
PVAQ				eSn	Sn	04 02 44.3	-1.1
PVAQ				A	A	04 02 49.9	
	3.5nm,0.5s						
PVAQ	Vaqueiros	7.51	90	P	Pn	04 01 26.4	+6.2
PVAQ				S	Sn	04 02 44.3	-1.1
	3.5nm,0.5s						
PESTR	Estremoz	7.60	79	eSn	Sn	04 02 48.2	+0.5
PESTR				A	A	04 02 51.7	
	3.9nm,0.4s						
PESTR	Estremoz	7.60	79	S	Sn	04 02 48.2	+0.5
	3.9nm,0.4s						
PESTR	Estremoz	7.60	79	S	Sn	04 02 48.2	+0.5
	3.9nm,0.4s						
EGRO	El Granado	7.68	89	S	Sn	04 02 49.4	-0.2
	3.0nm,0.3s,SNR=7.9						
EGRO	El Granado	7.68	89	S	Sn	04 02 49.4	-0.2
	3.0nm,0.3s,SNR=7.9						
PVIS	Viseu	7.76	65	eSn	Sn	04 02 50.9	-0.7
PVIS	Viseu	7.76	65	S	Sn	04 02 50.9	-0.7
PVIS	Viseu	7.76	65	S	Sn	04 02 50.9	-0.7
EZAM	Zamans	7.82	54	S	Sn	04 02 53.9	+0.8
	3.3nm,0.3s,SNR=7.9						
EZAM	Zamans	7.82	54	S	Sn	04 02 53.9	+0.8
	3.3nm,0.3s,SNR=7.9						
PMRV	Marv??o	7.82	75	ePn	Pn	04 01 30.0	+5.5
PMRV				eSn	Sn	04 02 53.5	+0.4
PMRV				A	A	04 02 56.5	
	5.1nm,0.2s						
PMRV	Marv??o	7.82	75	P	Pn	04 01 30.0	+5.5
PMRV				S	Sn	04 02 53.5	+0.4
	5.1nm,0.2s						
PCBR	Castelo Branco	7.83	72	eSn	Sn	04 02 53.6	+0.3
PCBR				A	A	04 02 59.5	

	3.9nm,0.3s						
PCBR	**Castelo Branco**	**7.83**	**72**	S	**Sn**	**04 02 53.6**	**+0.3**
	1.9nm,0.3s						
PCBR	**Castelo Branco**	**7.83**	**72**	S	**Sn**	**04 02 53.6**	**+0.3**
	1.9nm,0.3s						
MTE	**Manteigas**	**7.92**	**68**	*e*Sn	**Sn**	**04 02 56.6**	**+1.0**
MTE				A	A	04 03 03.7	
	6.1nm,0.1s						
MTE	**Manteigas**	**7.92**	**68**	S	**Sn**	**04 02 56.6**	**+1.0**
	3.1nm,0.1s						
MTE	**Manteigas**	**7.92**	**68**	S	**Sn**	**04 02 56.6**	**+1.0**
	3.1nm,0.1s						
PBAR	**Barrancos**	**8.01**	**84**	*e*Sn	**Sn**	**04 02 57.2**	**-0.4**
PBAR				A	A	04 03 03.5	
	5.2nm,0.5s						
PBAR	**Barrancos**	**8.01**	**84**	S	**Sn**	**04 02 57.2**	**-0.4**
	5.2nm,0.5s						
PBAR	**Barrancos**	**8.01**	**84**	S	**Sn**	**04 02 57.2**	**-0.4**
	5.2nm,0.5s						
PGAV	**Gavieira, Arco**	**8.01**	**56**	*e*Pn	Pn	04 01 33.1	+6.0
PGAV				*e*Sn	**Sn**	**04 02 58.2**	**+0.5**
PGAV				A	A	04 03 02.4	
	5.8nm,0.3s						
PCAB	**Cabril**	**8.05**	**58**	*e*Pn	Pn	04 01 33.9	+6.3
PCAB				*e*Sn	**Sn**	**04 02 59.2**	**+0.5**
PCAB				A	A	04 03 03.8	
	4.5nm,0.2s						
PCAB	**Cabril**	**8.05**	**58**	P	Pn	04 01 33.9	+6.3
PCAB				S	**Sn**	**04 02 59.2**	**+0.5**
	2.2nm,0.2s						
EMAZ	**Mazaricos**	**8.10**	**48**	S	**Sn**	**04 02 58.8**	**-0.9**
	5.7nm,0.4s,SNR=6.3						
EMIN	**Mina Concepcio**	**8.31**	**87**	P	Pn	04 01 36.8	+5.6
	0.2nm,0.4s,SNR=7.9						
EMIN				S	**Sn**	**04 03 04.1**	**-0.9**
	1.8nm,0.3s,SNR=8.1						
STS	**Santiago**	**8.31**	**50**	S	**Sn**	**04 03 04.6**	**-0.5**
	3.2nm,0.4s,SNR=7.9						
MVO	**Moncorvo**	**8.53**	**64**	*e*Sn	**Sn**	**04 03 10.3**	**-0.2**
MVO				A	A	04 03 14.2	
	4.6nm,0.3s						
MVO	**Moncorvo**	**8.53**	**64**	*e*Sn	**Sn**	**04 03 10.3**	**-0.2**
	4.6nm,0.3s						
EPLA	**Plasencia**	**8.93**	**72**	S	**Sn**	**04 03 19.6**	**-0.8**
	6.0nm,0.6s,SNR=5.8						
EPLA	**Plasencia**	**8.93**	**72**	S	**Sn**	**04 03 19.6**	**-0.8**
	6.0nm,0.6s,SNR=5.8						
PBRG	**Braganca**	**8.96**	**60**	*e*Sn	**Sn**	**04 03 21.4**	**+0.2**
PBRG	**Braganca**	**8.96**	**60**	S	**Sn**	**04 03 21.4**	**+0.2**
PBRG	**Braganca**	**8.96**	**60**	S	**Sn**	**04 03 21.4**	**+0.2**
ECAL	**Calabor**	**9.02**	**59**	P	Pn	04 01 46.2	+5.2
	1.4nm,0.5s,SNR=7.9						
ECAL				S	**Sn**	**04 03 21.9**	**-0.8**
	6.6nm,0.3s,SNR=7.9						
ESPR	**Espera**	**9.05**	**92**	S	**Sn**	**04 03 23.7**	**+0.4**
	4.1nm,0.3s,SNR=7.9						
ESPR	**Espera**	**9.05**	**92**	S	**Sn**	**04 03 23.7**	**+0.4**
	4.1nm,0.3s,SNR=7.9						
EPON	**Pontenova**	**9.41**	**51**	S	**Sn**	**04 03 30.3**	**-1.8**
	14nm,0.8s,SNR=7.9						
ESDC	**Sonseca Array**	**10.48**	**76**	S	**Sn**	**04 03 57.3**	**-1.2**
	1.4nm,0.3s,baz=264,slow=23,SNR=4.4						
ESDC	**Sonseca Array**	**10.48**	**76**	S	**Sn**	**04 03 57.3**	**-1.2**
	1.4nm,0.3s,baz=264,slow=23,SNR=4.4						
GUD	**Guadarrama**	**10.49**	**70**	S	**Sn**	**04 03 57.8**	**-0.9**
	2.9nm,0.5s,SNR=7.9						
GUD	**Guadarrama**	**10.49**	**70**	S	**Sn**	**04 03 57.8**	**-0.9**
	2.9nm,0.5s,SNR=7.9						
EARI	**Arriondas**	**10.63**	**55**	S	**Sn**	**04 04 01.5**	**-0.4**
	11nm,1.2s,SNR=7.9						
EARI	**Arriondas**	**10.63**	**55**	S	**Sn**	**04 04 01.5**	**-0.4**
	11nm,1.2s,SNR=7.9						
EQES	**Quesada**	**11.15**	**86**	S	**Sn**	**04 04 13.6**	**-1.4**
	0.8nm,0.5s,SNR=7.9						
EQES	**Quesada**	**11.15**	**86**	S	**Sn**	**04 04 13.6**	**-1.4**
	0.8nm,0.5s,SNR=7.9						
EHUE	**Huescar**	**11.53**	**85**	S	**Sn**	**04 04 22.2**	**-2.0**
	1.2nm,0.7s,SNR=7.9						
EHUE	**Huescar**	**11.53**	**85**	S	**Sn**	**04 04 22.2**	**-2.0**
	1.2nm,0.7s,SNR=7.9						
EVIA	**Vianos**	**11.57**	**81**	S	**Sn**	**04 04 23.6**	**-1.5**
	2.2nm,0.3s,SNR=7.9						
EVIA	**Vianos**	**11.57**	**81**	S	**Sn**	**04 04 23.6**	**-1.5**
	2.2nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**11.77**	**58**	S	**Sn**	**04 04 29.0**	**-0.9**
	7.2nm,0.8s,SNR=7.9						
ELAN	**Lanestosa**	**11.77**	**58**	S	**Sn**	**04 04 29.0**	**-0.9**
	7.2nm,0.8s,SNR=7.9						

IDC 08 04:00:31.0±17.0**, 21°.56N×143°.18E, h315**^{km}±177^{km}**,**
mb3.0/6**, mb1 3.2**/6**, mb1mx2.9**/26**, mbtmp3.0**/6**, Error ellipse: s-maj=33.7km s-min=30.1km az=77.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.14**	**192**	P	P	04 07 53.4	-0.2
	0.3nm,0.5s,baz=16,slow=7.9,SNR=6.7						
MKAR	**Makanchi Array**	**54.79**	**313**	P	P	04 09 29.1	+0.1
	0.1nm,0.3s,baz=98,slow=8.9,SNR=3.0						
ILAR	**Eielson Array**	**62.16**	**27**	P	P	04 10 18.8	-0.4
	0.2nm,0.7s,baz=233,slow=5.5,SNR=4.3						
YKA	**Yellowknife Ar**	**76.58**	**28**	P	P	04 11 47.4	+0.5
	0.4nm,0.5s,baz=290,slow=5.9,SNR=7.2						
ARCES	**ARCESS Array B**	**79.05**	**342**	P	P	04 12 00.5	+0.1
	1.4nm,0.7s,baz=70,slow=8.1,SNR=8.2						
FINES	**FINESS Array B**	**83.31**	**334**	P	P	04 12 22.1	-0.6
	2.0nm,1.0s,baz=66,slow=4.7,SNR=6.9						

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*CSEM **08** 04:13:16.3, 42°.47N×13°.40E, h9^{km}, After ROM*
ROM 08 04:13:16.3±0.1**, 42°.47N×13°.40E, h9**^{km}±1^{km}**, Ml1.8**/1**,**
Error ellipse: s-maj=2.4km s-min=1.4km az=112.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.06**	**3**	Pg	Pg	04 13 19.1	+0.6
CAMP				Sg	Sg	04 13 20.6	+0.5
CAMP	**Campotosto**	**0.06**	**3**	Pg	Pg	04 13 19.1	+0.6
CAMP				Sg	Sg	04 13 20.6	+0.5
AQU	**L'Aquila**	**0.12**	**181**	Pg	Pg	04 13 19.3	+0.1
AQU				Sg	Sg	04 13 21.1	0.0
AQU	**L'Aquila**	**0.12**	**181**	Pg	Pg	04 13 19.3	+0.1
AQU				Sg	Sg	04 13 21.1	0.0
TERO	**Teramo**	**0.21**	**44**	Pg	Pg	04 13 21.3	+0.6
TERO				Sg	Sg	04 13 24.6	+0.8
TERO	**Teramo**	**0.21**	**44**	Pg	Pg	04 13 21.3	+0.6
TERO				Sg	Sg	04 13 24.6	+0.8
LNSS	**Leonessa**	**0.30**	**296**	Pg	Pg	04 13 23.0	+0.5
LNSS				Sg	Sb	04 13 27.9	-1.3
	115nm,0.4s						
LNSS	**Leonessa**	**0.30**	**296**	Pg	Pg	04 13 23.0	+0.5
LNSS				Sg	Sb	04 13 27.9	-1.3
	115nm,0.4s						
VCEL	**Villa Celiera**	**0.33**	**103**	Pg	Pb	04 13 24.3	-0.3
VCEL	**Villa Celiera**	**0.33**	**103**	Pg	Pb	04 13 24.3	-0.3
NRCA	**Norcia**	**0.42**	**329**	Pg	Pg	04 13 25.0	+0.3
NRCA				Sg	Sg	04 13 31.4	+1.1
NRCA	**Norcia**	**0.42**	**329**	Pg	Pg	04 13 25.0	+0.3
NRCA				Sg	Sg	04 13 31.4	+1.1
CERT	**Cerreto**	**0.61**	**211**	Pg	Pb	04 13 28.9	-0.3
CERT	**Cerreto**	**0.61**	**211**	Pg	Pb	04 13 28.9	-0.3

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*CSEM **08** 04:13:25.8, 42°.28N×13°.52E, h10^{km}, After ROM*
ROM 08 04:13:25.8±0.1**, 42°.28N×13°.52E, h10**^{km}**, Ml2.2**/10**, Error ellipse: s-maj=1.1km s-min=0.8km az=54.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.05**	**102**	Pg	Pg	04 13 28.1	+0.2
FAGN				Sg	Sg	04 13 29.4	-0.1
	14µm,0.3s						
FAGN	**Fagnano**	**0.05**	**102**	Pg	Pg	04 13 28.1	+0.2
FAGN				Sg	Sg	04 13 29.4	-0.1
	14µm,0.3s						
AQU	**L'Aquila**	**0.11**	**312**	Pg	Pg	04 13 29.2	+0.5
AQU				Sg	Sg	04 13 31.5	+0.7
AQU	**L'Aquila**	**0.11**	**312**	Pg	Pg	04 13 29.2	+0.5
AQU				Sg	Sg	04 13 31.5	+0.7
VCEL	**Villa Celiera**	**0.27**	**64**	Pg	Pb	04 13 32.6	-0.3
VCEL				Sg	Sg	04 13 35.7	+0.5
	1µm,0.5s						
VCEL	**Villa Celiera**	**0.27**	**64**	Pg	Pb	04 13 32.6	-0.3
VCEL				Sg	Sg	04 13 35.7	+0.5
	1µm,0.5s						
PTQR	**Pietraquaria**	**0.27**	**199**	Pg	Pg	04 13 31.9	+0.5
PTQR				Sg	Sb	04 13 36.4	-1.2
PTQR	**Pietraquaria**	**0.27**	**199**	Pg	Pg	04 13 31.9	+0.5
PTQR				Sg	Sb	04 13 36.4	-1.2
CAMP	**Campotosto**	**0.27**	**343**	Pg	Pg	04 13 31.9	+0.4
CAMP				Sg	Sg	04 13 36.0	+0.7
CAMP	**Campotosto**	**0.27**	**343**	Pg	Pg	04 13 31.9	+0.4
CAMP				Sg	Sg	04 13 36.0	+0.7
FIAM	**Fiamignano**	**0.30**	**268**	Pg	Pg	04 13 32.2	+0.3
FIAM				Sg	Sg	04 13 37.2	+1.2
	128nm,0.3s						
FIAM	**Fiamignano**	**0.30**	**268**	Pg	Pg	04 13 32.2	+0.3
FIAM				Sg	Sg	04 13 37.2	+1.2
	128nm,0.3s						
TERO	**Teramo**	**0.35**	**11**	Pg	Pg	04 13 33.1	+0.2
TERO				Sg	Sg	04 13 38.5	+0.8
TERO	**Teramo**	**0.35**	**11**	Pg	Pg	04 13 33.1	+0.2
TERO				Sg	Sg	04 13 38.5	+0.8
INTR	**Introdacqua**	**0.39**	**132**	Pg	Pg	04 13 34.2	+0.5
INTR				Sg	Sb	04 13 40.7	-0.4
INTR	**Introdacqua**	**0.39**	**132**	Pg	Pg	04 13 34.2	+0.5
INTR				Sg	Sb	04 13 40.7	-0.4
VVLD	**Villa Vallelon**	**0.41**	**169**	Pg	Pg	04 13 34.3	+0.2
	290nm,0.4s						
VVLD	**Villa Vallelon**	**0.41**	**169**	Pg	Pg	04 13 34.3	+0.2
	290nm,0.4s						
LNSS	**Leonessa**	**0.48**	**313**	Pg	Pb	04 13 36.0	-0.5
LNSS				Sg	Sb	04 13 42.8	-1.0
	99nm,0.2s						
LNSS	**Leonessa**	**0.48**	**313**	Pg	Pb	04 13 36.0	-0.5
LNSS				Sg	Sb	04 13 42.8	-1.0
	99nm,0.2s						
GUAR	**Guarcino**	**0.51**	**198**	Pg	Pg	04 13 35.9	+0.1
	131nm,0.3s						
GUAR	**Guarcino**	**0.51**	**198**	Pg	Pg	04 13 35.9	+0.1
	131nm,0.3s						
CERT	**Cerreto**	**0.52**	**231**	Pg	Pg	04 13 35.9	0.0
CERT	**Cerreto**	**0.52**	**231**	Pg	Pg	04 13 35.9	0.0
POFI	**Posta Fibreno**	**0.58**	**165**	Pg	Pg	04 13 37.3	+0.1
	95nm,0.8s						
POFI	**Posta Fibreno**	**0.58**	**165**	Pg	Pg	04 13 37.3	+0.1
	95nm,0.8s						
SDI	**San Donato**	**0.61**	**159**	Pg	Pg	04 13 37.8	+0.1
	78nm,0.2s						
SDI	**San Donato**	**0.61**	**159**	Pg	Pg	04 13 37.8	+0.1
	78nm,0.2s						
CAFR	**Castel Frentan**	**0.62**	**94**	Pg	Pb	04 13 38.8	+0.1
	336nm,0.3s						
CAFR	**Castel Frentan**	**0.62**	**94**	Pg	Pb	04 13 38.8	+0.1
	336nm,0.3s						
MTCE	**Montecelio**	**0.63**	**246**	Pg	Pg	04 13 37.8	-0.2
MTCE	**Montecelio**	**0.63**	**246**	Pg	Pg	04 13 37.8	-0.2
NRCA	**Norcia**	**0.63**	**332**	Pg	Pg	04 13 37.9	-0.3
NRCA				Sg	Sb	04 13 47.7	-0.3
NRCA	**Norcia**	**0.63**	**332**	Pg	Pg	04 13 37.9	-0.3
NRCA				Sg	Sb	04 13 47.7	-0.3
GIUL	**Giuliano Di Ro**	**0.74**	**195**	Pg	Pg	04 13 40.1	-0.1
	59nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.74**	**195**	Pg	Pg	04 13 40.1	-0.1
	59nm,0.6s						
CERA	**Filignano**	**0.78**	**151**	Pg	Pg	04 13 40.4	-0.5
	92nm,0.5s						
CERA	**Filignano**	**0.78**	**151**	Pg	Pg	04 13 40.4	-0.5
	92nm,0.5s						
MIDA	**Miranda**	**0.84**	**139**	Pg	Pg	04 13 41.6	-0.5
	62nm,0.2s						
MIDA	**Miranda**	**0.84**	**139**	Pg	Pg	04 13 41.6	-0.5
	62nm,0.2s						

IDC 08 04:26:51.7±0.8**, 47°.84N×27°.93W, h0**^{km}**, mb3.7**/8**,**
mb1 3.8/9**, mb1mx3.6**/35**, mbtmp3.6**/9**, MS3.4**/10**,**
Ms1 3.4/10**, ms1mx3.1**/42**, Error ellipse: s-maj=37.7km s-min=17.0km az=34.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**19.08**	**106**	P	Pn	04 31 17.1	+0.7
	0.5nm,0.3s,baz=300,slow=13,SNR=4.6						
ESDC				LR	LR	04 37 00.0	
	comp=Z,78nm,19.6s,baz=330,slow=32						
SFJD	**Kangerlussuaq**	**22.51**	**337**	LR	LR	04 38 46.0	
	comp=Z,78nm,18.4s,baz=104,slow=32						
SCHQ	**Schefferville**	**25.03**	**301**	LR	LR	04 39 43.6	
	comp=Z,71nm,18.3s,baz=52,slow=31						
DAVOX	**Davos/Dischmat**	**25.49**	**78**	LR	LR	04 40 43.7	
	comp=Z,66nm,20.7s,baz=269,slow=33						
NOA	**NORSAR Array B**	**25.86**	**45**	LR	LR	04 42 13.4	
	comp=Z,14nm,18.3s,baz=125,slow=36						
FRB	**Frobisher Bay**	**27.21**	**321**	P	P	04 32 37.3	+0.6
	1.1nm,0.7s,baz=96,slow=9.0,SNR=3.7						
GERES	**GERESS Array B**	**27.45**	**72**	LR	LR	04 43 09.5	
	comp=Z,65nm,18.8s,baz=262,slow=36						
VRAC	**Vranov**	**29.18**	**70**	LR	LR	04 43 34.7	
	comp=Z,62nm,19.0s,baz=284,slow=34						
TORD	**Torodi Ar. Bea**	**42.48**	**135**	P	P	04 34 47.6	-0.9
	0.9nm,0.8s,baz=330,slow=5.0,SNR=6.9						
TORD				LR	LR	04 51 16.1	
	comp=Z,90nm,18.4s,baz=340,slow=34						
BRTR	**Keskin Array B**	**44.13**	**77**	P	P	04 35 01.9	+0.1
	0.6nm,0.8s,baz=316,slow=4.0,SNR=3.7						
DBIC	**Dimbokro**	**45.49**	**147**	P	P	04 35 13.2	+0.4
	2.9nm,0.9s,baz=337,slow=9.7,SNR=3.6						
PDAR	**Pinedale Array**	**55.10**	**297**	P	P	04 36 25.2	-0.4
	0.9nm,0.9s,baz=60,slow=7.5,SNR=5.8						
PDAR				LR	LR	05 01 15.1	
	comp=Z,61nm,18.4s,baz=131,slow=38						
ILAR	**Eielson Array**	**58.14**	**334**	P	P	04 36 47.2	+0.6
	0.2nm,0.6s,baz=30,slow=6.3,SNR=4.1						
TXAR	**Lajitas Array**	**59.66**	**281**	P	P	04 36 58.3	+0.4
	0.2nm,0.7s,baz=64,slow=6.1,SNR=2.9						
TXAR				LR	LR	05 02 34.4	
	comp=Z,58nm,18.1s,baz=355,slow=36						
KDAK	**Kodiak Island**	**65.24**	**331**	P	P	04 37 33.9	-0.6
	2.3nm,0.6s,baz=300,slow=8.1,SNR=7.3						
WRA	**Warramunga Arr**	**148.68**	**33**	PKPbc	PKPbc	04 46 39.6	-1.2
	0.7nm,1.0s,baz=332,slow=2.3,SNR=3.0						
ASAR	**Alice Springs**	**151.87**	**37**	PKPbc	PKPbc	04 46 48.0	-0.5
	0.3nm,0.3s,baz=351,slow=1.6,SNR=7.0						

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*STR **08** 04:27:25.3±7.0, 41°.59N×15°.17E, h10^{km}, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **08** 04:27:41.0, 42°.31N×13°.47E, h11^{km}, mb4.1/8, ML3.7(ROM), After ROM.*
NEIC Felt at Alatri, Castelplanio, Celano, Colleferro, Fara San Martino, Magliano de' Marsi, Montorio al Vomano, Penna Sant'Andrea, Pescara, Rome, Sulmona, Teramo and Veroli.
*IDC **08** 04:27:41.4±1.0, 42°.40N×13°.27E, h0^{km}, mb3.8/11, mb1 4.0/15, mb1mx3.8/33, mbtmp3.8/15, ML3.8/3, MS3.1/3, Ms1 3.1/3, ms1mx2.5/39, Error ellipse: s-maj=16.7km s-min=14.4km az=84.0*
*LDG **08** 04:27:41.4±0.1, 42°.32N×13°.48E, h2^{km}, Ml3.4/12, Error ellipse: s-maj=3.7km s-min=2.3km az=42.0*
*PDG **08** 04:27:42.0±0.3, 42°.33N×13°.42E, h10^{km}, ML3.7/9, Error ellipse: s-maj=0.5km s-min=1.0km az=0.0*
*ISCJB **08** 04:27:41.2±0.2, 42°.29N±0°.01×13°.46E±0°.02, h9^{km}±1^{km}, mb4.0/18, MS3.1/2, Error ellipse: s-maj=2.5km s-min=1.8km az=31.6*
*CSEM **08** 04:27:41.7±0.1, 42°.28N×13°.44E, h2^{km}, mb4.1/12, ML4.3/7, Error ellipse: s-maj=2.7km s-min=2.0km az=34.0*
*ROM **08** 04:27:41.2±0.1, 42°.29N×13°.46E, h9^{km}, Ml3.8/37, Error ellipse: s-maj=1.4km s-min=0.9km az=56.0*
*BEO **08** 04:27:41.4±3.2, 42°.24N×12°.90E, h0^{km}, ML4.0/5*
*MOS **08** 04:27:42.1±1.2, 42°.35N×13°.51E, h17^{km}, mb4.3/13, Error ellipse: s-maj=6.7km s-min=4.7km az=89.1*
*PRU **08** 04:27:42.0, 42°.26N×13°.54E, h0^{km}, M4.1*
ISC 08 04:27:42.3±0.7**, 42°.30N**±0°.01**×13°.46E**±0°.02**, h10**^{km}±4^{km}**,**
n462, σ1°.59/547**, mb4.0**/18**, 37C-29D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**321**	*e*Pg	**Pg**	**04 27 43.6**	**-0.8**
AQU				*e*Sg	**Sg**	**04 27 46.8**	**+0.7**
AQU	**L'Aquila**	**0.07**	**321**	Pg	**Pg**	**04 27 43.7**	**-0.8**
AQU				Sg	**Sg**	**04 27 45.5**	**-0.6**
	67µm,0.4s						
AQU	**L'Aquila**	**0.07**	**321**	Pg	**Pg**	**04 27 43.7**	**-0.8**
AQU				Sg	**Sg**	**04 27 45.5**	**-0.6**
	67µm,0.4s						
FAGN	**Fagnano**	**0.10**	**111**	Pg	**Pg**	**04 27 44.3**	**-0.6**
FAGN				Sg	**Sg**	**04 27 46.2**	**-0.6**
	118µm,0.4s						
FAGN	**Fagnano**	**0.10**	**111**	Pg	**Pg**	**04 27 44.3**	**-0.6**
FAGN				Sg	**Sg**	**04 27 46.2**	**-0.6**
	118µm,0.4s						
CAMP	**Campotosto**	**0.24**	**351**	Pg	**Pg**	**04 27 46.6**	**-0.6**
CAMP				Sg	**Sg**	**04 27 50.6**	**+0.1**
	33µm,1.0s						
CAMP	**Campotosto**	**0.24**	**351**	Pg	**Pg**	**04 27 46.6**	**-0.6**
CAMP				Sg	**Sg**	**04 27 50.6**	**+0.1**
	33µm,1.0s						
FIAM	**Fiamignano**	**0.26**	**263**	P	**Pg**	**04 27 47.2**	**-0.3**
FIAM				S	**Sg**	**04 27 51.8**	**+0.8**
FIAM	**Fiamignano**	**0.26**	**263**	Pg	**Pg**	**04 27 47.2**	**-0.3**
FIAM				Sg	**Sg**	**04 27 51.4**	**+0.4**
	55µm,1.1s						
FIAM	**Fiamignano**	**0.26**	**263**	Pg	**Pg**	**04 27 47.2**	**-0.3**
FIAM				Sg	**Sg**	**04 27 51.4**	**+0.4**
	55µm,1.1s						
FIAM				S	**Sg**	**04 27 51.8**	**+0.8**
PTQR	**Pietraquaria**	**0.28**	**189**	P	**Pg**	**04 27 47.5**	**-0.5**
PTQR	**Pietraquaria**	**0.28**	**189**	Pg	**Pg**	**04 27 47.5**	**-0.5**
PTQR	**Pietraquaria**	**0.28**	**189**	Pg	**Pg**	**04 27 47.5**	**-0.5**
TERO	**Teramo**	**0.34**	**18**	P	**Pg**	**04 27 48.3**	**-0.8**
TERO				S	**Sg**	**04 27 53.8**	**+0.2**
TERO	**Teramo**	**0.34**	**18**	Pg	**Pg**	**04 27 48.1**	**-1.0**
TERO				Sg	**Sg**	**04 27 53.4**	**-0.2**
TERO	**Teramo**	**0.34**	**18**	P	**Pg**	**04 27 48.3**	**-0.8**
TERO				Sg	**Sg**	**04 27 53.4**	**-0.2**
TERO				S	**Sg**	**04 27 53.8**	**+0.2**
LNSS	**Leonessa**	**0.43**	**314**	Pg	**Pg**	**04 27 50.1**	**-0.7**
LNSS				Sg	**Sg**	**04 27 57.8**	**+1.3**
	20µm,0.8s						
LNSS	**Leonessa**	**0.43**	**314**	Pg	**Pg**	**04 27 50.1**	**-0.7**
LNSS				Sg	**Sg**	**04 27 57.8**	**+1.3**
	20µm,0.8s						
INTR	**Introdacqua**	**0.44**	**131**	P	**Pg**	**04 27 50.1**	**-0.8**
INTR				S	**Sg**	**04 27 57.0**	**+0.3**
INTR	**Introdacqua**	**0.44**	**131**	⇓*e*Pg	**Pg**	**04 27 50.1**	**-0.8**
INTR				Sg	**Sg**	**04 27 57.2**	**+0.5**
	18µm,0.3s						
INTR	**Introdacqua**	**0.44**	**131**	P	**Pg**	**04 27 50.2**	**-0.8**
INTR				S	**Sg**	**04 27 57.0**	**+0.3**
VVLD	**Villa Vallelon**	**0.45**	**164**	P	**Pg**	**04 27 50.1**	**-1.0**
VVLD				S	**Sg**	**04 27 57.2**	**+0.2**
VVLD	**Villa Vallelon**	**0.45**	**164**	Pg	**Pg**	**04 27 50.1**	**-1.0**
VVLD				Sg	**Sg**	**04 27 57.2**	**+0.2**
	9µm,0.5s						
VVLD	**Villa Vallelon**	**0.45**	**164**	Pg	**Pg**	**04 27 50.1**	**-1.0**
VVLD				Sg	**Sg**	**04 27 57.2**	**+0.2**
	9µm,0.5s						
CERT	**Cerreto**	**0.50**	**225**	P	**Pg**	**04 27 51.2**	**-0.8**
CERT				S	**Sb**	**04 28 02.6**	**+2.0**
CERT	**Cerreto**	**0.50**	**225**	Pg	**Pg**	**04 27 51.2**	**-0.8**
	23µm,0.9s						
CERT	**Cerreto**	**0.50**	**225**	Pg	**Pg**	**04 27 51.2**	**-0.8**
	23µm,0.9s						
NRCA	**Norcia**	**0.59**	**335**	P	**Pg**	**04 27 52.6**	**-1.1**
NRCA	**Norcia**	**0.59**	**335**	Pg	**Pg**	**04 27 52.6**	**-1.1**
NRCA	**Norcia**	**0.59**	**335**	Pg	**Pg**	**04 27 52.6**	**-1.1**
MTCE	**Montecelio**	**0.60**	**243**	P	**Pg**	**04 27 53.0**	**-1.0**
MTCE				S	**Sn**	**04 28 05.0**	**-1.7**
MTCE	**Montecelio**	**0.60**	**243**	Pg	**Pg**	**04 27 52.9**	**-1.0**
	7µm,0.9s						
MTCE	**Montecelio**	**0.60**	**243**	P	**Pg**	**04 27 53.0**	**-1.0**
MTCE				S	**Sn**	**04 28 05.1**	**-1.7**
TRTR	**Tortoreto Alta**	**0.61**	**33**	Pg	**Pg**	**04 27 54.4**	**+0.3**
	43µm,0.9s						
TRTR	**Tortoreto Alta**	**0.61**	**33**	Pg	**Pg**	**04 27 54.4**	**+0.3**
	43µm,0.9s						
POFI	**Posta Fibreno**	**0.61**	**162**	Pg	**Pg**	**04 27 52.9**	**-1.3**
	8µm,1.2s						
POFI	**Posta Fibreno**	**0.61**	**162**	Pg	**Pg**	**04 27 52.9**	**-1.3**
	8µm,1.2s						
SDI	**San Donato**	**0.65**	**156**	P	**Pg**	**04 27 53.4**	**-1.4**
SDI	**San Donato**	**0.65**	**156**	P	**Pg**	**04 27 53.4**	**-1.4**
SDI	**San Donato**	**0.65**	**156**	Pg	**Pg**	**04 27 53.4**	**-1.4**
SDI	**San Donato**	**0.65**	**156**	Pg	**Pg**	**04 27 53.4**	**-1.4**
OFFI	**Offida**	**0.66**	**15**	Pg	**Pg**	**04 27 54.7**	**-0.3**
	33µm,0.7s						
OFFI	**Offida**	**0.66**	**15**	Pg	**Pg**	**04 27 54.7**	**-0.3**
	33µm,0.7s						
CAFR	**Castel Frentan**	**0.66**	**96**	Pg	**Pg**	**04 27 54.7**	**-0.4**
	10µm,0.4s						
CAFR	**Castel Frentan**	**0.66**	**96**	Pg	**Pg**	**04 27 54.7**	**-0.4**
	10µm,0.4s						
GIUL	**Giuliano Di Ro**	**0.76**	**192**	Pg	**Pg**	**04 27 55.4**	**-1.5**
	5µm,1.3s						
GIUL	**Giuliano Di Ro**	**0.76**	**192**	Pg	**Pg**	**04 27 55.4**	**-1.5**
	5µm,1.3s						
FDMO	**Fiordimonte**	**0.78**	**340**	Pg	**Pg**	**04 27 55.9**	**-1.5**
	2µm,0.5s						
FDMO	**Fiordimonte**	**0.78**	**340**	Pg	**Pg**	**04 27 55.9**	**-1.5**
	2µm,0.5s						
RNI2	**Rionero Sannit**	**0.79**	**139**	Pg	**Pg**	**04 27 56.4**	**-1.1**
	5µm,0.5s						
RNI2	**Rionero Sannit**	**0.79**	**139**	Pg	**Pg**	**04 27 56.4**	**-1.1**
	5µm,0.5s						
CESI	**CESI - Serrava**	**0.81**	**330**	Pg	**Pg**	**04 27 56.8**	**-1.2**
	1µm,0.6s						
CESI	**CESI - Serrava**	**0.81**	**330**	Pg	**Pg**	**04 27 56.8**	**-1.2**
	1µm,0.6s						
CERA	**Filignano**	**0.82**	**149**	Pg	**Pg**	**04 27 56.3**	**-1.8**
	7µm,1.1s						
CERA	**Filignano**	**0.82**	**149**	Pg	**Pg**	**04 27 56.3**	**-1.8**
	7µm,1.1s						
MIDA	**Miranda**	**0.89**	**138**	Pg	**Pg**	**04 27 57.6**	**-1.8**
	3µm,0.5s						
MIDA	**Miranda**	**0.89**	**138**	Pg	**Pg**	**04 27 57.6**	**-1.8**
	3µm,0.5s						
ASSB	**Assisi San Ben**	**0.95**	**322**	Pg	**Pg**	**04 27 59.0**	**-1.5**
	4µm,0.8s						
ASSB	**Assisi San Ben**	**0.95**	**322**	Pg	**Pg**	**04 27 59.0**	**-1.5**
	4µm,0.8s						
FRES	**Fresagrandinar**	**0.96**	**110**	Pg	**Pg**	**04 27 59.2**	**-1.5**
	5µm,1.2s						
FRES	**Fresagrandinar**	**0.96**	**110**	Pg	**Pg**	**04 27 59.2**	**-1.5**
	5µm,1.2s						
TRIV	**Trivento**	**0.97**	**123**	Pg	**Pg**	**04 27 59.4**	**-1.6**
	2µm,0.8s						
TRIV	**Trivento**	**0.97**	**123**	Pg	**Pg**	**04 27 59.4**	**-1.6**
	2µm,0.8s						
SNTG	**Esanatoglia**	**1.03**	**338**	Pg	**Pg**	**04 28 00.2**	**-1.8**
SNTG	**Esanatoglia**	**1.03**	**338**	Pg	**Pg**	**04 28 00.2**	**-1.8**
VAGA	**Valle Agricola**	**1.06**	**147**	Pg	**Pg**	**04 28 00.7**	**-1.9**
	2µm,0.9s						
VAGA	**Valle Agricola**	**1.06**	**147**	Pg	**Pg**	**04 28 00.7**	**-1.9**
	2µm,0.9s						
CING	**Cingoli**	**1.09**	**350**	Pg	**Pb**	**04 28 01.6**	**-1.7**
	2µm,0.9s						
CING	**Cingoli**	**1.09**	**350**	Pg	**Pb**	**04 28 01.6**	**-1.7**
	2µm,0.9s						
TOLF	**Tolfa**	**1.11**	**258**	Pg	**Pb**	**04 28 02.1**	**-1.5**
	2µm,0.9s						
TOLF	**Tolfa**	**1.11**	**258**	Pg	**Pb**	**04 28 02.1**	**-1.5**
	2µm,0.9s						
BSSO	**Busso**	**1.14**	**131**	Pg	**Pb**	**04 28 02.4**	**-1.7**
	3µm,1.1s						
BSSO	**Busso**	**1.14**	**131**	Pg	**Pb**	**04 28 02.4**	**-1.7**
	3µm,1.1s						
SGG	**Gregorio Mates**	**1.14**	**143**	Pg	**Pb**	**04 28 02.4**	**-1.8**
	1µm,0.8s						
SGG	**Gregorio Mates**	**1.14**	**143**	Pg	**Pb**	**04 28 02.4**	**-1.8**
	1µm,0.8s						
MURB	**Monte Urbino**	**1.18**	**325**	Pg	**Pb**	**04 28 03.5**	**-1.4**
	4µm,0.6s						
MURB	**Monte Urbino**	**1.18**	**325**	Pg	**Pb**	**04 28 03.5**	**-1.4**
	4µm,0.6s						
PTRJ	**Pietraroja**	**1.23**	**139**	Pn	**Pn**	**04 28 03.7**	**-2.0**
	5µm,0.7s						
PTRJ	**Pietraroja**	**1.23**	**139**	Pn	**Pn**	**04 28 03.7**	**-2.0**
	5µm,0.7s						
AOI	**Ancona**	**1.25**	**5**	Pn	**Pn**	**04 28 05.5**	**-0.4**
	1µm,0.6s						
AOI	**Ancona**	**1.25**	**5**	Pn	**Pn**	**04 28 05.5**	**-0.4**
	1µm,0.6s						
ARVD	**Arcevia**	**1.25**	**343**	Pn	**Pn**	**04 28 04.6**	**-1.4**
ARVD	**Arcevia**	**1.25**	**343**	Pn	**Pn**	**04 28 04.6**	**-1.4**
CIGN	**Sant'Elia a Pi**	**1.26**	**120**	Pn	**Pn**	**04 28 04.2**	**-1.8**
	1µm,1.1s						
CIGN	**Sant'Elia a Pi**	**1.26**	**120**	Pn	**Pn**	**04 28 04.2**	**-1.8**
	1µm,1.1s						
SACS	**San Casciano d**	**1.27**	**296**	Pn	**Pn**	**04 28 06.0**	**-0.2**

	2µm,0.9s						
PIEI	Pieia	1.41	332	Pn	Pn	04 28 07.1	-1.0
	697nm,0.6s						
PIEI	Pieia	1.41	332	Pn	Pn	04 28 07.1	-1.0
	697nm,0.6s						
BADI	Badiali	1.50	324	Pn	Pn	04 28 09.7	+0.4
	2µm,1.0s						
BADI	Badiali	1.50	324	Pn	Pn	04 28 09.7	+0.4
	2µm,1.0s						
CAFI	Castiglion Fio	1.50	314	Pn	Pn	04 28 09.5	+0.1
	1µm,0.9s						
CAFI	Castiglion Fio	1.50	314	Pn	Pn	04 28 09.5	+0.1
	1µm,0.9s						
ARCI	Arcidosso	1.56	291	Pn	Pb	04 28 11.4	0.0
	1µm,1.9s						
ARCI	Arcidosso	1.56	291	Pn	Pb	04 28 11.4	0.0
	1µm,1.9s						
PARC	Parchiule	1.62	327	Pn	Pn	04 28 11.3	+0.3
PARC	Parchiule	1.62	327	Pn	Pn	04 28 11.3	+0.3
MAON	Monte Argentar	1.73	275	Pn	Pn	04 28 12.1	-0.4
	593nm,1.1s						
MAON	Monte Argentar	1.73	275	Pn	Pn	04 28 12.1	-0.4
	593nm,1.1s						
SGRT	San Giovanni R	1.79	107	Pn	Pn	04 28 13.8	+0.5
	2µm,1.1s						
SGRT	San Giovanni R	1.79	107	Pn	Pn	04 28 13.8	+0.5
	2µm,1.1s						
MS1	Monte Sant'Ang	1.94	107	eSn	Sg	04 28 45.4	+0.6
CSNT	Castellina Chi	1.98	307	Pn	Pn	04 28 16.8	+0.9
CSNT	Castellina Chi	1.98	307	Pn	Pn	04 28 16.8	+0.9
CDT	Castel del Mon	2.44	119	ePn	Pn	04 28 23.3	+1.1
NVLJ	Novalja	2.48	24	i Pn	Pn	04 28 23.0	+0.2
NVLJ				Sn	Sb	04 28 55.6	-2.0
MAIM	Mastiano	2.71	308	P	Pn	04 28 27.6	+1.7
BAI	Bari	2.83	114	ePn	Pb	04 28 30.9	-1.9
CUC	Castrocucco	2.91	142	ePn	Pn	04 28 31.4	+2.6
CUC				ePg	Pg	04 28 37.2	-0.9
CUC				eSn	Sn	04 29 02.3	-1.6
CUC	Castrocucco	2.91	142	ePn	Pn	04 28 31.4	+2.6
STON	Ston	3.18	78	i Pn	Pn	04 28 32.4	0.0
STON				Sn	Sn	04 29 10.0	-0.4
STON	Ston	3.18	78	i Pn	Pn	04 28 32.4	0.0
STON				Sn	Sn	04 29 10.0	-0.4
OSPF	L'Ospedale	3.24	260	P	Pn	04 28 33.1	-0.3
OSPF	L'Ospedale	3.24	260	P	Pn	04 28 33.1	-0.3
OSPF	L'Ospedale	3.24	260	P	Pn	04 28 33.1	-0.3
SKDS	Skadanscina	3.27	7	i Pn	Pn	04 28 33.8	+0.1
SKDS				i Sn	Sn	04 29 14.6	+2.0
SKDS							
	comp=Z,135nm,0.6s						
SKDS	Skadanscina	3.27	7	Pn	Pn	04 28 33.8	+0.1
SKDS				i Sn	Sn	04 29 14.6	+2.0
	comp=Z,135nm,0.6s						
PGF	Pioggiola	3.31	276	ePn	Pn	04 28 35.4	+1.1
	SNR=1.0						
PGF				eSn	Sn	04 29 15.5	+1.7
	comp=Z,47nm,0.6s						
PGF	Pioggiola	3.31	276	ePn	Pn	04 28 35.4	+1.1
	SNR=1.0						
PGF				eSn	Sn	04 29 15.5	+1.7
	comp=Z,24nm,0.6s						
TRI	Trieste	3.41	4	eP	Pn	04 28 34.5	-1.1
TRI				e		04 29 14.0	
TRI	Trieste	3.41	4	ePn	Pn	04 28 34.5	-1.1
TRI				ePg	Pb	04 28 42.4	-0.5
TRI				eSn	Sn	04 29 14.0	-2.1
TRI	Trieste	3.41	4	eP	Pn	04 28 34.5	-1.1
TRI				eS	Sn	04 29 14.0	-2.1
BOJS	Bojanci	3.45	21	i Pn	Pn	04 28 36.9	+0.8
BOJS	Bojanci	3.45	21	i Pn	Pn	04 28 36.9	+0.8
SC2M	Scurtabo	3.55	308	P	Pn	04 28 37.7	+0.2
JAVS	Javornik	3.62	7	i Pn	Pn	04 28 38.7	+0.2
JAVS				i Sn	Sn	04 29 23.2	+1.9
JAVS	Javornik	3.62	7	i Pn	Pn	04 28 38.7	+0.2
JAVS				i Sn	Sn	04 29 23.2	+1.9
BLY	Banja Luka	3.65	47	ePn	Pn	04 28 40.1	+1.3
BLY	Banja Luka	3.65	47	ePn	Pn	04 28 40.1	+1.3
HCY	Herceg Novi	3.73	86	ePn	Pn	04 28 41.6	+1.6
HCY				eSn	Sn	04 29 27.0	+3.0
HCY	Herceg Novi	3.73	86	ePn	Pn	04 28 41.6	+1.6
HCY				eSn	Sn	04 29 27.0	+3.0
VOY	Vojsko	3.74	5	ePn	Pn	04 28 40.0	-0.2
VOY				e		04 28 42.4	
VOY				eSn	Sn	04 29 25.4	+1.0
VOY	Vojsko	3.74	5	ePn	Pn	04 28 40.0	-0.2
VOY				eSn	Sn	04 29 25.4	+1.0
BRY	Bratogost	3.80	79	ePn	Pn	04 28 42.6	+1.6
BRY				eSn	Sn	04 29 28.2	+2.4
BRY	Bratogost	3.80	79	ePn	Pn	04 28 42.6	+1.6
BRY				eSn	Sn	04 29 28.2	+2.4
LJU	Ljubljana	3.82	11	ePn	Pn	04 28 42.1	+0.9
TIP	Timpagrande	4.00	140	ePn	Pn	04 28 42.2	-1.5
TIP				ePg	Pb	04 28 54.5	+1.6
TIP	Timpagrande	4.00	140	ePn	Pn	04 28 42.2	-1.5
BUM	Brajici-Budva	4.03	88	⇓iPn	Pn	04 28 45.9	+1.7
BUM				eSn	Sn	04 29 33.4	+1.9
BUM	Brajici-Budva	4.03	88	⇓iPn	Pn	04 28 45.9	+1.7
BUM				eSn	Sn	04 29 33.4	+1.9
UPM	Unac-Piva	4.11	76	ePn	Pn	04 28 46.9	+1.5
UPM				eSn	Sn	04 29 35.8	+2.2
UPM	Unac-Piva	4.11	76	ePn	Pn	04 28 46.9	+1.5
UPM				eSn	Sn	04 29 35.8	+2.2
NKY	Niksic	4.12	81	⇓iPn	Pn	04 28 46.8	+1.4
NKY				eSn	Sn	04 29 35.9	+2.2
NKY	Niksic	4.12	81	⇓iPn	Pn	04 28 46.8	+1.4
NKY				eSn	Sn	04 29 35.9	+2.2
VSL	Villasalto	4.17	229	ePn	Pn	04 28 46.2	+0.2
VSL	Villasalto	4.17	229	ePn	Pn	04 28 46.2	+0.2
PCP	Piancastagn	4.22	304	P	Pn	04 28 47.2	+0.4
OBKA	Obir	4.28	10	⇑iPn	Pn	04 28 47.7	+0.1
	SNR=15						
OBKA	Obir	4.28	10	⇑iPn	Pn	04 28 47.7	+0.1
OBKA	Obir	4.28	10	Pn	Pn	04 28 47.7	+0.1
	SNR=15						
PDG	Podgorica	4.30	86	ePn	Pn	04 28 49.2	+1.5
PDG				eSn	Sn	04 29 39.1	+1.2
PDG	Podgorica	4.30	86	⇑iPn	Pn	04 28 49.0	+1.3
PDG				eSn	Sn	04 29 39.1	+1.2
TTG	Podgorica	4.30	86	⇑iPn	Pn	04 28 49.0	+1.3
TTG				eSn	Sn	04 29 40.4	+2.5
ULC	Ulcinj	4.32	93	⇑iPn	Pn	04 28 49.4	+1.4
ULC				eSn	Sn	04 29 40.4	+2.0
ULC	Ulcinj	4.32	93	⇑iPn	Pn	04 28 49.4	+1.4
ULC				eSn	Sn	04 29 40.4	+2.0
MYKA	Terra Mystica	4.33	2	⇑iPn	Pn	04 28 49.1	+0.8
MYKA	Terra Mystica	4.33	2	⇑iPn	Pn	04 28 49.1	+0.8
MYKA	Terra Mystica	4.33	2	Pn	Pn	04 28 49.1	+0.8
CEL	Celeste	4.45	154	ePn	Pn	04 28 49.9	+0.1
CEL	Celeste	4.45	154	ePn	Pn	04 28 49.9	+0.1
PLE	Pljevlja	4.48	75	⇓iPn	Pn	04 28 51.1	+0.7
PLE				eSn	Sn	04 29 44.8	+2.1
PLE	Pljevlja	4.48	75	⇓iPn	Pn	04 28 51.1	+0.7
PLE				eSn	Sn	04 29 44.8	+2.1
ABTA	Abfaltersbach	4.50	352	⇑iPn	Pn	04 28 51.5	+0.9
	SNR=38						
ABTA	Abfaltersbach	4.50	352	⇑iPn	Pn	04 28 51.5	+0.9
ABTA	Abfaltersbach	4.50	352	Pn	Pn	04 28 51.5	+0.9
	SNR=38						
BBLS	Lazići	4.63	68	ePn	Pn	04 28 54.4	+2.0
BBLS	Lazići	4.63	68	ePn	Pn	04 28 54.4	+2.0
SAOF	Saorge	4.64	293	P	Pn	04 28 55.3	+2.9
SAOF	Saorge	4.64	293	P	Pn	04 28 55.3	+2.9
SAOF	Saorge	4.64	293	P	Pn	04 28 55.3	+2.9
SBF	Sospel	4.68	292	ePn	Pn	04 28 53.9	+0.8
	SNR=1.0						
SBF				eSn	Sn	04 29 43.9	-3.6
	comp=Z,30nm,0.8s						
SBF	Sospel	4.68	292	ePn	Pn	04 28 53.9	+0.8
	SNR=1.0						
SBF				eSn	Sn	04 29 43.9	-3.6
	comp=Z,15nm,0.8s						
AUTN	L'Aution	4.73	293	P	Pn	04 28 56.8	+2.9
AUTN	L'Aution	4.73	293	P	Pn	04 28 56.8	+2.9
AUTN	L'Aution	4.73	293	P	Pn	04 28 56.8	+2.9
KBA	Koelnbreinsper	4.78	359	⇓iP	Pn	04 28 55.1	+0.5
KBA	Koelnbreinsper	4.78	359	⇓iPn	Pn	04 28 55.0	+0.5
	SNR=15						
KBA	Koelnbreinsper	4.78	359	⇓iPn	Pn	04 28 55.0	+0.5
KBA	Koelnbreinsper	4.78	359	Pn	Pn	04 28 55.0	+0.5
	SNR=15						
BEY	Berane	4.79	81	⇑iPn	Pn	04 28 56.6	+2.1
BEY				eSn	Sn	04 29 52.5	+2.4
IVA	Berane	4.79	81	⇑iPn	Pn	04 28 56.6	+2.1
IVA				eSn	Sn	04 29 52.5	+2.4
BEHE	Becsehely	4.80	29	⇓epPn	Pn	04 28 55.7	+1.1
PVY	Plav	4.82	84	⇑iPn	Pn	04 28 57.2	+2.2
PVY				eSn	Sn	04 29 52.9	+1.9
TOUF	Mont Tournerai	4.86	293	P	Pn	04 28 57.6	+2.0
TOUF	Mont Tournerai	4.86	293	P	Pn	04 28 57.6	+2.0
TOUF	Mont Tournerai	4.86	293	P	Pn	04 28 57.6	+2.0
TOUF	Mont Tournerai	4.86	293	P	Pn	04 28 57.6	+2.0
TIR	Tirane	4.88	99	ePn	Pn	04 28 56.0	+0.2
TIR	Tirane	4.88	99	ePn	Pn	04 28 56.0	+0.2
MVIF	Mont Vial	4.88	291	P	Pn	04 28 59.5	+3.5
MVIF	Mont Vial	4.88	291	P	Pn	04 28 59.5	+3.5
MVIF	Mont Vial	4.88	291	P	Pn	04 28 59.5	+3.5
CALN	Calern	5.03	289	P	Pn	04 28 59.5	+1.6
CALN	Calern	5.03	289	P	Pn	04 28 59.5	+1.6
CALN	Calern	5.03	289	P	Pn	04 28 59.5	+1.6
CALN	Calern	5.03	289	P	Pn	04 28 59.5	+1.6
IVAS	Ivanjica	5.08	73	ePn	Pn	04 28 59.5	+1.0
IVAS				eSn	Sn	04 29 56.9	-0.3
IVAS	Ivanjica	5.08	73	ePn	Pn	04 28 59.5	+1.0
IVAS				eSn	Sn	04 29 56.9	-0.3
DIVS	Divibare	5.10	67	ePn	Pn	04 28 59.2	+0.3
DIVS	Divibare	5.10	67	ePn	Pn	04 28 59.2	+0.3
FETA	Feichten	5.10	339	⇓iPn	Pn	04 29 00.4	+1.4
	SNR=37						
FETA	Feichten	5.10	339	⇓iPn	Pn	04 29 00.4	+1.4
FETA	Feichten	5.10	339	Pn	Pn	04 29 00.4	+1.4
	SNR=37						
TUE	Stuetta	5.11	326	ePn	Pn	04 29 00.1	+1.1
	comp=Z,25nm,0.8s						
TUE				eSn	Sn	04 29 55.7	-2.4
TUE	Stuetta	5.11	326	ePn	Pn	04 29 00.1	+1.1
	comp=Z,25nm,0.8s						
TUE				eSn	Sn	04 29 55.7	-2.4
DAVOX	Davos/Dischmat	5.16	331	Pn	Pn	04 29 02.5	+2.7
DAVOX				Sn	Sn	04 30 00.0	+0.6
DAVOX	Davos/Dischmat	5.16	331	Pn	Pn	04 29 02.5	+2.7
	comp=Z,4.0nm,0.3s,baz=153,slow=17,SNR=37						
DAVOX				Sn	Sn	04 30 00.0	+0.6
	comp=Z,0.5nm,0.3s,baz=190,slow=17,SNR=2.1						
DAVOX	Davos/Dischmat	5.16	331	P	Pn	04 29 02.5	+2.7
	comp=Z,4.0nm,0.3s						
DAVOX				S	Sn	04 30 00.0	+0.6
	comp=Z,1.0nm,0.3s						
FRF	La Foret Royal	5.16	286	ePn	Pn	04 28 59.9	+0.3
	SNR=1.0						
FRF				eSn	Sn	04 29 54.9	-4.2
	comp=Z,4.8nm,0.5s						
FRF	La Foret Royal	5.16	286	ePn	Pn	04 28 59.9	+0.3
	SNR=1.0						
FRF				eSn	Sn	04 29 54.9	-4.2
	comp=Z,2.4nm,0.5s						
ARSA	Arzberg	5.16	16	⇑iPn	Pn	04 28 58.9	-0.7
ARSA	Arzberg	5.16	16	⇑iPn	Pn	04 28 59.0	-0.7
ARSA	Arzberg	5.16	16	Pn	Pn	04 28 58.9	-0.7
LMR	La Mourre	5.21	284	ePn	Pn	04 29 00.4	+0.1
	SNR=1.0						
LMR				eSn	Sn	04 29 56.4	-4.1
	comp=Z,3.3nm,0.6s						
LMR	La Mourre	5.21	284	ePn	Pn	04 29 00.4	+0.1
	SNR=1.0						
LMR				eSn	Sn	04 29 56.4	-4.1
	comp=Z,1.6nm,0.6s						
MOTA	Moosalm	5.31	342	⇑iP	Pn	04 29 03.8	+1.9
MOTA	Moosalm	5.31	342	⇑iPn	Pn	04 29 03.8	+1.9
	SNR=12						
MOTA	Moosalm	5.31	342	⇑iPn	Pn	04 29 03.8	+1.9
MOTA	Moosalm	5.31	342	i P	Pn	04 29 03.8	+1.9
PKSM	Moragy	5.40	42	ePn	Pn	04 29 02.9	+0.1
PKSM	Moragy	5.40	42	⇓ePn	Pn	04 29 03.1	+0.3
PKSM	Moragy	5.40	42	⇓eP	Pn	04 29 03.1	+0.3
TRUS	Trudelj	5.42	67	ePn	Pn	04 29 03.3	+0.1
TRUS	Trudelj	5.42	67	ePn	Pn	04 29 03.3	+0.1
MBDF	Montbardon	5.43	299	eP	Pn	04 29 05.8	+2.3
MBDF	Montbardon	5.43	299	eP	Pn	04 29 05.8	+2.3
RJOB	Jochberg	5.46	355	ePn	Pn	04 29 05.1	+1.4
GRUS	Gruza	5.54	71	ePn	Pn	04 29 05.6	+0.7
GRUS				eSn	Sn	04 30 08.2	-0.5
GRUS	Gruza	5.54	71	ePn	Pn	04 29 05.6	+0.7
GRUS				eSn	Sn	04 30 08.2	-0.5
MOA	Molln	5.58	6	⇓iPn	Pn	04 29 06.3	+1.0
	SNR=27						
MOA	Molln	5.58	6	⇓iPn	Pn	04 29 06.3	+1.0
MOA	Molln	5.58	6	Pn	Pn	04 29 06.3	+1.0
	SNR=27						
DAVA	Damuels	5.60	334	⇑iPn	Pn	04 29 07.5	+1.7
	SNR=13						
DAVA	Damuels	5.60	334	⇑iPn	Pn	04 29 07.5	+1.7
DAVA	Damuels	5.60	334	Pn	Pn	04 29 07.5	+1.7
	SNR=13						
BNI	Bardonecchia	5.63	302	eP	Pn	04 29 08.0	+1.8
BNI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BNI	Bardonecchia	5.63	302	ePn	Pn	04 29 08.0	+1.8
	comp=Z,9.0nm,0.7s						
BNI	Bardonecchia	5.63	302	eP	Pn	04 29 08.0	+1.8
	comp=Z,9.0nm,0.7s						
SELS	Selova	5.71	78	ePn	Pn	04 29 08.1	+0.9
SELS	Selova	5.71	78	ePn	Pn	04 29 08.1	+0.9
LPG	La Plagne	5.80	306	eP	Pn	04 29 11.7	+3.0
	SNR=1.0						
LPG				eSn	Sn	04 30 10.9	-4.6
	comp=Z,22nm,0.8s						
LPL	La Plagne	5.83	306	eP	Pn	04 29 11.5	+2.6
	SNR=1.0						
LPL				eSn	Sn	04 30 09.9	-6.0
	comp=Z,7.9nm,0.5s						
LPL	La Plagne	5.83	306	eP	Pn	04 29 11.5	+2.6
	SNR=1.0						
CONA	Conrad Observa	5.88	16	⇓iPn	Pn	04 29 09.4	-0.1
	SNR=15						
CONA	Conrad Observa	5.88	16	⇓iPn	Pn	04 29 09.4	-0.1
CONA	Conrad Observa	5.88	16	Pn	Pn	04 29 09.4	-0.1
	SNR=15						
SKO	Skopje	5.94	90	ePn	Pn	04 29 08.4	-2.0
SMRF	Simiane la Rot	6.01	289	eP	Pn	04 29 13.0	+1.7
SMRF	Simiane la Rot	6.01	289	eP	Pn	04 29 13.0	+1.7
BIA	Bitola	6.03	100	ePn	Pn	04 29 10.6	-1.1
BIA	Bitola	6.03	100	ePn	Pn	04 29 10.5	-1.1
ORIF	Oris-en-Rattie	6.09	298	eP	Pn	04 29 16.3	+3.8
ORIF				eSn	Sn	04 30 17.5	-4.8
	comp=Z,3.9nm,0.6s						
BARS	Barje	6.19	82	ePn	Pn	04 29 15.3	+1.5
BARS				eSn	Sn	04 30 24.7	0.0
BOLS	Boljevac	6.41	73	ePn	Pn	04 29 17.5	+0.8
BOLS	Boljevac	6.41	73	ePn	Pn	04 29 17.5	+0.8
GEC2	GERESS Array S	6.55	1	eP	Pn	04 29 18.5	-0.2
GEC2	GERESS Array S	6.55	1	ePn	Pn	04 29 18.5	-0.2
GEC2	GERESS Array S	6.55	1	eP	Pn	04 29 18.5	-0.2
GERES	GERESS Array B	6.55	1	Pn	Pn	04 29 18.5	-0.2
GERES				Sn	Sn	04 30 32.1	-1.4
GERES	GERESS Array B	6.55	1	Pn	Pn	04 29 18.5	-0.2
	comp=Z,1.7nm,0.3s,baz=180,slow=12,SNR=35						
GERES				Sn	Sn	04 30 32.1	-1.4
	comp=Z,2.3nm,0.3s,baz=177,slow=24,SNR=4.8						
GERES	GERESS Array B	6.55	1	P	Pn	04 29 18.5	-0.2
	comp=Z,2.0nm,0.3s						
GERES				S	Sn	04 30 32.1	-1.4
	comp=Z,2.0nm,0.3s						
BZS	Buzias	6.75	58	⇑P	Pn	04 29 23.0	+1.5
BZS	Buzias	6.75	58	⇑iP	Pn	04 29 23.0	+1.5
BZS	Buzias	6.75	58	ePn	Pn	04 29 22.1	+0.6
BZS	Buzias	6.75	58	ePn	Pn	04 29 22.1	+0.6
BZS	Buzias	6.75	58	P	Pn	04 29 23.0	+1.5
FELD	Feldberg im Sc	6.78	327	P	Pn	04 29 23.7	+1.7
FELD	Feldberg im Sc	6.78	327	P	Pn	04 29 23.7	+1.7
CABF	La Chapelle	6.81	312	ePn	Pn	04 29 23.5	+1.2
	SNR=1.0						
CABF	La Chapelle	6.81	312	ePn	Pn	04 29 23.5	+1.2
	SNR=1.0						
ZAPS	Zavoj	6.82	79	ePn	Pn	04 29 23.8	+1.4
ZAPS	Zavoj	6.82	79	ePn	Pn	04 29 23.8	+1.4
KHC	Kasperske Hory	6.83	1	eP	Pn	04 29 21.7	-0.9
KHC				e		04 30 37.5	
KHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KHC	Kasperske Hory	6.83	1	ePn	Pn	04 29 21.7	-0.9
	comp=Z,9.6nm,0.8s						
KHC				eSn	Sn	04 30 37.5	-2.9
KHC	Kasperske Hory	6.83	1	ePN	Pn	04 29 22.6	0.0
KHC				ex	x	04 29 30.5	
KHC				ex	x	04 30 06.0	
KHC				eSN	Sn	04 30 37.7	-2.7
KHC	Kasperske Hory	6.83	1	eP	Pn	04 29 21.7	-0.9
	comp=Z,10.0nm,0.8s						
KHC	Kasperske Hory	6.83	1	Pn	Pn	04 29 22.6	0.0
WET	Wettzell	6.86	357	eP	Pn	04 29 22.3	-0.6
WET	Wettzell	6.86	357	ePn	Pn	04 29 22.3	-0.6
WET	Wettzell	6.86	357	eP	Pn	04 29 22.3	-0.6
VIVF	Saint-Julien-l	6.87	295	ePn	Pn	04 29 25.2	+2.1
VIVF	Saint-Julien-l	6.87	295	ePn	Pn	04 29 25.2	+2.1
VAY	Valandovo	6.88	95	ePn	Pn	04 29 20.2	-3.0
LOMF	Lomont	6.91	319	P	Pn	04 29 25.6	+2.0
LOMF	Lomont	6.91	319	P	Pn	04 29 25.6	+2.0
LOMF	Lomont	6.91	319	P	Pn	04 29 25.6	+2.0
LOMF	Lomont	6.91	319	P	Pn	04 29 25.6	+2.0
BFO	Black Forest	7.03	331	eP	Pn	04 29 26.4	+1.1
BFO	Black Forest	7.03	331	ePn	Pn	04 29 26.4	+1.1
BFO	Black Forest	7.03	331	ePn	Pn	04 29 24.5	-0.8
	comp=Z,7.6nm,0.7s						
BFO				eSn	Sn	04 30 44.3	-0.9
BFO	Black Forest	7.03	331	ePn	Pn	04 29 24.5	-0.8
	comp=Z,7.6nm,0.7s						
BFO	Black Forest	7.03	331	eP	Pn	04 29 26.4	+1.1
BFO				eSn	Sn	04 30 44.3	-0.9
MOF	Molkenrain	7.13	323	P	Pn	04 29 27.4	+0.7
MOF	Molkenrain	7.13	323	P	Pn	04 29 27.4	+0.7
MOF	Molkenrain	7.13	323	P	Pn	04 29 27.4	+0.7
MOF	Molkenrain	7.13	323	P	Pn	04 29 27.4	+0.7
VTS	Vitosha	7.22	84	⇓P	Pn	04 29 29.5	+1.4
VTS	Vitosha	7.22	84	⇓iP	Pn	04 29 29.5	+1.4
VTS	Vitosha	7.22	84	ePn	Pn	04 29 29.4	+1.4
VTS	Vitosha	7.22	84	ePn	Pn	04 29 29.4	+1.4
HINF	Hinteralfeld	7.23	322	ePn	Pn	04 29 27.8	-0.2
	SNR=1.0						
HINF				eSn	Sn	04 30 44.2	-6.0
	comp=Z,30nm,0.7s,SNR=1.0						
HINF	Hinteralfeld	7.23	322	ePn	Pn	04 29 27.8	-0.2
	SNR=1.0						
LASF	Ste Croix	7.24	287	ePn	Pn	04 29 28.7	+0.5
	SNR=1.0						
LASF	Ste Croix	7.24	287	ePn	Pn	04 29 28.7	+0.5
	SNR=1.0						
VYHS	Vyhne	7.26	30	ePN	Pn	04 29 29.9	+1.5
VYHS				eSN	Sn	04 30 46.3	-4.5
KEST	Kesra	7.30	207	ePn	Pn	04 29 33.6	+4.6
KEST	Kesra	7.30	207	Pn	Pn	04 29 34.4	+5.4
	comp=Z,1.0nm,0.3s,baz=295,slow=4.9,SNR=28						
KEST				LR	LR	04 32 29.1	
	comp=Z,82nm,19.8s,baz=258,slow=39						
ECH	Echery	7.40	325	eP	Pn	04 29 29.8	-0.5
ECH				pmax	pmax		
	comp=Z,10.0nm,0.3s						
ECH	Echery	7.40	325	ePn	Pn	04 29 29.8	-0.5
	comp=Z,9.7nm,0.3s						
ECH	Echery	7.40	325	P	Pn	04 29 30.5	+0.2
ECH	Echery	7.40	325	ePn	Pn	04 29 29.8	-0.5
	comp=Z,9.7nm,0.3s						
ECH	Echery	7.40	325	P	Pn	04 29 30.5	+0.2
GZR	Gura Zlata	7.41	62	⇓iP	Pn	04 29 33.1	+2.5
GZR	Gura Zlata	7.41	62	⇓iP	Pn	04 29 33.1	+2.5
CDF	Champ du Feu	7.50	327	ePn	Pn	04 29 31.5	-0.3
	SNR=1.0						
CDF				eSn	Sn	04 30 51.3	-5.6
	comp=Z,10.0nm,0.4s						
CDF	Champ du Feu	7.50	327	ePn	Pn	04 29 31.5	-0.3
	SNR=1.0						
ROTZ	Rotzenmuhle	7.52	354	ePn	Pn	04 29 31.8	-0.2
GRA1	Grafenberg Arr	7.55	349	eP	Pn	04 29 31.9	-0.6
GRF	Grafenberg Arr	7.55	349	eP	Pn	04 29 31.9	-0.6
GRF	Grafenberg Arr	7.55	349	ePn	Pn	04 29 31.9	-0.6
HAU	Haudompre	7.60	321	ePn	Pn	04 29 33.0	-0.1
	SNR=1.0						
HAU				eSn	Sn	04 30 51.8	-7.5
	comp=Z,33nm,0.7s,SNR=1.0						
HAU	Haudompre	7.60	321	ePn	Pn	04 29 33.0	-0.1
	SNR=1.0						
PRU	Pruhonice	7.72	5	eSN	Sn	04 31 01.4	-0.9
PRU	Pruhonice	7.72	5	Sn	Sn	04 31 01.4	-0.9
THEF	They Montfort	7.93	321	P	Pn	04 29 37.6	0.0
THEF	They Montfort	7.93	321	P	Pn	04 29 37.6	0.0
THEF	They Montfort	7.93	321	P	Pn	04 29 37.6	0.0
THEF	They Montfort	7.93	321	P	Pn	04 29 37.6	0.0
NKC	Novy Kostel	7.96	355	eSN	Sn	04 31 06.5	-1.7
DRGR		7.99	53	⇓iP	Pn	04 29 42.0	+3.5
MORC	Moravsky Berou	8.00	19	⇑P	Pn	04 29 40.4	+1.8
MORC	Moravsky Berou	8.00	19	ePn	Pn	04 29 39.4	+0.8
	comp=Z,6.5nm,1.0s						
MORC				eSn	Sn	04 31 06.4	-2.7
MORC	Moravsky Berou	8.00	19	⇑iP	Pn	04 29 40.4	+1.8
MORC	Moravsky Berou	8.00	19	P	Pn	04 29 40.4	+1.8
MORC	Moravsky Berou	8.00	19	ePn	Pn	04 29 41.6	+3.0
LOT	Lotru	8.09	64	⇑iP	Pn	04 29 42.5	+2.6
LOT	Lotru	8.09	64	⇑iP	Pn	04 29 42.5	+2.6
DPC	Dobruska-Polom	8.29	13	AMS	AMS	04 33 10.0	
	comp=Z,300nm,9.4s						
SFTF	Sexfontaines	8.37	318	ePn	Pn	04 29 43.7	0.0
SFTF				eSn	Sn	04 31 10.2	-8.0
	comp=Z,3.4nm,0.3s						
SFTF	Sexfontaines	8.37	318	ePn	Pn	04 29 43.7	0.0
MEZF	Maizieres J'vi	8.56	319	ePn	Pn	04 29 46.6	+0.3
MEZF				eSn	Sn	04 31 16.7	-6.2
	comp=Z,6.9nm,0.3s						
MEZF	Maizieres J'vi	8.56	319	ePn	Pn	04 29 46.6	+0.3
BRG	Berggiesshubel	8.58	2	PN	Pn	04 29 47.4	+0.8
BRG				SN	Sn	04 31 22.6	-0.7
BRG				SG	Sg	04 32 28.6	+11
	comp=Z,34nm,1.7s						
BRG	Berggiesshubel	8.58	2	P	Pn	04 29 47.3	+0.8
BRG						04 31 22.6	
BRG				smax	smax		
	comp=N,34nm,1.7s						
BRG	Berggiesshubel	8.58	2	P	Pn	04 29 47.3	+0.8
BRG				S	Sn	04 31 22.6	-0.7
	comp=N,34nm,1.7s						
ARR	Arges	8.64	65	⇓iP	Pn	04 29 49.7	+2.3
ARR	Arges	8.64	65	⇓iP	Pn	04 29 49.7	+2.3
CRVS	Cervenica-Dubn	8.66	38	ePN	Pn	04 29 48.6	+1.0
CRVS	Cervenica-Dubn	8.66	38	ePn	Pn	04 29 48.6	+1.0
TRPA	Tarpa	8.66	45	⇑iP	Pn	04 29 50.3	+2.7
TRPA	Tarpa	8.66	45	⇓ePn	Pn	04 29 50.4	+2.8
TRPA	Tarpa	8.66	45	⇓eP	Pn	04 29 50.4	+2.8
CAF	Calviac	8.67	291	eP	Pn	04 29 49.7	+1.9
CAF	Calviac	8.67	291	eP	Pn	04 29 49.7	+1.9
UZH	Uzhgorod	8.86	41	eP	Pn	04 29 51.9	+1.5
UZH				eS	Sn	04 31 32.7	+2.5
UZH	Uzhgorod	8.86	41	eP	Pn	04 29 51.9	+1.5
UZH				eS	Sn	04 31 32.7	+2.5
VOIR		8.94	66	⇑iP	Pn	04 29 54.7	+3.2
CLL	Collm	9.02	358	eP	Pn	04 29 58.0	+5.5
CLL				e		04 31 32.0	
CLL	Collm	9.02	358	e(Pn)	Pn	04 29 58.0	+5.5
CLL				eSn	Sn	04 31 32.0	-2.0
CLL				eSb1		04 32 05.0	
CLL				e(Sb2)		04 32 31.0	
CLL				eSg		04 32 47.0	
	comp=E,100nm,23.6s						
MLR	Muntele Rosu	9.56	66	Pn	Pn	04 30 02.8	+2.7
MLR	Muntele Rosu	9.56	66	⇑iP	Pn	04 30 03.0	+2.9
MLR	Muntele Rosu	9.56	66	Pn	Pn	04 30 02.8	+2.7
	comp=E,0.1nm,0.3s,baz=208,slow=7.6,SNR=30						
MLR	Muntele Rosu	9.56	66	P	Pn	04 30 02.8	+2.7
KWP	Kalwaria Pacla	9.75	38	⇑P	Pn	04 30 04.6	+2.0
KWP	Kalwaria Pacla	9.75	38	ePn	Pn	04 30 07.1	+4.5
	comp=E,20nm,1.0s						
KWP	Kalwaria Pacla	9.75	38	⇑iP	Pn	04 30 04.6	+2.0
KWP	Kalwaria Pacla	9.75	38	eP	Pn	04 30 07.8	+5.2
KWP	Kalwaria Pacla	9.75	38	P	Pn	04 30 04.6	+2.0
BURAR	Bucovina Array	9.88	53	⇑iP	Pn	04 30 07.4	+3.0
BURAR	Bucovina Array	9.88	53	⇑iP	Pn	04 30 07.4	+3.0
BUR08	Bucovina Ar. S	9.88	53	ePn	Pn	04 30 07.6	+3.1
BUR08	Bucovina Ar. S	9.88	53	ePn	Pn	04 30 07.6	+3.1
PLOR	Plostina	10.13	65	⇑P	Pn	04 30 10.1	+2.2
PLOR	Plostina	10.13	65	⇑iP	Pn	04 30 10.1	+2.2
PLOR	Plostina	10.13	65	P	Pn	04 30 10.1	+2.2
VRI	Vrincioaia	10.19	65	⇑P	Pn	04 30 10.8	+2.2
VRI	Vrincioaia	10.19	65	⇑iP	Pn	04 30 10.8	+2.2
VRI	Vrincioaia	10.19	65	P	Pn	04 30 10.8	+2.2
LVV	L'vov	10.50	41	eP	Pn	04 30 18.1	+5.2
AKASG	Malin Array Be	13.71	47	P	Pn	04 30 57.0	+0.4
AKASG	Malin Array Be	13.71	47	Pn	Pn	04 30 57.0	+0.4
AKASG	Malin Array Be	13.71	47	Pn	Pn	04 30 57.0	+0.4
	comp=E,0.3nm,0.3s,baz=238,slow=12,SNR=3.5						
AKASG	Malin Array Be	13.71	47	P	Pn	04 30 57.0	+0.4
BRTR	Keskin Array B	15.45	93	Pn	P	04 31 25.1	+0.2

BRTR	**Keskin Array B**	**15.45**	**93**	Pn	**P**	**04 31 25.1**	**+0.2**
	comp=E,0.1nm,0.3s,baz=285,slow=7.3,SNR=4.2						
BRTR	**Keskin Array B**	**15.45**	**93**	P	**P**	**04 31 25.2**	**+0.2**
ANN	**Anapa**	**17.54**	**74**	*e*P	Pn	04 31 40.6	-6.3
ANN				*e*S	Sn	04 34 53.3	-8.9
ANN				pmax	pmax		
	comp=Z,20nm,1.3s						
HFS	**Hagfors**	**17.86**	**0**	LR	LR	04 39 39.9	
	comp=Z,39nm,19.2s,baz=17,slow=40						
NB2	**NORSAR Subarra**	**18.82**	**357**	P	**Pn**	**04 32 02.8**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=175,slow=10						
NB2	**NORSAR Subarra**	**18.82**	**357**	P	**Pn**	**04 32 02.8**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=175,slow=9.7,SNR=5.6						
NOA	**NORSAR Array B**	**18.82**	**357**	P	**P**	**04 32 02.0**	**+0.1**
NOA	**NORSAR Array B**	**18.82**	**357**	P	**P**	**04 32 02.0**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=172,slow=12,SNR=5.0						
NOA	**NORSAR Array B**	**18.82**	**357**	P	**P**	**04 32 02.0**	**+0.1**
MALT	**Malatya**	**19.43**	**93**	*e*P	**Pn**	**04 32 10.5**	**+0.4**
MALT				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MALT	**Malatya**	**19.43**	**93**	*e*P	**Pn**	**04 32 10.5**	**+0.4**
	comp=Z,4.8nm,1.0s						
MALT	**Malatya**	**19.43**	**93**	*e*P	**Pn**	**04 32 10.5**	**+0.4**
	comp=Z,5.0nm,1.0s						
VSR	**Storozhevoye**	**19.66**	**54**	*e*P	**P**	**04 32 07.3**	**-3.8**
VSR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
VSR				pmax	pmax		
	comp=N,4.0nm,0.3s						
VSR				pmax	pmax		
	comp=E,4.0nm,0.4s						
OBN	**Obninsk**	**19.80**	**42**	*e*P	**P**	**04 32 11.2**	**-1.5**
OBN				*e*S	**S**	**04 35 51.5**	**-4.1**
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
OBN	**Obninsk**	**19.80**	**42**	*e*P	**P**	**04 32 11.2**	**-1.5**
	comp=Z,7.0nm,1.0s						
TAM	**Tamanrasset**	**20.55**	**201**	*e*P	**P**	**04 32 19.9**	**-1.3**
TAM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TAM	**Tamanrasset**	**20.55**	**201**	*e*P	**P**	**04 32 19.9**	**-1.3**
	comp=Z,3.6nm,1.1s						
TAM	**Tamanrasset**	**20.55**	**201**	*e*P	**P**	**04 32 19.9**	**-1.3**
	comp=Z,4.0nm,1.1s						
FINES	**FINESS Array B**	**20.62**	**17**	P	**P**	**04 32 21.3**	**-0.2**
FINES	**FINESS Array B**	**20.62**	**17**	P	**P**	**04 32 21.3**	**-0.2**
	comp=Z,6.9nm,1.0s,baz=180,slow=11,SNR=9.5						
FINES	**FINESS Array B**	**20.62**	**17**	P	**P**	**04 32 21.3**	**-0.2**
	comp=Z,7.0nm,1.0s						
VRHR	**Novokhopersk**	**21.12**	**56**	*e*P	**P**	**04 32 30.0**	**+3.0**
VRHR				pmax	pmax		
	comp=E,7.0nm,0.5s						
VRHR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VRHR				pmax	pmax		
	comp=N,2.0nm,0.3s						
VRHR	**Novokhopersk**	**21.12**	**56**	*e*P	**P**	**04 32 30.0**	**+3.0**
	comp=N,2.0nm,0.3s						
KIV	**Kislovodsk**	**21.35**	**76**	*e*P	**P**	**04 32 28.3**	**-1.4**
KIV				pmax	pmax		
	comp=Z,16nm,0.9s						
KIV				MLR	MLR		
	comp=Z,20nm,15.0s						
KIV	**Kislovodsk**	**21.35**	**76**	*e*P	**P**	**04 32 31.1**	**+1.5**
	comp=Z,10.0nm,0.8s						
KIV	**Kislovodsk**	**21.35**	**76**	*e*P	**P**	**04 32 28.3**	**-1.4**
	comp=Z,20nm,15.0s						
KBZ	**Khabaz**	**21.53**	**76**	P	**P**	**04 32 33.5**	**+2.1**
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBZ	**Khabaz**	**21.53**	**76**	P	**P**	**04 32 33.5**	**+2.1**
KBZ	**Khabaz**	**21.53**	**76**	P	**P**	**04 32 33.5**	**+2.1**
	comp=Z,6.5nm,1.0s,baz=318,slow=6.4,SNR=8.4						
KBZ	**Khabaz**	**21.53**	**76**	P	**P**	**04 32 33.5**	**+2.1**
	comp=Z,7.0nm,1.0s						
KLMR	**Klimovskoe**	**24.36**	**31**	P	**P**	**04 32 55.8**	**-4.4**
KLMR				pmax	pmax		
	comp=Z,15nm,2.2s						
TORD	**Torodi Ar. Bea**	**30.79**	**203**	P	**P**	**04 33 59.9**	**+1.7**
TORD	**Torodi Ar. Bea**	**30.79**	**203**	P	**P**	**04 33 59.9**	**+1.7**
	comp=Z,0.6nm,0.5s,baz=12,slow=9.0,SNR=15						
TORD	**Torodi Ar. Bea**	**30.79**	**203**	P	**P**	**04 33 59.9**	**+1.7**
ARU	**Arti**	**31.96**	**48**	*d i*P	**P**	**04 34 07.2**	**-0.9**
ARU						04 35 09.3	
ARU				S	**S**	**04 39 19.5**	**+0.3**
ARU				SS	**SnSn**	**04 41 05.5**	**-2.0**
ARU				pmax	pmax		
	comp=Z,11nm,1.2s						
ARU	**Arti**	**31.96**	**48**	*i* P	**P**	**04 34 07.2**	**-0.9**
	comp=Z,11nm,1.2s						
ARU				S	**S**	**04 39 19.5**	**+0.3**
ABKAR	**Akbulak array**	**32.73**	**62**	*e*P	**P**	**04 34 15.1**	**+0.1**
ABKAR	**Akbulak array**	**32.73**	**62**	*e*P	**P**	**04 34 15.1**	**+0.1**
BRVK	**Borovoye**	**38.77**	**54**	*e*P	**P**	**04 35 06.2**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRVK	**Borovoye**	**38.77**	**54**	*e*P	**P**	**04 35 05.7**	**-1.0**
	comp=Z,4.9nm,1.0s						
BRVK	**Borovoye**	**38.77**	**54**	*e*P	**P**	**04 35 06.2**	**-0.5**
	comp=Z,4.0nm,1.0s						
BVAR	**Borovoye Array**	**38.84**	**54**	P	**P**	**04 35 08.5**	**+1.2**
BVAR	**Borovoye Array**	**38.84**	**54**	P	**P**	**04 35 08.4**	**+1.2**
BVAR	**Borovoye Array**	**38.84**	**54**	P	**P**	**04 35 08.4**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=273,slow=5.1,SNR=4.0						
BVAR	**Borovoye Array**	**38.84**	**54**	P	**P**	**04 35 08.5**	**+1.2**
EKS2	**Erkin-Say**	**43.64**	**68**	*e*P	**P**	**04 35 48.5**	**+1.5**
EKS2				pmax	pmax		
	comp=Z,7.0nm,1.1s						
EKS2	**Erkin-Say**	**43.64**	**68**	*e*P	**P**	**04 35 48.5**	**+1.5**
	comp=Z,6.7nm,1.1s						
EKS2	**Erkin-Say**	**43.64**	**68**	*e*P	**P**	**04 35 48.5**	**+1.5**
	comp=Z,7.0nm,1.1s						
AAK	**Ala-Archa**	**44.14**	**68**	*e*P	**P**	**04 35 50.9**	**-0.2**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
AAK	**Ala-Archa**	**44.14**	**68**	*e*P	**P**	**04 35 52.2**	**+1.1**
	comp=Z,15nm,1.2s						
AAK	**Ala-Archa**	**44.14**	**68**	P	**P**	**04 35 52.4**	**+1.3**
	comp=Z,2.1nm,1.0s,baz=271,slow=8.9,SNR=3.6						
AAK	**Ala-Archa**	**44.14**	**68**	*e*P	**P**	**04 35 50.9**	**-0.2**
	comp=Z,9.0nm,1.3s						
KURBB	**Kurchatov Arra**	**44.27**	**56**	P	**P**	**04 35 52.3**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=290,slow=8.1,SNR=4.6						
KURK	**Kurchatov**	**44.30**	**56**	*e*P	**P**	**04 35 50.4**	**-1.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KURK	**Kurchatov**	**44.30**	**56**	*e*P	**P**	**04 35 49.9**	**-2.2**
	comp=Z,1.9nm,1.0s						
KURK	**Kurchatov**	**44.30**	**56**	*e*P	**P**	**04 35 50.4**	**-1.7**
	comp=Z,2.0nm,1.2s						
ZALV	**Zalesovo Beam**	**47.08**	**50**	P	**P**	**04 36 14.3**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**47.08**	**50**	P	**P**	**04 36 14.3**	**+0.3**
ZALV	**Zalesovo Beam**	**47.08**	**50**	P	**P**	**04 36 14.3**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=317,slow=9.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**47.08**	**50**	P	**P**	**04 36 14.3**	**+0.3**
	comp=Z,1.0nm,0.3s						
MK31	**Makanchi Array**	**47.83**	**60**	*e*P	**P**	**04 36 20.4**	**+0.3**
MK31	**Makanchi Array**	**47.83**	**60**	*e*P	**P**	**04 36 20.4**	**+0.3**
MK31	**Makanchi Array**	**47.83**	**60**	*e*P	**P**	**04 36 20.4**	**+0.3**
MKAR	**Makanchi Array**	**47.83**	**60**	P	**P**	**04 36 20.6**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**47.83**	**60**	P	**P**	**04 36 20.6**	**+0.6**
MKAR	**Makanchi Array**	**47.83**	**60**	P	**P**	**04 36 20.6**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=283,slow=7.1,SNR=10						
MKAR	**Makanchi Array**	**47.83**	**60**	P	**P**	**04 36 20.6**	**+0.6**
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**61.97**	**50**	P	**P**	**04 38 04.0**	**+1.5**
SONM	**Songino Array**	**61.97**	**50**	P	**P**	**04 38 04.0**	**+1.5**
	comp=Z,1.0nm,0.9s,baz=292,slow=7.6,SNR=4.8						
SONM	**Songino Array**	**61.97**	**50**	P	**P**	**04 38 04.0**	**+1.5**
	comp=Z,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**67.57**	**337**	P	**P**	**04 38 37.5**	**-1.1**
YKA	**Yellowknife Ar**	**67.57**	**337**	P	**P**	**04 38 37.4**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=40,slow=5.8,SNR=8.8						
YKA	**Yellowknife Ar**	**67.57**	**337**	P	**P**	**04 38 37.5**	**-1.1**
ILAR	**Eielson Array**	**72.16**	**351**	P	**P**	**04 39 06.8**	**+0.1**
ILAR	**Eielson Array**	**72.16**	**351**	P	**P**	**04 39 06.7**	**+0.1**
	comp=Z,0.6nm,0.9s,baz=7.9,slow=5.7,SNR=3.7						
ILAR	**Eielson Array**	**72.16**	**351**	P	**P**	**04 39 06.8**	**+0.1**
KSRS	**Korea Array**	**80.70**	**47**	LR	LR	05 18 53.2	
	comp=Z,21nm,18.8s,baz=150,slow=38						
BMO	**Blue Mountains**	**82.72**	**327**	*e*P	**P**	**04 40 07.7**	**+1.4**
	comp=Z,1.7nm,0.8s						
BMO	**Blue Mountains**	**82.72**	**327**	*e*P	**P**	**04 40 07.7**	**+1.4**
	comp=Z,1.7nm,0.8s						

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*NIED **08** 04:28:00, 36.°20N×141.°90E, h23km, Mw4.1 Best double couple: M0 1.58000×10^15 NP1:φs30.00000°, δ61.00000°, λ93.00000°. NP2:φs204.00000°, δ29.00000°, λ85.00000°.*
*IDC **08** 04:28:47.4±0.6, 36.°10N×141.°81E, h0km, mb4.0/23, mb1 4.1/28, mb1mx4.1/39, mbtmp4.1/28, ML4.1/3, MS3.3/9, Ms1 3.3/9, ms1mx3.0/44, Error ellipse: s-maj=15.3km s-min=13.6km az=111.0*
*ISCJB **08** 04:28:49.5±1.1, 36.°15N±0.°03×141.°89E±0.°05, h27km±8km, mb4.1/35, MS3.3/5, Error ellipse: s-maj=6.6km s-min=5.3km az=13.4*
*JMA **08** 04:28:50.1±0.2, 36.°17N×141.°87E, h46km, M3.9*
*NEIC **08** 04:28:51.3±2.4, 36.°17N×141.°82E, h24km±16km, mb4.3/13, Error ellipse: s-maj=8.6km s-min=6.9km az=145.0*
ISC 08 04:28:51.8±1.1**, 36.°13N**±0.°05**×141.°81E**±0.°06**, h29**km±7km**, n93, σ0.s92**/96**, mb4.2**/35**, MS3.5**/5**, 5C-3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.88**	**241**	P	**Pb**	**04 29 07.1**	**-1.4**
CHOJ				S	**Sb**	**04 29 19.9**	**0.0**
JHO	**Hitachi**	**1.11**	**296**	⇓P	**Pn**	**04 29 09.5**	**-1.9**
ONAJ	**Iwakimizuishiy**	**1.26**	**320**	P	**Pn**	**04 29 11.6**	**-2.0**
ONAJ				*e*S	**Sn**	**04 29 29.5**	**-0.1**
JFK	**Kawauchi**	**1.44**	**329**	P	**Pn**	**04 29 14.5**	**-1.5**
BSO1	**Boso 1**	**1.62**	**205**	⇓P	**Pn**	**04 29 17.7**	**-0.3**
BSO1				S	**Sb**	**04 29 39.9**	**-0.7**
BSO3	**Boso 3**	**1.70**	**219**	P	**Pn**	**04 29 19.2**	**-0.1**
JFT	**Otama**	**1.82**	**320**	P	**Pn**	**04 29 20.7**	**-0.5**
JFT				*e*S	**Sn**	**04 29 42.0**	**-1.3**
JMM	**Marumori**	**1.91**	**335**	⇑P	**Pn**	**04 29 21.1**	**-1.4**
JAG	**Ashikaga**	**1.92**	**279**	⇓P	**Pn**	**04 29 21.6**	**-1.0**
JFY	**Yanaizu**	**2.11**	**308**	⇑P	**Pn**	**04 29 24.9**	**-0.4**
JKT	**Katashina**	**2.16**	**288**	⇑P	**Pn**	**04 29 25.7**	**-0.2**
JRY	**Ryogami san**	**2.35**	**268**	⇑P	**Pn**	**04 29 27.8**	**-0.8**
JRY				*e*S	**Sn**	**04 29 57.1**	**+0.5**
JOD2	**Odawara 2**	**2.38**	**249**	⇑P	**Pn**	**04 29 28.9**	**0.0**
JOD2				*e*S	**Sn**	**04 29 56.9**	**-0.2**
MJAR	**Matsushiro Arr**	**2.93**	**279**	Pn	**Pn**	**04 29 36.3**	**-0.2**
MJAR	**Matsushiro Arr**	**2.93**	**279**	Pn	**Pn**	**04 29 36.3**	**-0.2**
	16nm,0.3s,baz=112,slow=7.6,SNR=179						
MJAR				LR	LR	04 30 49.7	
	comp=Z,494nm,19.3s,baz=100,slow=42						
MAJO	**Matsushiro**	**2.93**	**279**	*e*Pn	**Pn**	**04 29 36.8**	**+0.2**
MAT	**Matsushiro**	**2.93**	**279**	P	**Pn**	**04 29 37.0**	**+0.4**
MAT				S	**Sn**	**04 30 13.8**	**+2.9**
JHJ	**Hachijo jima 2**	**3.44**	**210**	Pn	**Pn**	**04 29 42.9**	**-0.6**
	61nm,0.3s,baz=133,slow=2.3,SNR=20						
JHJ				Sn	**Sn**	**04 30 22.0**	**-1.3**
	137nm,0.3s,baz=283,slow=23,SNR=12						
ERM	**Erimo**	**5.97**	**10**	*e*Pn	**Pn**	**04 30 15.4**	**-2.8**
	11nm,0.5s						
ASAJ	**Asahikawa**	**8.00**	**4**	Pn	**Pn**	**04 30 44.0**	**-2.0**
ASAJ	**Asahikawa**	**8.00**	**4**	Pn	**Pn**	**04 30 44.0**	**-2.0**
	2.6nm,0.3s,baz=185,slow=14,SNR=9.2						
ASAJ				LR	LR	04 34 55.8	
	comp=Z,196nm,19.0s,baz=333,slow=46						
CBIJ	**Chichi jima**	**9.02**	**178**	Pn	Pn	04 30 56.9	-3.2
CBIJ				Sn	Sn	04 32 30.8	-10
CBIJ	**Chichi jima**	**9.02**	**178**	Pn	Pn	04 30 56.9	-3.2
	15nm,0.3s,baz=296,slow=17,SNR=13						
CBIJ				Sn	Sn	04 32 30.8	-10
	11nm,0.3s,baz=97,slow=19,SNR=4.8						
JNU	**Nakatsue**	**9.49**	**255**	Pn	**Pn**	**04 31 08.7**	**+2.0**
JNU	**Nakatsue**	**9.49**	**255**	Pn	**Pn**	**04 31 08.7**	**+2.0**
	0.2nm,0.3s,baz=71,slow=12,SNR=2.7						
USRK	**Ussuriysk Arra**	**11.00**	**320**	Pn	**Pn**	**04 31 27.6**	**+0.4**
	0.3nm,0.3s,baz=120,slow=14,SNR=1.9						
USRK				LR	LR	04 35 32.5	
	comp=Z,203nm,18.2s,baz=159,slow=37						
KSRS	**Korea Array**	**11.21**	**281**	Pn	Pn	04 31 33.5	+3.4
	0.6nm,0.3s,baz=96,slow=14,SNR=10.0						
KSRS				LR	LR	04 35 53.4	
	comp=Z,90nm,18.4s,baz=159,slow=38						
KSAR	**Wonju Array Be**	**11.24**	**281**	Pn	Pn	04 31 33.5	+3.0
PETK	**Petropavlovsk-**	**20.32**	**28**	LR	LR	04 41 08.3	
	comp=Z,28nm,20.2s,baz=11,slow=36						
ULN	**Ulaanbaatar**	**28.13**	**305**	*e*P	**P**	**04 34 40.3**	**-1.2**
	1.9nm,0.6s						
SONM	**Songino Array**	**28.55**	**305**	P	**P**	**04 34 44.9**	**-0.3**
SONM	**Songino Array**	**28.55**	**305**	P	**P**	**04 34 44.9**	**-0.3**
	3.1nm,0.6s,baz=106,slow=9.1,SNR=20						
SONM				LR	LR	04 46 18.1	
	comp=Z,69nm,20.7s,baz=169,slow=37						
ZALV	**Zalesovo Beam**	**42.76**	**313**	P	**P**	**04 36 46.5**	**+0.1**
ZALV	**Zalesovo Beam**	**42.76**	**313**	P	**P**	**04 36 46.5**	**+0.1**
	3.7nm,0.7s,baz=92,slow=7.0,SNR=14						
MK31	**Makanchi Array**	**44.87**	**303**	*e*P	**P**	**04 37 03.5**	**0.0**
MKAR	**Makanchi Array**	**44.87**	**303**	P	**P**	**04 37 03.5**	**0.0**
MKAR	**Makanchi Array**	**44.87**	**303**	P	**P**	**04 37 03.5**	**0.0**
	1.9nm,0.6s,baz=86,slow=9.0,SNR=18						
MKAR				LR	LR	04 56 35.4	
	comp=Z,46nm,18.1s,baz=266,slow=37						
KURK	**Kurchatov**	**46.74**	**309**	*e*P	**P**	**04 37 17.9**	**-0.3**
	4.9nm,0.5s						
KURBB	**Kurchatov Arra**	**46.81**	**309**	P	**P**	**04 37 18.2**	**-0.5**
	4.3nm,0.5s,baz=84,slow=8.2,SNR=46						
KDAK	**Kodiak Island**	**47.56**	**41**	P	**P**	**04 37 24.6**	**+0.2**
KDAK	**Kodiak Island**	**47.56**	**41**	P	**P**	**04 37 24.6**	**+0.2**
	2.0nm,0.8s,baz=270,slow=6.1,SNR=3.3						
ILAR	**Eielson Array**	**50.09**	**32**	P	**P**	**04 37 43.7**	**-0.2**
ILAR	**Eielson Array**	**50.09**	**32**	P	**P**	**04 37 43.7**	**-0.2**
	1.0nm,0.7s,baz=267,slow=6.4,SNR=16						
TKM2	**Tokmak 2**	**50.34**	**299**	*e*P	**P**	**04 37 45.4**	**-0.9**
	3.7nm,0.6s						
AAK	**Ala-Archa**	**51.20**	**299**	*e*P	**P**	**04 37 53.6**	**+0.9**
AAK	**Ala-Archa**	**51.20**	**299**	P	**P**	**04 37 54.1**	**+1.4**
	2.7nm,0.6s,baz=37,slow=12,SNR=5.6						
BVAR	**Borovoye Array**	**51.41**	**313**	P	**P**	**04 37 53.5**	**-0.5**
BVAR	**Borovoye Array**	**51.41**	**313**	P	**P**	**04 37 53.5**	**-0.5**
	1.1nm,0.5s,baz=78,slow=7.5,SNR=5.8						
BRVK	**Borovoye**	**51.47**	**313**	*e*P	**P**	**04 37 54.5**	**+0.1**
	2.9nm,0.8s						
EKS2	**Erkin-Say**	**51.70**	**299**	*e*P	**P**	**04 37 57.0**	**+0.5**
	3.4nm,0.9s						
KKAR	**Karatay Array**	**53.85**	**301**	*e*P	**P**	**04 38 12.0**	**-0.2**
	1.5nm,0.5s						
INK	**Inuvik**	**55.05**	**27**	P	**P**	**04 38 21.1**	**+0.7**
INK	**Inuvik**	**55.05**	**27**	P	**P**	**04 38 21.1**	**+0.7**
	1.1nm,0.6s,baz=290,slow=7.6,SNR=7.5						
CTA	**Charters Tower**	**56.07**	**175**	LR	LR	05 02 12.3	
	comp=Z,40nm,18.8s,baz=48,slow=36						
WRAB	**Tennant Creek**	**56.20**	**188**	*e*P	**P**	**04 38 28.7**	**-0.6**
	3.3nm,0.7s						
WRA	**Warramunga Arr**	**56.22**	**188**	P	**P**	**04 38 28.8**	**-0.6**
WRA	**Warramunga Arr**	**56.22**	**188**	P	**P**	**04 38 28.7**	**-0.6**
	0.7nm,0.5s,baz=9.9,slow=7.1,SNR=7.5						
ARU	**Arti**	**57.24**	**319**	*e*P	**P**	**04 38 36.3**	**0.0**
	4.7nm,0.5s						
ABKAR	**Akbulak array**	**58.76**	**311**	*e*P	**P**	**04 38 46.5**	**-0.5**
	1.9nm,0.5s						
AKTO	**Aktyubinsk**	**59.51**	**312**	P	**P**	**04 38 51.7**	**-0.6**
AKTO	**Aktyubinsk**	**59.51**	**312**	P	**P**	**04 38 51.7**	**-0.6**
	1.4nm,0.7s,baz=87,slow=13,SNR=4.7						
ASAR	**Alice Springs**	**59.94**	**188**	P	**P**	**04 38 55.0**	**-0.4**
ASAR	**Alice Springs**	**59.94**	**188**	P	**P**	**04 38 55.0**	**-0.4**
	0.4nm,0.5s,baz=14,slow=8.6,SNR=9.0						
RES	**Resolute Bay**	**63.39**	**14**	*e*P	**P**	**04 39 18.0**	**-0.1**
	1.4nm,0.7s						
RES	**Resolute Bay**	**63.39**	**14**	P	**P**	**04 39 18.3**	**+0.2**
	0.8nm,0.5s,baz=322,slow=6.4,SNR=15						
YKA	**Yellowknife Ar**	**64.43**	**30**	P	**P**	**04 39 25.6**	**+0.5**
YKA	**Yellowknife Ar**	**64.43**	**30**	P	**P**	**04 39 25.6**	**+0.5**
	0.3nm,0.8s,baz=301,slow=7.0,SNR=6.4						
ARCES	**ARCESS Array B**	**64.95**	**340**	P	**P**	**04 39 28.8**	**+0.4**
ARCES	**ARCESS Array B**	**64.95**	**340**	P	**P**	**04 39 28.8**	**+0.4**
	1.9nm,0.8s,baz=61,slow=9.4,SNR=5.5						
ARCES				LR	LR	05 13 35.4	
	comp=Z,47nm,18.0s,baz=351,slow=41						
FINES	**FINESS Array B**	**69.76**	**333**	P	**P**	**04 39 58.8**	**-0.1**
FINES	**FINESS Array B**	**69.76**	**333**	P	**P**	**04 39 58.7**	**-0.1**
	1.0nm,0.4s,baz=70,slow=9.3,SNR=7.6						
NEW	**Newport**	**70.56**	**44**	*e*P	**P**	**04 40 04.8**	**+0.7**
	1.8nm,0.7s						
NEW				*e*pP	**pP**	**04 40 15.0**	**+1.9**
FFC	**Flin Flon**	**74.29**	**33**	*e*P	**P**	**04 40 26.3**	**+0.2**
	1.7nm,0.8s						
HFS	**Hagfors**	**75.04**	**336**	P	**P**	**04 40 30.8**	**+0.4**
HFS	**Hagfors**	**75.04**	**336**	P	**P**	**04 40 30.8**	**+0.4**
	0.8nm,0.5s,baz=87,slow=7.8,SNR=4.5						
BOZ	**Bozeman (W)**	**75.14**	**44**	*e*P	**P**	**04 40 30.4**	**-1.1**
	3.2nm,0.9s						
NB2	**NORSAR Subarra**	**75.14**	**338**	P	**P**	**04 40 31.0**	**0.0**
	comp=Z,0.6nm,0.5s,baz=42,slow=6.2						
NOA	**NORSAR Array B**	**75.14**	**338**	P	**P**	**04 40 31.1**	**+0.1**
NOA	**NORSAR Array B**	**75.14**	**338**	P	**P**	**04 40 31.2**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=39,slow=5.8,SNR=5.1						
AKASG	**Malin Array Be**	**75.20**	**323**	P	**P**	**04 40 31.1**	**-0.4**
AKASG	**Malin Array Be**	**75.20**	**323**	P	**P**	**04 40 31.1**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=46,slow=6.5,SNR=5.2						
FRB	**Frobisher Bay**	**77.58**	**13**	P	**P**	**04 40 43.4**	**-1.3**
FRB	**Frobisher Bay**	**77.58**	**13**	P	**P**	**04 40 43.4**	**-1.3**
	comp=Z,2.9nm,1.0s,baz=332,slow=7.3,SNR=5.4						
PDAR	**Pinedale Array**	**78.07**	**45**	P	**P**	**04 40 48.9**	**+0.7**
PDAR	**Pinedale Array**	**78.07**	**45**	P	**P**	**04 40 48.9**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=290,slow=2.6,SNR=3.5						
BRTR	**Keskin Array B**	**79.69**	**312**	P	**P**	**04 40 57.8**	**+0.7**
BRTR	**Keskin Array B**	**79.69**	**312**	P	**P**	**04 40 57.7**	**+0.7**
	comp=Z,1.1nm,1.0s,baz=103,slow=3.1,SNR=4.1						
TXAR	**Lajitas Array**	**90.42**	**53**	P	**P**	**04 41 51.9**	**+0.9**
TXAR	**Lajitas Array**	**90.42**	**53**	P	**P**	**04 41 51.9**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=270,slow=2.7,SNR=3.7						
LPAZ	**La Paz**	**146.86**	**61**	*e*PKPbc	**PKPbc**	**04 48 32.9**	**+0.3**
LPAZ	**La Paz**	**146.86**	**61**	PKPbc	**PKPbc**	**04 48 33.0**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=337,slow=2.6,SNR=7.1						
SIV	**San Ignacio**	**151.41**	**51**	PKPbc	**PKPbc**	**04 48 43.7**	**+0.3**
SIV	**San Ignacio**	**151.41**	**51**	PKPbc	**PKPbc**	**04 48 43.7**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=342,slow=3.2,SNR=7.0						

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*NEIC **08** 04:37:02.4, 19.°12N×64.°12W, h36km, MD3.7(RSPR), After RSPR.*
RSPR 08 04:37:02.4, 19.°12N×64.°12W, h36km±7km**, MD3.7**/9**, 18C-15D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.84**	**214**	⇓*e*P	Pn	04 37 16.5	-1.1
TBVI				*e*S	Sn	04 37 27.6	-1.2
TBVI	**Tortola**	**0.84**	**214**	⇓*e*P	Pn	04 37 16.5	-1.1
TBVI				*e*S	Sn	04 37 27.6	-1.2
TBVI	**Tortola**	**0.84**	**214**	⇓*e*P	Pn	04 37 16.5	-1.1
TBVI				*e*S	Sn	04 37 27.6	-1.2
STVI	**Saint Thomas**	**1.10**	**226**	⇑*e*P	Pn	04 37 19.9	-1.2
STVI	**Saint Thomas**	**1.10**	**226**	*e*S	Sn	04 37 33.8	-1.2
STVI	**Saint Thomas**	**1.10**	**226**	⇑*e*P	Pn	04 37 19.9	-1.2
STVI				*e*S	Sn	04 37 33.8	-1.2
STVI	**Saint Thomas**	**1.10**	**226**	⇑*e*P	Pn	04 37 19.9	-1.2
STVI				*e*S	Sn	04 37 33.8	-1.2
CDVI	**St. Croix**	**1.49**	**204**	*e*Pn	Pn	04 37 28.1	+1.6
MTP	**Monte Pirata**	**1.69**	**233**	⇑*e*P	Pn	04 37 28.4	-1.0
MTP	**Monte Pirata**	**1.69**	**233**	*e*S	Sn	04 37 48.7	-1.1
MTP	**Monte Pirata**	**1.69**	**233**	⇑*e*P	Pn	04 37 28.4	-1.0
MTP				*e*S	Sn	04 37 48.7	-1.1
MTP	**Monte Pirata**	**1.69**	**233**	⇑*e*P	Pn	04 37 28.4	-1.0
MTP				*e*S	Sn	04 37 48.7	-1.1
CBYP	**Canovanas**	**1.85**	**243**	⇓*e*P	Pn	04 37 30.6	-1.0
CBYP	**Canovanas**	**1.85**	**243**	⇓*e*P	Pn	04 37 30.6	-1.0
CBYP	**Canovanas**	**1.85**	**243**	⇓*e*P	Pn	04 37 30.6	-1.0
HUMP	**Col San Antoni**	**1.90**	**240**	⇑*e*P	Pn	04 37 31.4	-0.9
HUMP	**Col San Antoni**	**1.90**	**240**	*e*S	Sn	04 37 53.9	-1.1
HUMP	**Col San Antoni**	**1.90**	**240**	⇑*e*P	Pn	04 37 31.4	-0.9
HUMP				*e*S	Sn	04 37 53.9	-1.1
HUMP	**Col San Antoni**	**1.90**	**240**	⇑*e*P	Pn	04 37 31.4	-0.9
HUMP				*e*S	Sn	04 37 53.9	-1.1
CPD	**Cerro la Pandu**	**2.01**	**238**	⇑*e*P	Pn	04 37 32.9	-0.9
CPD	**Cerro la Pandu**	**2.01**	**238**	*e*S	Sn	04 37 56.7	-1.1
CPD	**Cerro la Pandu**	**2.01**	**238**	⇑*e*P	Pn	04 37 32.9	-0.9
CPD				*e*S	Sn	04 37 56.7	-1.1
CPD	**Cerro la Pandu**	**2.01**	**238**	⇑*e*P	Pn	04 37 32.9	-0.9
CPD				*e*S	Sn	04 37 56.7	-1.1
SJG	**San Juan**	**2.17**	**243**	*e*Pn	Pn	04 37 34.8	-1.1
SJG				*e*Sn	Sn	04 38 02.0	+0.4
CELP	**Cerrillos**	**2.55**	**246**	⇓*e*P	Pn	04 37 40.4	-0.8
CELP				*e*S	Sn	04 38 10.2	-0.9
CELP	**Cerrillos**	**2.55**	**246**	⇓*e*P	Pn	04 37 40.4	-0.8
CELP				*e*S	Sn	04 38 10.2	-0.9
CELP	**Cerrillos**	**2.55**	**246**	⇓*e*P	Pn	04 37 40.4	-0.8
CELP				*e*S	Sn	04 38 10.2	-0.9
OBIP	**Obispado Ponce**	**2.59**	**246**	⇓*e*P	Pn	04 37 40.9	-0.8
OBIP	**Obispado Ponce**	**2.59**	**246**	⇓*e*P	Pn	04 37 40.9	-0.8
OBIP	**Obispado Ponce**	**2.59**	**246**	⇓*e*P	Pn	04 37 40.9	-0.8
AOPR	**Arecibo Observ**	**2.61**	**253**	⇑*e*P	Pn	04 37 40.9	-1.2
AOPR	**Arecibo Observ**	**2.61**	**253**	⇑*e*P	Pn	04 37 40.9	-1.2
AOPR	**Arecibo Observ**	**2.61**	**253**	⇑*e*P	Pn	04 37 40.9	-1.2
LRS	**Lares**	**2.71**	**253**	*e*Pn	Pn	04 37 41.6	-1.8
LRS				*e*Sn	Sn	04 38 13.6	-1.4
LSP	**Las Mesas**	**2.96**	**252**	⇑*e*P	Pn	04 37 46.1	-0.8
LSP	**Las Mesas**	**2.96**	**252**	⇑*e*P	Pn	04 37 46.1	-0.8
LSP	**Las Mesas**	**2.96**	**252**	⇑*e*P	Pn	04 37 46.1	-0.8
CRPR	**Cabo Rojo, PR**	**3.04**	**249**	⇓*e*P	Pn	04 37 47.5	-0.4
CRPR	**Cabo Rojo, PR**	**3.04**	**249**	⇓*e*P	Pn	04 37 47.5	-0.4
CRPR	**Cabo Rojo, PR**	**3.04**	**249**	⇓*e*P	Pn	04 37 47.5	-0.4
SDDR	**Presa de Saban**	**6.78**	**270**	*e*Pn	Pn	04 38 37.8	-1.6
	18nm,0.6s						

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*CSEM **08** 04:59:45.4, 42.°30N×13.°37E, h11km, After ROM*
ROM 08 04:59:45.4±0.6**, 42.°30N×13.°37E, h11**km±2km**, Ml1.5**/3**, Error ellipse: s-maj=9.9km s-min=3.5km az=30.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**22**	Pg	Pg	04 59 48.3	+0.6
AQU				Sg	Sg	04 59 49.8	+0.4
AQU	**L'Aquila**	**0.06**	**22**	Pg	Pg	04 59 48.3	+0.6
AQU				Sg	Sg	04 59 49.8	+0.4
FAGN	**Fagnano**	**0.16**	**103**	Pg	Pg	04 59 48.9	-0.2
FAGN	**Fagnano**	**0.16**	**103**	Pg	Pg	04 59 48.9	-0.2
VCEL	**Villa Celiera**	**0.36**	**75**	Pg	Pb	04 59 53.6	-0.4
VCEL				Sg	Sg	04 59 58.7	+1.0
	47nm,0.6s						
VCEL	**Villa Celiera**	**0.36**	**75**	Pg	Pb	04 59 53.6	-0.4
VCEL				Sg	Sg	04 59 58.7	+1.0
	47nm,0.6s						
LNSS	**Leonessa**	**0.39**	**321**	Pg	Pg	04 59 53.7	+0.4
LNSS				Sg	Sb	04 59 59.9	-0.8
	28nm,0.3s						
LNSS	**Leonessa**	**0.39**	**321**	Pg	Pg	04 59 53.7	+0.4
LNSS				Sg	Sb	04 59 59.9	-0.8
	28nm,0.3s						
NRCA	**Norcia**	**0.56**	**340**	Pg	Pg	04 59 56.0	-0.6
NRCA				Sg	Sg	05 00 03.8	-0.3
	25nm,0.1s						
NRCA	**Norcia**	**0.56**	**340**	Pg	Pg	04 59 56.0	-0.6
NRCA				Sg	Sg	05 00 03.8	-0.3
	25nm,0.1s						

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*CSEM **08** 05:00:25.2, 42.°31N×13.°47E, h9km, MD1.9/2, After ROM*
ROM 08 05:00:25.2±0.4**, 42.°31N×13.°47E, h9**km±2km**, Md1.9**/2**, Ml1.5**/2**, Error ellipse: s-maj=8.7km s-min=1.5km az=31.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**313**	Pg	Pg	05 00 27.8	+0.4
AQU				Sg	Sg	05 00 29.2	+0.3
	153nm,0.5s						
AQU	**L'Aquila**	**0.07**	**313**	Pg	Pg	05 00 27.8	+0.4
AQU				Sg	Sg	05 00 29.2	+0.3
	153nm,0.5s						
FAGN	**Fagnano**	**0.10**	**117**	Pg	Pg	05 00 28.2	+0.4
FAGN				Sg	Sg	05 00 29.7	+0.1
FAGN	**Fagnano**	**0.10**	**117**	Pg	Pg	05 00 28.2	+0.4
FAGN				Sg	Sg	05 00 29.7	+0.1
VCEL	**Villa Celiera**	**0.29**	**73**	Pg	Pb	05 00 32.1	-0.7
VCEL				Sg	Sb	05 00 36.7	-1.1
	57nm,0.3s						
VCEL	**Villa Celiera**	**0.29**	**73**	Pg	Pb	05 00 32.1	-0.7
VCEL				Sg	Sb	05 00 36.7	-1.1
	57nm,0.3s						
NRCA	**Norcia**	**0.58**	**334**	Pg	Pg	05 00 36.5	-0.2
NRCA				Sg	Sg	05 00 45.3	+0.8
	19nm,0.1s						
NRCA	**Norcia**	**0.58**	**334**	Pg	Pg	05 00 36.5	-0.2
NRCA				Sg	Sg	05 00 45.3	+0.8
	19nm,0.1s						

*ROM **08** 05:24:01.4±0.4, 44°.25N×12°.00E, h32km±3km, Md2.1/7, Ml1.8/4, Error ellipse: s-maj=6.0km s-min=3.2km az=83.0*
*ISCJB **08** 05:24:02.0±0.5, 44°.25N±0°.05×11°.99E±0°.09, h32km±8km, Error ellipse: s-maj=11.8km s-min=7.1km az=19.1*
*CSEM **08** 05:24:02.0±0.1, 44°.25N×11°.97E, h30km, ML2.5/5, Error ellipse: s-maj=4.8km s-min=2.9km az=127.0*
ISC 08 05:24:02.2±0.9**, 44°.24N**±0°.04×**11°.95E**±0°.04**, h31**km±6km**, n19, σ0s.41**/34**, 4C, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAEN	Faenza	0.07	312	Pg	Pb	05 24 06.9	-0.5
FAEN				Sg	Sb	05 24 11.5	+0.5
FAEN	Faenza	0.07	312	Pg	Pb	05 24 06.9	-0.5
FAEN				Sg	Sb	05 24 11.5	+0.5
SFI	Santa Sofia	0.35	192	Pg	Pb	05 24 10.0	-0.4
SFI				Sg	Sb	05 24 16.2	+0.3
	127nm,0.3s						
SFI	Santa Sofia	0.35	192	Pg	Pb	05 24 10.0	-0.4
SFI				Sg	Sb	05 24 16.2	+0.3
	127nm,0.3s						
MTRZ	Monterenzio	0.37	291	Pg	Pn	05 24 11.3	-0.2
	54nm,0.5s						
MTRZ	Monterenzio	0.37	291	Pg	Pn	05 24 11.3	-0.2
	54nm,0.5s						
VMG	Vicchio	0.41	226	Pg	Pb	05 24 10.9	-0.3
VMG				Sg	Sb	05 24 17.9	+0.6
	34nm,0.2s						
VMG	Vicchio	0.41	226	Pg	Pb	05 24 10.9	-0.3
VMG				Sg	Sb	05 24 17.9	+0.6
	34nm,0.2s						
ASQU	Asqua	0.46	194⇑	iPg	Pb	05 24 11.8	-0.3
ASQU				Sg	Sn	05 24 19.7	-0.3
	60nm,0.5s						
ASQU	Asqua	0.46	194⇑	iPg	Pb	05 24 11.8	-0.3
ASQU				Sg	Sn	05 24 19.7	-0.3
	60nm,0.5s						
SEI	Scarperia	0.47	246⇑	iPg	Pb	05 24 11.7	-0.4
SEI				Sg	Sn	05 24 20.3	+0.3
SEI	Scarperia	0.47	246⇑	iPg	Pb	05 24 11.7	-0.4
SEI				Sg	Sn	05 24 20.3	+0.3
PARC	Parchiule	0.63	160	Pg	Pn	05 24 15.1	0.0
	27nm,0.6s						
PARC	Parchiule	0.63	160	Pg	Pn	05 24 15.1	0.0
	27nm,0.6s						
SKDS	Skadanscina	1.96	48	i Pn	Pn	05 24 33.0	-0.4
SKDS				i Sn	Sn	05 24 57.0	0.0
SKDS							
	comp=Z,9.0nm,0.3s						
SKDS	Skadanscina	1.96	48	Pn	Pn	05 24 33.0	-0.4
SKDS				i Sn	Sn	05 24 57.0	0.0
	comp=Z,9.0nm,0.3s						
JAVS	Javornik	2.23	42	i Pn	Pn	05 24 36.7	-0.4
JAVS				i Sn	Sn	05 25 04.2	+0.5
JAVS							
	comp=Z,2.0nm,0.2s						
JAVS	Javornik	2.23	42	i Pn	Pn	05 24 36.7	-0.4
JAVS				i Sn	Sn	05 25 04.2	+0.5
	comp=Z,2.0nm,0.2s						
CRNS	Crni Vrh	2.46	41	i Pn	Pn	05 24 40.3	+0.1
CRNS				i Sn	Sn	05 25 10.1	+0.8
CRNS							
	comp=Z,2.0nm,0.1s						

IDC 08 05:28:22.3±10.0**, 7°.58N**×**102°.90W, h0**km**, mb3.3**/4**, mb1 3.7**/4**, mb1mx3.6**/19**, mbtmp3.3**/4**, MS3.7**/6**, Ms1 3.7**/6**, ms1mx3.3**/16**, Error ellipse: s-maj=351.1km s-min=107.0km az=110.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	12.27	39	LR	LR	05 34 56.8	
	comp=Z,378nm,19.8s,baz=192,slow=32						
TEIG	Tepich	18.94	47	LR	LR	05 39 29.7	
	comp=Z,148nm,18.1s,baz=164,slow=35						
TXAR	Lajitas Array	21.65	358	P	P	05 33 14.3	-0.3
	0.7nm,0.9s,baz=179,slow=14,SNR=8.4						
TXAR				LR	LR	05 40 45.9	
	comp=Z,236nm,18.7s,baz=355,slow=34						
PDAR	Pinedale Array	35.53	352	P	P	05 35 21.9	+0.5
	1.0nm,0.8s,baz=161,slow=8.6,SNR=7.7						
LPAZ	La Paz	41.79	125	LR	LR	05 51 32.1	
	comp=Z,71nm,21.7s,baz=251,slow=33						
ULM	Lac du Bonnet	42.94	7	LR	LR	05 54 16.0	
	comp=Z,89nm,18.7s,baz=349,slow=36						
YKA	Yellowknife Ar	55.48	353	P	P	05 37 58.4	-0.3
	0.1nm,0.8s,baz=165,slow=7.6,SNR=3.6						
PLCA	Paso Flores	56.55	151	LR	LR	05 56 34.6	
	comp=Z,51nm,18.1s,baz=177,slow=30						
ILAR	Eielson Array	64.91	341	P	P	05 39 03.1	-0.2
	0.5nm,0.9s,baz=146,slow=5.5,SNR=5.3						

*NEIC **08** 05:31:50.0, 34°.15S×116°.88E, h0km, mb3.6/2, ML4.1(AUST), After AUST.*
*IDC **08** 05:31:54.1±1.0, 34°.09S×117°.22E, h0km, mb4.0/4, mb1 4.3/7, mb1mx4.0/17, mbtmp4.1/7, ML4.5/1, MS3.3/1, Ms1 3.2/1, ms1mx2.1/29, Error ellipse: s-maj=35.8km s-min=12.5km az=88.0*
*DJA **08** 05:32:01.8±3.6, 34°S±29'×11°7E±2°0, h27km±9km, M5.1/5, mB5.4/2, mb4.9/5, MLv5.2/4, Mw(mB)4.8/2*
ISC 08 05:31:55.7±0.9**, 33°.9S**±0°.1×**117°.32E**±0°.10**, h10**km**, n26, σ1s.09**/24**, mb4.0**/4**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	1.00	356	Pg	Pn	05 32 16.8	+1.0
NWAO				Lg	Lg	05 32 32.7	
NWAO				Rg	Rg	05 32 38.9	
NWAO	Narrogin (SRO)	1.00	356	Pg	Pn	05 32 16.8	+1.0
	232nm,0.3s,baz=187,slow=15,SNR=991						
NWAO				Lg	Lg	05 32 32.7	
	743nm,0.3s,baz=118,slow=20,SNR=49						
NWAO				Rg	Rg	05 32 38.9	
	8μm,0.9s,baz=233,slow=20,SNR=68						
FORT	Forrest	9.62	74	ePn	Pn	05 34 15.8	+1.7
	68nm,0.6s						
FORT				eSn	Sn	05 36 02.0	-0.2
MBWA	Marble Bar	12.90	10	ePn	Pn	05 34 56.9	-2.2
	20nm,0.5s						
FITZ	Fitzroy Crossi	17.43	27	Pn	Pn	05 35 57.3	-1.7
FITZ				Sn	Sn	05 39 03.8	-9.3
FITZ	Fitzroy Crossi	17.43	27	Pn	Pn	05 35 57.3	-1.7
	3.6nm,0.3s,baz=206,slow=12,SNR=74						
FITZ				Sn	Sn	05 39 03.8	-9.3
	0.8nm,0.3s,baz=113,slow=13,SNR=3.9						
ASAR	Alice Springs	17.75	59	Pn	Pn	05 36 02.9	-0.1
ASAR				Sn	Sn	05 39 10.5	-11
ASAR				Lg	Lg	05 41 09.6	
ASAR	Alice Springs	17.75	59	Pn	Pn	05 36 02.9	-0.1
	1.6nm,0.3s,baz=230,slow=12,SNR=55						
ASAR				Sn	Sn	05 39 10.5	-11
	0.4nm,0.3s,baz=236,slow=22,SNR=11						
ASAR				Lg	Lg	05 41 09.6	
	baz=226,slow=25,SNR=2.8						
AS31	Alice Springs	17.75	59	ePn	Pn	05 36 02.4	-0.7
STKA	Stephens Creek	20.48	91	eP	P	05 36 32.8	-0.9
	1.3nm,0.8s						
STKA				Pn	Pn	05 36 35.9	+0.1
STKA	Stephens Creek	20.48	91	Pn	Pn	05 36 35.9	+0.1
	5.6nm,0.8s,baz=273,slow=9.2,SNR=9.7						
STKA				LR	LR	05 44 11.4	
	comp=Z,79nm,20.5s,baz=14,slow=36						
WRA	Warramunga Arr	20.56	52	Pn	Pn	05 36 37.1	+0.3
WRA				Sn	S	05 40 13.7	-11
WRA				Lg	Lg	05 42 32.5	
WRA	Warramunga Arr	20.56	52	Pn	Pn	05 36 37.1	+0.3
	4.1nm,0.6s,baz=224,slow=11,SNR=25						
WRA				Sn	S	05 40 13.7	-11
	1.6nm,0.6s,baz=227,slow=22,SNR=3.8						
WRA				Lg	Lg	05 42 32.5	
	2.6nm,0.9s,baz=223,slow=27,SNR=3.0						
WRAB	Tennant Creek	20.57	52	eP	P	05 36 35.4	+0.7
	5.7nm,0.7s						
CMAR	Chiang Mai Arr	54.96	339	P	P	05 41 27.2	+0.2
CMAR	Chiang Mai Arr	54.96	339	P	P	05 41 27.2	+0.2
	1.0nm,0.3s,baz=169,slow=5.3,SNR=7.4						
QSPA	South Pole Qui	56.19	180	P	P	05 41 34.5	-1.0
QSPA	South Pole Qui	56.19	180	P	P	05 41 34.5	-1.0
	3.5nm,0.7s,baz=316,slow=2.4,SNR=20						
SONM	Songino Array	81.98	353	P	P	05 44 16.8	+1.3
SONM	Songino Array	81.98	353	P	P	05 44 16.8	+1.3
	0.3nm,0.4s,baz=160,slow=4.6,SNR=3.5						
MKAR	Makanchi Array	86.32	337	P	P	05 44 37.0	-0.6
MKAR	Makanchi Array	86.32	337	P	P	05 44 37.0	-0.6
	0.3nm,0.8s,baz=168,slow=6.2,SNR=3.7						
YKA	Yellowknife Ar	136.90	32	PKP	PKPdf	05 51 18.3	+0.6
YKA	Yellowknife Ar	136.90	32	PKP	PKPdf	05 51 18.3	+0.6
	0.1nm,0.4s,baz=285,slow=2.0,SNR=4.1						
TXAR	Lajitas Array	144.97	86	PKPbc	PKPdf	05 51 34.0	+0.5
TXAR	Lajitas Array	144.97	86	PKPbc	PKPdf	05 51 34.0	+0.5
	1.0nm,0.8s,baz=218,slow=5.7,SNR=16						

*IDC **08** 05:33:10.9±3.8, 32°.22N×105°.25E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/26, mbtmp3.7/7, Error ellipse: s-maj=91.5km s-min=46.3km az=4.0*
*ISCJB **08** 05:33:12.3±0.6, 32°.30N±0°.05×105°.23E±0°.07, h15km, mb3.6/7, Error ellipse: s-maj=10.4km s-min=5.3km az=39.2*
*BJI **08** 05:33:14.7, 32°.42N×105°.02E, h19km, ML3.4/7, Ms3.2/2*
ISC 08 05:33:13.5±0.7**, 32°.31N**±0°.05×**105°.27E**±0°.05**, h15**km**, n11, σ1s.45**/20**, mb3.6**/7**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.90	223	Pn	Pb	05 33 47.1	-0.7
CD2				Pg	Pg	05 33 49.6	-0.3
CD2				Sn	Sg	05 34 11.5	-3.0
CD2				Sg	Sb	05 34 13.9	+2.6
CD2				smax	smax		
	comp=N,540nm,0.4s						
CD2				smax	smax		
	comp=E,1μm,0.6s						
XAN	Xi'an	3.52	60	Pn	Pb	05 34 12.7	-2.8
XAN				Pg	Pg	05 34 22.0	+1.0
XAN				Sn	Sn	05 34 51.1	+2.0
XAN				Sg	Sg	05 35 05.4	-1.2
XAN				smax	smax		
	comp=N,52nm,0.7s						
XAN				smax	smax		
	comp=E,54nm,0.8s						
LZH	Lanzhou	3.95	343	ePn	Pn	05 34 14.8	+1.1
LZH				Pg	Pb	05 34 21.8	-1.1
LZH				Sn	Sn	05 35 00.5	+0.6
LZH				Sg	Sb	05 35 09.8	-0.8
LZH				smax	smax		
	comp=N,78nm,0.6s						
LZH				smax	smax		
	comp=E,170nm,0.8s						
LZH				LR	LR		
	comp=N,190nm,4.3s						
LZH				LR	LR		
	comp=E,280nm,4.2s						
MKAR	Makanchi Array	22.76	316	P	P	05 38 15.8	+0.6
	comp=E,0.3nm,0.3s,baz=119,slow=9.4,SNR=9.2						
ZALV	Zalesovo Beam	26.10	332	P	P	05 38 46.9	+0.5
	comp=E,0.3nm,0.4s,baz=116,slow=13,SNR=2.9						
ARCES	ARCESS Array B	56.58	336	P	P	05 42 54.8	-0.4
	comp=E,1.8nm,0.9s,baz=78,slow=8.4,SNR=4.3						
BRTR	Keskin Array B	57.01	299	P	P	05 42 59.0	+0.1
	comp=E,0.3nm,0.4s,baz=98,slow=7.9,SNR=3.0						
FINES	FINESS Array B	57.13	326	P	P	05 42 59.5	+0.4
	comp=E,1.1nm,0.6s,baz=115,slow=6.3,SNR=5.6						
NB2	NORSAR Subarra	64.18	327	P	P	05 43 46.8	-0.5
	comp=Z,0.6nm,0.5s,baz=73,slow=6.9						
NOA	NORSAR Array B	64.18	327	P	P	05 43 46.8	-0.5
	comp=Z,0.5nm,0.5s,baz=78,slow=6.4,SNR=4.3						
YKA	Yellowknife Ar	80.25	18	P	P	05 45 23.9	+0.7
	comp=Z,0.3nm,0.7s,baz=329,slow=5.0,SNR=8.6						

*CSEM **08** 05:48:05.1, 42°.26N×13°.47E, h10km, After ROM*
ROM 08 05:48:05.1±0.1**, 42°.26N**×**13°.47E, h10**km**, Ml1.9**/7**, Error ellipse: s-maj=1.0km s-min=0.8km az=32.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.09	85	Pg	Pg	05 48 08.0	+0.4
FAGN				Sg	Sg	05 48 09.8	+0.3
FAGN	Fagnano	0.09	85	Pg	Pg	05 48 08.0	+0.4
FAGN				Sg	Sg	05 48 09.8	+0.3
AQU	L'Aquila	0.11	333	Pg	Pg	05 48 08.5	+0.6
AQU				Sg	Sg	05 48 10.3	+0.4
AQU	L'Aquila	0.11	333	Pg	Pg	05 48 08.5	+0.6
AQU				Sg	Sg	05 48 10.3	+0.4
PTQR	Pietraquaria	0.24	192	Pg	Pg	05 48 10.8	+0.6
PTQR				Sg	Sg	05 48 14.7	+1.1
PTQR	Pietraquaria	0.24	192	Pg	Pg	05 48 10.8	+0.6
PTQR				Sg	Sg	05 48 14.7	+1.1
FIAM	Fiamignano	0.26	272	Pg	Pg	05 48 11.1	+0.5
FIAM				Sg	Sg	05 48 15.2	+1.0
FIAM	Fiamignano	0.26	272	Pg	Pg	05 48 11.1	+0.5
FIAM				Sg	Sg	05 48 15.2	+1.0
CAMP	Campotosto	0.28	351	Pg	Pb	05 48 11.8	-0.6
CAMP				Sg	Sg	05 48 15.9	+1.0
CAMP	Campotosto	0.28	351	Pg	Pb	05 48 11.8	-0.6
CAMP				Sg	Sg	05 48 15.9	+1.0
VCEL	Villa Celiera	0.31	64	Pg	Pb	05 48 12.2	-0.7
VCEL				Sg	Sg	05 48 16.8	+1.0
VCEL	Villa Celiera	0.31	64	Pg	Pb	05 48 12.2	-0.7
VCEL				Sg	Sg	05 48 16.8	+1.0
TERO	Teramo	0.38	16	Pg	Pg	05 48 12.8	+0.1
TERO				Sg	Sg	05 48 18.8	+1.0
TERO	Teramo	0.38	16	Pg	Pg	05 48 12.8	+0.1
TERO				Sg	Sg	05 48 18.8	+1.0
VVLD	Villa Vallelon	0.41	163	Pg	Pb	05 48 13.9	-0.6
VVLD				Sg	Sg	05 48 19.6	+0.9
	131nm,0.7s						
VVLD	Villa Vallelon	0.41	163	Pg	Pb	05 48 13.9	-0.6
VVLD				Sg	Sg	05 48 19.6	+0.9
	131nm,0.7s						
INTR	Introdacqua	0.41	127	Pg	Pg	05 48 13.5	+0.2
INTR				Sg	Sb	05 48 19.9	-1.0
	209nm,0.3s						
INTR	Introdacqua	0.41	127	Pg	Pg	05 48 13.5	+0.2
INTR				Sg	Sb	05 48 19.9	-1.0
	209nm,0.3s						
LNSS	Leonessa	0.47	318	Pg	Pg	05 48 14.9	+0.5
	97nm,0.4s						
LNSS	Leonessa	0.47	318	Pg	Pg	05 48 14.9	+0.5
	97nm,0.4s						
CERT	Cerreto	0.48	230	Pg	Pg	05 48 14.7	+0.2
	156nm,0.7s						
CERT	Cerreto	0.48	230	Pg	Pg	05 48 14.7	+0.2
	156nm,0.7s						
GUAR	Guarcino	0.48	194	Pg	Pb	05 48 15.6	-0.1
	50nm,0.3s						
GUAR	Guarcino	0.48	194	Pg	Pb	05 48 15.6	-0.1
	50nm,0.3s						
MNS	Montasola	0.60	282	Pg	Pg	05 48 16.7	-0.1
	43nm,0.5s						
MNS	Montasola	0.60	282	Pg	Pg	05 48 16.7	-0.1
	43nm,0.5s						
SDI	San Donato	0.61	155	Pg	Pg	05 48 17.0	0.0
SDI				Sg	Sb	05 48 26.2	-0.3
	33nm,0.3s						
SDI	San Donato	0.61	155	Pg	Pg	05 48 17.0	0.0
SDI				Sg	Sb	05 48 26.2	-0.3
	33nm,0.3s						
FDMO	Fiordimonte	0.83	340	Pg	Pg	05 48 21.1	0.0
	23nm,0.5s						
FDMO	Fiordimonte	0.83	340	Pg	Pg	05 48 21.1	0.0
	23nm,0.5s						
CESI	CESI - Serrava	0.85	331	Pg	Pb	05 48 22.2	+0.1
CESI	CESI - Serrava	0.85	331	Pg	Pb	05 48 22.2	+0.1

*CSEM **08** 05:48:47.6, 42°.47N×13°.42E, h9km, After ROM*
ROM 08 05:48:47.6±0.1**, 42°.47N**×**13°.42E, h9**km**, Ml2.2**/2**, Error ellipse: s-maj=1.3km s-min=1.0km az=93.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.06	355	Pg	Pg	05 48 50.4	+0.5
CAMP				Sg	Sg	05 48 52.1	+0.6
CAMP	Campotosto	0.06	355	Pg	Pg	05 48 50.4	+0.5
CAMP				Sg	Sg	05 48 52.1	+0.6
AQU	L'Aquila	0.12	185	Pg	Pg	05 48 51.1	+0.6
AQU				Sg	Sg	05 48 53.3	+0.8
AQU	L'Aquila	0.12	185	Pg	Pg	05 48 51.1	+0.6
AQU				Sg	Sg	05 48 53.3	+0.8
TERO	Teramo	0.20	43	Pg	Pg	05 48 52.5	+0.5
TERO				Sg	Sg	05 48 55.8	+0.9
TERO	Teramo	0.20	43	Pg	Pg	05 48 52.5	+0.5
TERO				Sg	Sg	05 48 55.8	+0.9
FAGN	Fagnano	0.24	149	Pg	Pg	05 48 53.0	+0.4
	471nm,0.5s						
FAGN	Fagnano	0.24	149	Pg	Pg	05 48 53.0	+0.4
	471nm,0.5s						
FIAM	Fiamignano	0.30	227	Pg	Pg	05 48 54.0	+0.2
FIAM	Fiamignano	0.30	227	Pg	Pg	05 48 54.0	+0.2
LNSS	Leonessa	0.31	295	Pg	Pg	05 48 54.6	+0.7
LNSS				Sg	Sb	05 48 59.7	-1.0
	164nm,0.1s						
LNSS	Leonessa	0.31	295	Pg	Pg	05 48 54.6	+0.7
LNSS				Sg	Sb	05 48 59.7	-1.0
	164nm,0.1s						
VCEL	Villa Celiera	0.32	104	Pg	Pg	05 48 54.6	+0.4
VCEL				Sg	Sb	05 49 00.8	-0.3
VCEL	Villa Celiera	0.32	104	Pg	Pg	05 48 54.6	+0.4
VCEL				Sg	Sb	05 49 00.8	-0.3
NRCA	Norcia	0.42	328	Pg	Pg	05 48 56.5	+0.4
NRCA				Sg	Sb	05 49 03.1	-0.9
NRCA	Norcia	0.42	328	Pg	Pg	05 48 56.5	+0.4
NRCA				Sg	Sb	05 49 03.1	-0.9
INTR	Introdacqua	0.59	142	Pg	Pg	05 48 59.3	+0.2
INTR				Sg	Sb	05 49 08.4	-0.2
INTR	Introdacqua	0.59	142	Pg	Pg	05 48 59.3	+0.2
INTR				Sg	Sb	05 49 08.4	-0.2
CERT	Cerreto	0.61	212	Pg	Pg	05 48 59.1	-0.5
CERT	Cerreto	0.61	212	Pg	Pg	05 48 59.1	-0.5

*IDC **08** 05:52:03.8±0.8, 22°.97S×174°.76W, h0km, mb4.2/11, mb1 4.5/12, mb1mx4.3/22, mbtmp4.2/12, ML4.0/1, Error ellipse: s-maj=31.2km s-min=17.8km az=145.0*
*ISCJB **08** 05:52:07.1±0.5, 22°.96S±0°.08×174°.9W±0°.1, h30km, mb4.3/13, Error ellipse: s-maj=13.7km s-min=10.6km az=21.0*
*NEIC **08** 05:52:09.0±0.4, 22°.98S×174°.83W, h35km, mb4.6/3, Error ellipse: s-maj=11.7km s-min=8.8km az=121.0*
ISC 08 05:52:08.5±0.6**, 22°.98S**±0°.09×**174°.8W**±0°.1**, h30**km**, n45, σ0s.80**/39**, mb4.3**/13**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	6.84	203	Pn	Pn	05 53 47.5	+0.7
MSVF	Nonsavu	8.48	307	ePn	Pn	05 54 08.7	-0.7
	23nm,1.0s						
AFI	Afiamalu	9.47	18	Pn	Pn	05 54 15.6	-7.4
AFI				Sn	Sn	05 55 52.6	-16
AFI	Afiamalu	9.47	18	Pn	Pn	05 54 15.6	-7.4
	2.5nm,0.3s,baz=87,slow=16,SNR=3.0						
AFI				Sn	Sn	05 55 52.6	-16
	1.5nm,0.3s,baz=198,slow=20,SNR=2.0						
RAR	Rarotonga	14.06	86	ePn	Pn	05 55 16.2	-10
	151nm,1.5s						
RAR				Sn	Sn	05 57 34.8	-26
RAR	Rarotonga	14.06	86	Pn	Pn	05 55 16.5	-9.2
	7.3nm,0.3s,baz=270,slow=6.5,SNR=11						
RAR				Sn	Sn	05 57 34.8	-26
	2.1nm,0.3s,baz=90,slow=17,SNR=5.3						
URZ	Urewera	16.73	203	Pn	Pn	05 55 58.8	-1.8
URZ				Sn	Sn	05 58 51.9	-14
URZ	Urewera	16.73	203	Pn	Pn	05 55 58.8	-1.8
	0.6nm,0.3s,baz=343,slow=14,SNR=2.7						
URZ				Sn	Sn	05 58 51.9	-14
	0.9nm,0.3s,baz=308,slow=19,SNR=4.3						
TBI	Tubuai	23.32	96	eLR	LR	06 02 21.6	
	126nm,27.8s						
RPZ	Rata Peaks	23.75	206	P	P	05 57 19.1	+0.9
RPZ	Rata Peaks	23.75	206	P	P	05 57 19.1	+0.9
	12nm,0.7s,baz=110,slow=16,SNR=2.2						
PPT2	Papeete2	24.27	82	eLR	LR	06 02 56.3	
	128nm,25.8s						
CTA	Charters Tower	36.25	267	P	P	05 59 09.5	+0.2
CTA	Charters Tower	36.25	267	P	P	05 59 09.5	+0.2
	4.1nm,0.6s,baz=98,slow=11,SNR=9.6						
CTAO	Charters Tower	36.25	267	eP	P	05 59 09.5	+0.2
	4.5nm,0.4s						
STKA	Stephens Creek	39.47	247	P	P	05 59 36.2	-0.1
STKA	Stephens Creek	39.47	247	P	P	05 59 36.2	-0.1
	0.9nm,0.4s,baz=105,slow=14,SNR=2.9						
ASAR	Alice Springs	46.88	259	P	P	06 00 36.1	-0.2
ASAR	Alice Springs	46.88	259	P	P	06 00 36.1	-0.2
	1.5nm,0.4s,baz=97,slow=7.2,SNR=20						
WRAB	Tennant Creek	47.21	264	eP	P	06 00 37.9	-1.0
	4.0nm,0.6s						
WRA	Warramunga Arr	47.22	264	P	P	06 00 38.2	-0.8
WRA	Warramunga Arr	47.22	264	P	P	06 00 38.2	-0.8
	3.6nm,0.6s,baz=102,slow=8.2,SNR=30						
PETK	Petropavlovsk-	79.44	344	P	P	06 04 11.9	+0.3
PETK	Petropavlovsk-	79.44	344	P	P	06 04 11.9	+0.3
	2.7nm,0.7s,baz=189,slow=8.5,SNR=3.8						
KSRS	Korea Array	80.69	317	P	P	06 04 20.6	+1.9
	0.4nm,0.3s,baz=154,slow=6.0,SNR=4.7						
KSAR	Wonju Array Be	80.71	317	P	P	06 04 20.6	+1.8
NVAR	Mina Array Bea	80.85	42	P	P	06 04 19.6	-0.3
NVAR	Mina Array Bea	80.85	42	P	P	06 04 19.6	-0.3
	1.9nm,0.7s,baz=226,slow=7.4,SNR=8.5						
VNA3	Neumayer Olymp	85.47	175	eP	P	06 04 43.0	0.0
VNA2	Neumayer--Watz	85.94	176	eP	P	06 04 45.8	+0.5
	baz=203,slow=3.0						
TXAR	Lajitas Array	85.94	56	P	P	06 04 45.5	-0.7
TXAR	Lajitas Array	85.94	56	P	P	06 04 45.5	-0.7
	1.2nm,0.9s,baz=213,slow=6.5,SNR=11						
VNA1	Neumayer--Stat	86.15	176	eP	P	06 04 47.0	+0.7
GDL2	Guadalupe Moun	86.82	53	eP	P	06 04 49.9	-0.6
	3.0nm,0.8s						
PDAR	Pinedale Array	88.78	42	P	P	06 04 58.9	-0.8
PDAR	Pinedale Array	88.78	42	P	P	06 04 58.9	-0.8
	0.6nm,0.8s,baz=235,slow=5.2,SNR=4.7						
ILAR	Eielson Array	90.10	12	P	P	06 05 05.1	+0.1
ILAR	Eielson Array	90.10	12	P	P	06 05 05.1	+0.1
	1.1nm,0.9s,baz=217,slow=5.1,SNR=9.4						
AKASG	Malin Array Be	146.59	332	PKPbc	PKPbc	06 11 46.1	-0.7
AKASG	Malin Array Be	146.59	332	PKPbc	PKPbc	06 11 46.1	-0.7
	1.3nm,0.5s,baz=38,slow=3.8,SNR=4.6						
BRTR	Keskin Array B	150.68	311	PKPbc	PKPbc	06 11 58.2	+0.2
BRTR	Keskin Array B	150.68	311	PKPbc	PKPbc	06 11 58.2	+0.2
	0.3nm,0.4s,baz=165,slow=4.8,SNR=3.7						
BRG	Berggiesshubel	151.33	348	e(P)	PKPbc	06 11 59.4	+0.4
	3.1nm,0.6s						
BRG				e		06 13 55.2	
	2.4nm,0.5s						
TORD	Torodi Ar. Bea	169.68	161	PKPab	PKPab	06 13 27.7	+0.2
TORD	Torodi Ar. Bea	169.68	161	PKPab	PKPab	06 13 27.7	+0.2
	0.6nm,1.0s,baz=223,slow=5.7,SNR=2.4						

MAN 08 05:52:27, 9°.98N×121°.70E, h26km, mb4.0, ML2.8, MS2.5, 1D, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	Jordan	1.08	54	eP	Pn	05 52 46.0	-0.5
GUIM				eS	Sn	05 53 00.7	0.0
CUYO	Cuyo Island	1.09	322	eP	Pn	05 52 45.8	-0.9
RCP	Roxas	1.87	33⇓	eP	Pn	05 52 58.1	+0.7
RCP				eS	Sb	05 53 22.0	-1.6
ENPP	El Nido	2.54	299	eP	Pn	05 53 07.6	+0.9

IDC 08 06:09:01.7±1.4**, 49°.46S**×**125°.98E, h0**km**, mb4.0**/6**, mb1 4.2**/6**, mb1mx4.0**/15**, mbtmp4.0**/6**, MS3.6**/7**, Ms1 3.6**/7**, ms1mx3.1**/35**, Error ellipse: s-maj=53.1km s-min=25.0km az=95.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	17.76	335	LR	LR	06 18 16.0	
	comp=Z,256nm,22.0s,baz=27,slow=31						
STKA	Stephens Creek	21.11	39	P	P	06 13 49.1	+1.4
	1.8nm,0.7s,baz=201,slow=13,SNR=4.9						
STKA				LR	LR	06 20 23.9	
	comp=Z,94nm,19.3s,baz=207,slow=32						
ASAR	Alice Springs	26.48	16	P	P	06 14 41.0	+0.4
	2.1nm,0.8s,baz=192,slow=8.6,SNR=16						
ASAR				LR	LR	06 24 06.3	
	comp=Z,91nm,18.6s,baz=174,slow=34						
WRA	Warramunga Arr	30.20	16	P	P	06 15 13.2	-0.6
	0.8nm,0.9s,baz=193,slow=11,SNR=4.3						
WRA				LR	LR	06 26 11.3	
	comp=Z,88nm,18.8s,baz=65,slow=34						
VNDA	Vanda	31.28	166	P	P	06 15 22.4	-0.3
	1.2nm,0.9s,baz=314,slow=7.7,SNR=5.1						
VNDA				LR	LR	06 26 42.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,214nm,18.3s,baz=289,slow=34						
CTA	Charters Tower	33.48	36	P	P	06 15 40.8	-1.8
	8.2nm,1.0s,baz=233,slow=5.1,SNR=4.3						
CTA				LR	LR	06 27 51.1	
	comp=Z,85nm,20.3s,baz=231,slow=34						
KAPI	Kappang	44.60	351	LR	LR	06 35 00.6	
	comp=Z,44nm,18.0s,baz=113,slow=35						
CMAR	Chiang Mai Arr	71.75	333	P	P	06 20 25.5	-0.1
	0.8nm,0.3s,baz=183,slow=5.2,SNR=4.2						
YKA	Yellowknife Ar	145.08	45	PKPbc	PKPab	06 28 39.3	+0.1
	2.7nm,0.8s,baz=269,slow=3.7,SNR=62						

IDC 08 06:14:57.6±3.1,30°.17S×138°.44E,h0km,mb1 3.0/3, mb1mx3.0/16,mbtmp2.8/3,ML2.3/3,Error ellipse: s-maj=75.3km s-min=15.1km az=45.0,South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.19	123	Pn	Pn	06 15 49.5	+0.3
	0.1nm,0.3s,baz=303,slow=15,SNR=3.4						
STKA				Pg	Pb	06 15 56.4	+1.1
	0.5nm,0.3s,baz=303,slow=14,SNR=5.0						
STKA				Sn	Sn	06 16 27.2	-0.7
	0.9nm,0.3s,baz=303,slow=17,SNR=4.7						
STKA				Lg	Lg	06 16 39.2	
	1.3nm,0.3s,baz=18,slow=19,SNR=7.6						
ASAR	Alice Springs	7.64	327	Pn	Pn	06 16 50.5	+0.2
	0.0nm,0.3s,baz=150,slow=12,SNR=2.8						
ASAR				Sn	Sn	06 18 20.2	+2.4
	baz=155,slow=22,SNR=3.1						
WRA	Warramunga Arr	10.84	339	Pn	Pn	06 17 33.1	-1.1
	0.1nm,0.3s,baz=155,slow=14,SNR=5.8						
WRA				Sn	Sn	06 19 37.6	+1.2
	0.0nm,0.3s,baz=156,slow=18,SNR=2.6						

IDC 08 06:24:57.2±9.7,10°.58S×165°.97E,h155km±99km,mb3.5/8, mb1 3.7/9,mb1mx3.5/22,mbtmp3.5/9,Error ellipse: s-maj=67.2km s-min=22.7km az=157.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.44	178	P	Pn	06 27 36.7	+0.4
	0.7nm,0.3s,baz=342,slow=20,SNR=7.8						
DZM				S	Sn	06 29 41.5	-1.4
	0.7nm,0.3s,baz=308,slow=19,SNR=13						
CTA	Charters Tower	21.22	241	P	P	06 29 31.9	+0.8
	6.4nm,0.8s,baz=58,slow=13,SNR=3.5						
STKA	Stephens Creek	30.94	223	P	P	06 31 00.5	+0.9
	0.6nm,0.4s,baz=51,slow=8.5,SNR=6.6						
WRA	Warramunga Arr	31.86	249	P	P	06 31 07.5	-0.4
	0.4nm,0.3s,baz=83,slow=9.1,SNR=8.4						
ASAR	Alice Springs	33.20	243	P	P	06 31 18.8	-0.8
	0.9nm,0.7s,baz=70,slow=9.9,SNR=9.3						
FITZ	Fitzroy Crossi	39.72	254	P	P	06 32 14.4	-0.4
	1.5nm,0.4s,baz=104,slow=8.5,SNR=4.9						
ILAR	Eielson Array	83.00	18	P	P	06 37 05.3	+0.6
	0.6nm,0.5s,baz=233,slow=5.1,SNR=20						
MKAR	Makanchi Array	93.33	317	P	P	06 37 54.9	+0.2
	0.2nm,0.6s,baz=100,slow=3.2,SNR=3.9						
YKA	Yellowknife Ar	94.45	27	P	P	06 37 57.5	-1.8
	0.1nm,0.5s,baz=255,slow=5.0,SNR=4.3						

*IDC **08** 06:26:51.4±0.4,58°.02S×7°.32W,h0km,mb4.8/22, mb1 4.8/23,mb1mx4.8/27,mbtmp4.8/23,ML5.2/1,MS4.7/23, Ms1 4.7/23,ms1mx4.6/27,Error ellipse: s-maj=13.5km s-min=12.5km az=142.0*

*ISCJB **08** 06:26:51.2±0.3,57°.96S±0°.04×7°.36W±0°.10,h10km, mb5.1/40,MS5.0/166,Error ellipse: s-maj=7.5km s-min=6.2km az=23.3*

*DJA **08** 06:26:53.2±1.1,58°S±9°×°±2°3,h10km,M5.1/11,mB5.7/2, mb5.1/11,Mw(mB)5.2/2*

*NEIC **08** 06:26:54.7±0.2,58°.10S×6°.26W,h10km,mb5.3/18, MS5.0/135,MW5.6,Error ellipse: s-maj=13.6km s-min=8.8km az=105.0*

*GCMT **08** 06:26:55.9±0.1,58°.04S×7°.15W,h13km,MW5.5,Moment Tensor Solution. s84,c150; s50,c57; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.21±.03; $M_{\theta\theta}$-0.08±.03; $M_{\phi\phi}$0.29±.03; $M_{r\theta}$0.61±.07; $M_{\theta\phi}$2.15±.03; $M_{\phi r}$-0.55±.07; Best double couple: $M_0$2.30000×10^{17} NP1:ϕ_s359.00000°,δ75.00000°, λ-165.00000°. NP2:ϕ_s266.00000°,δ75.00000°, λ-15.00000°. Principal axes: T 2.2600, Plg0.0000°, Azm313.0000°; N 0.1000, Plg69.0000°, Azm43.0000°; P -2.3700, Plg21.0000°, Azm223.0000°; Data Used: II IU IC G CN. Surface waves: sta=112, comp=194, per= 50.*

*MOS **08** 06:26:55.5±1.6,58°.22S×6°.35W,h10km,mb5.2/23, MS4.8/6 Error ellipse: s-maj=26.5km s-min=11.1km az=92.6*

ISC 08 06:26:53.5±0.3,58°.01S±0°.06×7°.27W±0°.06,h10km,n424, σ1^{s}89/302,mb5.1/40,MS5.0/167,42C-50D,East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.70	182	*e*Pn	Pn	06 29 55.8	+1.9
VNA1	Neumayer--Stat	12.70	182	*e*pn	Pn	06 29 57.5	+3.6
VNA1	Neumayer--Stat	12.70	182	*e*Sn	Sn	06 32 06.5	-8.7
VNA1	Neumayer--Stat	12.70	182	*e*ScS	ScS	06 42 54.9	+16
VNA2	Neumayer--Watz	12.97	180	*e*Pn	Pn	06 29 57.2	-0.4
VNA2	Neumayer--Watz	12.97	180	*e*pn	Pn	06 29 59.6	+2.0
VNA2	Neumayer--Watz	12.97	180	*e*sPn	sPn	06 30 01.5	+0.1
VNA2	Neumayer--Watz	12.97	180	*e*Sn	Sn	06 32 10.0	-12
VNA2	Neumayer--Watz	12.97	180	*e*ScS	ScS	06 42 43.6	+4.3
VNA2	Neumayer--Watz	12.97	180	*e*PKiKP	PKiKP	06 43 28.2	+1.3
VNA2	Neumayer--Watz	12.97	180	*e*pPKiKP	pPKiKP	06 43 31.1	+0.8
VNA3	Neumayer Olymp	13.33	183	*e*Pn	Pn	06 30 01.0	-1.5
VNA3	Neumayer Olymp	13.33	183	*e*pn	Pn	06 30 04.2	+1.7
VNA3	Neumayer Olymp	13.33	183	*e*sPn	sPn	06 30 06.7	+0.4
VNA3	Neumayer Olymp	13.33	183	*e*Sn	Sn	06 32 20.4	-10
VNA3	Neumayer Olymp	13.33	183	*e*ScS	ScS	06 42 43.3	+3.1
VNA3	Neumayer Olymp	13.33	183	*e*PKiKP	PKiKP	06 43 28.8	+1.8
VNA3	Neumayer Olymp	13.33	183	*e*pPKiKP	pPKiKP	06 43 30.8	+0.3
SNAA	Sanae	13.84	174	*e*Pn	Pn	06 30 09.0	-0.5
SNAA	Sanae	13.84	174	*e*pn	Pn	06 30 11.0	+1.5
SNAA	Sanae	13.84	174	*e*sPn	sPn	06 30 15.1	+1.7
SNAA	Sanae	13.84	174	*e*ScS	ScS	06 42 58.2	+17
SNAA	Sanae	13.84	174	*e*Pn	Pn	06 30 09.2	-0.3
SNAA				*e*Sn	Sn	06 32 27.2	-16
SNAA				Sn	Sn	06 32 28.3	-15
SNAA	Sanae	13.84	174	Pn	Pn	06 30 08.3	-1.2
	11nm,0.3s,baz=350,slow=15,SNR=323						
SNAA				Sn	Sn	06 32 28.3	-15
	8.1nm,0.3s,baz=24,slow=20,SNR=8.0						
SNAA				LR	LR	06 33 33.2	
	comp=Z,599nm,22.0s,baz=0.8,slow=29						
SYO	Syowa Base	22.95	138	⇓*i*P	P	06 31 55.0	-2.5
SYO	Syowa Base	22.95	138	⇓*i*P	P	06 31 57.0	-0.5
PMSA	Palmer Station	27.15	232	P	P	06 32 41.0	+4.7
PMSA	Palmer Station	27.15	232	LR	LR	06 40 38.5	
	comp=Z,1μm,19.4s,baz=279,slow=30						
MAW	Mawson	31.66	137	P	P	06 33 16.9	+0.5
MAW	Mawson	31.66	137	P	P	06 33 16.9	+0.5
	28nm,0.9s,baz=258,slow=10,SNR=17						
MAW				LR	LR	06 43 50.2	
	comp=Z,1μm,21.9s,baz=263,slow=32						
SUR	Sutherland	31.94	49	*e*P	P	06 33 19.0	-0.4
	146nm,1.7s						
SUR	Sutherland	31.94	49	P	P	06 33 19.7	+0.3
	17nm,0.8s,baz=208,slow=9.1,SNR=8.9						
SUR				LR	LR	06 42 58.9	
	comp=Z,2μm,21.0s,baz=209,slow=30						
BUFB	Buffelsbos	32.07	56	*e*P	P	06 33 19.6	-0.7
BUFB				AMB	AMB	06 33 23.6	
	comp=Z,91nm,2.7s						
QSPA	South Pole Qui	32.23	180	*e*P	P	06 33 21.8	+0.1
	comp=Z,58nm,0.8s						
QSPA				LR	LR		
	comp=Z,782nm,19.0s						
QSPA	South Pole Qui	32.23	180	P	P	06 33 21.7	+0.1
	comp=Z,25nm,0.5s,baz=212,slow=2.9,SNR=61						
CVNA	Calvinia	32.32	47	*e*P	P	06 33 24.8	+2.2
CVNA				AMB	AMB	06 33 26.4	
	comp=Z,83nm,2.2s						
USHA	Ushuaia	32.97	249	P	P	06 33 27.8	-0.2
USHA	Ushuaia	32.97	249	P	P	06 33 27.8	-0.2
	comp=Z,14nm,0.9s,baz=100,slow=6.3,SNR=6.4						
GRM	Grahamstown	33.56	57	*e*P	P	06 33 33.1	-0.3
GRM				AMB	AMB	06 33 36.3	
	comp=Z,113nm,2.2s						
BOSA	Boshof	37.06	52	⇓*i*P	P	06 34 01.9	-1.8
BOSA				AMB	AMB	06 34 06.2	
	comp=Z,105nm,1.8s						
BOSA	Boshof	37.06	52	*e*P	P	06 34 02.6	-1.1
	comp=Z,149nm,1.5s						
BOSA	Boshof	37.06	52	P	P	06 34 02.7	-1.0
	comp=Z,46nm,1.1s,baz=210,slow=8.0,SNR=17						
KSD	Kokstad	37.22	58	*e*P	P	06 34 03.6	-1.3
KSD				AMB	AMB	06 34 09.2	
	comp=Z,125nm,1.7s						
SEK	Senekal	38.32	54	*e*P	P	06 34 14.0	-0.4
SEK				AMB	AMB	06 34 17.5	
	comp=Z,105nm,1.5s						
PRYS	Parys	39.43	53	*e*P	P	06 34 21.9	-1.8
PRYS				AMB	AMB	06 34 27.0	
	comp=Z,99nm,3.4s						
KSR	Koster	40.18	52	*e*P	P	06 34 29.4	-0.5
KSR				AMB	AMB	06 34 32.5	
	comp=Z,73nm,1.7s						
ERPM	east rand prop	40.32	54	*e*P	P	06 34 31.1	+0.1
ERPM				AMB	AMB	06 34 32.1	
	comp=Z,81nm,4.7s						
TRQA	Tornquist	40.32	275	*e*P	P	06 34 30.3	-0.6
	comp=Z,44nm,1.1s						
TRQA				LR	LR		
	comp=Z,1μm,20.0s						
LBTB	Lobatse	40.39	49	*e*P	P	06 34 30.3	-1.3
LBTB				AMB	AMB	06 34 32.9	
	comp=Z,60nm,2.2s						
LBTB	Lobatse	40.39	49	*e*P	P	06 34 30.9	-0.7
	comp=Z,197nm,1.9s						
LBTB	Lobatse	40.39	49	P	P	06 34 30.5	-1.1
	comp=Z,16nm,0.8s,baz=211,slow=12,SNR=12						
SLR	Silverton	40.87	53	*e*P	P	06 34 34.3	-1.3
SLR				AMB	AMB	06 34 37.9	
	comp=Z,134nm,2.0s						
SHEL	Horse Pasture	41.99	2	PFAKE		06 35 00.0	+15
SHEL				LR	LR		
	comp=Z,1μm,21.0s						
MIR	Mirnyy	42.46	144	⇓*i*P	P	06 34 48.5	+0.5
MIR				pmax	pmax		
	comp=Z,66nm,1.2s						
TSUM	Tsumeb	42.84	36	*e*P	P	06 34 50.9	-0.8
TSUM	Tsumeb	42.84	36	*e*P	P	06 34 50.9	-0.8
	comp=Z,61nm,1.4s						
TSUM	Tsumeb	42.84	36	P	P	06 34 51.0	-0.7
	comp=Z,19nm,1.1s,baz=188,slow=9.0,SNR=7.9						
TSUM				LR	LR	06 49 18.1	
	comp=Z,1μm,18.9s,baz=150,slow=31						
PLCA	Paso Flores	42.94	265	LR	LR	06 49 11.4	
	comp=Z,692nm,20.2s,baz=316,slow=31						
CAM4	Nova Friburgo	43.75	309	*e*P	P	06 34 54.7	-4.5
CAM4				*i*		06 34 58.7	
CAM4				*i*		06 35 01.7	
CAM4				*i*		06 35 03.5	
CAM4				*i*		06 35 12.1	
PAF	Port-aux-Franc	44.28	114	PFAKE		06 35 10.0	+7.1
PAF				LR	LR		
	comp=Z,2μm,19.0s						
SBA	Scott Base	44.34	178	*e*P	P	06 35 04.7	+1.6
SBA				pmax	pmax		
	comp=Z,30nm,1.0s						
SBA				MLR	MLR		
	comp=Z,1μm,19.0s						
SBA	Scott Base	44.34	178	*e*P	P	06 35 04.7	+1.6
	comp=Z,30nm,1.0s						
SBA				LR	LR		
	comp=Z,1μm,19.0s						
VNDA	Vanda	44.56	177	*e*P	P	06 35 05.8	+0.9
	comp=Z,16nm,1.0s						
VNDA	Vanda	44.56	177	P	P	06 35 04.2	-0.6
	comp=Z,4.2nm,0.8s,baz=207,slow=8.5,SNR=18						
VNDA				LR	LR	06 51 54.9	
	comp=Z,985nm,19.3s,baz=192,slow=34						
MSNA	Messina	44.59	53	*e*P	P	06 35 05.5	-0.2
MSNA				AMB	AMB	06 35 08.3	
	comp=Z,66nm,2.2s						
SPB	Sao Paulo	44.76	303	*e*P	P	06 35 06.0	-1.0
	comp=Z,45nm,1.4s						
SPB				LR	LR		
	comp=Z,1μm,19.0s						
CPUP	Villa Florida	47.15	290	P	P	06 35 24.4	-1.4
CPUP	Villa Florida	47.15	290	P	P	06 35 24.4	-1.4
	comp=Z,7.7nm,0.9s,baz=122,slow=8.5,SNR=12						
CPUP				LR	LR	06 52 19.0	
	comp=Z,904nm,19.9s,baz=132,slow=32						
FCH	Farellones	48.31	272	*e*P	P	06 35 33.9	-1.3
CFAA	Coronel Fontan	48.56	276	P	P	06 35 35.0	-1.8
CFAA	Coronel Fontan	48.56	276	P	P	06 35 35.0	-1.8
	comp=Z,4.5nm,1.0s,baz=145,slow=7.8,SNR=32						
LSZ	Lusaka	50.20	47	⇓*i*P	P	06 35 47.9	-1.6
LSZ				AMB	AMB	06 35 51.2	
	comp=Z,1μm,2.0s						
LSZ	Lusaka	50.20	47	*e*P	P	06 35 48.2	-1.2
	comp=Z,74nm,1.4s						
LSZ	Lusaka	50.20	47	P	P	06 35 48.1	-1.3
	comp=Z,7.8nm,0.9s,baz=207,slow=9.9						
LSZ				LR	LR	06 54 00.9	
	comp=Z,3μm,20.0s,baz=32,slow=32						
LCO	Las Campanas	51.90	275	*e*P	P	06 36 01.2	-1.2
	comp=Z,25nm,1.0s						
LCO				LR	LR		
	comp=Z,700nm,21.0s						
BDFB	Brasilia	52.02	307	P	P	06 36 02.4	-0.8
BDFB	Brasilia	52.02	307	P	P	06 36 02.4	-0.8
	comp=Z,27nm,1.1s,baz=144,slow=5.3,SNR=22						
BDFB				LR	LR	06 54 00.6	
	comp=Z,2μm,19.6s,baz=144,slow=31						
DRV	Dumont d'Urvil	53.27	164	SP	S	06 43 39.0	-3.4
DRV				SS	SKiKP	06 48 18.0	+50
DRV				R		06 52 00.0	
RCBR	Riachuelo	56.62	325	PFAKE		06 36 50.0	+13
RCBR				LR	LR		
	comp=Z,772nm,20.0s						
RCBR	Riachuelo	56.62	325	LR	LR	06 54 46.2	
	comp=Z,592nm,20.6s,baz=328,slow=30						
SIV	San Ignacio	57.72	293	LR	LR	06 58 15.8	
	comp=Z,770nm,21.2s,slow=33						
LPAZ	La Paz	60.99	286	*e*P	P	06 37 06.3	-1.4
	comp=Z,62nm,1.3s						
LPAZ	La Paz	60.99	286	P	P	06 37 06.8	-0.9
	comp=Z,24nm,1.1s,baz=131,slow=5.3,SNR=31						
LPAZ				LR	LR	07 00 46.8	
	comp=Z,553nm,20.0s,baz=142,slow=33						
DBIC	Dimbokro	64.49	3	*e*P	P	06 37 29.7	-0.4
DBIC	Dimbokro	64.49	3	*e*P	P	06 37 29.9	-0.3
	comp=Z,17nm,1.1s						
DBIC	Dimbokro	64.49	3	P	P	06 37 29.5	-0.6
	comp=Z,9.5nm,1.0s,baz=167,slow=7.0,SNR=5.8						
DBIC				LR	LR	06 59 32.3	
	comp=Z,402nm,19.9s,baz=163,slow=30						
MBAR	Mbarara	64.64	43	*e*P	P	06 37 30.4	-1.1
MBAR	Mbarara	64.64	43	P	P	06 37 31.4	0.0
MBAR				LR	LR		
	comp=Z,714nm,21.0s						
MBAR	Mbarara	64.64	43	P	P	06 37 31.4	0.0
	comp=Z,4.9nm,0.2s,baz=184,slow=7.0,SNR=11						
SAML	Samuel	64.81	295	*e*P	P	06 37 30.4	-1.9
	comp=Z,35nm,1.6s						
SAML				LR	LR		
	comp=Z,850nm,22.0s						
KMBO	Kilima Mbogo	66.67	50	P	P	06 37 46.0	+1.4
KMBO	Kilima Mbogo	66.67	50	P	P	06 37 46.0	+1.4
	comp=Z,1.5nm,0.4s,baz=191,slow=6.5,SNR=15						
KMBO				LR	LR	07 04 20.6	
	comp=Z,2μm,19.4s,baz=176,slow=34						
NNA	Nana	69.12	281	PFAKE		06 38 20.0	+20
NNA				LR	LR		
	comp=Z,730nm,20.0s						
TOA0	Torodi Ar. Sit	71.28	9	*e*P	P	06 38 14.1	+1.3
TORD	Torodi Ar. Bea	71.28	9	P	P	06 38 11.3	-1.5
TORD	Torodi Ar. Bea	71.28	9	P	P	06 38 11.3	-1.5
	comp=Z,4.8nm,0.8s,baz=190,slow=4.3,SNR=20						
TORD				LR	LR	07 03 41.1	
	comp=Z,498nm,19.1s,baz=190,slow=31						
MSEY	Mahe Island	71.85	69	PFAKE		06 38 30.0	+13
MSEY				LR	LR		
	comp=Z,411nm,19.0s						
SACV	Santiago Islan	73.95	344	PFAKE		06 38 40.0	+11
SACV				LR	LR		
	comp=Z,440nm,22.0s						
TAU	Tasmania Unive	77.23	161	PFAKE		06 39 00.0	+13
TAU				LR	LR		
	comp=Z,2μm,21.0s						
NWAO	Narrogin (SRO)	78.21	135	P	P	06 38 50.9	-2.1
NWAO				LR	LR		
	comp=Z,439nm,19.0s						
NWAO	Narrogin (SRO)	78.21	135	P	P	06 38 50.9	-2.1
	comp=Z,12nm,0.9s,baz=184,slow=6.0,SNR=4.9						
OTAV	Otavalo	80.32	286	*e*P	P	06 39 05.5	+0.2
	comp=Z,71nm,1.3s						
OTAV				LR	LR		
	comp=Z,652nm,21.0s						
TAM	Tamanrasset	81.20	12	*e*P	P	06 39 10.5	+1.2
TAM				pmax	pmax		
	comp=Z,7.0nm,1.2s						
TAM				MLR	MLR		
	comp=Z,264nm,21.0s						
TAM	Tamanrasset	81.20	12	*e*P	P	06 39 10.4	+1.2
	comp=Z,7.4nm,1.2s						
TAM				LR	LR		
	comp=Z,264nm,21.0s						
ROSC	El Rosal	82.21	292	P	P	06 39 13.4	-1.8
ROSC	El Rosal	82.21	292	P	P	06 39 13.4	-1.8
	comp=Z,2.6nm,0.5s,baz=104,slow=21,SNR=4.9						
ROSC				LR	LR	07 11 51.2	
	comp=Z,523nm,21.9s,baz=7.2,slow=33						
GRGR	Grenville	82.74	307	PFAKE		06 39 30.0	+13
GRGR				LR	LR		
	comp=Z,494nm,19.0s						
BBGH	Gun Hill	82.77	309	PFAKE		06 39 30.0	+13
BBGH				LR	LR		
	comp=Z,1μm,20.0s						
BBOO	Buckleboo	84.44	150	*e*P	P	06 39 24.7	-1.3
	comp=Z,269nm,0.9s						
FDF	Fort de France	84.86	308	PFAKE		06 39 40.0	+12
FDF				LR	LR		
	comp=Z,385nm,20.0s						
CAN	Canberra	84.91	161	PFAKE		06 39 40.0	+12
CAN				LR	LR		
	comp=Z,2μm,19.0s						
PAYG	Puerto Ayora	85.72	276	PFAKE		06 39 50.0	+17
PAYG				LR	LR		
	comp=Z,547nm,22.0s						
STKA	Stephens Creek	86.72	154	*e*P	P	06 39 36.4	-1.1
	comp=Z,8.6nm,1.4s						
STKA	Stephens Creek	86.72	154	P	P	06 39 36.4	-1.1
	comp=Z,5.8nm,0.9s,baz=175,slow=6.1,SNR=11						
STKA				LR	LR	07 15 41.4	
	comp=Z,1μm,19.1s,baz=195,slow=34						
COCO	West Island	87.09	108	PFAKE		06 39 50.0	+11
COCO				LR	LR		
	comp=Z,891nm,21.0s						
ANWB	Willy Bob	87.75	309	PFAKE		06 40 00.0	+18
ANWB				LR	LR		
	comp=Z,476nm,20.0s						
BCIP	Isla Barro Col	88.66	290	PFAKE		06 40 00.0	+13
BCIP				LR	LR		
	comp=Z,406nm,19.0s						
MBWA	Marble Bar	89.73	132	*e*P	P	06 39 50.9	-1.0
	comp=Z,35nm,1.1s						
MBWA				LR	LR		
	comp=Z,652nm,19.0s						
SJG	San Juan	89.99	305	PFAKE		06 40 10.0	+17
SJG				LR	LR		
	comp=Z,379nm,21.0s						
RTC	Rabat Centre	91.64	0	PFAKE		06 40 10.0	+10
RTC				LR	LR		
	comp=Z,630nm,20.0s						
JTS	JuntasAbangare	92.21	286	PFAKE		06 40 20.0	+17
JTS				LR	LR		
	comp=Z,262nm,21.0s						
ASAR	Alice Springs	92.43	145	P	P	06 40 03.1	-1.3
ASAR	Alice Springs	92.43	145	P	P	06 40 03.1	-1.3
	comp=Z,5.4nm,1.2s,baz=201,slow=4.6,SNR=14						
ASAR				LR	LR	07 17 23.3	
	comp=Z,535nm,20.7s,baz=185,slow=33						
AS31	Alice Springs	92.43	145	*e*P	P	06 40 03.4	-1.1
TBI	Tubuai	93.04	214	*e*SS	SS	06 57 25.8	-0.4
	comp=Z,352nm,26.5s						
TBI				*e*LR	LR	07 10 11.8	
	comp=Z,732nm,26.2s						
SDDR	Presa de Saban	93.04	302	PFAKE		06 40 20.0	+13
SDDR				LR	LR		
	comp=Z,547nm,21.0s						
KEST	Kesra	94.42	13	LR	LR	07 19 15.3	
	comp=Z,128nm,20.3s,baz=285,slow=33						
GRTK	Grand Turk	95.18	303	PFAKE		06 40 30.0	+13
GRTK				LR	LR		
	comp=Z,413nm,19.0s						
WDD	Wield Dalam	95.29	18	PFAKE		06 40 30.0	+13
WDD				LR	LR		
	comp=Z,305nm,20.0s						
MTDJ	Mount Denham	95.30	296	PFAKE		06 40 30.0	+12
MTDJ				LR	LR		
	comp=Z,578nm,22.0s						
GTBY	Guantanamo Bay	95.62	299	PFAKE		06 40 30.0	+11
GTBY				LR	LR		
	comp=Z,591nm,20.0s						
WRA	Warramunga Arr	96.06	144	P	P	06 40 18.8	-2.3
WRA	Warramunga Arr	96.06	144	P	P	06 40 18.8	-2.3
	comp=Z,2.5nm,1.1s,baz=208,slow=4.6,SNR=7.8						
WRA				LR	LR	07 18 47.4	
	comp=Z,562nm,20.9s,baz=195,slow=32						
WRAB	Tennant Creek	96.07	144	*i* P	P	06 40 23.8	+2.6
WRAB	Tennant Creek	96.07	144	PFAKE		06 40 30.0	+8.8
WRAB				LR	LR		
	comp=Z,652nm,21.0s						
TGUH	Tegucigalpa,Un	96.58	286	PFAKE		06 40 40.0	+17
TGUH				LR	LR		
	comp=Z,463nm,22.0s						
CMLA	Cha da Macela	96.64	346	PFAKE		06 40 40.0	+17
CMLA				LR	LR		
	comp=Z,870nm,22.0s						
ESDC	Sonseca Array	97.36	3	LR	LR	07 22 18.7	
	comp=Z,136nm,19.7s,baz=140,slow=34						
CEL	Celeste	97.86	18	PFAKE		06 40 40.0	+11
CEL				LR	LR		
	comp=Z,449nm,19.0s						
VSL	Villasalto	98.14	13	PFAKE		06 40 40.0	+10
VSL				LR	LR		
	comp=Z,265nm,21.0s						
PPT2	Papeete2	98.49	216	*e*SS	SS	06 58 54.3	+10
	comp=Z,272nm,25.5s						
PPT2				*e*LR	LR	07 12 39.3	
	comp=Z,351nm,21.5s						
PPT	Papeete	98.51	216	LR	LR	07 19 29.1	
	comp=Z,555nm,18.0s,baz=178,slow=32						
CSS	Prodhromos	98.68	33	PFAKE		06 40 40.0	+7.6
CSS				LR	LR		
	comp=Z,285nm,19.0s						
TIP	Timpagrande	98.90	19	PFAKE		06 40 50.0	+17
TIP				LR	LR		
	comp=Z,431nm,20.0s						
CTAO	Charters Tower	99.14	155	PFAKE		06 40 50.0	+15
CTAO				LR	LR		
	comp=Z,700nm,20.0s						
CUC	Castrocucco	99.53	18	PFAKE		06 40 50.0	+14
CUC				LR	LR		
	comp=Z,191nm,21.0s						
DZM	Mont Dzumac	100.06	174	*e*LR	LR	07 13 12.9	
	comp=Z,1μm,23.1s						
ISP	Isparta	100.59	30	PFAKE		06 40 50.0	+9.1
ISP				LR	LR		
	comp=Z,272nm,21.0s						
AQU	L'Aquila	101.48	15	PFAKE		06 41 00.0	+15
AQU				LR	LR		
	comp=Z,290nm,22.0s						
TEIG	Tepich	102.29	288	PFAKE		06 41 00.0	+11
TEIG				LR	LR		
	comp=Z,498nm,21.0s						
VLC	Villacollemand	102.86	13	PFAKE		06 41 00.0	+9.3
VLC				LR	LR		
	comp=Z,293nm,21.0s						
ANTO	Ankara	103.11	31	PFAKE		06 41 00.0	+8.0
ANTO				LR	LR		
	comp=Z,256nm,20.0s						
BRTR	Keskin Array B	103.21	31	PP	PP	06 45 06.8	-1.5
BRTR	Keskin Array B	103.21	31	PP	PP	06 45 06.8	-1.5
	comp=Z,1.6nm,0.9s,baz=182,slow=11,SNR=6.9						
MALT	Malatya	103.30	35	PFAKE		06 41 00.0	+7.0
MALT				LR	LR		
	comp=Z,684nm,20.0s						
BNI	Bardonecchia	103.35	10	PFAKE		06 41 10.0	+17
BNI				LR	LR		
	comp=Z,394nm,22.0s						
SSB	Saint Sauveur	103.39	9	PFAKE		06 41 10.0	+17
SSB				LR	LR		
	comp=Z,353nm,19.0s						
KULM	Kulim	103.92	103	PFAKE		06 41 10.0	+14
KULM				LR	LR		
	comp=Z,401nm,22.0s						

KAPI Kappang 104.23 125 PFAKE 06 41 10.0 +12
KAPI LR LR
comp=Z,272nm,21.0s
TUE Stuetta 105.02 12 PFAKE 06 45 30.0
TUE LR LR
comp=Z,204nm,21.0s
BFO Black Forest 106.75 11 PFAKE 06 45 30.0
BFO LR LR
comp=Z,178nm,19.0s
WLF Walferdange 107.88 9 PFAKE 06 45 30.0
WLF LR LR
comp=Z,425nm,19.0s
PSZ Piszkesteto 107.92 19 PFAKE 06 45 30.0
PSZ LR LR
comp=Z,203nm,19.0s
CRVS Cervenica-Dubn 109.15 20 PDIF **Pdif 06 41 23.1 +4.5**
PMG Port Moresby 109.66 153 PFAKE 06 45 40.0
PMG LR LR
comp=Z,844nm,19.0s
KIV Kislovodsk 109.76 36 PFAKE 06 45 40.0
KIV LR LR
comp=Z,259nm,19.0s
CNNC Cliffs of the 109.98 305 PFAKE 06 45 40.0
CNNC LR LR
comp=Z,577nm,19.0s
KWP Kalwaria Pacla 110.08 20 PFAKE 06 45 40.0
KWP LR LR
comp=Z,360nm,20.0s
CLL Collm 110.21 13 *e*Sdif Sdif 06 53 50.0 +13
CLL *e*PS **PS 06 55 32.0 +4.1**
CLL *e*PPS PPS 06 56 41.0
CLL *e*SS SS 07 01 34.0 +8.2
CLL *e* 07 02 42.0
CLL *e*(SSS) 07 06 30.0
BRAL Brewton 110.67 295 PFAKE 06 45 40.0
BRAL LR LR
comp=Z,887nm,21.0s
HNR Honiara 111.99 166 PFAKE 06 45 40.0
HNR LR LR
comp=Z,1μm,19.0s
CBN Corbin 112.25 307 PFAKE 06 45 40.0
CBN LR LR
comp=Z,538nm,22.0s
LRAL Lakeview Retre 112.31 297 PFAKE 06 45 40.0
LRAL LR LR
comp=Z,536nm,22.0s
KIEV Kiev 112.39 24 PFAKE 06 45 40.0
KIEV LR LR
comp=Z,201nm,21.0s
BLA Blacksburg 112.74 304 PFAKE 06 45 40.0
BLA LR LR
comp=Z,491nm,20.0s
NIL Nilore 113.19 64 PFAKE 06 45 40.0
NIL LR LR
comp=Z,31nm,20.0s
VBMS Vicksburg 113.34 294 PFAKE 06 45 40.0
VBMS LR LR
comp=Z,319nm,20.0s
CMAR Chiang Mai Arr 114.05 94 PKiKP **PKiKP 06 45 33.5 +0.9**
CMAR PP **PP 06 46 28.1 +1.0**
CMAR Chiang Mai Arr 114.05 94 PKiKP **PKiKP 06 45 33.5 +0.9**
comp=Z,1.3nm,0.3s,baz=218,slow=4.0,SNR=5.6
CMAR PP **PP 06 46 28.1 +1.0**
comp=Z,1.1nm,0.3s,baz=231,slow=6.8,SNR=7.2
CHTO Chiang Mai 114.34 93 PFAKE 06 45 40.0 +6.8
CHTO LR LR
comp=Z,213nm,20.0s
PLAL Pickwick Lake 114.41 297 PFAKE 06 45 50.0 +17
PLAL LR LR
comp=Z,597nm,21.0s
OXF Oxford 114.67 296 PFAKE 06 45 50.0 +17
OXF LR LR
comp=Z,500nm,20.0s
BINY Binghamton 115.02 310 PFAKE 06 45 50.0 +16
BINY LR LR
comp=Z,685nm,20.0s
LBNH Lisbon 115.14 314 PFAKE 06 45 50.0 +16
LBNH LR LR
comp=Z,532nm,19.0s
NCB Newcomb 115.80 312 PFAKE 06 45 50.0 +15
NCB LR LR
comp=Z,812nm,20.0s
ACSO Alum Creek Sta 116.36 304 PFAKE 06 45 50.0 +14
ACSO LR LR
comp=Z,572nm,20.0s
LONY Lake Ozonia 116.48 313 PFAKE 06 45 50.0 +13
LONY LR LR
comp=Z,713nm,20.0s
JCT Junction City 116.59 285 PFAKE 06 45 50.0 +13
JCT LR LR
comp=Z,377nm,21.0s
ERPA Erie 116.61 307 PFAKE 06 45 50.0 +13
ERPA LR LR
comp=Z,593nm,19.0s
MIAR Mount Ida 116.71 293 PFAKE 06 45 50.0 +13
MIAR LR LR
comp=Z,461nm,19.0s
DAV Davao City (W) 117.57 125 PFAKE 06 45 50.0 +10
DAV LR LR
comp=Z,427nm,19.0s
TXAR Lajitas Array 117.67 282 PKP **PKPdf 06 45 40.7 +1.3**
TXAR Lajitas Array 117.67 282 PKP **PKPdf 06 45 40.7 +1.3**
comp=Z,2.1nm,1.2s,baz=111,slow=4.9,SNR=5.8
KONO Kongsberg 118.07 10 PFAKE 06 45 50.0 +11
KONO LR LR
comp=Z,272nm,21.0s
OBN Obninsk 118.18 27 PFAKE 06 45 50.0 +11
OBN LR LR
comp=Z,163nm,21.0s
AAM Ann Arbor 118.34 305 PFAKE 06 45 50.0 +10
AAM LR LR
comp=Z,537nm,21.0s
KSH Kashi 119.21 62 PKP **PKPdf 06 45 39.8 -2.3**
KSH PP **PP 06 47 01.0 -2.4**
KSH PKS **PKSdf 06 49 14.1 -4.7**
KSH SKS **SKSdf 06 52 50.0 -3.9**
KSH SKKS SKKSac 06 53 53.0 -10
KSH SS SS 07 03 16.1 -8.7
KSH LR LR
comp=N,190nm,5.5s
KSH LR LR
comp=E,190nm,6.0s
KSH LR LR
comp=Z,330nm,8.3s
WMOK Wichita Mounta 119.46 289 PFAKE 06 46 00.0 +17
WMOK LR LR
comp=Z,314nm,20.0s
HDIL Hopedale 119.47 300 PFAKE 06 46 00.0 +18
HDIL LR LR
comp=Z,450nm,22.0s
NOA NORSAR Array B 119.59 10 PKP **PKPdf 06 45 43.1 +1.1**
NOA NORSAR Array B 119.59 10 PKP **PKPdf 06 45 43.1 +1.1**
comp=Z,0.9nm,0.9s,baz=192,slow=1.5,SNR=2.4
QIZ Qiongzhong 120.26 103 PKP **PKPdf 06 45 44.2 -0.3**
QIZ PP **PP 06 47 09.7 -0.6**
QIZ SS SS 07 03 34.5 -3.4
QIZ AMB AMB
comp=Z,97nm,5.3s
QIZ LR LR
comp=N,410nm,21.5s
QIZ LR LR
comp=Z,450nm,21.6s
ABKAR Akbulak array 120.29 44 *e*PKPdf **PKPdf 06 45 44.0 +0.4**
MNTX Cornudas Mount 120.44 282 PFAKE 06 46 00.0 +15
MNTX LR LR
comp=Z,268nm,20.0s
EKS2 Erkin-Say 120.69 58 PFAKE 06 46 00.0 +15
EKS2 LR LR
comp=Z,266nm,22.0s
GLMI Grayling 120.78 306 PFAKE 06 46 00.0 +15
GLMI LR LR
comp=Z,697nm,20.0s
125A Gardner Draw, 120.82 283 ⇓P **PKPdf 06 45 47.2 +1.8**
baz=122
MSTX Muleshoe 120.88 285 ⇓P **PKPdf 06 45 47.3 +1.8**
baz=122
AAK Ala-Archa 120.99 58 ⇑*i*PKIKP **PKPdf 06 45 47.5 +2.0**
AAK Ala-Archa 120.99 58 PKP **PKPdf 06 45 45.9 +0.5**
AAK LR LR
comp=Z,264nm,21.0s
AAK Ala-Archa 120.99 58 PKP **PKPdf 06 45 45.9 +0.5**
comp=Z,1.2nm,0.7s,baz=158,slow=5.4,SNR=3.0
Y27A Causey 121.01 285 ⇑P **PKPdf 06 45 47.4 +1.6**
baz=122
AMTX Amarillo 121.04 287 PFAKE 06 46 00.0 +14
AMTX LR LR
comp=Z,431nm,21.0s
Z25A Roswell 121.34 283 ⇓P **PKPdf 06 45 48.1 +1.7**
baz=122
KMI Kunming 121.50 93 PKP **PKPdf 06 45 48.3 +1.2**
KMI sPKP 06 45 53.0
KMI PP **PP 06 47 22.6 +3.4**
KMI SS SS 07 03 52.1 -2.4
KMI AMB AMB
comp=Z,57nm,3.8s
KMI LR LR
comp=Z,350nm,26.0s
TKM2 Tokmak 2 121.72 59 PFAKE 06 46 00.0 +13
TKM2 LR LR
comp=Z,241nm,21.0s
KSU1 Kansas State U 121.80 294 PFAKE 06 46 00.0 +13
KSU1 LR LR
comp=Z,466nm,20.0s
Y25A Mesa, Roswell 121.83 284 ⇓P **PKPdf 06 45 50.0 +2.6**
baz=123
W27A Bowe Ranch, En 121.89 286 ⇑P **PKPdf 06 45 48.7 +1.3**
baz=123
FINES FINESS Array B 121.92 18 PKP **PKPdf 06 45 45.1 -1.3**
FINES FINESS Array B 121.92 18 PKP **PKPdf 06 45 45.1 -1.3**
comp=Z,2.0nm,0.8s,baz=188,slow=5.3,SNR=1.1
220A Playas Peak, P 122.25 279 ⇓P **PKPdf 06 45 49.9 +1.7**
baz=123
SCHQ Schefferville 122.31 324 PKP **PKPdf 06 45 48.6 +1.2**
SCHQ Schefferville 122.31 324 PKP **PKPdf 06 45 48.6 +1.2**
comp=Z,4.6nm,1.0s,baz=252,slow=3.2,SNR=3.4
121A Cookes Peak, D 122.36 281 ⇓P **PKPdf 06 45 50.4 +2.0**
baz=123
SCIA State Center 122.36 298 PFAKE 06 46 00.0 +12
SCIA LR LR
comp=Z,546nm,20.0s
V26A Tequesquite Ra 122.83 286 ⇓P **PKPdf 06 45 50.9 +1.7**
baz=124
W24A Lazy 6 Ranch, 123.20 284 ⇓P **PKPdf 06 45 48.2 -1.8**
baz=124
U26A Atchley Ranch, 123.27 286 ⇓P **PKPdf 06 45 51.6 +1.5**
baz=124
Y21A Point of Rocks 123.45 282 ⇓P **PKPdf 06 45 51.0 +0.5**
baz=124
LAZ Ladron 123.47 282 *e*PKPdf **PKPdf 06 45 53.1 +2.5**
TARA Tarawa 123.51 180 PFAKE 06 46 00.0 +9.0
TARA LR LR
comp=Z,3μm,22.0s
ANMO Albuquerque 123.54 283 PFAKE 06 46 00.0 +9.3
ANMO LR LR
comp=Z,299nm,19.0s
U25A Circle Dot Ran 123.61 286 ⇓P **PKPdf 06 45 52.4 +1.7**
baz=124
Y20A Horse Springs, 123.74 281 ⇑P **PKPdf 06 45 51.0 -0.2**
baz=124
TUC Tucson 123.76 278 *e*PKIKP **PKPdf 06 45 52.7 +1.7**
TUC Tucson 123.76 278 *e*PKPdf **PKPdf 06 45 52.7 +1.7**
T26A Comanche Natio 123.79 287 ⇑P **PKPdf 06 45 53.2 +2.1**
baz=124
X21A Alamocita Cree 123.84 282 ⇑P **PKPdf 06 45 53.2 +1.9**
baz=125
KLMR Klimovskoe 124.03 26 *e*PKIKP **PKPdf 06 45 48.3 -2.1**
KLMR pmax pmax
comp=Z,19nm,1.4s
T25A Trinidad 124.18 287 ⇑P **PKPdf 06 45 54.7 +2.9**
baz=125
T24A Torres, Weston 124.46 286 ⇓P **PKPdf 06 45 54.8 +2.3**
baz=125
214A Organ Pipe Nat 124.55 276 ⇓P **PKPdf 06 45 54.6 +2.2**
baz=125
S25A Robets Cordova 124.59 287 ⇓P **PKPdf 06 45 54.4 +1.8**
baz=125
GYA Guiyang 124.66 95 Pdif **Pdif 06 42 28.0 -0.3**
GYA PKP **PKiKP 06 45 54.3 +1.0**
GYA PP **PP 06 47 42.9 +2.5**
GYA PKS **PKSdf 06 49 29.4 -0.4**
GYA SKKS 06 54 33.8
GYA SS **SS 07 04 31.0 -3.3**
GYA AMB AMB
comp=Z,150nm,7.9s
GYA LR LR
comp=N,150nm,22.2s
GYA LR LR
comp=E,100nm,23.4s
GYA LR LR
comp=Z,130nm,21.9s
S24A Houchin Ranch, 124.97 286 ⇑P **PKPdf 06 45 57.2 +3.7**
baz=126
X18A Snowflake 125.04 280 ⇑P **PKPdf 06 45 57.4 +3.8**
baz=126
V20A Brimhall 125.24 282 ⇑P **PKPdf 06 45 55.5 +1.6**
baz=126
ECSD EROS Data Cent 125.36 297 *e*PKPdf **PKPdf 06 45 55.5 +1.9**
ECSD LR LR
comp=Z,452nm,20.0s
T22A Edith 125.36 285 ⇓P **PKPdf 06 45 55.8 +1.7**
baz=126
ARU Arti 125.64 39 *i* PKIKP **PKPdf 06 45 55.4 +1.7**
ARU SP SP 06 57 42.6 -3.3
ARU MLR MLR
comp=Z,257nm,20.0s
ARU Arti 125.64 39 PFAKE 06 46 10.0 +16
ARU LR LR
comp=Z,312nm,21.0s
R23A Moffat 125.71 286 ⇓P **PKPdf 06 45 57.4 +2.6**
baz=126
X16A Lo Mia Camp, P 125.74 279 ⇓P **PKPdf 06 45 54.8 0.0**
baz=126
OGNE Ogallala 125.88 291 PFAKE 06 46 10.0 +15
OGNE LR LR
comp=Z,332nm,19.0s
S22A 4UR Ranch, Cre 125.88 285 ⇓P **PKPdf 06 45 55.2 +0.1**
baz=127
EYMN Ely 126.20 304 PFAKE 06 46 10.0 +15
EYMN LR LR
comp=Z,606nm,19.0s
R22A Saguache, Gunn 126.21 286 ⇓P **PKPdf 06 45 55.8 0.0**
baz=127
MVCO Mesa Verde 126.34 284 PFAKE 06 46 10.0 +14
MVCO LR LR
comp=Z,425nm,20.0s
MVCO Mesa Verde 126.34 284 ⇑P **PKPdf 06 45 56.5 +0.5**
baz=127
WUAZ Wupatki 126.54 280 PFAKE 06 46 10.0 +14
WUAZ LR LR
comp=Z,283nm,20.0s
P23A Jefferson 126.61 287 ⇓P **PKPdf 06 45 58.0 +1.4**
baz=127
TMCR Tamitsa 126.64 23 *e*PKIKP **PKPdf 06 45 51.3 -4.0**
TMCR pmax pmax
comp=Z,45nm,1.3s
CD2 Chengdu 126.64 89 PKP **PKPdf 06 45 58.2 +1.7**
CD2 PP **PP 06 47 57.1 +3.6**
CD2 PKS **PKSdf 06 49 33.5 +0.3**
CD2 SKS **SKSdf 06 53 07.5 -0.6**
CD2 SKKS **SKKSac 06 54 47.9 -2.9**
CD2 SS **SS 07 04 57.1 -2.0**
CD2 AMB AMB
comp=Z,140nm,5.5s
CD2 LR LR
comp=N,280nm,21.7s
CD2 LR LR
comp=Z,260nm,27.4s
SVE Sverdlovsk 126.66 39 *e*PKIKP **PKPdf 06 45 58.4 +2.8**
SVE pmax pmax
comp=Z,13nm,0.6s
R21A Cimarron 126.72 285 ⇓P **PKPdf 06 45 56.5 -0.2**
baz=127
S20A Disappointment 126.73 284 ⇓P **PKPdf 06 45 56.5 -0.3**
baz=128
Q22A Crested Butte, 126.77 286 ⇑P **PKPdf 06 45 56.5 -0.4**
baz=128
ISCO Idaho Springs 126.82 288 PFAKE 06 46 10.0 +13
ISCO LR LR
comp=Z,456nm,22.0s
ISCO Idaho Springs 126.82 288 ⇓P **PKPdf 06 45 58.2 +1.3**
baz=128
R20A Redvale 127.02 284 ⇑P **PKPdf 06 45 58.3 +1.1**
baz=128
PV01 Paradox Valley 127.07 284 *e*PKPdf **PKPdf 06 46 00.8 +3.4**
MONP Monument Peak 127.19 274 ⇑P **PKPdf 06 45 58.4 +0.7**
baz=128
BRVK Borovoye 127.28 48 ⇑*i*PKIKP **PKPdf 06 45 59.2 +2.3**
BRVK MLR MLR
comp=Z,400nm,20.0s
BRVK Borovoye 127.28 48 *e*PKPdf **PKPdf 06 45 58.2 +1.3**
BRVK LR LR
comp=Z,389nm,20.0s
O23A Lake Granby, G 127.28 288 ⇓P **PKPdf 06 45 58.2 +0.4**
baz=128
BVAR Borovoye Array 127.29 48 PKIKP **PKPdf 06 45 55.7 -1.3**
BVAR pmax pmax
comp=Z,7.0nm,0.9s
BVAR Borovoye Array 127.29 48 PKP **PKPdf 06 45 55.7 -1.3**
BVAR Borovoye Array 127.29 48 PKP **PKPdf 06 45 55.7 -1.3**
comp=Z,6.5nm,0.9s,baz=211,slow=2.6,SNR=18
IRM Iron Mountain 127.50 276 ⇑P **PKPdf 06 45 58.2 +0.2**
baz=128
O22A Kremmling 127.56 287 ⇑P **PKPdf 06 45 59.3 +1.0**
baz=128
SOKR Solikamsk 127.59 35 *e*PKIKP **PKPdf 06 46 00.5 +3.3**
SOKR pmax pmax
comp=Z,20nm,1.5s
M24A Cheyenne 127.67 290 ⇑P **PKPdf 06 45 58.7 +0.4**
baz=128
MKAR Makanchi Array 127.75 60 PKIKP **PKPdf 06 45 57.9 -0.2**
MKAR pmax pmax
comp=Z,1.0nm,1.0s
MKAR Makanchi Array 127.75 60 PKP **PKPdf 06 45 57.9 -0.2**
MKAR Makanchi Array 127.75 60 PKP **PKPdf 06 45 57.9 -0.2**
comp=Z,1.1nm,0.9s,baz=253,slow=1.3,SNR=3.8
N23A Red Feather La 127.80 288 ⇑P **PKPdf 06 46 00.5 +1.8**
baz=128
N22A Wattenberg Ran 127.99 288 ⇑P **PKPdf 06 46 01.0 +1.9**
baz=129
Q19A Hogan Spring (128.05 284 ⇓P **PKPdf 06 46 00.5 +1.4**
baz=129
WMQ Urumqi 128.13 66 PKP **PKPdf 06 46 01.0 +2.0**
WMQ PP **PP 06 48 07.0 +3.7**
WMQ PKS **PKSdf 06 49 36.0 +0.6**
WMQ SKS **SKSdf 06 53 11.0 +0.7**
WMQ SKKS **SKKSac 06 54 59.0 -0.6**
WMQ SS **SS 07 05 17.0 -0.5**
WMQ AMB AMB
comp=Z,22nm,12.0s
WMQ LR LR
comp=N,280nm,26.0s
WMQ LR LR
comp=E,370nm,26.0s
WMQ LR LR
comp=Z,210nm,26.0s
P19A Cripple Cowboy 128.41 285 ⇑P **PKPdf 06 46 01.7 +1.8**
baz=129
AGMN Agassiz Nation 128.42 302 *e*PKPdf **PKPdf 06 46 01.1 +1.9**
AGMN LR LR
comp=Z,507nm,22.0s
N21A Black Mountain 128.50 287 ⇓P **PKPdf 06 45 59.2 -0.9**
baz=129
M22A Cedar Creek Ra 128.51 288 ⇓P **PKPdf 06 46 00.9 +0.9**
baz=129
SRU San Rafael 128.82 284 *e*PKIKP **PKPdf 06 46 02.6 +2.0**
SRU San Rafael 128.82 284 *e*PKPdf **PKPdf 06 46 02.6 +2.0**
SRU San Rafael 128.82 284 ⇓P **PKPdf 06 46 02.3 +1.7**
baz=130
O19A Miners Draw (B 128.98 286 ⇑P **PKPdf 06 46 00.0 -0.8**
baz=130
KURK Kurchatov 128.99 55 *i* PKIKP **PKPdf 06 46 02.7 +2.5**
KURK Kurchatov 128.99 55 PFAKE 06 46 10.0 +10
KURK LR LR
comp=Z,411nm,21.0s
P17A Butcher Ranch, 129.20 284 ⇓P **PKPdf 06 46 04.0 +2.7**
baz=130
RSSD Black Hills 129.23 293 *e*PKIKP **PKPdf 06 46 04.5 +3.3**
RSSD Black Hills 129.23 293 *e*PKPdf **PKPdf 06 46 04.5 +3.3**
MVU Marysvale 129.24 282 PFAKE 06 46 20.0 +18
MVU LR LR
comp=Z,351nm,21.0s
L21A Rawlins 129.31 288 ⇓P **PKPdf 06 46 04.4 +2.9**
baz=130
LVZ Lovozero 129.32 19 PFAKE 06 46 10.0 +10
LVZ LR LR
comp=Z,170nm,20.0s
O18A Roosevelt 129.41 285 ⇑P **PKPdf 06 46 01.6 0.0**
baz=130
ARCES ARCESS Array B 129.42 14 PKPpre PKPpre 06 45 56.1
ARCES ARCESS Array B 129.42 14 PKhKP PKPpre 06 45 56.1
comp=Z,1.2nm,0.7s,baz=174,slow=3.6,SNR=2.3
N18A Larsen Ranch, 129.76 286 ⇓P **PKPdf 06 46 04.1 +1.8**
baz=130
KEV Kevo 129.82 15 PFAKE 06 46 10.0 +8.8
KEV LR LR
comp=Z,253nm,20.0s
LRMC Laurel Mountai 129.85 275 ⇑P **PKPdf 06 46 03.7 +1.1**
baz=130
ULM Lac du Bonnet 129.85 303 PKP **PKPdf 06 46 02.5 +0.6**
ULM Lac du Bonnet 129.85 303 PKP **PKPdf 06 46 02.5 +0.6**
comp=Z,1.0nm,0.3s,baz=160,slow=2.8,SNR=2.9
J22A Midwest 129.93 290 ⇑P **PKPdf 06 46 03.8 +1.2**
baz=131
H24A Dirks Ranch, A 129.94 293 ⇑P **PKPdf 06 46 03.9 +1.5**
baz=131
I22A 9 Mile Ranch, 130.28 291 ⇑P **PKPdf 06 46 05.1 +2.0**
baz=131
K20A Yellowstone Ra 130.31 288 ⇓P **PKPdf 06 46 05.3 +2.0**
baz=131
J21A Lysite 130.36 290 ⇓P **PKPdf 06 46 04.8 +1.3**
baz=131
I21A Big Trails, Te 130.62 290 ⇑P **PKPdf 06 46 05.4 +1.6**
baz=131
LZH Lanzhou 130.67 85 *e*PKP **PKPdf 06 46 02.5 -1.7**
LZH sPKP 06 46 12.0
K19A Absolon Red Bu 130.69 288 ⇓P **PKPdf 06 46 05.6 +1.6**
baz=131
DUG Dugway 130.81 283 PFAKE 06 46 20.0 +16
DUG LR LR
comp=Z,351nm,21.0s
DUG Dugway 130.81 283 ⇓P **PKPdf 06 46 07.2 +2.9**
baz=132
BW06 Boulder Array 131.01 288 PFAKE 06 46 20.0 +15
BW06 LR LR
comp=Z,424nm,19.0s
PDAR Pinedale Array 131.01 288 PKP **PKPdf 06 46 04.9 +0.2**
PDAR Pinedale Array 131.01 288 PKP **PKPdf 06 46 04.9 +0.2**
comp=Z,0.7nm,0.8s,baz=134,slow=4.9,SNR=3.8
GTA Gaotai 131.03 79 *e*PKP **PKPdf 06 46 08.7 +4.0**
GTA PP PP 06 48 28.0 +5.7
GTA SKS **SKSdf 06 53 19.2 +3.3**
GTA SKKS **SKKSac 06 55 20.6 +2.6**
GTA SS **SS 07 05 54.1 +0.7**
GTA AMB AMB
comp=Z,94nm,5.0s
GTA LR LR
comp=N,230nm,20.4s
GTA LR LR
comp=E,230nm,19.0s
GTA LR LR
comp=Z,230nm,20.9s
J19A Crowheart 131.11 288 ⇓P **PKPdf 06 46 07.1 +2.3**
baz=132
I20A Worland 131.14 290 ⇑P **PKPdf 06 46 06.3 +1.5**
baz=132
HWUT Hardware Ranch 131.19 285 PFAKE 06 46 20.0 +15
HWUT LR LR
comp=Z,364nm,19.0s
D24A Glendive 131.53 295 ⇑P **PKPdf 06 46 08.8 +3.5**
baz=132
TPH Tonopah 131.55 278 PFAKE 06 46 20.0 +14
TPH LR LR
comp=Z,436nm,19.0s
AHID Auburn Hatcher 131.79 286 PFAKE 06 46 20.0 +14
AHID LR LR
comp=Z,426nm,22.0s
E22A Miles City 131.84 293 ⇑P **PKPdf 06 46 07.8 +1.9**
baz=133
G20A Bridger 132.09 291 ⇑P **PKPdf 06 46 08.9 +2.3**
baz=133
LOHW Long Hollow 132.15 288 *e*PKPdf **PKPdf 06 46 09.4 +2.6**
MOOW Moose Ponds 132.32 288 *e*PKPdf **PKPdf 06 46 09.3 +2.2**
NVAR Mina Array Bea 132.38 277 PKPpre PKPpre 06 46 02.5
NVAR Mina Array Bea 132.38 277 PKhKP PKPpre 06 46 02.5
comp=Z,0.5nm,0.6s,baz=106,slow=3.2,SNR=3.2
DGMT Dagmar 132.42 297 PFAKE 06 46 20.0 +13
DGMT LR LR
comp=Z,518nm,22.0s
IMW Indian Meadow 132.52 288 *e*PKPdf **PKPdf 06 46 11.0 +3.4**
RLMT Red Lodge 132.55 290 PFAKE 06 46 20.0 +12
RLMT LR LR
comp=Z,564nm,21.0s
LKWY Lake 132.72 289 PFAKE 06 46 20.0 +12
LKWY LR LR
comp=Z,668nm,20.0s
D21A La Casta Ranch 132.79 293 ⇑P **PKPdf 06 46 09.8 +2.1**
baz=134

GCMT Greycliff 133.22 290 ePKPdf PKPdf 06 46 11.3 +2.6
BMN Battle Mountai 133.28 280 PFAKE 06 46 20.0 +11
BMN LR LR
comp=Z,352nm,19.0s
F18A Big Timber 133.32 290 ⇓P PKPdf 06 46 11.3 +2.5
baz=134
D20A Manuel Ranch, 133.37 293 ⇑P PKPdf 06 46 11.2 +2.5
baz=134
F17A Fitzpatrick Pl 133.79 290 ⇑P PKPdf 06 46 11.2 +1.5
baz=134
I14A Mackay 133.82 286 ⇓P PKPdf 06 46 11.1 +1.2
baz=134
ZALV Zalesovo Beam 133.97 55 PKIKP PKPpre 06 46 05.3
ZALV Zalesovo Beam 133.97 55 PKPpre PKPpre 06 46 05.3
ZALV Zalesovo Beam 133.97 55 PKhKP PKPpre 06 46 05.3
comp=Z,0.3nm,0.3s,baz=223,slow=5.3,SNR=2.7
HLID Hailey 134.06 285 PFAKE 06 46 20.0 +10
HLID LR LR
comp=Z,351nm,19.0s
BOZ Bozeman (W) 134.10 289 PFAKE 06 46 20.0 +10
BOZ LR LR
comp=Z,416nm,19.0s
DLMT Dillon 134.39 288 ePKPdf PKPdf 06 46 14.6 +3.7
MFID Camas Ranch 134.69 284 ⇓P PKPdf 06 46 13.9 +2.5
baz=135
EGMT Eagleton 134.81 293 PFAKE 06 46 30.0 +19
EGMT LR LR
comp=Z,590nm,21.0s
HRY Holter Researc 134.94 290 ePKPdf PKPdf 06 46 16.5 +4.7
H12A Diamond D Ranc 134.98 286 ⇓P PKPdf 06 46 14.1 +2.1
baz=136
NJ2 Nanjing 135.53 102 ePKP PKPdf 06 46 10.5 -2.7
NJ2 sPKP 06 46 24.3
NJ2 PP PP 06 48 50.5 -0.3
NJ2 PKS PKSdf 06 49 45.5 -4.0
NJ2 AMB AMB
comp=Z,190nm,5.9s
NJ2 LR LR
comp=N,430nm,25.3s
NJ2 LR LR
comp=E,510nm,23.0s
NJ2 LR LR
comp=Z,220nm,26.1s
F13A Darby 135.57 287 ⇑P PKPdf 06 46 15.6 +2.5
baz=136
G12A Big Creek, Yel 135.62 286 ⇑P PKPdf 06 46 15.7 +2.5
baz=136
FFC Flin Flon 135.63 304 i PKIKP PKPdf 06 46 20.4 +7.7
FFC Flin Flon 135.63 304 PFAKE 06 46 30.0 +17
FFC LR LR
comp=Z,578nm,21.0s
C16A Fuhringer Ranc 135.64 291 ⇑P PKPdf 06 46 15.6 +2.5
baz=136
CHMT Chamberlain Mo 135.79 289 ePKPdf PKPdf 06 46 16.0 +2.4
E13A Victor 135.94 288 ⇑P PKPdf 06 46 16.7 +3.0
baz=137
C15A Salmond Ranch, 136.05 290 ⇓P PKPdf 06 46 16.0 +2.1
baz=137
MSO Missoula 136.08 289 ePKPdf PKPdf 06 46 15.0 +1.1
MSO LR LR
comp=Z,293nm,21.0s
MSO Missoula 136.08 289 ⇑P PKPdf 06 46 16.4 +2.5
baz=137
SLMT Seeley Lake 136.13 289 ePKPdf PKPdf 06 46 18.3 +4.2
B15A Bradely Ranch, 136.39 291 ⇑P PKPdf 06 46 15.6 +1.1
baz=137
BMO Blue Mountains 136.45 284 ePKIKP PKPdf 06 46 17.2 +2.5
BMO MLR MLR
comp=Z,316nm,20.0s
BMO Blue Mountains 136.45 284 ePKPdf PKPdf 06 46 17.2 +2.5
BMO LR LR
comp=Z,316nm,20.0s
D13A Huson 136.52 288 ⇓P PKPdf 06 46 16.5 +1.8
baz=137
C14A Swan Lake 136.62 290 ⇓P PKPdf 06 46 16.8 +1.9
baz=137
YBMT Yellow Bay 136.81 290 ePKPdf PKPdf 06 46 20.8 +5.6
JTMT Jette 136.87 289 ePKPdf PKPdf 06 46 18.4 +3.0
D12A Red Ives Fores 136.94 288 ⇓P PKPdf 06 46 18.8 +3.3
baz=138
BSMT Bassoo Peak 137.19 289 ePKPdf PKPdf 06 46 19.0 +2.9
A14A Double T Ranch 137.25 291 ⇑P PKPdf 06 46 19.5 +3.4
baz=138
WALA Waterton Lakes 137.55 291 ePKPdf PKPdf 06 46 19.6 +3.0
A13A Flathead Natio 137.72 291 ⇓P PKPdf 06 46 20.4 +3.6
baz=138
HHC Hu-ho-hao-te 138.27 87 ePKP PKPdf 06 46 19.7 +1.5
HHC PP PP 06 49 12.1 +3.9
HHC PKS PKSdf 06 49 53.7 -0.6
HHC SKS SKSdf 06 53 29.2 +0.7
HHC SKKS SKKSac 06 56 02.4 +0.7
HHC SS SS 07 07 21.0 +0.5
HHC AMB AMB
comp=Z,110nm,7.7s
HHC LR LR
comp=N,360nm,19.3s
HHC LR LR
comp=E,240nm,19.0s
HHC LR LR
comp=Z,300nm,21.0s
HAWA Hanford 138.64 284 PFAKE 06 46 30.0 +11
HAWA LR LR
comp=Z,551nm,22.0s
NEW Newport 138.64 288 PFAKE 06 46 30.0 +11
NEW LR LR
comp=Z,349nm,20.0s
LON Longmire 140.06 283 ePKIKP PKPdf 06 46 23.3 +2.1
LON Longmire 140.06 283 ePKPdf PKPdf 06 46 23.3 +2.1
BJI Beijing 140.15 92 PKP PKPdf 06 46 23.7 +2.3
BJI PP PP 06 49 20.4 +0.9
BJI LR LR
comp=N,200nm,26.1s
BJI LR LR
comp=E,110nm,24.6s
BJI LR LR
comp=Z,250nm,31.2s
ULN Ulaanbaatar 140.67 75 PFAKE 06 46 30.0 +7.6
ULN LR LR
comp=Z,191nm,20.0s
TLY Talaya 141.33 69 PFAKE 06 46 40.0 +17
TLY LR LR
comp=Z,222nm,20.0s
NLWA Neilton Lookou 141.54 282 PFAKE 06 46 40.0 +16
NLWA LR LR
comp=Z,260nm,21.0s
INCN Inchon 143.76 104 PFAKE 06 46 40.0 +12
INCN LR LR
comp=Z,272nm,21.0s
RES Resolute Bay 144.12 333 PKPpre PKPpre 06 46 21.7
RES PKP PKPdf 06 46 27.4 -0.1
RES Resolute Bay 144.12 333 PKhKP PKPpre 06 46 21.7
comp=Z,1.7nm,0.8s,baz=336,slow=7.8,SNR=12
RES PKP PKPdf 06 46 27.4 -0.1
comp=Z,12nm,1.1s,baz=77,slow=2.1,SNR=21
KSAR Wonju Array Be 144.38 105 PKP PKPab 06 46 26.6 -0.7
KSRS Korea Array 144.41 106 PKP PKPab 06 46 26.6 -0.8
comp=Z,16nm,0.9s,baz=213,slow=3.4,SNR=28
YKA Yellowknife Ar 145.43 309 PKPbc PKPdf 06 46 27.6 -2.4
YKA Yellowknife Ar 145.43 309 PKPbc PKPdf 06 46 27.6 -2.4
comp=Z,2.8nm,0.9s,baz=102,slow=3.9,SNR=40
CIT Chita 146.52 74 ePKP2 PKPab 06 46 36.0 +1.1
CIT pmax pmax
comp=Z,136nm,2.3s
CN2 Changchun 147.71 95 ePKPbc PKPdf 06 46 34.9 +0.4
CN2 ePKPab PKiKP 06 46 38.7 -0.7
CN2 ePP PP 06 50 07.1 +2.2
CN2 LR LR
comp=N,200nm,20.0s
CN2 LR LR
comp=E,200nm,20.0s
CN2 LR LR
comp=Z,200nm,20.0s
MAJO Matsushiro 148.77 118 ePKIKP PKPbc 06 46 39.4 -1.0
MAJO MLR MLR
comp=Z,305nm,22.0s
MAJO Matsushiro 148.77 118 ePKPbc PKPbc 06 46 39.4 -1.0
MAJO LR LR
comp=Z,305nm,22.0s
MJAR Matsushiro Arr 148.77 118 PKPbc PKPbc 06 46 39.5 -0.9
MJAR Matsushiro Arr 148.77 118 PKPbc PKPbc 06 46 39.5 -0.9
comp=Z,26nm,1.0s,baz=210,slow=4.1,SNR=16
MDJ Mudanjiang 150.45 98 PKPbc PKPbc 06 46 43.5 -0.8
DLBC Dease Lake 150.63 296 ePKPbc PKPbc 06 46 45.9 +1.6
WRAK Wrangell Islan 150.90 291 PFAKE 06 46 50.0 -2.4
WRAK LR LR
comp=Z,495nm,22.0s
USRK Ussuriysk Arra 151.43 101 PKPbc PKPbc 06 46 45.2 -1.3
comp=Z,15nm,0.9s,baz=250,slow=3.9,SNR=17
KLR Kul'dur 154.52 92 ePKIKP PKPdf 06 46 46.1 +1.3
ERM Erimo 155.44 118 PFAKE 06 47 00.0 -12
ERM LR LR
comp=Z,306nm,19.0s
EGAK Eagle 157.37 307 PFAKE 06 47 00.0 +12
EGAK LR LR
comp=Z,521nm,21.0s
YAK Yakutsk 158.42 61 PFAKE 06 47 00.0 +11
YAK LR LR
comp=Z,261nm,22.0s
YSS Yuzh-Sakhalins 158.84 108 PFAKE 06 47 00.0 +10
YSS LR LR
comp=Z,124nm,19.0s
ILAR Eielson Array 159.82 306 PKP PKPdf 06 46 49.1 -1.9
ILAR PKPab PKPab 06 47 31.0 +0.7
ILAR Eielson Array 159.82 306 PKP PKPdf 06 46 49.1 -1.9
comp=Z,0.5nm,0.8s,baz=225,slow=1.6,SNR=5.9
ILAR PKPab PKPab 06 47 31.0 +0.7
comp=Z,2.3nm,0.9s,baz=93,slow=2.7,SNR=12
COLA College 160.23 307 PFAKE 06 47 00.0 +8.6
COLA LR LR
comp=Z,333nm,20.0s
KDAK Kodiak Island 161.68 284 PFAKE 06 47 10.0 +17
KDAK LR LR
comp=Z,618nm,19.0s
SEY Seymchan 168.84 55 i PKIKP PKPdf 06 47 04.4 +5.3
BILL Bilibino 169.52 13 i PKIKP PKPdf 06 46 58.3 -1.1
BILL Bilibino 169.52 13 PFAKE 06 47 10.0 +11
BILL LR LR
comp=Z,319nm,21.0s
PET Petropavlovsk 170.59 116 PFAKE 06 47 10.0 +10
PET LR LR
comp=Z,437nm,21.0s

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*NIED **08** 06:37:00, 43.°90N×148.°50E, h47km, Mw3.8 Best double couple: M₀5.43000×10¹⁴ NP1:φs264.00000°, δ88.00000°, λ-116.00000°. NP2:φs169.00000°, δ26.00000°, λ-5.00000°.*
*JMA **08** 06:37:01.6±0.3, 43.°89N×148.°48E, h0km, M3.7*
*IDC **08** 06:37:08.7±3.3, 44.°73N×148.°75E, h83km±25km, mb3.2/5, mb1 3.4/7, mb1mx3.2/26, mbtmp3.3/7, Error ellipse: s-maj=59.7km s-min=18.1km az=164.0*
ISC 08 06:37:00.1±1.3, **43.°9N**±0.°2×**149.°0E**±0.°1, **h35km, n15, σ1.s96**/19, **mb3.3**/5, **East of Kuril Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NEM2 Nemuro 2 2.46 258 P Pn 06 37 38.1 +0.5
NEM2 eS Sn 06 38 04.6 -1.8
JRA Rausu 2.83 272 P Pn 06 37 43.5 +0.7
JRA eS Sn 06 38 14.1 -1.5
JNK Nakash 3.15 265 P Pn 06 37 47.7 +0.5
JAK Akkeshi 3.30 255 P Pn 06 37 49.8 +0.7
JAR Ashorobuto 3.88 263 P Pn 06 37 58.7 +1.5
JCH Churui 4.35 255 P Pn 06 38 06.0 +2.4
JCH eS Sn 06 38 52.7 -0.3
ASAJ Asahikawa 4.65 275 P Pn 06 38 12.3 +4.5
1.1nm,0.3s,baz=90,slow=13,SNR=7.2
ASAJ S Sn 06 39 05.4 +4.8
0.6nm,0.3s,baz=54,slow=19,SNR=2.8
JNBK Urakawa-nobuka 4.89 253 eS Sn 06 39 06.4 +0.1
JKB Kayabe 6.22 254 P Pn 06 38 31.3 +2.0
JKB eS Sn 06 39 37.2 -2.0
PETK Petropavlovsk- 10.83 29 P Pn 06 39 33.2 +0.7
0.8nm,0.3s,baz=210,slow=17,SNR=4.3
ILAR Eielson Array 40.54 36 P P 06 44 34.4 -1.1
0.3nm,0.8s,baz=274,slow=9.1,SNR=6.5
MKAR Makanchi Array 45.72 298 P P 06 45 16.3 -1.3
0.2nm,0.5s,baz=71,slow=11,SNR=2.7
FINES FINESS Array B 65.34 334 P P 06 47 36.3 -1.9
2.0nm,0.8s,baz=36,slow=7.4,SNR=3.6
NOA NORSAR Array B 69.93 340 P P 06 48 05.5 -1.7
0.3nm,0.5s,baz=42,slow=5.4,SNR=3.4
TXAR Lajitas Array 81.41 57 P P 06 49 15.7 +2.2
0.2nm,0.8s,baz=285,slow=3.5,SNR=3.4

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*IDC **08** 06:57:44.8±0.9, 39.°33N×77.°36E, h0km, mb3.6/9, mb1 3.7/14, mb1mx3.6/32, mbtmp3.5/14, ML3.2/5, MS4.0/2, Ms1 4.0/2, ms1mx2.9/28, Error ellipse: s-maj=19.7km s-min=13.3km az=60.0*
*ISCJB **08** 06:57:45.9±0.4, 39.°33N±0.°03×77.°89E±0.°07, h17km, mb3.5/9, MS4.1/2, Error ellipse: s-maj=8.3km s-min=4.4km az=0.7*
*BJI **08** 06:57:46.7, 39.°42N×77.°46E, h3km, ML3.6/8*
*NNC **08** 06:57:47.7±3.3, 39.°59N×77.°69E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=31.5km s-min=21.8km az=18.0*
ISC 08 06:57:47.5±0.6, **39.°32N**±0.°05×**77.°72E**±0.°06, **h17km, n42, σ2.s03**/41, **mb3.6**/9, **5C-4D, Southern Xinjiang**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSH Kashi 1.37 279 ⇓iPg Pg 06 58 14.7 +0.8
KSH Sg Sg 06 58 33.6 +1.9
KSH smax smax
comp=N,2μm,0.4s
KSH smax smax
comp=E,830nm,0.3s
ULHL Ulahol 3.13 339 P Pn 06 58 37.5 +1.2
SNR=13
KZA Kyzart 3.33 327 P Pn 06 58 39.8 +0.5
SNR=60
UCH Uchtor 3.79 321 P Pn 06 58 45.8 +0.2
SNR=6.4
KNDC Almaty 3.93 352 ⇑Lg Lg 06 59 45.4
comp=E,212nm,0.7s
KBK Karagaybulak 3.94 329 P Pb 06 58 54.6 -2.0
SNR=13
TKM2 Tokmak 2 3.94 337 ⇑Pn Pn 06 58 48.2 +0.9
comp=E,18nm,0.7s
TKM2 ⇓Lg Lg 06 59 43.7
comp=E,26nm,0.3s
TKM2 Tokmak 2 3.94 337 P Pn 06 58 48.6 +1.2
SNR=16
AAK Ala-Archa 4.11 325 Pn Pn 06 58 50.5 +0.7
comp=E,1.4nm,0.3s,baz=134,slow=9.1,SNR=20
AAK Pg Pb 06 58 57.1 -2.5
comp=E,5.4nm,0.3s,baz=133,slow=13,SNR=30
AAK Lg Lg 06 59 48.9
comp=E,9.8nm,0.3s,baz=297,slow=23,SNR=11
AML Almayashu 4.15 314 P Pn 06 58 50.8 +0.3
SNR=18
CHMS Chumysh 4.30 330 P Pb 06 58 58.5 -4.3
SNR=6.8
EKS2 Erkin-Say 4.48 319 P Pn 06 58 55.5 +0.8
SNR=10
USP Ospenovka 4.63 329 P Pb 06 59 09.3 +1.1
SNR=6.0
KK31 Karatay Array 6.62 307 Pg Pb 06 59 40.5 -1.7
comp=E,4.3nm,0.7s,baz=123,slow=14,SNR=27
KK31 ⇑Lg Lg 07 01 08.9
comp=E,12nm,0.7s,baz=118,slow=26,SNR=4.6
CHCP Chirah Chowk 6.69 214 P Pn 06 59 29.2 +4.1
DHRM DHARAMSHALA 7.15 190 eP Pn 06 59 34.5 +3.0
DHRM eS Sn 07 00 55.8 +3.3
DHRM AML AML 07 01 01.4
comp=N,115nm,0.2s
DHRM AML AML 07 01 02.8
comp=E,192nm,0.9s
CEP Cherat 7.21 222 P Pn 06 59 34.9 +2.7
CEP S Sn 07 00 54.0 +0.2
THW Thamme Wali 8.11 218 P Pn 06 59 46.9 +2.3
MK31 Makanchi Array 8.18 23 Pn Pn 06 59 46.6 +1.1
comp=E,0.5nm,0.7s,baz=214,slow=12,SNR=8.7
MK31 ⇑Lg Lg 07 01 54.7
comp=E,4.8nm,0.8s,baz=208,slow=26,SNR=4.0
MKAR Makanchi Array 8.18 23 Pn Pn 06 59 46.2 +0.7
comp=E,0.2nm,0.3s,baz=204,slow=13,SNR=7.9
MKAR Lg Lg 07 02 07.8
comp=E,0.4nm,0.3s,baz=213,slow=29,SNR=5.6
SMLA Simla 8.19 183 eP Pn 06 59 48.1 +2.5
SMLA eS Sn 07 01 16.1 -1.5
SMLA AML AML 07 01 25.7
comp=E,35nm,0.6s
SMLA AML AML 07 01 26.2
comp=N,36nm,0.4s
AYAN Aya Nagar 10.82 183 eS Sn 07 02 17.5 -4.9
SONA Sohna 11.05 183 eP Pn 07 00 24.7 -0.1
SONA eS Sn 07 02 21.5 -6.5
SONA AML AML 07 02 30.1
comp=E,17nm,0.2s
SONA AML AML 07 02 30.2
comp=N,13nm,0.3s
KUDL Kundal 11.19 186 eP Pn 07 00 27.4 +0.7
KUDL eS Sn 07 02 25.0 -6.5
KUDL AML AML 07 02 38.4
comp=N,4.1nm,0.3s
KUDL AML AML 07 02 38.5
comp=E,4.2nm,0.3s
KURBB Kurchatov Arra 11.32 3 ⇓Lg Lg 07 03 40.8
comp=E,6.1nm,1.4s
KURBB Kurchatov Arra 11.32 3 Pn Pn 07 00 28.5 +0.2
comp=E,0.1nm,0.3s,baz=187,slow=12,SNR=5.9
KHET Khetri 11.33 189 eP Pn 07 00 30.8 +2.1
KHET eS Sn 07 02 29.4 -5.5
KHET eS 07 02 31.7
KURK Kurchatov 11.41 3 ⇑Pn Pn 07 00 26.9 -2.8
comp=E,2.9nm,1.1s
KURK ⇓Lg Lg 07 03 39.5
comp=E,12nm,1.0s
BVAR Borovoye Array 14.61 342 Pn Pn 07 01 08.1 -5.1
comp=E,0.1nm,0.3s,baz=154,slow=11,SNR=3.5
BVAR Lg Lg 07 05 24.2
comp=E,0.2nm,0.3s,baz=143,slow=36,SNR=5.6
ZALV Zalesovo Beam 15.41 16 Pn Pn 07 01 24.6 +0.7
comp=E,0.2nm,0.3s,baz=216,slow=12,SNR=2.6
ZALV LR LR 07 06 38.9
comp=E,36nm,21.0s,baz=38,slow=34
AKTO Aktyubinsk 17.79 315 P P 07 01 54.8 -0.1
comp=E,0.1nm,0.3s,baz=115,slow=19,SNR=3.2
SONM Songino Array 22.35 58 P P 07 02 47.8 +3.1
comp=E,0.7nm,0.7s,baz=253,slow=10,SNR=5.7
FINES FINESS Array B 38.30 323 P P 07 05 05.3 -1.5
comp=E,0.7nm,0.4s,baz=98,slow=8.5,SNR=6.5
ARCES ARCESS Array B 40.72 335 P P 07 05 25.9 -0.9
comp=E,2.2nm,0.9s,baz=105,slow=8.6,SNR=7.0
NOA NORSAR Array B 45.43 321 P P 07 06 03.5 -1.6
comp=E,0.5nm,0.6s,baz=91,slow=8.0,SNR=2.7
GERES GERESS Array B 45.71 304 P P 07 06 06.6 -1.0
comp=E,0.8nm,0.8s,baz=60,slow=6.8,SNR=5.0
JMIC Jan Mayen 52.19 336 LR LR 07 29 52.5
comp=E,148nm,19.2s,baz=137,slow=37
TORD Torodi Ar. Bea 71.03 272 P P 07 09 02.9 -1.8
comp=E,0.2nm,0.5s,baz=45,slow=5.2,SNR=2.7
YKA Yellowknife Ar 78.05 6 P P 07 09 44.5 -0.2
comp=E,0.4nm,0.7s,baz=345,slow=5.2,SNR=9.6
WRA Warramunga Arr 79.19 127 P P 07 09 53.5 +1.9
comp=E,0.3nm,0.8s,baz=335,slow=6.2,SNR=2.4
NWAO Narrogin (SRO) 80.69 147 LR LR 07 46 31.4
comp=E,98nm,20.1s,baz=184,slow=36
ASAR Alice Springs 81.73 130 P P 07 10 05.4 +0.2
comp=E,0.1nm,0.4s,baz=313,slow=6.2,SNR=2.4

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*ISCJB **08** 07:08:20.6±0.8, 43.°13N±0.°06×1.°25W±0.°07, h15km±6km, Error ellipse: s-maj=9.4km s-min=9.0km az=25.2*
*CSEM **08** 07:08:21.3±0.2, 43.°13N×1.°21W, h2km, ML2.5/1, Error ellipse: s-maj=6.4km s-min=5.1km az=100.0*
*MDD **08** 07:08:21.9±0.3, 43.°11N×1.°28W, h0km, mbLg1.4/5, Error ellipse: s-maj=3.7km s-min=1.4km az=63.0, PRXIMO*
*LDG **08** 07:08:21.3±0.2, 43.°12N×1.°25W, h2km, Md2.1/2, Ml2.5/1, Error ellipse: s-maj=3.5km s-min=3.1km az=116.0*
ISC 08 07:08:20.8±1.0, **43.°13N**±0.°03×**1.°25W**±0.°04, **h15km**±5km, **n17, σ0.s34**/23, **Pyrenees**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SJPF Ste Jean 0.02 140 ePg Pg 07 08 23.5 0.0
SJPF eSg Sg 07 08 25.1 -0.2
8.9nm,0.2s
SJPF Ste Jean 0.02 140 ePg Pg 07 08 23.5 0.0
SJPF eSg Sg 07 08 25.1 -0.2
4.4nm,0.2s
OSSF Osses 0.13 354 Pg Pb 07 08 24.7 -0.2
OSSF Lg Lg 07 08 27.0
ELIZ Elizondo 0.21 279 Pg Pg 07 08 25.4 -0.2
2.0nm,0.1s,SNR=18
ELIZ Lg Lg 07 08 28.5
7.7nm,0.1s,SNR=10
ELIZ Elizondo 0.21 279 Pg Pg 07 08 25.4 -0.2
2.0nm,0.1s,SNR=18
ELIZ Lg Lg 07 08 28.5
7.7nm,0.1s,SNR=10
EORO Oroz-Betelu 0.24 191 Pg Pg 07 08 25.9 -0.3
2.9nm,0.1s,SNR=18
EORO Lg Lg 07 08 29.1
15nm,0.1s,SNR=7.9
EORO Oroz-Betelu 0.24 191 Pg Pg 07 08 25.9 -0.3
2.9nm,0.1s,SNR=18
EORO Lg Lg 07 08 29.1
15nm,0.1s,SNR=7.9
IELO Elcoad 0.29 179 Pg Pg 07 08 26.7 -0.2
1.0nm,0.1s,SNR=18
IELO Lg Lg 07 08 30.3
12nm,0.1s,SNR=7.9
IELO Elcoad 0.29 179 Pg Pg 07 08 26.7 -0.2
1.0nm,0.1s,SNR=18
IELO Lg Lg 07 08 30.3
12nm,0.1s,SNR=7.9
IZUN Zunzarren 0.31 210 Pg Pg 07 08 26.8 -0.5
0.6nm,0.1s,SNR=4.0
IZUN Lg Lg 07 08 30.9
4.1nm,0.1s,SNR=7.2
IZUN Zunzarren 0.31 210 Pg Pg 07 08 26.8 -0.5
0.6nm,0.1s,SNR=4.0
IZUN Lg Lg 07 08 30.9
4.1nm,0.1s,SNR=7.2
IEPA Eparoz 0.35 183 Pg Pb 07 08 29.0 +0.2
0.7nm,0.1s,SNR=7.9
IEPA Lg Lg 07 08 33.5
11nm,0.1s,SNR=7.9
IEPA Eparoz 0.35 183 Pg Pb 07 08 29.0 +0.2
0.7nm,0.1s,SNR=7.9
IEPA Lg Lg 07 08 33.5
11nm,0.1s,SNR=7.9
ETSF Etsaut 0.55 115 ePg Pg 07 08 31.3 -0.5
ETSF eSg Sg 07 08 39.0 -0.2
1.2nm,0.2s
ETSF Etsaut 0.55 115 ePg Pg 07 08 31.3 -0.5
ETSF eSg Sg 07 08 39.0 -0.2
0.6nm,0.2s
LFF La Frestale 2.31 38 ePn Pn 07 08 58.8 +0.5
LFF eSg Sg 07 09 34.7 -0.2
6.0nm,0.3s
LFF La Frestale 2.31 38 ePn Pn 07 08 58.8 +0.5
LFF eSg Sg 07 09 34.7 -0.2
3.0nm,0.3s

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*ISCJB **08** 07:17:14.0±0.6, 45.°52N±0.°09×151.°84E±0.°09, h30km, mb3.9/23, Error ellipse: s-maj=14.9km s-min=6.3km az=151.0*
*MOS **08** 07:17:16.8±0.9, 45.°48N×151.°74E, h57km, mb4.2/8, Error ellipse: s-maj=13.2km s-min=12.0km az=146.6*
*IDC **08** 07:17:17.5±0.8, 45.°47N×151.°74E, h45km±6km, mb3.6/19, mb1 3.8/24, mb1mx3.7/33, mbtmp3.6/24, ML3.3/4, MS3.0/3, Ms1 3.0/3, ms1mx2.8/36, Error ellipse: s-maj=17.5km s-min=11.9km az=156.0*
ISC 08 07:17:17.0±0.6, **45.°6N**±0.°1×**151.°75E**±0.°08, **h30km, n44, σ1.s52**/46, **mb3.7**/23, **Kuril Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KUR Kuril'sk 2.76 265 PN Pn 07 18 00.5 +1.4
KUR pmax pmax
comp=Z,90nm,0.6s
YUK Yuzh-Kuril'sk 4.46 252 i PN Pn 07 18 27.6 +5.1
YUK i S Sn 07 19 14.6 +1.3
YUK pmax pmax
comp=Z,10.0nm,0.1s
YUK pmax pmax
comp=E,17nm,0.3s
YUK pmax pmax
comp=Z,56nm,0.3s
YUK smax smax
comp=E,125μm,0.7s
YUK smax smax
comp=N,48μm,0.3s
SKR Severo-Kuril's 5.90 28 ePN Pn 07 18 38.0 -4.3
SKR pmax pmax
comp=Z,60nm,0.5s
YSS Yuzh-Sakhalins 6.39 286 ePN Pn 07 18 50.4 +1.4
ASAJ Asahikawa 6.67 261 P Pn 07 18 53.6 +0.9
comp=Z,0.8nm,0.3s,baz=82,slow=15,SNR=3.8

ASAJ				LR	LR	07 21 43.8	
	comp=Z,146nm,18.9s,baz=135,slow=40						
ERM	**Erimo**	**7.16**	**243**	*i* PN	**Pn**	**07 19 00.8**	**+1.3**
PETK	**Petropavlovsk-**	**8.49**	**25**	*e*PN	Pn	07 19 28.0	+10
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**8.49**	**25**	P	**Pn**	**07 19 18.3**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=190,slow=15,SNR=4.6						
PETK				LR	LR	07 22 41.3	
	comp=Z,60nm,20.3s,baz=2.3,slow=38						
MJA0	**Matsu Arr-Jizo**	**13.58**	**233**	*e*P	**P**	**07 20 36.0**	**-0.2**
MAJO	**Matsushiro**	**13.61**	**233**	*i* P	**P**	**07 20 36.0**	**-0.4**
MJAR	**Matsushiro Arr**	**13.61**	**233**	P	**Pn**	**07 20 27.3**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=104,slow=17,SNR=2.6						
USRK	**Ussuriysk Arra**	**14.07**	**272**	P	**Pn**	**07 20 33.4**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=82,slow=11,SNR=4.9						
USRK				LR	LR	07 26 39.5	
	comp=Z,101nm,19.1s,baz=128,slow=40						
KSRS	**Korea Array**	**19.55**	**254**	P	**P**	**07 21 42.1**	**+0.1**
	baz=58,slow=10,SNR=7.9						
HHC	**Hu-ho-hao-te**	**29.45**	**275**	*e*P	**P**	**07 23 15.8**	**-2.2**
HHC				S	S	07 27 57.2	-13
HHC				pmax	pmax		
	comp=Z,33nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,6.0s						
SONM	**Songino Array**	**30.86**	**291**	P	**P**	**07 23 29.0**	**-1.5**
	comp=Z,1.0nm,0.7s,baz=85,slow=8.0,SNR=7.5						
LZH	**Lanzhou**	**36.99**	**272**	*e*P	**P**	**07 24 24.0**	**+0.2**
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
ILAR	**Eielson Array**	**38.07**	**38**	P	**P**	**07 24 31.1**	**-1.3**
	comp=Z,0.2nm,0.6s,baz=254,slow=6.6,SNR=5.5						
GTA	**Gaotai**	**38.23**	**280**	*e*P	**P**	**07 24 34.9**	**+0.7**
ZALV	**Zalesovo Beam**	**42.55**	**306**	P	**P**	**07 25 08.0**	**-1.6**
ZALV	**Zalesovo Beam**	**42.55**	**306**	P	**P**	**07 25 08.0**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=74,slow=11,SNR=3.0						
INK	**Inuvik**	**43.16**	**32**	P	**P**	**07 25 12.8**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=274,slow=6.6,SNR=5.5						
INK				pP	**pP**	**07 25 26.5**	**+3.2**
	comp=Z,0.8nm,0.7s,baz=275,slow=4.9,SNR=3.0						
MKAR	**Makanchi Array**	**46.66**	**298**	*e*P	**P**	**07 25 42.3**	**-0.2**
MKAR	**Makanchi Array**	**46.66**	**298**	P	**P**	**07 25 41.2**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=69,slow=6.4,SNR=7.2						
MKAR				pP	**pP**	**07 25 54.2**	**+2.7**
	comp=Z,0.5nm,0.6s,baz=68,slow=6.5,SNR=4.0						
KURK	**Kurchatov**	**47.24**	**304**	*i* P	**P**	**07 25 45.2**	**-1.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KURBB	**Kurchatov Arra**	**47.33**	**304**	P	**P**	**07 25 45.7**	**-1.9**
	comp=Z,1.0nm,0.5s,baz=73,slow=8.3,SNR=12						
RES	**Resolute Bay**	**52.27**	**18**	P	**P**	**07 26 25.2**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=326,slow=8.4,SNR=3.7						
YKA	**Yellowknife Ar**	**52.45**	**36**	P	**P**	**07 26 26.0**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=298,slow=6.9,SNR=13						
YKA				pP	**pP**	**07 26 38.4**	**+3.0**
	comp=Z,0.8nm,0.8s,baz=296,slow=7.2,SNR=8.9						
AAK	**Ala-Archa**	**53.52**	**296**	*i* P	**P**	**07 26 34.9**	**+0.2**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AAK	**Ala-Archa**	**53.52**	**296**	P	**P**	**07 26 34.5**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=117,slow=6.3,SNR=11						
ARCES	**ARCESS Array B**	**58.67**	**341**	P	**P**	**07 27 09.5**	**-1.4**
	comp=Z,3.9nm,0.9s,baz=41,slow=6.8,SNR=17						
AKTO	**Aktyubinsk**	**58.82**	**312**	P	**P**	**07 27 12.0**	**-0.3**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKTO	**Aktyubinsk**	**58.82**	**312**	P	**P**	**07 27 11.9**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=111,slow=8.6,SNR=3.7						
NVAR	**Mina Array Bea**	**63.83**	**61**	P	**P**	**07 27 46.3**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=0.0,slow=1.8,SNR=3.6						
FINES	**FINESS Array B**	**64.71**	**334**	P	**P**	**07 27 50.4**	**-1.3**
	comp=Z,3.0nm,0.5s,baz=51,slow=9.1,SNR=12						
PDAR	**Pinedale Array**	**66.22**	**53**	pP	pP	07 28 14.1	+2.7
	comp=Z,0.4nm,0.5s,baz=282,slow=1.4,SNR=2.4						
WRA	**Warramunga Arr**	**67.08**	**198**	P	**P**	**07 28 06.1**	**-1.3**
	comp=Z,0.7nm,1.2s,baz=11,slow=6.6,SNR=2.8						
NB2	**NORSAR Subarra**	**69.05**	**341**	P	**P**	**07 28 18.3**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**69.05**	**341**	P	**P**	**07 28 18.6**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=29,slow=6.3,SNR=7.2						
ASAR	**Alice Springs**	**70.78**	**197**	P	**P**	**07 28 27.4**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=19,slow=5.9,SNR=2.9						
ASAR				pP	**pP**	**07 28 43.4**	**+3.6**
	comp=Z,0.6nm,0.8s,baz=14,slow=7.0,SNR=3.7						
KIV	**Kislovodsk**	**70.95**	**314**	*e*P	**P**	**07 28 33.1**	**+1.7**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBZ	**Khabaz**	**71.00**	**313**	P	**P**	**07 28 31.7**	**+0.2**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	**Khabaz**	**71.00**	**313**	P	**P**	**07 28 31.7**	**+0.2**
	comp=Z,3.1nm,0.7s,baz=61,slow=4.8,SNR=10.0						
BRTR	**Keskin Array B**	**78.60**	**316**	P	**P**	**07 29 15.3**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=54,slow=2.7,SNR=3.6						
TXAR	**Lajitas Array**	**78.91**	**59**	P	**P**	**07 29 17.0**	**-0.6**
	comp=Z,0.3nm,0.9s,baz=293,slow=4.7,SNR=3.5						
TXAR				pP	**pP**	**07 29 29.3**	**+2.2**
	comp=Z,0.8nm,0.7s,baz=298,slow=3.5,SNR=8.2						

WEL 08 07:28:33.5±0.8**, 35°.63S×178°.88E, h239**km±20km**, ML4.0**/5**, 1C-1D, Error ellipse: s-maj=22.6km s-min=16.3km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**2.49**	**191**	⇑PN	Pn	07 29 19.5	-0.3
PUZ				SN	S	07 29 55.2	-1.3
CNGZ	**Carnagh Statio**	**2.90**	**190**	PN	Pn	07 29 24.5	+0.3
MWZ	**Matawai**	**2.91**	**201**	PN	Pn	07 29 24.5	+0.2
MWZ				SN	S	07 30 05.2	+0.7
URZ	**Urewera**	**2.99**	**208**	⇓PN	Pn	07 29 25.0	-0.1
KNZ	**Kokohu**	**3.52**	**195**	PN	Pn	07 29 31.0	-0.1
RAHZ	**Arahi**	**3.58**	**203**	PN	Pn	07 29 32.1	+0.2
MHGZ	**Mahia Peninsul**	**3.61**	**192**	PN	Pn	07 29 32.5	+0.4
NMHZ	**Naumai**	**3.84**	**205**	PN	Pn	07 29 35.5	+0.6
BKZ	**Black Stump Fm**	**4.01**	**208**	PN	Pn	07 29 37.2	+0.2
MCHZ	**McNeill Hill**	**4.19**	**204**	PN	Pn	07 29 39.2	+0.2
KAHZ	**Kahuranaki**	**4.45**	**200**	PN	Pn	07 29 42.6	+0.3
BHHZ	**Black Hill Sta**	**4.46**	**209**	PN	Pn	07 29 42.5	+0.1
PXZ	**Pawanui**	**4.68**	**199**	PN	Pn	07 29 44.5	-0.4
PXZ				SN	S	07 30 42.8	+1.1
PRHZ	**Porangahau**	**4.96**	**200**	PN	Pn	07 29 48.3	-0.2
TSZ	**Takapari Road**	**4.99**	**207**	PN	Pn	07 29 48.1	-0.8
BFZ	**Birch Farm**	**5.46**	**202**	PN	Pn	07 29 54.1	-0.4
MRZ	**Mangatainoka R**	**5.66**	**206**	PN	Pn	07 29 55.9	-1.2
OGWZ	**Otaki Gorge**	**5.95**	**208**	PN	Pn	07 30 00.1	-0.6
KIW	**Kapiti Island**	**6.09**	**210**	PN	Pn	07 30 01.8	-0.6
TUWZ	**Tuamarina**	**6.97**	**212**	PN	Pn	07 30 12.3	-1.2
THZ	**Tophouse**	**7.70**	**215**	PN	Pn	07 30 22.4	-0.6
LTZ	**Lake Taylor**	**8.79**	**214**	PN	Pn	07 30 36.2	-0.6

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*CSEM **08** 07:43:51.7, 42°.31N×13°.46E, h10km, After ROM*

ROM 08 07:43:51.7±0.1**, 42°.31N×13°.46E, h10**km**, Ml2.3**/11**, Error ellipse: s-maj=1.0km s-min=0.7km az=59.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**315**	Pg	Pg	07 43 54.3	+0.4
AQU				Sg	Sg	07 43 55.7	+0.1
	2μm,0.4s						
AQU	**L'Aquila**	**0.06**	**315**	Pg	Pg	07 43 54.3	+0.4
AQU				Sg	Sg	07 43 55.7	+0.1
	2μm,0.4s						
FAGN	**Fagnano**	**0.10**	**116**	Pg	Pg	07 43 54.9	+0.5
FAGN				Sg	Sg	07 43 57.0	+0.7
	2μm,0.3s						
FAGN	**Fagnano**	**0.10**	**116**	Pg	Pg	07 43 54.9	+0.5
FAGN				Sg	Sg	07 43 57.0	+0.7
	2μm,0.3s						
CAMP	**Campotosto**	**0.23**	**350**	Pg	Pg	07 43 57.2	+0.6
CAMP				Sg	Sg	07 44 00.9	+0.9
	232nm,0.6s						
CAMP	**Campotosto**	**0.23**	**350**	Pg	Pg	07 43 57.2	+0.6
CAMP				Sg	Sg	07 44 00.9	+0.9
	232nm,0.6s						
FIAM	**Fiamignano**	**0.26**	**261**	Pg	Pg	07 43 57.8	+0.7
FIAM				Sg	Sg	07 44 02.0	+1.2
	216nm,0.6s						
FIAM	**Fiamignano**	**0.26**	**261**	Pg	Pg	07 43 57.8	+0.7
FIAM				Sg	Sg	07 44 02.0	+1.2
	216nm,0.6s						
PTQR	**Pietraquaria**	**0.29**	**189**	Pg	Pg	07 43 58.2	+0.5
PTQR				Sg	Sb	07 44 03.0	-1.1
	37nm,0.2s						
PTQR	**Pietraquaria**	**0.29**	**189**	Pg	Pg	07 43 58.2	+0.5
PTQR				Sg	Sb	07 44 03.0	-1.1
	37nm,0.2s						
VCEL	**Villa Celiera**	**0.29**	**73**	Pg	Pb	07 43 58.9	-0.4
	455nm,0.4s						
VCEL	**Villa Celiera**	**0.29**	**73**	Pg	Pb	07 43 58.9	-0.4
	455nm,0.4s						
TERO	**Teramo**	**0.33**	**19**	Pg	Pg	07 43 58.7	+0.3
TERO				Sg	Sg	07 44 03.9	+1.0
	272nm,0.2s						
TERO	**Teramo**	**0.33**	**19**	Pg	Pg	07 43 58.7	+0.3
TERO				Sg	Sg	07 44 03.9	+1.0
	272nm,0.2s						
LNSS	**Leonessa**	**0.43**	**313**	Pg	Pg	07 44 00.7	+0.4
	200nm,0.4s						
LNSS	**Leonessa**	**0.43**	**313**	Pg	Pg	07 44 00.7	+0.4
	200nm,0.4s						
INTR	**Introdacqua**	**0.45**	**132**	Pg	Pg	07 44 00.9	+0.4
INTR				Sg	Sb	07 44 07.7	-0.9
	219nm,0.2s						
INTR	**Introdacqua**	**0.45**	**132**	Pg	Pg	07 44 00.9	+0.4
INTR				Sg	Sb	07 44 07.7	-0.9
	219nm,0.2s						
VVLD	**Villa Vallelon**	**0.46**	**165**	Pg	Pg	07 44 00.7	0.0
	132nm,0.6s						
VVLD	**Villa Vallelon**	**0.46**	**165**	Pg	Pg	07 44 00.7	0.0
	132nm,0.6s						
CERT	**Cerreto**	**0.51**	**225**	Pg	Pg	07 44 01.8	+0.1
CERT	**Cerreto**	**0.51**	**225**	Pg	Pg	07 44 01.8	+0.1
GUAR	**Guarcino**	**0.53**	**192**	Pg	Pg	07 44 02.2	+0.1
	59nm,0.3s						
GUAR	**Guarcino**	**0.53**	**192**	Pg	Pg	07 44 02.2	+0.1
	59nm,0.3s						
NRCA	**Norcia**	**0.58**	**334**	Pg	Pg	07 44 03.3	+0.1
NRCA				Sg	Sb	07 44 12.2	-0.4
	126nm,0.1s						
NRCA	**Norcia**	**0.58**	**334**	Pg	Pg	07 44 03.3	+0.1
NRCA				Sg	Sb	07 44 12.2	-0.4
	126nm,0.1s						
SDI	**San Donato**	**0.65**	**156**	Pg	Pb	07 44 04.9	-0.4
	43nm,0.2s						
SDI	**San Donato**	**0.65**	**156**	Pg	Pb	07 44 04.9	-0.4
	43nm,0.2s						
CESI	**CESI - Serrava**	**0.81**	**330**	Pg	Pg	07 44 07.1	-0.3
CESI	**CESI - Serrava**	**0.81**	**330**	Pg	Pg	07 44 07.1	-0.3

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*CSEM **08** 07:44:50.7, 42°.39N×13°.43E, h11km, After ROM*

ROM 08 07:44:50.7±0.1**, 42°.39N×13°.43E, h11**km**, Ml2.2**/4**, Error ellipse: s-maj=1.6km s-min=1.4km az=94.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**212**	Pg	Pg	07 44 53.2	+0.4
AQU				Sg	Sg	07 44 54.6	+0.3
AQU	**L'Aquila**	**0.04**	**212**	Pg	Pg	07 44 53.2	+0.4
AQU				Sg	Sg	07 44 54.6	+0.3
CAMP	**Campotosto**	**0.15**	**354**	Pg	Pg	07 44 54.7	+0.4
CAMP				Sg	Sg	07 44 57.3	+0.5
CAMP	**Campotosto**	**0.15**	**354**	Pg	Pg	07 44 54.7	+0.4
CAMP				Sg	Sg	07 44 57.3	+0.5
FAGN	**Fagnano**	**0.17**	**137**	Pg	Pg	07 44 55.1	+0.6
FAGN				Sg	Sg	07 44 58.2	+1.1
	517nm,0.3s						
FAGN	**Fagnano**	**0.17**	**137**	Pg	Pg	07 44 55.1	+0.6
FAGN				Sg	Sg	07 44 58.2	+1.1
	517nm,0.3s						
FIAM	**Fiamignano**	**0.26**	**243**	Pg	Pg	07 44 56.3	+0.1
FIAM				Sg	Sg	07 45 00.4	+0.5
FIAM	**Fiamignano**	**0.26**	**243**	Pg	Pg	07 44 56.3	+0.1
FIAM				Sg	Sg	07 45 00.4	+0.5
TERO	**Teramo**	**0.27**	**29**	Pg	Pg	07 44 56.4	+0.1
TERO				Sg	Sg	07 45 00.6	+0.6
	450nm,0.4s						
TERO	**Teramo**	**0.27**	**29**	Pg	Pg	07 44 56.4	+0.1
TERO				Sg	Sg	07 45 00.6	+0.6
	450nm,0.4s						
VCEL	**Villa Celiera**	**0.30**	**89**	Pg	Pb	07 44 58.0	-0.4
	268nm,0.6s						
VCEL	**Villa Celiera**	**0.30**	**89**	Pg	Pb	07 44 58.0	-0.4
	268nm,0.6s						
LNSS	**Leonessa**	**0.36**	**307**	Pg	Pg	07 44 58.6	+0.5
LNSS				Sg	Sb	07 45 04.6	-0.6
	116nm,0.3s						
LNSS	**Leonessa**	**0.36**	**307**	Pg	Pg	07 44 58.6	+0.5
LNSS				Sg	Sb	07 45 04.6	-0.6
	116nm,0.3s						
NRCA	**Norcia**	**0.50**	**332**	Pg	Pg	07 45 00.6	-0.1
NRCA				Sg	Sb	07 45 08.6	-0.6
NRCA	**Norcia**	**0.50**	**332**	Pg	Pg	07 45 00.6	-0.1
NRCA				Sg	Sb	07 45 08.6	-0.6

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*IDC **08** 07:47:17.7±2.8, 25°.54S×67°.05W, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.6/18, mbtmp3.7/4, ML3.8/2, Error ellipse: s-maj=62.0km s-min=48.3km az=71.0*

*ISCJB **08** 07:47:48.3±1.3, 23°.4S±0°.1×66°.8W±0°.2, h231km±26km, mb3.3/1, Error ellipse: s-maj=34.4km s-min=16.6km az=35.7*

*GUC **08** 07:47:51.0±0.7, 23°.40S×67°.18W, h230km, ML4.0*

ISC 08 07:47:48.1±1.3**, 23°.5S**±0°.1×**66°.7W**±0°.1**, h206**km±20km**, n10, σ1s27**/14**, 4C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB06	**Plate Boundary**	**2.75**	**286**	⇑*i*P	**Pn**	**07 48 36.7**	**+1.3**
PB06				*e*S	**Sn**	**07 49 11.5**	**-0.8**
PB06				AML	AML	07 49 13.6	
	comp=N,212nm,0.1s						
PB09	**Plate Boundary**	**2.88**	**305**	⇑*e*P	**Pn**	**07 48 38.4**	**+1.5**
PB09				*e*S	**Sn**	**07 49 15.5**	**+0.6**
PB09				AML	AML	07 49 18.2	
	comp=N,483nm,0.6s						
CEN1	**Los Morros**	**3.22**	**271**	⇓*e*P	Pn	07 48 43.4	+2.6
CEN1				*e*S	**Sn**	**07 49 21.8**	**-0.1**
CEN1				AML	AML	07 49 24.1	
	comp=N,134nm,0.7s						
ANCH	**Antofagasta**	**3.41**	**266**	⇑*i*P	**Pn**	**07 48 44.0**	**+1.1**
ANCH				*e*S	**Sn**	**07 49 24.3**	**-1.5**
ANCH				AML	AML	07 49 26.2	
	comp=E,332nm,0.5s						
PB07	**Plate Boundary**	**3.42**	**300**	⇑*i*P	**Pn**	**07 48 43.7**	**+0.5**
PB07				*e*S	**Sn**	**07 49 24.0**	**-2.4**
LPAZ	**La Paz**	**7.27**	**349**	Pn	**Pn**	**07 49 33.4**	**+0.9**
	comp=E,0.5nm,0.3s,baz=181,slow=7.1,SNR=16						
SIV	**San Ignacio**	**9.13**	**36**	Pn	**Pn**	**07 49 55.6**	**-0.5**
	comp=E,0.3nm,0.3s,baz=220,slow=12,SNR=8.6						
BDFB	**Brasilia**	**19.24**	**69**	P	**P**	**07 51 57.1**	**-0.1**
	comp=E,2.8nm,0.8s,baz=227,slow=12,SNR=4.9						
TORD	**Torodi Ar. Bea**	**76.12**	**69**	P	**P**	**07 59 13.2**	**-0.4**
	comp=E,0.4nm,0.5s,baz=256,slow=5.5,SNR=7.7						
MKAR	**Makanchi Array**	**145.94**	**39**	PKPbc	**PKPbc**	**08 07 04.1**	**+0.7**
	comp=E,0.3nm,0.8s,baz=328,slow=3.7,SNR=2.4						

IDC 08 08:08:17.8±6.5**, 4°.86S×103°.92E, h0**km**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/23**, mbtmp3.3**/3**, Error ellipse: s-maj=368.1km s-min=28.9km az=50.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.18**	**120**	P	P	08 14 55.9	-0.6
	0.1nm,0.3s,baz=289,slow=9.6,SNR=5.5						
ASAR	**Alice Springs**	**34.42**	**126**	P	P	08 15 08.2	+0.9
	0.2nm,0.3s,baz=302,slow=8.2,SNR=4.8						
MKAR	**Makanchi Array**	**54.88**	**342**	P	P	08 17 50.5	+0.4
	0.5nm,0.8s,baz=152,slow=7.9,SNR=5.1						
TXAR	**Lajitas Array**	**144.31**	**44**	PKP	PKPab	08 27 54.2	-0.5
	0.2nm,0.4s,baz=287,slow=1.0,SNR=10						

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*IDC **08** 08:10:54.0±0.6, 19°.94S×168°.05E, h0km, mb4.5/20, mb1 4.6/21, mb1mx4.6/24, mbtmp4.4/21, ML4.1/1, MS4.0/10, Ms1 4.0/10, ms1mx3.6/33, Error ellipse: s-maj=18.0km s-min=15.0km az=123.0*

*BJI **08** 08:10:55.5, 20°.25S×168°.70E, h41km, mB5.0/21, mb4.9/28, Ms5.3/13, Ms7 4.8/14*

*ISCJB **08** 08:10:59.0±0.3, 19°.99S±0°.05×167°.98E±0°.05, h41km, mb4.7/39, MS4.1/11, Error ellipse: s-maj=8.4km s-min=5.0km az=39.0*

*NEIC **08** 08:11:01.1±0.7, 19°.93S×167°.98E, h46km±6km, mb4.9/10, Error ellipse: s-maj=9.8km s-min=6.2km az=159.0*

*DJA **08** 08:11:37.0±7.1, 20°S±22°×16°7E±5°0, h349km±66km, M4.4/8, mb4.4/8*

*AUST **08** 08:11:41.0±70.0, 20°.84S×167°.42E, h408km±6km, Error ellipse: s-maj=12.7km s-min=2.8km az=255.0*

ISC 08 08:11:00.7±0.4**, 20°.06S**±0°.05×**168°.00E**±0°.06**, h44**km±2km**, h44**km**:pP-P, n139, σ1s37**/162**, mb4.8**/38**, MS4.0**/11**, 8C-6D, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.48**	**216**	*e*Pn	**Pn**	**08 11 36.9**	**-1.8**
	164nm,0.2s						
DZM				*e*Sn	**Sn**	**08 12 06.1**	**-1.6**
	313nm,0.2s						
DZM	**Mont Dzumac**	**2.48**	**216**	*e*P	**Pn**	**08 11 36.6**	**-2.1**
DZM	**Mont Dzumac**	**2.48**	**216**	*e*Pn	**Pn**	**08 11 37.5**	**-1.2**
DZM				Sn	**Sn**	**08 12 07.3**	**-0.4**
DZM				*e*Sn	Sn	08 12 07.8	0.0
DZM	**Mont Dzumac**	**2.48**	**216**	Pn	**Pn**	**08 11 36.7**	**-2.0**
	39nm,0.3s,baz=213,slow=22,SNR=577						
DZM				Sn	**Sn**	**08 12 07.3**	**-0.4**
	59nm,0.3s,baz=299,slow=20,SNR=9.8						
DZM				LR	LR	08 12 26.8	
	comp=Z,1μm,21.1s,baz=39,slow=36						
NOUC	**Port Laguerre**	**2.58**	**218**	*e*P	**Pn**	**08 11 38.6**	**-1.4**
NOUC				*e*S	**Sn**	**08 12 10.4**	**+0.3**
MSVF	**Nonsavu**	**9.79**	**78**	*e*Pn	**Pn**	**08 13 20.3**	**+1.3**
MSVF	**Nonsavu**	**9.79**	**78**	Pn	**Pn**	**08 13 21.0**	**+2.0**
	466nm,1.4s,SNR=7.1						
EIDS	**Eidsvold**	**16.48**	**248**	Pn	**P**	**08 14 50.0**	**-1.0**
ARMA	**Armidale**	**18.03**	**232**	*e*P	**P**	**08 15 09.2**	**+1.0**
URZ	**Urewera**	**19.78**	**158**	P	**Pn**	**08 15 31.8**	**+2.8**
URZ	**Urewera**	**19.78**	**158**	P	**Pn**	**08 15 31.8**	**+2.8**
	0.4nm,0.3s,baz=3.8,slow=15,SNR=4.9						
URZ				LR	LR	08 22 03.9	
	comp=Z,276nm,20.2s,baz=347,slow=34						
CTA	**Charters Tower**	**20.43**	**266**	P	**P**	**08 15 34.5**	**+0.1**
CTA	**Charters Tower**	**20.43**	**266**	P	**P**	**08 15 34.5**	**+0.1**
	7.6nm,0.8s,baz=93,slow=15,SNR=6.4						
CTA				LR	LR	08 22 10.0	
	comp=Z,526nm,21.4s,baz=67,slow=33						
CTAO	**Charters Tower**	**20.43**	**266**	*e*P	**P**	**08 15 34.9**	**+0.5**
	50nm,1.1s						
CNB	**Canberra Magne**	**22.38**	**223**	P	**P**	**08 15 59.0**	**+3.7**
	baz=22,SNR=8.0						
YNG	**Young**	**22.42**	**227**	P	**P**	**08 15 59.2**	**+3.5**
	baz=22,SNR=6.6						
PMG	**Port Moresby**	**22.74**	**295**	*e*P	**P**	**08 15 59.3**	**0.0**
PMG				*e*pP	**pP**	**08 16 11.0**	**+1.0**
PMG	**Port Moresby**	**22.74**	**295**	P	**P**	**08 15 57.9**	**-1.4**
	12nm,0.8s,baz=158,slow=16,SNR=2.7						
QLP	**Quilpie**	**22.75**	**249**	P	**P**	**08 16 00.7**	**+1.4**
	baz=22,SNR=13						
CMSA	**Cobar Meteorol**	**23.06**	**236**	P	**P**	**08 16 04.2**	**+1.8**
	baz=22,SNR=23						
MILA	**Mila**	**23.61**	**220**	S	S	08 19 48.0	-31
	baz=23,SNR=8.3						
COEN	**Coen**	**24.49**	**280**	*e*P	**P**	**08 16 17.4**	**+1.4**
	764nm,1.7s						
COEN	**Coen**	**24.49**	**280**	P	pP	08 16 28.8	+1.1
	baz=24,SNR=4.0						
STKA	**Stephens Creek**	**26.43**	**238**	*e*P	**P**	**08 16 34.7**	**+1.3**
STKA				*e*pP	**pP**	**08 16 45.6**	**+0.4**
STKA	**Stephens Creek**	**26.43**	**238**	P	**P**	**08 16 33.9**	**+0.5**
	8.2nm,0.6s,baz=62,slow=7.6,SNR=29						
STKA				LR	LR	08 26 29.8	
	comp=Z,295nm,18.3s,baz=304,slow=35						
STKA	**Stephens Creek**	**26.43**	**238**	P	**P**	**08 16 34.9**	**+1.5**
	baz=26,SNR=17						
BBOO	**Buckleboo**	**31.17**	**239**	P	**P**	**08 17 16.7**	**+1.1**
	baz=30,SNR=5.7						
WRAB	**Tennant Creek**	**31.59**	**264**	P	**P**	**08 17 21.2**	**+1.7**
WRA	**Warramunga Arr**	**31.60**	**264**	P	**P**	**08 17 18.5**	**-1.1**
WRA				PcP	**PcP**	**08 20 10.4**	**-0.9**
WRA	**Warramunga Arr**	**31.60**	**264**	P	**P**	**08 17 18.5**	**-1.1**
	2.3nm,0.7s,baz=97,slow=8.6,SNR=15						
WRA				PcP	**PcP**	**08 20 10.4**	**-0.9**
	2.7nm,0.9s,baz=91,slow=2.6,SNR=11						
WRA				LR	LR	08 29 39.9	
	comp=Z,203nm,18.1s,baz=85,slow=36						
AS31	**Alice Springs**	**31.80**	**257**	*e*P	**P**	**08 17 21.3**	**-0.1**
AS31				*e*pP	**pP**	**08 17 31.8**	**-1.4**
ASAR	**Alice Springs**	**31.80**	**257**	P	**P**	**08 17 21.4**	**0.0**
ASAR				PcP	**PcP**	**08 20 11.8**	**0.0**
ASAR	**Alice Springs**	**31.80**	**257**	P	**P**	**08 17 21.4**	**0.0**
	10nm,0.8s,baz=84,slow=8.6,SNR=126						
ASAR				PcP	**PcP**	**08 20 11.8**	**0.0**
	1.8nm,0.9s,baz=116,slow=2.6,SNR=5.8						
ASAR				LR	LR	08 29 45.2	
	comp=Z,303nm,18.9s,baz=80,slow=36						
MTN	**Manton Dam**	**36.02**	**276**	P	**P**	**08 17 57.9**	**-0.1**
	baz=36,SNR=9.4						
TBI	**Tubuai**	**39.55**	**103**	*e*LR	LR	08 29 12.0	
	320nm,30.0s						
FITZ	**Fitzroy Crossi**	**40.01**	**265**	*e*P	**P**	**08 18 32.1**	**+0.5**
	13nm,0.7s						
FITZ	**Fitzroy Crossi**	**40.01**	**265**	P	**P**	**08 18 32.1**	**+0.5**
	19nm,0.9s,baz=118,slow=7.8,SNR=26						
FITZ				LR	LR	08 34 18.0	
	comp=Z,180nm,18.2s,baz=75,slow=35						
FITZ	**Fitzroy Crossi**	**40.01**	**265**	P	**P**	**08 18 32.2**	**+0.5**
	baz=39,SNR=18						
PPT2	**Papeete2**	**40.15**	**94**	*e*LR	LR	08 29 33.9	
	487nm,30.5s						
PPT	**Papeete**	**40.16**	**94**	LR	LR	08 31 09.0	
	comp=Z,177nm,20.1s,baz=11,slow=30						
MBWA	**Marble Bar**	**45.06**	**260**	*e*P	**P**	**08 19 12.7**	**+0.1**
	22nm,1.1s						
MEEK	**Meekatharra**	**45.59**	**252**	P	**P**	**08 19 17.3**	**+0.5**
	baz=45,SNR=5.6						
NWAO	**Narrogin (SRO)**	**46.80**	**243**	LR	LR	08 38 50.3	
	comp=Z,200nm,18.2s,baz=88,slow=36						
WSI	**Waingapu**	**47.11**	**275**	S	S	08 25 19.4	-59
	baz=47,SNR=4.0						
KAPI	**Kappang**	**49.22**	**281**	P	**P**	**08 19 43.2**	**-1.9**
KAPI	**Kappang**	**49.22**	**281**	P	**P**	**08 19 43.2**	**-1.9**
	6.3nm,0.8s,baz=130,slow=7.3,SNR=4.2						
PCI	**Palu**	**50.78**	**286**	P	sP	08 20 16.4	+1.9
	baz=50,SNR=5.2						
KKM	**Kota Kinabalu**	**57.14**	**292**	*e*P	**P**	**08 20 44.1**	**+0.7**
KKM	**Kota Kinabalu**	**57.14**	**292**	P	**P**	**08 20 44.5**	**+1.1**
	baz=57,SNR=5.0						
VNDA	**Vanda**	**57.58**	**182**	P	**P**	**08 20 46.0**	**+0.5**
VNDA	**Vanda**	**57.58**	**182**	P	**P**	**08 20 46.0**	**+0.5**
	1.5nm,1.1s,baz=340,slow=5.7,SNR=3.2						
KSM	**Kuching**	**60.43**	**284**	*e*P	**P**	**08 21 05.7**	**-0.6**
	20nm,0.8s						
KSM	**Kuching**	**60.43**	**284**	P	**P**	**08 21 06.7**	**+0.4**
	baz=60,SNR=4.5						
MJAR	**Matsushiro Arr**	**62.94**	**333**	P	**P**	**08 21 20.3**	**-2.5**
MJAR	**Matsushiro Arr**	**62.94**	**333**	P	**P**	**08 21 20.3**	**-2.5**
	3.5nm,0.8s,baz=170,slow=7.8,SNR=12						
MAT	**Matsushiro**	**62.95**	**333**	P	**P**	**08 21 21.9**	**-0.8**
JNU	**Nakatsue**	**63.67**	**326**	*e*P	**P**	**08 21 27.1**	**-0.5**
	16nm,0.9s						
KSRS	**Korea Array**	**68.53**	**327**	P	**P**	**08 21 58.2**	**-0.5**
	2.6nm,0.9s,baz=147,slow=6.8,SNR=13						
KSAR	**Wonju Array Be**	**68.55**	**327**	P	**P**	**08 21 58.2**	**-0.6**
QSPA	**South Pole Qui**	**70.00**	**180**	*e*P	**P**	**08 22 08.4**	**+0.8**
QSPA	**South Pole Qui**	**70.00**	**180**	P	**P**	**08 22 08.1**	**+0.5**
	3.5nm,0.9s,baz=7.1,slow=3.3,SNR=7.3						
PSI	**Prapat**	**71.41**	**280**	P	**P**	**08 22 16.7**	**-0.4**
	baz=71,SNR=6.0						
USRK	**Ussuriysk Arra**	**71.94**	**334**	P	**P**	**08 22 20.1**	**+0.7**
	13nm,0.9s,baz=148,slow=4.2,SNR=23						
MDJ	**Mudanjiang**	**73.30**	**332**	P	**P**	**08 22 27.9**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,18nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,96nm,6.2s						
PETK	**Petropavlovsk-**	**73.41**	**354**	P	**P**	**08 22 27.2**	**-0.7**
PETK	**Petropavlovsk-**	**73.41**	**354**	P	**P**	**08 22 27.2**	**-0.7**
	comp=Z,4.2nm,0.7s,baz=141,slow=9.6,SNR=5.9						
CN2	**Changchun**	**74.56**	**329**	*e*P	**P**	**08 22 35.2**	**+0.3**
CN2				*e*pP	**pP**	**08 22 47.3**	**-0.6**
CN2				*e*S	**S**	**08 32 07.2**	**+0.2**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA	**Guiyang**	**75.34**	**306**	P	**P**	**08 22 41.2**	**+1.3**
GYA				pP	**PcP**	**08 22 53.4**	**+0.4**
GYA				PP	**PP**	**08 25 33.0**	**+3.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GYA				S	**S**	**08 32 17.8**	**+1.1**
GYA				sS	**sS**	**08 32 38.9**	**+0.5**
GYA				SKS	**SKSac**	**08 32 43.2**	**-3.1**
GYA				SS	**SS**	**08 37 11.0**	**+3.1**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,5.2s						
GYA				LR	LR		
	comp=N,550nm,17.2s						
GYA				LR	LR		
	comp=E,400nm,18.4s						
GYA				LR	LR		
	comp=Z,530nm,17.9s						
BJI	**Beijing**	**76.85**	**322**	P	**P**	**08 22 48.7**	**+0.7**
BJI				pmax	pmax		
	comp=Z,13nm,0.5s						
KMI	**Kunming**	**77.72**	**303**	P	**P**	**08 22 56.0**	**+2.4**
KMI				S	**S**	**08 32 45.1**	**+2.1**
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
KMI				LR	LR		
	comp=Z,57nm,19.3s						
CM31	**Chiang Mai Arr**	**77.78**	**295**	*e*P	**P**	**08 22 54.1**	**+0.3**
	comp=Z,8.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**77.78**	**295**	P	**P**	**08 22 54.8**	**+1.0**
CMAR	**Chiang Mai Arr**	**77.78**	**295**	P	**P**	**08 22 54.8**	**+1.0**
	comp=Z,7.3nm,0.8s,baz=132,slow=4.3,SNR=34						
CHTO	**Chiang Mai**	**77.94**	**295**	*e*P	**P**	**08 22 55.0**	**+0.4**
	comp=Z,12nm,0.9s						
CD2	**Chengdu**	**79.82**	**308**	P	**P**	**08 23 04.5**	**-0.2**
CD2				pP	**pP**	**08 23 16.5**	**-1.3**
CD2				sP	**sP**	**08 23 21.2**	**-1.6**
CD2				PP	**PP**	**08 26 07.5**	**+0.7**
CD2				S	**S**	**08 33 03.0**	**-1.8**
CD2				SKS	**SKSac**	**08 33 13.1**	**-5.3**
CD2				sS	**ScS**	**08 33 23.3**	**-2.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2				pmax	pmax		
	comp=Z,100nm,4.8s						
HHC	**Hu-ho-hao-te**	**80.09**	**320**	*e*P	**P**	**08 23 05.7**	**-0.4**
HHC				pP	**pP**	**08 23 19.1**	**-0.1**
HHC				sP	**sP**	**08 23 24.2**	**0.0**
HHC				PP	**PP**	**08 26 11.2**	**+2.3**
HHC				S	**S**	**08 33 07.4**	**0.0**
HHC				sS	**sS**	**08 33 29.1**	**-0.2**
HHC				SS	**SS**	**08 38 22.6**	**+3.6**
HHC				pmax	pmax		
	comp=Z,34nm,0.9s						
HHC				pmax	pmax		
	comp=Z,230nm,5.7s						
HHC				LR	LR		
	comp=N,210nm,16.0s						
HHC				LR	LR		
	comp=E,310nm,14.5s						
HHC				LR	LR		
	comp=Z,200nm,16.0s						
LZH	**Lanzhou**	**82.42**	**313**	*e*P	**P**	**08 23 20.0**	**+1.4**
LZH				pP	**pP**	**08 23 33.1**	**+1.3**
LZH				sP	**sP**	**08 23 38.0**	**+1.3**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
SYO	**Syowa Base**	**83.82**	**196⇑**	*e*P	**P**	**08 23 23.0**	**-2.1**
ULN	**Ulaanbaatar**	**86.83**	**324**	*e*P	**P**	**08 23 40.5**	**0.0**
GTA	**Gaotai**	**86.85**	**314**	*e*P	**P**	**08 23 41.0**	**+0.1**
GTA				pP	**pP**	**08 23 54.4**	**+0.3**
GTA				sP	**sP**	**08 23 59.6**	**+0.6**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.7s						
KCPM	**Cahto Peak**	**87.13**	**46**	*e*P	**P**	**08 23 42.1**	**-0.1**
	comp=Z,106nm,0.9s						
KCPM				*e*pP	**pP**	**08 23 53.9**	**-1.6**
SONM	**Songino Array**	**87.18**	**324**	P	**P**	**08 23 41.7**	**-0.6**
SONM	**Songino Array**	**87.18**	**324**	P	**P**	**08 23 41.7**	**-0.6**
	comp=Z,3.1nm,1.0s,baz=134,slow=5.2,SNR=16						
TNA	**Tin City**	**87.30**	**10**	*e*P	**P**	**08 23 42.6**	**+0.4**
BILL	**Bilibino**	**87.85**	**359**	*e*P	**P**	**08 23 44.0**	**-0.8**
	comp=Z,12nm,1.1s						
WDC	**Whiskeytown Da**	**88.26**	**46**	*e*P	**P**	**08 23 47.5**	**+0.1**
WDC				*e*pP	**pP**	**08 23 58.7**	**-2.0**
SNAA	**Sanae**	**88.29**	**183**	*e*P	**P**	**08 23 47.2**	**0.0**
SNAA	**Sanae**	**88.29**	**183**	*e*pP	pP	08 24 01.8	+1.3
SNAA	**Sanae**	**88.29**	**183**	*e*P	**P**	**08 23 47.3**	**+0.1**
SNAA	**Sanae**	**88.29**	**183**	P	**P**	**08 23 47.5**	**+0.3**
	comp=Z,2.9nm,1.1s,baz=148,slow=3.8,SNR=8.2						
CMB	**Columbia Colle**	**88.57**	**49**	*e*P	**P**	**08 23 48.7**	**-0.3**
YBH	**Yreka Blue Hor**	**88.70**	**44**	*e*P	**P**	**08 23 48.4**	**-1.2**
ISA	**Isabella**	**88.90**	**51**	*e*P	**P**	**08 23 50.3**	**-0.4**
VNA3	**Neumayer Olymp**	**88.92**	**181**	*e*P	**P**	**08 23 50.2**	**0.0**
VNA3	**Neumayer Olymp**	**88.92**	**181**	*e*pP	pP	08 24 02.0	-1.4
VNA2	**Neumayer--Watz**	**89.20**	**182**	*e*P	**P**	**08 23 52.0**	**+0.6**
	baz=169,slow=4.3						
VNA2	**Neumayer--Watz**	**89.20**	**182**	*e*pP	pP	08 24 03.5	-1.2
	baz=169,slow=4.3						
NVAR	**Mina Array Bea**	**90.22**	**49**	P	**P**	**08 23 56.2**	**-0.7**
NVAR	**Mina Array Bea**	**90.22**	**49**	P	**P**	**08 23 56.2**	**-0.7**
	comp=Z,2.9nm,1.0s,baz=232,slow=7.5,SNR=6.5						
NVAR				LR	LR	08 58 05.0	
	comp=Z,116nm,20.0s,baz=220,slow=31						
GLA	**Glamis**	**90.56**	**55**	*e*pP	pP	08 24 12.2	+0.5
ILAR	**Eielson Array**	**91.36**	**18**	P	**P**	**08 23 59.0**	**-2.3**
ILAR	**Eielson Array**	**91.36**	**18**	P	**P**	**08 23 59.0**	**-2.3**
	comp=Z,0.7nm,0.7s,baz=239,slow=5.0,SNR=20						
EGAK	**Eagle**	**93.08**	**19**	*e*P	**P**	**08 24 08.7**	**-0.6**
	comp=Z,2.9nm,0.7s						
TUC	**Tucson**	**93.43**	**57**	*e*P	**P**	**08 24 10.7**	**-1.1**
	comp=Z,4.1nm,1.0s						
WMQ	**Urumqi**	**96.93**	**314**	P	**P**	**08 24 28.3**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,16nm,1.0s						
PDAR	**Pinedale Array**	**98.02**	**47**	P	Pdif	08 24 33.4	+0.7
PDAR	**Pinedale Array**	**98.02**	**47**	P	Pdif	08 24 33.4	+0.7
	comp=Z,0.4nm,0.7s,baz=210,slow=5.2,SNR=3.5						
TXAR	**Lajitas Array**	**98.18**	**62**	P	**P**	**08 24 33.4**	**-0.1**
TXAR	**Lajitas Array**	**98.18**	**62**	P	**P**	**08 24 33.4**	**-0.1**
	comp=Z,0.5nm,0.9s,baz=224,slow=5.0,SNR=4.4						
MKAR	**Makanchi Array**	**101.50**	**316**	P	**Pdif**	**08 24 47.1**	**-0.7**
MKAR	**Makanchi Array**	**101.50**	**316**	P	**Pdif**	**08 24 47.1**	**-0.7**
	comp=Z,0.1nm,0.6s,baz=100,slow=4.5,SNR=2.3						
YKA	**Yellowknife Ar**	**101.93**	**28**	P	**Pdif**	**08 24 50.0**	**+0.7**
YKA				PKiKP	**PKiKP**	**08 29 11.9**	**0.0**
YKA	**Yellowknife Ar**	**101.93**	**28**	P	**Pdif**	**08 24 50.0**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=256,slow=4.8,SNR=9.2						
YKA				PKiKP	**PKiKP**	**08 29 11.9**	**0.0**
	comp=Z,0.2nm,0.8s,baz=236,slow=1.5,SNR=4.3						
ARCES	**ARCESS Array B**	**125.56**	**345**	PKP	**PKPdf**	**08 29 56.0**	**-0.5**
ARCES	**ARCESS Array B**	**125.56**	**345**	PKP	**PKPdf**	**08 29 56.0**	**-0.5**
	comp=Z,2.4nm,0.9s,baz=75,slow=5.1,SNR=4.9						
TRPA	**Tarpa**	**140.53**	**323⇑**	*e*PP	PP	08 33 35.8	+12
CRVS	**Cervenica-Dubn**	**140.69**	**325**	PDIF	**Pdif**	**08 27 46.9**	**+4.9**
CONA	**Conrad Observa**	**144.22**	**327⇓**	*i*PKPdf	**PKPdf**	**08 30 31.2**	**-0.7**
	comp=Z,11nm,1.0s						
CONA	**Conrad Observa**	**144.22**	**327⇓**	*i*P	**PKPdf**	**08 30 31.1**	**-0.7**
KHC	**Kasperske Hory**	**144.50**	**331**	*e*PKPdf	**PKPab**	**08 30 30.5**	**-0.1**
GERES	**GERESS Array B**	**144.64**	**330**	PKP	PKPbc	08 30 31.9	+0.5
GERES	**GERESS Array B**	**144.64**	**330**	PKP	PKPbc	08 30 31.9	+0.5
	comp=Z,2.5nm,0.8s,baz=38,slow=2.4,SNR=14						
ARSA	**Arzberg**	**144.84**	**327⇑**	*i*PKPdf	**PKPdf**	**08 30 32.6**	**-0.3**
	comp=Z,8.7nm,0.9s						
ARSA	**Arzberg**	**144.84**	**327⇑**	*i*P	**PKPdf**	**08 30 32.6**	**-0.3**
MOA	**Molln**	**145.07**	**329⇑**	*i*PKPdf	**PKPdf**	**08 30 33.3**	**+0.1**
	comp=Z,26nm,1.0s						
MOA	**Molln**	**145.07**	**329⇑**	*i*P	**PKPdf**	**08 30 33.3**	**+0.1**
SOKA	**Soboth**	**145.47**	**326⇓**	*i*PKPdf	**PKPbc**	**08 30 34.1**	**0.0**
	comp=Z,23nm,1.2s						
SOKA	**Soboth**	**145.47**	**326⇓**	*i*P	**PKPbc**	**08 30 34.1**	**0.0**
KBA	**Koelnbreinsper**	**146.06**	**328⇓**	*i*PKPab	**PKPdf**	**08 30 35.2**	**+0.1**
	comp=Z,16nm,1.4s						
KBA	**Koelnbreinsper**	**146.06**	**328⇓**	*i*P	**PKPdf**	**08 30 35.2**	**+0.1**
BOJS	**Bojanci**	**146.11**	**325**	*i* PKPdf	**PKPab**	**08 30 36.4**	**-0.3**
VISS	**Visnje**	**146.14**	**325**	*i* PKPdf	**PKPbc**	**08 30 36.1**	**-0.1**
JAVS	**Javornik**	**146.49**	**326**	*i* PKPdf	**PKPbc**	**08 30 36.6**	**-0.7**
BCLA	**Clavier**	**146.75**	**340**	PKP	**PKPab**	**08 30 39.2**	**+0.3**
FETA	**Feichten**	**147.34**	**331⇑**	*i*PKPbc	**PKPbc**	**08 30 39.2**	**-0.6**
	comp=Z,13nm,1.0s						
FETA	**Feichten**	**147.34**	**331⇑**	*i*P	**PKPbc**	**08 30 39.2**	**-0.6**
TUE	**Stuetta**	**148.38**	**331**	*e*PKPbc	**PKPbc**	**08 30 42.1**	**-0.5**
TIP	**Timpagrande**	**148.77**	**314**	*e*PKPbc	**PKPbc**	**08 30 43.8**	**+0.1**
BNI	**Bardonecchia**	**150.67**	**332**	*e*PKPdf	**PKPdf**	**08 30 41.0**	**-1.7**

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*CSEM **08** 08:18:11.8, 42.°34N×13.°47E, h10km, MD2.3/17, After ROM*

ROM 08 08:18:11.8±0.1**, 42.°34N×13.°47E, h10km, Md2.3**/17, **Ml2.0**/11**, Error ellipse: s-maj=1.4km s-min=1.1km az=61.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**290**	Pg	Pg	08 18 14.1	+0.2
AQU				Sg	Sg	08 18 15.5	+0.1
	2μm,0.2s						
AQU	**L'Aquila**	**0.05**	**290**	Pg	Pg	08 18 14.1	+0.2
AQU				Sg	Sg	08 18 15.5	+0.1
	2μm,0.2s						
FAGN	**Fagnano**	**0.11**	**129**	Pg	Pg	08 18 15.1	+0.5
FAGN				Sg	Sg	08 18 17.5	+0.9
	1μm,0.2s						
FAGN	**Fagnano**	**0.11**	**129**	Pg	Pg	08 18 15.1	+0.5
FAGN				Sg	Sg	08 18 17.5	+0.9
	1μm,0.2s						
CAMP	**Campotosto**	**0.20**	**348**	Pg	Pg	08 18 17.0	+0.7
CAMP				Sg	Sg	08 18 19.8	+0.5
	250nm,0.8s						
CAMP	**Campotosto**	**0.20**	**348**	Pg	Pg	08 18 17.0	+0.7
CAMP				Sg	Sg	08 18 19.8	+0.5
	250nm,0.8s						
FIAM	**Fiamignano**	**0.27**	**255**	Pg	Pg	08 18 18.0	+0.6
FIAM				Sg	Sb	08 18 22.5	-1.2
	211nm,0.6s						
FIAM	**Fiamignano**	**0.27**	**255**	Pg	Pg	08 18 18.0	+0.6
FIAM				Sg	Sb	08 18 22.5	-1.2
	211nm,0.6s						
VCEL	**Villa Celiera**	**0.28**	**78**	Pg	Pb	08 18 18.7	-0.5
VCEL				Sg	Sb	08 18 23.2	-0.9
	38nm,0.4s						
VCEL	**Villa Celiera**	**0.28**	**78**	Pg	Pb	08 18 18.7	-0.5
VCEL				Sg	Sb	08 18 23.2	-0.9
	38nm,0.4s						
TERO	**Teramo**	**0.30**	**19**	Pg	Pg	08 18 18.4	+0.4
TERO				Sg	Sg	08 18 23.3	+1.1
	162nm,0.3s						
TERO	**Teramo**	**0.30**	**19**	Pg	Pg	08 18 18.4	+0.4
TERO				Sg	Sg	08 18 23.3	+1.1
	162nm,0.3s						
PTQR	**Pietraquaria**	**0.32**	**189**	Pg	Pg	08 18 18.8	+0.5
PTQR				Sg	Sg	08 18 23.6	+1.0
	25nm,0.2s						
PTQR	**Pietraquaria**	**0.32**	**189**	Pg	Pg	08 18 18.8	+0.5
PTQR				Sg	Sg	08 18 23.6	+1.0
	25nm,0.2s						
INTR	**Introdacqua**	**0.46**	**135**	Pg	Pg	08 18 21.1	+0.2
INTR				Sg	Sb	08 18 28.3	-0.8
	138nm,0.4s						
INTR	**Introdacqua**	**0.46**	**135**	Pg	Pg	08 18 21.1	+0.2
INTR				Sg	Sb	08 18 28.3	-0.8
	138nm,0.4s						
VVLD	**Villa Vallelon**	**0.48**	**166**	Pg	Pg	08 18 21.4	+0.1
	115nm,0.5s						
VVLD	**Villa Vallelon**	**0.48**	**166**	Pg	Pg	08 18 21.4	+0.1
	115nm,0.5s						
CERT	**Cerreto**	**0.53**	**223**	Pg	Pg	08 18 22.4	+0.2
	137nm,0.5s						
CERT	**Cerreto**	**0.53**	**223**	Pg	Pg	08 18 22.4	+0.2
	137nm,0.5s						
GUAR	**Guarcino**	**0.55**	**192**	Pg	Pb	08 18 24.1	+0.4
	61nm,0.4s						
GUAR	**Guarcino**	**0.55**	**192**	Pg	Pb	08 18 24.1	+0.4
	61nm,0.4s						
NRCA	**Norcia**	**0.56**	**332**	Pg	Pg	08 18 23.1	+0.2
NRCA				Sg	Sg	08 18 31.2	+0.8
	66nm,0.1s						
NRCA	**Norcia**	**0.56**	**332**	Pg	Pg	08 18 23.1	+0.2
NRCA				Sg	Sg	08 18 31.2	+0.8
	66nm,0.1s						
POFI	**Posta Fibreno**	**0.65**	**163**	Pg	Pg	08 18 24.6	+0.2
	29nm,0.6s						
POFI	**Posta Fibreno**	**0.65**	**163**	Pg	Pg	08 18 24.6	+0.2
	29nm,0.6s						
SDI	**San Donato**	**0.68**	**158**	Pg	Pg	08 18 24.8	-0.2
	35nm,0.3s						
SDI	**San Donato**	**0.68**	**158**	Pg	Pg	08 18 24.8	-0.2
	35nm,0.3s						
FDMO	**Fiordimonte**	**0.75**	**338**	Pg	Pb	08 18 27.3	+0.2
FDMO	**Fiordimonte**	**0.75**	**338**	Pg	Pb	08 18 27.3	+0.2
CESI	**CESI - Serrava**	**0.79**	**328**	Pg	Pb	08 18 27.9	+0.2
CESI	**CESI - Serrava**	**0.79**	**328**	Pg	Pb	08 18 27.9	+0.2
MIDA	**Miranda**	**0.91**	**140**	Pg	Pg	08 18 28.5	-0.9
MIDA	**Miranda**	**0.91**	**140**	Pg	Pg	08 18 28.5	-0.9

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*CSEM **08** 08:19:00.5, 42.°40N×13.°32E, h11km, After ROM*

ROM 08 08:19:00.5±0.1**, 42.°40N×13.°32E, h11**km±2km**, Ml1.9**/5**, Error ellipse: s-maj=1.6km s-min=1.0km az=101.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.08**	**128**	Pg	Pg	08 19 03.7	+0.6
AQU				Sg	Sg	08 19 05.5	+0.5
	2μm,0.2s						
AQU	**L'Aquila**	**0.08**	**128**	Pg	Pg	08 19 03.7	+0.6
AQU				Sg	Sg	08 19 05.5	+0.5
	2μm,0.2s						
CAMP	**Campotosto**	**0.15**	**28**	Pg	Pg	08 19 04.8	+0.6
CAMP				Sg	Sg	08 19 07.3	+0.6
	250nm,0.8s						
CAMP	**Campotosto**	**0.15**	**28**	Pg	Pg	08 19 04.8	+0.6
CAMP				Sg	Sg	08 19 07.3	+0.6
	250nm,0.8s						
FIAM	**Fiamignano**	**0.20**	**227**	Pg	Pg	08 19 05.4	+0.5
FIAM				Sg	Sg	08 19 08.7	+0.7
	211nm,0.6s						
FIAM	**Fiamignano**	**0.20**	**227**	Pg	Pg	08 19 05.4	+0.5
FIAM				Sg	Sg	08 19 08.7	+0.7
	211nm,0.6s						
FAGN	**Fagnano**	**0.24**	**125**	Pg	Pb	08 19 06.7	-0.3
	1μm,0.2s						
FAGN	**Fagnano**	**0.24**	**125**	Pg	Pb	08 19 06.7	-0.3
	1μm,0.2s						
TERO	**Teramo**	**0.31**	**44**	Pg	Pg	08 19 07.0	+0.2
TERO				Sg	Sg	08 19 11.8	+0.8
	162nm,0.3s						
TERO	**Teramo**	**0.31**	**44**	Pg	Pg	08 19 07.0	+0.2
TERO				Sg	Sg	08 19 11.8	+0.8
	162nm,0.3s						
PTQR	**Pietraquaria**	**0.39**	**171**	Pg	Pg	08 19 08.3	0.0
PTQR				Sg	Sg	08 19 14.5	+0.9
	25nm,0.2s						
PTQR	**Pietraquaria**	**0.39**	**171**	Pg	Pg	08 19 08.3	0.0
PTQR				Sg	Sg	08 19 14.5	+0.9
	25nm,0.2s						
NRCA	**Norcia**	**0.45**	**341**	Pg	Pg	08 19 10.0	+0.4
NRCA				Sg	Sb	08 19 16.9	-0.6
	66nm,0.1s						
NRCA	**Norcia**	**0.45**	**341**	Pg	Pg	08 19 10.0	+0.4
NRCA				Sg	Sb	08 19 16.9	-0.6
	66nm,0.1s						

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*SZGRF **08** 08:22:41.4, 5.°79N×38.°99W, h10km, mb5.6, MS3.9, North Atlantic Ocean*

*IDC **08** 08:22:56.3±0.4, 8.°12N×38.°03W, h0km, mb4.6/28, mb1 4.7/29, mb1mx4.7/31, mbtmp4.5/29, ML3.9/1, MS4.0/26, Ms1 4.0/26, ms1mx3.8/45, Error ellipse: s-maj=13.3km s-min=10.5km az=141.0*

*MOS **08** 08:22:56.8±0.8, 8.°15N×37.°99W, h10km, mb5.5/72, Error ellipse: s-maj=8.9km s-min=4.0km az=54.7*

*BJI **08** 08:22:56.3, 8.°38N×38.°46W, h9km, mB5.6/10, mb5.2/1, Ms5.3/6, Ms7 4.9/10*

*NEIC **08** 08:22:58.4±0.1, 8.°06N×37.°95W, h10km, mb5.2/117, Error ellipse: s-maj=4.3km s-min=2.6km az=166.0*

*CSEM **08** 08:22:58.8±0.1, 8.°10N×37.°97W, h10km, mb5.1/99, Ms3.8, Error ellipse: s-maj=5.0km s-min=2.8km az=164.0*

*ISCJB **08** 08:22:59.1±0.2, 8.°09N±0.°04×37.°96W±0.°02, h26km, mb5.0/185, MS4.1/32, Error ellipse: s-maj=5.9km s-min=2.4km az=169.7*

ISC 08 08:23:01.7±0.4**, 8.°08N**±0.°05×**37.°99W**±0.°05**, h33**km±1km**, h33**km**:pP-P, n1139, σ0.s88**/1210**, mb5.1**/186**, MS4.1**/32**, 221C-206D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**13.97**	**171**	Pn	**Pn**	**08 26 17.6**	**+0.1**
RCBR	**Riachuelo**	**13.97**	**171**	Pn	**Pn**	**08 26 17.6**	**+0.1**
	0.6nm,0.3s,baz=357,slow=16,SNR=5.7						
RCBR				LR	LR	08 30 30.6	
	comp=Z,86nm,18.4s,baz=326,slow=32						
RCBR	**Riachuelo**	**13.97**	**171**	Pn	**Pn**	**08 26 17.6**	**+0.1**
SACV	**Santiago Islan**	**15.66**	**63**	*e*Pn	Pn	08 26 31.8	-8.3
	74nm,0.8s						
SACV	**Santiago Islan**	**15.66**	**63**	Pn	Pn	08 26 32.7	-7.4
	558nm,0.8s,SNR=10						
BBTS	**Babate**	**22.01**	**71**	P	**P**	**08 27 51.9**	**-1.5**
BBTS	**Babate**	**22.01**	**71**	P	**P**	**08 27 51.9**	**-1.5**
	67nm,0.9s,baz=254,slow=2.6,SNR=8.4						
BBTS				LR	LR	08 34 46.9	
	comp=Z,556nm,18.6s,baz=293,slow=32						
BBTS	**Babate**	**22.01**	**71**	P	**P**	**08 27 51.9**	**-1.5**
BDFB	**Brasilia**	**25.58**	**203**	P	**P**	**08 28 28.5**	**+0.4**
BDFB	**Brasilia**	**25.58**	**203**	P	**P**	**08 28 28.5**	**+0.4**
	26nm,1.1s,baz=20,slow=13,SNR=22						
BDFB				LR	LR	08 38 10.3	
	comp=Z,194nm,18.5s,baz=77,slow=36						
BDFB	**Brasilia**	**25.58**	**203**	P	**P**	**08 28 28.5**	**+0.4**
SJG	**San Juan**	**29.15**	**293**	LR	LR	08 38 07.6	
	comp=Z,362nm,20.9s,baz=98,slow=31						
CELP	**Cerrillos**	**29.53**	**293**	*e*P	**P**	**08 29 03.4**	**0.0**
CELP	**Cerrillos**	**29.53**	**293**	*e*P	**P**	**08 29 03.4**	**0.0**
SAML	**Samuel**	**30.27**	**237**	*e*P	**P**	**08 29 10.5**	**+0.5**
	12nm,1.1s						
SAML	**Samuel**	**30.27**	**237**	*e*P	**P**	**08 29 10.5**	**+0.5**
	12nm,1.1s						
PMOZ	**Porto Moniz, M**	**31.26**	**35**	*e*T	T	09 01 35.5	
PMAR	**Madeira**	**31.35**	**36**	*e*T	T	09 01 40.6	
LIC	**Lamto**	**32.75**	**91**	*e*P	**P**	**08 29 29.9**	**-1.9**
	25nm,0.9s,baz=267						
LIC				*e*R			
	257nm,18.5s						
LIC	**Lamto**	**32.75**	**91**	*e*P	**P**	**08 29 29.9**	**-1.9**
	25nm,0.9s						
LIC	**Lamto**	**32.75**	**91**	*e*P	**P**	**08 29 29.9**	**-1.9**
	13nm,0.9s,baz=267						
DBIC	**Dimbokro**	**32.88**	**90**	*e*P	**P**	**08 29 31.8**	**-1.2**
	32nm,1.3s						
DBIC	**Dimbokro**	**32.88**	**90**	P	**P**	**08 29 31.8**	**-1.2**
	15nm,0.8s,baz=258,slow=10,SNR=9.3						
DBIC				LR	LR	08 40 27.4	
	comp=Z,298nm,18.2s,baz=266,slow=32						
DBIC	**Dimbokro**	**32.88**	**90**	*e*P	**P**	**08 29 31.8**	**-1.2**
	32nm,1.3s						
SIV	**San Ignacio**	**33.08**	**224**	P	**P**	**08 29 34.9**	**+0.2**
SIV	**San Ignacio**	**33.08**	**224**	P	**P**	**08 29 34.9**	**+0.2**
	4.3nm,0.9s,baz=76,slow=10.0,SNR=11						
SIV	**San Ignacio**	**33.08**	**224**	P	**P**	**08 29 34.9**	**+0.2**
SDDR	**Presa de Saban**	**34.08**	**292**	*e*P	**P**	**08 29 45.0**	**+1.6**
	50nm,1.5s						
SDDR	**Presa de Saban**	**34.08**	**292**	*e*P	**P**	**08 29 45.0**	**+1.6**
	50nm,1.5s						
ROSC	**El Rosal**	**36.24**	**267**	P	**P**	**08 30 01.6**	**-1.0**
ROSC				*e*P	**P**	**08 30 04.5**	**+1.9**
ROSC	**El Rosal**	**36.24**	**267**	P	**P**	**08 30 01.6**	**-1.0**
	2.3nm,0.4s,baz=101,slow=19,SNR=5.7						
ROSC				LR	LR	08 43 45.9	
	comp=Z,242nm,21.2s,baz=7.3,slow=34						
ROSC	**El Rosal**	**36.24**	**267**	P	**P**	**08 30 01.6**	**-1.0**
LPAZ	**La Paz**	**38.42**	**231**	P	**P**	**08 30 19.9**	**-1.3**
LPAZ				*e*P	**P**	**08 30 21.9**	**+0.7**
LPAZ	**La Paz**	**38.42**	**231**	P	**P**	**08 30 19.9**	**-1.3**
	7.3nm,1.0s,baz=43,slow=8.7,SNR=13						
LPAZ				LR	LR	08 45 21.9	
	comp=Z,166nm,18.4s,baz=109,slow=35						
LPAZ	**La Paz**	**38.42**	**231**	*e*P	**P**	**08 30 21.9**	**+0.7**
CPUP	**Villa Florida**	**39.02**	**208**	P	**P**	**08 30 24.7**	**-0.7**
CPUP	**Villa Florida**	**39.02**	**208**	P	**P**	**08 30 24.7**	**-0.7**
	0.8nm,0.6s,baz=356,slow=4.0,SNR=3.2						
CPUP				LR	LR	08 46 44.8	
	comp=Z,296nm,18.6s,baz=8.8,slow=37						
CPUP	**Villa Florida**	**39.02**	**208**	P	**P**	**08 30 24.7**	**-0.7**
TOA0	**Torodi Ar. Sit**	**39.29**	**79**	*e*P	**P**	**08 30 26.9**	**-1.0**
TOA0	**Torodi Ar. Sit**	**39.29**	**79**	*e*P	**P**	**08 30 26.9**	**-1.0**
TORD	**Torodi Ar. Bea**	**39.29**	**79**	P	**P**	**08 30 26.8**	**-1.1**
TORD				PcP	**PcP**	**08 32 35.9**	**-0.6**
TORD	**Torodi Ar. Bea**	**39.29**	**79**	P	**P**	**08 30 26.8**	**-1.1**
	24nm,0.8s,baz=275,slow=10.0,SNR=98						
TORD				PcP	**PcP**	**08 32 35.8**	**-0.6**
	3.2nm,0.9s,baz=278,slow=2.0,SNR=3.9						
TORD				LR	LR	08 45 06.0	
	comp=Z,459nm,18.4s,baz=260,slow=34						
TORD	**Torodi Ar. Bea**	**39.29**	**79**	P	**P**	**08 30 26.8**	**-1.1**
MORF	**Marmelete**	**39.41**	**38**	*e*P	**P**	**08 30 29.4**	**+0.7**
	70nm,1.8s						
MORF				*i* P	**pP**	**08 30 36.6**	**-1.9**
MORF				*e*P	**sP**	**08 30 42.8**	**+0.3**
MORF	**Marmelete**	**39.41**	**38**	*e*P	**P**	**08 30 29.2**	**+0.5**
MDT	**Midelt**	**39.50**	**47**	P	**P**	**08 30 28.7**	**-0.8**
MDT	**Midelt**	**39.50**	**47**	P	**P**	**08 30 28.7**	**-0.8**
	6.6nm,0.8s,baz=248,slow=8.2,SNR=11						
MDT				LR	LR	08 45 54.1	
	comp=Z,214nm,18.8s,baz=236,slow=35						
MDT	**Midelt**	**39.50**	**47**	P	**P**	**08 30 28.7**	**-0.8**
PTEO	**Sao Teotonio**	**39.52**	**38**	*e*P	**P**	**08 30 30.6**	**+1.1**
PTEO				*i* P	**pP**	**08 30 43.6**	**+4.3**
PBDV	**Barranco-do-Ve**	**39.82**	**39**	*e*P	**P**	**08 30 32.7**	**+0.7**
	78nm,1.0s						
PBDV				*i* P	**pP**	**08 30 40.1**	**-1.7**
PBDV				*e*P	**sP**	**08 30 46.3**	**+0.5**
PCVE	**Castro Verde**	**40.00**	**38**	*e*P	**P**	**08 30 34.0**	**+0.6**
PCVE				*i* P	**pP**	**08 30 41.5**	**-1.7**
PNCL	**Nicolau / Gran**	**40.01**	**37**	*e*P	**P**	**08 30 34.1**	**+0.6**
	58nm,0.9s						
PNCL				*i* P	**pP**	**08 30 41.7**	**-1.6**
PNCL				*e*P	**sP**	**08 30 47.8**	**+0.4**
MESJ	**Messejana**	**40.02**	**38**	*e*P	**P**	**08 30 34.2**	**+0.6**
MESJ				AMb	AMB	08 30 36.3	
	comp=Z,69nm,1.4s						
MESJ	**Messejana**	**40.02**	**38**	*e*P	**P**	**08 30 34.2**	**+0.6**
	comp=Z,69nm,1.4s						
MESJ	**Messejana**	**40.02**	**38**	*e*P	**P**	**08 30 34.2**	**+0.6**
PVAQ	**Vaqueiros**	**40.05**	**39**	*e*P	**P**	**08 30 34.4**	**+0.5**
	comp=Z,67nm,1.4s						
PVAQ				*i* P	**pP**	**08 30 42.1**	**-1.6**
PVAQ				*e*LR	LR	08 41 38.6	
	comp=Z,214nm,22.0s						
PMAFR	**Mafra**	**40.13**	**36**	*e*P	**P**	**08 30 35.7**	**+1.2**
	comp=Z,110nm,2.2s						
PMAFR				*i* P	**pP**	**08 30 43.0**	**-1.3**
PBEJ	**Beja**	**40.35**	**38**	*e*P	**P**	**08 30 37.4**	**+1.0**
	comp=Z,41nm,1.4s						
PBEJ				*i* P	**pP**	**08 30 44.6**	**-1.6**
PBEJ				*e*P	**sP**	**08 30 50.8**	**+0.6**
EVOP	**Sao Brissos**	**40.52**	**37**	*e*P	**P**	**08 30 38.2**	**+0.4**
EVOP				pmax	pmax		
	comp=Z,107nm,1.1s						
EVOP	**Sao Brissos**	**40.52**	**37**	*e*P	**P**	**08 30 38.2**	**+0.4**
	comp=Z,107nm,1.1s						
EVOP	**Sao Brissos**	**40.52**	**37**	*e*P	**P**	**08 30 38.2**	**+0.4**
	comp=Z,54nm,1.1s						
EVO	**Evora**	**40.59**	**37**	*e*P	**P**	**08 30 38.2**	**-0.1**
	comp=Z,107nm,1.1s						
EVO				*e*R			
	comp=Z,344nm,20.8s						
EVO	**Evora**	**40.59**	**37**	*e*P	**P**	**08 30 39.0**	**+0.7**
	comp=Z,66nm,1.0s						
EVO				*i* P	**pP**	**08 30 46.6**	**-1.6**
EVO				*e*P	**sP**	**08 30 52.9**	**+0.7**
PMTG	**Montargil**	**40.82**	**36**	*e*P	**P**	**08 30 40.8**	**+0.6**
	comp=Z,74nm,1.8s						
PMTG				*i* P	**pP**	**08 30 48.2**	**-1.8**
PMTG				*e*P	**sP**	**08 30 54.2**	**+0.2**
PMTG	**Montargil**	**40.82**	**36**	*e*P	**P**	**08 30 40.8**	**+0.6**
	comp=Z,74nm,1.8s						
PBAR	**Barrancos**	**40.95**	**38**	*e*P	**P**	**08 30 42.3**	**+1.0**
	comp=Z,64nm,1.1s						
PBAR				*i* P	**pP**	**08 30 49.6**	**-1.6**
PBAR				*e*P	**sP**	**08 30 56.0**	**+0.8**
PBAR	**Barrancos**	**40.95**	**38**	*e*P	**P**	**08 30 42.3**	**+1.0**
	comp=Z,64nm,1.1s						
PESTR	**Estremoz**	**41.06**	**37**	*e*P	**P**	**08 30 43.2**	**+1.0**
	comp=Z,33nm,1.3s						
PESTR				*i* P	**pP**	**08 30 50.5**	**-1.6**
PESTR	**Estremoz**	**41.06**	**37**	*e*P	**P**	**08 30 43.2**	**+1.0**
	comp=Z,33nm,1.3s						
PTOM	**Tomar**	**41.07**	**35**	*e*P	**P**	**08 30 43.4**	**+1.1**
	comp=Z,108nm,1.0s						
PTOM				*i* P	**pP**	**08 30 50.5**	**-1.6**
PTOM	**Tomar**	**41.07**	**35**	*e*P	**P**	**08 30 43.4**	**+1.1**
	comp=Z,108nm,1.0s						
PMRV	**Marv??o**	**41.54**	**36**	*e*P	**P**	**08 30 47.0**	**+0.8**
	comp=Z,111nm,1.2s						
PMRV				*i* P	**pP**	**08 30 54.6**	**-1.4**

PMRV *e*P **sP** 08 31 00.6 +0.6
PMRV *e*LR LR 08 42 18.3
comp=Z,169nm,20.0s
PMRV Marv??o 41.54 36 *e*P **P** 08 30 47.0 +0.8
comp=Z,111nm,1.2s
PCBR Castelo Branco 41.76 36 *e*P **P** 08 30 49.2 +1.3
PCBR *i* P **pP** 08 30 56.7 -1.1
PCBR Castelo Branco 41.76 36 *e*P **P** 08 30 49.2 +1.3
MTE Manteigas 42.09 35 *e*P **P** 08 30 51.4 +0.7
comp=Z,62nm,1.0s
MTE *i* P **pP** 08 30 58.7 -1.9
MTE *e*P **sP** 08 31 04.4 -0.2
MTE *e*LR LR 08 42 47.3
comp=Z,195nm,22.0s
MTE Manteigas 42.09 35 *e*P **P** 08 30 51.0 +0.3
comp=Z,32nm,0.8s
MTE Manteigas 42.09 35 *e*P **P** 08 30 51.4 +0.7
comp=Z,62nm,1.0s
PVIS Viseu 42.10 35 *e*P **P** 08 30 51.2 +0.4
comp=Z,51nm,1.3s
PVIS *i* P **pP** 08 30 58.8 -1.8
PVIS *e*P **sP** 08 31 05.1 +0.4
PVIS Viseu 42.10 35 *e*P **P** 08 30 51.2 +0.4
comp=Z,51nm,1.3s
PVRL Vila Real 42.58 34 *e*P **P** 08 30 55.4 +0.8
PVRL *i* P **pP** 08 31 02.9 -1.6
PVRL *e*P **sP** 08 31 08.2 -0.3
PVRL Vila Real 42.58 34 *e*P **P** 08 30 55.4 +0.8
POLO Lamas de Olo 42.60 34 *e*P **P** 08 30 55.2 +0.3
POLO *i* P **pP** 08 31 02.6 -2.2
POLO *e*P **sP** 08 31 08.8 0.0
POLO Lamas de Olo 42.60 34 *e*P **P** 08 30 55.2 +0.3
PCAB Cabril 42.70 33 *e*P **P** 08 30 56.1 +0.5
PCAB *i* P **pP** 08 31 03.8 -1.7
PCAB Cabril 42.70 33 *e*P **P** 08 30 56.1 +0.5
PGAV Gavieira, Arco 42.74 33 *e*P **P** 08 30 56.5 +0.4
comp=Z,76nm,1.2s
PGAV *i* P **pP** 08 31 04.0 -1.9
PGAV *e*P **sP** 08 31 10.4 +0.5
PGAV *e*LR LR 08 43 00.2
comp=Z,98nm,22.0s
MVO Moncorvo 42.89 35 *e*P **P** 08 30 57.6 +0.4
comp=Z,46nm,1.5s
MVO *i* P **pP** 08 31 05.0 -2.1
MVO *e*P **sP** 08 31 11.2 +0.1
MVO *e*LR LR 08 42 45.2
comp=Z,165nm,22.0s
PAB San Pablo 43.45 39 *e*P **P** 08 31 02.1 +0.3
PAB pmax pmax
comp=Z,314nm,3.0s
PAB San Pablo 43.45 39 *e*P **P** 08 31 02.1 +0.3
comp=Z,314nm,3.0s
PAB San Pablo 43.45 39 *e*P **P** 08 31 02.1 +0.3
comp=Z,314nm,3.0s
PBRG Braganca 43.48 34 *e*P **P** 08 31 02.6 +0.7
comp=Z,48nm,1.5s
PBRG *i* P **pP** 08 31 10.2 -1.6
PBRG *e*P **sP** 08 31 16.1 +0.3
ESDC Sonseca Array 43.76 39 P **P** 08 31 03.4 -0.9
ESDC Sonseca Array 43.76 39 P **P** 08 31 03.4 -0.9
comp=Z,2.4nm,0.7s,baz=239,slow=8.3,SNR=14
ESDC LR LR 08 46 05.5
comp=Z,172nm,18.4s,baz=240,slow=32
ESDC Sonseca Array 43.76 39 P **P** 08 31 03.4 -0.9
TAM Tamanrasset 44.23 66 *e*P **P** 08 31 09.5 +1.1
TAM pmax pmax
comp=Z,47nm,1.5s
TAM Tamanrasset 44.23 66 *e*P **P** 08 31 09.5 +1.1
comp=Z,47nm,1.5s
TAM Tamanrasset 44.23 66 *e*P **P** 08 31 09.5 +1.1
comp=Z,47nm,1.5s
SJPF Ste Jean 47.47 36 *e*P **P** 08 31 34.1 +0.6
comp=Z,28nm,0.9s
SJPF Ste Jean 47.47 36 *e*P **P** 08 31 34.1 +0.6
SJPF pmax pmax
comp=Z,28nm,0.9s
SJPF Ste Jean 47.47 36 *e*P **P** 08 31 34.1 +0.6
comp=Z,28nm,0.9s
SJPF Ste Jean 47.47 36 *e*P **P** 08 31 34.1 +0.6
comp=Z,14nm,0.9s
ETSF Etsaut 47.74 37 *e*P **P** 08 31 36.6 +1.0
ETSF Etsaut 47.74 37 *e*P **P** 08 31 36.6 +1.0
ETSF Etsaut 47.74 37 *e*P **P** 08 31 36.6 +1.0
ETSF Etsaut 47.74 37 *e*P **P** 08 31 36.6 +1.0
KMSC Kings Mountain 47.92 311 ⇑P **P** 08 31 37.7 +0.6
baz=48
TIGA Tifton 48.35 305 ⇑P **P** 08 31 41.3 +0.8
baz=48
EPF Esparros 48.35 37 *e*P **P** 08 31 41.5 +1.1
comp=Z,39nm,0.8s
EPF Esparros 48.35 37 *e*P **P** 08 31 41.5 +1.1
EPF pmax pmax
comp=Z,39nm,0.8s
EPF Esparros 48.35 37 *e*P **P** 08 31 41.5 +1.1
comp=Z,39nm,0.8s
EPF Esparros 48.35 37 *e*P **P** 08 31 41.5 +1.1
comp=Z,20nm,0.8s
CFAA Coronel Fontan 48.93 215 P **P** 08 31 44.7 -0.2
CFAA Coronel Fontan 48.93 215 P **P** 08 31 44.7 -0.2
comp=Z,1.0nm,0.9s,baz=56,slow=8.1,SNR=11
CFAA Coronel Fontan 48.93 215 P **P** 08 31 44.7 -0.2
QUIF Quistinic 49.45 30 *e*P **P** 08 31 48.5 -0.1
comp=Z,69nm,1.1s
QUIF Quistinic 49.45 30 *e*P **P** 08 31 48.5 -0.1
QUIF pmax pmax
comp=Z,69nm,1.1s
QUIF Quistinic 49.45 30 *e*P **P** 08 31 48.5 -0.1
comp=Z,69nm,1.1s
QUIF Quistinic 49.45 30 *e*P **P** 08 31 48.5 -0.1
comp=Z,34nm,1.1s
MTLF Montolieu 49.66 38 *e*P **P** 08 31 50.4 0.0
comp=Z,70nm,1.4s
MTLF Montolieu 49.66 38 *e*P **P** 08 31 50.4 0.0
MTLF pmax pmax
comp=Z,70nm,1.4s
MTLF Montolieu 49.66 38 *e*P **P** 08 31 50.4 0.0
comp=Z,70nm,1.4s
MTLF Montolieu 49.66 38 *e*P **P** 08 31 50.4 0.0
comp=Z,35nm,1.4s
ROSF Rostrenen 49.67 30 *e*P **P** 08 31 50.7 +0.4
comp=Z,95nm,1.0s
ROSF Rostrenen 49.67 30 *e*P **P** 08 31 50.7 +0.4
ROSF pmax pmax
comp=Z,95nm,1.0s
ROSF Rostrenen 49.67 30 *e*P **P** 08 31 50.7 +0.4
comp=Z,95nm,1.0s
ROSF Rostrenen 49.67 30 *e*P **P** 08 31 50.7 +0.4
comp=Z,47nm,1.0s
LFF La Frestale 49.69 36 *e*P **P** 08 31 50.8 +0.3
comp=Z,55nm,0.8s
LFF La Frestale 49.69 36 *e*P **P** 08 31 50.8 +0.3
LFF pmax pmax
comp=Z,55nm,0.8s
LFF La Frestale 49.69 36 *e*P **P** 08 31 50.8 +0.3
comp=Z,55nm,0.8s
LFF La Frestale 49.69 36 *e*P **P** 08 31 50.8 +0.3
comp=Z,28nm,0.8s
SGMF Saint Gilles 49.98 30 *e*P **P** 08 31 53.0 +0.4
comp=Z,292nm,1.5s
SGMF Saint Gilles 49.98 30 *e*P **P** 08 31 53.0 +0.4
SGMF Saint Gilles 49.98 30 *e*P **P** 08 31 53.0 +0.4
comp=Z,292nm,1.5s
SGMF Saint Gilles 49.98 30 *e*P **P** 08 31 53.0 +0.4
comp=Z,146nm,1.5s
TZTN Tazewell 50.13 311 *e*P **P** 08 31 56.1 +2.1
TZTN *e*pP pP 08 32 15.5 +11
TZTN Tazewell 50.13 311 *e*P **P** 08 31 56.1 +2.1
MFF Saint Martin d 50.19 33 *e*P **P** 08 31 54.1 -0.1
MFF Saint Martin d 50.19 33 *e*P **P** 08 31 54.1 -0.1
MFF Saint Martin d 50.19 33 *e*P **P** 08 31 54.1 -0.1
MFF Saint Martin d 50.19 33 *e*P **P** 08 31 54.1 -0.1
RJF Les Rejaudoux 50.35 36 *e*P **P** 08 31 55.4 -0.1
comp=Z,29nm,0.9s
RJF *e*R
comp=Z,276nm,22.0s
RJF Les Rejaudoux 50.35 36 *e*P **P** 08 31 55.4 -0.1
RJF pmax pmax
comp=Z,29nm,0.9s
RJF Les Rejaudoux 50.35 36 *e*P **P** 08 31 55.4 -0.1
comp=Z,29nm,0.9s
RJF Les Rejaudoux 50.35 36 *e*P **P** 08 31 55.4 -0.1
comp=Z,14nm,0.9s
CAF Calviac 50.45 36 *e*P **P** 08 31 56.6 +0.3
comp=Z,46nm,0.8s
CAF Calviac 50.45 36 *e*P **P** 08 31 56.6 +0.3
CAF pmax pmax
comp=Z,46nm,0.8s
CAF Calviac 50.45 36 *e*P **P** 08 31 56.6 +0.3
comp=Z,46nm,0.8s
CAF Calviac 50.45 36 *e*P **P** 08 31 56.6 +0.3
comp=Z,23nm,0.8s
GRR Gorron 50.92 31 *e*P **P** 08 31 59.7 -0.1
GRR Gorron 50.92 31 *e*P **P** 08 31 59.7 -0.1
GRR Gorron 50.92 31 *e*P **P** 08 31 59.7 -0.1
GRR Gorron 50.92 31 *e*P **P** 08 31 59.7 -0.1
LASF Ste Croix 51.06 38 *e*P **P** 08 32 01.6 +0.7
comp=Z,169nm,1.4s
LASF Ste Croix 51.06 38 *e*P **P** 08 32 01.6 +0.7
comp=Z,169nm,1.4s
LASF Ste Croix 51.06 38 *e*P **P** 08 32 01.6 +0.7
comp=Z,85nm,1.4s
TRQA Tornquist 51.07 204 *e*P **P** 08 32 02.2 +1.2
comp=Z,27nm,1.3s
TRQA Tornquist 51.07 204 *e*P **P** 08 32 02.2 +1.2
comp=Z,27nm,1.3s
KEST Kesra 51.16 50 P **P** 08 32 02.7 +0.8
KEST *e*P **P** 08 32 03.1 +1.2
KEST Kesra 51.16 50 P **P** 08 32 02.7 +0.8
comp=Z,9.3nm,1.1s,baz=205,slow=4.0,SNR=14
KEST LR LR 08 54 07.6
comp=Z,99nm,18.9s,baz=261,slow=37
KEST Kesra 51.16 50 *e*P **P** 08 32 03.1 +1.2
ACSO Alum Creek Sta 51.25 316 *e*P **P** 08 32 03.1 +0.7
comp=Z,42nm,1.3s
ACSO Alum Creek Sta 51.25 316 *e*P **P** 08 32 03.1 +0.7
comp=Z,42nm,1.3s
TCF Toulx Ste Croi 51.31 35 *e*P **P** 08 32 02.9 +0.1
comp=Z,121nm,1.4s
TCF Toulx Ste Croi 51.31 35 *e*P **P** 08 32 02.9 +0.1
TCF pmax pmax
comp=Z,121nm,1.4s
TCF Toulx Ste Croi 51.31 35 *e*P **P** 08 32 02.9 +0.1
comp=Z,121nm,1.4s
TCF Toulx Ste Croi 51.31 35 *e*P **P** 08 32 02.9 +0.1
comp=Z,60nm,1.4s
LBL Lubilhac 51.32 37 *e*P **P** 08 32 04.1 +1.2
LBL Lubilhac 51.32 37 *e*P **P** 08 32 04.1 +1.2
LBL Lubilhac 51.32 37 *e*P **P** 08 32 04.1 +1.2
LBL Lubilhac 51.32 37 *e*P **P** 08 32 04.1 +1.2
FLN La Foliniere 51.36 31 *e*P **P** 08 32 02.9 -0.1
FLN *e*R
comp=Z,186nm,23.0s
FLN La Foliniere 51.36 31 *e*P **P** 08 32 02.9 -0.1
FLN La Foliniere 51.36 31 *e*P **P** 08 32 02.9 -0.1
FLN La Foliniere 51.36 31 *e*P **P** 08 32 02.9 -0.1
LDF La Druitiere 51.43 31 *e*P **P** 08 32 03.4 -0.2
comp=Z,90nm,1.2s
LDF La Druitiere 51.43 31 *e*P **P** 08 32 03.4 -0.2
LDF pmax pmax
comp=Z,90nm,1.2s
LDF La Druitiere 51.43 31 *e*P **P** 08 32 03.4 -0.2
comp=Z,90nm,1.2s
LDF La Druitiere 51.43 31 *e*P **P** 08 32 03.4 -0.2
comp=Z,45nm,1.2s
SWET Sewanee 51.45 309 *e*P **P** 08 32 05.9 +1.9
comp=Z,33nm,1.3s
SWET *e*pP pP 08 32 19.6 +5.6
SWET Sewanee 51.45 309 *e*P **P** 08 32 05.9 +1.9
comp=Z,33nm,1.3s
PYM Petit Puy Mans 51.46 36 *e*P **P** 08 32 05.2 +1.2
PYM Petit Puy Mans 51.46 36 *e*P **P** 08 32 05.2 +1.2
PYM Petit Puy Mans 51.46 36 *e*P **P** 08 32 05.2 +1.2
PYM Petit Puy Mans 51.46 36 *e*P **P** 08 32 05.2 +1.2
AGO Saint Agoulin 51.70 36 *e*P **P** 08 32 06.5 +0.8
AGO Saint Agoulin 51.70 36 *e*P **P** 08 32 06.5 +0.8
AGO Saint Agoulin 51.70 36 *e*P **P** 08 32 06.5 +0.8
BGF Bois d'Agland 51.83 35 *e*P **P** 08 32 06.9 +0.3
comp=Z,124nm,1.1s
BGF Bois d'Agland 51.83 35 *e*P **P** 08 32 06.9 +0.3
BGF pmax pmax
comp=Z,124nm,1.0s
BGF Bois d'Agland 51.83 35 *e*P **P** 08 32 06.9 +0.3
comp=Z,124nm,1.0s
BGF Bois d'Agland 51.83 35 *e*P **P** 08 32 06.9 +0.3
comp=Z,62nm,1.1s
VIVF Saint-Julien-l 51.97 38 *e*P **P** 08 32 08.6 +0.9
comp=Z,108nm,1.1s
VIVF Saint-Julien-l 51.97 38 *e*P **P** 08 32 08.6 +0.9
VIVF pmax pmax
comp=Z,108nm,1.1s
VIVF Saint-Julien-l 51.97 38 *e*P **P** 08 32 08.6 +0.9
comp=Z,108nm,1.1s
VIVF Saint-Julien-l 51.97 38 *e*P **P** 08 32 08.6 +0.9
comp=Z,54nm,1.1s
SCHQ Schefferville 52.00 339 P **P** 08 32 06.8 -0.9
SCHQ *e*P **P** 08 32 07.8 +0.1
SCHQ Schefferville 52.00 339 P **P** 08 32 06.8 -0.9
comp=Z,10nm,1.0s,baz=121,slow=6.0,SNR=6.1
SCHQ Schefferville 52.00 339 *e*P **P** 08 32 07.8 +0.1
SMRF Simiane la Rot 52.07 39 *e*P **P** 08 32 09.3 +0.8
SMRF Simiane la Rot 52.07 39 *e*P **P** 08 32 09.3 +0.8
SMRF Simiane la Rot 52.07 39 *e*P **P** 08 32 09.3 +0.8
SSB Saint Sauveur 52.11 37 *e*P **P** 08 32 10.0 +1.2
SSB pmax pmax
comp=Z,93nm,1.8s
SSB Saint Sauveur 52.11 37 *e*P **P** 08 32 10.0 +1.2
comp=Z,93nm,1.8s
SSB Saint Sauveur 52.11 37 *e*P **P** 08 32 10.0 +1.2
comp=Z,93nm,1.8s
HYF Humbligny 52.12 34 *e*P **P** 08 32 09.3 +0.6
HYF Humbligny 52.12 34 *e*P **P** 08 32 09.3 +0.6
HYF Humbligny 52.12 34 *e*P **P** 08 32 09.3 +0.6
AVF Avril sur Loir 52.24 35 *e*P **P** 08 32 09.8 +0.1
comp=Z,21nm,0.8s
AVF Avril sur Loir 52.24 35 *e*P **P** 08 32 09.8 +0.1
AVF pmax pmax
comp=Z,21nm,0.8s
AVF Avril sur Loir 52.24 35 *e*P **P** 08 32 09.8 +0.1
comp=Z,21nm,0.8s
AVF Avril sur Loir 52.24 35 *e*P **P** 08 32 09.8 +0.1
comp=Z,10nm,0.8s
LMR La Mourre 52.35 40 *e*P **P** 08 32 10.4 -0.1
LMR La Mourre 52.35 40 *e*P **P** 08 32 10.4 -0.1
LMR La Mourre 52.35 40 *e*P **P** 08 32 10.4 -0.1
LMR La Mourre 52.35 40 *e*P **P** 08 32 10.4 -0.1
SMF Signal de Mont 52.44 35 *e*P **P** 08 32 11.3 +0.1
comp=Z,17nm,0.8s
SMF Signal de Mont 52.44 35 *e*P **P** 08 32 11.3 +0.1
SMF pmax pmax
comp=Z,17nm,0.8s
SMF Signal de Mont 52.44 35 *e*P **P** 08 32 11.3 +0.1
comp=Z,17nm,0.8s
SMF Signal de Mont 52.44 35 *e*P **P** 08 32 11.3 +0.1
comp=Z,8.6nm,0.8s
SSF Saint Saulge 52.48 35 *e*P **P** 08 32 11.4 -0.1
comp=Z,47nm,1.3s
SSF Saint Saulge 52.48 35 *e*P **P** 08 32 11.4 -0.1
SSF pmax pmax
comp=Z,47nm,1.3s
SSF Saint Saulge 52.48 35 *e*P **P** 08 32 11.4 -0.1
comp=Z,47nm,1.3s
SSF Saint Saulge 52.48 35 *e*P **P** 08 32 11.4 -0.1
comp=Z,24nm,1.3s
FRF La Foret Royal 52.55 40 *e*P **P** 08 32 12.9 +0.9
FRF La Foret Royal 52.55 40 *e*P **P** 08 32 12.9 +0.9
FRF La Foret Royal 52.55 40 *e*P **P** 08 32 12.9 +0.9
FRF La Foret Royal 52.55 40 *e*P **P** 08 32 12.9 +0.9
ORIF Oris-en-Rattie 52.74 38 *e*P **P** 08 32 14.3 +0.8
ORIF *e*R
comp=Z,232nm,21.0s
ORIF Oris-en-Rattie 52.74 38 *e*P **P** 08 32 14.3 +0.8
ORIF Oris-en-Rattie 52.74 38 *e*P **P** 08 32 14.3 +0.8
ORIF Oris-en-Rattie 52.74 38 *e*P **P** 08 32 14.3 +0.8
LOR Lormes 52.80 35 *e*P **P** 08 32 13.8 0.0
comp=Z,34nm,0.8s
LOR *e*R
comp=Z,184nm,22.8s
LOR Lormes 52.80 35 *e*P **P** 08 32 13.8 0.0
comp=Z,34nm,0.8s
LOR Lormes 52.80 35 *e*P **P** 08 32 13.8 0.0
comp=Z,17nm,0.8s
PLAL Pickwick Lake 53.03 308 P **P** 08 32 15.0 -0.7
MBDF Montbardon 53.19 39 *e*P **P** 08 32 17.4 +0.5
comp=Z,71nm,1.4s
MBDF Montbardon 53.19 39 *e*P **P** 08 32 17.4 +0.5
MBDF pmax pmax
comp=Z,71nm,1.4s
MBDF Montbardon 53.19 39 *e*P **P** 08 32 17.4 +0.5
comp=Z,71nm,1.4s
MBDF Montbardon 53.19 39 *e*P **P** 08 32 17.4 +0.5
comp=Z,36nm,1.4s
SBF Sospel 53.19 40 *e*P **P** 08 32 17.1 +0.3
SBF Sospel 53.19 40 *e*P **P** 08 32 17.1 +0.3
SBF Sospel 53.19 40 *e*P **P** 08 32 17.1 +0.3
SBF Sospel 53.19 40 *e*P **P** 08 32 17.1 +0.3
WVT Waverly 53.21 309 *e*P **P** 08 32 16.8 -0.2
WVT pmax pmax
comp=Z,24nm,1.4s
WVT Waverly 53.21 309 *e*P **P** 08 32 16.8 -0.2
comp=Z,24nm,1.4s
WVT Waverly 53.21 309 *e*P **P** 08 32 16.8 -0.2
comp=Z,24nm,1.4s
BNI Bardonecchia 53.30 38 *e*P **P** 08 32 18.5 +0.9
BNI pmax pmax
comp=Z,17nm,0.9s
BNI Bardonecchia 53.30 38 *e*P **P** 08 32 18.5 +0.9
comp=Z,17nm,0.9s
BNI Bardonecchia 53.30 38 *e*P **P** 08 32 18.5 +0.9
comp=Z,17nm,0.9s
BLO Bloomington 53.31 313 *e*P **P** 08 32 18.5 +0.8
BLO pmax pmax
comp=Z,20nm,1.1s
BLO Bloomington 53.31 313 *e*P **P** 08 32 18.5 +0.8
comp=Z,20nm,1.1s
BLO Bloomington 53.31 313 *e*P **P** 08 32 18.5 +0.8
comp=Z,20nm,1.1s
LPL La Plagne 53.56 38 *e*P **P** 08 32 20.4 +0.7
LPL La Plagne 53.56 38 *e*P **P** 08 32 20.4 +0.7
LPL La Plagne 53.56 38 *e*P **P** 08 32 20.4 +0.7
LPL La Plagne 53.56 38 *e*P **P** 08 32 20.4 +0.7
LPG La Plagne 53.56 38 *e*P **P** 08 32 20.6 +0.8
comp=Z,37nm,1.1s
LPG La Plagne 53.56 38 *e*P **P** 08 32 20.6 +0.8
LPG pmax pmax
comp=Z,37nm,1.1s
LPG La Plagne 53.56 38 *e*P **P** 08 32 20.6 +0.8
comp=Z,37nm,1.1s
LPG La Plagne 53.56 38 *e*P **P** 08 32 20.6 +0.8
comp=Z,18nm,1.1s
PGF Pioggiola 53.61 42 *e*P **P** 08 32 19.7 -0.3
comp=Z,72nm,1.2s
PGF Pioggiola 53.61 42 *e*P **P** 08 32 19.7 -0.3
PGF pmax pmax
comp=Z,72nm,1.2s
PGF Pioggiola 53.61 42 *e*P **P** 08 32 19.7 -0.3
comp=Z,72nm,1.2s
PGF Pioggiola 53.61 42 *e*P **P** 08 32 19.7 -0.3
comp=Z,36nm,1.2s
CABF La Chapelle 53.73 36 *e*P **P** 08 32 21.1 +0.3
comp=Z,77nm,1.3s
CABF La Chapelle 53.73 36 *e*P **P** 08 32 21.1 +0.3
CABF pmax pmax
comp=Z,77nm,1.3s
CABF La Chapelle 53.73 36 *e*P **P** 08 32 21.1 +0.3
comp=Z,77nm,1.3s
CABF La Chapelle 53.73 36 *e*P **P** 08 32 21.1 +0.3
comp=Z,38nm,1.3s
OXF Oxford 53.94 307 *e*P **P** 08 32 22.0 -0.4
OXF pmax pmax
comp=Z,23nm,1.1s
OXF Oxford 53.94 307 *e*P **P** 08 32 22.0 -0.4
comp=Z,23nm,1.1s
OXF Oxford 53.94 307 *e*P **P** 08 32 22.0 -0.4
comp=Z,23nm,1.1s
SFTF Sexfontaines 53.98 34 *e*P **P** 08 32 22.2 -0.3
SFTF Sexfontaines 53.98 34 *e*P **P** 08 32 22.2 -0.3
SFTF Sexfontaines 53.98 34 *e*P **P** 08 32 22.2 -0.3
MEZF Maizieres J'vi 54.15 34 *e*P **P** 08 32 23.6 -0.1
MEZF Maizieres J'vi 54.15 34 *e*P **P** 08 32 23.6 -0.1
MEZF Maizieres J'vi 54.15 34 *e*P **P** 08 32 23.6 -0.1
SFIN Scholer Farm 54.18 315 ⇓P **P** 08 32 24.8 +0.8
baz=54
SENIN Lac Senin/Sane 54.33 37 *e*P **P** 08 32 26.4 +1.2
comp=Z,18nm,0.9s
SENIN Lac Senin/Sane 54.33 37 *e*P **P** 08 32 26.5 +1.2
comp=Z,18nm,0.9s
LOMF Lomont 54.55 36 *e*P **P** 08 32 27.1 +0.4
LOMF Lomont 54.55 36 *e*P **P** 08 32 27.1 +0.4
LOMF Lomont 54.55 36 *e*P **P** 08 32 27.1 +0.4
LOMF Lomont 54.55 36 *e*P **P** 08 32 27.1 +0.4
PAGF Fort de Pagny 54.56 34 *e*P **P** 08 32 26.5 -0.2
comp=Z,22nm,1.1s
PAGF Fort de Pagny 54.56 34 *e*P **P** 08 32 26.5 -0.2
comp=Z,22nm,1.1s
PAGF Fort de Pagny 54.56 34 *e*P **P** 08 32 26.5 -0.2
comp=Z,11nm,1.1s
BAIF Baives 54.58 32 *e*P **P** 08 32 26.5 -0.2
comp=Z,50nm,1.1s
BAIF Baives 54.58 32 *e*P **P** 08 32 26.5 -0.2
BAIF pmax pmax
comp=Z,50nm,1.1s
BAIF Baives 54.58 32 *e*P **P** 08 32 26.5 -0.2
comp=Z,50nm,1.1s
BAIF Baives 54.58 32 *e*P **P** 08 32 26.5 -0.2
comp=Z,25nm,1.1s
HAU Haudompre 54.61 35 *e*P **P** 08 32 26.9 -0.2
comp=Z,62nm,1.0s
HAU *e*R
comp=Z,124nm,22.5s
HAU Haudompre 54.61 35 *e*P **P** 08 32 26.9 -0.2
HAU pmax pmax
comp=Z,62nm,1.0s
HAU Haudompre 54.61 35 *e*P **P** 08 32 26.9 -0.2
comp=Z,62nm,1.0s
HAU Haudompre 54.61 35 *e*P **P** 08 32 26.9 -0.2
comp=Z,31nm,1.0s
SIUC Southern Illin 54.78 311 *e*P **P** 08 32 28.7 +0.3
comp=Z,37nm,1.0s
SIUC Southern Illin 54.78 311 *e*P **P** 08 32 28.7 +0.3
comp=Z,37nm,1.0s
HINF Hinteralfeld 54.80 36 *e*P **P** 08 32 28.4 -0.1
comp=Z,108nm,1.4s
HINF Hinteralfeld 54.80 36 *e*P **P** 08 32 28.4 -0.1
HINF pmax pmax
comp=Z,108nm,1.4s
HINF Hinteralfeld 54.80 36 *e*P **P** 08 32 28.4 -0.1
comp=Z,108nm,1.4s
HINF Hinteralfeld 54.80 36 *e*P **P** 08 32 28.4 -0.1
comp=Z,54nm,1.4s
PARMO Parma 54.85 309 *e*P **P** 08 32 29.1 +0.2
PARMO *e*pP pP 08 32 49.3 +10
PARMO Parma 54.85 309 *e*P **P** 08 32 29.1 +0.2
GIVF Givet 54.93 32 *e*P **P** 08 32 28.9 -0.4
comp=Z,84nm,1.2s
GIVF Givet 54.93 32 *e*P **P** 08 32 28.9 -0.4
GIVF pmax pmax
comp=Z,84nm,1.2s
GIVF Givet 54.93 32 *e*P **P** 08 32 28.9 -0.4
comp=Z,84nm,1.2s
GIVF Givet 54.93 32 *e*P **P** 08 32 28.9 -0.4
comp=Z,42nm,1.2s
MOF Molkenrain 54.98 36 *e*P **P** 08 32 30.0 +0.1
MOF Molkenrain 54.98 36 *e*P **P** 08 32 30.0 +0.1
MOF Molkenrain 54.98 36 *e*P **P** 08 32 30.0 +0.1
MOF Molkenrain 54.98 36 *e*P **P** 08 32 30.0 +0.1
ECH Echery 55.19 35 *e*P **P** 08 32 31.3 +0.1
ECH pmax pmax
comp=Z,31nm,1.2s
ECH Echery 55.19 35 *e*P **P** 08 32 31.3 +0.1
comp=Z,31nm,1.2s
ECH Echery 55.19 35 *e*P **P** 08 32 31.3 +0.1
ECH Echery 55.19 35 *e*P **P** 08 32 31.3 +0.1
HBAR Harrisburg 55.22 308 *e*P **P** 08 32 32.4 +0.7
HBAR Harrisburg 55.22 308 *e*P **P** 08 32 32.4 +0.7
CDF Champ du Feu 55.35 35 *e*P **P** 08 32 32.2 -0.3
comp=Z,57nm,1.4s
CDF Champ du Feu 55.35 35 *e*P **P** 08 32 32.2 -0.3
CDF pmax pmax
comp=Z,57nm,1.4s
CDF Champ du Feu 55.35 35 *e*P **P** 08 32 32.2 -0.3
comp=Z,57nm,1.4s
CDF Champ du Feu 55.35 35 *e*P **P** 08 32 32.2 -0.3
comp=Z,28nm,1.4s
BCLA Clavier 55.36 32 P **P** 08 32 32.7 +0.3
comp=Z,21nm,1.9s
FELD Feldberg im Sc 55.50 36 *e*P **P** 08 32 33.5 -0.2
FELD Feldberg im Sc 55.50 36 *e*P **P** 08 32 33.5 -0.2
FVM French Village 55.77 311 *e*P **P** 08 32 35.1 -0.5
FVM pmax pmax
comp=Z,20nm,1.0s
FVM French Village 55.77 311 *e*P **P** 08 32 35.1 -0.5
comp=Z,20nm,1.0s
FVM *e*pP **pP** 08 32 46.2 +0.4
FVM French Village 55.77 311 *e*P **P** 08 32 35.1 -0.5
comp=Z,20nm,1.0s
FVM *e*pP **pP** 08 32 46.2 +0.4

HDIL Hopedale 55.80 314 *e*P P 08 32 36.1 +0.3
comp=Z,24nm,0.9s
HDIL Hopedale 55.80 314 *e*P P 08 32 36.1 +0.3
comp=Z,24nm,0.9s
RUP Ruppelstein 55.91 34 *e*P P 08 32 36.7 +0.2
RUP Ruppelstein 55.91 34 *e*P P 08 32 36.7 +0.2
RUP Ruppelstein 55.91 34 *e*P P 08 32 36.7 +0.2
BFO Black Forest 55.92 36 *e*P P 08 32 36.3 -0.2
BFO pmax pmax
comp=Z,33nm,1.1s
BFO Black Forest 55.92 36 *e*P P 08 32 36.3 -0.2
comp=Z,33nm,1.1s
BFO Black Forest 55.92 36 *e*P P 08 32 36.3 -0.2
comp=Z,33nm,1.1s
LANF Langenberg 55.95 35 *e*P P 08 32 36.3 -0.4
LANF Langenberg 55.95 35 *e*P P 08 32 36.3 -0.4
LANF Langenberg 55.95 35 *e*P P 08 32 36.3 -0.4
LANF Langenberg 55.95 35 *e*P P 08 32 36.3 -0.4
SPAK Spaichingen-Ko 56.07 36 *e*P P 08 32 38.1 +0.4
SPAK Spaichingen-Ko 56.07 36 *e*P P 08 32 38.1 +0.4
DAVOX Davos/Dischmat 56.09 38 LR LR 08 53 08.7
comp=Z,268nm,20.0s,baz=264,slow=32
FUORN Ofenpass-Fuorn 56.24 38 *e*P P 08 32 39.9 +0.8
comp=Z,99nm,2.1s
FUORN *ep*P **pP** 08 32 54.4 +5.1
FUORN Ofenpass-Fuorn 56.24 38 *e*P P 08 32 39.9 +0.8
comp=Z,99nm,2.1s
DAVA Damuels 56.32 37⇑ *i*P P 08 32 40.1 +0.5
comp=Z,20nm,0.8s
DAVA Damuels 56.32 37⇑ *i*P P 08 32 40.1 +0.5
comp=Z,20nm,0.8s
DAVA Damuels 56.32 37⇑ *i*P P 08 32 40.1 +0.5
comp=Z,20nm,0.8s
UALR University of 56.34 307 *e*P P 08 32 40.0 +0.3
FETA Feichten 56.71 38⇑ *i*P P 08 32 41.8 -0.6
comp=Z,16nm,1.0s
FETA Feichten 56.71 38⇑ *i*P P 08 32 41.8 -0.6
comp=Z,16nm,1.0s
FETA Feichten 56.71 38⇑ *i*P P 08 32 41.8 -0.6
comp=Z,16nm,1.0s
TOD Tromm 56.83 35 *e*P P 08 32 43.2 +0.2
TOD Tromm 56.83 35 *e*P P 08 32 43.2 +0.2
TOD Tromm 56.83 35 *e*P P 08 32 43.2 +0.2
CEL Celeste 56.93 49 *e*P P 08 32 44.5 +0.5
comp=Z,25nm,1.1s
CEL Celeste 56.93 49 *e*P P 08 32 44.5 +0.5
comp=Z,25nm,1.1s
RETA Reutte 56.95 37⇓ *i*P P 08 32 43.9 -0.1
comp=Z,21nm,1.1s
RETA Reutte 56.95 37⇓ *i*P P 08 32 43.9 -0.1
comp=Z,21nm,1.1s
RETA Reutte 56.95 37⇓ *i*P P 08 32 43.8 -0.1
comp=Z,21nm,1.1s
PLCA Paso Flores 57.08 209 LR LR 08 58 00.9
comp=Z,169nm,19.0s,baz=7.6,slow=37
MOTA Moosalm 57.09 38⇓ *i*P P 08 32 44.6 -0.4
MOTA pmax pmax
comp=Z,10.0nm,0.7s
MOTA Moosalm 57.09 38⇓ *i*P P 08 32 44.6 -0.4
comp=Z,10nm,0.7s
MOTA Moosalm 57.09 38⇓ *i*P P 08 32 44.6 -0.4
comp=Z,10nm,0.7s
MOTA Moosalm 57.09 38⇓ *i*P P 08 32 44.6 -0.4
comp=Z,10nm,0.7s
WATA Walderalm 57.37 38⇓ *i*P P 08 32 46.6 -0.4
WATA pmax pmax
comp=Z,9.0nm,0.6s
WATA Walderalm 57.37 38⇓ *i*P P 08 32 46.6 -0.4
comp=Z,9.2nm,0.6s
WATA Walderalm 57.37 38⇓ *i*P P 08 32 46.6 -0.4
comp=Z,9.2nm,0.6s
WATA Walderalm 57.37 38⇓ *i*P P 08 32 46.6 -0.4
comp=Z,9.2nm,0.6s
WTTA Wattenberg 57.38 38⇑ *i*P P 08 32 46.3 -0.8
WTTA pmax pmax
comp=Z,23nm,0.7s
WTTA Wattenberg 57.38 38⇑ *i*P P 08 32 46.3 -0.8
comp=Z,23nm,0.7s
WTTA Wattenberg 57.38 38⇑ *i*P P 08 32 46.3 -0.8
comp=Z,23nm,0.7s
WTTA Wattenberg 57.38 38⇑ *i*P P 08 32 46.3 -0.8
comp=Z,23nm,0.7s
CUC Castrocucco 57.41 47 *e*P P 08 32 46.5 -0.8
comp=Z,8.6nm,0.9s
CUC Castrocucco 57.41 47 *e*P P 08 32 46.5 -0.8
comp=Z,8.6nm,0.9s
ABTA Abfaltersbach 57.69 39⇓ *i*P P 08 32 49.2 0.0
comp=Z,14nm,0.9s
ABTA Abfaltersbach 57.69 39⇓ *i*P P 08 32 49.2 0.0
comp=Z,14nm,0.9s
ABTA Abfaltersbach 57.69 39⇓ *i*P P 08 32 49.2 0.0
comp=Z,14nm,0.9s
TIP Timpagrande 57.85 49 *e*P P 08 32 49.0 -1.4
TIP Timpagrande 57.85 49 *e*P P 08 32 49.0 -1.4
TRI Trieste 58.05 40 *e*P P 08 32 51.8 +0.2
TRI *e**PP **pP** 08 32 59.6 -2.2
TRI Trieste 58.05 40 *e*P P 08 32 51.8 +0.2
TRI *ep*P **pP** 08 32 59.6 -2.2
TRI Trieste 58.05 40 *e*P P 08 32 51.8 +0.2
GRFO Grafenberg 58.24 35 *e*P P 08 32 53.0 +0.1
GRFO pmax pmax
comp=Z,56nm,1.2s
GRFO Grafenberg 58.24 35 *e*P P 08 32 53.0 +0.1
comp=Z,56nm,1.2s
GRFO Grafenberg 58.24 35 *e*P P 08 32 53.0 +0.1
comp=Z,56nm,1.2s
GRF Grafenberg Arr 58.24 35 *e*P P 08 32 53.4 +0.5
GRF pmax pmax
comp=Z,46nm,1.2s
GRF Grafenberg Arr 58.24 35 *e*P P 08 32 53.4 +0.5
comp=Z,46nm,1.2s
GRF *e*L L 08 46 24.3
comp=Z,80nm,21.7s
JAVS Javornik 58.32 40 *i*P P 08 32 53.7 +0.1
JAVS *i*pP **pP** 08 33 01.4 -2.4
JAVS *i* 08 33 07.6
JAVS Javornik 58.32 40 P P 08 32 53.7 +0.1
KBA Koelnbreinsper 58.35 39⇓ *i*P P 08 32 53.6 -0.3
KBA pmax pmax
comp=Z,15nm,1.2s
KBA Koelnbreinsper 58.35 39⇓ *i*P P 08 32 53.6 -0.3
comp=Z,15nm,1.2s
KBA Koelnbreinsper 58.35 39⇓ *i*P P 08 32 53.6 -0.3
comp=Z,15nm,1.2s
KBA Koelnbreinsper 58.35 39⇓ *i*P P 08 32 53.6 -0.2
comp=Z,15nm,1.2s
MYKA Terra Mystica 58.35 39⇓ *i*P P 08 32 53.9 +0.2
comp=Z,17nm,0.8s
MYKA Terra Mystica 58.35 39⇓ *i*P P 08 32 53.9 +0.2
comp=Z,17nm,0.8s
MYKA Terra Mystica 58.35 39⇓ *i*P P 08 32 53.9 +0.2
comp=Z,17nm,0.8s
VISS Visnje 58.78 41 *i*P P 08 32 57.0 +0.3
VISS *i*pP **pP** 08 33 04.6 -2.3
VISS *i* 08 33 10.3
VISS Visnje 58.78 41 *i*P P 08 32 57.0 +0.3
OBKA Obir 58.87 40⇓ *i*P P 08 32 57.9 +0.4
comp=Z,35nm,1.2s
OBKA Obir 58.87 40⇓ *i*P P 08 32 57.9 +0.4
comp=Z,35nm,1.2s
OBKA Obir 58.87 40⇓ *i*P P 08 32 57.9 +0.4
comp=Z,35nm,1.2s
BOJS Bojanci 58.93 41 *i*P P 08 32 58.0 +0.2
BOJS *i*pP **pP** 08 33 06.0 -2.0
BOJS *i* 08 33 11.8
BOJS Bojanci 58.93 41 *i*P P 08 32 58.0 +0.2
NKC Novy Kostel 59.20 35⇑ *i*P P 08 33 00.2 +0.6
NKC *ex* x 08 33 08.0
NKC *ex* x 08 33 13.9
MOA Molln 59.23 38⇑ *i*P P 08 32 59.5 -0.4
comp=Z,16nm,1.2s
MOA Molln 59.23 38⇑ *i*P P 08 32 59.5 -0.4
comp=Z,16nm,1.2s
MOA Molln 59.23 38⇑ *i*P P 08 32 59.5 -0.4
comp=Z,16nm,1.2s
SOKA Soboth 59.24 40⇓ *i*P P 08 32 59.8 -0.2
comp=Z,24nm,1.3s
SOKA Soboth 59.24 40⇓ *i*P P 08 32 59.8 -0.2
comp=Z,24nm,1.3s
SOKA Soboth 59.24 40⇓ *i*P P 08 32 59.8 -0.2
comp=Z,24nm,1.3s
GERES GERESS Array B 59.31 37 P P 08 32 59.6 -0.8
GERES GERESS Array B 59.31 37 P P 08 32 59.6 -0.8
comp=Z,1.7nm,0.6s,baz=258,slow=6.3,SNR=9.8
GERES LR LR 08 54 22.1
comp=Z,128nm,20.9s,baz=16,slow=32

GERES GERESS Array B 59.31 37 P P 08 32 59.7 -0.8
TUL1 Tulsa 59.35 307 ⇑P P 08 33 00.7 -0.2
baz=59
KHC Kasperske Hory 59.36 37 *e*P P 08 33 00.5 -0.3
KHC pmax pmax
comp=Z,17nm,1.0s
KHC Kasperske Hory 59.36 37 *e*P P 08 33 00.5 -0.3
comp=Z,17nm,1.0s
KHC Kasperske Hory 59.36 37⇑ *e*P P 08 33 00.4 -0.3
KHC *ex* x 08 33 08.5
KHC *ex* x 08 33 14.5
KHC Kasperske Hory 59.36 37 *e*P P 08 33 00.5 -0.3
comp=Z,17nm,1.0s
SFJD Kangerlussuaq 59.46 354 *e*P P 08 33 00.5 -0.5
SFJD Kangerlussuaq 59.46 354 *i*P P 08 33 00.6 -0.4
comp=Z,9.1nm,0.8s
SFJD Kangerlussuaq 59.46 354 P P 08 32 59.8 -1.2
comp=Z,9.8nm,0.8s,baz=161,slow=7.9,SNR=5.0
SFJD Kangerlussuaq 59.46 354 *e*P P 08 33 00.5 -0.5
SPMN St. Paul 59.87 318 ⇓P P 08 33 04.2 0.0
baz=60
WHTX Lake Whitney 59.93 302 ⇑P P 08 33 04.7 -0.2
baz=60
CLL Collm 60.00 34 *i*P P 08 33 05.5 +0.5
CLL pmax pmax
comp=Z,24nm,1.4s
CLL Collm 60.00 34 *i*P P 08 33 05.5 +0.5
comp=Z,24nm,1.4s
CLL *i* 08 33 19.1
CLL LmV 08 54 00.0
comp=Z,100nm,21.0s
CONA Conrad Observa 60.25 39⇓ *i*P P 08 33 06.7 -0.3
comp=Z,20nm,1.6s
CONA Conrad Observa 60.25 39⇓ *i*P P 08 33 06.7 -0.3
comp=Z,20nm,1.6s
CONA Conrad Observa 60.25 39⇓ *i*P P 08 33 06.7 -0.3
comp=Z,20nm,1.6s
BEHE Becsehely 60.28 41⇑ *e*P P 08 33 08.1 +1.1
PRU Pruhonice 60.30 36⇑ *i*P P 08 33 07.4 +0.3
PRU *ex* x 08 33 14.4
PRU *ex* x 08 33 21.1
BRG Berggiesshubel 60.34 35 *e*P P 08 33 07.8 +0.4
comp=Z,22nm,1.5s
BRG *e* 08 33 21.6
comp=Z,27nm,1.5s
BRG
comp=N,160nm,20.6s
BRG
comp=E,141nm,18.5s
BRG
comp=Z,159nm,16.4s
BRG Berggiesshubel 60.34 35 *e*P P 08 33 07.8 +0.4
BRG pmax pmax
comp=Z,22nm,1.5s
BRG MLR MLR
comp=N,160nm,20.6s
BRG MLR MLR
comp=E,141nm,18.5s
BRG MLR MLR
comp=Z,159nm,16.4s
PVCC Panska Ves 60.55 36⇑ *e*P P 08 33 09.6 +0.8
TREC Trest 60.57 37⇑ *i*P P 08 33 09.4 +0.4
TREC *e* 08 33 16.8
TREC Trest 60.57 37⇑ *i*P P 08 33 09.4 +0.4
TREC *ex* x 08 33 16.8
TREC *ex* x 08 33 23.1
SOP Sopron 60.59 39⇓ *e*P P 08 33 09.3 +0.2
KSU1 Kansas State U 60.73 310 *e*P P 08 33 09.7 -0.7
comp=Z,23nm,1.2s
KSU1 Kansas State U 60.73 310 *e*P P 08 33 09.6 -0.7
comp=Z,23nm,1.2s
RUE Ruedersdorf 60.97 33 *e*P P 08 33 11.9 +0.3
RUE Ruedersdorf 60.97 33 *e*P P 08 33 11.9 +0.3
TSUM Tsumeb 61.09 117 *e*P P 08 33 13.7 +0.6
TSUM Tsumeb 61.09 117 *e*P P 08 33 13.7 +0.6
VRAC Vranov 61.24 37⇑ *i*P P 08 33 13.7 +0.2
VRAC Vranov 61.24 37 LR LR 08 55 30.2
comp=Z,150nm,21.3s,baz=173,slow=32
VRAC Vranov 61.24 37⇑ *i*P P 08 33 13.7 +0.2
UPC Upice 61.37 36⇑ *e*P P 08 33 14.7 +0.3
UPC *ex* x 08 33 28.6
PKSM Moragy 61.40 41 ⇓P P 08 33 15.6 +1.0
PKSM Moragy 61.40 41⇓ *i*P P 08 33 15.6 +1.0
PKSM Moragy 61.40 41⇓ *e*P P 08 33 15.4 +0.8
PKSM Moragy 61.40 41⇓ *i*P P 08 33 15.6 +1.0
DPC Dobruska-Polom 61.49 36 *e*P P 08 33 15.5 +0.2
DPC Dobruska-Polom 61.49 36 *e*P P 08 33 15.5 +0.2
DPC Dobruska-Polom 61.49 36⇑ *i*P P 08 33 16.0 +0.7
DPC *ex* x 08 33 23.2
DPC *ex* x 08 33 29.3
DPC Dobruska-Polom 61.49 36 *e*P P 08 33 15.5 +0.2
LLD Lille Linde 61.53 30 *e*P P 08 33 23.9 +8.6
LLD pmax pmax
comp=Z,51nm,0.8s
LLD Lille Linde 61.53 30 *i*P P 08 33 23.9 +8.6
comp=Z,51nm,0.7s
632A Uvalde 61.56 299 ⇓P P 08 33 15.9 -0.2
baz=62,SNR=8.5
732A Laxson Ranch, 61.62 298 ⇑P P 08 33 16.2 -0.3
baz=62,SNR=14
KSP Ksiaz 61.67 36 *e*P P 08 33 17.0 +0.6
JCT Junction City 61.69 300 *e*P P 08 33 16.9 -0.1
JCT pmax pmax
comp=Z,21nm,1.3s
JCT Junction City 61.69 300 *e*P P 08 33 16.9 -0.1
comp=Z,21nm,1.3s
JCT Junction City 61.69 300 ⇑P P 08 33 16.5 -0.5
baz=62,SNR=5.7
JCT Junction City 61.69 300 *e*P P 08 33 16.9 -0.1
comp=Z,21nm,1.3s
532A Rocksprings 61.74 300 ⇑P P 08 33 16.9 -0.4
baz=62,SNR=7.8
432A Menard 61.74 301 ⇑P P 08 33 16.5 -0.8
baz=62,SNR=6.6
232A Coleman 61.76 302 ⇓P P 08 33 16.5 -0.9
baz=62,SNR=5.9
332A Millersview 61.76 301 ⇑P P 08 33 16.5 -0.9
baz=62,SNR=5.3
Z32A Haskell 61.83 303 ⇑P P 08 33 17.3 -0.5
baz=62
ABTX Abilene, Hawle 61.86 303 ⇓P P 08 33 17.4 -0.7
baz=62
Y32A R-V Farms, Ver 61.91 304 ⇓P P 08 33 17.7 -0.7
baz=62
ECSD EROS Data Cent 61.98 315 *e*P P 08 33 17.8 -0.9
comp=Z,25nm,1.2s
ECSD EROS Data Cent 61.98 315 *e*P P 08 33 17.8 -0.9
comp=Z,25nm,1.2s
MORC Moravsky Berou 61.99 37 *e*P P 08 33 18.9 +0.3
MORC Moravsky Berou 61.99 37 *e*P P 08 33 18.9 +0.3
MORC Moravsky Berou 61.99 37 *e*P P 08 33 18.9 +0.3
BUD Budapest 62.08 40⇓ *e*P P 08 33 19.5 +0.3
631A Perdido Creek 62.23 299 ⇑P P 08 33 20.9 +0.3
baz=62
531A Rocksprings 62.29 300 ⇑P P 08 33 20.4 -0.6
baz=62
VYHS Vyhne 62.31 39 *e*P P 08 33 20.5 -0.3
VYHS *es*P **sP** 08 33 33.8 -1.1
231A Bronte 62.33 302 ⇑P P 08 33 20.7 -0.6
baz=62
331A San Angelo 62.33 301 ⇑P P 08 33 21.1 -0.2
baz=62
OKC Ostrava-Krasne 62.37 37⇑ *e*P P 08 33 21.8 +0.7
OKC *ex* x 08 33 35.5
Z31A Sharp Cattle R 62.38 303 ⇑P P 08 33 21.3 -0.3
baz=62
431A Sonora 62.41 300 ⇓P P 08 33 21.5 -0.4
baz=62,SNR=8.4
BGNE Belgrade 62.45 313 ⇓P P 08 33 21.5 -0.3
baz=62
X31A McDonald Ranch 62.46 305 ⇓P P 08 33 21.4 -0.6
baz=62
131A Roby 62.49 303 ⇑P P 08 33 21.8 -0.6
baz=62
W31A Holland Ranch, 62.52 305 ⇓P P 08 33 22.4 -0.1
baz=63
Y31A Rekieta Farm, 62.58 304 ⇑P P 08 33 22.7 -0.1
baz=63
T31A Randall Ranch, 62.66 308 ⇓P P 08 33 23.1 -0.2
baz=63
PSZ Piszkesteto 62.78 40 ⇑P P 08 33 24.7 +0.7
PSZ Piszkesteto 62.78 40 *e*P P 08 33 24.1 +0.1
PSZ Piszkesteto 62.78 40⇑ *i*P P 08 33 24.7 +0.7
PSZ Piszkesteto 62.78 40⇓ *e*P P 08 33 24.2 +0.2
PSZ Piszkesteto 62.78 40 *e*P P 08 33 24.1 +0.1

BSD Bornholm Skovb 62.78 31 *e*P P 08 33 32.8 +9.1
BSD pmax pmax
comp=Z,20nm,0.9s
BSD Bornholm Skovb 62.78 31 *i*P P 08 33 32.8 +9.1
comp=Z,20nm,0.9s
AGMN Agassiz Nation 62.90 321 *e*P P 08 33 23.7 -1.0
comp=Z,10nm,1.0s
AGMN Agassiz Nation 62.90 321 *e*P P 08 33 23.7 -1.0
comp=Z,10nm,1.0s
430A Baggett Ranch, 62.96 300 ⇓P P 08 33 25.0 -0.5
baz=63
130A Snyder 62.96 302 ⇓P P 08 33 25.7 +0.2
baz=63
530A J-C Ranch, Com 62.97 300 ⇓P P 08 33 25.3 -0.2
baz=63,SNR=8.7
330A Mertzon 62.98 301 ⇓P P 08 33 25.3 -0.4
baz=63,SNR=11
230A Sterling City 62.99 302 ⇓P P 08 33 25.6 -0.1
baz=63
X30A Coker Ranch, T 63.16 304 ⇓P P 08 33 26.5 -0.3
baz=63
SCO Scoresbysund 63.17 6 *i*P P 08 33 26.3 +0.3
SCO pmax pmax
comp=Z,7.0nm,0.9s
SCO Scoresbysund 63.17 6 *i*P P 08 33 26.3 +0.3
comp=Z,7.2nm,0.9s
SCO Scoresbysund 63.17 6 *i*P P 08 33 26.4 +0.4
comp=Z,7.2nm,0.9s,SNR=27
BZS Buzias 63.19 43 ⇑P P 08 33 27.7 +1.1
BZS Buzias 63.19 43⇑ *i*P P 08 33 27.7 +1.1
BZS Buzias 63.19 43⇑ *i*P P 08 33 27.7 +1.1
Z30A Sanderson Ranc 63.19 303 ⇑P P 08 33 26.8 -0.2
baz=63
IDI Anoyia 63.28 55 *e*P P 08 33 28.9 +1.4
comp=Z,103nm,1.3s
IDI Anoyia 63.28 55 *e*P P 08 33 28.9 +1.4
comp=Z,103nm,1.3s
429A Davenport Ranc 63.50 300 ⇑P P 08 33 28.9 -0.3
baz=64,SNR=7.1
OJC Ojcow 63.51 37 *e*P P 08 33 29.1 +0.4
OJC Ojcow 63.51 37 *e*P P 08 33 29.1 +0.4
ULM Lac du Bonnet 63.58 323 *e*P P 08 33 27.9 -1.2
ULM Lac du Bonnet 63.58 323 P P 08 33 27.9 -1.2
comp=Z,19nm,1.1s,baz=109,slow=6.7,SNR=19
ULM Lac du Bonnet 63.58 323 *e*P P 08 33 27.9 -1.2
229A Bryant Ranch, 63.59 302 ⇓P P 08 33 29.8 +0.1
baz=64
Z29A Hungry Hill Ra 63.67 303 ⇑P P 08 33 30.2 0.0
baz=64,SNR=6.2
329A Wagon Wheel Ra 63.67 301 ⇓P P 08 33 30.3 0.0
baz=64,SNR=5.3
Y29A Porterfield Fa 63.72 304 ⇓P P 08 33 30.6 0.0
baz=64
529A Stev Forest Ra 63.73 300 ⇑P P 08 33 31.0 +0.4
baz=64,SNR=9.8
NAO01 NORSAR Array S 63.85 24 *e*P P 08 33 31.0 +0.3
comp=Z,15nm,0.7s
NAO01 NORSAR Array S 63.85 24 *e*P P 08 33 31.0 +0.3
comp=Z,15nm,0.7s
W29A Amraillo 63.89 305 ⇑P P 08 33 31.9 +0.3
baz=64
GZR Gura Zlata 63.91 43 ⇓P P 08 33 32.0 +0.5
GZR Gura Zlata 63.91 43⇓ *i*P P 08 33 32.0 +0.5
GZR Gura Zlata 63.91 43⇓ *i*P P 08 33 32.0 +0.5
CRVS Cervenica-Dubn 64.08 39 *e*P P 08 33 33.0 +0.5
CRVS *ep*P **pP** 08 33 40.6 -2.2
CRVS *es*P **sP** 08 33 47.1 +0.4
NB2 NORSAR Subarra 64.10 24 P P 08 33 32.6 +0.2
baz=236,slow=6.9
NB2 NORSAR Subarra 64.10 24 P P 08 33 32.6 +0.2
comp=Z,45nm,1.1s,baz=236,slow=6.9
NB2 NORSAR Subarra 64.10 24 P P 08 33 32.6 +0.2
comp=Z,45nm,1.1s,SNR=4.8
NOA NORSAR Array B 64.10 24 P P 08 33 32.7 +0.3
NOA NORSAR Array B 64.10 24 P P 08 33 32.7 +0.3
comp=Z,16nm,1.0s,baz=236,slow=6.7,SNR=16
NOA LR LR 08 58 51.6
comp=Z,50nm,18.2s,baz=270,slow=34
NOA NORSAR Array B 64.10 24 P P 08 33 32.7 +0.3
428A Kincaid Ranch, 64.19 300 ⇓P P 08 33 33.9 +0.2
baz=64,SNR=14
Y28A McKinney Farm, 64.21 304 ⇓P P 08 33 34.0 +0.3
baz=64,SNR=6.3
528A Cox Ranch, San 64.22 300 ⇓P P 08 33 33.8 -0.1
baz=64
Z28A Tucker Farm, M 64.24 303 ⇓P P 08 33 34.0 0.0
baz=64,SNR=5.2
628A Black Gap, Mar 64.24 299 ⇑P P 08 33 34.1 +0.1
baz=64,SNR=12
DRGR 64.25 42 ⇑P P 08 33 34.2 +0.5
DRGR 64.25 42⇑ *i*P P 08 33 34.2 +0.5
DRGR 64.25 42⇑ *i*P P 08 33 34.2 +0.5
228A UT Block 9, Go 64.27 302 ⇓P P 08 33 34.1 0.0
baz=64
328A Wristen Ranch, 64.37 301 ⇑P P 08 33 34.4 -0.4
baz=64
SUMG Summit 64.44 360 *e*P P 08 33 35.1 +0.2
SUMG Summit 64.44 360 *e*P P 08 33 35.1 +0.2
SUMG Summit 64.44 360 *i*P P 08 33 34.8 -0.1
comp=Z,19nm,0.9s
SUMG Summit 64.44 360 *e*P P 08 33 35.1 +0.2
UZH Uzhgorod 64.52 40 *e*P P 08 33 35.1 -0.3
UZH *e* 08 33 41.9
UZH *e*PS **PnS** 08 42 32.5 -0.7
UZH *e* 08 43 22.9
TRPA Tarpa 64.53 40⇓ *i*P P 08 33 38.0 +2.6
LOT Lotru 64.59 43⇑ *i*P P 08 33 40.3 +4.2
KOLS Kolonicke sedl 64.60 39 *e*P P 08 33 36.5 +0.6
KOLS *ep*P **pP** 08 33 45.1 -1.1
MSTX Muleshoe 64.65 304 ⇑P P 08 33 36.6 0.0
baz=65
HFS Hagfors 64.65 26 LR LR 08 57 51.7
comp=Z,53nm,18.2s,baz=62,slow=32
627A Terlingua Ranc 64.67 299 ⇑P P 08 33 37.1 +0.2
baz=65,SNR=7.5
427A Hayter Ranch, 64.82 300 ⇑P P 08 33 37.9 +0.1
baz=65,SNR=12
227A Bennet, Jal 64.84 301 ⇓P P 08 33 37.8 -0.1
baz=65
TXAR Lajitas Array 64.91 299 P P 08 33 37.9 -0.5
TXAR Lajitas Array 64.91 299 P P 08 33 37.9 -0.5
comp=Z,0.7nm,0.6s,baz=100,slow=5.7,SNR=16
TXAR LR LR 09 00 04.9
comp=Z,93nm,19.4s,baz=80,slow=34
TXAR Lajitas Array 64.91 299 P P 08 33 37.9 -0.5
527A Woodward Ranch 64.93 299 ⇑P P 08 33 38.7 +0.1
baz=65
Z27A Tatum 64.93 303 ⇑P P 08 33 38.4 -0.1
baz=65,SNR=6.6
Y27A Causey 64.96 304 ⇓P P 08 33 39.0 +0.4
baz=65,SNR=9.5
X27A F and S Farms, 65.00 304 ⇓P P 08 33 39.3 +0.4
baz=65
W27A Bowe Ranch, En 65.03 305 ⇑P P 08 33 39.1 0.0
baz=65,SNR=5.9
T27A Campo 65.05 307 ⇓P P 08 33 39.3 0.0
baz=65
KWP Kalwaria Pacla 65.09 39 *e*P P 08 33 39.7 +0.6
KWP pmax pmax
comp=Z,31nm,0.9s
KWP Kalwaria Pacla 65.09 39 *e*P P 08 33 39.7 +0.6
comp=Z,31nm,0.9s
KWP Kalwaria Pacla 65.09 39 *e*P P 08 33 40.2 +1.1
KWP Kalwaria Pacla 65.09 39 *e*P P 08 33 39.7 +0.6
comp=Z,31nm,0.9s
ARR Arges 65.16 44⇑ *i*P P 08 33 40.8 +1.1
ARR Arges 65.16 44⇑ *i*P P 08 33 40.8 +1.1
OGNE Ogallala 65.20 311 *e*P P 08 33 39.9 -0.2
comp=Z,43nm,1.4s
OGNE Ogallala 65.20 311 ⇑P P 08 33 40.3 +0.2
baz=65,SNR=6.4
OGNE Ogallala 65.20 311 *e*P P 08 33 39.9 -0.2
comp=Z,43nm,1.4s
KSCO Kaye Shedlock' 65.30 309 ⇓P P 08 33 41.4 +0.6
baz=65,SNR=6.1
R27A Eads 65.31 308 ⇓P P 08 33 41.2 +0.3
baz=65,SNR=10
626A Big Bend Ranch 65.33 299 ⇑P P 08 33 41.2 +0.1
baz=65,SNR=6.3
526A Mary Lane Ranc 65.33 299 ⇓P P 08 33 41.2 0.0
baz=65,SNR=7.5
426A McDonald Obser 65.34 300 ⇓P P 08 33 41.4 +0.1
baz=65,SNR=24
P27A Ficken Ranch, 65.35 310 ⇓P P 08 33 42.0 +0.8
baz=65
326A Caldwell Ranch 65.36 301 ⇑P P 08 33 41.5 +0.2

baz=65
O27A **Beecher Island** 65.39 310 ⇓P P 08 33 41.6 +0.2
baz=65
VOIR 65.46 44 ⇑P P 08 33 44.8 +3.1
VOIR 65.46 44 ⇑*i*P P 08 33 44.8 +3.1
Y26A **Elida** 65.51 304 ⇓P P 08 33 42.8 +0.6
baz=66
126A **Clayton Basin,** 65.53 302 ⇑P P 08 33 42.6 +0.2
baz=66
N27A **Anderson Farm,** 65.55 311 ⇓P P 08 33 43.0 +0.6
baz=66,SNR=6.4
Z26A **Caprock** 65.56 303 ⇑P P 08 33 42.8 +0.2
baz=66,SNR=7.8
X26A **CR and CF Fran** 65.57 304 ⇑P P 08 33 42.6 0.0
baz=66
226B **Tecolote Peak,** 65.59 301 ⇓P P 08 33 43.1 +0.4
baz=66,SNR=10
K27A **Fluecklnger Fa** 65.70 313 ⇑P P 08 33 43.6 +0.3
baz=66,SNR=6.3
V26A **Tequesquite Ra** 65.72 306 ⇑P P 08 33 43.7 +0.1
baz=66
S26A **Kim** 65.73 308 ⇓P P 08 33 44.0 +0.4
baz=66,SNR=6.6
T26A **Comanche Natio** 65.75 307 ⇑P P 08 33 44.4 +0.6
baz=66,SNR=7.2
U26A **Atchley Ranch,** 65.76 306 ⇑P P 08 33 44.0 +0.1
baz=66
GDL2 **Guadalupe Moun** 65.77 302 *e*P P 08 33 44.7 +0.7
GDL2 **Guadalupe Moun** 65.77 302 *e*P P 08 33 44.7 +0.7
R26A **Arlington** 65.81 308 ⇑P P 08 33 44.6 +0.4
baz=66,SNR=5.3
P26A **Davis Ranch, A** 65.94 310 ⇑P P 08 33 45.5 +0.5
baz=66
LVV **L'vov** 65.96 39 *e*P P 08 33 44.7 0.0
Q26A **Hugo** 65.97 309 ⇓P P 08 33 45.3 +0.2
baz=66
O26A **Horse Wrangler** 66.03 310 ⇑P P 08 33 45.9 +0.3
baz=66
125A **Gardner Draw,** 66.06 302 ⇑P P 08 33 46.4 +0.6
baz=66,SNR=15
MLR **Muntele Rosu** 66.09 44 ⇓*i*P P 08 33 46.7 +0.9
MLR **Muntele Rosu** 66.09 44 LR LR 09 00 51.3
comp=Z,18nm,21.6s,baz=303,slow=34
MLR **Muntele Rosu** 66.09 44 ⇓*i*P P 08 33 46.7 +0.9
BUR08 **Bucovina Ar. S** 66.11 41 *e*P P 08 33 46.6 +0.8
BUR08 **Bucovina Ar. S** 66.11 41 *e*P P 08 33 46.6 +0.8
225A **Deer Hill, Car** 66.15 301 ⇓P P 08 33 46.7 +0.2
baz=66,SNR=5.3
Z25A **Roswell** 66.18 303 ⇓P P 08 33 46.9 +0.3
baz=66,SNR=8.9
325A **Bean Ranch, Si** 66.20 301 ⇑P P 08 33 46.8 0.0
baz=66,SNR=9.2
Y25A **Mesa, Roswell** 66.22 303 ⇑P P 08 33 46.8 0.0
baz=66
X25A **Clemmons Ranch** 66.27 304 ⇓P P 08 33 47.9 +0.7
baz=66,SNR=7.8
U25A **Circle Dot Ran** 66.29 306 ⇑P P 08 33 47.8 +0.4
baz=66,SNR=8.2
K26A **Motz Farm, Whi** 66.38 313 ⇓P P 08 33 48.2 +0.6
baz=66,SNR=5.6
V25A **Rancho No Teng** 66.39 306 ⇓P P 08 33 48.4 +0.4
baz=66,SNR=6.4
T25A **Trinidad** 66.40 307 ⇓P P 08 33 48.6 +0.5
baz=66,SNR=7.0
R25A **Fountain Ranch** 66.44 308 ⇑P P 08 33 49.0 +0.8
baz=66
S25A **Robets Cordova** 66.49 307 ⇓P P 08 33 49.3 +0.7
baz=66,SNR=8.2
Q25A **Bedland, Calha** 66.53 309 ⇓P P 08 33 49.5 +0.7
baz=67
MNTX **Cornudas Mount** 66.58 301 *e*P P 08 33 48.4 -0.7
comp=Z,8.6nm,1.3s
MNTX **Cornudas Mount** 66.58 301 ⇑P P 08 33 48.9 -0.2
baz=67,SNR=10
MNTX **Cornudas Mount** 66.58 301 *e*P P 08 33 48.4 -0.7
comp=Z,8.6nm,1.3s
324A **Moseley Ranch,** 66.65 301 ⇑P P 08 33 49.3 -0.4
baz=67,SNR=7.6
VRI **Vrincioaia** 66.71 43 ⇑P P 08 33 49.4 -0.2
VRI **Vrincioaia** 66.71 43 ⇑*i*P P 08 33 49.4 -0.2
VRI **Vrincioaia** 66.71 43 ⇑*i*P P 08 33 49.4 -0.2
Z24A **Sheeppen Canyo** 66.72 303 ⇓P P 08 33 50.5 +0.4
baz=67
124A **Stringfield Ra** 66.73 302 ⇓P P 08 33 50.5 +0.2
baz=67,SNR=5.5
224A **Cornudas Mount** 66.74 301 ⇓P P 08 33 50.1 -0.1
baz=67,SNR=10
SUW **Suwalki** 66.76 34 *e*P P 08 33 50.3 +0.5
SUW **Suwalki** 66.76 34 *e*P P 08 33 50.2 +0.5
comp=Z,48nm,0.3s
SUW **Suwalki** 66.76 34 *e*P P 08 33 50.2 +0.5
SUW **Suwalki** 66.76 34 *e*P P 08 33 50.2 +0.5
comp=Z,48nm,0.3s
M25A **Palm-Egli Farm** 66.79 312 ⇓P P 08 33 51.1 +0.7
baz=67
Y24A **Capitan** 66.84 303 ⇓P P 08 33 51.4 +0.5
baz=67,SNR=13
T24A **Torres, Weston** 66.90 307 ⇑P P 08 33 52.1 +0.8
baz=67
V24A **Rampart Ranch,** 66.90 305 ⇓P P 08 33 51.9 +0.6
baz=67
W24A **Lazy 6 Ranch,** 66.95 305 ⇓P P 08 33 52.2 +0.6
baz=67,SNR=15
R24A **Sanders Place,** 67.09 308 ⇓P P 08 33 53.3 +0.8
baz=67
S24A **Houchin Ranch,** 67.10 307 ⇓P P 08 33 52.9 +0.3
baz=67,SNR=5.6
Q24A **Divide** 67.23 309 ⇑P P 08 33 54.2 +0.8
baz=67
O24A **Longmont** 67.34 310 ⇓P P 08 33 54.2 +0.3
baz=67
Y23A **Lovelace Mesa,** 67.35 303 ⇑P P 08 33 54.6 +0.5
baz=67,SNR=7.3
M24A **Cheyenne** 67.37 312 ⇑P P 08 33 54.5 +0.4
baz=67,SNR=8.1
L24A **Wheatland** 67.54 312 ⇓P P 08 33 55.9 +0.7
baz=68
W23A **Werner Place,** 67.55 305 ⇓P P 08 33 55.9 +0.5
baz=68
J24A **Dixon Ranch, L** 67.57 314 ⇑P P 08 33 55.8 +0.5
baz=68
TIRR **Tirgusor** 67.58 45 ⇑P P 08 33 55.7 +0.6
TIRR **Tirgusor** 67.58 45 *e*P P 08 33 55.0 -0.1
comp=Z,23nm,1.3s
TIRR **Tirgusor** 67.58 45 ⇑*i*P P 08 33 55.7 +0.6
TIRR **Tirgusor** 67.58 45 *e*P P 08 33 55.0 -0.1
comp=Z,23nm,1.3s
V23A **Ortiz Mt. (NFS** 67.64 305 ⇓P P 08 33 57.1 +1.1
baz=68,SNR=9.1
R23A **Moffat** 67.65 308 ⇑P P 08 33 56.9 +0.8
baz=68,SNR=5.2
T23A **Casias Ranch,** 67.67 307 ⇑P P 08 33 57.0 +0.8
baz=68,SNR=6.2
ISCO **Idaho Springs** 67.70 310 *e*P P 08 33 57.2 +0.8
ISCO pmax pmax
comp=Z,18nm,1.3s
ISCO **Idaho Springs** 67.70 310 *e*P P 08 33 57.1 +0.8
comp=Z,18nm,1.3s
ISCO **Idaho Springs** 67.70 310 ⇑P P 08 33 57.0 +0.6
baz=68,SNR=12
ISCO **Idaho Springs** 67.70 310 *e*P P 08 33 57.2 +0.8
comp=Z,18nm,1.3s
U23A **El Rito** 67.72 306 ⇓P P 08 33 57.8 +1.4
baz=68,SNR=9.8
S23A **Nye Farm, Mont** 67.73 307 ⇓P P 08 33 57.9 +1.4
baz=68
Q23A **Hartsel** 67.75 309 ⇑P P 08 33 56.9 +0.2
baz=68
H24A **Dirks Ranch, A** 67.76 315 ⇓P P 08 33 56.2 -0.2
baz=68,SNR=6.7
G24A **Alzada** 67.77 316 ⇑P P 08 33 56.7 +0.2
baz=68
ANMO **Albuquerque** 67.78 304 *e*P P 08 33 58.0 +1.2
comp=Z,37nm,2.5s
ANMO *e*pP pP 08 34 10.9 +3.7
ANMO **Albuquerque** 67.78 304 *e*P P 08 33 58.0 +1.2
comp=Z,37nm,2.5s
P23A **Jefferson** 67.82 309 ⇓P P 08 33 58.2 +1.0
baz=68
F24A **Ekalaka** 67.90 316 ⇑P P 08 33 57.7 +0.5
baz=68,SNR=5.6
E24A **Baker** 67.95 317 ⇓P P 08 33 58.2 +0.7
baz=68
122A **Conniff Cattle** 68.03 302 ⇓P P 08 33 59.1 +0.7
baz=68
M23A **Laramie** 68.03 311 ⇓P P 08 33 58.9 +0.6
baz=68
Z22A **Elephant Butte** 68.05 303 ⇑P P 08 33 59.2 +0.7
baz=68,SNR=7.9
Y22A **Socorro** 68.11 303 ⇓P P 08 33 59.0 +0.1
baz=68
N23A **Red Feather La** 68.11 311 ⇓P P 08 33 59.8 +0.9
baz=68,SNR=7.6
L23A **Garrett** 68.12 312 ⇑P P 08 33 59.1 +0.2
baz=68,SNR=7.5
K23A **Bowen Ranch, D** 68.17 313 ⇓P P 08 33 59.2 +0.1
baz=68
C24A **Savage** 68.23 318 ⇑P P 08 34 00.0 +0.8
baz=68,SNR=13
A24A **Westby** 68.26 320 ⇓P P 08 33 60.0 +0.6
baz=68,SNR=9.4
DGMT **Dagmar** 68.28 319 ⇓P P 08 34 00.3 +0.8
baz=68,SNR=13
LAZ **Ladron** 68.29 304 *e*P P 08 34 00.9 +0.9
comp=Z,7.0nm,1.2s
LAZ **Ladron** 68.29 304 *e*P P 08 34 00.9 +0.9
comp=Z,7.0nm,1.2s
T22A **Edith** 68.36 307 ⇑P P 08 34 01.5 +1.0
baz=68,SNR=20
KIS **Kishinev** 68.36 43 *e*P P 08 33 58.0 -2.0
KIS **Kishinev** 68.36 43 *e*UNK P 08 33 58.0 -2.0
S22A **4UR Ranch, Cre** 68.38 307 ⇑P P 08 34 01.1 +0.4
baz=68,SNR=9.0
G23A **Biddle** 68.42 315 ⇓P P 08 34 00.9 +0.4
baz=68,SNR=5.7
O22A **Kremmling** 68.47 310 ⇑P P 08 34 01.4 +0.2
baz=68
N22A **Wattenberg Ran** 68.48 311 ⇓P P 08 34 01.8 +0.5
baz=68
P22A **Eagle** 68.55 309 ⇓P P 08 34 02.3 +0.7
baz=69
FFC **Flin Flon** 68.56 326 *i* P P 08 34 00.8 -0.2
FFC **Flin Flon** 68.56 326 *e*P P 08 34 00.6 -0.4
comp=Z,48nm,1.2s
FFC **Flin Flon** 68.56 326 P P 08 34 00.9 -0.1
comp=Z,178nm,1.3s,SNR=23
FFC **Flin Flon** 68.56 326 *e*P P 08 34 00.6 -0.4
comp=Z,48nm,1.2s
E23A **Ismay** 68.61 317 ⇓P P 08 34 02.2 +0.6
baz=69,SNR=9.6
221A **Mesquite Ranch** 68.64 301 ⇓P P 08 34 03.5 +1.3
baz=69
Z21A **St. Cloud Mine** 68.64 303 ⇓P P 08 34 03.0 +0.7
baz=69
L22A **Ellis Ranch, M** 68.65 312 ⇑P P 08 34 02.6 +0.5
baz=69,SNR=5.8
SMCO **Snowmass** 68.67 309 *e*P P 08 34 03.6 +1.1
comp=Z,13nm,1.4s
SMCO *e*pP pP 08 34 12.8 -0.1
SMCO **Snowmass** 68.67 309 *e*P P 08 34 03.6 +1.1
comp=Z,13nm,1.4s
M22A **Cedar Creek Ra** 68.67 311 ⇑P P 08 34 03.1 +0.7
baz=69
D23A **Lindsay** 68.68 318 ⇑P P 08 34 02.7 +0.7
baz=69,SNR=14
121A **Cookes Peak, D** 68.68 302 ⇓P P 08 34 03.1 +0.6
baz=69,SNR=5.8
Y21A **Point of Rocks** 68.70 303 ⇑P P 08 34 03.1 +0.4
baz=69,SNR=5.9
C23A **Lambert** 68.79 318 ⇑P P 08 34 03.5 +0.8
baz=69,SNR=17
B23A **Brockton** 68.80 319 ⇓P P 08 34 03.5 +0.7
baz=69,SNR=15
K22A **Casper** 68.81 313 ⇓P P 08 34 02.9 -0.2
baz=69
X21A **Alamocita Cree** 68.83 304 ⇑P P 08 34 04.3 +0.8
baz=69,SNR=10
A23A **Redstone** 68.83 319 ⇑P P 08 34 03.9 +1.0
baz=69
IIGN **Ignalina** 68.86 33 *e*P P 08 34 01.8 -1.1
IIGN AMB AMB 08 34 04.7
comp=Z,11nm,1.3s
T21A **Navajo Lake** 68.86 306 ⇑P P 08 34 04.5 +0.9
baz=69
ISAL **Salakas** 68.87 33 *e*P P 08 34 02.0 -1.0
ISAL AMB AMB 08 34 04.6
comp=Z,11nm,1.6s
U21A **Nageezi** 68.90 306 ⇑P P 08 34 04.6 +0.7
baz=69,SNR=20
I22A **9 Mile Ranch,** 68.97 314 ⇓P P 08 34 03.9 -0.1
baz=69,SNR=9.8
IZAR **Zarasai** 68.99 33 *e*P P 08 34 02.7 -1.0
IZAR AMB AMB 08 34 05.4
comp=Z,6.6nm,1.2s
R21A **Cimarron** 69.02 308 ⇑P P 08 34 05.5 +0.9
baz=69,SNR=6.4
NACGM **Naroch** 69.03 34 *e* P 08 34 03.0 -1.0
E22A **Miles City** 69.04 317 ⇓P P 08 34 04.6 +0.3
baz=69,SNR=8.5
Q21A **Lamborn Mesa,** 69.09 308 ⇓P P 08 34 06.0 +1.1
baz=69
F22A **Robud** 69.13 316 ⇓P P 08 34 05.3 +0.4
baz=69
S21A **Coal Bank Pass** 69.13 307 ⇓P P 08 34 05.8 +0.4
baz=69,SNR=6.3
320A **Kipp Ranch, An** 69.24 300 ⇑P P 08 34 06.6 +0.6
baz=69,SNR=8.3
C22A **Vida** 69.24 318 ⇓P P 08 34 06.1 +0.6
baz=69,SNR=23
220A **Playas Peak, P** 69.27 301 ⇑P P 08 34 06.6 +0.5
baz=69,SNR=6.3
M21A **Separation Pea** 69.27 311 ⇑P P 08 34 06.7 +0.6
baz=69
Y20A **Horse Springs,** 69.27 303 ⇑P P 08 34 07.0 +0.8
baz=69
N21A **Black Mountain** 69.28 310 ⇓P P 08 34 06.7 +0.6
baz=69,SNR=5.2
D22A **Cohagen** 69.32 317 ⇓P P 08 34 07.1 +1.1
baz=69,SNR=40
L21A **Rawlins** 69.33 312 ⇓P P 08 34 06.9 +0.5
baz=69,SNR=11
K21A **Alcova** 69.33 312 ⇓P P 08 34 06.4 0.0
baz=69,SNR=5.8
AK02 **Malin Array Si** 69.39 39 *e*P P 08 34 05.8 -0.5
AK02 **Malin Array Si** 69.39 39 *e*P P 08 34 05.8 -0.5
120A **U Bar Ranch, L** 69.40 302 ⇑P P 08 34 07.8 +0.9
baz=69
KIEV **Kiev** 69.40 39 *e*P P 08 34 05.9 -0.4
KIEV pmax pmax
comp=Z,36nm,1.5s
KIEV **Kiev** 69.40 39 *e*P P 08 34 05.9 -0.4
comp=Z,36nm,1.5s
KIEV **Kiev** 69.40 39 *e*P P 08 34 05.9 -0.4
comp=Z,36nm,1.5s
Z20A **Nine Sixteen R** 69.40 302 ⇑P P 08 34 07.8 +0.9
baz=69
AK01 **Malin Array Si** 69.40 39 *e*P P 08 34 05.7 -0.6
AK01 **Malin Array Si** 69.40 39 *e*P P 08 34 05.7 -0.6
AKASG **Malin Array Be** 69.41 39 P P 08 34 06.4 0.0
AKASG **Malin Array Be** 69.41 39 P P 08 34 06.4 0.0
AKASG **Malin Array Be** 69.41 39 P P 08 34 06.4 0.0
comp=Z,4.3nm,0.7s,baz=262,slow=5.5,SNR=21
AKASG **Malin Array Be** 69.41 39 P P 08 34 06.4 0.0
B22A **Reddig Ranch S** 69.42 319 ⇓P P 08 34 07.7 +1.1
baz=70
X20A **Quemado** 69.42 304 ⇑P P 08 34 08.2 +1.1
baz=69
W20A **Ramah** 69.47 304 ⇓P P 08 34 08.4 +1.0
baz=70,SNR=8.4
H21A **Big Horn, Sher** 69.48 315 ⇓P P 08 34 07.2 0.0
baz=70
V20A **Brimhall** 69.50 305 ⇑P P 08 34 07.8 +0.3
baz=70
A22A **Carney Farms,** 69.50 319 ⇓P P 08 34 08.0 +0.8
baz=70,SNR=14
MNK **Minsk** 69.51 35 *e*P P 08 34 06.0 -1.0
I21A **Big Trails, Te** 69.53 314 ⇑P P 08 34 07.3 -0.3
baz=70,SNR=12
MICGM **Minsk** 69.54 35 *e*P P 08 34 06.0 -1.1
LSZ **Lusaka** 69.54 110 *e*P P 08 34 09.3 +1.3
comp=Z,58nm,1.8s
LSZ **Lusaka** 69.54 110 *e*P P 08 34 09.3 +1.3
comp=Z,58nm,1.8s
J21A **Lysite** 69.58 313 ⇑P P 08 34 07.9 0.0
baz=70,SNR=9.2
U20A **Newcomb** 69.59 306 ⇓P P 08 34 09.1 +1.1
baz=70
S20A **Disappointment** 69.60 307 ⇑P P 08 34 09.3 +1.1
baz=70,SNR=5.7
MVCO **Mesa Verde** 69.65 307 *e*P P 08 34 09.8 +1.3
comp=Z,58nm,2.1s
MVCO **Mesa Verde** 69.65 307 ⇑P P 08 34 08.7 +0.2
baz=70
MVCO **Mesa Verde** 69.65 307 *e*P P 08 34 09.8 +1.3
comp=Z,58nm,2.1s
R20A **Redvale** 69.65 308 ⇓P P 08 34 09.2 +0.8
baz=70,SNR=10
Q20A **Ridgley Place,** 69.66 308 ⇓P P 08 34 09.1 +0.6
baz=70
G21A **Lodge Grass** 69.69 315 ⇑P P 08 34 08.9 +0.4
baz=70
O20A **White River Ci** 69.75 310 ⇑P P 08 34 09.7 +0.7
baz=70,SNR=8.4
PV01 **Paradox Valley** 69.79 308 *e*P P 08 34 10.3 +0.9
comp=Z,750nm,1.2s
PV01 **Paradox Valley** 69.79 308 *e*P P 08 34 10.3 +0.9
comp=Z,750nm,1.2s
E21A **Keefer Ranch,** 69.82 317 ⇓P P 08 34 10.0 +0.9
baz=70
N20A **Spence Gulch,** 69.85 310 ⇓P P 08 34 10.8 +1.2
baz=70
D21A **La Casta Ranch** 69.86 317 ⇓P P 08 34 09.8 +0.4
baz=70,SNR=6.7
M20A **Sweetwater, Wa** 69.87 311 ⇓P P 08 34 10.3 +0.6
baz=70
319A **Douglas** 69.88 300 ⇑P P 08 34 10.7 +0.8
baz=70
L20A **Wamsutter** 70.05 312 ⇓P P 08 34 10.8 0.0
baz=70,SNR=6.5
C21A **Desert Soulee** 70.06 318 ⇓P P 08 34 11.2 +0.7
baz=70,SNR=20
B21A **Ellsworth Farm** 70.11 319 ⇓P P 08 34 11.8 +1.0
baz=70,SNR=7.3
K20A **Yellowstone Ra** 70.13 312 ⇓P P 08 34 11.3 0.0
baz=70
H20A **Greybull** 70.14 314 ⇑P P 08 34 11.5 +0.3
baz=70
I20A **Worland** 70.15 314 ⇓P P 08 34 11.3 0.0
baz=70,SNR=7.3
A21A **Bergtoll Ranch** 70.16 319 ⇓P P 08 34 11.7 +0.6
baz=70,SNR=19
P19A **Cripple Cowboy** 70.26 309 ⇑P P 08 34 12.9 +0.7
baz=70
G20A **Bridger** 70.40 315 ⇓P P 08 34 12.7 -0.1
baz=70,SNR=13
Q19A **Hogan Spring (** 70.41 308 ⇑P P 08 34 13.9 +0.9
baz=70,SNR=22
O19A **Miners Draw (B** 70.44 310 ⇑P P 08 34 13.7 +0.5
baz=70
K19A **Absolon Red Bu** 70.52 313 ⇑P P 08 34 13.2 -0.5
baz=70
E20A **Meyer Farm, Mu** 70.53 316 ⇑P P 08 34 14.3 +0.8
baz=71,SNR=14
N19A **John Jarvie Ra** 70.55 310 ⇑P P 08 34 13.8 0.0
baz=71
M19A **Rock Springs** 70.60 311 ⇑P P 08 34 14.3 +0.1
baz=71
D20A **Manuel Ranch,** 70.63 317 ⇑P P 08 34 14.6 +0.5
baz=71,SNR=23
C20A **Veseth Ranch,** 70.64 318 ⇑P P 08 34 14.7 +0.6
baz=71,SNR=23
J19A **Crowheart** 70.73 313 ⇑P P 08 34 14.7 -0.2
baz=71,SNR=7.9
BR131 **Keskin Array S** 70.75 51 *e*P P 08 34 15.3 +0.2
comp=Z,5.6nm,0.8s
BR131 **Keskin Array S** 70.75 51 *e*P P 08 34 15.3 +0.2
comp=Z,5.6nm,0.8s
BRTR **Keskin Array B** 70.75 51 P P 08 34 15.7 +0.5
BRTR **Keskin Array B** 70.75 51 P P 08 34 15.7 +0.5
comp=Z,9.4nm,1.1s,baz=258,slow=4.9,SNR=32
BRTR **Keskin Array B** 70.75 51 P P 08 34 15.6 +0.5
B20A **Solberg Farm,** 70.77 318 ⇑P P 08 34 15.6 +0.7
baz=71,SNR=16
I19A **Meeteetse** 70.78 314 ⇑P P 08 34 15.4 +0.2
baz=71,SNR=9.5
A20A **Cobblestone Ra** 70.79 319 ⇓P P 08 34 15.4 +0.4
baz=71,SNR=22
L19A **Farson** 70.81 312 ⇓P P 08 34 15.8 +0.4
baz=71
H19A **Powell** 70.86 314 ⇓P P 08 34 16.0 +0.4
baz=71,SNR=16
S18A **Hurst Farm, Bl** 70.88 307 ⇑P P 08 34 16.4 +0.3
baz=71
N18A **Larsen Ranch,** 70.93 310 ⇑P P 08 34 16.7 +0.5
baz=71,SNR=12
E19A **Rath Farm, Rou** 70.97 316 ⇑P P 08 34 16.8 +0.6
baz=71,SNR=33
F19A **Roth Farm, Mol** 71.00 316 ⇓P P 08 34 16.8 +0.4
baz=71,SNR=14
BOSA **Boshof** 71.01 124 P P 08 34 16.6 -0.2
comp=Z,22nm,1.2s,baz=297,slow=7.3,SNR=7.4
BOSA LR LR 08 59 13.1
comp=Z,186nm,19.5s,baz=350,slow=31
BW06 **Boulder Array** 71.04 312 ⇑P P 08 34 17.1 +0.2
baz=71,SNR=9.9
PDAR **Pinedale Array** 71.04 312 P P 08 34 16.2 -0.6
PDAR **Pinedale Array** 71.04 312 P P 08 34 16.2 -0.6
comp=Z,6.1nm,1.2s,baz=96,slow=6.0,SNR=18
PDAR **Pinedale Array** 71.04 312 P P 08 34 16.2 -0.6
O18A **Roosevelt** 71.11 310 ⇑P P 08 34 17.8 +0.5
baz=71
RLMT **Red Lodge** 71.12 315 *e*P P 08 34 17.7 +0.4
RLMT **Red Lodge** 71.12 315 ⇑P P 08 34 18.0 +0.7
baz=71,SNR=17
RLMT **Red Lodge** 71.12 315 *e*P P 08 34 17.7 +0.4
D19A **Cripps Ranch,** 71.14 317 ⇑P P 08 34 17.8 +0.6
baz=71,SNR=19
TUC **Tucson** 71.20 301 *e*P P 08 34 18.5 +0.6
TUC *e*PP pP 08 34 31.8 +3.5
TUC pmax pmax
comp=Z,7.0nm,1.2s
TUC **Tucson** 71.20 301 *e*P P 08 34 18.5 +0.6
comp=Z,6.6nm,1.2s
TUC *e*pP pP 08 34 31.8 +3.5
TUC **Tucson** 71.20 301 *e*P P 08 34 18.5 +0.6
comp=Z,6.6nm,1.2s
P18A **Preston Nutter** 71.23 309 ⇑P P 08 34 18.5 +0.3
baz=71,SNR=12
EIL **Elat** 71.24 61 LR LR 09 07 01.1
comp=Z,122nm,18.6s,baz=272,slow=37
M18A **Lyman** 71.27 311 ⇑P P 08 34 18.9 +0.6
baz=71
L18A **Fontenelle, Gr** 71.30 311 ⇑P P 08 34 18.9 +0.5
baz=71
A19A **Klindworth Far** 71.33 319 ⇓P P 08 34 18.9 +0.7
baz=71,SNR=11
I18A **Diamond G Ranc** 71.33 313 ⇓P P 08 34 18.7 +0.1
baz=71,SNR=13
C19A **Slack Wire Ran** 71.34 318 ⇓P P 08 34 18.9 +0.5
baz=71,SNR=26
H18A **Shoshone NF, C** 71.34 314 ⇓P P 08 34 18.8 +0.1
baz=71,SNR=8.3
G18A **Lazy EL Ranch,** 71.35 315 ⇑P P 08 34 19.0 +0.3
baz=71,SNR=7.8
K18A **Toltan Ranch,** 71.38 312 ⇓P P 08 34 19.8 +0.8
baz=71,SNR=14
B19A **Brinkman Farms** 71.38 318 ⇓P P 08 34 19.2 +0.6
baz=71
SRU **San Rafael** 71.41 308 *e*P P 08 34 20.3 +1.2
SRU **San Rafael** 71.41 308 *e*P P 08 34 20.3 +1.2
SRU **San Rafael** 71.41 308 ⇓P P 08 34 19.8 +0.7
baz=71
SRU **San Rafael** 71.41 308 *e*P P 08 34 20.3 +1.2
J18A **Kendall Valley** 71.42 313 ⇑P P 08 34 19.7 +0.4
baz=71,SNR=8.2
GCMT **Greycliff** 71.49 316 *e*P P 08 34 19.7 +0.3
comp=Z,23nm,1.4s
GCMT **Greycliff** 71.49 316 *e*P P 08 34 19.7 +0.3
comp=Z,23nm,1.4s
F18A **Big Timber** 71.54 316 ⇑P P 08 34 20.6 +0.9
baz=72,SNR=21
P17A **Butcher Ranch,** 71.60 309 ⇑P P 08 34 20.9 +0.6
baz=72,SNR=5.5
O17A **Robinson Place** 71.66 310 ⇓P P 08 34 21.7 +1.0
baz=72,SNR=20
M17A **Scullys Gap (B** 71.72 311 ⇑P P 08 34 21.5 +0.4
baz=72
E18A **Harlowton** 71.76 316 ⇑P P 08 34 21.7 +0.7
baz=72,SNR=16
D18A **Linhart Farms,** 71.77 317 ⇓P P 08 34 21.7 +0.7
baz=72,SNR=18
N17A **Moffit Pass** 71.80 310 ⇑P P 08 34 21.8 +0.2
baz=72
WUAZ **Wupatki** 71.84 305 *e*P P 08 34 22.9 +1.1
comp=Z,9.7nm,1.1s
WUAZ **Wupatki** 71.84 305 *e*P P 08 34 22.9 +1.1
comp=Z,9.7nm,1.1s
X16A **Lo Mia Camp, P** 71.84 303 ⇑P P 08 34 22.9 +1.1
baz=72,SNR=6.4
LKWY **Lake** 71.85 314 *e*P P 08 34 22.7 +0.9
LKWY pmax pmax
comp=Z,35nm,1.4s

LKWY **Lake** 71.85 314 *e*P P 08 34 22.7 +0.9
comp=Z,35nm,1.4s
LKWY **Lake** 71.85 314 *e*P P 08 34 22.7 +0.9
comp=Z,35nm,1.4s
EGMT **Eagleton** 71.85 318 *e*P P 08 34 22.1 +0.6
comp=Z,34nm,1.4s
EGMT **Eagleton** 71.85 318 ⇑P P 08 34 21.9 +0.4
baz=72
EGMT **Eagleton** 71.85 318 *e*P P 08 34 22.1 +0.6
comp=Z,34nm,1.4s
LOHW **Long Hollow** 71.89 313 *e*P P 08 34 22.3 +0.3
LOHW **Long Hollow** 71.89 313 *e*P P 08 34 22.3 +0.3
I17A **Pilgrim Ck.** 71.90 313 ⇑P P 08 34 22.9 +0.9
baz=72,SNR=22
B18A **Beardsley Farm** 71.92 318 ⇑P P 08 34 22.3 +0.4
baz=72
L17A **Cokeville** 71.94 312 ⇓P P 08 34 22.4 +0.1
baz=72,SNR=8.2
J17A **Brown Place, J** 71.94 313 ⇓P P 08 34 22.9 +0.6
baz=72,SNR=12
TMUT **Trail Mountain** 71.95 309 *e*P P 08 34 23.3 +0.8
TMUT **Trail Mountain** 71.95 309 *e*P P 08 34 23.3 +0.8
H17A **Grant Village** 71.96 314 ⇓P P 08 34 23.9 +1.4
baz=72
SNOW **Snow King Moun** 71.98 313 *e*P P 08 34 23.1 +0.5
SNOW **Snow King Moun** 71.98 313 *e*P P 08 34 23.1 +0.5
MOOW **Moose Ponds** 72.01 313 *e*P P 08 34 22.8 +0.1
MOOW **Moose Ponds** 72.01 313 *e*P P 08 34 22.8 +0.1
K17A **Gardner Place,** 72.03 312 ⇑P P 08 34 23.2 +0.4
baz=72,SNR=7.1
A18A **Metzger Ranch,** 72.04 319 ⇓P P 08 34 22.6 +0.1
baz=72,SNR=8.1
TPAW **Teton Pass** 72.13 313 *e*P P 08 34 23.9 +0.4
comp=Z,21nm,1.1s
TPAW **Teton Pass** 72.13 313 *e*P P 08 34 23.9 +0.4
comp=Z,21nm,1.1s
YFT **Old Faithful** 72.15 314 *e*P P 08 34 25.2 +1.7
comp=Z,34nm,1.1s
YFT **Old Faithful** 72.15 314 *e*P P 08 34 25.2 +1.7
comp=Z,34nm,1.1s
IMW **Indian Meadow** 72.16 313 *e*P P 08 34 23.8 +0.1
comp=Z,28nm,1.2s
IMW **Indian Meadow** 72.16 313 *e*P P 08 34 23.8 +0.1
comp=Z,28nm,1.2s
AHID **Auburn Hatcher** 72.17 312 *e*P P 08 34 23.7 +0.1
comp=Z,41nm,1.6s
AHID **Auburn Hatcher** 72.17 312 *e*P P 08 34 23.7 +0.1
comp=Z,41nm,1.6s
G17A **Pierce Place,** 72.18 315 ⇓P P 08 34 24.4 +0.8
baz=72
F17A **Fitzpatrick Pl** 72.19 316 ⇑P P 08 34 24.3 +0.6
baz=72,SNR=14
JLU **Jordanelle** 72.24 310 *e*P P 08 34 24.9 +0.7
JLU **Jordanelle** 72.24 310 *e*P P 08 34 24.9 +0.7
O16A **Springville** 72.25 310 ⇑P P 08 34 24.8 +0.7
baz=72,SNR=10
YMR **Madison River** 72.26 314 *e*P P 08 34 24.9 +0.7
comp=Z,71nm,1.1s
YMR **Madison River** 72.26 314 *e*P P 08 34 24.9 +0.7
comp=Z,71nm,1.1s
DCID1 **Drake Creek** 72.31 313 *e*P P 08 34 24.7 +0.3
DCID1 **Drake Creek** 72.31 313 *e*P P 08 34 24.7 +0.3
P16A **Fountain Green** 72.32 309 ⇑P P 08 34 25.3 +0.7
baz=72
MPU **Maple Canyon** 72.33 309 *e*P P 08 34 26.4 +1.7
MPU *e*pP PcP 08 34 39.5 -3.1
MPU **Maple Canyon** 72.33 309 *e*P P 08 34 26.4 +1.7
L16A **Fish Haven** 72.34 311 ⇓P P 08 34 24.9 +0.2
baz=72,SNR=18
D17A **Six Diamond Ra** 72.36 317 ⇑P P 08 34 24.8 +0.1
baz=72,SNR=10
RRI2 **Red Ridge** 72.38 313 *e*P P 08 34 25.5 +0.5
comp=Z,44nm,1.4s
RRI2 **Red Ridge** 72.38 313 *e*P P 08 34 25.5 +0.5
comp=Z,44nm,1.4s
E17A **Martinsdale** 72.39 316 ⇓P P 08 34 25.2 +0.3
baz=72,SNR=26
HWUT **Hardware Ranch** 72.41 311 *e*P P 08 34 25.2 +0.1
comp=Z,21nm,0.9s
HWUT **Hardware Ranch** 72.41 311 *e*P P 08 34 25.2 +0.1
comp=Z,21nm,0.9s
M16A **Huntsville** 72.43 311 ⇑P P 08 34 25.6 +0.3
baz=72,SNR=8.6
H16A **Russell Place,** 72.47 314 ⇑P P 08 34 26.4 +1.0
baz=72,SNR=17
C17A **Wharram Farm,** 72.47 317 ⇑P P 08 34 25.1 -0.1
baz=72,SNR=8.0
K16A **Soda Springs** 72.53 312 ⇑P P 08 34 26.7 +0.9
baz=72,SNR=17
I16A **Newdale** 72.56 313 ⇓P P 08 34 26.7 +0.8
baz=73,SNR=9.7
B17A **L&G Farms, Che** 72.58 318 ⇓P P 08 34 26.1 +0.3
baz=73,SNR=10
J16A **Bone** 72.59 313 ⇑P P 08 34 26.8 +0.6
baz=73,SNR=7.5
A17A **Triple J Farms** 72.61 319 ⇑P P 08 34 26.1 +0.1
baz=73,SNR=8.7
QLMT **Earthquake Lak** 72.61 314 *e*P P 08 34 28.1 +1.8
QLMT **Earthquake Lak** 72.61 314 *e*P P 08 34 28.1 +1.8
U15A **North Rim** 72.63 306 ⇓P P 08 34 27.4 +0.8
baz=73
MSU **Marysvale** 72.65 308 *e*P P 08 34 28.4 +1.8
MSU *e**PP PcP 08 34 42.0 -2.0
MSU **Marysvale** 72.65 308 *e*P P 08 34 28.4 +1.8
MSU *e*pP PcP 08 34 42.0 -2.0
MSU **Marysvale** 72.65 308 *e*P P 08 34 28.4 +1.8
MVU **Marysvale** 72.68 308 *e*P P 08 34 27.5 +0.7
comp=Z,17nm,1.5s
MVU **Marysvale** 72.68 308 *e*P P 08 34 27.5 +0.7
comp=Z,17nm,1.5s
P15A **Leamington** 72.80 309 ⇑P P 08 34 28.2 +0.9
baz=73
BOZ **Bozeman (W)** 72.84 315 *e*P P 08 34 27.5 0.0
BOZ pmax pmax
comp=Z,8.0nm,1.0s
BOZ **Bozeman (W)** 72.84 315 *e*P P 08 34 27.5 0.0
comp=Z,8.1nm,1.0s
BOZ **Bozeman (W)** 72.84 315 ⇓P P 08 34 27.7 +0.2
baz=73,SNR=16
BOZ **Bozeman (W)** 72.84 315 *e*P P 08 34 27.5 0.0
comp=Z,8.1nm,1.0s
F16A **Kennard Place,** 72.85 315 ⇓P P 08 34 28.0 +0.5
baz=73,SNR=7.1
214A **Organ Pipe Nat** 72.91 301 ⇓P P 08 34 29.1 +1.0
baz=73
G16A **Moss Hill, Enn** 72.92 315 ⇓P P 08 34 28.9 +0.9
baz=73,SNR=19
D16A **Dana Ranch, Ca** 72.93 317 ⇑P P 08 34 28.7 +0.7
baz=73,SNR=17
ASF **Jabal al Asfar** 72.96 59 LR LR 09 10 02.0
comp=Z,44nm,20.5s,baz=200,slow=39
E16A **East Helena** 72.96 316 ⇑P P 08 34 28.5 +0.3
baz=73,SNR=31
L15A **Malad City** 73.05 311 ⇓P P 08 34 29.0 +0.1
baz=73,SNR=19
Z14A **Wintersburg** 73.06 302 ⇑P P 08 34 29.8 +1.0
baz=73
HRY **Holter Researc** 73.09 316 *e*P P 08 34 29.4 +0.4
HRY **Holter Researc** 73.09 316 *e*P P 08 34 29.4 +0.4
C16A **Fuhringer Ranc** 73.15 317 ⇑P P 08 34 29.5 +0.2
baz=73,SNR=17
J15A **Blackfoot** 73.20 313 ⇑P P 08 34 30.2 +0.6
baz=73,SNR=11
B16A **M & M Farms, S** 73.20 318 ⇑P P 08 34 29.5 0.0
baz=73
K15A **Arbon** 73.21 312 ⇓P P 08 34 30.2 +0.4
baz=73
DUG **Dugway** 73.25 309 ⇑P P 08 34 30.8 +0.8
baz=73,SNR=13
I15A **Monteview** 73.28 313 ⇓P P 08 34 31.0 +0.8
baz=73,SNR=15
HVU **Hansel Valley** 73.32 311 *e*P P 08 34 31.8 +1.3
HVU *e**PP PcP 08 34 44.7 -2.0
HVU pmax pmax
comp=Z,16nm,1.2s
HVU **Hansel Valley** 73.32 311 *e*P P 08 34 31.8 +1.3
comp=Z,16nm,1.2s
HVU *e*pP PcP 08 34 44.7 -2.0
HVU **Hansel Valley** 73.32 311 *e*P P 08 34 31.8 +1.3
comp=Z,16nm,1.2s
ARCES **ARCESS Array B** 73.37 19 P P 08 34 29.9 -0.1
ARCES **ARCESS Array B** 73.37 19 P P 08 34 29.9 -0.1
comp=Z,7.4nm,0.9s,baz=251,slow=3.7,SNR=10.0
ARCES **ARCESS Array B** 73.37 19 P P 08 34 29.9 -0.1
G15A **Dillon** 73.39 315 ⇓P P 08 34 31.6 +0.8
baz=73,SNR=31
LRM **Limekiln Ridge** 73.43 315 *e*P P 08 34 31.9 +0.8
LRM **Limekiln Ridge** 73.43 315 *e*P P 08 34 31.9 +0.8
H15A **Lima** 73.45 314 ⇓P P 08 34 32.0 +0.8
baz=74,SNR=7.9
F15A **Butte** 73.46 315 ⇑P P 08 34 31.8 +0.5
baz=74,SNR=14
DLMT **Dillon** 73.48 315 *e*P P 08 34 32.4 +1.1
comp=Z,34nm,1.1s
DLMT **Dillon** 73.48 315 *e*P P 08 34 32.4 +1.1
comp=Z,34nm,1.1s
CCUT **Cedar City** 73.54 307 *e*P P 08 34 33.0 +1.1
CCUT **Cedar City** 73.54 307 *e*P P 08 34 33.0 +1.1
D15A **Lincoln** 73.59 317 ⇓P P 08 34 32.4 +0.5
baz=74,SNR=17
ARUT **Antelope Range** 73.61 307 *e*P P 08 34 33.3 +1.0
ARUT pmax pmax
comp=Z,7.0nm,0.4s
ARUT **Antelope Range** 73.61 307 *e*P P 08 34 33.2 +1.0
comp=Z,6.5nm,0.4s
ARUT **Antelope Range** 73.61 307 *e*P P 08 34 33.2 +1.0
comp=Z,6.5nm,0.4s
MCMT **McKenzie Canyo** 73.61 314 *e*P P 08 34 32.8 +0.6
comp=Z,4.9nm,1.2s
MCMT **McKenzie Canyo** 73.61 314 *e*P P 08 34 32.8 +0.6
comp=Z,4.9nm,1.2s
E15A **Deer Lodge** 73.62 316 ⇓P P 08 34 32.3 +0.2
baz=74,SNR=7.4
K14A **Jones Ranch, D** 73.67 312 ⇓P P 08 34 32.4 -0.1
baz=74,SNR=7.6
L14A **Malta** 73.69 311 ⇑P P 08 34 32.9 +0.3
baz=74
C15A **Salmond Ranch,** 73.73 317 ⇑P P 08 34 33.1 +0.4
baz=74,SNR=26
B15A **Bradely Ranch,** 73.75 318 ⇓P P 08 34 32.9 +0.1
baz=74,SNR=16
RES **Resolute Bay** 73.84 347 *e*P P 08 34 32.5 -0.1
comp=Z,27nm,1.2s
RES **Resolute Bay** 73.84 347 *e*P P 08 34 32.5 -0.1
comp=Z,27nm,1.2s
A15A **Johnson Ranch,** 73.94 319 ⇓P P 08 34 34.1 +0.2
baz=74,SNR=13
H14A **Leadore** 73.97 314 ⇑P P 08 34 35.0 +0.8
baz=74,SNR=7.0
I14A **Mackay** 73.97 313 ⇑P P 08 34 34.7 +0.4
baz=74,SNR=8.7
J14A **Carey** 73.98 313 ⇓P P 08 34 34.9 +0.7
baz=74
ANN **Anapa** 74.01 46 *e*P P 08 34 32.2 -2.0
ANN *e* 08 34 47.5
ANN *e* 08 37 13.0
ANN *e*S S 08 44 05.0 +0.6
ANN pmax pmax
comp=Z,56nm,1.6s
F14A **Wisdom** 74.06 315 ⇑P P 08 34 35.4 +0.7
baz=74,SNR=6.1
PDMCI **Parker Dam,Lak** 74.07 303 ⇓P P 08 34 35.5 +0.7
baz=74
CHMT **Chamberlain Mo** 74.08 316 *e*P P 08 34 35.1 +0.2
CHMT **Chamberlain Mo** 74.08 316 *e*P P 08 34 35.1 +0.2
G14A **Jackson** 74.08 315 ⇓P P 08 34 35.2 +0.2
baz=74,SNR=5.6
E14A **Clinton** 74.20 316 ⇑P P 08 34 36.1 +0.6
baz=74
D14A **Greenough** 74.27 317 ⇑P P 08 34 35.9 0.0
baz=74,SNR=16
SLMT **Seeley Lake** 74.27 317 *e*P P 08 34 36.0 +0.1
SLMT **Seeley Lake** 74.27 317 *e*P P 08 34 36.0 +0.1
Y12C **Blythe** 74.38 303 ⇓P P 08 34 37.4 +0.8
baz=74
MALT **Malatya** 74.38 53 *e*P P 08 34 37.0 +0.3
MALT pmax pmax
comp=Z,20nm,1.5s
MALT **Malatya** 74.38 53 *e*P P 08 34 37.0 +0.3
comp=Z,20nm,1.5s
MALT **Malatya** 74.38 53 *e*P P 08 34 37.0 +0.3
comp=Z,20nm,1.5s
A14A **Double T Ranch** 74.39 319 ⇑P P 08 34 36.5 -0.1
baz=74,SNR=7.1
I13A **Whitehorse Cree** 74.45 313 ⇑P P 08 34 37.6 +0.5
baz=74,SNR=19
J13A **Cove Ranch, Pi** 74.46 313 ⇓P P 08 34 37.5 +0.4
baz=74,SNR=11
C14A **Swan Lake** 74.49 317 ⇑P P 08 34 37.4 +0.3
baz=74,SNR=30
MSO **Missoula** 74.54 316 *e*P P 08 34 37.8 +0.3
comp=Z,8.9nm,1.4s
MSO **Missoula** 74.54 316 ⇑P P 08 34 37.7 +0.3
baz=75,SNR=5.7
MSO **Missoula** 74.54 316 *e*P P 08 34 37.8 +0.3
comp=Z,8.9nm,1.4s
OBN **Obninsk** 74.59 35⇑ *e*P P 08 34 37.8 +0.5
OBN *e* 08 34 45.9
OBN *e*S S 08 44 12.3 +1.8
OBN pmax pmax
comp=Z,55nm,1.7s
H13A **Challis** 74.59 314 ⇑P P 08 34 38.4 +0.6
baz=75,SNR=14
G13A **Cobalt** 74.61 314 ⇑P P 08 34 38.5 +0.6
baz=75,SNR=28
SWMT **Swartz Lake** 74.64 317 *e*P P 08 34 37.6 -0.4
SWMT **Swartz Lake** 74.64 317 *e*P P 08 34 37.6 -0.4
HLID **Hailey** 74.65 313 *e*P P 08 34 39.0 +0.8
HLID **Hailey** 74.65 313 ⇑P P 08 34 38.7 +0.5
baz=75,SNR=19
HLID **Hailey** 74.65 313 *e*P P 08 34 39.0 +0.8
YBMT **Yellow Bay** 74.68 317 *e*P P 08 34 38.2 0.0
comp=Z,16nm,1.2s
YBMT **Yellow Bay** 74.68 317 *e*P P 08 34 38.2 0.0
comp=Z,16nm,1.2s
E13A **Victor** 74.68 316 ⇓P P 08 34 38.7 +0.4
baz=75,SNR=23
WALA **Waterton Lakes** 74.72 319 *e*P P 08 34 38.0 -0.4
comp=Z,1.1nm,1.3s
WALA **Waterton Lakes** 74.72 319 *e*P P 08 34 38.0 -0.4
comp=Z,1.1nm,1.3s
F13A **Darby** 74.73 315 ⇓P P 08 34 39.1 +0.5
baz=75,SNR=20
JTMT **Jette** 74.85 317 *e*P P 08 34 39.3 +0.1
JTMT *e*PcP PcP 08 34 52.8 -0.3
JTMT **Jette** 74.85 317 *e*P P 08 34 39.3 +0.1
IRM **Iron Mountain** 74.90 303 ⇓P P 08 34 40.7 +1.0
baz=75
D13A **Huson** 74.92 317 ⇓P P 08 34 39.9 +0.3
baz=75,SNR=11
BLMT **Blacktail Moun** 74.93 317 *e*P P 08 34 39.3 -0.5
BLMT *e*PcP PcP 08 34 53.3 -0.2
BLMT **Blacktail Moun** 74.93 317 *e*P P 08 34 39.3 -0.5
H12A **Diamond D Ranc** 75.02 314 ⇓P P 08 34 41.1 +0.8
baz=75,SNR=25
B13A **Whitefish** 75.03 318 ⇑P P 08 34 40.9 +0.7
baz=75,SNR=18
A13A **Flathead Natio** 75.04 318 ⇑P P 08 34 40.8 +0.6
baz=75
C13A **Hot Springs** 75.04 317 ⇓P P 08 34 40.5 +0.2
baz=75,SNR=19
ALE **Alert** 75.11 357 P P 08 34 39.9 -0.1
comp=Z,106nm,1.4s,SNR=13
ELK **Elko** 75.12 310 *e*P P 08 34 41.9 +0.8
ELK **Elko** 75.12 310 *e*P P 08 34 41.9 +0.8
BC3 **Big Chuckawall** 75.15 303 ⇑P P 08 34 41.7 +0.4
baz=75
I12A **Atlas** 75.18 313 ⇑P P 08 34 42.0 +0.7
baz=75,SNR=15
BSMT **Bassoo Peak** 75.20 317 *e*P P 08 34 41.5 +0.2
BSMT **Bassoo Peak** 75.20 317 *e*P P 08 34 41.5 +0.2
MOS **Moscow** 75.27 35 *e*P P 08 34 40.5 -0.7
MOS *e* 08 34 53.6
MOS pmax pmax
comp=Z,79nm,1.4s
MOS pmax pmax
comp=Z,200nm,1.7s
R11A **Troy Canyon, C** 75.32 307 ⇑P P 08 34 42.7 +0.5
baz=75
GMRC **Granite Mounta** 75.33 304 ⇑P P 08 34 42.9 +0.7
baz=75
F12A **Elk City** 75.38 315 ⇓P P 08 34 42.8 +0.5
baz=75,SNR=19
G12A **Big Creek, Yel** 75.39 314 ⇑P P 08 34 43.0 +0.5
baz=75
D12A **Red Ives Fores** 75.53 316 ⇑P P 08 34 42.9 -0.2
baz=76,SNR=9.8
KMBO **Kilima Mbogo** 75.55 93 P P 08 34 44.9 +0.9
KMBO **Kilima Mbogo** 75.55 93 P P 08 34 44.9 +0.9
comp=Z,0.9nm,0.2s,baz=46,slow=23,SNR=3.9
KMBO **Kilima Mbogo** 75.55 93 P P 08 34 44.9 +0.9
SOC **Sochi** 75.57 47 *e*P P 08 34 43.7 +0.4
SOC *e*S S 08 44 25.7 +3.7
SOC *e*SS SS 08 49 21.5 +8.2
SOC pmax pmax
comp=Z,26nm,0.8s
C12B **Naegeli Ranch,** 75.65 317 ⇑P P 08 34 44.1 +0.4
baz=76
MFID **Camas Ranch** 75.67 313 *e*P P 08 34 44.5 +0.5
comp=Z,14nm,1.5s
MFID *e*PcP PcP 08 34 57.6 +0.9
MFID **Camas Ranch** 75.67 313 ⇑P P 08 34 44.7 +0.7
baz=76,SNR=5.4
MFID **Camas Ranch** 75.67 313 *e*P P 08 34 44.5 +0.5
comp=Z,14nm,1.5s
VSR **Storozhevoye** 75.70 39 *e*P P 08 34 44.1 +0.3
VSR pmax pmax
comp=Z,10.0nm,1.0s
VSR pmax pmax
comp=N,6.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,1.2s
VORD **Divnogorie** 75.76 40 *e*P P 08 34 44.6 +0.5
VORD pmax pmax
comp=Z,30nm,1.6s
VORD pmax pmax
comp=N,20nm,0.9s
VORD pmax pmax
comp=E,20nm,0.9s
B12A **Libby** 75.78 318 ⇑P P 08 34 45.3 +0.9
baz=76,SNR=6.6
SHOC **Shoshone** 75.84 305 ⇓P P 08 34 45.8 +0.8
baz=76
A12A **Yaak River Ran** 75.85 318 ⇑P P 08 34 45.7 +0.9
baz=76,SNR=9.6
YKA **Yellowknife Ar** 76.70 332 P P 08 34 48.2 -1.1
YKA **Yellowknife Ar** 76.70 332 P P 08 34 48.2 -1.1
comp=E,7.6nm,1.0s,baz=95,slow=5.5,SNR=64
YKA **Yellowknife Ar** 76.70 332 P P 08 34 48.2 -1.1
YKW3 **Yellowknife Ar** 76.72 332 *e*P P 08 34 48.2 -1.2
comp=E,0.4nm,1.2s
YKW3 *e*PcP PcP 08 35 02.1 +1.5
YKW3 **Yellowknife Ar** 76.72 332 *e*P P 08 34 48.2 -1.2
comp=E,0.4nm,1.2s
BMO **Blue Mountains** 76.78 314 *e*P P 08 34 49.9 -0.4
BMO pmax pmax
comp=Z,18nm,1.5s
BMO **Blue Mountains** 76.78 314 *e*P P 08 34 49.9 -0.4
comp=Z,18nm,1.5s
BMO **Blue Mountains** 76.78 314 *e*P P 08 34 49.9 -0.4
comp=Z,18nm,1.5s
NEW **Newport** 76.79 318 *e*P P 08 34 49.7 -0.5
NEW **Newport** 76.79 318 ⇓P P 08 34 50.3 +0.1
baz=77,SNR=11
NEW **Newport** 76.79 318 *e*P P 08 34 49.7 -0.5
MPMC **Manual Prospec** 76.82 305 ⇑P P 08 34 51.7 +0.8
baz=77
KLMR **Klimovskoe** 76.90 29 *e*P P 08 34 48.5 -1.9
KLMR pmax pmax
comp=Z,75nm,1.7s
VRHR **Novokhopersk** 77.23 39 *e*P P 08 34 53.5 +1.0
VRHR pmax pmax
comp=Z,30nm,1.4s
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,20nm,0.6s
EDW2 **Edwards Air Fo** 77.25 304 ⇑P P 08 34 53.9 +0.9
baz=77
NVAR **Mina Array Bea** 77.45 308 P P 08 34 54.5 +0.1
NVAR **Mina Array Bea** 77.45 308 P P 08 34 54.5 +0.1
comp=E,1.4nm,0.7s,baz=94,slow=4.1,SNR=11
NVAR **Mina Array Bea** 77.45 308 P P 08 34 54.5 +0.1
MTUM **Tungsten Hills** 77.67 306 *e*P P 08 34 53.0 -2.6
KIV **Kislovodsk** 77.73 47 *e*P P 08 34 56.5 +0.9
KIV pmax pmax
comp=Z,25nm,1.1s
KIV **Kislovodsk** 77.73 47 *e*P P 08 34 56.6 +1.0
comp=Z,36nm,1.3s
KIV **Kislovodsk** 77.73 47 *e*P P 08 34 56.6 +1.0
comp=Z,36nm,1.3s
KBZ **Khabaz** 77.88 47 P P 08 34 57.8 +1.5
KBZ **Khabaz** 77.88 47 P P 08 34 57.8 +1.5
KBZ **Khabaz** 77.88 47 P P 08 34 57.8 +1.5
comp=Z,7.6nm,0.9s,baz=270,slow=2.9,SNR=13
KBZ **Khabaz** 77.88 47 P P 08 34 57.8 +1.5
RCTC **Rector, Farmer** 78.23 305 ⇑P P 08 34 59.4 +1.0
baz=78
HAWA **Hanford** 78.37 316 *e*P P 08 35 00.2 +1.2
HAWA **Hanford** 78.37 316 *e*P P 08 35 00.2 +1.2
OHCM **Honcut** 79.92 308 *e*P P 08 35 08.4 +0.9
OHCM **Honcut** 79.92 308 *e*P P 08 35 08.4 +0.9
YBH **Yreka Blue Hor** 80.75 311 LR LR 09 07 14.4
comp=Z,145nm,20.0s,baz=161,slow=33
VNA1 **Neumayer--Stat** 81.08 170 *e*P P 08 35 15.5 +2.4
VNA3 **Neumayer Olymp** 81.38 171 *e*P P 08 35 15.7 +1.0
VNA3 **Neumayer Olymp** 81.38 171 *e*PcP PcP 08 35 23.4 +2.7
VNA2 **Neumayer--Watz** 81.47 170 *e*P P 08 35 16.1 +1.0
baz=354,slow=6.3
VNA2 **Neumayer--Watz** 81.47 170 *e*PcP PcP 08 35 23.8 +2.7
baz=354,slow=6.3
KHMM **Horse Mountain** 81.56 310 *e*P P 08 35 17.1 +0.5
comp=Z,27nm,1.1s
KHMM **Horse Mountain** 81.56 310 *e*P P 08 35 17.1 +0.5
comp=Z,27nm,1.1s
SNAA **Sanae** 82.89 169 *e*P P 08 35 23.1 +0.4
SNAA **Sanae** 82.89 169 *e*PcP PcP 08 35 30.7 +3.3
SNAA **Sanae** 82.89 169 *e*P P 08 35 22.7 0.0
comp=Z,24nm,1.3s
SNAA **Sanae** 82.89 169 *e*P P 08 35 22.7 0.0
comp=Z,24nm,1.3s
BBB **Bella Bella** 83.76 322 LR LR 09 07 19.3
comp=Z,60nm,20.4s,baz=73,slow=32
INK **Inuvik** 84.60 338 LR LR 09 11 39.6
comp=Z,103nm,19.7s,baz=128,slow=35
SOKR **Solikamsk** 85.52 31*d* *i*P P 08 35 37.8 +1.6
SOKR pmax pmax
comp=Z,20nm,0.8s
ARU **Arti** 86.94 34*d* *i*P P 08 35 44.4 +1.1
ARU 08 39 01.6
ARU S S 08 46 11.0 -8.4
ARU pmax pmax
comp=Z,29nm,1.7s
ARU **Arti** 86.94 34 *e*P P 08 35 44.0 +0.7
comp=Z,22nm,1.1s
ARU **Arti** 86.94 34 *e*P P 08 35 44.0 +0.7
comp=Z,22nm,1.1s
SVE **Sverdlovsk** 87.99 33⇓ *e*P P 08 35 49.9 +1.5
SVE pmax pmax
comp=Z,31nm,1.5s
ABKAR **Akbulak array** 89.08 40 P P 08 35 54.8 +1.1
comp=Z,4.0nm,0.7s
ABKAR **Akbulak array** 89.08 40 P P 08 35 54.8 +1.1
comp=Z,4.0nm,0.7s
ILAR **Eielson Array** 90.65 336 P P 08 36 00.7 -0.1
ILAR **Eielson Array** 90.65 336 P P 08 36 00.7 -0.1
comp=Z,1.6nm,0.9s,baz=57,slow=3.6,SNR=17
ILAR **Eielson Array** 90.65 336 P P 08 36 00.6 -0.1
BRVK **Borovoye** 94.36 35⇑ *e*P P 08 36 18.8 +0.7
BRVK pmax pmax
comp=Z,14nm,2.5s
BRVK MLR MLR
comp=Z,78nm,19.0s
KURK **Kurchatov** 100.03 35 *i* P Pdif 08 36 44.1 +0.4
KURK pmax pmax
comp=Z,7.0nm,2.4s
AAK **Ala-Archa** 100.67 44 *i* P Pdif 08 36 47.1 +0.1
ZALV **Zalesovo Beam** 101.80 31 PP PP 08 41 01.2 -0.7
ZALV **Zalesovo Beam** 101.80 31 PP PP 08 41 01.2 -0.7
comp=Z,0.3nm,0.3s,baz=305,slow=10,SNR=4.4
KSH **Kashi** 102.86 46 P Pdif 08 36 57.1 +0.3
KSH pP 08 37 01.9
KSH PP PP 08 41 12.9 +2.2
KSH SKS 08 47 34.1
KSH S Sdif 08 48 37.0 -3.6
KSH SS SS 08 55 48.8 -0.5
KSH pmax pmax
comp=Z,2.0nm,0.5s
KSH pmax pmax
comp=Z,140nm,4.3s
KSH LR LR
comp=N,450nm,6.6s
KSH LR LR
comp=E,230nm,7.5s
KSH LR LR
comp=Z,250nm,7.0s
MKAR **Makanchi Array** 103.98 38 PP PP 08 41 19.7 +1.1
MKAR **Makanchi Array** 103.98 38 PP PP 08 41 19.7 +1.1
comp=Z,0.2nm,0.7s,baz=284,slow=4.9,SNR=3.8

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time	Res
TBI	Tubuai	112.84	248	eLR	LR	09 15 20.7	
	comp=Z,96nm,27.2s						
PPT2	Papeete2	112.92	254	eLR	LR	09 15 20.7	
	comp=Z,64nm,22.8s						
SONM	Songino Array	116.05	26	PKP	PKPdf	08 41 40.6	-1.1
SONM				PP	PP	08 42 43.7	-1.9
SONM	Songino Array	116.05	26	PKP	PKPdf	08 41 40.6	-1.1
	comp=Z,0.4nm,1.0s,baz=336,slow=3.3,SNR=4.8						
SONM				PP	PP	08 42 43.7	-1.9
	comp=Z,0.6nm,0.9s,baz=299,slow=7.5,SNR=4.1						
SONM	Songino Array	116.05	26	PKIKP	PKPdf	08 41 40.6	-1.1
SONM	Songino Array	116.05	26	PP	PP	08 42 43.7	-1.9
LZH	Lanzhou	123.28	37	ePKP	PKPdf	08 41 53.4	-2.6
LZH				sPKP		08 42 03.6	
HHC	Hu-ho-hao-te	123.82	28	ePKP	PKPdf	08 41 55.7	-1.1
HHC				PP	PP	08 43 42.3	+3.3
HHC				PKS	PKSdf	08 45 31.1	-2.4
HHC				SKS	SKSdf	08 49 06.2	-0.4
HHC				SKKS	SKKSac	08 50 34.2	-2.3
HHC				SS	SS	09 00 27.0	+1.8
HHC				AMB	AMB		
	comp=Z,190nm,8.8s						
HHC				LR	LR		
	comp=N,230nm,19.9s						
HHC				LR	LR		
	comp=E,180nm,19.2s						
HHC				LR	LR		
	comp=Z,200nm,19.4s						
CN2	Changchun	126.22	15	ePKP	PKPdf	08 42 00.2	-1.0
BJI	Beijing	126.49	25	PKP	PKPdf	08 42 01.5	-0.3
CD2	Chengdu	126.65	42	PKP	PKPdf	08 42 00.7	-1.7
CD2				PP	PP	08 44 00.2	+1.9
CD2				PKS	PKSdf	08 45 36.8	-2.4
CD2				SKS	SKSdf	08 49 10.8	-1.4
CD2				SKKS	SKKSac	08 50 51.9	-2.9
CD2				SS	SS	09 01 02.3	+0.6
CD2				AMB	AMB		
	comp=Z,120nm,5.8s						
KMI	Kunming	129.49	48	PKP	PKPdf	08 42 08.0	-0.2
KMI				PP	PP	08 44 20.9	+3.4
KMI				AMB	AMB		
	comp=Z,74nm,3.5s						
KMI				LR	LR		
	comp=Z,94nm,19.6s						
CMAR	Chiang Mai Arr	129.99	58	PKP	PKPdf	08 42 08.8	-0.3
CMAR	Chiang Mai Arr	129.99	58	PKP	PKPdf	08 42 08.8	-0.3
	comp=Z,1.1nm,0.6s,baz=280,slow=3.5,SNR=7.6						
CMAR	Chiang Mai Arr	129.99	58	PKIKP	PKPdf	08 42 08.8	-0.3
GYA	Guiyang	131.46	44	Pdif	Pdif	08 39 02.8	-1.4
GYA				PKP	PKPdf	08 42 11.0	-0.8
GYA				PP	PP	08 44 32.7	+2.7
GYA				PKS	PKSdf	08 45 45.7	-2.9
GYA				SKKS		08 51 23.4	
GYA				SS	SS	09 02 03.2	+1.8
GYA				AMB	AMB		
	comp=Z,130nm,7.8s						
GYA				LR	LR		
	comp=N,130nm,20.2s						
GYA				LR	LR		
	comp=E,120nm,21.4s						
GYA				LR	LR		
	comp=Z,130nm,20.9s						
NJ2	Nanjing	134.37	28	ePKP	PKPdf	08 42 11.7	-5.3
NJ2				sPKP		08 42 24.2	
NJ2				PP	PP	08 44 50.0	+2.2
NJ2				PKS	PKSdf	08 45 46.5	-6.9
NJ2				AMB	AMB		
	comp=Z,100nm,7.1s						
NJ2				LR	LR		
	comp=N,690nm,26.4s						
NJ2				LR	LR		
	comp=E,240nm,27.8s						
NJ2				LR	LR		
	comp=Z,340nm,27.8s						
QIZ	Qiongzhong	138.39	49	PKP	PKPdf	08 42 24.3	-0.4
QIZ				PP	PP	08 45 13.1	-0.8
QIZ				SS	SS	09 03 26.9	+2.0
QIZ				LR	LR		
	comp=Z,310nm,24.4s						
NWAO	Narrogin (SRO)	146.27	141	PKPbc	PKPdf	08 42 37.6	-0.8
NWAO	Narrogin (SRO)	146.27	141	PKPbc	PKPdf	08 42 37.6	-0.8
	comp=Z,16nm,1.0s,baz=297,slow=2.9,SNR=5.7						
NWAO	Narrogin (SRO)	146.27	141	PKPbc	PKPdf	08 42 37.6	-0.8
KSM	Kuching	146.99	75	ePKPbc	PKPbc	08 42 41.7	-0.4
KSM	Kuching	146.99	75	ePKPbc	PKPbc	08 42 41.7	-0.4
STKA	Stephens Creek	156.32	179	PKP	PKPdf	08 42 52.1	-1.6
STKA	Stephens Creek	156.32	179	PKP	PKPdf	08 42 52.1	-1.6
	comp=Z,4.2nm,1.1s,baz=70,slow=6.5,SNR=4.5						
STKA	Stephens Creek	156.32	179	PKIKP	PKPdf	08 42 52.1	-1.6
FITZ	Fitzroy Crossi	161.21	124	PKPab	PKPab	08 43 44.4	+1.1
FITZ	Fitzroy Crossi	161.21	124	PKPab	PKPab	08 43 44.4	+1.1
	comp=Z,7.3nm,1.1s,baz=205,slow=4.0,SNR=5.2						
FITZ	Fitzroy Crossi	161.21	124	PKPab	PKPab	08 43 44.4	+1.1
ASAR	Alice Springs	162.66	154	PKP	PKPdf	08 43 00.6	-0.7
ASAR				PKPab	PKPab	08 43 49.6	+0.2
ASAR	Alice Springs	162.66	154	PKP	PKPdf	08 43 00.6	-0.7
	comp=Z,1.2nm,1.0s,baz=173,slow=0.4,SNR=7.6						
ASAR				PKPab	PKPab	08 43 49.6	+0.2
	comp=Z,3.6nm,1.0s,baz=206,slow=4.5,SNR=13						
ASAR	Alice Springs	162.66	154	PKIKP	PKPdf	08 43 00.6	-0.7
WRA	Warramunga Arr	166.06	149	PKP	PKPdf	08 43 02.9	-1.4
WRA				PKPab	PKPab	08 44 03.5	-1.0
WRA	Warramunga Arr	166.06	149	PKP	PKPdf	08 43 02.9	-1.4
	comp=Z,2.6nm,1.0s,baz=270,slow=1.0,SNR=12						
WRA				PKPab	PKPab	08 44 03.5	-1.0
	comp=Z,0.5nm,0.8s,baz=210,slow=3.5,SNR=5.4						
WRA	Warramunga Arr	166.06	149	PKIKP	PKPdf	08 43 02.9	-1.4
PMG	Port Moresby	174.75	255	PKP	PKPdf	08 43 08.5	-0.7
PMG	Port Moresby	174.75	255	PKP	PKPdf	08 43 08.5	-0.7
	comp=Z,8.3nm,0.9s,baz=352,slow=7.5,SNR=3.0						
PMG	Port Moresby	174.75	255	PKIKP	PKPdf	08 43 08.5	-0.7

IDC 08 08:25:33.8±3.5**, 4°.90S**×**151°.72E, h0**km**, mb3.0**/2**, mb1 3.3**/2**, mb1mx3.1**/18**, mbtmp3.0**/2**, MS3.9**/1**, Ms1 3.9**/1**, ms1mx3.0**/12**, Error ellipse: s-maj=143.6km s-min=46.7km az=119.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.37	225	LR	LR	08 29 31.5	
	comp=Z,1μm,19.8s,baz=33,slow=37						
WRA	Warramunga Arr	22.58	227	P	P	08 30 35.3	-0.8
	0.2nm,0.3s,baz=53,slow=10,SNR=3.3						
ASAR	Alice Springs	25.36	221	P	P	08 31 03.5	+0.7
	0.2nm,0.4s,baz=57,slow=9.1,SNR=6.8						
TORD	Torodi Ar. Bea	149.31	288	PKPbc	PKPbc	08 45 25.1	-0.6
	0.7nm,1.0s,baz=67,slow=2.8,SNR=2.9						

*CSEM **08** 08:31:42.1, 42°.29N×13°.49E, h10km, After ROM*
ROM 08 08:31:42.0±0.0**, 42°.29N**×**13°.49E, h10**km**, Ml2.3**/15**, 2C, Error ellipse: s-maj=0.7km s-min=0.5km az=54.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	Fagnano	0.07	109	Pg	Pg	08 31 44.5	+0.1
FAGN				Sg	Sg	08 31 46.6	+0.5
	5μm,0.3s						
FAGN	Fagnano	0.07	109	Pg	Pg	08 31 44.5	+0.1
FAGN				Sg	Sg	08 31 46.4	+0.3
	6μm,0.3s						
FAGN	Fagnano	0.07	109	Pg	Pg	08 31 44.5	+0.1
FAGN				Sg	Sg	08 31 46.4	+0.3
	6μm,0.3s						
AQU	L'Aquila	0.09	314	Pg	Pg	08 31 45.1	+0.5
AQU				Sg	Sg	08 31 47.1	+0.6
	3μm,0.4s						
AQU	L'Aquila	0.09	314	Pg	Pg	08 31 45.1	+0.5
AQU				Sg	Sg	08 31 47.1	+0.6
	3μm,0.4s						
AQU	L'Aquila	0.09	314	Pg	Pg	08 31 45.1	+0.5
AQU				Sg	Sg	08 31 47.1	+0.6
	3μm,0.4s						
CAMP	Campotosto	0.25	346	Pg	Pg	08 31 48.0	+0.6
CAMP				Sg	Sg	08 31 52.1	+1.1
	299nm,0.5s						
CAMP	Campotosto	0.25	346	Pg	Pg	08 31 48.0	+0.6
CAMP				Sg	Sg	08 31 52.1	+1.1
	299nm,0.5s						
CAMP	Campotosto	0.25	346	Pg	Pg	08 31 48.0	+0.6
CAMP				Sg	Sg	08 31 52.1	+1.1
	299nm,0.5s						
PTQR	Pietraquaria	0.28	194	Pg	Pg	08 31 48.3	+0.6
PTQR				Sg	Sb	08 31 52.9	-1.1
	103nm,0.2s						
PTQR	Pietraquaria	0.28	194	Pg	Pg	08 31 48.3	+0.6
PTQR				Sg	Sb	08 31 52.9	-1.1
	103nm,0.2s						
PTQR	Pietraquaria	0.28	194	Pg	Pg	08 31 48.3	+0.6
PTQR				Sg	Sb	08 31 52.9	-1.1
	103nm,0.2s						
FIAM	Fiamignano	0.28	266	Pg	Pg	08 31 48.5	+0.7
FIAM				Sg	Sb	08 31 53.0	-1.1
	575nm,0.6s						
FIAM	Fiamignano	0.28	266	Pg	Pg	08 31 48.5	+0.7
	334nm,0.5s						
FIAM	Fiamignano	0.28	266	Pg	Pg	08 31 48.5	+0.7
	334nm,0.5s						
VCEL	Villa Celiera	0.28	68	Pg	Pg	08 31 48.4	+0.5
VCEL				Sg	Sg	08 31 53.0	+1.2
	798nm,0.3s						
VCEL	Villa Celiera	0.28	68	Pg	Pg	08 31 48.4	+0.5
	798nm,0.3s						
VCEL	Villa Celiera	0.28	68	Pg	Pg	08 31 48.4	+0.5
	798nm,0.3s						
TERO	Teramo	0.34	14	Pg	Pg	08 31 49.3	+0.3
TERO				Sg	Sb	08 31 54.9	-1.0
	435nm,0.3s						
TERO	Teramo	0.34	14⇑	iPg	Pg	08 31 49.3	+0.3
TERO				Sg	Sg	08 31 54.7	+1.1
	435nm,0.3s						
TERO	Teramo	0.34	14⇑	iPg	Pg	08 31 49.3	+0.3
TERO				Sg	Sg	08 31 54.7	+1.1
	435nm,0.3s						
INTR	Introdacqua	0.41	132	Pg	Pg	08 31 50.7	+0.4
INTR				Sg	Sb	08 31 57.6	-0.4
	351nm,0.3s						
INTR	Introdacqua	0.41	132	Pg	Pg	08 31 50.7	+0.4
INTR				Sg	Sb	08 31 57.3	-0.7
	350nm,0.5s						
INTR	Introdacqua	0.41	132	Pg	Pg	08 31 50.7	+0.4
INTR				Sg	Sb	08 31 57.3	-0.7
	350nm,0.5s						
VVLD	Villa Vallelon	0.43	167	Pg	Pg	08 31 50.8	+0.2
	186nm,0.3s						
VVLD	Villa Vallelon	0.43	167	Pg	Pg	08 31 50.8	+0.2
	186nm,0.3s						
VVLD	Villa Vallelon	0.43	167	Pg	Pg	08 31 50.8	+0.2
	186nm,0.3s						
LNSS	Leonessa	0.46	313	Pg	Pg	08 31 51.5	+0.4
	315nm,0.4s						
LNSS	Leonessa	0.46	313	Pg	Pg	08 31 51.5	+0.4
	315nm,0.4s						
LNSS	Leonessa	0.46	313	Pg	Pg	08 31 51.5	+0.4
	315nm,0.4s						
CERT	Cerreto	0.51	228	Pg	Pg	08 31 52.2	+0.2
	325nm,0.5s						
CERT	Cerreto	0.51	228	Pg	Pg	08 31 52.3	+0.3
	325nm,0.5s						
CERT	Cerreto	0.51	228	Pg	Pg	08 31 52.3	+0.3
	325nm,0.5s						
GUAR	Guarcino	0.51	195	Pg	Pg	08 31 52.1	0.0
	125nm,0.3s						
GUAR	Guarcino	0.51	195	Pg	Pg	08 31 52.1	0.0
	125nm,0.3s						
GUAR	Guarcino	0.51	195	Pg	Pg	08 31 52.1	0.0
	125nm,0.3s						
POFI	Posta Fibreno	0.60	164	Pg	Pg	08 31 54.0	+0.3
	71nm,0.6s						
POFI	Posta Fibreno	0.60	164	Pg	Pg	08 31 54.0	+0.3
	71nm,0.6s						
POFI	Posta Fibreno	0.60	164	Pg	Pg	08 31 54.0	+0.3
	71nm,0.6s						
MNS	Montasola	0.61	279	Pg	Pg	08 31 53.9	0.0
	94nm,0.5s						
MNS	Montasola	0.61	279	Pg	Pg	08 31 53.9	0.0
	94nm,0.5s						
MNS	Montasola	0.61	279	Pg	Pg	08 31 53.9	0.0
	94nm,0.5s						
NRCA	Norcia	0.61	333	Pg	Pg	08 31 54.1	+0.1
	166nm,0.1s						
NRCA	Norcia	0.61	333	Pg	Pg	08 31 54.1	+0.1
NRCA				Sg	Sb	08 32 03.1	-0.6
	166nm,0.1s						
NRCA	Norcia	0.61	333	Pg	Pg	08 31 54.1	+0.1
NRCA				Sg	Sb	08 32 03.1	-0.6
	166nm,0.1s						
SDI	San Donato	0.63	158	Pg	Pg	08 31 54.3	0.0
	88nm,0.4s						
SDI	San Donato	0.63	158	Pg	Pg	08 31 54.4	+0.1
	88nm,0.4s						
SDI	San Donato	0.63	158	Pg	Pg	08 31 54.4	+0.1
	88nm,0.4s						
GIUL	Giuliano Di Ro	0.75	194	Pg	Pb	08 31 57.1	-0.1
GIUL	Giuliano Di Ro	0.75	194	Pg	Pb	08 31 57.1	-0.1
RNI2	Rionero Sannit	0.77	140	Pg	Pb	08 31 57.7	+0.1
	97nm,0.7s						
RNI2	Rionero Sannit	0.77	140	Pg	Pb	08 31 57.7	+0.1
	97nm,0.7s						
FDMO	Fiordimonte	0.80	338	Pg	Pg	08 31 57.8	+0.2
	56nm,0.3s						
FDMO	Fiordimonte	0.80	338	Pg	Pg	08 31 57.8	+0.2
	56nm,0.3s						
FDMO	Fiordimonte	0.80	338	Pg	Pg	08 31 57.8	+0.2
	56nm,0.3s						
CESI	CESI - Serrava	0.83	329	Pg	Pb	08 31 58.5	-0.2
	28nm,0.6s						
CESI	CESI - Serrava	0.83	329	Pg	Pb	08 31 58.5	-0.2
	28nm,0.6s						
MIDA	Miranda	0.86	138	Pg	Pg	08 31 58.2	-0.6
	65nm,0.4s						
MIDA	Miranda	0.86	138	Pg	Pg	08 31 58.2	-0.6
	65nm,0.4s						
MIDA	Miranda	0.86	138	Pg	Pg	08 31 58.2	-0.6
	65nm,0.4s						
CING	Cingoli	1.11	349	Pg	Pg	08 32 03.4	0.0
	35nm,0.6s						
CING	Cingoli	1.11	349	Pg	Pg	08 32 03.4	0.0
	35nm,0.6s						

IDC 08 08:50:44.0±9.2**, 4°.85S**×**153°.96E, h46**km±66km**, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.4**/20**, mbtmp3.5**/4**, ML2.6**/1**, Error ellipse: s-maj=108.4km s-min=58.6km az=127.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.13	236	P	Pn	08 52 40.0	+0.4
	0.4nm,0.3s,baz=67,slow=13,SNR=1.6						
PMG				S	Sn	08 54 11.8	+1.7
	8.4nm,0.3s,baz=171,slow=17,SNR=13						
WRA	Warramunga Arr	24.29	230	P	P	08 55 57.8	+0.3
	1.1nm,0.4s,baz=55,slow=10,SNR=9.8						
WRA				pP	pP	08 56 07.8	-1.6
	0.9nm,0.5s,baz=51,slow=9.7,SNR=7.1						
ASAR	Alice Springs	26.91	224	P	P	08 56 20.4	-0.7
	0.1nm,0.3s,baz=50,slow=10,SNR=4.1						
ASAR				pP	pP	08 56 33.2	+0.1
	0.3nm,0.4s,baz=60,slow=9.0,SNR=6.6						
FITZ	Fitzroy Crossi	30.66	242	P	P	08 56 54.0	-0.5
	1.4nm,0.6s,baz=72,slow=8.1,SNR=5.4						
TORD	Torodi Ar. Bea	151.42	289	PKPbc	PKPbc	09 10 34.1	+0.1
	0.4nm,0.6s,baz=87,slow=2.6,SNR=4.1						

*ISK **08** 08:51:51.8, 37°.43N×37°.08E, h8km, MD2.9*
*DDA **08** 08:51:51.9, 37°.45N×37°.11E, h7km, MD2.9*
*ISCJB **08** 08:51:52.2±0.5, 37°.44N±0°.04×37°.11E±0°.04, h3km±8km, Error ellipse: s-maj=6.8km s-min=4.0km az=30.0*
*CSEM **08** 08:51:52.5±0.1, 37°.44N×37°.08E, h8km, MD2.9, Error ellipse: s-maj=2.6km s-min=2.3km az=78.0*
ISC 08 08:51:52.3±0.9**, 37°.44N**±0°.02×**37°.10E**±0°.02**, h10**km±7km**, n26, σ0ˢ.48**/40**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMRS	Kahramanmaras	0.18	294	ePG	Pg	08 51 55.7	-0.4
KMRS				eSG	Sg	08 51 58.7	-0.1
KMRS	Kahramanmaras	0.18	294	ePg	Pg	08 51 55.7	-0.4
KMRS				eSg	Sg	08 51 58.7	-0.1
AYKD	Aykdinkavak	0.24	265	i P	Pg	08 51 57.2	0.0
AYKD				i S	Sg	08 52 01.6	+1.1
GAZ	Gaziantep	0.28	162	ePG	Pg	08 51 57.9	0.0
GAZ				eSG	Sg	08 52 02.3	+0.6
GAZ	Gaziantep	0.28	162	ePg	Pg	08 51 57.9	0.0
GAZ				eSg	Sg	08 52 02.3	+0.6
GZT	Gaziantep	0.38	102	i P	Pg	08 51 59.3	-0.5
GZT				i S	Sg	08 52 04.1	-0.7
ANDN	Andirin	0.62	284	i P	Pg	08 52 04.1	-0.2
ANDN				i S	Sg	08 52 12.1	-0.4
ANDN	Andirin	0.62	284	i P	Pg	08 52 04.1	-0.2
ANDN				i S	Sg	08 52 12.1	-0.4
KUZU	Kuzuini	0.66	182	i P	Pb	08 52 05.9	0.0
KUZU				i S	Sb	08 52 14.8	-0.3
KUZU	Kuzuini	0.66	182	i P	Pb	08 52 05.9	0.0
KUZU				i S	Sb	08 52 14.8	-0.3
KOZT	Kozan	1.02	273	ePG	Pg	08 52 11.6	-0.2
KOZT	Kozan	1.02	273	ePg	Pg	08 52 11.6	-0.2
AKCD	Akcadag	1.08	37	i P	Pb	08 52 12.7	-0.3
AKCD				i S	Sn	08 52 28.3	-0.2
AKCD	Akcadag	1.08	37	i P	Pb	08 52 12.7	-0.3
AKCD				i S	Sn	08 52 28.3	-0.2
SARI	SarD1z-Kayseri	1.11	331	ePN	Pb	08 52 13.5	-0.2
DARE	Darende-Malaty	1.17	15	ePN	Pb	08 52 14.5	-0.2
PINB	Pinarbasi	1.36	336	i P	Pb	08 52 17.9	0.0
PINB				i S	Sg	08 52 37.2	+1.2
PINB	Pinarbasi	1.36	336	i P	Pb	08 52 17.9	0.0
PINB				i S	Sg	08 52 37.2	+1.2
MALT	Malatya	1.37	50	ePN	Pb	08 52 17.9	-0.1
MALT	Malatya	1.37	50	ePn	Pb	08 52 17.9	-0.1
MYA	Malataya	1.37	49	ePN	Pg	08 52 18.4	-0.2
MYA	Malataya	1.37	49	ePn	Pg	08 52 18.4	-0.2
HTY	Hatay	1.52	211	ePN	Pn	08 52 19.5	0.0
HTY	Hatay	1.52	211	ePn	Pn	08 52 19.5	0.0
SVRC	Sivrice-ELAZID	1.98	61	ePN	Pn	08 52 26.7	+0.7
SVRC	Sivrice-ELAZID	1.98	61	ePn	Pn	08 52 26.7	+0.7

*NIED **08** 08:54:00, 45°.80N×152°.00E, h35km, Mw4.8 Best double couple: M₀1.61000×10^16 NP1:φs16.00000°, δ63.00000°, λ76.00000°. NP2:φs226.00000°, δ30.00000°, λ116.00000°.*
*MOS **08** 08:54:30.6±1.0, 45°.91N×151°.77E, h50km, mb4.7/44, Error ellipse: s-maj=7.5km s-min=5.5km az=86.3*
*JMA **08** 08:54:30.2±0.6, 45°.82N×151°.97E, h30km, M5.2*
*ISCJB **08** 08:54:31.0±0.4, 45°.83N±0°.03×151°.70E±0°.03, h53km±4km, mb4.6/106, MS4.2/42, Error ellipse: s-maj=5.7km s-min=2.8km az=162.6*
*SKHL **08** 08:54:31.9±1.4, 45°.95N×151°.98E, h64km±10km, mb5.5/1, Ms4.3/3, msh5.8/1*
*IDC **08** 08:54:32.0±2.0, 45°.98N×151°.68E, h47km±18km, mb4.0/32, mb1 4.2/38, mb1mx4.2/44, mbtmp4.0/38, ML3.9/6, MS4.1/33, Ms1 4.1/33, ms1mx3.9/54, Error ellipse: s-maj=14.3km s-min=9.7km az=142.0*
*NEIC **08** 08:54:34.3±0.6, 46°.00N×151°.60E, h64km±5km, mb4.7/53, Error ellipse: s-maj=6.2km s-min=3.2km az=160.0*
*BJI **08** 08:54:34.4, 45°.78N×151°.54E, h77km, mB4.9/27, mb4.6/36, Ms4.5/23, Ms7 4.2/24*
*GCMT **08** 08:54:35.2±0.4, 45°.99N×151°.92E, h44km±1km, MW4.9, Moment Tensor Solution. s33,c38; s58,c71; Moment tensor: Scale 10^16Nm; Mrr1.69±.20; Mθθ-0.75±.14; Mφφ-0.93±.15; Mrθ0.49±.13; Mθφ-2.52±.12; Mφr1.10±.10; Best double couple: M₀2.90000×10^16 NP1:φs259.00000°, δ45.00000°, λ145.00000°. NP2:φs16.00000°, δ66.00000°, λ51.00000°. Principal axes: T 2.2300, Plg52.0000°, Azm239.0000°; N 1.3800, Plg35.0000°, Azm34.0000°; P -3.6100, Plg12.0000°, Azm133.0000°; Data Used: II IU IC G CN.*
ISC 08 08:54:35.2±0.4**, 45°.84N**±0°.05×**151°.63E**±0°.04**, h79**km±2km**, h78**km**:pP-P, n604, σ1ˢ.20**/649**, mb4.5**/106**, 141C-120D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.71	258⇑	iPN	Pn	08 55 15.2	-1.3
KUR				eS	Sn	08 55 48.5	+0.2
KUR				smax	smax		
	comp=N,12μm,2.0s						
KUR				smax	smax		
	comp=E,6μm,2.0s						
KUR	Kuril'sk	2.71	258⇑	iP	Pn	08 55 15.2	-1.3
KUR				eS	Sn	08 55 48.5	+0.2
KUR				A	A	08 56 11.0	
	comp=E,12μm,2.0s						
KUR				A	A	08 56 11.0	
	comp=E,6μm,2.0s						
YUK	Yuzh-Kuril'sk	4.47	248	i PN	Pn	08 55 40.5	+0.1
YUK				i S	Sn	08 56 30.8	-0.4
YUK				pmax	pmax		
	comp=E,200nm,0.5s						
YUK				pmax	pmax		
	comp=N,171nm,0.5s						
YUK				pmax	pmax		
	comp=Z,376nm,0.5s						
YUK				smax	smax		
	comp=N,234nm,0.6s						
YUK				smax	smax		
	comp=E,669nm,0.6s						
YUK	Yuzh-Kuril'sk	4.47	248⇑	iP	Pn	08 55 40.6	+0.1
YUK				AMB	AMB	08 55 48.2	
	comp=E,171nm,0.4s						
YUK				AMB	AMB	08 55 48.2	
	comp=E,200nm,0.4s						
YUK				AMB	AMB	08 55 48.2	
	comp=E,376nm,0.4s						
YUK				i S	Sn	08 56 30.9	-0.3
YUK				A	A	08 56 42.5	
	comp=E,234nm,0.5s						
YUK				A	A	08 56 42.5	
	comp=E,669nm,0.5s						
NEM2	Nemuro 2	4.88	242	P	Pn	08 55 43.3	-2.6
NEM2				eS	Sn	08 56 37.6	-3.4
JRA	Rausu	5.00	250	P	Pn	08 55 47.7	+0.1
JRA				eS	Sn	08 56 46.8	+2.8
JNK	Nakash	5.41	248	P	Pn	08 55 52.4	-0.9
JNK				eS	Sn	08 56 54.4	+0.2
SKR	Severo-Kuril's	5.70	30	ePN	Pn	08 55 49.5	-7.6
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				MLR	MLR		
	comp=E,2μm,16.0s						
SKR				MLR	MLR		
	comp=Z,2μm,16.0s						
SKR	Severo-Kuril's	5.70	30	eP	Pn	08 55 49.5	-7.6
SKR				AMB	AMB	08 55 51.0	
	comp=Z,60nm,0.5s						
SKR				eS	Sn	08 56 48.6	-12
SKR				A	A	08 57 26.4	
	comp=Z,610nm,1.3s						
SKR				A	A	08 57 26.4	
	comp=Z,190nm,0.7s						
SKR				A	A	08 57 26.4	
	comp=Z,110nm,0.7s						
SKR				AMS	AMS	08 58 18.0	
	comp=Z,2μm,16.0s						
SKR				AMS	AMS	08 58 18.0	
	comp=Z,2μm,16.0s						
JAK	Akkeshi	5.72	243	P	Pn	08 55 55.0	-2.5
JAK				eS	Sn	08 56 58.4	-3.3
JTKR	Abashiri--Toko	5.79	254	P	Pn	08 55 58.5	+0.1
JAR	Ashorobuto	6.16	248	P	Pn	08 56 03.0	-0.5
JAR				eS	Sn	08 57 13.5	+1.0
YSS	Yuzh-Sakhalins	6.24	283⇓	ePN	Pn	08 56 05.3	+0.8
YSS				eS	Sn	08 57 14.9	+0.6
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS				MLR	MLR		
	comp=E,2μm,18.0s						
YSS				MLR	MLR		
	comp=Z,2μm,18.0s						
YSS				MLR	MLR		
	comp=N,1μm,17.0s						
YSS	Yuzh-Sakhalins	6.24	283	ePn	Pn	08 56 04.5	0.0
YSS	Yuzh-Sakhalins	6.24	283⇓	eP	Pn	08 56 05.3	+0.8
YSS				AMB	AMB	08 56 07.1	
	comp=N,50nm,0.8s						
YSS				eS	Sn	08 57 14.9	+0.6
YSS				AMS	AMS	08 58 20.0	
	comp=N,1μm,17.0s						
YSS				AMS	AMS	08 58 20.0	
	comp=N,2μm,18.0s						
YSS				AMS	AMS	08 58 20.0	
	comp=N,2μm,18.0s						
JOB	Onbets	6.31	245	P	Pn	08 56 04.0	-1.5
JOB				eS	Sn	08 57 14.0	-2.1
JSE	Soyaes	6.43	265	P	Pn	08 56 09.6	+2.5
JKK2	Kamakawa 2	6.61	256	P	Pn	08 56 10.9	+1.3
ASAJ	Asahikawa	6.63	258	ePn	Pn	08 56 11.2	+1.3

ASAJ Asahikawa 6.63 258 P **Pn** **08 56 11.2 +1.3**
ASAJ Asahikawa 6.63 258 P **Pn** **08 56 09.3 -0.6**
comp=N,6.5nm,0.3s,baz=100,slow=7.9,SNR=46
ASAJ LR LR 08 58 46.8
comp=N,2µm,20.0s,baz=148,slow=38
JCH Churui 6.75 244 P **Pn** **08 56 09.6 -2.0**
JCH *e*S **Sn** **08 57 23.7 -3.3**
JWK2 Keihoku 6.85 269 P **Pn** **08 56 15.7 +2.8**
JFR Furan 6.99 251 P **Pn** **08 56 14.9 +0.1**
JAB Ashibetsu 7.10 254 P **Pn** **08 56 17.3 +1.0**
JEM Erimo 7.21 241 P **Pn** **08 56 16.0 -1.8**
ERM Erimo 7.21 241 *d* iPN **Pn** **08 56 17.9 +0.1**
ERM Erimo 7.21 241 *e*Pn **Pn** **08 56 17.8 +0.1**
ERM *e*Sn **Sn** **08 57 35.8 -2.4**
UGL Uglegorsk 7.25 300 *e*PN **Pn** **08 56 19.0 +0.8**
UGL *e*S **Sn** **08 57 41.5 +2.6**
UGL pmax pmax
comp=Z,84nm,0.7s
UGL smax smax
comp=N,87nm,0.6s
UGL smax smax
comp=E,100nm,0.6s
UGL MLR MLR
comp=N,2µm,18.0s
UGL MLR MLR
comp=E,1µm,16.0s
UGL Uglegorsk 7.25 300 *e*P **Pn** **08 56 19.0 +0.8**
UGL AMB AMB 08 56 24.0
comp=E,84nm,0.7s
UGL *e*S **Sn** **08 57 41.5 +2.6**
UGL A A 08 57 42.5
UGL A A 08 57 42.5
comp=E,87nm,0.6s
UGL A A 08 57 42.5
comp=E,100nm,0.6s
UGL *e*L L 08 58 04.0
UGL AMS AMS 08 59 16.0
comp=E,1µm,16.0s
UGL AMS AMS 08 59 16.0
comp=E,2µm,18.0s
JBT2 Biratori 2 7.31 249 P **Pn** **08 56 17.3 -1.9**
JNBK Urakawa-nobuka 7.31 244 P **Pn** **08 56 16.8 -2.4**
TYV Tymovskoe 7.81 313 *e*P **Pn** **08 56 25.0 -0.9**
TYV AMB AMB 08 56 27.0
comp=E,7.0nm,0.4s
TYV AMB AMB 08 56 27.0
comp=E,12nm,0.6s
TYV AMB AMB 08 56 42.0
comp=E,500nm,4.0s
TYV AMS AMS 08 59 26.0
comp=E,2µm,18.0s
TYV AMS AMS 08 59 26.0
comp=E,2µm,20.0s
JEW Eniwo 7.89 251 P **Pn** **08 56 27.2 +0.1**
PEA0B Petropavlovsk- 8.28 26 *e*Pn **Pn** **08 56 29.5 -2.8**
PEA0B *e*Sn **Sn** **08 58 03.5 -0.7**
PETK Petropavlovsk- 8.28 26 PN Pn 08 56 28.0 -4.3
PETK pmax pmax
comp=Z,1.0nm,0.3s
PETK Petropavlovsk- 8.28 26 P Pn 08 56 28.0 -4.3
PETK Petropavlovsk- 8.28 26 P Pn 08 56 28.0 -4.3
comp=Z,0.9nm,0.3s,baz=191,slow=14,SNR=5.0
JNB Noboribetsu 8.32 250 P **Pn** **08 56 31.4 -1.6**
JNB *e*S **Sn** **08 58 02.9 -2.5**
PET Petropavlovsk 8.52 30 *e*PN **Pn** **08 56 33.5 -2.1**
PET MLR MLR
comp=Z,400nm,15.0s
JKB Kayabe 8.61 246 P **Pn** **08 56 34.3 -2.6**
JKB *e*S **Sn** **08 58 06.6 -5.8**
JANG Nango 9.19 237 P Pn 08 56 40.1 -4.8
JANG *e*S Sn 08 58 16.3 -10
JTM Tenmabayashi 9.20 240 P Pn 08 56 41.5 -3.5
JTM *e*S Sn 08 58 18.5 -8.3
JTH Tanohata 9.28 234 P Pn 08 56 40.8 -5.2
JTH *e*S Sn 08 58 17.1 -12
JOSM Okushiri--Mats 9.53 251 P **Pn** **08 56 47.6 -1.9**
OKH Okha 9.55 327 *e*PN **Pn** **08 56 49.8 +0.2**
OKH Okha 9.55 327 *e*P **Pn** **08 56 49.8 +0.2**
OKH *e*P 08 56 50.0
OKH *e*S **Sn** **08 58 30.0 -5.1**
OKH *e*LQ LQ 08 59 28.0
OKH AMS AMS 09 01 22.2
comp=Z,1µm,15.0s
OKH AMS AMS 09 01 22.2
comp=Z,1µm,13.0s
OFUJ Ofunato 9.98 231 P Pn 08 56 50.9 -4.8
OFUJ *e*S Sn 08 58 35.8 -10
NKL Nikolayevsk 10.20 320 *e*P **Pn** **08 56 58.0 -0.5**
NKL AMB AMB 08 57 01.4
comp=Z,33nm,1.1s
NKL AMB AMB 08 57 01.4
comp=Z,38nm,1.1s
NKL AMB AMB 08 57 01.4
comp=Z,60nm,1.1s
NKL *e*L L 08 59 54.0
NKL AMS AMS 09 01 23.0
comp=Z,1µm,15.0s
NKL AMS AMS 09 01 23.0
comp=Z,450nm,15.0s
NKL AMS AMS 09 01 23.0
comp=Z,2µm,15.0s
JRG Rokugo 10.34 235 P Pn 08 56 56.8 -3.8
JIO Ouri 10.61 230 P Pn 08 56 59.8 -4.4
JIO *e*S Sn 08 58 50.8 -10
MAJO Matsushiro 13.71 232 *e*P **Pn** **08 57 45.7 -0.3**
MAJO Matsushiro 13.71 232 *e*Pn **Pn** **08 57 45.7 -0.3**
MAT Matsushiro 13.71 232 P **Pn** **08 57 43.5 -2.5**
MAT S Sn 09 00 23.6 +7.0
MJAR Matsushiro Arr 13.71 232 P **Pn** **08 57 43.1 -2.8**
MJAR Matsushiro Arr 13.71 232 P **Pn** **08 57 43.1 -2.8**
comp=Z,0.3nm,0.3s,baz=26,slow=12,SNR=14
KLR Kul'dur 13.85 291 *e*P **Pn** **08 57 46.2 -1.5**
KLR pmax pmax
comp=E,45nm,2.0s
KLR pmax pmax
comp=Z,72nm,2.0s
USRK Ussuriysk Arra 13.98 270 P **Pn** **08 57 48.0 -1.5**
comp=Z,0.6nm,0.3s,baz=75,slow=11,SNR=16
USRK LR LR 09 03 22.4
comp=Z,918nm,18.3s,baz=68,slow=38
MDJ Mudanjiang 15.57 273 P **P** **08 58 12.2 -0.4**
MDJ S **Sn** **09 01 01.0 -0.6**
MDJ pmax pmax
comp=Z,24nm,1.1s
MDJ pmax pmax
comp=Z,220nm,6.7s
MDJ LR LR
comp=N,330nm,15.8s
MDJ LR LR
comp=E,620nm,17.0s
MDJ LR LR
comp=Z,860nm,17.0s
FX1 Attu Island--F 15.66 55 Pn **Pn** **08 58 09.2 -1.8**
FX1 Attu Island--F 15.66 55 P **Pn** **08 58 07.4 -3.6**
comp=Z,1.6nm,0.3s,baz=11,slow=12,SNR=8.8
FX1 LR LR 09 02 58.3
comp=Z,337nm,20.1s,baz=89,slow=32
SEY Seymchan 17.14 1⇑ *e*P **P** **08 58 30.8 +1.1**
ZEA Zeya 17.55 306 *e*P **Pn** **08 58 30.6 -3.8**
ZEA AMB AMB 08 58 45.5
comp=Z,67nm,1.6s
ZEA AMB AMB 08 58 45.5
comp=Z,46nm,1.4s
CN2 Changchun 18.66 273 *e*P **P** **08 58 46.8 +0.2**
CN2 *e*pP **pP** **08 59 00.1 -2.2**
CN2 *e*S S 09 02 07.1 -7.5
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 LR LR
comp=N,600nm,16.0s
CN2 LR LR
comp=E,700nm,16.0s
CN2 LR LR
comp=Z,800nm,17.0s
KSRS Korea Array 19.54 253 P **Pn** **08 58 57.5 -0.9**
comp=Z,0.9nm,0.3s,baz=60,slow=11,SNR=41
KSRS PcP **PcP** **09 03 15.8 +2.4**
baz=64,slow=2.9,SNR=4.2
KSRS LR LR 09 06 11.4
comp=Z,345nm,18.1s,baz=53,slow=36
KSAR Wonju Array Be 19.57 253 P **P** **08 58 57.5 +0.8**
KSAR PcP **PcP** **09 03 15.8 +2.3**
CLNS Chul'man 19.86 313 *e*P **pP** **08 59 14.1 -1.4**
CLNS *e*S **Sn** **09 02 45.3 +0.5**
CLNS pmax pmax
comp=Z,42nm,1.1s
CLNS pmax pmax
comp=N,38nm,1.3s
CLNS pmax pmax
comp=E,23nm,1.2s
CLNS smax smax
comp=N,66nm,11.4s
CLNS smax smax
comp=E,300nm,18.9s
CLNS MLR MLR
comp=E,489nm,15.0s
CLNS MLR MLR
comp=Z,604nm,16.0s
CLNS MLR MLR
comp=N,363nm,16.0s
JNU Nakatsue 20.37 239 P **P** **08 59 05.5 +0.2**
JNU Nakatsue 20.37 239 P **P** **08 59 05.5 +0.2**
comp=N,10.0nm,1.1s,baz=50,slow=14,SNR=2.9
JNU LR LR 09 07 32.5
comp=N,303nm,21.2s,baz=42,slow=38
YAK Yakutsk 20.56 330 *e*P **P** **08 59 08.7 +1.6**
YAK pmax pmax
comp=E,21nm,1.3s
YAK pmax pmax
comp=N,15nm,1.0s
YAK pmax pmax
comp=Z,54nm,1.0s
YAK Yakutsk 20.56 330 *e*P **P** **08 59 05.8 -1.3**
comp=Z,69nm,0.9s
SNY Shenyang 20.58 269 ⇓P **P** **08 59 08.1 +0.6**
SNY S **S** **09 02 55.5 +2.4**
SNY pmax pmax
comp=Z,220nm,1.4s
BILL Bilibino 23.52 14 *i* P **P** **08 59 40.7 +2.9**
BILL *e*S **S** **09 03 46.9 +1.6**
BILL pmax pmax
comp=Z,8.0nm,1.5s
BILL MLR MLR
comp=Z,400nm,17.0s
BILL Bilibino 23.52 14 *e*P P 08 59 31.1 -6.7
comp=Z,4.3nm,0.7s
BJI Beijing 26.44 270 P **P** **09 00 07.4 +2.9**
BJI pP **pP** **09 00 21.9 -0.7**
BJI sP **sP** **09 00 32.2 +0.3**
BJI S **S** **09 04 32.8 +0.5**
BJI sS **sS** **09 05 03.9 0.0**
BJI pmax pmax
comp=Z,17nm,1.1s
BJI LR LR
comp=N,270nm,17.1s
BJI LR LR
comp=E,730nm,17.9s
BJI LR LR
comp=Z,490nm,19.5s
TIXI Tiksi 28.07 345 *i* P P 09 00 15.2 -3.5
TIXI Tiksi 28.07 345 *e*P P 09 00 14.8 -3.8
comp=Z,14nm,1.9s
NJ2 Nanjing 28.74 253 *e*P **P** **09 00 25.2 +0.1**
NJ2 pmax pmax
comp=Z,20nm,0.7s
HHC Hu-ho-hao-te 29.34 275 *e*P **P** **09 00 29.5 -0.9**
HHC pP **pP** **09 00 51.2 +2.4**
HHC sP **sP** **09 01 03.0 +5.0**
HHC PP **PnPn** **09 01 27.8 +0.4**
HHC S **S** **09 05 13.9 -4.2**
HHC sS **sS** **09 05 52.4 +2.7**
HHC SS **SnSn** **09 06 50.6 -1.2**
HHC pmax pmax
comp=Z,27nm,1.0s
HHC pmax pmax
comp=Z,160nm,6.9s
HHC LR LR
comp=N,590nm,15.1s
HHC LR LR
comp=E,1µm,16.9s
HHC LR LR
comp=Z,1µm,16.9s
TNA Tin City 29.36 33 *e*P **P** **09 00 30.1 -0.1**
TNA *e*pP **pP** **09 00 50.0 +1.5**
SONM Songino Array 30.67 290 P **P** **09 00 42.6 +0.4**
SONM Songino Array 30.67 290 P **P** **09 00 42.6 +0.4**
comp=Z,0.7nm,0.6s,baz=108,slow=9.3,SNR=2.4
SONM LR LR 09 13 57.9
comp=Z,389nm,19.6s,baz=241,slow=38
GUMO Guam 32.65 192 LR LR 09 11 02.5
comp=Z,209nm,20.6s,baz=56,slow=30
WHN Wuhan 32.70 255 P **P** **09 01 01.8 +1.8**
WHN LR LR
comp=Z,400nm,16.4s
XAN Xi'an 34.41 265 P **P** **09 01 15.2 +0.3**
XAN pmax pmax
comp=Z,4.0nm,1.5s
XAN pmax pmax
comp=Z,32nm,8.0s
KDAK Kodiak Island 35.48 50 *e*P **P** **09 01 25.1 +1.4**
comp=Z,78nm,1.8s
LZH Lanzhou 36.89 272 *e*P **P** **09 01 36.7 +0.5**
LZH pP **pP** **09 01 58.3 +3.4**
LZH sP **sP** **09 02 06.0 +2.0**
LZH PP **PnPn** **09 03 02.8 +0.3**
LZH *e*S **S** **09 07 14.1 -1.2**
LZH sS **sS** **09 07 46.3 -1.0**
LZH SS **SnSn** **09 09 45.6 -9.2**
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,76nm,4.3s
LZH LR LR
comp=N,890nm,17.4s
LZH LR LR
comp=E,640nm,16.9s
LZH LR LR
comp=Z,510nm,16.8s
SML Sawmill 37.34 43 *e*P **P** **09 01 38.5 -1.1**
SML pmax pmax
comp=Z,2.0nm,0.8s
SML Sawmill 37.34 43 *e*P **P** **09 01 38.5 -1.1**
comp=Z,2.2nm,0.8s
COLA College 37.49 38 *i* P **P** **09 01 41.1 +0.4**
ILAR Eielson Array 37.90 38 P **P** **09 01 42.6 -1.6**
ILAR Eielson Array 37.90 38 P **P** **09 01 42.6 -1.6**
comp=Z,0.8nm,0.5s,baz=263,slow=7.3,SNR=28
ILAR LR LR 09 18 32.7
comp=Z,98nm,18.8s,baz=281,slow=38
GTA Gaotai 38.10 279 *e*P **P** **09 01 49.1 +2.7**
GTA pP **pP** **09 02 07.2 +2.1**
GTA sP **sP** **09 02 16.4 +2.2**
GTA PcP **PcP** **09 04 02.6 +2.8**
GTA S **S** **09 07 35.8 +2.3**
GTA sS **sS** **09 08 06.5 +0.9**
GTA SS **SS** **09 10 16.4 -7.2**
GTA pmax pmax
comp=Z,4.0nm,0.8s
GTA pmax pmax
comp=Z,83nm,4.0s
GTA LR LR
comp=N,240nm,15.7s
GTA LR LR
comp=E,230nm,16.6s
GTA LR LR
comp=Z,280nm,16.2s
CD2 Chengdu 39.77 265 P **P** **09 02 00.4 +0.1**
CD2 pP **pP** **09 02 17.7 -1.5**
CD2 sP **sP** **09 02 26.2 -2.1**
CD2 PP **PnPn** **09 03 36.8 -0.1**
CD2 PcS **PcS** **09 07 55.5 0.0**
CD2 S **S** **09 07 58.5 -0.2**
CD2 sS **sS** **09 08 28.2 -2.8**
CD2 SS **SS** **09 10 50.0 -7.1**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,150nm,7.8s
CD2 LR LR
comp=N,260nm,17.1s
CD2 LR LR
comp=E,230nm,22.5s
CD2 LR LR
comp=Z,350nm,17.6s
GYA Guiyang 40.51 257 *e*P **P** **09 02 07.3 +0.8**
GYA pmax pmax
comp=Z,10.0nm,1.0s
ZALV Zalesovo Beam 42.31 306 P **P** **09 02 18.7 -2.1**
ZALV 09 04 13.4
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV MLR MLR
comp=Z,658nm,18.9s
ZALV Zalesovo Beam 42.31 306 P **P** **09 02 18.7 -2.1**
ZALV PcP **PcP** **09 04 13.4 +0.4**
ZALV Zalesovo Beam 42.31 306 P **P** **09 02 18.7 -2.1**
comp=Z,0.5nm,0.4s,baz=58,slow=9.4,SNR=2.6
ZALV PcP **PcP** **09 04 13.4 +0.4**
comp=Z,5.2nm,0.8s,baz=81,slow=2.6,SNR=18
ZALV LR LR 09 21 06.7
comp=Z,658nm,18.9s,baz=246,slow=38
INK Inuvik 42.97 32 P **P** **09 02 24.5 -1.4**
INK Inuvik 42.97 32 P **P** **09 02 24.5 -1.4**
comp=Z,4.0nm,0.8s,baz=300,slow=7.6,SNR=22
KMI Kunming 44.06 259 P **P** **09 02 37.2 +1.7**
KMI pmax pmax
comp=Z,11nm,2.0s
WMQ Urumqi 44.30 291 P **P** **09 02 38.6 +1.6**
WMQ pP **pP** **09 02 58.0 +1.8**
WMQ sP **sP** **09 03 06.6 +1.4**
WMQ PP **PP** **09 04 24.6 +3.2**
WMQ ScP **ScP** **09 08 06.6 +1.9**
WMQ S **S** **09 09 06.0 +0.9**
WMQ sS **sS** **09 09 39.0 +1.2**
WMQ SS SS 09 12 17.0 -8.6
WMQ ScS **ScS** **09 12 28.0 +0.7**
WMQ pmax pmax
comp=Z,12nm,1.0s
WMQ pmax pmax
comp=Z,75nm,5.0s
WMQ LR LR
comp=N,220nm,15.0s
WMQ LR LR
comp=E,330nm,15.0s
WMQ LR LR
comp=Z,230nm,15.0s
MK31 Makanchi Array 46.45 297 *e*P **P** **09 02 52.7 -1.2**
MK31 Makanchi Array 46.45 297 *e*P **P** **09 02 52.7 -1.2**
MKAR Makanchi Array 46.45 297 P **P** **09 02 52.6 -1.3**
MKAR 09 04 27.6
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR MLR MLR
comp=Z,388nm,19.5s
MKAR Makanchi Array 46.45 297 P **P** **09 02 52.6 -1.3**
MKAR PcP **PcP** **09 04 27.6 +0.3**
MKAR Makanchi Array 46.45 297 P **P** **09 02 52.6 -1.3**
comp=Z,1.3nm,0.6s,baz=69,slow=7.2,SNR=12
MKAR PcP **PcP** **09 04 27.6 +0.3**
comp=Z,2.7nm,0.7s,baz=55,slow=2.9,SNR=10
MKAR LR LR 09 23 26.7
comp=Z,388nm,19.5s,baz=54,slow=37
DLBC Dease Lake 46.97 45 P **P** **09 02 57.0 -0.9**
DLBC Dease Lake 46.97 45 P **P** **09 02 57.0 -0.9**
comp=Z,2.7nm,1.0s,baz=270,slow=4.5,SNR=3.1
KURK Kurchatov 47.01 304⇑ *e*P **P** **09 02 59.4 +1.2**
KURK pmax pmax
comp=Z,4.0nm,1.3s
KURK Kurchatov 47.01 304 *e*P **P** **09 02 57.3 -0.9**
comp=Z,2.9nm,0.9s
LSA Lhasa 49.29 273 P P 09 03 08.6 -8.0
BRVK Borovoye 50.68 310⇑ *e*P **P** **09 03 26.8 +0.5**
BRVK pmax pmax
comp=Z,4.0nm,1.3s
CHTO Chiang Mai 50.90 256 *e*P **P** **09 03 29.8 +1.4**
CHTO pmax pmax
comp=Z,14nm,1.1s
CHTO Chiang Mai 50.90 256 *e*P **P** **09 03 29.8 +1.4**
comp=Z,14nm,1.1s
CMAR Chiang Mai Arr 51.15 256 P **P** **09 03 32.1 +1.9**
CMAR Chiang Mai Arr 51.15 256 P **P** **09 03 32.1 +1.9**
comp=Z,3.4nm,0.7s,baz=35,slow=8.1,SNR=26
CMAR LR LR 09 27 07.9
comp=Z,109nm,18.8s,baz=47,slow=38
RES Resolute Bay 52.02 18 *e*P **P** **09 03 35.1 -0.9**
comp=Z,25nm,2.1s
RES Resolute Bay 52.02 18 P **P** **09 03 35.1 -0.9**
comp=Z,2.0nm,0.8s,baz=328,slow=7.2,SNR=12
RES LR LR 09 28 59.0
comp=Z,92nm,19.7s,baz=330,slow=40
YKW3 Yellowknife Ar 52.23 36 *e*P **P** **09 03 37.1 -0.6**
YKA Yellowknife Ar 52.27 36 P **P** **09 03 37.3 -0.6**
YKA Yellowknife Ar 52.27 36 P **P** **09 03 37.3 -0.6**
comp=Z,1.0nm,0.5s,baz=298,slow=6.9,SNR=46
AAK Ala-Archa 53.31 296⇑ *e*P **P** **09 03 47.7 +1.5**
AAK pmax pmax
comp=Z,6.0nm,0.7s
AAK Ala-Archa 53.31 296 *e*P **P** **09 03 46.9 +0.7**
comp=Z,12nm,0.9s
SPITS Spitsbergen Ar 53.32 350 P **P** **09 03 44.7 -0.9**
SPITS Spitsbergen Ar 53.32 350 P **P** **09 03 44.7 -0.9**
comp=Z,7.1nm,0.9s,baz=102,slow=6.2,SNR=5.0
EKS2 Erkin-Say 53.75 297 *e*P **P** **09 03 49.4 +0.1**
EKS2 pmax pmax
comp=Z,3.0nm,0.8s
EKS2 Erkin-Say 53.75 297 *e*P **P** **09 03 49.4 +0.1**
comp=Z,2.9nm,0.8s
GUN Gumba 54.05 275 *e*P **P** **09 03 53.4 +1.5**
RAMN Ramite 54.14 273 *e*P **P** **09 03 53.4 +0.9**
comp=Z,28nm,0.7s
KKN Kakani 54.54 275 *e*P **P** **09 03 57.0 +1.6**
DANN Dangsing 55.26 276 *e*P **P** **09 04 02.1 +1.5**
comp=Z,40nm,0.7s
KKAR Karatay Array 55.53 299 *e*P **P** **09 04 01.4 -0.6**
KKAR pmax pmax
comp=Z,1.0nm,0.6s
KKAR Karatay Array 55.53 299 *e*P **P** **09 04 01.4 -0.6**
comp=Z,1.1nm,0.6s
KOLN Koldanda 55.72 276 *e*P **P** **09 04 05.5 +1.6**
PYUN Piuthan 55.94 277 *e*P **P** **09 04 06.6 +1.2**
comp=Z,104nm,1.1s
DAG Danmarks Havn 57.51 357 *i* P **P** **09 04 13.6 -1.9**
DAG pmax pmax
comp=Z,3.0nm,1.1s
DAG Danmarks Havn 57.51 357 *i* P **P** **09 04 13.6 -1.9**
comp=Z,2.4nm,1.1s
ABKAR Akbulak array 58.22 310 *e*P **P** **09 04 20.0 -0.9**
comp=Z,1.8nm,0.5s
ARCES ARCESS Array B 58.37 341 P **P** **09 04 20.6 -1.1**
ARCES PcP **PcP** **09 05 11.5 -0.2**
ARCES ARCESS Array B 58.37 341 P **P** **09 04 20.6 -1.1**
comp=Z,2.6nm,0.9s,baz=56,slow=4.5,SNR=5.2
ARCES PcP **PcP** **09 05 11.5 -0.2**
comp=Z,1.7nm,0.6s,baz=46,slow=6.9,SNR=3.6
ARCES LR LR 09 35 34.3
comp=Z,173nm,18.0s,baz=203,slow=42
NEW Newport 58.55 52 P **P** **09 04 22.9 -0.4**
NEW Newport 58.55 52 ⇓P **P** **09 04 23.3 0.0**
baz=58
NEW Newport 58.55 52 P **P** **09 04 22.9 -0.4**
comp=Z,1.6nm,0.7s,baz=299,slow=4.0,SNR=5.0
AKTO Aktyubinsk 58.56 312 LR LR 09 32 07.4
comp=Z,667nm,18.4s,baz=31,slow=39
A12A Yaak River Ran 58.96 50 ⇑P **P** **09 04 26.2 +0.1**
baz=59
A13A Flathead Natio 59.62 50 ⇓P **P** **09 04 31.4 +0.7**
baz=59
C12B Naegeli Ranch, 59.77 51 ⇓P **P** **09 04 32.4 +0.6**
baz=59
WALA Waterton Lakes 59.81 49 *e*P **P** **09 04 32.5 +0.3**
B13A Whitefish 59.92 50 ⇓P **P** **09 04 33.3 +0.5**
baz=60,SNR=6.1
A14A Double T Ranch 60.13 49 ⇓P **P** **09 04 34.3 0.0**
baz=60
D12A Red Ives Fores 60.23 52 ⇓P **P** **09 04 35.3 +0.3**
baz=60
C13A Hot Springs 60.28 51 ⇑P **P** **09 04 35.6 +0.3**
baz=60
KLMR Klimovskoe 60.35 329 P **P** **09 04 32.3 -3.1**
KLMR pmax pmax
comp=Z,16nm,1.6s
BMO Blue Mountains 60.44 55 *e*P **P** **09 04 36.9 +0.5**
comp=Z,3.8nm,1.2s
YBMT Yellow Bay 60.47 51 *e*P **P** **09 04 37.0 +0.4**
A15A Johnson Ranch, 60.49 49 ⇑P **P** **09 04 35.8 -0.8**
baz=60,SNR=7.1
B14A Marquette Ranc 60.57 50 ⇓P **P** **09 04 37.3 0.0**
baz=60,SNR=6.2
C14A Swan Lake 60.67 50 ⇑P **P** **09 04 38.0 +0.1**
baz=60,SNR=6.7
D13A Huson 60.69 51 ⇑P **P** **09 04 38.0 0.0**
baz=60
SWMT Swartz Lake 60.69 51 *e*P **P** **09 04 38.4 +0.3**
B15A Bradely Ranch, 60.98 49 ⇑P **P** **09 04 39.7 -0.3**
baz=61,SNR=6.1
F12A Elk City 61.06 53 ⇑P **P** **09 04 40.9 +0.3**
baz=61,SNR=8.8

SLMT **Seeley Lake** 61.13 51 *e*P P 09 04 41.4 +0.2
MSO **Missoula** 61.13 51 *e*P P 09 04 41.6 +0.5
comp=Z,8.9nm,1.1s
MSO **Missoula** 61.13 51 ⇑P P 09 04 41.4 +0.3
baz=61,SNR=6.4
D14A **Greenough** 61.22 51 ⇑P P 09 04 41.6 -0.1
baz=61,SNR=15
E13A **Victor** 61.23 52 ⇑P P 09 04 41.6 -0.2
baz=61,SNR=6.0
C15A **Salmond Ranch,** 61.28 50 ⇑P P 09 04 42.4 +0.2
baz=61,SNR=14
B16A **M & M Farms, S** 61.37 49 ⇑P P 09 04 42.8 +0.2
baz=61
G12A **Big Creek, Yel** 61.40 54 ⇓P P 09 04 43.3 +0.3
baz=61
KBL **Kabul** 61.44 291 *e*P P 09 04 43.3 -0.2
KBL pmax pmax
comp=Z,8.0nm,0.9s
KBL **Kabul** 61.44 291 *e*P P 09 04 43.3 -0.2
comp=Z,8.1nm,0.9s
CHMT **Chamberlain Mo** 61.46 51 *e*P P 09 04 43.5 +0.1
F13A **Darby** 61.55 53 ⇑P P 09 04 43.8 -0.2
baz=61,SNR=6.5
A17A **Triple J Farms** 61.57 48 ⇓P P 09 04 43.7 -0.3
baz=61,SNR=5.5
E14A **Clinton** 61.63 52 ⇓P P 09 04 44.4 -0.1
baz=61,SNR=8.1
SUMG **Summit** 61.68 3 *i* P P 09 04 44.6 -0.1
SUMG pmax pmax
comp=Z,18nm,0.9s
SUMG **Summit** 61.68 3 *e*P P 09 04 43.8 -0.9
comp=Z,27nm,0.9s
SUMG **Summit** 61.68 3 *i* P P 09 04 44.6 -0.1
comp=Z,18nm,0.9s
C16A **Fuhringer Ranc** 61.73 50 ⇑P P 09 04 45.0 -0.1
baz=61,SNR=5.0
D15A **Lincoln** 61.78 51 ⇑P P 09 04 45.6 +0.1
baz=61
B17A **L&G Farms, Che** 61.92 49 ⇑P P 09 04 46.3 -0.1
baz=62,SNR=6.2
A18A **Metzger Ranch,** 62.03 48 ⇑P P 09 04 46.8 -0.2
baz=62
G13A **Cobalt** 62.03 53 ⇑P P 09 04 47.1 -0.1
baz=62,SNR=9.7
E15A **Deer Lodge** 62.09 51 ⇑P P 09 04 47.5 -0.1
baz=62,SNR=5.5
FFC **Flin Flon** 62.10 39 *i* P P 09 04 48.1 +0.8
FFC **Flin Flon** 62.10 39 *e*P P 09 04 47.4 +0.1
comp=Z,7.0nm,1.2s
MFID **Camas Ranch** 62.16 55 ⇓P P 09 04 47.8 -0.3
baz=62
D16A **Dana Ranch, Ca** 62.31 50 ⇓P P 09 04 49.3 +0.3
baz=62,SNR=7.3
I12A **Atlanta** 62.32 55 ⇑P P 09 04 49.5 +0.3
baz=62,SNR=8.1
H13A **Challis** 62.34 54 ⇓P P 09 04 49.4 0.0
baz=62,SNR=9.6
C17A **Wharram Farm,** 62.35 49 ⇓P P 09 04 49.0 -0.2
baz=62,SNR=9.5
HRY **Holter Researc** 62.35 51 *e*P P 09 04 50.0 +0.7
comp=Z,2.1nm,0.6s
G14A **Jackson** 62.37 53 ⇓P P 09 04 49.1 -0.4
baz=62
B18A **Beardsley Farm** 62.39 48 ⇓P P 09 04 49.8 +0.3
baz=62,SNR=5.2
F15A **Butte** 62.53 52 ⇓P P 09 04 51.1 +0.4
baz=62,SNR=9.6
E16A **East Helena** 62.55 51 ⇓P P 09 04 50.6 0.0
baz=62,SNR=7.4
LRM **Limekiln Ridge** 62.57 52 *e*P P 09 04 50.8 -0.1
A19A **Klindworth Far** 62.59 47 ⇓P P 09 04 50.8 0.0
baz=62,SNR=7.3
EGMT **Eagleton** 62.64 48 *e*P P 09 04 51.5 +0.4
comp=Z,17nm,1.3s
EGMT **Eagleton** 62.64 48 ⇓P P 09 04 51.3 +0.2
baz=62,SNR=5.8
D17A **Six Diamond Ra** 62.69 50 ⇑P P 09 04 51.3 -0.3
baz=62
DLMT **Dillon** 62.77 52 *e*P P 09 04 52.8 +0.6
comp=Z,17nm,1.9s
B19A **Brinkman Farms** 62.78 48 ⇓P P 09 04 51.6 -0.4
baz=62
H14A **Leadore** 62.81 53 ⇓P P 09 04 52.3 -0.1
baz=62
I13A **Wildhorse Cree** 62.83 54 ⇑P P 09 04 53.5 +0.8
baz=62,SNR=6.5
HLID **Hailey** 62.88 55 *e*P P 09 04 53.7 +0.8
comp=Z,8.3nm,1.4s
HLID **Hailey** 62.88 55 ⇓P P 09 04 53.6 +0.7
baz=63,SNR=5.5
G15A **Dillon** 62.96 52 ⇓P P 09 04 53.3 -0.1
baz=63,SNR=10
MCMT **McKenzie Canyo** 62.97 53 *e*P P 09 04 53.6 0.0
E17A **Martinsdale** 63.03 50 ⇓P P 09 04 54.5 +0.6
baz=63,SNR=10
A20A **Cobblestone Ra** 63.04 47 ⇑P P 09 04 53.8 +0.1
baz=63
F16A **Kennard Place,** 63.04 51 ⇑P P 09 04 53.7 -0.2
baz=63
J13A **Cove Ranch, Pi** 63.11 55 ⇑P P 09 04 54.8 +0.3
baz=63,SNR=5.8
BOZ **Bozeman (W)** 63.13 51 *e*P P 09 04 55.2 +0.7
BOZ pmax pmax
comp=Z,33nm,1.9s
BOZ **Bozeman (W)** 63.13 51 *e*P P 09 04 55.2 +0.7
comp=Z,33nm,1.9s
BOZ **Bozeman (W)** 63.13 51 ⇑P P 09 04 55.0 +0.5
baz=63,SNR=7.5
D18A **Linhart Farms,** 63.13 49 ⇓P P 09 04 54.5 0.0
baz=63
C19A **Slack Wire Ran** 63.19 48 ⇑P P 09 04 55.1 +0.3
baz=63,SNR=9.9
I14A **Mackay** 63.19 54 ⇑P P 09 04 55.4 +0.4
baz=63,SNR=9.9
H15A **Lima** 63.21 53 ⇑P P 09 04 55.0 -0.2
baz=63
B20A **Solberg Farm,** 63.27 47 ⇑P P 09 04 55.2 -0.1
baz=63
G16A **Moss Hill, Enn** 63.29 52 ⇑P P 09 04 55.6 0.0
baz=63,SNR=12
E18A **Harlowton** 63.47 50 ⇓P P 09 04 57.0 +0.2
baz=63
A21A **Bergtoll Ranch** 63.47 46 ⇑P P 09 04 57.2 +0.6
baz=63,SNR=10.0
F17A **Fitzpatrick Pl** 63.49 51 ⇓P P 09 04 57.3 +0.4
baz=63
J14A **Carey** 63.53 54 ⇓P P 09 04 58.0 +0.8
baz=63,SNR=8.2
D19A **Cripps Ranch,** 63.64 49 ⇓P P 09 04 58.1 +0.3
baz=63
C20A **Veseth Ranch,** 63.74 48 ⇓P P 09 04 59.2 +0.8
baz=63
QLMT **Earthquake Lak** 63.75 52 *e*P P 09 04 59.8 +1.1
NVAR **Mina Array Bea** 63.77 61 P P 09 04 59.4 +0.4
NVAR **Mina Array Bea** 63.77 61 P P 09 04 59.4 +0.4
comp=Z,1.7nm,0.7s,baz=301,slow=7.5,SNR=13
B21A **Ellsworth Farm** 63.79 47 ⇓P P 09 04 58.9 +0.2
baz=63
G17A **Pierce Place,** 63.82 51 ⇑P P 09 04 59.3 +0.3
baz=64
NV11 **Mina Array Sit** 63.86 61 *e*P P 09 05 00.4 +1.0
SCO **Scoresbysund** 63.90 358 *i* P P 09 04 59.5 +0.5
SCO pmax pmax
comp=Z,8.0nm,1.1s
SCO **Scoresbysund** 63.90 358 *i* P P 09 04 59.5 +0.5
comp=Z,7.9nm,1.1s
H16A **Russell Place,** 63.93 52 ⇑P P 09 05 00.3 +0.4
baz=64,SNR=6.0
A22A **Carney Farms,** 63.98 46 ⇑P P 09 04 60.0 0.0
baz=64
F18A **Big Timber** 64.00 50 ⇑P P 09 05 00.7 +0.5
baz=64,SNR=7.8
D20A **Manuel Ranch,** 64.08 48 ⇓P P 09 05 01.2 +0.6
baz=64,SNR=9.3
GCMT **Greycliff** 64.10 50 *e*P P 09 05 01.9 +1.0
comp=Z,1.4nm,0.6s
J15A **Blackfoot** 64.10 54 ⇓P P 09 05 01.2 +0.3
baz=64
YMR **Madison River** 64.11 52 *e*P P 09 05 02.1 +1.0
C21A **Desert Coulee** 64.14 47 ⇓P P 09 05 01.4 +0.4
baz=64
E19A **Rath Farm, Rou** 64.14 49 ⇑P P 09 05 01.5 +0.4
baz=64,SNR=6.9
K14A **Jones Ranch, D** 64.22 55 ⇑P P 09 05 02.2 +0.5
baz=64,SNR=6.2
I16A **Newdale** 64.33 53 ⇑P P 09 05 02.8 +0.4
baz=64
F19A **Roth Farm, Mol** 64.45 50 ⇓P P 09 05 03.4 +0.3
baz=64,SNR=10.0
E20A **Meyer Farm, Mu** 64.46 49 ⇑P P 09 05 03.7 +0.6
baz=64
G18A **Lazy EL Ranch,** 64.46 51 ⇓P P 09 05 03.9 +0.6
baz=64
LKWY **Lake** 64.49 52 *e*P P 09 05 04.4 +0.8
LKWY pmax pmax
comp=Z,4.0nm,1.0s
LKWY **Lake** 64.49 52 *e*P P 09 05 04.4 +0.8
comp=Z,4.1nm,1.0s
H17A **Grant Village** 64.50 52 ⇓P P 09 05 05.1 +1.4
baz=64,SNR=5.6
L14A **Malta** 64.51 55 ⇓P P 09 05 04.5 +0.8
baz=64
IMW **Indian Meadow** 64.62 53 *e*P P 09 05 06.6 +2.1
J16A **Bone** 64.64 53 ⇓P P 09 05 05.4 +0.8
baz=64,SNR=5.7
D21A **La Casta Ranch** 64.69 48 ⇑P P 09 05 05.2 +0.6
baz=64
RLMT **Red Lodge** 64.74 51 *e*P P 09 05 05.3 +0.1
comp=Z,8.9nm,1.2s
RLMT **Red Lodge** 64.74 51 ⇑P P 09 05 05.8 +0.5
baz=64,SNR=8.5
B23A **Brockton** 64.79 46 ⇓P P 09 05 05.7 +0.4
baz=64
I17A **Pilgrim Ck.** 64.80 52 ⇑P P 09 05 06.8 +1.2
baz=64
H18A **Shoshone NF, C** 64.82 51 ⇓P P 09 05 06.2 +0.5
baz=64
MOOW **Moose Ponds** 64.82 53 *e*P P 09 05 06.5 +0.8
comp=Z,4.8nm,1.0s
TPAW **Teton Pass** 64.87 53 *e*P P 09 05 07.0 +0.8
comp=Z,9.3nm,0.9s
K16A **Soda Springs** 64.94 54 ⇑P P 09 05 07.3 +0.9
baz=65
A24A **Westby** 64.97 45 ⇑P P 09 05 06.8 +0.4
baz=65
LOHW **Long Hollow** 64.99 53 *e*P P 09 05 08.1 +1.2
comp=Z,5.4nm,0.9s
SNOW **Snow King Moun** 65.00 53 *e*P P 09 05 08.4 +1.4
SNOW *e*pP pP 09 05 26.2 -1.0
L15A **Malad City** 65.02 55 ⇓P P 09 05 07.4 +0.4
baz=65
D22A **Cohagen** 65.05 47 ⇓P P 09 05 07.3 +0.3
baz=65
J17A **Brown Place, J** 65.09 53 ⇓P P 09 05 07.9 +0.5
baz=65,SNR=7.9
DGMT **Dagmar** 65.18 45 ⇑P P 09 05 07.8 +0.1
baz=65
H19A **Powell** 65.19 51 ⇓P P 09 05 08.5 +0.5
baz=65
G20A **Bridger** 65.25 50 ⇓P P 09 05 08.5 +0.1
baz=65
ISA **Isabella** 65.42 64 ⇓P P 09 05 09.2 -0.4
baz=65
OBN **Obninsk** 65.47 325 *e*P P 09 05 09.1 -0.3
OBN *e* 09 05 31.3
OBN pmax pmax
comp=Z,5.0nm,0.9s
L16A **Fish Haven** 65.55 54 ⇓P P 09 05 10.1 -0.4
baz=65
J18A **Kendall Valley** 65.57 53 ⇑P P 09 05 10.5 -0.1
baz=65
E22A **Miles City** 65.64 48 ⇑P P 09 05 10.9 +0.1
baz=65
HWUT **Hardware Ranch** 65.74 55 *e*P P 09 05 12.5 +0.8
comp=Z,4.2nm,0.9s
MPMC **Manual Prospec** 65.78 63 ⇑P P 09 05 12.1 +0.1
baz=66
CTA **Charters Tower** 65.79 186 LR LR 09 30 57.9
comp=Z,99nm,19.2s,baz=43,slow=33
L17A **Cokeville** 65.81 54 ⇑P P 09 05 12.3 +0.1
baz=66
H20A **Greybull** 65.84 51 ⇓P P 09 05 11.6 -0.6
baz=66
M16A **Huntsville** 65.89 55 ⇑P P 09 05 12.6 -0.1
baz=66
F22A **Rosebud** 65.92 49 ⇑P P 09 05 12.8 +0.2
baz=66,SNR=5.3
K18A **Toltan Ranch,** 65.93 53 ⇓P P 09 05 13.1 +0.2
baz=66,SNR=5.9
E23A **Ismay** 65.93 47 ⇑P P 09 05 13.1 +0.5
baz=66,SNR=5.9
DUG **Dugway** 65.93 57 *e*P P 09 05 13.5 +0.6
DUG **Dugway** 65.93 57 *e*P P 09 05 13.4 +0.6
DUG **Dugway** 65.93 57 ⇑P P 09 05 14.0 +1.1
baz=66,SNR=6.3
J19A **Crowheart** 66.07 52 ⇑P P 09 05 14.4 +0.6
baz=66
BW06 **Boulder Array** 66.12 53 *e*P P 09 05 14.5 +0.3
comp=Z,6.0nm,1.0s
BW06 **Boulder Array** 66.12 53 ⇑P P 09 05 14.4 +0.3
baz=66,SNR=6.4
PDAR **Pinedale Array** 66.12 53 P P 09 05 14.1 -0.1
PDAR **Pinedale Array** 66.12 53 P P 09 05 14.1 -0.1
comp=Z,2.9nm,0.8s,baz=252,slow=2.1,SNR=22
I20A **Worland** 66.13 51 ⇑P P 09 05 14.6 +0.5
baz=66,SNR=5.4
EDW2 **Edwards Air Fo** 66.22 64 ⇓P P 09 05 14.8 +0.1
baz=66
FRB **Frobisher Bay** 66.24 18 LR LR 09 33 15.2
comp=Z,74nm,21.8s,baz=329,slow=35
H21A **Big Horn, Sher** 66.26 50 ⇓P P 09 05 15.0 +0.1
baz=66,SNR=6.7
L18A **Fontenelle, Gr** 66.40 54 ⇑P P 09 05 15.9 0.0
baz=66
K19A **Absolon Red Bu** 66.47 52 ⇑P P 09 05 16.2 -0.1
baz=66
N17A **Moffit Pass** 66.59 55 ⇑P P 09 05 17.4 +0.2
baz=66
P15A **Leamington** 66.65 57 ⇓P P 09 05 18.0 +0.5
baz=66
I21A **Big Trails, Te** 66.67 51 ⇑P P 09 05 18.2 +0.6
baz=66,SNR=7.2
O16A **Springville** 66.69 56 ⇑P P 09 05 18.1 +0.3
baz=66
DAU **Daniels Canyon** 66.70 56 *e*P P 09 05 17.6 -0.4
DAU *e**SP sP 09 05 45.9 -1.2
DAU **Daniels Canyon** 66.70 56 *e*P P 09 05 17.6 -0.4
DAU *es*P sP 09 05 45.9 -1.2
G23A **Biddle** 66.76 49 ⇓P P 09 05 17.8 -0.2
baz=66
F24A **Ekalaka** 66.81 48 ⇓P P 09 05 18.2 -0.1
baz=66
J21A **Lysite** 66.90 51 ⇑P P 09 05 18.9 -0.2
baz=67
I22A **9 Mile Ranch,** 67.05 50 ⇑P P 09 05 20.0 0.0
baz=67
G24A **Alzada** 67.18 48 ⇑P P 09 05 20.6 -0.1
baz=67
N18A **Larsen Ranch,** 67.23 54 ⇑P P 09 05 21.2 0.0
baz=67
L20A **Wamsutter** 67.30 53 ⇓P P 09 05 21.7 +0.1
baz=67
WRA **Warramunga Arr** 67.32 198 P P 09 05 22.2 +0.6
WRA **Warramunga Arr** 67.32 198 P P 09 05 22.2 +0.6
comp=Z,1.9nm,0.8s,baz=16,slow=6.9,SNR=15
WRA LR LR 09 33 04.6
comp=Z,21nm,20.9s,baz=125,slow=34
K21A **Alcova** 67.48 52 ⇑P P 09 05 22.6 -0.2
baz=67
H24A **Dirks Ranch, A** 67.50 48 ⇓P P 09 05 22.4 -0.3
baz=67
O18A **Roosevelt** 67.51 55 ⇓P P 09 05 23.3 +0.3
baz=67
N19A **John Jarvie Ra** 67.57 54 ⇑P P 09 05 23.1 -0.2
baz=67
P17A **Butcher Ranch,** 67.61 56 ⇓P P 09 05 23.7 +0.1
baz=67
M20A **Sweetwater, Wa** 67.73 53 ⇑P P 09 05 24.4 +0.1
baz=67
Q16A **Castle Valley** 67.73 57 ⇓P P 09 05 24.6 +0.2
baz=67
P18A **Preston Nutter** 67.80 56 ⇓P P 09 05 25.2 +0.3
baz=68
FITZ **Fitzroy Crossi** 67.86 207 P P 09 05 25.4 +0.4
FITZ **Fitzroy Crossi** 67.86 207 P P 09 05 25.4 +0.4
comp=Z,1.8nm,0.8s,baz=316,slow=8.0,SNR=4.1
L21A **Rawlins** 67.86 52 ⇓P P 09 05 24.9 -0.3
baz=68
K22A **Casper** 67.86 51 ⇓P P 09 05 24.6 -0.5
baz=68
ULM **Lac du Bonnet** 67.88 40 P P 09 05 23.5 -1.4
ULM **Lac du Bonnet** 67.88 40 P P 09 05 23.5 -1.4
comp=Z,1.6nm,0.5s,baz=293,slow=7.1,SNR=3.9
SRU **San Rafael** 67.98 56 *e*P P 09 05 25.9 0.0
SRU **San Rafael** 67.98 56 *e*P P 09 05 25.9 0.0
comp=Z,240nm,1.1s
SRU **San Rafael** 67.98 56 ⇓P P 09 05 25.7 -0.2
baz=68
O19A **Miners Draw (B** 67.99 55 ⇑P P 09 05 25.7 -0.3
baz=68
M21A **Separation Pea** 68.11 52 ⇓P P 09 05 26.1 -0.7
baz=68
N20A **Spence Gulch,** 68.12 54 ⇓P P 09 05 26.8 0.0
baz=68
RSSD **Black Hills** 68.20 49 *e*P P 09 05 26.7 -0.6
RSSD pmax pmax
comp=Z,4.0nm,0.8s
RSSD **Black Hills** 68.20 49 *e*P P 09 05 26.7 -0.6
comp=Z,4.3nm,0.8s
L22A **Ellis Ranch, M** 68.33 52 ⇓P P 09 05 28.4 +0.3
baz=68
IRM **Iron Mountain** 68.47 63 ⇓P P 09 05 29.1 +0.2
baz=68
P19A **Cripple Cowboy** 68.52 55 ⇑P P 09 05 29.1 -0.2
baz=68
N21A **Black Mountain** 68.59 53 ⇑P P 09 05 30.0 +0.2
baz=68
O20A **White River Ci** 68.60 54 ⇓P P 09 05 30.3 +0.5
baz=68
M22A **Cedar Creek Ra** 68.67 52 ⇓P P 09 05 30.4 +0.2
baz=68
U15A **North Rim** 68.71 59 ⇓P P 09 05 30.8 +0.2
baz=68
NB2 **NORSAR Subarra** 68.75 341 P P 09 05 29.0 -1.2
comp=Z,7.9nm,0.9s,baz=27,slow=6.5
NOA **NORSAR Array B** 68.75 341 P P 09 05 29.3 -0.9
NOA **NORSAR Array B** 68.75 341 P P 09 05 29.3 -0.9
comp=Z,1.8nm,0.5s,baz=28,slow=6.4,SNR=29
NOA LR LR 09 41 59.4
comp=Z,104nm,18.1s,baz=25,slow=42
Q19A **Hogan Spring (** 68.81 56 ⇓P P 09 05 30.9 -0.1
baz=68
HFS **Hagfors** 68.94 339 P P 09 05 30.3 -1.0
HFS **Hagfors** 68.94 339 P P 09 05 30.3 -1.0
comp=Z,3.3nm,0.3s,baz=46,slow=4.5,SNR=36
HFS LR LR 09 38 19.9
comp=Z,141nm,18.6s,baz=24,slow=38
N22A **Wattenberg Ran** 69.16 53 ⇓P P 09 05 33.8 +0.5
baz=69
S18A **Hurst Farm, Bl** 69.24 57 ⇑P P 09 05 34.0 +0.1
baz=69
AGMN **Agassiz Nation** 69.30 41 *e*P P 09 05 33.7 0.0
comp=Z,6.0nm,1.0s
PV10 **Paradox Valley** 69.33 56 *e*P P 09 05 35.7 +1.2
Q20A **Ridgley Place,** 69.37 55 ⇓P P 09 05 34.5 -0.1
baz=69
N23A **Red Feather La** 69.38 52 ⇓P P 09 05 34.8 +0.1
baz=69
PV01 **Paradox Valley** 69.77 56 *e*P P 09 05 36.8 -0.3
comp=Z,105nm,0.8s
P22A **Eagle** 69.81 54 ⇑P P 09 05 37.7 +0.3
baz=70
R20A **Redvale** 69.84 56 ⇓P P 09 05 37.8 +0.3
baz=70
Q21A **Lamborn Mesa,** 69.86 55 ⇓P P 09 05 37.9 +0.3
baz=70
WUAZ **Wupatki** 69.88 60 ⇓P P 09 05 37.8 +0.1
baz=70
SMCO **Snowmass** 69.97 54 *e*P P 09 05 38.9 +0.3
comp=Z,48nm,2.6s
N24A **Carr** 70.01 52 ⇓P P 09 05 38.8 +0.4
baz=70
R21A **Cimarron** 70.19 55 ⇑P P 09 05 40.2 +0.5
baz=70
Q22A **Crested Butte,** 70.22 54 ⇑P P 09 05 40.2 +0.3
baz=70
ISCO **Idaho Springs** 70.31 53 ⇑P P 09 05 40.3 -0.1
baz=70
MVCO **Mesa Verde** 70.44 57 ⇑P P 09 05 41.1 -0.1
baz=70
S21A **Coal Bank Pass** 70.54 56 ⇓P P 09 05 42.5 +0.5
baz=70
X16A **Lo Mia Camp, P** 70.58 60 ⇓P P 09 05 42.6 +0.6
baz=70
KIV **Kislovodsk** 70.69 314 *e*P P 09 05 44.5 +2.1
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV MLR MLR
comp=Z,286nm,19.0s
KBZ **Khabaz** 70.74 313 P P 09 05 43.0 +0.4
KBZ pmax pmax
comp=Z,4.0nm,0.8s
KBZ MLR MLR
comp=Z,404nm,18.9s
KBZ **Khabaz** 70.74 313 P P 09 05 43.0 +0.4
KBZ **Khabaz** 70.74 313 P P 09 05 43.0 +0.4
comp=Z,4.3nm,0.8s,baz=217,slow=5.1,SNR=8.8
KBZ LR LR 09 41 14.6
comp=Z,404nm,18.9s,baz=40,slow=40
R22A **Saguache, Gunn** 70.75 55 ⇓P P 09 05 43.4 +0.3
baz=70
ASAR **Alice Springs** 71.03 197 P P 09 05 45.6 +1.2
ASAR **Alice Springs** 71.03 197 P P 09 05 45.6 +1.2
comp=Z,0.9nm,0.5s,baz=12,slow=6.1,SNR=22
S22A **4UR Ranch, Cre** 71.04 55 ⇓P P 09 05 45.1 +0.2
baz=71
N27A **Anderson Farm,** 71.30 50 ⇑P P 09 05 46.8 +0.6
baz=71
R23A **Moffat** 71.30 54 ⇑P P 09 05 47.0 +0.5
baz=71
V20A **Brimhall** 71.42 58 ⇓P P 09 05 47.6 +0.5
baz=71
OGNE **Ogallala** 71.47 50 *e*P P 09 05 47.1 -0.1
comp=Z,16nm,0.8s
OGNE **Ogallala** 71.47 50 ⇓P P 09 05 47.3 +0.1
baz=71
T22A **Edith** 71.50 56 ⇑P P 09 05 48.2 +0.5
baz=71
S23A **Nye Farm, Mont** 71.54 55 ⇑P P 09 05 48.5 +0.6
baz=71
R24A **Sanders Place,** 71.68 54 ⇓P P 09 05 49.3 +0.6
baz=71
Q25A **Bedland, Calha** 71.69 53 ⇑P P 09 05 49.1 +0.4
baz=71
AKASG **Malin Array Be** 71.72 326 P P 09 05 47.7 -0.7
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG MLR MLR
comp=Z,250nm,20.7s
AKASG **Malin Array Be** 71.72 326 P P 09 05 47.7 -0.7
AKASG **Malin Array Be** 71.72 326 P P 09 05 47.7 -0.7
comp=Z,3.2nm,0.5s,baz=36,slow=6.2,SNR=8.5
AKASG LR LR 09 39 28.4
comp=Z,250nm,20.7s,baz=45,slow=38
KIEV **Kiev** 71.73 326 *e*P P 09 05 47.4 -1.1
KIEV pmax pmax
comp=Z,5.0nm,0.8s
KIEV **Kiev** 71.73 326 *e*P P 09 05 47.4 -1.1
comp=Z,5.1nm,0.8s
AK01 **Malin Array Si** 71.73 326 *e*P P 09 05 47.7 -0.8
AK02 **Malin Array Si** 71.77 326 *e*P P 09 05 47.9 -0.8
U22A **Llaves** 71.97 56 ⇓P P 09 05 50.6 +0.2
baz=72
Q26A **Hugo** 72.08 52 ⇑P P 09 05 51.4 +0.4
baz=72
ECSD **EROS Data Cent** 72.26 45 *e*P P 09 05 51.3 -0.5
comp=Z,8.7nm,1.0s
X20A **Quemado** 72.27 59 ⇓P P 09 05 52.7 +0.5
baz=72
GNI **Garni** 72.33 310 LR LR 09 41 12.5
comp=Z,264nm,19.0s,baz=225,slow=39
U23A **El Rito** 72.38 56 ⇑P P 09 05 53.6 +0.7
baz=72
S25A **Robets Cordova** 72.46 54 ⇓P P 09 05 54.0 +0.7
baz=72
T24A **Torres, Weston** 72.52 55 ⇑P P 09 05 54.2 +0.4
baz=72
R26A **Arlington** 72.56 53 ⇓P P 09 05 54.1 +0.2
baz=72
ANN **Anapa** 72.65 317 *e*P P 09 05 56.0 +2.0
ANN *e* 09 06 12.9
ANN pmax pmax
comp=Z,14nm,0.9s
X21A **Alamocita Cree** 72.76 58 ⇓P P 09 05 56.0 +0.8
baz=72
Y20A **Horse Springs,** 72.78 59 ⇑P P 09 05 55.8 +0.5
baz=72
V23A **Ortiz Mt. (NFS** 72.80 56 ⇑P P 09 05 55.8 +0.4
baz=72
T25A **Trinidad** 72.84 54 ⇓P P 09 05 55.6 0.0
baz=72
R27A **Eads** 72.93 52 ⇓P P 09 05 55.6 -0.4
baz=73
SPMN **St. Paul** 72.98 42 ⇑P P 09 05 55.9 -0.2

baz=73
S26A Kim 73.03 53 ⇑P P 09 05 56.6 0.0
baz=73
X22A Bernardo 73.17 58 ⇓P P 09 05 57.6 0.0
baz=73
T26A Comanche Natio 73.28 54 ⇑P P 09 05 57.6 -0.6
baz=73
V24A Rampart Ranch, 73.34 56 ⇑P P 09 05 58.9 +0.3
baz=73
U25A Circle Dot Ran 73.36 55 ⇑P P 09 05 59.0 +0.3
baz=73
Z21A St. Cloud Mine 73.61 59 ⇓P P 09 06 00.7 +0.5
baz=73
319A Douglas 73.98 61 ⇓P P 09 06 03.0 +0.7
baz=74
Z22A Elephant Butte 74.07 59 ⇑P P 09 06 03.3 +0.5
baz=74
121A Cookes Peak, D 74.09 60 ⇓P P 09 06 03.3 +0.3
baz=74
Y23A Lovelace Mesa, 74.14 58 ⇑P P 09 06 03.5 +0.3
baz=74
W25A X Bar L Ranch, 74.17 56 ⇓P P 09 06 03.4 0.0
baz=74
320A Kipp Ranch, An 74.47 61 ⇓P P 09 06 05.6 +0.4
baz=74
Y24A Capitan 74.51 57 ⇓P P 09 06 05.9 +0.5
baz=74
X25A Clemmons Ranch 74.54 56 ⇑P P 09 06 06.0 +0.5
baz=74
SCHQ Schefferville 74.54 22 P P 09 06 03.9 -1.1
SCHQ Schefferville 74.54 22 P P 09 06 03.9 -1.1
comp=Z,2.7nm,0.8s,baz=0.1,slow=6.6,SNR=4.3
BUR08 Bucovina Ar. S 75.75 326 eP P 09 06 12.4 +0.1
224A Cornudas Mount 75.77 59 ⇑P P 09 06 12.8 +0.2
baz=76
KOLS Kolonicke sedl 75.81 328 eP P 09 06 12.5 +0.1
Z26A Caprock 75.83 57 ⇑P P 09 06 13.4 +0.5
baz=76
Y27A Causey 75.86 56 ⇓P P 09 06 13.7 +0.6
baz=76
AMTX Amarillo 76.00 54 ⇑P P 09 06 14.4 +0.6
baz=76
TESR 76.09 324 ⇑iP P 09 06 14.0 0.0
MNTX Cornudas Mount 76.12 59 ⇓P P 09 06 15.0 +0.5
baz=76
CRVS Cervenica-Dubn 76.13 329 eP P 09 06 14.0 -0.2
324A Moseley Ranch, 76.24 59 ⇑P P 09 06 15.4 +0.1
baz=76
Z27A Tatum 76.24 56 ⇑P P 09 06 15.7 +0.5
baz=76
TLCR 76.25 322 ⇑P P 09 06 15.1 +0.2
TLCR 76.25 322 ⇑iP P 09 06 15.1 +0.2
TRPA Tarpa 76.37 328 ⇑iP P 09 06 16.1 +0.5
TRPA Tarpa 76.37 328 ⇑eP P 09 06 16.0 +0.5
OKC Ostrava-Krasne 76.50 331 eP P 09 06 17.5 +1.3
CFR Carcaliu 76.55 323 ⇑P P 09 06 17.1 +0.5
CFR Carcaliu 76.55 323 ⇑iP P 09 06 17.1 +0.5
226B Tecolote Peak, 76.57 58 ⇑P P 09 06 17.6 +0.5
baz=76
DPC Dobruska-Polom 76.66 332 eP P 09 06 18.7 +1.5
DPC pmax pmax
comp=Z,16nm,1.2s
DPC Dobruska-Polom 76.66 332 eP P 09 06 18.7 +1.5
comp=Z,16nm,1.2s
DPC Dobruska-Polom 76.66 332 eP P 09 06 17.6 +0.4
DPC AMS AMS 09 44 00.0
comp=Z,200nm,13.7s
MORC Moravsky Berou 76.75 331 eP P 09 06 18.0 +0.2
MORC pmax pmax
comp=Z,11nm,1.0s
MORC Moravsky Berou 76.75 331 eP P 09 06 18.0 +0.2
comp=Z,11nm,1.0s
MORC Moravsky Berou 76.75 331 ⇑iP P 09 06 17.9 +0.2
CLL Collm 76.86 335 eP P 09 06 18.0 -0.2
CLL pmax pmax
comp=Z,20nm,1.2s
CLL Collm 76.86 335 eP P 09 06 18.0 -0.2
comp=Z,20nm,1.2s
CLL Lm MLR 09 44 00.0
comp=Z,100nm,20.2s
BRG Berggiesshubel 76.96 334 eP P 09 06 19.4 +0.6
comp=Z,5.6nm,1.0s
BRG e 09 11 51.9
comp=Z,3.4nm,1.1s
BRG Berggiesshubel 76.96 334 eP P 09 06 19.4 +0.6
BRG pmax pmax
comp=Z,6.0nm,1.0s
BRG pmax pmax
comp=Z,3.0nm,1.1s
EKA Eskdalemuir Ar 76.97 346 P P 09 06 18.9 +0.2
EKA Eskdalemuir Ar 76.97 346 P P 09 06 18.9 +0.2
comp=Z,0.9nm,0.3s,baz=20,slow=5.3,SNR=12
425A Indio Mountain 77.00 59 ⇑P P 09 06 20.4 +0.8
baz=77
TIRR Tirgusor 77.00 322 ⇑P P 09 06 19.2 0.0
TIRR Tirgusor 77.00 322 ⇑iP P 09 06 19.2 0.0
MALT Malatya 77.01 312 eP P 09 06 21.3 +1.8
MALT pmax pmax
comp=Z,6.0nm,0.9s
MALT Malatya 77.01 312 eP P 09 06 21.3 +1.8
comp=Z,6.3nm,0.9s
MALT Malatya 77.01 312 ⇑iP P 09 06 21.2 +1.8
Z29A Hungry Hill Ra 77.16 55 ⇑P P 09 06 20.5 +0.1
baz=77
128A Castleberry Fa 77.17 56 ⇓P P 09 06 20.8 +0.4
baz=77
MLR Muntele Rosu 77.21 324 P P 09 06 21.4 +1.0
MLR Muntele Rosu 77.21 324 P P 09 06 21.4 +1.0
comp=Z,1.7nm,0.6s,baz=191,slow=2.8,SNR=14
MLR LR LR 09 42 18.6
comp=Z,42nm,21.6s,baz=310,slow=37
326A Caldwell Ranch 77.23 58 ⇓P P 09 06 21.2 +0.4
baz=77
VYHS Vyhne 77.41 330 eP P 09 06 21.6 +0.2
VRAC Vranov 77.47 332 ⇑iP P 09 06 21.8 0.0
VRAC Vranov 77.47 332 LR LR 09 43 45.0
comp=Z,144nm,21.9s,baz=167,slow=38
PSZ Piszkesteto 77.52 329 ⇓eP P 09 06 23.0 +0.9
PRU Pruhonice 77.55 333 eP P 09 06 23.3 +1.2
PRU AMS AMS 09 44 20.0
comp=Z,200nm,18.6s
VOIR 77.62 325 ⇓P P 09 06 23.4 +0.7
VOIR 77.62 325 ⇓iP P 09 06 23.4 +0.7
ARR Arges 77.84 325 ⇓iP P 09 06 24.4 +0.5
TREC Trest 77.85 332 eP P 09 06 24.3 +0.5
TREC MLR MLR
comp=Z,300nm,18.7s
TREC Trest 77.85 332 eP P 09 06 24.3 +0.5
TREC AMS AMS 09 43 50.0
comp=Z,300nm,18.7s
328A Wristen Ranch, 77.87 57 ⇑P P 09 06 25.0 +0.7
baz=78
STKA Stephens Creek 77.88 189 LR LR 09 45 40.8
comp=Z,78nm,18.0s,baz=25,slow=39
Z31A Sharp Cattle R 78.01 54 ⇑P P 09 06 25.3 +0.3
baz=78
526A Mary Lane Ranc 78.06 59 ⇑P P 09 06 26.0 +0.5
baz=78
BUD Budapest 78.20 329 ⇓eP P 09 06 26.9 +1.1
MIB Mutribah 78.25 301 eP P 09 06 27.1 +0.7
MIB AMb AMB 09 06 29.0
comp=Z,34nm,0.9s
329A Wagon Wheel Ra 78.28 57 ⇑P P 09 06 27.2 +0.6
baz=78
BR131 Keskin Array S 78.34 316 eP P 09 06 27.4 +0.5
comp=Z,3.4nm,0.8s
BRTR Keskin Array B 78.34 316 P P 09 06 26.9 0.0
BRTR Keskin Array B 78.34 316 P P 09 06 26.9 0.0
comp=Z,4.7nm,0.8s,baz=90,slow=3.6,SNR=18
BRTR LR LR 09 46 54.6
comp=Z,128nm,18.5s,baz=213,slow=40
Z32A Haskell 78.39 54 ⇓P P 09 06 27.3 +0.2
baz=78
626A Big Bend Ranch 78.40 60 ⇓P P 09 06 27.7 +0.4
baz=78
KHC Kasperske Hory 78.60 333 eP P 09 06 28.6 +0.6
KHC pmax pmax
comp=Z,11nm,0.8s
KHC Kasperske Hory 78.60 333 eP P 09 06 28.6 +0.6
comp=Z,10nm,0.8s
KHC Kasperske Hory 78.60 333 eP P 09 06 28.7 +0.7
KHC AMS AMS 09 45 10.0
comp=Z,200nm,11.8s
NAY Al-Naaiem 78.71 300 eP P 09 06 29.6 +0.7
NAY AMb AMB 09 06 31.5
comp=Z,16nm,1.1s
RDF Al-Radifah 78.75 300 eP P 09 06 30.1 +0.9
RDF AMb AMB 09 06 32.1
comp=Z,46nm,1.1s
528A Cox Ranch, San 78.77 58 ⇓P P 09 06 30.0 +0.7
baz=78
GERES GERESS Array B 78.81 333 LR LR 09 45 28.5
comp=Z,150nm,18.6s,baz=49,slow=39
BZS Buzias 78.82 327 ⇑P P 09 06 30.5 +1.3
BZS Buzias 78.82 327 ⇑iP P 09 06 30.5 +1.3
TXAR Lajitas Array 78.84 59 P P 09 06 30.0 +0.2
TXAR Lajitas Array 78.84 59 P P 09 06 30.0 +0.2
comp=Z,1.0nm,0.6s,baz=303,slow=4.4,SNR=16
SOP Sopron 78.89 331 ⇓eP P 09 06 31.0 +1.4
CONA Conrad Observa 78.91 331 ⇑iP P 09 06 30.4 +0.6
comp=Z,12nm,1.0s
CONA Conrad Observa 78.91 331 ⇑iP P 09 06 30.4 +0.6
comp=Z,12nm,1.0s
529A Stev Forest Ra 79.13 58 ⇑P P 09 06 31.5 +0.2
baz=79
232A Coleman 79.34 55 ⇓P P 09 06 32.7 +0.3
baz=79
332A Millersview 79.66 55 ⇑P P 09 06 34.7 +0.6
baz=79
431A Sonora 79.67 57 ⇑P P 09 06 34.0 -0.2
baz=79
BCLA Clavier 79.78 339 P P 09 06 35.9 +1.6
comp=Z,20nm,2.2s
MPEP Malo Peshtene 79.86 324 P P 09 06 34.8 -0.2
432A Menard 80.00 56 ⇑P P 09 06 36.4 +0.4
baz=80
531A Rocksprings 80.09 57 ⇑P P 09 06 36.7 +0.2
baz=80
GIVF Givet 80.19 339 eP P 09 06 36.4 -0.2
GIVF Givet 80.19 339 eP P 09 06 36.4 -0.2
GIVF Givet 80.19 339 eP P 09 06 36.4 -0.2
SOKA Soboth 80.28 331 ⇑iP P 09 06 38.3 +1.1
comp=Z,21nm,1.5s
SOKA Soboth 80.28 331 ⇑iP P 09 06 38.3 +1.1
comp=Z,21nm,1.5s
BAIF Baives 80.39 339 eP P 09 06 37.5 -0.1
BAIF Baives 80.39 339 eP P 09 06 37.5 -0.1
BAIF Baives 80.39 339 eP P 09 06 37.5 -0.1
532A Rocksprings 80.49 56 ⇑P P 09 06 38.9 +0.3
baz=80
631A Perdido Creek 80.62 57 ⇑P P 09 06 39.6 +0.3
baz=80
VTS Vitosha 80.72 324 ⇑P P 09 06 40.7 +1.0
VTS Vitosha 80.72 324 ⇑iP P 09 06 40.7 +1.0
VTS Vitosha 80.72 324 P P 09 06 39.4 -0.3
WTTA Wattenberg 80.86 334 P 09 06 41.3 +0.9
CDF Champ du Feu 81.10 337 eP P 09 06 41.5 -0.1
comp=Z,22nm,0.9s
CDF Champ du Feu 81.10 337 eP P 09 06 41.5 -0.1
CDF pmax pmax
comp=Z,22nm,0.9s
CDF Champ du Feu 81.10 337 eP P 09 06 41.5 -0.1
comp=Z,22nm,0.9s
MMB Musomiste 81.33 323 P P 09 06 43.0 +0.1
PAGF Fort de Pagny 81.39 338 eP P 09 06 43.4 +0.4
comp=Z,15nm,0.8s
PAGF Fort de Pagny 81.39 338 eP P 09 06 43.4 +0.4
comp=Z,15nm,0.8s
PMOR Pomariorio Ree 81.43 122 eT T 10 36 07.2
comp=Z,11nm,0.2s
MEZF Maizieres J'vi 81.61 338 eP P 09 06 44.4 +0.2
MEZF Maizieres J'vi 81.61 338 eP P 09 06 44.4 +0.2
HAU Haudompre 81.72 337 eP P 09 06 44.6 -0.2
comp=Z,19nm,0.7s
HAU eR
comp=Z,127nm,20.0s
HAU Haudompre 81.72 337 eP P 09 06 44.6 -0.2
HAU pmax pmax
comp=Z,19nm,0.7s
HAU Haudompre 81.72 337 eP P 09 06 44.6 -0.2
comp=Z,19nm,0.7s
HINF Hinteralfeld 81.76 337 eP P 09 06 44.6 -0.4
comp=Z,7.0nm,0.7s
HINF Hinteralfeld 81.76 337 eP P 09 06 44.6 -0.4
HINF pmax pmax
comp=Z,7.0nm,0.6s
HINF Hinteralfeld 81.76 337 eP P 09 06 44.6 -0.4
comp=Z,7.0nm,0.6s
DAVOX Davos/Dischmat 81.83 335 P P 09 06 46.0 +0.4
DAVOX Davos/Dischmat 81.83 335 P P 09 06 46.0 +0.4
comp=Z,5.0nm,0.8s,baz=19,slow=9.4
DAVOX LR LR 09 46 26.4
comp=Z,109nm,20.8s,baz=253,slow=38
FUORN Ofenpass-Fuorn 81.86 334 eP P 09 06 46.7 +0.9
comp=Z,40nm,1.7s
SFTF Sexfontaines 81.89 338 eP P 09 06 45.6 0.0
comp=Z,41nm,0.8s
SFTF Sexfontaines 81.89 338 eP P 09 06 45.6 0.0
comp=Z,41nm,0.8s
TUE Stuetta 82.27 335 eP P 09 06 48.4 +0.5
comp=Z,38nm,1.8s
PPT Papeete 82.47 125 LR LR 09 36 01.6
comp=Z,299nm,21.8s,baz=346,slow=30
ASF Jabal al Asfar 82.48 309 P P 09 06 49.9 +0.8
ASF Jabal al Asfar 82.48 309 P P 09 06 49.9 +0.8
comp=Z,1.2nm,0.3s,baz=266,slow=3.7,SNR=3.7
ASF LR LR 09 48 50.9
comp=Z,78nm,18.6s,baz=264,slow=40
PPT2 Papeete2 82.49 125 eLR LR 09 32 51.2
comp=Z,243nm,22.5s,baz=318
MMAI Mount Meron Ar 82.63 311 P P 09 06 50.5 +0.6
MMAI Mount Meron Ar 82.63 311 P P 09 06 50.5 +0.6
comp=Z,0.7nm,0.3s,baz=57,slow=6.1,SNR=3.9
MMAI LR LR 09 48 30.3
comp=Z,254nm,19.4s,baz=100,slow=39
FLN La Foliniere 82.69 342 eP P 09 06 49.5 -0.3
FLN eR
comp=Z,109nm,22.5s
FLN La Foliniere 82.69 342 eP P 09 06 49.5 -0.3
FLN La Foliniere 82.69 342 eP P 09 06 49.5 -0.3
LDF La Druitiere 82.77 342 eP P 09 06 49.8 -0.4
LDF La Druitiere 82.77 342 eP P 09 06 49.8 -0.4
LDF La Druitiere 82.77 342 eP P 09 06 49.8 -0.4
GRR Gorron 83.12 342 eP P 09 06 52.0 0.0
GRR Gorron 83.12 342 eP P 09 06 52.0 0.0
GRR Gorron 83.12 342 eP P 09 06 52.0 0.0
SSF Saint Saulge 83.34 339 eP P 09 06 53.5 +0.3
SSF Saint Saulge 83.34 339 eP P 09 06 53.5 +0.3
SSF Saint Saulge 83.34 339 eP P 09 06 53.5 +0.3
AVF Avril sur Loir 83.63 339 eP P 09 06 55.1 +0.4
comp=Z,68nm,1.3s
AVF Avril sur Loir 83.63 339 eP P 09 06 55.1 +0.4
AVF pmax pmax
comp=Z,68nm,1.3s
AVF Avril sur Loir 83.63 339 eP P 09 06 55.1 +0.4
comp=Z,68nm,1.3s
SMF Signal de Mont 83.64 338 eP P 09 06 55.1 +0.3
comp=Z,53nm,1.1s
SMF Signal de Mont 83.64 338 eP P 09 06 55.1 +0.3
SMF pmax pmax
comp=Z,53nm,1.1s
SMF Signal de Mont 83.64 338 eP P 09 06 55.1 +0.3
comp=Z,53nm,1.1s
LPG La Plagne 83.91 336 eP P 09 06 57.3 +0.8
comp=Z,13nm,0.9s
LPG La Plagne 83.91 336 eP P 09 06 57.3 +0.8
LPG pmax pmax
comp=Z,13nm,0.9s
LPG La Plagne 83.91 336 eP P 09 06 57.3 +0.8
comp=Z,13nm,0.9s
MFF Saint Martin d 84.65 341 eP P 09 07 00.2 +0.3
MFF Saint Martin d 84.65 341 eP P 09 07 00.2 +0.3
MFF Saint Martin d 84.65 341 eP P 09 07 00.2 +0.3
EIL Elat 85.47 309 P P 09 07 05.8 +1.6
EIL Elat 85.47 309 P P 09 07 05.8 +1.6
comp=Z,6.4nm,0.8s,baz=340,slow=7.6,SNR=4.3
EIL LR LR 09 50 13.2
comp=Z,134nm,18.2s,baz=95,slow=39
CAF Calviac 85.69 339 eP P 09 07 05.2 0.0
CAF Calviac 85.69 339 eP P 09 07 05.2 0.0
CAF Calviac 85.69 339 eP P 09 07 05.2 0.0
PGF Pioggiola 85.92 333 eP P 09 07 06.8 +0.4
PGF Pioggiola 85.92 333 eP P 09 07 06.8 +0.4
PGF Pioggiola 85.92 333 eP P 09 07 06.8 +0.4
LFF La Frestale 86.01 340 eP P 09 07 06.2 -0.4
LFF La Frestale 86.01 340 eP P 09 07 06.2 -0.4
LFF La Frestale 86.01 340 eP P 09 07 06.2 -0.4
TIP Timpagrande 86.18 326 eP P 09 07 07.6 -0.1
TIP epP pP 09 07 22.6 -6.4
TBI Tubuai 87.14 128 eLR LR 09 34 55.7
comp=Z,153nm,28.5s,baz=324
TBI eT T 10 43 16.8
comp=Z,6.7nm,0.2s
KEST Kesra 91.96 330 LR LR 09 51 26.1
comp=Z,64nm,21.4s,baz=308,slow=37
DBIC Dimbokro 123.66 332 PKP PKPdf 09 13 23.3 -0.7
DBIC Dimbokro 123.66 332 PKP PKPdf 09 13 23.3 -0.7
comp=Z,1.9nm,0.7s,baz=49,slow=2.9,SNR=3.8
QSPA South Pole Qui 135.57 180 PKP PKPdf 09 13 46.5 +1.5
QSPA South Pole Qui 135.57 180 PKP PKPdf 09 13 46.5 +1.5
comp=Z,1.0nm,0.7s,baz=222,slow=4.9,SNR=9.2
CPUP Villa Florida 149.81 60 PKPbc PKPbc 09 14 16.4 +0.4
CPUP Villa Florida 149.81 60 PKPbc PKPbc 09 14 16.4 +0.4
comp=Z,2.4nm,0.6s,baz=321,slow=2.8,SNR=9.1
SNAA Sanae 151.39 197 eP PKPbc 09 14 18.6 +0.1
SNAA Sanae 151.39 197 PKPbc PKPbc 09 14 18.8 +0.4
SNAA Sanae 151.39 197 PKPbc PKPbc 09 14 18.8 +0.4
comp=Z,0.9nm,0.6s,baz=170,slow=5.1,SNR=20
VNA2 Neumayer--Watz 152.86 195 eP PKPbc 09 14 22.6 +0.9
baz=24,slow=1.2

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*ISCJB **08** 09:06:50.6±0.5, 71°.95N±0°.06×1°.0W±0°.2, h10km, mb3.7/13, MS3.5/1, Error ellipse: s-maj=10.5km s-min=6.5km az=44.9*

*IDC **08** 09:06:51.3±0.6, 71°.89N×1°.61W, h0km, mb3.8/13, mb1 4.0/17, mb1mx3.8/34, mbtmp3.8/17, ML3.9/4, MS3.0/5, Ms1 3.0/5, ms1mx2.7/48, Error ellipse: s-maj=22.1km s-min=12.0km az=53.0*

*BER **08** 09:06:56.4±3.2, 71°.90N×1°.05W, h10km, ML2.5*

ISC 08 09:06:52.8±0.6, 71°.98N±0°.08×1°.05W±0°.08, h10km, n31, σ1§66/29, mb3.8/13, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LOF	**Lofoten**	**6.30**	**121**	*eP*		Pn	09 08 13.2	-12
LOF				*eS*		Sn	09 09 19.2	-18
LOF				AML	AML	09 09 22.9	
	comp=Z,6.9nm,0.7s						
STEI	**Steigen**	**6.90**	**118**	*eP*		**Pn**	**09 08 34.2**	**+0.4**
TRO	**Tromso**	**6.98**	**100**	*eP*		**Pn**	**09 08 34.5**	**-0.4**
KONS	**Konsvik**	**7.44**	**131**	*eP*		**Pn**	**09 08 38.9**	**-2.4**
KONS				AML	AML	09 10 03.0	
	comp=Z,5.7nm,0.8s						
STOK	**Stokkvaagen**	**7.55**	**132**	*e*		**Pn**	**09 08 42.9**	**+0.1**
STOK				AML	AML	09 10 05.2	
	comp=Z,7.6nm,0.6s						
SPA0	**Spitsbergen Ar**	**7.63**	**28**	*eP*		**Pn**	**09 08 44.8**	**+1.0**
SPITS	**Spitsbergen Ar**	**7.63**	**28**	Pn		**Pn**	**09 08 44.4**	**+0.6**
	baz=206,slow=15,SNR=137						
FLOS	**Flostrand**	**7.63**	**131**	*eP*		**Pn**	**09 08 43.6**	**-0.3**
FLOS				AML	AML	09 10 10.2	
	comp=Z,7.5nm,0.6s						
MOR8	**Moi Rana**	**8.02**	**129**	*eP*		**Pn**	**09 08 50.4**	**+1.1**
MOR8				AML	AML	09 10 18.4	
	comp=Z,4.3nm,0.3s						
KTK1	**Kautokeino**	**8.61**	**98**	*eP*		**Pn**	**09 08 57.5**	**+0.2**
ARCES	**ARCESS Array B**	**9.06**	**93**	Pn		**Pn**	**09 09 02.8**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=296,slow=12,SNR=41						
ARCES				Sn		**Sn**	**09 10 40.1**	**-5.1**
	baz=306,slow=20,SNR=1.8						
ARCES				LR	LR	09 12 14.3	
	comp=Z,88nm,19.8s,baz=183,slow=35						
ARE0	**ARCESS Array S**	**9.06**	**93**	*eP*		**Pn**	**09 09 03.6**	**+0.2**
NOA	**NORSAR Array B**	**11.99**	**150**	Pn		**Pn**	**09 09 42.4**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=331,slow=12,SNR=3.4						
NOA				LR	LR	09 14 03.7	
	comp=Z,41nm,19.6s,baz=355,slow=36						
HFS	**Hagfors**	**13.25**	**146**	Pn		**Pn**	**09 10 00.1**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=345,slow=11,SNR=9.5						
HFS				LR	LR	09 14 31.1	
	comp=Z,45nm,21.7s,baz=0.4,slow=35						
EKA	**Eskdalemuir Ar**	**16.74**	**184**	Pn		**Pn**	**09 10 46.2**	**-0.9**
	baz=341,slow=23,SNR=3.5						
SFJD	**Kangerlussuaq**	**17.60**	**278**	LR	LR	09 16 28.3	
	comp=Z,50nm,20.6s,baz=30,slow=33						
CLL	**Collm**	**21.68**	**156**	*eP*		**P**	**09 11 47.0**	**+3.7**
GERES	**GERESS Array B**	**24.18**	**156**	P		**P**	**09 12 08.9**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=350,slow=7.3,SNR=6.2						
RES	**Resolute Bay**	**24.41**	**320**	P		**P**	**09 12 09.5**	**-1.3**
	comp=Z,1.4nm,1.0s,baz=44,slow=5.4,SNR=3.6						
AKASG	**Malin Array Be**	**25.27**	**131**	P		**P**	**09 12 17.9**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=329,slow=9.7,SNR=4.8						
FRB	**Frobisher Bay**	**25.29**	**286**	P		**P**	**09 12 16.4**	**-2.4**
	comp=Z,2.3nm,1.0s,baz=63,slow=22,SNR=3.1						
KBZ	**Khabaz**	**35.21**	**119**	P		**P**	**09 13 48.9**	**+2.2**
	comp=Z,1.9nm,0.9s,baz=358,slow=11,SNR=6.5						
INK	**Inuvik**	**36.47**	**333**	P		**P**	**09 13 57.4**	**+0.1**
	comp=Z,6.8nm,1.1s,baz=18,slow=9.9,SNR=16						
BRTR	**Keskin Array B**	**36.65**	**133**	P		**P**	**09 14 00.6**	**+1.3**
	comp=Z,0.9nm,0.9s,baz=330,slow=7.1,SNR=3.8						
YKA	**Yellowknife Ar**	**38.37**	**317**	P		**P**	**09 14 12.9**	**-0.6**
	comp=Z,2.7nm,1.1s,baz=24,slow=9.0,SNR=26						
ILAR	**Eielson Array**	**41.56**	**339**	P		**P**	**09 14 41.0**	**+1.1**
	comp=Z,1.7nm,1.0s,baz=2.3,slow=6.8,SNR=21						
MKAR	**Makanchi Array**	**44.33**	**78**	P		**P**	**09 15 04.2**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=352,slow=7.3,SNR=6.0						
ULM	**Lac du Bonnet**	**44.61**	**294**	LR	LR	09 35 34.4	
	comp=Z,61nm,19.7s,baz=355,slow=39						
TORD	**Torodi Ar. Bea**	**58.83**	**177**	P		**P**	**09 16 51.6**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=357,slow=8.8,SNR=9.8						
TXAR	**Lajitas Array**	**66.18**	**291**	P		**P**	**09 17 39.8**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=39,slow=7.2,SNR=3.5						
MJAR	**Matsushiro Arr**	**68.07**	**35**	P		**P**	**09 17 52.2**	**0.0**
	comp=Z,0.7nm,0.7s,baz=354,slow=7.0,SNR=4.1						

IDC 08 09:14:04.2±1.6, 3°.88N×126°.54E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/24, mbtmp3.6/5, MS3.9/2, Ms1 3.9/2, ms1mx2.7/35, Error ellipse: s-maj=105.5km s-min=22.2km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.86**	**182**	P	P	09 18 58.5	-0.2
	0.9nm,0.5s,baz=15,slow=11,SNR=5.0						
WRA	**Warramunga Arr**	**24.88**	**162**	P	P	09 19 28.8	-0.2
	1.8nm,0.8s,baz=342,slow=10,SNR=16						
PSI	**Prapat**	**27.59**	**269**	LR	LR	09 31 44.5	
	comp=Z,179nm,18.1s,baz=9.3,slow=38						
ASAR	**Alice Springs**	**28.30**	**166**	P	P	09 19 59.5	-0.3
	0.3nm,0.8s,baz=340,slow=6.4,SNR=4.9						
STKA	**Stephens Creek**	**38.34**	**159**	P	P	09 21 27.3	+0.3
	1.0nm,0.7s,baz=330,slow=11,SNR=2.9						
MKAR	**Makanchi Array**	**57.33**	**325**	P	P	09 23 54.1	-0.1
	0.3nm,0.4s,baz=118,slow=7.6,SNR=11						
KMBO	**Kilima Mbogo**	**89.36**	**269**	LR	LR	10 04 08.5	
	comp=Z,71nm,18.3s,baz=94,slow=34						

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*CSEM **08** 09:18:13.0, 42°.27N×13°.56E, h9km, After ROM*

ROM 08 09:18:13.0±0.1, 42°.27N×13°.56E, h9km, Ml2.5/15, Error ellipse: s-maj=1.2km s-min=0.9km az=57.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.02**	**100**	Pg	Pg	09 18 14.6	-0.2
FAGN				Sg	Sg	09 18 15.7	-0.3
FAGN	**Fagnano**	**0.02**	**100**	Pg	Pg	09 18 14.6	-0.2
FAGN				Sg	Sg	09 18 15.7	-0.3
AQU	**L'Aquila**	**0.15**	**306**	Pg	Pg	09 18 17.1	+0.8
AQU				Sg	Sg	09 18 19.7	+1.0
AQU	**L'Aquila**	**0.15**	**306**	Pg	Pg	09 18 17.1	+0.8
AQU				Sg	Sg	09 18 19.7	+1.0
VCEL	**Villa Celiera**	**0.24**	**59**	Pg	Pg	09 18 19.2	+1.1
VCEL				Sg	Sg	09 18 22.4	+0.8
	670nm,0.5s						
VCEL	**Villa Celiera**	**0.24**	**59**	Pg	Pg	09 18 19.2	+1.1
VCEL				Sg	Sg	09 18 22.4	+0.8
	670nm,0.5s						
PTQR	**Pietraquaria**	**0.28**	**206**	Pg	Pg	09 18 19.2	+0.5
PTQR				Sg	Sg	09 18 23.7	+1.2
	200nm,0.4s						
PTQR	**Pietraquaria**	**0.28**	**206**	Pg	Pg	09 18 19.2	+0.5
PTQR				Sg	Sg	09 18 23.7	+1.2
	200nm,0.4s						
CAMP	**Campotosto**	**0.29**	**337**	Pg	Pg	09 18 19.4	+0.4
CAMP				Sg	Sg	09 18 24.1	+1.0
	614nm,0.4s						
CAMP	**Campotosto**	**0.29**	**337**	Pg	Pg	09 18 19.4	+0.4
CAMP				Sg	Sg	09 18 24.1	+1.0
	614nm,0.4s						
FIAM	**Fiamignano**	**0.33**	**270**	Pg	Pg	09 18 20.1	+0.4
FIAM				Sg	Sg	09 18 25.3	+1.1
	570nm,0.7s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FIAM	Fiamignano	0.33	270	Pg	Pg	09 18 20.1	+0.4
FIAM				Sg	Sg	09 18 25.3	+1.1
	570nm,0.7s						
TERO	Teramo	0.35	5	Pg	Pg	09 18 20.5	+0.4
TERO				Sg	Sg	09 18 25.9	+1.0
TERO	Teramo	0.35	5	Pg	Pg	09 18 20.5	+0.4
TERO				Sg	Sg	09 18 25.9	+1.0
INTR	Introdacqua	0.36	135	Pg	Pg	09 18 20.8	+0.5
INTR				Sg	Sb	09 18 27.0	-0.6
	1μm,0.8s						
INTR	Introdacqua	0.36	135	Pg	Pg	09 18 20.8	+0.5
INTR				Sg	Sb	09 18 27.0	-0.6
	1μm,0.8s						
VVLD	Villa Vallelon	0.40	174	Pg	Pg	09 18 21.5	+0.5
	533nm,0.7s						
VVLD	Villa Vallelon	0.40	174	Pg	Pg	09 18 21.5	+0.5
	533nm,0.7s						
GUAR	Guarcino	0.51	202	Pg	Pg	09 18 23.2	+0.2
	253nm,0.6s						
GUAR	Guarcino	0.51	202	Pg	Pg	09 18 23.2	+0.2
	253nm,0.6s						
LNSS	Leonessa	0.51	311	Pg	Pg	09 18 23.4	+0.3
LNSS	Leonessa	0.51	311	Pg	Pg	09 18 23.4	+0.3
CERT	Cerreto	0.54	234	Pg	Pg	09 18 23.7	+0.2
	526nm,0.5s						
CERT	Cerreto	0.54	234	Pg	Pg	09 18 23.7	+0.2
	526nm,0.5s						
POFI	Posta Fibreno	0.56	168	Pg	Pg	09 18 24.3	+0.3
	141nm,0.6s						
POFI	Posta Fibreno	0.56	168	Pg	Pg	09 18 24.3	+0.3
	141nm,0.6s						
SDI	San Donato	0.59	162	Pg	Pg	09 18 24.8	+0.3
	94nm,0.3s						
SDI	San Donato	0.59	162	Pg	Pg	09 18 24.8	+0.3
	94nm,0.3s						
NRCA	Norcia	0.65	330	Pg	Pg	09 18 25.8	0.0
NRCA				Sg	Sb	09 18 35.3	-0.7
	44nm,0.2s						
NRCA	Norcia	0.65	330	Pg	Pg	09 18 25.8	0.0
NRCA				Sg	Sb	09 18 35.3	-0.7
	44nm,0.2s						
MNS	Montasola	0.66	280	Pg	Pg	09 18 25.7	-0.2
	209nm,0.5s						
MNS	Montasola	0.66	280	Pg	Pg	09 18 25.7	-0.2
	209nm,0.5s						
OFFI	Offida	0.67	8	Pg	Pb	09 18 27.3	+0.4
	628nm,0.6s						
OFFI	Offida	0.67	8	Pg	Pb	09 18 27.3	+0.4
	628nm,0.6s						
GIUL	Giuliano Di Ro	0.75	198	Pg	Pg	09 18 27.8	+0.3
GIUL	Giuliano Di Ro	0.75	198	Pg	Pg	09 18 27.8	+0.3
CERA	Filignano	0.75	153	Pg	Pg	09 18 27.7	+0.1
	189nm,0.5s						
CERA	Filignano	0.75	153	Pg	Pg	09 18 27.7	+0.1
	189nm,0.5s						
MIDA	Miranda	0.81	140	Pg	Pg	09 18 28.7	-0.1
	114nm,0.4s						
MIDA	Miranda	0.81	140	Pg	Pg	09 18 28.7	-0.1
	114nm,0.4s						
FDMO	Fiordimonte	0.84	336	Pg	Pg	09 18 28.9	-0.4
	86nm,0.3s						
FDMO	Fiordimonte	0.84	336	Pg	Pg	09 18 28.9	-0.4
	86nm,0.3s						
CESI	CESI - Serrava	0.88	327	Pg	Pg	09 18 30.3	+0.2
	39nm,0.4s						
CESI	CESI - Serrava	0.88	327	Pg	Pg	09 18 30.3	+0.2
	39nm,0.4s						
ASSB	Assisi San Ben	1.02	320	Pg	Pg	09 18 32.8	+0.1
	102nm,0.6s						
ASSB	Assisi San Ben	1.02	320	Pg	Pg	09 18 32.8	+0.1
	102nm,0.6s						

*ISCJB **08** 09:27:03.8±0.5, 37°.26N±0°.03×28°.26E±0°.03, h0^{km}, Error ellipse: s-maj=4.5km s-min=3.3km az=29.4*
*CSEM **08** 09:27:03.8±0.2, 37°.26N×28°.25E, h1^{km}, MD2.3, Error ellipse: s-maj=5.9km s-min=4.2km az=27.0*
*ISK **08** 09:27:03.4, 37°.28N×28°.25E, h8^{km}, MD2.3*
*DDA **08** 09:27:04.2, 37°.22N×28°.21E, h7^{km}, MD2.6*
ISC 08 09:27:03.6±0.9**, 37°.27N**±0°.03×**28°.24E**±0°.02**, h0**^{km}**, n22, σ0^{s}95**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.14	166	ePG	Pg	09 27 07.1	+0.9
YER				eSG	Sg	09 27 09.6	+1.6
YER	Yerkesik	0.14	166	ePg	Pg	09 27 07.1	+0.9
YER				eSg	Sg	09 27 09.6	+1.6
MLSB	Milas	0.37	274	ePG	Pg	09 27 11.3	+0.6
MLSB				eSG	Sg	09 27 17.2	+1.7
MLSB	Milas	0.37	274	ePg	Pg	09 27 11.3	+0.6
MLSB				eSg	Sg	09 27 17.2	+1.7
AYDN	Tasoluk	0.48	324	iP	Pg	09 27 14.2	+1.3
AYDN				iS	Sb	09 27 21.7	-1.0
AYDN	Tasoluk	0.48	324	iP	Pg	09 27 14.2	+1.3
AYDN				iS	Sb	09 27 21.7	-1.0
TURN	Turunc	0.49	144	iP	Pg	09 27 12.7	-0.3
TURN				iS	Sg	09 27 19.9	+0.6
TURN	Turunc	0.49	144	iP	Pg	09 27 12.7	-0.3
TURN				iS	Sg	09 27 19.9	+0.6
BDRM	Kayabasi	0.67	252	iP	Pg	09 27 16.1	-0.3
BDRM				iS	Sb	09 27 27.0	-0.9
BDRM	Kayabasi	0.67	252	iP	Pg	09 27 16.1	-0.3
BDRM				iS	Sb	09 27 27.0	-0.9
DNZL	Cakiroluk	0.77	57	iP	Pb	09 27 19.6	-0.3
DNZL				iS	Sg	09 27 29.3	+1.1
DNZL	Cakiroluk	0.77	57	iP	Pb	09 27 19.6	-0.3
DNZL				iS	Sg	09 27 29.3	+1.1
BODT	Bodrum	0.77	255	ePG	Pg	09 27 18.3	-0.1
BODT	Bodrum	0.77	255	ePg	Pg	09 27 18.3	-0.1
GCAM	G?zelcaml?	0.91	298	iP	Pg	09 27 19.6	-1.4
GCAM				iS	Sb	09 27 35.4	+0.5
GCAM	G?zelcaml?	0.91	298	iP	Pg	09 27 19.6	-1.4
GCAM				iS	Sb	09 27 35.3	+0.5
FETY	Fethiye	0.93	133	ePG	Pg	09 27 21.5	+0.2
FETY	Fethiye	0.93	133	ePg	Pg	09 27 21.5	+0.2
KULA	Kula-Manisa	1.28	15	ePN	Pg	09 27 28.3	+0.1
KULA	Kula-Manisa	1.28	15	ePn	Pg	09 27 28.3	+0.1
ELL	Elmali	1.43	111	ePN	Pn	09 27 30.2	-0.7
ELL	Elmali	1.43	111	ePn	Pn	09 27 30.2	-0.7

*IDC **08** 09:42:50.4±2.1, 33°.56N×142°.18E, h0^{km}, mb3.4/2, mb1 3.5/5, mb1mx3.3/27, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=40.2km s-min=21.6km az=59.0*
*ISCJB **08** 09:42:53.7±1.1, 33°.53N±0°.04×142°.22E±0°.07, h46^{km}±14^{km}, mb3.4/2, Error ellipse: s-maj=10.6km s-min=7.1km az=166.3*
*JMA **08** 09:42:53.9±0.3, 33°.55N×142°.23E, h63^{km}, M3.3*
ISC 08 09:42:53.7±2.4**, 33°.48N**±0°.06×**142°.3E**±0°.1**, h74**^{km}±42^{km}**, n18, σ1^{s}15**/29**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	1.58	318	P	Pn	09 43 19.0	-0.3
BSO1				S	Sn	09 43 38.4	-0.3
BSO2	Boso 2	1.77	316	S	Sn	09 43 44.1	+0.3
BSO3	Boso 3	1.96	313	P	Pn	09 43 24.8	+0.2
BSO3				S	Sn	09 43 48.8	+0.7
JHJ2	Mitsune	2.07	260	P	Pn	09 43 27.3	+0.9
JHJ2				S	Sn	09 43 51.6	+0.3
JHCJ	Hachijojimakas	2.09	260	P	Pn	09 43 27.8	+1.1
JHCJ				S	Sn	09 43 51.6	-0.2
JHJ	Hachijo jima 2	2.10	261	Pn	Pn	09 43 27.4	+0.7
	49nm,0.3s,baz=78,slow=20,SNR=81						
JHJ				Sn	Sn	09 43 51.2	-0.7
	106nm,0.3s,baz=84,slow=22,SNR=16						
BSO4	Boso 4	2.19	314	S	Sn	09 43 54.1	+0.2
JIM2	Oshima 3	2.64	299	P	Pn	09 43 33.7	-0.5
JIM2				eS	Sn	09 44 03.2	-2.0
JIZS	Izushimoda	3.06	295	P	Pn	09 43 40.0	+0.3
JIZS				eS	Sn	09 44 13.1	-2.1
JOD2	Odawara 2	3.16	305	P	Pn	09 43 41.0	-0.2
JOD2				eS	Sn	09 44 18.3	+0.5
JYN	Shimob	3.66	304	P	Pn	09 43 48.8	+0.7
JYN				S	Sn	09 44 31.3	+1.2
JAG	Ashikaga	3.73	323	P	Pn	09 43 49.6	+0.7
JRY	Ryogami san	3.74	314	P	Pn	09 43 49.5	+0.4
JRY				S	Sn	09 44 32.0	0.0
MJAR	Matsushiro Arr	4.51	314	Pn	Pn	09 43 59.0	-0.5
	1.5nm,0.3s,baz=147,slow=9.0,SNR=21						
MJAR				Sn	Sn	09 44 49.3	-1.4
	1.2nm,0.3s,baz=144,slow=15,SNR=5.5						
MAT	Matsushiro	4.51	314	P	Pn	09 44 01.1	+1.5
MAT				S	Sn	09 44 50.1	-0.6
CBIJ	Chichi jima	6.36	181	Pn	Pn	09 44 26.1	+1.2
	2.5nm,0.3s,baz=96,slow=22,SNR=6.9						
CBIJ				Sn	Sn	09 45 32.8	-3.3
	3.5nm,0.3s,baz=304,slow=17,SNR=3.1						
MKAR	Makanchi Array	46.65	305	P	P	09 51 19.0	+4.2
	0.2nm,0.6s,baz=79,slow=7.5,SNR=3.8						
WRA	Warramunga Arr	53.66	189	P	P	09 52 14.5	+6.7
	0.3nm,0.5s,baz=5.9,slow=7.6,SNR=10						

*ISCJB **08** 09:44:31.4±1.0, 41°.12N±0°.05×19°.72E±0°.04, h4^{km}±3^{km}, Error ellipse: s-maj=8.8km s-min=4.4km az=27.0*
*CSEM **08** 09:44:32.7±0.6, 41°.12N×19°.72E, h10^{km}, ML2.2, Error ellipse: s-maj=10.8km s-min=5.6km az=29.0*
*PDG **08** 09:44:33.3±0.1, 41°.13N×19°.59E, h18^{km}, ML2.5/9, Error ellipse: s-maj=0.8km s-min=0.8km az=0.0*
*SKO **08** 09:44:33.9, 41°.20N×19°.73E, h13^{km}*
*BEO **08** 09:44:35.8±0.9, 41°.35N×19°.69E, h5^{km}±2^{km}, ML2.2/5*
ISC 08 09:44:31.7±1.9**, 41°.07N**±0°.07×**19°.64E**±0°.04**, h10**^{km}±9^{km}**, n28, σ0^{s}95**/55**, 4C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.33	31	ePg	Pg	09 44 38.5	+0.3
TIR				eSg	Sg	09 44 41.4	-1.1
TIR	Tirane	0.33	31	ePg	Pg	09 44 38.5	+0.3
TIR				eSg	Sg	09 44 41.4	-1.1
ULC	Ulcinj	0.94	342⇑	iPg	Pg	09 44 49.7	-0.1
ULC				eSg	Sn	09 45 03.3	-1.2
BIA	Bitola	1.27	92	ePg	Pn	09 44 55.0	-0.6
BIA				eSg	Sn	09 45 12.8	0.0
BIA	Bitola	1.27	92	ePg	Pn	09 44 54.9	-0.6
BIA				eSg	Sn	09 45 12.7	0.0
BUM	Brajici-Budva	1.35	336⇓	iPg	Pb	09 44 57.3	+0.2
BUM				eSg	Sg	09 45 16.1	+0.9
PDG	Podgorica	1.39	348	ePn	Pb	09 44 57.4	-0.3
PDG				eSn	Sb	09 45 14.3	-1.2
PDG	Podgorica	1.39	348	ePn	Pb	09 44 57.4	-0.3
PDG				eSn	Sb	09 45 14.3	-1.2
PDG				eSg	Sg	09 45 16.5	+0.1
TTG	Podgorica	1.39	348	ePg	Pb	09 44 57.7	0.0
TTG				eSg	Sg	09 45 16.5	+0.1
PVY	Plav	1.54	9⇓	iPg	Pb	09 45 00.3	-0.1
PVY				eSg	Sg	09 45 21.7	+0.4
PVY	Plav	1.54	9⇓	iPg	Pb	09 45 00.3	-0.1
PVY				eSg	Sg	09 45 21.7	+0.4
HCY	Herceg Novi	1.62	328⇓	iPg	Pb	09 45 01.1	-0.6
HCY				eSg	Sb	09 45 22.8	+0.6
SKO	Skopje	1.62	56	ePg	Pb	09 45 02.0	+0.3
SKO				eSg	Sn	09 45 21.1	-0.2
SKO	Skopje	1.62	56	ePg	Pb	09 45 02.0	+0.3
SKO				eSg	Sn	09 45 21.1	-0.2
NKY	Niksic	1.81	345⇓	iPn	Pn	09 45 03.5	+0.6
NKY				eSn	Sb	09 45 27.6	0.0
NKY	Niksic	1.81	345⇓	iPn	Pn	09 45 03.5	+0.6
NKY				eSn	Sb	09 45 27.6	0.0
IVA	Berane	1.81	6⇑	iPn	Pb	09 45 04.4	-0.5
IVA				eSn	Sb	09 45 27.9	+0.2
BRY	Bratogost	2.01	336⇑	iPn	Pn	09 45 06.3	+0.6
BRY				eSn	Sb	09 45 32.2	-1.2
BRY	Bratogost	2.01	336⇑	iPn	Pn	09 45 06.3	+0.6
BRY				eSn	Sb	09 45 32.2	-1.2
UPM	Unac-Piva	2.20	346⇓	iPn	Pn	09 45 08.9	+0.5
UPM				eSn	Sn	09 45 37.1	+1.3
UPM	Unac-Piva	2.20	346⇓	iPn	Pn	09 45 08.9	+0.5
UPM				eSn	Sn	09 45 37.1	+1.3
BARS	Barje	2.38	42	ePn	Pn	09 45 12.6	+1.9
BARS				eSn	Sn	09 45 39.5	-0.5
BARS	Barje	2.38	42	ePn	Pn	09 45 12.6	+1.9
BARS				eSn	Sn	09 45 39.5	-0.5
SELS	Selova	2.41	27	ePn	Pn	09 45 11.0	-0.2
SELS				eSn	Sn	09 45 39.4	-1.4
DIVS	Divibare	3.04	5	eSn	Sn	09 45 54.7	-1.6
DIVS	Divibare	3.04	5	eSn	Sn	09 45 54.7	-1.6
ZAPS	Zavoj	3.13	44	ePn	Pn	09 45 23.4	+2.4
ZAPS				eSn	Sn	09 45 57.5	-1.0
ZAPS	Zavoj	3.13	44	ePn	Pn	09 45 23.4	+2.4
ZAPS				eSn	Sn	09 45 57.5	-1.0

*CSEM **08** 09:49:44.4, 41°.20N×27°.68E, h14^{km}, MD2.2, After ISK*
ISK 08 09:49:44.4, 41°.20N×27°.68E, h14^{km}**, MD2.2, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKR	Tekirdag	0.23	208	ePG	Pg	09 49 49.9	+0.4
TKR				eSG	Sg	09 49 53.6	+0.7
TKR	Tekirdag	0.23	208	ePg	Pg	09 49 49.9	+0.4
TKR				eSg	Sg	09 49 53.6	+0.7
SLVT	Silivri	0.40	85	ePG	Pg	09 49 52.9	+0.4
SLVT				eSG	Sb	09 49 59.6	+0.3
SLVT	Silivri	0.40	85	ePg	Pb	09 49 52.9	-0.4
SLVT				eSg	Sb	09 49 59.6	+0.3
MFT	Murefte	0.51	217	ePG	Pb	09 49 55.2	0.0
MFT	Murefte	0.51	217	ePg	Pb	09 49 55.2	0.0
CTYL	Yal??k??y-??at	0.54	59	ePG	Pg	09 49 55.0	0.0
CTYL	Yal??k??y-??at	0.54	59	ePg	Pg	09 49 55.0	0.0
CTKS	Kestanelik-??a	0.62	86	ePG	Pg	09 49 56.9	+0.2
CTKS	Kestanelik-??a	0.62	86	ePg	Pb	09 49 56.9	-0.2
RKY	Sarkoy-Tekirda	0.64	217	ePG	Pb	09 49 57.4	0.0
RKY	Sarkoy-Tekirda	0.64	217	ePg	Pb	09 49 57.4	0.0
KRBG	Karabiga-Canak	0.85	200	ePG	Pb	09 50 01.2	+0.2
KRBG	Karabiga-Canak	0.85	200	ePg	Pb	09 50 01.2	+0.2
EDRB	Edirne	0.96	313	ePG	Pn	09 50 03.6	+0.1
EDRB	Edirne	0.96	313	ePg	Pn	09 50 03.6	+0.2
GONE	Gonen-Balikesi	1.15	180	ePN	Pg	09 50 06.7	+0.2
GONE	Gonen-Balikesi	1.15	180	ePn	Pg	09 50 06.7	+0.2
GELI	Tayfur-Gelibol	1.21	229	ePN	Pb	09 50 07.2	+0.1
GELI	Tayfur-Gelibol	1.21	229	ePn	Pb	09 50 07.2	+0.1
ENEZ	Enez	1.24	249	ePN	Pg	09 50 08.4	0.0
ENEZ	Enez	1.24	249	ePn	Pg	09 50 08.4	0.0

*AUST **08** 10:06:57.8±2.4, 9°.54S×129°.37E, h184^{km}, Error ellipse: s-maj=2.1km s-min=1.3km az=33.0*
IDC 08 10:05:37.7±2.1**, 4°.11S×128°.24E, h0**^{km}**, mb3.8**/2**, mb1 4.3**/3**, mb1mx3.7**/22**, mbtmp4.0**/3**, ML4.2**/1**, MS3.4**/1**, Ms1 3.3**/1**, ms1mx2.7**/35**, Error ellipse: s-maj=166.1km s-min=28.2km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	Manton Dam	9.14	162	P	Pn	10 07 58.2	+7.2
	baz=3.7,SNR=4.3						
KDU	Kakadu	9.49	154	P	Pn	10 08 01.4	+5.6
	baz=4.4,SNR=10						
FITZ	Fitzroy Crossi	14.14	190	P	P	10 09 07.8	+0.6
	baz=9.3,SNR=4.3						
WRA	Warramunga Arr	16.82	160	Pn	Pn	10 09 35.4	+0.5
	0.9nm,0.3s,baz=342,slow=12,SNR=49						
WRA				Sn	Sn	10 12 31.4	-11
	0.1nm,0.3s,baz=346,slow=22,SNR=4.0						
ASAR	Alice Springs	20.20	165	P	P	10 10 14.0	-0.3
	6.6nm,0.6s,baz=348,slow=11,SNR=98						
ASAR				S	S	10 13 43.2	-19
	0.3nm,0.4s,baz=353,slow=24,SNR=4.4						
STKA	Stephens Creek	30.34	157	LR	LR	10 25 10.7	
	comp=Z,70nm,19.3s,baz=204,slow=39						
MKAR	Makanchi Array	64.86	327	P	P	10 16 18.8	0.0
	0.2nm,0.4s,baz=114,slow=7.7,SNR=6.1						

*MOS **08** 10:17:14.4±0.6, 54°.40N×163°.03E, h16^{km}, mb4.2/1, Error ellipse: s-maj=18.8km s-min=11.8km az=90.6*
KRSC 08 10:17:14.6±0.7**, 54°.41N×163°.08E, h15**^{km}±15^{km}**, ML4.0, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.80	281	PN	Pg	10 17 29.6	-0.6
MKZ				S	Sg	10 17 40.2	-0.5
MKZ	Mys Kozlova	0.80	281	eP	Pg	10 17 29.6	-0.6
MKZ				iS	Sg	10 17 40.2	-0.5
KBTR	Krutoberegovo	1.81	355	PN	Pn	10 17 45.4	+0.2
KBTR	Krutoberegovo	1.81	355	eP	Pn	10 17 45.4	+0.2
BKI	Bering	1.85	63	PN	Pb	10 17 47.4	-0.7
BKI				S	Sb	10 18 11.2	+0.1
BKI	Bering	1.85	63	eP	Pb	10 17 47.4	-0.7
BKI				iS	Sb	10 18 11.2	+0.1
KBG	Krutoberegovo	1.86	354	PN	Pn	10 17 46.1	+0.2
KBG				S	Sn	10 18 09.1	0.0
KBG	Krutoberegovo	1.86	354	eP	Pn	10 17 46.1	+0.2
KBG				eS	Sn	10 18 09.1	0.0
TUMR	Tumrok	1.91	298	eP	Pn	10 17 47.3	+0.6
TUMR				iS	Sn	10 18 10.6	0.0
BZGR	Bezymyannyi-Gr	2.06	319	eP	Pn	10 17 49.8	+1.1
BZGR				iS	Sn	10 18 15.6	+1.4
ZLN	Zelenaya	2.07	322	eP	Pn	10 17 50.3	+1.3
ZLN				iS	Sb	10 18 16.9	-0.8
KMNR	Kamenistaya	2.12	311	eP	Pn	10 17 50.8	+1.2
KMNR				iS	Sb	10 18 17.5	-1.5
BZMR	Bezymyannaya	2.13	317	eP	Pn	10 17 51.0	+1.2
BZMR				iS	Sn	10 18 17.7	+1.5
BZWR	Bezymyannyi-We	2.15	317	eP	Pn	10 17 51.3	+1.2
BZWR				iS	Sn	10 18 18.3	+1.6
LGNR	Loginova	2.16	322	eP	Pb	10 17 52.4	-1.4
LGNR				iS	Sb	10 18 20.6	-0.1
KII	Karymskiy	2.17	262	eP	Pn	10 17 50.9	+0.7
KII				iS	Sn	10 18 17.0	+0.2
CIRR	Tsirk	2.17	323	eP	Pn	10 17 51.5	+1.2
CIRR				iS	Sn	10 18 18.7	+1.6
KIRR	Kirishev	2.20	316	eP	Pn	10 17 52.2	+1.4
KIRR				iS	Sb	10 18 20.1	-1.5
SPN	Mys Shipunski	2.24	235	PN	Pn	10 17 51.2	+0.1
SPN				S	Sn	10 18 17.7	-0.8
SPN	Mys Shipunski	2.24	235	P	Pn	10 17 51.2	+0.1
SPN				iS	Sn	10 18 17.7	-0.8
KPT	Kopyto	2.26	315	eP	Pn	10 17 52.7	+1.1
KRSR	Krestovskiy	2.31	323	eP	Pn	10 17 53.2	+0.9
KRSR				iS	Sn	10 18 21.0	+0.5
KLY	Klyuchi	2.36	325	PN	Pn	10 17 52.7	0.0
KLY				S	Sn	10 18 20.7	-0.7
KLY	Klyuchi	2.36	325	eP	Pn	10 17 52.7	0.0
KLY				iS	Sn	10 18 20.7	-0.7
KOZR	Kozyr	2.46	314	PN	Pn	10 17 55.8	+1.5
KOZR				S	Sn	10 18 26.1	+2.0
KOZ	Kozyrevsk	2.47	313	eP	Pn	10 17 55.8	+1.5
KOZ				iS	Sn	10 18 26.1	+1.9
SRDR	Sredinnyy	2.71	316	eP	Pn	10 17 58.7	+1.0
SRDR				iS	Sn	10 18 31.0	+0.8
SDLR	Sedlovina	2.73	247	eP	Pn	10 17 59.4	+1.3
SDLR				iS	Sn	10 18 32.0	+1.1
SMAR	Somma	2.78	247	eP	Pn	10 18 00.3	+1.4
SMAR				iS	Sn	10 18 32.8	+0.4
KRER	Koryakskii	2.79	248	eP	Pn	10 18 00.8	+1.8
KRER				iS	Sn	10 18 34.8	+2.2
UGLR	Uglovaya	2.80	246	eP	Pn	10 18 00.5	+1.6
UGLR				iS	Sn	10 18 33.9	+1.4
AVH	Avacha	2.82	248	eP	Pn	10 18 01.0	+1.8
AVH				iS	Sn	10 18 34.5	+1.6
KOK	Koryaka	2.86	249	eP	Pn	10 18 01.6	+1.8
KOK				iS	Sn	10 18 35.4	+1.4
ESO	Esso	2.94	303	PN	Pn	10 18 02.4	+1.7
ESO				S	Sn	10 18 36.3	+0.6
ESO	Esso	2.94	303	eP	Pn	10 18 02.4	+1.7
ESO				iS	Sn	10 18 36.3	+0.6
PET	Petropavlovsk	2.98	244	ePN	Pn	10 18 02.2	+1.0
PET				eS	Sn	10 18 36.8	+0.3
PET				smax	smax		
	comp=N,180nm,0.7s						
PET				smax	smax		
	comp=E,108nm,0.6s						
PET	Petropavlovsk	2.98	244	eP	Pn	10 18 02.5	+1.3
PET				iS	Sn	10 18 37.4	+0.9
GNL	Ganaly	3.11	259	eP	Pn	10 18 04.7	+1.4
RUS	Russkaya	3.37	236	PN	Pn	10 18 07.5	+0.8
RUS				S	Sn	10 18 45.9	-0.5
RUS	Russkaya	3.37	236	eP	Pn	10 18 07.5	+0.8
RUS				iS	Sn	10 18 45.9	-0.5
MTVR	Mutnovka	3.51	239	eP	Pn	10 18 10.9	+2.2
MTVR				iS	Sn	10 18 51.3	+1.2
GRL	Gorelyy	3.52	240	eP	Pn	10 18 11.3	+2.4
APC	Apacha	3.82	250	eP	Pn	10 18 15.7	+2.8
APC				iS	Sn	10 19 00.4	+2.9
MIPR	Malaya Ipel'ka	4.35	243	eP	Pn	10 18 21.7	+1.6

IDC 08 10:20:56.5±0.8**, 10°.88S×164°.90E, h0**^{km}**, mb4.0**/16**, mb1 4.2**/17**, mb1mx4.1**/21**, mbtmp4.0**/17**, ML4.0**/1**, MS3.8**/9**, Ms1 3.8**/9**, ms1mx3.4**/32**, Error ellipse: s-maj=26.2km s-min=17.0km az=115.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.22	173	ePn	Pn	10 23 39.4	+0.9
DZM				eLR	LR	10 26 06.7	
	297nm,23.3s						
DZM	Mont Dzumac	11.22	173	Pn	Pn	10 23 38.0	-0.5
	1.0nm,0.3s,baz=358,slow=10.0,SNR=11						
DZM				LR	LR	10 27 05.3	
	comp=Z,356nm,18.1s,baz=207,slow=33						
CTA	Charters Tower	20.15	241	P	P	10 25 32.5	-0.1
	20nm,1.0s,baz=73,slow=13,SNR=6.9						
CTA				LR	LR	10 32 01.8	
	comp=Z,186nm,18.4s,baz=55,slow=33						
STKA	Stephens Creek	30.00	222	P	P	10 27 07.4	+0.4
	2.6nm,0.8s,baz=48,slow=12,SNR=4.9						
STKA				LR	LR	10 38 51.7	
	comp=Z,196nm,18.2s,baz=28,slow=36						
WRA	Warramunga Arr	30.76	249	P	P	10 27 12.7	-1.3
	1.9nm,1.2s,baz=81,slow=9.0,SNR=6.3						
GUMO	Guam	31.40	320	LR	LR	10 38 14.2	
	comp=Z,106nm,18.5s,baz=90,slow=33						
ASAR	Alice Springs	32.13	243	P	P	10 27 24.5	-1.5
	1.9nm,0.9s,baz=64,slow=10,SNR=22						
ASAR				LR	LR	10 39 54.4	
	comp=Z,145nm,18.4s,baz=144,slow=35						
RPZ	Rata Peaks	33.15	172	LR	LR	10 37 33.6	
	comp=Z,162nm,20.4s,baz=253,slow=30						
FITZ	Fitzroy Crossi	38.62	255	LR	LR	10 42 58.0	
	comp=Z,111nm,18.0s,baz=163,slow=34						
PPT	Papeete	44.54	104	LR	LR	10 43 26.1	
	comp=Z,100nm,20.8s,baz=349,slow=30						
PPT2	Papeete2	44.54	104	eLR	LR	10 41 33.7	
	103nm,25.5s						
TBI	Tubuai	45.16	112	eLR	LR	10 41 52.7	
	73nm,26.0s						
MJAR	Matsushiro Arr	53.45	333	P	P	10 30 17.8	-0.8
	0.3nm,0.3s,baz=159,slow=8.7,SNR=4.4						
KSRS	Korea Array	59.28	326	P	P	10 30 59.2	-0.9
	0.8nm,0.7s,baz=130,slow=7.6,SNR=6.6						
PETK	Petropavlovsk-	64.03	355	P	P	10 31 32.3	+0.4
	2.3nm,0.9s,baz=152,slow=8.0,SNR=3.8						
VNDA	Vanda	66.64	181	P	P	10 31 49.7	+1.2
	1.8nm,0.9s,baz=355,slow=4.9,SNR=5.7						
CMAR	Chiang Mai Arr	71.29	294	P	P	10 32 20.4	+1.9
	0.3nm,0.3s,baz=104,slow=3.8,SNR=3.8						
SONM	Songino Array	78.05	324	P	P	10 32 58.5	+1.2
	0.9nm,0.6s,baz=141,slow=5.5,SNR=3.4						
ILAR	Eielson Array	83.62	19	P	P	10 33 25.9	-0.7
	0.8nm,0.9s,baz=225,slow=5.9,SNR=7.4						
NVAR	Mina Array Bea	86.55	50	P	P	10 33 41.9	-0.2
	0.5nm,0.6s,baz=226,slow=8.0,SNR=4.1						
MKAR	Makanchi Array	92.84	317	P	P	10 34 11.2	-0.1
	0.4nm,0.7s,baz=108,slow=5.7,SNR=3.2						
ZALV	Zalesovo Beam	92.94	324	P	P	10 34 11.6	+0.1
	0.2nm,0.3s,baz=64,slow=3.4,SNR=3.4						
PDAR	Pinedale Array	94.05	47	P	P	10 34 16.4	-0.9
	0.4nm,0.7s,baz=269,slow=3.6,SNR=3.0						
YKA	Yellowknife Ar	95.21	27	P	P	10 34 20.8	-0.9
	0.3nm,1.0s,baz=251,slow=4.8,SNR=3.2						
TXAR	Lajitas Array	96.48	61	LR	LR	11 07 54.8	
	comp=Z,53nm,21.6s,baz=5.0,slow=29						

*NIED **08** 10:21:00, 46°.10N×152°.20E, h59^{km}, Mw4.1 Best double couple: M$_0$1.68000×10^{15} NP1:ϕ_s317.00000°, δ83.00000°, λ12.00000°. NP2:ϕ_s226.00000°, δ78.00000°, λ173.00000°.*
*ISCJB **08** 10:21:48.7±0.5, 45°.95N±0°.07×151°.91E±0°.08, h48^{km}, mb4.1/26, MS3.4/2, Error ellipse: s-maj=12.9km s-min=3.6km az=142.5*
*JMA **08** 10:21:48.1±0.5, 46°.06N×152°.20E, h30^{km}, M4.6*
*MOS **08** 10:21:49.8±1.1, 46°.12N×152°.04E, h56^{km}, mb4.4/13, Error ellipse: s-maj=13.1km s-min=8.2km az=64.2*
*IDC **08** 10:21:53.4±2.6, 46°.13N×151°.85E, h70^{km}±23^{km}, mb3.7/18, mb1 3.8/23, mb1mx3.8/31, mbtmp3.6/23, MS3.3/3, Ms1 3.3/3, ms1mx2.5/41, Error ellipse: s-maj=18.9km s-min=12.4km az=146.0*

ISC 08 10:21:49.5±0.6, 45°.80N±0°.09×152°.02E±0°.08, h48km, n74, σ1ˢ64/74, mb4.1/26, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.98	260	ePN	Pn	10 22 36.0	+1.8
KUR				eS	Sn	10 23 12.0	+3.4
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
KUR				smax	smax		
	comp=N,3μm,2.0s						
KUR				smax	smax		
	comp=E,4μm,2.0s						
KUR				smax	smax		
	comp=N,670nm,0.5s						
KUR				smax	smax		
	comp=E,290nm,0.5s						
YUK	Yuzh-Kuril'sk	4.72	250	i PN	Pn	10 23 03.7	+5.6
YUK				i S	Sn	10 24 00.4	+8.9
YUK				pmax	pmax		
	comp=E,26nm,0.1s						
YUK				pmax	pmax		
	comp=Z,109nm,0.5s						
YUK				pmax	pmax		
	comp=N,22nm,0.2s						
YUK				smax	smax		
	comp=N,89nm,0.7s						
YUK				smax	smax		
	comp=E,239nm,0.7s						
NEM2	Nemuro 2	5.11	244	P	Pn	10 23 04.8	+1.4
NEM2				eS	Sn	10 24 00.9	-0.1
JRA	Rausu	5.25	252	P	Pn	10 23 09.2	+3.9
SKR	Severo-Kuril's	5.59	28	ePN	Pn	10 23 06.0	-4.1
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				pmax	pmax		
	comp=N,60nm,0.3s						
JNK	Nakash	5.66	250	P	Pn	10 23 13.6	+2.6
JAK	Akkeshi	5.95	244	P	Pn	10 23 16.4	+1.4
JAK				eS	Sn	10 24 22.8	+1.0
JTKR	Abashiri--Toko	6.05	255	P	Pn	10 23 20.3	+4.0
JAR	Ashorobuto	6.41	250	P	Pn	10 23 24.2	+3.0
JAR				eS	Sn	10 24 35.3	+2.3
YSS	Yuzh-Sakhalins	6.51	283	ePN	Pn	10 23 26.9	+4.2
JOB	Onbets	6.55	247	P	Pn	10 23 25.3	+2.2
JOB				eS	Sn	10 24 38.1	+1.7
JKK2	Kamakawa 2	6.87	257	P	Pn	10 23 31.9	+4.3
ASAJ	Asahikawa	6.90	259	P	Pn	10 23 32.7	+4.7
ASAJ	Asahikawa	6.90	259	P	Pn	10 23 30.8	+2.8
	comp=N,2.6nm,0.3s,baz=75,slow=17,SNR=23						
ASAJ				LR	LR	10 26 07.5	
	comp=N,144nm,18.6s,baz=172,slow=37						
JCH	Churui	6.99	246	P	Pn	10 23 31.3	+2.0
JCH				eS	Sn	10 24 47.5	+0.1
JAB	Ashibetsu	7.36	255	P	Pn	10 23 39.2	+4.9
JEM	Erimo	7.44	243	eS	Sn	10 24 56.2	-2.1
ERM	Erimo	7.44	243	⇓ePN	Pn	10 23 38.7	+3.4
JNBK	Urakawa-nobuka	7.55	245	P	Pn	10 23 37.9	+1.0
JNBK				eS	Sn	10 24 58.6	-2.5
JBT2	Biratori 2	7.56	250	P	Pn	10 23 39.3	+2.2
PETK	Petropavlovsk-	8.19	25	ePN	Pn	10 23 45.0	-0.6
PETK	Petropavlovsk-	8.19	25	P	Pn	10 23 45.0	-0.6
	comp=N,0.3nm,0.3s,baz=180,slow=14,SNR=5.1						
JNB	Noboribetsu	8.57	251	P	Pn	10 23 53.7	+2.8
JNB				eS	Sn	10 25 27.4	+1.2
JKB	Kayabe	8.85	248	P	Pn	10 23 55.7	+1.0
JKB				eS	Sn	10 25 29.9	-3.1
JANG	Nango	9.41	238	P	Pn	10 24 01.3	-1.0
JANG				eS	Sn	10 25 41.0	-5.7
JTM	Tenmabayashi	9.43	242	eS	Sn	10 25 43.6	-3.6
JSR	Shiriuchi	9.43	247	P	Pn	10 24 04.0	+1.4
JTH	Tanohata	9.48	235	eS	Sn	10 25 42.9	-5.6
JOSM	Okushiri--Mats	9.78	252	P	Pn	10 24 09.5	+2.0
OFUJ	Ofunato	10.18	232	P	Pn	10 24 12.9	0.0
JRG	Rokugo	10.55	237	eS	Sn	10 26 11.0	-3.7
JIO	Ouri	10.80	231	P	Pn	10 24 20.8	-0.6
MJAR	Matsushiro Arr	13.90	233	P	P	10 25 09.7	-1.0
	comp=N,0.2nm,0.3s,baz=61,slow=13,SNR=3.8						
USRK	Ussuriysk Arra	14.26	271	P	P	10 25 11.9	-2.7
	comp=N,0.3nm,0.3s,baz=88,slow=18,SNR=4.1						
SEY	Seymchan	17.17	1	i P	Pn	10 25 43.6	-2.0
KSRS	Korea Array	19.80	254	P	Pn	10 26 18.0	+0.4
	comp=N,0.2nm,0.3s,baz=57,slow=12,SNR=7.9						
YAK	Yakutsk	20.73	330	eP	Pn	10 26 28.4	-0.1
YAK				pmax	pmax		
	comp=Z,16nm,0.7s						
BILL	Bilibino	23.49	13	i P	P	10 26 53.2	-1.3
BILL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIXI	Tiksi	28.17	345	i P	P	10 27 40.3	+3.4
TIXI				pmax	pmax		
	comp=Z,11nm,4.0s						
HHC	Hu-ho-hao-te	29.61	275	eP	P	10 27 50.4	+0.3
HHC				S	S	10 32 39.9	-2.2
HHC				pmax	pmax		
	comp=Z,32nm,0.6s						
HHC				pmax	pmax		
	comp=Z,240nm,5.8s						
COLA	College	37.35	38	i P	P	10 28 56.5	-0.4
ILAR	Eielson Array	37.76	38	P	P	10 28 59.5	-0.9
	comp=Z,0.4nm,0.7s,baz=264,slow=7.4,SNR=7.7						
ZALV	Zalesovo Beam	42.56	306	PcP	PcP	10 31 32.1	+0.3
	comp=Z,0.6nm,0.5s,baz=64,slow=3.4,SNR=4.4						
ZALV				LR	LR	10 48 25.8	
	comp=Z,54nm,19.7s,baz=64,slow=38						
INK	Inuvik	42.85	32	P	P	10 29 42.7	+0.3
	comp=Z,2.2nm,0.8s,baz=273,slow=7.7,SNR=12						
MKAR	Makanchi Array	46.71	298	eP	P	10 30 13.1	-0.3
MKAR	Makanchi Array	46.71	298	P	P	10 30 12.2	-1.2
	comp=Z,0.3nm,0.4s,baz=65,slow=6.2,SNR=9.3						
MKAR				PcP	PcP	10 31 45.9	-0.3
	comp=Z,0.7nm,0.6s,baz=74,slow=4.4,SNR=6.6						
MKAR				LR	LR	10 50 55.1	
	comp=Z,33nm,18.5s,baz=354,slow=38						
KURK	Kurchatov	47.26	304	P	P	10 30 17.7	+0.1
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURBB	Kurchatov Arra	47.35	304	P	P	10 30 17.7	-0.6
	comp=Z,0.8nm,0.5s,baz=82,slow=8.5,SNR=4.8						
CMAR	Chiang Mai Arr	51.41	256	P	P	10 30 52.3	+2.6
	comp=Z,0.4nm,0.3s,baz=41,slow=7.0,SNR=4.0						
YKA	Yellowknife Ar	52.13	36	P	P	10 30 54.7	+0.3
	comp=Z,0.9nm,0.5s,baz=296,slow=7.0,SNR=21						
YKA				PcP	PcP	10 32 05.9	+0.2
	comp=Z,0.3nm,0.8s,baz=295,slow=3.3,SNR=4.3						
ARCES	ARCESS Array B	58.49	341	P	P	10 31 40.4	+0.2
	comp=Z,4.6nm,1.0s,baz=21,slow=7.7,SNR=3.4						
NVAR	Mina Array Bea	63.55	61	P	P	10 32 16.5	+1.4
	comp=Z,1.4nm,0.7s,baz=286,slow=7.4,SNR=8.7						
FINES	FINESS Array B	64.57	334	P	P	10 32 19.1	-2.1
	comp=Z,0.9nm,0.4s,baz=40,slow=7.4,SNR=5.7						
PDAR	Pinedale Array	65.92	53	P	P	10 32 31.9	+1.3
	comp=Z,1.3nm,0.8s,baz=291,slow=1.7,SNR=6.2						
WRA	Warramunga Arr	67.38	198	P	P	10 32 41.8	+2.1
	comp=Z,0.3nm,0.5s,baz=16,slow=6.8,SNR=7.4						
NB2	NORSAR Subarra	68.87	341	P	P	10 32 47.6	-1.0
	comp=Z,1.0nm,0.5s,baz=28,slow=6.5						
NOA	NORSAR Array B	68.87	341	P	P	10 32 47.7	-1.0
	comp=Z,1.5nm,0.6s,baz=29,slow=6.2,SNR=8.5						
HFS	Hagfors	69.07	339	P	P	10 32 48.9	-1.0
	comp=Z,3.3nm,0.6s,baz=57,slow=5.3,SNR=6.1						
ASAR	Alice Springs	71.08	198	P	P	10 33 05.6	+3.1
	comp=Z,0.3nm,0.7s,baz=16,slow=6.1,SNR=4.7						
AKASG	Malin Array Be	71.91	326	P	P	10 33 06.1	-1.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	71.91	326	P	P	10 33 06.1	-1.2
	comp=Z,1.0nm,0.5s,baz=36,slow=6.1,SNR=4.7						
KIEV	Kiev	71.92	326	i P	P	10 33 06.6	-0.7
CLL	Collm	77.01	335	i P	P	10 33 36.4	-0.5
CLL				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CLL	Collm	77.01	335	i P	P	10 33 36.4	-0.5
	comp=Z,8.0nm,1.2s						
BRTR	Keskin Array B	78.55	316	P	P	10 33 46.0	+0.1
	comp=Z,1.6nm,0.9s,baz=71,slow=4.6,SNR=7.1						
TXAR	Lajitas Array	78.62	60	P	P	10 33 47.5	+1.2
	comp=Z,2.6nm,0.6s,baz=287,slow=4.9,SNR=28						
GERES	GERESS Array B	78.97	333	P	P	10 33 47.7	-0.2
	comp=Z,1.3nm,0.7s,baz=35,slow=5.4,SNR=9.6						
CDF	Champ du Feu	81.24	337	eP	P	10 33 59.8	-0.4
	comp=Z,15nm,1.0s						
PAGF	Fort de Pagny	81.52	338	eP	P	10 34 01.5	-0.1
	comp=Z,4.0nm,0.6s						
HAU	Haudompre	81.86	338	eP	P	10 34 02.9	-0.5
SFTF	Sexfontaines	82.02	338	eP	P	10 34 04.1	-0.1
LOR	Lormes	83.19	339	eP	P	10 34 10.1	-0.2
	comp=Z,7.9nm,0.7s						
SSF	Saint Saulge	83.47	339	eP	P	10 34 11.6	-0.2
SMF	Signal de Mont	83.77	339	eP	P	10 34 13.2	-0.1
	comp=Z,39nm,1.2s						

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*ISCJB **08** 10:22:53.8±0.3, 32°.71S±0°.03×70°.14W±0°.05, h99km±2km, mb4.4/39, Error ellipse: s-maj=7.0km s-min=4.7km az=4.3*
*GUC **08** 10:22:54.6±0.4, 32°.73S×70°.46W, h105km±2km, MD4.3, ML4.6*
*NEIC **08** 10:22:54.7±0.3, 32°.76S×70°.16W, h99km±2km, mb4.5/26, MD4.5(SJA), MD4.3(GUC), Error ellipse: s-maj=6.5km s-min=4.1km az=86.0*
NEIC Felt [II] at Santiago. Also felt at Colina, Melipilla, Puente Alto, San Bernardo and Valparaiso. Felt [III] at Mendoza, Argentina.
*IDC **08** 10:22:55.4±1.5, 32°.78S×70°.10W, h107km±12km, mb4.2/12, mb1 4.2/15, mb1mx4.2/20, mbtmp4.1/15, Error ellipse: s-maj=16.8km s-min=11.6km az=97.0*
ISC 08 10:22:54.2±0.5, 32°.73S±0°.03×70°.22W±0°.05, h100km±4km, n438, σ1ˢ39/481, mb4.5/39, 167C-158D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEL	Peldehue	0.57	223	⇓iP	Pn	10 23 10.8	+0.1
PEL				i S	Sn	10 23 23.0	0.0
PEL				AML	AML	10 23 23.7	
	comp=N,40μm,0.6s						
ROCH	El Roble	0.71	249	⇑iP	Pn	10 23 11.9	-0.1
ROCH				i S	Sn	10 23 25.1	-0.3
ROCH				AML	AML	10 23 26.3	
	comp=E,53μm,0.5s						
CLCH	Cerro Calan	0.72	202	⇑iP	Pn	10 23 12.3	+0.4
CLCH				i S	Sn	10 23 26.1	+0.9
CLCH				AML	AML	10 23 31.7	
	comp=E,34μm,0.6s						
STL	Santa Lucia	0.79	206	⇑iP	Pn	10 23 12.8	+0.2
STL				i S	Sn	10 23 26.7	+0.3
SAN	Santiago	0.81	207	⇓iP	Pn	10 23 13.1	+0.3
SAN				i S	Sn	10 23 27.0	+0.2
SAN	Santiago	0.81	207	⇓iP	Pn	10 23 13.1	+0.3
SAN				i S	Sn	10 23 27.0	+0.2
SAN				AML	AML	10 23 29.7	
	comp=E,17μm,0.4s						
ANTU	Antumapu	0.91	202	⇑iP	Pn	10 23 14.1	+0.3
ANTU				i S	Sn	10 23 28.9	+0.4
ANTU	Antumapu	0.91	202	⇑iP	Pn	10 23 14.1	+0.3
ANTU				i S	Sn	10 23 28.9	+0.4
ANTU				AML	AML	10 23 29.9	
	comp=E,39μm,0.4s						
SJCH	San Jose de Ma	0.92	187	AML	AML	10 23 30.1	
	comp=E,12μm,0.4s						
PCH	Pirque	0.93	195	⇑iP	Pn	10 23 14.7	+0.6
PCH				i S	Sn	10 23 29.8	+0.9
PCH	Pirque	0.93	195	⇑iP	Pn	10 23 14.7	+0.6
PCH				i S	Sn	10 23 29.8	+0.9
TACH	Talagante	1.10	213	⇓iP	Pn	10 23 15.9	0.0
TACH	Talagante	1.10	213	⇓iP	Pn	10 23 15.9	0.0
LMEL	Las Melosas	1.12	179	⇑iP	Pn	10 23 17.1	+0.9
LMEL				i S	Sn	10 23 34.5	+1.8
LMEL	Las Melosas	1.12	179	⇑iP	Pn	10 23 17.1	+0.9
LMEL				i S	Sn	10 23 34.5	+1.8
CHCH	Chadas Angostu	1.26	197	⇓iP	Pn	10 23 18.1	+0.5
CHCH				i S	Sn	10 23 35.9	+0.5
CHCH	Chadas Angostu	1.26	197	⇓iP	Pn	10 23 18.1	+0.5
CHCH				i S	Sn	10 23 35.9	+0.5
CHNG	Los Chungos	1.37	307	AML	AML	10 23 42.5	
	comp=E,3μm,0.6s						
CACH	El Canelo	1.42	193	⇑iP	Pn	10 23 20.6	+0.9
CACH	El Canelo	1.42	193	⇑iP	Pn	10 23 20.6	+0.9
LNV	Longovilo	1.58	219	⇑iP	Pn	10 23 20.9	-0.6
LNV				i S	Sn	10 23 40.5	-1.7
LNV	Longovilo	1.58	219	⇑iP	Pn	10 23 20.9	-0.6
LNV				i S	Sn	10 23 40.5	-1.7
CMCH	Combarbala	1.68	337	⇓iP	Pn	10 23 22.7	-0.1
CMCH				i S	Sn	10 23 44.8	+0.1
CMCH	Combarbala	1.68	337	⇓iP	Pn	10 23 22.7	-0.1
CMCH				i S	Sn	10 23 44.8	+0.1
CFAA	Coronel Fontan	2.02	57	P	Pn	10 23 28.0	+0.9
CFAA				S	Sn	10 23 53.0	+0.8
CFAA	Coronel Fontan	2.02	57	P	Pn	10 23 28.0	+0.9
	comp=E,205nm,0.3s,baz=226,slow=12,SNR=9677						
CFAA				S	Sn	10 23 53.0	+0.8
	comp=E,195nm,0.3s,baz=315,slow=19,SNR=43						
LCO	Las Campanas	3.72	354	ePn	Pn	10 23 49.6	-0.4
LCO				eSn	Sn	10 24 31.2	-1.9
PLCA	Paso Flores	8.00	182	ePn	Pn	10 24 46.9	-0.8
PLCA	Paso Flores	8.00	182	P	Pn	10 24 46.8	-0.9
	comp=E,1.9nm,0.3s,baz=351,slow=11,SNR=8.9						
TRQA	Tornquist	8.58	131	ePn	Pn	10 24 55.6	+0.1
CPUP	Villa Florida	12.90	64	P	Pn	10 25 48.8	-5.0
CPUP				S	Sn	10 28 12.1	-3.6
CPUP	Villa Florida	12.90	64	P	Pn	10 25 48.8	-5.0
	comp=E,3.6nm,0.3s,baz=219,slow=12,SNR=14						
CPUP				S	Sn	10 28 12.1	-3.6
	comp=E,1.3nm,0.3s,baz=196,slow=14,SNR=2.4						
LPAZ	La Paz	16.47	7	ePn	Pn	10 26 40.8	+0.8
LPAZ	La Paz	16.47	7	P	Pn	10 26 40.5	+0.6
	comp=E,0.6nm,0.3s,baz=174,slow=9.8,SNR=13						
SIV	San Ignacio	18.61	29	P	P	10 27 03.7	-0.2
SIV	San Ignacio	18.61	29	P	P	10 27 03.7	-0.2
	comp=E,1.1nm,0.3s,baz=222,slow=11,SNR=50						
NNA	Nana	21.52	342	P	P	10 27 37.8	+2.6
	comp=E,19nm,0.9s						
NNA	Nana	21.52	342	P	P	10 27 37.8	+2.6
	comp=E,7.6nm,0.6s,baz=196,slow=11,SNR=6.9						
USHA	Ushuaia	22.14	177	P	P	10 27 42.3	+0.9
USHA				S	S	10 31 30.4	-8.4
USHA	Ushuaia	22.14	177	P	P	10 27 42.3	+0.9
	comp=E,23nm,0.9s,baz=12,slow=4.6,SNR=11						
USHA				S	S	10 31 30.4	-8.4
	comp=E,5.2nm,0.9s,baz=288,slow=20,SNR=2.7						
SAML	Samuel	24.54	17	eP	P	10 28 05.5	+0.9
	comp=E,8.9nm,1.0s						
BDFB	Brasilia	26.36	55	P	P	10 28 21.4	+0.2
BDFB	Brasilia	26.36	55	P	P	10 28 21.4	+0.2
	comp=E,3.0nm,0.6s,baz=214,slow=7.7,SNR=3.9						
PMSA	Palmer Station	32.30	175	eP	P	10 29 13.0	-0.2
PMSA	Palmer Station	32.30	175	P	P	10 29 12.6	-0.5
	comp=E,4.5nm,0.4s,baz=76,slow=12,SNR=7.2						
OTAV	Otavalo	33.69	345	eP	P	10 29 29.2	+2.9
	comp=E,21nm,1.0s						
ROSC	El Rosal	37.58	353	eP	P	10 30 00.4	+0.9
VNA3	Neumayer Olymp	49.97	158	eP	P	10 31 43.9	+6.3
VNA2	Neumayer--Watz	50.60	158	eP	P	10 31 44.1	+1.7
SNAA	Sanae	52.20	158	eP	P	10 32 00.6	+6.3
SNAA	Sanae	52.20	158	P	P	10 31 54.7	+0.4
SNAA	Sanae	52.20	158	P	P	10 31 54.7	+0.4
	comp=E,0.4nm,0.6s,baz=275,slow=13,SNR=6.2						
TEIG	Tepich	55.41	339	eP	P	10 32 18.9	+0.8
	comp=E,32nm,0.6s						
QSPA	South Pole Qui	57.51	180	eP	P	10 32 33.2	+0.4
	comp=E,4.4nm,1.0s						
SYO	Syowa Base	66.49	158	⇑eP	P	10 33 29.6	-3.0
732A	Laxson Ranch,	67.33	332	⇓P	P	10 33 39.8	+1.4
	baz=68,SNR=11						
632A	Uvalde	67.95	332	⇓P	P	10 33 43.8	+1.5
	baz=68,SNR=5.2						
631A	Perdido Creek	68.18	332	⇑P	P	10 33 45.2	+1.5
	baz=68						
532A	Rocksprings	68.55	333	⇑P	P	10 33 47.5	+1.5
	baz=69,SNR=12						
JCT	Junction City	68.82	333	eP	P	10 33 49.0	+1.2
	comp=E,9.3nm,0.8s						
JCT	Junction City	68.82	333	⇓P	P	10 33 48.9	+1.1
	baz=69,SNR=5.3						
531A	Rocksprings	68.83	332	⇑P	P	10 33 49.4	+1.5
	baz=69,SNR=6.3						
530A	J-C Ranch, Com	69.13	331	⇑P	P	10 33 51.2	+1.5
	baz=70,SNR=6.4						
432A	Menard	69.17	333	⇑P	P	10 33 50.8	+0.9
	baz=70						
SWET	Sewanee	69.17	346	eP	P	10 33 50.5	+0.7
	comp=E,16nm,0.7s						
628A	Black Gap, Mar	69.19	330	⇓P	P	10 33 51.8	+1.7
	baz=70,SNR=6.1						
431A	Sonora	69.31	332	⇑P	P	10 33 51.9	+1.1
	baz=70						
WHTX	Lake Whitney	69.32	335	⇓P	P	10 33 52.0	+1.3
	baz=70						
627A	Terlingua Ranc	69.38	329	⇓P	P	10 33 52.4	+1.1
	baz=70						
TXAR	Lajitas Array	69.40	329	P	P	10 33 52.8	+1.5
TXAR	Lajitas Array	69.40	329	P	P	10 33 52.8	+1.5
	comp=E,2.7nm,0.6s,baz=153,slow=8.1,SNR=48						
529A	Stev Forest Ra	69.47	331	⇓P	P	10 33 53.1	+1.3
	baz=70,SNR=12						
332A	Millersview	69.60	333	⇓P	P	10 33 53.5	+0.9
	baz=70						
430A	Baggett Ranch,	69.66	332	⇑P	P	10 33 54.0	+1.1
	baz=70,SNR=8.9						
528A	Cox Ranch, San	69.74	330	⇑P	P	10 33 54.5	+1.0
	baz=70						
429A	Davenport Ranc	69.78	331	⇑P	P	10 33 54.9	+1.3
	baz=70,SNR=7.0						
626A	Big Bend Ranch	69.79	329	⇓P	P	10 33 55.4	+1.6
	baz=70,SNR=6.8						
331A	San Angelo	69.80	333	⇑P	P	10 33 54.5	+0.7
	baz=70,SNR=5.5						
232A	Coleman	70.02	334	⇓P	P	10 33 55.9	+0.8
	baz=70,SNR=6.6						
330A	Mertzon	70.18	332	⇓P	P	10 33 56.8	+0.7
	baz=70,SNR=5.7						
428A	Kincaid Ranch,	70.19	331	⇓P	P	10 33 57.2	+1.0
	baz=70						
526A	Mary Lane Ranc	70.21	329	⇓P	P	10 33 57.9	+1.5
	baz=71,SNR=9.5						
231A	Bronte	70.31	333	⇓P	P	10 33 57.5	+0.6
	baz=71						
WVT	Waverly	70.45	345	eP	P	10 33 57.8	+0.2
	comp=E,21nm,0.7s						
329A	Wagon Wheel Ra	70.57	332	⇓P	P	10 33 59.6	+1.1
	baz=71,SNR=7.4						
427A	Hayter Ranch,	70.60	330	⇓P	P	10 33 59.9	+1.2
	baz=71						
ABTX	Abilene, Hawle	70.68	334	⇑P	P	10 34 00.3	+1.3
	baz=71						
426A	McDonald Obser	70.71	329	⇑P	P	10 34 00.9	+1.4
	baz=71,SNR=7.8						
328A	Wristen Ranch,	70.81	331	⇓P	P	10 34 01.2	+1.2
	baz=71						
229A	Bryant Ranch,	70.92	332	⇓P	P	10 34 02.0	+1.4
	baz=71						
131A	Roby	71.00	333	⇑P	P	10 34 02.3	+1.2
	baz=71						
130A	Snyder	71.15	333	⇓P	P	10 34 02.8	+0.8
	baz=72						
425A	Indio Mountain	71.22	329	⇑P	P	10 34 03.4	+0.9
	baz=72						
Z32A	Haskell	71.23	334	⇑P	P	10 34 03.3	+0.9
	baz=72						
326A	Caldwell Ranch	71.25	330	⇑P	P	10 34 03.8	+1.1
	baz=72,SNR=5.3						
228A	UT Block 9, Go	71.37	331	⇑P	P	10 34 04.2	+0.9
	baz=72,SNR=5.9						
Z31A	Sharp Cattle R	71.48	334	⇑P	P	10 34 04.9	+0.9
	baz=72,SNR=11						
129A	Stewart Farms,	71.53	332	⇓P	P	10 34 05.2	+0.9
	baz=72						
227A	Bennet, Jal	71.56	331	⇓P	P	10 34 05.8	+1.3
	baz=72,SNR=6.6						
325A	Bean Ranch, Si	71.72	329	⇓P	P	10 34 06.2	+0.6
	baz=72,SNR=7.3						
128A	Castleberry Fa	71.77	332	⇓P	P	10 34 06.6	+0.8
	baz=72,SNR=6.3						
Z30A	Sanderson Ranc	71.83	333	⇑P	P	10 34 06.6	+0.6
	baz=72						
Y32A	R-V Farms, Ver	71.84	335	⇑P	P	10 34 06.8	+0.8
	baz=72,SNR=7.5						
226B	Tecolote Peak,	71.98	330	⇓P	P	10 34 08.3	+1.3
	baz=72						
324A	Moseley Ranch,	72.00	329	⇓P	P	10 34 07.3	+0.1
	baz=72,SNR=13						
Z29A	Hungry Hill Ra	72.03	333	⇓P	P	10 34 07.6	+0.4
	baz=72,SNR=7.4						
Y31A	Rekieta Farm,	72.10	334	⇑P	P	10 34 08.4	+0.8
	baz=72						
127A	Arkansas Junct	72.17	331	⇓P	P	10 34 09.0	+0.8
	baz=72						
GDL2	Guadalupe Moun	72.17	330	eP	P	10 34 09.7	+1.5
MNTX	Cornudas Mount	72.18	329	eP	P	10 34 08.1	0.0
	comp=E,5.6nm,0.8s						
MNTX	Cornudas Mount	72.18	329	⇓P	P	10 34 08.3	+0.2
	baz=72,SNR=13						
225A	Deer Hill, Car	72.29	330	⇓P	P	10 34 09.9	+0.9
	baz=73						
Z28A	Tucker Farm, M	72.32	332	⇑P	P	10 34 09.8	+0.8
	baz=73						
TUL1	Tulsa	72.36	338	⇑P	P	10 34 09.9	+0.9
	baz=73						
126A	Clayton Basin,	72.42	331	⇓P	P	10 34 10.7	+1.1
	baz=73,SNR=6.7						
Y29A	Porterfield Fa	72.54	333	⇑P	P	10 34 11.0	+0.7
	baz=73,SNR=12						
224A	Cornudas Mount	72.56	329	⇓P	P	10 34 11.0	+0.5
	baz=73,SNR=11						
X31A	McDonald Ranch	72.60	335	⇑P	P	10 34 11.3	+0.8
	baz=73,SNR=5.2						
125A	Gardner Draw,	72.69	330	⇓P	P	10 34 11.9	+0.7
	baz=73						
X30A	Coker Ranch, T	72.76	334	⇓P	P	10 34 13.0	+1.4
	baz=73						
FVM	French Village	72.82	343	eP	P	10 34 11.7	0.0
	comp=E,12nm,0.7s						
Z26A	Caprock	72.94	331	⇓P	P	10 34 13.7	+1.0
	baz=73,SNR=16						
124A	Stringfield Ra	73.07	329	⇓P	P	10 34 14.6	+1.0
	baz=73						
MSTX	Muleshoe	73.07	332	⇑P	P	10 34 14.2	+0.8
	baz=73,SNR=11						
X29A	Tulia	73.07	333	⇑P	P	10 34 14.4	+1.0
	baz=73						
W31A	Holland Ranch,	73.08	335	⇓P	P	10 34 14.3	+0.9
	baz=74						
Y27A	Causey	73.15	332	⇑P	P	10 34 14.6	+0.6
	baz=74						
Z25A	Roswell	73.26	330	⇑P	P	10 34 15.5	+1.0
	baz=74						
320A	Kipp Ranch, An	73.29	326	⇓P	P	10 34 16.7	+1.8
	baz=74						
DBIC	Dimbokro	73.33	70	P	P	10 34 14.8	-0.4
DBIC	Dimbokro	73.33	70	P	P	10 34 14.8	-0.4
	comp=E,5.9nm,0.6s,baz=200,slow=5.0,SNR=10						
AMTX	Amarillo	73.45	333	⇑P	P	10 34 16.8	+1.1
	baz=74						
221A	Mesquite Ranch	73.51	327	⇑P	P	10 34 18.4	+2.3
	baz=74						
Z24A	Sheeppen Canyo	73.57	330	⇓P	P	10 34 17.8	+1.3
	baz=74,SNR=7.5						
W29A	Amraillo	73.65	334	⇓P	P	10 34 17.6	+0.8
	baz=74,SNR=5.2						
319A	Douglas	73.68	326	⇓P	P	10 34 19.0	+1.9
	baz=74,SNR=5.8						
220A	Playas Peak, P	73.76	327	⇑P	P	10 34 19.3	+1.7
	baz=74,SNR=7.8						
X27A	F and S Farms,	73.79	332	⇑P	P	10 34 19.8	+2.1
	baz=74						
Y25A	Mesa, Roswell	73.80	331	⇓P	P	10 34 19.6	+1.8
	baz=74						
V30A	Spur Ranch, Mi	73.87	335	⇑P	P	10 34 20.8	+2.8
	baz=74						
Z23A	Rita Site, Whi	73.88	329	⇑P	P	10 34 20.4	+2.2
	baz=74,SNR=7.7						
121A	Cookes Peak, D	73.95	328	⇑P	P	10 34 20.9	+2.1
	baz=74,SNR=9.8						
X26A	CR and CF Fran	73.99	332	⇑P	P	10 34 20.6	+1.7
	baz=74						
W27A	Bowe Ranch, En	74.14	332	⇓P	P	10 34 20.9	+1.1
	baz=74,SNR=6.9						
Z22A	Elephant Butte	74.20	329	⇓P	P	10 34 22.1	+2.0
	baz=75						
120A	U Bar Ranch, L	74.35	327	⇑P	P	10 34 23.0	+1.9
	baz=75,SNR=6.3						
Y23A	Lovelace Mesa,	74.38	330	⇓P	P	10 34 23.4	+2.2
	baz=75						
Y22A	Socorro	74.78	329	⇑P	P	10 34 25.0	+1.5
	baz=75						
Z20A	Nine Sixteen R	74.81	327	⇓P	P	10 34 25.3	+1.7
	baz=75						
W25A	X Bar L Ranch,	74.83	331	⇓P	P	10 34 25.1	+1.4
	baz=75						
LPM	Los Pinos Moun	74.95	329	eP	P	10 34 26.1	+1.6
V26A	Tequesquite Ra	75.07	332	⇑P	P	10 34 26.5	+1.4
	baz=75						
Y21A	Point of Rocks	75.15	328	⇓P	P	10 34 27.8	+2.1
	baz=76,SNR=5.5						
W24A	Lazy 6 Ranch,	75.21	331	⇑P	P	10 34 27.3	+1.4
	baz=76,SNR=5.2						
X22A	Bernardo	75.28	329	⇑P	P	10 34 28.5	+2.1

	baz=76							
Y20A	Horse Springs, baz=76	75.38	328	⇑P		P	10 34 29.1	+2.1
ANMO	Albuquerque comp=E,47nm,2.7s	75.42	330	*e*P		P	10 34 28.9	+1.7
V25A	Rancho No Teng baz=76,SNR=6.2	75.43	332	⇑P		P	10 34 28.7	+1.5
W23A	Werner Place, baz=76	75.47	330	⇓P		P	10 34 29.3	+1.8
X21A	Alamocita Cree baz=76,SNR=5.6	75.57	329	⇑P		P	10 34 30.0	+1.9
U26A	Atchley Ranch, baz=76	75.57	333	⇑P		P	10 34 29.6	+1.5
V24A	Rampart Ranch, baz=76	75.60	331	⇑P		P	10 34 29.9	+1.6
T27A	Campo baz=76	75.77	334	⇑P		P	10 34 30.7	+1.6
U25A	Circle Dot Ran baz=76,SNR=5.6	75.84	332	⇑P		P	10 34 31.1	+1.6
X20A	Quemado baz=76	75.96	328	⇓P		P	10 34 32.2	+1.9
V23A	Ortiz Mt. (NFS baz=76	75.99	331	⇓P		P	10 34 32.4	+1.9
W21A	San Fidel baz=76	76.08	329	⇑P		P	10 34 33.1	+2.1
T26A	Comanche Natio baz=77,SNR=5.6	76.20	333	⇓P		P	10 34 33.4	+1.8
W20A	Ramah baz=77,SNR=5.5	76.45	329	⇓P		P	10 34 34.9	+1.8
T25A	Trinidad baz=77,SNR=6.7	76.48	332	⇑P		P	10 34 35.2	+2.0
U23A	El Rito baz=77,SNR=7.9	76.50	331	⇓P		P	10 34 35.3	+2.0
S26A	Kim baz=77,SNR=5.1	76.55	333	⇑P		P	10 34 35.0	+1.5
T24A	Torres, Weston baz=77,SNR=5.5	76.68	332	⇑P		P	10 34 36.2	+1.8
U22A	Llaves baz=77	76.81	330	⇑P		P	10 34 37.2	+2.1
R27A	Eads baz=77,SNR=5.4	76.88	334	⇓P		P	10 34 36.5	+1.2
S25A	Robets Cordova baz=77	76.95	333	⇓P		P	10 34 37.1	+1.3
V20A	Brimhall baz=77	77.01	329	⇓P		P	10 34 38.0	+1.9
T23A	Casias Ranch, baz=77	77.04	331	⇓P		P	10 34 38.2	+1.8
R26A	Arlington baz=78	77.13	334	⇓P		P	10 34 38.9	+2.2
U21A	Nageezi baz=78,SNR=8.2	77.19	330	⇑P		P	10 34 38.7	+1.5
X16A	Lo Mia Camp, P baz=78	77.21	326	⇓P		P	10 34 39.3	+2.0
S24A	Houchin Ranch, baz=78,SNR=10.0	77.23	332	⇓P		P	10 34 39.8	+2.3
R25A	Fountain Ranch baz=78	77.31	333	⇑P		P	10 34 39.6	+1.9
T22A	Edith baz=78,SNR=6.5	77.38	331	⇓P		P	10 34 40.3	+2.1
KSCO	Kaye Shedlock' baz=78	77.46	335	⇓P		P	10 34 40.5	+1.9
U20A	Newcomb baz=78	77.52	329	⇓P		P	10 34 40.7	+1.7
S23A	Nye Farm, Mont baz=78	77.60	332	⇑P		P	10 34 41.7	+2.2
T21A	Navajo Lake baz=78	77.62	330	⇓P		P	10 34 41.6	+2.0
R24A	Sanders Place, baz=78,SNR=9.4	77.70	333	⇑P		P	10 34 41.9	+1.9
Q26A	Hugo baz=78	77.71	334	⇑P		P	10 34 42.2	+2.3
R23A	Moffat baz=78	77.95	332	⇑P		P	10 34 43.3	+1.9
Q25A	Bedland, Calha baz=78	77.97	333	⇑P		P	10 34 43.4	+1.9
S22A	4UR Ranch, Cre baz=78	77.97	331	⇑P		P	10 34 43.3	+1.7
Y12C	Blythe baz=78	78.17	324	⇑P		P	10 34 44.5	+2.1
MVCO	Mesa Verde baz=79	78.21	330	⇑P		P	10 34 44.9	+2.0
S21A	Coal Bank Pass baz=79	78.30	330	⇑P		P	10 34 45.3	+1.9
R22A	Saguache, Gunn baz=79	78.36	331	⇑P		P	10 34 45.7	+2.0
Q24A	Divide baz=79,SNR=7.6	78.36	333	⇑P		P	10 34 45.4	+1.7
O27A	Beecher Island baz=79	78.45	335	⇑P		P	10 34 46.0	+2.1
P25A	Willow Gulch B baz=79,SNR=6.7	78.46	334	⇓P		P	10 34 46.0	+1.9
BC3	Big Chuckawall baz=79	78.56	323	⇑P		P	10 34 46.6	+1.9
Q23A	Hartsel baz=79	78.57	332	⇑P		P	10 34 47.2	+2.3
S20A	Disappointment baz=79	78.68	330	⇑P		P	10 34 47.6	+2.1
P24A	Kohler Place, baz=79	78.74	333	⇑P		P	10 34 47.8	+2.1
R21A	Cimarron baz=79	78.80	331	⇑P		P	10 34 48.2	+2.2
W13A	Hualapai Mount baz=79	78.93	325	⇑P		P	10 34 48.7	+1.9
Q22A	Crested Butte, baz=79	78.96	332	⇓P		P	10 34 48.8	+1.7
O25A	Wiggins baz=79	78.97	334	⇓P		P	10 34 49.3	+2.4
P23A	Jefferson baz=79	78.98	333	⇓P		P	10 34 49.1	+1.9
R20A	Redvale baz=79,SNR=5.7	78.99	330	⇑P		P	10 34 49.2	+2.1
U15A	North Rim baz=80	79.25	327	⇓P		P	10 34 50.4	+1.8
SMCO	Snowmass comp=E,7.4nm,0.9s	79.26	332	*e*P		P	10 34 50.6	+1.8
S18A	Hurst Farm, Bl baz=80,SNR=7.4	79.26	329	⇓P		P	10 34 50.5	+1.9
ISCO	Idaho Springs comp=E,2.6nm,0.8s	79.26	333	*e*P		P	10 34 50.0	+1.4
ISCO	Idaho Springs baz=80	79.26	333	⇑P		P	10 34 50.3	+1.7
BOSA	Boshof	79.30	117	P		P	10 34 49.3	+0.1
BOSA	Boshof comp=E,1.8nm,0.7s,baz=252,slow=3.5,SNR=3.5	79.30	117	P		P	10 34 49.3	+0.1
MURC	Murrieta baz=80	79.42	322	⇓P		P	10 34 51.3	+2.0
P22A	Eagle baz=80	79.53	332	⇓P		P	10 34 51.9	+1.9
O23A	Lake Granby, G baz=80,SNR=5.5	79.73	333	⇓P		P	10 34 53.1	+2.0
ECSD	EROS Data Cent comp=E,10.0nm,0.9s	79.82	341	*e*P		P	10 34 51.3	+0.1
HEC	Hector,Ludlow baz=80	79.93	323	⇑P		P	10 34 54.6	+2.5
O22A	Kremmling baz=80	79.93	333	⇓P		P	10 34 54.2	+1.9
P20A	De Beque baz=80	80.10	331	⇓P		P	10 34 54.9	+1.8
BFSC	Mount Baldy Ra baz=80	80.15	322	⇓P		P	10 34 55.4	+2.0
M24A	Cheyenne baz=81	80.42	334	⇓P		P	10 34 56.4	+1.7
N22A	Wattenberg Ran baz=81	80.45	333	⇓P		P	10 34 57.0	+2.0
PHWY	Pilot Hill comp=E,7.4nm,1.0s	80.50	334	*e*P		P	10 34 56.3	+1.0
K27A	Flueckinger Fa baz=81	80.60	337	⇑P		P	10 34 57.3	+1.7
SRU	San Rafael baz=81	80.67	329	⇓P		P	10 34 57.7	+1.6
EDW2	Edwards Air Fo baz=81	80.82	322	⇑P		P	10 34 58.6	+1.7
P18A	Preston Nutter baz=81,SNR=6.2	80.98	330	⇑P		P	10 34 59.2	+1.3
M22A	Cedar Creek Ra baz=81	81.02	333	⇓P		P	10 34 59.9	+1.9
P17A	Butcher Ranch, baz=81	81.06	329	⇑P		P	10 34 59.8	+1.6
O19A	Miners Draw (B baz=81	81.08	331	⇑P		P	10 34 59.9	+1.7
N20A	Spence Gulch, baz=82	81.18	332	⇓P		P	10 35 00.7	+1.8
O18A	Roosevelt baz=82	81.42	330	⇓P		P	10 35 02.2	+2.2
MPMC	Manual Prospec baz=82	81.48	323	⇓P		P	10 35 02.2	+1.7
M21A	Separation Pea baz=82	81.49	333	⇑P		P	10 35 02.4	+1.9
L22A	Ellis Ranch, M baz=82	81.50	334	⇑P		P	10 35 02.3	+1.8
K24A	Anderson Ranch baz=82	81.51	335	⇓P		P	10 35 02.8	+2.4
P16A	Fountain Green baz=82	81.58	329	⇓P		P	10 35 02.9	+1.9
N19A	John Jarvie Ra baz=82	81.60	331	⇓P		P	10 35 02.6	+1.7
O17A	Robinson Place baz=82	81.66	330	⇑P		P	10 35 03.0	+1.6
ISA	Isabella comp=E,3.4nm,0.8s	81.68	322	*e*P		P	10 35 02.6	+1.2
ISA	Isabella baz=82	81.68	322	⇓P		P	10 35 03.4	+2.0
M20A	Sweetwater, Wa baz=82	81.71	332	⇑P		P	10 35 03.3	+1.7
L21A	Rawlins baz=82,SNR=5.6	81.80	333	⇓P		P	10 35 03.1	+1.1
P15A	Leamington baz=82	81.81	328	⇑P		P	10 35 03.6	+1.5
K23A	Bowen Ranch, D baz=82	81.83	334	⇓P		P	10 35 03.9	+1.8
N18A	Larsen Ranch, baz=82	81.87	331	⇓P		P	10 35 03.8	+1.3
J24A	Dixon Ranch, L baz=82	81.99	335	⇓P		P	10 35 04.9	+2.0
O16A	Springville baz=82	82.00	329	⇓P		P	10 35 04.3	+1.2
K22A	Casper baz=82	82.07	334	⇑P		P	10 35 05.1	+1.7
M19A	Rock Springs baz=82	82.11	332	⇑P		P	10 35 05.2	+1.5
VES	Vestal, Richgr baz=82	82.13	322	⇓P		P	10 35 05.3	+1.7
L20A	Wamsutter baz=83	82.21	332	⇓P		P	10 35 05.7	+1.4
JLU	Jordanelle comp=E,3.2nm,0.9s	82.31	330	*e*P		P	10 35 05.6	+0.8
K21A	Alcova baz=83,SNR=9.0	82.33	333	⇑P		P	10 35 06.2	+1.4
N17A	Moffit Pass baz=83	82.33	330	⇑P		P	10 35 06.3	+1.4
TOA0	Torodi Ar. Sit	82.34	69	*e*P		P	10 35 05.6	+0.4
TORD	Torodi Ar. Bea	82.34	69	P		P	10 35 05.7	+0.5
TORD	Torodi Ar. Bea comp=E,5.7nm,0.6s,baz=262,slow=5.1,SNR=87	82.34	69	P		P	10 35 05.7	+0.5
R11A	Troy Canyon, C baz=83	82.34	326	⇑P		P	10 35 06.6	+1.6
I24A	Kuemmerle Ranc baz=83	82.44	336	⇓P		P	10 35 06.6	+1.4
RSSD	Black Hills comp=E,4.6nm,0.9s	82.47	336	*e*P		P	10 35 06.7	+1.2
DUG	Dugway comp=E,2.4nm,0.8s	82.56	328	*e*P		P	10 35 06.9	+0.9
DUG	Dugway baz=83	82.56	328	⇓P		P	10 35 07.7	+1.7
RCTC	Rector, Farmer baz=83	82.57	322	⇓P		P	10 35 07.4	+1.5
L19A	Farson baz=83	82.69	332	⇓P		P	10 35 08.2	+1.5
K20A	Yellowstone Ra baz=83	82.77	333	⇑P		P	10 35 07.7	+0.6
L18A	Fontenelle, Gr baz=83	82.82	331	⇑P		P	10 35 08.5	+1.1
M16A	Huntsville baz=83	82.97	330	⇑P		P	10 35 09.0	+0.9
K19A	Absolon Red Bu baz=84	83.10	332	⇓P		P	10 35 09.6	+0.8
I22A	9 Mile Ranch, baz=84	83.13	334	⇓P		P	10 35 09.4	+0.6
HWUT	Hardware Ranch	83.19	330	*e*P		P	10 35 10.4	+1.2
H24A	Dirks Ranch, A baz=84	83.19	336	⇑P		P	10 35 09.9	+0.8
L17A	Cokeville baz=84	83.31	331	⇓P		P	10 35 10.7	+0.8
BW06	Boulder Array baz=84	83.33	332	⇑P		P	10 35 10.7	+0.7
PDAR	Pinedale Array	83.33	332	P		P	10 35 10.3	+0.3
PDAR	Pinedale Array comp=E,1.7nm,0.7s,baz=133,slow=6.7,SNR=10	83.33	332	P		P	10 35 10.3	+0.3
K18A	Toltan Ranch, baz=84,SNR=5.6	83.42	332	⇓P		P	10 35 11.6	+1.2
L16A	Fish Haven baz=84,SNR=8.1	83.47	330	⇑P		P	10 35 11.5	+0.8
J19A	Crowheart baz=84	83.56	333	⇑P		P	10 35 12.2	+1.1
G24A	Alzada baz=84	83.66	336	⇓P		P	10 35 12.5	+1.1
NVAR	Mina Array Bea	83.73	324	P		P	10 35 14.0	+1.8
NVAR	Mina Array Bea comp=E,3.8nm,0.7s,baz=159,slow=5.8,SNR=18	83.73	324	P		P	10 35 14.0	+1.8
I20A	Worland baz=84,SNR=5.3	83.78	333	⇓P		P	10 35 13.2	+1.0
L15A	Malad City baz=84	83.86	330	⇑P		P	10 35 13.6	+0.9
K17A	Gardner Place, baz=84	83.87	331	⇑P		P	10 35 13.7	+1.0
G23A	Biddle baz=84	83.88	336	⇑P		P	10 35 13.0	+0.4
J18A	Kendall Valley baz=84,SNR=6.4	83.89	332	⇑P		P	10 35 13.5	+0.6
H21A	Big Horn, Sher baz=84	83.97	335	⇓P		P	10 35 13.8	+0.7
ELK	Elko	84.09	327	*e*P		P	10 35 15.4	+1.5
F24A	Ekalaka baz=84	84.12	337	⇑P		P	10 35 14.9	+1.1
I19A	Meeteetse baz=85	84.19	333	⇓P		P	10 35 14.9	+0.6
H20A	Greybull baz=85	84.19	334	⇓P		P	10 35 15.0	+0.8
K16A	Soda Springs baz=85,SNR=5.3	84.21	331	⇑P		P	10 35 15.9	+1.5
I18A	Diamond G Ranc baz=85,SNR=5.6	84.22	332	⇓P		P	10 35 15.5	+1.0
J17A	Brown Place, J baz=85	84.29	332	⇑P		P	10 35 16.1	+1.2
MDND	Maddock baz=85	84.43	341	⇓P		P	10 35 16.3	+1.1
LOHW	Long Hollow comp=E,1.9nm,0.7s	84.46	332	*e*P		P	10 35 16.8	+1.1
K15A	Arbon baz=85	84.48	330	⇓P		P	10 35 16.8	+1.0
TPAW	Teton Pass comp=E,66nm,2.9s	84.50	332	*e*P		P	10 35 17.2	+1.2
G21A	Lodge Grass baz=85	84.54	335	⇓P		P	10 35 16.9	+0.9
J16A	Bone baz=85	84.58	331	⇓P		P	10 35 17.5	+1.2
K14A	Jones Ranch, D baz=85	84.64	330	⇑P		P	10 35 17.6	+1.0
F22A	Rosebud baz=85	84.68	336	⇑P		P	10 35 17.4	+0.8
E24A	Baker baz=85	84.70	337	⇓P		P	10 35 17.9	+1.2
I17A	Pilgrim Ck. baz=85,SNR=5.6	84.70	332	⇑P		P	10 35 18.4	+1.5
H19A	Powell baz=85	84.72	333	⇑P		P	10 35 17.8	+0.9
IMW	Indian Meadow	84.83	332	*e*P		P	10 35 18.9	+1.3
G20A	Bridger baz=85,SNR=6.4	84.90	334	⇓P		P	10 35 18.3	+0.5
E23A	Ismay baz=85	84.98	337	⇓P		P	10 35 19.0	+1.0
H18A	Shoshone NF, C baz=85,SNR=9.3	84.98	333	⇑P		P	10 35 19.1	+0.7
J15A	Blackfoot baz=85	85.03	331	⇑P		P	10 35 19.6	+1.1
I16A	Newdale baz=85,SNR=5.1	85.03	331	⇑P		P	10 35 19.7	+1.2
RLMT	Red Lodge comp=E,3.7nm,0.5s	85.21	333	*e*P		P	10 35 20.4	+1.0
RLMT	Red Lodge baz=86,SNR=6.1	85.21	333	⇑P		P	10 35 20.5	+1.0
J14A	Carey baz=86	85.42	330	⇓P		P	10 35 21.3	+0.8
G18A	Lazy EL Ranch, baz=86,SNR=6.1	85.49	333	⇑P		P	10 35 21.6	+0.9
D23A	Lindsay baz=86,SNR=6.4	85.54	337	⇑P		P	10 35 22.1	+1.3
C24A	Savage baz=86,SNR=7.2	85.60	338	⇑P		P	10 35 22.3	+1.3
H16A	Russell Place, baz=86	85.62	332	⇓P		P	10 35 22.7	+1.2
E21A	Keefer Ranch, baz=86	85.63	335	⇓P		P	10 35 22.4	+1.2
ULM	Lac du Bonnet	85.68	344	P		P	10 35 20.9	-0.4
ULM	Lac du Bonnet comp=E,2.1nm,0.4s,baz=171,slow=2.2,SNR=5.9	85.68	344	P		P	10 35 20.9	-0.4
F19A	Roth Farm, Mol baz=86	85.71	334	⇓P		P	10 35 22.5	+0.7
J13A	Cove Ranch, Pi baz=86,SNR=13	85.76	330	⇑P		P	10 35 23.9	+1.8
D22A	Cohagen baz=86	85.84	336	⇑P		P	10 35 23.9	+1.6
I14A	Mackay baz=86,SNR=8.5	85.88	330	⇓P		P	10 35 24.5	+1.7
GCMT	Greycliff comp=E,0.3nm,0.4s	85.93	334	*e*P		P	10 35 23.6	+0.7
G17A	Pierce Place, baz=86	85.94	333	⇓P		P	10 35 24.5	+1.6
E20A	Meyer Farm, Mu baz=86,SNR=15	85.97	335	⇑P		P	10 35 24.1	+1.1
HLID	Hailey comp=E,2.5nm,0.8s	85.99	329	*e*P		P	10 35 24.4	+1.1
HLID	Hailey baz=86,SNR=5.9	85.99	329	⇑P		P	10 35 24.8	+1.5
F18A	Big Timber baz=86,SNR=6.6	86.04	334	⇑P		P	10 35 24.2	+0.8
D21A	La Casta Ranch baz=86	86.05	336	⇑P		P	10 35 24.4	+1.1
C23A	Lambert baz=86	86.08	337	⇑P		P	10 35 24.8	+1.3
I13A	Wildhorse Cree baz=86,SNR=9.1	86.15	330	⇑P		P	10 35 25.7	+1.6
E19A	Rath Farm, Rou baz=86,SNR=15	86.17	334	⇓P		P	10 35 24.9	+0.9
C22A	Vida baz=87	86.26	337	⇑P		P	10 35 25.5	+1.1
G16A	Moss Hill, Enn baz=87	86.28	332	⇑P		P	10 35 25.6	+0.9
DGMT	Dagmar comp=E,13nm,0.6s	86.35	338	*e*P		P	10 35 25.8	+1.1
DGMT	Dagmar baz=87	86.35	338	⇑P		P	10 35 26.2	+1.5
MCMT	McKenzie Canyo comp=E,3.3nm,0.7s	86.37	331	*e*P		P	10 35 26.7	+1.5
F17A	Fitzpatrick Pl baz=87	86.40	333	⇓P		P	10 35 26.8	+1.6
H14A	Leadore baz=87	86.41	331	⇑P		P	10 35 27.2	+1.8
D20A	Manuel Ranch, baz=87	86.47	335	⇑P		P	10 35 26.6	+1.2
MFID	Camas Ranch comp=E,7.3nm,1.4s	86.49	329	*e*P		P	10 35 26.4	+0.7
MFID	Camas Ranch baz=87	86.49	329	⇑P		P	10 35 27.4	+1.7
I12A	Atlanta baz=87	86.49	329	⇑P		P	10 35 26.8	+1.0
G15A	Dillon baz=87,SNR=5.0	86.50	332	⇓P		P	10 35 26.7	+0.9
BOZ	Bozeman (W) baz=87	86.56	332	⇓P		P	10 35 26.6	+0.6
B23A	Brockton baz=87	86.60	338	⇑P		P	10 35 27.6	+1.6
F16A	Kennard Place, baz=87	86.67	332	⇑P		P	10 35 27.5	+1.0
E18A	Harlowton baz=87	86.67	334	⇑P		P	10 35 27.7	+1.2
H13A	Challis baz=87,SNR=10.0	86.74	330	⇑P		P	10 35 28.2	+1.3
C21A	Desert Coulee baz=87,SNR=11	86.74	336	⇑P		P	10 35 27.4	+0.7
B22A	Reddig Ranch S baz=87,SNR=5.6	86.78	337	⇑P		P	10 35 27.7	+0.8
D19A	Cripps Ranch, baz=87,SNR=6.0	86.80	335	⇓P		P	10 35 27.5	+0.4
E17A	Martinsdale baz=87	86.94	333	⇓P		P	10 35 28.8	+0.9
C20A	Veseth Ranch, baz=87,SNR=7.5	86.96	336	⇓P		P	10 35 28.2	+0.4
F15A	Butte baz=87,SNR=6.2	87.06	332	⇑P		P	10 35 29.4	+1.0
G13A	Cobalt baz=88,SNR=7.9	87.16	330	⇓P		P	10 35 30.1	+1.2
D18A	Linhart Farms, baz=88,SNR=6.1	87.16	334	⇑P		P	10 35 29.7	+0.9
B21A	Ellsworth Farm baz=88	87.23	336	⇓P		P	10 35 30.0	+1.0
SCHQ	Schefferville	87.25	2	P		P	10 35 28.0	-0.9
SCHQ	Schefferville comp=E,1.9nm,0.5s,baz=191,slow=3.3,SNR=9.9	87.25	2	P		P	10 35 28.0	-0.9
E16A	East Helena baz=88	87.31	333	⇑P		P	10 35 30.6	+1.0
C19A	Slack Wire Ran baz=88	87.34	335	⇓P		P	10 35 30.4	+0.7
A22A	Carney Farms, baz=88,SNR=7.2	87.36	337	⇑P		P	10 35 30.7	+1.1
D17A	Six Diamond Ra baz=88,SNR=6.7	87.45	334	⇓P		P	10 35 31.1	+0.8
B20A	Solberg Farm, baz=88,SNR=7.2	87.58	336	⇓P		P	10 35 31.2	+0.5
A21A	Bergtoll Ranch baz=88	87.69	337	⇑P		P	10 35 32.0	+0.8
F13A	Darby baz=88,SNR=7.1	87.76	331	⇓P		P	10 35 32.8	+1.1
C17A	Wharram Farm, baz=88,SNR=5.7	87.88	334	⇓P		P	10 35 32.9	+0.7
B19A	Brinkman Farms baz=88	87.92	335	⇓P		P	10 35 33.3	+0.9
A20A	Cobblestone Ra baz=88,SNR=8.3	87.93	336	⇓P		P	10 35 33.0	+0.6
E14A	Clinton baz=88	87.93	332	⇓P		P	10 35 33.4	+0.8
D15A	Lincoln baz=88	88.06	333	⇑P		P	10 35 34.3	+1.1
F12A	Elk City baz=88	88.12	330	⇑P		P	10 35 34.6	+1.2
B18A	Beardsley Farm baz=88,SNR=7.4	88.16	335	⇑P		P	10 35 34.4	+0.9
E13A	Victor baz=89,SNR=6.5	88.23	331	⇓P		P	10 35 35.0	+1.0
A19A	Klindworth Far baz=89	88.25	336	⇑P		P	10 35 34.8	+0.9
C16A	Fuhringer Ranc baz=89,SNR=5.3	88.39	333	⇓P		P	10 35 35.6	+0.9
MSO	Missoula baz=89	88.44	332	⇓P		P	10 35 36.1	+1.1
B17A	L&G Farms, Che baz=89	88.45	334	⇑P		P	10 35 35.7	+0.9
D14A	Greenough baz=89	88.48	332	⇑P		P	10 35 36.3	+1.2
A18A	Metzger Ranch, baz=89	88.63	335	⇓P		P	10 35 36.4	+0.7
C15A	Salmond Ranch, baz=89	88.70	333	⇓P		P	10 35 37.4	+1.2
A17A	Triple J Farms baz=89	88.96	335	⇑P		P	10 35 38.0	+0.8
B15A	Bradely Ranch, baz=90	89.12	333	⇑P		P	10 35 38.6	+0.5
D12A	Red Ives Fores baz=90	89.20	331	⇓P		P	10 35 39.3	+0.8
C13A	Hot Springs baz=90	89.39	332	⇑P		P	10 35 40.1	+0.8
A15A	Johnson Ranch, baz=90	89.73	334	⇑P		P	10 35 41.2	+0.2
C12B	Naegeli Ranch, baz=90	89.77	331	⇓P		P	10 35 42.5	+1.4
B13A	Whitefish baz=90	89.91	332	⇓P		P	10 35 42.9	+1.2
A14A	Double T Ranch baz=90	89.99	333	⇑P		P	10 35 42.7	+0.6
A13A	Flathead Natio baz=91	90.34	333	⇓P		P	10 35 45.3	+1.5
NEW	Newport baz=91	90.89	331	⇓P		P	10 35 46.5	+0.3
YKA	Yellowknife Ar	101.35	341	P		Pdif	10 36 32.6	-0.6
YKA	Yellowknife Ar comp=E,0.2nm,0.5s,baz=143,slow=4.6,SNR=7.4	101.35	341	P		Pdif	10 36 32.6	-0.6
ASAR	Alice Springs	119.38	205	PKP		PKPdf	10 41 30.1	-2.3
ASAR				PKKPbc		PKKPbc	10 51 44.0	-0.1
ASAR	Alice Springs comp=E,0.3nm,0.7s,baz=153,slow=1.6,SNR=6.5	119.38	205	PKP		PKPdf	10 41 30.1	-2.3
ASAR				PKKPbc		PKKPbc	10 51 44.0	-0.1
BRTR	Keskin Array B	119.88	60	PKP		PKPdf	10 41 32.7	-0.2
BRTR	Keskin Array B comp=E,0.4nm,0.5s,baz=302,slow=3.2,SNR=3.2	119.88	60	PKP		PKPdf	10 41 32.7	-0.2
ARCES	ARCESS Array B	122.22	24	PKP		PKPdf	10 41 35.5	-0.8
ARCES	ARCESS Array B comp=E,2.3nm,0.9s,baz=242,slow=3.8,SNR=5.6	122.22	24	PKP		PKPdf	10 41 35.5	-0.8
WRA	Warramunga Arr	122.60	208	PKP		PKPdf	10 41 38.2	-0.4
WRA				PKKPbc		PKKPbc	10 51 31.2	-0.8
WRA	Warramunga Arr comp=E,0.8nm,0.4s,baz=158,slow=1.7,SNR=36	122.60	208	PKP		PKPdf	10 41 38.2	-0.4
WRA				PKKPbc		PKKPbc	10 51 31.2	-0.8
	comp=E,0.3nm,0.9s,baz=346,slow=4.1,SNR=5.2							

ABKAR	Akbulak array	139.70	51	ePKPdf	PKPdf	10 42 10.7	+0.9
BRVK	Borovoye	145.24	42	ePKPbc	PKPab	10 42 20.7	+1.0
BVAR	Borovoye Array	145.31	42	PKPbc	PKPab	10 42 20.7	+0.8
BVAR	Borovoye Array	145.31	42	PKPbc	PKPab	10 42 20.7	+0.8
	comp=E,11nm,0.5s,baz=296,slow=3.1,SNR=54						
KKAR	Karatay Array	147.60	60	ePKPbc	PKPbc	10 42 27.0	+0.3
EKS2	Erkin-Say	150.03	60	ePKPbc	PKPbc	10 42 34.0	+0.9
AAK	Ala-Archa	150.56	60	PKPbc	PKPbc	10 42 34.7	+0.4
AAK				ePKPab	PKPab	10 42 42.3	+0.8
AAK	Ala-Archa	150.56	60	PKPbc	PKPbc	10 42 34.7	+0.4
	comp=E,10nm,0.7s,baz=284,slow=4.2,SNR=30						
KURK	Kurchatov	150.91	43	ePKPbc	PKPbc	10 42 35.6	+0.9
TKM2	Tokmak 2	151.32	59	ePKPbc	PKPbc	10 42 37.0	+0.8
TKM2				ePKPab	PKPab	10 42 45.3	+0.6
KSH	Kashi	151.98	66	ePKPbc	PKPdf	10 42 31.1	0.0
KSH				pPKP	pPKPdf	10 42 59.1	+0.4
KSH				sPKP		10 43 08.5	
KSH				PKS	PKSdf	10 46 03.9	-1.8
KSH				PP	PP	10 46 20.8	+0.7
KSH				SKS	SKSdf	10 49 27.0	-2.4
KSH				SKKS	SKKSac	10 52 58.9	-1.9
KSH				SS	SS	11 05 38.0	-1.8
KSH				LR	LR		
	comp=N,34nm,3.1s						
KSH				LR	LR		
	comp=E,25nm,3.4s						
KSH				LR	LR		
	comp=Z,170nm,6.4s						
ZAA0	Zalesovo Array	152.34	32	ePKPbc	PKPbc	10 42 38.7	+0.9
ZALV	Zalesovo Beam	152.34	32	PKPbc	PKPbc	10 42 38.6	+0.8
ZALV	Zalesovo Beam	152.34	32	PKPbc	PKPbc	10 42 38.6	+0.8
	comp=Z,27nm,0.5s,baz=307,slow=3.1,SNR=87						
MKAR	Makanchi Array	154.78	48	PKPbc	PKPbc	10 42 43.8	+0.3
MKAR				PKPab	PKPab	10 42 58.1	-0.8
MKAR	Makanchi Array	154.78	48	PKPbc	PKPbc	10 42 43.8	+0.3
	comp=Z,1.0nm,0.6s,baz=295,slow=1.5,SNR=8.8						
MKAR				PKPab	PKPab	10 42 58.1	-0.8
	comp=Z,2.5nm,0.8s,baz=296,slow=4.3,SNR=11						
MJAR	Matsushiro Arr	156.34	287	PKPab	PKPab	10 43 06.9	+1.0
MJAR	Matsushiro Arr	156.34	287	PKPab	PKPab	10 43 06.9	+1.0
	comp=Z,1.9nm,0.8s,baz=94,slow=2.1,SNR=6.4						
CN2	Changchun	163.49	317	ePKP	PKPdf	10 42 44.8	-0.1
KSRS	Korea Array	164.42	293	PKPab	PKPab	10 43 42.7	+1.6
	comp=Z,0.6nm,0.4s,baz=79,slow=4.1,SNR=4.9						
KSAR	Wonju Array Be	164.45	293	PKPab	PKPab	10 43 42.7	+1.4
GTA	Gaotai	169.54	48	ePKP	PKPdf	10 42 49.2	-0.7
GTA				pPKP	pPKPdf	10 43 16.3	-1.4
GTA				sPKP		10 43 26.7	
GTA				PKPab	PKPab	10 44 05.6	+1.8
KMI	Kunming	170.24	139	PKP	PKPdf	10 42 51.1	+0.3
HHC	Hu-ho-hao-te	171.77	351	ePKP	PKPdf	10 42 48.9	-2.1
HHC				sPKP		10 43 26.5	
HHC				PKS	PKSdf	10 46 20.3	-3.1
HHC				PP	PP	10 48 05.2	+1.4
HHC				SKS	SKSdf	10 49 40.1	-5.1
HHC				SKKS	SKKSac	10 54 41.0	-0.7
HHC				SS	SS	11 09 02.6	-0.2
HHC				AMB	AMB		
	comp=Z,120nm,7.1s						
HHC				LR	LR		
	comp=N,190nm,20.1s						
HHC				LR	LR		
	comp=E,160nm,19.0s						
HHC				LR	LR		
	comp=Z,250nm,20.9s						
GYA	Guiyang	173.19	156	ePKP	PKPdf	10 42 52.8	+0.7
GYA				pPKP	pPKPdf	10 43 17.0	-2.9
GYA				sPKP		10 43 27.6	
GYA				PKPab	PKPab	10 44 21.5	+1.4
GYA				PKS	PKSdf	10 46 22.0	-2.5
GYA				PP	PP	10 48 13.4	+2.3
GYA				AMB	AMB		
	comp=Z,60nm,7.8s						
LZH	Lanzhou	174.06	54	ePKP	PKPdf	10 42 49.0	-3.2
LZH				pPKP	pPKPdf	10 43 14.1	-5.9
CD2	Chengdu	174.56	108	PKP	PKPdf	10 42 50.8	-1.5

CSEM 08 10:33:22.0, 42°.28N×13°.51E, h11km, After ROM

ROM 08 10:33:22.0±0.1, 42°.28N×13°.51E, h11km, Ml1.8/5, Error ellipse: s-maj=0.9km s-min=0.7km az=52.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	Fagnano	0.06	107	Pg	Pg	10 33 24.6	+0.3
FAGN				Sg	Sg	10 33 26.0	+0.1
	713nm,0.4s						
FAGN	Fagnano	0.06	107	Pg	Pg	10 33 24.6	+0.3
FAGN				Sg	Sg	10 33 26.0	+0.1
	713nm,0.4s						
AQU	L'Aquila	0.10	312	Pg	Pg	10 33 25.4	+0.5
AQU				Sg	Sg	10 33 27.5	+0.6
	921nm,0.2s						
AQU	L'Aquila	0.10	312	Pg	Pg	10 33 25.4	+0.5
AQU				Sg	Sg	10 33 27.5	+0.6
	921nm,0.2s						
CAMP	Campotosto	0.26	344	Pg	Pg	10 33 27.9	+0.3
CAMP				Sg	Sg	10 33 31.8	+0.4
	126nm,0.4s						
CAMP	Campotosto	0.26	344	Pg	Pg	10 33 27.9	+0.3
CAMP				Sg	Sg	10 33 31.8	+0.4
	126nm,0.4s						
VCEL	Villa Celiera	0.27	66	Pg	Pg	10 33 28.2	+0.5
VCEL				Sg	Sb	10 33 32.8	-1.1
	69nm,0.3s						
VCEL	Villa Celiera	0.27	66	Pg	Pg	10 33 28.2	+0.5
VCEL				Sg	Sb	10 33 32.8	-1.1
	69nm,0.3s						
PTQR	Pietraquaria	0.27	197	Pg	Pg	10 33 28.1	+0.4
PTQR				Sg	Sg	10 33 32.5	+1.0
	9.0nm,0.2s						
PTQR	Pietraquaria	0.27	197	Pg	Pg	10 33 28.1	+0.4
PTQR				Sg	Sg	10 33 32.5	+1.0
	9.0nm,0.2s						
FIAM	Fiamignano	0.29	267	Pg	Pg	10 33 28.6	+0.6
FIAM				Sg	Sg	10 33 32.9	+0.8
FIAM	Fiamignano	0.29	267	Pg	Pg	10 33 28.6	+0.6
FIAM				Sg	Sg	10 33 32.9	+0.8
TERO	Teramo	0.35	12	Pg	Pg	10 33 29.2	+0.2
TERO				Sg	Sb	10 33 35.3	-0.7
	117nm,0.3s						
TERO	Teramo	0.35	12	Pg	Pg	10 33 29.2	+0.2
TERO				Sg	Sb	10 33 35.3	-0.7
	117nm,0.3s						
INTR	Introdacqua	0.40	132	Pg	Pg	10 33 30.5	+0.4
INTR				Sg	Sg	10 33 36.5	+1.0
	36nm,0.2s						
INTR	Introdacqua	0.40	132	Pg	Pg	10 33 30.5	+0.4
INTR				Sg	Sg	10 33 36.5	+1.0
	36nm,0.2s						
VVLD	Villa Vallelon	0.42	168	Pg	Pg	10 33 30.8	+0.4
VVLD				Sg	Sb	10 33 37.7	-0.4
VVLD	Villa Vallelon	0.42	168	Pg	Pg	10 33 30.8	+0.4
VVLD				Sg	Sb	10 33 37.7	-0.4
LNSS	Leonessa	0.47	313	Pg	Pg	10 33 31.8	+0.4
LNSS	Leonessa	0.47	313	Pg	Pg	10 33 31.8	+0.4
CERT	Cerreto	0.51	230	Pg	Pg	10 33 32.1	0.0
CERT	Cerreto	0.51	230	Pg	Pg	10 33 32.1	0.0
NRCA	Norcia	0.62	332	Pg	Pg	10 33 34.1	-0.1
NRCA				Sg	Sg	10 33 43.2	+0.7
	17nm,0.3s						
NRCA	Norcia	0.62	332	Pg	Pg	10 33 34.1	-0.1
NRCA				Sg	Sg	10 33 43.2	+0.7
	17nm,0.3s						

IDC 08 10:33:52.7±0.7, 15°.14S×173°.48W, h0km, mb4.1/11, mb1 4.3/12, mb1mx4.2/22, mbtmp4.1/12, ML2.9/1, MS3.6/4, Ms1 3.6/4, ms1mx3.2/30, Error ellipse: s-maj=33.1km s-min=15.0km az=137.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.05	54	Pn	Pn	10 34 27.3	-1.3
	221nm,0.3s,baz=238,slow=9.5,SNR=193						
AFI				Sn	Sn	10 34 47.0	-8.0
	2μm,0.3s,baz=222,slow=23,SNR=17						
AFI				LR	LR	10 35 07.8	
	comp=Z,447nm,19.7s,baz=32,slow=37						
URZ	Urewera	24.49	198	P	P	10 39 13.5	-0.1
	7.1nm,0.6s,baz=36,slow=14,SNR=7.1						
STKA	Stephens Creek	44.10	240	P	P	10 42 02.4	-0.5
	2.1nm,0.7s,baz=82,slow=6.6,SNR=6.3						
WRA	Warramunga Arr	49.83	257	P	P	10 42 47.6	-0.3
	0.5nm,0.4s,baz=95,slow=6.3,SNR=17						
ASAR	Alice Springs	50.12	252	P	P	10 42 49.5	-0.7
	1.1nm,0.5s,baz=88,slow=7.6,SNR=32						
ASAR				LR	LR	11 02 10.4	
	comp=Z,81nm,19.4s,baz=41,slow=34						
VNDA	Vanda	63.63	186	P	P	10 44 25.4	+0.3
	1.3nm,0.9s,baz=13,slow=5.3,SNR=6.3						
FX1	Attu Island--F	68.71	351	LR	LR	11 07 56.2	
	comp=Z,57nm,20.4s,baz=245,slow=30						
NVAR	Mina Array Bea	74.19	42	P	P	10 45 31.6	-0.1
	1.8nm,0.7s,baz=230,slow=9.3,SNR=14						
USRK	Ussuriysk Arra	77.12	323	LR	LR	11 16 44.9	
	comp=Z,42nm,18.4s,baz=280,slow=33						
TXAR	Lajitas Array	80.53	56	P	P	10 46 07.6	+0.3
	2.2nm,1.1s,baz=232,slow=6.2,SNR=15						
PDAR	Pinedale Array	82.12	42	P	P	10 46 15.6	-0.1
	1.5nm,0.8s,baz=218,slow=3.7,SNR=14						
ILAR	Eielson Array	82.20	11	P	P	10 46 14.7	-0.6
	0.6nm,0.8s,baz=226,slow=6.3,SNR=8.1						
YKA	Yellowknife Ar	89.89	23	P	P	10 46 53.4	+0.2
	0.5nm,0.8s,baz=241,slow=4.4,SNR=9.6						
SONM	Songino Array	94.59	318	P	P	10 47 15.6	0.0
	0.9nm,0.5s,baz=131,slow=5.9,SNR=2.7						
GERES	GERESS Array B	145.87	352	PKPbc	PKPbc	10 53 34.2	0.0
	0.4nm,0.6s,baz=4.8,slow=2.4,SNR=3.4						
BRTR	Keskin Array B	145.90	321	PKPbc	PKPab	10 53 35.0	-0.1
	2.0nm,0.9s,baz=94,slow=2.9,SNR=8.7						

ISCJB 08 10:34:09.6±0.2, 42°.35N±0°.02×13°.38E±0°.02, h8km±2km, Error ellipse: s-maj=3.2km s-min=2.7km az=20.5

ROM 08 10:34:09.4±0.1, 42°.35N×13°.38E, h9km, Ml3.4/18, Error ellipse: s-maj=1.0km s-min=0.8km az=67.0

CSEM 08 10:34:10.2±0.1, 42°.34N×13°.37E, h2km, ML3.8/6, Error ellipse: s-maj=3.1km s-min=2.7km az=43.0

LDG 08 10:34:12.3±0.7, 42°.41N×13°.33E, h2km, Ml2.9/9, Error ellipse: s-maj=14.2km s-min=10.5km az=106.0

BEO 08 10:34:14.4±1.0, 42°.17N×13°.64E, h0km, ML3.5/5

ISC 08 10:34:10.4±0.8, 42°.36N±0°.02×13°.38E±0°.02, h7km±4km, n115, σ1s.62/163, 12C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.02	112	Pg	Pg	10 34 11.3	-0.5
AQU				Sg	Sg	10 34 12.3	-0.4
AQU	L'Aquila	0.02	112	Pg	Pg	10 34 11.3	-0.5
AQU				Sg	Sg	10 34 12.3	-0.4
CAMP	Campotosto	0.18	7	⇑iPg	Pg	10 34 13.9	-0.1
CAMP				Sg	Sg	10 34 16.9	+0.4
	11μm,0.5s						
CAMP	Campotosto	0.18	7	⇑iPg	Pg	10 34 13.9	-0.1
CAMP				Sg	Sg	10 34 16.9	+0.4
	11μm,0.5s						
FAGN	Fagnano	0.18	122	Pg	Pg	10 34 13.8	-0.2
FAGN				Sg	Sg	10 34 16.9	+0.4
FAGN	Fagnano	0.18	122	Pg	Pg	10 34 13.8	-0.2
FAGN				Sg	Sg	10 34 16.9	+0.4
FIAM	Fiamignano	0.22	245	⇑iPg	Pg	10 34 14.8	+0.1
FIAM				Sg	Sg	10 34 18.6	+0.9
	11μm,0.5s						
FIAM	Fiamignano	0.22	245	⇑iPg	Pg	10 34 14.8	+0.1
FIAM				Sg	Sg	10 34 18.6	+0.9
	11μm,0.5s						
PTQR	Pietraquaria	0.34	178	⇑iPg	Pg	10 34 16.6	-0.4
PTQR	Pietraquaria	0.34	178	⇑iPg	Pg	10 34 16.6	-0.4
VCEL	Villa Celiera	0.34	84	Pg	Pg	10 34 16.6	-0.5
VCEL				Sg	Sg	10 34 22.6	+1.0
VCEL	Villa Celiera	0.34	84	Pg	Pg	10 34 16.6	-0.5
VCEL				Sg	Sg	10 34 22.6	+1.0
LNSS	Leonessa	0.35	314	Pg	Pg	10 34 17.1	-0.2
LNSS				Sg	Sg	10 34 22.8	+0.9
	4μm,0.5s						
LNSS	Leonessa	0.35	314	Pg	Pg	10 34 17.1	-0.2
LNSS				Sg	Sg	10 34 22.8	+0.9
	4μm,0.5s						
CERT	Cerreto	0.51	216	⇑iPg	Pg	10 34 19.5	-0.7
CERT				Sg	Sg	10 34 26.8	0.0
	2μm,0.4s						
CERT	Cerreto	0.51	216	⇑iPg	Pg	10 34 19.5	-0.7
CERT				Sg	Sg	10 34 26.8	0.0
	2μm,0.4s						
NRCA	Norcia	0.51	337	Pg	Pg	10 34 19.7	-0.6
NRCA				Sg	Sg	10 34 27.7	+0.7
	2μm,0.1s						
NRCA	Norcia	0.51	337	Pg	Pg	10 34 19.7	-0.6
NRCA				Sg	Sg	10 34 27.7	+0.7
	2μm,0.1s						
MNS	Montasola	0.52	273	Pg	Pg	10 34 19.8	-0.6
	1μm,0.5s						
MNS	Montasola	0.52	273	Pg	Pg	10 34 19.8	-0.6
	1μm,0.5s						
VVLD	Villa Vallelon	0.52	160	Pg	Pg	10 34 19.5	-0.9
	2μm,0.4s						
VVLD	Villa Vallelon	0.52	160	Pg	Pg	10 34 19.5	-0.9
	2μm,0.4s						
GUAR	Guarcino	0.57	185	Pg	Pg	10 34 20.4	-0.9
	1μm,0.4s						
GUAR	Guarcino	0.57	185	Pg	Pg	10 34 20.4	-0.9
	1μm,0.4s						
MTCE	Montecelio	0.58	235	Pg	Pg	10 34 20.9	-0.7
MTCE	Montecelio	0.58	235	Pg	Pg	10 34 20.9	-0.7
TRTR	Tortoreto Alta	0.60	41	Pg	Pg	10 34 22.1	+0.2
	6μm,0.7s						
TRTR	Tortoreto Alta	0.60	41	Pg	Pg	10 34 22.1	+0.2
	6μm,0.7s						
OFFI	Offida	0.62	21	Pg	Pg	10 34 22.3	0.0
	11μm,0.6s						
OFFI	Offida	0.62	21	Pg	Pg	10 34 22.3	0.0
	11μm,0.6s						
POFI	Posta Fibreno	0.69	159	Pg	Pg	10 34 22.7	-0.9
POFI	Posta Fibreno	0.69	159	Pg	Pg	10 34 22.7	-0.9
FDMO	Fiordimonte	0.71	342	Pg	Pg	10 34 23.2	-0.9
FDMO	Fiordimonte	0.71	342	Pg	Pg	10 34 23.2	-0.9
SDI	San Donato	0.72	154	Pg	Pg	10 34 23.3	-1.0
SDI	San Donato	0.72	154	Pg	Pg	10 34 23.3	-1.0
CAFR	Castel Frentan	0.73	100	Pg	Pg	10 34 24.1	-0.3
	2μm,0.4s						
CAFR	Castel Frentan	0.73	100	Pg	Pg	10 34 24.1	-0.3
	2μm,0.4s						
CESI	CESI - Serrava	0.73	332	Pg	Pg	10 34 23.6	-0.9
CESI	CESI - Serrava	0.73	332	Pg	Pg	10 34 23.6	-0.9
GIUL	Giuliano Di Ro	0.81	187	Pg	Pg	10 34 24.6	-1.3
	684nm,0.5s						
GIUL	Giuliano Di Ro	0.81	187	Pg	Pg	10 34 24.6	-1.3
	684nm,0.5s						
ASSB	Assisi San Ben	0.87	322	Pg	Pg	10 34 25.9	-1.1
	670nm,0.5s						
ASSB	Assisi San Ben	0.87	322	Pg	Pg	10 34 25.9	-1.1
	670nm,0.5s						
CERA	Filignano	0.90	148	Pg	Pg	10 34 26.1	-1.5
	936nm,0.6s						
CERA	Filignano	0.90	148	Pg	Pg	10 34 26.1	-1.5
	936nm,0.6s						
MIDA	Miranda	0.97	138	Pg	Pg	10 34 27.1	-1.9
MIDA	Miranda	0.97	138	Pg	Pg	10 34 27.1	-1.9
TOLF	Tolfa	1.07	254	Pg	Pg	10 34 30.2	-0.7
TOLF	Tolfa	1.07	254	Pg	Pg	10 34 30.2	-0.7
MGAB	Montegabbione	1.09	301	Pg	Pg	10 34 30.4	-0.9
	721nm,0.5s						
MGAB	Montegabbione	1.09	301	Pg	Pg	10 34 30.4	-0.9
	721nm,0.5s						
MURB	Monte Urbino	1.10	325	Pg	Pg	10 34 30.5	-1.0
	1μm,0.4s						
MURB	Monte Urbino	1.10	325	Pg	Pg	10 34 30.5	-1.0
	1μm,0.4s						
ARVD	Arcevia	1.18	344	Pg	Pg	10 34 31.9	-1.2
	988nm,1.3s						
ARVD	Arcevia	1.18	344	Pg	Pg	10 34 31.9	-1.2
	988nm,1.3s						
AOI	Ancona	1.20	8	Pg	Pg	10 34 32.2	-1.2
	694nm,0.9s						
AOI	Ancona	1.20	8	Pg	Pg	10 34 32.2	-1.2
	694nm,0.9s						
MS1	Monte Sant'Ang	2.02	108	ePn	Pb	10 34 47.2	-0.2
NVLJ	Novalja	2.46	26	ePn	Pn	10 34 51.1	+0.2
NVLJ				Sn	Sn	10 35 21.4	+0.4
NVLJ	Novalja	2.46	26	ePn	Pn	10 34 51.0	+0.2
NVLJ				Sn	Sn	10 35 21.4	+0.4
CDT	Castel del Mon	2.51	120	ePn	Pb	10 34 55.4	-0.5
MAIM	Mastiano	2.62	307	P	Pn	10 34 53.9	+0.7
SKDS	Skadanscina	3.22	8	i Pn	Pn	10 35 00.9	-0.5
SKDS				i Sn	Sn	10 35 40.6	+0.6
SKDS							
	comp=Z,269nm,0.0s						
SKDS	Skadanscina	3.22	8	Pn	Pn	10 35 00.9	-0.5
SKDS				i Sn	Sn	10 35 40.6	+0.6
	comp=Z,269nm,0.0s						
STON	Ston	3.23	79	ePn	Pn	10 35 02.3	+0.9
STON				Sn	Sn	10 35 40.5	+0.4
STON	Ston	3.23	79	ePn	Pn	10 35 02.3	+0.9
STON				Sn	Sn	10 35 40.5	+0.4
PGF	Pioggiola	3.25	275	ePn	Pn	10 35 02.6	+0.7
PGF				eSn	Sn	10 35 42.7	+1.9
	comp=Z,16nm,0.7s						
PGF	Pioggiola	3.25	275	ePn	Pn	10 35 02.6	+0.7
PGF				eSn	Sn	10 35 42.7	+1.9
	comp=Z,8.0nm,0.7s						
BOJS	Bojanci	3.42	23	i Pn	Pn	10 35 05.2	+1.1
BOJS	Bojanci	3.42	23	i Pn	Pn	10 35 05.2	+1.1
BOJS				i Sn	Sn	10 35 48.0	+3.1
	comp=Z,11nm,0.4s						
BLY	Banja Luka	3.65	48	ePn	Pb	10 35 13.0	-2.2
VOY	Vojsko	3.69	6	ePn	Pn	10 35 10.3	+2.4
VOY				e		10 35 23.4	
VOY				eSn	Sn	10 35 52.8	+1.1
VOY	Vojsko	3.69	6	ePn	Pn	10 35 10.3	+2.4
VOY				eSn	Sn	10 35 52.8	+1.1
MYKA	Terra Mystica	4.27	2	⇑iPn	Pn	10 35 16.9	+1.0
MYKA	Terra Mystica	4.27	2	Pn	Pn	10 35 16.9	+1.0
PDG	Podgorica	4.35	87	ePn	Pn	10 35 18.9	+2.0
PDG				eSn	Sn	10 36 08.1	+0.3
PDG	Podgorica	4.35	87	ePn	Pn	10 35 18.9	+2.0
PDG				eSn	Sn	10 36 08.1	+0.3
ABTA	Abfaltersbach	4.43	352	⇑iPn	Pn	10 35 19.1	+1.0
	SNR=12						
ABTA	Abfaltersbach	4.43	352	Pn	Pn	10 35 19.1	+1.0
	SNR=12						
SBF	Sospel	4.61	291	ePn	Pn	10 35 21.0	+0.5
SBF				eSn	Sn	10 36 11.0	-3.2
	comp=Z,6.8nm,0.6s						
SBF	Sospel	4.61	291	ePn	Pn	10 35 21.0	+0.5
SBF				eSn	Sn	10 36 11.0	-3.2
	comp=Z,3.4nm,0.6s						
FETA	Feichten	5.03	339	⇑iPn	Pn	10 35 29.1	+2.7
FETA	Feichten	5.03	339	Pn	Pn	10 35 29.1	+2.7
FRF	La Foret Royal	5.09	286	ePn	Pn	10 35 27.2	+0.2
FRF				eSn	Sn	10 36 22.1	-3.9
	comp=Z,1.8nm,0.3s						
FRF	La Foret Royal	5.09	286	ePn	Pn	10 35 27.2	+0.2
FRF				eSn	Sn	10 36 22.1	-3.9
	comp=Z,0.9nm,0.3s						
IVAS	Ivanjica	5.12	74	ePn	Pn	10 35 29.1	+1.6
IVAS				eSn	Sn	10 36 27.7	+0.9
IVAS	Ivanjica	5.12	74	ePn	Pn	10 35 29.1	+1.6
IVAS				eSn	Sn	10 36 27.7	+0.9
DIVS	Divibare	5.13	68	ePn	Pn	10 35 30.4	+2.7
DIVS	Divibare	5.13	68	ePn	Pn	10 35 30.7	+3.0
DIVS				eSn	Sn	10 36 26.8	-0.5
DIVS				eSn	Sn	10 36 27.0	-0.3
DIVS	Divibare	5.13	68	ePn	Pn	10 35 30.4	+2.7
DIVS				eSn	Sn	10 36 27.0	-0.3
LMR	La Mourre	5.15	283	ePn	Pn	10 35 27.8	0.0
LMR				eSn	Sn	10 36 23.6	-3.8
	comp=Z,0.6nm,0.3s						
LMR	La Mourre	5.15	283	ePn	Pn	10 35 27.8	0.0
LMR				eSn	Sn	10 36 23.6	-3.8
	comp=Z,0.3nm,0.3s						
MBDF	Montbardon	5.36	298	eP	Pn	10 35 33.0	+2.1
MBDF	Montbardon	5.36	298	eP	Pn	10 35 33.0	+2.1
MOA	Molln	5.53	6	⇑iPn	Pn	10 35 34.4	+1.3
MOA	Molln	5.53	6	Pn	Pn	10 35 34.4	+1.3
GRUS	Gruza	5.58	72	ePn	Pn	10 35 36.5	+2.7
GRUS				eSn	Sn	10 36 38.0	-0.2
GRUS	Gruza	5.58	72	ePn	Pn	10 35 36.5	+2.7
GRUS				eSn	Sn	10 36 38.0	-0.2
LPG	La Plagne	5.72	305	eP	Pn	10 35 38.8	+2.8
LPG				eSn	Sn	10 36 38.0	-4.1
	comp=Z,2.1nm,0.3s						
LPG	La Plagne	5.72	305	eP	Pn	10 35 38.8	+2.8
LPL	La Plagne	5.74	306	eP	Pn	10 35 39.1	+2.8
LPL				eSn	Sn	10 36 37.2	-5.3
	comp=Z,3.6nm,0.3s						
LPL	La Plagne	5.74	306	eP	Pn	10 35 39.1	+2.8
SMRF	Simiane la Rot	5.93	288	eP	Pn	10 35 40.5	+1.8
SMRF	Simiane la Rot	5.93	288	eP	Pn	10 35 40.5	+1.8
BARS	Barje	6.24	83	ePn	Pn	10 35 43.8	+0.9
BARS	Barje	6.24	83	ePn	Pn	10 35 43.8	+0.9
KHC	Kasperske Hory	6.77	1	ePN	Pn	10 35 52.9	+2.7
KHC				eSN	Sn	10 37 07.1	-0.5
ZAPS	Zavoj	6.87	79	ePn	Pn	10 35 53.5	+2.0
ZAPS				eSn	Sn	10 37 07.5	-2.4
HINF	Hinteralfeld	7.15	322	ePn	Pn	10 35 55.0	-0.3
HINF				eSn	Sn	10 37 11.6	-5.2
	comp=Z,4.6nm,0.5s						
HINF	Hinteralfeld	7.15	322	ePn	Pn	10 35 55.0	-0.3
CDF	Champ du Feu	7.42	327	ePn	Pn	10 35 58.6	-0.5
CDF				eSn	Sn	10 37 18.4	-5.2
	comp=Z,4.8nm,0.7s						
CDF	Champ du Feu	7.42	327	ePn	Pn	10 35 58.6	-0.5
HAU	Haudompre	7.52	321	ePn	Pn	10 36 00.3	-0.1
HAU				eSn	Sn	10 37 19.2	-6.7
	comp=Z,4.9nm,0.5s						
HAU	Haudompre	7.52	321	ePn	Pn	10 36 00.3	-0.1

NIED 08 10:55:00, 46°.10N×151°.90E, h23km, Mw3.7 Best double couple: $M_0$4.28000×10^{14} NP1:ϕ_s347.00000°, δ72.00000°, λ57.00000°. NP2:ϕ_s232.00000°, δ37.00000°, λ149.00000°.

ISCJB 08 10:55:12.2±0.6, 45°.71N±0°.10×152°.06E±0°.09, h30km, mb3.3/9, Error ellipse: s-maj=15.4km s-min=5.5km az=150.7

JMA 08 10:55:14.9±0.7, 46°.12N×151°.89E, h30km, M4.3

MOS 08 10:55:17.5±1.2, 45°.91N×151°.79E, h80km, mb4.0/2, Error ellipse: s-maj=19.3km s-min=11.1km az=141.2

IDC 08 10:55:19.7±3.1, 46°.08N×151°.74E, h82km±28km, mb3.1/9, mb1 3.3/12, mb1mx3.2/28, mbtmp3.1/12, MS2.7/1, Ms1 2.7/1, ms1mx2.1/13, Error ellipse: s-maj=30.3km s-min=16.3km az=142.0

ISC 08 10:55:13.2±0.9, 45°.5N±0°.1×152°.23E±0°.07, h30km, n33, σ2s.06/33, mb3.5/9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.09	266	PN	Pn	10 56 00.5	+0.6
KUR				eS	Sn	10 56 35.0	-0.8
KUR				pmax	pmax		
	comp=Z,90nm,0.5s						
KUR				smax	smax		
	comp=N,360nm,0.5s						
KUR				smax	smax		
	comp=E,450nm,0.5s						
YUK	Yuzh-Kuril'sk	4.78	254	i PN	Pn	10 56 26.9	+3.8
YUK				i S	Sn	10 57 20.2	+2.8
YUK				pmax	pmax		
	comp=Z,38nm,0.5s						
YUK				pmax	pmax		
	comp=Z,51nm,0.5s						
YUK				pmax	pmax		
	comp=N,23nm,0.5s						
YUK				smax	smax		
	comp=E,140μm,0.7s						
YUK				smax	smax		
	comp=N,42μm,0.6s						
NEM2	Nemuro 2	5.13	247	P	Pn	10 56 29.5	+1.6
NEM2				eS	Sn	10 57 24.4	-1.7
JRA	Rausu	5.31	255	P	Pn	10 56 34.3	+3.9
JNK	Nakash	5.71	253	P	Pn	10 56 38.4	+2.5
JAK	Akkeshi	5.98	247	P	Pn	10 56 40.7	+1.1
JAK				eS	Sn	10 57 44.7	-2.3
JTKR	Abashiri--Toko	6.13	258	P	Pn	10 56 44.1	+2.5
JAR	Ashorobuto	6.46	253	P	Pn	10 56 48.8	+2.6
JAR				eS	Sn	10 57 58.9	0.0
JOB	Onbets	6.59	249	P	Pn	10 56 49.8	+1.9
JOB				eS	Sn	10 57 59.8	-2.1
YSS	Yuzh-Sakhalins	6.72	286	i PN	Pn	10 56 51.0	+1.3
JKK2	Kamakawa 2	6.96	259	P	Pn	10 56 56.2	+3.1
ASAJ	Asahikawa	7.00	262	P	Pn	10 56 57.0	+3.4
	comp=N,0.5nm,0.3s,baz=75,slow=15,SNR=5.5						
ASAJ				LR	LR	10 59 33.6	
	comp=N,60nm,19.8s,baz=215,slow=38						
JCH	Churui	7.03	249	P	Pn	10 56 55.8	+1.9
JCH				eS	Sn	10 58 10.6	-2.2
ERM	Erimo	7.46	245	i PN	Pn	10 57 03.5	+3.7
JNBK	Urakawa-nobuka	7.58	248	P	Pn	10 57 02.2	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JNBK				eS	Sn	10 58 21.6	-4.8
PETK	Petropavlovsk-	8.37	23	ePN	Pn	10 57 15.6	+3.3
PETK	Petropavlovsk-	8.37	23	P	Pn	10 57 11.7	-0.6
	comp=N,0.2nm,0.3s,baz=201,slow=16,SNR=3.8						
JKB	Kayabe	8.90	250	P	Pn	10 57 20.2	+0.7
JKB				eS	Sn	10 58 52.9	-5.8
JANG	Nango	9.40	240	P	Pn	10 57 26.2	-0.3
JANG				eS	Sn	10 59 03.7	-7.4
JTM	Tenmabayashi	9.44	244	P	Pn	10 57 27.8	+0.8
JTM				eS	Sn	10 59 05.7	-6.4
MJAR	Matsushiro Arr	13.87	234	P	Pn	10 58 29.1	+1.4
	baz=30,slow=15,SNR=4.6						
KSRS	Korea Array	19.87	255	P	P	10 59 43.3	+1.6
	comp=N,0.1nm,0.3s,baz=64,slow=12,SNR=7.2						
ILAR	Eielson Array	37.88	38	P	P	11 02 26.2	-0.8
	comp=N,0.2nm,0.7s,baz=267,slow=7.7,SNR=3.2						
MKAR	Makanchi Array	46.96	298	P	P	11 03 38.7	-2.4
MKAR						11 05 10.2	
MKAR	Makanchi Array	46.96	298	P	P	11 03 38.7	-2.4
	comp=N,0.3nm,0.8s,baz=73,slow=7.6,SNR=3.4						
MKAR				PcP	PcP	11 05 10.2	-2.9
	comp=N,0.2nm,0.7s,baz=54,slow=3.7,SNR=3.1						
KURK	Kurchatov	47.53	304	P	P	11 03 42.3	-3.1
KURBB	Kurchatov Arra	47.62	304	P	P	11 03 42.3	-3.8
	comp=N,0.4nm,0.8s,baz=71,slow=7.6,SNR=2.6						
CMAR	Chiang Mai Arr	51.49	257	P	P	11 04 15.3	-0.7
	comp=N,0.5nm,0.4s,baz=38,slow=7.4,SNR=4.4						
YKA	Yellowknife Ar	52.26	36	P	P	11 04 20.7	-0.4
	comp=N,0.4nm,0.7s,baz=297,slow=7.1,SNR=8.0						
WRA	Warramunga Arr	67.17	198	P	P	11 06 06.8	+2.7
	comp=N,0.4nm,0.9s,baz=20,slow=6.5,SNR=3.0						
ASAR	Alice Springs	70.87	198	P	P	11 06 30.0	+2.9
	comp=N,0.2nm,0.9s,baz=27,slow=6.3,SNR=3.1						
TXAR	Lajitas Array	78.62	60	P	P	11 07 14.2	+1.9
	comp=N,0.1nm,0.6s,baz=311,slow=5.9,SNR=2.5						
BRTR	Keskin Array B	78.85	316	P	P	11 07 09.3	-4.1
	comp=N,0.7nm,0.8s,baz=26,slow=3.7,SNR=3.3						

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*MAN **08** 11:01:36, 15.°19N×122.°23E, h1km, mb4.6, ML3.5, MS3.4*
*IDC **08** 11:01:38.0±1.6, 14.°76N×122.°40E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/25, mbtmp3.2/3, Error ellipse: s-maj=30.6km s-min=23.9km az=33.0*
ISC 08 11:01:37.7±1.6**, 15.°19N**±0.°05×**122.°23E**±0.°06**, h24**km±14km**, n17,** σ1.°**42**/22**, mb3.2**/3**, 3C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.54	212	eP	Pb	11 01 46.9	-1.6
BALP	Baler	0.84	311	eP	Pn	11 01 53.0	-1.0
BALP				eS	Sn	11 02 04.0	-1.6
PCPH	Palayan	1.16	289	⇓eP	Pn	11 01 57.0	-1.4
PCPH				eS	Sn	11 02 12.1	-1.3
LQP	Lukban	1.26	212	eP	Pb	11 02 02.6	+1.6
GQP	Guinayangan	1.29	171	⇑eP	Pn	11 02 00.5	+0.3
GQP				eS	Sb	11 02 18.1	+0.7
TGY	Tagaytay City	1.65	230	⇑iP	Pb	11 02 07.2	-0.3
TGY				iS	Sb	11 02 29.8	+1.8
TGY	Tagaytay City	1.65	230	Pn	Pb	11 02 07.1	-0.4
	524nm,0.3s,baz=45,slow=7.1,SNR=42						
TGY				Sn	Sb	11 02 28.7	+0.7
	114nm,0.3s,baz=0.0,slow=20,SNR=12						
BOAC	Boac	1.76	192	eP	Pb	11 02 08.9	-0.4
CAUP	Cauayan	1.79	347	eP	Pn	11 02 09.0	+1.9
PALP	Palanan	1.88	6	eP	Pn	11 02 09.5	+1.2
BCPH	Baguio City Da	1.98	307	⇑iP	Pn	11 02 11.5	+1.5
BCPH				iS	Sb	11 02 37.9	+0.2
SCZP	Santa Cruz	2.31	285	eP	Pn	11 02 15.8	+1.5
LUBP	Lubang	2.41	233	eP	Pn	11 02 17.1	+1.6
OTRP	Odiongan	2.81	184	eP	Pb	11 02 24.7	-2.6
WRA	Warramunga Arr	36.88	161	P	P	11 08 44.2	-0.4
	0.2nm,0.4s,baz=343,slow=9.2,SNR=7.9						
ASAR	Alice Springs	40.27	163	P	P	11 09 13.5	+0.6
	0.1nm,0.3s,baz=342,slow=7.3,SNR=8.1						
MKAR	Makanchi Array	45.75	322	P	P	11 10 04.6	+7.4
	0.2nm,0.6s,baz=111,slow=7.9,SNR=2.7						

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*IDC **08** 11:12:55.4±0.5, 38.°42S×178.°51E, h0km, mb4.7/13, mb1 4.8/14, mb1mx4.7/20, mbtmp4.7/14, ML3.9/1, MS4.4/18, Ms1 4.4/18, ms1mx4.2/34, Error ellipse: s-maj=23.3km s-min=14.3km az=22.0*
*ISCJB **08** 11:12:56.7±0.7, 38.°83S±0.°02×178.°59E±0.°05, h25km±4km, mb5.3/42, MS4.5/23, Error ellipse: s-maj=6.2km s-min=3.9km az=6.2*
*AUST **08** 11:12:58.5, 38.°76S×178.°29E, h5km*
*WEL **08** 11:12:58.9±0.3, 38.°69S×178.°54E, h26km±1km, ML5.0/62, Error ellipse: s-maj=2.6km s-min=1.1km az=90.0*
WEL Felt between Bay Plenty, H'' Bay and Gisborne, maximum reported intensity MM 5.
*GCMT **08** 11:12:58.9±0.4, 38.°66S×178.°58E, h14km±1km, MW4.9, Moment Tensor Solution. s35,c40; s63,c88; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.56±.17; $M_{\theta\theta}$0.88±.12; $M_{\phi\phi}$1.68±.11; $M_{r\theta}$0.86±.29; $M_{\theta\phi}$1.26±.07; $M_{\phi r}$0.72±.23; Best double couple: $M_0$2.80000×10^{16} NP1:ϕ_s31.00000°, δ34.00000°, λ-99.00000°. NP2:ϕ_s222.00000°, δ57.00000°, λ-84.00000°. Principal axes: T 2.8200, Plg11.0000°, Azm307.0000°; N -0.0200, Plg5.0000°, Azm38.0000°; P -2.8100, Plg77.0000°, Azm152.0000°; Data Used: II IU G IC.*
*NEIC **08** 11:12:58.8, 38.°72S×178.°51E, h22km, mb5.3/18, ML5.0(WEL), After WEL.*
NEIC Felt [IV] at Gisborne.
*MOS **08** 11:13:00.7±1.1, 38.°68S×178.°08E, h33km, mb5.5/5, Error ellipse: s-maj=16.1km s-min=12.9km az=131.6*
*DJA **08** 11:13:00.7±2.9, 39°S±20°×17°8E±4°4, h10km, M5.5/19, mB5.9/8, mb5.5/19, Mw(mB)5.4/8*
*BJI **08** 11:13:00.2, 39.°19S×178.°01E, h39km, mB5.6/11, mb5.5/18, Ms5.2/12, Ms7 4.8/14*
ISC 08 11:13:01.1±0.5**, 38.°73S**±0.°03×**178.°41E**±0.°05**, h34**km±1km**, n391,** σ1.°**40**/353**, mb5.4**/42**, MS4.6**/23**, 13C-11D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.29	327	⇑P*	Pb	11 13 06.2	-2.7
CNGZ	Carnagh Statio	0.29	327	P*	Pb	11 13 06.2	-2.7
PRGZ	Paritu Road	0.46	244	⇓P*	Pb	11 13 10.1	-1.1
PRGZ	Paritu Road	0.46	244	P*	Pb	11 13 10.1	-1.1
MHGZ	Mahia Peninsul	0.58	222	⇓P*	Pb	11 13 12.1	-1.0
MHGZ				S*	Sn	11 13 23.0	+1.8
MHGZ	Mahia Peninsul	0.58	222	P*	Pb	11 13 12.1	-1.0
KNZ	Kokohu	0.65	243	P*	Pn	11 13 12.1	-1.7
KNZ	Kokohu	0.65	243	Pn	Pn	11 13 12.1	-1.7
PUZ	Puketiti	0.66	350	P*	Pn	11 13 11.0	-3.1
PUZ				S*	Sb	11 13 21.5	-2.0
PUZ	Puketiti	0.66	350	P*	Pn	11 13 11.0	-3.1
MWZ	Matawai	0.79	299	⇑PN	Pn	11 13 14.3	-1.7
MWZ				SN	Sn	11 13 26.4	-0.2
MWZ	Matawai	0.79	299	eP*	Pn	11 13 14.3	-1.7
MWZ				S*	Sn	11 13 26.4	-0.2
RAHZ	Arahi	1.05	259	PN	Pn	11 13 18.6	-0.9
RAHZ				SN	Sn	11 13 34.1	+1.1
RAHZ	Arahi	1.05	259	Pn	Pn	11 13 18.6	-0.9
URZ	Urewera	1.12	294	PN	Pn	11 13 18.9	-1.4
URZ	Urewera	1.12	294	Pn	Pn	11 13 18.8	-1.6
URZ				Pn	Pn	11 13 18.9	-1.4
URZ				ePn	Pn	11 13 19.2	-1.2
URZ				eS	Sn	11 13 35.2	+0.6
URZ				Sn	Sn	11 13 35.8	+1.2
URZ	Urewera	1.12	294	Pn	Pn	11 13 18.8	-1.6
	377nm,0.3s,baz=108,slow=7.8,SNR=920						
URZ				LR	LR	11 13 28.6	
	comp=Z,12µm,18.1s,baz=95,slow=30						
URZ				Sn	Sn	11 13 35.8	+1.2
	1µm,0.3s,baz=92,slow=17,SNR=21						
MXZ	Matakaoa Point	1.16	356	⇓PN	Pn	11 13 19.2	-1.8
MXZ	Matakaoa Point	1.16	356	Pn	Pn	11 13 19.2	-1.8
NMHZ	Naumai	1.30	253	PN	Pn	11 13 22.2	-0.8
CKHZ	Cape Kidnapper	1.39	228	⇑PN	Pn	11 13 23.3	-0.8
CKHZ	Cape Kidnapper	1.39	228	Pn	Pn	11 13 23.3	-0.8
EDRZ	Edgecumbe	1.45	295	PN	Pn	11 13 24.2	-0.8
EDRZ	Edgecumbe	1.45	295	ePn	Pn	11 13 24.2	-0.8
MCHZ	McNeill Hill	1.51	241	⇑PN	Pn	11 13 25.3	-0.5
MCHZ	McNeill Hill	1.51	241	Pn	Pn	11 13 25.3	-0.5
RRRZ	Republican Roa	1.54	284	PN	Pn	11 13 25.8	-0.3
RRRZ	Republican Roa	1.54	284	Pn	Pn	11 13 25.8	-0.3
WIZ	White Island	1.54	321	PN	Pn	11 13 25.4	-0.7
WIZ	White Island	1.54	321	Pn	Pn	11 13 25.4	-0.7
MARZ	Manawahe	1.55	298	PN	Pn	11 13 25.8	-0.5
MARZ	Manawahe	1.55	298	Pn	Pn	11 13 25.9	-0.5
BKZ	Black Stump Fm	1.56	253	PN	Pn	11 13 25.4	-1.1
BKZ	Black Stump Fm	1.56	253	Pn	Pn	11 13 25.4	-1.1
TARZ	Mount Tarawera	1.57	288	PN	Pn	11 13 26.2	-0.5
TARZ	Mount Tarawera	1.57	288	Pn	Pn	11 13 26.2	-0.5
PRRZ	Plateau Road	1.60	278	PN	Pn	11 13 26.2	-0.7
PRRZ	Plateau Road	1.60	278	Pn	Pn	11 13 26.2	-0.7
KAHZ	Kahuranaki	1.60	228	⇑PN	Pn	11 13 26.1	-1.0
KAHZ	Kahuranaki	1.60	228	Pn	Pn	11 13 26.1	-1.0
ALRZ	Allen Road	1.63	275	PN	Pn	11 13 26.8	-0.6
ALRZ	Allen Road	1.63	275	Pn	Pn	11 13 26.8	-0.6
MKRZ	Makatiti	1.63	290	PN	Pn	11 13 27.7	+0.2
MKRZ	Makatiti	1.63	290	Pn	Pn	11 13 27.7	+0.2
HRRZ	Handcock Road	1.70	281	PN	Pn	11 13 27.0	-1.4
HRRZ	Handcock Road	1.70	281	Pn	Pn	11 13 28.4	0.0
OPRZ	Ohinepanea	1.70	300	PN	Pn	11 13 26.7	-1.7
OPRZ	Ohinepanea	1.70	300	Pn	Pn	11 13 26.7	-1.7
OMRZ	Omania	1.72	290	PN	Pn	11 13 27.7	-1.0
OMRZ	Omania	1.72	290	ePn	Pn	11 13 27.7	-1.0
LIRZ	Lichensteins R	1.75	294	PN	Pn	11 13 28.3	-0.7
LIRZ	Lichensteins R	1.75	294	Pn	Pn	11 13 28.3	-0.7
PXZ	Pawanui	1.77	222	⇓PN	Pn	11 13 27.3	-2.0
PXZ	Pawanui	1.77	222	Pn	Pn	11 13 27.4	-2.0
KARZ	Kaharoa	1.84	292	PN	Pn	11 13 29.2	-1.1
KARZ	Kaharoa	1.84	292	Pn	Pn	11 13 29.2	-1.1
WHTZ	Whakaora	1.92	271	PN	Pn	11 13 31.9	+0.5
WHTZ	Whakaora	1.92	271	Pn	Pn	11 13 31.9	+0.5
TGRZ	Tauranga	1.96	300	ePN	Pn	11 13 30.8	-1.1
TGRZ	Tauranga	1.96	300	ePn	Pn	11 13 30.8	-1.1
BHHZ	Black Hill Sta	1.98	247	PN	Pn	11 13 31.1	-1.1
BHHZ	Black Hill Sta	1.98	247	Pn	Pn	11 13 31.1	-1.1
RITZ	Rihia Road	2.01	262	PN	Pn	11 13 32.4	-0.2
RITZ	Rihia Road	2.01	262	Pn	Pn	11 13 32.4	-0.2
WPHZ	Waipukurau	2.03	228	PN	Pn	11 13 31.4	-1.5
WPHZ	Waipukurau	2.03	228	Pn	Pn	11 13 31.4	-1.5
PRHZ	Porangahau	2.06	221	⇑PN	Pn	11 13 31.2	-2.1
PRHZ	Porangahau	2.06	221	Pn	Pn	11 13 31.2	-2.1
RATZ	Rangitukua	2.07	265	PN	Pn	11 13 33.1	-0.4
RATZ	Rangitukua	2.07	265	Pn	Pn	11 13 33.1	-0.4
PNHZ	Pukenui	2.08	235	PN	Pn	11 13 32.0	-1.7
PNHZ	Pukenui	2.08	235	Pn	Pn	11 13 32.0	-1.7
WATZ	Wairara	2.09	270	PN	Pn	11 13 33.4	-0.5
WATZ	Wairara	2.09	270	Pn	Pn	11 13 33.4	-0.5
KATZ	Kakaramea	2.13	262	PN	Pn	11 13 34.2	-0.2
KATZ	Kakaramea	2.13	262	Pn	Pn	11 13 34.2	-0.2
MOVZ	Moawhango	2.18	251	⇑PN	Pn	11 13 34.7	-0.3
MOVZ	Moawhango	2.18	251	Pn	Pn	11 13 34.7	-0.3
OTVZ	Oturere	2.19	258	PN	Pn	11 13 34.9	-0.3
OTVZ	Oturere	2.19	258	Pn	Pn	11 13 34.9	-0.3
KRVZ	Karewarewa	2.19	259	PN	Pn	11 13 35.0	-0.2
KRVZ	Karewarewa	2.19	259	Pn	Pn	11 13 35.0	-0.2
TUVZ	Tukino	2.21	255	PN	Pn	11 13 35.3	-0.3
TUVZ	Tukino	2.21	255	Pn	Pn	11 13 35.3	-0.3
WTVZ	West Tongariro	2.23	259	⇓PN	Pn	11 13 35.7	-0.1
WTVZ	West Tongariro	2.23	259	Pn	Pn	11 13 35.7	-0.1
NGZ	Ngauruhoe	2.24	258	PN	Pn	11 13 35.4	-0.4
NGZ	Ngauruhoe	2.24	258	Pn	Pn	11 13 35.5	-0.4
WNVZ	Wahianoa	2.27	254	PN	Pn	11 13 36.0	-0.4
WNVZ	Wahianoa	2.27	254	Pn	Pn	11 13 36.0	-0.4
WPVZ	Whakapapa	2.28	257	PN	Pn	11 13 36.0	-0.5
WPVZ	Whakapapa	2.28	257	Pn	Pn	11 13 36.0	-0.5
DRZ	Dome Shelter	2.28	255	PN	Pn	11 13 36.8	+0.1
DRZ	Dome Shelter	2.28	255	Pn	Pn	11 13 36.8	+0.1
FWVZ	Far West T-bar	2.29	256	PN	Pn	11 13 36.0	-0.6
FWVZ	Far West T-bar	2.29	256	Pn	Pn	11 13 36.0	-0.6
TRVZ	Turoa	2.30	255	PN	Pn	11 13 36.4	-0.4
TSZ	Takapari Road	2.32	234	⇑PN	Pn	11 13 34.8	-2.1
TSZ	Takapari Road	2.32	234	Pn	Pn	11 13 34.8	-2.1
DVHZ	Dannevirke	2.34	227	PN	Pn	11 13 35.1	-2.1
DVHZ	Dannevirke	2.34	227	Pn	Pn	11 13 35.1	-2.1
TWVZ	Taurewa	2.34	261	PN	Pn	11 13 36.8	-0.5
TWVZ	Taurewa	2.34	261	Pn	Pn	11 13 36.8	-0.5
MTVZ	Mangateitei	2.38	253	PN	Pn	11 13 37.4	-0.4
MTVZ	Mangateitei	2.38	253	Pn	Pn	11 13 37.4	-0.4
PKVZ	Pokaka	2.45	256	⇓PN	Pn	11 13 38.7	-0.1
TOZ	Tahuroa Road	2.50	293	PN	Pn	11 13 38.1	-1.2
TOZ	Tahuroa Road	2.50	293	Pn	Pn	11 13 38.1	-1.2
BFZ	Birch Farm	2.57	220	PN	Pn	11 13 37.4	-2.9
BFZ	Birch Farm	2.57	220	Pn	Pn	11 13 37.5	-2.9
POWZ	Post Office Ro	2.63	230	PN	Pn	11 13 39.5	-1.7
POWZ	Post Office Ro	2.63	230	Pn	Pn	11 13 39.5	-1.7
HIZ	Hauiti	2.79	273	PN	Pn	11 13 43.4	0.0
HIZ	Hauiti	2.79	273	Pn	Pn	11 13 43.4	0.0
TIWZ	Tintock	2.83	223	PN	Pn	11 13 41.2	-2.6
WAZ	Wanganui	2.85	248	⇑PN	Pn	11 13 44.7	+0.5
KUZ	Kuaotunu	2.91	312	⇓PN	Pn	11 13 43.3	-1.7
KUZ	Kuaotunu	2.91	312	Pn	Pn	11 13 43.3	-1.7
MRZ	Mangatainoka R	2.92	228	PN	Pn	11 13 42.8	-2.3
MRZ	Mangatainoka R	2.92	228	Pn	Pn	11 13 42.8	-2.3
MKAZ	Moumakai	3.03	301	⇑PN	Pn	11 13 46.0	-0.6
MKAZ	Moumakai	3.03	301	Pn	Pn	11 13 46.0	-0.6
TMWZ	Te Maipa	3.07	218	PN	Pn	11 13 43.6	-3.6
TMWZ	Te Maipa	3.07	218	Pn	Pn	11 13 43.6	-3.6
HOWZ	Holdsworth Sta	3.11	225	PN	Pn	11 13 44.7	-3.1
HOWZ	Holdsworth Sta	3.11	225	Pn	Pn	11 13 44.7	-3.1
MHEZ	Mangahewa	3.21	262	PN	Pn	11 13 50.2	+1.1
OGWZ	Otaki Gorge	3.25	229	PN	Pn	11 13 47.1	-2.7
OGWZ	Otaki Gorge	3.25	229	Pn	Pn	11 13 47.1	-2.7
OTAZ	Otara	3.28	302	PN	Pn	11 13 49.8	-0.3
OTAZ	Otara	3.28	302	Pn	Pn	11 13 49.8	-0.3
MTW	Mount Morrison	3.30	222	PN	Pn	11 13 46.9	-3.5
MTW	Mount Morrison	3.30	222	Pn	Pn	11 13 46.9	-3.5
DREZ	Durham Road	3.31	261	PN	Pn	11 13 51.5	+1.0
DREZ	Durham Road	3.31	261	Pn	Pn	11 13 51.5	+1.0
TRWZ	Traveller	3.39	217	PN	Pn	11 13 47.3	-4.3
KIW	Kapiti Island	3.44	231	PN	Pn	11 13 49.7	-2.6
KIW	Kapiti Island	3.44	231	Pn	Pn	11 13 49.7	-2.6
PKE	Pukeiti	3.48	261	PN	Pn	11 13 53.3	+0.5
CAW	Cannon Point	3.50	226	PN	Pn	11 13 50.0	-3.1
CAW	Cannon Point	3.50	226	Pn	Pn	11 13 50.0	-3.1
PAWZ	Paruwai Farm	3.50	220	PN	Pn	11 13 49.3	-3.9
MSWZ	Moikau Station	3.62	221	PN	Pn	11 13 50.9	-3.9
MSWZ	Moikau Station	3.62	221	Pn	Pn	11 13 50.9	-3.9
PLWZ	Palliser	3.73	219	PN	Pn	11 13 52.0	-4.3
PLWZ	Palliser	3.73	219	Pn	Pn	11 13 52.0	-4.3
WEL	Wellington	3.79	226	P	Pn	11 13 54.0	-3.1
WEL	Wellington	3.79	226	PN	Pn	11 13 54.0	-3.1
WEL	Wellington	3.79	226	Pn	Pn	11 13 54.0	-3.1
BHW	Baring Head	3.81	224	PN	Pn	11 13 54.0	-3.4
SNZO	South Karori	3.84	227	PN	Pn	11 13 54.3	-3.5
SNZO	South Karori	3.84	227	Pn	Pn	11 13 54.3	-3.5
SNZO				ePn	Pn	11 13 54.6	-3.2
TCW	Tory Channel	4.03	231	PN	Pn	11 13 57.1	-3.3
TCW	Tory Channel	4.03	231	Pn	Pn	11 13 57.1	-3.3
DUWZ	D'Urville Isla	4.03	238	PN	Pn	11 13 57.8	-2.7
DUWZ	D'Urville Isla	4.03	238	Pn	Pn	11 13 57.8	-2.7
WCZ	Waipu Caves	4.27	309	PN	Pn	11 14 02.5	-1.1
WCZ	Waipu Caves	4.27	309	Pn	Pn	11 14 02.5	-1.1
TUWZ	Tuamarina	4.36	230	PN	Pn	11 14 00.8	-4.2
TUWZ	Tuamarina	4.36	230	Pn	Pn	11 14 00.8	-4.2
BSWZ	Blackbirch Sta	4.58	228	PN	Pn	11 14 04.0	-3.9
BSWZ	Blackbirch Sta	4.58	228	Pn	Pn	11 14 04.0	-3.9
NNZ	Nelson	4.60	236	PN	Pn	11 14 04.9	-3.3
NNZ	Nelson	4.60	236	Pn	Pn	11 14 04.9	-3.3
QRZ	Quartz Range	4.99	243	⇑PN	Pn	11 14 09.9	-3.7
QRZ	Quartz Range	4.99	243	Pn	Pn	11 14 09.9	-3.7
THZ	Tophouse	5.19	233	PN	Pn	11 14 12.2	-4.2
THZ	Tophouse	5.19	233	Pn	Pn	11 14 12.2	-4.2
OUZ	Omahuta	5.21	311	ePn	Pn	11 14 16.8	+0.2
KHZ	Kahutara	5.23	224	PN	Pn	11 14 12.3	-4.6
KHZ	Kahutara	5.23	224	ePn	Pn	11 14 14.7	-2.2
DSZ	Denniston Nort	5.89	237	PN	Pn	11 14 22.2	-3.7
DSZ	Denniston Nort	5.89	237	Pn	Pn	11 14 22.2	-3.7
LTZ	Lake Taylor	6.18	227	PN	Pn	11 14 25.5	-4.4
LTZ	Lake Taylor	6.18	227	Pn	Pn	11 14 25.5	-4.4
CTZ	Chatham Island	6.25	145	PN	Pn	11 14 30.2	-0.7
CTZ	Chatham Island	6.25	145	Pn	Pn	11 14 30.2	-0.7
CRLZ	Canterbury Las	6.52	220	PN	Pn	11 14 30.7	-3.8
CRLZ	Canterbury Las	6.52	220	Pn	Pn	11 14 30.8	-3.8
MQZ	McQueen's Vall	6.60	219	PN	Pn	11 14 30.7	-5.0
WVZ	Waitaha Valley	7.26	231	PN	Pn	11 14 41.3	-3.3
WVZ	Waitaha Valley	7.26	231	Pn	Pn	11 14 41.3	-3.3
RPZ	Rata Peaks	7.45	226	ePn	Pn	11 14 42.4	-5.0
RPZ				Sn	Sn	11 16 03.6	-7.2
RPZ				eSn	Sn	11 16 03.9	-6.9
RPZ	Rata Peaks	7.45	226	Pn	Pn	11 14 42.4	-5.0
	3.4nm,0.3s,baz=72,slow=6.7,SNR=9.8						
RPZ				Sn	Sn	11 16 03.6	-7.2
	28nm,0.3s,baz=14,slow=18,SNR=20						
FOZ	Fox Glacier	8.16	231	PN	Pn	11 14 52.9	-4.1
FOZ	Fox Glacier	8.16	231	Pn	Pn	11 14 53.0	-4.1
ODZ	Otahua Downs	8.56	220	PN	Pn	11 14 58.0	-4.6
ODZ	Otahua Downs	8.56	220	ePn	Pn	11 15 01.1	-1.5
TUZ	Tuapeka	9.71	219	PN	Pn	11 15 14.5	-3.8
TUZ	Tuapeka	9.71	219	Pn	Pn	11 15 14.5	-3.8
SYZ	Scrubby Hill	10.37	218	PN	Pn	11 15 23.9	-3.3
SYZ	Scrubby Hill	10.37	218	Pn	Pn	11 15 23.9	-3.3
WHZ	Wether Hill Ro	10.54	224	PN	Pn	11 15 28.0	-1.8
DZM	Mont Dzumac	19.52	325	eP	Pn	11 17 30.8	+3.7
	134nm,1.4s						
DZM				eLR	LR	11 22 25.9	
	2µm,23.6s						
DZM	Mont Dzumac	19.52	325	Pn	P	11 17 24.7	-0.9
DZM				eP	Pn	11 17 26.5	-0.6
DZM	Mont Dzumac	19.52	325	Pn	P	11 17 24.7	-0.9
	0.4nm,0.3s,baz=248,slow=23,SNR=3.8						
DZM				LR	LR	11 23 56.9	
	comp=Z,2µm,19.6s,baz=298,slow=34						
MSVF	Nonsavu	20.92	359	P	P	11 17 41.6	+0.7
MSVF				pmax	pmax		
	comp=Z,302nm,2.6s						
MSVF	Nonsavu	20.92	359	P	P	11 17 41.5	+0.7
	comp=Z,302nm,2.6s						
MILA	Mila	23.11	265	P	P	11 18 08.0	+3.9
	baz=23,SNR=6.6						
CNB	Canberra Magne	23.40	269	P	P	11 18 14.1	+7.2
	baz=23,SNR=6.3						
ARMA	Armidale	23.50	283	eP	P	11 18 07.8	-0.2
	comp=Z,82nm,1.1s						
ARMA	Armidale	23.50	283	P	P	11 18 10.7	+2.7
	baz=23,SNR=6.1						
MOO	Moorlands	23.93	251	P	P	11 18 20.5	+8.6
	baz=24,SNR=5.8						
TOO	Toolangi	25.84	262	P	P	11 18 30.8	+1.5
	baz=26,SNR=6.8						
EIDS	Eidsvold	26.60	292	eP	P	11 18 35.2	-1.1
	comp=Z,26nm,1.0s						
CMSA	Cobar Meteorol	27.60	275	P	P	11 18 47.0	+1.8
	baz=28,SNR=12						
RMQ	Roma	27.68	287	P	P	11 18 48.9	+2.9
	baz=28,SNR=4.6						
STKA	Stephens Creek	30.66	271	P	P	11 19 12.9	+0.5
STKA				eP	P	11 19 13.1	+0.7
STKA	Stephens Creek	30.66	271	P	P	11 19 12.9	+0.5
	comp=Z,9.9nm,0.8s,baz=107,slow=9.4,SNR=24						
STKA				LR	LR	11 32 03.7	
	comp=Z,930nm,18.2s,baz=120,slow=37						
STKA	Stephens Creek	30.66	271	P	P	11 19 14.1	+1.7
	baz=30,SNR=11						
QLP	Quilpie	31.04	283	P	P	11 19 16.1	+0.3
	baz=31,SNR=11						
TBI	Tubuai	31.32	70	eLR	LR	11 27 17.3	
	comp=Z,320nm,20.2s						
CTA	Charters Tower	33.37	295	P	P	11 19 35.8	-0.5
CTA	Charters Tower	33.37	295	P	P	11 19 35.8	-0.5
	comp=Z,12nm,0.7s,baz=111,slow=11,SNR=7.4						
CTAO	Charters Tower	33.37	295	eP	P	11 19 36.8	+0.5
CTAO				pmax	pmax		
	comp=Z,41nm,0.9s						
CTAO	Charters Tower	33.37	295	eP	P	11 19 36.8	+0.5
	comp=Z,41nm,0.9s						
HNR	Honiara	33.54	326	eP	P	11 19 37.1	-0.7
	comp=Z,176nm,1.1s						
HNR				ePcP	PcP	11 22 20.8	+2.8
BBOO	Buckleboo	34.63	267	eP	P	11 19 47.4	+0.2
	comp=Z,569nm,1.5s						
PPT2	Papeete2	34.94	62	eP	P	11 19 49.4	-0.6
	comp=Z,44nm,1.4s						
PPT2				eS	S	11 25 24.5	+5.1
	comp=Z,66nm,23.8s						
PPT2				eLR	LR	11 29 09.8	
	comp=Z,522nm,25.0s						
TIAR	Tiarei	35.12	62	eP	P	11 19 50.8	-0.7
	comp=Z,47nm,0.9s						
TIAR	Tiarei	35.12	62	eP	P	11 19 50.8	-0.7
	comp=Z,47nm,0.9s						
DRV	Dumont d'Urvil	35.35	205	P	P	11 19 51.0	-1.8
DRV				S	S	11 25 06.0	-19
DRV				L	L	11 27 00.0	
DRV				R		11 29 00.0	
COEN	Coen	39.68	299	eP	P	11 20 30.0	-0.1
	comp=Z,650nm,1.0s						
COEN	Coen	39.68	299	P	P	11 20 30.2	+0.1
	baz=40,SNR=14						
PMG	Port Moresby	40.45	308	eP	P	11 20 36.2	-0.2
	comp=Z,64nm,0.9s						
PMG	Port Moresby	40.45	308	P	P	11 20 36.2	-0.2
	comp=Z,79nm,0.9s						
AS31	Alice Springs	40.52	278	eP	P	11 20 36.4	-0.7
ASAR	Alice Springs	40.52	278	P	P	11 20 36.2	-0.9
ASAR				PcP	PcP	11 22 38.2	-0.9
ASAR				S	S	11 26 39.5	-4.4
ASAR	Alice Springs	40.52	278	P	P	11 20 36.2	-0.9
	comp=Z,16nm,0.7s,baz=121,slow=7.9,SNR=200						
ASAR				PcP	PcP	11 22 38.2	-0.9
	comp=Z,2.3nm,0.8s,baz=118,slow=3.8,SNR=2.9						
ASAR				S	S	11 26 39.5	-4.4
	comp=Z,2.3nm,1.0s,baz=124,slow=14,SNR=8.9						
ASAR				LR	LR	11 39 03.2	
	comp=Z,1µm,18.2s,baz=127,slow=39						
FORT	Forrest	41.69	265	eP	P	11 20 45.5	-1.0
	comp=Z,34nm,0.7s						
WRAB	Tennant Creek	42.27	283	eP	P	11 20 50.2	-1.3
WRAB				pmax	pmax		
	comp=Z,25nm,0.9s						
WRAB	Tennant Creek	42.27	283	eP	P	11 20 50.2	-1.3
	comp=Z,25nm,0.9s						
WRAB	Tennant Creek	42.27	283	P	P	11 20 50.1	-1.3
	comp=Z,155nm,0.9s,SNR=6.2						
WRA	Warramunga Arr	42.27	283	P	P	11 20 49.9	-1.5
WRA	Warramunga Arr	42.27	283	P	P	11 20 49.9	-1.5
	comp=Z,11nm,0.8s,baz=126,slow=6.9,SNR=68						
WRA				LR	LR	11 39 42.2	
	comp=Z,2µm,19.1s,baz=125,slow=38						
KDU	Kakadu	48.18	290	P	P	11 21 37.8	-0.5
	baz=48,SNR=5.2						
NWAO	Narrogin (SRO)	49.14	257	P	P	11 21 45.1	-0.5
NWAO	Narrogin (SRO)	49.14	257	P	P	11 21 45.1	-0.5
	comp=Z,5.0nm,0.8s,baz=118,slow=9.3,SNR=4.7						
KLBR	Kellerberrin	49.31	259	P	P	11 21 46.5	-0.5
	baz=49,SNR=5.0						
JAY	Jayapura	49.80	307	P	P	11 21 57.2	+6.4
	baz=50,SNR=3.8						
FITZ	Fitzroy Crossi	50.02	279	eP	P	11 21 51.7	-0.7
	comp=Z,22nm,1.1s						
FITZ	Fitzroy Crossi	50.02	279	P	P	11 21 51.6	-0.7
	comp=Z,7.6nm,1.0s,baz=163,slow=7.7,SNR=10.0						
FITZ	Fitzroy Crossi	50.02	279	P	P	11 21 51.9	-0.5
	baz=50,SNR=9.8						
BLDU	Ballidu	50.55	259	P	P	11 21 55.8	-0.5
	baz=50,SNR=6.3						
MEEK	Meekatharra	50.95	265	P	P	11 21 58.4	-0.9
	baz=51,SNR=14						
QSPA	South Pole Qui	51.40	180	eP	P	11 22 03.6	+1.2
	comp=Z,76nm,1.1s						
QSPA				P	P	11 22 04.0	+1.7
QSPA	South Pole Qui	51.40	180	P	P	11 22 04.0	+1.7
	comp=Z,56nm,1.0s,baz=35,slow=3.4,SNR=80						
QSPA				LR	LR	11 41 15.0	
	comp=Z,398nm,18.8s,baz=238,slow=33						
MORW	Morawa	51.78	261	P	P	11 22 04.4	-1.1
	baz=52,SNR=9.4						
MBWA	Marble Bar	52.91	272	eP	P	11 22 12.9	-1.0
	comp=Z,38nm,1.1s						
MMRI	Maumere	58.43	285	P	P	11 22 54.7	+1.0
	comp=Z,82nm,1.0s,comp=Z,1µm						
RPN	Rapa Nui	60.33	102	LR	LR	11 43 40.8	
	comp=Z,208nm,18.6s,baz=353,slow=31						
KDI	Kendari	61.22	290	P	P	11 23 12.6	-0.3
	comp=Z,44nm,1.1s,comp=Z,419nm						
BKSI	Bulukumba	62.17	287	P	P	11 23 19.7	+0.4
	comp=Z,54nm,1.0s,comp=Z,479nm						
KAPI	Kappang	62.65	287	eP	P	11 23 22.1	-0.4
	comp=Z,34nm,1.0s						
BNSI	Bone	62.79	287	P	P	11 23 24.1	+0.7
	comp=Z,65nm,1.2s,comp=Z,749nm						
LUWI	Luwuk	63.09	292	P	P	11 23 25.7	+0.4
	comp=Z,128nm,1.3s,comp=Z,1µm						
SPSI	Sidrap Palu	63.33	288	P	P	11 23 26.9	-0.1
	comp=Z,53nm,0.9s						
MAW	Mawson	63.50	203	LR	LR	11 49 27.8	
	comp=Z,510nm,21.5s,baz=27,slow=34						
TTSI	Tana Toraja	63.90	288	P	P	11 23 31.1	+0.4
	comp=Z,63nm,1.1s,comp=Z,1µm						
MRSI	Marisa	64.73	293	P	P	11 23 35.0	-1.2

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
	comp=Z,33nm,1.3s						
KBKI	**Kotabaru**	**66.47**	**285**	P	**P**	**11 23 47.7**	**+0.3**
	comp=Z,119nm,1.0s,comp=Z,945nm						
PWJI	**Pagerwojo**	**66.80**	**279**	P	**P**	**11 23 49.7**	**+0.2**
	comp=Z,50nm,1.3s						
BBKI	**Banjar Baru**	**67.36**	**284**	P	**P**	**11 23 53.2**	**+0.1**
SYO	**Syowa Base**	**68.34**	**195**⇓	*i*P	**P**	**11 23 58.6**	**+0.2**
SYO	**Syowa Base**	**68.34**	**195**⇑	*e*pP	pP	11 24 06.4	-2.6
SYO	**Syowa Base**	**68.34**	**195**⇓	*e*sP	sP	11 24 10.8	-2.2
SNAA	**Sanae**	**69.90**	**180**	*e*P	**P**	**11 24 10.0**	**+1.8**
SNAA	**Sanae**	**69.90**	**180**	*e*P	**P**	**11 24 10.2**	**+2.0**
VNA3	**Neumayer Olymp**	**70.18**	**177**	*e*P	**P**	**11 24 11.7**	**+1.8**
VNA3	**Neumayer Olymp**	**70.18**	**177**	*e*pP	pP	11 24 21.9	+1.4
VNA3	**Neumayer Olymp**	**70.18**	**177**	*e*PcP	**PcP**	**11 24 30.0**	**-1.6**
VNA2	**Neumayer--Watz**	**70.58**	**178**	*e*P	**P**	**11 24 14.4**	**+2.2**
	baz=176,slow=6.8						
VNA2	**Neumayer--Watz**	**70.58**	**178**	*e*pP	pP	11 24 24.7	+1.8
	baz=176,slow=6.8						
VNA2	**Neumayer--Watz**	**70.58**	**178**	*e*PcP	**PcP**	**11 24 36.5**	**+3.3**
	baz=176,slow=6.8						
USHA	**Ushuaia**	**70.72**	**146**	LR	LR	11 51 13.2	
	comp=Z,461nm,18.9s,baz=293,slow=32						
VNA1	**Neumayer--Stat**	**70.82**	**178**	*e*P	**P**	**11 24 16.1**	**+2.4**
KKM	**Kota Kinabalu**	**72.68**	**293**	P	P	11 24 32.1	+6.3
	baz=73,SNR=6.9						
KSM	**Kuching**	**74.00**	**285**	*e*P	**P**	**11 24 32.9**	**-0.6**
	comp=Z,69nm,0.9s						
KSM	**Kuching**	**74.00**	**285**	P	**P**	**11 24 33.1**	**-0.4**
	baz=74,SNR=16						
COCO	**West Island**	**75.95**	**266**	*i* P	P	11 24 36.8	-8.0
PLCA	**Paso Flores**	**78.95**	**134**	P	**P**	**11 25 02.0**	**+0.6**
PLCA	**Paso Flores**	**78.95**	**134**	P	**P**	**11 25 02.0**	**+0.6**
	comp=Z,9.0nm,1.0s,baz=212,slow=4.9,SNR=9.7						
PLCA				LR	LR	11 53 10.3	
	comp=Z,118nm,19.3s,baz=191,slow=30						
SSLB	**Suanglung**	**82.21**	**309**	*e*P	**P**	**11 25 16.8**	**-2.0**
	comp=Z,31nm,1.2s						
MJAR	**Matsushiro Arr**	**83.58**	**328**	P	**P**	**11 25 23.5**	**-2.1**
MJAR	**Matsushiro Arr**	**83.58**	**328**	P	**P**	**11 25 23.5**	**-2.1**
	comp=Z,1.4nm,0.8s,baz=169,slow=5.6,SNR=6.1						
JNU	**Nakatsue**	**84.01**	**322**	LR	LR	11 55 18.9	
	comp=Z,72nm,21.5s,baz=51,slow=30						
QIZ	**Qiongzhong**	**86.07**	**298**	P	**P**	**11 25 39.9**	**+1.4**
QIZ				S	**S**	**11 36 11.7**	**+1.2**
QIZ				pmax	pmax		
	comp=Z,110nm,4.9s						
QIZ				LR	LR		
	comp=Z,270nm,21.0s						
CFAA	**Coronel Fontan**	**86.54**	**128**	LR	LR	11 54 11.7	
	comp=Z,4.9nm,19.9s,baz=1.2,slow=29						
ASAJ	**Asahikawa**	**88.59**	**335**	LR	LR	12 02 01.4	
	comp=Z,164nm,19.7s,baz=177,slow=33						
KSRS	**Korea Array**	**88.92**	**322**	P	**P**	**11 25 51.4**	**-0.3**
	comp=Z,6.9nm,0.9s,baz=141,slow=5.4,SNR=31						
KSAR	**Wonju Array Be**	**88.93**	**322**	P	**P**	**11 25 51.4**	**-0.4**
NJ2	**Nanjing**	**89.57**	**313**	*e*P	**P**	**11 25 56.7**	**+1.8**
NJ2				pP	**pP**	**11 26 07.0**	**+1.1**
NJ2				sP	**sP**	**11 26 10.6**	**+0.8**
NJ2				PP	**PP**	**11 29 30.1**	**+2.8**
NJ2				S	**S**	**11 36 42.5**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,80nm,4.6s						
NJ2				LR	LR		
	comp=N,610nm,25.0s						
NJ2				LR	LR		
	comp=E,400nm,20.9s						
NJ2				LR	LR		
	comp=Z,390nm,18.0s						
FX1	**Attu Island--F**	**91.35**	**357**	LR	LR	12 01 43.5	
	comp=Z,232nm,21.1s,baz=355,slow=32						
USRK	**Ussuriysk Arra**	**92.58**	**329**	P	**P**	**11 26 06.5**	**-2.1**
	comp=Z,0.8nm,0.5s,baz=108,slow=6.3,SNR=3.0						
PETK	**Petropavlovsk-**	**93.21**	**348**	P	P	11 26 08.6	-2.7
PETK	**Petropavlovsk-**	**93.21**	**348**	P	P	11 26 08.6	-2.7
PETK	**Petropavlovsk-**	**93.21**	**348**	P	P	11 26 08.6	-2.7
	comp=Z,1.3nm,0.7s,baz=152,slow=6.5,SNR=3.0						
PETK				LR	LR	12 00 26.3	
	comp=Z,102nm,21.1s,baz=152,slow=31						
GYA	**Guiyang**	**93.24**	**301**	P	**P**	**11 26 13.0**	**+0.7**
GYA				pP	**pP**	**11 26 24.3**	**+1.1**
GYA				sP	**sP**	**11 26 30.0**	**+2.9**
GYA				PP	**PP**	**11 30 01.2**	**+4.6**
GYA				SKS	**SKSac**	**11 36 43.8**	**-0.2**
GYA				SS	**SS**	**11 43 35.4**	**+1.5**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.2s						
GYA				LR	LR		
	comp=N,730nm,21.2s						
GYA				LR	LR		
	comp=E,520nm,22.4s						
GYA				LR	LR		
	comp=Z,630nm,21.9s						
CMAR	**Chiang Mai Arr**	**93.46**	**291**	P	**P**	**11 26 12.8**	**-0.6**
CMAR				PP	**PP**	**11 29 57.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**93.46**	**291**	P	**P**	**11 26 12.8**	**-0.6**
	comp=Z,3.7nm,0.8s,baz=148,slow=3.5,SNR=20						
CMAR				PP	**PP**	**11 29 57.8**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=137,slow=7.7,SNR=5.4						
CMAR				LR	LR	12 09 30.6	
	comp=Z,133nm,20.2s,baz=158,slow=36						
KMI	**Kunming**	**95.02**	**298**	P	**P**	**11 26 20.3**	**-0.4**
KMI				S	**S**	**11 37 31.3**	**-1.7**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CN2	**Changchun**	**95.08**	**325**	*e*P	**P**	**11 26 22.8**	**+2.6**
ATAH	**Atahualpa**	**95.76**	**104**	LR	LR	12 01 11.1	
	comp=Z,175nm,18.5s,baz=340,slow=30						
CPUP	**Villa Florida**	**96.91**	**132**	LR	LR	12 04 25.4	
	comp=Z,169nm,18.5s,baz=182,slow=32						
LPAZ	**La Paz**	**97.20**	**117**	LR	LR	12 05 05.3	
	comp=Z,56nm,18.2s,baz=79,slow=32						
CD2	**Chengdu**	**98.08**	**303**	P	Pdif	11 26 35.3	+1.1
CD2				pP	pP	11 26 45.9	+0.8
CD2				sP	sP	11 26 49.8	+0.8
CD2				PP	**PP**	**11 30 37.7**	**+3.7**
CD2				SKS	**SKSac**	**11 37 09.3**	**+0.1**
CD2				S	**S**	**11 37 56.6**	**-2.1**
CD2				sS	sS	11 38 14.4	-2.6
CD2				SS	**SS**	**11 44 43.6**	**+1.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				pmax	pmax		
	comp=Z,140nm,6.1s						
TXAR	**Lajitas Array**	**99.25**	**60**	PKKPbc	PKKPbc	11 42 58.5	-4.8
TXAR	**Lajitas Array**	**99.25**	**60**	PKKPbc	PKKPbc	11 42 58.5	-4.8
	comp=Z,0.2nm,0.9s,baz=81,slow=5.6,SNR=3.3						
TXAR				LR	LR	12 05 54.3	
	comp=Z,206nm,18.9s,baz=45,slow=32						
HHC	**Hu-ho-hao-te**	**99.94**	**315**	*e*P	**Pdif**	**11 26 42.7**	**+0.4**
HHC				pP	**pP**	**11 26 53.3**	**0.0**
HHC				sP	**sP**	**11 26 57.2**	**0.0**
HHC				PP	**PP**	**11 30 51.3**	**+3.2**
HHC				SKS	**SKSac**	**11 37 17.3**	**-0.9**
HHC				S	**ScS**	**11 38 12.0**	**-2.1**
HHC				sS	**sS**	**11 38 29.8**	**-2.6**
HHC				SS	**SS**	**11 45 10.4**	**+2.1**
HHC				pmax	pmax		
	comp=Z,31nm,0.9s						
HHC				LR	LR		
	comp=N,240nm,18.8s						
HHC				LR	LR		
	comp=E,290nm,20.6s						
HHC				LR	LR		
	comp=Z,290nm,20.8s						
LZH	**Lanzhou**	**101.35**	**307**	*e*P	**Pdif**	**11 26 51.5**	**+2.7**
LZH				pP	pP	11 27 01.0	+1.1
LZH				sP		11 27 05.0	
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
ILAR	**Eielson Array**	**106.70**	**15**	Pdif	**Pdif**	**11 27 10.2**	**-1.5**
ILAR				PKiKP	**PKiKP**	**11 31 21.9**	**+0.2**
ILAR	**Eielson Array**	**106.70**	**15**	Pdiff	**Pdif**	**11 27 10.2**	**-1.5**
	comp=Z,0.3nm,1.1s,baz=224,slow=4.7,SNR=3.0						
ILAR				PKiKP	**PKiKP**	**11 31 21.9**	**+0.2**
	comp=Z,1.1nm,1.1s,baz=215,slow=3.1,SNR=5.8						
YKA	**Yellowknife Ar**	**114.19**	**28**	PKiKP	PKPdf	11 31 35.0	-0.9
YKA				PKKPbc	**PKKPbc**	**11 42 14.2**	**-3.3**
YKA	**Yellowknife Ar**	**114.19**	**28**	PKiKP	PKPdf	11 31 34.9	-0.9
	comp=Z,1.8nm,0.9s,baz=230,slow=1.9,SNR=21						
YKA				PKKPbc	**PKKPbc**	**11 42 14.2**	**-3.3**
	comp=Z,0.2nm,0.8s,baz=51,slow=4.9,SNR=3.1						
TIXI	**Tiksi**	**115.48**	**345**	*i* PKIKP	**PKPdf**	**11 31 37.5**	**-0.6**
TIXI	**Tiksi**	**115.48**	**345**	*e*PKPdf	**PKPdf**	**11 31 36.7**	**-1.3**
WMQ	**Urumqi**	**115.91**	**306**	PKP	**PKPdf**	**11 31 39.9**	**0.0**
ULM	**Lac du Bonnet**	**116.12**	**45**	PKP	**PKPdf**	**11 31 39.7**	**-0.2**
ULM	**Lac du Bonnet**	**116.12**	**45**	PKP	**PKPdf**	**11 31 39.7**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=190,slow=5.3,SNR=4.3						
MK31	**Makanchi Array**	**120.66**	**307**	*e*PKIKP	**PKPdf**	**11 31 48.4**	**-0.5**
MK31	**Makanchi Array**	**120.66**	**307**	*e*PKPdf	**PKPdf**	**11 31 48.4**	**-0.5**
MKAR	**Makanchi Array**	**120.66**	**307**	PKIKP	**PKPdf**	**11 31 48.2**	**-0.7**
MKAR	**Makanchi Array**	**120.66**	**307**	PKP	**PKPdf**	**11 31 48.2**	**-0.7**
MKAR	**Makanchi Array**	**120.66**	**307**	PKP	**PKPdf**	**11 31 48.2**	**-0.7**
	comp=Z,4.5nm,1.1s,baz=98,slow=2.9,SNR=21						
KSH	**Kashi**	**121.68**	**297**	*e*PKP	**PKPdf**	**11 31 53.2**	**+2.0**
KSH				sPKP		11 32 07.0	
KSH				PP	PP	11 33 31.1	+6.3
KSH				PKS	**PKSdf**	**11 35 28.1**	**+0.2**
KSH				SKS	**SKSdf**	**11 39 00.0**	**-0.6**
KSH				SKKS	**SKKSac**	**11 40 19.2**	**-1.7**
KSH				SS	**SS**	**11 50 02.3**	**+3.2**
KSH				AMB	AMB		
	comp=Z,43nm,3.0s						
KSH				LR	LR		
	comp=N,64nm,3.4s						
KSH				LR	LR		
	comp=E,53nm,3.7s						
KSH				LR	LR		
	comp=Z,260nm,4.7s						
ZAA0	**Zalesovo Array**	**122.11**	**316**	*e*PKPdf	**PKPdf**	**11 31 50.8**	**-0.5**
ZALV	**Zalesovo Beam**	**122.11**	**316**	PKIKP	**PKPdf**	**11 31 50.6**	**-0.8**
ZALV	**Zalesovo Beam**	**122.11**	**316**	PKP	**PKPdf**	**11 31 50.5**	**-0.8**
ZALV	**Zalesovo Beam**	**122.11**	**316**	PKP	**PKPdf**	**11 31 50.5**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=122,slow=1.9,SNR=9.1						
NVS	**Novosibirsk**	**123.30**	**316**	*e*PKIKP	**PKPdf**	**11 31 50.7**	**-2.9**
TKM2	**Tokmak 2**	**123.38**	**301**	*e*PKIKP	**PKPdf**	**11 31 54.2**	**-0.3**
TKM2	**Tokmak 2**	**123.38**	**301**	*e*PKPdf	**PKPdf**	**11 31 54.1**	**-0.3**
AAK	**Ala-Archa**	**124.00**	**300**	*i* PKIKP	**PKPdf**	**11 31 55.2**	**-0.4**
AAK				MLR	MLR		
	comp=Z,221nm,30.0s						
AAK	**Ala-Archa**	**124.00**	**300**	*e*PKPdf	**PKPdf**	**11 31 55.8**	**+0.2**
KURK	**Kurchatov**	**124.44**	**311**	*i* PKIKP	**PKPdf**	**11 31 55.2**	**-0.7**
KURK	**Kurchatov**	**124.44**	**311**	*e*PKPdf	**PKPdf**	**11 31 55.3**	**-0.7**
KBL	**Kabul**	**124.46**	**289**	*e*PKIKP	**PKPdf**	**11 31 57.1**	**+0.3**
KBL	**Kabul**	**124.46**	**289**	*e*PKPdf	**PKPdf**	**11 31 57.1**	**+0.3**
EKS2	**Erkin-Say**	**124.50**	**300**	*e*PKIKP	**PKPdf**	**11 31 57.2**	**+0.7**
EKS2	**Erkin-Say**	**124.50**	**300**	*e*PKPdf	**PKPdf**	**11 31 57.2**	**+0.7**
KMBO	**Kilima Mbogo**	**126.65**	**231**	PKP	**PKPdf**	**11 32 02.9**	**+1.1**
KMBO	**Kilima Mbogo**	**126.65**	**231**	PKP	**PKPdf**	**11 32 02.9**	**+1.1**
	comp=Z,2.5nm,0.8s,baz=149,slow=5.9,SNR=5.9						
KKAR	**Karatay Array**	**126.89**	**299**	*e*PKIKP	**PKPdf**	**11 32 00.9**	**-0.1**
KKAR	**Karatay Array**	**126.89**	**299**	*e*PKPdf	**PKPdf**	**11 32 00.8**	**-0.1**
BRVK	**Borovoye**	**130.06**	**311***c*	*i*PKIKP	**PKPdf**	**11 32 07.0**	**+0.4**
BRVK	**Borovoye**	**130.06**	**311**	*e*PKPdf	**PKPdf**	**11 32 07.1**	**+0.5**
ABKAR	**Akbulak array**	**135.64**	**305**	*e*PKPdf	**PKPdf**	**11 32 17.9**	**+0.7**
SVE	**Sverdlovsk**	**136.12**	**315**	*e*PKIKP	**PKPdf**	**11 32 18.6**	**+0.7**
SVE				pmax	pmax		
	comp=Z,15nm,1.1s						
ARU	**Arti**	**137.25**	**315**	*i* PKIKP	**PKPdf**	**11 32 20.7**	**+0.7**
ARU						11 35 03.5	
DAG	**Danmarks Havn**	**141.12**	**6**	*e*PKIKP	**PKPdf**	**11 32 24.1**	**-2.4**
DAG	**Danmarks Havn**	**141.12**	**6**	*i* P	**PKPdf**	**11 32 24.1**	**-2.4**
DGRG	**David-gareji**	**144.31**	**290**	P	**PKPab**	**11 32 31.6**	**+0.3**
APA	**Apatity**	**145.21**	**337**⇓	*i*PKIKP	**PKPbc**	**11 32 33.6**	**-0.1**
ARCES	**ARCESS Array B**	**145.91**	**343**	PKPbc	**PKPdf**	**11 32 35.2**	**+0.1**
ARCES	**ARCESS Array B**	**145.91**	**343**	PKPbc	**PKPdf**	**11 32 35.2**	**+0.1**
	comp=Z,13nm,0.8s,baz=51,slow=2.9,SNR=43						
ARE0	**ARCESS Array S**	**145.91**	**343**	*e*PKPbc	**PKPdf**	**11 32 35.6**	**+0.5**
KLMR	**Klimovskoe**	**146.28**	**325***d*	*i*PKIKP	**PKPdf**	**11 32 35.4**	**-0.6**
KLMR				pmax	pmax		
	comp=Z,63nm,1.1s						
SCO	**Scoresbysund**	**146.44**	**12**	*e*PKP2	PKPab	11 32 44.4	+6.1
SCO	**Scoresbysund**	**146.44**	**12**	*i* P	PKPab	11 32 44.4	+6.1
KBZ	**Khabaz**	**146.48**	**293**	PKP2	**PKPdf**	**11 32 37.2**	**+0.4**
KBZ	**Khabaz**	**146.48**	**293**	PKPbc	**PKPdf**	**11 32 37.2**	**+0.4**
KBZ	**Khabaz**	**146.48**	**293**	PKPbc	**PKPdf**	**11 32 37.2**	**+0.4**
	comp=Z,5.8nm,0.9s,baz=90,slow=7.4,SNR=9.0						
KIV	**Kislovodsk**	**146.66**	**293**	*i* PKP2	**PKPbc**	**11 32 38.7**	**-0.3**
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
VRHR	**Novokhopersk**	**147.46**	**307**	*e*PKP2	**PKPbc**	**11 32 40.1**	**-0.7**
VRHR				pmax	pmax		
	comp=Z,40nm,0.9s						
VRHR				pmax	pmax		
	comp=N,20nm,0.7s						
VRHR				pmax	pmax		
	comp=E,20nm,0.6s						
DBIC	**Dimbokro**	**147.95**	**174**	PKPbc	**PKPbc**	**11 32 43.6**	**+0.3**
DBIC	**Dimbokro**	**147.95**	**174**	PKPbc	**PKPbc**	**11 32 43.6**	**+0.3**
	comp=E,27nm,1.2s,baz=161,slow=2.5,SNR=13						
MALT	**Malatya**	**148.86**	**282**	*e*PKP2	**PKPbc**	**11 32 45.7**	**+0.6**
MALT	**Malatya**	**148.86**	**282**	*e*PKPbc	**PKPbc**	**11 32 45.7**	**+0.6**
VORD	**Divnogorie**	**148.94**	**307**	*e*PKIKP	**PKPbc**	**11 32 43.4**	**-1.3**
VORD				pmax	pmax		
	comp=Z,20nm,1.4s						
VORD				pmax	pmax		
	comp=N,20nm,0.9s						
VORD				pmax	pmax		
	comp=E,40nm,0.8s						
VSR	**Storozhevoye**	**148.99**	**307**	*e*PKP2	**PKPbc**	**11 32 44.7**	**-0.1**
VSR				pmax	pmax		
	comp=Z,30nm,1.1s						
VSR				pmax	pmax		
	comp=N,7.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,20nm,1.3s						
OBN	**Obninsk**	**149.69**	**315**	*i* PKHKP	**PKPdf**	**11 32 42.4**	**+0.7**
OBN				*e*		11 36 16.2	
OBN				*e*		11 39 37.4	
OBN				pmax	pmax		
	comp=Z,21nm,1.0s						
PUL	**Pulkovo**	**150.86**	**327**	*i* PKIKP	**PKPbc**	**11 32 50.5**	**+1.4**
FIA1	**FINESS Array S**	**151.55**	**332**	*e*PKPab	**PKPab**	**11 32 57.4**	**-1.9**
FINES	**FINESS Array B**	**151.56**	**332**	PKPbc	**PKPbc**	**11 32 49.4**	**-1.3**
FINES				PKPab	**PKPab**	**11 32 57.4**	**-2.0**
FINES	**FINESS Array B**	**151.56**	**332**	PKPbc	**PKPbc**	**11 32 49.4**	**-1.3**
	comp=Z,34nm,1.0s,baz=66,slow=3.4,SNR=32						
FINES				PKPab	**PKPab**	**11 32 57.4**	**-2.0**
	comp=Z,42nm,1.0s,baz=88,slow=4.4,SNR=19						
CSS	**Prodhromos**	**151.91**	**273**	*e*PKPbc	**PKPbc**	**11 32 52.7**	**+0.3**
BRTR	**Keskin Array B**	**152.79**	**283**	PKP	**PKPdf**	**11 32 46.3**	**-0.9**
BRTR				PKPbc	**PKPbc**	**11 32 52.9**	**-1.5**
BRTR	**Keskin Array B**	**152.79**	**283**	PKP	**PKPdf**	**11 32 46.3**	**-0.9**
	comp=Z,1.2nm,0.9s,baz=66,slow=1.7,SNR=4.7						
BRTR				PKPbc	**PKPbc**	**11 32 52.9**	**-1.5**
	comp=Z,5.2nm,0.9s,baz=144,slow=5.3,SNR=18						
TOA0	**Torodi Ar. Sit**	**154.36**	**187**	*e*PKPab	**PKPab**	**11 33 13.2**	**+1.0**
TORD	**Torodi Ar. Bea**	**154.36**	**187**	PKP	**PKPdf**	**11 32 50.4**	**+0.4**
TORD				PKPbc	**PKiKP**	**11 32 59.1**	**+0.8**
TORD				PKPab	**PKPab**	**11 33 13.0**	**+0.7**
TORD	**Torodi Ar. Bea**	**154.36**	**187**	PKP	**PKPdf**	**11 32 50.4**	**+0.4**
	comp=Z,3.2nm,1.1s,baz=169,slow=1.5,SNR=9.8						
TORD				PKPbc	**PKiKP**	**11 32 59.1**	**+0.8**
	comp=Z,4.1nm,1.1s,baz=198,slow=1.4,SNR=7.8						
TORD				PKPab	**PKPab**	**11 33 13.0**	**+0.7**
	comp=Z,11nm,0.9s,baz=173,slow=3.4,SNR=19						
AKASG	**Malin Array Be**	**155.23**	**309**	PKIKP	PKPdf	11 32 56.6	+6.5
AKASG	**Malin Array Be**	**155.23**	**309**	PKPbc	PKPdf	11 32 56.6	+6.5
AKASG	**Malin Array Be**	**155.23**	**309**	PKPbc	PKPdf	11 32 56.6	+6.5
	comp=Z,1.4nm,0.5s,baz=64,slow=2.8,SNR=6.9						
NB2	**NORSAR Subarra**	**156.28**	**344**	PKPdf	PKPdf	11 33 00.5	+9.3
	comp=Z,4.4nm,1.1s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**156.28**	**344**	PKPbc	PKPdf	11 32 59.1	+7.9
NOA	**NORSAR Array B**	**156.28**	**344**	PKPbc	PKPdf	11 32 59.1	+7.9
	comp=Z,2.1nm,1.0s,baz=34,slow=2.2,SNR=3.2						
UZH	**Uzhgorod**	**160.16**	**308**	*e*PKP2	**PKPab**	**11 33 33.9**	**-2.7**
CRVS	**Cervenica-Dubn**	**160.57**	**309**	*e*PKP	**PKPdf**	**11 33 00.1**	**+3.4**
CRVS				*e*		11 33 38.1	
CLL	**Collm**	**163.77**	**326**	*e*PKP2	PKPab	11 33 58.0	+5.7
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLL	**Collm**	**163.77**	**326**	*e*pPKPab	PKPab	11 33 58.0	+5.7
	comp=Z,5.0nm,1.0s						
CLL				*e*SSS	SSS	12 04 18.0	
CLL				LmV		12 52 00.0	
	comp=Z,100nm,21.6s						

WEL 08 11:22:48.6±0.5**, 38°.82S**×**178°.02E, h96**km±4km**, ML3.5**/4**, Error ellipse: s-maj=4.9km s-min=2.0km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNZ	**Kokohu**	**0.34**	**234**	PN	Pn	11 23 02.9	+0.1
MHGZ	**Mahia Peninsul**	**0.34**	**195**	PN	Pn	11 23 02.6	-0.3
MHGZ				SN	Sn	11 23 13.5	-0.1
MWZ	**Matawai**	**0.62**	**321**	PN	Pn	11 23 04.8	-0.2
MWZ				SN	Sn	11 23 16.3	-0.9
PUZ	**Puketiti**	**0.77**	**14**	PN	Pn	11 23 06.2	-0.2

IDC 08 11:23:25.6±1.7**, 10°.13S**×**124°.06E, h0**km**, mb3.4**/1**, mb1 3.7**/4**, mb1mx3.5**/20**, mbtmp3.5**/4**, ML3.6**/3**, Error ellipse: s-maj=113.3km s-min=26.5km az=62.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**8.07**	**169**	Pn	Pn	11 25 24.5	+0.4
	2.2nm,0.3s,baz=349,slow=12,SNR=100						
FITZ				Sn	Sn	11 26 49.5	-6.7
	0.8nm,0.3s,baz=66,slow=20,SNR=14						
WRA	**Warramunga Arr**	**13.91**	**136**	Pn	Pn	11 26 43.6	-0.6
	0.2nm,0.3s,baz=310,slow=14,SNR=11						
WRA				Sn	Sn	11 29 12.6	-6.9
	0.3nm,0.3s,baz=312,slow=25,SNR=6.9						
ASAR	**Alice Springs**	**16.41**	**146**	Pn	Pn	11 27 17.5	-0.1
	0.2nm,0.3s,baz=321,slow=12,SNR=13						
ASAR				Sn	Sn	11 30 11.3	-9.2
	0.1nm,0.3s,baz=320,slow=23,SNR=2.6						
MKAR	**Makanchi Array**	**67.82**	**330**	P	P	11 34 25.6	0.0
	0.3nm,0.8s,baz=131,slow=6.6,SNR=2.6						

*ISCJB **08** 11:32:11.7±0.9, 56°.1S±0°.1×25°.7W±0°.3, h10km, mb4.0/8, Error ellipse: s-maj=24.3km s-min=12.5km az=149.7*
*IDC **08** 11:32:11.8±0.9, 56°.13S×25°.63W, h0km, mb4.1/7, mb1 4.1/8, mb1mx4.0/20, mbtmp4.0/8, ML3.5/1, Error ellipse: s-maj=29.3km s-min=19.0km az=74.0*
*NEIC **08** 11:32:17.0±0.5, 56°.14S×25°.68W, h35km, mb4.4/4, Error ellipse: s-maj=15.4km s-min=9.6km az=60.0*
ISC 08 11:32:13.3±0.8**, 56°.1S**±0°.1×**25°.6W**±0°.2**, h10**km**, n24, σ0s.68**/24**, mb4.2**/8**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	**Sanae**	**18.32**	**157**	P	**P**	**11 36 28.0**	**+0.7**
SNAA	**Sanae**	**18.32**	**157**	P	**P**	**11 36 28.0**	**+0.7**
	0.1nm,0.3s,baz=318,slow=17,SNR=6.2						
PMSA	**Palmer Station**	**20.54**	**229**	P	**P**	**11 36 52.0**	**+0.6**
PMSA	**Palmer Station**	**20.54**	**229**	P	**P**	**11 36 52.0**	**+0.6**
	8.8nm,0.2s,baz=99,slow=9.9,SNR=33						
TRQA	**Tornquist**	**30.18**	**291**	*e*P	**P**	**11 38 23.6**	**+0.1**
	1.9nm,0.7s						
QSPA	**South Pole Qui**	**34.13**	**180**	P	**P**	**11 38 57.7**	**-0.3**
	3.3nm,0.6s						
QSPA	**South Pole Qui**	**34.13**	**180**	P	**P**	**11 38 57.7**	**-0.3**
	3.7nm,0.6s,baz=210,slow=3.0,SNR=46						
CPUP	**Villa Florida**	**37.55**	**309**	P	**P**	**11 39 27.6**	**+0.2**
CPUP	**Villa Florida**	**37.55**	**309**	P	**P**	**11 39 27.6**	**+0.2**
	0.6nm,0.4s,baz=101,slow=10,SNR=4.0						
CFAA	**Coronel Fontan**	**38.42**	**292**	P	**P**	**11 39 33.4**	**-1.4**
CFAA	**Coronel Fontan**	**38.42**	**292**	P	**P**	**11 39 33.4**	**-1.4**
	0.4nm,0.5s,baz=148,slow=7.4,SNR=6.8						
LCO	**Las Campanas**	**41.77**	**291**	*e*P	**P**	**11 40 02.0**	**-0.9**
	9.6nm,0.9s						
VNDA	**Vanda**	**46.54**	**182**	P	**P**	**11 40 39.8**	**-0.5**
VNDA	**Vanda**	**46.54**	**182**	P	**P**	**11 40 39.8**	**-0.5**
	1.1nm,0.6s,baz=182,slow=8.5,SNR=8.6						
LPAZ	**La Paz**	**51.16**	**304**	*e*P	**P**	**11 41 17.4**	**+0.2**
	3.0nm,0.8s						
LPAZ	**La Paz**	**51.16**	**304**	P	**P**	**11 41 17.8**	**+0.7**
	1.0nm,0.3s,baz=128,slow=6.7,SNR=9.1						
TORD	**Torodi Ar. Bea**	**72.68**	**28**	P	**P**	**11 43 41.5**	**+0.4**
TORD	**Torodi Ar. Bea**	**72.68**	**28**	P	**P**	**11 43 41.5**	**+0.4**
	1.6nm,0.7s,baz=198,slow=5.9,SNR=12						
YKA	**Yellowknife Ar**	**136.83**	**317**	PKP	**PKPdf**	**11 51 34.6**	**+0.2**
YKA	**Yellowknife Ar**	**136.83**	**317**	PKP	**PKPdf**	**11 51 34.6**	**+0.2**
	0.2nm,0.5s,baz=124,slow=2.4,SNR=4.1						
ZALV	**Zalesovo Beam**	**141.59**	**63**	PKP	**PKPdf**	**11 51 42.6**	**-0.8**
ZALV	**Zalesovo Beam**	**141.59**	**63**	PKP	**PKPdf**	**11 51 42.6**	**-0.8**
	0.3nm,0.3s,baz=247,slow=3.0,SNR=2.9						
ILAR	**Eielson Array**	**150.84**	**311**	PKPbc	**PKPbc**	**11 52 04.2**	**-0.1**
ILAR	**Eielson Array**	**150.84**	**311**	PKPbc	**PKPbc**	**11 52 04.2**	**-0.1**
	1.7nm,0.9s,baz=119,slow=1.4,SNR=18						

*IDC **08** 11:33:11.9±0.5, 15°.38S×173°.42W, h0km, mb4.3/13, mb1 4.5/15, mb1mx4.3/25, mbtmp4.3/15, ML3.8/2, MS3.9/8, Ms1 3.8/8, ms1mx3.5/37, Error ellipse: s-maj=23.3km s-min=14.8km az=134.0*
*AUST **08** 11:33:13.7±0.0, 14°.83S×172°.24W, h84km, Error ellipse: s-maj=1.4km s-min=1.3km az=40.0*
*ISCJB **08** 11:33:17.1±0.2, 15°.52S±0°.07×173°.38W±0°.06, h42km, mb4.4/25, MS3.9/7, Error ellipse: s-maj=11.8km s-min=5.4km az=141.8*
*NEIC **08** 11:33:30.4±2.1, 15°.48S×173°.51W, h149km±18km, mb4.4/15, Error ellipse: s-maj=16.0km s-min=9.5km az=134.0*
ISC 08 11:33:18.1±0.4**, 15°.52S**±0°.09×**173°.28W**±0°.08**, h42**km**, n332, σ0s.85**/317**, mb4.3**/25**, MS4.1**/7**, 130C-124D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.16**	**42**	Pn	Pn	11 33 49.4	-2.3
	465nm,0.3s,baz=229,slow=20,SNR=328						
AFI				Sn	Sn	11 34 10.4	-6.9
	552nm,0.3s,baz=233,slow=20,SNR=16						
NIUE	**Niue**	**4.77**	**138**	P	**Pn**	**11 34 26.3**	**-1.2**
	baz=4.8,SNR=89						
NIUE				S	Sn	11 35 13.8	-7.8
	baz=4.8,SNR=6.5						
MSVF	**Nonsavu**	**8.60**	**254**	*e*Pn	Pn	11 35 30.0	+10
	92nm,1.1s						
RAR	**Rarotonga**	**14.01**	**116**	Pn	**Pn**	**11 36 32.7**	**-1.4**
RAR	**Rarotonga**	**14.01**	**116**	Pn	**Pn**	**11 36 32.7**	**-1.4**
	1.6nm,0.3s,baz=270,slow=6.6,SNR=3.9						
RAR				LR	LR	11 39 58.7	
	comp=Z,412nm,21.9s,baz=90,slow=29						
DZM	**Mont Dzumac**	**20.26**	**248**	*e*P	Pn	11 37 56.6	+4.0
DZM	**Mont Dzumac**	**20.26**	**248**	P	Pn	11 37 52.6	+0.1
	25nm,0.8s						
DZM	**Mont Dzumac**	**20.26**	**248**	P	Pn	11 37 52.2	-0.3
	30nm,0.8s,baz=85,slow=16,SNR=13						
PPT	**Papeete**	**22.81**	**98**	LR	LR	11 43 40.5	
	comp=Z,179nm,21.3s,baz=300,slow=27						
PPT2	**Papeete2**	**22.81**	**99**	*e*LR	LR	11 43 28.3	
	366nm,27.8s						
TBI	**Tubuai**	**23.75**	**113**	*e*LR	LR	11 43 59.1	
	308nm,29.0s						
ARMA	**Armidale**	**35.38**	**239**	*e*P	**P**	**11 40 10.4**	**+0.3**
	6.5nm,0.8s						
CAN	**Canberra**	**39.05**	**233**	*e*P	**P**	**11 40 41.0**	**-0.1**
	21nm,1.4s						
CMSA	**Cobar Meteorol**	**40.60**	**239**	P	**P**	**11 40 53.6**	**-0.3**
	baz=42,SNR=5.0						
COEN	**Coen**	**42.09**	**266**	P	**P**	**11 41 07.9**	**+1.5**
	baz=43,SNR=6.4						
TOO	**Toolangi**	**42.48**	**231**	P	**P**	**11 41 08.8**	**-0.5**
	baz=44,SNR=4.9						
STKA	**Stephens Creek**	**44.08**	**240**	*e*P	**P**	**11 41 21.9**	**-0.4**
	1.2nm,0.9s						
STKA	**Stephens Creek**	**44.08**	**240**	P	**P**	**11 41 20.9**	**-1.4**
	7.2nm,0.8s,baz=92,slow=8.3,SNR=17						
STKA				LR	LR	11 56 30.5	
	comp=Z,111nm,19.4s,baz=23,slow=32						
STKA	**Stephens Creek**	**44.08**	**240**	P	**P**	**11 41 22.1**	**-0.2**
	baz=45,SNR=15						
BBOO	**Buckleboo**	**48.85**	**240**	P	**P**	**11 41 59.8**	**0.0**
	baz=50,SNR=5.7						
WRAB	**Tennant Creek**	**49.92**	**257**	*e*P	**P**	**11 42 07.2**	**-0.9**
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**49.93**	**257**	P	**P**	**11 42 06.8**	**-1.4**
WRA	**Warramunga Arr**	**49.93**	**257**	P	**P**	**11 42 06.8**	**-1.4**
	1.7nm,0.6s,baz=93,slow=6.7,SNR=61						
AS31	**Alice Springs**	**50.19**	**252**	*e*P	**P**	**11 42 09.5**	**-0.6**
ASAR	**Alice Springs**	**50.19**	**252**	P	**P**	**11 42 09.1**	**-1.0**
ASAR	**Alice Springs**	**50.19**	**252**	P	**P**	**11 42 09.1**	**-1.0**
	14nm,0.7s,baz=88,slow=8.0,SNR=123						
ASAR				LR	LR	12 00 44.4	
	comp=Z,202nm,18.9s,baz=176,slow=33						
FITZ	**Fitzroy Crossi**	**58.30**	**258**	LR	LR	12 06 21.3	
	comp=Z,126nm,18.6s,baz=32,slow=34						
VNDA	**Vanda**	**63.27**	**186**	P	**P**	**11 43 43.6**	**+1.6**
VNDA	**Vanda**	**63.27**	**186**	P	**P**	**11 43 43.6**	**+1.6**
	0.6nm,0.3s,baz=13,slow=8.0,SNR=8.0						
MEEK	**Meekatharra**	**63.88**	**248**	P	P	11 43 41.9	-5.0
	baz=65,SNR=4.2						

KLBR Kellerberrin 64.29 242 P P 11 43 50.3 +0.7
baz=65,SNR=6.0
KAPI Kappang 66.50 271 eP P 11 43 59.6 -4.5
9.6nm,0.3s
VES Vestal, Richgr 72.34 44 ⇓P P 11 44 40.6 +0.8
baz=73
EDW2 Edwards Air Fo 72.54 45 ⇑P P 11 44 42.1 +1.1
baz=73
ISA Isabella 72.65 44 ⇓P P 11 44 42.8 +1.1
baz=73
PETK Petropavlovsk- 72.78 342 P P 11 44 40.7 -1.3
PETK Petropavlovsk- 72.78 342 P P 11 44 40.7 -1.3
3.0nm,0.9s,baz=148,slow=8.5,SNR=3.4
LPIG La Paz 73.00 58 LR LR 12 07 43.8
comp=Z,22nm,20.4s,baz=206,slow=28
MPMC Manual Prospec 73.54 44 ⇑P P 11 44 48.0 +1.0
baz=74
GSC Goldstone 73.58 45 ⇓P P 11 44 48.3 +1.1
baz=74
HEC Hector,Ludlow 73.66 46 ⇓P P 11 44 48.6 +1.0
baz=74
GMRC Granite Mounta 74.10 46 ⇑P P 11 44 51.0 +0.7
baz=74
IRM Iron Mountain 74.13 47 ⇓P P 11 44 51.4 +1.0
baz=74
GRAC Grapevine Rang 74.14 44 ⇑P P 11 44 51.9 +1.5
baz=74
FURC Furnace Creek, 74.19 44 ⇑P P 11 44 51.9 +1.3
baz=74
TUQ Turquoise Moun 74.26 46 ⇓P P 11 44 52.3 +1.0
baz=75
NVAR Mina Array Bea 74.34 42 P P 11 44 52.2 +0.5
NVAR Mina Array Bea 74.34 42 P P 11 44 52.2 +0.5
3.0nm,0.9s,baz=229,slow=9.9,SNR=18
NV11 Mina Array Sit 74.43 42 eP P 11 44 52.7 +0.5
QSPA South Pole Qui 74.53 180 P P 11 44 53.4 +1.1
QSPA ePP PP 11 47 38.5 -0.4
QSPA South Pole Qui 74.53 180 P P 11 44 53.4 +1.1
6.6nm,0.9s,baz=56,slow=2.1,SNR=25
PDMCI Parker Dam,Lak 74.92 47 ⇑P P 11 44 55.9 +1.0
baz=75
Z14A Wintersburg 75.30 49 ⇓P P 11 44 58.3 +1.2
baz=76
W13A Hualapai Mount 75.50 47 ⇓P P 11 44 59.5 +0.9
baz=76
R11A Troy Canyon, C 76.06 43 ⇑P P 11 45 02.4 +0.8
baz=76
X16A Lo Mia Camp, P 76.91 48 ⇓P P 11 45 07.7 +1.2
baz=77
319A Douglas 77.07 52 ⇑P P 11 45 08.9 +1.5
baz=77
U15A North Rim 77.30 46 ⇑P P 11 45 09.9 +1.2
baz=78
KSM Kuching 77.31 275 P P 11 45 06.2 -2.8
baz=78,SNR=3.9
WUAZ Wupatki 77.49 47 ⇑P P 11 45 10.9 +1.2
baz=78
320A Kipp Ranch, An 77.63 52 ⇑P P 11 45 12.0 +1.4
baz=78
220A Playas Peak, P 77.88 52 ⇑P P 11 45 13.3 +1.4
baz=78
120A U Bar Ranch, L 78.09 51 ⇑P P 11 45 14.2 +1.1
baz=78
Z20A Nine Sixteen R 78.38 51 ⇑P P 11 45 15.8 +1.0
baz=79
MFID Camas Ranch 78.70 39 ⇑P P 11 45 17.1 +0.9
baz=79,SNR=7.2
121A Cookes Peak, D 78.73 52 ⇑P P 11 45 17.5 +0.9
baz=79
DUG Dugway 78.87 43 ⇓P P 11 45 18.3 +1.1
baz=79
Y20A Horse Springs, 78.90 50 ⇑P P 11 45 18.7 +1.0
baz=79
X20A Quemado 79.10 50 ⇓P P 11 45 20.4 +1.6
baz=79
Z21A St. Cloud Mine 79.16 51 ⇓P P 11 45 20.3 +1.3
baz=79
I12A Atlanta 79.33 39 ⇓P P 11 45 21.1 +1.4
baz=80,SNR=12
W20A Ramah 79.37 49 ⇑P P 11 45 21.5 +1.3
baz=80
Y21A Point of Rocks 79.47 50 ⇓P P 11 45 22.1 +1.3
baz=80
L14A Malta 79.55 41 ⇓P P 11 45 21.9 +1.0
baz=80
X21A Alamocita Cree 79.58 50 ⇑P P 11 45 22.5 +1.1
baz=80
HLID Hailey 79.64 39 eP P 11 45 22.6 +1.2
8.3nm,1.0s
HLID Hailey 79.64 39 ⇑P P 11 45 22.9 +1.5
baz=80,SNR=15
Z22A Elephant Butte 79.67 51 ⇓P P 11 45 23.1 +1.3
baz=80
J13A Cove Ranch, Pi 79.70 39 ⇑P P 11 45 23.1 +1.4
baz=80,SNR=11
V20A Brimhall 79.70 48 ⇑P P 11 45 23.1 +1.1
baz=80
HVU Hansel Valley 79.72 41 eP P 11 45 22.3 +0.4
3.1nm,0.8s
O16A Springville 79.73 43 ⇓P P 11 45 23.0 +1.0
baz=80
SRU San Rafael 79.84 45 ⇓P P 11 45 23.9 +1.3
baz=80
K14A Jones Ranch, D 79.86 41 ⇑P P 11 45 23.7 +1.1
baz=80
P17A Butcher Ranch, 79.88 44 ⇓P P 11 45 23.6 +0.8
baz=80
H12A Diamond D Ranc 79.92 38 ⇓P P 11 45 23.5 +0.6
baz=80,SNR=8.4
U20A Newcomb 79.93 48 ⇓P P 11 45 24.5 +1.4
baz=80
G12A Big Creek, Yel 79.96 38 ⇓P P 11 45 23.9 +0.8
baz=80,SNR=16
Y22A Socorro 79.97 51 ⇑P P 11 45 24.4 +1.0
baz=80
W21A San Fidel 79.99 49 ⇑P P 11 45 24.7 +1.2
baz=80
I13A Wildhorse Cree 80.01 39 ⇑P P 11 45 24.1 +0.7
baz=80,SNR=5.5
324A Moseley Ranch, 80.02 53 ⇓P P 11 45 24.3 +0.6
baz=80
J14A Carey 80.06 40 ⇓P P 11 45 25.1 +1.5
baz=80,SNR=9.5
L15A Malad City 80.08 41 ⇓P P 11 45 24.1 +0.3
baz=80
425A Indio Mountain 80.13 54 ⇓P P 11 45 25.3 +1.0
baz=80,SNR=6.0
MNTX Cornudas Mount 80.20 53 ⇓P P 11 45 25.5 +1.0
baz=80,SNR=5.4
M16A Huntsville 80.21 42 ⇓P P 11 45 25.1 +0.5
baz=80
Z23A Rita Site, Whi 80.22 52 ⇑P P 11 45 25.4 +0.7
baz=80
O17A Robinson Place 80.23 44 ⇑P P 11 45 25.8 +1.0
baz=80
224A Cornudas Mount 80.25 53 ⇓P P 11 45 25.8 +0.8
baz=80
H13A Challis 80.28 38 ⇓P P 11 45 25.8 +1.0
baz=81,SNR=9.0
626A Big Bend Ranch 80.30 56 ⇑P P 11 45 25.8 +0.7
baz=81,SNR=5.7
K15A Arbon 80.34 41 ⇓P P 11 45 26.0 +0.8
baz=81
F12A Elk City 80.35 37 ⇑P P 11 45 25.6 +0.5
baz=81,SNR=15
325A Bean Ranch, Si 80.38 54 ⇑P P 11 45 26.3 +0.7
baz=81,SNR=6.8
I14A Mackay 80.43 39 ⇑P P 11 45 26.7 +1.0
baz=81
526A Mary Lane Ranc 80.53 55 ⇑P P 11 45 27.3 +0.8
baz=81,SNR=5.0
124A Stringfield Ra 80.57 52 ⇓P P 11 45 27.8 +1.0
baz=81
U21A Nageezi 80.58 48 ⇓P P 11 45 27.9 +1.2
baz=81,SNR=9.7
TXAR Lajitas Array 80.58 56 P P 11 45 27.1 +0.4
TXAR Lajitas Array 80.58 56 P P 11 45 27.1 +0.4
2.1nm,1.0s,baz=229,slow=5.8,SNR=17
G13A Cobalt 80.59 38 ⇑P P 11 45 26.9 +0.5
baz=81,SNR=5.8
Q19A Hogan Spring (80.63 45 ⇓P P 11 45 27.7 +1.0
baz=81,SNR=5.4
Y23A Lovelace Mesa, 80.64 51 ⇑P P 11 45 27.7 +0.7
baz=81
L16A Fish Haven 80.69 42 ⇑P P 11 45 27.4 +0.2
baz=81
S20A Disappointment 80.72 47 ⇓P P 11 45 28.8 +1.3
baz=81

NEW Newport 80.74 34 ⇓P P 11 45 27.5 +0.5
baz=81
J15A Blackfoot 80.78 40 ⇓P P 11 45 29.0 +1.6
baz=81,SNR=7.0
225A Deer Hill, Car 80.81 53 ⇑P P 11 45 28.8 +0.9
baz=81
X23A Hourglass Bar 80.83 50 ⇑P P 11 45 28.7 +0.6
baz=81
426A McDonald Obser 80.83 55 ⇓P P 11 45 29.1 +1.0
baz=81,SNR=8.7
H14A Leadore 80.85 39 ⇑P P 11 45 28.8 +0.9
baz=81,SNR=7.9
627A Terlingua Ranc 80.85 56 ⇓P P 11 45 29.2 +1.0
baz=81,SNR=5.0
R20A Redvale 80.88 46 ⇓P P 11 45 28.6 +0.3
baz=81
Z24A Sheeppen Canyo 80.90 52 ⇑P P 11 45 29.1 +0.7
baz=81
F13A Darby 80.91 37 ⇓P P 11 45 28.6 +0.5
baz=81,SNR=5.2
T21A Navajo Lake 80.92 48 ⇑P P 11 45 29.6 +1.1
baz=81
C11A Tepee Creek (N 80.97 35 ⇑P P 11 45 28.9 +0.6
baz=81
K16A Soda Springs 81.01 41 ⇑P P 11 45 29.8 +1.0
baz=81
D12A Red Mtns Fores 81.02 36 ⇓P P 11 45 29.4 +0.8
baz=81
S21A Coal Bank Pass 81.04 47 ⇓P P 11 45 30.5 +1.2
baz=81,SNR=12
I15A Monteview 81.06 40 ⇓P P 11 45 30.0 +1.0
baz=81
Y24A Capitan 81.10 51 ⇓P P 11 45 30.3 +0.8
baz=81,SNR=5.2
W23A Werner Place, 81.11 50 ⇓P P 11 45 30.4 +0.8
baz=81
G14A Jackson 81.13 38 ⇑P P 11 45 30.0 +0.6
baz=81,SNR=5.7
U22A Llaves 81.13 48 ⇓P P 11 45 30.5 +0.8
baz=81
125A Gardner Draw, 81.16 53 ⇓P P 11 45 30.5 +0.8
baz=81
J16A Bone 81.22 41 ⇑P P 11 45 30.8 +0.8
baz=82
628A Black Gap, Mar 81.26 56 ⇓P P 11 45 31.0 +0.7
baz=82
MCMT McKenzie Canyo 81.27 39 eP P 11 45 30.7 +0.5
2.8nm,1.1s
H15A Lima 81.28 39 ⇑P P 11 45 31.3 +1.1
baz=82,SNR=7.2
Q20A Ridgley Place, 81.29 46 ⇓P P 11 45 31.5 +1.1
baz=82
226B Tecolote Peak, 81.30 53 ⇑P P 11 45 31.1 +0.7
baz=82,SNR=8.0
V23A Ortiz Mt. (NFS 81.34 49 ⇑P P 11 45 32.1 +1.3
baz=82
E13A Victor 81.35 37 ⇓P P 11 45 30.6 +0.2
baz=82,SNR=5.7
Z25A Roswell 81.38 52 ⇑P P 11 45 32.1 +1.2
baz=82
T22A Edith 81.38 48 ⇓P P 11 45 32.0 +1.0
baz=82
K17A Gardner Place, 81.39 41 ⇓P P 11 45 31.9 +1.1
baz=82
427A Hayter Ranch, 81.40 55 ⇑P P 11 45 32.1 +1.1
baz=82,SNR=7.8
R21A Cimarron 81.54 46 ⇑P P 11 45 32.8 +1.0
baz=82,SNR=5.4
D13A Huson 81.55 36 ⇑P P 11 45 31.3 -0.1
baz=82
U23A El Rito 81.59 49 ⇑P P 11 45 33.2 +1.2
baz=82,SNR=6.7
528A Cox Ranch, San 81.61 56 ⇑P P 11 45 33.1 +0.9
baz=82,SNR=5.1
I16A Newdale 81.61 40 ⇓P P 11 45 33.1 +1.2
baz=82,SNR=6.1
126A Clayton Basin, 81.64 53 ⇑P P 11 45 32.8 +0.5
baz=82
DCID1 Drake Creek 81.65 40 eP P 11 45 33.6 +1.4
7.4nm,1.2s
Y25A Mesa, Roswell 81.66 51 ⇓P P 11 45 33.0 +0.6
baz=82
G15A Dillon 81.67 39 ⇑P P 11 45 32.9 +0.7
baz=82
W24A Lazy 6 Ranch, 81.68 50 ⇑P P 11 45 33.1 +0.6
baz=82
MSO Missoula 81.70 37 ⇓P P 11 45 33.1 +0.8
baz=82
E14A Clinton 81.74 37 ⇓P P 11 45 32.8 +0.2
baz=82,SNR=7.9
S22A 4U Ranch, Cre 81.76 47 ⇑P P 11 45 34.3 +1.3
baz=82,SNR=8.3
BSMT Bassoo Peak 81.79 35 eP P 11 45 32.5 -0.3
12nm,1.5s
C13A Hot Springs 81.81 36 ⇓P P 11 45 33.1 +0.4
baz=82
J17A Brown Place, J 81.83 41 ⇑P P 11 45 33.7 +0.5
baz=82
K18A Toltan Ranch, 81.90 42 ⇑P P 11 45 34.5 +1.0
baz=82,SNR=5.3
428A Kincaid Ranch, 81.91 55 ⇑P P 11 45 34.4 +0.7
baz=82
Z26A Caprock 81.93 52 ⇓P P 11 45 34.3 +0.5
baz=82,SNR=9.1
V24A Rampart Ranch, 82.00 50 ⇓P P 11 45 34.8 +0.5
baz=82
T23A Casias Ranch, 82.01 48 ⇓P P 11 45 35.3 +0.9
baz=82
F15A Butte 82.02 38 ⇓P P 11 45 34.4 +0.3
baz=82
R22A Saguache, Gunn 82.03 47 ⇑P P 11 45 35.2 +0.7
baz=82,SNR=6.5
529A Stev Forest Ra 82.05 56 ⇑P P 11 45 35.1 +0.7
baz=82
328A Wristen Ranch, 82.07 54 ⇓P P 11 45 35.3 +0.8
baz=82
L19A Farson 82.08 42 ⇑P P 11 45 35.1 +0.6
baz=82
D14A Greenough 82.09 37 ⇑P P 11 45 34.5 +0.1
baz=82
G16A Moss Hill, Enn 82.11 39 ⇑P P 11 45 35.2 +0.7
baz=82
H16A Russell Place, 82.18 39 ⇑P P 11 45 36.3 +1.4
baz=82,SNR=15
N20A Spence Gulch, 82.19 44 ⇑P P 11 45 35.7 +0.6
baz=82
J18A Kendall Valley 82.20 41 ⇓P P 11 45 35.8 +0.7
baz=82,SNR=11
I17A Pilgrim Ck. 82.20 40 ⇑P P 11 45 35.9 +0.8
baz=82
Q22A Crested Butte, 82.21 46 ⇑P P 11 45 36.5 +1.1
baz=82,SNR=6.7
E15A Deer Lodge 82.24 37 ⇓P P 11 45 35.9 +0.7
baz=82
B13A Whitefish 82.26 35 ⇑P P 11 45 35.2 +0.1
baz=82
BW06 Boulder Array 82.27 42 ⇓P P 11 45 35.7 +0.2
baz=83
PDAR Pinedale Array 82.27 42 P P 11 45 35.2 -0.3
PDAR Pinedale Array 82.27 42 P P 11 45 35.2 -0.3
2.3nm,0.9s,baz=220,slow=3.2,SNR=16
W25A X Bar L Ranch, 82.38 50 ⇓P P 11 45 36.6 +0.5
baz=83
BOZ Bozeman (W) 82.43 39 ⇑P P 11 45 36.9 +0.7
baz=83,SNR=5.6
COLA College 82.45 11 eP P 11 45 35.4 -0.2
6.3nm,0.0s
429A Davenport Ranc 82.50 55 ⇓P P 11 45 36.9 +0.2
baz=83,SNR=9.9
F16A Kennard Place, 82.51 38 ⇑P P 11 45 37.2 +0.7
baz=83
V25A Rancho No Teng 82.53 50 ⇓P P 11 45 37.5 +0.5
baz=83,SNR=8.5
Z27A Tatum 82.53 53 ⇓P P 11 45 37.9 +0.9
baz=83
ILAR Eielson Array 82.54 11 P P 11 45 35.8 -0.3
ILAR Eielson Array 82.54 11 P P 11 45 35.8 -0.3
1.1nm,0.6s,baz=227,slow=6.1,SNR=36
M20A Sweetwater, Wa 82.56 43 ⇑P P 11 45 37.6 +0.6
baz=83,SNR=5.1
I18A Diamond G Ranc 82.57 41 ⇑P P 11 45 37.3 +0.3
baz=83
A13A Flathead Natio 82.60 35 ⇑P P 11 45 37.5 +0.6
baz=83
D15A Lincoln 82.64 37 ⇓P P 11 45 37.5 +0.3
baz=83
P22A Eagle 82.64 46 ⇑P P 11 45 38.3 +0.8
baz=83

N21A Black Mountain 82.66 44 ⇓P P 11 45 38.3 +0.7
baz=83
R23A Moffat 82.67 47 ⇓P P 11 45 38.5 +0.7
baz=83,SNR=7.1
L20A Wamsutter 82.70 43 ⇓P P 11 45 38.7 +0.9
baz=83,SNR=12
T24A Torres, Weston 82.74 48 ⇓P P 11 45 39.4 +1.2
baz=83
K19A Absolon Red Bu 82.76 42 ⇓P P 11 45 38.2 +0.2
baz=83
329A Wagon Wheel Ra 82.77 55 ⇑P P 11 45 38.9 +0.7
baz=83
G17A Pierce Place, 82.81 39 ⇑P P 11 45 38.5 +0.4
baz=83
Y27A Causey 82.81 52 ⇑P P 11 45 38.9 +0.5
baz=83
128A Castleberry Fa 82.82 53 ⇓P P 11 45 38.9 +0.4
baz=83
J19A Crowheart 82.84 42 ⇑P P 11 45 38.9 +0.5
baz=83,SNR=5.9
E16A East Helena 82.87 38 ⇑P P 11 45 38.6 +0.2
baz=83
S24A Houchin Ranch, 82.87 48 ⇓P P 11 45 39.5 +0.7
baz=83
U25A Circle Dot Ran 82.92 49 ⇓P P 11 45 39.3 +0.4
baz=83
C15A Salmond Ranch, 82.98 36 ⇓P P 11 45 39.4 +0.4
baz=83
Q23A Hartsel 82.98 47 ⇓P P 11 45 40.2 +0.8
baz=83
O22A Kremmling 83.05 45 ⇑P P 11 45 40.4 +0.7
baz=83,SNR=5.5
430A Baggett Ranch, 83.08 56 ⇑P P 11 45 40.4 +0.6
baz=83
631A Perdido Creek 83.10 57 ⇑P P 11 45 40.4 +0.6
baz=83
V26A Tequesquite Ra 83.12 50 ⇑P P 11 45 40.3 +0.3
baz=83
MSTX Muleshoe 83.14 52 ⇑P P 11 45 40.7 +0.6
baz=83
H18A Shoshone NF, C 83.14 40 ⇑P P 11 45 41.0 +1.0
baz=83
F17A Fitzpatrick Pl 83.15 39 ⇓P P 11 45 40.9 +1.0
baz=83
M21A Separation Pea 83.16 44 ⇓P P 11 45 40.3 +0.1
baz=83,SNR=5.9
Z28A Tucker Farm, M 83.16 53 ⇑P P 11 45 40.8 +0.6
baz=83
X27A F and S Farms, 83.16 51 ⇓P P 11 45 40.9 +0.7
baz=83
A14A Double T Ranch 83.17 35 ⇓P P 11 45 40.3 +0.4
baz=83
R24A Sanders Place, 83.20 47 ⇓P P 11 45 41.2 +0.8
baz=84
D16A Dana Ranch, Ca 83.20 37 ⇑P P 11 45 40.6 +0.5
baz=84
T25A Trinidad 83.23 49 ⇑P P 11 45 41.0 +0.4
baz=84
I19A Meeteetse 83.25 41 ⇑P P 11 45 40.9 +0.4
baz=84
B15A Bradely Ranch, 83.29 36 ⇓P P 11 45 40.2 -0.3
baz=84
E17A Martinsdale 83.31 38 ⇑P P 11 45 41.0 +0.2
baz=84
L21A Rawlins 83.32 43 ⇑P P 11 45 41.1 +0.1
baz=84
W27A Bowe Ranch, En 83.36 51 ⇓P P 11 45 41.1 -0.1
baz=84,SNR=6.4
N22A Wattenberg Ran 83.40 45 ⇓P P 11 45 42.0 +0.6
baz=84,SNR=5.8
531A Rocksprings 83.40 56 ⇓P P 11 45 42.1 +0.6
baz=84
U26A Atchley Ranch, 83.40 50 ⇓P P 11 45 41.2 -0.3
baz=84
S25A Robets Cordova 83.43 48 ⇑P P 11 45 42.2 +0.6
baz=84,SNR=5.7
Q24A Divide 83.48 47 ⇓P P 11 45 42.4 +0.4
baz=84
C16A Fuhringer Ranc 83.49 37 ⇓P P 11 45 41.7 +0.2
baz=84
O23A Lake Granby, G 83.50 45 ⇑P P 11 45 42.8 +0.8
baz=84
G18A Lazy EL Ranch, 83.52 40 ⇑P P 11 45 42.8 +0.9
baz=84,SNR=5.2
ISCO Idaho Springs 83.53 46 ⇓P P 11 45 42.4 +0.3
baz=84
A15A Johnson Ranch, 83.55 35 ⇑P P 11 45 41.9 +0.1
baz=84
H19A Powell 83.56 40 ⇑P P 11 45 43.1 +1.1
baz=84,SNR=6.1
M22A Cedar Creek Ra 83.58 44 ⇑P P 11 45 42.6 +0.3
baz=84
RLMT Red Lodge 83.61 40 ⇑P P 11 45 43.1 +0.7
baz=84
Z29A Hungry Hill Ra 83.67 53 ⇑P P 11 45 43.3 +0.5
baz=84
K21A Alcova 83.70 43 ⇓P P 11 45 43.3 +0.4
baz=84
F18A Big Timber 83.72 39 ⇓P P 11 45 43.5 +0.7
baz=84
I20A Worland 83.76 41 ⇓P P 11 45 43.4 +0.3
baz=84
D17A Six Diamond Ra 83.77 38 ⇑P P 11 45 43.9 +0.8
baz=84
632A Uvalde 83.77 57 ⇑P P 11 45 44.1 +0.8
baz=84
N23A Red Feather La 83.79 45 ⇓P P 11 45 44.2 +0.8
baz=84
X28A Dimmitt 83.79 52 ⇑P P 11 45 44.2 +0.8
baz=84
CMIG Matias Romero 83.81 70 LR LR 12 15 47.9
comp=Z,71nm,19.2s,baz=324,slow=30
B16A M & M Farms, S 83.83 36 ⇓P P 11 45 43.2 -0.1
baz=84
532A Rocksprings 83.90 57 ⇓P P 11 45 44.4 +0.3
baz=84
J21A Lysite 83.91 42 ⇑P P 11 45 44.5 +0.6
baz=84,SNR=9.5
E18A Harlowton 83.93 38 ⇓P P 11 45 44.3 +0.5
baz=84
Y29A Porterfield Fa 83.93 53 ⇑P P 11 45 44.7 +0.6
baz=84
C17A Wharram Farm, 83.97 37 ⇑P P 11 45 44.4 +0.4
baz=84
L22A Ellis Ranch, M 83.97 44 ⇑P P 11 45 44.9 +0.6
baz=84
H20A Greybull 84.09 41 ⇑P P 11 45 45.1 +0.3
baz=84
S26A Kim 84.11 49 ⇑P P 11 45 45.5 +0.4
baz=84
Z30A Sanderson Ranc 84.13 53 ⇓P P 11 45 45.1 0.0
baz=84,SNR=5.5
F19A Roth Farm, Mol 84.16 39 ⇑P P 11 45 45.9 +0.8
baz=84
K22A Casper 84.19 43 ⇓P P 11 45 46.0 +0.6
baz=84
M23A Laramie 84.19 44 ⇓P P 11 45 45.9 +0.4
baz=84
I21A Big Trails, Te 84.23 42 ⇑P P 11 45 46.1 +0.6
baz=84,SNR=5.4
COLD Coldfoot 84.24 9 eP P 11 45 45.9 +1.1
1.6nm,0.9s
231A Bronte 84.25 55 ⇓P P 11 45 45.9 +0.2
baz=84
432A Menard 84.27 56 ⇑P P 11 45 46.3 +0.4
baz=84
B17A L&G Farms, Che 84.28 37 ⇓P P 11 45 46.1 +0.5
baz=85
G20A Bridger 84.31 40 ⇑P P 11 45 46.2 +0.4
baz=85
AMTX Amarillo 84.33 52 eP P 11 45 43.4 -2.7
8.5nm,0.9s
AMTX Amarillo 84.33 52 ⇑P P 11 45 46.3 +0.2
baz=85
R26A Arlington 84.41 48 ⇓P P 11 45 46.9 +0.4
baz=85
T27A Campo 84.42 49 ⇑P P 11 45 46.9 +0.3
baz=85
W29A Amraillo 84.45 51 ⇑P P 11 45 47.4 +0.6
baz=85
131A Roby 84.47 54 ⇓P P 11 45 47.3 +0.5
baz=85
N24A Carr 84.48 45 ⇑P P 11 45 47.6 +0.7
baz=85
L23A Garrett 84.49 44 ⇑P P 11 45 47.0 0.0
baz=85,SNR=6.5
332A Millersview 84.50 55 ⇓P P 11 45 47.5 +0.5
baz=85

Y30A	Stafford Cattl	84.53	53	⇓P	P	11 45 47.7	+0.6
	baz=85						
E19A	Rath Farm, Rou	84.56	39	⇓P	P	11 45 47.7	+0.7
	baz=85						
A17A	Triple J Farms	84.67	36	⇓P	P	11 45 47.8	+0.3
	baz=85						
EGMT	Eagleton	84.75	37	⇑P	P	11 45 48.5	+0.6
	baz=85						
232A	Coleman	84.76	55	⇑P	P	11 45 48.4	+0.1
	baz=85						
H21A	Big Horn, Sher	84.76	41	⇓P	P	11 45 48.6	+0.5
	baz=85						
X30A	Coker Ranch, T	84.77	52	⇑P	P	11 45 48.6	+0.3
	baz=85						
I22A	9 Mile Ranch,	84.78	42	⇑P	P	11 45 48.4	+0.1
	baz=85						
K23A	Bowen Ranch, D	84.83	43	⇓P	P	11 45 48.8	+0.2
	baz=85						
D19A	Cripps Ranch,	84.84	38	⇓P	P	11 45 49.4	+1.0
	baz=85						
Z31A	Sharp Cattle R	84.90	54	⇓P	P	11 45 49.0	0.0
	baz=85						
B18A	Beardsley Farm	84.92	37	⇓P	P	11 45 49.0	+0.2
	baz=85						
E20A	Meyer Farm, Mu	84.97	39	⇑P	P	11 45 49.5	+0.5
	baz=85						
C19A	Slack Wire Ran	85.02	38	⇓P	P	11 45 50.0	+0.7
	baz=85						
ABTX	Abilene, Hawle	85.03	54	⇑P	P	11 45 50.1	+0.5
	baz=85						
Y31A	Rekieta Farm,	85.05	53	⇑P	P	11 45 50.3	+0.6
	baz=85						
A18A	Metzger Ranch,	85.15	36	⇑P	P	11 45 50.4	+0.5
	baz=85						
D20A	Manuel Ranch,	85.25	38	⇓P	P	11 45 51.0	+0.6
	baz=86						
Z32A	Haskell	85.42	54	⇑P	P	11 45 51.9	+0.3
	baz=86						
C20A	Veseth Ranch,	85.63	38	⇓P	P	11 45 53.4	+1.1
	baz=86						
Y32A	R-V Farms, Ver	85.70	53	⇑P	P	11 45 53.7	+0.8
	baz=86						
W31A	Holland Ranch,	85.76	52	⇓P	P	11 45 53.6	+0.4
	baz=86						
A19A	Klindworth Far	85.78	37	⇓P	P	11 45 53.4	+0.3
	baz=86						
C21A	Desert Coulee	86.22	38	⇓P	P	11 45 55.9	+0.6
	baz=86						
A20A	Cobblestone Ra	86.23	37	⇓P	P	11 45 56.0	+0.8
	baz=86						
GSI	Gunungsitoli	89.52	271	P	P	11 46 06.8	-4.9
	baz=90,SNR=3.7						
YKA	Yellowknife Ar	90.16	23	P	P	11 46 13.5	0.0
YKA	Yellowknife Ar	90.16	23	P	P	11 46 13.5	0.0
	0.9nm,0.9s,baz=239,slow=4.2,SNR=13						
VNA3	Neumayer Olymp	92.73	175	*e*P	P	11 46 26.8	+1.2
SNAA	Sanae	92.78	177	*e*P	P	11 46 26.5	+0.6
SNAA	Sanae	92.78	177	P	P	11 46 26.9	+1.1
SNAA	Sanae	92.78	177	P	P	11 46 26.9	+1.1
	0.9nm,1.0s,baz=256,slow=4.2,SNR=3.9						
ATAH	Atahualpa	92.79	98	LR	LR	12 17 08.7	
	comp=Z,103nm,20.8s,baz=42,slow=28						
VNA2	Neumayer--Watz	93.23	175	*e*P	P	11 46 29.5	+1.7
	baz=165,slow=2.4						
CFAA	Coronel Fontan	94.29	124	P	P	11 46 34.6	+1.0
CFAA	Coronel Fontan	94.29	124	P	P	11 46 34.6	+1.0
	0.4nm,0.8s,baz=249,slow=8.4,SNR=4.4						
MKAR	Makanchi Array	110.99	315	PKiKP	PKiKP	11 51 44.9	-2.1
MKAR	Makanchi Array	110.99	315	PKiKP	PKiKP	11 51 44.9	-2.1
	0.1nm,0.4s,baz=99,slow=3.1,SNR=2.5						
TIRR	Tirgusor	145.79	332	*e*PKPbc	PKPab	11 52 53.5	+0.3
KHC	Kasperske Hory	146.01	352	*e*PKPbc	PKPab	11 52 54.5	+0.5
GERES	GERESS Array B	146.27	352	PKPbc	PKPbc	11 52 54.6	+0.3
GERES	GERESS Array B	146.27	352	PKPbc	PKPbc	11 52 54.6	+0.3
	0.8nm,0.7s,baz=46,slow=2.8,SNR=8.7						
BR131	Keskin Array S	146.32	321	*e*PKPbc	PKPbc	11 52 55.2	+0.4
BRTR	Keskin Array B	146.32	321	PKPbc	PKPdf	11 52 53.4	-0.2
BRTR	Keskin Array B	146.32	321	PKPbc	PKPdf	11 52 53.4	-0.2
	2.3nm,0.8s,baz=87,slow=1.4,SNR=8.7						
TORD	Torodi Ar. Bea	174.59	115	PKPab	PKPab	11 54 56.8	-1.0
TORD	Torodi Ar. Bea	174.59	115	PKPab	PKPab	11 54 56.8	-1.0
	1.0nm,0.7s,baz=257,slow=4.3,SNR=5.3						

*ISCJB **08** 11:35:57.6±0.2, 42°.35N±0°.02×13°.32E±0°.02, h12km±2km, Error ellipse: s-maj=3.1km s-min=2.7km az=147.6*
*ROM **08** 11:35:57.4±0.1, 42°.35N×13°.32E, h10km, Ml3.5/12, Error ellipse: s-maj=1.0km s-min=0.8km az=83.0*
*CSEM **08** 11:35:58.0±0.1, 42°.34N×13°.31E, h2km, ML3.9/11, Error ellipse: s-maj=2.7km s-min=2.2km az=72.0*
*IDC **08** 11:36:00.6±2.5, 42°.63N×13°.23E, h0km, mb3.4/1, mb1 3.5/4, mb1mx3.2/29, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=61.4km s-min=20.7km az=101.0*
ISC 08 11:35:57.9±0.8**, 42°.35N**±0°.02×**13°.30E**±0°.02**, h12**km±4km**, n87, σ1s.60**/131**, 5C-1D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.08	89	Pg	Pg	11 36 00.1	-0.4
AQU				Sg	Sg	11 36 01.6	-0.8
	64µm,0.4s						
AQU	L'Aquila	0.08	89	Pg	Pg	11 36 00.1	-0.4
AQU				Sg	Sg	11 36 01.6	-0.8
	64µm,0.4s						
FIAM	Fiamignano	0.16	238	⇑*i*Pg	Pg	11 36 02.1	+0.5
FIAM				Sg	Sg	11 36 05.2	+1.0
	10µm,0.7s						
FIAM	Fiamignano	0.16	238	⇑*i*Pg	Pg	11 36 02.1	+0.5
FIAM				Sg	Sg	11 36 05.2	+1.0
	10µm,0.7s						
CAMP	Campotosto	0.20	24	⇑*i*Pg	Pg	11 36 02.3	0.0
CAMP				Sg	Sg	11 36 05.6	+0.2
	12µm,0.4s						
CAMP	Campotosto	0.20	24	⇑*i*Pg	Pg	11 36 02.3	0.0
CAMP				Sg	Sg	11 36 05.6	+0.2
	12µm,0.4s						
FAGN	Fagnano	0.23	112	Pg	Pg	11 36 02.7	0.0
FAGN				Sg	Sg	11 36 06.5	+0.5
FAGN	Fagnano	0.23	112	Pg	Pg	11 36 02.7	0.0
FAGN				Sg	Sg	11 36 06.5	+0.5
LNSS	Leonessa	0.32	323	Pg	Pg	11 36 04.5	+0.2
LNSS				Sg	Sg	11 36 09.7	+1.1
	7µm,0.5s						
LNSS	Leonessa	0.32	323	Pg	Pg	11 36 04.5	+0.2
LNSS				Sg	Sg	11 36 09.7	+1.1
	7µm,0.5s						
PTQR	Pietraquaria	0.34	167	Pg	Pg	11 36 04.7	0.0
PTQR				Sg	Sg	11 36 09.9	+0.6
PTQR	Pietraquaria	0.34	167	Pg	Pg	11 36 04.7	0.0
PTQR				Sg	Sg	11 36 09.9	+0.6
TERO	Teramo	0.35	40	Pg	Pg	11 36 04.5	-0.5
TERO				Sg	Sg	11 36 09.4	-0.3
	5µm,0.5s						
TERO	Teramo	0.35	40	Pg	Pg	11 36 04.5	-0.5
TERO				Sg	Sg	11 36 09.4	-0.3
	5µm,0.5s						
VCEL	Villa Celiera	0.40	84	Pg	Pg	11 36 05.5	-0.4
VCEL				Sg	Sg	11 36 11.9	+0.6
	5µm,0.5s						
VCEL	Villa Celiera	0.40	84	Pg	Pg	11 36 05.5	-0.4
VCEL				Sg	Sg	11 36 11.9	+0.6
	5µm,0.5s						
GAVE	Gavelli	0.45	319	Pg	Pg	11 36 07.2	+0.4
GAVE	Gavelli	0.45	319	Pg	Pg	11 36 07.2	+0.4
MNS	Montasola	0.46	274	Pg	Pg	11 36 06.9	0.0
MNS	Montasola	0.46	274	Pg	Pg	11 36 06.9	0.0
CERT	Cerreto	0.47	210	Pg	Pg	11 36 07.0	0.0
CERT				Sg	Sb	11 36 14.4	-0.5
	4µm,0.3s						
CERT	Cerreto	0.47	210	Pg	Pg	11 36 07.0	0.0
CERT				Sg	Sb	11 36 14.4	-0.5
	4µm,0.3s						
NRCA	Norcia	0.50	344	Pg	Pg	11 36 07.4	-0.3
NRCA				Sg	Sb	11 36 15.5	-0.5
	6µm,0.1s						
NRCA	Norcia	0.50	344	Pg	Pg	11 36 07.4	-0.3
NRCA				Sg	Sb	11 36 15.5	-0.5
	6µm,0.1s						
MTCE	Montecelio	0.53	232	Pg	Pg	11 36 08.1	-0.1
	594nm,0.4s						
MTCE	Montecelio	0.53	232	Pg	Pg	11 36 08.1	-0.1
	594nm,0.4s						
VVLD	Villa Vallelon	0.54	153	Pg	Pg	11 36 07.9	-0.5
VVLD				Sg	Sg	11 36 15.7	+0.2
VVLD	Villa Vallelon	0.54	153	Pg	Pg	11 36 07.9	-0.5
VVLD				Sg	Sg	11 36 15.7	+0.2
GUAR	Guarcino	0.56	179	Pg	Pg	11 36 08.5	-0.2
	1µm,0.7s						
GUAR	Guarcino	0.56	179	Pg	Pg	11 36 08.5	-0.2
	1µm,0.7s						
INTR	Introdacqua	0.56	127	Pg	Pg	11 36 08.3	-0.6
INTR				Sg	Sg	11 36 17.1	+0.7
	3µm,0.9s						
INTR	Introdacqua	0.56	127	Pg	Pg	11 36 08.3	-0.6
INTR				Sg	Sg	11 36 17.1	+0.7
	3µm,0.9s						
OFFI	Offida	0.65	26	Pg	Pg	11 36 10.8	+0.3
	6µm,0.5s						
OFFI	Offida	0.65	26	Pg	Pg	11 36 10.8	+0.3
	6µm,0.5s						
FDMO	Fiordimonte	0.70	347	Pg	Pg	11 36 10.9	-0.6
	859nm,0.2s						
FDMO	Fiordimonte	0.70	347	Pg	Pg	11 36 10.9	-0.6
	859nm,0.2s						
CESI	CESI - Serrava	0.71	336	Pg	Pg	11 36 11.3	-0.4
CESI				Sg	Sb	11 36 22.6	+0.5
CESI	CESI - Serrava	0.71	336	Pg	Pg	11 36 11.3	-0.4
CESI				Sg	Sb	11 36 22.6	+0.5
GIUL	Giuliano Di Ro	0.79	182	Pg	Pg	11 36 12.3	-0.9
GIUL	Giuliano Di Ro	0.79	182	Pg	Pg	11 36 12.3	-0.9
ASSB	Assisi San Ben	0.84	326	Pg	Pg	11 36 13.2	-0.8
ASSB	Assisi San Ben	0.84	326	Pg	Pg	11 36 13.2	-0.8
RNI2	Rionero Sannit	0.91	135	Pg	Pg	11 36 15.6	+0.2
RNI2	Rionero Sannit	0.91	135	Pg	Pg	11 36 15.6	+0.2
MIDA	Miranda	1.01	135	Pg	Pb	11 36 15.4	-1.9
MIDA	Miranda	1.01	135	Pg	Pb	11 36 15.4	-1.9
ARVD	Arcevia	1.18	347	Pg	Pb	11 36 19.3	-0.8
ARVD	Arcevia	1.18	347	Pg	Pb	11 36 19.3	-0.8
NVLJ	Novalja	2.49	27	⇑*i*Pn	Pn	11 36 38.2	0.0
NVLJ				Sn	Sn	11 37 10.0	+1.5
CDT	Castel del Mon	2.56	119	*e*Pn	Pb	11 36 43.5	-0.3
MAIM	Mastiano	2.58	308	P	Pb	11 36 42.0	-2.1
PGF	Pioggiola	3.19	275	*e*Pn	Pn	11 36 49.0	+1.1
PGF				*e*Sn	Sn	11 37 29.2	+3.3
	3.5nm,0.3s						
SKDS	Skadanscina	3.23	9	*i* Pn	Pn	11 36 50.4	+1.9
SKDS				*i* Sn	Sn	11 37 29.7	+2.7
SKDS							
	comp=Z,22nm,0.2s						
SKDS	Skadanscina	3.23	9	*i* Pn	Pn	11 36 50.4	+1.9
SKDS				*i* Sn	Sn	11 37 29.7	+2.7
	comp=Z,22nm,0.2s						
STON	Ston	3.29	79	*e*Pn	Pb	11 36 52.8	-3.3
STON				Sn	Sn	11 37 28.7	+0.5
BOJS	Bojanci	3.45	23	*i* Pn	Pn	11 36 53.6	+2.2
BOJS				*i* Sn	Sn	11 37 34.9	+2.7
BOJS							
	comp=Z,17nm,0.5s						
BOJS	Bojanci	3.45	23	*i* Pn	Pn	11 36 53.6	+2.2
BOJS				*i* Sn	Sn	11 37 34.9	+2.7
	comp=Z,17nm,0.5s						
VOY	Vojsko	3.70	6	*e*Pn	Pn	11 36 56.7	+1.7
VOY				*e*		11 36 59.3	
VOY				*e*Sn	Sn	11 37 39.8	+1.2
VOY	Vojsko	3.70	6	*e*Pn	Pn	11 36 56.7	+1.7
VOY				*e*Sn	Sn	11 37 39.8	+1.2
ABTA	Abfaltersbach	4.43	353	⇓*i*Pn	Pn	11 37 07.4	+2.4
ABTA	Abfaltersbach	4.43	353	Pn	Pn	11 37 07.4	+2.4
SBF	Sospel	4.55	291	*e*Pn	Pn	11 37 07.4	+0.8
SBF				*e*Sn	Sn	11 37 57.4	-2.0
	comp=Z,9.1nm,0.5s						
PUK	Puka	4.91	91	*e*PG	Pn	11 37 14.4	+2.9
PUK				*e*SG	Pb	11 37 20.8	-3.0
FRF	La Foret Royal	5.03	286	*e*Pn	Pn	11 37 13.6	+0.5
FRF				*e*Sn	Sn	11 38 08.5	-2.6
	comp=Z,2.2nm,0.3s						
DAVOX	Davos/Dischmat	5.06	332	Pn	Pn	11 37 15.7	+2.0
	comp=Z,1.4nm,0.3s,baz=150,slow=16,SNR=6.6						
DAVOX				Sn	Sn	11 38 15.9	+3.8
	comp=Z,1.2nm,0.3s,baz=139,slow=19,SNR=3.6						
LMR	La Mourre	5.09	283	*e*Pn	Pn	11 37 14.2	+0.3
LMR				*e*Sn	Sn	11 38 10.0	-2.6
	comp=Z,1.0nm,0.3s						
IVAS	Ivanjica	5.18	74	*e*Pn	Pn	11 37 17.1	+1.9
DIVS	Divibare	5.19	68	*e*Pn	Pn	11 37 16.7	+1.3
MBDF	Montbardon	5.30	299	*e*P	Pn	11 37 19.5	+2.5
PHP	Peshkopia	5.36	95	*e*PG	Pn	11 37 19.8	+2.1
TRUS	Trudelj	5.51	68	*e*Pn	Pn	11 37 19.6	-0.2
GRUS	Gruza	5.64	72	*e*Pn	Pn	11 37 21.9	+0.4
LPG	La Plagne	5.68	306	*e*P	Pn	11 37 25.3	+3.0
LPG				*e*Sn	Sn	11 38 24.5	-3.0
	comp=Z,2.3nm,0.4s						
LPL	La Plagne	5.70	306	*e*P	Pn	11 37 25.5	+3.0
LPL				*e*Sn	Sn	11 38 23.6	-4.4
	comp=Z,2.0nm,0.2s						
SELS	Selova	5.82	79	*e*Pn	Pn	11 37 26.2	+2.2
BARS	Barje	6.30	83	*e*Pn	Pn	11 37 32.2	+1.6
GERES	GERESS Array B	6.50	2	Pn	Pn	11 37 34.2	+0.8
	comp=Z,0.5nm,0.3s,baz=174,slow=13,SNR=5.6						
GERES				Sn	Sn	11 38 44.5	-3.0
	comp=Z,1.4nm,0.3s,baz=182,slow=28,SNR=12						
KHC	Kasperske Hory	6.78	2	*e*PN	Pn	11 37 39.3	+2.1
KHC				*e*SN	Sn	11 38 52.7	-1.7
KHC	Kasperske Hory	6.78	2	Pn	Pn	11 37 39.3	+2.1
HINF	Hinteralfeld	7.12	322	*e*Pn	Pn	11 37 41.5	-0.3
HINF				*e*Sn	Sn	11 38 57.9	-4.7
	comp=Z,4.5nm,0.4s						
VYHS	Vyhne	7.27	30	*e*PN	Pn	11 37 46.7	+2.8
VYHS				*e*SN	Sn	11 39 03.6	-2.8
VYHS	Vyhne	7.27	30	*e*Pn	Pn	11 37 46.7	+2.8
KEST	Kesra	7.29	206	Pn	Pn	11 37 50.4	+6.1
	comp=Z,0.3nm,0.3s,baz=20,slow=15,SNR=7.0						
CDF	Champ du Feu	7.39	327	*e*Pn	Pn	11 37 45.0	-0.6
CDF				*e*Sn	Sn	11 39 04.8	-4.7
	comp=Z,2.5nm,0.3s						
HAU	Haudompre	7.49	321	*e*Pn	Pn	11 37 46.8	0.0
HAU				*e*Sn	Sn	11 39 05.5	-6.1
	comp=Z,9.0nm,0.5s						
CRVS	Cervenica-Dubn	8.69	38	*e*PN	Pn	11 38 05.0	+1.6
FINES	FINESS Array B	20.61	18	P	Pn	11 40 39.6	+0.7
	comp=Z,1.2nm,0.6s,baz=194,slow=11,SNR=4.0						

*IDC **08** 11:36:30.1±4.2, 10°.70N×126°.40E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.7/25, mbtmp3.9/8, Error ellipse: s-maj=115.3km s-min=35.9km az=179.0*
*ISCJB **08** 11:36:31.9±0.8, 10°.07N±0°.05×126°.53E±0°.06, h44km, mb3.9/8, Error ellipse: s-maj=8.6km s-min=7.2km az=26.6*
*MAN **08** 11:36:33, 10°.04N×126°.45E, h37km, mb4.7, ML3.5, MS3.5*
ISC 08 11:36:33.6±1.0**, 10°.05N**±0°.05×**126°.46E**±0°.09**, h44**km**, n21, σ1s.06**/25**, mb4.0**/8**, 1C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	Butuan	1.36	218	*e*P	Pn	11 36 55.9	-0.3
MSLP	Maasin	1.58	273	*e*P	Pn	11 36 58.3	-0.9
MSLP				*e*S	Sn	11 37 18.3	-0.1
PLP	Palo	1.83	307	⇓*e*P	Pn	11 37 02.3	-0.3
PLP				*e*S	Sn	11 37 24.4	-0.2
BESP	Borongan	1.84	327	*e*P	Pn	11 37 04.0	+1.2
OCLP	Ormoc	2.08	299	*e*P	Pn	11 37 06.3	+0.3
CGP	Cagayan de Oro	2.36	228	⇓*e*P	Pn	11 37 09.7	-0.2
CGP				*e*S	Sn	11 37 37.8	+0.1
LLP	Lapu-Lapu	2.47	276	⇓*e*P	Pn	11 37 11.8	+0.4
LLP				*e*S	Sn	11 37 42.5	+2.1
BUKP	Musuan	2.57	213	*e*P	Pn	11 37 14.2	+1.4
TBP	Tagbilaran	2.59	262	*e*P	Pn	11 37 13.1	0.0
CNP	Catarman	3.01	324	*e*P	Pn	11 37 19.1	+0.2
PAGZ	Pagadian	3.75	234	*e*P	Pn	11 37 29.8	+0.8
GUIM	Jordan	3.85	279	*e*P	Pn	11 37 31.3	+0.9
RCP	Roxas	3.95	293	⇑*e*P	Pn	11 37 33.0	+1.2
CMAR	Chiang Mai Arr	27.92	290	P	P	11 42 19.6	-0.3
	0.4nm,0.3s,baz=110,slow=7.8,SNR=3.8						
MKAR	Makanchi Array	52.31	323	P	P	11 45 40.5	-0.5
	1.3nm,0.7s,baz=115,slow=8.0,SNR=9.1						
ZALV	Zalesovo Beam	54.91	331	P	P	11 45 57.3	-2.4
	0.5nm,0.4s,baz=109,slow=6.6,SNR=3.6						
KURBB	Kurchatov Arra	56.36	325	P	P	11 46 09.4	-0.8
	0.9nm,0.5s,baz=126,slow=6.8,SNR=12						
ILAR	Eielson Array	79.55	26	P	P	11 48 35.1	-0.6
	0.2nm,0.6s,baz=280,slow=5.4,SNR=3.5						
ARCES	ARCESS Array B	84.46	340	P	P	11 49 00.7	-0.7
	1.4nm,0.8s,baz=82,slow=6.5,SNR=4.4						
FINES	FINESS Array B	86.17	332	P	P	11 49 09.6	-0.4
	1.8nm,0.8s,baz=63,slow=6.4,SNR=6.8						
YKA	Yellowknife Ar	93.88	24	P	P	11 49 48.4	+2.2
	0.3nm,0.6s,baz=299,slow=4.4,SNR=6.6						

WEL 08 11:38:46.9±0.5**, 38°.72S**×**178°.54E, h24**km±2km**, ML3.5**/5**, Error ellipse: s-maj=4.5km s-min=1.9km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.35	312	P*	Pb	11 38 54.1	-0.4
PUZ	Puketiti	0.68	341	P*	Pb	11 38 59.4	-0.7
PUZ				S*	Sb	11 39 09.4	+0.2
KNZ	Kokohu	0.74	246	P*	Pb	11 39 00.7	-0.4
KNZ				S*	Sn	11 39 11.8	-0.5
MXZ	Matakaoa Point	1.17	351	PN	Pn	11 39 07.9	+0.2
MXZ				SN	Sn	11 39 22.9	0.0
URZ	Urewera	1.21	292	PN	Pn	11 39 07.6	-0.7
URZ				SN	Sn	11 39 23.2	-0.8
BKZ	Black Stump Fm	1.66	254	PN	Pn	11 39 13.9	-0.7
BHHZ	Black Hill Sta	2.07	247	PN	Pn	11 39 19.4	-0.9
WPVZ	Whakapapa	2.38	257	PN	Pn	11 39 23.9	-0.7
TSZ	Takapari Road	2.40	235	PN	Pn	11 39 23.2	-1.6

IDC 08 11:58:29.6±3.0**, 5°.61S**×**133°.57E, h0**km**, mb3.1**/1**, mb1 3.4**/4**, mb1mx3.3**/18**, mbtmp3.2**/4**, ML3.2**/3**, Error ellipse: s-maj=123.6km s-min=29.4km az=83.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.26	177	Pn	Pn	12 01 53.3	+0.3
	0.1nm,0.3s,baz=353,slow=13,SNR=7.1						
WRA				Sn	Sn	12 04 26.6	-5.6
	0.1nm,0.3s,baz=358,slow=24,SNR=4.1						
FITZ	Fitzroy Crossi	14.63	211	Pn	Pn	12 01 58.2	+0.1
	0.1nm,0.3s,baz=38,slow=11,SNR=9.2						
FITZ				Sn	Sn	12 04 35.8	-5.3
	0.3nm,0.3s,baz=40,slow=11,SNR=6.8						
ASAR	Alice Springs	17.95	179	P	Pn	12 02 40.4	-0.5
	0.1nm,0.3s,baz=5.4,slow=10,SNR=4.0						
MKAR	Makanchi Array	69.08	325	P	P	12 09 37.5	+0.1
	0.2nm,0.7s,baz=132,slow=8.0,SNR=2.9						

*ISK **08** 12:42:50.3, 38°.83N×25°.82E, h5km, MD3.1*
*ATH **08** 12:42:50.8, 38°.82N×26°.16E, h60km±7km*
*DDA **08** 12:42:52.0, 38°.84N×25°.87E, h28km, MD2.8*
*CSEM **08** 12:42:51.9±0.1, 38°.82N×25°.80E, h8km, ML2.7/5, Error ellipse: s-maj=2.8km s-min=2.5km az=65.0*
*ISCJB **08** 12:42:51.5±0.6, 38°.82N±0°.02×25°.81E±0°.03, h5km±4km, Error ellipse: s-maj=4.3km s-min=3.4km az=158.8*
*THE **08** 12:42:52.3, 38°.83N×25°.89E, h12km±1km, ML2.7/5, Error ellipse: s-maj=2.0km s-min=0.5km az=89.0*
ISC 08 12:42:52.1±0.9**, 38°.82N**±0°.02×**25°.84E**±0°.02**, h14**km±8km**, n63, σ0s.70**/92**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	SIGRI	0.39	2	P	Pg	12 42 59.7	-0.3
SIGR				S	Sg	12 43 05.7	+0.3
SIGR	SIGRI	0.39	2	P	Pg	12 42 59.7	-0.3
SIGR				S	Sg	12 43 05.7	+0.3
CHOS	Chios island	0.46	158	P	Pg	12 43 01.6	+0.3
CHOS				S	Sg	12 43 08.2	+0.6
CHOS	Chios island	0.46	158	P	Pg	12 43 01.6	+0.3
CHOS				S	Sg	12 43 08.2	+0.6
PRK	Paraskevi	0.55	38	P	Pg	12 43 02.5	-0.3
PRK				S	Sg	12 43 09.4	-0.7
PRK	Paraskevi	0.55	38	*e*P	Pg	12 43 02.6	-0.3
PRK	Paraskevi	0.55	38	*e*P	Pg	12 43 02.6	-0.3
PRK				S	Sg	12 43 09.4	-0.7
URLA	Izmir	0.75	127	*i* P	Pg	12 43 06.6	-0.1
URLA				*i* S	Sn	12 43 18.4	-1.0
URLA	Izmir	0.75	127	*i* P	Pg	12 43 06.6	-0.1
URLA				*i* S	Sn	12 43 18.4	-1.0
AYVA	Ayvalik	0.83	53	*i* P	Pg	12 43 07.7	-0.4
AYVA				*i* S	Sb	12 43 19.2	0.0
AYVA	Ayvalik	0.83	53	*i* P	Pg	12 43 07.7	-0.4
AYVA				*i* S	Sb	12 43 19.2	0.0
BOZC	Bozcaada	1.04	9	*i* P	Pb	12 43 11.1	-0.7
BOZC				*i* S	Sn	12 43 26.2	-0.2
BLCB	Balcova	1.04	114	*e*PG	Pb	12 43 11.5	-0.3
BLCB				*e*SG	Sn	12 43 26.9	+0.4
BLCB	Balcova	1.04	114	*e*Pg	Pb	12 43 11.5	-0.3
BLCB				*e*Sg	Sn	12 43 26.9	+0.4
EZN	Ezine	1.08	21	*e*PG	Pb	12 43 11.8	-0.7
EZN				*e*SG	Sn	12 43 27.4	0.0
EZN	Ezine	1.08	21	*e*Pg	Pb	12 43 11.8	-0.7
EZN				*e*Sg	Sn	12 43 27.4	0.0
LIA	Limnos Island	1.19	335	P	Pn	12 43 14.0	-0.3
LIA				S	Sg	12 43 30.8	+0.2
LIA	Limnos Island	1.19	335	*e*P	Pn	12 43 14.2	-0.1
LIA				*e*S	Sg	12 43 31.0	+0.4
LIA	Limnos Island	1.19	335	*e*P	Pn	12 43 14.2	-0.1
LIA				S	Sg	12 43 30.8	+0.2
IZM	Izmir	1.19	110	*e*PN	Pn	12 43 14.3	0.0
IZM	Izmir	1.19	110	*e*Pn	Pn	12 43 14.4	0.0
AKS	Akhisar	1.54	87	*e*PN	Pb	12 43 19.9	-0.6
AKS	Akhisar	1.54	87	*e*Pn	Pb	12 43 19.9	-0.6
AKHS	Akhisar	1.55	87	*i* P	Pb	12 43 20.0	-0.4
AKHS				*i* S	Sb	12 43 40.2	+0.3
AKHS	Akhisar	1.55	87	*i* P	Pb	12 43 20.0	-0.4
AKHS				*i* S	Sb	12 43 40.2	+0.3
AOS	Alonnisos	1.56	284	P	Pn	12 43 19.5	+0.1
AOS				S	Sb	12 43 40.9	+0.5
AOS	Alonnisos	1.56	284	*e*P	Pb	12 43 20.7	-0.1
AOS				*e*S	Sg	12 43 43.4	+0.9
AOS	Alonnisos	1.56	284	P	Pn	12 43 19.5	+0.1
AOS				S	Sb	12 43 40.9	+0.5
GCAM	G?zelcaml?	1.57	135	*i* P	Pg	12 43 21.9	-0.2
GCAM				*i* S	Sg	12 43 42.6	+0.1
GCAM	G?zelcaml?	1.57	135	*i* P	Pg	12 43 22.0	-0.2
GCAM				*i* S	Sg	12 43 42.6	+0.1
GELI	Tayfur-Gelibol	1.65	17	*e*PN	Pn	12 43 21.2	+0.6
GELI	Tayfur-Gelibol	1.65	17	*e*Pn	Pn	12 43 21.2	+0.6
BALY	Balya	1.66	56	*i* P	Pn	12 43 21.5	+0.7
BALY				*i* S	Sb	12 43 44.3	+1.0
BALY	Balya	1.66	56	*i* P	Pn	12 43 21.5	+0.7
BALY				*i* S	Sb	12 43 44.3	+1.0
MRKA	Markates	1.76	267	P	Pn	12 43 22.1	0.0
MRKA	Markates	1.76	267	P	Pn	12 43 22.1	0.0
APE	Apeiranthos	1.76	188	P	Pn	12 43 21.6	-0.6
APE	Apeiranthos	1.76	188	*e*P	Pn	12 43 21.2	-1.0
APE	Apeiranthos	1.76	188	P	Pn	12 43 21.6	-0.6
BALB	Balikesir	1.79	62	*e*PN	Pb	12 43 23.5	-1.1
BALB	Balikesir	1.79	62	*e*Pn	Pb	12 43 23.5	-1.1
SKIA	Skiathos	1.88	281	P	Pn	12 43 23.9	+0.2
SKIA	Skiathos	1.88	281	P	Pn	12 43 23.9	+0.2
GONE	Gonen-Balikesi	1.89	49	*e*PN	Pn	12 43 24.9	+1.1
GONE	Gonen-Balikesi	1.89	49	*e*Pn	Pn	12 43 24.9	+1.1
ENEZ	Enez	1.93	7	*e*PN	Pn	12 43 24.9	+0.5
ENEZ	Enez	1.93	7	*e*Pn	Pn	12 43 24.9	+0.5
KRBG	Karabiga-Canak	1.94	35	*e*PN	Pn	12 43 24.7	+0.2
KRBG	Karabiga-Canak	1.94	35	*e*Pn	Pn	12 43 24.7	+0.2
EDC	Edincik	2.19	45	*e*PN	Pn	12 43 29.1	+1.1
EDC	Edincik	2.19	45	*e*Pn	Pn	12 43 29.1	+1.1
DURS	Dursunbey	2.19	68	*i* P	Pn	12 43 28.9	+0.7
DURS				*i* S	Sb	12 43 57.4	-1.2
DURS	Dursunbey	2.19	68	*i* P	Pn	12 43 28.9	+0.7
DURS				*i* S	Sb	12 43 57.4	-1.2
KULA	Kula-Manisa	2.23	97	*e*PN	Pn	12 43 30.1	+1.4
KULA	Kula-Manisa	2.23	97	*e*Pn	Pn	12 43 30.1	+1.4
DST	Dursunbey	2.30	69	*e*PN	Pn	12 43 30.9	+1.3
DST	Dursunbey	2.30	69	*e*Pn	Pn	12 43 30.9	+1.3
EDRB	Edirne	3.10	13	*e*PN	Pn	12 43 42.0	+1.4
EDRB	Edirne	3.10	13	*e*Pn	Pn	12 43 42.0	+1.4
VLI	Veliai	3.11	229	P	Pn	12 43 40.7	+0.1
VLI	Veliai	3.11	229	P	Pn	12 43 40.7	+0.1
CTYL	Yal??k??y-??at	3.25	35	*e*PN	Pn	12 43 44.2	+1.6
CTYL	Yal??k??y-??at	3.25	35	*e*Pn	Pn	12 43 44.2	+1.6

*ISCJB **08** 12:54:49.7±1.2, 2°.16N±0°.10×127°.34E±0°.07, h112km, mb3.6/4, Error ellipse: s-maj=14.6km s-min=8.9km az=18.1*
*IDC **08** 12:54:53.7±4.0, 1°.73N×127°.05E, h125km±34km, mb3.3/4, mb1 3.4/5, mb1mx3.2/22, mbtmp3.2/5, Error ellipse: s-maj=87.7km s-min=18.3km az=70.0*
*DJA **08** 12:54:54.4±1.7, 2°N±11°×12°7E±°, h136km±11km, M3.7/3, MLv3.7/3*

ISC 08 12:54:52.0±1.2**, 2°.0N**±0°.1×**127°.26E**±0°.08**, h112**km**, n10, σ1s.80**/15**, mb3.6**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.20**	**175**	P	**Pn**	**12 55 17.3**	**+1.8**
TNTI				S	**Sn**	**12 55 36.8**	**+3.5**
MNI	**Manado**	**2.48**	**258**	P	**Pn**	**12 55 33.0**	**+1.8**
MNI				S	**Sn**	**12 56 02.8**	**+1.5**
LBMI	**Labuha**	**2.61**	**175**	P	**Pn**	**12 55 34.3**	**+1.4**
KMSI	**Cibinong**	**3.56**	**247**	P	Pn	12 56 05.4	+20
KMSI				S	**Sn**	**12 56 27.2**	**+0.2**
LUWI	**Luwuk**	**5.40**	**236**	P	Pn	12 56 25.0	+15
LUWI				S	**Sn**	**12 57 09.6**	**-1.6**
FITZ	**Fitzroy Crossi**	**20.02**	**185**	P	**P**	**12 59 14.9**	**-1.1**
	0.2nm,0.3s,baz=6.3,slow=11,SNR=5.9						
WRA	**Warramunga Arr**	**22.86**	**163**	P	**P**	**12 59 44.6**	**-1.4**
	2.0nm,0.5s,baz=340,slow=11,SNR=43						
WRA				PcP	**PcP**	**13 03 33.1**	**-0.3**
	0.6nm,1.1s,baz=340,slow=2.2,SNR=5.2						
WRA				S	**S**	**13 03 44.2**	**-2.9**
	0.4nm,0.9s,baz=340,slow=17,SNR=4.5						
ASAR	**Alice Springs**	**26.29**	**166**	P	**P**	**13 00 16.5**	**-0.7**
	0.4nm,0.3s,baz=342,slow=8.1,SNR=16						
ASAR				PcP	**PcP**	**13 03 40.8**	**-0.2**
	0.2nm,0.4s,baz=353,slow=2.0,SNR=6.9						
STKA	**Stephens Creek**	**36.31**	**159**	P	**P**	**13 01 44.1**	**-0.8**
	2.0nm,0.8s,baz=328,slow=6.4,SNR=8.8						
MKAR	**Makanchi Array**	**59.29**	**326**	P	**P**	**13 04 42.2**	**+0.2**
	0.2nm,0.4s,baz=122,slow=8.1,SNR=3.2						

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*IDC **08** 13:02:55.2±2.2, 9°.27S×113°.27E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/22, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=132.4km s-min=23.0km az=49.0*
*ISCJB **08** 13:03:03.5±0.7, 9°.18S±0°.09×113°.61E±0°.08, h73km, mb3.3/4, Error ellipse: s-maj=15.0km s-min=8.4km az=32.7*
*DJA **08** 13:03:05.3±2.2, 9°S±21°×11°4E±°, h26km±17km, M3.8/7, MLv3.8/7*
ISC 08 13:03:04.4±1.0**, 9°.1S**±0°.1×**113°.62E**±0°.06**, h73**km**, n12, σ1s.54**/12**, mb3.4**/4**, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**0.83**	**348**	P	**Pn**	**13 03 19.2**	**-1.8**
NBBI	**Negara**	**1.22**	**54**	P	**Pn**	**13 03 27.9**	**+2.1**
BLJI	**Banyuglugur**	**1.33**	**359**	P	**Pn**	**13 03 27.5**	**+0.2**
KRKI	**Karangkates**	**1.48**	**309**	P	**Pn**	**13 03 30.0**	**+0.9**
PWJI	**Pagerwojo**	**2.08**	**300**	P	**Pn**	**13 03 38.7**	**+1.5**
KHKI	**Kahang-Kahang**	**2.09**	**70**	P	**Pn**	**13 03 38.2**	**+0.8**
PCJI	**Pacitan**	**2.57**	**290**	P	**Pn**	**13 03 44.6**	**+0.8**
FITZ	**Fitzroy Crossi**	**14.72**	**129**	Pn	**Pn**	**13 06 26.3**	**-2.4**
	0.1nm,0.3s,baz=326,slow=12,SNR=4.7						
FITZ				Sn	Sn	13 08 59.0	-12
	0.1nm,0.3s,baz=200,slow=21,SNR=3.4						
WRA	**Warramunga Arr**	**22.75**	**121**	P	**P**	**13 08 00.8**	**+0.1**
	0.5nm,0.7s,baz=294,slow=12,SNR=5.7						
ASAR	**Alice Springs**	**24.22**	**129**	P	**P**	**13 08 16.4**	**+1.9**
	0.3nm,0.5s,baz=304,slow=9.3,SNR=11						
STKA	**Stephens Creek**	**34.46**	**135**	P	**P**	**13 09 45.1**	**-0.2**
	1.1nm,0.5s,baz=308,slow=20,SNR=4.7						
MKAR	**Makanchi Array**	**62.25**	**336**	P	**P**	**13 13 19.0**	**+0.4**
	0.2nm,0.3s,baz=150,slow=7.2,SNR=4.0						

IDC 08 13:23:11.7±1.2**, 12°.13N**×**87°.01W, h0**km**, mb3.8**/8**, mb1 4.1**/10**, mb1mx3.8**/25**, mbtmp3.8**/10**, ML3.3**/2**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.3**/43**, Error ellipse: s-maj=40.9km s-min=14.4km az=45.0, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**2.72**	**132**	Pn	Pn	13 23 57.1	+0.3
	11nm,0.3s,baz=317,slow=15,SNR=23						
JTS				Sn	Sn	13 24 28.7	-1.8
	11nm,0.3s,baz=321,slow=19,SNR=5.1						
JTS				Lg	Lg	13 24 38.1	
	19nm,0.3s,baz=127,slow=21,SNR=6.8						
CMIG	**Matias Romero**	**9.08**	**304**	Pn	Pn	13 25 25.9	+1.8
	0.2nm,0.3s,baz=124,slow=11,SNR=4.2						
CMIG				Sn	Sn	13 27 05.5	-1.6
	0.1nm,0.3s,baz=58,slow=12,SNR=2.1						
ROSC	**El Rosal**	**14.47**	**119**	LR	LR	13 32 21.8	
	comp=Z,43nm,18.6s,baz=27,slow=38						
TXAR	**Lajitas Array**	**23.09**	**320**	P	P	13 28 20.5	+1.1
	3.7nm,0.7s,baz=137,slow=11,SNR=24						
TKL	**Tuckaleechee C**	**23.60**	**7**	P	P	13 28 26.3	+1.9
	3.4nm,0.6s,baz=195,slow=11,SNR=4.2						
PDAR	**Pinedale Array**	**36.26**	**331**	P	P	13 30 17.8	+0.7
	0.8nm,0.8s,baz=125,slow=10,SNR=5.7						
NVAR	**Mina Array Bea**	**38.23**	**319**	P	P	13 30 33.1	-0.7
	0.3nm,0.3s,baz=277,slow=27,SNR=8.9						
NVAR				PcP	PcP	13 32 48.2	-0.2
	0.5nm,0.7s,baz=134,slow=3.9,SNR=3.4						
ULM	**Lac du Bonnet**	**38.70**	**351**	P	P	13 30 36.0	-1.3
	2.9nm,0.5s,baz=172,slow=8.0,SNR=7.2						
SCHQ	**Schefferville**	**45.46**	**16**	P	P	13 31 32.3	-0.2
	2.2nm,0.8s,baz=98,slow=3.4,SNR=3.0						
YKA	**Yellowknife Ar**	**54.03**	**345**	P	P	13 32 36.7	-0.9
	0.3nm,0.6s,baz=139,slow=7.7,SNR=10.0						
ILAR	**Eielson Array**	**66.48**	**336**	P	P	13 34 02.0	-0.9
	0.1nm,0.6s,baz=138,slow=4.7,SNR=5.7						
WRA	**Warramunga Arr**	**139.60**	**254**	PKP	PKPdf	13 42 43.1	+0.7
	0.3nm,0.6s,baz=91,slow=2.3,SNR=6.5						

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*ISCJB **08** 13:28:17.0±0.5, 39°.53N±0°.02×23°.47E±0°.03, h10km±4km, Error ellipse: s-maj=3.9km s-min=2.8km az=18.4*
*ATH **08** 13:28:16.4, 39°.53N×23°.46E, h23km, MD3.1/14*
*THE **08** 13:28:17.5, 39°.55N×23°.43E, h2km±3km, ML2.1/8, Error ellipse: s-maj=3.1km s-min=0.4km az=205.0*
*CSEM **08** 13:28:17.1±0.1, 39°.53N×23°.45E, h12km, ML2.1/8, Error ellipse: s-maj=2.8km s-min=1.9km az=105.0*
ISC 08 13:28:17.2±0.9**, 39°.54N**±0°.02×**23°.44E**±0°.02**, h12**km±7km**, n58, σ0s.45**/94**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
XOR	**Xorichti**	**0.26**	**228**	P	**Pg**	**13 28 22.3**	**-0.3**
XOR				S	**Sg**	**13 28 26.6**	**+0.3**
XOR	**Xorichti**	**0.26**	**228**	P	**Pg**	**13 28 22.3**	**-0.3**
NEO	**Neokhori**	**0.29**	**216**	*e*PB	**Pg**	**13 28 22.7**	**-0.4**
NEO				*e*SB	**Sg**	**13 28 27.7**	**+0.6**
NEO	**Neokhori**	**0.29**	**216**	*e*Pb	**Pg**	**13 28 22.7**	**-0.4**
NEO				*e*Sb	**Sg**	**13 28 27.7**	**+0.6**
SKIA	**Skiathos**	**0.37**	**177**	P	**Pg**	**13 28 24.3**	**-0.4**
SKIA				S	**Sg**	**13 28 30.1**	**+0.5**
SKIA	**Skiathos**	**0.37**	**177**	P	**Pg**	**13 28 24.3**	**-0.4**
SKIA				S	**Sg**	**13 28 30.1**	**+0.5**
PAIG	**Paliouri**	**0.43**	**25**	P	**Pg**	**13 28 25.9**	**+0.2**
PAIG				S	**Sg**	**13 28 31.8**	**+0.4**
PAIG	**Paliouri**	**0.43**	**25**	P	**Pg**	**13 28 25.9**	**+0.2**
PAIG				S	**Sg**	**13 28 31.8**	**+0.4**
AOS	**Alonnisos**	**0.50**	**137**	P	**Pg**	**13 28 26.7**	**-0.3**
AOS				S	**Sg**	**13 28 34.2**	**+0.5**
AOS	**Alonnisos**	**0.50**	**137**	*e*PB	**Pg**	**13 28 26.5**	**-0.5**
AOS				*e*SB	**Sg**	**13 28 33.4**	**-0.3**
AOS	**Alonnisos**	**0.50**	**137**	P	**Pg**	**13 28 26.7**	**-0.3**
AOS				*e*Sb	**Sg**	**13 28 33.4**	**-0.3**
AOS				S	**Sg**	**13 28 34.2**	**+0.5**
PLG	**Polygyros**	**0.83**	**0**	P	**Pg**	**13 28 32.9**	**-0.5**
PLG				S	**Sg**	**13 28 44.7**	**+0.4**
PLG	**Polygyros**	**0.83**	**0**	*e*PN	**Pg**	**13 28 32.7**	**-0.7**
PLG	**Polygyros**	**0.83**	**0**	P	**Pg**	**13 28 32.9**	**-0.5**
PLG				S	**Sg**	**13 28 44.7**	**+0.4**
MRKA	**Markates**	**0.84**	**172**	P	**Pg**	**13 28 33.3**	**-0.2**
MRKA				S	**Sb**	**13 28 45.0**	**-0.1**
MRKA	**Markates**	**0.84**	**172**	P	**Pg**	**13 28 33.3**	**-0.2**
MRKA				S	**Sb**	**13 28 45.0**	**-0.1**
OUR	**Ouranopolis**	**0.90**	**27**	P	**Pg**	**13 28 34.2**	**-0.3**
OUR				S	**Sb**	**13 28 47.4**	**+0.7**
OUR	**Ouranopolis**	**0.90**	**27**	P	**Pg**	**13 28 34.2**	**-0.3**
OUR				S	**Sb**	**13 28 47.4**	**+0.7**
ATAL	**Atalanti**	**0.91**	**201**	P	**Pg**	**13 28 34.3**	**-0.4**
ATAL				S	**Sb**	**13 28 47.8**	**+0.8**
ATAL	**Atalanti**	**0.91**	**201**	P	**Pg**	**13 28 34.3**	**-0.4**
ATAL				S	**Sb**	**13 28 47.8**	**+0.8**
LIT	**Litokhoron**	**0.92**	**308**	P	**Pg**	**13 28 34.7**	**-0.4**
LIT				S	**Sg**	**13 28 47.3**	**+0.2**
LIT	**Litokhoron**	**0.92**	**308**	*e*PN	**Pg**	**13 28 34.7**	**-0.4**
LIT				*e*SN	**Sg**	**13 28 47.3**	**+0.2**
LIT	**Litokhoron**	**0.92**	**308**	P	**Pg**	**13 28 34.7**	**-0.4**
LIT				S	**Sg**	**13 28 47.3**	**+0.2**
LKR	**Lokris**	**0.95**	**201**	*e*PN	**Pg**	**13 28 34.9**	**-0.7**
LKR	**Lokris**	**0.95**	**201**	*e*Pn	**Pg**	**13 28 34.9**	**-0.7**
AXAR	**Agios Charalam**	**0.98**	**219**	P	**Pg**	**13 28 35.9**	**-0.3**
AXAR				S	**Sb**	**13 28 50.2**	**+1.0**
AXAR	**Agios Charalam**	**0.98**	**219**	P	**Pg**	**13 28 35.9**	**-0.3**
AXAR				S	**Sb**	**13 28 50.2**	**+1.0**
AGG	**Agios Georgios**	**1.01**	**239**	P	**Pg**	**13 28 36.2**	**-0.4**
AGG				S	**Sn**	**13 28 51.2**	**-0.2**
AGG	**Agios Georgios**	**1.01**	**239**	*e*PN	**Pg**	**13 28 36.0**	**-0.6**
AGG				*e*SN	**Sb**	**13 28 50.2**	**+0.3**
AGG	**Agios Georgios**	**1.01**	**239**	P	**Pg**	**13 28 36.2**	**-0.4**
AGG				*e*Sn	**Sb**	**13 28 50.2**	**+0.3**
AGG				S	**Sn**	**13 28 51.2**	**-0.2**
HORT	**Hortiatis**	**1.09**	**346**	P	**Pb**	**13 28 37.5**	**-0.6**
HORT				S	**Sb**	**13 28 52.2**	**-0.2**
HORT	**Hortiatis**	**1.09**	**346**	P	**Pb**	**13 28 37.5**	**-0.6**
HORT				S	**Sb**	**13 28 52.2**	**-0.2**
THL	**Klokotos Trika**	**1.10**	**272**	P	**Pb**	**13 28 37.5**	**-0.8**
THL				S	**Sg**	**13 28 53.1**	**+0.2**
THL	**Klokotos Trika**	**1.10**	**272**	*e*PN	**Pb**	**13 28 38.0**	**-0.3**
THL	**Klokotos Trika**	**1.10**	**272**	P	**Pb**	**13 28 37.5**	**-0.8**
THL	**Klokotos Trika**	**1.10**	**272**	*e*Pn	**Pb**	**13 28 38.0**	**-0.3**
THL				S	**Sg**	**13 28 53.1**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.15**	**243**	P	**Pb**	**13 28 38.9**	**-0.1**
MAKR				S	**Sn**	**13 28 55.6**	**+0.8**
MAKR	**Makrakomi, Fth**	**1.15**	**243**	P	**Pb**	**13 28 38.9**	**-0.1**
MAKR				S	**Sn**	**13 28 55.6**	**+0.8**
SOH	**Sokhos**	**1.28**	**357**	P	**Pn**	**13 28 41.0**	**-0.1**
SOH	**Sokhos**	**1.28**	**357**	*e*PN	**Pn**	**13 28 41.0**	**-0.1**
SOH	**Sokhos**	**1.28**	**357**	P	**Pn**	**13 28 41.0**	**-0.1**
LIA	**Limnos Island**	**1.39**	**75**	*e*PN	**Pn**	**13 28 42.5**	**0.0**
LIA				*e*SN	**Sn**	**13 29 00.7**	**-0.1**
LIA	**Limnos Island**	**1.39**	**75**	*e*Pn	**Pn**	**13 28 42.5**	**0.0**
LIA				*e*Sn	**Sn**	**13 29 00.7**	**-0.1**
KALE	**Kalithea**	**1.53**	**222**	*e*PN	**Pn**	**13 28 44.5**	**0.0**
KALE	**Kalithea**	**1.53**	**222**	*e*Pn	**Pn**	**13 28 44.5**	**0.0**
LTK	**Loutraki**	**1.56**	**194**	*e*PN	**Pn**	**13 28 45.1**	**+0.2**
LTK	**Loutraki**	**1.56**	**194**	*e*Pn	**Pn**	**13 28 45.1**	**+0.2**
SRS	**Serrai**	**1.58**	**4**	P	**Pn**	**13 28 45.6**	**+0.5**
SRS	**Serrai**	**1.58**	**4**	P	**Pn**	**13 28 45.6**	**+0.5**
EFP	**Efpalio**	**1.63**	**228**	*e*PN	**Pn**	**13 28 45.7**	**-0.1**
EFP	**Efpalio**	**1.63**	**228**	*e*Pn	**Pn**	**13 28 45.7**	**-0.1**
KNT	**Kendrikon**	**1.67**	**346**	P	**Pb**	**13 28 47.6**	**-0.4**
KNT	**Kendrikon**	**1.67**	**346**	P	**Pb**	**13 28 47.6**	**-0.4**
LAKA	**Lakka**	**1.73**	**222**	*e*PN	**Pn**	**13 28 47.6**	**+0.4**
LAKA	**Lakka**	**1.73**	**222**	*e*Pn	**Pn**	**13 28 47.6**	**+0.4**
GUR	**Goura**	**1.82**	**209**	*e*PN	**Pn**	**13 28 48.3**	**-0.2**
DID	**Didima**	**2.04**	**185**	*e*PB	**Pn**	**13 28 50.9**	**-0.5**
DID	**Didima**	**2.04**	**185**	*e*Pb	**Pn**	**13 28 50.9**	**-0.5**

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*IDC **08** 13:35:08.0±1.2, 13°.45N×120°.74E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.4/25, mbtmp3.9/3, MS3.3/3, Ms1 3.3/3, ms1mx2.5/52, Error ellipse: s-maj=32.7km s-min=9.4km az=100.0*
*ISCJB **08** 13:35:08.0±0.5, 13°.48N±0°.04×120°.62E±0°.05, h10km, mb3.9/4, MS3.5/2, Error ellipse: s-maj=7.2km s-min=5.3km az=14.6*
*MAN **08** 13:35:08, 13°.53N×120°.59E, h9km, mb4.7, ML3.6, MS3.6*
MAN INTENSITY II - PUERTO GALERA; ILIJAN.
*NEIC **08** 13:35:11.9±0.8, 13°.67N×120°.94E, h35km, mb4.2/1, Error ellipse: s-maj=29.0km s-min=12.8km az=68.0*
NEIC Felt [II PIVS] at Puerto Galera. Also felt [II PIVS] at Batangas and Ilijan, Luzon.
ISC 08 13:35:08.8±0.8**, 13°.54N**±0°.04×**120°.64E**±0°.05**, h10**km**, n25, σ1s.09**/24**, mb4.0**/4**, 2C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.43**	**297**	*e*P	**Pb**	**13 35 17.0**	**-1.6**
TGY	**Tagaytay City**	**0.63**	**27**	Pg	**Pg**	**13 35 21.0**	**-0.1**
TGY				Lg	Lg	13 35 30.7	
TGY	**Tagaytay City**	**0.63**	**27**⇓	*e*P	**Pg**	**13 35 20.9**	**-0.1**
TGY				*i* S	**Sb**	**13 35 31.2**	**+0.3**
TGY	**Tagaytay City**	**0.63**	**27**	Pg	**Pg**	**13 35 21.0**	**-0.1**
	273nm,0.3s,baz=248,slow=3.5,SNR=31						
TGY				Lg	Lg	13 35 30.7	
	572nm,0.3s,baz=149,slow=20,SNR=46						
LQP	**Lukban**	**1.04**	**57**	*e*P	**Pb**	**13 35 27.5**	**-1.6**
SJMP	**San Jose**	**1.17**	**157**	*e*P	**Pb**	**13 35 30.5**	**-0.6**
OTRP	**Odiongan**	**1.78**	**131**	*e*P	**Pn**	**13 35 39.8**	**+0.1**
GQP	**Guinayangan**	**1.79**	**78**⇑	*i*P	**Pn**	**13 35 39.8**	**0.0**
GQP				*e*S	**Sb**	**13 36 04.5**	**+0.3**
PCPH	**Palayan**	**2.06**	**12**⇑	*e*P	**Pn**	**13 35 42.9**	**-0.6**
SCZP	**Santa Cruz**	**2.33**	**342**	*e*P	**Pb**	**13 35 50.0**	**-1.0**
BALP	**Baler**	**2.37**	**22**	*e*P	**Pb**	**13 35 49.3**	**-2.3**
ENPP	**El Nido**	**2.60**	**207**	*e*P	**Pn**	**13 35 50.3**	**-0.8**
CUYO	**Cuyo Island**	**2.70**	**172**	*e*P	**Pn**	**13 35 51.0**	**-1.3**
CAUP	**Cauayan**	**3.57**	**18**	*e*P	**Pb**	**13 36 12.3**	**+0.1**
DAV	**Davao City (W)**	**8.05**	**142**	LR	LR	13 40 20.6	
	comp=Z,74nm,20.2s,baz=177,slow=40						
CMAR	**Chiang Mai Arr**	**21.42**	**286**	P	**P**	**13 39 59.0**	**+1.8**
CMAR	**Chiang Mai Arr**	**21.42**	**286**	P	**P**	**13 39 59.0**	**+1.8**
	1.5nm,0.8s,baz=99,slow=8.3,SNR=8.3						
JHJ	**Hachijo jima 2**	**26.16**	**39**	LR	LR	13 49 42.7	
	comp=Z,24nm,19.5s,baz=82,slow=33						
WRAB	**Tennant Creek**	**35.89**	**158**	*e*P	**P**	**13 42 09.2**	**-0.2**
	2.4nm,0.8s						
WRA	**Warramunga Arr**	**35.90**	**158**	P	**P**	**13 42 08.7**	**-0.7**
WRA	**Warramunga Arr**	**35.90**	**158**	P	**P**	**13 42 08.7**	**-0.7**
	2.7nm,0.7s,baz=337,slow=9.6,SNR=19						
ASAR	**Alice Springs**	**39.19**	**161**	P	**P**	**13 42 37.0**	**-0.2**
ASAR	**Alice Springs**	**39.19**	**161**	P	**P**	**13 42 37.0**	**-0.2**
	1.6nm,0.6s,baz=338,slow=6.3,SNR=22						
KURK	**Kurchatov**	**50.29**	**326**	*e*P	**P**	**13 44 07.1**	**+1.6**
BORG	**Borgarnes**	**96.81**	**345**	LR	LR	14 35 49.7	
	comp=Z,68nm,18.8s,baz=155,slow=38						

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*CSEM **08** 13:36:21.3±0.2, 34°.03N×47°.00E, h2km, ML3.6, Error ellipse: s-maj=7.2km s-min=2.2km az=103.0*
*THR **08** 13:36:21.7±1.0, 34°.01N×47°.05E, h18km±12km, ML3.6*
*KISR **08** 13:36:25.2±0.5, 33°.47N×47°.00E, h4km±999km, ML2.9*
*IDC **08** 13:36:29.9±4.3, 33°.88N×47°.25E, h80km±44km, mb3.1/5, mb1 3.3/7, mb1mx3.1/26, mbtmp3.2/7, ML3.4/2, Error ellipse: s-maj=40.7km s-min=19.9km az=156.0*
ISC 08 13:36:20.6±2.9**, 33°.95N**±0°.04×**47°.16E**±0°.08**, h2**km±19km**, n25, σ1s.63**/33**, mb3.6**/6**, Western Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNGE	**Sanandaj**	**1.15**	**8**	*e*Pg	**Pb**	**13 36 42.5**	**-0.8**
SNGE				*e*Sg	**Sb**	**13 36 57.8**	**-1.0**
SNGE	**Sanandaj**	**1.15**	**8**	*e*Pg	**Pb**	**13 36 42.5**	**-0.8**
SNGE				*e*Sg	**Sb**	**13 36 57.8**	**-1.0**
SHGR	**Shooshtar-Gavs**	**2.30**	**143**	*e*Pn	**Pb**	**13 37 02.1**	**-0.6**
SHGR				AML	AML	13 37 51.3	
	comp=N,328nm,0.8s						
SHGR				AML	AML	13 37 53.6	
	comp=E,256nm,0.5s						
SHGR	**Shooshtar-Gavs**	**2.30**	**143**	*e*Pn	**Pb**	**13 37 02.2**	**-0.6**
GHVR	**GHOM**	**3.47**	**80**	*e*Pn	**Pn**	**13 37 18.3**	**+2.6**
GHVR				*e*Sg	**Sg**	**13 38 10.8**	**-1.4**
GHVR				AML	AML	13 38 15.9	
	comp=N,126nm,0.5s						
GHVR				AML	AML	13 38 17.1	
	comp=E,124nm,0.6s						
GHVR	**GHOM**	**3.47**	**80**	*e*Pn	**Pn**	**13 37 18.3**	**+2.6**
THKV	**Tehran--Karaj**	**3.63**	**56**	*e*Pn	**Pn**	**13 37 19.6**	**+1.5**
THKV	**Tehran--Karaj**	**3.63**	**56**	*e*Pn	**Pn**	**13 37 19.6**	**+1.5**
MIB	**Mutribah**	**4.14**	**178**	*e*P	**Pn**	**13 37 26.5**	**+1.7**
MIB				*e*S	**Sn**	**13 38 12.4**	**-1.3**
MIB				AML	AML	13 38 16.6	
	comp=Z,47nm,0.4s						
MIB	**Mutribah**	**4.14**	**178**	*e*P	**Pn**	**13 37 26.5**	**+1.7**
MIB				*e*S	**Sn**	**13 38 12.4**	**-1.3**
DAMV	**Damavand**	**4.30**	**66**	*e*Pn	**Pn**	**13 37 29.1**	**+1.8**
DAMV	**Damavand**	**4.30**	**66**	*e*Pn	**Pn**	**13 37 29.1**	**+1.8**
NAY	**Al-Naaiem**	**4.69**	**179**	*e*P	**Pn**	**13 37 34.0**	**+1.7**
NAY				*e*S	**Sn**	**13 38 25.7**	**-1.6**
NAY				AML	AML	13 38 29.8	
	comp=Z,16nm,0.5s						
NAY	**Al-Naaiem**	**4.69**	**179**	*e*P	**Pn**	**13 37 34.0**	**+1.7**
NAY				*e*S	**Sn**	**13 38 25.7**	**-1.6**
KBD	**Kabd**	**4.78**	**174**	*e*P	**Pn**	**13 37 35.8**	**+2.2**
KBD				*e*S	**Sn**	**13 38 28.2**	**-1.4**
KBD				AML	AML	13 38 28.4	
	comp=Z,6.4nm,0.2s						
KBD	**Kabd**	**4.78**	**174**	*e*P	**Pn**	**13 37 35.8**	**+2.2**
KBD				*e*S	**Sn**	**13 38 28.2**	**-1.4**
QRN	**Al-Qurain**	**5.23**	**173**	*e*P	**Pn**	**13 37 42.0**	**+2.2**
QRN				*e*S	**Sn**	**13 38 39.8**	**-0.9**
EIL	**Elat**	**11.22**	**251**	P	Pn	13 39 07.8	+5.8
	comp=Z,0.3nm,0.3s,baz=52,slow=19,SNR=2.7						
AKTO	**Aktyubinsk**	**18.30**	**23**	P	**P**	**13 40 38.2**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=199,slow=12,SNR=3.8						
KURBB	**Kurchatov Arra**	**28.29**	**44**	P	**P**	**13 42 15.6**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=249,slow=9.4,SNR=3.5						
MKAR	**Makanchi Array**	**29.43**	**54**	P	**P**	**13 42 25.5**	**0.0**
	comp=Z,0.3nm,0.7s,baz=242,slow=6.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**33.14**	**41**	P	P	13 43 00.9	+2.9
	comp=Z,0.5nm,0.5s,baz=238,slow=7.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**46.08**	**255**	P	**P**	**13 44 46.7**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=52,slow=7.0,SNR=6.3						
CMAR	**Chiang Mai Arr**	**48.47**	**95**	P	**P**	**13 45 04.0**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=295,slow=11,SNR=3.0						
YKA	**Yellowknife Ar**	**82.77**	**352**	P	**P**	**13 48 45.0**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=19,slow=5.7,SNR=5.5						

IDC 08 13:52:50.2±1.1**, 64°.32S**×**169°.19W, h0**km**, mb3.9**/3**, mb1 4.1**/4**, mb1mx3.9**/12**, mbtmp3.8**/4**, ML3.5**/1**, MS4.0**/14**, Ms1 4.0**/14**, ms1mx3.9**/28**, Error ellipse: s-maj=55.8km s-min=31.2km az=22.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**15.96**	**203**	Pn	Pn	13 56 35.6	0.0
	0.2nm,0.3s,baz=321,slow=1.5,SNR=7.5						
VNDA				LR	LR	14 01 18.3	
	comp=Z,292nm,21.4s,baz=38,slow=32						
RPZ	**Rata Peaks**	**23.48**	**322**	LR	LR	14 04 53.6	
	comp=Z,249nm,21.7s,baz=131,slow=31						
QSPA	**South Pole Qui**	**25.78**	**180**	LR	LR	14 08 20.3	
	comp=Z,228nm,18.1s,baz=104,slow=36						
URZ	**Urewera**	**27.34**	**336**	LR	LR	14 07 17.2	
	comp=Z,441nm,19.6s,baz=181,slow=32						
TBI	**Tubuai**	**42.97**	**27**	*e*LR	LR	14 12 21.8	
	155nm,28.8s						
TBI				*e*T	T	14 45 54.6	
	3.4nm,0.3s						
STKA	**Stephens Creek**	**44.34**	**293**	LR	LR	14 15 37.7	
	comp=Z,296nm,19.4s,baz=301,slow=31						
DZM	**Mont Dzumac**	**45.21**	**327**	*e*LR	LR	14 13 45.8	
	308nm,22.4s						
RKT	**Rikitea**	**46.91**	**45**	*e*T	T	14 50 51.2	
	1.2nm,0.2s						
PPT2	**Papeete2**	**48.56**	**25**	*e*LR	LR	14 14 52.2	
	169nm,27.5s						
PPT	**Papeete**	**48.58**	**25**	LR	LR	14 17 55.1	
	comp=Z,145nm,21.3s,baz=198,slow=31						
CTA	**Charters Tower**	**53.19**	**305**	LR	LR	14 20 30.8	
	comp=Z,180nm,19.7s,baz=227,slow=31						
ASAR	**Alice Springs**	**54.73**	**290**	P	P	14 02 21.1	-0.1
	1.3nm,0.9s,baz=151,slow=7.4,SNR=8.9						
ASAR				LR	LR	14 21 51.8	
	comp=Z,186nm,19.7s,baz=169,slow=32						
PLCA	**Paso Flores**	**57.63**	**117**	LR	LR	14 21 16.9	
	comp=Z,143nm,19.1s,baz=181,slow=30						
WRA	**Warramunga Arr**	**57.89**	**292**	P	P	14 02 43.4	-0.2
	1.2nm,1.0s,baz=154,slow=5.8,SNR=5.4						
FITZ	**Fitzroy Crossi**	**63.13**	**285**	LR	LR	14 26 18.6	
	comp=Z,99nm,19.9s,baz=187,slow=32						
CPUP	**Villa Florida**	**75.44**	**121**	LR	LR	14 33 02.5	
	comp=Z,173nm,18.6s,baz=173,slow=32						
LPAZ	**La Paz**	**80.18**	**107**	P	P	14 05 02.7	-0.2
	1.3nm,0.7s,baz=184,slow=6.8,SNR=4.6						
LPAZ				LR	LR	14 31 46.4	
	comp=Z,54nm,18.2s,baz=340,slow=29						
BOSA	**Boshof**	**86.69**	**193**	LR	LR	14 43 20.5	
	comp=Z,87nm,19.0s,baz=175,slow=35						
BDFB	**Brasilia**	**88.63**	**124**	LR	LR	14 43 03.3	
	comp=Z,132nm,21.1s,baz=327,slow=34						
ILAR	**Eielson Array**	**129.82**	**12**	PKP	PKPdf	14 11 59.6	0.0
	1.2nm,1.0s,baz=224,slow=2.6,SNR=7.8						
BVAR	**Borovoye Array**	**148.28**	**278**	PKPbc	PKPbc	14 12 35.8	-1.0
	0.8nm,0.7s,baz=142,slow=3.6,SNR=5.7						
BRTR	**Keskin Array B**	**151.97**	**220**	PKPbc	PKPbc	14 12 46.5	+0.1
	0.6nm,0.6s,baz=207,slow=4.1,SNR=4.8						

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*IDC **08** 13:55:04.5±2.6, 51°.78N×174°.03W, h16km±15km, mb4.4/34, mb1 4.5/36, mb1mx4.5/39, mbtmp4.4/36, ML4.9/2, MS3.5/17, Ms1 3.5/17, ms1mx3.2/56, Error ellipse: s-maj=14.9km s-min=8.9km az=167.0*
*MOS **08** 13:55:05.7±0.9, 51°.82N×174°.00W, h33km, mb5.0/47, Error ellipse: s-maj=10.4km s-min=5.7km az=87.3*
*ISCJB **08** 13:55:08.5±0.4, 51°.77N±0°.04×174°.01W±0°.02, h59km±2km, mb4.7/108, MS3.5/16, Error ellipse: s-maj=6.7km s-min=2.4km az=179.2*
*NEIC **08** 13:55:09.9±0.3, 51°.77N×174°.04W, h60km±2km, mb4.8/66, Error ellipse: s-maj=5.5km s-min=2.0km az=170.0*
*BJI **08** 13:55:10.2, 52°.46N×174°.60W, h50km, mB4.9/9, mb4.8/23, Ms4.6/8, Ms7 4.4/8*
ISC 08 13:55:08.9±0.5**, 51°.68N**±0°.07×**174°.05W**±0°.03**, h52**km±3km**, n600, σ0s.91**/649**, mb4.7**/108**, MS3.5**/16**, 185C-117D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**0.59**	**357**	P	**Pn**	**13 55 23.0**	**+1.6**
KOKL	**Mount Kliuchef**	**0.65**	**352**	P	**Pn**	**13 55 23.8**	**+1.7**
KOSE	**Korovin Southe**	**0.66**	**360**	P	**Pn**	**13 55 24.1**	**+1.8**
GSCK	**Great Sitkin C**	**1.35**	**285**	P	**Pn**	**13 55 31.6**	**+0.2**
GSTD	**Great Sitkin T**	**1.35**	**287**	P	**Pn**	**13 55 31.7**	**+0.3**
ADAG	**Mount Adagdak**	**1.61**	**282**	P	**Pn**	**13 55 36.1**	**+1.1**
KIKV	**Kanaga Island**	**1.95**	**277**	P	**Pn**	**13 55 40.1**	**+0.5**
KIMD	**Kanaga Island**	**1.98**	**273**	P	**Pn**	**13 55 40.4**	**+0.4**
TAFP	**Tanaga Falls P**	**2.45**	**277**	P	**Pn**	**13 55 47.2**	**+0.8**
TAFP				S	**Sn**	**13 56 16.7**	**+1.5**
TASE	**Tanaga Southea**	**2.48**	**275**	P	**Pn**	**13 55 47.9**	**+1.0**
TANO	**Tanaga North**	**2.54**	**277**	P	**Pn**	**13 55 47.9**	**+0.3**
GAEA	**Gareloi East**	**2.92**	**274**	P	**Pn**	**13 55 54.0**	**+1.1**
GALAA	**Gareloi Lava P**	**2.94**	**273**	P	**Pn**	**13 55 54.1**	**+1.0**
GANE	**Gareloi Northe**	**2.94**	**274**	P	**Pn**	**13 55 54.1**	**+0.9**
NIKO	**Nikolski**	**3.44**	**66**	P	**Pn**	**13 55 59.1**	**-0.8**
NIKO				S	**Sn**	**13 56 38.6**	**-0.7**
OKSP	**Okmok Steeple**	**3.86**	**64**	P	**Pn**	**13 56 06.5**	**+0.8**
OKSO	**Okmok South**	**3.97**	**63**	P	**Pn**	**13 56 07.6**	**+0.4**
OKSO				S	**Sn**	**13 56 53.1**	**+0.6**
OKCE	**Okmok Cone E**	**3.99**	**62**	P	**Pn**	**13 56 08.4**	**+0.9**
OKFG	**Magazine Ridge**	**4.13**	**63**	P	**Pn**	**13 56 09.9**	**+0.6**
OKFG				S	**Sn**	**13 56 57.5**	**+1.2**
MREP	**Makushin Rep't**	**4.92**	**62**	P	**Pn**	**13 56 21.4**	**+1.1**
MSW	**Makushin Switc**	**4.94**	**60**	P	**Pn**	**13 56 21.2**	**+0.6**
MSW				S	**Sn**	**13 57 19.0**	**+2.7**
MTBL	**Makushin Table**	**5.02**	**60**	P	**Pn**	**13 56 22.6**	**+0.9**
UNV	**Unalaska Valle**	**5.07**	**62**	P	**Pn**	**13 56 22.6**	**+0.4**
ZRO	**Akutan Zero**	**5.45**	**61**	P	**Pn**	**13 56 28.4**	**+0.9**
AKGG	**Akutan Green G**	**5.49**	**60**	P	**Pn**	**13 56 28.4**	**+0.5**
AHB	**Akutan Harbor**	**5.55**	**61**	P	**Pn**	**13 56 29.6**	**+0.8**
AKUT	**Akutan**	**5.58**	**61**	P	**Pn**	**13 56 29.5**	**+0.3**
SPIA	**Saint Paul Isl**	**5.93**	**20**	P	**Pn**	**13 56 35.7**	**+1.6**
WESE	**West Dahl East**	**6.35**	**60**	P	**Pn**	**13 56 40.0**	**+0.1**
FALS	**False Pass**	**7.12**	**59**	P	**Pn**	**13 56 50.6**	**+0.2**
DRIA	**Deer Island**	**7.79**	**60**	P	**Pn**	**13 56 59.5**	**0.0**
DT1	**Dutton Round H**	**7.83**	**59**	P	**Pn**	**13 57 00.2**	**+0.2**
DTNA	**Dutton South F**	**7.86**	**59**	P	**Pn**	**13 56 59.0**	**-1.4**
FX1	**Attu Island--F**	**7.94**	**284**	Pn	**Pn**	**13 57 00.8**	**-0.7**
FX1	**Attu Island--F**	**7.94**	**284**	Pn	**Pn**	**13 57 00.8**	**-0.7**
	15nm,0.3s,baz=182,slow=12,SNR=40						
PS4A	**Pavlof South-4**	**8.14**	**58**	P	**Pn**	**13 57 04.7**	**+0.4**
SDPT	**Sand Point**	**8.88**	**60**	P	**Pn**	**13 57 13.6**	**-0.8**
GAMB	**Gambell**	**12.19**	**5**	*e*P	Pn	13 58 02.7	+3.1
	7.4nm,0.7s						
OHAK	**Old Harbor**	**13.27**	**57**	*e*P	Pn	13 58 11.0	-3.3
	17nm,0.4s						
KDAK	**Kodiak Island**	**13.79**	**55**	P	**Pn**	**13 58 18.3**	**-3.1**
	38nm,0.4s						
KDAK				Sn	S	14 01 05.2	-7.5
KDAK	**Kodiak Island**	**13.79**	**55**	Pn	Pn	13 58 17.0	-4.4
	0.9nm,0.3s,baz=280,slow=13,SNR=40						
KDAK				Sn	S	14 01 05.2	-7.5
	1.0nm,0.3s,baz=150,slow=23,SNR=7.7						
TNA	**Tin City**	**14.27**	**10**	*e*P	**P**	**13 58 31.1**	**-2.5**
	4.4nm,0.6s						
SEW	**Seward**	**16.08**	**49**	*e*P	**Pn**	**13 58 47.9**	**-3.3**
	15nm,0.5s						
PMR	**Palmer**	**16.80**	**44**	*e*P	**Pn**	**13 58 59.1**	**-1.2**
PMR				pmax	pmax		
	comp=Z,4.0nm,0.6s						

PMR Palmer 16.80 44 eP Pn 13 58 59.1 -1.2
comp=Z,4.0nm,0.6s
TRF Thorofare Moun 17.23 38 eP Pn 13 59 05.9 +0.2
comp=Z,0.8nm,0.6s
SML Sawmill 17.24 44 eP Pn 13 59 04.4 -1.4
SML pmax pmax
comp=Z,2.0nm,0.5s
SML Sawmill 17.24 44 eP Pn 13 59 04.4 -1.4
comp=Z,2.2nm,0.5s
PETK Petropavlovsk- 17.26 286 P Pn 13 59 06.3 +0.3
PETK pmax pmax
comp=Z,1.0nm,0.3s
PETK Petropavlovsk- 17.26 286 P Pn 13 59 06.3 +0.3
PETK Petropavlovsk- 17.26 286 P Pn 13 59 06.3 +0.3
comp=Z,0.9nm,0.3s,baz=94,slow=14,SNR=19
PETK LR LR 14 05 13.4
comp=Z,53nm,21.4s,baz=280,slow=35
DIV Divide 18.14 48 eP P 13 59 14.9 -1.7
BMRM Bremner River 18.63 49 eP P 13 59 20.8 -1.2
comp=Z,7.3nm,0.5s
COLA College 18.89 36 eP P 13 59 22.8 -1.9
COLA pmax pmax
comp=Z,8.0nm,0.6s
COLA College 18.89 36 eP P 13 59 22.8 -1.9
comp=Z,8.1nm,0.6s
PAX Paxson 18.93 42 eP P 13 59 23.6 -1.7
PAX pmax pmax
comp=Z,9.0nm,0.5s
PAX Paxson 18.93 42 eP P 13 59 23.6 -1.7
comp=Z,8.6nm,0.5s
BILL Bilibino 18.99 337 eP Pn 13 59 26.8 -0.1
BILL pmax pmax
comp=Z,11nm,1.0s
BILL Bilibino 18.99 337 eP Pn 13 59 26.8 -0.1
comp=Z,11nm,1.0s
ILAR Eielson Array 19.19 37 P P 13 59 25.1 -2.9
ILAR PcP PcP 14 03 48.7 -0.6
ILAR ScP ScP 14 07 24.9 +4.3
ILAR Eielson Array 19.19 37 P P 13 59 25.1 -2.9
comp=Z,5.4nm,0.3s,baz=243,slow=10,SNR=100
ILAR PcP PcP 14 03 48.7 -0.6
comp=Z,0.1nm,0.3s,baz=276,slow=3.6,SNR=5.3
ILAR LR LR 14 06 49.9
comp=Z,104nm,18.4s,baz=261,slow=37
ILAR ScP ScP 14 07 24.9 +4.3
comp=Z,0.1nm,0.3s,baz=278,slow=4.0,SNR=5.8
COLD Coldfoot 19.52 28 eP Pn 13 59 32.4 -0.9
comp=Z,5.9nm,0.6s
MENT Mentasta 19.66 43 eP P 13 59 32.4 -0.8
DOT Dot Lake 19.79 41 eP P 13 59 32.8 -1.8
comp=Z,6.5nm,0.6s
PNL Peninsula 20.90 54 eP P 13 59 45.3 -1.3
comp=Z,15nm,0.4s
SEY Seymchan 21.06 315⇑ eP P 13 59 50.5 +2.2
WRAK Wrangell Islan 24.64 62 eP P 14 00 26.6 +2.3
comp=Z,18nm,0.7s
INK Inuvik 25.52 34 P P 14 00 31.1 -1.0
INK PcP PcP 14 04 01.8 -0.3
INK ScP ScP 14 07 40.9 +4.2
INK Inuvik 25.52 34 P P 14 00 31.1 -1.0
comp=Z,6.6nm,0.5s,baz=245,slow=7.2,SNR=64
INK PcP PcP 14 04 01.8 -0.3
comp=Z,1.8nm,0.7s,baz=243,slow=3.0,SNR=6.5
INK ScP ScP 14 07 40.9 +4.2
comp=Z,0.6nm,0.7s,baz=229,slow=32,SNR=8.0
INK LR LR 14 09 48.9
comp=Z,70nm,21.5s,baz=182,slow=35
DLBC Dease Lake 25.70 57 eP P 14 00 35.0 +1.0
DLBC Dease Lake 25.70 57 P P 14 00 35.4 +1.4
comp=Z,5.4nm,0.5s,baz=267,slow=8.3,SNR=18
DLBC LR LR 14 09 19.9
comp=Z,75nm,21.5s,baz=149,slow=33
BBB Bella Bella 27.97 71 LR LR 14 10 08.8
comp=Z,85nm,19.1s,baz=244,slow=32
ASAJ Asahikawa 29.67 273 P P 14 01 10.8 +1.3
ASAJ Asahikawa 29.67 273 P P 14 01 10.8 +1.3
comp=Z,7.4nm,0.8s,baz=157,slow=17,SNR=6.3
ASAJ LR LR 14 13 03.8
comp=Z,71nm,19.9s,baz=62,slow=36
TIXI Tiksi 31.85 330⇑ eP P 14 01 28.3 -0.1
TIXI pmax pmax
comp=Z,6.0nm,2.5s
YKW3 Yellowknife Ar 32.84 47 eP P 14 01 35.8 -1.3
YKA Yellowknife Ar 32.85 47 P P 14 01 36.1 -1.2
YKA PcP PcP 14 04 21.1 +0.4
YKA ScP ScP 14 08 05.4 +5.2
YKA Yellowknife Ar 32.85 47 P P 14 01 36.1 -1.2
comp=Z,1.0nm,0.4s,baz=272,slow=8.5,SNR=27
YKA PcP PcP 14 04 21.1 +0.4
comp=Z,2.2nm,0.6s,baz=286,slow=3.0,SNR=32
YKA ScP ScP 14 08 05.4 +5.2
comp=Z,0.3nm,0.6s,baz=285,slow=3.3,SNR=7.4
HAWA Hanford 35.42 77 eP P 14 02 00.2 +0.5
comp=Z,5.8nm,0.8s
YBH Yreka Blue Hor 35.90 85 P P 14 02 05.4 +1.5
YBH Yreka Blue Hor 35.90 85 P P 14 02 05.4 +1.5
comp=Z,1.0nm,0.6s,baz=328,slow=11,SNR=4.4
YBH LR LR 14 13 07.3
comp=Z,91nm,20.8s,baz=220,slow=30
NEW Newport 35.98 72 eP P 14 02 04.9 +0.4
comp=Z,12nm,0.9s
NEW PcP PcP 14 04 30.3 +0.3
NEW Newport 35.98 72 ⇑P P 14 02 05.1 +0.6
baz=36,SNR=10
NEW Newport 35.98 72 P P 14 02 05.1 +0.6
comp=Z,12nm,0.6s,baz=297,slow=7.5,SNR=20
NEW PcP PcP 14 04 30.3 +0.3
comp=Z,1.8nm,0.7s,baz=256,slow=2.8,SNR=4.7
USRK Ussuriysk Arra 36.18 280 P P 14 02 05.6 -0.5
comp=Z,3.1nm,0.5s,baz=61,slow=9.8,SNR=16
A12A Yeak River Ran 36.54 71 ⇑P P 14 02 10.4 +1.0
baz=36
C11A Tepee Creek (N 36.69 73 ⇓P P 14 02 10.8 +0.2
baz=36
MJAR Matsushiro Arr 36.77 265 P P 14 02 13.1 +1.7
MJAR PcP PcP 14 04 32.6 0.0
MJAR Matsushiro Arr 36.77 265 P P 14 02 13.1 +1.7
comp=Z,1.2nm,0.6s,baz=40,slow=7.2,SNR=7.2
MJAR PcP PcP 14 04 32.6 0.0
comp=Z,1.2nm,0.7s,baz=133,slow=1.0,SNR=5.2
MJAR LR LR 14 15 58.7
comp=Z,62nm,21.0s,baz=70,slow=34
MAT Matsushiro 36.77 265 P P 14 02 11.4 +0.1
C12B Naegeli Ranch, 37.22 72 ⇑P P 14 02 15.3 +0.2
baz=37
A13A Flathead Natio 37.27 70 ⇓P P 14 02 15.9 +0.3
baz=37
B13A Whitefish 37.50 71 ⇓P P 14 02 17.6 +0.1
baz=37
WALA Waterton Lakes 37.50 70 eP P 14 02 17.9 +0.4
comp=Z,0.1nm,0.8s
BSMT Bassoo Peak 37.56 72 eP P 14 02 18.4 +0.3
comp=Z,9.6nm,0.8s
C13A Hot Springs 37.77 72 ⇑P P 14 02 19.7 0.0
baz=38
A14A Double T Ranch 37.83 69 ⇓P P 14 02 20.7 +0.4
baz=38,SNR=10
JTMT Jette 37.91 72 eP P 14 02 21.3 +0.3
comp=Z,2.5nm,0.6s
D13A Huson 38.12 73 ⇓P P 14 02 22.7 0.0
baz=38
SWMT Swartz Lake 38.19 72 eP P 14 02 23.8 +0.5
comp=Z,1.9nm,0.6s
B14A Marquette Ranc 38.20 70 ⇑P P 14 02 23.9 +0.4
baz=38,SNR=13
A15A Johnson Ranch, 38.23 69 ⇑P P 14 02 23.3 -0.3
baz=38,SNR=7.0
RES Resolute Bay 38.23 25 eP P 14 02 22.5 -0.7
comp=Z,1.4nm,0.4s
RES PcP PcP 14 04 36.8 +0.5
RES Resolute Bay 38.23 25 P P 14 02 22.5 -0.7
comp=Z,1.3nm,0.3s,baz=262,slow=6.9,SNR=25
RES PcP PcP 14 04 36.8 +0.5
comp=Z,3.0nm,0.8s,baz=291,slow=3.8,SNR=7.5
RES LR LR 14 17 19.4
comp=Z,41nm,21.3s,baz=303,slow=35
F12A Elk City 38.32 75 ⇓P P 14 02 24.6 +0.1
baz=38,SNR=9.4
MSO Missoula 38.56 73 ⇑P P 14 02 26.6 +0.1
baz=38
E13A Victor 38.61 73 ⇑P P 14 02 26.9 0.0
baz=38
SLMT Seeley Lake 38.62 72 eP P 14 02 26.5 -0.5
comp=Z,3.6nm,0.5s
B15A Bradely Ranch, 38.64 70 ⇓P P 14 02 27.1 0.0
baz=38,SNR=11
D14A Greenough 38.69 72 ⇓P P 14 02 27.4 -0.2
baz=38,SNR=12
F13A Darby 38.85 74 ⇑P P 14 02 29.1 +0.2
baz=39,SNR=9.0
C15A Salmond Ranch, 38.88 71 ⇓P P 14 02 29.6 +0.5
baz=39,SNR=21
CHMT Chamberlain Mo 38.92 72 eP P 14 02 29.3 -0.4
comp=Z,3.0nm,0.5s
E14A Clinton 39.03 73 ⇓P P 14 02 30.6 +0.1
baz=39,SNR=8.0
B16A M & M Farms, S 39.09 69 ⇓P P 14 02 30.4 -0.4
baz=39,SNR=7.4
MFID Camas Ranch 39.21 78 ⇑P P 14 02 32.4 +0.4
baz=39
G13A Cobalt 39.27 75 ⇑P P 14 02 32.7 +0.2
baz=39,SNR=8.5
D15A Lincoln 39.29 72 ⇑P P 14 02 32.6 -0.1
baz=39,SNR=20
C16A Fuhringer Ranc 39.37 70 ⇑P P 14 02 33.2 0.0
baz=39,SNR=13
F14A Wisdom 39.42 74 ⇑P P 14 02 34.0 +0.3
baz=39,SNR=5.5
A17A Triple J Farms 39.42 68 ⇑P P 14 02 33.3 -0.3
baz=39,SNR=12
I12A Atlanta 39.42 78 ⇑P P 14 02 33.8 0.0
baz=39
E15A Deer Lodge 39.54 73 ⇓P P 14 02 34.6 -0.1
baz=39,SNR=9.3
H13A Challis 39.54 76 ⇑P P 14 02 34.8 0.0
baz=39
G14A Jackson 39.66 75 ⇑P P 14 02 35.7 -0.1
baz=40,SNR=5.6
B17A L&G Farms, Che 39.68 69 ⇓P P 14 02 35.7 -0.1
baz=40,SNR=12
HRY Holter Researc 39.87 72 eP P 14 02 37.6 +0.2
comp=Z,8.9nm,0.6s
D16A Dana Ranch, Ca 39.87 71 ⇓P P 14 02 37.4 -0.1
baz=40
A18A Metzger Ranch, 39.92 68 ⇓P P 14 02 37.3 -0.5
baz=40
F15A Butte 39.93 73 ⇑P P 14 02 37.8 -0.2
baz=40
LRM Limekiln Ridge 39.96 73 eP P 14 02 38.6 +0.3
comp=Z,19nm,0.8s
I13A Wildhorse Cree 39.98 77 ⇓P P 14 02 38.7 +0.2
baz=40,SNR=11
C17A Wharram Farm, 40.03 70 ⇓P P 14 02 38.4 -0.3
baz=40
H14A Leadore 40.05 75 ⇓P P 14 02 39.1 0.0
baz=40
E16A East Helena 40.05 72 ⇑P P 14 02 39.1 +0.2
baz=40,SNR=9.1
B18A Beardsley Farm 40.22 68 ⇓P P 14 02 40.3 +0.1
baz=40,SNR=5.1
J13A Cove Ranch, Pi 40.23 77 ⇑P P 14 02 41.0 +0.5
baz=40,SNR=9.8
MCMT McKenzie Canyo 40.25 75 eP P 14 02 40.6 -0.2
comp=Z,6.4nm,0.5s
G15A Dillon 40.28 74 ⇑P P 14 02 40.8 -0.2
baz=40,SNR=7.0
D17A Six Diamond Ra 40.32 71 ⇑P P 14 02 41.4 +0.2
baz=40
I14A Mackay 40.37 76 ⇓P P 14 02 42.2 +0.5
baz=40,SNR=12
CN2 Changchun 40.38 283 eP P 14 02 41.1 -0.4
EGMT Eagleton 40.42 69 ⇑P P 14 02 42.1 +0.2
baz=40
F16A Kennard Place, 40.47 73 ⇑P P 14 02 42.6 +0.2
baz=40,SNR=5.3
H15A Lima 40.48 75 ⇑P P 14 02 42.7 0.0
baz=40,SNR=6.6
BOZ Bozeman (W) 40.54 73 eP P 14 02 43.2 +0.2
BOZ pmax pmax
comp=Z,9.0nm,0.6s
BOZ Bozeman (W) 40.54 73 eP P 14 02 43.2 +0.2
comp=Z,8.5nm,0.6s
BOZ Bozeman (W) 40.54 73 ⇑P P 14 02 43.3 +0.2
baz=40,SNR=22
A19A Klindworth Far 40.55 67 ⇑P P 14 02 42.8 -0.2
baz=40
NVAR Mina Array Bea 40.57 87 P P 14 02 44.1 +0.7
NVAR PcP PcP 14 04 45.0 +0.3
NVAR Mina Array Bea 40.57 87 P P 14 02 44.1 +0.7
comp=Z,1.1nm,0.7s,baz=295,slow=8.1,SNR=10.0
NVAR PcP PcP 14 04 45.0 +0.3
comp=Z,1.0nm,0.7s,baz=289,slow=3.3,SNR=5.0
E17A Martinsdale 40.57 72 ⇑P P 14 02 43.7 +0.4
baz=40,SNR=8.9
G16A Moss Hill, Enn 40.66 74 ⇑P P 14 02 43.9 -0.2
baz=40,SNR=9.3
J14A Carey 40.66 77 ⇑P P 14 02 44.8 +0.8
baz=40,SNR=7.5
B19A Brinkman Farms 40.67 68 ⇑P P 14 02 44.0 +0.1
baz=40
D18A Linhart Farms, 40.81 70 ⇓P P 14 02 45.5 +0.3
baz=41
CBIJ Chichi jima 40.94 250 P P 14 02 46.9 +0.6
CBIJ Chichi jima 40.94 250 P P 14 02 46.9 +0.6
comp=Z,60nm,0.9s,baz=287,slow=19,SNR=3.5
C19A Slack Wire Ran 40.98 69 ⇓P P 14 02 47.0 +0.5
baz=41,SNR=20
F17A Fitzpatrick Pl 40.98 72 ⇓P P 14 02 46.7 +0.1
baz=41,SNR=8.2
A20A Cobblestone Ra 41.05 67 ⇓P P 14 02 47.0 0.0
baz=41,SNR=5.3
E18A Harlowton 41.08 71 ⇑P P 14 02 47.9 +0.5
baz=41,SNR=5.1
B20A Solberg Farm, 41.21 67 ⇓P P 14 02 48.3 -0.1
baz=41
H16A Russell Place, 41.28 74 ⇑P P 14 02 49.3 +0.1
baz=41,SNR=7.2
D19A Crippa Ranch, 41.37 70 ⇑P P 14 02 50.0 +0.3
baz=41,SNR=5.6
YMR Madison River 41.46 74 eP P 14 02 51.6 +0.9
comp=Z,6.4nm,0.6s
FFC Flin Flon 41.53 56 i P P 14 02 50.9 +0.1
FFC Flin Flon 41.53 56 eP P 14 02 50.6 -0.2
comp=Z,1.8nm,0.6s
F18A Big Timber 41.54 72 ⇑P P 14 02 51.3 +0.1
baz=41
A21A Bergtoll Ranch 41.56 66 ⇑P P 14 02 51.5 +0.3
baz=41
L14A Malta 41.56 79 ⇑P P 14 02 52.1 +0.7
baz=41
I16A Newdale 41.59 75 ⇑P P 14 02 52.0 +0.4
baz=41
C20A Veseth Ranch, 41.59 68 ⇓P P 14 02 51.9 +0.4
baz=41,SNR=12
K15A Arbon 41.62 77 ⇑P P 14 02 52.5 +0.6
baz=41
E19A Rath Farm, Rou 41.79 70 ⇑P P 14 02 53.5 +0.4
baz=42,SNR=6.1
B21A Ellsworth Farm 41.80 67 ⇓P P 14 02 53.0 -0.1
baz=42
D20A Manuel Ranch, 41.84 69 ⇑P P 14 02 53.9 +0.3
baz=42
H17A Grant Village 41.85 74 ⇓P P 14 02 54.7 +0.8
baz=42,SNR=7.2
J16A Bone 41.85 76 ⇓P P 14 02 54.6 +0.8
baz=42
LKWY Lake 41.86 74 eP P 14 02 55.1 +1.1
LKWY pmax pmax
comp=Z,9.0nm,0.7s
LKWY Lake 41.86 74 eP P 14 02 55.1 +1.1
comp=Z,9.3nm,0.7s
IMW Indian Meadow 41.91 75 eP P 14 02 54.9 +0.5
comp=Z,4.4nm,0.8s
G18A Lazy EL Ranch, 41.95 72 ⇑P P 14 02 54.5 0.0
baz=42
F19A Roth Farm, Mol 42.02 71 ⇑P P 14 02 55.2 +0.1
baz=42
L15A Malad City 42.10 78 ⇓P P 14 02 56.3 +0.5
baz=42
K16A Soda Springs 42.11 77 ⇓P P 14 02 57.6 +1.7
baz=42,SNR=11
A22A Carney Farms, 42.14 66 ⇑P P 14 02 55.8 -0.1
baz=42,SNR=5.6
E20A Meyer Farm, Mu 42.15 70 ⇑P P 14 02 56.5 +0.4
baz=42
RLMT Red Lodge 42.23 72 eP P 14 02 57.4 +0.4
comp=Z,15nm,0.8s
RLMT Red Lodge 42.23 72 ⇑P P 14 02 57.3 +0.4
baz=42,SNR=17
H18A Shoshone NF, C 42.24 73 ⇑P P 14 02 57.3 +0.2
baz=42
B22A Reddig Ranch S 42.45 67 ⇑P P 14 02 58.6 +0.2
baz=42
KSRS Korea Array 42.59 274 P P 14 03 00.8 +1.2
comp=Z,4.1nm,0.6s,baz=57,slow=7.6,SNR=31
KSRS PcP PcP 14 04 51.4 +0.4
comp=Z,1.7nm,0.8s,baz=64,slow=2.8,SNR=7.2
KSRS LR LR 14 18 15.9
comp=Z,52nm,20.3s,baz=320,slow=33
KSAR Wonju Array Be 42.62 274 P P 14 03 00.8 +1.0
KSAR PcP PcP 14 04 51.4 +0.2
H19A Powell 42.64 73 ⇓P P 14 03 00.6 +0.4
baz=42,SNR=6.7
L16A Fish Haven 42.67 77 ⇓P P 14 03 01.1 +0.5
baz=42,SNR=8.9
I18A Diamond G Ranc 42.69 74 ⇑P P 14 03 01.3 +0.6
baz=42
A23A Redstone 42.74 65 ⇑P P 14 03 00.9 +0.1
baz=42
G20A Bridger 42.80 72 ⇑P P 14 03 01.5 +0.1
baz=43,SNR=18
C22A Vida 42.80 67 ⇑P P 14 03 01.5 +0.2
baz=43
J18A Kendall Valley 42.84 75 ⇑P P 14 03 02.1 +0.1
baz=43,SNR=6.9
DUG Dugway 42.90 81 ⇑P P 14 03 03.1 +0.7
baz=43
B23A Brockton 42.93 66 ⇑P P 14 03 02.6 +0.2
baz=43
D22A Cohagen 42.94 68 ⇑P P 14 03 02.8 +0.3
baz=43,SNR=11
L17A Cokeville 42.96 77 ⇑P P 14 03 03.5 +0.6
baz=43
I19A Meeteetse 42.99 74 ⇑P P 14 03 03.2 +0.1
baz=43
EDW2 Edwards Air Fo 43.01 90 ⇑P P 14 03 03.9 +0.8
baz=43
F21A Absaloka Mine, 43.11 70 ⇑P P 14 03 03.7 -0.2
baz=43
C23A Lambert 43.17 67 ⇑P P 14 03 04.4 +0.1
baz=43,SNR=12
A24A Westby 43.25 65 ⇓P P 14 03 04.9 0.0
baz=43,SNR=9.0
H20A Greybull 43.33 72 ⇓P P 14 03 05.5 -0.2
baz=43
BW06 Boulder Array 43.37 75 ⇑P P 14 03 06.2 0.0
baz=43,SNR=20
PDAR Pinedale Array 43.38 75 P P 14 03 06.4 +0.1
PDAR Pinedale Array 43.38 75 P P 14 03 06.4 +0.1
comp=Z,9.1nm,0.7s,baz=307,slow=3.5,SNR=66
G21A Lodge Grass 43.39 71 ⇑P P 14 03 06.2 0.0
baz=43
J19A Crowheart 43.39 75 ⇑P P 14 03 06.7 +0.3
baz=43,SNR=7.0
SHOC Shoshone 43.41 88 ⇓P P 14 03 07.0 +0.7
baz=43
M17A Scullys Gap (B 43.45 78 ⇓P P 14 03 07.1 +0.2
baz=43
E22A Miles City 43.46 69 ⇓P P 14 03 07.1 +0.4
baz=43
GSC Goldstone 43.47 89 ⇑P P 14 03 07.7 +0.8
baz=43
JNU Nakatsue 43.55 267 P P 14 03 08.0 +0.5
JNU Nakatsue 43.55 267 P P 14 03 08.0 +0.5
comp=Z,4.5nm,0.8s,baz=76,slow=6.7,SNR=3.8
I20A Worland 43.56 73 ⇑P P 14 03 07.8 +0.2
baz=43
K19A Absolon Red Bu 43.77 75 ⇑P P 14 03 09.1 -0.3
baz=44,SNR=17
H21A Big Horn, Sher 43.82 72 ⇑P P 14 03 09.9 +0.2
baz=44,SNR=5.8
L19A Farson 43.88 76 ⇑P P 14 03 10.8 +0.5
baz=44
I21A Big Trails, Te 44.13 73 ⇓P P 14 03 11.8 -0.5
baz=44,SNR=7.7
K20A Yellowstone Ra 44.17 75 ⇓P P 14 03 12.4 -0.2
baz=44
J21A Lysite 44.31 73 ⇓P P 14 03 13.5 -0.1
baz=44
E24A Baker 44.34 68 ⇓P P 14 03 14.0 +0.2
baz=44
N18A Larsen Ranch, 44.35 78 ⇓P P 14 03 13.9 -0.2
baz=44
G23A Biddle 44.47 70 ⇓P P 14 03 14.5 -0.3
baz=44
I22A 9 Mile Ranch, 44.57 72 ⇓P P 14 03 15.7 +0.1
baz=44,SNR=11
F24A Ekalaka 44.66 69 ⇑P P 14 03 16.1 -0.2
baz=44
Q16A Castle Valley 44.68 81 ⇓P P 14 03 17.0 +0.3
baz=44
N19A John Jarvie Ra 44.70 77 ⇓P P 14 03 16.8 0.0
baz=44
P18A Preston Nutter 44.81 79 ⇓P P 14 03 17.7 -0.2
baz=45
K21A Alcova 44.84 74 ⇓P P 14 03 17.3 -0.6
baz=45,SNR=8.6
M20A Sweetwater, Wa 44.95 76 ⇓P P 14 03 18.6 -0.2
baz=45
SRU San Rafael 44.96 80 ⇓P P 14 03 19.2 +0.3
baz=45
G24A Alzada 44.97 69 ⇓P P 14 03 18.5 -0.3
baz=45
O19A Miners Draw (B 45.09 78 ⇑P P 14 03 20.1 +0.2
baz=45
L21A Rawlins 45.16 75 ⇑P P 14 03 20.0 -0.5
baz=45,SNR=10
H24A Dirks Ranch, A 45.22 70 ⇑P P 14 03 20.2 -0.6
baz=45
K22A Casper 45.26 74 ⇓P P 14 03 20.8 -0.4
baz=45,SNR=5.1
N20A Spence Gulch, 45.29 77 ⇓P P 14 03 21.4 -0.2
baz=45
M21A Separation Pea 45.38 75 ⇓P P 14 03 22.0 -0.2
baz=45,SNR=6.1
W13A Hualapai Mount 45.42 87 ⇓P P 14 03 23.1 +0.5
baz=45
U15A North Rim 45.55 84 ⇑P P 14 03 24.1 +0.4
baz=45
P19A Cripple Cowboy 45.59 79 ⇓P P 14 03 23.9 0.0
baz=45
L22A Ellis Ranch, M 45.68 74 ⇑P P 14 03 24.9 +0.3
baz=46,SNR=5.5
O20A White River Ci 45.73 78 ⇓P P 14 03 24.8 -0.2
baz=46
K23A Bowen Ranch, D 45.74 73 ⇑P P 14 03 24.8 -0.2
baz=46
N21A Black Mountain 45.79 76 ⇓P P 14 03 25.2 -0.3
baz=46,SNR=5.4
Q19A Hogan Spring (45.83 80 ⇑P P 14 03 25.4 -0.3
baz=46
RSSD Black Hills 45.88 71 eP P 14 03 25.9 -0.3
RSSD pmax pmax
comp=Z,4.0nm,0.6s
RSSD Black Hills 45.88 71 eP P 14 03 25.9 -0.3
comp=Z,3.6nm,0.6s
M22A Cedar Creek Ra 45.96 75 ⇑P P 14 03 26.3 -0.6
baz=46
J24A Dixon Ranch, L 45.97 72 ⇑P P 14 03 26.5 -0.3
baz=46
L23A Garrett 46.07 74 ⇑P P 14 03 27.4 -0.4
baz=46
O21A Pagoda 46.15 77 ⇑P P 14 03 27.8 -0.5
baz=46
S18A Hurst Farm, Bl 46.17 81 ⇑P P 14 03 28.4 -0.2
baz=46
K24A Anderson Ranch 46.24 73 ⇑P P 14 03 29.0 0.0
baz=46
MDND Maddock 46.30 64 ⇓P P 14 03 29.2 0.0
baz=46
N22A Wattenberg Ran 46.41 76 ⇓P P 14 03 30.4 0.0
baz=46,SNR=5.1
M23A Laramie 46.45 75 ⇓P P 14 03 30.3 -0.3
baz=46
N23A Red Feather La 46.66 75 ⇓P P 14 03 32.4 0.0
baz=46,SNR=5.1
O22A Kremmling 46.74 76 ⇓P P 14 03 32.6 -0.5
baz=47
ULM Lac du Bonnet 47.01 59 P P 14 03 34.1 -0.5
ULM Lac du Bonnet 47.01 59 P P 14 03 34.1 -0.5
comp=Z,4.5nm,0.6s,baz=310,slow=7.6,SNR=12
ULM LR LR 14 24 06.5
comp=Z,58nm,19.1s,baz=334,slow=37
S20A Disappointment 47.09 80 ⇓P P 14 03 35.4 -0.4
baz=47,SNR=5.5
Q22A Crested Butte, 47.33 78 ⇓P P 14 03 37.4 -0.2
baz=47
M25A Palm-Egli Farm 47.46 74 ⇓P P 14 03 38.9 +0.4
baz=47
ISCO Idaho Springs 47.53 76 ⇑P P 14 03 39.4 +0.1
baz=47
S21A Coal Bank Pass 47.54 80 ⇓P P 14 03 39.3 0.0
baz=47

R22A **Saguache, Gunn** 47.82 79 ⇓P P 14 03 41.6 +0.1
baz=48
Q23A **Hartsel** 47.95 77 ⇓P P 14 03 42.9 +0.3
baz=48
S22A **4UR Ranch, Cre** 48.08 79 ⇓P P 14 03 43.9 +0.4
baz=48
AGMN **Agassiz Nation** 48.12 61 *e*P P 14 03 42.3 -1.0
comp=Z,20nm,1.3s
N26A **Koester Ranch,** 48.33 74 ⇓P P 14 03 45.5 +0.4
baz=48
TLY **Talaya** 48.37 304 *e*P P 14 03 43.7 -1.5
TLY pmax pmax
comp=Z,3.0nm,0.7s
M27A **Reverse DX Ran** 48.40 72 ⇑P P 14 03 45.3 -0.3
baz=48
U21A **Nageezi** 48.41 81 ⇑P P 14 03 46.0 0.0
baz=48
T22A **Edith** 48.50 80 ⇑P P 14 03 46.6 -0.1
baz=48
P25A **Willow Gulch B** 48.58 76 ⇑P P 14 03 47.5 +0.4
baz=48
N27A **Anderson Farm,** 48.75 73 ⇓P P 14 03 48.5 +0.1
baz=49
R24A **Sanders Place,** 48.82 78 ⇑P P 14 03 49.2 +0.1
baz=49
OGNE **Ogallala** 48.97 73 ⇓P P 14 03 50.2 +0.2
baz=49
P26A **Davis Ranch, A** 49.05 75 ⇑P P 14 03 51.0 +0.3
baz=49,SNR=7.2
X20A **Quemado** 49.13 84 ⇓P P 14 03 51.5 0.0
baz=49
S24A **Houchin Ranch,** 49.13 78 ⇑P P 14 03 51.8 +0.2
baz=49
SONM **Songino Array** 49.13 299 P P 14 03 51.9 +0.7
SONM **Songino Array** 49.13 299 P P 14 03 51.9 +0.7
comp=Z,1.9nm,0.4s,baz=66,slow=6.4,SNR=6.3
S25A **Robets Cordova** 49.59 78 ⇓P P 14 03 55.2 +0.2
baz=49
T24A **Torres, Weston** 49.59 79 ⇓P P 14 03 55.5 +0.4
baz=49
Y20A **Horse Springs,** 49.62 84 ⇑P P 14 03 55.8 +0.5
baz=50
X21A **Alamocita Cree** 49.63 83 ⇓P P 14 03 56.0 +0.6
baz=50
R26A **Arlington** 49.78 76 ⇓P P 14 03 56.8 +0.5
baz=50
KSCO **Kaye Shedlock'** 49.82 75 ⇑P P 14 03 57.0 +0.4
baz=50
T25A **Trinidad** 49.94 78 ⇑P P 14 03 57.9 +0.2
baz=50,SNR=6.2
X22A **Bernardo** 50.07 83 ⇓P P 14 03 59.7 +1.1
baz=50
R27A **Eads** 50.18 76 ⇑P P 14 03 59.7 +0.4
baz=50
S26A **Kim** 50.20 77 ⇑P P 14 03 59.4 -0.1
baz=50,SNR=5.9
V24A **Rampart Ranch,** 50.34 80 ⇑P P 14 04 01.2 +0.5
baz=50
T26A **Comanche Natio** 50.42 78 ⇑P P 14 04 01.5 +0.2
baz=50
U25A **Circle Dot Ran** 50.42 79 ⇑P P 14 04 01.6 +0.4
baz=50
HHC **Hu-ho-hao-te** 50.43 289 *e*P P 14 03 59.6 -1.6
HHC pP **pP** 14 04 15.2 +0.1
HHC sP **sP** 14 04 22.4 +1.4
HHC PP **PP** 14 05 57.2 +0.3
HHC S **S** 14 11 06.6 -4.2
HHC sS **sS** 14 11 34.4 +0.2
HHC SS **SS** 14 14 38.1 -6.5
HHC pmax pmax
comp=Z,21nm,1.0s
HHC pmax pmax
comp=Z,180nm,6.7s
HHC LR LR
comp=N,130nm,17.3s
HHC LR LR
comp=E,240nm,16.8s
HHC LR LR
comp=Z,170nm,17.6s
Y22A **Socorro** 50.48 83 ⇓P P 14 04 01.8 +0.1
baz=50
W24A **Lazy 6 Ranch,** 50.59 81 ⇓P P 14 04 02.7 +0.1
baz=50
V25A **Rancho No Teng** 50.66 80 ⇑P P 14 04 03.5 +0.4
baz=50
U26A **Atchley Ranch,** 50.83 78 ⇓P P 14 04 04.4 0.0
baz=51
BGNE **Belgrade** 50.97 70 ⇑P P 14 04 04.8 -0.3
baz=51
Y23A **Lovelace Mesa,** 51.04 82 ⇑P P 14 04 06.5 +0.5
baz=51
W25A **X Bar L Ranch,** 51.17 80 ⇓P P 14 04 07.4 +0.6
baz=51
V26A **Tequesquite Ra** 51.20 79 ⇓P P 14 04 07.2 +0.1
baz=51,SNR=5.4
T28A **Walsh** 51.35 77 ⇑P P 14 04 08.5 +0.4
baz=51
Y24A **Capitan** 51.43 82 ⇓P P 14 04 09.1 +0.2
baz=51,SNR=6.9
Z24A **Sheeppen Canyo** 51.87 83 ⇑P P 14 04 12.6 +0.4
baz=52
Y25A **Mesa, Roswell** 51.89 81 ⇑P P 14 04 12.5 +0.3
baz=52
Z25A **Roswell** 52.30 82 ⇑P P 14 04 15.3 0.0
baz=52
224A **Cornudas Mount** 52.62 84 ⇓P P 14 04 17.7 -0.1
baz=52
125A **Gardner Draw,** 52.76 83 ⇑P P 14 04 19.1 +0.5
baz=53
Z26A **Caprock** 52.76 82 ⇑P P 14 04 18.7 0.0
baz=53
T31A **Randall Ranch,** 52.84 75 ⇓P P 14 04 19.1 0.0
baz=53
MNTX **Cornudas Mount** 52.97 84 ⇑P P 14 04 20.3 +0.2
baz=53
325A **Bean Ranch, Si** 53.45 84 ⇓P P 14 04 23.7 -0.2
baz=53
226B **Tecolote Peak,** 53.46 83 ⇑P P 14 04 23.9 +0.1
baz=53
425A **Indio Mountain** 53.84 85 ⇑P P 14 04 26.7 0.0
baz=54
128A **Castleberry Fa** 54.13 81 ⇑P P 14 04 28.4 -0.2
baz=54
Z29A **Hungry Hill Ra** 54.17 80 ⇓P P 14 04 28.9 0.0
baz=54
Y30A **Stafford Cattl** 54.25 79 ⇑P P 14 04 29.3 -0.2
baz=54
Z30A **Sanderson Ranc** 54.51 80 ⇑P P 14 04 31.1 -0.2
baz=54
426A **McDonald Obser** 54.52 84 ⇑P P 14 04 31.4 -0.3
baz=54
328A **Wristen Ranch,** 54.78 82 ⇑P P 14 04 33.0 -0.3
baz=55
526A **Mary Lane Ranc** 54.90 85 ⇑P P 14 04 34.4 0.0
baz=55
Y32A **R-V Farms, Ver** 55.05 78 ⇓P P 14 04 35.0 -0.2
baz=55
626A **Big Bend Ranch** 55.23 85 ⇑P P 14 04 36.6 -0.1
baz=55
428A **Kincaid Ranch,** 55.31 83 ⇓P P 14 04 37.2 0.0
baz=55
Z32A **Haskell** 55.50 78 ⇓P P 14 04 38.2 -0.2
baz=55
528A **Cox Ranch, San** 55.64 83 ⇑P P 14 04 39.3 -0.3
baz=56
TXAR **Lajitas Array** 55.67 85 P P 14 04 39.3 -0.6
TXAR **Lajitas Array** 55.67 85 P P 14 04 39.3 -0.6
comp=Z,2.2nm,0.8s,baz=303,slow=5.2,SNR=12
627A **Terlingua Ranc** 55.76 85 ⇓P P 14 04 40.6 +0.1
baz=56
429A **Davenport Ranc** 55.87 82 ⇑P P 14 04 40.9 -0.3
baz=56
ZALV **Zalesovo Beam** 55.93 316 P P 14 04 40.5 -0.7
ZALV 14 05 39.5
ZALV MLR MLR
comp=Z,35nm,18.8s
ZALV **Zalesovo Beam** 55.93 316 P P 14 04 40.5 -0.7
ZALV PcP **PcP** 14 05 39.5 +0.3
ZALV **Zalesovo Beam** 55.93 316 P P 14 04 40.5 -0.7
comp=Z,0.4nm,0.3s,baz=48,slow=8.4,SNR=3.0
ZALV PcP **PcP** 14 05 39.5 +0.3
comp=Z,5.0nm,0.6s,baz=38,slow=4.2,SNR=22
ZALV LR LR 14 32 23.2
comp=Z,35nm,18.8s,baz=68,slow=40
TUL1 **Tulsa** 55.96 74 ⇓P P 14 04 41.0 -0.7
baz=56
628A **Black Gap, Mar** 56.05 84 ⇑P P 14 04 42.3 -0.2
baz=56
331A **San Angelo** 56.30 81 ⇓P P 14 04 43.8 -0.4
baz=56
530A **J-C Ranch, Com** 56.54 82 ⇑P P 14 04 45.6 -0.4
baz=56
431A **Sonora** 56.62 81 ⇑P P 14 04 46.4 -0.1
baz=56
332A **Millersview** 56.66 80 ⇑P P 14 04 46.8 0.0
baz=56
532A **Rocksprings** 57.44 81 ⇑P P 14 04 52.1 -0.3
baz=57
SCHQ **Schefferville** 57.88 41 P P 14 04 54.0 -1.0
SCHQ **Schefferville** 57.88 41 P P 14 04 54.0 -1.0
comp=Z,5.6nm,0.8s,baz=320,slow=5.9,SNR=7.0
SCHQ LR LR 14 29 22.2
comp=Z,76nm,18.0s,baz=52,slow=36
632A **Uvalde** 57.95 82 ⇑P P 14 04 55.7 -0.2
baz=58
SFIN **Scholer Farm** 57.98 64 ⇓P P 14 04 55.6 -0.3
baz=58
GTA **Gaotai** 58.17 295 *e*P P 14 04 57.5 0.0
GTA pP **pP** 14 05 10.4 -1.2
GTA sP **sP** 14 05 15.6 -1.9
GTA pmax pmax
comp=Z,5.0nm,1.5s
MIAR **Mount Ida** 58.21 73 *e*P P 14 04 56.9 -0.7
MIAR pmax pmax
comp=Z,27nm,1.1s
MIAR **Mount Ida** 58.21 73 *e*P P 14 04 56.9 -0.7
comp=Z,27nm,1.1s
ARCES **ARCESS Array B** 58.25 352 P P 14 04 56.7 -0.7
ARCES PcP **PcP** 14 05 48.0 -0.1
ARCES **ARCESS Array B** 58.25 352 P P 14 04 56.7 -0.7
comp=Z,2.8nm,0.4s,baz=31,slow=7.4,SNR=42
ARCES PcP **PcP** 14 05 48.0 -0.1
comp=Z,9.1nm,0.7s,baz=2.8,slow=5.0,SNR=11
ARE0 **ARCESS Array S** 58.25 352 *e*P P 14 04 56.5 -0.8
ARE0 *e*PcP **PcP** 14 05 48.2 +0.1
732A **Laxson Ranch,** 58.38 83 ⇓P P 14 04 59.0 +0.1
baz=58
WCI **Wyandotte Cave** 59.90 65 *e*P P 14 05 08.3 -1.0
WCI pmax pmax
comp=Z,12nm,0.8s
WCI **Wyandotte Cave** 59.90 65 *e*P P 14 05 08.3 -1.0
comp=Z,12nm,0.8s
KURK **Kurchatov** 60.91 316 ⇓*e*P P 14 05 15.4 -0.6
KURK pmax pmax
comp=Z,7.0nm,0.7s
KURK **Kurchatov** 60.91 316 *e*P P 14 05 15.4 -0.6
comp=Z,5.8nm,0.6s
KURBB **Kurchatov Arra** 61.02 316 LR LR 14 35 33.5
comp=Z,38nm,18.6s,baz=170,slow=40
WMQ **Urumqi** 61.62 305 P P 14 05 22.4 +1.4
WMQ pmax pmax
comp=Z,16nm,1.0s
MK31 **Makanchi Array** 62.12 311 *c e*P P 14 05 22.9 -1.3
MK31 pmax pmax
comp=Z,1.0nm,0.2s
MK31 **Makanchi Array** 62.12 311 *e*P P 14 05 23.2 -1.1
MKAR **Makanchi Array** 62.12 311 P P 14 05 23.1 -1.2
MKAR 14 06 04.1
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR MLR MLR
comp=Z,42nm,20.3s
MKAR **Makanchi Array** 62.12 311 P P 14 05 23.1 -1.2
MKAR PcP **PcP** 14 06 04.1 +0.1
MKAR **Makanchi Array** 62.12 311 P P 14 05 23.1 -1.2
comp=Z,1.4nm,0.3s,baz=47,slow=6.3,SNR=56
MKAR PcP **PcP** 14 06 04.1 +0.1
comp=Z,1.1nm,0.5s,baz=46,slow=4.2,SNR=5.7
MKAR LR LR 14 32 16.6
comp=Z,42nm,20.3s,baz=105,slow=36
BVAR **Borovoye Array** 62.52 322 P P 14 05 26.5 -0.3
BVAR pmax pmax
comp=Z,4.0nm,0.5s
BVAR MLR MLR
comp=Z,69nm,20.5s
BVAR **Borovoye Array** 62.52 322 P P 14 05 26.5 -0.3
BVAR **Borovoye Array** 62.52 322 P P 14 05 26.5 -0.3
comp=Z,3.9nm,0.5s,baz=51,slow=7.3,SNR=37
BVAR LR LR 14 34 24.5
comp=Z,69nm,20.5s,baz=84,slow=38
BRVK **Borovoye** 62.54 322 ⇓*e*P P 14 05 26.8 -0.1
BRVK pmax pmax
comp=Z,7.0nm,2.5s
BRVK **Borovoye** 62.54 322 *e*P P 14 05 26.4 -0.5
comp=Z,1.8nm,0.5s
BINY **Binghamton** 62.69 56 *e*P P 14 05 27.9 -0.2
comp=Z,30nm,0.9s
GYA **Guiyang** 63.22 279 *e*P P 14 05 33.0 +1.0
GYA pmax pmax
comp=Z,10.0nm,1.0s
ARU **Arti** 63.85 331 *c i*P P 14 05 34.9 -0.6
ARU 14 07 55.2
ARU S **S** 14 14 06.0 -0.5
ARU pmax pmax
comp=Z,4.0nm,0.6s
KLMR **Klimovskoe** 64.63 343 P P 14 05 35.3 -5.2
KLMR pmax pmax
comp=Z,8.0nm,1.3s
KMSC **Kings Mountain** 64.90 65 ⇓P P 14 05 42.8 +0.1
baz=65
FINES **FINESS Array B** 66.08 350 P P 14 05 49.0 -0.9
FINES PcP **PcP** 14 06 19.6 -0.4
FINES **FINESS Array B** 66.08 350 P P 14 05 49.0 -0.9
comp=Z,6.5nm,0.6s,baz=24,slow=7.8,SNR=21
FINES PcP **PcP** 14 06 19.6 -0.4
comp=Z,3.9nm,0.9s,baz=72,slow=6.2,SNR=4.3
KMI **Kunming** 66.60 281 P P 14 05 54.9 +0.8
KMI pmax pmax
comp=Z,11nm,0.9s
NB2 **NORSAR Subarra** 67.55 357 P P 14 05 58.6 -0.7
comp=Z,2.2nm,0.7s,baz=3.1,slow=6.5
NOA **NORSAR Array B** 67.55 357 P P 14 05 58.9 -0.4
NOA **NORSAR Array B** 67.55 357 P P 14 05 58.9 -0.4
comp=Z,2.7nm,0.8s,baz=2.4,slow=6.4,SNR=12
TKM2 **Tokmak 2** 68.16 312 *e*P P 14 06 03.8 +0.1
TKM2 **Tokmak 2** 68.16 312 *e*P P 14 06 03.8 +0.1
AAK **Ala-Archa** 68.90 313 *c i*P P 14 06 08.1 -0.1
AAK pmax pmax
comp=Z,15nm,1.0s
AAK **Ala-Archa** 68.90 313 *e*P P 14 06 07.6 -0.6
comp=Z,19nm,0.6s
AAK **Ala-Archa** 68.90 313 P P 14 06 08.4 +0.2
comp=Z,3.8nm,0.5s,baz=113,slow=2.5,SNR=18
AKTO **Aktyubinsk** 69.09 327 P P 14 06 09.0 -0.1
AKTO **Aktyubinsk** 69.09 327 P P 14 06 09.0 -0.1
AKTO **Aktyubinsk** 69.09 327 P P 14 06 09.0 -0.1
AB31 **Akbulak array** 69.43 326 *c e*P P 14 06 10.5 -0.6
AB31 pmax pmax
comp=Z,2.0nm,0.3s
ABKAR **Akbulak array** 69.43 326 *e*P P 14 06 10.7 -0.5
comp=Z,2.1nm,0.4s
ABKAR *e*PcP **PcP** 14 06 33.8 -0.4
LSA **Lhasa** 70.10 293 P P 14 06 17.4 +1.2
KKAR **Karatay Array** 70.31 315 *e*P P 14 06 15.7 -1.0
KKAR pmax pmax
comp=Z,5.0nm,0.7s
KKAR **Karatay Array** 70.31 315 *e*P P 14 06 15.7 -1.0
comp=Z,5.5nm,0.7s
OBN **Obninsk** 70.57 342 *i*P P 14 06 17.1 -0.9
OBN *e* 14 08 54.7
OBN *e*S **S** 14 15 28.7 +1.5
OBN pmax pmax
comp=Z,39nm,1.8s
KSH **Kashi** 70.64 310 P P 14 06 22.0 +3.0
KSH pP **pP** 14 06 35.0 +1.5
KSH sP **sP** 14 06 41.0 +1.7
KSH PcP **PcP** 14 06 43.0 +3.3
KSH PP PP 14 09 02.0 +6.7
KSH S **S** 14 15 33.0 +4.0
KSH sS **sS** 14 15 54.9 +1.5
KSH SKS **SKSac** 14 16 16.1 -0.5
KSH ScS **ScS** 14 16 19.0 +1.0
KSH pmax pmax
comp=Z,12nm,0.5s
KSH pmax pmax
comp=Z,11nm,0.6s
KSH LR LR
comp=N,160nm,6.8s
KSH LR LR
comp=E,78nm,3.5s
KSH LR LR
comp=Z,330nm,5.4s
VRHR **Novokhopersk** 73.23 337 *e*P P 14 06 32.5 -1.6
VRHR pmax pmax
comp=Z,10.0nm,0.7s
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,5.0nm,0.5s
VSR **Storozhevoye** 73.69 339 *e*P P 14 06 36.3 -0.4
VSR pmax pmax
comp=Z,20nm,0.5s
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,2.0nm,0.4s
TAPN **Taplejung** 73.84 294 *e*P P 14 06 38.6 +0.2
comp=E,40nm,0.7s
VORD **Divnogorie** 73.89 339 *e*P P 14 06 37.4 -0.5
VORD pmax pmax
comp=Z,10.0nm,0.4s
VORD pmax pmax
comp=N,10.0nm,1.0s
VORD pmax pmax
comp=E,8.0nm,0.6s
CMAR **Chiang Mai Arr** 73.91 279 P P 14 06 39.1 +0.6
CMAR **Chiang Mai Arr** 73.91 279 P P 14 06 39.1 +0.6
comp=E,2.4nm,0.8s,baz=28,slow=7.0,SNR=17
GUN **Gumba** 74.45 295 *e*P P 14 06 42.6 +0.6
comp=E,43nm,0.5s
RAMN **Ramite** 74.78 294 *e*P P 14 06 44.2 +0.4
comp=E,71nm,0.6s
KKN **Kakani** 74.88 296 *e*P P 14 06 44.8 +0.4
comp=E,22nm,0.7s
PKI **Pulchoki** 74.98 295 *e*P P 14 06 45.2 +0.1
PKIN **Phulchoki** 74.98 295 *e*P P 14 06 47.2 +2.2
comp=E,10nm,0.7s
DMN **Daman** 75.12 296 *e*P P 14 06 46.5 +0.7
DANN **Dangsing** 75.30 297 *e*P P 14 06 47.2 +0.4
comp=E,64nm,0.7s
KOLN **Koldanda** 75.83 297 *e*P P 14 06 50.1 +0.3
PYUN **Piuthan** 75.92 297 *e*P P 14 06 50.4 +0.1
comp=E,43nm,0.8s
AKASG **Malin Array Be** 76.10 345 P P 14 06 49.3 -1.4
AKASG pmax pmax
comp=Z,9.0nm,0.4s
AKASG **Malin Array Be** 76.10 345 P P 14 06 49.2 -1.4
AKASG **Malin Array Be** 76.10 345 P P 14 06 49.2 -1.4
comp=Z,8.6nm,0.4s,baz=17,slow=6.0,SNR=27
KIEV **Kiev** 76.11 345 *e*P P 14 06 49.1 -1.6
KIEV pmax pmax
comp=Z,12nm,0.4s
KIEV **Kiev** 76.11 345 *e*P P 14 06 49.1 -1.6
comp=Z,12nm,0.4s
AK01 **Malin Array Si** 76.11 345 *e*P P 14 06 49.2 -1.5
AK02 **Malin Array Si** 76.14 345 *e*P P 14 06 49.5 -1.4
CLL **Collm** 77.21 355 ⇑*i*P P 14 06 56.4 -0.5
CLL pmax pmax
comp=Z,11nm,0.6s
CLL **Collm** 77.21 355 ⇑*i*P P 14 06 56.4 -0.5
comp=Z,11nm,0.6s
BRG **Berggiesshubel** 77.59 355 *i* P P 14 06 58.8 -0.3
comp=Z,11nm,0.6s
BRG **Berggiesshubel** 77.59 355 *i* P P 14 06 58.8 -0.3
BRG pmax pmax
comp=Z,11nm,0.6s
UPC **Upice** 77.83 353 *e*P P 14 07 00.4 0.0
PVCC **Panska Ves** 77.90 354 *e*P P 14 07 00.9 +0.1
DPC **Dobruska-Polom** 77.96 353 *e*P P 14 07 01.4 +0.2
KWP **Kalwaria Pacla** 78.06 349 ⇓P P 14 07 01.7 0.0
KWP **Kalwaria Pacla** 78.06 349 ⇓*i*P P 14 07 01.7 0.0
NKC **Novy Kostel** 78.31 356 *e*P P 14 07 03.2 +0.1
MORC **Moravsky Berou** 78.44 352 ⇓P P 14 07 03.6 -0.2
MORC **Moravsky Berou** 78.44 352 ⇓*i*P P 14 07 03.6 -0.2
PRU **Pruhonice** 78.44 354 *e*P P 14 07 03.5 -0.3
GIVF **Givet** 78.59 1 *e*P P 14 07 04.5 -0.1
GIVF **Givet** 78.59 1 *e*P P 14 07 04.5 -0.1
GIVF **Givet** 78.59 1 *e*P P 14 07 04.5 -0.1
BAIF **Baives** 78.62 1 *e*P P 14 07 04.7 -0.1
BAIF **Baives** 78.62 1 *e*P P 14 07 04.7 -0.1
BAIF **Baives** 78.62 1 *e*P P 14 07 04.7 -0.1
KOLS **Kolonicke sedl** 78.80 349 *e*P P 14 07 05.5 -0.3
CRVS **Cervenica-Dubn** 78.92 350 *e*P P 14 07 07.5 +1.0
TREC **Trest** 79.07 354 *e*P P 14 07 07.2 -0.1
TREC **Trest** 79.07 354 *e*P P 14 07 07.2 -0.1
KHC **Kasperske Hory** 79.35 355 *e*P P 14 07 08.8 -0.1
TRPA **Tarpa** 79.55 349 ⇓*i*P P 14 07 10.0 +0.1
KIV **Kislovodsk** 79.57 334 *e*P P 14 07 10.5 +0.3
KIV pmax pmax
comp=Z,7.0nm,0.9s
VYHS **Vyhne** 79.59 351 *e*P P 14 07 09.6 -0.6
GERES **GERESS Array B** 79.63 355 P P 14 07 10.3 -0.1
GERES **GERESS Array B** 79.63 355 P P 14 07 10.3 -0.1
comp=Z,3.8nm,0.6s,baz=15,slow=5.5,SNR=27
BUR08 **Bucovina Ar. S** 79.68 347 *e*P P 14 07 10.1 -0.7
KBZ **Khabaz** 79.72 334 P P 14 07 11.7 +0.8
KBZ pmax pmax
comp=Z,2.0nm,0.3s
KBZ **Khabaz** 79.72 334 P P 14 07 11.7 +0.8
KBZ **Khabaz** 79.72 334 P P 14 07 11.7 +0.8
comp=Z,2.1nm,0.3s,baz=203,slow=5.9,SNR=4.6
FLN **La Foliniere** 79.78 4 *e*P P 14 07 09.9 -1.2
FLN **La Foliniere** 79.78 4 *e*P P 14 07 09.9 -1.2
FLN **La Foliniere** 79.78 4 *e*P P 14 07 09.9 -1.2
LDF **La Druitiere** 79.97 4 *e*P P 14 07 11.5 -0.6
LDF **La Druitiere** 79.97 4 *e*P P 14 07 11.5 -0.6
LDF **La Druitiere** 79.97 4 *e*P P 14 07 11.5 -0.6
GRR **Gorron** 80.14 5 *e*P P 14 07 12.6 -0.4
GRR **Gorron** 80.14 5 *e*P P 14 07 12.6 -0.4
GRR **Gorron** 80.14 5 *e*P P 14 07 12.6 -0.4
PAGF **Fort de Pagny** 80.14 0 ⇑*i*P P 14 07 13.5 +0.4
comp=Z,12nm,0.6s
PAGF **Fort de Pagny** 80.14 0 ⇑*i*P P 14 07 13.5 +0.4
comp=Z,12nm,0.6s
CDF **Champ du Feu** 80.28 359 ⇑*i*P P 14 07 13.8 -0.1
comp=Z,20nm,0.6s
CDF **Champ du Feu** 80.28 359 ⇑*i*P P 14 07 13.8 -0.1
CDF pmax pmax
comp=Z,20nm,0.6s
CDF **Champ du Feu** 80.28 359 ⇑*i*P P 14 07 13.8 -0.1
comp=Z,20nm,0.6s
CONA **Conrad Observa** 80.40 353 ⇑*i*P P 14 07 14.5 -0.1
comp=Z,6.1nm,0.5s
CONA **Conrad Observa** 80.40 353 ⇑*i*P P 14 07 14.5 -0.1
comp=Z,6.1nm,0.5s
SFTF **Sexfontaines** 80.49 1 ⇑*i*P P 14 07 14.9 -0.1
comp=Z,30nm,0.7s
SFTF **Sexfontaines** 80.49 1 ⇑*i*P P 14 07 14.9 -0.1
comp=Z,30nm,0.7s
TESR 80.58 346 ⇓*i*P P 14 07 17.1 +1.6
HAU **Haudompre** 80.69 360 ⇑*i*P P 14 07 15.9 -0.2
comp=Z,20nm,0.6s
HAU **Haudompre** 80.69 360 ⇑*i*P P 14 07 15.9 -0.2
HAU pmax pmax
comp=Z,20nm,0.6s
HAU **Haudompre** 80.69 360 ⇑*i*P P 14 07 15.9 -0.2
comp=Z,20nm,0.6s
HINF **Hinteralfeld** 80.88 359 ⇑*i*P P 14 07 16.8 -0.3
comp=Z,17nm,0.5s
HINF **Hinteralfeld** 80.88 359 ⇑*i*P P 14 07 16.8 -0.3
HINF pmax pmax
comp=Z,17nm,0.5s
HINF **Hinteralfeld** 80.88 359 ⇑*i*P P 14 07 16.8 -0.3
comp=Z,17nm,0.5s
VRI **Vrincioaia** 81.19 345 ⇓P P 14 07 18.8 0.0
VRI **Vrincioaia** 81.19 345 ⇓*i*P P 14 07 18.8 0.0
LOR **Lormes** 81.41 1 ⇑*i*P P 14 07 19.5 -0.4
comp=Z,18nm,0.7s
LOR **Lormes** 81.41 1 ⇑*i*P P 14 07 19.5 -0.4
comp=Z,18nm,0.7s
KBA **Koelnbreinsper** 81.41 355 ⇑*i*P P 14 07 20.5 +0.4
KBA pmax pmax
comp=Z,16nm,0.5s
KBA **Koelnbreinsper** 81.41 355 ⇑*i*P P 14 07 20.5 +0.4
comp=Z,16nm,0.5s
KBA **Koelnbreinsper** 81.41 355 ⇑*i*P P 14 07 20.5 +0.4
comp=Z,16nm,0.5s
TLCR 81.51 344 ⇑P P 14 07 20.7 +0.3
TLCR 81.51 344 ⇑*i*P P 14 07 20.7 +0.3
FETA **Feichten** 81.59 357 ⇓*i*P P 14 07 21.0 -0.1
comp=Z,5.3nm,0.7s
FETA **Feichten** 81.59 357 ⇓*i*P P 14 07 21.0 -0.1
comp=Z,5.3nm,0.7s
SSF **Saint Saulge** 81.61 2 ⇑*i*P P 14 07 20.9 -0.1
comp=Z,18nm,0.6s
SSF **Saint Saulge** 81.61 2 ⇑*i*P P 14 07 20.9 -0.1
SSF pmax pmax
comp=Z,18nm,0.6s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SSF	Saint Saulge	81.61	2	⇑iP	P	14 07 20.9	-0.1
	comp=Z,18nm,0.6s						
CFR	Carcaliu	81.63	344	⇓P	P	14 07 21.2	+0.1
CFR	Carcaliu	81.63	344	⇓iP	P	14 07 21.2	+0.1
SOKA	Soboth	81.71	354	⇑iP	P	14 07 21.6	0.0
	comp=Z,7.1nm,0.7s						
SOKA	Soboth	81.71	354	⇑iP	P	14 07 21.6	0.0
	comp=Z,7.1nm,0.7s						
AVF	Avril sur Loir	81.88	2	⇑iP	P	14 07 22.1	-0.3
	comp=Z,14nm,0.6s						
AVF	Avril sur Loir	81.88	2	⇑iP	P	14 07 22.1	-0.3
AVF				pmax	pmax		
	comp=Z,14nm,0.6s						
AVF	Avril sur Loir	81.88	2	⇑iP	P	14 07 22.1	-0.3
	comp=Z,14nm,0.6s						
OBKA	Obir	81.91	354	⇑iP	P	14 07 22.5	-0.1
	comp=Z,7.6nm,0.6s						
OBKA	Obir	81.91	354	⇑iP	P	14 07 22.5	-0.1
	comp=Z,7.6nm,0.6s						
MFF	Saint Martin d	81.95	4	eP	P	14 07 22.0	-0.7
MFF	Saint Martin d	81.95	4	eP	P	14 07 22.0	-0.7
MFF	Saint Martin d	81.95	4	eP	P	14 07 22.0	-0.7
ARR	Arges	81.99	347	⇑iP	P	14 07 22.0	-1.1
SMF	Signal de Mont	82.03	1	⇑iP	P	14 07 23.0	-0.2
	comp=Z,32nm,0.9s						
SMF	Signal de Mont	82.03	1	⇑iP	P	14 07 23.0	-0.2
SMF				pmax	pmax		
	comp=Z,32nm,0.9s						
SMF	Signal de Mont	82.03	1	⇑iP	P	14 07 23.0	-0.2
	comp=Z,32nm,0.9s						
CABF	La Chapelle	82.08	360	⇑iP	P	14 07 23.9	+0.3
	comp=Z,25nm,0.7s						
CABF	La Chapelle	82.08	360	⇑iP	P	14 07 23.9	+0.3
CABF				pmax	pmax		
	comp=Z,25nm,0.7s						
CABF	La Chapelle	82.08	360	⇑iP	P	14 07 23.9	+0.3
	comp=Z,25nm,0.7s						
BGF	Bois d'Agland	82.10	2	eP	P	14 07 23.5	0.0
	comp=Z,8.5nm,0.5s						
BGF	Bois d'Agland	82.10	2	eP	P	14 07 23.5	0.0
BGF				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BGF	Bois d'Agland	82.10	2	eP	P	14 07 23.5	0.0
	comp=Z,8.5nm,0.5s						
BZS	Buzias	82.14	349	⇓P	P	14 07 23.4	-0.4
BZS	Buzias	82.14	349	⇓iP	P	14 07 23.4	-0.4
TIRR	Tirgusor	82.29	344	⇑P	P	14 07 24.7	+0.2
TIRR	Tirgusor	82.29	344	⇑iP	P	14 07 24.7	+0.2
TCF	Toulx Ste Croi	82.35	3	⇑iP	P	14 07 24.5	-0.4
	comp=Z,6.1nm,0.5s						
TCF	Toulx Ste Croi	82.35	3	⇑iP	P	14 07 24.5	-0.4
TCF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TCF	Toulx Ste Croi	82.35	3	⇑iP	P	14 07 24.5	-0.4
	comp=Z,6.1nm,0.5s						
LPG	La Plagne	83.19	359	eP	P	14 07 29.5	-0.1
LPG	La Plagne	83.19	359	eP	P	14 07 29.5	-0.1
LPG	La Plagne	83.19	359	eP	P	14 07 29.5	-0.1
ORIF	Oris-en-Rattie	83.78	0	eP	P	14 07 31.7	-0.7
	comp=Z,6.9nm,0.6s						
ORIF	Oris-en-Rattie	83.78	0	eP	P	14 07 31.7	-0.7
ORIF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ORIF	Oris-en-Rattie	83.78	0	eP	P	14 07 31.7	-0.7
	comp=Z,6.9nm,0.6s						
VIVF	Saint-Julien-l	83.83	1	eP	P	14 07 32.8	+0.2
VIVF	Saint-Julien-l	83.83	1	eP	P	14 07 32.8	+0.2
VIVF	Saint-Julien-l	83.83	1	eP	P	14 07 32.8	+0.2
MBDF	Montbardon	83.97	359	eP	P	14 07 33.3	-0.1
	comp=Z,14nm,0.6s						
MBDF	Montbardon	83.97	359	eP	P	14 07 33.3	-0.1
MBDF				pmax	pmax		
	comp=Z,14nm,0.6s						
MBDF	Montbardon	83.97	359	eP	P	14 07 33.3	-0.1
	comp=Z,14nm,0.6s						
WRA	Warramunga Arr	84.36	228	P	P	14 07 34.6	-0.7
WRA	Warramunga Arr	84.36	228	P	P	14 07 34.6	-0.7
	comp=Z,1.4nm,0.7s,baz=31,slow=5.8,SNR=18						
SMRF	Simiane la Rot	84.72	0	eP	P	14 07 37.1	0.0
	comp=Z,27nm,0.9s						
SMRF	Simiane la Rot	84.72	0	eP	P	14 07 37.1	0.0
	comp=Z,27nm,0.9s						
SBF	Sospel	84.82	359	eP	P	14 07 37.6	-0.1
	comp=Z,69nm,1.1s						
SBF	Sospel	84.82	359	eP	P	14 07 37.6	-0.1
SBF				pmax	pmax		
	comp=Z,69nm,1.1s						
SBF	Sospel	84.82	359	eP	P	14 07 37.6	-0.1
	comp=Z,69nm,1.1s						
VTS	Vitosha	84.91	347	⇓P	P	14 07 38.0	-0.2
VTS	Vitosha	84.91	347	⇓iP	P	14 07 38.0	-0.2
FRF	La Foret Royal	85.13	359	eP	P	14 07 39.2	+0.1
	comp=Z,12nm,0.5s						
FRF	La Foret Royal	85.13	359	eP	P	14 07 39.2	+0.1
FRF				pmax	pmax		
	comp=Z,12nm,0.4s						
FRF	La Foret Royal	85.13	359	eP	P	14 07 39.2	+0.1
	comp=Z,12nm,0.4s						
MTLF	Montolieu	85.30	3	eP	P	14 07 40.2	+0.2
	comp=Z,8.7nm,0.6s						
MTLF	Montolieu	85.30	3	eP	P	14 07 40.2	+0.2
MTLF				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MTLF	Montolieu	85.30	3	eP	P	14 07 40.2	+0.2
	comp=Z,8.7nm,0.6s						
LMR	La Mourre	85.36	360	eP	P	14 07 40.5	+0.3
	comp=Z,29nm,0.8s						
LMR	La Mourre	85.36	360	eP	P	14 07 40.5	+0.3
LMR				pmax	pmax		
	comp=Z,29nm,0.8s						
LMR	La Mourre	85.36	360	eP	P	14 07 40.5	+0.3
	comp=Z,29nm,0.8s						
SJPF	Ste Jean	85.38	5	eP	P	14 07 40.4	0.0
	comp=Z,8.1nm,0.6s						
SJPF	Ste Jean	85.38	5	eP	P	14 07 40.4	0.0
SJPF				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SJPF	Ste Jean	85.38	5	eP	P	14 07 40.4	0.0
	comp=Z,8.1nm,0.6s						
ETSF	Etsaut	85.63	5	⇑iP	P	14 07 42.1	+0.4
	comp=Z,9.5nm,0.7s						
ETSF	Etsaut	85.63	5	⇑iP	P	14 07 42.1	+0.4
ETSF				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ETSF	Etsaut	85.63	5	⇑iP	P	14 07 42.1	+0.4
	comp=Z,9.5nm,0.7s						
BR131	Keskin Array S	85.81	339	eP	P	14 07 43.0	+0.3
	comp=Z,2.1nm,0.8s						
BRTR	Keskin Array B	85.81	339	P	P	14 07 43.2	+0.4
BRTR	Keskin Array B	85.81	339	P	P	14 07 43.2	+0.4
	comp=Z,2.6nm,0.8s,baz=49,slow=3.4,SNR=14						
PSI	Prapat	85.97	269	LR	LR	14 49 34.8	
	comp=Z,76nm,18.2s,baz=293,slow=38						
PGF	Pioggiola	86.11	358	⇑iP	P	14 07 43.9	-0.2
	comp=Z,18nm,0.7s						
PGF	Pioggiola	86.11	358	⇑iP	P	14 07 43.9	-0.2
PGF				pmax	pmax		
	comp=Z,18nm,0.7s						
PGF	Pioggiola	86.11	358	⇑iP	P	14 07 43.9	-0.2
	comp=Z,18nm,0.7s						
VAY	Valandovo	86.25	348	eP	P	14 07 44.8	+0.2
FITZ	Fitzroy Crossi	87.04	236	P	P	14 07 48.5	-0.2
FITZ	Fitzroy Crossi	87.04	236	P	P	14 07 48.5	-0.2
	comp=Z,3.1nm,0.8s,baz=42,slow=5.1,SNR=9.6						
ASAR	Alice Springs	87.78	226	P	P	14 07 52.1	-0.1
ASAR	Alice Springs	87.78	226	P	P	14 07 52.1	-0.1
	comp=Z,3.2nm,0.7s,baz=28,slow=4.6,SNR=48						
POO	Poona	88.57	298	ex	P	14 07 53.5	-2.8
ESDC	Sonseca Array	88.61	8	P	P	14 07 55.5	-0.6
ESDC	Sonseca Array	88.61	8	P	P	14 07 55.5	-0.6
	comp=Z,0.2nm,0.3s,baz=355,slow=4.2,SNR=4.3						
STKA	Stephens Creek	91.87	217	P	P	14 08 11.2	+0.2
STKA	Stephens Creek	91.87	217	P	P	14 08 11.2	+0.2
	comp=Z,3.0nm,0.9s,baz=332,slow=5.3,SNR=5.2						
TORD	Torodi Ar. Bea	115.33	5	PKP	PKPdf	14 13 43.6	-1.2
TORD	Torodi Ar. Bea	115.33	5	PKP	PKPdf	14 13 43.6	-1.2
	comp=Z,0.3nm,0.4s,baz=340,slow=2.3,SNR=8.2						
DBIC	Dimbokro	121.14	13	PKP	PKPdf	14 13 56.1	+0.1
DBIC	Dimbokro	121.14	13	PKP	PKPdf	14 13 56.1	+0.1
	comp=Z,1.2nm,0.4s,baz=358,slow=6.7,SNR=3.4						
CPUP	Villa Florida	126.62	87	PKP	PKPdf	14 14 05.0	-1.1
CPUP	Villa Florida	126.62	87	PKP	PKPdf	14 14 05.0	-1.1
	comp=Z,0.4nm,0.4s,baz=266,slow=20,SNR=3.3						
PLCA	Paso Flores	128.25	110	PKP	PKPdf	14 14 08.7	-0.2
PLCA	Paso Flores	128.25	110	PKP	PKPdf	14 14 08.7	-0.2
	comp=Z,1.8nm,0.7s,baz=221,slow=2.0,SNR=4.5						
QSPA	South Pole Qui	141.44	180	PKPpre	PKPpre	14 14 24.9	
QSPA				PKP	PKiKP	14 14 34.5	-0.9
QSPA	South Pole Qui	141.44	180	PKhKP	PKPpre	14 14 24.8	
	comp=Z,1.1nm,0.5s,baz=88,slow=2.3,SNR=16						
QSPA				PKP	PKiKP	14 14 34.5	-0.9
	comp=Z,2.0nm,0.6s,baz=276,slow=1.6,SNR=10						
TSUM	Tsumeb	146.32	340	ePKPdf	PKPbc	14 14 43.5	-0.4
MAW	Mawson	148.54	218	PKPbc	PKPbc	14 14 48.4	0.0
MAW	Mawson	148.54	218	PKPbc	PKPbc	14 14 48.4	0.0
	comp=Z,12nm,0.7s,baz=105,slow=4.0,SNR=7.9						
LBTB	Lobatse	149.43	323	ePKPbc	PKPbc	14 14 52.3	+0.2
BOSA	Boshof	152.80	321	PKPbc	PKPbc	14 14 59.6	-0.3
BOSA				PKPab	PKPab	14 15 11.1	+0.1
BOSA	Boshof	152.80	321	PKPbc	PKPbc	14 14 59.6	-0.3
	comp=Z,4.2nm,0.4s,baz=42,slow=1.7,SNR=23						
BOSA				PKPab	PKPab	14 15 11.1	+0.1
	comp=Z,8.0nm,0.8s,baz=28,slow=3.5,SNR=6.0						
VNA2	Neumayer--Watz	159.76	167	eP	PKPab	14 15 39.2	-0.4
	baz=328,slow=4.1						

IDC 08 14:12:11.7±2.1**, 2°.06N**×**127°.70E, h0^{km}, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.3**/21**, mbtmp3.4**/3**, Error ellipse: s-maj=138.8km s-min=26.0km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.82	164	P	P	14 17 16.8	+0.4
	0.9nm,0.5s,baz=344,slow=10,SNR=16						
ASAR	Alice Springs	26.27	167	P	P	14 17 48.4	-0.6
	0.3nm,0.3s,baz=346,slow=7.3,SNR=16						
MKAR	Makanchi Array	59.47	325	P	P	14 22 16.9	+0.3
	0.1nm,0.4s,baz=125,slow=7.1,SNR=4.5						

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*ISCJB **08** 14:14:58.2±0.7, 40°.18N±0°.03×24°.01E±0°.05, h7^{km}±5^{km}, Error ellipse: s-maj=7.0km s-min=4.2km az=13.4*
*CSEM **08** 14:14:58.1±0.2, 40°.18N×24°.03E, h2^{km}, ML1.7/7, Error ellipse: s-maj=3.6km s-min=2.4km az=102.0*
*THE **08** 14:14:58.0, 40°.17N×24°.02E, h9^{km}±3^{km}, ML1.7/7, Error ellipse: s-maj=3.6km s-min=0.6km az=324.0*
*ATH **08** 14:14:58.7, 40°.16N×23°.80E, h42^{km}±3^{km}, MD2.8/3*
ISC 08 14:14:58.1±1.0**, 40°.17N**±0°.03×**24°.04E**±0°.03**, h9^{km}**±10^{km}**, n25, σ0^s.43**/44**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OUR	Ouranopolis	0.17	345	P	Pg	14 15 01.7	-0.1
OUR				S	Sg	14 15 04.3	0.0
OUR	Ouranopolis	0.17	345	P	Pg	14 15 01.7	-0.1
OUR				S	Sg	14 15 04.3	0.0
PAIG	Paliouri	0.37	229	P	Pg	14 15 05.2	-0.1
PAIG				S	Sg	14 15 10.2	0.0
PAIG	Paliouri	0.37	229	P	Pg	14 15 05.2	-0.1
PAIG				S	Sg	14 15 10.2	0.0
PLG	Polygyros	0.50	294	P	Pg	14 15 07.6	-0.2
PLG				S	Sg	14 15 14.2	-0.2
PLG	Polygyros	0.50	294	eP	Pg	14 15 07.6	-0.2
PLG				eS	Sg	14 15 14.2	-0.2
PLG	Polygyros	0.50	294	P	Pg	14 15 07.6	-0.2
PLG				S	Sg	14 15 14.2	-0.2
HORT	Hortiatis	0.84	301	P	Pg	14 15 13.7	-0.6
HORT				S	Sg	14 15 25.4	+0.2
HORT	Hortiatis	0.84	301	P	Pg	14 15 13.7	-0.6
HORT				S	Sg	14 15 25.4	+0.2
SOH	Sokhos	0.84	321	P	Pg	14 15 14.1	-0.1
SOH				S	Sg	14 15 24.7	-0.5
SOH	Sokhos	0.84	321	eP	Pg	14 15 14.2	-0.1
SOH				eS	Sg	14 15 24.7	-0.5
SOH	Sokhos	0.84	321	P	Pg	14 15 14.1	-0.1
SOH				S	Sg	14 15 24.7	-0.5
KAVA	Kavala	0.90	23	P	Pg	14 15 15.0	-0.5
KAVA				S	Sg	14 15 27.5	+0.3
KAVA	Kavala	0.90	23	P	Pg	14 15 15.0	-0.5
KAVA				S	Sg	14 15 27.5	+0.3
AOS	Alonnisos	1.00	187	P	Pg	14 15 16.8	-0.6
AOS				S	Sb	14 15 31.4	+0.5
AOS	Alonnisos	1.00	187	eP	Pg	14 15 16.8	-0.6
AOS				eS	Sb	14 15 31.5	+0.5
AOS	Alonnisos	1.00	187	P	Pg	14 15 16.8	-0.6
AOS				S	Sb	14 15 31.4	+0.5
SRS	Serrai	1.01	340	P	Pg	14 15 17.3	-0.2
SRS	Serrai	1.01	340	P	Pg	14 15 17.3	-0.2
XOR	Xorichti	1.03	220	P	Pg	14 15 17.4	-0.6
XOR				S	Sb	14 15 32.4	+0.5
XOR	Xorichti	1.03	220	P	Pg	14 15 17.4	-0.6
XOR				S	Sb	14 15 32.4	+0.5
NVR	Nevrokopi	1.19	353	eP	Pg	14 15 20.0	-0.9
NVR	Nevrokopi	1.19	353	eP	Pg	14 15 20.0	-0.9
ALN	Alexandroupoli	1.69	64	eP	Pb	14 15 29.6	+0.2
ALN	Alexandroupoli	1.69	64	eP	Pb	14 15 29.6	+0.2

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*ISCJB **08** 14:23:25.6±0.7, 24°.84N±0°.05×122°.51E±0°.02, h9^{km}±5^{km}, Error ellipse: s-maj=8.0km s-min=3.0km az=12.8*
*JMA **08** 14:23:27.1±0.2, 24°.84N×122°.53E, h31^{km}, M2.4*
*TAP **08** 14:23:27.5, 24°.78N×122°.33E, h5^{km}, ML3.3, D*
ISC 08 14:23:26.1±1.1**, 24°.78N**±0°.04×**122°.47E**±0°.03**, h17^{km}**±9^{km}**, n26, σ0^s.54**/40**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.49	297	i P	Pg	14 23 35.9	-0.1
	baz=306						
TWB1				S	Sg	14 23 41.8	-0.8
	baz=306						
TWC	Suao	0.59	253	eP	Pg	14 23 37.6	-0.2
	baz=248						
TWC				S	Sg	14 23 44.6	-1.0
	baz=248						
YOJ	Yonaguni jima	0.59	123	P	Pb	14 23 38.4	+0.4
YOJ				S	Sb	14 23 46.4	+0.3
NWF	Wu-fen Shan	0.68	295	P	Pb	14 23 40.0	+0.4
	baz=300						
NWF				S	Sg	14 23 49.3	+0.5
	baz=300						
TWE	Neicheng	0.73	265	P	Pb	14 23 40.1	-0.2
	baz=264						
TWE				eS	Sb	14 23 49.9	-0.1
	baz=264						
ENA	Nanau	0.75	242	eP	Pb	14 23 40.7	0.0
	baz=236						
ENTT	Nioudou	0.83	260	P	Pb	14 23 42.3	+0.2
	baz=258						
ENTT				eS	Sg	14 23 54.0	+0.7
	baz=258						
TWY	Chenhua	0.93	302	P	Pb	14 23 44.2	+0.5
	baz=306						
TWY				eS	Sb	14 23 56.1	+0.4
	baz=306						
NSK	Sanguang	1.01	264	P	Pb	14 23 45.2	0.0
	baz=263						
NSK				eS	Sb	14 23 58.3	0.0
	baz=263						
NNS	Nan Shan	1.05	251	⇓iP	Pb	14 23 46.4	+0.5
	baz=248						
NNS				eS	Sn	14 24 00.5	0.0
	baz=248						
TWD	Chiawan	1.06	229	eP	Pg	14 23 46.8	+0.1
	baz=223						
TWD				eS	Sg	14 24 01.5	+1.0
	baz=223						
IRIF	Iriomote-Funau	1.24	111	P	Pn	14 23 47.8	-0.8
TWT	Tachien	1.29	246	P	Pg	14 23 51.3	+0.2
	baz=243						
TWT				eS	Sg	14 24 08.5	+0.6
	baz=243						
NSTT	Nanjuang	1.34	264	eP	Pb	14 23 51.1	+0.3
	baz=263						
ESL	Shilin	1.35	224	eP	Pb	14 23 51.6	+0.7
	baz=220						
HATJ	Hateruma jima	1.42	120	P	Pn	14 23 51.0	-0.1
HATJ				eS	Sn	14 24 09.6	+0.2
JKRS	Kuro-shima	1.51	111	P	Pn	14 23 52.3	-0.1
JKRS				eS	Sn	14 24 10.8	-0.8
JIJ	Ishigaki jima	1.58	105	P	Pn	14 23 53.6	+0.2
JIJ				eS	Sn	14 24 13.2	-0.3
TWQ1	Liyutan	1.60	255	eP	Pb	14 23 55.5	+0.3
	baz=253						
SMLT	Sun Moon Lake	1.69	238	eP	Pb	14 23 57.3	+0.5
	baz=235						
TYC	Yuchr	1.71	239	eP	Pb	14 23 57.5	+0.4
	baz=236						
TWF1	Yuli	1.78	217	eP	Pb	14 23 58.9	+0.6
	baz=213						
ALS	Alishan	1.98	230	eP	Pb	14 24 01.4	-0.5
	baz=227						
CHN5	Tsauling	2.02	234	eP	Pb	14 24 01.9	-0.4
	baz=232						
CHN4	Tsaushan	2.23	231	eP	Pb	14 24 05.1	-0.9
	baz=228						
WTP	Ta-pu	2.28	228	eP	Pb	14 24 05.8	-1.1
	baz=225						

WEL 08 14:27:26.3±0.2**, 44°.21S**×**168°.41E, h5^{km}, ML3.7**/15**, 4C-1D, Error ellipse: s-maj=1.8km s-min=1.2km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCZ	Jackson Bay	0.28	62	⇑PG	Pg	14 27 32.3	+0.3
JCZ				SG	Sg	14 27 36.4	+0.5
MSZ	Milford Sound	0.58	217	P*	Pg	14 27 37.3	-0.2
MSZ				SG	Sg	14 27 45.4	+0.4
WKZ	Wanaka	0.76	145	P*	Pg	14 27 41.1	+0.1
WKZ				S*	Sg	14 27 51.0	+0.2
FOZ	Fox Glacier	1.13	55	⇑P*	Pn	14 27 48.6	-0.1
MLZ	Mavora Lakes	1.15	188	P*	Pg	14 27 48.0	-0.5
EAZ	Earnscleugh	1.21	148	P*	Pg	14 27 49.2	-0.3
LBZ	Lake Benmore	1.28	99	P*	Pn	14 27 50.6	-0.4
DCZ	Deep Cove	1.55	215	PN	Pn	14 27 53.9	-0.7
WHZ	Wether Hill Ro	1.72	191	⇓PN	Pn	14 27 56.9	0.0
ODZ	Otahua Downs	1.80	118	⇑PN	Pn	14 27 58.1	0.0
TUZ	Tuapeka	1.95	154	PN	Pn	14 28 00.5	+0.4
RPZ	Rata Peaks	1.97	76	PN	Pn	14 28 00.7	+0.3
WVZ	Waitaha Valley	2.03	57	⇑PN	Pn	14 27 59.4	-1.8
SYZ	Scrubby Hill	2.38	168	PN	Pn	14 28 06.5	+0.5
MQZ	McQueen's Vall	3.10	82	PN	Pn	14 28 14.7	-1.2
CRLZ	Canterbury Las	3.11	80	PN	Pn	14 28 14.9	-1.1
LTZ	Lake Taylor	3.15	64	PN	Pn	14 28 15.5	-1.2
DSZ	Denniston Nort	3.50	46	PN	Pn	14 28 19.6	-1.8
THZ	Tophouse	4.10	55	PN	Pn	14 28 28.8	-0.9
KHZ	Kahutara	4.15	66	PN	Pn	14 28 28.9	-1.4
QRZ	Quartz Range	4.55	43	PN	Pn	14 28 34.1	-1.7
NNZ	Nelson	4.72	52	PN	Pn	14 28 37.5	-0.7

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*NIED **08** 14:27:00, 23°.40N×123°.70E, h8^{km}, Mw3.7 Best double couple: M$_0$4.27000×10^{14} NP1:φ$_s$223.00000°, δ85.00000°, λ-149.00000°. NP2:φ$_s$130.00000°, δ59.00000°, λ-5.00000°.*
*IDC **08** 14:27:47.9±0.9, 23°.34N×122°.95E, h0^{km}, mb3.3/7, mb1 3.5/8, mb1mx3.4/26, mbtmp3.3/8, ML3.1/1, MS3.1/1, Ms1 3.1/1, ms1mx1.7/29, Error ellipse: s-maj=39.7km s-min=19.4km az=71.0*
*JMA **08** 14:27:49.7±0.3, 23°.37N×123°.70E, h44^{km}±4^{km}, M3.6*
ISC 08 14:27:50.7±3.6**, 23°.49N**±0°.07×**123°.75E**±0°.06**, h17^{km}**±23^{km}**, n21, σ1^s.46**/26**, mb3.2**/7**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.56	6	P	Pn	14 28 03.1	-0.9
HATJ				S	Sn	14 28 13.0	+0.1
JKRS	Kuro-shima	0.78	18	P	Pn	14 28 06.8	-0.1
JKRS				eS	Sn	14 28 18.9	+0.7
IRIF	Iriomote-Funau	0.84	359	P	Pn	14 28 07.1	-0.6
IRIF				S	Sn	14 28 19.5	-0.2
JIJ	Ishigaki jima	0.94	23	P	Pb	14 28 08.3	-0.3
JIJ				eS	Sb	14 28 21.7	+1.0
YOJ	Yonaguni jima	1.18	325	P	Pn	14 28 11.4	-1.0
YOJ				eS	Sb	14 28 26.7	-0.8
JTJ	Tarama	1.44	37	P	Pn	14 28 15.7	-0.3
JTJ				S	Sn	14 28 35.0	+0.5
JMJ	Miyako jima 2	1.93	47	P	Pn	14 28 22.7	-0.1
JMJ				eS	Sn	14 28 47.2	+0.5
JOGS	Gusukube	1.97	50	P	Pn	14 28 23.1	-0.2
JOGS				eS	Sn	14 28 47.6	-0.1
JKE	Kume jima 2	3.95	44	P	Pn	14 28 49.4	-1.1
JKE				eS	Sn	14 29 34.3	-2.1
JAMN	Amaminishikomi	6.80	45	P	Pn	14 29 27.6	-2.1
JAMN				eS	Sn	14 30 42.4	-4.4
JMZ	Minamidaito 2	7.18	70	P	Pn	14 29 30.9	-4.1
JMZ				eS	Sn	14 30 47.4	-8.8
KSRS	Korea Array	14.37	14	Pn	Pn	14 31 14.9	+1.5
	0.1nm,0.3s,baz=195,slow=11,SNR=7.4						
MJAR	Matsushiro Arr	18.03	41	P	P	14 32 01.3	+0.5
	0.1nm,0.3s,baz=220,slow=9.9,SNR=3.4						
PETK	Petropavlovsk-	39.16	32	LR	LR	14 53 45.2	
	comp=Z,23nm,19.9s,baz=359,slow=39						
MKAR	Makanchi Array	40.47	316	P	P	14 35 24.3	-4.2
	0.2nm,0.3s,baz=99,slow=8.7,SNR=7.2						
ZALV	Zalesovo Beam	42.11	326	P	P	14 35 37.5	-4.2
	0.3nm,0.3s,baz=131,slow=8.1,SNR=3.5						
WRA	Warramunga Arr	44.39	166	P	P	14 36 01.6	+1.0
	0.4nm,0.8s,baz=349,slow=9.3,SNR=3.5						
ASAR	Alice Springs	47.91	167	P	P	14 36 26.9	-1.3
	0.1nm,0.5s,baz=351,slow=6.8,SNR=3.4						
BVAR	Borovoye Array	49.69	321	P	P	14 36 40.5	-1.2
	0.4nm,0.6s,baz=90,slow=7.2,SNR=3.0						
ILAR	Eielson Array	68.75	27	P	P	14 38 56.5	+3.2
	0.1nm,0.5s,baz=284,slow=5.7,SNR=3.1						
YKA	Yellowknife Ar	82.68	23	P	P	14 40 15.4	+2.4
	0.1nm,0.6s,baz=300,slow=4.9,SNR=3.6						

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*NIED **08** 14:42:00, 37°.90N×143°.00E, h8^{km}, Mw3.6 Best double couple: M$_0$2.73000×10^{14} NP1:φ$_s$43.00000°, δ68.00000°, λ103.00000°. NP2:φ$_s$191.00000°, δ25.00000°, λ61.00000°.*
*IDC **08** 14:42:08.1±0.9, 37°.92N×143°.24E, h0^{km}, mb3.7/11, mb1 3.8/15, mb1mx3.7/30, mbtmp3.7/15, ML2.9/4, Error ellipse: s-maj=24.0km s-min=16.1km az=81.0*
*ISCJB **08** 14:42:09.4±0.6, 37°.90N±0°.05×143°.05E±0°.07, h18^{km}, mb3.7/11, Error ellipse: s-maj=7.5km s-min=6.7km az=169.1*
*JMA **08** 14:42:09.5±0.3, 37°.86N×142°.96E, h22^{km}±5^{km}, M4.0*
ISC 08 14:42:11.2±0.8**, 37°.89N**±0°.05×**143°.03E**±0°.07**, h18^{km}, n31, σ1^s.73**/37**, mb3.8**/11**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIO	Ouri	1.44	294	P	Pn	14 42 34.0	-2.3
JIO				S	Sn	14 42 52.9	-1.8
OFUJ	Ofunato	1.59	319	P	Pn	14 42 36.8	-1.7
OFUJ				eS	Sn	14 42 55.9	-2.7
JMM	Marumori	1.77	270	P	Pn	14 42 38.4	-2.4
JMK	Ichinoseki	1.77	307	P	Pn	14 42 39.6	-1.3
JFK	Kawauchi	1.79	254	P	Pn	14 42 38.6	-2.5
JOU	Okura	1.92	285	P	Pn	14 42 41.6	-1.4
JOM	Ohasama	2.08	320	P	Pn	14 42 44.4	-0.8
JFT	Otama	2.16	261	P	Pn	14 42 45.1	-1.2
JYK	Kaneyama	2.33	297	P	Pn	14 42 48.1	-0.5
JYS	Shirataka	2.36	279	P	Pn	14 42 48.5	-0.5
JANG	Nango	2.74	335	P	Pn	14 42 54.1	-0.2
JAW	Awa shima	3.03	282	P	Pn	14 42 57.6	-0.6
JAG	Ashikaga	3.21	244	P	Pn	14 43 00.0	-0.6
MJAR	Matsushiro Arr	4.07	252	Pn	Pn	14 43 14.1	+1.5
	1.2nm,0.3s,baz=78,slow=12,SNR=14						
MJAR				Sn	Sb	14 44 09.8	-1.5
	1.3nm,0.3s,baz=85,slow=18,SNR=5.5						
MAT	Matsushiro	4.07	252	P	Pn	14 43 14.2	+1.6
MAT				eS	Sn	14 44 02.7	+2.9
JHJ	Hachijo jima 2	5.45	210	Pn	Pn	14 43 30.9	-0.5
	3.1nm,0.3s,baz=92,slow=20,SNR=10						
JHJ				Sn	Sn	14 44 29.0	-4.6
	19nm,0.3s,baz=51,slow=21,SNR=6.2						
ASAJ	Asahikawa	6.23	357	Pn	Pn	14 43 44.3	+2.2
	1.0nm,0.3s,baz=194,slow=9.7,SNR=17						
USRK	Ussuriysk Arra	10.44	311	Pn	Pn	14 44 42.5	+2.6
	0.1nm,0.3s,baz=106,slow=14,SNR=4.9						
KSRS	Korea Array	11.98	273	Pn	Pn	14 45 03.5	+2.6
	0.1nm,0.3s,baz=85,slow=13,SNR=7.5						
ZALV	Zalesovo Beam	42.29	312	P	P	14 50 03.6	+0.1
	0.6nm,0.4s,baz=92,slow=9.5,SNR=7.3						
CMAR	Chiang Mai Arr	42.95	256	P	P	14 50 09.4	+0.1
	0.3nm,0.3s,baz=57,slow=6.6,SNR=3.0						
MKAR	Makanchi Array	44.76	302	P	P	14 50 23.9	+0.5
	1.0nm,0.8s,baz=83,slow=9.9,SNR=13						
KURBB	Kurchatov Arra	46.49	308	P	P	14 50 37.2	+0.1
	1.8nm,0.6s,baz=82,slow=8.1,SNR=11						
ILAR	Eielson Array	48.08	33	P	P	14 50 47.3	-2.0
	0.2nm,0.8s,baz=273,slow=6.8,SNR=3.0						
BVAR	Borovoye Array	50.95	312	P	P	14 51 11.8	+0.5
	0.4nm,0.5s,baz=77,slow=6.4,SNR=3.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BVAR				PcP	**PcP**	**14 52 28.0**	**+0.6**
	0.4nm,0.5s,baz=77,slow=5.2,SNR=2.7						
WRA	**Warramunga Arr**	**58.10**	**190**	P	**P**	**14 52 04.0**	**+0.5**
	0.7nm,0.7s,baz=7.4,slow=7.1,SNR=11						
ASAR	**Alice Springs**	**61.83**	**189**	P	**P**	**14 52 29.9**	**+0.8**
	0.3nm,0.8s,baz=9.0,slow=8.4,SNR=7.0						
FINES	**FINESS Array B**	**68.65**	**333**	P	**P**	**14 53 13.8**	**+1.0**
	1.8nm,0.7s,baz=40,slow=9.1,SNR=4.9						
STKA	**Stephens Creek**	**69.42**	**181**	P	**P**	**14 53 17.8**	**-0.2**
	0.5nm,0.6s,baz=353,slow=8.1,SNR=1.8						
NB2	**NORSAR Subarra**	**73.89**	**338**	P	**P**	**14 53 45.8**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**73.89**	**338**	P	**P**	**14 53 45.5**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=38,slow=6.1,SNR=4.4						

*ISCJB **08** 14:47:38.8±0.6, 31°.49N±0°.04×103°.71E±0°.10, h13km, mb3.4/6, MS3.6/1, Error ellipse: s-maj=12.0km s-min=5.7km az=172.6*
*IDC **08** 14:47:38.7±0.9, 31°.39N×103°.66E, h0km, mb3.4/6, mb1 3.7/7, mb1mx3.5/26, mbtmp3.5/7, ML4.3/1, MS3.5/1, Ms1 3.6/1, ms1mx2.4/27, Error ellipse: s-maj=34.8km s-min=17.4km az=60.0*
*BJI **08** 14:47:39.8, 31°.50N×103°.56E, h13km, ML3.5/17, Ms3.3/2, Ms7 2.9/1*
ISC 08 14:47:40.5±0.7**, 31°.35N**±0°.04×**103°.54E**±0°.07**, h13km, n16, σ1s.69**/26**, mb3.5**/6**, 1C, Sichuan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.47**	**157**	⇑ iPg	**Pb**	**14 47 50.8**	**+0.1**
CD2				Sg	**Sb**	**14 47 59.4**	**+1.8**
CD2				smax	smax		
	comp=N,3μm,0.7s						
CD2				smax	smax		
	comp=E,5μm,0.6s						
LZH	**Lanzhou**	**4.73**	**3**	ePg	**Pb**	**14 49 03.2**	**-0.2**
LZH				Sg	**Sb**	**14 50 02.1**	**+1.7**
LZH				smax	smax		
	comp=N,51nm,0.8s						
LZH				smax	smax		
	comp=E,28nm,0.6s						
XAN	**Xi'an**	**5.27**	**58**	Pn	**Pn**	**14 48 57.3**	**-1.7**
XAN				Pg	**Pb**	**14 49 13.0**	**+0.5**
XAN				Sg	**Sb**	**14 50 16.1**	**+0.4**
XAN				smax	smax		
	comp=N,69nm,0.7s						
XAN				smax	smax		
	comp=E,36nm,0.9s						
GYA	**Guiyang**	**5.59**	**150**	Pn	**Pn**	**14 49 05.7**	**+2.3**
GYA				Pg	**Pg**	**14 49 25.6**	**-1.9**
GYA				Sn	**Sn**	**14 50 09.6**	**+2.0**
GYA				Sg	**Sg**	**14 50 37.9**	**-2.0**
GYA				smax	smax		
	comp=N,100nm,0.7s						
GYA				smax	smax		
	comp=E,110nm,0.8s						
GYA	**Guiyang**	**5.59**	**150**	Pn	**Pn**	**14 49 05.1**	**+1.7**
GYA				Pg	**Pg**	**14 49 25.4**	**-2.1**
GYA				Sn	**Sn**	**14 50 09.9**	**+2.3**
GYA				Sg	**Sg**	**14 50 40.1**	**+0.2**
GYA				smax	smax		
	comp=N,110nm,0.8s						
GYA				smax	smax		
	comp=E,110nm,0.9s						
KMI	**Kunming**	**6.24**	**187**	Pn	**Pn**	**14 49 14.3**	**+1.8**
KMI				Sn	**Sn**	**14 50 20.2**	**-3.7**
KMI				LR	LR		
	comp=N,150nm,6.6s						
KMI				LR	LR		
	comp=E,290nm,8.5s						
KMI				LR	LR		
	comp=Z,76nm,7.2s						
CMAR	**Chiang Mai Arr**	**13.49**	**199**	Pn	**Pn**	**14 50 53.4**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=21,slow=13,SNR=3.8						
WMQ	**Urumqi**	**17.65**	**319**	P	**Pn**	**14 51 45.1**	**-0.9**
KSRS	**Korea Array**	**20.99**	**66**	P	**P**	**14 52 21.9**	**-1.6**
	comp=Z,1.1nm,0.7s,baz=256,slow=9.6,SNR=8.0						
MKAR	**Makanchi Array**	**22.48**	**319**	P	**P**	**14 52 40.8**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=133,slow=10,SNR=4.1						
ZALV	**Zalesovo Beam**	**26.29**	**335**	P	**P**	**14 53 14.6**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=142,slow=7.3,SNR=2.5						
KURBB	**Kurchatov Arra**	**26.75**	**323**	P	**P**	**14 53 19.9**	**+0.2**
	comp=Z,0.5nm,0.2s,baz=130,slow=8.4,SNR=2.5						
ARCES	**ARCESS Array B**	**56.84**	**336**	LR	LR	15 22 38.3	
	comp=Z,45nm,19.7s,baz=237,slow=37						
WRA	**Warramunga Arr**	**58.95**	**146**	P	**P**	**14 57 39.6**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=337,slow=7.7,SNR=27						
ASAR	**Alice Springs**	**61.95**	**148**	P	**P**	**14 58 00.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=334,slow=6.8,SNR=14						
YKA	**Yellowknife Ar**	**81.60**	**17**	P	**P**	**14 59 58.9**	**+1.1**
	comp=Z,0.1nm,0.5s,baz=329,slow=5.5,SNR=3.1						

*MOS **08** 14:58:11.9±1.2, 50°.23N×155°.18E, h116km, mb4.5/3, Error ellipse: s-maj=18.4km s-min=8.3km az=66.5*
*KRSC **08** 14:58:12.9±1.5, 49°.46N×157°.93E, h70km±79km, ML4.3*
*ISCJB **08** 14:58:14.4±0.7, 50°.24N±0°.07×155°.3E±0°.1, h145km±8km, mb3.6/16, Error ellipse: s-maj=16.3km s-min=7.7km az=41.3*
*IDC **08** 14:58:15.1±0.7, 50°.30N×155°.21E, h131km±6km, mb3.3/14, mb1 3.4/18, mb1mx3.3/31, mbtmp3.3/18, Error ellipse: s-maj=18.2km s-min=11.2km az=133.0*
ISC 08 14:58:14.1±0.7**, 50°.12N**±0°.09×**155°.46E**±0°.09**, h131km**±6km**, h130km:pP-P, n49, σ1s.81**/62**, mb3.8**/16**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.70**	**36**	⇓ iPN	Pn	14 58 30.9	-3.6
SKR				i S	**Sn**	**14 58 46.0**	**-4.0**
SKR				pmax	pmax		
	comp=N,310nm,0.5s						
SKR				pmax	pmax		
	comp=E,230nm,0.5s						
SKR				pmax	pmax		
	comp=Z,1μm,0.5s						
SKR				smax	smax		
	comp=N,2μm,0.2s						
SKR				smax	smax		
	comp=E,2μm,0.2s						
MIPR	**Malaya Ipel'ka**	**2.31**	**20**	P	Pn	14 59 00.0	+8.1
MTVR	**Mutnovka**	**2.92**	**35**	eP	**Pn**	**14 59 00.9**	**+1.1**
MTVR				eS	**Sn**	**14 59 35.9**	**+0.9**
GRL	**Gorelyy**	**2.94**	**33**	eP	**Pn**	**14 59 02.1**	**+2.1**
GRL				eS	**Sn**	**14 59 37.5**	**+2.1**
RUS	**Russkaya**	**3.01**	**38**	PN	**Pn**	**14 59 00.2**	**-0.5**
RUS				S	**Sn**	**14 59 35.0**	**-1.8**
RUS	**Russkaya**	**3.01**	**38**	eP	**Pn**	**14 59 00.2**	**-0.5**
RUS				eS	**Sn**	**14 59 35.0**	**-1.8**
PETK	**Petropavlovsk-**	**3.30**	**24**	PN	**Pn**	**14 59 06.2**	**+1.6**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK	**Petropavlovsk-**	**3.30**	**24**	P	**Pn**	**14 59 06.2**	**+1.6**
	comp=Z,2.0nm,0.3s,baz=178,slow=13,SNR=70						
PET	**Petropavlovsk**	**3.53**	**33**	ePN	Pn	14 59 03.6	-3.9
PET				eS	**Sn**	**14 59 45.9**	**-3.0**
PET				smax	smax		
	comp=E,46nm,0.7s						
PET				smax	smax		
	comp=N,60nm,0.5s						
PET	**Petropavlovsk**	**3.53**	**33**	S	**Sn**	**14 59 48.0**	**-0.9**
UGLR	**Uglovaya**	**3.74**	**33**	eP	**Pn**	**14 59 12.2**	**+1.8**
UGLR				eS	**Sn**	**14 59 55.3**	**+1.3**
KOK	**Koryaka**	**3.74**	**31**	eP	**Pn**	**14 59 12.8**	**+2.4**
AVH	**Avacha**	**3.75**	**32**	eP	**Pn**	**14 59 12.9**	**+2.3**
AVH				eS	**Sn**	**14 59 56.6**	**+2.2**
KRER	**Koryakskii**	**3.79**	**31**	eP	**Pn**	**14 59 13.2**	**+2.0**
KRER				eS	**Sn**	**14 59 57.4**	**+2.0**
SDLR	**Sedlovina**	**3.81**	**33**	eP	**Pn**	**14 59 12.7**	**+1.3**
SDLR				eS	**Sn**	**14 59 56.3**	**+0.4**
GNL	**Ganaly**	**3.90**	**22**	P	Pn	14 59 18.8	+6.3
SPN	**Mys Shipunski**	**4.12**	**42**	eS	Sn	14 59 57.0	-6.0
MKZ	**Mys Kozlova**	**5.88**	**38**	PN	**Pn**	**14 59 37.9**	**-0.8**
MKZ				S	**Sn**	**15 00 39.6**	**-5.2**
MKZ	**Mys Kozlova**	**5.88**	**38**	eP	**Pn**	**14 59 37.9**	**-0.8**
MKZ				eS	**Sn**	**15 00 39.6**	**-5.2**
KBTR	**Krutoberegovo**	**7.53**	**33**	PN	**Pn**	**15 00 00.4**	**-0.6**
KBTR	**Krutoberegovo**	**7.53**	**33**	eP	**Pn**	**15 00 00.4**	**-0.6**
ASAJ	**Asahikawa**	**10.62**	**240**	P	**Pn**	**15 00 43.8**	**+1.2**
	comp=N,1.3nm,0.3s,baz=69,slow=14,SNR=16						
FX1	**Attu Island--F**	**11.38**	**69**	P	**Pn**	**15 00 54.7**	**+2.1**
	comp=N,1.7nm,0.3s,baz=12,slow=20,SNR=1.3						
FX1				S	Sn	15 02 51.5	-6.3
	comp=N,5.1nm,0.3s,baz=297,slow=23,SNR=10						
ERM	**Erimo**	**11.76**	**231**	i PN	**Pn**	**15 00 55.0**	**-2.7**
MAJO	**Matsushiro**	**18.42**	**229**	i P	**P**	**15 02 19.4**	**+0.2**
MJAR	**Matsushiro Arr**	**18.42**	**229**	P	**Pn**	**15 02 20.5**	**-0.4**
	comp=N,0.4nm,0.3s,baz=20,slow=12,SNR=5.3						
YAK	**Yakutsk**	**18.53**	**320**	i P	**P**	**15 02 20.2**	**+0.1**
YAK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BILL	**Bilibino**	**18.76**	**13**	eP	**P**	**15 02 23.5**	**+0.9**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KSRS	**Korea Array**	**23.41**	**248**	P	**P**	**15 03 12.3**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=52,slow=9.8,SNR=4.3						
JNU	**Nakatsue**	**24.85**	**236**	P	**P**	**15 03 25.4**	**+1.1**
	comp=Z,3.3nm,0.8s,baz=12,slow=9.3,SNR=4.2						
HHC	**Hu-ho-hao-te**	**31.73**	**270**	eP	**P**	**15 04 24.0**	**-1.5**
HHC				S	**S**	**15 09 24.9**	**-0.7**
HHC				pmax	pmax		
	comp=Z,25nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,5.7s						
ILAR	**Eielson Array**	**32.96**	**42**	P	**P**	**15 04 37.5**	**+1.6**
	comp=Z,0.2nm,0.9s,baz=270,slow=7.8,SNR=3.2						
ZALV	**Zalesovo Beam**	**41.98**	**304**	P	**P**	**15 05 50.7**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**41.98**	**304**	P	**P**	**15 05 50.7**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=51,slow=7.7,SNR=2.9						
MKAR	**Makanchi Array**	**46.84**	**296**	P	**P**	**15 06 30.1**	**-0.4**
MKAR				*PP	**pP**	**15 07 00.7**	**+0.4**
MKAR						15 08 02.4	
MKAR	**Makanchi Array**	**46.84**	**296**	P	**P**	**15 06 30.1**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=62,slow=7.4,SNR=4.1						
MKAR				pP	**pP**	**15 07 00.7**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=62,slow=8.4,SNR=4.0						
MKAR				PcP	**PcP**	**15 08 02.4**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=60,slow=4.2,SNR=2.6						
KURK	**Kurchatov**	**46.85**	**302**	i P	**P**	**15 06 30.3**	**-0.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	**Kurchatov Arra**	**46.95**	**302**	P	**P**	**15 06 28.5**	**-2.8**
	comp=Z,1.2nm,0.6s,baz=66,slow=7.8,SNR=8.5						
YKA	**Yellowknife Ar**	**47.30**	**39**	P	**P**	**15 06 34.8**	**+0.9**
	comp=Z,0.2nm,0.7s,baz=301,slow=7.9,SNR=3.7						
YKA				pP	**pP**	**15 07 03.3**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=300,slow=7.8,SNR=2.4						
BVAR	**Borovoye Array**	**49.96**	**308**	P	**P**	**15 06 53.2**	**-1.1**
BVAR	**Borovoye Array**	**49.96**	**308**	P	**P**	**15 06 53.2**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=52,slow=8.8,SNR=5.6						
CMAR	**Chiang Mai Arr**	**54.70**	**256**	P	**P**	**15 07 31.2**	**+1.6**
	comp=Z,0.8nm,0.5s,baz=35,slow=7.3,SNR=7.4						
FINES	**FINESS Array B**	**61.65**	**335**	P	**P**	**15 08 16.0**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=24,slow=6.1,SNR=4.2						
SCHQ	**Schefferville**	**69.59**	**25**	P	**P**	**15 09 08.8**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=336,slow=10.0,SNR=4.1						
AKASG	**Malin Array Be**	**69.60**	**327**	P	**P**	**15 09 07.0**	**-1.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**69.60**	**327**	P	**P**	**15 09 07.0**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=33,slow=6.6,SNR=3.5						
WRA	**Warramunga Arr**	**72.21**	**201**	P	**P**	**15 09 25.2**	**+0.5**
	comp=Z,0.4nm,1.0s,baz=15,slow=6.7,SNR=5.1						
WRA				pP	**pP**	**15 09 57.5**	**+0.6**
	comp=Z,0.3nm,1.0s,baz=15,slow=6.4,SNR=1.8						
TXAR	**Lajitas Array**	**74.52**	**63**	pP	pP	15 10 10.6	-0.2
	comp=Z,0.1nm,0.3s,baz=294,slow=4.5,SNR=2.8						
ASAR	**Alice Springs**	**75.91**	**200**	P	**P**	**15 09 47.6**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=11,slow=5.3,SNR=10						
ASAR				pP	**pP**	**15 10 20.0**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=8.2,slow=4.6,SNR=1.9						

*ATH **08** 15:08:58.1, 39°.73N×23°.36E, h23km±3km, MD2.9/5*
*ISCJB **08** 15:09:18.4±0.5, 38°.71N±0°.04×22°.45E±0°.06, h33km±5km, Error ellipse: s-maj=8.2km s-min=5.8km az=38.4*
*CSEM **08** 15:09:18.0±0.3, 38°.71N×22°.48E, h32km±2km, ML1.4/4, Error ellipse: s-maj=5.1km s-min=3.7km az=97.0*
*THE **08** 15:09:18.6, 38°.71N×22°.46E, h30km±1km, ML1.4/4, Error ellipse: s-maj=1.6km s-min=0.6km az=96.0*
ISC 08 15:09:18.3±0.9**, 38°.71N**±0°.03×**22°.45E**±0°.04**, h31km**±7km**, n21, σ0s.25**/32**, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AXAR	**Agios Charalam**	**0.17**	**70**	P	**Pn**	**15 09 24.5**	**-0.3**
AXAR				S	**Sn**	**15 09 29.2**	**+0.5**
AXAR	**Agios Charalam**	**0.17**	**70**	P	**Pn**	**15 09 24.5**	**-0.3**
AXAR				S	**Sn**	**15 09 29.2**	**+0.5**
DSF	**Desfina**	**0.30**	**169**	P	**Pb**	**15 09 25.9**	**0.0**
DSF				S	**Sb**	**15 09 31.2**	**+0.1**
DSF	**Desfina**	**0.30**	**169**	P	**Pb**	**15 09 25.9**	**0.0**
DSF				S	**Sb**	**15 09 31.2**	**+0.1**
AGG	**Agios Georgios**	**0.33**	**343**	P	**Pb**	**15 09 26.3**	**0.0**
AGG				S	**Sb**	**15 09 31.8**	**+0.1**
AGG	**Agios Georgios**	**0.33**	**343**	P	**Pb**	**15 09 26.3**	**0.0**
AGG				S	**Sb**	**15 09 31.8**	**+0.1**
MAKR	**Makrakomi, Fth**	**0.40**	**321**	P	**Pn**	**15 09 27.6**	**-0.3**
MAKR	**Makrakomi, Fth**	**0.40**	**321**	P	**Pn**	**15 09 27.6**	**-0.3**
KALE	**Kalithea**	**0.40**	**218**	P	**Pb**	**15 09 27.3**	**0.0**
KALE				S	**Sn**	**15 09 34.1**	**-0.3**
KALE	**Kalithea**	**0.40**	**218**	ePN	**Pb**	**15 09 27.1**	**-0.2**
KALE	**Kalithea**	**0.40**	**218**	P	**Pb**	**15 09 27.3**	**0.0**
KALE				S	**Sn**	**15 09 34.1**	**-0.3**
LKR	**Lokris**	**0.43**	**97**	ePN	Pb	15 09 18.9	-8.8
LKR				eSN	**Sn**	**15 09 35.0**	**-0.1**
TRIZ	**Trizonia**	**0.45**	**221**	P	**Pb**	**15 09 27.9**	**-0.1**
TRIZ				S	**Sn**	**15 09 36.1**	**+0.5**
TRIZ	**Trizonia**	**0.45**	**221**	ePN	**Pb**	**15 09 28.1**	**+0.1**
TRIZ	**Trizonia**	**0.45**	**221**	P	**Pb**	**15 09 27.9**	**-0.1**
TRIZ				S	**Sn**	**15 09 36.1**	**+0.5**
EFP	**Efpalio**	**0.51**	**237**	P	**Pb**	**15 09 29.0**	**0.0**
EFP				S	**Sn**	**15 09 37.4**	**+0.3**
EFP	**Efpalio**	**0.51**	**237**	ePN	**Pn**	**15 09 29.2**	**-0.2**
EFP	**Efpalio**	**0.51**	**237**	P	**Pb**	**15 09 29.0**	**0.0**
EFP				S	**Sn**	**15 09 37.4**	**+0.3**
EVR	**Evrytania**	**0.55**	**293**	ePN	Pb	15 09 25.0	-4.6
EVR				eSN	Sn	15 09 44.3	+6.2
LAKA	**Lakka**	**0.60**	**219**	ePN	**Pn**	**15 09 30.6**	**0.0**
LAKA	**Lakka**	**0.60**	**219**	ePn	**Pn**	**15 09 30.6**	**0.0**

WEL 08 15:15:51.7±0.2**, 38°.70S**×**178°.57E, h51km**±2km**, ML3.7**/7**, 5D, Error ellipse: s-maj=2.7km s-min=1.0km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRGZ	**Paritu Road**	**0.58**	**247**	⇓PN	Pn	15 16 03.3	-0.8
PRGZ				SN	Sn	15 16 13.2	+0.2
PUZ	**Puketiti**	**0.67**	**338**	⇓PN	Pn	15 16 05.0	-0.1
PUZ				SN	Sn	15 16 14.9	0.0
MHGZ	**Mahia Peninsul**	**0.69**	**228**	⇓PN	Pn	15 16 05.4	0.0
KNZ	**Kokohu**	**0.77**	**245**	⇓PN	Pn	15 16 05.9	-0.5
KNZ				SN	Sn	15 16 17.0	-0.1
MWZ	**Matawai**	**0.89**	**294**	⇓PN	Pn	15 16 07.7	-0.5
MWZ				SN	Sn	15 16 19.2	-0.9
MXZ	**Matakaoa Point**	**1.15**	**350**	PN	Pn	15 16 13.1	+1.6
RAHZ	**Arahi**	**1.18**	**259**	PN	Pn	15 16 11.7	-0.3
URZ	**Urewera**	**1.23**	**290**	PN	Pn	15 16 12.2	-0.3
NMHZ	**Naumai**	**1.43**	**253**	PN	Pn	15 16 15.3	-0.2
MCHZ	**McNeill Hill**	**1.64**	**242**	PN	Pn	15 16 18.2	0.0
TARZ	**Mount Tarawera**	**1.68**	**285**	PN	Pn	15 16 19.6	+0.8
BKZ	**Black Stump Fm**	**1.69**	**253**	PN	Pn	15 16 18.6	-0.3
KAHZ	**Kahuranaki**	**1.71**	**230**	PN	Pn	15 16 18.9	-0.3
ALRZ	**Allen Road**	**1.75**	**274**	PN	Pn	15 16 20.2	+0.5
OPRZ	**Ohinepanea**	**1.80**	**298**	PN	Pn	15 16 20.2	-0.1
PXZ	**Pawanui**	**1.88**	**224**	PN	Pn	15 16 20.4	-0.9
BHHZ	**Black Hill Sta**	**2.10**	**247**	PN	Pn	15 16 24.2	-0.4
WPHZ	**Waipukurau**	**2.14**	**230**	PN	Pn	15 16 24.6	-0.5
PRHZ	**Porangahau**	**2.17**	**223**	PN	Pn	15 16 24.4	-1.0
PNHZ	**Pukenui**	**2.20**	**236**	PN	Pn	15 16 25.7	-0.2
MOVZ	**Moawhango**	**2.31**	**251**	PN	Pn	15 16 27.8	+0.4
TUVZ	**Tukino**	**2.34**	**255**	PN	Pn	15 16 28.3	+0.3
NGZ	**Ngauruhoe**	**2.36**	**257**	PN	Pn	15 16 28.6	+0.4
WNVZ	**Wahianoa**	**2.40**	**254**	PN	Pn	15 16 29.1	+0.3
WPVZ	**Whakapapa**	**2.41**	**257**	PN	Pn	15 16 29.1	+0.3
FWVZ	**Far West T-bar**	**2.42**	**256**	PN	Pn	15 16 29.4	+0.3
TSZ	**Takapari Road**	**2.44**	**235**	PN	Pn	15 16 28.1	-1.0
DVHZ	**Dannevirke**	**2.45**	**229**	PN	Pn	15 16 28.2	-1.1
TWVZ	**Taurewa**	**2.47**	**260**	PN	Pn	15 16 30.2	+0.5
PKVZ	**Pokaka**	**2.58**	**256**	PN	Pn	15 16 31.8	+0.7
BFZ	**Birch Farm**	**2.67**	**221**	PN	Pn	15 16 30.4	-1.8
POWZ	**Post Office Ro**	**2.75**	**231**	PN	Pn	15 16 33.1	-0.2
TIWZ	**Tintock**	**2.93**	**224**	ePN	Pn	15 16 34.5	-1.4
WAZ	**Wanganui**	**2.98**	**248**	PN	Pn	15 16 37.8	+1.3
VRZ	**Vera Road**	**3.00**	**261**	PN	Pn	15 16 37.6	+0.8
MRZ	**Mangatainoka R**	**3.03**	**229**	PN	Pn	15 16 35.6	-1.6
TMWZ	**Te Maipa**	**3.17**	**220**	PN	Pn	15 16 36.9	-2.2
HOWZ	**Holdsworth Sta**	**3.22**	**226**	PN	Pn	15 16 38.1	-1.7
OGWZ	**Otaki Gorge**	**3.37**	**230**	PN	Pn	15 16 40.3	-1.5
MTW	**Mount Morrison**	**3.41**	**223**	PN	Pn	15 16 40.2	-2.1
KIW	**Kapiti Island**	**3.55**	**231**	PN	Pn	15 16 42.8	-1.6
PAWZ	**Paruwai Farm**	**3.61**	**221**	PN	Pn	15 16 42.5	-2.6
CAW	**Cannon Point**	**3.61**	**227**	PN	Pn	15 16 43.2	-2.0
TCW	**Tory Channel**	**4.15**	**231**	PN	Pn	15 16 51.0	-1.5
TUWZ	**Tuamarina**	**4.48**	**231**	PN	Pn	15 16 54.8	-2.2
NNZ	**Nelson**	**4.72**	**236**	PN	Pn	15 16 58.5	-1.8
QRZ	**Quartz Range**	**5.12**	**244**	PN	Pn	15 17 03.1	-2.7
THZ	**Tophouse**	**5.31**	**233**	PN	Pn	15 17 05.9	-2.6

GUC 08 15:16:02.3±0.5**, 32°.71S**×**71°.66W, h5km**±2km**, MD3.5, ML2.6, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.60**	**115**	⇓ iP	Pb	15 16 15.0	-0.7
ROCH				i S	Sb	15 16 24.5	-0.3
ROCH				AML	AML	15 16 26.4	
	comp=N,234nm,0.2s						
CHNG	**Los Chungos**	**0.84**	**9**	eP	Pg	15 16 18.5	+0.1
CHNG				i S	Sb	15 16 30.7	-0.3
CHNG				AML	AML	15 16 31.8	
	comp=N,103nm,0.2s						
PEL	**Peldehue**	**0.93**	**118**	⇑ iP	Pg	15 16 20.1	0.0
PEL				i S	Sb	15 16 33.7	+0.1
PEL				AML	AML	15 16 35.7	
	comp=E,1μm,0.3s						
RCDM	**Rinconada Maip**	**1.05**	**137**	⇓ iP	Pg	15 16 21.0	-1.6
RCDM				i S	Sg	15 16 34.5	-1.8
CLCH	**Cerro Calan**	**1.16**	**126**	⇑ iP	Pg	15 16 23.7	-1.1
CLCH				i S	Sg	15 16 40.0	+0.1
CLCH				AML	AML	15 16 44.3	
	comp=N,281nm,0.4s						
ANTU	**Antumapu**	**1.21**	**135**	AML	AML	15 16 44.4	
	comp=N,246nm,0.4s						
FCH	**Farellones**	**1.30**	**118**	⇓ iP	Pn	15 16 24.8	-2.8
FCH				i S	Sg	15 16 43.2	-1.8
FCH				AML	AML	15 16 44.4	
	comp=E,242nm,0.2s						
LMEL	**Las Melosas**	**1.66**	**133**	⇑ iP	Pn	15 16 32.0	-0.4
LMEL				i S	Sb	15 16 55.5	+0.4
LMEL				AML	AML	15 16 57.9	
	comp=N,283nm,0.3s						

MEX 08 15:19:52.2±1.0**, 16°.79N**×**93°.12W, h1km**±17km**, MD3.8, Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGIG		**0.01**	**181**	i P	Pg	15 19 51.8	-0.9
TGIG				i S	Sg	15 19 53.1	+0.2
CCIG	**Comitan**	**1.07**	**118**	i P	Pg	15 20 10.7	-2.3
CCIG				i S	Sg	15 20 25.2	-1.9
CMIG	**Matias Romero**	**1.71**	**280**	i P	Pn	15 20 19.8	-3.4
CMIG				i S	Sn	15 20 41.5	-4.3
HUIG	**Huatulco**	**3.04**	**251**	i P	Pn	15 20 39.3	-2.1
HUIG				i S	Sn	15 21 15.8	-2.8

*CSEM **08** 15:24:19.0±1.1, 40°.26N×19°.37E, h2km, ML2.5/5, Error ellipse: s-maj=23.8km s-min=10.1km az=105.0*
*ATH **08** 15:24:19.1, 40°.22N×19°.47E, h7km±1km, MD3.4/13*
*SKO **08** 15:24:20.9, 40°.08N×19°.46E, h0km*
*THE **08** 15:24:22.2, 40°.15N×19°.76E, h0km±1km, ML2.5/5, Error ellipse: s-maj=2.3km s-min=0.8km az=291.0*
ISC 08 15:24:19.3±1.8**, 40°.22N**±0°.04×**19°.52E**±0°.08**, h5km**±11km**, n45, σ1s.46**/60**, Albania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.55**	**157**	P	**Pg**	**15 24 30.3**	**+0.4**
KEK				S	**Sg**	**15 24 37.1**	**0.0**
KEK	**Kerkira**	**0.55**	**157**	ePB	**Pg**	**15 24 30.5**	**+0.6**
KEK				eSB	**Sg**	**15 24 38.3**	**+1.2**
KEK	**Kerkira**	**0.55**	**157**	ePb	**Pg**	**15 24 30.5**	**+0.6**
IGT	**Igoumenitsa**	**0.93**	**137**	P	**Pg**	**15 24 36.0**	**-1.2**
IGT				S	**Sg**	**15 24 48.3**	**-0.9**
JAN	**Janina**	**1.17**	**118**	P	**Pb**	**15 24 41.1**	**-0.9**
JAN				S	**Sb**	**15 24 54.7**	**-2.8**
JAN	**Janina**	**1.17**	**118**	ePN	**Pb**	**15 24 41.2**	**-0.8**
JAN				eSB	**Sg**	**15 24 57.7**	**+0.8**
JAN	**Janina**	**1.17**	**118**	ePn	**Pb**	**15 24 41.2**	**-0.8**
NEST	**Nestorio**	**1.19**	**80**	P	**Pn**	**15 24 41.6**	**-1.0**
NEST				S	**Sb**	**15 24 55.9**	**-2.1**
FNA	**Florina**	**1.52**	**68**	P	**Pb**	**15 24 47.9**	**-0.2**
FNA				S	**Sb**	**15 25 08.4**	**+0.7**
FNA	**Florina**	**1.52**	**68**	P	**Pb**	**15 24 47.9**	**-0.2**
FNA				S	**Sb**	**15 25 08.4**	**+0.7**
BIA	**Bitola**	**1.59**	**59**	ePn	**Pg**	**15 24 49.9**	**0.0**
BIA	**Bitola**	**1.59**	**59**	ePn	**Pg**	**15 24 49.8**	**0.0**
LKD2	**Lefkada island**	**1.68**	**148**	P	**Pb**	**15 24 50.1**	**-0.6**
LKD2				S	**Sn**	**15 25 11.2**	**-0.1**
LKD2	**Lefkada island**	**1.68**	**148**	P	**Pb**	**15 24 50.1**	**-0.6**
KZN	**Kozani**	**1.73**	**86**	ePN	**Pg**	**15 24 52.9**	**+0.5**
KZN	**Kozani**	**1.73**	**86**	ePn	**Pg**	**15 24 52.9**	**+0.5**
THL	**Klokotos Trika**	**2.03**	**108**	ePN	**Pb**	**15 24 56.5**	**-0.1**
THL				eSN	**Sb**	**15 25 23.6**	**+1.4**
THL	**Klokotos Trika**	**2.03**	**108**	ePn	**Pb**	**15 24 56.5**	**-0.1**
THL				eSn	**Sb**	**15 25 23.6**	**+1.4**
EVR	**Evrytania**	**2.20**	**126**	ePN	**Pb**	**15 24 58.6**	**-1.0**
EVR				eSN	**Sb**	**15 25 28.0**	**+0.9**
EVR	**Evrytania**	**2.20**	**126**	ePn	**Pb**	**15 24 58.6**	**-1.0**
EVR				eSn	**Sb**	**15 25 28.0**	**+0.9**
VLS	**Valsamata**	**2.20**	**157**	ePN	**Pb**	**15 24 58.6**	**-1.0**
VLS	**Valsamata**	**2.20**	**157**	ePn	**Pb**	**15 24 58.6**	**-1.0**
LIT	**Litokhoron**	**2.28**	**92**	ePN	**Pb**	**15 25 00.2**	**-0.8**
LIT	**Litokhoron**	**2.28**	**92**	ePn	**Pb**	**15 25 00.2**	**-0.8**
AGG	**Agios Georgios**	**2.48**	**118**	ePN	**Pb**	**15 25 02.6**	**-1.8**
AGG				eSN	**Sb**	**15 25 34.5**	**-0.7**
AGG	**Agios Georgios**	**2.48**	**118**	ePn	**Pb**	**15 25 02.6**	**-1.8**
AGG				eSn	**Sb**	**15 25 34.5**	**-0.7**
VAY	**Valandovo**	**2.56**	**64**	ePn	**Pb**	**15 25 05.4**	**-0.4**
VAY	**Valandovo**	**2.56**	**64**	ePn	**Pn**	**15 25 01.9**	**+0.4**
EFP	**Efpalio**	**2.58**	**133**	ePN	**Pb**	**15 25 03.6**	**-2.4**
EFP	**Efpalio**	**2.58**	**133**	ePn	**Pb**	**15 25 03.6**	**-2.4**
TRIZ	**Trizonia**	**2.71**	**132**	ePB	**Pn**	**15 25 05.2**	**+1.7**
TRIZ	**Trizonia**	**2.71**	**132**	ePb	**Pn**	**15 25 05.2**	**+1.7**
KALE	**Kalithea**	**2.73**	**131**	ePB	**Pn**	**15 25 05.8**	**+1.9**
KALE	**Kalithea**	**2.73**	**131**	ePb	**Pn**	**15 25 05.8**	**+1.9**
LAKA	**Lakka**	**2.75**	**135**	ePN	**Pb**	**15 25 06.5**	**-2.5**
LAKA	**Lakka**	**2.75**	**135**	ePn	**Pb**	**15 25 06.5**	**-2.5**
SOH	**Sokhos**	**2.98**	**77**	ePB	**Pb**	**15 25 10.0**	**-3.0**
SOH	**Sokhos**	**2.98**	**77**	ePb	**Pb**	**15 25 10.0**	**-3.0**
PLG	**Polygyros**	**3.01**	**86**	ePN	**Pn**	**15 25 09.5**	**+1.9**
PLG	**Polygyros**	**3.01**	**86**	ePn	**Pn**	**15 25 09.5**	**+1.9**
GUR	**Goura**	**3.17**	**135**	ePN	**Pn**	**15 25 11.9**	**+2.0**
GUR	**Goura**	**3.17**	**135**	ePn	**Pn**	**15 25 11.9**	**+2.0**
AOS	**Alonnisos**	**3.52**	**106**	ePN	**Pn**	**15 25 16.8**	**+2.1**
AOS	**Alonnisos**	**3.52**	**106**	ePn	**Pn**	**15 25 16.8**	**+2.1**
VYHS	**Vyhne**	**8.29**	**357**	ePN	**Pn**	**15 26 20.0**	**-0.1**

*IDC **08** 15:36:50.5±5.0, 3°.48S×128°.05E, h124km±47km, mb3.5/4, mb1 3.7/6, mb1mx3.4/23, mbtmp3.5/6, Error ellipse: s-maj=66.5km s-min=12.4km az=65.0*
*AUST **08** 15:36:53.0±0.0, 3°.52S×126°.55E, h203km, Error ellipse: s-maj=1.4km s-min=1.0km az=23.0*
*DJA **08** 15:36:53.4±1.4, 4°S±5°×12°6E±°, h10km, M4.0/6, mb4.0/3, mB5.4/1, MLv4.0/6, Mw(mB)4.8/1*
ISC 08 15:36:52.5±0.9**, 3°.42S**±0°.10×**126°.60E**±0°.07**, h200km, n25, σ1s.94**/18**, mb3.8**/4**, Buru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.61**	**100**	P	**Pn**	**15 37 28.6**	**+1.4**
AAI				S	**Sn**	**15 37 57.5**	**+3.4**
AAI	**Ambon**	**1.61**	**100**	P	Pn	15 37 32.3	+5.2
	baz=1.7,SNR=8.6						
AAI				S	**Sn**	**15 37 56.1**	**+2.0**
	baz=1.7,SNR=4.6						
LBMI	**Labuha**	**2.90**	**18**	P	Pn	15 37 53.4	+12
LBMI				S	Sn	15 38 38.3	+19

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BNDI	Bandanaira	3.47	109	P	Pn	15 37 51.5	+3.7
TNTI	Ternate	4.23	10	P	Pn	15 38 11.7	+15
	16nm,1.0s,0.1nm						
SWI	Sorong	5.30	61	P	Pn	15 38 23.5	+13
	12nm,0.7s,3µm0.6nm						
SWI				S	Sn	15 39 43.7	+31
	12nm,0.7s,3µm0.6nm						
SWI	Sorong	5.30	61	P	Pn	15 38 15.9	+5.1
	baz=5.4,SNR=3.2						
SWI				S	Sn	15 39 12.0	-0.6
	baz=5.4,SNR=8.7						
FAKI	Fak Fak	5.66	85	P	Pn	15 38 15.2	-0.2
TLE	Tual	6.50	110	P	Pn	15 38 23.6	-2.7
TLE	Tual	6.50	110	P	Pn	15 38 24.4	-1.9
	baz=6.5,SNR=9.3						
TLE				S	Sn	15 39 23.9	-17
	baz=6.5,SNR=5.3						
PCI	Palu	7.21	290	P	Pn	15 38 35.5	+0.1
	baz=7.2,SNR=4.4						
WSI	Waingapu	8.82	225	P	Pn	15 38 39.6	-17
	baz=8.7,SNR=4.0						
MTN	Manton Dam	10.38	155	P	Pn	15 39 14.3	-2.3
	baz=10,SNR=19						
MTN				S	S	15 41 36.9	+24
	baz=10,SNR=4.2						
FITZ	Fitzroy Crossi	14.62	184	P	P	15 40 13.1	+1.8
	0.3nm,0.3s,baz=14,slow=14,SNR=14						
FITZ	Fitzroy Crossi	14.62	184	P	P	15 40 13.8	+2.5
	baz=15,SNR=7.2						
WRA	Warramunga Arr	18.08	156	P	P	15 40 46.5	-2.7
	0.8nm,0.3s,baz=339,slow=12,SNR=48						
ASAR	Alice Springs	21.33	161	P	P	15 41 22.4	-1.7
	2.7nm,0.3s,baz=343,slow=12,SNR=114						
ASAR				S	S	15 45 09.5	+1.0
	0.8nm,0.8s,baz=338,slow=24,SNR=4.9						
MORW	Morawa	27.41	200	S	S	15 46 48.1	+3.1
	baz=27,SNR=7.2						
GSI	Gunungsitoli	29.39	279	P	P	15 42 38.0	+0.6
	baz=29,SNR=3.5						
BBOO	Buckleboo	30.55	164	P	P	15 42 48.0	+0.7
	baz=31,SNR=7.5						
STKA	Stephens Creek	31.63	155	P	P	15 42 56.3	-0.4
	1.7nm,0.7s,baz=324,slow=8.5,SNR=11						
STKA	Stephens Creek	31.63	155	P	P	15 42 56.4	-0.4
	baz=32,SNR=6.6						
CMSA	Cobar Meteorol	33.25	149	P	P	15 43 10.8	0.0
	baz=33,SNR=10						
CMAR	Chiang Mai Arr	34.85	310	P	P	15 43 40.1	+15
	0.8nm,0.6s,baz=139,slow=7.2,SNR=8.8						
MKAR	Makanchi Array	63.40	328	P	P	15 47 12.3	+12
	0.6nm,0.5s,baz=123,slow=8.1,SNR=14						

ISCJB ***08*** *15:40:57.4±1.2, 20°.27N±0°.03×146°.67E±0°.04, h6km±7km, mb4.6/92, MS4.2/43, Error ellipse: s-maj=6.7km s-min=5.3km az=170.5*

BJI ***08*** *15:40:57.3, 20°.43N×146°.72E, h6km, mB4.9/29, mb4.7/39, Ms4.6/37, Ms7 4.3/37*

IDC ***08*** *15:40:58.1±0.4, 20°.28N×146°.65E, h0km, mb4.4/31, mb1 4.5/35, mb1mx4.5/42, mbtmp4.4/35, ML4.2/4, MS4.1/27, Ms1 4.1/27, ms1mx3.9/50, Error ellipse: s-maj=14.7km s-min=9.5km az=90.0*

NEIC ***08*** *15:41:00.5±3.4, 20°.30N×146°.64E, h15km±21km, mb4.7/30, Error ellipse: s-maj=7.4km s-min=5.1km az=91.0*

MOS ***08*** *15:41:01.3±1.1, 20°.27N×146°.60E, h33km, mb5.0/29, Error ellipse: s-maj=10.8km s-min=5.9km az=105.6*

ISC 08 15:41:01.6±0.4**, 20°.37N**±0°.04×**146°.66E**±0°.06**, h20**km±2km**, n220, σ1s.37**/248**, mb4.6**/92**, MS4.3**/43**, 9C-2D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	6.96	195	Pn	Pn	15 42 42.4	-0.1
GUMO				Sn	Sn	15 44 01.1	0.0
GUMO	Guam	6.96	195	Pn	Pn	15 42 42.4	-0.1
	26nm,0.3s,baz=356,slow=10.0,SNR=12						
GUMO				Sn	Sn	15 44 01.1	0.0
	3.9nm,0.3s,baz=314,slow=23,SNR=0.9						
GUMO				LR	LR	15 45 08.6	
	comp=Z,2µm,19.0s,baz=17,slow=36						
CBIJ	Chichi jima	7.85	329	Pn	Pn	15 42 54.5	-0.1
CBIJ				Sn	Sn	15 44 18.9	-4.0
CBIJ	Chichi jima	7.85	329	Pn	Pn	15 42 54.5	-0.1
	6.7nm,0.3s,baz=248,slow=18,SNR=16						
CBIJ				Sn	Sn	15 44 18.9	-4.0
	22nm,0.3s,baz=122,slow=23,SNR=11						
JOD2	Odawara 2	16.27	337	P	Pn	15 44 48.5	-0.5
JYT	Yasato	16.79	342	P	P	15 44 57.7	+0.1
JRY	Ryogami san	17.01	338	P	Pn	15 44 59.2	+0.8
JMN	Monobe	17.49	322	P	P	15 45 06.6	+1.1
MJAR	Matsushiro Arr	17.73	337	P	Pn	15 45 06.2	-1.1
MJAR	Matsushiro Arr	17.73	337	P	Pn	15 45 06.2	-1.1
	0.3nm,0.3s,baz=153,slow=11,SNR=18						
MAJO	Matsushiro	17.73	337	eP	Pn	15 45 06.0	-1.3
MAJO				pmax	pmax		
	comp=Z,21nm,0.8s						
MAJO	Matsushiro	17.73	337	eP	Pn	15 45 06.0	-1.3
	comp=Z,21nm,0.8s						
MAT	Matsushiro	17.73	337	P	Pn	15 45 06.1	-1.2
MAT				eS	Sn	15 48 18.2	-6.2
MAT	Matsushiro	17.73	337	P	Pn	15 45 06.4	-0.9
JWT	Wachi	17.86	329	P	P	15 45 10.3	+0.8
JMM	Marumori	18.16	345	P	P	15 45 14.0	+1.2
JAD	Aida	18.23	325	P	P	15 45 15.0	+1.5
JSU	Suzuyama	18.29	311	P	P	15 45 16.0	+1.7
JHS	Saijyo	18.84	323	P	Pn	15 45 21.7	+0.7
JNU	Nakatsue	18.94	315	eP	P	15 45 21.8	+0.3
JNU	Nakatsue	18.94	315	P	Pn	15 45 23.9	+1.7
JNU	Nakatsue	18.94	315	P	P	15 45 21.4	0.0
	comp=Z,0.4nm,0.3s,baz=106,slow=9.6,SNR=11						
JNU				LR	LR	15 52 12.0	
	comp=Z,546nm,21.2s,baz=129,slow=36						
JYA	Atsumi	19.13	343	P	Pn	15 45 25.2	+0.9
JOM	Ohasama	19.59	348	P	Pn	15 45 30.2	+0.3
JFU	Fukue jima 2	20.13	311	P	Pn	15 45 37.0	+0.7
JTM	Tenmabayashi	20.90	348	P	Pn	15 45 46.3	+1.0
KSRS	Korea Array	23.56	320	P	P	15 46 11.4	+0.6
	comp=Z,8.1nm,0.7s,baz=140,slow=9.6,SNR=34						
KSRS				LR	LR	15 54 51.9	
	comp=Z,822nm,20.4s,baz=130,slow=35						
KSAR	Wonju Array Be	23.58	320	P	P	15 46 11.4	+0.5
YUK	Yuzh-Kuril'sk	23.61	359c	iP	P	15 46 12.8	+1.6
YUK				pmax	pmax		
	comp=Z,14nm,1.7s						
YUK				MLR	MLR		
	comp=N,391nm,20.0s						
YUK				MLR	MLR		
	comp=Z,459nm,20.0s						
ASAJ	Asahikawa	23.92	353	P	P	15 46 16.5	+2.3
ASAJ	Asahikawa	23.92	353	P	P	15 46 16.5	+2.3
	comp=Z,9.2nm,0.9s,baz=197,slow=11,SNR=5.5						
ASAJ				LR	LR	15 54 00.6	
	comp=Z,543nm,19.7s,baz=45,slow=33						
SSLB	Suanglung	24.05	283	P	P	15 46 17.2	+1.6
	comp=Z,76nm,1.3s						
DAV	Davao City (W)	24.33	240	LR	LR	15 55 05.0	
	comp=Z,227nm,18.4s,baz=38,slow=35						
INCN	Inchon	24.37	319	eP	P	15 46 19.4	+1.0
	comp=Z,18nm,0.8s						
USRK	Ussuriysk Arra	26.71	336	P	P	15 46 40.2	+0.6
	comp=Z,6.2nm,0.9s,baz=152,slow=8.8,SNR=9.0						
USRK				LR	LR	15 56 44.6	
	comp=Z,530nm,19.5s,baz=310,slow=35						
NJ2	Nanjing	27.44	301	eP	P	15 46 45.1	-1.2
NJ2				pP	pP	15 46 54.2	+1.8
NJ2				sP	sP	15 46 58.2	+3.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,100nm,4.7s						
NJ2				LR	LR		
	comp=N,350nm,15.4s						
NJ2				LR	LR		
	comp=E,450nm,12.3s						
NJ2				LR	LR		
	comp=Z,700nm,15.2s						
DL2	Dalian	28.39	316	eP	P	15 47 02.4	+7.7
DL2				S	S	15 51 51.9	+11
DL2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DL2				LR	LR		
	comp=N,230nm,14.4s						
DL2				LR	LR		
	comp=E,240nm,16.5s						
DL2				LR	LR		
	comp=Z,280nm,15.4s						
SNY	Shenyang	28.96	323 ⇓	P	P	15 46 58.3	-1.3
SNY				S	S	15 51 46.1	-3.3
SNY				pmax	pmax		
	comp=Z,120nm,1.2s						
SNY				pmax	pmax		
	comp=Z,60nm,4.1s						
SNY				LR	LR		
	comp=N,670nm,13.4s						
SNY				LR	LR		
	comp=E,600nm,15.9s						
SNY				LR	LR		
	comp=Z,370nm,14.5s						
CN2	Changchun	29.31	328	eP	P	15 47 04.9	+2.1
CN2				esP	sP	15 47 12.0	+0.6
CN2				eS	S	15 51 56.9	+1.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=N,600nm,17.0s						
CN2				LR	LR		
	comp=E,500nm,17.0s						
CN2				LR	LR		
	comp=Z,500nm,19.0s						
PMG	Port Moresby	29.59	179	P	P	15 47 04.5	-1.0
PMG	Port Moresby	29.59	179	P	P	15 47 04.5	-1.0
	comp=Z,13nm,0.8s,baz=349,slow=10,SNR=3.5						
WHN	Wuhan	30.79	296	P	P	15 47 23.6	+7.6
WHN				S	S	15 52 25.2	+6.8
WHN				LR	LR		
	comp=N,1µm,12.5s						
WHN				LR	LR		
	comp=E,1µm,16.9s						
WHN				LR	LR		
	comp=Z,1µm,14.6s						
KLR	Kul'dur	31.17	341	eP	P	15 47 16.6	-2.5
BJI	Beijing	32.60	314	P	P	15 47 31.9	+0.1
BJI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BJI				LR	LR		
	comp=N,490nm,22.0s						
BJI				LR	LR		
	comp=E,370nm,21.2s						
BJI				LR	LR		
	comp=Z,330nm,22.4s						
PETK	Petropavlovsk-	33.77	12	P	P	15 47 43.4	+1.4
PETK	Petropavlovsk-	33.77	12	P	P	15 47 43.4	+1.4
PETK	Petropavlovsk-	33.77	12	P	P	15 47 43.4	+1.4
	comp=Z,1.9nm,0.8s,baz=188,slow=7.5,SNR=3.4						
PETK				LR	LR	16 02 23.0	
	comp=Z,99nm,18.2s,baz=14,slow=38						
QIZ	Qiongzhong	34.64	274	P	P	15 47 48.7	-1.2
QIZ				S	S	15 53 19.4	+0.7
QIZ				pmax	pmax		
	comp=Z,28nm,1.5s						
QIZ				LR	LR		
	comp=N,380nm,21.3s						
QIZ				LR	LR		
	comp=Z,280nm,18.8s						
HHC	Hu-ho-hao-te	36.12	312	eP	P	15 48 01.1	-1.4
HHC				pP	pP	15 48 05.5	-3.2
HHC				sP	sP	15 48 08.2	-3.0
HHC				S	S	15 53 40.0	-1.1
HHC				pmax	pmax		
	comp=Z,31nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,6.6s						
HHC				LR	LR		
	comp=N,720nm,16.2s						
HHC				LR	LR		
	comp=E,670nm,15.7s						
HHC				LR	LR		
	comp=Z,560nm,16.7s						
KAPI	Kappang	36.54	229	P	P	15 48 00.8	-5.4
KAPI	Kappang	36.54	229	P	P	15 48 00.8	-5.4
	comp=Z,12nm,0.9s,baz=41,slow=11,SNR=2.7						
GYA	Guiyang	37.09	287	P	P	15 48 11.6	+0.6
GYA				PP	PnPn	15 49 37.6	+1.7
GYA				S	S	15 53 57.0	+0.7
GYA				ScP	ScP	15 54 18.9	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.6s						
GYA				LR	LR		
	comp=N,430nm,17.2s						
GYA				LR	LR		
	comp=E,320nm,17.4s						
GYA				LR	LR		
	comp=Z,430nm,16.9s						
CD2	Chengdu	39.86	294	P	P	15 48 32.4	-1.7
CD2				pP	pP	15 48 42.2	+1.8
CD2				sP	sP	15 48 46.2	+3.3
CD2				PP	PnPn	15 50 08.1	-1.1
CD2				PcP	PcP	15 50 39.8	0.0
CD2				PcS	PcS	15 54 28.6	-1.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,110nm,5.6s						
CTA	Charters Tower	40.21	181	P	P	15 48 36.0	-1.0
CTA	Charters Tower	40.21	181	P	P	15 48 36.0	-1.0
	comp=Z,4.4nm,0.9s,baz=6.9,slow=9.5,SNR=3.1						
CTA				LR	LR	16 03 12.2	
	comp=Z,152nm,19.7s,baz=342,slow=33						
LZH	Lanzhou	40.50	302	eP	P	15 48 40.9	+1.4
LZH				pP	pP	15 48 45.5	-0.3
LZH				sP	sP	15 48 48.2	-0.1
LZH				eS	S	15 54 49.1	+1.5
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,67nm,5.1s						
LZH				LR	LR		
	comp=N,550nm,13.8s						
LZH				LR	LR		
	comp=E,110nm,12.7s						
LZH				LR	LR		
	comp=Z,480nm,15.4s						
KMI	Kunming	40.65	285	P	P	15 48 41.8	+0.9
KMI				pP	pP	15 48 44.7	-2.5
KMI				S	S	15 54 51.4	+1.2
KMI				LR	LR		
	comp=N,290nm,12.0s						
KMI				LR	LR		
	comp=E,280nm,14.1s						
KMI				LR	LR		
	comp=Z,210nm,11.1s						
WRAB	Tennant Creek	41.83	198	eP	P	15 48 48.3	-2.0
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WRAB	Tennant Creek	41.83	198	eP	P	15 48 48.2	-2.0
	comp=Z,10.0nm,0.8s						
WRA	Warramunga Arr	41.84	198	P	P	15 48 48.5	-1.9
WRA				PcP	PcP	15 50 46.2	0.0
WRA	Warramunga Arr	41.84	198	P	P	15 48 48.5	-1.9
	comp=Z,3.3nm,0.7s,baz=18,slow=8.3,SNR=24						
WRA				PcP	PcP	15 50 46.2	0.0
	comp=Z,2.0nm,0.9s,baz=12,slow=3.6,SNR=5.3						
WRA				LR	LR	16 06 04.4	
	comp=Z,267nm,21.6s,baz=215,slow=36						
ULN	Ulaanbaatar	42.05	320	eP	P	15 48 52.0	-0.1
	comp=Z,4.7nm,0.9s						
SONM	Songino Array	42.43	320	P	P	15 48 56.7	+1.6
SONM	Songino Array	42.43	320	P	P	15 48 56.7	+1.6
	comp=Z,1.0nm,0.5s,baz=124,slow=7.5,SNR=5.6						
SONM				LR	LR	16 06 20.9	
	comp=Z,322nm,19.6s,baz=318,slow=36						
SEY	Seymchan	42.71	4⇓	eP	P	15 48 58.2	+1.2
YAK	Yakutsk	43.26	348	eP	P	15 49 00.5	-0.9
YAK				pmax	pmax		
	comp=Z,11nm,1.0s						
FITZ	Fitzroy Crossi	43.44	210	eP	P	15 49 01.7	-1.7
	comp=Z,9.6nm,0.8s						
FITZ	Fitzroy Crossi	43.44	210	P	P	15 49 01.7	-1.7
	comp=Z,8.4nm,0.8s,baz=27,slow=9.5,SNR=18						
GTA	Gaotai	44.28	306	eP	P	15 49 10.2	0.0
GTA				pP	pP	15 49 14.9	-1.6
GTA				sP	sP	15 49 17.3	-1.7
GTA				PP	PcP	15 50 55.9	+1.5
GTA				S	S	15 55 43.7	+0.5
GTA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,31nm,4.0s						
GTA				LR	LR		
	comp=N,590nm,16.2s						
GTA				LR	LR		
	comp=E,260nm,15.2s						
GTA				LR	LR		
	comp=Z,240nm,15.7s						
CHTO	Chiang Mai	44.86	277	eP	P	15 49 14.3	-0.6
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CHTO	Chiang Mai	44.86	277	eP	P	15 49 14.3	-0.6
	comp=Z,7.6nm,1.1s						
CM31	Chiang Mai Arr	44.92	276	eP	P	15 49 16.0	+0.6
	comp=Z,2.6nm,0.5s						
CMAR	Chiang Mai Arr	44.92	276	P	P	15 49 15.4	0.0
CMAR	Chiang Mai Arr	44.92	276	P	P	15 49 15.4	0.0
	comp=Z,5.6nm,1.0s,baz=64,slow=7.1,SNR=32						
CMAR				LR	LR	16 09 55.4	
	comp=Z,132nm,18.3s,baz=80,slow=39						
ZAK	Zakamensk	45.38	322	eP	P	15 49 18.4	-0.3
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AS31	Alice Springs	45.50	196	eP	P	15 49 19.3	-0.5
ASAR	Alice Springs	45.50	196	P	P	15 49 17.8	-2.1
ASAR				PcP	PcP	15 50 58.2	-0.3
ASAR	Alice Springs	45.50	196	P	P	15 49 17.8	-2.1
	comp=Z,2.3nm,0.7s,baz=15,slow=7.4,SNR=34						
ASAR				PcP	PcP	15 50 58.2	-0.3
	comp=Z,1.2nm,0.8s,baz=27,slow=2.9,SNR=4.2						
ASAR				LR	LR	16 08 05.2	
	comp=Z,338nm,19.9s,baz=13,slow=36						
IRK	Irkutsk	45.65	325	eP	P	15 49 21.1	+0.3
IRK				pmax	pmax		
	comp=Z,23nm,2.0s						
TLY	Talaya	45.74	324	eP	P	15 49 21.9	+0.4
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TLY	Talaya	45.74	324	eP	P	15 49 21.9	+0.4
	comp=Z,2.4nm,0.6s						
DZM	Mont Dzumac	46.40	154	eS	S	15 56 06.4	-7.5
	comp=Z,80nm,30.1s						
DZM				eLR	LR	16 02 20.0	
	comp=Z,541nm,23.6s						
DZM	Mont Dzumac	46.40	154	P	P	15 49 26.8	-0.3
DZM	Mont Dzumac	46.40	154	P	P	15 49 26.8	-0.3
	comp=Z,4.2nm,0.8s,baz=343,slow=14,SNR=2.4						
MOY	Mondy	47.23	323	eP	P	15 49 34.5	+1.2
BILL	Bilibino	49.23	10	eP	P	15 49 49.1	+0.8
BILL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BILL	Bilibino	49.23	10	eP	P	15 49 49.0	+0.8
	comp=Z,8.9nm,0.9s						
PSI	Prapat	49.68	256	P	P	15 49 50.8	-1.9
PSI	Prapat	49.68	256	P	P	15 49 50.8	-1.9
	comp=Z,3.6nm,0.8s,baz=138,slow=15,SNR=2.0						
LSA	Lhasa	50.74	292	P	P	15 50 02.3	+1.3
STKA	Stephens Creek	52.17	185	eP	P	15 50 09.4	-1.6
	comp=Z,1.1nm,0.8s						
STKA	Stephens Creek	52.17	185	P	P	15 50 09.7	-1.3
	comp=Z,3.6nm,0.8s,baz=0.2,slow=10,SNR=9.3						
STKA				LR	LR	16 13 31.5	
	comp=Z,278nm,18.6s,baz=18,slow=38						
TIXI	Tiksi	52.33	353⇑	eP	P	15 50 11.6	0.0
TIXI				pmax	pmax		
	comp=Z,6.0nm,2.5s						
WMQ	Urumqi	53.92	310	P	P	15 50 25.5	+1.6
WMQ				sP	sP	15 50 33.0	+0.2
WMQ				PcP	PcP	15 51 31.0	+1.8
WMQ				PP	PP	15 52 29.0	+3.9
WMQ				ScP	ScP	15 55 28.0	+1.7
WMQ				S	S	15 58 00.0	+1.6
WMQ				ScS	ScS	16 00 12.0	-0.4
WMQ				SS	SS	16 01 41.0	+1.5
WMQ				pmax	pmax		
	comp=Z,21nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,150nm,5.0s						
WMQ				LR	LR		
	comp=N,290nm,16.0s						
WMQ				LR	LR		
	comp=E,270nm,18.0s						
WMQ				LR	LR		
	comp=Z,220nm,18.0s						
TNA	Tin City	53.94	22	eP	P	15 50 25.1	+1.6
	comp=Z,5.7nm,1.0s						
TAPN	Taplejung	53.94	290	eP	P	15 50 24.8	+0.2
ODAN	Odare	54.28	289	eP	P	15 50 26.9	-0.1
	comp=Z,27nm,0.7s						
RAMN	Ramite	54.97	289	eP	P	15 50 32.4	+0.4
GUN	Gumba	55.50	290	eP	P	15 50 36.5	+0.6
	comp=Z,150nm,1.3s						
PKI	Pulchoki	55.95	290	eP	P	15 50 39.0	-0.2
PKIN	Phulchoki	55.96	290	eP	P	15 50 39.4	+0.2
KKN	Kakani	56.04	290	eP	P	15 50 39.6	0.0
	comp=Z,57nm,1.0s						
DMN	Daman	56.21	290	eP	P	15 50 40.6	-0.4
ZAA0	Zalesovo Array	57.26	322	eP	P	15 50 47.0	-0.6
ZALV	Zalesovo Beam	57.26	322	P	P	15 50 46.9	-0.7
ZALV	Zalesovo Beam	57.26	322	P	P	15 50 46.9	-0.7
ZALV	Zalesovo Beam	57.26	322	P	P	15 50 46.9	-0.7
	comp=Z,6.7nm,0.8s,baz=106,slow=7.5,SNR=22						
ZALV				LR	LR	16 15 01.6	
	comp=Z,159nm,18.1s,baz=261,slow=36						
DANN	Dangsing	57.30	291	eP	P	15 50 48.9	+0.2
	comp=Z,270nm,0.9s						
KDAK	Kodiak Island	57.47	34	P	P	15 50 49.4	+0.4
KDAK	Kodiak Island	57.47	34	P	P	15 50 49.4	+0.4
	comp=Z,6.9nm,0.8s,baz=276,slow=9.2,SNR=3.5						
KOLN	Koldanda	57.52	291	eP	P	15 50 50.3	+0.2
	comp=Z,46nm,0.9s						
MK31	Makanchi Array	57.98	313c	eP	P	15 50 52.5	-0.3
MK31				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MK31	Makanchi Array	57.98	313	eP	P	15 50 52.8	0.0
MKAR	Makanchi Array	57.98	313	P	P	15 50 52.9	+0.1
MKAR	Makanchi Array	57.98	313	P	P	15 50 52.9	+0.1
MKAR	Makanchi Array	57.98	313	P	P	15 50 52.9	+0.1
	comp=Z,8.4nm,0.9s,baz=92,slow=6.8,SNR=29						
MKAR				LR	LR	16 18 25.6	
	comp=Z,167nm,18.9s,baz=213,slow=39						
PYUN	Piuthan	58.01	291	eP	P	15 50 53.3	-0.3
	comp=Z,138nm,1.0s						
NVS	Novosibirsk	58.33	323	eP	P	15 50 54.3	-0.8
NVS				pmax	pmax		
	comp=Z,21nm,1.5s						
NVS				pmax	pmax		
	comp=N,5.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,12nm,1.3s						
TRF	Thorofare Moun	59.99	28	eP	P	15 51 06.1	-0.6
	comp=E,13nm,0.9s						
SML	Sawmill	60.48	30	eP	P	15 51 09.7	-0.2
SML				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SML	Sawmill	60.48	30	eP	P	15 51 09.7	-0.2
	comp=Z,4.0nm,1.1s						
KURK	Kurchatov	60.65	317c	iP	P	15 51 10.8	-0.4
KURK				pmax	pmax		
	comp=Z,22nm,1.7s						
KURK				MLR	MLR		
	comp=Z,259nm,16.0s						
KURK	Kurchatov	60.65	317	eP	P	15 51 10.6	-0.6
	comp=Z,24nm,1.1s						
KURBB	Kurchatov Arra	60.70	317	P	P	15 51 12.7	+1.1
	comp=Z,9.6nm,0.8s,baz=92,slow=7.7,SNR=43						
COLD	Coldfoot	61.07	23	eP	P	15 51 14.2	+0.4
	comp=Z,5.5nm,0.9s						
ILAR	Eielson Array	61.75	26	P	P	15 51 17.4	-1.1
ILAR	Eielson Array	61.75	26	P	P	15 51 17.4	-1.1
	comp=Z,3.6nm,0.9s,baz=262,slow=5.4,SNR=32						
PAX	Paxson	62.01	29	P	P	15 51 20.0	-0.4
PAX				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PAX	Paxson	62.01	29	P	P	15 51 20.0	-0.4
	comp=Z,7.8nm,1.1s						
KSH	Kashi	62.66	305	P	P	15 51 27.6	+2.5
KSH				pP	pP	15 51 31.8	+0.2
KSH				sP	sP	15 51 34.9	+0.8
KSH				PcP	PcP	15 52 04.6	+0.7
KSH				PP	PP	15 53 47.7	+4.8
KSH				PcS	PcS	15 56 05.6	-1.8
KSH				S	S	15 59 55.5	+2.8
KSH				ScS	SKKSac	16 01 15.6	-1.3
KSH				pmax	pmax		
	comp=Z,1.0nm,0.1s						
KSH				LR	LR		
	comp=N,130nm,5.1s						

KSH LR LR
comp=E,110nm,4.0s
KSH LR LR
comp=Z,170nm,5.3s
TKM2 Tokmak 2 62.71 309 *eP* **P 15 51 25.9 +0.4**
TKM2 Tokmak 2 62.71 309 *eP* **P 15 51 25.9 +0.4**
DOT Dot Lake 62.76 28 *eP* **P 15 51 24.6 -0.6**
comp=Z,2.1nm,0.8s
NDI New Delhi 62.95 293 *eP* **P 15 51 24.0 -3.1**
AAK Ala-Archa 63.54 308 *eP* **P 15 51 30.8 -0.2**
AAK Ala-Archa 63.54 308⇓ *eP* **P 15 51 31.0 0.0**
AAK pmax pmax
comp=Z,11nm,1.7s
AAK Ala-Archa 63.54 308 *eP* **P 15 51 30.8 -0.2**
AAK Ala-Archa 63.54 308 P **P 15 51 31.1 +0.1**
comp=Z,1.8nm,0.7s,baz=120,slow=7.1,SNR=5.8
BVA0 Borovoye Array 65.78 320 *i* P **P 15 51 45.0 -0.2**
BVA0 pmax pmax
comp=Z,3.0nm,1.0s
BRVK Borovoye 65.84 320⇓ *eP* **P 15 51 45.8 +0.2**
BRVK pmax pmax
comp=Z,13nm,1.0s
BRVK Borovoye 65.84 320 *eP* **P 15 51 45.7 +0.1**
comp=Z,24nm,1.1s
KK31 Karatay Array 66.41 309 *ceP* **P 15 51 49.2 -0.3**
KK31 pmax pmax
comp=Z,7.0nm,0.7s
INK Inuvik 67.49 23 P **P 15 51 55.3 -0.5**
INK Inuvik 67.49 23 P **P 15 51 55.3 -0.5**
comp=Z,6.1nm,0.9s,baz=262,slow=6.9,SNR=15
KBL Kabul 68.81 300 *eP* **P 15 52 04.9 -0.2**
KBL pmax pmax
comp=Z,27nm,1.1s
KBL Kabul 68.81 300 *eP* **P 15 52 04.9 -0.2**
comp=Z,27nm,1.1s
DLBC Dease Lake 69.41 34 *eP* **P 15 52 08.6 +0.5**
SVE Sverdlovsk 71.04 325⇑ *eP* **P 15 52 18.5 +0.4**
SVE *eS* S 16 01 22.7 -10
SVE pmax pmax
comp=Z,17nm,1.3s
ARU Arti 72.24 324 *eP* **P 15 52 25.0 -0.3**
ARU pmax pmax
comp=Z,20nm,1.2s
ARU Arti 72.24 324 *eP* **P 15 52 24.9 -0.3**
comp=Z,20nm,1.2s
SOKR Solikamsk 72.61 328 *eP* P 15 52 37.0 +10
SOKR pmax pmax
comp=Z,10.0nm,0.8s
ABKAR Akbulak array 72.75 317 *eP* **P 15 52 27.2 -1.2**
comp=Z,3.9nm,0.8s
PPT Papeete 73.03 117 LR LR 16 19 45.4
comp=Z,139nm,18.9s,baz=319,slow=32
PPT2 Papeete2 73.04 117 *eLR* LR 16 14 48.3
comp=Z,172nm,23.5s
AKTO Aktyubinsk 73.72 318 P **P 15 52 33.3 -0.9**
AKTO Aktyubinsk 73.72 318 P **P 15 52 33.3 -0.9**
AKTO Aktyubinsk 73.72 318 P **P 15 52 33.3 -0.9**
comp=Z,0.9nm,0.6s,baz=109,slow=8.2,SNR=4.8
TBI Tubuai 75.92 122 *eLR* LR 16 16 07.1
comp=Z,88nm,23.8s
YKW3 Yellowknife Ar 76.07 28 *eP* **P 15 52 46.7 -0.8**
comp=Z,0.1nm,1.0s
YKA Yellowknife Ar 76.10 28 P **P 15 52 47.5 -0.2**
YKA Yellowknife Ar 76.10 28 P **P 15 52 47.4 -0.2**
comp=Z,3.3nm,0.9s,baz=289,slow=5.6,SNR=29
YBH Yreka Blue Hor 77.19 50 P **P 15 52 55.1 +0.7**
YBH Yreka Blue Hor 77.19 50 P **P 15 52 55.1 +0.7**
comp=Z,2.6nm,0.8s,baz=248,slow=4.5,SNR=6.2
RES Resolute Bay 77.59 14 P **P 15 52 55.0 -0.9**
comp=Z,4.2nm,0.9s
NEW Newport 79.08 43 *eP* **P 15 53 04.2 -0.5**
comp=Z,4.9nm,1.0s
TMCR Tamitsa 79.64 335 *eP* **P 15 53 07.1 -0.2**
TMCR pmax pmax
comp=Z,27nm,1.4s
BMO Blue Mountains 80.03 46 *eP* **P 15 53 10.4 +0.4**
BMO pmax pmax
comp=Z,7.0nm,1.2s
BMO Blue Mountains 80.03 46 *eP* **P 15 53 10.4 +0.4**
comp=Z,6.6nm,1.2s
KLMR Klimovskoe 80.42 332 *eP* **P 15 53 10.9 -0.7**
KLMR pmax pmax
comp=Z,16nm,1.4s
KLMR MLR MLR
comp=Z,330nm,20.0s
BSMT Bassoo Peak 80.69 42 *eP* **P 15 53 14.6 +1.0**
comp=Z,8.2nm,1.2s
BLMT Blacktail Moun 80.90 42 P **P 15 53 13.8 -1.0**
ARCES ARCESS Array B 81.19 342 P **P 15 53 14.0 -1.6**
ARCES ARCESS Array B 81.19 342 P **P 15 53 14.0 -1.6**
comp=Z,4.9nm,1.1s,baz=63,slow=5.6,SNR=5.3
ARCES LR LR 16 34 33.9
comp=Z,299nm,18.6s,baz=42,slow=40
NVAR Mina Array Bea 81.40 52 P **P 15 53 17.8 +0.1**
NVAR Mina Array Bea 81.40 52 P **P 15 53 17.8 +0.1**
comp=Z,4.6nm,0.8s,baz=269,slow=5.2,SNR=25
ELK Elko 82.85 49 *eP* **P 15 53 26.1 +0.9**
LRM Limekiln Ridge 82.91 44 *eP* **P 15 53 26.0 +0.6**
comp=Z,38nm,1.0s
VRHR Novokhopersk 83.39 322 *eP* **P 15 53 25.3 -2.1**
VRHR pmax pmax
comp=Z,6.0nm,0.9s
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.6s
YMR Madison River 84.32 44 *eP* **P 15 53 33.7 +1.0**
comp=E,8.2nm,0.9s
OBN Obninsk 84.37 327⇑ *eP* **P 15 53 32.9 +0.6**
OBN *e* 15 53 40.5
OBN pmax pmax
comp=Z,30nm,1.7s
OBN MLR MLR
comp=Z,300nm,17.0s
VSR Storozhevoye 84.74 323 *eP* **P 15 53 34.3 0.0**
VSR pmax pmax
comp=Z,10.0nm,1.2s
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,10.0nm,1.0s
VORD Divnogorie 84.78 323 *eP* **P 15 53 33.0 -1.5**
VORD pmax pmax
comp=E,8.0nm,0.9s
VORD pmax pmax
comp=Z,2.0nm,0.9s
VORD pmax pmax
comp=N,8.0nm,0.7s
FFC Flin Flon 85.20 33 *i* P **P 15 53 38.0 +1.4**
FFC Flin Flon 85.20 33 *eP* **P 15 53 35.9 -0.7**
comp=N,14nm,1.3s
RLMT Red Lodge 85.25 44 *eP* **P 15 53 38.1 +0.8**
comp=N,8.8nm,1.1s
KBZ Khabaz 85.61 315 P **P 15 53 40.7 +1.9**
KBZ Khabaz 85.61 315 P **P 15 53 40.7 +1.9**
KBZ Khabaz 85.61 315 P **P 15 53 40.7 +1.9**
comp=N,4.2nm,0.9s,baz=124,slow=3.6,SNR=6.1
KBZ LR LR 16 33 40.8
comp=N,198nm,21.3s,baz=62,slow=37
KIV Kislovodsk 85.66 315 *eP* **P 15 53 40.4 +1.2**
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,264nm,19.0s
FINES FINESS Array B 85.75 335 P **P 15 53 38.1 -1.0**
FINES FINESS Array B 85.75 335 P **P 15 53 38.1 -1.0**
comp=Z,2.8nm,0.5s,baz=57,slow=6.1,SNR=15
PDAR Pinedale Array 86.02 46 P **P 15 53 42.0 +0.8**
PDAR Pinedale Array 86.02 46 P **P 15 53 42.0 +0.8**
comp=Z,1.2nm,0.8s,baz=273,slow=2.4,SNR=7.1
SRU San Rafael 86.82 49 *eP* **P 15 53 45.4 +0.2**
SRU San Rafael 86.82 49 *eP* **P 15 53 45.4 +0.2**
comp=Z,95nm,0.6s
ANN Anapa 88.68 318 *eP* **P 15 53 55.0 +1.3**
ANN *e* 15 54 05.8
AKASG Malin Array Be 90.45 326 LR LR 16 35 52.8
comp=Z,169nm,21.0s,baz=80,slow=36
ULM Lac du Bonnet 90.72 35 P **P 15 54 03.3 +0.2**
ULM Lac du Bonnet 90.72 35 P **P 15 54 03.3 +0.2**
comp=Z,3.0nm,0.8s,baz=338,slow=5.4,SNR=5.6
HFS Hagfors 91.17 339 LR LR 16 37 04.4
comp=Z,123nm,20.4s,baz=52,slow=37
NOA NORSAR Array B 91.32 340 LR LR 16 40 48.5
comp=Z,88nm,18.3s,baz=5.0,slow=39
SFJD Kangerlussuaq 91.94 7 LR LR 16 36 39.1
comp=Z,98nm,18.4s,baz=341,slow=36

LPIG La Paz 93.03 63 LR LR 16 29 08.1
comp=Z,13nm,20.8s,baz=216,slow=31
BRTR Keskin Array B 93.59 315 P **P 15 54 17.4 +0.5**
BRTR Keskin Array B 93.59 315 P **P 15 54 17.4 +0.5**
comp=Z,0.8nm,0.9s,baz=70,slow=6.9,SNR=2.9
BRTR LR LR 16 38 56.6
comp=Z,74nm,21.9s,baz=207,slow=37
CRVS Cervenica-Dubn 95.56 327 *eP* **P 15 54 26.7 +1.2**
TXAR Lajitas Array 96.15 56 LR LR 16 31 45.8
comp=Z,69nm,21.1s,baz=0.0,slow=32
VYHS Vyhne 97.14 328 *eP* Pdif 15 54 34.7 +1.9
VRAC Vranov 97.68 330 LR LR 16 42 37.8
comp=Z,142nm,18.6s,baz=52,slow=38
CLL Collm 97.89 333 *eSS* SS 16 12 45.0 +3.9
GERES GERESS Array B 99.36 331 LR LR 16 44 20.2
comp=Z,140nm,18.2s,baz=269,slow=38
PMSA Palmer Station 131.17 163 *eP* **Pdif 15 57 07.7 +4.2**
TORD Torodi Ar. Bea 132.08 311 PKP **PKPdf 16 00 15.4 +0.5**
TORD Torodi Ar. Bea 132.08 311 PKP **PKPdf 16 00 15.4 +0.5**
comp=Z,0.7nm,0.9s,baz=4.0,slow=2.8,SNR=3.1
PLCA Paso Flores 142.44 131 PKP **PKPdf 16 00 34.9 +1.6**
PLCA Paso Flores 142.44 131 PKP **PKPdf 16 00 34.9 +1.6**
comp=Z,1.0nm,0.7s,baz=293,slow=2.4,SNR=3.1
LCO Las Campanas 145.10 112 *e*PKP **PKPbc 16 00 37.8 -0.2**
LPAZ La Paz 146.77 89 *e*PKPbc **PKPbc 16 00 43.3 -0.6**
LPAZ La Paz 146.77 89 PKPbc **PKPbc 16 00 43.8 -0.1**
comp=Z,3.4nm,0.9s,baz=323,slow=3.8,SNR=9.8
SAML Samuel 149.04 73 *e*PKPdf **PKPdf 16 00 44.2 -1.0**
SAML *e*PKPbc **PKPbc 16 00 48.5 -0.8**

CSEM ***08*** *15:57:08.2, 42.28N×13.46E, h10km, MD1.9/8, After ROM*
ROM 08 15:57:08.2±0.1, 42.28N×13.46E, h10km±1km, Md1.9/8, Ml1.8/3, Error ellipse: s-maj=1.8km s-min=1.3km az=68.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.08**	**329**	Pg	Pg	15 57 11.0	+0.3
AQU				Sg	Sg	15 57 12.8	+0.4
	219nm,0.2s						
AQU	**L'Aquila**	**0.08**	**329**	Pg	Pg	15 57 11.0	+0.3
AQU				Sg	Sg	15 57 12.8	+0.4
	219nm,0.2s						
FAGN	**Fagnano**	**0.09**	**100**	Pg	Pg	15 57 11.0	+0.2
FAGN				Sg	Sg	15 57 13.2	+0.6
	637nm,0.4s						
FAGN	**Fagnano**	**0.09**	**100**	Pg	Pg	15 57 11.0	+0.2
FAGN				Sg	Sg	15 57 13.2	+0.6
	637nm,0.4s						
CAMP	**Campotosto**	**0.26**	**352**	Pg	Pb	15 57 14.9	-0.2
CAMP				Sg	Sg	15 57 17.9	+0.7
CAMP	**Campotosto**	**0.26**	**352**	Pg	Pb	15 57 14.9	-0.2
CAMP				Sg	Sg	15 57 17.9	+0.7
PTQR	**Pietraquaria**	**0.26**	**189**	Pg	Pg	15 57 14.4	+0.7
PTQR				Sg	Sb	15 57 18.7	-1.2
	9.0nm,0.2s						
PTQR	**Pietraquaria**	**0.26**	**189**	Pg	Pg	15 57 14.4	+0.7
PTQR				Sg	Sb	15 57 18.7	-1.2
	9.0nm,0.2s						
VCEL	**Villa Celiera**	**0.30**	**68**	Pg	Pg	15 57 15.2	+0.7
VCEL				Sg	Sb	15 57 20.2	-0.9
	97nm,0.4s						
VCEL	**Villa Celiera**	**0.30**	**68**	Pg	Pg	15 57 15.2	+0.7
VCEL				Sg	Sb	15 57 20.2	-0.9
	97nm,0.4s						
TERO	**Teramo**	**0.36**	**17**	Pg	Pg	15 57 15.5	+0.1
	44nm,0.4s						
TERO	**Teramo**	**0.36**	**17**	Pg	Pg	15 57 15.5	+0.1
	44nm,0.4s						
VVLD	**Villa Vallelon**	**0.43**	**164**	Pg	Pg	15 57 17.1	+0.3
VVLD				Sg	Sb	15 57 23.7	-1.0
VVLD	**Villa Vallelon**	**0.43**	**164**	Pg	Pg	15 57 17.1	+0.3
VVLD				Sg	Sb	15 57 23.7	-1.0
LNSS	**Leonessa**	**0.45**	**316**	Pg	Pb	15 57 18.1	-0.3
LNSS	**Leonessa**	**0.45**	**316**	Pg	Pb	15 57 18.1	-0.3
NRCA	**Norcia**	**0.61**	**335**	Pg	Pg	15 57 20.1	0.0
	3.0nm,0.2s						
NRCA	**Norcia**	**0.61**	**335**	Pg	Pg	15 57 20.1	0.0
	3.0nm,0.2s						

IDC 08 16:04:56.0±50.0, 17.50S×178.57W, h0km, mb4.3/3, mb1 4.4/3, mb1mx3.8/19, mbtmp4.3/3, Error ellipse: s-maj=917.0km s-min=148.9km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.69**	**241**	P	P	16 12 22.4	+0.6
	2.0nm,0.5s,baz=98,slow=9.1,SNR=6.7						
WRA	**Warramunga Arr**	**44.55**	**259**	P	P	16 13 10.0	-0.1
	1.2nm,0.5s,baz=96,slow=7.5,SNR=60						
ASAR	**Alice Springs**	**44.75**	**254**	P	P	16 13 10.9	-0.8
	4.4nm,0.6s,baz=88,slow=8.6,SNR=103						

CSEM ***08*** *16:05:38.3, 42.28N×13.48E, h9km, MD1.9/7, After ROM*
ROM 08 16:05:38.3±0.1, 42.28N×13.48E, h9km, Md1.9/7, Ml1.6/2, Error ellipse: s-maj=1.4km s-min=0.9km az=177.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.08**	**102**	Pg	Pg	16 05 41.0	+0.4
FAGN				Sg	Sg	16 05 42.4	+0.1
FAGN	**Fagnano**	**0.08**	**102**	Pg	Pg	16 05 41.0	+0.4
FAGN				Sg	Sg	16 05 42.7	+0.4
FAGN	**Fagnano**	**0.08**	**102**	Pg	Pg	16 05 41.0	+0.4
FAGN				Sg	Sg	16 05 42.7	+0.4
AQU	**L'Aquila**	**0.09**	**321**	Pg	Pg	16 05 41.1	+0.3
AQU				Sg	Sg	16 05 43.4	+0.9
AQU	**L'Aquila**	**0.09**	**321**	Pg	Pg	16 05 41.1	+0.3
AQU	**L'Aquila**	**0.09**	**321**	Pg	Pg	16 05 41.1	+0.3
PTQR	**Pietraquaria**	**0.27**	**193**	Pg	Pg	16 05 41.5	-2.3
PTQR				Sg	Sg	16 05 45.7	-1.8
	14nm,0.2s						
PTQR	**Pietraquaria**	**0.27**	**193**	Pg	Pb	16 05 44.8	-0.6
PTQR				Sg	Sb	16 05 49.3	-0.9
	14nm,0.2s						
PTQR	**Pietraquaria**	**0.27**	**193**	Pg	Pb	16 05 44.8	-0.6
PTQR				Sg	Sb	16 05 49.3	-0.9
	14nm,0.2s						
FIAM	**Fiamignano**	**0.27**	**267**	Pg	Pg	16 05 44.6	+0.7
FIAM				Sg	Sg	16 05 48.9	+1.3
	24nm,0.6s						
FIAM	**Fiamignano**	**0.27**	**267**	Pg	Pg	16 05 44.4	+0.5
FIAM				Sg	Sb	16 05 49.3	-1.0
	64nm,0.6s						
FIAM	**Fiamignano**	**0.27**	**267**	Pg	Pg	16 05 44.4	+0.5
FIAM				Sg	Sb	16 05 49.3	-1.0
	64nm,0.6s						
VCEL	**Villa Celiera**	**0.29**	**67**	Pg	Pg	16 05 45.0	+0.7
VCEL				Sg	Sb	16 05 49.9	-1.0
	90nm,0.6s						
VCEL	**Villa Celiera**	**0.29**	**67**	Pg	Pb	16 05 45.1	-0.8
VCEL				Sg	Sb	16 05 49.9	-1.0
	92nm,0.5s						
VCEL	**Villa Celiera**	**0.29**	**67**	Pg	Pb	16 05 45.1	-0.8
VCEL				Sg	Sb	16 05 49.9	-1.0
	92nm,0.5s						
INTR	**Introdacqua**	**0.42**	**130**	Pg	Pb	16 05 47.5	-0.5
INTR				Sg	Sb	16 05 53.4	-1.1
INTR	**Introdacqua**	**0.42**	**130**	Pg	Pb	16 05 47.5	-0.5
INTR				Sg	Sb	16 05 53.4	-1.1
VVLD	**Villa Vallelon**	**0.42**	**165**	Pg	Pg	16 05 47.0	+0.2
VVLD	**Villa Vallelon**	**0.42**	**165**	Pg	Pg	16 05 47.0	+0.2

CSEM ***08*** *16:13:13.9, 42.34N×13.40E, h10km, MD1.8/9, After ROM*
ROM 08 16:13:13.9±0.1, 42.34N×13.40E, h10km, Md1.8/9, Ml1.6/5, 2D, Error ellipse: s-maj=1.5km s-min=1.1km az=3.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.02**	**12**	*i* Pg	Pg	16 13 16.3	+0.4
AQU				Sg	Sg	16 13 17.4	+0.1
	1μm,0.3s						
AQU	**L'Aquila**	**0.02**	**12**	⇓ *i* Pg	Pg	16 13 16.3	+0.4
AQU				Sg	Sg	16 13 17.4	+0.1
	1μm,0.3s						
FAGN	**Fagnano**	**0.15**	**117**	Pg	Pg	16 13 18.1	+0.6
FAGN				Sg	Sg	16 13 21.0	+1.0
	604nm,0.5s						
FAGN	**Fagnano**	**0.15**	**117**	Pg	Pg	16 13 18.1	+0.6
FAGN				Sg	Sg	16 13 21.0	+1.0
	604nm,0.5s						
CAMP	**Campotosto**	**0.20**	**3**	Pg	Pg	16 13 19.1	+0.7
CAMP				Sg	Sg	16 13 22.3	+0.9
CAMP	**Campotosto**	**0.20**	**3**	Pg	Pg	16 13 19.1	+0.7
CAMP				Sg	Sg	16 13 22.3	+0.9
FIAM	**Fiamignano**	**0.22**	**252**	Pg	Pg	16 13 19.1	+0.5
FIAM				Sg	Sg	16 13 22.9	+1.1
	80nm,0.7s						
FIAM	**Fiamignano**	**0.22**	**252**	Pg	Pg	16 13 19.1	+0.5
FIAM				Sg	Sg	16 13 22.9	+1.1
	80nm,0.7s						
TERO	**Teramo**	**0.33**	**28**	Pg	Pg	16 13 20.7	+0.2
	35nm,0.3s						
TERO	**Teramo**	**0.33**	**28**	Pg	Pg	16 13 20.7	+0.2
	35nm,0.3s						
VCEL	**Villa Celiera**	**0.33**	**80**	Pg	Pg	16 13 21.3	+0.5
VCEL				Sg	Sg	16 13 26.4	+1.0
	66nm,0.3s						
VCEL	**Villa Celiera**	**0.33**	**80**	Pg	Pg	16 13 21.3	+0.5
VCEL				Sg	Sg	16 13 26.4	+1.0
	66nm,0.3s						
LNSS	**Leonessa**	**0.38**	**315**	Pg	Pb	16 13 22.4	-0.4
	37nm,0.5s						
LNSS	**Leonessa**	**0.38**	**315**	Pg	Pb	16 13 22.4	-0.4
	37nm,0.5s						
VVLD	**Villa Vallelon**	**0.49**	**160**	Pg	Pg	16 13 23.4	-0.3
VVLD	**Villa Vallelon**	**0.49**	**160**	Pg	Pg	16 13 23.4	-0.3
NRCA	**Norcia**	**0.54**	**337**	Pg	Pg	16 13 24.4	-0.2
	7.0nm,0.1s						
NRCA	**Norcia**	**0.54**	**337**	Pg	Pg	16 13 24.4	-0.2
	7.0nm,0.1s						

NIED ***08*** *16:17:00, 45.90N×151.90E, h11km, Mw4.4 Best double couple: M0 4.77000×10^15 NP1: φ 11.00000°, δ 77.00000°, λ 93.00000°. NP2: φ 178.00000°, δ 14.00000°, λ 77.00000°.*
BJI ***08*** *16:17:44.5, 46.13N×152.81E, h12km, mB4.6/15, mb4.4/24, Ms4.3/5, Ms7 4.1/5*
ISCJB ***08*** *16:17:53.9±0.6, 45.85N±0.03×151.81E±0.04, h37km±5km, mb4.6/95, MS3.9/14, Error ellipse: s-maj=6.2km s-min=4.3km az=147.3*
SKHL ***08*** *16:17:53.6±2.1, 45.85N×152.18E, h44km±6km, mb5.0/7, Ms3.9/2*
MOS ***08*** *16:17:54.0±1.0, 45.90N×151.85E, h38km, mb5.0/44, Error ellipse: s-maj=7.7km s-min=5.1km az=96.5*
IDC ***08*** *16:17:55.5±3.2, 46.02N×151.67E, h33km±23km, mb4.1/29, mb1 4.2/33, mb1mx4.2/36, mbtmp4.1/33, ML3.9/3, MS3.7/16, Ms1 3.7/16, ms1mx3.4/47, Error ellipse: s-maj=15.3km s-min=11.2km az=135.0*
JMA ***08*** *16:17:55.3±0.7, 45.87N×151.91E, h30km, M5.0*
NEIC ***08*** *16:17:56.5±0.7, 45.98N×151.73E, h43km±5km, mb5.0/44, Error ellipse: s-maj=8.7km s-min=4.6km az=136.0*
SZGRF ***08*** *16:18:04.8, 47.07N×151.43E, h57km, mb4.8, Kuril Islands, Russia*
ISC 08 16:17:55.7±0.7, 45.83N±0.05×151.95E±0.05, h41km±5km, n412, σ1°28/431, mb4.7/95, MS3.9/14, 49C-27D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.93**	**260**	*e*PN	**Pn**	**16 18 38.5**	**-1.2**
KUR				*e*S	**Sn**	**16 19 13.0**	**-0.6**
KUR				pmax	pmax		
	comp=N,320nm,0.5s						
KUR				pmax	pmax		
	comp=Z,590nm,0.5s						
KUR				pmax	pmax		
	comp=E,180nm,0.3s						
KUR				smax	smax		
	comp=N,8μm,1.0s						
KUR				smax	smax		
	comp=E,4μm,1.4s						
KUR				smax	smax		
	comp=N,6μm,1.0s						
KUR				smax	smax		
	comp=E,6μm,0.9s						
KUR	**Kuril'sk**	**2.93**	**260**	*e*P	**Pn**	**16 18 38.5**	**-1.2**
KUR				AMB	AMB	16 18 42.0	
	comp=E,320nm,0.4s						
KUR				AMB	AMB	16 18 42.0	
	comp=E,180nm,0.4s						
KUR				AMB	AMB	16 18 42.0	
	comp=E,590nm,0.4s						
KUR				*e*S	**Sn**	**16 19 13.0**	**-0.6**
KUR				A	A	16 19 19.0	
	comp=E,8μm,1.2s						
KUR				A	A	16 19 19.0	
	comp=E,4μm,1.2s						
KUR				A	A	16 19 20.0	
	comp=E,6μm,1.0s						
KUR				A	A	16 19 20.0	
	comp=E,6μm,1.0s						
YUK	**Yuzh-Kuril'sk**	**4.68**	**250**	*i* PN	**Pn**	**16 19 05.2**	**+1.5**
YUK				*i* S	**Sn**	**16 19 56.7**	**0.0**
YUK				pmax	pmax		
	comp=N,186nm,0.5s						
YUK				pmax	pmax		
	comp=E,107nm,0.5s						
YUK				pmax	pmax		
	comp=Z,323nm,0.5s						
YUK				smax	smax		
	comp=N,372nm,0.8s						
YUK				smax	smax		
	comp=E,579nm,0.7s						
YUK	**Yuzh-Kuril'sk**	**4.68**	**250**	⇓ *i* P	**Pn**	**16 19 05.3**	**+1.5**
YUK				AMB	AMB	16 19 12.9	
	comp=E,186nm,0.5s						
YUK				AMB	AMB	16 19 12.9	
	comp=E,107nm,0.5s						
YUK				AMB	AMB	16 19 12.9	
	comp=E,323nm,0.5s						
YUK				*i* sP	sP	16 19 23.9	
YUK				*i* S	**Sn**	**16 19 56.8**	**0.0**
YUK				A	A	16 20 10.7	
	comp=E,372nm,0.8s						
YUK				A	A	16 20 10.7	
	comp=E,579nm,0.8s						
NEM2	**Nemuro 2**	**5.07**	**243**	P	**Pn**	**16 19 08.4**	**-0.7**
NEM2				*e*S	**Sn**	**16 20 02.6**	**-3.7**
JRA	**Rausu**	**5.21**	**251**	P	**Pn**	**16 19 11.9**	**+0.9**
SKR	**Severo-Kuril's**	**5.60**	**28**	*e*PN	Pn	16 19 13.0	-3.3
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR	**Severo-Kuril's**	**5.60**	**28**	*e*P	Pn	16 19 13.0	-3.3
SKR				AMB	AMB	16 19 15.0	
	comp=Z,80nm,0.5s						
SKR				AMB	AMB	16 19 15.0	
	comp=Z,60nm,0.5s						
SKR				AMB	AMB	16 19 15.0	
	comp=Z,90nm,0.5s						
SKR				*e*S	**Sn**	**16 20 14.5**	**-4.8**
SKR				A	A	16 20 47.5	
	comp=Z,560nm,0.7s						
SKR				A	A	16 20 47.5	
	comp=Z,150nm,0.7s						
SKR				A	A	16 20 47.5	
	comp=Z,110nm,0.7s						
JNK	**Nakash**	**5.62**	**249**	P	**Pn**	**16 19 17.1**	**+0.4**
JNK				*e*S	**Sn**	**16 20 15.1**	**-4.8**
JAK	**Akkeshi**	**5.92**	**244**	P	**Pn**	**16 19 20.2**	**-0.5**
JAK				*e*S	**Sn**	**16 20 22.0**	**-5.2**
JTKR	**Abashiri--Toko**	**6.01**	**255**	P	**Pn**	**16 19 23.4**	**+1.5**
JMP	**Maruseppu**	**6.37**	**256**	P	**Pn**	**16 19 29.8**	**+2.9**
JAR	**Ashorobuto**	**6.37**	**250**	P	**Pn**	**16 19 28.3**	**+1.4**
JAR				*e*S	**Sn**	**16 20 35.1**	**-3.2**
YSS	**Yuzh-Sakhalins**	**6.46**	**283**	⇓ *e*PN	**Pn**	**16 19 30.0**	**+1.8**
YSS				*e*S	**Sn**	**16 20 42.0**	**+1.5**
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
YSS				MLR	MLR		
	comp=E,900nm,16.0s						
YSS				MLR	MLR		
	comp=Z,700nm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.46**	**283**	*e*P	**Pn**	**16 19 29.3**	**+1.1**
	comp=Z,45nm,0.6s						
YSS	**Yuzh-Sakhalins**	**6.46**	**283**	⇓ *e*P	**Pn**	**16 19 30.0**	**+1.8**

YSS AMB AMB 16 19 31.9
comp=Z,70nm,1.0s
YSS esP sP 16 19 48.1
YSS eS **Sn** **16 20 42.0 +1.5**
YSS AMS AMS 16 21 45.0
comp=Z,700nm,16.0s
YSS AMS AMS 16 21 45.0
comp=Z,900nm,16.0s
JOB **Onbets** **6.51 246** P **Pn** **16 19 29.4 +0.6**
JOB eS **Sn** **16 20 39.1 -2.7**
JKK2 **Kamakawa 2** **6.83 257** P **Pn** **16 19 35.3 +2.1**
ASAJ **Asahikawa** **6.85 259** *e*P **Pn** **16 19 36.4 +2.8**
comp=Z,51nm,1.0s
ASAJ **Asahikawa** **6.85 259** P Pn 16 19 36.5 +3.0
ASAJ **Asahikawa** **6.85 259** Pn **Pn** **16 19 35.6 +2.1**
comp=Z,3.8nm,0.3s,baz=84,slow=13,SNR=28
ASAJ LR LR 16 21 33.6
comp=Z,222nm,19.7s,baz=176,slow=32
JCH **Churui** **6.95 246** P **Pn** **16 19 34.5 -0.5**
JCH eS **Sn** **16 20 48.7 -4.0**
JWK2 **Keihoku** **7.08 269** P Pn 16 19 40.3 +3.7
JFR **Furan** **7.20 252** P **Pn** **16 19 39.5 +1.1**
JAB **Ashibetsu** **7.31 255** P **Pn** **16 19 42.7 +2.8**
ERM **Erimo** **7.40 242** *d* iPN **Pn** **16 19 42.6 +1.5**
ERM pmax pmax
comp=Z,42nm,0.6s
ERM **Erimo** **7.40 242** *e*P **Pn** **16 19 42.4 +1.3**
comp=Z,282nm,0.3s
JEM **Erimo** **7.40 242** P **Pn** **16 19 42.1 +1.0**
UGL **Uglegorsk** **7.45 299** *e*PN **Pn** **16 19 42.9 +1.2**
UGL pmax pmax
comp=Z,42nm,0.5s
UGL MLR MLR
comp=N,300nm,17.0s
UGL MLR MLR
comp=E,500nm,17.0s
UGL **Uglegorsk** **7.45 299** *e*P **Pn** **16 19 42.9 +1.2**
UGL AMB AMB 16 19 45.0
comp=E,42nm,0.5s
UGL eS **Sn** **16 21 04.5 -0.3**
UGL A A 16 21 07.0
comp=E,120nm,0.6s
UGL A A 16 21 07.0
comp=E,65nm,0.7s
UGL eL L 16 21 53.0
UGL AMS AMS 16 22 30.0
comp=E,300nm,17.0s
UGL AMS AMS 16 22 30.0
comp=E,500nm,17.0s
JNBK **Urakawa-nobuka** **7.51 245** P **Pn** **16 19 41.8 -0.8**
JNBK eS **Sn** **16 21 02.6 -3.9**
JBT2 **Biratori 2** **7.52 250** P **Pn** **16 19 42.8 +0.1**
TYV **Tymovskoe** **7.98 313** *e*P **Pn** **16 19 50.0 +1.0**
TYV AMB AMB 16 19 51.0
comp=E,11nm,0.8s
TYV AMB AMB 16 19 51.0
comp=E,13nm,0.8s
TYV AMB AMB 16 19 51.0
comp=E,5.0nm,0.6s
TYV AMS AMS 16 22 59.0
comp=E,1μm,16.0s
TYV AMS AMS 16 22 59.0
comp=E,500nm,14.0s
JEW **Eniwo** **8.10 252** P **Pn** **16 19 50.6 0.0**
PEA0B **Petropavlovsk-** **8.19 25** P **Pn** **16 19 52.6 +0.8**
PETK **Petropavlovsk-** **8.19 25** PN **Pn** **16 19 52.7 +0.8**
PETK pmax pmax
comp=Z,1.0nm,0.3s
PETK **Petropavlovsk-** **8.19 25** Pn **Pn** **16 19 52.7 +0.8**
PETK **Petropavlovsk-** **8.19 25** Pn **Pn** **16 19 52.7 +0.8**
comp=Z,1.3nm,0.3s,baz=175,slow=12,SNR=23
PET **Petropavlovsk** **8.42 29** PN **Pn** **16 19 53.2 -1.8**
PET **Petropavlovsk** **8.42 29** P **Pn** **16 19 53.2 -1.8**
JNB **Noboribetsu** **8.53 251** P **Pn** **16 19 56.7 +0.1**
JKB **Kayabe** **8.81 247** P **Pn** **16 19 59.8 -0.6**
JKB eS Sn 16 21 31.3 -7.1
JYM2 **Yakumo 2** **9.13 250** P **Pn** **16 20 04.7 -0.1**
JANG **Nango** **9.38 238** P **Pn** **16 20 05.2 -3.0**
JANG eS Sn 16 21 41.5 -11
JSR **Shiriuchi** **9.39 247** P **Pn** **16 20 07.3 -1.1**
JSR eS Sn 16 21 44.8 -7.8
JTM **Tenmabayashi** **9.39 241** P **Pn** **16 20 06.9 -1.5**
JTM eS Sn 16 21 43.4 -9.2
JTH **Tanohata** **9.45 235** P **Pn** **16 20 07.1 -2.1**
JTH eS Sn 16 21 43.9 -10
OKH **Okha** **9.68 326** *e*P Pn 16 20 16.0 +3.7
OKH eS **Sn** **16 21 59.0 -0.6**
OKH eL L 16 23 10.0
JOSM **Okushiri--Mats** **9.74 252** P **Pn** **16 20 12.5 -0.7**
OFUJ **Ofunato** **10.15 232** P Pn 16 20 15.7 -3.1
NKL **Nikolayevsk** **10.36 319** *e*P **Pn** **16 20 23.0 +1.5**
NKL AMB AMB 16 20 26.0
comp=Z,28nm,1.1s
NKL AMB AMB 16 20 26.0
comp=Z,44nm,1.1s
NKL eL L 16 23 27.0
NKL AMS AMS 16 24 56.0
comp=Z,400nm,15.0s
NKL AMS AMS 16 24 56.0
comp=Z,500nm,15.0s
JRG **Rokugo** **10.52 236** P **Pn** **16 20 21.8 -2.1**
JRG eS Sn 16 22 09.6 -11
JIO **Ouri** **10.77 231** P **Pn** **16 20 24.8 -2.5**
JIO eS Sn 16 22 15.7 -11
MJAR **Matsushiro Arr** **13.88 233** Pn **Pn** **16 21 08.2 -1.5**
MJAR **Matsushiro Arr** **13.88 233** Pn **Pn** **16 21 08.2 -1.5**
comp=Z,0.5nm,0.3s,baz=26,slow=12,SNR=20
MAJO **Matsushiro** **13.88 233** *e*P **Pn** **16 21 07.7 -2.0**
MAJO pmax pmax
comp=Z,22nm,0.6s
MAJO **Matsushiro** **13.88 233** *e*P **Pn** **16 21 07.7 -2.0**
comp=Z,22nm,0.6s
MAJO *e* 16 21 19.0
MAT **Matsushiro** **13.88 233** P **Pn** **16 21 07.7 -2.0**
MAT eS Sn 16 23 49.4 +7.0
KLR **Kul'dur** **14.06 291** *e*P **Pn** **16 21 10.2 -1.9**
USRK **Ussuriysk Arra** **14.21 271** Pn **Pn** **16 21 11.9 -2.2**
comp=Z,0.3nm,0.3s,baz=82,slow=11,SNR=7.2
USRK LR LR 16 26 28.7
comp=Z,291nm,20.4s,baz=78,slow=37
JHJ **Hachijo jima 2** **15.76 221** LR LR 16 26 50.4
comp=Z,48nm,18.8s,baz=78,slow=34
MDJ **Mudanjiang** **15.80 274** P **Pn** **16 21 36.1 +1.1**
MDJ pmax pmax
comp=Z,16nm,0.9s
MDJ pmax pmax
comp=Z,88nm,5.7s
SEY **Seymchan** **17.14 1** *i* P **Pn** **16 21 51.9 0.0**
ZEA **Zeya** **17.74 305** *e*P **Pn** **16 21 55.2 -4.1**
ZEA AMB AMB 16 21 59.7
comp=Z,32nm,1.2s
ZEA AMB AMB 16 21 59.7
comp=Z,24nm,1.0s
KSRS **Korea Array** **19.75 253** P **P** **16 22 21.1 -0.8**
comp=Z,0.5nm,0.3s,baz=58,slow=11,SNR=45
KSRS LR LR 16 29 10.2
comp=Z,104nm,20.7s,baz=245,slow=34
KSAR **Wonju Array Be** **19.79 253** P **P** **16 22 21.1 -1.2**
JNU **Nakatsue** **20.55 239** *e*P Pn 16 22 31.8 -1.4
JNU **Nakatsue** **20.55 239** P **P** **16 22 31.3 +0.6**
comp=Z,5.2nm,0.8s,baz=50,slow=14,SNR=5.4
JNU LR LR 16 30 23.8
comp=Z,136nm,19.9s,baz=22,slow=36
INCN **Inchon** **20.61 255** *e*P Pn 16 22 33.1 -0.7
comp=Z,20nm,0.6s
YAK **Yakutsk** **20.69 330** *e*P **P** **16 22 30.9 -1.0**
YAK *e**PP **pP** **16 22 46.9 +4.8**
YAK eS **S** **16 26 23.0 +2.6**
YAK *e**SS sS 16 26 49.9 +13
YAK pmax pmax
comp=E,26nm,0.9s
YAK pmax pmax
comp=Z,102nm,0.9s
YAK pmax pmax
comp=N,34nm,1.1s
YAK smax smax
comp=E,16nm,1.6s
YAK smax smax
comp=N,41nm,3.0s
YAK **Yakutsk** **20.69 330** *e*P **P** **16 22 30.5 -1.4**
comp=N,125nm,0.8s
BILL **Bilibino** **23.48 14** *e*P **P** **16 22 58.8 -2.4**
BILL **Bilibino** **23.48 14** *e*P **P** **16 22 58.8 -2.4**
comp=N,3.5nm,0.9s
NJ2 **Nanjing** **28.96 253** *e*P **P** **16 23 53.8 +2.8**
NJ2 pmax pmax
comp=Z,20nm,0.5s
HHC **Hu-ho-hao-te** **29.56 275** *e*P **P** **16 23 58.5 +2.0**
HHC sP sP 16 24 05.3 -7.4
HHC PP **PnPn** **16 24 55.0 +2.9**
HHC PcP **PcP** **16 27 03.2 +2.6**
HHC S **S** **16 28 52.5 +3.9**
HHC ScP **ScP** **16 30 42.4 +3.4**
HHC PcS **PcS** **16 30 44.8 +1.0**
HHC ScS **ScS** **16 34 36.8 +3.0**
HHC pmax pmax
comp=Z,21nm,0.6s
HHC pmax pmax
comp=Z,210nm,5.7s
HHC LR LR
comp=N,310nm,12.5s
HHC LR LR
comp=E,380nm,12.3s
HHC LR LR
comp=Z,380nm,12.7s
SONM **Songino Array** **30.89 290** P **P** **16 24 06.3 -1.9**
SONM **Songino Array** **30.89 290** P **P** **16 24 06.3 -1.9**
comp=Z,1.1nm,0.7s,baz=60,slow=8.8,SNR=3.6
SONM LR LR 16 38 04.9
comp=Z,115nm,18.1s,baz=46,slow=40
ZAK **Zakamensk** **32.35 296** *e*P **P** **16 24 18.4 -2.6**
ZAK pmax pmax
comp=Z,2.0nm,1.1s
WHN **Wuhan** **32.92 256** P **P** **16 24 26.3 +0.3**
XAN **Xi'an** **34.64 266** P **P** **16 24 40.7 -0.3**
XAN pP **pP** **16 24 52.3 0.0**
XAN pmax pmax
comp=Z,3.0nm,0.9s
XAN pmax pmax
comp=Z,23nm,8.3s
COLD **Coldfoot** **36.55 34** *e*P **P** **16 24 56.5 -0.4**
comp=Z,2.0nm,0.9s
LZH **Lanzhou** **37.11 272** *e*P **P** **16 25 03.1 +0.8**
LZH pmax pmax
comp=Z,31nm,1.0s
LZH pmax pmax
comp=Z,68nm,4.8s
COLA **College** **37.36 38** *i* P **P** **16 25 04.6 +0.8**
ILAR **Eielson Array** **37.77 38** P **P** **16 25 07.6 +0.2**
ILAR **Eielson Array** **37.77 38** P **P** **16 25 07.6 +0.2**
comp=Z,0.5nm,0.6s,baz=263,slow=7.2,SNR=10
GTA **Gaotai** **38.32 279** *e*P **P** **16 25 13.6 +1.2**
GTA pP pP 16 25 18.2 -5.7
GTA pmax pmax
comp=Z,4.0nm,1.3s
ZALV **Zalesovo Beam** **42.50 306** P **P** **16 25 44.5 -2.1**
ZALV 16 27 38.9
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV MLR MLR
comp=Z,181nm,19.1s
ZALV **Zalesovo Beam** **42.50 306** P **P** **16 25 44.5 -2.1**
ZALV PcP **PcP** **16 27 38.9 +0.2**
ZALV **Zalesovo Beam** **42.50 306** P **P** **16 25 44.5 -2.1**
comp=Z,0.9nm,0.5s,baz=64,slow=6.8,SNR=5.0
ZALV PcP **PcP** **16 27 38.9 +0.2**
comp=Z,4.4nm,0.8s,baz=62,slow=3.4,SNR=21
ZALV LR LR 16 44 32.2
comp=Z,181nm,19.1s,baz=74,slow=38
MK31 **Makanchi Array** **46.65 298** *e*P **P** **16 26 17.6 -2.3**
MK31 *e* 16 27 52.9
MK31 **Makanchi Array** **46.65 298** *e*P **P** **16 26 17.6 -2.3**
MK31 *e*PcP **PcP** **16 27 52.9 -0.2**
MKAR **Makanchi Array** **46.65 298** P **P** **16 26 18.3 -1.6**
MKAR 16 27 53.4
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR MLR MLR
comp=Z,126nm,20.0s
MKAR **Makanchi Array** **46.65 298** P **P** **16 26 18.3 -1.6**
MKAR PcP **PcP** **16 27 53.4 +0.3**
MKAR ScP **ScP** **16 31 43.8 +0.7**
MKAR **Makanchi Array** **46.65 298** P **P** **16 26 18.3 -1.6**
comp=Z,2.0nm,0.6s,baz=67,slow=7.0,SNR=26
MKAR PcP **PcP** **16 27 53.4 +0.3**
comp=Z,3.6nm,0.7s,baz=61,slow=3.9,SNR=15
MKAR ScP **ScP** **16 31 43.8 +0.7**
comp=Z,0.6nm,0.8s,baz=64,slow=5.5,SNR=4.7
MKAR LR LR 16 46 51.9
comp=Z,126nm,20.0s,baz=262,slow=37
KURK **Kurchatov** **47.21 304** *i* P **P** **16 26 21.9 -2.2**
KURK pmax pmax
comp=Z,1.0nm,0.5s
KURK **Kurchatov** **47.21 304** P P 16 26 20.4 -3.7
comp=Z,3.0nm,0.8s
KURBB **Kurchatov Arra** **47.30 304** LR LR 16 47 08.7
comp=Z,45nm,18.8s,baz=20,slow=37
KIP **Kipapa** **47.31 104**⇑ *e*P **P** **16 26 25.0 -0.2**
LSA **Lhasa** **49.52 273** P **P** **16 26 43.5 +0.8**
BVAR **Borovoye Array** **50.82 310** LR LR 16 50 11.9
comp=Z,102nm,18.6s,baz=96,slow=38
BRVK **Borovoye** **50.87 310** *i* P **P** **16 26 52.8 +0.8**
BRVK pmax pmax
comp=Z,2.0nm,0.7s
CHTO **Chiang Mai** **51.12 256** *e*P **P** **16 26 55.0 +0.6**
CHTO pmax pmax
comp=Z,9.0nm,1.0s
CHTO **Chiang Mai** **51.12 256** *e*P **P** **16 26 55.0 +0.6**
comp=Z,9.2nm,1.0s
CM31 **Chiang Mai Arr** **51.37 256** *e*P **P** **16 26 57.0 +0.8**
comp=Z,2.5nm,0.8s
CMAR **Chiang Mai Arr** **51.37 256** P **P** **16 26 57.0 +0.8**
CMAR **Chiang Mai Arr** **51.37 256** P **P** **16 26 57.0 +0.8**
comp=Z,2.7nm,0.8s,baz=36,slow=7.4,SNR=24
CMAR LR LR 16 51 05.4
comp=Z,52nm,18.6s,baz=322,slow=39
RES **Resolute Bay** **51.97 18** *e*P **P** **16 26 59.2 -0.7**
comp=Z,3.3nm,0.9s
RES **Resolute Bay** **51.97 18** P **P** **16 26 59.4 -0.6**
comp=Z,1.9nm,0.7s,baz=314,slow=7.1,SNR=11
YKA **Yellowknife Ar** **52.15 36** P **P** **16 27 02.1 +0.7**
YKA **Yellowknife Ar** **52.15 36** P **P** **16 27 02.1 +0.7**
comp=Z,0.8nm,0.5s,baz=297,slow=7.0,SNR=22
TAPN **Taplejung** **53.34 273** *e*P **P** **16 27 11.3 +0.1**
comp=Z,11nm,0.6s
AAK **Ala-Archa** **53.52 296** *e*P **P** **16 27 11.5 -0.6**
AAK pmax pmax
comp=Z,12nm,0.8s
AAK **Ala-Archa** **53.52 296** *e*P **P** **16 27 11.5 -0.6**
comp=Z,12nm,0.8s
AAK **Ala-Archa** **53.52 296** LR LR 16 51 04.9
comp=Z,94nm,18.3s,baz=210,slow=37
ODAN **Odare** **53.87 273** *e*P **P** **16 27 15.4 +0.4**
GUN **Gumba** **54.28 275** *e*P **P** **16 27 17.8 -0.2**
comp=Z,30nm,0.8s
RAMN **Ramite** **54.37 273** *e*P **P** **16 27 18.5 -0.1**
comp=Z,44nm,0.9s
KKN **Kakani** **54.77 275** *e*P **P** **16 27 21.9 +0.4**
comp=Z,22nm,0.8s
PKI **Pulchoki** **54.81 275** *e*P **P** **16 27 21.8 -0.1**
comp=Z,14nm,0.8s
DMN **Daman** **55.00 275** *e*P **P** **16 27 23.3 +0.1**
comp=Z,38nm,1.0s
ARU **Arti** **55.15 317** *d* iP **P** **16 27 23.7 +0.2**
ARU 16 29 24.1
ARU S **S** **16 35 04.6 +1.3**
ARU SS **SS** **16 38 43.2 -3.7**
ARU pmax pmax
comp=Z,12nm,2.5s
DANN **Dangsing** **55.48 277** *e*P **P** **16 27 27.0 +0.3**
comp=Z,59nm,0.8s
KKAR **Karatay Array** **55.74 299** *e*P **P** **16 27 26.1 -1.9**
KKAR pmax pmax
comp=Z,1.0nm,0.6s
KKAR **Karatay Array** **55.74 299** *e*P **P** **16 27 26.1 -1.9**
comp=Z,1.1nm,0.6s
KOLN **Koldanda** **55.95 276** *e*P **P** **16 27 30.1 +0.2**
comp=Z,35nm,0.8s
PYUN **Piuthan** **56.17 277** *e*P **P** **16 27 31.7 +0.2**
comp=Z,82nm,0.9s
ABKAR **Akbulak array** **58.40 310** *e*P **P** **16 27 44.1 -2.5**
comp=Z,3.4nm,0.6s
AKTO **Aktyubinsk** **58.74 312** LR LR 16 55 14.1
comp=Z,157nm,18.2s,baz=231,slow=38
KLMR **Klimovskoe** **60.48 329** P P 16 27 56.2 -4.6
KLMR pmax pmax
comp=Z,10.0nm,1.8s
D14A **Greenough** **61.05 51** ⇓P **P** **16 28 06.6 +1.4**
baz=61
C15A **Salmond Ranch,** **61.12 50** ⇓P **P** **16 28 07.0 +1.4**
baz=61
C16A **Fuhringer Ranc** **61.56 50** ⇑P **P** **16 28 10.1 +1.6**
baz=61
D15A **Lincoln** **61.61 51** ⇑P **P** **16 28 10.3 +1.3**
baz=61
KBL **Kabul** **61.66 291** *e*P **P** **16 28 07.8 -1.7**
KBL pmax pmax
comp=Z,8.0nm,0.9s
KBL **Kabul** **61.66 291** *e*P **P** **16 28 07.8 -1.7**
comp=Z,7.6nm,0.9s
SUMG **Summit** **61.67 4** *e*P **P** **16 28 09.3 0.0**
SUMG pmax pmax
comp=Z,27nm,0.9s
SUMG **Summit** **61.67 4** *e*P **P** **16 28 09.2 0.0**
comp=Z,27nm,0.9s
G13A **Cobalt** **61.86 53** ⇓P **P** **16 28 11.8 +1.1**
baz=62
FFC **Flin Flon** **61.97 39** *i* P **P** **16 28 12.6 +1.6**
D16A **Dana Ranch, Ca** **62.14 50** ⇑P **P** **16 28 14.1 +1.7**
baz=62
C17A **Wharram Farm,** **62.19 49** ⇑P **P** **16 28 13.9 +1.2**
baz=62
G14A **Jackson** **62.20 53** ⇓P **P** **16 28 14.4 +1.4**
baz=62
F15A **Butte** **62.36 52** ⇓P **P** **16 28 15.7 +1.6**
baz=62
D17A **Six Diamond Ra** **62.53 50** ⇑P **P** **16 28 16.6 +1.6**
baz=62
I13A **Wildhorse Cree** **62.65 54** ⇓P **P** **16 28 18.2 +2.2**
baz=62
E17A **Martinsdale** **62.87 50** ⇑P **P** **16 28 18.9 +1.5**
baz=63
BOZ **Bozeman (W)** **62.96 52** ⇑P **P** **16 28 20.0 +2.0**
baz=63
C19A **Slack Wire Ran** **63.03 48** ⇓P **P** **16 28 19.7 +1.4**
baz=63
G16A **Moss Hill, Enn** **63.12 52** ⇑P **P** **16 28 20.8 +1.7**
baz=63
A21A **Bergtoll Ranch** **63.32 46** ⇓P **P** **16 28 22.3 +2.1**
baz=63
J14A **Carey** **63.36 54** ⇓P **P** **16 28 22.0 +1.3**
baz=63
NVAR **Mina Array Bea** **63.58 61** P **P** **16 28 24.1 +1.8**
NVAR **Mina Array Bea** **63.58 61** P **P** **16 28 24.1 +1.8**
comp=Z,0.6nm,0.6s,baz=296,slow=5.6,SNR=3.9
C20A **Veseth Ranch,** **63.58 48** ⇓P **P** **16 28 23.5 +1.5**
baz=63
A22A **Carney Farms,** **63.83 46** ⇑P **P** **16 28 24.9 +1.3**
baz=64
F18A **Big Timber** **63.83 50** ⇓P **P** **16 28 25.3 +1.6**
baz=64
F19A **Roth Farm, Mol** **64.28 50** ⇑P **P** **16 28 28.6 +1.9**
baz=64
FINES **FINESS Array B** **64.53 334** P **P** **16 28 25.6 -2.2**
FINES **FINESS Array B** **64.53 334** P **P** **16 28 25.6 -2.2**
comp=Z,3.9nm,0.5s,baz=48,slow=7.7,SNR=17
OBN **Obninsk** **65.61 325** *i* P **P** **16 28 33.7 -1.2**
OBN *e* 16 31 00.4
OBN eSS SS 16 41 27.6 -3.0
OBN pmax pmax
comp=Z,6.0nm,1.0s
OBN MLR MLR
comp=Z,100nm,17.0s
BW06 **Boulder Array** **65.94 53** *e*P **P** **16 28 38.7 +1.1**
PDAR **Pinedale Array** **65.94 53** P **P** **16 28 39.0 +1.3**
PDAR **Pinedale Array** **65.94 53** P **P** **16 28 39.0 +1.3**
comp=Z,1.6nm,0.7s,baz=303,slow=1.5,SNR=13
SFJD **Kangerlussuaq** **66.20 9** P **P** **16 28 38.0 -0.5**
SFJD **Kangerlussuaq** **66.20 9** P **P** **16 28 38.0 -0.5**
comp=Z,3.4nm,0.5s,baz=315,slow=7.1,SNR=2.2
K21A **Alcova** **67.31 52** ⇓P **P** **16 28 47.1 +0.8**
baz=67
H24A **Dirks Ranch, A** **67.34 49** ⇑P **P** **16 28 46.9 +0.6**
baz=67
WRAB **Tennant Creek** **67.37 198** P **P** **16 28 47.4 +0.9**
WRAB pmax pmax
comp=Z,1.0nm,0.6s
WRAB **Tennant Creek** **67.37 198** P **P** **16 28 47.4 +0.9**
comp=Z,1.0nm,0.6s
WRA **Warramunga Arr** **67.38 198** P **P** **16 28 47.1 +0.5**
WRA **Warramunga Arr** **67.38 198** P **P** **16 28 47.1 +0.5**
comp=Z,1.4nm,0.7s,baz=18,slow=6.8,SNR=11
ULM **Lac du Bonnet** **67.75 40** P **P** **16 28 49.1 +0.4**
ULM **Lac du Bonnet** **67.75 40** P **P** **16 28 49.1 +0.4**
comp=Z,0.8nm,0.3s,baz=342,slow=3.2,SNR=2.5
AFI **Afiamalu** **67.87 142** LR LR 16 54 17.8
comp=Z,119nm,19.8s,baz=97,slow=32
NB2 **NORSAR Subarra** **68.84 341** P **P** **16 28 53.9 -1.5**
comp=Z,5.4nm,0.8s,baz=27,slow=6.5
NOA **NORSAR Array B** **68.84 341** P **P** **16 28 53.6 -1.8**
NOA **NORSAR Array B** **68.84 341** P **P** **16 28 53.6 -1.8**
comp=Z,2.1nm,0.4s,baz=28,slow=6.4,SNR=26
HFS **Hagfors** **69.04 339** P **P** **16 28 55.0 -1.6**
HFS **Hagfors** **69.04 339** P **P** **16 28 55.0 -1.6**
comp=Z,6.0nm,0.4s,baz=52,slow=5.8,SNR=64
KIV **Kislovodsk** **70.86 314** *e*P **P** **16 29 09.3 +1.1**
KIV pmax pmax
comp=Z,6.0nm,0.9s
KBZ **Khabaz** **70.92 314** P **P** **16 29 08.5 +0.1**
KBZ pmax pmax
comp=Z,7.0nm,0.8s
KBZ MLR MLR
comp=Z,124nm,18.2s
KBZ **Khabaz** **70.92 314** P **P** **16 29 08.5 +0.1**
KBZ **Khabaz** **70.92 314** P **P** **16 29 08.5 +0.1**
comp=Z,6.7nm,0.8s,baz=72,slow=3.9,SNR=15
KBZ LR LR 17 04 58.3
comp=Z,124nm,18.2s,baz=265,slow=40
ASAR **Alice Springs** **71.08 197** P **P** **16 29 11.2 +1.8**
ASAR **Alice Springs** **71.08 197** P **P** **16 29 11.2 +1.8**
comp=Z,10.5nm,0.5s,baz=12,slow=5.9,SNR=20
AKASG **Malin Array Be** **71.86 326** P **P** **16 29 12.2 -1.7**
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKASG **Malin Array Be** **71.86 326** P **P** **16 29 12.2 -1.7**
AKASG **Malin Array Be** **71.86 326** P **P** **16 29 12.2 -1.7**
comp=Z,3.4nm,0.4s,baz=37,slow=6.3,SNR=18
AK01 **Malin Array Si** **71.87 326** *e*P **P** **16 29 12.4 -1.6**
KIEV **Kiev** **71.87 326** *e*P **P** **16 29 12.1 -1.9**
KIEV pmax pmax
comp=Z,5.0nm,0.9s
KIEV **Kiev** **71.87 326** *e*P **P** **16 29 12.1 -1.9**
comp=Z,5.5nm,0.9s
AK02 **Malin Array Si** **71.90 326** *e*P **P** **16 29 11.8 -2.4**
GNI **Garni** **72.51 310** *e*P **P** **16 29 18.7 +0.5**
comp=Z,7.0nm,0.8s
GNI **Garni** **72.51 310** LR LR 17 04 38.4
comp=Z,69nm,18.9s,baz=112,slow=39
SCHQ **Schefferville** **74.47 22** P **P** **16 29 29.2 -0.1**
SCHQ **Schefferville** **74.47 22** P **P** **16 29 29.2 -0.1**
comp=Z,1.9nm,0.7s,baz=14,slow=10,SNR=4.6
BUR08 **Borovina Ar. S** **75.89 326** *e*P **P** **16 29 36.4 -1.3**
KOLS **Kolonicke sedl** **75.94 328** *e*P **P** **16 29 37.4 -0.4**
TESR **76.23 325**⇑ *i*P **P** **16 29 39.1 -0.5**
CRVS **Cervenica-Dubn** **76.26 329** *e*P **P** **16 29 38.8 -0.9**
TRPA **Tarpa** **76.51 328**⇑ *i*P **P** **16 29 41.1 +0.1**
TRPA **Tarpa** **76.51 328**⇑ *e*P **P** **16 29 41.1 +0.1**
CFR **Carcaliu** **76.69 323** ⇑P **P** **16 29 41.3 -0.8**
CFR **Carcaliu** **76.69 323**⇑ *i*P **P** **16 29 41.3 -0.8**
VRI **Vrincioaia** **76.73 324** ⇑P **P** **16 29 42.5 +0.1**
VRI **Vrincioaia** **76.73 324**⇑ *i*P **P** **16 29 42.5 +0.1**
NRDL **Niedersach Rie** **76.73 337** *e*P **P** **16 29 41.6 -0.5**
comp=Z,4.0nm,0.8s
DPC **Dobruska-Polom** **76.78 333** *e*P **P** **16 29 42.6 0.0**
MORC **Moravsky Berou** **76.87 332** *e*P **P** **16 29 42.9 -0.3**
MORC pmax pmax
comp=Z,10.0nm,0.9s
MORC **Moravsky Berou** **76.87 332** *e*P **P** **16 29 42.9 -0.3**
comp=Z,10nm,0.9s
MORC **Moravsky Berou** **76.87 332**⇑ *i*P **P** **16 29 43.0 -0.3**
CLL **Collm** **76.97 335**⇑ *i*P **P** **16 29 42.6 -1.0**
CLL pmax pmax
comp=Z,14nm,1.1s
CLL **Collm** **76.97 335** *e*P **P** **16 29 42.7 -0.9**
comp=Z,7.0nm,0.8s
CLL **Collm** **76.97 335**⇑ *i*P **P** **16 29 42.6 -1.0**
comp=Z,14nm,1.1s
EKA **Eskdalemuir Ar** **77.04 346** P **P** **16 29 43.8 -0.2**
EKA **Eskdalemuir Ar** **77.04 346** P **P** **16 29 43.7 -0.2**
comp=Z,1.2nm,0.3s,baz=20,slow=5.2,SNR=16
TIRR **Tirgusor** **77.15 322** ⇑P **P** **16 29 44.7 -0.1**
TIRR **Tirgusor** **77.15 322**⇑ *i*P **P** **16 29 44.7 -0.1**
PVCC **Panska Ves** **77.18 334** *e*P **P** **16 29 44.3 -0.5**
MALT **Malatya** **77.18 312** ⇑P **P** **16 29 45.8 +0.6**
MALT **Malatya** **77.18 312**⇑ *i*P **P** **16 29 45.8 +0.6**
CLZ **Clausthal** **77.24 337** *e*P **P** **16 29 45.3 +0.1**
CLZ pmax pmax

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,8.0nm,0.8s						
CLZ	**Clausthal**	**77.24**	**337**	eP	**P**	**16 29 45.3**	**+0.1**
	comp=Z,8.0nm,0.8s						
MLR	**Muntele Rosu**	**77.35**	**324**	P	**P**	**16 29 45.8**	**-0.2**
MLR	**Muntele Rosu**	**77.35**	**324**	P	**P**	**16 29 45.8**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=200,slow=2.3,SNR=21						
ISR	**Istrita**	**77.41**	**324**	⇑P	**P**	**16 29 46.8**	**+0.5**
ISR	**Istrita**	**77.41**	**324**	⇑iP	**P**	**16 29 46.8**	**+0.5**
VYHS	**Vyhne**	**77.53**	**330**	eP	**P**	**16 29 46.8**	**-0.1**
VRAC	**Vranov**	**77.59**	**332**	P	**P**	**16 29 47.5**	**+0.4**
VRAC	**Vranov**	**77.59**	**332**	⇑iP	**P**	**16 29 47.3**	**+0.1**
VRAC	**Vranov**	**77.59**	**332**	P	**P**	**16 29 47.5**	**+0.4**
	comp=Z,9.3nm,0.8s,baz=27,slow=8.5,SNR=8.2						
PSZ	**Piszkesteto**	**77.65**	**329**	⇑P	**P**	**16 29 47.6**	**0.0**
PSZ	**Piszkesteto**	**77.65**	**329**	⇑iP	**P**	**16 29 47.6**	**0.0**
PSZ	**Piszkesteto**	**77.65**	**329**	⇓eP	**P**	**16 29 47.8**	**+0.2**
PRU	**Pruhonice**	**77.66**	**333**	eP	**P**	**16 29 47.2**	**-0.3**
VOIR		**77.76**	**325**	⇑P	**P**	**16 29 48.8**	**+0.5**
VOIR		**77.76**	**325**	⇑iP	**P**	**16 29 48.8**	**+0.5**
STKA	**Stephens Creek**	**77.91**	**189**	P	**P**	**16 29 50.1**	**+1.3**
STKA	**Stephens Creek**	**77.91**	**189**	P	**P**	**16 29 50.1**	**+1.3**
	comp=Z,2.2nm,1.1s,baz=0.0,slow=10,SNR=3.2						
TANN	**Tannenbergstha**	**77.92**	**335**	eP	**P**	**16 29 48.6**	**-0.4**
	comp=Z,2.0nm,0.8s						
MOX	**Moxa**	**77.96**	**335**	eP	**P**	**16 29 48.7**	**-0.5**
MOX				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MOX	**Moxa**	**77.96**	**335**	eP	**P**	**16 29 48.7**	**-0.5**
	comp=Z,3.0nm,0.7s						
TREC	**Trest**	**77.96**	**333**	eP	**P**	**16 29 49.2**	**-0.1**
TREC	**Trest**	**77.96**	**333**	eP	**P**	**16 29 49.2**	**-0.1**
ARR	**Arges**	**77.98**	**325**	⇓iP	**P**	**16 29 50.2**	**+0.7**
SMOL	**Smolenice**	**78.00**	**331**	eP	**P**	**16 29 50.1**	**+0.7**
NKC	**Novy Kostel**	**78.08**	**335**	eP	**P**	**16 29 49.5**	**-0.4**
UBBA	**Unterbreizbach**	**78.27**	**336**	eP	**P**	**16 29 50.5**	**-0.2**
	comp=Z,3.0nm,0.6s						
BUD	**Budapest**	**78.33**	**330**	⇓eP	**P**	**16 29 51.7**	**+0.5**
BUG	**Bochum--Univer**	**78.44**	**338**	eP	**P**	**16 29 51.6**	**-0.1**
	comp=Z,8.0nm,0.8s						
MIB	**Mutribah**	**78.45**	**301**	eP	**P**	**16 29 51.6**	**-0.7**
MIB				AMb	AMB	16 29 53.0	
	comp=Z,39nm,0.8s						
BR131	**Keskin Array S**	**78.50**	**316**	eP	**P**	**16 29 51.9**	**-0.7**
	comp=Z,4.7nm,0.8s						
BRTR	**Keskin Array B**	**78.50**	**316**	P	**P**	**16 29 52.3**	**-0.3**
BRTR	**Keskin Array B**	**78.50**	**316**	P	**P**	**16 29 52.3**	**-0.3**
	comp=Z,5.0nm,0.8s,baz=80,slow=4.8,SNR=28						
ROTZ	**Rotzenmuhle**	**78.57**	**335**	eP	**P**	**16 29 52.5**	**-0.1**
	comp=Z,5.0nm,0.9s						
TXAR	**Lajitas Array**	**78.65**	**60**	P	**P**	**16 29 55.1**	**+1.6**
TXAR	**Lajitas Array**	**78.65**	**60**	P	**P**	**16 29 55.1**	**+1.6**
	comp=Z,0.7nm,0.6s,baz=294,slow=4.2,SNR=5.7						
KHC	**Kasperske Hory**	**78.71**	**334**	eP	**P**	**16 29 53.2**	**-0.2**
KHC				pmax	pmax		
	comp=Z,13nm,0.9s						
KHC	**Kasperske Hory**	**78.71**	**334**	eP	**P**	**16 29 53.2**	**-0.2**
	comp=Z,13nm,0.9s						
KHC	**Kasperske Hory**	**78.71**	**334**	eP	**P**	**16 29 53.4**	**0.0**
NAY	**Al-Naaiem**	**78.91**	**301**	eP	**P**	**16 29 54.4**	**-0.4**
NAY				AMb	AMB	16 29 59.3	
	comp=Z,12nm,1.0s						
WET	**Wettzell**	**78.92**	**334**	eP	**P**	**16 29 54.5**	**0.0**
WET				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WET	**Wettzell**	**78.92**	**334**	eP	**P**	**16 29 54.5**	**0.0**
	comp=Z,8.0nm,0.9s						
GEC2	**GERESS Array S**	**78.93**	**333**	eP	**P**	**16 29 54.0**	**-0.7**
GEC2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GEC2	**GERESS Array S**	**78.93**	**333**	eP	**P**	**16 29 54.0**	**-0.7**
	comp=Z,4.0nm,0.8s						
GERES	**GERESS Array B**	**78.93**	**333**	P	**P**	**16 29 54.2**	**-0.4**
GERES	**GERESS Array B**	**78.93**	**333**	P	**P**	**16 29 54.2**	**-0.4**
	comp=Z,3.2nm,0.5s,baz=32,slow=5.4,SNR=30						
GRF	**Grafenberg Arr**	**78.93**	**335**	eP	**P**	**16 29 54.4**	**-0.1**
GRF				e*PP	**pP**	**16 30 10.3**	**+3.4**
GRF				pmax	pmax		
	comp=Z,15nm,0.7s						
GRF	**Grafenberg Arr**	**78.93**	**335**	eP	**P**	**16 29 54.4**	**-0.1**
	comp=Z,15nm,0.7s						
GRF				epP	**pP**	**16 30 10.3**	**+3.4**
BZS	**Buzias**	**78.95**	**327**	⇑P	**P**	**16 29 54.7**	**0.0**
BZS	**Buzias**	**78.95**	**327**	⇑iP	**P**	**16 29 54.7**	**0.0**
RDF	**Al-Radifah**	**78.96**	**300**	eP	**P**	**16 29 54.6**	**-0.4**
RDF				AMb	AMB	16 29 56.6	
	comp=Z,38nm,0.7s						
SOP	**Sopron**	**79.01**	**331**	⇑eP	**P**	**16 29 55.3**	**+0.3**
CONA	**Conrad Observa**	**79.03**	**332**	⇑iP	**P**	**16 29 55.3**	**0.0**
	comp=Z,9.2nm,0.6s						
CONA	**Conrad Observa**	**79.03**	**332**	⇑iP	**P**	**16 29 55.2**	**0.0**
	comp=Z,9.2nm,0.6s						
PKSM	**Moragy**	**79.55**	**329**	⇓eP	**P**	**16 29 57.2**	**-0.8**
BEHE	**Becsehely**	**79.99**	**330**	⇓eP	**P**	**16 30 00.5**	**+0.2**
MPEP	**Malo Peshtene**	**80.00**	**324**	P	**P**	**16 29 59.9**	**-0.6**
RJOB	**Jochberg**	**80.19**	**333**	eP	**P**	**16 30 01.5**	**0.0**
	comp=Z,5.0nm,0.8s						
GIVF	**Givet**	**80.28**	**339**	eP	**P**	**16 30 01.5**	**-0.4**
GIVF	**Givet**	**80.28**	**339**	eP	**P**	**16 30 01.5**	**-0.4**
GIVF	**Givet**	**80.28**	**339**	eP	**P**	**16 30 01.5**	**-0.4**
SOKA	**Soboth**	**80.40**	**332**	⇑iP	**P**	**16 30 02.4**	**-0.3**
	comp=Z,13nm,1.0s						
SOKA	**Soboth**	**80.40**	**332**	⇑iP	**P**	**16 30 02.4**	**-0.3**
	comp=Z,13nm,1.0s						
PERS	**Pernice**	**80.41**	**331**	iP	**P**	**16 30 02.3**	**-0.4**
BAIF	**Baives**	**80.48**	**340**	eP	**P**	**16 30 02.7**	**-0.2**
	comp=Z,22nm,1.1s						
BAIF	**Baives**	**80.48**	**340**	eP	**P**	**16 30 02.7**	**-0.2**
BAIF				pmax	pmax		
	comp=Z,22nm,1.1s						
BAIF	**Baives**	**80.48**	**340**	eP	**P**	**16 30 02.7**	**-0.2**
	comp=Z,22nm,1.1s						
PGB	**Panagyurishte**	**80.50**	**324**	P	**P**	**16 30 03.1**	**-0.2**
KBA	**Koelnbreinsper**	**80.60**	**333**	⇑iP	**P**	**16 30 03.4**	**-0.4**
KBA				pmax	pmax		
	comp=Z,19nm,0.9s						
KBA	**Koelnbreinsper**	**80.60**	**333**	⇑iP	**P**	**16 30 03.4**	**-0.4**
	comp=Z,18nm,0.9s						
KBA	**Koelnbreinsper**	**80.60**	**333**	⇑iP	**P**	**16 30 03.4**	**-0.4**
	comp=Z,18nm,0.9s						
VTS	**Vitosha**	**80.86**	**324**	P	**P**	**16 30 04.7**	**-0.6**
WATA	**Walderalm**	**80.92**	**334**	⇓iP	**P**	**16 30 05.6**	**0.0**
WATA				pmax	pmax		
	comp=Z,24nm,1.1s						
WATA	**Walderalm**	**80.92**	**334**	⇓iP	**P**	**16 30 05.6**	**0.0**
	comp=Z,24nm,1.1s						
WATA	**Walderalm**	**80.92**	**334**	⇓iP	**P**	**16 30 05.6**	**0.0**
	comp=Z,24nm,1.1s						
WTTA	**Wattenberg**	**80.97**	**334**	⇑iP	**P**	**16 30 05.8**	**-0.1**
WTTA				pmax	pmax		
	comp=Z,21nm,0.8s						
WTTA	**Wattenberg**	**80.97**	**334**	⇑iP	**P**	**16 30 05.8**	**-0.1**
	comp=Z,21nm,0.8s						
WTTA	**Wattenberg**	**80.97**	**334**	⇑iP	**P**	**16 30 05.8**	**-0.1**
	comp=Z,21nm,0.8s						
BFO	**Black Forest**	**80.98**	**336**	eP	**P**	**16 30 05.3**	**-0.4**
BFO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BFO	**Black Forest**	**80.98**	**336**	eP	**P**	**16 30 05.3**	**-0.4**
	comp=Z,8.0nm,0.9s						
MOTA	**Moosalm**	**81.06**	**334**	⇑iP	**P**	**16 30 06.0**	**-0.3**
MOTA				pmax	pmax		
	comp=Z,17nm,1.0s						
MOTA	**Moosalm**	**81.06**	**334**	⇑iP	**P**	**16 30 06.0**	**-0.3**
	comp=Z,17nm,1.0s						
MOTA	**Moosalm**	**81.06**	**334**	⇑iP	**P**	**16 30 06.0**	**-0.3**
	comp=Z,17nm,1.0s						
CDF	**Champ du Feu**	**81.20**	**337**	eP	**P**	**16 30 06.6**	**-0.3**
	comp=Z,26nm,1.0s						
CDF	**Champ du Feu**	**81.20**	**337**	eP	**P**	**16 30 06.6**	**-0.3**
CDF				pmax	pmax		
	comp=Z,26nm,1.0s						
CDF	**Champ du Feu**	**81.20**	**337**	eP	**P**	**16 30 06.6**	**-0.3**
	comp=Z,26nm,1.0s						
VISS	**Visnje**	**81.23**	**331**	iP	**P**	**16 30 06.0**	**-1.1**
VISS	**Visnje**	**81.23**	**331**	iP	**P**	**16 30 05.9**	**-1.1**
BOJS	**Bojanci**	**81.35**	**331**	iP	**P**	**16 30 07.1**	**-0.6**
JAVS	**Javornik**	**81.41**	**332**	iP	**P**	**16 30 06.5**	**-1.6**
JAVS	**Javornik**	**81.41**	**332**	iP	**P**	**16 30 06.5**	**-1.6**
MMB	**Musomiste**	**81.48**	**323**	P	**P**	**16 30 07.8**	**-0.7**
DAVA	**Damuels**	**81.48**	**335**	⇓iP	**P**	**16 30 08.1**	**-0.5**
	comp=Z,13nm,1.0s						
DAVA	**Damuels**	**81.48**	**335**	⇓iP	**P**	**16 30 08.1**	**-0.5**
	comp=Z,13nm,1.0s						
PAGF	**Fort de Pagny**	**81.48**	**338**	eP	**P**	**16 30 08.5**	**+0.2**
	comp=Z,12nm,0.7s						
PAGF	**Fort de Pagny**	**81.48**	**338**	eP	**P**	**16 30 08.5**	**+0.2**
	comp=Z,12nm,0.7s						
MEZF	**Maizieres J'vi**	**81.70**	**338**	eP	**P**	**16 30 09.6**	**+0.1**
	comp=Z,34nm,0.8s						
MEZF	**Maizieres J'vi**	**81.70**	**338**	eP	**P**	**16 30 09.6**	**+0.1**
	comp=Z,34nm,0.8s						
HAU	**Haudompre**	**81.82**	**337**	eP	**P**	**16 30 09.7**	**-0.4**
HAU				eR			
	comp=Z,104nm,20.8s						
HAU	**Haudompre**	**81.82**	**337**	eP	**P**	**16 30 09.7**	**-0.4**
HAU	**Haudompre**	**81.82**	**337**	eP	**P**	**16 30 09.7**	**-0.4**
HINF	**Hinteralfeld**	**81.86**	**337**	eP	**P**	**16 30 09.8**	**-0.6**
	comp=Z,6.8nm,0.7s						
HINF	**Hinteralfeld**	**81.86**	**337**	eP	**P**	**16 30 09.8**	**-0.6**
HINF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HINF	**Hinteralfeld**	**81.86**	**337**	eP	**P**	**16 30 09.8**	**-0.6**
	comp=Z,6.8nm,0.6s						
DAVOX	**Davos/Dischmat**	**81.94**	**335**	P	**P**	**16 30 11.0**	**+0.1**
DAVOX	**Davos/Dischmat**	**81.94**	**335**	P	**P**	**16 30 11.0**	**+0.1**
	comp=Z,5.3nm,0.8s,baz=345,slow=3.8,SNR=6.7						
SFTF	**Sexfontaines**	**81.98**	**338**	eP	**P**	**16 30 10.9**	**-0.1**
	comp=Z,66nm,1.0s						
SFTF	**Sexfontaines**	**81.98**	**338**	eP	**P**	**16 30 10.9**	**-0.1**
	comp=Z,66nm,1.0s						
FLN	**La Foliniere**	**82.77**	**342**	eP	**P**	**16 30 14.6**	**-0.4**
FLN				eR			
	comp=Z,70nm,20.5s						
FLN	**La Foliniere**	**82.77**	**342**	eP	**P**	**16 30 14.6**	**-0.4**
FLN	**La Foliniere**	**82.77**	**342**	eP	**P**	**16 30 14.6**	**-0.4**
LDF	**La Druitiere**	**82.85**	**342**	eP	**P**	**16 30 15.0**	**-0.5**
LDF	**La Druitiere**	**82.85**	**342**	eP	**P**	**16 30 15.0**	**-0.5**
LDF	**La Druitiere**	**82.85**	**342**	eP	**P**	**16 30 15.0**	**-0.5**
LOR	**Lormes**	**83.15**	**339**	eP	**P**	**16 30 16.9**	**-0.2**
	comp=Z,24nm,0.9s						
LOR				eR			
	comp=Z,65nm,20.5s						
LOR	**Lormes**	**83.15**	**339**	eP	**P**	**16 30 16.9**	**-0.2**
	comp=Z,24nm,0.9s						
CABF	**La Chapelle**	**83.17**	**337**	eP	**P**	**16 30 17.2**	**-0.1**
CABF	**La Chapelle**	**83.17**	**337**	eP	**P**	**16 30 17.2**	**-0.1**
CABF	**La Chapelle**	**83.17**	**337**	eP	**P**	**16 30 17.2**	**-0.1**
GRR	**Gorron**	**83.20**	**342**	eP	**P**	**16 30 17.2**	**-0.1**
	comp=Z,16nm,0.7s						
GRR	**Gorron**	**83.20**	**342**	eP	**P**	**16 30 17.2**	**-0.1**
GRR				pmax	pmax		
	comp=Z,16nm,0.7s						
GRR	**Gorron**	**83.20**	**342**	eP	**P**	**16 30 17.2**	**-0.1**
	comp=Z,16nm,0.7s						
SSF	**Saint Saulge**	**83.43**	**339**	eP	**P**	**16 30 18.5**	**0.0**
	comp=Z,22nm,1.1s						
SSF	**Saint Saulge**	**83.43**	**339**	eP	**P**	**16 30 18.5**	**0.0**
SSF				pmax	pmax		
	comp=Z,22nm,1.1s						
SSF	**Saint Saulge**	**83.43**	**339**	eP	**P**	**16 30 18.5**	**0.0**
	comp=Z,22nm,1.1s						
SGMF	**Saint Gilles**	**83.69**	**343**	eP	**P**	**16 30 20.1**	**+0.3**
SGMF	**Saint Gilles**	**83.69**	**343**	eP	**P**	**16 30 20.1**	**+0.3**
SGMF	**Saint Gilles**	**83.69**	**343**	eP	**P**	**16 30 20.1**	**+0.3**
AVF	**Avril sur Loir**	**83.72**	**339**	eP	**P**	**16 30 20.0**	**0.0**
	comp=Z,12nm,0.6s						
AVF	**Avril sur Loir**	**83.72**	**339**	eP	**P**	**16 30 20.0**	**0.0**
AVF				pmax	pmax		
	comp=Z,12nm,0.6s						
AVF	**Avril sur Loir**	**83.72**	**339**	eP	**P**	**16 30 20.0**	**0.0**
	comp=Z,12nm,0.6s						
SMF	**Signal de Mont**	**83.73**	**339**	eP	**P**	**16 30 20.1**	**0.0**
	comp=Z,64nm,1.1s						
SMF	**Signal de Mont**	**83.73**	**339**	eP	**P**	**16 30 20.1**	**0.0**
SMF				pmax	pmax		
	comp=Z,64nm,1.1s						
SMF	**Signal de Mont**	**83.73**	**339**	eP	**P**	**16 30 20.1**	**0.0**
	comp=Z,64nm,1.1s						
LPL	**La Plagne**	**84.00**	**336**	eP	**P**	**16 30 22.1**	**+0.4**
	comp=Z,13nm,0.9s						
LPL	**La Plagne**	**84.00**	**336**	eP	**P**	**16 30 22.1**	**+0.4**
LPL				pmax	pmax		
	comp=Z,13nm,0.9s						
LPL	**La Plagne**	**84.00**	**336**	eP	**P**	**16 30 22.1**	**+0.4**
	comp=Z,13nm,0.9s						
LPG	**La Plagne**	**84.01**	**336**	eP	**P**	**16 30 22.3**	**+0.4**
	comp=Z,8.6nm,0.6s						
LPG	**La Plagne**	**84.01**	**336**	eP	**P**	**16 30 22.3**	**+0.4**
LPG				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LPG	**La Plagne**	**84.01**	**336**	eP	**P**	**16 30 22.3**	**+0.4**
	comp=Z,8.6nm,0.6s						
BGF	**Bois d'Agland**	**84.07**	**339**	eP	**P**	**16 30 21.6**	**-0.2**
BGF	**Bois d'Agland**	**84.07**	**339**	eP	**P**	**16 30 21.6**	**-0.2**
BGF	**Bois d'Agland**	**84.07**	**339**	eP	**P**	**16 30 21.6**	**-0.2**
TCF	**Toulx Ste Croi**	**84.48**	**339**	eP	**P**	**16 30 24.3**	**+0.4**
	comp=Z,7.4nm,0.7s						
TCF	**Toulx Ste Croi**	**84.48**	**339**	eP	**P**	**16 30 24.3**	**+0.4**
TCF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TCF	**Toulx Ste Croi**	**84.48**	**339**	eP	**P**	**16 30 24.3**	**+0.4**
	comp=Z,7.4nm,0.7s						
MBDF	**Montbardon**	**84.71**	**336**	eP	**P**	**16 30 24.8**	**-0.5**
MBDF	**Montbardon**	**84.71**	**336**	eP	**P**	**16 30 24.8**	**-0.5**
MBDF	**Montbardon**	**84.71**	**336**	eP	**P**	**16 30 24.8**	**-0.5**
MFF	**Saint Martin d**	**84.74**	**341**	eP	**P**	**16 30 24.5**	**-0.6**
MFF	**Saint Martin d**	**84.74**	**341**	eP	**P**	**16 30 24.5**	**-0.6**
MFF	**Saint Martin d**	**84.74**	**341**	eP	**P**	**16 30 24.5**	**-0.6**
ORIF	**Oris-en-Rattie**	**84.79**	**337**	eP	**P**	**16 30 25.9**	**+0.3**
	comp=Z,13nm,0.8s						
ORIF				eR			
	comp=Z,76nm,22.8s						
ORIF	**Oris-en-Rattie**	**84.79**	**337**	eP	**P**	**16 30 25.9**	**+0.3**
ORIF				pmax	pmax		
	comp=Z,13nm,0.8s						
ORIF	**Oris-en-Rattie**	**84.79**	**337**	eP	**P**	**16 30 25.9**	**+0.3**
	comp=Z,13nm,0.8s						
VIVF	**Saint-Julien-l**	**85.17**	**337**	eP	**P**	**16 30 28.0**	**+0.6**
	comp=Z,16nm,1.0s						
VIVF	**Saint-Julien-l**	**85.17**	**337**	eP	**P**	**16 30 28.0**	**+0.6**
VIVF				pmax	pmax		
	comp=Z,16nm,1.0s						
VIVF	**Saint-Julien-l**	**85.17**	**337**	eP	**P**	**16 30 28.0**	**+0.6**
	comp=Z,16nm,1.0s						
SBF	**Sospel**	**85.31**	**335**	eP	**P**	**16 30 27.6**	**-0.6**
SBF	**Sospel**	**85.31**	**335**	eP	**P**	**16 30 27.6**	**-0.6**
SBF	**Sospel**	**85.31**	**335**	eP	**P**	**16 30 27.6**	**-0.6**
RJF	**Les Rejaudoux**	**85.57**	**340**	eP	**P**	**16 30 28.6**	**-0.7**
RJF				eR			
	comp=Z,86nm,19.5s						
RJF	**Les Rejaudoux**	**85.57**	**340**	eP	**P**	**16 30 28.6**	**-0.7**
RJF	**Les Rejaudoux**	**85.57**	**340**	eP	**P**	**16 30 28.6**	**-0.7**
CAF	**Calviac**	**85.79**	**339**	eP	**P**	**16 30 31.0**	**+0.5**
	comp=Z,15nm,1.0s						
CAF	**Calviac**	**85.79**	**339**	eP	**P**	**16 30 31.0**	**+0.5**
CAF				pmax	pmax		
	comp=Z,15nm,1.0s						
CAF	**Calviac**	**85.79**	**339**	eP	**P**	**16 30 31.0**	**+0.5**
	comp=Z,15nm,1.0s						
FRF	**La Foret Royal**	**85.81**	**335**	eP	**P**	**16 30 30.2**	**-0.4**
FRF	**La Foret Royal**	**85.81**	**335**	eP	**P**	**16 30 30.2**	**-0.4**
FRF	**La Foret Royal**	**85.81**	**335**	eP	**P**	**16 30 30.2**	**-0.4**
PGF	**Pioggiola**	**86.03**	**333**	eP	**P**	**16 30 31.3**	**-0.5**
PGF	**Pioggiola**	**86.03**	**333**	eP	**P**	**16 30 31.3**	**-0.5**
PGF	**Pioggiola**	**86.03**	**333**	eP	**P**	**16 30 31.3**	**-0.5**
LMR	**La Mourre**	**86.06**	**335**	eP	**P**	**16 30 31.9**	**+0.1**
	comp=Z,32nm,1.0s						
LMR	**La Mourre**	**86.06**	**335**	eP	**P**	**16 30 31.9**	**+0.1**
LMR				pmax	pmax		
	comp=Z,32nm,1.0s						
LMR	**La Mourre**	**86.06**	**335**	eP	**P**	**16 30 31.9**	**+0.1**
	comp=Z,32nm,1.0s						
LFF	**La Frestale**	**86.10**	**340**	eP	**P**	**16 30 31.6**	**-0.3**
LFF	**La Frestale**	**86.10**	**340**	eP	**P**	**16 30 31.6**	**-0.3**
LFF	**La Frestale**	**86.10**	**340**	eP	**P**	**16 30 31.6**	**-0.3**
TIP	**Timpagrande**	**86.32**	**327**	eP	**P**	**16 30 32.8**	**-0.4**
	comp=Z,9.6nm,1.0s						
KEST	**Kesra**	**92.08**	**330**	P	**P**	**16 31 00.8**	**+0.3**
KEST	**Kesra**	**92.08**	**330**	P	**P**	**16 31 00.8**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=307,slow=5.1,SNR=4.2						
TORD	**Torodi Ar. Bea**	**115.46**	**328**	PKP	**PKPdf**	**16 36 32.7**	**-0.6**
TORD	**Torodi Ar. Bea**	**115.46**	**328**	PKP	**PKPdf**	**16 36 32.7**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=6.4,slow=1.8,SNR=3.9						
DBIC	**Dimbokro**	**123.78**	**332**	PKP	**PKPdf**	**16 36 49.0**	**-0.3**
DBIC	**Dimbokro**	**123.78**	**332**	PKP	**PKPdf**	**16 36 49.0**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=345,slow=2.2,SNR=3.6						
CPUP	**Villa Florida**	**149.62**	**60**	PKPbc	**PKPbc**	**16 37 40.9**	**+0.3**
CPUP	**Villa Florida**	**149.62**	**60**	PKPbc	**PKPbc**	**16 37 40.9**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=235,slow=2.0,SNR=5.3						
SNAA	**Sanae**	**151.44**	**196**	eP	**PKPbc**	**16 37 43.3**	**-0.4**
VNA2	**Neumayer--Watz**	**152.91**	**195**	eP	**PKPbc**	**16 37 46.8**	**-0.1**
	baz=214,slow=1.0						
VNA3	**Neumayer Olymp**	**153.01**	**193**	eP	**PKPbc**	**16 37 46.6**	**-0.6**

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*ISK **08** 16:25:31.3, 39.29N×40.99E, h3km, MD2.8*
*ISCJB **08** 16:25:32.3±0.6, 39.29N±0.03×41.00E±0.03, h5km±5km, Error ellipse: s-maj=4.6km s-min=4.3km az=33.1*
*CSEM **08** 16:25:32.5±0.2, 39.29N×41.03E, h10km, MD2.8, Error ellipse: s-maj=5.0km s-min=3.7km az=19.0*
*DDA **08** 16:25:32.1, 39.28N×41.02E, h7km, MD2.7*
ISC 08 16:25:32.3±1.0**, 39.26N**±0.03×**41.03E**±0.03**, h12**km±9km**, n23, σ0.50**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.32**	**163**	iP	Pg	16 25 28.6	-11
VRTB	**Varto-Mus**	**0.34**	**107**	ePG	**Pg**	**16 25 39.4**	**+0.1**
VRTB				eSG	**Sb**	**16 25 45.7**	**-0.2**
VRTB	**Varto-Mus**	**0.34**	**107**	ePg	**Pg**	**16 25 39.4**	**+0.1**
VRTB				eSg	**Sb**	**16 25 45.7**	**-0.2**
BNGB	**Bing˘¶l**	**0.39**	**225**	ePG	**Pg**	**16 25 39.7**	**-0.3**
BNGB				eSG	**Sg**	**16 25 45.6**	**+0.4**
EZM	**Erzurum**	**0.69**	**22**	ePG	**Pg**	**16 25 45.1**	**-0.7**
ERZM	**Erzurum**	**0.69**	**22**	iP	**Pg**	**16 25 45.7**	**-0.1**
ERZM				iS	**Sg**	**16 25 55.0**	**0.0**
ERZM	**Erzurum**	**0.69**	**22**	iP	**Pg**	**16 25 45.7**	**-0.1**
ERZM				iS	**Sg**	**16 25 55.0**	**0.0**
KOPT	**Kop Dagi**	**0.86**	**332**	iP	**Pg**	**16 25 48.7**	**-0.2**
KOPT				iS	**Sb**	**16 26 01.8**	**+0.9**
KOPT	**Kop Dagi**	**0.86**	**332**	iP	**Pg**	**16 25 48.7**	**-0.2**
KOPT				iS	**Sb**	**16 26 01.8**	**+0.9**
HOMI	**Horasan**	**1.03**	**41**	iP	**Pg**	**16 25 52.6**	**+0.3**
HOMI				iS	**Sb**	**16 26 05.0**	**-0.8**
ERZN	**Erzincan**	**1.06**	**288**	ePG	**Pb**	**16 25 51.9**	**-0.8**
BAYT	**Ayd˜−ntepe-Bay**	**1.32**	**329**	ePN	**Pn**	**16 25 56.5**	**-0.2**
BAYT	**Ayd˜−ntepe-Bay**	**1.32**	**329**	ePn	**Pn**	**16 25 56.5**	**-0.2**
BEST	**Besiri**	**1.38**	**172**	iP	**Pg**	**16 25 58.8**	**0.0**
BEST				iS	**Sg**	**16 26 17.0**	**+0.2**
TUTA	**Tutak**	**1.39**	**84**	iP	**Pn**	**16 25 57.9**	**+0.3**
TUTA				iS	**Sg**	**16 26 17.8**	**+0.7**
TUTA	**Tutak**	**1.39**	**84**	iP	**Pn**	**16 25 57.9**	**+0.3**
TUTA				iS	**Sg**	**16 26 17.8**	**+0.7**
SVRC	**Sivrice-ELAZID**	**1.61**	**237**	ePN	**Pb**	**16 26 01.5**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.61**	**237**	ePn	**Pb**	**16 26 01.5**	**-0.5**
KELT	**Kelkit**	**1.63**	**303**	iP	**Pb**	**16 26 02.1**	**-0.3**
KELT				iS	**Sn**	**16 26 22.0**	**0.0**
KELT	**Kelkit**	**1.63**	**303**	iP	**Pb**	**16 26 02.1**	**-0.3**
KELT				iS	**Sn**	**16 26 22.0**	**0.0**
ILIC	**ilic-Erzincan**	**1.92**	**276**	ePN	**Pn**	**16 26 05.5**	**+0.7**
ILIC	**ilic-Erzincan**	**1.92**	**276**	ePn	**Pn**	**16 26 05.5**	**+0.7**
MARD	**Mardin**	**1.96**	**186**	iP	**Pb**	**16 26 07.1**	**-0.8**

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*CSEM **08** 16:29:06.9±0.2, 42.27N×13.40E, h2km, ML1.9/4, Error ellipse: s-maj=5.7km s-min=4.5km az=67.0*
ROM 08 16:29:05.7±0.1**, 42.29N×13.41E, h11km, Ml1.7**/4**, 2C, Error ellipse: s-maj=1.0km s-min=0.7km az=44.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**358**	⇑iP	Pg	16 29 03.6	-4.5
AQU	**L'Aquila**	**0.07**	**358**	Pg	Pg	16 29 08.6	+0.5
AQU				Sg	Sg	16 29 10.3	+0.4
AQU	**L'Aquila**	**0.07**	**358**	⇑iP	Pg	16 29 03.6	-4.5
AQU	**L'Aquila**	**0.07**	**358**	Pg	Pg	16 29 08.6	+0.5
AQU				Sg	Sg	16 29 10.3	+0.4
FAGN	**Fagnano**	**0.14**	**100**	Pg	Pg	16 29 09.6	+0.6
FAGN				Sg	Sg	16 29 12.0	+0.6
FAGN	**Fagnano**	**0.14**	**100**	Pg	Pg	16 29 09.6	+0.6
FAGN				Sg	Sg	16 29 12.0	+0.6
FIAM	**Fiamignano**	**0.21**	**264**	Pg	Pg	16 29 11.0	+0.6
FIAM				Sg	Sg	16 29 14.5	+0.9
	87nm,0.6s						
FIAM	**Fiamignano**	**0.21**	**264**	Pg	Pg	16 29 11.0	+0.6
FIAM				Sg	Sg	16 29 14.5	+0.9
	87nm,0.6s						
CAMP	**Campotosto**	**0.25**	**1**	Pg	Pg	16 29 11.1	+0.1
CAMP				Sg	Sg	16 29 15.6	+1.0
CAMP	**Campotosto**	**0.25**	**1**	Pg	Pg	16 29 11.1	+0.1
CAMP				Sg	Sg	16 29 15.6	+1.0
PTQR	**Pietraquaria**	**0.27**	**181**	Pg	Pg	16 29 11.7	+0.4
PTQR				Sg	Sg	16 29 16.1	+1.0
	18nm,0.2s						
PTQR	**Pietraquaria**	**0.27**	**181**	Pg	Pg	16 29 11.7	+0.4
PTQR				Sg	Sg	16 29 16.1	+1.0
	18nm,0.2s						
TERO	**Teramo**	**0.36**	**24**	Pg	Pg	16 29 13.5	+0.4
TERO				Sg	Sg	16 29 19.0	+1.0
	76nm,0.4s						
TERO	**Teramo**	**0.36**	**24**	Pg	Pg	16 29 13.5	+0.4
TERO				Sg	Sg	16 29 19.0	+1.0
	76nm,0.4s						
LNSS	**Leonessa**	**0.41**	**319**	Pg	Pg	16 29 14.6	+0.5
	64nm,0.8s						
LNSS	**Leonessa**	**0.41**	**319**	Pg	Pg	16 29 14.6	+0.5
	64nm,0.8s						
INTR	**Introdacqua**	**0.46**	**127**	Pg	Pg	16 29 14.9	0.0
INTR				Sg	Sb	16 29 22.7	-0.3
	93nm,0.6s						
INTR	**Introdacqua**	**0.46**	**127**	Pg	Pg	16 29 14.9	0.0
INTR				Sg	Sb	16 29 22.7	-0.3
	93nm,0.6s						

MEX 08 16:29:31.3±1.0**, 17.65N**×**103.33W, h14**km±14km**, MD4.3, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.64**	**359**	eP	Pg	16 29 42.9	-0.8
MMIG				iS	Sg	16 29 50.0	-2.2
R15V		**1.63**	**338**	eP	Pn	16 29 56.9	-2.9
R15V				iS	Sn	16 30 15.3	-5.4
ZIIG	**Zihuatanejo**	**1.78**	**91**	eP	Pn	16 29 57.6	-4.0
ZIIG				iS	Sn	16 30 20.0	-4.1
EZ5V		**1.84**	**352**	eP	Pn	16 29 58.4	-4.4
EZ5V				iS	Sn	16 30 21.9	-4.2
CJM	**Chamela**	**2.45**	**319**	eP	Pn	16 30 08.4	-2.6
CJM				iS	Sn	16 30 36.8	-4.0
SFJM	**Santa Fe**	**2.83**	**6**	eP	Pn	16 30 10.2	-6.2
SFJM				iS	Sn	16 30 41.5	-9.2
ARIG	**Puente Sto Nin**	**2.91**	**77**	iP	Pn	16 30 13.9	-3.4
ARIG				iS	Sn	16 30 48.6	-3.5
CAIG	**El Cayaco**	**2.99**	**101**	iP	Pn	16 30 16.6	-1.7
CAIG				iS	Sn	16 30 50.4	-3.5
ACX	**Acapulco**	**3.41**	**103**	eP	Pn	16 30 19.6	-4.5
ACX				iS	Sn	16 30 59.6	-4.8
MEIG	**Mezcala**	**3.55**	**85**	iP	Pn	16 30 23.9	-2.2
MEIG				iS	Sn	16 31 04.4	-3.6
ANIG	**Ahuacatlan**	**3.57**	**342**	eP	Pn	16 30 23.8	-2.6
ANIG				iS	Sn	16 31 04.7	-3.9
YAIG	**Yautepec**	**4.23**	**73**	iP	Pn	16 30 32.7	-2.9
YAIG				iS	Sn	16 31 20.4	-4.5
PPM	**Popocatepetl**	**4.69**	**72**	iP	Pn	16 30 40.5	-1.9
PPM				iS	Sn	16 31 33.3	-3.7
PNIG	**Pinotepa**	**5.13**	**103**	iP	Pn	16 30 46.4	-1.5
PNIG				iS	Sn	16 31 44.4	-2.6
ZAIG	**Zacatecas**	**5.14**	**8**	eP	Pn	16 30 46.5	-1.9
ZAIG				iS	Sn	16 31 44.5	-3.3
VHO	**Vista Hermosa**	**6.33**	**94**	iP	Pn	16 31 06.1	+1.5

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*ISCJB **08** 16:29:55.6±0.8, 37.10N±0.03×36.23E±0.04, h4km±6km, Error ellipse: s-maj=6.0km s-min=5.0km az=152.8*
*CSEM **08** 16:29:55.7±0.3, 37.10N×36.23E, h5km, MD2.6, Error ellipse: s-maj=5.8km s-min=4.3km az=77.0*
*DDA **08** 16:29:56.7, 37.04N×36.30E, h7km, MD2.8*
*ISK **08** 16:29:56.3, 37.19N×36.27E, h4km, MD2.6*
ISC 08 16:29:55.3±1.1**, 37.12N**±0.03×**36.23E**±0.03**, h10**km±11km**, n17, σ0.53**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.47**	**11**	iP	**Pg**	**16 30 04.2**	**-0.3**
ANDN				iS	**Sb**	**16 30 12.5**	**-0.3**
ANDN	**Andirin**	**0.47**	**11**	iP	**Pg**	**16 30 04.2**	**-0.3**
ANDN				iS	**Sb**	**16 30 12.5**	**-0.3**
KOZT	**Kozan**	**0.49**	**318**	ePG	**Pb**	**16 30 05.6**	**-0.3**
KOZT				eSG	**Sb**	**16 30 12.9**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOZT	Kozan	0.49	318	ePg	Pb	16 30 05.6	-0.3
KOZT				eSg	Sb	16 30 12.9	-0.2
AYKD	Aykdinkavak	0.54	57	i P	Pb	16 30 07.0	0.0
AYKD				i S	Sg	16 30 13.4	+0.3
AYKD	Aykdinkavak	0.54	57	i P	Pb	16 30 07.0	0.0
AYKD				i S	Sg	16 30 13.4	+0.3
KMRS	Kahramanmaras	0.66	54	ePG	Pb	16 30 08.4	-0.5
KMRS				eSG	Sb	16 30 17.1	-1.0
KMRS	Kahramanmaras	0.66	54	ePg	Pb	16 30 08.4	-0.5
KMRS				eSg	Sb	16 30 17.1	-1.0
KUZU	Kuzuini	0.76	117	i P	Pb	16 30 10.8	+0.2
KUZU				i S	Sb	16 30 20.5	-0.4
KUZU	Kuzuini	0.76	117	i P	Pb	16 30 10.8	+0.2
KUZU				i S	Sb	16 30 20.5	-0.4
GZT	Gaziantep	1.09	77	i P	Pn	16 30 17.4	+0.7
GZT				i S	Sn	16 30 32.3	+0.4
YAYL	Yayladag	1.09	185	i P	Pb	16 30 15.9	-0.3
YAYL				i S	Sg	16 30 30.3	0.0
YAYL	Yayladag	1.09	185	i P	Pb	16 30 15.9	-0.3
YAYL				i S	Sg	16 30 30.3	0.0
SARI	SarD1z-Kayseri	1.29	6	ePN	Pg	16 30 20.3	+0.2
SARI				eSN	Sg	16 30 37.7	+0.7
SARI	SarD1z-Kayseri	1.29	6	ePn	Pg	16 30 20.3	+0.2
SARI				eSn	Sg	16 30 37.7	+0.7
MALT	Malatya	2.11	55	ePN	Pb	16 30 32.6	-1.0
MALT	Malatya	2.11	55	ePn	Pb	16 30 32.6	-1.0

*JMA **08** 16:41:30.7±0.7, 46.̊14N×152.̊06E, h30km, M4.2*
*IDC **08** 16:41:31.5±4.6, 46.̊55N×151.̊08E, h0km, mb3.1/1, mb1 3.2/3, mb1mx3.1/25, mbtmp3.2/3, ML2.7/1, Error ellipse: s-maj=117.0km s-min=33.8km az=135.0*
ISC 08 16:41:34.1±2.8**, 44.̊8N**±0.̊4×**152.̊3E**±0.̊2**, h48km, n18, σ0.̊s75**/20**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	4.97	255	P	Pn	16 42 46.7	+0.6
NEM2				eS	Sn	16 43 42.6	+0.4
JRA	Rausu	5.25	263	P	Pn	16 42 51.0	+1.1
JNK	Nakash	5.62	260	P	Pn	16 42 55.8	+0.8
JAK	Akkeshi	5.81	254	P	Pn	16 42 58.4	+0.7
JAK				eS	Sn	16 44 03.6	+0.6
JTKR	Abashiri--Toko	6.10	265	P	Pn	16 43 02.1	+0.5
JAR	Ashorobuto	6.36	259	P	Pn	16 43 06.3	+1.1
JOB	Onbets	6.44	256	P	Pn	16 43 07.2	+1.0
JCH	Churui	6.87	254	P	Pn	16 43 12.7	+0.6
JCH				eS	Sn	16 44 28.3	-0.6
JKK2	Kamakawa 2	6.94	266	P	Pn	16 43 13.7	+0.5
ASAJ	Asahikawa	7.01	268	P	Pn	16 43 14.5	+0.5
ASAJ	Asahikawa	7.01	268	Pn	Pn	16 43 13.8	-0.3
	1.0nm,0.3s,baz=74,slow=15,SNR=15						
JNBK	Urakawa-nobuka	7.41	253	P	Pn	16 43 19.9	+0.3
JNBK				eS	Sn	16 44 41.5	-0.8
JNB	Noboribetsu	8.53	258	P	Pn	16 43 34.3	-0.5
JKB	Kayabe	8.74	254	P	Pn	16 43 37.8	0.0
PETK	Petropavlovsk-	9.01	21	Pn	Pn	16 43 27.1	-14
	0.1nm,0.3s,baz=192,slow=13,SNR=6.7						
KSRS	Korea Array	19.76	257	P	Pn	16 46 00.6	-1.2
	0.1nm,0.3s,baz=56,slow=11,SNR=4.2						
MKAR	Makanchi Array	47.37	299	P	P	16 49 54.3	-8.8
	0.3nm,0.9s,baz=58,slow=5.4,SNR=3.0						
CMAR	Chiang Mai Arr	51.40	257	P	P	16 50 34.3	+0.1
	0.3nm,0.4s,baz=42,slow=8.6,SNR=4.1						

*ISCJB **08** 16:42:26.8±1.1, 38.̊20N±0.̊08×73.̊63E±0.̊10, h124km, mb3.8/5, Error ellipse: s-maj=12.0km s-min=10.0km az=142.8*
*IDC **08** 16:42:29.3±4.9, 38.̊29N×74.̊12E, h152km±38km, mb3.4/5, mb1 3.2/10, mb1mx3.0/33, mbtmp3.2/10, Error ellipse: s-maj=46.1km s-min=41.4km az=118.0*
*NNC **08** 16:42:32.3±5.9, 38.̊53N×73.̊81E, h138km±68km, mb2.7, mpv3.4, Error ellipse: s-maj=54.7km s-min=26.1km az=2.0*
ISC 08 16:42:27.1±1.5**, 38.̊3N**±0.̊1×**73.̊85E**±0.̊10**, h124km, n26, σ1.̊s93**/29**, mb3.8**/5**, 6C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	Almayashu	3.86	358	P	Pn	16 43 28.0	+2.7
	SNR=46						
KZA	Kyzart	3.96	15	P	Pn	16 43 28.0	+1.5
	SNR=54						
UCH	Uchtor	3.99	7	P	Pn	16 43 29.7	+2.7
	SNR=5.2						
ULHL	Ulahol	4.38	24	P	Pn	16 43 32.9	+0.9
	SNR=8.8						
AAK	Ala-Archa	4.39	6	P	Pn	16 43 34.6	+2.5
	SNR=6.8						
AAK	Ala-Archa	4.39	6	P	Pn	16 43 34.7	+2.7
	1.4nm,0.3s,baz=156,slow=11,SNR=16						
AAK				S	Sn	16 44 25.2	+2.6
	1.3nm,0.3s,baz=180,slow=12,SNR=4.6						
EKS2	Erkin-Say	4.39	359	P	Pn	16 43 36.1	+4.1
	SNR=14						
KBK	Karagaybulak	4.47	10	P	Pn	16 43 35.5	+2.4
	SNR=19						
CHMS	Chumysh	4.78	8	P	Pn	16 43 39.5	+2.4
	SNR=6.5						
TKM2	Tokmak 2	4.84	15	⇑P	Pn	16 43 39.5	+1.5
	5.7nm,0.6s						
TKM2				⇑S	Sn	16 44 33.4	+0.1
	18nm,0.8s						
TKM2	Tokmak 2	4.84	15	P	Pn	16 43 39.7	+1.6
	SNR=12						
KK31	Karatay Array	5.46	333	⇑P	Pn	16 43 49.0	+2.8
	1.2nm,0.3s,baz=129,slow=12,SNR=117						
KK31				⇓S	Sn	16 44 48.3	+0.4
	30nm,0.6s,baz=145,slow=11,SNR=4.6						
MK31	Makanchi Array	10.55	33	⇑P	Pn	16 44 54.1	-0.7
	0.5nm,0.6s,baz=206,slow=14,SNR=5.6						
MKAR	Makanchi Array	10.55	33	P	Pn	16 44 54.0	-0.8
	0.1nm,0.3s,baz=208,slow=15,SNR=8.7						
KUR17	Kurchatov Arra	12.79	13	⇑P	P	16 45 29.1	-1.3
	0.2nm,0.9s						
KURK	Kurchatov	12.90	14	⇓P	P	16 45 30.2	-1.4
	1.5nm,0.8s						
AB31	Akbulak array	14.86	322	⇓P	Pn	16 45 49.9	-0.9
	0.7nm,0.5s,baz=130,slow=13,SNR=16						
AB31				⇑S	Sn	16 48 30.0	-5.0
	0.7nm,0.6s,baz=131,slow=26,SNR=3.2						
BVAR	Borovoye Array	14.96	352	P	P	16 45 54.9	+0.4
	0.2nm,0.3s,baz=161,slow=11,SNR=9.4						
AKTO	Aktyubinsk	16.58	322	⇓P	P	16 46 13.6	+1.2
	0.3nm,0.7s						
AKTO	Aktyubinsk	16.58	322	P	P	16 46 13.1	+0.7
	0.3nm,0.3s,baz=108,slow=11,SNR=6.4						
ZALV	Zalesovo Beam	17.40	22	P	P	16 46 20.4	-1.0
	0.2nm,0.3s,baz=218,slow=10.0,SNR=6.5						
FINES	FINESS Array B	37.34	324	P	P	16 49 27.4	+0.3
	0.6nm,0.4s,baz=107,slow=6.6,SNR=5.3						
ARCES	ARCESS Array B	40.42	336	P	P	16 49 53.0	+0.3
	4.0nm,1.1s,baz=106,slow=9.1,SNR=8.0						
HFS	Hagfors	43.12	321	P	P	16 50 14.7	-0.1
	1.2nm,0.5s,baz=89,slow=8.2,SNR=7.4						
NOA	NORSAR Array B	44.37	322	P	P	16 50 24.3	-0.5
	0.9nm,0.9s,baz=91,slow=7.1,SNR=2.7						
TORD	Torodi Ar. Bea	68.02	270	P	P	16 53 13.8	+0.5
	0.5nm,0.5s,baz=51,slow=5.3,SNR=5.5						

*ISCJB **08** 17:15:03.7±1.1, 43.̊02N±0.̊04×77.̊21E±0.̊07, h4km±6km, Error ellipse: s-maj=8.7km s-min=6.7km az=17.9*
*NNC **08** 17:15:04.7±0.2, 43.̊44N×76.̊89E, h7km±2km, mb3.0, mpv3.1, Error ellipse: s-maj=3.2km s-min=1.5km az=154.0*
*MOS **08** 17:15:05.1±0.9, 43.̊11N×77.̊15E, h15km, mb3.7/1, Error ellipse: s-maj=14.2km s-min=9.7km az=145.6*
MOS Felt (II) at Almaaty.
*KNET **08** 17:15:06.1±0.8, 43.̊03N×76.̊91E, h6km±4km, ml2.8, Error ellipse: s-maj=5.5km s-min=2.8km az=91.0*
ISC 08 17:15:06.3±1.2**, 43.̊04N**±0.̊04×**76.̊97E**±0.̊06**, h11km**±8km**, n31, σ1.̊s06**/33**, 12C-11D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KNDC	Almaty	0.18	0	⇑P	Pg	17 15 10.0	-0.2
	380nm,0.2s						
KNDC				⇑S	Sg	17 15 13.9	+0.9
	2μm,0.3s						
AAA	Alma-Ata	0.23	357	i PG	Pg	17 15 10.4	-0.8
AAA				eS	Sg	17 15 14.5	-0.1
AAA				pmax	pmax		
	comp=Z,5μm,0.2s						
AAA				smax	smax		
	comp=E,8μm,0.2s						
ULHL	Ulahol	0.95	214	i PG	Pg	17 15 24.0	-0.7
ULHL	Ulahol	0.95	214	P	Pg	17 15 23.9	-0.7
	comp=E,141nm,0.1s,SNR=102						
ULHL				⇓S	Sb	17 15 37.7	0.0
	comp=E,233nm,0.2s						
TKM2	Tokmak 2	1.01	264	⇓P	Pb	17 15 25.2	-0.6
	comp=E,3.1nm,0.1s						
TKM2				⇑S	Sn	17 15 40.3	-0.6
	comp=E,21nm,0.1s						
TKM2	Tokmak 2	1.01	264	i PG	Pb	17 15 25.4	-0.5
TKM2	Tokmak 2	1.01	264	⇑P	Pb	17 15 25.3	-0.6
	comp=E,32nm,0.1s,SNR=50						
KBK	Karagaybulak	1.53	256	i PN	Pg	17 15 34.7	-1.0
KBK	Karagaybulak	1.53	256	P	Pg	17 15 34.7	-1.0
	comp=E,123nm,0.2s,SNR=203						
KZA	Kyzart	1.59	233	i PN	Pb	17 15 35.8	-0.1
KZA	Kyzart	1.59	233	⇓P	Pb	17 15 35.8	-0.1
	comp=E,16nm,0.1s,SNR=42						
KZA				⇓S	Sg	17 15 59.1	+1.7
	comp=E,34nm,0.1s						
CHMS	Chumysh	1.62	269	i PN	Pb	17 15 35.5	-0.7
CHMS	Chumysh	1.62	269	⇓P	Pb	17 15 35.2	-1.0
	comp=E,16nm,0.1s,SNR=23						
CHMS				⇓S	Sg	17 15 58.8	+0.3
	comp=E,182nm,0.3s						
USP	Ospenovka	1.82	278	i PN	Pb	17 15 38.4	-1.2
USP	Ospenovka	1.82	278	⇑P	Pb	17 15 38.4	-1.2
	comp=E,37nm,0.2s,SNR=46						
USP				⇓S	Sg	17 16 04.7	0.0
	comp=E,101nm,0.2s						
AAK	Ala-Archa	1.86	258c	iPN	Pb	17 15 40.0	-0.4
UCH	Uchtor	1.98	247	i PN	Pb	17 15 42.9	+0.3
UCH	Uchtor	1.98	247	⇓P	Pb	17 15 42.9	+0.3
	comp=E,11nm,0.2s,SNR=8.2						
EKS2	Erkin-Say	2.37	262	⇑P	Pb	17 15 47.3	-1.8
	comp=E,6.5nm,0.1s,SNR=21						
AML	Almayashu	2.58	251	i PN	Pb	17 15 51.9	-0.8
KK31	Karatay Array	4.73	273	⇑Pg	Pb	17 16 30.4	+1.3
	comp=E,0.5nm,0.3s,baz=91,slow=14,SNR=25						
KK31				⇑Lg	Lg	17 17 34.0	
	comp=E,3.8nm,0.4s,baz=83,slow=25,SNR=15						
KK31	Karatay Array	4.73	273	PN	Pb	17 16 30.4	+1.3
KK31						17 17 33.9	
KK31				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KK31				pmax	pmax		
	comp=N,9.0nm,0.3s						
MK31	Makanchi Array	5.33	43	Pn	Pn	17 16 24.3	-1.4
	comp=N,0.1nm,0.2s,baz=209,slow=13,SNR=21						
MK31				⇑Lg	Lg	17 17 43.1	
	comp=N,2.8nm,0.6s,baz=222,slow=24,SNR=3.6						
MK31	Makanchi Array	5.33	43	i PN	Pn	17 16 24.3	-1.4
MK31				pmax	pmax		
	comp=Z,1.0nm,0.1s						
KURK	Kurchatov	7.76	8	⇓Lg	Lg	17 19 00.2	
	comp=Z,12nm,1.0s						
KURK	Kurchatov	7.76	8	i P	Pn	17 16 58.4	-0.7
VOSK	Vostochnaya	10.49	340	⇓Lg	Lg	17 20 25.2	
	comp=Z,4.2nm,0.9s						
BVA0	Borovoye Array	10.91	339	⇑Lg	Lg	17 20 36.8	
	comp=Z,0.6nm,1.0s,baz=137,slow=28,SNR=3.5						
BRVK	Borovoye	10.97	338	⇑Lg	Lg	17 20 41.4	
	comp=Z,7.9nm,1.1s						
BRVK	Borovoye	10.97	338	i P	Pn	17 17 45.8	+2.8
BRVK				pmax	pmax		
	comp=Z,5.0nm,2.0s						
ZRNK	Zerenda	11.25	335	⇓Lg	Lg	17 20 49.9	
	comp=Z,6.0nm,1.5s						

*IDC **08** 17:24:23.1±0.7, 33.̊65N×82.̊30E, h0km, mb3.8/14, mb1 4.1/16, mb1mx3.8/31, mbtmp3.9/16, ML3.3/2, MS3.0/4, Ms1 3.1/4, ms1mx2.6/56, Error ellipse: s-maj=22.2km s-min=15.0km az=57.0*
*ISCJB **08** 17:24:26.6±0.6, 33.̊72N±0.̊08×82.̊3E±0.̊1, h33km, mb3.8/13, MS2.9/3, Error ellipse: s-maj=14.8km s-min=9.4km az=137.7*
ISC 08 17:24:28.4±0.8**, 33.̊8N**±0.̊1×**82.̊4E**±0.̊1**, h35km, n22, σ1.̊s60**/19**, mb4.0**/13**, MS3.0**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSA	Lhasa	8.49	116	P	Pn	17 26 33.2	+3.9
LSA				S	Sn	17 28 29.2	+25
LSA				LR	LR		
	comp=N,190nm,13.9s						
LSA				LR	LR		
	comp=E,250nm,15.1s						
LSA				LR	LR		
	comp=Z,380nm,12.0s						
AAK	Ala-Archa	10.81	327	Pn	Pn	17 27 07.4	+6.6
	comp=Z,0.1nm,0.3s,baz=206,slow=15,SNR=4.2						
AAK				Sn	Sn	17 29 08.5	+8.0
	baz=160,slow=14,SNR=1.9						
AAK				LR	LR	17 31 37.8	
	comp=Z,100nm,18.7s,baz=126,slow=40						
MKAR	Makanchi Array	13.01	360	Pn	Pn	17 27 30.4	-0.3
	comp=Z,0.2nm,0.3s,baz=182,slow=13,SNR=18						
GTA	Gaotai	15.08	63	eP	P	17 28 03.9	+0.1
GTA				pP	pP	17 28 08.4	-4.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KURBB	Kurchatov Arra	17.08	352	P	P	17 28 25.9	+0.1
	comp=Z,0.0nm,0.3s,baz=169,slow=10,SNR=20						
LZH	Lanzhou	17.74	76	eP	Pn	17 28 32.0	-0.8
LZH				pP	P	17 28 37.2	+3.8
LZH				sP	sP	17 28 39.4	-7.6
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
ZALV	Zalesovo Beam	20.25	4	P	Pn	17 29 02.1	-0.5
	comp=Z,2.0nm,0.6s,baz=194,slow=8.7,SNR=14						
BVAR	Borovoye Array	21.08	340	P	P	17 29 10.7	+1.2
	comp=Z,1.0nm,0.6s,baz=155,slow=11,SNR=7.3						
CMAR	Chiang Mai Arr	21.25	132	P	P	17 29 11.6	0.0
	comp=Z,6.0nm,0.8s,baz=310,slow=11,SNR=53						
CMAR				LR	LR	17 38 03.4	
	comp=Z,18nm,18.5s,baz=215,slow=39						
SONM	Songino Array	22.85	45	P	P	17 29 30.1	+1.5
	comp=Z,1.6nm,0.8s,baz=233,slow=9.1,SNR=4.6						
AKTO	Aktyubinsk	24.42	320	P	P	17 29 44.1	+0.6
	comp=Z,0.7nm,0.4s,baz=118,slow=8.1,SNR=4.8						
GNI	Garni	30.59	293	LR	LR	17 43 58.9	
	comp=Z,35nm,20.2s,baz=2.0,slow=38						
KSRS	Korea Array	36.92	71	LR	LR	17 48 26.6	
	comp=Z,40nm,19.6s,baz=329,slow=39						
FINES	FINESS Array B	44.99	326	P	P	17 32 40.2	+0.2
	comp=Z,1.5nm,0.6s,baz=72,slow=8.2,SNR=5.6						
MJAR	Matsushiro Arr	45.18	70	P	P	17 32 42.7	+0.7
	comp=Z,0.3nm,0.4s,baz=269,slow=8.7,SNR=4.8						
NOA	NORSAR Array B	52.11	324	P	P	17 33 34.7	-0.2
	comp=Z,1.5nm,0.9s,baz=87,slow=7.4,SNR=3.4						
WRA	Warramunga Arr	72.81	129	P	P	17 35 53.8	+0.1
	comp=Z,2.0nm,0.8s,baz=326,slow=6.2,SNR=18						
ILAR	Eielson Array	74.52	20	P	P	17 36 03.0	0.0
	comp=Z,0.8nm,1.0s,baz=304,slow=5.3,SNR=7.2						
TORD	Torodi Ar. Bea	75.16	276	P	P	17 36 07.2	-0.4
	comp=Z,1.3nm,0.6s,baz=45,slow=5.2,SNR=11						
ASAR	Alice Springs	75.26	132	P	P	17 36 07.8	0.0
	comp=Z,1.1nm,0.8s,baz=305,slow=5.2,SNR=15						
BOSA	Boshof	82.31	228	P	P	17 36 46.3	-0.3
	comp=Z,2.1nm,0.6s,baz=28,slow=6.4,SNR=6.1						
YKA	Yellowknife Ar	83.10	8	P	P	17 36 50.1	-0.1
	comp=Z,0.7nm,0.5s,baz=340,slow=5.3,SNR=19						

IDC 08 17:33:01.2±5.3**, 6.̊67S**×**129.̊63E, h268km**±55km**, mb3.0**/1**, mb1 2.8**/4**, mb1mx2.6**/20**, mbtmp2.6**/4**, Error ellipse: s-maj=67.4km s-min=22.2km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.01	199	P	Pn	17 35 43.9	-0.6
	0.1nm,0.3s,baz=26,slow=11,SNR=7.8						
FITZ				S	S	17 37 57.5	-0.9
	0.1nm,0.3s,baz=90,slow=21,SNR=4.2						
WRA	Warramunga Arr	13.96	161	P	Pn	17 36 07.1	-1.3
	0.2nm,0.3s,baz=349,slow=12,SNR=12						
WRA				S	S	17 38 30.4	-12
	0.2nm,0.3s,baz=334,slow=25,SNR=8.1						
ASAR	Alice Springs	17.39	167	P	P	17 36 47.0	+0.8
	0.1nm,0.3s,baz=347,slow=11,SNR=11						
ASAR				S	S	17 39 53.9	+0.7
	0.0nm,0.3s,baz=199,slow=26,SNR=2.6						
MKAR	Makanchi Array	67.75	327	P	P	17 43 30.2	0.0
	0.3nm,0.5s,baz=119,slow=7.3,SNR=6.4						

*IPEC **08** 17:33:01.7±0.2, 50.̊29N×18.̊95E, h0km, ML2.2/3, Error ellipse: s-maj=2.6km s-min=1.1km az=169.0*
*ISCJB **08** 17:33:02.3±0.6, 50.̊34N±0.̊04×18.̊73E±0.̊03, h0km, Error ellipse: s-maj=5.8km s-min=2.7km az=14.3*
*CSEM **08** 17:33:03.3±0.3, 50.̊30N×18.̊77E, h2km, ML2.8/8, Error ellipse: s-maj=6.6km s-min=3.1km az=8.0*
*PRU **08** 17:33:04.7, 50.̊31N×18.̊72E, h0km*
ISC 08 17:33:03.2±0.8**, 50.̊28N**±0.̊04×**18.̊82E**±0.̊02**, h0km, n31, σ0.̊s84**/49**, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.62	224	ePG	Pg	17 33 15.6	+0.5
OKC				eSG	Sg	17 33 24.1	+1.0
	comp=Z,23nm,0.4s						
OKC	Ostrava-Krasne	0.62	224	ePg	Pg	17 33 15.0	-0.1
	baz=49						
OKC				Sg	Sg	17 33 24.1	+1.0
	23nm,0.4s						
OJC	Ojcow	0.64	95	ePg	Pg	17 33 15.3	0.0
OJC				eSg	Sg	17 33 23.8	+0.2
OJC	Ojcow	0.64	95	ePg	Pg	17 33 15.3	0.0
OJC				eSg	Sg	17 33 23.8	+0.2
MORC	Moravsky Berou	0.96	239	ePg	Pg	17 33 21.6	-0.1
	baz=60						
MORC				eSg	Sg	17 33 34.3	+0.1
	34nm,0.3s,baz=60						
NIE	Niedzica	1.30	131	ePg	Pg	17 33 28.4	+0.3
NIE				eSg	Sb	17 33 46.5	+0.7
NIE	Niedzica	1.30	131	ePg	Pg	17 33 28.4	+0.3
NIE				eSg	Sb	17 33 46.5	+0.7
DPC	Dobruska-Polom	1.60	273	ePG	Pn	17 33 32.7	-0.1
DPC				eSG	Sn	17 33 53.2	-0.9
	comp=Z,23nm,0.3s						
DPC	Dobruska-Polom	1.60	273	ePn	Pn	17 33 32.4	-0.4
	baz=91						
DPC	Dobruska-Polom	1.60	273	Pg	Pn	17 33 32.7	-0.1
DPC				eSg	Sb	17 33 54.5	+0.1
	baz=91						
KSP	Ksiaz	1.70	290	ePn	Pg	17 33 36.2	+0.4
KSP				eSn	Sg	17 33 59.1	+1.2
KSP	Ksiaz	1.70	290	ePg	Pg	17 33 36.1	+0.3
KSP				eSg	Sg	17 33 58.7	+0.8
VRAC	Vranov	1.74	237	ePn	Pn	17 33 34.4	-0.3
	baz=56						
VRAC				eSg	Sb	17 33 58.3	-0.1
	20nm,0.4s,baz=56						
VYHS	Vyhne	1.79	180	ePN	Pn	17 33 34.2	-1.2
VYHS				eSN	Sb	17 34 00.5	+0.6
VYHS	Vyhne	1.79	180	ePn	Pn	17 33 34.2	-1.2
VYHS				eSn	Sb	17 34 00.5	+0.6
UPC	Upice	1.81	278	eSG	Sb	17 34 00.0	-0.3
	comp=Z,5.0nm,0.4s						
UPC	Upice	1.81	278	Sg	Sb	17 34 00.0	-0.3
	5.0nm,0.4s						
KRUC	Moravsky	1.99	233	ePn	Pn	17 33 37.8	-0.3
	baz=53						
KRUC				eSn	Sb	17 34 05.0	-0.6
	13nm,0.4s,baz=53						
CRVS	Cervenica-Dubn	2.21	128	ePN	Pb	17 33 43.5	-0.4
CRVS				eSN	Sb	17 34 12.6	+0.7
CRVS	Cervenica-Dubn	2.21	128	ePn	Pb	17 33 43.6	-0.4
CRVS				eSn	Sb	17 34 12.6	+0.7
TREC	Trest	2.37	247	eSG	Sb	17 34 17.5	+0.9
	comp=Z,9.2nm,0.4s						
TREC	Trest	2.37	247	Sg	Sb	17 34 17.5	+0.9
	9.2nm,0.4s						
KOLS	Kolonicke sedl	2.62	120	ePN	Pb	17 33 51.4	+0.3
KOLS				eSG	Sg	17 34 34.8	+7.3
KOLS	Kolonicke sedl	2.62	120	ePn	Pb	17 33 51.4	+0.3
PRU	Pruhonice	2.77	266	eSG	Sb	17 34 29.1	+1.2
	comp=Z,6.4nm,0.5s						
PRU	Pruhonice	2.77	266	Sg	Sb	17 34 29.1	+1.2
	6.4nm,0.5s						
BRG	Berggiesshubel	3.16	283	SG	Sg	17 34 43.9	-0.8
	7.6nm,0.7s						
KHC	Kasperske Hory	3.59	253	ePG	Pb	17 34 09.0	+1.5
KHC				eSG	Sg	17 34 56.6	-1.9
	comp=Z,8.3nm,0.6s						
CLL	Collm	3.83	288	eSg	Sg	17 35 06.0	-0.1
	comp=Z,7.0nm,1.0s						
NKC	Novy Kostel	4.09	272	eSG	Sg	17 35 12.3	-2.1
NKC	Novy Kostel	4.09	272	Sg	Sg	17 35 12.3	-2.1

MEX 08 17:43:48.1±0.8**, 16.̊79N**×**96.̊23W, h73km**±9km**, MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	0.56	300	eP	Pn	17 44 01.1	-0.9
VHO				i S	Sn	17 44 10.4	-2.0
HUIG	Huatulco	1.02	174	i P	Pn	17 44 05.8	-1.3
HUIG				i S	Sn	17 44 19.5	-1.8
CMIG	Matias Romero	1.32	77	i P	Pn	17 44 09.5	-1.4
CMIG				i S	Sn	17 44 25.7	-2.2
PNIG	Pinotepa	1.87	258	i P	Pn	17 44 16.9	-1.2
PNIG				i S	Sn	17 44 38.4	-2.5
CCIG	Comitan	3.96	97	i P	Pn	17 44 46.3	-0.3
CCIG				i S	Sn	17 45 30.9	-1.1

*ROM **08** 17:58:35.8±0.1, 42.̊37N×13.̊42E, h9km, Ml3.4/28, Error ellipse: s-maj=1.3km s-min=1.0km az=61.0*
*ISCJB **08** 17:58:36.1±0.2, 42.̊38N±0.̊02×13.̊39E±0.̊02, h3km±2km, mb3.2/2, Error ellipse: s-maj=3.1km s-min=2.5km az=146.3*
*CSEM **08** 17:58:36.4±0.1, 42.̊36N×13.̊41E, h2km, ML3.7/10, Error ellipse: s-maj=2.6km s-min=2.0km az=60.0*
*IDC **08** 17:58:37.7±1.3, 42.̊48N×13.̊52E, h0km, mb3.3/3, mb1 3.5/6, mb1mx3.3/29, mbtmp3.4/6, ML3.3/3, MS2.9/1, Ms1 2.9/1, ms1mx2.2/29, Error ellipse: s-maj=34.1km s-min=14.1km az=96.0*
*LDG **08** 17:58:39.3±0.7, 42.̊41N×13.̊33E, h2km, Ml2.8/9, Error ellipse: s-maj=14.0km s-min=10.4km az=106.0*
ISC 08 17:58:36.6±0.7**, 42.̊38N**±0.̊02×**13.̊41E**±0.̊02**, h10km**±4km**, n123, σ1.̊s62**/153**, 5C-1D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	188	⇑iPg	Pg	17 58 37.5	-1.0
AQU				Sg	Sg	17 58 38.5	-1.3
AQU	L'Aquila	0.03	188	⇑iPg	Pg	17 58 37.5	-1.0
AQU				Sg	Sg	17 58 38.5	-1.3
CAMP	Campotosto	0.15	1	⇑iPg	Pg	17 58 40.0	-0.1
CAMP				Sg	Sg	17 58 42.9	+0.4
	9μm,0.6s						
CAMP	Campotosto	0.15	1	⇑iPg	Pg	17 58 40.0	-0.1
CAMP				Sg	Sg	17 58 42.9	+0.4
	9μm,0.6s						
FAGN	Fagnano	0.18	132	Pg	Pg	17 58 40.2	-0.2
FAGN				Sg	Sg	17 58 43.0	0.0
	28μm,0.5s						
FAGN	Fagnano	0.18	132	Pg	Pg	17 58 40.2	-0.2
FAGN				Sg	Sg	17 58 43.0	0.0
	28μm,0.5s						
FIAM	Fiamignano	0.24	242	Pg	Pb	17 58 41.6	0.0
FIAM				Sg	Sg	17 58 45.5	+0.5
	10μm,0.5s						
FIAM	Fiamignano	0.24	242	Pg	Pb	17 58 41.6	0.0
FIAM				Sg	Sg	17 58 45.5	+0.5
	10μm,0.5s						
TERO	Teramo	0.28	31	Pg	Pb	17 58 42.0	-1.8
TERO				Sg	Sb	17 58 46.6	-2.0
	5μm,0.3s						
TERO	Teramo	0.28	31	Pg	Pb	17 58 42.0	-1.8
TERO				Sg	Sb	17 58 46.6	-2.0
	5μm,0.3s						
VCEL	Villa Celiera	0.32	88	Pg	Pb	17 58 42.8	-1.7
VCEL				Sg	Sb	17 58 47.3	-2.5
	8μm,0.7s						
VCEL	Villa Celiera	0.32	88	Pg	Pb	17 58 42.8	-1.7
VCEL				Sg	Sb	17 58 47.3	-2.5
	8μm,0.7s						
LNSS	Leonessa	0.35	309	Pg	Pb	17 58 43.4	-1.6
LNSS				Sg	Sb	17 58 49.7	-0.9
	7μm,0.7s						

LNSS	Leonessa	0.35	309	Pg	Pb	17 58 43.4	-1.6
LNSS				Sg	Sb	17 58 49.7	-0.9
	7µm,0.7s						
PTQR	Pietraquaria	0.36	181	Pg	Pg	17 58 43.4	-0.4
PTQR	Pietraquaria	0.36	181	Pg	Pg	17 58 43.4	-0.4
NRCA	Norcia	0.50	334	Pg	Pb	17 58 46.1	-1.5
NRCA				Sg	Sb	17 58 54.0	-1.0
NRCA	Norcia	0.50	334	Pg	Pb	17 58 46.1	-1.5
NRCA				Sg	Sb	17 58 54.0	-1.0
INTR	Introdacqua	0.52	135	Pg	Pg	17 58 46.1	-0.7
INTR				Sg	Sb	17 58 54.1	-1.5
	6µm,0.8s						
INTR	Introdacqua	0.52	135	Pg	Pg	17 58 46.1	-0.7
INTR				Sg	Sb	17 58 54.1	-1.5
	6µm,0.8s						
VVLD	Villa Vallelon	0.54	163	Pg	Pg	17 58 46.2	-0.8
VVLD				Sg	Sg	17 58 53.5	-0.6
	3µm,0.6s						
VVLD	Villa Vallelon	0.54	163	Pg	Pg	17 58 46.2	-0.8
VVLD				Sg	Sg	17 58 53.5	-0.6
	3µm,0.6s						
CERT	Cerreto	0.54	216	Pg	Pg	17 58 46.4	-0.6
	5µm,0.4s						
CERT	Cerreto	0.54	216	Pg	Pg	17 58 46.4	-0.6
	5µm,0.4s						
MNS	Montasola	0.54	270	Pg	Pg	17 58 46.5	-0.6
	2µm,1.0s						
MNS	Montasola	0.54	270	Pg	Pg	17 58 46.5	-0.6
	2µm,1.0s						
TRTR	Tortoreto Alta	0.57	41	Pg	Pb	17 58 48.5	-0.1
	8µm,1.1s						
TRTR	Tortoreto Alta	0.57	41	Pg	Pb	17 58 48.5	-0.1
	8µm,1.1s						
OFFI	Offida	0.59	20	Pg	Pb	17 58 48.4	-0.6
	6µm,0.4s						
OFFI	Offida	0.59	20	Pg	Pb	17 58 48.4	-0.6
	6µm,0.4s						
GUAR	Guarcino	0.59	187	Pg	Pg	17 58 47.3	-0.8
	2µm,0.5s						
GUAR	Guarcino	0.59	187	Pg	Pg	17 58 47.3	-0.8
	2µm,0.5s						
MTCE	Montecelio	0.61	234	Pg	Pg	17 58 47.8	-0.6
	1µm,0.7s						
MTCE	Montecelio	0.61	234	Pg	Pg	17 58 47.8	-0.6
	1µm,0.7s						
FDMO	Fiordimonte	0.69	340	Pg	Pb	17 58 49.3	-1.5
FDMO	Fiordimonte	0.69	340	Pg	Pb	17 58 49.3	-1.5
CAFR	Castel Frentan	0.71	102	Pg	Pb	17 58 49.9	-1.2
	3µm,0.7s						
CAFR	Castel Frentan	0.71	102	Pg	Pb	17 58 49.9	-1.2
	3µm,0.7s						
CESI	CESI - Serrava	0.72	329	Pg	Pb	17 58 49.9	-1.5
	282nm,0.6s						
CESI	CESI - Serrava	0.72	329	Pg	Pb	17 58 49.9	-1.5
	282nm,0.6s						
SDI	San Donato	0.74	156	Pg	Pg	17 58 49.9	-0.9
SDI	San Donato	0.74	156	Pg	Pg	17 58 49.9	-0.9
GIUL	Giuliano Di Ro	0.83	188	Pg	Pg	17 58 51.2	-1.4
	1µm,1.0s						
GIUL	Giuliano Di Ro	0.83	188	Pg	Pg	17 58 51.2	-1.4
	1µm,1.0s						
ASSB	Assisi San Ben	0.86	320	Pg	Pb	17 58 52.4	-1.3
ASSB	Assisi San Ben	0.86	320	Pg	Pb	17 58 52.4	-1.3
RNI2	Rionero Sannit	0.88	141	Pg	Pg	17 58 52.4	-1.1
	828nm,0.8s						
RNI2	Rionero Sannit	0.88	141	Pg	Pg	17 58 52.4	-1.1
	828nm,0.8s						
CERA	Filignano	0.91	150	Pg	Pg	17 58 52.5	-1.6
	1µm,0.7s						
CERA	Filignano	0.91	150	Pg	Pg	17 58 52.5	-1.6
	1µm,0.7s						
SNTG	Esanatoglia	0.94	339	Pg	Pb	17 58 53.7	-1.3
	489nm,0.8s						
SNTG	Esanatoglia	0.94	339	Pg	Pb	17 58 53.7	-1.3
	489nm,0.8s						
MIDA	Miranda	0.97	139	Pg	Pg	17 58 53.5	-1.8
	684nm,0.7s						
MIDA	Miranda	0.97	139	Pg	Pg	17 58 53.5	-1.8
	684nm,0.7s						
CING	Cingoli	1.00	351	Pg	Pb	17 58 55.0	-1.1
	570nm,0.7s						
CING	Cingoli	1.00	351	Pg	Pb	17 58 55.0	-1.1
	570nm,0.7s						
MGAB	Montegabbione	1.09	299	Pg	Pb	17 58 57.1	-0.5
MGAB	Montegabbione	1.09	299	Pg	Pb	17 58 57.1	-0.5
MURB	Monte Urbino	1.09	324	Pg	Pb	17 58 56.9	-0.8
	1µm,0.5s						
MURB	Monte Urbino	1.09	324	Pg	Pb	17 58 56.9	-0.8
	1µm,0.5s						
TOLF	Tolfa	1.09	254	Pg	Pn	17 58 57.5	-0.5
	321nm,0.5s						
TOLF	Tolfa	1.09	254	Pg	Pn	17 58 57.5	-0.5
	321nm,0.5s						
ARVD	Arcevia	1.17	343	Pg	Pb	17 58 58.0	-0.9
	437nm,0.9s						
ARVD	Arcevia	1.17	343	Pg	Pb	17 58 58.0	-0.9
	437nm,0.9s						
AOI	Ancona	1.18	7	Pg	Pn	17 58 59.0	-0.2
	490nm,0.7s						
AOI	Ancona	1.18	7	Pg	Pn	17 58 59.0	-0.2
	490nm,0.7s						
SACS	San Casciano d	1.20	293	Pg	Pn	17 58 59.9	+0.4
	978nm,1.5s						
PIEI	Pieia	1.32	331	Pn	Pn	17 59 00.5	-0.6
PIEI	Pieia	1.32	331	Pn	Pn	17 59 00.5	-0.6
CAFI	Castiglion Fio	1.42	312	Pn	Pb	17 59 03.0	-0.2
	288nm,0.9s						
CAFI	Castiglion Fio	1.42	312	Pn	Pb	17 59 03.0	-0.2
	288nm,0.9s						
ARCI	Arcidosso	1.50	289	Pn	Pg	17 59 05.0	-0.4
ARCI	Arcidosso	1.50	289	Pn	Pg	17 59 05.0	-0.4
MAON	Monte Argentar	1.69	272	Pn	Pn	17 59 06.5	+0.4
MAON	Monte Argentar	1.69	272	Pn	Pn	17 59 06.5	+0.4
SGRT	San Giovanni R	1.85	109	Pn	Pb	17 59 09.9	-0.7
	173nm,0.6s						
SGRT	San Giovanni R	1.85	109	Pn	Pb	17 59 09.9	-0.7
	173nm,0.6s						
MS1	Monte Sant'Ang	2.01	109	ePn	Pg	17 59 14.4	-0.7
NVLJ	Novalja	2.43	26	ePn	Pn	17 59 17.1	+0.8
NVLJ	Novalja	2.43	26	ePn	Pn	17 59 17.1	+0.8
CDT	Castel del Mon	2.51	120	ePn	Pb	17 59 22.0	+0.2
CDT				eSn	Sb	17 59 52.4	-0.3
MAIM	Mastiano	2.63	307	P	Pn	17 59 20.2	+1.1
SKDS	Skadanscina	3.19	8	iPn	Pn	17 59 27.5	+0.6
SKDS				iSn	Sn	18 00 07.6	+2.6
SKDS							
	comp=Z,12nm,0.3s						
SKDS	Skadanscina	3.19	8	Pn	Pn	17 59 27.5	+0.6
SKDS				iSn	Sn	18 00 07.6	+2.6
	comp=Z,12nm,0.3s						
STON	Ston	3.21	80	ePn	Pn	17 59 28.7	+1.7
STON	Ston	3.21	80	ePn	Pn	17 59 28.7	+1.7
PGF	Pioggiola	3.27	274	ePn	Pn	17 59 29.4	+1.4
PGF				eSn	Sn	18 00 09.5	+2.6
	comp=Z,3.6nm,0.4s						
PGF	Pioggiola	3.27	274	ePn	Pn	17 59 29.4	+1.4
PGF				eSn	Sn	18 00 09.5	+2.6
	comp=Z,1.8nm,0.4s						
BOJS	Bojanci	3.39	22	iPn	Pn	17 59 31.7	+2.1
BOJS				iSn	Sb	18 00 13.4	-4.7
BOJS							
	comp=Z,11nm,0.5s						
BOJS	Bojanci	3.39	22	iPn	Pn	17 59 31.7	+2.1
BOJS				iSn	Sb	18 00 13.4	-4.7
	comp=Z,11nm,0.5s						
VOY	Vojsko	3.67	5	ePn	Pn	17 59 35.2	+1.8
VOY				e		17 59 45.3	
VOY				eSn	Sn	18 00 19.2	+2.5
VOY	Vojsko	3.67	5	ePn	Pn	17 59 35.2	+1.8
VOY				eSn	Sn	18 00 19.2	+2.5
ABTA	Abfaltersbach	4.41	352	⇑iPn	Pn	17 59 44.3	+0.6
ABTA	Abfaltersbach	4.41	352	Pn	Pn	17 59 44.3	+0.6
SBF	Sospel	4.62	291	ePn	Pn	17 59 47.9	+1.4
SBF				eSn	Sn	18 00 37.7	-2.4
	comp=Z,6.9nm,0.6s						
SBF	Sospel	4.62	291	ePn	Pn	17 59 47.9	+1.4
SBF				eSn	Sn	18 00 37.7	-2.4
	comp=Z,3.5nm,0.6s						
FETA	Feichten	5.01	339	⇓iPn	Pn	17 59 54.6	+2.6
FETA	Feichten	5.01	339	Pn	Pn	17 59 54.6	+2.6
DAVOX	Davos/Dischmat	5.07	331	Pn	Pn	17 59 56.5	+3.7
	comp=Z,1.0nm,0.3s,baz=154,slow=17,SNR=9.0						
DAVOX				Sn	Sn	18 00 56.1	+4.7
	comp=Z,0.3nm,0.3s,baz=142,slow=22,SNR=3.3						
FRF	La Foret Royal	5.10	286	ePn	Pn	17 59 54.1	+1.1
FRF				eSn	Sn	18 00 49.1	-2.9
	comp=Z,3.0nm,0.6s						
FRF	La Foret Royal	5.10	286	ePn	Pn	17 59 54.1	+1.1
FRF				eSn	Sn	18 00 49.1	-2.9
	comp=Z,1.5nm,0.6s						
LMR	La Mourre	5.16	283	ePn	Pn	17 59 54.7	+0.8
LMR				eSn	Sn	18 00 50.6	-2.8
	comp=Z,1.7nm,0.4s						
LMR	La Mourre	5.16	283	ePn	Pn	17 59 54.7	+0.8
LMR				eSn	Sn	18 00 50.6	-2.8
	comp=Z,0.9nm,0.4s						
MBDF	Montbardon	5.36	298	eP	Pn	17 59 59.9	+3.1
MBDF	Montbardon	5.36	298	eP	Pn	17 59 59.9	+3.1
LPG	La Plagne	5.72	305	eP	Pn	18 00 05.8	+3.9
LPG				eSn	Sn	18 01 04.9	-2.9
	comp=Z,0.9nm,0.3s						
LPL	La Plagne	5.75	305	eP	Pn	18 00 06.0	+3.9
LPL				eSn	Sn	18 01 04.1	-4.1
	comp=Z,0.9nm,0.3s						
SMRF	Simiane la Rot	5.94	288	eP	Pn	18 00 07.4	+2.7
SMRF	Simiane la Rot	5.94	288	eP	Pn	18 00 07.4	+2.7
GERES	GERESS Array B	6.47	2	Pn	Pn	18 00 13.1	+1.2
	comp=Z,0.4nm,0.3s,baz=175,slow=13,SNR=9.2						
GERES				Sn	Sn	18 01 25.2	-0.5
	comp=Z,0.5nm,0.3s,baz=182,slow=21,SNR=3.9						
KHC	Kasperske Hory	6.75	1	ePN	Pn	18 00 18.5	+2.8
KHC				eSN	Sn	18 01 31.0	-1.7
HINF	Hinteralfeld	7.14	322	ePn	Pn	18 00 21.9	+0.8
HINF				eSn	Sn	18 01 38.3	-4.0
	comp=Z,2.9nm,0.6s						
HINF	Hinteralfeld	7.14	322	ePn	Pn	18 00 21.9	+0.8
KEST	Kesra	7.35	207	Pn	Pn	18 00 29.6	+5.4
	comp=Z,0.5nm,0.3s,baz=14,slow=1.5,SNR=11						
CDF	Champ du Feu	7.41	327	ePn	Pn	18 00 25.6	+0.7
CDF				eSn	Sn	18 01 45.3	-3.7
	comp=Z,1.8nm,0.3s						
CDF	Champ du Feu	7.41	327	ePn	Pn	18 00 25.6	+0.7
HAU	Haudompre	7.51	321	ePn	Pn	18 00 27.2	+1.0
HAU				eSn	Sn	18 01 46.0	-5.4
	comp=Z,3.6nm,0.4s						
HAU	Haudompre	7.51	321	ePn	Pn	18 00 27.2	+1.0
MLR	Muntele Rosu	9.56	67	Pn	Pn	18 01 00.1	+5.7
	comp=Z,0.0nm,0.3s,baz=139,slow=18,SNR=4.6						
HFS	Hagfors	17.78	0	LR	LR	18 10 48.4	
	comp=Z,40nm,19.2s,baz=154,slow=41						
FINES	FINESS Array B	20.55	17	P	Pn	18 03 16.6	-0.7
	comp=Z,3.9nm,1.1s,baz=280,slow=25,SNR=3.2						
TORD	Torodi Ar. Bea	30.85	203	P	P	18 04 55.5	+2.6
	comp=Z,0.5nm,0.8s,baz=28,slow=9.8,SNR=3.7						
MKAR	Makanchi Array	47.83	60	P	P	18 07 16.4	+2.1
	comp=Z,0.1nm,0.5s,baz=279,slow=7.4,SNR=2.3						

MEX 08 17:59:13.2±0.7**, 15°.87N×96°.60W, h48km**±11km**, MD4.3, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.48	102	iP	Pn	17 59 22.7	-1.5
HUIG				eS	Sn	17 59 30.2	-1.7
VHO	Vista Hermosa	1.20	354	iP	Pn	17 59 31.7	-2.2
VHO				eS	Sn	17 59 47.0	-2.3
PNIG	Pinotepa	1.56	290	iP	Pn	17 59 36.5	-2.1
PNIG				iS	Sn	17 59 56.4	-1.3
CMIG	Matias Romero	2.04	53	iP	Pn	17 59 44.0	-1.1
CMIG				iS	Sn	18 00 08.2	-1.2
TPIG	Tehuac#an	2.64	344	iP	Pn	17 59 52.4	-1.1
TPIG				iS	Sn	18 00 23.0	-1.5
MEIG	Mezcala	3.54	306	iP	Pn	18 00 05.2	-0.7
MEIG				eS	Sn	18 00 45.5	-1.1
CAIG	El Cayaco	3.71	289	iP	Pn	18 00 07.9	-0.1
CAIG				iS	Sn	18 00 48.5	-2.0
PPM	Popocatepetl	3.72	329	iP	Pn	18 00 09.8	+0.9
PPM				iS	Sn	18 00 49.5	-2.4
YAIG	Yautepec	3.80	322	iP	Pn	18 00 08.7	-0.8
YAIG				iS	Sn	18 00 51.9	-1.1
ARIG	Puente Sto Nin	4.31	304	iP	Pn	18 00 16.4	0.0
ARIG				eS	Sn	18 01 04.5	-1.0
ZIIG	Zihuatanejo	4.97	291	iP	Pn	18 00 24.6	-0.7
ZIIG				iS	Sn	18 01 20.3	-1.4

*IDC **08** 17:59:57.4±1.1, 0°.71S×134°.17E, h0km, mb3.7/7, mb1 3.9/9, mb1mx3.7/24, mbtmp3.7/9, ML3.9/2, MS4.3/1, Ms1 4.3/1, ms1mx2.3/37, Error ellipse: s-maj=47.2km s-min=18.7km az=82.0*
*ISCJB **08** 17:59:59.7±0.9, 0°.77S±0°.06×134°.1E±0°.2, h27km, mb3.7/7, MS4.3/1, Error ellipse: s-maj=34.8km s-min=8.2km az=175.1*
*AUST **08** 18:00:38.8±13.0, 3°.43S×133°.65E, h139km, Error ellipse: s-maj=8.4km s-min=1.6km az=232.0*

ISC 08 18:00:01.5±1.2**, 0°.83S**±0°.09**×134°.1E**±0°.3**, h27km, n14,** σ1s.07/13**, mb3.6**/7**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLE	Tual	4.97	196	P	Pn	18 01 17.9	+3.6
	baz=2.4,SNR=8.5						
KDU	Kakadu	11.89	188	P	Pn	18 02 50.6	+1.3
	baz=9.3,SNR=14						
MTN	Manton Dam	12.29	194	P	Pn	18 02 55.3	+0.4
	baz=9.7,SNR=26						
WRA	Warramunga Arr	18.99	179	P	P	18 04 21.6	+0.4
	0.5nm,0.3s,baz=359,slow=11,SNR=29						
WRA				S	Sn	18 07 51.4	-2.6
	0.1nm,0.3s,baz=350,slow=23,SNR=5.5						
FITZ	Fitzroy Crossi	19.08	205	P	Pn	18 04 23.5	+0.5
	0.3nm,0.3s,baz=30,slow=12,SNR=7.0						
FITZ	Fitzroy Crossi	19.08	205	P	Pn	18 04 23.5	+0.5
	baz=17,SNR=6.5						
ASAR	Alice Springs	22.70	181	P	P	18 05 02.2	+1.0
	1.1nm,0.5s,baz=6.2,slow=10,SNR=29						
CMAR	Chiang Mai Arr	39.53	301	P	P	18 07 30.0	-0.4
	0.5nm,0.3s,baz=111,slow=6.6,SNR=5.5						
RPZ	Rata Peaks	53.88	147	LR	LR	18 31 03.7	
	comp=Z,253nm,18.1s,baz=23,slow=35						
MKAR	Makanchi Array	65.54	324	P	P	18 10 42.5	-0.2
	1.0nm,0.7s,baz=115,slow=7.9,SNR=14						
ZALV	Zalesovo Beam	68.05	331	P	P	18 10 57.8	-0.7
	0.2nm,0.4s,baz=134,slow=12,SNR=2.7						
KURBB	Kurchatov Arra	69.58	326	P	P	18 11 07.7	-0.4
	1.0nm,0.9s,baz=119,slow=5.7,SNR=11						
BVAR	Borovoye Array	75.18	326	P	P	18 11 41.8	+0.3
	0.6nm,0.9s,baz=90,slow=4.3,SNR=2.7						
ILAR	Eielson Array	86.06	25	P	P	18 12 39.2	-0.3
	0.2nm,0.6s,baz=249,slow=4.7,SNR=3.6						

NEIC 08 18:02:35.7, 51°.25N×178°.41W, h9km, ML3.6(AEIC)**, After AEIC., Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALAA	Gareloi Lava P	0.56	336	P	Pg	18 02 47.0	+0.5
GAEA	Gareloi East	0.57	339	P	Pg	18 02 47.1	+0.4
GANE	Gareloi Northe	0.61	338	P	Pg	18 02 47.0	-0.6
TASE	Tanaga Southea	0.63	22	P	Pg	18 02 48.2	+0.2
TANO	Tanaga North	0.69	15	P	Pg	18 02 48.2	-0.8
TAFP	Tanaga Falls P	0.70	22	P	Pg	18 02 49.0	-0.2
TAFP				S	Sb	18 02 59.5	-0.4
KIMD	Kanaga Island	0.90	55	P	Pg	18 02 51.8	-1.1
KIKV	Kanaga Island	1.00	51	P	Pg	18 02 53.4	-1.5
KIKV				S	Sg	18 03 07.1	-0.7
KIRH	Kanaga Island	1.05	51	P	Pg	18 02 54.2	-1.6
KIRH				S	Sg	18 03 08.0	-1.5
ADAG	Mount Adagdak	1.34	56	P	Pn	18 02 59.2	-1.4
GSTD	Great Sitkin T	1.63	59	P	Pn	18 03 02.9	-1.7
GSTD				S	Sn	18 03 23.9	-1.9
GSMY	Great Sitkin M	1.67	61	P	Pn	18 03 03.5	-1.6
GSMY				S	Sn	18 03 25.1	-1.6
KOFP	Korovin Flat P	2.87	67	P	Pn	18 03 20.7	-0.9
MREP	Makushin Rep't	7.56	66	P	Pn	18 04 25.3	-0.9

*ISCJB **08** 18:06:55.1±0.2, 43°.77N±0°.02×105°.35W±0°.03, h0km, mb3.9/3, Error ellipse: s-maj=2.7km s-min=2.1km az=160.0*
*IDC **08** 18:06:55.7±1.8, 43°.78N×105°.52W, h0km, mb3.9/3, mb1 3.8/7, mb1mx3.5/30, mbtmp3.6/7, ML3.4/4, Error ellipse: s-maj=53.6km s-min=7.8km az=148.0*
*NEIC **08** 18:06:56.1±0.3, 43°.81N×105°.26W, h0km, ML3.2, Error ellipse: s-maj=5.3km s-min=4.5km az=164.0, Suspected Mining explosion.*
NEIC 60 km [35 miles] SSE of Gillette.

ISC 08 18:06:55.7±0.6**, 43°.75N**±0°.02**×105°.32W**±0°.03**, h0km, n132,** σ0s.89/141**, mb3.8**/3**, 40C-50D, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I23A	Meade Ranch, G	0.24	333	⇑P	Pg	18 07 01.6	+1.3
	baz=0.2,SNR=247						
J23A	Dilts Ranch, B	0.39	206	⇓P	Pg	18 07 03.8	+0.7
	baz=0.5,SNR=128						
I24A	Kuemmerle Ranc	0.51	77	⇓P	Pg	18 07 06.1	+0.6
	baz=0.5						
I24A				⇓S	Sg	18 07 14.2	+2.0
	baz=0.5						
J24A	Dixon Ranch, L	0.64	131	⇑P	Pg	18 07 08.2	+0.3
	baz=0.6						
H23A	Clabaugh Cattl	0.81	356	⇓P	Pg	18 07 11.5	+0.1
	baz=0.8						
I22A	9 Mile Ranch,	0.86	280	⇑P	Pg	18 07 12.4	+0.3
	baz=0.9						
RSSD	Black Hills	1.00	68	eP	Pg	18 07 14.4	-0.5
K23A	Bowen Ranch, D	1.02	193	⇑P	Pg	18 07 15.2	-0.1
	baz=1.1						
K24A	Anderson Ranch	1.09	160	⇑P	Pg	18 07 16.3	-0.4
	baz=1.1						
H22A	Clearmont	1.13	319	⇓P	Pg	18 07 17.6	+0.3
	baz=1.1						
H24A	Dirks Ranch, A	1.14	29	⇓P	Pg	18 07 17.1	-0.5
	baz=1.1						
K22A	Casper	1.41	219	⇑P	Pn	18 07 21.8	-1.0
	baz=1.5						
I21A	Big Trails, Te	1.43	273	⇓P	Pn	18 07 21.7	-1.4
	baz=1.5						
G23A	Biddle	1.45	358	⇓P	Pn	18 07 22.8	-0.6
	baz=1.4						
G23A				⇓S	Sn	18 07 44.6	+1.5
	baz=1.4						
H21A	Big Horn, Sher	1.52	306	⇑P	Pn	18 07 24.4	+0.1
	baz=1.5						
J21A	Lysite	1.60	256	⇓P	Pn	18 07 24.8	-0.7
	baz=1.7						
J21A				⇑S	Sn	18 07 47.5	+0.6
	baz=1.7						
L23A	Garrett	1.66	190	⇓P	Pn	18 07 26.1	-0.2
	baz=1.7						
G24A	Alzada	1.70	22	⇑P	Pn	18 07 27.3	+0.5
	baz=1.6						
G24A				⇓S	Sg	18 07 51.3	+0.8
	baz=1.6						
L24A	Wheatland	1.73	170	⇓P	Pn	18 07 27.4	+0.2
	baz=1.8,SNR=56						
L24A				⇑S	Sn	18 07 50.4	+0.4
	baz=1.8						
K21A	Alcova	1.80	232	⇑P	Pn	18 07 28.7	+0.4
	baz=1.9,SNR=130						
L25A	Engebretsen Ra	1.88	148	⇑P	Pn	18 07 29.7	+0.4
	baz=1.9						
K26A	Motz Farm, Whi	1.88	123	⇑P	Pn	18 07 29.7	+0.4
	baz=1.9,SNR=37						
K26A				⇓Sb	Sg	18 07 56.9	+0.7
	baz=1.9						
L22A	Ellis Ranch, M	1.90	206	⇑P	Pn	18 07 30.1	+0.4
	baz=2.0,SNR=327						
L22A				⇓Sb	Sb	18 07 56.8	+0.9
	baz=2.0						
G21A	Lodge Grass	2.00	318	⇓P	Pn	18 07 31.4	+0.5
	baz=2.0,SNR=17						
I20A	Worland	2.04	277	⇑P	Pn	18 07 32.2	+0.7
	baz=2.1,SNR=354						
H20A	Greybull	2.07	292	⇑P	Pn	18 07 32.0	+0.1
	baz=2.1						
F22A	Rosebud	2.14	342	⇑P	Pn	18 07 32.8	+0.1
	baz=2.1						
F24A	Ekalaka	2.19	16	⇑P	Pn	18 07 34.5	+1.0
	baz=2.1,SNR=20						
M23A	Laramie	2.30	188	⇑P	Pn	18 07 35.2	+0.1
	baz=2.4						
M24A	Cheyenne	2.31	171	⇓Pb	Pb	18 07 38.3	-0.1
	baz=2.4						
M24A				⇓Sb	Sb	18 08 09.1	+1.6
	baz=2.4						
L21A	Rawlins	2.34	221	⇑P	Pn	18 07 36.4	+0.7
	baz=2.4						
F21A	Absaloka Mine,	2.44	329	⇓P	Pn	18 07 36.6	-0.3
	baz=2.4						
PHWY	Pilot Hill	2.45	182	eP	Pn	18 07 37.6	+0.4
G20A	Bridger	2.54	306	⇓P	Pn	18 07 38.3	-0.1
	baz=2.5						
E22A	Miles City	2.73	351	⇓P	Pn	18 07 40.7	-0.1
	baz=2.7						
E23A	Ismay	2.75	0	⇓P	Pn	18 07 41.5	+0.4
	baz=2.7						
H19A	Powell	2.79	290	⇑P	Pn	18 07 42.5	+0.7
	baz=2.8,SNR=28						
E24A	Baker	2.90	14	⇑P	Pn	18 07 44.3	+1.0
	baz=2.8,SNR=34						
RLMT	Red Lodge	3.15	297	eP	Pn	18 07 47.2	+0.5
RLMT	Red Lodge	3.15	297	⇓P	Pn	18 07 47.2	+0.5
	baz=3.1,SNR=36						
PDAR	Pinedale Array	3.25	254	Pn	Pn	18 07 49.4	+1.1
PDAR				Pg	Pb	18 07 54.1	-0.3
PDAR				Lg	Lg	18 08 34.2	
PDAR	Pinedale Array	3.25	254	Pn	Pn	18 07 49.4	+1.1
	4.7nm,0.3s,baz=70,slow=16,SNR=81						
PDAR				Pg	Pb	18 07 54.1	-0.3
	14nm,0.3s,baz=65,slow=21,SNR=72						
PDAR				Lg	Lg	18 08 34.2	
	20nm,0.3s,baz=343,slow=32,SNR=11						
BW06	Boulder Array	3.25	254	eP	Pn	18 07 49.4	+1.2
H18A	Shoshone NF, C	3.26	288	⇓P	Pn	18 07 48.4	0.0
	baz=3.3,SNR=22						
F19A	Roth Farm, Mol	3.33	310	⇓P	Pn	18 07 49.7	+0.6
	baz=3.3,SNR=68						
G18A	Lazy EL Ranch,	3.42	299	⇓P	Pn	18 07 51.0	+0.6
	baz=3.4,SNR=69						
D24A	Glendive	3.44	11	⇑P	Pn	18 07 51.9	+1.3
	baz=3.4,SNR=18						
E19A	Rath Farm, Rou	3.66	319	⇓P	Pn	18 07 53.5	-0.1
	baz=3.6						
GCMT	Greycliff	3.71	305	eP	Pn	18 07 55.0	+0.6
OGNE	Ogallala	3.71	138	eP	Pn	18 07 54.5	+0.1
F18A	Big Timber	3.80	306	⇓P	Pn	18 07 56.2	+0.6
	baz=3.8,SNR=36						
C24A	Savage	3.83	9	⇓P	Pn	18 07 56.7	+0.7
	baz=3.8,SNR=18						
LOHW	Long Hollow	3.84	270	eP	Pn	18 07 57.6	+1.3
D20A	Manuel Ranch,	3.89	330	⇑P	Pn	18 07 56.8	0.0
	baz=3.9,SNR=7.7						
MOOW	Moose Ponds	3.93	272	eP	Pn	18 07 57.8	+0.2
ISCO	Idaho Springs	3.95	183	eP	Pn	18 07 58.9	+1.0
ISCO	Idaho Springs	3.95	183	⇓P	Pn	18 07 58.5	+0.5
	baz=4.0						
SNOW	Snow King Moun	3.96	268	eP	Pn	18 08 00.6	+2.6
C22A	Vida	4.02	355	⇓P	Pn	18 07 59.6	+1.1
	baz=4.0						
N19A	John Jarvie Ra	4.04	226	⇑P	Pn	18 07 59.1	0.0
	baz=4.1						
REDW	Red Top Meadow	4.04	266	eP	Pb	18 08 07.5	-0.4
C23A	Lambert	4.05	1	⇓P	Pn	18 08 00.3	+1.2
	baz=4.0,SNR=20						
IMW	Indian Meadow	4.07	274	eP	Pn	18 08 00.3	+0.8
TPAW	Teton Pass	4.10	268	eP	Pn	18 08 01.2	+1.3
O27A	Beecher Island	4.14	148	⇓P	Pn	18 08 01.0	+0.8
	baz=4.2						
YMR	Madison River	4.16	285	eP	Pb	18 08 10.1	+0.1
DCID1	Drake Creek	4.26	270	eP	Pn	18 08 04.0	+2.0
E18A	Harlowton	4.30	312	⇓P	Pn	18 08 03.0	+0.5
	baz=4.3,SNR=14						
AHID	Auburn Hatcher	4.34	259	eP	Pn	18 08 03.2	+0.1
RRI2	Red Ridge	4.38	267	eP	Pn	18 08 04.6	+0.8
C20A	Veseth Ranch,	4.39	336	⇓P	Pn	18 08 04.2	+0.6
	baz=4.3						
P26A	Davis Ranch, A	4.44	160	⇑P	Pn	18 08 05.1	+0.7
	baz=4.5						
QLMT	Earthquake Lak	4.52	286	eP	Pn	18 08 04.8	-0.8
P27A	Ficken Ranch,	4.67	153	⇓P	Pn	18 08 07.7	+0.2
	baz=4.7,SNR=11						
B23A	Brockton	4.72	3	⇓P	Pn	18 08 09.3	+1.0
	baz=4.7						
SMCO	Snowmass	4.74	196	eP	Pn	18 08 11.1	+2.4
C19A	Slack Wire Ran	4.76	328	⇑P	Pn	18 08 09.6	+0.7
	baz=4.7						
E17A	Martinsdale	4.77	307	⇑P	Pn	18 08 09.4	+0.4
	baz=4.8,SNR=19						
DGMT	Dagmar	4.79	9	eP	Pn	18 08 10.2	+1.2
DGMT	Dagmar	4.79	9	⇑P	Pn	18 08 10.1	+1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=4.7,SNR=10						
BOZ	Bozeman (W)	4.88	295	eP	Pn	18 08 08.6	-2.0
Q25A	Bedland, Calha	4.90	170	⇓P	Pn	18 08 11.3	+0.5
	baz=5.0						
HWUT	Hardware Ranch	5.08	247	eP	Pn	18 08 14.0	+0.7
	11nm,0.5s						
D17A	Six Diamond Ra	5.08	314	⇑P	Pn	18 08 13.4	+0.1
	baz=5.1,SNR=53						
A24A	Westby	5.25	10	⇓P	Pn	18 08 16.7	+1.2
	baz=5.2,SNR=14						
E16A	East Helena	5.29	304	⇑P	Pn	18 08 16.3	+0.1
	baz=5.3,SNR=9.6						
C17A	Wharram Farm,	5.44	317	⇑P	Pn	18 08 18.3	+0.1
	baz=5.4,SNR=8.4						
DLMT	Dillon	5.45	290	eP	Pn	18 08 19.5	+1.2
	4.2nm,0.4s						
HRY	Holter Researc	5.47	305	eP	Pn	18 08 18.4	-0.1
	14nm,0.4s						
D16A	Dana Ranch, Ca	5.48	309	⇑P	Pn	18 08 18.9	+0.1
	baz=5.5,SNR=13						
LRM	Limekiln Ridge	5.48	295	eP	Pn	18 08 20.2	+1.3
	31nm,0.4s						
MCMT	McKenzie Canyo	5.51	284	eP	Pn	18 08 24.3	+5.0
	2.4nm,0.3s						
R26A	Arlington	5.62	165	⇑P	Pn	18 08 20.9	+0.1
	baz=5.7,SNR=9.3						
R25A	Fountain Ranch	5.65	172	⇑P	Pn	18 08 21.4	+0.2
	baz=5.7						
R27A	Eads	5.78	160	⇓P	Pn	18 08 23.4	+0.5
	baz=5.8						
E15A	Deer Lodge	5.83	300	⇓P	Pn	18 08 23.7	+0.1
	baz=5.8,SNR=12						
D15A	Lincoln	6.05	305	⇓P	Pn	18 08 26.8	+0.3
	baz=6.0,SNR=13						
C16A	Fuhringer Ranc	6.05	314	⇓P	Pn	18 08 26.3	-0.3
	baz=6.0						
SRU	San Rafael	6.07	222	eP	Pn	18 08 26.9	+0.1
TMUT	Trail Mountain	6.27	227	eP	Pn	18 08 30.7	+0.9
S26A	Kim	6.28	166	⇓P	Pn	18 08 29.7	0.0
	baz=6.3,SNR=8.1						
ECSD	EROS Data Cent	6.30	87	eP	Pn	18 08 30.2	+0.3
	7.8nm,0.6s						
E14A	Clinton	6.37	298	⇑P	Pn	18 08 31.3	+0.3
	baz=6.4,SNR=9.0						
CHMT	Chamberlain Mo	6.43	302	eP	Pn	18 08 32.0	+0.2
	2.2nm,0.4s						
B16A	M & M Farms, S	6.44	319	⇑P	Pn	18 08 31.8	0.0
	baz=6.4						
C15A	Salmond Ranch,	6.50	311	⇑P	Pn	18 08 32.8	+0.1
	baz=6.5						
Q16A	Castle Valley	6.54	224	⇓P	Pn	18 08 33.6	+0.3
	baz=6.6						
HLID	Hailey	6.60	272	eP	Pn	18 08 36.3	+2.1
	1.7nm,0.5s						
DUG	Dugway	6.62	240	⇓P	Pn	18 08 34.6	+0.2
	baz=6.7						
D14A	Greenough	6.66	303	⇓P	Pn	18 08 34.9	0.0
	baz=6.6,SNR=15						
SLMT	Seeley Lake	6.72	304	eP	Pn	18 08 35.1	-0.7
	5.2nm,0.5s						
F13A	Darby	6.73	291	⇓P	Pn	18 08 35.9	0.0
	baz=6.7						
B15A	Bradely Ranch,	6.80	315	⇑P	Pn	18 08 36.4	-0.4
	baz=6.8						
S18A	Hurst Farm, Bl	7.02	212	⇓P	Pn	18 08 39.9	-0.1
	baz=7.1						
B14A	Marquette Ranc	7.20	313	⇑P	Pn	18 08 42.1	-0.3
	baz=7.2						
D13A	Huson	7.25	301	⇓P	Pn	18 08 42.7	-0.3
	baz=7.2,SNR=7.4						
YBMT	Yellow Bay	7.34	307	eP	Pn	18 08 45.4	+1.2
	6.3nm,0.3s						
JTMT	Jette	7.43	306	eP	Pn	18 08 46.1	+0.5
	2.1nm,0.4s						
WALA	Waterton Lakes	7.96	315	eP	Pn	18 08 52.0	-0.9
	0.1nm,0.4s						
ULM	Lac du Bonnet	9.15	41	Pn	Pn	18 09 09.1	+0.1
ULM				Pg		18 09 39.8	
ULM				Lg	Lg	18 11 41.2	
ULM	Lac du Bonnet	9.15	41	Pn	Pn	18 09 09.1	+0.1
	1.0nm,0.3s,baz=234,slow=11,SNR=6.1						
ULM				Pg		18 09 39.8	
	0.8nm,0.3s,baz=229,slow=18,SNR=2.9						
ULM				Lg	Lg	18 11 41.2	
	0.5nm,0.3s,baz=127,slow=19,SNR=4.4						
NVAR	Mina Array Bea	11.14	246	Pn	Pn	18 09 38.8	+2.3
NVAR	Mina Array Bea	11.14	246	Pn	Pn	18 09 38.8	+2.3
	0.1nm,0.3s,baz=45,slow=13,SNR=3.7						
FFC	Flin Flon	11.20	10	eP	Pn	18 09 35.2	-1.7
	2.7nm,0.5s						
YKA	Yellowknife Ar	19.55	347	P	P	18 11 24.7	0.0
YKA	Yellowknife Ar	19.55	347	P	P	18 11 24.7	0.0
	0.1nm,0.3s,baz=165,slow=13,SNR=6.4						
ARCES	ARCESS Array B	61.42	18	P	P	18 17 12.2	-1.0
ARCES	ARCESS Array B	61.42	18	P	P	18 17 12.2	-1.0
	2.7nm,1.0s,baz=346,slow=6.6,SNR=3.9						
ZALV	Zalesovo Beam	82.29	354	P	P	18 19 17.9	-0.9
ZALV	Zalesovo Beam	82.29	354	P	P	18 19 17.9	-0.9
	0.3nm,0.4s,baz=15,slow=6.3,SNR=3.0						
MKAR	Makanchi Array	89.59	355	P	P	18 19 53.0	-2.1
MKAR	Makanchi Array	89.59	355	P	P	18 19 53.0	-2.1
	0.3nm,0.8s,baz=22,slow=4.6,SNR=4.9						

*THE **08** 18:08:54.4, 41°.71N×25°.30E, h2km±1km, ML3.2/7, Error ellipse: s-maj=1.7km s-min=0.9km az=52.0*
*ISK **08** 18:08:55.6, 41°.52N×25°.18E, h5km, MD3.6*
*CSEM **08** 18:08:55.2±0.1, 41°.68N×25°.12E, h2km, ML3.2/7, Error ellipse: s-maj=3.5km s-min=2.8km az=32.0*
*ATH **08** 18:08:55.6, 41°.59N×25°.24E, h25km±1km, MD3.5/9*
*DDA **08** 18:08:55.5, 41°.49N×25°.30E, h2km, MD3.7*
*SKO **08** 18:08:56.1, 41°.77N×25°.24E, h14km, M2.7*
*BEO **08** 18:09:00.4±1.0, 41°.97N×25°.11E, h0km, ML3.1/4*
ISC 08 18:08:54.0±1.1, **41°.70N**±0°.02×**25°.30E**±0°.01, **h5**km±10km, **n161**, σ**1^{s}23**/191, **14C-11D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLD	Plovdiv	0.60	312	P	Pg	18 09 05.8	+0.3
PLD				S	Sg	18 09 13.4	0.0
PLD	Plovdiv	0.60	312	P	Pg	18 09 05.8	+0.3
PLD				S	Sg	18 09 13.4	0.0
KAVA	Kavala	0.92	220	P	Pg	18 09 11.8	+0.2
KAVA				S	Sb	18 09 24.5	-0.3
KAVA	Kavala	0.92	220	P	Pg	18 09 11.8	+0.2
ALN	Alexandroupoli	0.98	145	P	Pn	18 09 13.7	-0.6
ALN				S	Sb	18 09 26.7	+0.2
ALN	Alexandroupoli	0.98	145	ePN	Pn	18 09 13.7	-0.6
ALN				eSN	Sb	18 09 26.9	+0.4
ALN	Alexandroupoli	0.98	145	P	Pn	18 09 13.7	-0.6
ALN				S	Sb	18 09 26.7	+0.2
NVR	Nevrokopi	1.14	253	P	Pb	18 09 15.7	-0.3
NVR				S	Sg	18 09 31.0	+0.6
NVR	Nevrokopi	1.14	253	ePN	Pb	18 09 15.8	-0.3
NVR				eSN	Sg	18 09 31.0	+0.6
NVR	Nevrokopi	1.14	253	ePn	Pb	18 09 15.8	-0.3
NVR				eSn	Sg	18 09 31.0	+0.6
ENEZ	Enez	1.16	146	ePG	Pg	18 09 17.3	+1.2
ENEZ				eSG	Sn	18 09 33.1	+0.2
ENEZ	Enez	1.16	146	ePg	Pg	18 09 17.3	+1.2
ENEZ				eSg	Sn	18 09 33.1	+0.2
JMB	Yambol	1.22	51	P	Pg	18 09 18.0	+0.6
JMB				S	Sn	18 09 33.8	-0.8
JMB	Yambol	1.22	51	P	Pg	18 09 18.0	+0.6
SRS	Serrai	1.41	246	P	Pb	18 09 20.4	-0.3
SRS				S	Sg	18 09 40.0	+0.7
SRS	Serrai	1.41	246	P	Pb	18 09 20.4	-0.3
GELI	Tayfur-Gelibol	1.57	145	ePN	Pg	18 09 24.7	+0.6
GELI				eSN	Sg	18 09 45.9	+1.4
GELI	Tayfur-Gelibol	1.57	145	ePn	Pg	18 09 24.7	+0.6
GELI				eSn	Sg	18 09 45.9	+1.4
OUR	Ouranopolis	1.69	217	P	Pn	18 09 23.8	-0.3
OUR				S	Sg	18 09 48.5	+0.3
OUR	Ouranopolis	1.69	217	P	Pn	18 09 23.8	-0.3
SOH	Sokhos	1.71	240	P	Pn	18 09 24.6	+0.2
SOH				S	Sg	18 09 48.5	-0.4
SOH	Sokhos	1.71	240	ePN	Pb	18 09 25.0	-0.9
SOH	Sokhos	1.71	240	P	Pn	18 09 24.6	+0.2
SOH	Sokhos	1.71	240	ePn	Pb	18 09 25.0	-0.9
LPK	Lapseki	1.73	140	ePN	Pg	18 09 27.0	0.0
LPK				eSN	Sg	18 09 50.4	+1.1
LPK	Lapseki	1.73	140	ePn	Pg	18 09 27.0	0.0
LPK				eSn	Sg	18 09 50.4	+1.1
RKY	Sarkoy-Tekirda	1.74	125	ePN	Pg	18 09 28.0	+0.7
RKY	Sarkoy-Tekirda	1.74	125	ePn	Pg	18 09 28.0	+0.7
SART	Tekirdag	1.74	125	iP	Pg	18 09 27.9	+0.6
SART				iS	Sg	18 09 49.5	-0.4
MFT	Murefte	1.75	121	ePN	Pg	18 09 28.4	+0.9
MFT	Murefte	1.75	121	ePn	Pg	18 09 28.4	+0.9
VTS	Vitosha	1.79	300	P	Pn	18 09 25.9	+0.2
VTS				S	Sb	18 09 50.2	0.0
VTS	Vitosha	1.79	300	⇑iP	Pn	18 09 25.8	+0.1
VTS	Vitosha	1.79	300	S	Sg	18 09 51.1	-0.5
VTS	Vitosha	1.79	300	ePg	Pb	18 09 27.3	-0.1
VTS				eSg	Sb	18 09 49.8	-0.4
VTS	Vitosha	1.79	300	P	Pn	18 09 25.9	+0.2
VTS	Vitosha	1.79	300	ePg	Pb	18 09 27.3	-0.1
VTS				eSg	Sb	18 09 49.8	-0.4
VTS				S	Sb	18 09 50.2	0.0
LIA	Limnos Island	1.80	183	P	Pn	18 09 25.6	0.0
LIA				S	Sb	18 09 50.1	-0.1
LIA	Limnos Island	1.80	183	ePN	Pn	18 09 25.5	0.0
LIA	Limnos Island	1.80	183	P	Pn	18 09 25.6	0.0
LIA				S	Sb	18 09 50.1	-0.1
TKR	Tekirdag	1.83	112	ePN	Pg	18 09 29.7	+0.8
TKR	Tekirdag	1.83	112	ePn	Pg	18 09 29.7	+0.8
KNT	Kendrikon	1.89	254	P	Pn	18 09 27.1	+0.3
KNT	Kendrikon	1.89	254	P	Pn	18 09 27.1	+0.3
CRLT	Corlu	1.92	106	ePN	Pg	18 09 31.2	+0.5
CRLT	Corlu	1.92	106	ePn	Pg	18 09 31.2	+0.5
PLG	Polygyros	1.93	227	P	Pn	18 09 27.2	-0.2
PLG				S	Sb	18 09 53.5	-0.5
PLG	Polygyros	1.93	227	ePN	Pn	18 09 27.4	0.0
PLG	Polygyros	1.93	227	ePn	Pn	18 09 27.4	0.0
PLG				S	Sb	18 09 53.5	-0.5
BOZC	Bozcaada	1.94	163	iP	Pb	18 09 28.6	-1.2
BOZC				iS	Sn	18 09 52.1	-0.1
ZIMR		1.96	1	⇓iP	Pb	18 09 30.3	+0.3
HORT	Hortiatis	1.99	237	P	Pn	18 09 28.6	+0.2
HORT				S	Sb	18 09 55.1	-0.8
HORT	Hortiatis	1.99	237	P	Pn	18 09 28.6	+0.2
HORT				S	Sb	18 09 55.1	-0.8
KRBG	Karabiga-Canak	2.00	130	ePN	Pb	18 09 31.2	+0.5
KRBG	Karabiga-Canak	2.00	130	ePn	Pb	18 09 31.2	+0.5
EZN	Ezine	2.03	157	ePN	Pb	18 09 30.3	-0.9
EZN	Ezine	2.03	157	ePn	Pb	18 09 30.3	-0.9
VAY	Valandovo	2.09	260	P	Pn	18 09 30.1	+0.6
VAY	Valandovo	2.09	260	ePn	Pb	18 09 32.1	-0.1
VAY				eSg	Sg	18 10 00.9	-0.1
VAY				eLg	Lg	18 10 02.6	
	comp=N,118nm,0.6s						
VAY				eLg	Lg	18 10 02.6	
	comp=E,107nm,0.5s						
VAY	Valandovo	2.09	260	P	Pn	18 09 30.1	+0.6
VAY	Valandovo	2.09	260	ePn	Pb	18 09 32.6	+0.4
VAY				eLg	Lg	18 10 01.1	
	comp=E,107nm,0.5s						
VAY				eSg	Sg	18 10 01.3	+0.4
PAIG	Paliouri	2.16	215	P	Pn	18 09 30.2	-0.3
PAIG	Paliouri	2.16	215	P	Pn	18 09 30.2	-0.3
SLVT	Silivri	2.24	101	ePN	Pg	18 09 36.0	-0.8
SLVT	Silivri	2.24	101	ePn	Pg	18 09 36.0	-0.8
CTYL	Yal??k??y-??at	2.25	95	ePN	Pg	18 09 36.4	-0.7
CTYL	Yal??k??y-??at	2.25	95	ePn	Pg	18 09 36.4	-0.7
EDC	Edincik	2.36	124	ePN	Pb	18 09 37.0	+0.1
EDC	Edincik	2.36	124	ePn	Pb	18 09 37.1	+0.1
BNT	Bandirma	2.39	123	ePN	Pb	18 09 37.1	-0.4
BNT	Bandirma	2.39	123	ePn	Pb	18 09 37.1	-0.4
ELBA	Catalca	2.42	102	iP	Pn	18 09 34.7	+0.6
ELBA				iS	Sb	18 10 08.5	+0.5
ELBA	Catalca	2.42	102	iP	Pn	18 09 34.7	+0.6
ELBA				iS	Sb	18 10 08.5	+0.5
GONE	Gonen-Balikesi	2.45	132	ePN	Pb	18 09 37.5	-0.9
GONE	Gonen-Balikesi	2.45	132	ePn	Pb	18 09 37.5	-0.9
CTKS	Kestanelik-??a	2.45	100	ePN	Pb	18 09 39.0	+0.5
CTKS	Kestanelik-??a	2.45	100	ePn	Pb	18 09 39.0	+0.5
ZAPS	Zavoj	2.52	309	ePg	Pb	18 09 40.8	+1.1
ZAPS				eSg	Sb	18 10 12.2	+1.1
PRK	Paraskevi	2.56	163	ePN	Pn	18 09 36.8	+0.8
PRK	Paraskevi	2.56	163	ePn	Pn	18 09 36.8	+0.8
BALY	Balya	2.63	137	iP	Pb	18 09 40.3	-1.3
BALY				iS	Sb	18 10 15.5	+1.3
BALY	Balya	2.63	137	iP	Pb	18 09 40.3	-1.3
BALY				iS	Sb	18 10 15.5	+1.3
BGKT	Bogazkoy	2.66	100	ePN	Pb	18 09 42.0	0.0
BGKT	Bogazkoy	2.66	100	ePn	Pb	18 09 42.0	0.0
AOS	Alonnisos	2.75	204	ePN	Pn	18 09 38.5	-0.2
AOS	Alonnisos	2.75	204	ePn	Pn	18 09 38.5	-0.2
BARS	Barje	2.82	294	ePg	Pb	18 09 46.1	+1.4
BARS				eSg	Sg	18 10 22.4	-2.0
BARS	Barje	2.82	294	ePg	Pb	18 09 46.1	+1.4
BARS				eSg	Sg	18 10 22.4	-2.0
XOR	Xorichti	2.83	215	P	Pn	18 09 39.6	-0.2
XOR	Xorichti	2.83	215	P	Pn	18 09 39.6	-0.2
BALB	Balikesir	2.84	136	ePN	Pb	18 09 42.8	-2.3
BALB	Balikesir	2.84	136	ePn	Pb	18 09 42.8	-2.3
NEO	Neokhori	2.87	214	ePN	Pn	18 09 40.1	-0.2
NEO	Neokhori	2.87	214	ePn	Pn	18 09 40.1	-0.2
ISK	Istanbul-Kandi	2.90	101	ePN	Pb	18 09 45.4	-0.7
ISK	Istanbul-Kandi	2.90	101	ePn	Pb	18 09 45.4	-0.7
ARMT	Armutlu	2.92	112	ePN	Pb	18 09 45.4	-1.0
ARMT	Armutlu	2.92	112	ePn	Pb	18 09 45.4	-1.0
BUY	Buyukada	3.00	105	iP	Pb	18 09 49.3	+1.5
BUY				iS	Sg	18 10 27.4	-2.8
SULR		3.06	13	⇓iP	Pb	18 09 45.8	-3.0
SULR		3.06	13	⇓iP	Pb	18 09 45.8	-3.0
DURS	Dursunbey	3.20	130	iP	Pg	18 09 53.8	-1.5
DURS				iS	Sb	18 10 33.1	+2.6
GEMT	Gemlik	3.20	112	ePN	Pb	18 09 49.4	-1.8
GEMT	Gemlik	3.20	112	ePn	Pb	18 09 49.4	-1.8
MANR	Mangalia	3.21	48	S	Sb	18 10 31.1	+0.2
MANR	Mangalia	3.21	48	S	Sb	18 10 31.1	+0.2
BOLS	Boljevac	3.26	312	eSg	Sb	18 10 34.2	+2.1
BOLS	Boljevac	3.26	312	eSg	Sb	18 10 34.2	+2.1
YLV	Yalova	3.28	109	ePN	Pb	18 09 50.9	-1.7
YLV	Yalova	3.28	109	ePn	Pb	18 09 50.9	-1.7
DST	Dursunbey	3.28	129	ePN	Pb	18 09 49.5	-3.0
DST	Dursunbey	3.28	129	ePn	Pb	18 09 49.6	-3.0
SILT	Sile	3.31	98	ePN	Pb	18 09 51.5	-1.6
SILT	Sile	3.31	98	ePn	Pb	18 09 51.5	-1.6
CHOS	Chios island	3.36	170	ePN	Pn	18 09 47.7	+0.6
CHOS	Chios island	3.36	170	ePn	Pn	18 09 47.7	+0.6
HRT	Hereke	3.41	103	ePN	Pb	18 09 52.7	-2.1
HRT	Hereke	3.41	103	ePn	Pb	18 09 52.7	-2.1
AKHS	Akhisar	3.41	145	iP	Pn	18 09 49.7	+1.9
AKHS	Akhisar	3.41	145	iP	Pn	18 09 49.7	+1.9
AKS	Akhisar	3.41	145	ePN	Pn	18 09 50.0	+2.3
AKS	Akhisar	3.41	145	ePn	Pn	18 09 50.0	+2.3
SELS	Selova	3.45	298	ePn	Pb	18 09 52.4	-3.1
AGG	Agios Georgios	3.51	221	ePN	Pn	18 09 49.8	+0.7
AGG	Agios Georgios	3.51	221	ePn	Pn	18 09 49.8	+0.7
ISR	Istrita	3.54	14	⇑iP	Pn	18 09 51.9	+2.4
ISR	Istrita	3.54	14	⇑iP	Pn	18 09 51.9	+2.4
TIRR	Tirgusor	3.58	39	⇓iP	Pn	18 09 50.5	+0.5
TIRR	Tirgusor	3.58	39	⇓iP	Pn	18 09 50.5	+0.5
TIRR				S	Sb	18 10 39.3	-2.0
ARR	Arges	3.70	353	⇑iP	Pn	18 09 53.5	+1.7
ARR	Arges	3.70	353	⇑iP	Pn	18 09 53.5	+1.7
VOIR		3.74	357	⇑iP	Pg	18 10 07.3	+1.7
CAVI	Cavuskoy	3.75	112	ePN	Pb	18 09 56.9	-3.7
CAVI	Cavuskoy	3.75	112	ePn	Pb	18 09 56.9	-3.7
MLR	Muntele Rosu	3.82	7	⇓iP	Pn	18 09 55.5	+2.0
MLR	Muntele Rosu	3.82	7	⇓iP	Pn	18 09 55.5	+2.0
TVSB	Tavsanli	3.88	124	ePN	Pb	18 09 58.6	-4.4
TVSB	Tavsanli	3.88	124	ePn	Pb	18 09 58.6	-4.4
SVIS	Svilajnac	3.94	312	eSg	Sg	18 10 56.5	-4.1
GRUS	Gruza	4.02	304	ePn	Pn	18 09 59.6	+3.5
GRUS	Gruza	4.02	304	ePn	Pn	18 09 59.6	+3.5
CFR	Carcaliu	4.04	30	⇓iP	Pn	18 09 57.8	+1.4
CFR	Carcaliu	4.04	30	⇓iP	Pn	18 09 57.8	+1.4
CFR				S	Sb	18 10 52.3	-2.4
KULA	Kula-Manisa	4.09	140	ePN	Pn	18 10 00.2	+3.0
KULA	Kula-Manisa	4.09	140	ePn	Pn	18 10 00.2	+3.0
GULT	Gulveren	4.14	106	ePN	Pb	18 10 02.9	-4.4
GULT	Gulveren	4.14	106	ePn	Pb	18 10 02.9	-4.4
PLOR	Plostina	4.26	13	⇑iP	Pn	18 10 01.7	+2.2
PLOR	Plostina	4.26	13	⇑iP	Pn	18 10 01.7	+2.2
DOPR	Dopca	4.27	1	⇑iP	Pn	18 10 01.2	+1.7
DOPR	Dopca	4.27	1	⇑iP	Pn	18 10 01.2	+1.7
VRI	Vrincioaia	4.29	13	⇓iP	Pn	18 10 02.1	+2.2
VRI	Vrincioaia	4.29	13	⇓iP	Pn	18 10 02.1	+2.2
ALT	Altintas	4.52	124	ePN	Pn	18 10 07.2	+4.1
ALT	Altintas	4.52	124	ePn	Pn	18 10 07.3	+4.1
BZS	Buzias	4.74	327	⇑iP	Pn	18 10 06.7	+0.7
BZS	Buzias	4.74	327	⇑iP	Pn	18 10 06.7	+0.7
TESR		4.91	11	⇑iP	Pn	18 10 10.4	+2.1
TESR		4.91	11	⇑iP	Pn	18 10 10.4	+2.1
CRVS	Cervenica-Dubn	7.69	341	e	Pb	18 11 02.2	-5.6
VYHS	Vyhne	8.19	328	ePN	Pn	18 10 59.4	+6.1
VYHS				ePG	Pg	18 11 38.3	+7.7

MEX 08 18:10:55.1±1.1, **18°.70N×103°.16W, h55**km±20km, **MD3.7, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.45	203	eP	Pn	18 11 03.9	-2.2
MMIG				iS	Sn	18 11 12.7	-1.3
EZ5V		0.88	332	iP	Pn	18 11 09.6	-2.2
EZ5V				iS	Sn	18 11 22.0	-2.0
R15V		0.91	301	eP	Pn	18 11 11.1	-0.8
R15V				iS	Sn	18 11 22.2	-2.0
ZIIG	Zihuatanejo	1.94	124	iP	Pn	18 11 24.2	-1.6
ZIIG				iS	Sn	18 11 47.8	-1.3
ANIG	Ahuacatlan	2.67	332	iP	Pn	18 11 33.9	-2.0
ANIG				iS	Sn	18 12 05.3	-1.8
ARIG	Puente Sto Nin	2.70	98	iP	Pn	18 11 34.9	-1.3
ARIG				iS	Sn	18 12 05.3	-2.4

IDC 08 18:12:54.3±5.6, **15°.45S×177°.61W, h0**km, **mb3.8**/3, **mb1 4.0**/3, **mb1mx3.6**/19, **mbtmp3.8**/3, **MS3.7**/4, **Ms1 3.7**/4, **ms1mx3.2**/29, **Error ellipse: s-maj=271.1km s-min=35.4km az=135.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PPT	Papeete	26.95	98	LR	LR	18 25 45.4	
	comp=Z,220nm,20.5s,baz=252,slow=29						
PPT2	Papeete2	26.95	98	eLR	LR	18 25 10.8	
	237nm,26.2s						
TBI	Tubuai	27.65	111	eLR	LR	18 25 35.8	
	378nm,29.0s						
STKA	Stephens Creek	40.51	239	P	P	18 20 35.2	-0.1
	2.7nm,0.9s,baz=74,slow=7.4,SNR=4.4						
STKA				LR	LR	18 34 18.5	
	comp=Z,97nm,20.4s,baz=26,slow=32						
ASAR	Alice Springs	46.23	252	P	P	18 21 21.6	-0.2
	1.0nm,0.7s,baz=83,slow=8.1,SNR=26						
KSRS	Korea Array	73.40	317	LR	LR	18 51 00.6	
	comp=Z,33nm,19.4s,baz=128,slow=31						
ILAR	Eielson Array	83.33	13	P	P	18 25 22.9	+0.1
	0.3nm,0.7s,baz=218,slow=5.2,SNR=5.0						
TXAR	Lajitas Array	84.04	58	LR	LR	18 53 43.0	
	comp=Z,60nm,20.8s,baz=85,slow=29						

*DDA **08** 18:34:30.8, 40°.58N×32°.99E, h6km, ML3.2*
*ISCJB **08** 18:34:31.9±0.6, 40°.62N±0°.03×33°.07E±0°.04, h8km±5km, Error ellipse: s-maj=4.9km s-min=4.2km az=139.7*
*ISK **08** 18:34:31.6, 40°.61N×33°.05E, h8km, MD3.3*
*CSEM **08** 18:34:32.0±0.1, 40°.60N×33°.09E, h5km, ML3.2, Error ellipse: s-maj=2.7km s-min=2.3km az=145.0*
ISC 08 18:34:32.0±1.0, **40°.61N**±0°.02×**33°.08E**±0°.02, **h10**km±9km, **n47**, σ**0^{s}74**/62, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELDT	Eldivan	0.29	114	iP	Pg	18 34 38.1	+0.2
ELDT				iS	Sg	18 34 43.1	+1.3
ELDT	Eldivan	0.29	114	iP	Pg	18 34 38.1	+0.2
ELDT				iS	Sg	18 34 43.1	+1.3
CANT	Cankiri	0.41	90	ePG	Pb	18 34 41.0	-0.4
CANT				eSG	Sb	18 34 47.8	0.0
ILGA	Ilgaz	0.66	47	iP	Pg	18 34 44.6	-0.2
ILGA				iS	Sg	18 34 52.4	-1.1
ILGA	Ilgaz	0.66	47	iP	Pg	18 34 44.6	-0.2
ILGA				iS	Sg	18 34 52.4	-1.1
SAFT	Safranbolu	0.70	335	ePG	Pg	18 34 44.8	-0.8
SAFT				eSG	Sg	18 34 55.4	+0.6
SAFT	Safranbolu	0.70	335	ePg	Pg	18 34 44.8	-0.8
SAFT				eSg	Sg	18 34 55.4	+0.6
LOD	Lodumlu	0.76	199	ePG	Pg	18 34 46.7	+0.1
LOD	Lodumlu	0.76	199	ePg	Pg	18 34 46.7	+0.1
TOS	Tosya	0.83	59	ePG	Pg	18 34 48.0	-0.1
TOS	Tosya	0.83	59	ePg	Pg	18 34 48.0	-0.1
BALT	Daday	0.96	14	iP	Pg	18 34 50.4	-0.1
BALT				iS	Sg	18 35 03.1	+0.1
BALT	Daday	0.96	14	iP	Pg	18 34 50.4	-0.1
BALT				iS	Sg	18 35 03.1	+0.1
BBAL	Bala	1.06	178	iP	Pg	18 34 51.6	-0.9
BBAL				iS	Sg	18 35 06.0	-0.3
BBAL	Bala	1.06	178	iP	Pg	18 34 51.6	-0.9
BBAL				iS	Sg	18 35 06.0	-0.3
AFSR	Af¯ar-Bala (A	1.16	180	ePN	Pg	18 34 54.0	-0.3
AFSR	Af¯ar-Bala (A	1.16	180	ePn	Pg	18 34 54.0	-0.3
CORM	Corum	1.26	109	ePN	Pn	18 34 56.1	+0.3
CORM	Corum	1.26	109	ePn	Pn	18 34 56.1	+0.3
CTKT	Corum	1.30	89	iP	Pn	18 34 56.6	+0.2
CTKT	Corum	1.30	89	iP	Pn	18 34 56.6	+0.2
KAMT	Kaman	1.33	158	ePN	Pn	18 34 56.7	0.0
KAMT	Kaman	1.33	158	ePn	Pn	18 34 56.7	0.0
CDAG	Cicekdag	1.39	134	iP	Pn	18 34 57.6	0.0
CDAG				iS	Sb	18 35 15.2	-0.9
CDAG	Cicekdag	1.39	134	iP	Pn	18 34 57.6	0.0
CDAG				iS	Sb	18 35 15.2	-0.9
MDUB	Mudurnu	1.44	265	ePN	Pn	18 34 58.2	-0.1
MDUB	Mudurnu	1.44	265	ePn	Pn	18 34 58.2	-0.1
SVRH	Sivrihisar-ESK	1.67	226	ePN	Pn	18 35 01.9	+0.6
SVRH	Sivrihisar-ESK	1.67	226	ePn	Pn	18 35 01.9	+0.6
GULT	Gulveren	1.96	266	ePN	Pn	18 35 06.1	+0.6
GULT	Gulveren	1.96	266	ePn	Pn	18 35 06.1	+0.6
ESKT	Eskisehir	2.03	238	ePN	Pn	18 35 07.0	+0.7
ESKT	Eskisehir	2.03	238	ePn	Pn	18 35 07.0	+0.7
SEYT	Eskypehyr	2.03	238	iP	Pb	18 35 07.8	-1.2
SEYT				iS	Sn	18 35 32.8	+1.0
SEYT	Eskypehyr	2.03	238	iP	Pb	18 35 07.8	-1.2
SEYT				iS	Sn	18 35 32.8	+1.0
KVT	Kavak	2.30	77	ePN	Pn	18 35 10.9	+0.9
KVT	Kavak	2.30	77	ePn	Pn	18 35 10.9	+0.9
SULT	Sultanhani-AKS	2.43	172	ePN	Pn	18 35 12.9	+1.1
SULT	Sultanhani-AKS	2.43	172	ePn	Pn	18 35 12.9	+1.1
SILT	Sile	2.66	283	ePN	Pn	18 35 15.9	+0.9
SILT	Sile	2.66	283	ePn	Pn	18 35 15.9	+0.9
ALT	Altintas	2.76	237	ePN	Pn	18 35 17.4	+0.9
ALT	Altintas	2.76	237	ePn	Pn	18 35 17.4	+0.9
TVSB	Tavsanli	3.01	249	ePN	Pn	18 35 21.0	+1.2
TVSB	Tavsanli	3.01	249	ePn	Pn	18 35 21.0	+1.2
ARMT	Armutlu	3.21	271	ePN	Pn	18 35 23.8	+1.2
ARMT	Armutlu	3.21	271	ePn	Pn	18 35 23.8	+1.2

IDC 08 18:39:32.9±0.9, **33°.59N×82°.23E, h0**km, **mb3.5**/9, **mb1 3.7**/11, **mb1mx3.5**/30, **mbtmp3.5**/11, **ML2.9**/2, **Error ellipse: s-maj=29.8km s-min=17.9km az=56.0, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.19	0	Pn	Pn	18 42 40.2	-1.2
	0.1nm,0.3s,baz=180,slow=12,SNR=7.4						
KURBB	Kurchatov Arra	17.24	352	P	Pn	18 43 35.5	+0.5
	0.0nm,0.3s,baz=172,slow=11,SNR=6.7						
ZALV	Zalesovo Beam	20.44	4	P	P	18 44 11.6	0.0
	0.6nm,0.6s,baz=197,slow=5.9,SNR=5.2						
CMAR	Chiang Mai Arr	21.23	131	P	P	18 44 20.6	+0.2
	2.6nm,1.0s,baz=311,slow=11,SNR=16						
SONM	Songino Array	23.07	45	P	P	18 44 41.2	+1.1
	0.1nm,0.3s,baz=229,slow=11,SNR=2.6						
AKTO	Aktyubinsk	24.47	321	P	P	18 44 54.1	+0.7
	0.7nm,0.6s,baz=112,slow=10,SNR=5.8						
FINES	FINESS Array B	45.07	326	P	P	18 47 50.7	+0.5
	1.0nm,0.6s,baz=134,slow=8.0,SNR=3.4						
WRA	Warramunga Arr	72.81	129	P	P	18 51 03.5	+0.1
	1.0nm,0.9s,baz=326,slow=5.8,SNR=4.7						
TORD	Torodi Ar. Bea	75.04	276	P	P	18 51 16.8	0.0
	0.6nm,0.6s,baz=44,slow=5.0,SNR=6.2						
ASAR	Alice Springs	75.23	132	P	P	18 51 17.8	+0.1
	0.2nm,0.5s,baz=321,slow=5.1,SNR=5.0						
YKA	Yellowknife Ar	83.30	8	P	P	18 51 59.3	-1.8
	0.2nm,0.5s,baz=339,slow=5.4,SNR=6.9						

IDC 08 19:07:48.8±1.0, **33°.98N×83°.18E, h0**km, **mb3.2**/6,

mb1 3.4/7, mb1mx3.2/29, mbtmp3.2/7, ML2.7/1, Error ellipse: s-maj=34.5km s-min=21.5km az=55.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	12.82	357	Pn	Pn	19 10 50.8	-1.5
	0.1nm,0.3s,baz=182,slow=10,SNR=4.0						
CMAR	Chiang Mai Arr	20.91	134	P	Pn	19 12 34.5	-0.9
	0.5nm,0.8s,baz=322,slow=12,SNR=4.7						
BVAR	Borovoye Array	21.12	338	P	P	19 12 35.5	+0.5
	0.4nm,0.4s,baz=142,slow=7.2,SNR=3.5						
SONM	Songino Array	22.24	45	P	P	19 12 47.9	+0.6
	0.5nm,0.9s,baz=232,slow=11,SNR=3.8						
WRA	Warramunga Arr	72.44	130	P	P	19 19 16.6	-0.7
	0.2nm,0.4s,baz=327,slow=5.8,SNR=2.5						
ASAR	Alice Springs	74.91	133	P	P	19 19 31.4	-0.3
	0.3nm,0.7s,baz=306,slow=6.3,SNR=6.7						
TORD	Torodi Ar. Bea	75.78	276	P	P	19 19 37.2	+0.3
	0.3nm,0.6s,baz=41,slow=5.6,SNR=2.5						

*IDC **08** 19:12:58.6±0.7, 57°.82S×25°.50W, h0km, mb3.9/6, mb1 3.9/7, mb1mx3.9/18, mbtmp3.8/7, ML3.5/1, Error ellipse: s-maj=36.8km s-min=20.1km az=87.0*
*ISCJB **08** 19:13:04.0±0.8, 57°.81S±0°.09×25°.6W±0°.4, h49km, mb3.8/6, Error ellipse: s-maj=32.4km s-min=9.1km az=161.6*
ISC 08 19:13:05.5±0.7, 57°.9S±0°.1×25°.3W±0°.2, h49km, n19, σ0s.91/17, mb3.8/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	14.88	160	*e*Pn	Pn	19 16 32.7	+0.3
VNA3	Neumayer Olymp	14.88	160	*e*Sn	Sn	19 19 20.5	+4.7
VNA2	Neumayer--Watz	15.07	157	*e*Pn	Pn	19 16 35.4	+0.5
	baz=318,slow=15						
VNA2	Neumayer--Watz	15.07	157	*e*Sn	S	19 19 27.1	-8.5
	baz=318,slow=15						
SNAA	Sanae	16.61	155	*e*Pn	P	19 16 56.2	-0.2
SNAA	Sanae	16.61	155	*e*Sn	S	19 20 05.1	-2.1
SNAA	Sanae	16.61	155	Pn	P	19 16 56.0	-0.5
	0.2nm,0.3s,baz=327,slow=15,SNR=20						
QSPA	South Pole Qui	32.33	180	P	P	19 19 30.3	+0.6
	0.8nm,0.7s,baz=270,slow=18,SNR=8.4						
VNDA	Vanda	44.75	182	P	P	19 21 14.7	+1.5
	0.7nm,0.7s,baz=188,slow=7.5,SNR=3.8						
LPAZ	La Paz	52.29	304	P	P	19 22 12.1	-0.5
	0.7nm,0.5s,baz=169,slow=5.2,SNR=2.9						
DBIC	Dimbokro	66.47	22	P	P	19 23 50.0	+0.4
	1.2nm,0.5s,baz=196,slow=8.7,SNR=4.2						
TORD	Torodi Ar. Bea	74.21	27	P	P	19 24 37.8	+1.0
	1.2nm,0.6s,baz=198,slow=6.4,SNR=18						
ASAR	Alice Springs	96.89	161	P	P	19 26 31.1	-0.2
	0.2nm,0.8s,baz=192,slow=8.5,SNR=3.4						
CMAR	Chiang Mai Arr	123.45	110	PKP	PKPdf	19 31 56.8	-0.2
	0.4nm,0.7s,baz=225,slow=3.7,SNR=3.5						
FINES	FINESS Array B	125.56	27	PKP	PKPdf	19 31 59.2	-0.4
	1.0nm,0.8s,baz=132,slow=2.1,SNR=4.5						
YKA	Yellowknife Ar	138.24	316	PKP	PKPdf	19 32 22.3	-1.1
	0.4nm,0.6s,baz=129,slow=2.2,SNR=8.5						
SONM	Songino Array	149.78	88	PKPbc	PKPbc	19 32 48.3	-0.7
	0.5nm,0.4s,baz=214,slow=3.6,SNR=5.3						
ILAR	Eielson Array	152.11	309	PKPbc	PKPbc	19 32 53.1	-0.6
	2.0nm,0.8s,baz=140,slow=3.9,SNR=20						
KDAK	Kodiak Island	152.53	292	PKPbc	PKPbc	19 32 54.3	-0.5
	4.3nm,0.7s,baz=148,slow=2.0,SNR=4.5						

IDC 08 19:13:13.2±0.6, 57°.84S×25°.66W, h0km, mb4.2/9, mb1 4.3/10, mb1mx4.2/18, mbtmp4.2/10, ML4.0/1, Error ellipse: s-maj=24.6km s-min=18.8km az=87.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	Sanae	16.76	155	Pn	P	19 17 10.3	-1.2
	0.5nm,0.3s,baz=315,slow=14,SNR=17						
QSPA	South Pole Qui	32.41	180	P	P	19 19 46.2	+1.8
	1.0nm,0.5s,baz=230,slow=3.3,SNR=7.7						
PLCA	Paso Flores	33.16	281	P	P	19 19 51.2	+0.1
	1.4nm,0.7s,baz=76,slow=14,SNR=3.5						
VNDA	Vanda	44.82	182	P	P	19 21 29.2	+1.1
	1.6nm,0.6s,baz=181,slow=4.8,SNR=9.6						
BOSA	Boshof	45.65	73	P	P	19 21 35.5	+0.1
	3.4nm,1.0s,baz=162,slow=21,SNR=3.8						
LPAZ	La Paz	52.09	305	P	P	19 22 26.1	+0.5
	1.9nm,0.4s,baz=106,slow=3.3,SNR=7.7						
DBIC	Dimbokro	66.47	23	P	P	19 24 05.4	+1.1
	2.9nm,0.5s,baz=164,slow=8.9,SNR=9.4						
TORD	Torodi Ar. Bea	74.23	28	P	P	19 24 52.7	+1.0
	2.7nm,0.5s,baz=199,slow=6.4,SNR=24						
STKA	Stephens Creek	89.99	169	P	P	19 26 12.4	-1.9
	1.3nm,1.0s,baz=28,slow=14,SNR=2.9						
ASAR	Alice Springs	97.02	161	P	P	19 26 45.5	-1.3
	0.6nm,0.7s,baz=182,slow=4.1,SNR=8.7						
PDAR	Pinedale Array	121.99	300	PKP	PKPdf	19 32 07.5	-1.3
	0.4nm,0.5s,baz=111,slow=4.6,SNR=5.9						
CMAR	Chiang Mai Arr	123.65	110	PKP	PKPdf	19 32 11.1	-1.4
	0.3nm,0.7s,baz=225,slow=3.2,SNR=5.6						
FINES	FINESS Array B	125.58	28	PKP	PKPdf	19 32 13.9	-0.9
	1.2nm,0.5s,baz=174,slow=0.7,SNR=7.1						
AAK	Ala-Archa	129.78	71	PKP	PKPdf	19 32 22.4	-1.3
	0.5nm,0.6s,baz=143,slow=4.3,SNR=4.6						
ARCES	ARCESS Array B	132.30	22	PKP	PKPdf	19 32 26.1	-1.2
	3.3nm,0.9s,baz=277,slow=2.1,SNR=6.0						
YKA	Yellowknife Ar	138.06	316	PKP	PKPdf	19 32 37.8	-0.4
	0.9nm,0.5s,baz=133,slow=2.2,SNR=16						
SONM	Songino Array	149.97	88	PKPbc	PKPbc	19 33 03.8	-0.8
	1.9nm,0.5s,baz=226,slow=3.4,SNR=12						
ILAR	Eielson Array	151.92	309	PKPbc	PKPbc	19 33 08.2	-0.2
	5.7nm,0.8s,baz=143,slow=2.8,SNR=39						
KDAK	Kodiak Island	152.33	293	PKPbc	PKPbc	19 33 09.0	-0.5
	7.2nm,0.7s,baz=120,slow=5.6,SNR=9.2						

*NIED **08** 19:14:00, 23°.10N×124°.00E, h5km, Mw4.1 Best double couple: $M_0$1.58000×10^15 NP1:ϕ_s284.00000°, δ66.00000°, λ-77.00000°. NP2:ϕ_s73.00000°, δ27.00000°, λ-117.00000°.*
*ISCJB **08** 19:14:52.8±1.7, 23°.08N±0°.09×123°.95E±0°.06, h33km±12km, mb3.7/13, MS2.9/2, Error ellipse: s-maj=14.7km s-min=9.4km az=172.4*
*JMA **08** 19:14:52.1±0.3, 23°.05N×124°.00E, h41km, M3.8*
*IDC **08** 19:15:11.9±4.4, 23°.89N×123°.99E, h158km±41km, mb3.3/13, mb1 3.5/15, mb1mx3.4/28, mbtmp3.3/15, MS2.9/5, Ms1 2.9/5, ms1mx2.4/26, Error ellipse: s-maj=22.5km s-min=14.3km az=65.0*
ISC 08 19:14:54.5±4.7, 23°.2N±0°.2×123°.94E±0°.07, h27km±26km, n29, σ1s.11/30, mb3.9/13, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.87	352	P	Pn	19 15 10.1	-0.8
HATJ				S	Sb	19 15 23.2	+1.0
JKRS	Kuro-shima	1.04	3	P	Pn	19 15 13.0	-0.3
JKRS				S	Sb	19 15 28.4	+1.3
IRIF	Iriomote-Funau	1.15	350	P	Pn	19 15 14.6	-0.2
IRIF				S	Sb	19 15 30.8	+0.5
JIJ	Ishigaki jima	1.18	9	P	Pn	19 15 14.3	-0.9
JIJ				S	Sb	19 15 30.1	-1.0
YOJ	Yonaguni jima	1.52	326	P	Pn	19 15 19.7	-0.2
YOJ				S	Sb	19 15 39.2	-1.7
JTJ	Tarama	1.60	26	P	Pn	19 15 20.3	-0.6
JTJ				S	Sb	19 15 41.4	-1.8
JMJ	Miyako jima 2	2.03	37	*e*S	Sn	19 15 51.8	+0.4
JOGS	Gusukube	2.06	40	P	Pn	19 15 26.3	-0.9
JOGS				S	Sn	19 15 52.1	+0.1
JNU	Nakatsue	11.63	30	LR	LR	19 22 36.0	
	comp=Z,79nm,21.1s,baz=67,slow=40						
KSRS	Korea Array	14.62	13	P	Pn	19 18 20.4	+0.9
	0.1nm,0.3s,baz=187,slow=13,SNR=5.7						
KSRS				LR	LR	19 24 15.4	
	comp=Z,73nm,20.0s,baz=172,slow=39						
JHJ	Hachijo jima 2	17.10	51	LR	LR	19 24 06.4	
	comp=Z,31nm,21.9s,baz=293,slow=32						
MAT	Matsushiro	18.14	40	P	P	19 19 05.5	+0.9
MJAR	Matsushiro Arr	18.14	40	P	P	19 19 06.0	+1.4
	0.2nm,0.3s,baz=231,slow=10,SNR=27						
CMAR	Chiang Mai Arr	23.82	263	P	P	19 20 13.8	+8.4
	0.4nm,0.8s,baz=74,slow=9.3,SNR=4.4						
CMAR				PcP	PcP	19 23 48.5	0.0
	0.1nm,0.3s,baz=34,slow=1.5,SNR=4.7						
ASAJ	Asahikawa	25.90	32	LR	LR	19 31 44.6	
	comp=Z,29nm,18.3s,baz=33,slow=39						
SONM	Songino Array	28.30	335	P	P	19 20 46.0	+0.2
	0.7nm,0.6s,baz=155,slow=10,SNR=6.9						
PETK	Petropavlovsk-	39.32	32	LR	LR	19 38 34.4	
	comp=Z,16nm,18.0s,baz=73,slow=36						
MKAR	Makanchi Array	40.81	316	P	P	19 22 33.8	+0.2
	2.8nm,0.8s,baz=108,slow=9.9,SNR=28						
ZALV	Zalesovo Beam	42.45	326	P	P	19 22 46.6	-0.3
	2.3nm,0.5s,baz=107,slow=8.7,SNR=14						
WRA	Warramunga Arr	44.06	166	P	P	19 23 08.7	+8.5
	2.9nm,1.1s,baz=348,slow=8.8,SNR=5.3						
AAK	Ala-Archa	45.11	308	P	P	19 23 09.5	+0.8
	0.2nm,0.3s,baz=167,slow=23,SNR=2.2						
ASAR	Alice Springs	47.58	168	P	P	19 23 37.0	+9.1
	0.4nm,0.8s,baz=351,slow=6.7,SNR=3.8						
BVAR	Borovoye Array	50.04	321	P	P	19 23 47.2	+0.7
	0.7nm,0.6s,baz=126,slow=7.5,SNR=4.2						
KBZ	Khabaz	68.06	309	P	P	19 25 52.0	+0.4
	1.3nm,0.9s,baz=232,slow=5.6,SNR=3.6						
FINES	FINESS Array B	73.56	330	P	P	19 26 22.8	-1.9
	0.8nm,0.7s,baz=66,slow=6.5,SNR=4.6						
BRTR	Keskin Array B	75.79	307	P	P	19 26 36.9	-1.4
	0.5nm,0.8s,baz=35,slow=4.5,SNR=3.3						
YKA	Yellowknife Ar	82.88	24	P	P	19 27 16.3	0.0
	1.1nm,0.8s,baz=310,slow=4.8,SNR=24						
GERES	GERESS Array B	85.20	322	P	P	19 27 27.1	-1.5
	0.1nm,0.3s,baz=337,slow=8.7,SNR=3.7						
PLCA	Paso Flores	158.68	148	PKP	PKPdf	19 34 52.3	+2.5
	0.7nm,0.4s,baz=236,slow=7.3,SNR=3.4						

IDC 08 19:16:43.5±4.8, 5°.96S×153°.94E, h75km±38km, mb3.6/9, mb1 3.8/10, mb1mx3.6/22, mbtmp3.7/10, ML3.9/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/30, Error ellipse: s-maj=29.7km s-min=20.1km az=57.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.54	243	P	Pn	19 18 30.3	-0.5
	9.7nm,0.3s,baz=72,slow=6.8,SNR=28						
PMG				S	Sn	19 19 56.5	+1.7
	3.3nm,0.3s,baz=149,slow=7.6,SNR=5.1						
DZM	Mont Dzumac	20.07	144	P	P	19 21 10.6	-0.4
	6.1nm,0.6s,baz=330,slow=13,SNR=8.3						
DZM				LR	LR	19 26 57.7	
	comp=Z,159nm,18.2s,baz=212,slow=31						
WRA	Warramunga Arr	23.58	232	P	P	19 21 47.2	-0.5
	1.5nm,0.6s,baz=55,slow=10,SNR=8.9						
WRA				PcP	PcP	19 25 31.1	+0.1
	1.2nm,0.5s,baz=56,slow=2.3,SNR=8.8						
ASAR	Alice Springs	26.11	226	P	P	19 22 10.4	-0.2
	0.7nm,0.4s,baz=56,slow=9.1,SNR=24						
ASAR				PcP	PcP	19 25 36.6	+0.1
	0.9nm,0.6s,baz=60,slow=2.5,SNR=16						
STKA	Stephens Creek	28.25	203	P	P	19 22 31.5	+1.8
	1.5nm,0.8s,baz=38,slow=14,SNR=3.5						
FITZ	Fitzroy Crossi	30.14	244	P	P	19 22 45.5	-1.1
	2.4nm,0.7s,baz=94,slow=9.0,SNR=8.7						
CMAR	Chiang Mai Arr	59.40	295	P	P	19 26 39.5	+0.8
	1.4nm,0.8s,baz=117,slow=5.0,SNR=11						
SONM	Songino Array	67.91	328	P	P	19 27 35.1	+0.8
	0.4nm,0.5s,baz=136,slow=6.7,SNR=3.2						
MKAR	Makanchi Array	81.94	319	P	P	19 28 54.5	-0.7
	0.4nm,0.7s,baz=104,slow=4.9,SNR=5.4						
QSPA	South Pole Qui	84.01	180	P	P	19 29 05.7	+0.1
	1.4nm,0.6s,baz=345,slow=3.6,SNR=19						
TORD	Torodi Ar. Bea	151.73	287	PKPbc	PKPbc	19 36 29.6	-1.0
	1.3nm,0.6s,baz=91,slow=1.9,SNR=17						
TORD				PKPab	PKPab	19 36 38.0	-1.7
	0.4nm,0.6s,baz=128,slow=4.2,SNR=4.2						

*NIED **08** 19:20:00, 35°.90N×140°.10E, h62km, Mw3.7 Best double couple: $M_0$4.58000×10^14 NP1:ϕ_s4.00000°, δ65.00000°, λ91.00000°. NP2:ϕ_s181.00000°, δ25.00000°, λ87.00000°.*
*ISCJB **08** 19:20:38.9±0.5, 35°.86N±0°.03×140°.18E±0°.06, h75km±4km, mb3.5/6, Error ellipse: s-maj=7.7km s-min=4.7km az=166.3*
*IDC **08** 19:20:39.8±1.7, 35°.81N×140°.19E, h65km±15km, mb3.2/6, mb1 3.5/10, mb1mx3.3/30, mbtmp3.5/10, Error ellipse: s-maj=21.8km s-min=7.6km az=63.0*
*JMA **08** 19:20:40.3±0.1, 35°.92N×140°.13E, h63km±1km, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s7.00000°, δ74.00000°, λ79.00000°. NP2:ϕ_s222.00000°, δ19.00000°, λ123.00000°. Principal axes: T Plg60.0000°, Azm262.0000°; N Plg10.0000°, Azm10.0000°; P Plg28.0000°, Azm106.0000°;*
JMA Felt I J1.
ISC 08 19:20:40.2±0.9, 35°.92N±0°.04×140°.16E±0°.05, h66km±7km, n23, σ1s.38/36, mb3.6/6, 1C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.31	5	⇑P	Pn	19 20 51.0	0.0
JYT				S	Sn	19 20 58.7	-0.2
TOK	Tokyo	0.40	235	P	Pn	19 20 52.5	+0.9
TOK				S	Sn	19 21 02.2	+2.2
JAG	Ashikaga	0.76	312	⇓P	Pn	19 20 55.7	+0.1
JAG				S	Sn	19 21 06.6	-0.3
JRY	Ryogami san	1.02	276	⇓P	Pn	19 20 59.0	+0.2
JRY				S	Sn	19 21 12.8	+0.1
JOD2	Odawara 2	1.09	234	⇓P	Pn	19 20 59.1	-0.5
JOD2				S	Sn	19 21 12.5	-1.6
JKT	Katashina	1.12	319	⇓P	Pn	19 21 00.2	+0.1
JKT				S	Sn	19 21 15.6	+0.6
BSO3	Boso 3	1.15	165	P	Pn	19 20 59.8	-0.3
BSO3				*e*S	Sn	19 21 15.5	+0.5
JIM2	Oshima 3	1.33	207	P	Pn	19 21 01.5	-1.3
JIM2				*e*S	Sn	19 21 17.8	-2.0
JYN	Shimob	1.38	253	⇓P	Pn	19 21 03.5	+0.1
JYN				S	Sn	19 21 20.2	-0.7
BSO1	Boso 1	1.43	152	P	Pn	19 21 03.6	+0.1
JFY	Yanaizu	1.53	346	⇓P	Pn	19 21 06.2	+0.7
JFY				S	Sn	19 21 26.1	+1.5
MJAR	Matsushiro Arr	1.70	292	P	Pn	19 21 06.7	-0.9
	34nm,0.3s,baz=98,slow=7.3,SNR=521						
MJAR				S	Sn	19 21 29.0	+0.6
	13nm,0.3s,baz=268,slow=38,SNR=8.7						
MAT	Matsushiro	1.70	292	P	Pn	19 21 08.2	+0.5
MAT				S	Sn	19 21 30.5	+2.0
JHJ	Hachijo jima 2	2.81	186	P	Pn	19 21 22.8	+0.1
	25nm,0.3s,baz=80,slow=3.9,SNR=50						
JHJ				S	Sn	19 21 53.0	-2.4
	35nm,0.3s,baz=86,slow=23,SNR=7.4						
ASAJ	Asahikawa	8.40	12	P	Pn	19 22 39.0	-0.1
	0.5nm,0.3s,baz=258,slow=20,SNR=10						
ASAJ				S	Sn	19 24 07.8	-4.6
	0.2nm,0.3s,baz=278,slow=30,SNR=2.7						
CBIJ	Chichi jima	8.96	168	P	Pn	19 22 43.5	-3.4
	2.4nm,0.3s,baz=336,slow=21,SNR=5.4						
CBIJ				S	Sn	19 24 18.4	-7.8
	6.2nm,0.3s,baz=97,slow=23,SNR=7.6						
KSRS	Korea Array	9.95	282	P	Pn	19 23 02.6	+2.4
	0.2nm,0.3s,baz=97,slow=14,SNR=11						
ZALV	Zalesovo Beam	41.93	313	P	P	19 28 24.0	0.0
	0.4nm,0.4s,baz=99,slow=8.9,SNR=3.8						
MKAR	Makanchi Array	43.87	303	P	P	19 28 40.1	+0.3
	0.5nm,0.7s,baz=94,slow=9.6,SNR=7.5						
KURBB	Kurchatov Arra	45.90	309	P	P	19 28 55.7	-0.2
	0.6nm,0.5s,baz=84,slow=8.8,SNR=7.0						
ILAR	Eielson Array	50.98	32	P	P	19 29 35.8	+1.0
	0.4nm,1.1s,baz=283,slow=9.6,SNR=4.5						
WRA	Warramunga Arr	55.83	187	P	P	19 30 09.4	-1.3
	0.6nm,0.6s,baz=7.0,slow=7.6,SNR=3.0						
ASAR	Alice Springs	59.55	187	P	P	19 30 35.9	-1.0
	0.3nm,0.5s,baz=19,slow=9.8,SNR=5.7						

*IDC **08** 19:35:56.7±0.8, 0°.02N×98°.57E, h0km, mb4.1/12, mb1 4.2/14, mb1mx4.0/27, mbtmp4.1/14, ML3.7/2, MS3.4/5, Ms1 3.4/5, ms1mx2.8/45, Error ellipse: s-maj=26.6km s-min=14.4km az=62.0*
*ISCJB **08** 19:36:00.9±0.6, 0°.02N±0°.05×98°.35E±0°.07, h48km, mb4.1/13, MS3.3/4, Error ellipse: s-maj=11.3km s-min=5.8km az=151.9*
*DJA **08** 19:36:00.7±1.5, 0°S±5°×9°8E±°, h30km±17km, M4.4/12, mb4.5/12, mB4.8/5, MLv4.4/12, Mw(mB)4.0/5*
ISC 08 19:36:03.3±0.8, 0°.07N±0°.07×98°.4E±0°.1, h48km, n36, σ1s.16/33, mb4.2/13, MS3.4/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	1.50	325	P	Pn	19 36 22.1	-5.7
PPI	Padang Panjang	2.03	105	P	Pn	19 36 34.9	-0.1
BKNI	Bangkinang	2.62	84	P	Pn	19 36 48.5	+5.4
PSI	Prapat	2.76	10	P	Pn	19 36 44.6	-0.6
PSI	Prapat	2.76	10	Pn	Pn	19 36 43.0	-2.2
	10nm,0.3s,baz=187,slow=6.3,SNR=27						
PSI				Sn	Sn	19 37 17.1	-0.3
	6.5nm,0.3s,baz=156,slow=14,SNR=3.7						
TSI	Tuntungan	3.41	2	P	Pn	19 36 55.1	+1.1
KRJI	Kerinci	3.71	125	P	Pn	19 36 59.5	+1.3
IPM	Ipoh	5.09	31	P	Pn	19 37 19.4	+2.3
	51nm,1.1s,708nm0.2nm						
BTDF	Bukit Timah Da	5.49	76	P	Pn	19 37 23.0	+0.4
	18nm,0.9s,0.1nm						
KSI	Kapahiang	5.56	132	P	Pn	19 37 25.6	+2.0
	69nm,0.6s,3μm0.8nm						
KULM	Kulim	5.64	23	P	Pn	19 37 25.6	+1.0
	53nm,1.0s,514nm0.2nm						
MYKOM	Kota Tinggi	5.68	72	P	Pn	19 37 25.2	+0.1
	21nm,0.9s,514nm0.2nm						
BSI	Banda Aceh	6.24	330	P	Pn	19 37 31.7	-1.1
	25nm,1.1s,961nm0.2nm						
KASI	Kota Agung	8.21	133	P	Pn	19 37 58.9	-1.0
	33nm,0.8s						
CISI	Cisompet, Garu	12.04	129	P	Pn	19 38 48.4	-3.9
	39nm,1.4s						
BBKI	Banjar Baru	16.77	102	P	Pn	19 39 55.7	+0.8
	28nm,0.8s						
CMAR	Chiang Mai Arr	18.28	2	P	Pn	19 40 13.7	+0.1
	0.1nm,0.3s,baz=192,slow=12,SNR=15						
CMAR				LR	LR	19 47 44.8	
	comp=Z,119nm,18.1s,baz=185,slow=39						
KKM	Kota Kinabalu	18.71	71	P	Pn	19 40 19.7	+0.8
	43nm,1.2s						
KAPI	Kappang	21.88	104	LR	LR	19 48 57.9	
	comp=Z,54nm,21.6s,baz=151,slow=36						
MRSI	Marisa	23.51	89	P	P	19 41 08.5	-0.7
	16nm,0.7s						
LUWI	Luwuk	24.36	93	P	P	19 41 17.7	+0.6
FITZ	Fitzroy Crossi	32.27	125	P	P	19 42 26.0	-1.7
	1.7nm,0.8s,baz=125,slow=12,SNR=3.8						
WRA	Warramunga Arr	40.39	122	P	P	19 43 35.1	-1.9
	1.0nm,0.5s,baz=303,slow=8.9,SNR=7.0						
ASAR	Alice Springs	41.73	127	P	P	19 43 47.2	-0.8
	1.0nm,0.6s,baz=298,slow=7.8,SNR=20						
JNU	Nakatsue	44.86	40	LR	LR	20 03 38.3	
	comp=Z,36nm,19.4s,baz=225,slow=37						
KSRS	Korea Array	46.10	33	P	P	19 44 21.7	-1.0
	4.1nm,0.7s,baz=222,slow=8.6,SNR=37						
KSRS				LR	LR	20 03 53.3	
	comp=Z,46nm,18.1s,baz=203,slow=36						
SONM	Songino Array	48.08	7	P	P	19 44 38.9	+0.7
	3.8nm,0.7s,baz=188,slow=9.3,SNR=20						
SONM				PcP	PcP	19 46 06.6	+1.2
	1.7nm,0.7s,baz=181,slow=3.8,SNR=6.2						
MKAR	Makanchi Array	48.64	345	P	P	19 44 43.2	+0.9
	4.0nm,0.7s,baz=152,slow=7.8,SNR=56						
MKAR				PcP	PcP	19 46 08.7	+1.4
	0.6nm,0.8s,baz=172,slow=4.4,SNR=2.1						
STKA	Stephens Creek	51.69	132	P	P	19 45 05.0	-0.8
	1.2nm,1.0s,baz=316,slow=22,SNR=3.5						
MJAR	Matsushiro Arr	51.71	41	P	P	19 45 04.4	-1.5
	1.4nm,0.8s,baz=228,slow=7.6,SNR=7.9						
USRK	Ussuriysk Arra	53.12	30	P	P	19 45 15.3	-0.8
	3.0nm,0.8s,baz=217,slow=7.1,SNR=7.6						
USRK				LR	LR	20 10 47.4	
	comp=Z,65nm,21.3s,baz=261,slow=39						
ZALV	Zalesovo Beam	54.87	350	P	P	19 45 29.4	+0.7
	2.5nm,0.8s,baz=179,slow=5.9,SNR=15						
KBZ	Khabaz	65.73	319	P	P	19 46 43.8	+0.6
	1.8nm,0.8s,baz=122,slow=6.6,SNR=4.8						
BRTR	Keskin Array B	70.78	312	P	P	19 47 15.1	0.0
	1.0nm,0.8s,baz=135,slow=7.4,SNR=8.3						
TXAR	Lajitas Array	143.94	34	PKP	PKPbc	19 55 33.0	+0.8
	0.5nm,0.6s,baz=316,slow=3.5,SNR=4.2						
CPUP	Villa Florida	144.97	220	PKPbc	PKPdf	19 55 36.9	+0.8
	0.8nm,0.5s,baz=195,slow=12,SNR=3.5						

*THE **08** 19:36:57.7, 41°.68N×25°.28E, h2km±1km, ML2.7/7, Error ellipse: s-maj=1.7km s-min=0.8km az=47.0*
*ATH **08** 19:36:57.8, 41°.66N×25°.31E, h29km±3km, MD3.2/10*
*CSEM **08** 19:36:57.5±0.1, 41°.70N×25°.20E, h2km, ML2.7/7, Error ellipse: s-maj=3.3km s-min=2.3km az=11.0*
*ISK **08** 19:36:59.2, 41°.66N×25°.47E, h5km, MD3.3*
*SKO **08** 19:36:59.6, 41°.74N×25°.22E, h0km*
*BEO **08** 19:36:59.9±1.8, 41°.60N×25°.03E, h29km±12km, ML2.5/3*
*DDA **08** 19:37:00.7, 41°.46N×25°.37E, h7km, MD3.3*
ISC 08 19:36:56.9±1.1, 41°.68N±0°.02×25°.28E±0°.02, h6km±10km, n108, σ0s.97/139, 8C-3D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLD	Plovdiv	0.61	315	P	Pg	19 37 09.1	+0.5
PLD	Plovdiv	0.61	315	P	Pg	19 37 09.1	+0.5
KAVA	Kavala	0.89	221	P	Pb	19 37 14.9	+0.1
KAVA				S	Sn	19 37 28.1	-1.0
KAVA	Kavala	0.89	221	P	Pb	19 37 14.9	+0.1
KAVA				S	Sn	19 37 28.1	-1.0
ALN	Alexandroupoli	0.97	143	P	Pn	19 37 16.7	-0.3
ALN				S	Sn	19 37 30.2	-0.8
ALN	Alexandroupoli	0.97	143	*e*PN	Pn	19 37 16.7	-0.3
ALN				*e*SB	Sb	19 37 29.6	+0.5
ALN	Alexandroupoli	0.97	143	P	Pn	19 37 16.7	-0.3
ALN				*e*Sb	Sb	19 37 29.6	+0.5
ALN				S	Sn	19 37 30.2	-0.8
EDRB	Edirne	1.11	81	*e*PG	Pb	19 37 18.2	-0.3
EDRB				*e*SG	Sn	19 37 33.7	-0.8
EDRB	Edirne	1.11	81	*e*Pg	Pb	19 37 18.2	-0.3
EDRB				*e*Sg	Sn	19 37 33.7	-0.8
NVR	Nevrokopi	1.11	253	P	Pn	19 37 18.8	-0.3
NVR				S	Sn	19 37 34.1	-0.6
NVR	Nevrokopi	1.11	253	*e*PN	Pn	19 37 18.7	-0.3
NVR				*e*SB	Sn	19 37 34.2	-0.5
NVR	Nevrokopi	1.11	253	P	Pn	19 37 18.8	-0.3
NVR				S	Sn	19 37 34.1	-0.6
ENEZ	Enez	1.15	145	*e*PG	Pn	19 37 20.5	+1.1
ENEZ				*e*SG	Sn	19 37 36.1	+0.7
ENEZ	Enez	1.15	145	*e*Pg	Pn	19 37 20.5	+1.1
ENEZ				*e*Sg	Sn	19 37 36.1	+0.7
JMB	Yambol	1.25	50	P	Pb	19 37 20.7	-0.2
JMB	Yambol	1.25	50	P	Pb	19 37 20.7	-0.2
SRS	Serrai	1.39	247	P	Pg	19 37 23.5	0.0
SRS				S	Sg	19 37 42.5	+1.0
SRS	Serrai	1.39	247	P	Pg	19 37 23.5	0.0
SRS				S	Sg	19 37 42.5	+1.0
GELI	Tayfur-Gelibol	1.56	144	*e*PN	Pg	19 37 27.6	+0.7
GELI	Tayfur-Gelibol	1.56	144	*e*Pn	Pg	19 37 27.6	+0.7
OUR	Ouranopolis	1.66	217	P	Pn	19 37 26.7	+0.2
OUR				S	Sg	19 37 50.6	+0.3
OUR	Ouranopolis	1.66	217	P	Pn	19 37 26.7	+0.2
OUR				S	Sg	19 37 50.6	+0.3
SOH	Sokhos	1.69	240	P	Pb	19 37 27.6	-0.7
SOH				S	Sg	19 37 50.9	-0.2
SOH	Sokhos	1.69	240	*e*PN	Pb	19 37 27.8	-0.5
SOH				*e*SN	Sb	19 37 50.0	+0.2
SOH	Sokhos	1.69	240	P	Pb	19 37 27.6	-0.7
SOH				*e*Sn	Sb	19 37 50.0	+0.2
SOH				S	Sg	19 37 50.9	-0.2
LPK	Lapseki	1.72	139	*e*PN	Pg	19 37 30.0	+0.2
LPK	Lapseki	1.72	139	*e*Pn	Pg	19 37 30.0	+0.2
RKY	Sarkoy-Tekirda	1.74	124	*e*PN	Pg	19 37 30.0	-0.2
RKY	Sarkoy-Tekirda	1.74	124	*e*Pn	Pg	19 37 30.0	-0.2
SART	Tekirdag	1.74	124	*i* P	Pg	19 37 31.4	+1.1
SART				*i* S	Sg	19 37 52.6	-0.2
SART	Tekirdag	1.74	124	*i* P	Pg	19 37 31.4	+1.1
SART				*i* S	Sg	19 37 52.6	-0.2
MFT	Murefte	1.75	120	*e*PN	Pg	19 37 30.4	-0.1
MFT	Murefte	1.75	120	*e*Pn	Pg	19 37 30.4	-0.1
LIA	Limnos Island	1.78	182	P	Pn	19 37 28.6	+0.5
LIA	Limnos Island	1.78	182	*e*PB	Pn	19 37 28.2	+0.1
LIA				*e*SN	Sn	19 37 50.4	-0.6
LIA	Limnos Island	1.78	182	*e*Pb	Pn	19 37 28.2	+0.1
LIA	Limnos Island	1.78	182	P	Pn	19 37 28.6	+0.5
LIA				*e*Sn	Sn	19 37 50.4	-0.6
VTS	Vitosha	1.79	301	P	Pn	19 37 28.9	+0.4
VTS	Vitosha	1.79	301	⇑*i*P	Pb	19 37 30.5	+0.3
VTS	Vitosha	1.79	301	*e*Pg	Pb	19 37 30.3	+0.1
VTS				*e*Sg	Sb	19 37 53.2	+0.2
VTS	Vitosha	1.79	301	P	Pn	19 37 28.9	+0.4
VTS	Vitosha	1.79	301	*e*Pg	Pb	19 37 30.3	+0.1
VTS				*e*Sg	Sb	19 37 53.2	+0.2
VTS				S	Sg	19 37 55.0	+0.5
TKR	Tekirdag	1.83	111	*e*PN	Pb	19 37 31.3	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TKR	Tekirdag	1.83	111	ePn	Pb	19 37 31.3	+0.5
KNT	Kendrikon	1.86	255	P	Pb	19 37 30.2	-1.2
KNT				S	Sb	19 37 55.0	+0.1
KNT	Kendrikon	1.86	255	P	Pb	19 37 30.2	-1.2
KNT				S	Sb	19 37 55.0	+0.1
PLG	Polygyros	1.90	227	P	Pn	19 37 30.6	+0.7
PLG	Polygyros	1.90	227	ePB	Pb	19 37 31.4	-0.6
PLG				eSN	Sn	19 37 54.6	+0.4
PLG	Polygyros	1.90	227	P	Pn	19 37 30.6	+0.7
PLG	Polygyros	1.90	227	ePb	Pb	19 37 31.4	-0.6
PLG				eSn	Sn	19 37 54.6	+0.4
CRLT	Corlu	1.93	106	ePN	Pb	19 37 32.3	-0.1
CRLT	Corlu	1.93	106	ePn	Pb	19 37 32.3	-0.1
KRBG	Karabiga-Canak	1.99	129	ePN	Pb	19 37 34.0	+0.5
KRBG	Karabiga-Canak	1.99	129	ePn	Pb	19 37 34.0	+0.5
VAY	Valandovo	2.07	261	ePn	Pb	19 37 34.9	+0.1
VAY				eSg	Sg	19 38 05.0	+1.7
VAY	Valandovo	2.07	261	ePn	Pb	19 37 35.3	+0.5
VAY				eSg	Sb	19 38 01.5	+0.8
PAIG	Paliouri	2.13	215	P	Pn	19 37 33.1	+0.1
PAIG	Paliouri	2.13	215	P	Pn	19 37 33.1	+0.1
SLVT	Silivri	2.25	100	ePN	Pb	19 37 36.9	-1.0
SLVT	Silivri	2.25	100	ePn	Pb	19 37 36.9	-1.0
CTYL	Yal??k??y-??at	2.27	94	ePN	Pb	19 37 37.2	-0.9
CTYL	Yal??k??y-??at	2.27	94	ePn	Pb	19 37 37.3	-0.9
BNT	Bandirma	2.39	123	ePN	Pb	19 37 39.3	-1.1
BNT	Bandirma	2.39	123	ePn	Pb	19 37 39.3	-1.1
GONE	Gonen-Balikesi	2.44	131	ePN	Pb	19 37 40.2	-1.0
GONE	Gonen-Balikesi	2.44	131	ePn	Pb	19 37 40.2	-1.0
CTKS	Kestanelik-??a	2.46	99	ePN	Pb	19 37 40.1	-1.5
CTKS	Kestanelik-??a	2.46	99	ePn	Pb	19 37 40.1	-1.5
ZAPS	Zavoj	2.53	310	ePn	Pn	19 37 38.2	-0.3
ZAPS				eSg	Sg	19 38 18.2	+0.1
PRK	Paraskevi	2.54	162	ePN	Pn	19 37 39.0	+0.4
PRK	Paraskevi	2.54	162	ePn	Pn	19 37 39.0	+0.4
BALY	Balya	2.63	137	iP	Pb	19 37 44.8	+0.4
BALY				iS	Sg	19 38 19.6	-1.7
BALY	Balya	2.63	137	iP	Pb	19 37 44.8	+0.4
BGKT	Bogazkoy	2.67	100	ePN	Pb	19 37 43.1	-2.0
BGKT	Bogazkoy	2.67	100	ePn	Pb	19 37 43.1	-2.0
AOS	Alonnisos	2.72	204	ePN	Pn	19 37 41.5	+0.4
AOS	Alonnisos	2.72	204	ePn	Pn	19 37 41.5	+0.4
XOR	Xorichti	2.80	215	P	Pn	19 37 42.5	+0.2
XOR	Xorichti	2.80	215	P	Pn	19 37 42.5	+0.2
BARS	Barje	2.81	295	ePn	Pn	19 37 41.3	-1.1
BARS				eSg	Sg	19 38 25.1	-2.2
NEO	Neokhori	2.84	214	ePN	Pn	19 37 43.2	+0.4
NEO	Neokhori	2.84	214	ePn	Pn	19 37 43.2	+0.4
ISK	Istanbul-Kandi	2.91	101	ePN	Pb	19 37 46.4	-2.8
ISK	Istanbul-Kandi	2.91	101	ePn	Pb	19 37 46.4	-2.8
ARMT	Armutlu	2.92	111	ePN	Pb	19 37 46.7	-2.7
ARMT	Armutlu	2.92	111	ePn	Pb	19 37 46.7	-2.7
BOLS	Boljevac	3.26	312	eSg	Sg	19 38 40.2	-1.4
BOLS	Boljevac	3.26	312	eSg	Sg	19 38 40.2	-1.4
SILT	Sile	3.32	98	ePN	Pn	19 37 52.3	+2.9
SILT	Sile	3.32	98	ePn	Pn	19 37 52.3	+2.9
CHOS	Chios island	3.34	169	ePN	Pn	19 37 50.4	+0.7
CHOS	Chios island	3.34	169	ePn	Pn	19 37 50.4	+0.7
AGG	Agios Georgios	3.48	221	ePN	Pn	19 37 52.7	+1.1
AGG	Agios Georgios	3.48	221	ePn	Pn	19 37 52.7	+1.1
TIRR	Tirgusor	3.60	38⇑	iP	Pb	19 38 00.7	-0.3
TIRR	Tirgusor	3.60	38	S	Sb	19 38 47.8	+2.8
ARR	Arges	3.72	353⇑	iP	Pn	19 37 55.6	+0.7
ARR	Arges	3.72	353⇑	iP	Pn	19 37 55.6	+0.7
GRUS	Gruza	4.02	305	eSg	Sg	19 39 04.1	-2.0
GRUS	Gruza	4.02	305	eSg	Sg	19 39 04.1	-2.0
CFR	Carcaliu	4.07	30⇓	iP	Pb	19 38 08.1	-0.9
CFR	Carcaliu	4.07	30	S	Sb	19 39 00.1	+1.7
PLOR	Plostina	4.29	13⇑	iP	Pn	19 38 05.6	+2.9
PLOR	Plostina	4.29	13⇑	iP	Pn	19 38 05.6	+2.9
DOPR	Dopca	4.29	1⇑	iP	Pn	19 38 04.7	+2.0
DOPR	Dopca	4.29	1⇑	iP	Pn	19 38 04.7	+2.0
VRI	Vrincioaia	4.32	14⇓	iP	Pn	19 38 06.1	+3.0
VRI	Vrincioaia	4.32	14⇓	iP	Pn	19 38 06.1	+3.0

*ISCJB **08** 19:48:10.5±0.7, 23°.77S±0°.04×179°.82E±0°.05, h515km±8km, mb4.4/46, Error ellipse: s-maj=6.8km s-min=5.7km az=14.3*

*AUST **08** 19:48:11.5±1.1, 23°.64S×179°.91E, h515km, Error ellipse: s-maj=2.0km s-min=1.3km az=38.0*

*IDC **08** 19:48:12.1±0.6, 23°.81S×179°.79E, h519km±6km, mb3.9/26, mb1 4.0/27, mb1mx4.0/28, mbtmp3.9/27, Error ellipse: s-maj=8.5km s-min=8.0km az=145.0*

*NEIC **08** 19:48:12.3±0.2, 23°.72S×179°.87E, mb4.8/15, Error ellipse: s-maj=7.7km s-min=6.7km az=169.0*

ISC 08 19:48:12.7±0.3**, 23°.83S**±0°.05×**179°.85E**±0°.05**, h531**km±2km**, h532**km**:pP-P, n187,** σ1.52/272**, mb4.4**/45**, 6C-4D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.76	160	eP	P	19 49 48.5	+0.5
	1µm,0.3s						
MSVF	Nonsavu	6.29	344	eP	P	19 49 51.1	-2.2
	43nm,0.6s						
NIUE	Niue	10.62	66	S	S	19 52 35.8	+0.2
	baz=10,SNR=7.4						
DZM	Mont Dzumac	12.48	275	P	P	19 50 58.9	+2.6
DZM				S	S	19 53 11.6	+0.5
DZM	Mont Dzumac	12.48	275	P	P	19 50 58.9	+2.6
	0.7nm,0.3s,baz=268,slow=22,SNR=5.9						
DZM				S	S	19 53 11.6	+0.5
	0.2nm,0.3s,baz=269,slow=21,SNR=1.6						
OUZ	Omahuta	12.59	204	eP	P	19 50 58.9	+1.8
	225nm,1.0s						
AFI	Afiamalu	12.65	40	P	P	19 50 53.0	-5.2
AFI				S	S	19 53 03.1	-11
AFI	Afiamalu	12.65	40	P	P	19 50 53.0	-5.2
	5.1nm,0.3s,baz=289,slow=1.7,SNR=6.9						
AFI				S	S	19 53 03.1	-11
	2.1nm,0.3s,baz=53,slow=22,SNR=3.3						
PUZ	Puketiti	14.27	185	PN	P	19 51 11.8	-2.8
PUZ				SN	S	19 53 43.9	-0.8
URZ	Urewera	14.58	189	eP	P	19 51 14.6	-3.2
	310nm,0.6s						
URZ				S	S	19 53 44.2	-6.3
URZ	Urewera	14.58	189	PN	P	19 51 14.7	-3.2
URZ				SN	S	19 53 47.0	-3.5
URZ	Urewera	14.58	189	P	P	19 51 15.5	-2.3
	56nm,0.3s,baz=15,slow=3.1,SNR=125						
URZ				S	S	19 53 44.2	-6.3
	10nm,0.3s,baz=191,slow=22,SNR=15						
MWZ	Matawai	14.60	187	PN	P	19 51 15.4	-2.8
MWZ				SN	S	19 53 48.5	-2.6
KNZ	Kokohu	15.26	186	SN	S	19 54 00.7	-2.6
MHGZ	Mahia Peninsul	15.37	186	SN	S	19 54 03.9	-1.4
BHHZ	Black Hill Sta	15.94	191	PN	P	19 51 27.0	-5.1
PXZ	Pawanui	16.35	188	PN	P	19 51 31.9	-4.1
BFZ	Birch Farm	17.08	189	PN	P	19 51 41.0	-1.8
NNZ	Nelson	18.17	196	PN	P	19 51 51.5	-1.3
RAR	Rarotonga	19.00	86	P	P	19 51 59.8	-0.9
RAR	Rarotonga	19.00	86	P	P	19 51 59.8	-0.9
	0.9nm,0.3s,baz=269,slow=10,SNR=3.9						
KHZ	Kahutara	19.27	194	eP	P	19 52 01.5	-1.3
	258nm,1.5s						
KHZ	Kahutara	19.27	194	PN	P	19 52 01.9	-0.9
LTZ	Lake Taylor	19.92	197	PN	P	19 52 07.3	-1.5
OXZ	Oxford	20.49	196	PN	P	19 52 12.4	-1.5
RPZ	Rata Peaks	21.12	198	eP	P	19 52 19.9	+0.2
	26nm,0.5s						
RPZ				S	S	19 55 37.2	-2.2
RPZ	Rata Peaks	21.12	198	P	P	19 52 20.1	+0.4
	28nm,0.5s,baz=8.9,slow=6.0,SNR=21						
RPZ				S	S	19 55 37.2	-2.2
	19nm,0.8s,baz=223,slow=24,SNR=4.4						
ARMA	Armidale	25.92	249	P	P	19 53 04.5	+1.7
	baz=26,SNR=4.6						
MGCD	Mangrove Creek	26.86	243	P	P	19 53 12.6	+1.8
	baz=27,SNR=5.3						
PPT2	Papeete2	29.22	84	eP	P	19 53 31.7	-0.1
	41nm,1.2s						
PPT	Papeete	29.23	84	P	P	19 53 31.5	-0.3
PPT	Papeete	29.23	84	P	P	19 53 31.5	-0.3
	20nm,0.3s,baz=256,slow=21,SNR=4.7						
TIAR	Tiarei	29.44	84	eP	P	19 53 33.6	0.0
	80nm,1.1s						
TIAR	Tiarei	29.44	84	eP	P	19 53 33.6	0.0
	80nm,1.1s						
TVO	Taravao	29.46	84	eP	P	19 53 33.5	-0.3
	47nm,0.9s						
TVO	Taravao	29.46	84	eP	P	19 53 33.5	-0.3
	47nm,0.9s						
CMSA	Cobar Meteorol	31.12	248	P	P	19 53 48.2	+0.4
	baz=31,SNR=17						
CTA	Charters Tower	31.34	270	P	P	19 53 50.3	+0.4
CTA				ScP	ScP	19 59 23.9	+3.3
CTA	Charters Tower	31.34	270	P	P	19 53 50.3	+0.4
	16nm,0.5s,baz=96,slow=11,SNR=38						
CTA				ScP	ScP	19 59 23.9	+3.3
	7.3nm,1.1s,baz=97,slow=2.9,SNR=5.4						
PMOR	Pomariorio Ree	31.60	80	eP	P	19 53 51.8	-0.3
	86nm,1.1s						
PMOR	Pomariorio Ree	31.60	80	eP	P	19 53 51.8	-0.3
	86nm,1.1s						
QLP	Quilpie	32.28	258	P	P	19 53 58.5	+0.6
	baz=32,SNR=5.8						
TOO	Toolangi	32.37	237	P	P	19 53 59.4	+0.8
	baz=32,SNR=7.7						
PMG	Port Moresby	34.34	289	P	P	19 54 14.9	-0.5
PMG	Port Moresby	34.34	289	P	P	19 54 14.9	-0.5
	36nm,0.7s,baz=78,slow=4.8,SNR=14						
STKA	Stephens Creek	34.62	248	eP	P	19 54 17.9	+0.3
	2.7nm,1.4s						
STKA				PcP	PcP	19 56 35.5	-1.4
STKA				ScP	ScP	19 59 34.1	+2.2
STKA	Stephens Creek	34.62	248	P	P	19 54 18.1	+0.5
	1.4nm,0.3s,baz=74,slow=7.0,SNR=25						
STKA				PcP	PcP	19 56 35.5	-1.4
	1.9nm,0.4s,baz=57,slow=8.7,SNR=5.2						
STKA				ScP	ScP	19 59 34.1	+2.2
	2.8nm,0.9s,baz=51,slow=2.0,SNR=4.2						
STKA	Stephens Creek	34.62	248	P	P	19 54 18.1	+0.5
	baz=35,SNR=13						
ARPS	Mount Arapiles	35.04	239	P	P	19 54 21.5	+0.6
	baz=35,SNR=6.5						
COEN	Coen	35.97	279	eP	P	19 54 27.9	-1.1
COEN	Coen	35.97	279	P	P	19 54 29.2	+0.2
	baz=36,SNR=4.9						
QIS	Mount Isa	37.32	267	S	S	19 59 46.2	-3.9
	baz=37,SNR=4.9						
BBOO	Buckleboo	39.35	247	P	P	19 54 55.9	-0.4
	baz=39,SNR=24						
AS31	Alice Springs	41.91	261	eP	P	19 55 16.7	-0.3
ASAR	Alice Springs	41.91	261	P	P	19 55 16.8	-0.2
ASAR				pP	pP	19 56 49.2	-2.9
ASAR				PcP	PcP	19 56 58.2	-2.0
ASAR				ScP	ScP	20 00 03.4	+3.3
ASAR				S	S	20 00 55.5	-1.5
ASAR	Alice Springs	41.91	261	P	P	19 55 16.8	-0.2
	5.1nm,0.8s,baz=92,slow=7.5,SNR=46						
ASAR				pP	pP	19 56 49.2	-2.9
	1.6nm,0.6s,baz=93,slow=7.6,SNR=2.0						
ASAR				PcP	PcP	19 56 58.2	-2.0
	2.6nm,0.8s,baz=92,slow=7.9,SNR=5.5						
ASAR				ScP	ScP	20 00 03.4	+3.3
	6.1nm,0.8s,baz=108,slow=4.3,SNR=20						
ASAR				S	S	20 00 55.5	-1.5
	0.8nm,0.7s,baz=100,slow=12,SNR=4.7						
WRAB	Tennant Creek	42.27	266	eP	P	19 55 18.9	-0.9
	9.5nm,1.0s						
WRA	Warramunga Arr	42.28	266	P	P	19 55 19.2	-0.7
WRA				PcP	PcP	19 57 01.1	-0.4
WRA				ScP	ScP	20 00 04.1	+2.5
WRA				S	S	20 00 59.9	-2.4
WRA	Warramunga Arr	42.28	266	P	P	19 55 19.2	-0.7
	2.6nm,0.3s,baz=90,slow=6.0,SNR=57						
WRA				PcP	PcP	19 57 01.1	-0.4
	1.7nm,0.3s,baz=98,slow=5.9,SNR=7.8						
WRA				ScP	ScP	20 00 04.1	+2.5
	1.7nm,0.8s,baz=106,slow=4.1,SNR=6.7						
WRA				S	S	20 00 59.9	-2.4
	1.1nm,0.8s,baz=101,slow=14,SNR=5.2						
FORT	Forrest	46.21	250	P	P	19 55 49.4	-0.7
	baz=46,SNR=16						
MTN	Manton Dam	47.31	274	P	P	19 55 57.7	-0.9
	baz=47,SNR=11						
FITZ	Fitzroy Crossi	50.70	266	P	P	19 56 24.2	+0.5
FITZ				pP	pP	19 58 02.7	-1.4
FITZ				ScP	ScP	20 00 39.6	+2.6
FITZ	Fitzroy Crossi	50.70	266	P	P	19 56 24.2	+0.5
	2.4nm,0.4s,baz=127,slow=5.9,SNR=26						
FITZ				pP	pP	19 58 02.7	-1.4
	5.2nm,1.0s,baz=122,slow=6.3,SNR=4.3						
FITZ				ScP	ScP	20 00 39.6	+2.6
	1.7nm,0.8s,baz=143,slow=5.1,SNR=3.8						
FITZ	Fitzroy Crossi	50.70	266	P	P	19 56 24.2	+0.5
	baz=51,SNR=15						
SWI	Sorong	52.29	289	P	P	19 56 34.5	-0.7
	baz=52,SNR=5.4						
VNDA	Vanda	54.44	185	P	P	19 56 51.1	+1.6
VNDA				PcP	PcP	19 57 45.5	+0.6
VNDA				ScP	ScP	20 00 53.9	+1.7
VNDA	Vanda	54.44	185	P	P	19 56 51.1	+1.6
	4.6nm,0.7s,baz=359,slow=8.0,SNR=24						
VNDA				PcP	PcP	19 57 45.5	+0.6
	2.4nm,0.5s,baz=332,slow=3.2,SNR=6.4						
VNDA				ScP	ScP	20 00 53.9	+1.7
	2.0nm,0.7s,baz=343,slow=5.8,SNR=7.0						
SBA	Scott Base	54.44	183	eP	P	19 56 51.6	+2.2
	38nm,0.9s						
SBA				ePcP	PcP	19 57 46.2	+1.4
MEEK	Meekatharra	55.00	253	P	P	19 56 53.4	-0.9
	baz=55,SNR=9.4						
RKGY	Rocky Gully	55.14	243	P	P	19 56 55.1	0.0
	baz=55,SNR=7.2						
BLDU	Ballidu	55.93	248	P	P	19 56 59.8	-0.8
	baz=56,SNR=17						
MORW	Morawa	56.77	250	P	P	19 57 06.0	-0.4
	baz=57,SNR=18						
QSPA	South Pole Qui	66.25	180	P	P	19 58 09.3	+1.4
QSPA	South Pole Qui	66.25	180	P	P	19 58 09.3	+1.4
	74nm,1.0s,baz=23,slow=1.4,SNR=342						
MJAR	Matsushiro Arr	71.76	326	P	P	19 58 40.5	-0.8
MJAR	Matsushiro Arr	71.76	326	P	P	19 58 40.5	-0.8
	12nm,0.8s,baz=168,slow=6.2,SNR=54						
MAJO	Matsushiro	71.76	326	eP	P	19 58 40.1	-1.2
	15nm,0.9s						
MAT	Matsushiro	71.76	326	P	P	19 58 40.5	-0.8
MAT				eS	SKiKP	20 07 25.8	+3.1
ASAJ	Asahikawa	75.74	333	P	P	19 59 05.1	+1.4
ASAJ	Asahikawa	75.74	333	P	P	19 59 05.1	+1.4
	8.8nm,0.8s,baz=234,slow=16,SNR=4.0						
MAW	Mawson	77.77	200	P	P	19 59 14.0	-0.5
MAW	Mawson	77.77	200	P	P	19 59 14.0	-0.5
	22nm,0.7s,baz=273,slow=20,SNR=4.7						
KSRS	Korea Array	78.11	320	P	P	19 59 17.2	+0.5
	4.5nm,0.8s,baz=135,slow=5.9,SNR=34						
KSAR	Wonju Array Be	78.12	320	P	P	19 59 17.2	+0.4
UNV	Unalaska Valle	78.25	8	eP	P	19 59 15.9	-1.2
PETK	Petropavlovsk-	79.00	347	P	P	19 59 21.1	-0.1
PETK	Petropavlovsk-	79.00	347	P	P	19 59 21.1	-0.1
	7.8nm,0.7s,baz=142,slow=7.3,SNR=12						
PMSA	Palmer Station	79.03	157	P	P	19 59 22.3	+1.0
PMSA	Palmer Station	79.03	157	P	P	19 59 22.3	+1.0
	41nm,1.0s,baz=233,slow=7.0,SNR=8.6						
NJ2	Nanjing	80.51	311	eP	P	19 59 30.2	+0.6
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
USRK	Ussuriysk Arra	80.63	327	P	P	19 59 30.3	+0.4
	comp=Z,9.9nm,1.0s,baz=128,slow=3.6,SNR=18						
MDJ	Mudanjiang	82.13	326	P	P	19 59 38.0	+0.3
MDJ				pmax	pmax		
	comp=Z,13nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,63nm,3.6s						
SYO	Syowa Base	83.05	193⇓	eP	P	19 59 40.2	-1.8
ISA	Isabella	83.07	46	eP	P	19 59 42.9	+0.2
	comp=Z,3.4nm,0.8s						
CN2	Changchun	83.75	324	eP	P	19 59 46.0	+0.2
CN2				epP	pP	20 01 42.2	+1.2
CN2				eS	S	20 09 24.0	-0.6
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
SNAA	Sanae	84.74	179	eP	P	19 59 49.9	-0.5
SNAA	Sanae	84.74	179	eP	P	19 59 49.7	-0.7
	comp=Z,6.1nm,0.4s						
SNAA				epP	pP	20 01 45.6	-0.2
NVAR	Mina Array Bea	84.80	44	P	P	19 59 52.0	+0.6
NVAR	Mina Array Bea	84.80	44	P	P	19 59 52.0	+0.6
	comp=Z,1.1nm,0.6s,baz=221,slow=8.9,SNR=6.5						
VNA3	Neumayer Olymp	84.95	177	eP	P	19 59 51.1	-0.3
VNA3	Neumayer Olymp	84.95	177	epP	pP	20 01 49.4	+2.5
VNA2	Neumayer--Watz	85.37	178	eP	P	19 59 53.4	0.0
VNA2	Neumayer--Watz	85.37	178	epP	pP	20 01 51.9	+2.9
VNA2	Neumayer--Watz	85.37	178	ePP	PP	20 03 21.3	+1.0
VNA1	Neumayer--Stat	85.61	177	eP	P	19 59 54.7	+0.2
GYA	Guiyang	86.59	301	eP	P	20 00 01.3	+1.1
GYA				pP	pP	20 01 56.3	0.0
GYA				sP	sP	20 02 48.4	-1.7
GYA				PP	PP	20 03 33.6	+1.4
GYA				SKS	SKSac	20 09 35.2	-1.3
GYA				S	S	20 09 51.7	-1.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PLCA	Paso Flores	88.41	134	P	P	20 00 09.5	+1.1
	comp=Z,70nm,1.9s						
PLCA	Paso Flores	88.41	134	P	P	20 00 09.8	+1.4
	comp=Z,4.1nm,0.9s,baz=234,slow=1.1,SNR=3.3						
XAN	Xi'an	88.59	308	P	P	20 00 10.2	+1.0
XAN				pmax	pmax		
	comp=Z,2.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,30nm,6.1s						
KMI	Kunming	89.11	298	P	P	20 00 10.7	-1.4
KMI				pmax	pmax		
	comp=Z,6.0nm,1.6s						
CMAR	Chiang Mai Arr	89.38	290	P	P	20 00 14.8	+1.6
CMAR	Chiang Mai Arr	89.38	290	P	P	20 00 14.8	+1.6
	comp=Z,2.6nm,1.0s,baz=146,slow=3.6,SNR=14						
CHTO	Chiang Mai	89.53	291	eP	P	20 00 14.9	+1.1
	comp=Z,5.3nm,1.3s						
TRF	Thorofare Moun	90.11	13	eP	P	20 00 13.8	-2.0
	comp=Z,8.1nm,0.9s						
HHC	Hu-ho-hao-te	90.27	315	eP	P	20 00 15.6	-1.4
HHC				pP	pP	20 02 15.2	+1.1
HHC				sP	sP	20 03 08.1	+0.6
HHC				PP	PP	20 04 01.8	+1.0
HHC				SKS	SKSac	20 09 55.3	-2.1
HHC				S	S	20 10 22.8	-3.3
HHC				sS	sS	20 13 55.4	0.0
HHC				SS	SS	20 16 44.1	+1.6
HHC				pmax	pmax		
	comp=Z,26nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,6.7s						
TXAR	Lajitas Array	90.51	58	P	P	20 00 19.6	+1.2
TXAR	Lajitas Array	90.51	58	P	P	20 00 19.6	+1.2
	comp=Z,2.5nm,0.6s,baz=216,slow=6.4,SNR=20						
ANMO	Albuquerque	91.02	52	P	P	20 00 21.3	+0.6
ANMO	Albuquerque	91.02	52	P	P	20 00 21.3	+0.6
	comp=Z,0.6nm,0.4s,baz=189,slow=8.0,SNR=3.1						
ILAR	Eielson Array	91.99	14	P	P	20 00 22.9	-1.3
ILAR				pP	pP	20 02 20.7	-0.8
ILAR	Eielson Array	91.99	14	P	P	20 00 22.9	-1.3
	comp=Z,0.5nm,0.6s,baz=231,slow=6.1,SNR=6.6						
ILAR				pP	pP	20 02 20.7	-0.8
	comp=Z,1.3nm,1.1s,baz=240,slow=5.6,SNR=6.1						
PDAR	Pinedale Array	92.73	44	P	P	20 00 28.9	+0.5
PDAR				pP	pP	20 02 25.8	0.0
PDAR	Pinedale Array	92.73	44	P	P	20 00 28.9	+0.5
	comp=Z,1.1nm,0.7s,baz=220,slow=4.1,SNR=9.2						
PDAR				pP	pP	20 02 25.8	0.0
	comp=Z,0.7nm,0.9s,baz=278,slow=3.5,SNR=3.4						
LZH	Lanzhou	93.22	308	eP	P	20 00 31.5	+0.8
LZH				pP	pP	20 02 30.6	+2.5
LZH				sP	sP	20 03 24.1	+2.6
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LCO	Las Campanas	94.20	124	P	P	20 00 36.3	+0.7
	baz=94,SNR=3.3						
CFAA	Coronel Fontan	94.71	127	P	P	20 00 38.1	+0.5
CFAA	Coronel Fontan	94.71	127	P	P	20 00 38.1	+0.5
	comp=Z,0.3nm,0.5s,baz=241,slow=3.8,SNR=4.3						
GTA	Gaotai	97.55	310	eP	P	20 00 52.9	+2.8
GTA				pP	pP	20 02 52.4	+4.5
GTA				sP	sP	20 03 41.6	+0.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
INK	Inuvik	98.00	16	P	Pdif	20 00 49.4	-1.8
INK	Inuvik	98.00	16	P	Pdif	20 00 49.4	-1.8
	comp=Z,1.1nm,0.8s,baz=288,slow=5.8,SNR=4.6						
ZALV	Zalesovo Beam	111.81	321	PKiKP	PKiKP	20 05 45.7	-1.2
ZALV	Zalesovo Beam	111.81	321	PKiKP	PKiKP	20 05 45.7	-1.2
	comp=Z,0.3nm,0.4s,baz=163,slow=1.5,SNR=3.2						
MKAR	Makanchi Array	112.01	313	PKiKP	PKiKP	20 05 46.5	-1.0
MKAR	Makanchi Array	112.01	313	PKiKP	PKiKP	20 05 46.5	-1.0
	comp=Z,0.5nm,0.7s,baz=224,slow=1.8,SNR=8.0						
KSH	Kashi	115.12	304	ePKP	PKPdf	20 05 52.6	-1.3
KSH				PP	PP	20 07 07.3	+3.3
KSH				sPKP		20 08 50.6	
KSH				PKS	PKSdf	20 09 27.2	-3.4
KSH				SKS	SKSdf	20 12 12.9	-2.9
KSH				SKKS	SKKSac	20 13 04.0	-5.6
KSH				SS	SS	20 22 22.2	+1.3
KSH				AMB	AMB		
	comp=Z,92nm,4.3s						
BDFB	Brasilia	118.96	125	PKP	PKPdf	20 06 00.9	-1.0
BDFB	Brasilia	118.96	125	PKP	PKPdf	20 06 00.9	-1.0
	comp=Z,1.2nm,0.5s,baz=178,slow=5.1,SNR=3.4						
KBL	Kabul	119.69	297	ePKPdf	PKPdf	20 06 03.0	+0.1
KKAR	Karatay Array	119.71	307	ePKPdf	PKPdf	20 06 01.6	-0.8
BVAR	Borovoye Array	120.30	319	PKP	PKPdf	20 06 02.2	-1.0
BVAR	Borovoye Array	120.30	319	PKP	PKPdf	20 06 02.2	-1.0
	comp=Z,1.6nm,0.5s,baz=86,slow=1.1,SNR=9.6						
BOSA	Boshof	122.41	207	PKP	PKPdf	20 06 08.5	+0.2
BOSA	Boshof	122.41	207	PKP	PKPdf	20 06 08.5	+0.2
	comp=Z,3.8nm,0.8s,baz=220,slow=7.7,SNR=5.8						
AKTO	Aktyubinsk	128.15	316	PKP	PKPdf	20 06 18.8	+0.5
AKTO				SKPbc	SKiKP	20 08 49.4	-15
AKTO	Aktyubinsk	128.15	316	PKP	PKPdf	20 06 18.8	+0.5
	comp=Z,1.5nm,0.6s,baz=41,slow=2.5,SNR=6.2						
AKTO				SKPbc	SKiKP	20 08 49.4	-15
	comp=Z,1.5nm,0.6s,baz=82,slow=4.8,SNR=4.7						
ARCES	ARCESS Array B	131.79	348	PKP	PKPdf	20 06 23.9	-0.8
ARCES				SKPbc	SKPab	20 09 02.0	-0.4
ARCES	ARCESS Array B	131.79	348	PKP	PKPdf	20 06 23.9	-0.8
	comp=Z,2.4nm,0.7s,baz=73,slow=2.5,SNR=8.3						
ARCES				SKPbc	SKPab	20 09 02.0	-0.4
	comp=Z,7.1nm,0.9s,baz=355,slow=10,SNR=7.4						
RCBR	Riachuelo	134.34	126	SKPbc	SKPbc	20 09 11.4	+0.1
RCBR	Riachuelo	134.34	126	SKPbc	SKPbc	20 09 11.4	+0.1
	comp=Z,5.6nm,0.7s,baz=205,slow=6.9,SNR=4.8						
KMBO	Kilima Mbogo	136.01	241	PKP	PKPdf	20 06 36.9	+2.2
KMBO				SKPbc	SKPbc	20 09 19.2	+2.4
KMBO	Kilima Mbogo	136.01	241	PKP	PKPdf	20 06 36.9	+2.2
	comp=Z,0.4nm,0.2s,baz=220,slow=24,SNR=3.7						
KMBO				SKPbc	SKPbc	20 09 19.2	+2.4
	comp=Z,1.4nm,0.6s,baz=47,slow=23,SNR=6.3						
FINES	FINESS Array B	138.34	341	PKPpre	PKPpre	20 06 26.2	
FINES				PKP	PKPdf	20 06 36.9	-0.2
FINES				SKPbc	SKPbc	20 09 22.4	+0.9
FINES	FINESS Array B	138.34	341	PKhKP	PKPpre	20 06 26.2	
	comp=Z,0.4nm,0.4s,baz=38,slow=6.4,SNR=4.8						
FINES				PKP	PKPdf	20 06 36.9	-0.2
	comp=Z,1.7nm,0.6s,baz=88,slow=3.5,SNR=4.3						
FINES				SKPbc	SKPbc	20 09 22.4	+0.9
	comp=Z,8.0nm,0.6s,baz=44,slow=3.8,SNR=18						
NB2	NORSAR Subarra	141.99	351	PKP	PKPdf	20 06 38.6	-5.2
	comp=Z,1.8nm,0.9s,baz=16,slow=3.2						
NOA	NORSAR Array B	141.99	351	PKP	PKPdf	20 06 39.4	-4.4
NOA				SKPbc	SKiKP	20 09 32.5	-0.2
NOA	NORSAR Array B	141.99	351	PKP	PKPdf	20 06 39.4	-4.4
	comp=Z,2.9nm,0.8s,baz=16,slow=4.7,SNR=9.4						
NOA				SKPbc	SKiKP	20 09 32.5	-0.2
	comp=Z,4.2nm,1.0s,baz=12,slow=4.2,SNR=5.2						
AKASG	Malin Array Be	144.84	327	PKP	PKPdf	20 06 48.6	-0.3
AKASG				SKPbc	SKiKP	20 09 39.5	+0.8
AKASG	Malin Array Be	144.84	327	PKP	PKPdf	20 06 48.6	-0.3
	comp=Z,6.1nm,0.5s,baz=44,slow=3.9,SNR=23						
AKASG				SKPbc	SKiKP	20 09 39.5	+0.8
	comp=Z,8.6nm,0.8s,baz=49,slow=2.2,SNR=21						
AK01	Malin Array Si	144.85	327	ePKP	PKPdf	20 06 48.6	-0.3
AK01				eSKPbc	SKiKP	20 09 39.8	+1.0
KIEV	Kiev	144.85	327	ePKP	PKPdf	20 06 48.6	-0.4
KIEV				eSKPbc	SKiKP	20 09 39.7	+0.9
AK02	Malin Array Si	144.88	327	ePKPdf	PKPdf	20 06 48.6	-0.4
AK02				eSKPbc	SKiKP	20 09 39.6	+0.8
SUW	Suwalki	145.14	336	ePKPdf	PKPdf	20 06 49.4	+0.1
SUW				eSKPbc	SKiKP	20 09 39.4	+0.2
SUW	Suwalki	145.14	336	ePKP	PKPbc	20 06 50.1	-0.2
BR131	Keskin Array S	147.43	307	ePKPbc	PKPbc	20 06 57.0	-0.3
BRTR	Keskin Array B	147.43	307	PKPbc	PKPbc	20 06 57.2	-0.1
BRTR				SKPbc	SKiKP	20 09 46.0	+1.2
BRTR	Keskin Array B	147.43	307	PKPbc	PKPbc	20 06 57.2	-0.1
	comp=Z,1.7nm,0.6s,baz=149,slow=4.8,SNR=12						
BRTR				SKPbc	SKiKP	20 09 46.0	+1.2
	comp=Z,1.2nm,0.9s,baz=132,slow=1.8,SNR=4.3						
BEL	Belsk	147.75	335	ePKP	PKPbc	20 06 57.7	+0.2
CFR	Carcaliu	148.69	320⇓	iP	PKPbc	20 07 00.3	+0.3
TESR		148.77	323⇑	iP	PKPbc	20 07 00.6	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUR08	**Bucovina Ar. S**	**148.82**	**326**	*e*PKPbc	**PKPbc**	**20 07 01.8**	**+1.4**
TIRR	**Tirgusor**	**148.91**	**318**⇓	*i*P	**PKPbc**	**20 07 01.1**	**+0.5**
VRI	**Vrincioaia**	**149.11**	**322**⇓	*i*P	**PKPbc**	**20 07 01.5**	**+0.4**
OKC	**Ostrava-Krasne**	**150.36**	**336**	*e*PKPAB	**PKPab**	**20 07 12.8**	**+0.2**
UPC	**Upice**	**150.55**	**339**⇑	*e*PKP	**PKPbc**	**20 07 04.6**	**+0.3**
UPC				*e*PKPAB	**PKPab**	**20 07 14.4**	**+1.0**
UPC				*e*pPKP	pPKPdf	20 09 12.3	+8.7
DPC	**Dobruska-Polom**	**150.58**	**338**⇑	*e*PKP	**PKPbc**	**20 07 04.9**	**+0.4**
DPC				*e*PKPAB	**PKPab**	**20 07 14.3**	**+0.7**
PVCC	**Panska Ves**	**150.99**	**340**⇑	*e*PKP	**PKPbc**	**20 07 05.6**	**+0.3**
PVCC				*e*PKPAB	**PKPab**	**20 07 16.2**	**+1.0**
PRU	**Pruhonice**	**151.48**	**340**⇑	*e*PKP	**PKPbc**	**20 07 06.6**	**+0.2**
PRU				*e*PKPAB	**PKPab**	**20 07 17.5**	**+0.2**
KHC	**Kasperske Hory**	**152.53**	**340**	*e*PKPbc	**PKPbc**	**20 07 08.6**	**-0.3**
KHC				*e*PKPab	**PKPab**	**20 07 22.0**	**+0.1**
KHC	**Kasperske Hory**	**152.53**	**340**⇑	*e*PKP	**PKPbc**	**20 07 08.9**	**+0.1**
KHC				*e*PKPAB	**PKPab**	**20 07 22.2**	**+0.4**
KHC				*e*x	x	20 09 01.9	
GERES	**GERESS Array B**	**152.74**	**340**	PKPbc	**PKPbc**	**20 07 09.8**	**+0.4**
GERES				PKPab	**PKPab**	**20 07 22.9**	**+0.1**
GERES	**GERESS Array B**	**152.74**	**340**	PKPbc	**PKPbc**	**20 07 09.8**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=251,slow=36,SNR=10						
GERES				PKPab	**PKPab**	**20 07 22.9**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=31,slow=5.4,SNR=5.3						
DBIC	**Dimbokro**	**162.35**	**164**	PKP	**PKPdf**	**20 07 13.0**	**-1.4**
DBIC				PKPab	**PKPab**	**20 08 05.8**	**+0.7**
DBIC	**Dimbokro**	**162.35**	**164**	PKP	**PKPdf**	**20 07 13.0**	**-1.4**
	comp=Z,6.8nm,1.1s,baz=174,slow=3.5,SNR=5.6						
DBIC				PKPab	**PKPab**	**20 08 05.8**	**+0.7**
	comp=Z,12nm,1.0s,baz=172,slow=4.1,SNR=7.9						
ESDC	**Sonseca Array**	**163.88**	**11**	PKPab	**PKPab**	**20 08 10.6**	**-0.8**
ESDC	**Sonseca Array**	**163.88**	**11**	PKPab	**PKPab**	**20 08 10.6**	**-0.8**
	comp=Z,2.1nm,1.0s,baz=344,slow=6.7,SNR=8.4						
TORD	**Torodi Ar. Bea**	**169.23**	**190**	PKP	**PKPdf**	**20 07 18.7**	**-1.1**
TORD				PKPab	**PKPab**	**20 08 35.4**	**-0.1**
TORD				pPKPab	**pPKPab**	**20 10 35.4**	**+1.9**
TORD	**Torodi Ar. Bea**	**169.23**	**190**	PKP	**PKPdf**	**20 07 18.7**	**-1.1**
	comp=Z,2.9nm,1.1s,baz=52,slow=0.3,SNR=9.2						
TORD				PKPab	**PKPab**	**20 08 35.4**	**-0.1**
	comp=Z,11nm,1.0s,baz=166,slow=3.9,SNR=34						
TORD				pPKPab	**pPKPab**	**20 10 35.4**	**+1.9**
	comp=Z,1.5nm,1.0s,baz=154,slow=3.4,SNR=4.6						

IDC 08 19:52:35.4±5.5**, 35.°76N**×**78.°65E, h0**km**, mb3.0**/1**, mb1 3.0**/5**, mb1mx2.9**/30**, mbtmp3.0**/5**, ML3.0**/4**, Error ellipse: s-maj=75.8km s-min=32.0km az=44.0, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**7.59**	**336**	Pn	Pn	19 54 30.6	+3.2
	0.5nm,0.3s,baz=154,slow=12,SNR=7.5						
AAK				Lg	Lg	19 56 35.8	
	0.1nm,0.3s,baz=34,slow=21,SNR=2.7						
MKAR	**Makanchi Array**	**11.36**	**13**	Pn	Pn	19 55 18.9	0.0
	0.1nm,0.3s,baz=192,slow=13,SNR=4.7						
MKAR				Sn	Sn	19 57 25.0	-1.6
	0.1nm,0.3s,baz=176,slow=18,SNR=3.0						
KURBB	**Kurchatov Arra**	**14.86**	**360**	Pn	Pn	19 56 07.6	+0.9
	0.0nm,0.3s,baz=186,slow=11,SNR=3.2						
ZALV	**Zalesovo Beam**	**18.69**	**11**	P	Pn	19 56 56.6	+1.3
	0.1nm,0.3s,baz=193,slow=10,SNR=2.4						
SONM	**Songino Array**	**23.81**	**51**	P	P	19 57 49.5	-0.5
	0.2nm,0.5s,baz=252,slow=7.4,SNR=2.8						

IDC 08 20:03:06.6±0.8**, 48.°49S**×**105.°48E, h0**km**, mb4.0**/6**, mb1 4.1**/6**, mb1mx3.9**/15**, mbtmp4.0**/6**, MS3.8**/3**, Ms1 3.8**/3**, ms1mx3.3**/26**, Error ellipse: s-maj=33.8km s-min=17.7km az=108.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**31.83**	**72**	P	P	20 09 32.5	-0.5
	1.4nm,0.8s,baz=263,slow=9.6,SNR=3.2						
STKA				LR	LR	20 19 52.4	
	comp=Z,157nm,19.6s,baz=205,slow=32						
ASAR	**Alice Springs**	**33.44**	**52**	P	P	20 09 47.2	0.0
	2.0nm,0.7s,baz=212,slow=8.2,SNR=29						
VNDA	**Vanda**	**36.01**	**162**	P	P	20 10 09.2	+0.4
	1.4nm,0.8s,baz=289,slow=8.9,SNR=7.6						
VNDA				LR	LR	20 24 04.9	
	comp=Z,132nm,20.9s,baz=238,slow=35						
WRA	**Warramunga Arr**	**36.75**	**49**	P	P	20 10 15.1	-0.6
	1.8nm,0.7s,baz=211,slow=8.8,SNR=12						
QSPA	**South Pole Qui**	**41.65**	**180**	P	P	20 10 56.0	-0.4
	2.3nm,0.7s,baz=324,slow=3.9,SNR=17						
SNAA	**Sanae**	**50.05**	**203**	P	P	20 12 01.6	-0.8
	0.7nm,1.0s,baz=112,slow=11,SNR=5.4						
BOSA	**Boshof**	**62.93**	**257**	LR	LR	20 37 41.8	
	comp=Z,106nm,18.8s,baz=167,slow=33						
CMAR	**Chiang Mai Arr**	**66.90**	**353**	P	P	20 13 59.9	-0.6
	1.0nm,0.7s,baz=200,slow=6.5,SNR=5.5						
MKAR	**Makanchi Array**	**97.03**	**344**	P	Pdif	20 16 41.0	+1.2
	0.8nm,0.8s,baz=281,slow=4.1,SNR=8.6						
INK	**Inuvik**	**145.13**	**34**	PKPbc	PKPbc	20 22 43.9	-0.2
	1.5nm,0.9s,baz=280,slow=12,SNR=2.1						
NVAR	**Mina Array Bea**	**147.07**	**91**	PKPbc	PKPbc	20 22 51.2	0.0
	0.4nm,0.5s,baz=225,slow=5.9,SNR=3.3						
TXAR	**Lajitas Array**	**150.60**	**120**	PKPbc	PKPbc	20 23 00.3	0.0
	0.3nm,0.5s,baz=232,slow=4.4,SNR=3.4						
RES	**Resolute Bay**	**152.31**	**11**	PKPbc	PKPbc	20 23 01.5	-1.2
	1.6nm,0.8s,baz=241,slow=3.4,SNR=6.2						
YKA	**Yellowknife Ar**	**153.84**	**43**	PKPbc	PKPbc	20 23 06.6	+0.2
	0.4nm,0.7s,baz=290,slow=1.7,SNR=4.8						

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*ISCJB **08** 20:06:03.4±0.3, 42.°28N±0.°02×13.°48E±0.°02, h9km±2km, Error ellipse: s-maj=3.2km s-min=2.7km az=153.4*
*ROM **08** 20:06:03.0±0.1, 42.°29N×13.°49E, h10km, Ml3.1/20, Error ellipse: s-maj=1.1km s-min=0.8km az=56.0*
*CSEM **08** 20:06:03.7±0.1, 42.°28N×13.°47E, h0km±1km, ML3.6/11, Error ellipse: s-maj=2.8km s-min=2.3km az=46.0*
*LDG **08** 20:06:06.5±0.9, 42.°41N×13.°37E, h2km, Ml2.6/8, Error ellipse: s-maj=17.5km s-min=13.4km az=106.0*
ISC 08 20:06:04.1±0.8**, 42.°28N**±0.°02×**13.°46E**±0.°02**, h8**km±5km**, n82, σ1.s41**/123**, 1C-4D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.08**	**327**⇓	*i*P	**Pg**	**20 06 05.9**	**-0.5**
AQU	**L'Aquila**	**0.08**	**327**	Pg	**Pg**	**20 06 06.1**	**-0.3**
AQU				Sg	**Sg**	**20 06 08.0**	**+0.1**
	8µm,0.3s						
AQU	**L'Aquila**	**0.08**	**327**⇓	*i*P	**Pg**	**20 06 05.9**	**-0.5**
AQU				Sg	**Sg**	**20 06 08.0**	**+0.1**
	8µm,0.3s						
FAGN	**Fagnano**	**0.09**	**101**⇓	*i*Pg	**Pg**	**20 06 05.6**	**-0.8**
FAGN				Sg	**Sg**	**20 06 07.1**	**-1.0**
FAGN	**Fagnano**	**0.09**	**101**⇓	*i*Pg	**Pg**	**20 06 05.6**	**-0.8**
FAGN				Sg	**Sg**	**20 06 07.1**	**-1.0**
CAMP	**Campotosto**	**0.26**	**351**	Pg	**Pg**	**20 06 08.8**	**-0.5**
CAMP				Sg	**Sg**	**20 06 12.9**	**+0.1**
	2µm,0.4s						
CAMP	**Campotosto**	**0.26**	**351**	Pg	**Pg**	**20 06 08.8**	**-0.5**
CAMP				Sg	**Sg**	**20 06 12.9**	**+0.1**
	2µm,0.4s						
FIAM	**Fiamignano**	**0.26**	**267**	Pg	**Pg**	**20 06 09.2**	**-0.1**
FIAM				Sg	**Sg**	**20 06 13.9**	**+1.1**
	3µm,0.3s						
FIAM	**Fiamignano**	**0.26**	**267**	Pg	**Pg**	**20 06 09.2**	**-0.1**
FIAM				Sg	**Sg**	**20 06 13.9**	**+1.1**
	3µm,0.3s						
PTQR	**Pietraquaria**	**0.27**	**190**	Pg	**Pg**	**20 06 09.7**	**+0.2**
PTQR				Sg	**Sg**	**20 06 14.1**	**+1.1**
PTQR	**Pietraquaria**	**0.27**	**190**	Pg	**Pg**	**20 06 09.7**	**+0.2**
VCEL	**Villa Celiera**	**0.30**	**68**	Pg	**Pg**	**20 06 09.3**	**-0.8**
VCEL				Sg	**Sg**	**20 06 14.4**	**+0.2**
	4µm,0.6s						
VCEL	**Villa Celiera**	**0.30**	**68**	Pg	**Pg**	**20 06 09.3**	**-0.8**
VCEL				Sg	**Sg**	**20 06 14.4**	**+0.2**
	4µm,0.6s						
TERO	**Teramo**	**0.35**	**17**	Pg	**Pg**	**20 06 10.1**	**-1.0**
TERO				Sg	**Sg**	**20 06 15.6**	**-0.2**
	3µm,0.3s						
TERO	**Teramo**	**0.35**	**17**	Pg	**Pg**	**20 06 10.1**	**-1.0**
TERO				Sg	**Sg**	**20 06 15.6**	**-0.2**
	3µm,0.3s						
INTR	**Introdacqua**	**0.43**	**129**	Pg	**Pg**	**20 06 11.5**	**-1.0**
INTR				Sg	**Sg**	**20 06 17.8**	**-0.3**
	1µm,0.4s						
INTR	**Introdacqua**	**0.43**	**129**	Pg	**Pg**	**20 06 11.5**	**-1.0**
INTR				Sg	**Sg**	**20 06 17.8**	**-0.3**
	1µm,0.4s						
VVLD	**Villa Vallelon**	**0.43**	**164**	Pg	**Pg**	**20 06 11.5**	**-1.0**
	2µm,0.7s						
VVLD	**Villa Vallelon**	**0.43**	**164**	Pg	**Pg**	**20 06 11.5**	**-1.0**
	2µm,0.7s						
LNSS	**Leonessa**	**0.45**	**316**	Pg	**Pg**	**20 06 12.3**	**-0.6**
LNSS				Sg	**Sb**	**20 06 19.9**	**-1.3**
	2µm,0.6s						
LNSS	**Leonessa**	**0.45**	**316**	Pg	**Pg**	**20 06 12.3**	**-0.6**
LNSS				Sg	**Sb**	**20 06 19.9**	**-1.3**
	2µm,0.6s						
CERT	**Cerreto**	**0.49**	**227**	Pg	**Pg**	**20 06 12.9**	**-0.7**
CERT				Sg	**Sg**	**20 06 20.7**	**+0.6**
	2µm,0.4s						
CERT	**Cerreto**	**0.49**	**227**	Pg	**Pg**	**20 06 12.9**	**-0.7**
CERT				Sg	**Sg**	**20 06 20.7**	**+0.6**
	2µm,0.4s						
GUAR	**Guarcino**	**0.50**	**193**	Pg	**Pg**	**20 06 12.9**	**-1.0**
	509nm,0.3s						
GUAR	**Guarcino**	**0.50**	**193**	Pg	**Pg**	**20 06 12.9**	**-1.0**
	509nm,0.3s						
MNS	**Montasola**	**0.59**	**280**	Pg	**Pg**	**20 06 14.6**	**-0.9**
	501nm,0.5s						
MNS	**Montasola**	**0.59**	**280**	Pg	**Pg**	**20 06 14.6**	**-0.9**
	501nm,0.5s						
POFI	**Posta Fibreno**	**0.59**	**162**	Pg	**Pg**	**20 06 14.6**	**-1.0**
POFI				Sg	**Sg**	**20 06 23.9**	**+0.5**
	384nm,0.7s						
POFI	**Posta Fibreno**	**0.59**	**162**	Pg	**Pg**	**20 06 14.6**	**-1.0**
POFI				Sg	**Sg**	**20 06 23.9**	**+0.5**
	384nm,0.7s						
NRCA	**Norcia**	**0.61**	**335**	Pg	**Pg**	**20 06 14.8**	**-1.1**
NRCA				Sg	**Sg**	**20 06 24.2**	**+0.3**
	975nm,0.2s						
NRCA	**Norcia**	**0.61**	**335**	Pg	**Pg**	**20 06 14.8**	**-1.1**
NRCA				Sg	**Sg**	**20 06 24.2**	**+0.3**
	975nm,0.2s						
TRTR	**Tortoreto Alta**	**0.62**	**32**	Pg	**Pg**	**20 06 16.1**	**0.0**
	2µm,0.7s						
TRTR	**Tortoreto Alta**	**0.62**	**32**	Pg	**Pg**	**20 06 16.1**	**0.0**
	2µm,0.7s						
SDI	**San Donato**	**0.63**	**156**	Pg	**Pg**	**20 06 14.8**	**-1.5**
SDI				Sg	**Sg**	**20 06 24.9**	**+0.4**
SDI	**San Donato**	**0.63**	**156**	Pg	**Pg**	**20 06 14.8**	**-1.5**
SDI				Sg	**Sg**	**20 06 24.9**	**+0.4**
CAFR	**Castel Frentan**	**0.66**	**95**	Pg	**Pg**	**20 06 16.0**	**-0.8**
	876nm,0.4s						
CAFR	**Castel Frentan**	**0.66**	**95**	Pg	**Pg**	**20 06 16.0**	**-0.8**
	876nm,0.4s						
OFFI	**Offida**	**0.67**	**14**	Pg	**Pg**	**20 06 16.9**	**-0.2**
	2µm,0.5s						
OFFI	**Offida**	**0.67**	**14**	Pg	**Pg**	**20 06 16.9**	**-0.2**
	2µm,0.5s						
CESX	**Cesi**	**0.73**	**297**	Pg	**Pg**	**20 06 17.4**	**-0.8**
	286nm,0.5s						
CESX	**Cesi**	**0.73**	**297**	Pg	**Pg**	**20 06 17.4**	**-0.8**
	286nm,0.5s						
RNI2	**Rionero Sannit**	**0.78**	**138**	Pg	**Pg**	**20 06 17.9**	**-1.2**
RNI2	**Rionero Sannit**	**0.78**	**138**	Pg	**Pg**	**20 06 17.9**	**-1.2**
FDMO	**Fiordimonte**	**0.80**	**340**	Pg	**Pg**	**20 06 18.0**	**-1.6**
	256nm,0.4s						
FDMO	**Fiordimonte**	**0.80**	**340**	Pg	**Pg**	**20 06 18.0**	**-1.6**
	256nm,0.4s						
CESI	**CESI - Serrava**	**0.83**	**330**	Pg	**Pg**	**20 06 18.7**	**-1.4**
	124nm,0.5s						
CESI	**CESI - Serrava**	**0.83**	**330**	Pg	**Pg**	**20 06 18.7**	**-1.4**
	124nm,0.5s						
MS1	**Monte Sant'Ang**	**1.94**	**107**	*e*Pn	**Pb**	**20 06 40.3**	**+0.6**
NVLJ	**Novalja**	**2.50**	**24**	*e*Pn	**Pn**	**20 06 44.6**	**-0.4**
NVLJ				Sn	**Sn**	**20 07 16.8**	**+1.1**
NVLJ	**Novalja**	**2.50**	**24**	*e*Pn	**Pn**	**20 06 44.6**	**-0.4**
NVLJ				Sn	**Sn**	**20 07 16.8**	**+1.1**
MAIM	**Mastiano**	**2.72**	**308**	P	**Pn**	**20 06 48.6**	**+0.5**
STON	**Ston**	**3.18**	**78**	*e*Pn	**Pn**	**20 06 54.7**	**+0.3**
STON				Sn	**Sn**	**20 07 30.8**	**-1.8**
STON	**Ston**	**3.18**	**78**	*e*Pn	**Pn**	**20 06 54.7**	**+0.3**
STON				Sn	**Sn**	**20 07 30.7**	**-1.8**
SKDS	**Skadanscina**	**3.29**	**7**	*i* Pn	**Pn**	**20 06 56.4**	**+0.5**
SKDS				*i* Sn	**Sn**	**20 07 35.7**	**+0.5**
SKDS							
	comp=Z,10.0nm,0.4s						
SKDS	**Skadanscina**	**3.29**	**7**	Pn	**Pn**	**20 06 56.4**	**+0.5**
SKDS				*i* Sn	**Sn**	**20 07 35.7**	**+0.5**
	comp=Z,10.0nm,0.4s						
PGF	**Pioggiola**	**3.32**	**276**	*e*Pn	**Pn**	**20 06 57.3**	**+0.9**
PGF				*e*Sn	**Sn**	**20 07 37.4**	**+1.4**
	comp=Z,7.9nm,0.8s						
PGF	**Pioggiola**	**3.32**	**276**	*e*Pn	**Pn**	**20 06 57.3**	**+0.9**
PGF				*e*Sn	**Sn**	**20 07 37.4**	**+1.4**
	comp=Z,4.0nm,0.8s						
VOY	**Vojsko**	**3.76**	**5**	*e*Pn	**Pn**	**20 07 03.8**	**+1.3**
VOY				*e*		20 07 13.8	
VOY				*e*Sn	**Sn**	**20 07 47.5**	**+0.5**
VOY	**Vojsko**	**3.76**	**5**	*e*Pn	**Pn**	**20 07 03.8**	**+1.3**
VOY				*e*Sn	**Sn**	**20 07 47.5**	**+0.5**
CRNS	**Crni Vrh**	**3.84**	**8**	*i* Pn	**Pn**	**20 07 06.0**	**+2.5**
CRNS				*i* Sn	**Sn**	**20 07 51.2**	**+2.4**
CRNS							
	comp=Z,6.0nm,0.4s						
ABTA	**Abfaltersbach**	**4.51**	**352**⇑	*i*Pn	**Pn**	**20 07 12.9**	**+0.1**
ABTA	**Abfaltersbach**	**4.51**	**352**	Pn	**Pn**	**20 07 12.9**	**+0.1**
SBF	**Sospel**	**4.69**	**292**	*e*Pn	**Pn**	**20 07 15.6**	**+0.4**
SBF				*e*Sn	**Sn**	**20 08 05.7**	**-4.1**
	comp=Z,2.2nm,0.4s						
SBF	**Sospel**	**4.69**	**292**	*e*Pn	**Pn**	**20 07 15.6**	**+0.4**
SBF				*e*Sn	**Sn**	**20 08 05.7**	**-4.1**
	comp=Z,1.1nm,0.4s						
DIVS	**Divibare**	**5.11**	**67**	*e*Pn	**Pn**	**20 07 22.2**	**+1.2**
FRF	**La Foret Royal**	**5.17**	**287**	*e*Pn	**Pn**	**20 07 21.9**	**+0.2**
FRF				*e*Sn	**Sn**	**20 08 16.8**	**-4.7**
	comp=Z,1.9nm,0.5s						
FRF	**La Foret Royal**	**5.17**	**287**	*e*Pn	**Pn**	**20 07 21.9**	**+0.2**
LMR	**La Mourre**	**5.22**	**284**	*e*Pn	**Pn**	**20 07 22.4**	**-0.1**
LMR				*e*Sn	**Sn**	**20 08 18.3**	**-4.6**
	comp=Z,1.3nm,0.5s						
LMR	**La Mourre**	**5.22**	**284**	*e*Pn	**Pn**	**20 07 22.4**	**-0.1**
MBDF	**Montbardon**	**5.45**	**299**	*e*P	**Pn**	**20 07 27.7**	**+2.0**
MBDF	**Montbardon**	**5.45**	**299**	*e*P	**Pn**	**20 07 27.7**	**+2.0**
GRUS	**Gruza**	**5.55**	**71**	*e*Pn	**Pn**	**20 07 28.7**	**+1.7**
LPG	**La Plagne**	**5.82**	**306**	*e*P	**Pn**	**20 07 33.6**	**+2.7**
LPG				*e*Sn	**Sn**	**20 08 32.7**	**-5.2**
	comp=Z,0.5nm,0.3s						
LPG	**La Plagne**	**5.82**	**306**	*e*P	**Pn**	**20 07 33.6**	**+2.7**
LPL	**La Plagne**	**5.84**	**306**	*e*P	**Pn**	**20 07 33.8**	**+2.6**
LPL				*e*Sn	Sn	20 08 31.9	-6.5
	comp=Z,1.1nm,0.3s						
LPL	**La Plagne**	**5.84**	**306**	*e*P	**Pn**	**20 07 33.8**	**+2.6**
SMRF	**Simiane la Rot**	**6.01**	**289**	*e*P	**Pn**	**20 07 35.1**	**+1.7**
SMRF	**Simiane la Rot**	**6.01**	**289**	*e*P	**Pn**	**20 07 35.1**	**+1.7**
HINF	**Hinteralfeld**	**7.25**	**322**	*e*Pn	**Pn**	**20 07 49.7**	**-0.6**
HINF				*e*Sn	Sn	20 09 06.1	-6.6
	comp=Z,2.3nm,0.4s						
HINF	**Hinteralfeld**	**7.25**	**322**	*e*Pn	**Pn**	**20 07 49.7**	**-0.6**
CDF	**Champ du Feu**	**7.52**	**327**	*e*Pn	**Pn**	**20 07 53.4**	**-0.7**
CDF				*e*Sn	Sn	20 09 13.1	-6.4
	comp=Z,1.0nm,0.3s						
CDF	**Champ du Feu**	**7.52**	**327**	*e*Pn	**Pn**	**20 07 53.4**	**-0.7**

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*IDC **08** 20:07:16.2±1.6, 30.°30N×132.°88E, h0km, ML2.5/2, MS2.6/1, Ms1 2.6/1, ms1mx1.9/41, Error ellipse: s-maj=59.8km s-min=27.0km az=86.0*
*JMA **08** 20:07:18.4±0.1, 30.°16N×132.°39E, h54km, M3.1*
ISC 08 20:07:20.6±2.6**, 30.°2N**±0.°1×**132.°3E**±0.°1**, h73**km±42km**, n12,** σ**0.s83**/14**, Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**1.21**	**292**	P	Pn	20 07 40.6	-1.3
JTN				S	**Sn**	**20 07 58.1**	**+0.2**
JTSR	**Tashiro 2**	**1.51**	**309**	P	**Pn**	**20 07 44.9**	**-1.0**
JTSR				*e*S	**Sn**	**20 08 05.6**	**+0.7**
JNAR	**Kushima--Naru**	**1.57**	**327**	P	**Pn**	**20 07 46.0**	**-0.7**
JNAR				*e*S	**Sn**	**20 08 06.1**	**-0.3**
JTZ	**Takazaki**	**1.97**	**329**	P	**Pn**	**20 07 51.5**	**-0.5**
JTZ				S	**Sn**	**20 08 16.3**	**+0.4**
JNN	**Nakanoshima**	**2.12**	**261**	P	**Pn**	**20 07 54.0**	**0.0**
JNN				*e*S	**Sn**	**20 08 20.0**	**+0.6**
JIU2	**Izumi 2**	**2.65**	**332**	P	**Pn**	**20 08 01.3**	**+0.2**
JIU2				*e*S	**Sn**	**20 08 32.8**	**+0.7**
JSJ	**Shimokoshiki**	**2.65**	**304**	P	Pn	20 08 00.2	-0.9
JSJ				S	**Sn**	**20 08 32.1**	**-0.1**
JNU	**Nakatsue**	**3.14**	**338**	Pn	**Pn**	**20 08 08.7**	**+0.8**
	0.6nm,0.3s,baz=153,slow=8.3,SNR=11						
JNU				Sn	**Sn**	**20 08 45.9**	**+1.7**
	5.7nm,0.3s,baz=154,slow=8.6,SNR=9.7						
JHJ	**Hachijo jima 2**	**7.02**	**64**	LR	LR	20 11 15.1	
	comp=Z,46nm,18.4s,baz=95,slow=36						
MJAR	**Matsushiro Arr**	**8.03**	**37**	Pn	Pn	20 09 09.6	-4.9
	0.1nm,0.3s,baz=210,slow=17,SNR=3.1						
WRA	**Warramunga Arr**	**49.90**	**177**	P	P	20 16 11.3	+4.4
	0.5nm,0.9s,baz=358,slow=7.8,SNR=4.1						
ASAR	**Alice Springs**	**53.59**	**178**	P	P	20 16 40.4	+6.1
	0.3nm,0.6s,baz=9.0,slow=13,SNR=5.6						

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*NIED **08** 20:50:00, 46.°00N×152.°20E, h44km, Mw4.3 Best double couple: M₀3.70000×10^15 NP1:φs132.00000°, δ68.00000°, λ-35.00000°. NP2:φs236.00000°, δ58.00000°, λ-154.00000°.*
*ISCJB **08** 20:50:35.4±0.6, 46.°02N±0.°04×152.°01E±0.°05, h48km±5km, mb4.6/108, MS3.6/11, Error ellipse: s-maj=7.8km s-min=4.8km az=142.6*
*JMA **08** 20:50:35.7±0.6, 45.°97N×152.°17E, h30km, M5.2*
*SKHL **08** 20:50:35.7±1.1, 46.°05N×152.°35E, h66km±12km, mb5.0/5, Ms3.7/2, msh5.7/1*
*BJI **08** 20:50:36.7, 46.°28N×152.°13E, h67km, mB4.8/20, mb4.7/36, Ms4.3/14, Ms7 4.0/15*
*MOS **08** 20:50:36.2±0.9, 46.°21N×151.°88E, h46km, mb4.8/53, Error ellipse: s-maj=8.6km s-min=5.2km az=100.1*
*NEIC **08** 20:50:39.7±0.6, 46.°22N×151.°88E, h66km±5km, mb4.8/46, Error ellipse: s-maj=7.0km s-min=4.2km az=144.0*
*IDC **08** 20:50:40.2±2.5, 46.°22N×151.°87E, h70km±21km, mb4.0/24, mb1 4.2/28, mb1mx4.1/32, mbtmp4.0/28, MS3.4/13, Ms1 3.4/13, ms1mx3.2/38, Error ellipse: s-maj=14.3km s-min=10.4km az=139.0*
*SZGRF **08** 20:50:52.2, 47.°70N×152.°29E, h115km, mb4.6, Kuril Islands, Russia*
ISC 08 20:50:38.9±0.5**, 45.°97N**±0.°05×**151.°99E**±0.°05**, h66**km±3km**, h66**km**:pP-P, n397,** σ**1.s24**/429**, mb4.6**/108**, 75C-25D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.99**	**257**⇑	*i*PN	**Pn**	**20 51 23.0**	**-0.8**
KUR				*e*S	**Sn**	**20 51 58.0**	**-0.4**
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
KUR				smax	smax		
	comp=N,2µm,0.5s						
KUR				smax	smax		
	comp=E,2µm,0.7s						
KUR				smax	smax		
	comp=N,5µm,2.0s						
KUR				smax	smax		
	comp=E,4µm,1.0s						
KUR	**Kuril'sk**	**2.99**	**257**⇑	*i*P	**Pn**	**20 51 23.0**	**-0.8**
KUR				AMB	AMB	20 51 24.0	
	comp=E,610nm,0.5s						
KUR				*e*S	**Sn**	**20 51 58.0**	**-0.4**
KUR				A	A	20 52 04.5	
	comp=E,5µm,2.0s						
KUR				A	A	20 52 04.5	
	comp=E,4µm,1.0s						
KUR				A	A	20 52 04.5	
	comp=E,2µm,0.6s						
KUR				A	A	20 52 04.5	
	comp=E,2µm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.76**	**248***d*	*i*PN	**Pn**	**20 51 48.7**	**+0.8**
YUK				*i* S	**Sn**	**20 52 43.6**	**+1.8**
YUK				pmax	pmax		
	comp=Z,378nm,0.5s						
YUK				pmax	pmax		
	comp=N,102nm,0.5s						
YUK				pmax	pmax		
	comp=E,127nm,0.2s						
YUK				smax	smax		
	comp=N,225nm,0.6s						
YUK				smax	smax		
	comp=E,570nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.76**	**248**⇓	*i*P	**Pn**	**20 51 48.8**	**+0.8**
YUK				*i* S	**Sn**	**20 52 43.7**	**+1.9**
YUK				A	A	20 52 58.4	
	comp=E,225nm,0.6s						
YUK				A	A	20 52 58.4	
	comp=E,570nm,0.6s						
NEM2	**Nemuro 2**	**5.16**	**242**	P	**Pn**	**20 51 52.0**	**-1.5**
NEM2				*e*S	**Sn**	**20 52 47.6**	**-4.1**
JRA	**Rausu**	**5.28**	**250**	P	**Pn**	**20 51 56.1**	**+1.0**
SKR	**Severo-Kuril's**	**5.46**	**29**	*e*PN	Pn	20 51 51.5	-6.0
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR	**Severo-Kuril's**	**5.46**	**29**	*e*P	Pn	20 51 51.5	-6.0
SKR				AMB	AMB	20 51 56.1	
	comp=Z,80nm,0.5s						
SKR				*e*S	Sn	20 52 49.4	-9.5
SKR				A	A	20 53 15.0	
	comp=Z,170nm,0.6s						
SKR				A	A	20 53 15.0	
	comp=Z,160nm,0.6s						
SKR				A	A	20 53 15.0	
	comp=Z,80nm,0.6s						
JNK	**Nakash**	**5.70**	**248**	P	**Pn**	**20 52 01.2**	**+0.3**
JAK	**Akkeshi**	**6.01**	**243**	P	**Pn**	**20 52 03.3**	**-1.7**
JAK				*e*S	**Sn**	**20 53 08.9**	**-3.5**
JTKR	**Abashiri--Toko**	**6.08**	**254**	P	**Pn**	**20 52 07.0**	**+1.0**
JMP	**Maruseppu**	**6.43**	**255**	P	**Pn**	**20 52 12.3**	**+1.4**
JAR	**Ashorobuto**	**6.45**	**248**	P	**Pn**	**20 52 11.5**	**+0.4**
JAR				*e*S	**Sn**	**20 53 23.3**	**+0.1**
YSS	**Yuzh-Sakhalins**	**6.46**	**282**⇑	*e*PN	**Pn**	**20 52 13.0**	**+1.8**
YSS				*e*S	**Sn**	**20 53 25.0**	**+1.6**
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				MLR	MLR		
	comp=Z,500nm,18.0s						
YSS				MLR	MLR		
	comp=E,400nm,17.0s						
YSS	**Yuzh-Sakhalins**	**6.46**	**282**	*e*P	**Pn**	**20 52 11.9**	**+0.8**
	comp=E,62nm,0.4s						
YSS	**Yuzh-Sakhalins**	**6.46**	**282**⇑	*e*P	**Pn**	**20 52 13.0**	**+1.8**
YSS				AMB	AMB	20 52 15.1	
	comp=E,60nm,1.0s						
YSS				*e*S	**Sn**	**20 53 25.0**	**+1.6**
YSS				AMS	AMS	20 54 28.0	
	comp=E,400nm,17.0s						
YSS				AMS	AMS	20 54 28.0	
	comp=E,500nm,18.0s						
JOB	**Onbets**	**6.60**	**245**	P	**Pn**	**20 52 12.5**	**-0.6**
JOB				*e*S	**Sn**	**20 53 24.6**	**-2.2**
JKK2	**Kamakawa 2**	**6.89**	**256**	P	**Pn**	**20 52 18.6**	**+1.4**
ASAJ	**Asahikawa**	**6.91**	**258**	*e*P	**Pn**	**20 52 19.2**	**+1.9**
	comp=E,38nm,1.0s						
ASAJ	**Asahikawa**	**6.91**	**258**	P	**Pn**	**20 52 19.3**	**+1.9**
ASAJ	**Asahikawa**	**6.91**	**258**	P	**Pn**	**20 52 19.3**	**+1.9**
	comp=E,11nm,0.3s,baz=81,slow=16,SNR=112						
JCH	**Churui**	**7.04**	**245**	*e*S	**Sn**	**20 53 34.2**	**-3.6**
JWK2	**Keihoku**	**7.11**	**268**	P	Pn	20 52 23.6	+3.5
JFR	**Furan**	**7.28**	**251**	P	**Pn**	**20 52 23.1**	**+0.7**
JAB	**Ashibetsu**	**7.38**	**254**	P	**Pn**	**20 52 25.6**	**+1.8**
UGL	**Uglegorsk**	**7.41**	**298**⇑	*i*PN	**Pn**	**20 52 25.3**	**+1.2**
UGL				S	**Sn**	**20 53 48.0**	**+1.4**
UGL				pmax	pmax		
	comp=Z,150nm,0.4s						
UGL				smax	smax		
	comp=E,95nm,0.6s						
UGL				smax	smax		
	comp=N,39nm,0.5s						
UGL	**Uglegorsk**	**7.41**	**298**⇑	*i*P	**Pn**	**20 52 25.3**	**+1.2**
UGL				AMB	AMB	20 52 26.0	
	comp=N,150nm,0.4s						
UGL				*e*S	**Sn**	**20 53 48.0**	**+1.4**
UGL				A	A	20 53 49.0	
	comp=N,39nm,0.6s						
UGL				A	A	20 53 49.0	
	comp=N,95nm,0.6s						
UGL				*e*L	L	20 54 32.0	
JEM	**Erimo**	**7.50**	**241**	*e*S	Sn	20 53 42.4	-6.5
ERM	**Erimo**	**7.50**	**241***d*	*i*PN	**Pn**	**20 52 25.6**	**+0.2**
ERM	**Erimo**	**7.50**	**241**	*e*P	**Pn**	**20 52 25.7**	**+0.3**
	comp=N,114nm,0.4s						
JBT2	**Biratori 2**	**7.60**	**249**	P	**Pn**	**20 52 26.0**	**-0.9**
JNBK	**Urakawa-nobuka**	**7.60**	**244**	P	**Pn**	**20 52 25.0**	**-1.9**
JNBK				*e*S	Sn	20 53 44.7	-6.8
TYV	**Tymovskoe**	**7.91**	**312**	*e*P	**Pn**	**20 52 30.5**	**-0.5**

TYV AMB AMB 20 52 32.2
comp=N,14nm,0.6s
TYV AMB AMB 20 52 32.2
comp=N,21nm,0.6s
TYV AMS AMS 20 55 38.0
comp=N,1µm,14.0s
TYV AMS AMS 20 55 38.0
comp=N,500nm,18.0s
PEA0B Petropavlovsk- 8.05 25 P **Pn 20 52 30.8 -2.1**
PETK Petropavlovsk- 8.05 25 PN **Pn 20 52 31.3 -1.7**
PETK pmax pmax
comp=Z,1.0nm,0.3s
PETK Petropavlovsk- 8.05 25 P **Pn 20 52 31.2 -1.7**
PETK Petropavlovsk- 8.05 25 P **Pn 20 52 31.2 -1.7**
comp=Z,1.0nm,0.3s,baz=180,slow=13,SNR=14
PETK LR LR 20 55 33.6
comp=Z,93nm,20.5s,baz=32,slow=37
JEW Eniwo 8.17 251 P **Pn 20 52 35.3 +0.6**
JNB Noboribetsu 8.61 250 P **Pn 20 52 39.6 -1.0**
JNB eS **Sn 20 54 12.9 -3.3**
JKB Kayabe 8.90 247 P **Pn 20 52 42.9 -1.7**
JKB eS **Sn 20 54 17.6 -5.6**
JSH Shimam 9.19 253 P **Pn 20 52 48.7 +0.1**
JYM2 Yakumo 2 9.21 249 P **Pn 20 52 47.6 -1.3**
JANG Nango 9.48 238 P Pn 20 52 48.4 -4.1
JANG eS Sn 20 54 27.6 -10
JSR Shiriuchi 9.48 246 P **Pn 20 52 50.5 -2.0**
JTM Tenmabayashi 9.49 241 P **Pn 20 52 49.6 -3.1**
JTM eS Sn 20 54 28.8 -8.9
JTH Tanohata 9.56 235 P Pn 20 52 49.0 -4.6
JTH eS Sn 20 54 28.9 -11
JOSM Okushiri--Mats 9.82 251 P **Pn 20 52 55.7 -1.4**
OFUJ Ofunato 10.26 232 P Pn 20 52 59.6 -3.7
OFUJ eS Sn 20 54 46.5 -10
JRG Rokugo 10.63 236 P Pn 20 53 05.0 -3.2
JRG eS Sn 20 54 55.4 -10
JOG2 Oga 2 10.79 240 P **Pn 20 53 08.5 -2.0**
JIO Ouri 10.89 230 P Pn 20 53 07.7 -4.1
JIO eS Sn 20 55 01.0 -11
JYA Atsumi 11.70 235 P **Pn 20 53 19.9 -2.9**
MJAR Matsushiro Arr 13.99 233 P **Pn 20 53 51.0 -2.8**
MJAR Matsushiro Arr 13.99 233 P **Pn 20 53 51.0 -2.8**
comp=Z,0.6nm,0.3s,baz=30,slow=13,SNR=29
MJAR LR LR 21 00 10.3
comp=Z,83nm,18.7s,baz=60,slow=40
MAJO Matsushiro 13.99 233 *e*P Pn 20 53 50.5 -3.3
MAJO pmax pmax
comp=Z,18nm,0.6s
MAJO Matsushiro 13.99 233 *e*P Pn 20 53 50.5 -3.3
comp=Z,18nm,0.6s
MAJO *e* 20 54 01.5
MAT Matsushiro 13.99 233 P Pn 20 53 50.4 -3.4
MAT eS Sn 20 56 35.0 +7.5
KLR Kul'dur 14.04 291 *e*P Pn 20 53 51.0 -3.3
JNG Nsakai 14.15 232 P **Pn 20 53 53.5 -2.5**
USRK Ussuriysk Arra 14.24 270 P **Pn 20 53 56.8 -0.2**
comp=Z,1.5nm,0.3s,baz=81,slow=14,SNR=25
USRK LR LR 20 59 23.4
comp=Z,157nm,19.6s,baz=342,slow=37
JGN Niukaw 14.72 234 P **P 20 54 09.7 +1.8**
MDJ Mudanjiang 15.82 273 P **Pn 20 54 17.4 +0.1**
MDJ pmax pmax
comp=Z,9.0nm,0.7s
MDJ pmax pmax
comp=Z,49nm,5.2s
JHJ Hachijo jima 2 15.89 220 LR LR 21 01 23.5
comp=Z,37nm,18.9s,baz=240,slow=40
SEY Seymchan 17.00 1 *i*P **Pn 20 54 30.9 -1.0**
ZEA Zeya 17.68 305 *e*P **Pn 20 54 36.4 -4.0**
ZEA AMB AMB 20 54 39.4
comp=Z,21nm,1.2s
CN2 Changchun 18.91 273 *e*P **Pn 20 54 56.0 +0.8**
KSRS Korea Array 19.83 253 P **P 20 55 04.7 +0.6**
comp=Z,1.0nm,0.3s,baz=57,slow=11,SNR=42
KSRS PcP **PcP 20 59 20.6 +1.4**
comp=Z,0.2nm,0.3s,baz=106,slow=1.0,SNR=5.4
KSRS LR LR 21 01 45.3
comp=Z,107nm,19.5s,baz=349,slow=34
KSAR Wonju Array Be 19.86 253 P **P 20 55 04.7 +0.3**
KSAR PcP **PcP 20 59 20.6 +1.3**
YAK Yakutsk 20.58 329 *e*P **P 20 55 10.1 -1.8**
YAK pmax pmax
comp=E,35nm,1.3s
YAK pmax pmax
comp=Z,91nm,1.0s
YAK pmax pmax
comp=N,23nm,0.9s
YAK Yakutsk 20.58 329 *e*P **P 20 55 08.9 -3.1**
comp=N,97nm,0.8s
JNU Nakatsue 20.65 239 P Pn 20 55 15.1 -0.8
JNU Nakatsue 20.65 239 P Pn 20 55 15.1 -0.9
comp=N,9.0nm,0.9s,baz=4.8,slow=12,SNR=2.5
JNU LR LR 21 04 27.3
comp=N,89nm,18.2s,baz=44,slow=40
BILL Bilibino 23.33 14 *e*P P 20 55 34.2 -6.6
BILL pmax pmax
comp=Z,4.0nm,0.6s
BILL Bilibino 23.33 14 *e*P P 20 55 34.2 -6.6
comp=Z,3.6nm,0.6s
TIXI Tiksi 28.01 345 *i*P **P 20 56 20.8 -2.2**
TIXI pmax pmax
comp=Z,4.0nm,2.3s
NJ2 Nanjing 29.03 253 *e*P P 20 56 43.7 +11
NJ2 pmax pmax
comp=Z,10.0nm,0.9s
HHC Hu-ho-hao-te 29.58 275 *e*P **P 20 56 37.0 -0.5**
HHC pP **pP 20 56 51.8 -1.6**
HHC sP **sP 20 56 59.3 -1.9**
HHC PP **PnPn 20 57 34.3 -0.5**
HHC S **S 21 01 25.8 -2.0**
HHC SS **SnSn 21 03 00.9 -0.8**
HHC pmax pmax
comp=Z,13nm,0.9s
HHC pmax pmax
comp=Z,130nm,5.6s
HHC LR LR
comp=N,190nm,15.3s
HHC LR LR
comp=E,210nm,15.9s
HHC LR LR
comp=Z,280nm,14.9s
SONM Songino Array 30.87 290 P **P 20 56 49.1 +0.3**
SONM PcP **PcP 20 59 43.4 -0.7**
SONM Songino Array 30.87 290 P **P 20 56 49.1 +0.3**
comp=Z,0.4nm,0.3s,baz=80,slow=7.6,SNR=7.5
SONM PcP **PcP 20 59 43.4 -0.7**
comp=Z,0.8nm,0.7s,baz=131,slow=2.9,SNR=5.3
SONM LR LR 21 10 14.1
comp=Z,65nm,18.2s,baz=235,slow=38
ZAK Zakamensk 32.31 296 *e*P P 20 56 58.2 -3.2
ZAK pmax pmax
comp=Z,1.0nm,0.9s
GUMO Guam 32.83 193 LR LR 21 11 25.8
comp=Z,68nm,18.8s,baz=65,slow=38
XAN Xi'an 34.68 265 P **P 20 57 22.3 +0.2**
XAN pP **pP 20 57 37.4 -0.8**
XAN pmax pmax
comp=Z,3.0nm,0.8s
XAN pmax pmax
comp=Z,16nm,4.7s
TRF Thorofare Moun 36.14 40 *e*P **P 20 57 33.0 -1.4**
SML Sawmill 37.07 43 *e*P **P 20 57 41.4 -0.8**
SML pmax pmax
comp=Z,3.0nm,0.7s
SML Sawmill 37.07 43 *e*P **P 20 57 41.4 -0.8**
comp=Z,2.6nm,0.7s
LZH Lanzhou 37.14 272 *e*P **P 20 57 44.4 +1.2**
LZH pP **pP 20 58 01.5 +2.0**
LZH sP **sP 20 58 08.0 +0.8**
LZH pmax pmax
comp=Z,22nm,1.0s
COLA College 37.23 38‖ *e*P **P 20 57 43.7 +0.3**
ILAR Eielson Array 37.64 38 P **P 20 57 46.1 -0.8**
ILAR Eielson Array 37.64 38 P **P 20 57 46.1 -0.8**
comp=Z,0.5nm,0.5s,baz=256,slow=7.6,SNR=9.9
GTA Gaotai 38.33 279 *e*P **P 20 57 54.5 +1.3**
GTA pP **pP 20 58 11.0 +1.5**
GTA sP **sP 20 58 19.7 +2.5**
GTA pmax pmax
comp=Z,6.0nm,1.0s
CD2 Chengdu 40.04 265 P **P 20 58 05.0 -2.5**
CD2 pP **pP 20 58 22.3 -1.6**
CD2 sP **sP 20 58 30.8 -0.7**
CD2 PP **PP 20 59 41.7 +1.2**
CD2 ScP **ScP 21 03 51.8 -2.5**
CD2 PcS **PcS 21 03 59.5 -2.2**
CD2 S **S 21 04 04.1 -4.4**
CD2 sS **sS 21 04 33.8 -2.6**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,100nm,5.2s
GYA Guiyang 40.79 257 *e*P **P 20 58 15.0 +1.2**
GYA pmax pmax
comp=Z,10.0nm,0.8s
ZALV Zalesovo Beam 42.44 306 P **P 20 58 25.2 -1.6**
ZALV 21 00 18.6
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV MLR MLR
comp=Z,121nm,19.0s
ZALV Zalesovo Beam 42.44 306 P **P 20 58 25.1 -1.6**
ZALV PcP **PcP 21 00 18.6 0.0**
ZALV Zalesovo Beam 42.44 306 P **P 20 58 25.1 -1.6**
comp=Z,0.9nm,0.5s,baz=72,slow=7.8,SNR=5.1
ZALV PcP **PcP 21 00 18.6 0.0**
comp=Z,1.6nm,0.5s,baz=64,slow=3.4,SNR=11
ZALV LR LR 21 17 12.5
comp=Z,121nm,19.0s,baz=76,slow=38
KMI Kunming 44.34 259 P **P 20 58 45.5 +2.8**
KMI pmax pmax
comp=Z,3.0nm,1.5s
WMQ Urumqi 44.49 291 P **P 20 58 44.0 +0.5**
WMQ pP **pP 20 59 02.0 +1.9**
WMQ sP **sP 20 59 11.0 +3.3**
WMQ PP **PP 21 00 29.0 +0.9**
WMQ ScP **ScP 21 04 11.0 -0.9**
WMQ S **S 21 05 12.0 -1.7**
WMQ sS **sS 21 05 44.0 +2.0**
WMQ pmax pmax
comp=Z,14nm,0.8s
WMQ pmax pmax
comp=Z,110nm,5.0s
WMQ LR LR
comp=N,130nm,14.0s
WMQ LR LR
comp=E,120nm,14.0s
WMQ LR LR
comp=Z,87nm,14.0s
MK31 Makanchi Array 46.61 298 *e*P **P 20 58 58.3 -1.9**
MK31 *e* 21 00 33.3
MK31 Makanchi Array 46.61 298 *e*P **P 20 58 58.3 -1.9**
MK31 *e*PcP **PcP 21 00 33.3 +0.3**
MKAR Makanchi Array 46.61 298 P **P 20 58 58.4 -1.8**
MKAR 21 00 33.6
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR MLR MLR
comp=Z,75nm,19.9s
MKAR Makanchi Array 46.61 298 P **P 20 58 58.4 -1.8**
MKAR PcP **PcP 21 00 33.5 +0.5**
MKAR Makanchi Array 46.61 298 P **P 20 58 58.4 -1.8**
comp=Z,2.7nm,0.8s,baz=70,slow=7.8,SNR=27
MKAR PcP **PcP 21 00 33.5 +0.5**
comp=Z,1.7nm,0.6s,baz=121,slow=0.4,SNR=12
MKAR LR LR 21 19 33.6
comp=Z,75nm,19.9s,baz=247,slow=37
KURK Kurchatov 47.15 304 *i*P **P 20 59 02.2 -2.0**
KURK pmax pmax
comp=Z,3.0nm,0.6s
KURK Kurchatov 47.15 304 *e*P P 20 59 01.2 -3.0
comp=Z,4.7nm,0.7s
LSA Lhasa 49.54 273 P **P 20 59 24.8 +1.3**
BVAR Borovoye Array 50.76 310 P **P 20 59 30.8 -1.0**
BVAR 21 00 48.3
BVAR pmax pmax
comp=Z,2.0nm,0.5s
BVAR Borovoye Array 50.76 310 P **P 20 59 30.8 -1.0**
BVAR PcP **PcP 21 00 48.3 +0.4**
BVAR Borovoye Array 50.76 310 P **P 20 59 30.8 -1.0**
comp=Z,1.8nm,0.5s,baz=56,slow=6.9,SNR=8.7
BVAR PcP **PcP 21 00 48.3 +0.4**
comp=Z,1.3nm,0.5s,baz=90,slow=3.0,SNR=5.5
BRVK Borovoye 50.80 310 *i*P **P 20 59 31.1 -1.0**
BRVK pmax pmax
comp=Z,3.0nm,0.6s
CHTO Chiang Mai 51.18 256 *e*P **P 20 59 36.8 +1.4**
CHTO pmax pmax
comp=Z,10.0nm,0.9s
CHTO Chiang Mai 51.18 256 *e*P **P 20 59 36.8 +1.4**
comp=Z,10nm,0.9s
CMAR Chiang Mai Arr 51.43 256 P **P 20 59 39.0 +1.7**
CMAR Chiang Mai Arr 51.43 256 P **P 20 59 39.0 +1.7**
comp=Z,5.3nm,0.8s,baz=37,slow=7.4,SNR=52
RES Resolute Bay 51.82 18 *e*P **P 20 59 38.8 -0.7**
comp=Z,3.2nm,1.0s
YKA Yellowknife Ar 52.01 36 P **P 20 59 41.2 +0.2**
YKA Yellowknife Ar 52.01 36 P **P 20 59 41.2 +0.2**
comp=Z,1.6nm,0.5s,baz=296,slow=7.2,SNR=16
TAPN Taplejung 53.37 273 *e*P **P 20 59 53.2 +1.3**
comp=Z,24nm,0.8s
AAK Ala-Archa 53.49 296 P **P 20 59 51.7 -0.7**
AAK pmax pmax
comp=Z,2.0nm,0.7s
AAK Ala-Archa 53.49 296 P **P 20 59 51.7 -0.7**
AAK Ala-Archa 53.49 296 P **P 20 59 51.7 -0.7**
comp=Z,1.9nm,0.7s,baz=86,slow=4.5,SNR=15
SVE Sverdlovsk 53.88 317 *e*P **P 20 59 54.0 -0.8**
SVE pmax pmax
comp=Z,5.0nm,0.7s
ODAN Odare 53.90 273 *e*P **P 20 59 56.9 +1.2**
EKS2 Erkin-Say 53.92 297 *e*P **P 20 59 54.9 -0.6**
EKS2 pmax pmax
comp=Z,2.0nm,0.6s
EKS2 Erkin-Say 53.92 297 *e*P **P 20 59 54.9 -0.6**
comp=Z,2.3nm,0.6s
KSH Kashi 54.23 292 P P 21 00 01.9 +4.0
KSH pP pP 21 00 17.8 +2.8
KSH sP sP 21 00 24.8 +2.3
KSH PcP **PcP 21 01 04.7 +3.3**
KSH PP PP 21 02 05.7 +5.8
KSH ScP **ScP 21 04 56.5 +2.9**
KSH PcS **PcS 21 05 02.8 +1.8**
KSH S **S 21 07 33.5 +3.3**
KSH sS sS 21 08 00.7 +1.5
KSH ScS **ScS 21 09 41.9 +0.9**
KSH SS **SS 21 11 16.7 +4.3**
KSH pmax pmax
comp=Z,6.0nm,0.5s
KSH LR LR
comp=N,87nm,4.4s
KSH LR LR
comp=E,41nm,4.7s
KSH LR LR
comp=Z,270nm,4.6s
GUN Gumba 54.30 275 *e*P **P 20 59 59.3 +0.6**
comp=Z,18nm,0.4s
RAMN Ramite 54.39 273 *e*P **P 20 59 59.9 +0.6**
comp=Z,25nm,0.4s
KKN Kakani 54.79 275 *e*P **P 21 00 03.4 +1.3**
PKI Pulchoki 54.83 275 *e*P **P 21 00 03.1 +0.5**
comp=Z,9.5nm,0.4s
PKIN Phulchoki 54.84 275 *e*P **P 21 00 03.1 +0.6**
comp=Z,4.9nm,0.3s
DMN Daman 55.02 275 *e*P **P 21 00 04.8 +0.9**
ARU Arti 55.06 317 *d i*P **P 21 00 01.7 -1.7**
ARU 21 02 04.0
ARU S **S 21 07 38.5 -2.1**
ARU pmax pmax
comp=Z,4.0nm,0.7s
ARU Arti 55.06 317 *e*P **P 21 00 01.4 -2.0**
comp=Z,3.5nm,0.4s
DANN Dangsing 55.49 277 *e*P **P 21 00 08.5 +1.2**
comp=Z,71nm,0.6s
KKAR Karatay Array 55.70 299 *e*P **P 21 00 07.7 -0.5**
KKAR pmax pmax
comp=Z,1.0nm,0.3s
KKAR Karatay Array 55.70 299 *e*P **P 21 00 07.7 -0.5**
comp=Z,0.9nm,0.3s
KOLN Koldanda 55.96 276 *e*P **P 21 00 11.6 +1.0**
PYUN Piuthan 56.18 277 *e*P **P 21 00 12.8 +0.7**
ABKAR Akbulak array 58.33 310 *e*P **P 21 00 25.1 -1.6**
comp=Z,1.9nm,0.4s
ARCES ARCESS Array B 58.33 341 P **P 21 00 25.9 -0.5**
ARCES ARCESS Array B 58.33 341 P **P 21 00 25.9 -0.5**
comp=Z,1.2nm,0.5s,baz=41,slow=6.7,SNR=23
KLMR Klimovskoe 60.37 329 P **P 21 00 38.2 -2.3**
KLMR pmax pmax
comp=Z,10.0nm,1.5s
SUMG Summit 61.53 4 *e*P **P 21 00 48.1 -0.7**
SUMG pmax pmax
comp=Z,12nm,1.0s
SUMG Summit 61.53 4 *e*P **P 21 00 48.0 -0.7**
comp=Z,12nm,1.0s
KBL Kabul 61.63 291 *e*P **P 21 00 48.9 -0.9**
KBL pmax pmax
comp=Z,10.0nm,0.9s
KBL Kabul 61.63 291 *e*P **P 21 00 48.9 -0.9**
comp=Z,10.0nm,0.9s
FFC Flin Flon 61.83 39 *i*P **P 21 00 51.4 +0.8**
LRM Limekiln Ridge 62.28 52 *e*P **P 21 00 54.5 +0.4**
comp=Z,39nm,0.8s
PSI Prapat 63.04 244 P **P 21 01 01.8 +2.5**
PSI Prapat 63.04 244 P **P 21 01 01.8 +2.5**
comp=Z,2.2nm,0.4s,baz=48,slow=13,SNR=7.7
NVAR Mina Array Bea 63.48 61 P **P 21 01 03.5 +1.4**
NVAR Mina Array Bea 63.48 61 P **P 21 01 03.5 +1.4**
comp=Z,1.8nm,0.6s,baz=287,slow=6.4,SNR=9.6
FINES FINESS Array B 64.41 334 P **P 21 01 05.8 -1.7**
FINES FINESS Array B 64.41 334 P **P 21 01 05.8 -1.7**
comp=Z,3.1nm,0.4s,baz=41,slow=6.7,SNR=25
TPAW Teton Pass 64.59 53 *e*P **P 21 01 11.1 +1.7**
comp=Z,3.7nm,0.9s
OBN Obninsk 65.51 325 *i*P **P 21 01 15.3 +0.6**
OBN *e* 21 01 47.1
OBN pmax pmax
comp=Z,3.0nm,0.9s
PDAR Pinedale Array 65.83 53 P **P 21 01 17.8 +0.4**
PDAR Pinedale Array 65.83 53 P **P 21 01 17.8 +0.4**
comp=Z,2.8nm,0.8s,baz=285,slow=1.5,SNR=19
VSR Storozhevoye 67.23 321 *e*P **P 21 01 23.6 -2.2**
VSR pmax pmax
comp=N,5.0nm,0.8s
VSR pmax pmax
comp=E,6.0nm,0.8s
VSR pmax pmax
comp=Z,5.0nm,0.8s
WRA Warramunga Arr 67.53 198 P **P 21 01 28.9 +1.0**
WRA Warramunga Arr 67.53 198 P **P 21 01 28.9 +1.0**
comp=Z,1.2nm,0.7s,baz=18,slow=6.8,SNR=7.5
FITZ Fitzroy Crossi 68.09 207 P **P 21 01 33.4 +1.9**
FITZ Fitzroy Crossi 68.09 207 P **P 21 01 33.4 +1.9**
comp=Z,2.9nm,0.7s,baz=33,slow=5.0,SNR=6.3
NB2 NORSAR Subarra 68.71 341 P **P 21 01 33.7 -1.3**
comp=Z,9.7nm,1.0s,baz=28,slow=6.5
NOA NORSAR Array B 68.71 341 P **P 21 01 33.6 -1.3**
NOA NORSAR Array B 68.71 341 P **P 21 01 33.6 -1.3**
comp=Z,3.0nm,0.5s,baz=28,slow=6.4,SNR=31
NOA LR LR 21 33 01.4
comp=Z,28nm,20.3s,baz=50,slow=37
ISCO Idaho Springs 70.03 53 *e*P **P 21 01 43.9 +0.1**
ISCO pmax pmax
comp=Z,2.0nm,0.8s
ISCO Idaho Springs 70.03 53 *e*P **P 21 01 43.9 +0.1**
comp=Z,2.2nm,0.8s
KIV Kislovodsk 70.78 314 *e*P **P 21 01 48.7 +0.6**
KIV pmax pmax
comp=Z,5.0nm,0.7s
KIV MLR MLR
comp=Z,43nm,19.0s
KIV Kislovodsk 70.78 314 *e*P **P 21 01 48.3 +0.2**
comp=Z,5.7nm,0.7s
KBZ Khabaz 70.84 314 P **P 21 01 48.9 +0.7**
KBZ pmax pmax
comp=Z,6.0nm,0.6s
KBZ MLR MLR
comp=Z,59nm,19.4s
KBZ Khabaz 70.84 314 P **P 21 01 48.9 +0.7**
KBZ Khabaz 70.84 314 P **P 21 01 48.9 +0.7**
comp=Z,5.7nm,0.6s,baz=71,slow=3.9,SNR=20
KBZ LR LR 21 37 20.8
comp=Z,59nm,19.4s,baz=279,slow=40
ASAR Alice Springs 71.23 198 P **P 21 01 52.9 +2.1**
ASAR Alice Springs 71.23 198 P **P 21 01 52.9 +2.1**
comp=Z,0.5nm,0.5s,baz=14,slow=5.3,SNR=9.0
AKASG Malin Array Be 71.76 326 P **P 21 01 52.2 -1.5**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG Malin Array Be 71.76 326 P **P 21 01 52.2 -1.5**
AKASG Malin Array Be 71.76 326 P **P 21 01 52.2 -1.5**
comp=Z,3.7nm,0.4s,baz=34,slow=6.3,SNR=12
KIEV Kiev 71.77 326⇑ *e*P **P 21 01 52.5 -1.3**
AK01 Malin Array Si 71.77 326 *e*P **P 21 01 52.3 -1.5**
AK02 Malin Array Si 71.80 326 *e*P **P 21 01 52.5 -1.4**
SCHQ Schefferville 74.33 22 P **P 21 02 08.1 -0.7**
SCHQ Schefferville 74.33 22 P **P 21 02 08.1 -0.7**
comp=Z,3.6nm,0.8s,baz=76,slow=2.4,SNR=11
KWP Kalwaria Pacla 75.09 329⇑‖ P **P 21 02 13.5 +0.1**
KWP Kalwaria Pacla 75.09 329⇑*i*P **P 21 02 13.5 +0.1**
KWP Kalwaria Pacla 75.09 329 *e*P **P 21 02 13.4 +0.1**
BSEG Bad Segeberg 75.26 338 *e*P **P 21 02 14.2 0.0**
BSEG pmax pmax
comp=Z,7.0nm,0.9s
BSEG Bad Segeberg 75.26 338 *e*P **P 21 02 14.2 0.0**
comp=Z,7.0nm,0.9s
LEOM Leova 75.51 324⇑‖ P **P 21 02 15.7 0.0**
LEOM Leova 75.51 324⇑*i*P **P 21 02 15.7 0.0**
OJC Ojcow 75.62 331 *e*P **P 21 02 16.2 -0.2**
OJC Ojcow 75.62 331 *e*P **P 21 02 16.2 -0.2**
BUR08 Bucovina Ar. S 75.79 326 *e*P **P 21 02 17.2 -0.3**
KOLS Kolonicke sedl 75.83 328 *e*P **P 21 02 17.4 -0.2**
TESR 76.14 325⇑*i*P **P 21 02 19.2 -0.1**
CRVS Cervenica-Dubn 76.15 329 *e*P **P 21 02 19.0 -0.4**
CRVS *es*P **sP 21 02 44.3 -0.4**
TLCR 76.30 322‖‖P **P 21 02 20.4 +0.1**
TLCR 76.30 322‖*i*P **P 21 02 20.4 +0.1**
TRPA Tarpa 76.40 328⇑*i*P **P 21 02 21.3 +0.5**
CFR Carcaliu 76.60 323⇑P **P 21 02 21.8 -0.1**
CFR Carcaliu 76.60 323⇑*i*P **P 21 02 21.8 -0.1**
NRDL Niedersach Rie 76.61 337 *e*P **P 21 02 21.8 0.0**
comp=Z,4.0nm,0.8s
UPC Upice 76.63 333 *e*P **P 21 02 22.7 +0.6**
VRI Vrincioaia 76.63 324‖P **P 21 02 22.5 +0.3**
VRI Vrincioaia 76.63 324‖*i*P **P 21 02 22.5 +0.3**
DPC Dobruska-Polom 76.67 333 *e*P **P 21 02 22.5 +0.2**
MORC Moravsky Berou 76.76 332‖P **P 21 02 23.3 +0.4**
MORC Moravsky Berou 76.76 332 *e*P **P 21 02 22.4 -0.5**
comp=Z,4.0nm,0.8s
MORC Moravsky Berou 76.76 332‖*i*P **P 21 02 23.3 +0.4**
CLL Collm 76.85 335 *i*P **P 21 02 22.6 -0.7**
CLL pmax pmax
comp=Z,15nm,1.2s
CLL Collm 76.85 335 *e*P **P 21 02 22.9 -0.4**
comp=Z,5.0nm,0.8s
CLL Collm 76.85 335 *i*P **P 21 02 22.6 -0.7**
comp=Z,15nm,1.2s
TIRR Tirgusor 77.06 322‖‖P **P 21 02 24.9 +0.4**
TIRR Tirgusor 77.06 322‖*i*P **P 21 02 24.9 +0.4**
PVCC Panska Ves 77.06 334 *e*P **P 21 02 27.3 +2.8**
DOPR Dopca 77.09 325‖*i*P P 21 02 20.3 -4.4
MALT Malatya 77.11 312‖‖P **P 21 02 26.8 +1.7**
MALT Malatya 77.11 312 *e*P **P 21 02 26.2 +1.1**
comp=Z,11nm,1.1s
MALT Malatya 77.11 312‖*i*P **P 21 02 26.8 +1.7**
CLZ Clausthal 77.12 337 *e*P **P 21 02 24.4 -0.5**
CLZ pmax pmax
comp=Z,5.0nm,0.7s
CLZ Clausthal 77.12 337 *e*P **P 21 02 24.4 -0.5**
comp=Z,5.0nm,0.7s
ISR Istrita 77.31 324‖‖P **P 21 02 26.9 +0.8**
ISR Istrita 77.31 324‖*i*P **P 21 02 26.9 +0.8**
VYHS Vyhne 77.42 330 *e*P **P 21 02 26.8 +0.2**
DRGR 77.45 327⇑P **P 21 02 27.3 +0.5**
DRGR 77.45 327⇑*i*P **P 21 02 27.3 +0.5**
VRAC Vranov 77.48 332‖*i*P **P 21 02 27.6 +0.7**
PRU Pruhonice 77.54 333 *e*P **P 21 02 27.2 0.0**
VOIR 77.66 325‖‖P **P 21 02 28.9 +0.9**
VOIR 77.66 325‖*i*P **P 21 02 28.9 +0.9**
SULR 77.79 324⇑*i*P **P 21 02 29.5 +0.9**
TANN Tannenbergstha 77.80 335 *e*P **P 21 02 28.6 -0.1**
comp=Z,2.0nm,0.8s
MOX Moxa 77.84 335 *e*P **P 21 02 28.9 0.0**
MOX pmax pmax
comp=Z,4.0nm,1.0s
MOX Moxa 77.84 335 *e*P **P 21 02 28.9 0.0**
comp=Z,4.0nm,1.0s
TREC Trest 77.85 333 *e*P **P 21 02 29.0 0.0**
TREC Trest 77.85 333 *e*P **P 21 02 29.0 0.0**
ARR Arges 77.88 325‖*i*P **P 21 02 30.3 +1.0**
SMOL Smolenice 77.89 331 *e*P **P 21 02 30.1 +1.0**
NKC Novy Kostel 77.97 335 *e*P **P 21 02 29.7 +0.1**
STKA Stephens Creek 78.05 189 P **P 21 02 31.6 +1.6**
STKA Stephens Creek 78.05 189 P **P 21 02 31.6 +1.6**

comp=Z,0.4nm,0.6s,baz=320,slow=18,SNR=3.0
UBBA Unterbreizbach 78.15 336 *e*P **P 21 02 30.1 -0.3**
comp=Z,2.0nm,0.7s
BUG Bochum--Univer 78.31 338 *e*P **P 21 02 31.4 0.0**
comp=Z,13nm,1.0s
MIB Mutribah 78.40 301 *e*P **P 21 02 32.4 +0.1**
MIB AMb AMB 21 02 33.1
comp=Z,36nm,0.8s
BR131 Keskin Array S 78.42 316 *e*P **P 21 02 32.6 +0.2**
comp=Z,4.8nm,0.9s
BRTR Keskin Array B 78.42 316 P **P 21 02 32.6 +0.2**
BRTR Keskin Array B 78.42 316 P **P 21 02 32.6 +0.2**
comp=Z,4.8nm,0.8s,baz=72,slow=4.4,SNR=25
ROTZ Rotzenmuhle 78.45 335 *e*P **P 21 02 32.8 +0.6**
comp=Z,4.0nm,0.8s
TXAR Lajitas Array 78.55 60 P **P 21 02 34.1 +0.9**
TXAR Lajitas Array 78.55 60 P **P 21 02 34.1 +0.9**
comp=Z,1.5nm,0.5s,baz=306,slow=3.8,SNR=11
KHC Kasperske Hory 78.60 334 *i* P **P 21 02 33.1 0.0**
KHC Kasperske Hory 78.60 334 *e*P **P 21 02 33.2 +0.1**
WET Wettzell 78.80 334 *e*P **P 21 02 34.8 +0.6**
WET pmax pmax
comp=Z,7.0nm,0.9s
WET Wettzell 78.80 334 *e*P **P 21 02 34.8 +0.6**
comp=Z,7.0nm,0.9s
GRF Grafenberg Arr 78.81 335 *e*P **P 21 02 33.9 -0.3**
GRF pmax pmax
comp=Z,12nm,0.7s
GRF Grafenberg Arr 78.81 335 *e*P **P 21 02 33.9 -0.3**
comp=Z,12nm,0.7s
GRFO Grafenberg 78.81 335 *e*P **P 21 02 34.2 0.0**
GRFO pmax pmax
comp=Z,9.0nm,0.6s
GRFO Grafenberg 78.81 335 *e*P **P 21 02 34.2 0.0**
comp=Z,9.3nm,0.6s
GEC2 GERESS Array S 78.81 333 *e*P **P 21 02 34.3 -0.1**
GEC2 pmax pmax
comp=Z,3.0nm,0.8s
GEC2 GERESS Array S 78.81 333 *e*P **P 21 02 34.3 -0.1**
comp=Z,3.0nm,0.8s
GERES GERESS Array B 78.81 333 P **P 21 02 34.0 -0.3**
GERES GERESS Array B 78.81 333 P **P 21 02 34.0 -0.3**
comp=Z,3.6nm,0.7s,baz=36,slow=5.0,SNR=30
GERES LR LR 21 39 25.7
comp=Z,41nm,19.6s,baz=355,slow=37
BZS Buzias 78.85 327 ⇑P **P 21 02 34.8 +0.3**
BZS Buzias 78.85 327⇑*i*P **P 21 02 34.8 +0.3**
NAY Al-Naaiem 78.86 301 *e*P **P 21 02 34.9 +0.1**
NAY AMb AMB 21 02 37.0
comp=Z,24nm,1.3s
RDF Al-Radifah 78.91 300 *e*P **P 21 02 35.6 +0.5**
RDF AMb AMB 21 02 36.5
comp=Z,74nm,1.4s
CONA Conrad Observa 78.92 332⇑*i*P **P 21 02 35.3 +0.3**
comp=Z,8.0nm,0.6s,SNR=15
CONA Conrad Observa 78.92 332⇑*i*P **P 21 02 35.3 +0.3**
comp=Z,8.0nm,0.6s
MEM Membach 79.40 339 P **P 21 02 37.1 -0.3**
comp=Z,8.0nm,1.0s
PKSM Moragy 79.44 329 ⇑P **P 21 02 37.7 0.0**
PKSM Moragy 79.44 329⇑*i*P **P 21 02 37.7 0.0**
MOA Molln 79.51 333⇑*i*P **P 21 02 38.0 -0.1**
comp=Z,4.9nm,0.8s
MOA Molln 79.51 333⇑*i*P **P 21 02 38.0 -0.1**
comp=Z,4.9nm,0.8s
BCLA Clavier 79.75 339 P **P 21 02 39.1 -0.2**
comp=Z,9.6nm,1.4s
MPEP Malo Peshtene 79.91 324 P **P 21 02 40.3 0.0**
RJOB Jochberg 80.07 333 *e*P **P 21 02 41.8 +0.6**
comp=Z,5.0nm,0.8s
GIVF Givet 80.16 339 *e*P **P 21 02 41.1 -0.4**
GIVF Givet 80.16 339 *e*P **P 21 02 41.1 -0.4**
GIVF Givet 80.16 339 *e*P **P 21 02 41.1 -0.4**
SOKA Soboth 80.29 332⇑*i*P **P 21 02 42.1 -0.3**
comp=Z,12nm,1.2s
BAIF Baives 80.35 340 *e*P **P 21 02 42.2 -0.3**
comp=Z,10nm,0.9s
BAIF Baives 80.35 340 *e*P **P 21 02 42.2 -0.3**
BAIF pmax pmax
comp=Z,10.0nm,0.9s
BAIF Baives 80.35 340 *e*P **P 21 02 42.2 -0.3**
comp=Z,10nm,0.9s
KBA Koelnbreinsper 80.48 333⇑*i*P **P 21 02 44.0 +0.4**
comp=Z,11nm,0.5s,SNR=17
VTS Vitosha 80.76 324 ⇓P **P 21 02 45.6 +0.5**
VTS Vitosha 80.76 324⇓*i*P **P 21 02 45.6 +0.5**
VTS Vitosha 80.76 324 P **P 21 02 45.0 -0.1**
WATA Walderalm 80.81 334⇑*i*P **P 21 02 45.4 +0.2**
comp=Z,7.4nm,0.5s
WTTA Wattenberg 80.85 334⇑*i*P **P 21 02 45.8 +0.3**
comp=Z,16nm,0.5s,SNR=15
BFO Black Forest 80.86 336 *e*P **P 21 02 45.5 +0.1**
BFO pmax pmax
comp=Z,6.0nm,0.8s
BFO Black Forest 80.86 336 *e*P **P 21 02 45.5 +0.1**
comp=Z,6.0nm,0.8s
BFO Black Forest 80.86 336 *e*P **P 21 02 44.8 -0.6**
comp=Z,5.7nm,0.9s
MOTA Moosalm 80.94 334⇓*i*P **P 21 02 46.1 +0.1**
comp=Z,17nm,1.0s,SNR=14
CDF Champ du Feu 81.08 337⇑*i*P **P 21 02 46.2 -0.4**
comp=Z,18nm,0.9s
CDF Champ du Feu 81.08 337⇑*i*P **P 21 02 46.2 -0.4**
CDF pmax pmax
comp=Z,18nm,0.9s
CDF Champ du Feu 81.08 337⇑*i*P **P 21 02 46.2 -0.4**
comp=Z,18nm,0.9s
ECH Echery 81.29 337 *e*P **P 21 02 47.2 -0.4**
ECH pmax pmax
comp=Z,8.0nm,0.9s
ECH Echery 81.29 337 *e*P **P 21 02 47.2 -0.4**
comp=Z,8.5nm,0.9s
PAGF Fort de Pagny 81.36 338⇑*i*P **P 21 02 48.1 +0.1**
comp=Z,12nm,0.6s
PAGF Fort de Pagny 81.36 338⇑*i*P **P 21 02 48.1 +0.1**
comp=Z,12nm,0.6s
DAVA Damuels 81.36 335⇑*i*P **P 21 02 47.5 -0.7**
comp=Z,9.7nm,0.9s
MMB Musomiste 81.38 323 P **P 21 02 48.3 +0.1**
MEZF Maizieres J'vi 81.58 338⇑*i*P **P 21 02 49.1 0.0**
comp=Z,12nm,0.5s
MEZF Maizieres J'vi 81.58 338⇑*i*P **P 21 02 49.1 0.0**
comp=Z,12nm,0.5s
HAU Haudompre 81.70 337⇑*i*P **P 21 02 49.3 -0.5**
comp=Z,11nm,0.7s
HAU *e*R
comp=Z,74nm,20.0s
HAU Haudompre 81.70 337⇑*i*P **P 21 02 49.3 -0.5**
HAU pmax pmax
comp=Z,11nm,0.7s
HAU Haudompre 81.70 337⇑*i*P **P 21 02 49.3 -0.5**
comp=Z,11nm,0.7s
HINF Hinteralfeld 81.74 337⇑*i*P **P 21 02 49.3 -0.7**
comp=Z,9.9nm,0.8s
HINF Hinteralfeld 81.74 337⇑*i*P **P 21 02 49.3 -0.7**
HINF pmax pmax
comp=Z,10.0nm,0.8s
HINF Hinteralfeld 81.74 337⇑*i*P **P 21 02 49.3 -0.7**
comp=Z,9.9nm,0.8s
SFTF Sexfontaines 81.86 338⇑*i*P **P 21 02 50.4 -0.2**
comp=Z,21nm,0.5s
SFTF Sexfontaines 81.86 338⇑*i*P **P 21 02 50.4 -0.2**
comp=Z,21nm,0.5s
SKO Skopje 81.99 325 *e*P **P 21 02 49.6 -1.8**
VAY Valandovo 82.08 324 *e*P **P 21 02 50.3 -1.5**
TUE Stuetta 82.25 335 *e*P **P 21 02 52.7 -0.2**
comp=Z,7.6nm,0.8s
FLN La Foliniere 82.64 342 *e*P **P 21 02 54.3 -0.4**
comp=Z,24nm,0.9s
FLN *e*R
comp=Z,57nm,20.0s
FLN La Foliniere 82.64 342 *e*P **P 21 02 54.3 -0.4**
FLN pmax pmax
comp=Z,24nm,0.9s
FLN La Foliniere 82.64 342 *e*P **P 21 02 54.3 -0.4**
comp=Z,24nm,0.9s
LDF La Druitiere 82.72 342 *e*P **P 21 02 54.7 -0.4**
LDF La Druitiere 82.72 342 *e*P **P 21 02 54.7 -0.4**
LDF La Druitiere 82.72 342 *e*P **P 21 02 54.7 -0.4**
BIA Bitola 82.84 325 *e*P **P 21 02 54.0 -2.0**
LOR Lormes 83.03 339⇑*i*P **P 21 02 56.4 -0.3**
comp=Z,18nm,0.8s
LOR *e*R
comp=Z,63nm,22.2s
LOR Lormes 83.03 339⇑*i*P **P 21 02 56.4 -0.3**
comp=Z,18nm,0.8s

CABF La Chapelle 83.05 337 *e*P **P 21 02 56.8 -0.2**
CABF La Chapelle 83.05 337 *e*P **P 21 02 56.8 -0.2**
CABF La Chapelle 83.05 337 *e*P **P 21 02 56.8 -0.2**
GRR Gorron 83.08 342 *e*P **P 21 02 56.8 -0.1**
GRR Gorron 83.08 342 *e*P **P 21 02 56.8 -0.1**
GRR Gorron 83.08 342 *e*P **P 21 02 56.8 -0.1**
SSF Saint Saulge 83.31 339⇑*i*P **P 21 02 57.9 -0.3**
comp=Z,11nm,0.9s
SSF Saint Saulge 83.31 339⇑*i*P **P 21 02 57.9 -0.3**
SSF pmax pmax
comp=Z,11nm,0.9s
SSF Saint Saulge 83.31 339⇑*i*P **P 21 02 57.9 -0.3**
comp=Z,11nm,0.9s
SGMF Saint Gilles 83.56 343 *e*P **P 21 02 59.3 -0.1**
SGMF Saint Gilles 83.56 343 *e*P **P 21 02 59.3 -0.1**
SGMF Saint Gilles 83.56 343 *e*P **P 21 02 59.3 -0.1**
AVF Avril sur Loir 83.60 339⇑*i*P **P 21 02 59.6 0.0**
comp=Z,17nm,0.9s
AVF Avril sur Loir 83.60 339⇑*i*P **P 21 02 59.6 0.0**
AVF pmax pmax
comp=Z,17nm,0.9s
AVF Avril sur Loir 83.60 339⇑*i*P **P 21 02 59.6 0.0**
comp=Z,17nm,0.9s
SMF Signal de Mont 83.61 339⇑*i*P **P 21 02 59.6 -0.1**
comp=Z,56nm,1.1s
SMF Signal de Mont 83.61 339⇑*i*P **P 21 02 59.6 -0.1**
SMF Signal de Mont 83.61 339⇑*i*P **P 21 02 59.6 -0.1**
comp=Z,56nm,1.1s
ROSF Rostrenen 83.62 344 *e*P **P 21 02 59.4 -0.3**
ROSF Rostrenen 83.62 344 *e*P **P 21 02 59.4 -0.3**
ROSF Rostrenen 83.62 344 *e*P **P 21 02 59.4 -0.3**
LPL La Plagne 83.88 336⇑*i*P **P 21 03 01.7 +0.3**
comp=Z,12nm,0.9s
LPL La Plagne 83.88 336⇑*i*P **P 21 03 01.7 +0.3**
LPL pmax pmax
comp=Z,12nm,0.9s
LPL La Plagne 83.88 336⇑*i*P **P 21 03 01.7 +0.3**
comp=Z,12nm,0.9s
LPG La Plagne 83.89 336⇑*i*P **P 21 03 01.9 +0.4**
comp=Z,12nm,0.9s
LPG La Plagne 83.89 336⇑*i*P **P 21 03 01.9 +0.4**
LPG pmax pmax
comp=Z,12nm,0.9s
LPG La Plagne 83.89 336⇑*i*P **P 21 03 01.9 +0.4**
comp=Z,12nm,0.9s
BGF Bois d'Agland 83.94 339 *e*P **P 21 03 01.2 -0.2**
BGF Bois d'Agland 83.94 339 *e*P **P 21 03 01.2 -0.2**
BGF Bois d'Agland 83.94 339 *e*P **P 21 03 01.2 -0.2**
QUIF Quistinic 84.00 343 *e*P **P 21 03 00.7 -0.9**
QUIF Quistinic 84.00 343 *e*P **P 21 03 00.7 -0.9**
QUIF Quistinic 84.00 343 *e*P **P 21 03 00.7 -0.9**
TCF Toulx Ste Croi 84.35 339⇑*i*P **P 21 03 03.7 +0.2**
comp=Z,10nm,0.9s
TCF Toulx Ste Croi 84.35 339⇑*i*P **P 21 03 03.7 +0.2**
TCF pmax pmax
comp=Z,10.0nm,0.9s
TCF Toulx Ste Croi 84.35 339⇑*i*P **P 21 03 03.7 +0.2**
comp=Z,10nm,0.9s
MBDF Montbardon 84.59 336 *e*P **P 21 03 04.6 -0.3**
comp=Z,8.7nm,0.9s
MBDF Montbardon 84.59 336 *e*P **P 21 03 04.6 -0.3**
MBDF pmax pmax
comp=Z,9.0nm,0.9s
MBDF Montbardon 84.59 336 *e*P **P 21 03 04.6 -0.3**
comp=Z,8.7nm,0.9s
MFF Saint Martin d 84.61 341 *e*P **P 21 03 04.2 -0.6**
comp=Z,7.6nm,0.7s
MFF Saint Martin d 84.61 341 *e*P **P 21 03 04.2 -0.6**
MFF pmax pmax
comp=Z,8.0nm,0.7s
MFF Saint Martin d 84.61 341 *e*P **P 21 03 04.2 -0.6**
comp=Z,7.6nm,0.7s
ORIF Oris-en-Rattie 84.67 337⇑*i*P **P 21 03 05.6 +0.4**
comp=Z,16nm,0.7s
ORIF *e*R
comp=Z,62nm,21.0s
ORIF Oris-en-Rattie 84.67 337⇑*i*P **P 21 03 05.6 +0.4**
ORIF pmax pmax
comp=Z,16nm,0.7s
ORIF Oris-en-Rattie 84.67 337⇑*i*P **P 21 03 05.6 +0.4**
comp=Z,16nm,0.7s
VIVF Saint-Julien-l 85.05 337⇑*i*P **P 21 03 07.5 +0.4**
VIVF Saint-Julien-l 85.05 337⇑*i*P **P 21 03 07.5 +0.4**
VIVF Saint-Julien-l 85.05 337⇑*i*P **P 21 03 07.5 +0.4**
SBF Sospel 85.19 335 *e*P **P 21 03 07.3 -0.5**
comp=Z,15nm,0.8s
SBF Sospel 85.19 335 *e*P **P 21 03 07.3 -0.5**
SBF pmax pmax
comp=Z,15nm,0.8s
SBF Sospel 85.19 335 *e*P **P 21 03 07.3 -0.5**
comp=Z,15nm,0.8s
CAF Calviac 85.66 339⇑*i*P **P 21 03 10.7 +0.6**
comp=Z,11nm,0.7s
CAF Calviac 85.66 339⇑*i*P **P 21 03 10.7 +0.6**
CAF pmax pmax
comp=Z,11nm,0.7s
CAF Calviac 85.66 339⇑*i*P **P 21 03 10.7 +0.6**
comp=Z,11nm,0.7s
FRF La Foret Royal 85.70 336 *e*P **P 21 03 09.8 -0.5**
FRF La Foret Royal 85.70 336 *e*P **P 21 03 09.8 -0.5**
FRF La Foret Royal 85.70 336 *e*P **P 21 03 09.8 -0.5**
PGF Pioggiola 85.91 334 *e*P **P 21 03 11.0 -0.5**
PGF Pioggiola 85.91 334 *e*P **P 21 03 11.0 -0.5**
PGF Pioggiola 85.91 334 *e*P **P 21 03 11.0 -0.5**
LMR La Mourre 85.94 336 *e*P **P 21 03 10.6 -0.9**
comp=Z,76nm,1.5s
LMR La Mourre 85.94 336 *e*P **P 21 03 10.6 -0.9**
LMR La Mourre 85.94 336 *e*P **P 21 03 10.6 -0.9**
comp=Z,76nm,1.5s
LASF Ste Croix 86.00 338 *e*P **P 21 03 12.3 +0.5**
LASF Ste Croix 86.00 338 *e*P **P 21 03 12.3 +0.5**
TORD Torodi Ar. Bea 115.35 328 PKP **PKPdf 21 09 12.8 -0.4**
TORD Torodi Ar. Bea 115.35 328 PKP **PKPdf 21 09 12.8 -0.4**
comp=Z,0.3nm,0.4s,baz=25,slow=1.7,SNR=3.9
DBIC Dimbokro 123.66 332 PKP **PKPdf 21 09 28.8 -0.5**
DBIC Dimbokro 123.66 332 PKP **PKPdf 21 09 28.8 -0.5**
comp=Z,4.1nm,1.1s,baz=45,slow=5.0,SNR=3.6
LPAZ La Paz 135.39 62 PKP **PKPdf 21 09 53.9 +1.8**
LPAZ La Paz 135.39 62 PKP **PKPdf 21 09 53.9 +1.8**
comp=Z,0.6nm,0.5s,baz=345,slow=4.2,SNR=3.7
CPUP Villa Florida 149.53 60 PKPbc **PKPbc 21 10 20.1 -0.4**
CPUP Villa Florida 149.53 60 PKPbc **PKPbc 21 10 20.1 -0.4**
comp=Z,0.9nm,0.5s,baz=267,slow=3.5,SNR=4.6

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*IDC **08** 20:51:29.0±1.2, 4.74S×145.52E, h0km, mb3.9/4, mb1 4.2/5, mb1mx3.7/17, mbtmp4.0/5, ML3.9/2, Error ellipse: s-maj=37.7km s-min=20.7km az=101.0*
*ISCJB **08** 20:51:35.5±1.0, 4.92S±0.08×145.7E±0.1, h64km, mb3.7/5, Error ellipse: s-maj=16.0km s-min=10.0km az=147.9*
*AUST **08** 20:51:37.0±5.6, 4.87S×145.87E, h85km, Error ellipse: s-maj=4.7km s-min=1.4km az=18.0*
ISC 08 20:51:37.0±1.2**, 4.9S**±0.1×**145.7E**±0.1**, h64**km**, n17, σ1.02**/17**, mb3.7**/5**, Near north coast of New Guinea**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
PMG Port Moresby 4.72 162 Pn **Pn 20 52 45.6 -0.2**
9.7nm,0.3s,baz=338,slow=5.7,SNR=20
PMG Sn **Sn 20 53 39.6 +0.3**
13nm,0.3s,baz=147,slow=19,SNR=11
COEN Coen 9.33 195 P **Pn 20 53 50.2 +1.3**
baz=9.5,SNR=10
KDU Kakadu 15.15 238 P **P 20 55 08.9 -2.2**
baz=15,SNR=16
MTN Manton Dam 16.37 240 P **P 20 55 23.4 -1.3**
baz=17,SNR=5.8
WRA Warramunga Arr 18.58 215 P **P 20 55 48.2 -0.9**
0.9nm,0.3s,baz=32,slow=11,SNR=38
ASAR Alice Springs 21.83 210 P **P 20 56 23.4 -0.9**
1.5nm,0.4s,baz=41,slow=7.3,SNR=32
FITZ Fitzroy Crossi 23.56 235 P **P 20 56 41.1 -0.9**
5.0nm,0.6s,baz=61,slow=8.1,SNR=27
FITZ Fitzroy Crossi 23.56 235 P **P 20 56 41.5 -0.5**
baz=24,SNR=19
WSI Waingapu 25.59 258 S **S 21 01 24.9 +0.8**
baz=26,SNR=5.3
PCI Palu 26.08 278 S S 21 01 15.8 -16
baz=26,SNR=4.3
CMSA Cobar Meteorol 26.50 180 P **P 20 57 09.2 +0.7**
baz=27,SNR=6.9
STKA Stephens Creek 27.11 188 P **P 20 57 13.7 -0.3**
1.8nm,0.4s,baz=7.4,slow=11,SNR=19
STKA Stephens Creek 27.11 188 P **P 20 57 14.4 +0.4**
baz=27,SNR=7.8

MEEK Meekatharra 33.68 227 P **P 20 58 12.4 +0.2**
baz=34,SNR=3.7
BLDU Ballidu 37.38 223 P **P 20 58 43.5 -0.3**
baz=38,SNR=8.2
MKAR Makanchi Array 75.80 321 P **P 21 03 17.7 +1.3**
0.1nm,0.5s,baz=98,slow=4.4,SNR=2.5
ILAR Eielson Array 85.00 23 P **P 21 04 04.7 -0.6**
0.4nm,0.8s,baz=231,slow=5.7,SNR=3.1

IDC 08 21:05:41.4±1.8**, 21.63N**×**143.10E, h295**km±18km**, mb3.0**/9**, mb1 3.2**/11**, mb1mx3.0**/28**, mbtmp3.1**/11**, Error ellipse: s-maj=25.1km s-min=11.1km az=93.0, Mariana Islands region**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
CBIJ Chichi jima 5.51 351 P Pn 21 07 05.7 +1.0
4.2nm,0.3s,baz=261,slow=21,SNR=6.7
CBIJ S S 21 08 11.4 -0.3
5.9nm,0.3s,baz=303,slow=21,SNR=5.1
MJAR Matsushiro Arr 15.46 345 P P 21 09 04.3 +0.6
0.5nm,0.3s,baz=169,slow=10,SNR=5.8
MAT Matsushiro 15.46 345 P Pn 21 09 05.3 -0.1
KSRS Korea Array 20.53 324 P P 21 09 58.4 +0.5
0.7nm,0.6s,baz=146,slow=9.4,SNR=6.3
WRA Warramunga Arr 42.19 192 P P 21 13 05.9 -0.1
1.2nm,0.6s,baz=17,slow=8.6,SNR=16
FITZ Fitzroy Crossi 43.03 205 P P 21 13 12.8 +0.1
0.5nm,0.3s,baz=23,slow=6.0,SNR=5.7
ASAR Alice Springs 45.90 192 P P 21 13 34.7 -0.6
0.4nm,0.6s,baz=19,slow=12,SNR=5.6
STKA Stephens Creek 53.22 182 P P 21 14 29.2 -0.8
0.8nm,0.6s,baz=345,slow=12,SNR=3.5
MKAR Makanchi Array 54.69 313 P P 21 14 40.7 +0.1
0.2nm,0.5s,baz=76,slow=7.4,SNR=2.9
MKAR PcP PcP 21 15 39.0 -0.2
0.2nm,0.4s,baz=81,slow=3.0,SNR=5.1
ILAR Eielson Array 62.13 27 P P 21 15 30.5 -0.8
0.3nm,0.6s,baz=268,slow=5.4,SNR=3.8
YKA Yellowknife Ar 76.55 28 P P 21 16 59.2 +0.1
0.6nm,0.6s,baz=290,slow=5.7,SNR=8.8
ARCES ARCESS Array B 78.96 341 P P 21 17 12.6 +0.3
2.0nm,0.8s,baz=64,slow=8.2,SNR=4.2
FINES FINESS Array B 83.21 334 P P 21 17 33.2 -1.4
0.6nm,0.5s,baz=74,slow=4.9,SNR=7.9
PLCA Paso Flores 145.77 132 PKPbc PKPab 21 24 46.8 -0.3
1.7nm,0.7s,baz=252,slow=3.2,SNR=3.7
LPAZ La Paz 150.02 85 PKPbc PKPbc 21 24 59.5 +0.8
0.8nm,0.5s,baz=279,slow=5.4,SNR=4.0

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*ROM **08** 21:11:04.6±0.1, 42.30N×13.56E, h10km, Ml3.3/20, Error ellipse: s-maj=1.2km s-min=0.9km az=52.0*
*ISCJB **08** 21:11:05.0±0.3, 42.29N±0.02×13.55E±0.03, h8km±2km, Error ellipse: s-maj=3.4km s-min=2.9km az=159.1*
*CSEM **08** 21:11:05.4±0.1, 42.28N×13.56E, h2km, ML3.5/11, Error ellipse: s-maj=2.8km s-min=2.4km az=63.0*
*LDG **08** 21:11:09.9±0.7, 42.41N×13.33E, h2km, Ml2.6/9, Error ellipse: s-maj=14.1km s-min=10.4km az=106.0*
ISC 08 21:11:05.3±0.8**, 42.29N**±0.02×**13.52E**±0.02**, h8**km±4km**, n86, σ1.60**/119**, Central Italy**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
FAGN Fagnano 0.05 120 Pg **Pg 21 11 06.4 -0.8**
FAGN Sg **Sg 21 11 07.8 -0.8**
22μm,0.6s
FAGN Fagnano 0.05 120 Pg **Pg 21 11 06.4 -0.8**
FAGN Sg **Sg 21 11 07.8 -0.8**
22μm,0.6s
AQU L'Aquila 0.11 305 Pg **Pg 21 11 08.3 +0.4**
AQU Sg **Sg 21 11 10.9 +1.1**
70μm,1.6s
AQU L'Aquila 0.11 305 Pg **Pg 21 11 08.3 +0.4**
AQU Sg **Sg 21 11 10.9 +1.1**
70μm,1.6s
VCEL Villa Celiera 0.26 66 Pg **Pg 21 11 10.1 -0.4**
VCEL Sg **Sg 21 11 14.1 +0.1**
11μm,1.0s
VCEL Villa Celiera 0.26 66 Pg **Pg 21 11 10.1 -0.4**
VCEL Sg **Sg 21 11 14.1 +0.1**
11μm,1.0s
CAMP Campotosto 0.26 341 Pg **Pg 21 11 10.5 -0.1**
CAMP Sg **Sg 21 11 14.7 +0.6**
4μm,1.0s
CAMP Campotosto 0.26 341 Pg **Pg 21 11 10.5 -0.1**
CAMP Sg **Sg 21 11 14.7 +0.6**
4μm,1.0s
PTQR Pietraquaria 0.28 199 Pg **Pg 21 11 11.2 +0.2**
PTQR Sg **Sg 21 11 16.1 +1.3**
PTQR Pietraquaria 0.28 199 Pg **Pg 21 11 11.2 +0.2**
PTQR Sg **Sg 21 11 16.1 +1.3**
FIAM Fiamignano 0.30 266 Pg **Pg 21 11 11.8 +0.5**
FIAM Sg **Sb 21 11 17.2 -0.9**
5μm,0.8s
FIAM Fiamignano 0.30 266 Pg **Pg 21 11 11.8 +0.5**
FIAM Sg **Sb 21 11 17.2 -0.9**
5μm,0.8s
TERO Teramo 0.34 10 Pg **Pg 21 11 11.3 -0.7**
TERO Sg **Sg 21 11 16.4 -0.1**
3μm,0.6s
TERO Teramo 0.34 10 Pg **Pg 21 11 11.3 -0.7**
TERO Sg **Sg 21 11 16.4 -0.1**
3μm,0.6s
INTR Introdacqua 0.40 134 Pg **Pg 21 11 12.8 -0.4**
INTR Sg **Sg 21 11 19.0 +0.6**
4μm,0.9s
INTR Introdacqua 0.40 134 Pg **Pg 21 11 12.8 -0.4**
INTR Sg **Sg 21 11 19.0 +0.6**
4μm,0.9s
VVLD Villa Vallelon 0.43 170 Pg **Pg 21 11 13.6 -0.1**
VVLD Sg **Sb 21 11 20.8 -0.9**
2μm,0.6s
VVLD Villa Vallelon 0.43 170 Pg **Pg 21 11 13.6 -0.1**
VVLD Sg **Sb 21 11 20.8 -0.9**
2μm,0.6s
LNSS Leonessa 0.47 311 Pg **Pg 21 11 14.6 0.0**
4μm,1.1s
LNSS Leonessa 0.47 311 Pg **Pg 21 11 14.6 0.0**
4μm,1.1s
GUAR Guarcino 0.52 198 Pg **Pg 21 11 15.1 -0.3**
959nm,0.7s
GUAR Guarcino 0.52 198 Pg **Pg 21 11 15.1 -0.3**
959nm,0.7s
CERT Cerreto 0.53 230 Pg **Pg 21 11 15.4 -0.2**
2μm,0.9s
CERT Cerreto 0.53 230 Pg **Pg 21 11 15.4 -0.2**
2μm,0.9s
POFI Posta Fibreno 0.59 166 Pg **Pg 21 11 16.3 -0.5**
POFI Posta Fibreno 0.59 166 Pg **Pg 21 11 16.3 -0.5**
TRTR Tortoreto Alta 0.59 29 Pg **Pb 21 11 17.3 -0.6**
TRTR Tortoreto Alta 0.59 29 Pg **Pb 21 11 17.3 -0.6**
CAFR Castel Frentan 0.62 96 Pg **Pg 21 11 16.9 -0.3**
2μm,0.7s
CAFR Castel Frentan 0.62 96 Pg **Pg 21 11 16.9 -0.3**
2μm,0.7s
NRCA Norcia 0.62 331 Pg **Pg 21 11 16.7 -0.6**
NRCA Sg **Sb 21 11 26.6 -0.7**
635nm,0.2s
NRCA Norcia 0.62 331 Pg **Pg 21 11 16.7 -0.6**
NRCA Sg **Sb 21 11 26.6 -0.7**
635nm,0.2s
SDI San Donato 0.62 160 Pg **Pg 21 11 16.6 -0.7**
SDI San Donato 0.62 160 Pg **Pg 21 11 16.6 -0.7**
MTCE Montecelio 0.64 245 Pg **Pg 21 11 17.3 -0.4**
963nm,0.7s
MTCE Montecelio 0.64 245 Pg **Pg 21 11 17.3 -0.4**
963nm,0.7s
OFFI Offida 0.65 11 Pg **Pg 21 11 18.0 0.0**
4μm,0.6s
OFFI Offida 0.65 11 Pg **Pg 21 11 18.0 0.0**
4μm,0.6s
RNI2 Rionero Sannit 0.75 141 Pg **Pg 21 11 19.1 -0.7**
RNI2 Rionero Sannit 0.75 141 Pg **Pg 21 11 19.1 -0.7**
GIUL Giuliano Di Ro 0.76 195 Pg **Pg 21 11 19.6 -0.4**
753nm,0.9s
GIUL Giuliano Di Ro 0.76 195 Pg **Pg 21 11 19.6 -0.4**
753nm,0.9s
CESX Cesi 0.77 295 Pg **Pg 21 11 20.2 +0.1**
801nm,0.9s
CESX Cesi 0.77 295 Pg **Pg 21 11 20.2 +0.1**
801nm,0.9s
CERA Filignano 0.79 152 Pg **Pg 21 11 19.1 -1.4**
1μm,0.9s

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CERA	Filignano	0.79	152	Pg	Pg	21 11 19.1	-1.4
	1μm,0.9s						
RDP	Rocca di Papa	0.80	229	Pg	Pb	21 11 21.3	-0.2
	2μm,0.7s						
RDP	Rocca di Papa	0.80	229	Pg	Pb	21 11 21.3	-0.2
	2μm,0.7s						
CESI	CESI - Serrava	0.85	328	Pg	Pg	21 11 20.6	-1.0
	33nm,0.4s						
CESI	CESI - Serrava	0.85	328	Pg	Pg	21 11 20.6	-1.0
	33nm,0.4s						
MIDA	Miranda	0.85	140	Pg	Pg	21 11 20.2	-1.5
	644nm,0.8s						
MIDA	Miranda	0.85	140	Pg	Pg	21 11 20.2	-1.5
	644nm,0.8s						
MS1	Monte Sant'Ang	1.90	107	ePn	Pb	21 11 40.5	+0.3
MS1				eSn	Sg	21 12 07.6	+1.3
CDT	Castel del Mon	2.39	119	eSn	Sb	21 12 18.6	+0.4
NVLJ	Novalja	2.47	23	i Pn	Pn	21 11 45.8	0.0
NVLJ				Sn	Sn	21 12 17.8	+1.5
NVLJ	Novalja	2.47	23	i Pn	Pn	21 11 45.8	0.0
NVLJ				Sn	Sn	21 12 17.7	+1.5
MAIM	Mastiano	2.75	307	P	Pn	21 11 51.5	+1.9
SKDS	Skadanscina	3.27	6	i Pn	Pn	21 11 58.0	+1.1
SKDS				i Sn	Sn	21 12 38.3	+2.3
SKDS							
	comp=Z,14nm,0.5s						
SKDS	Skadanscina	3.27	6	Pn	Pn	21 11 58.0	+1.1
SKDS				i Sn	Sn	21 12 38.3	+2.3
	comp=Z,14nm,0.5s						
PGF	Pioggiola	3.36	276	ePn	Pn	21 12 00.0	+1.9
PGF				eSn	Sn	21 12 40.1	+1.9
	comp=Z,4.1nm,0.5s						
PGF	Pioggiola	3.36	276	ePn	Pn	21 12 00.0	+1.9
PGF				eSn	Sn	21 12 40.1	+1.9
	comp=Z,2.0nm,0.5s						
BOJS	Bojanci	3.45	21	i Pn	Pn	21 12 01.4	+2.3
BOJS				i Sn	Sn	21 12 42.5	+2.3
BOJS							
	comp=Z,9.0nm,0.5s						
BOJS	Bojanci	3.45	21	i Pn	Pn	21 12 01.5	+2.3
BOJS				i Sn	Sn	21 12 42.5	+2.3
	comp=Z,9.0nm,0.5s						
SBF	Sospel	4.73	291	ePn	Pn	21 12 18.4	+1.5
SBF				eSn	Sn	21 13 08.4	-3.5
	comp=Z,9.9nm,0.7s						
SBF	Sospel	4.73	291	ePn	Pn	21 12 18.4	+1.5
IVAS	Ivanjica	5.03	73	ePn	Pn	21 12 21.5	+0.4
DIVS	Divibare	5.06	67	ePn	Pn	21 12 22.5	+1.0
FRF	La Foret Royal	5.21	286	ePn	Pn	21 12 24.7	+1.3
FRF				eSn	Sn	21 13 19.6	-4.0
	comp=Z,6.2nm,0.8s						
FRF	La Foret Royal	5.21	286	ePn	Pn	21 12 24.7	+1.3
LMR	La Mourre	5.26	284	ePn	Pn	21 12 25.3	+1.1
LMR				eSn	Sn	21 13 21.1	-3.9
	comp=Z,0.3nm,0.2s						
LMR	La Mourre	5.26	284	ePn	Pn	21 12 25.3	+1.1
MBDF	Montbardon	5.48	299	eP	Pn	21 12 30.5	+3.2
MBDF	Montbardon	5.48	299	eP	Pn	21 12 30.5	+3.2
GRUS	Gruza	5.50	71	ePn	Pn	21 12 27.9	+0.4
LPG	La Plagne	5.85	306	eP	Pn	21 12 36.4	+3.9
LPG				eSn	Sn	21 13 35.5	-4.3
	comp=Z,1.1nm,0.5s						
LPG	La Plagne	5.85	306	eP	Pn	21 12 36.4	+3.9
LPL	La Plagne	5.87	306	eP	Pn	21 12 36.6	+3.9
LPL				eSn	Sn	21 13 34.6	-5.6
	comp=Z,1.1nm,0.5s						
SMRF	Simiane la Rot	6.05	289	eP	Pn	21 12 37.9	+2.8
SMRF	Simiane la Rot	6.05	289	eP	Pn	21 12 37.9	+2.8
KHC	Kasperske Hory	6.84	0	ePN	Pn	21 12 55.0	+9.1
KHC				eSN	Sn	21 14 02.5	-1.4
HINF	Hinteralfeld	7.26	322	ePn	Pn	21 12 52.4	+0.7
HINF				eSn	Sn	21 14 08.9	-5.4
	comp=Z,1.1nm,0.5s						
HINF	Hinteralfeld	7.26	322	ePn	Pn	21 12 52.4	+0.7
CDF	Champ du Feu	7.54	326	ePn	Pn	21 12 56.1	+0.6
CDF				eSn	Sn	21 14 15.9	-5.1
	comp=Z,1.5nm,0.4s						
CDF	Champ du Feu	7.54	326	ePn	Pn	21 12 56.1	+0.6
HAU	Haudompre	7.64	321	ePn	Pn	21 12 57.8	+1.0
HAU				eSn	Sn	21 14 16.6	-6.9
	comp=Z,4.2nm,0.5s						
HAU	Haudompre	7.64	321	ePn	Pn	21 12 57.8	+1.0

*ISCJB **08** 21:14:38.1±0.4, 28°.99N±0°.04×139°.72E±0°.08, h418km±4km, mb3.5/18, Error ellipse: s-maj=11.3km s-min=5.5km az=166.8*

*IDC **08** 21:14:38.6±0.6, 28°.97N×139°.65E, h406km±6km, mb3.2/17, mb1 3.3/24, mb1mx3.2/31, mbtmp3.2/24, Error ellipse: s-maj=13.2km s-min=8.7km az=73.0*

*JMA **08** 21:14:38.0±0.2, 29°.06N×140°.14E, h442km±4km, M3.7*

ISC 08 21:14:38.9±0.7, 29°.02N±0°.06×139°.7E±0°.1, h412km±8km, n49, σ1s.30/64, mb3.4/18, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.89	131	P	P	21 15 42.5	+0.3
CBIJ				S	S	21 16 31.8	-1.7
CBIJ	Chichi jima	2.89	131	P	P	21 15 42.4	+0.1
	51nm,0.3s,baz=279,slow=2.0,SNR=91						
CBIJ				S	S	21 16 32.0	-1.5
	99nm,0.3s,baz=303,slow=22,SNR=11						
JHHJ	Haha-jima-NKT	3.22	137	P	P	21 15 45.0	+0.2
JHHJ				S	S	21 16 36.8	-1.5
JHJ2	Mitsune	4.08	1	P	P	21 15 53.6	+1.4
JHJ2				eS	S	21 16 53.9	+1.8
JHJ	Hachijo jima 2	4.09	1	P	P	21 15 53.8	+1.5
	5.3nm,0.3s,baz=72,slow=23,SNR=13						
JHJ				S	S	21 16 52.3	+0.1
	18nm,0.3s,baz=79,slow=22,SNR=6.0						
BSO3	Boso 3	5.80	6	P	P	21 16 10.3	+1.1
BSO3				eS	S	21 17 22.4	-1.0
BSO4	Boso 4	5.98	5	P	P	21 16 13.3	+2.1
BSO4				eS	S	21 17 26.7	-0.3
JOD2	Odawara 2	6.25	355	P	P	21 16 15.5	+1.2
JOD2				eS	S	21 17 32.5	-0.1
JNY	Yasuok	6.52	346	P	P	21 16 18.8	+0.9
JAO	Obara	6.57	342	P	P	21 16 19.8	+1.3
JHU	Hanno	6.82	357	P	P	21 16 20.5	-0.7
JHU				eS	S	21 17 41.0	-3.1
JRY	Ryogami san	7.01	354	P	P	21 16 23.3	0.0
JRY				eS	S	21 17 46.2	-1.8
JYT	Yasato	7.20	3	P	P	21 16 24.7	-0.6
JYT				eS	S	21 17 48.3	-3.3
JAG	Ashikaga	7.39	358	P	P	21 16 26.1	-1.3
JAG				eS	S	21 17 50.8	-4.8
MJAR	Matsushiro Arr	7.61	351	P	P	21 16 29.2	-0.6
	1.3nm,0.3s,baz=170,slow=11,SNR=20						
MJAR				S	S	21 17 58.8	-1.4
	0.4nm,0.3s,baz=286,slow=14,SNR=7.2						
MAT	Matsushiro	7.61	351	P	P	21 16 29.2	-0.7
MAT				S	S	21 17 59.1	-1.1
MAT	Matsushiro	7.61	351	P	P	21 16 29.7	-0.2
MAT				eS	S	21 17 59.6	-0.6
JHS	Saijyo	8.19	318	P	P	21 16 38.6	+2.4
JNU	Nakatsue	8.62	301	P	P	21 16 41.1	+0.1
	0.6nm,0.3s,baz=73,slow=6.5,SNR=12						
KSRS	Korea Array	12.97	313	P	P	21 17 29.9	+1.1
	0.7nm,0.3s,baz=130,slow=11,SNR=24						
ASAJ	Asahikawa	15.24	8	P	P	21 17 55.1	+1.7
	0.6nm,0.3s,baz=213,slow=19,SNR=4.8						
USRK	Ussuriysk Arra	16.36	340	P	P	21 18 06.8	+1.4
	0.4nm,0.3s,baz=145,slow=8.9,SNR=10						
SONM	Songino Array	31.83	315	P	P	21 20 27.8	+0.1
	1.2nm,0.7s,baz=130,slow=8.7,SNR=9.7						
CMAR	Chiang Mai Arr	38.62	263	P	P	21 21 25.1	+0.1
	0.8nm,0.7s,baz=82,slow=4.1,SNR=6.4						
TAPN	Taplejung	45.58	281	eP	P	21 22 20.7	+0.1
	5.0nm,0.4s						
ZALV	Zalesovo Beam	46.62	318	P	P	21 22 26.8	-1.0
	0.6nm,0.4s,baz=92,slow=9.1,SNR=4.2						
RAMN	Ramite	46.64	281	eP	P	21 22 28.6	-0.1
	12nm,0.6s						
GUN	Gumba	47.01	282	eP	P	21 22 31.7	+0.1
PKI	Pulchoki	47.49	282	eP	P	21 22 35.2	-0.1
KKN	Kakani	47.55	282	eP	P	21 22 35.5	-0.1
MKAR	Makanchi Array	47.58	308	P	P	21 22 35.0	-0.3
	0.7nm,0.4s,baz=87,slow=9.8,SNR=22						
DMN	Daman	47.74	282	eP	P	21 22 36.9	-0.2
DANN	Dangsing	48.70	284	eP	P	21 22 44.5	+0.1
	29nm,0.7s						
WRA	Warramunga Arr	48.95	187	P	P	21 22 45.8	0.0
	3.3nm,0.5s,baz=2.6,slow=7.7,SNR=42						
KOLN	Koldanda	48.99	283	eP	P	21 22 46.5	+0.1
	14nm,0.6s						
PYUN	Piuthan	49.42	283	eP	P	21 22 49.9	+0.2
	43nm,0.4s						
ASAR	Alice Springs	52.68	187	P	P	21 23 13.1	-0.2
	1.3nm,0.6s,baz=16,slow=12,SNR=15						
KDAK	Kodiak Island	54.15	38	P	P	21 23 24.4	+1.1
	2.3nm,0.3s,baz=121,slow=6.5,SNR=11						
ILAR	Eielson Array	57.09	29	P	P	21 23 44.0	+0.2
	0.4nm,0.6s,baz=248,slow=5.7,SNR=5.2						
INK	Inuvik	62.19	25	P	P	21 24 18.9	+0.8
	0.3nm,0.3s,baz=299,slow=9.6,SNR=4.9						
ARCES	ARCESS Array B	71.01	340	P	P	21 25 13.7	+0.6
	4.3nm,1.0s,baz=64,slow=8.2,SNR=9.3						
KBZ	Khabaz	75.11	312	P	P	21 25 37.8	+0.5
	2.3nm,0.8s,baz=99,slow=6.4,SNR=7.1						
FINES	FINESS Array B	75.26	333	P	P	21 25 37.7	0.0
	1.5nm,0.4s,baz=60,slow=5.1,SNR=12						
AKASG	Malin Array Be	79.78	323	P	P	21 26 01.8	-0.8
	1.0nm,0.6s,baz=314,slow=16,SNR=4.4						
NOA	NORSAR Array B	81.02	337	P	P	21 26 08.6	-0.4
	0.6nm,0.6s,baz=46,slow=5.0,SNR=4.7						
NVAR	Mina Array Bea	81.02	51	P	P	21 26 11.3	+1.6
	0.3nm,0.4s,baz=289,slow=5.6,SNR=2.9						
BRTR	Keskin Array B	83.11	312	P	P	21 26 20.0	-0.3
	0.6nm,0.6s,baz=110,slow=4.1,SNR=4.4						
PDAR	Pinedale Array	84.35	44	P	P	21 26 27.6	+1.0
	0.6nm,0.9s,baz=328,slow=3.2,SNR=2.0						
GERES	GERESS Array B	88.74	328	P	P	21 26 45.9	-1.4
	0.2nm,0.6s,baz=1.4,slow=5.3,SNR=3.5						

*CSEM **08** 21:23:37.5, 42°.31N×13°.50E, h9km, After ROM*

ROM 08 21:23:37.5±0.1, 42°.31N×13°.50E, h9km±1km, Ml1.4/5, Error ellipse: s-maj=2.1km s-min=1.6km az=35.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	Fagnano	0.08	128	Pg	Pg	21 23 39.7	-0.1
FAGN				Sg	Sg	21 23 41.1	-0.3
	646nm,0.4s						
FAGN	Fagnano	0.08	128	Pg	Pg	21 23 39.7	-0.1
FAGN				Sg	Sg	21 23 41.1	-0.3
	646nm,0.4s						
AQU	L'Aquila	0.08	298	Pg	Pg	21 23 40.6	+0.7
AQU				Sg	Sg	21 23 41.6	+0.1
	260nm,0.3s						
AQU	L'Aquila	0.08	298	Pg	Pg	21 23 40.6	+0.7
AQU				Sg	Sg	21 23 41.6	+0.1
	260nm,0.3s						
CAMP	Campotosto	0.23	343	Pg	Pg	21 23 43.9	+1.5
CAMP				Sg	Sg	21 23 47.0	+1.2
CAMP	Campotosto	0.23	343	Pg	Pg	21 23 43.9	+1.5
CAMP				Sg	Sg	21 23 47.0	+1.2
VCEL	Villa Celiera	0.26	72	Pg	Pb	21 23 43.9	-0.7
VCEL				Sg	Sb	21 23 48.9	-0.5
	60nm,0.4s						
VCEL	Villa Celiera	0.26	72	Pg	Pb	21 23 43.9	-0.7
VCEL				Sg	Sb	21 23 48.9	-0.5
	60nm,0.4s						
FIAM	Fiamignano	0.29	261	Pg	Pb	21 23 44.4	-0.6
FIAM				Sg	Sb	21 23 49.7	-0.4
	43nm,0.8s						
FIAM	Fiamignano	0.29	261	Pg	Pb	21 23 44.4	-0.6
FIAM				Sg	Sb	21 23 49.7	-0.4
	43nm,0.8s						
PTQR	Pietraquaria	0.30	195	Pg	Pb	21 23 44.5	-0.7
PTQR				Sg	Sg	21 23 48.8	+1.0
	5.0nm,0.2s						
PTQR	Pietraquaria	0.30	195	Pg	Pb	21 23 44.5	-0.7
PTQR				Sg	Sg	21 23 48.8	+1.0
	5.0nm,0.2s						
TERO	Teramo	0.32	14	Pg	Pg	21 23 44.0	+0.1
TERO				Sg	Sg	21 23 48.8	+0.6
	29nm,0.2s						
TERO	Teramo	0.32	14	Pg	Pg	21 23 44.0	+0.1
TERO				Sg	Sg	21 23 48.8	+0.6
	29nm,0.2s						
INTR	Introdacqua	0.42	135	Pg	Pb	21 23 46.7	-0.6
INTR				Sg	Sb	21 23 53.6	-0.3
INTR	Introdacqua	0.42	135	Pg	Pb	21 23 46.7	-0.6
INTR				Sg	Sb	21 23 53.6	-0.3
LNSS	Leonessa	0.45	310	Pg	Pb	21 23 47.1	-0.7
LNSS	Leonessa	0.45	310	Pg	Pb	21 23 47.1	-0.7
NRCA	Norcia	0.59	331	Pg	Pg	21 23 49.2	+0.1
NRCA				Sg	Sb	21 23 58.3	-0.5
	19nm,0.1s						
NRCA	Norcia	0.59	331	Pg	Pg	21 23 49.2	+0.1
NRCA				Sg	Sb	21 23 58.3	-0.5
	19nm,0.1s						

*CSEM **08** 21:24:04.2, 42°.28N×13°.48E, h10km, After ROM*

ROM 08 21:24:04.2±0.1, 42°.28N×13°.48E, h10km, Ml1.9/5, Error ellipse: s-maj=1.1km s-min=0.8km az=39.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	Fagnano	0.08	102	Pg	Pg	21 24 06.9	+0.3
FAGN				Sg	Sg	21 24 08.7	+0.4
FAGN	Fagnano	0.08	102	Pg	Pg	21 24 06.9	+0.3
FAGN				Sg	Sg	21 24 08.7	+0.4
AQU	L'Aquila	0.09	320	Pg	Pg	21 24 07.1	+0.3
AQU				Sg	Sg	21 24 08.8	+0.2
	569nm,0.5s						
AQU	L'Aquila	0.09	320	Pg	Pg	21 24 07.1	+0.3
AQU				Sg	Sg	21 24 08.8	+0.2
	569nm,0.5s						
CAMP	Campotosto	0.26	348	Pg	Pg	21 24 09.6	-0.1
CAMP				Sg	Sb	21 24 14.8	-1.1
CAMP	Campotosto	0.26	348	Pg	Pg	21 24 09.6	-0.1
CAMP				Sg	Sb	21 24 14.8	-1.1
PTQR	Pietraquaria	0.27	193	Pg	Pg	21 24 10.3	+0.6
PTQR				Sg	Sb	21 24 14.9	-1.1
PTQR	Pietraquaria	0.27	193	Pg	Pg	21 24 10.3	+0.6
PTQR				Sg	Sb	21 24 14.9	-1.1
FIAM	Fiamignano	0.27	267	Pg	Pg	21 24 10.3	+0.5
FIAM				Sg	Sb	21 24 15.1	-1.0
FIAM	Fiamignano	0.27	267	Pg	Pg	21 24 10.3	+0.5
FIAM				Sg	Sb	21 24 15.1	-1.0
VCEL	Villa Celiera	0.29	67	Pg	Pg	21 24 10.8	+0.6
VCEL				Sg	Sb	21 24 15.8	-0.9
	215nm,0.4s						
VCEL	Villa Celiera	0.29	67	Pg	Pg	21 24 10.8	+0.6
VCEL				Sg	Sb	21 24 15.8	-0.9
	215nm,0.4s						
TERO	Teramo	0.35	15	Pg	Pg	21 24 11.4	+0.1
TERO				Sg	Sg	21 24 17.1	+1.1
TERO	Teramo	0.35	15	Pg	Pg	21 24 11.4	+0.1
TERO				Sg	Sg	21 24 17.1	+1.1
INTR	Introdacqua	0.42	131	Pg	Pg	21 24 13.0	+0.5
INTR				Sg	Sb	21 24 19.5	-0.8
INTR	Introdacqua	0.42	131	Pg	Pg	21 24 13.0	+0.5
INTR				Sg	Sb	21 24 19.5	-0.8
LNSS	Leonessa	0.46	315	Pg	Pb	21 24 14.2	-0.4
LNSS				Sg	Sb	21 24 20.8	-0.8
	85nm,0.4s						
LNSS	Leonessa	0.46	315	Pg	Pb	21 24 14.2	-0.4
LNSS				Sg	Sb	21 24 20.8	-0.8
	85nm,0.4s						
CERT	Cerreto	0.50	228	Pg	Pg	21 24 14.1	+0.1
	68nm,0.4s						
CERT	Cerreto	0.50	228	Pg	Pg	21 24 14.1	+0.1
	68nm,0.4s						
MNS	Montasola	0.60	280	Pg	Pg	21 24 16.0	0.0
	20nm,0.6s						
MNS	Montasola	0.60	280	Pg	Pg	21 24 16.0	0.0
	20nm,0.6s						
NRCA	Norcia	0.61	334	Pg	Pg	21 24 16.1	-0.1
NRCA				Sg	Sb	21 24 25.5	-0.5
NRCA	Norcia	0.61	334	Pg	Pg	21 24 16.1	-0.1
NRCA				Sg	Sb	21 24 25.5	-0.5
FDMO	Fiordimonte	0.81	339	Pg	Pg	21 24 20.1	+0.2
FDMO	Fiordimonte	0.81	339	Pg	Pg	21 24 20.1	+0.2

*ISCJB **08** 22:04:01.4±0.5, 33°.32N±0°.02×115°.74W±0°.03, h1km±4km, Error ellipse: s-maj=3.8km s-min=2.7km az=28.0*

*NEIC **08** 22:04:02.4, 33°.32N×115°.72W, h4km, MW3.8(PAS), After PAS.*

*ECX **08** 22:04:02.9±0.4, 33°.32N×115°.72W, h4km, MD3.5, ML3.6*

ISC 08 22:04:01.7±1.0, 33°.29N±0°.02×115°.71W±0°.03, h9km±8km, n32, σ0s.87/51, 6C-11D, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRK	Frink	0.12	27	eP	Pg	22 04 04.5	-0.1
SWSC	Sam W. Stewart	0.36	192	⇓P	Pg	22 04 09.2	+0.5
	baz=0.4						
HAY	Hayfield	0.41	2	⇓iP	Pg	22 04 09.8	-0.1
BC3	Big Chuckawall	0.42	30	⇓P	Pg	22 04 09.9	-0.1
	baz=0.4						
BC3				⇓S	Sg	22 04 15.8	+0.3
	baz=0.4						
COK	Cook Ranch	0.44	182	eP	Pb	22 04 11.6	-0.1
SGL	Mount Signal	0.64	182	eP	Pg	22 04 14.8	+0.7
YUH	Yuha Desert	0.67	196	eP	Pg	22 04 14.8	+0.3
PFO	Pinyon Flat Ob	0.70	297	⇓S	Sg	22 04 24.0	-0.5
	baz=0.7						
DVTC	Desert V Tower	0.71	208	⇑P	Pg	22 04 15.3	-0.1
	baz=0.7						
DVTC				⇓S	Sg	22 04 25.5	+0.7
	baz=0.7						
MONP	Monument Peak	0.72	236	⇓S	Sg	22 04 24.9	-0.2
	baz=0.7						
GLA	Glamis	0.77	108	eP	Pb	22 04 17.5	+0.1
GLA				eS	Sb	22 04 28.1	0.0
IRM	Iron Mountain	0.98	28	⇓S	Sg	22 04 33.5	+0.1
	baz=1.0						
BAR	Barrett	1.02	233	P	Pg	22 04 21.6	+0.3
BAR				eS	Sb	22 04 35.0	0.0
Y12C	Blythe	1.09	65	⇓S	Sb	22 04 37.4	+0.3
	baz=1.1						
109C	Camp Elliot, M	1.24	252	⇑S	Sb	22 04 39.5	-2.0
	baz=1.2						
CBX	Cerro Bola	1.27	220	eP	Pn	22 04 25.3	-0.4
CBX				eS	Sb	22 04 42.3	0.0
MURC	Murrieta	1.29	284	⇑S	Sb	22 04 41.7	-1.2
	baz=1.3						
RDX	Rancho Dawling	1.37	188	eP	Pn	22 04 27.1	-0.2
RDX				eS	Sn	22 04 46.1	+0.4
RDX				⇓e		22 04 52.8	
	comp=N,556nm,0.4s						
GMRC	Granite Mounta	1.48	1	⇑Pg	Pb	22 04 29.6	0.0
	baz=1.5						
PDMCI	Parker Dam,Lak	1.65	52	⇑Sb	Sb	22 04 53.7	+0.6
	baz=1.6						
PBX	Punta Banda	1.77	209	eP	Pn	22 04 33.5	+1.0
PBX				eS	Sb	22 04 57.4	+0.7
PBX				⇑e		22 05 11.4	
	comp=N,712nm,1.0s						
ECNX	Esteban Cantu	1.80	205	eP	Pn	22 04 34.1	+1.1
ECNX				eS	Sn	22 04 53.4	-2.6
ECNX				eS	Sb	22 04 58.5	+0.9
LDFC	Landfair	1.85	15	ePn	Pb	22 04 35.5	-0.3
LDFC				Sn	Sn	22 04 57.7	+0.3
MWC	Mount Wilson	2.17	296	ePn	Pn	22 04 39.1	+0.9
MWC				eSn	Sn	22 05 06.6	+1.2
GSC	Goldstone	2.20	336	Pn	Pn	22 04 39.6	+1.0
GSC				eSn	Sn	22 05 05.7	-0.4
PASC	Pasadena Art C	2.25	294	ePn	Pn	22 04 40.4	+1.2
PASC				eSn	Sn	22 05 07.9	+0.9
SPX	San Pedro Mart	2.25	175	ePN	Pb	22 04 41.6	-1.1
SPX				eS	Sb	22 05 11.4	+0.6
EDW2	Edwards Air Fo	2.47	311	⇓Sb	Sb	22 05 17.6	+0.7
	baz=2.4						
ISA	Isabella	3.29	317	ePn	Pn	22 04 54.1	+0.5
ISA				S	Sg	22 05 46.0	-1.4
TUC	Tucson	4.26	102	ePn	Pn	22 05 05.5	-1.3
CCUT	Cedar City	4.66	24	ePn	Pn	22 05 13.8	+1.2
CCUT				ePg	Pg	22 05 30.2	-0.8
CCUT				eSg	Sg	22 06 31.3	0.0
ARUT	Antelope Range	4.85	22	ePn	Pn	22 05 16.2	+1.2
ARUT				ePg	Pg	22 05 33.4	-1.2
ARUT				eSg	Sg	22 06 37.8	+0.3

IDC 08 22:05:58.0±1.4, 3°.51N×126°.63E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.4/23, mbtmp3.4/4, Error ellipse: s-maj=159.4km s-min=21.3km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.50	162	P	P	22 11 18.9	-0.4
	1.4nm,0.8s,baz=342,slow=10,SNR=3.8						
ASAR	Alice Springs	27.93	166	P	P	22 11 50.7	+0.6
	0.1nm,0.3s,baz=342,slow=11,SNR=2.6						
SONM	Songino Array	47.48	342	P	P	22 14 34.8	0.0
	0.2nm,0.6s,baz=170,slow=8.6,SNR=2.7						
MKAR	Makanchi Array	57.68	325	P	P	22 15 50.1	-0.3
	0.4nm,0.7s,baz=124,slow=8.1,SNR=7.4						

IDC 08 22:20:20.3±1.0, 11°.01N×94°.88E, h0km, mb3.6/9, mb1 3.7/10, mb1mx3.6/28, mbtmp3.6/10, ML3.6/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/43, Error ellipse: s-maj=39.2km s-min=18.8km az=56.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.38	27	Pn	Pn	22 22 22.1	-1.1
	0.2nm,0.3s,baz=216,slow=14,SNR=11						
MKAR	Makanchi Array	37.23	346	P	P	22 27 33.8	+0.2
	1.2nm,0.9s,baz=161,slow=8.6,SNR=9.9						
SONM	Songino Array	37.96	13	P	P	22 27 39.6	-0.3
	0.8nm,0.9s,baz=200,slow=7.9,SNR=5.4						
ZALV	Zalesovo Beam	43.57	351	P	P	22 28 26.0	+0.1
	1.3nm,0.7s,baz=172,slow=8.8,SNR=9.0						
BVAR	Borovoye Array	46.30	340	P	P	22 28 48.3	+0.6
	0.8nm,0.7s,baz=129,slow=12,SNR=4.8						
MJAR	Matsushiro Arr	46.55	50	LR	LR	22 50 27.1	
	comp=Z,32nm,19.6s,baz=90,slow=39						
WRA	Warramunga Arr	49.55	128	P	P	22 29 13.1	-0.3
	0.6nm,0.8s,baz=304,slow=8.2,SNR=3.7						
ASAR	Alice Springs	51.42	132	P	P	22 29 27.8	+0.2
	0.4nm,0.6s,baz=308,slow=6.9,SNR=4.0						
BRTR	Keskin Array B	60.98	309	P	P	22 30 35.9	0.0
	0.6nm,0.8s,baz=62,slow=3.9,SNR=3.2						
FINES	FINESS Array B	70.31	332	P	P	22 31 35.9	+0.4
	0.8nm,0.7s,baz=137,slow=8.9,SNR=3.4						
GERES	GERESS Array B	76.00	318	P	P	22 32 08.1	-1.6
	0.3nm,0.7s,baz=82,slow=9.6,SNR=3.6						

IDC 08 22:29:41.7±8.8, 5°.64S×150°.97E, h82km±62km, mb2.8/2, mb1 3.2/3, mb1mx2.9/18, mbtmp3.0/3, ML2.6/1, Error ellipse: s-maj=125.6km s-min=56.8km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.32	225	P	Pn	22 30 59.0	+0.3
	1.4nm,0.3s,baz=53,slow=5.1,SNR=3.1						
PMG				S	Sn	22 31 59.4	+0.7
	2.6nm,0.3s,baz=282,slow=19,SNR=3.7						
WRA	Warramunga Arr	21.54	227	P	P	22 34 23.9	-0.5
	0.3nm,0.4s,baz=54,slow=10,SNR=3.6						
ASAR	Alice Springs	24.32	221	P	P	22 34 52.3	+0.4
	0.6nm,0.7s,baz=55,slow=9.6,SNR=6.7						
TORD	Torodi Ar. Bea	148.81	286	PKPbc	PKPbc	22 49 20.2	-0.7
	0.3nm,0.8s,baz=86,slow=2.0,SNR=5.2						

*CSEM **08** 22:42:09.9, 42°.37N×13°.43E, h9km, MD2.7/17, After ROM*

ROM 08 22:42:09.9±0.1, 42°.37N×13°.43E, h9km, Md2.7/17, Ml2.2/13, Error ellipse: s-maj=1.4km s-min=1.1km az=81.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	229	Pg	Pg	22 42 11.8	+0.1
AQU				Sg	Sg	22 42 12.7	-0.3
	17μm,0.3s						
AQU	L'Aquila	0.03	229	Pg	Pg	22 42 11.8	+0.1
AQU				Sg	Sg	22 42 12.7	-0.3
	17μm,0.3s						
FAGN	Fagnano	0.16	133	Pg	Pg	22 42 13.9	+0.5
FAGN				Sg	Sg	22 42 16.7	+0.9
	2μm,0.4s						
FAGN	Fagnano	0.16	133	Pg	Pg	22 42 13.9	+0.5
FAGN				Sg	Sg	22 42 16.7	+0.9
	2μm,0.4s						
CAMP	Campotosto	0.16	355	Pg	Pg	22 42 14.2	+0.6
CAMP				Sg	Sg	22 42 17.4	+1.2
	695nm,0.7s						
CAMP	Campotosto	0.16	355	Pg	Pg	22 42 14.2	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CAMP				Sg	Sg	22 42 17.4	+1.2
	695nm,0.7s						
FIAM	Fiamignano	0.25	246	Pg	Pg	22 42 16.0	+0.8
FIAM				Sg	Sb	22 42 20.3	-1.1
	336nm,0.4s						
FIAM	Fiamignano	0.25	246	Pg	Pg	22 42 16.0	+0.8
FIAM				Sg	Sb	22 42 20.3	-1.1
	336nm,0.4s						
TERO	Teramo	0.28	27	Pg	Pg	22 42 15.9	+0.2
TERO				Sg	Sg	22 42 20.6	+1.1
	280nm,0.4s						
TERO	Teramo	0.28	27	Pg	Pg	22 42 15.9	+0.2
TERO				Sg	Sg	22 42 20.6	+1.1
	280nm,0.4s						
VCEL	Villa Celiera	0.30	86	Pg	Pg	22 42 16.7	+0.5
	507nm,0.5s						
VCEL	Villa Celiera	0.30	86	Pg	Pg	22 42 16.7	+0.5
	507nm,0.5s						
PTQR	Pietraquaria	0.35	184	Pg	Pg	22 42 17.4	+0.4
PTQR				Sg	Sb	22 42 23.2	-1.0
	22nm,0.2s						
PTQR	Pietraquaria	0.35	184	Pg	Pg	22 42 17.4	+0.4
PTQR				Sg	Sb	22 42 23.2	-1.0
	22nm,0.2s						
LNSS	Leonessa	0.37	309	Pg	Pg	22 42 17.8	+0.4
	175nm,0.4s						
LNSS	Leonessa	0.37	309	Pg	Pg	22 42 17.8	+0.4
	175nm,0.4s						
INTR	Introdacqua	0.50	135	Pg	Pg	22 42 20.2	+0.4
INTR				Sg	Sb	22 42 28.8	+0.2
	189nm,0.5s						
INTR	Introdacqua	0.50	135	Pg	Pg	22 42 20.2	+0.4
INTR				Sg	Sb	22 42 28.8	+0.2
	189nm,0.5s						
NRCA	Norcia	0.52	333	Pg	Pg	22 42 20.4	+0.3
NRCA				Sg	Sb	22 42 28.6	-0.4
	40nm,0.5s						
NRCA	Norcia	0.52	333	Pg	Pg	22 42 20.4	+0.3
NRCA				Sg	Sb	22 42 28.6	-0.4
	40nm,0.5s						
VVLD	Villa Vallelon	0.52	164	Pg	Pg	22 42 20.7	+0.5
	104nm,0.5s						
VVLD	Villa Vallelon	0.52	164	Pg	Pg	22 42 20.7	+0.5
	104nm,0.5s						
CERT	Cerreto	0.54	218	Pg	Pg	22 42 20.7	+0.2
CERT				Sg	Sg	22 42 28.4	+0.8
	254nm,0.4s						
CERT	Cerreto	0.54	218	Pg	Pg	22 42 20.7	+0.2
CERT				Sg	Sg	22 42 28.4	+0.8
	254nm,0.4s						
MNS	Montasola	0.56	272	Pg	Pg	22 42 20.6	-0.2
	66nm,0.7s						
MNS	Montasola	0.56	272	Pg	Pg	22 42 20.6	-0.2
	66nm,0.7s						
GUAR	Guarcino	0.58	189	Pg	Pb	22 42 22.8	+0.4
	50nm,0.5s						
GUAR	Guarcino	0.58	189	Pg	Pb	22 42 22.8	+0.4
	50nm,0.5s						
OFFI	Offida	0.59	18	Pg	Pb	22 42 22.8	+0.3
	288nm,0.7s						
OFFI	Offida	0.59	18	Pg	Pb	22 42 22.8	+0.3
	288nm,0.7s						
SDI	San Donato	0.72	157	Pg	Pg	22 42 23.8	-0.1
	32nm,0.3s						
SDI	San Donato	0.72	157	Pg	Pg	22 42 23.8	-0.1
	32nm,0.3s						
CESI	CESI - Serrava	0.74	329	Pg	Pg	22 42 24.3	-0.1
	17nm,0.5s						
CESI	CESI - Serrava	0.74	329	Pg	Pg	22 42 24.3	-0.1
	17nm,0.5s						

*BEO **08** 22:56:49.8±3.1, 42°.57N×12°.77E, h0km, ML4.4/4*
*NEIC **08** 22:56:50.0, 42°.51N×13°.36E, h10km, mb4.1/6, ML4.3(PDG), ML4.3(STR), ML4.0(LDG), MW4.1(ROM), After ROM.*
NEIC Felt [IV] at Ascoli Piceno, Cassino, Chieti, Pescara, Rieti, Spoleto, Sulmona and Teramo; [III] at Ancona, Rome and Terni. Also felt at Assisi, Avezzano, Bisenti, Cermignano, Corridonia, Fermo, Foligno, Guidonia, Montesilvano, Narni and Viterbo.
*IDC **08** 22:56:50.0±0.7, 42°.60N×13°.22E, h0km, mb3.9/15, mb1 4.0/20, mb1mx3.9/32, mbtmp3.8/20, ML3.9/4, MS3.0/6, Ms1 3.0/6, ms1mx2.6/56, Error ellipse: s-maj=17.8km s-min=10.9km az=97.0*
*LDG **08** 22:56:50.8±0.1, 42°.60N×13°.60E, h2km, Ml4.0/18, Error ellipse: s-maj=3.4km s-min=1.9km az=5.0*
*PDG **08** 22:56:50.3±0.3, 42°.53N×13°.36E, h11km±1km, ML4.0/9, Error ellipse: s-maj=0.8km s-min=2.2km az=0.0*
*ISCJB **08** 22:56:50.2±0.2, 42°.53N±0°.01×13°.32E±0°.01, h15km±2km, mb4.0/22, MS3.3/4, Error ellipse: s-maj=2.3km s-min=1.4km az=27.1*
*CSEM **08** 22:56:50.7±0.1, 42°.51N×13°.31E, h5km, mb4.1/14, ML4.1/12, Mw4.1, Error ellipse: s-maj=2.1km s-min=1.5km az=30.0*
*ROM **08** 22:56:50.1±0.1, 42°.50N×13°.37E, h11km, Ml4.2/10, Error ellipse: s-maj=1.0km s-min=0.6km az=74.0*
*MOS **08** 22:56:50.2±1.1, 42°.54N×13°.34E, h18km, mb4.3/18, Error ellipse: s-maj=4.3km s-min=3.1km az=112.0*
*PRU **08** 22:56:51.3, 42°.54N×13°.49E, h0km, M4.1*
*STR **08** 22:57:00.4±0.5, 43°.06N×12°.74E, h10km, Ml4.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 08 22:56:50.8±0.6**, 42°.51N**±0°.01×**13°.35E**±0°.01**, h10**km±4km**, n707, σ1.55**/850**, mb4.1**/22**, MS3.2**/4**, 90C-16D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.05	57	⇑iPg	Pg	22 56 52.8	-0.2
CAMP				Sg	Sg	22 56 54.1	-0.4
CAMP	Campotosto	0.05	57	⇑iPg	Pg	22 56 52.8	-0.2
CAMP				Sg	Sg	22 56 54.1	-0.4
AQU	L'Aquila	0.16	167	eP	Pg	22 56 54.2	-0.1
AQU				eS	Sg	22 56 57.0	+0.3
AQU	L'Aquila	0.16	167	⇓iP	Pg	22 56 54.2	-0.1
AQU	L'Aquila	0.16	167	⇑iPg	Pg	22 56 54.3	-0.1
AQU				Sg	Sg	22 56 57.1	+0.3
	24µm,0.3s						
AQU	L'Aquila	0.16	167	⇑iPg	Pg	22 56 54.3	-0.1
AQU				eS	Sg	22 56 57.0	+0.3
TERO	Teramo	0.22	58	P	Pg	22 56 55.1	-0.2
TERO				S	Sg	22 56 58.4	0.0
TERO	Teramo	0.22	58	⇑iPg	Pg	22 56 55.1	-0.2
TERO				Sg	Sg	22 56 58.4	0.0
	26µm,0.6s						
TERO	Teramo	0.22	58	⇑iPg	Pg	22 56 55.1	-0.2
TERO				Sg	Sg	22 56 58.4	0.0
	26µm,0.6s						
LNSS	Leonessa	0.25	292	⇑iPg	Pg	22 56 56.1	+0.2
LNSS				Sg	Sg	22 57 00.4	+1.0
	55µm,0.3s						
LNSS	Leonessa	0.25	292	⇑iPg	Pg	22 56 56.1	+0.2
FAGN	Fagnano	0.30	145	Pg	Pg	22 56 56.6	-0.2
FAGN				Sg	Sg	22 57 00.9	+0.1
FAGN	Fagnano	0.30	145	Pg	Pg	22 56 56.6	-0.2
FAGN				Sg	Sg	22 57 00.9	+0.1
FIAM	Fiamignano	0.30	216	P	Pg	22 56 56.7	-0.1
FIAM				S	Sg	22 57 01.6	+0.8
FIAM	Fiamignano	0.30	216	Pg	Pg	22 56 56.7	-0.1
FIAM				Sg	Sg	22 57 01.6	+0.8
	36µm,0.8s						
FIAM	Fiamignano	0.30	216	Pg	Pg	22 56 56.7	-0.1
FIAM				Sg	Sg	22 57 01.6	+0.8
	36µm,0.8s						
NRCA	Norcia	0.37	332	P	Pg	22 56 58.1	-0.1
NRCA				S	Sg	22 57 03.9	+0.8
NRCA	Norcia	0.37	332	Pg	Pg	22 56 58.1	-0.1
NRCA				Sg	Sg	22 57 03.9	+0.8
	38µm,0.1s						
NRCA	Norcia	0.37	332	Pg	Pg	22 56 58.1	-0.1
NRCA				Sg	Sg	22 57 03.9	+0.8
	38µm,0.1s						
VCEL	Villa Celiera	0.38	107	Pg	Pg	22 56 58.4	+0.1
VCEL				Sg	Sb	22 57 04.8	-0.8
	50µm,0.7s						
VCEL	Villa Celiera	0.38	107	Pg	Pg	22 56 58.4	+0.1
VCEL				Sg	Sb	22 57 04.8	-0.8
	50µm,0.7s						
GAVE	Gavelli	0.39	299	Pg	Pg	22 56 58.5	+0.1
GAVE				Sg	Sg	22 57 04.6	+1.0
GAVE	Gavelli	0.39	299	Pg	Pg	22 56 58.5	+0.1
PTQR	Pietraquaria	0.49	176	P	Pg	22 56 59.6	-0.7
PTQR	Pietraquaria	0.49	176	Pg	Pg	22 56 59.6	-0.7
PTQR	Pietraquaria	0.49	176	Pg	Pg	22 56 59.6	-0.7
MNS	Montasola	0.51	256	⇑iPg	Pg	22 57 00.3	-0.5
MNS				Sg	Sg	22 57 08.0	+0.5
	14µm,0.5s						
MNS	Montasola	0.51	256	⇑iPg	Pg	22 57 00.3	-0.5
MNS				Sg	Sg	22 57 08.0	+0.5
	14µm,0.5s						
FDMO	Fiordimonte	0.56	340	P	Pg	22 57 01.3	-0.4
FDMO				S	Sb	22 57 10.1	-0.8
FDMO	Fiordimonte	0.56	340	Pg	Pg	22 57 01.3	-0.4
FDMO				Sg	Sb	22 57 10.1	-0.8
	7µm,0.5s						
FDMO	Fiordimonte	0.56	340	Pg	Pg	22 57 01.3	-0.4
FDMO				Sg	Sb	22 57 10.1	-0.8
	7µm,0.5s						
CESI	CESI - Serrava	0.60	326	Pg	Pg	22 57 02.1	-0.3
CESI				Sg	Sb	22 57 11.3	-0.6
CESI	CESI - Serrava	0.60	326	Pg	Pg	22 57 02.1	-0.3
CESI				Sg	Sb	22 57 11.3	-0.6
CERT	Cerreto	0.62	206	⇑iPg	Pg	22 57 02.0	-0.9
	42µm,1.1s						
CERT	Cerreto	0.62	206	⇑iPg	Pg	22 57 02.0	-0.9
	42µm,1.1s						
INTR	Introdacqua	0.64	140	Pg	Pg	22 57 02.3	-1.0
INTR				Sg	Sg	22 57 12.1	+0.4
	9µm,0.6s						
INTR	Introdacqua	0.64	140	Pg	Pg	22 57 02.3	-1.0
INTR				Sg	Sg	22 57 12.1	+0.4
	9µm,0.6s						
MTCE	Montecelio	0.66	223	⇑iPg	Pg	22 57 02.7	-0.9
MTCE	Montecelio	0.66	223	⇑iPg	Pg	22 57 02.7	-0.9
VVLD	Villa Vallelon	0.67	162	Pg	Pg	22 57 02.5	-1.2
VVLD	Villa Vallelon	0.67	162	Pg	Pg	22 57 02.5	-1.2
GUAR	Guarcino	0.71	182	Pg	Pg	22 57 03.4	-1.2
GUAR	Guarcino	0.71	182	Pg	Pg	22 57 03.4	-1.2
ASSB	Assisi San Ben	0.74	316	Pg	Pg	22 57 04.5	-0.6
ASSB	Assisi San Ben	0.74	316	Pg	Pg	22 57 04.5	-0.6
SNTG	Esanatoglia	0.81	338	⇑iPg	Pg	22 57 05.6	-0.7
SNTG	Esanatoglia	0.81	338	⇑iPg	Pg	22 57 05.6	-0.7
POFI	Posta Fibreno	0.83	161	Pg	Pg	22 57 05.8	-1.1
POFI	Posta Fibreno	0.83	161	Pg	Pg	22 57 05.8	-1.1
SDI	San Donato	0.87	157	Pg	Pg	22 57 05.8	-1.7
SDI	San Donato	0.87	157	Pg	Pg	22 57 05.8	-1.7
CING	Cingoli	0.87	352	⇑iPg	Pg	22 57 06.8	-0.8
CING	Cingoli	0.87	352	⇑iPg	Pg	22 57 06.8	-0.8
RDP	Rocca di Papa	0.89	212	Pg	Pg	22 57 06.7	-1.2
RDP	Rocca di Papa	0.89	212	Pg	Pg	22 57 06.7	-1.2
GIUL	Giuliano Di Ro	0.95	184	Pg	Pg	22 57 07.5	-1.6
GIUL	Giuliano Di Ro	0.95	184	Pg	Pg	22 57 07.5	-1.6
CERA	Filignano	1.04	151	Pg	Pg	22 57 08.9	-1.8
CERA	Filignano	1.04	151	Pg	Pg	22 57 08.9	-1.8
MIDA	Miranda	1.10	142	Pg	Pg	22 57 09.8	-2.0
MIDA	Miranda	1.10	142	Pg	Pg	22 57 09.8	-2.0
LATE	Laterza	1.15	276	Pn	Pb	22 57 11.8	-1.0
LATE	Laterza	1.15	276	Pn	Pb	22 57 11.8	-1.0
PIEI	Pieia	1.19	330	Pn	Pb	22 57 12.2	-1.3
PIEI	Pieia	1.19	330	Pn	Pb	22 57 12.2	-1.3
CDCA	Citt' di Caste	1.25	320	Pn	Pn	22 57 14.2	-0.2
CDCA	Citt' di Caste	1.25	320	Pn	Pn	22 57 14.2	-0.2
PARC	Parchiule	1.40	325	Pn	Pn	22 57 16.5	+0.1
PARC	Parchiule	1.40	325	Pn	Pn	22 57 16.5	+0.1
MS1	Monte Sant'Ang	2.09	112	ePn	Pb	22 57 28.2	-0.6
MS1				eSn	Sg	22 57 57.9	0.0
NVLJ	Novalja	2.33	28	ePn	Pn	22 57 28.9	-0.3
NVLJ				Sn	Sn	22 57 57.7	-0.2
NVLJ	Novalja	2.33	28	ePn	Pn	22 57 28.8	-0.3
NVLJ				Sn	Sn	22 57 57.6	-0.2
MAIM	Mastiano	2.52	305	P	Pn	22 57 31.7	-0.1
CRDM	Cardoso	2.59	307	P	Pn	22 57 32.9	+0.2
CDT	Castel del Mon	2.61	122	ePn	Pn	22 57 33.9	+0.9
CDT				eSn	Sb	22 58 07.8	-1.9
VLC	Villacollemand	2.72	308	ePn	Pn	22 57 34.8	+0.2
VLC				eSn	Sn	22 58 05.9	-1.7
VLC	Villacollemand	2.72	308	ePn	Pn	22 57 34.8	+0.2
VLC				eSn	Sn	22 58 05.9	-1.7
BAI	Bari	2.98	117	ePn	Pn	22 57 39.8	+1.7
BAI				eSn	Sn	22 58 16.7	+2.7
SKDS	Skadanscina	3.07	9	i Pn	Pn	22 57 39.1	-0.3
SKDS				i Sn	Sn	22 58 17.5	+1.2
SKDS							
	comp=Z,162nm,0.4s						
SKDS	Skadanscina	3.07	9	i Pn	Pn	22 57 39.1	-0.3
SKDS				i Sn	Sn	22 58 17.5	+1.2
	comp=Z,162nm,0.4s						
GRAM	Graiana	3.11	311	P	Pn	22 57 41.1	+1.2
CUC	Castrocucco	3.12	143	ePn	Pb	22 57 43.6	-2.8
CUC	Castrocucco	3.12	143	ePn	Pb	22 57 43.6	-2.8
CODM	Codolo	3.17	308	P	Pn	22 57 41.2	+0.5
TRI	Trieste	3.21	5	eP	Pn	22 57 41.0	-0.3
TRI				e		22 58 18.7	
TRI	Trieste	3.21	5	ePn	Pn	22 57 41.0	-0.3
TRI				eSn	Sn	22 58 18.6	-0.9
TRI	Trieste	3.21	5	eP	Pn	22 57 41.0	-0.3
TRI				eS	Sn	22 58 18.7	-0.9
PGF	Pioggiola	3.22	272	ePn	Pn	22 57 41.4	-0.1
	SNR=1.0						
PGF				eSn	Sn	22 58 21.6	+1.7
	comp=Z,38nm,0.5s						
PGF	Pioggiola	3.22	272	eP	Pn	22 57 41.4	-0.1
PGF				e		22 58 21.6	
PGF	Pioggiola	3.22	272	ePn	Pn	22 57 41.4	-0.1
PGF				eSn	Sn	22 58 21.6	+1.7
PGF	Pioggiola	3.22	272	ePn	Pn	22 57 41.4	-0.1
	SNR=1.0						
PGF				eSn	Sn	22 58 21.6	+1.7
	comp=Z,19nm,0.5s						
STON	Ston	3.23	82	ePn	Pn	22 57 42.3	+0.8
STON				Sn	Sn	22 58 18.2	-1.7
STON	Ston	3.23	82	ePn	Pn	22 57 42.2	+0.8
STON				Sn	Sn	22 58 18.2	-1.7
BOJS	Bojanci	3.29	24	⇑iPn	Pn	22 57 43.4	+1.0
BOJS				i Sn	Sn	22 58 24.7	+3.1
BOJS	Bojanci	3.29	24	⇑iPn	Pn	22 57 43.4	+1.0
BOJS				i Sn	Sn	22 58 24.7	+3.1
SC2M	Scurtabo	3.36	306	P	Pn	22 57 44.1	+0.7
VOY	Vojsko	3.54	6	ePn	Pn	22 57 45.7	-0.2
VOY				e		22 58 00.1	
VOY				eSn	Sn	22 58 29.4	+1.5
VOY	Vojsko	3.54	6	ePn	Pn	22 57 45.7	-0.2
VOY				eSn	Sn	22 58 29.4	+1.5
BLY	Banja Luka	3.57	50	ePn	Pn	22 57 47.2	+1.0
BLY	Banja Luka	3.57	50	ePn	Pn	22 57 47.2	+1.0
LJU	Ljubljana	3.63	13	ePn	Pn	22 57 43.0	-4.1
SISC	Sisak	3.68	35	ePn	Pn	22 57 49.6	+1.9
SISC	Sisak	3.68	35	ePn	Pn	22 57 49.5	+1.9
HCY	Herceg Novi	3.80	89	⇑iPn	Pn	22 57 49.9	+0.5
HCY				eSn	Sn	22 58 35.3	+1.1
HCY	Herceg Novi	3.80	89	⇑P	Pn	22 57 50.0	+0.5
HCY				S	Sn	22 58 36.4	+2.2
HCY	Herceg Novi	3.80	89	⇑P	Pn	22 57 50.0	+0.6
HCY				S	Sn	22 58 36.4	+2.2
HCY	Herceg Novi	3.80	89	P	Pn	22 57 50.0	+0.6
HCY				eSn	Sn	22 58 35.3	+1.1
HCY				S	Sn	22 58 36.4	+2.2
BRY	Bratogost	3.84	82	⇑iPn	Pn	22 57 50.8	+0.7
BRY				eSn	Sn	22 58 37.2	+1.8
BRY	Bratogost	3.84	82	⇑P	Pn	22 57 50.7	+0.7
BRY				S	Sn	22 58 37.2	+1.8
BRY	Bratogost	3.84	82	⇑P	Pn	22 57 50.7	+0.7
BRY				S	Sn	22 58 37.2	+1.8
BRY	Bratogost	3.84	82	⇑iPn	Pn	22 57 50.8	+0.7
BRY				eSn	Sn	22 58 37.2	+1.8
OBKA	Obir	4.09	12	⇓iPn	Pn	22 57 53.9	+0.4
	SNR=21						
OBKA	Obir	4.09	12	⇓iPn	Pn	22 57 53.9	+0.4
OBKA	Obir	4.09	12	⇓iPn	Pn	22 57 53.9	+0.4
BUM	Brajici-Budva	4.11	91	⇑iPn	Pn	22 57 54.6	+0.9
BUM				eSn	Sn	22 58 42.5	+0.7
BUM	Brajici-Budva	4.11	91	⇑iPn	Pn	22 57 54.6	+0.9
BUM				eSn	Sn	22 58 42.5	+0.7
MYKA	Terra Mystica	4.13	3	⇑iPn	Pn	22 57 54.4	+0.5
MYKA	Terra Mystica	4.13	3	⇑iPn	Pn	22 57 54.4	+0.5
MYKA	Terra Mystica	4.13	3	⇑iPn	Pn	22 57 54.4	+0.5
UPM	Unac-Piva	4.14	78	⇑iPn	Pn	22 57 55.5	+1.3
UPM				eSn	Sn	22 58 44.1	+1.3
UPM	Unac-Piva	4.14	78	⇑iPn	Pn	22 57 55.5	+1.3
UPM				eSn	Sn	22 58 44.1	+1.3
NKY	Niksic	4.17	84	⇑iPn	Pn	22 57 55.2	+0.6
NKY				eSn	Sn	22 58 45.4	+2.0
NKY	Niksic	4.17	84	⇓P	Pn	22 57 55.5	+0.9
NKY				S	Sn	22 58 45.1	+1.7
NKY	Niksic	4.17	84	⇓P	Pn	22 57 55.5	+0.9
NKY				S	Sn	22 58 45.1	+1.7
NKY	Niksic	4.17	84	⇑iPn	Pn	22 57 55.2	+0.6
NKY	Niksic	4.17	84	P	Pn	22 57 55.5	+0.9
NKY				S	Sn	22 58 45.1	+1.7
NKY				eSn	Sn	22 58 45.4	+2.0
TIP	Timpagrande	4.21	141	ePn	Pb	22 58 01.2	-3.8
VSL	Villasalto	4.25	226	ePn	Pn	22 57 56.2	+0.6
VSL				eSn	Sn	22 58 44.2	-1.2
VSL	Villasalto	4.25	226	ePn	Pn	22 57 56.2	+0.6
VSL				eSn	Sn	22 58 44.2	-1.2
ABTA	Abfaltersbach	4.28	352	i Pn	Pn	22 57 57.2	+1.2
	SNR=129						
ABTA	Abfaltersbach	4.28	352	i Pn	Pn	22 57 57.2	+1.2
ABTA	Abfaltersbach	4.28	352	i Pn	Pn	22 57 57.2	+1.2
PDG	Podgorica	4.37	89	ePn	Pn	22 57 58.1	+1.0
PDG				eSn	Sn	22 58 49.3	+1.2
PDG	Podgorica	4.37	89	⇑iPn	Pn	22 57 57.9	+0.8
PDG				eSn	Sn	22 58 49.3	+1.2
TTG	Podgorica	4.37	89	⇑iPn	Pn	22 57 57.9	+0.8
TTG				eSn	Sn	22 58 48.8	+0.7
TTG	Podgorica	4.37	89	⇑P	Pn	22 57 58.3	+1.2
TTG				S	Sn	22 58 49.4	+1.4
TTG	Podgorica	4.37	89	⇑P	Pn	22 57 58.3	+1.2
TTG				S	Sn	22 58 49.4	+1.4
TTG	Podgorica	4.37	89	P	Pn	22 57 58.3	+1.2
TTG				S	Sn	22 58 49.4	+1.4
ULC	Ulcinj	4.41	95	⇑iPn	Pn	22 57 58.4	+0.6
ULC				eSn	Sn	22 58 49.8	+0.7
ULC	Ulcinj	4.41	95	⇑P	Pn	22 57 58.8	+1.1
ULC				S	Sn	22 58 50.0	+0.9
ULC	Ulcinj	4.41	95	⇑P	Pn	22 57 58.8	+1.1
ULC				S	Sn	22 58 50.0	+0.9
ULC	Ulcinj	4.41	95	⇑iPn	Pn	22 57 58.4	+0.6
ULC	Ulcinj	4.41	95	P	Pn	22 57 58.8	+1.1
ULC				S	Sn	22 58 50.0	+0.9
SAOF	Saorge	4.49	291	P	Pn	22 58 00.8	+2.0
SAOF	Saorge	4.49	291	P	Pn	22 58 00.8	+2.0
SAOF	Saorge	4.49	291	P	Pn	22 58 00.8	+2.0
SAOF	Saorge	4.49	291	P	Pn	22 58 00.8	+2.0
PLE	Pljevlja	4.51	77	⇑iPn	Pn	22 58 00.4	+1.2
PLE				eSn	Sn	22 58 53.1	+1.4
PLE	Pljevlja	4.51	77	⇑iPn	Pn	22 58 00.4	+1.2
PLE				eSn	Sn	22 58 53.1	+1.4
SBF	Sospel	4.53	289	ePn	Pn	22 57 59.9	+0.4
	SNR=1.0						
SBF				eSn	Sn	22 58 52.6	+0.3
	comp=Z,64nm,0.6s,SNR=1.0						
SBF	Sospel	4.53	289	eP	Pn	22 57 59.9	+0.4
SBF				e		22 58 52.6	
SBF	Sospel	4.53	289	ePn	Pn	22 57 59.9	+0.4
SBF				eSn	Sn	22 58 52.6	+0.3
SBF	Sospel	4.53	289	ePn	Pn	22 57 59.9	+0.4
	SNR=1.0						
SBF				eSn	Sn	22 58 52.6	+0.3
	comp=Z,32nm,0.6s,SNR=1.0						
REVF	Revere	4.55	288	P	Pn	22 58 00.4	+0.7
REVF	Revere	4.55	288	P	Pn	22 58 00.4	+0.7
REVF	Revere	4.55	288	P	Pn	22 58 00.4	+0.7
REVF	Revere	4.55	288	P	Pn	22 58 00.4	+0.7
AUTN	L'Aution	4.58	291	P	Pn	22 58 01.8	+1.6
AUTN	L'Aution	4.58	291	P	Pn	22 58 01.8	+1.6
AUTN	L'Aution	4.58	291	P	Pn	22 58 01.8	+1.6
AUTN	L'Aution	4.58	291	P	Pn	22 58 01.8	+1.6
BBLS	Lazići	4.63	71	ePn	Pn	22 58 01.0	+0.2
BBLS	Lazići	4.63	71	ePn	Pn	22 58 01.0	+0.2
BEHE	Becsehely	4.66	31	epPn	Pn	22 58 02.6	+1.5
BEHE	Becsehely	4.66	31	eP	Pn	22 58 02.6	+1.5
FUORN	Ofenpass-Fuorn	4.67	333	ePn	Pn	22 58 03.5	+2.0
FUORN				eSn	Sn	22 58 53.0	-2.8
FUORN	Ofenpass-Fuorn	4.67	333	ePn	Pn	22 58 03.5	+2.0
FUORN				eSn	Sn	22 58 53.0	-2.8
CEL	Celeste	4.67	155	ePn	Pn	22 58 04.2	+2.8
CEL	Celeste	4.67	155	ePn	Pn	22 58 04.2	+2.8
TOUF	Mont Tournerai	4.71	291	P	Pn	22 58 03.1	+1.1
TOUF	Mont Tournerai	4.71	291	P	Pn	22 58 03.1	+1.1
TOUF	Mont Tournerai	4.71	291	P	Pn	22 58 03.1	+1.1
TOUF	Mont Tournerai	4.71	291	P	Pn	22 58 03.1	+1.1
MVIF	Mont Vial	4.74	289	P	Pn	22 58 04.3	+1.9
MVIF	Mont Vial	4.74	289	P	Pn	22 58 04.3	+1.9
MVIF	Mont Vial	4.74	289	P	Pn	22 58 04.3	+1.9
MVIF	Mont Vial	4.74	289	P	Pn	22 58 04.3	+1.9
BEY	Berane	4.83	83	⇑iPn	Pn	22 58 05.3	+1.6
BEY				eSn	Sn	22 59 01.0	+1.3
IVA	Berane	4.83	83	⇑iPn	Pn	22 58 05.3	+1.6
IVA				eSn	Sn	22 59 01.0	+1.3
PUK	Puka	4.88	93	ePN	Pn	22 58 06.4	+2.2
PUK	Puka	4.88	93	ePn	Pn	22 58 06.4	+2.2
PVY	Plav	4.88	87	⇑iPn	Pn	22 58 06.0	+1.7
PVY				eSn	Sn	22 59 02.2	+1.3
PVY	Plav	4.88	87	⇑iPn	Pn	22 58 06.0	+1.7
PVY				eSn	Sn	22 59 02.2	+1.3
FETA	Feichten	4.88	338	⇑iPn	Pn	22 58 06.3	+1.9
	SNR=40						
FETA	Feichten	4.88	338	⇑iPn	Pn	22 58 06.3	+1.9
FETA	Feichten	4.88	338	⇑iPn	Pn	22 58 06.3	+1.9
TUE	Stuetta	4.89	325	ePn	Pn	22 58 05.5	+1.0
TUE				eSn	Sn	22 58 56.8	-4.5
TUE	Stuetta	4.89	325	ePn	Pn	22 58 05.6	+1.0
TUE				eSn	Sn	22 58 56.8	-4.5
CALN	Calern	4.89	287	P	Pn	22 58 05.1	+0.6
CALN	Calern	4.89	287	P	Pn	22 58 05.1	+0.6
CALN	Calern	4.89	287	P	Pn	22 58 05.1	+0.6
CALN	Calern	4.89	287	P	Pn	22 58 05.1	+0.6
WTTA	Wattenberg	4.91	346	⇑iP	Pn	22 58 06.7	+1.9
WTTA	Wattenberg	4.91	346	⇑iPn	Pn	22 58 06.7	+1.9
	SNR=26						
WTTA	Wattenberg	4.91	346	⇑iPn	Pn	22 58 06.7	+1.9
WTTA	Wattenberg	4.91	346	i P	Pn	22 58 06.7	+1.9
TEKS	Tekeris	4.93	63	ePn	Pn	22 58 05.6	+0.7
TEKS	Tekeris	4.93	63	ePn	Pn	22 58 05.6	+0.7
DAVOX	Davos/Dischmat	4.94	331	Pn	Pn	22 58 07.3	+2.1
DAVOX				Sn	Sn	22 59 02.8	+0.4
DAVOX	Davos/Dischmat	4.94	331	Pn	Pn	22 58 07.3	+2.1
	comp=Z,6.5nm,0.3s,baz=142,slow=12,SNR=36						
DAVOX				Sn	Sn	22 59 02.8	+0.4
	comp=Z,12nm,0.3s,baz=287,slow=18,SNR=7.0						
DAVOX	Davos/Dischmat	4.94	331	P	Pn	22 58 07.3	+2.1
	comp=Z,7.0nm,0.3s						
DAVOX				S	Sn	22 59 02.8	+0.4
	comp=Z,12nm,0.3s						
BCI	Bajram Curri	4.97	89	ePN	Pn	22 58 07.8	+2.3
BCI	Bajram Curri	4.97	89	ePn	Pn	22 58 07.8	+2.3
ARSA	Arzberg	4.99	17	⇑iPn	Pn	22 58 05.6	-0.1
	SNR=8.7						
ARSA	Arzberg	4.99	17	⇑iPn	Pn	22 58 05.6	-0.1
ARSA	Arzberg	4.99	17	⇑iPn	Pn	22 58 05.6	-0.1
WATA	Walderalm	4.99	346	⇑iP	Pn	22 58 07.8	+2.0
WATA	Walderalm	4.99	346	⇑iPn	Pn	22 58 07.8	+2.0
	SNR=16						
WATA	Walderalm	4.99	346	⇑iPn	Pn	22 58 07.8	+2.0
WATA	Walderalm	4.99	346	i P	Pn	22 58 07.8	+2.0
TIR	Tirane	4.99	101	ePN	Pn	22 58 06.7	+0.9
TIR	Tirane	4.99	101	P	Pn	22 58 06.8	+1.0
TIR	Tirane	4.99	101	eP	Pn	22 58 06.8	+1.0
TIR				e		22 59 02.1	
TIR	Tirane	4.99	101	ePn	Pn	22 58 06.8	+1.0
TIR				eSn	Sn	22 59 02.1	-1.4
TIR	Tirane	4.99	101	ePn	Pn	22 58 06.4	+0.6
TIR				eSn	Sn	22 59 02.5	-1.1
TIR	Tirane	4.99	101	ePn	Pn	22 58 06.4	+0.6
TIR	Tirane	4.99	101	eP	Pn	22 58 06.8	+1.0
TIR				eS	Sn	22 59 02.1	-1.4
TIR				eSn	Sb	22 59 02.5	-16
FRF	La Foret Royal	5.03	284	ePn	Pn	22 58 06.0	-0.2
	SNR=1.0						
FRF	La Foret Royal	5.03	284	eP	Pn	22 58 06.0	-0.2
FRF	La Foret Royal	5.03	284	ePn	Pn	22 58 06.0	-0.2
FRF	La Foret Royal	5.03	284	ePn	Pn	22 58 06.0	-0.2
	SNR=1.0						
VLO	Vlora	5.04	112	ePN	Pn	22 58 09.9	+3.5
VLO	Vlora	5.04	112	ePn	Pn	22 58 09.9	+3.5
MOTA	Moosalm	5.09	343	⇑iP	Pn	22 58 09.1	+1.8
MOTA	Moosalm	5.09	343	⇑iPn	Pn	22 58 09.1	+1.8
	SNR=42						
MOTA	Moosalm	5.09	343	⇑iPn	Pn	22 58 09.1	+1.8
MOTA	Moosalm	5.09	343	i P	Pn	22 58 09.1	+1.8
LMR	La Mourre	5.09	282	ePn	Pn	22 58 06.6	-0.5
	SNR=1.0						

LMR eSn Sn 22 59 05.9 -0.1
comp=Z,11nm,0.5s
LMR La Mourre 5.09 282 eP Pn 22 58 06.6 -0.5
LMR e 22 59 05.9
LMR La Mourre 5.09 282 ePn Pn 22 58 06.6 -0.5
LMR eSn Sn 22 59 05.9 -0.1
LMR La Mourre 5.09 282 ePn Pn 22 58 06.6 -0.5
SNR=1.0
LMR eSn Sn 22 59 05.9 -0.1
comp=Z,5,6nm,0.5s
IVAS Ivanjica 5.10 76 ePn Pn 22 58 08.6 +1.4
IVAS eSn Sn 22 59 04.4 -1.8
IVAS Ivanjica 5.10 76 ePn Pn 22 58 08.6 +1.4
IVAS eSn Sn 22 59 04.4 -1.8
DIVS Divibare 5.10 70 P Pn 22 58 08.2 +0.9
DIVS Divibare 5.10 70 ePn Pn 22 58 07.7 +0.4
DIVS eSn Sn 22 59 03.5 -2.7
DIVS Divibare 5.10 70 ePn Pn 22 58 07.7 +0.4
DIVS Divibare 5.10 70 P Pn 22 58 08.2 +0.9
DIVS eSn Sn 22 59 03.5 -2.7
RJOB Jochberg 5.24 356 ePn Pn 22 58 10.8 +1.5
MBDF Montbardon 5.27 297 ePn Pn 22 58 10.7 +1.0
SNR=1.0
MBDF Montbardon 5.27 297 eP Pn 22 58 10.7 +1.0
MBDF Montbardon 5.27 297 ePn Pn 22 58 10.7 +1.0
MBDF Montbardon 5.27 297 ePn Pn 22 58 10.7 +1.0
SNR=1.0
PKSM Moragy 5.30 44 ⇑P Pn 22 58 09.0 -0.9
PKSM Moragy 5.30 44 ⇑*i*P Pn 22 58 09.0 -0.9
PKSM Moragy 5.30 44 ePn Pn 22 58 10.5 +0.6
PKSM Moragy 5.30 44 P Pn 22 58 09.0 -0.9
PHP Peshkopia 5.34 96 ePN Pn 22 58 12.5 +1.9
PHP Peshkopia 5.34 96 P Pn 22 58 12.5 +1.9
PHP Peshkopia 5.34 96 P Pn 22 58 12.5 +1.9
DAVA Damuels 5.38 334 ⇑*i*Pn Pn 22 58 13.2 +2.0
SNR=18
DAVA Damuels 5.38 334 ⇑*i*Pn Pn 22 58 13.2 +2.0
DAVA Damuels 5.38 334 ⇑*i*Pn Pn 22 58 13.2 +2.0
MOA Molln 5.38 7 ⇑*i*Pn Pn 22 58 11.8 +0.7
SNR=26
MOA Molln 5.38 7 ⇑*i*Pn Pn 22 58 11.8 +0.7
MOA Molln 5.38 7 ⇑⇑*i*Pn Pn 22 58 11.8 +0.7
PKS9 Tamasi 5.39 39 epPn Pn 22 58 13.3 +2.2
PKS9 Tamasi 5.39 39 eP Pn 22 58 13.3 +2.2
TRUS Trudelj 5.42 69 ePn Pn 22 58 11.3 -0.3
TRUS Trudelj 5.42 69 ePn Pn 22 58 11.3 -0.3
BNI Bardonecchia 5.46 300 eP Pn 22 58 16.7 +4.4
BNI Bardonecchia 5.46 300 ePn Pn 22 58 16.7 +4.4
GRUS Gruza 5.56 73 ePn Pn 22 58 14.4 +0.9
GRUS Gruza 5.56 73 ePn Pn 22 58 14.4 +0.9
KEK Kerkira 5.61 118 P Pn 22 58 15.8 +1.5
KEK Kerkira 5.61 118 eP Pn 22 58 15.9 +1.6
KEK Kerkira 5.61 118 P Pn 22 58 15.8 +1.5
LPG La Plagne 5.62 304 ePn Pn 22 58 15.4 +0.7
SNR=1.0
LPG eSn Sn 22 59 17.8 -1.6
comp=Z,44nm,0.8s
LPG La Plagne 5.62 304 eP Pn 22 58 15.4 +0.7
LPG e 22 59 17.8
LPG La Plagne 5.62 304 ePn Pn 22 58 15.4 +0.7
LPG eSn Sn 22 59 17.8 -1.6
LPG La Plagne 5.62 304 ePn Pn 22 58 15.4 +0.7
SNR=1.0
LPG eSn Sn 22 59 17.8 -1.6
comp=Z,22nm,0.8s
LPL La Plagne 5.64 304 ePn Pn 22 58 15.6 +0.7
SNR=1.0
LPL eSn Sn 22 59 17.9 -1.9
comp=Z,36nm,0.6s
LPL La Plagne 5.64 304 eP Pn 22 58 15.6 +0.7
LPL e 22 59 17.9
LPL La Plagne 5.64 304 ePn Pn 22 58 15.6 +0.7
LPL eSn Sn 22 59 17.9 -1.9
LPL La Plagne 5.64 304 ePn Pn 22 58 15.6 +0.7
SNR=1.0
LPL eSn Sn 22 59 17.9 -1.9
comp=Z,18nm,0.6s
SOP Sopron 5.65 23 ePn Pn 22 58 14.8 0.0
SOP Sopron 5.65 23 eP Pn 22 58 14.8 0.0
CONA Conrad Observa 5.70 17 *i* Pn Pn 22 58 15.7 +0.1
SNR=33
CONA Conrad Observa 5.70 17 *i* Pn Pn 22 58 15.7 +0.1
CONA Conrad Observa 5.70 17 *i* Pn Pn 22 58 15.7 +0.1
SELS Selova 5.75 80 ePn Pn 22 58 16.5 +0.3
SELS Selova 5.75 80 ePn Pn 22 58 16.5 +0.3
PKS2 Kecel 5.78 44 epPn Pn 22 58 18.3 +1.8
PKS2 Kecel 5.78 44 eP Pn 22 58 18.3 +1.8
PKST T"s 5.80 33 epPn Pn 22 58 17.9 +1.1
PKST T"s 5.80 33 eP Pn 22 58 17.9 +1.1
SENIN Lac Senin/Sane 5.80 314 ePn Pn 22 58 18.1 +1.1
SENIN eSn Sn 22 59 25.0 +1.3
SENIN Lac Senin/Sane 5.80 314 ePn Pn 22 58 18.1 +1.1
SENIN eSn Sn 22 59 25.0 +1.3
FUR Furstenfeldbru 5.84 346 eP Pn 22 58 18.2 +0.7
FUR Furstenfeldbru 5.84 346 ePn Pn 22 58 18.2 +0.7
FUR Furstenfeldbru 5.84 346 eP Pn 22 58 18.2 +0.7
SMRF Simiane la Rot 5.87 287 ePn Pn 22 58 19.2 +1.4
SNR=1.0
SMRF Simiane la Rot 5.87 287 ePn Pn 22 58 19.2 +1.4
SMRF Simiane la Rot 5.87 287 ePn Pn 22 58 19.2 +1.4
SNR=1.0
ORIF Oris-en-Rattie 5.93 297 eP Pn 22 58 21.8 +3.1
ORIF eSn Sn 22 59 25.1 -1.6
comp=Z,18nm,0.6s
ORIF Oris-en-Rattie 5.93 297 eP Pn 22 58 21.8 +3.1
ORIF e 22 59 25.1
ORIF Oris-en-Rattie 5.93 297 eP Pn 22 58 21.8 +3.1
ORIF eSn Sn 22 59 25.1 -1.6
SVIS Svilajnac 5.99 70 ePn Pn 22 58 19.8 +0.3
SVIS Svilajnac 5.99 70 ePn Pn 22 58 19.8 +0.3
SKO Skopje 6.03 92 ePn Pn 22 58 21.8 +1.9
SKO Skopje 6.03 92 ePn Pn 22 58 21.7 +1.7
SKO Skopje 6.03 92 ePn Pn 22 58 21.7 +1.7
PKS6 Bocsa 6.03 45 ePn Pn 22 58 21.4 +1.4
PKS6 Bocsa 6.03 45 eP Pn 22 58 21.4 +1.4
PKSG 6.05 34 epPn Pn 22 58 23.3 +3.0
IGT Igoumenitsa 6.06 117 P Pn 22 58 21.9 +1.5
IGT Igoumenitsa 6.06 117 P Pn 22 58 21.9 +1.5
PKS7 Kunszentmiklos 6.14 40 epPn Pn 22 58 24.1 +2.7
PKS7 Kunszentmiklos 6.14 40 eP Pn 22 58 24.1 +2.7
BIA Bitola 6.14 101 ePn Pn 22 58 22.6 +0.9
BIA Bitola 6.14 101 ePn Pn 22 58 22.5 +0.9
NEST Nestorio 6.15 107 P Pn 22 58 24.1 +2.4
NEST Nestorio 6.15 107 P Pn 22 58 24.1 +2.4
BARS Barje 6.25 84 ePn Pn 22 58 23.8 +0.8
BARS eSn Sn 22 59 33.0 -1.4
FNA Florina 6.25 103 P Pn 22 58 24.4 +1.3
FNA Florina 6.25 103 eP Pn 22 58 24.8 +1.7
FNA Florina 6.25 103 P Pn 22 58 24.4 +1.3
JAN Janina 6.34 114 eP Pn 22 58 26.5 +2.2
GEC2 GERESS Array S 6.34 2 eP Pn 22 58 24.3 -0.1
GEC2 GERESS Array S 6.34 2 ePn Pn 22 58 24.3 -0.1
GEC2 GERESS Array S 6.34 2 eP Pn 22 58 24.3 -0.1
GERES GERESS Array B 6.34 2 ePn Pn 22 58 24.0 -0.4
GERES Sn Sn 22 59 34.2 -2.6
comp=Z,1.2nm,0.3s,baz=178,slow=13,SNR=27
GERES GERESS Array B 6.34 2 Pn Pn 22 58 24.0 -0.4
GERES Sn Sn 22 59 34.2 -2.6
comp=Z,7.9nm,0.3s,baz=170,slow=24,SNR=13
GERES GERESS Array B 6.34 2 P Pn 22 58 24.0 -0.4
comp=Z,1.0nm,0.3s
BUD Budapest 6.39 37 ⇓*i*ePn Pn 22 58 25.9 +0.9
BUD Budapest 6.39 37 ⇓*i*eP Pn 22 58 25.9 +0.9
BOLS Boljevac 6.43 75 ePn Pn 22 58 24.9 -0.5
BOLS Boljevac 6.43 75 ePn Pn 22 58 24.9 -0.5
BBS Basel-Blauen 6.46 322 P Pn 22 58 26.1 +0.2
BBS S Sn 22 59 37.4 -2.3
BBS Basel-Blauen 6.46 322 P Pn 22 58 26.1 +0.2
BBS S Sn 22 59 37.4 -2.3
BBS Basel-Blauen 6.46 322 P Pn 22 58 26.1 +0.2
BBS S Sn 22 59 37.4 -2.3
FELD Feldberg im Sc 6.56 327 P Pn 22 58 27.3 -0.1
FELD Feldberg im Sc 6.56 327 P Pn 22 58 27.3 -0.1
CABF La Chapelle 6.61 311 ePn Pn 22 58 28.1 0.0
SNR=1.0
CABF La Chapelle 6.61 311 eP Pn 22 58 28.1 0.0
CABF La Chapelle 6.61 311 ePn Pn 22 58 28.1 0.0
CABF La Chapelle 6.61 311 ePn Pn 22 58 28.1 0.0
SNR=1.0
KHC Kasperske Hory 6.62 1 eP Pn 22 58 27.9 -0.3
KHC e 22 59 41.0
KHC Kasperske Hory 6.62 1 ePn Pn 22 58 27.9 -0.3
KHC eSn Sn 22 59 41.0 -2.8
KHC Kasperske Hory 6.62 1 ePN Pn 22 58 28.2 0.0
KHC ex x 22 58 39.0
KHC eSN Sn 22 59 41.1 -2.7
KHC Kasperske Hory 6.62 1 eP Pn 22 58 27.9 -0.3
KHC Kasperske Hory 6.62 1 Pn Pn 22 58 28.2 0.0
WET Wettzell 6.64 357 eP Pn 22 58 27.9 -0.6
WET Wettzell 6.64 357 ePn Pn 22 58 27.9 -0.6
WET Wettzell 6.64 357 eP Pn 22 58 27.9 -0.6
SMOL Smolenice 6.65 24 ePN Pn 22 58 29.2 +0.7
SMOL eSN Sn 22 59 47.4 +3.0
SMOL Smolenice 6.65 24 ePn Pn 22 58 29.2 +0.7
SMOL eSn Sn 22 59 47.4 +3.0
LKD2 Lefkada island 6.68 121 P Pn 22 58 30.9 +1.9
LKD2 Lefkada island 6.68 121 P Pn 22 58 30.9 +1.9
LOMF Lomont 6.70 319 P Pn 22 58 29.6 +0.3
LOMF Lomont 6.70 319 P Pn 22 58 29.6 +0.3
LOMF Lomont 6.70 319 P Pn 22 58 29.6 +0.3
LOMF Lomont 6.70 319 P Pn 22 58 29.6 +0.3
BZS Buzias 6.71 60 ⇑P Pn 22 58 29.8 +0.4
BZS Buzias 6.71 60 ⇑*i*P Pn 22 58 29.8 +0.4
BZS Buzias 6.71 60 ePn Pn 22 58 29.4 0.0
BZS Buzias 6.71 60 ePn Pn 22 58 29.4 0.0
BZS Buzias 6.71 60 P Pn 22 58 29.8 +0.4
VIVF Saint-Julien-l 6.72 293 ePn Pn 22 58 31.2 +1.7
VIVF Saint-Julien-l 6.72 293 eP Pn 22 58 31.2 +1.7
VIVF Saint-Julien-l 6.72 293 ePn Pn 22 58 31.2 +1.7
VIVF Saint-Julien-l 6.72 293 ePn Pn 22 58 31.2 +1.7
BFO Black Forest 6.81 330 eP Pn 22 58 30.3 -0.4
BFO Black Forest 6.81 330 ePn Pn 22 58 30.3 -0.4
BFO Black Forest 6.81 330 ePn Pn 22 58 29.7 -1.0
BFO eSn Sn 22 59 45.1 -3.1
BFO Black Forest 6.81 330 ePn Pn 22 58 29.7 -1.0
BFO Black Forest 6.81 330 eP Pn 22 58 30.3 -0.4
ZAPS Zavoj 6.86 80 ePn Pn 22 58 32.5 +1.1
STU Stuttgart 6.91 336 eP Pn 22 58 32.1 +0.1
STU Stuttgart 6.91 336 ePn Pn 22 58 32.1 +0.1
STU Stuttgart 6.91 336 eP Pn 22 58 32.1 +0.1
MOF Molkenrain 6.92 323 P Pn 22 58 31.7 -0.5
MOF S Sn 22 59 47.4 -3.6
MOF Molkenrain 6.92 323 P Pn 22 58 31.7 -0.5
MOF S Sn 22 59 47.4 -3.6
MOF Molkenrain 6.92 323 P Pn 22 58 31.7 -0.5
MOF S Sn 22 59 47.4 -3.6
MOF Molkenrain 6.92 323 P Pn 22 58 31.7 -0.5
SSB Saint Sauveur 6.94 297 eP Pn 22 58 31.9 -0.7
SSB pmax pmax
comp=Z,10.0nm,0.9s
SSB Saint Sauveur 6.94 297 ePn Pn 22 58 31.9 -0.7
comp=Z,9.9nm,0.9s
SSB Saint Sauveur 6.94 297 eP Pn 22 58 31.9 -0.7
comp=Z,10.0nm,0.9s
GRG Griva 6.94 100 P Pn 22 58 33.3 +0.7
GRG Griva 6.94 100 eP Pn 22 58 33.3 +0.7
GRG Griva 6.94 100 P Pn 22 58 33.3 +0.7
TREC Trest 6.95 12 eP Pn 22 58 32.4 -0.2
TREC e 22 59 48.8
TREC MLR MLR
comp=Z,600nm,4.6s
TREC Trest 6.95 12 ePN Pn 22 58 32.4 -0.2
TREC eSN Sn 22 59 48.8 -2.9
TREC AMS AMS 23 01 00.0
comp=Z,600nm,4.6s
TREC Trest 6.95 12 Pn Pn 22 58 32.4 -0.2
VAY Valandovo 6.98 97 ePn Pn 22 58 34.3 +1.3
VAY Valandovo 6.98 97 ePn Pn 22 58 34.7 +1.7
HINF Hinteralfeld 7.02 321 ePn Pn 22 58 34.0 +0.4
SNR=1.0
HINF eSn Sn 22 59 49.4 -4.0
comp=Z,89nm,0.5s
HINF Hinteralfeld 7.02 321 eP Pn 22 58 34.0 +0.4
HINF e 22 59 49.4
HINF Hinteralfeld 7.02 321 ePn Pn 22 58 34.0 +0.4
HINF eSn Sn 22 59 49.4 -4.0
HINF Hinteralfeld 7.02 321 ePn Pn 22 58 34.0 +0.4
SNR=1.0
VLS Valsamata 7.02 126 P Pn 22 58 35.5 +1.9
VLS Valsamata 7.02 126 eP Pn 22 58 35.7 +2.1
VLS Valsamata 7.02 126 P Pn 22 58 35.5 +1.9
LASF Ste Croix 7.10 286 ePn Pn 22 58 34.7 -0.1
SNR=1.0
LASF Ste Croix 7.10 286 ePn Pn 22 58 34.7 -0.1
LASF Ste Croix 7.10 286 ePn Pn 22 58 34.7 -0.1
SNR=1.0
PSZ Piszkesteto 7.11 38 eP Pn 22 58 35.3 +0.4
PSZ Piszkesteto 7.11 38 ePn Pn 22 58 35.3 +0.4
PSZ Piszkesteto 7.11 38 ⇓ePn Pn 22 58 36.3 +1.4
PSZ Piszkesteto 7.11 38 eP Pn 22 58 35.3 +0.4
VYHS Vyhne 7.12 31 ePn Pn 22 58 35.8 +0.9
VYHS eSN Sn 22 59 51.9 -3.9
VYHS Vyhne 7.12 31 ePn Pn 22 58 35.9 +1.0
VRAC Vranov 7.17 17 Pn Pn 22 58 36.2 +0.6
VRAC Vranov 7.17 17 ⇑*i*P Pn 22 58 35.6 0.0
VRAC Vranov 7.17 17 Pn Pn 22 58 36.2 +0.6
comp=Z,0.6nm,0.3s,baz=207,slow=12,SNR=8.9
VRAC LR LR 23 01 34.8
comp=Z,82nm,18.4s,baz=206,slow=40
VRAC Vranov 7.17 17 P Pn 22 58 36.2 +0.6
comp=Z,1.0nm,0.3s
THL Klokotos Trika 7.18 111 P Pn 22 58 37.4 +1.7
THL Klokotos Trika 7.18 111 eP Pn 22 58 37.4 +1.7
THL Klokotos Trika 7.18 111 P Pn 22 58 37.4 +1.7
KFL Anninata 7.18 125 P Pn 22 58 38.3 +2.5
KFL Anninata 7.18 125 P Pn 22 58 38.3 +2.5
ECH Echery 7.18 325 eP Pn 22 58 34.7 -1.1
ECH e 22 59 56.5
ECH pmax pmax
comp=Z,17nm,0.7s
ECH Echery 7.18 325 ePn Pn 22 58 34.7 -1.1
comp=Z,17nm,0.7s
ECH eSn Sn 22 59 56.5 -1.0
ECH Echery 7.18 325 P Pn 22 58 35.8 0.0
ECH S Sn 22 59 54.4 -3.0
ECH Echery 7.18 325 ePn Pn 22 58 34.7 -1.1
comp=Z,17nm,0.7s
ECH Echery 7.18 325 P Pn 22 58 35.8 0.0
ECH eS Sn 22 59 56.5 -1.0
KNT Kendrikon 7.25 97 P Pn 22 58 37.9 +1.1
KNT Kendrikon 7.25 97 P Pn 22 58 37.9 +1.1
VTS Vitosha 7.28 86 P Pn 22 58 38.9 +1.6
VTS Vitosha 7.28 86 ⇓P Pn 22 58 38.7 +1.4
VTS Vitosha 7.28 86 ⇓*i*P Pn 22 58 38.7 +1.4
VTS Vitosha 7.28 86 ePn Pn 22 58 38.4 +1.1
VTS eSn Sn 22 59 58.5 -1.5
VTS Vitosha 7.28 86 ePn Pn 22 58 38.4 +1.1
VTS Vitosha 7.28 86 P Pn 22 58 38.7 +1.4
CDF Champ du Feu 7.29 326 ePn Pn 22 58 36.5 -0.8
SNR=1.0
CDF eSn Sn 22 59 55.5 -4.6
comp=Z,80nm,0.4s
CDF Champ du Feu 7.29 326 eP Pn 22 58 36.5 -0.8
CDF e 22 59 55.5
CDF Champ du Feu 7.29 326 ePn Pn 22 58 36.5 -0.8
CDF eSn Sn 22 59 55.5 -4.6
CDF Champ du Feu 7.29 326 ePn Pn 22 58 36.5 -0.8
SNR=1.0
LIT Litokhoron 7.29 106 P Pn 22 58 38.3 +1.0
LIT Litokhoron 7.29 106 eP Pn 22 58 38.2 +1.0
LIT Litokhoron 7.29 106 P Pn 22 58 38.3 +1.0
ROTZ Rotzenmuhle 7.30 354 ePn Pn 22 58 37.4 -0.1
GRA1 Grafenberg Arr 7.34 349 eP Pn 22 58 37.5 -0.4
GRF Grafenberg Arr 7.34 349 eP Pn 22 58 37.5 -0.4
GRF Grafenberg Arr 7.34 349 ePn Pn 22 58 37.5 -0.4
EVR Evrytania 7.36 116 P Pn 22 58 41.2 +2.9
EVR Evrytania 7.36 116 eP Pn 22 58 41.3 +2.9
EVR Evrytania 7.36 116 P Pn 22 58 41.2 +2.9
HAU Haudompre 7.39 320 ePn Pn 22 58 38.2 -0.5
SNR=1.0
HAU eSn Sn 22 59 57.9 -4.7
comp=Z,78nm,0.4s
HAU Haudompre 7.39 320 eP Pn 22 58 38.2 -0.5
HAU e 22 59 57.9
HAU Haudompre 7.39 320 ePn Pn 22 58 38.2 -0.5
HAU eSn Sn 22 59 57.9 -4.7
HAU Haudompre 7.39 320 ePn Pn 22 58 38.2 -0.5
SNR=1.0
KEST Kesra 7.45 206 ePn Pn 22 58 45.3 +5.7
KEST Kesra 7.45 206 Pn Pn 22 58 44.4 +4.8
comp=Z,1.4nm,0.3s,baz=291,slow=3.1,SNR=46
MAKR Makrakomi, Fth 7.52 115 P Pn 22 58 43.6 +3.1
MAKR Makrakomi, Fth 7.52 115 P Pn 22 58 43.6 +3.1
PRU Pruhonice 7.53 6 ePN Pn 22 58 40.7 +0.2
PRU eSN Sn 23 00 02.0 -3.9
PRU Pruhonice 7.53 6 Pn Pn 22 58 40.7 +0.2
LANF Langenberg 7.54 331 P Pn 22 58 39.8 -1.0
LANF Langenberg 7.54 331 P Pn 22 58 39.8 -1.0
LANF Langenberg 7.54 331 P Pn 22 58 39.8 -1.0
LANF Langenberg 7.54 331 P Pn 22 58 39.8 -1.0
RLS Riolos of Patr 7.63 123 P Pn 22 58 44.7 +2.7
RLS Riolos of Patr 7.63 123 eP Pn 22 58 45.7 +3.7
RLS Riolos of Patr 7.63 123 P Pn 22 58 44.7 +2.7
AGG Agios Georgios 7.65 114 P Pn 22 58 44.4 +2.1
AGG Agios Georgios 7.65 114 eP Pn 22 58 45.1 +2.8
AGG Agios Georgios 7.65 114 P Pn 22 58 44.4 +2.1
SOH Sokhos 7.67 99 eP Pn 22 58 43.2 +0.6
EFP Efpalio 7.69 119 P Pn 22 58 45.6 +2.8
EFP Efpalio 7.69 119 eP Pn 22 58 46.1 +3.3
EFP Efpalio 7.69 119 P Pn 22 58 45.6 +2.8
THEF They Montfort 7.72 320 P Pn 22 58 42.9 -0.3
THEF S Sn 23 00 07.9 -2.7
THEF They Montfort 7.72 320 P Pn 22 58 42.9 -0.3
THEF S Sn 23 00 07.9 -2.7
THEF They Montfort 7.72 320 P Pn 22 58 42.9 -0.3
THEF S Sn 23 00 07.9 -2.7
THEF They Montfort 7.72 320 P Pn 22 58 42.9 -0.3
NKC Novy Kostel 7.75 356 ePN Pn 22 58 43.8 +0.2
NKC eSN Sn 23 00 08.3 -3.1
NKC AMS AMS 23 01 40.0
comp=Z,200nm,6.3s
NKC Novy Kostel 7.75 356 Pn Pn 22 58 43.8 +0.2
TOD Tromm 7.77 338 P Pn 22 58 43.8 -0.1
TOD Tromm 7.77 338 P Pn 22 58 43.8 -0.1
TOD Tromm 7.77 338 P Pn 22 58 43.8 -0.1
SRS Serrai 7.77 97 P Pn 22 58 44.6 +0.6
SRS Serrai 7.77 97 P Pn 22 58 44.6 +0.6
MORC Moravsky Berou 7.83 20 eP Pn 22 58 48.4 +3.7
MORC Moravsky Berou 7.83 20 ePn Pn 22 58 48.4 +3.7
MORC Moravsky Berou 7.83 20 ePn Pn 22 58 47.3 +2.6
TRIZ Trizonia 7.83 119 P Pn 22 58 47.9 +3.2
TRIZ Trizonia 7.83 119 P Pn 22 58 47.9 +3.2
LAKA Lakka 7.84 120 eP Pn 22 58 49.4 +4.5
KALE Kalithea 7.86 119 eP Pn 22 58 50.1 +4.9
PLG Polygyros 7.88 102 eP Pn 22 58 46.7 +1.3
NVR Nevrokopi 7.92 95 P Pn 22 58 47.4 +1.4
NVR Nevrokopi 7.92 95 eP Pn 22 58 47.3 +1.3
NVR Nevrokopi 7.92 95 P Pn 22 58 47.4 +1.4
TANN Tannenbergstha 7.93 356 ePn Pn 22 58 47.1 +1.0
SMF Signal de Mont 7.95 305 ePn Pn 22 58 46.4 +0.1
SNR=1.0
SMF eSn Sn 23 00 11.3 -5.0
comp=Z,15nm,0.5s
SMF Signal de Mont 7.95 305 eP Pn 22 58 46.4 +0.1
SMF e 23 00 11.3
SMF Signal de Mont 7.95 305 ePn Pn 22 58 46.4 +0.1
SMF eSn Sn 23 00 11.3 -5.0
SMF Signal de Mont 7.95 305 ePn Pn 22 58 46.4 +0.1
SNR=1.0
PVCC Panska Ves 8.07 6 ePN Pn 22 58 48.2 +0.3
PVCC eSN Sn 23 00 15.5 -3.6
PVCC Panska Ves 8.07 6 Pn Pn 22 58 48.2 +0.3
PAGF Fort de Pagny 8.07 321 ePn Pn 22 58 47.3 -0.7
PAGF eSn Sn 23 00 14.3 -5.0
comp=Z,9,3nm,0.6s
PAGF Fort de Pagny 8.07 321 ePn Pn 22 58 47.3 -0.7
PAGF eSn Sn 23 00 14.3 -5.0
PAGF Fort de Pagny 8.07 321 ePn Pn 22 58 47.3 -0.7
XOR Xorichti 8.08 110 P Pn 22 58 48.7 +0.5
XOR Xorichti 8.08 110 P Pn 22 58 48.7 +0.5
DPC Dobruska-Polom 8.11 14 eP Pn 22 58 49.8 +1.3
DPC Dobruska-Polom 8.11 14 ePn Pn 22 58 49.8 +1.3
DPC Dobruska-Polom 8.11 14 ePN Pn 22 58 48.2 -0.3
DPC eSN Sn 23 00 16.8 -3.4
DPC AMS AMS 23 02 10.0
comp=Z,200nm,6.9s
DPC Dobruska-Polom 8.11 14 Pn Pn 22 58 48.2 -0.3
DPC Dobruska-Polom 8.11 14 eP Pn 22 58 49.8 +1.3
SFTF Sexfontaines 8.17 317 ePn Pn 22 58 48.8 -0.5
SFTF eSn Sn 23 00 16.3 -5.3
comp=Z,20nm,0.5s
SFTF Sexfontaines 8.17 317 ePn Pn 22 58 48.8 -0.5
SFTF eSn Sn 23 00 16.3 -5.3
SFTF Sexfontaines 8.17 317 ePn Pn 22 58 48.8 -0.5
PAIG Paliouri 8.20 105 eP Pn 22 58 50.9 +1.1
MTLF Montolieu 8.21 280 ePn Pn 22 58 50.7 +0.7
SNR=1.0
MTLF Montolieu 8.21 280 eP Pn 22 58 50.7 +0.7
MTLF Montolieu 8.21 280 ePn Pn 22 58 50.7 +0.7
MTLF Montolieu 8.21 280 ePn Pn 22 58 50.7 +0.7
SNR=1.0
MOX Moxa 8.23 352 eP Pn 22 58 49.9 -0.2
MOX Moxa 8.23 352 ePn Pn 22 58 49.9 -0.2
MOX Moxa 8.23 352 eP Pn 22 58 49.9 -0.2
LOR Lormes 8.25 308 ePn Pn 22 58 50.3 -0.2
SNR=1.0
LOR eSn Sn 23 00 19.7 -4.0
comp=Z,15nm,0.5s,SNR=1.0
LOR Lormes 8.25 308 ePn Pn 22 58 50.3 -0.2
LOR eSn Sn 23 00 19.7 -4.0
LOR Lormes 8.25 308 ePn Pn 22 58 50.3 -0.2
SNR=1.0
GUR Goura 8.25 121 P Pn 22 58 53.6 +3.0
GUR Goura 8.25 121 eP Pn 22 58 53.7 +3.1
GUR Goura 8.25 121 P Pn 22 58 53.6 +3.0
LKR Lokris 8.29 114 eP Pn 22 58 54.0 +3.0
AVF Avril sur Loir 8.31 304 ePn Pn 22 58 51.4 +0.1
SNR=1.0
AVF Avril sur Loir 8.31 304 eP Pn 22 58 51.4 +0.1
AVF Avril sur Loir 8.31 304 ePn Pn 22 58 51.4 +0.1
AVF Avril sur Loir 8.31 304 ePn Pn 22 58 51.4 +0.1
SNR=1.0
SSF Saint Saulge 8.35 306 ePn Pn 22 58 51.6 -0.2
SNR=1.0
SSF Saint Saulge 8.35 306 eP Pn 22 58 51.6 -0.2
SSF Saint Saulge 8.35 306 ePn Pn 22 58 51.6 -0.2
SSF Saint Saulge 8.35 306 ePn Pn 22 58 51.6 -0.2
SNR=1.0
MEZF Maizieres J'vi 8.36 319 ePn Pn 22 58 51.3 -0.6
SNR=1.0
MEZF eSn Sn 23 00 21.3 -5.0
comp=Z,17nm,0.5s,SNR=1.0
MEZF Maizieres J'vi 8.36 319 ePn Pn 22 58 51.3 -0.6
MEZF eSn Sn 23 00 21.3 -5.0
MEZF Maizieres J'vi 8.36 319 ePn Pn 22 58 51.3 -0.6
SNR=1.0
BRG Berggiesshubel 8.38 3 ePN Pn 22 58 55.4 +3.2
BRG eSN Sn 23 00 23.0 -3.7
BRG eSG Sg 23 01 30.3 +11
comp=Z,17nm,1.1s
BRG Berggiesshubel 8.38 3 eP Pn 22 58 55.4 +3.2
BRG e 23 00 23.0
BRG smax smax
comp=N,17nm,1.1s
NIE Niedzica 8.44 33 eP Pn 22 58 58.6 +5.5
NIE Niedzica 8.44 33 eP Pn 22 58 58.6 +5.5
BGF Bois d'Agland 8.53 302 ePn Pn 22 58 54.2 0.0
BGF eSn Sn 23 00 25.9 -4.6
comp=N,9.5nm,0.4s
BGF Bois d'Agland 8.53 302 eP Pn 22 58 54.2 0.0
BGF e 23 00 25.9
BGF Bois d'Agland 8.53 302 ePn Pn 22 58 54.2 0.0
BGF eSn Sn 23 00 25.9 -4.6
BGF Bois d'Agland 8.53 302 ePn Pn 22 58 54.2 0.0
CAF Calviac 8.53 290 ePn Pn 22 58 55.7 +1.4
SNR=1.0
CAF eSn Sn 23 00 27.4 -3.1
comp=N,73nm,1.8s
CAF Calviac 8.53 290 eP Pn 22 58 55.7 +1.4
CAF e 23 00 27.4
CAF Calviac 8.53 290 ePn Pn 22 58 55.7 +1.4
CAF eSn Sn 23 00 27.4 -3.1
CAF Calviac 8.53 290 ePn Pn 22 58 55.7 +1.4
SNR=1.0
CRVS Cervenica-Dubn 8.54 39 ePN Pn 22 58 58.0 +3.5
CRVS e 22 59 43.7
PYL PYLOS 8.55 128 eP Pn 22 58 57.7 +3.0
TRPA Tarpa 8.57 46 ⇑*i*P Pn 22 58 56.3 +1.5
TRPA Tarpa 8.57 46 ⇓epPn Pn 22 58 58.8 +4.0
TRPA Tarpa 8.57 46 ⇑*i*P Pn 22 58 56.3 +1.5
LTK Loutraki 8.61 118 eP Pn 22 59 00.3 +4.9
VLX Vlachokerasia 8.62 124 eP Pn 22 59 02.7 +7.0
ARR Arges 8.63 67 ⇑*i*P Pn 22 58 57.4 +1.7
ARR Arges 8.63 67 ⇑⇑*i*P Pn 22 58 57.4 +1.7
HUMR Humele 8.69 73 ⇓*i*P Pn 22 58 57.7 +1.2
HUMR Humele 8.69 73 ⇓⇓*i*P Pn 22 58 57.7 +1.2

WLF Walferdange 8.73 328 PN Pn 22 58 57.8 +0.8
WLF SN Sn 23 00 36.2 +0.7
comp=N,11nm,0.0s
WLF Walferdange 8.73 328 Pn Pn 22 58 57.8 +0.8
WLF Sn Sn 23 00 36.1 +0.7
CLL Collm 8.81 359 eP Pn 22 59 00.0 +2.0
CLL Collm 8.81 359 e(Pn) Pn 22 59 00.0 +2.0
CLL eSn Sn 23 00 28.0 -9.3
CLL eSb1 23 01 01.0
CLL eSg Sg 23 01 38.0 +4.8
comp=E,300nm,19.8s
CLL i 23 01 51.4
CLL Collm 8.81 359 eP Pn 22 59 00.0 +2.0
TCF Toulx Ste Croi 8.83 299 ePn Pn 22 58 58.5 +0.1
TCF Toulx Ste Croi 8.83 299 eP Pn 22 58 58.5 +0.1
TCF Toulx Ste Croi 8.83 299 ePn Pn 22 58 58.5 +0.1
TCF Toulx Ste Croi 8.83 299 ePn Pn 22 58 58.5 +0.1
RJF Les Rejaudoux 8.99 292 ePn Pn 22 59 01.3 +0.7
RJF Les Rejaudoux 8.99 292 eP Pn 22 59 01.3 +0.7
RJF Les Rejaudoux 8.99 292 ePn Pn 22 59 01.3 +0.7
RJF Les Rejaudoux 8.99 292 ePn Pn 22 59 01.3 +0.7
DID Didima 9.08 120 eP Pn 22 59 05.4 +3.5
VLI Veliai 9.38 125 eP Pn 22 59 11.7 +5.7
MEM Membach 9.55 331 PN Pn 22 59 10.5 +2.3
MEM SN Sn 23 00 50.4 -5.1
comp=N,6.3nm,0.0s
MEM Membach 9.55 331 Pn Pn 22 59 10.5 +2.3
MLR Muntele Rosu 9.55 68 LR LR 23 03 02.8
comp=N,37nm,21.9s,baz=78,slow=39
GIVF Givet 9.61 325 ePn Pn 22 59 08.3 -0.8
GIVF eSn Sn 23 00 51.1 -6.0
comp=N,30nm,0.8s
GIVF Givet 9.61 325 eP Pn 22 59 08.3 -0.8
GIVF e 23 00 51.1
GIVF Givet 9.61 325 ePn Pn 22 59 08.3 -0.8
GIVF eSn Sn 23 00 51.1 -6.0
GIVF Givet 9.61 325 ePn Pn 22 59 08.3 -0.8
ALN Alexandroupoli 9.63 95 eP Pn 22 59 12.3 +2.9
KWP Kalwaria Pacla 9.64 39 eP Pn 22 59 08.2 -1.3
KWP pmax pmax
comp=Z,14nm,0.8s
KWP Kalwaria Pacla 9.64 39 ePn Pn 22 59 08.2 -1.3
comp=Z,14nm,0.8s
KWP Kalwaria Pacla 9.64 39 eP Pn 22 59 14.6 +5.1
KWP Kalwaria Pacla 9.64 39 eP Pn 22 59 08.2 -1.3
comp=Z,14nm,0.8s
BCLA Clavier 9.66 328 PN Pn 22 59 11.3 +1.5
BCLA SN Sn 23 00 53.5 -4.8
comp=N,7.0nm,0.0s
BCLA Clavier 9.66 328 Pn Pn 22 59 11.2 +1.5
BUR08 Bucovina Ar. S 9.82 54 ePn Pn 22 59 11.8 -0.4
BUR08 eSn Sn 23 01 01.1 -1.4
BUR08 Bucovina Ar. S 9.82 54 ePn Pn 22 59 11.8 -0.4
BAIF Baives 9.85 323 ePn Pn 22 59 11.5 -0.8
BAIF eSn Sn 23 00 56.9 -6.0
comp=N,8.4nm,0.7s
BAIF Baives 9.85 323 eP Pn 22 59 11.5 -0.8
BAIF e 23 00 56.9
BAIF Baives 9.85 323 ePn Pn 22 59 11.5 -0.8
BAIF eSn Sn 23 00 56.9 -6.0
BAIF Baives 9.85 323 ePn Pn 22 59 11.5 -0.8
ISR Istrita 9.89 70 ⇑P Pn 22 59 13.0 0.0
ISR Istrita 9.89 70⇑iP Pn 22 59 12.9 0.0
ISR Istrita 9.89 70 P Pn 22 59 13.0 0.0
PLOR Plostina 10.12 66 ⇑P Pn 22 59 17.6 +1.5
PLOR Plostina 10.12 66⇑iP Pn 22 59 17.6 +1.5
PLOR Plostina 10.12 66 P Pn 22 59 17.6 +1.5
VRI Vrincioaia 10.18 66 ⇑P Pn 22 59 18.2 +1.3
VRI Vrincioaia 10.18 66⇑iP Pn 22 59 18.2 +1.3
VRI Vrincioaia 10.18 66 P Pn 22 59 18.2 +1.3
LVV L'vov 10.40 42 eP Pn 22 59 23.3 +3.4
CFR Carcaliu 11.01 71 ⇑P Pn 22 59 29.9 +1.7
CFR Carcaliu 11.01 71⇑iP Pn 22 59 29.9 +1.7
CFR Carcaliu 11.01 71 P Pn 22 59 29.9 +1.7
TIRR Tirgusor 11.12 75 ⇑P Pn 22 59 30.6 +0.9
TIRR Tirgusor 11.12 75⇑iP Pn 22 59 30.6 +0.9
TIRR Tirgusor 11.12 75 P Pn 22 59 30.6 +0.9
ESDC Sonseca Array 13.37 264 Pn Pn 23 00 00.5 -0.1
ESDC Sonseca Array 13.37 264 Pn Pn 23 00 00.5 -0.1
comp=N,0.2nm,0.3s,baz=62,slow=14,SNR=7.1
ESDC Sonseca Array 13.37 264 Pn Pn 23 00 00.4 -0.1
BRTR Keskin Array B 15.54 93 Pn P 23 00 37.0 +2.6
BRTR Keskin Array B 15.54 93 Pn P 23 00 37.0 +2.6
comp=N,0.1nm,0.3s,baz=279,slow=9.0,SNR=9.3
BRTR Keskin Array B 15.54 93 P P 23 00 37.0 +2.6
EKA Eskdalemuir Ar 16.75 326 Pn P 23 00 46.9 -0.7
EKA Eskdalemuir Ar 16.75 326 Pn P 23 00 46.9 -0.7
baz=134,slow=15,SNR=3.1
EKA Eskdalemuir Ar 16.75 326 P P 23 00 46.9 -0.7
ANN Anapa 17.56 74 eP Pn 23 00 55.3 -0.2
ANN eS Sn 23 04 12.5 +1.5
ANN pmax pmax
comp=Z,32nm,1.1s
ANN Anapa 17.56 74 eP Pn 23 00 55.3 -0.2
comp=Z,32nm,1.1s
HFS Hagfors 17.65 1 P P 23 00 57.4 -0.1
HFS Hagfors 17.65 1 P P 23 00 57.4 -0.1
comp=Z,0.1nm,0.3s,baz=150,slow=12,SNR=4.2
HFS LR LR 23 07 52.4
comp=Z,40nm,18.3s,baz=215,slow=38
HFS Hagfors 17.65 1 P P 23 00 57.4 -0.1
NB2 NORSAR Subarra 18.60 357 P P 23 01 07.2 -0.8
comp=Z,6.7nm,1.4s,baz=172,slow=11
NB2 NORSAR Subarra 18.60 357 P P 23 01 07.2 -0.8
comp=Z,6.7nm,1.4s,SNR=4.4
NOA NORSAR Array B 18.60 357 P Pn 23 01 08.6 +0.3
NOA NORSAR Array B 18.60 357 P Pn 23 01 08.6 +0.3
comp=Z,0.2nm,0.3s,baz=181,slow=9.0,SNR=4.1
NOA LR LR 23 08 39.0
comp=Z,30nm,19.6s,baz=235,slow=38
NOA NORSAR Array B 18.60 357 P Pn 23 01 08.6 +0.3
MALT Malatya 19.52 94 eP P 23 01 16.9 -1.5
MALT pmax pmax
comp=Z,3.0nm,0.8s
MALT Malatya 19.52 94 eP P 23 01 16.9 -1.5
comp=Z,2.8nm,0.8s
MALT Malatya 19.52 94 eP P 23 01 16.9 -1.5
comp=Z,2.8nm,0.8s
VSR Storozhevoye 19.60 55 eP Pn 23 01 20.8 +0.5
VSR pmax pmax
comp=N,4.0nm,0.7s
VSR pmax pmax
comp=E,7.0nm,0.7s
VSR pmax pmax
comp=Z,6.0nm,0.7s
VSR Storozhevoye 19.60 55 eP Pn 23 01 20.8 +0.5
FINES FINESS Array B 20.45 18 P P 23 01 28.8 +0.7
FINES FINESS Array B 20.45 18 P P 23 01 28.8 +0.7
comp=Z,9.5nm,0.7s,baz=201,slow=10,SNR=17
FINES FINESS Array B 20.45 18 P P 23 01 28.8 +0.7
comp=Z,10.0nm,0.7s
TAM Tamanrasset 20.72 201 eP P 23 01 30.0 -1.5
TAM pmax pmax
comp=Z,4.0nm,0.9s
TAM Tamanrasset 20.72 201 eP P 23 01 30.0 -1.5
comp=Z,3.5nm,0.9s
TAM Tamanrasset 20.72 201 eP P 23 01 30.0 -1.5
comp=Z,3.5nm,0.9s
VRHR Novokhopersk 21.07 56 eP P 23 01 36.5 +1.6
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR pmax pmax
comp=Z,10.0nm,0.9s
VRHR Novokhopersk 21.07 56 eP P 23 01 36.5 +1.6
KIV Kislovodsk 21.38 76 eP P 23 01 39.9 +1.5
KIV pmax pmax
comp=Z,13nm,1.0s
KIV MLR MLR
comp=Z,29nm,14.0s
KIV Kislovodsk 21.38 76 eP P 23 01 40.6 +2.2
comp=Z,14nm,1.1s
KIV Kislovodsk 21.38 76 eP P 23 01 39.9 +1.5
comp=Z,29nm,14.0s
KBZ Khabaz 21.55 77 P P 23 01 42.7 +2.5
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KBZ Khabaz 21.55 77 P P 23 01 42.7 +2.5
KBZ Khabaz 21.55 77 P P 23 01 42.7 +2.5
comp=Z,7.3nm,0.9s,baz=311,slow=7.7,SNR=10
KBZ Khabaz 21.55 77 P P 23 01 42.7 +2.5
comp=Z,7.0nm,0.9s
GNI Garni 23.62 85 P P 23 02 04.8 +2.7
GNI Garni 23.62 85 P P 23 02 04.8 +2.7
comp=Z,5.9nm,1.0s,baz=338,slow=10,SNR=4.3
GNI Garni 23.62 85 P P 23 02 04.8 +2.7
comp=Z,6.0nm,1.0s
KLMR Klimovskoe 24.23 32 eP P 23 02 04.6 -2.8
KLMR pmax pmax
comp=Z,29nm,2.5s
ARCES ARCESS Array B 27.82 9 P P 23 02 39.5 -0.3
ARCES ARCESS Array B 27.82 9 P P 23 02 39.5 -0.3
comp=Z,2.9nm,1.0s,baz=186,slow=7.3,SNR=4.0
ARCES ARCESS Array B 27.82 9 P P 23 02 39.5 -0.3
comp=Z,3.0nm,1.0s
TOA0 Torodi Ar. Sit 30.95 203 eP P 23 03 07.4 -0.7
TOA0 Torodi Ar. Sit 30.95 203 eP P 23 03 07.4 -0.7
TORD Torodi Ar. Bea 30.95 203 P P 23 03 09.1 +1.1
TORD Torodi Ar. Bea 30.95 203 P P 23 03 09.1 +1.1
comp=Z,1.8nm,0.7s,baz=17,slow=8.8,SNR=18
TORD Torodi Ar. Bea 30.95 203 P P 23 03 09.1 +1.1
ARU Arti 31.88 48d iP P 23 03 16.6 +0.8
ARU 23 04 16.2
ARU S S 23 08 27.9 +1.6
ARU pmax pmax
comp=Z,6.0nm,0.8s
ARU Arti 31.88 48 eP P 23 03 16.5 +0.6
comp=Z,6.4nm,0.8s
ARU Arti 31.88 48 iP P 23 03 16.6 +0.8
comp=Z,6.0nm,0.8s
ARU S S 23 08 27.9 +1.6
SVE Sverdlovsk 33.06 48⇓eP P 23 03 27.8 +1.6
SVE pmax pmax
comp=Z,11nm,1.4s
SVE Sverdlovsk 33.06 48 eP P 23 03 27.8 +1.6
comp=Z,11nm,1.4s
BRVK Borovoye 38.71 54 iP P 23 04 16.7 +2.0
BRVK pmax pmax
comp=Z,2.0nm,0.9s
BRVK MLR MLR
comp=Z,35nm,19.0s
BRVK Borovoye 38.71 54 eP P 23 04 13.6 -1.1
comp=Z,4.6nm,0.9s
BRVK Borovoye 38.71 54 iP P 23 04 16.7 +2.0
comp=Z,35nm,19.0s
DBIC Dimbokro 39.16 209 P P 23 04 19.0 +0.2
DBIC Dimbokro 39.16 209 P P 23 04 19.0 +0.2
comp=Z,3.7nm,1.1s,baz=52,slow=5.1,SNR=3.2
DBIC Dimbokro 39.16 209 P P 23 04 19.0 +0.2
comp=Z,4.0nm,1.1s
KKAR Karatay Array 41.23 69 eP P 23 04 35.8 0.0
KKAR pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 41.23 69 eP P 23 04 35.8 0.0
comp=Z,3.0nm,0.8s
KKAR Karatay Array 41.23 69 eP P 23 04 35.8 0.0
comp=Z,3.0nm,0.8s
NVS Novosibirsk 45.87 49 eP P 23 05 11.4 -1.5
NVS Novosibirsk 45.87 49 eP P 23 05 11.4 -1.5
ZALV Zalesovo Beam 47.00 50 P P 23 05 22.9 +1.1
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 47.00 50 P P 23 05 22.9 +1.1
ZALV Zalesovo Beam 47.00 50 P P 23 05 22.9 +1.1
comp=Z,0.8nm,0.6s,baz=278,slow=11,SNR=3.2
ZALV Zalesovo Beam 47.00 50 P P 23 05 22.9 +1.1
comp=Z,1.0nm,0.6s
MK31 Makanchi Array 47.80 60 eP P 23 05 26.8 -1.4
MK31 Makanchi Array 47.80 60 eP P 23 05 26.8 -1.4
MK31 Makanchi Array 47.80 60 eP P 23 05 26.8 -1.4
MKAR Makanchi Array 47.80 60 P P 23 05 29.0 +0.8
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 47.80 60 P P 23 05 29.0 +0.8
MKAR Makanchi Array 47.80 60 P P 23 05 29.0 +0.8
comp=Z,1.3nm,0.7s,baz=285,slow=6.7,SNR=12
MKAR Makanchi Array 47.80 60 P P 23 05 29.0 +0.8
comp=Z,1.0nm,0.7s
KMBO Kilima Mbogo 48.49 147 P P 23 05 34.6 +0.5
KMBO Kilima Mbogo 48.49 147 P P 23 05 34.6 +0.5
comp=Z,0.4nm,0.4s,baz=58,slow=23,SNR=3.0
KMBO Kilima Mbogo 48.49 147 P P 23 05 34.6 +0.5
SONM Songino Array 61.90 50 P P 23 07 11.8 +1.4
SONM Songino Array 61.90 50 P P 23 07 11.8 +1.4
comp=Z,1.0nm,1.0s,baz=295,slow=7.4,SNR=6.8
SONM Songino Array 61.90 50 P P 23 07 11.8 +1.4
comp=Z,1.0nm,1.0s
YKA Yellowknife Ar 67.35 337 P P 23 07 46.0 +0.4
YKA Yellowknife Ar 67.35 337 P P 23 07 45.9 +0.4
comp=Z,0.5nm,0.6s,baz=39,slow=5.8,SNR=13
YKA Yellowknife Ar 67.35 337 P P 23 07 46.0 +0.4
ILAR Eielson Array 71.94 351 P P 23 08 15.7 +1.8
ILAR Eielson Array 71.94 351 P P 23 08 15.7 +1.8
comp=Z,0.4nm,0.7s,baz=360,slow=6.3,SNR=5.8
ILAR Eielson Array 71.94 351 P P 23 08 15.7 +1.8
CMAR Chiang Mai Arr 74.58 79 P P 23 08 30.6 +0.4
CMAR Chiang Mai Arr 74.58 79 P P 23 08 30.6 +0.4
comp=Z,0.8nm,0.3s,baz=308,slow=7.1,SNR=4.7
CMAR Chiang Mai Arr 74.58 79 P P 23 08 30.6 +0.4
comp=Z,1.0nm,0.3s
NJ2 Nanjing 79.18 56 eP P 23 08 55.7 -0.2
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
PDAR Pinedale Array 80.81 321 P P 23 09 05.1 +0.2
PDAR Pinedale Array 80.81 321 P P 23 09 05.1 +0.2
comp=Z,0.3nm,0.7s,baz=69,slow=6.0,SNR=2.6
PDAR Pinedale Array 80.81 321 P P 23 09 05.1 +0.2
TXAR Lajitas Array 88.00 309 P P 23 09 41.4 0.0
TXAR Lajitas Array 88.00 309 P P 23 09 41.4 0.0
comp=Z,0.6nm,0.9s,baz=126,slow=1.7,SNR=3.8
TXAR Lajitas Array 88.00 309 P P 23 09 41.4 0.0
comp=Z,1.0nm,0.9s
COCO West Island 93.39 103 iP P 23 10 08.1 +1.7
COCO West Island 93.39 103 iP P 23 10 08.1 +1.7
LPIG La Paz 95.81 310 LR LR 23 53 52.5
comp=Z,7.0nm,20.9s,baz=178,slow=36
NNA Nana 98.13 261 LR LR 23 49 55.3
comp=Z,39nm,18.4s,baz=355,slow=32

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*CSEM **08** 23:03:22.2, 42°42N×13°27E, h11km, MD1.9/8, After ROM*
ROM 08 23:03:22.2±0.1**, 42°42N×13°27E, h11**km**, Md1.9**/8**, Ml1.8**/5**,**
Error ellipse: s-maj=1.3km s-min=0.6km az=77.0,
Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AQU L'Aquila 0.12 125 Pg Pg 23 03 25.9 +0.6
AQU Sg Sg 23 03 28.2 +0.8
413nm,0.3s
AQU L'Aquila 0.12 125 Pg Pg 23 03 25.9 +0.6
AQU Sg Sg 23 03 28.2 +0.8
413nm,0.3s
CAMP Campotosto 0.15 43 Pg Pg 23 03 26.2 +0.3
CAMP Sg Sg 23 03 29.0 +0.5
126nm,0.4s
CAMP Campotosto 0.15 43 Pg Pg 23 03 26.2 +0.3
CAMP Sg Sg 23 03 29.0 +0.5
126nm,0.4s
LNSS Leonessa 0.25 317 Pg Pg 23 03 28.0 +0.5
LNSS Sg Sg 23 03 32.1 +1.1
102nm,0.2s
LNSS Leonessa 0.25 317 Pg Pg 23 03 28.0 +0.5
LNSS Sg Sg 23 03 32.1 +1.1
102nm,0.2s
FAGN Fagnano 0.28 124 Pg Pg 23 03 28.6 +0.6
FAGN Fagnano 0.28 124 Pg Pg 23 03 28.6 +0.6
PTQR Pietraquaria 0.41 166 Pg Pg 23 03 30.7 +0.2
PTQR Sg Sg 23 03 36.8 +0.8
PTQR Pietraquaria 0.41 166 Pg Pg 23 03 30.7 +0.2
PTQR Sg Sg 23 03 36.8 +0.8
VCEL Villa Celiera 0.42 94 Pg Pb 23 03 31.5 -0.4
VCEL Villa Celiera 0.42 94 Pg Pb 23 03 31.5 -0.4
NRCA Norcia 0.43 345 Pg Pg 23 03 30.9 +0.2
NRCA Sg Sb 23 03 37.5 -1.0
133nm,0.1s
NRCA Norcia 0.43 345 Pg Pg 23 03 30.9 +0.2
NRCA Sg Sb 23 03 37.5 -1.0
133nm,0.1s
MNS Montasola 0.44 265 Pg Pg 23 03 31.2 +0.3
14nm,0.2s
MNS Montasola 0.44 265 Pg Pg 23 03 31.2 +0.3
14nm,0.2s
CESI CESI - Serrava 0.64 335 Pg Pg 23 03 34.7 -0.1
CESI CESI - Serrava 0.64 335 Pg Pg 23 03 34.7 -0.1

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*ISCJB **08** 23:18:06.4±0.2, 42°40N±0°01×13°30E±0°02, h7km±2km,*
mb3.4/2, Error ellipse: s-maj=2.7km s-min=2.1km az=135.0
*ROM **08** 23:18:06.5±0.1, 42°39N×13°33E, h11km, Ml3.4/39, Error ellipse: s-maj=0.9km s-min=0.7km az=94.0*
*CSEM **08** 23:18:06.9±0.1, 42°40N×13°27E, h2km, ML3.8/11, Error ellipse: s-maj=2.7km s-min=2.0km az=37.0*
*LDG **08** 23:18:07.0±0.1, 42°41N×13°36E, h2km, Ml3.1/12, Error ellipse: s-maj=5.4km s-min=2.8km az=40.0*
*IDC **08** 23:18:07.1±1.4, 42°44N×13°22E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.3/28, mbtmp3.4/5, ML3.2/2, Error ellipse: s-maj=38.6km s-min=15.4km az=93.0*
*PRU **08** 23:18:08.3, 42°43N×13°46E, h0km*
ISC 08 23:18:07.7±0.8**, 42°40N**±0°01×**13°30E**±0°02**, h10**km±5km**,**
n197, σ1.58/243**, 30C, Central Italy**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AQU L'Aquila 0.09 122⇑iPg Pg 23 18 09.3 -0.8
AQU Sg Sg 23 18 11.0 -0.8
AQU L'Aquila 0.09 122⇑iPg Pg 23 18 09.3 -0.8
AQU Sg Sg 23 18 11.0 -0.8
CAMP Campotosto 0.16 31⇑iPg Pg 23 18 10.6 -0.6
CAMP Sg Sg 23 18 13.3 -0.3
13µm,0.5s
CAMP Campotosto 0.16 31⇑iPg Pg 23 18 10.6 -0.6
CAMP Sg Sg 23 18 13.3 -0.3
13µm,0.5s
FIAM Fiamignano 0.19 226⇑iPg Pg 23 18 11.4 -0.3
FIAM Sg Sg 23 18 14.6 +0.1
13µm,1.1s
FIAM Fiamignano 0.19 226⇑iPg Pg 23 18 11.4 -0.3
FIAM Sg Sg 23 18 14.6 +0.1
13µm,1.1s
FAGN Fagnano 0.25 123⇑ePg Pg 23 18 11.9 -0.8
FAGN Sg Sg 23 18 14.8 -1.4
13µm,0.4s
FAGN Fagnano 0.25 123⇑ePg Pg 23 18 11.9 -0.8
FAGN Sg Sg 23 18 14.8 -1.4
13µm,0.4s
LNSS Leonessa 0.28 316⇑iPg Pg 23 18 13.0 -0.3
LNSS Sg Sg 23 18 18.1 +1.0
10µm,0.6s
LNSS Leonessa 0.28 316⇑iPg Pg 23 18 13.0 -0.3
TERO Teramo 0.32 45⇑iPg Pg 23 18 12.9 -1.1
TERO Sg Sg 23 18 17.5 -0.7
6µm,0.3s
TERO Teramo 0.32 45⇑iPg Pg 23 18 12.9 -1.1
TERO Sg Sg 23 18 17.5 -0.7
6µm,0.3s
PTQR Pietraquaria 0.39 169⇑iPg Pg 23 18 14.3 -1.0
PTQR Sg Sg 23 18 19.7 -0.7
PTQR Pietraquaria 0.39 169⇑iPg Pg 23 18 14.3 -1.0
PTQR Sg Sg 23 18 19.7 -0.7
VCEL Villa Celiera 0.40 91 Pg Pg 23 18 14.3 -1.2
6µm,0.4s
VCEL Villa Celiera 0.40 91 Pg Pg 23 18 14.3 -1.2
6µm,0.4s
NRCA Norcia 0.45 342 Pg Pg 23 18 15.7 -0.9
NRCA Sg Sg 23 18 22.8 +0.2
4µm,0.1s
NRCA Norcia 0.45 342 Pg Pg 23 18 15.7 -0.9
NRCA Sg Sg 23 18 22.8 +0.2
4µm,0.1s
MNS Montasola 0.46 268⇑iPg Pg 23 18 15.9 -0.8
2µm,0.5s
MNS Montasola 0.46 268⇑iPg Pg 23 18 15.9 -0.8
2µm,0.5s
CERT Cerreto 0.51 208⇑iPg Pg 23 18 16.6 -1.0
CERT Sg Sg 23 18 24.1 -0.2
5µm,0.6s
CERT Cerreto 0.51 208⇑iPg Pg 23 18 16.6 -1.0
CERT Sg Sg 23 18 24.1 -0.2
5µm,0.6s
MTCE Montecelio 0.56 228⇑iPg Pg 23 18 17.6 -1.0
2µm,1.2s
MTCE Montecelio 0.56 228⇑iPg Pg 23 18 17.6 -1.0
2µm,1.2s
CESX Cesi 0.57 292⇑ePg Pg 23 18 17.8 -1.0
1µm,0.6s
CESX Cesi 0.57 292⇑ePg Pg 23 18 17.8 -1.0
1µm,0.6s
VVLD Villa Vallelon 0.58 156 Pg Pg 23 18 17.3 -1.6
2µm,0.8s
VVLD Villa Vallelon 0.58 156 Pg Pg 23 18 17.3 -1.6
2µm,0.8s
INTR Introdacqua 0.59 131⇑iPg Pg 23 18 17.6 -1.6
INTR Sg Sg 23 18 25.7 -1.3
2µm,0.9s
INTR Introdacqua 0.59 131⇑iPg Pg 23 18 17.6 -1.6
INTR Sg Sg 23 18 25.7 -1.3
2µm,0.9s
OFFI Offida 0.60 28⇑iPg Pg 23 18 19.1 -0.3
7µm,0.6s
OFFI Offida 0.60 28⇑iPg Pg 23 18 19.1 -0.3
7µm,0.6s
GUAR Guarcino 0.61 179 Pg Pg 23 18 18.0 -1.4
1µm,0.6s
GUAR Guarcino 0.61 179 Pg Pg 23 18 18.0 -1.4
1µm,0.6s
TRTR Tortoreto Alta 0.61 48 Pg Pg 23 18 19.3 -0.1
11µm,0.9s
TRTR Tortoreto Alta 0.61 48 Pg Pg 23 18 19.3 -0.1
11µm,0.9s
FDMO Fiordimonte 0.65 346⇑iPg Pg 23 18 19.2 -1.1
FDMO Sg Sg 23 18 29.4 +0.5
916nm,0.2s
FDMO Fiordimonte 0.65 346⇑iPg Pg 23 18 19.2 -1.1
FDMO Sg Sg 23 18 29.4 +0.5
916nm,0.2s
CESI CESI - Serrava 0.67 334 Pg Pg 23 18 19.6 -1.0
452nm,0.4s
CESI CESI - Serrava 0.67 334 Pg Pg 23 18 19.6 -1.0
452nm,0.4s
POFI Posta Fibreno 0.75 156 Pg Pg 23 18 20.3 -1.8
606nm,0.7s
POFI Posta Fibreno 0.75 156 Pg Pg 23 18 20.3 -1.8
606nm,0.7s
RDP Rocca di Papa 0.78 214 Pg Pg 23 18 21.3 -1.3
2µm,0.6s
RDP Rocca di Papa 0.78 214 Pg Pg 23 18 21.3 -1.3
2µm,0.6s
SDI San Donato 0.79 151 Pg Pg 23 18 20.8 -2.1
332nm,0.4s
SDI San Donato 0.79 151 Pg Pg 23 18 20.8 -2.1
332nm,0.4s
MA9 Marino 0.79 217 Pg Pg 23 18 21.1 -1.8
1µm,0.5s
MA9 Marino 0.79 217 Pg Pg 23 18 21.1 -1.8
1µm,0.5s
CAFR Castel Frentan 0.80 102 Pg Pg 23 18 21.6 -1.4
3µm,0.6s
CAFR Castel Frentan 0.80 102 Pg Pg 23 18 21.6 -1.4
3µm,0.6s
ASSB Assisi San Ben 0.80 324 Pg Pg 23 18 21.9 -1.1
942nm,0.4s
ASSB Assisi San Ben 0.80 324 Pg Pg 23 18 21.9 -1.1
942nm,0.4s
GIUL Giuliano Di Ro 0.84 182 Pg Pg 23 18 21.9 -2.0
1µm,0.9s
GIUL Giuliano Di Ro 0.84 182 Pg Pg 23 18 21.9 -2.0
1µm,0.9s
SNTG Esanatoglia 0.89 343 Pg Pg 23 18 23.4 -1.5
446nm,0.5s
SNTG Esanatoglia 0.89 343 Pg Pg 23 18 23.4 -1.5
446nm,0.5s
RNI2 Rionero Sannit 0.94 137 Pg Pg 23 18 24.3 -1.5
2µm,1.1s
RNI2 Rionero Sannit 0.94 137 Pg Pg 23 18 24.3 -1.5
2µm,1.1s
CERA Filignano 0.96 146 Pg Pg 23 18 24.0 -2.2
743nm,0.5s
CERA Filignano 0.96 146 Pg Pg 23 18 24.0 -2.2
743nm,0.5s
CING Cingoli 0.98 355 Pg Pg 23 18 24.7 -1.8
974nm,0.7s
CING Cingoli 0.98 355 Pg Pg 23 18 24.7 -1.8
974nm,0.7s
MGAB Montegabbione 1.01 301 Pg Pg 23 18 25.8 -1.4
1µm,0.5s
MGAB Montegabbione 1.01 301 Pg Pg 23 18 25.8 -1.4
1µm,0.5s
TOLF Tolfa 1.02 251 Pg Pg 23 18 25.7 -1.6
671nm,0.8s
TOLF Tolfa 1.02 251 Pg Pg 23 18 25.7 -1.6
671nm,0.8s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MURB	Monte Urbino	1.03	327	Pg	Pg	23 18 26.4	-1.1
	2µm,0.4s						
MURB	Monte Urbino	1.03	327	Pg	Pg	23 18 26.4	-1.1
	2µm,0.4s						
MIDA	Miranda	1.04	137	Pg	Pg	23 18 25.0	-2.6
	538nm,0.7s						
SACS	San Casciano d	1.12	294	Pn	Pb	23 18 28.0	-1.2
	751nm,0.8s						
ARVD	Arcevia	1.13	347	Pn	Pb	23 18 27.6	-1.7
	971nm,0.9s						
ARVD	Arcevia	1.13	347	Pn	Pb	23 18 27.6	-1.7
	971nm,0.9s						
AOI	Ancona	1.17	11	Pn	Pb	23 18 28.4	-1.6
	633nm,0.7s						
AOI	Ancona	1.17	11	Pn	Pb	23 18 28.4	-1.6
	633nm,0.7s						
PIEI	Pieia	1.27	334	Pn	Pn	23 18 30.2	-1.3
PIEI	Pieia	1.27	334	Pn	Pn	23 18 30.2	-1.3
CAFI	Castiglion Fio	1.35	314	Pn	Pn	23 18 32.1	-0.6
	278nm,0.8s						
CAFI	Castiglion Fio	1.35	314	Pn	Pn	23 18 32.1	-0.6
	278nm,0.8s						
ARCI	Arcidosso	1.42	289	Pn	Pn	23 18 33.4	-0.3
	260nm,1.4s						
ARCI	Arcidosso	1.42	289	Pn	Pn	23 18 33.4	-0.3
	260nm,1.4s						
PARC	Parchiule	1.47	328	Pn	Pn	23 18 34.2	-0.1
	405nm,0.8s						
PARC	Parchiule	1.47	328	Pn	Pn	23 18 34.2	-0.1
	405nm,0.8s						
MAON	Monte Argentar	1.61	272	Pn	Pn	23 18 35.9	-0.3
MAON	Monte Argentar	1.61	272	Pn	Pn	23 18 35.9	-0.3
CSNT	Castellina Chi	1.82	307	Pn	Pn	23 18 39.5	+0.3
CSNT	Castellina Chi	1.82	307	Pn	Pn	23 18 39.5	+0.3
SGRT	San Giovanni R	1.93	109	Pn	Pn	23 18 40.3	-0.4
	402nm,1.0s						
SGRT	San Giovanni R	1.93	109	Pn	Pn	23 18 40.3	-0.4
	402nm,1.0s						
MSAG	Monte S. Angel	2.06	109	Pn	Pn	23 18 42.7	+0.2
	446nm,0.6s						
MSAG	Monte S. Angel	2.06	109	Pn	Pn	23 18 42.7	+0.2
	446nm,0.6s						
MS1	Monte Sant'Ang	2.09	109	ePn	Pb	23 18 45.7	0.0
MS1				eSn	Sg	23 19 14.9	+0.2
NVLJ	Novalja	2.44	27	ePn	Pn	23 18 47.0	-0.7
NVLJ				Sn	Sn	23 19 16.3	-1.3
NVLJ	Novalja	2.44	27	ePn	Pn	23 18 46.9	-0.7
NVLJ				Sn	Sn	23 19 16.3	-1.3
MAIM	Mastiano	2.55	307	P	Pn	23 18 49.8	+0.7
CDT	Castel del Mon	2.59	120	ePn	Pn	23 18 50.4	+0.8
CDT				eSn	Sn	23 19 23.6	+2.5
BAI	Bari	2.97	115	ePn	Pn	23 18 56.0	+1.1
BAI				eSn	Sn	23 19 32.9	+2.3
PGF	Pioggiola	3.19	274	ePn	Pn	23 18 58.4	+0.4
PGF				eSn	Sn	23 19 38.4	+2.3
	57nm,1.0s						
PGF	Pioggiola	3.19	274	ePn	Pn	23 18 58.4	+0.4
PGF				eSn	Sn	23 19 38.4	+2.3
	28nm,1.0s						
SKDS	Skadanscina	3.19	9	iPn	Pn	23 18 58.1	+0.2
SKDS				iSn	Sn	23 19 37.0	+1.0
SKDS							
	comp=Z,30nm,0.3s						
SKDS	Skadanscina	3.19	9	Pn	Pn	23 18 58.1	+0.2
SKDS				iSn	Sn	23 19 37.0	+1.0
	comp=Z,30nm,0.3s						
STON	Ston	3.28	80	ePn	Pn	23 18 59.6	+0.5
STON				Sn	Sn	23 19 35.2	-2.9
STON	Ston	3.28	80	ePn	Pn	23 18 59.6	+0.5
STON				Sn	Sn	23 19 35.2	-2.9
SC2M	Scurtabo	3.40	307	P	Pn	23 19 00.8	0.0
VOY	Vojsko	3.65	6	ePn	Pn	23 19 04.2	-0.2
VOY				e		23 19 15.8	
VOY				eSn	Sn	23 19 49.1	+1.5
VOY	Vojsko	3.65	6	ePn	Pn	23 19 04.2	-0.2
VOY				eSn	Sn	23 19 49.1	+1.5
OBKA	Obir	4.20	12	⇑iPn	Pn	23 19 12.4	+0.5
	SNR=6.5						
OBKA	Obir	4.20	12	Pn	Pn	23 19 12.4	+0.5
	SNR=6.5						
ABTA	Abfaltersbach	4.38	353	⇑iPn	Pn	23 19 14.9	+0.5
	SNR=18						
ABTA	Abfaltersbach	4.38	353	Pn	Pn	23 19 14.9	+0.5
	SNR=18						
SBF	Sospel	4.54	291	ePn	Pn	23 19 16.9	+0.4
SBF				eSn	Sn	23 20 06.9	-2.4
	comp=Z,18nm,0.8s						
SBF	Sospel	4.54	291	ePn	Pn	23 19 16.9	+0.4
SBF				eSn	Sn	23 20 06.9	-2.4
	comp=Z,9.2nm,0.8s						
PUK	Puka	4.91	92	eP	Pn	23 19 22.8	+1.2
PUK	Puka	4.91	92	eP	Pn	23 19 22.8	+1.2
BCI	Bajram Curri	5.01	88	eP	Pn	23 19 24.7	+1.7
BCI	Bajram Curri	5.01	88	eP	Pn	23 19 24.7	+1.7
TIR	Tirane	5.01	100	eP	Pn	23 19 23.5	+0.6
TIR	Tirane	5.01	100	P	Pn	23 19 23.6	+0.6
TIR	Tirane	5.01	100	eP	Pn	23 19 23.5	+0.6
DAVOX	Davos/Dischmat	5.01	332	Pn	Pn	23 19 26.9	+3.8
	comp=Z,1.7nm,0.3s,baz=161,slow=18,SNR=17						
DAVOX				Sn	Sn	23 20 23.7	+2.4
	baz=106,slow=20						
FRF	La Foret Royal	5.02	286	ePn	Pn	23 19 23.1	+0.1
FRF				eSn	Sn	23 20 18.0	-3.1
	comp=Z,3.8nm,0.6s						
FRF	La Foret Royal	5.02	286	ePn	Pn	23 19 23.1	+0.1
FRF				eSn	Sn	23 20 18.0	-3.1
	comp=Z,1.9nm,0.6s						
LMR	La Mourre	5.08	283	ePn	Pn	23 19 23.6	-0.3
LMR				eSn	Sn	23 20 19.4	-3.2
	comp=Z,3.4nm,0.7s						
LMR	La Mourre	5.08	283	ePn	Pn	23 19 23.6	-0.3
LMR				eSn	Sn	23 20 19.4	-3.2
	comp=Z,1.7nm,0.7s						
IVAS	Ivanjica	5.16	75	ePn	Pn	23 19 25.6	+0.5
DIVS	Divibare	5.17	69	P	Pn	23 19 25.9	+0.7
DIVS	Divibare	5.17	69	P	Pn	23 19 25.9	+0.7
MBDF	Montbardon	5.28	298	eP	Pn	23 19 28.9	+2.1
MBDF	Montbardon	5.28	298	eP	Pn	23 19 28.9	+2.1
PHP	Peshkopia	5.36	95	eP	Pn	23 19 29.1	+1.3
PHP	Peshkopia	5.36	95	P	Pn	23 19 29.2	+1.3
PHP	Peshkopia	5.36	95	eP	Pn	23 19 29.1	+1.3
TRUS	Trudelj	5.49	68	ePn	Pn	23 19 28.7	-0.9
KEK	Kerkira	5.60	117	P	Pn	23 19 32.3	+1.3
KEK	Kerkira	5.60	117	P	Pn	23 19 32.3	+1.3
GRUS	Gruza	5.62	72	ePn	Pn	23 19 32.0	+0.7
LPG	La Plagne	5.65	305	eP	Pn	23 19 34.8	+2.8
LPG				eSn	Sn	23 20 33.9	-3.2
	comp=Z,1.3nm,0.3s						
LPL	La Plagne	5.67	306	eP	Pn	23 19 35.0	+2.8
LPL				eSn	Sn	23 20 33.1	-4.4
	comp=Z,3.2nm,0.5s						
SMRF	Simiane la Rot	5.86	288	eP	Pn	23 19 36.3	+1.6
SMRF	Simiane la Rot	5.86	288	eP	Pn	23 19 36.3	+1.6
ORIF	Oris-en-Rattie	5.94	298	eP	Pn	23 19 39.4	+3.6
ORIF				eSn	Sn	23 20 40.5	-3.5
	comp=Z,5.2nm,0.8s						
IGT	Igoumenitsa	6.04	116	P	Pn	23 19 38.5	+1.4
IGT	Igoumenitsa	6.04	116	P	Pn	23 19 38.5	+1.4
NEST	Nestorio	6.15	106	P	Pn	23 19 41.0	+2.3
NEST	Nestorio	6.15	106	P	Pn	23 19 41.0	+2.3
FNA	Florina	6.27	102	P	Pn	23 19 41.2	+1.0
FNA	Florina	6.27	102	P	Pn	23 19 41.2	+1.0
BARS	Barje	6.30	83	ePn	Pn	23 19 41.4	+0.8
GERES	GERESS Array B	6.45	2	Pn	Pn	23 19 42.6	-0.1
	comp=Z,0.4nm,0.3s,baz=172,slow=12,SNR=16						
GERES				Sn	Sn	23 20 58.0	+1.5
	comp=Z,1.3nm,0.3s,baz=181,slow=22,SNR=8.7						
LKD2	Lefkada island	6.66	120	P	Pn	23 19 47.2	+1.6
LKD2	Lefkada island	6.66	120	P	Pn	23 19 47.2	+1.6
VIVF	Saint-Julien-l	6.72	294	ePn	Pn	23 19 48.2	+1.7
VIVF	Saint-Julien-l	6.72	294	ePn	Pn	23 19 48.2	+1.7
KHC	Kasperske Hory	6.73	2	ePN	Pn	23 19 47.6	+1.0
KHC				eSN	Sn	23 21 00.4	-3.0
KHC	Kasperske Hory	6.73	2	Pn	Pn	23 19 47.6	+1.0
VLS	Valsamata	6.99	125	P	Pn	23 19 52.0	+1.9
VLS	Valsamata	6.99	125	P	Pn	23 19 52.0	+1.9
HINF	Hinteralfeld	7.08	322	ePn	Pn	23 19 50.8	-0.6
HINF				eSn	Sn	23 21 07.4	-4.5
	comp=Z,3.5nm,0.3s						
HINF	Hinteralfeld	7.08	322	ePn	Pn	23 19 50.8	-0.6
LASF	Ste Croix	7.10	287	ePn	Pn	23 19 51.6	0.0
LASF	Ste Croix	7.10	287	ePn	Pn	23 19 51.6	0.0
VYHS	Vyhne	7.23	31	ePN	Pn	23 19 52.4	-1.0
VYHS				eSN	Sn	23 21 11.3	-4.2
VYHS	Vyhne	7.23	31	ePn	Pn	23 19 52.4	-1.0
KKB	Krupnik	7.29	91	eP	Pn	23 19 55.8	+1.5
KKB	Krupnik	7.29	91	eP	Pn	23 19 55.8	+1.5
VTS	Vitosha	7.33	85	P	Pn	23 19 56.0	+1.2
VTS	Vitosha	7.33	85	eP	Pn	23 19 56.1	+1.2
VTS	Vitosha	7.33	85	eP	Pn	23 19 56.1	+1.2
KEST	Kesra	7.33	206	Pn	Pn	23 19 59.2	+4.3
	comp=Z,0.2nm,0.3s,baz=268,slow=3.6,SNR=13						
EVR	Evrytania	7.34	115	P	Pn	23 19 57.6	+2.5
CDF	Champ du Feu	7.35	327	ePn	Pn	23 19 54.5	-0.7
CDF				eSn	Sn	23 21 14.3	-4.4
	comp=Z,9.8nm,0.7s						
CDF	Champ du Feu	7.35	327	ePn	Pn	23 19 54.5	-0.7
HAU	Haudompre	7.45	321	ePn	Pn	23 19 56.2	-0.2
HAU				eSn	Sn	23 21 15.0	-6.0
	comp=Z,8.1nm,0.5s						
HAU	Haudompre	7.45	321	ePn	Pn	23 19 56.2	-0.2
RLS	Riolos of Patr	7.60	122	P	Pn	23 20 00.8	+2.3
PRU	Pruhonice	7.64	6	eSN	Sn	23 21 22.4	-3.1
AGG	Agios Georgios	7.64	113	P	Pn	23 20 03.4	+4.3
MMB	Musomiste	7.81	92	eP	Pn	23 20 02.4	+1.0
MMB	Musomiste	7.81	92	eP	Pn	23 20 02.4	+1.0
LAKA	Lakka	7.82	119	P	Pn	23 20 04.6	+3.0
LAKA	Lakka	7.82	119	P	Pn	23 20 04.6	+3.0
NKC	Novy Kostel	7.86	356	eSN	Sn	23 21 28.7	-2.3
SMF	Signal de Mont	7.98	305	ePn	Pn	23 20 03.9	+0.2
SMF				eSn	Sn	23 21 28.3	-5.7
	comp=Z,3.3nm,0.7s						
SMF	Signal de Mont	7.98	305	ePn	Pn	23 20 03.9	+0.2
XOR	Xorichti	8.08	109	P	Pn	23 20 05.7	+0.6
XOR	Xorichti	8.08	109	P	Pn	23 20 05.7	+0.6
MTLF	Montolieu	8.20	280	ePn	Pn	23 20 06.4	-0.3
MTLF	Montolieu	8.20	280	ePn	Pn	23 20 06.4	-0.3
GUR	Goura	8.23	120	P	Pn	23 20 10.1	+2.8
GUR	Goura	8.23	120	P	Pn	23 20 10.1	+2.8
LOR	Lormes	8.29	309	ePn	Pn	23 20 07.7	-0.2
LOR				eSn	Sn	23 21 37.0	-4.6
	comp=Z,2.9nm,0.5s						
LOR	Lormes	8.29	309	ePn	Pn	23 20 07.7	-0.2
RZN	Rozhen	8.53	91	eP	Pn	23 20 12.9	+1.5
RZN	Rozhen	8.53	91	eP	Pn	23 20 12.9	+1.5
BRTR	Keskin Array B	15.57	93	Pn	P	23 21 50.6	-1.1
	comp=Z,0.0nm,0.3s,baz=276,slow=14,SNR=2.6						
FINES	FINESS Array B	20.56	18	P	Pn	23 22 48.3	-0.2
	comp=Z,2.2nm,0.9s,baz=198,slow=11,SNR=3.8						
TORD	Torodi Ar. Bea	30.84	202	P	P	23 24 25.3	+1.4
	comp=Z,0.3nm,0.6s,baz=17,slow=10,SNR=3.5						
MKAR	Makanchi Array	47.88	60	P	P	23 26 46.2	+0.4
	comp=Z,0.3nm,0.7s,baz=287,slow=5.9,SNR=5.2						

IDC 08 23:31:29.9±67.0,20°.74S×178°.00W,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.7/18,mbtmp3.9/3,Error ellipse: s-maj=1220.0km s-min=182.4km az=83.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.69	244	P	P	23 38 46.5	-0.7
	1.0nm,0.8s,baz=104,slow=8.3,SNR=3.1						
ASAR	Alice Springs	44.47	257	P	P	23 39 43.2	0.0
	1.8nm,0.9s,baz=93,slow=8.3,SNR=15						
WRA	Warramunga Arr	44.57	262	P	P	23 39 44.2	+0.1
	0.7nm,0.5s,baz=94,slow=8.4,SNR=5.7						

IDC 08 23:31:53.8±1.9,0°.30N×124°.32E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.3/22,mbtmp3.3/3,Error ellipse: s-maj=221.8km s-min=26.0km az=63.0
DJA 08 23:32:07.0±0.4,0°N±4°×12°6E±°,h10km,M3.2/4,MLv3.2/4
ISC 08 23:32:07.1±1.3,0°.30N±0°.05×126°.44E±0°.04,h15km±12km, n11,σ2.01/13,mb3.6/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.04	63	P	Pg	23 32 26.2	-1.1
TNTI				S	Sn	23 32 41.8	+0.3
LBMI	Labuha	1.42	131	P	Pb	23 32 33.3	0.0
LBMI				S	Sg	23 32 53.1	+0.2
MNI	Manado	1.96	305	P	Pn	23 32 40.6	+0.8
MNI				S	Sb	23 33 07.7	+1.0
KMSI	Cibinong	2.47	276	P	Pg	23 32 54.1	-0.5
KMSI				S	Sg	23 33 25.9	-0.7
SGSI	Sangihe	3.48	345	P	Pn	23 33 02.9	+2.1
NLAI	Namlea	3.58	169	P	Pg	23 33 14.9	-0.9
NLAI				S	Sg	23 34 06.4	+4.1
LUWI	Luwuk	3.90	250	P	Pn	23 33 06.7	+0.2
MRSI	Marisa	4.50	272	P	Pn	23 33 04.4	-10
WRA	Warramunga Arr	21.56	159	P	P	23 36 53.0	-3.2
	0.8nm,0.3s,baz=332,slow=12,SNR=5.7						
ASAR	Alice Springs	24.91	164	P	P	23 37 25.4	-4.3
	0.1nm,0.4s,baz=343,slow=11,SNR=4.0						
MKAR	Makanchi Array	60.21	327	P	P	23 41 55.7	-19
	0.2nm,0.4s,baz=122,slow=7.0,SNR=5.5						

ISCJB 08 23:35:00.4±0.5,39°.32N±0°.03×29°.00E±0°.03,h2km±5km, Error ellipse: s-maj=4.8km s-min=3.9km az=14.0
CSEM 08 23:35:00.7±0.1,39°.31N×29°.00E,h8km,MD2.9,Error ellipse: s-maj=2.4km s-min=2.0km az=18.0
ISK 08 23:35:00.3,39°.33N×28°.97E,h5km,MD2.7
DDA 08 23:35:00.0,39°.31N×28°.99E,h7km,MD2.9
ISC 08 23:35:00.6±1.0,39°.31N±0°.02×29°.00E±0°.02,h10km±9km, n42,σ0.44/56,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	Demirci	0.34	220	iP	Pb	23 35 07.9	-0.9
DEMI				iS	Sg	23 35 12.6	+0.7
DEMI	Demirci	0.34	220	iP	Pb	23 35 07.9	-0.9
DEMI				iS	Sg	23 35 12.6	+0.7
TVSB	Tavsanli	0.39	68	ePG	Pg	23 35 08.4	+0.1
TVSB	Tavsanli	0.39	68	ePg	Pg	23 35 08.4	+0.1
DST	Dursunbey	0.42	316	ePG	Pg	23 35 08.4	-0.4
DST				eSG	Sg	23 35 14.4	+0.1
DST	Dursunbey	0.42	316	ePg	Pg	23 35 08.4	-0.4
DST				eSg	Sg	23 35 14.4	+0.1
GDZ	Gediz	0.43	120	iP	Pg	23 35 09.1	0.0
GDZ				iS	Sg	23 35 15.0	+0.2
GDZ	Gediz	0.43	120	iP	Pg	23 35 09.1	0.0
GDZ				iS	Sg	23 35 15.0	+0.2
DURS	Dursunbey	0.50	306	iP	Pg	23 35 10.5	+0.2
DURS				iS	Sg	23 35 16.6	-0.3
DURS	Dursunbey	0.50	306	iP	Pg	23 35 10.5	+0.2
DURS				iS	Sg	23 35 16.6	-0.3
ORLT	Orhaneli	0.74	354	ePG	Pg	23 35 14.8	-0.1
ORLT	Orhaneli	0.74	354	ePg	Pg	23 35 14.8	-0.1
KULA	Kula-Manisa	0.83	198	ePG	Pb	23 35 17.0	-0.2
KULA	Kula-Manisa	0.83	198	ePg	Pb	23 35 17.0	-0.2
ALT	Altintas	0.90	106	ePG	Pn	23 35 19.0	-0.4
ALT	Altintas	0.90	106	ePg	Pn	23 35 19.0	-0.4
BALB	Balikesir	0.93	291	ePG	Pg	23 35 18.2	-0.2
BALB	Balikesir	0.93	291	ePg	Pg	23 35 18.2	-0.2
AKHS	Akhisar	1.01	246	iP	Pg	23 35 19.6	-0.5
AKHS				iS	Sb	23 35 34.0	+0.4
AKHS	Akhisar	1.01	246	iP	Pg	23 35 19.6	-0.5
AKHS				iS	Sb	23 35 34.0	+0.4
KHL	Karahalli	1.06	157	ePN	Pn	23 35 22.1	+0.4
KHL	Karahalli	1.06	157	ePn	Pn	23 35 22.1	+0.4
MDNY	Mudanya-Bursa	1.06	355	ePG	Pb	23 35 20.9	-0.2
MDNY	Mudanya-Bursa	1.06	355	ePg	Pb	23 35 20.9	-0.2
GEMT	Gemlik	1.14	7	ePN	Pb	23 35 22.2	-0.2
GEMT	Gemlik	1.14	7	ePn	Pb	23 35 22.2	-0.2
BALY	Balya	1.15	293	iP	Pn	23 35 23.5	+0.7
BALY				iS	Sn	23 35 38.9	+0.3
BALY	Balya	1.15	293	iP	Pn	23 35 23.5	+0.7
BALY				iS	Sn	23 35 38.9	+0.3
GONE	Gonen-Balikesi	1.25	307	ePN	Pg	23 35 24.3	-0.3
GONE	Gonen-Balikesi	1.25	307	ePn	Pg	23 35 24.3	-0.3
ARMT	Armutlu	1.26	355	ePN	Pn	23 35 24.2	-0.1
ARMT	Armutlu	1.26	355	ePn	Pn	23 35 24.2	-0.1
BORA	Eskisehir	1.26	63	iP	Pn	23 35 24.1	-0.3
BORA				iS	Sn	23 35 41.3	-0.2
BORA	Eskisehir	1.26	63	iP	Pn	23 35 24.1	-0.3
BORA				iS	Sn	23 35 41.3	-0.2
YLV	Yalova	1.29	13	ePN	Pg	23 35 25.3	-0.1
YLV	Yalova	1.29	13	ePn	Pg	23 35 25.3	-0.1
GULT	Gulveren	1.62	46	ePN	Pb	23 35 30.5	-0.2
GULT	Gulveren	1.62	46	ePn	Pb	23 35 30.5	-0.2
KRBG	Karabiga-Canak	1.70	310	ePN	Pb	23 35 31.1	-0.8
KRBG	Karabiga-Canak	1.70	310	ePn	Pb	23 35 31.1	-0.8
CTKS	Kestanelik-??a	1.96	349	ePN	Pn	23 35 34.9	+1.0
CTKS	Kestanelik-??a	1.96	349	ePn	Pn	23 35 34.9	+1.0

CSEM 08 23:46:23.4±0.1,76°.99N×18°.64E,h5km,ML2.2,Error ellipse: s-maj=7.2km s-min=2.3km az=69.0
NAO 08 23:46:23.6±2.9,77°.10N×19°.81E,h24km±33km,ML2.4
ISCJB 08 23:46:24.9±1.0,77°.0N±0°.1×18°.8E±0°.2,h16km,Error ellipse: s-maj=16.9km s-min=6.4km az=11.7
BER 08 23:46:27.3±3.1,77°.07N×19°.05E,h15km±19km,MD2.3, ML2.2
ISC 08 23:46:25.2±0.9,76°.98N±0°.05×18°.80E±0°.06,h16km,n15, σ1.09/21,Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSP	Hornsund	0.74	274	eP	Pg	23 46 39.1	-0.4
HSP				eS	Sg	23 46 47.9	-1.3
SPA0	Spitsbergen Ar	1.32	338	Pg	Pn	23 46 48.8	-0.1
	baz=140,slow=22						
SPA0				Lg	Lg	23 47 05.0	
	baz=146,slow=22						
SPA0	Spitsbergen Ar	1.32	338	Pg	Pn	23 46 48.8	-0.1
	baz=140,slow=22						
SPA0				Lg	Lg	23 47 05.0	
	baz=146,slow=22						
SPA0	Spitsbergen Ar	1.32	338	Pg	Pn	23 46 48.8	-0.1
	baz=140,slow=20,SNR=92						
SPA0				Lg	Lg	23 47 05.0	
	baz=146,slow=21,SNR=90						
HOPEN	Hopen	1.51	105	eS	Sb	23 47 11.2	-0.3
HOPEN	Hopen	1.51	105	eS	Sb	23 47 11.2	-0.3
	SNR=55						
KBS	Kingsbay	2.43	327	Pn	Pn	23 47 03.3	-0.8
KBS				Pg	Pb	23 47 09.2	+0.8
KBS				Lg	Lg	23 47 39.1	
KBS	Kingsbay	2.43	327	Pn	Pn	23 47 03.3	-0.8
KBS				eP	Pn	23 47 03.6	-0.5
KBS				Pg	Pb	23 47 09.2	+0.8
KBS				eSg	Sb	23 47 39.2	+1.1
KBS				AML	AML	23 47 47.4	
	comp=Z,52nm,0.3s						
KBS	Kingsbay	2.43	327	Pn	Pn	23 47 03.3	-0.8
	SNR=55						
KBS	Kingsbay	2.43	327	eP	Pn	23 47 03.6	-0.5
	SNR=55						
KBS	Kingsbay	2.43	327	Pg	Pb	23 47 09.2	+0.8
	SNR=91						
KBS				Lg	Lg	23 47 39.1	
KBS				eSg	Sb	23 47 39.2	+1.1
	comp=Z,52nm,0.3s,SNR=91						
BJO	Bjornoya	2.49	178	ePg	Pb	23 47 11.3	+2.0
BJO				eSg	Sg	23 47 43.4	-1.5
BJO				AML	AML	23 47 48.5	
	comp=Z,14nm,0.4s						
BJO	Bjornoya	2.49	178	ePg	Pb	23 47 11.3	+2.0
	SNR=91						
BJO				eSg	Sg	23 47 43.4	-1.5
	comp=Z,14nm,0.4s,SNR=91						
ARA0	ARCESS Array S	7.72	162	Sn	Sn	23 49 37.0	-6.7
	baz=355,slow=22						
ARA0	ARCESS Array S	7.72	162	S	Sn	23 49 37.0	-6.7
	baz=355,slow=22						

IDC 08 23:46:37.3±0.6,5°.51S×147°.07E,h176km±5km,mb4.2/19, mb1 4.4/23,mb1mx4.3/27,mbtmp4.2/23,MS3.6/1, Ms1 3.5/1,ms1mx2.1/37,Error ellipse: s-maj=11.5km s-min=7.6km az=100.0
NEIC 08 23:46:37.1±0.2,5°.44S×147°.10E,mb4.4/17,Error ellipse: s-maj=7.8km s-min=5.0km az=96.0
ISCJB 08 23:46:38.0±0.3,5°.48S±0°.04×147°.09E±0°.05,h195km, mb4.3/32,Error ellipse: s-maj=7.5km s-min=4.8km az=17.1
AUST 08 23:46:46.2±0.5,6°.16S×147°.12E,h200km,Error ellipse: s-maj=1.3km s-min=1.0km az=9.0
ISC 08 23:46:38.5±0.3,5°.41S±0°.05×147°.11E±0°.06,h195km,n108, σ1.53/117,mb4.3/30,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.97	179	eP	Pn	23 47 36.4	-3.4
PMG				S	Sn	23 48 18.2	-10
PMG				eS		23 48 20.9	
PMG	Port Moresby	3.97	179	P	Pn	23 47 36.4	-3.4
	192nm,0.3s,baz=34,slow=5.1,SNR=304						
PMG				S	Sn	23 48 18.2	-10
	110nm,0.3s,baz=262,slow=22,SNR=3.3						
JAY	Jayapura	7.00	294	P	Pn	23 48 19.2	+0.3
	baz=7.4,SNR=6.5						
MMPI	Merauke	7.33	245	S	Sn	23 49 50.7	+4.5
	baz=7.1,SNR=4.8						
COEN	Coen	9.34	204	ePn	Pn	23 48 48.5	-0.8
	1µm,0.9s						
COEN				eSn	Sn	23 50 30.6	-3.3
COEN	Coen	9.34	204	P	Pn	23 48 50.7	+1.4
	baz=8.7,SNR=13						
COEN				S	Sn	23 50 29.6	-4.2
	baz=8.7,SNR=4.5						
HNR	Honiara	13.34	108	ePn	Pn	23 49 41.4	+0.8
HNR	Honiara	13.34	108	P	Pn	23 49 39.2	-1.4
	7.9nm,0.3s,baz=193,slow=6.9,SNR=4.4						
CTA	Charters Tower	14.62	183	P	Pn	23 49 55.6	-0.8
CTA	Charters Tower	14.62	183	P	Pn	23 49 55.6	-0.8
	1.4nm,0.3s,baz=2.6,slow=13,SNR=16						
CTAO	Charters Tower	14.62	183	ePn	P	23 49 56.5	-1.1
	18nm,0.8s						
KDU	Kakadu	16.15	242	P	P	23 50 13.8	-0.8
	baz=16,SNR=105						
KDU				S	S	23 53 12.6	-1.3
	baz=16,SNR=4.2						
QIS	Mount Isa	16.73	205	P	Pn	23 50 21.3	-0.7
	baz=16,SNR=30						
QIS				S	S	23 53 25.8	0.0
	baz=16,SNR=7.7						
MTN	Manton Dam	17.41	244	P	P	23 50 28.6	+0.3
	baz=17,SNR=49						
WRAB	Tennant Creek	19.04	220	eP	P	23 50 46.1	0.0
	98nm,0.6s						
WRA	Warramunga Arr	19.05	220	P	P	23 50 46.3	0.0
WRA				S	S	23 54 09.9	-2.2
WRA	Warramunga Arr	19.05	220	P	P	23 50 46.3	0.0
	16nm,0.3s,baz=44,slow=11,SNR=129						
WRA				S	S	23 54 09.9	-2.2
	0.3nm,0.3s,baz=41,slow=20,SNR=29						
EIDS	Eidsvold	20.21	170	P	P	23 50 59.1	+0.6
	baz=20,SNR=6.1						
RMQ	Roma	21.02	176	P	P	23 51 09.1	+1.9
	baz=20,SNR=11						
QLP	Quilpie	21.23	187	P	P	23 51 10.0	+0.6
	baz=21,SNR=4.5						
AS31	Alice Springs	22.16	214	eP	P	23 51 18.9	+0.1
AS31				ePcP	PcP	23 55 10.0	+1.6
ASAR	Alice Springs	22.17	214	P	P	23 51 19.5	+0.6
ASAR				S	S	23 55 09.6	+0.9
ASAR	Alice Springs	22.17	214	P	P	23 51 19.5	+0.6
	70nm,0.6s,baz=49,slow=8.3,SNR=668						
ASAR				S	S	23 55 09.6	+0.9
	47nm,0.9s,baz=31,slow=22,SNR=36						
FITZ	Fitzroy Crossi	24.47	237	eP	P	23 51 40.4	+0.4
	52nm,0.6s						
FITZ				eS	S	23 55 46.0	+0.2
FITZ	Fitzroy Crossi	24.47	237	P	P	23 51 40.3	+0.4
	60nm,0.6s,baz=55,slow=7.5,SNR=128						
FITZ	Fitzroy Crossi	24.47	237	P	P	23 51 40.3	+0.4
	baz=24,SNR=120						
DZM	Mont Dzumac	24.99	133	P	P	23 51 44.2	-0.4
DZM	Mont Dzumac	24.99	133	P	P	23 51 44.2	-0.4
	15nm,0.8s,baz=242,slow=16,SNR=8.8						
ARMA	Armidale	25.24	171	eP	P	23 51 47.6	+0.8
	8.7nm,0.6s						
ARMA	Armidale	25.24	171	P	P	23 51 47.5	+0.7
	baz=25,SNR=11						
ARMA				S	S	23 56 13.2	+15
	baz=25,SNR=7.5						
STKA	Stephens Creek	26.83	190	eP	P	23 52 01.2	+0.3
	2.6nm,0.6s						
STKA	Stephens Creek	26.83	190	P	P	23 52 01.6	+0.6
	1.9nm,0.6s,baz=348,slow=8.4,SNR=7.9						
STKA				LR	LR	00 02 03.9	
	comp=Z,119nm,19.8s,baz=205,slow=35						
STKA	Stephens Creek	26.83	190	P	P	23 52 01.2	+0.3
	baz=26,SNR=5.3						
YNG	Young	28.77	178	S	S	23 56 57.7	+4.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=28,SNR=4.8						
BBOO	**Buckleboo**	**29.15**	**199**	*e*P	**P**	**23 52 22.1**	**+0.6**
	212nm,0.8s						
BBOO	**Buckleboo**	**29.15**	**199**	P	P	23 52 29.1	+7.6
	baz=29,SNR=7.0						
MBWA	**Marble Bar**	**30.82**	**237**	*e*P	**P**	**23 52 36.6**	**+0.2**
	5.1nm,0.5s						
FORT	**Forrest**	**30.95**	**213**	P	**P**	**23 52 38.0**	**+0.6**
	baz=30,SNR=8.1						
ARPS	**Mount Arapiles**	**31.59**	**188**	P	**P**	**23 52 44.0**	**+1.2**
	baz=31,SNR=5.8						
MEEK	**Meekatharra**	**34.42**	**229**	P	**P**	**23 53 08.2**	**+0.5**
	baz=34,SNR=27						
KMBL	**Kambalda**	**35.02**	**219**	P	P	23 53 19.9	+7.2
	baz=34,SNR=9.9						
MORW	**Morawa**	**37.65**	**228**	P	**P**	**23 53 35.4**	**+0.4**
	baz=37,SNR=14						
KLBR	**Kellerberrin**	**37.88**	**223**	P	**P**	**23 53 36.9**	**0.0**
	baz=37,SNR=11						
BLDU	**Ballidu**	**38.02**	**225**	P	**P**	**23 53 38.4**	**+0.3**
	baz=38,SNR=6.2						
RKGY	**Rocky Gully**	**40.26**	**220**	P	P	23 54 05.4	+8.9
	baz=40,SNR=12						
XMIS	**Christmas Isla**	**41.34**	**260**	S	S	23 59 48.9	-17
	baz=41,SNR=3.4						
AFI	**Afiamalu**	**41.35**	**105**	P	**P**	**23 54 06.3**	**+0.5**
AFI	**Afiamalu**	**41.35**	**105**	P	**P**	**23 54 06.3**	**+0.5**
	29nm,0.7s,baz=89,slow=19,SNR=4.4						
URZ	**Urewera**	**42.57**	**144**	P	**P**	**23 54 15.0**	**-0.2**
URZ	**Urewera**	**42.57**	**144**	P	**P**	**23 54 15.0**	**-0.2**
	6.2nm,0.4s,baz=308,slow=1.1,SNR=5.7						
RPZ	**Rata Peaks**	**43.59**	**155**	P	**P**	**23 54 23.8**	**+0.4**
RPZ	**Rata Peaks**	**43.59**	**155**	P	**P**	**23 54 23.8**	**+0.4**
	22nm,0.8s,baz=108,slow=6.4,SNR=4.4						
KSRS	**Korea Array**	**46.24**	**339**	P	**P**	**23 54 46.6**	**+2.3**
	2.7nm,1.0s,baz=154,slow=8.7,SNR=10						
KSAR	**Wonju Array Be**	**46.25**	**339**	P	**P**	**23 54 46.6**	**+2.3**
USRK	**Ussuriysk Arra**	**51.22**	**346**	P	**P**	**23 55 24.4**	**+2.3**
	0.9nm,0.5s,baz=101,slow=8.8,SNR=4.7						
PETK	**Petropavlovsk-**	**58.98**	**7**	P	**P**	**23 56 19.8**	**+2.3**
PETK	**Petropavlovsk-**	**58.98**	**7**	P	**P**	**23 56 19.8**	**+2.3**
	5.4nm,0.8s,baz=158,slow=5.9,SNR=5.9						
ULN	**Ulaanbaatar**	**63.65**	**331**	*e*P	**P**	**23 56 51.2**	**+2.1**
	5.5nm,0.7s						
SONM	**Songino Array**	**63.94**	**331**	P	**P**	**23 56 53.3**	**+2.3**
SONM				pP	**pP**	**23 57 34.0**	**-2.3**
SONM	**Songino Array**	**63.94**	**331**	P	**P**	**23 56 53.3**	**+2.3**
	2.9nm,0.6s,baz=153,slow=5.8,SNR=25						
SONM				pP	**pP**	**23 57 34.0**	**-2.3**
	0.7nm,0.6s,baz=149,slow=5.7,SNR=1.6						
VNDA	**Vanda**	**72.49**	**177**	*e*P	**P**	**23 57 43.9**	**+0.5**
	11nm,1.1s						
VNDA	**Vanda**	**72.49**	**177**	P	**P**	**23 57 44.1**	**+0.7**
	6.3nm,0.7s,baz=327,slow=6.4,SNR=38						
SBA	**Scott Base**	**73.14**	**176**	*e*P	**P**	**23 57 49.0**	**+1.9**
MK31	**Makanchi Array**	**77.11**	**320**	*e*P	**P**	**23 58 11.5**	**+1.0**
MKAR	**Makanchi Array**	**77.11**	**320**	P	**P**	**23 58 11.8**	**+1.3**
MKAR				pP	**pP**	**23 58 53.6**	**-3.8**
MKAR	**Makanchi Array**	**77.11**	**320**	P	**P**	**23 58 11.8**	**+1.3**
	1.2nm,0.6s,baz=94,slow=6.7,SNR=11						
MKAR				pP	**pP**	**23 58 53.6**	**-3.8**
	2.4nm,0.9s,baz=111,slow=6.6,SNR=4.0						
TIXI	**Tiksi**	**77.84**	**354**	*e*P	**P**	**23 58 14.4**	**+0.5**
	5.8nm,0.9s						
ZAA0	**Zalesovo Array**	**78.57**	**328**	*e*P	**P**	**23 58 18.1**	**-0.3**
ZALV	**Zalesovo Beam**	**78.57**	**328**	P	**P**	**23 58 18.4**	**+0.1**
ZALV				pP	pP	23 59 00.6	-4.8
ZALV	**Zalesovo Beam**	**78.57**	**328**	P	**P**	**23 58 18.4**	**+0.1**
	3.1nm,0.6s,baz=107,slow=5.7,SNR=23						
ZALV				pP	pP	23 59 00.6	-4.8
	1.3nm,0.7s,baz=106,slow=5.4,SNR=3.1						
TKM2	**Tokmak 2**	**80.31**	**315**	*e*P	**P**	**23 58 28.9**	**+0.7**
	1.0nm,0.6s						
EKS2	**Erkin-Say**	**81.52**	**314**	*e*P	**P**	**23 58 36.0**	**+1.5**
	2.9nm,0.8s						
TRF	**Thorofare Moun**	**82.98**	**24**	*e*P	**P**	**23 58 41.8**	**+0.1**
	17nm,1.6s						
SML	**Sawmill**	**83.07**	**26**	*e*P	**P**	**23 58 43.7**	**+1.7**
	2.5nm,1.0s						
COLA	**College**	**84.57**	**23**	*e*P	**P**	**23 58 51.4**	**+1.9**
	5.0nm,0.8s						
COLD	**Coldfoot**	**84.75**	**20**	*e*P	**P**	**23 58 52.7**	**+2.4**
	5.6nm,1.0s						
ILAR	**Eielson Array**	**84.90**	**23**	P	**P**	**23 58 51.4**	**+0.2**
ILAR				pP	**pP**	**23 59 37.6**	**-1.4**
ILAR	**Eielson Array**	**84.90**	**23**	P	**P**	**23 58 51.4**	**+0.2**
	6.6nm,0.8s,baz=255,slow=5.0,SNR=70						
ILAR				pP	**pP**	**23 59 37.6**	**-1.4**
	2.1nm,0.9s,baz=259,slow=4.9,SNR=4.2						
MENT	**Mentasta**	**85.49**	**25**	*e*P	**P**	**23 58 55.8**	**+1.6**
DOT	**Dot Lake**	**85.60**	**25**	*e*P	**P**	**23 58 56.3**	**+1.5**
	2.6nm,0.9s						
BVAR	**Borovoye Array**	**86.36**	**324**	P	**P**	**23 58 58.0**	**-0.7**
BVAR				pP	**pP**	**23 59 42.8**	**-3.8**
BVAR	**Borovoye Array**	**86.36**	**324**	P	**P**	**23 58 58.0**	**-0.7**
	2.1nm,0.8s,baz=113,slow=6.2,SNR=10						
BVAR				pP	**pP**	**23 59 42.8**	**-3.8**
	0.7nm,0.6s,baz=111,slow=8.1,SNR=4.2						
INK	**Inuvik**	**91.07**	**21**	P	**P**	**23 59 21.3**	**+0.9**
INK	**Inuvik**	**91.07**	**21**	P	**P**	**23 59 21.3**	**+0.9**
	3.3nm,1.0s,baz=245,slow=6.6,SNR=9.8						
NVAR	**Mina Array Bea**	**96.92**	**52**	P	**P**	**23 59 50.0**	**+1.7**
NVAR	**Mina Array Bea**	**96.92**	**52**	P	**P**	**23 59 50.0**	**+1.7**
	1.0nm,0.5s,baz=253,slow=6.6,SNR=5.9						
NEW	**Newport**	**97.85**	**42**	*e*P	Pdif	23 59 54.2	+2.2
	3.5nm,1.0s						
YKA	**Yellowknife Ar**	**98.60**	**28**	P	Pdif	23 59 56.1	+1.2
YKA	**Yellowknife Ar**	**98.60**	**28**	P	Pdif	23 59 56.1	+1.2
	0.3nm,0.6s,baz=275,slow=4.5,SNR=7.0						
PDAR	**Pinedale Array**	**103.44**	**47**	Pdif	**Pdif**	**00 00 17.3**	**0.0**
PDAR	**Pinedale Array**	**103.44**	**47**	Pdiff	**Pdif**	**00 00 17.3**	**0.0**
	1.6nm,0.9s,baz=259,slow=5.4,SNR=7.1						
ARCES	**ARCESS Array B**	**105.73**	**342**	PKiKP	**PKiKP**	**00 04 36.0**	**-2.3**
ARCES	**ARCESS Array B**	**105.73**	**342**	PKiKP	**PKiKP**	**00 04 36.0**	**-2.3**
	2.3nm,0.8s,baz=103,slow=1.9,SNR=5.4						
GERES	**GERESS Array B**	**121.48**	**326**	PKP	**PKPdf**	**00 05 09.4**	**+0.4**
GERES	**GERESS Array B**	**121.48**	**326**	PKP	**PKPdf**	**00 05 09.4**	**+0.4**
	1.2nm,0.6s,baz=76,slow=1.6,SNR=17						
PLCA	**Paso Flores**	**122.55**	**147**	PKP	**PKPdf**	**00 05 11.4**	**+0.1**
PLCA	**Paso Flores**	**122.55**	**147**	PKP	**PKPdf**	**00 05 11.4**	**+0.1**
	2.2nm,1.0s,baz=225,slow=22,SNR=5.8						
SIV	**San Ignacio**	**144.93**	**128**	PKP	**PKPab**	**00 05 53.0**	**-0.2**
SIV	**San Ignacio**	**144.93**	**128**	PKP	**PKPab**	**00 05 53.0**	**-0.2**
	15nm,0.8s,baz=241,slow=3.9,SNR=59						
TOA0	**Torodi Ar. Sit**	**145.04**	**285**	*e*PKPbc	**PKPab**	**00 05 54.1**	**+0.5**
TORD	**Torodi Ar. Bea**	**145.04**	**285**	PKPbc	**PKPab**	**00 05 53.6**	**-0.1**
TORD	**Torodi Ar. Bea**	**145.04**	**285**	PKPbc	**PKPab**	**00 05 53.6**	**-0.1**
	2.6nm,0.6s,baz=69,slow=3.5,SNR=46						
SJG	**San Juan**	**145.16**	**66**	PKPbc	**PKPab**	**00 05 53.9**	**-0.1**
SJG	**San Juan**	**145.16**	**66**	PKPbc	**PKPab**	**00 05 53.8**	**-0.1**
	28nm,0.8s,baz=349,slow=18,SNR=9.5						
DBIC	**Dimbokro**	**152.09**	**274**	PKPbc	**PKPbc**	**00 06 11.8**	**-0.1**
DBIC	**Dimbokro**	**152.09**	**274**	PKPbc	**PKPbc**	**00 06 11.8**	**-0.1**
	2.6nm,0.7s,baz=156,slow=3.4,SNR=5.9						
BDFB	**Brasilia**	**154.28**	**145**	PKPbc	**PKPbc**	**00 06 16.7**	**0.0**
BDFB	**Brasilia**	**154.28**	**145**	PKPbc	**PKPbc**	**00 06 16.7**	**0.0**
	3.0nm,0.8s,baz=150,slow=3.6,SNR=4.1						

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*IDC **08** 23:47:05.2±13.0, 9°.59N×126°.71E, h0^{km}, mb3.9/4, mb1 4.0/4, mb1mx3.6/25, mbtmp3.9/4, Error ellipse: s-maj=496.5km s-min=145.8km az=26.0*
*ISCJB **08** 23:47:20.0±1.0, 9°.30N±0°.06×125°.89E±0°.10, h117^{km}±6^{km}, mb3.9/4, Error ellipse: s-maj=16.2km s-min=9.1km az=169.2*
*MAN **08** 23:47:20, 9°.28N×125°.88E, h105^{km}, mb4.7, ML3.5, MS3.5*
ISC 08 23:47:20.7±1.3**, 9°.31N**±0°.06×**125°.9E**±0°.1**, h113**^{km}±10^{km}**, n19, σ0^{s}.79**/24**, mb3.8**/4**, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.31**	**309**	*e*P	**Pn**	**23 47 45.3**	**-0.2**
MSLP				*e*S	**Sn**	**23 48 04.7**	**+0.4**
CGP	**Cagayan de Oro**	**1.46**	**235**	⇑*i*P	**Pn**	**23 47 46.6**	**-0.6**
CGP				*i* S	**Sn**	**23 48 06.3**	**-1.0**
TBP	**Tagbilaran**	**2.04**	**281**	*e*P	**Pn**	**23 47 54.5**	**+0.2**
TBP				*e*S	**Sn**	**23 48 19.4**	**-0.7**
OCLP	**Ormoc**	**2.15**	**324**	*e*P	**Pn**	**23 47 56.2**	**+0.5**
OCLP				*e*S	**Sn**	**23 48 23.3**	**+0.8**
LLP	**Lapu-Lapu**	**2.15**	**298**	⇑*e*P	**Pn**	**23 47 56.1**	**+0.4**
LLP				*e*S	**Sn**	**23 48 22.8**	**+0.3**
BESP	**Borongan**	**2.32**	**349**	*e*P	**Pn**	**23 47 57.9**	**0.0**
MATI	**Mati**	**2.37**	**171**	*e*P	**Pn**	**23 47 59.5**	**+0.9**
PAGZ	**Pagadian**	**2.88**	**240**	*e*P	**Pn**	**23 48 06.5**	**+1.3**
RCP	**Roxas**	**3.82**	**306**	⇓*e*P	**Pn**	**23 48 18.2**	**+0.5**
TAPN	**Taplejung**	**40.23**	**302**	*e*P	**P**	**23 54 48.0**	**+1.1**
	5.9nm,0.4s						
ODAN	**Odare**	**40.34**	**301**	*e*P	**P**	**23 54 48.6**	**+0.8**
	7.7nm,0.5s						
GUN	**Gumba**	**41.95**	**302**	*e*P	**P**	**23 55 02.1**	**+1.1**
	5.7nm,0.3s						
KOLN	**Koldanda**	**43.83**	**301**	*e*P	**P**	**23 55 17.0**	**+0.9**
	8.7nm,0.6s						
DANN	**Dangsing**	**43.86**	**301**	*e*P	**P**	**23 55 16.7**	**+0.3**
	4.4nm,0.5s						
PYUN	**Piuthan**	**44.44**	**301**	*e*P	**P**	**23 55 21.5**	**+0.5**
	8.6nm,0.6s						
MKAR	**Makanchi Array**	**52.57**	**323**	P	**P**	**23 56 22.6**	**-0.2**
	0.6nm,0.6s,baz=124,slow=8.0,SNR=13						
ZALV	**Zalesovo Beam**	**55.29**	**332**	P	**P**	**23 56 41.3**	**-1.1**
	0.5nm,0.4s,baz=121,slow=6.8,SNR=3.7						
BVAR	**Borovoye Array**	**62.25**	**326**	P	**P**	**23 57 30.1**	**-0.5**
	0.3nm,0.5s,baz=116,slow=6.8,SNR=4.0						
ARCES	**ARCESS Array B**	**84.96**	**340**	P	**P**	**23 59 42.1**	**-0.9**
	3.0nm,0.9s,baz=81,slow=7.5,SNR=6.6						

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*ATH **08** 23:50:19.9, 37°.68N×26°.86E, h30^{km}±5^{km}, MD3.0/4*
*DDA **08** 23:50:20.8, 37°.74N×26°.87E, h14^{km}, MD3.1*
*ISCJB **08** 23:50:20.7±0.6, 37°.70N±0°.02×26°.83E±0°.03, h7^{km}±4^{km}, Error ellipse: s-maj=4.5km s-min=3.2km az=151.6*
*ISK **08** 23:50:20.9, 37°.75N×26°.92E, h6^{km}, MD3.2*
*CSEM **08** 23:50:21.4±0.2, 37°.72N×26°.86E, h10^{km}, MD3.1, Error ellipse: s-maj=4.5km s-min=3.1km az=53.0*
*THE **08** 23:50:24.6, 37°.76N×26°.53E, h0^{km}±1^{km}, ML2.4/3, Error ellipse: s-maj=2.3km s-min=0.6km az=107.0*
ISC 08 23:50:20.9±1.0**, 37°.72N**±0°.02×**26°.85E**±0°.02**, h12**^{km}±9^{km}**, n66, σ0^{s}.85**/95**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.31**	**93**	*i* P	**Pg**	**23 50 27.5**	**+0.4**
GCAM				*i* S	**Sb**	**23 50 32.9**	**-0.4**
GCAM	**G?zelcaml?**	**0.31**	**93**	*i* P	**Pg**	**23 50 27.5**	**+0.4**
GCAM				*i* S	**Sb**	**23 50 32.9**	**-0.4**
URLA	**Izmir**	**0.67**	**343**	*i* P	**Pb**	**23 50 34.6**	**+0.1**
URLA				*i* S	**Sb**	**23 50 43.4**	**-0.5**
URLA	**Izmir**	**0.67**	**343**	*i* P	**Pb**	**23 50 34.7**	**+0.1**
URLA				*i* S	**Sb**	**23 50 43.4**	**-0.5**
BLCB	**Balcova**	**0.69**	**13**	*e*PG	**Pg**	**23 50 33.7**	**-0.5**
BLCB				*e*SG	**Sg**	**23 50 43.3**	**+0.1**
BLCB	**Balcova**	**0.69**	**13**	*e*Pg	**Pg**	**23 50 33.7**	**-0.5**
BLCB				*e*Sg	**Sg**	**23 50 43.3**	**+0.1**
BODT	**Bodrum**	**0.75**	**150**	*e*PG	**Pg**	**23 50 35.8**	**+0.4**
BODT				*e*SG	**Sb**	**23 50 46.8**	**+0.7**
BODT	**Bodrum**	**0.75**	**150**	*e*Pg	**Pg**	**23 50 35.8**	**+0.4**
BODT				*e*Sg	**Sb**	**23 50 46.8**	**+0.7**
IZM	**Izmir**	**0.76**	**26**	*e*PG	**Pg**	**23 50 35.0**	**-0.5**
IZM	**Izmir**	**0.76**	**26**	*e*Pg	**Pg**	**23 50 35.0**	**-0.5**
BDRM	**Kayabasi**	**0.81**	**144**	*i* P	**Pb**	**23 50 37.0**	**+0.2**
BDRM				*i* S	**Sb**	**23 50 47.8**	**+0.1**
BDRM	**Kayabasi**	**0.81**	**144**	*i* P	**Pb**	**23 50 37.0**	**+0.2**
BDRM				*i* S	**Sb**	**23 50 47.8**	**+0.1**
AYDN	**Tasoluk**	**0.82**	**94**	*i* P	**Pg**	**23 50 36.5**	**-0.2**
AYDN				*i* S	**Sg**	**23 50 47.2**	**-0.3**
AYDN	**Tasoluk**	**0.82**	**94**	*i* P	**Pg**	**23 50 36.5**	**-0.2**
AYDN				*i* S	**Sg**	**23 50 47.2**	**-0.3**
MLSB	**Milas**	**0.85**	**119**	*e*PG	**Pg**	**23 50 37.0**	**-0.3**
MLSB	**Milas**	**0.85**	**119**	*e*Pg	**Pg**	**23 50 37.0**	**-0.3**
CHOS	**Chios island**	**0.92**	**317**	P	**Pb**	**23 50 38.6**	**-0.2**
CHOS				S	**Sg**	**23 50 50.1**	**-0.4**
CHOS	**Chios island**	**0.92**	**317**	*e*PN	**Pg**	**23 50 38.0**	**-0.6**
CHOS				*e*SN	**Sb**	**23 50 51.5**	**+0.5**
CHOS	**Chios island**	**0.92**	**317**	*e*Pn	**Pg**	**23 50 38.0**	**-0.6**
CHOS	**Chios island**	**0.92**	**317**	P	**Pb**	**23 50 38.6**	**-0.2**
CHOS				S	**Sg**	**23 50 50.1**	**-0.4**
CHOS				*e*Sn	**Sb**	**23 50 51.5**	**+0.5**
APE	**Apeiranthos**	**1.23**	**239**	*e*PN	**Pg**	**23 50 45.8**	**+1.3**
APE	**Apeiranthos**	**1.23**	**239**	P	**Pg**	**23 50 45.0**	**+0.5**
APE				S	**Sb**	**23 51 00.1**	**+0.1**
APE	**Apeiranthos**	**1.23**	**239**	*e*PN	**Pn**	**23 50 42.5**	**-1.5**
APE				*e*SN	**Sb**	**23 50 59.8**	**-0.2**
APE	**Apeiranthos**	**1.23**	**239**	P	**Pg**	**23 50 45.0**	**+0.5**
APE	**Apeiranthos**	**1.23**	**239**	*e*Pn	**Pg**	**23 50 45.8**	**+1.3**
APE				*e*Sn	**Sb**	**23 50 59.8**	**-0.2**
APE				S	**Sb**	**23 51 00.1**	**+0.1**
YER	**Yerkesik**	**1.28**	**116**	*e*PN	**Pn**	**23 50 45.0**	**+0.3**
YER	**Yerkesik**	**1.28**	**116**	*e*Pn	**Pn**	**23 50 45.0**	**+0.3**
AKS	**Akhisar**	**1.39**	**33**	*e*PN	**Pb**	**23 50 46.6**	**-0.2**
AKS	**Akhisar**	**1.39**	**33**	*e*Pn	**Pb**	**23 50 46.6**	**-0.2**
PRK	**Paraskevi**	**1.59**	**344**	P	**Pg**	**23 50 51.2**	**-0.2**
PRK				S	**Sg**	**23 51 12.7**	**+0.6**
PRK	**Paraskevi**	**1.59**	**344**	*e*PN	**Pn**	**23 50 49.0**	**+0.1**
PRK				*e*SN	**Sn**	**23 51 09.1**	**-0.3**
PRK	**Paraskevi**	**1.59**	**344**	*e*Pn	**Pn**	**23 50 49.0**	**+0.1**
PRK	**Paraskevi**	**1.59**	**344**	P	**Pg**	**23 50 51.2**	**-0.2**
PRK				*e*Sn	**Sn**	**23 51 09.1**	**-0.3**
PRK				S	**Sg**	**23 51 12.7**	**+0.6**
AYVA	**Ayvalik**	**1.59**	**356**	*i* P	Pn	23 50 45.6	-3.4
AYVA				*i* S	**Sg**	**23 51 13.1**	**+0.9**
TURN	**Turunc**	**1.63**	**120**	*i* P	**Pn**	**23 50 47.2**	**-2.3**
KULA	**Kula-Manisa**	**1.64**	**60**	*e*PN	**Pn**	**23 50 50.1**	**+0.5**
KULA	**Kula-Manisa**	**1.64**	**60**	*e*Pn	**Pn**	**23 50 50.1**	**+0.5**
SIGR	**SIGRI**	**1.68**	**333**	P	**Pb**	**23 50 52.3**	**+0.5**
SIGR				S	**Sg**	**23 51 13.8**	**-1.2**
SIGR	**SIGRI**	**1.68**	**333**	P	**Pb**	**23 50 52.3**	**+0.5**
SIGR				S	**Sg**	**23 51 13.8**	**-1.2**
DNZL	**Cakiroluk**	**1.75**	**90**	*i* P	**Pn**	**23 50 51.0**	**-0.2**
DNZL	**Cakiroluk**	**1.75**	**90**	*i* P	**Pn**	**23 50 51.0**	**-0.2**
ARG	**Arkhangelos**	**1.81**	**145**	*e*PB	**Pn**	**23 50 50.7**	**-1.3**
ARG	**Arkhangelos**	**1.81**	**145**	*e*Pb	**Pn**	**23 50 50.7**	**-1.3**
DEMI	**Demirci**	**1.98**	**47**	*i* P	**Pg**	**23 50 59.3**	**+0.5**
DEMI				*i* S	**Sb**	**23 51 22.5**	**+1.0**
BALB	**Balikesir**	**2.08**	**23**	*e*PN	**Pn**	**23 50 56.7**	**+1.0**
BALB	**Balikesir**	**2.08**	**23**	*e*Pn	**Pn**	**23 50 56.7**	**+1.0**
FETY	**Fethiye**	**2.09**	**120**	*e*PN	**Pn**	**23 50 56.7**	**+1.0**
FETY	**Fethiye**	**2.09**	**120**	*e*Pn	**Pn**	**23 50 56.7**	**+1.0**
BALY	**Balya**	**2.11**	**16**	*i* P	**Pb**	**23 50 59.6**	**+0.4**
BALY				*i* S	**Sg**	**23 51 29.6**	**+0.9**
EZN	**Ezine**	**2.15**	**349**	*e*PN	**Pb**	**23 50 58.1**	**-1.6**
EZN	**Ezine**	**2.15**	**349**	*e*Pn	**Pb**	**23 50 58.1**	**-1.6**
DURS	**Dursunbey**	**2.27**	**34**	*i* P	**Pg**	**23 51 03.4**	**-1.1**
DURS				*i* S	**Sg**	**23 51 32.0**	**-2.0**
DST	**Dursunbey**	**2.34**	**36**	*e*PN	**Pn**	**23 51 00.1**	**+0.8**
DST	**Dursunbey**	**2.34**	**36**	*e*Pn	**Pn**	**23 51 00.1**	**+0.8**
GONE	**Gonen-Balikesi**	**2.42**	**15**	*e*PN	**Pn**	**23 51 01.4**	**+1.1**
GONE	**Gonen-Balikesi**	**2.42**	**15**	*e*Pn	**Pn**	**23 51 01.4**	**+1.1**
LIA	**Limnos Island**	**2.54**	**330**	*e*PN	**Pn**	**23 51 02.4**	**+0.5**
LIA	**Limnos Island**	**2.54**	**330**	*e*Pn	**Pn**	**23 51 02.4**	**+0.5**
TVSB	**Tavsanli**	**2.68**	**49**	*e*PN	**Pn**	**23 51 05.1**	**+1.1**
TVSB	**Tavsanli**	**2.68**	**49**	*e*Pn	**Pn**	**23 51 05.1**	**+1.1**
GELI	**Tayfur-Gelibol**	**2.69**	**354**	*e*PN	**Pn**	**23 51 05.8**	**+1.7**
GELI	**Tayfur-Gelibol**	**2.69**	**354**	*e*Pn	**Pn**	**23 51 05.8**	**+1.7**
KRBG	**Karabiga-Canak**	**2.70**	**7**	*e*PN	**Pn**	**23 51 05.5**	**+1.4**
KRBG	**Karabiga-Canak**	**2.70**	**7**	*e*Pn	**Pn**	**23 51 05.5**	**+1.4**
RKY	**Sarkoy-Tekirda**	**2.98**	**5**	*e*PN	**Pn**	**23 51 09.7**	**+1.7**
RKY	**Sarkoy-Tekirda**	**2.98**	**5**	*e*Pn	**Pn**	**23 51 09.7**	**+1.7**

TRN 08 23:50:58.7, 16°.91N×61°.78W, h59^{km}, MD3.6, M4.1(FDF)**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SEG	**Port Louis**	**0.57**	**152**	*e*P	Pn	23 51 12.5	+1.1
LZG	**Guadaloupe-1**	**0.76**	**179**	*e*P	Pn	23 51 14.9	+1.3
BCG	**Bois Riant Cap**	**0.83**	**169**	*e*P	Pn	23 51 15.8	+1.2
SCG	**Saint Claude**	**0.88**	**174**	*e*P	Pn	23 51 16.8	+1.6
DOG	**Dongo Capester**	**0.88**	**170**	*e*P	Pn	23 51 16.7	+1.5
PHG	**Guadaloupe-2**	**0.90**	**171**	*e*P	Pn	23 51 17.0	+1.5
HMG	**Houelmont**	**0.92**	**175**	*e*P	Pn	23 51 18.1	+2.3
SKI	**Saint Kitts**	**1.01**	**295**	*e*P	Pn	23 51 18.2	+1.3
SKI				*e*S	Sn	23 51 32.3	+2.0
TBG	**Guadaloupe-3**	**1.05**	**173**	*e*P	Pn	23 51 19.0	+1.5
MGG	**Marie-Galante**	**1.08**	**155**	*e*P	Pn	23 51 18.9	+1.1
DVCT	**Vielle Casse P**	**1.33**	**164**	*e*P	Pn	23 51 22.9	+1.7
DVCT				*e*S	Sn	23 51 39.6	+1.7
DWS	**Wesley**	**1.40**	**161**	*e*P	Pn	23 51 24.5	+2.4
DWS				*e*S	Sn	23 51 41.5	+1.8
DLPL	**La Plaine**	**1.65**	**162**	*e*P	Pn	23 51 26.9	+1.5
DLPL				*e*S	Sn	23 51 46.8	+1.3
FDF	**Fort de France**	**2.24**	**164**	*e*P	Pn	23 51 35.4	+1.8
FDF				*e*S	Sn	23 51 59.5	-0.7
BIM	**Bigot**	**2.47**	**164**	*e*P	Pn	23 51 37.9	+1.2
BIM				*e*S	Sn	23 52 07.9	+2.1
MVM	**Montagne Vaucl**	**2.49**	**160**	*e*P	Pn	23 51 37.6	+0.7
MVM				*e*S	Sn	23 52 06.3	+0.2

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*ISCJB **08** 23:55:13.4±0.4, 38°.87N±0°.04×27°.97E±0°.03, h7^{km}±5^{km}, Error ellipse: s-maj=7.1km s-min=4.1km az=16.9*
*CSEM **08** 23:55:13.5±0.1, 38°.87N×27°.97E, h6^{km}±1^{km}, MD2.9, Error ellipse: s-maj=2.4km s-min=2.0km az=5.0*
*DDA **08** 23:55:13.0, 38°.89N×27°.96E, h9^{km}, MD2.9*
*ISK **08** 23:55:13.1, 38°.87N×27°.97E, h7^{km}, MD3.0*
ISC 08 23:55:13.4±0.9**, 38°.86N**±0°.03×**27°.99E**±0°.03**, h9**^{km}±8^{km}**, n44, σ0^{s}.42**/58**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.14**	**280**	*i* P	**Pg**	**23 55 16.3**	**-0.2**
AKHS				*i* S	**Sg**	**23 55 18.5**	**-0.1**
AKHS	**Akhisar**	**0.14**	**280**	*i* P	**Pg**	**23 55 16.3**	**-0.2**
AKHS				*i* S	**Sg**	**23 55 18.5**	**-0.1**
AKS	**Akhisar**	**0.14**	**280**	PG	**Pg**	**23 55 16.4**	**-0.1**
AKS				*e*SG	**Sg**	**23 55 18.7**	**+0.1**
AKS	**Akhisar**	**0.14**	**280**	*i* Pg	**Pg**	**23 55 16.4**	**-0.1**
AKS				*e*Sg	**Sg**	**23 55 18.7**	**+0.1**
DEMI	**Demirci**	**0.60**	**72**	*i* P	**Pb**	**23 55 25.5**	**-0.6**
DEMI				*i* S	**Sg**	**23 55 33.2**	**+0.3**
DEMI	**Demirci**	**0.60**	**72**	*i* P	**Pb**	**23 55 25.5**	**-0.6**
DEMI				*i* S	**Sg**	**23 55 33.2**	**+0.3**
KULA	**Kula-Manisa**	**0.63**	**123**	*e*PG	**Pb**	**23 55 26.4**	**-0.3**
KULA				*e*SG	**Sb**	**23 55 35.2**	**-0.4**
KULA	**Kula-Manisa**	**0.63**	**123**	*e*Pg	**Pb**	**23 55 26.4**	**-0.3**
KULA				*e*Sg	**Sb**	**23 55 35.2**	**-0.4**
IZM	**Izmir**	**0.73**	**231**	*e*PG	**Pg**	**23 55 27.4**	**-0.1**
IZM	**Izmir**	**0.73**	**231**	*e*Pg	**Pg**	**23 55 27.4**	**-0.1**
BALB	**Balikesir**	**0.79**	**354**	*e*PG	**Pg**	**23 55 28.4**	**-0.2**
BALB	**Balikesir**	**0.79**	**354**	*e*Pg	**Pg**	**23 55 28.4**	**-0.2**
DURS	**Dursunbey**	**0.83**	**27**	*i* P	**Pb**	**23 55 30.6**	**+0.4**
DURS				*i* S	**Sb**	**23 55 42.2**	**+0.6**
DURS	**Dursunbey**	**0.83**	**27**	*i* P	**Pb**	**23 55 30.6**	**+0.4**
DURS				*i* S	**Sb**	**23 55 42.2**	**+0.6**
BLCB	**Balcova**	**0.88**	**238**	*e*PG	**Pg**	**23 55 30.3**	**0.0**
BLCB	**Balcova**	**0.88**	**238**	*e*Pg	**Pg**	**23 55 30.3**	**0.0**
DST	**Dursunbey**	**0.89**	**33**	*e*PG	**Pg**	**23 55 30.6**	**0.0**
DST	**Dursunbey**	**0.89**	**33**	*e*Pg	**Pg**	**23 55 30.6**	**0.0**
BALY	**Balya**	**0.93**	**342**	*i* P	**Pg**	**23 55 30.8**	**-0.5**
BALY				*i* S	**Sg**	**23 55 42.6**	**-0.7**
BALY	**Balya**	**0.93**	**342**	*i* P	**Pg**	**23 55 30.8**	**-0.5**
BALY				*i* S	**Sg**	**23 55 42.6**	**-0.7**
GDZ	**Gediz**	**1.19**	**78**	*i* P	**Pn**	**23 55 36.2**	**-0.2**
GDZ				*i* S	**Sg**	**23 55 51.0**	**-0.7**
GDZ	**Gediz**	**1.19**	**78**	*i* P	**Pn**	**23 55 36.2**	**-0.2**
GDZ				*i* S	**Sg**	**23 55 51.0**	**-0.7**
GONE	**Gonen-Balikesi**	**1.21**	**349**	*e*PN	**Pg**	**23 55 36.2**	**-0.4**
GONE	**Gonen-Balikesi**	**1.21**	**349**	*e*Pn	**Pg**	**23 55 36.3**	**-0.4**
TVSB	**Tavsanli**	**1.29**	**62**	*e*PN	**Pg**	**23 55 38.2**	**0.0**
TVSB	**Tavsanli**	**1.29**	**62**	*e*Pn	**Pg**	**23 55 38.2**	**0.0**
KHL	**Karahalli**	**1.32**	**113**	*e*PN	**Pg**	**23 55 38.9**	**+0.2**
KHL	**Karahalli**	**1.32**	**113**	*e*Pn	**Pg**	**23 55 38.9**	**+0.2**
EDC	**Edincik**	**1.49**	**356**	*e*PN	**Pn**	**23 55 40.7**	**+0.2**
EDC	**Edincik**	**1.49**	**356**	*e*Pn	**Pn**	**23 55 40.7**	**+0.2**
BNT	**Bandirma**	**1.50**	**358**	*e*PN	**Pn**	**23 55 40.7**	**+0.1**
BNT	**Bandirma**	**1.50**	**358**	*e*Pn	**Pn**	**23 55 40.7**	**+0.1**
KRBG	**Karabiga-Canak**	**1.62**	**341**	*e*PN	**Pn**	**23 55 42.2**	**-0.1**
KRBG	**Karabiga-Canak**	**1.62**	**341**	*e*Pn	**Pn**	**23 55 42.2**	**-0.1**
ALT	**Altintas**	**1.67**	**82**	*e*PN	**Pn**	**23 55 43.6**	**+0.6**
ALT	**Altintas**	**1.67**	**82**	*e*Pn	**Pn**	**23 55 43.6**	**+0.6**
ARMT	**Armutlu**	**1.84**	**21**	*e*PN	**Pn**	**23 55 45.8**	**+0.6**
ARMT	**Armutlu**	**1.84**	**21**	*e*Pn	**Pn**	**23 55 45.8**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.93**	**341**	*e*PN	**Pn**	**23 55 46.8**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.93**	**341**	*e*Pn	**Pn**	**23 55 46.8**	**+0.2**
YLV	**Yalova**	**2.02**	**32**	*e*PN	**Pn**	**23 55 48.6**	**+0.9**
YLV	**Yalova**	**2.02**	**32**	*e*Pn	**Pn**	**23 55 48.6**	**+0.9**
ENEZ	**Enez**	**2.35**	**324**	*e*PN	**Pn**	**23 55 52.8**	**+0.6**
ENEZ	**Enez**	**2.35**	**324**	*e*Pn	**Pn**	**23 55 52.8**	**+0.6**

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*ISK **08** 23:55:47.8, 41°.17N×33°.55E, h4^{km}, MD3.6*
*ISCJB **08** 23:55:48.1±0.5, 41°.16N±0°.02×33°.52E±0°.03, h0^{km}±4^{km}, Error ellipse: s-maj=3.8km s-min=3.1km az=22.3*
*CSEM **08** 23:55:48.9±0.1, 41°.15N×33°.55E, h2^{km}, ML3.5, Error ellipse: s-maj=2.8km s-min=2.3km az=22.0*
*DDA **08** 23:55:48.0, 41°.12N×33°.56E, h13^{km}, ML3.5*
ISC 08 23:55:49.0±1.1**, 41°.14N**±0°.02×**33°.55E**±0°.02**, h4**^{km}±10^{km}**, n108, σ0^{s}.83**/124**, 13C-1D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ILGA	**Ilgaz**	**0.15**	**125**	*i* P	**Pg**	**23 55 51.8**	**-0.3**
ILGA				*i* S	**Sg**	**23 55 54.5**	**+0.4**
ILGA	**Ilgaz**	**0.15**	**125**	*i* P	**Pg**	**23 55 51.8**	**-0.3**
ILGA				*i* S	**Sg**	**23 55 54.5**	**+0.4**
TOS	**Tosya**	**0.37**	**106**	PG	**Pg**	**23 55 55.9**	**-0.3**
TOS				*e*SG	**Sg**	**23 56 01.8**	**+0.8**
BALT	**Daday**	**0.42**	**342**	*i* P	**Pg**	**23 55 56.5**	**-0.6**
BALT	**Daday**	**0.42**	**342**	*i* P	**Pg**	**23 55 56.5**	**-0.6**
KAST	**KASTAMONU**	**0.45**	**39**	*i* P	**Pg**	**23 55 57.3**	**-0.4**
KAST				*i* S	**Sg**	**23 56 04.1**	**+0.5**
KAST	**KASTAMONU**	**0.45**	**39**	*i* P	**Pg**	**23 55 57.3**	**-0.4**
KAST				*i* S	**Sg**	**23 56 04.1**	**+0.5**
CANT	**Cankiri**	**0.53**	**175**	*e*PG	**Pg**	**23 55 59.2**	**0.0**
CANT				*e*SG	**Sb**	**23 56 08.1**	**-0.9**
ELDT	**Eldivan**	**0.65**	**189**	*i* P	**Pg**	**23 56 01.5**	**-0.1**
ELDT				*i* S	**Sg**	**23 56 08.6**	**-1.4**
ELDT	**Eldivan**	**0.65**	**189**	*i* P	**Pg**	**23 56 01.5**	**-0.1**
ELDT				*i* S	**Sg**	**23 56 08.6**	**-1.4**
SAFT	**Safranbolu**	**0.66**	**279**	*e*PG	**Pg**	**23 56 00.5**	**-1.3**
SAFT	**Safranbolu**	**0.66**	**279**	*e*Pg	**Pg**	**23 56 00.5**	**-1.3**
BZK	**Bozkurt**	**0.89**	**22**	*e*PG	**Pg**	**23 56 05.1**	**-1.0**
BZK	**Bozkurt**	**0.89**	**22**	*e*Pg	**Pg**	**23 56 05.1**	**-1.0**
CTKT	**Corum**	**1.07**	**118**	*i* P	**Pg**	**23 56 08.7**	**-0.8**
CTKT				*i* S	**Sg**	**23 56 19.7**	**-3.6**
CTKT	**Corum**	**1.07**	**118**	*i* P	**Pg**	**23 56 08.7**	**-0.8**
CORM	**Corum**	**1.26**	**139**	*e*PN	**Pn**	**23 56 13.4**	**-0.1**
CORM	**Corum**	**1.26**	**139**	*e*Pn	**Pn**	**23 56 13.4**	**-0.1**
DIKM	**Dikmen**	**1.38**	**68**	*e*PN	**Pn**	**23 56 14.7**	**-0.4**
DIKM	**Dikmen**	**1.38**	**68**	*e*Pn	**Pn**	**23 56 14.7**	**-0.4**
LOD	**Lodumlu**	**1.39**	**206**	*e*PN	**Pn**	**23 56 14.7**	**-0.6**
KDZE	**Karadeniz Ereo**	**1.60**	**277**	*e*PN	**Pn**	**23 56 17.4**	**-0.8**
KDZE	**Karadeniz Ereo**	**1.60**	**277**	*e*Pn	**Pn**	**23 56 17.4**	**-0.8**
BBAL	**Bala**	**1.63**	**192**	*i* P	**Pn**	**23 56 18.6**	**0.0**
BBAL				*i* S	**Sb**	**23 56 41.0**	**+0.4**
BBAL	**Bala**	**1.63**	**192**	*i* P	**Pn**	**23 56 18.6**	**0.0**
BBAL				*i* S	**Sb**	**23 56 41.0**	**+0.4**
CDAG	**Cicekdag**	**1.64**	**157**	*i* P	**Pn**	**23 56 18.2**	**-0.5**
CDAG				*i* S	**Sn**	**23 56 38.2**	**-2.1**
CDAG	**Cicekdag**	**1.64**	**157**	*i* P	**Pn**	**23 56 18.2**	**-0.5**
HAVZ	**Havza**	**1.64**	**91**	*i* P	**Pn**	**23 56 18.7**	**0.0**
HAVZ				*i* S	**Sg**	**23 56 41.1**	**-0.5**
HAVZ	**Havza**	**1.64**	**91**	*i* P	**Pn**	**23 56 18.7**	**0.0**
HAVZ				*i* S	**Sg**	**23 56 41.1**	**-0.5**
AFSR	**Af¯ar-Bala (A**	**1.73**	**193**	*e*PN	**Pn**	**23 56 20.0**	**0.0**
AFSR	**Af¯ar-Bala (A**	**1.73**	**193**	*e*Pn	**Pn**	**23 56 20.0**	**0.0**
KAMT	**Kaman**	**1.77**	**176**	*e*PN	**Pn**	**23 56 20.1**	**-0.5**
KVT	**Kavak**	**1.88**	**91**	*e*PN	**Pn**	**23 56 22.1**	**0.0**
KVT	**Kavak**	**1.88**	**91**	*e*Pn	**Pn**	**23 56 22.1**	**0.0**
MDUB	**Mudurnu**	**1.91**	**250**	*e*PN	**Pn**	**23 56 22.4**	**-0.1**
MDUB	**Mudurnu**	**1.91**	**250**	*e*Pn	**Pn**	**23 56 22.4**	**-0.1**
YOZ	**Yozgat**	**2.01**	**137**	*e*PN	**Pn**	**23 56 24.1**	**+0.2**
YOZ	**Yozgat**	**2.01**	**137**	*e*Pn	**Pn**	**23 56 24.1**	**+0.2**
HENT	**Hendek**	**2.03**	**262**	*i* P	**Pb**	**23 56 26.9**	**+0.3**
HENT				*i* S	**Sn**	**23 56 49.8**	**-0.2**
HENT	**Hendek**	**2.03**	**262**	*i* P	**Pb**	**23 56 26.9**	**+0.3**
HENT				*i* S	**Sn**	**23 56 49.8**	**-0.2**
SVRH	**Sivrihisar-ESK**	**2.29**	**223**	*e*PN	**Pn**	**23 56 27.7**	**-0.1**
SVRH	**Sivrihisar-ESK**	**2.29**	**223**	*e*Pn	**Pn**	**23 56 27.7**	**-0.1**
TOKA	**Tokat**	**2.37**	**109**	*i* P	**Pn**	**23 56 29.8**	**+1.1**
TOKA				*i* S	**Sb**	**23 57 00.8**	**-1.0**
TOKA	**Tokat**	**2.37**	**109**	*i* P	**Pn**	**23 56 29.8**	**+1.1**
GULT	**Gulveren**	**2.41**	**254**	*e*PN	**Pn**	**23 56 29.8**	**+0.4**
GULT	**Gulveren**	**2.41**	**254**	*e*Pn	**Pn**	**23 56 29.8**	**+0.4**
ERBA	**Erbaa**	**2.47**	**100**	*i* P	**Pn**	**23 56 31.3**	**+1.2**
ERBA	**Erbaa**	**2.47**	**100**	*i* P	**Pn**	**23 56 31.3**	**+1.2**
GPA	**Golpazari**	**2.61**	**252**	*e*PN	**Pn**	**23 56 32.2**	**+0.2**
GPA	**Golpazari**	**2.61**	**252**	*e*Pn	**Pn**	**23 56 32.2**	**+0.2**
ESKT	**Eskisehir**	**2.62**	**233**	*e*PN	**Pn**	**23 56 32.5**	**+0.3**
ESKT	**Eskisehir**	**2.62**	**233**	*e*Pn	**Pn**	**23 56 32.6**	**+0.3**
SEYT	**Eskypehyr**	**2.62**	**233**	*i* P	**Pn**	**23 56 31.3**	**-1.0**
SEYT				*i* S	**Sg**	**23 57 15.4**	**+2.1**
SEYT	**Eskypehyr**	**2.62**	**233**	*i* P	**Pn**	**23 56 31.3**	**-1.0**
KDHN	**Kadinhani**	**2.84**	**203**	*i* P	**Pn**	**23 56 35.4**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KDHN	Kadinhani	2.84	203	iP	Pn	23 56 35.4	+0.2
BNN	Bunyan	2.88	142	ePN	Pn	23 56 36.2	+0.3
BNN	Bunyan	2.88	142	ePn	Pn	23 56 36.2	+0.3
SULT	Sultanhani-AKS	2.94	181	ePN	Pn	23 56 37.4	+0.8
SULT	Sultanhani-AKS	2.94	181	ePn	Pn	23 56 37.4	+0.8
SILT	Sile	2.95	272	ePN	Pn	23 56 37.0	+0.3
SILT	Sile	2.95	272	ePn	Pn	23 56 37.0	+0.3
HRT	Hereke	2.96	265	ePN	Pn	23 56 37.2	+0.3
HRT	Hereke	2.96	265	ePn	Pn	23 56 37.2	+0.3
RSDY	Resadiye-TOKAT	2.96	103	ePN	Pn	23 56 37.4	+0.5
RSDY	Resadiye-TOKAT	2.96	103	ePn	Pn	23 56 37.4	+0.5
LADK	Ladik-KONYA	3.07	198	ePN	Pn	23 56 39.2	+0.8
LADK	Ladik-KONYA	3.07	198	ePn	Pn	23 56 39.3	+0.8
NIG	Nigde	3.13	165	ePN	Pn	23 56 39.9	+0.5
NIG	Nigde	3.13	165	ePn	Pn	23 56 39.9	+0.5
YLV	Yalova	3.22	261	ePN	Pn	23 56 40.9	+0.4
YLV	Yalova	3.22	261	ePn	Pn	23 56 40.9	+0.4
ALT	Altintas	3.36	233	ePN	Pn	23 56 43.0	+0.6
ALT	Altintas	3.36	233	ePn	Pn	23 56 43.0	+0.6
GEMT	Gemlik	3.39	259	ePN	Pn	23 56 43.1	+0.4
GEMT	Gemlik	3.39	259	ePn	Pn	23 56 43.1	+0.4
ISK	Istanbul-Kandi	3.40	270	ePN	Pn	23 56 43.4	+0.6
ISK	Istanbul-Kandi	3.40	270	ePn	Pn	23 56 43.4	+0.6
SHUT	Suhut-Afyon	3.46	223	ePN	Pn	23 56 44.5	+0.6
SHUT	Suhut-Afyon	3.46	223	ePn	Pn	23 56 44.5	+0.6
TVSB	Tavsanli	3.56	243	ePN	Pn	23 56 45.7	+0.6
TVSB	Tavsanli	3.56	243	ePn	Pn	23 56 45.7	+0.6
ARMT	Armutlu	3.60	262	ePN	Pn	23 56 46.4	+0.7
ARMT	Armutlu	3.60	262	ePn	Pn	23 56 46.4	+0.7
BGKT	Bogazkoy	3.61	272	ePN	Pn	23 56 46.4	+0.7
BGKT	Bogazkoy	3.61	272	ePn	Pn	23 56 46.4	+0.7
DARE	Darende-Malaty	3.93	122	ePN	Pn	23 56 51.9	+1.7
DARE	Darende-Malaty	3.93	122	ePn	Pn	23 56 51.9	+1.7
KOZT	Kozan	4.05	154	ePN	Pn	23 56 53.1	+1.2
KOZT	Kozan	4.05	154	ePn	Pn	23 56 53.1	+1.2
ILIC	ilic-Erzincan	4.19	112	ePN	Pn	23 56 54.9	+1.1
ILIC	ilic-Erzincan	4.19	112	ePn	Pn	23 56 54.9	+1.1
MANR	Mangalia	4.54	308	⇑iP	Pn	23 56 59.3	+0.7
MANR	Mangalia	4.54	308	⇑iP	Pn	23 56 59.3	+0.7
EFOR	EFORIE	4.67	311	⇑iP	Pn	23 57 00.2	-0.1
EFOR	EFORIE	4.67	311	⇑iP	Pn	23 57 00.2	-0.1
TIRR	Tirgusor	5.03	313	⇑iP	Pn	23 57 04.5	-0.8
TIRR	Tirgusor	5.03	313	⇑iP	Pn	23 57 04.5	-0.8
CFR	Carcaliu	5.66	317	⇑iP	Pn	23 57 13.1	-0.7
CFR	Carcaliu	5.66	317	⇑iP	Pn	23 57 13.1	-0.7
VRI	Vrincioaia	6.85	316	⇑iP	Pb	23 57 40.9	-7.7
HUMR	Humele	7.15	301	⇓iP	Pn	23 57 38.8	+4.4
TESR		7.33	319	⇑iP	Pn	23 57 36.5	-0.4
TESR		7.33	319	⇑iP	Pn	23 57 36.5	-0.4
ARR	Arges	7.76	306	⇑iP	Pn	23 57 44.9	+2.1
ARR	Arges	7.76	306	⇑iP	Pn	23 57 44.9	+2.1
VYHS	Vyhne	12.77	310	ePN	Pn	23 58 52.0	+0.8
VYHS	Vyhne	12.77	310	ePn	Pn	23 58 52.1	+0.8

KRSC 08 23:59:28.3±0.5, 53.°89N×168.°86E, h10km±10km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BKI	Bering	2.14	309	P	Pn	00 00 04.6	+0.6
BKI				iS	Sn	00 00 31.8	+1.3
KBTR	Krutoberegovo	4.18	306	P	Pn	00 00 34.2	+2.2
MKZ	Mys Kozlova	4.24	282	P	Pn	00 00 35.5	+2.7
MKZ				iS	Sn	00 01 22.9	+0.6
KMNR	Kamenistaya	5.33	294	P	Pn	00 00 49.5	+1.6
SDLR	Sedlovina	5.97	268	P	Pn	00 00 59.8	+2.9
UGLR	Uglovaya	6.02	268	P	Pn	00 01 00.8	+3.3
SMAR	Somma	6.03	268	P	Pn	00 01 01.1	+3.4
RUS	Russkaya	6.39	261	P	Pn	00 01 05.3	+2.9
GNL	Ganaly	6.47	273	P	Pn	00 01 07.1	+3.4
MTVR	Mutnovka	6.57	262	P	Pn	00 01 08.5	+3.4
MTVR				iS	Sn	00 02 19.8	-0.4

IDC 09 00:04:41.1±1.1, 8.°49S×74.°53W, h0km, mb3.6/4, mb1 3.8/8, mb1mx3.7/24, mbtmp3.7/8, ML3.7/4, MS2.8/1, Ms1 2.8/1, ms1mx2.3/31, Error ellipse: s-maj=32.7km s-min=21.7km az=31.0, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	4.06	289	Pn	Pn	00 05 45.2	+0.2
	3.8nm,0.3s,baz=66,slow=5.2,SNR=30						
ATAH				Sn	Sn	00 06 31.9	-1.7
	6.8nm,0.3s,baz=330,slow=13,SNR=4.3						
ATAH				Lg	Lg	00 06 44.0	
	11nm,0.3s,baz=285,slow=19,SNR=3.9						
ATAH				LR	LR	00 07 38.5	
	comp=Z,106nm,18.6s,baz=248,slow=44						
NNA	Nana	4.15	213	Pn	Pn	00 05 45.2	-0.7
	5.4nm,0.3s,baz=41,slow=13,SNR=11						
NNA				Sn	Sn	00 06 28.0	-7.3
	36nm,0.3s,baz=231,slow=19,SNR=15						
NNA				Lg	Lg	00 06 45.2	
	18nm,0.3s,baz=232,slow=18,SNR=3.7						
LPAZ	La Paz	9.96	142	Pn	Pn	00 07 07.0	+0.6
	0.1nm,0.3s,baz=323,slow=5.1,SNR=2.9						
LPAZ				Lg	Lg	00 09 54.1	
	0.7nm,0.3s,baz=189,slow=19,SNR=2.8						
SIV	San Ignacio	15.11	121	Pn	Pn	00 08 17.3	+1.2
	0.5nm,0.3s,baz=299,slow=14,SNR=4.2						
SIV				Lg	Lg	00 12 36.8	
	0.8nm,0.3s,baz=243,slow=20,SNR=3.0						
TXAR	Lajitas Array	46.92	324	P	P	00 13 14.7	+0.8
	0.1nm,0.4s,baz=140,slow=7.1,SNR=2.8						
DBIC	Dimbokro	71.07	80	P	P	00 16 02.1	+0.3
	1.2nm,0.3s,baz=257,slow=7.1,SNR=5.6						
YKA	Yellowknife Ar	77.20	342	P	P	00 16 36.0	-0.6
	0.1nm,0.5s,baz=142,slow=5.9,SNR=4.0						
TORD	Torodi Ar. Bea	78.68	75	P	P	00 16 45.6	-0.3
	0.6nm,0.6s,baz=249,slow=4.6,SNR=13						

*NIED **09** 00:12:00, 23.°20N×121.°60E, h44km, Mw4.2 Best double couple: Mo2.40000×10^15 NP1:φs226.00000°, δ86.00000°, λ125.00000°. NP2:φs322.00000°, δ35.00000°, λ7.00000°.*
*IDC **09** 00:12:24.1±0.7, 23.°06N×121.°48E, h0km, mb3.9/14, mb1 4.0/16, mb1mx4.0/27, mbtmp3.9/16, ML4.1/1, MS3.3/4, Ms1 3.3/4, ms1mx3.0/53, Error ellipse: s-maj=28.4km s-min=15.0km az=70.0*
*ISCJB **09** 00:12:28.0±0.3, 23.°11N±0.°02×121.°58E±0.°02, h27km±2km, mb3.8/15, MS3.5/2, Error ellipse: s-maj=3.1km s-min=2.3km az=149.0*
*BJI **09** 00:12:27.9, 23.°23N×121.°42E, h10km, mB4.4/4, mb4.2/8, ML4.0/5, Ms4.1/4, Ms7 3.9/4*
*TAP **09** 00:12:29.2, 23.°16N×121.°45E, h27km, ML4.6, B*
*JMA **09** 00:12:30.2±0.3, 23.°24N×121.°57E, h91km, M4.2*
ISC 09 00:12:28.5±0.8, 23.°15N±0.°02×121.°54E±0.°03, h27km±5km, n98, σ0.s97/141, mb3.8/15, 20C-6D, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHKT	Chengkung	0.17	251	⇓iP	Pb	00 12 34.4	+0.3
	baz=228						
CHKT				eS	Sb	00 12 37.8	0.0
	baz=228						
TWF1	Yuli	0.30	312	⇑iP	Pb	00 12 35.9	+0.2
	baz=310						
TWF1				eS	Sb	00 12 40.9	+0.3
	baz=310						
EHY	Hungye	0.40	331	⇑iP	Pb	00 12 37.3	0.0
	baz=329						
EHY				S	Sb	00 12 43.0	-0.2
	baz=329						
ELDTW	Lidau	0.48	274	iP	Pb	00 12 37.6	-1.0
	baz=274						
TTN	Taitung	0.54	222	eP	Pb	00 12 39.8	+0.4
	baz=208						
TWG	Pinlang	0.54	232	⇓iP	Pb	00 12 38.7	-0.8
	baz=235						
TWG				S	Sb	00 12 45.7	-1.3
	baz=235						
TEGC	Jichi Village	0.55	0	P	Pn	00 12 40.4	-0.2
	baz=15						
TEGC				eS	Sn	00 12 49.1	+0.2
	baz=15						
ESL	Shilin	0.66	352	⇑P	Pb	00 12 41.1	-0.4
	baz=348						
ESF	Shoufeng Towns	0.71	358	eP	Pb	00 12 42.3	-0.1
	baz=350						
ALS	Alishan	0.76	298	⇑iP	Pb	00 12 43.1	-0.2
	baz=301						
ALS				eS	Sb	00 12 52.7	-0.8
	baz=301						
ECL	Taimali	0.77	224	eP	Pb	00 12 41.7	-1.6
	baz=228						
HWA	Hwalien	0.82	4	eP	Pn	00 12 44.3	0.0
	baz=25						
HWA				eS	Sn	00 12 56.1	+0.6
	baz=25						
WTP	Ta-pu	0.85	276	⇑iP	Pb	00 12 44.5	-0.3
	baz=276						
WTP				eS	Sb	00 12 55.4	-0.5
	baz=276						
SGST	Jiashian	0.88	266	⇑eP	Pn	00 12 45.1	-0.1
	baz=265						
CHN4	Tsaushan	0.89	283	⇑iP	Pn	00 12 45.4	+0.1
	baz=284						
CHN4				S	Sb	00 12 57.0	+0.2
	baz=284						
CHN5	Tsauling	0.90	299	⇑iP	Pn	00 12 45.7	+0.2
	baz=301						
TWD	Chiawan	0.92	3	eP	Pn	00 12 45.2	-0.5
	baz=355						
TWD				eS	Sn	00 12 58.7	+0.6
	baz=355						
SSD	Sandimen	0.93	244	eP	Pn	00 12 44.4	-1.3
	baz=237						
CHN1	Nanshi	0.93	272	⇑iP	Pn	00 12 46.1	+0.3
	baz=272						
CHN1				eS	Sb	00 12 58.3	+0.3
	baz=272						
SMLT	Sun Moon Lake	0.93	321	⇑iP	Pn	00 12 45.9	0.0
	baz=331						
SMLT				eS	Sn	00 12 58.2	-0.3
	baz=331						
TWK	Hsinying	0.97	277	⇑iP	Pn	00 12 46.5	+0.1
	baz=277						
TWK				S	Sb	00 12 58.9	-0.3
	baz=277						
TYC	Yuchr	0.97	320	⇑iP	Pb	00 12 46.5	-0.2
	baz=332						
TYC				eS	Sn	00 12 59.1	-0.1
	baz=332						
TAW	Tawu	0.99	217	P	Pn	00 12 45.2	-1.4
	baz=221						
EAST	Anshuo	1.00	220	eP	Pn	00 12 45.2	-1.5
	baz=217						
WHF	Hehuan Shan	1.02	346	eP	Pn	00 12 46.8	-0.6
	baz=350						
WHF				eS	Sb	00 13 00.5	-0.4
	baz=350						
WGK	Gukeng	1.04	301	⇑iP	Pb	00 12 48.2	+0.3
	baz=316						
WGK				eS	Sb	00 13 01.7	+0.6
	baz=316						
CHN2	Minshiung	1.05	291	⇑P	Pb	00 12 48.4	+0.4
	baz=293						
CHN2				S	Sb	00 13 02.5	+1.3
	baz=293						
SGLT	Jiouru	1.05	246	eP	Pb	00 12 49.4	+1.3
	baz=244						
SGLT				eS	Sb	00 13 02.9	+1.4
	baz=244						
WNT	Mingjian	1.06	313	⇑iP	Pb	00 12 48.6	+0.3
	baz=316						
WNT				eS	Sb	00 13 02.5	+0.7
	baz=316						
TWM1	Shoushan	1.08	252	⇑iP	Pb	00 12 49.5	+1.0
	baz=251						
TWM1				eS	Sb	00 13 04.4	+2.2
	baz=251						
CHY	Chiayi	1.08	289	⇑iP	Pb	00 12 48.6	+0.1
	baz=290						
CHY				eS	Sb	00 13 02.7	+0.5
	baz=290						
CHN3	Shinhua	1.08	266	iP	Pb	00 12 49.8	+1.2
	baz=266						
CHN3				S	Sb	00 13 04.7	+2.4
	baz=266						
LAY	Lan-yu	1.11	179	P	Pn	00 12 47.5	-0.8
	baz=165						
LAY				eS	Sn	00 13 02.1	-0.6
	baz=165						
TWT	Tachien	1.14	343	eP	Pn	00 12 49.0	+0.1
	baz=335						
SCZT	Fangliau	1.15	228	⇓P	Pn	00 12 48.4	-0.4
	baz=223						
TAI1	Yung-k'ang	1.21	265	eP	Pb	00 12 50.9	+0.1
	baz=265						
CHN8	Yiju	1.23	279	eP	Pn	00 12 50.5	+0.5
	baz=280						
CHN8				eS	Sb	00 13 06.9	+0.2
	baz=280						
SCLT	Jiali	1.24	271	eP	Pn	00 12 50.9	+0.9
	baz=272						
SCLT				eS	Sb	00 13 07.8	+1.1
	baz=272						
TCU	Taichung	1.27	322	eP	Pb	00 12 51.8	+0.1
	baz=311						
TCU				eS	Sb	00 13 08.7	+1.1
	baz=311						
KAU	Kaohsiung	1.27	243	eP	Pb	00 12 53.4	+1.5
	baz=260						
ENA	Nanau	1.28	8	eP	Pn	00 12 50.5	-0.2
	baz=357						
NNS	Nan Shan	1.29	353	⇓P	Pn	00 12 51.2	+0.3
	baz=7.0						
WSF	Szhu	1.30	292	eP	Pn	00 12 51.0	+0.1
	baz=293						
WSF				eS	Sb	00 13 08.2	-0.4
	baz=293						
TWP	Hsiaoliuchiu	1.35	234	eP	Pb	00 12 54.9	+1.8
	baz=235						
WTCT	Ta-ch'eng	1.35	302	eP	Pn	00 12 51.9	+0.3
	baz=303						
HEN	Hengchun	1.36	213	eP	Pn	00 12 51.9	+0.2
	baz=192						
TWQ1	Liyutan	1.38	330	⇑iP	Pb	00 12 53.9	+0.2
	baz=332						
TWQ1				eS	Sb	00 13 11.4	+0.6
	baz=332						
TSEB	Hengchuen, Pin	1.38	205	eP	Pn	00 12 51.8	-0.2
	baz=190						
TWK1	Hengchun	1.38	209	eP	Pn	00 12 51.8	-0.3
	baz=191						
NSY	Sanyi	1.44	331	⇑P	Pb	00 12 54.9	+0.2
	baz=332						
NSY				S	Sb	00 13 14.2	+1.4
	baz=332						
TWC	Suao	1.48	11	eP	Pn	00 12 54.0	+0.7
	baz=359						
ENTT	Nioudou	1.48	1	eP	Pn	00 12 53.7	+0.3
	baz=2.0						
NSK	Sanguang	1.52	354	⇓iP	Pb	00 12 55.0	-1.2
	baz=7.0						
NSK				eS	Sn	00 13 13.0	0.0
	baz=7.0						
TWE	Neicheng	1.56	4	eP	Pn	00 12 55.0	+0.5
	baz=5.0						
HSN	Hsinchu	1.72	343	eP	Pb	00 12 58.5	-0.9
	baz=343						
WDGT	Dungji	1.73	274	eP	Pn	00 12 56.6	-0.1
	baz=274						
NCU	National Centr	1.84	350	eP	Pb	00 13 00.4	-1.0
	baz=348						
PNG	Penghu	1.87	283	⇑iP	Pn	00 12 58.6	-0.1
	baz=283						
YOJ	Yonaguni jima	1.88	46	P	Pb	00 13 00.5	-1.6
	baz=62						
YOJ				S	Sn	00 13 23.0	+1.4
	baz=62						
YOJ	Yonaguni jima	1.88	46	P	Pn	00 13 00.1	+1.3
YOJ				S	Sn	00 13 23.0	+1.4
TAP1	Taipei	1.88	360	eP	Pn	00 12 59.5	+0.7
	baz=357						
TWB1	Santiao Chiao	1.89	13	eP	Pb	00 13 01.1	-1.3
	baz=359						
NWF	Wu-fen Shan	1.92	7	eP	Pn	00 13 00.7	+1.2
	baz=4.0						
TWS1	Kuangyinshan	1.94	357	eP	Pb	00 13 01.4	-1.9
	baz=10.0						
TWS1				eS	Sb	00 13 25.8	-1.2
	baz=10.0						
TWY	Chenhua	2.11	2	eP	Pn	00 13 03.6	+1.5
	baz=358						
HATJ	Hateruma jima	2.27	66	P	Pn	00 13 05.4	+1.2
HATJ				eS	Sn	00 13 32.2	+1.0
IRIF	Iriomote-Funau	2.33	59	P	Pn	00 13 06.8	+1.8
IRIF				eS	Sn	00 13 34.3	+1.6
JKRS	Kuro-shima	2.51	64	P	Pn	00 13 09.1	+1.6
JKRS				eS	Sn	00 13 37.9	+0.7
JIJ	Ishigaki jima	2.67	63	P	Pn	00 13 11.0	+1.2
JIJ				S	Sn	00 13 41.6	+0.3
KNM	Kinmen	3.11	294	eP	Pn	00 13 16.6	+0.9
	baz=293						
QZH	Quanzhou	3.23	304	⇓iPn	Pn	00 13 18.2	+0.8
QZH				Sn	Sn	00 13 52.9	-2.1
QZH				smax	smax		
	comp=N,720nm,0.7s						
QZH				smax	smax		
	comp=E,680nm,0.6s						
JTJ	Tarama	3.25	62	P	Pn	00 13 19.0	+1.3
JTJ				eS	Sn	00 13 56.5	+0.9
JMJ	Miyako jima 2	3.81	64	P	Pn	00 13 26.2	+0.8
JMJ				eS	Sn	00 14 10.8	+1.4
JOGS	Gusukube	3.88	65	P	Pn	00 13 28.3	+1.9
JOGS				eS	Sn	00 14 11.4	+0.2
JKE	Kume jima 2	5.72	55	P	Pn	00 13 52.1	+0.4
JKE				eS	Sn	00 14 55.1	-1.4
JOW	Kunigami	7.12	58	eP	Pn	00 14 10.8	-0.2
	baz=62						
JAMN	Amaminishikomi	8.55	52	P	Pn	00 14 28.8	-1.7
JAM	Amami Oshima	8.96	53	P	Pn	00 14 35.3	-0.8
NJ2	Nanjing	9.18	346	eP	Pn	00 14 38.5	-0.6
NJ2				S	Sn	00 16 19.0	-2.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,100nm,4.9s						
NJ2				LR	LR		
	comp=Z,190nm,10.0s						
WHN	Wuhan	9.76	320	P	Pn	00 14 44.8	-2.3
KSRS	Korea Array	15.28	20	Pn	Pn	00 16 03.4	+1.1
	baz=207,slow=13,SNR=11						
KSRS				LR	LR	00 22 45.9	
	comp=Z,62nm,18.5s,baz=205,slow=40						
JHJ	Hachijo jima 2	18.88	54	LR	LR	00 23 06.8	
	comp=Z,52nm,18.5s,baz=243,slow=34						
MJAR	Matsushiro Arr	19.64	43	P	P	00 16 54.2	-0.8
	comp=Z,0.5nm,0.3s,baz=226,slow=11,SNR=3.1						
CMAR	Chiang Mai Arr	21.62	262	P	P	00 17 18.6	+1.9
	comp=Z,1.7nm,0.7s,baz=68,slow=8.6,SNR=8.9						
USRK	Ussuriysk Arra	22.69	20	P	P	00 17 29.4	+1.6
	comp=Z,1.1nm,0.6s,baz=233,slow=10,SNR=2.9						
SONM	Songino Array	27.44	338	P	P	00 18 12.6	+0.5
	comp=Z,0.7nm,0.6s,baz=156,slow=7.4,SNR=7.2						
SONM				LR	LR	00 30 17.6	
	comp=Z,152nm,18.5s,baz=62,slow=39						
MKAR	Makanchi Array	39.30	317	P	P	00 19 55.8	+0.6
	comp=Z,1.7nm,0.7s,baz=110,slow=10.0,SNR=12						
MKAR				PcP	PcP	00 22 03.3	-0.2
	comp=Z,0.4nm,0.6s,baz=94,slow=3.4,SNR=3.9						
ZALV	Zalesovo Beam	41.28	328	P	P	00 20 10.5	-0.8
	comp=Z,1.3nm,0.4s,baz=110,slow=8.4,SNR=6.2						
ZALV				LR	LR	00 38 28.5	
	comp=Z,57nm,20.6s,baz=191,slow=38						
KURBB	Kurchatov Arra	43.10	321	P	P	00 20 26.3	+0.1
	comp=Z,0.4nm,0.4s,baz=108,slow=10,SNR=7.4						
WRA	Warramunga Arr	44.62	163	P	P	00 20 37.7	-1.1
	comp=Z,0.9nm,0.4s,baz=345,slow=9.0,SNR=5.8						
ASAR	Alice Springs	48.07	165	P	P	00 21 05.0	-0.8
	comp=Z,0.4nm,0.4s,baz=335,slow=6.0,SNR=8.3						
STKA	Stephens Creek	57.99	160	P	P	00 22 18.2	-0.6
	comp=Z,1.9nm,0.6s,baz=341,slow=7.4,SNR=8.7						
ARCES	ARCESS Array B	70.61	338	P	P	00 23 41.5	+0.5
	comp=Z,3.4nm,1.0s,baz=60,slow=9.7,SNR=3.2						
FINES	FINESS Array B	72.49	330	P	P	00 23 52.4	-0.1
	comp=Z,2.5nm,0.9s,baz=34,slow=5.6,SNR=4.2						
BRTR	Keskin Array B	74.04	307	P	P	00 24 02.8	+0.5
	comp=Z,0.5nm,0.7s,baz=82,slow=10,SNR=3.5						
NOA	NORSAR Array B	79.28	332	P	P	00 24 30.8	-0.5
	comp=Z,0.4nm,0.5s,baz=57,slow=5.9,SNR=3.2						
YKA	Yellowknife Ar	83.79	23	P	P	00 24 56.1	+1.0
	comp=Z,0.4nm,0.7s,baz=314,slow=4.8,SNR=11						
GERES	GERESS Array B	83.84	321	P	P	00 24 55.4	-0.3
	comp=Z,0.6nm,0.7s,baz=50,slow=4.2,SNR=6.8						

*IDC **09** 00:23:08.0±6.9, 52.°32N×168.°32W, h0km, mb3.3/3, mb1 3.6/5, mb1mx3.4/31, mbtmp3.4/5, ML3.3/2, Error ellipse: s-maj=113.5km s-min=51.7km az=82.0*
*NEIC **09** 00:23:08.0, 52.°24N×169.°02W, h9km, ML3.0(AEIC), After AEIC.*
ISC 09 00:23:05.7±3.2, 52.°0N±0.°2×168.°5W±0.°2, h29km, n13, σ1.s05/14, mb3.2/3, Fox Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKSP	Okmok Steeple	1.28	6	P	Pb	00 23 28.8	-0.5
OKSO	Okmok South	1.40	8	P	Pb	00 23 31.0	-0.2
OKSO				S	Sb	00 23 48.7	+0.1
OKFG	Magazine Ridge	1.48	14	P	Pb	00 23 31.4	-1.2
OKFG				S	Sb	00 23 50.4	-0.6
MSOM	Makushin Julie	2.07	26	P	Pb	00 23 41.3	-1.2
MREP	Makushin Rep't	2.12	29	P	Pb	00 23 43.6	+0.1
MSW	Makushin Switc	2.20	27	P	Pb	00 23 43.9	-0.9
MSW				S	Sb	00 24 12.9	+1.3
UNV	Unalaska Valle	2.23	32	P	Pb	00 23 44.7	-0.5
UNV				S	Sb	00 24 13.3	+1.0
AKRB	Akutan Reef Bi	2.61	33	P	Pb	00 23 49.8	-1.9
KDAK	Kodiak Island	10.84	51	Pn	Pn	00 25 44.0	+5.3
	0.3nm,0.3s,baz=207,slow=6.8,SNR=3.2						
ILAR	Eielson Array	16.98	33	Pn	P	00 27 03.0	+0.5
	0.0nm,0.3s,baz=231,slow=11,SNR=3.7						
INK	Inuvik	23.39	32	P	P	00 28 12.6	+1.0
	0.5nm,0.5s,baz=258,slow=6.5,SNR=6.4						
YKA	Yellowknife Ar	30.10	48	P	P	00 29 15.8	+3.6
	0.2nm,0.5s,baz=272,slow=7.9,SNR=11						
PDAR	Pinedale Array	39.95	79	P	P	00 30 43.2	+5.7
	0.3nm,0.6s,baz=294,slow=8.8,SNR=2.2						

*CSEM **09** 00:23:56.4±0.8, 50.°11N×18.°49E, h1km, Error ellipse: s-maj=14.0km s-min=9.5km az=76.0*
PRU 09 00:23:57.7, 50.°06N×18.°44E, h0km, Poland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.29	220	ePG	Pg	00 24 03.7	+0.4
OKC				eSG	Sg	00 24 08.1	+1.0
	comp=Z,5.6nm,0.4s						
OKC	Ostrava-Krasne	0.29	220	Pg	Pg	00 24 03.7	+0.4
OKC				Sg	Sg	00 24 08.1	+1.0
	5.6nm,0.4s						
MORC	Moravsky Berou	0.65	244	ePg	Pg	00 24 10.1	-0.1
MORC				eSg	Sg	00 24 18.4	-0.2
DPC	Dobruska-Polom	1.39	283	ePG	Pn	00 24 23.8	-0.7
DPC				eSG	Sg	00 24 42.5	-0.1
	comp=Z,1.6nm,0.3s						
DPC	Dobruska-Polom	1.39	283	Pg	Pn	00 24 23.8	-0.7
DPC				Sg	Sg	00 24 42.5	-0.1
	1.6nm,0.3s						
VRAC	Vranov	1.42	239	ePn	Pn	00 24 23.3	-1.4
VRAC				eSg	Sg	00 24 42.7	-0.6

MEX 09 00:24:21.6±0.7, 16.°83N×96.°24W, h68km±13km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	0.53	297	eP	Pn	00 24 33.5	-1.3
VHO				iS	Sn	00 24 43.0	-1.6
HUIG	Huatulco	1.06	173	eP	Pn	00 24 39.4	-1.4
HUIG				iS	Sn	00 24 53.3	-1.8
CMIG	Matias Romero	1.32	78	eP	Pn	00 24 43.0	-1.2
CMIG				iS	Sn	00 24 58.9	-2.3
PNIG	Pinotepa	1.86	257	iP	Pn	00 24 50.1	-1.3
PNIG				iS	Sn	00 25 11.3	-2.8
CCIG	Comitan	3.97	97	iP	Pn	00 25 22.8	+2.4

*IDC **09** 00:34:58.5±0.9, 9.°79N×126.°07E, h0km, mb3.9/11, mb1 4.0/11, mb1mx3.8/27, mbtmp3.8/11, Error ellipse: s-maj=73.0km s-min=15.0km az=70.0*
*NEIC **09** 00:35:03.4±0.5, 9.°69N×125.°96E, h35km, mb3.8/5, Error ellipse: s-maj=28.8km s-min=7.2km az=74.0*
NEIC Felt [II PIVS] at Socorro.
*ISCJB **09** 00:35:04.8±1.2, 9.°76N±0.°04×126.°38E±0.°10, h72km±10km, mb3.8/14, Error ellipse: s-maj=16.4km s-min=6.8km az=169.4*

MAN ***09*** *00:35:04, 9.74N×126.40E, h53km, mb4.8, ML3.8, MS3.8*
MAN INTENSITY II - SOCORRO SURIGAO DEL NORTE.
ISC 09 00:35:06.3±1.7**, 9.76N**±0.05×**126.3E**±0.1**, h60**km±16km**,**
n37, σ**1.29**/41**, mb3.8**/14**, 3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.05**	**221**	eP	**Pn**	**00 35 22.7**	**-2.3**
BUTP				eS	**Sn**	**00 35 39.3**	**+0.3**
MSLP	**Maasin**	**1.49**	**284**	eP	**Pn**	**00 35 30.5**	**-0.4**
PLP	**Palo**	**1.92**	**317**	⇓eP	**Pn**	**00 35 35.7**	**-1.1**
PLP				eS	**Sn**	**00 36 01.7**	**+1.8**
CGP	**Cagayan de Oro**	**2.07**	**231**	⇓eP	**Pn**	**00 35 37.5**	**-1.2**
CGP				eS	**Sn**	**00 36 03.9**	**+0.4**
OCLP	**Ormoc**	**2.12**	**307**	eP	**Pn**	**00 35 40.6**	**+1.1**
BUKP	**Musuan**	**2.25**	**214**	eP	**Pn**	**00 35 41.5**	**+0.2**
TBP	**Tagbilaran**	**2.43**	**269**	eP	**Pn**	**00 35 43.8**	**+0.1**
TBP				eS	**Sn**	**00 36 13.4**	**+1.1**
DAV	**Davao City (W)**	**2.77**	**195**	ePn	Pn	00 35 43.2	-5.2
DAV				S	**Sn**	**00 36 20.4**	**-0.3**
DAV	**Davao City (W)**	**2.77**	**195**	Pn	Pn	00 35 56.4	+8.0
	70nm,0.3s,baz=62,slow=15,SNR=3.3						
DAV				Sn	**Sn**	**00 36 24.7**	**+3.9**
	51nm,0.3s,baz=328,slow=16,SNR=3.8						
CNP	**Catarman**	**3.18**	**329**	eP	**Pn**	**00 35 54.1**	**+0.1**
CTBH	**Cotabato--PC H**	**3.26**	**219**	⇓iP	**Pn**	**00 35 55.6**	**+0.6**
PAGZ	**Pagadian**	**3.48**	**237**	eP	**Pn**	**00 35 58.9**	**+0.9**
FITZ	**Fitzroy Crossi**	**27.70**	**181**	eP	**P**	**00 40 48.5**	**-0.5**
	0.6nm,0.3s						
FITZ	**Fitzroy Crossi**	**27.70**	**181**	P	**P**	**00 40 48.7**	**-0.2**
	1.9nm,0.7s,baz=6.4,slow=11,SNR=7.9						
WRAB	**Tennant Creek**	**30.55**	**165**	eP	**P**	**00 41 12.8**	**-1.5**
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**30.55**	**165**	P	**P**	**00 41 13.8**	**-0.6**
WRA	**Warramunga Arr**	**30.55**	**165**	P	**P**	**00 41 13.8**	**-0.6**
	0.3nm,0.3s,baz=344,slow=9.7,SNR=3.0						
ASAR	**Alice Springs**	**34.04**	**168**	P	**P**	**00 41 45.1**	**+0.3**
ASAR	**Alice Springs**	**34.04**	**168**	P	**P**	**00 41 45.1**	**+0.3**
	0.5nm,0.4s,baz=356,slow=7.4,SNR=5.0						
STKA	**Stephens Creek**	**43.91**	**161**	eP	**P**	**00 43 07.2**	**+0.1**
	0.2nm,0.6s						
STKA	**Stephens Creek**	**43.91**	**161**	P	**P**	**00 43 08.7**	**+1.5**
	2.8nm,0.8s,baz=324,slow=4.9,SNR=4.2						
MK31	**Makanchi Array**	**52.46**	**323**	eP	**P**	**00 44 11.4**	**-1.6**
MKAR	**Makanchi Array**	**52.46**	**323**	P	**P**	**00 44 12.7**	**-0.4**
MKAR	**Makanchi Array**	**52.46**	**323**	P	**P**	**00 44 12.7**	**-0.4**
	0.8nm,0.6s,baz=126,slow=8.2,SNR=13						
ZALV	**Zalesovo Beam**	**55.09**	**331**	P	**P**	**00 44 30.0**	**-2.1**
ZALV	**Zalesovo Beam**	**55.09**	**331**	P	**P**	**00 44 30.0**	**-2.1**
	0.3nm,0.3s,baz=126,slow=7.3,SNR=2.8						
KURK	**Kurchatov**	**56.52**	**326**	eP	**P**	**00 44 41.0**	**-1.3**
	1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**56.52**	**326**	P	**P**	**00 44 41.7**	**-0.7**
	0.6nm,0.5s,baz=128,slow=6.5,SNR=5.8						
BVAR	**Borovoye Array**	**62.11**	**326**	P	**P**	**00 45 19.6**	**-1.4**
BVAR	**Borovoye Array**	**62.11**	**326**	P	**P**	**00 45 19.6**	**-1.4**
	0.6nm,0.8s,baz=108,slow=9.5,SNR=4.2						
ABKAR	**Akbulak array**	**67.29**	**319**	eP	**P**	**00 45 52.8**	**-2.0**
	1.0nm,0.7s						
ARCES	**ARCESS Array B**	**84.69**	**340**	P	**P**	**00 47 33.7**	**+0.3**
ARCES	**ARCESS Array B**	**84.69**	**340**	P	**P**	**00 47 33.7**	**+0.3**
	1.9nm,0.8s,baz=55,slow=11,SNR=4.9						
FINES	**FINESS Array B**	**86.36**	**332**	P	**P**	**00 47 41.5**	**-0.3**
FINES	**FINESS Array B**	**86.36**	**332**	P	**P**	**00 47 41.5**	**-0.3**
	1.7nm,0.6s,baz=82,slow=5.5,SNR=7.5						
YKA	**Yellowknife Ar**	**94.20**	**24**	P	**P**	**00 48 19.6**	**+1.2**
YKA	**Yellowknife Ar**	**94.20**	**24**	P	**P**	**00 48 19.6**	**+1.2**
	0.2nm,0.6s,baz=301,slow=4.6,SNR=4.3						

CSEM ***09*** *00:38:05.7, 42.38N×13.46E, h9km, After ROM*
ROM 09 00:38:05.7±0.1**, 42.38N**×**13.46E, h9**km**, Ml1.8**/7**, Error ellipse: s-maj=1.3km s-min=1.0km az=76.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**243**	Pg	Pg	00 38 07.7	0.0
AQU				Sg	Sg	00 38 09.1	0.0
AQU	**L'Aquila**	**0.05**	**243**	Pg	Pg	00 38 07.7	0.0
AQU				Sg	Sg	00 38 09.1	0.0
FAGN	**Fagnano**	**0.14**	**139**	Pg	Pg	00 38 09.5	+0.5
FAGN				Sg	Sg	00 38 12.2	+0.9
	1μm,0.7s						
FAGN	**Fagnano**	**0.14**	**139**	Pg	Pg	00 38 09.5	+0.5
FAGN				Sg	Sg	00 38 12.2	+0.9
	1μm,0.7s						
CAMP	**Campotosto**	**0.17**	**348**	Pg	Pg	00 38 10.0	+0.5
CAMP				Sg	Sg	00 38 13.4	+1.4
CAMP	**Campotosto**	**0.17**	**348**	Pg	Pg	00 38 10.0	+0.5
CAMP				Sg	Sg	00 38 13.4	+1.4
TERO	**Teramo**	**0.27**	**24**	Pg	Pg	00 38 11.7	+0.4
TERO				Sg	Sb	00 38 16.4	-1.2
TERO	**Teramo**	**0.27**	**24**	Pg	Pg	00 38 11.7	+0.4
TERO				Sg	Sb	00 38 16.4	-1.2
FIAM	**Fiamignano**	**0.27**	**247**	Pg	Pg	00 38 11.9	+0.5
FIAM				Sg	Sg	00 38 16.4	+1.2
	137nm,0.6s						
FIAM	**Fiamignano**	**0.27**	**247**	Pg	Pg	00 38 11.9	+0.5
FIAM				Sg	Sg	00 38 16.4	+1.2
	137nm,0.6s						
VCEL	**Villa Celiera**	**0.28**	**86**	Pg	Pg	00 38 12.3	+0.7
VCEL				Sg	Sb	00 38 17.0	-1.1
	137nm,0.4s						
VCEL	**Villa Celiera**	**0.28**	**86**	Pg	Pg	00 38 12.3	+0.7
VCEL				Sg	Sb	00 38 17.0	-1.1
	137nm,0.4s						
PTQR	**Pietraquaria**	**0.35**	**187**	Pg	Pg	00 38 13.2	+0.3
PTQR				Sg	Sb	00 38 19.4	-0.7
	22nm,0.3s						
PTQR	**Pietraquaria**	**0.35**	**187**	Pg	Pg	00 38 13.2	+0.3
PTQR				Sg	Sb	00 38 19.4	-0.7
	22nm,0.3s						
LNSS	**Leonessa**	**0.38**	**307**	Pg	Pg	00 38 13.9	+0.5
LNSS	**Leonessa**	**0.38**	**307**	Pg	Pg	00 38 13.9	+0.5
INTR	**Introdacqua**	**0.49**	**137**	Pg	Pg	00 38 15.9	+0.5
INTR				Sg	Sb	00 38 24.3	+0.3
	95nm,0.6s						
INTR	**Introdacqua**	**0.49**	**137**	Pg	Pg	00 38 15.9	+0.5
INTR				Sg	Sb	00 38 24.3	+0.3
	95nm,0.6s						
VVLD	**Villa Vallelon**	**0.52**	**166**	Pg	Pg	00 38 16.3	+0.4
	70nm,0.7s						
VVLD	**Villa Vallelon**	**0.52**	**166**	Pg	Pg	00 38 16.3	+0.4
	70nm,0.7s						
NRCA	**Norcia**	**0.52**	**331**	Pg	Pg	00 38 16.2	+0.2
NRCA				Sg	Sb	00 38 24.5	-0.5
NRCA	**Norcia**	**0.52**	**331**	Pg	Pg	00 38 16.2	+0.2
NRCA				Sg	Sb	00 38 24.5	-0.5
CERT	**Cerreto**	**0.55**	**220**	Pg	Pg	00 38 16.0	-0.5
CERT	**Cerreto**	**0.55**	**220**	Pg	Pg	00 38 16.0	-0.5
MNS	**Montasola**	**0.57**	**271**	Pg	Pb	00 38 18.1	+0.1
	39nm,1.0s						
MNS	**Montasola**	**0.57**	**271**	Pg	Pb	00 38 18.1	+0.1
	39nm,1.0s						
GUAR	**Guarcino**	**0.59**	**191**	Pg	Pb	00 38 18.1	-0.2
	28nm,0.5s						
GUAR	**Guarcino**	**0.59**	**191**	Pg	Pb	00 38 18.1	-0.2
	28nm,0.5s						
POFI	**Posta Fibreno**	**0.68**	**164**	Pg	Pg	00 38 19.1	+0.1
POFI	**Posta Fibreno**	**0.68**	**164**	Pg	Pg	00 38 19.1	+0.1
FDMO	**Fiordimonte**	**0.71**	**338**	Pg	Pg	00 38 19.5	-0.1
FDMO	**Fiordimonte**	**0.71**	**338**	Pg	Pg	00 38 19.5	-0.1
SDI	**San Donato**	**0.72**	**158**	Pg	Pg	00 38 19.6	0.0
	31nm,0.6s						
SDI	**San Donato**	**0.72**	**158**	Pg	Pg	00 38 19.6	0.0
	31nm,0.6s						

ROM 09 00:38:32.1±0.1**, 42.38N**×**13.39E, h10**km±1km**, Ml1.7**/2**, Error ellipse: s-maj=3.3km s-min=1.4km az=99.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.03**	**167**	Pg	Pg	00 38 34.4	+0.3
AQU				Sg	Sg	00 38 35.7	+0.3
	1μm,0.3s						
CAMP	**Campotosto**	**0.15**	**4**	Pg	Pg	00 38 36.2	+0.5
CAMP				Sg	Sg	00 38 39.0	+0.7
	126nm,0.7s						
TERO	**Teramo**	**0.29**	**33**	Pg	Pg	00 38 38.5	+0.5
TERO				Sg	Sg	00 38 43.0	+1.1
	180nm,0.6s						

IDC ***09*** *00:44:27.1±1.0, 30.21N×80.36E, h0km, mb3.6/14, mb1 3.8/16, mb1mx3.7/35, mbtmp3.7/16, ML3.1/2, Error ellipse: s-maj=32.7km s-min=15.4km az=51.0*
NDI ***09*** *00:44:27.5±1.8, 30.41N×80.66E, h10km, ML3.3*
ISCJB ***09*** *00:44:28.6±1.4, 30.37N±0.05×80.55E±0.06, h18km±12km, mb3.6/12, Error ellipse: s-maj=8.7km s-min=7.9km az=168.5*
ISC 09 00:44:27.8±1.7**, 30.38N**±0.05×**80.43E**±0.05**, h3**km±11km**,**
n30, σ**2.53**/42**, mb3.7**/12**, 1C, Western Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**0.85**	**193**	eP	**Pg**	**00 44 44.3**	**+0.3**
PTH				ex	x	00 44 51.3	
LGTI	**Lohaghat**	**0.94**	**190**	eP	**Pn**	**00 44 48.3**	**+0.4**
LGTI				ex	x	00 48 08.5	
SMLA	**Simla**	**2.91**	**286**	i P	**Pn**	**00 45 16.3**	**+1.3**
SMLA				i S	**Sn**	**00 45 52.3**	**+1.8**
SMLA				i S	**Sb**	**00 45 53.0**	**-3.2**
KKR	**Kurukshetra**	**3.15**	**263**	eP	**Pn**	**00 45 21.1**	**+2.7**
SDNR	**Sundarnagar**	**3.18**	**291**	eP	**Pn**	**00 45 21.0**	**+2.3**
SDNR				ex	**Sg**	**00 46 10.5**	**+0.6**
NDI	**New Delhi**	**3.27**	**240**	eP	**Pn**	**00 45 21.0**	**+1.0**
NDI				ex	**Sn**	**00 46 04.5**	**+5.0**
AYAN	**Aya Nagar**	**3.45**	**238**	eP	**Pn**	**00 45 24.2**	**+1.8**
AYAN				eS	**Sn**	**00 46 05.2**	**+1.5**
BHK	**Bhakra**	**3.60**	**288**	eP	**Pn**	**00 45 26.8**	**+2.2**
BHK				ex	**Sg**	**00 46 21.8**	**-1.7**
SONA	**Sohna**	**3.61**	**235**	eP	**Pn**	**00 45 26.1**	**+1.4**
SONA				ex	**Sn**	**00 46 10.6**	**+2.7**
SONA				AML	AML	00 46 25.3	
	comp=E,120nm,0.6s						
SONA				AML	AML	00 46 25.9	
	comp=N,113nm,0.4s						
KUDL	**Kundal**	**4.10**	**238**	eP	**Pn**	**00 45 34.0**	**+2.7**
KUDL				ex	**Sn**	**00 46 15.4**	**-4.5**
KUDL				AML	AML	00 46 35.5	
	comp=E,83nm,0.5s						
KUDL				AML	AML	00 46 35.8	
	comp=N,71nm,0.6s						
THN	**Thein Dam**	**4.52**	**298**	eP	**Pn**	**00 45 36.5**	**-0.6**
THN				ex	**Sg**	**00 46 49.4**	**-3.6**
KHET	**Khetri**	**4.65**	**242**	eP	**Pn**	**00 45 40.8**	**+1.9**
KHET				ex	**Sn**	**00 46 28.3**	**-5.2**
KHET				AML	AML	00 46 49.9	
	comp=N,43nm,0.5s						
AJM	**Ajmer**	**6.41**	**234**	ex	x	00 46 42.0	
JBP	**Jabalpur**	**7.20**	**183**	⇑iP	**Pn**	**00 46 13.3**	**-0.6**
JBP				i x	x	00 46 14.2	
	comp=Z,36nm,0.5s						
JBP				ex	**Sn**	**00 47 31.7**	**-4.5**
AAK	**Ala-Archa**	**13.12**	**340**	Pn	**Pn**	**00 47 35.5**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=162,slow=13,SNR=11						
AAK				Sn	**Sn**	**00 49 57.3**	**-4.5**
	comp=Z,0.1nm,0.3s,baz=9.0,slow=19,SNR=3.0						
MKAR	**Makanchi Array**	**16.45**	**5**	Pn	**Pn**	**00 48 18.6**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=194,slow=18,SNR=4.6						
MKAR				Sn	**Sn**	**00 51 16.9**	**-5.7**
	comp=Z,0.1nm,0.3s,baz=180,slow=24,SNR=5.3						
KURBB	**Kurchatov Arra**	**20.27**	**357**	P	**P**	**00 49 04.5**	**+0.1**
	comp=Z,4.4nm,0.7s,baz=182,slow=10,SNR=30						
CMAR	**Chiang Mai Arr**	**20.58**	**121**	P	**P**	**00 49 08.2**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=309,slow=12,SNR=6.0						
ZALV	**Zalesovo Beam**	**23.77**	**6**	P	**P**	**00 49 41.4**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=198,slow=8.5,SNR=5.6						
BVAR	**Borovoye Array**	**23.79**	**345**	P	**P**	**00 49 43.2**	**+1.6**
	comp=Z,0.7nm,0.5s,baz=153,slow=12,SNR=7.3						
AKTO	**Aktyubinsk**	**26.14**	**326**	P	**P**	**00 50 04.5**	**+1.4**
	comp=Z,1.0nm,0.5s,baz=104,slow=10.0,SNR=6.2						
SONM	**Songino Array**	**26.45**	**41**	P	**P**	**00 50 08.0**	**+1.9**
	comp=Z,0.2nm,0.4s,baz=226,slow=7.8,SNR=2.8						
MLR	**Muntele Rosu**	**44.70**	**306**	P	**P**	**00 52 43.1**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=100,slow=6.1						
FINES	**FINESS Array B**	**46.90**	**328**	P	**P**	**00 52 59.4**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=116,slow=6.6,SNR=5.4						
ARCES	**ARCESS Array B**	**49.78**	**338**	P	**P**	**00 53 22.9**	**+1.5**
	comp=Z,1.1nm,0.7s,baz=109,slow=8.1,SNR=2.8						
HFS	**Hagfors**	**52.67**	**325**	P	**P**	**00 53 42.2**	**-0.9**
	comp=Z,3.9nm,1.0s,baz=92,slow=11,SNR=3.7						
WRA	**Warramunga Arr**	**72.04**	**127**	P	**P**	**00 55 51.8**	**-1.6**
	comp=Z,0.7nm,0.7s,baz=320,slow=6.4,SNR=2.4						
ASAR	**Alice Springs**	**74.29**	**130**	P	**P**	**00 56 06.3**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=303,slow=5.7,SNR=2.7						
ILAR	**Eielson Array**	**78.25**	**19**	P	**P**	**00 56 30.3**	**+1.7**
	comp=Z,0.3nm,0.8s,baz=293,slow=4.6,SNR=3.7						
YKA	**Yellowknife Ar**	**86.66**	**7**	P	**P**	**00 57 13.8**	**+1.3**
	comp=Z,0.1nm,0.6s,baz=338,slow=5.3,SNR=3.7						

DJA 09 00:50:13.5±0.4**, 0°S**±3°×**12°4E**±°**, h89**km±12km**, M3.7**/4**,**
MLv3.7/4**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.06**	**355**	P	Pn	00 50 37.2	+3.3
KMSI				S	Sn	00 50 46.6	-2.5
LUWI	**Luwuk**	**1.42**	**247**	P	Pn	00 50 39.9	+1.7
LUWI				S	Sn	00 50 59.5	+2.7
MNI	**Manado**	**2.07**	**22**	S	Sn	00 51 15.2	+3.4
MRSI	**Marisa**	**2.34**	**294**	P	Pn	00 50 49.1	-1.1
MRSI				S	Sn	00 51 17.7	-0.7
LBMI	**Labuha**	**3.42**	**92**	P	Pn	00 51 09.5	+4.7
LBMI				S	Sn	00 51 44.3	-0.1
KDI	**Kendari**	**3.74**	**203**	S	Sn	00 51 54.2	+2.1
NLAI	**Namlea**	**4.07**	**132**	S	Sn	00 52 01.3	+1.3
TTSI	**Tana Toraja**	**4.96**	**239**	P	Pn	00 51 25.1	-0.5
SPSI	**Sidrap Palu**	**5.52**	**231**	S	Sn	00 52 36.6	+1.2

CSEM ***09*** *00:52:13.1, 42.35N×13.34E, h10km, MD1.2/3, After ROM*
ROM 09 00:52:13.1±0.1**, 42.35N**×**13.34E, h10**km**, Md1.2**/3**, Error ellipse: s-maj=1.6km s-min=1.2km az=159.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**84**	Pg	Pg	00 52 15.7	+0.5
AQU				Sg	Sg	00 52 17.1	+0.3
AQU	**L'Aquila**	**0.05**	**84**	Pg	Pg	00 52 15.7	+0.5
AQU				Sg	Sg	00 52 17.1	+0.3
FIAM	**Fiamignano**	**0.18**	**243**	Pg	Pg	00 52 17.7	+0.6
FIAM				Sg	Sg	00 52 20.7	+0.8
FIAM	**Fiamignano**	**0.18**	**243**	Pg	Pg	00 52 17.7	+0.6
FIAM				Sg	Sg	00 52 20.7	+0.8
CAMP	**Campotosto**	**0.20**	**16**	Pg	Pg	00 52 18.1	+0.7
CAMP				Sg	Sg	00 52 21.2	+0.8
CAMP	**Campotosto**	**0.20**	**16**	Pg	Pg	00 52 18.1	+0.7
CAMP				Sg	Sg	00 52 21.2	+0.8
FAGN	**Fagnano**	**0.20**	**114**	Pg	Pg	00 52 18.1	+0.6
FAGN				Sg	Sg	00 52 21.5	+1.1
FAGN	**Fagnano**	**0.20**	**114**	Pg	Pg	00 52 18.1	+0.6
FAGN				Sg	Sg	00 52 21.5	+1.1
LNSS	**Leonessa**	**0.34**	**319**	Pg	Pb	00 52 21.1	-0.2
LNSS				Sg	Sg	00 52 25.5	+0.9
LNSS	**Leonessa**	**0.34**	**319**	Pg	Pb	00 52 21.1	-0.2
LNSS				Sg	Sg	00 52 25.5	+0.9
TERO	**Teramo**	**0.34**	**36**	Pg	Pg	00 52 20.1	+0.1
TERO				Sg	Sg	00 52 25.2	+0.6
TERO	**Teramo**	**0.34**	**36**	Pg	Pg	00 52 20.1	+0.1
TERO				Sg	Sg	00 52 25.2	+0.6
MNS	**Montasola**	**0.49**	**274**	Pg	Pg	00 52 22.4	-0.3
MNS	**Montasola**	**0.49**	**274**	Pg	Pg	00 52 22.4	-0.3
NRCA	**Norcia**	**0.51**	**341**	Pg	Pg	00 52 23.4	+0.2
NRCA				Sg	Sb	00 52 31.1	-0.8
NRCA	**Norcia**	**0.51**	**341**	Pg	Pg	00 52 23.4	+0.2
NRCA				Sg	Sb	00 52 31.1	-0.8
FDMO	**Fiordimonte**	**0.71**	**345**	Pg	Pg	00 52 27.0	+0.1
FDMO	**Fiordimonte**	**0.71**	**345**	Pg	Pg	00 52 27.0	+0.1

NIC ***09*** *00:52:56.6±0.7, 42.52N×13.38E, h2km, Central Italy, 19km. NW LAquila*
BJI ***09*** *00:52:57.9, 42.64N×13.11E, h7km, mB5.5/51, mb5.1/56, Ms5.4/56, Ms7 5.2/57*
ISCJB ***09*** *00:52:58.6±0.2, 42.557N±0.009×13.382E±0.009, h1km±1km, mb5.2/159, MS5.0/68, Error ellipse: s-maj=1.6km s-min=1.1km az=17.2*
NEIC ***09*** *00:52:59.0, 42.48N×13.34E, h15km, mb5.2/75, MW5.3, ML5.5(PDG), ML5.2(STR), ML5.0(LDG), MW5.3(USGS), MW5.4(ROM), Moment Tensor Solution. s52 Moment tensor: Scale 10^17Nm; Mrr-1.10; Mθθ0.33; Mφφ0.77; Mrθ0.24; Mθφ-0.24; Mφr-0.30; Best double couple: M0 1.10000×10^17 NP1:φs159.00000°, δ35.00000°, λ-84.00000°. NP2:φs332.00000°, δ55.00000°, λ-94.00000°. Principal axes: T 0.9500, Plg10.0000°, Azm64.0000°; N 0.2300, Plg3.0000°, Azm334.0000°; P -1.1700, Plg79.0000°, Azm225.0000°; After ROM.*
NEIC Felt [VII] at Montereale; [V] at Bellante, Macerata, Montorio al Vomano, Pratola Peligna and Teramo; [IV] at Ancona, Ascoli Piceno, Avezzano, Cepagatti, Chieti, Fabriano, Foligno, Francavilla al Mare, Frosinone, Giulinova, Monterotondo, Montesilvano, Ortona, Penne, Perugia, Pescara, Rieti, San Benedetto del Tronto, Spoleto, Spoltore, Sulmona, Terni, Tolentino and Vasto. Felt throughout central Italy and as far as Friuli and Basilicata.
LDG ***09*** *00:52:59.3±0.1, 42.57N×13.48E, h2km, Ml5.0/18 Error ellipse: s-maj=2.4km s-min=1.5km az=36.0*
PDG ***09*** *00:52:59.6±0.6, 42.53N×13.39E, h7km, MD5.5/9, ML5.4/9, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
ROM ***09*** *00:52:59.6±0.0, 42.49N×13.35E, h11km, Ml5.1/8, Error ellipse: s-maj=0.6km s-min=0.4km az=37.0*
IDC ***09*** *00:52:59.5±0.4, 42.58N×13.30E, h0km, mb4.8/36, mb1 4.9/48, mb1mx4.9/49, mbtmp4.8/48, ML4.6/8, MS4.8/43, Ms1 4.8/43, ms1mx4.7/52, Error ellipse: s-maj=9.4km s-min=8.3km az=119.0*
PRU ***09*** *00:53:00.2, 42.55N×13.25E, h1km, M5.2*
MOS ***09*** *00:53:00.3±1.1, 42.59N×13.31E, h16km, mb5.2/69, MS4.8/46, Error ellipse: s-maj=3.1km s-min=2.4km az=94.1*
BEO ***09*** *00:53:00.1±0.9, 42.64N×13.24E, h0km, ML5.7/5*
CRAAG ***09*** *00:53:00.6, 42.53N×13.39E, Mw5.4*
CSEM ***09*** *00:53:00.3±0.1, 42.51N×13.34E, h5km, mb5.2/98, Ms5.2, Mw5.3, Error ellipse: s-maj=1.8km s-min=1.3km az=17.0*
SFS ***09*** *00:53:00.0, 42.51N×13.30E, h5km, ML5.3*
TEH ***09*** *00:53:02.0, 42.51N×13.33E, h5km, ML5.3*
GCMT ***09*** *00:53:06.1±0.1, 42.48N×13.30E, h12km, MW5.4, Moment Tensor Solution. s91,c162; s99,c223; Moment tensor: Scale 10^17Nm; Mrr-1.47±.02; Mθθ0.46±.02; Mφφ1.01±.02; Mrθ-0.45±.05; Mθφ-0.80±.01; Mφr-0.12±.05; Best double couple: M0 1.60000×10^17 NP1:φs340.00000°, δ44.00000°, λ-66.00000°. NP2:φs129.00000°, δ50.00000°, λ-111.00000°. Principal axes: T 1.5900, Plg3.0000°, Azm234.0000°; N 0.0200, Plg16.0000°, Azm143.0000°; P -1.6100, Plg74.0000°, Azm335.0000°; Data Used: II IU IC G CN. Surface waves from 107 sta.*
STR ***09*** *00:53:08.2±0.5, 42.94N×12.92E, h10km, Ml5.0 Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 09 00:53:01.6±0.3**, 42.50N**±0.01×**13.35E**±0.01**, h14**km±1km**,**
h13km**:pP-P, n1976,** σ**1.53**/2206**, mb5.2**/159**, MS5.0**/69**,**
227C-204D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.06**	**51**	⇑iPg	**Pg**	**00 53 02.1**	**-2.3**
CAMP				Sg	**Sg**	**00 53 04.3**	**-2.1**
CAMP	**Campotosto**	**0.06**	**51**	⇑iPg	**Pg**	**00 53 02.1**	**-2.3**
CAMP				Sg	**Sg**	**00 53 04.3**	**-2.1**
AQU	**L'Aquila**	**0.15**	**164**	ePg	**Pg**	**00 53 03.9**	**-1.6**
AQU	**L'Aquila**	**0.15**	**164**	⇓iP	**Pg**	**00 53 03.5**	**-1.9**
AQU	**L'Aquila**	**0.15**	**164**	⇑iPg	**Pg**	**00 53 03.8**	**-1.6**
AQU				Sg	**Sg**	**00 53 06.2**	**-1.8**
AQU	**L'Aquila**	**0.15**	**164**	⇑iPg	**Pg**	**00 53 03.8**	**-1.6**
AQU				Sg	**Sg**	**00 53 06.2**	**-1.8**
TERO	**Teramo**	**0.23**	**57**	P	**Pg**	**00 53 04.4**	**-2.1**
TERO				S	**Sg**	**00 53 08.4**	**-1.6**
TERO	**Teramo**	**0.23**	**57**	Pg	**Pg**	**00 53 04.5**	**-2.1**
TERO				Sg	**Sg**	**00 53 08.7**	**-1.3**
TERO	**Teramo**	**0.23**	**57**	Pg	**Pg**	**00 53 04.5**	**-2.1**
TERO				Sg	**Sg**	**00 53 08.7**	**-1.3**
LNSS	**Leonessa**	**0.25**	**295**	Pg	**Pg**	**00 53 05.4**	**-1.6**
LNSS				Sg	**Sg**	**00 53 10.4**	**-0.3**
LNSS	**Leonessa**	**0.25**	**295**	Pg	**Pg**	**00 53 05.4**	**-1.6**
LNSS				Sg	**Sg**	**00 53 10.4**	**-0.3**
FIAM	**Fiamignano**	**0.29**	**217**	P	**Pg**	**00 53 05.9**	**-1.7**
FIAM	**Fiamignano**	**0.29**	**217**	⇑ePg	**Pg**	**00 53 05.9**	**-1.7**
FIAM				Sg	**Sg**	**00 53 10.9**	**-0.8**
FIAM	**Fiamignano**	**0.29**	**217**	⇑ePg	**Pg**	**00 53 05.9**	**-1.7**
FIAM				Sg	**Sg**	**00 53 10.9**	**-0.8**
FAGN	**Fagnano**	**0.29**	**143**	Pg	**Pg**	**00 53 06.1**	**-1.6**
FAGN				Sg	**Sg**	**00 53 10.4**	**-1.4**
FAGN	**Fagnano**	**0.29**	**143**	Pg	**Pg**	**00 53 06.1**	**-1.6**
FAGN				Sg	**Sg**	**00 53 10.4**	**-1.4**
NRCA	**Norcia**	**0.38**	**333**	P	**Pg**	**00 53 07.4**	**-1.9**
NRCA				S	**Sg**	**00 53 13.5**	**-0.9**
NRCA	**Norcia**	**0.38**	**333**	Pg	**Pg**	**00 53 07.4**	**-1.9**
NRCA				Sg	**Sg**	**00 53 13.5**	**-0.9**
NRCA	**Norcia**	**0.38**	**333**	Pg	**Pg**	**00 53 07.4**	**-1.9**
NRCA				Sg	**Sg**	**00 53 13.5**	**-0.9**
VCEL	**Villa Celiera**	**0.38**	**106**	Pg	**Pg**	**00 53 07.7**	**-1.6**
VCEL				Sg	**Sg**	**00 53 13.4**	**-1.1**
VCEL	**Villa Celiera**	**0.38**	**106**	Pg	**Pg**	**00 53 07.7**	**-1.6**
VCEL				Sg	**Sg**	**00 53 13.4**	**-1.1**
GAVE	**Gavelli**	**0.39**	**300**	Pg	**Pg**	**00 53 08.0**	**-1.4**
GAVE	**Gavelli**	**0.39**	**300**	Pg	**Pg**	**00 53 08.0**	**-1.4**
PTQR	**Pietraquaria**	**0.48**	**175**	P	**Pg**	**00 53 08.9**	**-2.2**
PTQR	**Pietraquaria**	**0.48**	**175**	⇑iPg	**Pg**	**00 53 08.9**	**-2.2**
PTQR	**Pietraquaria**	**0.48**	**175**	⇑iPg	**Pg**	**00 53 08.9**	**-2.2**
OFFI	**Offida**	**0.50**	**30**	P	**Pg**	**00 53 10.8**	**-0.8**
OFFI				S	**Sb**	**00 53 19.9**	**+0.4**
OFFI	**Offida**	**0.50**	**30**	⇑ePg	**Pg**	**00 53 10.2**	**-1.3**
OFFI	**Offida**	**0.50**	**30**	⇑ePg	**Pg**	**00 53 10.2**	**-1.3**
OFFI				S	**Sb**	**00 53 19.9**	**+0.4**
MNS	**Montasola**	**0.51**	**257**	P	**Pg**	**00 53 09.6**	**-2.0**
MNS	**Montasola**	**0.51**	**257**	P	**Pg**	**00 53 09.6**	**-2.0**
MNS	**Montasola**	**0.51**	**257**	⇑ePg	**Pg**	**00 53 09.6**	**-2.0**
MNS				Sg	**Sg**	**00 53 16.7**	**-1.7**
	151μm,0.9s						
MNS	**Montasola**	**0.51**	**257**	⇑ePg	**Pg**	**00 53 09.6**	**-2.0**
MNS				Sg	**Sg**	**00 53 16.7**	**-1.7**
	151μm,0.9s						
TRTR	**Tortoreto Alta**	**0.52**	**53**	Pg	**Pg**	**00 53 10.8**	**-1.1**
TRTR	**Tortoreto Alta**	**0.52**	**53**	Pg	**Pg**	**00 53 10.8**	**-1.1**
FDMO	**Fiordimonte**	**0.57**	**341**	P	**Pg**	**00 53 10.6**	**-2.2**
FDMO				S	**Sg**	**00 53 20.2**	**-0.2**
FDMO	**Fiordimonte**	**0.57**	**341**	Pg	**Pg**	**00 53 10.6**	**-2.2**
FDMO				Sg	**Sg**	**00 53 20.2**	**-0.2**
	60μm,0.3s						
FDMO	**Fiordimonte**	**0.57**	**341**	Pg	**Pg**	**00 53 10.6**	**-2.2**
FDMO				Sg	**Sg**	**00 53 20.2**	**-0.2**
	60μm,0.3s						
CESX	**Cesi**	**0.58**	**281**	Pg	**Pg**	**00 53 10.8**	**-2.1**
	180μm,1.3s						
CESX	**Cesi**	**0.58**	**281**	Pg	**Pg**	**00 53 10.8**	**-2.1**
	180μm,1.3s						
CESI	**CESI - Serrava**	**0.60**	**327**	Pg	**Pg**	**00 53 11.3**	**-2.1**
CESI	**CESI - Serrava**	**0.60**	**327**	Pg	**Pg**	**00 53 11.3**	**-2.1**
CERT	**Cerreto**	**0.61**	**206**	P	**Pg**	**00 53 11.3**	**-2.3**
CERT	**Cerreto**	**0.61**	**206**	Pg	**Pg**	**00 53 11.3**	**-2.3**
	192μm,0.6s						
CERT	**Cerreto**	**0.61**	**206**	Pg	**Pg**	**00 53 11.3**	**-2.3**
	192μm,0.6s						
INTR	**Introdacqua**	**0.64**	**139**	P	**Pg**	**00 53 12.0**	**-2.1**
INTR	**Introdacqua**	**0.64**	**139**	Pg	**Pg**	**00 53 11.8**	**-2.3**
INTR	**Introdacqua**	**0.64**	**139**	Pg	**Pg**	**00 53 11.8**	**-2.3**
MTCE	**Montecelio**	**0.65**	**224**	P	**Pg**	**00 53 12.0**	**-2.4**
MTCE	**Montecelio**	**0.65**	**224**	Pg	**Pg**	**00 53 12.0**	**-2.4**
	307μm,1.8s						
MTCE	**Montecelio**	**0.65**	**224**	Pg	**Pg**	**00 53 12.0**	**-2.4**
	307μm,1.8s						
VVLD	**Villa Vallelon**	**0.66**	**162**	P	**Pg**	**00 53 12.0**	**-2.5**
VVLD	**Villa Vallelon**	**0.66**	**162**	Pg	**Pg**	**00 53 12.0**	**-2.5**
	215μm,0.9s						
VVLD	**Villa Vallelon**	**0.66**	**162**	Pg	**Pg**	**00 53 12.0**	**-2.5**
	215μm,0.9s						
GUAR	**Guarcino**	**0.70**	**182**	P	**Pg**	**00 53 12.9**	**-2.4**
GUAR	**Guarcino**	**0.70**	**182**	⇑ePg	**Pg**	**00 53 12.7**	**-2.6**
	64μm,0.5s						
GUAR	**Guarcino**	**0.70**	**182**	⇑ePg	**Pg**	**00 53 12.7**	**-2.6**
	64μm,0.5s						
GUMA	**Gualdo di Mace**	**0.71**	**37**	Pg	Pg	00 53 10.9	-4.6
	195μm,0.5s						
GUMA	**Gualdo di Mace**	**0.71**	**37**	Pg	Pg	00 53 10.9	-4.6
	195μm,0.5s						
ASSB	**Assisi San Ben**	**0.74**	**317**	Pg	**Pg**	**00 53 13.8**	**-2.3**

ASSB	Assisi San Ben	0.74	317	Pg	Pg	00 53 13.8	-2.3
CAFR	Castel Frentan	0.79	110	Pg	Pg	00 53 14.8	-2.1
CAFR	Castel Frentan	0.79	110	Pg	Pg	00 53 14.8	-2.1
SNTG	Esanatoglia	0.81	339	Pg	Pg	00 53 14.9	-2.5
SNTG	Esanatoglia	0.81	339	Pg	Pg	00 53 14.9	-2.5
POFI	Posta Fibreno	0.83	161	Pg	Pg	00 53 14.8	-2.8
POFI	Posta Fibreno	0.83	161	Pg	Pg	00 53 14.8	-2.8
SDI	San Donato	0.86	156	Pg	Pg	00 53 15.2	-3.1
SDI	San Donato	0.86	156	Pg	Pg	00 53 15.2	-3.1
RDP	Rocca di Papa	0.88	213	Pg	Pg	00 53 16.3	-2.3
RDP	Rocca di Papa	0.88	213	Pg	Pg	00 53 16.3	-2.3
CING	Cingoli	0.88	353	Pg	Pg	00 53 16.1	-2.6
CING	Cingoli	0.88	353	Pg	Pg	00 53 16.1	-2.6
ROM9	Roma	0.91	223	Pg	Pg	00 53 17.0	-2.2
ROM9	Roma	0.91	223	Pg	Pg	00 53 17.0	-2.2
GIUL	Giuliano Di Ro	0.94	184	Pg	Pb	00 53 16.8	-3.0
GIUL	Giuliano Di Ro	0.94	184	Pg	Pb	00 53 16.8	-3.0
MURB	Monte Urbino	0.97	322	Pg	Pb	00 53 18.4	-1.9
MURB	Monte Urbino	0.97	322	Pg	Pb	00 53 18.4	-1.9
MGAB	Montegabbione	1.00	295	Pg	Pb	00 53 18.9	-1.9
MGAB	Montegabbione	1.00	295	Pg	Pb	00 53 18.9	-1.9
ARVD	Arcevia	1.04	344	Pg	Pb	00 53 19.4	-2.1
ARVD	Arcevia	1.04	344	Pg	Pb	00 53 19.4	-2.1
AOI	Ancona	1.07	10	Pg	Pb	00 53 19.6	-2.3
AOI	Ancona	1.07	10	Pg	Pb	00 53 19.6	-2.3
TOLF	Tolfa	1.09	247	Pg	Pb	00 53 19.8	-2.5
TOLF	Tolfa	1.09	247	Pg	Pb	00 53 19.8	-2.5
MIDA	Miranda	1.09	141	Pg	Pb	00 53 19.3	-3.0
MIDA	Miranda	1.09	141	Pg	Pb	00 53 19.3	-3.0
FRES	Fresagrandinar	1.11	118	Pg	Pb	00 53 19.8	-2.9
FRES	Fresagrandinar	1.11	118	Pg	Pb	00 53 19.8	-2.9
SACS	San Casciano d	1.12	289	Pg	Pb	00 53 20.7	-2.1
PIEI	Pieia	1.20	330	Pn	Pn	00 53 22.1	-1.9
PIEI	Pieia	1.20	330	Pn	Pn	00 53 22.1	-1.9
VAGA	Valle Agricola	1.27	148	Pn	Pn	00 53 22.6	-2.4
VAGA	Valle Agricola	1.27	148	Pn	Pn	00 53 22.6	-2.4
BSSO	Busso	1.33	135	Pn	Pn	00 53 24.2	-1.7
BSSO	Busso	1.33	135	Pn	Pn	00 53 24.2	-1.7
MODR	Mondragone	1.41	163	Pn	Pn	00 53 25.0	-1.9
MODR	Mondragone	1.41	163	Pn	Pn	00 53 25.0	-1.9
PESA	Pesaro	1.49	346	Pn	Pn	00 53 27.4	-0.6
PESA	Pesaro	1.49	346	Pn	Pn	00 53 27.4	-0.6
MAON	Monte Argentar	1.64	268	Pn	Pn	00 53 28.7	-1.4
MAON	Monte Argentar	1.64	268	Pn	Pn	00 53 28.7	-1.4
ASQU	Asqua	1.73	319	Pn	Pn	00 53 29.9	-1.4
ASQU	Asqua	1.73	319	Pn	Pn	00 53 29.9	-1.4
NVLJ	Novalja	2.34	28	⇑Pn	Pn	00 53 38.9	-0.8
NVLJ				Sn	Sn	00 54 08.4	+0.2
VLC	Villacollemand	2.72	309	ePn	Pn	00 53 44.4	-0.6
VLC				eSn	Sn	00 54 17.5	-0.3
VLC	Villacollemand	2.72	309	ePn	Pn	00 53 44.4	-0.6
VLC				eSn	Sn	00 54 17.5	-0.3
CUC	Castrocucco	3.12	143	ePn	Pn	00 53 50.7	+0.2
CUC	Castrocucco	3.12	143	ePn	Pn	00 53 50.7	+0.2
PGF	Pioggiola	3.21	272	ePn	Pn	00 53 50.7	-1.1
	SNR=1.0						
PGF				eSn	Sn	00 54 30.8	+0.8
	410nm,0.5s						
PGF	Pioggiola	3.21	272	eP	Pn	00 53 50.7	-1.1
PGF				e		00 54 30.8	
PGF	Pioggiola	3.21	272	ePn	Pn	00 53 50.7	-1.1
PGF				eSn	Sn	00 54 30.8	+0.8
PGF	Pioggiola	3.21	272	eP	Pn	00 53 50.7	-1.1
PGF				eS	Sn	00 54 30.8	+0.8
TRI	Trieste	3.22	5	eP	Pn	00 53 49.9	-1.9
TRI				e		00 54 29.7	
TRI	Trieste	3.22	5	ePn	Pn	00 53 49.9	-1.9
TRI				eSn	Sn	00 54 29.6	-0.4
TRI	Trieste	3.22	5	eP	Pn	00 53 49.9	-1.9
TRI				eSn	Sn	00 54 29.6	-0.4
STON	Ston	3.23	82	i Pn	Pn	00 53 51.4	-0.5
STON				Sn	Sn	00 54 30.3	+0.1
VOY	Vojsko	3.55	6	ePn	Pn	00 53 54.7	-1.8
VOY				e		00 53 59.9	
BLY	Banja Luka	3.58	50	ePn	Pn	00 53 57.0	+0.3
BLY	Banja Luka	3.58	50	ePn	Pn	00 53 57.0	+0.3
LJU	Ljubljana	3.64	13	i Pn	Pn	00 53 57.5	-0.1
LJU				eSn	Sn	00 54 44.0	+3.6
SISC	Sisak	3.69	35	ePn	Pn	00 53 56.8	-1.4
PDKS	Podkum	3.75	18	⇑iPn	Pn	00 53 58.9	-0.3
PDKS				eSn	Sn	00 54 43.1	-0.1
PDKS							
	comp=Z,35µm,2.8s						
HCY	Herceg Novi	3.81	89	⇑iPn	Pn	00 53 59.6	-0.3
HCY				eSn	Sn	00 54 45.9	+1.4
HCY	Herceg Novi	3.81	89	⇑P	Pn	00 53 59.7	-0.2
HCY				S	Sn	00 54 45.9	+1.4
HCY	Herceg Novi	3.81	89	⇑P	Pn	00 53 59.7	-0.2
HCY				S	Sn	00 54 45.9	+1.4
HCY	Herceg Novi	3.81	89	⇑iPn	Pn	00 53 59.6	-0.3
HCY				S	Sn	00 54 45.9	+1.4
BRY	Bratogost	3.85	82	ePn	Pn	00 54 00.4	-0.2
BRY				eSn	Sn	00 54 46.6	+0.9
BRY	Bratogost	3.85	82	⇑P	Pn	00 54 00.4	-0.2
BRY				S	Sn	00 54 46.6	+0.9
BRY	Bratogost	3.85	82	⇑P	Pn	00 54 00.4	-0.2
BRY				S	Sn	00 54 46.6	+0.9
BRY	Bratogost	3.85	82	P	Pn	00 54 00.4	-0.2
BRY				S	Sn	00 54 46.6	+0.9
MOZS	Mozjanca	3.88	11	⇑iPn	Pn	00 54 00.4	-0.4
MOZS				eSn	Sn	00 54 42.8	-3.4
MOZS							
	comp=Z,11µm,1.6s						
OBKA	Obir	4.10	12	i Pn	Pn	00 54 03.3	-0.7
	SNR=222						
OBKA	Obir	4.10	12	i Pn	Pn	00 54 03.3	-0.7
OBKA	Obir	4.10	12	i Pn	Pn	00 54 03.3	-0.7
BUM	Brajici-Budva	4.11	91	⇑iPn	Pn	00 54 04.1	0.0
BUM				eSn	Sn	00 54 52.9	+0.8
BUM	Brajici-Budva	4.11	91	⇑iPn	Pn	00 54 04.1	0.0
BUM				eSn	Sn	00 54 52.9	+0.8
MYKA	Terra Mystica	4.14	3	⇑iPn	Pn	00 54 03.8	-0.7
MYKA	Terra Mystica	4.14	3	⇑iPn	Pn	00 54 03.8	-0.7
MYKA	Terra Mystica	4.14	3	⇑iPn	Pn	00 54 03.8	-0.7
UPM	Unac-Piva	4.15	78	⇑iPn	Pn	00 54 05.1	+0.4
UPM				eSn	Sn	00 54 54.1	+1.0
UPM	Unac-Piva	4.15	78	⇑iPn	Pn	00 54 05.1	+0.4
UPM				eSn	Sn	00 54 54.1	+1.0
NKY	Niksic	4.18	84	ePn	Pn	00 54 05.1	+0.1
NKY				eSn	Sn	00 54 55.1	+1.4
NKY	Niksic	4.18	84	⇑P	Pn	00 54 04.9	-0.1
NKY				S	Sn	00 54 54.3	+0.6
NKY	Niksic	4.18	84	⇑P	Pn	00 54 04.9	-0.1
NKY				S	Sn	00 54 54.3	+0.6
NKY	Niksic	4.18	84	ePn	Pn	00 54 05.1	+0.1
NKY				S	Sn	00 54 54.3	+0.6
NKY				eSn	Sn	00 54 55.1	+1.4
TIP	Timpagrande	4.21	141	ePn	Pn	00 54 06.6	+1.2
TIP	Timpagrande	4.21	141	ePn	Pn	00 54 06.6	+1.2
ABTA	Abfaltersbach	4.29	352	i Pn	Pn	00 54 06.3	-0.3
	SNR=466						
ABTA	Abfaltersbach	4.29	352	i Pn	Pn	00 54 06.3	-0.3
ABTA	Abfaltersbach	4.29	352	i Pn	Pn	00 54 06.3	-0.3
PERS	Pernice	4.33	16	⇑iPn	Pn	00 54 06.3	-0.7
PERS				i Sn	Sn	00 54 55.3	-2.0
BISS	Bistriski jare	4.34	16	⇑iPn	Pn	00 54 06.7	-0.4
SOKA	Soboth	4.35	15	⇑iPn	Pn	00 54 06.7	-0.7
SOKA	Soboth	4.35	15	⇑iPn	Pn	00 54 06.7	-0.7
SOKA	Soboth	4.35	15	⇑iPn	Pn	00 54 06.7	-0.7
PDG	Podgorica	4.37	89	ePn	Pn	00 54 08.1	+0.5
PDG	Podgorica	4.37	89	ePn	Pn	00 54 08.1	+0.5
PDG				eSn	Sn	00 54 59.5	+1.2
TTG	Podgorica	4.37	89	⇑iPn	Pn	00 54 07.8	+0.2
TTG				eSn	Sn	00 54 59.5	+1.2
TTG	Podgorica	4.37	89	⇓P	Pn	00 54 07.9	+0.2
TTG				S	Sn	00 54 58.4	+0.1
TTG	Podgorica	4.37	89	⇓P	Pn	00 54 07.8	+0.2
TTG				S	Sn	00 54 58.4	+0.1
TTG	Podgorica	4.37	89	⇓P	Pn	00 54 07.8	+0.2
TTG				S	Sn	00 54 58.4	+0.1
ULC	Ulcinj	4.41	95	⇑iPn	Pn	00 54 07.9	-0.3
ULC				eSn	Sn	00 54 59.1	-0.3
ULC	Ulcinj	4.41	95	⇑P	Pn	00 54 08.1	-0.1
ULC				S	Sn	00 55 00.0	+0.6
ULC	Ulcinj	4.41	95	⇑P	Pn	00 54 08.1	-0.1
ULC				S	Sn	00 54 60.0	+0.6
ULC	Ulcinj	4.41	95	⇑iPn	Pn	00 54 07.9	-0.3
ULC				eSn	Sn	00 54 59.1	-0.3
ULC				S	Sn	00 55 00.0	+0.6
SAOF	Saorge	4.49	291	P	Pn	00 54 09.3	+0.1
SAOF	Saorge	4.49	291	P	Pn	00 54 09.3	+0.1
SAOF	Saorge	4.49	291	P	Pn	00 54 09.3	+0.1
SAOF	Saorge	4.49	291	P	Pn	00 54 09.3	+0.1
PLE	Pljevlja	4.51	77	⇑iPn	Pn	00 54 10.1	+0.4
PLE				eSn	Sn	00 55 02.9	+0.8
PLE	Pljevlja	4.51	77	⇓P	Pn	00 54 09.9	+0.2
PLE				S	Sn	00 55 02.5	+0.4
PLE	Pljevlja	4.51	77	⇓P	Pn	00 54 09.9	+0.2
PLE				S	Sn	00 55 02.5	+0.4
PLE	Pljevlja	4.51	77	P	Pn	00 54 09.9	+0.2
PLE				S	Sn	00 55 02.5	+0.4
PLE				eSn	Sn	00 55 02.9	+0.8
SBF	Sospel	4.53	290	ePn	Pn	00 54 08.7	-1.2
	SNR=1.0						
SBF				eSn	Sn	00 54 59.1	-3.3
	comp=Z,886nm,0.7s,SNR=1.0						
SBF	Sospel	4.53	290	eP	Pn	00 54 08.7	-1.2
SBF				e		00 54 59.1	
SBF	Sospel	4.53	290	ePn	Pn	00 54 08.7	-1.2
SBF				eSn	Sn	00 54 59.1	-3.3
SBF	Sospel	4.53	290	eP	Pn	00 54 08.7	-1.2
SBF				eS	Sn	00 54 59.1	-3.3
REVF	Revere	4.55	288	P	Pn	00 54 10.2	+0.1
REVF	Revere	4.55	288	P	Pn	00 54 10.2	+0.1
REVF	Revere	4.55	288	P	Pn	00 54 10.2	+0.1
REVF	Revere	4.55	288	P	Pn	00 54 10.2	+0.1
AUTN	L'Aution	4.58	291	P	Pn	00 54 11.4	+0.8
AUTN	L'Aution	4.58	291	P	Pn	00 54 11.4	+0.8
AUTN	L'Aution	4.58	291	P	Pn	00 54 11.4	+0.8
AUTN	L'Aution	4.58	291	P	Pn	00 54 11.4	+0.8
KBA	Koelnbreinsper	4.58	360	⇓iP	Pn	00 54 10.4	-0.2
KBA				i		00 55 03.8	
KBA	Koelnbreinsper	4.58	360	⇓iPn	Pn	00 54 10.4	-0.2
	SNR=49						
KBA				⇓iSn	Sn	00 55 03.8	0.0
KBA	Koelnbreinsper	4.58	360	⇓iPn	Pn	00 54 10.4	-0.2
KBA				i Sn	Sn	00 55 03.8	0.0
KBA	Koelnbreinsper	4.58	360	i P	Pn	00 54 10.4	-0.2
KBA				i S	Sn	00 55 03.8	0.0
BBLS	Lazići	4.64	71	ePn	Pn	00 54 12.1	+0.8
BBLS	Lazići	4.64	71	ePn	Pn	00 54 12.1	+0.8
CEL	Celeste	4.66	154	ePn	Pn	00 54 12.2	+0.5
CEL	Celeste	4.66	154	ePn	Pn	00 54 12.1	+0.5
BEHE	Becsehely	4.67	31	e	Pn	00 54 13.2	+1.5
FUORN	Ofenpass-Fuorn	4.67	333	ePn	Pn	00 54 13.0	+1.0
FUORN				eSn	Sn	00 55 05.7	-0.4
FUORN	Ofenpass-Fuorn	4.67	333	ePn	Pn	00 54 13.0	+1.0
FUORN				eSn	Sn	00 55 05.7	-0.4
TOUF	Mont Tournerai	4.70	291	P	Pn	00 54 13.2	+0.8
TOUF	Mont Tournerai	4.70	291	P	Pn	00 54 13.2	+0.8
TOUF	Mont Tournerai	4.70	291	P	Pn	00 54 13.2	+0.8
TOUF	Mont Tournerai	4.70	291	P	Pn	00 54 13.2	+0.8
MVIF	Mont Vial	4.74	289	P	Pn	00 54 13.6	+0.8
MVIF	Mont Vial	4.74	289	P	Pn	00 54 13.6	+0.8
MVIF	Mont Vial	4.74	289	P	Pn	00 54 13.6	+0.8
MVIF	Mont Vial	4.74	289	P	Pn	00 54 13.6	+0.8
BEY	Berane	4.84	83	⇑iPn	Pn	00 54 14.8	+0.7
BEY				eSn	Sn	00 55 09.8	-0.2
IVA	Berane	4.84	83	⇑iPn	Pn	00 54 14.8	+0.7
IVA				eSn	Sn	00 55 09.8	-0.2
PUK	Puka	4.88	93	eP	Pn	00 54 15.5	+0.9
PVY	Plav	4.89	87	⇑iPn	Pn	00 54 15.5	+0.7
PVY				eSn	Sn	00 55 12.3	+1.1
PVY	Plav	4.89	87	⇑iPn	Pn	00 54 15.5	+0.7
PVY				eSn	Sn	00 55 12.3	+1.1
CALN	Calern	4.89	287	P	Pn	00 54 15.1	+0.2
CALN	Calern	4.89	287	P	Pn	00 54 15.1	+0.2
CALN	Calern	4.89	287	P	Pn	00 54 15.1	+0.2
CALN	Calern	4.89	287	P	Pn	00 54 15.1	+0.2
FETA	Feichten	4.89	338	⇓iPn	Pn	00 54 15.2	+0.2
	SNR=889						
FETA	Feichten	4.89	338	⇓iPn	Pn	00 54 15.2	+0.2
FETA	Feichten	4.89	338	⇓iPn	Pn	00 54 15.1	+0.2
TUE	Stuetta	4.89	326	ePn	Pn	00 54 14.8	-0.2
TUE	Stuetta	4.89	326	ePn	Pn	00 54 14.8	-0.2
WTTA	Wattenberg	4.92	346	⇑iP	Pn	00 54 15.7	+0.4
WTTA	Wattenberg	4.92	346	⇑iPn	Pn	00 54 15.7	+0.4
	SNR=179						
WTTA	Wattenberg	4.92	346	⇑iPn	Pn	00 54 15.7	+0.4
WTTA	Wattenberg	4.92	346	i P	Pn	00 54 15.7	+0.4
SJES	Sjenica	4.93	79	ePn	Pn	00 54 15.5	+0.1
TEKS	Tekeris	4.94	63	ePn	Pn	00 54 14.7	-0.7
TEKS	Tekeris	4.94	63	ePn	Pn	00 54 14.7	-0.7
DAVOX	Davos/Dischmat	4.94	331	Pn	Pn	00 54 16.1	+0.5
DAVOX				Sn	Sn	00 55 14.9	+2.2
DAVOX	Davos/Dischmat	4.94	331	Pn	Pn	00 54 16.1	+0.5
	comp=Z,60nm,0.3s,baz=159,slow=18,SNR=203						
DAVOX				Sn	Sn	00 55 14.9	+2.2
	comp=Z,57nm,0.3s,baz=275,slow=13,SNR=4.6						
DAVOX	Davos/Dischmat	4.94	331	P	Pn	00 54 16.1	+0.5
	comp=Z,60nm,0.3s						
DAVOX				S	Sn	00 55 14.9	+2.2
	comp=Z,57nm,0.3s						
BCI	Bajram Curri	4.98	89	eP	Pn	00 54 16.9	+1.0
ARSA	Arzberg	5.00	17	⇑iPn	Pn	00 54 14.9	-1.3
	SNR=139						
ARSA	Arzberg	5.00	17	⇑iPn	Pn	00 54 14.9	-1.3
ARSA	Arzberg	5.00	17	⇑iPn	Pn	00 54 14.9	-1.3
TIR	Tirane	5.00	101	eP	Pn	00 54 16.2	0.0
WATA	Walderalm	5.00	346	⇑iP	Pn	00 54 17.1	+0.8
WATA	Walderalm	5.00	346	⇑iPn	Pn	00 54 17.1	+0.8
	SNR=159						
WATA	Walderalm	5.00	346	⇑iPn	Pn	00 54 17.1	+0.8
WATA	Walderalm	5.00	346	i P	Pn	00 54 17.1	+0.8
FRF	La Foret Royal	5.03	284	ePn	Pn	00 54 15.2	-1.4
	SNR=1.0						
FRF				eSn	Sn	00 55 10.4	-4.1
	comp=Z,588nm,1.2s,SNR=1.0						
FRF	La Foret Royal	5.03	284	eP	Pn	00 54 15.2	-1.4
FRF				e		00 55 10.4	
FRF	La Foret Royal	5.03	284	ePn	Pn	00 54 15.2	-1.4
FRF				eSn	Sn	00 55 10.4	-4.1
FRF	La Foret Royal	5.03	284	eP	Pn	00 54 15.2	-1.4
FRF				eS	Sn	00 55 10.4	-4.1
LMR	La Mourre	5.09	282	ePn	Pn	00 54 15.9	-1.6
	SNR=1.0						
LMR				eSn	Sn	00 55 12.0	-4.1
	comp=Z,457nm,1.3s						
LMR	La Mourre	5.09	282	eP	Pn	00 54 15.9	-1.6
LMR				e		00 55 12.0	
LMR	La Mourre	5.09	282	ePn	Pn	00 54 15.9	-1.6
LMR				eSn	Sn	00 55 12.0	-4.1
LMR	La Mourre	5.09	282	eP	Pn	00 54 15.9	-1.6
LMR				eS	Sn	00 55 12.0	-4.1
MOTA	Moosalm	5.10	343	⇑iP	Pn	00 54 18.7	+0.9
MOTA	Moosalm	5.10	343	⇑iPn	Pn	00 54 18.7	+0.9
	SNR=352						
MOTA	Moosalm	5.10	343	⇑iPn	Pn	00 54 18.7	+0.9
MOTA	Moosalm	5.10	343	i P	Pn	00 54 18.7	+0.9
IVAS	Ivanjica	5.10	76	ePn	Pn	00 54 18.1	+0.4
IVAS				eSn	Sn	00 55 16.1	-0.4
IVAS	Ivanjica	5.10	76	ePn	Pn	00 54 18.1	+0.4
IVAS				eSn	Sn	00 55 16.1	-0.4
DIVS	Divibare	5.11	70	ePn	Pn	00 54 17.2	-0.6
DIVS	Divibare	5.11	70	ePn	Pn	00 54 17.2	-0.6
RJOB	Jochberg	5.25	356	ePn	Pn	00 54 19.8	0.0
RJOB				eSn	Sn	00 55 21.0	+0.8
MBDF	Montbardon	5.27	297	eP	Pn	00 54 20.7	+0.6
	SNR=1.0						
MBDF	Montbardon	5.27	297	eP	Pn	00 54 20.7	+0.6
MBDF	Montbardon	5.27	297	eP	Pn	00 54 20.7	+0.6
MBDF	Montbardon	5.27	297	eP	Pn	00 54 20.7	+0.6
PKSM	Moragy	5.31	44	ePn	Pn	00 54 19.5	-1.0
PKSM	Moragy	5.31	44	e	Pn	00 54 19.4	-1.0
PKSM	Moragy	5.31	44	ePn	Pn	00 54 19.5	-1.0
RETA	Reutte	5.31	341	i Pn	Pn	00 54 21.6	+1.0
	SNR=303						
RETA				⇓iSn	Sn	00 55 22.9	+1.2
RETA	Reutte	5.31	341	i Pn	Pn	00 54 21.6	+1.0
RETA				i Sn	Sn	00 55 22.9	+1.2
RETA	Reutte	5.31	341	i Pn	Pn	00 54 21.6	+1.0
RETA				i Sn	Sn	00 55 22.9	+1.2
PHP	Peshkopia	5.34	96	eP	Pn	00 54 21.9	+0.9
PHP	Peshkopia	5.34	96	P	Pn	00 54 21.5	+0.5
DAVA	Damuels	5.38	334	⇓iPn	Pn	00 54 22.7	+1.0
	SNR=391						
DAVA	Damuels	5.38	334	⇓iPn	Pn	00 54 22.7	+1.0
DAVA	Damuels	5.38	334	⇓iPn	Pn	00 54 22.7	+1.0
MOA	Molln	5.39	7	⇓iPn	Pn	00 54 21.3	-0.3
	SNR=186						
MOA				⇓iSn	Sn	00 55 23.5	0.0
MOA	Molln	5.39	7	⇓iPn	Pn	00 54 21.3	-0.3
MOA				i Sn	Sn	00 55 23.5	0.0
MOA	Molln	5.39	7	⇓iPn	Pn	00 54 21.3	-0.3
MOA				i Sn	Sn	00 55 23.5	0.0
TRUS	Trudelj	5.43	69	ePn	Pn	00 54 21.0	-1.1
TRUS	Trudelj	5.43	69	ePn	Pn	00 54 21.0	-1.1
BNI	Bardonecchia	5.46	300	eP	Pn	00 54 23.0	+0.3
BNI	Bardonecchia	5.46	300	ePn	Pn	00 54 23.0	+0.3
BNI	Bardonecchia	5.46	300	eP	Pn	00 54 23.0	+0.3
GRUS	Gruza	5.56	73	ePn	Pn	00 54 24.0	0.0
GRUS				eSn	Sn	00 55 27.9	+0.2
GRUS	Gruza	5.56	73	ePn	Pn	00 54 24.0	0.0
GRUS				eSn	Sn	00 55 27.9	+0.2
KEK	Kerkira	5.61	118	P	Pn	00 54 25.3	+0.6
KEK	Kerkira	5.61	118	eP	Pn	00 54 25.3	+0.6
LPG	La Plagne	5.62	304	eP	Pn	00 54 27.2	+2.1
	SNR=1.0						
LPG				eSn	Sn	00 55 26.4	-3.2
	comp=Z,948nm,1.0s						
LPG	La Plagne	5.62	304	eP	Pn	00 54 27.2	+2.1
LPG				e		00 55 26.4	
LPG	La Plagne	5.62	304	eP	Pn	00 54 27.2	+2.1
LPG				eSn	Sn	00 55 26.4	-3.2
LPG	La Plagne	5.62	304	eP	Pn	00 54 27.2	+2.1
LPG				eS	Sn	00 55 26.4	-3.2
LPL	La Plagne	5.64	305	eSn	Sn	00 55 25.3	-4.7
	comp=Z,142nm,0.5s						
LPL	La Plagne	5.64	305	eSn	Sn	00 55 25.3	-4.7
LPL	La Plagne	5.64	305	eSn	Sn	00 55 25.3	-4.7
	comp=Z,71nm,0.5s						
SOP	Sopron	5.66	23	⇑e	Pn	00 54 24.5	-0.8
BEO	Beograd	5.66	64	ePn	Pn	00 54 24.8	-0.5
BEO	Beograd	5.66	64	ePn	Pn	00 54 24.8	-0.5
CONA	Conrad Observa	5.71	17	i Pn	Pn	00 54 25.2	-0.9
	SNR=411						
CONA				⇓iSn	Sn	00 55 31.1	-0.4
CONA	Conrad Observa	5.71	17	i Pn	Pn	00 54 25.2	-0.9
CONA				i Sn	Sn	00 55 31.1	-0.4
CONA	Conrad Observa	5.71	17	i Pn	Pn	00 54 25.2	-0.9
CONA				i Sn	Sn	00 55 31.1	-0.4
SELS	Selova	5.76	80	ePn	Pn	00 54 26.3	-0.4
SELS	Selova	5.76	80	ePn	Pn	00 54 26.3	-0.4
PKS2	Kecel	5.79	44	epPn	Pn	00 54 26.9	-0.2
SENIN	Lac Senin/Sane	5.80	314	ePn	Pn	00 54 27.6	+0.1
SENIN				eSn	Sn	00 55 34.3	+0.4
SENIN	Lac Senin/Sane	5.80	314	ePn	Pn	00 54 27.6	+0.1
SENIN				eSn	Sn	00 55 34.3	+0.4
PKST	Tˆ's	5.81	33	⇑e	Pn	00 54 26.2	-1.2
SMRF	Simiane la Rot	5.87	287	ePn	Pn	00 54 28.5	+0.3
	SNR=1.0						
SMRF	Simiane la Rot	5.87	287	ePn	Pn	00 54 28.5	+0.3
SMRF	Simiane la Rot	5.87	287	ePn	Pn	00 54 28.5	+0.3
	SNR=1.0						
ORIF	Oris-en-Rattie	5.93	297	eP	Pn	00 54 31.5	+2.4
	SNR=1.0						
ORIF				eSn	Sn	00 55 32.9	-3.9
	comp=Z,282nm,0.8s						
ORIF	Oris-en-Rattie	5.93	297	eP	Pn	00 54 31.5	+2.4
ORIF				e		00 55 32.9	
ORIF	Oris-en-Rattie	5.93	297	eP	Pn	00 54 31.5	+2.4
ORIF				eSn	Sn	00 55 32.9	-3.9
ORIF	Oris-en-Rattie	5.93	297	eP	Pn	00 54 31.5	+2.4
ORIF				eS	Sn	00 55 32.9	-3.9
SVIS	Svilajnac	6.00	70	ePn	Pn	00 54 29.3	-0.7
SKO	Skopje	6.03	92	P	Pn	00 54 31.3	+0.9
SKO	Skopje	6.03	92	ePn	Pn	00 54 31.6	+1.2
SKO	Skopje	6.03	92	ePn	Pn	00 54 31.6	+1.2
SKO	Skopje	6.03	92	ePn	Pn	00 54 31.6	+1.2
PKS6	Bocsa	6.04	45	ePn	Pn	00 54 29.9	-0.7
IGT	Igoumenitsa	6.06	117	P	Pn	00 54 31.4	+0.6
PKSG		6.06	34	⇓ePn	Pn	00 54 30.0	-0.8
OG01	Vacheresse	6.12	311	P	Pn	00 54 32.6	+0.9
OG01	Vacheresse	6.12	311	P	Pn	00 54 32.6	+0.9
OG01	Vacheresse	6.12	311	P	Pn	00 54 32.6	+0.9
BIA	Bitola	6.15	101	P	Pn	00 54 31.6	-0.4
BIA	Bitola	6.15	101	ePn	Pn	00 54 31.9	-0.2
BIA	Bitola	6.15	101	ePn	Pn	00 54 31.8	-0.2
PKS7	Kunszentmiklos	6.15	40	ePn	Pn	00 54 31.0	-1.0
NEST	Nestorio	6.15	107	P	Pn	00 54 33.0	+0.9
BARS	Barje	6.25	84	ePn	Pn	00 54 33.6	+0.1
FNA	Florina	6.25	103	P	Pn	00 54 33.4	-0.1
JAN	Janina	6.34	114	P	Pn	00 54 35.6	+0.9
JAN	Janina	6.34	114	eP	Pn	00 54 35.7	+1.0
GEC2	GERESS Array S	6.35	2	eP	Pn	00 54 33.5	-1.4
GEC2				e		00 55 45.7	
GEC2	GERESS Array S	6.35	2	ePn	Pn	00 54 33.5	-1.4
GEC2				eSn	Sn	00 55 45.7	-1.6
GEC2	GERESS Array S	6.35	2	eP	Pn	00 54 33.5	-1.4
GEC2				eS	Sn	00 55 45.7	-1.6
GERES	GERESS Array B	6.35	2	Pn	Pn	00 54 33.5	-1.4
GERES				Sn	Sn	00 55 43.2	-4.1
GERES				Lg	Lg	00 56 17.5	
GERES	GERESS Array B	6.35	2	Pn	Pn	00 54 33.5	-1.4
	comp=Z,8.0nm,0.3s,baz=180,slow=12,SNR=169						
GERES				Sn	Sn	00 55 43.2	-4.1
	comp=Z,40nm,0.3s,baz=183,slow=22,SNR=9.2						
GERES				Lg	Lg	00 56 17.5	
	baz=182,slow=26,SNR=2.6						
GERES				LR	LR	00 57 38.4	
	comp=Z,4µm,21.8s,baz=182,slow=44						
GERES	GERESS Array B	6.35	2	P	Pn	00 54 33.5	-1.4
	comp=Z,8.0nm,0.3s						
GERES				S	Sn	00 55 43.2	-4.1
	comp=Z,4µm,21.8s						
PKSN	Nyarlorinc	6.40	44	⇓epPn	Pn	00 54 38.2	+2.8
BUD	Budapest	6.41	37	epPn	Pn	00 54 36.6	+1.1
BOLS	Boljevac	6.43	75	ePn	Pn	00 54 34.5	-1.4
BOLS	Boljevac	6.43	75	ePn	Pn	00 54 34.5	-1.4
SPAK	Spaichingen-Ko	6.46	332	P	Pn	00 54 36.0	-0.4
SPAK	Spaichingen-Ko	6.46	332	P	Pn	00 54 36.0	-0.4
BBS	Basel-Blauen	6.46	322	P	Pn	00 54 36.4	0.0
BBS	Basel-Blauen	6.46	322	P	Pn	00 54 36.4	0.0
BBS	Basel-Blauen	6.46	322	P	Pn	00 54 36.4	0.0
FELD	Feldberg im Sc	6.57	327	P	Pn	00 54 36.7	-1.2
FELD	Feldberg im Sc	6.57	327	P	Pn	00 54 36.7	-1.2
OG35	Corcelles	6.61	305	P	Pn	00 54 38.4	0.0
CABF	La Chapelle	6.62	311	ePn	Pn	00 54 38.4	-0.1
	SNR=1.0						
CABF	La Chapelle	6.62	311	eP	Pn	00 54 38.4	-0.1
CABF	La Chapelle	6.62	311	ePn	Pn	00 54 38.4	-0.1
CABF	La Chapelle	6.62	311	eP	Pn	00 54 38.4	-0.1
KHC	Kasperske Hory	6.63	1	eP	Pn	00 54 37.1	-1.6
KHC				e		00 55 49.1	
KHC				MLR	MLR		
	comp=Z,9µm,5.9s						
KHC	Kasperske Hory	6.63	1	ePn	Pn	00 54 36.7	-2.0
KHC				eSn	Sn	00 55 50.5	-3.7
KHC	Kasperske Hory	6.63	1	ePN	Pn	00 54 37.1	-1.6
KHC				eSN	Sn	00 55 49.1	-5.1
KHC				AMS	AMS	00 58 00.0	
	comp=Z,9µm,5.9s						
KHC	Kasperske Hory	6.63	1	ePn	Pn	00 54 36.7	-2.0
KHC	Kasperske Hory	6.63	1	eP	Pn	00 54 37.1	-1.6
	comp=Z,9µm,5.9s						
KHC				eS	Sn	00 55 49.1	-5.1
KHC				eSn	Sn	00 55 50.5	-3.7
SMOL	Smolenice	6.66	24	ePN	Pn	00 54 38.2	-0.9
SMOL				eSN	Sn	00 55 55.3	+0.5
LKD2	Lefkada island	6.68	121	P	Pn	00 54 40.4	+1.0
LKD2	Lefkada island	6.68	121	eP	Pn	00 54 40.2	+0.8
KZN	Kozani	6.70	106	P	Pn	00 54 39.6	-0.1
KZN	Kozani	6.70	106	eP	Pn	00 54 40.1	+0.4
LOMF	Lomont	6.70	319	P	Pn	00 54 39.5	-0.2
LOMF	Lomont	6.70	319	P	Pn	00 54 39.5	-0.2
LOMF	Lomont	6.70	319	P	Pn	00 54 39.5	-0.2
LOMF	Lomont	6.70	319	P	Pn	00 54 39.5	-0.2
VIVF	Saint-Julien-l	6.72	293	ePn	Pn	00 54 40.5	+0.7
	SNR=1.0						
VIVF	Saint-Julien-l	6.72	293	eP	Pn	00 54 40.5	+0.7
VIVF	Saint-Julien-l	6.72	293	ePn	Pn	00 54 40.5	+0.7
VIVF	Saint-Julien-l	6.72	293	eP	Pn	00 54 40.5	+0.7
BZS	Buzias	6.72	60	⇑iP	Pn	00 54 39.0	-0.8
BZS	Buzias	6.72	60	ePn	Pn	00 54 39.1	-0.8
BZS	Buzias	6.72	60	ePn	Pn	00 54 39.1	-0.8
BFO	Black Forest	6.82	331	eP	Pn	00 54 39.7	-1.5
BFO	Black Forest	6.82	331	ePn	Pn	00 54 39.7	-1.5
BFO	Black Forest	6.82	331	ePn	Pn	00 54 39.6	-1.6
BFO	Black Forest	6.82	331	Pn	Pn	00 54 41.7	+0.5
	comp=Z,1µm,0.6s,SNR=42						
BFO	Black Forest	6.82	331	ePn	Pn	00 54 39.6	-1.6
ZAPS	Zavoj	6.87	80	ePn	Pn	00 54 42.5	+0.6

ZAPS				eSn	Sn	00 55 57.5	-2.4
STU	Stuttgart	6.92	337	eP	Pn	00 54 41.8	-0.7
STU	Stuttgart	6.92	337	ePn	Pn	00 54 41.8	-0.7
STU	Stuttgart	6.92	337	eP	Pn	00 54 41.8	-0.7
MOF	Molkenrain	6.92	323	P	Pn	00 54 41.9	-0.8
MOF	Molkenrain	6.92	323	P	Pn	00 54 41.9	-0.8
MOF	Molkenrain	6.92	323	P	Pn	00 54 41.9	-0.8
MOF	Molkenrain	6.92	323	P	Pn	00 54 41.9	-0.8
SSB	Saint Sauveur	6.94	297	P	Pn	00 54 43.3	+0.3
SSB	Saint Sauveur	6.94	297	P	Pn	00 54 43.3	+0.3
SSB	Saint Sauveur	6.94	297	P	Pn	00 54 43.3	+0.3
SSB	Saint Sauveur	6.94	297	P	Pn	00 54 43.3	+0.3
GRG	Griva	6.95	100	P	Pn	00 54 42.4	-0.6
LIBD	Limburg	6.95	326	P	Pn	00 54 42.2	-0.8
LIBD	Limburg	6.95	326	P	Pn	00 54 42.2	-0.8
LIBD	Limburg	6.95	326	P	Pn	00 54 42.2	-0.8
TREC	Trest	6.96	12	eP	Pn	00 54 41.9	-1.3
TREC				MLR	MLR		
	comp=Z,21µm,5.1s						
TREC	Trest	6.96	12	ePN	Pn	00 54 41.9	-1.3
TREC				AMS	AMS	00 57 10.0	
	comp=Z,21µm,5.1s						
TREC	Trest	6.96	12	eP	Pn	00 54 41.9	-1.3
	comp=Z,21µm,5.1s						
VAY	Valandovo	6.98	97	P	Pn	00 54 43.3	-0.1
VAY	Valandovo	6.98	97	ePn	Pn	00 54 42.5	-1.0
VAY				eSg	Sn	00 56 00.5	-2.2
VAY	Valandovo	6.98	97	ePn	Pn	00 54 42.9	-0.5
VAY				eSg	Sn	00 56 00.9	-1.7
VLS	Valsamata	7.02	126	P	Pn	00 54 44.7	+0.7
VLS	Valsamata	7.02	126	eP	Pn	00 54 44.7	+0.7
HINF	Hinteralfeld	7.02	321	ePn	Pn	00 54 42.8	-1.3
	SNR=1.0						
HINF				eSn	Sn	00 55 59.6	-4.1
	comp=Z,2µm,1.1s						
HINF	Hinteralfeld	7.02	321	eP	Pn	00 54 42.8	-1.3
HINF				e		00 55 59.6	
HINF	Hinteralfeld	7.02	321	ePn	Pn	00 54 42.8	-1.3
HINF				eSn	Sn	00 55 59.6	-4.1
HINF	Hinteralfeld	7.02	321	eP	Pn	00 54 42.8	-1.3
HINF				eS	Sn	00 55 59.6	-4.1
LASF	Ste Croix	7.10	286	ePn	Pn	00 54 44.2	-0.9
	SNR=1.0						
LASF	Ste Croix	7.10	286	ePn	Pn	00 54 44.2	-0.9
LASF	Ste Croix	7.10	286	ePn	Pn	00 54 44.2	-0.9
	SNR=1.0						
PSZ	Piszkesteto	7.12	38	eP	Pn	00 54 45.0	-0.4
PSZ	Piszkesteto	7.12	38	ePn	Pn	00 54 45.0	-0.4
PSZ	Piszkesteto	7.12	38	⇓iP	Pn	00 54 44.0	-1.4
PSZ	Piszkesteto	7.12	38	ePn	Pn	00 54 44.8	-0.6
PSZ	Piszkesteto	7.12	38	eP	Pn	00 54 45.0	-0.4
VYHS	Vyhne	7.13	31	ePN	Pn	00 54 43.8	-1.7
VYHS				eSN	Sn	00 56 01.3	-4.9
VYHS				e		00 56 55.5	
VRAC	Vranov	7.18	17	Pn	Pn	00 54 44.8	-1.3
VRAC				Sn	Sn	00 56 03.0	-4.4
VRAC				Lg	Lg	00 56 44.1	
VRAC	Vranov	7.18	17	⇑iP	Pn	00 54 45.1	-1.0
VRAC	Vranov	7.18	17	Pn	Pn	00 54 44.8	-1.3
	comp=Z,4.6nm,0.3s,baz=202,slow=13,SNR=44						
VRAC				Sn	Sn	00 56 03.0	-4.4
	comp=Z,8.6nm,0.3s,baz=148,slow=15,SNR=3.0						
VRAC				Lg	Lg	00 56 44.1	
	comp=Z,2.9nm,0.3s,baz=294,slow=19,SNR=2.2						
VRAC				LR	LR	00 57 46.7	
	comp=Z,8µm,18.4s,baz=206,slow=40						
VRAC	Vranov	7.18	17	Pn	Pn	00 54 44.8	-1.3
VRAC	Vranov	7.18	17	P	Pn	00 54 45.5	-0.6
VRAC				Sn	Sn	00 56 03.0	-4.4
THL	Klokotos Trika	7.18	111	P	Pn	00 54 45.9	-0.2
THL	Klokotos Trika	7.18	111	eP	Pn	00 54 46.4	+0.3
KFL	Anninata	7.18	125	P	Pn	00 54 47.4	+1.2
ECH	Echery	7.19	325	P	Pn	00 54 45.1	-1.2
ECH				S	Sn	00 56 06.9	-0.8
ECH	Echery	7.19	325	P	Pn	00 54 45.1	-1.2
ECH				S	Sn	00 56 06.9	-0.8
ECH	Echery	7.19	325	P	Pn	00 54 45.1	-1.2
ECH				S	Sn	00 56 06.9	-0.8
ECH	Echery	7.19	325	P	Pn	00 54 45.1	-1.2
ECH				S	Sn	00 56 06.9	-0.8
KNT	Kendrikon	7.26	97	P	Pn	00 54 46.6	-0.7
VTS	Vitosha	7.28	86	P	Pn	00 54 48.0	+0.2
VTS	Vitosha	7.28	86	⇑P	Pn	00 54 48.0	+0.2
VTS	Vitosha	7.28	86	⇑iP	Pn	00 54 48.0	+0.2
VTS	Vitosha	7.28	86	ePn	Pn	00 54 48.4	+0.6
VTS	Vitosha	7.28	86	P	Pn	00 54 48.0	+0.2
VTS	Vitosha	7.28	86	ePn	Pn	00 54 48.4	+0.6
LIT	Litokhoron	7.29	106	P	Pn	00 54 47.0	-0.7
LIT	Litokhoron	7.29	106	eP	Pn	00 54 47.3	-0.4
CDF	Champ du Feu	7.29	326	ePn	Pn	00 54 46.4	-1.4
	SNR=1.0						
CDF				eSn	Sn	00 56 06.7	-3.7
	comp=Z,3µm,1.2s						
CDF	Champ du Feu	7.29	326	eP	Pn	00 54 46.4	-1.4
CDF				e		00 56 06.7	
CDF	Champ du Feu	7.29	326	ePn	Pn	00 54 46.4	-1.4
CDF				eSn	Sn	00 56 06.7	-3.7
CDF	Champ du Feu	7.29	326	eP	Pn	00 54 46.4	-1.4
CDF				eS	Sn	00 56 06.7	-3.7
MAHO	Mahon	7.32	252	iP	Pn	00 54 49.1	+1.0
MAHO				iS	Sn	00 56 21.6	+11
GRA1	Grafenberg Arr	7.34	349	eP	Pn	00 54 47.0	-1.4
GRF	Grafenberg Arr	7.34	349	eP	Pn	00 54 47.0	-1.4
GRF	Grafenberg Arr	7.34	349	ePn	Pn	00 54 47.0	-1.4
GRFO	Grafenberg	7.34	349	eP	Pn	00 54 47.6	-0.9
GRFO	Grafenberg	7.34	349	ePn	Pn	00 54 47.5	-0.9
GRFO	Grafenberg	7.34	349	ePn	Pn	00 54 47.5	-0.9
EVR	Evrytania	7.36	116	P	Pn	00 54 50.0	+1.3
EVR	Evrytania	7.36	116	eP	Pn	00 54 50.4	+1.7
HAU	Haudompre	7.39	321	ePn	Pn	00 54 47.8	-1.3
	SNR=1.0						
HAU				eSn	Sn	00 56 07.3	-5.5
	comp=Z,610nm,0.4s						
HAU	Haudompre	7.39	321	eP	Pn	00 54 47.8	-1.3
HAU				e		00 56 07.3	
HAU	Haudompre	7.39	321	ePn	Pn	00 54 47.8	-1.3
HAU				eSn	Sn	00 56 07.3	-5.5
HAU	Haudompre	7.39	321	eP	Pn	00 54 47.8	-1.3
HAU				eS	Sn	00 56 07.3	-5.5
KEST	Kesra	7.44	206	ePn	Pn	00 54 53.2	+3.4
KEST				Sn	Sn	00 56 15.0	+1.0
KEST	Kesra	7.44	206	Pn	Pn	00 54 53.2	+3.4
	comp=Z,7.1nm,0.3s,baz=321,slow=3.2,SNR=226						
KEST				Sn	Sn	00 56 15.0	+1.0
	baz=243,slow=14,SNR=1.1						
KEST	Kesra	7.44	206	ePn	Pn	00 54 53.2	+3.4
KEST				Sn	Sn	00 56 15.0	+1.0
CMAH	Djebel Manchou	7.44	220	P	Pn	00 54 53.2	+3.4
CMAH	Djebel Manchou	7.44	220	P	Pn	00 54 53.2	+3.4
THE	Thessaloniki	7.45	101	P	Pn	00 54 48.6	-1.3
MAKR	Makrakomi, Fth	7.52	115	P	Pn	00 54 52.0	+1.1
PRU	Pruhonice	7.54	6	eP	Pn	00 54 49.2	-1.9
PRU				MLR	MLR		
	comp=Z,6µm,7.4s						
PRU	Pruhonice	7.54	6	ePN	Pn	00 54 49.2	-1.9
PRU				AMS	AMS	00 58 10.0	
	comp=Z,6µm,7.4s						
PRU	Pruhonice	7.54	6	eP	Pn	00 54 49.2	-1.9
	comp=Z,6µm,7.4s						
LANF	Langenberg	7.55	331	P	Pn	00 54 50.6	-0.7
LANF	Langenberg	7.55	331	P	Pn	00 54 50.6	-0.7
LANF	Langenberg	7.55	331	P	Pn	00 54 50.6	-0.7
LANF	Langenberg	7.55	331	P	Pn	00 54 50.6	-0.7
HORT	Hortiatis	7.56	101	P	Pn	00 54 50.2	-1.3
CAEH	'Ain El Ouahch	7.60	223	P	Pn	00 54 54.6	+2.7
CAEH	'Ain El Ouahch	7.60	223	P	Pn	00 54 54.6	+2.7
RLS	Riolos of Patr	7.63	123	P	Pn	00 54 54.3	+2.0
RLS	Riolos of Patr	7.63	123	eP	Pn	00 54 54.0	+1.7
AGG	Agios Georgios	7.65	114	P	Pn	00 54 52.7	0.0
AGG	Agios Georgios	7.65	114	eP	Pn	00 54 53.4	+0.7
SOH	Sokhos	7.68	99	P	Pn	00 54 52.5	-0.6
SOH	Sokhos	7.68	99	eP	Pn	00 54 51.8	-1.3
EFP	Efpalio	7.69	119	P	Pn	00 54 54.8	+1.6
EFP	Efpalio	7.69	119	eP	Pn	00 54 54.7	+1.6
LIKS	Likavka	7.69	30	ePN	Pn	00 54 56.9	+3.8
UPR	University Cam	7.69	120	P	Pn	00 54 55.2	+2.0
ABSA	Djebel Ababsia	7.70	218	P	Pn	00 54 56.6	+3.2
ABSA	Djebel Ababsia	7.70	218	P	Pn	00 54 56.6	+3.2
THEF	They Montfort	7.72	320	P	Pn	00 54 52.3	-1.3
THEF	They Montfort	7.72	320	P	Pn	00 54 52.3	-1.3
THEF	They Montfort	7.72	320	P	Pn	00 54 52.3	-1.3

THEF	They Montfort	7.72	320	P	Pn	00 54 52.3	-1.3
NKC	Novy Kostel	7.76	356	eP	Pn	00 54 53.3	-0.9
NKC				e		00 56 16.1	
NKC	Novy Kostel	7.76	356	ePN	Pn	00 54 53.3	-0.9
NKC				eSN	Sn	00 56 16.1	-5.7
NKC	Novy Kostel	7.76	356	eP	Pn	00 54 53.3	-0.9
NKC				eS	Sn	00 56 16.1	-5.7
TOD	Tromm	7.78	338	P	Pn	00 54 53.9	-0.5
TOD				S	Sn	00 56 21.4	-0.8
TOD	Tromm	7.78	338	P	Pn	00 54 53.9	-0.5
TOD				S	Sn	00 56 21.4	-0.8
TOD	Tromm	7.78	338	P	Pn	00 54 53.9	-0.5
TOD				S	Sn	00 56 21.4	-0.8
LBL	Lubilhac	7.79	294	P	Pn	00 54 55.3	+0.6
LBL	Lubilhac	7.79	294	P	Pn	00 54 55.3	+0.6
LBL	Lubilhac	7.79	294	P	Pn	00 54 55.3	+0.6
LBL	Lubilhac	7.79	294	P	Pn	00 54 55.3	+0.6
TRIZ	Trizonia	7.83	119	P	Pn	00 54 57.0	+1.9
TRIZ	Trizonia	7.83	119	eP	Pn	00 54 57.2	+2.1
MORC	Moravsky Berou	7.84	20	⇓P	Pn	00 54 55.0	-0.3
MORC	Moravsky Berou	7.84	20	ePn	Pn	00 54 54.8	-0.4
MORC				eSn	Sn	00 56 20.4	-3.4
MORC	Moravsky Berou	7.84	20	⇓iP	Pn	00 54 55.0	-0.3
MORC	Moravsky Berou	7.84	20	ePn	Pn	00 54 54.8	-0.4
MORC				eSn	Sn	00 56 20.4	-3.4
LAKA	Lakka	7.84	120	eP	Pn	00 54 56.7	+1.4
KALE	Kalithea	7.86	119	eP	Pn	00 54 57.5	+1.9
PLG	Polygyros	7.88	102	P	Pn	00 54 54.6	-1.2
PLG	Polygyros	7.88	102	eP	Pn	00 54 55.1	-0.7
NVR	Nevrokopi	7.92	95	P	Pn	00 54 56.5	+0.1
NVR	Nevrokopi	7.92	95	eP	Pn	00 54 57.5	+1.1
SMF	Signal de Mont	7.95	305	ePn	Pn	00 54 56.2	-0.6
	SNR=1.0						
SMF				eSn	Sn	00 56 20.9	-5.6
	comp=Z,346nm,0.9s,SNR=1.0						
SMF	Signal de Mont	7.95	305	eP	Pn	00 54 56.2	-0.6
SMF				e		00 56 20.9	
SMF	Signal de Mont	7.95	305	ePn	Pn	00 54 56.2	-0.6
SMF				eSn	Sn	00 56 20.9	-5.6
SMF	Signal de Mont	7.95	305	eP	Pn	00 54 56.2	-0.6
SMF				eS	Sn	00 56 20.9	-5.6
CKFL	Kef-Lekhel	7.96	222	P	Pn	00 55 00.0	+3.0
CKFL	Kef-Lekhel	7.96	222	P	Pn	00 55 00.0	+3.0
AXAR	Agios Charalam	8.00	115	P	Pn	00 54 58.7	+1.2
OKC	Ostrava-Krasne	8.06	23	eP	Pn	00 54 57.7	-0.5
OKC				MLR	MLR		
	comp=Z,8µm,9.8s						
OKC	Ostrava-Krasne	8.06	23	ePN	Pn	00 54 57.7	-0.5
OKC				AMS	AMS	00 59 40.0	
	comp=Z,8µm,9.8s						
OKC	Ostrava-Krasne	8.06	23	eP	Pn	00 54 57.7	-0.5
	comp=Z,8µm,9.8s						
LOT	Lotru	8.07	65	⇓iP	Pn	00 54 59.8	+1.2
PVCC	Panska Ves	8.08	6	eP	Pn	00 54 57.5	-0.9
PVCC	Panska Ves	8.08	6	ePN	Pn	00 54 57.5	-0.9
PVCC	Panska Ves	8.08	6	eP	Pn	00 54 57.5	-0.9
PAGF	Fort de Pagny	8.08	321	ePn	Pn	00 54 57.6	-0.9
PAGF	Fort de Pagny	8.08	321	ePn	Pn	00 54 57.6	-0.9
PAGF	Fort de Pagny	8.08	321	ePn	Pn	00 54 57.6	-0.9
XOR	Xorichti	8.08	109	P	Pn	00 54 57.6	-1.0
AMT	Artemida-Makis	8.11	125	P	Pn	00 55 01.0	+2.0
AMT	Artemida-Makis	8.11	125	eP	Pn	00 55 01.6	+2.6
DPC	Dobruska-Polom	8.12	14	eP	Pn	00 54 57.3	-1.8
DPC				e		00 56 28.8	
DPC	Dobruska-Polom	8.12	14	ePn	Pn	00 54 57.3	-1.8
DPC				eSn	Sn	00 56 28.8	-1.8
DPC	Dobruska-Polom	8.12	14	ePN	Pn	00 54 57.2	-1.8
DPC				AMS	AMS	00 58 40.0	
	comp=Z,8µm,8.2s						
DPC	Dobruska-Polom	8.12	14	Pn	Pn	00 54 57.2	-1.8
DPC				eS	Sn	00 56 28.8	-1.8
PYM	Petit Puy Mans	8.12	297	P	Pn	00 55 00.0	+0.9
PYM	Petit Puy Mans	8.12	297	P	Pn	00 55 00.0	+0.9
PYM	Petit Puy Mans	8.12	297	P	Pn	00 55 00.0	+0.9
PYM	Petit Puy Mans	8.12	297	P	Pn	00 55 00.0	+0.9
AGO	Saint Agoulin	8.14	299	P	Pn	00 54 59.4	0.0
AGO	Saint Agoulin	8.14	299	P	Pn	00 54 59.4	0.0
AGO	Saint Agoulin	8.14	299	P	Pn	00 54 59.4	0.0
SFTF	Sexfontaines	8.17	317	ePn	Pn	00 54 59.2	-0.5
SFTF				eSn	Sn	00 56 25.8	-6.1
	comp=Z,1µm,1.3s						
SFTF	Sexfontaines	8.17	317	ePn	Pn	00 54 59.2	-0.5
SFTF				eSn	Sn	00 56 25.8	-6.1
SFTF	Sexfontaines	8.17	317	ePn	Pn	00 54 59.2	-0.5
SFTF				eSn	Sn	00 56 25.8	-6.1
	comp=Z,535nm,1.3s						
CASM	Ain Smara	8.18	223	P	Pn	00 55 02.9	+2.9
CASM	Ain Smara	8.18	223	P	Pn	00 55 02.9	+2.9
PAIG	Paliouri	8.20	105	P	Pn	00 54 58.5	-1.7
MTLF	Montolieu	8.21	280	ePn	Pn	00 54 58.8	-1.6
	SNR=1.0						
MTLF	Montolieu	8.21	280	eP	Pn	00 54 58.8	-1.6
MTLF	Montolieu	8.21	280	ePn	Pn	00 54 58.8	-1.6
MTLF	Montolieu	8.21	280	eP	Pn	00 54 58.8	-1.6
UPC	Upice	8.22	12	eP	Pn	00 54 58.7	-1.7
UPC	Upice	8.22	12	ePN	Pn	00 54 58.7	-1.7
UPC	Upice	8.22	12	eP	Pn	00 54 58.7	-1.7
MOX	Moxa	8.23	352	eP	Pn	00 54 58.1	-2.5
MOX				e		00 56 25.0	
MOX	Moxa	8.23	352	ePn	Pn	00 54 58.1	-2.5
MOX				eSn	Sn	00 56 25.0	-8.5
MOX	Moxa	8.23	352	eP	Pn	00 54 58.1	-2.5
MOX				eS	Sn	00 56 25.0	-8.5
LOR	Lormes	8.25	309	ePn	Pn	00 54 59.8	-1.1
	SNR=1.0						
LOR				eSn	Sn	00 56 27.4	-6.5
	comp=Z,116nm,0.6s,SNR=1.0						
LOR	Lormes	8.25	309	ePn	Pn	00 54 59.8	-1.1
LOR				eSn	Sn	00 56 27.4	-6.5
LOR	Lormes	8.25	309	eP	Pn	00 54 59.8	-1.1
LOR				eS	Sn	00 56 27.4	-6.5
GUR	Goura	8.25	121	P	Pn	00 55 01.8	+0.8
GUR	Goura	8.25	121	eP	Pn	00 55 02.3	+1.3
OUR	Ouranopolis	8.28	102	P	Pn	00 54 59.9	-1.3
ATAL	Atalanti	8.28	114	P	Pn	00 55 01.9	+0.6
LKR	Lokris	8.29	114	P	Pn	00 55 01.6	+0.1
LKR	Lokris	8.29	114	eP	Pn	00 55 01.5	+0.1
RAC	Raciborz	8.29	22	eP	Pn	00 55 04.0	+2.6
RAC	Raciborz	8.29	22	eP	Pn	00 55 04.0	+2.6
AVF	Avril sur Loir	8.32	304	ePn	Pn	00 55 00.9	-0.8
	SNR=1.0						
AVF	Avril sur Loir	8.32	304	eP	Pn	00 55 00.9	-0.8
AVF	Avril sur Loir	8.32	304	ePn	Pn	00 55 00.9	-0.8
AVF	Avril sur Loir	8.32	304	eP	Pn	00 55 00.9	-0.8
SSF	Saint Saulge	8.35	306	ePn	Pn	00 55 01.5	-0.8
	SNR=1.0						
SSF	Saint Saulge	8.35	306	eP	Pn	00 55 01.5	-0.8
SSF	Saint Saulge	8.35	306	ePn	Pn	00 55 01.5	-0.8
SSF	Saint Saulge	8.35	306	eP	Pn	00 55 01.5	-0.8
MEZF	Maizieres J'vi	8.36	319	ePn	Pn	00 55 01.9	-0.5
	SNR=1.0						
MEZF				eSn	Sn	00 56 31.3	-5.2
	comp=Z,581nm,0.8s,SNR=1.0						
MEZF	Maizieres J'vi	8.36	319	ePn	Pn	00 55 01.9	-0.5
MEZF				eSn	Sn	00 56 31.3	-5.2
MEZF	Maizieres J'vi	8.36	319	ePn	Pn	00 55 01.9	-0.5
	SNR=1.0						
MEZF				eSn	Sn	00 56 31.3	-5.2
	comp=Z,290nm,0.8s,SNR=1.0						
SKIA	Skiathos	8.36	110	P	Pn	00 55 02.4	0.0
BRG	Berggiesshubel	8.39	3	PN	Pn	00 55 00.4	-2.3
BRG				i		00 55 04.9	
BRG				i		00 55 13.6	
BRG				i		00 55 26.3	
BRG				i		00 56 10.8	
BRG	Berggiesshubel	8.39	3	SN	Sn	00 56 37.0	-0.2
BRG							
	comp=N,4µm,6.7s						
BRG							
	comp=E,7µm,7.6s						
BRG							
	comp=Z,7µm,9.5s						
BRG	Berggiesshubel	8.39	3	P	Pn	00 55 00.4	-2.3
BRG						00 56 37.0	
BRG				MLR	MLR		
	comp=E,4µm,7.6s						
BRG				MLR	MLR		
	comp=Z,7µm,9.5s						
BRG	Berggiesshubel	8.39	3	P	Pn	00 55 00.4	-2.3
BRG				S	Sn	00 56 37.0	-0.2
	comp=Z,7µm,9.5s						
ABH	Alteburg	8.41	333	P	Pn	00 55 02.1	-0.9

ABH	Alteburg	8.41	333	P	Pn	00 55 02.1	-0.9
RUP	Ruppelstein	8.42	331	P	Pn	00 55 03.0	-0.2
RUP	Ruppelstein	8.42	331	P	Pn	00 55 03.0	-0.2
RUP	Ruppelstein	8.42	331	P	Pn	00 55 03.0	-0.2
PLD	Plovdiv	8.43	89	P	Pn	00 55 03.8	+0.5
PLD	Plovdiv	8.43	89	P	Pn	00 55 03.8	+0.5
NIE	Niedzica	8.45	33	eP	Pn	00 55 07.2	+3.6
NIE				e		00 56 47.6	
NIE	Niedzica	8.45	33	eP	Pn	00 55 07.2	+3.6
NIE				eSn	Sn	00 56 47.6	+8.8
NIE	Niedzica	8.45	33	eP	Pn	00 55 07.2	+3.6
NIE				eS	Sn	00 56 47.6	+8.8
ITM	Ithomi	8.47	126	P	Pn	00 55 05.0	+1.1
ITM	Ithomi	8.47	126	eP	Pn	00 55 05.0	+1.1
KAVA	Kavala	8.48	96	P	Pn	00 55 03.7	-0.4
RZN	Rozhen	8.49	92	P	Pn	00 55 04.9	+0.5
CAF	Calviac	8.53	290	ePn	Pn	00 55 05.1	+0.4
	SNR=1.0						
CAF	Calviac	8.53	290	eP	Pn	00 55 05.1	+0.4
CAF	Calviac	8.53	290	ePn	Pn	00 55 05.1	+0.4
CAF	Calviac	8.53	290	eP	Pn	00 55 05.1	+0.4
BGF	Bois d'Agland	8.53	302	ePn	Pn	00 55 04.4	-0.3
	SNR=1.0						
BGF				eSn	Sn	00 56 35.2	-5.4
	comp=Z,234nm,0.9s,SNR=1.0						
BGF	Bois d'Agland	8.53	302	eP	Pn	00 55 04.4	-0.3
BGF				e		00 56 35.2	
BGF	Bois d'Agland	8.53	302	ePn	Pn	00 55 04.4	-0.3
BGF				eSn	Sn	00 56 35.2	-5.4
BGF	Bois d'Agland	8.53	302	eP	Pn	00 55 04.4	-0.3
BGF				eS	Sn	00 56 35.2	-5.4
PYL	PYLOS	8.55	128	P	Pn	00 55 04.6	-0.4
PYL	PYLOS	8.55	128	eP	Pn	00 55 05.8	+0.8
CRVS	Cervenica-Dubn	8.55	39	ePN	Pn	00 55 05.0	0.0
CRVS				e		00 55 50.7	
CRVS				e		00 57 40.2	
TRPA	Tarpa	8.58	46	⇑iP	Pn	00 55 06.1	+0.8
TRPA	Tarpa	8.58	46	⇓ePn	Pn	00 55 07.4	+2.1
KSP	Ksiaz	8.59	13	⇓eP	Pn	00 55 04.6	-0.9
KSP				e		00 56 40.0	
KSP	Ksiaz	8.59	13	eP	Pn	00 55 04.7	-0.8
KSP				eS	Sn	00 56 54.1	+12
KSP	Ksiaz	8.59	13	eP	Pn	00 55 04.6	-0.9
KSP				eS	Sn	00 56 40.0	-2.1
LTK	Loutraki	8.61	118	P	Pn	00 55 05.7	0.0
LTK	Loutraki	8.61	118	eP	Pn	00 55 05.8	0.0
VLX	Vlachokerasia	8.62	123	P	Pn	00 55 08.6	+2.5
VLX	Vlachokerasia	8.62	123	eP	Pn	00 55 09.0	+2.9
ARR	Arges	8.63	67	⇓iP	Pn	00 55 07.3	+1.1
AOS	Alonnisos	8.65	109	P	Pn	00 55 05.1	-1.2
AOS	Alonnisos	8.65	109	eP	Pn	00 55 04.4	-1.9
MRKA	Markates	8.66	113	P	Pn	00 55 05.9	-0.6
HUMR	Humele	8.70	73	⇑iP	Pn	00 55 07.0	+0.1
MDB	Medias	8.71	62	⇓P	Pn	00 55 09.1	+2.0
MDB	Medias	8.71	62	⇓iP	Pn	00 55 09.1	+2.0
MDB	Medias	8.71	62	P	Pn	00 55 09.1	+2.0
WLF	Walferdange	8.73	328	PN	Pn	00 55 08.3	+0.8
WLF				SN	Sn	00 56 45.3	-0.4
	comp=Z,118nm,0.0s						
WLF	Walferdange	8.73	328	ePn	Pn	00 55 08.5	+1.0
UZH	Uzhgorod	8.77	43	eP	Pn	00 55 05.7	-2.2
UZH				eS	Sn	00 56 41.5	-5.1
UZH				MLR	MLR		
	comp=N,9µm,10.0s						
UZH				MLR	MLR		
	comp=E,11µm,10.0s						
UZH				MLR	MLR		
	comp=Z,10µm,10.0s						
UZH	Uzhgorod	8.77	43	eP	Pn	00 55 05.7	-2.2
UZH				eS	Sn	00 56 41.5	-5.1
SET	Setif	8.80	227	P	Pn	00 55 12.0	+3.5
SET	Setif	8.80	227	P	Pn	00 55 12.0	+3.5
CLL	Collm	8.82	359	eP	Pn	00 55 08.0	-0.6
CLL				e		00 56 46.0	
CLL	Collm	8.82	359	ePn	Pn	00 55 08.0	-0.6
CLL				eSn	Sn	00 56 46.0	-1.7
CLL				eSb1		00 57 15.0	
CLL				eSg	Sg	00 57 49.0	+4.8
	comp=E,24µm,21.5s						
CLL				e		00 57 55.0	
CLL				Lmax		00 58 00.0	
CLL				L	L	00 58 24.0	
	comp=Z,4µm,21.8s						
CLL	Collm	8.82	359	eP	Pn	00 55 08.0	-0.6
CLL				eS	Sn	00 56 46.0	-1.7
TCF	Toulx Ste Croi	8.83	299	ePn	Pn	00 55 08.4	-0.4
	SNR=1.0						
TCF	Toulx Ste Croi	8.83	299	eP	Pn	00 55 08.4	-0.4
TCF	Toulx Ste Croi	8.83	299	ePn	Pn	00 55 08.4	-0.4
TCF	Toulx Ste Croi	8.83	299	eP	Pn	00 55 08.4	-0.4
PVL	Pavlikeni	8.84	81	P	Pn	00 55 07.7	-1.2
BMR	Baia Mare	8.85	51	⇓P	Pn	00 55 10.3	+1.3
BMR	Baia Mare	8.85	51	⇓iP	Pn	00 55 10.3	+1.3
BMR	Baia Mare	8.85	51	P	Pn	00 55 10.3	+1.3
ZIMR		8.87	78	⇑P	Pn	00 55 10.0	+0.6
ZIMR		8.87	78	⇑iP	Pn	00 55 10.0	+0.6
ZIMR		8.87	78	P	Pn	00 55 10.0	+0.6
OJC	Ojcow	8.91	28	eP	Pn	00 55 11.5	+1.6
OJC				e		00 56 53.9	
OJC	Ojcow	8.91	28	eP	Pn	00 55 11.5	+1.6
OJC				eSn	Sn	00 56 53.9	+3.8
OJC	Ojcow	8.91	28	eP	Pn	00 55 11.5	+1.6
OJC				eS	Sn	00 56 53.9	+3.8
VOIR		8.94	67	P	Pn	00 55 12.2	+1.9
VOIR		8.94	67	⇓iP	Pn	00 55 12.1	+1.8
VOIR		8.94	67	P	Pn	00 55 12.2	+1.9
KOLS	Kolonicke sedl	8.96	41	ePN	Pn	00 55 12.5	+1.9
KOLS				e		00 56 05.0	
KOLS				e		00 57 54.8	
HYF	Humbligny	8.97	306	ePn	Pn	00 55 09.2	-1.5
HYF	Humbligny	8.97	306	ePn	Pn	00 55 09.2	-1.5
HYF	Humbligny	8.97	306	ePn	Pn	00 55 09.2	-1.5
RJF	Les Rejaudoux	8.99	292	ePn	Pn	00 55 12.3	+1.3
	SNR=1.0						
RJF	Les Rejaudoux	8.99	292	eP	Pn	00 55 12.3	+1.3
RJF	Les Rejaudoux	8.99	292	ePn	Pn	00 55 12.3	+1.3
RJF	Les Rejaudoux	8.99	292	eP	Pn	00 55 12.3	+1.3
DYR	Agios Nikonas	8.99	127	P	Pn	00 55 12.6	+1.5
KDZ	Kurdzhali	9.02	91	P	Pn	00 55 09.9	-1.5
MLS	Moulis	9.03	277	P	Pn	00 55 11.4	-0.2
MLS	Moulis	9.03	277	P	Pn	00 55 11.4	-0.2
MLS	Moulis	9.03	277	P	Pn	00 55 11.4	-0.2
DID	Didima	9.08	120	eP	Pn	00 55 12.2	-0.1
NAIG	Nisos Aigina	9.10	118	eP	Pn	00 55 13.2	+0.7
ATH	Athens Observa	9.13	116	eP	Pn	00 55 12.3	-0.6
PTL	Penteli	9.18	115	P	Pn	00 55 12.4	-1.3
PTL	Penteli	9.18	115	eP	Pn	00 55 12.7	-1.0
SZH	Strazhica	9.27	81	P	Pn	00 55 15.0	+0.1
LIA	Limnos Island	9.29	102	P	Pn	00 55 14.4	-0.7
LIA	Limnos Island	9.29	102	eP	Pn	00 55 15.4	+0.3
DOPR	Dopca	9.31	64	⇓iP	Pn	00 55 17.1	+1.7
CIOR	Ciorogarla	9.32	74	⇓iP	Pn	00 55 17.2	+1.7
VLI	Veliai	9.38	125	P	Pn	00 55 18.8	+2.4
VLI	Veliai	9.38	125	eP	Pn	00 55 19.1	+2.7
BUC1	Bucharest	9.41	74	P	Pn	00 55 18.3	+1.5
BUC1	Bucharest	9.41	74	⇑iP	Pn	00 55 18.0	+1.2
BUC1	Bucharest	9.41	74	P	Pn	00 55 18.3	+1.5
LFF	La Frestale	9.45	289	ePn	Pn	00 55 17.9	+0.6
	SNR=1.0						
LFF	La Frestale	9.45	289	eP	Pn	00 55 17.9	+0.6
LFF	La Frestale	9.45	289	ePn	Pn	00 55 17.9	+0.6
LFF	La Frestale	9.45	289	eP	Pn	00 55 17.9	+0.6
BVCR	Bucharest-Old	9.47	74	⇑iP	Pn	00 55 18.9	+1.3
SECR		9.55	70	⇑iP	Pn	00 55 19.9	+1.3
MEM	Membach	9.55	331	PN	Pn	00 55 19.2	+0.6
MEM				SN	Sn	00 56 59.6	-6.2
	comp=E,57nm,0.0s						
MLR	Muntele Rosu	9.56	67	Pn	Pn	00 55 20.0	+1.1
MLR				Sn	Sn	00 57 05.4	-0.8
MLR				Lg	Lg	00 58 07.1	
MLR	Muntele Rosu	9.56	67	Pn	Pn	00 55 20.0	+1.1
	baz=211,slow=5.9						
MLR				Sn	Sn	00 57 05.4	-0.8
	comp=E,0.2nm,0.3s,baz=30,slow=20,SNR=1.5						
MLR				Lg	Lg	00 58 07.1	
	baz=66,slow=19,SNR=2.3						
MLR				LR	LR	00 59 13.2	
	comp=E,4µm,21.7s,baz=255,slow=39						
MLR	Muntele Rosu	9.56	67	P	Pn	00 55 20.0	+1.1
	comp=E,4µm,21.7s						
MLR				S	Sn	00 57 05.4	-0.8

CLF	Chambon-Foret	9.56	309	eP	Pn	00 55 21.8	+3.0
CLF	Chambon-Foret	9.56	309	eP	Pn	00 55 21.8	+3.0
EPF	Esparros	9.58	278	ePn	Pn	00 55 16.8	-2.4
EPF				eSn	Sn	00 56 59.2	-7.5
	comp=E,87nm,1.2s						
EPF	Esparros	9.58	278	eP	Pn	00 55 16.8	-2.4
EPF				e		00 56 59.2	
EPF	Esparros	9.58	278	ePn	Pn	00 55 16.8	-2.4
EPF				eSn	Sn	00 56 59.2	-7.5
EPF	Esparros	9.58	278	eP	Pn	00 55 16.8	-2.4
EPF				eS	Sn	00 56 59.2	-7.5
RESF	Ens	9.59	276	P	Pn	00 55 20.8	+1.4
RESF	Ens	9.59	276	P	Pn	00 55 20.8	+1.4
RESF	Ens	9.59	276	P	Pn	00 55 20.8	+1.4
GIVF	Givet	9.62	325	ePn	Pn	00 55 19.8	+0.2
GIVF				eSn	Sn	00 56 59.8	-7.6
	comp=E,1µm,1.5s						
GIVF	Givet	9.62	325	eP	Pn	00 55 19.8	+0.2
GIVF				e		00 56 59.8	
GIVF	Givet	9.62	325	ePn	Pn	00 55 19.8	+0.2
GIVF				eSn	Sn	00 56 59.8	-7.6
GIVF	Givet	9.62	325	eP	Pn	00 55 19.8	+0.2
GIVF				eS	Sn	00 56 59.8	-7.6
SULR		9.62	73	⇑iP	Pn	00 55 18.2	-1.4
ALN	Alexandroupoli	9.63	95	P	Pn	00 55 19.8	0.0
ALN	Alexandroupoli	9.63	95	eP	Pn	00 55 19.4	-0.4
KWP	Kalwaria Pacla	9.65	39	⇓P	Pn	00 55 22.7	+2.7
KWP	Kalwaria Pacla	9.65	39	⇓iP	Pn	00 55 22.7	+2.7
KWP	Kalwaria Pacla	9.65	39	ePb	Pn	00 55 22.8	+2.7
KWP				eP		00 55 24.7	
KWP				eS	Sn	00 57 17.8	+10
KWP	Kalwaria Pacla	9.65	39	P	Pn	00 55 22.7	+2.7
BCLA	Clavier	9.67	328	PN	Pn	00 55 21.0	+0.8
BCLA				SN	Sn	00 56 58.0	-11
	comp=E,43nm,0.0s						
HGN	Heimansgroeve	9.71	331	eP	Pn	00 55 21.9	+1.1
	comp=E,62nm,1.1s						
HGN				eS	Sn	00 57 06.9	-2.6
DOU	Dourbes	9.71	324	PN	Pn	00 55 22.0	+1.2
DOU				SN	Sn	00 57 09.1	-0.6
	comp=E,72nm,0.0s						
KYTH	Kithira	9.73	126	eP	Pn	00 55 24.8	+3.6
ALAS	Alassa	9.74	189	iP	Pn	00 55 28.0	+6.7
	comp=E,378nm,1.5s,SNR=34						
ENEZ	Enez	9.75	96	eP	Pn	00 55 20.9	-0.5
LABF	Labassere	9.78	278	P	Pn	00 55 24.0	+2.1
LABF	Labassere	9.78	278	P	Pn	00 55 24.0	+2.1
LABF	Labassere	9.78	278	P	Pn	00 55 24.0	+2.1
JMB	Yambol	9.78	86	P	Pn	00 55 21.8	0.0
VIEF	Viey	9.82	277	P	Pn	00 55 23.9	+1.4
VIEF	Viey	9.82	277	P	Pn	00 55 23.9	+1.4
VIEF	Viey	9.82	277	P	Pn	00 55 23.9	+1.4
BEBN	Eben Emael	9.83	330	PN	Pn	00 55 24.4	+2.0
BURAR	Bucovina Array	9.83	55	P	Pn	00 55 24.9	+2.3
BURAR	Bucovina Array	9.83	55	⇓iP	Pn	00 55 24.5	+1.9
BUR08	Bucovina Ar. S	9.83	54	ePn	Pn	00 55 24.0	+1.4
BUR08	Bucovina Ar. S	9.83	54	ePn	Pn	00 55 24.0	+1.4
BAIF	Baives	9.85	323	ePn	Pn	00 55 22.2	-0.6
	SNR=1.0						
BAIF				eSn	Sn	00 57 05.2	-7.9
	comp=E,231nm,1.0s						
BAIF	Baives	9.85	323	eP	Pn	00 55 22.2	-0.6
BAIF				e		00 57 05.2	
BAIF	Baives	9.85	323	ePn	Pn	00 55 22.2	-0.6
BAIF				eSn	Sn	00 57 05.2	-7.9
BAIF	Baives	9.85	323	eP	Pn	00 55 22.2	-0.6
BAIF				eS	Sn	00 57 05.2	-7.9
BUG	Bochum--Univer	9.86	337	eP	Pn	00 55 26.3	+3.5
BUG	Bochum--Univer	9.86	337	ePn	Pn	00 55 26.3	+3.5
BUG	Bochum--Univer	9.86	337	eP	Pn	00 55 26.3	+3.5
ISR	Istrita	9.89	70	⇑P	Pn	00 55 24.6	+1.1
ISR	Istrita	9.89	70	⇑iP	Pn	00 55 24.5	+1.1
ISR	Istrita	9.89	70	P	Pn	00 55 24.6	+1.1
EDRB	Edirne	9.97	89	eP	Pn	00 55 24.3	-0.1
GELI	Tayfur-Gelibol	10.08	98	eP	Pn	00 55 25.7	-0.2
REYF	Montagne du Re	10.12	278	P	Pn	00 55 27.5	+0.9
REYF	Montagne du Re	10.12	278	P	Pn	00 55 27.5	+0.9
REYF	Montagne du Re	10.12	278	P	Pn	00 55 27.5	+0.9
PLOR	Plostina	10.13	66	P	Pn	00 55 27.7	+1.1
PLOR	Plostina	10.13	66	⇑iP	Pn	00 55 27.3	+0.7
PLOR	Plostina	10.13	66	P	Pn	00 55 27.7	+1.1
EZN	Ezine	10.14	101	eP	Pn	00 55 26.8	0.0
SNF	Seneffe	10.15	325	PN	Pn	00 55 28.7	+1.9
PGOR	Pogoanele	10.17	72	⇑iP	Pn	00 55 28.8	+1.7
VRI	Vrincioaia	10.18	66	P	Pn	00 55 28.5	+1.1
VRI	Vrincioaia	10.18	66	⇑iP	Pn	00 55 28.0	+0.6
VRI	Vrincioaia	10.18	66	P	Pn	00 55 28.5	+1.1
EMHD	Djebel Mahouad	10.21	235	P	Pn	00 55 24.3	-3.6
EMHD	Djebel Mahouad	10.21	235	P	Pn	00 55 24.3	-3.6
GRER		10.24	69	⇓iP	Pn	00 55 30.7	+2.5
ETSF	Etsaut	10.25	277	ePn	Pn	00 55 27.9	-0.4
	SNR=1.0						
ETSF	Etsaut	10.25	277	eP	Pn	00 55 27.9	-0.4
ETSF	Etsaut	10.25	277	ePn	Pn	00 55 27.9	-0.4
ETSF	Etsaut	10.25	277	eP	Pn	00 55 27.9	-0.4
LMSR	Misrath	10.25	172	iP	Pn	00 55 31.6	+3.3
	SNR=34						
LPK	Lapseki	10.29	97	eP	Pn	00 55 31.3	+2.4
TESR		10.31	63	⇓iP	Pn	00 55 30.6	+1.5
PRK	Paraskevi	10.31	104	P	Pn	00 55 26.9	-2.2
PRK	Paraskevi	10.31	104	eP	Pn	00 55 28.6	-0.5
PRAR	RASCA	10.34	58	⇓iP	Pn	00 55 31.6	+2.1
PRD	Provadia	10.35	81	P	Pn	00 55 29.3	-0.3
GHAR	Gharyan	10.36	181	iP	Pn	00 55 35.1	+5.2
	comp=E,307nm,1.6s,SNR=34						
AMRR	Amara	10.37	74	⇓P	Pn	00 55 31.6	+1.7
AMRR	Amara	10.37	74	⇓iP	Pn	00 55 31.6	+1.7
AMRR	Amara	10.37	74	P	Pn	00 55 31.6	+1.7
LVV	L'vov	10.41	42	diP	Pn	00 55 33.7	+3.3
LVV				eS	Sn	00 57 35.0	+8.2
LVV				MLR	MLR		
	comp=Z,5µm,11.0s						
LVV	L'vov	10.41	42	iP	Pn	00 55 33.7	+3.3
	comp=Z,5µm,11.0s						
LVV				eS	Sn	00 57 35.0	+8.2
WTSB	Winterswijk	10.46	337	eP	Pn	00 55 33.9	+2.9
	comp=Z,57nm,0.8s						
MFF	Saint Martin d	10.47	298	ePn	Pn	00 55 33.5	+2.3
	SNR=1.0						
MFF	Saint Martin d	10.47	298	eP	Pn	00 55 33.5	+2.3
MFF	Saint Martin d	10.47	298	ePn	Pn	00 55 33.5	+2.3
MFF	Saint Martin d	10.47	298	eP	Pn	00 55 33.5	+2.3
PETR		10.49	67	⇓iP	Pn	00 55 33.2	+1.7
CHOS	Chios island	10.52	109	P	Pn	00 55 30.4	-1.6
CHOS	Chios island	10.52	109	eP	Pn	00 55 31.5	-0.5
RKY	Sarkoy-Tekirda	10.52	95	eP	Pn	00 55 32.1	+0.1
LARF	Larrau	10.56	278	P	Pn	00 55 34.1	+1.6
LARF	Larrau	10.56	278	P	Pn	00 55 34.1	+1.6
LARF	Larrau	10.56	278	P	Pn	00 55 34.1	+1.6
MFT	Murefte	10.57	95	eP	Pn	00 55 32.7	0.0
BEL	Belsk	10.62	26	eP	Pn	00 55 36.4	+3.1
BEL				eS	Sn	00 57 48.3	+16
KRBG	Karabiga-Canak	10.68	97	eP	Pn	00 55 33.7	-0.5
GHRR		10.69	66	⇓iP	Pn	00 55 35.7	+1.4
TKR	Tekirdag	10.71	93	eP	Pn	00 55 35.0	+0.5
SJPF	Ste Jean	10.73	278	ePn	Pn	00 55 33.5	-1.3
	SNR=1.0						
SJPF	Ste Jean	10.73	278	eP	Pn	00 55 33.5	-1.3
SJPF	Ste Jean	10.73	278	ePn	Pn	00 55 33.5	-1.3
SJPF	Ste Jean	10.73	278	eP	Pn	00 55 33.5	-1.3
APE	Apeiranthos	10.83	116	eP	Pn	00 55 39.7	+3.5
APE	Apeiranthos	10.83	116	⇓P	Pn	00 55 35.7	-0.5
APE	Apeiranthos	10.83	116	⇓iP	Pn	00 55 35.7	-0.5
APE	Apeiranthos	10.83	116	eP	Pn	00 55 35.0	-1.2
APE	Apeiranthos	10.83	116	P	Pn	00 55 35.7	-0.5
CRLT	Corlu	10.83	92	eP	Pn	00 55 36.4	+0.2
PSN	Preselentsi	10.92	79	P	Pn	00 55 36.6	-0.8
CFR	Carcaliu	11.02	71	⇓P	Pn	00 55 37.8	-0.9
CFR	Carcaliu	11.02	71	⇓iP	Pn	00 55 37.8	-0.9
CFR	Carcaliu	11.02	71	P	Pn	00 55 37.8	-0.9
VAM	Vamos	11.02	126	P	Pn	00 55 40.9	+2.1
EBNR	Beni Rached	11.04	240	P	Pn	00 55 40.0	+0.8
EBNR	Beni Rached	11.04	240	P	Pn	00 55 40.0	+0.8
GONE	Gonen-Balikesi	11.07	98	eP	Pn	00 55 39.7	+0.2
GKP	Gorka Klasztor	11.09	12	eP	Pn	00 55 41.8	+2.2
GKP				eS	Sn	00 57 37.0	-6.3
EDC	Edincik	11.11	96	eP	Pn	00 55 42.0	+1.9
TIRR	Tirgusor	11.12	75	P	Pn	00 55 40.1	-0.1
TIRR	Tirgusor	11.12	75	ePn	Pn	00 55 39.5	-0.7
TIRR	Tirgusor	11.12	75	⇑iP	Pn	00 55 39.5	-0.7
TIRR	Tirgusor	11.12	75	ePn	Pn	00 55 39.5	-0.7
TIRR	Tirgusor	11.12	75	P	Pn	00 55 40.1	-0.1
BNT	Bandirma	11.15	96	eP	Pn	00 55 40.5	-0.1
SLVT	Silivri	11.16	92	eP	Pn	00 55 40.9	+0.2
BLCB	Balcova	11.21	107	eP	Pn	00 55 41.5	0.0
ECHA	Ech Chlef	11.23	240	P	Pn	00 55 42.3	+0.6
ECHA	Ech Chlef	11.23	240	P	Pn	00 55 42.3	+0.6
LDF	La Druitiere	11.23	307	ePn	Pn	00 55 40.1	-1.6
LDF	La Druitiere	11.23	307	eP	Pn	00 55 40.1	-1.6
LDF	La Druitiere	11.23	307	ePn	Pn	00 55 40.1	-1.6
LDF	La Druitiere	11.23	307	eP	Pn	00 55 40.1	-1.6
BALB	Balikesir	11.34	100	eP	Pn	00 55 42.8	-0.4
LEOM	Leova	11.36	64	⇓P	Pn	00 55 44.7	+1.3
LEOM	Leova	11.36	64	⇓iP	Pn	00 55 44.7	+1.3
LEOM	Leova	11.36	64	P	Pn	00 55 44.7	+1.3
IZM	Izmir	11.37	106	eP	Pn	00 55 45.8	+2.2
CTKS	Kestanelik-??a	11.38	91	eP	Pn	00 55 42.5	-1.2
TLCR		11.49	71	P	Pn	00 55 45.7	+0.5
TLCR		11.49	71	⇓iP	Pn	00 55 45.5	+0.3
TLCR		11.49	71	P	Pn	00 55 45.7	+0.5
IDI	Anoyia	11.51	125	ePn	Pn	00 55 46.1	+0.5
IDI				eSn	Sn	00 57 48.5	-5.6
IDI	Anoyia	11.51	125	eP	Pn	00 55 45.3	-0.3
IDI	Anoyia	11.51	125	ePn	Pn	00 55 46.1	+0.5
IDI				eSn	Sn	00 57 48.5	-5.6
FLN	La Foliniere	11.52	308	ePn	Pn	00 55 44.3	-1.3
FLN	La Foliniere	11.52	308	eP	Pn	00 55 44.3	-1.3
FLN	La Foliniere	11.52	308	ePn	Pn	00 55 44.3	-1.3
FLN	La Foliniere	11.52	308	eP	Pn	00 55 44.3	-1.3
EANR	'Ain N'Sour	11.53	239	P	Pn	00 55 42.5	-3.3
EANR	'Ain N'Sour	11.53	239	P	Pn	00 55 42.5	-3.3
AKS	Akhisar	11.56	103	eP	Pn	00 55 47.3	+1.1
GRR	Gorron	11.58	305	ePn	Pn	00 55 44.5	-1.9
	SNR=1.0						
GRR	Gorron	11.58	305	eP	Pn	00 55 44.5	-1.9
GRR	Gorron	11.58	305	ePn	Pn	00 55 44.5	-1.9
GRR	Gorron	11.58	305	eP	Pn	00 55 44.5	-1.9
BGKT	Bogazkoy	11.59	91	eP	Pn	00 55 46.0	-0.5
LSRT	Sirt	11.70	166	iP	Pn	00 55 49.2	+1.1
	comp=Z,151nm,1.3s,SNR=34						
ETRT	Tiaret	11.76	237	P	Pn	00 55 50.2	+1.2
ETRT	Tiaret	11.76	237	P	Pn	00 55 50.2	+1.2
ARMT	Armutlu	11.79	94	eP	Pn	00 55 49.2	-0.2
ISK	Istanbul-Kandi	11.82	92	eP	Pn	00 55 50.3	+0.6
MDNY	Mudanya-Bursa	11.86	95	eP	Pn	00 55 46.8	-3.5
KIS	Kishinev	11.88	62	eP	Pn	00 55 49.0	-1.5
KIS				eS	Sn	00 58 00.0	-2.9
KIS				pmax	pmax		
	comp=Z,2µm,2.6s						
KIS				pmax	pmax		
	comp=Z,3µm,3.6s						
KIS				pmax	pmax		
	comp=Z,3µm,3.6s						
KIS				MLR	MLR		
	comp=E,10µm,13.0s						
KIS				MLR	MLR		
	comp=Z,14µm,13.0s						
KIS				MLR	MLR		
	comp=N,8µm,11.0s						
KIS				MLR	MLR		
	comp=Z,13µm,14.0s						
KIS	Kishinev	11.88	62	eP	Pn	00 55 49.0	-1.5
	comp=Z,3µm,3.6s						
KIS	Kishinev	11.88	62	iPP	Pn	00 55 57.0	+6.5
KIS				eS	Sn	00 58 00.0	-2.9
KIS				eLi		00 58 48.0	
KIS				iLg1		00 59 06.0	
KIS				iLg2		00 59 33.0	
KIS				eRg	Rg	01 00 12.0	
KIS				LRM	MLR	01 01 10.0	
	comp=Z,8µm,11.0s						
KIS	Kishinev	11.88	62	⇑iP	Pn	00 55 52.2	+1.7
KIS	Kishinev	11.88	62	eP	Pn	00 55 49.0	-1.5
	comp=Z,3µm,3.6s						
KIS				eS	Sn	00 58 00.0	-2.9
	comp=Z,13µm,14.0s						
DST	Dursunbey	11.89	99	eP	Pn	00 55 50.5	-0.2
NPS	Neapolis	11.97	123	eP	Pn	00 55 51.7	-0.2
BODT	Bodrum	12.03	112	eP	Pn	00 55 55.3	+2.7
CART	Cartagena	12.04	251	iP	Pn	00 55 52.7	0.0
GEMT	Gemlik	12.06	95	eP	Pn	00 55 52.4	-0.7
YLV	Yalova	12.17	94	eP	Pn	00 55 53.8	-0.8
SILT	Sile	12.23	91	eP	Pn	00 55 55.3	-0.1
MLSB	Milas	12.24	110	eP	Pn	00 55 58.5	+3.1
KULA	Kula-Manisa	12.31	104	eP	Pn	00 55 58.8	+2.2
HRT	Hereke	12.32	92	eP	Pn	00 55 55.6	-1.1
LSHF	Shwairf	12.51	176	iP	Pn	00 56 01.2	+2.0
	SNR=34						
TVSB	Tavsanli	12.55	99	eP	Pn	00 56 00.1	+0.2
SGMF	Saint Gilles	12.57	303	ePn	Pn	00 55 56.5	-3.4
	SNR=1.0						
SGMF	Saint Gilles	12.57	303	eP	Pn	00 55 56.5	-3.4
SGMF	Saint Gilles	12.57	303	ePn	Pn	00 55 56.5	-3.4
SGMF	Saint Gilles	12.57	303	eP	Pn	00 55 56.5	-3.4
CAVI	Cavuskoy	12.61	95	eP	Pn	00 56 01.5	+0.9
YER	Yerkesik	12.67	110	eP	Pn	00 56 05.5	+4.1
BSD	Bornholm Skovb	12.67	4	iP	Pn	00 56 02.8	+1.6
BSD				pmax	pmax		
	comp=Z,16nm,1.0s						
BSD	Bornholm Skovb	12.67	4	iP	Pn	00 56 02.8	+1.6
	comp=Z,16nm,1.0s						
BSD	Bornholm Skovb	12.67	4	iP	Pn	00 56 02.8	+1.6
	comp=Z,16nm,1.0s						
SPNC	Sapanca-Adapaz	12.83	92	eP	Pn	00 56 04.2	+0.6
QUIF	Quistinic	12.84	301	ePn	Pn	00 56 00.4	-3.2
	SNR=1.0						
QUIF	Quistinic	12.84	301	eP	Pn	00 56 00.4	-3.2
QUIF	Quistinic	12.84	301	ePn	Pn	00 56 00.4	-3.2
QUIF	Quistinic	12.84	301	eP	Pn	00 56 00.4	-3.2
LGHD	Ghdames	12.85	195	iP	Pn	00 56 08.1	+4.2
	comp=Z,347nm,1.4s,SNR=34						
LLD	Lille Linde	12.87	357	iP	Pn	00 56 05.0	+1.1
LLD				pmax	pmax		
	comp=Z,50nm,0.9s						
LLD	Lille Linde	12.87	357	iP	Pn	00 56 05.0	+1.1
	comp=Z,50nm,0.8s						
LLD	Lille Linde	12.87	357	iP	Pn	00 56 05.0	+1.1
	comp=Z,50nm,0.9s						
DENT	Denizli	12.90	106	eP	Pn	00 56 03.4	-1.2
ARG	Arkhangelos	13.04	114	eP	Pn	00 56 07.4	+1.0
GULT	Gulveren	13.04	93	eP	Pn	00 56 07.9	+1.3
ROSF	Rostrenen	13.04	302	ePn	Pn	00 55 59.3	-7.1
ROSF	Rostrenen	13.04	302	eP	Pn	00 55 59.3	-7.1
ROSF	Rostrenen	13.04	302	ePn	Pn	00 55 59.3	-7.1
ALT	Altintas	13.16	100	eP	Pn	00 56 08.7	+0.5
COP	Copenhagen	13.21	358	iP	Pn	00 56 09.3	+0.7
COP				pmax	pmax		
	comp=Z,17nm,1.0s						
COP	Copenhagen	13.21	358	iP	Pn	00 56 09.3	+0.7
	comp=Z,17nm,1.0s						
COP	Copenhagen	13.21	358	iP	Pn	00 56 09.3	+0.7
	comp=Z,17nm,1.0s						
SUW	Suwalki	13.24	26	eP	Pn	00 56 09.5	+0.5
SUW	Suwalki	13.24	26	ePn	Pn	00 56 09.5	+0.5
SUW	Suwalki	13.24	26	eP	Pn	00 56 09.5	+0.5
SUW				eS	S	00 58 51.6	-8.9
SUW	Suwalki	13.24	26	eP	Pn	00 56 09.5	+0.5
ESDC	Sonseca Array	13.36	264	Pn	Pn	00 56 09.3	-1.5
ESDC	Sonseca Array	13.36	264	Pn	Pn	00 56 09.3	-1.5
	comp=Z,0.4nm,0.3s,baz=68,slow=14,SNR=54						
ESDC				LR	LR	01 00 59.9	
	comp=Z,3µm,20.8s,baz=70,slow=36						
ESDC	Sonseca Array	13.36	264	Pn	Pn	00 56 09.3	-1.5
LTBQ	Tobruq	13.39	138	iP	Pn	00 56 04.2	-7.0
	SNR=34						
FETY	Fethiye	13.47	111	eP	Pn	00 56 17.0	+4.6
LJFR	Jufra	13.52	171	iP	Pn	00 56 13.4	+0.4
	SNR=34						
KDZE	Karadeniz Ereo	13.53	89	eP	Pn	00 56 15.5	+2.3
MDUB	Mudurnu	13.54	93	eP	Pn	00 56 15.1	+1.8
ESKT	Eskisehir	13.55	97	eP	Pn	00 56 13.5	0.0
KIEV	Kiev	13.62	48	eP	Pn	00 56 14.5	+0.2
KIEV				e		00 58 52.6	
KIEV	Kiev	13.62	48	ePn	Pn	00 56 14.5	+0.2
KIEV				eSn	Sn	00 58 52.6	+7.3
KIEV	Kiev	13.62	48	eP	Pn	00 56 14.5	+0.2
AKASG	Malin Array Be	13.63	48	P	Pn	00 56 13.1	-1.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG				MLR	MLR		
	comp=Z,4µm,20.3s						
AKASG	Malin Array Be	13.63	48	Pn	Pn	00 56 13.1	-1.3
AKASG	Malin Array Be	13.63	48	Pn	Pn	00 56 13.1	-1.3
	comp=Z,1.0nm,0.3s,baz=239,slow=13,SNR=7.1						
AKASG				LR	LR	01 02 02.2	
	comp=Z,4µm,20.3s,baz=235,slow=40						
AKASG	Malin Array Be	13.63	48	P	Pn	00 56 13.1	-1.3
	comp=Z,4µm,20.3s						
SHUT	Suhut-Afyon	13.67	101	eP	Pn	00 56 15.6	+0.6
PAB	San Pablo	13.68	263	eP	Pn	00 56 14.2	-1.1
PAB	San Pablo	13.68	263	ePn	Pn	00 56 14.2	-1.1
PAB	San Pablo	13.68	263	eP	Pn	00 56 14.2	-1.1
ISP	Isparta	13.94	104	eP	Pn	00 56 19.3	+0.5
ELL	Elmali	13.99	109	eP	Pn	00 56 22.3	+2.8
SVRH	Sivrihisar-ESK	14.07	96	eP	Pn	00 56 17.0	-3.6
BCK	Bucak	14.14	105	eP	Pn	00 56 22.0	+0.5
MUD	Monsted U'grnd	14.23	351	eP	P	00 56 28.0	-1.8
MUD				pmax	pmax		
	comp=Z,16nm,0.7s						
MUD	Monsted U'grnd	14.23	351	iP	P	00 56 28.0	-1.8
	comp=Z,16nm,0.7s						
MUD	Monsted U'grnd	14.23	351	eP	P	00 56 28.0	-1.8
	comp=Z,16nm,0.7s						
LZLA	Zalla	14.33	165	iP	Pn	00 56 26.8	+2.7
	comp=Z,424nm,1.3s,SNR=45						
ANTB	Antalya	14.44	107	eP	Pn	00 56 28.7	+3.1
SAFT	Safranbolu	14.47	88	eP	Pn	00 56 26.9	+1.0
MELI	Melilla	14.56	246	iP	Pn	00 56 26.6	-0.7
MELI				iS	S	00 59 20.4	-7.4
LUJL	Ujela	14.82	152	iP	Pn	00 56 30.5	-0.2
	SNR=45						
EMAL	Malaga-Limoner	14.84	253	iP	Pn	00 56 32.1	+1.1
EMAL				eS	S	00 59 29.1	-4.3
LOD	Lodumlu	14.85	94	eP	Pn	00 56 31.2	0.0
PBRG	Braganca	14.92	274	eP	Pn	00 56 33.1	+1.0
	comp=Z,125nm,1.6s						
PBRG	Braganca	14.92	274	eP	Pn	00 56 33.1	+1.0
	comp=Z,125nm,1.6s						
LADK	Ladik-KONYA	15.12	100	eP	Pn	00 56 35.4	+0.5
AFSR	Af¯ar-Bala (A	15.21	95	eP	Pn	00 56 36.5	+0.5
SIM	Simferopol'	15.21	74	eP	Pn	00 56 36.0	+0.1
SIM				eS	Sn	00 59 26.0	+1.8
SIM				pmax	pmax		
	comp=Z,61nm,1.2s						
SIM				MLR	MLR		
	comp=Z,3µm,18.1s						
SIM	Simferopol'	15.21	74	eP	Pn	00 56 36.0	+0.1
	comp=Z,61nm,1.2s						
SIM				eS	Sn	00 59 26.0	+1.8
	comp=Z,3µm,18.1s						
KONT	Konya--Tatoy	15.21	101	eP	Pn	00 56 36.7	+0.7
NACGM	Naroch	15.22	31	eP	Pn	00 56 33.0	-2.9
MVO	Moncorvo	15.25	272	eP	Pn	00 56 35.6	-0.9
	comp=Z,88nm,1.5s						
MVO				eLR	LR	01 00 54.6	
	comp=Z,3µm,20.0s						
MVO	Moncorvo	15.25	272	eP	Pn	00 56 35.6	-0.9
	comp=Z,88nm,1.5s						
CANT	Cankiri	15.30	90	eP	Pn	00 56 37.8	+0.6
BZK	Bozkurt	15.31	85	eP	Pn	00 56 35.9	-1.4
MNK	Minsk	15.34	33	eP	Pn	00 56 33.0	-4.5
MNK				eS	Sn	00 59 22.0	-5.0
MNK				pmax	pmax		
	comp=Z,170nm,1.2s						
MNK				pmax	pmax		
	comp=N,250nm,1.2s						
MNK				pmax	pmax		
	comp=E,320nm,1.0s						
MNK				MLR	MLR		
	comp=N,12µm,8.0s						
MNK				MLR	MLR		
	comp=Z,12µm,8.0s						
MICGM	Minsk	15.36	34	⇓eP	Pn	00 56 33.0	-4.7
IIGN	Ignalina	15.36	29	eP	Pn	00 56 37.0	-0.8
IIGN				AMB	AMB	00 56 42.2	
	comp=Z,139nm,1.4s						
TOS	Tosya	15.50	88	eP	P	00 56 43.3	-0.9
ISAL	Salakas	15.50	28	eP	Pn	00 56 38.3	-1.3
ISAL				AMB	AMB	00 56 43.7	
	comp=Z,47nm,1.2s						
BRTR	Keskin Array B	15.54	93	Pn	Pn	00 56 40.6	+0.2
BRTR	Keskin Array B	15.54	93	Pn	Pn	00 56 40.6	+0.2
	comp=Z,0.2nm,0.3s,baz=283,slow=11,SNR=22						
BRTR				LR	LR	01 02 57.6	
	comp=Z,2µm,18.3s,baz=285,slow=38						
BRTR	Keskin Array B	15.54	93	P	Pn	00 56 40.7	+0.2
	comp=Z,2µm,18.3s						
IZAR	Zarasai	15.68	28	eP	Pn	00 56 40.5	-1.5
IZAR				AMB	AMB	00 56 50.1	
	comp=Z,80nm,0.9s						
KAMT	Kaman	15.70	95	eP	Pn	00 56 42.9	+0.3
PVRL	Vila Real	15.73	273	eP	P	00 56 47.1	+0.3
	comp=Z,107nm,1.8s						
PVRL	Vila Real	15.73	273	eP	P	00 56 47.1	+0.3
	comp=Z,107nm,1.8s						
POLO	Lamas de Olo	15.77	273	eP	P	00 56 48.3	+1.0
	comp=Z,71nm,1.7s						
POLO	Lamas de Olo	15.77	273	eP	P	00 56 48.3	+1.0
	comp=Z,71nm,1.7s						
MTE	Manteigas	15.80	269	eP	Pn	00 56 44.0	+0.2
	comp=Z,119nm,1.1s						
MTE				eLR	LR	01 01 12.2	
	comp=Z,4µm,18.0s						
MTE	Manteigas	15.80	269	ePn	Pn	00 56 42.8	-0.9
	comp=Z,72nm,1.0s						
MTE	Manteigas	15.80	269	ePn	Pn	00 56 42.8	-0.9
	comp=Z,72nm,1.0s						
MTE	Manteigas	15.80	269	eP	Pn	00 56 44.0	+0.2
	comp=Z,119nm,1.1s						
PCAB	Cabril	15.88	274	eP	P	00 56 50.3	+1.9
	comp=Z,127nm,1.6s						
PCAB	Cabril	15.88	274	eP	P	00 56 50.3	+1.9
	comp=Z,127nm,1.6s						
PCBR	Castelo Branco	15.90	267	eP	Pn	00 56 42.8	-2.2
	comp=Z,82nm,1.6s						
PCBR	Castelo Branco	15.90	267	eP	Pn	00 56 42.8	-2.2
	comp=Z,82nm,1.6s						
SULT	Sultanhani-AKS	15.96	99	eP	Pn	00 56 46.9	+1.1
PMRV	Marv??o	15.96	266	eP	Pn	00 56 45.7	0.0
	comp=Z,65nm,1.4s						
PMRV				eLR	LR	01 01 15.2	
	comp=Z,2µm,14.0s						
PMRV	Marv??o	15.96	266	eP	Pn	00 56 45.7	0.0
	comp=Z,65nm,1.4s						
BYBT	Boyabat	15.96	86	eP	P	00 56 48.2	-1.0
PVIS	Viseu	15.99	271	eP	Pn	00 56 46.9	+0.8
	comp=Z,131nm,1.3s						
PVIS	Viseu	15.99	271	eP	Pn	00 56 46.9	+0.8
	comp=Z,131nm,1.3s						
PGAV	Gavieira, Arco	16.02	275	eP	P	00 56 51.0	+1.0
	comp=Z,217nm,1.5s						
PGAV				eLR	LR	01 01 16.4	
	comp=Z,5µm,18.0s						
PGAV	Gavieira, Arco	16.02	275	eP	P	00 56 51.0	+1.0
	comp=Z,217nm,1.5s						
PBAR	Barrancos	16.13	261	eP	Pn	00 56 47.0	-0.8
	comp=Z,160nm,1.9s						
PBAR	Barrancos	16.13	261	eP	Pn	00 56 47.0	-0.8
	comp=Z,160nm,1.9s						
CORM	Corum	16.15	91	eP	Pn	00 56 49.3	+1.0
SFS	San Fernando	16.24	255	iP	Pn	00 56 49.0	-0.3
SFS				eS	S	01 00 05.6	+3.5
PESTR	Estremoz	16.29	264	eP	Pn	00 56 50.1	+0.2
	comp=Z,94nm,1.4s						
PESTR	Estremoz	16.29	264	eP	Pn	00 56 50.1	+0.2
	comp=Z,94nm,1.4s						
DIKM	Dikmen	16.29	86	eP	Pn	00 56 51.4	+1.5
LUMB	Murzuk	16.36	176	iP	P	00 56 55.8	+2.0
	SNR=42						
AKMC	Akamas	16.56	110	P	Pn	00 56 54.1	+0.7
AKMC	Akamas	16.56	110	P	Pn	00 56 54.1	+0.7
PPCY	Paphos	16.65	111	P	P	00 56 56.1	-0.7
PPCY	Paphos	16.65	111	P	P	00 56 56.1	-0.7
PTOM	Tomar	16.66	267	eP	Pn	00 56 55.4	+0.8
	comp=Z,106nm,1.6s						
PTOM	Tomar	16.66	267	eP	Pn	00 56 55.4	+0.8
	comp=Z,106nm,1.6s						
ALFC	Alevga	16.68	110	P	Pn	00 56 54.7	-0.2
	comp=Z,5.3nm,1.3s						
ALFC	Alevga	16.68	110	P	Pn	00 56 54.7	-0.2
	comp=Z,5.3nm,1.3s						
PMTG	Montargil	16.69	265	eP	P	00 56 56.6	-0.7
	comp=Z,188nm,1.4s						
PMTG	Montargil	16.69	265	eP	P	00 56 56.6	-0.7
	comp=Z,188nm,1.4s						
EVO	Evora	16.71	263	eP	Pn	00 56 55.9	+0.6
	comp=Z,89nm,1.4s						
EVO	Evora	16.71	263	eP	Pn	00 56 55.9	+0.6
	comp=Z,89nm,1.4s						
EKA	Eskdalemuir Ar	16.75	326	Pn	Pn	00 56 55.6	-0.1

EKA Sn Sn 00 59 54.7 -6.7
EKA Eskdalemuir Ar 16.75 326 Pn Pn 00 56 55.6 -0.1
baz=138,slow=14,SNR=18
EKA Sn Sn 00 59 54.7 -6.7
baz=133,slow=18,SNR=3.4
EKA Eskdalemuir Ar 16.75 326 P Pn 00 56 55.6 -0.1
EKA S Sn 00 59 54.7 -6.7
ESK Eskdalemuir 16.76 326 *i* P P 00 56 59.0 +1.0
ESK Eskdalemuir 16.76 326 *e*P P 00 56 58.1 +0.1
comp=Z,56nm,1.1s
ESK Eskdalemuir 16.76 326 *e*P P 00 56 58.1 +0.1
comp=Z,56nm,1.1s
PBEJ Beja 16.79 262 *e*P P 00 56 58.8 +0.4
comp=Z,56nm,1.5s
PBEJ Beja 16.79 262 *e*P P 00 56 58.8 +0.4
comp=Z,56nm,1.5s
LEF Lefka 16.90 109 *e*P Pn 00 56 55.6 -2.1
PVAQ Vaqueiros 16.92 260 *e*P P 00 56 59.0 -0.9
comp=Z,156nm,1.4s
PVAQ *e*LR LR 01 01 35.0
comp=Z,4µm,18.0s
PVAQ Vaqueiros 16.92 260 *e*P P 00 56 59.0 -0.9
comp=Z,156nm,1.4s
KVT Kavak 16.98 87 *e*P Pn 00 56 59.1 +0.4
PCVE Castro Verde 17.06 261 *e*P P 00 57 01.6 +0.1
comp=Z,104nm,1.5s
PCVE Castro Verde 17.06 261 *e*P P 00 57 01.6 +0.1
comp=Z,104nm,1.5s
SZAC Souni-Zanaja 17.09 110 P P 00 57 02.3 +0.5
SZAC Souni-Zanaja 17.09 110 P P 00 57 02.3 +0.5
MAMC Mammari 17.10 109 P P 00 57 02.5 +0.6
MAMC Mammari 17.10 109 P P 00 57 02.5 +0.6
PBDV Barranco-do-Ve 17.14 259 *e*P P 00 57 02.3 -0.1
comp=Z,145nm,1.6s
PBDV Barranco-do-Ve 17.14 259 *e*P P 00 57 02.3 -0.1
comp=Z,145nm,1.6s
MDT Midelt 17.16 242 P P 00 57 02.1 -0.7
MDT Midelt 17.16 242 P P 00 57 02.1 -0.7
comp=Z,0.1nm,0.3s,baz=60,slow=14,SNR=21
MDT LR LR 01 03 18.5
comp=Z,844nm,18.2s,baz=40,slow=36
MDT Midelt 17.16 242 P P 00 57 02.1 -0.7
MERS Mersin 17.23 102 *e*P P 00 57 04.8 +1.5
PNCL Nicolau / Gran 17.24 263 *e*P P 00 57 04.1 +0.7
comp=Z,56nm,1.6s
PNCL Nicolau / Gran 17.24 263 *e*P P 00 57 04.1 +0.7
comp=Z,56nm,1.6s
LFK Lefkose 17.27 108 *e*P Pn 00 57 01.6 -0.8
CSS Prodhromos 17.29 109 P P 00 57 05.0 +1.0
comp=Z,8.8nm,1.9s
CSS Prodhromos 17.29 109 *e*P Pn 00 57 00.4 -2.2
CSS Prodhromos 17.29 109 *e*Pn Pn 00 57 03.0 +0.4
comp=Z,252nm,1.2s
CSS Prodhromos 17.29 109 *e*Pn Pn 00 57 03.0 +0.4
comp=Z,252nm,1.2s
CSS Prodhromos 17.29 109 P P 00 57 05.0 +1.0
comp=Z,8.8nm,1.9s
KONO Kongsberg 17.33 354 *e*P Pn 00 57 03.1 +0.2
KONO pmax pmax
comp=Z,200nm,1.7s
KONO Kongsberg 17.33 354 *e*P Pn 00 57 03.1 +0.2
comp=Z,200nm,1.7s
KONO Kongsberg 17.33 354 *e*P Pn 00 57 03.1 +0.2
comp=Z,200nm,1.7s
BNN Bunyan 17.44 95 *e*P P 00 57 07.6 +1.8
LIS Lisbon 17.48 265 *e*P P 00 57 05.7 -0.4
LIS AMb AMB 00 57 14.0
comp=Z,107nm,1.5s
LIS Lisbon 17.48 265 *e*P P 00 57 05.7 -0.4
comp=Z,107nm,1.5s
LIS Lisbon 17.48 265 *e*P P 00 57 05.7 -0.4
LIS Lisbon 17.48 265 *e*P P 00 57 05.7 -0.4
comp=Z,107nm,1.5s
ANN Anapa 17.57 74 *e*P Pn 00 57 03.2 -2.8
ANN *e*S Sn 01 00 16.6 -4.7
ANN pmax pmax
comp=Z,344nm,1.9s
ANN MLR MLR
comp=Z,5µm,15.0s
ANN Anapa 17.57 74 *e*P Pn 00 57 03.2 -2.8
comp=Z,5µm,15.0s
PTEO Sao Teotonio 17.60 261 *e*P P 00 57 08.7 +1.3
comp=Z,183nm,1.6s
PTEO Sao Teotonio 17.60 261 *e*P P 00 57 08.7 +1.3
comp=Z,183nm,1.6s
MORF Marmelete 17.64 260 *e*P P 00 57 09.4 +1.5
comp=Z,171nm,1.6s
MORF Marmelete 17.64 260 *e*P Pn 00 57 07.3 +0.3
MORF *e*S Sn 01 00 25.9 +2.6
MORF Marmelete 17.64 260 *e*P P 00 57 09.4 +1.5
comp=Z,171nm,1.6s
HFS Hagfors 17.66 1 P Pn 00 57 06.4 -0.6
HFS Hagfors 17.66 1 P Pn 00 57 06.4 -0.6
comp=Z,0.6nm,0.3s,baz=178,slow=10,SNR=20
HFS LR LR 01 04 02.2
comp=Z,3µm,20.0s,baz=182,slow=38
HFS Hagfors 17.66 1 P Pn 00 57 06.4 -0.6
comp=Z,3µm,20.0s
PHNC Paralimni 17.76 108 P P 00 57 11.4 +2.2
comp=Z,5.7nm,1.4s
PHNC Paralimni 17.76 108 P P 00 57 11.4 +2.2
comp=Z,5.7nm,1.4s
PFVI Vila Bisbo 17.84 260 *e*P P 00 57 10.6 +0.6
comp=Z,58nm,1.7s
PFVI Vila Bisbo 17.84 260 *e*P P 00 57 10.6 +0.6
comp=Z,58nm,1.7s
KOZT Kozan 17.92 99 *e*P P 00 57 12.5 +1.5
KRTS Karatas 17.97 102 *e*P P 00 57 13.3 +1.8
CEYT Ceyhan 18.06 100 *e*P P 00 57 13.2 +0.7
RSDY Resadiye-TOKAT 18.09 89 *e*P P 00 57 13.3 +0.5
VAL Valentia 18.53 309 *e*P P 00 57 14.4 -3.1
NB2 NORSAR Subarra 18.61 357 P P 00 57 17.6 -0.9
baz=178,slow=14
NB2 NORSAR Subarra 18.61 357 P P 00 57 17.6 -0.9
comp=Z,13nm,0.6s,baz=178,slow=14
NB2 NORSAR Subarra 18.61 357 P P 00 57 17.6 -0.9
comp=Z,13nm,0.6s,baz=178,slow=12,SNR=9.8
NOA NORSAR Array B 18.61 357 P P 00 57 17.6 -0.9
NOA NORSAR Array B 18.61 357 P P 00 57 17.6 -0.9
comp=Z,1.3nm,0.3s,baz=175,slow=12,SNR=32
NOA LR LR 01 04 28.7
comp=Z,2µm,21.2s,baz=170,slow=37
NOA NORSAR Array B 18.61 357 P P 00 57 17.6 -0.9
comp=Z,2µm,21.2s
KMRS Kahramanmaras 18.70 98 *e*P Pn 00 57 20.5 +0.5
DARE Darende-Malaty 18.74 94 *e*P P 00 57 20.2 +0.1
SOC Sochi 19.28 78*c* *i*P P 00 57 25.9 0.0
SOC *i* 01 01 04.6
SOC pmax pmax
comp=Z,133nm,1.0s
SOC MLR MLR
comp=Z,2µm,15.0s
SOC MLR MLR
comp=N,1µm,15.0s
SOC MLR MLR
comp=E,192nm,15.0s
SOC Sochi 19.28 78 *i*P P 00 57 25.9 0.0
comp=E,133nm,1.0s
VSR Storozhevoye 19.61 55 *e*P P 00 57 28.8 -0.6
VSR *e*S S 01 01 08.8 -1.4
VSR pmax pmax
comp=N,50nm,0.9s
VSR pmax pmax
comp=E,100nm,0.9s
VSR pmax pmax
comp=Z,80nm,0.9s
VSR smax smax
comp=N,240nm,2.9s
VSR smax smax
comp=E,790nm,2.9s
VSR smax smax
comp=Z,740nm,2.9s
VSR MLR MLR
comp=N,3µm,13.0s
VSR MLR MLR
comp=E,4µm,13.0s
VSR MLR MLR
comp=Z,5µm,13.0s
VSR Storozhevoye 19.61 55 *e*P P 00 57 28.8 -0.6
VORD Divnogorie 19.62 55 *e*P P 00 57 29.1 -0.3
VORD *e*S S 01 01 10.2 -0.2
VORD pmax pmax
comp=N,40nm,0.9s
VORD pmax pmax
comp=E,180nm,0.9s
VORD pmax pmax
comp=Z,60nm,0.9s
VORD smax smax
comp=E,550nm,2.5s
VORD smax smax
comp=Z,420nm,2.5s
VORD smax smax
comp=N,130nm,1.3s
VORD MLR MLR
comp=N,2µm,12.0s
VORD MLR MLR
comp=E,3µm,12.0s
VORD MLR MLR
comp=Z,3µm,12.0s
VORD Divnogorie 19.62 55 *e*P P 00 57 29.1 -0.3
OBN Obninsk 19.71 42 *i*P P 00 57 28.6 -1.9
OBN *i* S S 01 01 10.3 -1.9
OBN pmax pmax
comp=Z,98nm,1.0s
OBN MLR MLR
comp=Z,5µm,20.0s
OBN Obninsk 19.71 42 *e*P P 00 57 28.6 -1.9
comp=Z,81nm,0.9s
OBN Obninsk 19.71 42 P P 00 57 29.2 -1.2
comp=Z,467nm,0.9s,SNR=14
OBN Obninsk 19.71 42 *i*P P 00 57 28.6 -1.9
comp=Z,5µm,20.0s
VOR Voronezh 19.78 53 P P 00 57 27.0 -4.2
VOR pmax pmax
comp=Z,620nm,2.0s
VOR Voronezh 19.78 53 P P 00 57 27.0 -4.2
comp=Z,620nm,2.0s
MMAI Mount Meron Ar 19.80 111 P Pn 00 57 33.1 -0.1
MMAI Mount Meron Ar 19.80 111 P Pn 00 57 33.1 -0.1
comp=Z,1.4nm,0.3s,baz=315,slow=11,SNR=14
MMAI Mount Meron Ar 19.80 111 P Pn 00 57 33.1 -0.1
LKFR Kufra 20.03 153 *i*P P 00 57 35.1 +0.9
comp=Z,458nm,1.4s,SNR=35
LKFR *e*S S 01 01 16.4 -2.7
SNR=47
PUL Pulkovo 20.20 25 *i*P Pn 00 57 37.8 +0.2
PUL pmax pmax
comp=Z,193nm,1.2s
PUL MLR MLR
comp=Z,2µm,20.0s
PUL Pulkovo 20.20 25 *i*P Pn 00 57 37.8 +0.2
comp=Z,2µm,20.0s
FINES FINESS Array B 20.46 18 P P 00 57 38.0 -0.5
FINES FINESS Array B 20.46 18 P P 00 57 38.0 -0.5
comp=Z,117nm,0.9s,baz=196,slow=8.9,SNR=51
FINES FINESS Array B 20.46 18 P P 00 57 38.0 -0.5
comp=Z,117nm,0.9s
MOS Moscow 20.55 41 *e*P P 00 57 36.6 -2.9
MOS *e* 00 57 55.0
MOS *i*S S 01 01 24.1 -4.7
MOS *e*SS SnSn 01 01 44.5 -3.1
MOS pmax pmax
comp=Z,236nm,1.2s
MOS pmax pmax
comp=E,157nm,1.1s
MOS pmax pmax
comp=Z,2µm,3.2s
MOS smax smax
comp=N,2µm,6.8s
MOS smax smax
comp=E,2µm,6.1s
MOS MLR MLR
comp=N,3µm,11.0s
MOS MLR MLR
comp=E,4µm,11.0s
MOS MLR MLR
comp=Z,5µm,11.0s
TAM Tamanrasset 20.71 201 *e*P P 00 57 42.3 +0.6
TAM pmax pmax
comp=Z,946nm,2.3s
TAM Tamanrasset 20.71 201 *e*P P 00 57 42.3 +0.6
comp=Z,946nm,2.3s
TAM Tamanrasset 20.71 201 *e*P P 00 57 42.3 +0.6
comp=Z,946nm,2.3s
VRHR Novokhopersk 21.08 56 *e*P P 00 57 44.8 -0.5
VRHR *e*S S 01 01 38.5 -0.9
VRHR *e*SS SnSn 01 02 02.5 +1.9
VRHR pmax pmax
comp=N,80nm,0.9s
VRHR pmax pmax
comp=E,100nm,0.9s
VRHR pmax pmax
comp=Z,190nm,0.9s
VRHR smax smax
comp=N,270nm,2.2s
VRHR smax smax
comp=E,360nm,2.2s
VRHR smax smax
comp=Z,100nm,2.2s
VRHR MLR MLR
comp=N,2µm,13.0s
VRHR MLR MLR
comp=E,3µm,13.0s
VRHR MLR MLR
comp=Z,4µm,13.0s
VRHR Novokhopersk 21.08 56 *e*P P 00 57 44.8 -0.5
KAF Kangasniemi 21.10 17 *e*P P 00 57 43.9 -1.6
KAF pmax pmax
comp=Z,67nm,0.7s
KAF Kangasniemi 21.10 17 *e*p P 00 57 43.9 -1.6
comp=Z,67nm,0.7s
KAF Kangasniemi 21.10 17 *e*P P 00 57 43.9 -1.6
comp=Z,67nm,0.7s
ASF Jabal al Asfar 21.31 111 P P 00 57 49.7 +1.6
ASF Jabal al Asfar 21.31 111 P P 00 57 49.7 +1.6
comp=Z,11nm,1.0s,baz=157,slow=8.2,SNR=9.4
ASF LR LR 01 07 24.2
comp=Z,1µm,18.6s,baz=190,slow=40
KIV Kislovodsk 21.38 76 *e*P P 00 57 49.3 +0.5
KIV *e*S S 01 01 48.2 +2.4
KIV pmax pmax
comp=Z,538nm,1.0s
KIV pmax pmax
comp=Z,222nm,4.4s
KIV MLR MLR
comp=Z,1µm,15.0s
KIV Kislovodsk 21.38 76 *e*P P 00 57 48.8 0.0
comp=Z,561nm,1.1s
KIV Kislovodsk 21.38 76 P P 00 57 49.3 +0.5
SNR=138
KIV Kislovodsk 21.38 76 P P 00 57 49.8 +1.0
comp=Z,3µm,1.1s,SNR=64
KIV Kislovodsk 21.38 76 *e*P P 00 57 48.8 0.0
comp=Z,561nm,1.1s
KBZ Khabaz 21.56 77 P P 00 57 51.9 +1.4
KBZ pmax pmax
comp=Z,83nm,0.9s
KBZ Khabaz 21.56 77 P P 00 57 51.9 +1.4
KBZ Khabaz 21.56 77 P P 00 57 51.9 +1.4
comp=Z,83nm,0.9s,baz=292,slow=8.8,SNR=83
KBZ Khabaz 21.56 77 P P 00 57 51.9 +1.4
comp=Z,83nm,0.9s
EIL Elat 21.58 119 P P 00 57 51.7 +0.8
EIL S S 01 01 46.7 -2.9
EIL Elat 21.58 119 P P 00 57 51.7 +0.8
comp=Z,12nm,0.8s,baz=319,slow=8.0,SNR=8.5
EIL S S 01 01 46.7 -2.9
comp=Z,4.3nm,0.6s,baz=159,slow=20,SNR=5.0
EIL Elat 21.58 119 P P 00 57 51.7 +0.8
EIL S S 01 01 46.7 -2.9
ONI Oni 22.13 80 P P 00 57 57.9 +1.1
ONI S S 01 02 05.0 +4.7
AKH Akhalkalaki 22.39 83 P P 00 58 01.7 +1.9
AKH S S 01 02 11.2 +5.7
ZEI Tsey 22.42 79 *e*P P 00 58 00.9 +0.8
ZEI pmax pmax
comp=Z,164nm,1.3s
ZEI MLR MLR
comp=Z,2µm,15.0s
ZEI Tsey 22.42 79 *e*P P 00 58 00.9 +0.8
comp=Z,2µm,15.0s
GOR Gori 22.72 81 P P 00 58 05.1 +2.0
JOF Joensuu 23.01 21 *e*P P 00 58 05.2 -0.6
JOF pmax pmax
comp=Z,52nm,0.8s
JOF Joensuu 23.01 21 *e*p P 00 58 05.2 -0.6
comp=Z,52nm,0.8s
JOF Joensuu 23.01 21 *e*P P 00 58 05.2 -0.6
comp=Z,52nm,0.8s
KZR Kazreti 23.08 82 P P 00 58 11.5 +4.6
TBLG Delisi 23.24 81 P P 00 58 10.2 +1.8
TBLG S S 01 02 25.9 +5.9
GNI Garni 23.63 85 P P 00 58 12.9 +0.5
GNI Garni 23.63 85 P P 00 58 13.8 +1.3
SNR=55
GNI Garni 23.63 85 P P 00 58 12.9 +0.5
comp=Z,19nm,0.6s,baz=343,slow=3.0,SNR=28
GNI Garni 23.63 85 P P 00 58 12.9 +0.5
comp=Z,19nm,0.6s
MOR8 Moi Rana 23.73 1 *e*P P 00 58 15.2 +2.2
MOR8 AMB AMB 00 58 17.7
comp=Z,82nm,1.1s
MOR8 Moi Rana 23.73 1 *e*P P 00 58 15.2 +2.2
comp=Z,82nm,1.1s,SNR=35
DGRG David-gareji 23.76 82 P P 00 58 15.6 +2.0
DGRG S Sn 01 02 43.2 -7.3
FLOS Flostrand 23.89 0 *e*P P 00 58 18.4 +3.9
KONS Konsvik 24.05 360 *e*P P 00 58 18.2 +2.2
KONS AMB AMB 00 58 20.5
comp=Z,80nm,1.8s
KLMR Klimovskoe 24.24 32*d* *i*P P 00 58 17.1 -0.7
KLMR *e**PP pP 00 58 19.9 -2.0
KLMR *e**SP sP 00 58 21.3 -2.3
KLMR *e*S S 01 02 34.3 -1.4
KLMR *e**SS sS 01 02 39.5 -2.9
KLMR pmax pmax
comp=Z,132nm,1.5s
KLMR MLR MLR
comp=Z,3µm,10.0s
KLMR Klimovskoe 24.24 32 *i*P P 00 58 17.1 -0.7
comp=Z,132nm,1.5s
NAX Nakhchivan 24.47 87 P P 00 58 21.9 +1.6
SNR=84
NAX Nakhchivan 24.47 87 P P 00 58 21.9 +1.6
SNR=84
NAX Nakhchivan 24.47 87 P P 00 58 21.9 +1.6
SNR=84
IMRD Marand 24.77 88 *e*P P 00 58 23.0 -0.1
IMRD Marand 24.77 88 *e*P P 00 58 23.0 -0.1
MAK Makhachkala 25.00 77 *e*P P 00 58 25.9 +1.0
MAK *e* 00 58 59.3
MAK *e* 01 02 00.6
MAK *e*S S 01 02 54.6 +6.3
MAK *e*SSS SSS 01 04 03.0
MAK pmax pmax
comp=Z,500nm,1.7s
MAK MLR MLR
comp=Z,4µm,15.0s
MAK Makhachkala 25.00 77 *e*P P 00 58 25.9 +1.0
comp=Z,500nm,1.7s
SEKA Sheki 25.16 81 P P 00 58 27.0 +0.6
SNR=62
SEKA Sheki 25.16 81 P P 00 58 27.0 +0.6
SNR=62
SEKA Sheki 25.16 81 P P 00 58 27.0 +0.6
SNR=62
ITBZ Tabriz 25.26 89 *e*P P 00 58 27.6 +0.1
ITBZ Tabriz 25.26 89 *e*P P 00 58 27.6 +0.1
IFTB Fath-abad 25.52 89 *e*P P 00 58 34.8 +4.9
IFTB Fath-abad 25.52 89 *e*P P 00 58 34.8 +4.9
PMAR Madeira 25.76 258 *e*P P 00 58 35.7 +3.6
comp=Z,411nm,1.6s
PMAR Madeira 25.76 258 *e*P P 00 58 35.7 +3.6
comp=Z,411nm,1.6s
IHRS Heris 25.89 88 *e*P P 00 58 33.4 +0.1
IHRS Heris 25.89 88 *e*P P 00 58 33.4 +0.1
TMCR Tamitsa 25.91 25 *e*P P 00 58 36.5 +3.6
TMCR pmax pmax
comp=Z,208nm,1.5s
PMOZ Porto Moniz, M 25.92 258 *e*P P 00 58 39.0 +5.6
comp=Z,302nm,1.4s
PMOZ Porto Moniz, M 25.92 258 *e*P P 00 58 39.0 +5.6
comp=Z,302nm,1.4s
IBST Bostanabad 26.00 89 *e*P P 00 58 33.9 -0.4
IBST Bostanabad 26.00 89 *e*P P 00 58 33.9 -0.4
BHD Baghdad 26.05 100 *i*x P 00 58 30.8 -3.7
BHD *i*x S 01 03 05.8 +0.7
QUBA Quba, Azerbaij 26.07 81 P P 00 58 38.6 +4.0
SNR=16
QUBA Quba, Azerbaij 26.07 81 P P 00 58 38.6 +4.0
SNR=16
QUBA Quba, Azerbaij 26.07 81 P P 00 58 38.6 +4.0
SNR=16
PQL Pirkuli 26.28 82 P P 00 58 37.9 +1.1
SNR=10.0
PQL Pirkuli 26.28 82 P P 00 58 37.9 +1.1
SNR=10.0
PQL Pirkuli 26.28 82 P P 00 58 37.9 +1.1
SNR=10.0
SIZA Siyzn 26.43 81 P P 00 58 42.0 +4.0
SNR=5.3
SIZA Siyzn 26.43 81 P P 00 58 42.0 +4.0
SNR=5.3
SIZA Siyzn 26.43 81 P P 00 58 42.0 +4.0
SNR=5.3
ISRB Sarab 26.53 89 *e*P P 00 58 38.8 -0.2
ISRB Sarab 26.53 89 *e*P P 00 58 38.8 -0.2
GLBA Clilabad 26.59 85 P P 00 58 39.6 +0.3
SNR=15
GLBA Clilabad 26.59 85 P P 00 58 39.6 +0.3
SNR=15
GLBA Clilabad 26.59 85 P P 00 58 39.6 +0.3
SNR=15
ALIB Äli-Bayra 26.82 83 P P 00 58 44.4 +3.0
SNR=11
ALIB Äli-Bayra 26.82 83 P P 00 58 44.4 +3.0
SNR=11
ALIB Äli-Bayra 26.82 83 P P 00 58 44.4 +3.0
SNR=11
LKRN Lenkeran, Azer 27.04 86 P P 00 58 48.0 +4.6
SNR=7.1
LKRN Lenkeran, Azer 27.04 86 P P 00 58 48.0 +4.6
SNR=7.1
LKRN Lenkeran, Azer 27.04 86 P P 00 58 48.0 +4.6
SNR=7.1
KTK1 Kautokeino 27.08 8 *e*P P 00 58 42.6 -0.8
KTK1 Kautokeino 27.08 8 *e*P P 00 58 42.6 -0.8
SNR=34
IGHG Ghaleghazi 27.14 96 *e*P P 00 58 45.2 +0.5
IGHG Ghaleghazi 27.14 96 *e*P P 00 58 45.2 +0.5
IVIS Veis 27.26 96 *e*P P 00 58 44.1 -1.5
IVIS Veis 27.26 96 *e*P P 00 58 44.1 -1.5
APA Apatity 27.36 17 *i*P P 00 58 46.2 +0.3
APA *i* 00 59 42.4
APA *i*S S 01 03 21.0 -4.1
APA MLR MLR
comp=Z,3µm,12.0s
APA Apatity 27.36 17 *i*P P 00 58 46.2 +0.3
ARCES ARCESS Array B 27.83 9 P P 00 58 49.0 -1.2
ARCES PcP PcP 01 02 04.4 -1.3
ARCES ARCESS Array B 27.83 9 P P 00 58 49.0 -1.2
comp=Z,7.6nm,0.8s,baz=180,slow=8.8,SNR=16
ARCES PcP PcP 01 02 04.4 -1.3
comp=Z,4.7nm,0.9s,baz=175,slow=3.2,SNR=5.0
ARCES ARCESS Array B 27.83 9 P P 00 58 49.0 -1.2
comp=Z,8.0nm,0.8s
IKOM Komasi 27.91 96 *e*P P 00 58 51.8 +0.4
IKOM Komasi 27.91 96 *e*P P 00 58 51.8 +0.4
KEV Kevo 28.22 10 *e*P P 00 58 52.8 -0.8
KEV pmax pmax
comp=Z,6.0nm,0.8s
KEV Kevo 28.22 10 *e*p P 00 58 52.8 -0.8
comp=Z,6.1nm,0.8s
KEV Kevo 28.22 10 *e*P P 00 58 52.8 -0.8
comp=Z,6.0nm,0.8s
IRAZ Razeghan 29.15 92 *e*P P 00 59 00.0 -2.5
IRAZ Razeghan 29.15 92 *e*P P 00 59 00.0 -2.5
BORG Borgarnes 29.67 330 LR LR 01 12 20.7
comp=Z,2µm,18.2s,baz=340,slow=39
IR5 Iran Long-Peri 29.71 92 *e*P P 00 59 04.8 -2.6
IR5 Iran Long-Peri 29.71 92 *e*P P 00 59 04.8 -2.6
PSMN Pico do Norte, 29.86 272 *e*LQ LQ 01 06 18.2
PSMN *e*LR LR 01 07 26.1
comp=Z,545nm,21.2s
IR3 Iran Long-Peri 29.93 91 *e*P P 00 59 07.0 -2.3
IR3 Iran Long-Peri 29.93 91 *e*P P 00 59 07.0 -2.3
MIB Mutribah 30.02 104 *e*P P 00 59 10.8 +0.7
MIB AMb AMB 00 59 17.6
comp=Z,180nm,1.0s
NAY Al-Naaiem 30.27 105 *e*P P 00 59 12.7 +0.5
NAY AMb AMB 00 59 19.5
comp=Z,30nm,1.1s
UMR Umm Al-Rimmam 30.44 104 *e*P P 00 59 14.4 +0.7
UMR AMb AMB 00 59 23.2
comp=Z,111nm,1.2s
IVRN Varamin 30.66 91 *e*P P 00 59 11.4 -4.3
IVRN *e*P P 00 59 13.2 -2.5

IVRN Varamin 30.66 91 eP P 00 59 13.2 -2.5
TORD Torodi Ar. Bea 30.94 202 P P 00 59 18.0 -0.2
TORD PP PP 01 00 31.5 +3.3
TORD PcP PcP 01 02 15.8 +1.3
TORD Torodi Ar. Bea 30.94 202 P P 00 59 18.0 -0.2
comp=Z,30nm,0.9s,baz=18,slow=8.7,SNR=145
TORD PP PP 01 00 31.5 +3.3
comp=Z,28nm,1.3s,baz=30,slow=8.5,SNR=3.5
TORD PcP PcP 01 02 15.8 +1.3
comp=Z,6.9nm,1.2s,baz=337,slow=2.9,SNR=3.9
TORD LR LR 01 12 43.8
comp=Z,2µm,18.6s,baz=20,slow=38
TORD Torodi Ar. Bea 30.94 202 P P 00 59 18.0 -0.2
IPIR Pirpir 31.10 96 eP P 00 59 21.0 +1.1
IPIR Pirpir 31.10 96 eP P 00 59 21.0 +1.1
IFIR Firoozkooh 31.14 89 eP P 00 59 16.8 -3.4
IFIR Firoozkooh 31.14 89 eP P 00 59 16.8 -3.4
PGRA Graciosa 31.27 278 eLR LR 01 08 09.8
comp=Z,202nm,17.4s
IKLH Kolahrood 31.30 94 eP P 00 59 21.9 +0.3
IKLH Kolahrood 31.30 94 eP P 00 59 21.9 +0.3
AKTK Aktyubinsk 31.37 60 P P 00 59 21.0 -0.8
comp=Z,2µm,18.9s
AKTO Aktyubinsk 31.37 60 P P 00 59 21.0 -0.8
AKTO pmax pmax
comp=Z,11nm,0.7s
AKTO MLR MLR
comp=Z,2µm,18.9s
AKTO Aktyubinsk 31.37 60 P P 00 59 21.0 -0.8
AKTO Aktyubinsk 31.37 60 P P 00 59 21.0 -0.8
comp=Z,11nm,0.7s,baz=273,slow=9.1,SNR=41
AKTO LR LR 01 13 42.7
comp=Z,2µm,18.9s,baz=110,slow=40
AKTO Aktyubinsk 31.37 60 P P 00 59 21.0 -0.8
ILAS Lasjerd 31.40 90 eP P 00 59 22.6 +0.1
ILAS Lasjerd 31.40 90 eP P 00 59 22.6 +0.1
ISHM Shahmirzad 31.47 89 eP P 00 59 23.5 +0.4
ISHM Shahmirzad 31.47 89 eP P 00 59 23.5 +0.4
SOKR Solikamsk 31.50 42 d iP P 00 59 22.8 +0.1
SOKR 01 00 25.2
SOKR S S 01 04 28.7 -1.4
SOKR pmax pmax
comp=Z,60nm,1.1s
SOKR MLR MLR
comp=Z,3µm,19.0s
SOKR Solikamsk 31.50 42 i P P 00 59 22.8 +0.1
comp=Z,60nm,1.1s
ROSA Rosais 31.57 277 eLR LR 01 07 57.7
comp=Z,190nm,15.5s
ARU Arti 31.89 48⇑ iP P 00 59 25.6 -0.6
ARU e 01 00 27.6
ARU eS S 01 04 38.1 +1.7
ARU pmax pmax
comp=Z,211nm,1.0s
ARU MLR MLR
comp=Z,3µm,15.6s
ARU Arti 31.89 48 eP P 00 59 25.6 -0.6
comp=Z,176nm,1.0s
ARU Arti 31.89 48 P P 00 59 25.6 -0.6
comp=Z,1µm,0.9s,SNR=87
ARU Arti 31.89 48 i P P 00 59 25.6 -0.6
comp=Z,211nm,1.0s
IZEF Zefreh 32.06 94 eP P 00 59 28.0 -0.3
IZEF Zefreh 32.06 94 eP P 00 59 28.0 -0.3
IANJ Anjilo 32.07 89 eP P 00 59 28.3 0.0
IANJ Anjilo 32.07 89 eP P 00 59 28.3 0.0
IGAR Gharneh 32.09 95 eP P 00 59 28.9 +0.4
IMND Minoodasht 32.45 85 eP P 00 59 33.7 +2.3
IMND Minoodasht 32.45 85 eP P 00 59 33.7 +2.3
AB31 Akbulak array 32.71 62 i P P 00 59 32.4 -1.1
AB31 pmax pmax
comp=Z,26nm,1.1s
AB31 Akbulak array 32.71 62 i P P 00 59 32.4 -1.1
comp=Z,26nm,1.1s
ABKAR Akbulak array 32.71 62 eP P 00 59 33.1 -0.4
ABKAR Akbulak array 32.71 62 eP P 00 59 33.1 -0.4
SVE Sverdlovsk 33.07 48 c iP P 00 59 37.0 +0.5
SVE e 01 00 51.4
SVE e 01 02 24.3
SVE eS S 01 04 53.9 -0.9
SVE pmax pmax
comp=Z,221nm,1.6s
SVE MLR MLR
comp=Z,4µm,15.0s
SVE Sverdlovsk 33.07 48 i P P 00 59 37.0 +0.5
comp=Z,221nm,1.6s
SCO Scoresbysund 33.20 339 i P P 00 59 38.9 +1.4
SCO pmax pmax
comp=Z,12nm,1.0s
SCO Scoresbysund 33.20 339 i P P 00 59 38.9 +1.4
comp=Z,12nm,1.0s
SCO Scoresbysund 33.20 339 i P P 00 59 38.9 +1.4
comp=Z,12nm,1.0s
ICHK Chekchek 33.91 94 eP P 00 59 43.2 -1.2
ICHK Chekchek 33.91 94 eP P 00 59 43.2 -1.2
ABKT Ailbek 34.19 82 P P 00 59 47.9 +1.3
comp=Z,361nm,0.9s,SNR=17
ISRV Sarvestan 34.44 99 eP P 00 59 49.7 +0.5
ISRV Sarvestan 34.44 99 eP P 00 59 49.7 +0.5
IMEH Mehriz 34.49 95 eP P 00 59 48.2 -1.3
IMEH Mehriz 34.49 95 eP P 00 59 48.2 -1.3
IKRD Kardeh 34.93 84 eP P 01 00 00.7 +7.5
IKRD Kardeh 34.93 84 eP P 01 00 00.7 +7.5
IBAF Bafgh 35.09 94 eP P 00 59 54.8 +0.2
IBAF Bafgh 35.09 94 eP P 00 59 54.8 +0.2
IPAY Payeh 35.41 84 eP P 00 59 58.7 +1.3
IPAY Payeh 35.41 84 eP P 00 59 58.7 +1.3
SPITS Spitsbergen Ar 35.81 1 P P 01 00 00.2 +0.1
SPITS Spitsbergen Ar 35.81 1 P P 01 00 00.2 +0.1
comp=Z,24nm,0.9s,baz=116,slow=4.5,SNR=13
SPITS LR LR 01 14 29.5
comp=Z,2µm,20.6s,baz=190,slow=36
SPITS Spitsbergen Ar 35.81 1 P P 01 00 00.2 +0.1
ISRO Mashad 35.82 84 eP P 01 00 01.4 +0.7
ISRO Mashad 35.82 84 eP P 01 00 01.4 +0.7
IMYA Miami 36.27 84 eP P 01 00 06.2 +1.5
IMYA Miami 36.27 84 eP P 01 00 06.2 +1.5
KBS Kingsbay 36.55 360 eP P 01 00 08.1 +1.7
KBS pmax pmax
comp=Z,56nm,1.3s
KBS Kingsbay 36.55 360 eP P 01 00 08.1 +1.7
comp=Z,56nm,1.3s
KBS Kingsbay 36.55 360 eP P 01 00 08.1 +1.7
comp=Z,56nm,1.3s
DAG Danmarks Havn 36.92 348 i P P 01 00 09.7 +0.2
DAG pmax pmax
comp=Z,15nm,1.0s
DAG MLR MLR
comp=Z,900nm,20.0s
DAG Danmarks Havn 36.92 348 i P P 01 00 09.7 +0.2
comp=Z,15nm,1.0s
DAG
comp=Z,840nm,19.0s
IKOO Kooshah 37.22 90 eP P 01 00 13.3 +0.4
IKOO Kooshah 37.22 90 eP P 01 00 13.3 +0.4
BBTS Babate 37.82 232 P P 01 00 18.5 +0.7
BBTS Babate 37.82 232 P P 01 00 18.5 +0.7
comp=Z,34nm,0.9s,baz=143,slow=0.7,SNR=4.8
BBTS Babate 37.82 232 P P 01 00 18.5 +0.7
IBND Bandar-abas 38.02 99 eP P 01 00 18.6 -0.8
IBND Bandar-abas 38.02 99 eP P 01 00 18.6 -0.8
BRVK Borovoye 38.72 54 eP P 01 00 25.4 +0.4
BRVK pmax pmax
comp=Z,115nm,1.3s
BRVK Borovoye 38.72 54 eP P 01 00 25.4 +0.4
comp=Z,114nm,1.3s
BRVK Borovoye 38.72 54 P P 01 00 25.9 +0.8
SNR=64
BRVK Borovoye 38.72 54 P P 01 00 26.4 +1.4
comp=Z,351nm,1.2s,SNR=31
BRVK Borovoye 38.72 54 eP P 01 00 25.4 +0.4
comp=Z,115nm,1.3s
BANOM Banah 38.73 101 P P 01 00 25.8 +0.3
SNR=19
BANOM Banah 38.73 101 P P 01 00 25.4 0.0
SNR=9.7
SUMG Summit 38.77 338 i P P 01 00 26.9 +1.2
SUMG pmax pmax
comp=Z,14nm,1.0s
SUMG Summit 38.77 338 eP P 01 00 27.0 +1.3
comp=Z,61nm,1.4s
SUMG Summit 38.77 338 i P P 01 00 26.9 +1.2
comp=Z,14nm,1.0s
SUMG Summit 38.77 338 i P P 01 00 26.9 +1.2
comp=Z,14nm,1.0s
BVA0 Borovoye Array 38.79 54 i P P 01 00 25.4 -0.2
BVA0 pmax pmax
comp=Z,16nm,1.8s
BVA0 Borovoye Array 38.79 54 i P P 01 00 25.4 -0.2
comp=Z,16nm,1.8s
BVAR Borovoye Array 38.79 54 P P 01 00 25.9 +0.3
BVAR 01 01 54.4
BVAR pmax pmax
comp=Z,13nm,0.7s
BVAR pmax pmax
comp=Z,10.0nm,0.8s
BVAR Borovoye Array 38.79 54 P P 01 00 25.9 +0.3
BVAR PP PP 01 01 54.4 +0.1
BVAR Borovoye Array 38.79 54 P P 01 00 25.9 +0.3
comp=Z,13nm,0.7s,baz=261,slow=6.9,SNR=101
BVAR PP PP 01 01 54.4 +0.1
comp=Z,10nm,0.8s,baz=278,slow=10,SNR=3.6
BVAR Borovoye Array 38.79 54 P P 01 00 25.9 +0.3
comp=Z,13nm,0.7s
BVAR Borovoye Array 38.79 54 PP PP 01 01 54.4 +0.1
ASUD Al Ashush, Dub 38.81 104 P P 01 00 27.2 +1.2
SNR=20
ASUD Al Ashush, Dub 38.81 104 P P 01 00 26.6 +0.5
NAZ Nazwa, Dubai 38.83 103 P P 01 00 26.7 +0.5
SNR=37
NAZ Nazwa, Dubai 38.83 103 P P 01 00 26.4 +0.2
FAQ Al Faqa, Dubai 38.92 103 P P 01 00 27.2 +0.2
DBIC Dimbokro 39.15 209 eP P 01 00 28.8 -0.1
DBIC PP PnPn 01 02 03.5 +2.1
DBIC Dimbokro 39.15 209 P P 01 00 28.4 -0.4
comp=Z,27nm,1.0s,baz=3.3,slow=12,SNR=9.3
DBIC PP PnPn 01 02 03.5 +2.1
comp=Z,12nm,1.0s,baz=12,slow=14,SNR=5.0
DBIC LR LR 01 17 03.0
comp=Z,1µm,19.4s,baz=111,slow=37
DBIC Dimbokro 39.15 209 P P 01 00 28.5 -0.4
comp=Z,27nm,1.0s
HATD Hatta, Dubai 39.27 103 P P 01 00 30.0 +0.1
SNR=36
HATD Hatta, Dubai 39.27 103 P P 01 00 30.0 +0.1
SNR=36
ASHO Ashiyiah 39.30 103 P P 01 00 30.3 +0.1
SNR=39
ASHO Ashiyiah 39.30 103 P P 01 00 29.9 -0.3
SNR=11
FURI Furi 40.19 139 eP P 01 00 42.8 +4.8
comp=Z,145nm,1.8s
ARQ Araqi 40.46 104 P P 01 00 40.8 +1.0
SNR=30
ARQ Araqi 40.46 104 P P 01 00 40.8 +1.0
SNR=30
HOQ Hoqain 40.87 103 P P 01 00 43.1 -0.2
SNR=28
HOQ Hoqain 40.87 103 P P 01 00 43.1 -0.2
SNR=28
KK31 Karatay Array 41.24 69 i P P 01 00 46.5 +0.4
KK31 pmax pmax
comp=Z,31nm,0.6s
KK31 Karatay Array 41.24 69 i P P 01 00 46.5 +0.4
comp=Z,31nm,0.6s
KKAR Karatay Array 41.24 69 eP P 01 00 47.0 +0.9
KKAR Karatay Array 41.24 69 eP P 01 00 47.0 +0.9
KKAR Karatay Array 41.24 69 eP P 01 00 47.0 +0.9
BSY Bisya 41.32 104 P P 01 00 47.0 +0.1
SNR=19
BSYO Bisya 41.35 104 P P 01 00 47.0 -0.2
SNR=19
SFJD Kangerlussuaq 41.71 328 P P 01 00 49.5 -0.1
SFJD Kangerlussuaq 41.71 328 i P P 01 00 49.7 +0.1
comp=Z,20nm,0.9s
SFJD Kangerlussuaq 41.71 328 P P 01 00 49.5 -0.1
comp=Z,24nm,1.0s,baz=89,slow=7.9,SNR=8.9
SFJD Kangerlussuaq 41.71 328 P P 01 00 49.5 -0.1
SMDO Samad 41.73 103 P P 01 00 50.6 +0.2
SNR=43
SMDO Samad 41.73 103 P P 01 00 50.6 +0.2
SNR=43
ABTO Aybut 42.18 114 P P 01 00 54.7 +0.6
SNR=8.0
ABTO Aybut 42.18 114 P P 01 00 54.7 +0.6
SNR=8.0
JMDO Jabal Madar 42.20 104 P P 01 00 54.5 +0.4
SNR=22
JMDO Jabal Madar 42.20 104 P P 01 00 54.5 +0.4
SNR=22
WBK Wadi Bani Khal 42.67 103 P P 01 00 58.9 +0.9
SNR=12
WBK Wadi Bani Khal 42.67 103 P P 01 00 58.9 +0.9
SNR=12
RBK Rabkut 42.69 113 P P 01 00 58.5 +0.3
SNR=8.1
RBK Rabkut 42.69 113 P P 01 00 58.5 +0.3
SNR=8.1
KBL Kabul 43.62 81 eP P 01 01 06.9 +1.1
KBL pmax pmax
comp=Z,19nm,1.4s
KBL Kabul 43.62 81 eP P 01 01 06.9 +1.1
comp=Z,19nm,1.4s
KBL Kabul 43.62 81 eP P 01 01 06.9 +1.1
comp=Z,19nm,1.4s
EKS2 Erkin-Say 43.64 68 eP P 01 01 07.0 +1.2
EKS2 pmax pmax
comp=Z,87nm,1.0s
EKS2 Erkin-Say 43.64 68 eP P 01 01 07.0 +1.2
comp=Z,87nm,1.0s
EKS2 Erkin-Say 43.64 68 P P 01 01 07.0 +1.2
SNR=63
EKS2 Erkin-Say 43.64 68 eP P 01 01 07.0 +1.2
comp=Z,87nm,1.0s
AML Almayashu 43.78 69 i P P 01 01 07.8 +0.6
AML Almayashu 43.78 69 P P 01 01 07.8 +0.6
SNR=22
AML Almayashu 43.78 69 i P P 01 01 07.8 +0.6
USP Ospenovka 43.92 67 i P P 01 01 09.2 +1.3
USP Ospenovka 43.92 67 P P 01 01 09.2 +1.3
SNR=15
USP Ospenovka 43.92 67 i P P 01 01 09.2 +1.3
AAK Ala-Archa 44.14 68 d iP P 01 01 11.0 +1.1
AAK pmax pmax
comp=Z,112nm,1.8s
AAK Ala-Archa 44.14 68 P P 01 01 10.9 +1.1
AAK Ala-Archa 44.14 68 P P 01 01 11.6 +1.7
SNR=31
AAK Ala-Archa 44.14 68 P P 01 01 11.3 +1.5
SNR=22
AAK Ala-Archa 44.14 68 P P 01 01 11.0 +1.1
comp=Z,212nm,1.0s,SNR=24
AAK Ala-Archa 44.14 68 P P 01 01 10.9 +1.1
comp=Z,13nm,1.0s,baz=244,slow=5.1,SNR=34
AAK Ala-Archa 44.14 68 P P 01 01 10.9 +1.1
CHMS Chumysh 44.19 68 iP P 01 01 11.3 +1.3
CHMS Chumysh 44.19 68 P P 01 01 11.3 +1.3
SNR=7.7
CHMS Chumysh 44.19 68 iP P 01 01 11.3 +1.3
KURBB Kurchatov Arra 44.23 56 P P 01 01 09.8 -0.4
comp=Z,8.1nm,1.0s,baz=289,slow=8.1,SNR=33
KURBB PP PP 01 02 52.9 -0.2
comp=Z,12nm,1.1s,baz=294,slow=9.9,SNR=5.6
KURK Kurchatov 44.26 56 P P 01 01 09.8 -0.6
KURK 01 02 52.9
KURK pmax pmax
comp=Z,8.0nm,1.0s
KURK pmax pmax
comp=Z,12nm,1.1s
KURK Kurchatov 44.26 56 eP P 01 01 10.4 0.0
KURK PP PP 01 02 52.9 -0.5
KURK Kurchatov 44.26 56 P P 01 01 10.7 +0.3
SNR=25
KURK Kurchatov 44.26 56 P P 01 01 10.0 -0.4
comp=Z,164nm,1.2s,SNR=21
KURK Kurchatov 44.26 56 P P 01 01 09.8 -0.6
comp=Z,8.0nm,1.0s
KBK Karagaybulak 44.45 68 iP P 01 01 13.6 +1.3
KBK Karagaybulak 44.45 68 P P 01 01 13.6 +1.3
SNR=8.2
KBK Karagaybulak 44.45 68 iP P 01 01 13.6 +1.3
TKM2 Tokmak 2 44.79 67 iP P 01 01 15.3 +0.2
TKM2 Tokmak 2 44.79 67 eP P 01 01 15.7 +0.6
comp=Z,124nm,2.3s
TKM2 Tokmak 2 44.79 67 P P 01 01 15.4 +0.2
SNR=9.8
TKM2 Tokmak 2 44.79 67 iP P 01 01 15.3 +0.2
KZA Kyzart 44.87 69 iP P 01 01 17.7 +1.7
KZA Kyzart 44.87 69 P P 01 01 17.7 +1.7
SNR=50
KZA Kyzart 44.87 69 iP P 01 01 17.7 +1.7
ULHL Ulahol 45.49 68 iP P 01 01 21.8 +1.1
ULHL Ulahol 45.49 68 P P 01 01 21.8 +1.1
SNR=6.9
ULHL Ulahol 45.49 68 iP P 01 01 21.8 +1.1
NVS Novosibirsk 45.88 49 eP P 01 01 23.7 +0.4
NVS e 01 03 08.8
NVS eS S 01 08 04.6 -2.3
NVS pmax pmax
comp=E,54nm,1.7s
NVS pmax pmax
comp=Z,368nm,1.7s
NVS pmax pmax
comp=Z,71nm,1.5s
NVS pmax pmax
comp=E,21nm,1.4s
NVS smax smax
comp=E,62nm,3.1s
NVS Novosibirsk 45.88 49 eP P 01 01 23.7 +0.4
NVS eS S 01 08 04.6 -2.3
ALE Alert 46.27 350 P P 01 01 26.0 0.0
comp=E,93nm,1.1s,SNR=8.9
KSH Kashi 46.40 72 ⇓ iP P 01 01 28.3 +0.5
KSH PcP PcP 01 03 05.0 +2.5
KSH PP PP 01 03 17.6 +1.0
KSH ScP ScP 01 06 57.9 +2.5
KSH S S 01 08 14.9 -0.1
KSH ScS ScS 01 11 23.5 +0.8
KSH SS SS 01 11 31.6 -8.9
KSH pmax pmax
comp=Z,70nm,1.2s
KSH pmax pmax
comp=Z,780nm,3.8s
KSH LR LR
comp=N,1µm,10.1s
KSH LR LR
comp=E,860nm,7.4s
KSH LR LR
comp=Z,2µm,16.9s
ZALV Zalesovo Beam 47.01 50 P P 01 01 32.2 0.0
ZALV 01 03 21.8
ZALV pmax pmax
comp=Z,12nm,0.8s
ZALV pmax pmax
comp=Z,6.0nm,0.8s
ZALV MLR MLR
comp=Z,928nm,18.5s
ZALV Zalesovo Beam 47.01 50 P P 01 01 32.1 0.0
ZALV PP PP 01 03 21.8 -0.7
ZALV Zalesovo Beam 47.01 50 P P 01 01 32.1 0.0
comp=Z,12nm,0.8s,baz=285,slow=8.2,SNR=71
ZALV PP PP 01 03 21.8 -0.7
comp=Z,6.4nm,0.8s,baz=291,slow=9.3,SNR=4.1
ZALV LR LR 01 24 23.8
comp=Z,928nm,18.5s,baz=283,slow=40
ZALV Zalesovo Beam 47.01 50 P P 01 01 32.2 0.0
comp=Z,12nm,0.8s
ZALV Zalesovo Beam 47.01 50 PP PP 01 03 21.8 -0.7
MK31 Makanchi Array 47.81 60 i P P 01 01 38.5 0.0
MK31 pmax pmax
comp=Z,18nm,0.7s
MK31 Makanchi Array 47.81 60 i P P 01 01 38.5 0.0
comp=Z,18nm,0.7s
MKAR Makanchi Array 47.81 60 P P 01 01 38.5 0.0
MKAR 01 03 31.2
MKAR pmax pmax
comp=Z,17nm,0.7s
MKAR pmax pmax
comp=Z,5.0nm,0.9s
MKAR MLR MLR
comp=Z,1µm,18.2s
MKAR Makanchi Array 47.81 60 P P 01 01 38.5 0.0
MKAR PP PP 01 03 31.2 +1.1
MKAR Makanchi Array 47.81 60 P P 01 01 38.5 0.0
comp=Z,17nm,0.7s,baz=287,slow=6.4,SNR=251
MKAR PP PP 01 03 31.2 +1.1
comp=Z,4.8nm,0.9s,baz=283,slow=6.5,SNR=2.7
MKAR LR LR 01 23 35.2
comp=Z,1µm,18.2s,baz=286,slow=38
MKAR Makanchi Array 47.81 60 P P 01 01 38.5 0.0
comp=Z,17nm,0.7s
MKAR Makanchi Array 47.81 60 PP PP 01 03 31.2 +1.1
KMBO Kilima Mbogo 48.48 147 eP P 01 01 45.1 +0.9
comp=Z,30nm,1.8s
KMBO Kilima Mbogo 48.48 147 P P 01 01 45.5 +1.2
comp=Z,3.1nm,1.0s,baz=335,slow=12,SNR=6.0
KMBO LR LR 01 26 03.5
comp=Z,378nm,18.2s,baz=290,slow=41
KMBO Kilima Mbogo 48.48 147 eP P 01 01 45.2 +0.9
comp=Z,30nm,1.8s
SCHQ Schefferville 51.54 313 eP P 01 02 06.5 -0.3
SCHQ Schefferville 51.54 313 P P 01 02 05.7 -1.1
comp=Z,14nm,0.8s,baz=69,slow=7.3,SNR=10
SCHQ LR LR 01 23 31.4
comp=Z,718nm,18.4s,baz=234,slow=36
SCHQ Schefferville 51.54 313 eP P 01 02 06.5 -0.3
WMQ Urumqi 52.49 61 P P 01 02 15.0 +0.9
WMQ PP PP 01 04 15.0 +2.2
WMQ ScP ScP 01 07 22.0 +0.7
WMQ S S 01 09 41.0 +0.8
WMQ ScS ScS 01 12 03.0 -0.6
WMQ SS SS 01 13 18.0 +0.2
WMQ pmax pmax
comp=Z,28nm,1.0s
WMQ pmax pmax
comp=Z,400nm,5.0s
WMQ LR LR
comp=N,3µm,16.0s
WMQ LR LR
comp=E,3µm,16.0s
WMQ LR LR
comp=Z,2µm,16.0s
RES Resolute Bay 54.03 342 P P 01 02 25.1 +0.3
RES Resolute Bay 54.03 342 P P 01 02 25.1 +0.3
comp=Z,5.7nm,1.0s
RES Resolute Bay 54.03 342 P P 01 02 25.1 +0.3
MOY Mondy 56.94 48 eP P 01 02 47.8 +1.5
MOY pmax pmax
comp=Z,37nm,2.5s
MOY Mondy 56.94 48 eP P 01 02 47.8 +1.5
comp=Z,37nm,2.5s
TIXI Tiksi 57.48 20 ⇓ eP P 01 02 50.1 +0.4
TIXI pmax pmax
comp=Z,42nm,1.6s
TIXI MLR MLR
comp=Z,1µm,20.0s
TIXI Tiksi 57.48 20 eP P 01 02 50.0 +0.4
comp=Z,41nm,1.1s
TIXI Tiksi 57.48 20 eP P 01 02 50.0 +0.4
comp=Z,41nm,1.1s
TLY Talaya 58.38 47 eP P 01 02 57.9 +1.6
TLY eS S 01 10 47.9 -11
TLY pmax pmax
comp=Z,39nm,1.0s
TLY MLR MLR
comp=Z,2µm,17.0s
TLY Talaya 58.38 47 eP P 01 02 58.0 +1.7
comp=Z,37nm,0.9s
TLY Talaya 58.38 47 P P 01 02 58.2 +1.9
SNR=16
TLY Talaya 58.38 47 P P 01 02 58.9 +2.6
comp=Z,252nm,0.9s,SNR=12
TLY Talaya 58.38 47 eP P 01 02 57.9 +1.6
comp=Z,39nm,1.0s
IRK Irkutsk 58.43 46 eP P 01 02 57.0 +0.3
IRK e 01 05 06.4
IRK pmax pmax
comp=Z,74nm,2.1s
IRK Irkutsk 58.43 46 eP P 01 02 57.0 +0.3
comp=Z,74nm,2.1s
ZAK Zakamensk 58.83 48 eP P 01 03 00.3 +0.7
ZAK e 01 05 12.1
ZAK pmax pmax
comp=Z,10.0nm,1.7s
ZAK Zakamensk 58.83 48 eP P 01 03 00.3 +0.7
comp=Z,10.0nm,1.7s
LSZ Lusaka 59.09 163 eP P 01 03 01.6 -0.1
comp=Z,25nm,1.3s
LSZ Lusaka 59.09 163 eP P 01 03 01.6 -0.1
comp=Z,25nm,1.3s
HYB Hyderabad 60.24 93 i P P 01 03 09.0 -0.7
HYB eS S 01 11 20.0 -3.4
SONM Songino Array 61.91 50 P P 01 03 21.2 +0.5
SONM Songino Array 61.91 50 P P 01 03 21.2 +0.5
comp=Z,22nm,0.8s,baz=292,slow=8.7,SNR=189
SONM LR LR 01 31 59.5
comp=Z,2µm,18.6s,baz=300,slow=38

SONM	**Songino Array**	**61.91**	**50**	P	**P**	**01 03 21.2**	**+0.5**
	comp=Z,2µm,18.6s						
LSA	**Lhasa**	**62.11**	**74**	P	**P**	**01 03 23.2**	**+0.4**
LSA				PP	**PP**	**01 05 43.0**	**+3.8**
LSA				S	**S**	**01 11 43.2**	**-4.7**
LSA				pmax	pmax		
	comp=Z,40nm,0.9s						
LSA				LR	LR		
	comp=E,760nm,25.4s						
LSA				LR	LR		
	comp=Z,1µm,25.4s						
ULN	**Ulaanbaatar**	**62.26**	**49**	*e*P	**P**	**01 03 23.8**	**+0.7**
	comp=Z,57nm,1.5s						
ULN	**Ulaanbaatar**	**62.26**	**49**	P	**P**	**01 03 24.3**	**+1.2**
	SNR=24						
ULN	**Ulaanbaatar**	**62.26**	**49**	P	**P**	**01 03 24.0**	**+0.9**
	comp=Z,24nm,1.6s,comp=Z,550nm						
ULN	**Ulaanbaatar**	**62.26**	**49**	*e*P	**P**	**01 03 23.8**	**+0.7**
	comp=Z,57nm,1.5s						
GTA	**Gaotai**	**62.55**	**61**	⇓P	**P**	**01 03 26.0**	**+0.8**
GTA				pP	**pP**	**01 03 30.7**	**+1.1**
GTA				sP	**sP**	**01 03 33.1**	**+1.9**
GTA				PP	**PP**	**01 05 46.8**	**+4.3**
GTA				S	**S**	**01 11 54.2**	**+1.7**
GTA				sS	**sS**	**01 12 02.8**	**+3.0**
GTA				SS	**SS**	**01 16 01.5**	**+5.4**
GTA				pmax	pmax		
	comp=Z,15nm,1.6s						
GTA				pmax	pmax		
	comp=Z,330nm,5.7s						
GTA				LR	LR		
	comp=N,1µm,16.2s						
GTA				LR	LR		
	comp=E,1µm,17.6s						
GTA				LR	LR		
	comp=Z,2µm,17.6s						
YAK	**Yakutsk**	**63.96**	**28**	*i* P	**P**	**01 03 34.0**	**+0.1**
YAK				*e*S	**S**	**01 12 06.2**	**-2.9**
YAK				pmax	pmax		
	comp=Z,35nm,0.9s						
YAK				MLR	MLR		
	comp=Z,590nm,12.1s						
YAK	**Yakutsk**	**63.96**	**28**	*i* P	**P**	**01 03 34.0**	**+0.1**
	comp=Z,35nm,0.9s						
SSPA	**Standing Stone**	**64.88**	**303**	*e*P	**P**	**01 03 41.2**	**+0.9**
	comp=Z,19nm,1.0s						
SSPA	**Standing Stone**	**64.88**	**303**	*e*P	**P**	**01 03 41.2**	**+0.9**
	comp=Z,19nm,1.0s						
CLNS	**Chul'man**	**65.60**	**34**	*e*P	**P**	**01 03 45.1**	**+0.3**
CLNS	**Chul'man**	**65.60**	**34**	*e*P	**P**	**01 03 45.1**	**+0.3**
JSRW	**J. Sargeant Re**	**66.59**	**300**	*e*P	**P**	**01 03 51.7**	**+0.3**
JSRW	**J. Sargeant Re**	**66.59**	**300**	*e*P	**P**	**01 03 51.7**	**+0.3**
INK	**Inuvik**	**66.76**	**347**	LR	LR	01 36 03.6	
	comp=Z,465nm,18.9s,baz=30,slow=39						
LZH	**Lanzhou**	**67.08**	**62**	*e*P	**P**	**01 03 56.4**	**+1.7**
LZH				pP	**pP**	**01 04 00.9**	**+1.7**
LZH				sP	**sP**	**01 04 03.6**	**+2.8**
LZH				PP	**PP**	**01 06 26.4**	**+4.2**
LZH				*e*S	**S**	**01 12 47.0**	**-1.4**
LZH				sS	**sS**	**01 12 55.0**	**-0.7**
LZH				SS	**SS**	**01 17 08.2**	**+1.5**
LZH				pmax	pmax		
	comp=Z,38nm,1.0s						
LZH				pmax	pmax		
	comp=Z,410nm,5.4s						
LZH				LR	LR		
	comp=N,860nm,11.6s						
LZH				LR	LR		
	comp=E,320nm,11.8s						
LZH				LR	LR		
	comp=Z,1µm,17.7s						
YKA	**Yellowknife Ar**	**67.36**	**337**	P	**P**	**01 03 55.8**	**0.0**
YKA				⇑*e*		01 32 24.2	
YKA	**Yellowknife Ar**	**67.36**	**337**	P	**P**	**01 03 55.8**	**0.0**
	comp=Z,11nm,0.8s,baz=41,slow=6.0,SNR=94						
YKA				PKP2bc		01 32 24.2	
	comp=Z,0.1nm,0.3s,baz=216,slow=2.4,SNR=5.5						
YKA	**Yellowknife Ar**	**67.36**	**337**	P	**P**	**01 03 55.8**	**0.0**
	comp=Z,11nm,0.8s						
BILL	**Bilibino**	**67.92**	**11**	⇑*e*P	**P**	**01 03 59.6**	**+0.3**
BILL				*e*S	**S**	**01 12 56.0**	**-1.1**
BILL				pmax	pmax		
	comp=Z,36nm,1.5s						
BILL				MLR	MLR		
	comp=Z,800nm,20.0s						
BILL	**Bilibino**	**67.92**	**11**	*e*P	**P**	**01 03 59.6**	**+0.3**
	comp=Z,800nm,20.0s						
BILL				*e*S	**S**	**01 12 56.0**	**-1.1**
LBTB	**Lobatse**	**68.12**	**168**	*e*P	**P**	**01 04 01.2**	**+0.1**
	comp=Z,109nm,1.8s						
LBTB	**Lobatse**	**68.12**	**168**	*e*P	**P**	**01 04 01.2**	**+0.1**
	comp=Z,109nm,1.8s						
EYMN	**Ely**	**68.23**	**316**	*e*P	**P**	**01 04 01.8**	**+0.2**
	comp=Z,26nm,1.2s						
EYMN	**Ely**	**68.23**	**316**	*e*P	**P**	**01 04 01.8**	**+0.2**
	comp=Z,26nm,1.2s						
ACSO	**Alum Creek Sta**	**68.25**	**305**	*e*P	**P**	**01 04 01.5**	**-0.4**
	comp=Z,34nm,1.0s						
ACSO	**Alum Creek Sta**	**68.25**	**305**	*e*P	**P**	**01 04 01.5**	**-0.4**
	comp=Z,34nm,1.0s						
OPO	**Ambohidratompo**	**68.31**	**145**	P	**P**	**01 04 04.1**	**+1.6**
OPO	**Ambohidratompo**	**68.31**	**145**	P	**P**	**01 04 04.1**	**+1.6**
	comp=Z,7.1nm,1.0s,baz=333,slow=11,SNR=3.4						
OPO	**Ambohidratompo**	**68.31**	**145**	P	**P**	**01 04 04.1**	**+1.6**
FFC	**Flin Flon**	**68.61**	**326**	*i* P	**P**	**01 04 04.2**	**+0.3**
FFC	**Flin Flon**	**68.61**	**326**	*e*P	**P**	**01 04 04.2**	**+0.3**
	comp=Z,26nm,1.2s						
FFC	**Flin Flon**	**68.61**	**326**	P	**P**	**01 04 04.1**	**+0.3**
	comp=Z,97nm,1.0s,SNR=10						
FFC	**Flin Flon**	**68.61**	**326**	*i* P	**P**	**01 04 04.2**	**+0.3**
ULM	**Lac du Bonnet**	**68.91**	**319**	P	**P**	**01 04 04.5**	**-1.3**
ULM	**Lac du Bonnet**	**68.91**	**319**	P	**P**	**01 04 04.5**	**-1.3**
	comp=Z,11nm,0.9s,baz=68,slow=5.9,SNR=10.0						
ULM				LR	LR	01 34 44.9	
	comp=Z,458nm,18.8s,baz=237,slow=36						
ULM	**Lac du Bonnet**	**68.91**	**319**	P	**P**	**01 04 04.6**	**-1.3**
	comp=Z,458nm,18.8s						
HHC	**Hu-ho-hao-te**	**69.00**	**54**	*e*P	**P**	**01 04 06.7**	**0.0**
HHC				PcP	**PcP**	**01 04 31.7**	**+0.8**
HHC				PP	**PP**	**01 06 41.2**	**+2.5**
HHC				S	**S**	**01 13 10.4**	**-0.7**
HHC				ScS	**SKSac**	**01 14 04.3**	**-1.8**
HHC				SS	**SS**	**01 17 36.0**	**-0.1**
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				pmax	pmax		
	comp=Z,590nm,6.4s						
HHC				LR	LR		
	comp=N,2µm,16.1s						
HHC				LR	LR		
	comp=E,1µm,16.4s						
HHC				LR	LR		
	comp=Z,2µm,16.3s						
COLD	**Coldfoot**	**69.89**	**353**	*e*P	**P**	**01 04 13.1**	**+1.5**
	comp=Z,15nm,1.0s						
COLD	**Coldfoot**	**69.89**	**353**	*e*P	**P**	**01 04 13.1**	**+1.5**
	comp=Z,15nm,1.0s						
SEY	**Seymchan**	**69.94**	**19**	⇑*e*P	**P**	**01 04 12.8**	**+0.9**
SEY	**Seymchan**	**69.94**	**19**	*e*P	**P**	**01 04 12.8**	**+0.9**
CD2	**Chengdu**	**70.15**	**66**	P	**P**	**01 04 13.3**	**-0.6**
CD2				pP	**pP**	**01 04 18.0**	**-0.3**
CD2				sP	**sP**	**01 04 20.3**	**+0.3**
CD2				PcP	**PcP**	**01 04 35.8**	**0.0**
CD2				PP	**PP**	**01 06 49.8**	**+1.0**
CD2				S	**S**	**01 13 22.1**	**-2.8**
CD2				SKS	**SKSac**	**01 14 10.1**	**-4.9**
CD2				SS	**SS**	**01 17 52.4**	**-1.8**
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
CD2				pmax	pmax		
	comp=Z,430nm,5.4s						
CD2				LR	LR		
	comp=N,850nm,14.7s						
CD2				LR	LR		
	comp=E,770nm,14.7s						
CD2				LR	LR		
	comp=Z,970nm,14.5s						
AGMN	**Agassiz Nation**	**70.21**	**318**	*e*P	**P**	**01 04 14.4**	**+0.5**
	comp=Z,11nm,1.0s						
AGMN	**Agassiz Nation**	**70.21**	**318**	*e*P	**P**	**01 04 14.4**	**+0.5**
	comp=Z,11nm,1.0s						
KMSC	**Kings Mountain**	**70.35**	**300**	⇓P	**P**	**01 04 14.6**	**-0.4**
	baz=70						
SFIN	**Scholer Farm**	**70.61**	**307**	⇓P	**P**	**01 04 16.0**	**-0.5**
	baz=70						
SPMN	**St. Paul**	**70.68**	**314**	⇑P	**P**	**01 04 16.1**	**-0.7**
	baz=70						
TZTN	**Tazewell**	**70.88**	**302**	*e*P	P	01 04 22.1	+3.9
	comp=Z,106nm,2.1s						
BLO	**Bloomington**	**71.04**	**306**	*e*P	**P**	**01 04 19.2**	**+0.1**
BLO				pmax	pmax		
	comp=Z,16nm,0.8s						
BLO	**Bloomington**	**71.04**	**306**	*e*P	**P**	**01 04 19.2**	**+0.1**
	comp=Z,16nm,0.8s						
BLO	**Bloomington**	**71.04**	**306**	*e*P	**P**	**01 04 19.2**	**+0.1**
	comp=Z,16nm,0.8s						
WCI	**Wyandotte Cave**	**71.50**	**305**	*e*P	**P**	**01 04 20.7**	**-1.3**
WCI				pmax	pmax		
	comp=Z,19nm,1.0s						
WCI	**Wyandotte Cave**	**71.50**	**305**	*e*P	**P**	**01 04 20.7**	**-1.3**
	comp=Z,19nm,1.0s						
WCI	**Wyandotte Cave**	**71.50**	**305**	*e*P	**P**	**01 04 20.7**	**-1.3**
	comp=Z,19nm,1.0s						
TKL	**Tuckaleechee C**	**71.58**	**302**	*e*P	**P**	**01 04 22.5**	**+0.1**
TKL	**Tuckaleechee C**	**71.58**	**302**	*e*P	**P**	**01 04 22.5**	**+0.1**
BOSA	**Boshof**	**71.61**	**169**	*e*P	**P**	**01 04 22.1**	**-0.4**
BOSA	**Boshof**	**71.61**	**169**	P	**P**	**01 04 21.9**	**-0.6**
	comp=Z,23nm,0.8s,baz=359,slow=6.7,SNR=31						
BOSA				LR	LR	01 40 18.8	
	comp=Z,767nm,18.7s,baz=356,slow=40						
BOSA	**Boshof**	**71.61**	**169**	P	**P**	**01 04 21.9**	**-0.6**
	comp=Z,767nm,18.7s						
XAN	**Xi'an**	**71.62**	**61**	P	**P**	**01 04 22.9**	**+0.2**
XAN				S	**S**	**01 13 44.0**	**+2.2**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,81nm,6.1s						
XAN				LR	LR		
	comp=N,520nm,18.4s						
XAN				LR	LR		
	comp=E,210nm,19.5s						
XAN				LR	LR		
	comp=Z,270nm,18.4s						
ILAR	**Eielson Array**	**71.95**	**351**	P	**P**	**01 04 24.7**	**+0.6**
ILAR	**Eielson Array**	**71.95**	**351**	P	**P**	**01 04 24.7**	**+0.6**
	comp=Z,6.3nm,0.9s,baz=8.3,slow=4.8,SNR=67						
ILAR				LR	LR	01 35 17.2	
	comp=Z,282nm,21.4s,baz=355,slow=35						
ILAR	**Eielson Array**	**71.95**	**351**	P	**P**	**01 04 24.7**	**+0.6**
	comp=Z,6.0nm,0.9s						
COLA	**College**	**71.95**	**352**	*i* P	**P**	**01 04 25.1**	**+1.0**
COLA	**College**	**71.95**	**352**	*i* P	**P**	**01 04 25.1**	**+1.0**
CPCT	**Cooper Cave**	**72.18**	**302**	*e*P	**P**	**01 04 25.8**	**-0.2**
CPCT	**Cooper Cave**	**72.18**	**302**	*e*P	**P**	**01 04 25.8**	**-0.2**
BJI	**Beijing**	**72.23**	**52**	P	**P**	**01 04 26.7**	**+0.5**
BJI				PP	**PP**	**01 07 07.4**	**+1.2**
BJI				S	**S**	**01 13 49.3**	**+0.8**
BJI				SS	**SS**	**01 18 27.3**	**+2.0**
BJI				pmax	pmax		
	comp=Z,23nm,0.9s						
BJI				pmax	pmax		
	comp=Z,400nm,5.7s						
BJI				LR	LR		
	comp=N,2µm,15.8s						
BJI				LR	LR		
	comp=E,2µm,17.6s						
BJI				LR	LR		
	comp=Z,400nm,34.3s						
USIN	**University of**	**72.50**	**306**	*e*P	**P**	**01 04 27.6**	**-0.3**
	comp=Z,34nm,0.9s						
USIN	**University of**	**72.50**	**306**	*e*P	**P**	**01 04 27.6**	**-0.3**
	comp=Z,34nm,0.9s						
DOT	**Dot Lake**	**72.68**	**350**	*e*P	**P**	**01 04 30.7**	**+2.1**
	comp=Z,40nm,1.0s						
DOT	**Dot Lake**	**72.68**	**350**	*e*P	**P**	**01 04 30.7**	**+2.1**
	comp=Z,40nm,1.0s						
KMI	**Kunming**	**73.06**	**71**	P	**P**	**01 04 30.3**	**-1.4**
KMI				PcP	**PcP**	**01 04 50.5**	**+2.0**
KMI				PP	**PP**	**01 07 14.9**	**+0.8**
KMI				S	**S**	**01 13 54.9**	**-4.1**
KMI				SKS	**SKSac**	**01 14 30.8**	**-6.7**
KMI				ScS	**SKKSac**	**01 14 34.7**	**-3.0**
KMI				SS	**SS**	**01 18 40.9**	**+1.5**
KMI				pmax	pmax		
	comp=Z,11nm,1.2s						
KMI				pmax	pmax		
	comp=Z,340nm,4.6s						
KMI				LR	LR		
	comp=N,470nm,17.5s						
KMI				LR	LR		
	comp=E,640nm,16.2s						
KMI				LR	LR		
	comp=Z,770nm,25.3s						
PAX	**Paxson**	**73.52**	**350**	*e*P	**P**	**01 04 34.6**	**+1.0**
PAX				pmax	pmax		
	comp=Z,11nm,1.1s						
PAX	**Paxson**	**73.52**	**350**	*e*P	**P**	**01 04 34.6**	**+1.0**
	comp=Z,11nm,1.1s						
PAX	**Paxson**	**73.52**	**350**	*e*P	**P**	**01 04 34.6**	**+1.0**
	comp=Z,11nm,1.1s						
SDDR	**Presa de Saban**	**73.56**	**281**	*e*P	**P**	**01 04 35.5**	**+1.0**
SDDR	**Presa de Saban**	**73.56**	**281**	*e*P	**P**	**01 04 35.5**	**+1.0**
TRF	**Thorofare Moun**	**73.59**	**352**	*e*P	**P**	**01 04 33.8**	**-0.4**
	comp=Z,18nm,0.9s						
TRF	**Thorofare Moun**	**73.59**	**352**	*e*P	**P**	**01 04 33.8**	**-0.4**
	comp=Z,18nm,0.9s						
A24A	**Westby**	**73.63**	**322**	⇓P	**P**	**01 04 34.3**	**-0.1**
	baz=73						
ECSD	**EROS Data Cent**	**73.70**	**315**	*e*P	**P**	**01 04 34.4**	**-0.5**
	comp=Z,13nm,0.8s						
ECSD	**EROS Data Cent**	**73.70**	**315**	*e*P	**P**	**01 04 34.4**	**-0.5**
	comp=Z,13nm,0.8s						
KLR	**Kul'dur**	**73.88**	**37**	*e*P	**P**	**01 04 33.0**	**-2.8**
KLR	**Kul'dur**	**73.88**	**37**	*e*P	**P**	**01 04 33.0**	**-2.8**
DGMT	**Dagmar**	**74.05**	**322**	*e*P	**P**	**01 04 38.1**	**+1.2**
	comp=Z,44nm,1.3s						
DGMT	**Dagmar**	**74.05**	**322**	⇑P	**P**	**01 04 36.1**	**-0.8**
	baz=74						
DGMT	**Dagmar**	**74.05**	**322**	*e*P	**P**	**01 04 38.1**	**+1.2**
	comp=Z,44nm,1.3s						
FVM	**French Village**	**74.13**	**307**	*e*P	**P**	**01 04 36.4**	**-1.1**
FVM				pmax	pmax		
	comp=Z,28nm,1.2s						
FVM	**French Village**	**74.13**	**307**	*e*P	**P**	**01 04 36.4**	**-1.1**
	comp=Z,28nm,1.2s						
FVM	**French Village**	**74.13**	**307**	*e*P	**P**	**01 04 36.4**	**-1.1**
	comp=Z,28nm,1.2s						
TIGA	**Tifton**	**74.16**	**298**	⇓P	**P**	**01 04 37.1**	**-0.6**
	baz=74						
CHTO	**Chiang Mai**	**74.36**	**79**	*e*P	**P**	**01 04 39.1**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,68nm,1.5s						
CHTO	**Chiang Mai**	**74.36**	**79**	*e*P	**P**	**01 04 39.1**	**-0.1**
	comp=Z,68nm,1.5s						
CHTO	**Chiang Mai**	**74.36**	**79**	P	**P**	**01 04 39.4**	**+0.3**
	SNR=23						
CHTO	**Chiang Mai**	**74.36**	**79**	P	**P**	**01 04 39.0**	**-0.1**
	comp=Z,37nm,1.2s,comp=Z,614nm						
CHTO	**Chiang Mai**	**74.36**	**79**	P	**P**	**01 04 39.4**	**+0.3**
	SNR=23						
B23A	**Brockton**	**74.41**	**323**	⇓P	**P**	**01 04 38.6**	**-0.5**
	baz=74						
A22A	**Carney Farms,**	**74.43**	**323**	⇑P	**P**	**01 04 38.5**	**-0.6**
	baz=74						
CMAR	**Chiang Mai Arr**	**74.59**	**79**	P	**P**	**01 04 40.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**74.59**	**79**	P	**P**	**01 04 40.2**	**-0.3**
	comp=Z,8.0nm,0.7s,baz=306,slow=7.2,SNR=33						
CMAR				LR	LR	01 43 28.9	
	comp=Z,260nm,20.4s,baz=310,slow=41						
CMAR	**Chiang Mai Arr**	**74.59**	**79**	P	**P**	**01 04 40.2**	**-0.3**
	comp=Z,8.0nm,0.7s						
PLAL	**Pickwick Lake**	**74.70**	**303**	*e*P	P	01 04 46.5	+5.6
	comp=Z,41nm,1.3s						
CN2	**Changchun**	**74.76**	**44**	*e*P	**P**	**01 04 41.3**	**+0.2**
CN2				*e*PP	**PP**	**01 07 29.8**	**+2.1**
CN2				*e*S	**S**	**01 14 17.3**	**+0.2**
CN2				pmax	pmax		
	comp=Z,40nm,1.5s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,2µm,19.0s						
CN2				LR	LR		
	comp=E,1µm,19.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
DLBC	**Dease Lake**	**74.91**	**341**	LR	LR	01 38 06.3	
	comp=Z,186nm,21.0s,baz=272,slow=36						
GYA	**Guiyang**	**74.93**	**68**	⇑*i*P	**P**	**01 04 42.8**	**+0.3**
GYA				PP	**PP**	**01 07 31.7**	**+1.8**
GYA				S	**S**	**01 14 19.0**	**-0.8**
GYA				SKS	**SKSac**	**01 14 47.6**	**-3.7**
GYA				SS	**SS**	**01 19 09.3**	**+1.7**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,150nm,5.2s						
GYA				LR	LR		
	comp=N,630nm,19.2s						
GYA				LR	LR		
	comp=E,520nm,18.4s						
GYA				LR	LR		
	comp=Z,730nm,19.9s						
B22A	**Reddig Ranch S**	**74.98**	**323**	⇓P	**P**	**01 04 41.7**	**-0.6**
	baz=75						
C23A	**Lambert**	**74.99**	**322**	⇓P	**P**	**01 04 41.8**	**-0.6**
	baz=75						
SML	**Sawmill**	**74.99**	**351**	*e*P	**P**	**01 04 43.9**	**+1.7**
SML				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SML	**Sawmill**	**74.99**	**351**	*e*P	**P**	**01 04 43.9**	**+1.7**
	comp=Z,9.3nm,1.0s						
SML	**Sawmill**	**74.99**	**351**	*e*P	**P**	**01 04 43.9**	**+1.7**
	comp=Z,9.0nm,1.0s						
PMR	**Palmer**	**75.29**	**351**	*e*P	**P**	**01 04 44.5**	**+0.7**
PMR				pmax	pmax		
	comp=Z,14nm,0.9s						
PMR	**Palmer**	**75.29**	**351**	*e*P	**P**	**01 04 44.5**	**+0.7**
	comp=Z,14nm,0.9s						
PMR	**Palmer**	**75.29**	**351**	*e*P	**P**	**01 04 44.5**	**+0.7**
	comp=Z,14nm,0.9s						
LRAL	**Lakeview Retre**	**75.31**	**301**	*e*P	**P**	**01 04 43.6**	**-0.8**
	comp=Z,22nm,0.9s						
LRAL	**Lakeview Retre**	**75.31**	**301**	*e*P	**P**	**01 04 43.6**	**-0.8**
	comp=Z,22nm,0.9s						
BMRM	**Bremner River**	**75.33**	**349**	*e*P	**P**	**01 04 45.5**	**+1.4**
	comp=Z,52nm,1.2s						
BMRM	**Bremner River**	**75.33**	**349**	*e*P	**P**	**01 04 45.5**	**+1.4**
	comp=Z,52nm,1.2s						
C22A	**Vida**	**75.35**	**323**	⇓P	**P**	**01 04 43.4**	**-1.1**
	baz=75						
A20A	**Cobblestone Ra**	**75.39**	**324**	⇓P	**P**	**01 04 43.7**	**-1.0**
	baz=75						
A19A	**Klindworth Far**	**75.71**	**325**	⇑P	**P**	**01 04 45.9**	**-0.7**
	baz=75						
B20A	**Solberg Farm,**	**75.77**	**324**	⇑P	**P**	**01 04 47.0**	**+0.1**
	baz=76						
C21A	**Desert Coulee**	**75.83**	**323**	⇓P	**P**	**01 04 46.2**	**-1.0**
	baz=76						
SPU	**Mount Spurr**	**75.99**	**353**	*e*P	**P**	**01 04 48.2**	**+0.3**
SPU	**Mount Spurr**	**75.99**	**353**	*e*P	**P**	**01 04 48.2**	**+0.3**
E23A	**Ismay**	**76.01**	**321**	⇓P	**P**	**01 04 48.3**	**0.0**
	baz=76						
F24A	**Ekalaka**	**76.09**	**320**	⇓P	**P**	**01 04 48.4**	**-0.5**
	baz=76						
BGNE	**Belgrade**	**76.13**	**314**	⇓P	**P**	**01 04 48.6**	**-0.5**
	baz=76						
B19A	**Brinkman Farms**	**76.16**	**325**	⇓P	**P**	**01 04 48.5**	**-0.6**
	baz=76						
A18A	**Metzger Ranch,**	**76.18**	**325**	⇑P	**P**	**01 04 48.7**	**-0.6**
	baz=76						
MDJ	**Mudanjiang**	**76.26**	**41**	P	**P**	**01 04 49.8**	**+0.2**
MDJ				PP	**PP**	**01 07 42.1**	**+1.8**
MDJ				S	**S**	**01 14 31.9**	**-1.7**
MDJ				SS	**SS**	**01 19 33.3**	**+7.0**
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,170nm,5.6s						
MDJ				LR	LR		
	comp=N,1µm,16.8s						
MDJ				LR	LR		
	comp=E,2µm,14.6s						
MDJ				LR	LR		
	comp=Z,610nm,23.5s						
C20A	**Veseth Ranch,**	**76.31**	**324**	⇓P	**P**	**01 04 50.5**	**+0.5**
	baz=76						
D21A	**La Casta Ranch**	**76.36**	**323**	⇑P	**P**	**01 04 49.9**	**-0.4**
	baz=76						
SVW2	**Sparrevohn**	**76.36**	**354**	*e*P	**P**	**01 04 52.5**	**+2.5**
	comp=Z,19nm,1.1s						
G24A	**Alzada**	**76.46**	**320**	⇑P	**P**	**01 04 50.2**	**-0.8**
	baz=76						
A17A	**Triple J Farms**	**76.52**	**326**	⇓P	**P**	**01 04 50.4**	**-0.8**
	baz=76						
B18A	**Beardsley Farm**	**76.56**	**325**	⇓P	**P**	**01 04 51.9**	**+0.5**
	baz=76						
C19A	**Slack Wire Ran**	**76.75**	**324**	⇓P	**P**	**01 04 52.0**	**-0.5**
	baz=76						
SEW	**Seward**	**76.78**	**351**	*e*P	**P**	**01 04 53.7**	**+1.4**
	comp=Z,20nm,1.0s						
SEW	**Seward**	**76.78**	**351**	*e*P	**P**	**01 04 53.7**	**+1.4**
	comp=Z,20nm,1.0s						
E21A	**Keefer Ranch,**	**76.79**	**322**	⇓P	**P**	**01 04 52.0**	**-0.7**
	baz=76						
EGMT	**Eagleton**	**76.83**	**325**	*e*P	P	01 04 45.7	-7.3
	comp=Z,41nm,0.8s						
EGMT	**Eagleton**	**76.83**	**325**	⇑P	**P**	**01 04 52.2**	**-0.8**
	baz=76						
D20A	**Manuel Ranch,**	**76.85**	**323**	⇑P	**P**	**01 04 52.5**	**-0.5**
	baz=77						
A16A	**West Butte Ran**	**76.89**	**326**	⇓P	**P**	**01 04 52.7**	**-0.7**
	baz=77						
KSU1	**Kansas State U**	**76.92**	**311**	*e*P	**P**	**01 04 53.1**	**-0.4**
	comp=Z,45nm,1.0s						
KSU1	**Kansas State U**	**76.92**	**311**	*e*P	**P**	**01 04 53.1**	**-0.4**
	comp=Z,45nm,1.0s						
F22A	**Rosebud**	**76.99**	**321**	⇓P	**P**	**01 04 53.6**	**-0.3**
	baz=77						
B17A	**L&G Farms, Che**	**77.07**	**325**	⇑P	**P**	**01 04 53.7**	**-0.5**
	baz=77,SNR=14						
D19A	**Cripps Ranch,**	**77.12**	**324**	⇓P	**P**	**01 04 54.5**	**-0.1**
	baz=77						
A15A	**Johnson Ranch,**	**77.33**	**327**	⇑P	**P**	**01 04 55.8**	**0.0**
	baz=77						
B16A	**M & M Farms, S**	**77.35**	**326**	⇓P	**P**	**01 04 55.3**	**-0.6**
	baz=77						
SRDT	**SRDT**	**77.37**	**82**	P	**P**	**01 04 56.4**	**0.0**
	comp=Z,34nm,1.5s						
WHN	**Wuhan**	**77.37**	**60**	P	**P**	**01 04 56.5**	**+0.3**
WHN				*e*S	**S**	**01 14 44.3**	**-1.9**
WHN				LR	LR		
	comp=N,540nm,11.4s						
WHN				LR	LR		
	comp=E,1µm,12.0s						
WHN				LR	LR		
	comp=Z,1µm,18.8s						
D18A	**Linhart Farms,**	**77.50**	**324**	⇓P	**P**	**01 04 57.0**	**+0.2**
	baz=77						
C17A	**Wharram Farm,**	**77.57**	**325**	⇑P	**P**	**01 04 57.1**	**0.0**
	baz=77						
A14A	**Double T Ranch**	**77.61**	**327**	⇓P	**P**	**01 04 57.3**	**0.0**
	baz=77						
USRK	**Ussuriysk Arra**	**77.73**	**40**	P	**P**	**01 04 58.0**	**+0.1**
	comp=Z,12nm,0.9s,baz=288,slow=4.8,SNR=26						
USRK				LR	LR	01 43 04.3	
	comp=Z,992nm,18.4s,baz=323,slow=39						
B15A	**Bradely Ranch,**	**77.78**	**326**	⇓P	**P**	**01 04 57.2**	**-1.1**
	baz=78,SNR=12						
F20A	**Billings**	**77.84**	**322**	⇑P	**P**	**01 04 58.8**	**+0.1**
	baz=78						
C16A	**Fuhringer Ranc**	**77.85**	**326**	⇓P	**P**	**01 04 57.7**	**-1.0**
	baz=78						
D17A	**Six Diamond Ra**	**77.91**	**325**	⇑P	**P**	**01 04 58.5**	**-0.6**
	baz=78						
E18A	**Harlowton**	**78.03**	**324**	⇑P	**P**	**01 05 00.2**	**+0.5**
	baz=78						
A13A	**Flathead Natio**	**78.03**	**328**	⇓P	**P**	**01 04 59.1**	**-0.6**
	baz=78						
B14A	**Marquette Ranc**	**78.03**	**327**	⇑P	**P**	**01 04 58.9**	**-0.9**
	baz=78,SNR=13						
K25A	**Mack Ranch, Ha**	**78.21**	**318**	⇓P	**P**	**01 05 00.8**	**0.0**
	baz=78						
C15A	**Salmond Ranch,**	**78.23**	**326**	⇑P	**P**	**01 05 00.1**	**-0.8**
	baz=78						
M27A	**Reverse DX Ran**	**78.26**	**316**	⇓P	**P**	**01 05 00.9**	**-0.2**
	baz=78						
G20A	**Bridger**	**78.31**	**322**	⇓P	**P**	**01 05 01.6**	**+0.2**
	baz=78						
MIAR	**Mount Ida**	**78.33**	**306**	*e*P	**P**	**01 05 01.5**	**+0.1**
MIAR	**Mount Ida**	**78.33**	**306**	*e*P	**P**	**01 05 01.5**	**+0.1**
MIAR	**Mount Ida**	**78.33**	**306**	*e*P	**P**	**01 05 01.5**	**+0.1**
D16A	**Dana Ranch, Ca**	**78.37**	**325**	⇓P	**P**	**01 05 01.4**	**-0.3**
	baz=78						
J23A	**Dilts Ranch, B**	**78.44**	**319**	⇓P	**P**	**01 05 01.7**	**-0.4**
	baz=78						
F18A	**Big Timber**	**78.46**	**323**	⇑P	**P**	**01 05 02.2**	**+0.1**
	baz=78						
VLA	**Vladivostok**	**78.48**	**41**	⇓*i*P	**P**	**01 05 01.1**	**-1.0**

VLA e 01 05 09.9
VLA S S 01 14 58.3 +0.5
VLA pmax pmax
comp=Z,27nm,1.2s
VLA Vladivostok 78.48 41 *i* P P 01 05 01.1 -1.0
comp=Z,27nm,1.2s
VLA Vladivostok 78.48 41 *e*PcP PcP 01 05 09.9 -1.3
VLA S S 01 14 58.3 +0.5
B13A Whitefish 78.50 327 ⇓P P 01 05 01.2 -1.1
baz=78,SNR=8.6
OGNE Ogallala 78.50 316 ⇓P P 01 05 01.8 -0.7
baz=78
A12A Yaak River Ran 78.52 328 ⇓P P 01 05 02.2 -0.1
baz=78
I22A 9 Mile Ranch, 78.52 320 ⇑P P 01 05 02.1 -0.4
baz=78
E17A Martinsdale 78.52 324 ⇑P P 01 05 02.2 -0.3
baz=78
TUL1 Tulsa 78.68 309 ⇑P P 01 05 03.7 +0.3
baz=78
M26A McRoberts Ranc 78.69 317 ⇓P P 01 05 03.6 +0.1
baz=78
C14A Swan Lake 78.70 327 ⇑P P 01 05 02.9 -0.5
baz=78
HRY Holter Researc 78.74 325 *e*P P 01 05 06.3 +2.7
BLMT Blacktail Moun 78.75 327 *e*P P 01 05 04.3 +0.5
BLMT Blacktail Moun 78.75 327 *e*P P 01 05 04.3 +0.5
G18A Lazy EL Ranch, 78.84 323 ⇑P P 01 05 03.9 -0.4
baz=79
RLMT Red Lodge 78.86 323 ⇑P P 01 05 03.2 -1.3
baz=79
N27A Anderson Farm, 78.86 316 ⇓P P 01 05 04.6 +0.1
baz=79
B12A Libby 78.87 328 ⇑P P 01 05 03.7 -0.6
baz=79
F17A Fitzpatrick Pl 78.87 324 ⇓P P 01 05 04.7 +0.2
baz=79
JTMT Jette 78.93 327 *e*P P 01 05 05.2 +0.5
JTMT Jette 78.93 327 *e*P P 01 05 05.2 +0.5
SWMT Swartz Lake 79.01 327 *e*P P 01 05 05.8 +0.7
SWMT Swartz Lake 79.01 327 *e*P P 01 05 05.8 +0.7
SLMT Seeley Lake 79.02 326 *e*P P 01 05 05.4 +0.2
SLMT Seeley Lake 79.02 326 *e*P P 01 05 05.4 +0.2
BSMT Bassoo Peak 79.05 327 *e*P P 01 05 06.3 +0.9
BSMT Bassoo Peak 79.05 327 *e*P P 01 05 06.3 +0.9
C13A Hot Springs 79.10 327 ⇑P P 01 05 05.6 +0.1
baz=79,SNR=22
CHMT Chamberlain Mo 79.18 326 *e*P P 01 05 06.5 +0.3
CHMT Chamberlain Mo 79.18 326 *e*P P 01 05 06.5 +0.3
NJ2 Nanjing 79.19 56 *e*P P 01 05 06.4 +0.2
NJ2 pP PcP 01 05 15.3 +0.8
NJ2 PP PP 01 08 03.2 -2.0
NJ2 S S 01 15 07.2 +1.5
NJ2 pmax pmax
comp=Z,20nm,0.9s
NJ2 pmax pmax
comp=Z,330nm,6.2s
NJ2 LR LR
comp=N,550nm,18.5s
NJ2 LR LR
comp=E,670nm,18.1s
NJ2 LR LR
comp=Z,2μm,18.2s
E15A Deer Lodge 79.31 325 ⇓P P 01 05 06.8 0.0
baz=79,SNR=15
G17A Pierce Place, 79.36 324 ⇓P P 01 05 06.2 -0.9
baz=79
F16A Kennard Place, 79.39 324 ⇓P P 01 05 07.1 -0.1
baz=79
J21A Lysite 79.39 320 ⇑P P 01 05 06.9 -0.5
baz=79
KDAK Kodiak Island 79.39 352 *e*P P 01 05 08.3 +1.5
comp=Z,253nm,2.0s
KDAK Kodiak Island 79.39 352 *e*P P 01 05 08.3 +1.5
comp=Z,253nm,2.0s
C12B Naegeli Ranch, 79.44 328 ⇑P P 01 05 07.4 +0.1
baz=79
BOZ Bozeman (W) 79.49 324 *e*P P 01 05 08.9 +1.0
BOZ pmax pmax
comp=Z,18nm,1.1s
BOZ Bozeman (W) 79.49 324 *e*P P 01 05 08.9 +1.0
comp=Z,18nm,1.1s
BOZ Bozeman (W) 79.49 324 ⇑P P 01 05 08.0 +0.1
baz=79,SNR=13
BOZ Bozeman (W) 79.49 324 *e*P P 01 05 08.9 +1.0
comp=Z,18nm,1.1s
D13A Huson 79.53 327 ⇓P P 01 05 08.0 +0.1
baz=79,SNR=18
MSO Missoula 79.53 326 *e*P P 01 05 08.0 0.0
comp=Z,18nm,1.5s
MSO Missoula 79.53 326 ⇑P P 01 05 07.9 -0.1
baz=79
MSO Missoula 79.53 326 *e*P P 01 05 08.0 0.0
comp=Z,18nm,1.5s
I19A Meeteetse 79.58 322 ⇓P P 01 05 08.7 +0.3
baz=79
NEW Newport 79.63 329 *e*P P 01 05 09.2 +0.8
comp=Z,25nm,1.3s
NEW Newport 79.63 329 ⇓P P 01 05 08.5 +0.1
baz=79
NEW Newport 79.63 329 LR LR 01 40 50.7
comp=Z,714nm,18.2s,baz=38,slow=36
NEW Newport 79.63 329 *e*P P 01 05 09.2 +0.8
comp=Z,25nm,1.3s
SDV Santo Domingo 79.63 273 *e*P P 01 05 10.9 +1.8
comp=Z,0.6nm,1.1s
C11A Tepee Creek (N 79.64 328 ⇑P P 01 05 08.3 -0.2
baz=79
E14A Clinton 79.67 326 ⇓P P 01 05 08.3 -0.6
baz=79
LRM Limekiln Ridge 79.71 325 *e*P P 01 05 09.9 +0.8
LRM Limekiln Ridge 79.71 325 *e*P P 01 05 09.9 +0.8
F15A Butte 79.71 325 ⇑P P 01 05 09.3 +0.2
baz=79,SNR=11
LKWY Lake 79.80 323 *e*P P 01 05 12.3 +2.6
LKWY Lake 79.80 323 *e*P P 01 05 12.3 +2.6
G16A Moss Hill, Enn 79.90 324 ⇑P P 01 05 10.3 +0.2
baz=80,SNR=7.4
L22A Ellis Ranch, M 79.90 319 ⇑P P 01 05 09.6 -0.6
baz=80
INCN Inchon 79.90 48 P P 01 05 11.4 +1.3
SNR=7.1
D12A Red Ives Fores 79.92 327 ⇓P P 01 05 09.7 -0.4
baz=80
PETK Petropavlovsk- 79.94 21 P P 01 05 09.7 -0.2
PETK pmax pmax
comp=Z,36nm,1.2s
PETK MLR MLR
comp=Z,518nm,20.0s
PETK Petropavlovsk- 79.94 21 P P 01 05 09.7 -0.2
PETK Petropavlovsk- 79.94 21 P P 01 05 09.7 -0.2
comp=Z,36nm,1.2s,baz=25,slow=5.1,SNR=6.3
PETK LR LR 01 42 59.9
comp=Z,518nm,20.0s,baz=328,slow=38
PETK Petropavlovsk- 79.94 21 P P 01 05 09.7 -0.2
comp=Z,518nm,20.0s
E13A Victor 79.94 326 ⇑P P 01 05 10.4 +0.1
baz=80
BBB Bella Bella 79.97 337 LR LR 01 41 30.7
comp=Z,430nm,20.2s,baz=219,slow=36
M23A Laramie 79.98 318 ⇑P P 01 05 10.3 -0.4
baz=80
H17A Grant Village 80.01 323 ⇓P P 01 05 11.4 +0.6
baz=80
QLMT Earthquake Lak 80.05 324 *e*P P 01 05 12.5 +1.5
QLMT Earthquake Lak 80.05 324 *e*P P 01 05 12.5 +1.5
H16A Russell Place, 80.07 323 ⇑P P 01 05 11.4 +0.3
baz=80
F14A Wisdom 80.11 325 ⇓P P 01 05 10.5 -0.7
baz=80
DLMT Dillon 80.14 325 *e*P P 01 05 12.6 +1.3
comp=Z,120nm,2.0s
DLMT Dillon 80.14 325 *e*P P 01 05 12.6 +1.3
comp=Z,120nm,2.0s
I18A Diamond G Ranc 80.21 322 ⇓P P 01 05 12.0 +0.1
baz=80
G15A Dillon 80.25 324 ⇑P P 01 05 12.0 +0.1
baz=80
PET Petropavlovsk 80.26 20 *e*P P 01 05 10.7 -0.9
PET *e* 01 08 10.9
PET *e*PPP PPP 01 10 02.9
PET *e*S S 01 15 16.6 +0.3
PET *e*PS PnS 01 16 01.1 +0.1
PET *e*SS SS 01 20 35.5 +10
PET pmax pmax
comp=Z,200nm,7.7s
PET MLR MLR
comp=Z,700nm,19.0s
PET Petropavlovsk 80.26 20 *e*P P 01 05 10.7 -0.9
comp=Z,200nm,7.7s
N23A Red Feather La 80.52 318 ⇑P P 01 05 14.0 +0.3
baz=80
F13A Darby 80.53 326 ⇑P P 01 05 13.5 +0.1
baz=80,SNR=20
MOOW Moose Ponds 80.59 323 *e*P P 01 05 15.6 +1.7
comp=Z,19nm,1.4s
MOOW Moose Ponds 80.59 323 *e*P P 01 05 15.6 +1.7
comp=Z,19nm,1.4s
G14A Jackson 80.60 325 ⇑P P 01 05 13.6 -0.3
baz=80
KSAR Wonju Array Be 80.62 47 P P 01 05 14.4 +0.6
KSAR PP PP 01 08 18.5 +1.6
KSAR Wonju Array Be 80.62 47 P P 01 05 14.4 +0.6
KSRS Korea Array 80.63 47 P P 01 05 14.4 +0.5
comp=Z,8.6nm,0.8s,baz=327,slow=4.6,SNR=42
KSRS PP PP 01 08 18.5 +1.5
comp=Z,0.7nm,0.3s,baz=316,slow=6.1,SNR=4.1
KSRS LR LR 01 47 27.5
comp=Z,700nm,19.1s,baz=322,slow=40
KSRS Korea Array 80.63 47 P P 01 05 14.4 +0.5
comp=Z,9.0nm,0.8s
P25A Willow Gulch B 80.66 316 ⇓P P 01 05 14.1 -0.2
baz=80
O24A Longmont 80.67 317 ⇑P P 01 05 14.1 -0.2
baz=80
J18A Kendall Valley 80.69 322 ⇓P P 01 05 14.4 -0.1
baz=80
BDFB Brasilia 80.73 239 P P 01 05 15.0 +0.3
BDFB Brasilia 80.73 239 P P 01 05 15.0 +0.3
comp=Z,12nm,0.8s,baz=6.7,slow=2.6,SNR=12
BDFB LR LR 01 42 21.8
comp=Z,442nm,18.1s,baz=55,slow=37
BDFB Brasilia 80.73 239 P P 01 05 15.0 +0.3
comp=Z,442nm,18.2s
Q26A Hugo 80.77 315 ⇓P P 01 05 14.5 -0.4
baz=80
BW06 Boulder Array 80.82 321 ⇑P P 01 05 15.0 -0.2
baz=80
PDAR Pinedale Array 80.82 321 LR LR 01 40 27.5
comp=Z,481nm,19.4s,baz=48,slow=35
I16A Newdale 80.83 323 ⇑P P 01 05 14.8 -0.3
baz=80
L20A Wamsutter 80.84 320 ⇑P P 01 05 15.0 -0.2
baz=81
N22A Wattenberg Ran 80.84 318 ⇓P P 01 05 15.3 -0.1
baz=81
J17A Brown Place, J 80.88 322 ⇓P P 01 05 15.1 -0.4
baz=81
F12A Elk City 80.93 326 ⇑P P 01 05 16.3 +0.7
baz=81,SNR=12
O23A Lake Granby, G 81.03 317 ⇓P P 01 05 16.1 -0.2
baz=81
G13A Cobalt 81.05 325 ⇓P P 01 05 16.2 0.0
baz=81,SNR=8.1
H14A Leadore 81.06 325 ⇑P P 01 05 16.2 -0.2
baz=81
K18A Toltan Ranch, 81.14 321 ⇓P P 01 05 16.5 -0.4
baz=81
M20A Sweetwater, Wa 81.16 320 ⇓P P 01 05 17.2 +0.2
baz=81
ISCO Idaho Springs 81.18 317 *e*P P 01 05 17.9 +0.7
ISCO pmax pmax
comp=Z,15nm,1.1s
ISCO Idaho Springs 81.18 317 *e*P P 01 05 17.9 +0.7
comp=Z,15nm,1.1s
ISCO Idaho Springs 81.18 317 ⇑P P 01 05 17.0 -0.2
baz=81
ISCO Idaho Springs 81.18 317 *e*P P 01 05 17.9 +0.7
comp=Z,15nm,1.1s
R26A Arlington 81.19 315 ⇑P P 01 05 16.7 -0.4
baz=81
L19A Farson 81.24 321 ⇑P P 01 05 17.3 -0.1
baz=81
SSE Sheshan 81.28 56 *e*P P 01 05 16.5 -1.0
SSE S S 01 15 23.0 -4.7
SSE pmax pmax
comp=Z,38nm,0.7s
SSE pmax pmax
comp=Z,180nm,6.2s
SSE LR LR
comp=N,500nm,22.1s
SSE LR LR
comp=E,800nm,22.2s
SSE LR LR
comp=Z,670nm,15.8s
J16A Bone 81.36 323 ⇓P P 01 05 17.8 -0.2
baz=81
O22A Kremmling 81.38 318 ⇓P P 01 05 18.1 -0.1
baz=81
N21A Black Mountain 81.40 319 ⇑P P 01 05 18.4 +0.1
baz=81
K17A Gardner Place, 81.46 322 ⇑P P 01 05 18.3 -0.2
baz=81
G12A Big Creek, Yel 81.47 326 ⇑P P 01 05 18.4 -0.1
baz=81
H13A Challis 81.48 325 ⇑P P 01 05 18.9 +0.4
baz=81
W31A Holland Ranch, 81.57 310 ⇑P P 01 05 19.1 +0.1
baz=81
Q24A Divide 81.58 316 ⇓P P 01 05 19.6 +0.3
baz=81
PGC Sidney 81.59 333 *e*P P 01 05 22.2 +3.4
comp=Z,1.7nm,1.0s
M19A Rock Springs 81.61 320 ⇓P P 01 05 19.1 -0.3
baz=81
P23A Jefferson 81.62 317 ⇑P P 01 05 19.8 +0.2
baz=81
I14A Mackay 81.65 324 ⇓P P 01 05 20.5 +1.1
baz=81,SNR=26
K16A Soda Springs 81.70 322 ⇑P P 01 05 20.0 +0.2
baz=81
L18A Fontenelle, Gr 81.70 321 ⇓P P 01 05 19.3 -0.6
baz=81
N20A Spence Gulch, 81.70 319 ⇑P P 01 05 20.2 +0.3
baz=81,SNR=6.1
S26A Kim 81.71 314 ⇑P P 01 05 19.1 -0.7
baz=81
T27A Campo 81.72 313 ⇑P P 01 05 19.6 -0.3
baz=82
H12A Diamond D Ranc 81.75 325 ⇑P P 01 05 20.3 +0.3
baz=81,SNR=15
P22A Eagle 81.91 318 ⇓P P 01 05 21.3 +0.3
baz=82
I13A Wildhorse Cree 81.94 325 ⇑P P 01 05 21.9 +0.8
baz=82,SNR=26
L17A Cokeville 81.95 322 ⇑P P 01 05 20.4 -0.7
baz=82
Q23A Hartsel 81.97 317 ⇑P P 01 05 22.1 +0.6
baz=82
X31A McDonald Ranch 81.99 310 ⇓P P 01 05 21.6 +0.3
baz=82
QIZ Qiongzhong 82.01 72 P P 01 05 23.3 +1.8
QIZ S S 01 15 37.1 +1.5
QIZ pmax pmax
comp=Z,19nm,2.5s
QIZ LR LR
comp=Z,310nm,28.1s
N19A John Jarvie Ra 82.09 320 ⇓P P 01 05 21.6 -0.2
baz=82
HAWA Hanford 82.10 329 *e*P P 01 05 23.6 +2.0
comp=Z,31nm,1.4s
HAWA Hanford 82.10 329 *e*P P 01 05 23.6 +2.0
comp=Z,31nm,1.4s
M18A Lyman 82.10 321 ⇓P P 01 05 21.7 -0.3
baz=82
T26A Comanche Natio 82.11 314 ⇑P P 01 05 22.2 +0.2
baz=82
R24A Sanders Place, 82.11 316 ⇑P P 01 05 22.1 0.0
baz=82
Y32A R-V Farms, Ver 82.14 309 ⇓P P 01 05 22.3 +0.3
baz=82
J14A Carey 82.16 324 ⇑P P 01 05 22.0 -0.1
baz=82
O20A White River Ci 82.23 319 ⇓P P 01 05 23.1 +0.5
baz=82
K15A Arbon 82.23 323 ⇑P P 01 05 22.7 +0.1
baz=82
N18A Larsen Ranch, 82.27 320 ⇑P P 01 05 22.9 +0.1
baz=82
L16A Fish Haven 82.27 322 ⇓P P 01 05 23.1 +0.3
baz=82
P21A Newcastle 82.31 318 ⇓P P 01 05 23.1 0.0
baz=82
SMCO Snowmass 82.34 317 *e*P P 01 05 23.4 0.0
comp=Z,9.8nm,0.8s
SMCO Snowmass 82.34 317 *e*P P 01 05 23.5 0.0
comp=Z,9.8nm,0.8s
HLID Hailey 82.36 325 *e*P P 01 05 25.2 +2.0
comp=Z,32nm,1.9s
HLID Hailey 82.36 325 ⇓P P 01 05 23.5 +0.3
baz=82
J13A Cove Ranch, Pi 82.39 324 ⇑P P 01 05 23.6 +0.2
baz=82,SNR=7.0
I12A Atlanta 82.47 325 ⇓P P 01 05 23.6 -0.2
baz=82
BMO Blue Mountains 82.51 327 *e*P P 01 05 23.8 0.0
comp=Z,67nm,1.3s
BMO Blue Mountains 82.51 327 *e*P P 01 05 23.8 0.0
comp=Z,67nm,1.3s
R23A Moffat 82.51 316 ⇓P P 01 05 24.4 +0.2
baz=82
O19A Miners Draw (B 82.53 319 ⇑P P 01 05 24.1 -0.1
baz=82
ASAJ Asahikawa 82.53 34 *e*P P 01 05 24.4 +0.6
comp=Z,18nm,1.2s
ASAJ Asahikawa 82.53 34 LR LR 01 46 09.2
comp=Z,1μm,18.8s,baz=340,slow=39
ASAJ Asahikawa 82.53 34 *e*P P 01 05 24.4 +0.6
comp=Z,18nm,1.2s
Q22A Crested Butte, 82.55 317 ⇓P P 01 05 24.3 -0.1
baz=82
T25A Trinidad 82.56 315 ⇓P P 01 05 24.6 +0.2
baz=82
W29A Amraillo 82.57 311 ⇑P P 01 05 24.1 -0.3
baz=82
S24A Houchin Ranch, 82.61 315 ⇑P P 01 05 24.6 -0.2
baz=82
X30A Coker Ranch, T 82.63 311 ⇑P P 01 05 24.9 +0.3
baz=82,SNR=10
K14A Jones Ranch, D 82.63 323 ⇓P P 01 05 24.9 +0.3
baz=82
LON Longmire 82.64 331 *e*P P 01 05 26.8 +2.3
LON pmax pmax
comp=Z,53nm,1.8s
LON Longmire 82.64 331 *e*P P 01 05 26.8 +2.3
comp=Z,53nm,1.8s
Y31A Rekieta Farm, 82.64 310 ⇑P P 01 05 24.8 +0.1
baz=82
Z32A Haskell 82.67 309 ⇑P P 01 05 24.8 0.0
baz=82,SNR=9.9
U26A Atchley Ranch, 82.77 314 ⇓P P 01 05 25.7 +0.2
baz=82
P20A De Beque 82.79 318 ⇓P P 01 05 25.7 +0.1
baz=82
N17A Moffit Pass 82.84 321 ⇓P P 01 05 25.4 -0.5
baz=82
Q21A Lamborn Mesa, 82.90 318 ⇑P P 01 05 25.1 -1.1
baz=83
T24A Torres, Weston 82.95 315 ⇑P P 01 05 26.7 +0.2
baz=83
R22A Saguache, Gunn 82.95 317 ⇓P P 01 05 27.1 +0.5
baz=83
P19A Cripple Cowboy 82.98 319 ⇑P P 01 05 26.5 0.0
baz=83
O18A Roosevelt 82.98 320 ⇑P P 01 05 26.3 -0.2
baz=83
Z31A Sharp Cattle R 83.04 309 ⇓P P 01 05 27.0 +0.2
baz=83,SNR=11
HVU Hansel Valley 83.07 323 *e*P P 01 05 28.4 +1.5
HVU pmax pmax
comp=Z,70nm,2.1s
HVU Hansel Valley 83.07 323 *e*P P 01 05 28.4 +1.5
comp=Z,70nm,2.1s
HVU Hansel Valley 83.07 323 *e*P P 01 05 28.4 +1.5
comp=Z,70nm,2.1s
L14A Malta 83.07 323 ⇑P P 01 05 27.3 +0.4
baz=83
MFID Camas Ranch 83.08 325 *e*P P 01 05 27.8 +0.9
comp=Z,51nm,1.6s
MFID Camas Ranch 83.08 325 ⇓P P 01 05 27.1 +0.3
baz=83
MFID Camas Ranch 83.08 325 *e*P P 01 05 27.8 +0.9
comp=Z,51nm,1.6s
X29A Tulia 83.09 311 ⇓P P 01 05 27.9 +0.8
baz=83
U25A Circle Dot Ran 83.12 314 ⇓P P 01 05 28.0 +0.7
baz=83,SNR=24
Q20A Ridgley Place, 83.17 318 ⇑P P 01 05 27.9 +0.4
baz=83
V26A Tequesquite Ra 83.24 313 ⇓P P 01 05 28.3 +0.4
baz=83
R21A Cimarron 83.25 317 ⇓P P 01 05 28.6 +0.6
baz=83
ABTX Abilene, Hawle 83.26 309 ⇑P P 01 05 28.1 +0.3
baz=83
X28A Dimmitt 83.32 311 ⇑P P 01 05 28.7 +0.5
baz=83
S22A 4UR Ranch, Cre 83.36 316 ⇓P P 01 05 28.4 -0.3
baz=83,SNR=7.8
O17A Robinson Place 83.38 320 ⇑P P 01 05 28.0 -0.6
baz=83
W27A Bowe Ranch, En 83.39 312 ⇑P P 01 05 29.2 +0.6
baz=83
JLU Jordanelle 83.39 321 *e*P P 01 05 29.4 +0.6
comp=Z,43nm,1.8s
JLU Jordanelle 83.39 321 *e*P P 01 05 29.4 +0.6
comp=Z,43nm,1.8s
T23A Casias Ranch, 83.49 315 ⇓P P 01 05 29.5 +0.2
baz=83
U24A Moreno Valley 83.57 315 ⇓P P 01 05 30.7 +0.9
baz=83
P18A Preston Nutter 83.59 320 ⇑P P 01 05 29.7 -0.2
baz=83,SNR=5.2
Z30A Sanderson Ranc 83.62 310 ⇓P P 01 05 30.1 +0.3
baz=83
Q19A Hogan Spring (83.64 319 ⇑P P 01 05 30.5 +0.6
baz=83
V25A Rancho No Teng 83.65 314 ⇑P P 01 05 30.4 +0.3
baz=83
131A Roby 83.65 309 ⇓P P 01 05 29.9 0.0
baz=83
232A Coleman 83.79 308 ⇑P P 01 05 30.9 +0.2
baz=84,SNR=6.0
Y28A McKinney Farm, 83.80 311 ⇓P P 01 05 31.0 +0.2
baz=84
R20A Redvale 83.80 318 ⇓P P 01 05 30.8 0.0
baz=84,SNR=5.5
PV04 Paradox Valley 83.90 318 *e*P P 01 05 33.5 +2.2
S21A Coal Bank Pass 83.91 317 ⇑P P 01 05 32.0 +0.5
baz=84,SNR=19
QZH Quanzhou 83.93 62 ⇓*i*P P 01 05 32.7 +1.3
QZH *e*S S 01 15 55.5 +0.6
QZH LR LR
comp=Z,1μm,17.0s
MPU Maple Canyon 83.94 321 *e*P P 01 05 33.6 +2.1
comp=Z,6.6nm,0.9s
T22A Edith 83.96 316 ⇑P P 01 05 32.3 +0.6
baz=84,SNR=11
Z29A Hungry Hill Ra 83.97 310 ⇑P P 01 05 32.4 +0.8
baz=84
W25A X Bar L Ranch, 84.03 313 ⇓P P 01 05 32.2 +0.3
baz=84
MSTX Muleshoe 84.04 311 ⇓P P 01 05 32.1 +0.1
baz=84
S20A Disappointment 84.07 317 ⇓P P 01 05 32.4 +0.2
baz=84
V24A Rampart Ranch, 84.08 314 ⇓P P 01 05 31.1 -1.2
baz=84
U23A El Rito 84.11 315 ⇑P P 01 05 32.5 0.0
baz=84
TSI Tuntungan 84.12 91 P P 01 05 28.7 -3.8
comp=Z,47nm,1.0s
SRU San Rafael 84.13 320 *e*P P 01 05 32.6 +0.1
SRU San Rafael 84.13 320 *e*P P 01 05 32.5 +0.1
comp=Z,732nm,0.8s
SRU San Rafael 84.13 320 ⇓P P 01 05 32.6 +0.1
baz=84,SNR=6.4
SRU San Rafael 84.13 320 *e*P P 01 05 32.5 +0.1
comp=Z,732nm,0.8s
231A Bronte 84.15 308 ⇑P P 01 05 32.8 +0.4
baz=84
X26A CR and CF Fran 84.18 312 ⇑P P 01 05 33.1 +0.4
baz=84,SNR=6.0
332A Millersview 84.22 308 ⇑P P 01 05 32.7 -0.1
baz=84
T21A Navajo Lake 84.30 316 ⇓P P 01 05 32.8 -0.6
baz=84
Y27A Causey 84.32 312 ⇑P P 01 05 33.3 -0.2
baz=84
Z28A Tucker Farm, M 84.33 311 ⇓P P 01 05 33.5 0.0
baz=84,SNR=5.2
DUG Dugway 84.35 322 *e*P P 01 05 34.2 +0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DUG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DUG	Dugway	84.35	322	eP	P	01 05 34.2	+0.7
	comp=Z,9.6nm,1.0s						
DUG	Dugway	84.35	322	⇓P	P	01 05 33.1	-0.3
	baz=84						
DUG	Dugway	84.35	322	eP	P	01 05 34.2	+0.7
	comp=Z,10.0nm,1.0s						
U22A	Llaves	84.42	316	⇑P	P	01 05 34.5	+0.5
	baz=84,SNR=9.2						
129A	Stewart Farms,	84.53	310	⇓P	P	01 05 34.6	+0.2
	baz=84						
W24A	Lazy 6 Ranch,	84.55	314	⇑P	P	01 05 35.1	+0.4
	baz=84,SNR=8.4						
Q16A	Castle Valley	84.59	320	⇓P	P	01 05 34.8	0.0
	baz=84						
P15A	Leamington	84.60	321	⇑P	P	01 05 34.3	-0.5
	baz=84						
432A	Menard	84.62	307	⇓P	P	01 05 34.9	0.0
	baz=84,SNR=7.2						
MVCO	Mesa Verde	84.62	317	eP	P	01 05 35.8	+0.8
	comp=Z,15nm,1.0s						
MVCO	Mesa Verde	84.62	317	⇑P	P	01 05 35.1	+0.1
	baz=84						
MVCO	Mesa Verde	84.62	317	eP	P	01 05 35.8	+0.8
	comp=Z,15nm,1.0s						
230A	Sterling City	84.64	309	⇑P	P	01 05 35.1	+0.1
	baz=84						
Y26A	Elida	84.66	312	⇓P	P	01 05 35.2	+0.1
	baz=84						
X25A	Clemmons Ranch	84.66	313	⇓P	P	01 05 35.7	+0.5
	baz=84,SNR=9.0						
331A	San Angelo	84.67	308	⇓P	P	01 05 35.5	+0.4
	baz=84						
Z27A	Tatum	84.78	311	⇓P	P	01 05 36.0	+0.2
	baz=84						
U21A	Nageezi	84.80	316	⇑P	P	01 05 36.2	+0.2
	baz=84						
V22A	San Miguel Ran	84.80	315	⇑P	P	01 05 35.9	-0.1
	baz=84						
PSI	Prapat	84.86	91	P	P	01 05 35.7	-0.7
GSI	Gunungsitoli	84.86	93	P	P	01 05 36.0	-0.2
	comp=Z,36nm,1.1s						
128A	Castleberry Fa	84.88	310	⇑P	P	01 05 36.3	0.0
	baz=85						
JCT	Junction City	84.91	307	eP	P	01 05 36.8	+0.5
JCT				pmax	pmax		
	comp=Z,15nm,1.0s						
JCT	Junction City	84.91	307	eP	P	01 05 36.8	+0.5
	comp=Z,15nm,1.0s						
JCT	Junction City	84.91	307	⇓P	P	01 05 36.6	+0.3
	baz=85						
JCT	Junction City	84.91	307	eP	P	01 05 36.8	+0.5
	comp=Z,15nm,1.0s						
229A	Bryant Ranch,	84.98	309	⇓P	P	01 05 36.7	-0.1
	baz=85						
S18A	Hurst Farm, Bl	84.99	318	⇓P	P	01 05 36.5	-0.4
	baz=85						
ELK	Elko	85.00	323	eP	P	01 05 40.8	+3.9
	comp=Z,49nm,2.4s						
330A	Mertzon	85.03	309	⇑P	P	01 05 37.2	+0.2
	baz=85,SNR=7.9						
ROSC	El Rosal	85.04	272	P	P	01 05 37.2	-0.4
ROSC	El Rosal	85.04	272	P	P	01 05 37.2	-0.4
	comp=Z,3.2nm,0.5s,baz=82,slow=24,SNR=5.1						
ROSC				LR	LR	01 38 53.4	
	comp=Z,689nm,21.2s,baz=4.1,slow=32						
ROSC	El Rosal	85.04	272	P	P	01 05 37.2	-0.4
X24A	Lazy VL Ranch,	85.05	313	⇑P	P	01 05 37.1	-0.1
	baz=85						
Y25A	Mesa, Roswell	85.13	313	⇓P	P	01 05 37.5	-0.1
	baz=85,SNR=8.0						
532A	Rocksprings	85.23	307	⇓P	P	01 05 38.2	+0.3
	baz=85,SNR=12						
Z26A	Caprock	85.23	312	⇓P	P	01 05 38.5	+0.5
	baz=85,SNR=21						
431A	Sonora	85.23	308	⇑P	P	01 05 38.4	+0.4
	baz=85,SNR=17						
V21A	Milan	85.26	316	⇑P	P	01 05 38.2	-0.1
	baz=85						
ANMO	Albuquerque	85.31	314	eP	P	01 05 39.2	+0.7
	comp=Z,26nm,2.0s						
ANMO	Albuquerque	85.31	314	eP	P	01 05 39.2	+0.7
	comp=Z,26nm,2.0s						
228A	UT Block 9, Go	85.32	310	⇑P	P	01 05 38.5	0.0
	baz=85						
127A	Arkansas Junct	85.33	311	⇑P	P	01 05 38.5	0.0
	baz=85						
MSU	Marysvale	85.39	320	eP	P	01 05 39.7	+0.8
MSU	Marysvale	85.39	320	eP	P	01 05 39.7	+0.8
MSU	Marysvale	85.39	320	eP	P	01 05 39.7	+0.8
MVU	Marysvale	85.42	320	eP	P	01 05 39.9	+0.9
	comp=Z,37nm,1.8s						
MVU	Marysvale	85.42	320	eP	P	01 05 39.9	+0.9
	comp=Z,37nm,1.8s						
329A	Wagon Wheel Ra	85.44	309	⇓P	P	01 05 39.7	+0.7
	baz=85,SNR=19						
JNU	Nakatsue	85.46	48	eP	P	01 05 40.0	+1.0
	comp=Z,24nm,1.1s						
JNU	Nakatsue	85.46	48	eP	P	01 05 40.0	+1.0
	comp=Z,24nm,1.1s						
430A	Baggett Ranch,	85.52	308	⇑P	P	01 05 39.9	+0.5
	baz=85,SNR=12						
Y24A	Capitan	85.53	313	⇑P	P	01 05 39.8	+0.2
	baz=85						
531A	Rocksprings	85.58	307	⇓P	P	01 05 40.2	+0.5
	baz=85,SNR=18						
632A	Uvalde	85.61	306	⇑P	P	01 05 40.3	+0.4
	baz=85						
Z25A	Roswell	85.63	312	⇑P	P	01 05 40.2	+0.2
	baz=85						
V20A	Brimhall	85.69	316	⇓P	P	01 05 40.4	0.0
	baz=85						
126A	Clayton Basin,	85.72	311	⇓P	P	01 05 40.7	+0.2
	baz=86						
227A	Bennet, Jal	85.79	310	⇓P	P	01 05 41.4	+0.7
	baz=86						
LPM	Los Pinos Moun	85.88	314	eP	P	01 05 45.1	+3.8
328A	Wristen Ranch,	85.99	310	⇑P	P	01 05 42.1	+0.3
	baz=86,SNR=10						
429A	Davenport Ranc	86.02	309	⇑P	P	01 05 42.0	+0.1
	baz=86						
530A	J-C Ranch, Com	86.05	308	⇑P	P	01 05 42.3	+0.2
	baz=86,SNR=17						
125A	Gardner Draw,	86.07	312	⇑P	P	01 05 42.5	+0.3
	baz=86						
631A	Perdido Creek	86.15	307	⇑P	P	01 05 42.8	+0.3
	baz=86,SNR=21						
MOD	Modoc	86.17	327	eP	P	01 05 45.6	+3.0
	comp=Z,19nm,1.0s						
226B	Tecolote Peak,	86.23	311	⇓P	P	01 05 43.4	+0.4
	baz=86,SNR=11						
GDL2	Guadalupe Moun	86.25	311	eP	P	01 05 42.9	-0.3
GDL2	Guadalupe Moun	86.25	311	eP	P	01 05 42.8	-0.3
732A	Laxson Ranch,	86.29	306	⇑P	P	01 05 43.3	+0.1
	baz=86						
X21A	Alamocita Cree	86.39	315	⇑P	P	01 05 44.2	+0.3
	baz=86						
428A	Kincaid Ranch,	86.40	309	⇓P	P	01 05 43.8	-0.1
	baz=86						
124A	Stringfield Ra	86.47	312	⇑P	P	01 05 44.0	-0.3
	baz=86						
529A	Stev Forest Ra	86.58	308	⇓P	P	01 05 45.4	+0.7
	baz=86,SNR=20						
MAT	Matsushiro	86.64	41	P	P	01 05 44.5	-0.3
MAT				S	S	01 16 12.4	-9.0
MJAR	Matsushiro Arr	86.64	41	P	P	01 05 44.6	-0.2
MJAR	Matsushiro Arr	86.64	41	P	P	01 05 44.6	-0.2
	comp=Z,1.4nm,0.3s,baz=299,slow=6.6,SNR=15						
MJAR				LR	LR	01 47 48.5	
	comp=Z,1µm,18.8s,baz=345,slow=38						
MJAR	Matsushiro Arr	86.64	41	P	P	01 05 44.6	-0.2
	comp=Z,1µm,18.8s						
326A	Caldwell Ranch	86.70	310	⇓P	P	01 05 45.8	+0.5
	baz=86						
427A	Hayter Ranch,	86.72	310	⇑P	P	01 05 45.9	+0.5
	baz=86,SNR=9.9						
CCUT	Cedar City	86.72	320	eP	P	01 05 47.0	+1.5
	comp=Z,57nm,2.8s						
CCUT	Cedar City	86.72	320	eP	P	01 05 47.0	+1.5
	comp=Z,57nm,2.8s						
528A	Cox Ranch, San	86.88	309	⇓P	P	01 05 46.8	+0.5
	baz=87,SNR=12						
224A	Cornudas Mount	86.98	312	⇑P	P	01 05 47.3	+0.5
	baz=87						
R11A	Troy Canyon, C	87.11	322	⇑P	P	01 05 46.8	-0.5
	baz=87						
U15A	North Rim	87.11	319	⇑P	P	01 05 47.5	0.0
	baz=87						
Z21A	St. Cloud Mine	87.20	314	⇓P	P	01 05 48.7	+0.8
	baz=87						
325A	Bean Ranch, Si	87.21	311	⇑P	P	01 05 48.2	+0.3
	baz=87						
426A	McDonald Obser	87.21	310	⇑P	P	01 05 48.2	+0.2
	baz=87						
YBH	Yreka Blue Hor	87.26	329	LR	LR	01 44 19.5	
	comp=Z,502nm,18.0s,baz=132,slow=35						
527A	Woodward Ranch	87.37	309	⇓P	P	01 05 49.0	+0.3
	baz=87						
WUAZ	Wupatki	87.38	318	⇑P	P	01 05 48.9	+0.3
	baz=87						
324A	Moseley Ranch,	87.44	311	⇑P	P	01 05 48.7	-0.3
	baz=87,SNR=5.8						
628A	Black Gap, Mar	87.44	308	⇑P	P	01 05 49.1	+0.2
	baz=87,SNR=5.6						
425A	Indio Mountain	87.66	311	⇓P	P	01 05 50.0	0.0
	baz=87						
526A	Mary Lane Ranc	87.70	310	⇓P	P	01 05 50.5	+0.2
	baz=88						
627A	Terlingua Ranc	87.76	309	⇑P	P	01 05 50.8	+0.3
	baz=88						
Z20A	Nine Sixteen R	87.84	315	⇓P	P	01 05 51.2	+0.4
	baz=88						
121A	Cookes Peak, D	87.86	314	⇓P	P	01 05 51.4	+0.4
	baz=88						
TXAR	Lajitas Array	88.01	309	P	P	01 05 52.1	+0.4
TXAR	Lajitas Array	88.01	309	P	P	01 05 52.1	+0.4
	comp=Z,6.4nm,1.1s,baz=66,slow=2.1,SNR=18						
TXAR				LR	LR	01 44 05.0	
	comp=Z,461nm,21.3s,baz=10.0,slow=35						
TXAR	Lajitas Array	88.01	309	P	P	01 05 52.1	+0.4
	comp=Z,461nm,21.3s						
626A	Big Bend Ranch	88.11	309	⇑P	P	01 05 52.0	-0.1
	baz=88						
NVAR	Mina Array Bea	88.25	324	P	P	01 05 53.3	+0.5
NVAR	Mina Array Bea	88.25	324	P	P	01 05 53.3	+0.5
	comp=Z,0.6nm,0.3s,baz=43,slow=1.7,SNR=3.4						
NVAR				LR	LR	01 45 51.5	
	comp=Z,607nm,18.9s,baz=323,slow=36						
NVAR	Mina Array Bea	88.25	324	P	P	01 05 53.3	+0.5
X16A	Lo Mia Camp, P	88.29	317	⇓P	P	01 05 53.5	+0.5
	baz=88						
W13A	Hualapai Mount	88.95	319	⇓P	P	01 05 56.6	+0.5
	baz=89						
TUC	Tucson	89.62	315	eP	P	01 05 59.5	+0.3
TUC				pmax	pmax		
	comp=Z,8.0nm,1.9s						
TUC	Tucson	89.62	315	eP	P	01 05 59.5	+0.3
	comp=Z,7.7nm,1.9s						
TUC	Tucson	89.62	315	eP	P	01 05 59.5	+0.3
	comp=Z,8.0nm,1.9s						
MPMC	Manual Prospec	89.85	322	⇓P	P	01 05 59.8	-0.5
	baz=90						
Z14A	Wintersburg	89.88	318	⇓P	P	01 06 00.8	+0.5
	baz=90						
GMRC	Granite Mounta	90.05	320	⇓P	P	01 06 01.5	+0.3
	baz=90						
JHJ	Hachijo jima 2	90.15	42	LR	LR	01 51 00.3	
	comp=Z,959nm,19.1s,baz=352,slow=39						
ISA	Isabella	90.62	323	⇑P	P	01 06 03.2	-0.6
	baz=90						
113A	Mohawk Valley,	90.77	318	⇑P	P	01 06 03.8	-0.6
	baz=90						
EDW2	Edwards Air Fo	91.06	322	⇑P	P	01 06 06.4	+0.6
	baz=91						
OTAV	Otavalo	91.17	271	eP	P	01 06 07.3	+0.3
	comp=Z,10nm,1.1s						
OTAV	Otavalo	91.17	271	eP	P	01 06 07.3	+0.3
	comp=Z,10nm,1.1s						
CPUP	Villa Florida	94.44	238	P	P	01 06 26.0	+4.8
CPUP	Villa Florida	94.44	238	P	P	01 06 26.0	+4.8
	comp=Z,0.5nm,0.4s,baz=90,slow=20,SNR=3.4						
CPUP				LR	LR	01 45 42.3	
	comp=Z,364nm,21.9s,baz=16,slow=34						
LPAZ	La Paz	94.72	252	P	P	01 06 25.3	+1.8
LPAZ				PP	PP	01 10 08.0	-4.2
LPAZ	La Paz	94.72	252	P	P	01 06 25.3	+1.8
	comp=Z,2.0nm,1.1s,baz=24,slow=10,SNR=4.7						
LPAZ				PP	PP	01 10 08.0	-4.2
	comp=Z,1.6nm,1.0s,baz=32,slow=10,SNR=3.8						
LPAZ				LR	LR	01 45 11.0	
	comp=Z,239nm,20.7s,baz=223,slow=33						
CBIJ	Chichi jima	96.23	44	LR	LR	01 56 24.1	
	comp=Z,359nm,18.1s,baz=60,slow=40						
VNA2	Neumayer--Watz	114.10	187	ePP	PP	01 12 36.4	+1.7
SNAA	Sanae	114.44	186	ePP	PP	01 12 40.7	+3.5
VNA3	Neumayer Olymp	114.63	188	ePP	PP	01 12 33.2	-5.2
WRA	Warramunga Arr	125.91	85	PKP	PKPdf	01 12 01.5	-1.9
WRA	Warramunga Arr	125.91	85	PKP	PKPdf	01 12 01.5	-1.9
	comp=Z,3.1nm,1.0s,baz=297,slow=2.2,SNR=7.7						
WRA	Warramunga Arr	125.91	85	PKIKP	PKPdf	01 12 01.5	-1.9
ASAR	Alice Springs	127.84	89	PKP	PKPdf	01 12 07.0	0.0
ASAR	Alice Springs	127.84	89	PKP	PKPdf	01 12 07.0	0.0
	comp=Z,1.8nm,0.8s,baz=302,slow=2.4,SNR=7.9						
ASAR	Alice Springs	127.84	89	PKIKP	PKPdf	01 12 07.0	0.0
VNDA	Vanda	142.58	169	PKP	PKPdf	01 12 30.7	-2.1
VNDA	Vanda	142.58	169	PKP	PKPdf	01 12 30.7	-2.1
	comp=Z,1.0nm,0.7s,baz=170,slow=1.5,SNR=5.5						
DZM	Mont Dzumac	149.68	56	PKPbc	PKPbc	01 12 50.6	-0.6
DZM	Mont Dzumac	149.68	56	PKPbc	PKPbc	01 12 50.6	-0.6
	comp=Z,17nm,1.0s,baz=270,slow=7.1,SNR=4.8						
DZM	Mont Dzumac	149.68	56	PKPbc	PKPbc	01 12 50.6	-0.6
PPT2	Papeete2	151.22	324	eLR	LR	02 03 05.5	
	comp=Z,361nm,24.5s						
TBI	Tubuai	156.15	318	eLR	LR	02 05 23.8	
	comp=Z,262nm,27.5s						
RPZ	Rata Peaks	163.68	102	PKPab	PKPab	01 13 54.2	-1.6
RPZ	Rata Peaks	163.68	102	PKPab	PKPab	01 13 54.2	-1.6
	comp=Z,22nm,1.0s,baz=36,slow=10.0,SNR=2.9						
RPZ	Rata Peaks	163.68	102	PKPab	PKPab	01 13 54.2	-1.6

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*ISCJB **09** 01:22:20.9±0.5, 40°.40N±0°.03×23°.88E±0°.04, h21km±5km, Error ellipse: s-maj=5.6km s-min=4.7km az=169.3*
*CSEM **09** 01:22:20.7±0.1, 40°.41N×23°.88E, h14km±1km, ML1.3/8, Error ellipse: s-maj=2.6km s-min=2.0km az=78.0*
*ATH **09** 01:22:20.4, 40°.42N×23°.80E, h32km±2km, MD2.7/4*
*THE **09** 01:22:21.3, 40°.43N×23°.87E, h10km±2km, ML1.3/8, Error ellipse: s-maj=2.4km s-min=0.4km az=149.0*
ISC 09 01:22:20.7±0.9**, 40°.41N**±0°.02×**23°.87E**±0°.02**, h16**km±6km**, n25, σ0s.24**/48**, 4C, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OUR	Ouranopolis	0.11	133	P	Pb	01 22 24.5	0.0
OUR				S	Sg	01 22 26.6	+0.1
OUR	Ouranopolis	0.11	133	P	Pb	01 22 24.5	0.0
OUR				S	Sg	01 22 26.6	+0.1
PLG	Polygyros	0.33	264	P	Pb	01 22 27.9	-0.2
PLG				S	Sg	01 22 32.4	+0.1
PLG	Polygyros	0.33	264	⇑iPB	Pb	01 22 28.0	-0.2
PLG				eSB	Sg	01 22 32.4	+0.1
PLG	Polygyros	0.33	264	P	Pb	01 22 27.9	-0.2
PLG				S	Sg	01 22 32.4	+0.1
PAIG	Paliouri	0.51	197	P	Pb	01 22 31.1	-0.1
PAIG				S	Sb	01 22 38.4	+0.1
PAIG	Paliouri	0.51	197	P	Pb	01 22 31.1	-0.1
PAIG				S	Sb	01 22 38.4	+0.1
SOH	Sokhos	0.57	316	P	Pb	01 22 32.1	-0.2
SOH				S	Sg	01 22 39.8	+0.2
SOH	Sokhos	0.57	316	⇑iPN	Pb	01 22 32.2	-0.1
SOH				eSN	Sg	01 22 39.2	-0.4
SOH	Sokhos	0.57	316	P	Pb	01 22 32.1	-0.2
SOH				eSn	Sg	01 22 39.2	-0.4
SOH				S	Sg	01 22 39.8	+0.2
HORT	Hortiatis	0.62	288	P	Pg	01 22 32.8	-0.1
HORT				S	Sb	01 22 41.7	+0.1
HORT	Hortiatis	0.62	288	P	Pg	01 22 32.8	-0.1
HORT				S	Sb	01 22 41.7	+0.1
SRS	Serrai	0.74	343	P	Pg	01 22 34.9	-0.1
SRS				S	Sb	01 22 45.4	+0.4
SRS	Serrai	0.74	343	P	Pg	01 22 34.9	-0.1
SRS				S	Sb	01 22 45.4	+0.4
KAVA	Kavala	0.76	40	P	Pb	01 22 35.4	-0.1
KAVA				S	Sb	01 22 45.8	+0.2
KAVA	Kavala	0.76	40	P	Pb	01 22 35.4	-0.1
KAVA				S	Sb	01 22 45.8	+0.2
NVR	Nevrokopi	0.94	359	P	Pb	01 22 38.6	0.0
NVR				S	Sn	01 22 51.9	-0.4
NVR	Nevrokopi	0.94	359	ePN	Pg	01 22 38.8	0.0
NVR				eSN	Sg	01 22 51.1	-0.1
NVR	Nevrokopi	0.94	359	P	Pb	01 22 38.6	0.0
NVR				eSn	Sg	01 22 51.1	-0.1
NVR				S	Sn	01 22 51.9	-0.4
KNT	Kendrikon	1.05	316	P	Pn	01 22 40.8	0.0
KNT				S	Sn	01 22 55.8	+0.6
KNT	Kendrikon	1.05	316	P	Pn	01 22 40.8	0.0
KNT				S	Sn	01 22 55.8	+0.6
LIA	Limnos Island	1.13	117	ePN	Pg	01 22 42.2	-0.2
LIA	Limnos Island	1.13	117	ePn	Pg	01 22 42.2	-0.2
AOS	Alonnisos	1.24	180	⇑iPN	Pb	01 22 43.5	-0.2
AOS	Alonnisos	1.24	180	⇑iPn	Pb	01 22 43.5	-0.2

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*ISCJB **09** 01:22:47.2±0.2, 60°.50N±0°.02×152°.64W±0°.05, h10km, mb3.5/3, Error ellipse: s-maj=3.8km s-min=2.3km az=34.9*
*NEIC **09** 01:22:47.1, 60°.51N×152°.67W, h7km, ML3.3(AEIC), After AEIC.*
*IDC **09** 01:22:48.2±1.3, 60°.57N×152°.51W, h0km, mb3.5/3, mb1 3.8/6, mb1mx3.5/28, mbtmp3.6/6, ML3.5/3, Error ellipse: s-maj=25.4km s-min=18.6km az=97.0*
ISC 09 01:22:48.4±0.6**, 60°.48N**±0°.02×**152°.59W**±0°.03**, h10**km**, n80, σ1s.25**/92**, mb3.5**/3**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
REF	Redoubt East F	0.06	278	P	Pg	01 22 49.3	-1.4
RDN	Redoubt North	0.09	290	P	Pg	01 22 49.4	-1.6
RED	Redoubt Volcan	0.11	236	P	Pg	01 22 50.0	-1.3
DFR	Drift River	0.12	336	P	Pg	01 22 50.0	-1.4
RDT	Redoubt	0.13	44	P	Pg	01 22 50.8	-0.7
NCT	North Crescent	0.19	295	P	Pg	01 22 50.8	-1.6
ILIM	Iliamna	0.44	205	P	Pg	01 22 55.9	-1.1
INE	Iliamna NE	0.48	210	P	Pg	01 22 56.5	-1.4
IVE	Iliamna Volcan	0.51	205	P	Pg	01 22 57.0	-1.3
IVE				S	Sg	01 23 04.0	-1.2
BKG	Blockade Glaci	0.61	15	P	Pg	01 22 58.6	-1.6
NKA	Nikishka	0.71	68	P	Pn	01 23 03.2	-1.3
SPU	Mount Spurr	0.75	20	P	Pg	01 23 01.1	-1.8
SPU				S	Sg	01 23 10.7	-1.9
BGL	Barrier Glacie	0.79	7	P	Pg	01 23 01.8	-1.9
OPT	Oil Point	0.89	202	P	Pg	01 23 04.6	-0.9
PDB	Pedro Bay	1.06	230	P	Pg	01 23 06.6	-2.2
STLK	Strandline Lak	1.08	19	P	Pb	01 23 06.8	-2.4
BRLK	Bradley Lake	1.11	129	P	Pb	01 23 08.3	-1.4
BRLK				S	Sn	01 23 24.4	-1.0
SLKM	Skilak Lake	1.17	88	P	Pb	01 23 08.8	-1.9
AUNW	Augustine NWes	1.20	202	P	Pb	01 23 09.9	-1.2
AUP	Augustine Pinn	1.20	201	P	Pb	01 23 10.2	-1.1
AUW	Augustine West	1.20	202	P	Pb	01 23 10.1	-1.1
RC01	Rabbit Creek A	1.52	65	ePn	Pn	01 23 14.4	-1.2
RC01				eS	Sb	01 23 35.0	-1.0
SKT	Skwentna	1.59	18	P	Pn	01 23 15.7	-0.9
SVW2	Sparrevohn	1.59	294	P	Pn	01 23 15.1	-1.6
SEW	Seward	1.61	102	ePn	Pn	01 23 15.8	-0.9
SEW				eS	Sb	01 23 37.7	-0.7
PMR	Palmer	2.02	55	P	Pn	01 23 22.2	-0.2
PMR				S	Sn	01 23 47.9	+0.3
KAWH	Katmai	2.39	209	P	Pn	01 23 26.9	-0.7
PPLA	Purkeypile	2.43	4	P	Pb	01 23 29.9	-2.3
SML	Sawmill	2.45	55	ePn	Pn	01 23 29.3	+0.8
SML				eS	Sb	01 24 01.3	-1.5
KAKN	Katmai Knife C	2.53	211	P	Pn	01 23 29.2	-0.3
KELA	Mount Kelaz	2.60	220	P	Pn	01 23 30.4	-0.2
KCE	Katmai Mt Cerb	2.61	212	P	Pn	01 23 30.8	+0.2
KABU	Katmai Buttres	2.61	213	P	Pn	01 23 30.7	0.0
KABR	Katmai Barrier	2.66	208	P	Pn	01 23 30.9	-0.4
KDAK	Kodiak Island	2.71	180	ePn	Pn	01 23 33.1	+1.3
KDAK				eS	Sb	01 24 09.7	-0.4
KDAK	Kodiak Island	2.71	180	Pn	Pn	01 23 32.8	+0.9
	12nm,0.3s,baz=20,slow=9.4,SNR=99						
KDAK				Sn	Sb	01 24 07.8	-2.3
	20nm,0.3s,baz=156,slow=21,SNR=12						
TT01	Tatalina	2.93	328	P	Pn	01 23 34.2	-0.8
VLZ	Valdez	3.13	75	P	Pn	01 23 38.2	+0.5
TRF	Thorofare Moun	3.17	19	P	Pn	01 23 38.8	+0.4
OHAK	Old Harbor	3.29	187	P	Pn	01 23 40.7	+0.8
DIV	Divide	3.40	76	P	Pn	01 23 41.7	+0.1
RND	Reindeer	3.42	29	P	Pn	01 23 42.8	+1.0
DHY	Denali Highway	3.59	41	P	Pn	01 23 45.2	+1.0
MCK	McKinley	3.69	26	P	Pn	01 23 46.0	+0.6
GOAT	Goat Mountain	3.88	85	P	Pn	01 23 47.3	-0.8
BMRM	Bremner River	3.95	79	P	Pn	01 23 48.5	-0.5
HARP	HAARP	4.06	58	P	Pn	01 23 51.3	+0.8
PAX	Paxson	4.21	51	ePn	Pn	01 23 54.4	+1.8
PAX				eS	Sb	01 24 53.5	+0.3
VRDI	Verde Repeater	4.53	77	P	Pn	01 23 56.8	-0.3
DDM	Donnelly Dome	4.58	41	P	Pn	01 23 58.9	+1.3
CCB	Clear Creek Bu	4.73	26	P	Pn	01 24 00.2	+0.6
MENT	Mentasta	4.88	56	ePn	Pn	01 24 03.0	+1.1
COLA	College	4.92	24	ePn	Pn	01 24 04.8	+2.5
IL1	Eielson Array	5.04	29	P	Pn	01 24 03.5	-0.5
ILAR	Eielson Array	5.04	29	Pn	Pn	01 24 04.7	+0.7
ILAR				Sn	Sn	01 25 05.2	+3.0
ILAR				Lg	Lg	01 25 23.1	
ILAR	Eielson Array	5.04	29	Pn	Pn	01 24 04.7	+0.7
	0.5nm,0.3s,baz=216,slow=14,SNR=21						
ILAR				Sn	Sn	01 25 05.3	+3.0
	1.2nm,0.3s,baz=212,slow=23,SNR=5.3						
ILAR				Lg	Lg	01 25 23.1	
	2.3nm,0.3s,baz=207,slow=27,SNR=7.2						
KIAG	Kiagna River	5.04	81	P	Pn	01 24 03.8	-0.4
BALM	Baldy	5.05	79	P	Pn	01 24 04.0	-0.2
DOT	Dot Lake	5.11	48	ePn	Pn	01 24 06.8	+1.8
	12nm,0.5s						
DOT				eS	Sb	01 25 18.8	-0.5
CHGN	Chignik	5.19	219	ePn	Pn	01 24 06.7	+0.7
IM3	Indian Mountai	5.55	355	P	Pn	01 24 10.8	-0.1
BCA3	Beaver Creek A	5.74	59	P	Pn	01 24 13.8	+0.2
SDPT	Sand Point	6.64	223	ePn	Pn	01 24 27.6	+1.7
PNL	Peninsula	6.65	91	ePn	Pn	01 24 24.4	-1.7
	27nm,0.7s						
EGAK	Eagle	6.80	46	ePn	Pn	01 24 29.3	+1.3
	6.8nm,0.5s						
COLD	Coldfoot	6.85	8	ePn	Pn	01 24 30.1	+1.3
	5.5nm,0.8s						
DAWY	Dawson	7.12	54	P	Pn	01 24 32.9	+0.4
HYT	Haines Junctio	7.42	81	P	Pn	01 24 36.6	-0.1
BM3	Burnt Mountain	7.79	23	P	Pn	01 24 42.0	+0.3
TNA	Tin City	8.62	313	ePn	Pn	01 24 54.4	+1.4
	3.7nm,0.5s						
INK	Inuvik	11.33	38	Pn	Pn	01 25 31.2	+1.2
INK	Inuvik	11.33	38	Pn	Pn	01 25 31.2	+1.2
	0.1nm,0.3s,baz=226,slow=16,SNR=8.4						
YKA	Yellowknife Ar	18.07	67	P	P	01 26 59.1	-0.4
YKA	Yellowknife Ar	18.07	67	P	P	01 26 59.1	-0.4
	0.2nm,0.3s,baz=279,slow=9.9,SNR=18						
PDAR	Pinedale Array	31.31	105	P	P	01 29 10.4	+1.7
PDAR	Pinedale Array	31.31	105	P	P	01 29 10.4	+1.7
	0.7nm,1.0s,baz=316,slow=6.4,SNR=2.3						
TXAR	Lajitas Array	44.96	111	P	P	01 31 03.4	-0.1
TXAR	Lajitas Array	44.96	111	P	P	01 31 03.4	-0.1
	0.2nm,0.4s,baz=319,slow=5.5,SNR=5.8						
SONM	Songino Array	54.67	306	P	P	01 32 18.7	+1.4
SONM	Songino Array	54.67	306	P	P	01 32 18.7	+1.4
	0.9nm,0.8s,baz=38,slow=7.3,SNR=3.7						

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*CSEM **09** 01:23:31.0, 42°.30N×13°.41E, h11km, After ROM*
ROM 09 01:23:31.0±0.1**, 42°.30N×13°.41E, h11**km**, Ml2.3**/11**, Error ellipse: s-maj=1.4km s-min=1.1km az=48.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.05	350	Pg	Pg	01 23 33.5	+0.2
AQU				Sg	Sg	01 23 35.1	+0.2
AQU	L'Aquila	0.05	350	Pg	Pg	01 23 33.5	+0.2
AQU				Sg	Sg	01 23 35.1	+0.2
FAGN	Fagnano	0.13	105	Pg	Pg	01 23 34.7	+0.5
FAGN				Sg	Sg	01 23 37.2	+0.7
	7µm,0.3s						
FAGN	Fagnano	0.13	105	Pg	Pg	01 23 34.7	+0.5
FAGN				Sg	Sg	01 23 37.2	+0.7
	7µm,0.3s						
FIAM	Fiamignano	0.22	262	Pg	Pg	01 23 36.4	+0.6
FIAM				Sg	Sg	01 23 40.1	+1.0
FIAM	Fiamignano	0.22	262	Pg	Pg	01 23 36.4	+0.6
FIAM				Sg	Sg	01 23 40.1	+1.0
CAMP	Campotosto	0.23	359	Pg	Pg	01 23 36.4	+0.3
CAMP				Sg	Sg	01 23 39.8	+0.3
	1µm,0.4s						
CAMP	Campotosto	0.23	359	Pg	Pg	01 23 36.4	+0.3

CAMP				Sg	Sg	01 23 39.8	+0.3
	1μm,0.4s						
PTQR	Pietraquaria	0.28	182	Pg	Pg	01 23 36.5	-0.3
PTQR				Sg	Sg	01 23 41.6	+0.9
PTQR	Pietraquaria	0.28	182	Pg	Pg	01 23 36.5	-0.3
PTQR				Sg	Sg	01 23 41.6	+0.9
TERO	Teramo	0.35	24	Pg	Pg	01 23 38.5	+0.4
TERO				Sg	Sb	01 23 44.3	-0.7
	245nm,0.3s						
TERO	Teramo	0.35	24	Pg	Pg	01 23 38.5	+0.4
TERO				Sg	Sb	01 23 44.3	-0.7
	245nm,0.3s						
VVLD	Villa Vallelon	0.46	160	Pg	Pg	01 23 40.0	-0.1
VVLD				Sg	Sg	01 23 46.6	+0.3
	223nm,0.5s						
VVLD	Villa Vallelon	0.46	160	Pg	Pg	01 23 40.0	-0.1
VVLD				Sg	Sg	01 23 46.6	+0.3
	223nm,0.5s						
INTR	Introdacqua	0.47	128	Pg	Pg	01 23 40.2	-0.1
INTR				Sg	Sg	01 23 47.4	+0.9
	340nm,0.3s						
INTR	Introdacqua	0.47	128	Pg	Pg	01 23 40.2	-0.1
INTR				Sg	Sg	01 23 47.4	+0.9
	340nm,0.3s						
CERT	Cerreto	0.48	223	Pg	Pg	01 23 40.7	+0.3
	186nm,0.3s						
CERT	Cerreto	0.48	223	Pg	Pg	01 23 40.7	+0.3
	186nm,0.3s						
GUAR	Guarcino	0.51	189	Pg	Pg	01 23 41.6	+0.5
	106nm,0.3s						
GUAR	Guarcino	0.51	189	Pg	Pg	01 23 41.6	+0.5
	106nm,0.3s						
MTCE	Montecelio	0.57	241	Pg	Pg	01 23 42.4	+0.2
	62nm,0.3s						
MTCE	Montecelio	0.57	241	Pg	Pg	01 23 42.4	+0.2
	62nm,0.3s						
CERA	Filignano	0.83	147	Pg	Pb	01 23 47.7	+0.1
	73nm,0.4s						
CERA	Filignano	0.83	147	Pg	Pb	01 23 47.7	+0.1
	73nm,0.4s						
MIDA	Miranda	0.91	136	Pg	Pg	01 23 48.1	-0.6
	43nm,0.3s						
MIDA	Miranda	0.91	136	Pg	Pg	01 23 48.1	-0.6
	43nm,0.3s						
ASSB	Assisi San Ben	0.93	323	Pg	Pg	01 23 48.8	-0.2
	52nm,0.4s						
ASSB	Assisi San Ben	0.93	323	Pg	Pg	01 23 48.8	-0.2
	52nm,0.4s						

*ISCJB **09** 01:25:50.9±0.3, 42°.50N±0°.02×13°.34E±0°.03, h13km±3km, Error ellipse: s-maj=3.6km s-min=2.6km az=142.1*
*ROM **09** 01:25:51.1±0.1, 42°.51N×13°.37E, h10km, Ml3.0/28, Error ellipse: s-maj=1.1km s-min=0.8km az=89.0*
*CSEM **09** 01:25:51.2±0.1, 42°.50N×13°.34E, h10km, ML3.5/11, Error ellipse: s-maj=2.4km s-min=1.8km az=62.0*
ISC 09 01:25:51.6±0.8, **42°.50N**±0°.02×**13°.37E**±0°.02, **h11**km±4km, **n74**, σ**0s81**/102, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	Campotosto	0.04	45	Pg	Pg	01 25 53.5	-0.5
CAMP				Sg	Sg	01 25 54.9	-0.8
CAMP	Campotosto	0.04	45	Pg	Pg	01 25 53.5	-0.5
CAMP				Sg	Sg	01 25 54.9	-0.8
AQU	L'Aquila	0.15	170	Pg	Pg	01 25 55.9	+0.7
AQU				Sg	Sg	01 25 58.1	+0.4
	4μm,0.6s						
AQU	L'Aquila	0.15	170	Pg	Pg	01 25 55.9	+0.7
AQU				Sg	Sg	01 25 58.1	+0.4
	4μm,0.6s						
TERO	Teramo	0.21	56	Pg	Pg	01 25 55.8	-0.3
TERO				Sg	Sg	01 25 59.3	0.0
	2μm,0.5s						
TERO	Teramo	0.21	56	Pg	Pg	01 25 55.8	-0.3
TERO				Sg	Sg	01 25 59.3	0.0
	2μm,0.5s						
LNSS	Leonessa	0.26	292	Pg	Pg	01 25 56.9	-0.1
LNSS				Sg	Sg	01 26 01.3	+0.6
	3μm,0.6s						
LNSS	Leonessa	0.26	292	Pg	Pg	01 25 56.9	-0.1
LNSS				Sg	Sg	01 26 01.3	+0.6
	3μm,0.6s						
FAGN	Fagnano	0.29	146	Pg	Pb	01 25 57.7	-1.1
FAGN				Sg	Sb	01 26 02.5	-1.1
	3μm,0.5s						
FAGN	Fagnano	0.29	146	Pg	Pb	01 25 57.7	-1.1
FAGN				Sg	Sb	01 26 02.5	-1.1
	3μm,0.5s						
FIAM	Fiamignano	0.30	218	Pg	Pg	01 25 57.6	-0.1
	2μm,0.7s						
FIAM	Fiamignano	0.30	218	Pg	Pg	01 25 57.6	-0.1
	2μm,0.7s						
VCEL	Villa Celiera	0.37	107	Pg	Pg	01 25 58.6	-0.4
VCEL				Sg	Sb	01 26 04.6	-1.3
	1μm,0.5s						
VCEL	Villa Celiera	0.37	107	Pg	Pg	01 25 58.6	-0.4
VCEL				Sg	Sb	01 26 04.6	-1.3
	1μm,0.5s						
NRCA	Norcia	0.38	331	Pg	Pg	01 25 58.9	-0.3
NRCA				Sg	Sg	01 26 04.7	+0.5
	4μm,0.2s						
NRCA	Norcia	0.38	331	Pg	Pg	01 25 58.9	-0.3
NRCA				Sg	Sg	01 26 04.7	+0.5
	4μm,0.2s						
PTQR	Pietraquaria	0.48	177	Pg	Pg	01 26 00.5	-0.6
	45nm,0.2s						
PTQR	Pietraquaria	0.48	177	Pg	Pg	01 26 00.5	-0.6
	45nm,0.2s						
OFFI	Offida	0.49	29	Pg	Pb	01 26 01.7	-0.5
	3μm,0.6s						
OFFI	Offida	0.49	29	Pg	Pb	01 26 01.7	-0.5
	3μm,0.6s						
TRTR	Tortoreto Alta	0.51	53	Pg	Pb	01 26 02.3	-0.1
	2μm,0.6s						
TRTR	Tortoreto Alta	0.51	53	Pg	Pb	01 26 02.3	-0.1
	2μm,0.6s						
MNS	Montasola	0.52	257	Pg	Pg	01 26 01.2	-0.6
MNS				Sg	Sb	01 26 09.3	-1.0
	788nm,0.5s						
MNS	Montasola	0.52	257	Pg	Pg	01 26 01.2	-0.6
MNS				Sg	Sb	01 26 09.3	-1.0
	788nm,0.5s						
FDMO	Fiordimonte	0.57	339	Pg	Pg	01 26 02.1	-0.6
FDMO				Sg	Sb	01 26 11.0	-0.7
	942nm,0.2s						
FDMO	Fiordimonte	0.57	339	Pg	Pg	01 26 02.1	-0.6
FDMO				Sg	Sb	01 26 11.0	-0.7
	942nm,0.2s						
CESX	Cesi	0.59	281	Pg	Pg	01 26 02.5	-0.6
	474nm,0.2s						
CESX	Cesi	0.59	281	Pg	Pg	01 26 02.5	-0.6
	474nm,0.2s						
CESI	CESI - Serrava	0.60	326	Pg	Pg	01 26 03.1	-0.3
CESI				Sg	Sb	01 26 12.4	-0.4
	228nm,0.3s						
CESI	CESI - Serrava	0.60	326	Pg	Pg	01 26 03.1	-0.3
CESI				Sg	Sb	01 26 12.4	-0.4
	228nm,0.3s						
CERT	Cerreto	0.62	207	Pg	Pg	01 26 03.0	-0.7
	1μm,0.7s						
CERT	Cerreto	0.62	207	Pg	Pg	01 26 03.0	-0.7
	1μm,0.7s						
INTR	Introdacqua	0.63	141	Pg	Pg	01 26 03.2	-0.7
INTR				Sg	Sb	01 26 12.9	-0.7
	539nm,0.7s						
INTR	Introdacqua	0.63	141	Pg	Pg	01 26 03.2	-0.7
INTR				Sg	Sb	01 26 12.9	-0.7
	539nm,0.7s						
VVLD	Villa Vallelon	0.66	163	Pg	Pb	01 26 04.6	-0.6
VVLD	Villa Vallelon	0.66	163	Pg	Pb	01 26 04.6	-0.6
MTCE	Montecelio	0.67	224	Pg	Pg	01 26 03.7	-0.9
	222nm,0.5s						
MTCE	Montecelio	0.67	224	Pg	Pg	01 26 03.7	-0.9
	222nm,0.5s						
GUAR	Guarcino	0.71	183	Pg	Pb	01 26 05.9	-0.1
	379nm,0.6s						
GUAR	Guarcino	0.71	183	Pg	Pb	01 26 05.9	-0.1
	379nm,0.6s						
ASSB	Assisi San Ben	0.75	316	Pg	Pg	01 26 05.3	-0.8
ASSB				Sg	Sb	01 26 16.9	0.0
	362nm,0.3s						
ASSB	Assisi San Ben	0.75	316	Pg	Pg	01 26 05.3	-0.8
ASSB				Sg	Sb	01 26 16.9	0.0
	362nm,0.3s						
CAFR	Castel Frentan	0.78	111	Pg	Pg	01 26 06.1	-0.5
	347nm,0.4s						
CAFR	Castel Frentan	0.78	111	Pg	Pg	01 26 06.1	-0.5
	347nm,0.4s						
POFI	Posta Fibreno	0.83	162	Pg	Pg	01 26 07.2	-0.4
	138nm,0.5s						
POFI	Posta Fibreno	0.83	162	Pg	Pg	01 26 07.2	-0.4
	138nm,0.5s						
SDI	San Donato	0.86	157	Pg	Pg	01 26 07.2	-1.0
	219nm,0.8s						
SDI	San Donato	0.86	157	Pg	Pg	01 26 07.2	-1.0
	219nm,0.8s						
CING	Cingoli	0.88	352	Pg	Pg	01 26 07.5	-1.1
	484nm,0.4s						
CING	Cingoli	0.88	352	Pg	Pg	01 26 07.5	-1.1
	484nm,0.4s						
RDP	Rocca di Papa	0.89	213	Pg	Pg	01 26 07.8	-0.9
	515nm,0.4s						
RDP	Rocca di Papa	0.89	213	Pg	Pg	01 26 07.8	-0.9
	515nm,0.4s						
GIUL	Giuliano Di Ro	0.95	185	Pg	Pg	01 26 09.5	-0.4
	180nm,0.7s						
GIUL	Giuliano Di Ro	0.95	185	Pg	Pg	01 26 09.5	-0.4
	180nm,0.7s						
MURB	Monte Urbino	0.98	321	Pg	Pg	01 26 09.7	-0.8
	561nm,0.3s						
MURB	Monte Urbino	0.98	321	Pg	Pg	01 26 09.7	-0.8
	561nm,0.3s						
MGAB	Montegabbione	1.01	294	Pg	Pg	01 26 10.5	-0.6
	310nm,0.4s						
MGAB	Montegabbione	1.01	294	Pg	Pg	01 26 10.5	-0.6
	310nm,0.4s						
ARVD	Arcevia	1.04	343	Pg	Pg	01 26 10.4	-1.2
	193nm,0.6s						
ARVD	Arcevia	1.04	343	Pg	Pg	01 26 10.4	-1.2
	193nm,0.6s						
AOI	Ancona	1.06	9	Pg	Pg	01 26 11.0	-1.0
	264nm,0.3s						
AOI	Ancona	1.06	9	Pg	Pg	01 26 11.0	-1.0
	264nm,0.3s						
MIDA	Miranda	1.09	142	Pg	Pg	01 26 10.8	-1.7
	100nm,0.7s						
MIDA	Miranda	1.09	142	Pg	Pg	01 26 10.8	-1.7
	100nm,0.7s						
TOLF	Tolfa	1.11	247	Pg	Pb	01 26 11.7	-1.0
	164nm,0.7s						
TOLF	Tolfa	1.11	247	Pg	Pb	01 26 11.7	-1.0
	164nm,0.7s						
SACS	San Casciano d	1.13	288	Pg	Pb	01 26 12.7	-0.4
	158nm,0.8s						
PIEI	Pieia	1.20	330	Pg	Pb	01 26 13.5	-0.8
	120nm,0.6s						
PIEI	Pieia	1.20	330	Pg	Pb	01 26 13.5	-0.8
	120nm,0.6s						
MS1	Monte Sant'Ang	2.08	112	*e*Pn	Pg	01 26 31.0	-0.4
NVLJ	Novalja	2.33	27	*e*Pn	Pn	01 26 30.2	+0.4
NVLJ				Sn	Sn	01 26 59.7	+1.3
NVLJ	Novalja	2.33	27	*e*Pn	Pn	01 26 30.2	+0.4
NVLJ				Sn	Sn	01 26 59.6	+1.3
STON	Ston	3.21	82	*e*Pn	Pn	01 26 43.5	+1.6
STON				Sn	Sn	01 27 22.0	+1.8
STON	Ston	3.21	82	*e*Pn	Pn	01 26 43.5	+1.6
STON				Sn	Sn	01 27 21.9	+1.8

*IDC **09** 01:31:04.3±2.7, 0°.76S×133°.85E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.4/22, mbtmp3.4/4, ML3.7/2, Error ellipse: s-maj=100.3km s-min=27.8km az=80.0*
*ISCJB **09** 01:31:08.6±0.9, 0°.79S±0°.09×133°.62E±0°.05, h32km, mb3.1/2, Error ellipse: s-maj=12.8km s-min=6.9km az=175.6*
*DJA **09** 01:31:10.0±4.5, 1°S±6°×13°4E±°, h37km±55km, M3.4/3, MLv3.4/3*
ISC 09 01:31:08.0±1.1, **0°.7S**±0°.1×**133°.77E**±0°.06, **h32**km, **n7**, σ**0s97**/10, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAKI	Biak	2.38	101	P	Pb	01 31 48.9	-1.3
BAKI				S	Sb	01 32 19.7	+0.5
SWI	Sorong	2.51	267	P	Pn	01 31 45.8	-0.8
SWI				S	Sn	01 32 15.4	-0.7
FAKI	Fak Fak	2.64	215	P	Pn	01 31 48.8	+0.4
FAKI				S	Sn	01 32 19.3	-0.1
FITZ	Fitzroy Crossi	19.01	204	P	Pn	01 35 27.6	-0.6
	0.1nm,0.3s,baz=24,slow=12,SNR=3.5						
WRA	Warramunga Arr	19.09	178	P	Pn	01 35 29.0	-0.1
	0.3nm,0.3s,baz=358,slow=12,SNR=4.8						
ASAR	Alice Springs	22.79	180	P	P	01 36 08.7	+0.6
	0.3nm,0.3s,baz=354,slow=10,SNR=4.6						
MKAR	Makanchi Array	65.25	324	P	P	01 41 48.2	+1.6
	0.1nm,0.5s,baz=102,slow=6.6,SNR=3.8						

*MDD **09** 01:36:17.6±2.5, 37°.08N×13°.16W, h0km, mb3.5/1, Error ellipse: s-maj=23.2km s-min=19.1km az=15.0, PRXIMO*
*INMG **09** 01:36:19.8±0.8, 36°.98N×13°.49W, h10km, ML2.1, Error ellipse: s-maj=5.7km s-min=4.5km az=72.0*
*CSEM **09** 01:36:20.4±0.4, 37°.24N×12°.94W, h10km, mb3.5/1, Error ellipse: s-maj=7.5km s-min=5.6km az=30.0*
ISC 09 01:36:17.5±3.8, **37°.2N**±0°.1×**13°.1W**±0°.2, **h10**km, **n59**, σ**1s17**/100, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	3.42	89	*e*Pn	Pn	01 37 11.3	+0.4
PFVI				*e*Sn	Sn	01 37 50.5	-1.1
PMAFR	Mafra	3.51	58	*e*Pn	Pn	01 37 13.3	+1.2
PMAFR				*e*Sn	Sn	01 37 53.8	+0.1
PMAFR	Mafra	3.51	58	*e*Pn	Pn	01 37 13.3	+1.2
PTEO	Sao Teotonio	3.52	82	*e*Pn	Pn	01 37 13.1	+0.9
PTEO				*e*Sn	Sn	01 37 52.6	-1.2
PTEO	Sao Teotonio	3.52	82	P	Pn	01 37 13.1	+0.9
PTEO				S	Sn	01 37 52.6	-1.2
PTEO	Sao Teotonio	3.52	82	P	Pn	01 37 13.1	+0.9
PTEO				S	Sn	01 37 52.6	-1.2
MORF	Marmelete	3.56	86	*e*Sn	Sn	01 37 54.2	-0.9
MORF	Marmelete	3.56	86	S	Sn	01 37 54.2	-0.9
MORF	Marmelete	3.56	86	S	Sn	01 37 54.2	-0.9
PNCL	Nicolau / Gran	3.76	74	*e*Pn	Pn	01 37 16.2	+0.7
PNCL				*e*Sn	Sn	01 37 59.2	-0.6
PNCL	Nicolau / Gran	3.76	74	*e*Pn	Pn	01 37 16.2	+0.7
PNCL				*e*Sn	Sn	01 37 59.2	-0.6
PCVE	Castro Verde	4.07	82	*e*Pn	Pn	01 37 20.5	+0.8
PCVE				*e*Sn	Sn	01 38 06.1	-1.3
PCVE	Castro Verde	4.07	82	P	Pn	01 37 20.5	+0.8
PCVE				S	Sn	01 38 06.1	-1.3
PCVE	Castro Verde	4.07	82	P	Pn	01 37 20.5	+0.8
PCVE				S	Sn	01 38 06.1	-1.3
PBDV	Barranco-do-Ve	4.14	87	*e*Pn	Pn	01 37 21.6	+0.9
PBDV				*e*Sn	Sn	01 38 08.5	-0.7
PBDV	Barranco-do-Ve	4.14	87	P	Pn	01 37 21.6	+0.9
PBDV				S	Sn	01 38 08.5	-0.7
PBDV	Barranco-do-Ve	4.14	87	P	Pn	01 37 21.6	+0.9
PBDV				S	Sn	01 38 08.5	-0.7
PBEJ	Beja	4.25	77	*e*Sn	Sn	01 38 11.9	-0.2
PBEJ	Beja	4.25	77	S	Sn	01 38 11.9	-0.2
PBEJ	Beja	4.25	77	S	Sn	01 38 11.9	-0.2
EVO	Evora	4.26	70	*e*Pn	Pn	01 37 23.8	+1.4
EVO				*e*Sn	Sn	01 38 10.8	-1.4
EVO	Evora	4.26	70	P	Pn	01 37 23.8	+1.4
EVO				S	Sn	01 38 10.8	-1.4
EVO	Evora	4.26	70	P	Pn	01 37 23.8	+1.4
EVO				S	Sn	01 38 10.8	-1.4
PMTG	Montargil	4.30	62	*e*Pn	Pn	01 37 24.1	+1.2
PMTG				*e*Sn	Sn	01 38 14.3	+1.2
PMTG	Montargil	4.30	62	*e*Pn	Pn	01 37 24.1	+1.2
PVAQ	Vaqueiros	4.31	85	*e*Pn	Pn	01 37 24.2	+1.1
PVAQ				*e*Sn	Sn	01 38 11.7	-1.7
PVAQ	Vaqueiros	4.31	85	P	Pn	01 37 24.2	+1.1
PVAQ				S	Sn	01 38 11.7	-1.7
PVAQ	Vaqueiros	4.31	85	P	Pn	01 37 24.2	+1.1
PVAQ				S	Sn	01 38 11.7	-1.7
PTOM	Tomar	4.43	55	*e*Pn	Pn	01 37 26.3	+1.5
PTOM				*e*Sn	Sn	01 38 18.0	+1.6
PTOM	Tomar	4.43	55	P	Pn	01 37 26.3	+1.5
PTOM				S	Sn	01 38 18.0	+1.6
PTOM	Tomar	4.43	55	P	Pn	01 37 26.3	+1.5
PTOM				S	Sn	01 38 18.0	+1.6
EGRO	El Granado	4.50	84	P	Pn	01 37 27.1	+1.4
	0.3nm,0.1s,SNR=7.9						
EGRO				S	Sn	01 38 17.4	-0.7
	0.9nm,0.1s,SNR=7.9						
EGRO	El Granado	4.50	84	P	Pn	01 37 27.1	+1.4
	0.3nm,0.1s,SNR=7.9						
EGRO				S	Sn	01 38 17.4	-0.7
	0.9nm,0.1s,SNR=7.9						
PESTR	Estremoz	4.68	67	*e*Sn	Sn	01 38 23.2	+0.6
PESTR	Estremoz	4.68	67	S	Sn	01 38 23.2	+0.6
PESTR	Estremoz	4.68	67	S	Sn	01 38 23.2	+0.6
PBAR	Barrancos	4.92	76	*e*Sn	Sn	01 38 28.1	-0.4
PBAR	Barrancos	4.92	76	S	Sn	01 38 28.1	-0.4
PBAR	Barrancos	4.92	76	S	Sn	01 38 28.1	-0.4
PMRV	Marv??o	5.04	62	*e*Pn	Pn	01 37 34.0	+0.9
PMRV				*e*Sn	Sn	01 38 30.8	-0.5
PMRV	Marv??o	5.04	62	P	Pn	01 37 34.0	+0.9
PMRV				S	Sn	01 38 30.8	-0.5
PMRV	Marv??o	5.04	62	P	Pn	01 37 34.0	+0.9
PMRV				S	Sn	01 38 30.8	-0.5
EMIN	Mina Concepcio	5.16	81	S	Sn	01 38 32.0	-2.3
	0.1nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	5.16	81	S	Sn	01 38 32.0	-2.3
	0.1nm,0.1s,SNR=7.9						
PCBR	Castelo Branco	5.17	57	*e*Pn	Pn	01 37 35.9	+1.1
PCBR				*e*Sn	Sn	01 38 34.5	0.0
PCBR	Castelo Branco	5.17	57	P	Pn	01 37 35.9	+1.1
PCBR				S	Sn	01 38 34.5	0.0
PCBR	Castelo Branco	5.17	57	P	Pn	01 37 35.9	+1.1
PCBR				S	Sn	01 38 34.5	0.0
PVIS	Viseu	5.40	47	*e*Pn	Pn	01 37 38.1	0.0
PVIS				*e*Sn	Sn	01 38 39.9	-0.4
PVIS	Viseu	5.40	47	P	Pn	01 37 38.1	0.0
PVIS				S	Sn	01 38 39.9	-0.4
PVIS	Viseu	5.40	47	P	Pn	01 37 38.1	0.0
PVIS				S	Sn	01 38 39.9	-0.4
POLO	Lamas de Olo	5.89	43	*e*Pn	Pn	01 37 45.5	+0.6
POLO				*e*Sn	Sn	01 38 49.8	-2.7
POLO	Lamas de Olo	5.89	43	*e*Pn	Pn	01 37 45.5	+0.6
PCAB	Cabril	6.01	39	*e*Pn	Pn	01 37 47.0	+0.6
PCAB				*e*Sn	Sn	01 38 53.4	-1.9
PCAB	Cabril	6.01	39	P	Pn	01 37 47.0	+0.6
PCAB				S	Sn	01 38 53.4	-1.9
PCAB	Cabril	6.01	39	P	Pn	01 37 47.0	+0.6
PCAB				S	Sn	01 38 53.4	-1.9
PGAV	Gavieira, Arco	6.08	36	*e*Pn	Pn	01 37 48.6	+1.1
PGAV				*e*Sn	Sn	01 38 54.2	-3.0
PGAV	Gavieira, Arco	6.08	36	*e*Pn	Pn	01 37 48.6	+1.1
MVO	Moncorvo	6.19	48	*e*Pn	Pn	01 37 49.4	+0.5
MVO				*e*Sn	Sn	01 38 57.8	-2.0
MVO	Moncorvo	6.19	48	*e*Pn	Pn	01 37 49.4	+0.5
MVO				*e*Sn	Sn	01 38 57.8	-2.0

*MOS **09** 01:40:32.8±1.2, 13°.16N×51°.34E, h10km, mb4.7/9, Error ellipse: s-maj=15.7km s-min=8.3km az=78.3*
*IDC **09** 01:40:34.1±0.7, 13°.34N×51°.20E, h0km, mb4.1/19, mb1 4.3/21, mb1mx4.1/32, mbtmp4.2/21, ML4.6/1, MS4.1/8, Ms1 4.1/8, ms1mx3.7/33, Error ellipse: s-maj=18.2km s-min=13.6km az=129.0*
*CSEM **09** 01:40:34.5±0.3, 13°.36N×51°.24E, h2km, mb4.5/9, Error ellipse: s-maj=13.0km s-min=7.8km az=147.0*
*ISCJB **09** 01:40:34.1±0.5, 13°.37N±0°.05×51°.17E±0°.04, h12km, mb4.2/31, MS4.0/6, Error ellipse: s-maj=8.2km s-min=4.7km az=162.7*
*NEIC **09** 01:40:35.4±0.5, 13°.27N×51°.26E, h10km, mb4.5/8, Error ellipse: s-maj=12.6km s-min=8.4km az=137.0*
*OMAN **09** 01:40:36.0±95.0, 13°.42N×51°.25E, h15km, Error ellipse: s-maj=22.5km s-min=2.5km az=303.0*
*DHMR **09** 01:40:39.2±0.4, 13°.43N×50°.75E, h4km±63km, ML4.1*
ISC 09 01:40:35.9±0.6, **13°.38N**±0°.07×**51°.22E**±0°.06, **h12**km, **n135**, σ**1s37**/134, **mb4.2**/31, **MS4.1**/6, **7C-3D**, **Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MUKL	Al Mukalla	2.38	297	⇓*i*P	Pn	01 41 14.0	-0.8
MUKL				*i*S	Sn	01 41 41.6	-2.4
MUKL				AML	AML	01 41 44.1	
	comp=N,2μm,0.7s						
ABTO	Aybut	4.43	27	P	Pn	01 41 41.0	-2.0
	SNR=29						
ABTO				⇑S	Sn	01 42 29.9	-4.7
ABTO	Aybut	4.43	27	P	Pn	01 41 41.0	-2.0
	SNR=29						
RBK	Rabkut	5.01	35	P	Pn	01 41 49.6	-1.4
	SNR=96						
RBK	Rabkut	5.01	35	P	Pn	01 41 49.6	-1.4
	SNR=96						
BDHA	Al Bayda'	5.53	277	⇑*i*P	Pn	01 41 58.4	+0.1
BDHA				*i*S	Sn	01 42 60.0	-1.9
BDHA	Al Bayda'	5.53	277	⇑*i*P	Pn	01 41 58.4	+0.1
LBOS		5.82	275	⇑*i*P	Pn	01 42 02.2	-0.2
LBOS				*i*S	Sn	01 43 07.0	-2.4
TRBA	At Turbah	6.92	270	⇑*i*P	Pn	01 42 17.0	-0.4
TRBA	At Turbah	6.92	270	⇑*i*P	Pn	01 42 17.0	-0.4
ATD	Arta Tunnel	8.38	258	Pn	Pn	01 42 37.7	+0.4
ATD	Arta Tunnel	8.38	258	Pn	Pn	01 42 37.7	+0.4
	comp=N,7.4nm,0.3s,baz=161,slow=18,SNR=16						
ATD				LR	LR	01 45 09.6	
	comp=N,1μm,19.0s,baz=68,slow=33						
ATD	Arta Tunnel	8.38	258	Pn	Pn	01 42 37.7	+0.4
ASUD	Al Ashush, Dub	11.84	19	P	Pn	01 43 24.3	-0.4
	SNR=8.7						
ASUD	Al Ashush, Dub	11.84	19	P	Pn	01 43 24.3	-0.4
	SNR=8.7						
BANOM	Banah	13.36	20	P	Pn	01 43 45.7	+0.2
	SNR=5.9						
BANOM	Banah	13.36	20	P	Pn	01 43 45.7	+0.2
	SNR=5.9						
RDF	Al-Radifah	15.84	348	*e*P	Pn	01 44 20.5	+1.7
RDF				AMb	AMB	01 44 26.4	
	comp=Z,216nm,1.1s						
RDF	Al-Radifah	15.84	348	*e*P	Pn	01 44 20.5	+1.7
	comp=Z,216nm,1.1s						
NAY	Al-Naaiem	16.22	347	*e*P	Pn	01 44 24.1	+0.4
NAY				AMb	AMB	01 44 26.8	
	comp=Z,72nm,1.2s						
UMR	Umm Al-Rimmam	16.42	349	*e*P	Pn	01 44 26.2	0.0
UMR				AMb	AMB	01 44 30.6	
	comp=Z,98nm,1.6s						
MIB	Mutribah	16.73	348	*e*P	Pn	01 44 29.6	-0.7
MIB				AMb	AMB	01 44 36.1	
	comp=Z,72nm,1.2s						
KMBO	Kilima Mbogo	19.99	225	P	P	01 45 07.0	-1.7
KMBO	Kilima Mbogo	19.99	225	P	P	01 45 08.7	-0.1
	SNR=8.1						
KMBO	Kilima Mbogo	19.99	225	P	P	01 45 07.0	-1.7
	baz=44,slow=13,SNR=11						
KMBO				LR	LR	01 52 51.7	
	comp=Z,469nm,18.2s,baz=303,slow=37						
KMBO	Kilima Mbogo	19.99	225	P	P	01 45 07.0	-1.7
BHD	Baghdad	20.76	344	*i* x	P	01 45 14.0	-2.6
BHD				*i* x	S	01 49 10.0	+1.8
EIL	Elat	22.13	320	LR	LR	01 54 29.5	
	comp=Z,620nm,18.4s,baz=278,slow=38						
ASF	Jabal al Asfar	22.85	327	P	P	01 45 42.1	+2.9
ASF	Jabal al Asfar	22.85	327	P	P	01 45 42.1	+2.9
	comp=Z,8.8nm,1.0s,baz=4.3,slow=3.4,SNR=10						
ASF				LR	LR	01 54 26.1	
	comp=Z,224nm,20.4s,baz=167,slow=36						
MMAI	Mount Meron Ar	24.30	326	LR	LR	01 55 23.1	
	comp=Z,207nm,18.6s,baz=170,slow=37						
KBL	Kabul	26.54	34	*e*P	P	01 46 15.1	+1.2
KBL				pmax	pmax		
	comp=Z,13nm,1.1s						
KBL	Kabul	26.54	34	*e*P	P	01 46 15.1	+1.2
	comp=Z,13nm,1.1s						
KBL	Kabul	26.54	34	*e*P	P	01 46 15.1	+1.2
	comp=Z,13nm,1.1s						
GNI	Garni	27.27	349	*e*P	P	01 46 23.0	+2.7
	comp=Z,16nm,0.9s						
GNI	Garni	27.27	349	LR	LR	01 59 12.8	
	comp=Z,559nm,21.2s,baz=150,slow=41						
GNI	Garni	27.27	349	*e*P	P	01 46 23.0	+2.7
	comp=Z,16nm,0.9s						
MALT	Malatya	27.31	338	*e*P	P	01 46 23.4	+2.7
MALT				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MALT	Malatya	27.31	338	*e*P	P	01 46 23.4	+2.7
	comp=Z,6.7nm,1.1s						
MALT	Malatya	27.31	338	*e*P	P	01 46 23.4	+2.7
	comp=Z,6.7nm,1.1s						
BRTR	Keskin Array B	30.47	333	P	P	01 46 50.1	+1.4
BRTR	Keskin Array B	30.47	333	P	P	01 46 50.1	+1.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,1.1nm,1.0s,baz=136,slow=11,SNR=5.6						
BRTR	Keskin Array B	30.47	333	P	P	01 46 50.2	+1.4
KBZ	Khabaz	31.08	348	P	P	01 46 55.6	+1.7
KBZ	Khabaz	31.08	348	P	P	01 46 55.6	+1.7
KBZ	Khabaz	31.08	348	P	P	01 46 55.6	+1.7
	comp=Z,2.9nm,0.8s,baz=183,slow=6.1,SNR=6.4						
KBZ				LR	LR	02 01 38.9	
	comp=Z,773nm,20.3s,baz=138,slow=41						
KBZ	Khabaz	31.08	348	P	P	01 46 55.6	+1.7
KKAR	Karatay Array	33.97	26	P	P	01 47 20.1	+0.8
KKAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KKAR	Karatay Array	33.97	26	P	P	01 47 20.1	+0.8
	comp=Z,7.3nm,1.1s						
KKAR	Karatay Array	33.97	26	P	P	01 47 20.1	+0.8
	comp=Z,7.2nm,1.1s						
AAK	Ala-Archa	35.42	30	eP	P	01 47 33.1	+1.0
AAK				pmax	pmax		
	comp=Z,13nm,1.4s						
AAK	Ala-Archa	35.42	30	eP	P	01 47 33.1	+1.0
	comp=Z,13nm,1.4s						
AAK	Ala-Archa	35.42	30	P	P	01 47 34.0	+2.0
	SNR=7.3						
AAK	Ala-Archa	35.42	30	P	P	01 47 33.8	+1.7
	comp=Z,2.1nm,0.8s,baz=217,slow=6.6,SNR=8.2						
AAK	Ala-Archa	35.42	30	eP	P	01 47 33.1	+1.0
	comp=Z,13nm,1.4s						
ABKAR	Akbulak array	36.49	10	eP	P	01 47 41.2	+0.3
	comp=Z,16nm,1.1s						
ABKAR	Akbulak array	36.49	10	eP	P	01 47 41.2	+0.3
	comp=Z,16nm,1.1s						
AKTK	Aktyubinsk	37.37	7	P	P	01 47 48.8	+0.4
AKTO	Aktyubinsk	37.37	7	P	P	01 47 48.8	+0.4
AKTO	Aktyubinsk	37.37	7	P	P	01 47 48.8	+0.4
AKTO	Aktyubinsk	37.37	7	P	P	01 47 48.8	+0.4
	comp=Z,3.7nm,1.0s,baz=200,slow=8.8,SNR=11						
AKTO				LR	LR	02 05 02.2	
	comp=Z,387nm,19.1s,baz=353,slow=39						
AKTO	Aktyubinsk	37.37	7	P	P	01 47 48.8	+0.4
VRHR	Novokhopersk	38.41	350	eP	P	01 47 58.0	+0.9
VRHR				pmax	pmax		
	comp=N,4.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,6.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
VRHR	Novokhopersk	38.41	350	eP	P	01 47 58.0	+0.9
AKASG	Malin Array Be	41.30	339	P	P	01 48 20.9	-0.3
AKASG	Malin Array Be	41.30	339	P	P	01 48 20.9	-0.3
AKASG	Malin Array Be	41.30	339	P	P	01 48 20.9	-0.3
	comp=Z,0.4nm,0.3s,baz=132,slow=6.5,SNR=5.3						
AKASG	Malin Array Be	41.30	339	P	P	01 48 20.9	-0.3
MK31	Makanchi Array	42.28	32	eP	P	01 48 29.5	+0.1
MK31	Makanchi Array	42.28	32	eP	P	01 48 29.4	+0.1
MK31	Makanchi Array	42.28	32	eP	P	01 48 29.5	+0.1
MKAR	Makanchi Array	42.28	32	P	P	01 48 29.4	0.0
MKAR	Makanchi Array	42.28	32	P	P	01 48 29.4	0.0
MKAR	Makanchi Array	42.28	32	P	P	01 48 29.4	0.0
	comp=Z,1.8nm,0.5s,baz=223,slow=7.8,SNR=43						
MKAR	Makanchi Array	42.28	32	P	P	01 48 29.4	0.0
BRVK	Borovoye	42.39	17	eP	P	01 48 30.3	+0.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	Borovoye	42.39	17	eP	P	01 48 30.3	+0.2
	comp=Z,4.1nm,0.8s						
BRVK	Borovoye	42.39	17	eP	P	01 48 30.3	+0.2
	comp=Z,4.1nm,0.8s						
BVAR	Borovoye Array	42.39	17	P	P	01 48 30.4	+0.3
BVAR	Borovoye Array	42.39	17	P	P	01 48 30.4	+0.3
BVAR	Borovoye Array	42.39	17	P	P	01 48 30.4	+0.3
	comp=Z,1.7nm,0.6s,baz=192,slow=7.5,SNR=16						
BVAR	Borovoye Array	42.39	17	P	P	01 48 30.4	+0.3
KURBB	Kurchatov Arra	43.27	25	P	P	01 48 37.3	+0.1
	comp=Z,4.8nm,1.1s,baz=227,slow=8.2,SNR=34						
KURK	Kurchatov	43.38	25	eP	P	01 48 38.1	-0.1
KURK	Kurchatov	43.38	25	eP	P	01 48 38.0	-0.1
KURK	Kurchatov	43.38	25	P	P	01 48 38.6	+0.5
	SNR=7.2						
KURK	Kurchatov	43.38	25	eP	P	01 48 38.1	-0.1
PKST	T˜'s	43.69	327	⇓eS	S	01 55 14.4	+3.9
TAM	Tamanrasset	44.28	289	eP	P	01 48 45.7	-0.3
TAM				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TAM	Tamanrasset	44.28	289	eP	P	01 48 45.7	-0.3
	comp=Z,3.5nm,1.0s						
TAM	Tamanrasset	44.28	289	eP	P	01 48 45.7	-0.3
	comp=Z,3.5nm,1.0s						
SOP	Sopron	44.73	327	⇓eS	S	01 55 22.8	-2.8
LBTB	Lobatse	45.62	213	P	P	01 48 55.6	-0.9
LBTB	Lobatse	45.62	213	P	P	01 48 55.6	-0.9
	comp=Z,2.1nm,0.7s,baz=83,slow=19,SNR=6.3						
LBTB	Lobatse	45.62	213	P	P	01 48 55.6	-0.9
CMAR	Chiang Mai Arr	46.07	77	P	P	01 48 58.8	-1.3
CMAR	Chiang Mai Arr	46.07	77	P	P	01 48 58.8	-1.3
	comp=Z,9.3nm,1.0s,baz=274,slow=8.8,SNR=16						
CMAR	Chiang Mai Arr	46.07	77	P	P	01 48 58.8	-1.3
TOA0	Torodi Ar. Sit	48.14	276	eP	P	01 49 16.4	+0.1
TOA0	Torodi Ar. Sit	48.14	276	eP	P	01 49 16.4	+0.1
TORD	Torodi Ar. Bea	48.14	276	P	P	01 49 15.9	-0.4
TORD	Torodi Ar. Bea	48.14	276	P	P	01 49 15.9	-0.4
	comp=Z,4.1nm,0.7s,baz=88,slow=7.7,SNR=34						
TORD	Torodi Ar. Bea	48.14	276	P	P	01 49 15.9	-0.4
NVS	Novosibirsk	48.33	24	⇑iP	P	01 49 15.3	-1.8
NVS				pmax	pmax		
	comp=Z,17nm,1.2s						
NVS				pmax	pmax		
	comp=N,10.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.1s						
NVS	Novosibirsk	48.33	24	i P	P	01 49 15.3	-1.8
	comp=E,10.0nm,1.4s						
ZAA0	Zalesovo Array	48.35	26	eP	P	01 49 16.0	-1.3
ZAA0	Zalesovo Array	48.35	26	eP	P	01 49 16.0	-1.3
ZALV	Zalesovo Beam	48.35	26	P	P	01 49 16.0	-1.3
ZALV	Zalesovo Beam	48.35	26	P	P	01 49 16.0	-1.3
ZALV	Zalesovo Beam	48.35	26	P	P	01 49 16.0	-1.3
	comp=E,2.9nm,0.6s,baz=232,slow=8.1,SNR=20						
ZALV	Zalesovo Beam	48.35	26	P	P	01 49 16.0	-1.3
BOSA	Boshof	48.72	211	eP	P	01 49 19.5	-1.2
BOSA	Boshof	48.72	211	P	P	01 49 19.1	-1.5
	comp=E,1.5nm,0.6s,baz=43,slow=13,SNR=4.5						
BOSA	Boshof	48.72	211	eP	P	01 49 19.5	-1.2
FINES	FINESS Array B	51.32	345	P	P	01 49 39.5	-0.3
FINES	FINESS Array B	51.32	345	P	P	01 49 39.5	-0.3
	comp=E,2.6nm,0.8s,baz=152,slow=8.6,SNR=4.7						
FINES	FINESS Array B	51.32	345	P	P	01 49 39.5	-0.3
ESDC	Sonseca Array	54.90	309	P	P	01 50 07.5	+0.8
ESDC	Sonseca Array	54.90	309	P	P	01 50 07.5	+0.8
	comp=E,0.9nm,0.7s,baz=102,slow=6.4,SNR=6.3						
ESDC	Sonseca Array	54.90	309	P	P	01 50 07.5	+0.8
NOA	NORSAR Array B	55.69	338	P	P	01 50 11.6	-0.4
NOA	NORSAR Array B	55.69	338	P	P	01 50 11.6	-0.4
	comp=E,1.4nm,1.0s,baz=155,slow=5.3,SNR=2.7						
NOA	NORSAR Array B	55.69	338	P	P	01 50 11.6	-0.4
ZAK	Zakamensk	55.96	38	eP	P	01 50 09.0	-5.2
ZAK				e		01 53 38.7	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SONM	Songino Array	57.02	41	P	P	01 50 21.9	+0.1
SONM	Songino Array	57.02	41	P	P	01 50 21.9	+0.1
	comp=Z,1.7nm,1.0s,baz=247,slow=7.1,SNR=10						
SONM	Songino Array	57.02	41	P	P	01 50 21.9	+0.1
FITZ	Fitzroy Crossi	79.77	111	P	P	01 52 48.2	+3.6
FITZ	Fitzroy Crossi	79.77	111	P	P	01 52 48.2	+3.6
	comp=Z,3.5nm,0.9s,baz=258,slow=7.2,SNR=5.0						
WRA	Warramunga Arr	88.18	111	P	P	01 53 29.5	+2.0
WRA	Warramunga Arr	88.18	111	P	P	01 53 29.5	+2.0
	comp=Z,1.7nm,0.6s,baz=300,slow=4.0,SNR=8.8						
WRA	Warramunga Arr	88.18	111	P	P	01 53 29.5	+2.0
ASAR	Alice Springs	88.75	115	P	P	01 53 32.1	+2.0
ASAR	Alice Springs	88.75	115	P	P	01 53 32.1	+2.0
	comp=Z,1.3nm,0.8s,baz=293,slow=6.5,SNR=7.1						
ASAR	Alice Springs	88.75	115	P	P	01 53 32.2	+2.0

*MOS **09** 01:44:02.9±1.3, 46°.65N×152°.83E, h33km, mb4.3/2, Error ellipse: s-maj=22.4km s-min=12.3km az=51.2*
*IDC **09** 01:44:06.4±2.8, 47°.04N×152°.63E, h47km±26km, mb3.4/6, mb1 3.7/10, mb1mx3.5/30, mbtmp3.6/10, ML3.3/4, Error ellipse: s-maj=45.5km s-min=21.0km az=149.0*
ISC 09 01:44:06.8±1.0, **46°.8N**±0°.2×**152°.3E**±0°.1, **h67km, n26, σ2s.19**/27, **mb4.0**/5, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KUR	Kuril'sk	3.47	245	ePN	Pn	01 44 59.0	+0.6
KUR				pmax	pmax		
	comp=Z,100nm,0.5s						
KUR				pmax	pmax		
	comp=N,90nm,0.3s						
SKR	Severo-Kuril's	4.65	31	ePN	Pn	01 45 09.0	-5.5
NEM2	Nemuro 2	5.78	236	P	Pn	01 45 28.1	-1.8
JRA	Rausu	5.82	244	P	Pn	01 45 32.4	+2.0
JNK	Nakash	6.25	242	P	Pn	01 45 37.3	+0.9
JTKR	Abashiri--Toko	6.56	248	P	Pn	01 45 42.9	+2.3
YSS	Yuzh-Sakhalins	6.57	275	ePN	Pn	01 45 45.5	+4.7
JAK	Akkeshi	6.61	238	P	Pn	01 45 40.0	-1.2
JAK				eS	Sn	01 46 53.2	-1.9
JAR	Ashorobuto	6.99	243	P	Pn	01 45 47.6	+1.1
JAR				eS	Sn	01 47 07.2	+2.7
JOB	Onbets	7.17	240	P	Pn	01 45 49.0	0.0
JOB				eS	Sn	01 47 08.0	-0.9
PETK	Petropavlovsk-	7.23	27	ePN	Pn	01 45 55.4	+5.7
PETK	Petropavlovsk-	7.23	27	P	Pn	01 45 44.5	-5.3
	comp=N,0.3nm,0.3s,baz=210,slow=17,SNR=2.0						
PETK				S	Sn	01 47 05.6	-4.7
	baz=220,slow=24,SNR=2.0						
ASAJ	Asahikawa	7.34	252	P	Pn	01 45 54.8	+3.4
	comp=N,0.6nm,0.3s,baz=85,slow=14,SNR=5.7						
JKK2	Kamakawa 2	7.35	250	P	Pn	01 45 54.3	+2.9
JCH	Churui	7.62	240	P	Pn	01 45 54.6	-0.5
JCH				eS	Sn	01 47 17.8	-2.1
ERM	Erimo	8.11	237	ePN	Pn	01 46 02.0	+0.2
JKB	Kayabe	9.45	243	P	Pn	01 46 19.0	-1.1
JKB				eS	Sn	01 48 00.6	-4.1
JTM	Tenmabayashi	10.10	238	P	Pn	01 46 26.4	-2.6
USRK	Ussuriysk Arra	14.49	267	P	P	01 47 31.1	-2.0
	comp=N,0.5nm,0.3s,baz=75,slow=11,SNR=9.4						
MJAR	Matsushiro Arr	14.67	231	P	P	01 47 36.6	+1.4
	comp=N,0.4nm,0.3s,baz=39,slow=9.3,SNR=4.0						
KSRS	Korea Array	20.29	252	P	Pn	01 48 41.0	+1.5
	comp=N,1.0nm,0.4s,baz=58,slow=10,SNR=6.1						
YKA	Yellowknife Ar	51.23	36	P	P	01 53 02.8	-0.2
	comp=N,0.1nm,0.5s,baz=298,slow=7.0,SNR=3.6						
FINES	FINESS Array B	63.80	334	P	P	01 54 32.0	+0.6
	comp=N,1.2nm,0.5s,baz=26,slow=6.7,SNR=6.8						
NOA	NORSAR Array B	68.04	341	P	P	01 54 59.2	+0.5
	comp=N,1.1nm,0.7s,baz=29,slow=6.6,SNR=6.3						
TXAR	Lajitas Array	77.95	60	P	P	01 55 57.5	-0.3
	comp=N,0.2nm,0.7s,baz=318,slow=5.2,SNR=2.9						
TXAR				pP	PcP	01 56 11.6	+4.2
	comp=N,0.4nm,0.6s,baz=304,slow=5.0,SNR=5.5						
MMAI	Mount Meron Ar	82.40	311	P	P	01 56 23.4	+1.8
	comp=N,2.4nm,0.8s,baz=54,slow=5.9,SNR=5.2						

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*SZGRF **09** 01:46:48.0, 25°.03N×70°.89E, h41km, mb4.8, India-Pakistan border region*
*LDG **09** 01:46:52.2±0.9, 26°.31N×70°.81E, h47km, Mb5.2/44, Ms4.0/10*
*ISCJB **09** 01:46:55.1±0.4, 27°.09N±0°.02×70°.75E±0°.02, h33km±3km, mb5.1/237, MS4.3/49, Error ellipse: s-maj=3.5km s-min=2.3km az=9.1*
*DJA **09** 01:46:56.0±3.4, 27°N±6°×7°1E±°, h12km±24km, M5.7/22, mB5.9/10, mb5.2/22, MLv6.2/1, Mw(mB)5.5/10*
*MOS **09** 01:46:56.5±1.1, 27°.16N×70°.74E, h42km, mb5.4/109, MS4.3/21, Error ellipse: s-maj=5.5km s-min=3.0km az=115.8*
*NDI **09** 01:46:57.1±2.5, 27°.02N×70°.62E, h36km±28km, ML5.2, mb5.2(NEIC)*
*IDC **09** 01:46:57.6±0.5, 27°.08N×70°.75E, h38km±4km, mb4.5/36, mb1 4.6/36, mb1mx4.6/37, mbtmp4.5/36, ML5.8/1, MS4.2/25, Ms1 4.2/25, ms1mx4.2/33, Error ellipse: s-maj=9.9km s-min=9.0km az=11.0*
*BJI **09** 01:46:58.1, 27°.35N×70°.82E, h43km, mB4.9/31, mb5.0/49, Ms4.8/43, Ms7 4.4/43*
*NEIC **09** 01:46:58.3±0.2, 27°.14N×70°.75E, mb5.2/116, Error ellipse: s-maj=4.2km s-min=3.2km az=21.0*
NEIC At least 6 people injured and many buildings damaged at Jaisalmer, India. Felt at Bhuj, Bikaner, Jaipur, Jodhpur and by people in high-rise buildings at Delhi. Also felt at Kabul, Afghanistan and at Hyderabad and Sukkur, Pakistan.
*TEH **09** 01:46:59.0, 27°.17N×70°.74E, h43km, ML5.2*
*GCMT **09** 01:47:02.3±0.3, 26°.99N×70°.64E, h39km±1km, MW5.1, Moment Tensor Solution. s45,c61; s81,c140; Moment tensor: Scale 10^{16}Nm; M_{rr}0.47±.21; $M_{\theta\theta}$-4.65±.17; $M_{\phi\phi}$4.19±.17; $M_{r\theta}$-2.86±.20; $M_{\theta\phi}$3.13±.15; $M_{\phi r}$-1.14±.20; Best double couple: $M_0$6.20000×10^{16} NP1:ϕ_s153.00000°, δ60.00000°, λ179.00000°. NP2:ϕ_s243.00000°, δ89.00000°, λ30.00000°. Principal axes: T 5.9500, Plg21.0000°, Azm112.0000°; N 0.5600, Plg60.0000°, Azm245.0000°; P -6.5000, Plg20.0000°, Azm14.0000°; Data Used: II IU IC G CN.*
ISC 09 01:46:58.2±0.3, **27°.17N**±0°.03×**70°.77E**±0°.03, **h42km**±2km, **h42km:pP-P, n804, σ1s.17**/1035, **mb5.2**/237, **MS4.3**/49, **39C-147D, India-Pakistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AJM	Ajmer	3.53	100	eP	Pn	01 47 51.4	+0.8
AJM				eS	Sn	01 48 31.6	+0.5
AJM				AML	AML	01 48 50.6	
	comp=N,10µm,0.8s						
AJM				AML	AML	01 48 51.1	
	comp=E,11µm,0.2s						
QUE	Quetta	4.51	313	⇑iP	Pn	01 48 08.0	+3.9
QUE	Quetta	4.51	313	⇑iP	Pn	01 48 08.0	+3.9
QUE				eS		01 49 59.0	
KHET	Khetri	4.56	77	eP	Pn	01 48 05.9	+1.2
KHET				eS	Sn	01 48 56.4	0.0
KHET				AML	AML	01 49 29.3	
	comp=E,6µm,0.5s						
KHET				AML	AML	01 49 29.5	
	comp=N,11µm,0.5s						
SARP	Sargodha	5.02	19	P	Pn	01 48 11.4	+0.4
SARP				S	Sn	01 49 07.0	-0.7
KUDL	Kundal	5.17	78	eP	Pn	01 48 13.6	+0.6
KUDL				eS	Sn	01 49 08.8	-2.6
KUDL				eS		01 49 10.2	
KUDL				AML	AML	01 49 49.4	
	comp=E,4µm,0.5s						
KUDL				AML	AML	01 49 51.9	
	comp=N,3µm,0.5s						
BHGR	Bahadurgarh	5.67	73	eP	Pn	01 48 21.1	+1.2
BHGR				eS	Sn	01 49 21.0	-2.6
BHGR				AML	AML	01 49 25.0	
	comp=Z,7µm,0.5s						
THW	Thamme Wali	5.67	8	⇓P	Pn	01 48 21.7	+1.7
THW				S	Sn	01 49 37.0	+13
SONA	Sohna	5.70	78	eP	Pn	01 48 21.4	+1.1
SONA				eS	Sn	01 49 23.1	-1.4
SONA				AML	AML	01 50 00.4	
	comp=N,5µm,0.4s						
SONA				AML	AML	01 50 05.8	
	comp=E,7µm,0.5s						
AYAN	Aya Nagar	5.78	75	eP	Pn	01 48 22.2	+0.8
AYAN				eS	Sn	01 49 23.7	-2.8
AYAN				AML	AML	01 50 09.5	
	comp=Z,3µm,0.7s						
NDI	New Delhi	5.90	74	ex	Pn	01 48 20.5	-2.6
NDI				ex	Sn	01 49 23.0	-6.5
KKR	Kurukshetra	6.00	61	eP	Pn	01 48 25.5	+1.0
BISR	Bishrakh	6.07	75	ex	x	01 49 21.8	
AGRA	Agra	6.39	88	eP	Pn	01 48 30.2	+0.4
AGRA				eS	Sn	01 49 38.0	-3.5
AGRA				AML	AML	01 50 29.3	
	comp=E,5µm,0.5s						
AGRA				AML	AML	01 50 37.6	
	comp=N,6µm,0.7s						
BHK	Bhakra	6.50	48	eP	Pn	01 48 32.4	+1.1
BHK				eS	Sn	01 49 42.2	-2.0
CEP	Cherat	6.71	8	⇓P	Pn	01 48 35.9	+1.6
CEP				S	Sn	01 49 51.0	+1.5
THN	Thein Dam	6.78	38	eP	Pn	01 48 35.0	-0.2
THN				eS	Sn	01 49 49.0	-2.1
CHCP	Chirah Chowk	6.82	18	P	Pn	01 48 36.8	+1.1
SMLA	Simla	6.84	53	i P	Pn	01 48 38.3	+2.2
SMLA				i x	Sn	01 49 53.0	+0.4
SDNR	Sundarnagar	6.92	50	eP	Pn	01 48 39.0	+1.8
SDNR				ex	Sn	01 49 55.5	+0.8
KBL	Kabul	7.50	349	eP	Pn	01 48 46.9	+1.7
KBL	Kabul	7.50	349	ePn	Pn	01 48 46.9	+1.7
PTH	Pithoragarh	8.65	72	eP	Pn	01 49 00.9	-0.2
PTH				ex	Sn	01 50 34.9	-2.6
LGTI	Lohaghat	8.66	73	ex	Pn	01 49 03.5	+2.6
LGTI				ex	x	01 50 29.3	
POO	Poona	9.05	161	i x	Sn	01 50 46.0	-1.2
POO				i SS	SnSn	01 50 59.0	-0.3
JBP	Jabalpur	9.25	114	i P	Pn	01 49 07.2	-1.9
JBP				i P	Pn	01 49 07.2	-1.9
JBP				⇑iP	Pn	01 49 07.2	-1.9
JBP				ex	Sn	01 50 45.4	-6.3
NGP	Nagpur	9.64	127	ex	Pn	01 49 10.2	-4.4
NGP				ex	Sn	01 51 07.0	+5.4
ALBI	Allahabad	10.08	98	ex	Pn	01 49 17.0	-3.5
ALBI				ex	x	01 51 00.0	
LATR	Latur	10.21	147	eP	Pn	01 49 19.7	-2.6
LATR				ex	Sn	01 51 21.8	+6.3
KAD	Karad	10.31	161	ex	Pn	01 49 24.0	+0.3
KAD				ex	Sn	01 51 22.0	+4.0
PYUN	Piuthan	10.88	82	eP	Pn	01 49 30.6	-1.0
	comp=N,1µm,0.6s						
KOLN	Koldanda	11.41	84	eP	Pn	01 49 37.4	-1.5
	comp=N,880nm,0.4s						
IKOO	Kooshah	11.48	300	Pn	Pn	01 49 38.9	-0.9
IKOO	Kooshah	11.48	300	ePn	Pn	01 49 38.9	-0.9
DANN	Dangsing	11.57	81	eP	Pn	01 49 39.7	-1.4
	comp=N,1µm,0.5s						
WBK	Wadi Bani Khal	11.63	250	⇓P	Pn	01 49 38.5	-3.2
	SNR=12						
HYB	Hyderabad	12.08	142	i P	Pn	01 49 42.5	-5.4
	comp=N,140nm,1.0s						
HYB				eS	Sn	01 52 00.0	-1.3
SMDO	Samad	12.23	253	P	Pn	01 49 46.7	-3.2
	SNR=16						
JMDO	Jabal Madar	12.46	250	P	Pn	01 49 51.3	-1.7
	SNR=47						
IBND	Bandar-abas	12.66	275	Pn	Pn	01 49 55.3	-0.4
IBND	Bandar-abas	12.66	275	ePn	Pn	01 49 55.3	-0.4
IBND				ePn	Pn	01 49 55.4	-0.3
HOQ	Hoqain	12.68	257	⇓P	Pn	01 49 52.4	-3.6
	SNR=12						
DMN	Daman	12.75	85	eP	Pn	01 49 54.4	-2.8
	comp=N,928nm,0.6s						
IMYA	Miami	12.88	318	Pn	Pn	01 50 00.4	+1.7
IMYA	Miami	12.88	318	ePn	Pn	01 50 00.5	+1.7
KKN	Kakani	12.90	84	eP	Pn	01 49 56.1	-3.1
	comp=N,1µm,0.7s						
PKIN	Phulchoki	13.01	85	eP	Pn	01 49 58.1	-2.6
	comp=N,904nm,0.7s						
BANOM	Banah	13.01	268	P	Pn	01 49 57.8	-2.8
	SNR=11						
PKI	Pulchoki	13.02	85	eP	Pn	01 49 57.7	-3.2
	comp=N,1µm,0.7s						
KSH	Kashi	13.06	18	⇓iP	Pn	01 49 55.7	-5.5
KSH				pP	P	01 50 04.5	-6.1
KSH				PP	PnPn	01 50 06.6	-2.7
KSH				sP		01 50 10.8	
KSH				S	Sn	01 52 15.9	-9.2
KSH				SS	SnSn	01 52 30.7	-7.2
KSH				pmax	pmax		
	comp=Z,100nm,1.1s						
KSH				LR	LR		
	comp=N,4µm,3.2s						
KSH				LR	LR		
	comp=E,4µm,4.3s						
KSH				LR	LR		
	comp=Z,4µm,5.2s						
BSY	Bisya	13.07	253	P	Pn	01 50 00.1	-1.3
	SNR=27						
BSY				P	Pn	01 50 00.2	-1.1
	SNR=16						
ISRO	Mashad	13.24	316	ePn	Pn	01 50 04.4	+0.7
HATD	Hatta, Dubai	13.37	263	⇓P	Pn	01 50 01.8	-3.7
	SNR=6.9						
GUN	Gumba	13.43	83	eP	Pn	01 50 03.1	-3.5
	comp=Z,1µm,0.6s						
ARQ	Araqi	13.44	257	P	Pn	01 50 06.2	-0.3
	SNR=34						
ARQ				P	P	01 50 07.3	-7.6
	SNR=18						
ASHO	Ashiyiah	13.47	263	⇑P	Pn	01 50 04.2	-2.6
	SNR=19						
IPAY	Payeh	13.62	316	ePn	Pn	01 50 09.5	+0.5
NAZ	Nazwa, Dubai	13.75	264	⇓P	Pn	01 50 10.2	-0.5
	SNR=9.3						
IBAF	Bafgh	13.96	292	ePn	Pn	01 50 13.4	-0.3
RAMN	Ramite	14.11	87	eP	Pn	01 50 11.6	-4.1
	comp=Z,1µm,0.6s						
ASUD	Al Ashush, Dub	14.13	263	P	Pn	01 50 15.9	+0.2
	SNR=5.4						
IKRD	Kardeh	14.13	316	ePn	Pn	01 50 08.5	-7.4
IMEH	Mehriz	14.71	290	ePn	Pn	01 50 23.1	-0.7
ODAN	Odare	14.82	87	eP	Pn	01 50 21.2	-4.0
	comp=Z,2µm,0.9s						
VIS	Vishakhapatnam	14.93	126	ex	Pn	01 50 22.8	-3.7
VIS				eS	Sn	01 53 09.9	-0.8
TAPN	Taplejung	15.07	85	eP	Pn	01 50 24.1	-4.5
	comp=Z,219nm,0.4s						
ISHV	Shirvan	15.11	316	ePn	P	01 50 35.3	+1.8
ABKT	Ailbek	15.11	318	P	P	01 50 34.8	+1.4
	comp=Z,184nm,0.6s,SNR=6.4						
AML	Almayashu	15.12	8	i P	Pn	01 50 27.8	-1.4
AML	Almayashu	15.12	8	i P	Pn	01 50 27.8	-1.4
AML	Almayashu	15.12	8	P	Pn	01 50 27.8	-1.4
	SNR=112						
KZA	Kyzart	15.32	13	i P	Pn	01 50 29.9	-2.0
KZA	Kyzart	15.32	13	i P	Pn	01 50 29.9	-2.0
KZA	Kyzart	15.32	13	P	Pn	01 50 29.9	-2.0
	SNR=198						
UCH	Uchtor	15.33	11	i P	Pn	01 50 31.6	-0.5
UCH	Uchtor	15.33	11	i P	Pn	01 50 31.6	-0.5
UCH	Uchtor	15.33	11	P	Pn	01 50 31.6	-0.5
	SNR=52						
BWNR	Bhubaneshwar	15.37	113	ex	Pn	01 50 26.0	-6.2
BWNR				ex	x	01 53 11.0	
EKS2	Erkin-Say	15.65	8	eP	Pn	01 50 34.3	-1.6
EKS2				pmax	pmax		
	comp=Z,283nm,0.8s						
EKS2	Erkin-Say	15.65	8	ePn	Pn	01 50 34.3	-1.6
	comp=Z,283nm,0.8s						
EKS2	Erkin-Say	15.65	8	P	Pn	01 50 35.3	-0.6
	SNR=68						
ULHL	Ulahol	15.69	15	i P	Pn	01 50 35.2	-1.3
ULHL	Ulahol	15.69	15	P	Pn	01 50 35.2	-1.3
	SNR=22						
ISRV	Sarvestan	15.71	282	ePn	Pn	01 50 35.0	-1.9
AAK	Ala-Archa	15.73	10	d iP	Pn	01 50 35.0	-1.9
AAK				pmax	pmax		
	comp=Z,656nm,0.8s						
AAK				MLR	MLR		
	comp=Z,4µm,21.0s						
AAK	Ala-Archa	15.73	10	ePn	Pn	01 50 35.7	-1.2
AAK				Sn	Sn	01 53 24.9	-5.2
AAK	Ala-Archa	15.73	10	P	Pn	01 50 35.6	-1.3
	SNR=123						
AAK	Ala-Archa	15.73	10	Pn	Pn	01 50 36.0	-0.9
	comp=Z,2µm,0.5s						
AAK	Ala-Archa	15.73	10	Pn	Pn	01 50 35.5	-1.3
	comp=Z,37nm,0.3s,baz=186,slow=11,SNR=241						
AAK				Sn	Sn	01 53 24.9	-5.2
	comp=Z,4.0nm,0.3s,baz=5.5,slow=19,SNR=3.5						
AAK				LR	LR	01 57 35.2	
	comp=Z,2µm,21.6s,baz=204,slow=40						
KBK	Karagaybulak	15.82	11	i P	Pn	01 50 37.6	-0.5
KBK	Karagaybulak	15.82	11	P	Pn	01 50 37.6	-0.5
	SNR=82						
KK31	Karatay Array	15.90	359	i P	Pn	01 50 37.1	-1.9
KK31				pmax	pmax		
	comp=Z,103nm,0.4s						
KKAR	Karatay Array	15.90	359	eP	Pn	01 50 37.2	-1.8
KKAR	Karatay Array	15.90	359	ePn	Pn	01 50 37.2	-1.8
FRU	Bishkek	15.94	10	eP	Pn	01 50 37.9	-1.6
FRU				eS	Sn	01 53 36.0	+0.9
FRU				pmax	pmax		
	comp=Z,620nm,2.2s						
FRU				pmax	pmax		
	comp=Z,1µm,2.7s						
FRU				smax	smax		
	comp=N,500nm,2.2s						
CHMS	Chumysh	16.12	11	i P	Pn	01 50 41.2	-0.6
CHMS	Chumysh	16.12	11	P	Pn	01 50 41.2	-0.6
	SNR=34						
TKM2	Tokmak 2	16.20	13	i P	Pn	01 50 42.4	-0.6
TKM2	Tokmak 2	16.20	13	ePn	Pn	01 50 41.5	-1.5

comp=N,275nm,1.0s
TKM2 Tokmak 2 16.20 13 P **Pn 01 50 42.4 -0.6**
SNR=33
USP Ospenovka 16.35 10 *i* P **Pn 01 50 44.9 +0.3**
USP Ospenovka 16.35 10 P **Pn 01 50 44.9 +0.3**
SNR=32
CAL Calcutta 16.59 102 *e*P **P 01 50 49.9 +0.1**
CAL *ex* x 01 53 38.1
AAA Alma-Ata 16.83 16 *i* P **Pn 01 50 49.6 -1.2**
AAA *i* S **Sn 01 53 55.2 -1.5**
AAA pmax pmax
comp=Z,2μm,2.0s
AAA smax smax
comp=E,1μm,2.7s
AAA MLR MLR
comp=Z,1μm,7.0s
IZEF Zefreh 16.95 294 *e*Pn **Pn 01 50 52.0 -0.5**
ISHM Shahmirzad 17.20 304 *e*Pn **P 01 50 59.0 +2.2**
IKLH Kolahrood 17.67 295 *e*Pn **P 01 51 01.8 -0.2**
RBK Rabkut 18.07 241 P **Pn 01 51 05.4 -0.9**
SNR=19
IPIR Pirpir 18.08 292 *e*Pn **P 01 51 08.0 +1.5**
LSA Lhasa 18.10 77 P **P 01 51 06.4 -0.6**
LSA LR LR
comp=E,2μm,19.1s
AGT Agartala 18.77 95 *ex* **Pn 01 51 18.0 +3.4**
ABTO Aybut 18.87 242 P **P 01 51 13.8 -1.3**
SNR=18
SHL Shillong 18.99 90 *i* x **P 01 51 12.0 -4.5**
SHL *i* x x 01 54 28.0
QRN Al-Qurain 20.24 280 *e*P **P 01 51 29.5 -0.5**
HMDM Hanimaadhoo 20.41 173 P Pn 01 51 51.4 +17
UMR Umm Al-Rimmam 20.42 282 *e*P **P 01 51 31.4 -0.5**
UMR AMb AMB 01 51 33.7
comp=Z,144nm,0.8s
KBD Kabd 20.44 281 *e*P **P 01 51 31.9 -0.2**
RDF Al-Radifah 20.57 280 *e*P **P 01 51 32.9 -0.5**
RDF AMb AMB 01 51 37.8
comp=Z,88nm,0.4s
MIB Mutribah 20.75 283 *e*P **P 01 51 34.7 -0.8**
MIB AMb AMB 01 51 47.3
comp=Z,492nm,0.8s
NAY Al-Naaiem 20.83 281 *e*P **P 01 51 35.4 -1.0**
NAY AMb AMB 01 51 48.3
comp=Z,153nm,1.1s
IMP Imphal 20.96 91 *e*P **P 01 51 38.0 +0.2**
IMP *ex* x 01 55 24.0
IKOM Komasi 21.16 295 *e*Pn **P 01 51 39.3 -0.7**
WMQ Urumqi 21.52 35 P **P 01 51 45.0 +1.4**
WMQ pP **pP 01 51 56.0 +1.9**
WMQ PP **PnPn 01 52 10.0 +4.9**
WMQ S **S 01 55 36.0 -3.9**
WMQ PcP **PcP 01 55 48.0 +3.0**
WMQ sS Sn 01 55 53.0 +3.3
WMQ ScP **ScP 01 59 18.0 -0.7**
WMQ pmax pmax
comp=Z,250nm,0.8s
WMQ pmax pmax
comp=Z,710nm,4.0s
WMQ LR LR
comp=N,2μm,12.0s
WMQ LR LR
comp=E,1μm,12.0s
WMQ LR LR
comp=Z,900nm,12.0s
MK31 Makanchi Array 21.60 22 *i* P **P 01 51 44.8 +0.4**
MK31 pmax pmax
comp=Z,212nm,0.8s
MK31 Makanchi Array 21.60 22 *e*P **P 01 51 45.0 +0.6**
MKAR Makanchi Array 21.60 22 P **P 01 51 45.2 +0.8**
MKAR S **S 01 55 41.9 +0.5**
MKAR pmax pmax
comp=Z,129nm,0.7s
MKAR smax smax
comp=N,11nm,0.8s
MKAR MLR MLR
comp=Z,555nm,21.1s
MKAR Makanchi Array 21.60 22 *e*P **P 01 51 45.2 +0.8**
MKAR S **S 01 55 41.9 +0.5**
MKAR Makanchi Array 21.60 22 P **P 01 51 45.1 +0.8**
comp=Z,129nm,0.7s,baz=208,slow=12,SNR=842
MKAR S **S 01 55 41.9 +0.5**
comp=Z,11nm,0.8s,baz=199,slow=21,SNR=3.6
MKAR LR LR 02 01 16.3
comp=Z,555nm,21.1s,baz=309,slow=40
IGHG Ghaleghazi 21.96 295 *e*Pn **P 01 51 47.9 -0.7**
ISRB Sarab 22.14 304 Pn **P 01 51 51.1 +0.6**
ISRB Sarab 22.14 304 *e*Pn **P 01 51 51.1 +0.6**
IBST Bostanabad 22.66 304 *e*Pn **P 01 51 55.9 -0.3**
IHRS Heris 22.78 305 *e*Pn **P 01 51 57.0 -0.4**
RAYN Ar Rayn 23.11 267 P **P 01 52 00.0 -0.6**
comp=Z,380nm,1.1s,SNR=8.6
AB31 Akbulak array 23.59 342 P **P 01 52 06.0 +1.0**
AB31 pmax pmax
comp=Z,46nm,0.4s
ABKAR Akbulak array 23.59 342 *e*P **P 01 52 06.1 +1.1**
IMRD Marand 23.90 305 *e*Pn **P 01 52 09.5 +1.2**
KURBB Kurchatov Arra 24.16 12 P **P 01 52 10.5 +0.2**
comp=Z,18nm,0.6s,baz=203,slow=9.0,SNR=124
KURBB LR LR 02 02 36.3
comp=Z,1μm,21.3s,baz=210,slow=39
KURK Kurchatov 24.27 12*d i* P **P 01 52 11.5 +0.3**
KURK pmax pmax
comp=Z,65nm,1.7s
KURK Kurchatov 24.27 12 *e*P **P 01 52 11.3 +0.1**
KURK Kurchatov 24.27 12 P **P 01 52 11.9 +0.7**
SNR=104
KURK Kurchatov 24.27 12 P **P 01 52 11.8 +0.6**
comp=Z,1μm,1.1s,SNR=36
MAK Makhachkala 24.60 316 *e*P **P 01 52 15.6 +1.3**
MAK *e**SP **sP 01 52 27.7 -3.2**
MAK *e*PPP PPP 01 52 55.9
MAK *e*S **S 01 56 35.7 +3.2**
MAK *e**SS **sS 01 56 49.9 -1.6**
MAK *e*SS **SnSn 01 57 22.9 +2.4**
MAK *e*SSS SSS 01 57 38.9
MAK pmax pmax
comp=Z,68nm,1.0s
CUKT Cukurca 25.01 300 *e*P **P 01 52 19.2 +0.9**
GNI Garni 25.13 308 *e*P **P 01 52 21.6 +2.1**
GNI Garni 25.13 308 *e*P **P 01 52 21.4 +1.9**
GNI Garni 25.13 308 P **P 01 52 21.9 +2.5**
SNR=21
GNI Garni 25.13 308 P **P 01 52 20.9 +1.5**
comp=Z,16nm,0.7s,baz=154,slow=3.8,SNR=15
AKTO Aktyubinsk 25.20 341 P **P 01 52 20.7 +1.0**
AKTO pmax pmax
comp=Z,27nm,0.5s
AKTO Aktyubinsk 25.20 341 P **P 01 52 20.7 +1.0**
AKTO Aktyubinsk 25.20 341 P **P 01 52 20.7 +1.0**
comp=Z,27nm,0.5s,baz=156,slow=8.3,SNR=138
DGRG David-gareji 25.24 311 P **P 01 52 23.0 +2.7**
CLDR Caldiran 25.36 305 *e*P **P 01 52 22.6 +1.1**
TBLG Delisi 25.79 311 P **P 01 52 27.5 +2.3**
BVA0 Borovoye Array 25.83 359 *i* P **P 01 52 26.0 +0.6**
BVA0 pmax pmax
comp=Z,17nm,0.7s
BVAR Borovoye Array 25.83 359 P **P 01 52 26.4 +1.0**
BVAR pmax pmax
comp=Z,58nm,0.5s
BVAR MLR MLR
comp=Z,1μm,19.9s
BVAR Borovoye Array 25.83 359 P **P 01 52 26.4 +1.0**
BVAR Borovoye Array 25.83 359 P **P 01 52 26.4 +1.0**
comp=Z,58nm,0.5s,baz=163,slow=9.6,SNR=148
BVAR LR LR 02 03 57.0
comp=Z,1μm,19.9s,baz=185,slow=39
BRVK Borovoye 25.86 359*d i* P **P 01 52 26.7 +1.0**
BRVK pmax pmax
comp=Z,216nm,1.2s
BRVK Borovoye 25.86 359 *e*P **P 01 52 26.7 +1.0**
comp=Z,130nm,0.9s
BRVK Borovoye 25.86 359 P **P 01 52 27.0 +1.3**
SNR=64
BRVK Borovoye 25.86 359 P **P 01 52 26.0 +0.3**
comp=Z,901nm,0.7s,SNR=67
GOR Gori 26.33 311 P **P 01 52 32.7 +2.6**
KARS Kars 26.49 308 *e*P **P 01 52 34.5 +2.8**
AKH Akhalkalaki 26.50 309 P **P 01 52 34.6 +2.7**
ZEI Tsey 26.81 312 *e*P **P 01 52 36.1 +1.4**
ZEI pmax pmax
comp=Z,122nm,0.9s
ONI Oni 27.03 312 P **P 01 52 38.0 +1.5**
GTA Gaotai 27.05 56 ⇑P **P 01 52 38.6 +1.8**
GTA pP **pP 01 52 50.3 +2.1**
GTA pmax pmax
comp=Z,27nm,1.2s
GTA pmax pmax
comp=Z,160nm,6.4s
GTA LR LR
comp=N,2μm,20.0s
GTA LR LR
comp=E,660nm,20.9s
GTA LR LR
comp=Z,700nm,18.5s
VRTB Varto-Mus 27.18 304 *e*P **P 01 52 37.4 -0.6**
CHTO Chiang Mai 27.19 102 *e*P **P 01 52 38.4 +0.3**
CHTO pmax pmax
comp=Z,42nm,1.1s
CHTO Chiang Mai 27.19 102 *e*P **P 01 52 38.4 +0.3**
comp=Z,42nm,1.1s
CHTO Chiang Mai 27.19 102 P **P 01 52 38.7 +0.7**
SNR=15
CHTO Chiang Mai 27.19 102 P **P 01 52 38.3 +0.2**
comp=Z,50nm,1.4s,comp=Z,532nm
CMMT Chiang Mai 27.20 102 P **P 01 52 38.8 +0.7**
comp=Z,45nm,1.4s
CM31 Chiang Mai Arr 27.33 103 *e*P **P 01 52 40.0 +0.7**
comp=Z,20nm,0.7s
CMAR Chiang Mai Arr 27.33 103 P **P 01 52 39.4 0.0**
CMAR Chiang Mai Arr 27.33 103 P **P 01 52 39.4 0.0**
comp=Z,18nm,1.0s,baz=292,slow=9.5,SNR=52
CMAR LR LR 02 05 05.6
comp=Z,535nm,20.5s,baz=288,slow=40
BNGB Bing˜ǁ 27.71 303 *e*P **P 01 52 42.1 -0.5**
KBZ Khabaz 27.90 314 P **P 01 52 44.8 +0.7**
KBZ pmax pmax
comp=Z,16nm,0.9s
KBZ Khabaz 27.90 314 P **P 01 52 44.8 +0.7**
KBZ Khabaz 27.90 314 P **P 01 52 44.8 +0.7**
comp=Z,16nm,0.9s,baz=126,slow=7.6,SNR=23
KIV Kislovodsk 28.14 314 *e*P **P 01 52 47.8 +1.5**
KIV *e*S **S 01 57 30.4 +1.6**
KIV *e*SS **SnSn 01 58 47.1 0.0**
KIV pmax pmax
comp=Z,36nm,1.0s
KIV Kislovodsk 28.14 314 *e*P **P 01 52 47.9 +1.5**
comp=Z,47nm,1.1s
KIV Kislovodsk 28.14 314 P **P 01 52 48.5 +2.1**
SNR=10
KIV Kislovodsk 28.14 314 P **P 01 52 48.1 +1.7**
comp=Z,175nm,1.1s,SNR=6.4
PZAR Pazar-Rize 28.23 307 *e*P P 01 53 03.3 +16
BAYT Ayd˜-ntepe-Bay 28.52 305 *e*P P 01 52 55.1 +5.3
ERZN Erzincan 28.59 304 *e*P **P 01 52 49.8 -0.6**
ZAA0 Zalesovo Array 28.69 17 *e*P **P 01 52 51.0 -0.1**
ZALV Zalesovo Beam 28.69 17 P **P 01 52 50.9 -0.2**
ZALV pmax pmax
comp=Z,8.0nm,0.4s
ZALV MLR MLR
comp=Z,731nm,19.7s
ZALV Zalesovo Beam 28.69 17 P **P 01 52 50.9 -0.2**
ZALV Zalesovo Beam 28.69 17 P **P 01 52 50.9 -0.2**
comp=Z,8.4nm,0.4s,baz=232,slow=9.0,SNR=48
ZALV LR LR 02 05 43.3
comp=Z,731nm,19.7s,baz=85,slow=39
KMI Kunming 28.73 87 P **P 01 52 53.1 +1.1**
KMI pP **pP 01 53 04.7 +1.2**
KMI sP **sP 01 53 09.9 +1.3**
KMI PP **PnPn 01 53 47.2 +3.3**
KMI S **S 01 57 36.8 -1.9**
KMI sS **sS 01 57 57.9 0.0**
KMI pmax pmax
comp=Z,26nm,1.0s
KMI pmax pmax
comp=Z,120nm,5.0s
KMI LR LR
comp=N,530nm,15.8s
KMI LR LR
comp=E,370nm,16.7s
KMI LR LR
comp=Z,400nm,14.5s
GUMT Gumushane 29.02 305 *e*P **P 01 52 55.2 +0.9**
CD2 Chengdu 29.02 75 P **P 01 52 54.7 +0.3**
CD2 pP **pP 01 53 07.5 +1.7**
CD2 PP **PnPn 01 53 49.4 +1.7**
CD2 PcP **PcP 01 56 03.0 +0.9**
CD2 S **S 01 57 40.3 -2.6**
CD2 sS **sS 01 58 02.1 +0.1**
CD2 SS **SnSn 01 59 11.1 +2.3**
CD2 PcS **PcS 01 59 44.5 -0.5**
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 pmax pmax
comp=Z,170nm,8.3s
CD2 LR LR
comp=N,2μm,11.2s
CD2 LR LR
comp=E,740nm,11.7s
CD2 LR LR
comp=Z,600nm,14.7s
NVS Novosibirsk 29.11 15⇓ *i* P **P 01 52 53.9 -0.8**
NVS *e* 01 53 14.5
NVS *e*S S 01 57 35.3 -8.3
NVS *e* 01 59 09.4
NVS pmax pmax
comp=Z,12nm,0.7s
NVS pmax pmax
comp=N,11nm,0.8s
NVS smax smax
comp=N,28nm,1.5s
MALT Malatya 29.25 301 *e*P **P 01 52 57.5 +1.2**
MALT Malatya 29.25 301 *e*P **P 01 52 57.5 +1.2**
SRDT SRDT 29.34 110 P **P 01 52 58.6 +1.4**
comp=N,38nm,1.2s,comp=N,4μm
ILIC ilic-Erzincan 29.41 303 *e*P **P 01 52 58.0 +0.2**
LZH Lanzhou 29.42 64 *e*P **P 01 52 58.8 +0.8**
LZH pP **pP 01 53 09.5 +0.1**
LZH PP **PnPn 01 53 55.5 +2.4**
LZH PcP **PcP 01 56 03.6 +0.5**
LZH *e*S **S 01 57 47.5 -1.7**
LZH sS **sS 01 58 06.0 -2.4**
LZH SS **SnSn 01 59 22.0 +3.4**
LZH pmax pmax
comp=Z,20nm,1.1s
LZH pmax pmax
comp=Z,100nm,6.0s
LZH LR LR
comp=N,1μm,12.8s
LZH LR LR
comp=E,1μm,12.7s
LZH LR LR
comp=Z,2μm,16.8s
ASF Jabal al Asfar 29.77 288 P **P 01 53 03.7 +2.6**
ASF Jabal al Asfar 29.77 288 P **P 01 53 03.7 +2.6**
comp=Z,3.3nm,1.0s,baz=120,slow=14,SNR=3.1
ASF LR LR 02 08 01.8
comp=Z,252nm,18.0s,baz=132,slow=42
SOC Sochi 29.93 311 *e*P P 01 53 09.9 +7.7
DARE Darende-Malaty 30.03 301 *e*P **P 01 53 03.2 0.0**
KMRS Kahramanmaras 30.27 298 *e*P **P 01 53 04.8 -0.5**
SVE Sverdlovsk 30.51 349⇑ *i* P **P 01 53 08.7 +1.6**
SVE pmax pmax
comp=Z,56nm,1.4s
SVE MLR MLR
comp=Z,1μm,17.0s
ARU Arti 30.53 347 *e*P **P 01 53 08.8 +1.5**
ARU pmax pmax
comp=Z,35nm,0.8s
ARU Arti 30.53 347 *e*P **P 01 53 08.8 +1.5**
comp=Z,35nm,0.8s
ARU Arti 30.53 347 P **P 01 53 08.7 +1.5**
comp=Z,281nm,0.5s,SNR=13
RSDY Resadiye-TOKAT 30.58 304 *e*P **P 01 53 09.6 +1.6**
MMAI Mount Meron Ar 31.05 289 LR LR 02 07 21.1
comp=Z,236nm,21.0s,baz=110,slow=39
CEYT Ceyhan 31.10 297 *e*P **P 01 53 12.8 +0.2**
KOZT Kozan 31.11 298 *e*P **P 01 53 12.9 +0.2**
BSI Banda Aceh 31.78 128 P **P 01 53 17.9 -0.9**
comp=Z,40nm,1.3s
ANN Anapa 31.91 312 *e*P P 01 53 15.5 -4.1
ANN *e* 01 54 20.8
ANN *e*S S 01 58 20.3 -7.4
ANN *e*SS **SnSn 02 00 23.1 +4.4**
ANN pmax pmax
comp=Z,89nm,1.8s
GYA Guiyang 31.98 83 P **P 01 53 21.0 +0.4**
GYA pP **pP 01 53 33.4 +1.3**
GYA sP **sP 01 53 38.0 +0.8**
GYA PP **PnPn 01 54 28.4 +1.7**
GYA S **S 01 58 28.6 -0.8**
GYA sS **sS 01 58 49.6 +1.0**
GYA ScP **ScP 01 59 50.0 -0.1**
GYA SS **SnSn 02 00 22.8 +1.9**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,4.9s
GYA LR LR
comp=N,670nm,18.2s
GYA LR LR
comp=E,540nm,19.4s
GYA LR LR
comp=Z,710nm,18.9s
VRHR Novokhopersk 32.52 325 *e*P **P 01 53 25.2 +0.3**
VRHR *e**PP **pP 01 53 36.6 +0.2**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,20nm,0.8s
VRHR pmax pmax
comp=Z,40nm,0.8s
VRHR MLR MLR
comp=N,280nm,17.0s
VRHR MLR MLR
comp=E,500nm,17.0s
VRHR MLR MLR
comp=Z,450nm,17.0s
CSS Prodhromos 32.85 293 *e*P **P 01 53 28.3 +0.3**
comp=Z,25nm,0.8s
CSS *e*pP **pP 01 53 39.8 +0.2**
BR131 Keskin Array S 33.18 302 *e*P **P 01 53 30.9 -0.2**
comp=Z,3.7nm,0.7s
BRTR Keskin Array B 33.18 302 P **P 01 53 30.9 -0.2**
BRTR Keskin Array B 33.18 302 P **P 01 53 30.9 -0.2**
comp=Z,2.3nm,0.7s,baz=119,slow=7.2,SNR=16
BRTR LR LR 02 09 25.5
comp=Z,243nm,19.8s,baz=338,slow=41
XAN Xi'an 33.40 69 P **P 01 53 33.8 +0.9**
XAN LR LR
comp=N,1μm,19.2s
XAN LR LR
comp=E,310nm,20.4s
XAN LR LR
comp=Z,170nm,19.5s
MOY Mondy 33.41 35 *e*P **P 01 53 35.0 +2.2**
MOY pmax pmax
comp=Z,29nm,1.6s
VORD Divnogorie 33.66 323 *e*P **P 01 53 34.8 0.0**
VORD *e**PP **pP 01 53 46.8 +0.4**
VORD pmax pmax
comp=N,60nm,0.9s
VORD pmax pmax
comp=E,60nm,0.9s
VORD pmax pmax
comp=Z,50nm,0.9s
VORD MLR MLR
comp=N,670nm,23.0s
VORD MLR MLR
comp=Z,500nm,23.0s
VORD MLR MLR
comp=E,60nm,9.0s
SOKR Solikamsk 33.80 347*d i* P **P 01 53 37.0 +1.1**
SOKR pmax pmax
comp=Z,40nm,0.9s
SOKR MLR MLR
comp=Z,530nm,15.0s
VSR Storozhevoye 33.87 324 *e*P **P 01 53 36.6 0.0**
VSR *e**PP **pP 01 53 48.3 +0.1**
VSR pmax pmax
comp=N,30nm,0.9s
VSR pmax pmax
comp=E,50nm,0.9s
VSR pmax pmax
comp=Z,60nm,0.9s
VSR MLR MLR
comp=N,410nm,17.0s
VSR MLR MLR
comp=Z,260nm,17.0s
VSR MLR MLR
comp=E,210nm,12.0s
SIM Simferopol' 34.17 311*d i* P **P 01 53 40.0 +0.6**
SIM *i* 01 53 51.0
SONM Songino Array 34.56 44 P **P 01 53 45.1 +2.2**
SONM Songino Array 34.56 44 P **P 01 53 45.1 +2.2**
comp=E,48nm,0.7s,baz=243,slow=9.1,SNR=354
SONM LR LR 02 08 11.0
comp=E,378nm,21.4s,baz=342,slow=37
TLY Talaya 34.79 36 *e*P **P 01 53 45.1 +0.5**
TLY pmax pmax
comp=Z,14nm,0.8s
TLY Talaya 34.79 36 *e*P **P 01 53 46.3 +1.7**
comp=Z,15nm,0.8s
TLY Talaya 34.79 36 P **P 01 53 47.4 +2.8**
SNR=12
TLY Talaya 34.79 36 P **P 01 53 47.4 +2.8**
comp=Z,116nm,0.8s,SNR=5.8
ULN Ulaanbaatar 34.98 44 *e*P **P 01 53 48.6 +2.1**
comp=Z,56nm,1.2s
ULN Ulaanbaatar 34.98 44 P **P 01 53 48.9 +2.4**
SNR=21
ULN Ulaanbaatar 34.98 44 P **P 01 53 48.6 +2.1**
comp=Z,45nm,1.3s,comp=Z,495nm
IRK Irkutsk 35.41 36 *e*P **P 01 53 51.8 +1.8**
IRK *e* 01 54 02.6
IRK pmax pmax
comp=Z,59nm,1.3s
KULM Kulim 35.82 122 *e*P **P 01 53 54.7 +0.8**
comp=Z,32nm,0.9s
KULM Kulim 35.82 122 P **P 01 53 53.9 0.0**
comp=Z,33nm,0.8s
HHC Hu-ho-hao-te 36.14 57 *e*P **P 01 53 58.1 +1.6**
HHC PP **PP 01 55 21.2 +2.1**
HHC PcP **PcP 01 56 23.9 +2.3**
HHC S **S 01 59 33.3 -0.1**
HHC ScP **ScP 02 00 04.4 -0.2**
HHC PcS **PcS 02 00 09.6 +0.4**
HHC SS **SnSn 02 01 58.6 -2.9**
HHC ScS **ScS 02 04 08.7 -1.8**
HHC pmax pmax
comp=Z,21nm,0.6s
HHC pmax pmax
comp=Z,440nm,6.1s
HHC LR LR
comp=N,2μm,13.3s
HHC LR LR
comp=E,1μm,14.6s
HHC LR LR
comp=Z,970nm,13.9s
PSI Prapat 36.23 127 P **P 01 53 57.2 -0.4**
PSI Prapat 36.23 127 P **P 01 53 57.6 +0.1**
comp=Z,31nm,1.2s
PSI Prapat 36.23 127 P **P 01 53 57.2 -0.4**
comp=Z,17nm,0.9s,baz=296,slow=9.2,SNR=12
GSI Gunungsitoli 36.37 131 P **P 01 53 59.9 +1.4**
comp=Z,106nm,1.4s
IPM Ipoh 36.63 123 *e*P **P 01 54 00.6 -0.3**
comp=Z,16nm,0.8s
QIZ Qiongzhong 36.73 94 P **P 01 54 01.4 -0.2**
QIZ S **S 01 59 42.3 -0.2**
QIZ pmax pmax
comp=Z,20nm,1.4s
MOS Moscow 37.21 329 *e*P **P 01 54 03.9 -1.3**
MOS *e**PP **pP 01 54 16.9 0.0**
MOS *e* 01 55 29.8
MOS *e* 01 56 20.7
MOS *e*S **S 01 59 47.2 -1.8**
MOS pmax pmax
comp=Z,300nm,1.3s
MOS pmax pmax
comp=N,100nm,0.9s
MOS pmax pmax
comp=E,100nm,1.1s
MOS pmax pmax
comp=Z,185nm,1.2s
MOS pmax pmax
comp=E,98nm,1.0s
MOS MLR MLR
comp=Z,900nm,21.0s
MOS MLR MLR
comp=N,500nm,19.0s
MOS MLR MLR
comp=E,500nm,22.0s
OBN Obninsk 37.34 328⇓ *e*P **P 01 54 07.0 +0.7**
OBN *i* 01 55 31.8

OBN eS S 01 59 49.8 -1.2
OBN pmax pmax
comp=Z,158nm,1.2s
OBN MLR MLR
comp=Z,600nm,19.0s
OBN Obninsk 37.34 328 eP P 01 54 07.2 +0.9
comp=Z,162nm,1.2s
OBN Obninsk 37.34 328 P P 01 54 07.7 +1.4
comp=Z,645nm,0.6s,SNR=11
TIRR Tirgusor 37.96 308 ⇓P P 01 54 12.4 +0.7
TIRR Tirgusor 37.96 308 eP P 01 54 12.2 +0.5
TIRR Tirgusor 37.96 308 ⇓*i*P P 01 54 12.4 +0.7
CFR Carcaliu 38.31 309 P P 01 54 15.3 +0.6
CFR Carcaliu 38.31 309 ⇓*i*P P 01 54 15.2 +0.6
KIS Kishinev 38.31 312 eP P 01 54 14.0 -0.7
KIS *e* 01 54 26.0
KIS Kishinev 38.31 312 eUNK P 01 54 14.0 -0.7
AK02 Malin Array Si 39.23 318 eP P 01 54 22.4 +0.1
AKASG Malin Array Be 39.24 318 P P 01 54 22.3 0.0
AKASG pmax pmax
comp=Z,9.0nm,0.6s
AKASG Malin Array Be 39.24 318 P P 01 54 22.3 0.0
AKASG Malin Array Be 39.24 318 P P 01 54 22.3 0.0
comp=Z,9.2nm,0.6s,baz=104,slow=6.9,SNR=38
AK01 Malin Array Si 39.24 318 eP P 01 54 22.3 0.0
AK01 epP pP 01 54 33.3 -0.8
KIEV Kiev 39.24 318 eP P 01 54 22.6 +0.2
KIEV pmax pmax
comp=Z,59nm,1.1s
KIEV Kiev 39.24 318 eP P 01 54 22.6 +0.2
comp=Z,58nm,1.1s
ISR Istrita 39.40 309 ⇓P P 01 54 26.3 +2.4
ISR Istrita 39.40 309 ⇓*i*P P 01 54 26.3 +2.4
VRI Vrincioaia 39.43 310 P P 01 54 25.7 +1.6
VRI Vrincioaia 39.43 310 ⇓*i*P P 01 54 25.6 +1.5
BKNI Bangkinang 39.47 128 P P 01 54 24.8 +0.1
comp=Z,102nm,1.2s,comp=Z,1μm
PLOR Plostina 39.48 310 P P 01 54 26.3 +1.7
PLOR Plostina 39.48 310 ⇓*i*P P 01 54 26.2 +1.7
BJI Beijing 39.53 59 P P 01 54 27.4 +2.4
BJI pmax pmax
comp=Z,24nm,1.0s
BJI LR LR
comp=N,2μm,21.5s
BJI LR LR
comp=E,210nm,15.1s
BJI LR LR
comp=Z,340nm,24.1s
PPI Padang Panjang 39.57 129 P P 01 54 25.8 +0.2
comp=Z,21nm,1.4s,comp=Z,2μm
TESR 39.63 311 ⇓*i*P P 01 54 26.6 +0.9
KLMR Klimovskoe 39.74 337 *d i*P P 01 54 26.8 +0.3
KLMR *e**PP pP 01 54 40.0 +1.8
KLMR *e* 01 55 57.8
KLMR eS S 02 00 25.2 -2.0
KLMR pmax pmax
comp=Z,155nm,1.4s
KLMR MLR MLR
comp=Z,517nm,14.0s
ZIMR 39.97 306 P P 01 54 30.1 +1.6
RZN Rozhen 40.18 303 P P 01 54 30.4 -0.2
HUMR Humele 40.38 308 ⇓*i*P P 01 54 33.3 +1.3
CIT Chita 40.44 40 eP P 01 54 34.2 +1.8
CIT *e* 01 54 48.9
CIT *e* 01 56 40.5
CIT *e* 02 00 42.1
CIT pmax pmax
comp=Z,148nm,1.3s
VOIR 40.49 309 P P 01 54 34.1 +1.0
VOIR 40.49 309 ⇑*i*P P 01 54 34.0 +1.0
MYKOM Kota Tinggi 40.52 123 P P 01 54 34.3 +0.9
comp=Z,135nm,0.9s,comp=Z,1μm
ARR Arges 40.77 309 ⇓*i*P P 01 54 36.4 +1.1
BUR08 Bucovina Ar. S 40.86 312 eP P 01 54 36.9 +0.8
PLG Polygyros 41.02 301 eP P 01 54 38.1 +0.7
DID Didima 41.09 297 eP P 01 54 36.4 -1.5
MPEP Malo Peshtene 41.09 306 P P 01 54 38.9 +1.0
LTK Loutraki 41.30 298 eP P 01 54 38.2 -1.5
LOT Lotru 41.38 309 ⇓*i*P P 01 54 41.0 +0.6
VTS Vitosha 41.39 304 ⇓P P 01 54 41.3 +0.8
VTS Vitosha 41.39 304 ⇓*i*P P 01 54 41.3 +0.8
VTS Vitosha 41.39 304 P P 01 54 40.7 +0.2
VLX Vlachokerasia 41.77 297 eP P 01 54 42.8 -0.8
GUR Goura 41.80 297 eP P 01 54 43.0 -0.9
NJ2 Nanjing 41.82 71 eP P 01 54 43.1 -0.9
NJ2 S S 02 00 59.0 +0.2
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
NJ2 pmax pmax
comp=Z,90nm,5.4s
NJ2 LR LR
comp=N,1μm,21.9s
NJ2 LR LR
comp=E,570nm,20.9s
NJ2 LR LR
comp=Z,3μm,21.4s
DEV Deva 42.05 309 P P 01 54 47.0 +1.3
THL Klokotos Trika 42.08 300 eP P 01 54 43.5 -2.5
ITM Ithomi 42.13 296 eP P 01 54 45.6 -0.9
LVV L'vov 42.14 315 eP P 01 54 44.9 -1.4
LVV *e* 01 56 25.5
NACGM Naroch 42.18 323 *e* P 01 54 44.0 -2.6
PYL PYLOS 42.28 296 eP P 01 54 43.0 -4.7
TMCR Tamitsa 42.55 339 eP P 01 54 47.6 -1.9
TMCR pmax pmax
comp=Z,123nm,1.2s
IIGN Ignalina 42.65 324 eP P 01 54 51.6 +1.1
IIGN AMB AMB 01 54 52.6
comp=Z,26nm,1.2s
PUL Pulkovo 42.71 331 *c*eP P 01 54 51.9 +1.1
PUL pmax pmax
comp=Z,99nm,0.6s
TRPA Tarpa 42.71 313 ⇓*i*P P 01 54 51.1 +0.1
ISAL Salakas 42.79 324 eP P 01 54 52.6 +1.1
ISAL AMB AMB 01 54 53.6
comp=Z,31nm,1.4s
KMBO Kilima Mbogo 42.80 234 eP P 01 54 53.1 +0.7
KMBO epP pP 01 55 03.6 -0.5
KMBO Kilima Mbogo 42.80 234 P P 01 54 52.6 +0.2
comp=Z,0.7nm,0.5s,baz=42,slow=12,SNR=2.8
KMBO LR LR 02 13 45.6
comp=Z,354nm,18.4s,baz=272,slow=38
IZAR Zarasai 42.80 324 eP P 01 54 52.6 +1.0
IZAR AMB AMB 01 54 53.7
comp=Z,26nm,1.2s
BZS Buzias 42.90 309 P P 01 54 53.9 +1.3
BZS Buzias 42.90 309 ⇓*i*P P 01 54 53.8 +1.2
KWP Kalwaria Pacla 42.93 315 ⇓P P 01 54 53.8 +1.0
KWP Kalwaria Pacla 42.93 315 eP P 01 54 53.5 +0.7
comp=Z,54nm,0.9s
KWP Kalwaria Pacla 42.93 315 ⇓*i*P P 01 54 53.8 +1.0
KWP Kalwaria Pacla 42.93 315 eP P 01 54 53.7 +1.0
UZH Uzhgorod 42.97 313 ⇑P P 01 54 54.0 +0.9
UZH *e* 01 55 04.5
UZH eS S 02 01 16.0 +0.6
UZH *e* 02 04 16.3
UZH *e* 02 05 03.3
JAN Janina 42.98 300 eP P 01 54 51.7 -1.7
KOLS Kolonicke sedl 43.05 314 eP P 01 54 55.0 +1.2
KSI Kapahiang 43.39 130 P P 01 54 56.7 -0.2
comp=Z,77nm,0.9s
CRVS Cervenica-Dubn 43.57 313 eP P 01 54 58.9 +0.9
CRVS epP pP 01 55 10.8 +1.0
SUW Suwalki 43.84 321 eP P 01 55 00.1 +0.1
SUW pmax pmax
comp=Z,71nm,0.9s
SUW Suwalki 43.84 321 eP P 01 55 00.1 +0.1
comp=Z,71nm,0.9s
SUW Suwalki 43.84 321 eP P 01 55 00.0 +0.1
JOF Joensuu 44.06 335 eP P 01 55 01.2 -0.4
JOF pmax pmax
comp=Z,51nm,0.4s
JOF Joensuu 44.06 335 ep P 01 55 01.2 -0.4
comp=Z,51nm,0.4s
NIE Niedzica 44.41 314 eP P 01 55 06.3 +1.6
NIE Niedzica 44.41 314 eP P 01 55 06.3 +1.6
PSZ Piszkesteto 44.42 312 ⇓P P 01 55 06.1 +1.2
PSZ Piszkesteto 44.42 312 eP P 01 55 06.1 +1.2
comp=Z,43nm,0.9s
PSZ epP pP 01 55 16.9 +0.2
PSZ Piszkesteto 44.42 312 ⇓*i*P P 01 55 06.1 +1.2
BEL Belsk 44.63 317 eP P 01 55 07.2 +0.8
PPBI Pangkal Pinang 44.85 125 P P 01 55 08.6 0.0
comp=Z,23nm,1.2s
OJC Ojcow 44.89 315 eP P 01 55 09.2 +0.7
OJC Ojcow 44.89 315 eP P 01 55 09.2 +0.7
PKSM Moragy 45.04 309 ⇓P P 01 55 10.4 +0.7
PKSM Moragy 45.04 309 ⇓*i*P P 01 55 10.4 +0.7
PKSM Moragy 45.04 309 ⇓*i* P 01 55 10.5 +0.7
LIKS Likavka 45.12 313 eP P 01 55 09.9 -0.4
VYHS Vyhne 45.21 312 eP P 01 55 11.7 +0.6
VYHS epP pP 01 55 24.1 +1.2
PKS9 Tamasi 45.33 310 ⇓*i* P 01 55 12.7 +0.7
PKSG 45.35 311 ⇓*i*eS P 01 55 12.6 +0.4
FINES FINESS Array B 45.36 332 P P 01 55 12.3 +0.3
FINES FINESS Array B 45.36 332 P P 01 55 12.3 +0.3
comp=Z,22nm,0.5s,baz=112,slow=6.6,SNR=134
KAF Kangasniemi 45.59 333 eP P 01 55 12.8 -1.0
KAF pmax pmax
comp=Z,47nm,0.5s
KAF Kangasniemi 45.59 333 *e*p P 01 55 12.8 -1.0
comp=Z,47nm,0.5s
KSM Kuching 45.70 117 eP P 01 55 15.4 +0.1
comp=Z,16nm,0.9s
KSM Kuching 45.70 117 P P 01 55 15.6 +0.3
comp=Z,27nm,1.1s,comp=Z,492nm
KSM Kuching 45.70 117 P P 01 55 16.5 +1.2
comp=Z,27nm,1.1s,comp=Z,492nm
OKC Ostrava-Krasne 45.87 314 ⇓*i*P P 01 55 17.1 +0.9
OKC *e**PP pP 01 55 27.6 -0.5
OKC Ostrava-Krasne 45.87 314 ⇓*i*P P 01 55 17.1 +0.9
OKC *e*pP pP 01 55 27.6 -0.5
LVZ Lovozero 46.15 342 *d i*P P 01 55 18.4 +0.2
LVZ pmax pmax
comp=Z,82nm,1.7s
LVZ Lovozero 46.15 342 eP P 01 55 18.8 +0.5
comp=Z,73nm,1.1s
TIP Timpagrande 46.16 299 eP P 01 55 18.7 -0.1
comp=Z,14nm,1.2s
TIP *e*pP pP 01 55 29.4 -1.3
MORC Moravsky Berou 46.24 314 eP P 01 55 19.7 +0.4
MORC *e**PP pP 01 55 32.1 +0.9
MORC pmax pmax
comp=Z,10.0nm,0.8s
MORC Moravsky Berou 46.24 314 eP P 01 55 19.7 +0.4
comp=Z,9.9nm,0.8s
MORC *e*pP pP 01 55 32.1 +0.9
MORC Moravsky Berou 46.24 314 ⇓*i*P P 01 55 20.0 +0.7
APA Apatity 46.28 341 ⇑*i*P P 01 55 20.0 +0.8
APA pmax pmax
comp=Z,79nm,0.9s
APA MLR MLR
comp=Z,700nm,17.0s
SBUM Sibu 46.65 115 P P 01 55 24.1 +1.3
comp=Z,19nm,1.1s
CN2 Changchun 46.67 54 eP P 01 55 23.5 +0.9
CN2 epP pP 01 55 33.7 -0.8
CN2 *e*PP pP 01 57 10.9 -1.8
CN2 eS S 02 02 06.3 -2.8
CN2 *e*SS SS 02 05 25.2 -10
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 LR LR
comp=N,3μm,20.0s
CN2 LR LR
comp=E,1μm,20.0s
CN2 LR LR
comp=Z,300nm,23.0s
KOGS Kog 46.71 309 *i* P P 01 55 23.7 +0.8
VRAC Vranov 46.79 313 ⇓*i*P P 01 55 24.1 +0.6
CUC Castrocucco 46.86 300 eP P 01 55 24.4 +0.1
comp=Z,24nm,0.9s
CUC *e*pP pP 01 55 36.3 +0.2
CUC Castrocucco 46.86 300 eP P 01 55 24.2 0.0
GKP Gorka Klasztor 47.06 319 eP P 01 55 25.8 +0.3
DPC Dobruska-Polom 47.11 315 ⇓*i*P P 01 55 27.4 +1.4
DPC *e**PP pP 01 55 38.3 +0.3
DPC Dobruska-Polom 47.11 315 ⇓*i*P P 01 55 27.4 +1.4
DPC *e*pP pP 01 55 38.3 +0.3
GOLS Golise 47.11 309 eP P 01 55 25.4 -0.7
KSP Ksiaz 47.20 315 ⇓*e*P P 01 55 27.7 +1.0
KSP *e**PP pP 01 55 38.4 -0.2
KSP Ksiaz 47.20 315 eP P 01 55 27.7 +1.0
ARSA Arzberg 47.28 310 *i* P P 01 55 28.1 +0.8
comp=Z,22nm,1.0s,SNR=15
ARSA Arzberg 47.28 310 *i* P P 01 55 28.1 +0.8
comp=Z,22nm,1.0s
UPC Upice 47.33 315 eP P 01 55 29.0 +1.3
UPC *e**PP pP 01 55 40.1 +0.5
UPC Upice 47.33 315 ⇓eP P 01 55 29.0 +1.3
UPC epP pP 01 55 40.1 +0.5
BOJS Bojanci 47.34 308 *i* P P 01 55 28.5 +0.7
MBAR Mbarara 47.36 241 P P 01 55 29.1 +0.5
MBAR Mbarara 47.36 241 P P 01 55 29.1 +0.5
comp=Z,2.0nm,0.2s,baz=79,slow=5.2,SNR=1.9
STKI Sintang 47.48 118 P P 01 55 30.2 +0.9
comp=Z,42nm,1.2s,comp=Z,10μm
PERS Pernice 47.51 310 *i* P P 01 55 29.8 +0.6
TREC Trest 47.51 313 eP P 01 55 29.6 +0.5
TREC *e**PP pP 01 55 40.7 -0.3
TREC MLR MLR
comp=Z,300nm,28.8s
TREC Trest 47.51 313 ⇓eP P 01 55 29.6 +0.5
TREC epP pP 01 55 40.7 -0.3
TREC AMS AMS 02 18 00.0
comp=Z,300nm,28.8s
SOKA Soboth 47.57 310 ⇑*i*P P 01 55 30.2 +0.5
comp=Z,19nm,1.3s
SOKA Soboth 47.57 310 ⇑*i*P P 01 55 30.2 +0.5
comp=Z,19nm,1.3s
LJU Ljubljana 47.88 309 *i* P P 01 55 32.9 +0.9
LJU *i* pP pP 01 55 45.1 +1.1
OBKA Obir 47.89 309 *i* P P 01 55 32.9 +0.7
comp=Z,18nm,1.1s,SNR=7.6
OBKA Obir 47.89 309 *i* P P 01 55 32.9 +0.7
comp=Z,18nm,1.1s
KKM Kota Kinabalu 48.00 108 eP P 01 55 33.8 +0.4
comp=Z,27nm,1.0s
MOA Molln 48.17 311 ⇑*i*P P 01 55 34.5 +0.3
comp=Z,30nm,1.1s,SNR=22
MOA Molln 48.17 311 ⇑*i*P P 01 55 34.5 +0.3
comp=Z,30nm,1.0s
PRU Pruhonice 48.20 314 eP P 01 55 35.0 +0.6
PRU *e**PP pP 01 55 46.1 -0.3
PRU Pruhonice 48.20 314 ⇓eP P 01 55 35.0 +0.6
PRU epP pP 01 55 46.1 -0.3
PVCC Panska Ves 48.24 315 eP P 01 55 36.1 +1.3
PVCC *e**PP pP 01 55 48.2 +1.5
PVCC Panska Ves 48.24 315 ⇓eP P 01 55 36.1 +1.3
PVCC epP pP 01 55 48.2 +1.5
VOY Vojsko 48.32 309 eP P 01 55 35.3 -0.2
VOY *e* 01 55 52.2
TRI Trieste 48.40 308 eP P 01 55 35.7 -0.3
TRI *e**PP pP 01 55 46.7 -1.2
TRI pmax pmax
comp=Z,23nm,1.2s
TRI Trieste 48.40 308 eP P 01 55 35.7 -0.3
comp=Z,23nm,1.2s
TRI epP pP 01 55 46.7 -1.2
CADS Cadrg 48.44 309 *i* P P 01 55 36.6 +0.2
CADS epP pP 01 55 48.8 +0.4
MYKA Terra Mystica 48.52 309 ⇓*i*P P 01 55 37.6 +0.5
comp=Z,12nm,0.9s
MYKA Terra Mystica 48.52 309 ⇓*i*P P 01 55 37.6 +0.5
comp=Z,12nm,0.9s
GEC2 GERESS Array S 48.63 312 eP P 01 55 38.4 +0.5
GEC2 *e**PP pP 01 55 49.4 -0.5
GEC2 pmax pmax
comp=Z,6.0nm,0.8s
GEC2 GERESS Array S 48.63 312 eP P 01 55 38.4 +0.5
comp=Z,6.0nm,0.8s
GEC2 epP pP 01 55 49.4 -0.5
GERES GERESS Array B 48.63 312 P P 01 55 38.2 +0.4
GERES pP pP 01 55 49.1 -0.8
GERES GERESS Array B 48.63 312 P P 01 55 38.2 +0.4
comp=Z,5.6nm,0.7s,baz=92,slow=7.1,SNR=59
GERES pP pP 01 55 49.1 -0.8
comp=Z,5.6nm,0.6s,baz=89,slow=7.2,SNR=17
BRG Berggiesshubel 48.68 315 *i* P P 01 55 39.1 +1.0
comp=Z,18nm,0.9s
BRG *i* pP pP 01 55 51.6 +1.5
comp=Z,20nm,1.0s
BRG Berggiesshubel 48.68 315 *i* P P 01 55 39.1 +1.0
BRG *i **PP pP 01 55 51.6 +1.5
comp=Z,5.0nm,0.9s
BRG pmax pmax
comp=Z,18nm,1.0s
BRG Berggiesshubel 48.68 315 eP P 01 55 39.3 +1.2
comp=Z,9.0nm,0.8s
BRG epP pP 01 55 50.7 +0.6
KSAR Wonju Array Be 48.70 63 P P 01 55 39.0 +0.5
KSRS Korea Array 48.73 63 P P 01 55 39.0 +0.3
comp=Z,4.0nm,0.7s,baz=269,slow=8.0,SNR=19
KSRS LR LR 02 16 55.8
comp=Z,211nm,20.5s,baz=86,slow=37
KHC Kasperske Hory 48.73 313 eP P 01 55 38.9 +0.3
KHC *e**PP pP 01 55 51.2 +0.6
KHC pmax pmax
comp=Z,3.0nm,0.9s
KHC Kasperske Hory 48.73 313 eP P 01 55 38.9 +0.3
comp=Z,2.7nm,0.9s
KHC epP pP 01 55 51.2 +0.6
KHC Kasperske Hory 48.73 313 ⇓eP P 01 55 38.9 +0.3
KHC epP pP 01 55 51.1 +0.5
KBA Koelnbreinsper 48.75 310 ⇑*i*P P 01 55 39.2 +0.3
KBA pmax pmax
comp=Z,32nm,1.1s
KBA Koelnbreinsper 48.75 310 ⇑*i*P P 01 55 39.2 +0.3
comp=Z,32nm,1.1s,SNR=12
KBA Koelnbreinsper 48.75 310 ⇑*i*P P 01 55 39.2 +0.3
comp=Z,32nm,1.1s
BSD Bornholm Skovb 48.77 321 ⇓*i*P P 01 55 38.0 -0.7
BSD *i* 01 55 49.3
BSD pmax pmax
comp=Z,29nm,0.9s
BSD Bornholm Skovb 48.77 321 ⇓*i*P P 01 55 38.0 -0.7
comp=Z,29nm,0.8s
BSD *i* 01 55 49.3
RJOB Jochberg 49.16 311 eP P 01 55 41.9 0.0
comp=Z,5.0nm,0.9s
ABTA Abfaltersbach 49.30 310 *i* P P 01 55 43.0 -0.1
comp=Z,19nm,1.2s,SNR=9.2
ABTA Abfaltersbach 49.30 310 *i* P P 01 55 43.0 -0.1
comp=Z,19nm,1.2s
CLL Collm 49.32 316 eP P 01 55 43.0 0.0
CLL *e**PP pP 01 55 55.0 0.0
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 49.32 316 eP P 01 55 44.0 +1.0
comp=Z,6.0nm,0.8s
CLL Collm 49.32 316 eP P 01 55 43.0 0.0
comp=Z,8.0nm,0.9s
CLL epP pP 01 55 55.0 0.0
CLL *e*sP sP 01 56 00.0 0.0
CLL *e*PP PP 01 57 37.0 0.0
CLL *e* 01 58 16.0
CLL LmV 02 23 00.0
comp=Z,100nm,20.2s
KEV Kevo 49.48 342 eP P 01 55 42.7 -1.2
KEV pmax pmax
comp=Z,29nm,0.6s
KEV Kevo 49.48 342 *e*p P 01 55 42.7 -1.2
comp=Z,29nm,0.6s
NKC Novy Kostel 49.56 314 eP P 01 55 46.1 +1.2
NKC *e**PP pP 01 55 57.2 +0.3
NKC Novy Kostel 49.56 314 ⇓eP P 01 55 46.1 +1.2
NKC *e*pP pP 01 55 57.2 +0.3
TANN Tannenbergstha 49.57 314 eP P 01 55 45.9 +0.9
comp=Z,8.0nm,0.9s
MDJ Mudanjiang 49.66 53 P P 01 55 45.1 -0.6
MDJ pP pP 01 55 56.6 -1.1
MDJ sP sP 01 56 01.2 -1.5
MDJ PcP PcP 01 57 05.8 -0.8
MDJ PP PP 01 57 40.7 +0.4
MDJ ScP ScP 02 00 58.3 -0.4
MDJ PcS PcS 02 01 02.8 -0.4
MDJ S S 02 02 47.7 -3.7
MDJ ScS ScS 02 05 33.0 -0.8
MDJ SS SS 02 06 22.9 -0.9
MDJ pmax pmax
comp=Z,19nm,1.2s
MDJ pmax pmax
comp=Z,140nm,10.6s
MDJ LR LR
comp=N,240nm,19.6s
MDJ LR LR
comp=E,65nm,30.6s
MDJ LR LR
comp=Z,160nm,17.8s
ROTZ Rotzenmuhle 49.68 313 eP P 01 55 46.9 +1.1
comp=Z,5.0nm,0.9s
ARCES ARCESS Array B 49.78 341 P P 01 55 47.3 +1.0
ARCES ARCESS Array B 49.78 341 P P 01 55 47.3 +1.0
comp=Z,47nm,0.7s,baz=128,slow=7.6,SNR=269
ARE0 ARCESS Array S 49.78 341 eP P 01 55 47.0 +0.8
WTTA Wattenberg 49.92 310 ⇑*i*P P 01 55 47.3 -0.6
WTTA pmax pmax
comp=Z,21nm,1.0s
WTTA Wattenberg 49.92 310 ⇑*i*P P 01 55 47.3 -0.6
comp=Z,21nm,1.0s,SNR=6.8
WTTA Wattenberg 49.92 310 ⇑*i*P P 01 55 47.3 -0.6
comp=Z,21nm,1.0s
NEUB Neuenburg 50.08 315 eP P 01 55 49.6 +0.9
comp=Z,17nm,0.9s
MOX Moxa 50.13 315 eP P 01 55 50.3 +1.1
MOX pmax pmax
comp=Z,19nm,0.9s
MOX Moxa 50.13 315 eP P 01 55 50.3 +1.1
comp=Z,19nm,0.9s
KTK1 Kautokeino 50.18 340 eP P 01 55 49.7 +0.4
KTK1 AMB AMB 01 55 50.5
comp=Z,62nm,0.5s
FUR Furstenfeldbru 50.20 311 eP P 01 55 49.8 0.0
FUR pmax pmax
comp=Z,12nm,0.8s
FUR Furstenfeldbru 50.20 311 eP P 01 55 49.8 0.0
comp=Z,12nm,0.8s
MOTA Moosalm 50.28 310 ⇓*i*P P 01 55 49.7 -0.9
MOTA pmax pmax
comp=Z,30nm,1.1s
MOTA Moosalm 50.28 310 ⇓*i*P P 01 55 49.7 -0.9
comp=Z,30nm,1.1s,SNR=9.7
MOTA Moosalm 50.28 310 ⇓*i*P P 01 55 49.7 -0.9
comp=Z,30nm,1.1s
GRF Grafenberg Arr 50.31 313 eP P 01 55 51.9 +1.3
GRF pmax pmax
comp=Z,17nm,0.9s
GRF Grafenberg Arr 50.31 313 eP P 01 55 51.9 +1.3
comp=Z,17nm,0.9s
RETA Reutte 50.52 310 ⇑*i*P P 01 55 51.4 -0.9
comp=Z,8.8nm,0.6s,SNR=6.4
RETA Reutte 50.52 310 ⇑*i*P P 01 55 51.4 -0.9
comp=Z,8.8nm,0.6s
FETA Feichten 50.53 310 ⇑*i*P P 01 55 51.9 -0.6
comp=Z,31nm,1.1s,SNR=22
FETA Feichten 50.53 310 ⇑*i*P P 01 55 51.9 -0.6
comp=Z,31nm,1.1s
VLC Villacollemand 50.79 306 eP P 01 55 54.0 -0.2
comp=Z,41nm,0.9s
OPO Ambohidratompo 50.90 209 P P 01 55 55.0 -0.4
OPO Ambohidratompo 50.90 209 P P 01 55 55.0 -0.4
comp=Z,2.7nm,0.7s,baz=14,slow=8.3,SNR=2.4
CLZ Clausthal 51.01 316 eP P 01 55 56.6 +0.8
CLZ pmax pmax
comp=Z,16nm,0.9s
CLZ Clausthal 51.01 316 eP P 01 55 56.6 +0.8
comp=Z,16nm,0.9s
DAVA Damuels 51.12 310 ⇑*i*P P 01 55 56.3 -0.6
comp=Z,25nm,0.6s,SNR=29
DAVA Damuels 51.12 310 ⇑*i*P P 01 55 56.3 -0.6
comp=Z,25nm,0.6s
UBBA Unterbreizbach 51.16 315 epP pP 01 56 09.4 +0.5
KLR Kul'dur 51.22 47 eP P 01 55 53.8 -3.6
NRDL Niedersach Rie 51.22 317 eP P 01 55 58.3 +1.0
comp=Z,15nm,0.9s
BSEG Bad Segeberg 51.24 319 eP P 01 55 58.5 +1.1
BSEG *e**PP pP 01 56 09.6 +0.1
BSEG pmax pmax
comp=Z,40nm,0.9s
BSEG Bad Segeberg 51.24 319 eP P 01 55 58.5 +1.1
comp=Z,40nm,0.9s
BSEG epP pP 01 56 09.6 +0.1
USRK Ussuriysk Arra 51.40 54 P P 01 55 59.6 +0.9
comp=Z,2.5nm,0.6s,baz=266,slow=5.7,SNR=12
USRK LR LR 02 18 08.4
comp=Z,277nm,21.7s,baz=45,slow=36
TUE Stuetta 51.48 309 eP P 01 55 59.2 -0.4
comp=Z,16nm,0.8s
TUE epP pP 01 56 11.6 -0.1
STU Stuttgart 51.60 312 eP P 01 56 00.0 -0.3
STU *e**PP pP 01 56 12.4 +0.1
STU pmax pmax

comp=Z,9,0nm,0.7s
STU Stuttgart 51.60 312 *e*P P 01 56 00.0 -0.3
comp=Z,9,1nm,0.7s
STU *e*pP **pP** 01 56 12.4 +0.1
JNU Nakatsue 51.71 68 P P 01 56 01.2 -0.2
JNU Nakatsue 51.71 68 P P 01 56 01.2 -0.2
comp=Z,6,1nm,0.7s,baz=292,slow=5.4,SNR=4.6
TRO Tromso 51.82 340↓*i*P P
TRO AMB AMB 01 56 04.0
comp=Z,90nm,1.5s
SPAK Spaichingen-Ko 51.86 311 *e*P P 01 56 02.6 +0.3
PGF Pioggiola 51.87 304↓*i*P P 01 56 01.4 -1.1
comp=Z,30nm,1.0s
PGF Pioggiola 51.87 304↓*i*P P 01 56 01.4 -1.1
PGF pmax pmax
comp=Z,30nm,1.0s
PGF Pioggiola 51.87 304↓*i*P P 01 56 01.4 -1.1
comp=Z,30nm,1.0s
YAK Yakutsk 51.87 31 *e*P P 01 56 01.7 -0.3
YAK *e**PP 01 59 45.3
YAK *e*S **S** 02 03 20.9 -0.5
YAK *e* 02 06 46.1
YAK pmax pmax
comp=Z,37nm,0.8s
YAK MLR MLR
comp=Z,207nm,19.8s
YAK Yakutsk 51.87 31 *e*P P 01 56 02.6 +0.6
comp=Z,64nm,0.6s
TOD Tromm 51.88 313 *e*P P 01 56 03.0 +0.6
TOD Tromm 51.88 313 *e*P P 01 56 03.0 +0.6
NB2 NORSAR Subarra 51.94 328 P P 01 56 01.7 -1.0
baz=106,slow=7.4
NB2 NORSAR Subarra 51.94 328 P P 01 56 01.7 -1.0
comp=Z,46nm,1.1s,baz=106,slow=7.4
NOA NORSAR Array B 51.94 328 P P 01 56 01.9 -0.7
NOA pP **pP** 01 56 13.8 -0.9
NOA NORSAR Array B 51.94 328 P P 01 56 01.9 -0.7
comp=Z,18nm,0.8s,baz=106,slow=7.3,SNR=52
NOA pP **pP** 01 56 13.8 -0.9
comp=Z,12nm,0.7s,baz=106,slow=7.4,SNR=9.7
NOA LR LR 02 21 37.6
comp=Z,520nm,20.3s,baz=100,slow=40
MOR8 Moi Rana 52.00 335 *i* P P 01 56 02.6 -0.4
MOR8 AMB AMB 01 56 03.3
comp=Z,48nm,1.0s
NAO01 NORSAR Array S 52.05 328 *e*P P 01 56 03.0 -0.5
comp=Z,15nm,1.0s
BFO Black Forest 52.17 311 *e*P P 01 56 03.9 -0.6
BFO pmax pmax
comp=Z,5.0nm,0.9s
BFO Black Forest 52.17 311 *e*P P 01 56 03.9 -0.6
comp=Z,5.0nm,0.9s
BFO Black Forest 52.17 311 *e*P P 01 56 03.6 -1.0
comp=Z,8.1nm,1.1s
BFO *e*pP **pP** 01 56 16.1 -0.5
MUD Monsted U'grnd 52.19 322 *i* P P 01 56 05.3 +0.8
MUD *i* 01 56 16.3
MUD pmax pmax
comp=Z,13nm,0.9s
MUD Monsted U'grnd 52.19 322 *i* P P 01 56 05.3 +0.8
comp=Z,13nm,0.9s
MUD *i* 01 56 16.3
STEI Steigen 52.33 337 *e*P P 01 56 05.7 +0.3
STEI *e*pP **pP** 01 56 18.6 +1.2
KTD Kalmit 52.34 313 *e*P P 01 56 06.7 +0.9
KTD Kalmit 52.34 313 *e*P P 01 56 06.7 +0.9
KEST Kesra 52.35 296 *e*P P 01 56 07.1 +0.9
KEST Kesra 52.35 296 P P 01 56 06.5 +0.3
comp=Z,5.9nm,1.1s,baz=28,slow=3.1,SNR=8.2
KEST LR LR 02 18 34.2
comp=Z,74nm,20.8s,baz=269,slow=36
FELD Feldberg im Sc 52.39 311 *e*P P 01 56 06.4 +0.1
FLOS Flostrand 52.46 335 *e*P P 01 56 07.4 +1.0
FLOS AMB AMB 01 56 08.9
comp=Z,163nm,1.4s
FLOS *e*pP **pP** 01 56 20.1 +1.7
NSS Namsos 52.48 332 *e*P P 01 56 05.5 -1.0
LANF Langenberg 52.52 312 *e*P P 01 56 07.6 +0.5
LANF Langenberg 52.52 312 *e*P P 01 56 07.6 +0.5
LANF Langenberg 52.52 312 *e*P P 01 56 07.6 +0.5
STOK Stokkvaagen 52.59 335↓*i*P P 01 56 07.5 +0.2
STOK AMB AMB 01 56 08.4
comp=Z,86nm,1.1s
KONS Konsvik 52.61 335 *e*P P 01 56 05.7 -1.7
KONS AMB AMB 01 56 07.5
comp=Z,114nm,1.3s
KONS *e*pP **pP** 01 56 18.7 -0.8
IBBN Ibbenburen 52.65 317 *e*P P 01 56 08.9 +0.9
comp=Z,24nm,0.9s
HLG Helgoland 52.69 319 *e*pP pP 01 56 20.1 -0.2
ABH Alteburg 52.70 313 *e*P P 01 56 09.7 +1.2
BBS Basel-Blauen 52.73 310 *e*P P 01 56 07.1 -1.6
BBS Basel-Blauen 52.73 310 *e*P P 01 56 07.1 -1.6
SAOF Saorge 52.83 306 *e*P P 01 56 08.5 -1.0
SAOF Saorge 52.83 306 *e*P P 01 56 08.5 -1.0
SAOF Saorge 52.83 306 *e*P P 01 56 08.5 -1.0
CDF Champ du Feu 52.87 312 *e*P P 01 56 09.1 -0.7
comp=Z,17nm,0.7s
CDF Champ du Feu 52.87 312 *e*P P 01 56 09.1 -0.7
CDF pmax pmax
comp=Z,17nm,0.7s
CDF Champ du Feu 52.87 312 *e*P P 01 56 09.1 -0.7
comp=Z,17nm,0.7s
BUG Bochum--Univer 52.91 315 *e*P P 01 56 10.6 +0.7
comp=Z,17nm,1.0s
SBF Sospel 52.93 306↓*i*P P 01 56 09.6 -0.7
comp=Z,88nm,0.8s
SBF *e*pP **pP** 01 56 22.4 0.0
SBF Sospel 52.93 306↓*i*P P 01 56 09.6 -0.7
SBF *e**PP **pP** 01 56 22.4 0.0
SBF pmax pmax
comp=Z,88nm,0.8s
SBF Sospel 52.93 306↓*i*P P 01 56 09.6 -0.7
comp=Z,88nm,0.8s
SBF *e*pP **pP** 01 56 22.4 0.0
ECH Echery 52.95 311 *e*P P 01 56 09.8 -0.5
ECH *e**PP **pP** 01 56 23.1 +0.7
ECH pmax pmax
comp=Z,14nm,1.0s
ECH Echery 52.95 311 *e*P P 01 56 09.8 -0.5
comp=Z,14nm,1.0s
ECH *e*pP **pP** 01 56 23.1 +0.7
ECH Echery 52.95 311 *e*P P 01 56 09.5 -0.8
MOF Molkenrain 52.97 311 *e*P P 01 56 09.5 -1.1
MOF Molkenrain 52.97 311 *e*P P 01 56 09.5 -1.1
MOF Molkenrain 52.97 311 *e*P P 01 56 09.5 -1.1
REVF Revere 52.98 306 *e*P P 01 56 09.0 -1.7
REVF Revere 52.98 306 *e*P P 01 56 09.0 -1.7
REVF Revere 52.98 306 *e*P P 01 56 09.0 -1.7
RUP Ruppelstein 53.01 313 *e*P P 01 56 11.5 +0.7
RUP Ruppelstein 53.01 313 *e*P P 01 56 11.5 +0.7
TOUF Mont Tournerai 53.05 306 *e*P P 01 56 11.6 +0.2
TOUF Mont Tournerai 53.05 306 *e*P P 01 56 11.6 +0.2
TOUF Mont Tournerai 53.05 306 *e*P P 01 56 11.6 +0.2
HINF Hinteralfeld 53.16 311 *e*P P 01 56 11.3 -0.6
comp=Z,17nm,0.6s
HINF *e*pP **pP** 01 56 24.1 +0.1
HINF Hinteralfeld 53.16 311 *e*P P 01 56 11.3 -0.6
HINF *e**PP **pP** 01 56 24.1 +0.1
HINF pmax pmax
comp=Z,17nm,0.6s
HINF Hinteralfeld 53.16 311 *e*P P 01 56 11.3 -0.6
comp=Z,17nm,0.6s
HINF *e*pP **pP** 01 56 24.1 +0.1
LOMF Lomont 53.19 310 *e*P P 01 56 12.3 +0.1
LOMF Lomont 53.19 310 *e*P P 01 56 12.3 +0.1
LOMF Lomont 53.19 310 *e*P P 01 56 12.3 +0.1
LPG La Plagne 53.32 308↓*i*P P 01 56 12.8 -0.6
comp=Z,60nm,0.8s
LPG *e*pP **pP** 01 56 25.6 +0.1
LPG La Plagne 53.32 308↓*i*P P 01 56 12.8 -0.6
LPG *e**PP **pP** 01 56 25.6 +0.1
LPG pmax pmax
comp=Z,60nm,0.8s
LPG La Plagne 53.32 308↓*i*P P 01 56 12.8 -0.6
comp=Z,60nm,0.8s
LPG *e*pP **pP** 01 56 25.6 +0.1
OG01 Vacheresse 53.33 309 *e*P P 01 56 13.2 0.0
OG01 Vacheresse 53.33 309 *e*P P 01 56 13.2 0.0
LPL La Plagne 53.33 308↓*i*P P 01 56 12.9 -0.5
comp=Z,66nm,0.8s
LPL La Plagne 53.33 308↓*i*P P 01 56 12.9 -0.5
LPL pmax pmax
comp=Z,66nm,0.8s
LPL La Plagne 53.33 308↓*i*P P 01 56 12.9 -0.5
comp=Z,66nm,0.8s
MBDF Montbardon 53.35 307↓*i*P P 01 56 12.4 -1.1
comp=Z,46nm,0.8s
MBDF Montbardon 53.35 307↓*i*P P 01 56 12.4 -1.1
MBDF pmax pmax
comp=Z,46nm,0.8s
MBDF Montbardon 53.35 307↓*i*P P 01 56 12.4 -1.1
comp=Z,46nm,0.8s
BNI Bardonecchia 53.39 307 *e*P P 01 56 13.1 -0.7
BNI *e**PP **pP** 01 56 25.5 -0.4
BNI pmax pmax
comp=Z,33nm,0.8s
BNI Bardonecchia 53.39 307 *e*P P 01 56 13.1 -0.7
comp=Z,32nm,0.8s
BNI *e*pP **pP** 01 56 25.5 -0.4
HAU Haudompre 53.50 311 *e*P P 01 56 13.9 -0.5
comp=Z,25nm,0.8s
HAU *e*pP **pP** 01 56 26.9 +0.4
HAU *e*R
comp=Z,150nm,19.3s
HAU Haudompre 53.50 311 *e*P P 01 56 13.9 -0.5
HAU *e**PP **pP** 01 56 26.9 +0.4
HAU pmax pmax
comp=Z,25nm,0.8s
HAU Haudompre 53.50 311 *e*P P 01 56 13.9 -0.5
comp=Z,25nm,0.8s
HAU *e*pP **pP** 01 56 26.9 +0.4
FRF La Foret Royal 53.52 306↓*i*P P 01 56 13.4 -1.2
comp=Z,18nm,0.8s
FRF La Foret Royal 53.52 306↓*i*P P 01 56 13.4 -1.2
FRF pmax pmax
comp=Z,18nm,0.8s
FRF La Foret Royal 53.52 306↓*i*P P 01 56 13.4 -1.2
comp=Z,18nm,0.8s
WLF Walferdange 53.60 313 P P 01 56 16.1 +1.0
WLF AP **pP** 01 56 28.1 +1.0
comp=Z,19nm,1.5s
WLF Walferdange 53.60 313 *e*P P 01 56 16.2 +1.2
WLF pmax pmax
comp=Z,26nm,1.4s
WLF Walferdange 53.60 313 *e*P P 01 56 16.3 +1.2
comp=Z,17nm,1.1s
WLF Walferdange 53.60 313 *e*P P 01 56 16.2 +1.2
comp=Z,26nm,1.4s
LMR La Mourre 53.64 305↓*i*P P 01 56 14.3 -1.1
comp=Z,18nm,0.9s
LMR La Mourre 53.64 305↓*i*P P 01 56 14.3 -1.1
LMR pmax pmax
comp=Z,18nm,0.9s
LMR La Mourre 53.64 305↓*i*P P 01 56 14.3 -1.1
comp=Z,18nm,0.9s
MEM Membach 53.70 314 P P 01 56 16.6 +0.9
MEM AP **pP** 01 56 28.8 +1.0
comp=Z,6.8nm,1.0s
CABF La Chapelle 53.73 309↓*i*P P 01 56 16.2 +0.1
comp=Z,86nm,0.8s
CABF *e*pP **pP** 01 56 29.1 +0.9
CABF La Chapelle 53.73 309↓*i*P P 01 56 16.2 +0.1
CABF *e**PP **pP** 01 56 29.1 +0.9
CABF pmax pmax
comp=Z,86nm,0.8s
CABF La Chapelle 53.73 309↓*i*P P 01 56 16.2 +0.1
comp=Z,86nm,0.8s
CABF *e*pP **pP** 01 56 29.1 +0.9
THEF They Montfort 53.73 311 *e*P P 01 56 16.1 0.0
THEF They Montfort 53.73 311 *e*P P 01 56 16.1 0.0
THEF They Montfort 53.73 311 *e*P P 01 56 16.1 0.0
PAGF Fort de Pagny 53.90 312↓*i*P P 01 56 17.5 +0.2
comp=Z,16nm,1.0s
PAGF *e*pP **pP** 01 56 30.4 +1.0
PAGF Fort de Pagny 53.90 312↓*i*P P 01 56 17.5 +0.2
comp=Z,16nm,1.0s
PAGF *e*pP **pP** 01 56 30.4 +1.0
ORIF Oris-en-Rattie 53.97 307 *e*P P 01 56 16.8 -1.1
comp=Z,38nm,1.0s
ORIF *e*R
comp=Z,257nm,21.5s
ORIF Oris-en-Rattie 53.97 307 *e*P P 01 56 16.8 -1.1
ORIF pmax pmax
comp=Z,38nm,1.0s
ORIF Oris-en-Rattie 53.97 307 *e*P P 01 56 16.8 -1.1
comp=Z,38nm,1.0s
BJO Bjornoya 54.11 345 *e*P P 01 56 19.7 +1.4
OG35 Corcelles 54.11 309 *e*P P 01 56 18.5 -0.4
BCLA Clavier 54.14 314 P P 01 56 19.7 +0.7
comp=Z,7.4nm,1.2s
BCLA AP **pP** 01 56 31.4 +0.2
SMRF Simiane la Rot 54.26 306 *e*P P 01 56 19.5 -0.5
comp=Z,70nm,1.4s
SMRF Simiane la Rot 54.26 306 *e*P P 01 56 19.5 -0.5
comp=Z,70nm,1.4s
MEZF Maizieres J'vi 54.35 312 *e*P P 01 56 20.6 +0.1
comp=Z,59nm,0.9s
MEZF *e*pP **pP** 01 56 33.6 +1.0
MEZF Maizieres J'vi 54.35 312 *e*P P 01 56 20.6 +0.1
comp=Z,59nm,0.9s
MEZF *e*pP **pP** 01 56 33.6 +1.0
SFTF Sexfontaines 54.37 311↓*i*P P 01 56 20.6 -0.1
comp=Z,67nm,0.8s
SFTF *e*pP **pP** 01 56 33.5 +0.7
SFTF Sexfontaines 54.37 311↓*i*P P 01 56 20.6 -0.1
comp=Z,67nm,0.8s
SFTF *e*pP **pP** 01 56 33.5 +0.7
GIVF Givet 54.46 314 *e*P P 01 56 22.0 +0.7
comp=Z,57nm,0.9s
GIVF *e*pP **pP** 01 56 34.9 +1.5
GIVF Givet 54.46 314 *e*P P 01 56 22.0 +0.7
GIVF *e**PP **pP** 01 56 34.9 +1.5
GIVF pmax pmax
comp=Z,57nm,0.9s
GIVF Givet 54.46 314 *e*P P 01 56 22.0 +0.7
comp=Z,57nm,0.9s
GIVF *e*pP **pP** 01 56 34.9 +1.5
TIXI Tiksi 54.55 19*d*i*P P 01 56 21.3 -0.3
TIXI pmax pmax
comp=Z,44nm,1.7s
TIXI MLR MLR
comp=Z,627nm,18.0s
TIXI Tiksi 54.55 19 *e*P P 01 56 21.0 -0.6
comp=Z,14nm,0.8s
DOU Dourbes 54.60 314 P P 01 56 23.5 +1.1
DOU AP **pP** 01 56 35.9 +1.5
comp=Z,11nm,1.1s
SNF Seneffe 54.80 314 P P 01 56 24.1 +0.4
SNF AP **pP** 01 56 37.0 +1.2
comp=Z,17nm,1.5s
VIVF Saint-Julien-l 54.83 307↓*i*P P 01 56 23.5 -0.6
comp=Z,79nm,0.9s
VIVF *e*pP **pP** 01 56 36.4 +0.1
VIVF Saint-Julien-l 54.83 307↓*i*P P 01 56 23.5 -0.6
VIVF *e**PP **pP** 01 56 36.4 +0.1
VIVF pmax pmax
comp=Z,79nm,0.9s
VIVF Saint-Julien-l 54.83 307↓*i*P P 01 56 23.5 -0.6
comp=Z,79nm,0.9s
VIVF *e*pP **pP** 01 56 36.4 +0.1
BAIF Baives 54.85 314↓*i*P P 01 56 24.7 +0.6
comp=Z,32nm,0.8s
BAIF Baives 54.85 314↓*i*P P 01 56 24.7 +0.6
BAIF pmax pmax
comp=Z,32nm,0.8s
BAIF Baives 54.85 314↓*i*P P 01 56 24.7 +0.6
comp=Z,32nm,0.8s
SSB Saint Sauveur 54.89 308 *e*P P 01 56 23.9 -0.6
SSB *e**PP **pP** 01 56 36.2 -0.5
SSB pmax pmax
comp=Z,23nm,0.7s
SSB Saint Sauveur 54.89 308 *e*P P 01 56 23.9 -0.6
comp=Z,22nm,0.7s
SSB *e*pP **pP** 01 56 36.2 -0.5
SSB Saint Sauveur 54.89 308 *e*P P 01 56 23.6 -0.9
LOR Lormes 55.21 310 *e*P P 01 56 26.1 -0.7
comp=Z,27nm,1.0s
LOR *e*R
comp=Z,139nm,17.7s
LOR Lormes 55.21 310 *e*P P 01 56 26.1 -0.7
comp=Z,27nm,1.0s
SMF Signal de Mont 55.27 310↓*i*P P 01 56 26.7 -0.5
comp=Z,73nm,1.1s
SMF *e*pP **pP** 01 56 39.7 +0.3
SMF Signal de Mont 55.27 310↓*i*P P 01 56 26.7 -0.5
SMF *e**PP **pP** 01 56 39.7 +0.3
SMF pmax pmax
comp=Z,73nm,1.1s
SMF Signal de Mont 55.27 310↓*i*P P 01 56 26.7 -0.5
comp=Z,73nm,1.1s
SMF *e*pP **pP** 01 56 39.7 +0.3
SSF Saint Saulge 55.47 310 *e*P P 01 56 28.2 -0.4
comp=Z,51nm,1.1s
SSF *e*pP **pP** 01 56 41.2 +0.4
SSF Saint Saulge 55.47 310 *e*P P 01 56 28.2 -0.4
SSF *e**PP **pP** 01 56 41.2 +0.4
SSF pmax pmax
comp=Z,51nm,1.1s
SSF Saint Saulge 55.47 310 *e*P P 01 56 28.2 -0.4
comp=Z,51nm,1.1s
SSF *e*pP **pP** 01 56 41.2 +0.4
LASF Ste Croix 55.48 306↓*i*P P 01 56 28.5 -0.3
comp=Z,68nm,0.9s
LASF Ste Croix 55.48 306↓*i*P P 01 56 28.5 -0.3
comp=Z,68nm,0.9s
AVF Avril sur Loir 55.59 310↓*i*P P 01 56 28.8 -0.7
comp=Z,22nm,0.9s
AVF Avril sur Loir 55.59 310↓*i*P P 01 56 28.8 -0.7
AVF pmax pmax
comp=Z,22nm,0.9s
AVF Avril sur Loir 55.59 310↓*i*P P 01 56 28.8 -0.7
comp=Z,22nm,0.9s
LBL Lubilhac 55.80 308 *e*P P 01 56 31.1 -0.1
LBL Lubilhac 55.80 308 *e*P P 01 56 31.1 -0.1
LBL Lubilhac 55.80 308 *e*P P 01 56 31.1 -0.1
AGO Saint Agoulin 55.81 309 *e*P P 01 56 30.9 -0.2
AGO Saint Agoulin 55.81 309 *e*P P 01 56 30.9 -0.2
PYM Petit Puy Mans 55.92 309 *e*P P 01 56 31.3 -0.7
PYM Petit Puy Mans 55.92 309 *e*P P 01 56 31.3 -0.7
PYM Petit Puy Mans 55.92 309 *e*P P 01 56 31.3 -0.7
BGF Bois d'Agland 55.96 309 *e*P P 01 56 31.5 -0.7
comp=Z,25nm,0.9s
BGF *e*pP **pP** 01 56 44.6 +0.2
BGF Bois d'Agland 55.96 309 *e*P P 01 56 31.5 -0.7
BGF *e**PP **pP** 01 56 44.6 +0.2
BGF pmax pmax
comp=Z,25nm,0.9s
BGF Bois d'Agland 55.96 309 *e*P P 01 56 31.5 -0.7
comp=Z,25nm,0.9s
BGF *e*pP **pP** 01 56 44.6 +0.2
HYF Humbligny 56.04 310 *e*P P 01 56 32.9 +0.1
HYF Humbligny 56.04 310 *e*P P 01 56 32.9 +0.1
TCF Toulx Ste Croi 56.42 309↓*i*P P 01 56 35.2 -0.3
comp=Z,16nm,0.7s
TCF *e*pP **pP** 01 56 48.1 +0.4
TCF Toulx Ste Croi 56.42 309↓*i*P P 01 56 35.2 -0.3
TCF *e**PP **pP** 01 56 48.1 +0.4
TCF pmax pmax
comp=Z,16nm,0.7s
TCF Toulx Ste Croi 56.42 309↓*i*P P 01 56 35.2 -0.3
comp=Z,16nm,0.7s
TCF *e*pP **pP** 01 56 48.1 +0.4
CAF Calviac 56.67 308↓*i*P P 01 56 37.0 -0.3
comp=Z,64nm,1.1s
CAF *e*pP **pP** 01 56 50.0 +0.5
CAF Calviac 56.67 308↓*i*P P 01 56 37.0 -0.3
CAF *e**PP **pP** 01 56 50.0 +0.5
CAF pmax pmax
comp=Z,65nm,1.1s
CAF Calviac 56.67 308↓*i*P P 01 56 37.0 -0.3
comp=Z,64nm,1.1s
CAF *e*pP **pP** 01 56 50.0 +0.5
MTLF Montolieu 56.75 306↓*i*P P 01 56 37.2 -0.7
comp=Z,46nm,0.9s
MTLF *e*pP **pP** 01 56 50.2 +0.1
MTLF Montolieu 56.75 306↓*i*P P 01 56 37.2 -0.7
MTLF *e**PP **pP** 01 56 50.2 +0.1
MTLF pmax pmax
comp=Z,46nm,0.9s
MTLF Montolieu 56.75 306↓*i*P P 01 56 37.2 -0.7
comp=Z,46nm,0.9s
MTLF *e*pP **pP** 01 56 50.2 +0.1
MJAR Matsushiro Arr 57.01 62 P P 01 56 40.2 +0.3
MJAR Matsushiro Arr 57.01 62 P P 01 56 40.2 +0.3
comp=Z,2.1nm,0.7s,baz=285,slow=11,SNR=6.2
RJF Les Rejaudoux 57.01 308↓*i*P P 01 56 39.5 -0.2
comp=Z,58nm,1.2s
RJF *e*R
comp=Z,141nm,20.8s
RJF Les Rejaudoux 57.01 308↓*i*P P 01 56 39.5 -0.2
RJF pmax pmax
comp=Z,58nm,1.2s
RJF Les Rejaudoux 57.01 308↓*i*P P 01 56 39.5 -0.2
comp=Z,58nm,1.2s
LFF La Frestale 57.60 308 *e*P P 01 56 43.6 -0.2
comp=Z,50nm,0.8s
LFF La Frestale 57.60 308 *e*P P 01 56 43.6 -0.2
LFF pmax pmax
comp=Z,50nm,0.8s
LFF La Frestale 57.60 308 *e*P P 01 56 43.6 -0.2
comp=Z,50nm,0.8s
KBS Kingsbay 57.67 349↓*i*P P 01 56 45.0 +1.1
KBS AMB AMB 01 56 45.6
comp=Z,51nm,0.6s
KBS Kingsbay 57.67 349*d*i*P P 01 56 44.9 +1.1
KBS pmax pmax
comp=Z,65nm,2.5s
KBS Kingsbay 57.67 349 *e*P P 01 56 45.0 +1.1
comp=Z,13nm,0.4s
LDF La Druitiere 57.77 312↓*i*P P 01 56 44.4 -0.6
comp=Z,27nm,0.7s
LDF *e*pP **pP** 01 56 57.3 +0.1
LDF La Druitiere 57.77 312↓*i*P P 01 56 44.4 -0.6
LDF *e**PP **pP** 01 56 57.3 +0.1
LDF pmax pmax
comp=Z,27nm,0.7s
LDF La Druitiere 57.77 312↓*i*P P 01 56 44.4 -0.6
comp=Z,27nm,0.7s
LDF *e*pP **pP** 01 56 57.3 +0.1
FLN La Foliniere 57.99 312 *e*P P 01 56 46.0 -0.5
comp=Z,27nm,0.8s
FLN *e*R
comp=Z,198nm,20.0s
FLN La Foliniere 57.99 312 *e*P P 01 56 46.0 -0.5
FLN pmax pmax
comp=Z,27nm,0.8s
FLN La Foliniere 57.99 312 *e*P P 01 56 46.0 -0.5
comp=Z,27nm,0.8s
MFF Saint Martin d 58.01 310↓*i*P P 01 56 46.0 -0.7
comp=Z,28nm,0.9s
MFF *e*pP **pP** 01 56 59.0 +0.1
MFF Saint Martin d 58.01 310↓*i*P P 01 56 46.0 -0.7
MFF *e**PP **pP** 01 56 59.0 +0.1
MFF pmax pmax
comp=Z,29nm,0.9s
MFF Saint Martin d 58.01 310↓*i*P P 01 56 46.0 -0.7
comp=Z,28nm,0.9s
MFF *e*pP **pP** 01 56 59.0 +0.1
EPF Esparros 58.15 306 *e*P P 01 56 46.0 -1.8
comp=Z,20nm,1.1s
EPF Esparros 58.15 306 *e*P P 01 56 46.0 -1.8
EPF pmax pmax
comp=Z,20nm,1.1s
EPF Esparros 58.15 306 *e*P P 01 56 46.0 -1.8
comp=Z,20nm,1.1s
GRR Gorron 58.28 312↓*i*P P 01 56 47.7 -0.8
comp=Z,15nm,0.6s
GRR Gorron 58.28 312↓*i*P P 01 56 47.7 -0.8
GRR pmax pmax
comp=Z,15nm,0.6s
GRR Gorron 58.28 312↓*i*P P 01 56 47.7 -0.8
comp=Z,15nm,0.6s
TAM Tamanrasset 58.72 281 *e*P P 01 56 51.6 -0.6
TAM pmax pmax
comp=Z,7.0nm,1.0s
TAM Tamanrasset 58.72 281 *e*P P 01 56 51.6 -0.6
comp=Z,7.4nm,1.0s
ETSF Etsaut 58.83 306↓*i*P P 01 56 52.0 -0.5
comp=Z,65nm,1.1s
ETSF *e*pP **pP** 01 57 04.9 +0.1
ETSF Etsaut 58.83 306↓*i*P P 01 56 52.0 -0.5
ETSF *e**PP **pP** 01 57 04.9 +0.1
ETSF pmax pmax
comp=Z,65nm,1.1s
ETSF Etsaut 58.83 306↓*i*P P 01 56 52.0 -0.5
comp=Z,65nm,1.1s
ETSF *e*pP **pP** 01 57 04.9 +0.1
LSZ Lusaka 59.06 230 *e*P P 01 56 54.2 -0.2
comp=Z,5.1nm,1.1s
LSZ Lusaka 59.06 230 P P 01 56 53.7 -0.7
comp=Z,0.7nm,0.4s,baz=63,slow=6.8,SNR=2.6
ESK Eskdalemuir 59.12 320 *e*P P 01 56 53.8 -0.4
ESK pmax pmax
comp=Z,17nm,0.7s

ESK Eskdalemuir 59.12 320 eP P 01 56 53.8 -0.4
comp=Z,17nm,0.7s
SJPF Ste Jean 59.27 306 eP P 01 56 55.0 -0.6
comp=Z,44nm,0.9s
SJPF epP pP 01 57 08.1 +0.3
SJPF Ste Jean 59.27 306 eP P 01 56 55.0 -0.6
SJPF e*PP pP 01 57 08.1 +0.3
SJPF pmax pmax
comp=Z,44nm,0.9s
SJPF Ste Jean 59.27 306 eP P 01 56 55.0 -0.6
comp=Z,44nm,0.9s
SJPF epP pP 01 57 08.1 +0.3
SGMF Saint Gilles 59.42 312 eP P 01 56 56.3 -0.2
comp=Z,134nm,1.2s
SGMF epP pP 01 57 09.3 +0.6
SGMF Saint Gilles 59.42 312 eP P 01 56 56.3 -0.2
SGMF e*PP pP 01 57 09.3 +0.6
SGMF pmax pmax
comp=Z,134nm,1.2s
SGMF Saint Gilles 59.42 312 eP P 01 56 56.3 -0.2
comp=Z,134nm,1.2s
SGMF epP pP 01 57 09.3 +0.6
ERM Erimo 59.75 55 i P P 01 57 01.2 +2.4
QUIF Quistinic 59.87 312 eP P 01 56 58.7 -0.9
comp=Z,42nm,0.8s
QUIF Quistinic 59.87 312 eP P 01 56 58.7 -0.9
QUIF pmax pmax
comp=Z,42nm,0.8s
QUIF Quistinic 59.87 312 eP P 01 56 58.7 -0.9
comp=Z,42nm,0.8s
ROSF Rostrenen 59.89 312⇓iP P 01 56 59.2 -0.5
comp=Z,76nm,1.2s
ROSF Rostrenen 59.89 312⇓iP P 01 56 59.2 -0.5
ROSF pmax pmax
comp=Z,76nm,1.2s
ROSF Rostrenen 59.89 312⇓iP P 01 56 59.2 -0.5
comp=Z,76nm,1.2s
ESDC Sonseca Array 61.97 302 P P 01 57 13.4 -0.7
ESDC pP pP 01 57 25.3 -1.1
ESDC Sonseca Array 61.97 302 P P 01 57 13.4 -0.7
comp=Z,6.0nm,0.9s,baz=64,slow=7.3,SNR=26
ESDC pP pP 01 57 25.3 -1.1
comp=Z,8.3nm,0.8s,baz=64,slow=7.0,SNR=21
ESDC LR LR 02 24 04.1
comp=Z,79nm,20.1s,baz=295,slow=36
ESLA Sonseca Array 61.97 302 eP P 01 57 13.1 -1.0
comp=Z,5.8nm,1.3s
ESLA epP pP 01 57 26.1 -0.3
PAB San Pablo 62.29 302 eP P 01 57 15.1 -1.1
PAB e*PP pP 01 57 28.1 -0.5
PAB pmax pmax
comp=Z,36nm,1.3s
PAB San Pablo 62.29 302 eP P 01 57 15.1 -1.1
comp=Z,36nm,1.3s
PAB epP pP 01 57 28.1 -0.5
SEY Seymchan 62.40 31⇓eP P 01 57 16.3 -0.1
CBIJ Chichi jima 62.68 72 P P 01 57 21.7 +2.8
CBIJ Chichi jima 62.68 72 P P 01 57 21.7 +2.8
comp=Z,109nm,0.8s,baz=274,slow=13,SNR=3.8
PBRG Braganca 63.53 305 eP P 01 57 24.0 -0.4
PBRG epP pP 01 57 36.7 -0.1
DAG Danmarks Havn 63.64 345⇓iP P 01 57 25.0 +0.6
DAG pmax pmax
comp=Z,24nm,0.8s
DAG Danmarks Havn 63.64 345⇓iP P 01 57 25.0 +0.6
comp=Z,33nm,0.8s
MVO Moncorvo 63.90 305 eP P 01 57 30.6 +3.8
comp=Z,33nm,2.0s
MVO epP pP 01 57 39.6 +0.4
POLO Lamas de Olo 64.40 305 epP pP 01 57 43.0 +0.4
MTE Manteigas 64.47 304 eP P 01 57 30.7 +0.1
comp=Z,31nm,1.1s
MTE epP pP 01 57 43.0 0.0
PCAB Cabril 64.49 306 epP pP 01 57 43.5 +0.4
PCBR Castelo Branco 64.56 303 eP P 01 57 30.9 -0.2
comp=Z,36nm,1.1s
PCBR epP pP 01 57 44.1 +0.6
PGAV Gavieira, Arco 64.60 306 eP P 01 57 31.2 -0.3
comp=Z,39nm,1.5s
PGAV epP pP 01 57 42.1 -1.8
PMRV Marv??o 64.60 303 eP P 01 57 31.0 -0.4
comp=Z,30nm,1.2s
PMRV epP pP 01 57 43.1 -0.7
PVIS Viseu 64.64 304 eP P 01 57 32.0 +0.3
comp=Z,23nm,1.8s
PVIS epP pP 01 57 44.8 +0.7
PBAR Barrancos 64.67 302 eP P 01 57 31.4 -0.5
comp=Z,49nm,1.2s
PBAR epP pP 01 57 44.4 +0.2
PESTR Estremoz 64.90 302 eP P 01 57 32.8 -0.6
comp=Z,16nm,1.7s
PESTR epP pP 01 57 45.4 -0.4
EVO Evora 65.31 302⇓iP P 01 57 35.5 -0.5
comp=Z,58nm,1.1s
EVO epP pP 01 57 49.0 +0.6
EVO eR
comp=Z,151nm,22.9s
EVO Evora 65.31 302 eP P 01 57 35.5 -0.5
comp=Z,24nm,1.2s
EVO epP pP 01 57 47.1 -1.3
PTOM Tomar 65.31 303 eP P 01 57 36.0 0.0
comp=Z,36nm,1.3s
PTOM epP pP 01 57 49.4 +1.0
PMTG Montargil 65.32 303 eP P 01 57 35.5 -0.6
comp=Z,19nm,1.9s
PMTG epP pP 01 57 47.8 -0.7
PBEJ Beja 65.34 302 epP pP 01 57 48.7 +0.1
EVOP Sao Brissos 65.39 302⇓iP P 01 57 35.5 -1.0
EVOP e*PP pP 01 57 49.0 +0.1
EVOP pmax pmax
comp=Z,59nm,1.1s
EVOP Sao Brissos 65.39 302⇓iP P 01 57 35.5 -1.0
comp=Z,58nm,1.1s
EVOP epP pP 01 57 49.0 +0.1
PVAQ Vaqueiros 65.40 301 eP P 01 57 35.6 -1.0
comp=Z,32nm,1.4s
PCVE Castro Verde 65.58 301 eP P 01 57 37.1 -0.7
comp=Z,20nm,1.2s
PCVE epP pP 01 57 50.1 -0.1
TOA0 Torodi Ar. Sit 65.63 273 eP P 01 57 37.5 -0.9
TORD Torodi Ar. Bea 65.63 273 P P 01 57 37.2 -1.2
TORD Torodi Ar. Bea 65.63 273 P P 01 57 37.2 -1.2
comp=Z,3.7nm,0.8s,baz=70,slow=4.8,SNR=24
TORD LR LR 02 28 50.1
comp=Z,207nm,20.6s,baz=95,slow=38
PNCL Nicolau / Gran 65.82 302 eP P 01 57 38.4 -0.9
comp=Z,24nm,1.5s
PNCL epP pP 01 57 52.2 +0.5
PFVI Vila Bisbo 66.32 301 epP pP 01 57 55.5 +0.5
PETK Petropavlovsk- 66.97 41 P P 01 57 45.6 -0.9
PETK pmax pmax
comp=Z,5.0nm,0.7s
PETK MLR MLR
comp=Z,128nm,21.5s
PETK Petropavlovsk- 66.97 41 P P 01 57 45.5 -0.9
PETK Petropavlovsk- 66.97 41 P P 01 57 45.5 -0.9
comp=Z,4.6nm,0.7s,baz=255,slow=2.9,SNR=7.9
PETK LR LR 02 27 55.7
comp=Z,128nm,21.5s,baz=101,slow=37
BILL Bilibino 67.13 24⇑eP P 01 57 48.2 +1.1
BILL e*PP PP 02 00 14.1 -0.9
BILL eS S 02 06 41.9 +3.9
BILL pmax pmax
comp=Z,33nm,1.0s
BILL MLR MLR
comp=Z,300nm,20.0s
BILL Bilibino 67.13 24 eP P 01 57 48.2 +1.1
comp=Z,7.8nm,0.6s
MBWA Marble Bar 67.48 130 eP P 01 57 48.8 -1.2
comp=Z,17nm,1.0s
MBWA epP pP 01 58 01.6 -0.9
LBTB Lobatse 67.74 224 eP P 01 57 50.8 -0.9
comp=Z,5.3nm,0.6s
LBTB Lobatse 67.74 224 P P 01 57 50.5 -1.2
comp=Z,1.5nm,0.6s,baz=44,slow=7.0,SNR=5.4
ALE Alert 68.27 354 P P 01 57 55.0 +0.9
comp=Z,131nm,0.7s,SNR=8.1
TSUM Tsumeb 69.14 234 eP P 01 58 00.3 -0.3
comp=Z,5.2nm,0.9s
TSUM Tsumeb 69.14 234 P P 01 57 59.9 -0.8
comp=Z,2.5nm,0.7s,baz=1.0,slow=6.7,SNR=4.8
FITZ Fitzroy Crossi 69.68 124 eP P 01 58 03.1 -0.6
comp=Z,21nm,1.1s
FITZ epP pP 01 58 16.5 +0.2
SUMG Summit 69.84 342 i P P 01 58 05.7 +1.2
SUMG pmax pmax
comp=Z,20nm,0.9s
SUMG Summit 69.84 342 eP P 01 58 05.3 +0.8
comp=Z,31nm,1.0s
SUMG Summit 69.84 342 i P P 01 58 05.7 +1.2
comp=Z,20nm,0.9s
BOSA Boshof 70.58 222 eP P 01 58 08.3 -1.0
comp=Z,4.4nm,0.7s
BOSA Boshof 70.58 222 P P 01 58 07.8 -1.5
comp=Z,3.4nm,0.9s,baz=31,slow=6.0,SNR=4.2
BOSA LR LR 02 24 30.9
comp=Z,240nm,20.9s,baz=51,slow=32
DBIC Dimbokro 74.21 269 eP P 01 58 30.7 -0.4
comp=Z,13nm,1.1s
DBIC Dimbokro 74.21 269 P P 01 58 30.9 -0.2
comp=Z,2.3nm,0.9s,baz=22,slow=7.1,SNR=3.7
DBIC LR LR 02 35 14.7
comp=Z,160nm,18.1s,baz=50,slow=39
TNA Tin City 77.27 21 eP P 01 58 49.4 +1.7
comp=Z,24nm,1.2s
WRA Warramunga Arr 77.35 120 P P 01 58 48.4 -0.5
WRA pP pP 01 59 00.7 -0.9
WRA Warramunga Arr 77.35 120 P P 01 58 48.4 -0.5
comp=Z,19nm,0.9s,baz=316,slow=5.4,SNR=81
WRA pP pP 01 59 00.7 -0.9
comp=Z,23nm,1.0s,baz=316,slow=5.5,SNR=15
WRA LR LR 02 33 20.9
comp=Z,142nm,21.9s,baz=230,slow=36
WRAB Tennant Creek 77.35 120 eP P 01 58 48.1 -0.8
WRAB e*PP pP 01 59 01.6 +0.1
WRAB pmax pmax
comp=Z,29nm,0.9s
WRAB Tennant Creek 77.35 120 eP P 01 58 48.1 -0.8
comp=Z,29nm,0.9s
WRAB epP pP 01 59 01.6 +0.1
WRAB Tennant Creek 77.35 120 P P 01 58 48.0 -0.8
comp=Z,164nm,0.6s,SNR=8.6
ASAR Alice Springs 79.17 124 P P 01 58 58.5 -0.5
ASAR Alice Springs 79.17 124 P P 01 58 58.5 -0.5
comp=Z,8.4nm,0.4s,baz=305,slow=5.3,SNR=79
ASAR LR LR 02 36 37.2
comp=Z,123nm,19.7s,baz=312,slow=38
AS31 Alice Springs 79.17 124 eP P 01 58 58.4 -0.6
AS31 epP pP 01 59 11.9 +0.2
FORT Forrest 79.45 133 eP P 01 58 59.2 -1.1
comp=Z,24nm,0.6s
FORT epP pP 01 59 11.8 -1.1
COLD Coldfoot 81.00 15 eP P 01 59 08.5 +0.4
comp=Z,33nm,1.0s
COLA College 83.48 16 eP P 01 59 21.1 0.0
COLA pmax pmax
comp=Z,33nm,1.1s
COLA College 83.48 16 eP P 01 59 21.1 0.0
comp=Z,33nm,1.1s
ILAR Eielson Array 83.80 15 P P 01 59 21.9 -0.9
ILAR PP PP 02 02 34.9 -0.6
ILAR Eielson Array 83.80 15 P P 01 59 21.9 -0.9
comp=Z,12nm,1.1s,baz=319,slow=3.5,SNR=38
ILAR PP PP 02 02 34.9 -0.6
comp=Z,4.1nm,1.0s,baz=316,slow=7.7,SNR=6.7
ILAR LR LR 02 41 53.2
comp=Z,209nm,18.9s,baz=248,slow=39
TRF Thorofare Moun 84.04 17 eP P 01 59 23.6 -0.7
comp=Z,9.3nm,1.0s
DOT Dot Lake 85.41 15 eP P 01 59 30.6 -0.3
comp=Z,13nm,0.9s
PAX Paxson 85.66 16 eP P 01 59 32.0 -0.3
PAX e*PP pP 01 59 45.3 +0.2
PAX pmax pmax
comp=Z,12nm,0.9s
PAX Paxson 85.66 16 eP P 01 59 32.0 -0.3
comp=Z,12nm,0.9s
PAX epP pP 01 59 45.2 +0.2
PMR Palmer 85.87 18 eP P 01 59 32.8 -0.4
PMR pmax pmax
comp=Z,12nm,0.9s
PMR Palmer 85.87 18 eP P 01 59 32.8 -0.4
comp=Z,12nm,0.9s
SML Sawmill 85.91 17 eP P 01 59 33.5 0.0
SML pmax pmax
comp=Z,11nm,1.0s
SML Sawmill 85.91 17 eP P 01 59 33.5 0.0
comp=Z,11nm,1.0s
CTAO Charters Tower 86.86 114 eP P 01 59 38.1 -0.7
CTAO pmax pmax
comp=Z,28nm,1.1s
CTAO Charters Tower 86.86 114 eP P 01 59 38.0 -0.7
comp=Z,28nm,1.1s
STKA Stephens Creek 89.41 127 eP P 01 59 50.0 -0.7
comp=Z,2.0nm,0.8s
STKA epP pP 02 00 03.4 -0.1
STKA Stephens Creek 89.41 127 P P 01 59 50.1 -0.5
comp=Z,4.8nm,0.4s,baz=326,slow=4.3,SNR=22
STKA LR LR 02 37 19.3
comp=Z,386nm,21.4s,baz=26,slow=34
YKW3 Yellowknife Ar 90.48 2 eP P 01 59 54.8 -0.3
comp=Z,0.3nm,1.0s
YKA Yellowknife Ar 90.55 2 P P 01 59 55.9 +0.4
YKA pP pP 02 00 07.8 -0.5
YKA Yellowknife Ar 90.55 2 P P 01 59 55.9 +0.4
comp=Z,1.2nm,0.4s,baz=344,slow=5.3,SNR=47
YKA pP pP 02 00 07.8 -0.5
comp=Z,3.4nm,0.7s,baz=348,slow=5.1,SNR=9.9
SCHQ Schefferville 90.58 337 PP PP 02 03 29.1 -1.2
SCHQ Schefferville 90.58 337 PP PP 02 03 29.1 -1.2
comp=Z,7.2nm,1.0s,baz=54,slow=8.8,SNR=5.1
SCHQ LR LR 02 39 35.0
comp=Z,169nm,21.8s,baz=54,slow=35
RSSD Black Hills 108.90 356 ePKP PKiKP 02 05 20.9 -2.5
MOOW Moose Ponds 109.42 1 ePKP PKiKP 02 05 22.8 -1.6
TPAW Teton Pass 109.67 1 ePKP PKiKP 02 05 24.1 -0.8
ANMO Albuquerque 118.17 357 ePKPdf PKPdf 02 05 41.9 +0.6
Z31A Sharp Cattle R 119.23 351 ⇓P PKPdf 02 05 42.6 -0.5
baz=119
Z27A Tatum 119.58 354 ⇑P PKPdf 02 05 43.3 -0.6
baz=119
Z26A Caprock 119.69 355 ⇓P PKPdf 02 05 43.3 -0.8
baz=119
TUC Tucson 120.83 2 ePKIKP PKPdf 02 05 47.0 +0.6
TUC Tucson 120.83 2 ePKPdf PKPdf 02 05 47.0 +0.6
331A San Angelo 121.25 351 ⇓P PKPdf 02 05 46.8 -0.3
baz=121
330A Mertzon 121.25 352 ⇑P PKPdf 02 05 46.0 -1.1
baz=121
325A Bean Ranch, Si 121.64 356 ⇑P PKPdf 02 05 48.1 0.0
baz=121
HKT Hockley 121.77 346 ePKIKP PKPdf 02 05 47.1 -0.9
HKT Hockley 121.77 346 ePKPdf PKPdf 02 05 47.1 -0.9
431A Sonora 121.89 351 ⇓P PKPdf 02 05 47.6 -0.7
baz=122
JCT Junction City 121.97 350 ePKIKP PKPdf 02 05 47.9 -0.6
JCT Junction City 121.97 350 ePKPdf PKPdf 02 05 47.9 -0.6
427A Hayter Ranch, 122.04 354 ⇓P PKPdf 02 05 48.1 -0.6
baz=122
428A Kincaid Ranch, 122.09 353 ⇑P PKPdf 02 05 48.9 +0.1
baz=122
426A McDonald Obser 122.27 355 ⇑P PKPdf 02 05 49.2 -0.1
baz=122
532A Rocksprings 122.33 350 ⇑P PKPdf 02 05 48.4 -0.8
baz=122
531A Rocksprings 122.39 351 ⇑P PKPdf 02 05 48.9 -0.4
baz=122
530A J-C Ranch, Com 122.51 352 ⇑P PKPdf 02 05 49.3 -0.2
baz=122
529A Stev Forest Ra 122.64 353 ⇑P PKPdf 02 05 49.4 -0.5
baz=122
528A Cox Ranch, San 122.66 353 ⇓P PKPdf 02 05 49.8 -0.1
baz=122
527A Woodward Ranch 122.76 354 ⇑P PKPdf 02 05 50.3 +0.2
baz=122
628A Black Gap, Mar 123.34 353 ⇑P PKPdf 02 05 51.3 +0.1
baz=123
626A Big Bend Ranch 123.39 355 ⇓P PKPdf 02 05 51.2 -0.1
baz=123
627A Terlingua Ranc 123.42 354 ⇑P PKPdf 02 05 51.4 -0.1
baz=123
TXAR Lajitas Array 123.56 354 PKP PKPdf 02 05 51.6 -0.1
TXAR PP PP 02 07 29.0 -3.1
TXAR Lajitas Array 123.56 354 PKP PKPdf 02 05 51.6 -0.1
comp=Z,0.7nm,0.7s,baz=40,slow=4.2,SNR=12
TXAR PP PP 02 07 29.0 -3.1
comp=Z,0.7nm,0.9s,baz=6.1,slow=9.3,SNR=4.1
SAML Samuel 132.93 284 ePKPdf PKPdf 02 06 09.4 -0.2
PLCA Paso Flores 145.46 237 ePKPbc PKPab 02 06 33.2 +1.1
PLCA Paso Flores 145.46 237 PKPbc PKPdf 02 06 31.2 -0.5
comp=Z,2.6nm,0.8s,baz=113,slow=7.7,SNR=2.4
LCO Las Campanas 146.06 258 ePKPbc PKPdf 02 06 33.8 +0.4
NNA Nana 146.08 290 ePKPbc PKPbc 02 06 34.1 -0.3

CSEM 09 01:52:35.6, 42°.45N×13°.45E, h10km, After ROM
ROM 09 01:52:35.6±0.1, 42°.45N×13°.45E, h10km, Ml1.8/3, Error ellipse: s-maj=1.0km s-min=0.8km az=81.0, Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CAMP Campotosto 0.09 339 Pg Pg 01 52 38.7 +0.5
CAMP Sg Sg 01 52 40.5 +0.4
CAMP Campotosto 0.09 339 Pg Pg 01 52 38.7 +0.5
CAMP Sg Sg 01 52 40.5 +0.4
AQU L'Aquila 0.11 200 Pg Pg 01 52 38.8 +0.5
AQU Sg Sg 01 52 40.8 +0.6
AQU L'Aquila 0.11 200 Pg Pg 01 52 38.8 +0.5
AQU Sg Sg 01 52 40.8 +0.6
TERO Teramo 0.20 34 Pg Pg 01 52 40.5 +0.5
TERO Sg Sg 01 52 43.8 +0.9
TERO Teramo 0.20 34 Pg Pg 01 52 40.5 +0.5
TERO Sg Sg 01 52 43.8 +0.9
FAGN Fagnano 0.21 152 Pg Pg 01 52 41.0 +0.9
FAGN Sg Sg 01 52 44.0 +0.9
FAGN Fagnano 0.21 152 Pg Pg 01 52 41.0 +0.9
FAGN Sg Sg 01 52 44.0 +0.9
VCEL Villa Celiera 0.29 101 Pg Pg 01 52 42.2 +0.5
VCEL Sg Sb 01 52 47.7 -0.6
59nm,0.4s
VCEL Villa Celiera 0.29 101 Pg Pg 01 52 42.2 +0.5
VCEL Sg Sb 01 52 47.7 -0.6
59nm,0.4s
LNSS Leonessa 0.34 296 Pg Pg 01 52 42.8 +0.3
LNSS Sg Sb 01 52 48.5 -1.1
78nm,0.2s
LNSS Leonessa 0.34 296 Pg Pg 01 52 42.8 +0.3
LNSS Sg Sb 01 52 48.5 -1.1
78nm,0.2s
NRCA Norcia 0.45 327 Pg Pg 01 52 44.8 +0.2
NRCA Sg Sb 01 52 51.8 -1.0
131nm,0.1s
NRCA Norcia 0.45 327 Pg Pg 01 52 44.8 +0.2
NRCA Sg Sb 01 52 51.8 -1.0
131nm,0.1s

CSEM 09 01:53:51.0, 42°.47N×13°.43E, h9km, After ROM
ROM 09 01:53:51.0±0.1, 42°.47N×13°.43E, h9km, Ml1.8/3, Error ellipse: s-maj=1.2km s-min=0.9km az=113.0, Central Italy

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CAMP Campotosto 0.07 348 Pg Pg 01 53 53.8 +0.5
CAMP Sg Sg 01 53 55.4 +0.5
CAMP Campotosto 0.07 348 Pg Pg 01 53 53.8 +0.5
CAMP Sg Sg 01 53 55.4 +0.5
AQU L'Aquila 0.11 190 Pg Pg 01 53 54.2 +0.4
AQU Sg Sg 01 53 56.1 +0.4
AQU L'Aquila 0.11 190 Pg Pg 01 53 54.2 +0.4
AQU Sg Sg 01 53 56.1 +0.4
TERO Teramo 0.20 39 Pg Pg 01 53 55.5 +0.2
TERO Sg Sg 01 53 59.1 +0.9
TERO Teramo 0.20 39 Pg Pg 01 53 55.5 +0.2
TERO Sg Sg 01 53 59.1 +0.9
VCEL Villa Celiera 0.31 103 Pg Pb 01 53 58.3 -0.7
VCEL Sg Sb 01 54 03.3 -1.0
59nm,0.4s
VCEL Villa Celiera 0.31 103 Pg Pb 01 53 58.3 -0.7
VCEL Sg Sb 01 54 03.3 -1.0
59nm,0.4s
LNSS Leonessa 0.32 296 Pg Pg 01 53 58.1 +0.6
LNSS Sg Sb 01 54 03.2 -1.3
78nm,0.2s
LNSS Leonessa 0.32 296 Pg Pg 01 53 58.1 +0.6
LNSS Sg Sb 01 54 03.2 -1.3
78nm,0.2s
NRCA Norcia 0.43 328 Pg Pg 01 54 00.0 +0.4
NRCA Sg Sb 01 54 06.8 -1.0
131nm,0.1s
NRCA Norcia 0.43 328 Pg Pg 01 54 00.0 +0.4
NRCA Sg Sb 01 54 06.8 -1.0
131nm,0.1s

IDC 09 01:57:28.3±3.3, 39°.38N×69°.45E, h0km, mb3.4/2, mb1 3.7/5, mb1mx3.4/30, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=127.7km s-min=15.3km az=149.0
ISCJB 09 01:57:32.7±1.2, 39°.7N±0°.1×69°.14E±0°.09, h33km, mb3.4/2, Error ellipse: s-maj=16.3km s-min=10.0km az=174.7
ISC 09 01:57:34.8±1.4, 39°.7N±0°.1×69°.14E±0°.10, h35km, n14, σ0s.91/16, 3C-1D, Tajikistan

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KK31 Karatay Array 3.56 16 ⇑Pn Pn 01 58 26.0 -1.5
5.0nm,0.3s,baz=198,slow=15,SNR=9.2
KK31 ⇓Lg Lg 01 59 15.1
72nm,0.5s,baz=198,slow=26,SNR=13
AML Almayashu 4.22 53 P Pn 01 58 36.2 -0.8
SNR=54
EKS2 Erkin-Say 4.59 48 P Pn 01 58 42.3 +0.5
SNR=11
AAK Ala-Archa 5.00 52 P Pn 01 58 47.5 0.0
SNR=14
AAK Ala-Archa 5.00 52 Pn Pn 01 58 47.4 0.0
1.4nm,0.3s,baz=94,slow=1.7,SNR=30
AAK Sn Sn 01 59 44.9 +0.8
2.4nm,0.3s,baz=198,slow=19,SNR=2.8
AAK Lg Lg 02 00 04.8
2.4nm,0.3s,baz=12,slow=20,SNR=3.6
KZA Kyzart 5.21 61 P Pn 01 58 50.8 +0.2
SNR=6.1
KSH Kashi 5.28 90 Pn Pn 01 58 50.3 -1.0
KSH Sn Sn 01 59 52.2 +1.2
KSH smax smax
comp=N,35nm,0.9s
KSH smax smax
comp=E,30nm,1.0s
KBK Karagaybulak 5.29 54 P Pn 01 58 51.9 +0.4
SNR=16
TKM2 Tokmak 2 5.84 54 ⇑Pn Pn 01 58 58.1 -0.9
comp=E,8.0nm,0.7s
TKM2 ⇑Lg Lg 02 00 34.4
comp=E,44nm,0.8s
TKM2 Tokmak 2 5.84 54 P Pn 01 58 58.8 -0.1
SNR=6.7
MKAR Makanchi Array 11.92 49 Pn Pn 02 00 20.8 -1.4
baz=234,slow=15,SNR=2.1
MKAR Lg Lg 02 03 44.1
comp=E,0.1nm,0.3s,baz=247,slow=30,SNR=3.3
ZALV Zalesovo Beam 17.79 32 P Pn 02 01 38.9 -0.4
comp=E,0.3nm,0.3s,baz=219,slow=11,SNR=4.0
TORD Torodi Ar. Bea 64.40 266 P P 02 08 08.6 +1.0
comp=E,0.3nm,0.6s,baz=55,slow=5.2,SNR=5.5
YKA Yellowknife Ar 78.12 2 P P 02 09 29.2 -0.5
comp=E,0.2nm,0.6s,baz=354,slow=5.4,SNR=3.4

AUST 09 02:01:45.4±1.6, 11°.74S×121°.94E, h57km, Error ellipse: s-maj=1.4km s-min=1.0km az=296.0
IDC 09 02:01:48.4±2.9, 12°.14S×122°.62E, h0km, mb3.5/1, mb1 3.6/3, mb1mx3.5/17, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=162.6km s-min=28.5km az=52.0
ISCJB 09 02:01:49.8±0.8, 12°.53S±0°.08×122°.47E±0°.05, h33km, mb4.2/2, Error ellipse: s-maj=12.2km s-min=7.6km az=173.9
ISC 09 02:01:51.9±1.0, 12°.52S±0°.09×122°.33E±0°.08, h35km, n12, σ2s.01/13, South of Timor

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FITZ Fitzroy Crossi 6.40 151 P Pn 02 03 30.1 +6.3
baz=7.3,SNR=4.4
MTN Manton Dam 8.59 93 S Sn 02 05 27.1 -2.6
baz=9.1,SNR=7.0
KDU Kakadu 9.90 92 P Pn 02 04 11.3 -0.5
baz=10,SNR=6.1
KDU S Sn 02 06 00.8 -0.9
baz=10,SNR=4.2
GIRL Giralia 12.68 216 P Pn 02 04 49.1 -0.8
baz=13,SNR=3.6
WRA Warramunga Arr 13.68 124 Pn Pn 02 05 04.1 +0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.1nm,0.3s,baz=305,slow=14,SNR=3.8						
WRA				Sn	**Sn**	**02 07 32.6**	**-1.9**
	0.2nm,0.3s,baz=290,slow=23,SNR=3.1						
MEEK	**Meekatharra**	**14.47**	**193**	P	**Pn**	**02 05 15.5**	**+1.2**
	baz=15,SNR=13						
MEEK				S	**Sn**	**02 07 50.8**	**-2.8**
	baz=15,SNR=6.4						
ASAR	**Alice Springs**	**15.61**	**137**	Pn	**Pn**	**02 05 31.8**	**+2.4**
	0.2nm,0.3s,baz=316,slow=12,SNR=4.8						
ASAR				Sn	**Sn**	**02 08 24.5**	**+3.2**
	0.1nm,0.3s,baz=314,slow=26,SNR=3.8						
MORW	**Morawa**	**17.48**	**199**	P	**Pn**	**02 05 54.6**	**+1.6**
	baz=18,SNR=3.5						
MORW				S	Sn	02 08 59.3	-7.3
	baz=18,SNR=5.1						
MMPI	**Merauke**	**18.20**	**79**	P	Pn	02 05 55.6	-6.3
	baz=18,SNR=3.3						
JAY	**Jayapura**	**20.73**	**63**	P	Pn	02 06 32.4	+0.2
	baz=21,SNR=3.6						
SONM	**Songino Array**	**61.74**	**348**	P	**P**	**02 12 06.9**	**0.0**
	0.3nm,0.6s,baz=167,slow=8.1,SNR=3.6						
ZALV	**Zalesovo Beam**	**73.49**	**338**	P	**P**	**02 13 21.1**	**+0.3**
	5.2nm,0.4s,baz=133,slow=4.7,SNR=20						

*IDC **09** 02:04:11.4±1.3, 2.30°N×96.16°E, h0km, mb4.1/10, mb1 4.2/11, mb1mx3.9/29, mbtmp4.1/11, ML4.7/1, Error ellipse: s-maj=55.2km s-min=18.3km az=53.0*
*ISCJB **09** 02:04:13.4±0.7, 2.33°N±0.07°×96.15°E±0.08°, h25km, mb4.1/11, Error ellipse: s-maj=14.1km s-min=5.3km az=137.5*
*DJA **09** 02:04:14.1±1.1, 2°N±7°×9°6E±1°0, h49km±55km, M4.3/5, mb4.7/2, mB4.8/2, MLv4.1/5, Mw(mB)4.0/2*
ISC 09 02:04:15.3±0.9, **2.34°N**±0.08°×**96.16°E**±0.10°, **h25km, n21**, σ**1.06**/23, **mb4.2**/11, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.75**	**126**	P	**Pn**	**02 04 43.7**	**-0.4**
GSI				S	**Sn**	**02 05 03.3**	**-2.3**
TSI	**Tuntungan**	**2.67**	**64**	P	**Pn**	**02 04 57.8**	**+1.1**
PSI	**Prapat**	**2.80**	**81**	P	**Pn**	**02 04 58.6**	**0.0**
BSI	**Banda Aceh**	**3.25**	**345**	P	**Pn**	**02 05 03.3**	**-1.4**
BSI				S	**Sn**	**02 05 41.5**	**-1.2**
MNSI	**Mandailing Nat**	**3.75**	**114**	P	**Pn**	**02 05 11.4**	**-0.2**
PPI	**Padang Panjang**	**5.07**	**123**	S	**Sn**	**02 06 27.2**	**-0.3**
IPM	**Ipoh**	**5.30**	**66**	P	**Pn**	**02 05 32.7**	**-0.3**
	54nm,0.8s,900nm						
KULM	**Kulim**	**5.36**	**57**	P	**Pn**	**02 05 33.2**	**-0.5**
CMAR	**Chiang Mai Arr**	**16.25**	**9**	Pn	**P**	**02 08 03.7**	**-1.2**
	0.9nm,0.3s,baz=200,slow=10,SNR=9.6						
WRA	**Warramunga Arr**	**43.52**	**122**	P	**P**	**02 12 16.8**	**-0.5**
	0.4nm,0.3s,baz=300,slow=9.3,SNR=4.8						
AAK	**Ala-Archa**	**44.55**	**337**	P	**P**	**02 12 28.2**	**+2.9**
	0.7nm,0.4s,baz=166,slow=17,SNR=3.6						
ASAR	**Alice Springs**	**44.91**	**127**	P	**P**	**02 12 28.4**	**+0.1**
	0.4nm,0.5s,baz=291,slow=9.3,SNR=4.3						
MKAR	**Makanchi Array**	**45.90**	**347**	P	**P**	**02 12 36.2**	**+0.4**
	5.1nm,0.7s,baz=162,slow=8.0,SNR=72						
SONM	**Songino Array**	**46.17**	**10**	P	**P**	**02 12 37.9**	**-0.1**
	1.8nm,0.5s,baz=191,slow=9.9,SNR=17						
SONM				PcP	**PcP**	**02 14 14.2**	**+0.5**
	0.5nm,0.6s,baz=184,slow=3.4,SNR=3.8						
KURBB	**Kurchatov Arra**	**50.37**	**345**	P	**P**	**02 13 10.4**	**+0.2**
	1.2nm,0.8s,baz=153,slow=7.6,SNR=11						
ZALV	**Zalesovo Beam**	**52.28**	**352**	P	**P**	**02 13 24.4**	**0.0**
	5.2nm,0.4s,baz=185,slow=7.4,SNR=4.7						
BVAR	**Borovoye Array**	**54.84**	**341**	P	**P**	**02 13 43.2**	**-0.1**
	1.7nm,0.5s,baz=150,slow=8.9,SNR=9.5						
AKTO	**Aktyubinsk**	**57.74**	**332**	P	**P**	**02 14 03.9**	**-0.2**
	0.4nm,0.4s,baz=101,slow=11,SNR=4.0						
KBZ	**Khabaz**	**62.53**	**319**	P	**P**	**02 14 38.1**	**+1.1**
	1.5nm,0.8s,baz=102,slow=9.2,SNR=3.6						
ARCES	**ARCESS Array B**	**81.12**	**340**	P	**P**	**02 16 28.5**	**+0.3**
	1.5nm,0.7s,baz=90,slow=6.3,SNR=10.0						
TXAR	**Lajitas Array**	**143.22**	**30**	PKP	PKPbc	02 23 45.8	+0.7
	0.1nm,0.4s,baz=251,slow=2.5,SNR=4.0						

IDC 09 02:15:57.0±2.0, **8.40°N×103.81W, h0km, mb3.5**/5, **mb1 3.9**/6, **mb1mx3.7**/20, **mbtmp3.5**/6, **ML3.2**/1, **MS3.6**/6, **Ms1 3.6**/6, **ms1mx3.3**/24, **Error ellipse: s-maj=62.7km s-min=27.6km az=58.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**12.26**	**44**	Pn	Pn	02 18 51.7	-1.3
	0.2nm,0.3s,baz=218,slow=14,SNR=4.5						
CMIG				LR	LR	02 22 24.4	
	comp=Z,341nm,21.1s,baz=265,slow=32						
LPIG	**La Paz**	**16.81**	**339**	LR	LR	02 24 52.9	
	comp=Z,12nm,19.1s,baz=227,slow=32						
TXAR	**Lajitas Array**	**20.83**	**0**	P	P	02 20 41.6	+1.1
	1.2nm,0.9s,baz=184,slow=11,SNR=11						
TXAR				LR	LR	02 28 22.8	
	comp=Z,192nm,19.1s,baz=85,slow=36						
ATAH	**Atahualpa**	**29.66**	**121**	LR	LR	02 29 25.1	
	comp=Z,75nm,20.3s,baz=107,slow=27						
TKL	**Tuckaleechee C**	**32.73**	**31**	LR	LR	02 37 12.9	
	comp=Z,60nm,18.2s,baz=69,slow=39						
NNA	**Nana**	**33.60**	**127**	LR	LR	02 33 13.0	
	comp=Z,68nm,21.8s,baz=317,slow=31						
PDAR	**Pinedale Array**	**34.61**	**353**	P	P	02 22 49.0	+0.9
	0.9nm,0.7s,baz=166,slow=9.4,SNR=6.1						
RPN	**Rapa Nui**	**35.72**	**188**	LR	LR	02 31 40.2	
	comp=Z,163nm,21.8s,baz=340,slow=26						
LPAZ	**La Paz**	**42.99**	**125**	P	P	02 23 59.4	+0.2
	1.2nm,0.7s,baz=284,slow=7.1,SNR=4.5						
YKA	**Yellowknife Ar**	**54.57**	**354**	P	P	02 25 26.1	-0.7
	0.1nm,0.7s,baz=164,slow=7.1,SNR=3.9						
ILAR	**Eielson Array**	**63.85**	**341**	P	P	02 26 30.5	-0.6
	0.6nm,0.8s,baz=153,slow=4.9,SNR=8.9						

*ISCJB **09** 02:21:39.8±0.9, 36.78°N±0.03°×27.20°E±0.03°, h2km±6km, Error ellipse: s-maj=5.1km s-min=4.3km az=0.8*
*ATH **09** 02:21:40.4, 36.81°N×27.22E, h23km±4km, MD3.3/5*
*CSEM **09** 02:21:40.6±0.1, 36.79°N×27.22E, h2km, ML3.2, Error ellipse: s-maj=3.6km s-min=2.8km az=164.0*
*ISK **09** 02:21:41.0, 36.84°N×27.23E, h9km, MD3.4*
*DDA **09** 02:21:41.0, 36.92°N×27.27E, h26km, ML3.2*
ISC 09 02:21:40.6±1.0, **36.80°N**±0.02°×**27.24°E**±0.03°, **h10**km±8km, **n80**, σ**1.12**/97, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.27**	**12**	*e*PG	**Pg**	**02 21 46.0**	**-0.1**
BODT				*e*SG	**Sg**	**02 21 50.1**	**+0.4**
BODT	**Bodrum**	**0.27**	**12**	*e*Pg	**Pg**	**02 21 46.0**	**-0.1**
BODT				*e*Sg	**Sg**	**02 21 50.1**	**+0.4**
BDRM	**Kayabasi**	**0.31**	**31**	*i* P	**Pg**	**02 21 46.0**	**-0.8**
BDRM				*i* S	**Sg**	**02 21 50.7**	**-0.3**
BDRM	**Kayabasi**	**0.31**	**31**	*i* P	**Pg**	**02 21 46.0**	**-0.8**
BDRM				*i* S	**Sg**	**02 21 50.7**	**-0.3**
MLSB	**Milas**	**0.65**	**41**	*e*PG	**Pb**	**02 21 53.6**	**-0.5**
MLSB	**Milas**	**0.65**	**41**	*e*Pg	**Pb**	**02 21 53.6**	**-0.5**
GCAM	**G?zelcaml?**	**0.90**	**360**	*i* P	**Pb**	**02 21 58.0**	**-0.3**
GCAM				*i* S	**Sn**	**02 22 11.1**	**-1.2**
GCAM	**G?zelcaml?**	**0.90**	**360**	*i* P	**Pb**	**02 21 58.0**	**-0.3**
GCAM				*i* S	**Sn**	**02 22 11.1**	**-1.2**
YER	**Yerkesik**	**0.90**	**68**	*e*PG	**Pb**	**02 21 58.4**	**+0.1**
YER				*e*SG	**Sn**	**02 22 11.5**	**-0.9**
YER	**Yerkesik**	**0.90**	**68**	*e*Pg	**Pb**	**02 21 58.4**	**+0.1**
YER				*e*Sg	**Sn**	**02 22 11.5**	**-0.9**
ARG	**Arkhangelos**	**0.92**	**129**	*e*PN	**Pg**	**02 21 58.3**	**0.0**
ARG				*e*SN	**Sn**	**02 22 11.9**	**-0.9**
ARG	**Arkhangelos**	**0.92**	**129**	*e*Pn	**Pg**	**02 21 58.3**	**0.0**
ARG				*e*Sn	**Sn**	**02 22 11.9**	**-0.9**
AYDN	**Tasoluk**	**1.00**	**30**	*i* P	**Pg**	**02 21 59.2**	**-0.6**
AYDN				*i* S	**Sb**	**02 22 12.9**	**-0.3**
AYDN	**Tasoluk**	**1.00**	**30**	*i* P	**Pg**	**02 21 59.2**	**-0.6**
AYDN				*i* S	**Sb**	**02 22 12.9**	**-0.3**
TURN	**Turunc**	**1.09**	**86**	*i* P	Pb	02 21 55.5	-6.1
TURN				*i* S	Sb	02 22 07.7	-8.2
KARP	**Karpathos**	**1.25**	**183**	*e*PN	**Pn**	**02 22 04.2**	**0.0**
KARP				*e*SN	**Sg**	**02 22 21.8**	**+0.8**
KARP	**Karpathos**	**1.25**	**183**	*e*Pn	**Pn**	**02 22 04.2**	**0.0**
KARP				*e*Sn	**Sg**	**02 22 21.8**	**+0.8**
APE	**Apeiranthos**	**1.40**	**282**	*e*PN	**Pb**	**02 22 07.3**	**+0.5**
APE	**Apeiranthos**	**1.40**	**282**	*e*PN	**Pn**	**02 22 06.5**	**+0.3**
APE	**Apeiranthos**	**1.40**	**282**	*e*Pn	**Pb**	**02 22 07.3**	**+0.5**
FETY	**Fethiye**	**1.49**	**96**	*e*PN	**Pg**	**02 22 08.8**	**-0.4**
FETY	**Fethiye**	**1.49**	**96**	*e*Pn	**Pg**	**02 22 08.8**	**-0.4**
BLCB	**Balcova**	**1.59**	**354**	*e*PN	**Pb**	**02 22 09.5**	**-0.6**
BLCB	**Balcova**	**1.59**	**354**	*e*Pn	**Pb**	**02 22 09.5**	**-0.6**
IZM	**Izmir**	**1.59**	**1**	*e*PN	**Pb**	**02 22 09.4**	**-0.8**
IZM	**Izmir**	**1.59**	**1**	*e*Pn	**Pb**	**02 22 09.4**	**-0.8**
URLA	**Izmir**	**1.64**	**342**	*i* P	**Pn**	**02 22 10.0**	**+0.5**
URLA	**Izmir**	**1.64**	**342**	*i* P	**Pn**	**02 22 10.0**	**+0.5**
DNZL	**Cakiroluk**	**1.69**	**58**	*i* P	**Pb**	**02 22 11.2**	**-0.7**
DNZL				*i* S	**Sg**	**02 22 36.0**	**+1.0**
DNZL	**Cakiroluk**	**1.69**	**58**	*i* P	**Pb**	**02 22 11.2**	**-0.7**
DNZL				*i* S	**Sg**	**02 22 36.0**	**+1.0**
DENT	**Denizli**	**1.71**	**56**	*e*PN	**Pb**	**02 22 11.5**	**-0.8**
CHOS	**Chios island**	**1.84**	**330**	*e*PN	**Pn**	**02 22 12.6**	**+0.2**
CHOS	**Chios island**	**1.84**	**330**	*e*Pn	**Pn**	**02 22 12.6**	**+0.2**
GOLH	**Golhisar**	**1.91**	**76**	*i* P	**Pb**	**02 22 15.0**	**-0.5**
GOLH				*i* S	**Sb**	**02 22 39.8**	**+0.4**
GOLH	**Golhisar**	**1.91**	**76**	*i* P	**Pb**	**02 22 15.0**	**-0.5**
GOLH				*i* S	**Sb**	**02 22 39.8**	**+0.4**
NPS	**Neapolis**	**2.03**	**221**	*e*PN	**Pn**	**02 22 14.0**	**-0.8**
NPS	**Neapolis**	**2.03**	**221**	*e*Pn	**Pn**	**02 22 14.0**	**-0.8**
KULA	**Kula-Manisa**	**2.05**	**33**	*e*PN	**Pb**	**02 22 16.4**	**-1.5**
KULA	**Kula-Manisa**	**2.05**	**33**	*e*Pn	**Pb**	**02 22 16.4**	**-1.5**
AKS	**Akhisar**	**2.12**	**12**	*e*PN	**Pn**	**02 22 17.0**	**+0.9**
AKS	**Akhisar**	**2.12**	**12**	*e*Pn	**Pn**	**02 22 17.0**	**+0.9**
ELL	**Elmali**	**2.14**	**91**	*e*PN	**Pb**	**02 22 18.2**	**-1.3**
ELL	**Elmali**	**2.14**	**91**	*e*Pn	**Pb**	**02 22 18.2**	**-1.3**
KHL	**Karahalli**	**2.36**	**49**	*e*PN	**Pn**	**02 22 20.9**	**+1.3**
KHL	**Karahalli**	**2.36**	**49**	*e*Pn	**Pn**	**02 22 20.9**	**+1.3**
ANTB	**Antalya**	**2.74**	**87**	*e*PN	**Pn**	**02 22 26.6**	**+2.1**
ANTB	**Antalya**	**2.74**	**87**	*e*Pn	**Pn**	**02 22 26.6**	**+2.1**
BCK	**Bucak**	**2.75**	**75**	*e*PN	**Pn**	**02 22 26.5**	**+1.6**
BCK	**Bucak**	**2.75**	**75**	*e*Pn	**Pn**	**02 22 26.5**	**+1.6**
BALB	**Balikesir**	**2.88**	**10**	*e*PN	**Pn**	**02 22 28.1**	**+1.6**
BALB	**Balikesir**	**2.88**	**10**	*e*Pn	**Pn**	**02 22 28.1**	**+1.6**
BALY	**Balya**	**2.95**	**6**	*i* P	**Pn**	**02 22 27.6**	**+0.1**
BALY	**Balya**	**2.95**	**6**	*i* P	**Pn**	**02 22 27.6**	**+0.1**
DST	**Dursunbey**	**3.00**	**21**	*e*PN	**Pn**	**02 22 30.1**	**+1.8**
DST	**Dursunbey**	**3.00**	**21**	*e*Pn	**Pn**	**02 22 30.1**	**+1.8**
EZN	**Ezine**	**3.10**	**347**	*e*PN	**Pn**	**02 22 31.3**	**+1.7**
EZN	**Ezine**	**3.10**	**347**	*e*Pn	**Pn**	**02 22 31.3**	**+1.7**
NAIG	**Nisos Aigina**	**3.14**	**289**	*e*PN	**Pn**	**02 22 31.7**	**+1.5**
NAIG	**Nisos Aigina**	**3.14**	**289**	*e*Pn	**Pn**	**02 22 31.7**	**+1.5**
SHUT	**Suhut-Afyon**	**3.15**	**55**	*e*PN	**Pn**	**02 22 32.2**	**+1.8**
SHUT	**Suhut-Afyon**	**3.15**	**55**	*e*Pn	**Pn**	**02 22 32.2**	**+1.8**
TVSB	**Tavsanli**	**3.17**	**33**	*e*PN	**Pn**	**02 22 32.3**	**+1.6**
TVSB	**Tavsanli**	**3.17**	**33**	*e*Pn	**Pn**	**02 22 32.3**	**+1.6**
ALT	**Altintas**	**3.19**	**44**	*e*PN	**Pn**	**02 22 32.6**	**+1.6**
ALT	**Altintas**	**3.19**	**44**	*e*Pn	**Pn**	**02 22 32.6**	**+1.6**
GONE	**Gonen-Balikesi**	**3.26**	**6**	*e*PN	**Pn**	**02 22 33.4**	**+1.6**
GONE	**Gonen-Balikesi**	**3.26**	**6**	*e*Pn	**Pn**	**02 22 33.4**	**+1.6**
DID	**Didima**	**3.28**	**284**	*e*PN	**Pn**	**02 22 33.3**	**+1.3**
DID	**Didima**	**3.28**	**284**	*e*Pn	**Pn**	**02 22 33.3**	**+1.3**
LIA	**Limnos Island**	**3.49**	**333**	*e*PN	**Pn**	**02 22 35.7**	**+0.8**
LIA	**Limnos Island**	**3.49**	**333**	*e*Pn	**Pn**	**02 22 35.7**	**+0.8**
AOS	**Alonnisos**	**3.56**	**313**	*e*PN	**Pn**	**02 22 36.8**	**+0.9**
AOS	**Alonnisos**	**3.56**	**313**	*e*Pn	**Pn**	**02 22 36.8**	**+0.9**
LTK	**Loutraki**	**3.62**	**291**	*e*PN	**Pn**	**02 22 38.3**	**+1.6**
LTK	**Loutraki**	**3.62**	**291**	*e*Pn	**Pn**	**02 22 38.3**	**+1.6**
NEO	**Neokhori**	**4.04**	**309**	*e*PN	**Pn**	**02 22 43.9**	**+1.4**
NEO	**Neokhori**	**4.04**	**309**	*e*Pn	**Pn**	**02 22 43.9**	**+1.4**
ALN	**Alexandroupoli**	**4.20**	**347**	*e*PN	**Pn**	**02 22 45.2**	**+0.6**
AGG	**Agios Georgios**	**4.47**	**301**	*e*PN	**Pn**	**02 22 50.5**	**+2.0**
AGG	**Agios Georgios**	**4.47**	**301**	*e*Pn	**Pn**	**02 22 50.5**	**+2.0**

*ISK **09** 02:32:28.8, 37.34°N×38.64°E, h8km, MD2.7*
*ISCJB **09** 02:32:29.8±0.8, 37.41°N±0.05°×38.62°E±0.03°, h9km±6km, Error ellipse: s-maj=8.6km s-min=4.3km az=177.1*
*DDA **09** 02:32:29.6, 37.45°N×38.58E, h7km, MD2.8*
*CSEM **09** 02:32:29.9±0.3, 37.44°N×38.64E, h10km, MD2.7, Error ellipse: s-maj=8.1km s-min=5.7km az=174.0*
*NSSC **09** 02:32:30.2±1.2, 37.31°N×38.64E, h0km±7km, ML1.3*
ISC 09 02:32:29.5±0.9, **37.44°N**±0.05°×**38.65°E**±0.02°, **h15**km±7km, **n22**, σ**0.72**/35, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.14**	**90**	*e*PG	**Pb**	**02 32 32.9**	**-1.0**
URFA				*e*SG	**Sg**	**02 32 36.0**	**+0.2**
URFA	**Urfa**	**0.14**	**90**	*e*Pg	**Pb**	**02 32 32.9**	**-1.0**
URFA				*e*Sg	**Sg**	**02 32 36.1**	**+0.2**
GZT	**Gaziantep**	**0.87**	**265**	*i* P	**Pg**	**02 32 45.3**	**-1.0**
GZT				*i* S	**Sg**	**02 32 56.8**	**-0.9**
MALT	**Malatya**	**0.89**	**349**	*e*PG	**Pn**	**02 32 48.2**	**+0.6**
MALT	**Malatya**	**0.89**	**349**	*e*Pg	**Pn**	**02 32 48.2**	**+0.6**
SVRC	**Sivrice-ELAZID**	**1.07**	**29**	*e*PN	**Pn**	**02 32 51.0**	**+0.8**
SVRC	**Sivrice-ELAZID**	**1.07**	**29**	*e*Pn	**Pn**	**02 32 51.0**	**+0.8**
DIYA	**Diyarbakir**	**1.27**	**67**	*i* P	**Pg**	**02 32 54.8**	**+0.9**
DIYA				*i* S	**Sg**	**02 33 09.9**	**-0.5**
DIYA	**Diyarbakir**	**1.27**	**67**	*i* P	**Pg**	**02 32 54.8**	**+0.9**
DIYA				*i* S	**Sg**	**02 33 09.9**	**-0.5**
KMRS	**Kahramanmaras**	**1.39**	**273**	*e*PN	**Pb**	**02 32 55.3**	**0.0**
KMRS	**Kahramanmaras**	**1.39**	**273**	*e*Pn	**Pb**	**02 32 55.3**	**0.0**
KUZU	**Kuzuini**	**1.42**	**242**	*i* P	**Pn**	**02 32 54.9**	**0.0**
KUZU				*i* S	**Sn**	**02 33 13.3**	**-0.1**
KUZU	**Kuzuini**	**1.42**	**242**	*i* P	**Pn**	**02 32 54.9**	**0.0**
SFNV	**Sufian**	**1.56**	**131**	*e*P	**Pb**	**02 32 57.2**	**-0.9**
SFNV				*e*S	**Sb**	**02 33 17.8**	**+0.2**
SFNV				AML	AML	02 33 21.4	
	comp=Z,5.6nm,0.4s						
SFNV	**Sufian**	**1.56**	**131**	*e*P	**Pb**	**02 32 57.2**	**-0.9**
	SNR=57						
SFNV				*e*S	**Sb**	**02 33 17.8**	**+0.2**
	comp=Z,5.6nm,0.4s,SNR=49						
KBSD	**Kabsdagh**	**1.58**	**106**	*e*P	**Pb**	**02 32 58.2**	**-0.2**
KBSD				*e*S	**Sg**	**02 33 19.4**	**-0.9**
KBSD				AML	AML	02 33 22.7	
	comp=Z,7.5nm,0.2s						
KBSD	**Kabsdagh**	**1.58**	**106**	*e*P	**Pb**	**02 32 58.2**	**-0.2**
	SNR=57						
KBSD				*e*S	**Sg**	**02 33 19.4**	**-0.9**
	comp=Z,7.5nm,0.2s,SNR=49						
DARE	**Darende-Malaty**	**1.65**	**337**	*e*PN	**Pn**	**02 32 57.2**	**-0.8**
DARE	**Darende-Malaty**	**1.65**	**337**	*e*Pn	**Pn**	**02 32 57.2**	**-0.8**
DRWC	**Darouich**	**1.78**	**243**	*e*P	**Pb**	**02 33 02.4**	**+0.5**
DRWC				*e*S	**Sb**	**02 33 24.4**	**+0.2**
DRWC				AML	AML	02 33 29.2	
	comp=E,2.7nm,0.5s						
DRWC				AML	AML	02 33 33.3	
	comp=N,5.5nm,0.4s						
DRWC	**Darouich**	**1.78**	**243**	*e*P	**Pb**	**02 33 02.4**	**+0.5**
	SNR=45						
DRWC				*e*S	**Sb**	**02 33 24.4**	**+0.2**
	comp=N,5.5nm,0.4s,SNR=40						
BTCH	**Batrach**	**2.25**	**232**	*e*P	**Pn**	**02 33 07.8**	**+1.6**
BTCH				*e*S	**Sn**	**02 33 34.2**	**+0.5**
BTCH				AML	AML	02 33 44.6	
	comp=E,4.6nm,0.4s						
BTCH				AML	AML	02 33 50.2	
	comp=N,8.6nm,0.7s						

MAN 09 02:32:39, 9.85°N×125.25°E, h8km, mb4.6, ML3.4, MS3.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.47**	**307**	*e*P	Pg	02 32 48.9	+0.6
MSLP				*e*S	Sb	02 32 57.6	+0.8
PLP	**Palo**	**1.33**	**349**	⇓*e*P	Pn	02 33 03.4	-0.6
PLP				*e*S	Sg	02 33 22.3	+0.3
OCLP	**Ormoc**	**1.35**	**332**	*e*P	Pb	02 33 04.5	0.0
OCLP				*e*S	Sg	02 33 23.2	+0.7
TBP	**Tagbilaran**	**1.37**	**264**	*e*P	Pn	02 33 03.7	-0.7
TBP				*e*S	Sg	02 33 23.7	+0.5

*ISCJB **09** 02:33:39.7±0.9, 50.29°N±0.05°×87.65°E±0.09°, h8km, Error ellipse: s-maj=8.7km s-min=7.0km az=19.5*
*IDC **09** 02:33:40.2±1.6, 50.25°N×87.65E, h0km, mb1 3.5/7, mb1mx3.3/34, mbtmp3.5/7, ML3.4/7, Error ellipse: s-maj=15.1km s-min=12.5km az=83.0*
ISC 09 02:33:41.9±1.1, **50.33°N**±0.07°×**87.59°E**±0.08°, **h8km, n9**, σ**1.66**/16, **5C-1D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**4.00**	**336**	Pn	**Pn**	**02 34 45.3**	**+1.8**
	3.3nm,0.3s,baz=158,slow=14,SNR=45						
ZALV				Sn	**Sn**	**02 35 31.9**	**+1.3**
	1.0nm,0.3s,baz=154,slow=18,SNR=2.9						
ZALV				Lg	Lg	02 35 49.1	
	2.5nm,0.3s,baz=148,slow=29,SNR=5.9						
MK31	**Makanchi Array**	**4.99**	**227**	⇑Pn	**Pn**	**02 34 57.3**	**+0.2**
	9.9nm,0.7s,baz=48,slow=13,SNR=153						
MK31				⇑Pg	**Pb**	**02 35 10.9**	**+1.4**
	3.0nm,0.5s,baz=45,slow=15,SNR=4.4						
MK31				Sn	**Sn**	**02 35 56.5**	**+1.5**
	0.9nm,0.2s,baz=45,slow=26,SNR=4.6						
MK31				⇑Lg	Lg	02 36 16.1	
	17nm,0.6s,baz=47,slow=32,SNR=6.1						
MKAR	**Makanchi Array**	**4.99**	**227**	Pn	**Pn**	**02 34 57.3**	**+0.1**
	2.1nm,0.3s,baz=48,slow=13,SNR=169						
MKAR				Sn	**Sn**	**02 35 55.1**	**+0.1**
	2.1nm,0.3s,baz=51,slow=26,SNR=7.3						
MKAR				Lg	Lg	02 36 16.4	
	4.3nm,0.3s,baz=47,slow=33,SNR=9.9						
KURK	**Kurchatov**	**5.74**	**277**	⇑Pn	**Pn**	**02 35 07.6**	**+0.3**
	3.6nm,0.7s						
KURK				⇓Sn	**Sn**	**02 36 16.2**	**+3.0**
	1.8nm,0.4s						
KURK				⇑Lg	Lg	02 36 44.2	
	22nm,1.0s						
KURBB	**Kurchatov Arra**	**5.79**	**276**	Pn	**Pn**	**02 35 08.6**	**+0.5**
	0.5nm,0.3s,baz=93,slow=14,SNR=44						
KURBB				Sn	**Sn**	**02 36 15.3**	**+0.7**
	0.2nm,0.3s,baz=87,slow=29,SNR=3.2						
KURBB				Lg	Lg	02 36 44.4	
	0.5nm,0.3s,baz=88,slow=29,SNR=8.9						
BVAR	**Borovoye Array**	**11.02**	**291**	Pn	**Pn**	**02 36 18.0**	**-1.7**
	0.5nm,0.3s,baz=101,slow=15,SNR=4.9						
BVAR				Sn	**Sn**	**02 38 19.3**	**-3.6**
	0.4nm,0.3s,baz=94,slow=22,SNR=3.6						
AAK	**Ala-Archa**	**11.85**	**234**	Pn	**Pn**	**02 36 30.7**	**-0.6**
	0.1nm,0.3s,baz=52,slow=12,SNR=2.7						
SONM	**Songino Array**	**12.58**	**94**	Pn	**Pn**	**02 36 40.9**	**-0.2**
	0.1nm,0.3s,baz=282,slow=7.2,SNR=2.5						
SONM				Lg	Lg	02 40 17.6	
	0.1nm,0.3s,baz=284,slow=37,SNR=4.7						
AKTO	**Aktyubinsk**	**18.81**	**282**	P	**P**	**02 38 01.2**	**-0.5**
	0.1nm,0.3s,baz=90,slow=11,SNR=5.7						

IDC 09 02:35:43.0±3.3, **14.18°S×71.29W, h100**km±86km, **mb2.9**/3, **mb1 3.2**/5, **mb1mx3.1**/21, **mbtmp3.0**/5, **ML3.3**/2, **MS3.0**/1, **Ms1 3.0**/1, **ms1mx2.4**/9, **Error ellipse: s-maj=252.3km s-min=11.1km az=27.0, Central Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.70**	**125**	P	Pn	02 36 39.6	+0.7
	0.8nm,0.3s,baz=302,slow=7.7,SNR=25						
LPAZ				S	Sn	02 37 22.4	+0.2
	0.4nm,0.3s,baz=194,slow=21,SNR=8.5						
NNA	**Nana**	**5.83**	**291**	P	Pn	02 37 08.7	+1.5
	2.0nm,0.3s,baz=114,slow=14,SNR=3.7						
NNA				S	Sn	02 38 10.3	-2.6
	4.9nm,0.3s,baz=212,slow=19,SNR=4.9						
SIV	**San Ignacio**	**10.03**	**102**	LR	LR	02 42 29.7	
	comp=Z,79nm,20.1s,slow=40						
TXAR	**Lajitas Array**	**53.37**	**324**	P	P	02 44 54.0	+1.4
	0.2nm,0.7s,baz=116,slow=6.1,SNR=2.7						
TORD	**Torodi Ar. Bea**	**77.20**	**73**	P	P	02 47 25.0	-1.6
	0.2nm,0.5s,baz=252,slow=4.7,SNR=9.6						
YKA	**Yellowknife Ar**	**83.57**	**341**	P	P	02 48 00.5	+0.9
	0.1nm,0.7s,baz=138,slow=5.2,SNR=5.1						

*ISCJB **09** 02:37:26.2±0.2, 42.51°N±0.02°×13.33°E±0.02°, h14km±2km, mb3.3/2, Error ellipse: s-maj=2.9km s-min=2.5km az=38.7*
*CSEM **09** 02:37:26.7±0.1, 42.50°N×13.32E, h5km, ML3.5/10, Error ellipse: s-maj=2.6km s-min=2.1km az=47.0*
*ROM **09** 02:37:26.6±0.1, 42.50°N×13.34E, h11km, Ml3.2/28, Error ellipse: s-maj=0.9km s-min=0.7km az=94.0*
*IDC **09** 02:37:26.3±1.4, 42.56°N×13.31E, h0km, mb3.2/2, mb1 3.2/5, mb1mx3.1/29, mbtmp3.1/5, ML3.0/2, Error ellipse: s-maj=21.6km s-min=15.7km az=85.0*
*LDG **09** 02:37:27.6±0.8, 42.40°N×13.35E, h2km, Ml2.8/9, Error ellipse: s-maj=16.3km s-min=12.1km az=105.0*
ISC 09 02:37:27.1±0.7, **42.51°N**±0.02°×**13.33°E**±0.02°, **h12**km±4km, **n120**, σ**1.21**/162, **1D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.06**	**61**	Pg	**Pg**	**02 37 29.3**	**-0.4**
CAMP				Sg	**Sg**	**02 37 30.8**	**-0.7**
	37µm,0.5s						
CAMP	**Campotosto**	**0.06**	**61**	Pg	**Pg**	**02 37 29.3**	**-0.4**
CAMP				Sg	**Sg**	**02 37 30.8**	**-0.7**
	37µm,0.5s						
AQU	**L'Aquila**	**0.16**	**162**	Pg	**Pg**	**02 37 30.6**	**-0.2**
AQU				Sg	**Sg**	**02 37 32.8**	**-0.6**
	12µm,0.7s						
AQU	**L'Aquila**	**0.16**	**162**	Pg	**Pg**	**02 37 30.6**	**-0.2**
AQU				Sg	**Sg**	**02 37 32.8**	**-0.6**
	12µm,0.7s						
TERO	**Teramo**	**0.23**	**59**	Pg	**Pg**	**02 37 31.6**	**-0.4**
TERO				Sg	**Sg**	**02 37 35.1**	**-0.2**
	10µm,0.3s						
TERO	**Teramo**	**0.23**	**59**	Pg	**Pg**	**02 37 31.6**	**-0.4**
TERO				Sg	**Sg**	**02 37 35.1**	**-0.2**
	10µm,0.3s						
LNSS	**Leonessa**	**0.24**	**294**	Pg	**Pg**	**02 37 32.2**	**0.0**
LNSS				Sg	**Sg**	**02 37 36.5**	**+0.9**
	6µm,0.5s						
LNSS	**Leonessa**	**0.24**	**294**	Pg	**Pg**	**02 37 32.2**	**0.0**
LNSS				Sg	**Sg**	**02 37 36.5**	**+0.9**
	6µm,0.5s						
FIAM	**Fiamignano**	**0.29**	**214**	Pg	**Pg**	**02 37 32.8**	**-0.2**
FIAM				Sg	**Sg**	**02 37 37.7**	**+0.7**
FIAM	**Fiamignano**	**0.29**	**214**	Pg	**Pg**	**02 37 32.8**	**-0.2**
FIAM				Sg	**Sg**	**02 37 37.7**	**+0.7**
FAGN	**Fagnano**	**0.30**	**142**	Pg	**Pg**	**02 37 32.9**	**-0.4**
FAGN				Sg	**Sg**	**02 37 37.7**	**+0.3**
FAGN	**Fagnano**	**0.30**	**142**	Pg	**Pg**	**02 37 32.9**	**-0.4**
FAGN				Sg	**Sg**	**02 37 37.7**	**+0.3**
NRCA	**Norcia**	**0.37**	**334**	Pg	**Pb**	**02 37 34.3**	**-1.4**
NRCA				Sg	**Sb**	**02 37 40.1**	**-1.3**
NRCA	**Norcia**	**0.37**	**334**	Pg	**Pb**	**02 37 34.3**	**-1.4**
NRCA				Sg	**Sb**	**02 37 40.1**	**-1.3**
VCEL	**Villa Celiera**	**0.39**	**106**	Pg	**Pg**	**02 37 34.4**	**-0.5**
VCEL				Sg	**Sb**	**02 37 41.0**	**-1.1**
	7µm,0.4s						
VCEL	**Villa Celiera**	**0.39**	**106**	Pg	**Pg**	**02 37 34.4**	**-0.5**
VCEL				Sg	**Sb**	**02 37 41.0**	**-1.1**
	7µm,0.4s						
PTQR	**Pietraquaria**	**0.49**	**174**	Pg	**Pg**	**02 37 35.9**	**-0.8**
PTQR				Sg	**Sg**	**02 37 43.7**	**+0.6**
PTQR	**Pietraquaria**	**0.49**	**174**	Pg	**Pg**	**02 37 35.9**	**-0.8**
PTQR				Sg	**Sg**	**02 37 43.7**	**+0.6**
MNS	**Montasola**	**0.50**	**256**	Pg	**Pg**	**02 37 36.4**	**-0.5**
MNS				Sg	**Sg**	**02 37 44.0**	**+0.5**
	1µm,0.6s						
MNS	**Montasola**	**0.50**	**256**	Pg	**Pg**	**02 37 36.4**	**-0.5**
MNS				Sg	**Sg**	**02 37 44.0**	**+0.5**
	1µm,0.6s						
OFFI	**Offida**	**0.50**	**31**	Pg	**Pb**	**02 37 37.4**	**-0.5**
OFFI	**Offida**	**0.50**	**31**	Pg	**Pb**	**02 37 37.4**	**-0.5**
TRTR	**Tortoreto Alta**	**0.52**	**55**	Pg	**Pb**	**02 37 37.9**	**-0.4**
TRTR	**Tortoreto Alta**	**0.52**	**55**	Pg	**Pb**	**02 37 37.9**	**-0.4**
FDMO	**Fiordimonte**	**0.56**	**341**	Pg	**Pg**	**02 37 37.6**	**-0.5**
FDMO				Sg	**Sb**	**02 37 46.2**	**-0.8**
	757nm,0.3s						
FDMO	**Fiordimonte**	**0.56**	**341**	Pg	**Pg**	**02 37 37.6**	**-0.5**
FDMO				Sg	**Sb**	**02 37 46.2**	**-0.8**
	757nm,0.3s						
CESX	**Cesi**	**0.57**	**281**	Pg	**Pg**	**02 37 37.6**	**-0.6**
	630nm,0.3s						
CESX	**Cesi**	**0.57**	**281**	Pg	**Pg**	**02 37 37.6**	**-0.6**
	630nm,0.3s						
CESI	**CESI - Serrava**	**0.59**	**328**	Pg	**Pg**	**02 37 38.2**	**-0.5**
CESI	**CESI - Serrava**	**0.59**	**328**	Pg	**Pg**	**02 37 38.2**	**-0.5**
CERT	**Cerreto**	**0.61**	**205**	Pg	**Pg**	**02 37 38.2**	**-0.9**
	2µm,0.5s						
CERT	**Cerreto**	**0.61**	**205**	Pg	**Pg**	**02 37 38.2**	**-0.9**
	2µm,0.5s						
INTR	**Introdacqua**	**0.65**	**139**	Pg	**Pg**	**02 37 38.9**	**-0.9**
	1µm,0.3s						
INTR	**Introdacqua**	**0.65**	**139**	Pg	**Pg**	**02 37 38.9**	**-0.9**
	1µm,0.3s						
MTCE	**Montecelio**	**0.65**	**223**	Pg	**Pg**	**02 37 38.9**	**-0.9**
	589nm,0.7s						
MTCE	**Montecelio**	**0.65**	**223**	Pg	**Pg**	**02 37 38.9**	**-0.9**
	589nm,0.7s						
VVLD	**Villa Vallelon**	**0.67**	**161**	Pg	**Pg**	**02 37 39.8**	**-0.3**
	850nm,0.6s						

VVLD	**Villa Vallelon**	**0.67**	**161**	Pg	**Pg**	**02 37 39.8**	**-0.3**
	850nm,0.6s						
GUAR	**Guarcino**	**0.71**	**181**	Pg	**Pg**	**02 37 39.9**	**-1.0**
	617nm,0.6s						
GUAR	**Guarcino**	**0.71**	**181**	Pg	**Pg**	**02 37 39.9**	**-1.0**
	617nm,0.6s						
ASSB	**Assisi San Ben**	**0.73**	**317**	Pg	**Pg**	**02 37 40.6**	**-0.7**
	390nm,0.3s						
ASSB	**Assisi San Ben**	**0.73**	**317**	Pg	**Pg**	**02 37 40.6**	**-0.7**
	390nm,0.3s						
CAFR	**Castel Frentan**	**0.80**	**110**	Pg	**Pg**	**02 37 41.6**	**-1.0**
	1μm,0.5s						
CAFR	**Castel Frentan**	**0.80**	**110**	Pg	**Pg**	**02 37 41.6**	**-1.0**
	1μm,0.5s						
POFI	**Posta Fibreno**	**0.84**	**160**	Pg	**Pg**	**02 37 42.4**	**-0.9**
	355nm,0.5s						
POFI	**Posta Fibreno**	**0.84**	**160**	Pg	**Pg**	**02 37 42.4**	**-0.9**
	355nm,0.5s						
CING	**Cingoli**	**0.88**	**353**	Pg	**Pg**	**02 37 43.1**	**-0.9**
	658nm,0.2s						
CING	**Cingoli**	**0.88**	**353**	Pg	**Pg**	**02 37 43.1**	**-0.9**
	658nm,0.2s						
RDP	**Rocca di Papa**	**0.88**	**212**	Pg	**Pg**	**02 37 42.7**	**-1.3**
	962nm,0.4s						
RDP	**Rocca di Papa**	**0.88**	**212**	Pg	**Pg**	**02 37 42.7**	**-1.3**
	962nm,0.4s						
GIUL	**Giuliano Di Ro**	**0.95**	**184**	Pg	**Pg**	**02 37 43.9**	**-1.5**
	379nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.95**	**184**	Pg	**Pg**	**02 37 43.9**	**-1.5**
	379nm,0.6s						
MGAB	**Montegabbione**	**0.99**	**295**	Pg	**Pg**	**02 37 45.4**	**-0.8**
	397nm,0.5s						
MGAB	**Montegabbione**	**0.99**	**295**	Pg	**Pg**	**02 37 45.4**	**-0.8**
	397nm,0.5s						
ARVD	**Arcevia**	**1.03**	**344**	Pg	**Pg**	**02 37 45.8**	**-1.2**
	402nm,0.6s						
ARVD	**Arcevia**	**1.03**	**344**	Pg	**Pg**	**02 37 45.8**	**-1.2**
	402nm,0.6s						
CERA	**Filignano**	**1.04**	**150**	Pg	**Pg**	**02 37 45.1**	**-2.0**
	596nm,0.7s						
CERA	**Filignano**	**1.04**	**150**	Pg	**Pg**	**02 37 45.1**	**-2.0**
	596nm,0.7s						
AOI	**Ancona**	**1.06**	**11**	Pg	**Pb**	**02 37 46.7**	**-0.8**
	336nm,0.3s						
AOI	**Ancona**	**1.06**	**11**	Pg	**Pb**	**02 37 46.7**	**-0.8**
	336nm,0.3s						
TOLF	**Tolfa**	**1.08**	**246**	Pg	**Pg**	**02 37 46.7**	**-1.3**
	513nm,0.9s						
TOLF	**Tolfa**	**1.08**	**246**	Pg	**Pg**	**02 37 46.7**	**-1.3**
	513nm,0.9s						
MIDA	**Miranda**	**1.10**	**141**	Pg	**Pg**	**02 37 46.1**	**-2.2**
MIDA	**Miranda**	**1.10**	**141**	Pg	**Pg**	**02 37 46.1**	**-2.2**
SACS	**San Casciano d**	**1.10**	**289**	Pg	**Pg**	**02 37 47.5**	**-0.9**
	363nm,1.0s						
PIEI	**Pieia**	**1.19**	**331**	Pn	**Pg**	**02 37 48.7**	**-1.2**
	243nm,0.3s						
PIEI	**Pieia**	**1.19**	**331**	Pn	**Pg**	**02 37 48.7**	**-1.2**
	243nm,0.3s						
PARC	**Parchiule**	**1.40**	**325**	Pn	**Pg**	**02 37 53.0**	**-0.9**
	1μm,1.7s						
PARC	**Parchiule**	**1.40**	**325**	Pn	**Pg**	**02 37 53.0**	**-0.9**
	1μm,1.7s						
PESA	**Pesaro**	**1.48**	**346**	Pn	**Pg**	**02 37 54.8**	**-0.7**
	443nm,0.6s						
PESA	**Pesaro**	**1.48**	**346**	Pn	**Pg**	**02 37 54.8**	**-0.7**
	443nm,0.6s						
MAON	**Monte Argentar**	**1.63**	**268**	Pn	**Pn**	**02 37 55.4**	**-0.3**
	44nm,0.6s						
MAON	**Monte Argentar**	**1.63**	**268**	Pn	**Pn**	**02 37 55.4**	**-0.3**
	44nm,0.6s						
MS1	**Monte Sant'Ang**	**2.10**	**112**	*e*Pn	**Pb**	**02 38 04.9**	**-0.3**
NVLJ	**Novalja**	**2.34**	**28**	*i* Pn	**Pn**	**02 38 05.6**	**+0.1**
NVLJ				Sn	**Sn**	**02 38 34.6**	**+0.4**
NVLJ	**Novalja**	**2.34**	**28**	*i* Pn	**Pn**	**02 38 05.5**	**+0.1**
NVLJ				Sn	**Sn**	**02 38 34.5**	**+0.4**
MAIM	**Mastiano**	**2.51**	**305**	P	**Pn**	**02 38 07.7**	**-0.1**
CDT	**Castel del Mon**	**2.62**	**122**	*e*Pn	**Pb**	**02 38 11.5**	**-2.5**
CDT				*e*Sn	**Sb**	**02 38 44.7**	**-1.4**
BAI	**Bari**	**3.00**	**117**	*e*Pn	**Pn**	**02 38 16.0**	**+1.6**
BAI				*e*Sn	**Sn**	**02 38 53.4**	**+3.1**
SKDS	**Skadanscina**	**3.08**	**9**	*i* Pn	**Pn**	**02 38 15.3**	**-0.3**
SKDS				*i* Sn	**Sn**	**02 38 52.9**	**+0.5**
SKDS							
	comp=Z,15nm,0.3s						
SKDS	**Skadanscina**	**3.08**	**9**	Pn	**Pn**	**02 38 15.3**	**-0.3**
SKDS				*i* Sn	**Sn**	**02 38 52.9**	**+0.5**
	comp=Z,15nm,0.3s						
PGF	**Pioggiola**	**3.20**	**272**	*e*Pn	**Pn**	**02 38 18.1**	**+0.7**
PGF				*e*Sn	**Sn**	**02 38 58.3**	**+2.7**
	comp=Z,2.5nm,0.4s						
PGF	**Pioggiola**	**3.20**	**272**	*e*Pn	**Pn**	**02 38 18.1**	**+0.7**
PGF				*e*Sn	**Sn**	**02 38 58.3**	**+2.7**
	comp=Z,1.2nm,0.4s						
STON	**Ston**	**3.24**	**82**	*e*Pn	**Pn**	**02 38 18.5**	**+0.7**
STON				Sn	**Sn**	**02 38 57.0**	**+0.7**
STON	**Ston**	**3.24**	**82**	*e*Pn	**Pn**	**02 38 18.5**	**+0.7**
STON				Sn	**Sn**	**02 38 56.9**	**+0.7**
ROBS	**Robic**	**3.74**	**2**	*i* Sn	**Sn**	**02 39 08.2**	**-0.5**
ROBS	**Robic**	**3.74**	**2**	*i* Sn	**Sn**	**02 39 08.2**	**-0.5**
ABTA	**Abfaltersbach**	**4.28**	**352**	⇓*i*Pn	**Pn**	**02 38 32.2**	**0.0**
ABTA	**Abfaltersbach**	**4.28**	**352**	Pn	**Pn**	**02 38 32.2**	**0.0**
SBF	**Sospel**	**4.52**	**289**	*e*Pn	**Pn**	**02 38 36.6**	**+1.1**
SBF				*e*Sn	**Sn**	**02 39 26.6**	**-1.5**
	comp=Z,5.4nm,0.6s						
SBF	**Sospel**	**4.52**	**289**	*e*Pn	**Pn**	**02 38 36.6**	**+1.1**
SBF				*e*Sn	**Sn**	**02 39 26.6**	**-1.5**
	comp=Z,2.7nm,0.6s						
DAVOX	**Davos/Dischmat**	**4.93**	**331**	Pn	**Pn**	**02 38 42.8**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=159,slow=18,SNR=4.3						
DAVOX				Sn	**Sn**	**02 39 39.6**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=341,slow=18,SNR=3.2						
FRF	**La Foret Royal**	**5.01**	**284**	*e*Pn	**Pn**	**02 38 42.9**	**+0.7**
FRF				*e*Sn	**Sn**	**02 39 37.7**	**-2.4**
	comp=Z,2.3nm,0.5s						
FRF	**La Foret Royal**	**5.01**	**284**	*e*Pn	**Pn**	**02 38 42.9**	**+0.7**
FRF				*e*Sn	**Sn**	**02 39 37.7**	**-2.4**
	comp=Z,1.1nm,0.5s						
LMR	**La Mourre**	**5.08**	**282**	*e*Pn	**Pn**	**02 38 43.4**	**+0.3**
LMR				*e*Sn	**Sn**	**02 39 39.3**	**-2.4**
	comp=Z,0.8nm,0.4s						
LMR	**La Mourre**	**5.08**	**282**	*e*Pn	**Pn**	**02 38 43.4**	**+0.3**
LMR				*e*Sn	**Sn**	**02 39 39.3**	**-2.4**
	comp=Z,0.4nm,0.4s						
IVAS	**Ivanjica**	**5.11**	**76**	*e*Pn	**Pn**	**02 38 43.2**	**-0.4**
DIVS	**Divibare**	**5.11**	**70**	*e*Pn	**Pn**	**02 38 43.4**	**-0.2**
MBDF	**Montbardon**	**5.26**	**297**	*e*P	**Pn**	**02 38 48.7**	**+3.0**
MBDF	**Montbardon**	**5.26**	**297**	*e*P	**Pn**	**02 38 48.7**	**+3.0**
GRUS	**Gruza**	**5.57**	**73**	*e*Pn	**Pn**	**02 38 49.4**	**-0.4**
LPG	**La Plagne**	**5.61**	**304**	*e*P	Pn	02 38 54.6	+3.9
LPG				*e*Sn	**Sn**	**02 39 53.7**	**-1.5**
	comp=Z,1.3nm,0.3s						
LPL	**La Plagne**	**5.63**	**305**	*e*P	Pn	02 38 54.7	+3.8
LPL				*e*Sn	**Sn**	**02 39 52.9**	**-2.7**
	comp=Z,1.0nm,0.3s						
SMRF	**Simiane la Rot**	**5.86**	**287**	*e*P	**Pn**	**02 38 56.1**	**+2.3**
SMRF	**Simiane la Rot**	**5.86**	**287**	*e*P	**Pn**	**02 38 56.1**	**+2.3**
BARS	**Barje**	**6.26**	**84**	*e*Pn	**Pn**	**02 39 00.9**	**+1.6**
GERES	**GERESS Array B**	**6.35**	**2**	Pn	**Pn**	**02 39 00.7**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=175,slow=12,SNR=4.3						
GERES				Sn	**Sn**	**02 40 11.9**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=178,slow=25,SNR=6.0						
KHC	**Kasperske Hory**	**6.63**	**1**	*e*PN	Pb	02 39 15.0	-7.3
KHC				*e*SN	**Sn**	**02 40 19.0**	**-0.9**
ZAPS	**Zavoj**	**6.87**	**80**	*e*Pn	**Pn**	**02 39 10.2**	**+2.4**
HINF	**Hinteralfeld**	**7.01**	**321**	*e*Pn	**Pn**	**02 39 10.6**	**+0.9**
HINF				*e*Sn	**Sn**	**02 40 27.2**	**-2.1**
	comp=Z,6.8nm,0.5s						
HINF	**Hinteralfeld**	**7.01**	**321**	*e*Pn	**Pn**	**02 39 10.6**	**+0.9**
CDF	**Champ du Feu**	**7.28**	**326**	*e*Pn	**Pn**	**02 39 13.9**	**+0.5**
CDF				*e*Sn	**Sn**	**02 40 34.1**	**-1.9**
	comp=Z,3.6nm,0.5s						
CDF	**Champ du Feu**	**7.28**	**326**	*e*Pn	**Pn**	**02 39 13.9**	**+0.5**
VTS	**Vitosha**	**7.29**	**86**	*e*Pn	**Pn**	**02 39 13.9**	**+0.3**
HAU	**Haudompre**	**7.38**	**321**	*e*Pn	**Pn**	**02 39 16.0**	**+1.3**
HAU				*e*Sn	**Sn**	**02 40 34.7**	**-3.7**
	comp=Z,3.1nm,0.3s						
HAU	**Haudompre**	**7.38**	**321**	*e*Pn	**Pn**	**02 39 16.0**	**+1.3**
KEST	**Kesra**	**7.44**	**206**	Pn	Pn	02 39 20.5	+4.9
	comp=Z,0.1nm,0.3s,baz=87,slow=19,SNR=6.1						
MLR	**Muntele Rosu**	**9.57**	**68**	Pn	**Pn**	**02 39 46.6**	**+1.8**
	baz=267,slow=19						
TORD	**Torodi Ar. Bea**	**30.94**	**202**	P	**P**	**02 43 45.0**	**+1.0**
	comp=Z,0.5nm,1.1s,baz=16,slow=9.9,SNR=2.8						
MKAR	**Makanchi Array**	**47.81**	**60**	P	**P**	**02 46 05.0**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=280,slow=8.6,SNR=2.3						

*CSEM **09** 02:45:44.2, 42°.27N×13°.60E, h10km, After ROM*
ROM 09 02:45:44.2±0.1**, 42°.27N×13°.60E, h10**km**, Ml2.1**/15**, Error ellipse: s-maj=1.3km s-min=1.0km az=37.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.01**	**266**	Pg	Pg	02 45 45.8	-0.2
FAGN				Sg	Sg	02 45 46.8	-0.5
	18μm,0.5s						
FAGN	**Fagnano**	**0.01**	**266**	Pg	Pg	02 45 45.8	-0.2
FAGN				Sg	Sg	02 45 46.8	-0.5
	18μm,0.5s						
AQU	**L'Aquila**	**0.17**	**300**	Pg	Pg	02 45 48.8	+0.8
AQU				Sg	Sg	02 45 51.8	+1.2
	1μm,0.7s						
AQU	**L'Aquila**	**0.17**	**300**	Pg	Pg	02 45 48.8	+0.8
AQU				Sg	Sg	02 45 51.8	+1.2
	1μm,0.7s						
VCEL	**Villa Celiera**	**0.22**	**54**	Pg	Pg	02 45 50.0	+1.1
VCEL				Sg	Sg	02 45 53.3	+1.2
	581nm,0.4s						
VCEL	**Villa Celiera**	**0.22**	**54**	Pg	Pg	02 45 50.0	+1.1
VCEL				Sg	Sg	02 45 53.3	+1.2
	581nm,0.4s						
PTQR	**Pietraquaria**	**0.29**	**212**	Pg	Pg	02 45 50.8	+0.7
PTQR				Sg	Sb	02 45 55.7	-0.9
	46nm,0.4s						
PTQR	**Pietraquaria**	**0.29**	**212**	Pg	Pg	02 45 50.8	+0.7
PTQR				Sg	Sb	02 45 55.7	-0.9
	46nm,0.4s						
CAMP	**Campotosto**	**0.30**	**332**	Pg	Pg	02 45 50.9	+0.4
CAMP				Sg	Sg	02 45 55.5	+0.7
	144nm,0.6s						
CAMP	**Campotosto**	**0.30**	**332**	Pg	Pg	02 45 50.9	+0.4
CAMP				Sg	Sg	02 45 55.5	+0.7
	144nm,0.6s						
INTR	**Introdacqua**	**0.34**	**139**	Pg	Pb	02 45 51.9	-0.6
INTR				Sg	Sb	02 45 57.6	-0.5
	237nm,0.5s						
INTR	**Introdacqua**	**0.34**	**139**	Pg	Pb	02 45 51.9	-0.6
INTR				Sg	Sb	02 45 57.6	-0.5
	237nm,0.5s						
TERO	**Teramo**	**0.36**	**0**	Pg	Pg	02 45 51.4	0.0
	184nm,0.6s						
TERO	**Teramo**	**0.36**	**0**	Pg	Pg	02 45 51.4	0.0
	184nm,0.6s						
FIAM	**Fiamignano**	**0.36**	**270**	Pg	Pg	02 45 51.9	+0.4
FIAM				Sg	Sb	02 45 57.7	-1.1
	241nm,0.6s						
FIAM	**Fiamignano**	**0.36**	**270**	Pg	Pg	02 45 51.9	+0.4
FIAM				Sg	Sb	02 45 57.7	-1.1
	241nm,0.6s						
VVLD	**Villa Vallelon**	**0.40**	**178**	Pg	Pg	02 45 52.7	+0.6
	156nm,0.5s						
VVLD	**Villa Vallelon**	**0.40**	**178**	Pg	Pg	02 45 52.7	+0.6
	156nm,0.5s						
GUAR	**Guarcino**	**0.52**	**205**	Pg	Pg	02 45 54.7	+0.3
	83nm,0.3s						
GUAR	**Guarcino**	**0.52**	**205**	Pg	Pg	02 45 54.7	+0.3
	83nm,0.3s						
LNSS	**Leonessa**	**0.54**	**309**	Pg	Pb	02 45 55.6	-0.3
LNSS	**Leonessa**	**0.54**	**309**	Pg	Pb	02 45 55.6	-0.3
POFI	**Posta Fibreno**	**0.56**	**172**	Pg	Pg	02 45 55.4	+0.3
	40nm,0.5s						
POFI	**Posta Fibreno**	**0.56**	**172**	Pg	Pg	02 45 55.4	+0.3
	40nm,0.5s						
CERT	**Cerreto**	**0.56**	**236**	Pg	Pg	02 45 55.2	0.0
	163nm,0.4s						
CERT	**Cerreto**	**0.56**	**236**	Pg	Pg	02 45 55.2	0.0
	163nm,0.4s						
SDI	**San Donato**	**0.58**	**164**	Pg	Pg	02 45 55.7	+0.2
	37nm,0.3s						
SDI	**San Donato**	**0.58**	**164**	Pg	Pg	02 45 55.7	+0.2
	37nm,0.3s						
NRCA	**Norcia**	**0.67**	**328**	Pg	Pg	02 45 57.3	0.0
NRCA				Sg	Sb	02 46 07.4	-0.3
NRCA	**Norcia**	**0.67**	**328**	Pg	Pg	02 45 57.3	0.0
NRCA				Sg	Sb	02 46 07.4	-0.3
MTCE	**Montecelio**	**0.69**	**249**	Pg	Pb	02 45 58.6	+0.3
	49nm,0.4s						
MTCE	**Montecelio**	**0.69**	**249**	Pg	Pb	02 45 58.6	+0.3
	49nm,0.4s						
MNS	**Montasola**	**0.69**	**280**	Pg	Pg	02 45 57.6	-0.1
	223nm,0.5s						
MNS	**Montasola**	**0.69**	**280**	Pg	Pg	02 45 57.6	-0.1
	223nm,0.5s						
CERA	**Filignano**	**0.74**	**155**	Pg	Pg	02 45 58.3	-0.2
	56nm,0.5s						
CERA	**Filignano**	**0.74**	**155**	Pg	Pg	02 45 58.3	-0.2
	56nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.75**	**200**	Pg	Pg	02 45 58.6	-0.2
	38nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.75**	**200**	Pg	Pg	02 45 58.6	-0.2
	38nm,0.5s						
MIDA	**Miranda**	**0.79**	**142**	Pg	Pg	02 45 59.6	0.0
	42nm,0.8s						
MIDA	**Miranda**	**0.79**	**142**	Pg	Pg	02 45 59.6	0.0
	42nm,0.8s						
FDMO	**Fiordimonte**	**0.86**	**334**	Pg	Pg	02 46 00.2	-0.6
FDMO	**Fiordimonte**	**0.86**	**334**	Pg	Pg	02 46 00.2	-0.6
CESI	**CESI - Serrava**	**0.90**	**325**	Pg	Pg	02 46 01.1	-0.6
CESI	**CESI - Serrava**	**0.90**	**325**	Pg	Pg	02 46 01.1	-0.6

*CSEM **09** 02:46:09.8, 42°.52N×13°.36E, h9km, After ROM*
ROM 09 02:46:09.8±0.1**, 42°.52N×13°.36E, h9**km**, Ml2.5**/16**, Error ellipse: s-maj=1.1km s-min=0.8km az=87.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.04**	**62**	Pg	Pg	02 46 12.2	+0.4
CAMP				Sg	Sg	02 46 13.5	+0.2
	144nm,0.6s						
CAMP	**Campotosto**	**0.04**	**62**	Pg	Pg	02 46 12.2	+0.4
CAMP				Sg	Sg	02 46 13.5	+0.2
	144nm,0.6s						
AQU	**L'Aquila**	**0.16**	**168**	Pg	Pg	02 46 13.9	+0.5
AQU				Sg	Sg	02 46 16.8	+0.9
	1μm,0.7s						
AQU	**L'Aquila**	**0.16**	**168**	Pg	Pg	02 46 13.9	+0.5
AQU				Sg	Sg	02 46 16.8	+0.9
	1μm,0.7s						
TERO	**Teramo**	**0.21**	**59**	Pg	Pg	02 46 14.6	+0.3
TERO				Sg	Sg	02 46 17.8	+0.5
	184nm,0.6s						
TERO	**Teramo**	**0.21**	**59**	Pg	Pg	02 46 14.6	+0.3
TERO				Sg	Sg	02 46 17.8	+0.5
	184nm,0.6s						
LNSS	**Leonessa**	**0.25**	**291**	Pg	Pg	02 46 15.6	+0.6
LNSS				Sg	Sg	02 46 19.9	+1.3
	826nm,0.3s						
LNSS	**Leonessa**	**0.25**	**291**	Pg	Pg	02 46 15.6	+0.6
LNSS				Sg	Sg	02 46 19.9	+1.3
	826nm,0.3s						
FAGN	**Fagnano**	**0.30**	**146**	Pg	Pb	02 46 17.3	-0.1
	19μm,0.4s						
FAGN	**Fagnano**	**0.30**	**146**	Pg	Pb	02 46 17.3	-0.1
	19μm,0.4s						
FIAM	**Fiamignano**	**0.30**	**216**	Pg	Pg	02 46 16.5	+0.5
FIAM				Sg	Sg	02 46 20.7	+0.5
	241nm,0.6s						
FIAM	**Fiamignano**	**0.30**	**216**	Pg	Pg	02 46 16.5	+0.5
FIAM				Sg	Sg	02 46 20.7	+0.5
	241nm,0.6s						
NRCA	**Norcia**	**0.36**	**331**	Pg	Pg	02 46 17.5	+0.3
NRCA				Sg	Sg	02 46 23.3	+1.2
	790nm,0.1s						
NRCA	**Norcia**	**0.36**	**331**	Pg	Pg	02 46 17.5	+0.3
NRCA				Sg	Sg	02 46 23.3	+1.2
	790nm,0.1s						
VCEL	**Villa Celiera**	**0.38**	**108**	Pg	Pb	02 46 18.4	-0.4
VCEL				Sg	Sg	02 46 23.3	+0.8
	581nm,0.4s						
VCEL	**Villa Celiera**	**0.38**	**108**	Pg	Pb	02 46 18.4	-0.4
VCEL				Sg	Sg	02 46 23.3	+0.8
	581nm,0.4s						
OFFI	**Offida**	**0.48**	**30**	Pg	Pb	02 46 20.5	0.0
OFFI	**Offida**	**0.48**	**30**	Pg	Pb	02 46 20.5	0.0
PTQR	**Pietraquaria**	**0.49**	**176**	Pg	Pg	02 46 19.3	-0.2
	46nm,0.4s						
PTQR	**Pietraquaria**	**0.49**	**176**	Pg	Pg	02 46 19.3	-0.2
	46nm,0.4s						
MNS	**Montasola**	**0.52**	**256**	Pg	Pg	02 46 19.9	0.0
MNS				Sg	Sg	02 46 27.5	+0.7
	223nm,0.5s						
MNS	**Montasola**	**0.52**	**256**	Pg	Pg	02 46 19.9	0.0
MNS				Sg	Sg	02 46 27.5	+0.7
	223nm,0.5s						
FDMO	**Fiordimonte**	**0.56**	**339**	Pg	Pg	02 46 20.7	0.0
FDMO				Sg	Sb	02 46 29.5	-0.5
FDMO	**Fiordimonte**	**0.56**	**339**	Pg	Pg	02 46 20.7	0.0
FDMO				Sg	Sb	02 46 29.5	-0.5
CESX	**Cesi**	**0.58**	**280**	Pg	Pg	02 46 21.2	+0.1
CESX				Sg	Sb	02 46 30.0	-0.6
CESX	**Cesi**	**0.58**	**280**	Pg	Pg	02 46 21.2	+0.1
CESX				Sg	Sb	02 46 30.0	-0.6
CESI	**CESI - Serrava**	**0.59**	**326**	Pg	Pg	02 46 21.6	+0.2
CESI				Sg	Sb	02 46 30.4	-0.6
	67nm,0.3s						
CESI	**CESI - Serrava**	**0.59**	**326**	Pg	Pg	02 46 21.6	+0.2
CESI				Sg	Sb	02 46 30.4	-0.6
	67nm,0.3s						
CERT	**Cerreto**	**0.63**	**206**	Pg	Pg	02 46 22.1	0.0
	163nm,0.4s						
CERT	**Cerreto**	**0.63**	**206**	Pg	Pg	02 46 22.1	0.0
	163nm,0.4s						
INTR	**Introdacqua**	**0.65**	**141**	Pg	Pg	02 46 22.2	-0.2
INTR				Sg	Sb	02 46 31.8	-0.8
	237nm,0.5s						
INTR	**Introdacqua**	**0.65**	**141**	Pg	Pg	02 46 22.2	-0.2
INTR				Sg	Sb	02 46 31.8	-0.8
	237nm,0.5s						
MTCE	**Montecelio**	**0.67**	**223**	Pg	Pb	02 46 23.5	-0.2
	49nm,0.4s						
MTCE	**Montecelio**	**0.67**	**223**	Pg	Pb	02 46 23.5	-0.2
	49nm,0.4s						
VVLD	**Villa Vallelon**	**0.67**	**163**	Pg	Pb	02 46 23.8	0.0
	156nm,0.5s						
VVLD	**Villa Vallelon**	**0.67**	**163**	Pg	Pb	02 46 23.8	0.0
	156nm,0.5s						
ASSB	**Assisi San Ben**	**0.74**	**316**	Pg	Pg	02 46 24.2	+0.1
ASSB				Sg	Sb	02 46 35.2	+0.1
ASSB	**Assisi San Ben**	**0.74**	**316**	Pg	Pg	02 46 24.2	+0.1
ASSB				Sg	Sb	02 46 35.2	+0.1
CING	**Cingoli**	**0.87**	**352**	Pg	Pg	02 46 26.2	-0.4
CING	**Cingoli**	**0.87**	**352**	Pg	Pg	02 46 26.2	-0.4
GIUL	**Giuliano Di Ro**	**0.96**	**185**	Pg	Pg	02 46 28.2	-0.1
	38nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.96**	**185**	Pg	Pg	02 46 28.2	-0.1
	38nm,0.5s						
MGAB	**Montegabbione**	**1.00**	**294**	Pg	Pg	02 46 29.2	+0.1
MGAB	**Montegabbione**	**1.00**	**294**	Pg	Pg	02 46 29.2	+0.1
FSSB	**Fossombrone**	**1.25**	**340**	Pg	Pn	02 46 33.4	-0.1
	101nm,0.3s						
FSSB	**Fossombrone**	**1.25**	**340**	Pg	Pn	02 46 33.4	-0.1
	101nm,0.3s						

*CSEM **09** 02:47:05.2, 42°.50N×13°.35E, h12km, After ROM*
ROM 09 02:47:05.2±0.1**, 42°.50N×13°.35E, h12**km±1km**, Ml1.6**/2**, Error ellipse: s-maj=0.9km s-min=0.8km az=112.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.05**	**49**	Pg	Pg	02 47 08.1	+0.3
CAMP				Sg	Sg	02 47 09.5	-0.1
CAMP	**Campotosto**	**0.05**	**49**	Pg	Pg	02 47 08.1	+0.3
CAMP				Sg	Sg	02 47 09.5	-0.1
AQU	**L'Aquila**	**0.15**	**166**	Pg	Pg	02 47 09.4	+0.5
AQU				Sg	Sg	02 47 11.7	+0.3
AQU	**L'Aquila**	**0.15**	**166**	Pg	Pg	02 47 09.4	+0.5
AQU				Sg	Sg	02 47 11.7	+0.3
TERO	**Teramo**	**0.22**	**56**	Pg	Pg	02 47 10.4	+0.4
TERO				Sg	Sg	02 47 14.0	+0.7
TERO	**Teramo**	**0.22**	**56**	Pg	Pg	02 47 10.4	+0.4
TERO				Sg	Sg	02 47 14.0	+0.7
LNSS	**Leonessa**	**0.25**	**294**	Pg	Pg	02 47 11.0	+0.3
LNSS				Sg	Sg	02 47 15.2	+0.8
LNSS	**Leonessa**	**0.25**	**294**	Pg	Pg	02 47 11.0	+0.3
LNSS				Sg	Sg	02 47 15.2	+0.8
FIAM	**Fiamignano**	**0.29**	**217**	Pg	Pg	02 47 11.6	+0.3
FIAM				Sg	Sg	02 47 15.2	-0.2
FIAM	**Fiamignano**	**0.29**	**217**	Pg	Pg	02 47 11.6	+0.3
FIAM				Sg	Sg	02 47 15.2	-0.2
VCEL	**Villa Celiera**	**0.38**	**106**	Pg	Pg	02 47 13.4	+0.5
VCEL	**Villa Celiera**	**0.38**	**106**	Pg	Pg	02 47 13.4	+0.5
NRCA	**Norcia**	**0.38**	**332**	Pg	Pg	02 47 13.1	+0.2
NRCA				Sg	Sg	02 47 18.9	+0.8
NRCA	**Norcia**	**0.38**	**332**	Pg	Pg	02 47 13.1	+0.2
NRCA				Sg	Sg	02 47 18.9	+0.8
MNS	**Montasola**	**0.51**	**257**	Pg	Pg	02 47 15.2	-0.1
MNS				Sg	Sg	02 47 22.9	+0.7
MNS	**Montasola**	**0.51**	**257**	Pg	Pg	02 47 15.2	-0.1
MNS				Sg	Sg	02 47 22.9	+0.7
FDMO	**Fiordimonte**	**0.57**	**340**	Pg	Pg	02 47 16.6	+0.1
FDMO				Sg	Sb	02 47 25.1	-0.3
FDMO	**Fiordimonte**	**0.57**	**340**	Pg	Pg	02 47 16.6	+0.1
FDMO				Sg	Sb	02 47 25.1	-0.3

*CSEM **09** 02:47:18.9±0.1, 42°.46N×13°.41E, h10km, Error ellipse: s-maj=2.4km s-min=1.9km az=67.0*
ROM 09 02:47:18.6±0.1**, 42°.45N×13°.44E, h9**km**, Ml2.9**/3**, Error ellipse: s-maj=1.1km s-min=0.8km az=86.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.09**	**343**	Pg	Pg	02 47 21.6	+0.5
CAMP				Sg	Sg	02 47 23.2	+0.4
CAMP	**Campotosto**	**0.09**	**343**	Pg	Pg	02 47 21.6	+0.5
CAMP				Sg	Sg	02 47 23.2	+0.4
AQU	**L'Aquila**	**0.10**	**197**	Pg	Pg	02 47 21.8	+0.6
AQU				Sg	Sg	02 47 23.8	+0.8
AQU	**L'Aquila**	**0.10**	**197**	Pg	Pg	02 47 21.8	+0.6
AQU				Sg	Sg	02 47 23.8	+0.8
TERO	**Teramo**	**0.21**	**35**	Pg	Pg	02 47 23.3	+0.3
TERO				Sg	Sg	02 47 26.6	+0.7
TERO	**Teramo**	**0.21**	**35**	Pg	Pg	02 47 23.3	+0.3
TERO				Sg	Sg	02 47 26.6	+0.7
FAGN	**Fagnano**	**0.21**	**151**	Pg	Pg	02 47 23.5	+0.5
FAGN				Sg	Sg	02 47 27.0	+0.9
FAGN	**Fagnano**	**0.21**	**151**	Pg	Pg	02 47 23.5	+0.5
FAGN				Sg	Sg	02 47 27.0	+0.9
VCEL	**Villa Celiera**	**0.30**	**101**	Pg	Pg	02 47 25.3	+0.6
VCEL				Sg	Sb	02 47 31.1	-0.5
VCEL	**Villa Celiera**	**0.30**	**101**	Pg	Pg	02 47 25.3	+0.6
VCEL				Sg	Sb	02 47 31.1	-0.5
FIAM	**Fiamignano**	**0.30**	**233**	Pg	Pg	02 47 25.0	+0.2
FIAM				Sg	Sg	02 47 29.8	+0.9
FIAM	**Fiamignano**	**0.30**	**233**	Pg	Pg	02 47 25.0	+0.2
FIAM				Sg	Sg	02 47 29.8	+0.9
LNSS	**Leonessa**	**0.33**	**297**	Pg	Pg	02 47 26.0	+0.6
LNSS				Sg	Sg	02 47 31.1	+1.1
LNSS	**Leonessa**	**0.33**	**297**	Pg	Pg	02 47 26.0	+0.6
LNSS				Sg	Sg	02 47 31.1	+1.1
PTQR	**Pietraquaria**	**0.43**	**184**	Pg	Pg	02 47 27.2	+0.1
PTQR				Sg	Sb	02 47 35.2	0.0
PTQR	**Pietraquaria**	**0.43**	**184**	Pg	Pg	02 47 27.2	+0.1
PTQR				Sg	Sb	02 47 35.2	0.0
NRCA	**Norcia**	**0.45**	**328**	Pg	Pg	02 47 27.8	+0.2
NRCA				Sg	Sb	02 47 34.8	-1.1
NRCA	**Norcia**	**0.45**	**328**	Pg	Pg	02 47 27.8	+0.2
NRCA				Sg	Sb	02 47 34.8	-1.1
TRTR	**Tortoreto Alta**	**0.50**	**44**	Pg	Pb	02 47 29.7	+0.1
TRTR	**Tortoreto Alta**	**0.50**	**44**	Pg	Pb	02 47 29.7	+0.1
INTR	**Introdacqua**	**0.56**	**142**	Pg	Pg	02 47 29.6	+0.1
INTR				Sg	Sb	02 47 38.2	-0.7
INTR	**Introdacqua**	**0.56**	**142**	Pg	Pg	02 47 29.6	+0.1
INTR				Sg	Sb	02 47 38.2	-0.7
MNS	**Montasola**	**0.57**	**263**	Pg	Pg	02 47 29.7	0.0
MNS	**Montasola**	**0.57**	**263**	Pg	Pg	02 47 29.7	0.0
VVLD	**Villa Vallelon**	**0.60**	**167**	Pg	Pg	02 47 30.5	+0.2
VVLD	**Villa Vallelon**	**0.60**	**167**	Pg	Pg	02 47 30.5	+0.2
CERT	**Cerreto**	**0.61**	**214**	Pg	Pg	02 47 30.6	+0.1
CERT	**Cerreto**	**0.61**	**214**	Pg	Pg	02 47 30.6	+0.1
FDMO	**Fiordimonte**	**0.64**	**336**	Pg	Pg	02 47 30.9	-0.2
FDMO				Sg	Sb	02 47 40.7	-0.5
FDMO	**Fiordimonte**	**0.64**	**336**	Pg	Pg	02 47 30.9	-0.2
FDMO				Sg	Sb	02 47 40.7	-0.5
MTCE	**Montecelio**	**0.67**	**231**	Pg	Pg	02 47 32.1	+0.4
MTCE	**Montecelio**	**0.67**	**231**	Pg	Pg	02 47 32.1	+0.4
CESI	**CESI - Serrava**	**0.68**	**325**	Pg	Pg	02 47 31.6	-0.3

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CESI				Sg	Sb	02 47 41.9	-0.5
CESI	CESI - Serrava	0.68	325	Pg	Pg	02 47 31.6	-0.3
CESI				Sg	Sb	02 47 41.9	-0.5
ASSB	Assisi San Ben	0.83	316	Pg	Pg	02 47 34.3	-0.3
ASSB				Sg	Sb	02 47 46.7	+0.1
ASSB	Assisi San Ben	0.83	316	Pg	Pg	02 47 34.3	-0.3
ASSB				Sg	Sb	02 47 46.7	+0.1
RDP	Rocca di Papa	0.88	218	Pg	Pg	02 47 35.6	0.0
RDP	Rocca di Papa	0.88	218	Pg	Pg	02 47 35.6	0.0
CING	Cingoli	0.94	349	Pg	Pg	02 47 36.0	-0.8
CING	Cingoli	0.94	349	Pg	Pg	02 47 36.0	-0.8
MURB	Monte Urbino	1.05	321	Pg	Pg	02 47 38.6	-0.4
MURB	Monte Urbino	1.05	321	Pg	Pg	02 47 38.6	-0.4
MGAB	Montegabbione	1.08	296	Pg	Pg	02 47 39.1	-0.4
MGAB	Montegabbione	1.08	296	Pg	Pg	02 47 39.1	-0.4
AOI	Ancona	1.10	6	Pg	Pg	02 47 39.9	0.0
AOI	Ancona	1.10	6	Pg	Pg	02 47 39.9	0.0
ARVD	Arcevia	1.11	341	Pg	Pg	02 47 39.2	-0.8
ARVD	Arcevia	1.11	341	Pg	Pg	02 47 39.2	-0.8
TOLF	Tolfa	1.14	251	Pg	Pg	02 47 40.4	-0.1
TOLF	Tolfa	1.14	251	Pg	Pg	02 47 40.4	-0.1
PIEI	Pieia	1.27	329	Pg	Pn	02 47 42.2	-0.5
PIEI	Pieia	1.27	329	Pg	Pn	02 47 42.2	-0.5
CAFI	Castiglion Fio	1.40	309	Pg	Pb	02 47 44.8	-0.1
CAFI	Castiglion Fio	1.40	309	Pg	Pb	02 47 44.8	-0.1
PARC	Parchiule	1.49	324	Pg	Pb	02 47 46.6	+0.1
PARC	Parchiule	1.49	324	Pg	Pb	02 47 46.6	+0.1
MS1	Monte Sant'Ang	2.00	111	ePn	Pg	02 47 56.6	-0.6
NVLJ	Novalja	2.35	26	ePn	Pn	02 47 58.0	+0.6
NVLJ				Sn	Sn	02 48 27.3	+0.9
NVLJ	Novalja	2.35	26	ePn	Pn	02 47 58.0	+0.6
NVLJ				Sn	Sn	02 48 27.3	+0.9
STON	Ston	3.17	81	i Pn	Pn	02 48 09.9	+1.2
STON				Sn	Sn	02 48 46.9	+0.4
STON	Ston	3.17	81	i Pn	Pn	02 48 09.8	+1.2
STON				Sn	Sn	02 48 46.9	+0.4
GRUS	Gruza	5.51	72	ePn	Pn	02 48 40.1	-0.7

IDC 09 02:52:03.1±1.1**, 4°54S×137°27E, h0km, mb4.0**/4**, mb1 4.1**/6**, mb1mx3.9**/17**, mbtmp3.9**/6**, ML3.7**/2**, Error ellipse: s-maj=43.5km s-min=22.2km az=82.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.57	190	Pn	Pn	02 55 39.2	-5.0
	0.2nm,0.3s,baz=8.2,slow=13,SNR=3.6						
WRA				Sn	Sn	02 58 23.0	-15
	0.1nm,0.3s,baz=3.2,slow=24,SNR=2.7						
FITZ	Fitzroy Crossi	17.64	219	P	Pn	02 56 09.2	-1.3
	0.1nm,0.3s,baz=45,slow=17,SNR=5.7						
FITZ				S	Sn	02 59 10.1	-18
	0.1nm,0.3s,baz=198,slow=19,SNR=2.3						
ASAR	Alice Springs	19.29	189	P	P	02 56 28.8	-0.9
	0.5nm,0.3s,baz=14,slow=9.9,SNR=37						
ASAR				S	Sn	03 00 00.8	-7.0
	0.1nm,0.3s,baz=7.9,slow=29,SNR=3.4						
STKA	Stephens Creek	27.49	172	P	P	02 57 52.4	+1.0
	0.3nm,0.3s,baz=336,slow=12,SNR=2.1						
CMAR	Chiang Mai Arr	44.15	302	P	P	03 00 14.4	+0.5
	1.1nm,0.6s,baz=111,slow=7.5,SNR=5.8						
MKAR	Makanchi Array	70.38	323	P	P	03 03 19.1	+0.1
	1.1nm,0.5s,baz=111,slow=7.9,SNR=21						
ILAR	Eielson Array	88.08	25	P	P	03 04 54.9	-0.5
	1.6nm,0.7s,baz=261,slow=4.4,SNR=20						
TORD	Torodi Ar. Bea	135.35	284	PKP	PKPdf	03 11 25.0	-1.1
	0.3nm,0.8s,baz=143,slow=0.6,SNR=2.8						

*IDC **09** 03:14:50.7±0.5, 42°41N×13°27E, h0km, mb4.3/21, mb1 4.4/28, mb1mx4.3/36, mbtmp4.3/28, ML4.4/5, MS3.7/14, Ms1 3.7/14, ms1mx3.4/46, Error ellipse: s-maj=12.6km s-min=10.2km az=122.0*
*LDG **09** 03:14:51.8±0.2, 42°38N×13°49E, h2km, Ml4.0/18, Error ellipse: s-maj=5.2km s-min=3.5km az=32.0*
*MOS **09** 03:14:51.9±1.1, 42°41N×13°41E, h17km, mb4.7/32, Error ellipse: s-maj=3.5km s-min=2.8km az=103.6*
*ROM **09** 03:14:52.2±0.1, 42°34N×13°44E, h17km±1km, Ml4.6/18, Error ellipse: s-maj=1.0km s-min=0.8km az=69.0*
*CSEM **09** 03:14:52.7±0.1, 42°36N×13°40E, h10km, mb4.4/26, ML4.8/11, Mw4.4, Error ellipse: s-maj=1.9km s-min=1.4km az=18.0*
*PDG **09** 03:14:52.6±0.6, 42°36N×13°44E, h13km, ML4.3/9, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
*BJI **09** 03:14:52.4, 42°40N×13°40E, h7km, mB4.8/2, mb4.7/7, Ms4.7/4, Ms7 4.4/4*
*NEIC **09** 03:14:52.0, 42°34N×13°44E, h18km, mb4.3/25, ML4.5(PDG), ML4.3(STR), ML4.0(LDG), MW4.4(ROM), After ROM.*
NEIC Felt [III] at Ascoli Piceno, Guidonia, Macerata, Pescara, Rieti, Spoltore, Sulmona, Tivoli and Tolentino; [II] at Albano Laziale, Ancona, Avezzano, Campobasso, Cassino, Foligno, Rocca di Papa, Rome, Spoleto and Terni. Felt in much of Abruzzo, Lazio, Marche, Molise and Umbria. Also felt in northwestern Campania.
*ISCJB **09** 03:14:52.3±0.2, 42°38N±0°01×13°40E±0°01, h20km±1km, mb4.3/50, MS3.9/15, Error ellipse: s-maj=2.0km s-min=1.4km az=26.7*
*PRU **09** 03:14:53.4, 42°48N×13°34E, h1km, M4.3*
*BEO **09** 03:14:54.1±2.9, 42°40N×13°16E, h0km, ML4.8/5*
*STR **09** 03:14:58.5±1.0, 42°70N×12°98E, h5km, Ml4.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 09 03:14:52.9±0.5**, 42°35N**±0°01×**13°41E**±0°01**, h13**km±2km**, n931,** σ1.40/1047**, mb4.4**/50**, MS4.0**/15**, 89C-64D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.01	313	ePg	Pg	03 14 55.3	0.0
AQU	L'Aquila	0.01	313	Pg	Pg	03 14 55.7	+0.4
AQU				Sg	Sg	03 14 57.8	+0.8
AQU	L'Aquila	0.01	313	eP	Pg	03 14 55.3	0.0
AQU				Sg	Sg	03 14 57.8	+0.8
FAGN	Fagnano	0.15	122	⇓iPg	Pg	03 14 56.5	-0.2
FAGN				Sg	Sg	03 14 58.8	-0.5
FAGN	Fagnano	0.15	122	⇓iPg	Pg	03 14 56.5	-0.2
FAGN				Sg	Sg	03 14 58.8	-0.5
CAMP	Campotosto	0.19	359	eP	Pg	03 14 56.8	-0.5
CAMP	Campotosto	0.19	359	⇑ePg	Pb	03 14 57.5	-0.8
CAMP				Sg	Sg	03 15 01.0	+0.7
	34µm,0.6s						
CAMP	Campotosto	0.19	359	eP	Pg	03 14 56.8	-0.5
CAMP	Campotosto	0.19	359	⇑ePg	Pb	03 14 57.5	-0.8
CAMP				Sg	Sg	03 15 01.0	+0.7
	34µm,0.6s						
FIAM	Fiamignano	0.23	250	⇑iPg	Pb	03 14 58.3	-0.7
FIAM				Sg	Sg	03 15 02.5	+1.1
	55µm,0.5s						
FIAM	Fiamignano	0.23	250	⇑iPg	Pb	03 14 58.3	-0.7
FIAM				Sg	Sg	03 15 02.5	+1.1
	55µm,0.5s						
TERO	Teramo	0.31	27	P	Pg	03 14 58.9	-0.4
TERO				S	Sb	03 15 04.7	-0.6
TERO	Teramo	0.31	27	⇑iPg	Pg	03 14 58.9	-0.4
TERO				Sg	Sg	03 15 03.7	+0.1
	70µm,0.5s						
TERO	Teramo	0.31	27	⇑iPg	Pg	03 14 58.9	-0.4
TERO				Sg	Sg	03 15 03.7	+0.1
	70µm,0.5s						
TERO				S	Sb	03 15 04.7	-0.6
VCEL	Villa Celiera	0.32	81	Pg	Pg	03 14 59.1	-0.4
VCEL				Sg	Sg	03 15 04.4	+0.4
	108µm,0.5s						
VCEL	Villa Celiera	0.32	81	Pg	Pg	03 14 59.1	-0.4
VCEL				Sg	Sg	03 15 04.4	+0.4
	108µm,0.5s						
PTQR	Pietraquaria	0.33	181	P	Pb	03 15 00.1	-0.5
PTQR	Pietraquaria	0.33	181	⇑iPg	Pg	03 14 59.3	-0.3
PTQR	Pietraquaria	0.33	181	⇑iPg	Pg	03 14 59.3	-0.3
PTQR	Pietraquaria	0.33	181	P	Pb	03 15 00.1	-0.5
LNSS	Leonessa	0.38	313	Pg	Pg	03 15 00.5	0.0
LNSS				Sg	Sb	03 15 06.3	-0.9
	47µm,0.4s						
LNSS	Leonessa	0.38	313	Pg	Pg	03 15 00.5	0.0
LNSS				Sg	Sb	03 15 06.3	-0.9
	47µm,0.4s						
INTR	Introdacqua	0.50	132	P	Pg	03 15 01.5	-1.2
INTR	Introdacqua	0.50	132	⇓iPg	Pg	03 15 01.5	-1.2
INTR				Sg	Sg	03 15 09.5	+0.2
	31µm,0.9s						
INTR	Introdacqua	0.50	132	⇓iPg	Pg	03 15 01.5	-1.2
INTR				Sg	Sg	03 15 09.5	+0.2
	31µm,0.9s						
VVLD	Villa Vallelon	0.50	162	P	Pg	03 15 01.9	-0.8
VVLD	Villa Vallelon	0.50	162	⇓iPg	Pg	03 15 02.0	-0.8
VVLD				Sg	Sg	03 15 09.3	-0.2
	22µm,0.7s						
VVLD	Villa Vallelon	0.50	162	⇓iPg	Pg	03 15 02.0	-0.8
VVLD				Sg	Sg	03 15 09.3	-0.2
	22µm,0.7s						
CERT	Cerreto	0.51	219	P	Pg	03 15 02.6	-0.3
CERT	Cerreto	0.51	219	⇑ePg	Pg	03 15 02.6	-0.3
CERT				Sg	Sg	03 15 09.4	-0.4
	72µm,0.5s						
CERT	Cerreto	0.51	219	⇑ePg	Pg	03 15 02.6	-0.3
CERT				Sg	Sg	03 15 09.4	-0.4
	72µm,0.5s						
NRCA	Norcia	0.53	336	P	Pg	03 15 02.9	-0.6
NRCA				S	Sb	03 15 11.0	-0.8
NRCA	Norcia	0.53	336	Pg	Pg	03 15 02.8	-0.6
NRCA				Sg	Sb	03 15 11.0	-0.8
	30µm,0.2s						
NRCA	Norcia	0.53	336	Pg	Pg	03 15 02.8	-0.6
NRCA				Sg	Sb	03 15 11.0	-0.8
	30µm,0.2s						
MNS	Montasola	0.54	274	P	Pg	03 15 03.5	-0.1
MNS	Montasola	0.54	274	P	Pg	03 15 03.5	-0.1
MNS	Montasola	0.54	274	Pg	Pg	03 15 03.5	-0.1
	19µm,0.6s						
MNS	Montasola	0.54	274	Pg	Pg	03 15 03.5	-0.1
	19µm,0.6s						
GUAR	Guarcino	0.56	188	⇑ePg	Pg	03 15 03.1	-0.7
GUAR				Sg	Sb	03 15 12.1	-0.3
	14µm,0.8s						
GUAR	Guarcino	0.56	188	⇑ePg	Pg	03 15 03.1	-0.7
GUAR				Sg	Sb	03 15 12.1	-0.3
	14µm,0.8s						
TRTR	Tortoreto Alta	0.59	39	Pg	Pb	03 15 04.4	-0.7
	54µm,0.6s						
TRTR	Tortoreto Alta	0.59	39	Pg	Pb	03 15 04.4	-0.7
	54µm,0.6s						
MTCE	Montecelio	0.59	237	P	Pg	03 15 04.2	-0.2
MTCE	Montecelio	0.59	237	⇑iPg	Pg	03 15 04.3	-0.2
MTCE	Montecelio	0.59	237	⇑iPg	Pg	03 15 04.3	-0.2
OFFI	Offida	0.62	19	P	Pb	03 15 04.9	-0.7
OFFI	Offida	0.62	19	Pg	Pb	03 15 04.9	-0.7
	70µm,0.5s						
OFFI	Offida	0.62	19	Pg	Pb	03 15 04.9	-0.7
	70µm,0.5s						
POFI	Posta Fibreno	0.67	160	⇓iPg	Pg	03 15 04.6	-1.3
POFI	Posta Fibreno	0.67	160	⇓iPg	Pg	03 15 04.6	-1.3
CESX	Cesi	0.67	293	P	Pg	03 15 05.6	-0.3
CESX	Cesi	0.67	293	Pg	Pg	03 15 05.5	-0.4
	16µm,0.5s						
CESX	Cesi	0.67	293	Pg	Pg	03 15 05.5	-0.4
	16µm,0.5s						
SDI	San Donato	0.70	155	P	Pg	03 15 05.0	-1.6
SDI	San Donato	0.70	155	P	Pg	03 15 05.0	-1.6
SDI	San Donato	0.70	155	⇓iPg	Pg	03 15 05.0	-1.6
SDI	San Donato	0.70	155	⇓iPg	Pg	03 15 05.0	-1.6
CAFR	Castel Frentan	0.70	99	⇓iPg	Pg	03 15 05.5	-1.1
	24µm,0.8s						
CAFR	Castel Frentan	0.70	99	⇓iPg	Pg	03 15 05.5	-1.1
	24µm,0.8s						
FDMO	Fiordimonte	0.73	341	P	Pg	03 15 06.1	-1.0
FDMO	Fiordimonte	0.73	341	Pg	Pg	03 15 06.0	-1.0
FDMO				Sg	Sb	03 15 17.5	+0.1
	13µm,0.7s						
FDMO	Fiordimonte	0.73	341	P	Pg	03 15 06.1	-1.0
FDMO				Sg	Sb	03 15 17.5	+0.1
	13µm,0.7s						
CESI	CESI - Serrava	0.76	331	P	Pg	03 15 06.8	-0.8
CESI	CESI - Serrava	0.76	331	Pg	Pg	03 15 06.8	-0.8
CESI				Sg	Sb	03 15 18.3	+0.1
CESI	CESI - Serrava	0.76	331	Pg	Pg	03 15 06.8	-0.8
CESI				Sg	Sb	03 15 18.3	+0.1
RDP	Rocca di Papa	0.78	222	Pg	Pg	03 15 07.2	-0.9
	63µm,0.6s						
RDP	Rocca di Papa	0.78	222	Pg	Pg	03 15 07.2	-0.9
	63µm,0.6s						
GIUL	Giuliano Di Ro	0.80	188	⇑iPg	Pg	03 15 07.2	-1.1
GIUL	Giuliano Di Ro	0.80	188	⇑iPg	Pg	03 15 07.2	-1.1
MA9	Marino	0.80	224	Pg	Pg	03 15 07.7	-0.8
	38µm,0.6s						
MA9	Marino	0.80	224	Pg	Pg	03 15 07.7	-0.8
	38µm,0.6s						
RNI2	Rionero Sannit	0.85	139	Pg	Pg	03 15 07.6	-1.7
RNI2	Rionero Sannit	0.85	139	Pg	Pg	03 15 07.6	-1.7
ASSB	Assisi San Ben	0.89	322	Pg	Pg	03 15 09.3	-0.8
ASSB	Assisi San Ben	0.89	322	Pg	Pg	03 15 09.3	-0.8
MIDA	Miranda	0.94	138	Pg	Pg	03 15 08.9	-2.2
MIDA	Miranda	0.94	138	Pg	Pg	03 15 08.9	-2.2
FRES	Fresagrandinar	1.01	111	Pg	Pb	03 15 09.7	-2.5
FRES	Fresagrandinar	1.01	111	Pg	Pb	03 15 09.7	-2.5
CING	Cingoli	1.04	351	Pg	Pb	03 15 11.5	-1.3
CING	Cingoli	1.04	351	Pg	Pb	03 15 11.5	-1.3
MGAB	Montegabbione	1.11	301	Pg	Pb	03 15 13.4	-0.6
MGAB	Montegabbione	1.11	301	Pg	Pb	03 15 13.4	-0.6
MS1	Monte Sant'Ang	1.99	108	ePn	Pn	03 15 26.7	+0.4
NVLJ	Novalja	2.46	25	i Pn	Pn	03 15 32.9	+0.2
NVLJ				Sn	Sn	03 16 02.6	+0.1
NVLJ	Novalja	2.46	25	i Pn	Pn	03 15 32.8	+0.2
NVLJ				Sn	Sn	03 16 02.5	+0.1
CDT	Castel del Mon	2.49	120	ePn	Pn	03 15 33.6	+0.5
CDT				eSn	Sn	03 16 05.0	+1.7
MAIM	Mastiano	2.65	307	P	Pn	03 15 36.0	+0.7
CRDM	Cardoso	2.72	309	P	Pn	03 15 36.2	-0.1
VLC	Villacollemand	2.86	310	ePn	Pn	03 15 38.4	+0.2
VLC				ePg	Pb	03 15 44.6	+0.9
VLC				eSn	Sn	03 16 13.7	+1.3
VLC	Villacollemand	2.86	310	ePn	Pn	03 15 38.4	+0.2
CUC	Castrocucco	2.97	142	ePn	Pn	03 15 41.5	+1.8
CUC				ePg	Pg	03 15 49.6	-0.2
CUC	Castrocucco	2.97	142	ePn	Pn	03 15 41.5	+1.8
STON	Ston	3.21	79	i Pn	Pn	03 15 43.1	+0.1
STON				Sn	Sn	03 16 19.7	-1.3
STON	Ston	3.21	79	i Pn	Pn	03 15 43.0	+0.1
STON				Sn	Sn	03 16 19.7	-1.3
GRAM	Graiana	3.25	312	P	Pn	03 15 44.6	+1.1
PGF	Pioggiola	3.27	275	ePn	Pn	03 15 44.5	+0.6
	SNR=1.0						
PGF				eSn	Sn	03 16 24.7	+2.0
	63nm,0.4s						
PGF	Pioggiola	3.27	275	eP	Pn	03 15 44.5	+0.6
PGF				e		03 16 24.7	
PGF	Pioggiola	3.27	275	ePn	Pn	03 15 44.5	+0.6
PGF				eSn	Sn	03 16 24.7	+2.0
PGF	Pioggiola	3.27	275	ePn	Pn	03 15 44.5	+0.6
	SNR=1.0						
PGF				eSn	Sn	03 16 24.7	+2.0
	31nm,0.4s						
CODM	Codolo	3.30	309	P	Pn	03 15 43.7	-0.6
TRI	Trieste	3.37	4	eP	Pn	03 15 44.7	-0.5
TRI	Trieste	3.37	4	ePn	Pn	03 15 44.7	-0.5
TRI				ePg	Pb	03 15 53.9	+1.5
TRI	Trieste	3.37	4	eP	Pn	03 15 44.7	-0.5
SC2M	Scurtabo	3.50	307	P	Pn	03 15 47.2	+0.3
BLY	Banja Luka	3.64	48	ePn	Pn	03 15 49.6	+0.7
BLY	Banja Luka	3.64	48	ePn	Pn	03 15 49.6	+0.7
VOY	Vojsko	3.70	5	ePn	Pn	03 15 49.4	-0.4
VOY				eSn	Sn	03 16 33.0	-0.3
VOY	Vojsko	3.70	5	Pn	Pn	03 15 49.4	-0.4
VOY				eSn	Sn	03 16 33.0	-0.3
HCY	Herceg Novi	3.77	87	⇑iPn	Pn	03 15 51.1	+0.5
HCY				eSn	Sn	03 16 36.3	+1.5
HCY	Herceg Novi	3.77	87	⇑P	Pn	03 15 50.7	+0.1
HCY				S	Sn	03 16 35.0	+0.2
HCY	Herceg Novi	3.77	87	⇑P	Pn	03 15 50.7	+0.1
HCY				S	Sn	03 16 35.0	+0.2
HCY	Herceg Novi	3.77	87	⇑P	Pn	03 15 50.7	+0.1
HCY	Herceg Novi	3.77	87	⇑iPn	Pn	03 15 51.1	+0.5
HCY				S	Sn	03 16 35.0	+0.2
HCY				eSn	Sn	03 16 36.3	+1.5
LJU	Ljubljana	3.78	12	⇑iPn	Pn	03 15 51.5	+0.7
BRY	Bratogost	3.82	80	ePn	Pn	03 15 51.8	+0.2
BRY				eSn	Sn	03 16 37.8	+1.4
BRY	Bratogost	3.82	80	⇑P	Pn	03 15 51.8	+0.2
BRY				S	Sn	03 16 36.7	+0.3
BRY	Bratogost	3.82	80	⇑P	Pn	03 15 51.8	+0.2
BRY				S	Sn	03 16 36.7	+0.3
BRY	Bratogost	3.82	80	ePn	Pn	03 15 51.8	+0.2
BRY				S	Sn	03 16 36.7	+0.3
BRY				eSn	Sn	03 16 37.8	+1.4
PDKS	Podkum	3.88	17	⇑iPn	Pn	03 15 52.7	+0.4
PDKS				i Sn	Sn	03 16 38.0	+0.3
PDKS	Podkum	3.88	17	⇑iPn	Pn	03 15 52.7	+0.4
PDKS				i Sn	Sn	03 16 38.0	+0.3
MOZS	Mozjanca	4.01	10	⇑iPn	Pn	03 15 54.5	+0.4
MOZS							
	comp=Z,678nm,1.1s						
MOZS	Mozjanca	4.01	10	⇑iPn	Pn	03 15 54.5	+0.4
	comp=Z,678nm,1.1s						
TIP	Timpagrande	4.06	140	ePn	Pn	03 15 58.2	+3.5
TIP				ePg	Pg	03 16 09.7	-1.0
TIP				eSg	Sg	03 17 02.5	-0.7
BUM	Brajici-Budva	4.07	89	⇑iPn	Pn	03 15 55.5	+0.7
BUM				eSn	Sn	03 16 43.8	+1.5
BUM	Brajici-Budva	4.07	89	⇑iPn	Pn	03 15 55.5	+0.7
BUM				eSn	Sn	03 16 43.8	+1.5
UPM	Unac-Piva	4.13	76	⇑iPn	Pn	03 15 57.0	+1.2
UPM				eSn	Sn	03 16 45.5	+1.4
UPM	Unac-Piva	4.13	76	⇑iPn	Pn	03 15 57.0	+1.2
UPM				eSn	Sn	03 16 45.5	+1.4
NKY	Niksic	4.15	82	⇓iPn	Pn	03 15 56.9	+0.9
NKY				eSn	Sn	03 16 45.4	+1.0
NKY	Niksic	4.15	82	⇑P	Pn	03 15 56.6	+0.6
NKY				S	Sn	03 16 44.8	+0.4
NKY	Niksic	4.15	82	⇑P	Pn	03 15 56.6	+0.6
NKY				S	Sn	03 16 44.8	+0.4
NKY	Niksic	4.15	82	⇑P	Pn	03 15 56.6	+0.6
NKY	Niksic	4.15	82	⇓iPn	Pn	03 15 56.9	+0.9
NKY				S	Sn	03 16 44.8	+0.4
NKY				eSn	Sn	03 16 45.4	+1.0
VSL	Villasalto	4.18	228	ePn	Pn	03 15 56.3	0.0
VSL	Villasalto	4.18	228	ePn	Pn	03 15 56.3	0.0
OBKA	Obir	4.24	11	i Pn	Pn	03 15 57.4	+0.2
	SNR=83						
OBKA	Obir	4.24	11	i Pn	Pn	03 15 57.5	+0.2
OBKA	Obir	4.24	11	i Pn	Pn	03 15 57.5	+0.2
MYKA	Terra Mystica	4.29	2	⇑iPn	Pn	03 15 58.3	+0.5
MYKA	Terra Mystica	4.29	2	⇑iPn	Pn	03 15 58.3	+0.5
MYKA	Terra Mystica	4.29	2	⇑iPn	Pn	03 15 58.3	+0.5
PDG	Podgorica	4.33	87	ePn	Pn	03 15 59.1	+0.7
PDG				eSn	Sn	03 16 48.4	-0.2
PDG	Podgorica	4.33	87	ePn	Pn	03 15 59.1	+0.7
PDG				eSn	Sn	03 16 49.8	+1.1
TTG	Podgorica	4.33	87	⇑iPn	Pn	03 15 59.4	+1.1
TTG				eSn	Sn	03 16 49.8	+1.1
TTG	Podgorica	4.33	87	⇓P	Pn	03 15 59.0	+0.7
TTG				S	Sn	03 16 49.7	+1.1
TTG	Podgorica	4.33	87	⇓P	Pn	03 15 59.0	+0.7
TTG				S	Sn	03 16 49.7	+1.1
TTG	Podgorica	4.33	87	⇓P	Pn	03 15 59.0	+0.7
TTG				S	Sn	03 16 49.7	+1.1
ULC	Ulcinj	4.35	93	⇓iPn	Pn	03 15 59.1	+0.4
ULC				eSn	Sn	03 16 50.3	+1.0
ULC	Ulcinj	4.35	93	⇑P	Pn	03 15 59.1	+0.4
ULC				S	Sn	03 16 49.3	0.0
ULC	Ulcinj	4.35	93	⇑P	Pn	03 15 59.1	+0.4
ULC				S	Sn	03 16 49.3	0.0
ULC	Ulcinj	4.35	93	⇓iPn	Pn	03 15 59.1	+0.4
ULC				S	Sn	03 16 49.3	0.0
ULC				eSn	Sn	03 16 50.3	+1.0
ABTA	Abfaltersbach	4.45	352	⇑iPn	Pn	03 16 00.9	+0.9
	SNR=164						
ABTA	Abfaltersbach	4.45	352	⇑iPn	Pn	03 16 00.9	+0.9
ABTA	Abfaltersbach	4.45	352	⇑iPn	Pn	03 16 00.9	+0.9
PERS	Pernice	4.46	15	⇓iPn	Pn	03 16 00.6	+0.4
PERS							
	comp=Z,120nm,0.5s						
PERS	Pernice	4.46	15	⇓iPn	Pn	03 16 00.6	+0.4
	comp=Z,120nm,0.5s						
BISS	Bistriski jare	4.47	15	⇓iPn	Pn	03 16 00.7	+0.4
BISS	Bistriski jare	4.47	15	⇓iPn	Pn	03 16 00.7	+0.4
SOKA	Soboth	4.48	14	⇓iPn	Pn	03 16 00.8	+0.2
SOKA	Soboth	4.48	14	⇓iPn	Pn	03 16 00.8	+0.2
SOKA	Soboth	4.48	14	⇓iPn	Pn	03 16 00.8	+0.2
CEL	Celeste	4.50	154	ePn	Pn	03 16 01.6	+0.8
CEL	Celeste	4.50	154	ePn	Pn	03 16 01.6	+0.8
PLE	Pljevlja	4.50	75	⇑iPn	Pn	03 16 02.6	+1.7
PLE				eSn	Sn	03 16 54.5	+1.4
PLE	Pljevlja	4.50	75	⇓P	Pn	03 16 01.4	+0.5
PLE				S	Sn	03 16 53.9	+0.7
PLE	Pljevlja	4.50	75	⇓P	Pn	03 16 01.4	+0.5
PLE				S	Sn	03 16 53.9	+0.7
PLE	Pljevlja	4.50	75	⇓P	Pn	03 16 01.4	+0.5
PLE	Pljevlja	4.50	75	⇑iPn	Pn	03 16 02.6	+1.7
PLE				S	Sn	03 16 53.9	+0.7
PLE				eSn	Sn	03 16 54.5	+1.4
SAOF	Saorge	4.59	293	P	Pn	03 16 02.6	+0.7
SAOF	Saorge	4.59	293	P	Pn	03 16 02.6	+0.7
SAOF	Saorge	4.59	293	P	Pn	03 16 02.6	+0.7
SAOF	Saorge	4.59	293	P	Pn	03 16 02.6	+0.7
SBF	Sospel	4.63	291	ePn	Pn	03 16 03.2	+0.6
	SNR=1.0						
SBF				eSn	Sn	03 16 52.8	-3.4
	comp=Z,106nm,0.7s						
SBF	Sospel	4.63	291	eP	Pn	03 16 03.2	+0.6
SBF				e		03 16 52.8	
SBF	Sospel	4.63	291	ePn	Pn	03 16 03.2	+0.6
SBF				eSn	Sn	03 16 52.8	-3.4
SBF	Sospel	4.63	291	ePn	Pn	03 16 03.2	+0.6
	SNR=1.0						
SBF				eSn	Sn	03 16 52.8	-3.4
	comp=Z,53nm,0.7s						
BBLS	Lazići	4.64	69	ePn	Pn	03 16 03.4	+0.7
BBLS	Lazići	4.64	69	ePn	Pn	03 16 03.4	+0.7
REVF	Revere	4.64	289	P	Pn	03 16 03.1	+0.4
REVF	Revere	4.64	289	P	Pn	03 16 03.1	+0.4
REVF	Revere	4.64	289	P	Pn	03 16 03.1	+0.4
REVF	Revere	4.64	289	P	Pn	03 16 03.1	+0.4
AUTN	L'Aution	4.68	293	P	Pn	03 16 04.5	+1.2
AUTN	L'Aution	4.68	293	P	Pn	03 16 04.5	+1.2
AUTN	L'Aution	4.68	293	P	Pn	03 16 04.5	+1.2
AUTN	L'Aution	4.68	293	P	Pn	03 16 04.5	+1.2
KBA	Koelnbreinsper	4.73	359	i P	Pn	03 16 04.7	+0.6
KBA	Koelnbreinsper	4.73	359	i Pn	Pn	03 16 04.7	+0.6
	SNR=112						
KBA	Koelnbreinsper	4.73	359	i Pn	Pn	03 16 04.7	+0.6
KBA	Koelnbreinsper	4.73	359	i P	Pn	03 16 04.7	+0.6
BEHE	Becsehely	4.77	29	ePn	Pn	03 16 04.9	+0.4
TOUF	Mont Tournerai	4.80	292	P	Pn	03 16 06.2	+1.1
TOUF	Mont Tournerai	4.80	292	P	Pn	03 16 06.2	+1.1
TOUF	Mont Tournerai	4.80	292	P	Pn	03 16 06.2	+1.1
TOUF	Mont Tournerai	4.80	292	P	Pn	03 16 06.2	+1.1
BEY	Berane	4.81	82	⇑iPn	Pn	03 16 06.9	+1.8
BEY				eSn	Sn	03 17 02.3	+1.6
IVA	Berane	4.81	82	⇑iPn	Pn	03 16 06.9	+1.8
IVA				eSn	Sn	03 17 02.3	+1.6
PUK	Puka	4.83	91	eP	Pn	03 16 07.0	+1.8
PUK	Puka	4.83	91	eP	Pn	03 16 07.0	+1.8
FUORN	Ofenpass-Fuorn	4.83	333	ePn	Pn	03 16 06.8	+1.3
FUORN	Ofenpass-Fuorn	4.83	333	ePn	Pn	03 16 06.8	+1.3
MVIF	Mont Vial	4.84	291	P	Pn	03 16 06.2	+0.7
MVIF	Mont Vial	4.84	291	P	Pn	03 16 06.2	+0.7
MVIF	Mont Vial	4.84	291	P	Pn	03 16 06.2	+0.7
MVIF	Mont Vial	4.84	291	P	Pn	03 16 06.2	+0.7
PVY	Plav	4.85	85	⇓iPn	Pn	03 16 07.3	+1.7
PVY				eSn	Sn	03 17 02.6	+0.9
PVY	Plav	4.85	85	⇓iPn	Pn	03 16 07.3	+1.7
PVY				eSn	Sn	03 17 02.6	+0.9
TIR	Tirane	4.92	100	eP	Pn	03 16 07.3	+0.8
TIR	Tirane	4.92	100	P	Pn	03 16 07.3	+0.8
TIR	Tirane	4.92	100	ePn	Pn	03 16 07.0	+0.5
TIR	Tirane	4.92	100	ePn	Pn	03 16 07.0	+0.5
TIR	Tirane	4.92	100	eP	Pn	03 16 07.3	+0.8
BCI	Bajram Curri	4.93	88	eP	Pn	03 16 08.5	+1.8
BCI	Bajram Curri	4.93	88	eP	Pn	03 16 08.5	+1.8
VLO	Vlora	4.95	110	eP	Pn	03 16 08.3	+1.5
VLO	Vlora	4.95	110	eP	Pn	03 16 08.3	+1.5
TEKS	Tekeris	4.97	62	ePn	Pn	03 16 06.4	-0.7
TEKS	Tekeris	4.97	62	ePn	Pn	03 16 06.4	-0.7
CALN	Calern	4.98	289	P	Pn	03 16 08.3	+0.9
CALN	Calern	4.98	289	P	Pn	03 16 08.3	+0.9
CALN	Calern	4.98	289	P	Pn	03 16 08.3	+0.9
CALN	Calern	4.98	289	P	Pn	03 16 08.3	+0.9
TUE	Stuetta	5.05	326	ePn	Pn	03 16 08.9	+0.5
TUE				eSn	Sn	03 17 07.8	+1.1
TUE	Stuetta	5.05	326	ePn	Pn	03 16 08.9	+0.5
TUE				eSn	Sn	03 17 07.8	+1.1

FETA Feichten 5.05 339⇓iPn Pn 03 16 09.7 +1.3
SNR=69
FETA Feichten 5.05 339⇓iPn Pn 03 16 09.7 +1.3
FETA Feichten 5.05 339⇓iPn Pn 03 16 09.7 +1.3
WTTA Wattenberg 5.08 346⇓iP Pn 03 16 10.4 +1.6
WTTA Wattenberg 5.08 346⇓iPn Pn 03 16 10.4 +1.6
SNR=42
WTTA Wattenberg 5.08 346⇓iPn Pn 03 16 10.4 +1.6
WTTA Wattenberg 5.08 346 iP Pn 03 16 10.4 +1.6
IVAS Ivanjica 5.10 74 ePn Pn 03 16 09.9 +0.9
IVAS eSn Sn 03 17 06.5 -1.2
IVAS Ivanjica 5.10 74 ePn Pn 03 16 09.9 +0.9
IVAS eSn Sn 03 17 06.5 -1.2
DAVOX Davos/Dischmat 5.10 332 Pn Pn 03 16 10.7 +1.6
DAVOX Sn Sn 03 17 05.1 -2.8
DAVOX Davos/Dischmat 5.10 332 Pn Pn 03 16 10.7 +1.6
comp=Z,15nm,0.3s,baz=142,slow=9.7,SNR=87
DAVOX Sn Sn 03 17 05.1 -2.8
comp=Z,7.3nm,0.3s,baz=142,slow=19,SNR=1.9
DAVOX Davos/Dischmat 5.10 332 P Pn 03 16 10.7 +1.6
comp=Z,15nm,0.3s
DAVOX S Sn 03 17 05.1 -2.8
comp=Z,7.0nm,0.3s
FRF La Foret Royal 5.11 286 ePn Pn 03 16 09.5 +0.4
SNR=1.0
FRF eSn Sn 03 17 04.3 -3.6
comp=Z,91nm,1.0s,SNR=1.0
FRF La Foret Royal 5.11 286 eP Pn 03 16 09.5 +0.4
FRF e 03 17 04.3
FRF La Foret Royal 5.11 286 ePn Pn 03 16 09.5 +0.4
FRF eSn Sn 03 17 04.3 -3.6
FRF La Foret Royal 5.11 286 ePn Pn 03 16 09.5 +0.4
SNR=1.0
FRF eSn Sn 03 17 04.3 -3.6
comp=Z,46nm,1.0s,SNR=1.0
DIVS Divibare 5.12 68 ePn Pn 03 16 09.6 +0.3
DIVS Divibare 5.12 68 ePn Pn 03 16 09.6 +0.3
ARSA Arzberg 5.13 16 iPn Pn 03 16 09.2 -0.1
SNR=65
ARSA Arzberg 5.13 16 iPn Pn 03 16 09.2 -0.1
ARSA Arzberg 5.13 16 iPn Pn 03 16 09.2 -0.1
WATA Walderalm 5.16 346⇑iP Pn 03 16 11.8 +1.9
WATA Walderalm 5.16 346⇑iPn Pn 03 16 11.8 +1.9
SNR=19
WATA Walderalm 5.16 346⇑iPn Pn 03 16 11.8 +1.9
WATA Walderalm 5.16 346 iP Pn 03 16 11.8 +1.9
LMR La Mourre 5.17 283 ePn Pn 03 16 10.1 +0.2
SNR=1.0
LMR eSn Sn 03 17 05.6 -3.8
comp=Z,42nm,0.7s
LMR La Mourre 5.17 283 eP Pn 03 16 10.1 +0.2
LMR e 03 17 05.6
LMR La Mourre 5.17 283 ePn Pn 03 16 10.1 +0.2
LMR eSn Sn 03 17 05.6 -3.8
LMR La Mourre 5.17 283 ePn Pn 03 16 10.1 +0.2
SNR=1.0
LMR eSn Sn 03 17 05.6 -3.8
comp=Z,21nm,0.7s
MOTA Moosalm 5.26 343⇑iP Pn 03 16 13.0 +1.7
MOTA Moosalm 5.26 343⇑iPn Pn 03 16 13.0 +1.7
SNR=67
MOTA Moosalm 5.26 343⇑iPn Pn 03 16 13.0 +1.7
MOTA Moosalm 5.26 343 iP Pn 03 16 13.0 +1.7
PHP Peshkopia 5.28 95 eP Pn 03 16 12.9 +1.5
PHP Peshkopia 5.28 95 eP Pn 03 16 12.9 +1.5
MBDF Montbardon 5.38 298 eP Pn 03 16 14.7 +1.8
SNR=1.0
MBDF Montbardon 5.38 298 eP Pn 03 16 14.7 +1.8
MBDF Montbardon 5.38 298 eP Pn 03 16 14.7 +1.8
MBDF Montbardon 5.38 298 eP Pn 03 16 14.7 +1.8
SNR=1.0
PKSM Moragy 5.39 42 ⇑P Pn 03 16 15.0 +2.1
PKSM Moragy 5.39 42⇑iP Pn 03 16 15.0 +2.1
PKSM Moragy 5.39 42 ePn Pn 03 16 12.3 -0.6
PKSM Moragy 5.39 42 ePn Pn 03 16 12.4 -0.5
PKSM Moragy 5.39 42 eP Pn 03 16 12.4 -0.5
RJOB Jochberg 5.41 356 ePn Pn 03 16 14.2 +1.0
RJOB eSn Sn 03 17 16.8 +1.5
TRUS Trudelj 5.44 67 ePn Pn 03 16 12.9 -0.7
TRUS Trudelj 5.44 67 ePn Pn 03 16 12.9 -0.7
RETA Reutte 5.47 341⇑iPn Pn 03 16 16.4 +2.3
SNR=16
RETA Reutte 5.47 341⇑iPn Pn 03 16 16.4 +2.3
RETA Reutte 5.47 341⇑iPn Pn 03 16 16.4 +2.3
PKS9 Tamasi 5.49 38⇓ePn Pn 03 16 13.7 -0.5
PKS9 Tamasi 5.49 38⇓eP Pn 03 16 13.7 -0.5
KEK Kerkira 5.50 116 P Pn 03 16 15.6 +1.1
KEK Kerkira 5.50 116 eP Pn 03 16 15.5 +1.1
MOA Molln 5.54 6 iPn Pn 03 16 15.5 +0.6
SNR=132
MOA Molln 5.54 6 iPn Pn 03 16 15.5 +0.6
MOA Molln 5.54 6 iPn Pn 03 16 15.5 +0.6
DAVA Damuels 5.54 334⇓iPn Pn 03 16 17.2 +2.0
SNR=68
DAVA Damuels 5.54 334⇓iPn Pn 03 16 17.2 +2.0
DAVA Damuels 5.54 334⇓iPn Pn 03 16 17.2 +2.0
GRUS Gruza 5.56 71 ePn Pn 03 16 16.0 +0.7
GRUS Gruza 5.56 71 ePn Pn 03 16 16.0 +0.7
BNI Bardonecchia 5.58 301 eP Pn 03 16 17.6 +1.9
BNI Bardonecchia 5.58 301 ePn Pn 03 16 17.6 +1.9
BNI Bardonecchia 5.58 301 ePn Pn 03 16 17.5 +1.9
SELS Selova 5.74 79 ePn Pn 03 16 17.9 +0.1
SELS Selova 5.74 79 ePn Pn 03 16 17.9 +0.1
LPG La Plagne 5.75 305 eP Pn 03 16 20.9 +2.8
SNR=1.0
LPG eSn Sn 03 17 20.0 -4.0
comp=Z,56nm,0.8s
LPG La Plagne 5.75 305 eP Pn 03 16 20.9 +2.8
LPG e 03 17 20.0
LPG La Plagne 5.75 305 eP Pn 03 16 20.9 +2.8
LPG eSn Sn 03 17 20.0 -4.0
LPL La Plagne 5.77 306 eP Pn 03 16 21.1 +2.8
SNR=1.0
LPL eSn Sn 03 17 19.2 -5.3
comp=Z,40nm,0.5s
LPL La Plagne 5.77 306 eP Pn 03 16 21.1 +2.8
LPL e 03 17 19.2
LPL La Plagne 5.77 306 eP Pn 03 16 21.1 +2.8
LPL eSn Sn 03 17 19.2 -5.3
SOP Sopron 5.78 22 ePn Pn 03 16 18.1 -0.2
SOP Sopron 5.78 22 eP Pn 03 16 18.1 -0.2
CONA Conrad Observa 5.84 16⇑iPn Pn 03 16 19.3 0.0
SNR=77
CONA Conrad Observa 5.84 16⇑iPn Pn 03 16 19.3 0.0
CONA Conrad Observa 5.84 16⇑iPn Pn 03 16 19.3 0.0
PKS2 Kecel 5.87 43⇓epPn Pn 03 16 22.8 +3.4
PKST T˜'s 5.91 32 ePn Pn 03 16 19.8 -0.3
PKST T˜'s 5.91 32 eP Pn 03 16 19.8 -0.3
SENIN Lac Senin/Sane 5.94 315 ePn Pn 03 16 22.2 +1.5
SENIN Lac Senin/Sane 5.94 315 ePn Pn 03 16 22.2 +1.5
IGT Igoumenitsa 5.95 116 P Pn 03 16 22.0 +1.4
SMRF Simiane la Rot 5.96 288 eP Pn 03 16 22.7 +1.9
SNR=1.0
SMRF Simiane la Rot 5.96 288 eP Pn 03 16 22.7 +1.9
SMRF Simiane la Rot 5.96 288 eP Pn 03 16 22.7 +1.9
SNR=1.0
SKO Skopje 5.98 91 P Pn 03 16 23.1 +2.1
SKO Skopje 5.98 91 ePn Pn 03 16 22.8 +1.9
SKO Skopje 5.98 91 ePn Pn 03 16 22.9 +1.9
SKO Skopje 5.98 91 ePn Pn 03 16 22.9 +1.9
ORIF Oris-en-Rattie 6.04 298 eP Pn 03 16 25.5 +3.6
SNR=1.0
ORIF eSn Sn 03 17 26.7 -4.2
comp=Z,58nm,0.7s
ORIF Oris-en-Rattie 6.04 298 eP Pn 03 16 25.5 +3.6
ORIF e 03 17 26.7
ORIF Oris-en-Rattie 6.04 298 eP Pn 03 16 25.5 +3.6
ORIF eSn Sn 03 17 26.7 -4.2
BIA Bitola 6.07 100 ePn Pn 03 16 23.1 +0.8
PKS6 Bocsa 6.12 44⇓ePn Pn 03 16 22.6 -0.3
PKS6 Bocsa 6.12 44⇓eP Pn 03 16 22.6 -0.3
PKSG 6.16 33⇓ePn Pn 03 16 23.2 -0.3
PKSG 6.16 33⇓eP Pn 03 16 23.2 -0.3
FNA Florina 6.17 102 P Pn 03 16 25.0 +1.2
FNA Florina 6.17 102 eP Pn 03 16 24.6 +0.8
BARS Barje 6.22 83 ePn Pn 03 16 24.9 +0.5
BARS eSn Sn 03 17 32.1 -3.2
BARS Barje 6.22 83 ePn Pn 03 16 24.9 +0.5
PKS7 Kunszentmiklos 6.23 39⇓ePn Pn 03 16 19.6 -4.9
BOLS Boljevac 6.43 74 ePn Pn 03 16 26.4 -0.8
BOLS Boljevac 6.43 74 ePn Pn 03 16 26.4 -0.8
PKSN Nyarlorinc 6.47 43⇓epPn Pn 03 16 30.7 +2.9
GEC2 GERESS Array S 6.50 2 eP Pn 03 16 27.7 -0.5
GEC2 e 03 17 38.6
GEC2 GERESS Array S 6.50 2 ePn Pn 03 16 27.7 -0.5
GEC2 eSn Sn 03 17 38.6 -3.7
GEC2 GERESS Array S 6.50 2 eP Pn 03 16 27.7 -0.5
GERES GERESS Array B 6.50 2 Pn Pn 03 16 27.8 -0.5
GERES Sn Sn 03 17 38.3 -4.0
GERES Lg Lg 03 18 24.4
GERES GERESS Array B 6.50 2 Pn Pn 03 16 27.8 -0.5
comp=Z,4.1nm,0.3s,baz=178,slow=13,SNR=180
GERES Sn Sn 03 17 38.3 -4.0
comp=Z,20nm,0.3s,baz=191,slow=27,SNR=20
GERES Lg Lg 03 18 24.4
baz=173,slow=26,SNR=1.6
GERES GERESS Array B 6.50 2 P Pn 03 16 27.8 -0.5
comp=Z,4.0nm,0.3s
LKD2 Lefkada island 6.56 120 P Pn 03 16 30.4 +1.3
LKD2 Lefkada island 6.56 120 eP Pn 03 16 30.9 +1.8
BBS Basel-Blauen 6.61 323 P Pn 03 16 29.0 -0.7
BBS Basel-Blauen 6.61 323 P Pn 03 16 29.0 -0.7
BBS Basel-Blauen 6.61 323 P Pn 03 16 29.0 -0.7
KZN Kozani 6.62 105 P Pn 03 16 31.7 +1.9
KZN Kozani 6.62 105 eP Pn 03 16 32.3 +2.5
SPAK Spaichingen-Ko 6.62 332 P Pn 03 16 30.3 +0.5
SPAK Spaichingen-Ko 6.62 332 P Pn 03 16 30.3 +0.5
FELD Feldberg im Sc 6.72 327 P Pn 03 16 31.2 -0.1
FELD Feldberg im Sc 6.72 327 P Pn 03 16 31.2 -0.1
OG35 Corcelles 6.74 306 P Pn 03 16 32.9 +1.4
CABF La Chapelle 6.75 312 ePn Pn 03 16 32.4 +0.7
SNR=1.0
CABF La Chapelle 6.75 312 eP Pn 03 16 32.4 +0.7
CABF La Chapelle 6.75 312 ePn Pn 03 16 32.4 +0.7
CABF La Chapelle 6.75 312 ePn Pn 03 16 32.4 +0.7
SNR=1.0
BZS Buzias 6.76 58 ⇓P Pn 03 16 33.3 +1.6
BZS Buzias 6.76 58⇓iP Pn 03 16 33.3 +1.6
BZS Buzias 6.76 58 ePn Pn 03 16 32.4 +0.7
BZS Buzias 6.76 58 ePn Pn 03 16 32.4 +0.7
BZS Buzias 6.76 58 P Pn 03 16 33.3 +1.6
SMOL Smolenice 6.78 23 ePN Pn 03 16 31.9 -0.1
KHC Kasperske Hory 6.79 1 eP Pn 03 16 31.6 -0.5
KHC e 03 17 45.9
KHC Kasperske Hory 6.79 1 ePn Pn 03 16 31.6 -0.5
KHC eSn Sn 03 17 45.9 -3.3
KHC Kasperske Hory 6.79 1 ePN Pn 03 16 31.5 -0.5
KHC eSN Sn 03 17 45.3 -3.9
KHC AMS AMS 03 19 20.0
comp=Z,400nm,14.0s
KHC Kasperske Hory 6.79 1 eP Pn 03 16 31.6 -0.5
WET Wettzell 6.81 357 eP Pn 03 16 31.6 -0.8
WET e 03 17 45.0
WET Wettzell 6.81 357 ePn Pn 03 16 31.6 -0.8
WET eSn Sn 03 17 45.0 -4.7
WET Wettzell 6.81 357 eP Pn 03 16 31.6 -0.8
VIVF Saint-Julien-l 6.82 295 ePn Pn 03 16 34.3 +1.7
SNR=1.0
VIVF Saint-Julien-l 6.82 295 eP Pn 03 16 34.3 +1.7
VIVF Saint-Julien-l 6.82 295 ePn Pn 03 16 34.3 +1.7
VIVF Saint-Julien-l 6.82 295 ePn Pn 03 16 34.3 +1.7
SNR=1.0
ZAPS Zavoj 6.85 79 ePn Pn 03 16 34.3 +1.3
ZAPS eSn Sn 03 17 48.0 -2.7
ZAPS Zavoj 6.85 79 ePn Pn 03 16 34.3 +1.3
LOMF Lomont 6.85 319 P Pn 03 16 33.0 0.0
LOMF Lomont 6.85 319 P Pn 03 16 33.0 0.0
LOMF Lomont 6.85 319 P Pn 03 16 33.0 0.0
LOMF Lomont 6.85 319 P Pn 03 16 33.0 0.0
GRG Griva 6.88 99 P Pn 03 16 34.1 +0.7
GRG Griva 6.88 99 eP Pn 03 16 34.0 +0.7
VLS Valsamata 6.89 125 P Pn 03 16 35.0 +1.4
VLS Valsamata 6.89 125 eP Pn 03 16 35.3 +1.8
VAY Valandovo 6.92 95 P Pn 03 16 34.0 +0.1
VAY Valandovo 6.92 95 ePn Pn 03 16 33.8 -0.1
VAY eSg Sn 03 17 49.2 -3.2
BFO Black Forest 6.97 331 eP Pn 03 16 34.7 +0.1
BFO e 03 17 51.8
BFO Black Forest 6.97 331 ePn Pn 03 16 34.6 0.0
BFO Black Forest 6.97 331 ePn Pn 03 16 34.7 +0.1
BFO eSn Sn 03 17 51.8 -2.0
BFO Black Forest 6.97 331 eP Pn 03 16 34.7 +0.1
BFO eS Sn 03 17 51.8 -2.0
KFL Anninata 7.05 124 P Pn 03 16 37.5 +1.7
SSB Saint Sauveur 7.05 298 eP Pn 03 16 37.1 +1.3
SSB pmax pmax
comp=Z,25nm,0.7s
SSB Saint Sauveur 7.05 298 ePn Pn 03 16 37.1 +1.3
comp=Z,25nm,0.7s
SSB Saint Sauveur 7.05 298 P Pn 03 16 37.3 +1.5
SSB Saint Sauveur 7.05 298 eP Pn 03 16 37.1 +1.3
comp=Z,25nm,0.7s
MOF Molkenrain 7.07 323 P Pn 03 16 35.5 -0.6
MOF S Sn 03 17 57.1 +0.8
MOF Molkenrain 7.07 323 P Pn 03 16 35.5 -0.6
MOF S Sn 03 17 57.1 +0.8
MOF Molkenrain 7.07 323 P Pn 03 16 35.5 -0.6
MOF S Sn 03 17 57.1 +0.8
MOF Molkenrain 7.07 323 P Pn 03 16 35.5 -0.6
MOF S Sn 03 17 57.1 +0.8
STU Stuttgart 7.07 337 eP Pn 03 16 36.4 +0.4
STU e 03 17 55.2
STU Stuttgart 7.07 337 ePn Pn 03 16 36.4 +0.4
STU eSn Sn 03 17 55.2 -1.0
STU Stuttgart 7.07 337 eP Pn 03 16 36.4 +0.4
STU eS Sn 03 17 55.2 -1.0
THL Klokotos Trika 7.08 110 P Pn 03 16 37.9 +1.8
THL Klokotos Trika 7.08 110 eP Pn 03 16 37.2 +1.1
TREC Trest 7.10 11 eP Pn 03 16 35.9 -0.5
TREC MLR MLR
comp=Z,800nm,13.2s
TREC Trest 7.10 11 ePN Pn 03 16 35.9 -0.5
TREC AMS AMS 03 19 40.0
comp=Z,800nm,13.2s
TREC Trest 7.10 11 Pn Pn 03 16 35.9 -0.5
LIBD Limburg 7.10 327 P Pn 03 16 36.4 0.0
LIBD Limburg 7.10 327 P Pn 03 16 36.4 0.0
LIBD Limburg 7.10 327 P Pn 03 16 36.4 0.0
HINF Hinteralfeld 7.17 322 ePn Pn 03 16 36.7 -0.7
SNR=1.0
HINF eSn Sn 03 17 53.6 -5.1
comp=Z,178nm,0.8s
HINF Hinteralfeld 7.17 322 eP Pn 03 16 36.7 -0.7
HINF e 03 17 53.6
HINF Hinteralfeld 7.17 322 ePn Pn 03 16 36.7 -0.7
HINF eSn Sn 03 17 53.6 -5.1
HINF Hinteralfeld 7.17 322 ePn Pn 03 16 36.7 -0.7
SNR=1.0
LASF Ste Croix 7.19 287 ePn Pn 03 16 37.8 +0.1
SNR=1.0
LASF Ste Croix 7.19 287 ePn Pn 03 16 37.8 +0.1
LASF Ste Croix 7.19 287 ePn Pn 03 16 37.8 +0.1
SNR=1.0
KNT Kendrikon 7.19 96 P Pn 03 16 38.6 +0.9
LIT Litokhoron 7.20 105 P Pn 03 16 38.3 +0.5
LIT Litokhoron 7.20 105 eP Pn 03 16 38.4 +0.6
KKB Krupnik 7.21 91 iP Pn 03 16 39.6 +1.7
PSZ Piszkesteto 7.21 37 ⇓P Pn 03 16 38.5 +0.5
PSZ Piszkesteto 7.21 37 ePn Pn 03 16 38.3 +0.3
PSZ Piszkesteto 7.21 37⇓iP Pn 03 16 38.5 +0.5
PSZ Piszkesteto 7.21 37 ePn Pn 03 16 38.3 +0.3
PSZ Piszkesteto 7.21 37 eP Pn 03 16 38.3 +0.3
VYHS Vyhne 7.23 30 ePN Pn 03 16 38.8 +0.6
VYHS eSN Sn 03 17 57.0 -3.2
VYHS Vyhne 7.23 30 ePn Pn 03 16 38.8 +0.6
EVR Evrytania 7.25 115 P Pn 03 16 40.6 +2.0
EVR Evrytania 7.25 115 eP Pn 03 16 40.5 +2.0
VTS Vitosha 7.25 85 P Pn 03 16 39.6 +0.9
VTS Vitosha 7.25 85 ⇑P Pn 03 16 39.5 +0.9
VTS Vitosha 7.25 85⇑iP Pn 03 16 39.5 +0.9
VTS Vitosha 7.25 85 ePn Pn 03 16 39.5 +0.9
VTS eSn Sn 03 17 57.4 -3.4
VTS Vitosha 7.25 85 iP Pn 03 16 39.5 +0.9
VTS Vitosha 7.25 85⇑iP Pn 03 16 39.5 +0.9
VRAC Vranov 7.31 17 Pn Pn 03 16 38.5 -0.7
VRAC Sn Sn 03 17 59.1 -2.9
VRAC Lg Lg 03 18 52.4
VRAC Vranov 7.31 17⇑iP Pn 03 16 38.9 -0.3
VRAC Vranov 7.31 17 Pn Pn 03 16 38.5 -0.7
comp=Z,2.6nm,0.3s,baz=202,slow=14,SNR=14
VRAC Sn Sn 03 17 59.1 -2.9
comp=Z,0.6nm,0.3s,baz=155,slow=14,SNR=2.0
VRAC Lg Lg 03 18 52.4
comp=Z,0.5nm,0.3s,baz=338,slow=16,SNR=1.8
VRAC Vranov 7.31 17 Pn Pn 03 16 38.5 -0.7
VRAC Vranov 7.31 17 P Pn 03 16 38.9 -0.3
KEST Kesra 7.32 207 ePn Pn 03 16 44.2 +4.6
KEST Sn Sn 03 18 04.5 +2.0
KEST Kesra 7.32 207 Pn Pn 03 16 43.2 +3.6
comp=Z,4.7nm,0.3s,baz=310,slow=4.3,SNR=93
KEST Sn Sn 03 18 04.5 +2.0
baz=322,slow=16,SNR=1.1
KEST LR LR 03 19 39.9
comp=Z,460nm,18.6s,baz=16,slow=39
ECH Echery 7.34 325 eP Pn 03 16 38.6 -1.1
ECH e 03 18 01.6
ECH pmax pmax
comp=Z,25nm,0.4s
ECH Echery 7.34 325 ePn Pn 03 16 38.6 -1.1
comp=Z,25nm,0.4s
ECH eSn Sn 03 18 01.6 -1.2
ECH Echery 7.34 325 P Pn 03 16 39.5 -0.2
ECH S Sn 03 18 02.0 -0.8
ECH Echery 7.34 325 ePn Pn 03 16 38.6 -1.1
comp=Z,25nm,0.4s
ECH Echery 7.34 325 P Pn 03 16 39.5 -0.2
ECH eSn Sn 03 18 01.6 -1.2
ECH S Sn 03 18 02.0 -0.8
THE Thessaloniki 7.38 100 eP Pn 03 16 40.4 +0.2
MAKR Makrakomi, Fth 7.42 114 P Pn 03 16 43.7 +2.9
CDF Champ du Feu 7.44 327 ePn Pn 03 16 40.6 -0.6
SNR=1.0
CDF eSn Sn 03 18 00.4 -5.1
comp=Z,75nm,0.6s
CDF Champ du Feu 7.44 327 eP Pn 03 16 40.6 -0.6
CDF e 03 18 00.4
CDF Champ du Feu 7.44 327 ePn Pn 03 16 40.6 -0.6
CDF eSn Sn 03 18 00.4 -5.1
CDF Champ du Feu 7.44 327 ePn Pn 03 16 40.6 -0.6
SNR=1.0
ROTZ Rotzenmuhle 7.47 354 ePn Pn 03 16 41.1 -0.3
GRF Grafenberg Arr 7.50 349 eSn Sn 03 18 05.2 -1.6
RLS Riolos of Patr 7.51 122 P Pn 03 16 44.2 +2.2
RLS Riolos of Patr 7.51 122 eP Pn 03 16 44.4 +2.4
HAU Haudompre 7.54 321 ePn Pn 03 16 41.7 -0.8
SNR=1.0
HAU eSn Sn 03 18 02.5 -5.3
comp=Z,105nm,0.5s
HAU Haudompre 7.54 321 eP Pn 03 16 41.7 -0.8
HAU e 03 18 02.5
HAU Haudompre 7.54 321 ePn Pn 03 16 41.7 -0.8
HAU eSn Sn 03 18 02.5 -5.3
HAU Haudompre 7.54 321 ePn Pn 03 16 41.7 -0.8
SNR=1.0
AGG Agios Georgios 7.55 113 P Pn 03 16 44.5 +1.9
AGG Agios Georgios 7.55 113 eP Pn 03 16 45.0 +2.4
EFP Efpalio 7.57 118 P Pn 03 16 45.3 +2.4
EFP Efpalio 7.57 118 eP Pn 03 16 45.3 +2.4
SOH Sokhos 7.61 98 P Pn 03 16 44.2 +0.8
SOH Sokhos 7.61 98 eP Pn 03 16 43.7 +0.3
MPEP Malo Peshtene 7.66 79 iP Pb 03 16 54.9 -11
PRU Pruhonice 7.68 5 eP Pn 03 16 43.6 -0.8
PRU e 03 18 06.0
PRU MLR MLR
comp=Z,400nm,18.5s
PRU Pruhonice 7.68 5 ePN Pn 03 16 43.6 -0.8
PRU eSN Sn 03 18 06.0 -5.2
PRU AMS AMS 03 19 50.0
comp=Z,400nm,18.5s
PRU Pruhonice 7.68 5 Pn Pn 03 16 43.6 -0.8
DEV Deva 7.69 59 ⇓P Pn 03 16 45.8 +1.3
DEV Deva 7.69 59⇓iP Pn 03 16 45.8 +1.3
DEV Deva 7.69 59 P Pn 03 16 45.8 +1.3
SRS Serrai 7.71 96 P Pn 03 16 45.3 +0.5
TRIZ Trizonia 7.72 118 P Pn 03 16 48.2 +3.3
LAKA Lakka 7.72 119 P Pn 03 16 47.7 +2.7
LAKA Lakka 7.72 119 eP Pn 03 16 48.1 +3.1
MMB Musomiste 7.73 92 iP Pn 03 16 46.4 +1.4
KALE Kalithea 7.75 118 P Pn 03 16 48.6 +3.3
KALE Kalithea 7.75 118 eP Pn 03 16 48.1 +2.8
SJAF Saint Jean de 7.79 275 P Pn 03 16 44.8 -1.1
SJAF Saint Jean de 7.79 275 P Pn 03 16 44.8 -1.1
SJAF Saint Jean de 7.79 275 P Pn 03 16 44.8 -1.1
PLG Polygyros 7.80 101 eP Pn 03 16 46.2 +0.1
NVR Nevrokopi 7.87 94 P Pn 03 16 47.6 +0.6
NVR Nevrokopi 7.87 94 eP Pn 03 16 47.9 +0.9
THEF They Montfort 7.87 321 P Pn 03 16 46.3 -0.7
THEF They Montfort 7.87 321 P Pn 03 16 46.3 -0.7
THEF They Montfort 7.87 321 P Pn 03 16 46.3 -0.7
THEF They Montfort 7.87 321 P Pn 03 16 46.3 -0.7
AXAR Agios Charalam 7.90 114 P Pn 03 16 50.6 +3.2
LBL Lubilhac 7.90 295 P Pn 03 16 49.1 +1.7
LBL Lubilhac 7.90 295 P Pn 03 16 49.1 +1.7
LBL Lubilhac 7.90 295 P Pn 03 16 49.1 +1.7
LBL Lubilhac 7.90 295 P Pn 03 16 49.1 +1.7
NKC Novy Kostel 7.92 356 eP Pn 03 16 46.7 -0.9
NKC e 03 18 11.3
NKC Novy Kostel 7.92 356 ePN Pn 03 16 46.7 -0.9
NKC eSN Sn 03 18 11.3 -5.7
NKC Novy Kostel 7.92 356 Pn Pn 03 16 46.7 -0.9
TOD Tromm 7.94 338 P Pn 03 16 46.4 -1.5
TOD Tromm 7.94 338 P Pn 03 16 46.4 -1.5
TOD Tromm 7.94 338 P Pn 03 16 46.4 -1.5
PGB Panagyurishte 7.96 85 iP Pn 03 16 49.7 +1.5
MORC Moravsky Berou 7.96 20 P Pn 03 16 52.5 +4.2
MORC Moravsky Berou 7.96 20 ePn Pn 03 16 48.3 0.0
MORC Moravsky Berou 7.96 20⇑iP Pn 03 16 48.9 +0.6
MORC Moravsky Berou 7.96 20 ePn Pn 03 16 48.3 0.0
MORC Moravsky Berou 7.96 20⇑iP Pn 03 16 48.9 +0.6
WERN Wernitzgruen 7.97 355 ePn Pn 03 16 47.9 -0.5
WERN eSn Sn 03 18 11.1 -7.3
AMT Artemida-Makis 7.98 124 P Pn 03 16 51.3 +2.7
AMT Artemida-Makis 7.98 124 eP Pn 03 16 53.0 +4.4
XOR Xorichti 7.99 109 P Pn 03 16 49.9 +1.3
DSF Desfina 7.99 116 P Pn 03 16 51.0 +2.3
FILF Fillols 8.03 275 P Pn 03 16 49.8 +0.6
FILF Fillols 8.03 275 P Pn 03 16 49.8 +0.6
FILF Fillols 8.03 275 P Pn 03 16 49.8 +0.6
LRDF Laroque-de-Fa 8.04 278 P Pn 03 16 48.8 -0.5
LRDF Laroque-de-Fa 8.04 278 P Pn 03 16 48.8 -0.5
LRDF Laroque-de-Fa 8.04 278 P Pn 03 16 48.8 -0.5
GUNZ Gunzen 8.05 355 ePn Pn 03 16 49.0 -0.5
SMF Signal de Mont 8.08 305 ePn Pn 03 16 50.0 +0.2
SNR=1.0
SMF eSn Sn 03 18 15.0 -5.9
comp=Z,47nm,0.8s
SMF Signal de Mont 8.08 305 eP Pn 03 16 50.0 +0.2
SMF e 03 18 15.0
SMF Signal de Mont 8.08 305 ePn Pn 03 16 50.0 +0.2
SMF eSn Sn 03 18 15.0 -5.9
SMF Signal de Mont 8.08 305 ePn Pn 03 16 50.0 +0.2
SNR=1.0
LOT Lotru 8.10 64⇑iP Pn 03 16 52.5 +2.3
TANN Tannenbergstha 8.10 356 ePn Pn 03 16 49.4 -0.7
PAIG Paliouri 8.12 104 P Pn 03 16 57.0 +6.6
PAIG Paliouri 8.12 104 eP Pn 03 16 50.2 -0.2
GUR Goura 8.13 120 P Pn 03 16 53.1 +2.4
GUR Goura 8.13 120 eP Pn 03 16 53.5 +2.8
OKC Ostrava-Krasne 8.18 22 AMS AMS 03 20 50.0
comp=Z,800nm,18.1s
LKR Lokris 8.18 114 P Pn 03 16 53.9 +2.6
LKR Lokris 8.18 114 eP Pn 03 16 54.6 +3.3
PLN Plauen 8.19 354 ePn Pn 03 16 51.1 -0.2
PVCC Panska Ves 8.22 5 eP Pn 03 16 50.3 -1.5
PVCC Panska Ves 8.22 5 ePN Pn 03 16 50.3 -1.5
PVCC Panska Ves 8.22 5 Pn Pn 03 16 50.3 -1.5
PAGF Fort de Pagny 8.23 322 ePn Pn 03 16 52.0 +0.2
PAGF Fort de Pagny 8.23 322 ePn Pn 03 16 52.0 +0.2
PAGF Fort de Pagny 8.23 322 ePn Pn 03 16 52.0 +0.2
PYM Petit Puy Mans 8.23 298 P Pn 03 16 53.3 +1.3
PYM Petit Puy Mans 8.23 298 P Pn 03 16 53.3 +1.3
PYM Petit Puy Mans 8.23 298 P Pn 03 16 53.3 +1.3
PYM Petit Puy Mans 8.23 298 P Pn 03 16 53.3 +1.3
DPC Dobruska-Polom 8.25 13 eP Pn 03 16 51.1 -1.1
DPC MLR MLR
comp=Z,700nm,13.3s
DPC Dobruska-Polom 8.25 13 ePn Pn 03 16 50.8 -1.5
DPC Dobruska-Polom 8.25 13 ePN Pn 03 16 51.1 -1.1
DPC AMS AMS 03 20 20.0
comp=Z,700nm,13.3s
DPC Dobruska-Polom 8.25 13 Pn Pn 03 16 51.1 -1.1
AGO Saint Agoulin 8.26 300 P Pn 03 16 53.4 +1.0
AGO Saint Agoulin 8.26 300 P Pn 03 16 53.4 +1.0
AGO Saint Agoulin 8.26 300 P Pn 03 16 53.4 +1.0
MTLF Montolieu 8.29 281 ePn Pn 03 16 52.6 -0.1
SNR=1.0

MTLF Montolieu 8.29 281 eP Pn 03 16 52.6 -0.1
MTLF Montolieu 8.29 281 ePn Pn 03 16 52.6 -0.1
MTLF Montolieu 8.29 281 ePn Pn 03 16 52.6 -0.1
SNR=1.0
SFTF Sexfontaines 8.31 318 ePn Pn 03 16 52.8 -0.2
SFTF eSn Sn 03 18 19.4 -7.3
comp=Z,19nm,0.5s
SFTF Sexfontaines 8.31 318 ePn Pn 03 16 52.8 -0.2
SFTF eSn Sn 03 18 19.4 -7.3
SFTF Sexfontaines 8.31 318 ePn Pn 03 16 52.8 -0.2
ITM Ithomi 8.34 125 P Pn 03 16 54.7 +1.2
ITM Ithomi 8.34 125 eP Pn 03 17 00.3 +6.8
UPC Upice 8.36 11 eP Pn 03 16 52.8 -0.8
UPC Upice 8.36 11 ePN Pn 03 16 52.8 -0.8
UPC Upice 8.36 11 Pn Pn 03 16 52.8 -0.8
LOR Lormes 8.38 309 ePn Pn 03 16 53.7 -0.3
SNR=1.0
LOR eSn Sn 03 18 23.1 -5.4
comp=Z,21nm,0.5s
LOR Lormes 8.38 309 ePn Pn 03 16 53.7 -0.3
LOR eSn Sn 03 18 23.1 -5.4
LOR Lormes 8.38 309 ePn Pn 03 16 53.7 -0.3
SNR=1.0
PLD Plovdiv 8.38 88 P Pn 03 16 55.6 +1.6
PLD Plovdiv 8.38 88 i P Pn 03 16 55.6 +1.6
PLD Plovdiv 8.38 88 P Pn 03 16 55.6 +1.6
PYL PYLOS 8.42 128 P Pn 03 16 55.9 +1.3
PYL PYLOS 8.42 128 eP Pn 03 16 56.3 +1.7
AVF Avril sur Loir 8.44 305 ePn Pn 03 16 54.7 -0.1
SNR=1.0
AVF Avril sur Loir 8.44 305 eP Pn 03 16 54.7 -0.1
AVF Avril sur Loir 8.44 305 ePn Pn 03 16 54.7 -0.1
AVF Avril sur Loir 8.44 305 ePn Pn 03 16 54.7 -0.1
SNR=1.0
RZN Rozhen 8.44 91 i P Pn 03 16 56.6 +1.6
SSF Saint Saulge 8.48 307 ePn Pn 03 16 55.1 -0.2
SNR=1.0
SSF Saint Saulge 8.48 307 eP Pn 03 16 55.1 -0.2
SSF Saint Saulge 8.48 307 ePn Pn 03 16 55.1 -0.2
SSF Saint Saulge 8.48 307 ePn Pn 03 16 55.1 -0.2
SNR=1.0
LTK Loutraki 8.49 117 P Pn 03 16 57.0 +1.5
LTK Loutraki 8.49 117 eP Pn 03 16 57.6 +2.1
VLX Vlachokerasia 8.50 123 P Pn 03 16 58.8 +3.1
VLX Vlachokerasia 8.50 123 eP Pn 03 16 59.5 +3.8
BRG Berggiesshubel 8.54 2 PN Pn 03 16 55.7 -0.4
BRG i 03 16 57.3
BRG i 03 18 25.0
BRG i 03 18 38.5
BRG
comp=N,271nm,10.8s
BRG
comp=E,312nm,8.7s
BRG
comp=Z,251nm,10.5s
BRG Berggiesshubel 8.54 2 P Pn 03 16 55.7 -0.4
BRG i 03 18 38.5
BRG MLR MLR
comp=N,20μm,10.8s
BRG MLR MLR
comp=E,271nm,8.7s
BRG MLR MLR
comp=Z,312nm,10.5s
BRG Berggiesshubel 8.54 2 P Pn 03 16 55.7 -0.4
comp=Z,20μm,10.8s
NIE Niedzica 8.55 32 eP Pn 03 16 59.7 +3.4
NIE Niedzica 8.55 32 eP Pn 03 16 59.7 +3.4
AOS Alonnisos 8.55 108 P Pn 03 16 56.5 +0.1
ABH Alteburg 8.56 334 P Pn 03 16 55.7 -0.8
ABH Alteburg 8.56 334 P Pn 03 16 55.7 -0.8
FBE Freiberg 8.58 360 ePn Pn 03 16 55.8 -0.8
FBE eSn Sn 03 18 26.9 -6.3
RUP Ruppelstein 8.58 331 P Pn 03 16 57.1 +0.4
RUP Ruppelstein 8.58 331 P Pn 03 16 57.1 +0.4
RUP Ruppelstein 8.58 331 P Pn 03 16 57.1 +0.4
CAF Calviac 8.62 291 eP Pn 03 16 58.7 +1.4
SNR=1.0
CAF eSn Sn 03 18 28.0 -6.4
comp=Z,7.2nm,0.6s
CAF Calviac 8.62 291 eP Pn 03 16 58.7 +1.4
CAF e 03 18 28.0
CAF Calviac 8.62 291 eP Pn 03 16 58.7 +1.4
CAF eSn Sn 03 18 28.0 -6.4
CAF Calviac 8.62 291 eP Pn 03 16 58.7 +1.4
SNR=1.0
CRVS Cervenica-Dubn 8.64 38 ePN Pn 03 16 58.0 +0.4
CRVS e 03 19 40.6
CRVS Cervenica-Dubn 8.64 38 ePn Pn 03 16 58.0 +0.4
BGF Bois d'Agland 8.65 303 ePn Pn 03 16 58.3 +0.7
SNR=1.0
BGF eSn Sn 03 18 28.8 -6.2
comp=Z,28nm,0.7s
BGF Bois d'Agland 8.65 303 eP Pn 03 16 58.3 +0.7
BGF e 03 18 28.8
BGF Bois d'Agland 8.65 303 ePn Pn 03 16 58.3 +0.7
BGF eSn Sn 03 18 28.8 -6.2
BGF Bois d'Agland 8.65 303 ePn Pn 03 16 58.3 +0.7
SNR=1.0
TRPA Tarpa 8.65 45⇑iP Pn 03 16 58.3 +0.7
ARR Arges 8.65 66⇓iP Pn 03 16 59.6 +1.8
HUMR Humele 8.70 72⇑iP Pn 03 16 59.2 +0.9
KSP Ksiaz 8.73 12 eP Pn 03 16 58.0 -0.7
KSP e 03 18 38.1
KSP Ksiaz 8.73 12 eP Pn 03 16 58.0 -0.7
KSP eS Sn 03 18 38.1 +1.3
UZH Uzhgorod 8.85 42 eP Pn 03 16 58.7 -1.7
UZH eS Sn 03 18 37.3 -2.6
UZH MLR MLR
comp=N,650nm,11.0s
UZH MLR MLR
comp=E,780nm,11.0s
UZH MLR MLR
comp=Z,600nm,11.0s
UZH Uzhgorod 8.85 42 eP Pn 03 16 58.7 -1.7
ZIMR 8.86 77 ⇑P Pn 03 17 02.0 +1.5
ZIMR 8.86 77⇑iP Pn 03 17 02.0 +1.5
ZIMR 8.86 77 P Pn 03 17 02.0 +1.5
DYR Agios Nikonas 8.86 126 P Pn 03 17 02.7 +2.1
DYR Agios Nikonas 8.86 126 eP Pn 03 17 03.6 +3.0
WLF Walferdange 8.89 328 P Pn 03 17 00.9 0.0
WLF Walferdange 8.89 328 eP Pn 03 17 02.2 +1.3
WLF pmax pmax
comp=Z,13nm,0.6s
WLF Walferdange 8.89 328 ePn Pn 03 17 02.2 +1.3
comp=Z,13nm,0.6s
WLF Walferdange 8.89 328 eP Pn 03 17 02.2 +1.3
comp=Z,13nm,0.6s
TCF Toulx Ste Croi 8.94 300 ePn Pn 03 17 02.4 +0.7
TCF Toulx Ste Croi 8.94 300 eP Pn 03 17 02.4 +0.7
TCF Toulx Ste Croi 8.94 300 ePn Pn 03 17 02.4 +0.7
TCF Toulx Ste Croi 8.94 300 ePn Pn 03 17 02.4 +0.7
VOIR 8.95 66 P Pn 03 17 04.5 +2.6
VOIR 8.95 66⇑iP Pn 03 17 04.3 +2.4
VOIR 8.95 66 P Pn 03 17 04.5 +2.6
DID Didima 8.96 119 P Pn 03 17 03.5 +1.5
DID Didima 8.96 119 eP Pn 03 17 04.3 +2.3
CLL Collm 8.97 358 eP Pn 03 17 02.0 0.0
CLL e 03 18 36.0
CLL Collm 8.97 358 eSn Sn 03 18 36.3 -6.5
CLL Collm 8.97 358 eP Pn 03 17 02.0 0.0
KDZ Kurdzhali 8.97 90 i P Pn 03 17 02.3 +0.2
KOLS Kolonicke sedl 9.04 40 ePN Pn 03 17 03.7 +0.6
KOLS e 03 19 52.5
KOLS Kolonicke sedl 9.04 40 ePn Pn 03 17 03.7 +0.6
PTL Penteli 9.08 115 eP Pn 03 17 10.0 +6.4
RJF Les Rejaudoux 9.09 293 eP Pn 03 17 05.9 +2.2
SNR=1.0
RJF Les Rejaudoux 9.09 293 eP Pn 03 17 05.9 +2.2
RJF Les Rejaudoux 9.09 293 eP Pn 03 17 05.9 +2.2
RJF Les Rejaudoux 9.09 293 eP Pn 03 17 05.9 +2.2
SNR=1.0
MLS Moulis 9.10 278 P Pn 03 17 03.8 0.0
MLS Moulis 9.10 278 P Pn 03 17 03.8 0.0
MLS Moulis 9.10 278 P Pn 03 17 03.8 0.0
SZH Strazhica 9.25 80 i P Pn 03 17 07.9 +2.0
VLI Veliai 9.26 124 P Pn 03 17 09.2 +3.2
DOPR Dopca 9.34 63⇑iP Pn 03 17 09.6 +2.5
LFF La Frestale 9.54 290 eP Pn 03 17 11.9 +2.0
LFF La Frestale 9.54 290 eP Pn 03 17 11.9 +2.0
LFF La Frestale 9.54 290 eP Pn 03 17 11.9 +2.0
LFF La Frestale 9.54 290 eP Pn 03 17 11.9 +2.0
SECR 9.55 69⇑iP Pn 03 17 12.6 +2.5

ALN Alexandroupoli 9.57 94 P Pn 03 17 11.4 +1.1
MLR Muntele Rosu 9.57 67 Pn Pn 03 17 12.4 +2.0
MLR Muntele Rosu 9.57 67 Pn Pn 03 17 12.4 +2.0
baz=248,slow=6.8
MLR Muntele Rosu 9.57 67 P Pn 03 17 12.4 +2.0
KYTH Kithira 9.61 126 P Pn 03 17 15.8 +5.0
SULR 9.62 72⇓iP Pn 03 17 09.7 -1.2
EPF Esparros 9.65 278 ePn Pn 03 17 10.5 -1.0
EPF eSn Sn 03 18 52.8 -6.9
comp=Z,6.1nm,0.8s
EPF Esparros 9.65 278 eP Pn 03 17 10.5 -1.0
EPF e 03 18 52.8
EPF Esparros 9.65 278 ePn Pn 03 17 10.5 -1.0
EPF eSn Sn 03 18 52.8 -6.9
EPF Esparros 9.65 278 ePn Pn 03 17 10.5 -1.0
RESF Ens 9.66 277 P Pn 03 17 14.2 +2.6
RESF Ens 9.66 277 P Pn 03 17 14.2 +2.6
RESF Ens 9.66 277 P Pn 03 17 14.2 +2.6
MEM Membach 9.71 331 P Pn 03 17 13.0 +0.8
KWP Kalwaria Pacla 9.74 38 eP Pn 03 17 16.3 +3.7
KWP pmax pmax
comp=Z,50nm,0.8s
KWP Kalwaria Pacla 9.74 38 ePn Pn 03 17 16.3 +3.7
comp=Z,50nm,0.8s
KWP Kalwaria Pacla 9.74 38⇑iP Pn 03 17 16.8 +4.3
JMB Yambol 9.75 85 P Pn 03 17 14.7 +2.0
JMB Yambol 9.75 85 i P Pn 03 17 13.6 +0.9
JMB Yambol 9.75 85 P Pn 03 17 14.7 +2.0
GIVF Givet 9.77 325 ePn Pn 03 17 13.6 +0.6
SNR=1.0
GIVF eSn Sn 03 18 54.6 -7.9
comp=Z,17nm,0.5s
GIVF Givet 9.77 325 eP Pn 03 17 13.6 +0.6
GIVF e 03 18 54.6
GIVF Givet 9.77 325 ePn Pn 03 17 13.6 +0.6
GIVF eSn Sn 03 18 54.6 -7.9
GIVF Givet 9.77 325 ePn Pn 03 17 13.6 +0.6
SNR=1.0
BCLA Clavier 9.82 328 P Pn 03 17 14.8 +1.2
DOU Dourbes 9.86 325 P Pn 03 17 15.3 +1.1
HGN Heimansgroeve 9.86 331 eP Pn 03 17 15.9 +1.7
comp=Z,4.7nm,0.4s
BUR08 Bucovina Ar. S 9.88 54 ePn Pn 03 17 17.2 +2.6
BUR08 Bucovina Ar. S 9.88 54 ePn Pn 03 17 17.2 +2.6
ISR Istrita 9.90 69 ⇑P Pn 03 17 16.4 +1.5
ISR Istrita 9.90 69⇑iP Pn 03 17 16.4 +1.5
ISR Istrita 9.90 69 P Pn 03 17 16.4 +1.5
BAIF Baives 10.00 324 ePn Pn 03 17 16.1 -0.1
BAIF eSn Sn 03 19 01.0 -7.2
comp=Z,6.2nm,0.3s
BAIF Baives 10.00 324 eP Pn 03 17 16.1 -0.1
BAIF e 03 19 01.0
BAIF Baives 10.00 324 ePn Pn 03 17 16.1 -0.1
BAIF eSn Sn 03 19 01.0 -7.2
BAIF Baives 10.00 324 ePn Pn 03 17 16.1 -0.1
PLOR Plostina 10.15 65 P Pn 03 17 19.8 +1.6
PLOR Plostina 10.15 65⇓iP Pn 03 17 19.6 +1.4
PLOR Plostina 10.15 65 P Pn 03 17 19.8 +1.6
VRI Vrincioaia 10.20 65 P Pn 03 17 20.6 +1.7
VRI Vrincioaia 10.20 65⇑iP Pn 03 17 20.4 +1.5
VRI Vrincioaia 10.20 65 P Pn 03 17 20.6 +1.7
GRER 10.25 68⇓iP Pn 03 17 21.9 +2.3
ETSF Etsaut 10.31 278 ePn Pn 03 17 21.8 +1.3
ETSF Etsaut 10.31 278 eP Pn 03 17 21.8 +1.3
ETSF Etsaut 10.31 278 ePn Pn 03 17 21.8 +1.3
ETSF Etsaut 10.31 278 ePn Pn 03 17 21.8 +1.3
PRD Provadia 10.32 81 i P Pn 03 17 22.2 +1.6
TESR 10.34 62⇓iP Pn 03 17 23.3 +2.5
LVV L'vov 10.49 41⇓iP Pn 03 17 26.3 +3.4
LVV MLR MLR
comp=N,300nm,12.0s
LVV MLR MLR
comp=E,200nm,12.0s
LVV MLR MLR
comp=Z,400nm,12.0s
MFF Saint Martin d 10.58 298 eP Pn 03 17 26.8 +2.7
MFF Saint Martin d 10.58 298 eP Pn 03 17 26.8 +2.7
MFF Saint Martin d 10.58 298 eP Pn 03 17 26.8 +2.7
SJPF Ste Jean 10.80 279 ePn Pn 03 17 27.2 +0.1
SJPF Ste Jean 10.80 279 eP Pn 03 17 27.2 +0.1
SJPF Ste Jean 10.80 279 ePn Pn 03 17 27.2 +0.1
SJPF Ste Jean 10.80 279 ePn Pn 03 17 27.2 +0.1
PSN Preselentsi 10.90 78 i P Pn 03 17 28.7 +0.2
CFR Carcaliu 11.02 70 ⇑P Pn 03 17 30.2 +0.1
CFR Carcaliu 11.02 70⇑iP Pn 03 17 30.2 +0.1
CFR Carcaliu 11.02 70 P Pn 03 17 30.2 +0.1
TIRR Tirgusor 11.12 74 ⇑P Pn 03 17 31.9 +0.5
TIRR Tirgusor 11.12 74 ePn Pn 03 17 30.8 -0.6
TIRR Tirgusor 11.12 74⇑iP Pn 03 17 31.9 +0.5
TIRR Tirgusor 11.12 74 ePn Pn 03 17 30.8 -0.6
TIRR Tirgusor 11.12 74 P Pn 03 17 31.9 +0.5
TLCR 11.49 70 ⇑P Pn 03 17 37.7 +1.1
TLCR 11.49 70⇑iP Pn 03 17 37.7 +1.1
TLCR 11.49 70 P Pn 03 17 37.7 +1.1
KIS Kishinev 11.91 62 eP Pn 03 17 43.0 +0.7
KIS MLR MLR
comp=Z,1μm,14.0s
KIS MLR MLR
comp=E,1μm,13.0s
KIS MLR MLR
comp=Z,1μm,14.0s
KIS Kishinev 11.91 62 eP Pn 03 17 43.0 +0.7
KIS LRM MLR 03 23 12.0
comp=Z,1μm,14.0s
KIS Kishinev 11.91 62 eP Pn 03 17 43.0 +0.7
comp=Z,1μm,14.0s
ESDC Sonseca Array 13.39 264 Pn Pn 03 18 01.9 -0.7
ESDC Sonseca Array 13.39 264 Pn Pn 03 18 01.9 -0.7
comp=Z,0.8nm,0.3s,baz=68,slow=14,SNR=46
ESDC LR LR 03 23 11.7
comp=Z,199nm,20.2s,baz=70,slow=38
ESDC Sonseca Array 13.39 264 Pn Pn 03 18 01.9 -0.7
AK02 Malin Array Si 13.67 47 ePn Pn 03 18 09.6 +3.4
KIEV Kiev 13.69 47 eP Pn 03 18 10.0 +3.5
KIEV pmax pmax
comp=Z,7.0nm,0.9s
KIEV Kiev 13.69 47 ePn Pn 03 18 10.0 +3.5
comp=Z,7.0nm,0.9s
AK01 Malin Array Si 13.69 47 ePn Pn 03 18 10.0 +3.5
AKASG Malin Array Be 13.70 47 P Pn 03 18 09.1 +2.4
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG Malin Array Be 13.70 47 Pn Pn 03 18 09.1 +2.4
AKASG Malin Array Be 13.70 47 Pn Pn 03 18 09.1 +2.4
comp=Z,1.7nm,0.3s,baz=238,slow=11,SNR=4.5
AKASG Malin Array Be 13.70 47 P Pn 03 18 09.1 +2.4
comp=Z,2.0nm,0.3s
PAB San Pablo 13.71 264 eP Pn 03 18 06.5 -0.5
PAB San Pablo 13.71 264 ePn Pn 03 18 06.5 -0.5
PAB San Pablo 13.71 264 eP Pn 03 18 06.5 -0.5
NACGM Naroch 15.32 30 e P 03 18 31.0 -2.4
IIGN Ignalina 15.47 28 eP P 03 18 34.1 -0.9
BR131 Keskin Array S 15.49 93 ePn Pn 03 18 29.9 -1.2
comp=Z,1.9nm,0.8s
BR131 Keskin Array S 15.49 93 ePn Pn 03 18 29.9 -1.2
comp=Z,1.9nm,0.8s
BRTR Keskin Array B 15.49 93 Pn Pn 03 18 31.9 +0.8
BRTR Keskin Array B 15.49 93 Pn Pn 03 18 31.9 +0.8
comp=Z,0.0nm,0.3s,baz=291,slow=10,SNR=5.8
BRTR Keskin Array B 15.49 93 Pn Pn 03 18 31.9 +0.8
ISAL Salakas 15.61 28 eP P 03 18 35.6 -1.0
ISAL AMB AMB 03 18 38.2
comp=Z,9.0nm,1.3s
IZAR Zarasai 15.79 27 eP P 03 18 37.8 -0.8
IZAR AMB AMB 03 18 40.4
comp=Z,9.8nm,0.9s
EKA Eskdalemuir Ar 16.91 326 Pn P 03 18 49.9 -1.0
EKA Eskdalemuir Ar 16.91 326 Pn P 03 18 49.9 -1.0
baz=139,slow=14,SNR=2.6
EKA Eskdalemuir Ar 16.91 326 P P 03 18 49.9 -1.0
MDT Midelt 17.14 242 P P 03 18 53.4 -0.4
MDT Midelt 17.14 242 P P 03 18 53.4 -0.4
comp=Z,0.1nm,0.3s,baz=58,slow=10,SNR=5.7
MDT LR LR 03 24 26.2
comp=Z,157nm,20.3s,baz=99,slow=34
MDT Midelt 17.14 242 P P 03 18 53.4 -0.4
ANN Anapa 17.57 74 eP Pn 03 18 53.7 -3.5
ANN pmax pmax
comp=Z,46nm,1.3s
ANN MLR MLR
comp=Z,285nm,14.0s
HFS Hagfors 17.81 0 P Pn 03 18 59.3 -0.9
HFS Hagfors 17.81 0 P Pn 03 18 59.3 -0.9

comp=Z,0.2nm,0.3s,baz=168,slow=7.6,SNR=7.1
HFS LR LR 03 26 38.3
comp=Z,103nm,20.7s,baz=182,slow=40
HFS Hagfors 17.81 0 P Pn 03 18 59.3 -0.9
comp=Z,103nm,20.7s
NAO01 NORSAR Array S 18.59 356 eP Pn 03 19 09.8 +0.1
comp=Z,12nm,0.9s
NAO01 NORSAR Array S 18.59 356 eP Pn 03 19 09.8 +0.1
comp=Z,12nm,0.9s
NB2 NORSAR Subarra 18.77 357 P Pn 03 19 11.9 0.0
comp=Z,4.4nm,0.7s,baz=176,slow=10
NB2 NORSAR Subarra 18.77 357 P Pn 03 19 11.9 0.0
comp=Z,4.4nm,0.7s,baz=176,slow=9.4,SNR=6.6
NOA NORSAR Array B 18.77 357 P Pn 03 19 11.5 -0.5
NOA NORSAR Array B 18.77 357 P Pn 03 19 11.5 -0.5
comp=Z,0.4nm,0.3s,baz=174,slow=11,SNR=6.4
NOA LR LR 03 26 55.6
comp=Z,44nm,21.9s,baz=290,slow=39
NOA NORSAR Array B 18.77 357 P Pn 03 19 11.5 -0.5
MALT Malatya 19.47 94 eP Pn 03 19 21.4 +0.8
MALT pmax pmax
comp=Z,14nm,1.3s
MALT Malatya 19.47 94 eP Pn 03 19 21.4 +0.8
comp=Z,14nm,1.3s
MALT Malatya 19.47 94 eP Pn 03 19 21.4 +0.8
comp=Z,14nm,1.3s
VSR Storozhevoye 19.66 54 eP P 03 19 20.2 -1.0
VSR eS S 03 22 52.2 -10
VSR pmax pmax
comp=E,6.0nm,0.5s
VSR pmax pmax
comp=Z,8.0nm,0.5s
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR smax smax
comp=N,60nm,2.1s
VSR smax smax
comp=E,30nm,2.1s
VSR smax smax
comp=Z,20nm,2.1s
VSR MLR MLR
comp=N,260nm,14.0s
VSR MLR MLR
comp=E,670nm,14.0s
VSR MLR MLR
comp=Z,320nm,14.0s
VSR Storozhevoye 19.66 54 eP P 03 19 20.2 -1.0
comp=Z,1.0nm,0.3s
VORD Divnogorie 19.66 55 eP P 03 19 20.0 -1.3
VORD pmax pmax
comp=N,6.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.8s
VORD pmax pmax
comp=Z,9.0nm,0.8s
VORD MLR MLR
comp=N,380nm,19.0s
VORD MLR MLR
comp=E,370nm,19.0s
VORD MLR MLR
comp=Z,530nm,19.0s
VORD Divnogorie 19.66 55 eP P 03 19 20.0 -1.3
MMAI Mount Meron Ar 19.70 111 P Pn 03 19 24.8 +1.5
MMAI Mount Meron Ar 19.70 111 P Pn 03 19 24.8 +1.5
comp=Z,0.5nm,0.3s,baz=316,slow=12,SNR=4.7
MMAI LR LR 03 28 04.1
comp=Z,76nm,21.6s,baz=265,slow=40
MMAI Mount Meron Ar 19.70 111 P Pn 03 19 24.8 +1.5
OBN Obninsk 19.79 42⇓iP P 03 19 21.7 -0.9
OBN eS S 03 23 04.9 -0.2
OBN pmax pmax
comp=Z,18nm,1.2s
OBN MLR MLR
comp=Z,200nm,15.0s
OBN Obninsk 19.79 42 i P P 03 19 21.7 -0.9
comp=Z,18nm,1.2s
TAM Tamanrasset 20.58 201 eP Pn 03 19 33.9 -0.1
TAM pmax pmax
comp=Z,5.0nm,0.8s
TAM Tamanrasset 20.58 201 eP Pn 03 19 33.9 0.0
comp=Z,4.8nm,0.8s
TAM Tamanrasset 20.58 201 eP Pn 03 19 33.9 -0.1
comp=Z,5.0nm,0.8s
FINES FINESS Array B 20.59 17 P P 03 19 30.9 -0.3
FINES FINESS Array B 20.59 17 P P 03 19 30.9 -0.3
comp=Z,25nm,0.7s,baz=189,slow=9.2,SNR=49
FINES FINESS Array B 20.59 17 P P 03 19 30.9 -0.3
comp=Z,25nm,0.7s
MOS Moscow 20.63 41 eP P 03 19 19.9 -12
VRHR Novokhopersk 21.12 56 eP P 03 19 37.5 +0.4
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,20nm,0.6s
VRHR pmax pmax
comp=E,4.0nm,0.3s
VRHR MLR MLR
comp=E,290nm,17.0s
VRHR MLR MLR
comp=Z,430nm,17.0s
VRHR MLR MLR
comp=N,20nm,4.0s
VRHR Novokhopersk 21.12 56 eP P 03 19 37.5 +0.4
comp=N,20nm,4.0s
ASF Jabal al Asfar 21.21 111 P P 03 19 42.4 +4.0
ASF Jabal al Asfar 21.21 111 P P 03 19 42.4 +4.0
comp=N,0.6nm,0.3s,baz=321,slow=6.5,SNR=2.0
ASF LR LR 03 29 10.2
comp=N,57nm,18.2s,baz=334,slow=40
KAF Kangasniemi 21.23 17 eP P 03 19 36.8 -1.4
KAF pmax pmax
comp=Z,18nm,0.6s
KAF Kangasniemi 21.23 17 ep P 03 19 36.8 -1.4
comp=Z,18nm,0.6s
KAF Kangasniemi 21.23 17 eP P 03 19 36.8 -1.4
comp=Z,18nm,0.6s
KIV Kislovodsk 21.37 76 eP P 03 19 40.8 +0.8
KIV pmax pmax
comp=Z,68nm,1.1s
KIV MLR MLR
comp=Z,87nm,15.0s
KIV Kislovodsk 21.37 76 eP P 03 19 41.4 +1.4
comp=Z,59nm,1.0s
KIV Kislovodsk 21.37 76 eP P 03 19 40.8 +0.8
comp=Z,87nm,15.0s
KBZ Khabaz 21.55 76 P P 03 19 43.2 +1.5
KBZ pmax pmax
comp=Z,37nm,0.9s
KBZ Khabaz 21.55 76 P P 03 19 43.2 +1.5
KBZ Khabaz 21.55 76 P P 03 19 43.2 +1.5
comp=Z,36nm,0.9s,baz=300,slow=7.5,SNR=21
KBZ Khabaz 21.55 76 P P 03 19 43.2 +1.5
comp=Z,37nm,0.9s
ZEI Tsey 22.41 79 eP P 03 19 53.0 +1.7
ZEI pmax pmax
comp=Z,11nm,0.9s
ZEI Tsey 22.41 79 eP P 03 19 53.0 +1.7
comp=Z,11nm,0.9s
JOF Joensuu 23.13 21 eP P 03 19 57.7 -0.7
JOF pmax pmax
comp=Z,14nm,0.6s
JOF Joensuu 23.13 21 ep P 03 19 57.7 -0.7
comp=Z,14nm,0.6s
JOF Joensuu 23.13 21 eP P 03 19 57.7 -0.7
comp=Z,14nm,0.6s
GNI Garni 23.59 85 eP P 03 20 04.5 +1.1
comp=Z,35nm,1.0s
GNI Garni 23.59 85 P P 03 20 04.7 +1.2
comp=Z,25nm,1.0s,baz=22,slow=7.5,SNR=11
GNI Garni 23.59 85 eP P 03 20 04.5 +1.1
comp=Z,35nm,1.0s
KLMR Klimovskoe 24.34 32 eP P 03 20 07.8 -2.3
KLMR e*PP pP 03 20 10.6 -3.5
KLMR e*SP sP 03 20 12.0 -3.8
KLMR pmax pmax
comp=Z,273nm,12.9s
MAK Makhachkala 24.99 77 eP P 03 20 15.6 -0.5
MAK MLR MLR
comp=Z,336nm,14.0s
TMCR Tamitsa 26.03 25 eP P 03 20 21.6 -3.7
TMCR pmax pmax
comp=Z,11nm,0.3s
ARCES ARCESS Array B 27.97 9 P P 03 20 41.7 -1.0
ARCES ARCESS Array B 27.97 9 P P 03 20 41.7 -1.0
comp=Z,2.8nm,0.6s,baz=187,slow=9.3,SNR=17
ARCES LR LR 03 32 57.6
comp=Z,143nm,18.1s,baz=212,slow=39

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ARCES	ARCESS Array B	27.97	9	P	P	03 20 41.7	-1.0
TOA0	Torodi Ar. Sit	30.82	203	eP	P	03 21 09.3	+0.8
TOA0	Torodi Ar. Sit	30.82	203	eP	P	03 21 09.3	+0.8
TORD	Torodi Ar. Bea	30.82	203	P	P	03 21 08.7	+0.2
TORD				PcP	PcP	03 24 04.1	-1.4
TORD	Torodi Ar. Bea	30.82	203	P	P	03 21 08.7	+0.2
	comp=Z,4.7nm,0.7s,baz=14,slow=7.9,SNR=48						
TORD				PcP	PcP	03 24 04.1	-1.4
	comp=Z,0.5nm,0.8s,baz=339,slow=1.2,SNR=3.7						
TORD				LR	LR	03 34 50.6	
	comp=Z,262nm,19.5s,baz=20,slow=39						
TORD	Torodi Ar. Bea	30.82	203	P	P	03 21 08.7	+0.2
TORD	Torodi Ar. Bea	30.82	203	PcP	PcP	03 24 04.1	-1.4
AKTO	Aktyubinsk	31.41	60	P	P	03 21 12.7	-0.7
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKTO	Aktyubinsk	31.41	60	P	P	03 21 12.7	-0.7
AKTO	Aktyubinsk	31.41	60	P	P	03 21 12.7	-0.7
	comp=Z,2.5nm,0.6s,baz=261,slow=9.3,SNR=11						
AKTO	Aktyubinsk	31.41	60	P	P	03 21 12.6	-0.8
ARU	Arti	31.95	48	eP	P	03 21 17.7	-0.4
ARU				pmax	pmax		
	comp=Z,22nm,0.9s						
ARU	Arti	31.95	48	eP	P	03 21 17.7	-0.4
	comp=Z,22nm,0.9s						
ARU	Arti	31.95	48	eP	P	03 21 17.7	-0.4
	comp=Z,22nm,0.9s						
ABKAR	Akbulak array	32.74	62	eP	P	03 21 24.7	-0.4
	comp=Z,2.4nm,0.8s						
ABKAR	Akbulak array	32.74	62	eP	P	03 21 24.7	-0.4
	comp=Z,2.4nm,0.8s						
SVE	Sverdlovsk	33.13	48	eP	P	03 21 28.6	+0.1
SVE				pmax	pmax		
	comp=Z,14nm,0.8s						
BRVK	Borovoye	38.77	54c	iP	P	03 22 17.3	+0.5
BRVK				pmax	pmax		
	comp=Z,13nm,1.0s						
BRVK	Borovoye	38.77	54	eP	P	03 22 17.4	+0.6
	comp=Z,10nm,0.8s						
BRVK	Borovoye	38.77	54	eP	P	03 22 17.4	+0.6
	comp=Z,10nm,0.8s						
DBIC	Dimbokro	39.04	210	eP	P	03 22 20.2	+0.8
	comp=Z,7.3nm,1.0s						
DBIC	Dimbokro	39.04	210	P	P	03 22 19.8	+0.4
	comp=Z,4.1nm,0.8s,baz=1.4,slow=11,SNR=5.1						
DBIC	Dimbokro	39.04	210	eP	P	03 22 20.2	+0.8
	comp=Z,7.3nm,1.0s						
KKAR	Karatay Array	41.25	69	eP	P	03 22 38.5	+1.0
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KKAR	Karatay Array	41.25	69	eP	P	03 22 38.5	+1.0
	comp=Z,7.3nm,0.8s						
KKAR	Karatay Array	41.25	69	eP	P	03 22 38.5	+1.0
	comp=Z,7.3nm,0.8s						
EKS2	Erkin-Say	43.65	68	eP	P	03 22 58.0	+0.8
EKS2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
EKS2	Erkin-Say	43.65	68	eP	P	03 22 58.0	+0.8
	comp=Z,9.6nm,0.9s						
EKS2	Erkin-Say	43.65	68	eP	P	03 22 58.0	+0.8
	comp=Z,9.6nm,0.9s						
AAK	Ala-Archa	44.16	68⇓	eP	P	03 23 02.8	+1.5
AAK				pmax	pmax		
	comp=Z,15nm,1.0s						
AAK	Ala-Archa	44.16	68	eP	P	03 23 02.3	+1.0
AAK	Ala-Archa	44.16	68	eP	P	03 23 02.3	+1.0
KURK	Kurchatov	44.30	56⇑	eP	P	03 23 01.6	-0.6
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK				MLR	MLR		
	comp=Z,52nm,14.0s						
KURK	Kurchatov	44.30	56	eP	P	03 23 01.6	-0.6
	comp=Z,5.4nm,1.3s						
KURK	Kurchatov	44.30	56	eP	P	03 23 01.5	-0.6
	comp=Z,5.4nm,1.3s						
NVS	Novosibirsk	45.94	49	eP	P	03 23 15.1	0.0
NVS				pmax	pmax		
	comp=Z,13nm,1.5s						
ZAA0	Zalesovo Array	47.07	50	eP	P	03 23 24.1	+0.1
ZAA0	Zalesovo Array	47.07	50	eP	P	03 23 24.1	+0.1
ZALV	Zalesovo Beam	47.07	50	P	P	03 23 24.0	0.0
ZALV						03 25 13.8	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV				MLR	MLR		
	comp=Z,288nm,18.2s						
ZALV	Zalesovo Beam	47.07	50	P	P	03 23 23.9	0.0
ZALV				PP	PP	03 25 13.8	-0.6
ZALV	Zalesovo Beam	47.07	50	P	P	03 23 23.9	0.0
	comp=Z,3.3nm,0.7s,baz=286,slow=8.3,SNR=17						
ZALV				PP	PP	03 25 13.8	-0.6
	comp=Z,1.3nm,0.7s,baz=304,slow=10,SNR=4.1						
ZALV				LR	LR	03 45 11.9	
	comp=Z,288nm,18.2s,baz=290,slow=39						
ZALV	Zalesovo Beam	47.07	50	P	P	03 23 24.0	0.0
ZALV	Zalesovo Beam	47.07	50	PP	PP	03 25 13.8	-0.6
MK31	Makanchi Array	47.84	60	eP	P	03 23 30.2	0.0
MK31	Makanchi Array	47.84	60	eP	P	03 23 30.1	0.0
MK31	Makanchi Array	47.84	60	eP	P	03 23 30.1	0.0
MKAR	Makanchi Array	47.84	60	P	P	03 23 29.9	-0.2
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,65nm,18.1s						
MKAR	Makanchi Array	47.84	60	P	P	03 23 29.9	-0.2
MKAR	Makanchi Array	47.84	60	P	P	03 23 29.9	-0.2
	comp=Z,4.2nm,0.6s,baz=287,slow=6.5,SNR=67						
MKAR				LR	LR	03 45 49.0	
	comp=Z,65nm,18.1s,baz=174,slow=39						
MKAR	Makanchi Array	47.84	60	P	P	03 23 29.9	-0.2
SCHQ	Schefferville	51.68	313	P	P	03 23 57.8	-1.4
SCHQ	Schefferville	51.68	313	P	P	03 23 57.8	-1.4
	comp=Z,4.4nm,0.8s,baz=244,slow=4.9,SNR=5.6						
SCHQ	Schefferville	51.68	313	P	P	03 23 57.8	-1.4
WMQ	Urumqi	52.52	61	eP	P	03 24 08.9	+3.2
WMQ				pmax	pmax		
	comp=Z,15nm,1.0s						
TIXI	Tiksi	57.61	20⇓	eP	P	03 24 43.1	+1.2
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.7s						
TIXI				MLR	MLR		
	comp=Z,105nm,16.0s						
TIXI	Tiksi	57.61	20	eP	P	03 24 42.6	+0.7
	comp=Z,2.9nm,0.6s						
TIXI	Tiksi	57.61	20	eP	P	03 24 42.6	+0.7
	comp=Z,2.9nm,0.6s						
SONM	Songino Array	61.97	50	P	P	03 25 12.7	+0.2
SONM	Songino Array	61.97	50	P	P	03 25 12.7	+0.2
	comp=Z,2.5nm,0.9s,baz=288,slow=7.5,SNR=18						
SONM				LR	LR	03 54 13.7	
	comp=Z,216nm,19.8s,baz=54,slow=38						
SONM	Songino Array	61.97	50	P	P	03 25 12.7	+0.2
YKA	Yellowknife Ar	67.52	337	P	P	03 25 48.1	0.0
YKA	Yellowknife Ar	67.52	337	P	P	03 25 48.1	0.0
	comp=Z,0.8nm,0.6s,baz=40,slow=5.7,SNR=17						
YKA	Yellowknife Ar	67.52	337	P	P	03 25 48.2	0.0
LBTB	Lobatse	67.96	168	eP	P	03 25 51.6	+0.1
	comp=Z,2.5nm,0.7s						
LBTB	Lobatse	67.96	168	eP	P	03 25 51.6	+0.1
	comp=Z,2.5nm,0.7s						
BILL	Bilibino	68.06	11⇑	iP	P	03 25 52.5	+1.0
BILL				pmax	pmax		
	comp=Z,8.0nm,2.6s						
BILL				MLR	MLR		
	comp=Z,200nm,22.0s						
BILL	Bilibino	68.06	11	eP	P	03 25 52.5	+1.0
	comp=Z,2.0nm,0.5s						
BILL	Bilibino	68.06	11	eP	P	03 25 52.5	+1.0
	comp=Z,2.0nm,0.5s						
FFC	Flin Flon	68.76	326	iP	P	03 25 59.2	+3.1
FFC	Flin Flon	68.76	326	eP	P	03 25 56.4	+0.3
	comp=Z,1.7nm,0.7s						
FFC	Flin Flon	68.76	326	eP	P	03 25 56.4	+0.3
	comp=Z,1.6nm,0.7s						
HHC	Hu-ho-hao-te	69.05	54	eP	P	03 25 57.6	-0.7
HHC				PcP	PcP	03 26 22.1	-0.3
HHC				PP	PP	03 28 32.4	+2.0
HHC				S	S	03 35 01.1	-2.0
HHC				SKS	SKSac	03 35 53.8	-4.1
HHC				ScS	SKKSac	03 35 55.3	-2.6
HHC				LR	LR		
	comp=N,170nm,17.0s						
HHC				LR	LR		
	comp=E,200nm,16.6s						
HHC				LR	LR		
	comp=Z,150nm,16.9s						
ULM	Lac du Bonnet	69.06	320	P	P	03 25 56.6	-1.5
ULM	Lac du Bonnet	69.06	320	P	P	03 25 56.6	-1.5
	comp=Z,1.2nm,0.3s,baz=57,slow=6.8,SNR=4.3						
ULM	Lac du Bonnet	69.06	320	P	P	03 25 56.6	-1.5
COLD	Coldfoot	70.04	353	eP	P	03 26 04.4	+0.5
	comp=Z,1.4nm,0.8s						
COLD	Coldfoot	70.04	353	eP	P	03 26 04.4	+0.5
	comp=Z,1.4nm,0.8s						
SEY	Seymchan	70.06	19	iP	P	03 26 05.6	+1.6
BOSA	Boshof	71.45	169	P	P	03 26 12.0	-0.9
BOSA	Boshof	71.45	169	P	P	03 26 12.0	-0.9
	comp=Z,3.2nm,0.9s,baz=323,slow=5.1,SNR=3.3						
BOSA	Boshof	71.45	169	P	P	03 26 12.0	-0.9
WCI	Wyandotte Cave	71.63	305	eP	P	03 26 13.5	-0.5
WCI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WCI	Wyandotte Cave	71.63	305	eP	P	03 26 13.5	-0.5
	comp=Z,5.3nm,0.8s						
WCI	Wyandotte Cave	71.63	305	eP	P	03 26 13.5	-0.5
	comp=Z,5.3nm,0.8s						
ILAR	Eielson Array	72.11	351	P	P	03 26 17.1	+0.7
ILAR	Eielson Array	72.11	351	P	P	03 26 17.1	+0.7
	comp=Z,0.7nm,0.7s,baz=1.4,slow=6.3,SNR=13						
ILAR	Eielson Array	72.11	351	P	P	03 26 17.1	+0.7
CMAR	Chiang Mai Arr	74.57	79	P	P	03 26 31.9	+0.2
CMAR	Chiang Mai Arr	74.57	79	P	P	03 26 31.9	+0.2
	comp=Z,0.8nm,0.3s,baz=306,slow=7.7,SNR=4.5						
CMAR	Chiang Mai Arr	74.57	79	P	P	03 26 31.9	+0.2
GYA	Guiyang	74.95	68	eP	P	03 26 34.2	+0.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BOZ	Bozeman (W)	79.64	324	eP	P	03 27 01.0	+1.0
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BOZ	Bozeman (W)	79.64	324	eP	P	03 27 01.0	+1.0
	comp=Z,1.4nm,0.9s						
BOZ	Bozeman (W)	79.64	324	eP	P	03 27 01.0	+1.0
	comp=Z,1.4nm,0.9s						
NEW	Newport	79.78	329	eP	P	03 27 01.1	+0.6
	comp=Z,2.0nm,0.9s						
NEW	Newport	79.78	329	eP	P	03 27 01.1	+0.6
	comp=Z,2.0nm,0.9s						
KSAR	Wonju Array Be	80.69	47	P	P	03 27 06.0	+0.5
KSAR	Wonju Array Be	80.69	47	P	P	03 27 06.0	+0.5
BDFB	Brasilia	80.69	239	P	P	03 27 05.3	-0.5
BDFB	Brasilia	80.69	239	P	P	03 27 05.3	-0.5
	comp=Z,2.7nm,0.9s,baz=99,slow=7.1,SNR=3.7						
BDFB	Brasilia	80.69	239	P	P	03 27 05.3	-0.5
KSRS	Korea Array	80.70	47	P	P	03 27 06.0	+0.4
	comp=Z,0.3nm,0.2s,baz=332,slow=5.2,SNR=5.2						
MOOW	Moose Ponds	80.74	323	eP	P	03 27 07.1	+1.0
	comp=Z,0.8nm,0.8s						
MOOW	Moose Ponds	80.74	323	eP	P	03 27 07.1	+1.0
	comp=Z,0.8nm,0.8s						
LOHW	Long Hollow	80.79	322	eP	P	03 27 07.0	+0.7
LOHW	Long Hollow	80.79	322	eP	P	03 27 07.0	+0.7
PDAR	Pinedale Array	80.97	321	P	P	03 27 06.1	-1.2
PDAR	Pinedale Array	80.97	321	P	P	03 27 06.1	-1.2
	comp=Z,0.8nm,0.8s,baz=74,slow=5.4,SNR=4.3						
PDAR	Pinedale Array	80.97	321	P	P	03 27 06.1	-1.2
BW06	Boulder Array	80.97	321	eP	P	03 27 06.9	-0.4
	comp=Z,1.5nm,1.0s						
BW06	Boulder Array	80.97	321	eP	P	03 27 06.9	-0.4
	comp=Z,1.5nm,1.0s						
TPAW	Teton Pass	81.04	323	eP	P	03 27 09.4	+1.7
	comp=Z,1.7nm,0.9s						
TPAW	Teton Pass	81.04	323	eP	P	03 27 09.4	+1.7
	comp=Z,1.7nm,0.9s						
BMO	Blue Mountains	82.66	327	eP	P	03 27 15.6	-0.4
	comp=Z,5.2nm,1.0s						
BMO	Blue Mountains	82.66	327	eP	P	03 27 15.6	-0.4
	comp=Z,5.2nm,1.0s						
MJAR	Matsushiro Arr	86.72	41	LR	LR	04 10 39.8	
	comp=Z,99nm,18.3s,baz=260,slow=39						
TXAR	Lajitas Array	88.14	309	P	P	03 27 43.4	-0.2
TXAR	Lajitas Array	88.14	309	P	P	03 27 43.4	-0.2
	comp=Z,0.2nm,0.6s,baz=26,slow=4.4,SNR=2.9						
TXAR	Lajitas Array	88.14	309	P	P	03 27 43.4	-0.2
SIV	San Ignacio	89.60	248	P	P	03 27 50.4	0.0
SIV	San Ignacio	89.60	248	P	P	03 27 50.4	0.0
	comp=Z,0.4nm,0.5s,baz=74,slow=2.9,SNR=3.8						
SIV	San Ignacio	89.60	248	P	P	03 27 50.4	0.0
CMIG	Matias Romero	91.52	295	LR	LR	04 10 36.3	
	comp=Z,72nm,20.8s,baz=253,slow=37						

IDC 09 03:20:11.6±2.5, 22°.94S×68°.70W, h0km, mb3.6/2, mb1 3.6/4, mb1mx3.4/18, mbtmp3.4/4, ML3.3/2, Error ellipse: s-maj=58.0km s-min=51.6km az=40.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	6.64	5	Pn	Pn	03 21 52.1	+1.2
	0.2nm,0.3s,baz=179,slow=6.2,SNR=5.1						
SIV	San Ignacio	9.97	47	Pn	Pn	03 22 34.8	-1.4
	0.2nm,0.3s,baz=246,slow=14,SNR=7.1						
TORD	Torodi Ar. Bea	77.66	70	P	P	03 32 10.8	+0.4
	0.2nm,0.4s,baz=254,slow=5.6,SNR=12						
YKA	Yellowknife Ar	92.60	340	P	P	03 33 24.0	-0.6
	0.1nm,0.5s,baz=135,slow=4.7,SNR=7.2						

MEX 09 03:21:48.0±0.5, 17°.02N×100°.27W, h4km±8km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.03	4	eP	Pg	03 21 48.2	-0.7
CAIG				iS	Sg	03 21 49.2	-0.2
ACX	Acapulco	0.42	111	eP	Pg	03 21 54.8	-1.4
ACX				iS	Sg	03 22 00.6	-1.2
MEIG	Mezcala	1.09	35	iP	Pg	03 22 05.6	-3.5
MEIG				iS	Sg	03 22 20.5	-2.8
ARIG	Puente Sto Nin	1.25	357	eP	Pg	03 22 08.3	-3.8
ARIG				iS	Sg	03 22 24.8	-3.7
ZIIG	Zihuatanejo	1.28	297	eP	Pg	03 22 09.9	-2.7
ZIIG				iS	Sg	03 22 25.7	-3.6
PNIG	Pinotepa	2.15	107	iP	Pn	03 22 21.8	-2.9
PNIG				iS	Sn	03 22 46.8	-5.1
YAIG	Yautepec	2.16	32	iP	Pn	03 22 21.9	-3.2
YAIG				iS	Sn	03 22 48.0	-4.4
PPM	Popocatepetl	2.56	37	iP	Pn	03 22 28.8	-2.3
PPM				iS	Sn	03 22 58.3	-4.9

KRSC 09 03:22:17.1±0.1, 54°.83N×163°.08E, h18km±17km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.83	251	eP	Pb	03 22 32.6	-0.3
MKZ				iS	Sg	03 22 44.5	+0.2
KBTR	Krutoberegovo	1.39	354	eP	Pn	03 22 41.2	-0.4
KBTR				eS	Sn	03 22 58.9	-0.6
BKI	Bering	1.71	76	eP	Pn	03 22 46.2	+0.3
BKI				iS	Sn	03 23 06.7	-0.5
TUMR	Tumrok	1.75	286	eP	Pn	03 22 47.6	+0.9
TUMR				iS	Sb	03 23 10.0	-0.5
BZGR	Bezymyannyi-Gr	1.76	310	eP	Pn	03 22 47.7	+0.9
BZGR				iS	Sn	03 23 09.6	+0.8
ZLN	Zelenaya	1.76	313	eP	Pn	03 22 47.8	+1.0
ZLN				iS	Sb	03 23 11.0	+0.2
BZMR	Bezymyannaya	1.85	308	eP	Pn	03 22 48.8	+0.7
CIRR	Tsirk	1.85	315	P	Pn	03 22 48.4	+0.3
LGNR	Loginova	1.85	314	eP	Pb	03 22 50.0	-0.8
LGNR				eS	Sb	03 23 14.2	+0.3
BZWR	Bezymyannyi-We	1.86	309	P	Pn	03 22 49.0	+0.7
KMNR	Kamenistaya	1.87	301	eP	Pn	03 22 49.3	+0.9
KMNR				iS	Sb	03 23 13.2	-0.9
SMKR	Semkarok	1.98	333	P	Pn	03 22 50.3	+0.5
KPT	Kopyto	1.99	306	P	Pn	03 22 51.0	+1.1
KLY	Klyuchi	2.03	318	P	Pn	03 22 50.1	-0.2
KLY				iS	Sn	03 23 14.6	-0.6
BDR	Baidarnaya	2.04	329	P	Pn	03 22 51.9	+1.3
SRKR	Sorokina	2.12	330	P	Pn	03 22 52.7	+0.9
KOZ	Kozyrevsk	2.20	305	P	Pn	03 22 54.1	+1.3
KOZ				iS	Sn	03 23 21.2	+1.6
KII	Karymskiy	2.27	251	P	Pn	03 22 54.9	+1.2
KII				iS	Sn	03 23 22.6	+1.4
SRDR	Sredinnyy	2.42	309	eP	Pn	03 22 56.9	+1.0
SPN	Mys Shipunski	2.50	227	P	Pn	03 22 57.0	+0.1
SPN				iS	Sn	03 23 26.5	-0.4
ESO	Esso	2.73	295	P	Pn	03 23 01.2	+1.2
SDLR	Sedlovina	2.92	240	P	Pn	03 23 04.5	+1.7
SDLR				iS	Sn	03 23 38.7	+1.2
SMAR	Somma	2.97	240	P	Pn	03 23 05.3	+1.7
SMAR				iS	Sn	03 23 39.8	+0.8
KRER	Koryakskii	2.98	241	P	Pn	03 23 05.5	+1.9
KRER				iS	Sn	03 23 40.8	+1.8
UGLR	Uglovaya	2.99	239	P	Pn	03 23 05.6	+1.9
UGLR				iS	Sn	03 23 40.4	+1.2
AVH	Avacha	3.00	240	P	Pn	03 23 06.1	+2.3
AVH				iS	Sn	03 23 42.2	+2.8
KOK	Koryaka	3.04	241	eP	Pn	03 23 06.3	+1.9
GNL	Ganaly	3.22	251	P	Pn	03 23 09.0	+2.1
GNL				iS	Sn	03 23 47.2	+2.3
RUS	Russkaya	3.63	230	P	Pn	03 23 12.6	+0.3
RUS				iS	Sn	03 23 53.4	-1.2
MTVR	Mutnovka	3.74	233	P	Pn	03 23 15.7	+1.6
MTVR				iS	Sn	03 23 59.3	+1.5

KRSC 09 03:23:43.9±1.3, 53°.80N×168°.50E, h10km±10km, ML3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	2.04	315	eP	Pn	03 24 18.9	+0.7
BKI				eS	Sn	03 24 44.6	+0.9
MKZ	Mys Kozlova	4.05	284	P	Pn	03 24 48.2	+2.4
MKZ				S	Sn	03 25 34.3	+1.1
SPN	Mys Shipunski	5.12	266	S	Sn	03 26 01.7	+2.1
KMNR	Kamenistaya	5.17	296	P	Pn	03 25 04.3	+2.9
KMNR				S	Sn	03 26 02.5	+1.4
KII	Karymskiy	5.36	276	P	Pn	03 25 07.3	+3.4
KII				S	Sn	03 26 06.5	+0.8
UGLR	Uglovaya	5.81	268	P	Pn	03 25 13.4	+3.3
RUS	Russkaya	6.17	261	P	Pn	03 25 17.7	+2.8
MTVR	Mutnovka	6.35	262	S	Sn	03 26 31.9	+1.6

*IDC **09** 03:31:26.4±0.4, 60°.58S×49°.88W, h0km, mb4.7/23, mb1 4.8/25, mb1mx4.8/26, mbtmp4.7/25, ML5.3/2, MS4.2/17, Ms1 4.2/17, ms1mx4.1/28, Error ellipse: s-maj=17.0km s-min=11.0km az=66.0*

*ISCJB **09** 03:31:27.1±0.3, 60°.53S±0°.04×50°.1W±0°.1, h10km, mb4.8/39, MS4.4/21, Error ellipse: s-maj=7.3km s-min=5.7km az=159.8*

*BJI **09** 03:31:27.9, 60°.61S×50°.04W, h10km, mB5.2/17, Ms5.3/14, Ms7 5.1/14*

*NEIC **09** 03:31:28.1±0.2, 60°.55S×49°.82W, h10km, mb5.1/21, Error ellipse: s-maj=10.1km s-min=6.8km az=61.0*

*GCMT **09** 03:31:32.4±0.3, 60°.76S×50°.19W, h20km, MW5.1, Moment Tensor Solution. s45,c56; s62,c91; Moment tensor: Scale 10^{16}Nm; M_{rr}-4.03±.23; $M_{\theta\theta}$1.26±.14; $M_{\phi\phi}$2.77±.19; $M_{r\theta}$-2.68±.32; $M_{\theta\phi}$2.68±.12; $M_{\phi r}$0.64±.33; Best double couple: $M_0$5.20000×10^{16} NP1:ϕ_s193.00000°, δ44.00000°, λ-131.00000°. NP2:ϕ_s63.00000°, δ58.00000°, λ-58.00000°. Principal axes: T 4.9600, Plg8.0000°, Azm131.0000°; N 0.5400, Plg27.0000°, Azm225.0000°; P -5.5000, Plg61.0000°, Azm26.0000°; Data Used: II IU IC CN G.*

ISC 09 03:31:29.2±1.4, 60°.47S±0°.05×50°.04W±0°.05, h15km±7km, n152, σ1s.70/210, mb5.0/37, MS4.4/22, 1C-2D, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	Palmer Station	7.76	230	ePn	Pn	03 33 21.8	+0.3
	237nm,1.4s						
PMSA				Sn	Sn	03 34 49.7	+0.7
PMSA	Palmer Station	7.76	230	Pn	Pn	03 33 21.2	-0.3
	6.6nm,0.3s,baz=56,slow=10,SNR=35						
PMSA				Sn	Sn	03 34 49.7	+0.7
	0.4nm,0.3s,baz=150,slow=17,SNR=1.5						
PMSA				LR	LR	03 36 12.5	
	comp=Z,4μm,18.9s,baz=53,slow=37						
EFI	East Falkland	9.88	330	ePn	Pn	03 33 52.9	+2.4
	274nm,0.9s						
EFI				eSn	Sn	03 35 37.0	-4.1
EFI	East Falkland	9.88	330	Pn	Pn	03 33 52.1	+1.6
	2μm,0.9s,SNR=12						
USHA	Ushuaia	11.34	292	Pn	Pn	03 34 13.2	+2.7
USHA				Sn	Sn	03 36 14.6	-2.1
USHA	Ushuaia	11.34	292	Pn	Pn	03 34 13.2	+2.7
	10nm,0.3s,baz=94,slow=14,SNR=69						
USHA				Sn	Sn	03 36 14.6	-2.1
	1.2nm,0.3s,baz=0.0,slow=20,SNR=5.9						
USHA				LR	LR	03 37 26.8	
	comp=Z,2μm,19.7s,baz=239,slow=32						
VNA3	Neumayer Olymp	19.26	141	eP	Pn	03 35 54.4	+0.7
VNA3	Neumayer Olymp	19.26	141	ePcP	PcP	03 40 14.5	-0.3
VNA1	Neumayer--Stat	19.59	139	eP	Pn	03 35 58.4	+0.8
VNA2	Neumayer--Watz	19.92	139	eP	Pn	03 36 01.6	0.0
	baz=287,slow=12						
VNA2	Neumayer--Watz	19.92	139	ePcP	PcP	03 40 15.8	-0.1
	baz=287,slow=12						
SNAA	Sanae	21.48	141	eP	P	03 36 18.3	+1.4
SNAA	Sanae	21.48	141	eP	P	03 36 17.4	+0.6
	220nm,1.3s						
SNAA				PcP	PcP	03 40 18.2	-0.7
SNAA	Sanae	21.48	141	P	P	03 36 17.9	+1.0
	31nm,1.0s,baz=282,slow=8.8,SNR=117						
SNAA				PcP	PcP	03 40 18.2	-0.7
	2.5nm,0.8s,baz=190,slow=2.5,SNR=7.3						
SNAA				LR	LR	03 43 16.2	
	comp=Z,277nm,20.8s,baz=332,slow=33						
PLCA	Paso Flores	23.47	318	eP	P	03 36 39.0	+0.9
	43nm,1.2s						
PLCA	Paso Flores	23.47	318	P	P	03 36 38.4	+0.3
	11nm,0.7s,baz=157,slow=9.5,SNR=28						
PLCA				LR	LR	03 45 39.4	
	comp=Z,293nm,18.7s,baz=117,slow=36						
TRQA	Tornquist	23.67	336	eP	P	03 36 41.8	+1.8
	14nm,1.1s						
QSPA	South Pole Qui	29.77	180	P	P	03 37 36.0	+1.0
QSPA				PcP	PcP	03 40 36.8	-1.1
QSPA	South Pole Qui	29.77	180	P	P	03 37 35.9	+1.0
	33nm,0.6s,baz=173,slow=3.6,SNR=143						
QSPA				PcP	PcP	03 40 36.8	-1.1
	3.8nm,0.7s,baz=165,slow=3.6,SNR=4.0						
QSPA				LR	LR	03 50 11.2	
	comp=Z,442nm,21.4s,baz=161,slow=38						
CFAA	Coronel Fontan	31.29	329	P	P	03 37 48.0	-0.4
CFAA				PcP	PcP	03 40 41.9	-0.5
CFAA	Coronel Fontan	31.29	329	P	P	03 37 48.0	-0.4
	0.6nm,0.8s,baz=174,slow=9.2,SNR=6.0						
CFAA				PcP	PcP	03 40 41.9	-0.5
	0.2nm,0.6s,baz=203,slow=2.3,SNR=3.9						
CFAA				LR	LR	03 51 26.9	
	comp=Z,64nm,18.1s,baz=162,slow=38						
LCO	Las Campanas	34.40	327	eP	P	03 38 16.8	+0.9
	28nm,1.2s						
CPUP	Villa Florida	34.49	348	P	P	03 38 17.4	+1.0
CPUP				PcP	PcP	03 40 51.2	0.0
CPUP	Villa Florida	34.49	348	P	P	03 38 17.4	+1.0
	2.3nm,0.6s,baz=156,slow=7.5,SNR=8.1						
CPUP				PcP	PcP	03 40 51.2	0.0
	2.1nm,0.6s,baz=217,slow=1.2,SNR=4.2						
CPUP				LR	LR	03 51 35.2	
	comp=Z,487nm,20.4s,baz=156,slow=35						
SYO	Syowa Base	35.76	142⇑	epP	P	03 38 26.2	-0.7
SYO	Syowa Base	35.76	142⇓	isP	sP	03 38 28.0	-5.3
SPB	Sao Paulo	36.90	4	eP	P	03 38 39.2	+2.2
	39nm,0.8s						
LVC	Limon Verde	40.07	332	eP	P	03 39 05.5	+1.5
	5.0nm,0.9s						
SBA	Scott Base	40.10	191	eP	P	03 39 04.3	+0.9
	154nm,2.3s						
VNDA	Vanda	40.86	190	eP	P	03 39 11.6	+1.9
	15nm,1.3s						
VNDA				PcP	PcP	03 41 09.4	-0.6
VNDA	Vanda	40.86	190	P	P	03 39 09.9	+0.2
	1.5nm,0.8s,baz=187,slow=6.6,SNR=7.0						
VNDA				PcP	PcP	03 41 09.4	-0.6
	3.6nm,1.1s,baz=193,slow=4.7,SNR=3.6						
VNDA				LR	LR	03 56 56.1	
	comp=Z,488nm,18.4s,baz=138,slow=38						
MAW	Mawson	43.24	149	P	P	03 39 28.9	-0.3
MAW	Mawson	43.24	149	P	P	03 39 28.9	-0.3
	32nm,1.1s,baz=183,slow=9.8,SNR=3.8						
MAW				LR	LR	03 55 24.2	
	comp=Z,88nm,18.5s,baz=277,slow=33						
BDFB	Brasilia	44.78	3	P	P	03 39 43.3	+1.1

BDFB PcP **PcP** **03 41 24.1 0.0**
BDFB Brasilia 44.78 3 P **P** **03 39 43.3 +1.1**
22nm,0.7s,baz=171,slow=3.6,SNR=35
BDFB PcP **PcP** **03 41 24.1 0.0**
3.2nm,0.6s,baz=282,slow=4.2,SNR=2.9
BDFB LR LR 03 56 47.5
comp=Z,291nm,20.2s,baz=26,slow=34
SIV San Ignacio 45.13 345 P **P** **03 39 45.5 +0.6**
SIV PcP **PcP** **03 41 25.3 0.0**
SIV San Ignacio 45.13 345 P **P** **03 39 45.5 +0.6**
19nm,0.8s,baz=180,slow=7.6,SNR=80
SIV PcP **PcP** **03 41 25.3 0.0**
7.0nm,1.0s,baz=180,slow=6.8,SNR=3.6
SIV LR LR 03 57 51.4
comp=Z,309nm,20.2s,slow=35
LPAZ La Paz 46.02 336 *e*P **P** **03 39 53.6 +1.0**
12nm,1.0s
LPAZ *i* PcP **PcP** **03 41 29.2 +0.2**
LPAZ La Paz 46.02 336 P **P** **03 39 53.2 +0.5**
7.6nm,0.8s,baz=127,slow=5.9,SNR=22
LPAZ PcP **PcP** **03 41 29.1 0.0**
2.1nm,0.7s,baz=139,slow=5.1,SNR=4.0
LPAZ LR LR 03 59 25.5
comp=Z,374nm,19.9s,baz=334,slow=36
NNA Nana 52.27 326 *e*P **P** **03 40 41.4 +1.6**
32nm,1.0s
NNA Nana 52.27 326 P **P** **03 40 40.8 +0.9**
17nm,0.8s,baz=176,slow=4.4,SNR=9.5
SAML Samuel 52.35 344 *e*P **P** **03 40 41.3 +1.0**
60nm,0.8s
SUR Sutherland 53.09 92 *e*P **P** **03 40 46.7 +0.7**
20nm,1.0s
SUR Sutherland 53.09 92 P **P** **03 40 46.6 +0.6**
6.2nm,0.8s,baz=171,slow=13,SNR=4.1
RCBR Riachuelo 55.56 17 P **P** **03 41 04.9 +1.0**
RCBR Riachuelo 55.56 17 P **P** **03 41 04.9 +1.0**
5.5nm,0.8s,baz=150,slow=8.1,SNR=3.1
ATAH Atahualpa 57.33 326 P **P** **03 41 19.2 +2.3**
ATAH PcP **PcP** **03 42 12.5 +1.6**
ATAH Atahualpa 57.33 326 P **P** **03 41 19.2 +2.3**
13nm,0.8s,baz=62,slow=8.2,SNR=10.0
ATAH PcP **PcP** **03 42 12.5 +1.6**
4.6nm,0.7s,baz=57,slow=2.3,SNR=3.6
BOSA Boshof 58.37 93 *e*P **P** **03 41 23.6 -0.2**
BOSA Boshof 58.37 93 P **P** **03 41 22.9 -0.9**
12nm,0.9s,baz=215,slow=6.4,SNR=18
BOSA LR LR 04 02 42.4
comp=Z,304nm,18.0s,baz=65,slow=32
LBTB Lobatse 61.52 91 *e*P **P** **03 41 45.0 -0.5**
28nm,0.8s
TSUM Tsumeb 62.47 80 *e*P **P** **03 41 52.3 +0.4**
68nm,2.3s
OTAV Otavalo 64.40 328 *e*P **P** **03 42 06.0 +0.9**
ROSC El Rosal 67.86 334 *e*P **P** **03 42 28.0 +0.8**
ROSC El Rosal 67.86 334 P **P** **03 42 27.7 +0.6**
5.7nm,0.5s,baz=86,slow=21,SNR=8.7
ROSC LR LR 04 12 24.2
comp=Z,219nm,18.5s,baz=6.2,slow=36
LSZ Lusaka 71.03 87 *e*P **P** **03 42 46.6 0.0**
22nm,0.8s
TBI Tubuai 74.47 250 *e*LR LR 04 05 56.5
272nm,22.5s,baz=153
DBIC Dimbokro 75.72 47 *e*P **P** **03 43 14.5 +0.6**
29nm,1.4s
DBIC Dimbokro 75.72 47 P **P** **03 43 14.0 +0.1**
7.5nm,0.6s,baz=181,slow=9.2,SNR=12
DBIC LR LR 04 10 06.6
comp=Z,200nm,18.6s,baz=172,slow=31
JTS JuntasAbangare 75.78 324 *e*P **P** **03 43 14.6 +0.3**
16nm,1.0s
JTS JuntasAbangare 75.78 324 P **P** **03 43 14.8 +0.5**
3.7nm,0.8s,baz=39,slow=11,SNR=4.6
CRPR Cabo Rojo, PR 79.41 343 *e*P **P** **03 43 33.7 -0.6**
91nm,1.6s
PPT2 Papeete2 79.48 253 *e*LR LR 04 08 15.2
176nm,23.2s
TOA0 Torodi Ar. Sit 84.11 50 *e*P **P** **03 43 59.4 +0.1**
TORD Torodi Ar. Bea 84.11 50 P **P** **03 43 59.6 +0.3**
TORD Torodi Ar. Bea 84.11 50 P **P** **03 43 59.6 +0.3**
11nm,0.9s,baz=200,slow=6.1,SNR=47
TORD LR LR 04 14 34.5
comp=Z,212nm,18.4s,baz=190,slow=31
CMIG Matias Romero 85.28 317 P **P** **03 44 04.7 -0.4**
CMIG Matias Romero 85.28 317 P **P** **03 44 04.7 -0.4**
1.6nm,0.7s,baz=171,slow=6.4,SNR=3.9
TEIG Tepich 86.17 324 P **P** **03 44 09.0 -0.4**
TEIG Tepich 86.17 324 P **P** **03 44 09.0 -0.4**
12nm,0.6s,baz=232,slow=0.6,SNR=18
NWAO Narrogin (SRO) 86.36 169 P **P** **03 44 09.5 -1.0**
NWAO Narrogin (SRO) 86.36 169 P **P** **03 44 09.5 -1.0**
20nm,0.8s,baz=176,slow=5.0,SNR=8.8
STKA Stephens Creek 87.50 190 P **P** **03 44 15.8 -0.3**
STKA Stephens Creek 87.50 190 P **P** **03 44 15.8 -0.3**
1.5nm,0.9s,baz=142,slow=4.4,SNR=4.1
KMBO Kilima Mbogo 87.68 88 *e*P **P** **03 44 20.1 +2.6**
8.0nm,1.3s
KMBO Kilima Mbogo 87.68 88 P P 03 44 20.5 +3.1
1.2nm,0.5s,baz=211,slow=6.4,SNR=5.7
KMBO LR LR 04 20 04.7
comp=Z,156nm,18.3s,baz=214,slow=33
FORT Forrest 89.07 178 *e*P **P** **03 44 22.7 -0.8**
33nm,0.8s
TAM Tamanrasset 94.36 50 *e*P **P** **03 44 48.5 +0.4**
1.5nm,1.1s
ASAR Alice Springs 96.11 184 P **P** **03 44 54.5 -1.8**
ASAR PKKPbc **PKKPbc** **04 01 40.4 +0.1**
ASAR Alice Springs 96.11 184 P **P** **03 44 54.5 -1.8**
1.4nm,0.7s,baz=173,slow=4.3,SNR=11
ASAR PKKPbc **PKKPbc** **04 01 40.4 +0.1**
0.4nm,0.6s,baz=354,slow=2.5,SNR=6.2
TXAR Lajitas Array 99.61 315 P **Pdif** **03 45 11.5 -0.1**
TXAR PP **PP** **03 49 19.2 +3.1**
TXAR Lajitas Array 99.61 315 P **Pdif** **03 45 11.5 -0.1**
0.1nm,0.3s,baz=157,slow=5.5,SNR=2.9
TXAR PP **PP** **03 49 19.2 +3.1**
0.4nm,0.9s,baz=186,slow=7.2,SNR=3.8
WRA Warramunga Arr 99.80 184 P **Pdif** **03 45 11.1 -1.7**
WRA PKiKP **PKiKP** **03 49 39.4 -1.7**
WRA Warramunga Arr 99.80 184 P **Pdif** **03 45 11.1 -1.7**
1.8nm,0.7s,baz=180,slow=4.1,SNR=9.4
WRA PKiKP **PKiKP** **03 49 39.4 -1.7**
0.7nm,0.7s,baz=192,slow=1.4,SNR=4.6
FITZ Fitzroy Crossi 101.63 176 P **Pdif** **03 45 20.7 -0.2**
FITZ Fitzroy Crossi 101.63 176 P **Pdif** **03 45 20.7 -0.2**
3.3nm,0.8s,baz=210,slow=6.9,SNR=4.8
WLF Walferdange 118.76 38 *e*PKPdf **PKPdf** **03 50 14.8 -0.7**
GERES GERESS Array B 120.48 43 PKP **PKPdf** **03 50 16.1 -2.9**
GERES GERESS Array B 120.48 43 PKP **PKPdf** **03 50 16.1 -2.9**
1.2nm,0.9s,baz=173,slow=2.3,SNR=7.3
BRTR Keskin Array B 120.72 63 PKP **PKPdf** **03 50 17.9 -2.0**
BRTR Keskin Array B 120.72 63 PKP **PKPdf** **03 50 17.9 -2.0**
1.2nm,0.7s,baz=190,slow=3.6,SNR=8.5
MALT Malatya 121.72 68 *e*PKPdf **PKPdf** **03 50 21.1 -0.6**
CLL Collm 122.36 41 *e*PKPdf **PKPdf** **03 50 22.0 -0.3**
BUR08 Bucovina Ar. S 123.68 52 *e*PKPdf **PKPdf** **03 50 24.5 -0.7**
KIEV Kiev 127.70 52 *e*PKPdf **PKPdf** **03 50 31.3 -1.3**
AKASG Malin Array Be 127.71 52 PKP **PKPdf** **03 50 31.1 -1.5**
AKASG PP **PP** **03 52 32.1 -3.1**
AKASG Malin Array Be 127.71 52 PKP **PKPdf** **03 50 31.1 -1.5**
1.8nm,0.7s,baz=231,slow=2.1,SNR=7.5
AKASG PP **PP** **03 52 32.1 -3.1**
0.4nm,0.4s,baz=226,slow=7.8,SNR=4.8
KBZ Khabaz 128.08 67 PKP **PKPdf** **03 50 32.5 -1.0**
KBZ Khabaz 128.08 67 PKP **PKPdf** **03 50 32.5 -1.0**
4.1nm,0.9s,baz=86,slow=3.3,SNR=6.2
KIV Kislovodsk 128.16 67 *e*PKPdf **PKPdf** **03 50 32.4 -1.4**
NOA NORSAR Array B 130.00 34 PKP **PKPdf** **03 50 35.4 -1.4**
NOA NORSAR Array B 130.00 34 PKP **PKPdf** **03 50 35.4 -1.4**
4.1nm,1.0s,baz=216,slow=1.9,SNR=4.2
YKA Yellowknife Ar 132.11 326 PKPpre PKPpre 03 50 22.6
YKA PKP **PKPdf** **03 50 39.1 -1.4**
YKA PP **PP** **03 53 07.0 +3.4**
YKA SKPbc **SKPbc** **03 54 04.7 -1.4**
YKA Yellowknife Ar 132.11 326 PKhKP PKPpre 03 50 22.6
0.1nm,0.4s,baz=152,slow=3.1,SNR=4.3
YKA PKP **PKPdf** **03 50 39.1 -1.4**
1.0nm,0.6s,baz=141,slow=2.1,SNR=17
YKA PP **PP** **03 53 07.0 +3.4**
0.3nm,0.6s,baz=121,slow=5.5,SNR=4.9
YKA SKPbc **SKPbc** **03 54 04.6 -1.4**
0.6nm,0.8s,baz=139,slow=3.8,SNR=5.9
FINES FINESS Array B 134.80 41 PKP **PKPdf** **03 50 43.8 -1.8**
FINES FINESS Array B 134.80 41 PKP **PKPdf** **03 50 43.8 -1.8**
2.4nm,0.7s,baz=336,slow=4.2,SNR=5.4
KMI Kunming 140.01 140 PKP **PKPdf** **03 50 57.5 +0.7**
KMI sPKP 03 51 02.3
KMI PP **PP** **03 53 58.0 +4.6**
KMI SS SS 04 12 17.0 +2.4
KMI AMB AMB
comp=Z,33nm,3.1s
KMI LR LR
comp=N,97nm,15.0s
KMI LR LR
comp=E,170nm,23.3s
KMI LR LR
comp=Z,160nm,21.7s
ARCES ARCESS Array B 140.32 32 PKPpre PKPpre 03 50 45.7
ARCES ARCESS Array B 140.32 32 PKhKP PKPpre 03 50 45.7
comp=Z,1.1nm,0.4s,baz=217,slow=2.7,SNR=21
KSH Kashi 140.88 97 *e*PKP **PKPdf** **03 51 01.0 +3.2**
KSH PP **PP** **03 54 02.0 +2.9**
KSH PKS **PKSdf** **03 54 35.0 +1.2**
KSH SKS **SKSdf** **03 58 09.0 +1.9**
KSH SKKS **SKKSac** **04 00 52.1 +0.8**
KSH SS **SS** **04 12 24.9 -0.5**
KSH AMB AMB
comp=Z,90nm,4.2s
KSH LR LR
comp=N,110nm,4.3s
KSH LR LR
comp=E,130nm,4.8s
KSH LR LR
comp=Z,380nm,5.6s
INK Inuvik 141.77 323 PKPpre PKPpre 03 50 51.4
INK Inuvik 141.77 323 PKhKP PKPpre 03 50 51.4
comp=Z,3.4nm,0.8s,baz=124,slow=4.0,SNR=13
EKS2 Erkin-Say 142.17 92 *e*PKPdf **PKPdf** **03 50 56.1 -3.9**
KDAK Kodiak Island 142.29 301 PKPpre PKPpre 03 50 54.3
KDAK Kodiak Island 142.29 301 PKhKP PKPpre 03 50 54.3
comp=Z,3.2nm,0.6s,baz=269,slow=7.3,SNR=4.2
GYA Guiyang 142.45 144 PKP **PKPdf** **03 51 01.6 +0.6**
GYA PP **PP** **03 54 12.0 +3.9**
GYA PKS **PKSdf** **03 54 35.4 -1.6**
GYA SKKS 04 01 01.6
GYA SS **SS** **04 12 45.8 +3.0**
GYA AMB AMB
comp=Z,120nm,8.0s
GYA LR LR
comp=N,150nm,20.2s
GYA LR LR
comp=E,120nm,21.4s
GYA LR LR
comp=Z,130nm,21.0s
DOT Dot Lake 142.46 313 *e*PKPdf **PKPdf** **03 50 55.6 -4.1**
AAK Ala-Archa 142.51 93 *e*PKPdf **PKPdf** **03 50 56.7 -3.9**
SML Sawmill 142.98 309 *e*PKPdf 03 50 56.6
PMR Palmer 143.16 308 *e*PKPdf PKPab 03 50 57.3 +0.8
ARU Arti 144.10 64 *e*PKPdf **PKPab** **03 50 59.6 -0.8**
ILAR Eielson Array 144.11 313 PKP **PKPab** **03 51 00.2 0.0**
ILAR Eielson Array 144.11 313 PKP **PKPab** **03 51 00.2 0.0**
comp=Z,16nm,0.7s,baz=148,slow=1.6,SNR=210
COLA College 144.51 313 *e*PKPdf **PKPab** **03 51 01.3 -0.4**
TRF Thorofare Moun 144.65 310 *e*PKPdf **PKPab** **03 51 01.4 -1.1**
CD2 Chengdu 145.70 138 PKPbc **PKPdf** **03 51 05.2 -1.3**
CD2 PKPab **PKPab** **03 51 07.8 +0.6**
CD2 PP **PP** **03 54 30.0 +2.4**
CD2 PKS **PKSdf** **03 54 39.2 -2.8**
CD2 SKS **SKSdf** **03 58 11.5 -3.3**
CD2 SKKS **SKKSac** **04 01 17.8 -1.3**
CD2 SS **SS** **04 13 20.2 +0.1**
CD2 AMB AMB
comp=Z,100nm,5.1s
CD2 LR LR
comp=N,180nm,21.6s
CD2 LR LR
comp=Z,260nm,19.0s
COLD Coldfoot 146.53 316 *e*PKPbc **PKPbc** **03 51 08.0 -0.2**
BRVK Borovoye 147.51 76 *e*PKPbc **PKPbc** **03 51 10.3 -1.1**
WHN Wuhan 148.31 154 PKPbc **PKPbc** **03 51 13.3 -0.9**
WHN PKPab **PKPab** **03 51 20.5 +3.2**
WHN PP **PP** **03 54 47.1 +4.4**
WHN LR LR
comp=Z,640nm,20.4s
MK31 Makanchi Array 149.36 95 *e*PKPbc **PKPbc** **03 51 14.6 -1.8**
MKAR Makanchi Array 149.36 95 PKP **PKPdf** **03 51 09.5 -2.5**
MKAR PKPbc **PKPbc** **03 51 14.7 -1.7**
MKAR Makanchi Array 149.36 95 PKP **PKPdf** **03 51 09.5 -2.5**
comp=Z,1.3nm,0.9s,baz=250,slow=2.5,SNR=9.8
MKAR PKPbc **PKPbc** **03 51 14.7 -1.7**
comp=Z,8.6nm,0.7s,baz=233,slow=1.8,SNR=97
WMQ Urumqi 149.85 104 PKPbc **PKPbc** **03 51 17.0 -0.8**
WMQ PKS **PP** **03 54 50.0 -2.3**
WMQ PP PP 03 54 58.4 +6.1
WMQ SKS **SKSdf** **03 58 24.0 +4.1**
WMQ SKKS **SKKSac** **04 01 47.0 +5.1**
WMQ SS **SS** **04 14 12.0 +4.5**
WMQ AMB AMB
comp=Z,29nm,10.0s
WMQ LR LR
comp=N,120nm,20.0s
WMQ LR LR
comp=E,150nm,25.0s
WMQ LR LR
comp=Z,120nm,25.0s
KURK Kurchatov 150.14 86 *e*PKPdf **PKPdf** **03 51 10.7 -2.3**
KURK *e*PKPbc **PKPbc** **03 51 16.9 -1.2**
XAN Xi'an 150.22 143 PKPbc **PKPbc** **03 51 17.3 -1.6**
LZH Lanzhou 150.43 134 *e*PKPbc **PKPbc** **03 51 18.9 -0.6**
LZH PP PP 03 55 02.3 +6.9
LZH SKKS 04 01 48.0
LZH SS **SS** **04 14 14.3 +0.7**
LZH AMB AMB
comp=Z,86nm,5.3s
GTA Gaotai 151.78 125 ⇓PKPbc **PKPbc** **03 51 21.7 -0.8**
GTA AMB AMB
comp=Z,66nm,6.2s
GTA LR LR
comp=N,300nm,19.0s
GTA LR LR
comp=E,420nm,19.2s
GTA LR LR
comp=Z,190nm,20.4s
TNA Tin City 152.41 307 *e*PKPbc **PKPbc** **03 51 23.2 +0.3**
GAMB Gambell 153.35 303 *e*PKPbc **PKPbc** **03 51 24.1 -0.9**
ZALV Zalesovo Beam 155.12 85 PKPbc PKPdf 03 51 27.1 +6.8
ZALV PKPab **PKPab** **03 51 43.1 -2.0**
ZALV Zalesovo Beam 155.12 85 PKPbc PKPdf 03 51 27.1 +6.8
comp=Z,0.5nm,0.3s,baz=235,slow=4.0,SNR=5.4
ZALV PKPab **PKPab** **03 51 43.1 -2.0**
comp=Z,1.5nm,0.6s,baz=228,slow=5.0,SNR=5.9
MJAR Matsushiro Arr 155.48 196 PKPbc PKPdf 03 51 28.9 +7.5
MJAR PKPab **PKPab** **03 51 45.4 -1.7**
MJAR Matsushiro Arr 155.48 196 PKPbc PKPdf 03 51 28.9 +7.5
comp=Z,2.0nm,0.7s,baz=178,slow=3.7,SNR=5.9
MJAR PKPab **PKPab** **03 51 45.4 -1.7**
comp=Z,0.7nm,0.6s,baz=172,slow=3.6,SNR=3.6
KSAR Wonju Array Be 156.92 176 PKP **PKPdf** **03 51 21.8 -1.4**
KSAR PKPab **PKPab** **03 51 52.5 -0.7**
KSRS Korea Array 156.93 176 PKP **PKPdf** **03 51 21.8 -1.4**
comp=Z,0.4nm,0.3s,baz=140,slow=0.9,SNR=5.4
KSRS PKPab **PKPab** **03 51 52.5 -0.7**
comp=Z,1.3nm,0.7s,baz=187,slow=3.0,SNR=5.5
HHC Hu-ho-hao-te 157.31 142 *e*PKP **PKPdf** **03 51 23.0 -0.7**
HHC PKS **PKSdf** **03 54 55.8 -1.7**
HHC PP **PP** **03 55 36.5 +2.5**
HHC SKS **SKSdf** **03 58 27.1 -1.7**
HHC SKKS **SKKSac** **04 02 23.8 +1.5**
HHC SS **SS** **04 15 29.5 +1.2**
HHC AMB AMB
comp=Z,150nm,9.2s
HHC LR LR
comp=N,290nm,21.4s
HHC LR LR
comp=E,350nm,20.1s
HHC LR LR
comp=Z,410nm,21.1s
SONM Songino Array 161.41 122 PKP **PKPdf** **03 51 27.1 -1.2**
SONM PKPab **PKPab** **03 52 11.1 -1.6**
SONM Songino Array 161.41 122 PKP **PKPdf** **03 51 27.1 -1.2**
comp=Z,0.4nm,0.9s,baz=195,slow=3.9,SNR=2.9
SONM PKPab **PKPab** **03 52 11.1 -1.6**
comp=Z,1.9nm,0.9s,baz=202,slow=4.7,SNR=11
ULN Ulaanbaatar 161.71 123 *e*PKPab **PKPab** **03 52 12.5 -1.6**
CN2 Changchun 163.09 169 *e*PKP **PKPdf** **03 51 26.7 -3.2**
CN2 *e*PKPab **PKPab** **03 52 18.7 -1.2**
CN2 LR LR
comp=N,2µm,21.0s
CN2 LR LR
comp=E,900nm,21.0s
CN2 LR LR
comp=Z,300nm,23.0s
USRK Ussuriysk Arra 163.66 185 PKPab **PKPab** **03 52 21.2 -1.1**
comp=Z,4.0nm,1.0s,baz=158,slow=2.8,SNR=6.0
MDJ Mudanjiang 164.12 179 PKP **PKPdf** **03 51 31.3 +0.5**
MDJ AMB AMB
comp=Z,46nm,5.2s

*ISCJB **09** 03:41:55.3±0.2, 42°.50N±0°.02×13°.33E±0°.02, h14km±2km, Error ellipse: s-maj=3.1km s-min=2.5km az=40.6*
*LDG **09** 03:41:55.9±0.8, 42°.41N×13°.35E, h2km, Ml3.0/9, Error ellipse: s-maj=16.2km s-min=12.0km az=105.0*
*ROM **09** 03:41:55.6±0.1, 42°.51N×13°.34E, h11km, Ml3.2/27, Error ellipse: s-maj=0.8km s-min=0.7km az=84.0*
*CSEM **09** 03:41:55.8±0.1, 42°.49N×13°.30E, h5km, ML3.5/11, Error ellipse: s-maj=2.5km s-min=2.0km az=48.0*

ISC 09 03:41:55.8±0.8, 42°.50N±0°.02×13°.33E±0°.02, h12km±4km, n114, σ1§14/154, 16C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.07**	**61**	⇑*i*Pg	**Pg**	**03 41 58.2**	**-0.4**
CAMP				Sg	**Sg**	**03 41 59.6**	**-1.0**
CAMP	**Campotosto**	**0.07**	**61**	⇑*i*Pg	**Pg**	**03 41 58.2**	**-0.4**
CAMP				Sg	**Sg**	**03 41 59.6**	**-1.0**
AQU	**L'Aquila**	**0.16**	**159**	⇑*i*Pg	**Pg**	**03 41 59.8**	**+0.2**
AQU				Sg	**Sg**	**03 42 02.7**	**+0.4**
	7µm,0.4s						
AQU	**L'Aquila**	**0.16**	**159**	⇑*i*Pg	**Pg**	**03 41 59.8**	**+0.2**
AQU				Sg	**Sg**	**03 42 02.7**	**+0.4**
	7µm,0.4s						
LNSS	**Leonessa**	**0.23**	**296**	⇑*i*Pg	**Pg**	**03 42 01.1**	**+0.2**
LNSS				Sg	**Sg**	**03 42 05.1**	**+0.8**
	12µm,0.3s						
LNSS	**Leonessa**	**0.23**	**296**	⇑*i*Pg	**Pg**	**03 42 01.1**	**+0.2**
LNSS				Sg	**Sg**	**03 42 05.1**	**+0.8**
	12µm,0.3s						
TERO	**Teramo**	**0.24**	**59**	⇑*i*Pg	**Pg**	**03 42 00.5**	**-0.4**
TERO				Sg	**Sg**	**03 42 04.2**	**-0.2**
TERO	**Teramo**	**0.24**	**59**	⇑*i*Pg	**Pg**	**03 42 00.5**	**-0.4**
TERO				Sg	**Sg**	**03 42 04.2**	**-0.2**
FIAM	**Fiamignano**	**0.28**	**214**	⇑*i*Pg	**Pg**	**03 42 01.9**	**+0.2**
FIAM				Sg	**Sg**	**03 42 06.5**	**+0.9**
	3µm,0.5s						
FIAM	**Fiamignano**	**0.28**	**214**	⇑*i*Pg	**Pg**	**03 42 01.9**	**+0.2**
FIAM				Sg	**Sg**	**03 42 06.5**	**+0.9**
	3µm,0.5s						
FAGN	**Fagnano**	**0.30**	**141**	Pg	**Pg**	**03 42 02.3**	**+0.2**
FAGN				Sg	**Sg**	**03 42 07.1**	**+0.8**
	6µm,0.6s						
FAGN	**Fagnano**	**0.30**	**141**	Pg	**Pg**	**03 42 02.3**	**+0.2**
FAGN				Sg	**Sg**	**03 42 07.1**	**+0.8**
	6µm,0.6s						
NRCA	**Norcia**	**0.37**	**335**	Pg	**Pg**	**03 42 03.1**	**-0.1**
NRCA				Sg	**Sg**	**03 42 08.8**	**+0.6**
	5µm,0.1s						
NRCA	**Norcia**	**0.37**	**335**	Pg	**Pg**	**03 42 03.1**	**-0.1**
NRCA				Sg	**Sg**	**03 42 08.8**	**+0.6**
	5µm,0.1s						
GAVE	**Gavelli**	**0.37**	**301**	Pg	**Pg**	**03 42 03.5**	**+0.2**
GAVE	**Gavelli**	**0.37**	**301**	Pg	**Pg**	**03 42 03.5**	**+0.2**
VCEL	**Villa Celiera**	**0.40**	**106**	Pg	**Pg**	**03 42 04.0**	**+0.2**
VCEL				Sg	**Sb**	**03 42 10.5**	**-0.4**
VCEL	**Villa Celiera**	**0.40**	**106**	Pg	**Pg**	**03 42 04.0**	**+0.2**
VCEL				Sg	**Sb**	**03 42 10.5**	**-0.4**
PTQR	**Pietraquaria**	**0.48**	**173**	Pg	**Pg**	**03 42 05.1**	**-0.3**
PTQR	**Pietraquaria**	**0.48**	**173**	Pg	**Pg**	**03 42 05.1**	**-0.3**
MNS	**Montasola**	**0.49**	**256**	⇑*i*Pg	**Pg**	**03 42 05.4**	**-0.1**
	1µm,0.3s						
MNS	**Montasola**	**0.49**	**256**	⇑*i*Pg	**Pg**	**03 42 05.4**	**-0.1**
	1µm,0.3s						
OFFI	**Offida**	**0.51**	**31**	⇑*i*Pg	**Pg**	**03 42 06.2**	**+0.4**
	5µm,0.4s						
OFFI	**Offida**	**0.51**	**31**	⇑*i*Pg	**Pg**	**03 42 06.2**	**+0.4**
	5µm,0.4s						
TRTR	**Tortoreto Alta**	**0.53**	**55**	Pg	**Pb**	**03 42 06.8**	**-0.3**
	3µm,0.4s						
TRTR	**Tortoreto Alta**	**0.53**	**55**	Pg	**Pb**	**03 42 06.8**	**-0.3**
	3µm,0.4s						
CESX	**Cesi**	**0.56**	**281**	Pg	**Pg**	**03 42 06.4**	**-0.4**
CESX				Sg	**Sb**	**03 42 15.6**	**0.0**
	1µm,0.3s						
CESX	**Cesi**	**0.56**	**281**	Pg	**Pg**	**03 42 06.4**	**-0.4**
FDMO	**Fiordimonte**	**0.56**	**342**	Pg	**Pg**	**03 42 06.4**	**-0.5**
FDMO				Sg	**Sg**	**03 42 14.8**	**+0.5**
	973nm,0.2s						
FDMO	**Fiordimonte**	**0.56**	**342**	Pg	**Pg**	**03 42 06.4**	**-0.5**
FDMO				Sg	**Sg**	**03 42 14.8**	**+0.5**
	973nm,0.2s						
CESI	**CESI - Serrava**	**0.59**	**328**	Pg	**Pg**	**03 42 07.2**	**-0.2**
CESI				Sg	**Sg**	**03 42 15.8**	**+0.6**
	323nm,0.3s						
CESI	**CESI - Serrava**	**0.59**	**328**	Pg	**Pg**	**03 42 07.2**	**-0.2**
CESI				Sg	**Sg**	**03 42 15.8**	**+0.6**
	323nm,0.3s						
CERT	**Cerreto**	**0.61**	**205**	⇑*i*Pg	**Pg**	**03 42 07.4**	**-0.3**
	3µm,0.6s						
CERT	**Cerreto**	**0.61**	**205**	⇑*i*Pg	**Pg**	**03 42 07.4**	**-0.3**
	3µm,0.6s						
MTCE	**Montecelio**	**0.65**	**222**	Pg	**Pg**	**03 42 07.9**	**-0.5**
	482nm,0.4s						
MTCE	**Montecelio**	**0.65**	**222**	Pg	**Pg**	**03 42 07.9**	**-0.5**
	482nm,0.4s						
INTR	**Introdacqua**	**0.65**	**139**	⇓*i*Pg	**Pg**	**03 42 07.9**	**-0.6**
INTR				Sg	**Sg**	**03 42 17.3**	**+0.2**
	1µm,0.7s						
INTR	**Introdacqua**	**0.65**	**139**	⇓*i*Pg	**Pg**	**03 42 07.9**	**-0.6**
INTR				Sg	**Sg**	**03 42 17.3**	**+0.2**
	1µm,0.7s						
VVLD	**Villa Vallelon**	**0.67**	**161**	Pg	**Pg**	**03 42 08.8**	**0.0**
	1µm,0.5s						
VVLD	**Villa Vallelon**	**0.67**	**161**	Pg	**Pg**	**03 42 08.8**	**0.0**
	1µm,0.5s						
GUAR	**Guarcino**	**0.71**	**181**	Pg	**Pg**	**03 42 09.5**	**-0.1**
	794nm,0.4s						
GUAR	**Guarcino**	**0.71**	**181**	Pg	**Pg**	**03 42 09.5**	**-0.1**
	794nm,0.4s						
ASSB	**Assisi San Ben**	**0.73**	**318**	Pg	**Pg**	**03 42 09.7**	**-0.3**
	751nm,0.3s						
ASSB	**Assisi San Ben**	**0.73**	**318**	Pg	**Pg**	**03 42 09.7**	**-0.3**
	751nm,0.3s						
SNTG	**Esanatoglia**	**0.80**	**340**	Pg	**Pg**	**03 42 10.5**	**-0.9**
	361nm,0.5s						
SNTG	**Esanatoglia**	**0.80**	**340**	Pg	**Pg**	**03 42 10.5**	**-0.9**
	361nm,0.5s						
CAFR	**Castel Frentan**	**0.81**	**110**	Pg	**Pg**	**03 42 10.8**	**-0.6**
	1µm,0.3s						
CAFR	**Castel Frentan**	**0.81**	**110**	Pg	**Pg**	**03 42 10.8**	**-0.6**
	1µm,0.3s						
POFI	**Posta Fibreno**	**0.83**	**160**	Pg	**Pg**	**03 42 11.4**	**-0.6**
	406nm,0.9s						
POFI	**Posta Fibreno**	**0.83**	**160**	Pg	**Pg**	**03 42 11.4**	**-0.6**
	406nm,0.9s						
RDP	**Rocca di Papa**	**0.87**	**212**	Pg	**Pg**	**03 42 12.7**	**0.0**
	1µm,0.5s						
RDP	**Rocca di Papa**	**0.87**	**212**	Pg	**Pg**	**03 42 12.7**	**0.0**
	1µm,0.5s						
SDI	**San Donato**	**0.87**	**155**	Pg	**Pg**	**03 42 12.0**	**-0.7**
	152nm,0.3s						
SDI	**San Donato**	**0.87**	**155**	Pg	**Pg**	**03 42 12.0**	**-0.7**
	152nm,0.3s						
CING	**Cingoli**	**0.88**	**354**	Pg	**Pg**	**03 42 11.9**	**-0.9**
	784nm,0.2s						
CING	**Cingoli**	**0.88**	**354**	Pg	**Pg**	**03 42 11.9**	**-0.9**
	784nm,0.2s						
GIUL	**Giuliano Di Ro**	**0.94**	**183**	Pg	**Pb**	**03 42 13.2**	**-0.9**
GIUL	**Giuliano Di Ro**	**0.94**	**183**	Pg	**Pb**	**03 42 13.2**	**-0.9**
MURB	**Monte Urbino**	**0.96**	**323**	Pg	**Pb**	**03 42 13.8**	**-0.7**
MURB	**Monte Urbino**	**0.96**	**323**	Pg	**Pb**	**03 42 13.8**	**-0.7**
MGAB	**Montegabbione**	**0.98**	**295**	Pg	**Pb**	**03 42 14.1**	**-0.7**
	787nm,0.5s						
MGAB	**Montegabbione**	**0.98**	**295**	Pg	**Pb**	**03 42 14.1**	**-0.7**
	787nm,0.5s						
CERA	**Filignano**	**1.04**	**150**	Pg	**Pb**	**03 42 14.3**	**-1.5**
	437nm,0.6s						
CERA	**Filignano**	**1.04**	**150**	Pg	**Pb**	**03 42 14.3**	**-1.5**
	437nm,0.6s						
AOI	**Ancona**	**1.07**	**11**	Pg	**Pb**	**03 42 15.5**	**-0.7**
	456nm,0.6s						
AOI	**Ancona**	**1.07**	**11**	Pg	**Pb**	**03 42 15.5**	**-0.7**
	456nm,0.6s						
TOLF	**Tolfa**	**1.08**	**246**	Pg	**Pb**	**03 42 15.6**	**-0.8**
	345nm,0.6s						
TOLF	**Tolfa**	**1.08**	**246**	Pg	**Pb**	**03 42 15.6**	**-0.8**
	345nm,0.6s						

SACS	**San Casciano d**	**1.10**	**289**	Pg	**Pb**	**03 42 16.5**	**-0.3**
	366nm,0.8s						
MIDA	**Miranda**	**1.10**	**141**	Pg	**Pb**	**03 42 15.2**	**-1.7**
	204nm,0.5s						
MIDA	**Miranda**	**1.10**	**141**	Pg	**Pb**	**03 42 15.2**	**-1.7**
	204nm,0.5s						
PIEI	**Pieia**	**1.19**	**331**	Pn	**Pn**	**03 42 17.5**	**-0.7**
PIEI	**Pieia**	**1.19**	**331**	Pn	**Pn**	**03 42 17.5**	**-0.7**
NVLJ	**Novalja**	**2.35**	**28**	*e*Pn	**Pn**	**03 42 34.4**	**+0.3**
NVLJ				Sn	**Sn**	**03 43 03.3**	**+0.4**
NVLJ	**Novalja**	**2.35**	**28**	*e*Pn	**Pn**	**03 42 34.4**	**+0.3**
NVLJ				Sn	**Sn**	**03 43 03.2**	**+0.4**
MAIM	**Mastiano**	**2.51**	**305**	P	**Pn**	**03 42 37.4**	**+1.0**
CRDM	**Cardoso**	**2.58**	**307**	P	**Pn**	**03 42 37.5**	**+0.2**
GRAM	**Graiana**	**3.10**	**311**	P	**Pn**	**03 42 46.8**	**+2.3**
CODM	**Codolo**	**3.16**	**308**	P	**Pn**	**03 42 46.2**	**+0.9**
PGF	**Pioggiola**	**3.20**	**272**	*e*Pn	**Pn**	**03 42 46.5**	**+0.5**
PGF				*e*Sn	**Sn**	**03 43 26.5**	**+2.5**
	15nm,0.7s						
PGF	**Pioggiola**	**3.20**	**272**	*e*Pn	**Pn**	**03 42 46.5**	**+0.5**
PGF				*e*Sn	**Sn**	**03 43 26.5**	**+2.5**
	7.7nm,0.7s						
STON	**Ston**	**3.25**	**82**	*e*Pn	**Pn**	**03 42 47.6**	**+1.1**
STON				Sn	**Sn**	**03 43 23.9**	**-1.1**
STON	**Ston**	**3.25**	**82**	*e*Pn	**Pn**	**03 42 47.5**	**+1.1**
STON				Sn	**Sn**	**03 43 23.9**	**-1.1**
VOY	**Vojsko**	**3.55**	**6**	*e*Pn	**Pn**	**03 42 52.3**	**+1.5**
VOY				*e*Sn	**Sn**	**03 43 33.7**	**+1.0**
VOY	**Vojsko**	**3.55**	**6**	Pn	**Pn**	**03 42 52.3**	**+1.5**
VOY				*e*Sn	**Sn**	**03 43 33.7**	**+1.0**
ABTA	**Abfaltersbach**	**4.28**	**352**	⇓*i*Pn	**Pn**	**03 43 02.1**	**+1.2**
ABTA	**Abfaltersbach**	**4.28**	**352**	Pn	**Pn**	**03 43 02.1**	**+1.2**
SBF	**Sospel**	**4.52**	**290**	*e*Pn	**Pn**	**03 43 05.0**	**+0.9**
SBF				*e*Sn	**Sn**	**03 43 54.8**	**-1.7**
	8.9nm,0.7s						
SBF	**Sospel**	**4.52**	**290**	*e*Pn	**Pn**	**03 43 05.0**	**+0.9**
SBF				*e*Sn	**Sn**	**03 43 54.8**	**-1.7**
	4.4nm,0.7s						
FRF	**La Foret Royal**	**5.01**	**284**	*e*Pn	**Pn**	**03 43 11.1**	**+0.4**
FRF				*e*Sn	**Sn**	**03 44 06.1**	**-2.4**
	6.7nm,0.8s						
FRF	**La Foret Royal**	**5.01**	**284**	*e*Pn	**Pn**	**03 43 11.1**	**+0.4**
FRF				*e*Sn	**Sn**	**03 44 06.1**	**-2.4**
	3.3nm,0.8s						
LMR	**La Mourre**	**5.08**	**282**	*e*Pn	**Pn**	**03 43 11.7**	**+0.1**
LMR				*e*Sn	**Sn**	**03 44 07.5**	**-2.6**
	2.6nm,0.6s						
LMR	**La Mourre**	**5.08**	**282**	*e*Pn	**Pn**	**03 43 11.7**	**+0.1**
LMR				*e*Sn	**Sn**	**03 44 07.5**	**-2.6**
	1.3nm,0.6s						
IVAS	**Ivanjica**	**5.12**	**76**	*e*Pn	**Pn**	**03 43 14.3**	**+2.0**
DIVS	**Divibare**	**5.12**	**70**	*e*Pn	**Pn**	**03 43 14.7**	**+2.4**
MBDF	**Montbardon**	**5.25**	**297**	*e*P	**Pn**	**03 43 17.0**	**+2.8**
MBDF	**Montbardon**	**5.25**	**297**	*e*P	**Pn**	**03 43 17.0**	**+2.8**
GRUS	**Gruza**	**5.58**	**73**	*e*Pn	Pn	03 43 21.8	+3.3
LPG	**La Plagne**	**5.61**	**305**	*e*P	Pn	03 43 23.0	+3.8
LPG				*e*Sn	**Sn**	**03 44 22.0**	**-1.7**
	1.0nm,0.3s						
LPL	**La Plagne**	**5.63**	**305**	*e*P	Pn	03 43 22.8	+3.3
LPL				*e*Sn	**Sn**	**03 44 21.1**	**-3.0**
	1.0nm,0.3s						
SELS	**Selova**	**5.77**	**80**	*e*Pn	**Pn**	**03 43 22.8**	**+1.5**
SMRF	**Simiane la Rot**	**5.85**	**287**	*e*P	**Pn**	**03 43 24.1**	**+1.8**
SMRF	**Simiane la Rot**	**5.85**	**287**	*e*P	**Pn**	**03 43 24.1**	**+1.8**
KHC	**Kasperske Hory**	**6.63**	**1**	*e*PN	**Pn**	**03 43 34.7**	**+1.6**
KHC				*e*SN	**Sn**	**03 44 46.7**	**-1.8**
KHC	**Kasperske Hory**	**6.63**	**1**	Pn	**Pn**	**03 43 34.7**	**+1.6**
HINF	**Hinteralfeld**	**7.01**	**322**	*e*Pn	**Pn**	**03 43 38.9**	**+0.6**
HINF				*e*Sn	**Sn**	**03 44 55.4**	**-2.5**
	8.7nm,0.4s						
HINF	**Hinteralfeld**	**7.01**	**322**	*e*Pn	**Pn**	**03 43 38.9**	**+0.6**
VYHS	**Vyhne**	**7.13**	**31**	*e*PN	**Pn**	**03 43 41.7**	**+1.8**
VYHS	**Vyhne**	**7.13**	**31**	*e*Pn	**Pn**	**03 43 41.7**	**+1.8**
CDF	**Champ du Feu**	**7.28**	**326**	*e*Pn	**Pn**	**03 43 42.4**	**+0.4**
CDF				*e*Sn	**Sn**	**03 45 02.4**	**-2.1**
	5.1nm,0.4s						
CDF	**Champ du Feu**	**7.28**	**326**	*e*Pn	**Pn**	**03 43 42.4**	**+0.4**
VTS	**Vitosha**	**7.30**	**86**	*e*Pn	**Pn**	**03 43 44.1**	**+1.8**
HAU	**Haudompre**	**7.38**	**321**	*e*Pn	**Pn**	**03 43 43.9**	**+0.6**
HAU				*e*Sn	**Sn**	**03 45 03.1**	**-3.9**
	10nm,0.3s						
HAU	**Haudompre**	**7.38**	**321**	*e*Pn	**Pn**	**03 43 43.9**	**+0.6**

KRSC 09 04:00:48.2±0.5**, 55.29N**×**165.42E, h38**km±41km**, ML3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.33**	**105**	*i* P	Pn	04 00 55.8	-0.7
BKI				*i* S	Sn	04 01 01.8	-1.4
KBTR	**Krutoberegovo**	**1.73**	**303**	P	Pn	04 01 14.1	-1.6
KBTR				*i* S	Sn	04 01 33.3	-3.3
MKZ	**Mys Kozlova**	**2.25**	**252**	*e*P	Pn	04 01 24.1	+1.3
MKZ				*i* S	Sn	04 01 50.1	+0.8
ZLN	**Zelenaya**	**2.71**	**287**	P	Pn	04 01 32.4	+3.0
ZLN				*i* S	Sn	04 02 03.7	+2.7
BZGR	**Bezymyannyi-Gr**	**2.76**	**286**	P	Pn	04 01 32.0	+2.0
BZGR				*i* S	Sn	04 02 04.9	+2.8
LGNR	**Loginova**	**2.79**	**288**	P	Pn	04 01 32.9	+2.2
LGNR				*i* S	Sn	04 02 05.7	+2.3
BZMR	**Bezymyannaya**	**2.87**	**285**	P	Pn	04 01 34.1	+2.5
BZMR				*i* S	Sn	04 02 07.1	+2.2
BZWR	**Bezymyannyi-We**	**2.87**	**286**	P	Pn	04 01 33.4	+1.8
BZWR				*i* S	Sn	04 02 07.3	+2.2
KLY	**Klyuchi**	**2.88**	**293**	P	Pn	04 01 31.8	+0.3
KLY				*i* S	Sn	04 02 03.7	-1.1
KMNR	**Kamenistaya**	**2.98**	**281**	*e*P	Pn	04 01 35.3	+2.3
KMNR				*e*S	Sn	04 02 10.2	+2.6
TUMR	**Tumrok**	**3.02**	**272**	*e*P	Pn	04 01 36.0	+2.5
TUMR				*i* S	Sn	04 02 10.5	+2.0
KPT	**Kopyto**	**3.02**	**285**	*e*P	Pn	04 01 36.0	+2.4
KPT				*i* S	Sn	04 02 10.2	+1.6
KOZ	**Kozyrevsk**	**3.23**	**286**	P	Pn	04 01 39.8	+3.4
KOZ				*i* S	Sn	04 02 17.0	+3.4
SRDR	**Sredinnyy**	**3.38**	**290**	P	Pn	04 01 40.8	+2.4
SRDR				*i* S	Sn	04 02 19.2	+1.9
KII	**Karymskiy**	**3.69**	**253**	P	Pn	04 01 45.6	+2.9
KII				*i* S	Sn	04 02 26.9	+2.0
SPN	**Mys Shipunski**	**3.86**	**237**	P	Pn	04 01 46.7	+1.8
SPN				*i* S	Sn	04 02 29.2	+0.3
SDLR	**Sedlovina**	**4.33**	**245**	*e*P	Pn	04 01 54.5	+3.0
SDLR				*e*S	Sn	04 02 43.3	+2.5
SMAR	**Somma**	**4.38**	**245**	*e*P	Pn	04 01 55.1	+2.7
KRER	**Koryakskii**	**4.38**	**246**	*e*P	Pn	04 01 55.6	+3.2
UGLR	**Uglovaya**	**4.39**	**244**	*e*P	Pn	04 01 55.4	+3.0
AVH	**Avacha**	**4.41**	**245**	*e*P	Pn	04 01 55.8	+3.2
AVH				*e*S	Sn	04 02 45.4	+2.7
KOK	**Koryaka**	**4.45**	**246**	*e*P	Pn	04 01 56.2	+3.0
PET	**Petropavlovsk**	**4.58**	**243**	P	Pn	04 01 57.4	+2.6
GNL	**Ganaly**	**4.64**	**253**	*e*P	Pn	04 01 59.2	+3.3
RUS	**Russkaya**	**4.99**	**238**	*e*P	Pn	04 02 02.6	+2.2
MTVR	**Mutnovka**	**5.12**	**240**	P	Pn	04 02 04.7	+2.2

*ISCJB **09** 04:06:07.2±0.5, 40.99N±0.03×23.43E±0.04, h7km±8km, Error ellipse: s-maj=5.7km s-min=3.9km az=43.2*
*CSEM **09** 04:06:07.5±0.1, 40.98N×23.44E, h2km, ML1.9/6, Error ellipse: s-maj=2.2km s-min=1.9km az=148.0*
*ATH **09** 04:06:07.6, 40.96N×23.51E, h3km±2km, MD2.5/3*
*THE **09** 04:06:07.5, 41.00N×23.42E, h5km±3km, ML1.9/6, Error ellipse: s-maj=3.7km s-min=0.3km az=28.0*
*SKO **09** 04:06:08.9, 41.05N×23.44E, h1km, M1.3, ML1.4*
ISC 09 04:06:07.3±0.9**, 40.99N**±0.02×**23.44E**±0.02**, h10**km±8km**, n24,** σ0.28/41**, 1C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRS	**Serrai**	**0.17**	**42**	P	**Pg**	**04 06 10.9**	**-0.2**
SRS				S	**Sg**	**04 06 13.6**	**0.0**
SRS	**Serrai**	**0.17**	**42**	P	**Pg**	**04 06 10.9**	**-0.2**
SRS				S	**Sg**	**04 06 13.6**	**0.0**
SOH	**Sokhos**	**0.18**	**202**	P	**Pg**	**04 06 11.3**	**+0.1**
SOH				S	**Sg**	**04 06 14.0**	**+0.1**
SOH	**Sokhos**	**0.18**	**202**	⇑*i*PG	**Pg**	**04 06 11.3**	**+0.1**
SOH				*e*SG	**Sg**	**04 06 14.1**	**+0.1**
SOH	**Sokhos**	**0.18**	**202**	P	**Pg**	**04 06 11.3**	**+0.1**
SOH				S	**Sg**	**04 06 14.0**	**+0.1**
KNT	**Kendrikon**	**0.45**	**293**	P	**Pg**	**04 06 15.8**	**-0.3**
KNT				S	**Sg**	**04 06 21.8**	**-0.2**
KNT	**Kendrikon**	**0.45**	**293**	P	**Pg**	**04 06 15.8**	**-0.3**
KNT				S	**Sg**	**04 06 21.8**	**-0.2**
HORT	**Hortiatis**	**0.47**	**214**	P	**Pg**	**04 06 16.5**	**0.0**
HORT				S	**Sg**	**04 06 22.9**	**+0.2**
HORT	**Hortiatis**	**0.47**	**214**	P	**Pg**	**04 06 16.5**	**0.0**
HORT				S	**Sg**	**04 06 22.9**	**+0.2**
NVR	**Nevrokopi**	**0.48**	**41**	P	**Pg**	**04 06 16.6**	**-0.1**
NVR	**Nevrokopi**	**0.48**	**41**	*e*PG	**Pg**	**04 06 16.7**	**0.0**
NVR				*e*SG	**Sg**	**04 06 23.1**	**0.0**
NVR	**Nevrokopi**	**0.48**	**41**	*e*Pg	**Pg**	**04 06 16.7**	**0.0**
NVR				*e*Sg	**Sg**	**04 06 23.1**	**0.0**
THE	**Thessaloniki**	**0.51**	**225**	P	**Pg**	**04 06 17.1**	**-0.1**
THE				S	**Sg**	**04 06 24.0**	**+0.1**
THE	**Thessaloniki**	**0.51**	**225**	P	**Pg**	**04 06 17.1**	**-0.1**
THE				S	**Sg**	**04 06 24.0**	**+0.1**
PLG	**Polygyros**	**0.62**	**180**	P	**Pg**	**04 06 19.0**	**-0.3**
PLG	**Polygyros**	**0.62**	**180**	*e*PG	**Pg**	**04 06 18.5**	**-0.8**
PLG	**Polygyros**	**0.62**	**180**	*e*Pg	**Pg**	**04 06 18.5**	**-0.8**
PLG	**Polygyros**	**0.62**	**180**	P	**Pg**	**04 06 19.0**	**-0.3**
VAY	**Valandovo**	**0.74**	**297**	*i* Pg	**Pg**	**04 06 21.7**	**+0.2**
VAY				*i* Sg	**Sg**	**04 06 31.7**	**+0.5**
VAY				*e*Lg	Lg	04 06 32.0	
	comp=E,9.8nm,0.3s						
VAY				*e*Lg	Lg	04 06 32.0	
	comp=N,13nm,0.2s						
VAY	**Valandovo**	**0.74**	**297**	*i* Pg	**Pb**	**04 06 22.2**	**0.0**
VAY				*i* Sg	**Sb**	**04 06 32.2**	**-0.1**
VAY				*e*Lg	Lg	04 06 32.5	
	comp=N,13nm,0.2s						
OUR	**Ouranopolis**	**0.77**	**148**	P	**Pg**	**04 06 22.3**	**+0.1**
OUR	**Ouranopolis**	**0.77**	**148**	P	**Pg**	**04 06 22.3**	**+0.1**
KAVA	**Kavala**	**0.81**	**89**	P	**Pb**	**04 06 23.2**	**-0.3**
KAVA				S	**Sb**	**04 06 35.1**	**+0.6**
KAVA	**Kavala**	**0.81**	**89**	P	**Pb**	**04 06 23.2**	**-0.3**
KAVA				S	**Sb**	**04 06 35.1**	**+0.6**

NNC 09 04:12:06.1±5.2**, 54.31N**×**86.32E, h0**km**, mb3.7, mpv3.4, 6C-4D, Error ellipse: s-maj=41.0km s-min=27.4km az=57.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.92**	**236**	⇑Pn	Pn	04 13 35.9	+1.0
	4.3nm,0.8s						
KURK				⇑Sn	Sn	04 14 46.6	+3.1
	3.6nm,0.8s						
KURK				⇓Lg	Lg	04 15 17.8	
	22nm,1.2s						
MK31	**Makanchi Array**	**7.95**	**200**	⇑Pn	Pn	04 14 02.2	-0.7
	0.8nm,0.6s,baz=23,slow=13,SNR=19						
MK31				⇑Sn	Sn	04 15 33.2	-0.3
	0.6nm,0.5s,baz=24,slow=26,SNR=4.8						
MK31				⇑Lg	Lg	04 16 15.6	
	8.3nm,0.9s,baz=24,slow=30,SNR=6.3						
VOSK	**Vostochnaya**	**9.28**	**266**	⇓Pn	Pn	04 14 22.0	+1.0
	1.4nm,0.5s						
VOSK				⇓Sn	Sn	04 16 03.7	-2.3
	4.1nm,0.8s						
ZRNK	**Zerenda**	**10.37**	**269**	⇓Pn	Pn	04 14 37.7	+1.6
	0.4nm,0.3s						
ZRNK				⇑Sn	Sn	04 16 29.9	-3.1
	3.2nm,1.0s						

*IDC **09** 04:13:03.5±0.4, 22.25S×170.67E, h0km, mb4.9/25, mb1 5.0/28, mb1mx5.0/30, mbtmp4.9/28, MS4.6/26, Ms1 4.6/26, ms1mx4.6/33, Error ellipse: s-maj=13.3km s-min=12.9km az=116.0*
*ISCJB **09** 04:13:06.8±1.1, 22.20S±0.05×170.53E±0.04, h33km±9km, mb5.2/87, MS4.8/43, Error ellipse: s-maj=7.7km s-min=6.6km az=8.4*
*NOU **09** 04:13:07.0±1.7, 20.99S×170.46E, h10km, MD3.3, ML3.9*
*MOS **09** 04:13:08.5±1.6, 22.18S×170.45E, h33km, mb5.5/25, MS4.9/9, Error ellipse: s-maj=10.1km s-min=9.4km az=163.3*
*SZGRF **09** 04:13:08.4, 22.42S×171.03E, h33km, Southeast of Loyalty Islands*
*NEIC **09** 04:13:09.1±0.2, 22.15S×170.64E, h35km, mb5.4/39, Error ellipse: s-maj=6.4km s-min=5.6km az=149.0*
*BGS **09** 04:13:11.4±5.5, 22.15S×170.64E, h33km, mb5.4(NEIC)*
*BJI **09** 04:13:13.5, 21.88S×171.17E, h93km, mB5.2/34, mb5.2/45*
*GCMT **09** 04:13:13.2±0.1, 22.39S×170.40E, h30km, MW5.3, Moment Tensor Solution. s90,c147; s96,c149; Moment tensor: Scale 10^17Nm; Mrr0.00; Mθθ0.00; Mϕϕ0.00; Mrθ0.00; Mθϕ0.00; Mϕr0.00; Best double couple: Mo1.10000×10^17 NP1:ϕs314.00000°, δ34.00000°, λ108.00000°. NP2:ϕs113.00000°, δ58.00000°, λ78.00000°. Principal axes: T 1.0600, Plg74.0000°, Azm351.0000°; N 0.0800, Plg10.0000°, Azm119.0000°; P -1.1400, Plg12.0000°, Azm211.0000°; Data Used: II IU IC G CN.*
*DJA **09** 04:13:16.4±3.1, 22°S±7°×17°0E±1°4, h85km±23km, M5.3/31, mB5.8/17, mb5.2/31, Mw(mB)5.3/17*
ISC 09 04:13:12.7±0.5**, 22.29S**±0.05×**170.45E**±0.04**, h65**km±4km**, n665,** σ1.30/701**, mb5.3**/86**, 88C-35D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.31**	**272**	*e*S	**Sn**	**04 14 37.5**	**-2.8**
BAYA				AMP		04 14 43.9	
	comp=Z,98nm,0.0s						
PLUM	**Mont Dore**	**3.53**	**269**	*e*P	Pn	04 14 01.7	-3.4
PLUM				*e*S	**Sn**	**04 14 42.0**	**-3.7**
DZM	**Mont Dzumac**	**3.72**	**273**	*e*P	Pn	04 14 04.6	-3.2
DZM				*e*S	**Sn**	**04 14 46.9**	**-3.7**
DZM				AMP		04 14 53.3	
	comp=Z,7µm,4.1s						
DZM	**Mont Dzumac**	**3.72**	**273**	Pn	Pn	04 14 04.9	-3.0
DZM				Sn	**Sn**	**04 14 47.5**	**-3.1**
DZM	**Mont Dzumac**	**3.72**	**273**	Pn	Pn	04 14 04.9	-3.0
	comp=Z,140nm,0.3s,baz=97,slow=18,SNR=887						
DZM				Sn	**Sn**	**04 14 47.5**	**-3.1**
	comp=Z,70nm,0.3s,baz=288,slow=20,SNR=3.6						
NOUC	**Port Laguerre**	**3.85**	**272**	*e*P	Pn	04 14 06.3	-3.2
NOUC				*e*S	**Sn**	**04 14 50.1**	**-3.5**
NOUC				AMP		04 14 54.7	
	comp=Z,435nm,2.5s						
MSVF	**Nonsavu**	**8.46**	**59**	*e*P	**Pn**	**04 15 13.6**	**+1.0**
MSVF	**Nonsavu**	**8.46**	**59**	*e*Pn	**Pn**	**04 15 13.6**	**+1.0**
MSVF	**Nonsavu**	**8.46**	**59**	Pn	**Pn**	**04 15 14.0**	**+1.4**
	comp=Z,4µm,1.0s,SNR=67						
HNR	**Honiara**	**16.28**	**320**	*e*Pn	**P**	**04 17 03.6**	**+4.3**
HNR	**Honiara**	**16.28**	**320**	LR	LR	04 22 09.6	
	comp=Z,940nm,21.6s,baz=268,slow=33						
URZ	**Urewera**	**16.92**	**162**	*e*Pn	**P**	**04 17 06.4**	**+0.2**
URZ	**Urewera**	**16.92**	**162**	Pn	**Pn**	**04 17 02.1**	**-3.0**
	baz=349,slow=12,SNR=2.7						
URZ				LR	LR	04 22 29.2	
	comp=Z,4µm,18.0s,baz=346,slow=34						
EIDS	**Eidsvold**	**17.99**	**256**	*e*P	**Pn**	**04 17 19.8**	**+1.4**
	comp=Z,65nm,1.2s						
ARMA	**Armidale**	**18.70**	**240**	*e*P	**Pn**	**04 17 27.5**	**+0.5**
	comp=Z,51nm,1.1s						
AFI	**Afiamalu**	**18.82**	**67**	*e*P	**Pn**	**04 17 27.3**	**-1.3**
AFI	**Afiamalu**	**18.82**	**67**	Pn	**P**	**04 17 24.8**	**-2.5**
	comp=Z,3.4nm,0.3s,baz=34,slow=12,SNR=13						
AFI				LR	LR	04 23 12.3	
	comp=Z,2µm,18.8s,baz=244,slow=33						
KHZ	**Kahutara**	**20.24**	**173**	*e*P	Pn	04 17 44.6	-0.4
	comp=Z,214nm,1.2s						
RPZ	**Rata Peaks**	**21.38**	**179**	*e*P	**P**	**04 17 55.4**	**+0.6**
RPZ	**Rata Peaks**	**21.38**	**179**	P	**P**	**04 17 54.7**	**-0.1**
	comp=Z,51nm,1.0s,baz=356,slow=12,SNR=5.7						
RPZ				LR	LR	04 24 58.0	
	comp=Z,2µm,21.6s,baz=359,slow=33						
CTA	**Charters Tower**	**22.67**	**271**	P	**P**	**04 18 09.5**	**+0.7**
CTA	**Charters Tower**	**22.67**	**271**	P	**P**	**04 18 09.5**	**+0.7**
	comp=Z,16nm,0.8s,baz=104,slow=14,SNR=11						
CTAO	**Charters Tower**	**22.67**	**271**	*e*P	**P**	**04 18 09.6**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,26nm,0.9s						
CTAO	**Charters Tower**	**22.67**	**271**	*e*P	**P**	**04 18 09.6**	**+0.7**
	comp=Z,26nm,0.9s						
CAN	**Canberra**	**22.79**	**231**	*e*P	**P**	**04 18 11.5**	**+1.4**
CAN				pmax	pmax		
	comp=Z,133nm,1.5s						
CAN	**Canberra**	**22.79**	**231**	*e*P	**P**	**04 18 11.5**	**+1.4**
	comp=Z,133nm,1.5s						
TARA	**Tarawa**	**23.62**	**6**	*e*P	**P**	**04 18 15.9**	**-2.2**
	comp=Z,134nm,0.8s						
PMG	**Port Moresby**	**25.76**	**296**	*e*P	**P**	**04 18 37.8**	**+0.3**
	comp=Z,59nm,0.9s						
PMG	**Port Moresby**	**25.76**	**296**	P	**P**	**04 18 38.6**	**+1.1**
	comp=Z,72nm,1.1s,comp=Z,1µm						
PMG	**Port Moresby**	**25.76**	**296**	P	**P**	**04 18 38.1**	**+0.6**
	comp=Z,41nm,0.8s,baz=116,slow=6.5,SNR=12						
COEN	**Coen**	**27.18**	**283**	*e*P	**P**	**04 18 52.1**	**+1.7**
	comp=Z,342nm,1.0s						
STKA	**Stephens Creek**	**27.34**	**243**	*e*P	**P**	**04 18 53.0**	**+1.3**
STKA				PcP	**PcP**	**04 22 10.4**	**+0.8**
STKA	**Stephens Creek**	**27.34**	**243**	P	**P**	**04 18 52.9**	**+1.2**
	comp=Z,15nm,1.1s,baz=85,slow=10,SNR=18						
STKA				PcP	**PcP**	**04 22 10.4**	**+0.8**
	comp=Z,6.7nm,0.8s,baz=101,slow=2.6,SNR=5.5						
STKA				LR	LR	04 28 59.0	
	comp=Z,2µm,19.6s,baz=217,slow=35						
RAR	**Rarotonga**	**27.66**	**93**	LR	LR	04 27 30.7	
	comp=Z,525nm,19.2s,baz=117,slow=32						
BBOO	**Buckleboo**	**32.12**	**243**	*e*P	**P**	**04 19 34.7**	**+0.7**
	comp=Z,328nm,1.3s						
AS31	**Alice Springs**	**33.62**	**260**	*e*P	**P**	**04 19 47.3**	**0.0**
AS31				*e*PcP	**PcP**	**04 22 27.0**	**+0.7**
ASAR	**Alice Springs**	**33.62**	**260**	P	**P**	**04 19 47.1**	**-0.1**
ASAR				PcP	**PcP**	**04 22 27.0**	**+0.7**
ASAR				ScP	**ScP**	**04 26 12.1**	**+6.8**
ASAR				PKiKP	**PKiKP**	**04 29 50.5**	**-0.8**
ASAR	**Alice Springs**	**33.62**	**260**	P	**P**	**04 19 47.1**	**-0.1**
	comp=Z,8.5nm,0.8s,baz=87,slow=8.9,SNR=84						
ASAR				PcP	**PcP**	**04 22 27.0**	**+0.7**
	comp=Z,6.3nm,1.0s,baz=104,slow=2.9,SNR=8.1						
ASAR				ScP	**ScP**	**04 26 12.1**	**+6.8**
	comp=Z,2.7nm,1.1s,baz=97,slow=4.8,SNR=7.1						
ASAR				PKiKP	**PKiKP**	**04 29 50.5**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=74,slow=1.3,SNR=5.4						
ASAR				LR	LR	04 33 39.2	
	comp=Z,1µm,18.4s,baz=97,slow=36						
WRAB	**Tennant Creek**	**33.71**	**267**	*e*P	**P**	**04 19 47.5**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,14nm,1.0s						
WRAB	**Tennant Creek**	**33.71**	**267**	*e*P	**P**	**04 19 47.5**	**-0.6**
	comp=Z,14nm,1.0s						
WRA	**Warramunga Arr**	**33.72**	**267**	P	**P**	**04 19 47.1**	**-1.1**
WRA				PcP	**PcP**	**04 22 26.3**	**-0.3**
WRA				ScP	ScP	04 26 13.0	+7.3
WRA	**Warramunga Arr**	**33.72**	**267**	P	**P**	**04 19 47.1**	**-1.1**
	comp=Z,7.3nm,0.9s,baz=97,slow=8.5,SNR=22						
WRA				PcP	**PcP**	**04 22 26.3**	**-0.3**
	comp=Z,7.7nm,1.0s,baz=94,slow=3.3,SNR=8.6						
WRA				ScP	ScP	04 26 13.0	+7.3
	comp=Z,0.9nm,0.5s,baz=94,slow=4.4,SNR=5.6						
WRA				LR	LR	04 33 50.3	
	comp=Z,3µm,18.1s,baz=95,slow=37						
JAY	**Jayapura**	**34.94**	**300**	P	**P**	**04 19 59.5**	**+0.8**
	comp=Z,81nm,0.8s,comp=Z,19µm						
SMPI	**Sarmi**	**36.85**	**299**	P	**P**	**04 20 16.6**	**+1.6**
	comp=Z,49nm,1.7s						
TBI	**Tubuai**	**36.88**	**100**	*e*S	**S**	**04 25 55.2**	**-0.2**
	comp=Z,206nm,28.8s						
TBI				*e*LQ	LQ	04 28 32.9	
	comp=Z,839nm,29.5s						
TBI				*e*LR	LR	04 30 16.3	
	comp=Z,1µm,26.8s,baz=271						
PPT2	**Papeete2**	**37.79**	**90**	*e*S	**S**	**04 26 06.1**	**-3.3**
	comp=Z,286nm,26.5s						
PPT2				*e*LQ	LQ	04 28 50.6	
	comp=Z,1µm,34.0s						
PPT2				*e*LR	LR	04 30 43.3	
	comp=Z,791nm,24.5s,baz=245						
FORT	**Forrest**	**38.68**	**248**	*e*P	**P**	**04 20 33.1**	**+2.9**
	comp=Z,44nm,0.9s						
BAKI	**Biak**	**39.44**	**297**	P	**P**	**04 20 38.8**	**+2.0**
	comp=Z,190nm,1.1s,comp=Z,2µm						
TLE	**Tual**	**40.01**	**289**	P	**P**	**04 20 42.6**	**+1.1**
	comp=Z,117nm,1.5s,comp=Z,2µm						
FAKI	**Fak Fak**	**41.76**	**292**	P	**P**	**04 20 55.9**	**0.0**
	comp=Z,93nm,1.3s,comp=Z,1µm						
FITZ	**Fitzroy Crossi**	**42.15**	**267**	*e*P	**P**	**04 20 59.8**	**+0.7**
FITZ	**Fitzroy Crossi**	**42.15**	**267**	P	**P**	**04 20 59.0**	**-0.1**
	comp=Z,28nm,0.9s,baz=104,slow=9.1,SNR=31						
GUMO	**Guam**	**43.59**	**322**	LR	LR	04 37 44.5	
	comp=Z,479nm,19.6s,baz=103,slow=34						
SWI	**Sorong**	**43.67**	**294**	P	**P**	**04 21 11.6**	**+0.2**
	comp=Z,144nm,1.0s,comp=Z,2µm						
MBWA	**Marble Bar**	**46.95**	**261**	*e*P	**P**	**04 21 37.9**	**+0.5**
TNTI	**Ternate**	**47.83**	**293**	P	**P**	**04 21 45.4**	**+1.2**
	comp=Z,80nm,0.9s,comp=Z,1µm						
NWAO	**Narrogin (SRO)**	**47.90**	**245**	P	**P**	**04 21 44.3**	**-0.3**
NWAO	**Narrogin (SRO)**	**47.90**	**245**	P	**P**	**04 21 44.3**	**-0.3**
	comp=Z,18nm,0.8s,baz=107,slow=8.5,SNR=8.3						
DRV	**Dumont d'Urvil**	**48.40**	**196**	S	**S**	**04 28 49.0**	**+5.7**
DRV				SS	**SS**	**04 32 12.0**	**-1.5**
DRV				R		04 35 00.0	
RKT	**Rikitea**	**50.10**	**102**	*e*LR	LR	04 36 28.9	
	comp=Z,916nm,27.5s						
KAPI	**Kappang**	**51.89**	**282**	*e*P	**P**	**04 22 15.5**	**+0.4**
KAPI	**Kappang**	**51.89**	**282**	P	**P**	**04 22 15.8**	**+0.8**
	SNR=8.9						
KAPI	**Kappang**	**51.89**	**282**	P	**P**	**04 22 15.7**	**+0.6**
	comp=Z,314nm,1.2s,SNR=9.0						
KAPI	**Kappang**	**51.89**	**282**	P	**P**	**04 22 15.9**	**+0.8**
	comp=Z,74nm,1.4s,comp=Z,979nm						
KAPI	**Kappang**	**51.89**	**282**	P	**P**	**04 22 15.1**	**0.0**
	comp=Z,40nm,1.0s,baz=121,slow=7.1,SNR=16						
DAV	**Davao City (W)**	**52.75**	**298**	*e*P	**P**	**04 22 22.0**	**+0.6**
VNDA	**Vanda**	**55.44**	**182**	P	**P**	**04 22 40.7**	**+0.6**
VNDA	**Vanda**	**55.44**	**182**	P	**P**	**04 22 40.7**	**+0.6**
	comp=Z,2.3nm,0.9s,baz=352,slow=7.2,SNR=11						
VNDA				LR	LR	04 43 26.2	
	comp=Z,1µm,18.1s,baz=329,slow=33						
SBA	**Scott Base**	**55.65**	**181**	*e*P	**P**	**04 22 43.2**	**+1.6**
SBA	**Scott Base**	**55.65**	**181**	*e*P	**P**	**04 22 43.2**	**+1.6**
CBIJ	**Chichi jima**	**56.19**	**329**	LR	LR	04 43 29.6	
	comp=Z,310nm,19.6s,baz=128,slow=32						
MYLDM	**Lahad Datu**	**57.68**	**292**	P	**P**	**04 23 00.0**	**+3.1**
	comp=Z,35nm,1.4s						
KKM	**Kota Kinabalu**	**60.08**	**291**	*e*P	**P**	**04 23 14.8**	**+1.1**
	comp=Z,33nm,0.9s						
KKM	**Kota Kinabalu**	**60.08**	**291**	P	**P**	**04 23 14.9**	**+1.2**
SBUM	**Sibu**	**61.89**	**286**	P	**P**	**04 23 27.5**	**+1.6**
	comp=Z,28nm,1.8s,comp=Z,568nm						
KSM	**Kuching**	**63.17**	**284**	*e*P	**P**	**04 23 35.4**	**+0.9**
	comp=Z,83nm,0.9s						
KSM				*e*PcP	**PcP**	**04 24 13.0**	**+1.5**
KSM	**Kuching**	**63.17**	**284**	P	**P**	**04 23 34.8**	**+0.4**
	comp=Z,98nm,1.1s,comp=Z,839nm						
JOW	**Kunigami**	**63.64**	**318**	*e*P	**P**	**04 23 38.2**	**+1.0**
	comp=Z,97nm,1.4s						
TWG	**Pinlang**	**65.74**	**310**	*e*P	**P**	**04 23 49.9**	**-1.1**
	comp=Z,81nm,0.4s						
MJAR	**Matsushiro Arr**	**65.96**	**332**	P	**P**	**04 23 51.7**	**-0.4**
MJAR	**Matsushiro Arr**	**65.96**	**332**	P	**P**	**04 23 51.7**	**-0.4**
	comp=Z,26nm,0.9s,baz=154,slow=5.4,SNR=72						
MAT	**Matsushiro**	**65.96**	**332**	P	**P**	**04 23 51.6**	**-0.5**
NACB	**Ninganchiao**	**66.23**	**311**	*e*P	**P**	**04 23 54.3**	**+0.2**
	comp=Z,140nm,1.1s						
TPUB	**Ta-pu**	**66.36**	**310**	*e*P	**P**	**04 23 54.8**	**-0.1**
	comp=Z,98nm,1.1s						
SSLB	**Suanglung**	**66.44**	**311**	*e*P	**P**	**04 23 55.2**	**-0.3**
	comp=Z,55nm,0.9s						
YHNB	**Yeheng**	**66.71**	**312**	*e*P	**P**	**04 23 57.9**	**+0.7**
	comp=Z,117nm,1.0s						
JNU	**Nakatsue**	**66.79**	**324**	*e*P	**P**	**04 23 57.9**	**+0.3**
	comp=Z,33nm,1.0s						
TATO	**Taipei**	**66.83**	**312**	*e*P	**P**	**04 23 58.2**	**+0.4**
	comp=Z,303nm,1.5s						
QSPA	**South Pole Qui**	**67.78**	**180**	P	**P**	**04 24 03.6**	**0.0**
QSPA	**South Pole Qui**	**67.78**	**180**	P	**P**	**04 24 03.6**	**0.0**
	comp=Z,21nm,1.0s,baz=26,slow=3.3,SNR=42						
ASAJ	**Asahikawa**	**70.84**	**339**	P	**P**	**04 24 22.9**	**+0.5**
ASAJ	**Asahikawa**	**70.84**	**339**	P	**P**	**04 24 22.9**	**+0.5**
	comp=Z,8.6nm,0.6s,baz=216,slow=14,SNR=5.0						
KSRS	**Korea Array**	**71.65**	**325**	P	**P**	**04 24 28.2**	**+0.8**
	comp=Z,19nm,0.9s,baz=144,slow=6.3,SNR=76						
KSRS				LR	LR	04 54 47.0	
	comp=Z,218nm,20.0s,baz=140,slow=35						
KSAR	**Wonju Array Be**	**71.66**	**325**	P	**P**	**04 24 28.2**	**+0.7**
QIZ	**Qiongzhong**	**72.08**	**300**	P	**P**	**04 24 31.6**	**+1.2**
QIZ				pP	**PcP**	**04 24 52.4**	**+3.9**
QIZ				S	**S**	**04 33 48.7**	**+1.1**
QIZ				pmax	pmax		
	comp=Z,37nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,210nm,9.7s						
INCN	**Inchon**	**72.36**	**325**	*e*P	**P**	**04 24 32.7**	**+1.1**
	comp=Z,21nm,0.6s						
INCN	**Inchon**	**72.36**	**325**	P	**P**	**04 24 32.8**	**+1.1**
	SNR=15						
IPM	**Ipoh**	**72.83**	**282**	*e*P	**P**	**04 24 35.7**	**+0.6**

comp=Z,66nm,1.1s
IPM Ipoh 72.83 282 P P 04 24 35.9 +0.8
NJ2 Nanjing 73.18 316 *eP* **P 04 24 37.5 +0.9**
NJ2 pP PcP 04 24 58.7 +5.8
NJ2 sP sP 04 25 09.5 +8.0
NJ2 pmax pmax
comp=Z,90nm,1.1s
YSS Yuzh-Sakhalins 73.32 341⇑ *eP* **P 04 24 39.0 +1.9**
YSS pmax pmax
comp=Z,40nm,1.0s
YSS MLR MLR
comp=Z,600nm,18.0s
YSS Yuzh-Sakhalins 73.32 341 *eP* **P 04 24 38.5 +1.4**
comp=Z,31nm,0.8s
KULM Kulim 73.51 283 *eP* **P 04 24 39.8 +0.7**
comp=Z,81nm,1.4s
KULM Kulim 73.51 283 P **P 04 24 40.1 +1.1**
comp=Z,50nm,1.4s
UBPT Khong Chiam 73.78 294 P **P 04 24 42.8 +2.2**
comp=Z,30nm,1.4s
PSI Prapat 74.05 280 P **P 04 24 41.6 -0.8**
comp=Z,52nm,1.3s,comp=Z,701nm
VLA Vladivostok 74.13 332 *eP* **P 04 24 41.7 -0.2**
VLA pmax pmax
comp=Z,27nm,0.8s
USRK Ussuriysk Arra 74.95 332 P **P 04 24 47.4 +0.7**
comp=Z,13nm,1.0s,baz=162,slow=4.7,SNR=25
USRK LR LR 04 52 17.8
comp=Z,211nm,21.6s,baz=138,slow=31
WHN Wuhan 75.23 312 P **P 04 24 49.4 +0.8**
PET Petropavlovsk 75.69 353 *eP* P 04 24 54.9 +4.2
PET *e*SS S 04 35 20.8 +54
PET pmax pmax
comp=Z,200nm,16.7s
PETK Petropavlovsk- 75.89 352 P **P 04 24 52.3 +0.4**
PETK Petropavlovsk- 75.89 352 P **P 04 24 52.3 +0.4**
PETK Petropavlovsk- 75.89 352 P **P 04 24 52.3 +0.4**
comp=Z,11nm,0.9s,baz=146,slow=8.0,SNR=8.5
PETK LR LR 04 54 11.3
comp=Z,488nm,19.7s,baz=154,slow=32
DL2 Dalian 76.12 323 P **P 04 24 54.5 +1.0**
DL2 S **S 04 34 34.8 +2.6**
DL2 pmax pmax
comp=Z,50nm,1.1s
DL2 pmax pmax
comp=Z,160nm,9.6s
DL2 LR LR
comp=N,290nm,30.4s
DL2 LR LR
comp=E,190nm,28.3s
DL2 LR LR
comp=Z,90nm,27.9s
MDJ Mudanjiang 76.33 331 P **P 04 24 54.5 -0.1**
MDJ pP **pP 04 25 14.9 +2.5**
MDJ PP **PP 04 27 50.5 +3.3**
MDJ S **S 04 34 32.6 -1.7**
MDJ pmax pmax
comp=Z,17nm,1.4s
MDJ pmax pmax
comp=Z,150nm,6.5s
MDJ LR LR
comp=N,190nm,19.8s
MDJ LR LR
comp=E,180nm,25.2s
MDJ LR LR
comp=Z,300nm,24.2s
CN2 Changchun 77.64 328 *eP* **P 04 25 01.6 -0.4**
CN2 *e*PP **PP 04 28 00.2 +2.0**
CN2 *e*S **S 04 34 46.8 -1.8**
CN2 pmax pmax
comp=Z,50nm,1.0s
CN2 pmax pmax
comp=Z,200nm,4.0s
GYA Guiyang 78.49 305⇑ *iP* **P 04 25 08.1 +0.9**
GYA pP **pP 04 25 28.3 +3.2**
GYA sP sP 04 25 41.8 +10
GYA PP **PP 04 28 08.3 +2.5**
GYA S **S 04 34 57.6 -1.1**
GYA SKS **SKSac 04 35 10.8 -6.0**
GYA SS **SS 04 40 03.3 -0.4**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,150nm,7.5s
GYA LR LR
comp=N,540nm,19.3s
GYA LR LR
comp=E,470nm,20.0s
GYA LR LR
comp=Z,510nm,19.8s
SRDT SRDT 78.79 291 P **P 04 25 11.5 +2.6**
comp=Z,81nm,1.3s,comp=Z,3µm
KLR Kul'dur 79.10 335 *eP* **P 04 25 07.6 -2.3**
KLR pmax pmax
comp=Z,70nm,1.8s
BJI Beijing 80.01 321 P **P 04 25 15.5 +0.5**
BJI sP sP 04 25 46.3 +6.2
BJI S **S 04 35 17.4 +3.4**
BJI sS sS 04 35 52.9 +8.6
BJI pmax pmax
comp=Z,39nm,0.8s
BJI pmax pmax
comp=Z,230nm,6.6s
BJI LR LR
comp=N,230nm,23.8s
BJI LR LR
comp=E,240nm,22.5s
BJI LR LR
comp=Z,270nm,23.8s
CMAR Chiang Mai Arr 80.78 294 P **P 04 25 22.2 +2.5**
CMAR PKKPbc **PKKPbc 04 43 58.7 +0.3**
CMAR Chiang Mai Arr 80.78 294 P **P 04 25 22.2 +2.5**
comp=Z,31nm,1.0s,baz=130,slow=4.2,SNR=62
CMAR PKKPbc **PKKPbc 04 43 58.7 +0.3**
comp=Z,2.8nm,0.8s,baz=288,slow=4.1,SNR=14
KMI Kunming 80.84 302⇑ P **P 04 25 22.1 +1.9**
KMI pP pP 04 25 42.7 +4.6
KMI sP sP 04 25 54.0 +8.8
KMI PP PP 04 28 30.9 +5.4
KMI S **S 04 35 20.6 -3.2**
KMI SKS **SKSac 04 35 27.4 -6.2**
KMI sS sS 04 36 01.8 +7.5
KMI SS **SS 04 40 41.5 +2.3**
KMI pmax pmax
comp=Z,53nm,1.4s
KMI pmax pmax
comp=Z,340nm,4.5s
KMI LR LR
comp=N,130nm,15.3s
KMI LR LR
comp=E,200nm,20.4s
KMI LR LR
comp=Z,160nm,18.6s
CHTO Chiang Mai 80.95 295 P **P 04 25 23.1 +2.6**
SNR=22
CHTO Chiang Mai 80.95 295 P **P 04 25 23.0 +2.4**
comp=Z,76nm,1.6s,comp=Z,1µm
XAN Xi'an 81.00 312 P **P 04 25 21.7 +1.1**
XAN pmax pmax
comp=Z,14nm,1.0s
SYO Syowa Base 82.33 196⇑ *iP* **P 04 25 25.6 -1.4**
SYO Syowa Base 82.33 196⇑ *i*PcP **PcP 04 25 31.2 -0.9**
CD2 Chengdu 82.98 307 P **P 04 25 32.4 +1.3**
CD2 pP pP 04 25 54.5 +5.4
CD2 sP sP 04 26 03.6 +7.4
CD2 PP **PP 04 28 46.6 +3.8**
CD2 SKS **S 04 35 42.9 -2.4**
CD2 S **SKSac 04 35 44.2 -3.2**
CD2 sS sS 04 36 22.4 +6.6
CD2 SS **SS 04 41 13.3 +2.7**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,260nm,5.3s
CD2 LR LR
comp=N,290nm,22.5s
CD2 LR LR
comp=Z,280nm,19.2s
HHC Hu-ho-hao-te 83.26 319 *eP* **P 04 25 33.3 +1.0**
HHC pP pP 04 25 54.6 +4.2
HHC sP sP 04 26 02.9 +5.4
HHC PP **PP 04 28 48.7 +3.7**
HHC SKS **S 04 35 44.3 -3.5**
HHC S **SKSac 04 35 47.7 -1.2**
HHC sS sS 04 36 23.1 +4.7
HHC SS **SS 04 41 17.8 +3.3**
HHC pmax pmax
comp=Z,88nm,0.8s
HHC pmax pmax
comp=Z,500nm,6.9s
HHC LR LR
comp=N,370nm,17.5s
HHC LR LR
comp=E,420nm,17.1s
HHC LR LR
comp=Z,550nm,17.7s
LZH Lanzhou 85.60 312 *eP* **P 04 25 46.6 +2.2**
LZH pP pP 04 26 08.1 +5.6
LZH sP sP 04 26 18.9 +9.3
LZH *e*S **SKKSac 04 36 09.3 -2.0**
LZH sS sS 04 36 47.5 +5.3
LZH SS **SS 04 41 50.5 +1.2**
LZH pmax pmax
comp=Z,48nm,1.0s
LZH pmax pmax
comp=Z,370nm,4.0s
SEY Seymchan 86.13 352⇑ *eP* **P 04 25 45.5 -0.6**
SNAA Sanae 86.18 182 *eP* **P 04 25 46.1 -0.5**
SNAA Sanae 86.18 182 *eP* **P 04 25 45.7 -0.9**
comp=Z,87nm,1.3s
SNAA Sanae 86.18 182 P **P 04 25 45.7 -0.9**
comp=Z,12nm,1.1s,baz=185,slow=6.0,SNR=32
VNA3 Neumayer Olymp 86.72 180 *eP* **P 04 25 48.8 -0.4**
VNA3 Neumayer Olymp 86.72 180 *e* pP 04 26 08.3 +1.0
GAMB Gambell 86.91 8 *eP* **P 04 25 50.2 +0.3**
comp=Z,22nm,1.0s
VNA2 Neumayer--Watz 87.03 181 *eP* **P 04 25 50.6 -0.1**
VNA2 Neumayer--Watz 87.03 181 *e* pP 04 26 17.2 +8.4
KCPM Cahto Peak 87.06 45 *eP* **P 04 25 51.6 +0.2**
comp=Z,5.7nm,0.8s
VNA1 Neumayer--Stat 87.31 180 *eP* **P 04 25 52.0 0.0**
ISA Isabella 88.52 50 *eP* **P 04 25 58.0 -0.4**
ISA pmax pmax
comp=Z,10.0nm,0.9s
ISA Isabella 88.52 50 *eP* **P 04 25 58.0 -0.4**
comp=Z,9.9nm,0.9s
ISA Isabella 88.52 50 ⇓P **P 04 25 58.5 +0.1**
baz=88
YBH Yreka Blue Hor 88.70 43 P **P 04 25 58.9 -0.2**
YBH Yreka Blue Hor 88.70 43 P **P 04 25 58.9 -0.2**
comp=Z,2.7nm,0.8s,baz=225,slow=2.4,SNR=7.2
YBH LR LR 04 56 44.1
comp=Z,292nm,21.3s,baz=220,slow=30
TNA Tin City 89.12 9 P **P 04 26 00.1 -0.2**
comp=Z,3.1nm,0.9s
BELC Belle Mtn. Jos 89.54 53 ⇓P **P 04 26 03.2 -0.1**
baz=90
LPIG Laz Paz 89.72 64 LR LR 04 57 15.3
comp=Z,46nm,18.1s,baz=188,slow=30
GRAC Grapevine Rang 89.94 50 ⇓P **P 04 26 05.1 +0.1**
baz=90
NVAR Mina Array Bea 89.97 48 P **P 04 26 05.0 -0.3**
NVAR Mina Array Bea 89.97 48 P **P 04 26 05.0 -0.3**
comp=Z,3.7nm,0.8s,baz=224,slow=7.6,SNR=14
NVAR LR LR 04 59 24.7
comp=Z,666nm,18.8s,baz=94,slow=31
ULN Ulaanbaatar 89.97 323 *eP* **P 04 26 05.4 +0.5**
comp=Z,82nm,1.4s
ULN Ulaanbaatar 89.97 323 P **P 04 26 06.0 +1.0**
SNR=26
ULN Ulaanbaatar 89.97 323 P **P 04 26 05.5 +0.5**
GTA Gaotai 90.03 313⇑ P **P 04 26 06.5 +1.0**
GTA pP pP 04 26 29.9 +6.2
GTA sP sP 04 26 39.2 +8.4
GTA PP PP 04 29 45.4 +5.7
GTA SKS **SKSac 04 36 28.6 -2.3**
GTA S **S 04 36 52.9 -0.6**
GTA sS sS 04 37 33.3 +8.8
GTA pmax pmax
comp=Z,13nm,1.5s
GTA pmax pmax
comp=Z,200nm,5.2s
GTA LR LR
comp=N,220nm,19.0s
GTA LR LR
comp=E,400nm,19.5s
GTA LR LR
comp=Z,190nm,20.0s
NV11 Mina Array Sit 90.07 48 *eP* **P 04 26 04.9 -0.8**
BILL Bilibino 90.11 358⇓ *iP* **P 04 26 04.9 -0.1**
BILL *e* 04 29 37.4
BILL *e*PS **PnS 04 38 12.7 +4.6**
BILL pmax pmax
comp=Z,30nm,1.5s
BILL Bilibino 90.11 358 *eP* **P 04 26 04.5 -0.4**
comp=Z,40nm,1.5s
IRM Iron Mountain 90.24 53⇑P **P 04 26 06.9 +0.5**
baz=90
TUQ Turquoise Moun 90.25 52⇑P **P 04 26 06.8 +0.2**
baz=90
SONM Songino Array 90.32 323 P **P 04 26 07.4 +0.8**
SONM Songino Array 90.32 323 P **P 04 26 07.4 +0.8**
comp=Z,26nm,0.9s,baz=137,slow=4.9,SNR=125
SONM LR LR 05 08 43.1
comp=Z,255nm,18.4s,baz=21,slow=37
BMRM Bremner River 90.54 20 *eP* **P 04 26 05.5 -1.7**
comp=Z,5.2nm,0.9s
113A Mohawk Valley, 90.65 55 ⇓P **P 04 26 08.7 +0.3**
baz=91
TRF Thorofare Moun 90.83 17 *eP* **P 04 26 06.2 -2.5**
comp=Z,5.6nm,0.9s
PDMCI Parker Dam,Lak 91.05 53⇑P **P 04 26 10.4 +0.3**
baz=91
Z14A Wintersburg 91.53 55⇑P **P 04 26 12.6 +0.2**
baz=92
W13A Hualapai Mount 91.59 53⇑P **P 04 26 12.8 -0.1**
baz=92
LSA Lhasa 92.08 301 P P 04 26 12.0 -3.6
MENT Mentasta 92.30 19 *eP* **P 04 26 13.8 -1.5**
COLA College 92.62 17 *eP* **P 04 26 14.7 -1.9**
COLA pmax pmax
comp=Z,6.0nm,0.8s
COLA College 92.62 17 *eP* **P 04 26 14.7 -1.9**
comp=Z,5.7nm,0.8s
DOT Dot Lake 92.73 19 *eP* **P 04 26 15.8 -1.5**
comp=Z,5.2nm,0.8s
ILAR Eielson Array 92.79 17 P **P 04 26 15.3 -2.2**
ILAR PKiKP **PKiKP 04 31 03.6 -1.4**
ILAR Eielson Array 92.79 17 P **P 04 26 15.3 -2.2**
comp=Z,2.4nm,0.8s,baz=238,slow=6.1,SNR=26
ILAR PKiKP **PKiKP 04 31 03.6 -1.4**
comp=Z,0.5nm,0.7s,baz=275,slow=2.9,SNR=7.1
ILAR LR LR 05 03 51.2
comp=Z,388nm,18.6s,baz=123,slow=33
X16A Lo Mia Camp, P 93.11 54 ⇓P **P 04 26 19.8 -0.1**
baz=93
U15A North Rim 93.33 52 ⇓P **P 04 26 21.1 0.0**
baz=93
ZAK Zakamensk 93.42 324⇑ *iP* **P 04 26 21.0 +0.2**
ZAK pmax pmax
comp=Z,21nm,1.3s
TLY Talaya 93.90 325 *eP* **P 04 26 22.0 -0.9**
TLY pmax pmax
comp=Z,15nm,0.8s
TLY Talaya 93.90 325 *eP* **P 04 26 23.1 +0.2**
comp=Z,16nm,0.9s
TLY Talaya 93.90 325 P **P 04 26 23.5 +0.6**
SNR=10
COLD Coldfoot 93.93 14 *eP* **P 04 26 21.8 -0.8**
comp=Z,4.4nm,0.9s
320A Kipp Ranch, An 94.09 58 ⇓P **P 04 26 24.4 -0.1**
baz=94
DLBC Dease Lake 94.22 27 *eP* **P 04 26 23.4 -0.9**
DLBC Dease Lake 94.22 27 LR LR 05 00 00.2
comp=Z,414nm,21.6s,baz=160,slow=30
MOY Mondy 95.31 324 *eP* **P 04 26 29.8 +0.3**
NEW Newport 95.37 40 LR LR 05 01 06.2
comp=Z,340nm,19.5s,baz=285,slow=30
PLCA Paso Flores 95.51 138 P **P 04 26 30.6 -0.3**
PLCA Paso Flores 95.51 138 P **P 04 26 30.6 -0.3**
comp=Z,4.1nm,1.0s,baz=212,slow=3.5,SNR=5.3
PLCA LR LR 04 59 14.4
comp=Z,216nm,21.0s,baz=195,slow=29
ANMO Albuquerque 97.09 55 LR LR 05 03 29.3
comp=Z,462nm,18.2s,baz=76,slow=31
TXAR Lajitas Array 97.22 61 PKKP **PKKPbc 04 43 18.4 +0.4**
comp=Z,0.6nm,0.8s,baz=103,slow=3.1,SNR=5.6
TXAR LR LR 05 02 25.6
comp=Z,472nm,19.3s,baz=85,slow=30
PDAR Pinedale Array 97.85 47 P **P 04 26 39.4 -2.0**
PDAR Pinedale Array 97.85 47 P **P 04 26 39.4 -2.0**
comp=Z,1.0nm,1.1s,baz=222,slow=3.6,SNR=2.4
PDAR LR LR 05 03 58.2
comp=Z,341nm,20.1s,baz=250,slow=31
TIXI Tiksi 97.94 348⇓ *eP* **P 04 26 39.2 -1.6**
TIXI pmax pmax
comp=Z,5.0nm,1.5s
HYB Hyderabad 98.14 285 *i* P **P 04 26 43.0 0.0**
INK Inuvik 99.07 18 P **Pdif 04 26 43.4 -2.5**
INK PKiKP **PKiKP 04 31 14.9 -1.0**
INK Inuvik 99.07 18 P **Pdif 04 26 43.4 -2.5**
comp=Z,0.9nm,0.9s,baz=239,slow=3.0,SNR=4.5
INK PKiKP **PKiKP 04 31 14.9 -1.0**
comp=Z,2.4nm,1.0s,baz=278,slow=0.2,SNR=8.6
INK LR LR 05 05 22.8
comp=Z,271nm,20.5s,baz=337,slow=32
WMQ Urumqi 100.12 313 P **Pdif 04 26 51.0 -0.3**
WMQ PP **PP 04 31 00.0 +2.1**
WMQ SKS **SKSac 04 37 21.0 -3.4**
WMQ S **Sdif 04 38 16.0 -5.1**
WMQ SS **SS 04 45 14.0 -2.8**
WMQ pmax pmax
comp=Z,19nm,1.2s
WMQ pmax pmax
comp=Z,85nm,8.0s
WMQ LR LR
comp=N,110nm,20.0s
WMQ LR LR
comp=E,180nm,20.0s
WMQ LR LR
comp=Z,110nm,20.0s
PHWY Pilot Hill 100.14 50 *e*Pdif **Pdif 04 26 50.7 -1.0**
comp=Z,22nm,0.8s
YKA Yellowknife Ar 102.84 27 P **Pdif 04 27 03.2 +0.4**
YKA PKiKP **PKiKP 04 31 21.4 -1.5**
YKA Yellowknife Ar 102.84 27 P **Pdif 04 27 03.2 +0.4**
comp=Z,0.3nm,0.7s,baz=253,slow=4.5,SNR=5.8
YKA PKiKP **PKiKP 04 31 21.4 -1.5**
comp=Z,0.7nm,0.8s,baz=248,slow=1.4,SNR=12
MK31 Makanchi Array 104.69 315 *eP* **Pdif 04 27 11.8 +0.3**
MK31 Makanchi Array 104.69 315 *e*Pdif **Pdif 04 27 11.8 +0.3**
MKAR Makanchi Array 104.69 315 P **Pdif 04 27 12.4 +0.9**
MKAR Makanchi Array 104.69 315 Pdif **Pdif 04 27 12.4 +0.9**
MKAR PKiKP **PKiKP 04 31 26.8 0.0**
MKAR Makanchi Array 104.69 315 Pdiff **Pdif 04 27 12.4 +0.9**
comp=Z,0.7nm,0.7s,baz=103,slow=3.9,SNR=7.9
MKAR PKiKP **PKiKP 04 31 26.8 0.0**
comp=Z,1.5nm,1.0s,baz=126,slow=3.7,SNR=5.9
ZALV Zalesovo Beam 105.22 322 P **Pdif 04 27 13.2 -0.4**
ZALV Zalesovo Beam 105.22 322 Pdif **Pdif 04 27 13.2 -0.4**
ZALV PKiKP **PKiKP 04 31 27.9 +0.4**
ZALV Zalesovo Beam 105.22 322 Pdiff **Pdif 04 27 13.2 -0.4**
comp=Z,1.5nm,0.8s,baz=99,slow=4.5,SNR=6.0
ZALV PKiKP **PKiKP 04 31 27.9 +0.4**
comp=Z,0.9nm,0.3s,baz=90,slow=2.9,SNR=4.2
KSH Kashi 107.15 306 *e*PKPbc **PKiKP 04 31 34.5 +2.7**
KSH sPKP 04 32 12.4
KSH PP PP 04 32 13.9 +23
KSH PKS 04 35 10.3
KSH SKS **SKSdf 04 38 36.3 -1.9**
KSH SKKS SKKSac 04 38 57.4 +8.9
KSH SS SS 04 47 29.2 +35
KSH AMB AMB
comp=Z,37nm,2.3s
KSH LR LR
comp=N,230nm,5.6s
KSH LR LR
comp=E,190nm,6.3s
KSH LR LR
comp=Z,250nm,5.8s
KURK Kurchatov 108.05 318 *e*PKPdf **PKiKP 04 31 30.2 -2.7**
HBAR Harrisburg 109.57 59 *e*PKPdf **PKiKP 04 31 32.4 -3.8**
BRVK Borovoye 113.54 320⇑ *i*PKIKP **PKiKP 04 31 43.0 -0.2**
BRVK pmax pmax
comp=Z,5.0nm,1.0s
SIV San Ignacio 116.81 122 PKP **PKPdf 04 31 50.2 -0.5**
SIV San Ignacio 116.81 122 PKP **PKPdf 04 31 50.2 -0.5**
comp=Z,2.0nm,0.9s,baz=147,slow=1.8,SNR=6.4
SAML Samuel 118.97 115 *e*PKPdf **PKPdf 04 31 53.9 -1.0**
BOSA Boshof 119.28 215 PKP **PKPdf 04 31 55.7 +0.4**
BOSA Boshof 119.28 215 PKP **PKPdf 04 31 55.7 +0.4**
comp=Z,1.5nm,0.6s,baz=160,slow=3.3,SNR=4.2
ABKAR Akbulak array 119.83 315 *e*PKPdf **PKPdf 04 31 55.0 -0.4**
RBK Rabkut 120.24 278 P **PKPdf 04 31 58.0 +0.9**
SNR=7.4
HATD Hatta, Dubai 120.27 287 P **PKPdf 04 31 57.7 +0.7**
SNR=5.5
ARU Arti 120.36 323 *i* PKIKP **PKPdf 04 31 56.1 -0.1**
ARU 04 33 25.3
ARU 04 38 46.1
ARU Arti 120.36 323 *e*PKPdf **PKPdf 04 31 55.7 -0.5**
SOKR Solikamsk 120.92 327 *d i*PKIKP **PKPdf 04 31 57.2 +0.1**
SOKR pmax pmax
comp=Z,10.0nm,0.6s
ABTO Aybut 121.03 277 P **PKPdf 04 31 59.8 +1.1**
SNR=5.5
AKTO Aktyubinsk 121.06 316 PKIKP **PKPdf 04 31 57.6 -0.2**
AKTO Aktyubinsk 121.06 316 PKP **PKPdf 04 31 57.6 -0.2**
AKTO Aktyubinsk 121.06 316 PKP **PKPdf 04 31 57.6 -0.2**
comp=Z,4.4nm,0.8s,baz=11,slow=0.5,SNR=17
NCB Newcomb 123.15 51 *e*PKPdf **PKPdf 04 32 01.2 -0.8**
DAG Danmarks Havn 125.28 3⇑ *i*PKIKP **PKPdf 04 32 03.5 -1.6**
DAG pmax pmax
comp=Z,11nm,0.7s
DAG Danmarks Havn 125.28 3⇑ *i*P **PKPdf 04 32 03.5 -1.6**
comp=Z,16nm,0.7s
OBIP Obispado Ponce 126.53 84 *e*PKPdf **PKPdf 04 32 08.0 -1.2**
SCHQ Schefferville 126.66 37 PKP **PKPdf 04 32 07.3 -1.1**
SCHQ Schefferville 126.66 37 PKP **PKPdf 04 32 07.3 -1.1**
comp=Z,11nm,1.0s,baz=238,slow=1.6,SNR=7.8
BDFB Brasilia 126.70 132 PKP **PKPdf 04 32 09.1 -0.7**
BDFB Brasilia 126.70 132 PKP **PKPdf 04 32 09.1 -0.7**
comp=Z,8.4nm,0.8s,baz=216,slow=1.5,SNR=11
SJG San Juan 126.97 84 *e*PKPdf **PKPdf 04 32 09.0 -1.0**
SJG San Juan 126.97 84 PKP **PKPdf 04 32 08.9 -1.0**
comp=Z,51nm,0.8s,baz=25,slow=2.3,SNR=23
SUMG Summit 127.14 11 *e*PKIKP **PKPdf 04 32 08.9 -0.4**
SUMG Summit 127.14 11 *e*PKPdf **PKPdf 04 32 08.9 -0.4**
SUMG Summit 127.14 11 *i* P **PKPdf 04 32 08.6 -0.7**
comp=Z,18nm,1.0s
PQI Presque Isle 127.37 48 *e*PKPdf **PKPdf 04 32 09.0 -0.9**
ARCES ARCESS Array B 128.29 345 PKP **PKPdf 04 32 10.8 -0.3**
ARCES ARCESS Array B 128.29 345 PKP **PKPdf 04 32 10.8 -0.3**
comp=Z,4.8nm,0.5s,baz=91,slow=3.6,SNR=49
SFJD Kangerlussuaq 128.40 19 *i* P **PKPdf 04 32 10.2 -1.1**
comp=Z,11nm,0.9s
KLMR Klimovskoe 128.75 332 *e*PKIKP **PKPdf 04 32 09.0 -3.1**
KLMR pmax pmax
comp=Z,35nm,1.8s
KMBO Kilima Mbogo 128.80 249 *e*PKPdf **PKPdf 04 32 15.1 +1.0**
KMBO PKP **PKPdf 04 32 15.6 +1.6**
KMBO Kilima Mbogo 128.80 249 PKP **PKPdf 04 32 15.6 +1.6**
comp=Z,5.9nm,1.0s,baz=1.2,slow=1.6,SNR=12
TSUM Tsumeb 130.97 215 PKP **PKPdf 04 32 19.0 +1.1**
TSUM Tsumeb 130.97 215 PKP **PKPdf 04 32 19.0 +1.1**
comp=Z,5.4nm,0.9s,baz=124,slow=3.6,SNR=5.7
VRHR Novokhopersk 131.21 319 *e*PKIKP **PKPdf 04 32 17.9 +0.8**
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,20nm,0.4s
VRHR pmax pmax
comp=Z,10.0nm,0.4s
SCO Scoresbysund 131.23 6 *i* PKIKP **PKPdf 04 32 16.6 0.0**
SCO pmax pmax
comp=Z,8.0nm,1.0s
SCO Scoresbysund 131.23 6 *i* P **PKPdf 04 32 16.6 0.0**
comp=Z,8.3nm,1.0s
OBN Obninsk 132.65 326⇑ *i*PKIKP **PKPdf 04 32 21.3 +1.6**
OBN *e* 04 34 46.1
OBN *e*SS SS 04 52 18.1 -1.7
OBN pmax pmax
comp=Z,10.0nm,0.5s
VSR Storozhevoye 132.65 320 *e*PKIKP **PKPdf 04 32 18.7 -1.1**
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=Z,3.0nm,0.4s
VSR pmax pmax
comp=E,2.0nm,0.3s
VORD Divnogorie 132.65 320 *e*PKIKP **PKPdf 04 32 19.8 0.0**
VORD pmax pmax
comp=N,3.0nm,0.5s
VORD pmax pmax
comp=E,4.0nm,0.5s
VORD pmax pmax

comp=Z,3.0nm,0.5s
FINES FINESS Array B 133.82 337 PKP PKPdf 04 32 20.8 -1.0
FINES FINESS Array B 133.82 337 PKP PKPdf 04 32 20.8 -1.0
comp=Z,7.0nm,0.9s,baz=85,slow=4.5,SNR=6.6
NACGM Naroch 137.63 329 e PKPdf 04 32 26.0 -3.0
ASF Jabal al Asfar 137.82 294 PKP PKPdf 04 32 30.8 +0.5
ASF Jabal al Asfar 137.82 294 PKP PKPdf 04 32 30.8 +0.5
comp=Z,1.2nm,0.4s,baz=359,slow=6.6,SNR=3.7
SIM Simferopol’ 137.84 313 PKIKP PKPdf 04 32 47.0 +17
SIM pmax pmax
comp=Z,120nm,17.9s
YAYL Yayladag 138.21 300 i P PKPdf 04 32 30.7 -0.1
AKASG Malin Array Be 138.61 323 PKIKP PKPdf 04 32 29.2 -1.7
AKASG Malin Array Be 138.61 323 PKP PKPdf 04 32 29.2 -1.7
AKASG Malin Array Be 138.61 323 PKP PKPdf 04 32 29.2 -1.7
comp=Z,6.6nm,0.9s,baz=57,slow=2.0,SNR=7.0
AK01 Malin Array Si 138.62 323 ePKPdf PKPdf 04 32 30.4 -0.5
KIEV Kiev 138.62 323 ePKIKP PKPdf 04 32 29.0 -2.0
KIEV Kiev 138.62 323 ePKPdf PKPdf 04 32 29.0 -2.0
AK02 Malin Array Si 138.64 323 ePKPdf PKPdf 04 32 30.7 -0.3
NB2 NORSAR Subarra 138.67 345 PKP PKPpre 04 32 21.5
comp=Z,2.4nm,1.0s,baz=16,slow=3.2
NOA NORSAR Array B 138.67 345 PKPpre PKPpre 04 32 21.1
NOA NORSAR Array B 138.67 345 PKhKP PKPpre 04 32 21.1
comp=Z,2.4nm,0.8s,baz=19,slow=2.8,SNR=7.7
HFS Hagfors 138.80 343 PKPpre PKPpre 04 32 21.8
HFS Hagfors 138.80 343 PKhKP PKPpre 04 32 21.8
comp=Z,2.3nm,0.6s,baz=90,slow=1.4,SNR=7.0
MMAI Mount Meron Ar 139.04 295 PKPpre PKPpre 04 32 24.0
MMAI Mount Meron Ar 139.04 295 PKhKP PKPpre 04 32 24.0
comp=Z,0.6nm,0.3s,baz=107,slow=40,SNR=2.7
EIL Elat 139.52 290 PKP PKPdf 04 32 34.4 +1.1
EIL Elat 139.52 290 PKP PKPdf 04 32 34.4 +1.1
comp=Z,8.5nm,0.9s,baz=22,slow=7.8,SNR=4.7
BR131 Keskin Array S 139.54 306 ePKPdf PKPdf 04 32 30.3 -2.9
BRTR Keskin Array B 139.54 306 PKPpre PKPpre 04 32 28.8
BRTR Keskin Array B 139.54 306 PKhKP PKPpre 04 32 28.8
comp=Z,2.3nm,0.9s,baz=84,slow=2.4,SNR=7.4
CFR Carcaliu 141.72 316 ⇑PKIKP PKPdf 04 32 38.5 +1.8
CFR Carcaliu 141.72 316⇑iP PKPdf 04 32 38.5 +1.8
TIRR Tirgusor 141.82 315 ⇑PKIKP PKPdf 04 32 43.1 +6.1
TIRR Tirgusor 141.82 315⇑iP PKPdf 04 32 43.1 +6.1
BORA Eskisehir 141.88 307 i P PKPdf 04 32 43.5 +6.2
LVV L’vov 141.91 324 ePKHKP PKPpre 04 32 32.7
RCBR Riachuelo 141.97 134 PKPpre PKPpre 04 32 31.9
RCBR Riachuelo 141.97 134 PKhKP PKPpre 04 32 31.9
comp=Z,6.7nm,0.6s,baz=246,slow=1.5,SNR=8.2
VRI Vrincioaia 142.32 317 ⇑PKHKP PKPdf 04 32 34.0 -3.9
VRI Vrincioaia 142.32 317⇑iP PKPdf 04 32 34.0 -3.9
BUR08 Bucovina Ar. S 142.41 321 ePKPdf PKPdf 04 32 35.1 -2.9
BSD Bornholm Skovb 142.46 337 i PKIKP PKPdf 04 32 34.8 -2.9
BSD pmax pmax
comp=Z,11nm,1.0s
BSD MLR MLR
comp=Z,230nm,22.0s
BSD Bornholm Skovb 142.46 337 i P PKPdf 04 32 34.8 -2.9
comp=Z,11nm,0.9s
BSD
comp=Z,230nm,22.0s
KWP Kalwaria Pacla 142.73 325 ePKHKP PKPdf 04 32 34.6 -3.8
KWP Kalwaria Pacla 142.73 325 ePKPdf PKPdf 04 32 34.6 -3.8
KWP Kalwaria Pacla 142.73 325⇓iP PKPdf 04 32 35.5 -3.0
ISR Istrita 142.77 316 ⇓PKIKP PKPdf 04 32 40.1 +1.4
ISR Istrita 142.77 316⇓iP PKPdf 04 32 40.1 +1.4
GDZ Gediz 142.82 306 i P PKPdf 04 32 47.6 +8.5
COP Copenhagen 142.86 339 i PKIKP PKPdf 04 32 35.5 -2.9
COP pmax pmax
comp=Z,15nm,0.8s
COP MLR MLR
comp=Z,110nm,16.0s
COP Copenhagen 142.86 339 i P PKPdf 04 32 35.5 -2.9
comp=Z,15nm,0.7s
COP
comp=Z,100nm,16.0s
CTKS Kestanelik-??a 142.91 310 eP PKPdf 04 32 46.4 +7.4
MLR Muntele Rosu 142.98 317 PKPpre PKPpre 04 32 34.6
MLR PKP PKPdf 04 32 39.0 -0.2
MLR Muntele Rosu 142.98 317 PKhKP PKPpre 04 32 34.6
comp=Z,3.4nm,1.0s,baz=180,slow=15,SNR=8.3
MLR PKP PKPdf 04 32 39.0 -0.2
comp=Z,2.7nm,0.9s,baz=0.0,slow=3.0,SNR=13
MUD Monsted U’grnd 143.19 343 i PKHKP PKPbc 04 32 35.9 -0.2
MUD pmax pmax
comp=Z,8.0nm,0.7s
MUD Monsted U’grnd 143.19 343 i P PKPbc 04 32 35.9 -0.2
comp=Z,8.4nm,0.7s
LLD Lille Linde 143.22 339 i PKIKP PKPbc 04 32 35.7 -0.5
LLD pmax pmax
comp=Z,44nm,0.8s
LLD Lille Linde 143.22 339 i P PKPbc 04 32 35.7 -0.5
comp=Z,44nm,0.8s
KOLS Kolonicke sedl 143.36 324 ePKP PKPbc 04 32 37.7 +0.8
KOLS e 04 35 08.9
BMR Baia Mare 143.38 322 ⇑PKIKP PKPdf 04 32 38.6 -1.0
BMR Baia Mare 143.38 322⇑iP PKPdf 04 32 38.6 -1.0
DURS Dursunbey 143.43 307 i P PKPab 04 32 33.2 -3.2
DNZL Cakiroluk 143.50 304 i P PKPab 04 32 36.8 0.0
UZH Uzhgorod 143.53 324⇑iPKIKP PKPdf 04 32 38.7 -1.1
UZH e 04 32 48.9
VOIR 143.57 318 ⇑PKIKP PKPdf 04 32 39.9 -0.3
VOIR 143.57 318⇑iP PKPdf 04 32 39.9 -0.3
TRPA Tarpa 143.67 323⇓iP PKPbc 04 32 38.6 +0.9
CRVS Cervenica-Dubn 143.82 325 ePKP PKPbc 04 32 39.0 +0.8
ARR Arges 143.86 318⇓iP PKPdf 04 32 39.8 -0.9
GONE Gonen-Balikesi 143.87 308 eP PKPbc 04 32 38.6 0.0
EDRB Edirne 143.94 311 eP PKPbc 04 32 39.0 +0.3
BALY Balya 144.02 308 i P PKPab 04 32 38.8 +0.2
HUMR Humele 144.03 316⇓iP PKPbc 04 32 39.4 +0.4
RKY Sarkoy-Tekirda 144.04 309 eP PKPab 04 32 38.6 -0.1
KRBG Karabiga-Canak 144.05 309 eP PKPbc 04 32 39.5 +0.4
NIE Niedzica 144.11 326 ePKIKP PKPdf 04 32 40.1 -0.8
NIE Niedzica 144.11 326 ePKP PKPdf 04 32 40.1 -0.8
LOT Lotru 144.35 318⇓iP PKPdf 04 32 41.1 -0.5
AYDN Tasoluk 144.40 304 i P PKPbc 04 32 40.7 +0.2
LPK Lapseki 144.44 309 eP PKPbc 04 32 40.4 +0.1
MCD Coleburn Disti 144.44 354⇑eP PKPab 04 32 39.1 -0.5
MCD Coleburn Disti 144.44 354 P PKPab 04 32 39.1 -0.5
GELI Tayfur-Gelibol 144.64 309 eP PKPbc 04 32 41.4 +0.4
DEV Deva 144.66 320 ⇓PKIKP PKPdf 04 32 42.9 +1.0
DEV Deva 144.66 320⇓iP PKPdf 04 32 42.9 +1.0
IZM Izmir 144.68 305 eP PKPab 04 32 41.0 -0.2
MDO Dochfour 144.68 355 eP PKPab 04 32 38.2 -2.2
MDO Dochfour 144.68 355 P PKPab 04 32 38.2 -2.2
MME1 Meikle Cairn 144.68 354⇑eP PKPab 04 32 38.8 -1.7
MME1 Meikle Cairn 144.68 354 P PKPab 04 32 38.8 -1.7
KAC Achnashellach 144.69 356⇑eP PKPab 04 32 39.9 -0.6
KAC Achnashellach 144.69 356 P PKPab 04 32 39.9 -0.6
ENEZ Enez 144.75 310 eP PKPdf 04 32 41.8 -0.4
ALN Alexandroupoli 144.77 310 P PKPab 04 32 41.3 0.0
BLCB Balcova 144.85 306 eP PKPab 04 32 41.0 -0.7
KPL Plockton 144.87 356 eP PKPab 04 32 40.1 -1.0
KPL AMB AMB 04 32 41.9
comp=Z,130nm,1.2s
KPL Plockton 144.87 356 P PKPab 04 32 40.1 -1.0
KPL AMB AMB 04 32 41.9
comp=Z,130nm,1.2s
BDRM Kayabasi 144.89 303 i P PKPab 04 32 41.3 -0.7
GCAM G?zelcaml? 144.89 304 i P PKPbc 04 32 41.9 0.0
OKC Ostrava-Krasne 144.92 328 ePKIKP PKPdf 04 32 42.0 -0.2
OKC MLR MLR
comp=Z,300nm,23.6s
OKC Ostrava-Krasne 144.92 328 ePKP PKPdf 04 32 42.0 -0.2
OKC AMS AMS 05 33 20.0
comp=Z,300nm,23.6s
RUE Ruedersdorf 144.93 335 ePKPbc PKPdf 04 32 42.0 -0.1
RUE Ruedersdorf 144.93 335 ePKPbc PKPdf 04 32 42.2 +0.1
EZN Ezine 144.94 308 eP PKPdf 04 32 42.7 +0.1
BODT Bodrum 144.99 303 eP PKPbc 04 32 42.3 0.0
BSEG Bad Segeberg 145.00 339 ePKIKP PKPdf 04 32 42.1 -0.1
BSEG Bad Segeberg 145.00 339 ePKPbc PKPdf 04 32 42.1 -0.1
KSP Ksiaz 145.09 331 ePKIKP PKPdf 04 32 42.5 0.0
KSP MLR MLR
comp=Z,700nm,20.9s
KSP Ksiaz 145.09 331 ePKPc 04 32 42.6
BOZC Bozcaada 145.13 308 i P PKPbc 04 32 41.8 -0.7
PRK Paraskevi 145.16 307 P PKPdf 04 32 43.0 0.0
PSZ Piszkesteto 145.24 325 PKIKP PKPdf 04 32 43.1 +0.1
PSZ Piszkesteto 145.24 325 ePKPbc PKPdf 04 32 43.7 +0.8
PSZ Piszkesteto 145.24 325⇓iP PKPdf 04 32 43.7 +0.8
PSZ Piszkesteto 145.24 325⇓ePKPbc PKPdf 04 32 43.8 +0.8
MORC Moravsky Berou 145.25 329 ⇓PKIKP PKPdf 04 32 43.7 +0.8
MORC Moravsky Berou 145.25 329 ePKPbc PKPdf 04 32 43.5 +0.6
MORC Moravsky Berou 145.25 329⇓iP PKPdf 04 32 43.7 +0.8
MPEP Malo Peshtene 145.35 315 i P PKPab 04 32 44.1 +0.7
RZN Rozhen 145.40 312 i P PKPdf 04 32 43.2 -0.4
PGB Panagyurishte 145.42 314 P PKPdf 04 32 43.2 -0.2
DPC Dobruska-Polom 145.43 330 i PKIKP PKPab 04 32 44.1 +0.6
DPC MLR MLR
comp=Z,300nm,22.4s
DPC Dobruska-Polom 145.43 330 i PKP PKPab 04 32 44.1 +0.6
DPC AMS AMS 05 38 40.0
comp=Z,300nm,22.4s
VYHS Vyhne 145.44 326 ePKP PKPab 04 32 43.7 +0.1
UPC Upice 145.46 331 i PKIKP PKPab 04 32 44.0 +0.5
UPC Upice 145.46 331 i PKP PKPab 04 32 44.0 +0.5
HLG Helgoland 145.53 342 ePKPbc PKPab 04 32 44.0 +0.4
BZS Buzias 145.57 320 ⇓PKIKP PKPab 04 32 44.1 -0.1
BZS Buzias 145.57 320⇓iP PKPab 04 32 44.0 -0.1
CHOS Chios island 145.59 306 P PKPab 04 32 44.4 -0.1
LIA Limnos Island 145.74 309 P PKPbc 04 32 44.6 +0.1
KAVA Kavala 145.81 311 P PKPbc 04 32 44.7 0.0
EAB Aberfoyle 145.92 355⇑eP PKPdf 04 32 43.7 0.0
EAB Aberfoyle 145.92 355 P PKPdf 04 32 43.7 0.0
BUD Budapest 145.97 325⇑ePKPdf PKPab 04 32 46.6 +1.0
ESY Stoneypath 146.02 353⇑iP PKPdf 04 32 44.0 +0.1
ESY Stoneypath 146.02 353 P PKPdf 04 32 44.0 +0.1
VRAC Vranov 146.02 329 PKPbc PKPab 04 32 45.4 -0.3
VRAC Vranov 146.02 329⇑iP PKPab 04 32 45.9 +0.2
VRAC Vranov 146.02 329 PKPbc PKPab 04 32 45.4 -0.3
comp=Z,75nm,1.0s,baz=45,slow=3.6,SNR=70
VTS Vitosha 146.04 314 P PKPab 04 32 46.0 -0.2
VTS Vitosha 146.04 314 ⇑PKP2 PKPab 04 32 46.4 +0.2
VTS Vitosha 146.04 314⇑iP PKPab 04 32 46.4 +0.2
VTS Vitosha 146.04 314 i P PKPab 04 32 46.0 -0.2
EDI Edinburgh 146.08 354⇑eP PKPdf 04 32 42.1 -1.9
EDI AMB AMB 04 32 43.6
comp=Z,94nm,1.3s
EDI Edinburgh 146.08 354 P PKPdf 04 32 42.1 -1.9
EDI AMB AMB 04 32 43.6
comp=Z,94nm,1.3s
PVCC Panska Ves 146.08 332 ePKP2 PKPab 04 32 45.9 0.0
PVCC MLR MLR
comp=Z,300nm,22.5s
PVCC Panska Ves 146.08 332 ePKP PKPab 04 32 45.9 0.0
PVCC AMS AMS 05 36 40.0
comp=Z,300nm,22.5s
BRG Berggiesshubel 146.09 333 i PKP PKPab 04 32 45.8 -0.1
comp=Z,98nm,0.9s
BRG i 04 32 47.2
comp=Z,108nm,1.2s
BRG i 04 32 50.2
comp=Z,21nm,0.8s
BRG i 04 33 21.8
comp=Z,6.3nm,0.8s
BRG Berggiesshubel 146.09 333 i PKP2 PKPab 04 32 45.8 -0.1
BRG i 04 32 47.2
BRG pmax pmax
comp=Z,4.0nm,0.9s
BRG pmax pmax
comp=Z,98nm,1.2s
BRG Berggiesshubel 146.09 333 ePKPbc PKPbc 04 32 45.2 0.0
NVR Nevrokopi 146.12 312 P PKPbc 04 32 45.7 0.0
CLL Collm 146.14 334⇑iPKP2 PKPbc 04 32 45.6 +0.2
CLL pmax pmax
comp=Z,81nm,1.0s
CLL MLR MLR
comp=Z,200nm,21.5s
CLL Collm 146.14 334 ePKPbc PKPbc 04 32 45.5 +0.2
CLL Collm 146.14 334⇑iPKPbc PKPbc 04 32 45.6 +0.2
comp=Z,81nm,1.0s
CLL e 04 33 06.0
CLL e(PSPS) 04 56 00.0
CLL eSSS SSS 05 00 30.0
CLL LmV 05 37 00.0
comp=Z,200nm,21.5s
SMOL Smolenice 146.15 327 ePKP PKPab 04 32 47.4 +1.2
EAU Auchinoon 146.18 354⇑eP PKPdf 04 32 44.6 +0.4
EAU Auchinoon 146.18 354 P PKPdf 04 32 44.6 +0.4
EBL Broad Law 146.21 353⇑eP PKPdf 04 32 44.3 0.0
EBL Broad Law 146.21 353 P PKPdf 04 32 44.3 0.0
NRDL Niedersach Rie 146.27 338 ePKPbc PKPab 04 32 46.0 -0.4
FBE Freiberg 146.30 334 ePKPbc PKPab 04 32 46.2 -0.5
PGBU Glenifferbraes 146.31 355⇑eP PKPdf 04 32 44.9 +0.5
PGBU AMB AMB 04 32 50.5
comp=Z,143nm,3.9s
PGBU Glenifferbraes 146.31 355 P PKPdf 04 32 44.9 +0.5
PGBU AMB AMB 04 32 50.5
comp=Z,143nm,3.9s
PKSG 146.37 325⇓ePKPdf PKPab 04 32 47.0 -0.1
SRS Serrai 146.41 312 P PKPbc 04 32 46.2 -0.3
KKB Krupnik 146.44 313 i P PKPbc 04 32 47.0 +0.4
PRU Pruhonice 146.49 332 i PKP2 PKPab 04 32 46.9 -0.6
PRU MLR MLR
comp=Z,300nm,23.3s
PRU Pruhonice 146.49 332 i PKP PKPab 04 32 46.9 -0.6
PRU AMS AMS 05 34 40.0
comp=Z,300nm,23.3s
TREC Trest 146.56 330 ePKP2 PKPbc 04 32 47.0 +0.3
TREC MLR MLR
comp=Z,400nm,16.9s
TREC Trest 146.56 330 ePKP PKPbc 04 32 47.0 +0.3
TREC AMS AMS 05 39 30.0
comp=Z,400nm,16.9s
PKST T‵s 146.64 325⇓ePKPdf PKPbc 04 32 47.5 +0.5
EKA Eskdalemuir Ar 146.65 353 PKPbc PKPbc 04 32 46.0 -0.7
EKA Eskdalemuir Ar 146.65 353 PKPbc PKPbc 04 32 46.0 -0.7
comp=Z,63nm,0.8s,baz=360,slow=2.9,SNR=88
ESK Eskdalemuir 146.68 353⇑eP PKPbc 04 32 45.9 -0.9
ESK AMB AMB 04 32 47.2
comp=Z,124nm,2.7s
ESK Eskdalemuir 146.68 353 P PKPbc 04 32 45.9 -0.9
ESK AMB AMB 04 32 47.2
comp=Z,124nm,2.7s
ESK Eskdalemuir 146.68 353 i PKP2 PKPbc 04 32 46.8 0.0
ESK Eskdalemuir 146.68 353 ePKPbc PKPbc 04 32 46.2 -0.6
NEUB Neuenburg 146.70 335 ePKPbc PKPbc 04 32 47.5 +0.5
CLZ Clausthal 146.72 337 ePKP2 PKPbc 04 32 47.5 +0.4
CLZ Clausthal 146.72 337 ePKPbc PKPbc 04 32 47.5 +0.4
ECK Cauldkaine Hil 146.80 353⇑eP PKPdf 04 32 45.9 +0.6
ECK Cauldkaine Hil 146.80 353 P PKPdf 04 32 45.9 +0.6
PLG Polygyros 146.80 311 P PKPbc 04 32 47.1 -0.6
PAIG Paliouri 146.81 310 P PKPbc 04 32 47.2 -0.5
KNT Kendrikon 146.87 312 P PKPbc 04 32 47.6 -0.2
AOS Alonnisos 146.94 308 P PKPbc 04 32 47.6 -0.5
PKSM Moragy 146.95 323 ⇓PKP2 PKPbc 04 32 48.5 +0.7
PKSM Moragy 146.95 323⇓iP PKPbc 04 32 48.5 +0.7
PKSM Moragy 146.95 323⇓e PKPbc 04 32 48.5 +0.7
XAL Allendale 147.01 352⇑eP PKPbc 04 32 46.6 -1.1
XAL Allendale 147.01 352 P PKPbc 04 32 46.6 -1.1
VAY Valandovo 147.02 313 P PKPbc 04 32 47.2 -1.0
VAY Valandovo 147.02 313 ePKP PKPdf 04 32 46.9 +0.8
TANN Tannenbergstha 147.05 334 ePKPbc PKPbc 04 32 48.4 +0.3
WERD Werda 147.09 334 ePKPbc PKPbc 04 32 48.6 +0.4
PLN Plauen 147.12 334 ePKPbc PKPbc 04 32 48.6 +0.4
GUNZ Gunzen 147.14 334 ePKPbc PKPbc 04 32 48.7 +0.4
WERN Wernitzgruen 147.19 334 ePKPbc PKPbc 04 32 49.1 +0.7
NKC Novy Kostel 147.20 334 i PKP2 PKPbc 04 32 49.0 +0.5
NKC Novy Kostel 147.20 334 i PKP PKPbc 04 32 49.0 +0.5
IBBN Ibbenburen 147.20 340 ePKPbc PKPbc 04 32 48.5 +0.2
MOX Moxa 147.21 335 ePKP2 PKPbc 04 32 48.6 +0.1
MOX Moxa 147.21 335 ePKPbc PKPbc 04 32 48.6 +0.1
GAL1 Galloway 147.26 355⇑eP PKPbc 04 32 47.7 -0.7
GAL1 AMB AMB 04 32 49.0
comp=Z,165nm,1.1s
GAL1 Galloway 147.26 355 P PKPbc 04 32 47.7 -0.7
GAL1 AMB AMB 04 32 49.0
comp=Z,165nm,1.1s
CONA Conrad Observa 147.32 328⇑iPKPab PKPbc 04 32 49.5 +0.5
comp=Z,34nm,0.8s,SNR=14
CONA Conrad Observa 147.32 328⇑iP PKPbc 04 32 49.5 +0.5
PTL Penteli 147.33 306 P PKPbc 04 32 49.0 -0.2
DIVS Divibare 147.36 319 P PKPbc 04 32 49.6 +0.4
XOR Xorichti 147.37 309 P PKPbc 04 32 48.7 -0.6
KESW Keswick, Cumbr 147.38 353⇑eP PKPbc 04 32 48.1 -0.7
KESW AMB AMB 04 32 49.6
comp=Z,106nm,1.2s
KESW Keswick, Cumbr 147.38 353 P PKPbc 04 32 48.1 -0.7
KESW AMB AMB 04 32 49.6
comp=Z,106nm,1.2s
ATH Athens Observa 147.47 306 P PKPbc 04 32 49.3 -0.3
SKO Skopje 147.49 314 P PKPab 04 32 50.6 -1.1
SKO Skopje 147.49 314 ePKP PKPbc 04 32 50.2 +0.7
KHC Kasperske Hory 147.54 331 ePKP2 PKPbc 04 32 50.4 +0.9
KHC Kasperske Hory 147.54 331 ePKPbc PKPbc 04 32 50.4 +0.9
KHC Kasperske Hory 147.54 331 i PKP PKPbc 04 32 50.1 +0.6
KHC AMS AMS 05 37 20.0
comp=Z,300nm,22.5s
LIT Litokhoron 147.58 311 P PKPbc 04 32 49.4 -0.5
ROTZ Rotzenmuhle 147.66 333 ePKPbc PKPbc 04 32 50.2 +0.5
UBBA Unterbreizbach 147.69 337 ePKPbc PKPbc 04 32 50.1 +0.5
GEC2 GERESS Array S 147.70 331 ePKP2 PKPbc 04 32 50.2 +0.2
GEC2 GERESS Array S 147.70 331 ePKPbc PKPbc 04 32 50.2 +0.2
GERES GERESS Array B 147.70 331 PKPbc PKPbc 04 32 49.7 -0.3
GERES GERESS Array B 147.70 331 PKPbc PKPbc 04 32 49.7 -0.3
comp=Z,35nm,1.0s,baz=35,slow=3.6,SNR=86
ATAL Atalanti 147.73 308 P PKPbc 04 32 49.6 -0.7
WTSB Winterswijk 147.79 341 ePKP PKPbc 04 32 49.9 0.0
comp=Z,127nm,1.2s
WET Wettzell 147.84 332 ePKP2 PKPbc 04 32 50.7 +0.4
WET Wettzell 147.84 332 ePKPbc PKPbc 04 32 50.7 +0.4
VAM Vamos 147.84 302 P PKPbc 04 32 51.8 +1.1
AXAR Agios Charalam 147.97 308 P PKPbc 04 32 50.7 -0.2
DID Didima 147.98 306 P PKPbc 04 32 50.2 -0.8
DIDY Didyma 148.01 306 P PKPbc 04 32 50.4 -0.8
LTK Loutraki 148.01 307 P PKPbc 04 32 50.2 -0.9
FNA Florina 148.07 312 P PKPbc 04 32 50.9 -0.3
BUG Bochum--Univer 148.10 340 ePKPbc PKPbc 04 32 50.9 +0.1
KOGS Kog 148.10 325 i PKPbc PKPbc 04 32 50.9 -0.1
GRF Grafenberg Arr 148.12 334 ePKP2 PKPbc 04 32 51.4 +0.4
GRF Grafenberg Arr 148.12 334 ePKPbc PKPbc 04 32 51.4 +0.4
GRF ePKPab PKPab 04 32 55.0 +1.1
THL Klokotos Trika 148.13 310 P PKPbc 04 32 50.4 -0.9
MOA Molln 148.15 329⇑iPKPbc PKPbc 04 32 51.2 0.0
comp=Z,13nm,0.7s,SNR=8.7
MOA Molln 148.15 329⇑iP PKPbc 04 32 51.2 0.0
DSF Desfina 148.20 308 P PKPbc 04 32 51.0 -0.6
BCI Bajram Curri 148.20 316 ePN PKPbc 04 32 52.0 +0.6
LHO Holmfirth 148.25 351⇑eP PKPbc 04 32 50.7 -0.5
LHO Holmfirth 148.25 351 P PKPbc 04 32 50.7 -0.5
PHP Peshkopia 148.29 315 ePN PKPbc 04 32 51.8 0.0
PHP Peshkopia 148.29 315 P PKPbc 04 32 52.1 +0.4
ABA1 Baconsthorpe 148.37 348⇑eP PKPbc 04 32 51.0 -0.5
ABA1 Baconsthorpe 148.37 348 P PKPbc 04 32 51.0 -0.5
VLI Veliai 148.46 304 P PKPbc 04 32 51.6 -0.6
PUK Puka 148.47 316 ePN PKPbc 04 32 52.8 +0.6
KBI1 Birley Grange 148.48 351⇑eP PKPbc 04 32 51.2 -0.5
KBI1 Birley Grange 148.48 351 P PKPbc 04 32 51.2 -0.5
GUR Goura 148.50 307 P PKPbc 04 32 52.0 -0.5
EVR Evrytania 148.53 309 P PKPbc 04 32 52.7 +0.2
TRIZ Trizonia 148.54 308 P PKPbc 04 32 52.5 +0.1
PERS Pernice 148.57 327 i PKPbc PKPbc 04 32 52.0 -0.3
SOKA Soboth 148.58 327⇑iPKPbc PKPbc 04 32 52.2 -0.2
comp=Z,44nm,1.1s
SOKA Soboth 148.58 327⇑iP PKPbc 04 32 52.2 -0.2
AEU East Anglia Un 148.60 347⇑eP PKPbc 04 32 52.2 +0.1
AEU East Anglia Un 148.60 347 P PKPbc 04 32 52.2 +0.1
EFP Efpalio 148.65 308 P PKPbc 04 32 53.3 +0.6
LAKA Lakka 148.66 308 P PKPbc 04 32 53.2 +0.4
VLX Vlachokerasia 148.67 306 P PKPbc 04 32 53.1 +0.2
WME Myndd Eilian 148.68 354⇑eP PKPbc 04 32 50.9 -1.4
WME Myndd Eilian 148.68 354 P PKPbc 04 32 50.9 -1.4
WPM1 Penmaenmawr 148.78 353⇑eP PKPbc 04 32 51.8 -0.8
WPM1 Penmaenmawr 148.78 353 P PKPbc 04 32 51.8 -0.8
WLF1 Llynfaes 148.80 354⇑eP PKPbc 04 32 52.1 -0.4
WLF1 AMB AMB 04 32 53.2
comp=Z,127nm,0.9s
WLF1 Llynfaes 148.80 354 P PKPbc 04 32 52.1 -0.4
WLF1 AMB AMB 04 32 53.2
comp=Z,127nm,0.9s
TIR Tirane 148.83 314 ePN PKPab 04 32 59.0 +1.9
TIR Tirane 148.83 314 ePKP2 PKPbc 04 32 54.0 +0.9
TIR Tirane 148.83 314 ePKPbc PKPbc 04 32 54.0 +0.9
YRC Rhoscolyn 148.85 354⇑eP PKPbc 04 32 52.0 -0.6
YRC Rhoscolyn 148.85 354 P PKPbc 04 32 52.0 -0.6
DYR Agios Nikonas 148.90 305 P PKPbc 04 32 53.5 +0.1
RJOB Jochberg 148.92 330 ePKPbc PKPbc 04 32 53.1 -0.1
PDKS Podkum 149.01 326 i PKPbc PKPbc 04 32 53.4 0.0
FOEL Foel Wylfa 149.06 353⇑eP PKPbc 04 32 53.1 -0.2
FOEL AMB AMB 04 32 53.8
comp=Z,168nm,0.8s
FOEL Foel Wylfa 149.06 353 P PKPbc 04 32 53.1 -0.2
FOEL AMB AMB 04 32 53.8
comp=Z,168nm,0.8s
RLS Riolos of Patr 149.10 308 P PKPbc 04 32 54.7 +0.9
YRE Yr Eifl 149.10 354⇑eP PKPbc 04 32 52.0 -1.3
YRE Yr Eifl 149.10 354 P PKPbc 04 32 52.0 -1.3
HGN Heimansgroeve 149.11 341 ePKP PKPbc 04 32 53.3 -0.1
comp=Z,63nm,1.1s
AMT Artemida-Makis 149.11 307 P PKPbc 04 32 54.4 +0.5
TOD Tromm 149.12 336 PKP2 PKPbc 04 32 53.2 -0.4
TOD Tromm 149.12 336 PKP PKPbc 04 32 53.2 -0.4
KBA Koelnbreinsper 149.14 329⇓ePKP2 PKPbc 04 32 53.1 -0.8
KBA Koelnbreinsper 149.14 329⇓ePKPbc PKPbc 04 32 53.1 -0.8
comp=Z,41nm,1.1s,SNR=8.7
KBA Koelnbreinsper 149.14 329⇓eP PKPbc 04 32 53.1 -0.8
BEBN Eben Emael 149.15 341 PKPbc PKPbc 04 32 54.2 +0.7
MEM Membach 149.22 340 PKPbc PKPbc 04 32 53.8 +0.1
BOJS Bojanci 149.24 325 i PKPdf PKPdf 04 32 49.5 -0.1
BOJS i PKPbc PKPbc 04 32 54.4 +0.4
LJU Ljubljana 149.27 326 i PKPdf PKPdf 04 32 49.5 -0.1
LJU i PKPbc PKPbc 04 32 54.3 +0.3
FUR Furstenfeldbru 149.28 332 ePKP2 PKPab 04 32 59.7 +1.0
FUR Furstenfeldbru 149.28 332 ePKPab PKPab 04 32 59.7 +1.0
PYL PYLOS 149.31 305 P PKPbc 04 32 53.6 -0.8
MYKA Terra Mystica 149.31 328⇑iPKPbc PKPbc 04 32 53.5 -0.7
comp=Z,30nm,1.0s
MYKA Terra Mystica 149.31 328⇑iP PKPbc 04 32 53.5 -0.7
ABH Alteburg 149.34 338 PKP PKPbc 04 32 54.2 +0.1
LKD2 Lefkada island 149.41 309 P PKPbc 04 32 55.2 +0.6
CADS Cadrg 149.54 327 i PKPbc PKPbc 04 32 54.1 -0.6
BCLA Clavier 149.60 341 PKPbc PKPbc 04 32 54.5 -0.2
BCLA PKPab PKPab 04 32 59.4 -0.5
KTD Kalmit 149.62 337 PKP2 PKPab 04 32 58.6 -1.5
KTD Kalmit 149.62 337 PKP PKPab 04 32 58.6 -1.5
STU Stuttgart 149.65 335 ePKP2 PKPbc 04 32 55.7 +0.8
STU Stuttgart 149.65 335 ePKPbc PKPbc 04 32 55.3 +0.4
STU ePKPab PKPab 04 33 00.8 +0.6
STU Stuttgart 149.65 335 ePKPbc PKPbc 04 32 55.7 +0.8
STU ePKPab PKPab 04 32 59.9 -0.3
RUP Ruppelstein 149.66 338 PKP2 PKPbc 04 32 54.9 0.0
RUP Ruppelstein 149.66 338 PKP PKPbc 04 32 54.9 0.0
VLS Valsamata 149.70 308 P PKPbc 04 32 55.5 +0.2
ABTA Abfaltersbach 149.77 329⇑iPKPbc PKPbc 04 32 54.5 -0.8
comp=Z,40nm,0.9s,SNR=9.0
ABTA Abfaltersbach 149.77 329⇑iP PKPbc 04 32 54.5 -0.8
WATA Walderalm 149.77 331⇑iPKP2 PKPbc 04 32 55.2 -0.2
WATA Walderalm 149.77 331⇑iPKPbc PKPbc 04 32 55.2 -0.2
comp=Z,17nm,0.5s,SNR=6.8
WATA Walderalm 149.77 331⇑iP PKPbc 04 32 55.2 -0.2
SSW Stow on the Wo 149.78 351⇑eP PKPbc 04 32 54.5 -0.6
SSW Stow on the Wo 149.78 351 P PKPbc 04 32 54.5 -0.6
WTTA Wattenberg 149.80 331⇑iPKP2 PKPbc 04 32 55.3 -0.2
WTTA Wattenberg 149.80 331⇑iPKPbc PKPbc 04 32 55.3 -0.2
comp=Z,83nm,1.1s
WTTA Wattenberg 149.80 331⇑iP PKPbc 04 32 55.3 -0.2
SNF Seneffe 149.82 342 PKPbc PKPbc 04 32 55.8 +0.6
SNF PKPab PKPab 04 33 00.6 -0.1
SKP1 Kophill 149.84 349⇑eP PKPbc 04 32 54.5 -0.7
SKP1 Kophill 149.84 349 P PKPbc 04 32 54.5 -0.7
TRI Trieste 149.88 326 ePKHKP PKPbc 04 32 55.3 -0.2
TRI e 04 33 01.0
TRI Trieste 149.88 326 ePKPbc PKPbc 04 32 55.3 -0.2
TRI ePKPab PKPab 04 33 00.9 -0.2
MCH1 Michaelchurch 149.91 352⇑eP PKPbc 04 32 55.0 -0.4
MCH1 AMB AMB 04 32 55.6
comp=Z,89nm,0.9s
MCH1 Michaelchurch 149.91 352 P PKPbc 04 32 55.0 -0.4
MCH1 AMB AMB 04 32 55.6
comp=Z,89nm,0.9s
MOTA Moosalm 149.98 331⇑iPKP2 PKPbc 04 32 55.8 -0.1
MOTA Moosalm 149.98 331⇑iPKPbc PKPbc 04 32 55.8 -0.1
comp=Z,78nm,1.0s
MOTA Moosalm 149.98 331⇑iP PKPbc 04 32 55.8 -0.1
WLF Walferdange 150.00 339 PKPbc PKPbc 04 32 56.7 +1.0
WLF PKPab PKPab 04 33 00.6 -0.9
WLF Walferdange 150.00 339 ePKP2 PKPbc 04 32 56.7 +1.0
WLF Walferdange 150.00 339 ePKPbc PKPbc 04 32 56.4 +0.8
WLF Walferdange 150.00 339 ePKPbc PKPbc 04 32 56.7 +1.0
LANF Langenberg 150.01 337 PKP2 PKPbc 04 32 56.0 +0.3
LANF Langenberg 150.01 337 PKP PKPbc 04 32 56.0 +0.3
LANF Langenberg 150.01 337 PKP PKPbc 04 32 56.0 +0.3
ELSH Elham, Standar 150.01 346 eP PKPbc 04 32 55.5 -0.1
ELSH AMB AMB 04 32 56.9
comp=Z,150nm,0.9s
ELSH Elham, Standar 150.01 346 P PKPbc 04 32 55.5 -0.1
ELSH AMB AMB 04 32 56.9
comp=Z,150nm,0.9s

RETA	**Reutte**	**150.02**	**332**⇑	*i*PKPbc	**PKPbc**	**04 32 55.9**	**0.0**
	comp=Z,24nm,0.8s,SNR=8.0						
RETA	**Reutte**	**150.02**	**332**⇑	*i*P	**PKPbc**	**04 32 55.9**	**0.0**
DOU	**Dourbes**	**150.10**	**342**	PKPbc	**PKPbc**	**04 32 56.1**	**+0.2**
SWN1	**Swindon**	**150.21**	**350**⇑	*e*P	**PKPbc**	**04 32 55.6**	**-0.5**
SWN1				AMB	AMB	04 32 57.1	
	comp=Z,406nm,0.9s						
SWN1	**Swindon**	**150.21**	**350**	P	**PKPbc**	**04 32 55.6**	**-0.5**
SWN1				AMB	AMB	04 32 57.1	
	comp=Z,406nm,0.9s						
WOL	**Wolverton**	**150.31**	**349**⇑	*e*P	**PKPbc**	**04 32 56.1**	**-0.3**
WOL				AMB	AMB	04 32 56.7	
	comp=Z,179nm,0.8s						
WOL	**Wolverton**	**150.31**	**349**	P	**PKPbc**	**04 32 56.1**	**-0.3**
WOL				AMB	AMB	04 32 56.7	
	comp=Z,179nm,0.8s						
BFO	**Black Forest**	**150.35**	**336**	*e*PKIKP	**PKPbc**	**04 32 56.4**	**-0.2**
BFO				*e*		04 33 03.5	
BFO	**Black Forest**	**150.35**	**336**	*e*PKPbc	**PKPbc**	**04 32 56.4**	**-0.2**
BFO				*e*PKPab	**PKPab**	**04 33 03.5**	**+0.4**
BFO	**Black Forest**	**150.35**	**336**	*e*PKPbc	**PKPbc**	**04 32 56.3**	**-0.2**
BFO				*e*PKPab	**PKPab**	**04 33 03.7**	**+0.6**
SPAK	**Spaichingen-Ko**	**150.36**	**335**	PKP	**PKPbc**	**04 32 56.1**	**-0.6**
FETA	**Feichten**	**150.39**	**331**⇑	*i*PKiKP	**PKPbc**	**04 32 57.1**	**+0.2**
	comp=Z,81nm,1.0s,SNR=18						
FETA	**Feichten**	**150.39**	**331**⇑	*i*P	**PKPbc**	**04 32 57.1**	**+0.2**
DAVA	**Damuels**	**150.56**	**333**⇓	*i*PKiKP	**PKPbc**	**04 32 57.4**	**+0.1**
	comp=Z,52nm,1.2s						
DAVA	**Damuels**	**150.56**	**333**⇓	*i*P	**PKPbc**	**04 32 57.4**	**+0.1**
LIBD	**Limburg**	**150.77**	**336**	PKIKP	**PKPbc**	**04 32 57.7**	**+0.2**
LIBD	**Limburg**	**150.77**	**336**	PKP	**PKPbc**	**04 32 57.7**	**+0.2**
FELD	**Feldberg im Sc**	**150.85**	**335**	PKP	**PKPbc**	**04 32 57.5**	**-0.4**
ECH	**Echery**	**150.88**	**337**	*e*PKIKP	**PKPdf**	**04 32 50.6**	**-1.5**
ECH						04 32 57.7	
ECH	**Echery**	**150.88**	**337**	*e*PKPdf	**PKPdf**	**04 32 50.6**	**-1.5**
ECH				PKP	**PKPbc**	**04 32 57.7**	**-0.2**
HEX	**Exmoor**	**150.93**	**353**⇑	*e*P	**PKPbc**	**04 32 57.3**	**-0.5**
HEX	**Exmoor**	**150.93**	**353**	P	**PKPbc**	**04 32 57.3**	**-0.5**
DAVOX	**Davos/Dischmat**	**150.95**	**332**	PKPbc	**PKPbc**	**04 32 58.4**	**+0.1**
DAVOX	**Davos/Dischmat**	**150.95**	**332**	PKPbc	**PKPbc**	**04 32 58.4**	**+0.1**
	comp=Z,73nm,0.8s,baz=151,slow=1.7,SNR=36						
MOF	**Molkenrain**	**151.20**	**336**	PKIKP	**PKPbc**	**04 32 57.9**	**-0.8**
MOF	**Molkenrain**	**151.20**	**336**	PKP	**PKPbc**	**04 32 57.9**	**-0.8**
MOF	**Molkenrain**	**151.20**	**336**	PKP	**PKPbc**	**04 32 57.9**	**-0.8**
THEF	**They Montfort**	**151.29**	**338**	PKIKP	**PKPbc**	**04 32 58.6**	**-0.2**
THEF	**They Montfort**	**151.29**	**338**	PKP	**PKPbc**	**04 32 58.6**	**-0.2**
THEF	**They Montfort**	**151.29**	**338**	PKP	**PKPbc**	**04 32 58.6**	**-0.2**
BBS	**Basel-Blauen**	**151.38**	**335**	PKIKP	**PKPbc**	**04 32 58.6**	**-0.5**
BBS	**Basel-Blauen**	**151.38**	**335**	PKP	**PKPbc**	**04 32 58.6**	**-0.5**
TUE	**Stuetta**	**151.42**	**332**	*e*PKPbc	**PKPbc**	**04 32 59.7**	**+0.3**
DYA	**Yadsworthy**	**151.56**	**352**⇑	*e*P	**PKPbc**	**04 32 58.6**	**-0.7**
DYA				AMB	AMB	04 32 59.8	
	comp=Z,90nm,1.0s						
DYA	**Yadsworthy**	**151.56**	**352**	P	**PKPbc**	**04 32 58.6**	**-0.7**
DYA				AMB	AMB	04 32 59.8	
	comp=Z,90nm,1.0s						
LOMF	**Lomont**	**151.73**	**336**	PKIKP	**PKPbc**	**04 32 59.6**	**-0.3**
LOMF	**Lomont**	**151.73**	**336**	PKP	**PKPbc**	**04 32 59.6**	**-0.3**
LOMF	**Lomont**	**151.73**	**336**	PKP	**PKPbc**	**04 32 59.6**	**-0.3**
TIP	**Timpagrande**	**151.96**	**313**	*e*PKPdf	**PKPdf**	**04 32 54.0**	**-0.2**
TIP				*e*PKPbc	**PKiKP**	**04 33 01.2**	**+0.2**
TIP				*e*PKPab	**PKPab**	**04 33 11.4**	**+1.2**
CUC	**Castrocucco**	**152.17**	**315**	*e*PKPbc	**PKPbc**	**04 33 00.1**	**-1.0**
CUC				*e*PKPab	**PKPab**	**04 33 11.4**	**+0.4**
VLC	**Villacollemand**	**152.68**	**328**	*e*PKPbc	**PKPbc**	**04 33 01.4**	**-0.7**
CEL	**Celeste**	**152.99**	**312**	*e*PKPdf	**PKPdf**	**04 32 55.2**	**-0.5**
BNI	**Bardonecchia**	**153.68**	**333**	*e*PKIKP	**PKPdf**	**04 32 56.2**	**-0.4**
BNI				*e*		04 33 04.9	
BNI				*e*		04 33 18.6	
BNI	**Bardonecchia**	**153.68**	**333**	*e*PKPdf	**PKPdf**	**04 32 56.2**	**-0.4**
BNI				*e*PKPbc	**PKiKP**	**04 33 04.9**	**+0.4**
BNI				*e*PKPab	**PKPab**	**04 33 18.6**	**+1.4**
SAOF	**Saorge**	**154.15**	**331**	PKIKP	**PKPbc**	**04 33 04.9**	**-0.4**
SAOF	**Saorge**	**154.15**	**331**	PKP	**PKPbc**	**04 33 04.9**	**-0.4**
SAOF	**Saorge**	**154.15**	**331**	PKP	**PKPbc**	**04 33 04.9**	**-0.4**
TOUF	**Mont Tournerai**	**154.27**	**331**	PKIKP	**PKPbc**	**04 33 05.6**	**-0.2**
TOUF	**Mont Tournerai**	**154.27**	**331**	PKP	**PKPbc**	**04 33 05.6**	**-0.2**
TOUF	**Mont Tournerai**	**154.27**	**331**	PKP	**PKPbc**	**04 33 05.6**	**-0.2**
SSB	**Saint Sauveur**	**154.33**	**337**	*e*PKIKP	**PKPbc**	**04 33 06.0**	**+0.3**
SSB				*e*		04 33 20.0	
SSB	**Saint Sauveur**	**154.33**	**337**	*e*PKPbc	**PKPbc**	**04 33 06.0**	**+0.3**
SSB				*e*PKPab	**PKPab**	**04 33 20.0**	**+0.2**
REVF	**Revere**	**154.43**	**331**	PKIKP	**PKPbc**	**04 33 05.4**	**-0.5**
REVF	**Revere**	**154.43**	**331**	PKP	**PKPbc**	**04 33 05.4**	**-0.5**
REVF	**Revere**	**154.43**	**331**	PKP	**PKPbc**	**04 33 05.4**	**-0.5**
CALN	**Calern**	**154.63**	**331**	PKIKP	**PKPbc**	**04 33 05.9**	**-0.6**
CALN	**Calern**	**154.63**	**331**	PKP	**PKPbc**	**04 33 05.9**	**-0.6**
CALN	**Calern**	**154.63**	**331**	PKP	**PKPbc**	**04 33 05.9**	**-0.6**
ESDC	**Sonseca Array**	**162.03**	**346**	PKP	**PKPdf**	**04 33 05.8**	**-1.1**
ESDC				PKPab	**PKPab**	**04 33 52.9**	**-0.4**
ESDC	**Sonseca Array**	**162.03**	**346**	PKP	**PKPdf**	**04 33 05.8**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=337,slow=2.0,SNR=3.1						
ESDC				PKPab	**PKPab**	**04 33 52.9**	**-0.4**
	comp=Z,2.9nm,0.9s,baz=8.7,slow=4.1,SNR=11						
DBIC	**Dimbokro**	**163.83**	**197**	PKP	**PKPdf**	**04 33 09.1**	**-0.2**
DBIC				PKPab	**PKPab**	**04 34 01.4**	**-0.2**
DBIC	**Dimbokro**	**163.83**	**197**	PKP	**PKPdf**	**04 33 09.1**	**-0.2**
	comp=Z,13nm,1.0s,baz=101,slow=2.2,SNR=7.5						
DBIC				PKPab	**PKPab**	**04 34 01.4**	**-0.2**
	comp=Z,9.1nm,0.8s,baz=165,slow=4.6,SNR=7.8						
TOA0	**Torodi Ar. Sit**	**165.96**	**232**	*e*PKPdf	**PKPdf**	**04 33 11.0**	**-0.1**
TOA0				*e*PKPab	**PKPab**	**04 34 11.4**	**+0.1**
TORD	**Torodi Ar. Bea**	**165.96**	**232**	PKP	**PKPdf**	**04 33 11.3**	**+0.2**
TORD				PKPab	**PKPab**	**04 34 10.9**	**-0.3**
TORD	**Torodi Ar. Bea**	**165.96**	**232**	PKP	**PKPdf**	**04 33 11.3**	**+0.2**
	comp=Z,11nm,1.0s,baz=94,slow=0.5,SNR=40						
TORD				PKPab	**PKPab**	**04 34 10.9**	**-0.3**
	comp=Z,3.3nm,1.0s,baz=117,slow=2.0,SNR=5.4						
TAM	**Tamanrasset**	**166.06**	**275**	*e*PKIKP	**PKPdf**	**04 33 10.4**	**-0.8**
TAM	**Tamanrasset**	**166.06**	**275**	*e*PKPdf	**PKPdf**	**04 33 10.4**	**-0.8**
MDT	**Midelt**	**168.64**	**338**	PKP	**PKPdf**	**04 33 12.8**	**+0.1**
MDT	**Midelt**	**168.64**	**338**	PKP	**PKPdf**	**04 33 12.8**	**+0.1**
	comp=Z,3.1nm,0.9s,baz=45,slow=1.4,SNR=4.8						

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*CSEM **09** 04:16:09.4, 42°51N×13°38E, h9km, After ROM*

ROM 09 04:16:09.4±0.1**, 42°51N×13°38E, h9**km±1km**, Ml2.0**/3**, 2C, Error ellipse: s-maj=1.6km s-min=1.5km az=149.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.04**	**47**⇑	*i*Pg	Pg	04 16 11.8	+0.5
CAMP				Sg	Sg	04 16 13.0	+0.3
	456nm,0.5s						
CAMP	**Campotosto**	**0.04**	**47**⇑	*i*Pg	Pg	04 16 11.8	+0.5
CAMP				Sg	Sg	04 16 13.0	+0.3
	456nm,0.5s						
AQU	**L'Aquila**	**0.16**	**173**	Pg	Pg	04 16 13.5	+0.6
AQU				Sg	Sg	04 16 16.1	+0.8
	471nm,0.3s						
AQU	**L'Aquila**	**0.16**	**173**	Pg	Pg	04 16 13.5	+0.6
AQU				Sg	Sg	04 16 16.1	+0.8
	471nm,0.3s						
TERO	**Teramo**	**0.20**	**57**	Pg	Pg	04 16 14.1	+0.4
TERO				Sg	Sg	04 16 17.3	+0.7
TERO	**Teramo**	**0.20**	**57**	Pg	Pg	04 16 14.1	+0.4
TERO				Sg	Sg	04 16 17.3	+0.7
LNSS	**Leonessa**	**0.26**	**290**	Pg	Pb	04 16 15.7	-0.8
LNSS				Sg	Sb	04 16 20.0	-1.3
	138nm,0.2s						
LNSS	**Leonessa**	**0.26**	**290**	Pg	Pb	04 16 15.7	-0.8
LNSS				Sg	Sb	04 16 20.0	-1.3
	138nm,0.2s						
NRCA	**Norcia**	**0.38**	**329**	Pg	Pg	04 16 17.3	+0.4
NRCA				Sg	Sg	04 16 23.1	+1.1
	109nm,0.1s						
NRCA	**Norcia**	**0.38**	**329**	Pg	Pg	04 16 17.3	+0.4
NRCA				Sg	Sg	04 16 23.1	+1.1
	109nm,0.1s						
OFFI	**Offida**	**0.48**	**28**	Pg	Pb	04 16 20.3	+0.2
OFFI	**Offida**	**0.48**	**28**	Pg	Pb	04 16 20.3	+0.2

CASC 09 04:20:09.3±2.5**, 13°21N×90°89W, h34**km±64km**, MD3.6, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.23**	**2**	*e*P	Pn	04 20 30.0	-0.4
JAT	**Jato**	**1.32**	**327**	*e*P	Pn	04 20 31.1	-0.2
FG6		**1.34**	**0**	*e*P	Pn	04 20 31.7	-0.4
SBLS	**San Blas**	**1.38**	**63**	*e*P	Pn	04 20 32.4	-0.2
SBLS				*e*S	Sn	04 20 50.9	+0.9
RTR	**El Retiro**	**1.39**	**61**	*e*P	Pn	04 20 32.5	-0.1
SNJE	**San Jose**	**1.41**	**62**	*e*P	Pn	04 20 32.5	-0.4
NBG	**Las Nubes**	**1.47**	**21**	*e*P	Pn	04 20 35.0	+1.3
RBDL	**Robledal**	**1.48**	**52**	*e*P	Pn	04 20 31.0	-2.7
LFRS	**El Faro**	**1.83**	**77**	*e*P	Pn	04 20 39.2	+0.7
MRL	**Marmol**	**2.18**	**32**	*e*P	Pn	04 20 45.5	+2.0

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*NIED **09** 04:27:00, 44°00N×147°90E, h35km, Mw3.9 Best double couple: $M_0$8.49000×10^{14} NP1:ϕ_s4.00000°, δ77.00000°, λ75.00000°. NP2:ϕ_s234.00000°, δ19.00000°, λ138.00000°.*
*MOS **09** 04:27:15.5±1.1, 44°46N×148°16E, h62km, mb4.2/9, Error ellipse: s-maj=12.8km s-min=8.3km az=70.2*
*ISCJB **09** 04:27:15.5±0.7, 44°37N±0°05×148°19E±0°07, h62km±6km, mb3.7/23, Error ellipse: s-maj=9.9km s-min=4.8km az=42.8*
*JMA **09** 04:27:16.2±0.3, 44°01N×147°95E, h0km, M4.9*
*SKHL **09** 04:27:17.5±0.2, 44°39N×148°16E, h33km, mb4.7/3*
*IDC **09** 04:27:17.2±2.3, 44°47N×148°07E, h58km±21km, mb3.6/21, mb1 3.7/26, mb1mx3.7/33, mbtmp3.6/26, ML3.6/4, Error ellipse: s-maj=18.3km s-min=13.0km az=138.0*

ISC 09 04:27:16.0±0.9**, 44°37N**±0°05×**148°23E**±0°07**, h51**km±7km**, n65, $\sigma 1^{s}21$**/82**, mb3.8**/23**, 2C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.90**	**343**	*e*PN	**Pn**	**04 27 32.2**	**-0.3**
KUR				*e*S	**Sn**	**04 27 43.4**	**-1.1**
KUR				pmax	pmax		
	comp=Z,2µm,1.0s						
KUR				pmax	pmax		
	comp=N,530nm,0.5s						
KUR				pmax	pmax		
	comp=Z,930nm,0.5s						
KUR				pmax	pmax		
	comp=E,270nm,0.3s						
KUR				smax	smax		
	comp=N,3µm,0.5s						
KUR				smax	smax		
	comp=E,2µm,0.5s						
KUR				smax	smax		
	comp=N,16µm,1.0s						
KUR				smax	smax		
	comp=E,10µm,1.6s						
KUR	**Kuril'sk**	**0.90**	**343**	*e*P	**Pn**	**04 27 32.2**	**-0.3**
KUR				AMB	AMB	04 27 32.6	
	comp=E,2µm,1.0s						
KUR				AMB	AMB	04 27 32.8	
	comp=E,270nm,0.3s						
KUR				AMB	AMB	04 27 32.8	
	comp=E,530nm,0.5s						
KUR				AMB	AMB	04 27 32.8	
	comp=E,930nm,0.5s						
KUR				*e*S	**Sn**	**04 27 43.4**	**-1.1**
KUR				A	A	04 27 45.7	
	comp=E,3µm,0.5s						
KUR				A	A	04 27 45.7	
	comp=E,2µm,0.5s						
KUR				A	A	04 27 48.6	
	comp=E,16µm,1.0s						
KUR				A	A	04 27 48.6	
	comp=E,10µm,1.6s						
YUK	**Yuzh-Kuril'sk**	**1.74**	**260**	*i* PN	**Pn**	**04 27 44.1**	**+0.3**
YUK				*i* S	**Sn**	**04 28 04.0**	**-0.7**
YUK				pmax	pmax		
	comp=Z,3.0nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.74**	**260**⇑	*i*P	**Pn**	**04 27 44.2**	**+0.4**
YUK				AMB	AMB	04 27 45.0	
	comp=Z,114nm,0.2s						
YUK				AMB	AMB	04 27 45.0	
	comp=Z,76nm,0.2s						
YUK				AMB	AMB	04 27 45.0	
	comp=Z,314nm,0.2s						
YUK				*i* sP	sP	04 27 45.6	
YUK				*i* S	**Sn**	**04 28 04.1**	**-0.7**
YUK				A	A	04 28 08.6	
	comp=Z,2µm,0.2s						
YUK				A	A	04 28 08.6	
	comp=Z,929nm,0.2s						
NEM2	**Nemuro 2**	**2.06**	**242**	P	**Pn**	**04 27 47.6**	**-0.6**
NEM2				*e*S	**Sn**	**04 28 10.4**	**-2.3**
JRA	**Rausu**	**2.28**	**260**	P	**Pn**	**04 27 52.6**	**+1.4**
JRA				*e*S	**Sn**	**04 28 19.1**	**+1.1**
JNK	**Nakash**	**2.66**	**254**	P	**Pn**	**04 27 57.1**	**+0.8**
JNK				*e*S	**Sn**	**04 28 27.0**	**-0.3**
JAK	**Akkeshi**	**2.91**	**243**	P	**Pn**	**04 27 59.9**	**+0.1**
JAK				*e*S	**Sn**	**04 28 31.6**	**-1.9**
JTKR	**Abashiri--Toko**	**3.14**	**264**	P	**Pn**	**04 28 04.1**	**+1.2**
JAR	**Ashorobuto**	**3.40**	**253**	P	**Pn**	**04 28 08.1**	**+1.5**
JAR				*e*S	**Sn**	**04 28 46.3**	**+0.6**
JOB	**Onbets**	**3.51**	**247**	P	**Pn**	**04 28 09.0**	**+0.9**
JOB				*e*S	**Sn**	**04 28 47.9**	**-0.5**
JMP	**Maruseppu**	**3.52**	**266**	P	**Pn**	**04 28 09.7**	**+1.4**
JCH	**Churui**	**3.95**	**245**	P	**Pn**	**04 28 14.6**	**+0.5**
JCH				*e*S	**Sn**	**04 28 58.1**	**-1.1**
JKK2	**Kamakawa 2**	**3.98**	**265**	P	**Pn**	**04 28 17.0**	**+2.5**
ASAJ	**Asahikawa**	**4.06**	**268**	P	**Pn**	**04 28 17.2**	**+1.6**
	comp=Z,4.6nm,0.3s,baz=76,slow=13,SNR=18						
JSE	**Soyaes**	**4.07**	**280**	P	**Pn**	**04 28 17.2**	**+1.5**
ERM	**Erimo**	**4.39**	**239**	*e*PN	**Pn**	**04 28 23.0**	**+2.8**
JNBK	**Urakawa-nobuka**	**4.51**	**244**	P	**Pn**	**04 28 22.9**	**+1.1**
JWK2	**Keihoku**	**4.60**	**284**	P	**Pn**	**04 28 25.8**	**+2.8**
YSS	**Yuzh-Sakhalins**	**4.63**	**306**⇓	*e*PN	**Pn**	**04 28 25.0**	**+1.6**
YSS				*e*S	**Sn**	**04 29 18.0**	**+2.2**
YSS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
YSS	**Yuzh-Sakhalins**	**4.63**	**306**⇓	*e*P	**Pn**	**04 28 25.0**	**+1.6**
YSS				AMB	AMB	04 28 26.0	
	comp=Z,30nm,0.5s						
YSS				*e*S	**Sn**	**04 29 18.0**	**+2.2**
YSS				A	A	04 29 20.0	
	comp=Z,40nm,0.5s						
JEW	**Eniwo**	**5.16**	**255**	*e*S	**Sn**	**04 29 30.5**	**+1.7**
JKB	**Kayabe**	**5.82**	**247**	P	**Pn**	**04 28 40.9**	**+1.1**
JKB				*e*S	**Sn**	**04 29 43.7**	**-1.5**
PETK	**Petropavlovsk-**	**10.74**	**32**	PN	**Pn**	**04 29 47.0**	**0.0**
PETK	**Petropavlovsk-**	**10.74**	**32**	P	**Pn**	**04 29 47.0**	**0.0**
	comp=Z,0.2nm,0.3s,baz=210,slow=8.3,SNR=4.7						
MJA0	**Matsu Arr-Jizo**	**10.90**	**228**	*e*PN	**Pn**	**04 29 50.6**	**+1.2**
MJAR	**Matsushiro Arr**	**10.92**	**228**	P	**Pn**	**04 29 49.3**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=32,slow=13,SNR=5.5						
PET	**Petropavlovsk**	**11.05**	**35**	*e*PN	**Pn**	**04 29 51.6**	**+0.3**
USRK	**Ussuriysk Arra**	**11.64**	**275**	P	**Pn**	**04 29 57.5**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=87,slow=16,SNR=2.4						
KSRS	**Korea Array**	**16.81**	**253**	P	**Pn**	**04 31 06.3**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=57,slow=12,SNR=3.9						
SEY	**Seymchan**	**18.75**	**6**	*e*P	**Pn**	**04 31 31.0**	**-0.3**
BILL	**Bilibino**	**25.55**	**16**⇑	*e*P	P	04 32 46.5	+6.9
BILL				*e*S	**S**	**04 37 05.0**	**+1.6**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.7s						
TIXI	**Tiksi**	**28.92**	**347**	*e*P	P	04 33 14.3	+4.6
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.3s						
SONM	**Songino Array**	**28.96**	**292**	P	**P**	**04 33 10.6**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=87,slow=8.9,SNR=3.2						
ILAR	**Eielson Array**	**40.53**	**37**	P	**P**	**04 34 50.0**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=273,slow=9.0,SNR=8.7						
ZALV	**Zalesovo Beam**	**41.25**	**307**	P	**P**	**04 34 55.9**	**+0.1**
ZALV						04 36 53.2	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV	**Zalesovo Beam**	**41.25**	**307**	P	**P**	**04 34 55.9**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=73,slow=4.8,SNR=2.5						
ZALV				PcP	**PcP**	**04 36 53.2**	**-0.4**
	comp=Z,1.5nm,0.4s,baz=64,slow=3.6,SNR=7.4						
MKAR	**Makanchi Array**	**44.99**	**297**	P	**P**	**04 35 25.9**	**-0.2**
MKAR						04 37 06.0	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**44.99**	**297**	P	**P**	**04 35 25.9**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=77,slow=9.2,SNR=13						
MKAR				PcP	**PcP**	**04 37 06.0**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=74,slow=4.5,SNR=8.0						
INK	**Inuvik**	**45.47**	**31**	P	**P**	**04 35 30.6**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=284,slow=5.2,SNR=9.0						
CMAR	**Chiang Mai Arr**	**48.45**	**254**	P	**P**	**04 35 53.0**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=36,slow=7.8,SNR=4.2						
GUN	**Gumba**	**51.76**	**273**	*e*P	**P**	**04 36 19.2**	**+0.4**
	comp=Z,12nm,0.7s						
RAMN	**Ramite**	**51.81**	**272**	*e*P	**P**	**04 36 19.1**	**0.0**
	comp=Z,25nm,0.4s						
DANN	**Dangsing**	**53.02**	**275**	*e*P	**P**	**04 36 28.7**	**+0.6**
	comp=Z,12nm,0.5s						
KOLN	**Koldanda**	**53.47**	**275**	*e*P	**P**	**04 36 31.4**	**+0.1**
PYUN	**Piuthan**	**53.71**	**276**	*e*P	**P**	**04 36 33.3**	**+0.2**
YKA	**Yellowknife Ar**	**54.85**	**34**	P	**P**	**04 36 41.2**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=301,slow=7.2,SNR=30						
ARCES	**ARCESS Array B**	**58.94**	**340**	P	**P**	**04 37 08.3**	**-1.1**
	comp=Z,2.4nm,0.9s,baz=45,slow=9.1,SNR=5.5						
FFC	**Flin Flon**	**64.74**	**37**	*i* P	**P**	**04 37 50.2**	**+1.6**
WRA	**Warramunga Arr**	**65.25**	**194**	P	**P**	**04 37 52.8**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=18,slow=6.9,SNR=4.6						
OBN	**Obninsk**	**65.28**	**324**⇓	*e*P	**P**	**04 37 49.5**	**-2.5**
OBN				*e**PP	**pP**	**04 38 07.8**	**+1.4**
OBN				*e*		04 40 15.0	
OBN				*e*S	**S**	**04 46 30.8**	**-0.7**
NVAR	**Mina Array Bea**	**66.59**	**59**	P	**P**	**04 38 02.1**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=295,slow=6.9,SNR=3.3						
PDAR	**Pinedale Array**	**68.91**	**50**	P	**P**	**04 38 15.9**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=302,slow=4.1,SNR=3.7						
ASAR	**Alice Springs**	**68.96**	**194**	P	**P**	**04 38 16.8**	**+1.1**
	comp=Z,0.6nm,0.9s,baz=8.5,slow=7.5,SNR=5.8						
NOA	**NORSAR Array B**	**69.30**	**339**	P	**P**	**04 38 16.7**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=30,slow=6.4,SNR=5.6						
HFS	**Hagfors**	**69.42**	**338**	P	**P**	**04 38 16.7**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=28,slow=6.5,SNR=6.8						
AKASG	**Malin Array Be**	**71.54**	**324**	P	**P**	**04 38 30.1**	**-1.2**
AKASG	**Malin Array Be**	**71.54**	**324**	P	**P**	**04 38 30.1**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=46,slow=6.6,SNR=3.3						
STKA	**Stephens Creek**	**76.12**	**186**	P	**P**	**04 38 59.3**	**+1.2**
	comp=Z,1.6nm,1.0s,baz=327,slow=8.3,SNR=3.0						
SCHQ	**Schefferville**	**76.78**	**20**	P	**P**	**04 39 01.4**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=284,slow=8.3,SNR=4.2						
BRTR	**Keskin Array B**	**77.68**	**314**	P	**P**	**04 39 07.3**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=69,slow=4.1,SNR=3.8						
EKA	**Eskdalemuir Ar**	**77.75**	**344**	P	**P**	**04 39 06.3**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=16,slow=5.4,SNR=5.0						
TXAR	**Lajitas Array**	**81.66**	**57**	P	**P**	**04 39 29.6**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=297,slow=4.0,SNR=6.4						
MMAI	**Mount Meron Ar**	**81.71**	**309**	P	**P**	**04 39 29.2**	**0.0**
	comp=Z,2.6nm,0.6s,baz=42,slow=6.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**115.17**	**324**	PKP	**PKPdf**	**04 45 50.7**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=12,slow=2.2,SNR=9.6						

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*ISCJB **09** 04:29:45.0±0.2, 42°50N±0°02×13°34E±0°02, h13km±2km, Error ellipse: s-maj=3.1km s-min=2.6km az=153.5*
*CSEM **09** 04:29:45.4±0.1, 42°50N×13°32E, h10km, ML3.8/7, Error ellipse: s-maj=2.0km s-min=1.5km az=71.0*
*ROM **09** 04:29:45.3±0.1, 42°50N×13°34E, h10km, Ml3.2/26, Error ellipse: s-maj=1.0km s-min=0.8km az=99.0*

ISC 09 04:29:45.7±0.8**, 42°51N**±0°02×**13°34E**±0°02**, h12**km±4km**, n86, $\sigma 0^{s}81$**/123**, 26C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.06**	**64**	Pg	**Pg**	**04 29 48.0**	**-0.2**
CAMP				Sg	**Sg**	**04 29 49.5**	**-0.6**
	24µm,0.5s						
CAMP	**Campotosto**	**0.06**	**64**	Pg	**Pg**	**04 29 48.0**	**-0.2**
CAMP				Sg	**Sg**	**04 29 49.5**	**-0.6**
	24µm,0.5s						
AQU	**L'Aquila**	**0.16**	**163**⇑	*i*Pg	**Pg**	**04 29 49.4**	**-0.1**
AQU				Sg	**Sg**	**04 29 52.2**	**+0.1**
AQU	**L'Aquila**	**0.16**	**163**⇑	*i*Pg	**Pg**	**04 29 49.4**	**-0.1**
AQU				Sg	**Sg**	**04 29 52.2**	**+0.1**
TERO	**Teramo**	**0.23**	**60**⇑	*i*Pg	**Pg**	**04 29 50.3**	**-0.3**
TERO				Sg	**Sg**	**04 29 53.8**	**-0.1**
TERO	**Teramo**	**0.23**	**60**⇑	*i*Pg	**Pg**	**04 29 50.3**	**-0.3**
TERO				Sg	**Sg**	**04 29 53.8**	**-0.1**
LNSS	**Leonessa**	**0.24**	**293**⇑	*i*Pg	**Pg**	**04 29 50.9**	**+0.1**
LNSS				Sg	**Sg**	**04 29 55.0**	**+0.8**
	10µm,0.2s						
LNSS	**Leonessa**	**0.24**	**293**⇑	*i*Pg	**Pg**	**04 29 50.9**	**+0.1**
LNSS				Sg	**Sg**	**04 29 55.0**	**+0.8**
	10µm,0.2s						
FIAM	**Fiamignano**	**0.29**	**214**⇑	*i*Pg	**Pg**	**04 29 51.5**	**-0.2**
FIAM				Sg	**Sg**	**04 29 56.3**	**+0.6**
FIAM	**Fiamignano**	**0.29**	**214**⇑	*i*Pg	**Pg**	**04 29 51.5**	**-0.2**
FIAM				Sg	**Sg**	**04 29 56.3**	**+0.6**
FAGN	**Fagnano**	**0.30**	**143**	Pg	**Pg**	**04 29 52.2**	**+0.2**
FAGN				Sg	**Sg**	**04 29 56.5**	**+0.4**
FAGN	**Fagnano**	**0.30**	**143**	Pg	**Pg**	**04 29 52.2**	**+0.2**
FAGN				Sg	**Sg**	**04 29 56.5**	**+0.4**
NRCA	**Norcia**	**0.36**	**333**⇑	*i*Pg	**Pg**	**04 29 52.9**	**-0.1**
NRCA				Sg	**Sg**	**04 29 58.6**	**+0.7**
	7µm,0.2s						
NRCA	**Norcia**	**0.36**	**333**⇑	*i*Pg	**Pg**	**04 29 52.9**	**-0.1**
NRCA				Sg	**Sg**	**04 29 58.6**	**+0.7**
	7µm,0.2s						
VCEL	**Villa Celiera**	**0.39**	**107**	Pg	**Pg**	**04 29 53.1**	**-0.4**
VCEL				Sg	**Sg**	**04 29 59.9**	**+1.1**
VCEL	**Villa Celiera**	**0.39**	**107**	Pg	**Pg**	**04 29 53.1**	**-0.4**
VCEL				Sg	**Sg**	**04 29 59.9**	**+1.1**
PTQR	**Pietraquaria**	**0.49**	**174**⇑	*i*Pg	**Pg**	**04 29 54.7**	**-0.6**
PTQR				Sg	**Sg**	**04 30 01.4**	**-0.5**
PTQR	**Pietraquaria**	**0.49**	**174**⇑	*i*Pg	**Pg**	**04 29 54.7**	**-0.6**
PTQR				Sg	**Sg**	**04 30 01.4**	**-0.5**
OFFI	**Offida**	**0.50**	**31**⇑	*i*Pg	**Pg**	**04 29 56.0**	**+0.5**
	3µm,0.3s						
OFFI	**Offida**	**0.50**	**31**⇑	*i*Pg	**Pg**	**04 29 56.0**	**+0.5**
	3µm,0.3s						
MNS	**Montasola**	**0.50**	**256**⇑	*i*Pg	**Pg**	**04 29 55.1**	**-0.4**
MNS				Sg	**Sg**	**04 30 02.4**	**+0.2**
MNS	**Montasola**	**0.50**	**256**⇑	*i*Pg	**Pg**	**04 29 55.1**	**-0.4**
MNS				Sg	**Sg**	**04 30 02.4**	**+0.2**
TRTR	**Tortoreto Alta**	**0.52**	**55**	Pg	**Pb**	**04 29 56.6**	**-0.2**
	3µm,0.5s						
TRTR	**Tortoreto Alta**	**0.52**	**55**	Pg	**Pb**	**04 29 56.6**	**-0.2**
	3µm,0.5s						
FDMO	**Fiordimonte**	**0.56**	**341**⇑	*i*Pg	**Pg**	**04 29 56.1**	**-0.5**
FDMO				Sg	**Sg**	**04 30 04.8**	**+0.8**
	825nm,0.4s						
FDMO	**Fiordimonte**	**0.56**	**341**⇑	*i*Pg	**Pg**	**04 29 56.1**	**-0.5**
FDMO				Sg	**Sg**	**04 30 04.8**	**+0.8**
	825nm,0.4s						
CESX	**Cesi**	**0.57**	**280**	Pg	**Pg**	**04 29 56.2**	**-0.6**
CESX				Sg	**Sg**	**04 30 04.8**	**+0.5**
	983nm,0.4s						
CESX	**Cesi**	**0.57**	**280**	Pg	**Pg**	**04 29 56.2**	**-0.6**
CESX				Sg	**Sg**	**04 30 04.8**	**+0.5**
	983nm,0.4s						
CESI	**CESI - Serrava**	**0.59**	**327**	Pg	**Pg**	**04 29 56.8**	**-0.4**
CESI				Sg	**Sg**	**04 30 05.9**	**+0.9**
	289nm,0.4s						
CESI	**CESI - Serrava**	**0.59**	**327**	Pg	**Pg**	**04 29 56.8**	**-0.4**
CESI				Sg	**Sg**	**04 30 05.9**	**+0.9**
	289nm,0.4s						
CERT	**Cerreto**	**0.62**	**205**⇑	*i*Pg	**Pg**	**04 29 56.9**	**-0.9**
	2µm,0.4s						
CERT	**Cerreto**	**0.62**	**205**⇑	*i*Pg	**Pg**	**04 29 56.9**	**-0.9**
	2µm,0.4s						
INTR	**Introdacqua**	**0.65**	**140**	Pg	**Pg**	**04 29 57.6**	**-0.8**
INTR	**Introdacqua**	**0.65**	**140**	Pg	**Pg**	**04 29 57.6**	**-0.8**
MTCE	**Montecelio**	**0.66**	**222**⇑	*i*Pg	**Pg**	**04 29 57.5**	**-1.0**
MTCE				Sg	**Sb**	**04 30 08.3**	**0.0**
	471nm,0.3s						
MTCE	**Montecelio**	**0.66**	**222**⇑	*i*Pg	**Pg**	**04 29 57.5**	**-1.0**
MTCE				Sg	**Sb**	**04 30 08.3**	**0.0**
	471nm,0.3s						
VVLD	**Villa Vallelon**	**0.67**	**162**	Pg	**Pg**	**04 29 58.0**	**-0.8**
VVLD	**Villa Vallelon**	**0.67**	**162**	Pg	**Pg**	**04 29 58.0**	**-0.8**
GUMA	**Gualdo di Mace**	**0.71**	**38**⇑	*i*Pg	**Pg**	**04 29 56.5**	**-2.9**
GUMA				Sg	**Sg**	**04 30 05.4**	**-3.3**
	2µm,0.3s						
GUAR	**Guarcino**	**0.71**	**181**	Pg	**Pg**	**04 29 59.1**	**-0.5**
	705nm,0.6s						
GUAR	**Guarcino**	**0.71**	**181**	Pg	**Pg**	**04 29 59.1**	**-0.5**
	705nm,0.6s						
ASSB	**Assisi San Ben**	**0.73**	**317**	Pg	**Pg**	**04 29 59.3**	**-0.6**
	639nm,0.2s						
ASSB	**Assisi San Ben**	**0.73**	**317**	Pg	**Pg**	**04 29 59.3**	**-0.6**
	639nm,0.2s						
CAFR	**Castel Frentan**	**0.80**	**110**	Pg	**Pg**	**04 30 00.6**	**-0.6**
	862nm,0.4s						
CAFR	**Castel Frentan**	**0.80**	**110**	Pg	**Pg**	**04 30 00.6**	**-0.6**
	862nm,0.4s						
SNTG	**Esanatoglia**	**0.80**	**339**⇑	*i*Pg	**Pg**	**04 30 00.4**	**-0.8**
	207nm,0.3s						
SNTG	**Esanatoglia**	**0.80**	**339**⇑	*i*Pg	**Pg**	**04 30 00.4**	**-0.8**
	207nm,0.3s						
POFI	**Posta Fibreno**	**0.84**	**160**	Pg	**Pg**	**04 30 01.7**	**-0.2**
	230nm,0.5s						

POFI	Posta Fibreno	0.84	160	Pg	Pg	04 30 01.7	-0.2
	230nm,0.5s						
CING	Cingoli	0.87	353	Pg	Pg	04 30 01.7	-0.9
	577nm,0.4s						
CING	Cingoli	0.87	353	Pg	Pg	04 30 01.7	-0.9
	577nm,0.4s						
SDI	San Donato	0.87	156	Pg	Pg	04 30 02.3	-0.3
SDI	San Donato	0.87	156	Pg	Pg	04 30 02.3	-0.3
RDP	Rocca di Papa	0.88	212	Pg	Pg	04 30 02.4	-0.3
	959nm,0.4s						
RDP	Rocca di Papa	0.88	212	Pg	Pg	04 30 02.4	-0.3
	959nm,0.4s						
GIUL	Giuliano Di Ro	0.95	184	Pg	Pg	04 30 03.0	-1.1
	257nm,0.5s						
GIUL	Giuliano Di Ro	0.95	184	Pg	Pg	04 30 03.0	-1.1
	257nm,0.5s						
MURB	Monte Urbino	0.96	322	Pg	Pg	04 30 03.6	-0.7
	780nm,0.3s						
MURB	Monte Urbino	0.96	322	Pg	Pg	04 30 03.6	-0.7
	780nm,0.3s						
MGAB	Montegabbione	0.99	294	Pg	Pb	04 30 03.9	-0.9
	637nm,0.6s						
MGAB	Montegabbione	0.99	294	Pg	Pb	04 30 03.9	-0.9
	637nm,0.6s						
RNI2	Rionero Sannit	1.01	143	Pg	Pb	04 30 04.4	-0.8
	468nm,0.8s						
RNI2	Rionero Sannit	1.01	143	Pg	Pb	04 30 04.4	-0.8
	468nm,0.8s						
ARVD	Arcevia	1.03	344	Pg	Pb	04 30 04.7	-0.8
	432nm,0.5s						
ARVD	Arcevia	1.03	344	Pg	Pb	04 30 04.7	-0.8
	432nm,0.5s						
AOI	Ancona	1.06	11	Pg	Pb	04 30 05.2	-0.8
	368nm,0.6s						
AOI	Ancona	1.06	11	Pg	Pb	04 30 05.2	-0.8
	368nm,0.6s						
SACS	San Casciano d	1.11	288	Pn	Pb	04 30 06.1	-0.8
	402nm,1.1s						
LATE	Laterza	1.14	276	Pn	Pb	04 30 06.5	-0.9
	681nm,0.6s						
LATE	Laterza	1.14	276	Pn	Pb	04 30 06.5	-0.9
	681nm,0.6s						
PIEI	Pieia	1.18	330	Pn	Pn	04 30 07.2	-1.0
	249nm,0.4s						
PIEI	Pieia	1.18	330	Pn	Pn	04 30 07.2	-1.0
	249nm,0.4s						
PARC	Parchiule	1.39	325	Pn	Pb	04 30 11.7	0.0
	256nm,0.7s						
PARC	Parchiule	1.39	325	Pn	Pb	04 30 11.7	0.0
	256nm,0.7s						
NVLJ	Novalja	2.34	28	*i* Pn	Pn	04 30 24.2	+0.2
NVLJ				Sn	Sn	04 30 53.1	+0.4
NVLJ	Novalja	2.34	28	*i* Pn	Pn	04 30 24.1	+0.2
NVLJ				Sn	Sn	04 30 53.0	+0.4
KNDS	Knezji Dol	3.11	14	*i* Sn	Sn	04 31 13.4	+1.5
KNDS	Knezji Dol	3.11	14	*i* Sn	Sn	04 31 13.4	+1.5
STON	Ston	3.24	82	*e*Pn	Pn	04 30 38.0	+1.7
STON				Sn	Sn	04 31 15.3	+0.5
STON	Ston	3.24	82	*e*Pn	Pn	04 30 38.0	+1.7
STON				Sn	Sn	04 31 15.3	+0.5
JAVS	Javornik	3.42	9	*e*Pn	Pn	04 30 39.2	+0.2
JAVS				*i* Sn	Sn	04 31 20.4	+0.9
JAVS	Javornik	3.42	9	Pn	Pn	04 30 39.2	+0.2
JAVS				*i* Sn	Sn	04 31 20.5	+0.9
VOY	Vojsko	3.54	6	*e*Pn	Pn	04 30 40.2	-0.5
VOY				*e*		04 30 45.1	
VOY				*e*Sn	Sn	04 31 24.2	+1.6
VOY	Vojsko	3.54	6	*e*Pn	Pn	04 30 40.2	-0.5
VOY				*e*Sn	Sn	04 31 24.2	+1.6
ABTA	Abfaltersbach	4.28	352	⇑*i*Pn	Pn	04 30 51.0	+0.3
ABTA	Abfaltersbach	4.28	352	Pn	Pn	04 30 51.0	+0.3

*CSEM **09** 04:32:04.1, 42°.26N×13°.46E, h11km, MD1.1/4, After ROM*

ROM 09 04:32:04.1±0.1**, 42°.26N×13°.46E, h11**km**, Md1.1**/4**, Error ellipse: s-maj=1.7km s-min=0.7km az=24.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.09	84	Pg	Pg	04 32 07.0	+0.2
FAGN				Sg	Sg	04 32 09.3	+0.6
FAGN	Fagnano	0.09	84	Pg	Pg	04 32 07.0	+0.2
FAGN				Sg	Sg	04 32 09.3	+0.6
AQU	L'Aquila	0.11	336	Pg	Pg	04 32 07.4	+0.4
AQU				Sg	Sg	04 32 09.5	+0.4
AQU	L'Aquila	0.11	336	Pg	Pg	04 32 07.4	+0.4
AQU				Sg	Sg	04 32 09.5	+0.4
PTQR	Pietraquaria	0.24	191	Pg	Pb	04 32 10.0	-0.6
PTQR				Sg	Sg	04 32 13.6	+1.0
PTQR	Pietraquaria	0.24	191	Pg	Pb	04 32 10.0	-0.6
PTQR				Sg	Sg	04 32 13.6	+1.0
FIAM	Fiamignano	0.26	273	Pg	Pg	04 32 10.1	+0.6
FIAM				Sg	Sg	04 32 14.1	+0.9
FIAM	Fiamignano	0.26	273	Pg	Pg	04 32 10.1	+0.6
FIAM				Sg	Sg	04 32 14.1	+0.9
VCEL	Villa Celiera	0.31	64	Pg	Pg	04 32 11.1	+0.5
VCEL	Villa Celiera	0.31	64	Pg	Pg	04 32 11.1	+0.5
INTR	Introdacqua	0.41	126	Pg	Pg	04 32 12.4	+0.1
INTR				Sg	Sg	04 32 18.6	+0.7
INTR	Introdacqua	0.41	126	Pg	Pg	04 32 12.4	+0.1
INTR				Sg	Sg	04 32 18.6	+0.7

*NEIC **09** 04:32:44.0, 42°.45N×13°.42E, h8km, mb4.2/18, MW4.2(ROM), After ROM.*

NEIC Felt [II] at Ancona, Ascoli Piceno, Avezzano, Casoli, Cassino, Ciampino, Foligno, Frattocchie, Guidonia, Latina, Macerata, Perugia, Pescara, Rome, Senigallia, Spoltore, Sulmona and Terni. Felt in much of Abruzzo, Lazio, Marche and Umbria.

*ISCJB **09** 04:32:44.9±0.2, 42°.47N±0°.01×13°.40E±0°.01, h10km±1km, mb4.2/31, MS4.4/7, Error ellipse: s-maj=2.1km s-min=1.5km az=35.0*

*LDG **09** 04:32:44.8±0.1, 42°.46N×13°.44E, h2km, Ml3.8/11, Error ellipse: s-maj=3.3km s-min=2.4km az=31.0*

*BJI **09** 04:32:44.4, 42°.50N×13°.30E, h10km, mB4.9/3, mb4.7/7, Ms4.7/4, Ms7 4.2/4*

*IDC **09** 04:32:46.0±0.7, 42°.60N×13°.29E, h0km, mb4.1/13, mb1 4.1/24, mb1mx4.0/40, mbtmp4.0/24, ML3.8/9, MS3.3/6, Ms1 3.3/6, ms1mx3.0/46, Error ellipse: s-maj=13.1km s-min=11.0km az=81.0*

*PDG **09** 04:32:45.5±0.8, 42°.46N×13°.43E, h8km±1km, ML4.3/9, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*

*ROM **09** 04:32:45.0±0.1, 42°.45N×13°.43E, h10km, Ml4.2/32, Error ellipse: s-maj=1.1km s-min=0.8km az=68.0*

*CSEM **09** 04:32:45.3±0.1, 42°.45N×13°.38E, h2km, ML4.7/10, Mw4.2, Error ellipse: s-maj=2.1km s-min=1.5km az=31.0*

*MOS **09** 04:32:45.2±0.9, 42°.52N×13°.41E, h10km, mb4.5/18, Error ellipse: s-maj=5.5km s-min=3.7km az=82.0*

*PRU **09** 04:32:46.4, 42°.53N×13°.47E, h0km, M4.2*

*BEO **09** 04:32:47.8±0.8, 42°.58N×13°.58E, h0km, ML4.4/5*

*STR **09** 04:32:54.6±0.7, 42°.90N×12°.88E, h10km, Ml3.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 09 04:32:46.1±0.6**, 42°.46N**±0°.01×**13°.39E**±0°.01**, h2**km±3km**, n635, σ1**§**43**/732**, mb4.3**/31**, MS4.4**/7**, 62C-44D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.08	8	⇑*i*Pg	Pg	04 32 48.0	+0.2
CAMP				Sg	Sg	04 32 49.7	+0.8
	104µm,0.7s						
CAMP	Campotosto	0.08	8	⇑*i*Pg	Pg	04 32 48.0	+0.2
CAMP				Sg	Sg	04 32 49.7	+0.8
	104µm,0.7s						
AQU	L'Aquila	0.10	177	*e*Pg	Pg	04 32 47.8	-0.3
AQU				*e*Sg	Sg	04 32 51.0	+1.5
AQU	L'Aquila	0.10	177	⇑*i*P	Pg	04 32 48.3	+0.2
AQU	L'Aquila	0.10	177	⇑*i*Pg	Pg	04 32 48.3	+0.2
AQU				Sg	Sg	04 32 50.3	+0.8
AQU	L'Aquila	0.10	177	*e*P	Pg	04 32 47.8	-0.3
AQU				Sg	Sg	04 32 50.3	+0.8
TERO	Teramo	0.23	43	P	Pg	04 32 49.8	-0.7
TERO				S	Sg	04 32 53.2	-0.3
TERO	Teramo	0.23	43	⇑*i*Pg	Pg	04 32 49.8	-0.7
TERO				Sg	Sg	04 32 53.1	-0.3
TERO	Teramo	0.23	43	⇑*i*Pg	Pg	04 32 49.8	-0.7
TERO				S	Sg	04 32 53.2	-0.3
FAGN	Fagnano	0.24	144	⇓*i*Pg	Pg	04 32 50.1	-0.6
FAGN				Sg	Sg	04 32 53.7	-0.1
FAGN	Fagnano	0.24	144	⇓*i*Pg	Pg	04 32 50.1	-0.6
FAGN				Sg	Sg	04 32 53.7	-0.1
FIAM	Fiamignano	0.28	227	⇑*i*Pg	Pg	04 32 51.5	0.0
FIAM				Sg	Sg	04 32 55.7	+0.6
	26µm,0.8s						
FIAM	Fiamignano	0.28	227	⇑*i*Pg	Pg	04 32 51.5	0.0
FIAM				Sg	Sg	04 32 55.7	+0.6
	26µm,0.8s						
LNSS	Leonessa	0.30	299	Pg	Pg	04 32 52.3	+0.4
LNSS				Sg	Sg	04 32 57.3	+1.5
	39µm,0.3s						
LNSS	Leonessa	0.30	299	Pg	Pg	04 32 52.3	+0.4
LNSS				Sg	Sg	04 32 57.3	+1.5
	39µm,0.3s						
VCEL	Villa Celiera	0.34	101	Pg	Pg	04 32 51.7	-0.9
VCEL				Sg	Sg	04 32 57.3	+0.3
	72µm,0.4s						
VCEL	Villa Celiera	0.34	101	Pg	Pg	04 32 51.7	-0.9
VCEL				Sg	Sg	04 32 57.3	+0.3
	72µm,0.4s						
NRCA	Norcia	0.43	331	P	Pg	04 32 54.1	-0.4
NRCA				S	Sg	04 33 01.0	+1.0
NRCA	Norcia	0.43	331	⇓*i*Pg	Pg	04 32 54.0	-0.4
NRCA				Sg	Sg	04 33 01.0	+1.0
NRCA	Norcia	0.43	331	⇓*i*Pg	Pg	04 32 54.0	-0.4
NRCA				Sg	Sg	04 33 01.0	+1.0
PTQR	Pietraquaria	0.43	179	P	Pg	04 32 53.6	-0.9
PTQR	Pietraquaria	0.43	179	⇑*i*Pg	Pg	04 32 53.6	-0.9
PTQR	Pietraquaria	0.43	179	⇑*i*Pg	Pg	04 32 53.6	-0.9
TRTR	Tortoreto Alta	0.52	47	⇑*i*Pg	Pg	04 32 56.2	+0.1
	119µm,0.9s						
TRTR	Tortoreto Alta	0.52	47	⇑*i*Pg	Pg	04 32 56.2	+0.1
	119µm,0.9s						
OFFI	Offida	0.52	24	Pg	Pg	04 32 56.2	0.0
OFFI	Offida	0.52	24	Pg	Pg	04 32 56.2	0.0
INTR	Introdacqua	0.58	139	P	Pg	04 32 56.1	-1.2
INTR				S	Sg	04 33 04.9	-0.1
INTR	Introdacqua	0.58	139	Pg	Pg	04 32 56.1	-1.2
INTR				Sg	Sg	04 33 04.8	-0.1
	17µm,0.7s						
INTR	Introdacqua	0.58	139	Pg	Pg	04 32 56.1	-1.2
INTR				Sg	Sg	04 33 04.8	-0.1
	17µm,0.7s						
CERT	Cerreto	0.59	211	P	Pg	04 32 56.6	-0.9
CERT				S	Sb	04 33 08.2	+0.1
CERT	Cerreto	0.59	211	Pg	Pg	04 32 56.6	-0.9
CERT				Sg	Sg	04 33 05.1	-0.1
	31µm,0.6s						
CERT	Cerreto	0.59	211	Pg	Pg	04 32 56.6	-0.9
CERT				Sg	Sg	04 33 05.1	-0.1
	31µm,0.6s						
CERT				S	Sb	04 33 08.2	+0.1
VVLD	Villa Vallelon	0.61	164	P	Pg	04 32 56.8	-1.0
VVLD	Villa Vallelon	0.61	164	Pg	Pg	04 32 56.4	-1.4
VVLD	Villa Vallelon	0.61	164	Pg	Pg	04 32 56.4	-1.4
VVLD	Villa Vallelon	0.61	164	P	Pg	04 32 56.8	-1.0
CESX	Cesi	0.62	285	P	Pg	04 32 57.4	-0.6
CESX	Cesi	0.62	285	Pg	Pg	04 32 57.4	-0.6
	5µm,0.6s						
CESX	Cesi	0.62	285	Pg	Pg	04 32 57.4	-0.6
	5µm,0.6s						
FDMO	Fiordimonte	0.62	339	P	Pg	04 32 57.3	-0.8
FDMO	Fiordimonte	0.62	339	Pg	Pg	04 32 57.2	-0.8
FDMO				Sg	Sg	04 33 06.8	+0.7
	3µm,0.3s						
FDMO	Fiordimonte	0.62	339	Pg	Pg	04 32 57.2	-0.8
FDMO				Sg	Sg	04 33 06.8	+0.7
	3µm,0.3s						
MTCE	Montecelio	0.65	228	Pg	Pg	04 32 57.8	-0.8
	19µm,0.8s						
MTCE	Montecelio	0.65	228	Pg	Pg	04 32 57.8	-0.8
	19µm,0.8s						
CESI	CESI - Serrava	0.66	327	⇓*i*Pg	Pg	04 32 58.1	-0.6
CESI				Sg	Sg	04 33 08.3	+1.1
CESI	CESI - Serrava	0.66	327	⇓*i*Pg	Pg	04 32 58.1	-0.6
CESI				Sg	Sg	04 33 08.3	+1.1
GUAR	Guarcino	0.67	185	P	Pg	04 32 57.5	-1.3
GUAR	Guarcino	0.67	185	Pg	Pg	04 32 58.9	0.0
	10µm,0.7s						
GUAR	Guarcino	0.67	185	P	Pg	04 32 57.5	-1.3
GUAR	Guarcino	0.67	185	Pg	Pg	04 32 58.9	0.0
	10µm,0.7s						
CAFR	Castel Frentan	0.74	108	⇑*i*Pg	Pg	04 32 59.1	-1.3
CAFR				Sg	Sg	04 33 08.5	-1.5
	21µm,0.6s						
CAFR	Castel Frentan	0.74	108	⇑*i*Pg	Pg	04 32 59.1	-1.3
CAFR				Sg	Sg	04 33 08.5	-1.5
	21µm,0.6s						
POFI	Posta Fibreno	0.78	162	Pg	Pg	04 32 59.6	-1.4
POFI	Posta Fibreno	0.78	162	Pg	Pg	04 32 59.6	-1.4
ASSB	Assisi San Ben	0.80	317	Pg	Pg	04 33 00.5	-0.9
ASSB				Sg	Sg	04 33 12.8	+1.0
	6µm,0.3s						
ASSB	Assisi San Ben	0.80	317	Pg	Pg	04 33 00.5	-0.9
ASSB				Sg	Sg	04 33 12.8	+1.0
	6µm,0.3s						
SDI	San Donato	0.81	157	Pg	Pg	04 32 59.9	-1.7
SDI	San Donato	0.81	157	Pg	Pg	04 32 59.9	-1.7
RDP	Rocca di Papa	0.86	216	Pg	Pg	04 33 01.2	-1.4
	17µm,0.5s						
RDP	Rocca di Papa	0.86	216	Pg	Pg	04 33 01.2	-1.4
	17µm,0.5s						
SNTG	Esanatoglia	0.86	337	⇓*i*Pg	Pg	04 33 01.5	-1.2
SNTG	Esanatoglia	0.86	337	⇓*i*Pg	Pg	04 33 01.5	-1.2
GIUL	Giuliano Di Ro	0.90	187	Pg	Pg	04 33 01.5	-1.9
	7µm,0.8s						
GIUL	Giuliano Di Ro	0.90	187	Pg	Pg	04 33 01.5	-1.9
	7µm,0.8s						
CING	Cingoli	0.93	351	Pg	Pg	04 33 02.5	-1.5
	6µm,0.5s						
CING	Cingoli	0.93	351	Pg	Pg	04 33 02.5	-1.5
	6µm,0.5s						
RNI2	Rionero Sannit	0.94	143	Pg	Pg	04 33 01.7	-2.5
	8µm,0.6s						
RNI2	Rionero Sannit	0.94	143	Pg	Pg	04 33 01.7	-2.5
	8µm,0.6s						
CERA	Filignano	0.98	151	Pg	Pg	04 33 02.3	-2.5
	11µm,0.9s						
CERA	Filignano	0.98	151	Pg	Pg	04 33 02.3	-2.5
	11µm,0.9s						
MURB	Monte Urbino	1.03	322	Pg	Pg	04 33 04.5	-1.3
	12µm,0.5s						
MURB	Monte Urbino	1.03	322	Pg	Pg	04 33 04.5	-1.3
	12µm,0.5s						
MIDA	Miranda	1.04	142	Pg	Pg	04 33 03.4	-2.6
	4µm,0.6s						
MIDA	Miranda	1.04	142	Pg	Pg	04 33 03.4	-2.6
	4µm,0.6s						
FRES	Fresagrandinar	1.06	117	Pg	Pg	04 33 03.7	-2.8
FRES	Fresagrandinar	1.06	117	Pg	Pg	04 33 03.7	-2.8
ARVD	Arcevia	1.09	342	Pn	Pg	04 33 05.5	-1.6
ARVD	Arcevia	1.09	342	Pn	Pg	04 33 05.5	-1.6
AOI	Ancona	1.10	8	Pn	Pg	04 33 06.0	-1.3
	13µm,1.1s						
AOI	Ancona	1.10	8	Pn	Pg	04 33 06.0	-1.3
	13µm,1.1s						
SACS	San Casciano d	1.16	290	Pn	Pg	04 33 07.5	-0.9
	10µm,1.8s						
LATE	Laterza	1.19	278	Pn	Pg	04 33 07.6	-1.2
	4µm,0.7s						
LATE	Laterza	1.19	278	Pn	Pg	04 33 07.6	-1.2
	4µm,0.7s						
VAGA	Valle Agricola	1.22	149	Pn	Pg	04 33 06.5	-2.9
	3µm,0.8s						
SENI	Senigallia	1.25	355	Pn	Pg	04 33 09.6	-0.5
	6µm,0.9s						
SENI	Senigallia	1.25	355	Pn	Pg	04 33 09.6	-0.5
	6µm,0.9s						
CDCA	Citt' di Caste	1.31	320	Pn	Pn	04 33 10.1	-1.4
	7µm,1.3s						
CDCA	Citt' di Caste	1.31	320	Pn	Pn	04 33 10.1	-1.4
	7µm,1.3s						
FSSB	Fossombrone	1.31	340	Pn	Pn	04 33 09.5	-2.0
	7µm,0.5s						
FSSB	Fossombrone	1.31	340	Pn	Pn	04 33 09.5	-2.0
	7µm,0.5s						
BADI	Badiali	1.35	322	Pn	Pn	04 33 10.5	-1.5
	4µm,0.9s						
BADI	Badiali	1.35	322	Pn	Pn	04 33 10.5	-1.5
	4µm,0.9s						
MODR	Mondragone	1.36	164	Pn	Pn	04 33 10.7	-1.4
MODR	Mondragone	1.36	164	Pn	Pn	04 33 10.7	-1.4
CAFI	Castiglion Fio	1.36	310	Pn	Pn	04 33 11.0	-1.2
	2µm,1.0s						
CAFI	Castiglion Fio	1.36	310	Pn	Pn	04 33 11.0	-1.2
	2µm,1.0s						
SACR	S. Croce Del S	1.44	137	Pn	Pn	04 33 11.4	-1.9
	3µm,1.1s						
SACR	S. Croce Del S	1.44	137	Pn	Pn	04 33 11.4	-1.9
	3µm,1.1s						
ARCI	Arcidosso	1.47	286	Pn	Pn	04 33 13.2	-0.5
ARCI	Arcidosso	1.47	286	Pn	Pn	04 33 13.2	-0.5
PESA	Pesaro	1.54	345	Pn	Pn	04 33 14.1	-0.5
	4µm,0.5s						
PESA	Pesaro	1.54	345	Pn	Pn	04 33 14.1	-0.5
	4µm,0.5s						
CRE	Caprese Michel	1.57	318	Pn	Pn	04 33 13.7	-1.5
CRE	Caprese Michel	1.57	318	Pn	Pn	04 33 13.7	-1.5
MAON	Monte Argentar	1.68	270	Pn	Pn	04 33 14.8	-1.7
MAON	Monte Argentar	1.68	270	Pn	Pn	04 33 14.8	-1.7
CSNT	Castellina Chi	1.85	304	Pn	Pn	04 33 18.0	-0.9
CSNT	Castellina Chi	1.85	304	Pn	Pn	04 33 18.0	-0.9
CASP	Castiglione de	1.90	281	Pn	Pn	04 33 18.4	-1.1
CASP	Castiglione de	1.90	281	Pn	Pn	04 33 18.4	-1.1
MSAG	Monte S. Angel	2.02	111	Pn	Pn	04 33 19.8	-1.4
	3µm,0.6s						
MSAG	Monte S. Angel	2.02	111	Pn	Pn	04 33 19.8	-1.4
	3µm,0.6s						
VMG	Vicchio	2.02	319	Pn	Pn	04 33 20.7	-0.6
VMG	Vicchio	2.02	319	Pn	Pn	04 33 20.7	-0.6
NVLJ	Novalja	2.36	27	*e*Pn	Pn	04 33 25.1	-0.9
NVLJ				Sn	Sn	04 33 54.3	-1.2
NVLJ	Novalja	2.36	27	*e*Pn	Pn	04 33 25.0	-0.9
NVLJ				Sn	Sn	04 33 54.3	-1.2
MAIM	Mastiano	2.57	305	P	Pn	04 33 28.8	0.0
VLC	Villacollemand	2.78	309	*e*Pn	Pn	04 33 30.9	-0.8
VLC				*e*Pg	Pb	04 33 36.5	0.0
VLC	Villacollemand	2.78	309	*e*Pn	Pn	04 33 30.9	-0.8
BAI	Bari	2.93	116	*e*Pn	Pn	04 33 33.5	-0.2
CUC	Castrocucco	3.06	143	Pn	Pn	04 33 37.1	+1.6
CUC				*e*Pg	Pg	04 33 44.6	-0.3
CUC	Castrocucco	3.06	143	Pn	Pn	04 33 37.2	+1.6
STON	Ston	3.20	81	*i* Pn	Pn	04 33 36.2	-1.3
STON				Sn	Sn	04 34 13.6	-2.5
STON	Ston	3.20	81	*i* Pn	Pn	04 33 36.1	-1.3
STON				Sn	Sn	04 34 13.6	-2.5
PGF	Pioggiola	3.25	273	*e*Pn	Pn	04 33 37.8	-0.4
PGF				*e*Sn	Sn	04 34 17.1	-0.4
	207nm,1.0s						
PGF	Pioggiola	3.25	273	*e*Pn	Pn	04 33 37.8	-0.4
PGF				*e*Sn	Sn	04 34 17.1	-0.4
	103nm,1.0s						
TRI	Trieste	3.26	5	*e*P	Pn	04 33 36.6	-1.6
TRI				*e*		04 34 15.6	
TRI	Trieste	3.26	5	*e*Pn	Pn	04 33 36.6	-1.6
TRI				*e*Pg	Pb	04 33 46.0	+1.3
TRI				*e*Sn	Sn	04 34 15.6	-2.0
TRI	Trieste	3.26	5	*e*P	Pn	04 33 36.6	-1.6
TRI	Trieste	3.26	5	*e*Pg	Pb	04 33 46.0	+1.3
TRI				*e*S	Sn	04 34 15.6	-2.0
SC2M	Scurtabo	3.42	306	P	Pn	04 33 39.6	-0.9
BLY	Banja Luka	3.58	49	*e*Pn	Pn	04 33 43.1	+0.4
BLY	Banja Luka	3.58	49	*e*Pn	Pn	04 33 43.1	+0.4
VOY	Vojsko	3.59	6	*e*Pn	Pn	04 33 41.3	-1.6
VOY				*e*		04 33 42.7	
VOY				*e*Sn	Sn	04 34 25.1	-0.8
VOY	Vojsko	3.59	6	*e*Pn	Pn	04 33 41.3	-1.6
VOY				*e*Sn	Sn	04 34 25.1	-0.8
LJU	Ljubljana	3.68	12	*e*Pn	Pn	04 33 42.6	-1.4
LJU				*i* Sn	Sn	04 34 26.1	-1.9
LJU	Ljubljana	3.68	12	*e*Pn	Pn	04 33 42.6	-1.4
LJU				*i* Sn	Sn	04 34 26.0	-1.9
HCY	Herceg Novi	3.77	88	⇑*i*Pn	Pn	04 33 44.1	-1.2
HCY				*e*Sn	Sn	04 34 28.2	-2.1
HCY	Herceg Novi	3.77	88	⇑P	Pn	04 33 44.2	-1.1
HCY				S	Sn	04 34 30.1	-0.2
HCY	Herceg Novi	3.77	88	⇑P	Pn	04 33 44.2	-1.1
HCY				S	Sn	04 34 30.1	-0.2
HCY	Herceg Novi	3.77	88	P	Pn	04 33 44.2	-1.1
HCY				*e*Sn	Sn	04 34 28.2	-2.1
HCY				S	Sn	04 34 30.1	-0.2
PDKS	Podkum	3.78	17	*i* Pn	Pn	04 33 44.8	-0.7
PDKS				*i* Sn	Sn	04 34 28.3	-2.3
PDKS	Podkum	3.78	17	*i* Pn	Pn	04 33 44.8	-0.7
PDKS				*i* Sn	Sn	04 34 28.3	-2.3
BRY	Bratogost	3.82	82	*e*Pn	Pn	04 33 44.9	-1.2
BRY	Bratogost	3.82	82	⇑P	Pn	04 33 44.9	-1.2
BRY				S	Sn	04 34 31.6	0.0
BRY	Bratogost	3.82	82	⇑P	Pn	04 33 44.9	-1.2
BRY				S	Sn	04 34 31.6	0.0
BRY	Bratogost	3.82	82	*e*Pn	Pn	04 33 44.9	-1.2
BRY				S	Sn	04 34 31.6	0.0
MOZS	Mozjanca	3.91	11	*i* Pn	Pn	04 33 46.4	-0.8
MOZS				*i* Sn	Sn	04 34 32.3	-1.4
MOZS							
	comp=Z,560nm,1.3s						
MOZS	Mozjanca	3.91	11	*i* Pn	Pn	04 33 46.4	-0.8
MOZS				*i* Sn	Sn	04 34 32.3	-1.4
	comp=Z,560nm,1.3s						
BUM	Brajici-Budva	4.08	90	⇑*i*Pn	Pn	04 33 48.8	-0.7
BUM				*e*Sn	Sn	04 34 37.5	-0.4
BUM	Brajici-Budva	4.08	90	⇑*i*Pn	Pn	04 33 48.8	-0.7
BUM				*e*Sn	Sn	04 34 37.5	-0.4
PCP	Piancastagn	4.10	302	P	Pn	04 33 48.8	-1.0
UPM	Unac-Piva	4.12	78	*e*Pn	Pn	04 33 49.9	-0.4
UPM				*e*Sn	Sn	04 34 39.3	+0.2
UPM	Unac-Piva	4.12	78	*e*Pn	Pn	04 33 49.9	-0.4
UPM				*e*Sn	Sn	04 34 39.3	+0.2
NKY	Niksic	4.15	83	⇓*i*Pn	Pn	04 33 50.1	-0.5
NKY				*e*Sn	Sn	04 34 39.8	+0.2
NKY	Niksic	4.15	83	⇓P	Pn	04 33 50.1	-0.5
NKY				S	Sn	04 34 39.6	0.0
NKY	Niksic	4.15	83	⇓P	Pn	04 33 50.0	-0.5
NKY				S	Sn	04 34 39.6	0.0
NKY	Niksic	4.15	83	⇓P	Pn	04 33 50.0	-0.5
NKY				S	Sn	04 34 39.6	0.0
TIP	Timpagrande	4.15	141	*e*Pn	Pn	04 33 54.0	+3.4
TIP				*e*Pg	Pg	04 34 08.9	+3.2
TIP	Timpagrande	4.15	141	*e*Pn	Pn	04 33 54.0	+3.4
MYKA	Terra Mystica	4.18	2	⇓*i*Pn	Pn	04 33 49.8	-1.1
MYKA	Terra Mystica	4.18	2	⇓*i*Pn	Pn	04 33 49.8	-1.1
MYKA	Terra Mystica	4.18	2	⇓*i*Pn	Pn	04 33 49.8	-1.1
VSL	Villasalto	4.24	227	*e*Pn	Pn	04 33 50.6	-1.2
VSL	Villasalto	4.24	227	*e*Pn	Pn	04 33 50.6	-1.2
ABTA	Abfaltersbach	4.34	352	⇓*i*Pn	Pn	04 33 52.7	-0.5
ABTA	Abfaltersbach	4.34	352	⇓*i*Pn	Pn	04 33 52.6	-0.5
ABTA	Abfaltersbach	4.34	352	⇓*i*Pn	Pn	04 33 52.7	-0.5
PDG	Podgorica	4.34	88	*e*Pn	Pn	04 33 52.5	-0.5
PDG				*e*Sn	Sn	04 34 42.5	-1.7
PDG	Podgorica	4.34	88	*e*Pn	Pn	04 33 52.5	-0.5
PDG				*e*Sn	Sn	04 34 44.1	-0.1
TTG	Podgorica	4.34	88	⇑*i*Pn	Pn	04 33 52.8	-0.2
TTG				*e*Sn	Sn	04 34 44.1	-0.1
TTG	Podgorica	4.34	88	⇑P	Pn	04 33 52.3	-0.7
TTG				S	Sn	04 34 43.1	-1.0
TTG	Podgorica	4.34	88	⇑P	Pn	04 33 52.3	-0.7
TTG				S	Sn	04 34 43.1	-1.0
TTG	Podgorica	4.34	88	P	Pn	04 33 52.3	-0.7
TTG				S	Sn	04 34 43.1	-1.0
ULC	Ulcinj	4.37	95	⇑*i*Pn	Pn	04 33 52.5	-1.1
ULC				*e*Sn	Sn	04 34 44.7	-0.4
ULC	Ulcinj	4.37	95	⇓P	Pn	04 33 52.8	-0.8
ULC				S	Sn	04 34 44.3	-0.8
ULC	Ulcinj	4.37	95	⇓P	Pn	04 33 52.8	-0.8
ULC				S	Sn	04 34 44.3	-0.8
ULC	Ulcinj	4.37	95	⇑*i*Pn	Pn	04 33 52.5	-1.1
ULC	Ulcinj	4.37	95	P	Pn	04 33 52.8	-0.8
ULC				S	Sn	04 34 44.3	-0.8
ULC				*e*Sn	Sn	04 34 44.7	-0.4
PLE	Pljevlja	4.49	77	⇑*i*Pn	Pn	04 33 55.8	+0.5
PLE				*e*Sn	Sn	04 34 48.3	+0.2
PLE	Pljevlja	4.49	77	⇑P	Pn	04 33 55.4	+0.1
PLE				S	Sn	04 34 48.0	-0.1
PLE	Pljevlja	4.49	77	⇑P	Pn	04 33 55.4	+0.1
PLE				S	Sn	04 34 48.0	-0.1
PLE	Pljevlja	4.49	77	P	Pn	04 33 55.4	+0.1
PLE	Pljevlja	4.49	77	⇑*i*Pn	Pn	04 33 55.8	+0.5
PLE				S	Sn	04 34 48.0	-0.1
PLE				*e*Sn	Sn	04 34 48.3	+0.2
SAOF	Saorge	4.53	292	P	Pn	04 33 55.9	+0.1
SAOF	Saorge	4.53	292	P	Pn	04 33 55.9	+0.1
SAOF	Saorge	4.53	292	P	Pn	04 33 55.9	+0.1
SAOF	Saorge	4.53	292	P	Pn	04 33 55.9	+0.1

SBF	Sospel	4.58	290	ePn	Pn	04 33 55.7	-0.8
	SNR=1.0						
SBF				eSn	Sn	04 34 45.5	-4.8
	comp=Z,52nm,0.5s						
SBF	Sospel	4.58	290	ePn	Pn	04 33 55.7	-0.8
	SNR=1.0						
SBF				eSn	Sn	04 34 45.5	-4.8
	comp=Z,26nm,0.5s						
CEL	Celeste	4.61	155	ePn	Pn	04 33 58.4	+1.6
CEL	Celeste	4.61	155	ePn	Pn	04 33 58.4	+1.6
BBLS	Lazići	4.62	70	ePn	Pn	04 33 56.8	-0.2
BBLS	Lazići	4.62	70	ePn	Pn	04 33 56.8	-0.2
KBA	Koelnbreinsper	4.62	360	⇓iP	Pn	04 33 56.1	-1.0
KBA	Koelnbreinsper	4.62	360	⇓iPn	Pn	04 33 56.1	-1.0
KBA	Koelnbreinsper	4.62	360	⇓iPn	Pn	04 33 56.1	-1.0
KBA	Koelnbreinsper	4.62	360	iP	Pn	04 33 56.1	-1.0
TOUF	Mont Tournerai	4.75	291	P	Pn	04 33 59.6	+0.7
TOUF	Mont Tournerai	4.75	291	P	Pn	04 33 59.6	+0.7
TOUF	Mont Tournerai	4.75	291	P	Pn	04 33 59.6	+0.7
TOUF	Mont Tournerai	4.75	291	P	Pn	04 33 59.6	+0.7
BEY	Berane	4.81	83	⇓iPn	Pn	04 34 00.4	+0.8
BEY				eSn	Sn	04 34 55.8	-0.2
IVA	Berane	4.81	83	⇓iPn	Pn	04 34 00.4	+0.8
IVA				eSn	Sn	04 34 55.8	-0.2
PUK	Puka	4.84	93	ePN	Pn	04 34 00.1	+0.1
PUK	Puka	4.84	93	ePn	Pn	04 34 00.1	+0.1
PVY	Plav	4.85	86	⇑iPn	Pn	04 34 00.8	+0.5
PVY				eSn	Sn	04 34 57.8	+0.7
PVY	Plav	4.85	86	⇑iPn	Pn	04 34 00.8	+0.5
PVY				eSn	Sn	04 34 57.8	+0.7
SJES	Sjenica	4.90	78	ePn	Pn	04 34 00.5	-0.4
CALN	Calern	4.94	287	P	Pn	04 34 01.9	+0.5
CALN	Calern	4.94	287	P	Pn	04 34 01.9	+0.5
CALN	Calern	4.94	287	P	Pn	04 34 01.9	+0.5
CALN	Calern	4.94	287	P	Pn	04 34 01.9	+0.5
BCI	Bajram Curri	4.94	89	ePN	Pn	04 34 01.9	+0.5
BCI	Bajram Curri	4.94	89	ePn	Pn	04 34 01.9	+0.5
FETA	Feichten	4.94	338	⇑iPn	Pn	04 34 00.9	-0.6
FETA	Feichten	4.94	338	⇑iPn	Pn	04 34 00.9	-0.6
FETA	Feichten	4.94	338	⇑iPn	Pn	04 34 00.9	-0.6
TUE	Stuetta	4.95	326	ePn	Pn	04 34 01.6	0.0
TUE	Stuetta	4.95	326	ePn	Pn	04 34 01.6	0.0
TIR	Tirane	4.96	101	ePN	Pn	04 34 00.3	-1.2
TIR	Tirane	4.96	101	eP	Pn	04 34 01.1	-0.4
TIR	Tirane	4.96	101	ePn	Pn	04 34 00.7	-0.8
TIR	Tirane	4.96	101	ePn	Pn	04 34 00.7	-0.8
WTTA	Wattenberg	4.97	346	D	Pn	04 34 02.4	+0.6
	SNR=8.8						
WTTA				D		04 44 27.4	
	SNR=9.2						
VLO	Vlora	5.00	111	ePN	Pn	04 34 02.4	+0.3
VLO	Vlora	5.00	111	ePn	Pn	04 34 02.4	+0.3
DAVOX	Davos/Dischmat	5.00	331	Pn	Pn	04 34 02.1	-0.2
DAVOX				Sn	Sn	04 35 03.3	+2.6
DAVOX	Davos/Dischmat	5.00	331	Pn	Pn	04 34 02.1	-0.2
	comp=Z,4.6nm,0.3s,baz=160,slow=18,SNR=17						
DAVOX				Sn	Sn	04 35 03.3	+2.6
	comp=Z,8.8nm,0.3s,baz=241,slow=18,SNR=3.6						
DAVOX	Davos/Dischmat	5.00	331	P	Pn	04 34 02.1	-0.2
	comp=Z,5.0nm,0.3s						
DAVOX				S	Sn	04 35 03.3	+2.6
	comp=Z,9.0nm,0.3s						
ARSA	Arzberg	5.03	17	⇓iPn	Pn	04 34 01.2	-1.4
	SNR=8.2						
ARSA	Arzberg	5.03	17	⇓iPn	Pn	04 34 01.2	-1.4
ARSA	Arzberg	5.03	17	⇓iPn	Pn	04 34 01.2	-1.4
WATA	Walderalm	5.05	346	⇓iP	Pn	04 34 02.8	-0.1
WATA	Walderalm	5.05	346	⇓iPn	Pn	04 34 02.8	-0.1
WATA	Walderalm	5.05	346	⇓iPn	Pn	04 34 02.8	-0.1
WATA	Walderalm	5.05	346	iP	Pn	04 34 02.8	-0.1
FRF	La Foret Royal	5.07	285	ePn	Pn	04 34 01.8	-1.3
FRF				eSn	Sn	04 34 56.6	-5.6
	comp=Z,12nm,0.5s						
FRF	La Foret Royal	5.07	285	ePn	Pn	04 34 01.8	-1.3
FRF				eSn	Sn	04 34 56.6	-5.6
	comp=Z,5.8nm,0.5s						
IVAS	Ivanjica	5.08	75	ePn	Pn	04 34 02.7	-0.6
IVAS				eSn	Sn	04 34 58.9	-3.7
IVAS	Ivanjica	5.08	75	ePn	Pn	04 34 02.7	-0.6
IVAS				eSn	Sn	04 34 58.9	-3.7
DIVS	Divibare	5.09	69	P	Pn	04 34 02.7	-0.8
DIVS	Divibare	5.09	69	ePn	Pn	04 34 02.0	-1.5
DIVS				eSn	Sn	04 34 56.9	-5.9
DIVS	Divibare	5.09	69	ePn	Pn	04 34 02.0	-1.5
DIVS	Divibare	5.09	69	P	Pn	04 34 02.7	-0.8
LMR	La Mourre	5.13	282	ePn	Pn	04 34 03.0	-1.0
LMR	La Mourre	5.13	282	ePn	Pn	04 34 03.0	-1.0
MOTA	Moosalm	5.15	342	⇑iP	Pn	04 34 04.9	+0.5
MOTA	Moosalm	5.15	342	⇑iPn	Pn	04 34 04.9	+0.5
	SNR=17						
MOTA	Moosalm	5.15	342	⇑iPn	Pn	04 34 04.9	+0.5
MOTA	Moosalm	5.15	342	iP	Pn	04 34 04.9	+0.5
RJOB	Jochberg	5.30	356	ePn	Pn	04 34 06.1	-0.2
PHP	Peshkopia	5.30	96	ePN	Pn	04 34 06.3	-0.1
PHP	Peshkopia	5.30	96	P	Pn	04 34 06.6	+0.2
PHP	Peshkopia	5.30	96	ePn	Pn	04 34 06.3	-0.1
PHP	Peshkopia	5.30	96	P	Pn	04 34 06.6	+0.2
PKSM	Moragy	5.32	43	⇑P	Pn	04 34 08.5	+2.0
PKSM	Moragy	5.32	43	⇑iP	Pn	04 34 08.5	+2.0
PKSM	Moragy	5.32	43	ePn	Pn	04 34 06.7	+0.2
PKSM	Moragy	5.32	43	ePn	Pn	04 34 06.7	+0.2
PKSM	Moragy	5.32	43	P	Pn	04 34 08.5	+2.0
MBDF	Montbardon	5.32	297	eP	Pn	04 34 07.6	+0.9
MBDF	Montbardon	5.32	297	eP	Pn	04 34 07.6	+0.9
TRUS	Trudelj	5.41	69	ePn	Pn	04 34 05.6	-2.2
TRUS	Trudelj	5.41	69	ePn	Pn	04 34 05.6	-2.2
MOA	Molln	5.43	6	⇑iPn	Pn	04 34 07.7	-0.4
MOA	Molln	5.43	6	⇑iPn	Pn	04 34 07.7	-0.4
MOA	Molln	5.43	6	⇑iPn	Pn	04 34 07.7	-0.4
DAVA	Damuels	5.44	334	⇑iPn	Pn	04 34 08.9	+0.6
	SNR=17						
DAVA	Damuels	5.44	334	⇑iPn	Pn	04 34 08.9	+0.6
DAVA	Damuels	5.44	334	⇑iPn	Pn	04 34 08.9	+0.6
BNI	Bardonecchia	5.51	300	eP	Pn	04 34 10.0	+0.6
BNI	Bardonecchia	5.51	300	ePn	Pn	04 34 09.9	+0.6
BNI	Bardonecchia	5.51	300	ePn	Pn	04 34 09.9	+0.6
GRUS	Gruza	5.54	73	ePn	Pn	04 34 08.7	-0.9
GRUS	Gruza	5.54	73	ePn	Pn	04 34 08.7	-0.9
KEK	Kerkira	5.56	117	P	Pn	04 34 09.6	-0.3
KEK	Kerkira	5.56	117	eP	Pn	04 34 09.9	0.0
LPG	La Plagne	5.67	305	eP	Pn	04 34 13.6	+1.9
	SNR=1.0						
LPL	La Plagne	5.70	305	eP	Pn	04 34 13.8	+1.9
	SNR=1.0						
SELS	Selova	5.73	80	ePn	Pn	04 34 11.0	-1.2
SELS	Selova	5.73	80	ePn	Pn	04 34 11.0	-1.2
CONA	Conrad Observa	5.74	17	⇑iPn	Pn	04 34 11.5	-0.9
CONA	Conrad Observa	5.74	17	⇑iPn	Pn	04 34 11.5	-0.9
CONA	Conrad Observa	5.74	17	⇑iPn	Pn	04 34 11.5	-0.9
SENIN	Lac Senin/Sane	5.86	314	ePn	Pn	04 34 16.8	+2.7
SMRF	Simiane la Rot	5.91	288	ePn	Pn	04 34 15.1	+0.4
	SNR=1.0						
SMRF	Simiane la Rot	5.91	288	ePn	Pn	04 34 15.1	+0.4
	SNR=1.0						
ORIF	Oris-en-Rattie	5.98	297	eP	Pn	04 34 17.7	+2.0
ORIF				eSn	Sn	04 35 19.0	-5.7
	comp=Z,43nm,0.9s						
SKO	Skopje	5.99	92	P	Pn	04 34 16.0	+0.2
SKO	Skopje	5.99	92	ePn	Pn	04 34 16.2	+0.3
IGT	Igoumenitsa	6.01	117	P	Pn	04 34 16.3	+0.3
BIA	Bitola	6.10	101	ePn	Pn	04 34 16.4	-1.0
NEST	Nestorio	6.10	107	P	Pn	04 34 18.4	+1.0
FNA	Florina	6.21	103	P	Pn	04 34 18.3	-0.6
FNA	Florina	6.21	103	eP	Pn	04 34 18.7	-0.2
BARS	Barje	6.22	84	ePn	Pn	04 34 18.1	-0.9
BARS				eSn	Sn	04 35 26.2	-4.4
BARS	Barje	6.22	84	ePn	Pn	04 34 18.1	-0.9
JAN	Janina	6.29	114	P	Pn	04 34 20.4	+0.5
JAN	Janina	6.29	114	eP	Pn	04 34 20.4	+0.5
GEC2	GERESS Array S	6.39	2	eP	Pn	04 34 19.8	-1.6
GEC2				e		04 35 27.5	
GEC2	GERESS Array S	6.39	2	ePn	Pn	04 34 19.8	-1.6
GEC2				eSn	Sn	04 35 27.5	-7.4
GEC2	GERESS Array S	6.39	2	eP	Pn	04 34 19.8	-1.6
GERES	GERESS Array B	6.39	2	Pn	Pn	04 34 19.7	-1.6
GERES				Sn	Sn	04 35 30.2	-4.8
GERES	GERESS Array B	6.39	2	Pn	Pn	04 34 19.7	-1.6
	comp=Z,1.7nm,0.3s,baz=181,slow=12,SNR=20						
GERES				Sn	Sn	04 35 30.2	-4.8
	comp=Z,7.6nm,0.3s,baz=193,slow=25,SNR=9.4						
GERES				LR	LR	04 36 17.9	
	comp=Z,74nm,20.4s,baz=0.0,slow=34						
GERES	GERESS Array B	6.39	2	P	Pn	04 34 19.7	-1.6
	comp=Z,2.0nm,0.3s						
BOLS	Boljevac	6.41	75	ePn	Pn	04 34 18.5	-3.0
BOLS	Boljevac	6.41	75	ePn	Pn	04 34 18.5	-3.0
BBS	Basel-Blauen	6.52	322	P	Pn	04 34 22.3	-0.7
BBS	Basel-Blauen	6.52	322	P	Pn	04 34 22.3	-0.7
BBS	Basel-Blauen	6.52	322	P	Pn	04 34 22.3	-0.7
FELD	Feldberg im Sc	6.62	327	P	Pn	04 34 23.2	-1.4
FELD				S	Sn	04 35 38.5	-2.2
FELD	Feldberg im Sc	6.62	327	P	Pn	04 34 23.2	-1.4
FELD				S	Sn	04 35 38.5	-2.2
LKD2	Lefkada island	6.63	121	P	Pn	04 34 25.8	+1.2
LKD2	Lefkada island	6.63	121	eP	Pn	04 34 26.1	+1.5
KZN	Kozani	6.66	106	P	Pn	04 34 26.1	+1.1
KZN	Kozani	6.66	106	eP	Pn	04 34 26.1	+1.1
CABF	La Chapelle	6.67	311	ePn	Pn	04 34 25.0	-0.2
	SNR=1.0						
CABF	La Chapelle	6.67	311	ePn	Pn	04 34 25.0	-0.2
	SNR=1.0						
KHC	Kasperske Hory	6.68	1	eP	Pn	04 34 25.1	-0.1
KHC				e		04 35 36.0	
KHC	Kasperske Hory	6.68	1	ePn	Pn	04 34 23.1	-2.1
KHC				eSn	Sn	04 35 36.0	-5.8
KHC	Kasperske Hory	6.68	1	ePN	Pn	04 34 25.1	-0.1
KHC				eSN	Sn	04 35 36.0	-5.8
KHC	Kasperske Hory	6.68	1	Pn	Pn	04 34 25.1	-0.1
WET	Wettzell	6.70	357	eP	Pn	04 34 23.8	-1.7
WET				e		04 35 37.0	
WET	Wettzell	6.70	357	ePn	Pn	04 34 23.8	-1.7
WET				eSn	Sn	04 35 37.0	-5.4
WET	Wettzell	6.70	357	eP	Pn	04 34 23.8	-1.7
BZS	Buzias	6.71	59	⇑P	Pn	04 34 26.8	+1.1
BZS	Buzias	6.71	59	⇑iP	Pn	04 34 26.8	+1.1
BZS	Buzias	6.71	59	ePn	Pn	04 34 23.3	-2.4
BZS	Buzias	6.71	59	ePn	Pn	04 34 23.3	-2.4
BZS	Buzias	6.71	59	P	Pn	04 34 26.8	+1.1
LOMF	Lomont	6.76	319	P	Pn	04 34 26.0	-0.4
LOMF	Lomont	6.76	319	P	Pn	04 34 26.0	-0.4
LOMF	Lomont	6.76	319	P	Pn	04 34 26.0	-0.4
VIVF	Saint-Julien-l	6.76	294	ePn	Pn	04 34 26.9	+0.5
	SNR=1.0						
VIVF	Saint-Julien-l	6.76	294	ePn	Pn	04 34 26.9	+0.5
	SNR=1.0						
ZAPS	Zavoj	6.84	80	ePn	Pn	04 34 27.5	+0.1
ZAPS				eSn	Sn	04 35 41.0	-4.9
ZAPS	Zavoj	6.84	80	ePn	Pn	04 34 27.5	+0.1
BFO	Black Forest	6.87	330	eP	Pn	04 34 27.7	-0.1
BFO				e		04 35 43.2	
BFO	Black Forest	6.87	330	ePn	Pn	04 34 27.1	-0.7
BFO				eSn	Sn	04 35 45.8	-0.8
BFO	Black Forest	6.87	330	ePn	Pn	04 34 27.7	-0.1
BFO				eSn	Sn	04 35 43.2	-3.4
BFO	Black Forest	6.87	330	eP	Pn	04 34 27.7	-0.1
BFO				eS	Sn	04 35 43.2	-3.4
GRG	Griva	6.91	100	P	Pn	04 34 27.5	-0.9
GRG	Griva	6.91	100	eP	Pn	04 34 27.5	-0.9
VAY	Valandovo	6.94	96	P	Pn	04 34 27.4	-1.4
VAY	Valandovo	6.94	96	ePn	Pn	04 34 27.8	-1.0
VLS	Valsamata	6.96	125	P	Pn	04 34 29.5	+0.3
VLS	Valsamata	6.96	125	eP	Pn	04 34 29.4	+0.3
MOF	Molkenrain	6.98	323	P	Pn	04 34 28.9	-0.5
MOF	Molkenrain	6.98	323	P	Pn	04 34 28.9	-0.5
MOF	Molkenrain	6.98	323	P	Pn	04 34 28.9	-0.5
MOF	Molkenrain	6.98	323	P	Pn	04 34 28.9	-0.5
TREC	Trest	6.99	11	eP	Pn	04 34 27.8	-1.7
TREC				MLR	MLR		
	comp=Z,500nm,10.6s						
TREC	Trest	6.99	11	ePN	Pn	04 34 27.8	-1.7
TREC				AMS	AMS	04 37 10.0	
	comp=Z,500nm,10.6s						
TREC	Trest	6.99	11	Pn	Pn	04 34 27.8	-1.7
HINF	Hinteralfeld	7.08	321	ePn	Pn	04 34 29.6	-1.1
HINF				eSn	Sn	04 35 46.2	-5.5
	comp=Z,45nm,0.6s						
HINF	Hinteralfeld	7.08	321	ePn	Pn	04 34 29.6	-1.1
KFL	Anninata	7.13	125	P	Pn	04 34 31.7	+0.3
THL	Klokotos Trika	7.13	111	P	Pn	04 34 31.6	+0.2
THL	Klokotos Trika	7.13	111	eP	Pn	04 34 33.0	+1.6
PSZ	Piszkesteto	7.13	38	⇓P	Pn	04 34 34.0	+2.5
PSZ	Piszkesteto	7.13	38	⇓iP	Pn	04 34 34.0	+2.5
VYHS	Vyhne	7.14	30	ePN	Pn	04 34 31.3	-0.3
VYHS				eSN	Sn	04 35 47.4	-5.9
VYHS	Vyhne	7.14	30	ePn	Pn	04 34 31.3	-0.3
LASF	Ste Croix	7.15	286	ePn	Pn	04 34 30.4	-1.3
	SNR=1.0						
LASF	Ste Croix	7.15	286	ePn	Pn	04 34 30.4	-1.3
	SNR=1.0						
VRAC	Vranov	7.21	17	⇓iP	Pn	04 34 32.5	+0.1
VRAC	Vranov	7.21	17	ePn	Pn	04 34 31.6	-0.8
VRAC	Vranov	7.21	17	P	Pn	04 34 32.5	+0.1
KKB	Krupnik	7.22	91	iP	Pn	04 34 33.0	+0.3
ECH	Echery	7.24	325	eP	Pn	04 34 32.0	-1.0
ECH				S	Sn	04 35 53.2	-2.5
ECH				pmax	pmax		
	comp=Z,18nm,0.5s						
ECH	Echery	7.24	325	ePn	Pn	04 34 32.0	-1.0
	comp=Z,18nm,0.5s						
ECH				S	Sn	04 35 53.2	-2.5
ECH	Echery	7.24	325	P	Pn	04 34 31.6	-1.3
ECH				S	Sn	04 35 53.2	-2.5
ECH	Echery	7.24	325	eP	Pn	04 34 32.0	-1.0
	comp=Z,18nm,0.5s						
ECH				S	Sn	04 35 53.2	-2.5
LIT	Litokhoron	7.24	106	P	Pn	04 34 31.8	-1.2
LIT	Litokhoron	7.24	106	eP	Pn	04 34 32.2	-0.8
VTS	Vitosha	7.25	86	P	Pn	04 34 32.9	-0.3
VTS	Vitosha	7.25	86	⇓P	Pn	04 34 33.4	+0.2
VTS	Vitosha	7.25	86	⇓iP	Pn	04 34 33.4	+0.2
VTS	Vitosha	7.25	86	ePn	Pn	04 34 32.8	-0.4
VTS	Vitosha	7.25	86	iP	Pn	04 34 32.0	-1.2
VTS	Vitosha	7.25	86	ePn	Pn	04 34 32.8	-0.4
VTS	Vitosha	7.25	86	P	Pn	04 34 33.4	+0.2
EVR	Evrytania	7.31	116	P	Pn	04 34 35.3	+1.4
EVR	Evrytania	7.31	116	eP	Pn	04 34 35.6	+1.7
CDF	Champ du Feu	7.34	326	ePn	Pn	04 34 33.2	-1.2
CDF				eSn	Sn	04 35 53.1	-5.3
	comp=Z,44nm,0.6s						
CDF	Champ du Feu	7.34	326	ePn	Pn	04 34 33.2	-1.2
THE	Thessaloniki	7.41	101	eP	Pn	04 34 33.9	-1.3
KEST	Kesra	7.42	206	ePn	Pn	04 34 38.6	+3.2
KEST	Kesra	7.42	206	Pn	Pn	04 34 38.2	+2.8
	comp=Z,2.5nm,0.3s,baz=239,slow=5.9,SNR=47						
KEST				LR	LR	04 37 44.7	
	comp=Z,104nm,18.7s,baz=141,slow=40						
HAU	Haudompre	7.45	321	ePn	Pn	04 34 34.4	-1.4
HAU				eSn	Sn	04 35 53.8	-7.0
	comp=Z,50nm,0.5s						
HAU	Haudompre	7.45	321	ePn	Pn	04 34 34.4	-1.4
PRU	Pruhonice	7.58	6	eP	Pn	04 34 36.6	-0.9
PRU				e		04 35 57.4	
PRU	Pruhonice	7.58	6	ePN	Pn	04 34 36.6	-0.9
PRU				eSN	Sn	04 35 57.4	-6.5
PRU	Pruhonice	7.58	6	Pn	Pn	04 34 36.6	-0.9
RLS	Riolos of Patr	7.58	123	eP	Pn	04 34 39.0	+1.5
AGG	Agios Georgios	7.60	114	eP	Pn	04 34 40.9	+3.0
LANF	Langenberg	7.60	331	P	Pn	04 34 37.6	-0.3
LANF	Langenberg	7.60	331	P	Pn	04 34 37.6	-0.3
LANF	Langenberg	7.60	331	P	Pn	04 34 37.6	-0.3
LANF	Langenberg	7.60	331	P	Pn	04 34 37.6	-0.3
EFP	Efpalio	7.64	119	P	Pn	04 34 39.6	+1.2
EFP	Efpalio	7.64	119	eP	Pn	04 34 40.5	+2.1
SOH	Sokhos	7.64	99	eP	Pn	04 34 37.2	-1.2
MPEP	Malo Peshtene	7.65	80	iP	Pn	04 34 45.7	+7.2
MMB	Musomiste	7.74	93	iP	Pn	04 34 45.1	+5.2
THEF	They Montfort	7.78	320	P	Pn	04 34 39.1	-1.2
THEF	They Montfort	7.78	320	P	Pn	04 34 39.1	-1.2
THEF	They Montfort	7.78	320	P	Pn	04 34 39.1	-1.2
THEF	They Montfort	7.78	320	P	Pn	04 34 39.1	-1.2
TRIZ	Trizonia	7.78	119	P	Pn	04 34 41.9	+1.6
TRIZ	Trizonia	7.78	119	P	Pn	04 34 41.9	+1.6
LAKA	Lakka	7.79	120	P	Pn	04 34 42.2	+1.7
LAKA	Lakka	7.79	120	eP	Pn	04 34 42.1	+1.6
KALE	Kalithea	7.81	118	P	Pn	04 34 42.6	+1.8
KALE	Kalithea	7.81	118	eP	Pn	04 34 43.2	+2.4
PLG	Polygyros	7.84	102	eP	Pn	04 34 40.1	-1.0
LBL	Lubilhac	7.84	294	P	Pn	04 34 42.9	+1.7
LBL	Lubilhac	7.84	294	P	Pn	04 34 42.9	+1.7
LBL	Lubilhac	7.84	294	P	Pn	04 34 42.9	+1.7
WERN	Wernitzgruen	7.86	355	ePn	Pn	04 34 42.3	+0.8
MORC	Moravsky Berou	7.87	20	eP	Pn	04 34 43.4	+1.9
MORC	Moravsky Berou	7.87	20	ePn	Pn	04 34 43.4	+1.9
MORC	Moravsky Berou	7.87	20	⇑iP	Pn	04 34 45.0	+3.5
NVR	Nevrokopi	7.89	95	eP	Pn	04 34 41.4	-0.4
SMF	Signal de Mont	8.00	305	ePn	Pn	04 34 42.6	-0.8
	SNR=1.0						
SMF				eSn	Sn	04 36 07.3	-7.2
	comp=Z,19nm,0.7s						
SMF	Signal de Mont	8.00	305	ePn	Pn	04 34 42.6	-0.8
	SNR=1.0						
XOR	Xorichti	8.04	109	P	Pn	04 34 40.7	-3.2
LOT	Lotru	8.06	65	⇑iP	Pn	04 34 46.7	+2.4
OKC	Ostrava-Krasne	8.08	22	AMS	AMS	04 38 30.0	
	comp=Z,400nm,15.1s						
PAGF	Fort de Pagny	8.13	321	ePn	Pn	04 34 44.4	-0.8
PAGF	Fort de Pagny	8.13	321	ePn	Pn	04 34 44.4	-0.8
DPC	Dobruska-Polom	8.15	13	AMS	AMS	04 38 00.0	
	comp=Z,400nm,12.7s						
PAIG	Paliouri	8.16	105	eP	Pn	04 34 44.2	-1.3
AGO	Saint Agoulin	8.20	299	P	Pn	04 34 44.3	-1.7
AGO	Saint Agoulin	8.20	299	P	Pn	04 34 44.3	-1.7
AGO	Saint Agoulin	8.20	299	P	Pn	04 34 44.3	-1.7
GUR	Goura	8.20	120	P	Pn	04 34 47.2	+1.0
GUR	Goura	8.20	120	eP	Pn	04 34 48.0	+1.8
GUR	Goura	8.20	120	P	Pn	04 34 47.2	+1.0
SFTF	Sexfontaines	8.22	317	ePn	Pn	04 34 45.4	-1.0
SFTF	Sexfontaines	8.22	317	ePn	Pn	04 34 45.4	-1.0
MTLF	Montolieu	8.25	280	ePn	Pn	04 34 45.2	-1.6
MTLF	Montolieu	8.25	280	ePn	Pn	04 34 45.2	-1.6
MOX	Moxa	8.28	352	eSn	Sn	04 36 14.3	-7.0
LOR	Lormes	8.30	309	ePn	Pn	04 34 46.5	-1.0
	SNR=1.0						
LOR				eSn	Sn	04 36 15.9	-6.0
	comp=Z,13nm,0.5s						
LOR	Lormes	8.30	309	ePn	Pn	04 34 46.5	-1.0
	SNR=1.0						
AVF	Avril sur Loir	8.37	305	ePn	Pn	04 34 47.2	-1.2
	SNR=1.0						
AVF	Avril sur Loir	8.37	305	ePn	Pn	04 34 47.2	-1.2
	SNR=1.0						
PLD	Plovdiv	8.39	89	iP	Pn	04 34 42.0	-6.7
SSF	Saint Saulge	8.41	307	ePn	Pn	04 34 47.6	-1.3
SSF	Saint Saulge	8.41	307	ePn	Pn	04 34 47.6	-1.3
MEZF	Maizieres J'vi	8.42	319	ePn	Pn	04 34 48.4	-0.6
MEZF	Maizieres J'vi	8.42	319	ePn	Pn	04 34 48.4	-0.6
BRG	Berggiesshubel	8.43	2	PN	Pn	04 34 48.6	-0.6
BRG				i		04 35 22.0	
BRG				i		04 36 18.8	
BRG				i		04 36 30.0	
BRG							
	comp=N,198nm,14.8s						
BRG							
	comp=E,592nm,15.8s						
BRG							
	comp=Z,294nm,14.0s						
BRG	Berggiesshubel	8.43	2	P	Pn	04 34 48.6	-0.6
BRG				i		04 36 30.0	
BRG				MLR	MLR		
	comp=N,6µm,14.8s						
BRG				MLR	MLR		
	comp=E,198nm,15.8s						
BRG				MLR	MLR		
	comp=Z,592nm,14.0s						
BRG	Berggiesshubel	8.43	2	P	Pn	04 34 48.6	-0.6
	comp=Z,6µm,14.8s						
RZN	Rozhen	8.46	91	iP	Pn	04 34 43.2	-6.6
FBE	Freiberg	8.47	360	eSn	Sn	04 36 17.0	-8.8
RUP	Ruppelstein	8.47	331	P	Pn	04 34 50.0	+0.1
RUP	Ruppelstein	8.47	331	P	Pn	04 34 50.0	+0.1
RUP	Ruppelstein	8.47	331	P	Pn	04 34 50.0	+0.1
PYL	PYLOS	8.50	128	P	Pn	04 34 51.2	+1.0
PYL	PYLOS	8.50	128	eP	Pn	04 34 50.9	+0.7
PYL	PYLOS	8.50	128	P	Pn	04 34 51.2	+1.0
LTK	Loutraki	8.55	118	P	Pn	04 34 53.6	+2.6
VLX	Vlachokerasia	8.57	123	eP	Pn	04 34 55.2	+3.9
CAF	Calviac	8.57	291	eP	Pn	04 34 51.4	+0.2
	SNR=1.0						
CAF	Calviac	8.57	291	eP	Pn	04 34 51.4	+0.2
	SNR=1.0						
BGF	Bois d'Agland	8.58	302	ePn	Pn	04 34 50.6	-0.7
	SNR=1.0						
BGF				eSn	Sn	04 36 21.6	-7.0
	comp=Z,12nm,0.5s						
BGF	Bois d'Agland	8.58	302	ePn	Pn	04 34 50.6	-0.7
	SNR=1.0						
TRPA	Tarpa	8.58	46	⇓iP	Pn	04 34 54.4	+3.1
ARR	Arges	8.62	66	⇓iP	Pn	04 34 53.3	+1.4
ARR	Arges	8.62	66	⇓iP	Pn	04 34 53.3	+1.4
KSP	Ksiaz	8.62	12	eP	Pn	04 34 52.7	+0.9
KSP				e		04 36 22.4	
KSP	Ksiaz	8.62	12	eP	Pn	04 34 52.7	+0.9
UZH	Uzhgorod	8.78	42	eP	Pn	04 34 53.3	-0.7
UZH	Uzhgorod	8.78	42	eP	Pn	04 34 53.3	-0.7
CLL	Collm	8.86	358	eP	Pn	04 34 55.0	-0.1
CLL				e		04 36 29.0	
CLL	Collm	8.86	358	ePn	Pn	04 34 55.0	-0.1
CLL				eSn	Sn	04 36 29.0	-6.4
CLL				eSg	Sg	04 37 41.0	+11
	comp=E,600nm,20.8s						
CLL				Lmax		04 38 00.0	
CLL	Collm	8.86	358	eP	Pn	04 34 55.0	-0.1
TCF	Toulx Ste Croi	8.88	299	ePn	Pn	04 34 55.0	-0.4
	SNR=1.0						
TCF	Toulx Ste Croi	8.88	299	ePn	Pn	04 34 55.0	-0.4
	SNR=1.0						
VOIR		8.92	67	⇑P	Pn	04 34 57.7	+1.7
VOIR		8.92	67	⇑iP	Pn	04 34 57.7	+1.7
VOIR		8.92	67	P	Pn	04 34 57.7	+1.7
DID	Didima	9.03	120	eP	Pn	04 34 58.4	+0.9
RJF	Les Rejaudoux	9.04	292	eP	Pn	04 34 58.7	+1.1
RJF	Les Rejaudoux	9.04	292	eP	Pn	04 34 58.7	+1.1
VLI	Veliai	9.33	125	eP	Pn	04 35 04.2	+2.6
LFF	La Frestale	9.50	289	eP	Pn	04 35 04.6	+0.8
LFF	La Frestale	9.50	289	eP	Pn	04 35 04.6	+0.8
MLR	Muntele Rosu	9.54	67	Pn	Pn	04 35 05.7	+1.1
MLR	Muntele Rosu	9.54	67	Pn	Pn	04 35 05.7	+1.1
	comp=E,0.2nm,0.3s,baz=182,slow=8.2,SNR=9.5						
MLR	Muntele Rosu	9.54	67	P	Pn	04 35 05.7	+1.1
ALN	Alexandroupoli	9.60	95	eP	Pn	04 35 04.9	-0.3
EPF	Esparros	9.62	278	eSn	Sn	04 36 45.6	-8.8
	comp=E,1.6nm,0.5s						
KWP	Kalwaria Pacla	9.66	39	eP	Pn	04 35 09.7	+3.6
KWP	Kalwaria Pacla	9.66	39	ePn	Pn	04 35 09.7	+3.6
KWP	Kalwaria Pacla	9.66	39	⇓iP	Pn	04 35 09.4	+3.3
KWP	Kalwaria Pacla	9.66	39	eP	Pn	04 35 09.9	+3.8
GIVF	Givet	9.67	325	ePn	Pn	04 35 06.2	0.0
GIVF	Givet	9.67	325	ePn	Pn	04 35 06.2	0.0
BUR08	Bucovina Ar. S	9.83	54	ePn	Pn	04 35 09.8	+1.3
BUR08	Bucovina Ar. S	9.83	54	ePn	Pn	04 35 09.8	+1.3
ISR	Istrita	9.88	70	⇑P	Pn	04 35 09.9	+0.8
ISR	Istrita	9.88	70	⇑iP	Pn	04 35 09.9	+0.8
ISR	Istrita	9.88	70	P	Pn	04 35 09.9	+0.8
BAIF	Baives	9.91	323	ePn	Pn	04 35 08.6	-0.8
BAIF	Baives	9.91	323	ePn	Pn	04 35 08.6	-0.8
VRI	Vrincioaia	10.17	66	⇓P	Pn	04 35 12.9	-0.2
VRI	Vrincioaia	10.17	66	⇓iP	Pn	04 35 12.9	-0.2
VRI	Vrincioaia	10.17	66	P	Pn	04 35 12.9	-0.2
LVV	L'vov	10.42	41	eP	Pn	04 35 21.7	+5.3
MFF	Saint Martin d	10.52	298	eP	Pn	04 35 19.9	+2.1
CFR	Carcaliu	10.99	71	⇑iP	Pn	04 35 24.6	+0.3
CFR	Carcaliu	10.99	71	⇑iP	Pn	04 35 24.6	+0.3
TIRR	Tirgusor	11.10	75	eP	Pn	04 35 24.7	-1.1
TIRR	Tirgusor	11.10	75	ePn	Pn	04 35 24.7	-1.1
TIRR	Tirgusor	11.10	75	⇑iP	Pn	04 35 24.7	-1.1
TIRR	Tirgusor	11.10	75	eP	Pn	04 35 24.7	-1.1
ARG	Arkhangelos	12.99	114	eP	Pn	04 35 48.1	-3.5
ESDC	Sonseca Array	13.39	264	Pn	Pn	04 35 57.0	-0.2
ESDC	Sonseca Array	13.39	264	Pn	Pn	04 35 57.0	-0.2
	comp=E,0.1nm,0.3s,baz=66,slow=14,SNR=6.6						
ESDC	Sonseca Array	13.39	264	Pn	Pn	04 35 57.0	-0.2
KIEV	Kiev	13.62	47	eP	Pn	04 36 03.3	+3.1
KIEV	Kiev	13.62	47	ePn	Pn	04 36 03.3	+3.1
AKASG	Malin Array Be	13.64	47	P	Pn	04 36 00.8	+0.4
AKASG	Malin Array Be	13.64	47	Pn	Pn	04 36 00.8	+0.4
AKASG	Malin Array Be	13.64	47	Pn	Pn	04 36 00.8	+0.4
	comp=E,0.2nm,0.3s,baz=239,slow=11,SNR=2.6						
AKASG	Malin Array Be	13.64	47	P	Pn	04 36 00.8	+0.4
BR131	Keskin Array S	15.51	93	ePn	Pn	04 36 25.9	0.0
	comp=E,5.4nm,1.0s						
BR131	Keskin Array S	15.51	93	ePn	Pn	04 36 25.9	0.0
	comp=E,5.4nm,1.0s						
BRTR	Keskin Array B	15.51	93	Pn	Pn	04 36 25.4	-0.6
BRTR	Keskin Array B	15.51	93	Pn	Pn	04 36 25.4	-0.6
	comp=E,0.1nm,0.3s,baz=285,slow=13,SNR=6.4						
BRTR	Keskin Array B	15.51	93	Pn	Pn	04 36 25.4	-0.6

EKA	**Eskdalemuir Ar**	**16.81**	**326**	Pn	**Pn**	**04 36 42.0**	**-0.4**
EKA	**Eskdalemuir Ar**	**16.81**	**326**	Pn	**Pn**	**04 36 42.0**	**-0.4**
	baz=136,slow=14,SNR=3.0						
EKA	**Eskdalemuir Ar**	**16.81**	**326**	P	**Pn**	**04 36 42.0**	**-0.4**
MDT	**Midelt**	**17.18**	**242**	LR	LR	04 42 41.9	
	comp=E,88nm,19.9s,baz=113,slow=35						
HFS	**Hagfors**	**17.70**	**0**	P	**Pn**	**04 36 52.7**	**-0.9**
HFS	**Hagfors**	**17.70**	**0**	P	**Pn**	**04 36 52.7**	**-0.9**
	comp=E,0.1nm,0.3s,baz=187,slow=10.0,SNR=5.1						
HFS				LR	LR	04 44 27.2	
	comp=E,96nm,19.6s,baz=183,slow=40						
HFS	**Hagfors**	**17.70**	**0**	P	**Pn**	**04 36 52.7**	**-0.9**
	comp=E,96nm,19.6s						
NAO01	**NORSAR Array S**	**18.48**	**356**	*e*P	**P**	**04 37 02.0**	**-1.1**
	comp=E,10.0nm,0.9s						
NAO01	**NORSAR Array S**	**18.48**	**356**	*e*P	**P**	**04 37 02.0**	**-1.1**
	comp=E,10.0nm,0.9s						
NB2	**NORSAR Subarra**	**18.66**	**357**	P	**P**	**04 37 03.6**	**-1.5**
	comp=Z,3.8nm,0.7s,baz=175,slow=12						
NB2	**NORSAR Subarra**	**18.66**	**357**	P	**P**	**04 37 03.6**	**-1.5**
	comp=Z,3.8nm,0.7s,baz=175,slow=11,SNR=1.2						
NOA	**NORSAR Array B**	**18.66**	**357**	P	**P**	**04 37 04.1**	**-1.0**
NOA	**NORSAR Array B**	**18.66**	**357**	P	**P**	**04 37 04.1**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=175,slow=11,SNR=9.7						
NOA				LR	LR	04 45 35.7	
	comp=Z,64nm,19.1s,baz=180,slow=42						
NOA	**NORSAR Array B**	**18.66**	**357**	P	**P**	**04 37 04.1**	**-1.0**
	comp=Z,64nm,19.2s						
MALT	**Malatya**	**19.49**	**94**	*e*P	**Pn**	**04 37 16.2**	**+0.6**
MALT				pmax	pmax		
	comp=Z,11nm,1.0s						
MALT	**Malatya**	**19.49**	**94**	*e*P	**Pn**	**04 37 16.2**	**+0.6**
	comp=Z,11nm,1.0s						
VSR	**Storozhevoye**	**19.61**	**55**	*e*P	**Pn**	**04 37 16.0**	**-0.8**
VSR				*e*S	Sn	04 40 47.1	-10
VSR				pmax	pmax		
	comp=N,4.0nm,0.5s						
VSR				pmax	pmax		
	comp=E,3.0nm,0.5s						
VSR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VSR				smax	smax		
	comp=N,20nm,0.6s						
VSR				smax	smax		
	comp=E,10.0nm,0.6s						
VSR				smax	smax		
	comp=Z,8.0nm,0.6s						
VSR	**Storozhevoye**	**19.61**	**55**	*e*P	**Pn**	**04 37 16.0**	**-0.8**
VORD	**Divnogorie**	**19.61**	**55**	*e*P	**P**	**04 37 15.9**	**+0.3**
VORD				*e*S	S	04 40 46.6	-11
VORD				pmax	pmax		
	comp=N,5.0nm,0.5s						
VORD				pmax	pmax		
	comp=E,4.0nm,0.5s						
VORD				pmax	pmax		
	comp=Z,4.0nm,0.5s						
VORD				smax	smax		
	comp=N,40nm,2.3s						
VORD				smax	smax		
	comp=E,50nm,2.3s						
VORD				smax	smax		
	comp=Z,3.0nm,0.4s						
VORD	**Divnogorie**	**19.61**	**55**	*e*P	**P**	**04 37 15.9**	**+0.3**
OBN	**Obninsk**	**19.72**	**42**⇓	*e*P	**Pn**	**04 37 17.2**	**-0.9**
OBN				pmax	pmax		
	comp=Z,43nm,2.5s						
OBN				MLR	MLR		
	comp=Z,200nm,20.0s						
OBN	**Obninsk**	**19.72**	**42**	*e*P	**Pn**	**04 37 17.2**	**-0.9**
	comp=Z,200nm,20.0s						
MMAI	**Mount Meron Ar**	**19.75**	**111**	P	**Pn**	**04 37 18.6**	**-0.1**
MMAI	**Mount Meron Ar**	**19.75**	**111**	P	**Pn**	**04 37 18.6**	**-0.1**
	baz=306,slow=9.9,SNR=2.1						
MMAI	**Mount Meron Ar**	**19.75**	**111**	P	**Pn**	**04 37 18.6**	**-0.1**
FINES	**FINESS Array B**	**20.49**	**18**	P	**P**	**04 37 24.1**	**-0.9**
FINES	**FINESS Array B**	**20.49**	**18**	P	**P**	**04 37 24.1**	**-0.9**
	comp=Z,15nm,1.0s,baz=188,slow=8.4,SNR=9.9						
FINES	**FINESS Array B**	**20.49**	**18**	P	**P**	**04 37 24.1**	**-0.9**
	comp=Z,15nm,1.0s						
MOS	**Moscow**	**20.56**	**41**	*e*P	**P**	**04 37 23.6**	**-2.2**
MOS				*e*		04 37 31.2	
MOS	**Moscow**	**20.56**	**41**	*e*P	**P**	**04 37 23.6**	**-2.2**
TAM	**Tamanrasset**	**20.68**	**201**	*e*P	Pn	04 37 29.3	-0.6
TAM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TAM	**Tamanrasset**	**20.68**	**201**	*e*P	Pn	04 37 29.3	-0.6
	comp=Z,5.3nm,0.9s						
VRHR	**Novokhopersk**	**21.07**	**56**	*e*P	**P**	**04 37 31.8**	**+0.4**
VRHR				pmax	pmax		
	comp=N,5.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,2.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KIV	**Kislovodsk**	**21.36**	**76**	*e*P	**P**	**04 37 35.7**	**+1.0**
KIV				pmax	pmax		
	comp=Z,35nm,1.1s						
KIV	**Kislovodsk**	**21.36**	**76**	*e*P	**P**	**04 37 35.3**	**+0.6**
	comp=Z,26nm,0.9s						
EIL	**Elat**	**21.53**	**119**	P	**P**	**04 37 38.1**	**+1.7**
EIL	**Elat**	**21.53**	**119**	P	**P**	**04 37 38.1**	**+1.7**
	comp=Z,4.4nm,0.9s,baz=196,slow=21,SNR=3.1						
KBZ	**Khabaz**	**21.54**	**77**	P	**P**	**04 37 37.8**	**+1.4**
KBZ				pmax	pmax		
	comp=Z,22nm,0.9s						
KBZ	**Khabaz**	**21.54**	**77**	P	**P**	**04 37 37.8**	**+1.4**
KBZ	**Khabaz**	**21.54**	**77**	P	**P**	**04 37 37.8**	**+1.4**
	comp=Z,22nm,0.9s,baz=294,slow=7.6,SNR=25						
ZEI	**Tsey**	**22.40**	**79**	*e*P	**P**	**04 37 47.6**	**+1.6**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GNI	**Garni**	**23.60**	**85**	*e*P	**P**	**04 38 00.9**	**+2.5**
	comp=Z,24nm,1.1s						
GNI	**Garni**	**23.60**	**85**	P	**P**	**04 38 00.9**	**+2.5**
	comp=Z,5.4nm,0.4s,baz=196,slow=3.0,SNR=6.1						
KLMR	**Klimovskoe**	**24.25**	**32**	*e*P	**P**	**04 38 00.5**	**-3.7**
KLMR				pmax	pmax		
	comp=Z,178nm,13.3s						
BHD	**Baghdad**	**26.01**	**100**	*e*x	**P**	**04 38 16.0**	**-4.4**
BHD				*e*x	x	04 42 45.0	
TOA0	**Torodi Ar. Sit**	**30.92**	**203**	*e*P	**P**	**04 39 04.2**	**-0.1**
TORD	**Torodi Ar. Bea**	**30.92**	**203**	P	**P**	**04 39 04.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**30.92**	**203**	P	**P**	**04 39 04.1**	**-0.2**
	comp=Z,3.2nm,0.8s,baz=13,slow=9.3,SNR=18						
ARU	**Arti**	**31.89**	**48**	*e*P	**P**	**04 39 11.3**	**-1.2**
ARU				pmax	pmax		
	comp=Z,13nm,0.8s						
ARU	**Arti**	**31.89**	**48**	*e*P	**P**	**04 39 11.3**	**-1.2**
	comp=Z,13nm,0.8s						
ABKAR	**Akbulak array**	**32.70**	**62**	*e*P	**P**	**04 39 18.7**	**-1.0**
	comp=Z,0.4nm,0.4s						
BRVK	**Borovoye**	**38.72**	**54**⇑	*e*P	**P**	**04 40 11.4**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**38.72**	**54**	*e*P	**P**	**04 40 11.1**	**-0.2**
	comp=Z,3.5nm,0.6s						
KKAR	**Karatay Array**	**41.22**	**69**	*e*P	**P**	**04 40 32.3**	**0.0**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KKAR	**Karatay Array**	**41.22**	**69**	*e*P	**P**	**04 40 32.3**	**0.0**
	comp=Z,4.9nm,0.8s						
EKS2	**Erkin-Say**	**43.62**	**68**	*e*P	**P**	**04 40 52.3**	**+0.3**
EKS2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
EKS2	**Erkin-Say**	**43.62**	**68**	*e*P	**P**	**04 40 52.3**	**+0.3**
	comp=Z,9.6nm,1.0s						
AAK	**Ala-Archa**	**44.13**	**68**	*e*P	**P**	**04 40 56.3**	**+0.2**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AAK	**Ala-Archa**	**44.13**	**68**	*e*P	**P**	**04 40 56.2**	**+0.2**
	comp=Z,3.7nm,0.9s						
KURK	**Kurchatov**	**44.25**	**56**	*e*P	**P**	**04 40 56.1**	**-0.6**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	**Kurchatov**	**44.25**	**56**	*e*P	**P**	**04 40 56.1**	**-0.6**
	comp=Z,2.6nm,0.9s						
ZAA0	**Zalesovo Array**	**47.01**	**50**	*e*P	**P**	**04 41 17.3**	**-1.2**
ZALV	**Zalesovo Beam**	**47.01**	**50**	P	**P**	**04 41 17.4**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**47.01**	**50**	P	**P**	**04 41 17.4**	**-1.1**
ZALV	**Zalesovo Beam**	**47.01**	**50**	P	**P**	**04 41 17.4**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=263,slow=8.6,SNR=5.8						
MK31	**Makanchi Array**	**47.80**	**60**	*e*P	**P**	**04 41 23.8**	**-1.0**
MK31	**Makanchi Array**	**47.80**	**60**	*e*P	**P**	**04 41 23.8**	**-1.0**
MKAR	**Makanchi Array**	**47.80**	**60**	P	**P**	**04 41 23.8**	**-1.0**
MKAR						04 42 54.8	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**47.80**	**60**	P	**P**	**04 41 23.8**	**-1.0**
MKAR				PcP	**PcP**	**04 42 54.8**	**+1.1**
MKAR	**Makanchi Array**	**47.80**	**60**	P	**P**	**04 41 23.8**	**-1.0**
	comp=Z,1.7nm,0.6s,baz=285,slow=7.0,SNR=27						
MKAR				PcP	**PcP**	**04 42 54.8**	**+1.1**
	comp=Z,2.0nm,0.7s,baz=281,slow=3.7,SNR=9.2						
SCHQ	**Schefferville**	**51.59**	**313**	P	**P**	**04 41 52.5**	**-1.1**
SCHQ	**Schefferville**	**51.59**	**313**	P	**P**	**04 41 52.5**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=49,slow=9.3,SNR=3.3						
WMQ	**Urumqi**	**52.48**	**61**	*e*P	**P**	**04 42 03.0**	**+2.6**
WMQ				PcP	**PcP**	**04 43 14.0**	**+3.0**
WMQ				PP	**PP**	**04 44 03.0**	**+4.0**
WMQ				ScP	**ScP**	**04 47 11.0**	**+1.9**
WMQ				S	**S**	**04 49 29.0**	**+1.4**
WMQ				ScS	**ScS**	**04 51 51.0**	**-0.3**
WMQ				SS	**SS**	**04 53 05.0**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,16nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,40nm,5.0s						
WMQ				LR	LR		
	comp=N,120nm,18.0s						
WMQ				LR	LR		
	comp=E,140nm,18.0s						
WMQ				LR	LR		
	comp=Z,120nm,18.0s						
TIXI	**Tiksi**	**57.51**	**20**⇑	*e*P	**P**	**04 42 35.4**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,276nm,21.0s						
TIXI	**Tiksi**	**57.51**	**20**	*e*P	**P**	**04 42 35.8**	**-0.5**
	comp=Z,4.1nm,1.0s						
SONM	**Songino Array**	**61.91**	**50**	P	**P**	**04 43 06.7**	**-0.4**
SONM	**Songino Array**	**61.91**	**50**	P	**P**	**04 43 06.7**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=293,slow=7.7,SNR=12						
INK	**Inuvik**	**66.81**	**347**	P	**P**	**04 43 36.8**	**-1.8**
INK	**Inuvik**	**66.81**	**347**	P	**P**	**04 43 36.8**	**-1.8**
	comp=Z,0.5nm,0.7s,baz=12,slow=8.3,SNR=4.3						
YKA	**Yellowknife Ar**	**67.41**	**337**	P	**P**	**04 43 41.8**	**-0.8**
YKA	**Yellowknife Ar**	**67.41**	**337**	P	**P**	**04 43 41.7**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=41,slow=5.7,SNR=18						
BILL	**Bilibino**	**67.95**	**11**⇓	*e*P	**P**	**04 43 45.0**	**-0.9**
BILL				*e*		04 46 16.3	
BILL				*e*S	**S**	**04 52 47.7**	**+2.5**
BILL				*e*SS	**SS**	**04 57 05.9**	**+0.1**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BILL				MLR	MLR		
	comp=Z,200nm,18.0s						
FFC	**Flin Flon**	**68.66**	**326**	*i* P	P	04 43 56.7	+6.1
HHC	**Hu-ho-hao-te**	**69.00**	**54**	*e*P	**P**	**04 43 53.4**	**+0.3**
HHC				PcP	**PcP**	**04 44 18.1**	**+0.8**
HHC				PP	**PP**	**04 46 27.6**	**+2.7**
HHC				S	**S**	**04 52 57.1**	**-1.6**
HHC				SKS	**SKSac**	**04 53 49.9**	**-4.0**
HHC				ScS	**SKKSac**	**04 53 51.1**	**-2.8**
HHC				SS	**SS**	**04 57 23.2**	**-0.3**
HHC				LR	LR		
	comp=N,150nm,17.2s						
HHC				LR	LR		
	comp=E,200nm,16.2s						
HHC				LR	LR		
	comp=Z,130nm,17.7s						
COLD	**Coldfoot**	**69.93**	**353**	*e*P	**P**	**04 43 58.0**	**-0.3**
	comp=Z,1.5nm,0.8s						
BOSA	**Boshof**	**71.56**	**169**	P	**P**	**04 44 09.6**	**+1.0**
BOSA	**Boshof**	**71.56**	**169**	P	**P**	**04 44 09.6**	**+1.0**
	comp=Z,4.5nm,1.1s,baz=325,slow=4.2,SNR=3.0						
TKL	**Tuckaleechee C**	**71.63**	**302**	LR	LR	05 14 44.9	
	comp=Z,491nm,18.7s,baz=262,slow=35						
ILAR	**Eielson Array**	**72.00**	**351**	P	**P**	**04 44 10.8**	**0.0**
ILAR	**Eielson Array**	**72.00**	**351**	P	**P**	**04 44 10.8**	**0.0**
	comp=Z,0.7nm,0.9s,baz=6.6,slow=6.8,SNR=7.5						
GYA	**Guiyang**	**74.92**	**68**	*e*P	**P**	**04 44 28.6**	**-0.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MDJ	**Mudanjiang**	**76.26**	**41**	P	**P**	**04 44 35.0**	**-1.1**
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MDJ				pmax	pmax		
	comp=Z,69nm,4.5s						
BOZ	**Bozeman (W)**	**79.55**	**324**	*e*P	**P**	**04 44 53.6**	**-1.0**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BOZ	**Bozeman (W)**	**79.55**	**324**	*e*P	**P**	**04 44 53.6**	**-1.0**
	comp=Z,1.7nm,0.8s						
MOOW	**Moose Ponds**	**80.65**	**323**	*e*P	**P**	**04 45 00.6**	**-0.1**
	comp=Z,0.4nm,0.7s						
BDFB	**Brasilia**	**80.73**	**239**	LR	LR	05 23 23.9	
	comp=Z,212nm,18.2s,baz=54,slow=38						
BMO	**Blue Mountains**	**82.56**	**327**	*e*P	**P**	**04 45 09.5**	**-1.1**
	comp=Z,2.9nm,0.9s						
JHJ	**Hachijo jima 2**	**90.16**	**42**	LR	LR	05 28 44.5	
	comp=Z,86nm,18.8s,baz=190,slow=37						

*CSEM **09** 04:42:22.5, 42°.36N×13°.44E, h9km, After ROM*

ROM 09 04:42:22.5±0.1**, 42°.36N×13°.44E, h9**km**, Ml2.8**/4**, 2C-2D, Error ellipse: s-maj=1.1km s-min=0.9km az=74.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.03**	**248**⇑	*i*Pg	Pg	04 42 24.4	+0.1
AQU				Sg	Sg	04 42 25.5	-0.1
AQU	**L'Aquila**	**0.03**	**248**⇑	*i*Pg	Pg	04 42 24.4	+0.1
AQU				Sg	Sg	04 42 25.5	-0.1
FAGN	**Fagnano**	**0.15**	**131**	Pg	Pg	04 42 26.6	+0.7
FAGN				Sg	Sg	04 42 28.8	+0.6
FAGN	**Fagnano**	**0.15**	**131**	Pg	Pg	04 42 26.6	+0.7
FAGN				Sg	Sg	04 42 28.8	+0.6
CAMP	**Campotosto**	**0.17**	**354**	Pg	Pg	04 42 27.0	+0.6
CAMP				Sg	Sg	04 42 29.9	+0.8
CAMP	**Campotosto**	**0.17**	**354**	Pg	Pg	04 42 27.0	+0.6
CAMP				Sg	Sg	04 42 29.9	+0.8
FIAM	**Fiamignano**	**0.25**	**248**⇓	*i*Pg	Pg	04 42 28.5	+0.7
FIAM				Sg	Sb	04 42 32.7	-1.3
FIAM	**Fiamignano**	**0.25**	**248**⇓	*i*Pg	Pg	04 42 28.5	+0.7
FIAM				Sg	Sb	04 42 32.7	-1.3
TERO	**Teramo**	**0.29**	**26**	Pg	Pg	04 42 28.7	+0.3
TERO				Sg	Sg	04 42 33.1	+0.8
TERO	**Teramo**	**0.29**	**26**	Pg	Pg	04 42 28.7	+0.3
TERO				Sg	Sg	04 42 33.1	+0.8
VCEL	**Villa Celiera**	**0.30**	**84**	Pg	Pg	04 42 29.3	+0.6
VCEL				Sg	Sg	04 42 33.6	+0.7
VCEL	**Villa Celiera**	**0.30**	**84**	Pg	Pg	04 42 29.3	+0.6
VCEL				Sg	Sg	04 42 33.6	+0.7
PTQR	**Pietraquaria**	**0.34**	**184**	Pg	Pg	04 42 29.9	+0.5
PTQR				Sg	Sb	04 42 35.3	-1.2
PTQR	**Pietraquaria**	**0.34**	**184**	Pg	Pg	04 42 29.9	+0.5
PTQR				Sg	Sb	04 42 35.3	-1.2
LNSS	**Leonessa**	**0.38**	**309**	Pg	Pg	04 42 30.5	+0.4
LNSS				Sg	Sb	04 42 36.9	-0.7
LNSS	**Leonessa**	**0.38**	**309**	Pg	Pg	04 42 30.5	+0.4
LNSS				Sg	Sb	04 42 36.9	-0.7
INTR	**Introdacqua**	**0.50**	**135**	Pg	Pg	04 42 32.7	+0.4
INTR				Sg	Sb	04 42 41.0	+0.1
INTR	**Introdacqua**	**0.50**	**135**	Pg	Pg	04 42 32.7	+0.4
INTR				Sg	Sb	04 42 41.0	+0.1
VVLD	**Villa Vallelon**	**0.51**	**164**	Pg	Pg	04 42 32.7	+0.1
VVLD	**Villa Vallelon**	**0.51**	**164**	Pg	Pg	04 42 32.7	+0.1
NRCA	**Norcia**	**0.53**	**333**	Pg	Pg	04 42 33.0	+0.1
NRCA				Sg	Sb	04 42 41.5	-0.3
NRCA	**Norcia**	**0.53**	**333**	Pg	Pg	04 42 33.0	+0.1
NRCA				Sg	Sb	04 42 41.5	-0.3
CERT	**Cerreto**	**0.53**	**219**	Pg	Pg	04 42 33.3	+0.3
CERT				Sg	Sb	04 42 41.1	-0.9
CERT	**Cerreto**	**0.53**	**219**	Pg	Pg	04 42 33.3	+0.3
CERT				Sg	Sb	04 42 41.1	-0.9
MNS	**Montasola**	**0.56**	**272**	Pg	Pg	04 42 33.6	+0.2
MNS	**Montasola**	**0.56**	**272**	Pg	Pg	04 42 33.6	+0.2
GUAR	**Guarcino**	**0.58**	**189**	Pg	Pg	04 42 33.7	-0.1
	823nm,0.7s						
GUAR	**Guarcino**	**0.58**	**189**	Pg	Pg	04 42 33.7	-0.1
	823nm,0.7s						
OFFI	**Offida**	**0.60**	**18**	Pg	Pb	04 42 35.7	+0.5
OFFI	**Offida**	**0.60**	**18**	Pg	Pb	04 42 35.7	+0.5
CAFR	**Castel Frentan**	**0.69**	**101**	Pg	Pb	04 42 36.5	-0.2
CAFR	**Castel Frentan**	**0.69**	**101**	Pg	Pb	04 42 36.5	-0.2
SDI	**San Donato**	**0.71**	**157**	Pg	Pg	04 42 36.3	0.0
SDI	**San Donato**	**0.71**	**157**	Pg	Pg	04 42 36.3	0.0
CESI	**CESI - Serrava**	**0.75**	**329**	Pg	Pg	04 42 36.9	-0.2
CESI	**CESI - Serrava**	**0.75**	**329**	Pg	Pg	04 42 36.9	-0.2
ASSB	**Assisi San Ben**	**0.89**	**320**	Pg	Pg	04 42 39.5	-0.2
ASSB	**Assisi San Ben**	**0.89**	**320**	Pg	Pg	04 42 39.5	-0.2

*ROM **09** 04:43:09.6±0.1, 42°.50N×13°.37E, h10km, Ml4.0/14, Error ellipse: s-maj=1.1km s-min=0.8km az=82.0*
*IDC **09** 04:43:09.9±0.9, 42°.60N×13°.23E, h0km, mb3.6/7, mb1 3.7/14, mb1mx3.6/33, mbtmp3.5/14, ML3.5/7, MS2.8/1, Ms1 2.8/1, ms1mx2.2/44, Error ellipse: s-maj=17.4km s-min=13.1km az=96.0*
*LDG **09** 04:43:09.8±0.2, 42°.48N×13°.42E, h2km, Ml3.7/17, Error ellipse: s-maj=8.1km s-min=3.5km az=14.0*
*ISCJB **09** 04:43:09.4±0.2, 42°.51N±0°.01×13°.33E±0°.02, h13km±1km, mb3.6/6, Error ellipse: s-maj=2.5km s-min=1.8km az=31.7*
*CSEM **09** 04:43:09.9±0.1, 42°.51N×13°.34E, h2km, ML4.2/7, Error ellipse: s-maj=2.2km s-min=1.6km az=39.0*
*NEIC **09** 04:43:09.0, 42°.51N×13°.37E, h9km, ML4.0(VIE), ML3.7(ROM), ML3.7(PDG), After ROM.*
NEIC Felt [III] at Ascoli Piceno, Pescara and Rieti; [II] at Avezzano, Chieti, Gualdo Tadino, Guidonia, Macerata, Rocca di Papa, Rome, Spoleto, Spoltore, Sulmona and Terni. Felt in Abruzzo, Lazio, Marche and Umbria.
*PRU **09** 04:43:10.5, 42°.50N×13°.63E, h1km*
*STR **09** 04:43:18.8±0.8, 42°.92N×12°.80E, h10km, Ml3.7, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 09 04:43:10.5±0.7**, 42°.50N**±0°.02×**13°.35E**±0°.01**, h9**km±4km**, n285, σ1s.50**/371**, mb3.7**/6**, 37C-12D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.05**	**50**⇑	*i*Pg	**Pg**	**04 43 11.9**	**-0.7**
CAMP				Sg	**Sg**	**04 43 13.2**	**-0.9**
	91µm,0.7s						
CAMP	**Campotosto**	**0.05**	**50**⇑	*i*Pg	**Pg**	**04 43 11.9**	**-0.7**
CAMP				Sg	**Sg**	**04 43 13.2**	**-0.9**
	91µm,0.7s						
AQU	**L'Aquila**	**0.15**	**167**	*e*Pg	**Pg**	**04 43 13.6**	**-0.2**
AQU	**L'Aquila**	**0.15**	**167**⇑	*i*Pg	**Pg**	**04 43 13.6**	**-0.2**
AQU				Sg	**Sg**	**04 43 16.3**	**+0.2**
	43µm,0.8s						
AQU	**L'Aquila**	**0.15**	**167**⇑	*i*Pg	**Pg**	**04 43 13.6**	**-0.2**
AQU				Sg	**Sg**	**04 43 16.3**	**+0.2**
	43µm,0.8s						
TERO	**Teramo**	**0.22**	**57**⇑	*i*Pg	**Pg**	**04 43 14.3**	**-0.8**
TERO				Sg	**Sg**	**04 43 17.6**	**-0.5**
	14µm,0.6s						
TERO	**Teramo**	**0.22**	**57**⇑	*i*Pg	**Pg**	**04 43 14.3**	**-0.8**
TERO				Sg	**Sg**	**04 43 17.6**	**-0.5**
	14µm,0.6s						
LNSS	**Leonessa**	**0.25**	**294**	Pg	**Pg**	**04 43 15.6**	**-0.1**
LNSS				Sg	**Sg**	**04 43 20.0**	**+0.9**
	28µm,0.5s						
LNSS	**Leonessa**	**0.25**	**294**	Pg	**Pg**	**04 43 15.6**	**-0.1**
FAGN	**Fagnano**	**0.29**	**144**⇑	*i*Pg	**Pg**	**04 43 15.9**	**-0.4**
FAGN				Sg	**Sg**	**04 43 20.1**	**-0.1**
	17µm,0.5s						
FAGN	**Fagnano**	**0.29**	**144**⇑	*i*Pg	**Pg**	**04 43 15.9**	**-0.4**
FAGN				Sg	**Sg**	**04 43 20.1**	**-0.1**
	17µm,0.5s						
FIAM	**Fiamignano**	**0.29**	**217**⇑	*i*Pg	**Pg**	**04 43 16.1**	**-0.3**
FIAM				Sg	**Sb**	**04 43 22.1**	**-0.8**
FIAM	**Fiamignano**	**0.29**	**217**⇑	*i*Pg	**Pg**	**04 43 16.1**	**-0.3**
VCEL	**Villa Celiera**	**0.38**	**106**	Pg	**Pg**	**04 43 17.2**	**-0.7**
VCEL				Sg	**Sg**	**04 43 23.5**	**+0.6**
VCEL	**Villa Celiera**	**0.38**	**106**	Pg	**Pg**	**04 43 17.2**	**-0.7**
VCEL				Sg	**Sg**	**04 43 23.5**	**+0.6**
NRCA	**Norcia**	**0.38**	**332**	Pg	**Pg**	**04 43 17.5**	**-0.5**
NRCA				Sg	**Sg**	**04 43 23.2**	**+0.3**
	40µm,0.2s						
NRCA	**Norcia**	**0.38**	**332**	Pg	**Pg**	**04 43 17.5**	**-0.5**
NRCA				Sg	**Sg**	**04 43 23.2**	**+0.3**
	40µm,0.2s						
GAVE	**Gavelli**	**0.39**	**299**	Pg	**Pg**	**04 43 18.1**	**-0.1**
GAVE	**Gavelli**	**0.39**	**299**	Pg	**Pg**	**04 43 18.1**	**-0.1**
PTQR	**Pietraquaria**	**0.48**	**176**	Pg	**Pg**	**04 43 19.0**	**-0.9**
PTQR				Sg	**Sb**	**04 43 27.6**	**-0.7**
PTQR	**Pietraquaria**	**0.48**	**176**	Pg	**Pg**	**04 43 19.0**	**-0.9**
PTQR				Sg	**Sb**	**04 43 27.6**	**-0.7**
OFFI	**Offida**	**0.50**	**29**	Pg	**Pg**	**04 43 20.2**	**0.0**
	31µm,0.6s						
OFFI	**Offida**	**0.50**	**29**	Pg	**Pg**	**04 43 20.2**	**0.0**
	31µm,0.6s						
MNS	**Montasola**	**0.51**	**257**	Pg	**Pg**	**04 43 19.8**	**-0.6**
MNS				Sg	**Sg**	**04 43 27.7**	**+0.5**
	9µm,0.5s						
MNS	**Montasola**	**0.51**	**257**	Pg	**Pg**	**04 43 19.8**	**-0.6**
MNS				Sg	**Sg**	**04 43 27.7**	**+0.5**
	9µm,0.5s						
TRTR	**Tortoreto Alta**	**0.51**	**53**⇑	*i*Pg	**Pg**	**04 43 20.8**	**+0.3**
	13µm,0.6s						
TRTR	**Tortoreto Alta**	**0.51**	**53**⇑	*i*Pg	**Pg**	**04 43 20.8**	**+0.3**
	13µm,0.6s						
FDMO	**Fiordimonte**	**0.57**	**340**	Pg	**Pg**	**04 43 20.7**	**-0.9**
FDMO				Sg	**Sg**	**04 43 29.3**	**+0.2**
FDMO	**Fiordimonte**	**0.57**	**340**	Pg	**Pg**	**04 43 20.7**	**-0.9**
FDMO				Sg	**Sg**	**04 43 29.3**	**+0.2**
CESX	**Cesi**	**0.58**	**281**	Pg	**Pg**	**04 43 21.0**	**-0.8**
CESX				Sg	**Sg**	**04 43 30.1**	**+0.7**
	5µm,0.2s						
CESX	**Cesi**	**0.58**	**281**	Pg	**Pg**	**04 43 21.0**	**-0.8**
CESX				Sg	**Sg**	**04 43 30.1**	**+0.7**
	5µm,0.2s						
CESI	**CESI - Serrava**	**0.60**	**327**	Pg	**Pg**	**04 43 21.6**	**-0.6**
CESI				Sg	**Sg**	**04 43 30.9**	**+0.8**
	3µm,0.3s						
CESI	**CESI - Serrava**	**0.60**	**327**	Pg	**Pg**	**04 43 21.6**	**-0.6**
CERT	**Cerreto**	**0.62**	**207**	Pg	**Pg**	**04 43 21.5**	**-0.9**
	10µm,0.5s						
CERT	**Cerreto**	**0.62**	**207**	Pg	**Pg**	**04 43 21.5**	**-0.9**
	10µm,0.5s						
INTR	**Introdacqua**	**0.64**	**140**	Pg	**Pg**	**04 43 22.0**	**-0.8**
INTR				Sg	**Sg**	**04 43 31.1**	**-0.1**
INTR	**Introdacqua**	**0.64**	**140**	Pg	**Pg**	**04 43 22.0**	**-0.8**
INTR				Sg	**Sg**	**04 43 31.1**	**-0.1**
MTCE	**Montecelio**	**0.66**	**224**	Pg	**Pg**	**04 43 22.3**	**-0.9**
	2µm,0.4s						
MTCE	**Montecelio**	**0.66**	**224**	Pg	**Pg**	**04 43 22.3**	**-0.9**
	2µm,0.4s						
VVLD	**Villa Vallelon**	**0.66**	**162**	Pg	**Pg**	**04 43 22.0**	**-1.3**
	3µm,0.6s						
VVLD	**Villa Vallelon**	**0.66**	**162**	Pg	**Pg**	**04 43 22.0**	**-1.3**
	3µm,0.6s						
GUAR	**Guarcino**	**0.71**	**183**	Pg	**Pg**	**04 43 22.8**	**-1.3**
	3µm,0.6s						
GUAR	**Guarcino**	**0.71**	**183**	Pg	**Pg**	**04 43 22.8**	**-1.3**
	3µm,0.6s						
CAFR	**Castel Frentan**	**0.79**	**110**	Pg	**Pg**	**04 43 24.5**	**-1.1**
CAFR	**Castel Frentan**	**0.79**	**110**	Pg	**Pg**	**04 43 24.5**	**-1.1**
POFI	**Posta Fibreno**	**0.83**	**161**	Pg	**Pg**	**04 43 25.6**	**-0.8**
POFI	**Posta Fibreno**	**0.83**	**161**	Pg	**Pg**	**04 43 25.6**	**-0.8**
RDP	**Rocca di Papa**	**0.88**	**213**	Pg	**Pg**	**04 43 27.3**	**-0.1**
RDP	**Rocca di Papa**	**0.88**	**213**	Pg	**Pg**	**04 43 27.3**	**-0.1**
CING	**Cingoli**	**0.88**	**352**	Pg	**Pg**	**04 43 26.1**	**-1.4**
CING	**Cingoli**	**0.88**	**352**	Pg	**Pg**	**04 43 26.1**	**-1.4**
GIUL	**Giuliano Di Ro**	**0.94**	**185**	Pg	**Pg**	**04 43 27.6**	**-1.1**
GIUL	**Giuliano Di Ro**	**0.94**	**185**	Pg	**Pg**	**04 43 27.6**	**-1.1**
MURB	**Monte Urbino**	**0.97**	**322**	Pg	**Pg**	**04 43 28.2**	**-1.1**
MURB	**Monte Urbino**	**0.97**	**322**	Pg	**Pg**	**04 43 28.2**	**-1.1**
RNI2	**Rionero Sannit**	**0.99**	**143**	Pg	**Pg**	**04 43 28.4**	**-1.2**
RNI2	**Rionero Sannit**	**0.99**	**143**	Pg	**Pg**	**04 43 28.4**	**-1.2**
CERA	**Filignano**	**1.03**	**151**	Pg	**Pg**	**04 43 28.2**	**-2.1**
CERA	**Filignano**	**1.03**	**151**	Pg	**Pg**	**04 43 28.2**	**-2.1**
ARVD	**Arcevia**	**1.04**	**343**	Pg	**Pg**	**04 43 28.9**	**-1.6**
ARVD	**Arcevia**	**1.04**	**343**	Pg	**Pg**	**04 43 28.9**	**-1.6**
AOI	**Ancona**	**1.06**	**10**	Pg	**Pg**	**04 43 29.5**	**-1.4**
AOI	**Ancona**	**1.06**	**10**	Pg	**Pg**	**04 43 29.5**	**-1.4**
MIDA	**Miranda**	**1.09**	**142**	Pg	**Pg**	**04 43 29.3**	**-2.1**
MIDA	**Miranda**	**1.09**	**142**	Pg	**Pg**	**04 43 29.3**	**-2.1**
TOLF	**Tolfa**	**1.10**	**247**	Pg	**Pg**	**04 43 29.9**	**-1.6**
TOLF	**Tolfa**	**1.10**	**247**	Pg	**Pg**	**04 43 29.9**	**-1.6**
SACS	**San Casciano d**	**1.12**	**289**	Pg	**Pb**	**04 43 31.0**	**-1.1**
LATE	**Laterza**	**1.15**	**276**	Pg	**Pb**	**04 43 31.3**	**-1.3**
LATE	**Laterza**	**1.15**	**276**	Pg	**Pb**	**04 43 31.3**	**-1.3**
PIEI	**Pieia**	**1.20**	**330**	Pg	**Pb**	**04 43 31.9**	**-1.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIEI	Pieia	1.20	330	Pg	Pb	04 43 31.9	-1.4
SENI	Senigallia	1.21	356	Pg	Pb	04 43 33.1	-0.4
SENI	Senigallia	1.21	356	Pg	Pb	04 43 33.1	-0.4
ARCI	Arcidosso	1.43	285	Pn	Pn	04 43 36.7	0.0
ARCI	Arcidosso	1.43	285	Pn	Pn	04 43 36.7	0.0
PESA	Pesaro	1.49	346	Pn	Pn	04 43 37.7	+0.3
PESA	Pesaro	1.49	346	Pn	Pn	04 43 37.7	+0.3
MAON	Monte Argentar	1.65	268	Pn	Pn	04 43 38.9	-0.7
MAON	Monte Argentar	1.65	268	Pn	Pn	04 43 38.9	-0.7
MS1	Monte Sant'Ang	2.08	112	ePn	Pb	04 43 48.6	+0.1
NVLJ	Novalja	2.34	28	i Pn	Pn	04 43 48.9	-0.1
NVLJ				Sn	Sn	04 44 17.8	0.0
NVLJ	Novalja	2.34	28	i Pn	Pn	04 43 48.9	-0.1
NVLJ				Sn	Sn	04 44 17.8	0.0
MAIM	Mastiano	2.52	305	P	Pn	04 43 52.0	+0.4
CDT	Castel del Mon	2.60	122	ePn	Pn	04 43 53.8	+1.1
CDT				eSn	Sb	04 44 27.7	-1.7
VLC	Villacollemand	2.73	308	ePn	Pn	04 43 54.2	-0.3
VLC				eS	Sn	04 44 27.3	-0.2
VLC	Villacollemand	2.73	308	ePn	Pn	04 43 54.2	-0.3
VLC				eS	Sn	04 44 27.3	-0.2
BAI	Bari	2.98	117	ePn	Pn	04 43 59.0	+1.1
BAI				eSn	Sn	04 44 35.4	+1.7
SKDS	Skadanscina	3.08	9	i Pn	Pn	04 43 59.4	+0.1
SKDS				eSn	Sn	04 44 36.8	+0.5
SKDS							
	comp=Z,71nm,0.3s						
SKDS	Skadanscina	3.08	9	i Pn	Pn	04 43 59.4	+0.1
SKDS				eSn	Sn	04 44 36.8	+0.5
	comp=Z,71nm,0.3s						
KNDS	Knezji Dol	3.12	13	i Pn	Pn	04 44 01.4	+1.6
KNDS				eSn	Sn	04 44 38.8	+1.6
KNDS	Knezji Dol	3.12	13	i Pn	Pn	04 44 01.4	+1.6
KNDS				eSn	Sn	04 44 38.8	+1.6
CUC	Castrocucco	3.12	143	ePn	Pn	04 43 59.7	-0.2
CUC	Castrocucco	3.12	143	ePn	Pn	04 43 59.7	-0.2
GBRS	Gornja Briga	3.21	19	i Pn	Pn	04 44 02.6	+1.6
GBRS				i Sn	Sn	04 44 40.7	+1.4
PGF	Pioggiola	3.22	272	ePn	Pn	04 44 01.2	-0.1
PGF				eSn	Sn	04 44 41.3	+1.5
	comp=Z,13nm,0.3s						
PGF	Pioggiola	3.22	272	ePn	Pn	04 44 01.2	-0.1
PGF				eSn	Sn	04 44 41.3	+1.5
	comp=Z,6.7nm,0.3s						
TRI	Trieste	3.22	5	ePn	Pn	04 44 00.0	-1.2
TRI				eS	Sn	04 44 42.2	+2.6
TRI	Trieste	3.22	5	ePn	Pn	04 44 00.0	-1.2
TRI				eS	Sn	04 44 42.2	+2.6
STON	Ston	3.23	82	ePn	Pn	04 44 01.5	+0.2
STON				Sn	Sn	04 44 38.0	-1.8
STON	Ston	3.23	82	ePn	Pn	04 44 01.4	+0.2
STON				Sn	Sn	04 44 37.9	-1.8
SC2M	Scurtabo	3.37	306	P	Pn	04 44 03.6	+0.3
VOY	Vojsko	3.55	6	ePn	Pn	04 44 04.3	-1.5
VOY				e		04 44 06.8	
VOY				eSn	Sn	04 44 48.1	+0.2
VOY	Vojsko	3.55	6	ePn	Pn	04 44 04.3	-1.5
VOY				eSn	Sn	04 44 48.1	+0.2
BLY	Banja Luka	3.57	50	ePn	Pn	04 44 09.6	+3.5
HCY	Herceg Novi	3.80	89	⇓P	Pn	04 44 09.1	-0.1
HCY				S	Sn	04 44 54.5	+0.5
HCY	Herceg Novi	3.80	89	⇓P	Pn	04 44 09.1	-0.1
HCY				S	Sn	04 44 54.5	+0.5
BRY	Bratogost	3.84	82	⇑P	Pn	04 44 10.4	+0.5
BRY				S	Sn	04 44 56.1	+0.9
BRY	Bratogost	3.84	82	⇑P	Pn	04 44 10.4	+0.5
BRY				S	Sn	04 44 56.1	+0.9
PCP	Piancastagn	4.05	302	P	Pn	04 44 11.3	-1.3
OBKA	Obir	4.10	12	⇑iPn	Pn	04 44 14.4	+1.0
	SNR=8.1						
OBKA	Obir	4.10	12	⇑iPn	Pn	04 44 14.3	+1.0
OBKA	Obir	4.10	12	⇑iPn	Pn	04 44 14.4	+1.0
NKY	Niksic	4.17	84	⇑P	Pn	04 44 15.8	+1.4
NKY				S	Sn	04 45 03.6	+0.4
NKY	Niksic	4.17	84	⇑P	Pn	04 44 15.8	+1.4
NKY				S	Sn	04 45 03.6	+0.4
TIP	Timpagrande	4.21	141	ePn	Pn	04 44 16.4	+1.7
TIP	Timpagrande	4.21	141	ePn	Pn	04 44 16.5	+1.7
VSL	Villasalto	4.25	226	ePn	Pn	04 44 16.0	+0.6
VSL	Villasalto	4.25	226	ePn	Pn	04 44 16.0	+0.6
ABTA	Abfaltersbach	4.29	352	⇓iPn	Pn	04 44 16.3	+0.4
	SNR=32						
ABTA	Abfaltersbach	4.29	352	⇓iPn	Pn	04 44 16.4	+0.4
ABTA	Abfaltersbach	4.29	352	⇓iPn	Pn	04 44 16.4	+0.4
PDG	Podgorica	4.37	89	ePn	Pn	04 44 18.4	+1.5
TTG	Podgorica	4.37	89	⇓P	Pn	04 44 18.4	+1.5
TTG				S	Sn	04 45 08.5	+0.6
TTG	Podgorica	4.37	89	⇓P	Pn	04 44 18.4	+1.5
TTG				S	Sn	04 45 08.5	+0.6
ULC	Ulcinj	4.41	95	⇓P	Pn	04 44 18.8	+1.3
ULC				S	Sn	04 45 08.9	0.0
ULC	Ulcinj	4.41	95	⇓P	Pn	04 44 18.8	+1.3
ULC				S	Sn	04 45 08.9	0.0
SAOF	Saorge	4.49	291	P	Pn	04 44 20.1	+1.4
SAOF	Saorge	4.49	291	P	Pn	04 44 20.1	+1.4
SAOF	Saorge	4.49	291	P	Pn	04 44 20.1	+1.4
SBF	Sospel	4.54	289	ePn	Pn	04 44 19.4	0.0
SBF				eSn	Sn	04 45 09.6	-2.6
	comp=Z,59nm,0.7s						
SBF	Sospel	4.54	289	ePn	Pn	04 44 19.4	0.0
SBF				eSn	Sn	04 45 09.6	-2.6
	comp=Z,29nm,0.7s						
KBA	Koelnbreinsper	4.58	360	⇑iPn	Pn	04 44 20.4	+0.4
	SNR=9.9						
KBA	Koelnbreinsper	4.58	360	⇑iPn	Pn	04 44 20.4	+0.4
KBA	Koelnbreinsper	4.58	360	⇑iPn	Pn	04 44 20.4	+0.4
AUTN	L'Aution	4.58	291	P	Pn	04 44 20.2	+0.1
AUTN	L'Aution	4.58	291	P	Pn	04 44 20.2	+0.1
AUTN	L'Aution	4.58	291	P	Pn	04 44 20.2	+0.1
BBLS	Lazići	4.63	71	ePn	Pn	04 44 25.0	+4.4
CEL	Celeste	4.66	155	ePn	Pn	04 44 22.2	+1.2
CEL	Celeste	4.66	155	ePn	Pn	04 44 22.2	+1.2
TOUF	Mont Tournerai	4.71	291	P	Pn	04 44 23.5	+1.7
TOUF	Mont Tournerai	4.71	291	P	Pn	04 44 23.5	+1.7
TOUF	Mont Tournerai	4.71	291	P	Pn	04 44 23.5	+1.7
FETA	Feichten	4.89	338	⇑iPn	Pn	04 44 25.7	+1.4
	SNR=24						
FETA	Feichten	4.89	338	⇑iPn	Pn	04 44 25.7	+1.4
FETA	Feichten	4.89	338	⇑iPn	Pn	04 44 25.7	+1.4
CALN	Calern	4.89	287	P	Pn	04 44 24.5	+0.2
CALN	Calern	4.89	287	P	Pn	04 44 24.5	+0.2
CALN	Calern	4.89	287	P	Pn	04 44 24.5	+0.2
TUE	Stuetta	4.90	326	ePn	Pn	04 44 24.6	+0.2
TUE				eS	Sn	04 45 14.1	-7.1
TUE	Stuetta	4.90	326	ePn	Pn	04 44 24.6	+0.2
DAVOX	Davos/Dischmat	4.95	331	Pn	Pn	04 44 25.6	+0.6
	comp=Z,3.8nm,0.3s,baz=149,slow=18,SNR=25						
DAVOX				Sn	Sn	04 45 25.2	+2.8
	comp=Z,5.7nm,0.3s,baz=342,slow=20,SNR=7.2						
TIR	Tirane	4.99	101	ePn	Pn	04 44 26.5	+1.0
WATA	Walderalm	5.00	346	⇑iPn	Pn	04 44 26.1	+0.4
	SNR=9.3						
WATA	Walderalm	5.00	346	⇑iPn	Pn	04 44 26.1	+0.4
WATA	Walderalm	5.00	346	⇑iPn	Pn	04 44 26.1	+0.4
FRF	La Foret Royal	5.03	284	ePn	Pn	04 44 25.8	-0.3
	SNR=1.0						
FRF				eSn	Sn	04 45 20.6	-3.7
	comp=Z,15nm,0.6s						
FRF	La Foret Royal	5.03	284	ePn	Pn	04 44 25.8	-0.3
	SNR=1.0						
FRF				eSn	Sn	04 45 20.6	-3.7
	comp=Z,7.7nm,0.6s						
LMR	La Mourre	5.09	282	ePn	Pn	04 44 26.4	-0.5
	SNR=1.0						
LMR				eSn	Sn	04 45 22.2	-3.7
	comp=Z,21nm,0.9s						
LMR	La Mourre	5.09	282	ePn	Pn	04 44 26.4	-0.5
	SNR=1.0						
LMR				eSn	Sn	04 45 22.2	-3.7
	comp=Z,11nm,0.9s						
IVAS	Ivanjica	5.10	76	ePn	Pn	04 44 28.2	+1.2
DIVS	Divibare	5.10	70	ePn	Pn	04 44 23.2	-3.9
MOTA	Moosalm	5.10	343	⇑iPn	Pn	04 44 28.2	+1.0
	SNR=14						
MOTA	Moosalm	5.10	343	⇑iPn	Pn	04 44 28.1	+1.0
MOTA	Moosalm	5.10	343	⇑iPn	Pn	04 44 28.1	+1.0
RJOB	Jochberg	5.25	356	ePn	Pn	04 44 28.5	-0.6
RJOB				eSn	Sn	04 45 30.8	+1.0
MBDF	Montbardon	5.27	297	eP	Pn	04 44 30.8	+1.3
	SNR=1.0						
MBDF	Montbardon	5.27	297	eP	Pn	04 44 30.8	+1.3
	SNR=1.0						
DAVA	Damuels	5.38	334	⇓iPn	Pn	04 44 32.3	+1.2
	SNR=14						
DAVA	Damuels	5.38	334	⇓iPn	Pn	04 44 32.3	+1.2
DAVA	Damuels	5.38	334	⇓iPn	Pn	04 44 32.3	+1.2
MOA	Molln	5.39	7	⇑iPn	Pn	04 44 31.9	+0.9
	SNR=13						
MOA	Molln	5.39	7	⇑iPn	Pn	04 44 31.9	+0.9
MOA	Molln	5.39	7	⇑iPn	Pn	04 44 31.9	+0.9
TRUS	Trudelj	5.42	69	ePn	Pn	04 44 30.1	-1.3
BNI	Bardonecchia	5.46	300	ePn	Pn	04 44 33.6	+1.4
	comp=Z,13nm,1.0s						
BNI				eS	Sn	04 45 39.5	+4.3
BNI	Bardonecchia	5.46	300	ePn	Pn	04 44 33.6	+1.4
	comp=Z,13nm,1.0s						
GRUS	Gruza	5.56	73	ePn	Pn	04 44 33.2	-0.1
LPG	La Plagne	5.63	304	eP	Pn	04 44 36.5	+2.0
	SNR=1.0						
LPG				eSn	Sn	04 45 36.5	-2.9
	comp=Z,15nm,0.5s						
LPG	La Plagne	5.63	304	eP	Pn	04 44 36.5	+2.0
	SNR=1.0						
LPL	La Plagne	5.65	305	eP	Pn	04 44 37.2	+2.5
	SNR=1.0						
LPL				eSn	Sn	04 45 35.8	-4.0
	comp=Z,15nm,0.4s						
CONA	Conrad Observa	5.71	17	⇑iPn	Pn	04 44 34.9	-0.5
	SNR=6.1						
CONA	Conrad Observa	5.71	17	⇑iPn	Pn	04 44 34.9	-0.5
CONA	Conrad Observa	5.71	17	⇑iPn	Pn	04 44 34.9	-0.5
SMRF	Simiane la Rot	5.87	287	eP	Pn	04 44 39.0	+1.4
	SNR=1.0						
SMRF	Simiane la Rot	5.87	287	eP	Pn	04 44 39.0	+1.4
	SNR=1.0						
ORIF	Oris-en-Rattie	5.93	297	eP	Pn	04 44 41.6	+3.1
	SNR=1.0						
SKO	Skopje	6.03	92	ePn	Pn	04 44 41.1	+1.4
SKO	Skopje	6.03	92	ePn	Pn	04 44 41.5	+1.8
BIA	Bitola	6.14	101	ePn	Pn	04 44 42.4	+1.0
BIA	Bitola	6.14	101	ePn	Pn	04 44 42.3	+1.0
GEC2	GERESS Array S	6.35	2	ePn	Pn	04 44 44.4	+0.1
GEC2				eSn	Sn	04 45 55.0	-1.9
GERES	GERESS Array B	6.35	2	Pn	Pn	04 44 43.8	-0.5
	comp=Z,0.7nm,0.3s,baz=175,slow=12,SNR=18						
GERES				Sn	Sn	04 45 54.2	-2.7
	comp=Z,4.3nm,0.3s,baz=167,slow=24,SNR=10						
BBS	Basel-Blauen	6.46	322	P	Pn	04 44 47.0	+1.2
BBS				S	Sn	04 45 58.2	-1.4
BBS	Basel-Blauen	6.46	322	P	Pn	04 44 47.0	+1.2
BBS				S	Sn	04 45 58.2	-1.4
FELD	Feldberg im Sc	6.57	327	P	Pn	04 44 47.0	-0.3
FELD	Feldberg im Sc	6.57	327	P	Pn	04 44 47.0	-0.3
CABF	La Chapelle	6.62	311	ePn	Pn	04 44 47.8	-0.2
CABF	La Chapelle	6.62	311	ePn	Pn	04 44 47.8	-0.2
KHC	Kasperske Hory	6.63	1	ePn	Pn	04 44 47.6	-0.5
	comp=Z,4.9nm,0.5s						
KHC				eS	Sn	04 46 01.8	-2.0
KHC	Kasperske Hory	6.63	1	ePN	Pn	04 44 48.0	-0.1
KHC				eSN	Sn	04 46 00.4	-3.4
KHC	Kasperske Hory	6.63	1	Pn	Pn	04 44 48.0	-0.1
KHC				eS	Sn	04 46 01.8	-2.0
WET	Wettzell	6.65	357	ePn	Pn	04 44 49.3	+0.9
WET				eSn	Sn	04 45 59.7	-4.5
LOMF	Lomont	6.71	319	P	Pn	04 44 49.6	+0.5
LOMF	Lomont	6.71	319	P	Pn	04 44 49.6	+0.5
LOMF	Lomont	6.71	319	P	Pn	04 44 49.6	+0.5
VIVF	Saint-Julien-l	6.72	293	ePn	Pn	04 44 50.9	+1.6
VIVF	Saint-Julien-l	6.72	293	ePn	Pn	04 44 50.9	+1.6
BFO	Black Forest	6.82	330	ePn	Pn	04 44 50.2	-0.4
BFO				eSn	Sn	04 46 04.1	-4.2
BFO	Black Forest	6.82	330	ePn	Pn	04 44 50.5	-0.1
	comp=Z,5.8nm,0.6s						
BFO				eS	Sn	04 46 07.6	-0.7
BFO	Black Forest	6.82	330	ePn	Pn	04 44 50.5	-0.1
	comp=Z,5.8nm,0.6s						
BFO				eS	Sn	04 46 07.6	-0.7
MOF	Molkenrain	6.92	323	P	Pn	04 44 52.0	-0.1
MOF				S	Sn	04 46 10.0	-1.0
MOF	Molkenrain	6.92	323	P	Pn	04 44 52.0	-0.1
MOF				S	Sn	04 46 10.0	-1.0
MOF	Molkenrain	6.92	323	P	Pn	04 44 52.0	-0.1
MOF				S	Sn	04 46 10.0	-1.0
TREC	Trest	6.96	12	ePN	Pn	04 44 52.2	-0.3
TREC				eSN	Sn	04 46 08.0	-3.7
TREC	Trest	6.96	12	Pn	Pn	04 44 52.2	-0.3
VAY	Valandovo	6.97	97	ePn	Pn	04 44 53.5	+0.8
VAY	Valandovo	6.97	97	ePn	Pn	04 44 54.0	+1.2
HINF	Hinteralfeld	7.02	321	ePn	Pn	04 44 52.6	-0.9
	SNR=1.0						
HINF				eSn	Sn	04 46 10.1	-3.3
	comp=Z,54nm,0.5s						
HINF	Hinteralfeld	7.02	321	ePn	Pn	04 44 52.6	-0.9
	SNR=1.0						
LASF	Ste Croix	7.11	286	ePn	Pn	04 44 54.4	-0.2
LASF	Ste Croix	7.11	286	ePn	Pn	04 44 54.4	-0.2
VYHS	Vyhne	7.12	31	ePN	Pn	04 44 55.1	+0.3
VYHS				eSN	Sn	04 46 11.5	-4.3
VYHS	Vyhne	7.12	31	ePn	Pn	04 44 55.2	+0.4
VRAC	Vranov	7.17	17	LR	LR	04 48 05.7	
	comp=Z,66nm,18.3s,baz=230,slow=42						
ECH	Echery	7.19	325	ePn	Pn	04 44 54.6	-1.1
	comp=Z,7.5nm,0.6s						
ECH				eS	Sn	04 46 14.7	-2.8
ECH	Echery	7.19	325	P	Pn	04 44 55.4	-0.3
ECH				S	Sn	04 46 15.7	-1.7
ECH	Echery	7.19	325	ePn	Pn	04 44 54.6	-1.1
	comp=Z,7.5nm,0.6s						
ECH	Echery	7.19	325	P	Pn	04 44 55.4	-0.3
ECH				S	Sn	04 46 15.7	-1.7
CDF	Champ du Feu	7.29	326	ePn	Pn	04 44 56.0	-1.2
	SNR=1.0						
CDF				eSn	Sn	04 46 16.9	-3.2
	comp=Z,37nm,0.4s						
CDF	Champ du Feu	7.29	326	ePn	Pn	04 44 56.0	-1.2
	SNR=1.0						
ROTZ	Rotzenmuhle	7.31	354	eSn	Sn	04 46 16.2	-4.2
HAU	Haudompre	7.40	320	ePn	Pn	04 44 58.1	-0.5
	SNR=1.0						
HAU				eSn	Sn	04 46 17.7	-4.8
	comp=Z,63nm,0.4s						
HAU	Haudompre	7.40	320	ePn	Pn	04 44 58.1	-0.5
	SNR=1.0						
KEST	Kesra	7.44	206	ePn	Pn	04 45 04.3	+5.0
KEST	Kesra	7.44	206	Pn	Pn	04 45 02.0	+2.8
	comp=Z,0.5nm,0.3s,baz=330,slow=4.9,SNR=15						
PRU	Pruhonice	7.53	6	eSN	Sn	04 46 22.3	-3.6
THEF	They Montfort	7.72	320	P	Pn	04 45 02.1	-0.9
THEF	They Montfort	7.72	320	P	Pn	04 45 02.1	-0.9
THEF	They Montfort	7.72	320	P	Pn	04 45 02.1	-0.9
NKC	Novy Kostel	7.76	356	eSN	Sn	04 46 28.6	-2.9
SMF	Signal de Mont	7.95	305	ePn	Pn	04 45 05.7	-0.5
SMF				eSn	Sn	04 46 31.2	-5.1
	comp=Z,16nm,0.7s						
SMF	Signal de Mont	7.95	305	ePn	Pn	04 45 05.7	-0.5
PAGF	Fort de Pagny	8.08	321	ePn	Pn	04 45 08.6	+0.7
PAGF	Fort de Pagny	8.08	321	ePn	Pn	04 45 08.6	+0.7
SFTF	Sexfontaines	8.17	317	ePn	Pn	04 45 08.0	-1.2
SFTF				eSn	Sn	04 46 36.0	-5.6
	comp=Z,31nm,0.8s						
SFTF	Sexfontaines	8.17	317	ePn	Pn	04 45 08.0	-1.2
MOX	Moxa	8.23	352	eSn	Sn	04 46 38.9	-4.2
LOR	Lormes	8.25	309	ePn	Pn	04 45 09.2	-1.1
	SNR=1.0						
LOR				eSn	Sn	04 46 37.7	-5.9
	comp=Z,12nm,0.5s,SNR=1.0						
LOR	Lormes	8.25	309	ePn	Pn	04 45 09.2	-1.1
	SNR=1.0						
AVF	Avril sur Loir	8.32	304	ePn	Pn	04 45 11.0	-0.2
AVF	Avril sur Loir	8.32	304	ePn	Pn	04 45 11.0	-0.2
SSF	Saint Saulge	8.36	306	ePn	Pn	04 45 11.7	0.0
SSF	Saint Saulge	8.36	306	ePn	Pn	04 45 11.7	0.0
MEZF	Maizieres J'vi	8.36	319	ePn	Pn	04 45 11.3	-0.5
MEZF				eSn	Sn	04 46 42.5	-3.8
	comp=Z,19nm,0.6s						
MEZF	Maizieres J'vi	8.36	319	ePn	Pn	04 45 11.3	-0.5
BRG	Berggiesshubel	8.38	3	PN	Pn	04 45 16.6	+4.5
BRG				e		04 46 43.2	
BRG				e		04 47 56.6	
BRG							
	comp=N,167nm,14.8s						
BRG							
	comp=E,206nm,29.3s						
BRG							
	comp=Z,210nm,17.0s						
CAF	Calviac	8.53	290	eP	Pn	04 45 15.0	+0.9
	SNR=1.0						
CAF				eSn	Sn	04 46 44.5	-5.9
	comp=Z,0.6nm,0.3s						
CAF	Calviac	8.53	290	eP	Pn	04 45 15.0	+0.9
	SNR=1.0						
BGF	Bois d'Agland	8.53	302	eP	Pn	04 45 13.5	-0.6
BGF				eSn	Sn	04 46 45.7	-4.7
	comp=Z,7.1nm,0.7s						
BGF	Bois d'Agland	8.53	302	eP	Pn	04 45 13.5	-0.6
WLF	Walferdange	8.73	328	eSn	Sn	04 46 56.4	+1.0
TCF	Toulx Ste Croi	8.83	299	ePn	Pn	04 45 18.9	+0.7
TCF	Toulx Ste Croi	8.83	299	ePn	Pn	04 45 18.9	+0.7
RJF	Les Rejaudoux	8.99	292	eP	Pn	04 45 22.5	+2.0
RJF	Les Rejaudoux	8.99	292	eP	Pn	04 45 22.5	+2.0
LFF	La Frestale	9.45	289	eP	Pn	04 45 28.3	+1.6
LFF	La Frestale	9.45	289	eP	Pn	04 45 28.3	+1.6
MLR	Muntele Rosu	9.55	67	Pn	Pn	04 45 31.6	+3.3
	comp=Z,0.1nm,0.3s,baz=223,slow=6.3,SNR=4.8						
GIVF	Givet	9.62	325	ePn	Pn	04 45 30.4	+1.4
GIVF				eSn	Sn	04 47 11.3	-5.8
	comp=Z,6.6nm,0.4s						
GIVF	Givet	9.62	325	ePn	Pn	04 45 30.4	+1.4
BAIF	Baives	9.85	323	ePn	Pn	04 45 32.3	+0.1
BAIF				eSn	Sn	04 47 17.6	-5.2
	comp=Z,2.4nm,0.2s						
BAIF	Baives	9.85	323	ePn	Pn	04 45 32.3	+0.1
MFF	Saint Martin d	10.47	298	eP	Pn	04 45 43.6	+3.0
	SNR=1.0						
ESDC	Sonseca Array	13.37	264	Pn	Pn	04 46 20.2	-0.1
	comp=Z,0.1nm,0.3s,baz=63,slow=14,SNR=4.4						
BRTR	Keskin Array B	15.54	93	Pn	Pn	04 46 50.3	+0.5
	comp=Z,0.0nm,0.3s,baz=285,slow=13,SNR=2.6						
NOA	NORSAR Array B	18.61	357	P	Pn	04 47 28.5	+0.3
	comp=Z,0.1nm,0.3s,baz=189,slow=14,SNR=3.1						
FINES	FINESS Array B	20.45	18	P	P	04 47 47.4	-0.6
	comp=Z,2.9nm,0.7s,baz=202,slow=10,SNR=6.1						
KBZ	Khabaz	21.55	77	P	P	04 48 02.0	+2.0
	comp=Z,4.7nm,0.9s,baz=296,slow=7.7,SNR=6.7						
TORD	Torodi Ar. Bea	30.95	203	P	P	04 49 28.1	+0.3
	comp=Z,0.6nm,0.7s,baz=15,slow=8.2,SNR=9.6						
MKAR	Makanchi Array	47.80	60	P	P	04 51 48.1	+0.1
	comp=Z,0.4nm,0.6s,baz=285,slow=6.4,SNR=8.5						
SONM	Songino Array	61.90	50	P	P	04 53 30.6	+0.4
	comp=Z,0.8nm,1.0s,baz=290,slow=5.6,SNR=4.8						
YKA	Yellowknife Ar	67.36	337	P	P	04 54 05.5	+0.1
	comp=Z,0.3nm,0.7s,baz=38,slow=5.8,SNR=9.5						
ILAR	Eielson Array	71.95	351	P	P	04 54 35.3	+1.6
	comp=Z,0.3nm,0.8s,baz=14,slow=4.1,SNR=4.1						

IDC 09 05:03:35.9±1.9**, 1.05N×125.49E, h0km, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/22**, mbtmp3.4**/3**, Error ellipse: s-maj=183.3km s-min=25.4km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.59	158	P	P	05 08 38.0	-0.3
	0.4nm,0.3s,baz=336,slow=11,SNR=6.1						
ASAR	Alice Springs	25.89	162	P	P	05 09 10.0	+0.2
	0.2nm,0.3s,baz=345,slow=6.7,SNR=4.3						
MKAR	Makanchi Array	59.07	327	P	P	05 13 38.0	0.0
	0.4nm,0.5s,baz=122,slow=8.4,SNR=8.0						

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*ISCJB **09** 05:09:06.8±0.3, 42.38N±0.02×13.31E±0.03, h15km±3km, Error ellipse: s-maj=3.7km s-min=3.2km az=158.5*

*CSEM **09** 05:09:07.2±0.1, 42.38N×13.32E, h10km, ML3.5/7, Error ellipse: s-maj=2.1km s-min=1.6km az=65.0*

*ROM **09** 05:09:07.1±0.1, 42.38N×13.32E, h10km, Ml3.0/26, Error ellipse: s-maj=1.0km s-min=0.9km az=82.0*

ISC 09 05:09:07.3±0.8**, 42.39N**±0.02×**13.34E**±0.02**, h14**km±4km**, n67, σ0.59**/92**, 20C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	123	⇑iPg	Pg	05 09 09.9	-0.3
AQU				Sg	Sg	05 09 11.3	-0.7
AQU	L'Aquila	0.06	123	⇑iPg	Pg	05 09 09.9	-0.3
AQU				Sg	Sg	05 09 11.3	-0.7
CAMP	Campotosto	0.16	20	⇑iPg	Pg	05 09 11.3	-0.1
CAMP				Sg	Sg	05 09 13.9	-0.3
CAMP	Campotosto	0.16	20	⇑iPg	Pg	05 09 11.3	-0.1
CAMP				Sg	Sg	05 09 13.9	-0.3
FIAM	Fiamignano	0.20	234	⇑iPg	Pg	05 09 12.1	+0.1
FIAM				Sg	Sg	05 09 15.1	0.0
	4μm,0.6s						
FIAM	Fiamignano	0.20	234	⇑iPg	Pg	05 09 12.1	+0.1
FIAM				Sg	Sg	05 09 15.1	0.0
	4μm,0.6s						
FAGN	Fagnano	0.22	123	⇑iPg	Pg	05 09 12.4	+0.2
FAGN				Sg	Sg	05 09 16.3	+0.7
	16μm,0.5s						
FAGN	Fagnano	0.22	123	⇑iPg	Pg	05 09 12.4	+0.2
FAGN				Sg	Sg	05 09 16.3	+0.7
	16μm,0.5s						
LNSS	Leonessa	0.31	315	⇑iPg	Pg	05 09 13.8	0.0
LNSS				Sg	Sg	05 09 18.7	+0.5
	2μm,0.4s						
LNSS	Leonessa	0.31	315	⇑iPg	Pg	05 09 13.8	0.0
LNSS				Sg	Sg	05 09 18.7	+0.5
	2μm,0.4s						
TERO	Teramo	0.31	40	⇑iPg	Pg	05 09 13.6	-0.2
TERO				Sg	Sg	05 09 18.2	0.0
	3μm,0.6s						
TERO	Teramo	0.31	40	⇑iPg	Pg	05 09 13.6	-0.2
TERO				Sg	Sg	05 09 18.2	0.0
	3μm,0.6s						
PTQR	Pietraquaria	0.37	172	⇑iPg	Pg	05 09 14.8	0.0
PTQR				Sg	Sg	05 09 20.3	+0.4
PTQR	Pietraquaria	0.37	172	⇑iPg	Pg	05 09 14.8	0.0
PTQR				Sg	Sg	05 09 20.3	+0.4
VCEL	Villa Celiera	0.37	88	Pg	Pg	05 09 15.2	+0.3
VCEL				Sg	Sb	05 09 21.6	+0.1
	4μm,0.4s						
VCEL	Villa Celiera	0.37	88	Pg	Pg	05 09 15.2	+0.3
VCEL				Sg	Sb	05 09 21.6	+0.1
	4μm,0.4s						
NRCA	Norcia	0.48	340	Pg	Pg	05 09 16.6	-0.2
NRCA	Norcia	0.48	340	Pg	Pg	05 09 16.6	-0.2
MNS	Montasola	0.48	270	⇑iPg	Pg	05 09 16.7	-0.2
	744nm,0.6s						
MNS	Montasola	0.48	270	⇑iPg	Pg	05 09 16.7	-0.2
	744nm,0.6s						
CERT	Cerreto	0.51	211	⇑iPg	Pg	05 09 17.2	-0.2
CERT				Sg	Sg	05 09 24.5	+0.3
	2μm,0.5s						
CERT	Cerreto	0.51	211	⇑iPg	Pg	05 09 17.2	-0.2
CERT				Sg	Sg	05 09 24.5	+0.3
	2μm,0.5s						
VVLD	Villa Vallelon	0.56	157	Pg	Pg	05 09 17.8	-0.5
	934nm,0.5s						
VVLD	Villa Vallelon	0.56	157	Pg	Pg	05 09 17.8	-0.5
	934nm,0.5s						
INTR	Introdacqua	0.56	131	Pg	Pg	05 09 18.1	-0.3
INTR				Sg	Sb	05 09 27.2	+0.3
	748nm,0.4s						
INTR	Introdacqua	0.56	131	Pg	Pg	05 09 18.1	-0.3
INTR				Sg	Sb	05 09 27.2	+0.3
	748nm,0.4s						
MTCE	Montecelio	0.57	231	Pg	Pg	05 09 18.2	-0.3
	429nm,0.6s						
MTCE	Montecelio	0.57	231	Pg	Pg	05 09 18.2	-0.3
	429nm,0.6s						
GUAR	Guarcino	0.59	182	Pg	Pg	05 09 18.5	-0.4
	629nm,0.5s						
GUAR	Guarcino	0.59	182	Pg	Pg	05 09 18.5	-0.4
	629nm,0.5s						
TRTR	Tortoreto Alta	0.60	45	Pg	Pb	05 09 20.1	+0.5
	3μm,0.8s						
TRTR	Tortoreto Alta	0.60	45	Pg	Pb	05 09 20.1	+0.5
	3μm,0.8s						
CESX	Cesi	0.60	292	Pg	Pg	05 09 18.6	-0.5
	421nm,0.5s						
CESX	Cesi	0.60	292	Pg	Pg	05 09 18.6	-0.5
	421nm,0.5s						
OFFI	Offida	0.61	25	⇑iPg	Pb	05 09 19.8	+0.1
	2μm,0.5s						
OFFI	Offida	0.61	25	⇑iPg	Pb	05 09 19.8	+0.1
	2μm,0.5s						
FDMO	Fiordimonte	0.68	344	Pg	Pg	05 09 20.2	-0.3
	212nm,0.4s						
FDMO	Fiordimonte	0.68	344	Pg	Pg	05 09 20.2	-0.3
	212nm,0.4s						
CESI	CESI - Serrava	0.70	333	Pg	Pg	05 09 20.9	0.0

	160nm,0.5s						
CESI	CESI - Serrava	0.70	333	Pg	Pg	05 09 20.9	0.0
	160nm,0.5s						
POFI	Posta Fibreno	0.72	157	Pg	Pg	05 09 21.3	-0.1
	293nm,0.6s						
POFI	Posta Fibreno	0.72	157	Pg	Pg	05 09 21.3	-0.1
	293nm,0.6s						
SDI	San Donato	0.76	152	Pg	Pb	05 09 22.4	0.0
	128nm,0.3s						
SDI	San Donato	0.76	152	Pg	Pb	05 09 22.4	0.0
	128nm,0.3s						
CAFR	Castel Frentan	0.77	102	Pg	Pb	05 09 22.4	0.0
	818nm,0.4s						
CAFR	Castel Frentan	0.77	102	Pg	Pb	05 09 22.4	0.0
	818nm,0.4s						
ASSB	Assisi San Ben	0.82	323	Pg	Pg	05 09 22.7	-0.6
	295nm,0.8s						
ASSB	Assisi San Ben	0.82	323	Pg	Pg	05 09 22.7	-0.6
	295nm,0.8s						
GIUL	Giuliano Di Ro	0.83	184	Pg	Pg	05 09 22.6	-0.8
	678nm,1.1s						
GIUL	Giuliano Di Ro	0.83	184	Pg	Pg	05 09 22.6	-0.8
	678nm,1.1s						
RNI2	Rionero Sannit	0.91	138	Pg	Pb	05 09 25.2	+0.2
	450nm,0.8s						
RNI2	Rionero Sannit	0.91	138	Pg	Pb	05 09 25.2	+0.2
	450nm,0.8s						
CERA	Filignano	0.94	147	Pg	Pg	05 09 24.3	-1.1
	428nm,0.8s						
CERA	Filignano	0.94	147	Pg	Pg	05 09 24.3	-1.1
	428nm,0.8s						
CING	Cingoli	0.99	354	Pg	Pb	05 09 25.8	-0.5
	263nm,0.6s						
CING	Cingoli	0.99	354	Pg	Pb	05 09 25.8	-0.5
	263nm,0.6s						
MIDA	Miranda	1.01	137	Pg	Pb	05 09 25.6	-1.0
	294nm,0.9s						
MIDA	Miranda	1.01	137	Pg	Pb	05 09 25.6	-1.0
	294nm,0.9s						
MGAB	Montegabbione	1.04	301	Pg	Pb	05 09 27.1	-0.1
	277nm,0.4s						
MGAB	Montegabbione	1.04	301	Pg	Pb	05 09 27.1	-0.1
	277nm,0.4s						
MURB	Monte Urbino	1.06	326	Pg	Pb	05 09 27.2	-0.3
	418nm,0.4s						
MURB	Monte Urbino	1.06	326	Pg	Pb	05 09 27.2	-0.3
	418nm,0.4s						
MS1	Monte Sant'Ang	2.06	108	ePn	Pg	05 09 46.0	-0.8
MS1				eSn	Sg	05 10 12.1	-1.4
NVLJ	Novalja	2.45	27	i Pn	Pn	05 09 48.3	+1.5
NVLJ				Sn	Sb	05 10 19.1	-1.9
NVLJ	Novalja	2.45	27	i Pn	Pn	05 09 48.2	+1.5
NVLJ				Sn	Sb	05 10 19.1	-1.9
STON	Ston	3.26	80	ePn	Pn	05 09 57.6	-0.3
STON				Sn	Sn	05 10 37.3	+0.9
STON	Ston	3.26	80	ePn	Pn	05 09 57.6	-0.3
STON				Sn	Sn	05 10 37.3	+0.9

*IDC **09** 05:18:14.8±3.2, 38°.93N×74°.79E, h0km, mb3.2/2, mb1 3.4/5, mb1mx3.2/30, mbtmp3.3/5, ML3.1/3, Error ellipse: s-maj=51.7km s-min=30.6km az=62.0*

ISC 09 05:18:18.9±2.9**, 38°.9N**±0°.2×**75°.0E**±0°.1**, h10**km**, n8,** σ1s38/6**, 2C-2D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	3.73	355	Pn	Pn	05 19 17.6	+0.9
	1.2nm,0.3s,baz=177,slow=15,SNR=8.4						
AAK				Pg	Pb	05 19 22.6	-2.4
	2.4nm,0.3s,baz=158,slow=11,SNR=23						
AAK				Lg	Lg	05 20 01.5	
	1.7nm,0.3s,baz=8.1,slow=14,SNR=4.8						
TKM2	Tokmak 2	4.03	7	⇓Pn	Pn	05 19 21.7	+0.8
	14nm,0.4s						
TKM2				⇑Sn	Sn	05 20 08.1	-0.2
	26nm,0.6s						
KK31	Karatay Array	5.36	323	⇑Pn	Pn	05 19 40.1	+1.1
	0.9nm,0.3s,baz=134,slow=13,SNR=6.7						
KK31				⇓Sn	Sn	05 20 39.4	-1.5
	2.8nm,0.5s,baz=139,slow=24,SNR=4.2						
CEP	Cherat	5.64	207	P	Pb	05 19 53.4	-4.1
MKAR	Makanchi Array	9.54	32	Pn	Pn	05 20 34.5	-1.8
	0.1nm,0.3s,baz=216,slow=14,SNR=7.8						
ZALV	Zalesovo Beam	16.48	21	Pn	Pn	05 22 06.7	-3.3
	0.1nm,0.3s,baz=203,slow=14,SNR=5.2						
SONM	Songino Array	24.40	58	P	P	05 23 36.5	-1.0
	0.4nm,0.6s,baz=256,slow=8.6,SNR=4.0						
YKA	Yellowknife Ar	78.65	5	P	P	05 30 17.8	-2.8
	0.1nm,0.5s,baz=354,slow=5.5,SNR=6.3						

*CSEM **09** 05:26:25.4, 42°.46N×13°.43E, h9km, MD1.8/7, After ROM*

ROM 09 05:26:25.4±0.1**, 42°.46N×13°.43E, h9**km**, Md1.8**/7**, Ml1.9**/3**, 4C, Error ellipse: s-maj=1.2km s-min=1.0km az=115.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	Campotosto	0.07	351	⇑iPg	Pg	05 26 28.3	+0.6
CAMP				Sg	Sg	05 26 30.1	+0.7
	52nm,0.3s						
CAMP	Campotosto	0.07	351	⇑iPg	Pg	05 26 28.3	+0.6
CAMP				Sg	Sg	05 26 30.1	+0.7
	52nm,0.3s						
AQU	L'Aquila	0.11	189	Pg	Pg	05 26 28.5	+0.4
AQU				Sg	Sg	05 26 30.5	+0.5
	455nm,0.4s						
AQU	L'Aquila	0.11	189	Pg	Pg	05 26 28.5	+0.4
AQU				Sg	Sg	05 26 30.5	+0.5
	455nm,0.4s						
TERO	Teramo	0.21	39	⇑iPg	Pg	05 26 30.1	+0.3
TERO				Sg	Sg	05 26 33.5	+0.8
	57nm,0.1s						
TERO	Teramo	0.21	39	⇑iPg	Pg	05 26 30.1	+0.3
TERO				Sg	Sg	05 26 33.5	+0.8
	57nm,0.1s						
VCEL	Villa Celiera	0.32	102	Pg	Pb	05 26 32.8	-0.6
VCEL				Sg	Sb	05 26 37.9	-0.9
VCEL	Villa Celiera	0.32	102	Pg	Pb	05 26 32.8	-0.6
VCEL				Sg	Sb	05 26 37.9	-0.9
LNSS	Leonessa	0.32	296	Pg	Pb	05 26 32.7	-0.7
LNSS				Sg	Sb	05 26 37.7	-1.1
LNSS	Leonessa	0.32	296	Pg	Pb	05 26 32.7	-0.7
LNSS				Sg	Sb	05 26 37.7	-1.1
NRCA	Norcia	0.44	328	Pg	Pg	05 26 34.4	+0.3
NRCA				Sg	Sb	05 26 41.2	-1.0
NRCA	Norcia	0.44	328	Pg	Pg	05 26 34.4	+0.3
NRCA				Sg	Sb	05 26 41.2	-1.0

*CSEM **09** 05:26:46.4, 42°.39N×13°.39E, h10km, MD1.4/4, After ROM*

ROM 09 05:26:46.4±0.1**, 42°.39N×13°.39E, h10**km±1km**, Md1.4**/4**, Ml1.9**/2**, Error ellipse: s-maj=1.7km s-min=1.5km az=43.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	169	Pg	Pg	05 26 49.1	+0.6
AQU				Sg	Sg	05 26 50.5	+0.5
AQU	L'Aquila	0.04	169	Pg	Pg	05 26 49.1	+0.6
AQU				Sg	Sg	05 26 50.5	+0.5
CAMP	Campotosto	0.14	5	Pg	Pg	05 26 50.4	+0.5
CAMP				Sg	Sg	05 26 52.9	+0.5
CAMP	Campotosto	0.14	5	Pg	Pg	05 26 50.4	+0.5
CAMP				Sg	Sg	05 26 52.9	+0.5
FAGN	Fagnano	0.19	132	Pg	Pg	05 26 51.3	+0.7
FAGN				Sg	Sg	05 26 54.0	+0.6
	399nm,0.3s						
FAGN	Fagnano	0.19	132	Pg	Pg	05 26 51.3	+0.7
FAGN				Sg	Sg	05 26 54.0	+0.6
	399nm,0.3s						
TERO	Teramo	0.28	34	Pg	Pg	05 26 52.8	+0.6
TERO				Sg	Sb	05 26 57.2	-1.2
	70nm,0.3s						
TERO	Teramo	0.28	34	Pg	Pg	05 26 52.8	+0.6
TERO				Sg	Sb	05 26 57.2	-1.2
	70nm,0.3s						
LNSS	Leonessa	0.33	309	Pg	Pg	05 26 53.4	+0.1
LNSS				Sg	Sb	05 26 59.0	-1.1
LNSS	Leonessa	0.33	309	Pg	Pg	05 26 53.4	+0.1
LNSS				Sg	Sb	05 26 59.0	-1.1

IDC 09 05:26:55.8±5.2**, 36°.64S×78°.50E, h0**km**, mb4.0**/5**, mb1 4.1**/5**, mb1mx3.7**/22**, mbtmp4.0**/5**, MS3.9**/11**, Ms1 3.9**/11**, ms1mx3.6**/32**, Error ellipse: s-maj=194.4km s-min=33.9km az=28.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	31.88	95	LR	LR	05 43 07.3	
	comp=Z,257nm,20.5s,baz=90,slow=30						
MAW	Mawson	32.26	191	LR	LR	05 44 18.2	
	comp=Z,676nm,18.5s,baz=234,slow=32						
OPO	Ambohidratompo	32.87	295	LR	LR	05 42 57.9	
	comp=Z,200nm,21.0s,baz=355,slow=29						
PSI	Prapat	43.62	30	LR	LR	05 48 45.4	
	comp=Z,137nm,18.9s,baz=199,slow=30						
BOSA	Boshof	45.07	264	LR	LR	05 51 25.0	
	comp=Z,104nm,18.0s,baz=164,slow=33						
FITZ	Fitzroy Crossi	45.26	79	LR	LR	05 52 01.6	
	comp=Z,66nm,20.5s,baz=206,slow=33						
ASAR	Alice Springs	49.01	91	P	P	05 35 45.4	+0.8
	0.9nm,1.0s,baz=236,slow=6.7,SNR=6.4						
ASAR				LR	LR	05 54 00.5	
	comp=Z,154nm,20.2s,baz=161,slow=33						
KAPI	Kappang	49.16	60	LR	LR	05 54 13.2	
	comp=Z,70nm,20.1s,baz=21,slow=33						
WRA	Warramunga Arr	51.22	87	P	P	05 36 00.3	-1.0
	1.8nm,1.0s,baz=237,slow=7.9,SNR=5.5						
STKA	Stephens Creek	51.55	104	LR	LR	05 53 09.8	
	comp=Z,139nm,21.6s,baz=205,slow=30						
CMAR	Chiang Mai Arr	58.11	23	LR	LR	05 56 38.1	
	comp=Z,45nm,18.3s,baz=72,slow=31						
CTA	Charters Tower	60.72	94	LR	LR	06 00 54.5	
	comp=Z,169nm,18.9s,baz=231,slow=34						
MKAR	Makanchi Array	83.13	3	P	P	05 39 22.6	-0.6
	0.5nm,0.7s,baz=191,slow=7.0,SNR=4.2						
BRTR	Keskin Array B	86.48	327	P	P	05 39 40.2	-0.1
	0.5nm,0.7s,baz=139,slow=5.5,SNR=2.6						
KURBB	Kurchatov Arra	86.89	0	P	P	05 39 42.5	+0.6
	0.2nm,0.3s,baz=176,slow=5.1,SNR=4.5						

*CSEM **09** 05:27:02.0, 42°.39N×13°.34E, h11km, MD1.6/1, After ROM*

ROM 09 05:27:02.0±0.1**, 42°.39N×13°.34E, h11**km**, Md1.6**/1**, Ml1.7**/1**, 2C-2D, Error ellipse: s-maj=1.6km s-min=1.3km az=137.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	126	⇑iPg	Pg	05 27 04.9	+0.5
AQU				Sg	Sg	05 27 06.6	+0.5
AQU	L'Aquila	0.06	126	⇑iPg	Pg	05 27 04.9	+0.5
AQU				Sg	Sg	05 27 06.6	+0.5
CAMP	Campotosto	0.16	20	⇓iPg	Pg	05 27 06.4	+0.6
CAMP				Sg	Sg	05 27 09.2	+0.7
CAMP	Campotosto	0.16	20	⇓iPg	Pg	05 27 06.4	+0.6
CAMP				Sg	Sg	05 27 09.2	+0.7
LNSS	Leonessa	0.31	314	Pg	Pg	05 27 08.7	+0.3
LNSS				Sg	Sg	05 27 13.5	+0.8
LNSS	Leonessa	0.31	314	Pg	Pg	05 27 08.7	+0.3
LNSS				Sg	Sg	05 27 13.5	+0.8
TERO	Teramo	0.31	40	Pg	Pg	05 27 08.7	+0.4
TERO				Sg	Sg	05 27 13.4	+0.9
	70nm,0.3s						
TERO	Teramo	0.31	40	Pg	Pg	05 27 08.7	+0.4
TERO				Sg	Sg	05 27 13.4	+0.9
	70nm,0.3s						

*ISCJB **09** 05:38:41.6±0.6, 36°.43N±0°.02×36°.98E±0°.03, h8km±4km, Error ellipse: s-maj=4.3km s-min=3.4km az=135.5*
*ISK **09** 05:38:42.1, 36°.49N×36°.90E, h5km, MD3.1*
*DDA **09** 05:38:42.9, 36°.61N×36°.74E, h8km, MD3.1*
*NSSC **09** 05:38:42.0±1.6, 35°.78N×37°.10E, h3km±7km, MD1.1, ML2.7*
*CSEM **09** 05:38:42.1±0.2, 36°.43N×36°.96E, h10km, MD3.1, Error ellipse: s-maj=4.8km s-min=3.8km az=164.0*

ISC 09 05:38:41.7±1.1**, 36°.46N**±0°.02×**36°.99E**±0°.02**, h11**km±9km**, n49,** σ0s66/71**, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUZU	Kuzuini	0.32	12	i P	Pb	05 38 49.5	0.0
KUZU				i S	Sb	05 38 54.9	+0.1
KUZU	Kuzuini	0.32	12	i P	Pb	05 38 49.5	0.0
KUZU				i S	Sb	05 38 54.9	+0.1
BTCH	Batrach	0.60	226	eP	Pg	05 38 53.5	+0.1
BTCH				eS	Sg	05 39 01.4	+0.1
BTCH				AML	AML	05 39 02.6	
	comp=N,2µm,0.3s						
BTCH				AML	AML	05 39 02.7	
	comp=E,995nm,0.3s						
BTCH	Batrach	0.60	226	eP	Pg	05 38 53.5	+0.1
	SNR=75						
GAZ	Gaziantep	0.74	14	ePG	Pb	05 38 56.5	-0.1
GAZ				eSG	Sb	05 39 06.5	-0.2
GAZ	Gaziantep	0.74	14	ePg	Pb	05 38 56.5	-0.1
GAZ				eSg	Sb	05 39 06.5	-0.2
HTY	Hatay	0.77	244	ePG	Pg	05 38 55.8	-0.7
HTY				eSG	Sg	05 39 06.4	-0.1
HTY	Hatay	0.77	244	ePg	Pg	05 38 55.8	-0.7
HTY				eSg	Sg	05 39 06.4	-0.1
SLMH	Al Salmeh	0.79	107	i P	Pb	05 38 57.5	0.0
SLMH				eS	Sb	05 39 08.6	+0.3
SLMH				AML	AML	05 39 14.7	
	comp=Z,173nm,0.2s						
SLMH	Al Salmeh	0.79	107	i P	Pb	05 38 57.5	0.0
	SNR=75						
SLMH				eS	Sb	05 39 08.6	+0.3
	comp=Z,173nm,0.2s,SNR=59						
YAYL	Yayladag	0.83	240	i P	Pg	05 38 57.5	-0.2
YAYL				i S	Sg	05 39 08.7	+0.1
YAYL	Yayladag	0.83	240	i P	Pg	05 38 57.5	-0.2
YAYL				i S	Sg	05 39 08.7	+0.1
AYKD	Aykdinkavak	0.97	351	i P	Pg	05 38 59.9	-0.4
AYKD				i S	Sb	05 39 13.7	+0.4
GZT	Gaziantep	1.01	27	i P	Pn	05 39 01.7	-0.2
GZT				i S	Sg	05 39 14.8	+0.5
KMRS	Kahramanmaras	1.05	356	ePG	Pn	05 39 02.3	-0.1
KMRS				eSG	Sn	05 39 16.4	-0.6
KMRS	Kahramanmaras	1.05	356	ePg	Pn	05 39 02.3	-0.1
CEYT	Ceyhan	1.14	299	ePG	Pg	05 39 03.5	-0.1
CEYT	Ceyhan	1.14	299	ePg	Pg	05 39 03.5	-0.1
ANDN	Andirin	1.23	335	i P	Pg	05 39 05.8	+0.4
ANDN				i S	Sn	05 39 21.6	-0.1
ANDN	Andirin	1.23	335	i P	Pg	05 39 05.8	+0.4
ANDN				i S	Sn	05 39 21.6	-0.1
KRTS	Karatas	1.31	276	ePN	Pb	05 39 06.1	-0.1
KRTS	Karatas	1.31	276	ePn	Pb	05 39 06.1	-0.1
KOZT	Kozan	1.38	318	ePN	Pg	05 39 07.8	-0.4
KOZT	Kozan	1.38	318	ePn	Pg	05 39 07.8	-0.4
KSRV	Kasrt alli	1.73	109	eP	Pn	05 39 12.2	+0.5
KSRV				eS	Sn	05 39 32.7	-1.1
KSRV				AML	AML	05 39 43.3	
	comp=Z,116nm,0.3s						
KSRV	Kasrt alli	1.73	109	eP	Pn	05 39 12.2	+0.5
	SNR=45						
KSRV				eS	Sn	05 39 32.7	-1.1
	comp=Z,116nm,0.3s,SNR=40						
URFA	Urfa	1.77	56	ePN	Pb	05 39 14.8	+0.7
URFA	Urfa	1.77	56	ePn	Pb	05 39 14.8	+0.7
GULE	Gulek	1.96	296	i P	Pn	05 39 14.5	-0.5
GULE				i S	Sn	05 39 40.1	+0.5
GULE	Gulek	1.96	296	i P	Pn	05 39 14.5	-0.5
GULE				i S	Sn	05 39 40.1	+0.5
SARI	SarD1z-Kayseri	2.00	347	ePN	Pb	05 39 17.2	-1.0
SARI	SarD1z-Kayseri	2.00	347	ePn	Pb	05 39 17.2	-1.0
MERS	Mersin	2.03	282	ePN	Pn	05 39 16.9	+1.1
MERS	Mersin	2.03	282	ePn	Pn	05 39 16.9	+1.1
DARE	Darende-Malaty	2.15	10	ePN	Pb	05 39 19.8	-0.8
DARE	Darende-Malaty	2.15	10	ePn	Pb	05 39 19.8	-0.8
MALT	Malatya	2.18	31	ePN	Pb	05 39 20.7	-0.5
MALT	Malatya	2.18	31	ePn	Pb	05 39 20.7	-0.5
MYA	Malataya	2.19	31	ePN	Pb	05 39 20.6	-0.7
MYA	Malataya	2.19	31	ePn	Pb	05 39 20.6	-0.7
NIG	Nigde	2.52	312	ePN	Pn	05 39 23.5	+0.7
NIG	Nigde	2.52	312	ePn	Pn	05 39 23.5	+0.7
SFNV	Sufian	2.52	90	eP	Pn	05 39 22.7	+0.1
SFNV				eS	Sn	05 39 54.4	+1.2
SFNV				AML	AML	05 40 08.8	
	comp=Z,31nm,0.4s						
SFNV	Sufian	2.52	90	eP	Pn	05 39 22.7	+0.1
	SNR=45						
BNN	Bunyan	2.56	340	ePN	Pn	05 39 24.8	+1.6
BNN	Bunyan	2.56	340	ePn	Pn	05 39 24.8	+1.6
ELZG	Elazig	2.58	37	eP	Pg	05 39 31.4	+0.2
MZRK	Al-Mazaregh	3.03	101	eP	Pn	05 39 30.0	+0.4
MZRK				eS	Sn	05 40 03.5	-2.4
MZRK				AML	AML	05 40 23.0	
	comp=Z,39nm,0.5s						
MZRK	Al-Mazaregh	3.03	101	eP	Pn	05 39 30.0	+0.4
	SNR=45						

IDC 09 05:44:07.1±1.2**, 5°.25N×127°.36E, h0**km**, mb3.8**/7**, mb1 3.9**/7**, mb1mx3.7**/25**, mbtmp3.8**/7**, Error ellipse: s-maj=92.6km s-min=16.4km az=70.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	23.27	184	P	P	05 49 17.5	+1.1
	2.0nm,1.0s,baz=36,slow=8.7,SNR=2.5						
WRA	Warramunga Arr	25.96	165	P	P	05 49 41.9	+0.3
	3.0nm,0.4s,baz=345,slow=10,SNR=33						
ASAR	Alice Springs	29.45	168	P	P	05 50 12.2	-0.6
	0.4nm,0.6s,baz=344,slow=7.1,SNR=6.9						
STKA	Stephens Creek	39.34	161	P	P	05 51 37.8	-0.5
	1.5nm,0.5s,baz=342,slow=9.2,SNR=11						
SONM	Songino Array	46.07	340	P	P	05 52 33.6	+0.7
	0.2nm,0.5s,baz=146,slow=10,SNR=2.2						
MKAR	Makanchi Array	56.68	324	P	P	05 53 52.0	-0.4
	0.5nm,0.4s,baz=113,slow=7.8,SNR=22						
AKTO	Aktyubinsk	72.87	321	P	P	05 55 37.5	-0.4
	0.4nm,0.3s,baz=79,slow=10,SNR=4.6						

*NEIC **09** 05:47:39.8, 19°.65N×66°.33W, h53km, MD3.5(RSPR), After RSPR.*

RSPR 09 05:47:39.8, 19°.65N×66°.33W, h53km±16km**, MD3.5**/6**, 6C-8D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOPR	Arecibo Observ	1.36	197	⇓eP	Pn	05 48 01.3	-1.2
AOPR				eS	Sn	05 48 18.4	-1.1
AOPR	Arecibo Observ	1.36	197	⇓eP	Pn	05 48 01.3	-1.2
AOPR				eS	Sn	05 48 18.4	-1.1
LRS	Lares	1.44	200	ePn	Pn	05 48 02.3	-1.3
LRS				eSn	Sn	05 48 17.8	-3.6
CBYP	Canovanas	1.44	162	⇑eP	Pn	05 48 02.7	-1.0
CBYP				eS	Sn	05 48 20.4	-1.1
CBYP	Canovanas	1.44	162	⇑eP	Pn	05 48 02.7	-1.0
CBYP				eS	Sn	05 48 20.4	-1.1
SJG	San Juan	1.54	174	ePn	Pn	05 48 03.3	-1.6
SJG				eSn	Sn	05 48 22.9	-0.9
HUMP	Col San Antoni	1.57	163	⇓eP	Pn	05 48 04.0	-1.3
HUMP				eS	Sn	05 48 23.7	-0.8
HUMP	Col San Antoni	1.57	163	⇓eP	Pn	05 48 04.0	-1.3
HUMP				eS	Sn	05 48 23.7	-0.8
CELP	Cerrillos	1.58	189	ePn	Pn	05 48 04.1	-1.4
CELP				eSn	Sn	05 48 23.6	-1.3
OBIP	Obispado Ponce	1.62	189	ePn	Pn	05 48 04.2	-1.8
OBIP				Sn	Sn	05 48 25.0	-0.8
LSP	Las Mesas	1.63	206	⇑eP	Pn	05 48 05.8	-0.5
LSP				eS	Sn	05 48 25.2	-1.0
LSP	Las Mesas	1.63	206	⇑eP	Pn	05 48 05.8	-0.5
LSP				eS	Sn	05 48 25.2	-1.0
MTP	Monte Pirata	1.71	154	⇑eP	Pn	05 48 06.0	-1.2
MTP	Monte Pirata	1.71	154	⇑eP	Pn	05 48 06.0	-1.2
CRPR	Cabo Rojo, PR	1.79	204	⇓eP	Pn	05 48 08.0	-0.4
CRPR				eS	Sn	05 48 29.2	-0.8
CRPR	Cabo Rojo, PR	1.79	204	⇓eP	Pn	05 48 08.0	-0.4
CRPR				eS	Sn	05 48 29.2	-0.8
STVI	Saint Thomas	1.83	135	⇓eP	Pn	05 48 08.1	-0.8
STVI				eS	Sn	05 48 30.6	-0.4
STVI	Saint Thomas	1.83	135	⇓eP	Pn	05 48 08.1	-0.8
STVI				eS	Sn	05 48 30.6	-0.4

MEX 09 06:00:42.5±1.1**, 18°.33N×103°.26W, h5**km**, MD3.6, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.09	240	eP	Pg	06 00 43.6	-0.9
MMIG				i S	Sg	06 00 46.3	+0.5
R15V		1.07	321	eP	Pg	06 00 59.5	-3.8
R15V				i S	Sg	06 01 14.7	-2.6
EZ5V		1.18	344	eP	Pg	06 01 02.7	-2.9
EZ5V				i S	Sg	06 01 18.3	-3.0
ZIIG	Zihuatanejo	1.86	113	i P	Pn	06 01 11.8	-3.2
ZIIG				i S	Sn	06 01 34.6	-4.2

*ISCJB **09** 06:01:18.8±0.3, 38°.96N±0°.01×21°.90E±0°.02, h16km±3km, Error ellipse: s-maj=3.1km s-min=2.0km az=173.2*
*CSEM **09** 06:01:18.5±0.1, 38°.96N×21°.89E, h10km, ML3.6, Error ellipse: s-maj=2.7km s-min=1.8km az=80.0*
*THE **09** 06:01:18.7, 38°.94N×21°.89E, h15km, ML3.3/15, Error ellipse: s-maj=0.5km s-min=0.3km az=141.0*
*ATH **09** 06:01:18.3, 38°.97N×21°.90E, h18km±1km, MD3.3/26, ML3.2*
*BEO **09** 06:01:20.8±1.0, 39°.13N×22°.06E, h0km, ML3.1/4*
*SKO **09** 06:01:20.9, 39°.18N×22°.01E, h0km*
*SOF **09** 06:01:27.4, 39°.70N×22°.42E, h2km, MD3.2*

ISC 09 06:01:18.6±0.8**, 38°.96N**±0°.01×**21°.90E**±0°.02**, h13**km±4km**, n150,** σ0s80/217**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	Evrytania	0.08	237	P	Pg	06 01 21.4	-0.1
EVR				S	Sg	06 01 23.4	-0.2
EVR	Evrytania	0.08	237	ePB	Pg	06 01 21.5	-0.1
EVR				eSB	Sg	06 01 23.1	-0.5
EVR	Evrytania	0.08	237	P	Pg	06 01 21.3	-0.2
EVR				eSb	Sg	06 01 23.1	-0.5
EVR				S		06 01 23.4	
MAKR	Makrakomi, Fth	0.19	74	P	Pg	06 01 23.6	+0.7
MAKR				S	Sb	06 01 27.4	-0.2
MAKR	Makrakomi, Fth	0.19	74	P	Pg	06 01 23.6	+0.7
MAKR				S	Sb	06 01 27.4	-0.2
AGG	Agios Georgios	0.34	80	P	Pg	06 01 26.1	+0.5
AGG				S	Sb	06 01 31.9	-0.1
AGG	Agios Georgios	0.34	80	ePB	Pg	06 01 26.1	+0.5
AGG				eSB	Sb	06 01 31.8	-0.2
AGG	Agios Georgios	0.34	80	P	Pg	06 01 26.1	+0.5
AGG				S	Sg	06 01 31.4	+1.1
AGG				eSb	Sb	06 01 31.8	-0.2
EFP	Efpalio	0.53	179	P	Pg	06 01 28.8	-0.3
EFP				S	Sg	06 01 35.9	-0.3
EFP	Efpalio	0.53	179	ePN	Pg	06 01 28.9	-0.2
EFP				eSN	Sb	06 01 37.7	+0.2
EFP	Efpalio	0.53	179	P	Pg	06 01 28.8	-0.3
EFP				S	Sg	06 01 35.9	-0.3
EFP				eSn	Sb	06 01 37.7	+0.2
KALE	Kalithea	0.60	162	P	Pg	06 01 29.6	-0.8
KALE				S	Sg	06 01 38.5	+0.1
KALE	Kalithea	0.60	162	ePB	Pg	06 01 29.8	-0.6
KALE				eSN	Sb	06 01 39.4	-0.1
KALE	Kalithea	0.60	162	ePb	Pg	06 01 29.8	-0.6
KALE				S	Sg	06 01 38.5	+0.1
KALE				eSn	Sb	06 01 39.4	-0.1
THL	Klokotos Trika	0.61	9	P	Pg	06 01 30.4	-0.1
THL				S	Sb	06 01 40.3	+0.6
THL	Klokotos Trika	0.61	9	ePN	Pg	06 01 30.5	-0.1
THL				eSN	Sg	06 01 38.1	-0.5
THL	Klokotos Trika	0.61	9	P	Pg	06 01 30.4	-0.1
THL				eSn	Sg	06 01 38.1	-0.5
THL				S	Sb	06 01 40.3	+0.6
TRIZ	Trizonia	0.61	167	P	Pg	06 01 29.9	-0.6
TRIZ				S	Sg	06 01 39.2	+0.6
TRIZ	Trizonia	0.61	167	ePB	Pg	06 01 30.0	-0.6
TRIZ				eSN	Sb	06 01 39.7	0.0
TRIZ	Trizonia	0.61	167	ePb	Pg	06 01 30.0	-0.6
TRIZ				S	Sg	06 01 39.2	+0.6
TRIZ				eSn	Sb	06 01 39.7	0.0
AXAR	Agios Charalam	0.63	108	P	Pg	06 01 30.6	-0.3
AXAR	Agios Charalam	0.63	108	P	Pg	06 01 30.6	-0.3
UPR	University Cam	0.68	187	P	Pg	06 01 31.3	-0.6
UPR	University Cam	0.68	187	ePN	Pg	06 01 31.4	-0.5
UPR				eSN	Sg	06 01 41.3	+0.3
UPR	University Cam	0.68	187	P	Pg	06 01 31.3	-0.6
UPR				S	Sg	06 01 41.2	+0.3
LAKA	Lakka	0.72	175	P	Pg	06 01 31.8	-0.9
LAKA				S	Sg	06 01 42.1	-0.1
LAKA	Lakka	0.72	175	ePB	Pg	06 01 32.0	-0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LAKA	Lakka	0.72	175	ePb	Pg	06 01 32.0	-0.7
LAKA				S	Sg	06 01 42.1	-0.1
DSF	Desfina	0.74	138	P	Pg	06 01 31.6	-1.4
DSF				S	Sg	06 01 42.4	-0.3
LKR	Lokris	0.92	110	P	Pb	06 01 35.8	-0.6
LKR	Lokris	0.92	110	ePB	Pb	06 01 35.2	-1.2
LKR				eSN	Sg	06 01 49.0	+0.7
LKR	Lokris	0.92	110	ePb	Pb	06 01 35.2	-1.2
LKR	Lokris	0.92	110	P	Pb	06 01 35.8	-0.6
LKR				eSn	Sg	06 01 49.0	+0.7
ATAL	Atalanti	0.92	107	P	Pb	06 01 35.6	-0.8
ATAL	Atalanti	0.92	107	P	Pb	06 01 35.6	-0.8
RLS	Riolos of Patr	0.96	201	ePN	Pb	06 01 37.4	+0.2
RLS				eSN	Sn	06 01 50.9	-0.5
RLS	Riolos of Patr	0.96	201	ePn	Pb	06 01 37.4	+0.2
RLS				eSn	Sn	06 01 50.9	-0.5
MEV	Metsovon	0.97	328	P	Pb	06 01 36.7	-0.8
MEV	Metsovon	0.97	328	P	Pb	06 01 36.7	-0.8
LKD2	Lefkada island	0.98	260	ePN	Pg	06 01 37.9	+0.3
LKD2	Lefkada island	0.98	260	ePn	Pg	06 01 37.9	+0.3
JAN	Janina	1.07	311	P	Pb	06 01 38.2	-0.8
JAN				S	Sg	06 01 53.6	+0.4
JAN	Janina	1.07	311	ePN	Pb	06 01 38.6	-0.4
JAN	Janina	1.07	311	P	Pb	06 01 38.2	-0.8
JAN	Janina	1.07	311	ePn	Pb	06 01 38.6	-0.4
JAN				S	Sg	06 01 53.6	+0.4
GUR	Goura	1.08	161	P	Pb	06 01 38.1	-1.2
GUR				S	Sb	06 01 53.4	0.0
GUR	Goura	1.08	161	ePN	Pb	06 01 38.5	-0.8
GUR				eSN	Sb	06 01 53.8	+0.4
GUR	Goura	1.08	161	P	Pb	06 01 38.1	-1.2
GUR	Goura	1.08	161	ePn	Pb	06 01 38.5	-0.8
GUR				S	Sb	06 01 53.4	0.0
GUR				eSn	Sb	06 01 53.8	+0.4
XOR	Xorichti	1.08	68	P	Pb	06 01 39.0	-0.3
XOR				S	Sn	06 01 54.5	0.0
XOR	Xorichti	1.08	68	P	Pb	06 01 39.0	-0.3
XOR				S	Sn	06 01 54.5	0.0
NEO	Neokhori	1.09	71	ePN	Pn	06 01 39.6	0.0
NEO	Neokhori	1.09	71	ePn	Pn	06 01 39.6	0.0
KFL	Anninata	1.22	226	P	Pn	06 01 40.5	-0.9
KFL	Anninata	1.22	226	P	Pn	06 01 41.0	-0.4
LIT	Litokhoron	1.23	22	P	Pn	06 01 41.5	0.0
LIT				S	Sn	06 01 57.8	-0.2
LIT	Litokhoron	1.23	22	ePN	Pn	06 01 41.6	0.0
LIT	Litokhoron	1.23	22	P	Pn	06 01 41.5	0.0
LIT				S	Sn	06 01 57.8	-0.2
LTK	Loutraki	1.26	138	ePN	Pb	06 01 42.4	+0.1
LTK				eSN	Sg	06 01 59.9	+0.7
LTK	Loutraki	1.26	138	P	Pn	06 01 42.0	0.0
LTK	Loutraki	1.26	138	ePn	Pb	06 01 42.4	+0.1
LTK				S	Sg	06 01 59.9	+0.7
VLS	Valsamata	1.29	233	P	Pn	06 01 41.6	-0.8
VLS	Valsamata	1.29	233	ePN	Pn	06 01 42.5	+0.1
VLS	Valsamata	1.29	233	P	Pn	06 01 41.6	-0.8
VLS	Valsamata	1.29	233	ePn	Pn	06 01 42.5	+0.1
IGT	Igoumenitsa	1.34	296	P	Pn	06 01 42.7	-0.4
IGT				S	Sn	06 02 00.3	-0.6
IGT	Igoumenitsa	1.34	296	P	Pn	06 01 42.7	-0.4
IGT				S	Sn	06 02 00.3	-0.6
KZN	Kozani	1.35	356	ePN	Pb	06 01 43.7	-0.1
KZN	Kozani	1.35	356	ePn	Pb	06 01 43.7	-0.1
AMT	Artemida-Makis	1.44	186	ePN	Pb	06 01 45.7	+0.4
AMT	Artemida-Makis	1.44	186	ePn	Pb	06 01 45.7	+0.4
AOS	Alonnisos	1.56	82	P	Pn	06 01 45.8	-0.3
AOS				S	Sn	06 02 05.3	-0.8
AOS	Alonnisos	1.56	82	ePB	Pn	06 01 45.9	-0.2
AOS	Alonnisos	1.56	82	P	Pn	06 01 45.8	-0.3
AOS				S	Sn	06 02 05.3	-0.8
VLX	Vlachokerasia	1.63	166	ePN	Pb	06 01 48.7	0.0
VLX	Vlachokerasia	1.63	166	ePn	Pb	06 01 48.7	0.0
PAIG	Paliouri	1.68	54	P	Pn	06 01 47.3	-0.5
PAIG				S	Sn	06 02 09.2	0.0
PAIG	Paliouri	1.68	54	P	Pn	06 01 47.3	-0.5
PAIG				S	Sn	06 02 09.2	0.0
NAIG	Nisos Aigina	1.73	133	ePN	Pn	06 01 49.2	+0.7
NAIG	Nisos Aigina	1.73	133	ePn	Pn	06 01 49.2	+0.7
ATH	Athens Observa	1.74	124	ePN	Pn	06 01 49.2	+0.7
ATH	Athens Observa	1.74	124	ePn	Pn	06 01 49.2	+0.7
ITM	Ithomi	1.78	179	ePN	Pb	06 01 51.3	+0.2
ITM	Ithomi	1.78	179	ePn	Pb	06 01 51.3	+0.2
PTL	Penteli	1.79	120	ePN	Pn	06 01 50.1	+0.8
PTL	Penteli	1.79	120	ePn	Pn	06 01 50.1	+0.8
DID	Didima	1.80	144	ePN	Pn	06 01 50.3	+0.9
DID				eSN	Sb	06 02 13.8	-0.1
DID	Didima	1.80	144	P	Pn	06 01 50.3	+0.9
DID				S	Sb	06 02 13.3	-0.6
DID				eSn	Sb	06 02 13.8	-0.1
PLG	Polygyros	1.85	40	P	Pn	06 01 49.6	-0.5
PLG	Polygyros	1.85	40	ePB	Pn	06 01 49.7	-0.4
PLG	Polygyros	1.85	40	P	Pn	06 01 49.6	-0.5
FNA	Florina	1.86	348	P	Pn	06 01 50.2	-0.1
FNA				S	Sn	06 02 14.3	+0.5
FNA	Florina	1.86	348	P	Pn	06 01 50.2	-0.1
FNA				S	Sn	06 02 14.3	+0.5
HORT	Hortiatis	1.88	29	P	Pn	06 01 50.0	-0.6
HORT	Hortiatis	1.88	29	P	Pn	06 01 50.0	-0.6
GRG	Griva	2.03	11	P	Pn	06 01 52.6	0.0
GRG	Griva	2.03	11	P	Pn	06 01 52.6	0.0
PYL	PYLOS	2.07	183	ePN	Pb	06 01 56.2	+0.2
PYL				eSN	Sb	06 02 21.3	-0.3
PYL	PYLOS	2.07	183	ePn	Pb	06 01 56.2	+0.2
PYL				eSn	Sb	06 02 21.3	-0.3
BIA	Bitola	2.10	348	ePn	Pn	06 01 54.2	+0.6
BIA				eSg	Sb	06 02 21.6	-1.1
BIA	Bitola	2.10	348	ePn	Pn	06 01 54.2	+0.6
BIA				eSg	Sb	06 02 21.6	-1.1
SOH	Sokhos	2.17	31	ePB	Pn	06 01 54.6	+0.1
SOH	Sokhos	2.17	31	ePb	Pn	06 01 54.6	+0.1
DYR	Agios Nikonas	2.22	171	ePN	Pb	06 01 58.0	-0.7
DYR	Agios Nikonas	2.22	171	ePn	Pb	06 01 58.0	-0.7
VLI	Veliai	2.39	160	ePN	Pn	06 01 58.2	+0.7
VLI	Veliai	2.39	160	ePn	Pn	06 01 58.2	+0.7
VAY	Valandovo	2.41	12	ePn	Pn	06 01 58.3	+0.4
VAY	Valandovo	2.41	12	ePn	Pn	06 01 58.7	+0.9
LIA	Limnos Island	2.71	69	ePN	Pn	06 02 00.5	-1.4
LIA	Limnos Island	2.71	69	ePn	Pn	06 02 00.5	-1.4
NVR	Nevrokopi	2.82	32	ePN	Pn	06 02 04.5	+1.0
NVR	Nevrokopi	2.82	32	ePn	Pn	06 02 04.5	+1.0
KYTH	Kithira	2.83	161	ePN	Pn	06 02 05.4	+1.9
KYTH	Kithira	2.83	161	ePn	Pn	06 02 05.4	+1.9
PHP	Peshkopia	2.94	338	ePN	Pn	06 02 07.8	+2.7
MMB	Musomiste	2.97	27	iP	Pn	06 02 05.5	-0.1
MMB	Musomiste	2.97	27	iP	Pn	06 02 05.5	-0.1
SKO	Skopje	3.03	354	ePn	Pn	06 02 07.5	+1.2
SKO	Skopje	3.03	354	ePn	Pn	06 02 01.0	-5.3
KKB	Krupnik	3.04	17	iP	Pn	06 02 06.9	+0.4
KKB	Krupnik	3.04	17	iP	Pn	06 02 06.9	+0.4
CHOS	Chios island	3.30	99	ePN	Pn	06 02 11.3	+1.1
CHOS	Chios island	3.30	99	ePn	Pn	06 02 11.3	+1.1
PUK	Puka	3.44	334	ePN	Pb	06 02 17.1	-2.4
RZN	Rozhen	3.47	37	iP	Pn	06 02 13.1	+0.5
RZN	Rozhen	3.47	37	iP	Pn	06 02 13.1	+0.5
BCI	Bajram Curri	3.67	338	ePN	Pn	06 02 18.9	+3.7
ALN	Alexandroupoli	3.73	57	ePN	Pn	06 02 15.6	-0.3
ALN	Alexandroupoli	3.73	57	ePn	Pn	06 02 15.6	-0.3
VTS	Vitosha	3.76	15	ePn	Pn	06 02 17.9	+1.4
VTS				eSn	Sn	06 02 59.8	-0.9
VTS	Vitosha	3.76	15	iP	Pn	06 02 17.4	+0.9
VTS	Vitosha	3.76	15	iP	Pn	06 02 17.4	+0.9
VTS	Vitosha	3.76	15	ePn	Pn	06 02 17.9	+1.4
VTS				eSn	Sn	06 02 59.8	-0.9
BARS	Barje	3.85	359	ePn	Pn	06 02 18.7	+1.1
BARS				eSn	Sn	06 03 02.2	-0.6
BARS	Barje	3.85	359	ePn	Pn	06 02 18.7	+1.1
BARS				eSn	Sn	06 03 02.2	-0.6
PDG	Podgorica	4.00	331	ePn	Pn	06 02 22.6	+2.9
PDG				eSn	Sn	06 03 08.8	+2.3
PDG	Podgorica	4.00	331	ePn	Pn	06 02 22.6	+2.9
PDG				eSn	Sn	06 03 08.8	+2.3
SELS	Selova	4.29	352	ePn	Pn	06 02 24.2	+0.5
ZAPS	Zavoj	4.34	7	ePn	Pn	06 02 26.0	+1.6
IDI	Anoyia	4.38	146	ePN	Pn	06 02 25.5	+0.6
IDI	Anoyia	4.38	146	ePn	Pn	06 02 25.5	+0.6
IVAS	Ivanjica	4.79	345	ePn	Pn	06 02 32.1	+1.5
IVAS	Ivanjica	4.79	345	ePn	Pn	06 02 32.1	+1.5
GRUS	Gruza	5.00	350	ePn	Pn	06 02 34.5	+1.1
GRUS	Gruza	5.00	350	ePn	Pn	06 02 34.5	+1.1
DIVS	Divibare	5.33	345	ePn	Pn	06 02 39.2	+1.2
DIVS				eSn	Sn	06 03 37.8	-1.4
DIVS	Divibare	5.33	345	ePn	Pn	06 02 39.2	+1.2
DIVS				eSn	Sn	06 03 37.8	-1.4
TRUS	Trudelj	5.38	348	ePn	Pn	06 02 38.8	+0.3
TRUS	Trudelj	5.38	348	ePn	Pn	06 02 38.8	+0.3

*BJI **09** 06:14:23.4, 3°.11N×126°.93E, h35km, mB5.0/30, mb5.0/47, Ms4.6/41, Ms7 4.4/43*
*IDC **09** 06:14:24.2±0.5, 3°.62N×126°.63E, h0km, mb4.6/27, mb1 4.7/27, mb1mx4.6/30, mbtmp4.6/27, MS4.1/16, Ms1 4.1/16, ms1mx3.8/31, Error ellipse: s-maj=21.8km s-min=10.3km az=79.0*
*MOS **09** 06:14:27.5±1.0, 3°.60N×126°.60E, h33km, mb5.2/26, Error ellipse: s-maj=15.2km s-min=6.6km az=114.2*
*NEIC **09** 06:14:29.7±0.2, 3°.61N×126°.69E, h35km, mb5.0/33, Error ellipse: s-maj=9.1km s-min=4.7km az=76.0*
*ISCJB **09** 06:14:31.2±0.5, 3°.64N±0°.02×126°.84E±0°.04, h67km±4km, mb4.8/89, Error ellipse: s-maj=6.3km s-min=3.7km az=163.9*
*DJA **09** 06:14:33.1±0.4, 4°N±3°×12°7E±°, h61km±4km, M4.8/30, mB5.3/18, mb5.0/30, MLv5.3/9, Mw(mB)4.7/18*
ISC 09 06:14:30.5±0.4, **3°.64N**±0°.03×**126°.75E**±0°.06, **h42**km±2km, **n229**, σ1§**59**/277, **mb4.9**/88, **MS4.1**/33, **8C-6D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	Manado	2.90	221	P	Pn	06 15 17.0	+2.8
MNI				S	Sn	06 15 57.3	+9.4
TNTI	Ternate	2.92	168	P	Pn	06 15 15.2	+0.7
TNTI				S	Sn	06 15 56.0	+7.7
MATI	Mati	3.32	352	eP	Pn	06 15 22.5	+2.5
DAV	Davao City (W)	3.60	341	Pn	Pn	06 15 25.6	+1.7
DAV				Sn	Sn	06 16 08.6	+3.5
DAV	Davao City (W)	3.60	341	Pn	Pn	06 15 26.6	+2.8
	SNR=16						
DAV	Davao City (W)	3.60	341	P	Pn	06 15 26.8	+3.0
DAV	Davao City (W)	3.60	341	Pn	Pn	06 15 25.5	+1.7
	15nm,0.3s,baz=315,slow=9.9,SNR=8.9						
DAV				Sn	Sn	06 16 08.6	+3.5
	58nm,0.3s,baz=137,slow=23,SNR=3.6						
KCP	Kidapawan	3.73	334⇓	eP	Pn	06 15 21.3	-4.4
KMSI	Cibinong	4.12	222	P	Pn	06 15 35.4	+4.5
LBMI	Labuha	4.32	170	P	Pn	06 15 35.2	+1.5
LBMI				S	Sn	06 16 27.9	+5.0
CTBH	Cotabato--PC H	4.34	325⇑	eP	Pn	06 15 36.4	+2.3
BUKP	Musuan	4.53	338	eP	Pn	06 15 39.3	+2.6
CGP	Cagayan de Oro	5.20	337⇓	eP	Pn	06 15 51.3	+5.4
PAGZ	Pagadian	5.35	321	eP	Pn	06 15 51.4	+3.4
MRSI	Marisa	5.74	237	P	Pn	06 15 56.6	+3.3
	269nm,0.9s,4μm1.6nm						
MRSI				S	Sn	06 17 04.5	+6.5
	269nm,0.9s,4μm1.6nm						
IPIL	Ipil	5.85	315	eP	Pn	06 15 56.4	+1.6
LUWI	Luwuk	6.12	221	P	Pn	06 16 06.4	+7.9
	506nm,0.9s,4μm2.4nm						
SWI	Sorong	6.35	135	P	Pn	06 16 02.5	+0.8
	254nm,1.2s,4μm1.4nm						
MSLP	Maasin	6.72	344	eP	Pn	06 16 11.2	+4.5
NLAI	Namlea	6.84	177	P	Pn	06 16 09.3	+0.8
	132nm,0.5s,3μm0.8nm						
PLP	Palo	7.68	347⇓	eP	Pn	06 16 24.2	+4.3
MYLDM	Lahad Datu	8.36	281	P	Pn	06 16 34.4	+5.1
	152nm,1.6s,2μm						
MYLDM				S	Sn	06 18 17.0	+14
	152nm,1.6s,2μm						
FAKI	Fak Fak	8.53	140	P	Pn	06 16 32.9	+1.3
	114nm,1.2s,1μm						
KDI	Kendari	8.60	209	P	Pn	06 16 35.1	+2.5
	48nm,0.8s,938nm						
TTSI	Tana Toraja	9.60	226	P	Pn	06 16 49.9	+3.7
	80nm,1.6s,1μm						
SPSI	Sidrap Palu	10.28	223	P	Pn	06 17 00.5	+4.9
	31nm,0.8s,887nm						
KKM	Kota Kinabalu	10.76	283	ePn	Pn	06 17 06.7	+4.4
KKM				eSn	Sn	06 19 16.0	+14
KKM	Kota Kinabalu	10.76	283	P	Pn	06 17 08.2	+5.9
	38nm,2.1s,643nm						
TLE	Tual	10.99	147	P	Pn	06 17 09.4	+4.1
	273nm,1.2s,4μm						
KAPI	Kappang	11.08	219	Pn	Pn	06 17 06.7	+0.2
KAPI	Kappang	11.08	219	Pn	Pn	06 17 06.7	+0.2
	0.6nm,0.3s,baz=60,slow=12,SNR=2.0						
BBKI	Banjar Baru	13.84	239	P	P	06 17 50.2	-1.5
	68nm,1.4s						
SBUM	Sibu	14.56	266	P	P	06 17 58.5	-1.2
	34nm,0.8s,504nm						
STKI	Sintang	15.67	257	P	P	06 18 15.5	+3.4
	43nm,1.4s						
KHKI	Kahang-Kahang	16.30	223	P	P	06 18 32.5	+13
KSM	Kuching	16.56	263	ePn	P	06 18 23.1	+1.1
	52nm,1.3s						
KSM				eSn	Sn	06 21 09.5	-13
KSM	Kuching	16.56	263	P	P	06 18 24.3	+2.3
	36nm,1.4s						
YULB	Yu-li	20.33	345	eP	P	06 19 00.6	-2.7
	58nm,1.3s						
TPUB	Ta-pu	20.42	344	ePn	P	06 19 02.2	-2.1
	53nm,0.7s						
SSLB	Suanglung	20.79	345	ePn	P	06 19 06.4	-2.0
	82nm,1.2s						
PPBI	Pangkal Pinang	21.39	255	P	P	06 19 20.1	+5.2
	17nm,0.9s,3μm						
YHNB	Yeheng	21.54	347	eP	P	06 19 17.4	+1.1
	99nm,1.3s						
FITZ	Fitzroy Crossi	21.64	183	P	P	06 19 16.0	-1.4
	22nm,0.9s						
FITZ	Fitzroy Crossi	21.64	183	P	P	06 19 16.0	-1.4
	23nm,0.5s,baz=11,slow=9.9,SNR=67						
QIZ	Qiongzhong	22.51	314	P	P	06 19 26.8	-0.1
QIZ				S	S	06 23 33.3	+2.0
QIZ				pmax	pmax		
	comp=Z,110nm,4.5s						
QIZ				LR	LR		
	comp=N,350nm,16.2s						
QIZ				LR	LR		
	comp=Z,510nm,19.9s						
COEN	Coen	23.90	137	eP	P	06 19 39.2	-1.4
UBPT	Khong Chiam	23.93	300	P	P	06 19 40.3	-0.6
	comp=Z,72nm,1.2s,comp=Z,830nm						
WRAB	Tennant Creek	24.59	163	eP	P	06 19 45.7	-1.2
WRAB				pmax	pmax		
	comp=Z,182nm,0.9s						
WRAB	Tennant Creek	24.59	163	eP	P	06 19 45.7	-1.2
	comp=Z,182nm,0.9s						
WRAB	Tennant Creek	24.59	163	P	P	06 19 45.8	-1.2
	comp=Z,1μm,1.0s,SNR=35						
WRA	Warramunga Arr	24.60	163	P	P	06 19 45.9	-1.1
WRA	Warramunga Arr	24.60	163	P	P	06 19 45.9	-1.1
	comp=Z,171nm,0.9s,baz=344,slow=9.9,SNR=133						
MBWA	Marble Bar	25.59	195	eP	P	06 19 56.5	+0.6
	comp=Z,27nm,0.9s						
AS31	Alice Springs	28.02	166	eP	P	06 20 17.0	-0.9
ASAR	Alice Springs	28.03	166	P	P	06 20 17.0	-0.9
ASAR	Alice Springs	28.03	166	P	P	06 20 17.0	-0.9
	comp=Z,8.5nm,0.7s,baz=352,slow=7.8,SNR=54						
WHN	Wuhan	29.21	338	P	P	06 20 28.0	-0.3
WHN				S	S	06 25 21.1	+3.0
WHN				LR	LR		
	comp=Z,2μm,25.0s						
NJ2	Nanjing	29.22	346	eP	P	06 20 29.8	+1.4
NJ2				pP	pP	06 20 38.4	-1.3
NJ2				sP	sP	06 20 43.7	-1.1
NJ2				S	S	06 25 21.5	+3.3
NJ2				sS	sS	06 25 38.6	+1.4
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,100nm,4.7s						
NJ2				LR	LR		
	comp=N,910nm,21.2s						
NJ2				LR	LR		
	comp=E,870nm,23.6s						
NJ2				LR	LR		
	comp=Z,170nm,20.1s						
JNU	Nakatsue	29.58	7	eP	P	06 20 30.6	-1.0
JNU	Nakatsue	29.58	7	P	P	06 20 30.4	-1.2
	comp=Z,31nm,1.0s,baz=166,slow=5.6,SNR=12						
JNU				LR	LR	06 32 19.8	
	comp=Z,326nm,19.4s,baz=179,slow=36						
GYA	Guiyang	29.75	322	eP	P	06 20 35.6	+2.3
GYA				pP	pP	06 20 45.7	+1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GYA				PP	PnPn	06 21 33.4	+3.3
GYA				S	S	06 25 28.5	+1.5
GYA				sS	sS	06 25 46.0	0.0
GYA				SS	SnSn	06 27 05.9	+6.5
GYA				ScP	ScP	06 27 15.6	+0.1
GYA				ScS	ScS	06 31 10.2	-0.6
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.3s						
GYA				LR	LR		
	comp=N,510nm,14.3s						
GYA				LR	LR		
	comp=E,490nm,15.0s						
GYA				LR	LR		
	comp=Z,480nm,14.8s						
CTA	Charters Tower	30.39	142	P	P	06 20 38.3	-0.6
CTA	Charters Tower	30.39	142	P	P	06 20 38.3	-0.6
	comp=Z,9.0nm,1.0s,baz=333,slow=12,SNR=2.9						
CM31	Chiang Mai Arr	30.93	301	eP	P	06 20 44.4	+0.7
CMAR	Chiang Mai Arr	30.93	301	P	P	06 20 43.8	0.0
CMAR	Chiang Mai Arr	30.93	301	P	P	06 20 43.8	0.0
	comp=Z,3.9nm,0.8s,baz=110,slow=6.9,SNR=22						
CMAR				LR	LR	06 34 34.4	
	comp=Z,260nm,18.2s,baz=339,slow=39						
CMMT	Chiang Mai	31.08	301	P	P	06 20 45.9	+0.8
	comp=Z,12nm,1.4s,comp=Z,519nm						
CHTO	Chiang Mai	31.08	301	eP	P	06 20 45.1	0.0
CHTO	Chiang Mai	31.08	301	eP	P	06 20 45.1	0.0
CHTO	Chiang Mai	31.08	301	P	P	06 20 45.3	+0.3
	SNR=6.8						
CHTO	Chiang Mai	31.08	301	P	P	06 20 45.0	0.0
	comp=Z,14nm,1.0s						
KMI	Kunming	31.45	315	P	P	06 20 51.1	+2.6
KMI				pP	pP	06 21 00.8	+0.9
KMI				sP	sP	06 21 04.9	0.0
KMI				PP	PnPn	06 21 55.7	+3.2
KMI				S	S	06 25 55.6	+1.6
KMI				sS	sS	06 26 12.8	-0.2
KMI				SS	SnSn	06 27 45.1	+4.1
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,100nm,3.8s						
KMI				LR	LR		
	comp=N,280nm,12.8s						
KMI				LR	LR		
	comp=E,250nm,18.0s						
KMI				LR	LR		
	comp=Z,410nm,18.0s						
KSAR	Wonju Array Be	33.65	2	P	P	06 21 07.4	+0.1
KSRS	Korea Array	33.67	2	P	P	06 21 07.4	0.0
	comp=Z,1.3nm,0.5s,baz=176,slow=9.4,SNR=4.8						
KSRS				LR	LR	06 36 26.8	
	comp=Z,212nm,19.2s,baz=188,slow=39						
FORT	Forrest	34.25	178	eP	P	06 21 12.3	-0.3
	comp=Z,61nm,0.7s						
MAT	Matsushiro	34.40	16	P	P	06 21 12.1	-1.8
MAT				S	S	06 26 41.2	+2.2
MJAR	Matsushiro Arr	34.40	16	P	P	06 21 12.2	-1.7
MJAR	Matsushiro Arr	34.40	16	P	P	06 21 12.2	-1.7
	comp=Z,1.3nm,0.4s,baz=203,slow=9.3,SNR=8.8						
MJAR				LR	LR	06 35 21.1	
	comp=Z,284nm,19.6s,baz=195,slow=36						
XAN	Xi'an	34.50	333	P	P	06 21 13.1	-1.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				LR	LR		
	comp=N,310nm,21.7s						
XAN				LR	LR		
	comp=E,100nm,20.5s						
XAN				LR	LR		
	comp=Z,170nm,19.7s						
CD2	Chengdu	34.72	324	P	P	06 21 17.1	+0.3
CD2				pP	pP	06 21 26.8	-1.5
CD2				sP	sP	06 21 30.7	-2.6
CD2				PP	PnPn	06 22 34.8	+1.1
CD2				S	S	06 26 44.4	+0.1
CD2				sS	sS	06 27 00.4	-3.0
CD2				PcS	PcS	06 27 35.8	-1.0
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,150nm,5.3s						
CD2				LR	LR		
	comp=N,450nm,13.2s						
CD2				LR	LR		
	comp=E,450nm,17.2s						
CD2				LR	LR		
	comp=Z,450nm,15.3s						
DL2	Dalian	35.41	353	P	P	06 21 23.9	+1.4
DL2				S	S	06 26 56.5	+2.1
DL2				pmax	pmax		
	comp=Z,50nm,1.1s						
BBOO	Buckleboo	37.31	167	eP	P	06 21 38.1	-0.7
	comp=Z,156nm,1.2s						
NWAO	Narrogin (SRO)	37.47	193	P	P	06 21 40.1	-0.1
NWAO	Narrogin (SRO)	37.47	193	P	P	06 21 40.1	-0.1
	comp=Z,7.3nm,0.6s,baz=15,slow=9.0,SNR=6.5						
BJI	Beijing	37.48	347	P	P	06 21 41.0	+0.9
BJI				S	S	06 27 30.4	+4.5
BJI				pmax	pmax		
	comp=Z,90nm,1.1s						
BJI				LR	LR		
	comp=N,140nm,22.1s						
BJI				LR	LR		
	comp=E,290nm,19.8s						
BJI				LR	LR		
	comp=Z,140nm,21.2s						
STKA	Stephens Creek	38.04	159	P	P	06 21 44.6	-0.4
	comp=Z,54nm,0.8s						
STKA	Stephens Creek	38.04	159	P	P	06 21 44.6	-0.4
	comp=Z,16nm,0.6s,baz=336,slow=9.2,SNR=63						
STKA				LR	LR	06 38 09.3	
	comp=Z,143nm,20.7s,baz=113,slow=37						
SNY	Shenyang	38.12	356	⇑P	P	06 21 46.3	+0.8
SNY				pmax	pmax		
	comp=Z,37nm,0.9s						
LZH	Lanzhou	38.59	330	eP	P	06 21 50.2	+0.4
LZH				pP	pP	06 21 58.4	-3.0
LZH				sP	sP	06 22 04.3	-2.0
LZH				PP	PnPn	06 23 22.0	+1.1
LZH				eS	ScP	06 27 44.0	-2.7
LZH				sS	sS	06 27 59.4	-3.2
LZH				pmax	pmax		
	comp=Z,52nm,1.4s						
LZH				pmax	pmax		
	comp=Z,130nm,4.3s						
LZH				LR	LR		
	comp=N,110nm,12.0s						
LZH				LR	LR		
	comp=E,440nm,15.3s						
LZH				LR	LR		
	comp=Z,770nm,18.7s						
HHC	Hu-ho-hao-te	39.49	342	eP	P	06 22 00.6	+3.4
HHC				sP	sP	06 22 13.2	-0.5
HHC				PP	PnPn	06 23 35.2	+3.7
HHC				PcP	PcP	06 24 07.2	+2.8
HHC				PcS	PcS	06 27 56.2	+1.9
HHC				S	S	06 28 01.0	+4.4
HHC				sS	sS	06 28 16.6	+0.7
HHC				SS	SS	06 30 49.1	-3.3
HHC				ScS	ScS	06 32 03.2	+1.0
HHC				pmax	pmax		
	comp=Z,36nm,0.6s						
HHC				pmax	pmax		
	comp=Z,220nm,6.1s						
HHC				LR	LR		
	comp=N,520nm,13.2s						
HHC				LR	LR		
	comp=E,420nm,13.7s						
HHC				LR	LR		
	comp=Z,680nm,13.7s						
CN2	Changchun	40.01	359	eP	P	06 21 59.7	-1.6
CN2				esP	sP	06 22 13.6	-4.3
CN2				eS	S	06 28 04.0	-0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
USRK	Ussuriysk Arra	40.65	6	P	P	06 22 07.1	+0.5
	comp=Z,5.4nm,0.7s,baz=198,slow=6.8,SNR=16						
USRK				LR	LR	06 38 22.2	
	comp=Z,149nm,20.7s,baz=188,slow=35						
MDJ	Mudanjiang	40.88	3	P	P	06 22 09.0	+0.5

MDJ pP **pP** 06 22 18.0 -2.2
MDJ sP sP 06 22 22.0 -3.1
MDJ PP **PP** **06 23 42.8 -0.6**
MDJ PcP **PcP** **06 24 10.0 +1.4**
MDJ ScP **ScP** **06 27 56.4 +1.3**
MDJ PcS **PcS** **06 27 58.4 -1.0**
MDJ S S 06 28 23.5 +6.4
MDJ SS **SS** **06 31 21.4 +1.6**
MDJ ScS **ScS** **06 32 11.5 +1.5**
MDJ pmax pmax
comp=Z,36nm,0.9s
MDJ pmax pmax
comp=Z,46nm,5.1s
MDJ LR LR
comp=N,220nm,37.5s
MDJ LR LR
comp=E,82nm,32.6s
MDJ LR LR
comp=Z,220nm,26.1s
ARMA Armidale 41.38 147 *e*P **P** **06 22 13.6 +0.6**
comp=Z,31nm,0.8s
LSA Lhasa 42.51 311 P **P** **06 22 22.6 -0.1**
ASAJ Asahikawa 42.67 17 P **P** **06 22 23.1 -0.1**
ASAJ Asahikawa 42.67 17 P **P** **06 22 23.1 -0.1**
comp=Z,24nm,1.1s,baz=242,slow=13,SNR=6.4
GTA Gaotai 43.18 329 *e*P **P** **06 22 27.1 -0.4**
GTA pP **pP** **06 22 36.9 -2.3**
GTA sP sP 06 22 40.8 -3.4
GTA PP **PP** **06 24 09.3 +0.9**
GTA S **S** **06 28 50.4 -1.1**
GTA pmax pmax
comp=Z,6.0nm,1.8s
GTA pmax pmax
comp=Z,74nm,4.3s
GTA LR LR
comp=N,290nm,20.0s
GTA LR LR
comp=E,660nm,20.9s
GTA LR LR
comp=Z,710nm,20.4s
CAN Canberra 44.03 154 *e*P **P** **06 22 34.5 +0.2**
CAN pmax pmax
comp=Z,23nm,1.0s
CAN Canberra 44.03 154 *e*P **P** **06 22 34.5 +0.2**
comp=Z,24nm,1.0s
TAPN Taplejung 44.08 306 *e*P **P** **06 22 34.4 -0.8**
ODAN Odare 44.13 306 *e*P **P** **06 22 34.6 -0.9**
comp=Z,13nm,0.5s
RAMN Ramite 44.81 305 *e*P **P** **06 22 40.3 -0.7**
comp=Z,12nm,0.5s
KLR Kul'dur 45.62 5 *e*P P 06 22 43.7 -3.0
KLR pmax pmax
comp=Z,48nm,1.4s
GUN Gumba 45.79 306 *e*P **P** **06 22 47.8 -1.0**
comp=Z,15nm,0.3s
ULN Ulaanbaatar 47.21 342 *e*P **P** **06 22 58.7 -0.7**
ULN Ulaanbaatar 47.21 342 P **P** **06 23 00.1 +0.8**
SNR=7.5
SONM Songino Array 47.38 341 P **P** **06 23 00.4 -0.3**
SONM PcP **PcP** **06 24 31.0 +0.1**
SONM Songino Array 47.38 341 P **P** **06 23 00.4 -0.3**
comp=Z,3.0nm,0.6s,baz=161,slow=7.7,SNR=26
SONM PcP **PcP** **06 24 31.0 +0.1**
comp=Z,1.5nm,0.7s,baz=158,slow=4.0,SNR=2.2
SONM LR LR 06 44 36.1
comp=Z,168nm,19.0s,baz=154,slow=38
KOLN Koldanda 47.59 305 *e*P **P** **06 23 02.1 -0.7**
comp=Z,34nm,0.4s
DANN Dangsing 47.68 306 *e*P **P** **06 23 02.8 -0.8**
comp=Z,56nm,0.6s
PYUN Piuthan 48.21 305 *e*P **P** **06 23 07.1 -0.5**
HYB Hyderabad 49.16 290 *i* P **P** **06 23 13.0 -1.8**
TLY Talaya 51.62 342 *e*P **P** **06 23 32.2 -0.6**
TLY *e*S S 06 30 40.1 -11
TLY *e*SS **SS** **06 34 23.9 -3.7**
TLY pmax pmax
comp=Z,8.0nm,0.9s
TLY MLR MLR
comp=Z,239nm,26.0s
TLY Talaya 51.62 342 *e*P **P** **06 23 33.8 +1.0**
TLY Talaya 51.62 342 P **P** **06 23 34.1 +1.3**
SNR=6.2
MOY Mondy 52.47 340 *e*P **P** **06 23 40.0 +0.7**
WMQ Urumqi 52.80 325 P **P** **06 23 42.0 +0.2**
WMQ pP **pP** **06 23 52.0 -1.8**
WMQ sP sP 06 23 56.0 -2.7
WMQ PcP **PcP** **06 24 51.0 +0.1**
WMQ PP **PP** **06 25 42.0 +0.4**
WMQ ScP **ScP** **06 28 45.0 -0.1**
WMQ S **S** **06 31 07.0 -0.5**
WMQ ScS **ScS** **06 33 26.0 -2.3**
WMQ SS **SS** **06 34 44.0 -2.8**
WMQ pmax pmax
comp=Z,14nm,1.2s
WMQ pmax pmax
comp=Z,140nm,6.0s
WMQ LR LR
comp=N,420nm,18.0s
WMQ LR LR
comp=E,320nm,18.0s
WMQ LR LR
comp=Z,430nm,18.0s
MSVF Nonsavu 54.86 115 *e*P **P** **06 23 57.2 -0.1**
MSVF pmax pmax
comp=Z,19nm,1.0s
MSVF Nonsavu 54.86 115 *e*P **P** **06 23 57.2 -0.1**
comp=Z,19nm,1.0s
PEA0B Petropavlovsk- 55.50 22 *e*P **P** **06 24 01.8 +0.6**
PETK Petropavlovsk- 55.50 22 P **P** **06 24 02.1 +0.8**
PETK Petropavlovsk- 55.50 22 P **P** **06 24 02.1 +0.8**
PETK Petropavlovsk- 55.50 22 P **P** **06 24 02.1 +0.8**
comp=Z,6.4nm,0.8s,baz=192,slow=4.8,SNR=11
PETK LR LR 06 47 37.5
comp=Z,73nm,19.2s,baz=351,slow=36
MK31 Makanchi Array 57.64 325*ce*P **P** **06 24 15.8 -0.7**
MK31 pmax pmax
comp=Z,4.0nm,0.3s
MK31 Makanchi Array 57.64 325 *e*P **P** **06 24 15.9 -0.7**
MKAR Makanchi Array 57.64 325 P **P** **06 24 16.0 -0.6**
MKAR Makanchi Array 57.64 325 P **P** **06 24 15.9 -0.6**
MKAR ScP **ScP** **06 29 10.8 +4.6**
MKAR Makanchi Array 57.64 325 P **P** **06 24 15.9 -0.6**
comp=Z,6.8nm,0.4s,baz=119,slow=7.0,SNR=78
MKAR ScP **ScP** **06 29 10.8 +4.6**
comp=Z,0.8nm,0.8s,baz=120,slow=5.2,SNR=4.8
MKAR LR LR 06 50 53.4
comp=Z,262nm,20.3s,baz=247,slow=38
KSH Kashi 58.12 315‖ *i* P **P** **06 24 21.0 +0.8**
KSH pP **pP** **06 24 30.2 -2.1**
KSH sP sP 06 24 34.2 -3.0
KSH PcP **PcP** **06 25 11.5 -0.1**
KSH PP **PP** **06 26 31.4 +2.1**
KSH ScP **ScP** **06 29 07.5 -1.1**
KSH PcS **PcS** **06 29 11.4 -1.7**
KSH S **S** **06 32 18.3 -0.4**
KSH sS sS 06 32 35.0 -3.8
KSH ScS **ScS** **06 34 03.0 -3.8**
KSH SS **SS** **06 36 11.1 +0.3**
KSH pmax pmax
comp=Z,25nm,1.2s
KSH LR LR
comp=N,320nm,6.4s
KSH LR LR
comp=E,310nm,5.1s
KSH LR LR
comp=Z,450nm,5.4s
ULHL Ulahol 59.10 318 P **P** **06 24 28.0 +0.9**
SNR=6.4
KZA Kyzart 59.69 318 P **P** **06 24 32.8 +1.3**
SNR=11
TKM2 Tokmak 2 59.82 319 *i* P **P** **06 24 32.3 +0.2**
TKM2 Tokmak 2 59.82 319 *e*P **P** **06 24 32.0 0.0**
comp=Z,27nm,0.6s
TKM2 Tokmak 2 59.82 319 P **P** **06 24 32.3 +0.2**
SNR=8.1
AAK Ala-Archa 60.43 318 *e*P **P** **06 24 37.1 +0.9**
AAK pmax pmax
comp=Z,23nm,1.7s
AAK Ala-Archa 60.43 318 P **P** **06 24 35.8 -0.4**
AAK Ala-Archa 60.43 318 P **P** **06 24 36.9 +0.7**
SNR=5.2
AAK Ala-Archa 60.43 318 P **P** **06 24 35.8 -0.4**
comp=Z,2.2nm,0.7s,baz=153,slow=7.5,SNR=8.4
ZAA0 Zalesovo Array 60.67 333 *e*P **P** **06 24 36.1 -1.3**
ZALV Zalesovo Beam 60.67 333 P **P** **06 24 36.3 -1.1**
ZALV Zalesovo Beam 60.67 333 P **P** **06 24 36.2 -1.1**
ZALV Zalesovo Beam 60.67 333 P **P** **06 24 36.2 -1.1**
comp=Z,2.4nm,0.4s,baz=126,slow=6.3,SNR=13
ZALV LR LR 06 52 33.3
comp=Z,181nm,20.1s,baz=105,slow=38
USP Ospenovka 60.70 319 P **P** **06 24 38.6 +0.7**
SNR=8.7
AML Almayashu 60.77 317 P **P** **06 24 39.6 +0.8**
SNR=22
EKS2 Erkin-Say 60.92 318 *e*P **P** **06 24 39.5 0.0**
EKS2 pmax pmax
comp=Z,11nm,0.9s
EKS2 Erkin-Say 60.92 318 *e*P **P** **06 24 39.5 0.0**
comp=Z,11nm,0.9s
EKS2 Erkin-Say 60.92 318 P **P** **06 24 40.3 +0.8**
SNR=9.5
KBL Kabul 61.59 308 *e*P **P** **06 24 43.5 -0.7**
KBL pmax pmax
comp=Z,5.0nm,0.6s
KBL Kabul 61.59 308 *e*P **P** **06 24 43.5 -0.7**
comp=Z,5.0nm,0.6s
KURBB Kurchatov Arra 61.82 327 P **P** **06 24 45.0 -0.2**
comp=Z,12nm,0.5s,baz=130,slow=6.4,SNR=134
KURK Kurchatov 61.82 328 *e*P **P** **06 24 44.6 -0.6**
KURK pmax pmax
comp=Z,24nm,0.6s
KURK Kurchatov 61.82 328 P **P** **06 24 45.0 -0.2**
comp=Z,4.6nm,0.6s
KURK Kurchatov 61.82 328 P **P** **06 24 44.6 -0.6**
SNR=13
KURK Kurchatov 61.82 328 P **P** **06 24 44.8 -0.4**
comp=Z,326nm,0.5s,SNR=38
NVS Novosibirsk 61.96 333 *e*P P 06 24 42.5 -3.5
NVS pmax pmax
comp=Z,17nm,1.7s
SEY Seymchan 62.11 13*ce*P **P** **06 24 48.8 +1.9**
KKAR Karatay Array 63.31 317 *e*P **P** **06 24 55.0 -0.4**
KKAR pmax pmax
comp=Z,12nm,1.0s
KKAR Karatay Array 63.31 317 *e*P **P** **06 24 55.0 -0.4**
comp=Z,12nm,1.0s
VOSK Vostochnaya 66.95 327 P **P** **06 25 17.0 -1.8**
VOSK pmax pmax
comp=Z,14nm,1.0s
BVA0 Borovoye Array 67.40 327 *i* P **P** **06 25 20.6 -1.0**
BVA0 pmax pmax
comp=Z,5.0nm,1.2s
BRVK Borovoye 67.47 327 *e*P **P** **06 25 21.5 -0.6**
BRVK pmax pmax
comp=Z,24nm,1.0s
BRVK Borovoye 67.47 327 *e*P **P** **06 25 21.4 -0.7**
comp=Z,26nm,1.0s
BRVK Borovoye 67.47 327 P **P** **06 25 21.4 -0.7**
SNR=11
BRVK Borovoye 67.47 327 P **P** **06 25 21.7 -0.4**
comp=Z,132nm,0.9s,SNR=8.4
TIXI Tiksi 67.93 1 *e*P **P** **06 25 24.5 0.0**
TIXI pmax pmax
comp=Z,9.0nm,1.0s
TIXI MLR MLR
comp=Z,181nm,21.0s
TIXI Tiksi 67.93 1 *e*P **P** **06 25 24.6 0.0**
comp=Z,8.0nm,0.8s
ZRNK Zerenda 68.13 327 *i* P **P** **06 25 24.8 -1.4**
ZRNK pmax pmax
comp=Z,22nm,1.0s
BILL Bilibino 69.63 15‖ *e*P **P** **06 25 38.2 +3.0**
BILL *e* 06 28 09.4
BILL pmax pmax
comp=Z,3.0nm,0.8s
AB31 Akbulak array 72.23 321*ce*P **P** **06 25 50.3 -1.1**
AB31 pmax pmax
comp=Z,1.0nm,0.2s
ABKAR Akbulak array 72.23 321 *e*P **P** **06 25 50.2 -1.1**
comp=Z,4.6nm,0.6s
AKTO Aktyubinsk 73.74 322 *i* P **P** **06 25 59.5 -0.8**
AKTO pmax pmax
comp=Z,2.0nm,0.7s
SVE Sverdlovsk 74.04 328‖ *e*P **P** **06 26 01.4 -0.5**
SVE pmax pmax
comp=Z,21nm,1.0s
GAMB Gambell 74.47 24 *e*P **P** **06 26 03.9 -0.3**
comp=Z,7.8nm,1.0s
ARU Arti 75.02 328*d i*P **P** **06 26 06.3 -1.3**
ARU 06 28 49.8
ARU S **S** **06 35 42.4 0.0**
ARU SS **SS** **06 40 33.6 +2.0**
ARU pmax pmax
comp=Z,19nm,1.2s
ARU Arti 75.02 328 *e*P **P** **06 26 06.6 -1.0**
comp=Z,12nm,0.8s
KDAK Kodiak Island 81.95 32 *e*P **P** **06 26 47.4 +1.6**
comp=Z,21nm,1.2s
ZEI Tsey 82.29 312 *e*P **P** **06 26 48.8 +0.6**
ZEI pmax pmax
comp=Z,9.0nm,1.3s
KBZ Khabaz 83.05 313 LR LR 07 11 41.4
comp=Z,128nm,18.5s,baz=262,slow=41
VNDA Vanda 83.34 173 P **P** **06 26 53.0 +0.4**
VNDA Vanda 83.34 173 P **P** **06 26 53.0 +0.4**
comp=Z,2.5nm,0.9s,baz=312,slow=5.4,SNR=11
TRF Thorofare Moun 83.61 27 *e*P **P** **06 26 54.6 +0.1**
comp=Z,44nm,1.7s
COLD Coldfoot 83.96 23 *e*P **P** **06 26 57.7 +1.6**
comp=Z,9.8nm,1.1s
PMR Palmer 84.01 29 *e*P **P** **06 26 57.4 +1.0**
PMR pmax pmax
comp=Z,18nm,1.2s
PMR Palmer 84.01 29 *e*P **P** **06 26 57.4 +1.0**
comp=Z,18nm,1.2s
SML Sawmill 84.40 28 *e*P **P** **06 26 59.3 +0.8**
SML pmax pmax
comp=Z,6.0nm,1.1s
SML Sawmill 84.40 28 *e*P **P** **06 26 59.3 +0.8**
comp=Z,5.8nm,1.1s
ILAR Eielson Array 85.17 25 P **P** **06 27 03.3 +1.1**
ILAR Eielson Array 85.17 25 P **P** **06 27 03.3 +1.1**
comp=Z,1.0nm,0.8s,baz=261,slow=5.1,SNR=7.2
VORD Divnogorie 85.59 321 *e*P **P** **06 27 03.6 -0.9**
VORD pmax pmax
comp=N,7.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.7s
VORD pmax pmax
comp=Z,10.0nm,0.7s
DIV Divide 85.61 29 P **P** **06 27 06.7 +2.1**
comp=Z,6.5nm,0.7s
VSR Storozhevoye 85.67 321 *e*P **P** **06 27 04.0 -0.9**
VSR pmax pmax
comp=E,4.0nm,0.5s
VSR pmax pmax
comp=Z,7.0nm,0.5s
BMRM Bremner River 86.18 29 *e*P **P** **06 27 09.7 +2.3**
comp=Z,8.9nm,1.0s
TMCR Tamitsa 86.18 334 *e*P P 06 27 01.8 -5.4
TMCR pmax pmax
comp=Z,20nm,0.5s
MOS Moscow 86.52 325 *e*P **P** **06 27 07.6 -1.4**
MOS pmax pmax
comp=Z,46nm,1.0s
OBN Obninsk 87.14 325‖ *i* P **P** **06 27 12.4 +0.4**
OBN pmax pmax
comp=Z,40nm,1.7s
OBN MLR MLR
comp=Z,100nm,20.0s
OBN Obninsk 87.14 325 P **P** **06 27 12.2 +0.1**
KMBO Kilima Mbogo 89.57 269 *e*P **P** **06 27 24.5 -0.3**
comp=Z,2.2nm,0.4s
KMBO Kilima Mbogo 89.57 269 P **P** **06 27 22.9 -1.9**
comp=Z,3.4nm,1.0s,baz=33,slow=6.5,SNR=6.4
KMBO LR LR 07 03 14.5
comp=Z,99nm,18.0s,baz=0.0,slow=33
BR131 Keskin Array S 90.09 310 *e*P **P** **06 27 25.5 -1.1**
comp=Z,2.7nm,0.8s
BRTR Keskin Array B 90.09 310 P **P** **06 27 25.4 -1.2**
BRTR Keskin Array B 90.09 310 P **P** **06 27 25.4 -1.2**
comp=Z,2.7nm,0.8s,baz=108,slow=4.7,SNR=11
BRTR LR LR 07 17 16.1
comp=Z,57nm,19.1s,baz=182,slow=42
INK Inuvik 90.24 21 P **P** **06 27 26.2 -0.2**
INK Inuvik 90.24 21 P **P** **06 27 26.2 -0.2**
comp=Z,1.0nm,0.9s,baz=296,slow=5.8,SNR=5.3
ARCES ARCESS Array B 90.53 340 P **P** **06 27 27.0 -0.8**
ARCES ARCESS Array B 90.53 340 P **P** **06 27 27.0 -0.8**
comp=Z,2.6nm,0.5s,baz=90,slow=7.2,SNR=33
ARCES LR LR 07 10 59.7
comp=Z,149nm,21.4s,baz=221,slow=38
FINES FINESS Array B 91.92 332 P **P** **06 27 33.3 -1.0**
FINES FINESS Array B 91.92 332 P **P** **06 27 33.3 -1.0**
comp=Z,1.1nm,0.5s,baz=88,slow=4.6,SNR=3.8
AKASG Malin Array Be 91.97 321 P **P** **06 27 32.9 -1.9**
AKASG Malin Array Be 91.97 321 P **P** **06 27 32.9 -1.9**
AKASG Malin Array Be 91.97 321 P **P** **06 27 32.9 -1.9**
comp=Z,1.9nm,0.6s,baz=69,slow=5.1,SNR=5.7
AKASG LR LR 07 14 42.1
comp=Z,119nm,20.2s,baz=315,slow=39
SYO Syowa Base 92.35 201‖ *e*P **P** **06 27 35.0 -1.2**
BUR08 Bucovina Ar. S 95.08 318 *e*P **P** **06 27 49.3 -0.1**
KOLS Kolonicke sedl 96.72 320 *e*P **P** **06 27 58.3 +1.6**
UZH Uzhgorod 96.78 320 *e*P P 06 28 00.7 +3.8
UZH *e* 06 28 09.3
CRVS Cervenica-Dubn 97.25 320 *e*P Pdif 06 27 59.1 -0.1
NB2 NORSAR Subarra 98.87 334 P **P** **06 28 04.6 -1.6**
comp=Z,5.3nm,1.2s,baz=63,slow=4.6
NOA NORSAR Array B 98.87 334 P **P** **06 28 04.6 -1.6**
NOA NORSAR Array B 98.87 334 P **P** **06 28 04.6 -1.6**
comp=Z,1.7nm,0.9s,baz=67,slow=4.5,SNR=4.3
NOA LR LR 07 17 42.0
comp=Z,170nm,21.3s,baz=60,slow=38
YKA Yellowknife Ar 99.57 24 P **Pdif** **06 28 10.5 +1.3**
YKA Yellowknife Ar 99.57 24 P **Pdif** **06 28 10.5 +1.3**
comp=Z,0.2nm,0.6s,baz=296,slow=4.3,SNR=7.8
TXAR Lajitas Array 121.64 52 PKP **PKPdf** **06 33 22.4 +1.8**
TXAR Lajitas Array 121.64 52 PKP **PKPdf** **06 33 22.4 +1.8**
comp=Z,0.4nm,0.8s,baz=251,slow=1.6,SNR=2.7
TORD Torodi Ar. Bea 122.96 288 PKP **PKPdf** **06 33 23.4 0.0**
TORD Torodi Ar. Bea 122.96 288 PKP **PKPdf** **06 33 23.4 0.0**
comp=Z,0.6nm,0.7s,baz=80,slow=1.9,SNR=6.7
JCT Junction City 124.10 49 *e*PKIKP **PKPdf** **06 33 26.7 +1.4**
JCT Junction City 124.10 49 *e*PKPdf **PKPdf** **06 33 26.7 +1.4**
CPUP Villa Florida 157.10 171 PKPab **PKPab** **06 34 52.7 -0.2**
CPUP Villa Florida 157.10 171 PKPab **PKPab** **06 34 52.7 -0.2**
comp=Z,0.6nm,0.6s,baz=223,slow=5.2,SNR=3.9

*CSEM **09** 06:26:25.2±0.7,36.60N×21.64E,h15km,MD3.2,Error ellipse: s-maj=15.5km s-min=7.1km az=62.0*
ATH 09 06:26:25.8,36.64N×21.70E,h25km±4km**,MD3.2/6, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.26**	**8**	*e*PB			Pb	06 26 32.5	+0.3
PYL				*e*SB			Sb	06 26 37.0	+0.4
PYL	**PYLOS**	**0.26**	**8**	*e*Pb			Pb	06 26 32.5	+0.3
PYL				*e*Sb			Sb	06 26 37.0	+0.4
DYR	**Agios Nikonas**	**0.52**	**76**	*e*PN			Pb	06 26 35.8	-0.7
DYR				*e*SN			Sb	06 26 44.5	+0.8
DYR	**Agios Nikonas**	**0.52**	**76**	*e*Pn			Pb	06 26 35.8	-0.7
DYR				*e*Sn			Sb	06 26 44.5	+0.8
ITM	**Ithomi**	**0.57**	**19**	*e*PN			Pb	06 26 37.0	-0.2
ITM				*e*SN			Sb	06 26 46.0	+1.0
ITM	**Ithomi**	**0.57**	**19**	*e*Pn			Pb	06 26 37.0	-0.2
ITM				*e*Sn			Sb	06 26 46.0	+1.0
AMT	**Artemida-Makis**	**0.89**	**0**	*e*PN			Pn	06 26 43.0	+0.2
AMT	**Artemida-Makis**	**0.89**	**0**	*e*Pn			Pn	06 26 43.0	+0.2
VLI	**Veliai**	**1.00**	**85**	*e*PN			Pb	06 26 45.7	+1.3
VLI	**Veliai**	**1.00**	**85**	*e*Pn			Pb	06 26 45.7	+1.3
KYTH	**Kithira**	**1.14**	**108**	*e*PN			Pb	06 26 47.7	+0.9
KYTH	**Kithira**	**1.14**	**108**	*e*Pn			Pb	06 26 47.7	+0.9

*SOF **09** 06:28:36.8,40.76N×22.16E,h8km,MD2.7*
*SKO **09** 06:28:37.7,40.84N×22.07E,h12km,M2.4,ML2.7*
*ISCJB **09** 06:28:37.7±0.4,40.82N±0.02×22.07E±0.02,h9km±3km, Error ellipse: s-maj=3.3km s-min=2.7km az=44.7*
*THE **09** 06:28:38.6,40.80N×22.07E,h4km±1km,ML2.7/10, Error ellipse: s-maj=1.9km s-min=0.2km az=4.0*
*CSEM **09** 06:28:38.2±0.1,40.80N×22.10E,h10km,ML2.7/10, Error ellipse: s-maj=4.0km s-min=3.0km az=99.0*
*ATH **09** 06:28:38.0,40.81N×22.13E,h21km±1km,MD3.3/16*
*BEO **09** 06:28:40.2±1.8,40.92N×22.20E,h18km±7km,ML2.5/2*
ISC 09 06:28:37.9±1.0,40.82N±0.02×22.10E±0.02,h7km±9km**, n89,σ0963/128,Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.27**	**59**	P			**Pb**	**06 28 44.4**	**-0.7**
GRG				S			**Sb**	**06 28 48.8**	**-1.1**
GRG	**Griva**	**0.27**	**59**	P			**Pb**	**06 28 44.4**	**-0.7**
GRG				S			**Sb**	**06 28 48.8**	**-1.1**
FNA	**Florina**	**0.55**	**266**	P			**Pg**	**06 28 48.5**	**-0.1**
FNA				S			**Sg**	**06 28 56.2**	**+0.4**
KZN	**Kozani**	**0.57**	**206**	P			**Pg**	**06 28 48.8**	**-0.1**
KZN				S			**Sg**	**06 28 57.0**	**+0.7**
KZN	**Kozani**	**0.57**	**206**	*e*PN			**Pg**	**06 28 48.8**	**-0.1**
KZN				*e*SN			**Sg**	**06 28 57.1**	**+0.7**
KZN	**Kozani**	**0.57**	**206**	*e*Pn			**Pg**	**06 28 48.8**	**-0.1**
KZN				*e*Sn			**Sg**	**06 28 57.1**	**+0.7**
VAY	**Valandovo**	**0.61**	**35**	*e*Pg			**Pg**	**06 28 49.7**	**0.0**
VAY				*e*Sg			**Sg**	**06 28 58.2**	**+0.5**
VAY				*e*Lg			Lg	06 29 01.8	
VAY	comp=N,585nm,1.0s								
VAY	comp=E,406nm,0.4s			*e*Lg			Lg	06 29 02.5	
VAY	**Valandovo**	**0.61**	**35**	*e*Pg			**Pg**	**06 28 49.8**	**0.0**
VAY				*e*Sg			**Sg**	**06 28 57.9**	**+0.1**
VAY	**Valandovo**	**0.61**	**35**	*e*Sg			**Sg**	**06 28 57.9**	**+0.1**
VAY	**Valandovo**	**0.61**	**35**	*e*Pg			**Pg**	**06 28 50.2**	**+0.4**
VAY				*e*Sg			**Sg**	**06 28 58.7**	**+0.9**
VAY				*e*Lg			Lg	06 29 01.2	
VAY	comp=E,585nm,1.0s								
BIA	**Bitola**	**0.62**	**289**	*e*Pg			**Pg**	**06 28 49.5**	**-0.4**
BIA				*e*Sg			**Sg**	**06 28 57.8**	**-0.3**
BIA	**Bitola**	**0.62**	**289**	*e*Pg			**Pg**	**06 28 49.5**	**-0.4**
BIA				*e*Sg			**Sg**	**06 28 57.7**	**-0.3**
THE	**Thessaloniki**	**0.68**	**106**	P			**Pg**	**06 28 51.4**	**+0.3**
THE				S			**Sb**	**06 29 01.9**	**+0.1**
THE	**Thessaloniki**	**0.68**	**106**	P			**Pg**	**06 28 51.4**	**+0.3**
THE				S			**Sb**	**06 29 01.9**	**+0.1**
KNT	**Kendrikon**	**0.69**	**60**	P			**Pb**	**06 28 52.1**	**-0.3**
KNT				S			**Sb**	**06 29 02.4**	**+0.2**
KNT	**Kendrikon**	**0.69**	**60**	P			**Pb**	**06 28 52.1**	**-0.3**
KNT				S			**Sb**	**06 29 02.4**	**+0.2**
LIT	**Litokhoron**	**0.78**	**157**	P			**Pg**	**06 28 53.0**	**+0.1**
LIT				S			**Sb**	**06 29 04.0**	**-0.6**
LIT	**Litokhoron**	**0.78**	**157**	*e*PN			**Pg**	**06 28 52.9**	**+0.1**
LIT				*e*SN			**Sb**	**06 29 04.5**	**-0.1**
LIT	**Litokhoron**	**0.78**	**157**	P			**Pg**	**06 28 53.0**	**+0.1**
LIT				S			**Sb**	**06 29 04.0**	**-0.6**
LIT				*e*Sn			**Sb**	**06 29 04.5**	**-0.1**
HORT	**Hortiatis**	**0.79**	**106**	P			**Pg**	**06 28 53.5**	**+0.4**
HORT				S			**Sb**	**06 29 05.4**	**+0.4**
HORT	**Hortiatis**	**0.79**	**106**	P			**Pg**	**06 28 53.5**	**+0.4**
NEST	**Nestorio**	**0.90**	**244**	P			**Pg**	**06 28 54.9**	**-0.3**
NEST				S			**Sg**	**06 29 07.3**	**+0.5**
SOH	**Sokhos**	**0.95**	**89**	P			**Pb**	**06 28 56.6**	**-0.2**
SOH				S			**Sn**	**06 29 11.1**	**-0.5**
SOH	**Sokhos**	**0.95**	**89**	*e*PN			**Pb**	**06 28 56.6**	**-0.2**
SOH				*e*SN			**Sg**	**06 29 08.4**	**-0.1**
SOH	**Sokhos**	**0.95**	**89**	P			**Pb**	**06 28 56.6**	**-0.2**
SOH				*e*Sn			**Sg**	**06 29 08.4**	**-0.1**
PLG	**Polygyros**	**1.12**	**113**	*e*PN			**Pg**	**06 28 59.2**	**-0.1**
PLG				*e*SN			**Sg**	**06 29 12.8**	**-1.0**
PLG	**Polygyros**	**1.12**	**113**	*e*Pn			**Pg**	**06 28 59.2**	**-0.1**
PLG				*e*Sn			**Sg**	**06 29 12.8**	**-1.0**
SKO	**Skopje**	**1.25**	**337**	*e*Pg			**Pn**	**06 29 01.6**	**-0.3**
SKO				*e*Sg			**Sg**	**06 29 18.3**	**0.0**
SKO				*e*Lg			Lg	06 29 19.0	
SKO	comp=E,67nm,0.2s								
SKO	comp=N,78nm,0.2s			*e*Lg			Lg	06 29 19.1	
SKO	**Skopje**	**1.25**	**337**	*e*Pg			**Pg**	**06 29 02.6**	**+0.6**
SKO				*e*Sg			**Sb**	**06 29 18.4**	**+0.1**
SKO	**Skopje**	**1.25**	**337**	*e*Sg			**Sb**	**06 29 18.4**	**+0.1**
SKO	**Skopje**	**1.25**	**337**	*e*Pg			**Pg**	**06 29 02.6**	**+0.6**
SKO				*e*Sg			**Sb**	**06 29 18.7**	**+0.4**
SKO				*e*Lg			Lg	06 29 19.6	
SKO	comp=N,78nm,0.2s								
THL	**Klokotos Trika**	**1.26**	**183**	P			**Pn**	**06 29 01.8**	**-0.1**
THL				S			**Sn**	**06 29 19.8**	**+0.8**
THL	**Klokotos Trika**	**1.26**	**183**	*e*PN			**Pb**	**06 29 01.9**	**0.0**
THL				*e*SN			**Sn**	**06 29 19.4**	**+0.4**
THL	**Klokotos Trika**	**1.26**	**183**	*e*Pn			**Pb**	**06 29 01.9**	**0.0**
THL				*e*Sn			**Sn**	**06 29 19.4**	**+0.4**
THL				S			**Sn**	**06 29 19.8**	**+0.8**
KKB	**Krupnik**	**1.28**	**35**	*i* P			**Pg**	**06 29 02.5**	**0.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KKB	Krupnik	1.28	35	iP	Pg	06 29 02.5	0.0
NVR	Nevrokopi	1.43	68	ePN	Pn	06 29 04.2	-0.2
NVR				eSN	Sg	06 29 24.6	+0.6
NVR	Nevrokopi	1.43	68	ePn	Pn	06 29 04.2	-0.2
NVR				eSn	Sg	06 29 24.6	+0.6
MMB	Musomiste	1.45	57	iP	Pn	06 29 04.2	-0.4
MMB	Musomiste	1.45	57	iP	Pn	06 29 04.2	-0.4
JAN	Janina	1.50	220	ePN	Pb	06 29 06.5	+0.3
JAN	Janina	1.50	220	ePn	Pb	06 29 06.5	+0.3
NEO	Neokhori	1.74	150	ePB	Pn	06 29 08.3	-0.3
NEO				eSN	Sn	06 29 31.2	+0.1
NEO	Neokhori	1.74	150	ePb	Pn	06 29 08.3	-0.3
NEO				eSn	Sn	06 29 31.2	+0.1
AGG	Agios Georgios	1.80	174	ePB	Pn	06 29 09.3	-0.2
AGG				eSN	Sb	06 29 34.2	+0.1
AGG	Agios Georgios	1.80	174	ePb	Pn	06 29 09.3	-0.2
AGG				eSn	Sb	06 29 34.2	+0.1
MAKR	Makrakomi, Fth	1.81	179	P	Pn	06 29 09.5	0.0
MAKR	Makrakomi, Fth	1.81	179	P	Pn	06 29 09.5	0.0
EVR	Evrytania	1.91	187	ePN	Pn	06 29 11.4	+0.3
EVR	Evrytania	1.91	187	ePn	Pn	06 29 11.4	+0.3
VTS	Vitosha	1.96	25	iP	Pn	06 29 12.5	+0.8
VTS	Vitosha	1.96	25	iP	Pn	06 29 12.5	+0.8
BARS	Barje	2.01	354	ePn	Pn	06 29 12.4	+0.1
BARS	Barje	2.01	354	ePn	Pn	06 29 12.4	+0.1
KEK	Kerkira	2.08	239	ePN	Pb	06 29 14.7	-1.3
KEK	Kerkira	2.08	239	ePn	Pb	06 29 14.7	-1.3
AOS	Alonnisos	2.14	140	ePB	Pn	06 29 13.4	-0.7
AOS	Alonnisos	2.14	140	ePb	Pn	06 29 13.4	-0.7
RZN	Rozhen	2.15	65	iP	Pn	06 29 15.0	+0.6
RZN	Rozhen	2.15	65	iP	Pn	06 29 15.0	+0.6
LKD2	Lefkada island	2.31	209	ePB	Pb	06 29 18.3	-1.7
LKD2	Lefkada island	2.31	209	ePb	Pb	06 29 18.3	-1.7
EFP	Efpalio	2.40	184	ePB	Pn	06 29 19.2	+1.6
EFP	Efpalio	2.40	184	ePb	Pn	06 29 19.2	+1.6
KALE	Kalithea	2.43	179	ePN	Pn	06 29 18.2	+0.1
KALE	Kalithea	2.43	179	ePn	Pn	06 29 18.2	+0.1
TRIZ	Trizonia	2.45	181	ePN	Pn	06 29 18.3	0.0
TRIZ	Trizonia	2.45	181	ePn	Pn	06 29 18.3	0.0
ZAPS	Zavoj	2.48	9	ePn	Pn	06 29 19.8	+0.9
SELS	Selova	2.51	343	ePn	Pn	06 29 18.8	-0.4
LAKA	Lakka	2.58	182	ePB	Pn	06 29 21.3	+1.2
LAKA	Lakka	2.58	182	ePb	Pn	06 29 21.3	+1.2
RLS	Riolos of Patr	2.80	190	ePN	Pn	06 29 23.9	+0.7
RLS	Riolos of Patr	2.80	190	ePn	Pn	06 29 23.9	+0.7
MPEP	Malo Peshtene	2.81	25	P	Pn	06 29 24.4	+1.1
LTK	Loutraki	2.87	166	ePN	Pn	06 29 24.4	+0.2
LTK	Loutraki	2.87	166	ePn	Pn	06 29 24.4	+0.2
VLS	Valsamata	2.89	204	ePN	Pn	06 29 25.9	+1.5
VLS	Valsamata	2.89	204	ePn	Pn	06 29 25.9	+1.5
ALN	Alexandroupoli	2.99	87	ePN	Pn	06 29 26.1	+0.3
ALN	Alexandroupoli	2.99	87	ePn	Pn	06 29 26.1	+0.3
IVAS	Ivanjica	3.11	333	ePn	Pn	06 29 28.1	+0.6
IVAS	Ivanjica	3.11	333	ePn	Pn	06 29 28.1	+0.6
GRUS	Gruza	3.23	342	ePn	Pn	06 29 29.1	0.0
GRUS	Gruza	3.23	342	ePn	Pn	06 29 29.1	0.0
TRUS	Trudelj	3.62	340	ePn	Pn	06 29 33.1	-1.4
TRUS	Trudelj	3.62	340	ePn	Pn	06 29 33.1	-1.4
DIVS	Divibare	3.63	335	ePn	Pn	06 29 34.7	+0.1
DIVS	Divibare	3.63	335	ePn	Pn	06 29 34.7	+0.1

*SOF **09** 06:35:25.9, 41°.74N×25°.26E, h13km, MD3.6*
*ATH **09** 06:35:26.7, 41°.62N×25°.24E, h24km±1km, MD3.5/12*
*CSEM **09** 06:35:26.8±0.1, 41°.67N×25°.16E, h2km, MD3.6, Error ellipse: s-maj=2.8km s-min=2.2km az=25.0*
*THE **09** 06:35:27.1, 41°.64N×25°.29E, h6km±1km, ML3.6/10, Error ellipse: s-maj=1.5km s-min=0.6km az=27.0*
*SKO **09** 06:35:28.7, 41°.75N×25°.18E, h0km, M3.1, ML3.6*
*BEO **09** 06:35:28.5±0.9, 41°.83N×25°.24E, h6km±3km, ML3.5/9*
*DDA **09** 06:35:28.3, 41°.49N×25°.18E, h26km, MD3.4*
*ISK **09** 06:35:30.4, 41°.60N×25°.62E, h3km, MD3.8, ML3.7*
ISC 09 06:35:24.9±0.7, **41°.71N**±0°.02×**25°.27E**±0°.01, **h7**km±6km, **n207**, σ1s.**22**/228, **8C-9D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDZ	Kurdzhali	0.13	120	iPg	Pg	06 35 29.1	+1.5
KDZ	Kurdzhali	0.13	120	iPg	Pg	06 35 29.1	+1.5
RZN	Rozhen	0.42	267	iPg	Pb	06 35 34.6	0.0
RZN	Rozhen	0.42	267	iPg	Pb	06 35 34.6	0.0
PLD	Plovdiv	0.58	313	ePg	Pb	06 35 37.3	0.0
PLD				eSg	Sb	06 35 44.8	-0.8
PLD	Plovdiv	0.58	313	iPg	Pb	06 35 37.4	+0.1
PLD	Plovdiv	0.58	313	ePg	Pb	06 35 37.3	0.0
PLD				eSg	Sb	06 35 44.8	-0.8
KAVA	Kavala	0.92	219	P	Pn	06 35 43.5	-0.6
KAVA				S	Sn	06 35 56.3	-1.2
KAVA	Kavala	0.92	219	P	Pn	06 35 43.5	-0.6
KAVA				S	Sn	06 35 56.3	-1.2
ALN	Alexandroupoli	1.00	144	P	Pn	06 35 45.3	0.0
ALN				S	Sg	06 35 58.5	+1.4
ALN	Alexandroupoli	1.00	144	ePN	Pn	06 35 45.5	+0.2
ALN				eSN	Sg	06 35 58.3	+1.2
ALN	Alexandroupoli	1.00	144	P	Pn	06 35 45.3	0.0
ALN				S	Sg	06 35 58.5	+1.4
EDRB	Edirne	1.11	83	ePG	Pg	06 35 46.5	+0.3
EDRB				eSG	Sb	06 36 00.4	-0.6
EDRB	Edirne	1.11	83	ePg	Pg	06 35 46.5	+0.3
NVR	Nevrokopi	1.12	251	P	Pg	06 35 47.4	+1.1
NVR	Nevrokopi	1.12	251	ePN	Pg	06 35 47.3	+1.0
NVR				eSN	Sn	06 36 02.4	-0.2
NVR	Nevrokopi	1.12	251	ePn	Pg	06 35 47.3	+1.0
NVR				eSn	Sn	06 36 02.4	-0.2
MMB	Musomiste	1.16	264	iP	Pg	06 35 48.2	+1.0
MMB	Musomiste	1.16	264	iP	Pg	06 35 48.2	+1.0
PGB	Panagyurishte	1.17	316	iPg	Pg	06 35 47.6	+0.3
PGB	Panagyurishte	1.17	316	iPg	Pg	06 35 47.6	+0.3
ENEZ	Enez	1.18	145	ePG	Pg	06 35 49.0	+1.5
ENEZ				eSG	Sn	06 36 03.5	-0.5
ENEZ	Enez	1.18	145	ePg	Pg	06 35 49.0	+1.5
ENEZ				eSg	Sn	06 36 03.5	-0.5
JMB	Yambol	1.23	52	ePg	Pg	06 35 50.2	+1.7
JMB				eSg	Sg	06 36 05.5	+1.0
JMB	Yambol	1.23	52	iP	Pg	06 35 50.1	+1.6
JMB	Yambol	1.23	52	iP	Pg	06 35 50.1	+1.6
JMB				eSg	Sg	06 36 05.5	+1.0
SRS	Serrai	1.40	245	P	Pg	06 35 52.0	+0.4
SRS				S	Sg	06 36 11.3	+1.6
SRS	Serrai	1.40	245	P	Pg	06 35 52.0	+0.4
SRS				S	Sg	06 36 11.3	+1.6
PVL	Pavlikeni	1.50	2	iP	Pg	06 35 53.0	-0.7
PVL	Pavlikeni	1.50	2	iP	Pg	06 35 53.0	-0.7
GELI	Tayfur-Gelibol	1.60	145	ePN	Pg	06 35 56.4	+0.9
GELI	Tayfur-Gelibol	1.60	145	ePn	Pg	06 35 56.4	+0.9
SZH	Strazhica	1.63	17	iP	Pg	06 35 55.2	-0.9
SZH	Strazhica	1.63	17	iP	Pg	06 35 55.2	-0.9
KKB	Krupnik	1.64	276	iP	Pb	06 35 55.2	-0.2
KKB	Krupnik	1.64	276	iP	Pb	06 35 55.2	-0.2
OUR	Ouranopolis	1.69	216	P	Pb	06 35 55.9	-0.3
OUR	Ouranopolis	1.69	216	P	Pb	06 35 55.9	-0.3
SOH	Sokhos	1.70	239	P	Pb	06 35 56.3	-0.1
SOH				S	Sg	06 36 19.0	-0.4
SOH	Sokhos	1.70	239	ePN	Pb	06 35 56.0	-0.4
SOH	Sokhos	1.70	239	ePn	Pb	06 35 56.0	-0.4
SOH	Sokhos	1.70	239	P	Pb	06 35 56.3	-0.1
SOH				S	Sg	06 36 19.0	-0.4
LPK	Lapseki	1.75	139	ePN	Pg	06 35 59.2	+0.8
LPK	Lapseki	1.75	139	ePn	Pg	06 35 59.2	+0.8
VTS	Vitosha	1.77	300⇑	iP	Pg	06 35 58.1	-0.6
VTS	Vitosha	1.77	300	ePn	Pg	06 35 59.2	+0.5
VTS				eSn	Sg	06 36 21.0	-0.6
VTS	Vitosha	1.77	300	P	Pb	06 35 57.4	-0.2
VTS	Vitosha	1.77	300	P	Pb	06 35 57.4	-0.2
VTS	Vitosha	1.77	300	ePn	Pg	06 35 59.2	+0.5
VTS				eSn	Sg	06 36 21.0	-0.6
VTS				S	Sb	06 36 23.3	+3.3
RKY	Sarkoy-Tekirda	1.77	125	ePN	Pg	06 35 59.0	+0.2
RKY	Sarkoy-Tekirda	1.77	125	ePn	Pg	06 35 59.0	+0.2
SART	Tekirdag	1.77	125	iP	Pb	06 35 58.0	+0.4
SART				iS	Sg	06 36 22.2	+0.6
SART	Tekirdag	1.77	125	iP	Pb	06 35 58.0	+0.4
SART				iS	Sg	06 36 22.2	+0.6
MFT	Murefte	1.78	121	ePN	Pg	06 35 59.5	+0.6
MFT	Murefte	1.78	121	ePn	Pg	06 35 59.5	+0.6
LIA	Limnos Island	1.81	182	P	Pb	06 35 57.4	-1.0
LIA				S	Sn	06 36 20.2	+0.5
LIA	Limnos Island	1.81	182	ePN	Pn	06 35 57.3	+0.8
LIA				eSN	Sn	06 36 19.5	-0.2
LIA	Limnos Island	1.81	182	P	Pb	06 35 57.4	-1.0
LIA				eSn	Sn	06 36 19.5	-0.2
LIA				S	Sn	06 36 20.2	+0.5
TKR	Tekirdag	1.85	112	ePN	Pb	06 35 59.9	+0.9
TKR	Tekirdag	1.85	112	ePn	Pb	06 35 59.9	+0.9
KNT	Kendrikon	1.87	254	P	Pb	06 35 58.8	-0.5
KNT				S	Sb	06 36 23.5	+0.7
KNT	Kendrikon	1.87	254	P	Pb	06 35 58.8	-0.5
KNT				S	Sb	06 36 23.5	+0.7
PLG	Polygyros	1.92	226	P	Pb	06 35 59.0	-1.2
PLG	Polygyros	1.92	226	ePN	Pb	06 35 59.1	-1.2
PLG	Polygyros	1.92	226	ePn	Pb	06 35 59.1	-1.2
ZIMR		1.94	2⇑	iP	Pg	06 36 02.2	+0.1
ZIMR		1.94	2	S	Sg	06 36 28.4	+1.1
BOZC	Bozcaada	1.96	162	iP	Pn	06 35 58.8	+0.4
BOZC				iS	Sb	06 36 25.5	0.0
HORT	Hortiatis	1.98	236	P	Pn	06 35 59.8	+0.9
HORT				S	Sb	06 36 25.8	-0.4
HORT	Hortiatis	1.98	236	P	Pn	06 35 59.8	+0.9
HORT				S	Sb	06 36 25.8	-0.4
MPEP	Malo Peshtene	1.99	326	iP	Pb	06 36 00.8	-0.6
KRBG	Karabiga-Canak	2.02	130	ePN	Pb	06 36 02.9	+1.0
KRBG	Karabiga-Canak	2.02	130	ePn	Pb	06 36 02.9	+1.0
THE	Thessaloniki	2.05	239	P	Pb	06 36 01.1	-1.2
THE	Thessaloniki	2.05	239	P	Pb	06 36 01.1	-1.2
EZN	Ezine	2.05	157	ePN	Pg	06 36 04.0	-0.1
EZN	Ezine	2.05	157	ePn	Pg	06 36 04.0	-0.1
VAY	Valandovo	2.06	260	ePn	Pg	06 36 04.6	+0.1
VAY				eSg	Sg	06 36 33.0	+1.8
VAY				eLg	Lg	06 36 34.5	
	comp=N,306nm,0.6s						
VAY				eLg	Lg	06 36 34.8	
	comp=E,484nm,0.9s						
VAY	Valandovo	2.06	260	ePn	Pb	06 36 01.0	-1.6
VAY				eSg	Sg	06 36 33.5	+2.3
VAY				eLg	Lg	06 36 35.2	
	comp=E,484nm,0.9s						
ROIA	ROIAK	2.08	48	iP	Pb	06 36 01.9	-1.0
PAIG	Paliouri	2.15	215	P	Pn	06 36 01.9	+0.8
PAIG				S	Sb	06 36 29.9	-1.1
PAIG	Paliouri	2.15	215	P	Pn	06 36 01.9	+0.8
PAIG				S	Sb	06 36 29.9	-1.1
PRD	Provadia	2.17	46	P	Pb	06 36 05.0	+0.7
PRD	Provadia	2.17	46	P	Pb	06 36 05.0	+0.7
SLVT	Silivri	2.26	101	ePN	Pb	06 36 05.9	-0.1
SLVT	Silivri	2.26	101	ePn	Pb	06 36 05.9	-0.1
CTYL	Yal??k??y-??at	2.28	95	ePN	Pb	06 36 06.7	+0.5
CTYL	Yal??k??y-??at	2.28	95	ePn	Pb	06 36 06.7	+0.5
GRG	Griva	2.29	252	P	Pb	06 36 05.5	-1.0
GRG				S	Sb	06 36 33.7	-1.3
GRG	Griva	2.29	252	P	Pb	06 36 05.5	-1.0
GRG				S	Sb	06 36 33.7	-1.3
EDC	Edincik	2.39	124	ePN	Pb	06 36 08.1	-0.1
EDC	Edincik	2.39	124	ePn	Pb	06 36 08.1	-0.1
BNT	Bandirma	2.42	123	ePN	Pb	06 36 08.0	-0.7
BNT	Bandirma	2.42	123	ePn	Pb	06 36 08.0	-0.7
GONE	Gonen-Balikesi	2.48	131	ePN	Pb	06 36 09.1	-0.5
GONE	Gonen-Balikesi	2.48	131	ePn	Pb	06 36 09.1	-0.5
CTKS	Kestanelik-??a	2.48	100	ePN	Pb	06 36 08.9	-0.7
CTKS	Kestanelik-??a	2.48	100	ePn	Pb	06 36 08.9	-0.7
ZAPS	Zavoj	2.50	310	ePn	Pb	06 36 08.6	-1.4
PRK	Paraskevi	2.58	162	P	Pn	06 36 07.8	+0.8
PRK				S	Sn	06 36 39.3	+0.7
PRK	Paraskevi	2.58	162	ePN	Pn	06 36 08.6	+1.6
PRK				eSN	Sn	06 36 39.1	+0.5
PRK	Paraskevi	2.58	162	P	Pn	06 36 07.8	+0.8
PRK	Paraskevi	2.58	162	ePn	Pn	06 36 08.6	+1.6
PRK				S	Sn	06 36 39.3	+0.7
LIT	Litokhoron	2.65	234	ePN	Pn	06 36 08.7	+0.7
LIT	Litokhoron	2.65	234	ePn	Pn	06 36 08.7	+0.7
BALY	Balya	2.66	137	iP	Pb	06 36 10.9	-1.9
BALY				iS	Sg	06 36 48.9	-1.4
BALY	Balya	2.66	137	iP	Pb	06 36 10.9	-1.9
BALY				iS	Sg	06 36 48.9	-1.4
BGKT	Bogazkoy	2.69	100	ePN	Pb	06 36 12.1	-1.1
BGKT	Bogazkoy	2.69	100	ePn	Pb	06 36 12.1	-1.1
AOS	Alonnisos	2.75	203	P	Pn	06 36 09.9	+0.5
AOS	Alonnisos	2.75	203	ePN	Pn	06 36 09.8	+0.4
AOS	Alonnisos	2.75	203	P	Pn	06 36 09.9	+0.5
BARS	Barje	2.79	294	ePn	Pb	06 36 13.0	-2.0
BARS				eSg	Sg	06 36 54.7	+0.2
BARS	Barje	2.79	294	ePn	Pb	06 36 13.0	-2.0
BARS				eSg	Sg	06 36 54.7	+0.2
HUMR	Humele	2.82	356⇓	iP	Pb	06 36 15.7	+0.2
HUMR	Humele	2.82	356⇓	iP	Pb	06 36 15.7	+0.2
XOR	Xorichti	2.83	215	P	Pn	06 36 11.3	+0.8
XOR	Xorichti	2.83	215	P	Pn	06 36 11.3	+0.8
NEO	Neokhori	2.87	214	ePN	Pn	06 36 11.5	+0.5
NEO	Neokhori	2.87	214	ePn	Pn	06 36 11.5	+0.5
BALB	Balikesir	2.87	135	ePN	Pb	06 36 14.9	-1.4
BALB	Balikesir	2.87	135	ePn	Pb	06 36 14.9	-1.4
SKIA	Skiathos	2.89	209	P	Pn	06 36 11.9	+0.6
SKIA	Skiathos	2.89	209	P	Pn	06 36 11.9	+0.6
PSN	Preselentsi	2.91	47	iP	Pn	06 36 12.3	+0.7
ISK	Istanbul-Kandi	2.92	102	ePN	Pb	06 36 15.7	-1.6
ISK	Istanbul-Kandi	2.92	102	ePn	Pb	06 36 15.7	-1.6
ARMT	Armutlu	2.94	112	ePN	Pb	06 36 15.1	-2.5
ARMT	Armutlu	2.94	112	ePn	Pb	06 36 15.1	-2.5
KZN	Kozani	3.00	243	ePN	Pn	06 36 13.6	+0.8
KZN	Kozani	3.00	243	ePn	Pn	06 36 13.6	+0.8
MDNY	Mudanya-Bursa	3.05	115	ePN	Pb	06 36 17.2	-2.1
MDNY	Mudanya-Bursa	3.05	115	ePn	Pb	06 36 17.3	-2.1
ORLT	Orhaneli	3.21	120	ePN	Pb	06 36 19.8	-2.5
ORLT	Orhaneli	3.21	120	ePn	Pb	06 36 19.8	-2.5
GEMT	Gemlik	3.23	112	ePN	Pb	06 36 19.5	-2.9
GEMT	Gemlik	3.23	112	ePn	Pb	06 36 19.5	-2.9
BOLS	Boljevac	3.23	312	ePn	Pn	06 36 18.1	+2.2
BOLS				eSg	Sg	06 37 08.9	+0.3
BOLS	Boljevac	3.23	312	ePn	Pn	06 36 18.1	+2.2
BOLS				eSg	Sg	06 37 08.9	+0.3
THL	Klokotos Trika	3.28	230	ePN	Pn	06 36 15.4	-1.2
THL	Klokotos Trika	3.28	230	ePn	Pn	06 36 15.4	-1.2
YLV	Yalova	3.30	109	ePN	Pb	06 36 21.4	-2.4
YLV	Yalova	3.30	109	ePn	Pb	06 36 21.4	-2.4
DST	Dursunbey	3.31	129	ePN	Pb	06 36 20.8	-3.0
DST	Dursunbey	3.31	129	ePn	Pb	06 36 20.8	-3.0
SILT	Sile	3.33	98	ePN	Pb	06 36 21.6	-2.7
SILT	Sile	3.33	98	ePn	Pb	06 36 21.6	-2.7
CHOS	Chios island	3.38	169	ePN	Pn	06 36 18.5	+0.5
CHOS	Chios island	3.38	169	ePn	Pn	06 36 18.5	+0.5
SELS	Selova	3.42	297	ePn	Pn	06 36 20.8	+2.2
SELS				eSg	Sg	06 37 14.2	-0.5
SELS	Selova	3.42	297	ePn	Pn	06 36 20.8	+2.2
SELS				eSg	Sg	06 37 14.2	-0.5
HRT	Hereke	3.43	104	ePN	Pb	06 36 22.5	-3.5
HRT	Hereke	3.43	104	ePn	Pb	06 36 22.5	-3.5
AKS	Akhisar	3.44	145	ePN	Pb	06 36 22.8	-3.2
AKS	Akhisar	3.44	145	ePn	Pb	06 36 22.8	-3.2
AGG	Agios Georgios	3.50	221	ePN	Pn	06 36 20.8	+1.1
AGG	Agios Georgios	3.50	221	ePn	Pn	06 36 20.8	+1.1
ISR	Istrita	3.53	15⇑	iP	Pb	06 36 23.8	-3.8
ISR	Istrita	3.53	15⇑	iP	Pb	06 36 23.8	-3.8
TIRR	Tirgusor	3.58	39⇑	iP	Pn	06 36 23.4	+2.7
TIRR	Tirgusor	3.58	39⇑	iP	Pn	06 36 23.4	+2.7
BLCB	Balcova	3.59	157	ePN	Pb	06 36 25.8	-2.9
BLCB	Balcova	3.59	157	ePn	Pb	06 36 25.8	-2.9
IZM	Izmir	3.65	155	ePN	Pb	06 36 26.2	-3.4
IZM	Izmir	3.65	155	ePn	Pb	06 36 26.2	-3.4
CAVI	Cavuskoy	3.78	112	ePN	Pn	06 36 27.5	+4.0
CAVI	Cavuskoy	3.78	112	ePn	Pn	06 36 27.5	+4.0
TVSB	Tavsanli	3.91	124	ePN	Pn	06 36 29.5	+4.1
TVSB	Tavsanli	3.91	124	ePn	Pn	06 36 29.5	+4.1
GRUS	Gruza	3.99	304	ePn	Pn	06 36 29.1	+2.7
GRUS				eSg	Sg	06 37 32.4	-0.7
GRUS	Gruza	3.99	304	ePn	Pn	06 36 29.1	+2.7
GRUS				eSg	Sg	06 37 32.4	-0.7
CFR	Carcaliu	4.04	30⇓	iP	Pg	06 36 39.6	-2.7
KALE	Kalithea	4.10	217	ePN	Pn	06 36 29.2	+1.3
KALE	Kalithea	4.10	217	ePn	Pn	06 36 29.3	+1.3
KULA	Kula-Manisa	4.12	140	ePN	Pn	06 36 32.7	+4.5
KULA	Kula-Manisa	4.12	140	ePn	Pn	06 36 32.7	+4.5
TRIZ	Trizonia	4.15	217	ePN	Pn	06 36 30.0	+1.5
TRIZ	Trizonia	4.15	217	ePn	Pn	06 36 30.0	+1.5
GULT	Gulveren	4.17	106	ePN	Pn	06 36 33.1	+4.2
GULT	Gulveren	4.17	106	ePn	Pn	06 36 33.1	+4.2
EFP	Efpalio	4.18	219	ePN	Pn	06 36 31.0	+2.1
EFP	Efpalio	4.18	219	ePn	Pn	06 36 31.0	+2.1
PLOR	Plostina	4.25	13⇓	iP	Pn	06 36 33.3	+3.2
PLOR	Plostina	4.25	13⇓	iP	Pn	06 36 33.3	+3.2
VRI	Vrincioaia	4.28	14⇓	iP	Pn	06 36 33.5	+3.1
VRI	Vrincioaia	4.28	14⇓	iP	Pn	06 36 33.5	+3.1
LAKA	Lakka	4.29	217	ePN	Pn	06 36 32.7	+2.1
LAKA	Lakka	4.29	217	ePn	Pn	06 36 32.7	+2.1
GUR	Goura	4.39	212	ePN	Pn	06 36 33.8	+1.8
GUR	Goura	4.39	212	ePn	Pn	06 36 33.8	+1.8
DID	Didima	4.49	201	ePN	Pn	06 36 34.2	+1.0
DID	Didima	4.49	201	ePn	Pn	06 36 34.2	+1.0
ALT	Altintas	4.55	124	ePN	Pn	06 36 38.1	+3.9
ALT	Altintas	4.55	124	ePn	Pn	06 36 38.1	+3.9
DIVS	Divibare	4.55	303	ePn	Pn	06 36 35.9	+1.7
DIVS				eSn	Sn	06 37 27.3	0.0
DIVS	Divibare	4.55	303	ePn	Pn	06 36 35.9	+1.7
DIVS				eSn	Sn	06 37 27.3	0.0
BZS	Buzias	4.72	327⇓	iP	Pn	06 36 40.3	+4.0
BZS	Buzias	4.72	327⇓	iP	Pn	06 36 40.3	+4.0
TESR		4.90	11⇑	iP	Pn	06 36 42.1	+3.2
TESR		4.90	11⇑	iP	Pn	06 36 42.1	+3.2
VLI	Veliai	5.31	201	ePN	Pn	06 36 45.8	+1.3
VLI	Veliai	5.31	201	ePn	Pn	06 36 45.8	+1.3
DYR	Agios Nikonas	5.44	206	ePN	Pn	06 36 47.3	+0.9
DYR	Agios Nikonas	5.44	206	ePn	Pn	06 36 47.3	+0.9
KYTH	Kithira	5.70	198	ePN	Pn	06 36 51.7	+1.8
KYTH	Kithira	5.70	198	ePn	Pn	06 36 51.7	+1.8
KOLS	Kolonicke sedl	7.52	345	ePN	Pn	06 37 12.4	-2.5
KOLS				ePG	Pg	06 37 49.9	+1.1
KOLS				eSG	Sg	06 39 34.8	+8.6

MEX 09 07:00:21.8±0.7, **17°.66N**×**101°.14W**, **h39**km±7km, **MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.31	260	eP	Pn	07 00 28.3	-1.9
ZIIG				iS	Sn	07 00 34.4	-1.9
ARIG	Puente Sto Nin	0.98	51	eP	Pn	07 00 37.4	-1.7
ARIG				iS	Sn	07 00 49.3	-2.5
CAIG	El Cayaco	1.04	126	eP	Pn	07 00 38.6	-1.2
CAIG				iS	Sn	07 00 51.2	-1.9
ACX	Acapulco	1.46	123	iP	Pn	07 00 43.1	-2.6
ACX				iS	Sn	07 01 00.5	-3.1
MEIG	Mezcala	1.48	80	iP	Pn	07 00 43.3	-2.7
MEIG				iS	Sn	07 01 01.9	-2.2
MMIG	Aquila	2.19	287	iP	Pn	07 00 53.6	-2.1
MMIG				iS	Sn	07 01 20.0	-1.5
YAIG	Yautepec	2.31	59	iP	Pn	07 00 56.9	-0.7
YAIG				iS	Sn	07 01 23.1	-1.8
PNIG	Pinotepa	3.15	113	eP	Pn	07 01 07.1	-1.8
PNIG				iS	Sn	07 01 42.5	-2.8

*CSEM **09** 07:04:01.8±0.7, 36°.45N×21°.67E, h2km, ML3.1/6, Error ellipse: s-maj=13.3km s-min=7.8km az=47.0*
*ATH **09** 07:04:02.1, 36°.39N×21°.73E, h5km±2km, MD3.5/19, ML3.2*
*THE **09** 07:04:02.9, 36°.45N×21°.72E, h0km±1km, ML3.1/6, Error ellipse: s-maj=2.1km s-min=0.8km az=214.0*
ISC 09 07:04:02.0±1.5, **36°.41N**±0°.05×**21°.71E**±0°.04, **h8**km±9km, **n77**, σ0s.**77**/106, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.48	4	P	Pg	07 04 11.0	-0.3
PYL				S	Sg	07 04 18.4	+0.7
PYL	PYLOS	0.48	4	ePB	Pg	07 04 11.1	-0.3
PYL				eSB	Sb	07 04 18.7	-1.3
PYL	PYLOS	0.48	4	ePb	Pg	07 04 11.1	-0.3
PYL				eSb	Sb	07 04 18.7	-1.3
DYR	Agios Nikonas	0.61	55	P	Pg	07 04 13.1	-0.7
DYR	Agios Nikonas	0.61	55	ePG	Pg	07 04 13.4	-0.4
DYR				eSB	Sg	07 04 22.3	+0.4
DYR	Agios Nikonas	0.61	55	ePg	Pg	07 04 13.4	-0.4
ITM	Ithomi	0.79	13	P	Pg	07 04 17.1	0.0
ITM				S	Sb	07 04 28.3	-0.4
ITM	Ithomi	0.79	13	ePG	Pg	07 04 17.0	0.0
ITM				eSB	Sb	07 04 28.8	+0.1
ITM	Ithomi	0.79	13	P	Pg	07 04 17.1	0.0
ITM				eSb	Sb	07 04 28.8	+0.1
VLI	Veliai	1.04	73	P	Pg	07 04 21.9	0.0
VLI				S	Sn	07 04 37.4	-0.1
VLI	Veliai	1.04	73	ePN	Pg	07 04 22.1	+0.2
VLI				eSN	Sg	07 04 34.7	-0.7
VLI	Veliai	1.04	73	ePn	Pg	07 04 22.1	+0.2
VLI				S	Sn	07 04 37.4	-0.1
KYTH	Kithira	1.08	97	P	Pg	07 04 23.1	+0.3
KYTH	Kithira	1.08	97	ePN	Pg	07 04 23.1	+0.3
KYTH	Kithira	1.08	97	P	Pg	07 04 23.1	+0.3
VLX	Vlachokerasia	1.10	29	P	Pg	07 04 22.7	-0.4
VLX				S	Sn	07 04 38.6	-0.6
VLX	Vlachokerasia	1.10	29	ePG	Pg	07 04 22.6	-0.5
VLX				eSB	Sn	07 04 38.9	-0.3
VLX	Vlachokerasia	1.10	29	P	Pg	07 04 22.7	-0.4
VLX				S	Sn	07 04 38.6	-0.6
VLX				eSb	Sn	07 04 38.9	-0.3
AMT	Artemida-Makis	1.12	0	P	Pg	07 04 23.1	-0.3
AMT	Artemida-Makis	1.12	0	ePG	Pg	07 04 23.1	-0.3
AMT				eSB	Sn	07 04 39.9	+0.3
AMT	Artemida-Makis	1.12	0	P	Pg	07 04 23.1	-0.3
AMT				eSb	Sn	07 04 39.9	+0.3
GUR	Goura	1.60	18	ePG	Pb	07 04 31.8	-0.1
GUR				eSB	Sg	07 04 54.7	+1.2
DIDY	Didyma	1.61	48	P	Pn	07 04 31.6	+0.8
DIDY	Didyma	1.61	48	P	Pn	07 04 31.6	+0.8
DID	Didima	1.64	48	P	Pn	07 04 32.0	+0.8
DID				S	Sg	07 04 54.1	-0.7
DID	Didima	1.64	48	ePB	Pb	07 04 32.7	+0.2
DID				eSB	Sg	07 04 55.2	+0.4
DID	Didima	1.64	48	P	Pn	07 04 32.0	+0.8
DID	Didima	1.64	48	ePb	Pb	07 04 32.7	+0.2
DID				S	Sg	07 04 54.1	-0.7
DID				eSb	Sg	07 04 55.2	+0.4
RLS	Riolos of Patr	1.65	353	P	Pn	07 04 31.6	+0.3
RLS	Riolos of Patr	1.65	353	ePG	Pb	07 04 32.6	-0.1
RLS	Riolos of Patr	1.65	353	P	Pn	07 04 31.6	+0.3
RLS	Riolos of Patr	1.65	353	ePg	Pb	07 04 32.6	-0.1
LAKA	Lakka	1.84	7	P	Pb	07 04 35.2	-0.6
LAKA				S	Sb	07 04 58.9	-0.1
LAKA	Lakka	1.84	7	ePG	Pb	07 04 35.8	0.0
LAKA				eSN	Sg	07 05 02.1	+1.1
LAKA	Lakka	1.84	7	P	Pb	07 04 35.2	-0.6
LAKA	Lakka	1.84	7	ePg	Pb	07 04 35.8	0.0
LAKA				S	Sb	07 04 58.9	-0.1
LAKA				eSn	Sg	07 05 02.1	+1.1
LTK	Loutraki	1.90	32	P	Pn	07 04 35.3	+0.6
LTK	Loutraki	1.90	32	ePN	Pb	07 04 37.2	+0.4
LTK	Loutraki	1.90	32	P	Pn	07 04 35.3	+0.6
NAIG	Nisos Aigina	1.96	46	ePG	Pb	07 04 38.4	+0.5
NAIG	Nisos Aigina	1.96	46	ePg	Pb	07 04 38.4	+0.5
TRIZ	Trizonia	1.97	8	P	Pn	07 04 36.1	+0.5
TRIZ				S	Sb	07 05 02.3	-0.5
TRIZ	Trizonia	1.97	8	ePN	Pb	07 04 38.6	+0.5
TRIZ	Trizonia	1.97	8	P	Pn	07 04 36.1	+0.5
TRIZ	Trizonia	1.97	8	ePn	Pb	07 04 38.6	+0.5
TRIZ				S	Sb	07 05 02.3	-0.5
VLS	Valsamata	1.97	334	ePB	Pn	07 04 37.0	+1.3
VLS	Valsamata	1.97	334	ePb	Pn	07 04 37.0	+1.3
KALE	Kalithea	2.00	10	ePN	Pb	07 04 38.5	-0.2
KALE	Kalithea	2.00	10	ePn	Pb	07 04 38.5	-0.2
EFP	Efpalio	2.02	4	ePG	Pg	07 04 40.2	-0.4
EFP				eSN	Sg	07 05 07.0	+0.2
EFP	Efpalio	2.02	4	ePg	Pg	07 04 40.2	-0.4
EFP				eSn	Sg	07 05 07.0	+0.2
DSF	Desfina	2.10	18	P	Pn	07 04 38.6	+1.1
DSF				S	Sb	07 05 05.5	-1.1
DSF	Desfina	2.10	18	P	Pn	07 04 38.6	+1.1
DSF				S	Sb	07 05 05.5	-1.1
ATH	Athens Observa	2.24	45	ePB	Pn	07 04 40.6	+1.3
ATH	Athens Observa	2.24	45	ePb	Pn	07 04 40.6	+1.3
VAM	Vamos	2.26	116	ePN	Pb	07 04 42.2	-0.8
VAM	Vamos	2.26	116	ePn	Pb	07 04 42.2	-0.8
LKR	Lokris	2.46	24	ePB	Pn	07 04 43.5	+1.1
LKR	Lokris	2.46	24	ePb	Pn	07 04 43.5	+1.1
EVR	Evrytania	2.50	2	ePG	Pb	07 04 48.0	+0.8
EVR	Evrytania	2.50	2	ePg	Pb	07 04 48.0	+0.8
ATAL	Atalanti	2.50	24	P	Pn	07 04 44.1	+1.1
ATAL	Atalanti	2.50	24	P	Pn	07 04 44.1	+1.1
LKD2	Lefkada island	2.51	341	ePN	Pb	07 04 46.7	-0.7
LKD2	Lefkada island	2.51	341	ePn	Pb	07 04 46.7	-0.7
AGG	Agios Georgios	2.65	11	ePB	Pn	07 04 46.8	+1.7
AGG	Agios Georgios	2.65	11	ePb	Pn	07 04 46.8	+1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MRKA	Markates	2.73	33	P	Pn	07 04 46.9	+0.7
MRKA	Markates	2.73	33	P	Pn	07 04 46.9	+0.7
SKIA	Skiathos	3.08	26	P	Pn	07 04 51.7	+0.7
SKIA	Skiathos	3.08	26	P	Pn	07 04 51.7	+0.7
NEO	Neokhori	3.13	22	ePB	Pn	07 04 55.0	+3.4
NEO	Neokhori	3.13	22	ePb	Pn	07 04 55.0	+3.4
THL	Klokotos Trika	3.15	4	ePB	Pb	07 04 55.9	-2.4
THL	Klokotos Trika	3.15	4	ePb	Pb	07 04 55.9	-2.4
AOS	Alonnisos	3.25	31	ePN	Pn	07 04 53.2	0.0
AOS	Alonnisos	3.25	31	ePn	Pn	07 04 53.2	0.0

WEL 09 07:05:03.5±0.5, 44°.56S×173°.75E, h33km, ML3.8/10, 1C, Error ellipse: s-maj=4.9km s-min=2.8km az=90.0, Off east coast of South Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MQZ	McQueen's Vall	1.17	317	PN	Pn	07 05 22.8	-0.7
MQZ				eSN	Sn	07 05 38.4	+0.3
CRLZ	Canterbury Las	1.28	320	PN	Pn	07 05 24.8	-0.2
LTZ	Lake Taylor	2.08	328	⇑PN	Pn	07 05 34.8	-1.3
KHZ	Kahutara	2.15	356	PN	Pn	07 05 35.9	-1.1
KHZ				eSN	Sn	07 06 00.9	-1.6
ODZ	Otahua Downs	2.26	257	PN	Pn	07 05 37.8	-0.7
ODZ				SN	Sn	07 06 04.2	-1.2
LBZ	Lake Benmore	2.56	273	PN	Pn	07 05 42.0	-0.6
BSWZ	Blackbirch Sta	2.85	2	PN	Pn	07 05 46.7	+0.1
THZ	Tophouse	2.87	347	PN	Pn	07 05 46.8	-0.1
FOZ	Fox Glacier	3.09	287	PN	Pn	07 05 50.0	0.0
TUWZ	Tuamarina	3.13	3	PN	Pn	07 05 51.0	+0.5
DSZ	Denniston Nort	3.15	332	PN	Pn	07 05 50.4	-0.5
TUZ	Tuapeka	3.23	243	PN	Pn	07 05 51.5	-0.2
TUZ				SN	Sn	07 06 25.3	-3.7
EAZ	Earnscleugh	3.23	256	PN	Pn	07 05 52.1	+0.3
SNZO	South Karori	3.33	12	PN	Pn	07 05 52.5	-0.6
MSWZ	Moikau Station	3.33	20	PN	Pn	07 05 52.5	-0.7
TCW	Tory Channel	3.37	7	PN	Pn	07 05 53.2	-0.6
WKZ	Wanaka	3.39	264	PN	Pn	07 05 54.3	+0.2
PAWZ	Paruwai Farm	3.41	22	PN	Pn	07 05 52.8	-1.5
CAW	Cannon Point	3.58	16	PN	Pn	07 05 55.9	-0.9
JCZ	Jackson Bay	3.62	276	PN	Pn	07 05 57.0	-0.3
MTW	Mount Morrison	3.64	21	PN	Pn	07 05 55.9	-1.5
TMWZ	Te Maipa	3.79	25	PN	Pn	07 05 58.2	-1.4
KIW	Kapiti Island	3.79	13	PN	Pn	07 05 59.0	-0.6
SYZ	Scrubby Hill	3.79	237	PN	Pn	07 05 59.2	-0.3
QRZ	Quartz Range	3.84	346	PN	Pn	07 05 59.9	-0.3
HOWZ	Holdsworth Sta	3.88	20	PN	Pn	07 05 59.8	-1.1
OGWZ	Otaki Gorge	3.89	16	PN	Pn	07 06 00.5	-0.3
MLZ	Mavora Lakes	4.04	257	PN	Pn	07 06 04.2	+1.2
MRZ	Mangatainoka R	4.12	20	PN	Pn	07 06 02.9	-1.2
POWZ	Post Office Ro	4.42	20	PN	Pn	07 06 07.7	-0.6
DVHZ	Dannevirke	4.62	24	PN	Pn	07 06 09.8	-1.2
APZ	The Paps	4.63	239	PN	Pn	07 06 11.1	-0.1
TSZ	Takapari Road	4.79	21	PN	Pn	07 06 11.8	-1.5
PNHZ	Pukenui	4.99	22	PN	Pn	07 06 15.0	-1.0
BHHZ	Black Hill Sta	5.35	20	PN	Pn	07 06 20.3	-0.9
PKE	Pukeiti	5.37	2	PN	Pn	07 06 21.9	+0.7
BKZ	Black Stump Fm	5.77	22	PN	Pn	07 06 23.6	-3.2
HIZ	Hauiti	6.10	8	PN	Pn	07 06 31.4	+0.1

IDC 09 07:23:48.2±2.1, 6°.12S×154°.91E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/18, mbtmp3.7/4, MS3.8/1, Ms1 3.8/1, ms1mx2.3/35, Error ellipse: s-maj=95.5km s-min=29.8km az=127.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.34	246	LR	LR	07 28 09.1	
	comp=Z,613nm,20.0s,baz=84,slow=31						
WRA	Warramunga Arr	24.25	234	P	P	07 29 07.2	0.0
	2.3nm,0.7s,baz=59,slow=9.5,SNR=10						
ASAR	Alice Springs	26.69	227	P	P	07 29 29.4	+0.1
	0.4nm,0.6s,baz=60,slow=9.4,SNR=6.5						
MKAR	Makanchi Array	82.69	319	P	P	07 36 13.6	-0.2
	0.3nm,0.6s,baz=108,slow=4.0,SNR=4.0						
YKA	Yellowknife Ar	95.61	28	P	P	07 37 15.2	-0.1
	0.2nm,0.6s,baz=267,slow=4.5,SNR=12						

*AUST **09** 07:29:22.2, 19°.98S×172°.12E, h0km*
*NOU **09** 07:29:52.4±0.6, 22°.86S×170°.67E, h10km, MD3.2, MS3.1*
*IDC **09** 07:29:55.5±8.0, 21°.56S×170°.36E, h152km±43km, mb3.9/4, mb1 4.0/5, mb1mx3.5/19, mbtmp3.8/5, MS3.2/1, Ms1 3.2/1, ms1mx2.6/29, Error ellipse: s-maj=73.8km s-min=68.8km az=6.0*
ISC 09 07:29:38.0±1.9, 21°.4S±0°.3×171°.2E±0°.1, h35km, n25, σ1s.20/20, mb4.3/4, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	4.08	258	eS	Sn	07 31 22.8	-1.7
DZM	Mont Dzumac	4.47	260	eP	Pn	07 30 50.5	+7.1
DZM				eS	Sn	07 31 33.7	-0.6
DZM				AMP		07 31 39.5	
	comp=Z,928nm,13.4s						
DZM	Mont Dzumac	4.47	260	P	Pn	07 30 51.6	+8.1
	comp=Z,5.0nm,0.3s,baz=82,slow=19,SNR=51						
DZM				S	Sn	07 31 35.6	+1.3
	comp=Z,20nm,0.3s,baz=153,slow=23,SNR=13						
NOUC	Port Laguerre	4.60	260	eP	Pn	07 30 53.5	+8.3
NOUC				AMP		07 31 49.6	
	comp=Z,53nm,6.8s						
ARMA	Armidale	19.76	239	P	Pn	07 34 08.5	+1.7
	baz=21,SNR=14						
RMQ	Roma	21.12	252	P	P	07 34 25.1	+5.2
	baz=22,SNR=5.6						
CTA	Charters Tower	23.35	269	LR	LR	07 41 41.2	
	comp=Z,62nm,20.1s,baz=212,slow=31						
CNB	Canberra Magne	23.65	229	P	P	07 34 47.7	+1.4
	baz=25,SNR=13						
YNG	Young	23.86	232	P	P	07 34 49.6	+1.3
	baz=25,SNR=9.0						
CMSA	Cobar Meteorol	24.93	241	P	P	07 34 58.5	+0.5
	baz=26,SNR=52						
QLP	Quilpie	25.15	253	P	P	07 35 00.5	+0.4
	baz=26,SNR=10						
STKA	Stephens Creek	28.38	242	P	P	07 35 29.1	+0.1
	comp=Z,5.8nm,0.8s,baz=76,slow=7.5,SNR=10						
STKA	Stephens Creek	28.38	242	P	P	07 35 29.6	+0.6
	baz=30,SNR=4.8						
BBOO	Buckleboo	33.15	242	P	P	07 36 10.8	-0.4
	baz=34,SNR=8.9						
ASAR	Alice Springs	34.46	259	P	P	07 36 21.8	-1.0
	comp=Z,2.8nm,0.8s,baz=97,slow=9.4,SNR=34						
WRA	Warramunga Arr	34.46	266	P	P	07 36 21.3	-1.5
	comp=Z,1.8nm,0.8s,baz=100,slow=8.0,SNR=12						
JAY	Jayapura	35.08	298	P	P	07 36 15.3	-13
	baz=35,SNR=3.5						
KDU	Kakadu	37.93	277	S	S	07 42 41.3	-0.7
	baz=39,SNR=4.2						
FORT	Forrest	39.66	247	P	P	07 37 05.9	-0.9
	baz=41,SNR=14						
FITZ	Fitzroy Crossi	42.89	266	P	P	07 37 33.5	0.0
	comp=Z,5.1nm,0.8s,baz=127,slow=6.2,SNR=9.3						
FITZ	Fitzroy Crossi	42.89	266	P	P	07 37 33.7	+0.2
	baz=44,SNR=5.7						
SWI	Sorong	43.93	292	S	S	07 44 13.7	+2.2
	baz=44,SNR=47						
MEEK	Meekatharra	48.05	253	P	P	07 38 13.1	-1.2
	baz=49,SNR=10						
KLBR	Kellerberrin	48.50	246	P	P	07 38 16.6	-1.0
	baz=50,SNR=7.7						
PCI	Palu	54.00	285	S	S	07 46 41.5	+8.4
	baz=54,SNR=4.4						

*ISCJB **09** 07:31:44.9±0.2, 44°.28N±0°.02×11°.93E±0°.02, h36km±5km, Error ellipse: s-maj=3.2km s-min=2.2km az=137.6*
*VIE **09** 07:31:44.5±0.5, 44°.32N×12°.09E, h14km±6km, mb2.3/8, ML2.9/8, Error ellipse: s-maj=5.3km s-min=2.1km az=179.0 53 km NW of San Marino*
*GEN **09** 07:31:44.6, 43°.65N×12°.13E, h43km, ML2.8*
*LDG **09** 07:31:45.2±0.2, 44°.29N×11°.93E, h2km, Ml2.9/18, Error ellipse: s-maj=3.4km s-min=2.1km az=98.0*
*CSEM **09** 07:31:45.1±0.1, 44°.27N×12°.00E, h26km±1km, ML3.2/11, Error ellipse: s-maj=2.5km s-min=2.1km az=130.0*
*ROM **09** 07:31:45.8±0.2, 44°.20N×11°.96E, h24km±3km, Ml2.7/20, Error ellipse: s-maj=2.6km s-min=2.3km az=72.0*
ISC 09 07:31:44.9±0.8, 44°.25N±0°.02×11°.97E±0°.02, h29km±5km, n146, σ0s.96/230, 27C-9D, Northern Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAEN	Faenza	0.08	302	⇑iPg	Pb	07 31 49.4	-0.5
FAEN				Sg	Sb	07 31 53.9	+0.6
FAEN	Faenza	0.08	302	⇑iPg	Pb	07 31 49.4	-0.5
FAEN				eSg	Sb	07 31 53.9	+0.6
BRSN	Barisano	0.09	65	⇓iPg	Pb	07 31 49.7	-0.2
	1.0nm,0.2s						
BRSN	Barisano	0.09	65	⇓iPg	Pb	07 31 49.7	-0.2
	1.0nm,0.2s						
CMPO	Campotto Po	0.35	341	Pg	Pb	07 31 53.0	0.0
CMPO				Sg	Sn	07 32 01.7	+1.6
	732nm,0.8s						
CMPO	Campotto Po	0.35	341	ePg	Pb	07 31 53.0	0.0
CMPO				Sg	Sn	07 32 01.7	+1.6
	732nm,0.8s						
SFI	Santa Sofia	0.35	194	Pg	Pb	07 31 52.4	-0.6
SFI				Sg	Sb	07 31 58.9	+0.4
	1μm,0.3s						
SFI	Santa Sofia	0.35	194	ePg	Pb	07 31 52.4	-0.6
SFI				Sg	Sb	07 31 58.9	+0.4
	1μm,0.3s						
MTRZ	Monterenzio	0.38	290	Pg	Pb	07 31 53.8	+0.4
	531nm,0.5s						
MTRZ	Monterenzio	0.38	290	Pg	Pb	07 31 53.8	+0.4
	531nm,0.5s						
VMG	Vicchio	0.42	227	Pg	Pb	07 31 53.3	-0.7
VMG				Sg	Sb	07 32 00.4	+0.3
	968nm,0.5s						
VMG	Vicchio	0.42	227	ePg	Pb	07 31 53.3	-0.7
VMG				Sg	Sb	07 32 00.4	+0.3
	968nm,0.5s						
ASQU	Asqua	0.47	196	Pg	Pb	07 31 54.3	-0.5
ASQU				Sg	Sb	07 32 02.0	+0.5
	572nm,0.3s						
ASQU	Asqua	0.47	196	ePg	Pb	07 31 54.3	-0.5
ASQU				Sg	Sb	07 32 02.0	+0.5
	572nm,0.3s						
RSM	Repubblica di	0.47	132	Pg	Pn	07 31 56.0	+0.3
	7.0nm,0.3s						
RSM	Repubblica di	0.47	132	Pg	Pn	07 31 56.0	+0.3
	7.0nm,0.3s						
SEI	Scarperia	0.48	247	Pg	Pb	07 31 54.2	-0.8
SEI				Sg	Sb	07 32 02.8	+1.0
	735nm,0.3s						
SEI	Scarperia	0.48	247	ePg	Pb	07 31 54.2	-0.8
SEI				eSg	Sb	07 32 02.8	+1.0
FIU	Minerbio Fiu	0.52	319	Pg	Pn	07 31 57.7	+1.3
FIU				Sg	Sn	07 32 06.2	+2.0
	748nm,0.4s						
FIU	Minerbio Fiu	0.52	319	ePg	Pn	07 31 57.7	+1.3
FIU				Sg	Sn	07 32 06.2	+2.0
	748nm,0.4s						
CRE	Caprese Michel	0.63	181	Pg	Pb	07 31 57.1	-0.3
CRE				Sg	Sb	07 32 04.5	-1.5
	159nm,0.5s						
CRE	Caprese Michel	0.63	181	ePg	Pb	07 31 57.1	-0.3
CRE				Sg	Sb	07 32 04.5	-1.5
	159nm,0.5s						
PARC	Parchiule	0.63	162	Pg	Pb	07 31 57.2	-0.2
	279nm,0.6s						
PARC	Parchiule	0.63	162	Pg	Pb	07 31 57.2	-0.2
	279nm,0.6s						
PESA	Pesaro	0.70	116	Pg	Pn	07 32 00.3	+1.5
	692nm,0.3s						
PESA	Pesaro	0.70	116	Pg	Pn	07 32 00.3	+1.5
	692nm,0.3s						
ZCCA	Zocca	0.72	279	Pg	Pn	07 32 00.4	+1.2
	77nm,0.7s						
ZCCA	Zocca	0.72	279	Pg	Pn	07 32 00.4	+1.2
	77nm,0.7s						
ADRI	Adria, Italy	0.79	2	ePg	Pb	07 32 01.2	+1.1
ADRI				eSg	Sn	07 32 13.2	+2.3
ADRI	Adria, Italy	0.79	2	ePg	Pb	07 32 01.2	+1.1
ADRI				eSg	Sn	07 32 13.2	+2.3
FSSB	Fossombrone	0.81	133	Pg	Pb	07 32 01.0	+0.7
	532nm,0.3s						
FSSB	Fossombrone	0.81	133	Pg	Pb	07 32 01.0	+0.7
	532nm,0.3s						
PIEI	Pieia	0.82	150	Pg	Pn	07 32 00.4	-0.2
	352nm,0.6s						
PIEI	Pieia	0.82	150	Pg	Pn	07 32 00.4	-0.2
	352nm,0.6s						
CRMI	Carmignano	0.85	238	Pg	Pn	07 32 01.1	+0.1
CRMI				Sg	Sn	07 32 13.7	+1.2
	110nm,0.3s						
CRMI	Carmignano	0.85	238	Pg	Pn	07 32 01.1	+0.1
CRMI				Sg	Sn	07 32 13.7	+1.2
	110nm,0.3s						
CSNT	Castellina Chi	0.92	213	Pg	Pb	07 32 03.0	+0.8
	154nm,0.4s						
CSNT	Castellina Chi	0.92	213	Pg	Pb	07 32 03.0	+0.8
	154nm,0.4s						
CAFI	Castiglion Fio	0.92	180	Pg	Pn	07 32 02.3	+0.4
	174nm,0.5s						
CAFI	Castiglion Fio	0.92	180	Pg	Pn	07 32 02.3	+0.4
	174nm,0.5s						
MURB	Monte Urbino	1.06	158	Pg	Pb	07 32 06.6	+1.9
	320nm,0.3s						
MURB	Monte Urbino	1.06	158	Pg	Pb	07 32 06.6	+1.9
	320nm,0.3s						
CRDM	Cardoso	1.09	259	P	Pb	07 32 05.3	+0.1
CRDM				S	Sb	07 32 19.3	+0.2
MAIM	Mastiano	1.12	253	Pg	Pb	07 32 05.4	-0.1
	96nm,0.8s						
MAIM	Mastiano	1.12	253	P	Pn	07 32 04.6	0.0
MAIM	Mastiano	1.12	253	Pg	Pb	07 32 05.4	-0.1
	96nm,0.8s						
MAIM				S	Sn	07 32 18.4	-0.6
PII	Pisa	1.17	244	Pg	Pb	07 32 06.6	+0.2
	55nm,0.2s						
PII	Pisa	1.17	244	Pg	Pb	07 32 06.6	+0.2
	55nm,0.2s						
SNTG	Esanatoglia	1.22	144	Pg	Pb	07 32 07.5	+0.2
	109nm,0.7s						
SNTG	Esanatoglia	1.22	144	Pg	Pb	07 32 07.5	+0.2
	109nm,0.7s						
MGAB	Montegabbione	1.34	175	Pg	Pb	07 32 09.1	-0.2
	98nm,0.6s						
MGAB	Montegabbione	1.34	175	Pg	Pb	07 32 09.1	-0.2
	98nm,0.6s						
AOI	Ancona	1.37	120	Pg	Pb	07 32 09.5	-0.4
	87nm,0.5s						
AOI	Ancona	1.37	120	Pg	Pb	07 32 09.5	-0.4
	87nm,0.5s						
SACS	San Casciano d	1.40	182	Pg	Pn	07 32 09.6	+1.1
	50nm,0.7s						
ARCI	Arcidosso	1.44	195	Pg	Pb	07 32 10.5	-0.6
	63nm,0.9s						
ARCI	Arcidosso	1.44	195	Pg	Pb	07 32 10.5	-0.6
	63nm,0.9s						
CGRP	Cima Grappa	1.64	356	ePg	Pn	07 32 11.8	-0.1
CGRP				eSg	Sn	07 32 31.8	-0.3
CGRP	Cima Grappa	1.64	356	ePg	Pn	07 32 11.8	-0.1
CGRP				eSg	Sn	07 32 31.8	-0.3
BALD	Monte Baldo	1.65	331	⇓ePg	Pn	07 32 12.0	-0.1
BALD	Monte Baldo	1.65	331	⇓ePg	Pn	07 32 12.0	-0.1
DDS	Dosso del Somm	1.72	342	⇑iPg	Pn	07 32 12.9	-0.2
DDS	Dosso del Somm	1.72	342	⇑iPg	Pn	07 32 12.9	-0.2
SC2M	Scurtabo	1.75	276	P	Pb	07 32 15.7	-0.7
SC2M				S	Sb	07 32 37.0	-1.0
PANI	Panarotta	1.86	346	⇑ePn	Pn	07 32 15.1	+0.1
PANI				eSn	Sn	07 32 37.0	-0.7
PANI	Panarotta	1.86	346	⇑ePn	Pn	07 32 15.1	+0.1
PANI				eSn	Sn	07 32 37.0	-0.7
TRI	Trieste	1.94	40	ePn	Pn	07 32 15.2	-0.7
TRI	Trieste	1.94	40	ePn	Pn	07 32 15.2	-0.7
SKDS	Skadanscina	1.95	48	⇑iPn	Pn	07 32 15.3	-0.8
SKDS				i Sn	Sn	07 32 39.1	-0.5
SKDS							
	comp=Z,79nm,0.3s						
SKDS	Skadanscina	1.95	48	Pn	Pn	07 32 15.3	-0.8
SKDS				i Sn	Sn	07 32 39.1	-0.5
	comp=Z,79nm,0.3s						
MLNI	Malnisio	1.96	13	⇑ePn	Pn	07 32 15.7	-0.5
MLNI				eSn	Sn	07 32 40.0	+0.2
MLNI	Malnisio	1.96	13	⇑ePn	Pn	07 32 15.7	-0.5
MLNI				eSn	Sn	07 32 40.0	+0.2
RNI	Roncone	1.97	332	ePn	Pn	07 32 16.8	+0.3
RNI	Roncone	1.97	332	ePn	Pn	07 32 16.8	+0.3
SABO	M.te Sabotino	2.08	33	⇑iPn	Pn	07 32 17.7	-0.2
SABO	M.te Sabotino	2.08	33	⇑iPn	Pn	07 32 17.7	-0.2
CIMO	Cimolais	2.09	9	ePn	Pn	07 32 17.4	-0.6
CIMO	Cimolais	2.09	9	ePn	Pn	07 32 17.4	-0.6
NVLJ	Novalja	2.10	80	i Pn	Pn	07 32 18.5	+0.4
NVLJ				Sn	Sn	07 32 43.1	-0.2
NVLJ	Novalja	2.10	80	i Pn	Pn	07 32 18.5	+0.4
NVLJ				Sn	Sn	07 32 43.1	-0.2
COLI	Coloredo	2.13	27	⇑iPn	Pn	07 32 18.4	-0.2
COLI				i Sn	Sn	07 32 43.5	-0.5
COLI	Coloredo	2.13	27	⇑iPn	Pn	07 32 18.4	-0.2
COLI				i Sn	Sn	07 32 43.5	-0.5
KNDS	Knezji Dol	2.14	52	⇑iPn	Pn	07 32 18.3	-0.4
KNDS				i Sn	Sn	07 32 44.7	+0.3
KNDS	Knezji Dol	2.14	52	⇑iPn	Pn	07 32 18.3	-0.4
KNDS				i Sn	Sn	07 32 44.7	+0.3
BAD	Bernadia	2.18	24	⇑iPn	Pn	07 32 18.9	-0.4
BAD				i Sn	Sn	07 32 44.8	-0.6
BAD	Bernadia	2.18	24	⇑iPn	Pn	07 32 18.9	-0.4
BAD				i Sn	Sn	07 32 44.8	-0.6
VINO	Villanova	2.21	24	⇑iPn	Pn	07 32 19.2	-0.5
VINO				i Sn	Sn	07 32 45.5	-0.6
VINO	Villanova	2.21	24	⇑iPn	Pn	07 32 19.2	-0.5
VINO				i Sn	Sn	07 32 45.5	-0.6
VOY	Vojsko	2.24	37	ePn	Pn	07 32 19.3	-0.9
VOY				e		07 32 25.2	
VOY				eSn	Sn	07 32 46.9	-0.1
VOY	Vojsko	2.24	37	ePn	Pn	07 32 19.3	-0.9
VOY				eSn	Sn	07 32 46.9	-0.1
KOSI	Kohlern	2.25	350	ePn	Pn	07 32 21.2	+0.8
DRE	Drenchia	2.26	31	⇑iPn	Pn	07 32 19.9	-0.4
DRE				i Sn	Sn	07 32 46.9	-0.4
DRE	Drenchia	2.26	31	⇑iPn	Pn	07 32 20.0	-0.4
DRE				i Sn	Sn	07 32 46.9	-0.4
ZOU	Zoufplan	2.42	17	⇑ePn	Pn	07 32 22.6	0.0
LSR	Lussari	2.48	26	ePn	Pn	07 32 23.4	-0.2
LSR	Lussari	2.48	26	ePn	Pn	07 32 23.4	-0.2
ACOM	Acomizza, Ital	2.54	25	ePn	Pn	07 32 24.4	0.0
ACOM	Acomizza, Ital	2.54	25	ePn	Pn	07 32 24.4	0.0
MOSI	Grossmontoni	2.57	338	⇓ePn	Pn	07 32 26.5	+1.7
MYKA	Terra Mystica	2.66	26	⇓iPn	Pn	07 32 25.6	-0.3
MYKA				⇓iSn	Sn	07 32 57.7	+0.6
MYKA	Terra Mystica	2.66	26	Pn	Pn	07 32 25.6	-0.3
MYKA				Sn	Sn	07 32 57.7	+0.6
RISI	Rein	2.70	2	ePn	Pn	07 32 28.3	+1.7
PGF	Pioggiola	2.75	233	ePn	Pn	07 32 28.5	+1.3
PGF				eSn	Sn	07 33 00.6	+1.1
	comp=Z,17nm,0.4s						
PGF	Pioggiola	2.75	233	ePn	Pn	07 32 28.5	+1.3
PGF				eSn	Sn	07 33 00.6	+1.1
	comp=Z,8.7nm,0.4s						
OBKA	Obir	2.90	38	⇑iPn	Pn	07 32 28.7	-0.5
OBKA	Obir	2.90	38	Pn	Pn	07 32 28.7	-0.5
FETA	Feichten	2.91	343	⇓iPn	Pn	07 32 30.3	+0.9
FETA				⇓iSn	Sn	07 33 05.4	+2.0
FETA	Feichten	2.91	343	Pn	Pn	07 32 30.3	+0.9
FETA				Sn	Sn	07 33 05.4	+2.0
KBA	Koelnbreinsper	2.99	18	⇑iPn	Pn	07 32 30.0	-0.5
KBA				⇑iSn	Sn	07 33 06.3	+0.8
KBA	Koelnbreinsper	2.99	18	Pn	Pn	07 32 30.0	-0.5
KBA				Sn	Sn	07 33 06.3	+0.8
SBF	Sospel	3.29	265	ePn	Pn	07 32 35.9	+1.4
SBF				eSn	Sn	07 33 12.7	0.0
	comp=Z,6.1nm,0.2s						
SBF	Sospel	3.29	265	ePn	Pn	07 32 35.9	+1.4
SBF				eSn	Sn	07 33 12.7	0.0
	comp=Z,3.0nm,0.2s						
MBDF	Montbardon	3.75	279	ePn	Pn	07 32 42.1	+1.2
MBDF				eSn	Sn	07 33 23.7	-0.5
	comp=Z,1.7nm,0.3s						
MBDF	Montbardon	3.75	279	ePn	Pn	07 32 42.1	+1.2
MBDF				eSn	Sn	07 33 23.7	-0.5
	comp=Z,0.9nm,0.3s						
FRF	La Foret Royal	3.91	262	ePn	Pn	07 32 44.0	+1.1
FRF				eSn	Sn	07 33 27.0	-0.8
	comp=Z,6.0nm,0.3s						
FRF	La Foret Royal	3.91	262	ePn	Pn	07 32 44.0	+1.1
FRF				eSn	Sn	07 33 27.0	-0.8
	comp=Z,3.0nm,0.3s						
LPG	La Plagne	3.91	290	ePn	Pn	07 32 44.4	+1.1
LPG				eSn	Sn	07 33 27.7	-0.7
	comp=Z,3.8nm,0.3s						
LPG	La Plagne	3.91	290	ePn	Pn	07 32 44.4	+1.1
LPG				eSn	Sn	07 33 27.7	-0.7
	comp=Z,1.9nm,0.3s						
LPL	La Plagne	3.93	291	ePn	Pn	07 32 44.7	+1.2
LPL				eSn	Sn	07 33 28.3	-0.5
	comp=Z,2.5nm,0.3s						
LPL	La Plagne	3.93	291	ePn	Pn	07 32 44.7	+1.2
LPL				eSn	Sn	07 33 28.3	-0.5
	comp=Z,1.2nm,0.3s						
MOA	Molln	3.94	23	⇑iPn	Pn	07 32 43.7	+0.3
MOA				⇑iSn	Sn	07 33 29.4	+0.7
MOA	Molln	3.94	23	Pn	Pn	07 32 43.7	+0.3
MOA				Sn	Sn	07 33 29.4	+0.7
LMR	La Mourre	4.06	259	ePn	Pn	07 32 45.8	+0.8
LMR				eSn	Sn	07 33 30.9	-0.6
	comp=Z,3.3nm,0.3s						
LMR	La Mourre	4.06	259	ePn	Pn	07 32 45.8	+0.8
LMR				eSn	Sn	07 33 30.9	-0.6
	comp=Z,1.6nm,0.3s						
ORIF	Oris-en-Rattie	4.40	281	ePn	Pn	07 32 50.6	+0.8
ORIF				eSn	Sn	07 33 39.1	-1.1
	comp=Z,9.0nm,0.4s						
ORIF	Oris-en-Rattie	4.40	281	ePn	Pn	07 32 50.6	+0.8
ORIF				eSn	Sn	07 33 39.1	-1.1
	comp=Z,4.5nm,0.4s						
SMRF	Simiane la Rot	4.61	269	ePn	Pn	07 32 53.5	+0.8
SMRF				eSn	Sn	07 33 44.2	-1.1
	comp=Z,2.8nm,0.5s						
SMRF	Simiane la Rot	4.61	269	ePn	Pn	07 32 53.5	+0.8
SMRF				eSn	Sn	07 33 44.2	-1.1
	comp=Z,1.4nm,0.5s						
CABF	La Chapelle	4.77	302	ePn	Pn	07 32 55.5	+0.7
CABF				eSn	Sn	07 33 47.4	-1.7
	comp=Z,1.8nm,0.4s						
CABF	La Chapelle	4.77	302	ePn	Pn	07 32 55.5	+0.7
CABF				eSn	Sn	07 33 47.4	-1.7
	comp=Z,0.9nm,0.4s						
KHC	Kasperske Hory	5.01	12	ePN	Pn	07 32 58.0	-0.1
KHC				eSN	Sn	07 33 52.9	-2.1
KHC	Kasperske Hory	5.01	12	Pn	Pn	07 32 58.0	-0.1
KHC				Sn	Sn	07 33 52.9	-2.1
HINF	Hinteralfeld	5.04	317	ePn	Pn	07 32 58.3	-0.3
HINF				eSn	Sn	07 33 52.5	-3.4
	comp=Z,5.9nm,0.3s						
HINF	Hinteralfeld	5.04	317	ePn	Pn	07 32 58.3	-0.3
HINF				eSn	Sn	07 33 52.5	-3.4
	comp=Z,3.0nm,0.3s						
CDF	Champ du Feu	5.28	324	ePn	Pn	07 33 02.1	+0.2
CDF				eSn	Sn	07 34 00.5	-1.3
	comp=Z,4.4nm,0.4s						
CDF	Champ du Feu	5.28	324	ePn	Pn	07 33 02.1	+0.2
CDF				eSn	Sn	07 34 00.5	-1.3
	comp=Z,2.2nm,0.4s						
HAU	Haudompre	5.42	316	ePn	Pn	07 33 03.7	0.0
HAU				eSn	Sn	07 34 02.3	-2.8
	comp=Z,22nm,0.4s						
HAU	Haudompre	5.42	316	ePn	Pn	07 33 03.7	0.0
PAGF	Fort de Pagny	6.10	317	ePn	Pn	07 33 13.8	+0.8
PAGF				eSn	Sn	07 34 19.8	-2.0
	comp=Z,1.8nm,0.5s						
PAGF	Fort de Pagny	6.10	317	ePn	Pn	07 33 13.8	+0.8
SMF	Signal de Mont	6.20	296	ePn	Pn	07 33 15.1	+0.7
SMF				eSn	Sn	07 34 22.0	-2.3
	comp=Z,2.3nm,0.3s						
SMF	Signal de Mont	6.20	296	ePn	Pn	07 33 15.1	+0.7
LOR	Lormes	6.43	301	ePn	Pn	07 33 17.9	+0.3
LOR				eSn	Sn	07 34 27.0	-2.9
	comp=Z,3.1nm,0.3s						
LOR	Lormes	6.43	301	ePn	Pn	07 33 17.9	+0.3
SSF	Saint Saulge	6.56	298	ePn	Pn	07 33 19.8	+0.4
SSF				eSn	Sn	07 34 30.5	-2.8
	comp=Z,1.0nm,0.3s						
SSF	Saint Saulge	6.56	298	ePn	Pn	07 33 19.8	+0.4

IDC 09 07:32:31.4±2.8, 18°.78N×145°.46E, h586km±37km, mb2.8/7, mb1 3.0/8, mb1mx2.8/26, mbtmp2.9/8, Error ellipse: s-maj=65.4km s-min=13.7km az=81.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	8.80	341	P	P	07 34 37.9	-0.1
	8.0nm,0.3s,baz=311,slow=21,SNR=7.3						
WRA	Warramunga Arr	40.00	196	P	P	07 39 17.0	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	0.1nm,0.2s,baz=5.6,slow=8.3,SNR=2.5						
FITZ	Fitzroy Crossi	41.51	209	P	P	07 39 28.7	-0.1
	1.6nm,0.8s,baz=28,slow=11,SNR=8.1						
SONM	Songino Array	42.94	321	P	P	07 39 40.1	+0.3
	0.6nm,0.6s,baz=135,slow=5.3,SNR=6.3						
ASAR	Alice Springs	43.67	195	P	P	07 39 45.3	-0.4
	0.2nm,0.5s,baz=19,slow=6.4,SNR=3.7						
CMAR	Chiang Mai Arr	43.98	277	P	P	07 39 48.0	-0.3
	0.9nm,0.5s,baz=90,slow=5.4,SNR=6.1						
ZALV	Zalesovo Beam	57.81	323	P	P	07 41 27.1	-0.6
	0.7nm,0.4s,baz=104,slow=6.0,SNR=4.3						
MKAR	Makanchi Array	58.24	314	P	P	07 41 30.8	+0.1
	0.5nm,0.4s,baz=90,slow=7.9,SNR=12						

*ISK **09** 07:42:52.1, 37°.33N×28°.24E, h7km, MD2.3*
*ISCJB **09** 07:42:53.7±0.5, 37°.23N±0°.04×28°.20E±0°.04, h0km, Error ellipse: s-maj=6.6km s-min=3.2km az=33.7*
*CSEM **09** 07:42:53.5±0.4, 37°.27N×28°.24E, h1km, MD2.3, Error ellipse: s-maj=12.1km s-min=6.4km az=38.0*
*DDA **09** 07:42:53.6, 37°.24N×28°.21E, h7km, MD2.6*
ISC 09 07:42:53.6±0.9**, 37°.22N**±0°.04×**28°.18E**±0°.03**, h0km, n20, σ0s.93**/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.12	135	ePG	Pg	07 42 56.8	+0.9
YER				eSG	Sg	07 42 59.3	+1.8
YER	Yerkesik	0.12	135	ePg	Pg	07 42 56.8	+0.9
YER				eSg	Sg	07 42 59.3	+1.8
MLSB	Milas	0.33	284	ePG	Pg	07 42 59.9	0.0
MLSB				eSG	Sg	07 43 05.6	+1.4
MLSB	Milas	0.33	284	ePg	Pg	07 42 59.9	0.0
MLSB				eSg	Sg	07 43 05.6	+1.4
TURN	Turunc	0.49	135	i P	Pg	07 43 03.2	+0.3
TURN				i S	Sg	07 43 09.6	+0.4
AYDN	Tasoluk	0.50	332	i P	Pg	07 43 03.9	+0.7
AYDN				i S	Sg	07 43 10.7	+1.0
AYDN	Tasoluk	0.50	332	i P	Pg	07 43 03.9	+0.7
AYDN				i S	Sg	07 43 10.7	+1.0
BDRM	Kayabasi	0.60	255	i P	Pg	07 43 05.8	+0.6
BDRM				i S	Sg	07 43 13.4	+0.4
BDRM	Kayabasi	0.60	255	i P	Pg	07 43 05.8	+0.6
BDRM				i S	Sg	07 43 13.4	+0.4
BODT	Bodrum	0.71	257	ePG	Pb	07 43 08.2	-0.7
BODT	Bodrum	0.71	257	ePg	Pb	07 43 08.2	-0.7
DNZL	Cakiroluk	0.84	56	i P	Pg	07 43 09.8	+0.1
GCAM	G?zelcaml?	0.89	303	i P	Pn	07 43 12.8	-0.6
GCAM				i S	Sb	07 43 24.6	+0.2
GCAM	G?zelcaml?	0.89	303	i P	Pn	07 43 12.8	-0.6
GCAM				i S	Sb	07 43 24.6	+0.2
FETY	Fethiye	0.93	128	ePG	Pg	07 43 11.7	+0.2
FETY	Fethiye	0.93	128	ePg	Pg	07 43 11.7	+0.2
IZM	Izmir	1.38	329	ePN	Pn	07 43 17.1	-3.1
IZM	Izmir	1.38	329	ePn	Pn	07 43 17.1	-3.1
ELL	Elmali	1.47	108	ePN	Pn	07 43 20.0	-1.5
ELL	Elmali	1.47	108	ePn	Pn	07 43 20.0	-1.5

IDC 09 07:48:04.6±1.4**, 3°.78N**×**127°.07E, h0km, mb3.8**/6**, mb1 3.9**/6**, mb1mx3.6**/25**, mbtmp3.8**/6**, MS2.6**/1**, Ms1 2.6**/1**, ms1mx1.6**/48**, Error ellipse: s-maj=99.1km s-min=18.1km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.79	184	P	P	07 52 57.8	-0.4
	0.8nm,0.5s,baz=12,slow=6.2,SNR=6.7						
WRA	Warramunga Arr	24.63	163	P	P	07 53 26.6	-0.4
	3.6nm,0.6s,baz=344,slow=10,SNR=23						
ASAR	Alice Springs	28.08	167	P	P	07 53 58.1	0.0
	0.3nm,0.3s,baz=347,slow=12,SNR=5.4						
KSRS	Korea Array	33.53	1	LR	LR	08 06 27.1	
	comp=Z,11nm,20.9s,baz=60,slow=33						
STKA	Stephens Creek	38.05	160	P	P	07 55 25.6	+0.6
	0.8nm,0.4s,baz=360,slow=9.5,SNR=3.7						
MKAR	Makanchi Array	57.71	325	P	P	07 57 56.8	-0.4
	0.6nm,0.4s,baz=120,slow=7.2,SNR=14						
KURBB	Kurchatov Arra	61.89	327	P	P	07 58 26.1	+0.3
	0.8nm,0.5s,baz=128,slow=6.2,SNR=19						

BJI 09 07:58:45.9, 35°.90N×**92°.65E, h6km, mb4.2**/3**, ML3.4**/5**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	9.07	86	eP	Pn	08 00 56.5	-1.2
LZH				pP		08 01 00.0	
LZH				sP		08 01 03.6	
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						

JMA 09 08:02:11.0±0.1**, 36°.85N**×**135°.62E, h16km**±3km**, M1.8, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKG	Kaga	0.81	135	P	Pb	08 02 26.3	-0.4
JKG				S	Sb	08 02 37.0	-0.4
JJH	Hakui	0.93	85	P	Pb	08 02 28.3	-0.5
JJH				S	Sg	08 02 41.2	-0.2
JKY	Yasaka	1.29	199	P	Pn	08 02 34.2	-0.2

*BJI **09** 08:10:43.2, 5°.65N×94°.17E, h41km, mB4.9/31, mb5.2/59, Ms4.7/37, Ms7 4.6/20*
*SZGRF **09** 08:10:50.1, 5°.75N×95°.00E, h66km, mb5.4, Northern Sumatera, Indonesia*
*ISCJB **09** 08:10:52.0±0.4, 6°.21N±0°.02×94°.40E±0°.02, h80km±4km, mb5.3/292, Error ellipse: s-maj=4.6km s-min=2.8km az=43.5*
*AUST **09** 08:10:51.6, 6°.31N×94°.40E, h60km*
*MOS **09** 08:10:53.3±1.5, 6°.21N×94°.46E, h96km, mb5.5/138, Error ellipse: s-maj=10.7km s-min=4.3km az=126.2*
*NEIC **09** 08:10:54.0±0.6, 6°.26N×94°.44E, h82km±4km, mb5.4/138, Error ellipse: s-maj=4.3km s-min=2.6km az=221.0*
NEIC Felt [III] at Banda Aceh and Sabang, Indonesia.
*DJA **09** 08:10:54.5±0.7, 6°N±3°×9°4E±°, h68km±4km, M5.3/35, mB5.7/28, mb5.5/35, MLv5.4/7, Mw(mB)5.2/28*
*IDC **09** 08:10:55.2±1.0, 6°.31N×94°.55E, h91km±8km, mb5.1/53, mb1 5.1/55, mb1mx5.1/55, mbtmp5.1/55, MS3.9/30, Ms1 3.9/30, ms1mx3.7/49, Error ellipse: s-maj=9.1km s-min=6.2km az=51.0*
*GCMT **09** 08:10:55.3±0.3, 6°.28N×94°.54E, h62km±1km, MW5.1, Moment Tensor Solution. s54,c63; s66,c97; Moment tensor: Scale 10^{16}Nm; M_{rr}4.58±.19; $M_{\theta\theta}$-5.15±.12; $M_{\phi\phi}$0.57±.15; $M_{r\theta}$0.12±.12; $M_{\theta\phi}$-0.42±.13; $M_{\phi r}$-0.54±.12; Best double couple: $M_0$4.90000×10^{16} NP1:ϕ_s258.00000°, δ45.00000°, λ79.00000°. NP2:ϕ_s94.00000°, δ46.00000°, λ101.00000°. Principal axes: T 4.6600, Plg82.0000°, Azm82.0000°; N 0.5200, Plg8.0000°, Azm266.0000°; P -5.1800, Plg0.0000°, Azm176.0000°; Data Used: II IU IC G CN.*
ISC 09 08:10:53.8±0.4**, 6°.23N**±0°.03×**94°.45E**±0°.03**, h82km**±3km**, h82km:pP-P, n1282, σ1s.18**/1488**, mb5.4**/289**, 281C-169D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	1.11	131	P	Pn	08 11 13.5	-0.9
BSI				S	Sn	08 11 28.9	-0.9
LHMI	Lhok Sumawe	2.68	112	P	Pn	08 11 35.4	+0.6
LHMI				S	Sn	08 12 07.5	+1.1
TSI	Tuntungan	4.92	123	P	Pn	08 12 06.8	+1.6
PSI	Prapat	5.61	127	P	Pn	08 12 15.8	+0.9
PSI				S	Sn	08 13 13.2	-4.9
PSI	Prapat	5.61	127	P	Pn	08 12 15.9	+1.0
	686nm,0.7s,8µm2.1nm						
PSI	Prapat	5.61	127	P	Pn	08 12 15.8	+0.9
	66nm,0.3s,baz=302,slow=11,SNR=398						
PSI				S	Sn	08 13 13.2	-4.9
	baz=319,slow=11,SNR=2.1						
PSI				LR	LR	08 14 42.2	
	comp=Z,2µm,20.7s,baz=298,slow=40						
PSI	Prapat	5.61	127	P	Pn	08 12 15.8	+0.9
	baz=5.8,SNR=287						
GSI	Gunungsitoli	5.80	147	P	Pn	08 12 14.6	-2.8
	579nm,0.8s,7µm3.0nm						
GSI	Gunungsitoli	5.80	147	P	Pn	08 12 14.7	-2.8
	baz=5.9,SNR=8.4						
KULM	Kulim	6.24	98	ePn	Pn	08 12 23.0	-0.3
KULM				eSn	Sn	08 13 31.3	-1.9
KULM	Kulim	6.24	98	P	Pn	08 12 23.6	+0.3
KULM	Kulim	6.24	98	P	Pn	08 12 23.4	+0.1
	266nm,0.8s,4µm1.2nm						
IPM	Ipoh	6.77	105	ePn	Pn	08 12 30.2	-0.4
IPM				eSn	Sn	08 13 41.3	-5.0
IPM	Ipoh	6.77	105	P	Pn	08 12 31.0	+0.4
IPM	Ipoh	6.77	105	P	Pn	08 12 30.8	+0.2
	220nm,0.8s,7µm2.3nm						
MNSI	Mandailing Nat	7.44	136	P	Pn	08 12 38.3	-1.4
	390nm,0.7s,5µm						
FRIM	Kepong	7.74	112	P	Pn	08 12 43.6	-0.2
KTGM	Kuala Trenggan	8.69	95	P	Pn	08 12 57.3	+0.6
BKNI	Bangkinang	8.81	131	P	Pn	08 12 56.9	-1.6
	285nm,1.2s,3µm						
PPI	Padang Panjang	8.91	138	P	Pn	08 12 58.4	-1.4
	181nm,0.8s,6µm						
PPI	Padang Panjang	8.91	138	P	Pn	08 12 58.8	-1.0
	baz=9.0,SNR=11						
SRDT	SRDT	9.28	29	P	Pn	08 13 06.8	+2.0
	189nm,0.8s,4µm						
KGM	Kluang	9.79	115	P	Pn	08 13 12.0	+0.3
RGRI	Rengat	10.23	129	P	Pn	08 13 16.3	-1.5
	181nm,0.8s,43µm						
MYKOM	Kota Tinggi	10.36	115	P	Pn	08 13 19.2	-0.4
MYKOM	Kota Tinggi	10.36	115	P	Pn	08 13 19.2	-0.4
	70nm,0.9s,659nm						
BTDF	Bukit Timah Da	10.48	117	P	Pn	08 13 21.7	+0.4
	63nm,0.8s,513nm						
KRJI	Kerinci	10.83	140	P	Pn	08 13 26.2	+0.1
	465nm,0.8s,5µm						
KSI	Kapahiang	12.75	140	P	Pn	08 13 52.3	+0.3
	314nm,0.9s,21µm						
CM31	Chiang Mai Arr	12.92	19	ePn	Pn	08 13 55.3	+1.1
	348nm,0.9s						
CMAR	Chiang Mai Arr	12.92	19	P	Pn	08 13 55.2	+1.0
CMAR				ScP	ScP	08 22 48.9	+0.4
CMAR				PKiKP	PKiKP	08 27 19.2	-0.6
CMAR	Chiang Mai Arr	12.92	19	P	Pn	08 13 55.2	+1.0
	14nm,0.3s,baz=208,slow=13,SNR=153						
CMAR				LR	LR	08 18 32.0	
	comp=Z,595nm,21.9s,baz=205,slow=36						
CMAR				ScP	ScP	08 22 48.9	+0.4
	0.4nm,0.3s,baz=228,slow=3.0,SNR=15						
CMAR				PKiKP	PKiKP	08 27 19.2	-0.6
	0.5nm,0.3s,baz=217,slow=2.0,SNR=4.1						
CHTO	Chiang Mai	13.25	19	eP	Pn	08 13 59.8	+1.2
CHTO				e		08 16 34.1	
CHTO	Chiang Mai	13.25	19	ePn	Pn	08 13 59.8	+1.2
CHTO				eSn	S	08 16 34.1	-9.4
CHTO	Chiang Mai	13.25	19	Pn	Pn	08 14 00.3	+1.6
	SNR=49						
CHTO	Chiang Mai	13.25	19	P	Pn	08 14 00.9	+2.2
	317nm,0.8s,2µm						
CMMT	Chiang Mai	13.25	19	P	Pn	08 14 00.8	+2.1
	290nm,0.8s,2µm						
UBPT	Khong Chiam	14.06	49	P	P	08 14 12.7	-1.8
	109nm,1.1s,1µm						
PPBI	Pangkal Pinang	14.34	125	P	P	08 14 15.7	-1.9
KASI	Kota Agung	15.39	139	P	Pn	08 14 25.8	-0.6
	99nm,0.8s,974nm						
VIS	Vishakhapatnam	15.76	317	eP	Pn	08 14 30.2	-0.8
VIS				AMB	AMB	08 14 31.9	
VIS				ex	x	08 17 09.1	
KSM	Kuching	16.51	106	ePn	Pn	08 14 40.8	+0.4
	189nm,0.8s						
KSM	Kuching	16.51	106	P	P	08 14 41.2	-0.5
KSM	Kuching	16.51	106	P	P	08 14 41.4	-0.3
	267nm,0.9s,2µm						
KSM	Kuching	16.51	106	P	P	08 14 41.7	0.0
	baz=17,SNR=43						
DBJI	Dramaga	17.66	136	P	P	08 14 52.3	-2.1
	86nm,0.9s						
STKI	Sintang	18.06	109	P	Pn	08 14 59.6	+0.1
	103nm,0.7s,7µm						
SBUM	Sibu	18.11	101	P	Pn	08 15 00.6	+0.6
IMP	Imphal	18.45	359	ex	P	08 15 08.0	+4.9
IMP				ex	S	08 18 23.0	-6.0
BTM	Bintulu	18.81	98	P	Pn	08 15 09.2	+0.7
HYB	Hyderabad	19.10	307	i P	P	08 15 11.0	+0.8
HYB				eS	S	08 18 44.0	+1.3
SHL	Shillong	19.38	353	ex	P	08 15 09.0	-4.4
SHL				i x	S	08 18 40.0	-8.5
QIZ	Qiongzhong	19.66	48	P	Pn	08 15 18.1	-0.3
QIZ				S	S	08 18 56.0	+2.2
QIZ				sS	sS	08 19 12.2	-8.3
QIZ				pmax	pmax		
	comp=Z,120nm,1.2s						
XMIS	Christmas Isla	20.00	146	P	Pn	08 15 24.0	+1.5
	baz=20,SNR=3.6						
KMI	Kunming	20.39	22	P	Pn	08 15 27.1	-0.1
KMI				pP	pP	08 15 36.9	-3.9
KMI				PP	PnPn	08 15 47.7	+2.2
KMI				S	S	08 19 11.2	+2.7
KMI				SS	SnSn	08 19 42.0	+8.4
KMI				pmax	pmax		
	comp=Z,42nm,0.8s						
KMI				pmax	pmax		
	comp=Z,47nm,3.1s						
SMRI	Semarang	20.70	129	P	Pn	08 15 29.7	-1.0
	comp=Z,130nm,0.9s						
NGP	Nagpur	21.03	316	eP	P	08 15 30.7	-0.3
NGP				eS	S	08 19 18.3	-2.6
PLKI	Palangkaraya	21.20	113	P	P	08 15 36.5	+3.6
	comp=Z,388nm,1.1s						
UGM	Wanagama	21.32	131	P	P	08 15 33.4	-0.8
	baz=22,SNR=11						
UGM				S	Sn	08 19 36.2	-2.8
	baz=22,SNR=5.2						
ODAN	Odare	21.59	343	eP	P	08 15 34.7	-2.5
	comp=Z,141nm,0.5s						
KKM	Kota Kinabalu	21.64	89	eP	P	08 15 38.5	+0.8
	comp=Z,74nm,1.1s						
KKM	Kota Kinabalu	21.64	89	P	P	08 15 38.6	+0.9
KKM	Kota Kinabalu	21.64	89	P	P	08 15 38.9	+1.2
	baz=22,SNR=17						
JBP	Jabalpur	21.86	322⇑	i P	P	08 15 41.6	+1.9
JBP				ex	S	08 19 42.2	+5.4
RAMN	Ramite	21.92	341	eP	P	08 15 39.2	-1.5
	comp=Z,176nm,0.6s						
TAPN	Taplejung	21.96	344	eP	P	08 15 38.8	-2.4
	comp=Z,352nm,0.6s						
KDM	Kudat	22.25	87	P	P	08 15 45.5	+1.4
PWJI	Pagerwojo	22.36	129	P	P	08 15 44.6	-0.7
	comp=Z,68nm,0.6s						
BBKI	Banjar Baru	22.52	115	P	P	08 15 46.8	-0.3
	comp=Z,288nm,0.9s,comp=Z,3µm						
PKI	Pulchoki	22.89	339	eP	P	08 15 48.9	-2.2
	comp=Z,298nm,0.6s						
DMN	Daman	23.04	338	eP	P	08 15 50.2	-2.3
GUN	Gumba	23.04	340	eP	P	08 15 50.1	-2.5
	comp=Z,230nm,0.6s						
KKN	Kakani	23.14	339	eP	P	08 15 51.3	-2.1
GYA	Guiyang	23.24	29⇓	i P	P	08 15 55.4	+1.1
GYA				pP	pP	08 16 04.6	-6.9
GYA				PP	PnPn	08 16 27.3	+3.0
GYA				S	S	08 20 01.4	+1.3
GYA				SS	SnSn	08 20 53.2	+10
GYA				pmax	pmax		
	comp=Z,70nm,1.0s						
GYA				pmax	pmax		
	comp=Z,200nm,5.0s						
GYA				LR	LR		
	comp=N,2µm,21.4s						
GYA				LR	LR		
	comp=E,1µm,15.5s						
GYA				LR	LR		
	comp=Z,2µm,22.3s						
TSM	Tawau	23.40	94	P	P	08 15 55.9	+0.1
POO	Poona	23.51	303	eP	P	08 15 56.6	-0.1
POO				ePPP	PPP	08 16 41.0	
POO				i x	x	08 20 12.0	
KMMI	Kalianget	23.52	124	P	P	08 15 57.4	+0.6
	comp=Z,439nm,0.7s,comp=Z,4µm						
LSA	Lhasa	23.55	353	P	P	08 15 55.7	-1.7
BLJI	Banyuglugur	23.61	126	P	P	08 15 58.7	+1.1
	comp=Z,529nm,0.9s,comp=Z,4µm						
SMKI	Samarinda	23.66	105	P	P	08 15 59.8	+1.7
	comp=Z,165nm,0.7s						
KOLN	Koldanda	23.77	336	eP	P	08 15 58.8	-0.3
GMJI	Gumukmas	23.80	127	P	P	08 15 58.5	-0.7
	comp=Z,60nm,1.1s						
MYLDM	Lahad Datu	23.95	91	P	P	08 16 01.7	+1.0
MYLDM	Lahad Datu	23.95	91	P	P	08 16 01.9	+1.2
	comp=Z,248nm,1.1s,comp=Z,3µm						
DANN	Dangsing	24.22	337	eP	P	08 16 02.6	-0.6
PYUN	Piuthan	24.31	335	eP	P	08 16 04.1	+0.1
NBBI	Negara	24.80	126	P	P	08 16 10.4	+2.1
	comp=Z,342nm,0.9s,comp=Z,3µm						
SRBI	Singaraja	25.12	124	P	P	08 16 12.7	+1.5
	comp=Z,770nm,1.0s,comp=Z,7µm						
DNP	Denpasar	25.45	125	P	P	08 16 13.6	-0.6
	comp=Z,450nm,1.2s,comp=Z,32µm						
IGBI	Denpasar	25.48	126	P	P	08 16 14.0	-0.5
	comp=Z,83nm,1.2s						
KHKI	Kahang-Kahang	25.60	124	P	P	08 16 15.4	-0.2
	comp=Z,168nm,1.1s,comp=Z,1µm						
CD2	Chengdu	26.06	18	P	P	08 16 19.6	0.0
CD2				PP	PnPn	08 17 01.3	-1.2
CD2				PcP	PcP	08 19 47.4	+1.7
CD2				S	S	08 20 46.3	+1.4
CD2				pmax	pmax		
	comp=Z,50nm,0.6s						
CD2				pmax	pmax		
	comp=Z,120nm,8.3s						
CD2				LR	LR		
	comp=N,330nm,16.7s						
CD2				LR	LR		
	comp=E,340nm,12.7s						
CD2				LR	LR		
	comp=Z,320nm,17.1s						
AGRA	Agra	26.13	325	eP	P	08 16 19.9	-0.3
AGRA				AMB	AMB	08 16 25.3	
	comp=Z,41nm,0.1s						
PCI	Palu	26.32	105	P	pP	08 16 34.4	-6.6
	baz=26,SNR=8.1						
PCI				S	S	08 20 40.0	-9.3
	baz=26,SNR=3.9						
PTH	Pithoragarh	26.80	332	eP	P	08 16 27.1	+0.6
TGY	Tagaytay City	27.20	71	P	P	08 16 31.3	+1.2
TGY	Tagaytay City	27.20	71	P	P	08 16 31.3	+1.2
	comp=Z,164nm,0.3s,baz=153,slow=13,SNR=4.5						
SONA	Sohna	27.39	325	eP	P	08 16 32.0	+0.4
SONA				AMb	AMB	08 16 34.1	
	comp=Z,50nm,0.6s						
AYAN	Aya Nagar	27.55	325	eP	P	08 16 33.2	+0.2
AYAN				AMb	AMB	08 16 35.3	
	comp=Z,39nm,0.5s						
AJM	Ajmer	27.61	319	eP	P	08 16 34.4	+0.8
AJM				AMB	AMB	08 17 05.0	
	comp=Z,135nm,1.0s						
KAPI	Kappang	27.62	113	eP	P	08 16 32.4	-1.4
	comp=Z,136nm,1.2s						
KAPI	Kappang	27.62	113	P	P	08 16 33.4	-0.4
	SNR=6.8						
KAPI	Kappang	27.62	113	P	P	08 16 33.8	0.0
	comp=Z,609nm,0.5s,SNR=16						
KAPI	Kappang	27.62	113	P	P	08 16 32.4	-1.4
	comp=Z,39nm,0.4s,baz=297,slow=4.8,SNR=32						
NDI	New Delhi	27.65	326	eP	P	08 16 31.0	-2.9
NDI				eS	S	08 21 08.0	-2.0
KUDL	Kundal	27.66	324	eP	P	08 16 34.3	+0.4
KUDL				AMb	AMB	08 16 36.3	
	comp=Z,16nm,0.5s						
KHET	Khetri	28.01	323	eP	P	08 16 37.6	+0.5
BKSI	Bulukumba	28.08	114	P	P	08 16 37.4	-0.5
DDI	Dehra Dun	28.50	329	ex	P	08 16 42.0	+0.5
KKR	Kurukshetra	28.86	327	eP	P	08 16 45.4	+0.7
KKR				AMB	AMB	08 16 47.2	
	comp=Z,107nm,0.8s						
QZH	Quanzhou	29.68	49⇓	i P	P	08 16 55.5	+3.5
QZH				S	S	08 21 49.0	+7.0
QZH				pmax	pmax		
	comp=Z,60nm,0.6s						
SDNR	Sundarnagar	30.00	329	eP	P	08 16 55.5	+0.8
TWG	Pinlang	30.50	55	eP	P	08 17 01.4	+2.1
WHN	Wuhan	30.57	35	P	P	08 17 07.4	+7.7
WHN				S	S	08 21 57.4	+1.6
WHN				pmax	pmax		
	comp=Z,170nm,1.4s						
WHN				LR	LR		
	comp=N,620nm,5.0s						
WHN				LR	LR		
	comp=E,460nm,4.1s						
WHN				LR	LR		
	comp=Z,850nm,22.3s						
XAN	Xi'an	30.75	24	P	P	08 17 00.9	-0.4
XAN				pmax	pmax		
	comp=Z,12nm,0.6s						
XAN				pmax	pmax		
	comp=Z,200nm,6.8s						
XAN				LR	LR		
	comp=N,230nm,24.2s						
XAN				LR	LR		
	comp=E,160nm,22.1s						
SSLB	Suanglung	30.88	53	eP	P	08 17 04.8	+2.2
	comp=E,25nm,0.7s						
DAV	Davao City (W)	30.93	87	LR	LR	08 31 38.0	
	comp=E,182nm,18.3s,baz=159,slow=40						
LZH	Lanzhou	30.94	15	eP	P	08 17 03.8	+0.6
LZH				PcP	PcP	08 19 59.2	+1.3
LZH				eS	S	08 22 06.0	+4.2
LZH				ScP	ScP	08 23 35.4	+1.9
LZH				SS	SnSn	08 23 54.5	+4.4
LZH				pmax	pmax		
	comp=Z,41nm,1.0s						
LZH				pmax	pmax		
	comp=Z,140nm,4.8s						
LZH				LR	LR		
	comp=N,1µm,14.7s						
LZH				LR	LR		
	comp=E,2µm,9.8s						
LZH				LR	LR		
	comp=Z,1µm,15.0s						
YULB	Yu-li	30.96	54	eP	P	08 17 05.0	+1.7
	comp=Z,21nm,0.8s						
THN	Thein Dam	31.38	329	eP	P	08 17 05.0	-1.9
YHNB	Yeheng	31.66	52	eP	P	08 17 10.3	+0.8
	comp=Z,22nm,0.6s						
GTA	Gaotai	33.38	8	P	P	08 17 25.5	+1.0
GTA				pP	pP	08 17 35.2	-8.5
GTA				PcP	PcP	08 20 05.5	+1.0
GTA				S	S	08 22 44.8	+5.1
GTA				ScP	ScP	08 23 42.0	+0.3
GTA				SS	SnSn	08 24 50.3	+1.0
GTA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,43nm,5.0s						
GTA				LR	LR		
	comp=N,260nm,19.9s						
GTA				LR	LR		
	comp=E,210nm,21.8s						
NJ2	Nanjing	34.34	38	eP	P	08 17 34.1	+1.4
NJ2				S	S	08 23 01.0	+6.7
NJ2				pmax	pmax		
	comp=Z,90nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,100nm,7.6s						
NJ2				LR	LR		
	comp=N,260nm,14.7s						
NJ2				LR	LR		
	comp=E,180nm,15.7s						
GIRL	Giralia	34.62	147	P	P	08 17 36.3	+1.1
	baz=35,SNR=5.3						
AAI	Ambon	35.10	105	P	P	08 17 39.5	-0.1
	baz=35,SNR=10						
KBL	Kabul	36.66	324	eP	P	08 17 52.0	-0.9
KBL				e		08 20 15.0	
KBL				pmax	pmax		
	comp=Z,12nm,0.7s						
KBL	Kabul	36.66	324	eP	P	08 17 52.0	-0.9
	comp=Z,12nm,0.7s						
KBL				ePcP	PcP	08 20 15.0	+0.7
MBWA	Marble Bar	36.83	138	eP	P	08 17 53.3	-0.9
	comp=Z,6.4nm,0.6s						
MBWA				ePcP	PcP	08 20 15.4	+0.7
KSH	Kashi	37.09	336	PP	PP	08 19 20.1	-2.3
KSH				PcP	PcP	08 20 15.6	+0.3
KSH				S	S	08 23 40.0	+3.5
KSH				PcS	PcS	08 24 01.9	-1.8
KSH				ScP	PcS	08 24 01.9	-1.8
KSH				SS	SnSn	08 26 08.1	-11
KSH				ScS	ScS	08 28 08.0	+5.1
KSH				pmax	pmax		
	comp=Z,12nm,0.5s						
KSH				pmax	pmax		

comp=Z,33nm,0.6s
KSH LR LR
comp=N,3µm,13.0s
KSH LR LR
comp=E,1µm,13.8s
KSH LR LR
comp=Z,320nm,7.2s
SWI Sorong 37.41 100 P **P 08 17 58.8 -0.4**
baz=38,SNR=3.2
HHC Hu-ho-hao-te 37.72 21 *e*P **P 08 18 02.4 +0.8**
HHC PP **PnPn 08 19 33.0 +1.8**
HHC PcP **PcP 08 20 19.0 +1.8**
HHC S **S 08 23 51.3 +5.3**
HHC PcS **PcS 08 24 06.0 0.0**
HHC pmax pmax
comp=Z,65nm,0.6s
HHC pmax pmax
comp=Z,240nm,6.0s
HHC LR LR
comp=N,540nm,14.6s
HHC LR LR
comp=E,420nm,13.5s
HHC LR LR
comp=Z,770nm,13.0s
WBK Wadi Bani Khal 37.88 299 P **P 08 18 06.0 +2.8**
SNR=8.0
WMQ Urumqi 37.91 352 P **P 08 18 03.0 -0.1**
WMQ pP pP 08 18 13.0 -10
WMQ PP **PnPn 08 19 33.0 -0.4**
WMQ PcP **PcP 08 20 19.0 +1.3**
WMQ S **S 08 23 53.0 +4.3**
WMQ SS **SnSn 08 26 31.0 -7.3**
WMQ ScS **ScS 08 28 10.0 +2.8**
WMQ pmax pmax
comp=Z,16nm,0.9s
WMQ pmax pmax
comp=Z,130nm,5.0s
WMQ LR LR
comp=N,220nm,14.0s
WMQ LR LR
comp=E,190nm,15.0s
JOW Kunigami 38.15 54 *e*P **P 08 18 06.4 +1.1**
comp=E,37nm,1.2s
JMDO Jabal Madar 38.55 298 P **P 08 18 11.3 +2.5**
SNR=6.8
BJI Beijing 38.91 27 P **P 08 18 13.1 +1.7**
BJI S S 08 24 10.5 +6.7
BJI pmax pmax
comp=Z,67nm,1.1s
BJI LR LR
comp=N,220nm,19.5s
BJI LR LR
comp=E,230nm,21.0s
FITZ Fitzroy Crossi 39.14 129 *e*P **P 08 18 13.1 -0.6**
comp=E,1.1nm,0.5s
FITZ *e*PcP **PcP 08 20 22.4 +0.6**
FITZ PcP **PcP 08 20 22.6 +0.7**
FITZ Fitzroy Crossi 39.14 129 P **P 08 18 13.1 -0.6**
comp=E,197nm,0.8s,baz=313,slow=5.5,SNR=330
FITZ PcP **PcP 08 20 22.6 +0.7**
comp=E,18nm,0.5s,baz=330,slow=3.8,SNR=6.9
FITZ LR LR 08 35 20.1
comp=E,221nm,20.7s,baz=302,slow=38
FITZ Fitzroy Crossi 39.14 129 P **P 08 18 13.1 -0.6**
baz=39,SNR=100
ULHL Ulahol 39.34 339 P **P 08 18 15.7 +0.4**
SNR=28
BSY Bisya 39.47 298 P **P 08 18 19.4 +3.0**
SNR=15
KZA Kyzart 39.56 337 P **P 08 18 18.0 +0.6**
SNR=34
HOQ Hoqain 39.65 300 P **P 08 18 21.0 +3.1**
SNR=9.3
UCH Uchtor 39.97 337 P **P 08 18 22.6 +1.7**
SNR=6.6
TLE Tual 39.99 106 P **P 08 18 20.4 -0.5**
baz=40,SNR=5.9
TKM2 Tokmak 2 40.16 338 *i* P **P 08 18 22.6 +0.6**
TKM2 Tokmak 2 40.16 338 P **P 08 18 22.7 +0.6**
SNR=41
KBK Karagaybulak 40.17 338 P **P 08 18 23.5 +1.3**
SNR=44
MEEK Meekatharra 40.20 145 P **P 08 18 22.1 -0.3**
baz=40,SNR=18
AML Almayashu 40.22 336 P **P 08 18 23.7 +0.9**
SNR=14
ARQ Araqi 40.25 299 P **P 08 18 25.9 +3.0**
SNR=5.8
AAK Ala-Archa 40.33 337 *i* P **P 08 18 24.9 +1.5**
AAK pmax pmax
comp=Z,99nm,1.3s
AAK Ala-Archa 40.33 337 *e*P **P 08 18 25.1 +1.7**
comp=Z,30nm,0.8s
AAK PcP **PcP 08 20 26.6 +1.1**
AAK *e*PcP **PcP 08 20 26.8 +1.3**
AAK ScP **ScP 08 24 08.3 +0.7**
AAK S **S 08 24 27.0 +1.8**
AAK Ala-Archa 40.33 337 P **P 08 18 25.4 +2.0**
SNR=21
AAK Ala-Archa 40.33 337 P **P 08 18 25.0 +1.5**
comp=Z,220nm,0.9s,SNR=20
AAK Ala-Archa 40.33 337 P **P 08 18 25.1 +1.7**
comp=Z,24nm,0.8s,baz=129,slow=5.4,SNR=57
AAK PcP **PcP 08 20 26.6 +1.1**
comp=Z,30nm,0.8s,baz=149,slow=4.7,SNR=7.5
AAK ScP **ScP 08 24 08.3 +0.7**
comp=Z,8.4nm,0.9s,baz=186,slow=5.3,SNR=6.8
AAK S **S 08 24 27.0 +1.8**
comp=Z,2.0nm,0.4s,baz=224,slow=23,SNR=6.9
AAK LR LR 08 36 34.4
comp=Z,289nm,21.1s,baz=144,slow=38
FRU Bishkek 40.45 337 *e*P **P 08 18 25.5 +1.2**
FRU *e* 08 24 28.5
FRU pmax pmax
comp=Z,50nm,2.0s
CHMS Chumysh 40.54 338 P **P 08 18 25.8 +0.8**
SNR=12
EKS2 Erkin-Say 40.63 336 *e*P **P 08 18 27.0 +1.2**
EKS2 *e* 08 20 27.3
EKS2 pmax pmax
comp=Z,24nm,0.7s
EKS2 Erkin-Say 40.63 336 *e*P **P 08 18 27.0 +1.2**
comp=Z,24nm,0.7s
EKS2 *e*PcP **PcP 08 20 27.3 +0.9**
EKS2 Erkin-Say 40.63 336 P **P 08 18 27.1 +1.2**
SNR=37
DL2 Dalian 40.76 33 P **P 08 18 28.3 +1.5**
DL2 S **S 08 24 34.9 +3.5**
DL2 pmax pmax
comp=Z,90nm,0.9s
MORW Morawa 40.79 150 P **P 08 18 27.7 +0.5**
baz=41,SNR=11
USP Ospenovka 40.86 338 P **P 08 18 28.3 +0.7**
SNR=68
MTN Manton Dam 41.08 118 P **P 08 18 28.4 -1.3**
baz=41,SNR=89
ASHO Ashiyiah 41.09 301 P **P 08 18 32.3 +2.4**
SNR=5.6
ABTO Aybut 41.68 289 P **P 08 18 37.0 +2.2**
SNR=11
ASUD Al Ashush, Dub 41.70 300 P **P 08 18 37.8 +3.0**
SNR=6.9
MK31 Makanchi Array 41.75 347 *ce*P **P 08 18 34.7 -0.1**
MK31 pmax pmax
comp=Z,9.0nm,0.4s
MK31 Makanchi Array 41.75 347 *e*P **P 08 18 34.9 0.0**
MKAR Makanchi Array 41.75 347 *e*P **P 08 18 34.9 +0.1**
MKAR 08 20 30.2
MKAR S **S 08 24 45.1 -0.9**
MKAR Makanchi Array 41.75 347 *e*P **P 08 18 34.9 +0.1**
MKAR PcP **PcP 08 20 30.2 +0.4**
MKAR ScP **ScP 08 24 11.9 -0.9**
MKAR S **S 08 24 45.1 -0.9**
MKAR PKiKP **PKiKP 08 27 35.2 -1.2**
MKAR Makanchi Array 41.75 347 P **P 08 18 34.7 -0.1**
comp=Z,21nm,0.6s,baz=170,slow=7.9,SNR=241
MKAR PcP **PcP 08 20 30.2 +0.4**
comp=Z,6.3nm,0.7s,baz=181,slow=4.2,SNR=4.7
MKAR ScP **ScP 08 24 11.9 -0.9**
comp=Z,3.6nm,1.0s,baz=157,slow=4.7,SNR=3.9
MKAR S **S 08 24 45.1 -0.9**
comp=Z,1.0nm,0.9s,baz=162,slow=15,SNR=2.0
MKAR PKiKP **PKiKP 08 27 35.2 -1.2**
comp=Z,0.4nm,0.5s,baz=202,slow=2.0,SNR=5.4
MKAR LR LR 08 39 45.1
comp=Z,90nm,21.4s,baz=169,slow=42

KDU Kakadu 42.20 117 P **P 08 18 37.6 -1.3**
baz=42,SNR=11
KK31 Karatay Array 42.36 334 *ce*P **P 08 18 40.3 +0.4**
KK31 pmax pmax
comp=Z,9.0nm,0.3s
KKAR Karatay Array 42.36 334 *e*P **P 08 18 39.8 -0.1**
KKAR *e* 08 20 32.4
KKAR pmax pmax
comp=Z,13nm,0.5s
KKAR Karatay Array 42.36 334 *e*P **P 08 18 39.8 -0.1**
comp=Z,12nm,0.5s
KKAR *e*PcP **PcP 08 20 32.4 +0.5**
BLDU Ballidu 42.39 151 P **P 08 18 40.5 +0.3**
baz=43,SNR=12
SONM Songino Array 42.69 12 P **P 08 18 42.6 0.0**
SONM PcP **PcP 08 20 33.4 +0.3**
SONM ScP **ScP 08 24 15.5 -1.3**
SONM Songino Array 42.69 12 P **P 08 18 42.6 0.0**
comp=Z,21nm,0.7s,baz=193,slow=8.8,SNR=74
SONM PcP **PcP 08 20 33.4 +0.3**
comp=Z,15nm,0.6s,baz=201,slow=3.6,SNR=11
SONM ScP **ScP 08 24 15.5 -1.3**
comp=Z,3.9nm,0.8s,baz=185,slow=4.1,SNR=6.8
SONM LR LR 08 37 48.7
comp=Z,170nm,20.0s,baz=196,slow=38
INCN Inchon 42.72 39 *e*P **P 08 18 43.1 +0.2**
comp=Z,60nm,1.0s
INCN *e*PcP **PcP 08 20 33.8 +0.5**
INCN Inchon 42.72 39 P **P 08 18 43.3 +0.4**
SNR=7.8
ULN Ulaanbaatar 42.86 12 *e*P **P 08 18 43.7 -0.3**
comp=Z,16nm,0.7s
ULN *e*PcP **PcP 08 20 33.5 -0.1**
ULN Ulaanbaatar 42.86 12 P **P 08 18 44.0 0.0**
SNR=9.0
JNU Nakatsue 43.12 47 P **P 08 18 46.4 +0.1**
JNU PcP **PcP 08 20 33.8 -0.9**
JNU Nakatsue 43.12 47 P **P 08 18 46.4 +0.1**
comp=Z,42nm,0.9s,baz=154,slow=2.7,SNR=27
JNU PcP **PcP 08 20 33.8 -0.9**
comp=Z,6.2nm,0.8s,baz=270,slow=3.0,SNR=2.6
JNU LR LR 08 36 15.1
comp=Z,248nm,20.7s,baz=15,slow=35
KSAR Wonju Array Be 43.48 40 P **P 08 18 49.2 +0.3**
KSAR PcP **PcP 08 20 35.7 -0.1**
KSAR ScP **ScP 08 24 18.3 -1.7**
KSRS Korea Array 43.51 40 P **P 08 18 49.2 +0.1**
comp=Z,14nm,0.8s,baz=218,slow=9.1,SNR=66
KSRS PcP **PcP 08 20 35.7 -0.1**
comp=Z,2.9nm,0.5s,baz=237,slow=3.0,SNR=5.9
KSRS ScP **ScP 08 24 18.3 -1.8**
comp=Z,2.9nm,1.0s,baz=230,slow=4.3,SNR=6.8
KSRS LR LR 08 37 26.6
comp=Z,149nm,19.2s,baz=359,slow=37
KLBR Kellerberrin 43.70 151 P **P 08 18 51.1 +0.3**
baz=44,SNR=22
SNY Shenyang 43.89 32 ⇑P **P 08 18 52.6 +0.4**
SNY pmax pmax
comp=Z,55nm,0.8s
NWAO Narrogin (SRO) 44.56 152 *e*P **P 08 18 57.9 +0.3**
NWAO Narrogin (SRO) 44.56 152 P **P 08 18 57.6 0.0**
comp=Z,52nm,0.8s,baz=320,slow=8.5,SNR=22
ZAK Zakamensk 44.62 8 *e*P **P 08 18 57.8 -0.2**
ZAK *e* 08 20 39.8
ZAK pmax pmax
comp=Z,5.0nm,1.0s
ABKT Ailbek 45.63 319 P **P 08 19 06.7 +0.5**
comp=Z,272nm,0.5s,SNR=12
KMBL Kambalda 45.66 147 P **P 08 19 06.7 +0.3**
baz=46,SNR=6.2
RKGY Rocky Gully 45.86 154 P **P 08 19 08.9 +1.0**
baz=46,SNR=5.8
TLY Talaya 45.94 8 *e*P **P 08 19 07.2 -1.1**
TLY pmax pmax
comp=Z,12nm,0.9s
TLY Talaya 45.94 8 *e*P **P 08 19 08.8 +0.5**
comp=Z,12nm,0.9s
TLY *e*PcP **PcP 08 20 44.7 +0.7**
TLY Talaya 45.94 8 P **P 08 19 09.2 +0.8**
SNR=5.9
TLY Talaya 45.94 8 P **P 08 19 09.6 +1.3**
comp=Z,83nm,0.8s,SNR=8.6
KURBB Kurchatov Arra 46.20 346 P **P 08 19 11.0 +0.6**
comp=Z,32nm,0.8s,baz=169,slow=6.6,SNR=245
KURBB PcP **PcP 08 20 45.7 +0.8**
comp=Z,19nm,0.9s,baz=160,slow=3.3,SNR=5.4
KURBB ScP **ScP 08 24 29.7 -1.2**
comp=Z,4.1nm,0.7s,baz=162,slow=3.9,SNR=16
KURBB S **S 08 25 50.6 0.0**
comp=Z,3.1nm,0.9s,baz=182,slow=11,SNR=11
KURBB LR LR 08 41 58.7
comp=Z,183nm,19.9s,baz=185,slow=40
CN2 Changchun 46.26 31 *e*P **P 08 19 10.4 -0.5**
CN2 PcP **PcP 08 20 44.9 -0.3**
CN2 *e*S **S 08 25 55.0 +3.4**
CN2 *e*SS **SS 08 29 13.0 -5.0**
CN2 pmax pmax
comp=Z,50nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
KURK Kurchatov 46.27 346 *c i*P **P 08 19 11.4 +0.5**
KURK pmax pmax
comp=Z,43nm,1.0s
KURK Kurchatov 46.27 346 P **P 08 19 11.0 +0.1**
KURK *e*PcP **PcP 08 20 45.2 +0.2**
KURK PcP **PcP 08 20 45.7 +0.6**
KURK ScP **ScP 08 24 29.7 -1.5**
KURK *e*ScP **ScP 08 24 31.6 +0.3**
KURK S **S 08 25 50.6 -0.9**
KURK Kurchatov 46.27 346 P **P 08 19 12.6 +1.7**
SNR=17
KURK Kurchatov 46.27 346 P **P 08 19 11.8 +0.9**
comp=Z,240nm,0.6s,SNR=41
WRA Warramunga Arr 47.07 125 P **P 08 19 17.4 -0.3**
WRA PcP **PcP 08 20 48.8 +0.2**
WRA *e* 08 57 02.2
WRA Warramunga Arr 47.07 125 P **P 08 19 17.4 -0.3**
comp=Z,181nm,0.7s,baz=305,slow=9.0,SNR=526
WRA PcP **PcP 08 20 48.8 +0.2**
comp=Z,12nm,0.5s,baz=316,slow=2.7,SNR=8.4
WRA P4KPbc 08 57 02.2
comp=Z,0.5nm,0.7s,baz=313,slow=3.5,SNR=6.5
WRAB Tennant Creek 47.08 125 *e*P **P 08 19 17.5 -0.2**
WRAB *e* 08 20 47.0
WRAB pmax pmax
comp=Z,184nm,0.7s
WRAB Tennant Creek 47.08 125 *e*P **P 08 19 17.5 -0.2**
comp=Z,184nm,0.7s
WRAB *e*PcP **PcP 08 20 47.0 -1.6**
WRAB Tennant Creek 47.08 125 P **P 08 19 17.0 -0.7**
comp=Z,2µm,0.7s,SNR=69
ZAA0 Zalesovo Array 48.21 352 *e*P **P 08 19 26.3 +0.4**
ZALV Zalesovo Beam 48.21 352 P **P 08 19 26.2 +0.3**
ZALV 08 20 51.2
ZALV S **S 08 26 17.8 -1.3**
ZALV 08 29 04.8
ZALV pmax pmax
comp=Z,19nm,0.3s
ZALV smax smax
comp=N,9.0nm,0.8s
ZALV MLR MLR
comp=Z,95nm,20.3s
ZALV Zalesovo Beam 48.21 352 P **P 08 19 26.2 +0.3**
ZALV PcP **PcP 08 20 51.2 -0.7**
ZALV ScP **ScP 08 24 37.6 -1.7**
ZALV S **S 08 26 17.8 -1.3**
ZALV ScS **ScS 08 29 04.8 -6.0**
ZALV Zalesovo Beam 48.21 352 P **P 08 19 26.2 +0.3**
comp=Z,19nm,0.3s,baz=166,slow=7.3,SNR=76
ZALV PcP **PcP 08 20 51.2 -0.7**
comp=Z,5.6nm,0.4s,baz=163,slow=5.4,SNR=3.2
ZALV ScP **ScP 08 24 37.6 -1.7**
comp=Z,5.7nm,0.7s,baz=180,slow=4.0,SNR=6.5
ZALV S **S 08 26 17.8 -1.3**
comp=Z,8.6nm,0.8s,baz=182,slow=10,SNR=12
ZALV ScS **ScS 08 29 04.8 -6.0**
comp=Z,2.4nm,0.7s,baz=184,slow=4.5,SNR=5.4
ZALV LR LR 08 43 30.8
comp=Z,95nm,20.3s,baz=242,slow=41
AS31 Alice Springs 48.64 129 *e*P **P 08 19 29.7 -0.1**
AS31 *e*PcP **PcP 08 20 54.7 +0.5**
ASAR Alice Springs 48.64 129 P **P 08 19 29.8 0.0**
ASAR PcP **PcP 08 20 54.5 +0.3**
ASAR P'P' 08 50 30.8
ASAR *e* 08 57 08.6

ASAR Alice Springs 48.64 129 P **P 08 19 29.8 0.0**
comp=Z,128nm,0.7s,baz=300,slow=7.5,SNR=1130
ASAR PcP **PcP 08 20 54.5 +0.3**
comp=Z,21nm,0.7s,baz=301,slow=3.5,SNR=7.5
ASAR PKPPKP **P'P'df 08 50 30.8 -3.3**
comp=Z,0.6nm,0.9s,baz=148,slow=2.5,SNR=4.5
ASAR P4KPbc 08 57 08.6
comp=Z,0.5nm,0.5s,baz=304,slow=4.8,SNR=9.9
FORT Forrest 48.88 141 *e*P **P 08 19 31.9 +0.6**
comp=Z,117nm,0.8s
FORT *e*PcP **PcP 08 20 55.4 +0.6**
FORT Forrest 48.88 141 P **P 08 19 32.1 +0.7**
baz=49,SNR=48
MDJ Mudanjiang 49.00 33 P **P 08 19 33.2 +1.1**
MDJ PcP **PcP 08 20 55.2 +0.2**
MDJ PP **PP 08 21 26.1 -0.3**
MDJ PcS **PcS 08 24 51.8 +0.5**
MDJ S **S 08 26 29.3 -1.1**
MDJ pmax pmax
comp=Z,40nm,1.2s
MDJ pmax pmax
comp=Z,39nm,4.3s
MDJ LR LR
comp=N,61nm,25.6s
MDJ LR LR
comp=E,120nm,26.3s
QRN Al-Qurain 49.30 303 *e*P **P 08 19 34.9 +0.2**
QRN AMb AMB 08 19 38.7
comp=Z,123nm,1.3s
NVS Novosibirsk 49.30 351 *e*P **P 08 19 33.1 -1.2**
NVS *e*S **S 08 26 32.6 -1.7**
NVS pmax pmax
comp=Z,14nm,0.7s
NVS pmax pmax
comp=N,5.0nm,0.6s
NVS pmax pmax
comp=E,4.0nm,0.6s
NVS smax smax
comp=N,27nm,1.3s
NVS smax smax
comp=E,114nm,2.0s
VLA Vladivostok 49.35 36⇓ *e*P **P 08 19 32.8 -2.0**
VLA *e* 08 20 55.4
VLA 08 21 26.6
VLA S **S 08 26 36.4 +1.0**
VLA pmax pmax
comp=Z,37nm,1.3s
KBD Kabd 49.61 303 *e*P **P 08 19 37.4 +0.3**
RDF Al-Radifah 49.66 303 *e*P **P 08 19 37.7 +0.2**
RDF AMb AMB 08 19 38.4
comp=Z,108nm,0.6s
UMR Umm Al-Rimmam 49.71 304 *e*P **P 08 19 37.9 0.0**
UMR AMb AMB 08 19 38.6
comp=Z,67nm,0.4s
JHJ Hachijo jima 2 49.82 51 LR LR 08 39 57.4
comp=Z,100nm,21.6s,baz=310,slow=35
CBIJ Chichi jima 49.84 60 P **P 08 19 37.8 -1.0**
CBIJ Chichi jima 49.84 60 P **P 08 19 37.8 -1.0**
comp=Z,174nm,0.6s,baz=248,slow=2.0,SNR=26
NAY Al-Naaiem 50.01 303 *e*P **P 08 19 40.4 +0.2**
NAY AMb AMB 08 19 41.0
comp=Z,52nm,0.4s
MAT Matsushiro 50.04 47 P **P 08 19 40.2 -0.1**
MJAR Matsushiro Arr 50.04 47 P **P 08 19 40.3 0.0**
MJAR PcP **PcP 08 20 59.2 +0.1**
MJAR ScP **ScP 08 24 46.9 -0.7**
MJAR Matsushiro Arr 50.04 47 P **P 08 19 40.3 0.0**
comp=Z,8.2nm,0.6s,baz=248,slow=8.2,SNR=32
MJAR PcP **PcP 08 20 59.2 +0.1**
comp=Z,25nm,1.0s,baz=246,slow=5.0,SNR=20
MJAR ScP **ScP 08 24 46.9 -0.7**
comp=Z,1.6nm,0.8s,baz=236,slow=5.1,SNR=4.0
MJAR LR LR 08 40 33.8
comp=Z,224nm,21.4s,baz=235,slow=36
RAYN Ar Rayn 50.05 295 P **P 08 19 41.5 +0.9**
comp=Z,288nm,0.6s,SNR=16
USRK Ussuriysk Arra 50.07 35 P **P 08 19 40.7 +0.4**
comp=Z,18nm,0.8s,baz=238,slow=6.5,SNR=30
USRK PcP **PcP 08 20 57.3 -1.6**
comp=Z,3.9nm,0.6s,baz=246,slow=2.6,SNR=4.5
USRK LR LR 08 41 28.8
comp=Z,171nm,21.3s,baz=337,slow=37
MIB Mutribah 50.10 304 *e*P **P 08 19 40.9 +0.1**
MIB AMb AMB 08 19 42.1
comp=Z,99nm,1.0s
VOSK Vostochnaya 50.19 342 P **P 08 19 40.8 -0.3**
VOSK pmax pmax
comp=Z,56nm,0.8s
BVA0 Borovoye Array 50.63 341 *i* P **P 08 19 44.4 0.0**
BVA0 pmax pmax
comp=Z,4.0nm,0.5s
BVAR Borovoye Array 50.63 341 P **P 08 19 44.5 +0.1**
BVAR 08 21 01.3
BVAR S **S 08 26 47.9 -5.1**
BVAR pmax pmax
comp=Z,22nm,0.7s
BVAR smax smax
comp=N,2.0nm,0.7s
BVAR MLR MLR
comp=Z,115nm,19.5s
BVAR Borovoye Array 50.63 341 P **P 08 19 44.5 +0.1**
BVAR PcP **PcP 08 21 01.3 +0.5**
BVAR ScP **ScP 08 24 49.3 -0.4**
BVAR S **S 08 26 47.9 -5.1**
BVAR Borovoye Array 50.63 341 P **P 08 19 44.5 +0.1**
comp=Z,22nm,0.7s,baz=145,slow=8.2,SNR=112
BVAR PcP **PcP 08 21 01.3 +0.5**
comp=Z,14nm,0.6s,baz=187,slow=3.0,SNR=7.3
BVAR ScP **ScP 08 24 49.3 -0.4**
comp=Z,1.6nm,0.8s,baz=111,slow=3.6,SNR=4.0
BVAR S **S 08 26 47.9 -5.1**
comp=Z,2.3nm,0.7s,baz=128,slow=9.3,SNR=3.1
BVAR LR LR 08 43 01.3
comp=Z,114nm,19.5s,baz=332,slow=38
BRVK Borovoye 50.70 341 *c i*P **P 08 19 44.8 0.0**
BRVK pmax pmax
comp=Z,44nm,1.0s
BRVK Borovoye 50.70 341 *e*P **P 08 19 44.9 0.0**
comp=Z,30nm,0.8s
BRVK *e*PcP **PcP 08 21 01.6 +0.6**
BRVK Borovoye 50.70 341 P **P 08 19 45.4 +0.5**
SNR=17
BRVK Borovoye 50.70 341 P **P 08 19 45.9 +1.0**
comp=Z,271nm,0.8s,SNR=21
ZRNK Zerenda 51.02 340 *i* P **P 08 19 47.2 -0.1**
ZRNK pmax pmax
comp=Z,14nm,0.3s
ATD Arta Tunnel 51.20 280 P **P 08 19 51.8 +2.4**
ATD Arta Tunnel 51.20 280 P **P 08 19 51.8 +2.4**
comp=Z,20nm,0.8s,baz=260,slow=23,SNR=6.3
ATD LR LR 08 39 13.6
comp=Z,37nm,18.9s,baz=0.5,slow=33
QIS Mount Isa 51.73 122 P **P 08 19 52.9 -0.2**
baz=52,SNR=29
AB31 Akbulak array 51.81 332 *ce*P **P 08 19 53.4 +0.1**
AB31 pmax pmax
comp=Z,7.0nm,0.2s
ABKAR Akbulak array 51.81 332 *e*P **P 08 19 53.5 +0.3**
comp=Z,14nm,0.5s
COEN Coen 52.35 113 *e*P **P 08 19 57.1 -0.7**
comp=Z,412nm,1.8s
COEN *e*PcP **PcP 08 21 08.9 +0.9**
COEN Coen 52.35 113 P **P 08 19 56.7 -1.1**
baz=52,SNR=6.4
OPO Ambohidratompo 52.71 241 LR LR 08 38 32.3
comp=Z,287nm,18.9s,baz=5.9,slow=31
AKTO Aktyubinsk 53.53 332 P **P 08 20 05.9 0.0**
AKTO 08 21 12.0
AKTO S **S 08 27 28.8 -3.9**
AKTO pmax pmax
comp=Z,19nm,0.6s
AKTO smax smax
comp=N,3.0nm,0.7s
AKTO MLR MLR
comp=Z,88nm,21.1s
AKTO Aktyubinsk 53.53 332 P **P 08 20 05.9 0.0**
AKTO PcP **PcP 08 21 12.0 +0.2**
AKTO ScP **ScP 08 25 02.0 -0.3**
AKTO S **S 08 27 28.8 -3.9**
AKTO Aktyubinsk 53.53 332 P **P 08 20 05.9 0.0**
comp=Z,19nm,0.6s,baz=131,slow=7.7,SNR=62
AKTO PcP **PcP 08 21 12.0 +0.2**
comp=Z,21nm,0.5s,baz=104,slow=3.5,SNR=5.6
AKTO ScP **ScP 08 25 02.0 -0.3**
comp=Z,2.1nm,0.6s,baz=136,slow=5.5,SNR=5.1
AKTO S **S 08 27 28.8 -3.9**

comp=Z,3.1nm,0.7s,baz=305,slow=20,SNR=11
AKTO LR LR 08 46 07.4
comp=Z,88nm,21.1s,baz=351,slow=40
PMG Port Moresby 54.77 106 *e*P **P 08 20 15.3 -0.3**
comp=Z,96nm,0.9s
PMG *e*PcP **PcP 08 21 18.1 +0.9**
PMG Port Moresby 54.77 106 P **P 08 20 14.9 -0.6**
comp=Z,91nm,0.7s,baz=333,slow=2.8,SNR=21
BBOO Buckleboo 55.40 137 *e*P **P 08 20 19.5 -0.2**
comp=Z,764nm,0.9s
BBOO Buckleboo 55.40 137 P **P 08 20 19.6 -0.2**
baz=56,SNR=70
GNI Garni 55.80 315 *e*P **P 08 20 23.1 +0.3**
comp=Z,25nm,0.8s
GNI Garni 55.80 315 P **P 08 20 23.5 +0.7**
SNR=6.6
ASAJ Asahikawa 56.45 40 *e*P **P 08 20 27.7 +0.6**
comp=Z,20nm,1.0s
ASAJ Asahikawa 56.45 40 P **P 08 20 28.3 +1.1**
comp=Z,15nm,0.5s,baz=247,slow=8.6,SNR=20
ASAJ LR LR 08 44 45.9
comp=Z,141nm,21.1s,baz=356,slow=36
SVE Sverdlovsk 57.03 339*d i*P **P 08 20 31.6 +0.6**
SVE pmax pmax
comp=Z,171nm,0.9s
CTA Charters Tower 57.25 119 P **P 08 20 33.0 -0.2**
CTA Charters Tower 57.25 119 P **P 08 20 33.0 -0.2**
comp=Z,57nm,0.8s,baz=299,slow=8.4,SNR=31
CTAO Charters Tower 57.25 119 *e*P **P 08 20 33.0 -0.2**
CTAO pmax pmax
comp=Z,65nm,0.9s
CTAO Charters Tower 57.25 119 *e*P **P 08 20 33.0 -0.2**
comp=Z,65nm,0.9s
ZEI Tsey 57.45 318 *e*P P 08 20 30.2 -4.3
ZEI pmax pmax
comp=Z,23nm,1.0s
ARU Arti 57.51 337*c i*P **P 08 20 34.4 +0.1**
ARU 08 21 27.1
ARU 08 22 40.2
ARU S **S 08 28 25.7 +0.2**
ARU pmax pmax
comp=Z,81nm,1.0s
ARU Arti 57.51 337 *e*P **P 08 20 34.5 +0.1**
ARU Arti 57.51 337 P **P 08 20 34.5 +0.1**
comp=Z,499nm,0.4s,SNR=7.2
KMBO Kilima Mbogo 57.56 265 *e*P **P 08 20 37.8 +2.0**
comp=Z,35nm,1.0s
KMBO Kilima Mbogo 57.56 265 P **P 08 20 38.6 +2.8**
SNR=10
KMBO Kilima Mbogo 57.56 265 P **P 08 20 38.2 +2.4**
comp=Z,25nm,0.9s,baz=54,slow=9.2,SNR=31
KMBO LR LR 08 41 02.1
comp=Z,110nm,19.4s,baz=98,slow=31
KMBO Kilima Mbogo 57.56 265 P **P 08 20 38.2 +2.4**
baz=58,SNR=13
YSS Yuzh-Sakhalins 57.89 37⇑ *e*P **P 08 20 38.3 +1.1**
YSS pmax pmax
comp=Z,90nm,1.0s
YSS Yuzh-Sakhalins 57.89 37 *e*P **P 08 20 37.7 +0.6**
comp=Z,87nm,0.9s
QLP Quilpie 58.21 126 P **P 08 20 40.3 +0.6**
baz=58,SNR=112
KBZ Khabaz 58.51 318 P **P 08 20 41.4 -0.1**
KBZ pmax pmax
comp=Z,19nm,0.9s
KBZ Khabaz 58.51 318 P **P 08 20 41.4 -0.1**
KBZ Khabaz 58.51 318 P **P 08 20 41.4 -0.1**
comp=Z,19nm,0.9s,baz=126,slow=6.2,SNR=25
KIV Kislovodsk 58.74 318 *e*P **P 08 20 42.6 -0.7**
KIV pmax pmax
comp=Z,46nm,1.0s
KIV MLR MLR
comp=Z,43nm,17.0s
KIV Kislovodsk 58.74 318 *e*P **P 08 20 43.0 -0.2**
comp=Z,37nm,0.8s
KIV Kislovodsk 58.74 318 P **P 08 20 43.2 -0.2**
SNR=7.8
KIV Kislovodsk 58.74 318 P **P 08 20 43.1 -0.2**
comp=Z,278nm,0.8s,SNR=6.4
STKA Stephens Creek 58.76 133 *e*P **P 08 20 43.6 +0.1**
comp=Z,13nm,0.8s
STKA Stephens Creek 58.76 133 P **P 08 20 43.6 +0.1**
comp=Z,59nm,0.6s,baz=310,slow=6.5,SNR=189
STKA Stephens Creek 58.76 133 P **P 08 20 43.7 +0.2**
baz=59,SNR=86
ASF Jabal al Asfar 59.37 304 P **P 08 20 49.1 +1.2**
ASF Jabal al Asfar 59.37 304 P **P 08 20 49.1 +1.2**
comp=Z,9.3nm,0.6s,baz=325,slow=1.1,SNR=15
ASF LR LR 08 47 43.6
comp=Z,57nm,21.2s,baz=329,slow=37
MALT Malatya 59.76 311 *e*P **P 08 20 50.3 -0.2**
MALT pmax pmax
comp=Z,9.0nm,0.9s
MALT Malatya 59.76 311 *e*P **P 08 20 50.3 -0.2**
comp=Z,9.0nm,0.9s
SOKR Solikamsk 60.43 339*c i*P **P 08 20 54.9 +0.4**
SOKR pmax pmax
comp=Z,70nm,0.9s
EIL Elat 60.51 301 P **P 08 20 56.8 +1.1**
EIL Elat 60.51 301 P **P 08 20 56.8 +1.1**
comp=Z,13nm,0.5s,baz=118,slow=3.9,SNR=13
EIL LR LR 08 45 56.3
comp=Z,101nm,21.8s,baz=90,slow=35
EIL Elat 60.51 301 P **P 08 20 56.8 +1.1**
baz=60,SNR=7.5
MMAI Mount Meron Ar 60.78 304 P **P 08 20 59.3 +1.8**
MMAI Mount Meron Ar 60.78 304 P **P 08 20 59.3 +1.8**
comp=Z,13nm,0.6s,baz=93,slow=10,SNR=20
MMAI LR LR 08 48 58.2
comp=Z,100nm,19.5s,baz=180,slow=38
YAK Yakutsk 61.45 18⇑ *i*P **P 08 21 00.6 -0.7**
YAK *e* 08 23 14.8
YAK *i* S **S 08 29 12.3 -3.7**
YAK pmax pmax
comp=Z,44nm,0.8s
YAK Yakutsk 61.45 18 *e*P **P 08 21 00.6 -0.7**
comp=Z,61nm,0.4s
ARPS Mount Arapiles 61.56 138 P **P 08 21 03.1 +0.5**
baz=62,SNR=19
CMSA Cobar Meteorol 61.62 131 P **P 08 21 03.9 +0.8**
baz=62,SNR=14
RMQ Roma 61.84 124 P **P 08 21 05.8 +1.2**
baz=62,SNR=38
VRHR Novokhopersk 62.45 325 *e*P **P 08 21 07.0 -1.3**
VRHR *e*S S 08 29 22.8 -6.2
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,50nm,0.7s
VRHR smax smax
comp=N,50nm,1.4s
VRHR smax smax
comp=E,60nm,1.4s
VRHR smax smax
comp=Z,8.0nm,0.7s
CSS Prodhromos 62.88 306 *e*P **P 08 21 11.6 +0.1**
comp=Z,37nm,1.1s
EIDS Eidsvold 63.34 122 *e*P **P 08 21 14.6 0.0**
comp=Z,65nm,1.3s
EIDS Eidsvold 63.34 122 P **P 08 21 14.8 +0.1**
baz=64,SNR=9.3
PATS Pohnpei 63.41 85 P **P 08 21 17.7 +2.4**
baz=63,SNR=3.3
VORD Divnogorie 63.72 325 *e*P **P 08 21 15.1 -1.6**
VORD pmax pmax
comp=N,7.0nm,0.5s
VORD pmax pmax
comp=E,9.0nm,0.5s
VORD pmax pmax
comp=Z,10.0nm,0.5s
BR131 Keskin Array S 63.73 311 *e*P **P 08 21 16.1 -1.1**
comp=Z,23nm,0.8s
BRTR Keskin Array B 63.73 311 P **P 08 21 16.1 -1.1**
BRTR Keskin Array B 63.73 311 P **P 08 21 16.1 -1.1**
comp=Z,24nm,0.7s,baz=126,slow=7.4,SNR=116
BRTR LR LR 08 51 09.3
comp=Z,69nm,21.1s,baz=99,slow=38
VSR Storozhevoye 63.90 325 *e*P **P 08 21 16.1 -1.8**
VSR *e*S **S 08 29 45.1 -2.0**
VSR pmax pmax
comp=N,6.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,20nm,0.6s
VSR smax smax
comp=E,40nm,1.6s
VSR smax smax
comp=Z,10.0nm,1.6s
VSR smax smax
comp=N,20nm,0.8s
ANTO Ankara 64.40 311 *e*P **P 08 21 20.3 -1.2**
ANTO pmax pmax
comp=Z,23nm,0.9s
ANTO Ankara 64.40 311 *e*P **P 08 21 20.3 -1.2**
comp=Z,23nm,0.9s
TOO Toolangi 64.46 137 P **P 08 21 23.3 +1.6**
baz=65,SNR=34
SIM Simferopol' **64.83 317** *e*P **P 08 21 23.0 -1.1**
SIM pmax pmax
comp=Z,37nm,0.7s
YNG Young 64.92 132 P **P 08 21 25.2 +0.3**
baz=65,SNR=24
ARMA Armidale 65.72 127 *e*P **P 08 21 31.6 +1.4**
comp=Z,97nm,1.3s
ARMA Armidale 65.72 127 P **P 08 21 31.9 +1.7**
baz=66,SNR=16
CAN Canberra 65.83 133 *e*P **P 08 21 31.6 +0.8**
CAN pmax pmax
comp=Z,65nm,0.7s
CAN Canberra 65.83 133 *e*P **P 08 21 31.6 +0.8**
comp=Z,65nm,0.7s
CNB Canberra Magne 66.09 133 P **P 08 21 33.0 +0.6**
baz=66,SNR=27
MGCD Mangrove Creek 66.47 130 P **P 08 21 36.0 +1.3**
baz=67,SNR=15
MOS Moscow 66.63 329 *e*P **P 08 21 32.4 -3.0**
MOS *e*S **S 08 30 17.3 -3.0**
MOS pmax pmax
comp=Z,200nm,1.3s
MOS pmax pmax
comp=Z,127nm,0.9s
MILA Mila 66.74 135 P **P 08 21 37.5 +0.9**
baz=67,SNR=6.7
OBN Obninsk 66.92 328⇑ *e*P **P 08 21 36.5 -0.8**
OBN *e*S **S 08 30 19.7 -4.1**
OBN pmax pmax
comp=Z,123nm,1.2s
OBN MLR MLR
comp=Z,100nm,23.0s
OBN Obninsk 66.92 328 *e*P **P 08 21 36.7 -0.6**
comp=Z,135nm,1.1s
KARP Karpathos 67.95 306 *e*P **P 08 21 45.1 +0.9**
KLMR Klimovskoe 68.06 334*c i*P **P 08 21 43.9 -0.4**
KLMR *e*PPP PPP 08 25 58.0
KLMR *e*S S 08 30 44.0 +6.7
KLMR pmax pmax
comp=Z,40nm,0.6s
MOO Moorlands 68.10 141 P **P 08 21 46.2 +1.3**
baz=68,SNR=3.6
TLCR 68.51 316⇑ *i*P **P 08 21 47.2 -0.3**
TIRR Tirgusor 68.63 315 *e*P **P 08 21 47.6 -0.6**
TIRR pmax pmax
comp=Z,20nm,0.8s
TIRR Tirgusor 68.63 315 *e*P **P 08 21 47.6 -0.6**
comp=Z,20nm,0.8s
TIRR Tirgusor 68.63 315⇓ *i*P **P 08 21 47.9 -0.3**
TIXI Tiksi 68.77 11*c i*P **P 08 21 47.4 -1.2**
TIXI pmax pmax
comp=Z,93nm,1.3s
TIXI MLR MLR
comp=Z,130nm,18.0s
TIXI Tiksi 68.77 11 *e*P **P 08 21 47.6 -1.0**
comp=Z,92nm,0.6s
CFR Carcaliu 68.98 316⇓ *i*P **P 08 21 50.0 -0.4**
LSZ Lusaka 69.02 251 *e*P **P 08 21 52.8 +1.5**
comp=Z,52nm,1.3s
XRY Khrisi 69.05 305 *e*P **P 08 21 50.7 -0.3**
PETK Petropavlovsk- 69.16 35 P **P 08 21 50.4 -1.0**
PETK MLR MLR
comp=Z,101nm,21.5s
PETK Petropavlovsk- 69.16 35 P **P 08 21 50.4 -1.0**
PETK Petropavlovsk- 69.16 35 P **P 08 21 50.4 -1.0**
comp=Z,5.0nm,1.0s,baz=260,slow=2.9,SNR=5.9
PETK LR LR 08 51 59.4
comp=Z,101nm,21.5s,baz=244,slow=36
PRK Panaskevi 69.21 310 *e*P **P 08 21 51.8 -0.2**
CHOS Chios island 69.25 309 P **P 08 21 52.5 +0.2**
AK02 Malin Array Si 69.63 322 *e*P **P 08 21 53.0 -1.2**
AKASG Malin Array Be 69.63 322 P **P 08 21 52.8 -1.4**
AKASG pmax pmax
comp=Z,26nm,0.6s
AKASG Malin Array Be 69.63 322 P **P 08 21 52.8 -1.4**
AKASG Malin Array Be 69.63 322 P **P 08 21 52.8 -1.4**
comp=Z,26nm,0.6s,baz=88,slow=5.2,SNR=45
AK01 Malin Array Si 69.63 322 *e*P **P 08 21 53.0 -1.3**
KIEV Kiev 69.63 322 *e*P **P 08 21 52.9 -1.4**
KIEV pmax pmax
comp=Z,40nm,1.0s
KIEV Kiev 69.63 322 *e*P **P 08 21 52.9 -1.4**
comp=Z,40nm,1.0s
ALN Alexandroupoli 69.65 311 P **P 08 21 54.3 -0.3**
PET Petropavlovsk 69.68 35 *e*P **P 08 21 55.2 +0.7**
PET *e*S **S 08 30 52.2 -4.5**
PET pmax pmax
comp=Z,21nm,0.5s
PET MLR MLR
comp=Z,300nm,15.0s
IDI Anoyia 69.75 305 *e*P **P 08 21 55.1 -0.4**
comp=Z,55nm,0.6s
VRI Vrincioaia 70.09 317⇓ *i*P **P 08 21 57.7 +0.4**
PLOR Plostina 70.14 317⇓ *i*P **P 08 21 58.2 +0.6**
LIA Limnos Island 70.14 310 P **P 08 21 57.3 -0.4**
LIA Limnos Island 70.14 310 *e*P **P 08 21 57.1 -0.6**
KDZ Kurdzhali 70.25 312 *i*P **P 08 21 57.4 -0.9**
TMCR Tamitsa 70.25 337 *e*P **P 08 21 56.4 -1.4**
TMCR pmax pmax
comp=Z,93nm,1.0s
TESR 70.28 317⇓ *i*P **P 08 21 58.6 +0.2**
SEY Seymchan 70.28 24 *e*P **P 08 21 57.2 -0.9**
VAM Vamos 70.33 305 P **P 08 21 59.6 +0.7**
VAM Vamos 70.33 305 *e*PN **P 08 21 59.6 +0.7**
VAM Vamos 70.33 305 *e*P **P 08 22 00.2 +1.3**
VAM Vamos 70.33 305 *e*Pn **P 08 21 59.6 +0.7**
MLR Muntele Rosu 70.56 316 P **P 08 22 00.4 +0.1**
MLR Muntele Rosu 70.56 316 P **P 08 22 00.4 +0.1**
comp=Z,11nm,0.8s,baz=135,slow=1.2,SNR=59
MLR LR LR 08 59 06.2
comp=Z,16nm,18.2s,baz=254,slow=41
RZN Rozhen 70.77 312 *i*P **P 08 22 00.8 -0.9**
KAVA Kavala 70.81 311 P **P 08 22 01.3 -0.4**
VOIR 71.17 316⇓ *i*P **P 08 22 03.3 -0.6**
PAIG Paliouri 71.29 310 P **P 08 22 04.3 -0.4**
DID Didima 71.34 307 P **P 08 22 03.2 -1.8**
NVR Nevrokopi 71.35 311 P **P 08 22 04.5 -0.6**
NVR Nevrokopi 71.35 311 *e*PB **P 08 22 04.2 -0.9**
NVR Nevrokopi 71.35 311 *e*P **P 08 22 03.9 -1.2**
KYTH Kithira 71.36 306 *e*PN **P 08 22 02.5 -2.7**
KYTH Kithira 71.36 306 *e*P **P 08 22 04.1 -1.1**
KYTH Kithira 71.36 306 *e*Pn **P 08 22 02.5 -2.7**
MICGM Minsk 71.45 326⇑ *i*P **P 08 22 03.0 -2.3**
MNK Minsk 71.47 326⇑ *i*P **P 08 22 03.0 -2.4**
MNK pmax pmax
comp=Z,280nm,1.0s
BUR08 Bucovina Ar. S 71.48 318 *e*P **P 08 22 05.5 -0.2**
VLI Veliai 71.49 307 *e*P **P 08 22 02.8 -3.1**
PLG Polygyros 71.53 310 *e*PB **P 08 22 03.9 -2.3**
XOR Xorichti 71.59 309 P **P 08 22 04.8 -1.7**
SOH Sokhos 71.66 311 *e*PB **P 08 22 05.9 -1.0**
SOH Sokhos 71.66 311 *e*P **P 08 22 05.9 -1.0**
DYR Agios Nikonas 71.97 307 P **P 08 22 08.3 -0.6**
DSF Desfina 72.00 308 P **P 08 22 06.5 -2.5**
VTS Vitosha 72.01 313 P **P 08 22 08.6 -0.6**
VTS Vitosha 72.01 313⇑ *i*P **P 08 22 08.6 -0.6**
VTS Vitosha 72.01 313 *i*P **P 08 22 08.5 -0.6**
KNT Kendrikon 72.05 311 P **P 08 22 08.3 -0.9**
LHI Lord Howe Isla 72.07 126 P **P 08 22 10.7 +1.3**
baz=72,SNR=7.0
NACGM Naroch 72.17 326 *e*P **P 08 22 07.0 -2.6**
LIT Litokhoron 72.22 310 P **P 08 22 09.8 -0.5**
LIT Litokhoron 72.22 310 *e*P pP 08 22 33.7 +1.9
KALE Kalithea 72.30 308 P **P 08 22 09.2 -1.6**
VAY Valandovo 72.31 311 P **P 08 22 09.2 -1.5**
VAY Valandovo 72.31 311 *i*P **P 08 22 09.2 -1.5**
ITM Ithomi 72.34 307 P **P 08 22 10.1 -0.9**
ITM Ithomi 72.34 307 *e*P **P 08 22 09.3 -1.7**
TRIZ Trizonia 72.35 308 P **P 08 22 09.4 -1.6**
GRG Griva 72.39 311 P **P 08 22 10.2 -1.1**
LAKA Lakka 72.41 308 P **P 08 22 10.2 -1.2**
JOF Joensuu 72.45 335 *e*P **P 08 22 09.2 -1.9**
JOF pmax pmax
comp=Z,33nm,0.6s
JOF Joensuu 72.45 335 *e*p **P 08 22 09.2 -1.9**
comp=Z,33nm,0.6s
PYL PYLOS 72.46 307 P **P 08 22 10.4 -1.3**
THL Klokotos Trika 72.52 309 P **P 08 22 10.0 -2.0**
THL Klokotos Trika 72.52 309 *e*P **P 08 22 09.7 -2.3**
IIGN Ignalina 72.59 326 *e*P **P 08 22 12.1 0.0**
IIGN AMB AMB 08 22 13.7
comp=Z,50nm,1.1s
EVR Evrytania 72.61 309 *e*P **P 08 22 10.6 -2.1**
LVV L'vov 72.66 320 *e*P **P 08 22 12.1 -0.6**
IZAR Zarasai 72.68 327 *e*P **P 08 22 12.6 0.0**
IZAR AMB AMB 08 22 13.3
comp=Z,41nm,0.6s
ISAL Salakas 72.70 326 *e*P **P 08 22 12.7 0.0**
ISAL AMB AMB 08 22 14.3
comp=Z,39nm,1.2s
RLS Riolos of Patr 72.79 308 *e*P **P 08 22 13.0 -0.6**
DRGR 73.00 317⇑ *i*P **P 08 22 15.0 +0.2**
LVZ Lovozero 73.20 340*d i*P **P 08 22 15.4 -0.1**
LVZ pmax pmax
comp=Z,80nm,1.7s
LVZ Lovozero 73.20 340 *e*P **P 08 22 14.9 -0.7**
comp=Z,29nm,0.7s
SKO Skopje 73.23 312 *i*P **P 08 22 15.1 -1.1**
TRPA Tarpa 73.33 318⇓ *i*P **P 08 22 16.9 +0.3**
TRPA Tarpa 73.33 318⇑ *e*P **P 08 22 16.7 +0.1**
KWP Kalwaria Pacla 73.47 320 *e*P **P 08 22 17.7 +0.2**
KWP pmax pmax
comp=Z,38nm,0.5s
KWP Kalwaria Pacla 73.47 320 *e*P **P 08 22 17.7 +0.2**
comp=Z,38nm,0.5s
KWP Kalwaria Pacla 73.47 320 *e*P **P 08 22 17.6 +0.1**
APA Apatity 73.48 339⇓ *i*P **P 08 22 17.0 -0.1**
APA *i* 08 22 35.0
APA pmax pmax
comp=Z,65nm,1.0s
VLS Valsamata 73.49 308 *e*P **P 08 22 16.5 -1.3**
LKD2 Lefkada island 73.49 308 P **P 08 22 17.0 -0.8**
UZH Uzhgorod 73.57 319 *e*P **P 08 22 17.0 -1.0**
UZH *e* 08 22 32.3
UZH *e**PP **pP 08 22 38.0 -1.6**
UZH *e*S **SKiKP 08 31 38.3 -2.3**
KOLS Kolonicke sedl 73.64 319 *e*P **P 08 22 18.8 +0.4**
KOLS pmax pmax
comp=Z,26nm,0.8s
KOLS Kolonicke sedl 73.64 319 *e*P **P 08 22 18.8 +0.4**
LBTB Lobatse 73.74 242 *e*P **P 08 22 21.2 +1.7**
comp=Z,58nm,0.8s
PHP Peshkopia 73.94 311 P **P 08 22 19.3 -1.1**
SUW Suwalki 74.01 324 *e*P **P 08 22 19.8 -0.7**
SUW Suwalki 74.01 324 *e*P **P 08 22 19.8 -0.7**
comp=Z,346nm,0.9s
SUW Suwalki 74.01 324 *e*P **P 08 22 19.9 -0.6**
CRVS Cervenica-Dubn 74.16 319 *e*P **P 08 22 21.4 -0.1**
CRVS pmax pmax
comp=Z,37nm,1.0s
CRVS Cervenica-Dubn 74.16 319 *e*P **P 08 22 21.4 -0.1**
KEK Kerkira 74.24 309 P **P 08 22 20.9 -1.2**
KEK Kerkira 74.24 309 *e*P **P 08 22 20.2 -1.9**
FINES FINESS Array B 74.30 332 P **P 08 22 21.8 -0.2**
FINES FINESS Array B 74.30 332 P **P 08 22 21.8 -0.2**
comp=Z,49nm,0.4s,baz=91,slow=5.3,SNR=297
KAF Kangasniemi 74.38 333 *e*P **P 08 22 21.0 -1.5**
KAF pmax pmax
comp=Z,42nm,0.5s
KAF Kangasniemi 74.38 333 *e*p **P 08 22 21.0 -1.5**
comp=Z,42nm,0.5s
PVY Plav 74.39 312⇑ *i*P **P 08 22 22.8 -0.3**
IVA Berane 74.47 313 *e*P **P 08 22 23.2 -0.3**
ULC Ulcinj 74.86 312⇑ *i*P **P 08 22 24.4 -1.3**
PLE Pljevlja 74.89 313⇑ *i*P **P 08 22 25.3 -0.7**
TTG Podgorica 74.90 312⇑ *i*P **P 08 22 24.9 -1.0**
NIE Niedzica 74.98 319 *e*P **P 08 22 27.3 +1.0**
NIE Niedzica 74.98 319 *e*P **P 08 22 27.3 +1.0**
BEL Belsk 75.04 322 *e*P **P 08 22 26.9 +0.4**
PSZ Piszkesteto 75.06 318 *e*P **P 08 22 26.7 -0.1**
PSZ pmax pmax
comp=Z,39nm,0.8s
PSZ Piszkesteto 75.06 318 *e*P **P 08 22 26.7 -0.1**
comp=Z,39nm,0.8s
PSZ Piszkesteto 75.06 318⇓ *i*P **P 08 22 26.7 -0.1**
PSZ Piszkesteto 75.06 318⇑ *e*P **P 08 22 26.8 -0.1**
NKY Niksic 75.12 313⇑ *i*P **P 08 22 26.6 -0.7**
BUM Brajici-Budva 75.15 312⇑ *i*P **P 08 22 26.2 -1.2**
UPM Unac-Piva 75.22 313⇑ *i*P **P 08 22 26.8 -1.2**
OJC Ojcow 75.42 320 *e*P **P 08 22 28.9 +0.2**
OJC Ojcow 75.42 320 *e*P **P 08 22 28.9 +0.2**
PKS7 Kunszentmiklos 75.44 317⇓ *e*P **P 08 22 29.3 +0.4**
HCY Herceg Novi 75.46 312⇑ *i*P **P 08 22 28.0 -1.1**
BRY Bratogost 75.47 313⇑ *i*P **P 08 22 28.3 -1.0**
PKSM Moragy 75.71 316⇑ *i*P **P 08 22 30.1 -0.3**
PKSM Moragy 75.71 316⇑ *e*P **P 08 22 30.1 -0.3**
VYHS Vyhne 75.83 318 *e*P **P 08 22 31.3 +0.2**
VYHS pmax pmax
comp=Z,35nm,1.4s
VYHS Vyhne 75.83 318 *e*P **P 08 22 31.3 +0.2**
DZM Mont Dzumac 75.83 115 P **P 08 22 32.6 +0.9**
DZM Mont Dzumac 75.83 115 P **P 08 22 32.6 +0.9**
comp=Z,20nm,0.8s,baz=295,slow=22,SNR=6.7
PKSG 76.00 317⇑ *e*P **P 08 22 32.0 -0.1**
PKST T"'s 76.23 317⇑ *e*P **P 08 22 33.5 +0.1**
OKC Ostrava-Krasne 76.43 320⇑ *i*P **P 08 22 35.0 +0.5**
OKC Ostrava-Krasne 76.43 320⇑ *i*P **P 08 22 35.0 +0.5**
KEV Kevo 76.48 341 *e*P **P 08 22 34.2 -0.1**
KEV pmax pmax
comp=Z,49nm,0.8s
KEV Kevo 76.48 341 *e*P **P 08 22 34.2 -0.1**
comp=Z,50nm,0.8s
KEV Kevo 76.48 341 *e*p **P 08 22 33.4 -0.9**
comp=Z,42nm,0.7s
TIP Timpagrande 76.55 309 *e*P **P 08 22 34.8 -0.7**
comp=Z,72nm,1.5s
SMOL Smolenice 76.76 318 *e*P **P 08 22 36.6 +0.2**
SMOL Smolenice 76.76 318 *e*P **P 08 22 36.5 +0.2**
MORC Moravsky Berou 76.81 320 *e*P **P 08 22 37.2 +0.5**
MORC pmax pmax
comp=Z,72nm,0.9s
MORC Moravsky Berou 76.81 320 *e*P **P 08 22 37.2 +0.5**
comp=Z,72nm,0.9s
MORC Moravsky Berou 76.81 320⇑ *i*P **P 08 22 37.1 +0.4**
ARCES ARCESS Array B 76.91 340 P **P 08 22 37.1 +0.3**
ARCES ARCESS Array B 76.91 340 P **P 08 22 37.1 +0.3**
comp=Z,27nm,0.6s,baz=97,slow=6.9,SNR=203
ARCES LR LR 08 59 32.7
comp=Z,186nm,21.9s,baz=63,slow=38
ARE0 ARCESS Array S 76.91 340 *e*P **P 08 22 36.5 -0.3**
ARE0 ARCESS Array S 76.91 340 *e*P **P 08 22 36.8 0.0**
MAW Mawson 77.00 192 P **P 08 22 39.7 +2.5**
MAW Mawson 77.00 192 P **P 08 22 39.7 +2.5**
comp=Z,18nm,0.7s,baz=7.2,slow=6.1,SNR=14
MAW Mawson 77.00 192 P **P 08 22 39.5 +2.3**
baz=77,SNR=10.0
BEHE Becsehely 77.02 316⇑ *e*P **P 08 22 38.4 +0.5**
CEL Celeste 77.19 308 *e*P **P 08 22 39.4 +0.4**
comp=Z,62nm,1.1s
CUC Castrocucco 77.32 309 *e*P **P 08 22 39.0 -0.8**
comp=Z,10.0nm,0.6s
KOGS Kog 77.38 316 *i*P **P 08 22 40.0 +0.1**
VRAC Vranov 77.38 319 P **P 08 22 40.1 +0.2**
VRAC Vranov 77.38 319⇑ *i*P **P 08 22 40.1 +0.2**
VRAC Vranov 77.38 319 P **P 08 22 40.1 +0.2**
comp=Z,16nm,0.5s,baz=109,slow=5.6,SNR=14
GKP Gorka Klasztor 77.39 323 *e*P **P 08 22 39.7 0.0**
BILL Bilibino 77.49 21⇓ *i*P **P 08 22 39.5 -0.6**
BILL *e*S **SKSac 08 32 42.9 -2.8**
BILL MLR MLR
comp=Z,200nm,20.0s
BILL Bilibino 77.49 21 *e*P **P 08 22 39.4 -0.6**
comp=Z,3.7nm,0.5s
KTK1 Kautokeino 77.53 340 *e*P P 08 22 30.2 -10
KTK1 AMB AMB 08 22 31.3
comp=Z,166nm,1.1s
DPC Dobruska-Polom 77.65 320⇑ *i*P **P 08 22 42.3 +0.9**
DPC Dobruska-Polom 77.65 320⇑ *i*P **P 08 22 42.3 +0.9**
KSP Ksiaz 77.72 321⇑ *i*P **P 08 22 42.2 +0.5**
KSP Ksiaz 77.72 321 *e*P **P 08 22 42.2 +0.5**
CONA Conrad Observa 77.75 318 *i*P **P 08 22 42.0 -0.1**
comp=Z,27nm,0.8s,SNR=18
CONA Conrad Observa 77.75 318 *i*P **P 08 22 42.0 -0.1**
comp=Z,27nm,0.8s

GCIS	Gornji Cirnik	77.77	315	iP	P	08 22 42.2	+0.1
UPC	Upice	77.86	320⇑	iP	P	08 22 43.2	+0.7
UPC	Upice	77.86	320⇑	iP	P	08 22 43.2	+0.7
ARSA	Arzberg	77.94	317⇑	iP	P	08 22 43.4	+0.4
	comp=Z,42nm,0.8s,SNR=26						
ARSA	Arzberg	77.94	317⇑	iP	P	08 22 43.4	+0.4
	comp=Z,42nm,0.8s						
BOJS	Bojanci	78.01	315	iP	P	08 22 43.5	+0.1
PERS	Pernice	78.17	316	iP	P	08 22 44.7	+0.3
SOKA	Soboth	78.23	316⇑	iP	P	08 22 45.1	+0.4
	comp=Z,104nm,1.1s						
SOKA	Soboth	78.23	316⇑	iP	P	08 22 45.1	+0.4
	comp=Z,104nm,1.1s						
FX1	Attu Island--F	78.25	37	P	P	08 22 44.3	-0.3
	comp=Z,123nm,0.5s						
FX1	Attu Island--F	78.25	37	P	P	08 22 44.3	-0.3
	comp=Z,13nm,0.4s,baz=347,slow=6.6,SNR=10.0						
LJU	Ljubljana	78.55	316	iP	P	08 22 46.8	+0.4
OBKA	Obir	78.56	316	iP	P	08 22 46.8	+0.3
	comp=Z,41nm,0.7s,SNR=25						
OBKA	Obir	78.56	316	iP	P	08 22 46.9	+0.3
	comp=Z,41nm,0.7s						
PRU	Pruhonice	78.77	320⇑	iP	P	08 22 48.0	+0.5
PRU	Pruhonice	78.77	320⇑	iP	P	08 22 48.0	+0.5
PVCC	Panska Ves	78.78	320⇑	iP	P	08 22 48.3	+0.7
PVCC	Panska Ves	78.78	320⇑	iP	P	08 22 48.3	+0.7
MOA	Molln	78.82	317	iP	P	08 22 47.8	-0.1
	comp=Z,49nm,1.1s,SNR=16						
MOA	Molln	78.82	317	iP	P	08 22 47.8	-0.1
	comp=Z,49nm,1.1s						
BSD	Bornholm Skovb	78.93	325⇑	iP	P	08 22 47.5	-0.7
BSD				pmax	pmax		
	comp=Z,45nm,0.7s						
BSD	Bornholm Skovb	78.93	325⇑	iP	P	08 22 47.5	-0.7
	comp=Z,45nm,0.6s						
VOY	Vojsko	78.99	316⇑	iP	P	08 22 48.5	-0.4
VOY				e		08 23 05.5	
TRI	Trieste	79.07	315	eP	P	08 22 48.4	-0.8
TRI				pmax	pmax		
	comp=Z,30nm,0.6s						
TRI	Trieste	79.07	315	eP	P	08 22 48.4	-0.8
	comp=Z,30nm,0.6s						
CADS	Cadrg	79.11	316	iP	P	08 22 49.4	-0.1
CADS				e		08 23 06.7	
CADS				e		08 23 13.5	
TRO	Tromso	79.16	340	eP	P	08 22 48.9	-0.3
TRO				AMB	AMB	08 22 51.2	
	comp=Z,64nm,1.1s						
TRO				epP	pP	08 23 11.2	+0.2
MYKA	Terra Mystica	79.19	316⇑	iP	P	08 22 50.0	0.0
	comp=Z,29nm,0.6s						
MYKA	Terra Mystica	79.19	316⇑	iP	P	08 22 50.0	0.0
	comp=Z,29nm,0.6s						
BRG	Berggiesshubel	79.20	320	iP	P	08 22 50.2	+0.4
	comp=Z,35nm,0.7s						
BRG	Berggiesshubel	79.20	320	iP	P	08 22 50.2	+0.4
BRG	Berggiesshubel	79.20	320	eP	P	08 22 50.3	+0.4
	comp=Z,28nm,0.8s						
AQU	L'Aquila	79.22	312	eP	P	08 22 50.2	0.0
	comp=Z,964nm,0.8s						
GEC2	GERESS Array S	79.25	318	eP	P	08 22 50.7	+0.4
GEC2				pmax	pmax		
	comp=Z,69nm,0.8s						
GEC2	GERESS Array S	79.25	318	eP	P	08 22 50.7	+0.4
	comp=Z,69nm,0.8s						
GEC2				epP	pP	08 23 08.4	-3.7
GERES	GERESS Array B	79.25	318	P	P	08 22 50.6	+0.4
GERES	GERESS Array B	79.25	318	P	P	08 22 50.6	+0.4
	comp=Z,64nm,0.7s,baz=90,slow=5.3,SNR=371						
KHC	Kasperske Hory	79.34	319⇑	iP	P	08 22 50.9	+0.1
KHC	Kasperske Hory	79.34	319	eP	P	08 22 50.8	+0.1
	comp=Z,33nm,0.8s						
KHC	Kasperske Hory	79.34	319⇑	iP	P	08 22 50.9	+0.1
RUE	Ruedersdorf	79.40	322	eP	P	08 22 51.3	+0.4
	comp=Z,111nm,0.7s						
RUE	Ruedersdorf	79.40	322	eP	P	08 22 51.2	+0.3
	comp=Z,112nm,0.6s						
KBA	Koelnbreinsper	79.41	317	iP	P	08 22 50.9	-0.4
KBA				pmax	pmax		
	comp=Z,27nm,0.5s						
KBA	Koelnbreinsper	79.41	317	iP	P	08 22 50.9	-0.4
	comp=Z,27nm,0.5s,SNR=31						
KBA	Koelnbreinsper	79.41	317	iP	P	08 22 50.9	-0.4
	comp=Z,27nm,0.5s						
FBE	Freiberg	79.58	321	eP	P	08 22 52.5	+0.6
SUR	Sutherland	79.66	236	eP	P	08 22 55.2	+2.3
	comp=Z,86nm,0.9s						
SUR	Sutherland	79.66	236	P	P	08 22 55.0	+2.1
	comp=Z,660nm,0.8s,SNR=19						
TSUM	Tsumeb	79.73	249	eP	P	08 22 55.0	+1.5
	comp=Z,26nm,0.9s						
WET	Wettzell	79.80	319	eP	P	08 22 53.6	+0.4
WET				pmax	pmax		
	comp=Z,39nm,0.8s						
WET	Wettzell	79.80	319	eP	P	08 22 53.6	+0.4
	comp=Z,39nm,0.8s						
RJOB	Jochberg	79.81	317	eP	P	08 22 52.9	-0.4
	comp=Z,39nm,0.6s						
RJOB				epP	pP	08 23 14.0	-1.1
CLL	Collm	79.82	321⇑	iP	P	08 22 53.1	-0.1
CLL				eS	S	08 32 47.0	-2.7
CLL				pmax	pmax		
	comp=Z,37nm,1.0s						
CLL	Collm	79.82	321	eP	P	08 22 53.0	-0.1
	comp=Z,23nm,0.9s						
CLL	Collm	79.82	321⇑	iP	P	08 22 53.1	-0.1
	comp=Z,37nm,1.0s						
CLL				ePcP	PcP	08 23 00.0	-0.6
CLL				i		08 23 09.5	
CLL				epP	pP	08 23 14.0	-1.0
CLL				eS	S	08 32 47.0	-2.7
CLL				epS	pS	08 33 17.0	+0.2
CLL				ePS	PnS	08 33 48.0	+3.7
CLL				e(SSS)		08 42 00.0	
CLL				eSSSS		08 44 19.0	
ABTA	Abfaltersbach	79.97	316	iP	P	08 22 53.7	-0.5
	comp=Z,23nm,0.6s,SNR=15						
ABTA	Abfaltersbach	79.97	316	iP	P	08 22 53.7	-0.5
	comp=Z,23nm,0.6s						
HFS	Hagfors	80.02	330	P	P	08 22 53.8	-0.3
HFS	Hagfors	80.02	330	P	P	08 22 53.8	-0.3
	comp=Z,19nm,0.5s,baz=107,slow=5.1,SNR=207						
TANN	Tannenbergstha	80.12	320	eP	P	08 22 55.1	+0.2
	comp=Z,9.0nm,0.7s						
NKC	Novy Kostel	80.12	320⇑	iP	P	08 22 55.2	+0.3
NKC	Novy Kostel	80.12	320⇑	iP	P	08 22 55.2	+0.3
WERN	Wernitzgruen	80.17	320	eP	P	08 22 55.6	+0.4
STEI	Steigen	80.20	338	eP	P	08 22 54.7	-0.1
STEI				AMB	AMB	08 22 56.9	
	comp=Z,81nm,1.2s						
GUNZ	Gunzen	80.20	320	eP	P	08 22 55.7	+0.4
WERD	Werda	80.22	320	eP	P	08 22 55.6	+0.2
ROTZ	Rotzenmuhle	80.26	319	eP	P	08 22 56.5	+0.9
	comp=Z,33nm,0.8s						
MOR8	Moi Rana	80.29	336⇑	iP	P	08 22 54.6	-0.8
MOR8				AMB	AMB	08 22 56.5	
	comp=Z,34nm,1.6s						
PLN	Plauen	80.32	320	eP	P	08 22 56.1	+0.2
COP	Copenhagen	80.38	325	iP	P	08 22 56.3	+0.2
COP				pmax	pmax		
	comp=Z,16nm,0.6s						
COP	Copenhagen	80.38	325	iP	P	08 22 56.3	+0.2
	comp=Z,16nm,0.6s						
LLD	Lille Linde	80.49	325	iP	P	08 22 57.2	+0.6
LLD				pmax	pmax		
	comp=Z,20nm,0.6s						
LLD	Lille Linde	80.49	325	iP	P	08 22 57.2	+0.6
	comp=Z,20nm,0.6s						
WTTA	Wattenberg	80.58	317⇑	iP	P	08 22 57.1	-0.5
WTTA				pmax	pmax		
	comp=Z,77nm,0.5s						
WTTA	Wattenberg	80.58	317⇑	iP	P	08 22 57.1	-0.5
	comp=Z,77nm,0.5s,SNR=30						
WTTA	Wattenberg	80.58	317⇑	iP	P	08 22 57.1	-0.5
	comp=Z,77nm,0.5s						
NEUB	Neuenburg	80.59	321	eP	P	08 22 57.4	+0.1
	comp=Z,39nm,0.8s						
WATA	Walderalm	80.62	317⇑	iP	P	08 22 57.1	-0.7
WATA				pmax	pmax		
	comp=Z,41nm,0.5s						
WATA	Walderalm	80.62	317⇑	iP	P	08 22 57.1	-0.7
	comp=Z,40nm,0.5s,SNR=12						
WATA	Walderalm	80.62	317⇑	iP	P	08 22 57.1	-0.7
	comp=Z,40nm,0.5s						
MOX	Moxa	80.67	320	eP	P	08 22 58.0	+0.2
MOX				pmax	pmax		
	comp=Z,16nm,0.7s						
MOX	Moxa	80.67	320	eP	P	08 22 58.0	+0.2
	comp=Z,16nm,0.7s						
FLOS	Flostrand	80.74	336	eP	P	08 22 58.5	+0.7
FLOS				AMB	AMB	08 23 00.8	
	comp=Z,94nm,1.2s						
FUR	Furstenfeldbru	80.84	318	eP	P	08 22 58.6	-0.2
FUR				pmax	pmax		
	comp=Z,52nm,0.6s						
FUR	Furstenfeldbru	80.84	318	eP	P	08 22 58.6	-0.2
	comp=Z,52nm,0.6s						
STOK	Stokkvaagen	80.88	336	eP	P	08 22 57.4	-1.1
GRF	Grafenberg Arr	80.90	319	eP	P	08 22 59.7	+0.6
GRF				pmax	pmax		
	comp=Z,42nm,0.9s						
GRF	Grafenberg Arr	80.90	319	eP	P	08 22 59.7	+0.6
	comp=Z,42nm,0.9s						
GRF				epP	pP	08 23 17.2	-3.8
GRFO	Grafenberg	80.90	319	eP	P	08 22 58.9	-0.1
GRFO				pmax	pmax		
	comp=Z,69nm,1.1s						
GRFO	Grafenberg	80.90	319	eP	P	08 22 58.9	-0.1
	comp=Z,70nm,1.1s						
MOTA	Moosalm	80.94	317	iP	P	08 22 58.9	-0.6
MOTA				pmax	pmax		
	comp=Z,58nm,0.7s						
MOTA	Moosalm	80.94	317	iP	P	08 22 58.9	-0.6
	comp=Z,58nm,0.7s,SNR=14						
MOTA	Moosalm	80.94	317	iP	P	08 22 58.9	-0.6
	comp=Z,58nm,0.7s						
NSS	Namsos	81.17	334	eP	P	08 22 58.9	-1.2
NSS				AMB	AMB	08 23 00.5	
	comp=Z,31nm,1.1s						
RETA	Reutte	81.18	317	iP	P	08 23 00.4	-0.2
	comp=Z,96nm,0.5s,SNR=21						
RETA	Reutte	81.18	317	iP	P	08 23 00.4	-0.2
	comp=Z,96nm,0.5s						
FETA	Feichten	81.20	317	iP	P	08 23 00.7	-0.2
	comp=Z,42nm,0.7s,SNR=40						
FETA	Feichten	81.20	317	iP	P	08 23 00.7	-0.2
	comp=Z,42nm,0.7s						
NB2	NORSAR Subarra	81.30	331	P	P	08 23 00.1	-0.9
	baz=94,slow=6.2						
NB2	NORSAR Subarra	81.30	331	P	P	08 23 00.1	-0.9
	comp=Z,29nm,1.1s,baz=94,slow=6.2						
NOA	NORSAR Array B	81.30	331	P	P	08 23 00.1	-0.9
NOA				PKKPbc	PKKPbc	08 41 35.9	-2.2
NOA	NORSAR Array B	81.30	331	P	P	08 23 00.1	-0.9
	comp=Z,9.5nm,0.8s,baz=94,slow=5.7,SNR=24						
NOA				PKKPbc	PKKPbc	08 41 35.9	-2.2
	comp=Z,0.9nm,0.8s,baz=280,slow=2.1,SNR=3.6						
NOA				LR	LR	09 02 25.9	
	comp=Z,86nm,20.9s,baz=95,slow=38						
CLZ	Clausthal	81.48	321	eP	P	08 23 02.3	+0.2
CLZ				pmax	pmax		
	comp=Z,45nm,0.9s						
CLZ	Clausthal	81.48	321	eP	P	08 23 02.3	+0.2
	comp=Z,45nm,0.9s						
CLZ				epP	pP	08 23 19.8	-4.2
SPA0	Spitsbergen Ar	81.50	348⇑	iP	P	08 23 01.4	-0.3
SPA0				epP	pP	08 23 19.1	-4.5
BSEG	Bad Segeberg	81.54	324	eP	P	08 23 02.7	+0.4
BSEG				pmax	pmax		
	comp=Z,72nm,0.8s						
BSEG	Bad Segeberg	81.54	324	eP	P	08 23 02.7	+0.4
	comp=Z,72nm,0.8s						
NRDL	Niedersach Rie	81.65	322	eP	P	08 23 03.3	+0.5
	comp=Z,81nm,1.3s						
NRDL				epP	pP	08 23 20.3	-4.4
UBBA	Unterbreizbach	81.70	320	eP	P	08 23 03.2	+0.1
	comp=Z,5.0nm,0.6s						
DAVA	Damuels	81.78	317	iP	P	08 23 03.9	0.0
	comp=Z,57nm,0.9s,SNR=11						
DAVA	Damuels	81.78	317	iP	P	08 23 03.9	0.0
	comp=Z,57nm,0.9s						
DAVOX	Davos/Dischmat	81.78	316	P	P	08 23 04.5	+0.5
DAVOX	Davos/Dischmat	81.78	316	P	P	08 23 04.5	+0.5
	comp=Z,114nm,0.6s,baz=124,slow=4.9,SNR=126						
TBLU	Trondheim	81.85	333	eP	P	08 23 03.4	-0.4
KONO	Kongsberg	82.06	329	eP	P	08 23 04.7	-0.2
KONO				AMB	AMB	08 23 07.3	
	comp=Z,48nm,1.7s						
KONO	Kongsberg	82.06	329	eP	P	08 23 04.6	-0.2
KONO				pmax	pmax		
	comp=Z,69nm,1.4s						
KONO	Kongsberg	82.06	329	eP	P	08 23 04.5	-0.3
	comp=Z,69nm,1.4s						
TUE	Stuetta	82.15	316	eP	P	08 23 05.8	-0.1
	comp=Z,46nm,0.8s						
STU	Stuttgart	82.23	318	eP	P	08 23 06.0	0.0
	comp=Z,30nm,0.8s						
VSL	Villasalto	82.28	309	eP	P	08 23 06.0	-0.6
	comp=Z,46nm,1.0s						
KEST	Kesra	82.43	305	eP	P	08 23 08.3	+0.8
KEST	Kesra	82.43	305	P	P	08 23 08.4	+1.0
	comp=Z,12nm,0.7s,baz=8.4,slow=0.8,SNR=26						
TOD	Tromm	82.47	319	eP	P	08 23 07.2	-0.1
TOD	Tromm	82.47	319	eP	P	08 23 07.2	-0.1
PGF	Pioggiola	82.48	312	eP	P	08 23 07.5	-0.1
	comp=Z,38nm,0.7s						
PGF	Pioggiola	82.48	312	eP	P	08 23 07.5	-0.1
PGF				pmax	pmax		
	comp=Z,38nm,0.7s						
PGF	Pioggiola	82.48	312	eP	P	08 23 07.5	-0.1
	comp=Z,38nm,0.7s						
KBS	Kingsbay	82.48	349	eP	P	08 23 06.0	-0.8
KBS				AMB	AMB	08 23 07.3	
	comp=Z,52nm,1.2s						
KBS	Kingsbay	82.48	349c	iP	P	08 23 06.9	+0.1
KBS				pmax	pmax		
	comp=Z,28nm,1.0s						
KBS	Kingsbay	82.48	349	eP	P	08 23 05.9	-0.9
	comp=Z,27nm,1.1s						
SPAK	Spaichingen-Ko	82.51	318	eP	P	08 23 07.4	-0.2
BFO	Black Forest	82.81	318	eP	P	08 23 08.8	-0.3
BFO				pmax	pmax		
	comp=Z,25nm,0.7s						
BFO	Black Forest	82.81	318	eP	P	08 23 08.8	-0.3
	comp=Z,25nm,0.7s						
BFO	Black Forest	82.81	318	eP	P	08 23 08.7	-0.4
	comp=Z,36nm,0.9s						
BFO	Black Forest	82.81	318	P	P	08 23 08.4	-0.7
	comp=Z,274nm,0.6s,SNR=11						
FELD	Feldberg im Sc	83.04	317	eP	P	08 23 09.8	-0.7
MOL	Molde	83.08	332	eP	P	08 23 10.5	+0.4
MOL				AMB	AMB	08 23 10.8	
	comp=Z,29nm,0.5s						
IBBN	Ibbenburen	83.09	322	eP	P	08 23 10.7	+0.3
	comp=Z,39nm,0.6s						
IBBN				epP	pP	08 23 28.4	-4.0
LANF	Langenberg	83.14	319	eP	P	08 23 10.9	+0.1
LANF	Langenberg	83.14	319	eP	P	08 23 10.9	+0.1
LANF	Langenberg	83.14	319	eP	P	08 23 10.9	+0.1
LIBD	Limburg	83.30	318	eP	P	08 23 11.5	-0.1
LIBD	Limburg	83.30	318	eP	P	08 23 11.5	-0.1
BUG	Bochum--Univer	83.41	321	eP	P	08 23 12.1	0.0
	comp=Z,25nm,0.7s						
SAOF	Saorge	83.48	313	eP	P	08 23 12.6	-0.1
SAOF	Saorge	83.48	313	eP	P	08 23 12.6	-0.1
SAOF	Saorge	83.48	313	eP	P	08 23 12.6	-0.1
CDF	Champ du Feu	83.51	318⇑	iP	P	08 23 12.3	-0.5
	comp=Z,32nm,0.7s						
CDF	Champ du Feu	83.51	318⇑	iP	P	08 23 12.3	-0.5
CDF				pmax	pmax		
	comp=Z,32nm,0.7s						
CDF	Champ du Feu	83.51	318⇑	iP	P	08 23 12.3	-0.5
	comp=Z,32nm,0.7s						
ODD1	Odda	83.56	330	eP	P	08 23 13.1	+0.4
AUTN	L'Aution	83.58	314	eP	P	08 23 14.1	+0.7
AUTN	L'Aution	83.58	314	eP	P	08 23 14.1	+0.7
AUTN	L'Aution	83.58	314	eP	P	08 23 14.1	+0.7
SBF	Sospel	83.58	313⇑	iP	P	08 23 13.2	0.0
	comp=Z,179nm,0.7s						
SBF	Sospel	83.58	313⇑	iP	P	08 23 13.2	0.0
SBF				pmax	pmax		
	comp=Z,179nm,0.7s						
SBF	Sospel	83.58	313⇑	iP	P	08 23 13.2	0.0
	comp=Z,179nm,0.7s						
ECH	Echery	83.59	318	eP	P	08 23 12.6	-0.6
ECH	Echery	83.59	318	eP	P	08 23 12.6	-0.6
ECH	Echery	83.59	318	eP	P	08 23 12.6	-0.6
RUP	Ruppelstein	83.60	319	eP	P	08 23 13.1	-0.1
RUP	Ruppelstein	83.60	319	eP	P	08 23 13.1	-0.1
MOF	Molkenrain	83.62	317	eP	P	08 23 12.8	-0.6
MOF	Molkenrain	83.62	317	eP	P	08 23 12.8	-0.6
MOF	Molkenrain	83.62	317	eP	P	08 23 12.8	-0.6
BLS5	Blasjo	83.66	329	eP	P	08 23 13.8	+0.6
BLS5				AMB	AMB	08 23 14.6	
	comp=Z,28nm,0.6s						
TOUF	Mont Tournerai	83.70	314	eP	P	08 23 13.5	-0.5
TOUF	Mont Tournerai	83.70	314	eP	P	08 23 13.5	-0.5
TOUF	Mont Tournerai	83.70	314	eP	P	08 23 13.5	-0.5
HINF	Hinteralfeld	83.81	317	eP	P	08 23 13.5	-0.8
	comp=Z,12nm,0.5s						
HINF	Hinteralfeld	83.81	317	eP	P	08 23 13.5	-0.8
HINF				pmax	pmax		
	comp=Z,12nm,0.5s						
HINF	Hinteralfeld	83.81	317	eP	P	08 23 13.5	-0.8
	comp=Z,12nm,0.5s						
SYO	Syowa Base	83.94	197⇓	eP	P	08 23 14.8	+0.5
SYO	Syowa Base	83.94	197⇓	ePcP	PcP	08 23 19.0	+0.9
CALN	Calern	83.97	313	eP	P	08 23 15.4	0.0
CALN	Calern	83.97	313	eP	P	08 23 15.4	0.0
CALN	Calern	83.97	313	eP	P	08 23 15.4	0.0
LPG	La Plagne	83.99	315⇑	iP	P	08 23 15.7	+0.1
	comp=Z,131nm,0.8s						
LPG	La Plagne	83.99	315⇑	iP	P	08 23 15.7	+0.1
LPG				pmax	pmax		
	comp=Z,131nm,0.8s						
LPG	La Plagne	83.99	315⇑	iP	P	08 23 15.7	+0.1
	comp=Z,131nm,0.8s						
LPL	La Plagne	84.00	315⇑	iP	P	08 23 15.7	+0.1
	comp=Z,158nm,0.7s						
LPL				epP	pP	08 23 37.4	-0.2
LPL	La Plagne	84.00	315⇑	iP	P	08 23 15.7	+0.1
LPL				e*PP	pP	08 23 37.4	-0.2
LPL				pmax	pmax		
	comp=Z,158nm,0.7s						
LPL	La Plagne	84.00	315⇑	iP	P	08 23 15.7	+0.1
	comp=Z,158nm,0.7s						
LPL				epP	pP	08 23 37.4	-0.2
MBDF	Montbardon	84.01	314⇑	iP	P	08 23 14.8	-0.7
	comp=Z,42nm,0.6s						
MBDF	Montbardon	84.01	314⇑	iP	P	08 23 14.8	-0.7
MBDF				pmax	pmax		
	comp=Z,42nm,0.6s						
MBDF	Montbardon	84.01	314⇑	iP	P	08 23 14.8	-0.7
	comp=Z,42nm,0.6s						
BNI	Bardonecchia	84.06	315	eP	P	08 23 15.1	-0.6
BNI				pmax	pmax		
	comp=Z,33nm,0.8s						
BNI	Bardonecchia	84.06	315	eP	P	08 23 15.1	-0.6
	comp=Z,33nm,0.8s						
HAU	Haudompre	84.14	318⇑	iP	P	08 23 15.6	-0.4
	comp=Z,131nm,0.8s						
HAU				eR			
	comp=Z,64nm,22.9s						
HAU	Haudompre	84.14	318⇑	iP	P	08 23 15.6	-0.4
HAU				pmax	pmax		
	comp=Z,131nm,0.8s						
HAU	Haudompre	84.14	318⇑	iP	P	08 23 15.6	-0.4
	comp=Z,131nm,0.8s						
FRF	La Foret Royal	84.16	313⇑	iP	P	08 23 16.3	+0.2
	comp=Z,113nm,0.8s						
FRF	La Foret Royal	84.16	313⇑	iP	P	08 23 16.3	+0.2
FRF				pmax	pmax		
	comp=Z,113nm,0.8s						
FRF	La Foret Royal	84.16	313⇑	iP	P	08 23 16.3	+0.2
	comp=Z,113nm,0.8s						
WLF	Walferdange	84.19	319	P	P	08 23 17.0	+0.8
	comp=Z,29nm,1.5s						
WLF	Walferdange	84.19	319	eP	P	08 23 17.0	+0.8
	comp=Z,20nm,0.9s						
MEM	Membach	84.24	320	P	P	08 23 16.3	0.0
	comp=Z,19nm,1.1s						
LMR	La Mourre	84.27	313⇑	iP	P	08 23 16.8	+0.1
	comp=Z,60nm,0.7s						
LMR	La Mourre	84.27	313⇑	iP	P	08 23 16.8	+0.1
LMR				pmax	pmax		
	comp=Z,60nm,0.7s						
LMR	La Mourre	84.27	313⇑	iP	P	08 23 16.8	+0.1
	comp=Z,60nm,0.7s						
THEF	They Montfort	84.38	318	eP	P	08 23 16.5	-0.6
THEF	They Montfort	84.38	318	eP	P	08 23 16.5	-0.6
THEF	They Montfort	84.38	318	eP	P	08 23 16.5	-0.6
CABF	La Chapelle	84.39	316⇑	iP	P	08 23 17.5	+0.1
	comp=Z,47nm,0.5s						
CABF				epP	pP	08 23 39.0	-0.4
CABF	La Chapelle	84.39	316⇑	iP	P	08 23 17.5	+0.1
CABF				e*PP	pP	08 23 39.0	-0.4
CABF				pmax	pmax		
	comp=Z,47nm,0.5s						
CABF	La Chapelle	84.39	316⇑	iP	P	08 23 17.5	+0.1
	comp=Z,47nm,0.5s						
CABF				epP	pP	08 23 39.0	-0.4
PAGF	Fort de Pagny	84.53	318	eP	P	08 23 17.6	-0.3
	comp=Z,6.4nm,0.7s						
PAGF	Fort de Pagny	84.53	318	eP	P	08 23 17.6	-0.3
	comp=Z,6.4nm,0.7s						
ORIF	Oris-en-Rattie	84.63	314	eP	P	08 23 18.4	-0.2
	comp=Z,44nm,0.6s						
ORIF				eR			
	comp=Z,80nm,20.0s						
ORIF	Oris-en-Rattie	84.63	314	eP	P	08 23 18.4	-0.2
ORIF				pmax	pmax		
	comp=Z,44nm,0.6s						
ORIF	Oris-en-Rattie	84.63	314	eP	P	08 23 18.4	-0.2
	comp=Z,44nm,0.6s						
RPZ	Rata Peaks	84.68	135	P	P	08 23 18.9	+0.3
RPZ	Rata Peaks	84.68	135	P	P	08 23 18.9	+0.3
	comp=Z,11nm,0.5s,baz=166,slow=4.7,SNR=12						
BCLA	Clavier	84.70	320	P	P	08 23 19.0	+0.3
SMRF	Simiane la Rot	84.91	314	eP	P	08 23 20.5	+0.6
	comp=Z,47nm,0.7s						
SMRF	Simiane la Rot	84.91	314	eP	P	08 23 20.5	+0.6
	comp=Z,47nm,0.7s						
MEZF	Maizieres J'vi	84.98	318	eP	P	08 23 20.0	-0.1
MEZF	Maizieres J'vi	84.98	318	eP	P	08 23 20.0	-0.1
SFTF	Sexfontaines	85.01	318	eP	P	08 23 20.1	-0.2
	comp=Z,62nm,0.5s						
SFTF	Sexfontaines	85.01	318	eP	P	08 23 20.1	-0.2
	comp=Z,62nm,0.5s						
GIVF	Givet	85.03	320	eP	P	08 23 20.3	0.0
	comp=Z,35nm,1.0s						
GIVF	Givet	85.03	320	eP	P	08 23 20.3	0.0
GIVF				pmax	pmax		
	comp=Z,35nm,1.0s						
GIVF	Givet	85.03	320	eP	P	08 23 20.3	0.0
	comp=Z,35nm,1.0s						
DOU	Dourbes	85.17	320	P	P	08 23 20.8	-0.3
	comp=Z,13nm,1.4s						
SNF	Seneffe	85.35	320	P	P	08 23 22.3	+0.4
	comp=Z,12nm,1.1s						
BAIF	Baives	85.43	320	eP	P	08 23 22.5	+0.2
	comp=Z,39nm,0.7s						
BAIF	Baives	85.43	320	eP	P	08 23 22.5	+0.2
BAIF				pmax	pmax		
	comp=Z,39nm,0.7s						
BAIF	Baives	85.43	320	eP	P	08 23 22.5	+0.2
	comp=Z,39nm,0.7s						
VIVF	Saint-Julien-l	85.50	314⇑	iP	P	08 23 22.8	0.0
	comp=Z,75nm,0.9s						
VIVF	Saint-Julien-l	85.50	314⇑	iP	P	08 23 22.8	0.0
VIVF				pmax	pmax		
	comp=Z,75nm,0.9s						
VIVF	Saint-Julien-l	85.50	314⇑	iP	P	08 23 22.8	0.0
	comp=Z,75nm,0.9s						
SSB	Saint Sauveur	85.56	315	eP	P	08 23 23.0	-0.1
SSB				pmax	pmax		
	comp=Z,37nm,1.0s						
SSB	Saint Sauveur	85.56	315	eP	P	08 23 23.0	-0.1
	comp=Z,37nm,1.0s						
SSB	Saint Sauveur	85.56	315	eP	P	08 23 23.2	+0.1
MSVF	Nonsavu	85.81	108	eP	P	08 23 26.1	+1.1
MSVF				pmax	pmax		
	comp=Z,20nm,1.0s						
MSVF	Nonsavu	85.81	108	eP	P	08 23 26.1	+1.1
	comp=Z,20nm,1.0s						
LOR	Lormes	85.87	317⇑	iP	P	08 23 24.4	-0.2
	comp=Z,56nm,0.6s,baz=94						
LOR				epP	pP	08 23 46.0	-0.7
LOR				eR			
	comp=Z,67nm,20.2s						
LOR	Lormes	85.87	317⇑	iP	P	08 23 24.4	-0.2
	comp=Z,56nm,0.6s						
LOR				epP	pP	08 23 46.0	-0.7
SMF	Signal de Mont	85.94	316⇑	iP	P	08 23 24.6	-0.3
	comp=Z,80nm,0.8s						
SMF	Signal de Mont	85.94	316⇑	iP	P	08 23 24.6	-0.3
SMF				pmax	pmax		

comp=Z,80nm,0.8s
SMF Signal de Mont 85.94 316⇑*i*P P 08 23 24.6 -0.3
comp=Z,80nm,0.8s
SSF Saint Saulge 86.13 317⇑*i*P P 08 23 25.7 -0.2
comp=Z,26nm,0.6s
SSF Saint Saulge 86.13 317⇑*i*P P 08 23 25.7 -0.2
SSF pmax pmax
comp=Z,26nm,0.6s
SSF Saint Saulge 86.13 317⇑*i*P P 08 23 25.7 -0.2
comp=Z,26nm,0.6s
LASF Ste Croix 86.14 314⇑*i*P P 08 23 26.3 +0.3
comp=Z,26nm,0.8s
LASF Ste Croix 86.14 314⇑*i*P P 08 23 26.3 +0.3
comp=Z,26nm,0.8s
GAMB Gambell 86.16 26 *e*P P 08 23 25.2 -0.4
comp=Z,36nm,0.9s
AVF Avril sur Loir 86.26 316 *e*P P 08 23 26.2 -0.3
comp=Z,70nm,1.0s
AVF Avril sur Loir 86.26 316 *e*P P 08 23 26.2 -0.3
AVF pmax pmax
comp=Z,70nm,1.0s
AVF Avril sur Loir 86.26 316 *e*P P 08 23 26.2 -0.3
comp=Z,70nm,1.0s
LBL Lubilhac 86.47 315 *e*P P 08 23 27.8 +0.1
LBL Lubilhac 86.47 315 *e*P P 08 23 27.8 +0.1
LBL Lubilhac 86.47 315 *e*P P 08 23 27.8 +0.1
AGO Saint Agoulin 86.48 316 *e*P P 08 23 27.8 +0.2
AGO Saint Agoulin 86.48 316 *e*P P 08 23 27.8 +0.2
PYM Petit Puy Mans 86.59 315 *e*P P 08 23 28.3 0.0
PYM Petit Puy Mans 86.59 315 *e*P P 08 23 28.3 0.0
PYM Petit Puy Mans 86.59 315 *e*P P 08 23 28.3 0.0
BGF Bois d'Agland 86.63 316 *e*P P 08 23 28.5 +0.2
comp=Z,99nm,1.1s
BGF Bois d'Agland 86.63 316 *e*P P 08 23 28.5 +0.2
BGF pmax pmax
comp=Z,99nm,1.1s
BGF Bois d'Agland 86.63 316 *e*P P 08 23 28.5 +0.2
comp=Z,99nm,1.1s
TAM Tamanrasset 86.63 292 *e*P P 08 23 30.9 +1.8
TAM pmax pmax
comp=Z,31nm,1.0s
TAM Tamanrasset 86.63 292 *e*P P 08 23 30.9 +1.8
comp=Z,31nm,1.0s
HYF Humbligny 86.70 317 *e*P P 08 23 29.1 +0.4
HYF Humbligny 86.70 317 *e*P P 08 23 29.1 +0.4
TCF Toulx Ste Croi 87.09 316 *e*P P 08 23 30.7 +0.1
comp=Z,17nm,0.8s
TCF Toulx Ste Croi 87.09 316 *e*P P 08 23 30.7 +0.1
TCF pmax pmax
comp=Z,17nm,0.8s
TCF Toulx Ste Croi 87.09 316 *e*P P 08 23 30.7 +0.1
comp=Z,17nm,0.8s
CAF Calviac 87.33 315⇑*i*P P 08 23 32.2 +0.3
comp=Z,21nm,0.7s
CAF Calviac 87.33 315⇑*i*P P 08 23 32.2 +0.3
CAF pmax pmax
comp=Z,21nm,0.7s
CAF Calviac 87.33 315⇑*i*P P 08 23 32.2 +0.3
comp=Z,21nm,0.7s
MTLF Montolieu 87.39 313⇑*i*P P 08 23 32.4 +0.3
comp=Z,39nm,0.8s
MTLF Montolieu 87.39 313⇑*i*P P 08 23 32.4 +0.3
MTLF pmax pmax
comp=Z,39nm,0.8s
MTLF Montolieu 87.39 313⇑*i*P P 08 23 32.4 +0.3
comp=Z,39nm,0.8s
TNA Tin City 87.53 24 *e*P P 08 23 32.8 +0.6
comp=Z,24nm,0.7s
TNA *e*PP PP 08 26 58.6 +0.8
RJF Les Rejaudoux 87.68 315⇑*i*P P 08 23 33.9 +0.4
comp=Z,43nm,0.8s
RJF *e*R
comp=Z,61nm,22.0s
RJF Les Rejaudoux 87.68 315⇑*i*P P 08 23 33.9 +0.4
RJF pmax pmax
comp=Z,43nm,0.8s
RJF Les Rejaudoux 87.68 315⇑*i*P P 08 23 33.9 +0.4
comp=Z,43nm,0.8s
URZ Urewera 88.08 129 P P 08 23 34.8 -0.6
URZ Urewera 88.08 129 P P 08 23 34.8 -0.6
comp=Z,28nm,0.8s,baz=255,slow=2.8,SNR=19
LFF La Frestale 88.27 315 *e*P P 08 23 36.8 +0.6
comp=Z,15nm,0.5s
LFF La Frestale 88.27 315 *e*P P 08 23 36.8 +0.6
LFF pmax pmax
comp=Z,15nm,0.5s
LFF La Frestale 88.27 315 *e*P P 08 23 36.8 +0.6
comp=Z,15nm,0.5s
LDF La Druitiere 88.39 319 *e*P P 08 23 36.8 +0.1
comp=Z,58nm,0.8s
LDF La Druitiere 88.39 319 *e*P P 08 23 36.8 +0.1
LDF pmax pmax
comp=Z,59nm,0.8s
LDF La Druitiere 88.39 319 *e*P P 08 23 36.8 +0.1
comp=Z,58nm,0.8s
FLN La Foliniere 88.61 319 *e*P P 08 23 37.8 +0.1
comp=Z,52nm,0.7s
FLN *e*R
comp=Z,49nm,20.8s
FLN La Foliniere 88.61 319 *e*P P 08 23 37.8 +0.1
FLN pmax pmax
comp=Z,52nm,0.7s
FLN La Foliniere 88.61 319 *e*P P 08 23 37.8 +0.1
comp=Z,52nm,0.7s
MFF Saint Martin d 88.67 317⇑*i*P P 08 23 38.2 +0.1
comp=Z,31nm,0.8s
MFF Saint Martin d 88.67 317⇑*i*P P 08 23 38.2 +0.1
MFF pmax pmax
comp=Z,31nm,0.8s
MFF Saint Martin d 88.67 317⇑*i*P P 08 23 38.2 +0.1
comp=Z,31nm,0.8s
EPF Esparros 88.79 313 *e*P P 08 23 38.4 -0.4
EPF Esparros 88.79 313 *e*P P 08 23 38.4 -0.4
EPF Esparros 88.79 313 *e*P P 08 23 38.4 -0.4
GRR Gorron 88.91 318 *e*P P 08 23 39.3 +0.2
comp=Z,16nm,0.5s
GRR Gorron 88.91 318 *e*P P 08 23 39.3 +0.2
GRR pmax pmax
comp=Z,16nm,0.5s
GRR Gorron 88.91 318 *e*P P 08 23 39.3 +0.2
comp=Z,16nm,0.5s
DAG Danmarks Havn 89.14 348⇑*i*P P 08 23 38.6 -1.0
DAG pmax pmax
comp=Z,10.0nm,0.8s
DAG Danmarks Havn 89.14 348⇑*i*P P 08 23 38.6 -1.0
comp=Z,13nm,0.8s
DAG *i* 08 23 57.2
ESK Eskdalemuir 89.27 325 *i*P P 08 23 41.7 +1.0
ETSF Etsaut 89.46 313 *e*P P 08 23 42.6 +0.6
comp=Z,17nm,0.5s
ETSF Etsaut 89.46 313 *e*P P 08 23 42.6 +0.6
ETSF pmax pmax
comp=Z,17nm,0.5s
ETSF Etsaut 89.46 313 *e*P P 08 23 42.6 +0.6
comp=Z,17nm,0.5s
SJPF Ste Jean 89.92 313 *e*P P 08 23 44.9 +0.9
comp=Z,33nm,0.9s
SJPF Ste Jean 89.92 313 *e*P P 08 23 44.9 +0.9
SJPF pmax pmax
comp=Z,33nm,0.9s
SJPF Ste Jean 89.92 313 *e*P P 08 23 44.9 +0.9
comp=Z,33nm,0.9s
SGMF Saint Gilles 90.05 318⇑*i*P P 08 23 44.6 +0.1
comp=Z,27nm,0.7s
SGMF Saint Gilles 90.05 318⇑*i*P P 08 23 44.6 +0.1
SGMF pmax pmax
comp=Z,27nm,0.7s
SGMF Saint Gilles 90.05 318⇑*i*P P 08 23 44.6 +0.1
comp=Z,27nm,0.7s
UNV Unalaska Valle 90.33 36 *e*P P 08 23 45.4 -0.2
comp=Z,263nm,1.6s
QUIF Quistinic 90.51 318⇑*i*P P 08 23 46.5 -0.1
comp=Z,20nm,0.6s
QUIF Quistinic 90.51 318⇑*i*P P 08 23 46.5 -0.1
QUIF pmax pmax
comp=Z,21nm,0.6s
QUIF Quistinic 90.51 318⇑*i*P P 08 23 46.5 -0.1
comp=Z,20nm,0.6s
ROSF Rostrenen 90.51 319⇑*i*P P 08 23 46.8 +0.2
comp=Z,38nm,0.8s
ROSF Rostrenen 90.51 319⇑*i*P P 08 23 46.8 +0.2
ROSF pmax pmax
comp=Z,38nm,0.8s
ROSF Rostrenen 90.51 319⇑*i*P P 08 23 46.8 +0.2
comp=Z,38nm,0.8s
ALE Alert 90.75 357 P P 08 23 47.0 -0.1
comp=Z,137nm,0.9s,SNR=12
VNDA Vanda 91.27 168 *e*P P 08 23 50.2 +0.6
comp=Z,12nm,1.0s
VNDA PKKP **PKKPdf 08 41 09.7 -1.5**
VNDA Vanda 91.27 168 P P 08 23 50.4 +0.9
comp=Z,9.4nm,0.9s,baz=293,slow=4.9,SNR=39
VNDA PKKP **PKKPdf 08 41 09.7 -1.5**
comp=Z,0.5nm,0.5s,baz=53,slow=4.9,SNR=6.4
TOA0 Torodi Ar. Sit 91.27 283 *e*P P 08 23 51.4 +0.5
TORD Torodi Ar. Bea 91.27 283 P P 08 23 51.9 +1.0
TORD PP **PP 08 27 30.6 +1.4**
TORD PKKP **PKKPbc 08 41 13.2 +0.7**
TORD Torodi Ar. Bea 91.27 283 P P 08 23 51.9 +1.0
comp=Z,13nm,0.6s,baz=87,slow=4.6,SNR=110
TORD PP **PP 08 27 30.6 +1.4**
comp=Z,3.1nm,1.2s,baz=80,slow=8.5,SNR=4.5
TORD PKKP **PKKPbc 08 41 13.2 +0.7**
comp=Z,0.7nm,0.3s,baz=312,slow=2.3,SNR=20
TORD LR LR 09 02 34.8
comp=Z,71nm,20.4s,baz=90,slow=34
SBA Scott Base 92.37 168 *e*P P 08 23 56.5 +1.9
SBA pmax pmax
comp=Z,25nm,0.8s
SBA Scott Base 92.37 168 *e*P P 08 23 56.5 +1.9
comp=Z,25nm,0.8s
ESDC Sonseca Array 92.50 310 P P 08 23 56.5 +0.3
ESDC PKKP **PKKPbc 08 41 10.8 +0.6**
ESDC Sonseca Array 92.50 310 P P 08 23 56.5 +0.3
comp=Z,12nm,0.8s,baz=59,slow=4.3,SNR=47
ESDC PKKP **PKKPbc 08 41 10.8 +0.6**
comp=Z,0.7nm,0.5s,baz=264,slow=1.8,SNR=7.1
ESLA Sonseca Array 92.50 310 *e*P P 08 23 56.5 +0.4
comp=Z,3.8nm,1.0s
SCO Scoresbysund 92.69 342⇓*i*P P 08 23 56.7 +0.4
SCO pmax pmax
comp=Z,10.0nm,1.0s
SCO Scoresbysund 92.69 342⇓*i*P P 08 23 56.7 +0.4
comp=Z,9.6nm,1.0s
PAB San Pablo 92.82 310 *e*P P 08 23 58.0 +0.3
PAB pmax pmax
comp=Z,17nm,1.0s
PAB San Pablo 92.82 310 *e*P P 08 23 58.0 +0.3
comp=Z,17nm,1.0s
MAIT Maitri 93.44 199 *e*P P 08 23 51.8 -7.9
COLD Coldfoot 93.80 21 *e*P P 08 24 01.6 +0.1
comp=Z,8.4nm,1.1s
TRF Thorofare Moun 95.41 24 *e*P P 08 24 08.3 -0.8
comp=Z,10nm,1.0s
SUMG Summit 95.80 347 *i*P P 08 24 11.2 +0.2
SUMG pmax pmax
comp=Z,9.0nm,0.9s
SUMG Summit 95.80 347 *e*P P 08 24 10.7 -0.3
comp=Z,9.4nm,0.9s
SUMG Summit 95.80 347 *i*P P 08 24 11.2 +0.2
comp=Z,8.6nm,0.9s
ILAR Eielson Array 96.14 22 P P 08 24 10.2 -2.0
ILAR PP PP 08 27 55.5 -10
ILAR PKKP **PKKPbc 08 40 58.0 -3.5**
ILAR Eielson Array 96.14 22 P P 08 24 10.2 -2.0
comp=Z,3.1nm,0.5s,baz=299,slow=4.1,SNR=73
ILAR PP PP 08 27 55.5 -10
comp=Z,0.6nm,0.8s,baz=301,slow=7.5,SNR=5.3
ILAR PKKP **PKKPbc 08 40 58.0 -3.5**
comp=Z,1.2nm,0.7s,baz=146,slow=1.9,SNR=16
OHAK Old Harbor 96.57 30 *e*P P 08 24 13.6 -0.7
comp=Z,63nm,1.4s
KDAK Kodiak Island 96.70 30 P P 08 24 14.5 -0.3
KDAK Kodiak Island 96.70 30 P P 08 24 14.0 -0.9
comp=Z,146nm,1.5s,SNR=8.0
KDAK Kodiak Island 96.70 30 P P 08 24 14.5 -0.3
comp=Z,6.1nm,0.4s,baz=310,slow=2.5,SNR=23
PMR Palmer 96.71 26 *e*P P 08 24 14.0 -0.8
PMR pmax pmax
comp=Z,16nm,0.9s
PMR Palmer 96.71 26 *e*P P 08 24 14.0 -0.8
comp=Z,16nm,0.9s
SML Sawmill 96.95 25 *e*P P 08 24 15.7 -0.3
SML pmax pmax
comp=Z,6.0nm,0.9s
SML Sawmill 96.95 25 *e*P P 08 24 15.7 -0.3
comp=Z,5.8nm,0.9s
PAX Paxson 97.57 24 *e*P P 08 24 18.6 -0.2
PAX pmax pmax
comp=Z,2.0nm,0.7s
PAX Paxson 97.57 24 *e*P P 08 24 18.6 -0.2
comp=Z,2.3nm,0.7s
DOT Dot Lake 97.77 23 *e*P P 08 24 18.9 -0.7
comp=Z,2.9nm,0.6s
MENT Mentasta 98.27 23 *e*P Pdif 08 24 22.2 +0.3
DBIC Dimbokro 98.47 278 P Pdif 08 24 25.3 +1.5
DBIC Dimbokro 98.47 278 P Pdif 08 24 25.3 +1.5
comp=Z,7.9nm,0.8s,baz=72,slow=5.9,SNR=9.4
DBIC LR LR 09 11 16.8
comp=Z,43nm,18.2s,baz=78,slow=37
INK Inuvik 98.47 16 P P 08 24 22.1 -0.5
INK PP PP 08 28 17.0 -6.3
INK PKKPbc PKKPbc 08 40 49.0 -6.1
INK Inuvik 98.47 16 P P 08 24 22.1 -0.5
comp=Z,7.9nm,0.6s,baz=342,slow=5.7,SNR=65
INK PP PP 08 28 17.0 -6.3
comp=Z,0.6nm,0.8s,baz=328,slow=10,SNR=2.3
INK PKKPbc PKKPbc 08 40 49.0 -6.1
comp=Z,0.5nm,0.6s,baz=120,slow=3.5,SNR=6.6
LIC Lamto 98.69 277 *e*P P 08 24 24.6 -0.2
comp=Z,6.9nm,0.5s
LIC *e*R
comp=Z,101nm,19.8s
LIC Lamto 98.69 277 *e*P P 08 24 24.6 -0.2
comp=Z,6.9nm,0.5s
BMRM Bremner River 98.93 25 *e*P Pdif 08 24 25.1 +0.1
comp=Z,17nm,0.8s
RES Resolute Bay 99.02 3 P Pdif 08 24 24.8 -0.2
RES Resolute Bay 99.02 3 P Pdif 08 24 24.8 -0.2
comp=Z,12nm,0.9s,baz=0.0,slow=20
YKA Yellowknife Ar 107.94 14 Pdif **Pdif 08 25 04.8 -0.1**
YKA PKiKP **PKiKP 08 29 10.3 -1.2**
YKA PP **PP 08 29 29.2 -4.7**
YKA PKKPbc **PKKPbc 08 40 23.4 -3.6**
YKA PKKP **PKKPdf 08 40 38.4 -1.4**
YKA Yellowknife Ar 107.94 14 Pdif **Pdif 08 25 04.8 -0.1**
comp=Z,0.4nm,0.6s,baz=333,slow=6.0,SNR=12
YKA PKiKP **PKiKP 08 29 10.3 -1.2**
comp=Z,0.4nm,0.7s,baz=322,slow=5.0,SNR=7.5
YKA PP **PP 08 29 29.2 -4.7**
comp=Z,1.8nm,0.9s,baz=331,slow=8.0,SNR=13
YKA PKKPbc **PKKPbc 08 40 23.4 -3.6**
comp=Z,1.6nm,0.8s,baz=150,slow=2.9,SNR=28
YKA PKKP **PKKPdf 08 40 38.4 -1.4**
comp=Z,0.6nm,0.5s,baz=160,slow=2.1,SNR=19
SCHQ Schefferville 117.18 348 PKP **PKPdf 08 29 28.8 -0.6**
SCHQ PP **PP 08 30 37.3 -2.5**
SCHQ PKKPbc **PKKPbc 08 39 53.9 -2.2**
SCHQ Schefferville 117.18 348 PKP **PKPdf 08 29 28.8 -0.6**
comp=Z,5.2nm,0.5s,baz=29,slow=2.7,SNR=28
SCHQ PP **PP 08 30 37.3 -2.5**
comp=Z,3.3nm,0.8s,baz=299,slow=6.1,SNR=3.5
SCHQ PKKPbc **PKKPbc 08 39 53.9 -2.2**
comp=Z,1.8nm,0.5s,baz=200,slow=3.6,SNR=6.9
FFC Flin Flon 117.73 11*c i* PKIKP **PKPdf 08 29 30.5 0.0**
EBG Ellensburg 118.67 27 P PKPdf 08 29 33.3 +0.7
NEW Newport 119.06 24⇓PKiKP **PKPdf 08 29 33.3 0.0**
baz=119
A12A Yaak River Ran 119.08 22⇑PKiKP **PKiKP 08 29 33.7 +0.3**
VFP Flag Point 119.45 28 P PKPdf 08 29 35.0 +0.7
B12A Libby 119.49 23⇓PKiKP **PKiKP 08 29 34.5 +0.3**
baz=119
A13A Flathead Natio 119.54 21⇓PKiKP **PKiKP 08 29 34.6 +0.2**
baz=119
C11A Tepee Creek (N 119.75 23⇓PKiKP **PKPdf 08 29 34.7 0.0**
baz=120
A14A Double T Ranch 119.87 21⇓PKiKP **PKPdf 08 29 34.9 -0.1**
baz=120
B13A Whitefish 119.99 22⇓PKiKP **PKiKP 08 29 35.3 +0.1**
baz=120
A15A Johnson Ranch, 120.10 20⇑PKiKP **PKPdf 08 29 35.1 -0.2**
baz=120
C12B Naegeli Ranch, 120.16 23⇓PKiKP **PKPdf 08 29 35.4 0.0**
baz=120
BSMT Bassoo Peak 120.30 22 P PKPdf 08 29 36.2 +0.2
B14A Marquette Ranc 120.44 21⇓PKiKP **PKPdf 08 29 35.8 -0.3**
baz=120
VIPM Ingram Point 120.45 28 PKIKP **PKPdf 08 29 37.0 +0.7**
VIPM Ingram Point 120.45 28 P PKPdf 08 29 37.0 +0.7
A16A West Butte Ran 120.51 20⇑PKiKP **PKPdf 08 29 36.2 0.0**
baz=120
C13A Hot Springs 120.53 22⇑PKiKP **PKPdf 08 29 36.1 -0.1**
baz=120
B15A Bradely Ranch, 120.73 21⇑PKiKP **PKPdf 08 29 36.2 -0.4**
baz=120
D12A Red Ives Fores 120.74 23⇓PKiKP **PKPdf 08 29 36.2 -0.4**
baz=120
C14A Swan Lake 120.76 22⇓PKiKP **PKPdf 08 29 36.5 -0.2**
baz=120
A17A Triple J Farms 120.81 19⇓PKiKP **PKiKP 08 29 36.9 +0.1**
baz=121
SWMT Swartz Lake 120.88 22 *e*PKPdf PKPdf 08 29 36.4 -0.5
B16A M & M Farms, S 120.94 20⇑PKiKP **PKPdf 08 29 36.6 -0.4**
baz=121
D13A Huson 121.06 23⇑PKiKP **PKPdf 08 29 37.0 -0.3**
baz=121
A18A Metzger Ranch, 121.11 18⇑PKiKP **PKPdf 08 29 37.0 -0.2**
baz=121
C15A Salmond Ranch, 121.17 21⇓PKiKP **PKPdf 08 29 37.4 -0.2**
baz=121
SLMT Seeley Lake 121.30 22 *e*PKPdf PKPdf 08 29 37.3 -0.5
B17A L&G Farms, Che 121.35 19⇓PKiKP **PKPdf 08 29 37.7 0.0**
baz=121
D14A Greenough 121.43 22⇑PKiKP **PKPdf 08 29 37.7 -0.3**
baz=121
A19A Klindworth Far 121.44 18⇑PKiKP **PKPdf 08 29 37.7 -0.2**
baz=121
C16A Fuhringer Ranc 121.45 20⇑PKiKP **PKPdf 08 29 37.8 -0.2**
baz=121
MSO Missoula 121.47 23 *e*PKPdf PKPdf 08 29 37.5 -0.5
MSO Missoula 121.47 23⇓PKiKP **PKPdf 08 29 37.9 -0.2**
baz=121
B18A Beardsley Farm 121.59 19⇑PKiKP **PKPdf 08 29 38.2 0.0**
baz=121
CHMT Chamberlain Mo 121.66 22 *e*PKPdf PKPdf 08 29 38.1 -0.4
E13A Victor 121.70 23⇑PKiKP **PKPdf 08 29 38.4 -0.2**
baz=122
A20A Cobblestone Ra 121.73 17⇓PKiKP **PKPdf 08 29 38.4 -0.1**
baz=122
LHEM Herd Peak 121.77 32 P PKPdf 08 29 39.1 +0.2
B19A Brinkman Farms 121.80 18⇑PKiKP **PKPdf 08 29 38.5 -0.1**
baz=122
D15A Lincoln 121.82 21⇑PKiKP **PKPdf 08 29 38.7 -0.2**
baz=122
A21A Bergtoll Ranch 121.91 16⇑PKiKP **PKPdf 08 29 38.9 +0.1**
baz=122
EGMT Eagleton 121.92 19 *e*PKPdf PKPdf 08 29 38.8 -0.1
EGMT Eagleton 121.92 19⇑PKiKP **PKPdf 08 29 38.8 -0.1**
baz=122
C17A Wharram Farm, 121.93 20⇑PKiKP **PKPdf 08 29 38.9 0.0**
baz=122
E14A Clinton 121.99 22⇑PKiKP **PKPdf 08 29 39.1 -0.1**
baz=122
B20A Solberg Farm, 122.09 17⇑PKiKP **PKiKP 08 29 39.3 0.0**
baz=122
D16A Dana Ranch, Ca 122.18 21⇓PKiKP **PKiKP 08 29 39.7 +0.1**
baz=122
F13A Darby 122.18 23⇑PKiKP **PKPdf 08 29 39.4 -0.2**
baz=122
A22A Carney Farms, 122.19 16⇑PKiKP **PKiKP 08 29 39.6 +0.1**
baz=122
E15A Deer Lodge 122.30 22⇓PKiKP **PKPdf 08 29 39.5 -0.3**
baz=122
G12A Big Creek, Yel 122.32 25⇑PKiKP **PKPdf 08 29 39.1 -0.7**
baz=122
D17A Six Diamond Ra 122.37 20⇑PKiKP **PKPdf 08 29 39.8 -0.1**
baz=122
B21A Ellsworth Farm 122.40 17⇓PKiKP **PKiKP 08 29 40.0 +0.1**
baz=122
C19A Slack Wire Ran 122.40 19⇑PKiKP **PKiKP 08 29 40.0 0.0**
baz=122
F14A Wisdom 122.54 23⇑PKiKP **PKPdf 08 29 40.2 -0.1**
baz=122
MOD Modoc 122.55 30 *e*PKPdf PKPdf 08 29 41.0 +0.6
E16A East Helena 122.56 21⇓PKiKP **PKPdf 08 29 40.2 0.0**
baz=122
D18A Linhart Farms, 122.63 19⇑PKiKP **PKPdf 08 29 40.3 0.0**
baz=122
C20A Veseth Ranch, 122.75 18⇑PKiKP **PKiKP 08 29 40.7 0.0**
baz=122
A24A Westby 122.75 14⇑PKiKP **PKiKP 08 29 40.7 +0.1**
baz=122
G13A Cobalt 122.80 24⇓PKiKP **PKPdf 08 29 40.7 -0.1**
baz=123
B22A Reddig Ranch S 122.80 16⇑PKiKP **PKiKP 08 29 40.8 0.0**
baz=123
F15A Butte 122.85 22⇑PKiKP **PKPdf 08 29 40.6 -0.3**
baz=123
E17A Martinsdale 122.91 21⇑PKiKP **PKPdf 08 29 41.0 0.0**
baz=123
C21A Desert Coulee 122.92 17⇓PKiKP **PKPdf 08 29 40.8 +0.1**
baz=123
B23A Brockton 122.92 15⇓PKiKP **PKiKP 08 29 40.9 -0.1**
baz=123
D19A Cripps Ranch, 122.96 19⇓PKiKP **PKiKP 08 29 41.0 -0.1**
baz=123
G14A Jackson 122.98 23⇓PKiKP **PKiKP 08 29 41.3 -0.1**
baz=123
H12A Diamond D Ranc 122.99 25⇑PKiKP **PKPdf 08 29 41.2 0.0**
baz=123
ULM Lac du Bonnet 123.04 8 PKP PKPdf 08 29 40.3 -0.5
ULM Lac du Bonnet 123.04 8 PKP PKPdf 08 29 40.3 -0.5
comp=Z,7.4nm,0.6s,baz=4.4,slow=2.0,SNR=15
DGMT Dagmar 123.12 15 *e*PKPdf PKPdf 08 29 41.4 +0.2
DGMT Dagmar 123.12 15⇓PKiKP **PKPdf 08 29 41.3 +0.2**
baz=123
E18A Harlowton 123.15 20⇓PKiKP **PKPdf 08 29 41.5 +0.1**
baz=123
DLMT Dillon 123.21 23 *e*PKPdf PKPdf 08 29 42.0 +0.5
F16A Kennard Place, 123.22 22⇑PKiKP **PKPdf 08 29 41.5 0.0**
baz=123
H13A Challis 123.22 24⇓PKiKP **PKPdf 08 29 41.7 +0.1**
baz=123
D20A Manuel Ranch, 123.26 18⇓PKiKP **PKiKP 08 29 41.7 0.0**
baz=123
BOZ Bozeman (W) 123.33 22 *e*PKIKP PKPdf 08 29 42.0 +0.2
BOZ Bozeman (W) 123.33 22 *e*PKPdf PKPdf 08 29 42.0 +0.2
BOZ Bozeman (W) 123.33 22⇓PKiKP **PKPdf 08 29 41.9 +0.2**
baz=123
C22A Vida 123.34 16⇑PKiKP **PKiKP 08 29 41.8 0.0**
baz=123
G15A Dillon 123.42 23⇓PKiKP **PKiKP 08 29 42.2 0.0**
baz=123
F17A Fitzpatrick Pl 123.46 21⇓PKiKP **PKiKP 08 29 42.2 0.0**
baz=123
C23A Lambert 123.48 16⇓PKiKP **PKiKP 08 29 42.2 +0.1**
baz=123
I12A Atlanta 123.48 25⇑PKiKP **PKiKP 08 29 42.5 +0.1**
baz=123
MFID Camas Ranch 123.49 26 *e*PKPdf PKPdf 08 29 42.5 +0.4
MFID Camas Ranch 123.49 26⇓PKiKP **PKiKP 08 29 42.6 +0.3**
baz=123
H14A Leadore 123.54 24⇓PKiKP **PKiKP 08 29 42.6 +0.1**
baz=123
MCMT McKenzie Canyo 123.56 23 *e*PKPdf PKPdf 08 29 42.9 +0.5
E19A Rath Farm, Rou 123.61 19⇓PKiKP **PKiKP 08 29 42.4 0.0**
baz=123
G16A Moss Hill, Enn 123.62 22⇓PKiKP **PKiKP 08 29 42.7 +0.1**
baz=123
D21A La Casta Ranch 123.63 17⇑PKiKP **PKiKP 08 29 42.5 +0.1**
baz=123
E20A Meyer Farm, Mu 123.78 19⇑PKiKP **PKiKP 08 29 43.0 +0.2**
baz=124
F18A Big Timber 123.79 20⇓PKiKP **PKiKP 08 29 42.9 +0.1**
baz=124
D22A Cohagen 123.80 17⇓PKiKP **PKiKP 08 29 43.0 +0.3**
baz=124
I13A Wildhorse Cree 123.81 25⇓PKiKP **PKiKP 08 29 43.4 +0.3**
baz=124
H15A Lima 123.82 23⇓PKiKP **PKiKP 08 29 43.2 +0.1**
baz=124
GCMT Greycliff 123.91 20 *e*PKPdf PKPdf 08 29 43.2 +0.4
C24A Savage 123.93 15⇑PKiKP **PKiKP 08 29 43.5 +0.5**
baz=124
G17A Pierce Place, 123.94 21⇓PKiKP **PKiKP 08 29 43.9 +0.7**
baz=124
HLID Hailey 123.98 25 *e*PKPdf PKPdf 08 29 43.6 +0.5
HLID Hailey 123.98 25⇑PKiKP **PKiKP 08 29 43.9 +0.6**
baz=124
D23A Lindsay 124.05 16⇑PKiKP **PKiKP 08 29 43.7 +0.5**
baz=124
I14A Mackay 124.07 24⇓PKiKP **PKiKP 08 29 43.6 0.0**
baz=124
E21A Keefer Ranch, 124.08 18⇓PKiKP **PKiKP 08 29 43.7 +0.4**
baz=124
F19A Roth Farm, Mol 124.09 20⇓PKiKP **PKiKP 08 29 43.4 0.0**
baz=124
QLMT Earthquake Lak 124.10 22 *e*PKPdf PKPdf 08 29 44.4 +1.0

J13A	Cove Ranch, Pi	124.21	25	⇓PKiKP	PKiKP	08 29 44.3	+0.5
	baz=124						
H16A	Russell Place,	124.28	22	⇑PKiKP	PKiKP	08 29 44.6	+0.6
	baz=124						
D24A	Glendive	124.34	15	⇑PKiKP	PKiKP	08 29 44.1	+0.3
	baz=124						
G18A	Lazy EL Ranch,	124.36	20	⇓PKiKP	PKiKP	08 29 44.5	+0.5
	baz=124						
I15A	Monteview	124.40	23	⇑PKiKP	PKiKP	08 29 44.5	+0.3
	baz=124						
F20A	Billings	124.40	19	⇑PKiKP	PKiKP	08 29 44.1	+0.1
	baz=124						
YMR	Madison River	124.41	22	ePKPdf	PKPdf	08 29 44.8	+0.8
E22A	Miles City	124.51	17	⇑PKiKP	PKiKP	08 29 44.5	+0.4
	baz=124						
J14A	Carey	124.55	25	⇓PKiKP	PKiKP	08 29 44.7	+0.2
	baz=124						
RLMT	Red Lodge	124.63	20	⇑PKiKP	PKiKP	08 29 44.8	+0.1
	baz=124						
E23A	Ismay	124.64	16	⇓PKiKP	PKiKP	08 29 44.6	+0.1
	baz=124						
YFT	Old Faithful	124.65	22	ePKPdf	PKPdf	08 29 46.5	+2.0
LKWY	Lake	124.71	21	ePKIKP	PKPdf	08 29 46.6	+2.0
LKWY	Lake	124.71	21	ePKPdf	PKPdf	08 29 46.6	+2.0
MDND	Maddock	124.74	11	⇓PKiKP	PKPdf	08 29 44.3	+0.1
	baz=124						
H17A	Grant Village	124.79	22	⇓PKiKP	PKiKP	08 29 46.2	+1.1
	baz=125						
E24A	Baker	124.86	16	⇓PKiKP	PKiKP	08 29 45.4	+0.5
	baz=125						
H18A	Shoshone NF, C	124.88	21	⇑PKiKP	PKiKP	08 29 45.4	+0.2
	baz=125						
I16A	Newdale	124.89	23	⇑PKiKP	PKiKP	08 29 45.4	+0.2
	baz=125						
G20A	Bridger	124.90	19	⇑PKiKP	PKiKP	08 29 45.2	+0.2
	baz=125						
J15A	Blackfoot	124.92	24	⇓PKiKP	PKiKP	08 29 45.4	+0.2
	baz=125						
AGMN	Agassiz Nation	124.95	8	ePKPdf	PKPdf	08 29 43.8	-0.7
F22A	Rosebud	125.01	18	⇓PKiKP	PKiKP	08 29 45.3	+0.1
	baz=125						
IMW	Indian Meadow	125.08	22	ePKPdf	PKPdf	08 29 45.7	+0.4
H19A	Powell	125.12	20	⇑PKiKP	PKiKP	08 29 46.3	+0.8
	baz=125						
I17A	Pilgrim Ck.	125.20	22	⇓PKiKP	PKiKP	08 29 46.0	+0.2
	baz=125						
G21A	Lodge Grass	125.22	19	⇓PKiKP	PKiKP	08 29 45.8	+0.1
	baz=125						
DCID1	Drake Creek	125.25	23	ePKPdf	PKPdf	08 29 46.1	+0.5
MOOW	Moose Ponds	125.28	22	ePKPdf	PKPdf	08 29 46.1	+0.5
CMB	Columbia Colle	125.32	34	ePKIKP	PKPdf	08 29 45.8	+0.1
CMB	Columbia Colle	125.32	34	ePKPdf	PKPdf	08 29 45.8	+0.1
K14A	Jones Ranch, D	125.33	25	⇑PKiKP	PKiKP	08 29 46.3	+0.3
	baz=125						
J16A	Bone	125.35	23	⇑PKiKP	PKiKP	08 29 46.3	+0.1
	baz=125						
LOHW	Long Hollow	125.45	22	ePKPdf	PKPdf	08 29 46.6	+0.6
F24A	Ekalaka	125.48	16	⇑PKiKP	PKiKP	08 29 46.1	0.0
	baz=125						
K15A	Arbon	125.48	24	⇑PKiKP	PKiKP	08 29 46.6	+0.3
	baz=125						
G22A	Birney	125.51	18	⇑PKiKP	PKiKP	08 29 46.5	+0.2
	baz=125						
SNOW	Snow King Moun	125.52	22	ePKPdf	PKPdf	08 29 46.9	+0.7
J17A	Brown Place, J	125.62	22	⇓PKiKP	PKiKP	08 29 47.0	+0.3
	baz=125						
I18A	Diamond G Ranc	125.67	22	⇑PKiKP	PKiKP	08 29 47.0	+0.1
	baz=125						
I19A	Meeteetse	125.67	21	⇓PKiKP	PKiKP	08 29 46.8	0.0
	baz=125						
L14A	Malta	125.72	25	⇑PKiKP	PKPdf	08 29 46.6	+0.2
	baz=126						
K16A	Soda Springs	125.73	23	⇓PKiKP	PKiKP	08 29 46.9	0.0
	baz=126						
G23A	Biddle	125.79	17	⇓PKiKP	PKiKP	08 29 46.8	-0.1
	baz=126						
H21A	Big Horn, Sher	125.80	19	⇓PKiKP	PKPdf	08 29 46.6	+0.1
	baz=126						
ELK	Elko	125.88	28	ePKPdf	PKPdf	08 29 47.5	+0.5
J18A	Kendall Valley	126.02	22	⇓PKiKP	PKPdf	08 29 47.2	0.0
	baz=126						
I20A	Worland	126.05	20	⇓PKiKP	PKiKP	08 29 47.3	-0.1
	baz=126						
H22A	Clearmont	126.05	18	⇓PKiKP	PKiKP	08 29 47.2	-0.2
	baz=126						
L15A	Malad City	126.11	25	⇓PKiKP	PKPdf	08 29 47.2	0.0
	baz=126						
NVAR	Mina Array Bea	126.15	32	PKP	PKPdf	08 29 48.2	+0.7
NVAR	Mina Array Bea	126.15	32	PKP	PKPdf	08 29 48.2	+0.7
	comp=Z,9.0nm,0.7s,baz=302,slow=2.0,SNR=83						
NV11	Mina Array Sit	126.23	32	ePKPdf	PKPdf	08 29 48.4	+0.8
J19A	Crowheart	126.32	21	⇑PKiKP	PKiKP	08 29 47.9	-0.1
	baz=126						
H23A	Clabaugh Cattl	126.37	18	⇑PKiKP	PKiKP	08 29 47.8	-0.2
	baz=126						
I21A	Big Trails, Te	126.45	19	⇓PKiKP	PKPdf	08 29 47.9	+0.1
	baz=126						
H24A	Dirks Ranch, A	126.45	17	⇑PKiKP	PKPdf	08 29 47.7	0.0
	baz=126						
L16A	Fish Haven	126.49	24	⇑PKiKP	PKPdf	08 29 48.0	0.0
	baz=126						
K18A	Toltan Ranch,	126.50	22	⇓PKiKP	PKPdf	08 29 48.3	+0.2
	baz=126						
BW06	Boulder Array	126.57	22	⇑PKiKP	PKPdf	08 29 48.2	0.0
	baz=126						
PDAR	Pinedale Array	126.57	22	PKPpre	PKPpre	08 29 44.8	
PDAR				PKP	PKPdf	08 29 47.9	-0.3
PDAR	Pinedale Array	126.57	22	PKhKP	PKPpre	08 29 44.8	
	comp=Z,9.8nm,0.9s,baz=111,slow=3.3,SNR=31						
PDAR				PKP	PKPdf	08 29 47.9	-0.3
	comp=Z,12nm,0.9s,baz=350,slow=2.1,SNR=37						
L17A	Cokeville	126.64	23	⇑PKiKP	PKPdf	08 29 48.4	+0.1
	baz=126						
I22A	9 Mile Ranch,	126.64	19	⇓PKiKP	PKiKP	08 29 48.4	-0.2
	baz=126						
HWUT	Hardware Ranch	126.77	24	ePKPdf	PKPdf	08 29 48.6	+0.1
K19A	Absolon Red Bu	126.78	21	⇑PKiKP	PKPdf	08 29 48.4	-0.1
	baz=126						
J21A	Lysite	126.81	20	⇑PKiKP	PKPdf	08 29 48.7	+0.2
	baz=127						
K20A	Yellowstone Ra	127.11	21	⇓PKiKP	PKiKP	08 29 49.5	-0.2
	baz=127						
L18A	Fontenelle, Gr	127.11	23	⇓PKiKP	PKiKP	08 29 49.5	-0.2
	baz=127						
RCTC	Rector, Farmer	127.20	34	⇓PKiKP	PKiKP	08 29 49.6	-0.1
	baz=127						
L19A	Farson	127.22	22	⇓PKiKP	PKPdf	08 29 49.6	+0.2
	baz=127						
I24A	Kuemmerle Ranc	127.24	17	⇓PKiKP	PKiKP	08 29 49.6	-0.2
	baz=127						
M17A	Scullys Gap (B	127.25	24	⇓PKiKP	PKPdf	08 29 49.7	+0.2
	baz=127						
DUG	Dugway	127.42	26	ePKIKP	PKPdf	08 29 50.6	+0.8
DUG	Dugway	127.42	26	ePKPdf	PKPdf	08 29 50.6	+0.8
DUG	Dugway	127.42	26	⇓PKiKP	PKiKP	08 29 50.4	+0.2
	baz=127						
SMMC	Simmler	127.48	36	⇑PKiKP	PKiKP	08 29 50.9	+0.5
	baz=127						
K21A	Alcova	127.51	20	⇓PKiKP	PKPdf	08 29 50.1	+0.2
	baz=127						
M18A	Lyman	127.53	23	⇑PKiKP	PKiKP	08 29 50.4	-0.1
	baz=127						
R11A	Troy Canyon, C	127.59	30	⇓PKiKP	PKiKP	08 29 51.0	+0.2
	baz=127						
VES	Vestal, Richgr	127.62	35	⇑PKiKP	PKPdf	08 29 50.2	+0.1
	baz=127						
N17A	Moffit Pass	127.63	24	⇓PKiKP	PKiKP	08 29 50.7	-0.2
	baz=127						
JLU	Jordanelle	127.66	25	ePKPdf	PKPdf	08 29 50.4	+0.1
L20A	Wamsutter	127.68	21	⇑PKiKP	PKPdf	08 29 50.5	+0.3
	baz=127						
J24A	Dixon Ranch, L	127.71	18	⇑PKiKP	PKPdf	08 29 50.3	+0.1
	baz=128						
K22A	Casper	127.74	20	⇑PKiKP	PKPdf	08 29 50.5	+0.2
	baz=128						
CWC	Cottonwood Cre	127.74	33	⇑PKiKP	PKiKP	08 29 51.1	+0.1
	baz=128						
M19A	Rock Springs	127.81	22	⇑PKiKP	PKPdf	08 29 50.7	+0.2
	baz=128						
PKM	Peak Mountain	127.87	36	⇑PKiKP	PKiKP	08 29 51.5	+0.1
	baz=128						
K23A	Bowen Ranch, D	127.94	19	⇓PKiKP	PKPdf	08 29 50.8	+0.1
	baz=128						
L21A	Rawlins	128.06	21	⇑PKiKP	PKPdf	08 29 51.2	+0.2
	baz=128						
N18A	Larsen Ranch,	128.06	23	⇓PKiKP	PKPdf	08 29 51.3	+0.3
	baz=128						
ISA	Isabella	128.09	34	⇓PKiKP	PKiKP	08 29 51.4	-0.2
	baz=128						
BRSD	Miller	128.13	12	⇑PKiKP	PKPdf	08 29 51.0	+0.2
	baz=128						
P15A	Leamington	128.16	26	⇑PKiKP	PKPdf	08 29 51.3	+0.1
	baz=128						
M20A	Sweetwater, Wa	128.18	22	⇑PKiKP	PKPdf	08 29 51.5	+0.2
	baz=128						
K24A	Anderson Ranch	128.22	18	⇑PKiKP	PKiKP	08 29 51.7	-0.2
	baz=128						
O17A	Robinson Place	128.30	25	⇓PKiKP	PKiKP	08 29 52.1	0.0
	baz=128						
L22A	Ellis Ranch, M	128.32	20	⇑PKiKP	PKiKP	08 29 51.9	-0.3
	baz=128						
N19A	John Jarvie Ra	128.33	23	⇓PKiKP	PKPdf	08 29 51.5	0.0
	baz=128						
MPMC	Manual Prospec	128.34	33	⇑PKiKP	PKiKP	08 29 52.5	+0.2
	baz=128						
SPMN	St. Paul	128.36	7	⇑PKiKP	PKiKP	08 29 51.9	+0.1
	baz=128						
FURC	Furnace Creek,	128.38	32	⇑PKiKP	PKiKP	08 29 52.4	+0.4
	baz=128						
M21A	Separation Pea	128.38	21	⇑PKiKP	PKPdf	08 29 51.9	+0.3
	baz=128						
P16A	Fountain Green	128.40	26	⇑PKiKP	PKiKP	08 29 52.5	+0.1
	baz=128						
L23A	Garrett	128.49	19	⇓PKiKP	PKPdf	08 29 52.0	+0.2
	baz=128						
O18A	Roosevelt	128.54	24	⇑PKiKP	PKiKP	08 29 52.6	+0.1
	baz=128						
K25A	Mack Ranch, Ha	128.61	17	⇑PKiKP	PKiKP	08 29 52.5	-0.1
	baz=128						
LRMC	Laurel Mountai	128.66	34	⇑PKiKP	PKiKP	08 29 52.8	-0.1
	baz=128						
K26A	Motz Farm, Whi	128.72	17	⇑PKiKP	PKiKP	08 29 52.5	-0.2
	baz=128						
N20A	Spence Gulch,	128.73	22	⇑PKiKP	PKiKP	08 29 52.9	-0.1
	baz=128						
L24A	Wheatland	128.80	18	⇑PKiKP	PKiKP	08 29 52.8	-0.2
	baz=129						
M22A	Cedar Creek Ra	128.82	20	⇓PKiKP	PKPdf	08 29 52.6	+0.1
	baz=129						
TMUT	Trail Mountain	128.85	26	ePKPdf	PKPdf	08 29 53.7	+1.0
TMUT				eSKPdf	SKiKP	08 33 25.7	+3.4
O19A	Miners Draw (B	128.86	23	⇓PKiKP	PKPdf	08 29 52.9	+0.3
	baz=129						
P17A	Butcher Ranch,	128.91	25	⇑PKiKP	PKiKP	08 29 53.4	0.0
	baz=129						
EDW2	Edwards Air Fo	128.93	35	⇑PKiKP	PKiKP	08 29 53.5	+0.1
	baz=129						
P18A	Preston Nutter	128.98	25	⇑PKiKP	PKiKP	08 29 53.6	-0.1
	baz=129						
K27A	Flueckinger Fa	128.98	16	⇓PKiKP	PKPdf	08 29 52.7	+0.1
	baz=129						
L25A	Engebretsen Ra	129.00	18	⇑PKiKP	PKiKP	08 29 53.1	-0.3
	baz=129						
M23A	Laramie	129.06	19	⇓PKiKP	PKPdf	08 29 53.3	+0.3
	baz=129						
N21A	Black Mountain	129.06	21	⇑PKiKP	PKiKP	08 29 53.5	-0.2
	baz=129						
MVU	Marysvale	129.07	27	ePKPdf	PKPdf	08 29 54.2	+1.2
MSU	Marysvale	129.07	27	ePKIKP	PKPdf	08 29 54.1	+1.1
MSU	Marysvale	129.07	27	ePKPdf	PKPdf	08 29 54.1	+1.1
SHOC	Shoshone	129.11	32	⇓PKiKP	PKiKP	08 29 54.2	+0.6
	baz=129						
GLMI	Grayling	129.17	359	ePKPdf	PKPdf	08 29 53.8	+1.0
Q16A	Castle Valley	129.18	26	⇑PKiKP	PKiKP	08 29 54.2	+0.2
	baz=129						
ECSD	EROS Data Cent	129.27	10	ePKPdf	PKPdf	08 29 52.9	-0.1
GSC	Goldstone	129.28	33	ePKIKP	PKPdf	08 29 55.0	+1.6
GSC	Goldstone	129.28	33	ePKPdf	PKPdf	08 29 55.0	+1.6
SRU	San Rafael	129.30	25	ePKIKP	PKPdf	08 29 54.1	+0.7
SRU	San Rafael	129.30	25	ePKPdf	PKPdf	08 29 54.1	+0.7
SRU	San Rafael	129.30	25	⇑PKiKP	PKPdf	08 29 53.8	+0.3
	baz=129						
O20A	White River Ci	129.34	22	⇓PKiKP	PKiKP	08 29 53.9	-0.3
	baz=129						
M24A	Cheyenne	129.35	19	⇓PKiKP	PKPdf	08 29 53.8	+0.4
	baz=129						
N22A	Wattenberg Ran	129.41	21	⇓PKiKP	PKPdf	08 29 54.0	+0.3
	baz=129						
P19A	Cripple Cowboy	129.49	23	⇓PKiKP	PKiKP	08 29 54.2	-0.3
	baz=129						
N23A	Red Feather La	129.50	20	⇓PKiKP	PKPdf	08 29 54.1	+0.3
	baz=129						
O21A	Pagoda	129.56	22	⇓PKiKP	PKiKP	08 29 54.1	+0.1
	baz=129						
BFSC	Mount Baldy Ra	129.59	35	⇓PKiKP	PKPdf	08 29 54.1	+0.1
	baz=129						
USHA	Ushuaia	129.62	193	PKP	PKPdf	08 29 54.1	+0.9
USHA	Ushuaia	129.62	193	PKP	PKPdf	08 29 54.1	+0.9
	comp=Z,11nm,1.1s,baz=45,slow=1.4,SNR=7.0						
M25A	Palm-Egli Farm	129.63	18	⇑PKiKP	PKPdf	08 29 54.1	+0.1
	baz=129						
M26A	McRoberts Ranc	129.87	17	⇑PKiKP	PKPdf	08 29 54.5	+0.2
	baz=130						
O22A	Kremmling	129.94	21	⇓PKiKP	PKPdf	08 29 54.9	+0.1
	baz=130						
Q19A	Hogan Spring (	129.95	24	⇓PKiKP	PKiKP	08 29 55.7	+0.4
	baz=130						
BBRC	Big Bear Solar	129.99	34	⇑PKiKP	PKiKP	08 29 55.9	+0.2
	baz=130						
O23A	Lake Granby, G	130.12	20	⇓PKiKP	PKiKP	08 29 56.0	+0.1
	baz=130						
P21A	Newcastle	130.17	22	⇓PKiKP	PKiKP	08 29 56.1	+0.1
	baz=130						
GMRC	Granite Mounta	130.29	33	⇓PKiKP	PKiKP	08 29 57.1	+0.9
	baz=130						
MURC	Murrieta	130.31	35	⇑PKiKP	PKiKP	08 29 56.1	-0.1
	baz=130						
Q20A	Ridgley Place,	130.34	23	⇑PKiKP	PKiKP	08 29 56.1	-0.1
	baz=130						
P22A	Eagle	130.37	22	⇑PKiKP	PKiKP	08 29 56.1	-0.3
	baz=130						
O24A	Longmont	130.49	20	⇓PKiKP	PKPdf	08 29 55.9	+0.3
	baz=130						
ISCO	Idaho Springs	130.59	20	⇓PKiKP	PKiKP	08 29 56.6	-0.3
	baz=130						
RCBR	Riachuelo	130.64	268	ePKPdf	PKPdf	08 29 57.4	+1.0
RCBR				PKP	PKPdf	08 29 57.8	+1.4
RCBR	Riachuelo	130.64	268	PKP	PKPdf	08 29 57.8	+1.4
	comp=Z,31nm,1.1s,baz=8.8,slow=3.0,SNR=7.0						
SMCO	Snowmass	130.65	22	ePKPdf	PKPdf	08 29 56.6	+0.3
N27A	Anderson Farm,	130.66	17	⇓PKiKP	PKiKP	08 29 56.6	-0.1
	baz=130						
BELC	Belle Mtn. Jos	130.69	34	⇑PKiKP	PKiKP	08 29 57.3	+0.2
	baz=130						
U15A	North Rim	130.71	29	⇑PKiKP	PKiKP	08 29 57.3	+0.1
	baz=130						
S18A	Hurst Farm, Bl	130.72	26	⇓PKiKP	PKiKP	08 29 57.1	0.0
	baz=130						
PFO	Pinyon Flat Ob	130.73	34	⇓PKiKP	PKiKP	08 29 57.2	+0.1
	baz=130						
P23A	Jefferson	130.89	21	⇓PKiKP	PKiKP	08 29 57.4	-0.2
	baz=131						
PV01	Paradox Valley	130.94	24	ePKPdf	PKPdf	08 29 56.9	+0.2
PV01				ePP	PP	08 32 11.4	-1.3
Q22A	Crested Butte,	130.95	22	⇓PKiKP	PKPdf	08 29 57.0	+0.3
	baz=131						
R20A	Redvale	130.97	24	⇑PKiKP	PKiKP	08 29 57.3	-0.3
	baz=131						
W13A	Hualapai Mount	130.98	31	⇑PKiKP	PKiKP	08 29 57.6	-0.1
	baz=131						
R21A	Cimarron	131.14	23	⇓PKiKP	PKPdf	08 29 57.4	+0.4
	baz=131						
BGNE	Belgrade	131.21	13	⇑PKiKP	PKiKP	08 29 57.5	-0.2
	baz=131						
MONP	Monument Peak	131.28	35	⇑PKiKP	PKiKP	08 29 58.7	+0.3
	baz=131						
S20A	Disappointment	131.28	24	⇓PKiKP	PKiKP	08 29 57.9	-0.4
	baz=131						
Q23A	Hartsel	131.31	21	⇑PKiKP	PKiKP	08 29 58.0	-0.4
	baz=131						
P25A	Willow Gulch B	131.34	19	⇑PKiKP	PKiKP	08 29 57.8	-0.4
	baz=131						
PDMCI	Parker Dam,Lak	131.47	32	⇓PKiKP	PKiKP	08 29 58.8	+0.4
	baz=131						
R22A	Saguache, Gunn	131.57	22	⇓PKiKP	PKiKP	08 29 58.9	0.0
	baz=131						
SWSC	Sam W. Stewart	131.59	34	⇓PKiKP	PKiKP	08 29 58.9	+0.3
	baz=131						
S21A	Coal Bank Pass	131.66	24	⇑PKiKP	PKiKP	08 29 59.0	0.0
	baz=131						
Y12C	Blythe	131.68	33	⇓PKiKP	PKiKP	08 29 59.5	+0.7
	baz=132						
MVCO	Mesa Verde	131.75	25	⇑PKiKP	PKiKP	08 29 59.0	-0.2
	baz=132						
Q25A	Bedland, Calha	131.85	20	⇑PKiKP	PKPdf	08 29 58.8	+0.5
	baz=132						
R23A	Moffat	131.95	22	⇓PKiKP	PKiKP	08 29 59.3	-0.3
	baz=132						
S22A	4UR Ranch, Cre	131.96	23	⇓PKiKP	PKPdf	08 29 58.6	-0.1
	baz=132						
GLA	Glamis	132.05	34	⇓PKiKP	PKPdf	08 29 59.0	+0.4
	baz=132						
Q26A	Hugo	132.08	19	⇓PKiKP	PKPdf	08 29 58.9	+0.3
	baz=132						
R24A	Sanders Place,	132.17	21	⇑PKiKP	PKiKP	08 29 59.5	-0.5
	baz=132						
U20A	Newcomb	132.46	25	⇓PKiKP	PKiKP	08 30 00.3	-0.3
	baz=132						
T22A	Edith	132.57	23	⇑PKiKP	PKiKP	08 30 00.5	-0.4
	baz=132						
X16A	Lo Mia Camp, P	132.74	29	⇑PKiKP	PKiKP	08 30 01.1	-0.1
	baz=132						
U21A	Nageezi	132.77	24	⇓PKiKP	PKiKP	08 30 01.1	-0.2
	baz=133						
Z14A	Wintersburg	132.82	32	⇑PKiKP	PKiKP	08 30 01.1	0.0
	baz=133						
113A	Mohawk Valley,	132.84	33	⇓PKiKP	PKiKP	08 30 01.2	+0.1
	baz=133						
R27A	Eads	132.89	19	⇑PKiKP	PKPdf	08 30 00.6	+0.4
	baz=133						
V20A	Brimhall	132.97	26	⇓PKiKP	PKiKP	08 30 01.2	-0.4
	baz=133						
W18A	Petrified Fore	132.98	27	⇑PKiKP	PKiKP	08 30 01.1	-0.5
	baz=133						
U22A	Llaves	133.14	24	⇓PKiKP	PKPdf	08 30 01.4	+0.5
	baz=133						
S26A	Kim	133.28	20	⇓PKiKP	PKPdf	08 30 01.5	+0.5
	baz=133						
V21A	Milan	133.31	25	⇑PKiKP	PKPdf	08 30 01.6	+0.5
	baz=133						
X18A	Snowflake	133.36	28	⇑PKiKP	PKiKP	08 30 02.3	-0.2
	baz=133						
T25A	Trinidad	133.39	21	⇓PKiKP	PKPdf	08 30 01.7	+0.5
	baz=133						
U23A	El Rito	133.44	23	⇓PKiKP	PKiKP	08 30 02.4	-0.2
	baz=133						
V22A	San Miguel Ran	133.52	24	⇑PKiKP	PKiKP	08 30 02.5	-0.3
	baz=133						
W20A	Ramah	133.52	26	⇓PKiKP	PKiKP	08 30 02.4	-0.4
	baz=133						
V23A	Ortiz Mt. (NFS	133.96	23	⇑PKiKP	PKiKP	08 30 03.7	+0.1
	baz=134						
U25A	Circle Dot Ran	134.05	21	⇓PKiKP	PKiKP	08 30 03.5	-0.3
	baz=134						
V24A	Rampart Ranch,	134.33	23	⇓PKiKP	PKiKP	08 30 03.8	-0.7
	baz=134						
X21A	Alamocita Cree	134.41	26	⇑PKiKP	PKiKP	08 30 04.1	-0.5
	baz=134						
V25A	Rancho No Teng	134.48	22	⇓PKiKP	PKiKP	08 30 04.2	-0.5
	baz=134						
ANMO	Albuquerque	134.54	24	ePKPdf	PKPdf	08 30 04.4	+1.0
Y20A	Horse Springs,	134.60	27	⇑PKiKP	PKiKP	08 30 04.5	-0.6
	baz=134						
LAZ	Ladron	134.72	25	ePKPdf	PKPdf	08 30 04.6	+0.8
LAZ				eSKPbc	SKPbc	08 33 26.2	-0.6
W24A	Lazy 6 Ranch,	134.73	23	⇑PKiKP	PKiKP	08 30 04.9	-0.3
	baz=134						
TUC	Tucson	134.76	31	ePKIKP	PKPdf	08 30 05.0	+1.2
TUC	Tucson	134.76	31	ePKPdf	PKPdf	08 30 05.0	+1.2
X23A	Hourglass Bar	134.97	24	⇓PKiKP	PKPdf	08 30 05.0	+0.7
	baz=135						
W25A	X Bar L Ranch,	135.09	22	⇑PKiKP	PKiKP	08 30 05.4	-0.5
	baz=135						
Z20A	Nine Sixteen R	135.17	28	⇑PKiKP	PKiKP	08 30 05.8	-0.3
	baz=135						
Y22A	Socorro	135.20	26	⇑PKiKP	PKiKP	08 30 05.8	-0.4
	baz=135						
V28A	Channing	135.39	19	⇑PKiKP	PKiKP	08 30 06.0	-0.5
	baz=135						
Z21A	St. Cloud Mine	135.42	27	⇓PKiKP	PKiKP	08 30 06.3	-0.4
	baz=135						
Y23A	Lovelace Mesa,	135.59	25	⇓PKiKP	PKiKP	08 30 06.4	-0.6
	baz=135						
120A	U Bar Ranch, L	135.62	28	⇓PKiKP	PKiKP	08 30 06.5	-0.5
	baz=135						
X25A	Clemmons Ranch	135.62	23	⇑PKiKP	PKiKP	08 30 06.4	-0.6
	baz=135						
W27A	Bowe Ranch, En	135.73	21	⇓PKiKP	PKiKP	08 30 06.6	-0.6
	baz=136						
Z22A	Elephant Butte	135.78	26	⇓PKiKP	PKiKP	08 30 07.1	-0.3
	baz=136						
Y24A	Capitan	135.84	24	⇑PKiKP	PKiKP	08 30 07.0	-0.5
	baz=136						
X26A	CR and CF Fran	135.92	22	⇓PKiKP	PKiKP	08 30 07.0	-0.6
	baz=136						
121A	Cookes Peak, D	136.02	27	⇓PKiKP	PKiKP	08 30 07.4	-0.5
	baz=136						
X27A	F and S Farms,	136.09	21	⇓PKiKP	PKiKP	08 30 07.6	-0.3
	baz=136						
Y25A	Mesa, Roswell	136.14	23	⇑PKiKP	PKPdf	08 30 07.2	+0.8
	baz=136						
220A	Playas Peak, P	136.20	29	⇓PKiKP	PKiKP	08 30 07.7	-0.6
	baz=136						
319A	Douglas	136.27	30	⇓PKiKP	PKiKP	08 30 08.0	-0.3
	baz=136						
Z24A	Sheeppen Canyo	136.39	24	⇑PKiKP	PKiKP	08 30 08.1	-0.6
	baz=136						
320A	Kipp Ranch, An	136.67	29	⇓PKiKP	PKiKP	08 30 08.6	-0.6
	baz=136						
Z25A	Roswell	136.70	24	⇑PKiKP	PKiKP	08 30 08.4	-0.8
	baz=136						
Y27A	Causey	136.75	22	⇑PKiKP	PKPdf	08 30 08.4	+0.9
	baz=136						
X29A	Tulia	136.76	20	⇑PKiKP	PKPdf	08 30 08.3	+0.9
	baz=136						
MSTX	Muleshoe	136.82	21	⇑PKiKP	PKPdf	08 30 08.4	+0.8
	baz=137						
124A	Stringfield Ra	136.90	25	⇑PKiKP	PKPdf	08 30 08.7	+0.7
	baz=137						
TUL1	Tulsa	136.99	12	⇓PKiKP	PKiKP	08 30 08.7	-0.8
	baz=137						
Z26A	Caprock	136.99	23	⇓PKiKP	PKiKP	08 30 08.9	-0.9
	baz=137						
Y28A	McKinney Farm,	137.06	21	⇓PKiKP	PKiKP	08 30 09.2	-0.7
	baz=137						
X31A	McDonald Ranch	137.13	18	⇓PKiKP	PKiKP	08 30 09.0	-0.9
	baz=137						
Z27A	Tatum	137.24	22	⇓PKiKP	PKPdf	08 30 09.3	+0.9
	baz=137						
125A	Gardner Draw,	137.26	24	⇓PKiKP	PKPdf	08 30 09.4	+0.9
	baz=137						
Y29A	Porterfield Fa	137.30	20	⇑PKiKP	PKiKP	08 30 09.5	-0.9
	baz=137						
TZTN	Tazewell	137.41	358	ePKPdf	PKPdf	08 30 08.7	+0.2
Z28A	Tucker Farm, M	137.57	21	⇑PKiKP	PKiKP	08 30 10.2	-0.7
	baz=137						
MNTX	Cornudas Mount	137.80	26	ePKPdf	PKPdf	08 30 10.0	+0.7
MNTX	Cornudas Mount	137.80	26	⇑PKiKP	PKPdf	08 30 10.3	+0.9
	baz=138						
Z29A	Hungry Hill Ra	137.84	20	⇑PKiKP	PKPdf	08 30 10.2	+0.8
	baz=138						
226B	Tecolote Peak,	137.97	24	⇓PKiKP	PKiKP	08 30 11.2	-0.6
	baz=138						
CPCT	Cooper Cave	138.53	359	ePKPdf	PKPdf	08 30 10.6	0.0
MIAR	Mount Ida	138.74	10	ePKIKP	PKPdf	08 30 11.4	+0.4
MIAR	Mount Ida	138.74	10	ePKPdf	PKPdf	08 30 11.3	+0.4
MIAR				eSKPbc	SKPbc	08 33 37.8	-0.8
JSC	Jenkinsville	139.50	355	ePKIKP	PKPdf	08 30 12.8	+0.4
JSC	Jenkinsville	139.50	355	ePKPdf	PKPdf	08 30 12.8	+0.4
TXAR	Lajitas Array	140.58	25	PKPpre	PKPpre	08 30 06.7	
TXAR				PKP	PKPdf	08 30 14.3	-0.3
TXAR				PP	PP	08 33 15.2	+2.1
TXAR				SKP		08 33 42.8	
TXAR	Lajitas Array	140.58	25	PKhKP	PKPpre	08 30 06.7	
	comp=Z,1.4nm,0.5s,baz=304,slow=1.3,SNR=25						
TXAR				PKP	PKPdf	08 30 14.3	-0.3
	comp=Z,6.3nm,0.7s,baz=186,slow=1.8,SNR=16						
TXAR				PP	PP	08 33 15.2	+2.1
	comp=Z,1.6nm,0.9s,baz=2.9,slow=5.0,SNR=4.2						
TXAR				SKP		08 33 42.8	
	comp=Z,3.8nm,0.8s,baz=72,slow=0.3,SNR=9.7						
TRQA	Tornquist	141.77	211	ePKPdf	PKPdf	08 30 11.5	-4.8
BDFB	Brasilia	142.04	253	PKPpre	PKPpre	08 30 14.5	
BDFB				PKP	PKiKP	08 30 19.1	-1.4
BDFB	Brasilia	142.04	253	PKhKP	PKPpre	08 30 14.5	
	comp=Z,25nm,0.9s,baz=68,slow=1.2,SNR=12						
BDFB				PKP	PKiKP	08 30 19.1	-1.4
	comp=Z,25nm,0.9s,baz=27,slow=2.3,SNR=16						
PLCA	Paso Flores	143.12	199	ePKPdf	PKPbc	08 30 15.8	0.0
PLCA				PKP	PKPab	08 30 16.3	+2.0
PLCA				PP	PP	08 33 15.0	-13

PLCA Paso Flores 143.12 199 PKP PKPbc 08 30 16.3 +0.5
comp=Z,12nm,0.8s,baz=173,slow=1.7,SNR=25
PLCA PP PP 08 33 15.0 -13
comp=Z,1.4nm,0.3s,baz=194,slow=12,SNR=6.7
DWPF Disney 145.63 354 ePKPbc PKPbc 08 30 23.7 +0.1
CPUP Villa Florida 146.48 230 PKPbc PKPbc 08 30 25.6 -0.7
CPUP Villa Florida 146.48 230 PKPbc PKPbc 08 30 25.6 -0.7
comp=Z,33nm,0.8s,baz=87,slow=2.7,SNR=79
STVI Saint Thomas 148.23 321 ePKPbc PKPbc 08 30 32.0 +0.7
MTP Monte Pirata 148.79 321 ePKPdf PKPdf 08 30 29.0 +0.1
MTP ePKPbc PKPbc 08 30 32.9 +0.1
CBYP Canovanas 148.85 322 ePKPbc PKPbc 08 30 32.6 -0.4
SJG San Juan 149.15 322 ePKPbc PKPbc 08 30 33.6 -0.1
SJG ePKPab PKPab 08 30 39.1 +0.9
LRS Lares 149.43 323 ePKPbc PKPbc 08 30 34.2 -0.3
CELP Cerrillos 149.44 323 ePKPdf PKPdf 08 30 30.2 +0.2
CELP ePKPbc PKPbc 08 30 34.6 +0.2
OBIP Obispado Ponce 149.48 323 ePKPdf PKPdf 08 30 30.7 +0.7
OBIP ePKPbc PKPbc 08 30 34.7 +0.2
LSP Las Mesas 149.66 323 ePKPdf PKPdf 08 30 30.8 +0.5
LSP ePKPbc PKPbc 08 30 35.2 +0.2
LSP ePKPab PKPab 08 30 40.1 -0.2
CRPR Cabo Rojo, PR 149.81 323 ePKPdf PKPdf 08 30 29.3 -1.2
CRPR ePKPbc PKPbc 08 30 35.3 0.0
CFAA Coronel Fontan 150.01 211 PKP PKPdf 08 30 31.6 +1.0
CFAA PKPbc PKiKP 08 30 36.5 0.0
CFAA Coronel Fontan 150.01 211 PKP PKPdf 08 30 31.6 +1.0
comp=Z,12nm,0.6s,baz=197,slow=1.4,SNR=24
CFAA PKPbc PKiKP 08 30 36.5 0.0
comp=Z,11nm,0.5s,baz=166,slow=2.9,SNR=112
GRGR Grenville 150.04 308 ePKPbc PKPbc 08 30 37.1 +1.1
SDDR Presa de Saban 151.27 331 ePKPbc PKPbc 08 30 39.4 +0.5
SDDR ePKPab PKPab 08 30 47.7 +0.8
TLL Tololo Astrono 152.44 208 eP PKPbc 08 30 42.1 +0.6
LCO Las Campanas 153.35 210 ePKPdf PKPdf 08 30 37.0 +1.1
LCO ePKPbc PKiKP 08 30 44.2 +0.5
LCO Las Campanas 153.35 210 eP PKPdf 08 30 37.1 +1.1
TEIG Tepich 153.57 6 ePKPdf PKPdf 08 30 37.1 +1.0
TEIG ePKPbc PKiKP 08 30 44.5 +0.5
TEIG ePKPab PKPab 08 30 56.3 -0.1
SIV San Ignacio 154.13 246 PKP PKPdf 08 30 37.7 +0.6
SIV PKPbc PKPbc 08 30 45.1 -0.1
SIV PKPab PKPab 08 30 58.1 -1.0
SIV San Ignacio 154.13 246 PKP PKPdf 08 30 37.7 +0.6
comp=Z,8.1nm,0.7s,baz=127,slow=2.7,SNR=37
SIV PKPbc PKPbc 08 30 45.1 -0.1
comp=Z,8.7nm,0.6s,baz=122,slow=5.0,SNR=24
SIV PKPab PKPab 08 30 58.1 -1.0
comp=Z,4.7nm,0.6s,baz=139,slow=2.5,SNR=5.2
MTDJ Mount Denham 154.44 342 ePKPdf PKPdf 08 30 37.7 +0.2
MTDJ ePKPbc PKiKP 08 30 46.5 +0.5
MTDJ ePKPab PKPab 08 31 00.6 +0.3
SAML Samuel 157.67 262 ePKPdf PKPdf 08 30 42.3 +0.5
SAML ePKPab PKPab 08 31 14.6 +0.2
LPAZ La Paz 160.23 238 ePKPdf PKPdf 08 30 46.2 +0.7
LPAZ PKP PKP 08 30 46.5
LPAZ PKPab PKPab 08 31 26.4 +0.3
LPAZ ePKPab PKPab 08 31 26.7 +0.5
LPAZ La Paz 160.23 238 PKP PKPdf 08 30 46.5 +1.0
comp=Z,17nm,0.9s,baz=82,slow=1.0,SNR=58
LPAZ PKPab PKPab 08 31 26.4 +0.3
comp=Z,12nm,0.7s,baz=113,slow=4.1,SNR=15
ROSC El Rosal 164.29 314 ePKPdf PKPdf 08 30 49.8 +0.4
ROSC ePKPab PKPab 08 31 43.7 +0.1
ROSC PKPab PKPab 08 31 44.0 +0.4
ROSC El Rosal 164.29 314 PKP PKPdf 08 30 49.9 +0.4
comp=Z,18nm,0.8s,baz=122,slow=4.2,SNR=20
ROSC PKPab PKPab 08 31 44.0 +0.4
comp=Z,4.3nm,0.5s,baz=104,slow=17,SNR=3.2
OTAV Otavalo 170.43 312 ePKPdf PKPdf 08 30 54.4 +0.5
ATAH Atahualpa 172.84 262 PKP PKPdf 08 30 55.8 +0.8
ATAH Atahualpa 172.84 262 PKP PKPdf 08 30 55.8 +0.8
comp=Z,5.8nm,0.8s,baz=155,slow=16,SNR=6.3

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*ISK **09** 08:13:23.3, 36°.62N×31°.43E, h94km, MD3.0*
*ISCJB **09** 08:13:24.0±1.3, 36°.68N±0°.06×31°.38E±0°.05, h103km±11km, Error ellipse: s-maj=10.0km s-min=6.8km az=9.5*
*CSEM **09** 08:13:24.2±0.3, 36°.68N×31°.38E, h103km±3km, MD3.0, Error ellipse: s-maj=4.6km s-min=3.1km az=1.0*
*DDA **09** 08:13:25.7, 36°.95N×31°.52E, h7km, ML3.2*
ISC 09 08:13:25.2±2.2, **36°.70N**±0°.06×**31°.39E**±0°.04, **h95**km±17km, **n22**, σ**0s.63**/36, **Turkey**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ANTB Antalya 0.62 289 ePG Pn 08 13 40.8 -0.6
ANTB eSG Sn 08 13 53.3 -0.2
ANTB Antalya 0.62 289 ePg Pn 08 13 40.8 -0.6
ANTB eSg Sn 08 13 53.3 -0.2
GAZI Gazipasa 0.88 121 iP Pn 08 13 43.4 -0.6
GAZI iS Sn 08 13 57.9 -0.1
GAZI Gazipasa 0.88 121 iP Pn 08 13 43.4 -0.6
GAZI iS Sn 08 13 57.9 -0.1
KORT Korkueli 0.89 290 iP Pn 08 13 44.0 -0.2
KORT iS Sn 08 14 00.1 +1.8
KORT Korkueli 0.89 290 iP Pn 08 13 44.0 -0.2
KORT iS Sn 08 14 00.1 +1.8
BCK Bucak 0.99 320 ePG Pn 08 13 44.7 -0.6
BCK eSG Sn 08 14 00.8 +0.5
BCK Bucak 0.99 320 ePg Pn 08 13 44.7 -0.6
BCK eSg Sn 08 14 00.9 +0.5
ELL Elmali 1.19 273 ePN Pn 08 13 46.9 -0.7
ELL Elmali 1.19 273 ePn Pn 08 13 46.9 -0.7
ERMK Ermenek 1.23 92 iP Pn 08 13 48.3 +0.2
ERMK iS Sn 08 14 06.2 +0.9
ERMK Ermenek 1.23 92 iP Pn 08 13 48.3 +0.2
ERMK iS Sn 08 14 06.2 +0.9
ISP Isparta 1.32 329 ePN Pn 08 13 48.9 -0.2
ISP Isparta 1.32 329 ePn Pn 08 13 48.9 -0.2
KONT Konya--Tatoy 1.47 32 ePN Pn 08 13 50.6 -0.2
KONT eSN Sn 08 14 10.2 0.0
KONT Konya--Tatoy 1.47 32 ePn Pn 08 13 50.6 -0.2
KONT eSn Sn 08 14 10.2 0.0
LADK Ladik-KONYA 1.69 27 ePN Pn 08 13 53.2 -0.5
LADK Ladik-KONYA 1.69 27 ePn Pn 08 13 53.2 -0.5
FETY Fethiye 1.85 269 ePN Pn 08 13 55.4 -0.3
FETY Fethiye 1.85 269 ePn Pn 08 13 55.4 -0.3
KDHN Kadinhani 1.91 17 iP Pn 08 13 56.2 -0.3
KDHN iS Sn 08 14 20.3 -0.1
KDHN Kadinhani 1.91 17 iP Pn 08 13 56.2 -0.3
KDHN iS Sn 08 14 20.3 -0.1

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*BJI **09** 08:18:36.1, 10°.00S×120°.60E, h35km, mB5.0/19, mb4.8/23, Ms4.9/18, Ms7 4.5/18*
*NEIC **09** 08:18:36.4±1.3, 9°.87S×120°.65E, h30km±9km, mb4.8/11, Error ellipse: s-maj=11.3km s-min=5.6km az=60.0*
*IDC **09** 08:18:36.3±2.6, 9°.69S×120°.64E, h26km±17km, mb4.4/22, mb1 4.4/23, mb1mx4.4/28, mbtmp4.4/23, ML5.0/1, MS3.7/10, Ms1 3.8/10, ms1mx3.3/40, Error ellipse: s-maj=21.0km s-min=10.8km az=72.0*
*AUST **09** 08:18:37.1±0.3, 10°.08S×120°.45E, h26km, Error ellipse: s-maj=0.8km s-min=0.6km az=241.0*
*ISCJB **09** 08:18:38.4±0.4, 10°.02S±0°.03×120°.53E±0°.03, h63km±4km, mb4.7/39, Error ellipse: s-maj=5.9km s-min=4.3km az=150.0*
*DJA **09** 08:18:38.2±0.6, 10°S±2°×12°1E±°, h14km±5km, M4.9/38, mB5.4/18, mb5.1/38, MLv5.1/13, Mw(mB)4.8/18*
ISC 09 08:18:37.8±0.3, **10°.02S**±0°.04×**120°.46E**±0°.05, **h39**km±2km, **n176**, σ**1s.74**/199, **mb4.7**/39, **MS3.9**/12, **Sumba region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WSI Waingapu 0.38 335 P Pn 08 18 48.8 +1.9
WSI S Sn 08 18 58.0 +4.5
WSI Waingapu 0.38 335 P Pn 08 18 48.9 +2.0
baz=0.4,SNR=107
WSI S Sn 08 18 50.3 -3.2
baz=0.4,SNR=9.1
MMRI Maumere 2.23 52 P Pn 08 19 13.0 +0.7
MMRI S Sn 08 19 38.2 -0.4
BKSI Bulukumba 4.68 356 P Pn 08 19 48.2 +2.2
BBSI Bau Bau 4.96 25 P Pn 08 19 52.7 +2.8
680nm,1.1s,5μm2.1nm
KAPI Kappang 5.02 352 ePn Pn 08 19 49.2 -1.5
KAPI Sn Sn 08 20 46.1 -1.4
KAPI eSn Sn 08 20 46.4 -1.1
KAPI Kappang 5.02 352 P Pn 08 19 52.7 +2.0
729nm,0.8s,5μm2.0nm
KAPI Kappang 5.02 352 Pn Pn 08 19 51.9 +1.3
36nm,0.3s,baz=186,slow=5.4,SNR=75
KAPI Sn Sn 08 20 46.1 -1.4
baz=355,slow=11,SNR=1.9
KAPI LR LR 08 22 03.1
comp=Z,2μm,20.6s,baz=282,slow=44
KHKI Kahang-Kahang 5.07 289 P Pn 08 19 54.5 +3.2
159nm,1.4s,2μm1.0nm
IGBI Denpasar 5.38 282 P Pn 08 19 58.9 +3.3
235nm,1.1s,69μm1.4nm
SRBI Singaraja 5.53 290 P Pn 08 20 03.0 +5.4
132nm,1.0s,2μm0.7nm
NBBI Negara 5.99 285 P Pn 08 20 08.7 +4.7
192nm,1.1s,3μm1.2nm
SPSI Sidrap Palu 6.05 353 P Pn 08 20 08.2 +3.3
196nm,0.9s,2μm0.7nm
KDI Kendari 6.39 20 P Pn 08 20 12.6 +3.1
259nm,0.8s,2μm0.8nm
TTSI Tana Toraja 6.96 355 P Pn 08 20 23.0 +5.7
256nm,0.9s,2μm0.8nm
GMJI Gumukmas 7.14 283 P Pn 08 20 25.1 +5.3
79nm,0.9s,1μm0.4nm
KBKI Kotabaru 7.92 327 P Pn 08 20 36.7 +6.2
83nm,1.1s
BBKI Banjar Baru 8.58 319 P Pn 08 20 45.2 +5.7
150nm,1.3s,4μm
SJI Sawahan 8.88 284 P Pn 08 20 54.9 +11
PCI Palu 9.08 356 S Sn 08 22 40.5 +13
baz=9.2,SNR=45
LUWI Luwuk 9.21 15 P Pn 08 20 53.0 +4.8
254nm,0.9s,2μm
NLAI Namlea 9.43 45 P Pn 08 20 58.3 +7.2
FITZ Fitzroy Crossi 9.47 149 Pn Pn 08 20 50.7 -1.1
FITZ eSn Sn 08 22 26.7 -10
FITZ Sn Sn 08 22 29.0 -8.1
FITZ Fitzroy Crossi 9.47 149 Pn Pn 08 20 50.7 -1.1
5.1nm,0.3s,baz=342,slow=8.9,SNR=28
FITZ Sn Sn 08 22 29.0 -8.1
23nm,0.3s,baz=200,slow=16,SNR=12
FITZ LR LR 08 25 18.9
comp=Z,597nm,21.2s,baz=312,slow=42
FITZ Fitzroy Crossi 9.47 149 P Pn 08 20 51.3 -0.5
baz=9.5,SNR=5.9
FITZ S Sn 08 22 30.0 -7.1
baz=9.5,SNR=7.0
UGM Wanagama 10.04 281 ePn Pn 08 21 01.3 +1.7
UGM Wanagama 10.04 281 P Pn 08 21 01.8 +2.3
baz=10.0,SNR=7.3
UGM S Sn 08 22 48.4 -2.6
baz=10.0,SNR=5.0
SMKI Samarinda 10.05 341 P Pn 08 21 04.4 +4.7
176nm,1.4s
MRSI Marisa 10.53 8 P Pn 08 21 09.0 +2.7
132nm,1.1s,933nm
MTN Manton Dam 10.83 106 P Pn 08 21 08.8 -1.6
baz=11,SNR=51
MTN S Sn 08 22 59.9 -11
baz=11,SNR=10
MBWA Marble Bar 11.10 184 ePn Pn 08 21 12.9 -1.1
LBMI Labuha 11.66 37 P Pn 08 21 27.8 +6.1
124nm,1.3s,1μm
KDU Kakadu 12.07 104 P Pn 08 21 25.8 -1.6
baz=12,SNR=18
TNTI Ternate 12.73 33 P Pn 08 21 41.7 +5.2
57nm,0.7s
FAKI Fak Fak 13.67 60 P Pn 08 21 49.1 -0.1
36nm,0.8s
GIRL Giralia 13.90 205 P Pn 08 21 51.0 -1.3
baz=14,SNR=18
KSM Kuching 15.25 318 Pn Pn 08 22 11.0 +0.5
20nm,1.0s
KASI Kota Agung 16.43 285 P P 08 22 30.4 +2.4
84nm,1.1s,1μm
KKM Kota Kinabalu 16.51 345 Pn Pn 08 22 26.9 +0.1
86nm,1.6s
KKM Kota Kinabalu 16.51 345 P P 08 22 29.7 +0.8
35nm,1.1s,675nm
KKM Kota Kinabalu 16.51 345 P P 08 22 33.3 +4.3
baz=17,SNR=4.5
MEEK Meekatharra 16.62 186 P Pn 08 22 28.3 +0.3
baz=17,SNR=9.7
MEEK S Sn 08 25 14.2 -18
baz=17,SNR=11
WRA Warramunga Arr 16.63 128 Pn Pn 08 22 24.9 -3.3
WRA Sn Sn 08 25 16.9 -15
WRA Warramunga Arr 16.63 128 Pn Pn 08 22 24.9 -3.3
3.7nm,0.3s,baz=303,slow=14,SNR=19
WRA Sn Sn 08 25 16.9 -15
3.2nm,0.3s,baz=299,slow=24,SNR=7.5
WRAB Tennant Creek 16.64 128 ePn Pn 08 22 26.4 -1.8
59nm,0.7s
LWLI Liwa 17.00 286 P P 08 22 40.1 +5.7
108nm,0.6s
AS31 Alice Springs 18.68 138 eP P 08 22 53.2 +0.4
AS31 eS Sn 08 26 06.8 -15
ASAR Alice Springs 18.68 138 P P 08 22 53.3 +0.5
ASAR S Sn 08 26 10.7 -11
ASAR Alice Springs 18.68 138 P P 08 22 53.3 +0.5
4.7nm,0.3s,baz=320,slow=13,SNR=20
ASAR S Sn 08 26 10.7 -11
1.5nm,0.3s,baz=313,slow=23,SNR=7.1
ASAR LR LR 08 30 46.0
comp=Z,207nm,21.4s,baz=295,slow=39
MORW Morawa 19.40 192 P Pn 08 23 01.7 -0.2
baz=19,SNR=12
MORW S S 08 26 21.6 -16
baz=19,SNR=7.9
KRJI Kerinci 20.45 291 P Pn 08 23 18.2 +3.5
207nm,0.8s
BLDU Ballidu 20.79 189 P P 08 23 16.8 +1.1
baz=21,SNR=11
BLDU S S 08 26 54.8 -11
baz=21,SNR=5.9
QIS Mount Isa 21.21 122 P P 08 23 21.5 +1.1
baz=21,SNR=9.4
KMBL Kambalda 21.28 177 P P 08 23 21.7 +0.6
baz=21,SNR=9.7
KLBR Kellerberrin 21.61 186 P P 08 23 25.4 +0.8
baz=22,SNR=18
KLBR S S 08 27 13.4 -8.5
baz=22,SNR=4.0
FORT Forrest 21.83 162 eP P 08 23 27.8 +0.9
64nm,0.8s
FORT Forrest 21.83 162 P P 08 23 28.1 +1.2
baz=22,SNR=8.5
COEN Coen 22.56 102 eP P 08 23 34.2 -0.6
122nm,0.6s
COEN eS S 08 27 39.6 -0.3
COEN Coen 22.56 102 P P 08 23 34.7 -0.2
baz=23,SNR=8.9
NWAO Narrogin (SRO) 22.99 187 eP P 08 23 39.3 +0.1
24nm,0.6s
NWAO S S 08 27 44.2 -2.8
NWAO Narrogin (SRO) 22.99 187 P P 08 23 39.3 +0.1
23nm,0.5s,baz=14,slow=8.4,SNR=21
NWAO S S 08 27 44.2 -2.8
22nm,0.8s,baz=107,slow=22,SNR=7.1
NWAO LR LR 08 32 24.6
comp=Z,176nm,21.9s,baz=161,slow=36
RKGY Rocky Gully 24.68 187 P P 08 23 57.6 +2.5
baz=25,SNR=10
PSI Prapat 24.95 300 P P 08 23 57.6 -0.3
PSI Prapat 24.95 300 P P 08 23 57.0 -0.9
14nm,1.0s
PSI Prapat 24.95 300 P P 08 23 57.6 -0.3
4.5nm,0.4s,baz=3.3,slow=18,SNR=4.5
PSI LR LR 08 33 53.9
comp=Z,205nm,21.0s,baz=128,slow=37
PSI Prapat 24.95 300 P P 08 23 57.2 -0.7
baz=25,SNR=3.3
GSI Gunungsitoli 25.41 295 S S 08 28 22.6 -3.6
baz=26,SNR=6.3
BBOO Buckleboo 26.86 150 eP P 08 24 15.4 +0.5
513nm,0.8s
BBOO ePcP PcP 08 27 37.8 +1.0
BBOO Buckleboo 26.86 150 P P 08 24 15.5 +0.5
baz=27,SNR=17
QLP Quilpie 27.86 129 P P 08 24 25.6 +1.7
baz=28,SNR=10.0
STKA Stephens Creek 29.26 141 eP P 08 24 35.1 -1.2
6.9nm,1.0s
STKA ePcP PcP 08 27 43.4 +0.8
STKA Stephens Creek 29.26 141 P P 08 24 37.3 +1.0
24nm,0.7s,baz=313,slow=8.9,SNR=12
STKA PcP PcP 08 27 43.5 +0.8
9.1nm,0.8s,baz=356,slow=4.3,SNR=4.2
STKA LR LR 08 38 48.6
comp=Z,127nm,18.0s,baz=218,slow=41
STKA Stephens Creek 29.26 141 P P 08 24 37.4 +1.1
baz=29,SNR=19
RMQ Roma 31.36 125 P P 08 24 57.4 +2.4
baz=31,SNR=6.7
CMSA Cobar Meteorol 31.71 136 P P 08 24 59.7 +1.7
baz=32,SNR=7.3
ARPS Mount Arapiles 32.91 147 P P 08 25 10.1 +1.6
baz=33,SNR=8.8
YNG Young 35.18 138 P P 08 25 30.3 +2.1
baz=35,SNR=26
CMAR Chiang Mai Arr 35.38 323 P P 08 25 29.9 -0.1
CMAR ScP ScP 08 31 43.1 +0.5
CMAR Chiang Mai Arr 35.38 323 P P 08 25 29.9 -0.1
1.3nm,0.4s,baz=143,slow=9.4,SNR=5.6
CMAR ScP ScP 08 31 43.1 +0.5
2.3nm,0.8s,baz=165,slow=3.4,SNR=11
CMAR LR LR 08 40 47.9
comp=Z,74nm,20.6s,baz=156,slow=38
ARMA Armidale 35.40 129 P P 08 25 33.1 +2.8
baz=35,SNR=9.2
TOO Toolangi 35.51 145 P P 08 25 33.4 +2.4
baz=36,SNR=6.1
CNB Canberra Magne 36.42 138 P P 08 25 41.0 +2.1
baz=36,SNR=5.9
MGCD Mangrove Creek 36.43 134 P P 08 25 41.9 +2.9
baz=36,SNR=5.4
GYA Guiyang 38.66 340 P P 08 26 00.0 +2.1
GYA pP pP 08 26 10.8 +1.8
GYA PP PnPn 08 27 31.5 +2.2
GYA S S 08 31 55.0 +2.8
GYA sS sS 08 32 12.0 +1.5
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,4.9s
GYA LR LR
comp=N,480nm,16.4s
GYA LR LR
comp=E,430nm,17.5s
GYA LR LR
comp=Z,490nm,17.3s
KMI Kunming 38.97 334 P P 08 26 02.8 +2.1
KMI pP pP 08 26 14.1 +2.4
KMI sP sP 08 26 17.9 +1.5
KMI PP PnPn 08 27 36.1 +2.9
KMI S S 08 32 00.7 +3.6
KMI sS sS 08 32 18.0 +2.6
KMI pmax pmax
comp=Z,10.0nm,1.2s
KMI LR LR
comp=N,160nm,21.7s
KMI LR LR
comp=E,120nm,19.4s
KMI LR LR
comp=Z,130nm,17.8s
NJ2 Nanjing 41.86 358 eP P 08 26 26.2 +2.0
NJ2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 Chengdu 43.74 339 P P 08 26 39.7 +0.1
CD2 pP pP 08 26 49.6 -1.1
CD2 sP sP 08 26 53.5 -1.9
CD2 PP PP 08 28 23.7 +1.7
CD2 PcP PcP 08 28 26.2 +0.2
CD2 PcS PcS 08 32 17.9 -1.1
CD2 S S 08 33 07.9 +0.5
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,180nm,5.2s
KSAR Wonju Array Be 47.72 8 P P 08 27 07.8 -3.0
KSRS Korea Array 47.74 8 P P 08 27 07.8 -3.1
comp=Z,0.6nm,0.4s,baz=174,slow=3.3,SNR=3.4
LZH Lanzhou 48.46 342 eP P 08 27 19.8 +3.0
LZH pP pP 08 27 27.8 -0.3
LZH sP sP 08 27 32.2 -0.5
LZH pmax pmax
comp=Z,17nm,1.0s
LZH pmax pmax
comp=Z,81nm,5.3s
LZH LR LR
comp=N,260nm,8.7s
LZH LR LR
comp=E,610nm,9.8s
LZH LR LR
comp=Z,430nm,11.0s
ODAN Odare 48.73 320 eP P 08 27 17.3 -1.8
TAPN Taplejung 48.87 320 eP P 08 27 17.3 -2.9
MAT Matsushiro 49.23 19 P P 08 27 18.7 -3.8
MJAR Matsushiro Arr 49.23 19 P P 08 27 18.6 -3.9
MJAR ScP ScP 08 32 36.3 -1.2
MJAR Matsushiro Arr 49.23 19 P P 08 27 18.6 -3.9
comp=Z,1.8nm,0.5s,baz=196,slow=9.2,SNR=12
MJAR ScP ScP 08 32 36.3 -1.2
comp=Z,0.2nm,0.3s,baz=227,slow=7.1,SNR=4.8
RAMN Ramite 49.30 319 eP P 08 27 22.7 -0.8
comp=Z,28nm,0.5s
GUN Gumba 50.42 319 eP P 08 27 29.8 -2.3
PKI Pulchoki 50.49 319 eP P 08 27 30.6 -2.0
comp=Z,16nm,0.5s
HHC Hu-ho-hao-te 51.28 351 eP P 08 27 37.7 -0.3
HHC sP sP 08 27 51.6 -2.4
HHC PcP PcP 08 28 52.3 -0.4
HHC PP PP 08 29 36.6 +1.2
HHC ScP ScP 08 32 44.0 -2.3
HHC PcS PcS 08 32 48.4 -2.1
HHC S S 08 34 54.5 +0.2
HHC ScS ScS 08 37 22.5 -3.0
HHC pmax pmax
comp=Z,34nm,0.7s
HHC pmax pmax
comp=Z,130nm,6.7s
HHC LR LR
comp=N,260nm,16.4s
HHC LR LR
comp=E,250nm,16.7s
HHC LR LR
comp=Z,230nm,16.6s
DANN Dangsing 52.09 318 eP P 08 27 42.6 -2.0
comp=Z,27nm,0.4s
GTA Gaotai 52.79 340 eP P 08 27 49.4 +0.1
GTA pP pP 08 27 59.5 -1.3
GTA sP sP 08 28 03.4 -1.9
GTA PcP PcP 08 28 57.7 -0.8
GTA S S 08 35 15.3 +0.1
GTA SS SS 08 38 54.2 -0.4
GTA pmax pmax
comp=Z,8.0nm,0.9s
GTA pmax pmax
comp=Z,86nm,8.1s
GTA LR LR
comp=N,89nm,15.4s
GTA LR LR
comp=E,140nm,16.9s
GTA LR LR
comp=Z,110nm,17.8s
CN2 Changchun 53.76 4 eP P 08 27 58.2 +2.0
USRK Ussuriysk Arra 54.97 10 P P 08 28 01.6 -3.3
comp=Z,2.4nm,0.5s,baz=191,slow=5.6,SNR=7.6
RPZ Rata Peaks 55.08 137 P P 08 28 07.0 +1.1
RPZ Rata Peaks 55.08 137 P P 08 28 07.0 +1.1
comp=Z,23nm,0.8s,baz=342,slow=11,SNR=8.2
ASAJ Asahikawa 57.51 19 P P 08 28 20.5 -2.6
ASAJ Asahikawa 57.51 19 P P 08 28 20.5 -2.6
comp=Z,3.4nm,0.5s,baz=252,slow=11,SNR=8.2
ULN Ulaanbaatar 58.85 349 eP P 08 28 31.4 -1.2
comp=Z,5.8nm,0.4s
SONM Songino Array 58.94 349 P P 08 28 32.2 -1.0
SONM ScP ScP 08 33 18.6 -1.2
SONM Songino Array 58.94 349 P P 08 28 32.2 -1.0
comp=Z,9.6nm,0.5s,baz=166,slow=8.1,SNR=87
SONM ScP ScP 08 33 18.6 -1.2
comp=Z,0.5nm,0.8s,baz=157,slow=4.7,SNR=3.0
WMQ Urumqi 61.30 333 P P 08 28 51.3 +1.9
WMQ pmax pmax
comp=Z,15nm,1.0s
TLY Talaya 63.14 348 eP P 08 29 00.4 -1.1
comp=Z,12nm,1.1s
KSH Kashi 64.28 323 eP P 08 29 08.5 -0.9
KSH pP pP 08 29 18.1 -3.0
KSH sP sP 08 29 22.3 -3.3
KSH PcP PcP 08 29 42.4 -1.5
KSH PP PP 08 31 32.1 +0.8
KSH ScP 08 33 40.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH				PcS		08 33 45.1	
KSH				S	**S**	**08 37 43.1**	**-1.6**
KSH				sS	**sS**	**08 38 00.1**	**-3.9**
KSH				ScS	**SKSac**	**08 38 56.0**	**-4.7**
KSH				SS	**SS**	**08 41 54.3**	**-0.9**
KSH				pmax	pmax		
	comp=Z,16nm,0.7s						
KSH				pmax	pmax		
	comp=Z,260nm,5.8s						
KSH				LR	LR		
	comp=N,420nm,5.8s						
KSH				LR	LR		
	comp=E,250nm,6.2s						
KSH				LR	LR		
	comp=Z,360nm,7.4s						
KBL	**Kabul**	**65.83**	**315**	P	**P**	**08 29 18.3**	**-1.4**
	baz=66,SNR=4.4						
MK31	**Makanchi Array**	**66.02**	**332**	*e*P	**P**	**08 29 19.1**	**-1.4**
MKAR	**Makanchi Array**	**66.02**	**332**	P	**P**	**08 29 19.1**	**-1.3**
MKAR	**Makanchi Array**	**66.02**	**332**	P	**P**	**08 29 19.1**	**-1.3**
	comp=Z,5.1nm,0.5s,baz=145,slow=5.0,SNR=78						
AAK	**Ala-Archa**	**67.13**	**325**	P	**P**	**08 29 26.7**	**-1.1**
AAK	**Ala-Archa**	**67.13**	**325**	P	**P**	**08 29 26.7**	**-1.1**
	comp=Z,1.3nm,0.4s,baz=105,slow=4.9,SNR=6.8						
PETK	**Petropavlovsk-**	**70.44**	**23**	P	**P**	**08 29 46.9**	**-1.1**
PETK	**Petropavlovsk-**	**70.44**	**23**	P	**P**	**08 29 46.9**	**-1.1**
	comp=Z,1.8nm,0.5s,baz=216,slow=5.3,SNR=15						
ZALV	**Zalesovo Beam**	**70.50**	**339**	P	**P**	**08 29 45.2**	**-3.1**
ZALV	**Zalesovo Beam**	**70.50**	**339**	P	**P**	**08 29 45.2**	**-3.1**
	comp=Z,6.0nm,0.4s,baz=129,slow=4.5,SNR=14						
KURBB	**Kurchatov Arra**	**70.52**	**333**	P	**P**	**08 29 47.4**	**-1.1**
	comp=Z,3.5nm,0.5s,baz=140,slow=5.7,SNR=36						
KURK	**Kurchatov**	**70.55**	**333**	*e*P	**P**	**08 29 47.4**	**-1.3**
	comp=Z,9.2nm,1.1s						
VNDA	**Vanda**	**70.76**	**171**	P	**P**	**08 29 50.8**	**+1.1**
VNDA	**Vanda**	**70.76**	**171**	P	**P**	**08 29 50.8**	**+1.1**
	comp=Z,3.4nm,0.8s,baz=302,slow=5.6,SNR=9.9						
BVAR	**Borovoye Array**	**75.87**	**331**	P	**P**	**08 30 18.7**	**-1.4**
BVAR	**Borovoye Array**	**75.87**	**331**	P	**P**	**08 30 18.7**	**-1.4**
	comp=Z,2.5nm,0.7s,baz=127,slow=6.6,SNR=8.0						
BVAR				LR	LR	09 06 19.3	
	comp=Z,74nm,20.5s,baz=256,slow=38						
ABKAR	**Akbulak array**	**79.22**	**325**	*e*P	**P**	**08 30 37.6**	**-1.2**
	comp=Z,2.0nm,0.7s						
QSPA	**South Pole Qui**	**79.98**	**180**	P	**P**	**08 30 44.4**	**+1.5**
QSPA	**South Pole Qui**	**79.98**	**180**	P	**P**	**08 30 44.4**	**+1.5**
	comp=Z,4.1nm,0.6s,baz=324,slow=2.0,SNR=13						
AKTO	**Aktyubinsk**	**80.88**	**325**	P	**P**	**08 30 46.1**	**-1.7**
AKTO	**Aktyubinsk**	**80.88**	**325**	P	**P**	**08 30 46.1**	**-1.7**
	comp=Z,2.5nm,0.6s,baz=99,slow=11,SNR=7.8						
KMBO	**Kilima Mbogo**	**83.12**	**270**	P	**P**	**08 31 00.9**	**+0.2**
KMBO	**Kilima Mbogo**	**83.12**	**270**	P	**P**	**08 31 00.9**	**+0.2**
	comp=Z,2.2nm,0.9s,baz=216,slow=22,SNR=4.8						
KBZ	**Khabaz**	**88.01**	**315**	P	**P**	**08 31 24.6**	**+0.6**
KBZ	**Khabaz**	**88.01**	**315**	P	**P**	**08 31 24.6**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=48,slow=14,SNR=4.5						
MBAR	**Mbarara**	**89.62**	**269**	LR	LR	09 05 57.8	
	comp=Z,74nm,19.8s,baz=227,slow=32						
SNAA	**Sanae**	**90.41**	**195**	*e*P	**P**	**08 31 36.8**	**+1.9**
SNAA	**Sanae**	**90.41**	**195**	P	**P**	**08 31 36.7**	**+1.9**
SNAA	**Sanae**	**90.41**	**195**	P	**P**	**08 31 36.7**	**+1.9**
	comp=Z,1.4nm,0.7s,baz=114,slow=2.3,SNR=17						
MMAI	**Mount Meron Ar**	**91.28**	**303**	P	**P**	**08 31 41.6**	**+1.9**
MMAI	**Mount Meron Ar**	**91.28**	**303**	P	**P**	**08 31 41.6**	**+1.9**
	comp=Z,2.1nm,0.5s,baz=79,slow=7.5,SNR=4.1						
VNA2	**Neumayer--Watz**	**92.03**	**195**	*e*P	**P**	**08 31 44.5**	**+2.1**
VNA2	**Neumayer--Watz**	**92.03**	**195**	*e*	pP	08 31 55.5	+1.0
VNA2	**Neumayer--Watz**	**92.03**	**195**	*e*PP	PP	08 35 21.2	-0.6
BRTR	**Keskin Array B**	**93.89**	**309**	LR	LR	09 15 36.2	
	comp=Z,28nm,21.8s,baz=324,slow=36						
YKA	**Yellowknife Ar**	**114.52**	**25**	PKP	PKPdf	08 37 12.9	-0.4
YKA	**Yellowknife Ar**	**114.52**	**25**	PKP	PKPdf	08 37 12.9	-0.4
	comp=Z,0.8nm,0.7s,baz=298,slow=1.9,SNR=17						
TORD	**Torodi Ar. Bea**	**120.05**	**279**	PKP	**PKPdf**	**08 37 25.9**	**+0.5**
TORD	**Torodi Ar. Bea**	**120.05**	**279**	PKP	**PKPdf**	**08 37 25.9**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=22,slow=2.2,SNR=9.3						
NVAR	**Mina Array Bea**	**120.54**	**51**	PKP	**PKPdf**	**08 37 27.0**	**+1.0**
NVAR	**Mina Array Bea**	**120.54**	**51**	PKP	**PKPdf**	**08 37 27.0**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=342,slow=2.4,SNR=3.6						
PDAR	**Pinedale Array**	**125.66**	**44**	PKP	**PKPdf**	**08 37 36.0**	**+0.2**
PDAR	**Pinedale Array**	**125.66**	**44**	PKP	**PKPdf**	**08 37 35.9**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=278,slow=6.3,SNR=2.9						
DBIC	**Dimbokro**	**125.84**	**271**	PKP	**PKPdf**	**08 37 37.6**	**+1.1**
DBIC	**Dimbokro**	**125.84**	**271**	PKP	**PKPdf**	**08 37 37.6**	**+1.1**
	comp=Z,3.1nm,0.7s,baz=169,slow=5.2,SNR=4.2						
ULM	**Lac du Bonnet**	**129.93**	**30**	SKPbc	SKPab	08 40 59.5	-3.0
	comp=Z,2.3nm,0.7s,baz=333,slow=2.3,SNR=3.4						
TXAR	**Lajitas Array**	**134.55**	**59**	SKPbc	**SKPbc**	**08 41 18.6**	**-1.2**
TXAR	**Lajitas Array**	**134.55**	**59**	SKPbc	**SKPbc**	**08 41 18.6**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=270,slow=1.3,SNR=7.0						
SCHQ	**Schefferville**	**134.93**	**6**	SKPbc	**SKPbc**	**08 41 21.0**	**+0.8**
SCHQ	**Schefferville**	**134.93**	**6**	SKPbc	**SKPbc**	**08 41 21.0**	**+0.8**
	comp=Z,5.4nm,1.0s,baz=192,slow=5.3,SNR=3.7						
CPUP	**Villa Florida**	**143.80**	**183**	PKP	PKPbc	08 38 08.2	+1.1
CPUP	**Villa Florida**	**143.80**	**183**	PKP	PKPbc	08 38 08.2	+1.1
	comp=Z,2.8nm,0.7s,baz=124,slow=0.8,SNR=10						
TZTN	**Tazewell**	**145.80**	**36**	*e*PKPbc	**PKPdf**	**08 38 12.8**	**+0.1**
LRAL	**Lakeview Retre**	**145.89**	**44**	*e*PKPbc	**PKPbc**	**08 38 13.7**	**+0.1**
TKL	**Tuckaleechee C**	**146.28**	**37**	*e*PKPbc	**PKPbc**	**08 38 14.6**	**-0.1**
RCBR	**Riachuelo**	**151.67**	**237**	PKPbc	**PKPbc**	**08 38 30.9**	**+1.6**
RCBR	**Riachuelo**	**151.67**	**237**	PKPbc	**PKPbc**	**08 38 30.9**	**+1.6**
	comp=Z,4.3nm,0.9s,baz=24,slow=4.3,SNR=4.0						
BDFB	**Brasilia**	**152.06**	**204**	PKPbc	**PKPbc**	**08 38 31.5**	**+1.3**
BDFB	**Brasilia**	**152.06**	**204**	PKPbc	**PKPbc**	**08 38 31.5**	**+1.3**
	comp=Z,2.3nm,0.5s,baz=330,slow=2.6,SNR=5.0						
LPAZ	**La Paz**	**152.51**	**162**	PKPbc	**PKPbc**	**08 38 33.8**	**+2.0**
LPAZ				PKPab	**PKPab**	**08 38 42.9**	**+1.0**
LPAZ	**La Paz**	**152.51**	**162**	PKPbc	**PKPbc**	**08 38 33.8**	**+2.0**
	comp=Z,6.1nm,0.8s,baz=263,slow=1.1,SNR=15						
LPAZ				PKPab	**PKPab**	**08 38 42.9**	**+1.0**
	comp=Z,7.8nm,0.8s,baz=183,slow=2.5,SNR=13						
SIV	**San Ignacio**	**154.11**	**177**	PKPbc	**PKPbc**	**08 38 35.8**	**+1.3**
SIV				PKPab	**PKPab**	**08 38 48.1**	**+0.2**
SIV	**San Ignacio**	**154.11**	**177**	PKPbc	**PKPbc**	**08 38 35.8**	**+1.3**
	comp=Z,2.1nm,0.9s,baz=171,slow=4.3,SNR=4.4						
SIV				PKPab	**PKPab**	**08 38 48.1**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=218,slow=5.5,SNR=4.5						

*CSEM **09** 08:20:50.3, 42°.34N×13°.36E, h10km, MD1.9/7, After ROM*

ROM 09 08:20:50.3±0.1**, 42°.34N×13°.36E, h10km, Md1.9**/7**, Ml1.5**/3**, 4C-2D, Error ellipse: s-maj=1.6km s-min=1.1km az=96.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**74**	⇓*i*Pg	Pg	08 20 52.9	+0.6
AQU				Sg	Sg	08 20 54.3	+0.6
	1μm,0.1s						
AQU	**L'Aquila**	**0.04**	**74**	⇓*i*Pg	Pg	08 20 52.9	+0.6
AQU				Sg	Sg	08 20 54.3	+0.6
	1μm,0.1s						
FIAM	**Fiamignano**	**0.19**	**247**	⇑*i*Pg	Pg	08 20 55.2	+0.7
FIAM				Sg	Sg	08 20 58.2	+0.8
	78nm,0.3s						
FIAM	**Fiamignano**	**0.19**	**247**	⇑*i*Pg	Pg	08 20 55.2	+0.7
FIAM				Sg	Sg	08 20 58.2	+0.8
	78nm,0.3s						
CAMP	**Campotosto**	**0.20**	**12**	⇑*i*Pg	Pg	08 20 55.0	+0.3
CAMP				Sg	Sg	08 20 58.2	+0.6
	61nm,0.4s						
CAMP	**Campotosto**	**0.20**	**12**	⇑*i*Pg	Pg	08 20 55.0	+0.3
CAMP				Sg	Sg	08 20 58.2	+0.6
	61nm,0.4s						
PTQR	**Pietraquaria**	**0.32**	**174**	Pg	Pg	08 20 57.3	+0.4
PTQR				Sg	Sb	08 21 02.5	-1.2
	14nm,0.2s						
PTQR	**Pietraquaria**	**0.32**	**174**	Pg	Pg	08 20 57.3	+0.4
PTQR				Sg	Sb	08 21 02.5	-1.2
	14nm,0.2s						
LNSS	**Leonessa**	**0.35**	**318**	Pg	Pb	08 20 58.3	-0.5
LNSS				Sg	Sb	08 21 03.5	-1.0
	47nm,0.3s						
LNSS	**Leonessa**	**0.35**	**318**	Pg	Pb	08 20 58.3	-0.5
LNSS				Sg	Sb	08 21 03.5	-1.0
	47nm,0.3s						
NRCA	**Norcia**	**0.52**	**340**	Pg	Pg	08 21 00.6	0.0
NRCA				Sg	Sb	08 21 08.6	-0.8
	10.0nm,0.1s						
NRCA	**Norcia**	**0.52**	**340**	Pg	Pg	08 21 00.6	0.0
NRCA				Sg	Sb	08 21 08.6	-0.8
	10.0nm,0.1s						

*CSEM **09** 08:21:13.6, 37°.75N×26°.35E, h31km, MD3.5, After ATH*

ATH 09 08:21:13.6, 37°.75N×26°.35E, h31km, MD3.5/5**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.68**	**340**	*e*P	Sn	08 21 39.2	+2.4
PRK	**Paraskevi**	**1.50**	**358**	*e*PB	Pb	08 21 39.8	-0.9
PRK	**Paraskevi**	**1.50**	**358**	*e*Pb	Pb	08 21 39.8	-0.9
LIA	**Limnos Island**	**2.33**	**337**	*e*PN	Pn	08 21 49.9	+0.1
LIA	**Limnos Island**	**2.33**	**337**	*e*Pn	Pn	08 21 49.9	+0.1
ALN	**Alexandroupoli**	**3.15**	**356**	*e*P	Pb	08 22 09.8	+0.9
AGG	**Agios Georgios**	**3.40**	**293**	*e*P	Sb	08 22 51.4	-2.9
RDO	**Rodhopi**	**3.45**	**350**	*e*PB	Pb	08 22 13.2	-0.8
RDO	**Rodhopi**	**3.45**	**350**	*e*P	Pb	08 22 17.6	+3.6
RDO	**Rodhopi**	**3.45**	**350**	*e*Pb	Pb	08 22 13.2	-0.8

*IDC **09** 08:40:07.6±0.8, 35°.68N×92°.65E, h0km, mb3.6/7, mb1 3.7/11, mb1mx3.6/29, mbtmp3.6/11, ML3.7/5, MS3.8/4, Ms1 3.8/4, ms1mx2.9/45, Error ellipse: s-maj=34.4km s-min=16.5km az=51.0*

*BJI **09** 08:40:09.6, 35°.91N×92°.82E, h10km, mb4.5/6, ML3.8/3, Ms3.8/3, Ms7 3.6/2*

*ISCJB **09** 08:40:10.6±0.6, 35°.68N±0°.07×92°.58E±0°.07, h33km, mb3.4/8, MS3.9/3, Error ellipse: s-maj=10.7km s-min=6.9km az=35.2*

ISC 09 08:40:12.7±0.8**, 35°.63N**±0°.08×**92°.49E**±0°.07**, h35km, n20,** σ**2s02**/19**, mb3.4**/8**, MS3.9**/3**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	**Gaotai**	**6.94**	**55**	*e*P	**Pn**	**08 41 54.1**	**+2.1**
GTA				pP		08 41 57.7	
GTA				sP		08 42 00.2	
GTA				S	Sn	08 43 19.2	+9.5
GTA				sS		08 43 24.7	
GTA				pmax	pmax		
	comp=Z,7.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,80nm,4.0s						
GTA				LR	LR		
	comp=N,480nm,13.3s						
GTA				LR	LR		
	comp=E,700nm,11.9s						
GTA				LR	LR		
	comp=Z,790nm,11.9s						
WMQ	**Urumqi**	**8.98**	**337**	P	**Pn**	**08 42 20.0**	**+0.1**
WMQ				S	**Sn**	**08 44 02.0**	**+2.2**
LZH	**Lanzhou**	**9.23**	**84**	*e*P	**Pn**	**08 42 23.0**	**-0.5**
LZH				pP		08 42 26.5	
LZH				sP		08 42 28.4	
LZH				*e*S	**Sn**	**08 44 04.6**	**-1.5**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				LR	LR		
	comp=N,300nm,6.1s						
LZH				LR	LR		
	comp=E,610nm,9.8s						
LZH				LR	LR		
	comp=Z,430nm,10.7s						
MKAR	**Makanchi Array**	**13.53**	**329**	Pn	Pn	08 43 18.4	-3.6
	comp=Z,0.5nm,0.3s,baz=138,slow=14,SNR=22						
MKAR				Sn	**Sn**	**08 45 47.1**	**-4.0**
	comp=Z,0.1nm,0.3s,baz=144,slow=23,SNR=3.2						
AAK	**Ala-Archa**	**15.61**	**302**	Pn	**Pn**	**08 43 48.1**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=342,slow=19,SNR=2.0						
AAK				LR	LR	08 50 50.5	
	comp=Z,130nm,18.9s,baz=331,slow=41						
SONM	**Songino Array**	**15.98**	**36**	Pn	**Pn**	**08 43 53.4**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=228,slow=12,SNR=5.2						
SONM				Lg	Lg	08 48 24.6	
	comp=Z,0.2nm,0.3s,baz=206,slow=39,SNR=4.9						
CMAR	**Chiang Mai Arr**	**18.03**	**160**	P	**Pn**	**08 44 20.6**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=332,slow=12,SNR=4.5						
KURBB	**Kurchatov Arra**	**18.08**	**330**	P	**Pn**	**08 44 17.7**	**-3.2**
	comp=Z,0.0nm,0.3s,baz=134,slow=12,SNR=18						
ZALV	**Zalesovo Beam**	**19.09**	**346**	P	**P**	**08 44 29.7**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=173,slow=13,SNR=3.3						
BVAR	**Borovoye Array**	**23.35**	**325**	P	**P**	**08 45 17.7**	**0.0**
	comp=Z,1.2nm,0.8s,baz=128,slow=9.5,SNR=6.1						
AKTO	**Aktyubinsk**	**28.92**	**312**	P	**P**	**08 46 08.2**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=130,slow=16,SNR=2.0						
USRK	**Ussuriysk Arra**	**31.24**	**62**	LR	LR	09 00 05.7	
	comp=Z,146nm,18.4s,baz=253,slow=38						
ASAJ	**Asahikawa**	**38.86**	**62**	LR	LR	09 04 40.3	
	comp=Z,151nm,18.2s,baz=133,slow=38						
BRTR	**Keskin Array B**	**46.04**	**294**	P	**P**	**08 48 34.0**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=56,slow=8.9,SNR=2.7						
WRA	**Warramunga Arr**	**68.02**	**137**	P	**P**	**08 51 09.5**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=328,slow=6.1,SNR=3.2						
ILAR	**Eielson Array**	**69.75**	**23**	P	**P**	**08 51 21.1**	**+2.3**
	comp=Z,0.3nm,0.8s,baz=279,slow=4.3,SNR=4.2						
ASAR	**Alice Springs**	**70.81**	**140**	P	**P**	**08 51 23.9**	**-1.9**
	comp=Z,0.3nm,0.8s,baz=347,slow=7.6,SNR=2.5						
HNR	**Honiara**	**77.66**	**111**	LR	LR	09 25 32.8	
	comp=Z,129nm,18.5s,baz=126,slow=35						
YKA	**Yellowknife Ar**	**79.81**	**12**	P	**P**	**08 52 17.6**	**+0.6**
	comp=Z,0.2nm,0.9s,baz=348,slow=5.1,SNR=4.0						
TORD	**Torodi Ar. Bea**	**83.11**	**281**	P	**P**	**08 52 37.3**	**+2.0**
	comp=Z,0.2nm,0.7s,baz=47,slow=2.9,SNR=2.1						

*BJI **09** 08:44:20.9, 44°.30N×129°.40W, h10km, Ms4.7/1, Ms7 4.5/1*

*IDC **09** 08:44:21.7±1.1, 44°.24N×129°.08W, h0km, mb3.8/9, mb1 4.1/12, mb1mx3.9/32, mbtmp3.8/12, ML3.6/4, MS3.5/14, Ms1 3.5/14, ms1mx3.3/46, Error ellipse: s-maj=27.8km s-min=13.0km az=39.0*

*ISCJB **09** 08:44:23.1±0.4, 44°.34N±0°.02×129°.20W±0°.05, h13km, mb4.0/12, MS3.6/10, Error ellipse: s-maj=4.8km s-min=3.4km az=179.0*

*NEIC **09** 08:44:23.9±0.6, 44°.31N×129°.31W, h10km, mb4.2/13, Error ellipse: s-maj=8.0km s-min=5.4km az=62.0*

ISC 09 08:44:23.5±0.6**, 44°.28N**±0°.05×**129°.28W**±0°.06**, h13km, n370,** σ**1s24**/366**, mb4.0**/12**, MS3.6**/10**, 110C-132D, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COR	**Corvallis**	**4.29**	**84**	*e*Pn	**Pn**	**08 45 27.8**	**-0.7**
COR				*e*Sn	**Sn**	**08 46 17.8**	**-0.5**
KMOR	**Kings Mountain**	**4.32**	**70**	P	**Pn**	**08 45 28.0**	**-1.0**
F03A	**Seaside**	**4.37**	**66**	P	**Pn**	**08 45 29.2**	**-0.4**
NLWA	**Neilton Lookou**	**4.89**	**49**	*e*Pn	**Pn**	**08 45 36.4**	**-0.4**
NLWA				*e*Sn	**Sn**	**08 46 32.4**	**-0.9**
HUMO	**Hull Mountain**	**4.89**	**108**	*e*Pn	**Pn**	**08 45 35.0**	**-1.9**
HUMO				*e*Sn	**Sn**	**08 46 29.4**	**-3.9**
BROR	**Big Rock Looko**	**4.90**	**88**	P	**Pn**	**08 45 36.4**	**-0.4**
OSR	**Olympics--Salm**	**4.91**	**47**	P	**Pn**	**08 45 36.8**	**-0.4**
OOW	**Octopus West**	**4.95**	**44**	P	**Pn**	**08 45 37.6**	**0.0**
RVW	**Rose Valley**	**4.98**	**66**	P	**Pn**	**08 45 37.7**	**-0.2**
F04A	**Amboy**	**5.13**	**69**	P	**Pn**	**08 45 40.0**	**0.0**
FL2	**Flat Top 2**	**5.25**	**66**	P	**Pn**	**08 45 42.0**	**+0.1**
MTMW	**Mount Mitchell**	**5.29**	**68**	P	**Pn**	**08 45 42.4**	**+0.1**
YBH	**Yreka Blue Hor**	**5.45**	**116**	*e*Pn	**Pn**	**08 45 46.0**	**+1.5**
YBH				Sn	**Sn**	**08 46 44.3**	**-2.7**
YBH	**Yreka Blue Hor**	**5.45**	**116**	Pn	**Pn**	**08 45 42.5**	**-2.0**
	0.2nm,0.3s,baz=318,slow=13,SNR=18						
YBH				Sn	**Sn**	**08 46 44.3**	**-2.7**
	0.2nm,0.3s,baz=245,slow=11,SNR=2.8						
ASR	**Mount Adams--S**	**5.74**	**68**	P	**Pn**	**08 45 49.0**	**+0.5**
LON	**Longmire**	**5.80**	**62**	*e*Pn	**Pn**	**08 45 49.3**	**0.0**
LON				*e*Sn	**Sn**	**08 46 57.0**	**+1.4**
PGC	**Sidney**	**5.94**	**41**	*e*Pn	**Pn**	**08 45 50.9**	**-0.2**
PGC				*e*Sn	**Sn**	**08 46 54.3**	**-4.6**
WDC	**Whiskeytown Da**	**6.20**	**124**	*e*Pn	**Pn**	**08 45 56.7**	**+1.9**
MOD	**Modoc**	**6.99**	**107**	*e*Pn	**Pn**	**08 46 08.0**	**+2.4**
HOPS	**Hopland**	**7.03**	**137**	*e*Pn	**Pn**	**08 46 04.5**	**-1.7**
HAWA	**Hanford**	**7.18**	**69**	*e*Pn	**Pn**	**08 46 09.2**	**+0.9**
BBB	**Bella Bella**	**7.95**	**5**	Pn	Pn	08 46 22.4	+3.8
BBB	**Bella Bella**	**7.95**	**5**	Pn	Pn	08 46 22.4	+3.8
	0.5nm,0.3s,baz=163,slow=11,SNR=9.0						
BBB				LR	LR	08 48 32.4	
	comp=Z,108nm,20.4s,baz=68,slow=31						
BMO	**Blue Mountains**	**8.57**	**82**	*e*Pn	**Pn**	**08 46 28.0**	**+0.7**
CMB	**Columbia Colle**	**9.15**	**130**	*e*Pn	**Pn**	**08 46 36.0**	**+0.7**
NEW	**Newport**	**9.31**	**60**	*e*Pn	**Pn**	**08 46 37.4**	**0.0**
NEW	**Newport**	**9.31**	**60**	⇓P	**Pn**	**08 46 37.3**	**-0.2**
	baz=9.3,SNR=10.0						
NEW	**Newport**	**9.31**	**60**	Pn	**Pn**	**08 46 36.3**	**-1.1**
	0.4nm,0.3s,baz=240,slow=13,SNR=19						
NEW				LR	LR	08 50 05.4	
	comp=Z,551nm,20.4s,baz=255,slow=37						
C11A	**Tepee Creek (N**	**9.72**	**64**	⇑P	**Pn**	**08 46 42.8**	**-0.3**
	baz=9.7						
MFID	**Camas Ranch**	**9.76**	**90**	*e*Pn	**Pn**	**08 46 45.8**	**+2.2**
MFID	**Camas Ranch**	**9.76**	**90**	⇑P	**Pn**	**08 46 44.9**	**+1.3**
	baz=9.8						
G12A	**Big Creek, Yel**	**9.97**	**80**	⇓P	**Pn**	**08 46 47.1**	**+0.5**
	baz=10.0						
F12A	**Elk City**	**10.04**	**77**	⇓P	**Pn**	**08 46 49.7**	**+2.2**
	baz=10.0,SNR=12						
NVAR	**Mina Array Bea**	**10.11**	**122**	Pn	**Pn**	**08 46 49.2**	**+0.7**
NVAR	**Mina Array Bea**	**10.11**	**122**	Pn	**Pn**	**08 46 49.2**	**+0.7**
	0.2nm,0.3s,baz=282,slow=13,SNR=14						
NVAR				LR	LR	08 50 32.0	
	comp=Z,274nm,18.4s,baz=57,slow=37						
D12A	**Red Ives Fores**	**10.13**	**69**	⇑P	**Pn**	**08 46 50.7**	**+2.0**
	baz=10						
I12A	**Atlanta**	**10.20**	**88**	⇓P	**Pn**	**08 46 51.3**	**+1.6**
	baz=10						
H12A	**Diamond D Ranc**	**10.32**	**83**	⇓P	**Pn**	**08 46 54.0**	**+2.6**
	baz=10,SNR=15						
B12A	**Libby**	**10.34**	**61**	⇑P	**Pn**	**08 46 52.5**	**+0.9**
	baz=10						
A12A	**Yaak River Ran**	**10.46**	**59**	⇑P	**Pn**	**08 46 54.7**	**+1.5**
	baz=10						
BSMT	**Bassoo Peak**	**10.68**	**65**	*e*Pn	**Pn**	**08 46 57.1**	**+0.8**
F13A	**Darby**	**10.69**	**77**	⇓P	**Pn**	**08 46 57.9**	**+1.6**
	baz=11,SNR=14						
D13A	**Huson**	**10.74**	**70**	⇑P	**Pn**	**08 46 57.7**	**+0.6**
	baz=11						
G13A	**Cobalt**	**10.74**	**80**	⇓P	**Pn**	**08 46 58.6**	**+1.4**
	baz=11,SNR=19						
HLID	**Hailey**	**10.75**	**89**	⇓P	**Pn**	**08 46 59.8**	**+2.6**
	baz=11,SNR=46						
H13A	**Challis**	**10.75**	**83**	⇑P	**Pn**	**08 46 59.7**	**+2.4**
	baz=11,SNR=16						
C13A	**Hot Springs**	**10.78**	**66**	⇓P	**Pn**	**08 46 59.0**	**+1.4**
	baz=11						
E13A	**Victor**	**10.84**	**73**	⇑P	**Pn**	**08 46 59.0**	**+0.6**
	baz=11,SNR=11						
I13A	**Wildhorse Cree**	**10.91**	**87**	⇓P	**Pn**	**08 47 00.8**	**+1.3**
	baz=11						
ELK	**Elko**	**10.95**	**104**	*e*Pn	**Pn**	**08 47 02.9**	**+2.9**
J13A	**Cove Ranch, Pi**	**10.95**	**89**	⇓P	Pn	08 47 03.2	+3.2
	baz=11,SNR=27						
JTMT	**Jette**	**10.99**	**66**	*e*Pn	**Pn**	**08 47 01.4**	**+0.9**
BLMT	**Blacktail Moun**	**11.00**	**65**	*e*Pn	**Pn**	**08 47 01.3**	**+0.6**
B13A	**Whitefish**	**11.03**	**63**	⇓P	**Pn**	**08 47 01.4**	**+0.5**
	baz=11						
MSO	**Missoula**	**11.05**	**71**	*e*Pn	**Pn**	**08 47 01.8**	**+0.4**
MSO	**Missoula**	**11.05**	**71**	⇑P	**Pn**	**08 47 01.4**	**+0.1**
	baz=11,SNR=12						
SWMT	**Swartz Lake**	**11.12**	**68**	*e*Pn	**Pn**	**08 47 03.7**	**+1.3**
YBMT	**Yellow Bay**	**11.19**	**66**	*e*Pn	Pn	08 47 00.1	-3.2
A13A	**Flathead Natio**	**11.23**	**60**	⇓P	**Pn**	**08 47 04.2**	**+0.4**
	baz=11						
G14A	**Jackson**	**11.29**	**80**	⇓P	**Pn**	**08 47 05.6**	**+0.9**
	baz=11,SNR=9.7						
E14A	**Clinton**	**11.31**	**74**	⇑P	**Pn**	**08 47 05.4**	**+0.4**
	baz=11						
C14A	**Swan Lake**	**11.35**	**67**	⇓P	**Pn**	**08 47 05.2**	**-0.2**
	baz=11						
F14A	**Wisdom**	**11.36**	**77**	⇑P	**Pn**	**08 47 07.5**	**+1.9**
	baz=11,SNR=8.5						
H14A	**Leadore**	**11.38**	**83**	⇑P	**Pn**	**08 47 06.7**	**+0.8**
	baz=11,SNR=7.8						
D14A	**Greenough**	**11.38**	**70**	⇑P	**Pn**	**08 47 05.9**	**0.0**
	baz=11						
I14A	**Mackay**	**11.39**	**86**	⇓P	**Pn**	**08 47 08.0**	**+2.0**
	baz=11,SNR=10.0						
SLMT	**Seeley Lake**	**11.42**	**69**	*e*Pn	**Pn**	**08 47 06.5**	**+0.1**
J14A	**Carey**	**11.43**	**89**	⇓P	**Pn**	**08 47 09.5**	**+2.9**
	baz=11						
CHMT	**Chamberlain Mo**	**11.53**	**71**	*e*Pn	**Pn**	**08 47 10.3**	**+2.3**
WALA	**Waterton Lakes**	**11.58**	**60**	*e*Pn	**Pn**	**08 47 09.4**	**+0.9**
GRAC	**Grapevine Rang**	**11.60**	**125**	⇓P	**Pn**	**08 47 10.0**	**+1.2**
	baz=12						
MCMT	**McKenzie Canyo**	**11.74**	**82**	*e*Pn	**Pn**	**08 47 12.6**	**+1.8**
B14A	**Marquette Ranc**	**11.79**	**64**	⇓P	**Pn**	**08 47 12.0**	**+0.5**
	baz=12						
K14A	**Jones Ranch, D**	**11.84**	**93**	⇑P	**Pn**	**08 47 12.6**	**+0.5**
	baz=12						
A14A	**Double T Ranch**	**11.86**	**61**	⇓P	**Pn**	**08 47 14.6**	**+2.1**
	baz=12,SNR=9.6						
R11A	**Troy Canyon, C**	**11.87**	**115**	⇑P	**Pn**	**08 47 13.5**	**+0.8**
	baz=12						
H15A	**Lima**	**11.90**	**83**	⇓P	**Pn**	**08 47 14.1**	**+1.1**
	baz=12						
DLMT	**Dillon**	**11.90**	**79**	*e*Pn	**Pn**	**08 47 15.4**	**+2.5**
E15A	**Deer Lodge**	**11.90**	**74**	⇓P	**Pn**	**08 47 13.6**	**+0.6**
	baz=12						
L14A	**Malta**	**11.93**	**95**	⇓P	**Pn**	**08 47 14.5**	**+1.1**
	baz=12						
ISA	**Isabella**	**11.94**	**132**	*e*Pn	**Pn**	**08 47 14.4**	**+1.0**
ISA	**Isabella**	**11.94**	**132**	⇑P	**Pn**	**08 47 13.6**	**+0.2**
	baz=12,SNR=5.8						
F15A	**Butte**	**11.97**	**77**	⇓P	**Pn**	**08 47 14.5**	**+0.5**
	baz=12,SNR=8.1						
G15A	**Dillon**	**11.98**	**80**	⇓P	**Pn**	**08 47 15.6**	**+1.5**
	baz=12,SNR=13						
LRM	**Limekiln Ridge**	**12.00**	**77**	*e*Pn	**Pn**	**08 47 15.8**	**+1.3**
D15A	**Lincoln**	**12.04**	**71**	⇓P	**Pn**	**08 47 15.6**	**+0.6**
	baz=12,SNR=9.8						
I15A	**Monteview**	**12.07**	**85**	⇑P	**Pn**	**08 47 16.4**	**+1.0**
	baz=12						
C15A	**Salmond Ranch,**	**12.10**	**67**	⇓P	**Pn**	**08 47 16.1**	**+0.4**
	baz=12,SNR=17						
J15A	**Blackfoot**	**12.20**	**88**	⇑P	**Pn**	**08 47 18.5**	**+1.4**
	baz=12,SNR=15						
B15A	**Bradely Ranch,**	**12.24**	**65**	⇓P	**Pn**	**08 47 17.8**	**+0.3**
	baz=12,SNR=8.2						
FURC	**Furnace Creek,**	**12.26**	**125**	⇑P	**Pn**	**08 47 19.9**	**+2.2**
	baz=12						
K15A	**Arbon**	**12.27**	**92**	⇓P	**Pn**	**08 47 20.6**	**+2.5**
	baz=12						
A15A	**Johnson Ranch,**	**12.30**	**62**	⇑P	**Pn**	**08 47 19.5**	**+1.1**
	baz=12,SNR=38						
G16A	**Moss Hill, Enn**	**12.46**	**80**	⇓P	**Pn**	**08 47 21.9**	**+1.2**
	baz=12,SNR=16						
L15A	**Malad City**	**12.55**	**95**	⇑P	**Pn**	**08 47 24.3**	**+2.4**
	baz=12,SNR=8.9						
E16A	**East Helena**	**12.57**	**74**	⇓P	**Pn**	**08 47 23.5**	**+1.4**
	baz=12						
BOZ	**Bozeman (W)**	**12.57**	**78**	*e*Pn	**Pn**	**08 47 23.4**	**+1.2**
BOZ	**Bozeman (W)**	**12.57**	**78**	⇓P	**Pn**	**08 47 23.6**	**+1.4**
	baz=13,SNR=14						
F16A	**Kennard Place,**	**12.58**	**77**	⇓P	**Pn**	**08 47 23.1**	**+0.9**
	baz=13,SNR=7.8						
C16A	**Fuhringer Ranc**	**12.68**	**68**	⇓P	**Pn**	**08 47 24.3**	**+0.8**
	baz=13,SNR=9.4						
D16A	**Dana Ranch, Ca**	**12.70**	**71**	⇓P	**Pn**	**08 47 25.7**	**+1.7**
	baz=13,SNR=12						
QLMT	**Earthquake Lak**	**12.74**	**81**	*e*Pn	**Pn**	**08 47 26.3**	**+1.8**
I16A	**Newdale**	**12.80**	**86**	⇓P	**Pn**	**08 47 27.6**	**+2.2**
	baz=13,SNR=14						
J16A	**Bone**	**12.81**	**88**	⇑P	**Pn**	**08 47 27.2**	**+1.7**
	baz=13,SNR=8.9						
B16A	**M & M Farms, S**	**12.82**	**65**	P	**Pn**	**08 47 26.2**	**+0.8**
	baz=13,SNR=16						
H16A	**Russell Place,**	**12.88**	**82**	⇑P	**Pn**	**08 47 28.5**	**+2.0**
	baz=13,SNR=24						
K16A	**Soda Springs**	**12.91**	**90**	⇑P	Pn	08 47 31.2	+4.3
	baz=13,SNR=7.5						
SHOC	**Shoshone**	**12.99**	**126**	⇑P	**Pn**	**08 47 29.6**	**+1.8**
	baz=13,SNR=6.1						
RRI2	**Red Ridge**	**13.01**	**88**	*e*Pn	**Pn**	**08 47 30.2**	**+2.0**
A16A	**West Butte Ran**	**13.01**	**63**	⇑P	**Pn**	**08 47 28.9**	**+0.7**
	baz=13						
DCID1	**Drake Creek**	**13.06**	**87**	*e*Pn	**Pn**	**08 47 28.6**	**-0.2**
YMR	**Madison River**	**13.09**	**82**	*e*Pn	**Pn**	**08 47 31.6**	**+2.4**
GSC	**Goldstone**	**13.12**	**129**	*e*Pn	**Pn**	**08 47 30.7**	**+1.1**
GSC	**Goldstone**	**13.12**	**129**	⇑P	**Pn**	**08 47 31.3**	**+1.8**
	baz=13						
E17A	**Martinsdale**	**13.13**	**74**	⇓P	**Pn**	**08 47 31.0**	**+1.2**
	baz=13						
IMW	**Indian Meadow**	**13.19**	**85**	*e*Pn	**Pn**	**08 47 32.8**	**+2.1**
YFT	**Old Faithful**	**13.20**	**83**	*e*Pn	Pn	08 47 34.4	+3.5
G17A	**Pierce Place,**	**13.21**	**79**	⇓P	**Pn**	**08 47 32.1**	**+1.2**
	baz=13,SNR=6.9						
L16A	**Fish Haven**	**13.23**	**94**	⇓P	**Pn**	**08 47 32.8**	**+1.6**
	baz=13						
TPAW	**Teton Pass**	**13.24**	**87**	*e*Pn	**Pn**	**08 47 33.8**	**+2.3**
HWUT	**Hardware Ranch**	**13.25**	**95**	*e*Pn	**Pn**	**08 47 33.4**	**+1.9**
F17A	**Fitzpatrick Pl**	**13.26**	**76**	⇓P	**Pn**	**08 47 33.0**	**+1.5**
	baz=13,SNR=20						
AHID	**Auburn Hatcher**	**13.28**	**90**	Pn	**Pn**	**08 47 34.0**	**+2.1**
D17A	**Six Diamond Ra**	**13.30**	**71**	P	**Pn**	**08 47 33.1**	**+1.0**
	baz=13,SNR=24						
C17A	**Wharram Farm,**	**13.31**	**69**	P	**Pn**	**08 47 33.1**	**+1.0**

baz=13,SNR=8.4
MOOW Moose Ponds 13.35 86 ePn Pn 08 47 35.2 +2.3
B17A L&G Farms, Che 13.39 66 P Pn 08 47 34.0 +0.8
baz=13,SNR=7.9
H17A Grant Village 13.39 83 ⇓P Pn 08 47 36.9 +3.5
baz=13,SNR=5.5
SNOW Snow King Moun 13.39 87 ePn Pn 08 47 36.5 +3.1
K17A Gardner Place, 13.41 90 ⇑P Pn 08 47 35.7 +2.0
baz=13
J17A Brown Place, J 13.44 87 ⇑P Pn 08 47 36.9 +2.8
baz=13,SNR=7.0
I17A Pilgrim Ck. 13.45 85 ⇑P Pn 08 47 37.5 +3.3
baz=13,SNR=17
LOHW Long Hollow 13.47 86 ePn Pn 08 47 36.8 +2.2
LKWY Lake 13.50 82 ePn Pn 08 47 36.5 +1.7
13nm,1.1s
A17A Triple J Farms 13.59 63 P Pn 08 47 35.5 -0.4
baz=14,SNR=16
ARUT Antelope Range 13.59 113 ePn Pn 08 47 38.5 +2.4
11nm,1.0s
L17A Cokeville 13.61 93 ⇓P Pn 08 47 37.8 +1.5
baz=14
D18A Linhart Farms, 13.91 71 ⇓P Pn 08 47 41.5 +1.2
baz=14,SNR=7.9
F18A Big Timber 13.91 76 ⇑P Pn 08 47 42.0 +1.6
baz=14
M17A Scullys Gap (B 13.93 95 ⇑P Pn 08 47 42.0 +1.2
baz=14
GCMT Greycliff 13.95 77 ePn Pn 08 47 44.3 +3.4
J18A Kendall Valley 13.96 88 ⇓P Pn 08 47 42.8 +1.5
baz=14
N17A Moffit Pass 13.98 97 ⇑P Pn 08 47 42.5 +0.9
baz=14
H18A Shoshone NF, C 14.01 82 ⇑P Pn 08 47 43.7 +1.9
baz=14,SNR=5.1
I18A Diamond G Ranc 14.02 86 ⇑P Pn 08 47 44.6 +2.5
baz=14,SNR=5.8
EGMT Eagleton 14.03 68 ePn Pn 08 47 43.6 +1.6
EGMT Eagleton 14.03 68 ⇑P Pn 08 47 43.6 +1.6
baz=14,SNR=5.4
G18A Lazy EL Ranch, 14.04 79 ⇓P Pn 08 47 43.3 +1.2
baz=14,SNR=11
MSU Marysvale 14.06 108 ePn Pn 08 47 44.7 +2.1
K18A Toltan Ranch, 14.07 90 ⇑P Pn 08 47 43.3 +0.7
baz=14
B18A Beardsley Farm 14.08 66 ⇓P Pn 08 47 43.2 +0.6
baz=14
A18A Metzger Ranch, 14.13 64 ⇑P Pn 08 47 43.2 -0.1
baz=14
DLBC Dease Lake 14.18 358 Pn P 08 47 49.2 -2.3
DLBC Dease Lake 14.18 358 Pn P 08 47 49.2 -2.3
0.0nm,0.3s,baz=171,slow=12,SNR=3.3
LDFC Landfair 14.25 125 ePn Pn 08 47 44.7 -0.4
20nm,1.1s
L18A Fontenelle, Gr 14.25 93 ⇓P Pn 08 47 46.1 +0.9
baz=14,SNR=7.4
RLMT Red Lodge 14.26 80 ⇑P Pn 08 47 46.2 +1.0
baz=14
M18A Lyman 14.38 95 ⇓P Pn 08 47 48.0 +1.2
baz=14
BW06 Boulder Array 14.39 89 ePn Pn 08 47 49.7 +2.7
BW06 Boulder Array 14.39 89 ⇑P Pn 08 47 47.3 +0.2
baz=14
PDAR Pinedale Array 14.39 89 Pn Pn 08 47 49.0 +1.9
PDAR Pinedale Array 14.39 89 Pn Pn 08 47 49.0 +1.9
0.0nm,0.3s,baz=285,slow=12,SNR=7.0
PDAR LR LR 08 53 24.3
comp=Z,319nm,18.9s,baz=86,slow=38
F19A Roth Farm, Mol 14.45 77 ⇓P Pn 08 47 47.9 +0.1
baz=14
C19A Slack Wire Ran 14.47 69 P Pn 08 47 49.4 +1.4
baz=14,SNR=18
H19A Powell 14.49 81 ⇑P Pn 08 47 51.8 +3.4
baz=14,SNR=14
BELC Belle Mtn. Jos 14.52 130 ⇑P Pn 08 47 50.1 +1.2
baz=15
D19A Cripps Ranch, 14.53 71 P Pn 08 47 50.3 +1.4
baz=14,SNR=12
Q16A Castle Valley 14.56 105 ⇑P Pn 08 47 50.4 +1.0
baz=15
I19A Meeteetse 14.56 84 ⇓P Pn 08 47 51.8 +2.3
baz=14
E19A Rath Farm, Rou 14.56 74 P Pn 08 47 50.4 +1.1
baz=14,SNR=7.3
P17A Butcher Ranch, 14.61 103 ⇓P Pn 08 47 50.7 +0.6
baz=15
B19A Brinkman Farms 14.63 66 ⇑P Pn 08 47 50.5 +0.3
baz=15,SNR=8.4
L19A Farson 14.69 92 ⇓P Pn 08 47 52.3 +1.1
baz=15
N18A Larsen Ranch, 14.80 96 ⇑P Pn 08 47 53.1 +0.4
baz=15,SNR=6.4
O18A Roosevelt 14.81 99 ⇓P Pn 08 47 53.3 +0.5
baz=15
A19A Klindworth Far 14.85 65 ⇓P Pn 08 47 53.4 +0.3
baz=15,SNR=15
P18A Preston Nutter 14.90 102 ⇓P Pn 08 47 53.9 -0.1
baz=15
SRU San Rafael 14.92 104 Pn Pn 08 47 56.2 +1.9
SRU San Rafael 14.92 104 ⇑P Pn 08 47 55.3 +1.0
baz=15,SNR=21
W13A Hualapai Mount 14.96 123 ⇓P Pn 08 47 55.9 +1.1
baz=15
G20A Bridger 14.99 79 ⇓P Pn 08 47 56.2 +1.0
baz=15
M19A Rock Springs 15.00 94 ⇑P Pn 08 47 56.1 +0.7
baz=15
F20A Billings 15.01 77 ⇓P Pn 08 47 55.6 +0.2
baz=15
E20A Meyer Farm, Mu 15.02 74 ⇓P Pn 08 47 56.4 +1.0
baz=15
D20A Manuel Ranch, 15.03 72 ⇓P Pn 08 47 56.7 +1.1
baz=15
U15A North Rim 15.12 115 ⇓P Pn 08 47 58.3 +1.2
baz=15,SNR=10
MONP Monument Peak 15.16 134 ⇑P Pn 08 47 57.0 -0.5
baz=15
C20A Veseth Ranch, 15.17 69 ⇑P Pn 08 47 58.5 +1.1
baz=15
I20A Worland 15.19 84 ⇑P P 08 48 01.4 -1.5
baz=15,SNR=5.3
K20A Yellowstone Ra 15.29 89 ⇓P Pn 08 47 58.7 -0.4
baz=15
A20A Cobblestone Ra 15.37 65 ⇓P Pn 08 47 59.3 -0.8
baz=15
O19A Miners Draw (B 15.43 98 ⇓P Pn 08 48 00.9 -0.1
baz=15
L20A Wamsutter 15.45 91 ⇑P Pn 08 48 01.0 -0.2
baz=15
M20A Sweetwater, Wa 15.70 93 ⇓P Pn 08 48 05.8 +1.1
baz=16,SNR=5.8
J21A Lysite 15.78 86 ⇑P P 08 48 08.4 -1.1
baz=16,SNR=29
P19A Cripple Cowboy 15.79 100 ⇑P Pn 08 48 06.4 +0.7
baz=16,SNR=6.5
C21A Desert Coulee 15.79 69 ⇓P Pn 08 48 06.7 +1.2
baz=16
I21A Big Trails, Te 15.81 84 ⇑P Pn 08 48 07.0 +1.0
baz=16,SNR=9.7
D21A La Casta Ranch 15.81 72 ⇓P Pn 08 48 06.8 +0.9
baz=16
N20A Spence Gulch, 15.86 95 P Pn 08 48 07.0 +0.4
baz=16,SNR=19
Q19A Hogan Spring (15.87 103 P Pn 08 48 07.5 +0.8
baz=16,SNR=12
H21A Big Horn, Sher 15.88 81 ⇓P Pn 08 48 06.8 0.0
baz=16
B21A Ellsworth Farm 15.90 67 ⇓P Pn 08 48 07.3 +0.4
baz=16
S18A Hurst Farm, Bl 15.96 108 ⇑P Pn 08 48 08.5 +0.5
baz=16
A21A Bergtoll Ranch 16.04 65 ⇑P Pn 08 48 08.9 +0.2
baz=16
K21A Alcova 16.07 88 ⇑P Pn 08 48 11.0 +1.6
baz=16,SNR=5.1
O20A White River Ci 16.12 98 ⇓P Pn 08 48 10.5 +0.6
baz=16,SNR=8.2
L21A Rawlins 16.16 91 ⇑P Pn 08 48 12.3 +1.9
baz=16,SNR=11
P20A De Beque 16.26 100 ⇑P Pn 08 48 12.2 +0.5
baz=16
M21A Separation Pea 16.26 92 ⇓P P 08 48 13.9 -0.9
baz=16,SNR=19
WUAZ Wupatki 16.26 116 eP P 08 48 14.8 -0.1
24nm,1.4s
WUAZ Wupatki 16.26 116 ⇑P Pn 08 48 12.5 +0.7
baz=16
PV10 Paradox Valley 16.29 104 ePn Pn 08 48 13.8 +1.6

F22A Rosebud 16.33 77 ⇑P Pn 08 48 13.4 +0.8
baz=16,SNR=5.1
G22A Birney 16.35 79 ⇑P Pn 08 48 13.2 +0.4
baz=16
H22A Clearmont 16.37 81 ⇓P Pn 08 48 14.2 +1.2
baz=16
D22A Cohagen 16.37 72 ⇑P Pn 08 48 13.3 +0.3
baz=16
PV04 Paradox Valley 16.38 104 eP Pn 08 48 14.0 +0.8
I22A 9 Mile Ranch, 16.38 83 ⇑P Pn 08 48 14.3 +1.2
baz=16,SNR=5.9
N21A Black Mountain 16.41 95 ⇑P Pn 08 48 13.8 0.0
baz=16,SNR=16
E22A Miles City 16.53 74 ⇓P Pn 08 48 14.8 -0.2
baz=16
Q20A Ridgley Place, 16.55 102 ⇑P Pn 08 48 15.2 -0.2
baz=16
B22A Reddig Ranch S 16.57 68 ⇓P Pn 08 48 15.6 +0.2
baz=16
K22A Casper 16.59 88 ⇑P Pn 08 48 17.3 +1.4
baz=17,SNR=6.1
C22A Vida 16.60 70 ⇑P Pn 08 48 15.8 0.0
baz=17
O21A Pagoda 16.64 97 ⇓P Pn 08 48 16.5 -0.1
baz=17
113A Mohawk Valley, 16.68 128 ⇓P Pn 08 48 17.6 +0.6
baz=17
A22A Carney Farms, 16.70 65 ⇑P Pn 08 48 16.9 -0.2
baz=17
PV01 Paradox Valley 16.73 104 ePn Pn 08 48 18.2 +0.5
R20A Redvale 16.84 104 P Pn 08 48 19.8 +0.6
baz=17,SNR=11
M22A Cedar Creek Ra 16.87 92 ⇓P Pn 08 48 19.6 +0.1
baz=17
P21A Newcastle 16.91 99 ⇓P Pn 08 48 20.1 0.0
baz=17
X16A Lo Mia Camp, P 16.92 120 ⇓P Pn 08 48 20.7 +0.6
baz=17
E23A Ismay 16.97 74 ⇑P Pn 08 48 21.1 +0.6
baz=17,SNR=7.7
G23A Biddle 16.98 79 ⇓P Pn 08 48 21.2 +0.4
baz=17
S20A Disappointment 17.02 105 P Pn 08 48 22.3 +0.9
baz=17,SNR=9.2
D23A Lindsay 17.04 72 ⇓P Pn 08 48 22.7 +1.3
baz=17,SNR=16
C23A Lambert 17.07 70 ⇑P Pn 08 48 22.0 +0.2
baz=17
N22A Wattenberg Ran 17.16 94 P Pn 08 48 22.7 -0.5
baz=17,SNR=8.5
K23A Bowen Ranch, D 17.21 87 ⇓P Pn 08 48 23.5 -0.2
baz=17
MVCO Mesa Verde 17.23 107 ePn Pn 08 48 24.9 +0.8
28nm,1.5s
MVCO Mesa Verde 17.23 107 ⇓P Pn 08 48 24.2 +0.1
baz=17
B23A Brockton 17.25 67 P Pn 08 48 24.9 +0.8
baz=17,SNR=8.3
O22A Kremmling 17.32 96 ⇓P Pn 08 48 25.4 +0.2
baz=17,SNR=15
R21A Cimarron 17.33 102 ⇓P Pn 08 48 24.9 -0.5
baz=17
P22A Eagle 17.38 98 ⇑P Pn 08 48 25.9 0.0
baz=17
S21A Coal Bank Pass 17.50 105 ⇓P Pn 08 48 28.2 +0.7
baz=18,SNR=10
N23A Red Feather La 17.50 93 ⇓P Pn 08 48 27.3 -0.1
baz=18
Q22A Crested Butte, 17.57 100 ⇑P Pn 08 48 29.1 +0.7
baz=18,SNR=5.4
C24A Savage 17.57 71 ⇓P Pn 08 48 28.8 +0.7
baz=18,SNR=17
F24A Ekalaka 17.60 76 ⇓P Pn 08 48 28.1 -0.4
baz=18
H24A Dirks Ranch, A 17.63 80 ⇓P Pn 08 48 29.5 +0.6
baz=18
D24A Glendive 17.64 72 ⇓P Pn 08 48 29.8 +0.9
baz=18
O23A Lake Granby, G 17.75 95 ⇑P Pn 08 48 31.0 +0.4
baz=18,SNR=9.1
DGMT Dagmar 17.77 68 eP P 08 48 32.8 +1.5
62nm,1.5s
DGMT Dagmar 17.77 68 ⇓P Pn 08 48 31.4 +0.8
baz=18
J24A Dixon Ranch, L 17.78 84 ⇑P Pn 08 48 31.5 +0.8
baz=18
K24A Anderson Ranch 17.80 86 ⇓P Pn 08 48 31.9 +0.9
baz=18
A24A Westby 17.94 66 ⇑P P 08 48 33.9 +0.7
baz=18,SNR=11
R22A Saguache, Gunn 17.95 102 ⇓P Pn 08 48 33.6 +0.5
baz=18,SNR=5.4
T21A Navajo Lake 18.00 106 ⇓P Pn 08 48 33.9 +0.2
baz=18
V20A Brimhall 18.01 111 ⇓P Pn 08 48 34.3 +0.5
baz=18
RSSD Black Hills 18.08 82 ePn P 08 48 35.3 +0.4
14nm,1.3s
ISCO Idaho Springs 18.12 96 eP Pn 08 48 35.4 +0.3
7.4nm,0.9s
ISCO Idaho Springs 18.12 96 ⇑P Pn 08 48 35.8 +0.6
baz=18,SNR=5.6
P23A Jefferson 18.12 98 ⇓P Pn 08 48 35.4 +0.2
baz=18
M24A Cheyenne 18.12 90 ⇓P Pn 08 48 35.5 +0.5
baz=18
S22A 4UR Ranch, Cre 18.12 103 ⇑P Pn 08 48 35.6 +0.4
baz=18
U21A Nageezi 18.21 108 ⇑P P 08 48 37.5 +1.0
baz=18,SNR=17
Q23A Hartsel 18.31 99 ⇑P Pn 08 48 37.9 +0.4
baz=18
W20A Ramah 18.38 113 ⇓P Pn 08 48 39.1 +0.9
baz=18,SNR=7.5
O24A Longmont 18.38 95 ⇓P P 08 48 38.4 +0.2
baz=18
T22A Edith 18.43 105 ⇑P P 08 48 39.0 +0.2
baz=18
K25A Mack Ranch, Ha 18.50 86 ⇑P P 08 48 39.9 +0.4
baz=18
L25A Engebretsen Ra 18.55 88 ⇓P P 08 48 40.2 +0.2
baz=18
R23A Moffat 18.62 101 ⇑P Pn 08 48 42.0 +0.7
baz=19,SNR=6.7
S23A Nye Farm, Mont 18.72 103 ⇓P P 08 48 42.6 +0.5
baz=19
X20A Quemado 18.73 114 ⇑P P 08 48 42.3 +0.2
baz=19
TUC Tucson 18.75 123 ePn Pn 08 48 45.5 +2.8
17nm,1.9s
Q24A Divide 18.77 98 ⇓P P 08 48 42.5 -0.2
baz=19
U22A Llaves 18.79 107 ⇑P P 08 48 42.9 +0.1
baz=19
K26A Motz Farm, Whi 18.98 86 ⇓P Pn 08 48 46.3 +1.0
baz=19
V22A San Miguel Ran 19.00 108 ⇑P Pn 08 48 46.9 +1.1
baz=19
T23A Casias Ranch, 19.02 104 ⇓P Pn 08 48 47.1 +1.0
baz=19
X21A Alamocita Cree 19.25 113 ⇓P Pn 08 48 49.3 +0.4
baz=19
P25A Willow Gulch B 19.26 96 ⇑P Pn 08 48 49.1 +0.3
baz=19
U23A El Rito 19.27 106 ⇓P P 08 48 48.8 +0.7
baz=19
V23A Ortiz Mt. (NFS 19.59 108 ⇓P Pn 08 48 52.7 -0.1
baz=20
K27A Flueckinger Fa 19.65 85 ⇓P Pn 08 48 53.4 0.0
baz=20,SNR=5.5
LAZ Ladron 19.71 112 eP P 08 48 53.3 +0.5
5.5nm,1.3s
ANMO Albuquerque 19.84 110 P Pn 08 48 55.7 -0.2
ANMO Albuquerque 19.84 110 P Pn 08 48 55.7 -0.2
0.1nm,0.3s,baz=310,slow=15,SNR=4.5
ANMO LR LR 08 56 22.4
comp=Z,89nm,19.9s,baz=141,slow=37
S25A Robets Cordova 19.85 101 ⇑P P 08 48 55.1 +0.8
baz=20
120A U Bar Ranch, L 19.91 119 ⇓P Pn 08 48 56.6 -0.1
baz=20,SNR=6.0
Y22A Socorro 20.10 113 ⇑P P 08 48 57.0 0.0
baz=20
T25A Trinidad 20.11 102 ⇓P P 08 48 57.5 +0.3
baz=20,SNR=16
YKA Yellowknife Ar 20.14 20 P P 08 48 57.9 +0.8
YKA Yellowknife Ar 20.14 20 P P 08 48 57.9 +0.8
1.8nm,0.8s,baz=208,slow=11,SNR=21

YKW3 Yellowknife Ar 20.20 20 eP P 08 48 58.3 +0.6
O27A Beecher Island 20.22 92 ⇓P P 08 48 58.4 +0.2
baz=20
V24A Rampart Ranch, 20.22 107 ⇓P P 08 48 59.1 +0.7
baz=20,SNR=5.8
R26A Arlington 20.26 98 ⇑P P 08 48 59.1 +0.3
baz=20
OGNE Ogallala 20.29 90 ⇓P P 08 48 59.5 +0.5
baz=20
W24A Lazy 6 Ranch, 20.41 108 ⇓P P 08 49 00.8 +0.4
baz=20
220A Playas Peak, P 20.41 120 ⇑P P 08 49 01.6 +1.2
baz=20,SNR=6.2
FFC Flin Flon 20.45 50 eP P 08 49 00.8 +0.3
17nm,0.9s
121A Cookes Peak, D 20.46 118 ⇑P P 08 49 01.1 +0.1
baz=20,SNR=9.0
MENT Mentasta 20.47 341 eP Pn 08 49 03.7 +0.8
U25A Circle Dot Ran 20.47 104 ⇑P P 08 49 01.3 +0.2
baz=20,SNR=8.1
S26A Kim 20.55 100 ⇑P P 08 49 02.3 +0.5
baz=20
KSCO Kaye Shedlock' 20.55 96 ⇑P P 08 49 01.6 -0.3
baz=20,SNR=5.3
V25A Rancho No Teng 20.61 106 ⇑P P 08 49 04.1 +1.4
baz=21,SNR=10
T26A Comanche Natio 20.66 101 ⇓P P 08 49 03.1 -0.1
baz=21,SNR=9.0
Y23A Lovelace Mesa, 20.71 112 ⇓P P 08 49 04.2 +0.5
baz=21
R27A Eads 20.73 98 P P 08 49 04.3 +0.5
baz=21,SNR=20
320A Kipp Ranch, An 20.80 121 ⇑P P 08 49 06.0 +1.3
baz=21
U26A Atchley Ranch, 20.94 103 ⇓P P 08 49 07.7 +1.5
baz=21
W25A X Bar L Ranch, 21.05 107 ⇓P P 08 49 08.6 +1.3
baz=21
Y24A Capitan 21.12 111 ⇑P P 08 49 09.5 +1.3
baz=21
V26A Tequesquite Ra 21.21 105 ⇑P P 08 49 10.4 +1.4
baz=21
T27A Campo 21.33 101 ⇓P P 08 49 11.2 +0.8
baz=21,SNR=6.8
124A Stringfield Ra 21.86 114 ⇑P P 08 49 16.8 +0.7
baz=22
224A Cornudas Mount 22.21 115 ⇓P P 08 49 21.4 +1.6
baz=22
V28A Channing 22.32 103 ⇓P P 08 49 21.8 +0.8
baz=22
125A Gardner Draw, 22.41 113 ⇑P P 08 49 22.9 +1.0
baz=22
Z26A Caprock 22.49 111 ⇓P P 08 49 23.9 +1.2
baz=22
Y27A Causey 22.68 108 ⇑P P 08 49 25.2 +0.4
baz=23
ILAR Eielson Array 22.77 340 P P 08 49 26.4 +1.0
ILAR Eielson Array 22.77 340 P P 08 49 26.4 +1.0
3.5nm,1.0s,baz=156,slow=8.1,SNR=28
ILAR LR LR 08 56 37.9
comp=Z,178nm,20.6s,baz=130,slow=32
Y28A McKinney Farm, 23.30 107 ⇑P P 08 49 30.9 -0.2
baz=23
ULM Lac du Bonnet 23.30 63 P P 08 49 30.3 -0.7
ULM Lac du Bonnet 23.30 63 P P 08 49 30.3 -0.7
7.8nm,0.8s,baz=301,slow=9.0,SNR=9.4
ULM LR LR 08 58 32.7
comp=Z,178nm,18.8s,baz=233,slow=37
AGMN Agassiz Nation 23.32 68 eP P 08 49 31.6 +0.4
8.9nm,0.9s
425A Indio Mountain 23.40 117 ⇓P P 08 49 32.5 +0.3
baz=23
ECSD EROS Data Cent 23.42 80 eP P 08 49 32.1 -0.1
22nm,1.1s
INK Inuvik 24.19 356 P P 08 49 39.9 +0.6
INK Inuvik 24.19 356 P P 08 49 39.9 +0.6
1.1nm,0.9s,baz=189,slow=5.7,SNR=5.6
427A Hayter Ranch, 24.38 115 ⇓P P 08 49 43.8 +2.2
baz=24
526A Mary Lane Ranc 24.46 117 ⇓P P 08 49 44.4 +2.1
baz=24
X31A McDonald Ranch 24.48 103 ⇑P P 08 49 43.3 +1.0
baz=24
Y31A Rekieta Farm, 24.64 105 ⇑P P 08 49 44.1 +0.3
baz=25
527A Woodward Ranch 24.71 116 ⇓P P 08 49 46.5 +2.0
baz=25
626A Big Bend Ranch 24.77 118 ⇑P P 08 49 46.4 +1.3
baz=25
KSU1 Kansas State U 24.83 91 eP P 08 49 46.0 +0.6
11nm,0.9s
TXAR Lajitas Array 25.22 118 P P 08 49 49.0 -0.1
TXAR Lajitas Array 25.22 118 P P 08 49 49.0 -0.1
1.9nm,0.9s,baz=306,slow=7.7,SNR=3.7
TXAR LR LR 09 00 11.8
comp=Z,83nm,20.4s,baz=5.0,slow=38
528A Cox Ranch, San 25.23 115 ⇑P P 08 49 50.8 +1.5
baz=25
WMOK Wichita Mounta 25.26 102 eP P 08 49 50.0 +0.7
12nm,0.9s
627A Terlingua Ranc 25.32 117 ⇓P P 08 49 51.6 +1.6
baz=25
LPIG La Paz 25.41 136 LR LR 08 58 29.2
comp=Z,12nm,20.7s,baz=257,slow=34
429A Davenport Ranc 25.52 113 ⇑P P 08 49 53.2 +1.4
baz=26
Z32A Haskell 25.55 105 ⇑P P 08 49 53.3 +1.4
baz=26
529A Stev Forest Ra 25.62 114 ⇑P P 08 49 54.5 +1.7
baz=26,SNR=8.7
231A Bronte 25.76 109 ⇓P P 08 49 54.9 +0.9
baz=26
331A San Angelo 26.07 110 ⇓P P 08 49 57.5 +0.8
baz=26
431A Sonora 26.34 111 ⇓P P 08 50 00.2 +1.0
baz=26
332A Millersview 26.49 109 ⇓P P 08 50 01.2 +0.7
baz=26
SONM Songino Array 76.04 325 P P 08 56 11.7 +1.1
SONM Songino Array 76.04 325 P P 08 56 11.7 +1.1
0.6nm,0.8s,baz=72,slow=4.8,SNR=4.7
ZALV Zalesovo Beam 77.90 340 P P 08 56 22.0 +1.3
ZALV Zalesovo Beam 77.90 340 P P 08 56 22.0 +1.3
0.4nm,0.4s,baz=24,slow=5.0,SNR=3.5
ZALV LR LR 09 29 32.6
comp=Z,33nm,21.1s,baz=44,slow=35
HHC Hu-ho-hao-te 79.17 318 eP P 08 56 26.9 -1.2
HHC sP sP 08 56 34.3 +0.3
HHC PcP PcP 08 56 35.8 -0.7
HHC PP PP 08 59 27.3 +0.4
HHC S S 09 06 23.6 -4.0
HHC SKS SKSac 09 06 36.5 -7.4
HHC ScS SKKSac 09 06 44.3 -1.0
HHC LR LR
comp=N,120nm,17.7s
HHC LR LR
comp=E,170nm,17.3s
HHC LR LR
comp=Z,180nm,16.6s
BVAR Borovoye Array 81.61 348 LR LR 09 34 51.2
comp=Z,39nm,19.1s,baz=72,slow=37
LPAZ La Paz 82.01 122 eP P 08 56 43.8 -0.3
comp=Z,1.1nm,0.7s
LPAZ La Paz 82.01 122 P P 08 56 42.3 -1.8
comp=Z,0.9nm,0.7s,baz=8.7,slow=9.7,SNR=2.5
KURK Kurchatov 82.33 343 P P 08 56 45.7 +1.0
KURBB Kurchatov Arra 82.43 343 P P 08 56 45.7 +0.5
comp=Z,1.0nm,0.8s,baz=16,slow=4.7,SNR=4.0
KURBB LR LR 09 37 50.9
comp=Z,25nm,21.4s,baz=0.0,slow=39
MKAR Makanchi Array 85.12 339 LR LR 09 34 22.8
comp=Z,35nm,19.9s,baz=356,slow=35
WMQ Urumqi 86.29 334 eP P 08 57 06.7 +1.7
AAK Ala-Archa 90.89 343 LR LR 09 41 40.9
comp=Z,46nm,18.0s,baz=185,slow=38

IDC 09 09:00:52.1±5.6, 12°92'N×143°38'E, h118km±48km, mb2.8/3, mb1 3.1/3, mb1mx2.9/25, mbtmp2.8/3, Error ellipse: s-maj=112.6km s-min=24.3km az=116.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.59**	**65**	P	Pn	09 01 21.3	+0.8
	43nm,0.3s,baz=221,slow=1.9,SNR=24						
GUMO				S	Sn	09 01 42.0	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	25nm,0.3s,baz=16,slow=23,SNR=10.0						
WRA	Warramunga Arr	33.85	195	P	P	09 07 23.5	+0.1
	0.3nm,0.6s,baz=9.7,slow=9.3,SNR=6.4						
ASAR	Alice Springs	37.53	194	P	P	09 07 54.4	-0.5
	0.1nm,0.4s,baz=13,slow=11,SNR=4.8						
YKA	Yellowknife Ar	84.11	27	P	P	09 13 09.6	0.0
	0.1nm,0.4s,baz=286,slow=5.2,SNR=5.4						

*GUC **09** 09:36:49.3±0.8, 22°.38S×70°.66W, h6km±8km, ML4.1*
*IDC **09** 09:36:54.9±2.9, 22°.42S×70°.30W, h68km±25km, mb3.5/4, mb1 3.7/7, mb1mx3.5/18, mbtmp3.5/7, MS3.2/2, Ms1 3.2/2, ms1mx2.8/19, Error ellipse: s-maj=32.6km s-min=25.1km az=80.0*
ISC 09 09:36:47.4±1.8, 22°.37S±0°.04×70°.75W±0°.08, h9km±10km, n23, $\sigma 1^{s}43$/27, mb3.8/4, 1C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.79	159⇓	iP	Pg	09 37 02.5	0.0
MECH				i S	Sg	09 37 12.1	-0.7
MECH				AML	AML	09 37 22.0	
	comp=E,8μm,0.8s						
PB07	Plate Boundary	1.02	52⇓	iP	Pg	09 37 07.1	0.0
PB07				eS	Sg	09 37 19.8	-0.6
PB07				AML	AML	09 37 22.5	
	comp=N,11μm,0.2s						
CEN1	Los Morros	1.14	154⇓	iP	Pn	09 37 10.7	+1.0
CEN1				i S	Sn	09 37 26.7	+1.3
CEN1				AML	AML	09 37 29.6	
	comp=E,2μm,0.6s						
PB04	Plate Boundary	1.17	85⇓	iP	Pb	09 36 58.3	-12
PB04				i S	Sb	09 37 04.6	-21
PB04				AML	AML	09 37 06.3	
	comp=E,29μm,0.5s						
ANCH	Antofagasta	1.35	167⇓	iP	Pn	09 37 10.8	-1.6
ANCH				i S	Sb	09 37 28.1	-2.1
PB09	Plate Boundary	1.51	68⇓	iP	Pn	09 37 14.2	-0.6
PB09				i S	Sn	09 37 33.1	-1.6
PB09				AML	AML	09 37 36.7	
	comp=N,18μm,0.3s						
PB01	Plate Boundary	1.77	42⇑	iP	Pn	09 37 18.7	+0.5
PB01				eS	Sn	09 37 40.8	-0.1
PB01				AML	AML	09 37 47.1	
	comp=E,3μm,0.4s						
SPCH	San Pedro de A	2.42	103	eP	Pn	09 37 29.5	+2.1
SPCH				i S	Sb	09 38 00.5	-0.8
SPCH				AML	AML	09 38 08.5	
	comp=N,3μm,0.9s						
LPAZ	La Paz	6.53	23	P	Pn	09 38 28.4	+4.1
	comp=N,1.3nm,0.3s,baz=229,slow=6.9,SNR=24						
LPAZ				LR	LR	09 40 48.7	
	comp=N,102nm,19.5s,baz=220,slow=36						
CFAA	Coronel Fontan	9.47	167	P	Pn	09 39 06.8	+2.7
	comp=N,0.1nm,0.3s,baz=348,slow=13,SNR=6.0						
SIV	San Ignacio	11.12	57	P	Pn	09 39 25.8	-1.0
	comp=N,1.1nm,0.3s,baz=248,slow=12,SNR=16						
SIV				LR	LR	09 44 36.9	
	comp=N,234nm,18.1s,slow=43						
CPUP	Villa Florida	12.85	111	P	Pn	09 39 52.9	+2.5
	comp=N,0.2nm,0.3s,baz=88,slow=20,SNR=6.5						
VNA3	Neumayer Olymp	59.81	161	eP	P	09 46 52.2	-0.5
VNA2	Neumayer--Watz	60.41	160	eP	P	09 46 56.3	-0.5
	baz=294,slow=8.9						
SNAA	Sanae	62.03	161	eP	P	09 47 06.3	-1.5
PDAR	Pinedale Array	74.03	331	P	P	09 48 24.5	+0.7
	comp=N,0.3nm,0.5s,baz=143,slow=6.2,SNR=4.1						
NVAR	Mina Array Bea	75.14	323	P	P	09 48 32.5	+2.2
	comp=N,0.2nm,0.5s,baz=161,slow=6.5,SNR=2.7						
TORD	Torodi Ar. Bea	79.25	71	P	P	09 48 51.7	-1.9
	comp=N,3.1nm,0.8s,baz=255,slow=5.3,SNR=29						
YKA	Yellowknife Ar	91.44	341	P	P	09 49 53.9	+0.4
	comp=N,0.5nm,0.7s,baz=138,slow=4.4,SNR=18						
ASAR	Alice Springs	128.34	209	PKP	PKPdf	09 55 54.7	-0.6
	comp=N,0.4nm,0.7s,baz=138,slow=1.9,SNR=5.5						
WRA	Warramunga Arr	131.33	212	PKP	PKPdf	09 55 59.9	-1.1
	comp=N,0.3nm,0.6s,baz=141,slow=1.6,SNR=6.3						
ZALV	Zalesovo Beam	143.45	24	PKP	PKPbc	09 56 19.9	+0.6
	comp=N,1.4nm,0.7s,baz=337,slow=1.2,SNR=6.3						
MKAR	Makanchi Array	147.33	35	PKPbc	PKPdf	09 56 29.4	+0.4
	comp=N,1.7nm,0.7s,baz=341,slow=1.9,SNR=21						

IDC 09 09:53:55.7±57.0, 19°.52S×179°.02W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/18, mbtmp3.8/3, Error ellipse: s-maj=1031.0km s-min=154.3km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.37	243	P	P	10 01 10.1	-0.2
	0.5nm,0.4s,baz=75,slow=12,SNR=3.8						
WRA	Warramunga Arr	43.79	261	P	P	10 02 03.6	0.0
	0.5nm,0.3s,baz=96,slow=7.6,SNR=30						
ASAR	Alice Springs	43.82	256	P	P	10 02 03.6	-0.2
	1.2nm,0.6s,baz=94,slow=7.5,SNR=25						

*CSEM **09** 10:13:27.6±0.2, 41°.70N×25°.27E, h2km, MD2.7, Error ellipse: s-maj=5.5km s-min=4.5km az=178.0*
*SOF **09** 10:13:27.1, 41°.73N×25°.28E, h12km, MD2.7*
*THE **09** 10:13:28.0, 41°.66N×25°.29E, h2km±2km, ML1.9/2, Error ellipse: s-maj=3.0km s-min=1.1km az=86.0*
*ATH **09** 10:13:28.3, 41°.67N×25°.30E, h10km, MD3.4/3*
*BEO **09** 10:13:29.3±1.1, 41°.76N×25°.27E, h0km, ML1.9/4*
ISC 09 10:13:27.8±1.2, 41°.71N±0°.02×25°.28E±0°.02, h1km±11km, n40, $\sigma 0^{s}86$/55, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KDZ	Kurdzhali	0.12	119	i Pg	Pg	10 13 30.2	+0.2
KDZ	Kurdzhali	0.12	119	i Pg	Pg	10 13 30.2	+0.2
DIM	Dimitrovgrad	0.39	28	i Pg	Pg	10 13 35.3	0.0
DIM	Dimitrovgrad	0.39	28	i Pg	Pg	10 13 35.3	0.0
RZN	Rozhen	0.42	268	i Pg	Pg	10 13 35.7	-0.3
RZN	Rozhen	0.42	268	i Pg	Pg	10 13 35.7	-0.3
PLD	Plovdiv	0.59	313	P	Pg	10 13 39.0	-0.1
PLD	Plovdiv	0.59	313	ePg	Pg	10 13 38.9	-0.1
PLD				eSg	Sg	10 13 46.6	-0.1
PLD	Plovdiv	0.59	313	Pg	Pg	10 13 38.6	-0.5
PLD	Plovdiv	0.59	313	P	Pg	10 13 39.0	-0.1
PLD				eSg	Sg	10 13 46.6	-0.1
KAVA	Kavala	0.92	220	P	Pg	10 13 44.9	-0.5
KAVA	Kavala	0.92	220	P	Pg	10 13 44.9	-0.5
ALN	Alexandroupoli	0.99	144	P	Pg	10 13 46.5	-0.3
ALN				S	Sg	10 13 59.8	+0.1
ALN	Alexandroupoli	0.99	144	ePG	Pg	10 13 46.5	-0.3
ALN	Alexandroupoli	0.99	144	P	Pg	10 13 46.5	-0.3
ALN				S	Sg	10 13 59.8	+0.1
NVR	Nevrokopi	1.12	252	P	Pg	10 13 49.4	0.0
NVR	Nevrokopi	1.12	252	ePB	Pg	10 13 48.5	-0.9
NVR	Nevrokopi	1.12	252	ePb	Pg	10 13 48.5	-0.9
NVR	Nevrokopi	1.12	252	P	Pg	10 13 49.4	0.0
MMB	Musomiste	1.17	265	P	Pg	10 13 49.0	-1.3
MMB	Musomiste	1.17	265	P	Pg	10 13 49.0	-1.3
PGB	Panagyurishte	1.18	316	P	Pg	10 13 49.2	-1.3
PGB	Panagyurishte	1.18	316	P	Pg	10 13 49.2	-1.3
JMB	Yambol	1.23	51	P	Pg	10 13 51.3	-0.1
JMB	Yambol	1.23	51	ePg	Pg	10 13 51.1	-0.3
JMB				eSg	Sg	10 14 07.4	0.0
JMB	Yambol	1.23	51	P	Pg	10 13 51.3	-0.1
JMB				eSg	Sg	10 14 07.4	0.0
SRS	Serrai	1.40	246	P	Pn	10 13 52.7	-1.9
SRS				S	Sb	10 14 13.2	0.0
SRS	Serrai	1.40	246	P	Pn	10 13 52.7	-1.9
SRS				S	Sb	10 14 13.2	0.0
KKB	Krupnik	1.65	276	i P	Pn	10 13 57.8	-0.2
KKB	Krupnik	1.65	276	i P	Pn	10 13 57.8	-0.2
SOH	Sokhos	1.70	239	ePN	Pg	10 14 01.6	+1.2
SOH	Sokhos	1.70	239	ePb	Pg	10 14 01.6	+1.2
VTS	Vitosha	1.78	301	P	Pn	10 14 00.1	+0.2
VTS				S	Sb	10 14 24.2	0.0
VTS	Vitosha	1.78	301	ePn	Pn	10 14 00.3	+0.4
VTS				eSn	Sn	10 14 23.2	-0.1
VTS	Vitosha	1.78	301	P	Pn	10 13 58.7	-1.2
VTS	Vitosha	1.78	301	P	Pn	10 14 00.1	+0.2
VTS				eSn	Sn	10 14 23.2	-0.1
VTS				S	Sb	10 14 24.2	0.0
MPEP	Malo Peshtene	2.00	326	P	Pb	10 14 05.3	+0.2
VAY	Valandovo	2.07	260	ePn	Pg	10 14 09.3	+1.8
VAY				eSg	Sg	10 14 35.7	+1.3
VAY	Valandovo	2.07	260	ePn	Pn	10 14 01.8	-2.0
VAY				eSg	Sg	10 14 36.2	+1.8
ZAPS	Zavoj	2.51	310	ePn	Pn	10 14 11.5	+1.7
ZAPS				eSn	Sn	10 14 42.2	+1.1

*CSEM **09** 10:16:54.5±0.1, 42°.46N×13°.45E, h15km, ML2.1/4, Error ellipse: s-maj=3.3km s-min=2.1km az=59.0*
ROM 09 10:16:54.5±0.1, 42°.45N×13°.43E, h10km, Md2.0/11, Ml1.8/3, Error ellipse: s-maj=1.3km s-min=0.9km az=83.0, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.08	348	Pg	Pg	10 16 57.6	+0.5
CAMP				Sg	Sg	10 16 59.5	+0.6
	247nm,0.3s						
CAMP	Campotosto	0.08	348	Pg	Pg	10 16 57.6	+0.5
CAMP				Sg	Sg	10 16 59.5	+0.6
	247nm,0.3s						
AQU	L'Aquila	0.10	193	Pg	Pg	10 16 57.7	+0.5
AQU				Sg	Sg	10 16 59.6	+0.5
	418nm,0.3s						
AQU	L'Aquila	0.10	193	Pg	Pg	10 16 57.7	+0.5
AQU				Sg	Sg	10 16 59.6	+0.5
	418nm,0.3s						
TERO	Teramo	0.21	37	Pg	Pg	10 16 59.5	+0.5
TERO				Sg	Sg	10 17 02.9	+0.9
TERO	Teramo	0.21	37	Pg	Pg	10 16 59.5	+0.5
TERO				Sg	Sg	10 17 02.9	+0.9
FAGN	Fagnano	0.22	149	Pg	Pg	10 16 59.9	+0.8
FAGN				Sg	Sg	10 17 03.7	+1.5
FAGN	Fagnano	0.22	149	Pg	Pg	10 16 59.9	+0.8
FAGN				Sg	Sg	10 17 03.7	+1.5
FIAM	Fiamignano	0.30	232	Pg	Pb	10 17 01.4	-0.7
	58nm,0.7s						
FIAM	Fiamignano	0.30	232	Pg	Pb	10 17 01.4	-0.7
	58nm,0.7s						
LNSS	Leonessa	0.33	297	Pg	Pg	10 17 01.3	+0.1
LNSS				Sg	Sg	10 17 06.6	+0.9
	111nm,0.3s						
LNSS	Leonessa	0.33	297	Pg	Pg	10 17 01.3	+0.1
LNSS				Sg	Sg	10 17 06.6	+0.9
	111nm,0.3s						
NRCA	Norcia	0.45	328	Pg	Pg	10 17 03.5	+0.1
NRCA				Sg	Sg	10 17 10.2	+0.8
	24nm,0.4s						
NRCA	Norcia	0.45	328	Pg	Pg	10 17 03.5	+0.1
NRCA				Sg	Sg	10 17 10.2	+0.8
	24nm,0.4s						
FDMO	Fiordimonte	0.64	336	Pg	Pb	10 17 07.4	-0.4
FDMO	Fiordimonte	0.64	336	Pg	Pb	10 17 07.4	-0.4
CESI	CESI - Serrava	0.67	325	Pg	Pg	10 17 08.0	+0.3
CESI				Sg	Sb	10 17 18.1	+0.1
CESI	CESI - Serrava	0.67	325	Pg	Pg	10 17 08.0	+0.3
CESI				Sg	Sb	10 17 18.1	+0.1
LPEL	Lama dei Pelig	0.69	126	Pg	Pg	10 17 07.5	-0.4
LPEL				Sg	Sb	10 17 18.0	-0.4
LPEL	Lama dei Pelig	0.69	126	Pg	Pg	10 17 07.5	-0.4
LPEL				Sg	Sb	10 17 18.0	-0.4

IDC 09 10:18:53.5±1.1, 5°.01N×126°.90E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/24, mbtmp3.9/6, Error ellipse: s-maj=54.9km s-min=18.8km az=81.0, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	23.00	183	P	P	10 24 01.6	+1.5
	1.5nm,0.8s,baz=6.3,slow=12,SNR=3.2						
WRA	Warramunga Arr	25.85	164	P	P	10 24 26.9	-0.2
	4.1nm,0.6s,baz=343,slow=10,SNR=42						
ASAR	Alice Springs	29.31	167	P	P	10 24 57.2	-0.8
	0.7nm,0.6s,baz=356,slow=8.3,SNR=20						
STKA	Stephens Creek	39.26	160	P	P	10 26 23.9	-0.2
	2.4nm,0.6s,baz=332,slow=8.4,SNR=9.5						
PETK	Petropavlovsk-	54.19	22	P	P	10 28 21.1	+0.3
	0.9nm,0.6s,baz=194,slow=5.3,SNR=5.6						
MKAR	Makanchi Array	56.61	325	P	P	10 28 38.0	-0.5
	0.3nm,0.5s,baz=123,slow=8.3,SNR=6.7						

*NIED **09** 10:26:00, 42°.20N×142°.90E, h53km, Mw4.1 Best double couple: Mo1.68000×10[15] NP1:φs38.00000°, δ62.00000°, λ96.00000°. NP2:φs204.00000°, δ28.00000°, λ78.00000°.*
*MOS **09** 10:26:28.9±1.1, 42°.34N×142°.82E, h55km, mb4.5/13, Error ellipse: s-maj=13.8km s-min=9.5km az=95.6*
*ISCJB **09** 10:26:30.0±0.3, 42°.17N±0°.03×142°.89E±0°.04, h70km±2km, mb3.9/29, Error ellipse: s-maj=6.3km s-min=4.3km az=140.9*
*BJI **09** 10:26:30.5, 42°.10N×143°.00E, h73km, mB4.9/5, mb4.7/8*
*JMA **09** 10:26:31.4±0.1, 42°.23N×142°.92E, h55km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs7.00000°, δ86.00000°, λ90.00000°. NP2:φs187.00000°, δ4.00000°, λ90.00000°. Principal axes: T Plg49.0000°, Azm277.0000°; N Plg0.0000°, Azm7.0000°; P Plg41.0000°, Azm97.0000°;*
JMA Felt I J1.
*IDC **09** 10:26:33.5±1.5, 42°.27N×142°.80E, h79km±12km, mb3.5/19, mb1 3.7/23, mb1mx3.7/30, mbtmp3.5/23, MS2.9/5, Ms1 2.9/5, ms1mx2.5/40 Error ellipse: s-maj=15.1km s-min=10.1km az=118.0*
ISC 09 10:26:30.8±0.6, 42°.23N±0°.04×142°.86E±0°.04, h60km±5km, n62, $\sigma 1^{s}49$/78, mb4.0/29, 7C-8D, Hokkaido region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.09	306	⇑P	Pn	10 26 39.8	0.0
JNBK				eS	Sn	10 26 46.8	+0.5
ERM	Erimo	0.31	133d	iPN	Pn	10 26 41.0	0.0
ERM				pmax	pmax		
	comp=Z,4μm,1.0s						
JEM	Erimo	0.31	133	⇑P	Pn	10 26 40.9	-0.1
JCH	Churui	0.54	44	⇑P	Pn	10 26 43.2	0.0
JCH				eS	Sn	10 26 52.1	-0.1
JBT2	Biratori 2	0.66	327	⇓P	Pn	10 26 45.1	+0.5
JBT2				eS	Sn	10 26 56.5	+1.8
JFR	Furan	0.96	348	⇓P	Pn	10 26 48.3	0.0
JOB	Onbets	0.99	47	⇑P	Pn	10 26 49.6	+0.9
JOB				eS	Sn	10 27 03.1	+1.1
JEW	Eniwo	1.21	301	⇓P	Pn	10 26 52.7	+1.1
JEW				eS	Sn	10 27 09.3	+2.3
JAR	Ashorobuto	1.27	32	⇑P	Pn	10 26 52.4	0.0
JAR				eS	Sn	10 27 08.7	+0.3
JAB	Ashibetsu	1.36	340	P	Pn	10 26 54.6	+1.0
JNB	Noboribetsu	1.37	281	⇓P	Pn	10 26 53.8	+0.1
JNB				eS	Sn	10 27 11.9	+1.0
JKB	Kayabe	1.40	257	⇓P	Pn	10 26 54.6	+0.5
JKB				eS	Sn	10 27 12.6	+1.0
ASAJ	Asahikawa	1.90	354	P	Pn	10 27 02.7	+1.8
	comp=Z,92nm,0.3s,baz=224,slow=9.3,SNR=434						
ASAJ				S	Sn	10 27 26.7	+3.0
	comp=Z,28nm,0.3s,baz=168,slow=33,SNR=9.6						
YUK	Yuzh-Kuril'sk	2.85	50	i PN	Pn	10 27 15.3	+1.5
YUK				i S	Sn	10 27 49.3	+2.4
YUK				pmax	pmax		
	comp=N,19nm,0.3s						
YUK				pmax	pmax		
	comp=Z,91nm,0.3s						
YUK				pmax	pmax		
	comp=E,15nm,0.3s						
YUK				smax	smax		
	comp=N,194nm,0.6s						
YUK				smax	smax		
	comp=E,244nm,0.6s						
YSS	Yuzh-Sakhalins	4.73	359	ePN	Pn	10 27 43.0	+3.5
YSS				eS	Sn	10 28 39.0	+6.0
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				smax	smax		
	comp=N,50nm,1.0s						
MAT	Matsushiro	6.72	214	P	Pn	10 28 08.7	+1.8
MAT				eS	Sn	10 29 23.0	+1.0
MJAR	Matsushiro Arr	6.72	214	P	Pn	10 28 08.6	+1.7
	comp=N,1.5nm,0.3s,baz=28,slow=11,SNR=18						
USRK	Ussuriysk Arra	8.17	288	P	Pn	10 28 28.4	+1.8
	comp=N,0.5nm,0.3s,baz=89,slow=17,SNR=7.1						
USRK				LR	LR	10 31 53.0	
	comp=N,69nm,20.4s,baz=39,slow=39						
JHJ	Hachijo jima 2	9.41	196	P	Pn	10 28 41.7	-2.0
	comp=N,13nm,0.3s,baz=60,slow=16,SNR=9.7						
JHJ				S	Sn	10 30 19.1	-8.9
	comp=N,7.7nm,0.3s,baz=38,slow=19,SNR=4.6						
JHJ				LR	LR	10 32 42.0	
	comp=N,41nm,20.8s,baz=60,slow=39						
KSRS	Korea Array	12.42	252	P	Pn	10 29 26.4	+1.7
	comp=N,0.1nm,0.3s,baz=66,slow=13,SNR=6.0						
KSRS				LR	LR	10 34 03.6	
	comp=N,20nm,21.5s,baz=166,slow=36						
PETK	Petropavlovsk-	14.75	37	P	Pn	10 29 55.6	-0.3
PETK	Petropavlovsk-	14.75	37	P	Pn	10 29 55.5	-0.3
	comp=N,0.1nm,0.3s,baz=198,slow=13,SNR=3.8						
SEY	Seymchan	21.49	12c	iP	P	10 31 12.8	-1.4
HHC	Hu-ho-hao-te	23.40	277	eP	P	10 31 32.7	-1.8
HHC				S	S	10 35 37.0	-6.0
HHC				pmax	pmax		
	comp=Z,24nm,0.5s						
HHC				pmax	pmax		
	comp=Z,160nm,5.6s						
SONM	Songino Array	26.20	295	P	P	10 32 00.5	+0.7
	comp=Z,3.9nm,0.8s,baz=81,slow=8.8,SNR=20						
SONM				PcP	PcP	10 35 25.9	+0.6
	comp=Z,0.4nm,0.7s,baz=93,slow=3.9,SNR=3.2						
SONM				LR	LR	10 42 44.2	
	comp=Z,40nm,20.4s,baz=56,slow=37						
TLY	Talaya	28.08	303	eP	P	10 32 16.1	-0.5
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZAK	Zakamensk	28.25	300	eP	P	10 32 18.2	0.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s						
GTA	Gaotai	32.44	280	eP	P	10 32 56.5	+1.2
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZALV	Zalesovo Beam	39.42	308	eP	P	10 33 55.2	+0.6
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZALV	Zalesovo Beam	39.42	308	P	P	10 33 55.3	+0.6
	comp=Z,6.2nm,0.7s,baz=87,slow=7.6,SNR=25						
ZALV				PcP	PcP	10 36 01.9	+0.3
	comp=Z,0.9nm,0.8s,baz=35,slow=5.3,SNR=3.8						
MKAR	Makanchi Array	42.50	298	eP	P	10 34 20.4	+0.3
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	42.50	298	P	P	10 34 19.8	-0.3
	comp=Z,3.1nm,0.7s,baz=82,slow=9.5,SNR=35						
MKAR				PcP	PcP	10 36 12.1	+0.3
	comp=Z,0.2nm,0.4s,baz=56,slow=5.2,SNR=3.4						
KURK	Kurchatov	43.77	304d	iP	P	10 34 30.8	+0.6
KURK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CMAR	Chiang Mai Arr	44.06	251	P	P	10 34 34.2	+1.3
	comp=Z,0.9nm,0.6s,baz=40,slow=6.6,SNR=7.0						
ILAR	Eielson Array	44.56	35	P	P	10 34 36.7	+0.3
	comp=Z,0.9nm,0.8s,baz=268,slow=6.0,SNR=13						
BRVK	Borovoye	48.08	309	eP	P	10 35 04.5	+0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
INK	Inuvik	49.29	29	P	P	10 35 13.3	+0.2
	comp=Z,0.7nm,0.3s,baz=285,slow=4.7,SNR=11						
ARU	Arti	53.29	316d	iP	P	10 35 42.3	-0.9
ARU				S	S	10 43 11.5	+1.5
ARU				SS	SS	10 46 43.8	-6.0
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
YKA	Yellowknife Ar	58.79	32	P	P	10 36 22.6	+0.2
	comp=Z,0.3nm,0.8s,baz=305,slow=6.4,SNR=8.7						
KEV	Kevo	59.00	339	eP	P	10 36 22.9	-0.9
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KEV	Kevo	59.00	339	ep	P	10 36 22.9	-0.9
	comp=Z,0.7nm,0.3s						
ARCES	ARCESS Array B	59.55	339	P	P	10 36 27.1	-0.5
	comp=Z,1.1nm,0.5s,baz=58,slow=9.1,SNR=9.1						
ARCES				LR	LR	11 08 39.0	
	comp=Z,30nm,18.0s,baz=238,slow=42						
JOF	Joensuu	61.93	331	eP	P	10 36 42.1	-1.7
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JOF	Joensuu	61.93	331	ep	P	10 36 42.1	-1.7
	comp=Z,1.4nm,0.3s						
FITZ	Fitzroy Crossi	62.10	199	P	P	10 36 46.6	+1.2
	comp=Z,0.7nm,0.8s,baz=63,slow=11,SNR=2.5						
WRA	Warramunga Arr	62.35	189	P	P	10 36 47.3	+0.2
	comp=Z,0.2nm,0.5s,baz=6.6,slow=7.0,SNR=6.5						
KAF	Kangasniemi	64.22	332	eP	P	10 36 56.8	-2.2
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KAF	Kangasniemi	64.22	332	ep	P	10 36 56.8	-2.2
	comp=Z,1.4nm,0.4s						
FINES	FINESS Array B	64.76	332	P	P	10 37 02.2	-0.3
	comp=Z,3.2nm,0.4s,baz=51,slow=7.2,SNR=29						
ASAR	Alice Springs	66.08	189	P	P	10 37 12.2	+0.7
	comp=Z,0.2nm,0.5s,baz=1.8,slow=6.5,SNR=4.7						
NB2	NORSAR Subarra	69.83	337	P	P	10 37 34.1	-0.6
	comp=Z,0.9nm,0.7s,baz=37,slow=6.2						
NOA	NORSAR Array B	69.83	337	P	P	10 37 34.4	-0.3
	comp=Z,1.5nm,0.8s,baz=38,slow=6.1,SNR=6.5						
AKASG	Malin Array Be	70.89	322	eP	P	10 37 40.7	-0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	70.89	322	P	P	10 37 41.0	-0.3
	comp=Z,1.4nm,0.5s,baz=45,slow=6.3,SNR=5.5						
NVAR	Mina Array Bea	71.05	55	P	P	10 37 44.3	+1.6
	comp=Z,0.3nm,0.6s,baz=306,slow=6.6,SNR=3.6						
PDAR	Pinedale Array	73.28	47	P	P	10 37 55.8	-0.2
	comp=Z,0.2nm,0.6s,baz=266,slow=6.1,SNR=3.1						
BRTR	Keskin Array B	76.25	311	P	P	10 38 12.0	-1.1
	comp=Z,0.7nm,0.7s,baz=72,slow=5.7,SNR=3.7						
GERES	GERESS Array B	78.88	329	P	P	10 38 27.5	-0.1
	comp=Z,0.2nm,0.3s,baz=16,slow=7.5,SNR=2.8						
TXAR	Lajitas Array	86.10	53	P	P	10 39 05.9	+0.4
	comp=Z,0.3nm,0.6s,baz=292,slow=9.5,SNR=3.5						
SYO	Syowa Base	133.31	209⇑	eP	Pdif	10 42 37.6	+1.2
SNAA	Sanae	146.03	199	PKPbc	PKPbc	10 46 03.0	+0.3
	comp=Z,0.7nm,0.7s,baz=233,slow=5.1,SNR=6.4						
SIV	San Ignacio	146.75	45	PKPbc	PKPbc	10 46 06.9	+0.5
	comp=Z,0.8nm,0.5s,baz=314,slow=6.4,SNR=4.0						

*ISCJB **09** 10:47:10.1±0.9, 39°.70N±0°.05×29°.47E±0°.04, h0km, Error ellipse: s-maj=7.7km s-min=4.6km az=14.5*
*CSEM **09** 10:47:10.2, 39°.68N×29°.45E, h7km, MD2.8, After DDA*
*DDA **09** 10:47:10.2, 39°.68N×29°.45E, h7km, MD2.8*
ISC 09 10:47:10.2±1.1, 39°.70N±0°.05×29°.46E±0°.03, h0km, n12, $\sigma 0^{s}50$/24, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GDZ	Gediz	0.61	179	eP	Pg	10 47 21.5	-0.3
GDZ				eS	Sg	10 47 30.0	+0.3
GDZ	Gediz	0.61	179	eP	Pg	10 47 21.5	-0.3
GDZ				eS	Sg	10 47 30.0	+0.3
DURS	Dursunbey	0.77	263	eP	Pg	10 47 24.5	-0.4
DURS				eS	Sg	10 47 35.6	+0.7
DURS	Dursunbey	0.77	263	eP	Pg	10 47 24.5	-0.4
DURS				eS	Sg	10 47 35.6	+0.7
DEMI	Demirci	0.87	222	eP	Pg	10 47 27.5	+0.6
DEMI				eS	Sn	10 47 42.7	-0.5
DEMI	Demirci	0.87	222	eP	Pg	10 47 27.5	+0.6
DEMI				eS	Sn	10 47 42.7	-0.5
SEYT	Eskypehyr	1.09	99	eP	Pg	10 47 31.3	+0.2
SEYT				eS	Sb	10 47 46.5	-0.2
SEYT	Eskypehyr	1.09	99	eP	Pg	10 47 31.3	+0.2
SEYT				eS	Sb	10 47 46.5	-0.2
KHAL	Karahalli	1.32	179	eP	Pg	10 47 35.3	-0.3
KHAL				eS	Sg	10 47 53.6	+0.8
KHAL	Karahalli	1.32	179	eP	Pg	10 47 35.3	-0.3
KHAL				eS	Sg	10 47 53.6	+0.8
BALY	Balya	1.42	272	eP	Pn	10 47 37.0	-0.3
BALY				eS	Sn	10 47 57.0	+0.2
BALY	Balya	1.42	272	eP	Pn	10 47 37.0	-0.3
BALY				eS	Sn	10 47 57.0	+0.2

*IDC **09** 10:56:13.4±1.1, 31°.08N×103°.68E, h0km, mb3.3/6, mb1 3.5/7, mb1mx3.4/25, mbtmp3.3/7, ML3.2/1, Error ellipse: s-maj=40.5km s-min=20.1km az=59.0*
*BJI **09** 10:56:15.9, 31°.29N×103°.58E, h20km, ML3.5/13*
ISC 09 10:56:16.3±1.0, 31°.12N±0°.06×103°.54E±0°.10, h16km, n11, $\sigma 1^{s}68$/13, mb3.3/7, Sichuan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.28	138	Pg	Pb	10 56 22.9	0.0
CD2				Sg	Sb	10 56 28.5	+1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CD2				smax	smax		
	comp=N,5µm,0.9s						
CD2				smax	smax		
	comp=E,7µm,0.7s						
GYA	Guiyang	5.39	149	Pn	Pn	10 57 42.3	+6.1
GYA				Sn	Sn	10 58 39.1	+1.1
GYA				smax	smax		
	comp=N,90nm,0.9s						
GYA				smax	smax		
	comp=E,80nm,0.9s						
XAN	Xi'an	5.39	56	Pg	Pb	10 57 50.8	+0.6
XAN				Sg	Sb	10 58 55.0	+0.3
XAN				smax	smax		
	comp=N,36nm,0.8s						
XAN				smax	smax		
	comp=E,17nm,0.8s						
SONM	Songino Array	16.84	7	Pn	P	11 00 13.0	-0.5
	comp=E,0.1nm,0.3s,baz=183,slow=14,SNR=2.8						
KSRS	Korea Array	21.08	66	P	P	11 00 58.2	-1.7
	comp=E,0.8nm,0.6s,baz=260,slow=10,SNR=5.8						
MKAR	Makanchi Array	22.66	320	P	P	11 01 18.0	+1.3
	comp=E,1.0nm,0.9s,baz=125,slow=10,SNR=8.6						
ZALV	Zalesovo Beam	26.50	335	P	P	11 01 56.9	+4.1
	comp=E,0.4nm,0.5s,baz=123,slow=11,SNR=4.4						
KURBB	Kurchatov Arra	26.94	324	P	P	11 01 56.8	+0.1
	comp=E,0.2nm,0.4s,baz=128,slow=11,SNR=3.4						
WRA	Warramunga Arr	58.76	146	P	P	11 06 12.7	-0.9
	comp=E,0.8nm,0.5s,baz=338,slow=7.8,SNR=24						
ASAR	Alice Springs	61.76	148	P	P	11 06 33.4	-0.8
	comp=E,0.1nm,0.4s,baz=338,slow=7.1,SNR=7.6						
YKA	Yellowknife Ar	81.82	17	P	P	11 08 32.9	-1.3
	comp=E,0.1nm,0.9s,baz=329,slow=5.8,SNR=2.5						

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*CRAAG **09** 10:58:10.9, 36°.02N×2°.87E, Ml4.1*
*CSEM **09** 10:58:11.9±0.3, 36°.10N×2°.73E, h5km, ML4.1, Error ellipse: s-maj=8.2km s-min=5.1km az=164.0*
*IDC **09** 10:58:11.2±1.7, 36°.13N×2°.67E, h0km, mb3.3/2, mb1 3.4/5, mb1mx3.2/31, mbtmp3.3/5, ML3.5/3, MS2.8/1, Ms1 2.8/1, ms1mx1.7/27, Error ellipse: s-maj=43.9km s-min=21.1km az=165.0*
*MDD **09** 10:58:11.7±0.7, 36°.04N×2°.78E, h0km, mb4.1/20, Error ellipse: s-maj=8.7km s-min=4.3km az=165.0, PRXIMO*
ISC 09 10:58:11.5±1.3**, 36°.02N**±0°.04×**2°.77E**±0°.02**, h8**km±10km**, n102,** σ1s57/127**, 2D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMHD	Djebel Mahouad	0.23	40	P	Pg	10 58 15.5	-0.8
EMHD	Djebel Mahouad	0.23	40	P	Pg	10 58 15.5	-0.8
EMHD	Djebel Mahouad	0.23	40	P	Pg	10 58 15.5	-0.8
ADJB	Djebel Djouab	0.56	76	P	Pg	10 58 21.5	-0.9
ADJB	Djebel Djouab	0.56	76	P	Pg	10 58 21.5	-0.9
ADJB	Djebel Djouab	0.56	76	P	Pg	10 58 21.5	-0.9
ABA	Alger-Bouzarea	0.81	16	P	Pg	10 58 27.1	0.0
ABA	Alger-Bouzarea	0.81	16	P	Pg	10 58 27.1	0.0
ABA	Alger-Bouzarea	0.81	16	P	Pg	10 58 27.1	0.0
EBNR	Beni Rached	1.03	285	P	Pn	10 58 32.3	0.0
EBNR	Beni Rached	1.03	285	P	Pn	10 58 32.3	0.0
ECHA	Ech Chlef	1.14	277	P	Pb	10 58 33.4	0.0
ECHA	Ech Chlef	1.14	277	P	Pb	10 58 33.4	0.0
ECHF	Ech Chlef	1.16	277	P	Pg	10 58 33.4	-0.4
ECHF	Ech Chlef	1.16	277	P	Pg	10 58 33.4	-0.4
ETRT	Tiaret	1.35	243	P	Pg	10 58 37.5	+0.1
ETRT	Tiaret	1.35	243	P	Pg	10 58 37.5	+0.1
ETRT	Tiaret	1.35	243	P	Pg	10 58 37.5	+0.1
EANR	'Ain N'Sour	1.35	267	P	Pn	10 58 35.6	-1.1
EANR	'Ain N'Sour	1.35	267	P	Pn	10 58 35.6	-1.1
EANR	'Ain N'Sour	1.35	267	P	Pn	10 58 35.6	-1.1
OJGS	Djebel Guires	1.72	253	P	Pn	10 58 38.0	-3.7
OJGS	Djebel Guires	1.72	253	P	Pn	10 58 38.0	-3.7
OJGS	Djebel Guires	1.72	253	P	Pn	10 58 38.0	-3.7
OKGL	Djebel Kef Gue	1.72	271	P	Pn	10 58 40.0	-1.7
OKGL	Djebel Kef Gue	1.72	271	P	Pn	10 58 40.0	-1.7
OKGL	Djebel Kef Gue	1.72	271	P	Pn	10 58 40.0	-1.7
OJBR	Djebel Berber	2.02	258	P	Pn	10 58 43.0	-2.8
OJBR	Djebel Berber	2.02	258	P	Pn	10 58 43.0	-2.8
OJBR	Djebel Berber	2.02	258	P	Pn	10 58 43.0	-2.8
SET	Setif	2.14	84	P	Pb	10 58 51.0	+0.5
SET	Setif	2.14	84	P	Pb	10 58 51.0	+0.5
SET	Setif	2.14	84	P	Pb	10 58 51.0	+0.5
CTEI	Djebel Teioual	2.95	88	P	Pg	10 59 07.8	-0.2
CTEI	Djebel Teioual	2.95	88	P	Pg	10 59 07.8	-0.2
CTEI	Djebel Teioual	2.95	88	P	Pg	10 59 07.8	-0.2
CASM	Ain Smara	3.02	84	P	Pg	10 59 09.4	0.0
CASM	Ain Smara	3.02	84	P	Pg	10 59 09.4	0.0
CASM	Ain Smara	3.02	84	P	Pg	10 59 09.4	0.0
EIBI	Ibiza	3.21	340	⇓P	Pn	10 59 01.5	-0.6
	23nm,0.3s,SNR=18						
EIBI				S	Sn	10 59 36.7	-3.8
	27nm,0.4s,SNR=5.0						
EIBI	Ibiza	3.21	340	P	Pn	10 59 01.5	-0.6
	23nm,0.3s,SNR=18						
EIBI				S	Sn	10 59 36.7	-3.8
	27nm,0.4s,SNR=5.0						
CKFL	Kef-Lekhel	3.22	82	P	Pg	10 59 11.5	-1.7
CKFL	Kef-Lekhel	3.22	82	P	Pg	10 59 11.5	-1.7
CKFL	Kef-Lekhel	3.22	82	P	Pg	10 59 11.5	-1.7
EBEN	Beniarda	3.58	319	P	Pn	10 59 06.1	-1.3
	1.4nm,0.3s,SNR=8.4						
EBEN				S	Sn	10 59 48.1	-1.8
	2.8nm,0.3s,SNR=5.0						
EBEN	Beniarda	3.58	319	P	Pn	10 59 06.1	-1.3
	1.4nm,0.3s,SNR=8.4						
EBEN				S	Sn	10 59 48.1	-1.8
	2.8nm,0.3s,SNR=5.0						
EMUR	La Murta	3.69	301	S	Sn	10 59 52.6	+0.1
	5.5nm,0.3s,SNR=7.9						
EMUR	La Murta	3.69	301	S	Sn	10 59 52.6	+0.1
	5.5nm,0.3s,SNR=7.9						
AFON	Font Roja	3.73	316	P	Pn	10 59 10.2	+0.8
	0.6nm,0.2s,SNR=7.9						
AFON				S	Sn	10 59 55.4	+1.9
	3.1nm,0.3s,SNR=7.9						
AFON	Font Roja	3.73	316	P	Pn	10 59 10.2	+0.8
	0.6nm,0.2s,SNR=7.9						
AFON				S	Sn	10 59 55.4	+1.9
	3.1nm,0.3s,SNR=7.9						
CMAH	Djebel Manchou	3.81	80	P	Pn	10 59 10.2	-0.2
CMAH	Djebel Manchou	3.81	80	P	Pn	10 59 10.2	-0.2
CMAH	Djebel Manchou	3.81	80	P	Pn	10 59 10.2	-0.2
ETOB	Tobarra	4.32	309	P	Pn	10 59 17.7	+0.2
	3.9nm,0.2s,SNR=17						
ETOB				S	Sn	11 00 08.0	-0.1
	2.1nm,0.2s,SNR=5.0						
ETOB	Tobarra	4.32	309	P	Pn	10 59 17.7	+0.2
	3.9nm,0.2s,SNR=17						
ETOB				S	Sn	11 00 08.0	-0.1
	2.1nm,0.2s,SNR=5.0						
ECHE	Chera	4.63	321	P	Pn	10 59 22.3	+0.6
	4.1nm,0.4s,SNR=5.1						
ECHE				S	Sn	11 00 11.8	-3.8
	2.4nm,0.5s,SNR=5.0						
ECHE	Chera	4.63	321	P	Pn	10 59 22.3	+0.6
	4.1nm,0.4s,SNR=5.1						
ECHE				S	Sn	11 00 11.8	-3.8
	2.4nm,0.5s,SNR=5.0						
EBER	Berja	4.64	283	P	Pn	10 59 20.5	-1.5
	4.0nm,0.2s,SNR=15						
EBER				S	Sn	11 00 14.0	-2.1
	7.0nm,0.3s,SNR=7.9						
EBER	Berja	4.64	283	P	Pn	10 59 20.5	-1.5
	4.0nm,0.2s,SNR=15						
EBER				S	Sn	11 00 14.0	-2.1
	7.0nm,0.3s,SNR=7.9						
EHUE	Huescar	4.65	294	P	Pn	10 59 24.0	+2.0
	1.3nm,0.3s,SNR=7.9						
EHUE	Huescar	4.65	294	P	Pn	10 59 24.0	+2.0
	1.3nm,0.3s,SNR=7.9						
EVIA	Vianos	4.94	303	P	Pn	10 59 26.7	+0.6
	2.3nm,0.2s,SNR=4.0						
EVIA				S	Sn	11 00 23.3	-0.2
	5.4nm,0.4s,SNR=7.9						
EVIA	Vianos	4.94	303	P	Pn	10 59 26.7	+0.6
	2.3nm,0.2s,SNR=4.0						
EVIA				S	Sn	11 00 23.3	-0.2
	5.4nm,0.4s,SNR=7.9						
EQES	Quesada	5.00	293	P	Pn	10 59 28.6	+1.7
	1.9nm,0.3s,SNR=5.3						
EQES				S	Sn	11 00 24.1	-0.9
	5.4nm,0.3s,SNR=5.3						
EQES	Quesada	5.00	293	P	Pn	10 59 28.6	+1.7
	1.9nm,0.3s,SNR=5.3						
EQES				S	Sn	11 00 24.1	-0.9
	5.4nm,0.3s,SNR=5.3						
EMOS	Mosqueruela	5.03	331	⇓P	Pn	10 59 27.2	-0.2
	12nm,0.3s,SNR=18						
EMOS				S	Sn	11 00 20.2	-5.5
	5.6nm,0.4s,SNR=5.0						
EMOS	Mosqueruela	5.03	331	P	Pn	10 59 27.2	-0.2
	12nm,0.3s,SNR=18						
EMOS				S	Sn	11 00 20.2	-5.5
	5.6nm,0.4s,SNR=5.0						
EQUE	Quentar	5.13	285	P	Pn	10 59 28.4	-0.2
	5.5nm,0.3s,SNR=10						
EQUE				S	Sn	11 00 27.2	-0.9
	1.9nm,0.3s,SNR=7.9						
EQUE	Quentar	5.13	285	P	Pn	10 59 28.4	-0.2
	5.5nm,0.3s,SNR=10						
EQUE				S	Sn	11 00 27.2	-0.9
	1.9nm,0.3s,SNR=7.9						
EGUA	Guajares	5.17	281	P	Pn	10 59 30.3	+1.2
	14nm,0.3s,SNR=7.9						
EGUA				S	Sn	11 00 26.9	-2.0
	19nm,0.5s,SNR=7.9						
EGUA	Guajares	5.17	281	P	Pn	10 59 30.3	+1.2
	14nm,0.3s,SNR=7.9						
EGUA				S	Sn	11 00 26.9	-2.0
	19nm,0.5s,SNR=7.9						
ERTA	Horta de San J	5.28	340	P	Pn	10 59 29.8	-0.9
	2.3nm,0.3s,SNR=10						
ERTA	Horta de San J	5.28	340	P	Pn	10 59 29.8	-0.9
	2.3nm,0.3s,SNR=10						
KEST	Kesra	5.35	91	Pn	Pn	10 59 32.5	+0.8
	0.4nm,0.3s,baz=286,slow=5.2,SNR=11						
ERON	Agron	5.38	283	P	Pn	10 59 32.7	+0.5
	3.6nm,0.4s,SNR=7.9						
ERON				S	Sn	11 00 31.0	-3.4
	1.4nm,0.2s,SNR=7.9						
ERON	Agron	5.38	283	P	Pn	10 59 32.7	+0.5
	3.6nm,0.4s,SNR=7.9						
ERON				S	Sn	11 00 31.0	-3.4
	1.4nm,0.2s,SNR=7.9						
EPOB	Poblet	5.49	347	P	Pn	10 59 32.4	-1.1
	2.1nm,0.3s,SNR=4.0						
EPOB	Poblet	5.49	347	P	Pn	10 59 32.4	-1.1
	2.1nm,0.3s,SNR=4.0						
CFON	Fontmartina	5.74	358	P	Pn	10 59 36.1	-0.9
	10nm,0.3s,SNR=12						
CFON				S	Sn	11 00 39.8	-3.2
	3.9nm,0.3s,SNR=4.0						
CFON	Fontmartina	5.74	358	P	Pn	10 59 36.1	-0.9
	10nm,0.3s,SNR=12						
CFON				S	Sn	11 00 39.8	-3.2
	3.9nm,0.3s,SNR=4.0						
EMIR	Miracle	5.96	351	P	Pn	10 59 39.9	-0.2
	21nm,0.4s,SNR=17						
EMIR	Miracle	5.96	351	P	Pn	10 59 39.9	-0.2
	21nm,0.4s,SNR=17						
ETOR	Torete	6.11	323	P	Pn	10 59 43.5	+1.5
	4.4nm,0.2s,SNR=7.9						
ETOR	Torete	6.11	323	P	Pn	10 59 43.5	+1.5
	4.4nm,0.2s,SNR=7.9						
EMIJ	Mijas	6.11	277	P	Pn	10 59 39.6	-2.5
	1.2nm,0.2s,SNR=7.9						
EMIJ				S	Sn	11 00 45.4	-6.8
	8.5nm,0.6s,SNR=7.9						
EMIJ	Mijas	6.11	277	P	Pn	10 59 39.6	-2.5
	1.2nm,0.2s,SNR=7.9						
EMIJ				S	Sn	11 00 45.4	-6.8
	8.5nm,0.6s,SNR=7.9						
ESDC	Sonseca Array	6.45	306	P	Pn	10 59 46.0	-0.8
	1.5nm,0.3s,baz=114,slow=13,SNR=7.5						
ESDC				S	Sn	11 01 00.5	-0.1
	0.3nm,0.1s,baz=118,slow=25,SNR=3.8						
ESDC	Sonseca Array	6.45	306	Pn	Pn	10 59 46.9	+0.1
	1.0nm,0.3s,baz=116,slow=13,SNR=11						
ESDC				Sn	Sn	11 01 10.3	+10
	0.4nm,0.3s,baz=120,slow=29,SNR=3.6						
ESDC	Sonseca Array	6.45	306	P	Pn	10 59 46.0	-0.8
	1.5nm,0.3s,slow=13,SNR=7.5						
ESDC				S	Sn	11 01 00.5	-0.1
	0.3nm,0.1s,slow=25,SNR=3.8						
CSOR	Sort	6.47	349	P	Pn	10 59 46.8	-0.3
	2.3nm,0.3s,SNR=6.3						
CSOR	Sort	6.47	349	P	Pn	10 59 46.8	-0.3
	2.3nm,0.3s,SNR=6.3						
CLLI	Llivia	6.48	355	P	Pn	10 59 47.4	+0.2
	2.1nm,0.2s,SNR=7.3						
CLLI	Llivia	6.48	355	P	Pn	10 59 47.4	+0.2
	2.1nm,0.2s,SNR=7.3						
MDT	Midelt	6.88	244	Pn	Pn	10 59 53.8	+1.0
	0.3nm,0.3s,baz=72,slow=13,SNR=18						
MDT				Lg	Lg	11 01 48.1	
	0.5nm,0.3s,baz=246,slow=18,SNR=3.4						
MDT				LR	LR	11 02 55.1	
	comp=Z,72nm,19.0s,baz=78,slow=41						
GUD	Guadarrama	7.13	312	P	Pn	10 59 56.6	+0.4
	2.7nm,0.3s,SNR=6.5						
GUD	Guadarrama	7.13	312	P	Pn	10 59 56.6	+0.4
	2.7nm,0.3s,SNR=6.5						
IEPA	Eparoz	7.43	336	P	Pn	11 00 00.0	-0.2
	1.3nm,0.3s,SNR=7.9						
IEPA	Eparoz	7.43	336	P	Pn	11 00 00.0	-0.2
	1.3nm,0.3s,SNR=7.9						
IELO	Elcoad	7.48	337	P	Pn	11 00 01.0	+0.1
	0.3nm,0.2s,SNR=7.9						
IELO	Elcoad	7.48	337	P	Pn	11 00 01.0	+0.1
	0.3nm,0.2s,SNR=7.9						
MKAR	Makanchi Array	58.22	53	P	P	11 08 08.1	+2.0
	0.4nm,0.7s,baz=275,slow=6.0,SNR=4.2						
YKA	Yellowknife Ar	69.79	334	P	P	11 09 21.2	-0.6
	0.1nm,0.6s,baz=55,slow=6.0,SNR=4.4						

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*IDC **09** 11:30:39.1±1.0, 9°.37S×117°.68E, h69km±8km, mb3.5/5, mb1 3.6/7, mb1mx3.5/20, mbtmp3.5/7, MS2.9/1, Ms1 2.9/1, ms1mx2.3/30, Error ellipse: s-maj=22.5km s-min=14.6km az=79.0*
*DJA **09** 11:30:42.8±0.4, 9°S±5°×11°8E±°, h81km±23km, M4.8/14, mb4.9/4, mB5.3/2, MLv4.7/14, Mw(mB)4.8/2*
ISC 09 11:30:38.5±0.9**, 9°.53S**±0°.07×**117°.93E**±0°.05**, h71**km±9km**, n27,** σ1s65/29**, mb3.8**/4**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	2.34	94	P	Pn	11 31 20.3	+5.6
KHKI	Kahang-Kahang	2.57	297	P	Pn	11 31 18.7	+0.8
DNP	Denpasar	2.82	287	P	Pn	11 31 22.4	+1.2
DNP				S	Sn	11 31 54.9	+0.8
SRBI	Singaraja	3.05	298	P	Pn	11 31 25.2	+0.8
SRBI				S	Sn	11 31 59.2	-0.5
NBBI	Negara	3.47	289	P	Pn	11 31 26.8	-3.3
BYJI	Banyuwangi	3.77	290	P	Pn	11 31 35.9	+1.7
BYJI				S	Sn	11 32 20.3	+2.9
MMRI	Maumere	4.34	79	P	Pn	11 31 47.4	+5.3
GMJI	Gumukmas	4.61	285	P	Pn	11 31 45.4	-0.3
GMJI				S	Sn	11 32 36.9	-1.0
KMMI	Kalianget	4.63	302	P	Pn	11 31 48.7	+2.7
BLJI	Banyuglugur	4.64	292	S	Sn	11 32 38.3	-0.4
BKSI	Bulukumba	4.71	28	P	Pn	11 31 50.8	+3.7
KAPI	Kappang	4.83	22	P	Pn	11 31 51.4	+2.6
KAPI				S	Sn	11 32 44.7	+1.2
KAPI	Kappang	4.83	22	P	Pn	11 31 49.9	+1.2
	3.1nm,0.3s,baz=214,slow=7.1,SNR=15						
KAPI				S	Sn	11 32 43.7	+0.2
	18nm,0.3s,baz=287,slow=23,SNR=22						
KAPI				LR	LR	11 34 02.3	
	comp=Z,124nm,20.8s,baz=187,slow=42						
KRKI	Karangkates	5.58	284	P	Pn	11 32 02.0	+3.0
	354nm,0.8s,2.1nm						
PWJI	Pagerwojo	6.24	283	P	Pn	11 32 10.7	+2.7
	130nm,0.7s,2µm0.4nm						
PWJI				S	Sn	11 33 17.9	0.0
	130nm,0.7s,2µm0.4nm						
SJI	Sawahan	6.35	286	P	Pn	11 32 11.7	+2.1
	59nm,0.8s,5µm0.4nm						
PCJI	Pacitan	6.80	281	P	Pn	11 32 17.2	+1.5
KDI	Kendari	7.23	40	P	Pn	11 32 28.8	+7.2
FITZ	Fitzroy Crossi	11.34	140	P	Pn	11 33 17.8	+0.1
	0.5nm,0.3s,baz=318,slow=12,SNR=6.0						
FITZ				S	Sn	11 35 17.4	-5.3
	0.3nm,0.3s,baz=183,slow=16,SNR=7.9						
WRA	Warramunga Arr	18.93	125	P	Pn	11 34 57.0	+1.8
	0.2nm,0.3s,baz=303,slow=11,SNR=13						
WRA				S	S	11 38 17.9	-7.3
	0.1nm,0.3s,baz=293,slow=23,SNR=4.1						
ASAR	Alice Springs	20.75	135	P	Pn	11 35 17.3	+0.6
	2.2nm,0.6s,baz=308,slow=10,SNR=33						
ASAR				S	S	11 39 01.9	+0.4
	1.2nm,0.8s,baz=304,slow=23,SNR=5.9						
NWAO	Narrogin (SRO)	23.30	181	pP	pP	11 35 55.6	-0.2
	6.6nm,0.7s,baz=111,slow=5.9,SNR=2.5						
STKA	Stephens Creek	31.23	139	P	P	11 36 55.5	+4.1
	1.5nm,0.5s,baz=313,slow=11,SNR=9.4						
KSRS	Korea Array	47.66	11	pP	pP	11 39 26.6	+1.1
	0.9nm,0.8s,baz=187,slow=9.7,SNR=3.7						
SONM	Songino Array	58.02	351	P	P	11 40 22.2	-1.9
	0.4nm,0.5s,baz=168,slow=8.7,SNR=4.6						
SONM				pP	pP	11 40 41.9	-0.5
	0.9nm,0.7s,baz=265,slow=9.5,SNR=4.7						
MKAR	Makanchi Array	64.45	334	P	P	11 41 07.6	+0.1
	0.3nm,0.6s,baz=152,slow=6.6,SNR=3.9						
MKAR				pP	pP	11 41 24.9	-1.2
	0.7nm,0.7s,baz=142,slow=7.7,SNR=5.9						
ZALV	Zalesovo Beam	69.16	340	P	P	11 41 36.3	-0.8
	0.6nm,0.5s,baz=143,slow=4.4,SNR=3.9						
ZALV				pP	pP	11 41 54.4	-1.7
	0.7nm,0.4s,baz=136,slow=4.7,SNR=3.2						

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*IDC **09** 11:32:35.3±0.9, 27°.83N×57°.59E, h0km, mb4.0/23, mb1 4.1/27, mb1mx4.0/39, mbtmp4.0/27, ML4.2/3, MS3.5/12, Ms1 3.5/12, ms1mx3.1/45, Error ellipse: s-maj=21.0km s-min=13.6km az=165.0*
*MOS **09** 11:32:37.6±1.0, 27°.75N×57°.54E, h33km, mb4.4/27, Error ellipse: s-maj=9.9km s-min=6.4km az=104.4*
*THR **09** 11:32:38.9±0.4, 27°.81N×57°.54E, h18km±5km, ML4.2*
*CSEM **09** 11:32:38.7±0.2, 27°.86N×57°.59E, h20km, mb4.3/31, Error ellipse: s-maj=6.4km s-min=4.9km az=105.0*
*NEIC **09** 11:32:38.9, 27°.81N×57°.54E, h18km, mb4.3/15, ML4.2(THR), MN4.2(TEH), After THR.*
*ISCJB **09** 11:32:38.1±0.2, 27°.86N±0°.03×57°.56E±0°.04, h30km, mb4.2/42, MS3.5/12, Error ellipse: s-maj=4.6km s-min=3.6km az=17.0*
*TEH **09** 11:32:39.9, 27°.90N×57°.39E, h22km, ML4.2*
*OMAN **09** 11:32:47.0±99.0, 27°.38N×57°.57E, h50km, Error ellipse: s-maj=38.3km s-min=2.5km az=17.0*
ISC 09 11:32:39.1±0.4**, 27°.78N**±0°.03×**57°.60E**±0°.05**, h30**km**, n273,** σ1s14/253**, mb4.2**/43**, MS3.5**/12**, 2C-1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	Bandar-abas	0.99	251	Pg	Pb	11 32 57.7	-0.1
IBND				Sg	Sb	11 33 09.0	-1.5
IBND	Bandar-abas	0.99	251	*e*Pg	Pb	11 32 57.7	-0.1
IBND				*e*Sg	Sb	11 33 11.8	+1.3
IBND				*e*		11 33 29.4	
	comp=Z,49µm,0.3s						
IBND	Bandar-abas	0.99	251	*e*Pg	Pb	11 32 57.7	-0.1
IBND				*e*Sg	Sb	11 33 11.8	+1.3
BNDS	Bandar-Abbas	1.32	254	*e*Pg	Pb	11 33 02.8	-0.6
BNDS				AML	AML	11 33 22.7	
	comp=E,5µm,0.5s						
BNDS				AML	AML	11 33 29.6	
	comp=N,4µm,0.7s						
BNDS	Bandar-Abbas	1.32	254	*e*Pg	Pb	11 33 02.8	-0.6
BNDS	Bandar-Abbas	1.32	254	*e*Pg	Pb	11 33 02.8	-0.6
BANOM	Banah	2.18	212	P	Pb	11 33 15.9	-2.0
	SNR=81						
BANOM	Banah	2.18	212	P	Pb	11 33 15.9	-2.0
	SNR=81						
BANOM				S	Sb	11 33 44.5	-0.1
KRBR	Kerman	2.32	342	*e*Pn	Pb	11 33 17.8	-2.6
KRBR				*e*Sg	Sb	11 33 50.3	+1.6
KRBR				AML	AML	11 33 57.6	
	comp=N,1µm,0.5s						
KRBR				AML	AML	11 33 58.1	
	comp=E,2µm,0.4s						
KRBR	Kerman	2.32	342	*e*Pn	Pb	11 33 17.8	-2.6
KRBR				*e*Sg	Sb	11 33 50.3	+1.6
KRBR	Kerman	2.32	342	*e*Pn	Pb	11 33 17.8	-2.6
HATD	Hatta, Dubai	3.22	204	P	Pn	11 33 27.3	-0.4
	SNR=19						
HATD	Hatta, Dubai	3.22	204	P	Pn	11 33 27.9	+0.2
NAZ	Nazwa, Dubai	3.27	212	P	Pn	11 33 31.7	+3.2
	SNR=26						
NAZ	Nazwa, Dubai	3.27	212	P	Pn	11 33 31.5	+3.1
ZHSF	Zahedan	3.34	56	*e*Pn	Pn	11 33 32.8	+3.3
ZHSF	Zahedan	3.34	56	*e*Pn	Pn	11 33 32.8	+3.3
ZHSF	Zahedan	3.34	56	*e*Pn	Pn	11 33 32.8	+3.3
ASHO	Ashiyiah	3.38	204	P	Pn	11 33 32.2	+2.3
	SNR=80						
ASHO	Ashiyiah	3.38	204	P	Pn	11 33 32.1	+2.3
	SNR=80						
FAQ	Al Faqa, Dubai	3.52	211	P	Pn	11 33 34.5	+2.8
ASUD	Al Ashush, Dub	3.74	213	⇑P	Pn	11 33 38.3	+3.4
	SNR=8.1						
ASUD	Al Ashush, Dub	3.74	213	P	Pn	11 33 37.6	+2.7
GHIR	Ghir-Karzin	4.11	278	*e*Pn	Pn	11 33 42.0	+2.0
GHIR				AML	AML	11 34 32.7	
	comp=N,359nm,0.4s						
GHIR				AML	AML	11 34 37.2	
	comp=E,340nm,0.4s						
GHIR	Ghir-Karzin	4.11	278	*e*Pn	Pn	11 33 42.0	+2.0
GHIR	Ghir-Karzin	4.11	278	*e*Pn	Pn	11 33 42.0	+2.0
HOQ	Hoqain	4.18	184	P	Pn	11 33 41.3	+0.3
	SNR=27						
HOQ	Hoqain	4.18	184	P	Pn	11 33 41.3	+0.3
	SNR=27						
IBAF	Bafgh	4.19	336	*e*Pn	Pn	11 33 43.1	+1.9
IBAF	Bafgh	4.19	336	*e*Pn	Pn	11 33 43.1	+1.9
ISRV	Sarvestan	4.25	293	Pn	Pn	11 33 43.4	+1.2
ISRV	Sarvestan	4.25	293	*e*Pn	Pn	11 33 43.6	+1.4
ISRV				*e*		11 34 40.4	
	comp=Z,3µm,0.2s						
ISRV	Sarvestan	4.25	293	*e*Pn	Pn	11 33 43.6	+1.4
IMEH	Mehriz	4.44	325	Pn	Pn	11 33 46.2	+1.5
IMEH	Mehriz	4.44	325	*e*Pn	Pn	11 33 46.4	+1.7
IMEH				*e*		11 35 06.7	
	comp=Z,2µm,0.3s						
IMEH	Mehriz	4.44	325	*e*Pn	Pn	11 33 46.4	+1.7
ARQ	Araqi	4.53	193	P	Pn	11 33 48.7	+3.0
	SNR=8.1						
ARQ	Araqi	4.53	193	P	Pn	11 33 48.7	+3.0
	SNR=8.1						
SMDO	Samad	4.72	175	P	Pn	11 33 49.8	+1.4
	SNR=16						
SMDO	Samad	4.72	175	P	Pn	11 33 49.8	+1.4
	SNR=16						
IKOO	Kooshah	4.79	14	*e*Pn	Pn	11 33 52.7	+3.2
IKOO				*e*		11 34 06.8	
	comp=Z,2µm,0.2s						
IKOO	Kooshah	4.79	14	*e*Pn	Pn	11 33 52.7	+3.2
BSY	Bisya	5.02	184	⇑P	Pn	11 33 54.9	+2.3
	SNR=22						
BSYO	Bisya	5.04	184	P	Pn	11 33 54.9	+2.2
	SNR=22						
ICHK	Chekchek	5.24	329	Pn	Pn	11 33 58.0	+2.3
ICHK	Chekchek	5.24	329	*e*Pn	Pn	11 33 57.5	+1.8
ICHK				*e*		11 34 23.0	
	comp=Z,2µm,0.3s						
ICHK	Chekchek	5.24	329	*e*Pn	Pn	11 33 57.5	+1.8
WBK	Wadi Bani Khal	5.29	166	P	Pn	11 33 57.5	+1.3
	SNR=22						
WBK	Wadi Bani Khal	5.29	166	P	Pn	11 33 57.5	+1.3
	SNR=22						
IDAH	Dahanechah	5.32	21	*e*Pn	Pn	11 34 01.4	+4.6
IDAH				*e*		11 34 23.1	
	comp=Z,855nm,0.2s						
IDAH	Dahanechah	5.32	21	*e*Pn	Pn	11 34 01.4	+4.6
JMDO	Jabal Madar	5.40	175	P	Pn	11 34 00.1	+2.3
	SNR=16						
JMDO	Jabal Madar	5.40	175	P	Pn	11 34 00.1	+2.3
	SNR=16						
IGAR	Gharneh	6.66	315	*e*Pn	Pn	11 34 16.7	+1.5
IGAR				*e*		11 34 21.1	
	comp=Z,688nm,0.1s						
IZEF	Zefreh	6.84	320	Pn	Pn	11 34 18.7	+1.1
IZEF	Zefreh	6.84	320	*e*Pn	Pn	11 34 18.7	+1.1
IZEF				*e*		11 34 19.1	
	comp=Z,376nm,0.1s						
IZEF	Zefreh	6.84	320	*e*Pn	Pn	11 34 18.7	+1.1
IPIR	Pirpir	7.58	312	*e*Pn	Pn	11 34 29.3	+1.4
IPIR				*e*		11 36 04.3	
	comp=Z,740nm,0.3s						
IPIR	Pirpir	7.58	312	*e*Pn	Pn	11 34 29.3	+1.4
QRN	Al-Qurain	8.59	279	*e*P	Pn	11 34 41.1	-0.3
QRN				AML	AML	11 36 12.0	
	comp=Z,54nm,0.3s						
ISRO	Mashad	8.65	10	*e*Pn	Pn	11 34 44.7	+2.3
ISRO				*e*Sg	Sn	11 37 17.9	+59
ISRO	Mashad	8.65	10	*e*Pn	Pn	11 34 44.7	+2.3
KBD	Kabd	8.82	281	*e*P	Pn	11 34 43.9	-0.8

KBD AML AML 11 36 17.7
comp=Z,26nm,0.4s
KBD Kabd 8.82 281 *e*P **Pn 11 34 43.9 -0.8**
UMR Umm Al-Rimmam 8.86 284 *e*P **Pn 11 34 44.6 -0.5**
UMR AML AML 11 36 22.2
comp=Z,130nm,0.4s
UMR Umm Al-Rimmam 8.86 284 *e*P **Pn 11 34 44.6 -0.5**
RDF Al-Radifah 8.93 280 *e*P **Pn 11 34 45.2 -0.9**
RDF AML AML 11 36 19.0
comp=Z,42nm,0.5s
RDF Al-Radifah 8.93 280 *e*P **Pn 11 34 45.2 -0.9**
IKRD Kardeh 9.01 5 *e*Pn Pn 11 34 52.7 +5.3
IKRD *e* 11 37 46.8
comp=Z,98nm,0.1s
MIB Mutribah 9.22 285 *e*P **Pn 11 34 50.0 -0.1**
MIB AML AML 11 36 29.4
comp=Z,35nm,0.3s
MIB Mutribah 9.22 285 *e*P **Pn 11 34 50.0 -0.1**
NAY Al-Naaiem 9.23 282 *e*P **Pn 11 34 49.6 -0.6**
NAY AML AML 11 36 29.8
comp=Z,28nm,0.4s
NAY Al-Naaiem 9.23 282 *e*P **Pn 11 34 49.6 -0.6**
ISHV Shirvan 9.73 1 *e*Pn Pn 11 35 00.2 +2.9
ISHV *e* 11 36 27.9
comp=Z,603nm,0.0s
ISHV Shirvan 9.73 1 *e*Pn Pn 11 35 00.2 +2.9
RBK Rabkut 10.69 198 ⇓P **Pn 11 35 09.1 -1.3**
ABTO Aybut 11.11 202 P **Pn 11 35 14.9 -1.2**
SNR=6.9
IDHR Dehrash 11.81 309 *e*Pn **Pn 11 35 24.6 -1.2**
IDHR *e* 11 37 38.4
comp=Z,780nm,0.3s
BHD Baghdad 12.64 299 *ex* Pn 11 35 31.8 -5.0
BHD *ex* x 11 37 44.2
GNI Garni 16.29 323 *e*Pn **Pn 11 36 25.0 -0.8**
comp=Z,16nm,0.9s
GNI Garni 16.29 323 Pn **Pn 11 36 25.3 -0.5**
comp=Z,0.4nm,0.3s,baz=331,slow=19,SNR=2.1
GNI Garni 16.29 323 *e*Pn **Pn 11 36 25.0 -0.8**
comp=Z,16nm,0.9s
ASF Jabal al Asfar 18.45 289 P **Pn 11 36 53.7 +1.0**
ASF S Sn 11 40 04.0 -14
ASF Jabal al Asfar 18.45 289 P **Pn 11 36 53.7 +1.0**
comp=Z,0.6nm,0.3s,baz=90,slow=6.1,SNR=3.3
ASF S Sn 11 40 04.0 -14
comp=Z,0.3nm,0.3s,baz=155,slow=17,SNR=3.6
ASF LR LR 11 45 33.2
comp=Z,29nm,18.8s,baz=344,slow=42
KKAR Karatay Array 18.53 31 *e*P **Pn 11 36 55.5 +2.0**
KKAR pmax pmax
comp=Z,7.0nm,1.0s
KKAR Karatay Array 18.53 31 *e*P **Pn 11 36 55.5 +2.0**
comp=Z,6.8nm,1.0s
KKAR Karatay Array 18.53 31 *e*P **Pn 11 36 55.5 +2.0**
comp=Z,6.8nm,1.0s
ZEI Tsey 18.64 327 *e*P **Pn 11 36 55.6 +0.5**
ZEI pmax pmax
comp=Z,13nm,1.0s
ZEI Tsey 18.64 327 *e*P **Pn 11 36 55.6 +0.5**
comp=Z,13nm,1.0s
MALT Malatya 19.16 308 *e*P **P 11 36 59.4 -0.9**
MALT pmax pmax
comp=Z,12nm,0.9s
MALT Malatya 19.16 308 *e*P **P 11 36 59.4 -0.9**
comp=Z,12nm,0.9s
MALT Malatya 19.16 308 *e*P **P 11 36 59.4 -0.9**
comp=Z,12nm,0.9s
EKS2 Erkin-Say 19.83 37 *e*P **Pn 11 37 08.6 -0.7**
EKS2 pmax pmax
comp=Z,21nm,1.2s
EKS2 Erkin-Say 19.83 37 *e*P **Pn 11 37 08.6 -0.7**
comp=Z,21nm,1.2s
EKS2 Erkin-Say 19.83 37 *e*P **Pn 11 37 08.6 -0.7**
comp=Z,21nm,1.2s
MMAI Mount Meron Ar 19.83 291 P **Pn 11 37 08.8 -0.5**
MMAI Mount Meron Ar 19.83 291 P **Pn 11 37 08.8 -0.5**
comp=Z,0.6nm,0.3s,baz=84,slow=15,SNR=4.0
MMAI Mount Meron Ar 19.83 291 P **Pn 11 37 08.8 -0.5**
KBZ Khabaz 19.84 327 P **Pn 11 37 08.0 -1.2**
KBZ Khabaz 19.84 327 P **Pn 11 37 08.0 -1.2**
KBZ Khabaz 19.84 327 P **Pn 11 37 08.0 -1.2**
comp=Z,0.3nm,0.3s,baz=147,slow=13,SNR=2.6
KBZ Khabaz 19.84 327 P **Pn 11 37 08.0 -1.2**
EIL Elat 19.95 281 P **Pn 11 37 11.3 +0.8**
EIL Elat 19.95 281 P **Pn 11 37 11.3 +0.8**
comp=Z,0.2nm,0.3s,baz=72,slow=20,SNR=4.8
AAK Ala-Archa 20.20 38 *e*P Pn 11 37 13.3 -0.4
AAK Ala-Archa 20.20 38 *e*P Pn 11 37 13.3 -0.4
AAK Ala-Archa 20.20 38 P Pn 11 37 12.9 -0.7
comp=Z,3.1nm,0.8s,baz=230,slow=11,SNR=11
AAK LR LR 11 46 02.0
comp=Z,159nm,18.5s,baz=207,slow=40
AAK Ala-Archa 20.20 38 *e*P Pn 11 37 13.3 -0.4
TKM2 Tokmak 2 21.00 39 *e*P **P 11 37 21.4 +1.0**
TKM2 pmax pmax
comp=Z,3.0nm,0.8s
TKM2 Tokmak 2 21.00 39 *e*P **P 11 37 21.4 +1.0**
comp=Z,3.5nm,0.8s
TKM2 Tokmak 2 21.00 39 *e*P **P 11 37 21.4 +1.0**
comp=Z,3.5nm,0.8s
ATD Arta Tunnel 21.27 223 P **P 11 37 25.6 +2.2**
ATD Arta Tunnel 21.27 223 P **P 11 37 25.6 +2.2**
comp=Z,6.3nm,0.3s,baz=31,slow=12,SNR=6.0
ATD LR LR 11 46 48.6
comp=Z,63nm,19.8s,baz=68,slow=40
ATD Arta Tunnel 21.27 223 P **P 11 37 25.5 +2.2**
ABKAR Akbulak array 21.52 4 *e*P **P 11 37 25.7 +0.1**
comp=Z,9.1nm,0.5s
ABKAR Akbulak array 21.52 4 *e*P **P 11 37 25.7 +0.1**
comp=Z,9.1nm,0.5s
AKTK Aktyubinsk 22.63 1 P **P 11 37 38.7 +1.2**
comp=Z,109nm,18.8s
AKTO Aktyubinsk 22.63 1 P **P 11 37 38.7 +1.2**
AKTO pmax pmax
comp=Z,6.0nm,0.4s
AKTO MLR MLR
comp=Z,109nm,18.8s
AKTO Aktyubinsk 22.63 1 P **P 11 37 38.7 +1.2**
AKTO Aktyubinsk 22.63 1 P **P 11 37 38.7 +1.2**
comp=Z,6.2nm,0.4s,baz=186,slow=9.2,SNR=29
AKTO LR LR 11 48 02.4
comp=Z,108nm,18.8s,baz=176,slow=41
AKTO Aktyubinsk 22.63 1 P **P 11 37 38.7 +1.2**
BRTR Keskin Array B 23.14 307 P **P 11 37 43.6 +0.7**
BRTR Keskin Array B 23.14 307 P **P 11 37 43.6 +0.7**
comp=Z,7.2nm,0.8s,baz=119,slow=9.8,SNR=32
BRTR Keskin Array B 23.14 307 P **P 11 37 43.7 +0.7**
BR131 Keskin Array S 23.14 307 *e*P **P 11 37 42.7 -0.3**
comp=Z,4.5nm,0.7s
BR131 Keskin Array S 23.14 307 *e*P **P 11 37 42.7 -0.3**
comp=Z,4.5nm,0.7s
BVAR Borovoye Array 26.95 17 P **P 11 38 18.1 +0.3**
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR MLR MLR
comp=Z,207nm,18.4s
BVAR Borovoye Array 26.95 17 P **P 11 38 18.1 +0.3**
BVAR Borovoye Array 26.95 17 P **P 11 38 18.1 +0.3**
comp=Z,2.0nm,0.6s,baz=193,slow=8.2,SNR=14
BVAR LR LR 11 50 25.6
comp=Z,207nm,18.4s,baz=248,slow=40
BVAR Borovoye Array 26.95 17 P **P 11 38 18.1 +0.3**
comp=Z,207nm,18.4s
MK31 Makanchi Array 27.13 39 *e*P **P 11 38 20.0 +0.4**
MK31 Makanchi Array 27.13 39 *e*P **P 11 38 20.0 +0.4**
MK31 Makanchi Array 27.13 39 *e*P **P 11 38 20.0 +0.4**
MKAR Makanchi Array 27.13 39 P **P 11 38 20.1 +0.5**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MKAR MLR MLR
comp=Z,57nm,20.2s
MKAR Makanchi Array 27.13 39 P **P 11 38 20.1 +0.5**
MKAR Makanchi Array 27.13 39 P **P 11 38 20.1 +0.5**
comp=Z,1.5nm,0.8s,baz=227,slow=7.9,SNR=16
MKAR LR LR 11 50 24.3
comp=Z,57nm,20.2s,baz=268,slow=40
MKAR Makanchi Array 27.13 39 P **P 11 38 20.1 +0.5**
comp=Z,57nm,20.2s
KURBB Kurchatov Arra 27.81 29 P **P 11 38 25.9 +0.4**
comp=Z,1.0nm,0.6s,baz=228,slow=8.3,SNR=17
KURBB LR LR 11 51 16.2
comp=Z,90nm,18.2s,baz=235,slow=40
KURK Kurchatov 27.92 29 P **P 11 38 25.9 -0.6**
KURK pmax pmax
comp=Z,1.0nm,0.6s
KURK MLR MLR
comp=Z,90nm,18.2s
KURK Kurchatov 27.92 29 P **P 11 38 25.9 -0.6**
KURK Kurchatov 27.92 29 P **P 11 38 25.9 -0.6**
comp=Z,90nm,18.2s
AKASG Malin Array Be 31.40 325 P **P 11 38 56.9 -0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 31.40 325 P **P 11 38 56.9 -0.4**
AKASG Malin Array Be 31.40 325 P **P 11 38 56.9 -0.4**
comp=Z,0.5nm,0.3s,baz=116,slow=7.6,SNR=5.0
AKASG Malin Array Be 31.40 325 P **P 11 38 56.9 -0.4**
comp=Z,1.0nm,0.3s
NVS Novosibirsk 32.84 27 *e*P **P 11 39 11.1 +1.2**
NVS Novosibirsk 32.84 27 *e*P **P 11 39 11.1 +1.2**
ZAA0 Zalesovo Array 32.90 30 *e*P **P 11 39 10.3 -0.1**
ZAA0 Zalesovo Array 32.90 30 *e*P **P 11 39 10.3 -0.1**
ZALV Zalesovo Beam 32.90 30 P **P 11 39 10.5 +0.1**
ZALV pmax pmax
comp=Z,2.0nm,0.3s
ZALV MLR MLR
comp=Z,85nm,18.2s
ZALV Zalesovo Beam 32.90 30 P **P 11 39 10.4 +0.1**
ZALV Zalesovo Beam 32.90 30 P **P 11 39 10.4 +0.1**
comp=Z,1.8nm,0.3s,baz=248,slow=9.3,SNR=19
ZALV LR LR 11 54 27.2
comp=Z,85nm,18.1s,baz=132,slow=40
ZALV Zalesovo Beam 32.90 30 P **P 11 39 10.5 +0.1**
comp=Z,85nm,18.2s
KOLS Kolonicke sedl 34.39 318 *e*P **P 11 39 24.8 +1.3**
KOLS pmax pmax
comp=Z,9.0nm,1.0s
KOLS Kolonicke sedl 34.39 318 *e*P **P 11 39 24.8 +1.3**
KOLS Kolonicke sedl 34.39 318 *e*P **P 11 39 24.8 +1.3**
comp=Z,9.0nm,1.0s
VYHS Vyhne 36.32 315 *e*P **P 11 39 40.3 +0.2**
VYHS Vyhne 36.32 315 *e*P **P 11 39 40.2 +0.2**
VYHS Vyhne 36.32 315 *e*P **P 11 39 40.3 +0.2**
GTA Gaotai 36.73 61 *e*P **P 11 39 45.7 +1.8**
GTA pP **pP 11 39 50.0 -2.7**
GTA sP **sP 11 39 52.9 -3.5**
GTA pmax pmax
comp=Z,3.0nm,1.2s
JOF Joensuu 39.12 341 *e*P **P 11 40 01.8 -1.8**
JOF pmax pmax
comp=Z,2.0nm,0.6s
JOF Joensuu 39.12 341 *ep* **P 11 40 01.8 -1.8**
comp=Z,1.8nm,0.6s
JOF Joensuu 39.12 341 *e*P **P 11 40 01.8 -1.8**
comp=Z,2.0nm,0.6s
GERES GERESS Array B 39.66 314 P **P 11 40 08.7 +0.2**
GERES GERESS Array B 39.66 314 P **P 11 40 08.7 +0.2**
comp=Z,0.3nm,0.3s,baz=113,slow=8.8,SNR=4.7
GERES GERESS Array B 39.66 314 P **P 11 40 08.6 +0.2**
FINES FINESS Array B 39.69 337 P **P 11 40 08.0 -0.3**
FINES FINESS Array B 39.69 337 P **P 11 40 08.0 -0.3**
comp=Z,4.3nm,0.5s,baz=136,slow=7.2,SNR=34
FINES FINESS Array B 39.69 337 P **P 11 40 08.0 -0.3**
comp=Z,4.0nm,0.5s
KHC Kasperske Hory 39.82 315 *e*P **P 11 40 09.7 +0.1**
KHC pmax pmax
comp=Z,2.0nm,0.7s
KHC Kasperske Hory 39.82 315 *e*P **P 11 40 09.7 +0.1**
comp=Z,2.3nm,0.7s
KHC Kasperske Hory 39.82 315 *e*P **P 11 40 09.7 +0.1**
comp=Z,2.3nm,0.7s
KAF Kangasniemi 40.08 338 *e*P **P 11 40 12.5 +1.0**
KAF pmax pmax
comp=Z,2.0nm,0.6s
KAF Kangasniemi 40.08 338 *ep* **P 11 40 12.5 +1.0**
comp=Z,1.8nm,0.6s
KAF Kangasniemi 40.08 338 *e*P **P 11 40 12.5 +1.0**
comp=Z,2.0nm,0.6s
BSD Bornholm Skovb 41.09 324 *i*P **P 11 40 18.4 -1.6**
BSD pmax pmax
comp=Z,7.0nm,0.8s
BSD Bornholm Skovb 41.09 324 *i*P **P 11 40 18.4 -1.6**
comp=Z,6.7nm,0.8s
BSD Bornholm Skovb 41.09 324 *i*P **P 11 40 18.4 -1.6**
comp=Z,7.0nm,0.8s
PGF Pioggiola 41.81 304 *e*P **P 11 40 23.6 -2.6**
comp=Z,6.7nm,0.6s
PGF Pioggiola 41.81 304 *e*P **P 11 40 23.6 -2.6**
PGF pmax pmax
comp=Z,7.0nm,0.6s
PGF Pioggiola 41.81 304 *e*P **P 11 40 23.6 -2.6**
comp=Z,6.7nm,0.6s
PGF Pioggiola 41.81 304 *e*P **P 11 40 23.6 -2.6**
comp=Z,6.7nm,0.6s
SONM Songino Array 42.62 48 P **P 11 40 32.8 -0.1**
SONM Songino Array 42.62 48 P **P 11 40 32.8 -0.1**
comp=Z,0.7nm,0.8s,baz=265,slow=8.8,SNR=4.5
SONM LR LR 12 00 20.4
comp=Z,106nm,20.5s,baz=224,slow=39
SONM Songino Array 42.62 48 P **P 11 40 32.8 -0.1**
comp=Z,107nm,20.5s
MBDF Montbardon 43.60 307 *e*P **P 11 40 42.1 +1.3**
comp=Z,6.2nm,0.6s
MBDF Montbardon 43.60 307 *e*P **P 11 40 42.1 +1.3**
MBDF pmax pmax
comp=Z,6.0nm,0.6s
MBDF Montbardon 43.60 307 *e*P **P 11 40 42.1 +1.3**
comp=Z,6.2nm,0.6s
MBDF Montbardon 43.60 307 *e*P **P 11 40 42.1 +1.3**
comp=Z,6.2nm,0.6s
LPG La Plagne 43.69 308 *e*P **P 11 40 41.3 -0.4**
LPG La Plagne 43.69 308 *e*P **P 11 40 41.3 -0.4**
LPG La Plagne 43.69 308 *e*P **P 11 40 41.3 -0.4**
LPG La Plagne 43.69 308 *e*P **P 11 40 41.3 -0.4**
HFS Hagfors 43.87 330 P **P 11 40 42.1 -0.5**
HFS Hagfors 43.87 330 P **P 11 40 42.1 -0.5**
comp=Z,1.9nm,0.4s,baz=132,slow=10,SNR=14
HFS Hagfors 43.87 330 P **P 11 40 42.1 -0.5**
comp=Z,2.0nm,0.4s
ORIF Oris-en-Rattie 44.25 307 *e*P **P 11 40 44.5 -1.5**
comp=Z,4.3nm,0.5s
ORIF Oris-en-Rattie 44.25 307 *e*P **P 11 40 44.5 -1.5**
ORIF pmax pmax
comp=Z,4.0nm,0.5s
ORIF Oris-en-Rattie 44.25 307 *e*P **P 11 40 44.5 -1.5**
comp=Z,4.3nm,0.5s
ORIF Oris-en-Rattie 44.25 307 *e*P **P 11 40 44.5 -1.5**
comp=Z,4.3nm,0.5s
PAGF Fort de Pagny 44.77 312 *e*P **P 11 40 49.8 -0.1**
comp=Z,1.9nm,0.5s
PAGF Fort de Pagny 44.77 312 *e*P **P 11 40 49.8 -0.1**
comp=Z,1.9nm,0.5s
PAGF Fort de Pagny 44.77 312 *e*P **P 11 40 49.8 -0.1**
comp=Z,1.9nm,0.5s
SFTF Sexfontaines 45.17 312 *e*P **P 11 40 52.1 -1.1**
comp=Z,5.0nm,0.3s
SFTF Sexfontaines 45.17 312 *e*P **P 11 40 52.1 -1.1**
comp=Z,5.0nm,0.3s
SFTF Sexfontaines 45.17 312 *e*P **P 11 40 52.1 -1.1**
comp=Z,5.0nm,0.3s
NB2 NORSAR Subarra 45.37 330 P **P 11 40 53.3 -1.3**
comp=Z,1.5nm,0.8s,baz=112,slow=7.9
NB2 NORSAR Subarra 45.37 330 P **P 11 40 53.3 -1.3**
comp=Z,1.5nm,0.8s,SNR=0.2
NOA NORSAR Array B 45.37 330 P **P 11 40 53.3 -1.3**
NOA NORSAR Array B 45.37 330 P **P 11 40 53.3 -1.3**
comp=Z,2.0nm,0.8s,baz=115,slow=8.0,SNR=9.6
NOA NORSAR Array B 45.37 330 P **P 11 40 53.3 -1.3**
comp=Z,2.0nm,0.8s
KEV Kevo 45.56 346 *e*P **P 11 40 55.6 -0.3**
KEV pmax pmax
comp=Z,6.0nm,0.7s
KEV Kevo 45.56 346 *ep* **P 11 40 55.6 -0.3**
comp=Z,6.1nm,0.7s
KEV Kevo 45.56 346 *e*P **P 11 40 55.6 -0.3**
comp=Z,6.0nm,0.7s
ARCES ARCESS Array B 45.73 345 P **P 11 40 57.2 0.0**
ARCES ARCESS Array B 45.73 345 P **P 11 40 57.2 0.0**
comp=Z,1.9nm,0.5s,baz=140,slow=8.1,SNR=18
ARCES ARCESS Array B 45.73 345 P **P 11 40 57.3 0.0**
comp=Z,2.0nm,0.5s
SMF Signal de Mont 45.82 309 *e*P **P 11 40 58.2 -0.1**
comp=Z,7.8nm,0.7s
SMF Signal de Mont 45.82 309 *e*P **P 11 40 58.2 -0.1**
SMF pmax pmax
comp=Z,8.0nm,0.7s
SMF Signal de Mont 45.82 309 *e*P **P 11 40 58.2 -0.1**
comp=Z,7.8nm,0.7s
SMF Signal de Mont 45.82 309 *e*P **P 11 40 58.2 -0.1**
comp=Z,7.8nm,0.7s
SSF Saint Saulge 46.08 310 *e*P **P 11 40 59.5 -0.8**
SSF Saint Saulge 46.08 310 *e*P **P 11 40 59.5 -0.8**
AVF Avril sur Loir 46.16 309 *e*P **P 11 41 00.1 -0.9**
AVF Avril sur Loir 46.16 309 *e*P **P 11 41 00.1 -0.9**
AVF Avril sur Loir 46.16 309 *e*P **P 11 41 00.1 -0.9**
AVF Avril sur Loir 46.16 309 *e*P **P 11 41 00.1 -0.9**
CAF Calviac 46.96 307 *e*P **P 11 41 06.9 -0.4**
CAF Calviac 46.96 307 *e*P **P 11 41 06.9 -0.4**
CAF Calviac 46.96 307 *e*P **P 11 41 06.9 -0.4**
CAF Calviac 46.96 307 *e*P **P 11 41 06.9 -0.4**
ESDC Sonseca Array 51.65 300 P **P 11 41 43.7 +0.4**
ESDC Sonseca Array 51.65 300 P **P 11 41 43.7 +0.4**
comp=Z,1.0nm,0.5s,baz=67,slow=8.0,SNR=11
ESDC Sonseca Array 51.65 300 P **P 11 41 43.7 +0.4**
MDT Midelt 53.28 292 P **P 11 41 55.9 +0.4**
MDT Midelt 53.28 292 P **P 11 41 55.9 +0.4**
comp=Z,1.9nm,0.8s,baz=74,slow=10,SNR=3.5
MDT Midelt 53.28 292 P **P 11 41 55.9 +0.4**
SPITS Spitsbergen Ar 53.77 350 P **P 11 41 58.6 +0.3**
SPITS Spitsbergen Ar 53.77 350 P **P 11 41 58.6 +0.3**
comp=Z,8.3nm,1.0s,baz=120,slow=12,SNR=4.2
SPITS Spitsbergen Ar 53.77 350 P **P 11 41 58.6 +0.3**
comp=Z,8.0nm,1.0s
TOA0 Torodi Ar. Sit 53.94 266 *e*P **P 11 41 59.8 -0.6**
TOA0 Torodi Ar. Sit 53.94 266 *e*P **P 11 41 59.8 -0.6**
TORD Torodi Ar. Bea 53.94 266 P **P 11 42 00.1 -0.3**
TORD Torodi Ar. Bea 53.94 266 P **P 11 42 00.1 -0.3**
comp=Z,1.9nm,0.6s,baz=62,slow=7.1,SNR=42
TORD LR LR 12 08 18.8
comp=Z,46nm,18.4s,baz=120,slow=40
TORD Torodi Ar. Bea 53.94 266 P **P 11 42 00.1 -0.3**
EVO Evora 54.93 299 *e*P **P 11 42 08.3 +1.0**
comp=Z,6.4nm,0.6s
EVOP Sao Brissos 55.02 299 *e*P **P 11 42 08.3 +0.4**
EVOP pmax pmax
comp=Z,6.0nm,0.6s
EVOP Sao Brissos 55.02 299 *e*P **P 11 42 08.3 +0.4**
comp=Z,6.4nm,0.6s
EVOP Sao Brissos 55.02 299 *e*P **P 11 42 08.3 +0.4**
comp=Z,6.4nm,0.6s
KSAR Wonju Array Be 58.77 61 P **P 11 42 34.3 -0.2**
KSAR Wonju Array Be 58.77 61 P **P 11 42 34.3 -0.2**
KSRS Korea Array 58.80 61 P **P 11 42 34.3 -0.4**
comp=Z,0.8nm,0.6s,baz=264,slow=9.1,SNR=5.4
KSRS Korea Array 58.80 61 P **P 11 42 34.3 -0.4**
comp=Z,1.0nm,0.6s
DAG Danmarks Havn 60.02 345 *i*P **P 11 42 42.4 -0.2**
DAG pmax pmax
comp=Z,2.0nm,0.8s
DAG Danmarks Havn 60.02 345 *i*P **P 11 42 42.4 -0.2**
comp=Z,2.1nm,0.8s
USRK Ussuriysk Arra 60.44 53 LR LR 12 11 47.5
comp=Z,55nm,19.7s,baz=127,slow=39
SUMG Summit 65.55 341 *i*P **P 11 43 19.2 -0.7**
SUMG pmax pmax
comp=Z,3.0nm,0.9s
SUMG Summit 65.55 341 *i*P **P 11 43 19.2 -0.7**
comp=Z,3.4nm,0.8s
SUMG Summit 65.55 341 *i*P **P 11 43 19.2 -0.7**
comp=Z,3.0nm,0.9s
JHJ Hachijo jima 2 69.32 63 LR LR 12 18 03.7
comp=Z,32nm,18.0s,baz=303,slow=39
RES Resolute Bay 76.23 353 P **P 11 44 23.9 -0.2**
RES Resolute Bay 76.23 353 P **P 11 44 23.9 -0.2**
comp=Z,0.4nm,0.7s,baz=45,slow=7.1,SNR=4.2
RES Resolute Bay 76.23 353 P **P 11 44 24.0 -0.2**
ILAR Eielson Array 85.80 10 P **P 11 45 13.4 -1.9**
ILAR Eielson Array 85.80 10 P **P 11 45 13.4 -1.9**
comp=Z,0.2nm,0.6s,baz=329,slow=4.9,SNR=4.9
WRA Warramunga Arr 88.05 114 P **P 11 45 28.2 +1.2**
WRA Warramunga Arr 88.05 114 P **P 11 45 28.2 +1.2**
comp=Z,0.7nm,0.9s,baz=314,slow=4.1,SNR=6.0
WRA Warramunga Arr 88.05 114 P **P 11 45 28.2 +1.2**
YKA Yellowknife Ar 89.83 356 P **P 11 45 35.0 +0.3**
YKA Yellowknife Ar 89.83 356 P **P 11 45 34.9 +0.3**
comp=Z,0.6nm,0.7s,baz=0.7,slow=5.3,SNR=9.5
YKA Yellowknife Ar 89.83 356 P **P 11 45 34.9 +0.3**
comp=Z,1.0nm,0.7s

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*IDC **09** 11:39:31.9±0.9, 44°.24N×129°.15W, h0km, mb3.8/13, mb1 4.0/19, mb1mx3.9/36, mbtmp3.8/19, ML3.7/6, MS3.5/16, Ms1 3.5/16, ms1mx3.2/47, Error ellipse: s-maj=24.1km s-min=11.7km az=40.0*

*ISCJB **09** 11:39:32.4±0.3, 44°.33N±0°.02×129°.26W±0°.04, h10km, mb4.0/17, MS3.5/10, Error ellipse: s-maj=4.2km s-min=3.1km az=172.5*

*NEIC **09** 11:39:34.4±0.5, 44°.31N×129°.30W, h10km, mb4.1/13, Error ellipse: s-maj=6.9km s-min=4.2km az=44.0*

ISC 09 11:39:34.0±0.6, **44°.24N**±0°.05×**129°.21W**±0°.05, **h10**km, **n420**, σ1§**16**/405, **mb4.1**/17, **MS3.6**/10, **144C-150D**, **Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.80**	**109**	*e*Pn	Pn	11 40 29.2	-3.5
RNO	**Roman Nose**	**3.95**	**93**	P	**Pn**	**11 40 33.8**	**-1.0**
COR	**Corvallis**	**4.25**	**83**	*e*Pn	**Pn**	**11 40 38.5**	**-0.2**
COR				*e*Sn	**Sn**	**11 41 28.5**	**+0.2**
KMOR	**Kings Mountain**	**4.29**	**69**	P	**Pn**	**11 40 38.5**	**-0.9**
F03A	**Seaside**	**4.34**	**65**	P	**Pn**	**11 40 39.8**	**-0.3**
ON2	**Olympics--Nort**	**4.63**	**53**	P	**Pn**	**11 40 43.8**	**-0.2**
BMW	**Boistfort Moun**	**4.77**	**60**	P	**Pn**	**11 40 44.9**	**-1.1**
HUMO	**Hull Mountain**	**4.84**	**108**	*e*Pn	**Pn**	**11 40 45.6**	**-1.3**
HUMO				*e*Sn	**Sn**	**11 41 40.4**	**-2.6**
NLWA	**Neilton Lookou**	**4.88**	**48**	*e*Pn	**Pn**	**11 40 47.4**	**-0.1**
NLWA				*e*Sn	**Sn**	**11 41 43.5**	**-0.6**
RVW	**Rose Valley**	**4.95**	**65**	P	**Pn**	**11 40 48.4**	**0.0**
FL2	**Flat Top 2**	**5.22**	**66**	P	**Pn**	**11 40 52.4**	**+0.1**
YBH	**Yreka Blue Hor** 12nm,0.8s	**5.39**	**116**	*e*Pn	**Pn**	**11 40 53.0**	**-1.5**
YBH				Sn	**Sn**	**11 41 54.6**	**-2.0**
YBH	**Yreka Blue Hor** 0.9nm,0.3s,baz=310,slow=10,SNR=26	**5.39**	**116**	Pn	**Pn**	**11 40 53.0**	**-1.5**
YBH	0.3nm,0.3s,baz=189,slow=17,SNR=2.5			Sn	**Sn**	**11 41 54.6**	**-2.0**
YBH	comp=Z,97nm,18.9s,baz=301,slow=30			LR	LR	11 42 10.9	
LON	**Longmire**	**5.77**	**62**	*e*Pn	**Pn**	**11 40 59.8**	**+0.1**
PGC	**Sidney**	**5.94**	**40**	*e*Pn	**Pn**	**11 41 01.5**	**-0.4**
PGC				*e*Sn	**Sn**	**11 42 09.1**	**-0.8**
WDC	**Whiskeytown Da** 7.6nm,0.9s	**6.14**	**124**	*e*Pn	**Pn**	**11 41 06.5**	**+1.7**
KCPM	**Cahto Peak**	**6.19**	**135**	*e*Pn	**Pn**	**11 41 05.2**	**-0.4**
MOD	**Modoc**	**6.93**	**107**	*e*Pn	**Pn**	**11 41 16.4**	**+0.6**
HOPS	**Hopland**	**6.97**	**137**	*e*Pn	**Pn**	**11 41 14.8**	**-1.4**
HAWA	**Hanford**	**7.15**	**69**	*e*Pn	**Pn**	**11 41 19.1**	**+0.5**
BBB	**Bella Bella**	**7.98**	**5**	Pn	**Pn**	**11 41 29.9**	**0.0**
BBB	**Bella Bella** 0.6nm,0.3s,baz=202,slow=11,SNR=21	**7.98**	**5**	Pn	**Pn**	**11 41 29.9**	**0.0**
BBB	comp=Z,170nm,18.6s,baz=169,slow=36			LR	LR	11 44 19.3	
BMO	**Blue Mountains**	**8.52**	**82**	*e*Pn	**Pn**	**11 41 37.1**	**-0.4**
WCN	**Washoe City**	**8.62**	**122**	*e*Pn	Pn	11 41 41.6	+2.8
CMB	**Columbia Colle**	**9.09**	**130**	*e*Pn	**Pn**	**11 41 46.5**	**+1.2**
NEW	**Newport**	**9.29**	**60**	*e*Pn	**Pn**	**11 41 47.1**	**-0.9**
NEW	**Newport** baz=9.3,SNR=17	**9.29**	**60**	⇓P	**Pn**	**11 41 47.5**	**-0.5**
NEW	**Newport** 0.8nm,0.3s,baz=235,slow=9.0,SNR=14	**9.29**	**60**	Pn	**Pn**	**11 41 46.4**	**-1.6**
NEW	comp=Z,516nm,20.9s,baz=248,slow=37			LR	LR	11 45 16.2	
C11A	**Tepee Creek (N** baz=9.7	**9.70**	**64**	⇑P	**Pn**	**11 41 53.0**	**-0.6**
MFID	**Camas Ranch** baz=9.7	**9.71**	**90**	⇓P	**Pn**	**11 41 56.1**	**+2.3**
G12A	**Big Creek, Yel** baz=10.0	**9.93**	**80**	⇑P	**Pn**	**11 41 57.8**	**+0.9**
F12A	**Elk City** baz=10.0,SNR=13	**10.00**	**76**	⇓P	**Pn**	**11 41 59.6**	**+1.8**
NVAR	**Mina Array Bea**	**10.04**	**122**	Pn	**Pn**	**11 41 59.8**	**+1.3**
NVAR	**Mina Array Bea** 0.2nm,0.3s,baz=296,slow=14,SNR=17	**10.04**	**122**	Pn	**Pn**	**11 41 59.8**	**+1.3**
D12A	**Red Ives Fores** baz=10	**10.10**	**69**	⇑P	**Pn**	**11 42 00.1**	**+0.9**
NV11	**Mina Array Sit**	**10.13**	**121**	*e*Pn	**Pn**	**11 42 00.9**	**+1.3**
I12A	**Atlanta** baz=10	**10.15**	**88**	⇓P	**Pn**	**11 42 02.2**	**+2.3**
C12B	**Naegeli Ranch,** baz=10	**10.17**	**65**	⇑P	**Pn**	**11 42 00.7**	**+0.7**
H12A	**Diamond D Ranc** baz=10,SNR=20	**10.28**	**83**	⇑P	**Pn**	**11 42 04.1**	**+2.4**
B12A	**Libby**	**10.32**	**61**	⇑P	**Pn**	**11 42 02.6**	**+0.5**

baz=10
A12A **Yaak River Ran** 10.44 59 ⇓P Pn 11 42 03.9 +0.1
baz=10
F13A **Darby** 10.65 76 ⇓P Pn 11 42 08.0 +1.3
baz=11,SNR=19
BSMT **Bassoo Peak** 10.65 65 *e*Pn Pn 11 42 07.8 +1.0
HLID **Hailey** 10.70 88 *e*Pn Pn 11 42 10.7 +3.2
HLID **Hailey** 10.70 88 ⇑P Pn 11 42 09.7 +2.3
baz=11,SNR=54
G13A **Cobalt** 10.70 80 ⇓P Pn 11 42 09.0 +1.5
baz=11,SNR=26
H13A **Challis** 10.71 83 ⇑P Pn 11 42 09.3 +1.8
baz=11,SNR=20
D13A **Huson** 10.71 69 ⇑P Pn 11 42 07.2 -0.3
baz=11
C13A **Hot Springs** 10.75 66 ⇑P Pn 11 42 08.8 +0.8
baz=11,SNR=30
E13A **Victor** 10.80 73 ⇓P Pn 11 42 09.4 +0.7
baz=11,SNR=12
I13A **Wildhorse Cree** 10.87 86 ⇑P Pn 11 42 11.8 +2.0
baz=11,SNR=16
ELK **Elko** 10.89 104 *e*Pn Pn 11 42 13.3 +3.1
J13A **Cove Ranch, Pi** 10.90 89 ⇓P Pn 11 42 12.5 +2.3
baz=11,SNR=27
JTMT **Jette** 10.96 66 *e*Pn Pn 11 42 11.7 +0.7
BLMT **Blacktail Moun** 10.97 65 *e*Pn Pn 11 42 11.1 0.0
B13A **Whitefish** 11.00 63 ⇓P Pn 11 42 11.2 -0.2
baz=11,SNR=5.6
MSO **Missoula** 11.02 71 *e*Pn Pn 11 42 12.2 +0.5
MSO **Missoula** 11.02 71 ⇑P Pn 11 42 11.9 +0.2
baz=11,SNR=9.7
SWMT **Swartz Lake** 11.10 68 *e*Pn Pn 11 42 14.2 +1.4
YBMT **Yellow Bay** 11.16 66 *e*Pn Pn 11 42 14.2 +0.5
2.6nm,0.5s
A13A **Flathead Natio** 11.21 60 ⇑P Pn 11 42 13.5 -0.8
baz=11,SNR=7.8
G14A **Jackson** 11.25 79 ⇓P Pn 11 42 16.0 +1.0
baz=11,SNR=10
E14A **Clinton** 11.28 73 ⇓P Pn 11 42 16.3 +1.0
baz=11
C14A **Swan Lake** 11.32 66 ⇑P Pn 11 42 15.7 0.0
baz=11
F14A **Wisdom** 11.32 76 ⇑P Pn 11 42 16.8 +0.8
baz=11
H14A **Leadore** 11.34 83 ⇓P Pn 11 42 17.4 +1.2
baz=11,SNR=10
I14A **Mackay** 11.34 86 ⇑P Pn 11 42 17.7 +1.5
baz=11,SNR=8.6
D14A **Greenough** 11.35 70 ⇓P Pn 11 42 16.4 +0.2
baz=11
J14A **Carey** 11.38 89 ⇓P Pn 11 42 20.3 +3.5
baz=11
SLMT **Seeley Lake** 11.38 69 *e*Pn Pn 11 42 17.3 +0.5
VES **Vestal, Richgr** 11.42 134 ⇓P Pn 11 42 16.2 -1.0
baz=12
CHMT **Chamberlain Mo** 11.50 71 *e*Pn Pn 11 42 19.4 +1.0
GRAC **Grapevine Rang** 11.54 125 ⇓P Pn 11 42 20.7 +1.9
baz=12
WALA **Waterton Lakes** 11.56 60 *e*Pn Pn 11 42 20.0 +0.8
0.2nm,0.8s
MCMT **McKenzie Canyo** 11.69 81 *e*Pn Pn 11 42 22.0 +0.9
4.8nm,1.0s
B14A **Marquette Ranc** 11.76 64 ⇑P Pn 11 42 21.9 0.0
baz=12,SNR=7.5
K14A **Jones Ranch, D** 11.79 93 ⇓P Pn 11 42 24.9 +2.6
baz=12
R11A **Troy Canyon, C** 11.81 115 ⇑P Pn 11 42 25.4 +2.7
baz=12
A14A **Double T Ranch** 11.84 61 ⇑P Pn 11 42 23.3 +0.4
baz=12,SNR=9.5
H15A **Lima** 11.85 82 ⇑P Pn 11 42 24.9 +1.6
baz=12,SNR=7.9
DLMT **Dillon** 11.86 79 *e*Pn Pn 11 42 24.6 +1.4
E15A **Deer Lodge** 11.87 74 ⇑P Pn 11 42 23.6 +0.3
baz=12
L14A **Malta** 11.88 95 ⇑P Pn 11 42 25.3 +1.8
baz=12,SNR=7.5
ISA **Isabella** 11.88 133 *e*Pn Pn 11 42 24.9 +1.4
ISA **Isabella** 11.88 133 ⇑P Pn 11 42 25.0 +1.5
baz=12,SNR=7.1
F15A **Butte** 11.94 76 ⇓P Pn 11 42 25.0 +0.7
baz=12,SNR=8.9
G15A **Dillon** 11.94 80 ⇓P Pn 11 42 25.6 +1.2
baz=12,SNR=16
LRM **Limekiln Ridge** 11.96 77 *e*Pn Pn 11 42 26.0 +1.2
D15A **Lincoln** 12.01 71 ⇓P Pn 11 42 26.1 +0.8
baz=12,SNR=11
I15A **Monteview** 12.03 85 ⇓P Pn 11 42 27.6 +2.1
baz=12
C15A **Salmond Ranch,** 12.07 67 ⇑P Pn 11 42 26.4 +0.3
baz=12,SNR=27
J15A **Blackfoot** 12.15 88 ⇓P Pn 11 42 29.3 +2.1
baz=12,SNR=25
FURC **Furnace Creek,** 12.20 125 ⇑P Pn 11 42 29.9 +2.1
baz=12,SNR=11
B15A **Bradely Ranch,** 12.21 65 ⇑P Pn 11 42 28.0 0.0
baz=12,SNR=10
K15A **Arbon** 12.22 92 ⇓P Pn 11 42 30.6 +2.4
baz=12,SNR=16
A15A **Johnson Ranch,** 12.27 62 ⇑P Pn 11 42 29.2 +0.3
baz=12,SNR=42
G16A **Moss Hill, Enn** 12.42 79 ⇓P Pn 11 42 32.4 +1.5
baz=12,SNR=23
HRY **Holter Researc** 12.45 72 *e*Pn Pn 11 42 32.4 +1.2
6.6nm,0.8s
L15A **Malad City** 12.49 94 ⇓P Pn 11 42 33.9 +2.0
baz=12,SNR=14
BOZ **Bozeman (W)** 12.54 77 *e*Pn Pn 11 42 33.9 +1.4
BOZ **Bozeman (W)** 12.54 77 ⇑P Pn 11 42 33.5 +1.0
baz=12,SNR=20
E16A **East Helena** 12.54 73 ⇑P Pn 11 42 33.5 +1.0
baz=12,SNR=5.8
F16A **Kennard Place,** 12.54 77 ⇑P Pn 11 42 33.6 +1.1
baz=13,SNR=14
C16A **Fuhringer Ranc** 12.65 68 ⇓P Pn 11 42 34.4 +0.4
baz=13,SNR=13
D16A **Dana Ranch, Ca** 12.67 71 ⇓P Pn 11 42 35.4 +1.0
baz=13,SNR=16
QLMT **Earthquake Lak** 12.70 81 *e*Pn Pn 11 42 37.0 +2.2
I16A **Newdale** 12.76 85 ⇓P Pn 11 42 37.7 +2.2
baz=13,SNR=22
J16A **Bone** 12.76 88 ⇑P Pn 11 42 37.9 +2.3
baz=13,SNR=8.7
B16A **M & M Farms, S** 12.79 65 ⇓P Pn 11 42 36.0 +0.1
baz=13,SNR=15
H16A **Russell Place,** 12.84 82 ⇓P Pn 11 42 38.4 +1.7
baz=13,SNR=29
K16A **Soda Springs** 12.87 90 ⇓P Pn 11 42 40.2 +3.1
baz=13,SNR=8.8
SHOC **Shoshone** 12.93 126 ⇑P Pn 11 42 40.0 +2.2
baz=13
RRI2 **Red Ridge** 12.96 88 *e*Pn Pn 11 42 40.3 +1.9
9.3nm,1.0s
A16A **West Butte Ran** 12.99 63 ⇓P Pn 11 42 38.5 -0.1
baz=13
YMR **Madison River** 13.04 82 *e*Pn Pn 11 42 42.3 +2.8
24nm,1.3s
GSC **Goldstone** 13.05 129 *e*Pn Pn 11 42 40.8 +1.2
GSC **Goldstone** 13.05 129 ⇑P Pn 11 42 41.3 +1.8
baz=13
E17A **Martinsdale** 13.10 74 ⇑P Pn 11 42 42.4 +2.2
baz=13,SNR=6.9
IMW **Indian Meadow** 13.15 85 *e*Pn Pn 11 42 43.7 +2.7
YFT **Old Faithful** 13.15 83 *e*Pn Pn 11 42 43.5 +2.4
27nm,1.2s
G17A **Pierce Place,** 13.17 79 ⇓P Pn 11 42 42.5 +1.4
baz=13,SNR=9.9
L16A **Fish Haven** 13.18 94 ⇓P Pn 11 42 43.3 +2.0
baz=13,SNR=13
HWUT **Hardware Ranch** 13.20 95 *e*Pn Pn 11 42 44.0 +2.4
TPAW **Teton Pass** 13.20 87 *e*Pn Pn 11 42 44.9 +3.3
F17A **Fitzpatrick Pl** 13.22 76 ⇓P Pn 11 42 42.9 +1.1
baz=13,SNR=21
AHID **Auburn Hatcher** 13.23 90 *e*Pn Pn 11 42 45.9 +3.9
D17A **Six Diamond Ra** 13.27 71 ⇓P Pn 11 42 43.2 +0.7
baz=13,SNR=27
C17A **Wharram Farm,** 13.28 69 ⇓P Pn 11 42 43.2 +0.6
baz=13,SNR=13
SNOW **Snow King Moun** 13.35 87 *e*Pn Pn 11 42 47.0 +3.4
H17A **Grant Village** 13.35 83 ⇑P Pn 11 42 46.3 +2.7
baz=13,SNR=8.6
B17A **L&G Farms, Che** 13.36 66 ⇑P Pn 11 42 43.9 +0.3
baz=13
K17A **Gardner Place,** 13.36 90 ⇑P Pn 11 42 46.6 +2.7
baz=13
J17A **Brown Place, J** 13.39 87 ⇑P Pn 11 42 46.6 +2.3
baz=13,SNR=9.9
I17A **Pilgrim Ck.** 13.40 85 ⇓P Pn 11 42 46.7 +2.3
baz=13,SNR=18
LOHW **Long Hollow** 13.43 86 *e*Pn Pn 11 42 47.8 +3.0
LKWY **Lake** 13.46 82 *e*Pn Pn 11 42 47.0 +1.8
TUQ **Turquoise Moun** 13.46 126 ⇓P Pn 11 42 47.6 +2.4
baz=14
ARUT **Antelope Range** 13.53 113 *e*Pn Pn 11 42 49.2 +3.1
18nm,1.2s
L17A **Cokeville** 13.55 93 ⇑P Pn 11 42 48.2 +1.7
baz=14
A17A **Triple J Farms** 13.56 63 ⇑P Pn 11 42 46.6 +0.2
baz=14,SNR=20
CCUT **Cedar City** 13.71 114 *e*Pn Pn 11 42 52.2 +3.5
E18A **Harlowton** 13.75 74 ⇓P Pn 11 42 50.5 +1.4
baz=14,SNR=5.2
D18A **Linhart Farms,** 13.87 71 ⇑P Pn 11 42 51.8 +1.1
baz=14,SNR=7.7
F18A **Big Timber** 13.88 76 ⇓P Pn 11 42 51.9 +1.1
baz=14
M17A **Scullys Gap (B** 13.88 95 ⇑P Pn 11 42 52.7 +1.8
baz=14
GCMT **Greycliff** 13.91 77 *e*Pn Pn 11 42 52.6 +1.4
7.8nm,1.2s
J18A **Kendall Valley** 13.92 88 ⇑P Pn 11 42 53.5 +2.0
baz=14,SNR=6.1
N17A **Moffit Pass** 13.93 97 ⇑P Pn 11 42 53.5 +1.8
baz=14
H18A **Shoshone NF, C** 13.97 81 ⇓P Pn 11 42 53.5 +1.3
baz=14,SNR=5.4
I18A **Diamond G Ranc** 13.98 85 ⇑P Pn 11 42 54.6 +2.3
baz=14,SNR=7.3
MVU **Marysvale** 13.98 108 *e*Pn Pn 11 42 55.4 +3.0
G18A **Lazy EL Ranch,** 14.00 79 ⇑P Pn 11 42 53.9 +1.5
baz=14,SNR=13
MSU **Marysvale** 14.00 108 *e*Pn Pn 11 42 55.4 +2.7
EGMT **Eagleton** 14.00 68 *e*Pn Pn 11 42 53.2 +0.8
EGMT **Eagleton** 14.00 68 ⇑P Pn 11 42 54.1 +1.6
baz=14,SNR=11
K18A **Toltan Ranch,** 14.02 90 ⇓P Pn 11 42 54.8 +1.9
baz=14
B18A **Beardsley Farm** 14.05 66 ⇑P Pn 11 42 53.2 +0.1
baz=14,SNR=9.4
GMRC **Granite Mounta** 14.08 128 ⇑P Pn 11 42 54.7 +1.1
baz=14
A18A **Metzger Ranch,** 14.10 64 ⇓P Pn 11 42 53.2 -0.5
baz=14
L18A **Fontenelle, Gr** 14.20 93 ⇑P Pn 11 42 56.7 +1.4
baz=14,SNR=8.3
RLMT **Red Lodge** 14.22 79 *e*Pn P 11 43 01.1 -1.9
RLMT **Red Lodge** 14.22 79 ⇓P Pn 11 42 57.3 +1.8
baz=14,SNR=13
DLBC **Dease Lake** 14.22 358 Pn P 11 43 00.6 -2.3
DLBC **Dease Lake** 14.22 358 Pn P 11 43 00.6 -2.3
baz=196,slow=12,SNR=2.9
DLBC LR LR 11 47 28.0
comp=Z,116nm,18.4s,baz=112,slow=34
M18A **Lyman** 14.32 95 ⇓P Pn 11 42 58.5 +1.4
baz=14
BW06 **Boulder Array** 14.34 89 *e*Pn Pn 11 42 59.0 +1.8
BW06 **Boulder Array** 14.34 89 ⇓P Pn 11 42 58.4 +1.2
baz=14
PDAR **Pinedale Array** 14.34 89 Pn Pn 11 42 59.0 +1.7
PDAR **Pinedale Array** 14.34 89 Pn Pn 11 42 59.0 +1.7
0.0nm,0.3s,baz=281,slow=11,SNR=11
PDAR LR LR 11 48 36.0
comp=Z,256nm,21.2s,baz=338,slow=38
F19A **Roth Farm, Mol** 14.42 76 ⇑P Pn 11 42 59.5 +1.3
baz=14
C19A **Slack Wire Ran** 14.44 69 ⇓P Pn 11 42 59.3 +0.9
baz=14
H19A **Powell** 14.45 81 ⇑P Pn 11 43 00.9 +2.2
baz=14,SNR=19
D19A **Cripps Ranch,** 14.50 71 ⇑P Pn 11 42 60.0 +0.7
baz=14,SNR=14
Q16A **Castle Valley** 14.50 105 ⇓P Pn 11 43 02.4 +3.0
baz=15
I19A **Meeteetse** 14.52 84 ⇓P Pn 11 43 01.6 +1.9
baz=14,SNR=11
E19A **Rath Farm, Rou** 14.53 74 ⇓P Pn 11 43 00.1 +0.4
baz=14,SNR=9.1
J19A **Crowheart** 14.60 87 ⇑P Pn 11 43 02.7 +2.0
baz=15
B19A **Brinkman Farms** 14.61 66 ⇑P Pn 11 43 01.0 +0.3
baz=15
L19A **Farson** 14.64 91 ⇑P Pn 11 43 03.0 +1.7
baz=15
N18A **Larsen Ranch,** 14.75 96 ⇓P Pn 11 43 03.1 +0.3
baz=15,SNR=6.8
O18A **Roosevelt** 14.76 99 ⇓P Pn 11 43 04.0 +1.1
baz=15
A19A **Klindworth Far** 14.82 64 ⇑P Pn 11 43 05.5 +1.9
baz=15,SNR=27
K19A **Absolon Red Bu** 14.84 88 ⇑P Pn 11 43 04.8 +0.9
baz=15
P18A **Preston Nutter** 14.84 102 ⇑P Pn 11 43 05.3 +1.2
baz=15
SRU **San Rafael** 14.87 104 *e*Pn Pn 11 43 06.8 +2.4
SRU **San Rafael** 14.87 104 ⇑P Pn 11 43 07.8 +3.5
baz=15,SNR=27
W13A **Hualapai Mount** 14.90 123 ⇑P Pn 11 43 06.7 +1.8
baz=15
M19A **Rock Springs** 14.95 94 ⇑P Pn 11 43 05.9 +0.4
baz=15
G20A **Bridger** 14.95 79 ⇑P Pn 11 43 06.8 +1.3
baz=15
E20A **Meyer Farm, Mu** 14.98 74 ⇓P Pn 11 43 06.5 +0.7
baz=15
D20A **Manuel Ranch,** 15.00 72 ⇓P Pn 11 43 07.6 +1.5
baz=15,SNR=9.6
BC3 **Big Chuckawall** 15.02 130 ⇓P Pn 11 43 06.9 +0.5
baz=15
U15A **North Rim** 15.06 115 ⇓P Pn 11 43 09.7 +2.6
baz=15,SNR=13
MONP **Monument Peak** 15.10 134 ⇑P Pn 11 43 07.6 +0.1
baz=15
N19A **John Jarvie Ra** 15.13 96 ⇑P Pn 11 43 09.8 +1.9
baz=15
C20A **Veseth Ranch,** 15.14 69 ⇑P Pn 11 43 08.3 +0.5
baz=15,SNR=8.3
I20A **Worland** 15.15 84 ⇑P Pn 11 43 10.8 +2.7
baz=15,SNR=5.3
H20A **Greybull** 15.17 82 ⇓P Pn 11 43 09.8 +1.4
baz=15
B20A **Solberg Farm,** 15.21 67 ⇑P Pn 11 43 09.7 +0.8
baz=15,SNR=11
K20A **Yellowstone Ra** 15.24 89 ⇑P Pn 11 43 09.9 +0.6
baz=15
J20A **Shoshoni** 15.28 86 ⇓P Pn 11 43 11.8 +1.9
baz=15
PDMCI **Parker Dam,Lak** 15.30 125 ⇓P Pn 11 43 10.8 +0.8
baz=15
A20A **Cobblestone Ra** 15.34 65 ⇓P Pn 11 43 09.5 -1.1
baz=15
O19A **Miners Draw (B** 15.38 98 ⇓P Pn 11 43 11.5 +0.3
baz=15
SWSC **Sam W. Stewart** 15.38 133 ⇓P Pn 11 43 11.2 +0.1
baz=16
L20A **Wamsutter** 15.40 91 ⇑P Pn 11 43 12.1 +0.7
baz=15,SNR=8.6
M20A **Sweetwater, Wa** 15.65 93 ⇓P Pn 11 43 16.7 +1.9
baz=16,SNR=15
G21A **Lodge Grass** 15.66 79 ⇑P Pn 11 43 14.8 -0.1
baz=16
E21A **Keefer Ranch,** 15.71 74 ⇓P Pn 11 43 15.8 +0.4
baz=16
P19A **Cripple Cowboy** 15.73 100 ⇓P Pn 11 43 17.0 +1.1
baz=16,SNR=6.2
J21A **Lysite** 15.74 86 ⇑P Pn 11 43 18.4 +2.5
baz=16,SNR=17
C21A **Desert Coulee** 15.76 69 ⇑P Pn 11 43 17.0 +1.1
baz=16,SNR=5.1
I21A **Big Trails, Te** 15.77 84 ⇓P Pn 11 43 18.3 +2.0
baz=16,SNR=13
D21A **La Casta Ranch** 15.78 72 ⇑P Pn 11 43 16.5 +0.3
baz=16
N20A **Spence Gulch,** 15.80 95 ⇑P Pn 11 43 17.7 +1.0
baz=16,SNR=24
Q19A **Hogan Spring (** 15.82 103 ⇑P Pn 11 43 18.1 +1.3
baz=16,SNR=8.9
H21A **Big Horn, Sher** 15.84 81 ⇑P Pn 11 43 17.0 -0.1
baz=16
B21A **Ellsworth Farm** 15.87 67 ⇓P Pn 11 43 17.2 -0.2
baz=16
S18A **Hurst Farm, Bl** 15.90 108 ⇑P Pn 11 43 19.6 +1.4
baz=16,SNR=13
A21A **Bergtoll Ranch** 16.01 65 ⇑P Pn 11 43 18.4 -0.8
baz=16,SNR=9.7
K21A **Alcova** 16.03 88 ⇓P Pn 11 43 20.0 +0.4
baz=16
O20A **White River Ci** 16.06 98 ⇓P Pn 11 43 20.8 +0.6
baz=16,SNR=9.2
L21A **Rawlins** 16.11 91 ⇑P Pn 11 43 20.7 0.0
baz=16,SNR=16
P20A **De Beque** 16.20 100 ⇓P Pn 11 43 22.2 +0.3
baz=16
M21A **Separation Pea** 16.21 92 ⇑P P 11 43 25.3 +0.1
baz=16,SNR=30
F22A **Rosebud** 16.30 77 ⇓P Pn 11 43 23.2 +0.3
baz=16,SNR=9.4
G22A **Birney** 16.31 79 ⇑P Pn 11 43 22.2 -0.9
baz=16
PV04 **Paradox Valley** 16.32 104 *e*Pn Pn 11 43 24.8 +1.4
H22A **Clearmont** 16.33 81 ⇓P Pn 11 43 22.9 -0.5
baz=16,SNR=8.9
I22A **9 Mile Ranch,** 16.33 83 ⇑P Pn 11 43 23.2 -0.3
baz=16
N21A **Black Mountain** 16.36 95 ⇓P Pn 11 43 23.2 -0.8
baz=16,SNR=14
Q20A **Ridgley Place,** 16.50 101 ⇓P Pn 11 43 25.0 -0.7
baz=16
B22A **Reddig Ranch S** 16.54 68 ⇓P Pn 11 43 26.0 +0.1
baz=16,SNR=11
K22A **Casper** 16.55 88 ⇑P Pn 11 43 26.4 +0.2
baz=17
C22A **Vida** 16.57 70 ⇑P Pn 11 43 26.5 +0.2
baz=17
A22A **Carney Farms,** 16.67 65 ⇓P Pn 11 43 26.4 -1.2
baz=17,SNR=11
PV01 **Paradox Valley** 16.67 104 *e*Pn Pn 11 43 28.7 +0.8
1µm,1.0s
L22A **Ellis Ranch, M** 16.76 90 ⇓P Pn 11 43 29.0 0.0
baz=17
R20A **Redvale** 16.78 104 ⇓P Pn 11 43 29.8 +0.5
baz=17,SNR=12
M22A **Cedar Creek Ra** 16.82 92 ⇓P Pn 11 43 30.1 +0.3
baz=17
X16A **Lo Mia Camp, P** 16.86 120 ⇓P Pn 11 43 30.8 +0.6
baz=17,SNR=6.2
P21A **Newcastle** 16.86 99 ⇑P Pn 11 43 30.4 +0.1
baz=17,SNR=8.3
E23A **Ismay** 16.93 74 ⇑P Pn 11 43 30.7 -0.3
baz=17,SNR=17
G23A **Biddle** 16.95 78 ⇓P Pn 11 43 30.5 -0.6
baz=17
S20A **Disappointment** 16.96 105 ⇓P Pn 11 43 32.0 +0.3
baz=17,SNR=8.2
D23A **Lindsay** 17.00 72 ⇓P Pn 11 43 31.9 +0.1
baz=17,SNR=22
C23A **Lambert** 17.04 69 ⇑P Pn 11 43 32.5 +0.2
baz=17,SNR=17
N22A **Wattenberg Ran** 17.11 94 ⇓P Pn 11 43 33.2 -0.2
baz=17
MVCO **Mesa Verde** 17.17 107 *e*Pn Pn 11 43 35.3 +1.1
24nm,1.3s
MVCO **Mesa Verde** 17.17 107 ⇑P Pn 11 43 34.4 +0.1
baz=17
B23A **Brockton** 17.22 67 ⇑P Pn 11 43 35.0 +0.5
baz=17,SNR=10
O22A **Kremmling** 17.26 96 ⇓P Pn 11 43 35.8 +0.4
baz=17,SNR=14
L23A **Garrett** 17.27 89 ⇓P Pn 11 43 35.8 +0.5
baz=17
R21A **Cimarron** 17.28 102 ⇓P Pn 11 43 35.8 +0.3
baz=17
P22A **Eagle** 17.32 98 ⇑P Pn 11 43 36.4 +0.3
baz=17
SMCO **Snowmass** 17.34 99 *e*P P 11 43 39.5 +1.6
19nm,1.5s
M23A **Laramie** 17.43 91 ⇓P Pn 11 43 37.4 0.0
baz=17
S21A **Coal Bank Pass** 17.44 105 ⇓P Pn 11 43 38.3 +0.7
baz=18,SNR=11
N23A **Red Feather La** 17.45 93 ⇓P Pn 11 43 37.9 +0.2
baz=18
Q22A **Crested Butte,** 17.51 100 ⇓P Pn 11 43 39.0 +0.5
baz=18,SNR=12
C24A **Savage** 17.54 70 ⇑P Pn 11 43 39.1 +0.6
baz=18,SNR=12
F24A **Ekalaka** 17.56 76 ⇑P Pn 11 43 38.3 -0.5
baz=18
H24A **Dirks Ranch, A** 17.59 80 ⇓P Pn 11 43 39.1 0.0
baz=18,SNR=10
U20A **Newcomb** 17.60 109 ⇑P P 11 43 41.0 +0.5
baz=18
E24A **Baker** 17.62 74 ⇓P P 11 43 40.9 +0.3
baz=18
PHWY **Pilot Hill** 17.67 91 *e*Pn P 11 43 42.1 +0.7
5.9nm,0.9s
O23A **Lake Granby, G** 17.70 95 ⇓P Pn 11 43 41.0 +0.2
baz=18,SNR=6.8
X18A **Snowflake** 17.73 117 ⇑P Pn 11 43 40.8 -0.3
baz=18,SNR=5.3
J24A **Dixon Ranch, L** 17.73 84 ⇑P P 11 43 42.1 +0.2
baz=18
DGMT **Dagmar** 17.75 67 *e*Pn P 11 43 42.4 +0.5
167nm,2.1s
DGMT **Dagmar** 17.75 67 ⇓P Pn 11 43 40.4 -0.7
baz=18,SNR=7.0
K24A **Anderson Ranch** 17.75 86 ⇑P Pn 11 43 41.3 0.0
baz=18
R22A **Saguache, Gunn** 17.90 102 ⇑P Pn 11 43 43.8 +0.5
baz=18
A24A **Westby** 17.91 66 ⇑P P 11 43 44.4 +0.7
baz=18,SNR=6.0
T21A **Navajo Lake** 17.95 106 ⇑P P 11 43 44.7 +0.3
baz=18
V20A **Brimhall** 17.95 111 ⇓P P 11 43 45.2 +0.7
baz=18
RSSD **Black Hills** 18.04 82 *e*P P 11 43 46.7 +1.3
ISCO **Idaho Springs** 18.06 96 *e*Pn Pn 11 43 45.9 +0.5
7.1nm,0.8s
ISCO **Idaho Springs** 18.06 96 ⇓P Pn 11 43 44.5 -0.9
baz=18,SNR=7.3
P23A **Jefferson** 18.07 98 ⇑P Pn 11 43 44.3 -1.1
baz=18
S22A **4UR Ranch, Cre** 18.07 103 ⇑P Pn 11 43 44.7 -0.7
baz=18,SNR=11
M24A **Cheyenne** 18.07 90 ⇓P Pn 11 43 44.8 -0.6
baz=18
U21A **Nageezi** 18.16 108 ⇓P Pn 11 43 46.3 -0.2
baz=18,SNR=21
W20A **Ramah** 18.32 113 ⇓P P 11 43 49.2 +0.7
baz=18,SNR=6.1
O24A **Longmont** 18.33 95 ⇑P Pn 11 43 48.4 -0.1
baz=18
T22A **Edith** 18.37 105 ⇑P P 11 43 49.4 +0.3
baz=18
K25A **Mack Ranch, Ha** 18.46 86 ⇓P P 11 43 49.6 -0.4
baz=18,SNR=7.1
L25A **Engebretsen Ra** 18.50 88 ⇑P P 11 43 50.1 -0.3
baz=18
R23A **Moffat** 18.57 101 ⇓P P 11 43 51.5 +0.2
baz=19,SNR=6.5
X20A **Quemado** 18.67 114 ⇑P Pn 11 43 53.1 +0.5
baz=19
S23A **Nye Farm, Mont** 18.67 102 ⇓P Pn 11 43 53.4 +0.7
baz=19
TUC **Tucson** 18.69 123 *e*P Pn 11 43 53.6 +0.8
0.6nm,0.9s
Q24A **Divide** 18.72 98 ⇑P P 11 43 52.7 -0.3
baz=19
U22A **Llaves** 18.73 107 ⇑P P 11 43 53.2 +0.1
baz=19,SNR=8.0
K26A **Motz Farm, Whi** 18.93 86 ⇓P Pn 11 43 55.9 +0.2
baz=19
V22A **San Miguel Ran** 18.94 108 ⇑P P 11 43 55.0 -0.4
baz=19,SNR=13
T23A **Casias Ranch,** 18.96 104 ⇑P P 11 43 55.8 +0.1
baz=19,SNR=5.3
R24A **Sanders Place,** 19.06 100 ⇑P P 11 43 57.4 +0.8
baz=19
Y20A **Horse Springs,** 19.14 116 ⇑P P 11 43 57.8 +0.3
baz=19
X21A **Alamocita Cree** 19.19 113 ⇑P P 11 43 58.9 +0.8
baz=19,SNR=5.7
P25A **Willow Gulch B** 19.21 96 ⇓P Pn 11 43 59.3 +0.2
baz=19,SNR=5.3
U23A **El Rito** 19.21 106 ⇑P P 11 44 00.0 +0.8
baz=19
S24A **Houchin Ranch,** 19.25 102 ⇑P Pn 11 44 00.5 +0.7
baz=19
M26A **McRoberts Ranc** 19.29 89 ⇑P Pn 11 44 00.3 +0.3
baz=19
Q25A **Bedland, Calha** 19.38 97 ⇓P P 11 44 01.2 +1.0
baz=19
Z20A **Nine Sixteen R** 19.50 118 ⇑P P 11 44 02.0 +0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=20						
V23A	**Ortiz Mt. (NFS**	**19.53**	**108**	⇑P	**Pn**	**11 44 03.0**	**0.0**
	baz=20						
Y21A	**Point of Rocks**	**19.53**	**114**	⇓P	**Pn**	**11 44 03.6**	**+0.5**
	baz=20,SNR=8.9						
O26A	**Horse Wrangler**	**19.55**	**93**	⇓P	**P**	**11 44 02.9**	**+1.0**
	baz=20						
K27A	**Flueckinger Fa**	**19.61**	**85**	⇑P	**P**	**11 44 03.5**	**+1.1**
	baz=20,SNR=7.9						
LAZ	**Ladron**	**19.65**	**112**	*e*P	**Pn**	**11 44 04.5**	**0.0**
	3.3nm,1.0s						
R25A	**Fountain Ranch**	**19.68**	**99**	⇑P	**Pn**	**11 44 05.1**	**+0.3**
	baz=20,SNR=9.4						
P26A	**Davis Ranch, A**	**19.78**	**95**	⇑P	**P**	**11 44 05.4**	**+1.0**
	baz=20						
ANMO	**Albuquerque**	**19.79**	**110**	*e*P	**P**	**11 44 05.8**	**+1.2**
ANMO	**Albuquerque**	**19.79**	**110**	P	**P**	**11 44 05.2**	**+0.6**
	0.1nm,0.3s,baz=311,slow=11,SNR=8.5						
ANMO				LR	LR	11 51 34.1	
	comp=Z,97nm,20.9s,baz=142,slow=37						
S25A	**Robets Cordova**	**19.79**	**101**	⇓P	**Pn**	**11 44 05.8**	**-0.3**
	baz=20						
U24A	**Moreno Valley**	**19.80**	**105**	⇑P	**P**	**11 44 05.7**	**+0.8**
	baz=20						
120A	**U Bar Ranch, L**	**19.85**	**119**	⇓P	**P**	**11 44 06.4**	**+1.2**
	baz=20						
W23A	**Werner Place,**	**19.87**	**109**	⇓P	**P**	**11 44 06.5**	**+1.0**
	baz=20						
Q26A	**Hugo**	**19.90**	**97**	⇓P	**Pn**	**11 44 07.2**	**-0.2**
	baz=20						
Z21A	**St. Cloud Mine**	**19.97**	**116**	⇓P	**P**	**11 44 07.1**	**+0.5**
	baz=20						
Y22A	**Socorro**	**20.04**	**113**	⇑P	Pn	11 44 08.7	-0.4
	baz=20						
T25A	**Trinidad**	**20.05**	**102**	⇑P	Pn	11 44 09.0	-0.3
	baz=20,SNR=6.4						
BNM	**Barren Site**	**20.14**	**112**	*e*P	**P**	**11 44 09.4**	**+1.0**
	5.4nm,1.0s						
YKA	**Yellowknife Ar**	**20.16**	**20**	P	**P**	**11 44 08.4**	**+0.2**
YKA				PcP	**PcP**	**11 48 22.2**	**-0.2**
YKA	**Yellowknife Ar**	**20.16**	**20**	P	**P**	**11 44 08.4**	**+0.2**
	2.4nm,0.9s,baz=210,slow=11,SNR=21						
YKA				PcP	**PcP**	**11 48 22.2**	**-0.2**
	0.2nm,0.7s,baz=205,slow=2.7,SNR=2.9						
V24A	**Rampart Ranch,**	**20.16**	**107**	⇑P	Pn	11 44 10.3	-0.4
	baz=20,SNR=15						
O27A	**Beecher Island**	**20.17**	**92**	⇓P	**P**	**11 44 09.4**	**+0.8**
	baz=20						
R26A	**Arlington**	**20.21**	**98**	⇓P	**P**	**11 44 10.6**	**+1.5**
	baz=20,SNR=12						
YKW3	**Yellowknife Ar**	**20.22**	**20**	*e*P	**P**	**11 44 08.6**	**-0.2**
	0.2nm,1.3s						
OGNE	**Ogallala**	**20.24**	**90**	⇑P	**P**	**11 44 10.2**	**+0.9**
	baz=20						
319A	**Douglas**	**20.25**	**123**	⇑P	**P**	**11 44 09.7**	**+0.1**
	baz=20						
P27A	**Ficken Ranch,**	**20.33**	**94**	⇓P	**P**	**11 44 11.0**	**+0.6**
	baz=20						
220A	**Playas Peak, P**	**20.35**	**120**	⇑P	**P**	**11 44 12.0**	**+1.3**
	baz=20						
W24A	**Lazy 6 Ranch,**	**20.35**	**108**	⇓P	Pn	11 44 12.4	-0.4
	baz=20,SNR=7.8						
121A	**Cookes Peak, D**	**20.40**	**118**	⇑P	Pn	11 44 12.8	-0.5
	baz=20,SNR=9.1						
U25A	**Circle Dot Ran**	**20.41**	**104**	⇓P	**P**	**11 44 12.3**	**+0.9**
	baz=20,SNR=14						
FFC	**Flin Flon**	**20.43**	**49**	*e*P	**P**	**11 44 11.5**	**+0.2**
	19nm,0.8s						
Z22A	**Elephant Butte**	**20.46**	**115**	⇑P	**P**	**11 44 13.3**	**+1.4**
	baz=20						
S26A	**Kim**	**20.49**	**100**	⇓P	**P**	**11 44 13.1**	**+1.0**
	baz=20						
KSCO	**Kaye Shedlock'**	**20.50**	**96**	⇓P	**P**	**11 44 12.9**	**+0.6**
	baz=20,SNR=5.1						
MENT	**Mentasta**	**20.52**	**341**	*e*P	**P**	**11 44 12.6**	**+0.5**
V25A	**Rancho No Teng**	**20.56**	**106**	⇑P	**P**	**11 44 13.4**	**+0.5**
	baz=21,SNR=10						
T26A	**Comanche Natio**	**20.61**	**101**	⇓P	**P**	**11 44 14.2**	**+0.7**
	baz=21,SNR=14						
Y23A	**Lovelace Mesa,**	**20.65**	**112**	⇑P	**P**	**11 44 14.0**	**0.0**
	baz=21						
R27A	**Eads**	**20.68**	**98**	⇓P	**P**	**11 44 15.0**	**+0.8**
	baz=21,SNR=28						
320A	**Kipp Ranch, An**	**20.74**	**121**	⇓P	**P**	**11 44 16.3**	**+1.4**
	baz=21						
MDND	**Maddock**	**20.80**	**70**	⇑P	**P**	**11 44 16.7**	**+1.4**
	baz=21						
SML	**Sawmill**	**20.87**	**334**	*e*P	**P**	**11 44 16.1**	**+0.1**
	5.8nm,1.4s						
U26A	**Atchley Ranch,**	**20.88**	**103**	⇑P	**P**	**11 44 17.1**	**+0.6**
	baz=21,SNR=5.8						
PMR	**Palmer**	**20.97**	**333**	*e*P	Pn	11 44 18.3	-1.2
W25A	**X Bar L Ranch,**	**21.00**	**107**	⇑P	**P**	**11 44 19.0**	**+1.3**
	baz=21,SNR=10						
Y24A	**Capitan**	**21.07**	**111**	⇓P	**P**	**11 44 19.5**	**+1.1**
	baz=21						
V26A	**Tequesquite Ra**	**21.16**	**105**	⇓P	**P**	**11 44 20.4**	**+1.0**
	baz=21,SNR=11						
T27A	**Campo**	**21.28**	**101**	⇓P	**P**	**11 44 21.4**	**+0.7**
	baz=21,SNR=6.3						
Z24A	**Sheeppen Canyo**	**21.47**	**112**	⇓P	**P**	**11 44 23.5**	**+0.7**
	baz=22						
Y25A	**Mesa, Roswell**	**21.57**	**110**	⇓P	**P**	**11 44 24.8**	**+1.0**
	baz=22						
T28A	**Walsh**	**21.68**	**100**	⇑P	**P**	**11 44 25.8**	**+0.8**
	baz=22						
SPU	**Mount Spurr**	**21.70**	**329**	*e*P	**P**	**11 44 25.5**	**+0.6**
124A	**Stringfield Ra**	**21.80**	**114**	⇓P	**P**	**11 44 27.8**	**+1.4**
	baz=22						
X26A	**CR and CF Fran**	**21.81**	**108**	⇓P	**P**	**11 44 27.7**	**+1.3**
	baz=22						
ILAR	**Eielson Array**	**22.83**	**340**	P	**P**	**11 44 37.0**	**+0.2**
ILAR				PcP	**PcP**	**11 48 27.8**	**+0.2**
ILAR	**Eielson Array**	**22.83**	**340**	P	**P**	**11 44 37.0**	**+0.2**
	4.3nm,1.1s,baz=153,slow=8.6,SNR=30						
ILAR				PcP	**PcP**	**11 48 27.8**	**+0.2**
	0.2nm,0.7s,baz=163,slow=3.5,SNR=2.6						
ILAR				LR	LR	11 52 00.5	
	comp=Z,130nm,19.1s,baz=171,slow=33						
Z27A	**Tatum**	**22.92**	**110**	⇓P	**P**	**11 44 38.7**	**+0.5**
	baz=23						
Y28A	**McKinney Farm,**	**23.24**	**107**	⇓P	**P**	**11 44 41.2**	**-0.3**
	baz=23						
ULM	**Lac du Bonnet**	**23.28**	**63**	P	**P**	**11 44 40.5**	**-1.1**
ULM	**Lac du Bonnet**	**23.28**	**63**	P	**P**	**11 44 40.5**	**-1.1**
	9.2nm,0.7s,baz=278,slow=9.3,SNR=11						
ULM				LR	LR	11 53 54.2	
	comp=Z,198nm,20.8s,baz=355,slow=37						
AGMN	**Agassiz Nation**	**23.30**	**68**	*e*P	**P**	**11 44 43.5**	**+1.7**
	9.2nm,0.7s						
425A	**Indio Mountain**	**23.34**	**117**	⇓P	**P**	**11 44 43.4**	**+0.9**
	baz=23						
ECSD	**EROS Data Cent**	**23.38**	**80**	*e*P	**P**	**11 44 42.3**	**-0.4**
	26nm,1.3s						
326A	**Caldwell Ranch**	**23.64**	**115**	⇓P	**P**	**11 44 44.9**	**-0.6**
	baz=24						
Z29A	**Hungry Hill Ra**	**23.98**	**108**	⇓P	**P**	**11 44 48.4**	**-0.3**
	baz=24						
INK	**Inuvik**	**24.23**	**356**	P	**P**	**11 44 50.0**	**-0.6**
INK	**Inuvik**	**24.23**	**356**	P	**P**	**11 44 50.0**	**-0.6**
	1.6nm,1.0s,baz=184,slow=9.3,SNR=5.8						
INK				LR	LR	11 53 58.4	
	comp=Z,92nm,20.9s,baz=279,slow=36						
129A	**Stewart Farms,**	**24.24**	**109**	⇓P	**P**	**11 44 51.5**	**+0.4**
	baz=24						
427A	**Hayter Ranch,**	**24.32**	**115**	⇓P	**P**	**11 44 52.2**	**+0.3**
	baz=24						
526A	**Mary Lane Ranc**	**24.40**	**117**	⇓P	**P**	**11 44 52.6**	**-0.1**
	baz=24						
X31A	**McDonald Ranch**	**24.42**	**103**	⇓P	**P**	**11 44 52.7**	**0.0**
	baz=24						
Y31A	**Rekieta Farm,**	**24.58**	**105**	⇓P	**P**	**11 44 53.6**	**-0.6**
	baz=25						
527A	**Woodward Ranch**	**24.65**	**116**	⇓P	**P**	**11 44 55.1**	**+0.1**
	baz=25						
626A	**Big Bend Ranch**	**24.71**	**118**	⇑P	**P**	**11 44 55.8**	**+0.3**
	baz=25						
428A	**Kincaid Ranch,**	**24.87**	**114**	⇓P	**P**	**11 44 56.8**	**-0.1**
	baz=25						
TXAR	**Lajitas Array**	**25.16**	**118**	P	**P**	**11 44 58.9**	**-0.6**
TXAR	**Lajitas Array**	**25.16**	**118**	P	**P**	**11 44 58.9**	**-0.6**
	3.3nm,1.0s,baz=301,slow=6.5,SNR=8.9						
TXAR				LR	LR	11 55 19.9	
	comp=Z,47nm,21.0s,baz=5.0,slow=38						
528A	**Cox Ranch, San**	**25.17**	**115**	⇑P	**P**	**11 44 59.5**	**-0.2**
	baz=25						
WMOK	**Wichita Mounta**	**25.21**	**102**	*e*P	**P**	**11 45 00.2**	**+0.4**
	12nm,0.9s						
627A	**Terlingua Ranc**	**25.26**	**117**	⇑P	**P**	**11 45 00.6**	**+0.2**
	baz=25						
330A	**Mertzon**	**25.45**	**111**	⇓P	**P**	**11 45 02.5**	**+0.5**
	baz=26						
429A	**Davenport Ranc**	**25.46**	**113**	⇓P	**P**	**11 45 02.7**	**+0.5**
	baz=26						
Z32A	**Haskell**	**25.49**	**105**	⇑P	**P**	**11 45 02.8**	**+0.4**
	baz=26						
628A	**Black Gap, Mar**	**25.55**	**116**	⇑P	**P**	**11 45 03.7**	**+0.7**
	baz=26						
529A	**Stev Forest Ra**	**25.57**	**114**	⇓P	**P**	**11 45 04.0**	**+0.9**
	baz=26						
430A	**Baggett Ranch,**	**25.79**	**112**	⇓P	**P**	**11 45 04.8**	**-0.3**
	baz=26						
232A	**Coleman**	**26.19**	**108**	⇑P	**P**	**11 45 09.1**	**+0.3**
	baz=26						
431A	**Sonora**	**26.28**	**111**	⇑P	**P**	**11 45 09.5**	**0.0**
	baz=26						
332A	**Millersview**	**26.43**	**109**	⇓P	**P**	**11 45 11.1**	**+0.2**
	baz=26						
531A	**Rocksprings**	**26.64**	**112**	⇑P	**P**	**11 45 13.5**	**+0.6**
	baz=27						
632A	**Uvalde**	**27.57**	**112**	⇓P	**P**	**11 45 20.7**	**-0.5**
	baz=28						
OXF	**Oxford**	**31.99**	**94**	*e*P	**P**	**11 46 00.3**	**0.0**
	31nm,1.0s						
RES	**Resolute Bay**	**34.10**	**15**	P	**P**	**11 46 18.4**	**+0.1**
RES	**Resolute Bay**	**34.10**	**15**	P	**P**	**11 46 18.4**	**+0.1**
	1.9nm,0.7s,baz=245,slow=8.9,SNR=7.2						
SCHQ	**Schefferville**	**40.54**	**52**	LR	LR	12 03 58.7	
	comp=Z,165nm,19.7s,baz=293,slow=36						
NOA	**NORSAR Array B**	**70.26**	**19**	P	**P**	**11 50 46.7**	**-0.3**
NOA	**NORSAR Array B**	**70.26**	**19**	P	**P**	**11 50 46.7**	**-0.3**
	0.4nm,0.8s,baz=314,slow=7.0,SNR=2.3						
NOA				LR	LR	12 18 10.1	
	comp=Z,15nm,21.5s,baz=275,slow=33						
FINES	**FINESS Array B**	**72.78**	**12**	P	**P**	**11 51 04.8**	**+2.7**
FINES	**FINESS Array B**	**72.78**	**12**	P	**P**	**11 51 04.8**	**+2.7**
	3.8nm,0.9s,baz=332,slow=4.7,SNR=4.0						
SONM	**Songino Array**	**76.10**	**325**	P	**P**	**11 51 21.3**	**-0.6**
SONM	**Songino Array**	**76.10**	**325**	P	**P**	**11 51 21.3**	**-0.6**
	0.5nm,0.2s,baz=34,slow=2.5,SNR=3.5						
ZALV	**Zalesovo Beam**	**77.95**	**340**	P	**P**	**11 51 31.2**	**-0.8**
ZALV	**Zalesovo Beam**	**77.95**	**340**	P	**P**	**11 51 31.2**	**-0.8**
	0.4nm,0.4s,baz=38,slow=7.3,SNR=3.3						
ZALV				LR	LR	12 25 06.9	
	comp=Z,32nm,19.4s,baz=84,slow=35						
BVAR	**Borovoye Array**	**81.66**	**348**	P	**P**	**11 51 50.1**	**-2.0**
BVAR	**Borovoye Array**	**81.66**	**348**	P	**P**	**11 51 50.1**	**-2.0**
	0.4nm,0.6s,baz=27,slow=1.6,SNR=2.9						
GERES	**GERESS Array B**	**81.76**	**24**	LR	LR	12 25 55.0	
	comp=Z,28nm,19.0s,baz=300,slow=34						
LPAZ	**La Paz**	**81.95**	**122**	P	**P**	**11 51 53.4**	**-1.4**
LPAZ	**La Paz**	**81.95**	**122**	P	**P**	**11 51 53.4**	**-1.4**
	1.1nm,0.7s,baz=328,slow=9.5,SNR=3.9						
KURK	**Kurchatov**	**82.38**	**343**	P	**P**	**11 51 55.8**	**-0.1**
KURBB	**Kurchatov Arra**	**82.48**	**343**	P	**P**	**11 51 55.8**	**-0.7**
	1.5nm,0.9s,baz=26,slow=4.6,SNR=6.3						
HNR	**Honiara**	**83.14**	**250**	LR	LR	12 20 29.2	
	comp=Z,109nm,20.9s,baz=102,slow=30						
MKAR	**Makanchi Array**	**85.17**	**339**	P	**P**	**11 52 09.2**	**-1.1**
MKAR	**Makanchi Array**	**85.17**	**339**	P	**P**	**11 52 09.2**	**-1.1**
	0.1nm,0.4s,baz=3.8,slow=4.3,SNR=3.0						
MKAR				LR	LR	12 29 31.3	
	comp=Z,24nm,19.4s,baz=356,slow=35						

IDC 09 11:50:57.3±46.0**, 16°.04S**×**174°.15W, h0km, mb4.4**/3**, mb1 4.6**/3**, mb1mx3.8**/19**, mbtmp4.4**/3**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.8**/31**, Error ellipse: s-maj=886.5km s-min=177.7km az=78.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.09**	**240**	P	P	11 59 00.3	+0.9
	1.7nm,0.5s,baz=95,slow=11,SNR=4.1						
WRA	**Warramunga Arr**	**48.99**	**257**	P	P	11 59 45.5	-0.8
	1.6nm,0.5s,baz=96,slow=8.3,SNR=45						
ASAR	**Alice Springs**	**49.23**	**252**	P	P	11 59 47.8	-0.2
	12nm,0.5s,baz=89,slow=8.0,SNR=199						
GUMO	**Guam**	**50.08**	**304**	LR	LR	12 17 10.6	
	comp=Z,74nm,19.4s,baz=88,slow=31						

MAN 09 12:03:07, 9°.82N×122°.22E, h18km, mb4.4, ML3.3, MS3.1, Negros

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.88**	**24**	*e*P	Pb	12 03 23.2	-0.5
GUIM				*e*S	Sg	12 03 35.7	-0.1
CUYO	**Cuyo Island**	**1.57**	**311**	*e*P	Pn	12 03 34.1	+0.2
TBP	**Tagbilaran**	**1.62**	**94**	*e*P	Pn	12 03 34.1	-0.6
RCP	**Roxas**	**1.80**	**16**	*e*P	Pb	12 03 40.3	+0.8
RCP				*e*S	Sb	12 04 01.9	+0.1
PAGZ	**Pagadian**	**2.27**	**150**	*e*P	Pn	12 03 44.7	+1.1
MSLP	**Maasin**	**2.61**	**83**	*e*P	Pn	12 03 49.0	+0.6
ENPP	**El Nido**	**3.08**	**297**	*e*P	Pn	12 03 55.1	+0.4

MAN 09 12:05:28, 9°.85N×122°.26E, h28km, mb4.1, ML2.9, MS2.7, Negros

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.84**	**23**	*e*P	Pb	12 05 44.2	+0.1
CUYO	**Cuyo Island**	**1.58**	**309**	*e*P	Pn	12 05 55.1	+1.0
TBP	**Tagbilaran**	**1.59**	**95**	*e*P	Pn	12 05 55.0	+0.7
RCP	**Roxas**	**1.77**	**16**	*e*P	Pb	12 06 01.7	+1.9
RCP				*e*S	Sb	12 06 23.1	+1.5
PAGZ	**Pagadian**	**2.27**	**151**	*e*P	Pn	12 06 06.1	+2.3
MSLP	**Maasin**	**2.58**	**83**	*e*P	Pn	12 06 10.2	+2.3

KRSC 09 12:13:46.4±1.0**, 50°.31N**×**157°.63E, h51km**±50km**, ML3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.04**	**292**	*i* P	Pn	12 14 03.9	-0.7
SKR				*i* S	Sn	12 14 17.2	-0.8
MIPR	**Malaya Ipel'ka**	**2.04**	**345**	P	Pn	12 14 21.4	+3.1
RUS	**Russkaya**	**2.20**	**14**	*e*P	Pn	12 14 22.2	+1.8
RUS				*e*S	Sn	12 14 48.5	+2.2
MTVR	**Mutnovka**	**2.20**	**9**	P	Pn	12 14 22.9	+2.2
MTVR				*e*S	Sn	12 14 49.4	+2.5
GRL	**Gorelyy**	**2.26**	**7**	P	Pn	12 14 24.1	+2.6
GRL				S	Sn	12 14 52.0	+3.7
PET	**Petropavlovsk**	**2.79**	**13**	P	Pn	12 14 30.5	+2.0
PET				S	Sn	12 15 03.1	+2.2
UGLR	**Uglovaya**	**3.00**	**14**	P	Pn	12 14 33.4	+1.9
SMAR	**Somma**	**3.05**	**13**	P	Pn	12 14 34.3	+2.0
SDLR	**Sedlovina**	**3.07**	**14**	P	Pn	12 14 35.8	+3.2
SDLR				S	Sn	12 15 11.0	+2.8
SPN	**Mys Shipunski**	**3.16**	**27**	S	Sn	12 15 12.1	+2.0
GNL	**Ganaly**	**3.40**	**3**	P	Pn	12 14 40.8	+3.8
MKZ	**Mys Kozlova**	**4.94**	**29**	P	Pn	12 14 59.5	+1.6

*ISCJB **09** 12:20:05.5±0.7, 1°.64N±0°.07×128°.57E±0°.07, h61km, mb3.7/7, Error ellipse: s-maj=10.2km s-min=10.0km az=28.0*
*DJA **09** 12:20:06.5±1.0, 1°N±11°×12°9E±°, h10km, M4.2/4, mb4.5/3, mB5.1/2, MLv4.1/4, Mw(mB)4.5/2*
*IDC **09** 12:20:07.1±1.0, 1°.67N×128°.46E, h56km±9km, mb3.5/7, mb1 3.6/9, mb1mx3.5/23, mbtmp3.5/9, Error ellipse: s-maj=37.8km s-min=12.8km az=75.0*
ISC 09 12:20:07.3±0.8**, 1°.60N**±0°.08×**128°.7E**±0°.1**, h61km, n20,** σ**1s.42**/21**, mb3.6**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.53**	**237**	P	**Pn**	**12 20 30.2**	**-2.1**
LBMI	**Labuha**	**2.50**	**207**	P	**Pn**	**12 20 44.4**	**-1.2**
SWI	**Sorong**	**3.57**	**133**	P	**Pn**	**12 21 01.1**	**+0.8**
MNI	**Manado**	**3.81**	**268**	P	**Pn**	**12 21 06.2**	**+2.6**
KMSI	**Cibinong**	**4.78**	**258**	P	**Pn**	**12 21 16.6**	**-0.2**
LUWI	**Luwuk**	**6.44**	**246**	P	Pn	12 21 49.3	+10
MRSI	**Marisa**	**6.80**	**261**	P	**Pn**	**12 21 45.4**	**+0.9**
	24nm,0.8s						
KDI	**Kendari**	**8.18**	**228**	P	**Pn**	**12 22 02.6**	**-0.7**
	13nm,0.8s,577nm						
TTSI	**Tana Toraja**	**9.96**	**242**	P	Pn	12 22 40.6	+13
SPSI	**Sidrap Palu**	**10.46**	**238**	P	**Pn**	**12 22 34.9**	**+0.4**
KAPI	**Kappang**	**11.06**	**234**	P	**Pn**	**12 22 40.7**	**-2.0**
	1.3nm,0.3s,baz=60,slow=14,SNR=4.3						
FITZ	**Fitzroy Crossi**	**19.80**	**188**	P	**P**	**12 24 32.9**	**+0.1**
	0.1nm,0.3s,baz=8.4,slow=11,SNR=3.7						
WRA	**Warramunga Arr**	**22.12**	**166**	P	**P**	**12 24 58.7**	**+0.8**
	1.2nm,0.6s,baz=348,slow=11,SNR=17						
WRA				pP	**pP**	**12 25 13.3**	**+2.1**
	2.0nm,0.7s,baz=344,slow=11,SNR=6.7						
ASAR	**Alice Springs**	**25.63**	**169**	P	**P**	**12 25 32.3**	**+1.0**
	0.7nm,0.8s,baz=349,slow=8.2,SNR=12						
ASAR				pP	**pP**	**12 25 46.6**	**+0.5**
	1.3nm,0.8s,baz=346,slow=11,SNR=8.4						
STKA	**Stephens Creek**	**35.48**	**161**	P	**P**	**12 26 59.8**	**+1.7**
	0.9nm,0.7s,baz=331,slow=12,SNR=3.0						
MJAR	**Matsushiro Arr**	**35.88**	**13**	P	**P**	**12 27 01.1**	**-0.3**
	1.4nm,0.8s,baz=190,slow=10,SNR=5.9						
SONM	**Songino Array**	**49.93**	**341**	P	**P**	**12 28 54.4**	**-0.6**
	0.5nm,0.8s,baz=143,slow=8.3,SNR=2.8						
MKAR	**Makanchi Array**	**60.39**	**325**	P	**P**	**12 30 10.3**	**0.0**
	1.4nm,0.4s,baz=114,slow=7.9,SNR=31						
MKAR				pP	**pP**	**12 30 24.0**	**-2.6**
	0.6nm,0.6s,baz=119,slow=7.7,SNR=3.0						
ZALV	**Zalesovo Beam**	**63.35**	**333**	P	**P**	**12 30 29.3**	**-0.7**
	0.2nm,0.3s,baz=124,slow=7.2,SNR=2.4						
TORD	**Torodi Ar. Bea**	**125.39**	**287**	PKP	**PKPdf**	**12 39 01.8**	**-0.6**
	0.4nm,0.9s,baz=85,slow=1.8,SNR=2.8						

*IDC **09** 12:41:35.8±2.1, 45°.49N×153°.14E, h0km, mb3.2/4, mb1 3.6/6, mb1mx3.4/27, mbtmp3.3/6, ML3.3/2, MS2.6/1, Ms1 2.6/1, ms1mx1.9/17, Error ellipse: s-maj=66.0km s-min=33.2km az=157.0*
*ISCJB **09** 12:41:41.2±1.1, 45°.2N±0°.3×152°.8E±0°.2, h79km, mb3.3/4, Error ellipse: s-maj=47.0km s-min=7.9km az=155.1*
ISC 09 12:41:42.6±1.2**, 45°.1N**±0°.3×**152°.7E**±0°.1**, h79km, n19,** σ**2s.09**/21**, mb3.3**/4**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**5.33**	**253**	P	**Pn**	**12 43 00.8**	**+1.3**
JRA	**Rausu**	**5.57**	**260**	P	**Pn**	**12 43 05.3**	**+2.5**
JNK	**Nakash**	**5.95**	**258**	P	**Pn**	**12 43 10.1**	**+2.0**
JAK	**Akkeshi**	**6.17**	**252**	P	**Pn**	**12 43 12.5**	**+1.4**
JAK				*e*S	**Sn**	**12 44 19.9**	**-0.3**
JTKR	**Abashiri--Toko**	**6.41**	**263**	P	**Pn**	**12 43 16.5**	**+2.2**
JAR	**Ashorobuto**	**6.70**	**257**	P	**Pn**	**12 43 20.7**	**+2.5**
JOB	**Onbets**	**6.79**	**254**	P	**Pn**	**12 43 21.6**	**+2.1**
JCH	**Churui**	**7.23**	**253**	P	**Pn**	**12 43 27.5**	**+2.1**
JCH				*e*S	**Sn**	**12 44 43.9**	**-2.0**
JKK2	**Kamakawa 2**	**7.25**	**263**	P	**Pn**	**12 43 28.0**	**+2.2**
ASAJ	**Asahikawa**	**7.30**	**265**	Pn	**Pn**	**12 43 28.5**	**+2.0**
	0.7nm,0.3s,baz=90,slow=14,SNR=7.7						
ASAJ				LR	LR	12 46 02.9	
	comp=Z,45nm,21.5s,baz=275,slow=35						
JNBK	**Urakawa-nobuka**	**7.78**	**252**	P	**Pn**	**12 43 34.5**	**+1.6**
JNBK				*e*S	**Sn**	**12 44 55.7**	**-3.7**
PETK	**Petropavlovsk-**	**8.61**	**20**	Pn	Pn	12 43 37.0	-7.3
	0.3nm,0.3s,baz=177,slow=11,SNR=10						
JKB	**Kayabe**	**9.10**	**253**	P	**Pn**	**12 43 52.5**	**+1.5**
JANG	**Nango**	**9.53**	**244**	P	**Pn**	**12 43 59.0**	**+2.2**
JANG				*e*S	Sn	12 45 39.0	-3.1
JTM	**Tenmabayashi**	**9.59**	**247**	P	**Pn**	**12 43 58.1**	**+0.4**
ILAR	**Eielson Array**	**37.98**	**37**	P	**P**	**12 48 51.8**	**-0.5**
	0.4nm,1.0s,baz=253,slow=7.4,SNR=6.4						
YKA	**Yellowknife Ar**	**52.38**	**36**	P	**P**	**12 50 44.3**	**-1.8**
	0.1nm,0.4s,baz=294,slow=6.9,SNR=3.3						
NVAR	**Mina Array Bea**	**63.42**	**61**	P	**P**	**12 52 06.3**	**+2.2**
	0.4nm,0.7s,baz=273,slow=3.5,SNR=3.7						
PDAR	**Pinedale Array**	**65.92**	**53**	P	**P**	**12 52 19.6**	**-0.7**
	0.3nm,0.7s,baz=296,slow=2.9,SNR=3.2						

*ISCJB **09** 13:00:29.0±0.3, 42°.31N±0°.02×13°.47E±0°.03, h13km±3km, Error ellipse: s-maj=3.4km s-min=2.6km az=143.8*
*CSEM **09** 13:00:29.4±0.1, 42°.29N×13°.47E, h2km, ML3.8/10, Error ellipse: s-maj=2.7km s-min=1.9km az=50.0*
*ROM **09** 13:00:29.0±0.1, 42°.30N×13°.46E, h9km, Ml3.2/29, Error ellipse: s-maj=1.0km s-min=0.8km az=59.0*
*LDG **09** 13:00:33.6±0.9, 42°.42N×13°.31E, h2km, Ml3.0/6, Error ellipse: s-maj=19.5km s-min=13.3km az=114.0*
ISC 09 13:00:29.3±0.8**, 42°.30N**±0°.02×**13°.46E**±0°.02**, h11km**±4km**, n88,** σ**1s.19**/121**, 11C-8D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**321**	⇑*i*Pg	**Pg**	**13 00 31.5**	**-0.2**
AQU				Sg	**Sg**	**13 00 33.1**	**-0.4**
	20µm,1.0s						
AQU	**L'Aquila**	**0.07**	**321**	⇑*i*Pg	**Pg**	**13 00 31.5**	**-0.2**
AQU				Sg	**Sg**	**13 00 33.1**	**-0.4**
	20µm,1.0s						
FAGN	**Fagnano**	**0.10**	**111**	Pg	**Pg**	**13 00 31.7**	**-0.4**
FAGN				Sg	**Sg**	**13 00 34.4**	**+0.2**
	58µm,0.5s						
FAGN	**Fagnano**	**0.10**	**111**	Pg	**Pg**	**13 00 31.7**	**-0.4**
FAGN				Sg	**Sg**	**13 00 34.4**	**+0.2**
	58µm,0.5s						
CAMP	**Campotosto**	**0.24**	**351**	⇓*i*Pg	**Pg**	**13 00 34.4**	**+0.1**
CAMP				Sg	**Sg**	**13 00 38.8**	**+1.1**
	4µm,0.7s						
CAMP	**Campotosto**	**0.24**	**351**	⇓*i*Pg	**Pg**	**13 00 34.4**	**+0.1**
CAMP				Sg	**Sg**	**13 00 38.8**	**+1.1**
	4µm,0.7s						
FIAM	**Fiamignano**	**0.26**	**262**	⇑*i*Pg	**Pg**	**13 00 35.0**	**+0.4**
FIAM				Sg	**Sb**	**13 00 39.7**	**-0.7**
FIAM	**Fiamignano**	**0.26**	**262**	⇑*i*Pg	**Pg**	**13 00 35.0**	**+0.4**
FIAM				Sg	**Sb**	**13 00 39.7**	**-0.7**
PTQR	**Pietraquaria**	**0.28**	**189**	⇑*i*Pg	**Pg**	**13 00 35.2**	**+0.1**
PTQR	**Pietraquaria**	**0.28**	**189**	⇑*i*Pg	**Pg**	**13 00 35.2**	**+0.1**
VCEL	**Villa Celiera**	**0.30**	**72**	Pg	**Pg**	**13 00 35.4**	**0.0**
VCEL				Sg	**Sg**	**13 00 40.2**	**+0.7**
	7µm,0.5s						
VCEL	**Villa Celiera**	**0.30**	**72**	Pg	**Pg**	**13 00 35.4**	**0.0**
VCEL				Sg	**Sg**	**13 00 40.2**	**+0.7**
	7µm,0.5s						
TERO	**Teramo**	**0.34**	**19**	⇓*i*Pg	**Pg**	**13 00 35.9**	**-0.2**
TERO				Sg	**Sg**	**13 00 41.4**	**+0.7**
TERO	**Teramo**	**0.34**	**19**	⇓*i*Pg	**Pg**	**13 00 35.9**	**-0.2**
TERO				Sg	**Sg**	**13 00 41.4**	**+0.7**
LNSS	**Leonessa**	**0.43**	**314**	Pg	**Pg**	**13 00 38.0**	**+0.2**
LNSS				Sg	**Sb**	**13 00 44.8**	**-0.7**
	4µm,0.8s						
LNSS	**Leonessa**	**0.43**	**314**	Pg	**Pg**	**13 00 38.0**	**+0.2**
LNSS				Sg	**Sb**	**13 00 44.8**	**-0.7**
	4µm,0.8s						
INTR	**Introdacqua**	**0.44**	**131**	Pg	**Pg**	**13 00 37.8**	**-0.2**
INTR				Sg	**Sb**	**13 00 45.5**	**-0.3**
	3µm,0.4s						
INTR	**Introdacqua**	**0.44**	**131**	Pg	**Pg**	**13 00 37.8**	**-0.2**
INTR				Sg	**Sb**	**13 00 45.5**	**-0.3**
	3µm,0.4s						
VVLD	**Villa Vallelon**	**0.45**	**164**	Pg	**Pg**	**13 00 37.8**	**-0.3**
VVLD				Sg	**Sb**	**13 00 46.1**	**+0.1**
	1µm,0.5s						
VVLD	**Villa Vallelon**	**0.45**	**164**	Pg	**Pg**	**13 00 37.8**	**-0.3**
CERT	**Cerreto**	**0.50**	**225**	⇑*i*Pg	**Pg**	**13 00 38.9**	**-0.2**
	2µm,0.5s						
CERT	**Cerreto**	**0.50**	**225**	⇑*i*Pg	**Pg**	**13 00 38.9**	**-0.2**
	2µm,0.5s						
GUAR	**Guarcino**	**0.52**	**192**	Pg	**Pg**	**13 00 39.2**	**-0.3**
GUAR				Sg	**Sb**	**13 00 48.2**	**+0.2**
	991nm,0.7s						
GUAR	**Guarcino**	**0.52**	**192**	Pg	**Pg**	**13 00 39.2**	**-0.3**
MNS	**Montasola**	**0.58**	**278**	⇑*i*Pg	**Pg**	**13 00 40.4**	**-0.2**
	823nm,0.7s						
MNS	**Montasola**	**0.58**	**278**	⇑*i*Pg	**Pg**	**13 00 40.4**	**-0.2**
	823nm,0.7s						
NRCA	**Norcia**	**0.59**	**335**	⇓*i*Pg	**Pg**	**13 00 40.6**	**-0.2**
NRCA				Sg	**Sb**	**13 00 49.9**	**-0.1**
	673nm,0.3s						
NRCA	**Norcia**	**0.59**	**335**	⇓*i*Pg	**Pg**	**13 00 40.6**	**-0.2**
NRCA				Sg	**Sb**	**13 00 49.9**	**-0.1**
	673nm,0.3s						
LPEL	**Lama dei Pelig**	**0.60**	**115**	Pg	**Pg**	**13 00 40.4**	**-0.5**
LPEL				Sg	**Sb**	**13 00 49.7**	**-0.5**
	2µm,0.3s						
LPEL	**Lama dei Pelig**	**0.60**	**115**	Pg	**Pg**	**13 00 40.4**	**-0.5**
LPEL				Sg	**Sb**	**13 00 49.7**	**-0.5**
	2µm,0.3s						
MTCE	**Montecelio**	**0.60**	**243**	Pg	**Pg**	**13 00 40.6**	**-0.4**
MTCE				Sg	**Sg**	**13 00 49.2**	**+0.3**
	871nm,0.7s						
MTCE	**Montecelio**	**0.60**	**243**	Pg	**Pg**	**13 00 40.6**	**-0.4**
MTCE				Sg	**Sg**	**13 00 49.2**	**+0.3**
	871nm,0.7s						

TRTR	Tortoreto Alta	0.61	34	Pg	Pg	13 00 41.2	+0.1
	5μm,0.7s						
TRTR	Tortoreto Alta	0.61	34	Pg	Pg	13 00 41.2	+0.1
	5μm,0.7s						
POFI	Posta Fibreno	0.61	162	Pg	Pg	13 00 41.0	-0.3
	571nm,0.8s						
POFI	Posta Fibreno	0.61	162	Pg	Pg	13 00 41.0	-0.3
	571nm,0.8s						
SDI	San Donato	0.65	156	Pg	Pg	13 00 41.6	-0.3
SDI	San Donato	0.65	156	Pg	Pg	13 00 41.6	-0.3
OFFI	Offida	0.65	15	⇓iPg	Pb	13 00 42.5	-0.3
	4μm,0.7s						
OFFI	Offida	0.65	15	⇓iPg	Pb	13 00 42.5	-0.3
	4μm,0.7s						
CAFR	Castel Frentan	0.66	96	Pg	Pg	13 00 42.4	+0.2
CAFR				Sg	Sb	13 00 51.7	-0.4
	4μm,0.4s						
CAFR	Castel Frentan	0.66	96	Pg	Pg	13 00 42.4	+0.2
CAFR				Sg	Sb	13 00 51.7	-0.4
	4μm,0.4s						
CESX	Cesi	0.72	296	Pg	Pg	13 00 43.3	+0.1
	564nm,0.5s						
CESX	Cesi	0.72	296	Pg	Pg	13 00 43.3	+0.1
	564nm,0.5s						
GIUL	Giuliano Di Ro	0.76	192	Pg	Pg	13 00 43.2	-0.8
	456nm,0.8s						
GIUL	Giuliano Di Ro	0.76	192	Pg	Pg	13 00 43.2	-0.8
	456nm,0.8s						
FDMO	Fiordimonte	0.78	340	Pg	Pg	13 00 43.8	-0.7
	466nm,0.7s						
FDMO	Fiordimonte	0.78	340	Pg	Pg	13 00 43.8	-0.7
	466nm,0.7s						
RNI2	Rionero Sannit	0.79	139	Pg	Pg	13 00 44.6	0.0
	2μm,1.0s						
RNI2	Rionero Sannit	0.79	139	Pg	Pg	13 00 44.6	0.0
	2μm,1.0s						
CESI	CESI - Serrava	0.81	330	Pg	Pg	13 00 44.4	-0.6
	277nm,0.4s						
CESI	CESI - Serrava	0.81	330	Pg	Pg	13 00 44.4	-0.6
	277nm,0.4s						
CERA	Filignano	0.82	149	Pg	Pg	13 00 44.2	-0.9
	2μm,1.4s						
CERA	Filignano	0.82	149	Pg	Pg	13 00 44.2	-0.9
	2μm,1.4s						
MIDA	Miranda	0.89	138	Pg	Pg	13 00 45.5	-0.9
	649nm,0.4s						
MIDA	Miranda	0.89	138	Pg	Pg	13 00 45.5	-0.9
	649nm,0.4s						
ASSB	Assisi San Ben	0.95	322	Pg	Pg	13 00 47.0	-0.5
	464nm,0.5s						
ASSB	Assisi San Ben	0.95	322	Pg	Pg	13 00 47.0	-0.5
	464nm,0.5s						
VAGA	Valle Agricola	1.06	147	Pg	Pb	13 00 49.1	-0.6
	445nm,1.0s						
VAGA	Valle Agricola	1.06	147	Pg	Pb	13 00 49.1	-0.6
	445nm,1.0s						
CING	Cingoli	1.09	350	Pg	Pb	13 00 49.2	-1.0
	520nm,0.8s						
CING	Cingoli	1.09	350	Pg	Pb	13 00 49.2	-1.0
	520nm,0.8s						
TOLF	Tolfa	1.11	258	Pg	Pb	13 00 50.3	-0.2
	405nm,1.2s						
TOLF	Tolfa	1.11	258	Pg	Pb	13 00 50.3	-0.2
	405nm,1.2s						
MURB	Monte Urbino	1.18	325	Pg	Pg	13 00 52.0	0.0
	744nm,0.4s						
MURB	Monte Urbino	1.18	325	Pg	Pg	13 00 52.0	0.0
	744nm,0.4s						
ARVD	Arcevia	1.25	343	Pg	Pn	13 00 52.5	-0.3
	318nm,0.7s						
ARVD	Arcevia	1.25	343	Pg	Pn	13 00 52.5	-0.3
	318nm,0.7s						
MS1	Monte Sant'Ang	1.95	107	ePn	Pg	13 01 07.0	+0.4
PGF	Pioggiola	3.31	276	ePn	Pn	13 01 23.4	+2.3
PGF				eSn	Sn	13 02 03.6	+3.1
	9.5nm,0.6s						
PGF	Pioggiola	3.31	276	ePn	Pn	13 01 23.4	+2.3
PGF				eSn	Sn	13 02 03.6	+3.1
	4.8nm,0.6s						
SBF	Sospel	4.68	292	ePn	Pn	13 01 41.9	+2.0
SBF				eSn	Sn	13 02 31.9	-2.3
	6.8nm,0.5s						
SBF	Sospel	4.68	292	ePn	Pn	13 01 41.9	+2.0
SBF				eSn	Sn	13 02 31.9	-2.3
	3.4nm,0.5s						
FETA	Feichten	5.10	339	⇑iPn	Pn	13 01 48.6	+2.8
FETA	Feichten	5.10	339	Pn	Pn	13 01 48.6	+2.8
FRF	La Foret Royal	5.16	286	ePn	Pn	13 01 48.1	+1.7
FRF				eSn	Sn	13 02 43.0	-2.9
	5.1nm,0.4s						
FRF	La Foret Royal	5.16	286	ePn	Pn	13 01 48.1	+1.7
FRF				eSn	Sn	13 02 43.0	-2.9
	2.5nm,0.4s						
LMR	La Mourre	5.21	284	ePn	Pn	13 01 48.6	+1.4
LMR				eSn	Sn	13 02 44.5	-2.8
	5.7nm,0.6s						
LMR	La Mourre	5.21	284	ePn	Pn	13 01 48.6	+1.4
LMR				eSn	Sn	13 02 44.5	-2.8
	2.8nm,0.6s						
MBDF	Montbardon	5.43	299	eP	Pn	13 01 54.0	+3.7
MBDF	Montbardon	5.43	299	eP	Pn	13 01 54.0	+3.7
SMRF	Simiane la Rot	6.00	289	eP	Pn	13 02 00.8	+2.7
SMRF	Simiane la Rot	6.00	289	eP	Pn	13 02 00.8	+2.7
KHC	Kasperske Hory	6.83	1	eSN	Sn	13 03 28.6	+1.5
CDF	Champ du Feu	7.50	327	ePn	Pn	13 02 19.5	+0.9
CDF				eSn	Sn	13 03 39.4	-4.3
	2.0nm,0.4s						
CDF	Champ du Feu	7.50	327	ePn	Pn	13 02 19.5	+0.9
HAU	Haudompre	7.60	321	ePn	Pn	13 02 21.2	+1.3
HAU				eSn	Sn	13 03 39.9	-6.1
	3.8nm,0.4s						
HAU	Haudompre	7.60	321	ePn	Pn	13 02 21.2	+1.3

IDC 09 13:02:50.6±41.0, 50°.20S×116°.54E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/14, mbtmp4.0/4, MS3.8/8, Ms1 3.7/8, ms1mx3.3/28, Error ellipse: s-maj=691.6km s-min=74.0km az=45.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	17.27	2	P	Pn	13 06 53.2	+0.3
	0.4nm,0.3s,baz=183,slow=14,SNR=6.1						
NWAO				LR	LR	13 11 35.7	
	comp=Z,302nm,21.4s,baz=194,slow=30						
STKA	Stephens Creek	26.11	55	P	P	13 08 26.1	+0.1
	4.1nm,0.9s,baz=204,slow=12,SNR=10						
STKA				LR	LR	13 16 23.8	
	comp=Z,155nm,19.2s,baz=204,slow=31						
ASAR	Alice Springs	29.75	33	P	P	13 08 58.5	-0.1
	0.8nm,0.9s,baz=211,slow=9.4,SNR=5.9						
ASAR				LR	LR	13 19 20.2	
	comp=Z,202nm,19.0s,baz=137,slow=33						
FITZ	Fitzroy Crossi	32.84	16	LR	LR	13 20 54.4	
	comp=Z,150nm,19.0s,baz=255,slow=33						
WRA	Warramunga Arr	33.34	32	P	P	13 09 30.2	0.0
	0.9nm,0.8s,baz=201,slow=9.4,SNR=4.2						
CTA	Charters Tower	38.17	49	LR	LR	13 23 41.2	
	comp=Z,135nm,20.0s,baz=235,slow=33						
HNR	Honiara	54.17	57	LR	LR	13 33 23.9	
	comp=Z,112nm,18.6s,baz=153,slow=34						
DAV	Davao City (W)	57.57	11	LR	LR	13 35 16.2	
	comp=Z,66nm,19.6s,baz=238,slow=34						
KSRS	Korea Array	87.85	9	LR	LR	14 00 48.8	
	comp=Z,24nm,18.5s,baz=162,slow=40						

TAP 09 13:06:21.8, 21°.42N×122°.12E, h167km±1km, ML3.5, 1C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSEB	Hengchuen, Pin	1.23	293	eP	Pn	13 06 50.9	+0.8
	baz=288						
TWK1	Hengchun	1.33	293	⇑P	Pn	13 06 51.2	+0.3
	baz=290						
TWK1				S	Sn	13 07 13.0	-0.4
	baz=290						
HEN	Hengchun	1.41	295	eP	Pn	13 06 52.5	+0.8
	baz=295						
TAW	Tawu	1.47	310	eP	Pn	13 06 52.2	-0.1
	baz=314						
EAST	Anshuo	1.52	309	iP	Pn	13 06 52.8	0.0
	baz=313						
EAST				eS	Sn	13 07 15.3	-1.6
	baz=313						
ECL	Taimali	1.59	318	eP	Pn	13 06 52.8	-0.7
	baz=314						
ECL				eS	Sn	13 07 16.1	-2.1
	baz=314						
SCZT	Fangliau	1.68	305	eP	Pn	13 06 54.4	-0.1
	baz=305						
SCZT				eS	Sn	13 07 18.7	-1.1
	baz=305						
TWG	Pinlang	1.70	325	eP	Pn	13 06 54.2	-0.4
	baz=319						
TWG				eS	Sn	13 07 18.7	-1.4
	baz=319						
SSD	Sandimen	1.91	314	P	Pn	13 06 57.1	+0.2
	baz=314						
SSD				eS	Sn	13 07 22.5	-1.6
	baz=314						
ELDTW	Lidau	2.04	330	eP	Pn	13 06 59.3	+0.8
	baz=330						
ELDTW				eS	Sn	13 07 26.8	-0.1
	baz=330						
TWF1	Yuli	2.07	339	eP	Pn	13 06 59.6	+0.9
	baz=342						
TWF1				eS	Sn	13 07 27.8	+0.3
	baz=342						
TWM1	Shoushan	2.10	312	eP	Pn	13 07 00.5	+1.4
	baz=318						
EHY	Hungye	2.20	341	eP	Pn	13 07 01.5	+1.2
	baz=334						
WTP	Ta-pu	2.29	323	P	Pn	13 07 01.7	+0.3
	baz=316						
WTP				eS	Sn	13 07 31.1	-0.9
	baz=316						
CHN1	Nanshi	2.29	320	eP	Pn	13 07 00.7	-0.6
	baz=315						
CHN1				S	Sn	13 07 31.1	-0.9
	baz=315						
TWK	Hsinying	2.38	321	eP	Pn	13 07 02.4	0.0
	baz=315						
TWK				eS	Sn	13 07 32.7	-1.2
	baz=315						
CHN4	Tsaushan	2.38	324	P	Pn	13 07 02.6	+0.3
	baz=332						
CHN4				eS	Sn	13 07 33.1	-0.8
	baz=332						
ALS	Alishan	2.41	330	P	Pn	13 07 03.7	+0.7
	baz=322						
ALS				eS	Sn	13 07 34.4	-0.7
	baz=322						
CHN5	Tsauling	2.54	329	P	Pn	13 07 04.7	+0.3
	baz=329						
CHN5				eS	Sn	13 07 36.1	-1.4
	baz=329						
TYC	Yuchr	2.73	335	eP	Pn	13 07 07.0	+0.5
	baz=328						
TYC				eS	Sn	13 07 40.4	-1.0
	baz=328						
WHF	Hehuan Shan	2.83	344	eP	Pn	13 07 10.4	+2.2
	baz=349						

IDC 09 13:10:55.1±7.9, 3°.13S×101°.30E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/22, mbtmp3.3/3, Error ellipse: s-maj=409.8km s-min=27.5km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	36.31	120	P	P	13 18 00.5	-0.4
	0.2nm,0.4s,baz=291,slow=8.0,SNR=5.0						
ASAR	Alice Springs	37.54	126	P	P	13 18 11.4	+0.1
	0.1nm,0.3s,baz=296,slow=7.6,SNR=11						
MKAR	Makanchi Array	52.47	344	P	P	13 20 09.6	-0.1
	0.1nm,0.3s,baz=149,slow=6.7,SNR=3.9						

NIED 09 13:12:00, 35°.70N×142°.90E, h5km, Mw4.3 Best double couple: $M_0$3.38000×10^{15} NP1:ϕ_s181.00000°, δ63.00000°, λ-86.00000°. NP2:ϕ_s353.00000°, δ27.00000°, λ-98.00000°.

ISCJB 09 13:12:07.9±0.4, 35°.66N±0°.03×142°.99E±0°.04, h37km, mb4.2/33, MS3.5/13, Error ellipse: s-maj=4.9km s-min=4.2km az=160.0

JMA 09 13:12:07.7±0.3, 35°.66N×142°.95E, h89km, M3.9

IDC 09 13:12:09.4±0.5, 35°.48N×143°.10E, h35km±3km, mb3.8/17, mb1 4.0/22, mb1mx3.9/33, mbtmp3.9/22, ML3.9/4, MS3.4/15, Ms1 3.4/15, ms1mx3.2/45, Error ellipse: s-maj=15.2km s-min=11.5km az=127.0

MOS 09 13:12:09.2±0.9, 35°.89N×142°.97E, h33km, mb4.8/13, Error ellipse: s-maj=11.2km s-min=7.3km az=112.0

NEIC 09 13:12:09.0±0.4, 35°.48N×143°.08E, mb4.6/7, MW4.3(NIED), Error ellipse: s-maj=10.2km s-min=8.9km az=146.0

ISC 09 13:12:11.0±0.4, 35°.65N±0°.05×142°.98E±0°.05, h59km, h59km:pP-P, n102, σ2°.31/119, mb4.2/33, MS3.6/13, 2C-4D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.73	273	P	Pn	13 12 36.1	-2.6
CHOJ				eS	Sn	13 12 58.5	-1.2
BSO1	Boso 1	1.92	240	P	Pn	13 12 38.8	-2.0
BSO1				S	Sn	13 13 02.8	-0.7
JHO	Hitachi	2.18	297	P	Pn	13 12 42.1	-2.7
JHO				eS	Sn	13 13 07.5	-3.2
JFT	Otama	2.83	312	P	Pn	13 12 51.8	-2.0
JFT				eS	Sn	13 13 24.4	-2.4
JAG	Ashikaga	2.96	286	P	Pn	13 12 53.0	-2.6
JAG				S	Sn	13 13 27.3	-2.6
JOD2	Odawara 2	3.20	264	P	Pn	13 12 56.2	-2.6
JOD2				S	Sn	13 13 35.0	-0.8
JRY	Ryogami san	3.34	278	P	Pn	13 12 59.1	-1.6
JMK	Ichinoseki	3.59	337	P	Pn	13 13 01.3	-2.8
JMK				eS	Sn	13 13 43.2	-2.0
JYN	Shimob	3.62	269	P	Pn	13 13 02.8	-1.8
JHJ2	Mitsune	3.64	227	P	Pn	13 13 00.9	-3.9
JHJ2				eS	Sn	13 13 40.5	-6.0
JHJ	Hachijo jima 2	3.65	227	Pn	Pn	13 13 00.8	-4.2
	101nm,0.3s,baz=84,slow=20,SNR=116						
JHJ				Sn	Sn	13 13 40.4	-6.5
	211nm,0.3s,baz=226,slow=24,SNR=10						
JYK	Kaneyama	3.88	328	P	Pn	13 13 05.8	-2.3
JYK				eS	Sn	13 13 51.0	-1.4
MJAR	Matsushiro Arr	3.97	284	Pn	Pn	13 13 08.3	-1.1
MJAR	Matsushiro Arr	3.97	284	Pn	Pn	13 13 08.3	-1.1
	17nm,0.3s,baz=102,slow=7.3,SNR=92						
MJAR				LR	LR	13 14 54.9	
	comp=Z,381nm,21.9s,baz=110,slow=41						
MAT	Matsushiro	3.97	284	P	Pn	13 13 08.8	-0.5
MAT				eS	Sn	13 13 53.7	-0.9
MAT	Matsushiro	3.97	284	P	Pn	13 13 08.8	-0.5
JOM	Ohasama	4.05	341	P	Pn	13 13 08.3	-2.1
JOM				eS	Sn	13 13 54.0	-2.6
JAW	Awa shima	4.10	314	P	Pn	13 13 11.5	+0.4
JSD	Sado	4.48	304	P	Pn	13 13 14.9	-1.4
ERM	Erimo	6.36	1	eP	Pn	13 13 41.9	-0.1
ASAJ	Asahikawa	8.47	358	Pn	Pn	13 14 08.8	-2.1
ASAJ	Asahikawa	8.47	358	Pn	Pn	13 14 08.8	-2.1
	1.7nm,0.3s,baz=214,slow=18,SNR=28						
ASAJ				LR	LR	13 18 23.9	
	comp=Z,38nm,18.8s,baz=153,slow=43						
CBIJ	Chichi jima	8.55	185	Pn	Pn	13 14 05.2	-6.8
CBIJ				Sn	Sn	13 15 32.5	-15
CBIJ	Chichi jima	8.55	185	Pn	Pn	13 14 05.2	-6.8
	7.9nm,0.3s,baz=131,slow=22,SNR=24						
CBIJ				Sn	Sn	13 15 32.5	-15
	2.3nm,0.3s,baz=357,slow=19,SNR=2.1						
YUK	Yuzh-Kuril'sk	8.67	14	iP	Pn	13 14 09.5	-4.0
YUK				eS	Sn	13 15 44.3	-5.4
YUK				pmax	pmax		
	comp=N,430nm,1.7s						
YUK				pmax	pmax		
	comp=E,241nm,1.7s						
YUK				pmax	pmax		
	comp=Z,303nm,1.7s						
JNU	Nakatsue	10.32	259	Pn	Pn	13 14 34.8	-1.4
JNU	Nakatsue	10.32	259	Pn	Pn	13 14 34.8	-1.4
	comp=Z,0.9nm,0.3s,baz=111,slow=8.1,SNR=11						
YSS	Yuzh-Sakhalins	11.30	359	eP	Pn	13 14 48.0	-1.5
USRK	Ussuriysk Arra	11.99	319	Pn	Pn	13 15 00.1	+1.1
	comp=Z,0.3nm,0.3s,baz=116,slow=14,SNR=4.7						
USRK				LR	LR	13 19 24.2	
	comp=Z,192nm,18.2s,baz=59,slow=36						
KSRS	Korea Array	12.25	283	Pn	Pn	13 15 02.6	+0.1
	comp=Z,0.1nm,0.3s,baz=99,slow=13,SNR=26						
KSRS				LR	LR	13 19 41.3	
	comp=Z,122nm,20.4s,baz=276,slow=36						
KSAR	Wonju Array Be	12.28	283	Pn	Pn	13 15 02.6	-0.3
PETK	Petropavlovsk-	20.31	26	LR	LR	13 23 32.9	
	comp=Z,28nm,19.3s,baz=19,slow=34						
YAK	Yakutsk	27.71	347	eP	P	13 17 53.9	+0.6
YAK				pmax	pmax		
	comp=Z,11nm,1.1s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
SONM	Songino Array	29.62	306	P	P	13 18 13.7	+3.0
SONM	Songino Array	29.62	306	P	P	13 18 13.7	+3.0
	comp=N,2.2nm,0.8s,baz=106,slow=8.0,SNR=13						
SONM				LR	LR	13 30 01.0	
	comp=N,64nm,19.0s,baz=50,slow=36						
ZAK	Zakamensk	32.13	310	eP	P	13 18 35.0	+2.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
TLY	Talaya	32.20	312	eP	P	13 18 34.9	+1.7
TLY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CMAR	Chiang Mai Arr	42.41	258	P	P	13 20 01.8	+1.9
CMAR	Chiang Mai Arr	42.41	258	P	P	13 20 01.8	+1.9
	comp=Z,0.5nm,0.4s,baz=50,slow=5.0,SNR=5.1						
CMAR				LR	LR	13 36 23.0	
	comp=Z,54nm,20.6s,baz=124,slow=34						
ZALV	Zalesovo Beam	43.79	313	P	P	13 20 12.8	+2.2
ZALV	Zalesovo Beam	43.79	313	P	P	13 20 12.8	+2.2
ZALV	Zalesovo Beam	43.79	313	P	P	13 20 12.8	+2.2
	comp=Z,1.7nm,0.7s,baz=90,slow=7.4,SNR=11						
ZALV				LR	LR	13 38 18.6	
	comp=Z,37nm,18.9s,baz=25,slow=36						
NVS	Novosibirsk	44.72	315	eP	P	13 20 19.3	+1.3
NVS				pmax	pmax		
	comp=Z,25nm,2.3s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.1s						
MK31	Makanchi Array	45.94	304	eP	P	13 20 29.2	+1.4
MK31	Makanchi Array	45.94	304	eP	P	13 20 29.2	+1.4
MKAR	Makanchi Array	45.94	304	P	P	13 20 30.1	+2.3
MKAR	Makanchi Array	45.94	304	P	P	13 20 30.1	+2.3
MKAR	Makanchi Array	45.94	304	P	P	13 20 30.1	+2.3
	comp=E,1.5nm,0.8s,baz=92,slow=9.6,SNR=14						
MKAR				LR	LR	13 39 47.1	
	comp=E,57nm,21.8s,baz=262,slow=36						
KDAK	Kodiak Island	47.30	41	P	P	13 20 39.1	+0.9
KDAK	Kodiak Island	47.30	41	P	P	13 20 39.1	+0.9
	comp=E,4.3nm,0.9s,baz=236,slow=3.6,SNR=3.2						
KURK	Kurchatov	47.79	309	d iP	P	13 20 43.9	+1.7
KURK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KURK	Kurchatov	47.79	309	eP	P	13 20 43.4	+1.2
	comp=Z,6.2nm,0.9s						
KURBB	Kurchatov Arra	47.86	309	LR	LR	13 41 14.9	
	comp=Z,59nm,19.1s,baz=95,slow=36						
ILAR	Eielson Array	50.00	32	P	P	13 21 00.8	+1.9
ILAR				pP	pP	13 21 11.1	-3.2
ILAR	Eielson Array	50.00	32	P	P	13 21 00.8	+1.9
	comp=Z,1.5nm,0.9s,baz=262,slow=5.7,SNR=16						
ILAR				pP	pP	13 21 11.1	-3.2
	comp=Z,2.5nm,0.8s,baz=259,slow=6.2,SNR=16						
TKM2	Tokmak 2	51.41	300	eP	P	13 21 12.0	+1.9
TKM2				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TKM2	Tokmak 2	51.41	300	eP	P	13 21 12.0	+1.9
	comp=Z,8.5nm,1.0s						
MENT	Mentasta	51.46	34	eP	P	13 21 11.4	+1.4
MENT				epP	pP	13 21 21.8	-3.7
AAK	Ala-Archa	52.27	300	d iP	P	13 21 19.6	+3.1
AAK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
AAK	Ala-Archa	52.27	300	LR	LR	13 44 51.9	
	comp=Z,105nm,19.2s,baz=110,slow=37						
BVAR	Borovoye Array	52.44	313	PcP	PcP	13 22 30.6	+3.3
BVAR	Borovoye Array	52.44	313	PcP	PcP	13 22 30.6	+3.3
	comp=Z,1.4nm,0.7s,baz=94,slow=5.8,SNR=4.2						
BRVK	Borovoye	52.50	313	c iP	P	13 21 19.9	+2.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KKAR	Karatay Array	54.92	301	eP	P	13 21 37.1	+1.4
KKAR				e*PP	pP	13 21 48.3	-3.0
KKAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KKAR	Karatay Array	54.92	301	eP	P	13 21 37.1	+1.4
	comp=Z,6.7nm,1.0s						
KKAR				epP	pP	13 21 48.3	-3.0
INK	Inuvik	55.05	27	P	P	13 21 37.6	+1.5
INK	Inuvik	55.05	27	P	P	13 21 37.6	+1.5
	comp=Z,1.7nm,0.9s,baz=282,slow=9.9,SNR=5.8						
WRA	Warramunga Arr	55.89	190	P	P	13 21 42.8	+0.1
WRA	Warramunga Arr	55.89	190	P	P	13 21 42.8	+0.1
	comp=Z,3.2nm,1.0s,baz=9.3,slow=7.4,SNR=16						
ARU	Arti	58.24	319	d iP	P	13 22 00.1	+1.1
ARU				S	S	13 29 52.4	-3.9
ARU				pmax	pmax		
	comp=Z,13nm,1.7s						
ASAR	Alice Springs	59.61	190	P	P	13 22 08.9	+0.1
ASAR				pP	pP	13 22 19.6	-5.1
ASAR	Alice Springs	59.61	190	P	P	13 22 08.9	+0.1
	comp=Z,1.0nm,0.8s,baz=3.9,slow=7.4,SNR=12						
ASAR				pP	pP	13 22 19.6	-5.1
	comp=Z,1.5nm,0.7s,baz=13,slow=8.7,SNR=9.7						
ABKAR	Akbulak array	59.80	311	eP	P	13 22 10.6	+0.6
	comp=Z,0.9nm,0.4s						
ABKAR				epP	pP	13 22 21.9	-3.9
RES	Resolute Bay	63.63	15	eP	P	13 22 36.5	+1.4
	comp=Z,9.1nm,0.9s						
RES				epP	pP	13 22 47.5	-3.6
RES	Resolute Bay	63.63	15	P	P	13 22 36.9	+1.7
	comp=Z,6.2nm,1.0s,baz=304,slow=7.8,SNR=17						
RES				pP	pP	13 22 47.9	-3.2
	comp=Z,8.3nm,0.9s,baz=322,slow=7.0,SNR=16						
YKA	Yellowknife Ar	64.37	30	P	P	13 22 41.7	+1.4
YKA				pP	pP	13 22 52.6	-3.6
YKA	Yellowknife Ar	64.37	30	P	P	13 22 41.7	+1.4
	comp=Z,1.1nm,0.9s,baz=299,slow=6.7,SNR=14						
YKA				pP	pP	13 22 52.6	-3.6
	comp=Z,1.9nm,0.8s,baz=298,slow=6.4,SNR=18						
KLMR	Klimovskoe	65.60	328	P	P	13 22 48.4	+0.1
KLMR				pmax	pmax		
	comp=Z,21nm,1.8s						
ARCES	ARCESS Array B	65.74	340	LR	LR	13 58 20.4	
	comp=Z,35nm,18.1s,baz=225,slow=42						
STKA	Stephens Creek	67.18	181	P	P	13 22 58.2	-0.3
STKA	Stephens Creek	67.18	181	P	P	13 22 58.2	-0.3
	comp=Z,1.2nm,0.8s,baz=328,slow=7.8,SNR=3.5						
OBN	Obninsk	69.96	324	⇓eP	P	13 23 17.3	+1.5
OBN				e		13 25 50.5	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s						
FINES	FINESS Array B	70.63	333	LR	LR	13 57 24.4	
	comp=Z,50nm,19.1s,baz=1.1,slow=38						
KIV	Kislovodsk	72.77	312	eP	P	13 23 36.7	+3.6
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,32nm,19.0s						
FFC	Flin Flon	74.18	33	c eP	P	13 23 43.9	+2.9
FFC	Flin Flon	74.18	33	eP	P	13 23 40.0	-1.0
	comp=Z,1.6nm,0.8s						
FFC				epP	PcP	13 23 53.0	-2.8
NOA	NORSAR Array B	75.95	338	LR	LR	14 01 59.4	
	comp=Z,23nm,20.1s,baz=30,slow=39						
AKASG	Malin Array Be	76.17	323	P	P	13 23 54.3	+1.8
AKASG	Malin Array Be	76.17	323	P	P	13 23 54.3	+1.8
AKASG	Malin Array Be	76.17	323	P	P	13 23 54.3	+1.8
	comp=Z,0.3nm,0.5s,baz=93,slow=4.0,SNR=3.7						
NAO01	NORSAR Array S	76.20	338	eP	P	13 23 52.0	-0.5
	comp=Z,7.2nm,0.9s						
PDAR	Pinedale Array	77.73	46	P	P	13 24 03.5	+1.7
PDAR				pP	PcP	13 24 14.2	+2.5
PDAR	Pinedale Array	77.73	46	P	P	13 24 03.5	+1.7
	comp=Z,0.4nm,0.7s,baz=122,slow=1.9,SNR=3.1						
PDAR				pP	PcP	13 24 14.2	+2.5
	comp=Z,1.1nm,0.7s,baz=290,slow=2.2,SNR=7.4						
ULM	Lac du Bonnet	79.95	34	P	P	13 24 14.8	+1.3
ULM	Lac du Bonnet	79.95	34	P	P	13 24 14.8	+1.3
	comp=Z,1.3nm,0.4s,baz=145,slow=12,SNR=2.4						
BRTR	Keskin Array B	80.72	312	P	P	13 24 21.0	+2.9
BRTR	Keskin Array B	80.72	312	P	P	13 24 21.0	+2.9
	comp=Z,1.3nm,0.9s,baz=111,slow=6.8,SNR=5.6						
GERES	GERESS Array B	84.56	329	LR	LR	14 07 52.2	
	comp=Z,36nm,21.0s,baz=359,slow=39						
TXAR	Lajitas Array	89.95	53	P	P	13 25 05.1	+1.0
TXAR				pP	pP	13 25 16.7	-4.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TXAR	Lajitas Array	89.95	53	P	P	13 25 05.1	+1.0
	comp=Z,0.3nm,0.6s,baz=224,slow=3.8,SNR=2.7						
TXAR				pP	pP	13 25 16.7	-4.2
	comp=Z,0.8nm,0.7s,baz=305,slow=4.5,SNR=4.4						
LPAZ	La Paz	146.24	63	PKPbc	PKPab	13 31 47.3	+0.5
LPAZ				pPKPbc	pPKPbc	13 31 57.8	-5.4
LPAZ	La Paz	146.24	63	PKPbc	PKPab	13 31 47.3	+0.5
	comp=Z,0.7nm,0.7s,baz=351,slow=4.1,SNR=2.6						
LPAZ				pPKPbc	pPKPbc	13 31 57.8	-5.4
	comp=Z,1.8nm,0.7s,baz=7.9,slow=5.8,SNR=6.0						

*ATH **09** 13:14:23.9, 41°.65N×25°.26E, h3^{km}±2^{km}, MD2.9/5*
*SOF **09** 13:14:23.3, 41°.72N×25°.27E, h9^{km}, MD2.8*
*CSEM **09** 13:14:23.4±0.1, 41°.69N×25°.27E, h2^{km}, MD2.8, Error ellipse: s-maj=2.9km s-min=2.4km az=165.0*
*THE **09** 13:14:23.3, 41°.70N×25°.29E, h2^{km}±2^{km}, ML2.4/4, Error ellipse: s-maj=2.9km s-min=1.0km az=84.0*
*SKO **09** 13:14:25.0, 41°.74N×25°.24E, h0^{km}, M1.9, ML2.4*
*BEO **09** 13:14:26.0±0.6, 41°.92N×25°.35E, h4^{km}±2^{km}, ML2.1/5*
ISC 09 13:14:23.4±0.9**, 41°.71N**±0°.02×**25°.29E**±0°.02**, h9**^{km}±8^{km}**, n45, σ0^{s}50**/74**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDZ	Kurdzhali	0.11	120	i Pg	Pg	13 14 26.0	0.0
KDZ	Kurdzhali	0.11	120	i Pg	Pg	13 14 26.0	0.0
DIM	Dimitrovgrad	0.39	28	i Pg	Pg	13 14 31.4	+0.4
DIM	Dimitrovgrad	0.39	28	i Pg	Pg	13 14 31.4	+0.4
RZN	Rozhen	0.43	268	i Pg	Pg	13 14 31.5	-0.3
RZN	Rozhen	0.43	268	i Pg	Pg	13 14 31.5	-0.3
PLD	Plovdiv	0.59	313	P	Pg	13 14 34.7	-0.1
PLD				S	Sg	13 14 42.3	-0.3
PLD	Plovdiv	0.59	313	ePg	Pg	13 14 34.8	-0.1
PLD				eSg	Sg	13 14 42.5	-0.1
PLD	Plovdiv	0.59	313	i Pg	Pg	13 14 34.8	-0.1
PLD	Plovdiv	0.59	313	P	Pg	13 14 34.7	-0.1
PLD				S	Sg	13 14 42.3	-0.3
KAVA	Kavala	0.92	220	P	Pg	13 14 40.6	-0.4
KAVA				S	Sg	13 14 53.3	+0.3
KAVA	Kavala	0.92	220	P	Pg	13 14 40.6	-0.4
KAVA				S	Sg	13 14 53.3	+0.3
ALN	Alexandroupoli	0.99	145	P	Pb	13 14 42.3	-0.4
ALN				S	Sb	13 14 55.7	-0.1
ALN	Alexandroupoli	0.99	145	ePG	Pb	13 14 42.4	-0.3
ALN				eSG	Sb	13 14 55.4	-0.4
ALN	Alexandroupoli	0.99	145	ePg	Pb	13 14 42.4	-0.3
ALN				eSg	Sb	13 14 55.4	-0.4
ALN				S	Sb	13 14 55.7	-0.1
NVR	Nevrokopi	1.13	252	P	Pg	13 14 44.4	-0.6
NVR				S	Sb	13 15 00.3	+0.3
NVR	Nevrokopi	1.13	252	ePG	Pg	13 14 44.5	-0.6
NVR				eSG	Sg	13 14 59.5	-0.2
NVR	Nevrokopi	1.13	252	ePg	Pg	13 14 44.5	-0.6
NVR				eSg	Sg	13 14 59.5	-0.2
NVR				S	Sb	13 15 00.3	+0.3
MMB	Musomiste	1.18	265	i Pg	Pg	13 14 45.5	-0.5
MMB	Musomiste	1.18	265	i Pg	Pg	13 14 45.5	-0.5
JMB	Yambol	1.23	51	P	Pn	13 14 46.7	-0.1
JMB				S	Sn	13 15 03.0	-0.5
JMB	Yambol	1.23	51	ePn	Pn	13 14 47.2	+0.4
JMB				eSn	Sb	13 15 02.8	+0.1
JMB	Yambol	1.23	51	i Pg	Pn	13 14 47.1	+0.3
JMB	Yambol	1.23	51	P	Pn	13 14 46.7	-0.1
JMB	Yambol	1.23	51	i Pg	Pn	13 14 47.1	+0.3
JMB				S	Sn	13 15 03.0	-0.5
SRS	Serrai	1.41	246	P	Pb	13 14 49.6	-0.2
SRS				S	Sg	13 15 08.6	0.0
SRS	Serrai	1.41	246	P	Pb	13 14 49.6	-0.2
SRS				S	Sg	13 15 08.6	0.0
KKB	Krupnik	1.66	276	i P	Pb	13 14 53.8	-0.3
KKB	Krupnik	1.66	276	i P	Pb	13 14 53.8	-0.3
SOH	Sokhos	1.71	239	ePG	Pb	13 14 54.6	-0.4
SOH				eSB	Sg	13 15 17.8	-0.4
SOH	Sokhos	1.71	239	ePg	Pb	13 14 54.6	-0.4
SOH				eSb	Sg	13 15 17.8	-0.4
VTS	Vitosha	1.78	300	P	Pn	13 14 54.8	+0.2
VTS				S	Sn	13 15 17.9	+0.5
VTS	Vitosha	1.78	300	ePn	Pb	13 14 56.2	-0.2
VTS				eSn	Sb	13 15 19.4	+0.5
VTS	Vitosha	1.78	300	i P	Pb	13 14 56.1	-0.3
VTS	Vitosha	1.78	300	P	Pn	13 14 54.8	+0.2
VTS	Vitosha	1.78	300	ePn	Pb	13 14 56.2	-0.2
VTS				S	Sn	13 15 17.9	+0.5
VTS				eSn	Sb	13 15 19.4	+0.5
LIA	Limnos Island	1.81	183	ePB	Pb	13 14 57.0	+0.4
LIA	Limnos Island	1.81	183	ePb	Pb	13 14 57.0	+0.4
PLG	Polygyros	1.93	227	ePG	Pb	13 14 58.6	-0.1
PLG				eSB	Sb	13 15 24.1	+1.2
PLG	Polygyros	1.93	227	ePg	Pb	13 14 58.6	-0.1
PLG				eSb	Sb	13 15 24.1	+1.2
MPEP	Malo Peshtene	2.01	326	i P	Pb	13 15 00.8	+0.7
VAY	Valandovo	2.08	260	ePn	Pb	13 15 01.3	0.0
VAY				eSg	Sg	13 15 30.8	+0.6
VAY				eLg	Lg	13 15 31.5	
	comp=E,12nm,0.4s						
VAY				eLg	Lg	13 15 31.8	
	comp=N,20nm,0.5s						
VAY	Valandovo	2.08	260	eSn	Sg	13 15 30.6	+0.4
VAY	Valandovo	2.08	260	ePn	Pb	13 15 01.7	+0.4
VAY				eSg	Sg	13 15 31.2	+1.0
VAY				eLg	Lg	13 15 32.3	
	comp=N,20nm,0.5s						
ZAPS	Zavoj	2.51	309	ePn	Pb	13 15 06.7	-2.0
ZAPS				eSg	Sg	13 15 43.2	-0.9

*CSEM **09** 13:18:34.2, 42°.34N×13°.26E, h12^{km}, After ROM*
ROM 09 13:18:34.2±0.1**, 42°.34N×13°.26E, h12**^{km}**, Ml3.1**/40**, 18C, Error ellipse: s-maj=1.0km s-min=0.7km az=63.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.10	83	Pg	Pg	13 18 37.5	+0.3
AQU				Sg	Sg	13 18 39.4	0.0
	16µm,0.3s						
AQU	L'Aquila	0.10	83	Pg	Pg	13 18 37.5	+0.3
AQU				Sg	Sg	13 18 39.4	0.0
	16µm,0.3s						
FIAM	Fiamignano	0.13	235	Pg	Pg	13 18 38.1	+0.5
FIAM				Sg	Sg	13 18 40.4	+0.4
	7µm,0.4s						
FIAM	Fiamignano	0.13	235	Pg	Pg	13 18 38.1	+0.5
FIAM				Sg	Sg	13 18 40.4	+0.4
	7µm,0.4s						
CAMP	Campotosto	0.22	29	⇑iPg	Pg	13 18 39.3	+0.1
CAMP				Sg	Sg	13 18 42.6	+0.1
	3µm,0.5s						
CAMP	Campotosto	0.22	29	⇑iPg	Pg	13 18 39.3	+0.1
CAMP				Sg	Sg	13 18 42.6	+0.1
	3µm,0.5s						
FAGN	Fagnano	0.25	107	Pg	Pg	13 18 39.9	+0.3
FAGN				Sg	Sg	13 18 43.8	+0.7
	7µm,0.4s						
FAGN	Fagnano	0.25	107	Pg	Pg	13 18 39.9	+0.3
FAGN				Sg	Sg	13 18 43.8	+0.7
	7µm,0.4s						
LNSS	Leonessa	0.31	328	⇑iPg	Pg	13 18 40.8	+0.1
LNSS				Sg	Sg	13 18 45.7	+0.7
	2µm,0.2s						
LNSS	Leonessa	0.31	328	⇑iPg	Pg	13 18 40.8	+0.1
LNSS				Sg	Sg	13 18 45.7	+0.7
	2µm,0.2s						
PTQR	Pietraquaria	0.34	162	⇑iPg	Pg	13 18 41.3	+0.2
PTQR				Sg	Sg	13 18 46.4	+0.7
PTQR	Pietraquaria	0.34	162	⇑iPg	Pg	13 18 41.3	+0.2
PTQR				Sg	Sg	13 18 46.4	+0.7
TERO	Teramo	0.38	42	⇑iPg	Pg	13 18 41.6	-0.3
TERO				Sg	Sg	13 18 47.2	+0.2
	2µm,0.3s						
TERO	Teramo	0.38	42	⇑iPg	Pg	13 18 41.6	-0.3
TERO				Sg	Sg	13 18 47.2	+0.2
	2µm,0.3s						
MNS	Montasola	0.43	276	⇑iPg	Pg	13 18 42.9	+0.1
MNS				Sg	Sg	13 18 48.7	+0.1
	798nm,0.6s						
MNS	Montasola	0.43	276	⇑iPg	Pg	13 18 42.9	+0.1
MNS				Sg	Sg	13 18 48.7	+0.1
	798nm,0.6s						
VCEL	Villa Celiera	0.43	83	Pg	Pb	13 18 43.6	-0.4
VCEL				Sg	Sb	13 18 50.5	-0.1
	4µm,0.4s						
VCEL	Villa Celiera	0.43	83	Pg	Pb	13 18 43.6	-0.4
VCEL				Sg	Sb	13 18 50.5	-0.1
	4µm,0.4s						
GAVE	Gavelli	0.44	322	Pg	Pg	13 18 43.5	+0.4
GAVE	Gavelli	0.44	322	Pg	Pg	13 18 43.5	+0.4
CERT	Cerreto	0.44	208	⇑iPg	Pg	13 18 43.2	+0.1
CERT				Sg	Sb	13 18 50.1	-0.7
	2µm,0.4s						
CERT	Cerreto	0.44	208	⇑iPg	Pg	13 18 43.2	+0.1
CERT				Sg	Sb	13 18 50.1	-0.7
	2µm,0.4s						
MTCE	Montecelio	0.50	231	⇑iPg	Pg	13 18 44.2	+0.1
	495nm,0.8s						
MTCE	Montecelio	0.50	231	⇑iPg	Pg	13 18 44.2	+0.1
	495nm,0.8s						
NRCA	Norcia	0.50	348	Pg	Pg	13 18 43.9	-0.3
NRCA				Sg	Sb	13 18 52.0	-0.6
	1µm,0.1s						
NRCA	Norcia	0.50	348	Pg	Pg	13 18 43.9	-0.3
NRCA				Sg	Sb	13 18 52.0	-0.6
	1µm,0.1s						
VVLD	Villa Vallelon	0.54	150	Pg	Pg	13 18 44.5	-0.4
	716nm,0.5s						
VVLD	Villa Vallelon	0.54	150	Pg	Pg	13 18 44.5	-0.4
	716nm,0.5s						
GUAR	Guarcino	0.55	176	⇑iPg	Pg	13 18 44.8	-0.2
	593nm,0.6s						
GUAR	Guarcino	0.55	176	⇑iPg	Pg	13 18 44.8	-0.2
	593nm,0.6s						
CESX	Cesi	0.57	298	Pg	Pg	13 18 44.9	-0.5
	738nm,0.3s						
CESX	Cesi	0.57	298	Pg	Pg	13 18 44.9	-0.5
	738nm,0.3s						
INTR	Introdacqua	0.58	124	Pg	Pg	13 18 45.2	-0.5
	844nm,0.5s						
INTR	Introdacqua	0.58	124	Pg	Pg	13 18 45.2	-0.5
	844nm,0.5s						
OFFI	Offida	0.67	28	Pg	Pb	13 18 47.6	-0.3
	2µm,0.5s						
OFFI	Offida	0.67	28	Pg	Pb	13 18 47.6	-0.3
	2µm,0.5s						
TRTR	Tortoreto Alta	0.67	46	Pg	Pb	13 18 48.3	+0.4
	2µm,0.5s						
TRTR	Tortoreto Alta	0.67	46	Pg	Pb	13 18 48.3	+0.4
	2µm,0.5s						
FDMO	Fiordimonte	0.71	350	⇑iPg	Pg	13 18 47.5	-0.5
	471nm,0.3s						
FDMO	Fiordimonte	0.71	350	⇑iPg	Pg	13 18 47.5	-0.5
	471nm,0.3s						
POFI	Posta Fibreno	0.71	152	Pg	Pg	13 18 47.8	-0.3
	313nm,0.6s						
POFI	Posta Fibreno	0.71	152	Pg	Pg	13 18 47.8	-0.3
	313nm,0.6s						
RDP	Rocca di Papa	0.71	215	Pg	Pg	13 18 47.9	-0.2
	1µm,0.5s						
RDP	Rocca di Papa	0.71	215	Pg	Pg	13 18 47.9	-0.2
	1µm,0.5s						
CESI	CESI - Serrava	0.71	338	Pg	Pg	13 18 48.0	-0.2
	318nm,0.5s						
CESI	CESI - Serrava	0.71	338	Pg	Pg	13 18 48.0	-0.2
	318nm,0.5s						
LPEL	Lama dei Pelig	0.75	113	Pg	Pg	13 18 48.3	-0.5
	517nm,0.6s						
LPEL	Lama dei Pelig	0.75	113	Pg	Pg	13 18 48.3	-0.5
	517nm,0.6s						
SDI	San Donato	0.75	147	Pg	Pg	13 18 49.1	+0.2
	180nm,0.3s						
SDI	San Donato	0.75	147	Pg	Pg	13 18 49.1	+0.2
	180nm,0.3s						
GIUL	Giuliano Di Ro	0.78	180	Pg	Pg	13 18 48.8	-0.6
	519nm,0.6s						
GIUL	Giuliano Di Ro	0.78	180	Pg	Pg	13 18 48.8	-0.6
	519nm,0.6s						
CAFR	Castel Frentan	0.81	98	Pg	Pn	13 18 51.3	-0.2
	748nm,0.4s						
CAFR	Castel Frentan	0.81	98	Pg	Pn	13 18 51.3	-0.2
	748nm,0.4s						
ASSB	Assisi San Ben	0.83	328	Pg	Pg	13 18 49.7	-0.7
	581nm,0.4s						
ASSB	Assisi San Ben	0.83	328	Pg	Pg	13 18 49.7	-0.7
	581nm,0.4s						
RNI2	Rionero Sannit	0.92	134	Pg	Pn	13 18 54.1	+1.0
	384nm,0.6s						
RNI2	Rionero Sannit	0.92	134	Pg	Pn	13 18 54.1	+1.0
	384nm,0.6s						
SNTG	Esanatoglia	0.94	346	Pg	Pg	13 18 51.8	-0.7
	124nm,0.3s						
SNTG	Esanatoglia	0.94	346	Pg	Pg	13 18 51.8	-0.7
	124nm,0.3s						
TOLF	Tolfa	0.98	254	Pg	Pg	13 18 52.6	-0.5
	258nm,0.8s						
TOLF	Tolfa	0.98	254	Pg	Pg	13 18 52.6	-0.5
	258nm,0.8s						
MIDA	Miranda	1.02	133	Pg	Pb	13 18 52.8	-1.1
	212nm,0.7s						
MIDA	Miranda	1.02	133	Pg	Pb	13 18 52.8	-1.1
	212nm,0.7s						
MGAB	Montegabbione	1.02	304	Pg	Pb	13 18 53.7	-0.2
MGAB	Montegabbione	1.02	304	Pg	Pb	13 18 53.7	-0.2
CING	Cingoli	1.03	357	Pg	Pb	13 18 53.3	-0.9
	527nm,0.7s						
CING	Cingoli	1.03	357	Pg	Pb	13 18 53.3	-0.9
	527nm,0.7s						
MURB	Monte Urbino	1.07	330	Pg	Pb	13 18 54.2	-0.6
	912nm,0.3s						
MURB	Monte Urbino	1.07	330	Pg	Pb	13 18 54.2	-0.6
	912nm,0.3s						
SACS	San Casciano d	1.12	297	Pn	Pg	13 18 56.6	+0.7
	228nm,0.6s						
ARVD	Arcevia	1.18	349	Pg	Pb	13 18 56.1	-0.5
	252nm,0.8s						
ARVD	Arcevia	1.18	349	Pg	Pb	13 18 56.1	-0.5
	252nm,0.8s						
AOI	Ancona	1.23	12	Pn	Pn	13 18 57.4	0.0
	322nm,0.8s						
AOI	Ancona	1.23	12	Pn	Pn	13 18 57.4	0.0
	322nm,0.8s						
SGG	Gregorio Mates	1.27	138	Pn	Pg	13 18 59.3	+0.6
	126nm,0.6s						
SGG	Gregorio Mates	1.27	138	Pn	Pg	13 18 59.3	+0.6
	126nm,0.6s						
PIEI	Pieia	1.31	336	Pn	Pn	13 18 58.3	-0.1
	164nm,0.3s						
PIEI	Pieia	1.31	336	Pn	Pn	13 18 58.3	-0.1
	164nm,0.3s						
CAFI	Castiglion Fio	1.37	316	Pn	Pg	13 19 00.5	-0.1
	257nm,0.4s						
CAFI	Castiglion Fio	1.37	316	Pn	Pg	13 19 00.5	-0.1
	257nm,0.4s						
FSSB	Fossombrone	1.40	345	Pn	Pn	13 18 59.8	+0.2
	2µm,0.5s						
FSSB	Fossombrone	1.40	345	Pn	Pn	13 18 59.8	+0.2
	2µm,0.5s						
PARC	Parchiule	1.51	330	Pn	Pb	13 19 02.1	-0.1
	728nm,0.5s						
PARC	Parchiule	1.51	330	Pn	Pb	13 19 02.1	-0.1
	728nm,0.5s						
MAON	Monte Argentar	1.58	274	Pn	Pn	13 19 02.5	+0.4
	357nm,0.9s						
MAON	Monte Argentar	1.58	274	Pn	Pn	13 19 02.5	+0.4
	357nm,0.9s						
CASP	Castiglione de	1.83	285	Pn	Pn	13 19 06.3	+0.8
	130nm,0.6s						
CASP	Castiglione de	1.83	285	Pn	Pn	13 19 06.3	+0.8
	130nm,0.6s						

*IDC **09** 13:19:33.9±0.8, 42°.45N×13°.10E, h0^{km}, mb3.8/12, mb1 4.0/20, mb1mx3.9/34, mbtmp3.9/20, ML3.8/8, MS2.8/3, Ms1 2.8/3, ms1mx2.1/45, Error ellipse: s-maj=14.4km s-min=12.2km az=112.0*
*ISCJB **09** 13:19:33.7±0.2, 42°.36N±0°.01×13°.17E±0°.01, h19^{km}±2^{km}, mb3.8/14, MS2.8/1, Error ellipse: s-maj=2.3km s-min=1.6km az=20.8*
*ROM **09** 13:19:33.8±0.1, 42°.34N×13°.26E, h10^{km}, Ml4.1/4, Error ellipse: s-maj=1.0km s-min=0.9km az=43.0*
*PDG **09** 13:19:34.5±0.3, 42°.43N×13°.27E, h8^{km}±1^{km}, ML3.9/8, Error ellipse: s-maj=1.0km s-min=1.8km az=0.0*
*LDG **09** 13:19:34.3±0.1, 42°.40N×13°.33E, h2^{km}, Ml3.8/17, Error ellipse: s-maj=3.5km s-min=2.0km az=31.0*
*CSEM **09** 13:19:34.1±0.1, 42°.39N×13°.17E, h2^{km}, mb3.9/4, Mw3.6, Error ellipse: s-maj=2.6km s-min=1.8km az=20.0*
*NEIC **09** 13:19:34.3±0.3, 42°.37N×13°.19E, h4^{km}±3^{km}, mb3.9/4, ML4.0(PDG), MW3.6(ROM), Error ellipse: s-maj=3.2km s-min=3.1km az=108.0*
NEIC Felt [III] at Rieti, Teramo and Tortoretto; [II] at Albano Laziale, Ascoli Piceno, Avezzano, Chieti, Foligno, Guidonia, Monterotondo, Rocca di Papa, Rome, Sulmona and Terni. Felt in Abruzzo, Lazio, Marche and Umbria.
*PRU **09** 13:19:35.7, 42°.37N×13°.52E, h0^{km}, M3.9*
*BEO **09** 13:19:35.0±0.8, 42°.38N×12°.86E, h30^{km}±19^{km}, ML4.1/5*
*THE **09** 13:19:38.7, 42°.42N×13°.41E, h31^{km}±51^{km}, ML3.9/2, Error ellipse: s-maj=51.7km s-min=3.7km az=0.0*
ISC 09 13:19:34.9±0.7**, 42°.35N**±0°.01×**13°.24E**±0°.01**, h10**^{km}±4^{km}**, n447, σ1^{s}48**/547**, mb3.9**/14**, 60C-21D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.12	90	⇓iP	Pg	13 19 37.1	-0.8
AQU	L'Aquila	0.12	90	⇓iPg	Pg	13 19 37.1	-0.8
AQU				Sg	Sg	13 19 39.1	-0.9
AQU	L'Aquila	0.12	90	⇓iP	Pg	13 19 37.1	-0.8
AQU				Sg	Sg	13 19 39.1	-0.9
FIAM	Fiamignano	0.12	226	P	Pg	13 19 37.7	-0.2
FIAM				S	Sg	13 19 40.1	0.0
FIAM	Fiamignano	0.12	226	⇑iPg	Pg	13 19 37.7	-0.2
FIAM				Sg	Sg	13 19 39.9	-0.2
FIAM	Fiamignano	0.12	226	⇑iPg	Pg	13 19 37.7	-0.2
FIAM				S	Sg	13 19 40.1	0.0
CAMP	Campotosto	0.22	35	P	Pg	13 19 39.0	-0.6
CAMP				S	Sg	13 19 42.4	-0.4
CAMP	Campotosto	0.22	35	⇑iPg	Pg	13 19 39.0	-0.6
CAMP				Sg	Sg	13 19 42.3	-0.5
CAMP	Campotosto	0.22	35	⇑iPg	Pg	13 19 39.0	-0.6
CAMP				S	Sg	13 19 42.4	-0.4
FAGN	Fagnano	0.27	109	P	Pg	13 19 39.5	-0.9
FAGN				S	Sg	13 19 43.5	-0.7
FAGN	Fagnano	0.27	109	Pg	Pg	13 19 39.6	-0.9
FAGN				Sg	Sg	13 19 43.4	-0.7
FAGN	Fagnano	0.27	109	Pg	Pg	13 19 39.6	-0.9
FAGN				S	Sg	13 19 43.5	-0.7
LNSS	Leonessa	0.29	330	P	Pg	13 19 40.5	-0.3
LNSS	Leonessa	0.29	330	⇑iPg	Pg	13 19 40.5	-0.3
LNSS				Sg	Sg	13 19 45.4	+0.7
LNSS	Leonessa	0.29	330	⇑iPg	Pg	13 19 40.5	-0.3
PTQR	Pietraquaria	0.35	160	P	Pg	13 19 41.6	-0.4
PTQR	Pietraquaria	0.35	160	⇑iPg	Pg	13 19 40.9	-1.0
PTQR	Pietraquaria	0.35	160	⇑iPg	Pg	13 19 40.9	-1.0
PTQR	Pietraquaria	0.35	160	P	Pg	13 19 41.6	-0.4
TERO	Teramo	0.38	45	P	Pg	13 19 41.3	-1.2
TERO	Teramo	0.38	45	⇑iPg	Pg	13 19 41.3	-1.2
TERO				Sg	Sg	13 19 47.8	+0.2
TERO	Teramo	0.38	45	⇑iPg	Pg	13 19 41.3	-1.2
TERO				Sg	Sg	13 19 47.8	+0.2
MNS	Montasola	0.41	274	P	Pg	13 19 42.5	-0.5
MNS				S	Sg	13 19 46.8	-1.7
MNS	Montasola	0.41	274	⇑iPg	Pg	13 19 42.5	-0.5
MNS				Sg	Sg	13 19 49.2	+0.7
MNS	Montasola	0.41	274	⇑iPg	Pg	13 19 42.5	-0.5
MNS				S	Sg	13 19 46.8	-1.7
GAVE	Gavelli	0.42	323	Pn	Pg	13 19 42.5	-0.7
GAVE	Gavelli	0.42	323	Pn	Pg	13 19 42.5	-0.7
CERT	Cerreto	0.45	205	P	Pg	13 19 42.8	-0.8
CERT				S	Sg	13 19 49.8	+0.2
CERT	Cerreto	0.45	205	⇑iPn	Pg	13 19 42.9	-0.8
CERT				Sn	Sg	13 19 49.8	+0.2
CERT	Cerreto	0.45	205	P	Pg	13 19 42.8	-0.8
CERT				Sn	Sg	13 19 49.8	+0.2
VCEL	Villa Celiera	0.45	85	P	Pg	13 19 43.4	-0.4
VCEL				S	Sb	13 19 50.9	-0.8
VCEL	Villa Celiera	0.45	85	Pn	Pg	13 19 43.3	-0.4
VCEL				Sn	Sg	13 19 50.0	+0.3
VCEL	Villa Celiera	0.45	85	P	Pg	13 19 43.4	-0.4
VCEL				Sn	Sg	13 19 50.0	+0.3
VCEL				S	Sb	13 19 50.9	-0.8
NRCA	Norcia	0.49	349	P	Pg	13 19 43.6	-0.8
NRCA				S	Sg	13 19 51.7	+0.8
NRCA	Norcia	0.49	349	Pn	Pg	13 19 43.6	-0.8
NRCA				Sn	Sg	13 19 51.8	+0.8
NRCA	Norcia	0.49	349	Pn	Pg	13 19 43.6	-0.8
NRCA				S	Sg	13 19 51.7	+0.8
MTCE	Montecelio	0.49	228	P	Pg	13 19 43.8	-0.7
MTCE	Montecelio	0.49	228	⇑iPn	Pg	13 19 43.8	-0.7
MTCE	Montecelio	0.49	228	⇑iPn	Pg	13 19 43.8	-0.7
CESX	Cesi	0.55	298	P	Pg	13 19 44.7	-0.9
CESX	Cesi	0.55	298	Pn	Pg	13 19 44.8	-0.8
CESX	Cesi	0.55	298	P	Pg	13 19 44.7	-0.9
VVLD	Villa Vallelon	0.56	149	P	Pg	13 19 44.5	-1.3
VVLD	Villa Vallelon	0.56	149	Pn	Pg	13 19 44.4	-1.3
VVLD	Villa Vallelon	0.56	149	P	Pg	13 19 44.5	-1.3
GUAR	Guarcino	0.56	174	P	Pg	13 19 44.5	-1.3
GUAR	Guarcino	0.56	174	Pn	Pg	13 19 44.5	-1.3
GUAR	Guarcino	0.56	174	Pn	Pg	13 19 44.5	-1.3
INTR	Introdacqua	0.60	124	P	Pg	13 19 44.9	-1.7
INTR	Introdacqua	0.60	124	Pn	Pg	13 19 45.1	-1.5
INTR				Sn	Sg	13 19 54.0	-0.5
INTR	Introdacqua	0.60	124	Pn	Pg	13 19 45.1	-1.5
INTR				Sn	Sg	13 19 54.0	-0.5
OFFI	Offida	0.67	30	⇑iPn	Pg	13 19 47.5	-0.3
OFFI	Offida	0.67	30	⇑iPn	Pg	13 19 47.5	-0.3
TRTR	Tortoreto Alta	0.68	48	P	Pg	13 19 47.8	-0.2
TRTR	Tortoreto Alta	0.68	48	Pn	Pg	13 19 47.7	-0.2
TRTR	Tortoreto Alta	0.68	48	Pn	Pg	13 19 47.7	-0.2
FDMO	Fiordimonte	0.69	351	⇑iPn	Pg	13 19 47.2	-1.1
FDMO				Sn	Sb	13 19 58.4	-0.2
FDMO	Fiordimonte	0.69	351	⇑iPn	Pg	13 19 47.2	-1.1
CESI	CESI - Serrava	0.69	339	Pn	Pg	13 19 47.4	-1.0
CESI	CESI - Serrava	0.69	339	Pn	Pg	13 19 47.4	-1.0
RDP	Rocca di Papa	0.71	213	P	Pg	13 19 47.5	-1.1
RDP	Rocca di Papa	0.71	213	⇑iPn	Pg	13 19 47.5	-1.1
RDP	Rocca di Papa	0.71	213	⇑iPn	Pg	13 19 47.5	-1.1
POFI	Posta Fibreno	0.73	151	Pn	Pg	13 19 47.5	-1.5
LPEL	Lama dei Pelig	0.77	113	Pn	Pg	13 19 48.0	-1.7
LPEL				Sn	Sg	13 19 58.4	-1.3
SDI	San Donato	0.77	146	Pn	Pg	13 19 48.8	-1.0
GIUL	Giuliano Di Ro	0.80	179	P	Pg	13 19 44.8	-5.4
GIUL	Giuliano Di Ro	0.80	179	Pn	Pg	13 19 48.5	-1.7
GIUL	Giuliano Di Ro	0.80	179	P	Pg	13 19 44.8	-5.4
ASSB	Assisi San Ben	0.81	328	Pn	Pg	13 19 49.4	-1.1
ASSB	Assisi San Ben	0.81	328	Pn	Pg	13 19 49.4	-1.1
CAFR	Castel Frentan	0.83	98	Pn	Pg	13 19 50.0	-0.9
SNTG	Esanatoglia	0.93	346	⇑iPn	Pg	13 19 51.3	-1.4
SNTG	Esanatoglia	0.93	346	⇑iPn	Pg	13 19 51.3	-1.4
CERA	Filignano	0.95	142	Pn	Pg	13 19 52.1	-1.2
TOLF	Tolfa	0.96	253	Pn	Pg	13 19 52.0	-1.4
TOLF	Tolfa	0.96	253	Pn	Pg	13 19 52.0	-1.4
MGAB	Montegabbione	1.00	304	Pn	Pg	13 19 53.1	-1.0
MGAB	Montegabbione	1.00	304	Pn	Pg	13 19 53.1	-1.0
CING	Cingoli	1.02	358	Pn	Pg	13 19 53.0	-1.5
CING	Cingoli	1.02	358	Pn	Pg	13 19 53.0	-1.5
MIDA	Miranda	1.04	133	Pn	Pb	13 19 52.2	-2.8
MURB	Monte Urbino	1.05	330	Pn	Pg	13 19 53.8	-1.3
MURB	Monte Urbino	1.05	330	Pn	Pg	13 19 53.8	-1.3
LATE	Laterza	1.09	284	Pn	Pb	13 19 55.2	-0.6
LATE	Laterza	1.09	284	Pn	Pb	13 19 55.2	-0.6
TRIV	Trivento	1.14	121	Pn	Pb	13 19 55.3	-1.4
TRIV	Trivento	1.14	121	Pn	Pb	13 19 55.3	-1.4
ARVD	Arcevia	1.16	349	Pn	Pb	13 19 55.6	-1.5
ARVD	Arcevia	1.16	349	Pn	Pb	13 19 55.6	-1.5
AOI	Ancona	1.23	13	Pn	Pn	13 19 56.7	-1.4
AOI	Ancona	1.23	13	Pn	Pn	13 19 56.7	-1.4
PIEI	Pieia	1.29	337	Pn	Pn	13 19 58.2	-0.8
PIEI	Pieia	1.29	337	Pn	Pn	13 19 58.2	-0.8
CAFI	Castiglion Fio	1.35	317	Pn	Pn	13 19 59.8	0.0
CAFI	Castiglion Fio	1.35	317	Pn	Pn	13 19 59.8	0.0
FSSB	Fossombrone	1.38	346	Pn	Pn	13 19 59.3	-0.9
FSSB	Fossombrone	1.38	346	Pn	Pn	13 19 59.3	-0.9
PTRJ	Pietraroja	1.38	135	Pn	Pn	13 20 00.1	-0.2
PTRJ	Pietraroja	1.38	135	Pn	Pn	13 20 00.1	-0.2
ARCI	Arcidosso	1.39	292	Pn	Pn	13 20 00.5	+0.1
ARCI	Arcidosso	1.39	292	Pn	Pn	13 20 00.5	+0.1
PARC	Parchiule	1.49	331	Pn	Pn	13 20 01.9	+0.2
PARC	Parchiule	1.49	331	Pn	Pn	13 20 01.9	+0.2
MAON	Monte Argentar	1.56	273	Pn	Pn	13 20 01.6	-1.0
MAON	Monte Argentar	1.56	273	Pn	Pn	13 20 01.6	-1.0
PESA	Pesaro	1.61	350	Pn	Pb	13 20 04.3	-0.4
PESA	Pesaro	1.61	350	Pn	Pb	13 20 04.3	-0.4
CASP	Castiglione de	1.81	285	Pn	Pn	13 20 05.6	-0.4
CASP	Castiglione de	1.81	285	Pn	Pn	13 20 05.6	-0.4
CSNT	Castellina Chi	1.81	309	Pn	Pn	13 20 06.8	+0.6
CSNT	Castellina Chi	1.81	309	Pn	Pn	13 20 06.8	+0.6
MAIM	Mastiano	2.54	309	P	Pn	13 20 16.6	+0.5

VLC Villacollemand 2.75 312 ePn Pn 13 20 18.4 -0.7
VLC Villacollemand 2.75 312 eP Pn 13 20 18.4 -0.7
CUC Castrocucco 3.06 140 eP Pn 13 20 23.8 +0.5
CUC Castrocucco 3.06 140 eP Pn 13 20 23.8 +0.5
PGF Pioggiola 3.14 275 ePn Pn 13 20 24.5 0.0
PGF eSn Sn 13 21 04.6 +2.5
80nm,0.8s
PGF Pioggiola 3.14 275 ePn Pn 13 20 24.5 0.0
PGF eSn Sn 13 21 04.6 +2.5
40nm,0.8s
GBRS Gornja Briga 3.37 19 Pn Pn 13 20 27.8 +0.2
GBRS i Sn Sn 13 21 10.8 +3.1
TRI Trieste 3.38 6 eP Pn 13 20 25.9 -1.7
TRI Trieste 3.38 6 eP Pn 13 20 25.9 -1.7
SC2M Scurtabo 3.39 308 P Pn 13 20 27.0 -0.8
JAVS Javornik 3.59 9 i Pn Pn 13 20 30.9 +0.4
JAVS eSn Sn 13 21 14.1 +1.0
JAVS Javornik 3.59 9 i Pn Pn 13 20 31.0 +0.4
JAVS eSn Sn 13 21 14.1 +1.0
LJU Ljubljana 3.80 14 ePn Pn 13 20 34.0 +0.5
HCY Herceg Novi 3.89 87⇑ iPn Pn 13 20 35.4 +0.7
HCY eSn Sn 13 21 22.1 +1.6
HCY Herceg Novi 3.89 87 ⇑P Pn 13 20 35.3 +0.5
HCY S Sn 13 21 20.6 +0.1
HCY Herceg Novi 3.89 87⇑ iPn Pn 13 20 35.4 +0.7
HCY S Sn 13 21 20.6 +0.1
HCY eSn Sn 13 21 22.1 +1.6
ROBS Robic 3.90 3 ePn Pn 13 20 34.3 -0.4
ROBS eSn Sn 13 21 19.4 -1.0
ROBS Robic 3.90 3 ePn Pn 13 20 34.3 -0.4
ROBS eSn Sn 13 21 19.4 -1.0
BRY Bratogost 3.95 80⇓ iPn Pn 13 20 36.5 +0.9
BRY eSn Sn 13 21 23.1 +1.0
BRY Bratogost 3.95 80 ⇑P Pn 13 20 36.7 +1.0
BRY S Sn 13 21 22.8 +0.7
BRY Bratogost 3.95 80⇓ iPn Pn 13 20 36.5 +0.9
BRY S Sn 13 21 22.8 +0.7
BRY eSn Sn 13 21 23.1 +1.0
VSL Villasalto 4.09 227 eP Pn 13 20 35.8 -1.6
VSL Villasalto 4.09 227 eP Pn 13 20 35.8 -1.6
TIP Timpagrande 4.15 139 eP Pn 13 20 39.1 +0.8
TIP Timpagrande 4.15 139 eP Pn 13 20 39.1 +0.8
BUM Brajici-Budva 4.20 89⇑ iPn Pn 13 20 40.4 +1.5
BUM eSn Sn 13 21 29.4 +1.4
BUM Brajici-Budva 4.20 89⇑ iPn Pn 13 20 40.4 +1.5
BUM eSn Sn 13 21 29.4 +1.4
IMI Imperia 4.21 293 P Pn 13 20 37.2 -1.9
UPM Unac-Piva 4.26 77⇓ iPn Pn 13 20 41.3 +1.4
UPM eSn Sn 13 21 31.0 +1.3
UPM Unac-Piva 4.26 77⇓ iPn Pn 13 20 41.3 +1.4
UPM eSn Sn 13 21 31.0 +1.3
NKY Niksic 4.28 82⇓ iPn Pn 13 20 41.8 +1.8
NKY eSn Sn 13 21 32.1 +2.1
NKY Niksic 4.28 82 ⇓P Pn 13 20 41.4 +1.3
NKY S Sn 13 21 30.1 +0.1
NKY Niksic 4.28 82 ⇓P Pn 13 20 41.4 +1.3
NKY Niksic 4.28 82⇓ iPn Pn 13 20 41.8 +1.8
NKY S Sn 13 21 30.1 +0.1
NKY eSn Sn 13 21 32.1 +2.1
ABTA Abfaltersbach 4.42 354⇑ iPn Pn 13 20 40.4 -1.7
ABTA Abfaltersbach 4.42 354 Pn Pn 13 20 40.4 -1.7
PDG Podgorica 4.46 87⇓ iPn Pn 13 20 43.6 +1.1
PDG eSn Sn 13 21 35.4 +1.1
TTG Podgorica 4.46 87⇓ iPn Pn 13 20 43.6 +1.1
TTG eSn Sn 13 21 35.4 +1.1
TTG Podgorica 4.46 87 ⇑P Pn 13 20 43.5 +1.1
TTG S Sn 13 21 33.8 -0.5
TTG Podgorica 4.46 87 ⇑P Pn 13 20 43.5 +1.1
TTG S Sn 13 21 33.8 -0.5
ULC Ulcinj 4.48 93⇓ iPn Pn 13 20 43.7 +0.9
ULC eSn Sn 13 21 36.3 +1.3
ULC Ulcinj 4.48 93 ⇑P Pn 13 20 43.6 +0.8
ULC S Sn 13 21 33.5 -1.5
ULC Ulcinj 4.48 93 ⇑P Pn 13 20 43.6 +0.8
ULC S Sn 13 21 33.5 -1.5
ULC eSn Sn 13 21 36.3 +1.3
SBF Sospel 4.51 292 ePn Pn 13 20 42.9 -0.3
SBF eSn Sn 13 21 32.8 -2.9
38nm,0.5s
SBF Sospel 4.51 292 ePn Pn 13 20 42.9 -0.3
SBF eSn Sn 13 21 32.8 -2.9
19nm,0.5s
SOKA Soboth 4.51 16⇑ iPn Pn 13 20 43.0 -0.3
SOKA Soboth 4.51 16 Pn Pn 13 20 43.0 -0.3
CEL Celeste 4.57 153 eP Pn 13 20 45.7 +1.7
CEL Celeste 4.57 153 eP Pn 13 20 45.7 +1.7
PLE Pljevlja 4.63 76⇑ iPn Pn 13 20 46.5 +1.6
PLE eSn Sn 13 21 39.9 +1.2
PLE Pljevlja 4.63 76 ⇓P Pn 13 20 47.1 +2.2
PLE S Sn 13 21 39.1 +0.5
PLE Pljevlja 4.63 76⇑ iPn Pn 13 20 46.5 +1.6
PLE Pljevlja 4.63 76 ⇓P Pn 13 20 47.1 +2.2
PLE S Sn 13 21 39.2 +0.5
PLE eSn Sn 13 21 39.9 +1.2
BBLS Lazići 4.76 69 ePn Pn 13 20 48.4 +1.9
BBLS Lazići 4.76 69 ePn Pn 13 20 48.6 +1.9
BEHE Becsehely 4.83 30 ePn Pn 13 20 43.8 -3.8
BEHE Becsehely 4.83 30 eP Pn 13 20 43.8 -3.8
BEY Berane 4.94 82⇑ iPn Pn 13 20 50.8 +1.6
BEY eSn Sn 13 21 47.8 +1.4
IVA Berane 4.94 82⇑ iPn Pn 13 20 50.8 +1.6
IVA eSn Sn 13 21 47.8 +1.4
TUE Stuetta 4.97 327 eP Pn 13 20 48.7 -1.0
TUE Stuetta 4.97 327 eP Pn 13 20 48.7 -1.0
PVY Plav 4.98 85 ePn Pn 13 20 51.8 +2.1
PVY eSn Sn 13 21 49.0 +1.6
FRF La Foret Royal 4.98 286 ePn Pn 13 20 49.1 -0.6
FRF eSn Sn 13 21 44.0 -3.3
25nm,0.7s
FRF La Foret Royal 4.98 286 ePn Pn 13 20 49.1 -0.6
FRF eSn Sn 13 21 44.0 -3.3
13nm,0.7s
FETA Feichten 5.00 340⇑ iPn Pn 13 20 51.2 +1.2
FETA Feichten 5.00 340 Pn Pn 13 20 51.2 +1.2
DAVOX Davos/Dischmat 5.03 333 Pn Pn 13 20 50.4 -0.1
DAVOX Sn Sn 13 21 52.1 +3.3
DAVOX Davos/Dischmat 5.03 333 Pn Pn 13 20 50.4 -0.1
9.6nm,0.3s,baz=148,slow=17,SNR=29
DAVOX Sn Sn 13 21 52.1 +3.3
6.0nm,0.3s,baz=277,slow=17,SNR=2.8
DAVOX Davos/Dischmat 5.03 333 Pn Pn 13 20 50.4 -0.1
DAVOX Sn Sn 13 21 52.1 +3.3
LMR La Mourre 5.04 283 ePn Pn 13 20 49.8 -0.7
LMR eSn Sn 13 21 45.5 -3.2
30nm,1.0s
LMR La Mourre 5.04 283 ePn Pn 13 20 49.8 -0.7
LMR eSn Sn 13 21 45.5 -3.2
15nm,1.0s
TIR Tirane 5.05 99 P Pn 13 20 51.7 +1.1
TIR Tirane 5.05 99 P Pn 13 20 51.7 +1.1
ARSA Arzberg 5.16 18⇑ iPn Pn 13 20 50.6 -1.5
ARSA Arzberg 5.16 18 Pn Pn 13 20 50.6 -1.5
DIVS Divibare 5.23 68 P Pn 13 20 53.6 +0.4
DIVS Divibare 5.23 68 ePn Pn 13 20 53.9 +0.7
DIVS eSn Sn 13 21 54.1 +0.5
DIVS Divibare 5.23 68 P Pn 13 20 53.6 +0.4
DIVS Divibare 5.23 68 ePn Pn 13 20 53.9 +0.7
DIVS eSn Sn 13 21 54.1 +0.5
MBDF Montbardon 5.26 299 eP Pn 13 20 55.0 +1.3
MBDF Montbardon 5.26 299 eP Pn 13 20 55.0 +1.3
PHP Peshkopia 5.41 95 P Pn 13 20 56.8 +1.2
PHP Peshkopia 5.41 95 P Pn 13 20 56.8 +1.2
BNI Bardonecchia 5.46 302 eP Pn 13 20 55.4 -1.0
BNI Bardonecchia 5.46 302 eP Pn 13 20 55.4 -1.0
PKSM Moragy 5.47 43 ePn Pn 13 20 55.8 -0.5
PKSM Moragy 5.47 43 eP Pn 13 20 55.8 -0.5
DAVA Damuels 5.48 335⇑ iPn Pn 13 20 58.7 +2.0
MOA Molln 5.54 7⇑ iPn Pn 13 20 57.2 -0.2
MOA Molln 5.54 7 Pn Pn 13 20 57.2 -0.2
KEK Kerkira 5.62 116 P Pn 13 20 59.9 +1.5
KEK Kerkira 5.62 116 eP Pn 13 21 00.0 +1.5
KEK Kerkira 5.62 116 P Pn 13 20 59.9 +1.5
LPG La Plagne 5.64 306 eP Pn 13 21 00.8 +1.8
LPG eSn Sn 13 22 00.0 -3.9
27nm,0.5s
LPG La Plagne 5.64 306 eP Pn 13 21 00.8 +1.8
LPL La Plagne 5.66 306 eP Pn 13 21 00.9 +1.7
LPL eSn Sn 13 21 59.2 -5.1
24nm,0.7s
LPL La Plagne 5.66 306 eP Pn 13 21 00.9 +1.7

GRUS Gruza 5.68 72 ePn Pn 13 21 00.2 +0.9
GRUS eSn Sn 13 22 05.7 +1.1
GRUS Gruza 5.68 72 ePn Pn 13 21 00.2 +0.9
GRUS eSn Sn 13 22 05.7 +1.1
SOP Sopron 5.83 23 ePn Pn 13 21 01.3 +0.1
SOP Sopron 5.83 23 eP Pn 13 21 01.3 +0.1
SMRF Simiane la Rot 5.83 289 ePn Pn 13 21 02.3 +0.9
SMRF Simiane la Rot 5.83 289 ePn Pn 13 21 02.3 +0.9
SELS Selova 5.87 79 ePn Pn 13 21 02.9 +1.1
SELS eSn Sn 13 22 09.8 +0.7
SELS Selova 5.87 79 ePn Pn 13 21 02.9 +1.1
SELS eSn Sn 13 22 09.8 +0.7
CONA Conrad Observa 5.88 18⇓ iPn Pn 13 21 02.4 +0.4
CONA Conrad Observa 5.88 18 Pn Pn 13 21 02.4 +0.4
ORIF Oris-en-Rattie 5.92 298 eP Pn 13 21 05.5 +2.9
ORIF eSn Sn 13 22 06.7 -3.9
43nm,1.0s
IGT Igoumenitsa 6.07 115 P Pn 13 21 06.3 +1.7
IGT S Sn 13 22 14.4 +0.4
IGT Igoumenitsa 6.07 115 P Pn 13 21 06.3 +1.7
IGT S Sn 13 22 14.4 +0.4
SKO Skopje 6.11 91 ePn Pn 13 21 07.1 +2.0
BIA Bitola 6.20 100 ePn Pn 13 21 07.3 +0.8
BIA Bitola 6.20 100 ePn Pn 13 21 07.2 +0.8
FNA Florina 6.30 102 P Pn 13 21 08.9 +1.0
FNA Florina 6.30 102 P Pn 13 21 08.9 +1.0
BARS Barje 6.35 83 ePn Pn 13 21 09.5 +1.0
BARS eSn Sn 13 22 21.6 +0.6
BARS Barje 6.35 83 ePn Pn 13 21 09.5 +1.0
BARS eSn Sn 13 22 21.6 +0.6
JAN Janina 6.36 113 eP Pn 13 21 07.7 -0.9
GERES GERESS Array B 6.50 3 Pn Pn 13 21 10.7 +0.1
GERES Sn Sn 13 22 21.5 -3.3
GERES GERESS Array B 6.50 3 Pn Pn 13 21 10.7 +0.1
2.2nm,0.3s,baz=174,slow=13,SNR=26
GERES Sn Sn 13 22 21.5 -3.3
11nm,0.3s,baz=180,slow=24,SNR=15
GERES GERESS Array B 6.50 3 Pn Pn 13 21 10.7 +0.1
CABF La Chapelle 6.65 312 ePn Pn 13 21 12.3 -0.4
CABF La Chapelle 6.65 312 ePn Pn 13 21 12.3 -0.4
LKD2 Lefkada island 6.68 120 P Pn 13 21 15.1 +2.1
LKD2 S Sn 13 22 29.5 +0.4
LKD2 Lefkada island 6.68 120 eP Pn 13 21 13.2 +0.2
LKD2 Lefkada island 6.68 120 P Pn 13 21 15.1 +2.1
LKD2 S Sn 13 22 29.5 +0.4
VIVF Saint-Julien-l 6.70 295 ePn Pn 13 21 14.3 +1.0
VIVF Saint-Julien-l 6.70 295 ePn Pn 13 21 14.3 +1.0
KHC Kasperske Hory 6.78 2 ePn Pn 13 21 14.1 -0.3
KHC eSn Sn 13 22 29.6 -2.1
KHC Kasperske Hory 6.78 2 ePN Pn 13 21 15.6 +1.2
KHC eSN Sn 13 22 29.3 -2.3
KHC AMS AMS 13 24 10.0
comp=Z,200nm,15.5s
KHC Kasperske Hory 6.78 2 ePn Pn 13 21 14.1 -0.3
KHC eSn Sn 13 22 29.6 -2.1
BZS Buzias 6.87 59⇑ iP Pn 13 21 17.9 +2.4
BZS Buzias 6.87 59⇑ iP Pn 13 21 17.9 +2.4
ZAPS Zavoj 6.97 79 ePn Pn 13 21 19.0 +2.0
ZAPS eSn Sn 13 22 35.3 -1.0
ZAPS Zavoj 6.97 79 ePn Pn 13 21 19.0 +2.0
ZAPS eSn Sn 13 22 35.3 -1.0
VLS Valsamata 7.00 124 P Pn 13 21 19.4 +2.0
VLS Valsamata 7.00 124 eP Pn 13 21 19.2 +1.8
VLS Valsamata 7.00 124 P Pn 13 21 19.4 +2.0
GRG Griva 7.00 98 P Pn 13 21 18.0 +0.5
GRG Griva 7.00 98 P Pn 13 21 18.0 +0.5
VAY Valandovo 7.05 95 ePn Pn 13 21 17.1 -0.9
VAY Valandovo 7.05 95 ePn Pn 13 21 17.6 -0.4
LASF Ste Croix 7.07 287 ePn Pn 13 21 17.7 -0.6
LASF Ste Croix 7.07 287 ePn Pn 13 21 17.7 -0.6
HINF Hinteralfeld 7.09 323 ePn Pn 13 21 16.9 -1.7
HINF eSn Sn 13 22 33.5 -5.6
60nm,0.6s
HINF Hinteralfeld 7.09 323 ePn Pn 13 21 16.9 -1.7
TREC Trest 7.12 12 ePN Pn 13 21 18.9 -0.1
TREC eSN Sn 13 22 36.7 -3.2
TREC AMS AMS 13 24 20.0
comp=Z,200nm,13.2s
TREC Trest 7.12 12 Pn Pn 13 21 18.9 -0.1
KFL Anninata 7.16 124 P Pn 13 21 21.8 +2.2
KFL Anninata 7.16 124 P Pn 13 21 21.8 +2.2
THL Klokotos Trika 7.20 110 P Pn 13 21 22.0 +1.8
THL Klokotos Trika 7.20 110 eP Pn 13 21 20.3 +0.1
THL Klokotos Trika 7.20 110 P Pn 13 21 22.0 +1.8
KEST Kesra 7.27 206 Pn Pn 13 21 23.0 +1.8
KEST Kesra 7.27 206 Pn Pn 13 21 23.0 +1.8
1.6nm,0.3s,baz=281,slow=1.4,SNR=23
KEST Kesra 7.27 206 Pn Pn 13 21 23.0 +1.8
PSZ Piszkesteto 7.29 38⇑ iP Pn 13 21 24.5 +3.2
PSZ Piszkesteto 7.29 38⇑ ePn Pn 13 21 20.3 -1.0
PSZ Piszkesteto 7.29 38⇑ eP Pn 13 21 20.3 -1.0
VYHS Vyhne 7.29 31 ePN Pn 13 21 21.1 -0.3
VYHS eSN Sn 13 22 41.5 -2.7
VYHS Vyhne 7.29 31 ePn Pn 13 21 21.1 -0.3
KKB Krupnik 7.34 90 iP Pn 13 21 24.1 +2.1
KKB Krupnik 7.34 90 iP Pn 13 21 24.1 +2.1
VRAC Vranov 7.34 17 Pn Pn 13 21 21.9 -0.1
VRAC Vranov 7.34 17⇑ iP Pn 13 21 21.6 -0.4
VRAC Vranov 7.34 17 Pn Pn 13 21 21.9 -0.1
1.3nm,0.3s,baz=207,slow=15,SNR=4.4
VRAC Vranov 7.34 17⇑ iP Pn 13 21 21.6 -0.4
VRAC Vranov 7.34 17 Pn Pn 13 21 21.9 -0.1
CDF Champ du Feu 7.37 327 ePn Pn 13 21 20.7 -1.8
CDF eSn Sn 13 22 40.4 -5.7
60nm,0.8s
CDF Champ du Feu 7.37 327 ePn Pn 13 21 20.7 -1.8
EVR Evrytania 7.37 115 P Pn 13 21 25.3 +2.8
EVR Evrytania 7.37 115 eP Pn 13 21 22.3 -0.2
EVR Evrytania 7.37 115 P Pn 13 21 25.3 +2.8
VTS Vitosha 7.38 85 P Pn 13 21 23.4 +0.7
VTS Vitosha 7.38 85⇑ iP Pn 13 21 23.6 +0.9
VTS Vitosha 7.38 85 i P Pn 13 21 23.5 +0.7
VTS Vitosha 7.38 85 P Pn 13 21 23.4 +0.7
HAU Haudompre 7.46 322 ePn Pn 13 21 22.2 -1.4
HAU eSn Sn 13 22 41.1 -7.1
38nm,0.5s
HAU Haudompre 7.46 322 ePn Pn 13 21 22.2 -1.4
MAKR Makrakomi, Fth 7.54 113 P Pn 13 21 27.8 +3.0
MAKR Makrakomi, Fth 7.54 113 P Pn 13 21 27.8 +3.0
AGG Agios Georgios 7.67 113 P Pn 13 21 28.6 +2.0
AGG Agios Georgios 7.67 113 eP Pn 13 21 29.0 +2.4
AGG Agios Georgios 7.67 113 P Pn 13 21 28.6 +2.0
PRU Pruhonice 7.69 6 ePN Pn 13 21 27.9 +1.1
PRU eSN Sn 13 22 50.9 -3.0
PRU AMS AMS 13 24 40.0
comp=Z,100nm,12.0s
PRU Pruhonice 7.69 6 Pn Pn 13 21 27.9 +1.1
EFP Efpalio 7.69 118 eP Pn 13 21 28.0 +1.2
TRIZ Trizonia 7.83 118 P Pn 13 21 31.3 +2.5
TRIZ Trizonia 7.83 118 eP Pn 13 21 31.3 +2.5
TRIZ Trizonia 7.83 118 P Pn 13 21 31.3 +2.5
LAKA Lakka 7.84 119 eP Pn 13 21 30.3 +1.3
MMB Musomiste 7.86 92 iP Pn 13 21 31.0 +1.9
MMB Musomiste 7.86 92 iP Pn 13 21 31.0 +1.9
KALE Kalithea 7.86 117 eP Pn 13 21 32.4 +3.1
NKC Novy Kostel 7.90 356 ePN Pn 13 21 31.1 +1.4
NKC eSN Sn 13 22 57.2 -1.9
NKC Novy Kostel 7.90 356 Pn Pn 13 21 31.1 +1.4
NKC Sn Sn 13 22 57.2 -1.9
PLG Polygyros 7.93 101 eP Pn 13 21 30.1 -0.1
SMF Signal de Mont 7.97 306 ePn Pn 13 21 30.2 -0.4
SMF eSn Sn 13 22 54.7 -6.1
16nm,0.6s
SMF Signal de Mont 7.97 306 ePn Pn 13 21 30.2 -0.4
MORC Moravsky Berou 8.00 20 ePn Pn 13 21 31.3 +0.1
MORC Moravsky Berou 8.00 20⇑ iP Pn 13 21 32.9 +1.7
MORC Moravsky Berou 8.00 20 eP Pn 13 21 31.3 +0.1
MORC Moravsky Berou 8.00 20⇑ iP Pn 13 21 32.9 +1.7
DRGR 8.09 54⇑ iP Pn 13 21 35.3 +3.0
DRGR 8.09 54⇑ iP Pn 13 21 35.3 +3.0
XOR Xorichti 8.11 108 P Pn 13 21 33.7 +1.0
XOR Xorichti 8.11 108 P Pn 13 21 33.7 +1.0
PAGF Fort de Pagny 8.14 322 ePn Pn 13 21 32.0 -1.0
PAGF Fort de Pagny 8.14 322 ePn Pn 13 21 32.0 -1.0
MTLF Montolieu 8.16 281 ePn Pn 13 21 32.5 -0.8
MTLF Montolieu 8.16 281 ePn Pn 13 21 32.5 -0.8
SFTF Sexfontaines 8.22 318 ePn Pn 13 21 32.8 -1.3
SFTF Sexfontaines 8.22 318 ePn Pn 13 21 32.8 -1.3
GUR Goura 8.25 119 P Pn 13 21 37.7 +3.1
GUR Goura 8.25 119 eP Pn 13 21 37.6 +3.0

GUR Goura 8.25 119 P Pn 13 21 37.7 +3.1
DPC Dobruska-Polom 8.28 14 ePN Pn 13 21 35.3 +0.4
DPC eSN Sn 13 23 05.3 -3.1
DPC AMS AMS 13 25 00.0
comp=Z,200nm,14.5s
DPC Dobruska-Polom 8.28 14 Pn Pn 13 21 35.3 +0.4
LOR Lormes 8.28 310 ePn Pn 13 21 33.7 -1.2
LOR eSn Sn 13 23 03.2 -5.2
12nm,0.6s
LOR Lormes 8.28 310 ePn Pn 13 21 33.7 -1.2
AVF Avril sur Loir 8.33 306 ePn Pn 13 21 34.7 -0.9
AVF Avril sur Loir 8.33 306 ePn Pn 13 21 34.7 -0.9
SSF Saint Saulge 8.38 307 ePn Pn 13 21 35.1 -1.1
SSF Saint Saulge 8.38 307 ePn Pn 13 21 35.1 -1.1
UPC Upice 8.38 12 ePN Pn 13 21 35.9 -0.3
UPC eSN Sn 13 23 07.4 -3.4
UPC Upice 8.38 12 Pn Pn 13 21 35.9 -0.3
MEZF Maizieres J'vi 8.42 320 ePn Pn 13 21 35.7 -1.1
MEZF eSn Sn 13 23 05.8 -6.0
13nm,0.4s
MEZF Maizieres J'vi 8.42 320 ePn Pn 13 21 35.7 -1.1
CAF Calviac 8.50 291 eP Pn 13 21 38.8 +0.8
CAF eSn Sn 13 23 07.7 -6.2
4.1nm,0.5s
CAF Calviac 8.50 291 eP Pn 13 21 38.8 +0.8
PYL PYLOS 8.53 127 P Pn 13 21 39.6 +1.2
PYL PYLOS 8.53 127 eP Pn 13 21 39.7 +1.3
PYL PYLOS 8.53 127 P Pn 13 21 39.6 +1.2
BGF Bois d'Agland 8.54 303 ePn Pn 13 21 38.1 -0.3
BGF eSn Sn 13 23 09.0 -5.7
9.6nm,0.5s
BGF Bois d'Agland 8.54 303 ePn Pn 13 21 38.1 -0.3
BRG Berggiesshubel 8.54 3 PN Pn 13 21 34.1 -4.3
BRG i 13 22 24.1
BRG i 13 23 09.4
BRG Berggiesshubel 8.54 3 i SN Sn 13 23 21.4 +6.7
BRG e 13 24 29.3
AOS Alonnisos 8.68 108 eP Pn 13 21 41.9 +1.5
CRVS Cervenica-Dubn 8.72 39 ePN Pn 13 21 42.3 +1.4
CRVS ePG Pg 13 22 26.4 +4.9
CRVS Cervenica-Dubn 8.72 39 ePn Pn 13 21 42.3 +1.4
TRPA Tarpa 8.74 45⇑ iP Pn 13 21 44.2 +3.0
TRPA Tarpa 8.74 45⇓ iePn Pn 13 21 44.0 +2.8
TRPA Tarpa 8.74 45⇓ ieP Pn 13 21 44.0 +2.8
TCF Toulx Ste Croi 8.83 300 ePn Pn 13 21 42.4 -0.1
TCF Toulx Ste Croi 8.83 300 ePn Pn 13 21 42.4 -0.1
RJF Les Rejaudoux 8.97 293 eP Pn 13 21 46.1 +1.7
RJF Les Rejaudoux 8.97 293 eP Pn 13 21 46.1 +1.7
DYR Agios Nikonas 8.97 125 eP Pn 13 21 46.5 +2.1
VOIR 9.07 66⇑ iP Pn 13 21 47.3 +1.5
VOIR 9.07 66⇑ iP Pn 13 21 47.3 +1.5
DID Didima 9.08 119 eP Pn 13 21 48.2 +2.3
KOLS Kolonicke sedl 9.12 41 e Pn 13 21 57.5 +11
LFF La Frestale 9.42 290 eP Pn 13 21 51.8 +1.2
LFF La Frestale 9.42 290 eP Pn 13 21 51.8 +1.2
EPF Esparros 9.52 278 ePn Pn 13 21 50.4 -1.6
EPF Esparros 9.52 278 ePn Pn 13 21 50.4 -1.6
GIVF Givet 9.69 326 ePn Pn 13 21 53.5 -0.7
GIVF eSn Sn 13 23 34.7 -8.4
15nm,0.6s
GIVF Givet 9.69 326 ePn Pn 13 21 53.5 -0.7
MLR Muntele Rosu 9.69 67 Pn Pn 13 21 56.5 +2.1
MLR Muntele Rosu 9.69 67 Pn Pn 13 21 56.5 +2.1
0.1nm,0.3s,baz=237,slow=5.2,SNR=14
MLR LR LR 13 25 48.8
comp=Z,37nm,19.9s,baz=64,slow=38
MLR Muntele Rosu 9.69 67 Pn Pn 13 21 56.5 +2.1
KYTH Kithira 9.71 125 P Pn 13 21 58.2 +3.6
BAIF Baives 9.92 324 ePn Pn 13 21 55.8 -1.6
BAIF eSn Sn 13 23 41.0 -7.7
3.3nm,0.3s
BAIF Baives 9.92 324 ePn Pn 13 21 55.8 -1.6
BUR08 Bucovina Ar. S 9.98 54 eP Pn 13 22 00.0 +1.6
BUR08 Bucovina Ar. S 9.98 54 eP Pn 13 22 00.0 +1.6
ETSF Etsaut 10.19 278 ePn Pn 13 22 01.7 +0.6
ETSF Etsaut 10.19 278 ePn Pn 13 22 01.7 +0.6
PLOR Plostina 10.26 66⇑ iP Pn 13 22 04.0 +1.9
PLOR Plostina 10.26 66⇑ iP Pn 13 22 04.0 +1.9
VRI Vrincioaia 10.32 66⇓ iP Pn 13 22 04.8 +2.0
VRI Vrincioaia 10.32 66⇓ iP Pn 13 22 04.8 +2.0
MFF Saint Martin d 10.46 298 eP Pn 13 22 07.3 +2.5
SJPF Ste Jean 10.67 279 ePn Pn 13 22 07.2 -0.5
SJPF Ste Jean 10.67 279 ePn Pn 13 22 07.2 -0.5
LDF La Druitiere 11.26 308 ePn Pn 13 22 13.6 -2.1
LDF La Druitiere 11.26 308 ePn Pn 13 22 13.6 -2.1
GRR Gorron 11.60 306 ePn Pn 13 22 18.2 -2.1
GRR Gorron 11.60 306 ePn Pn 13 22 18.2 -2.1
ESDC Sonseca Array 13.26 264 Pn Pn 13 22 41.1 -2.1
ESDC Sonseca Array 13.26 264 Pn Pn 13 22 41.1 -2.1
0.1nm,0.3s,baz=73,slow=14,SNR=8.2
ESDC Sonseca Array 13.26 264 Pn Pn 13 22 41.1 -2.1
BRTR Keskin Array B 15.62 93 Pn P 13 23 21.5 +2.2
BRTR Keskin Array B 15.62 93 Pn P 13 23 21.5 +2.2
0.1nm,0.3s,baz=284,slow=10,SNR=7.9
HFS Hagfors 17.81 1 P P 13 23 43.5 +0.3
HFS Hagfors 17.81 1 P P 13 23 43.5 +0.3
0.2nm,0.3s,baz=179,slow=10,SNR=5.6
HFS LR LR 13 30 57.8
comp=Z,35nm,18.3s,baz=358,slow=39
HFS Hagfors 17.81 1 P P 13 23 43.5 +0.3
NOA NORSAR Array B 18.75 357 P Pn 13 23 54.3 +0.1
NOA NORSAR Array B 18.75 357 P Pn 13 23 54.3 +0.1
0.2nm,0.3s,baz=175,slow=11,SNR=8.0
NOA NORSAR Array B 18.75 357 P Pn 13 23 54.3 +0.1
TAM Tamanrasset 20.54 201 eP Pn 13 24 16.2 +0.4
3.5nm,1.0s
TAM Tamanrasset 20.54 201 eP Pn 13 24 16.2 +0.3
3.5nm,1.0s
FINES FINESS Array B 20.62 18 P P 13 24 13.7 -0.3
FINES FINESS Array B 20.62 18 P P 13 24 13.7 -0.3
3.4nm,0.6s,baz=205,slow=8.4,SNR=11
FINES LR LR 13 32 52.7
comp=Z,40nm,18.8s,baz=164,slow=39
FINES FINESS Array B 20.62 18 P P 13 24 13.7 -0.3
KBZ Khabaz 21.67 76 P P 13 24 28.4 +2.9
KBZ Khabaz 21.67 76 P P 13 24 28.4 +2.9
4.5nm,0.8s,baz=300,slow=8.3,SNR=4.9
KBZ Khabaz 21.67 76 P P 13 24 28.4 +2.9
TORD Torodi Ar. Bea 30.78 202 P P 13 25 50.8 +0.2
TORD Torodi Ar. Bea 30.78 202 P P 13 25 50.8 +0.2
1.2nm,0.7s,baz=18,slow=8.7,SNR=10
TORD Torodi Ar. Bea 30.78 202 P P 13 25 50.8 +0.2
ARU Arti 32.04 48 eP P 13 26 00.1 -1.2
11nm,1.0s
ARU Arti 32.04 48 eP P 13 26 00.1 -1.2
11nm,1.0s
BVAR Borovoye Array 38.94 54 P P 13 27 01.3 +0.7
BVAR Borovoye Array 38.94 54 P P 13 27 01.3 +0.7
1.1nm,0.7s,baz=251,slow=4.5,SNR=5.9
BVAR Borovoye Array 38.94 54 P P 13 27 01.3 +0.7
KKAR Karatay Array 41.37 69 eP P 13 27 21.1 +0.2
1.7nm,0.6s
KKAR Karatay Array 41.37 69 eP P 13 27 21.1 +0.2
1.7nm,0.6s
KURK Kurchatov 44.40 56 eP P 13 27 45.5 +0.1
1.0nm,0.7s
KURK Kurchatov 44.40 56 eP P 13 27 45.5 +0.1
1.0nm,0.7s
ZALV Zalesovo Beam 47.17 50 P P 13 28 07.5 +0.4
ZALV Zalesovo Beam 47.17 50 P P 13 28 07.5 +0.4
0.4nm,0.3s,baz=290,slow=7.3,SNR=5.0
ZALV Zalesovo Beam 47.17 50 P P 13 28 07.6 +0.4
MKAR Makanchi Array 47.95 60 P P 13 28 13.6 +0.2
MKAR Makanchi Array 47.95 60 P P 13 28 13.6 +0.2
1.0nm,0.7s,baz=279,slow=8.2,SNR=10
MKAR Makanchi Array 47.95 60 P P 13 28 13.6 +0.2
SCHQ Schefferville 51.58 313 P P 13 28 39.5 -1.3
SCHQ Schefferville 51.58 313 P P 13 28 39.5 -1.3
2.6nm,0.9s,baz=114,slow=9.4,SNR=3.6
SCHQ Schefferville 51.58 313 P P 13 28 39.5 -1.3
SONM Songino Array 62.06 50 P P 13 29 55.8 +0.3
SONM Songino Array 62.06 50 P P 13 29 55.8 +0.3
0.4nm,0.7s,baz=284,slow=6.0,SNR=4.5
SONM Songino Array 62.06 50 P P 13 29 55.8 +0.3
YKA Yellowknife Ar 67.46 337 P P 13 30 30.8 +0.5
YKA Yellowknife Ar 67.46 337 P P 13 30 30.8 +0.5
0.5nm,0.6s,baz=39,slow=5.7,SNR=13
YKA Yellowknife Ar 67.46 337 P P 13 30 30.8 +0.5
ULM Lac du Bonnet 68.97 319 P P 13 30 39.6 -0.3
ULM Lac du Bonnet 68.97 319 P P 13 30 39.6 -0.3
1.2nm,0.5s,baz=17,slow=3.3,SNR=2.9
ULM Lac du Bonnet 68.97 319 P P 13 30 39.7 -0.3
ILAR Eielson Array 72.08 351 P P 13 30 59.2 +0.5

ILAR Eielson Array 72.08 351 P P 13 30 59.2 +0.5
0.3nm,0.9s,baz=0.1,slow=6.5,SNR=5.4
ILAR Eielson Array 72.08 351 P P 13 30 59.2 +0.5
PDAR Pinedale Array 80.88 321 P P 13 31 49.5 +0.2
PDAR Pinedale Array 80.88 321 P P 13 31 49.5 +0.2
0.5nm,0.8s,baz=79,slow=7.7,SNR=3.8
PDAR Pinedale Array 80.88 321 P P 13 31 49.5 +0.2

IDC 09 13:19:43.1±2.5,15°.42S×173°.28W,h0km,mb3.7/4, mb1 4.0/5,mb1mx3.7/22,mbtmp3.7/5,Error ellipse: s-maj=173.8km s-min=20.9km az=145.0,Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFI Afiamalu 2.09 44 Pn Pn 13 20 17.5 -2.0
89nm,0.3s,baz=211,slow=3.0,SNR=72
AFI Sn Sn 13 20 36.8 -10
284nm,0.3s,baz=207,slow=18,SNR=16
STKA Stephens Creek 44.12 240 P P 13 27 53.7 +0.2
1.0nm,0.8s,baz=105,slow=12,SNR=2.3
WRA Warramunga Arr 49.95 257 P P 13 28 38.6 -0.6
0.2nm,0.4s,baz=96,slow=8.4,SNR=9.8
ASAR Alice Springs 50.21 252 P P 13 28 40.9 -0.3
0.7nm,0.4s,baz=90,slow=7.6,SNR=26
NVAR Mina Array Bea 74.27 42 P P 13 31 23.9 +1.3
0.2nm,0.7s,baz=220,slow=8.3,SNR=4.3

IDC 09 13:26:06.1±1.0,1°.84N×99°.82E,h171km±23km,mb3.2/5, mb1 3.3/5,mb1mx3.1/24,mbtmp3.2/5,Error ellipse: s-maj=124.7km s-min=15.9km az=58.0,Northern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PSI Prapat 1.31 317 P Pn 13 26 35.1 -0.6
5.4nm,0.3s,baz=352,slow=19,SNR=13
PSI S Sn 13 26 57.2 -1.2
1.3nm,0.3s,baz=289,slow=22,SNR=6.8
WRA Warramunga Arr 40.19 124 P P 13 33 25.4 -0.8
1.0nm,0.4s,baz=302,slow=9.0,SNR=16
ASAR Alice Springs 41.73 129 P P 13 33 39.3 +0.6
0.1nm,0.4s,baz=301,slow=7.6,SNR=8.6
SONM Songino Array 46.17 6 P P 13 34 13.8 0.0
0.4nm,0.5s,baz=198,slow=9.8,SNR=3.8
MKAR Makanchi Array 47.31 344 P P 13 34 22.4 -0.1
0.6nm,0.4s,baz=162,slow=9.2,SNR=7.4
ZALV Zalesovo Beam 53.39 349 P P 13 35 07.8 -0.2
0.6nm,0.4s,baz=176,slow=8.7,SNR=4.3

IDC 09 13:34:38.4±2.2,0°.66N×99°.68E,h206km±9km,mb3.1/6, mb1 3.1/8,mb1mx3.0/26,mbtmp3.0/8,Error ellipse: s-maj=76.8km s-min=13.9km az=57.0,Northern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PSI Prapat 2.26 341 P Pn 13 35 20.9 +0.6
1.3nm,0.3s,baz=117,slow=9.9,SNR=5.5
PSI S S 13 35 51.2 -1.3
1.2nm,0.3s,baz=359,slow=20,SNR=14
CMAR Chiang Mai Arr 17.70 358 P P 13 38 31.1 +0.3
0.1nm,0.3s,baz=179,slow=12,SNR=4.7
WRA Warramunga Arr 39.66 123 P P 13 41 50.5 -0.2
0.9nm,0.4s,baz=304,slow=8.9,SNR=7.5
ASAR Alice Springs 41.11 128 P P 13 42 02.2 -0.3
0.2nm,0.4s,baz=301,slow=8.0,SNR=3.6
SONM Songino Array 47.35 6 P P 13 42 52.0 +0.3
0.2nm,0.4s,baz=183,slow=5.8,SNR=2.3
MKAR Makanchi Array 48.40 344 P P 13 42 59.8 +0.1
0.4nm,0.3s,baz=158,slow=7.8,SNR=6.5
ZALV Zalesovo Beam 54.52 349 P P 13 43 43.9 -0.9
0.3nm,0.3s,baz=174,slow=4.3,SNR=3.3
BVAR Borovoye Array 57.60 340 P P 13 44 06.8 +0.2
0.5nm,0.5s,baz=128,slow=9.3,SNR=3.6

IDC 09 13:35:37.2±1.0,42°.79S×83°.81E,h0km,mb3.9/6, mb1 4.1/6,mb1mx3.8/19,mbtmp3.9/6,MS3.8/15, Ms1 3.8/15,ms1mx3.6/39,Error ellipse: s-maj=37.8km s-min=22.7km az=93.0,Mid-Indian Ridge

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NWAO Narrogin (SRO) 28.01 81 LR LR 13 50 03.3
comp=Z,196nm,21.0s,baz=345,slow=31
OPO Ambohidratompo 39.22 297 LR LR 13 54 44.8
comp=Z,186nm,18.6s,baz=297,slow=29
FITZ Fitzroy Crossi 43.05 68 LR LR 13 58 54.2
comp=Z,120nm,20.3s,baz=208,slow=32
ASAR Alice Springs 45.32 82 P P 13 43 56.6 -0.4
1.6nm,1.1s,baz=225,slow=9.0,SNR=6.7
ASAR PcP PcP 13 45 36.9 +0.1
0.5nm,0.9s,baz=240,slow=1.1,SNR=4.6
ASAR LR LR 14 00 28.4
comp=Z,205nm,20.2s,baz=313,slow=33
VNDA Vanda 46.06 163 P P 13 44 01.7 -0.5
0.6nm,0.7s,baz=276,slow=7.7,SNR=3.7
STKA Stephens Creek 46.41 96 LR LR 14 00 10.9
comp=Z,157nm,18.1s,baz=204,slow=32
QSPA South Pole Qui 47.36 180 P P 13 44 12.5 -0.3
2.4nm,0.7s,baz=310,slow=5.1,SNR=13
WRA Warramunga Arr 47.96 78 P P 13 44 17.6 -0.1
2.9nm,0.8s,baz=230,slow=7.3,SNR=10
CMAR Chiang Mai Arr 62.52 16 P P 13 46 02.2 -0.4
0.6nm,0.4s,baz=217,slow=6.2,SNR=7.0
CMAR LR LR 14 09 32.9
comp=Z,41nm,20.5s,baz=187,slow=33
AAK Ala-Archa 85.45 353 LR LR 14 23 22.9
comp=Z,88nm,18.1s,baz=141,slow=34
MMAI Mount Meron Ar 87.51 321 LR LR 14 23 57.3
comp=Z,31nm,19.8s,baz=115,slow=33
MKAR Makanchi Array 89.21 359 P P 13 48 34.1 -0.2
0.1nm,0.4s,baz=158,slow=4.7,SNR=3.7
MKAR LR LR 14 23 22.2
comp=Z,45nm,18.0s,baz=63,slow=32
GNI Garni 89.81 331 LR LR 14 23 25.7
comp=Z,38nm,18.9s,baz=282,slow=32
KURBB Kurchatov Arra 93.15 357 LR LR 14 27 47.0
comp=Z,44nm,21.9s,baz=180,slow=34
DBIC Dimbokro 93.50 276 LR LR 14 23 05.2
comp=Z,48nm,21.4s,baz=331,slow=30
KBZ Khabaz 93.61 332 LR LR 14 28 08.1
comp=Z,28nm,20.9s,baz=276,slow=34
AKTO Aktyubinsk 95.54 344 LR LR 14 26 46.6
comp=Z,27nm,19.6s,baz=50,slow=32
BVAR Borovoye Array 96.14 352 LR LR 14 28 12.3
comp=Z,63nm,20.7s,baz=355,slow=33
ILAR Eielson Array 144.23 35 PKP PKPab 13 55 11.6 -0.2
0.4nm,0.7s,baz=263,slow=3.3,SNR=6.9
INK Inuvik 147.78 25 PKPbc PKPbc 13 55 22.3 -0.4
2.0nm,0.8s,baz=3.5,slow=1.9,SNR=9.1
RES Resolute Bay 148.01 359 PKPbc PKPbc 13 55 23.7 +0.5
1.1nm,0.7s,baz=59,slow=6.6,SNR=6.6
YKA Yellowknife Ar 157.48 23 PKPab PKPab 13 56 04.7 -1.3
0.1nm,0.6s,baz=331,slow=3.9,SNR=6.4
NVAR Mina Array Bea 162.67 97 PKPab PKPab 13 56 30.3 +0.6
0.4nm,0.7s,baz=248,slow=4.8,SNR=3.5

IDC 09 13:47:02.3±1.3,7°.35S×123°.49E,h0km,mb3.5/2, mb1 3.8/5,mb1mx3.5/22,mbtmp3.6/5,ML3.8/2,Error ellipse: s-maj=134.1km s-min=22.4km az=64.0,Banda Sea

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
FITZ Fitzroy Crossi 10.89 169 Pn Pn 13 49 40.4 +0.9
1.5nm,0.3s,baz=7.1,slow=12,SNR=31
FITZ Sn Sn 13 51 29.6 -13
0.6nm,0.3s,baz=41,slow=20,SNR=4.1
WRA Warramunga Arr 16.36 141 Pn Pn 13 50 54.5 +1.0
0.2nm,0.3s,baz=312,slow=13,SNR=16
WRA Sn Sn 13 53 44.7 -11
0.3nm,0.3s,baz=311,slow=21,SNR=7.6
ASAR Alice Springs 19.06 149 P P 13 51 25.5 -0.9
0.3nm,0.3s,baz=327,slow=12,SNR=17
ASAR S Sn 13 54 48.1 -13
0.1nm,0.3s,baz=316,slow=21,SNR=5.0
MKAR Makanchi Array 65.13 330 P P 13 57 45.5 +0.5
0.1nm,0.4s,baz=130,slow=8.4,SNR=3.5
ZALV Zalesovo Beam 69.19 337 P P 13 58 10.1 -0.4
0.4nm,0.3s,baz=152,slow=6.5,SNR=2.0

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*ISCJB **09** 14:15:20.0±0.3,36°.47N±0°.02×70°.67E±0°.05,h188km, mb4.2/28,Error ellipse: s-maj=5.4km s-min=2.9km az=159.8*
*MOS **09** 14:15:21.8±0.9,36°.46N×70°.79E,h217km,mb4.3/24,Error ellipse: s-maj=11.0km s-min=4.9km az=81.0*
*BJI **09** 14:15:23.6,36°.77N×70°.71E,h224km,mB4.6/5,mb4.4/13*
*IDC **09** 14:15:23.8±2.0,36°.53N×70°.84E,h222km±18km,mb3.6/13, mb1 3.9/18,mb1mx3.6/30,mbtmp3.7/18,Error ellipse: s-maj=12.3km s-min=11.3km az=27.0*
*NNC **09** 14:15:26.1±5.8,36°.81N×70°.72E,h202km±56km,mb3.5, mpv5.1,Error ellipse: s-maj=50.3km s-min=27.6km az=5.0*
ISC 09 14:15:21.7±0.5,36°.60N±0°.05×70°.86E±0°.05,h188km,n115, σ1.86/126,mb4.2/28,17C-9D,Hindu Kush region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CEP Cherat 2.90 162 ⇑P Pn 14 16 12.6 +2.9
CEP S Sn 14 16 50.0 +2.9
CHCP Chirah Chowk 3.53 145 P Pn 14 16 20.4 +3.1
THW Thamme Wali 3.86 169 P Pn 14 16 23.4 +2.0
SARP Sargodha 4.90 162 P Pn 14 16 35.9 +1.3
KSH Kashi 4.98 53 P Pn 14 16 34.4 -1.3
KSH smax smax
comp=N,530nm,0.5s
KSH smax smax
comp=E,740nm,0.6s
THN Thein Dam 5.77 135 ex Pn 14 16 49.4 +3.5
THN eS Sn 14 17 50.5 -1.7
AML Almayashu 5.95 21 i PN Pn 14 16 51.2 +2.7
AML Almayashu 5.95 21 P Pn 14 16 51.2 +2.7
SNR=1309
UCH Uchtor 6.30 26 i PN Pn 14 16 56.2 +3.1
UCH Uchtor 6.30 26 P Pn 14 16 56.2 +3.1
SNR=63
KZA Kyzart 6.45 31 i PN Pn 14 16 57.4 +2.4
KZA Kyzart 6.45 31 P Pn 14 16 57.4 +2.4
SNR=82
EKS2 Erkin-Say 6.46 20 P Pn 14 16 57.9 +3.0
SNR=144
KK31 Karatay Array 6.51 358 ⇑P Pn 14 16 57.7 +2.3
comp=E,37nm,0.5s,baz=176,slow=12,SNR=543
KK31 S Sn 14 18 10.5 +1.0
comp=E,46nm,0.5s,baz=186,slow=23,SNR=7.6
KK31 Karatay Array 6.51 358 cePN Pn 14 16 57.6 +2.3
KK31 pmax pmax
comp=Z,23nm,0.1s
AAK Ala-Archa 6.65 24 d iPN Pn 14 17 00.4 +3.0
AAK Ala-Archa 6.65 24 P Pn 14 17 00.5 +3.0
SNR=116
AAK Ala-Archa 6.65 24 P Pn 14 17 00.5 +3.0
comp=Z,39nm,0.3s,baz=186,slow=5.5,SNR=804
AAK S Sn 14 18 13.6 +0.6
comp=Z,19nm,0.3s,baz=121,slow=24,SNR=15
KBK Karagaybulak 6.83 26 i PN Pn 14 17 03.0 +3.3
KBK Karagaybulak 6.83 26 P Pn 14 17 03.0 +3.3
SNR=136
FRU Bishkek 6.87 24 ⇓iPN Pn 14 17 03.0 +2.8
FRU eS Sn 14 18 21.0 +2.9
FRU pmax pmax
comp=Z,80nm,1.4s
FRU smax smax
comp=N,240nm,1.6s
BHK Bhakra 6.93 137 ex x 14 18 06.0
ULHL Ulahol 7.01 35 i PN Pn 14 17 04.6 +2.4
ULHL Ulahol 7.01 35 P Pn 14 17 04.6 +2.4
SNR=56
CHMS Chumysh 7.06 24 i PN Pn 14 17 05.2 +2.5
CHMS Chumysh 7.06 24 P Pn 14 17 05.2 +2.5
SNR=110
SDNR Sundarnagar 7.18 133 eP Pn 14 17 03.5 -0.8
SDNR ex x 14 18 18.5
USP Ospenovka 7.23 22 i PN Pn 14 17 06.8 +2.0
USP Ospenovka 7.23 22 P Pn 14 17 06.8 +2.0
SNR=41
TKM2 Tokmak 2 7.29 29 ⇓P Pn 14 17 08.7 +2.7
comp=N,204nm,0.8s
TKM2 ⇑S Sn 14 18 29.8 +1.4
comp=N,86nm,0.8s
TKM2 Tokmak 2 7.29 29 i PN Pn 14 17 08.6 +2.7
TKM2 Tokmak 2 7.29 29 P Pn 14 17 08.6 +2.7
SNR=85
SMLA Simla 7.57 134 i P Pn 14 17 10.2 +0.9
SMLA eP Pn 14 17 10.2 +0.9
SMLA eS Sn 14 18 31.6 -3.0
SMLA i S Sn 14 18 31.6 -3.0
SMLA i S 14 18 32.4
SMLA 14 18 34.8
comp=E,889nm,0.3s
SMLA 14 18 34.9
comp=N,743nm,0.4s
KNDC Almaty 8.11 33 ⇑P Pn 14 17 19.3 +2.9
KNDC ⇓S Sn 14 18 48.5 +1.0
DDI Dehra Dun 8.68 134 eP Pn 14 17 24.0 +0.1
DDI ex x 14 19 04.3
KHET Khetri 9.47 152 eP Pn 14 17 32.7 -1.6
KHET eS Sn 14 19 09.7 -10
KHET AML AML 14 19 16.4
comp=E,168nm,0.6s
KHET AML AML 14 19 16.6
comp=N,116nm,0.4s
NDI New Delhi 9.54 144 eP Pn 14 17 31.0 -4.1
NDI eS Sn 14 19 10.5 -11
AYAN Aya Nagar 9.66 145 eP Pn 14 17 36.1 -0.6
AYAN eS Sn 14 19 15.2 -9.5
KUDL Kundal 9.68 149 eP Pn 14 17 35.3 -1.7
KUDL AMb AMB 14 17 37.8
comp=Z,13nm,0.8s
KUDL eS Sn 14 19 14.3 -11
AGRA Agra 11.11 145 eP Pn 14 17 54.3 -1.2
AGRA eS Sn 14 19 48.1 -11
AGRA AML AML 14 20 18.9
comp=E,64nm,0.2s
AGRA AML AML 14 20 20.2
comp=N,59nm,0.6s
MK31 Makanchi Array 13.28 36 ⇓P Pn 14 18 24.7 +1.6
comp=N,16nm,0.8s,baz=221,slow=12,SNR=120
MK31 Makanchi Array 13.28 36 ceP Pn 14 18 24.3 +1.3
MK31 pmax pmax
comp=Z,26nm,0.7s
MKAR Makanchi Array 13.28 36 P Pn 14 18 24.9 +1.8
MKAR pmax pmax
comp=Z,1.0nm,0.3s
MKAR Makanchi Array 13.28 36 P Pn 14 18 24.9 +1.8
comp=Z,1.1nm,0.3s,baz=225,slow=14,SNR=58
KOLN Koldanda 13.91 126 eP Pn 14 18 31.4 +0.1
WMQ Urumqi 14.74 56 P P 14 18 44.3 +1.9
WMQ pmax pmax
comp=Z,15nm,1.0s
AB31 Akbulak array 14.95 331 ⇑P Pn 14 18 43.8 +0.2
comp=Z,5.1nm,0.7s,baz=140,slow=13,SNR=72
AB31 Akbulak array 14.95 331 ceP Pn 14 18 43.3 -0.3
AB31 pmax pmax
comp=Z,2.0nm,0.2s
DMN Daman 15.02 123 eP Pn 14 18 45.3 +0.3
KKN Kakani 15.03 122 eP P 14 18 46.7 +0.8
KURBB Kurchatov Arra 15.07 19 P Pn 14 18 44.8 -0.3
comp=Z,0.5nm,0.3s,baz=206,slow=10,SNR=35
KURBB S S 14 21 29.1 -4.4
baz=204,slow=18,SNR=4.1
KURK Kurchatov 15.18 19 c iP Pn 14 18 46.7 +0.3
KURK pmax pmax
comp=Z,5.0nm,0.7s
PKIN Phulchoki 15.24 122 eP P 14 18 49.4 +1.0
PKI Pulchoki 15.25 122 eP P 14 18 49.5 +0.9
comp=Z,10nm,0.3s
GUN Gumba 15.36 120 eP P 14 18 50.6 +0.8
comp=Z,11nm,0.4s
VOSK Vostochnaya 16.13 0 ⇓P Pn 14 18 58.7 +0.7
comp=Z,14nm,0.8s
ZRNK Zerenda 16.41 356 ⇑P Pn 14 19 02.4 +1.1
comp=Z,12nm,0.8s
BVA0 Borovoye Array 16.43 359 ⇓P Pn 14 19 02.6 +1.0
comp=Z,1.5nm,1.0s,baz=163,slow=11,SNR=34
BVA0 Borovoye Array 16.43 359 i P Pn 14 19 03.9 +2.3
BVA0 i S S 14 22 03.2 +0.4
BVA0 pmax pmax
comp=Z,1.0nm,0.4s
BVA0 smax smax
comp=N,6.0nm,1.2s
BVAR Borovoye Array 16.43 359 P Pn 14 19 03.0 +1.4
BVAR S S 14 22 01.4 -1.4
BVAR pmax pmax
comp=Z,2.0nm,0.3s
BVAR Borovoye Array 16.43 359 P Pn 14 19 03.0 +1.4
comp=Z,1.7nm,0.3s,baz=165,slow=11,SNR=27
BVAR S S 14 22 01.4 -1.4
comp=Z,0.2nm,0.3s,baz=168,slow=21,SNR=10.0
RAMN Ramite 16.46 121 eP P 14 19 02.0 +0.2
comp=Z,10nm,0.3s
BRVK Borovoye 16.47 359 eP Pn 14 19 03.3 +1.3
BRVK pmax pmax
comp=Z,11nm,0.8s
AKTO Aktyubinsk 16.64 330 ⇑P Pn 14 19 04.5 +0.4
comp=Z,1.6nm,0.6s
AKTO Aktyubinsk 16.64 330 i P Pn 14 19 04.6 +0.4
AKTO pmax pmax
comp=Z,2.0nm,0.5s
AKTO Aktyubinsk 16.64 330 P Pn 14 19 04.7 +0.6
comp=Z,2.0nm,0.3s,baz=141,slow=10,SNR=46
AKTO S S 14 22 02.8 -4.4
comp=Z,0.1nm,0.3s,baz=1.3,slow=18,SNR=5.0
TAPN Taplejung 16.99 118 eP Pn 14 19 09.4 +0.5
comp=Z,12nm,0.4s
ODAN Odare 17.07 120 eP P 14 19 09.5 +1.1
comp=Z,11nm,0.4s
ZALV Zalesovo Beam 19.88 25 P P 14 19 39.0 +0.6
ZALV S S 14 23 09.2 -2.3
ZALV pmax pmax
comp=Z,5.0nm,0.3s
ZALV smax smax
comp=N,1.0nm,0.3s
ZALV Zalesovo Beam 19.88 25 P P 14 19 39.0 +0.6
comp=N,4.8nm,0.3s,baz=219,slow=11,SNR=100
ZALV S S 14 23 09.2 -2.3
comp=N,0.7nm,0.3s,baz=212,slow=16,SNR=9.3
NVS Novosibirsk 20.13 21 ⇑iP P 14 19 41.2 +0.1
NVS e 14 20 45.3
NVS i S S 14 23 14.8 -1.8
NVS pmax pmax
comp=N,19nm,0.7s
NVS pmax pmax
comp=Z,23nm,0.7s
NVS pmax pmax
comp=E,6.0nm,0.6s
NVS smax smax
comp=E,41nm,1.2s
NVS smax smax
comp=N,18nm,0.9s
SVE Sverdlovsk 21.37 344 ⇓eP P 14 19 55.5 +1.3
SVE pmax pmax
comp=Z,19nm,1.4s
ARU Arti 21.51 341 d iP P 14 19 56.6 +1.0
ARU S S 14 23 42.4 +0.8
ARU pmax pmax
comp=Z,25nm,1.2s
BHD Baghdad 21.93 269 ex P 14 19 53.7 -6.5
BHD ex x 14 23 45.3
KIV Kislovodsk 22.64 298 eP P 14 20 06.5 -0.4
KIV pmax pmax
comp=Z,7.0nm,1.0s
GTA Gaotai 22.95 74 P P 14 20 11.5 +1.8
GTA pmax pmax
comp=Z,16nm,1.4s
VSR Storozhevoye 26.85 313 eP P 14 20 44.1 -0.6
VSR pmax pmax
comp=N,7.0nm,0.8s
VSR pmax pmax
comp=E,6.0nm,0.8s
VSR pmax pmax
comp=Z,4.0nm,0.8s
ZAK Zakamensk 27.02 49 eP P 14 20 47.1 +0.8
ZAK e 14 21 34.3
ZAK pmax pmax
comp=Z,3.0nm,1.1s
TLY Talaya 27.66 47 eP P 14 20 52.6 +0.7
SONM Songino Array 28.38 55 P P 14 20 59.8 +1.4
comp=Z,2.3nm,0.8s,baz=260,slow=9.1,SNR=16
SONM pP pP 14 21 46.0 +9.2
comp=Z,0.8nm,0.8s,baz=246,slow=9.3,SNR=2.5
OBN Obninsk 29.79 319 ⇑eP P 14 21 10.7 +0.1
OBN eS S 14 25 49.8 -3.1
OBN pmax pmax
comp=Z,8.0nm,0.7s
CMAR Chiang Mai Arr 30.60 119 P P 14 21 18.1 0.0
comp=Z,1.4nm,0.8s,baz=301,slow=8.1,SNR=8.6
KLMR Klimovskoe 31.34 331 eP P 14 21 20.6 -3.6
KLMR e*PP pP 14 22 04.7 +1.8
KLMR e 14 22 34.5
KLMR pmax pmax
comp=Z,15nm,1.2s
HHC Hu-ho-hao-te 31.84 70 eP P 14 21 28.7 -0.2
HHC S S 14 26 21.5 -3.9
HHC pmax pmax
comp=Z,29nm,0.6s
HHC pmax pmax
comp=Z,170nm,5.7s
KIEV Kiev 32.80 309 i P P 14 21 36.6 -0.5
JOF Joensuu 35.73 330 eP P 14 22 01.1 -0.9
JOF pmax pmax
comp=Z,8.0nm,0.6s
JOF Joensuu 35.73 330 ep P 14 22 01.1 -0.9
comp=Z,7.8nm,0.6s
FINES FINESS Array B 37.34 326 P P 14 22 15.8 +0.2
comp=Z,5.4nm,0.7s,baz=111,slow=11,SNR=12
KAF Kangasniemi 37.48 327 eP P 14 22 15.6 -1.3
KAF pmax pmax
comp=Z,3.0nm,0.8s
KAF Kangasniemi 37.48 327 ep P 14 22 15.6 -1.3
comp=Z,3.0nm,0.8s
CRVS Cervenica-Dubn 37.66 305 eP P 14 22 23.6 +5.0
CRVS Cervenica-Dubn 37.66 305 eP P 14 22 23.5 +5.0
VYHS Vyhne 39.41 304 eP P 14 22 35.6 +2.5
VYHS Vyhne 39.41 304 eP P 14 22 35.6 +2.5
KEV Kevo 40.67 338 eP P 14 22 40.6 -2.5
KEV pmax pmax
comp=Z,6.0nm,0.8s
KEV Kevo 40.67 338 ep P 14 22 40.6 -2.5
comp=Z,6.3nm,0.8s
ARCES ARCESS Array B 41.01 338 P P 14 22 46.5 +0.5
comp=Z,8.4nm,0.7s,baz=109,slow=8.4,SNR=32
YAK Yakutsk 43.96 36 eP P 14 23 08.7 -1.0
YAK pmax pmax
comp=Z,13nm,0.9s
YAK pmax pmax
comp=E,2.0nm,0.8s
NB2 NORSAR Subarra 44.23 323 P P 14 23 11.0 -1.1
comp=Z,5.3nm,0.8s,baz=97,slow=7.9
NOA NORSAR Array B 44.23 323 P P 14 23 11.2 -0.8
comp=Z,3.7nm,0.7s,baz=97,slow=7.7,SNR=19
KSRS Korea Array 44.96 71 P P 14 23 17.8 -0.2
comp=Z,0.6nm,0.6s,baz=280,slow=7.1,SNR=4.1
MJAR Matsushiro Arr 53.03 68 P P 14 24 17.6 -1.7
comp=Z,0.8nm,0.9s,baz=281,slow=9.1,SNR=4.3
DAG Danmarks Havn 54.61 344 ⇑iP P 14 24 30.0 -0.1
DAG pmax pmax
comp=Z,5.0nm,0.7s
DAG Danmarks Havn 54.61 344 ⇑iP P 14 24 30.0 -0.1
comp=Z,6.6nm,0.7s
BILL Bilibino 58.57 26 ⇑eP P 14 24 58.5 +0.3
BILL e*PP pP 14 25 44.3 +3.1
BILL i 14 27 09.4
BILL eS S 14 32 46.9 +0.1
BILL pmax pmax
comp=Z,13nm,1.2s
PETK Petropavlovsk- 59.98 44 P P 14 25 06.6 -1.5
PETK pmax pmax
comp=Z,1.0nm,0.8s
PETK Petropavlovsk- 59.98 44 P P 14 25 06.6 -1.5
comp=Z,1.2nm,0.8s,baz=256,slow=12,SNR=3.8
TORD Torodi Ar. Bea 65.61 269 P P 14 25 42.3 -3.5
comp=Z,2.8nm,0.7s,baz=46,slow=4.8,SNR=20
COLA College 74.42 16 i P P 14 26 38.4 -0.2
ILAR Eielson Array 74.72 16 P P 14 26 39.1 -1.2
comp=Z,2.7nm,1.1s,baz=320,slow=4.6,SNR=23
ILAR pP pP 14 27 34.1 +8.7
comp=Z,0.9nm,1.0s,baz=297,slow=5.6,SNR=5.0
YKA Yellowknife Ar 81.16 3 P P 14 27 15.0 -0.8
comp=Z,2.3nm,0.6s,baz=349,slow=5.3,SNR=46
WRA Warramunga Arr 82.14 122 P P 14 27 18.9 -2.8
comp=Z,3.0nm,0.7s,baz=324,slow=4.9,SNR=23
ASAR Alice Springs 84.40 125 P P 14 27 30.4 -2.7
comp=Z,2.4nm,0.7s,baz=308,slow=4.8,SNR=26
FFC Flin Flon 88.84 356 ceP P 14 27 54.4 +0.2
PLCA Paso Flores 149.75 250 PKPbc PKPbc 14 34 47.0 -2.1
comp=Z,1.6nm,0.7s,baz=59,slow=7.1,SNR=3.9

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*IDC **09** 14:15:51.2±0.9,0°.54S×133°.24E,h0km,mb4.0/7, mb1 4.0/9,mb1mx3.7/25,mbtmp3.9/9,ML3.9/2,Error*

ellipse: s-maj=45.2km s-min=16.0km az=75.0
*ISCJB **09** 14:15:54.0±0.7, 0°.64S±0°.06×133°.29E±0°.07, h32km, mb3.9/7, Error ellipse: s-maj=9.7km s-min=7.9km az=155.5*
*AUST **09** 14:16:00.8, 0°.98S×133°.00E, h100km*
*DJA **09** 14:16:00.7±0.8, 1°S±8°×13°3E±°, h10km, M4.6/7, mb5.0/3, mB5.5/2, MLv4.3/7, Mw(mB)5.0/2*
ISC 09 14:15:56.1±0.9, 0°.64S±0°.07×133°.18E±0°.09, h32km, n24, σ1s.55/24, mb4.0/7, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	Sorong	1.93	263	P	Pn	14 16 26.0	-0.7
SWI	Sorong	1.93	263	P	Pn	14 16 26.5	-0.2
	baz=1.7,SNR=79						
SWI				S	Sn	14 16 51.8	+1.8
	baz=1.7,SNR=4.8						
FAKI	Fak Fak	2.45	202	P	Pn	14 16 34.7	+0.8
TLE	Tual	4.99	185	P	Pn	14 17 10.8	+2.0
TLE	Tual	4.99	185	P	Pn	14 17 10.6	+1.8
	baz=4.7,SNR=18						
TLE				S	Sn	14 18 05.2	-0.1
	baz=4.7,SNR=3.4						
MSAI	Masohi	5.03	238	P	Pn	14 17 11.9	+2.5
BNDI	Bandanaira	5.06	220	P	Pn	14 17 13.5	+3.7
AAI	Ambon	5.83	239	P	Pn	14 17 21.0	+0.6
	152nm,0.6s,0.6nm						
AAI	Ambon	5.83	239	P	Pn	14 17 21.2	+0.9
	baz=5.5,SNR=13						
JAY	Jayapura	7.75	104	P	Pn	14 17 57.5	+11
	91nm,0.5s,9μm0.6nm						
KDU	Kakadu	11.99	183	P	Pn	14 18 44.3	-0.6
	baz=12,SNR=3.8						
KDU				S	Sn	14 20 50.2	-7.4
	baz=12,SNR=5.7						
MTN	Manton Dam	12.30	189	P	Pn	14 18 47.6	-1.5
	baz=12,SNR=26						
MTN				S	Sn	14 21 00.5	-4.6
	baz=12,SNR=7.3						
FITZ	Fitzroy Crossi	18.87	203	P	P	14 20 12.5	-1.3
	0.3nm,0.3s,baz=43,slow=13,SNR=14						
FITZ				S	Sn	14 23 30.4	-15
	0.1nm,0.3s,baz=248,slow=16,SNR=3.5						
FITZ	Fitzroy Crossi	18.87	203	P	P	14 20 13.5	-0.3
	baz=19,SNR=13						
WRA	Warramunga Arr	19.22	177	P	P	14 20 17.6	-0.1
	0.4nm,0.3s,baz=360,slow=12,SNR=22						
WRA				S	Sn	14 23 40.7	-13
	0.1nm,0.3s,baz=353,slow=24,SNR=4.9						
ASAR	Alice Springs	22.90	178	P	P	14 20 57.4	0.0
	1.4nm,0.3s,baz=358,slow=10,SNR=85						
CTA	Charters Tower	23.18	147	P	P	14 21 01.8	+1.5
	7.0nm,0.7s,baz=314,slow=12,SNR=5.7						
STKA	Stephens Creek	32.07	166	P	P	14 22 21.3	+1.1
	0.7nm,0.4s,baz=343,slow=11,SNR=2.0						
GSI	Gunungsitoli	35.66	273	P	P	14 22 58.4	+6.7
	baz=36,SNR=6.1						
GSI				S	S	14 28 14.8	-12
	baz=36,SNR=7.5						
ARPS	Mount Arapiles	36.84	168	P	P	14 23 01.8	+0.5
	baz=37,SNR=6.5						
MKAR	Makanchi Array	64.83	324	P	P	14 26 31.9	-0.1
	0.5nm,0.4s,baz=108,slow=8.6,SNR=8.1						
KURBB	Kurchatov Arra	68.90	326	P	P	14 26 58.0	+0.2
	0.6nm,0.3s,baz=123,slow=6.3,SNR=4.7						
BVAR	Borovoye Array	74.49	326	P	P	14 27 31.0	-0.3
	0.6nm,0.6s,baz=108,slow=4.7,SNR=3.2						
ILAR	Eielson Array	86.28	25	P	P	14 28 33.4	-1.0
	0.3nm,0.6s,baz=253,slow=5.1,SNR=5.8						

IDC 09 14:16:25.2±31.0, 16°.13S×178°.20W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/20, mbtmp4.0/4, MS3.5/1, Ms1 3.5/1, ms1mx2.7/26, Error ellipse: s-maj=587.0km s-min=148.3km az=83.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	22.43	190	LR	LR	14 29 23.4	
	comp=Z,112nm,18.2s,baz=112,slow=35						
STKA	Stephens Creek	39.68	239	P	P	14 23 59.0	-0.2
	1.2nm,0.6s,baz=70,slow=12,SNR=3.2						
WRA	Warramunga Arr	45.18	258	P	P	14 24 44.3	+0.1
	0.4nm,0.3s,baz=92,slow=7.8,SNR=6.9						
ASAR	Alice Springs	45.49	253	P	P	14 24 46.9	+0.2
	3.9nm,0.7s,baz=89,slow=8.0,SNR=43						
FITZ	Fitzroy Crossi	53.54	259	P	P	14 25 47.6	-0.6
	2.1nm,0.9s,baz=90,slow=5.1,SNR=5.1						

*CSEM **09** 14:18:47.9, 42°.47N×13°.37E, h9km, MD1.9/3, After ROM*
ROM 09 14:18:47.9±0.1, 42°.47N×13°.37E, h9km±1km, Md1.9/3, Ml1.7/2, Error ellipse: s-maj=1.4km s-min=1.1km az=110.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.07	23	Pg	Pg	14 18 50.9	+0.6
CAMP				Sg	Sg	14 18 52.7	+0.7
	86nm,0.4s						
CAMP	Campotosto	0.07	23	Pg	Pg	14 18 50.9	+0.6
CAMP				Sg	Sg	14 18 52.7	+0.7
	86nm,0.4s						
AQU	L'Aquila	0.12	168	Pg	Pg	14 18 51.0	+0.3
AQU				Sg	Sg	14 18 53.2	+0.5
AQU	L'Aquila	0.12	168	Pg	Pg	14 18 51.0	+0.3
AQU				Sg	Sg	14 18 53.2	+0.5
TERO	Teramo	0.23	48	Pg	Pg	14 18 53.0	+0.3
TERO				Sg	Sg	14 18 56.8	+0.8
	91nm,0.1s						
TERO	Teramo	0.23	48	Pg	Pg	14 18 53.0	+0.3
TERO				Sg	Sg	14 18 56.8	+0.8
	91nm,0.1s						
FAGN	Fagnano	0.26	142	Pg	Pb	14 18 54.1	-0.7
FAGN				Sg	Sb	14 18 58.8	-0.6
FAGN	Fagnano	0.26	142	Pg	Pb	14 18 54.1	-0.7
FAGN				Sg	Sb	14 18 58.8	-0.6
FIAM	Fiamignano	0.27	223	Pg	Pg	14 18 54.1	+0.5
FIAM	Fiamignano	0.27	223	Pg	Pg	14 18 54.1	+0.5
LNSS	Leonessa	0.28	299	Pg	Pg	14 18 54.2	+0.5
LNSS				Sg	Sb	14 18 59.3	-0.9
LNSS	Leonessa	0.28	299	Pg	Pg	14 18 54.2	+0.5
LNSS				Sg	Sb	14 18 59.3	-0.9
VCEL	Villa Celiera	0.36	102	Pg	Pg	14 18 55.7	+0.6
VCEL				Sg	Sb	14 19 01.8	-0.6
	93nm,0.5s						
VCEL	Villa Celiera	0.36	102	Pg	Pg	14 18 55.7	+0.6
VCEL				Sg	Sb	14 19 01.8	-0.6
	93nm,0.5s						
NRCA	Norcia	0.41	333	Pg	Pg	14 18 56.5	+0.4
NRCA				Sg	Sb	14 19 03.1	-0.8
NRCA	Norcia	0.41	333	Pg	Pg	14 18 56.5	+0.4
NRCA				Sg	Sb	14 19 03.1	-0.8

*CSEM **09** 14:19:20.5, 42°.45N×13°.45E, h9km, After ROM*
ROM 09 14:19:20.5±0.1, 42°.45N×13°.45E, h9km, Ml2.6/22, 10C, Error ellipse: s-maj=1.1km s-min=0.8km az=70.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.09	342⇑	iPg	Pg	14 19 23.6	+0.5
CAMP				Sg	Sg	14 19 25.3	+0.4
	1μm,0.2s						
CAMP	Campotosto	0.09	342⇑	iPg	Pg	14 19 23.6	+0.5
CAMP				Sg	Sg	14 19 25.3	+0.4
	1μm,0.2s						
AQU	L'Aquila	0.10	201⇑	iPg	Pg	14 19 23.6	+0.6
AQU				Sg	Sg	14 19 25.5	+0.7
	6μm,0.3s						
AQU	L'Aquila	0.10	201⇑	iPg	Pg	14 19 23.6	+0.6
AQU				Sg	Sg	14 19 25.5	+0.7
	6μm,0.3s						
FAGN	Fagnano	0.21	151	Pg	Pg	14 19 25.4	+0.6
FAGN				Sg	Sg	14 19 28.7	+0.9
	4μm,0.3s						
FAGN	Fagnano	0.21	151	Pg	Pg	14 19 25.4	+0.6
FAGN				Sg	Sg	14 19 28.7	+0.9
	4μm,0.3s						
TERO	Teramo	0.21	33⇑	iPg	Pg	14 19 25.3	+0.4
TERO				Sg	Sg	14 19 28.5	+0.6
TERO	Teramo	0.21	33⇑	iPg	Pg	14 19 25.3	+0.4
TERO				Sg	Sg	14 19 28.5	+0.6
VCEL	Villa Celiera	0.29	100	Pg	Pg	14 19 27.0	+0.4
VCEL				Sg	Sb	14 19 32.0	-1.3
	1μm,0.5s						
VCEL	Villa Celiera	0.29	100	Pg	Pg	14 19 27.0	+0.4
VCEL				Sg	Sb	14 19 32.0	-1.3
	1μm,0.5s						
FIAM	Fiamignano	0.30	234⇑	iPg	Pg	14 19 27.0	+0.3
FIAM	Fiamignano	0.30	234⇑	iPg	Pg	14 19 27.0	+0.3
LNSS	Leonessa	0.34	297	Pg	Pg	14 19 27.8	+0.4
LNSS				Sg	Sg	14 19 33.3	+1.2
	700nm,0.2s						
LNSS	Leonessa	0.34	297	Pg	Pg	14 19 27.8	+0.4
LNSS				Sg	Sg	14 19 33.3	+1.2
	700nm,0.2s						
PTQR	Pietraquaria	0.43	185⇑	iPg	Pg	14 19 28.9	-0.1
	44nm,0.2s						
PTQR	Pietraquaria	0.43	185⇑	iPg	Pg	14 19 28.9	-0.1
	44nm,0.2s						
NRCA	Norcia	0.46	328	Pg	Pg	14 19 29.8	+0.2
NRCA				Sg	Sg	14 19 36.7	+1.0
	793nm,0.1s						
NRCA	Norcia	0.46	328	Pg	Pg	14 19 29.8	+0.2
NRCA				Sg	Sg	14 19 36.7	+1.0
	793nm,0.1s						
TRTR	Tortoreto Alta	0.50	43	Pg	Pb	14 19 31.7	+0.2
TRTR	Tortoreto Alta	0.50	43	Pg	Pb	14 19 31.7	+0.2
OFFI	Offida	0.52	20	Pg	Pb	14 19 32.0	+0.2
	3μm,0.6s						
OFFI	Offida	0.52	20	Pg	Pb	14 19 32.0	+0.2
	3μm,0.6s						
INTR	Introdacqua	0.55	142	Pg	Pg	14 19 31.5	+0.2
INTR				Sg	Sb	14 19 40.1	-0.5
	306nm,0.5s						
INTR	Introdacqua	0.55	142	Pg	Pg	14 19 31.5	+0.2
INTR				Sg	Sb	14 19 40.1	-0.5
	306nm,0.5s						
MNS	Montasola	0.57	264	Pg	Pg	14 19 31.6	-0.1
	138nm,0.4s						
MNS	Montasola	0.57	264	Pg	Pg	14 19 31.6	-0.1
	138nm,0.4s						
VVLD	Villa Vallelon	0.59	167	Pg	Pg	14 19 32.0	-0.1
	230nm,0.5s						
VVLD	Villa Vallelon	0.59	167	Pg	Pg	14 19 32.0	-0.1
	230nm,0.5s						
CERT	Cerreto	0.61	215	Pg	Pg	14 19 31.9	-0.4
	424nm,0.4s						
CERT	Cerreto	0.61	215	Pg	Pg	14 19 31.9	-0.4
	424nm,0.4s						
FDMO	Fiordimonte	0.65	336	Pg	Pg	14 19 33.0	-0.1
FDMO				Sg	Sb	14 19 42.6	-0.6
FDMO	Fiordimonte	0.65	336	Pg	Pg	14 19 33.0	-0.1
FDMO				Sg	Sb	14 19 42.6	-0.6
GUAR	Guarcino	0.66	189	Pg	Pb	14 19 34.3	0.0
	137nm,0.3s						
GUAR	Guarcino	0.66	189	Pg	Pb	14 19 34.3	0.0
	137nm,0.3s						
CESX	Cesi	0.66	285	Pg	Pg	14 19 33.6	+0.2
	148nm,0.5s						
CESX	Cesi	0.66	285	Pg	Pg	14 19 33.6	+0.2
	148nm,0.5s						
MTCE	Montecelio	0.68	231	Pg	Pb	14 19 34.2	-0.3
	177nm,0.5s						
MTCE	Montecelio	0.68	231	Pg	Pb	14 19 34.2	-0.3
	177nm,0.5s						
LPEL	Lama dei Pelig	0.68	126	Pg	Pg	14 19 33.5	-0.2
	181nm,0.2s						
LPEL	Lama dei Pelig	0.68	126	Pg	Pg	14 19 33.5	-0.2
	181nm,0.2s						
CESI	CESI - Serrava	0.69	324	Pg	Pg	14 19 33.7	-0.2
	47nm,0.3s						
CESI	CESI - Serrava	0.69	324	Pg	Pg	14 19 33.7	-0.2
	47nm,0.3s						
GUMA	Gualdo di Mace	0.71	30	Pg	Pg	14 19 33.4	-0.9
GUMA	Gualdo di Mace	0.71	30	Pg	Pg	14 19 33.4	-0.9
POFI	Posta Fibreno	0.76	165	Pg	Pg	14 19 35.5	+0.3
POFI	Posta Fibreno	0.76	165	Pg	Pg	14 19 35.5	+0.3
SDI	San Donato	0.79	160	Pg	Pg	14 19 35.7	0.0
	74nm,0.3s						
SDI	San Donato	0.79	160	Pg	Pg	14 19 35.7	0.0
	74nm,0.3s						
ASSB	Assisi San Ben	0.83	316	Pg	Pg	14 19 36.3	-0.4
	132nm,0.3s						
ASSB	Assisi San Ben	0.83	316	Pg	Pg	14 19 36.3	-0.4
	132nm,0.3s						
SNTG	Esanatoglia	0.89	335	Pg	Pg	14 19 37.3	-0.4
	52nm,0.3s						
SNTG	Esanatoglia	0.89	335	Pg	Pg	14 19 37.3	-0.4
	52nm,0.3s						
GIUL	Giuliano Di Ro	0.90	189	Pg	Pb	14 19 38.5	+0.1
	518nm,2.0s						
GIUL	Giuliano Di Ro	0.90	189	Pg	Pb	14 19 38.5	+0.1
	518nm,2.0s						
CING	Cingoli	0.95	349	Pg	Pg	14 19 38.3	-0.5
	174nm,0.3s						
CING	Cingoli	0.95	349	Pg	Pg	14 19 38.3	-0.5
	174nm,0.3s						
MIDA	Miranda	1.00	143	Pg	Pg	14 19 39.5	-0.4
	48nm,0.4s						
MIDA	Miranda	1.00	143	Pg	Pg	14 19 39.5	-0.4
	48nm,0.4s						
ARVD	Arcevia	1.11	341	Pg	Pg	14 19 41.6	-0.4
	54nm,0.5s						
ARVD	Arcevia	1.11	341	Pg	Pg	14 19 41.6	-0.4
	54nm,0.5s						
PIEI	Pieia	1.28	329	Pg	Pn	14 19 44.7	+0.1
	43nm,0.3s						
PIEI	Pieia	1.28	329	Pg	Pn	14 19 44.7	+0.1
	43nm,0.3s						

*CSEM **09** 14:20:01.6, 42°.33N×13°.53E, h10km, MD2.0/4, After ROM*
ROM 09 14:20:01.6±0.1, 42°.33N×13°.53E, h10km±1km, Md2.0/4, Error ellipse: s-maj=1.9km s-min=1.6km az=22.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.07	146	Pg	Pg	14 20 04.1	+0.2
FAGN				Sg	Sg	14 20 05.7	+0.2
FAGN	Fagnano	0.07	146	Pg	Pg	14 20 04.1	+0.2
FAGN				Sg	Sg	14 20 05.7	+0.2
AQU	L'Aquila	0.10	287	Pg	Pg	14 20 04.5	+0.3
AQU				Sg	Sg	14 20 06.7	+0.6
AQU	L'Aquila	0.10	287	Pg	Pg	14 20 04.5	+0.3
AQU				Sg	Sg	14 20 06.7	+0.6
CAMP	Campotosto	0.23	337	Pg	Pg	14 20 06.7	+0.2
CAMP	Campotosto	0.23	337	Pg	Pg	14 20 06.7	+0.2
VCEL	Villa Celiera	0.24	73	Pg	Pg	14 20 08.0	+1.3
VCEL				Sg	Sg	14 20 12.4	+2.2
VCEL	Villa Celiera	0.24	73	Pg	Pg	14 20 08.0	+1.3
VCEL				Sg	Sg	14 20 12.4	+2.2
TERO	Teramo	0.30	11	Pg	Pg	14 20 08.0	+0.2
TERO				Sg	Sg	14 20 13.1	+1.2
TERO	Teramo	0.30	11	Pg	Pg	14 20 08.0	+0.2
TERO				Sg	Sg	14 20 13.1	+1.2
FIAM	Fiamignano	0.31	259	Pg	Pg	14 20 08.3	+0.3
FIAM				Sg	Sb	14 20 13.9	-0.8
FIAM	Fiamignano	0.31	259	Pg	Pg	14 20 08.3	+0.3
FIAM				Sg	Sb	14 20 13.9	-0.8
PTQR	Pietraquaria	0.32	197	Pg	Pg	14 20 08.6	+0.5
PTQR				Sg	Sb	14 20 13.8	-1.1
PTQR	Pietraquaria	0.32	197	Pg	Pg	14 20 08.6	+0.5
PTQR				Sg	Sb	14 20 13.8	-1.1
LNSS	Leonessa	0.46	308	Pg	Pg	14 20 10.8	+0.1
LNSS				Sg	Sg	14 20 17.6	+0.8
LNSS	Leonessa	0.46	308	Pg	Pg	14 20 10.8	+0.1
LNSS				Sg	Sg	14 20 17.6	+0.8
NRCA	Norcia	0.59	329	Pg	Pg	14 20 13.2	-0.1
NRCA				Sg	Sb	14 20 22.2	-0.6
NRCA	Norcia	0.59	329	Pg	Pg	14 20 13.2	-0.1
NRCA				Sg	Sb	14 20 22.2	-0.6
OFFI	Offida	0.62	11	Pg	Pb	14 20 15.2	+0.6
OFFI	Offida	0.62	11	Pg	Pb	14 20 15.2	+0.6

*NEIC **09** 14:32:57.3±2.3, 24°.39N×141°.15E, h93km±23km, mb4.5/7, Error ellipse: s-maj=22.9km s-min=9.1km az=91.0*
*IDC **09** 14:33:03.5±1.1, 24°.61N×141°.26E, h151km±9km, mb3.6/17, mb1 3.9/22, mb1mx3.8/30, mbtmp3.7/22, Error ellipse: s-maj=15.1km s-min=9.8km az=92.0*
*JMA **09** 14:33:05.9±0.2, 24°.84N×140°.64E, h82km, M5.0*
ISC 09 14:33:03.0±0.5, 24°.60N±0°.05×141°.16E±0°.09, h150km, n63, σ1s.78/75, mb4.0/24, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	1.71	22	P	Pn	14 33 41.9	-1.3
JHHJ				S	Sn	14 34 08.9	-1.4
CBIJ	Chichi jima	2.15	18	P	Pn	14 33 47.2	-0.5
CBIJ				S	Sn	14 34 18.6	+0.1
CBIJ	Chichi jima	2.15	18	P	Pn	14 33 47.2	-0.5
	164nm,0.3s,baz=216,slow=3.9,SNR=289						
CBIJ				S	Sn	14 34 18.3	-0.1
	833nm,0.3s,baz=243,slow=22,SNR=27						
JHCJ	Hachijojimakas	8.14	350	P	Pn	14 35 05.1	+1.7
JHCJ				eS	Sn	14 36 33.0	-1.8
JHJ2	Mitsune	8.17	350	P	Pn	14 35 05.2	+1.4
JHJ2				eS	Sn	14 36 36.3	+0.7
JHJ	Hachijo jima 2	8.18	350	P	Pn	14 35 05.2	+1.2
	19nm,0.3s,baz=240,slow=22,SNR=43						
JHJ				S	Sn	14 36 34.2	-1.7
	20nm,0.3s,baz=84,slow=22,SNR=5.3						
JKO	Kozu shima	9.34	348	P	Pn	14 35 22.6	+3.5
BSO1	Boso 1	9.59	358	P	Pn	14 35 22.2	+0.3
BSO1				eS	Sn	14 37 08.4	-0.2
BSO3	Boso 3	9.77	355	P	Pn	14 35 24.0	-0.4
BSO3				eS	Sn	14 37 13.3	+0.1
BSO4	Boso 4	9.97	355	P	Pn	14 35 27.4	+0.2
BSO4				eS	Sn	14 37 16.0	-2.2
JIE	Ise	10.19	337	P	Pn	14 35 33.3	+3.1
JKN2	Miekihoku	10.21	335	P	P	14 35 34.8	-3.9
JOD2	Odawara 2	10.39	349	P	Pn	14 35 33.1	+0.2
JNY	Yasuok	10.74	344	P	Pn	14 35 38.0	+0.6
JAO	Obara	10.82	341	P	Pn	14 35 40.0	+1.6
JRY	Ryogami san	11.16	349	P	Pn	14 35 42.4	-0.4
JRY				eS	Sn	14 37 47.8	+0.8
JYT	Yasato	11.21	355	P	Pn	14 35 42.6	-0.7
JYT				eS	Sn	14 37 44.4	-3.6
JAG	Ashikaga	11.48	352	P	Pn	14 35 44.6	-2.2
JHO	Hitachi	11.56	356	P	Pn	14 35 46.5	-1.4
JHO				eS	Sn	14 37 50.6	-5.9
MJAR	Matsushiro Arr	11.80	347	P	Pn	14 35 50.1	-0.9
	2.3nm,0.3s,baz=159,slow=9.5,SNR=25						
MAJO	Matsushiro	11.80	347	ePn	Pn	14 35 49.7	-1.3
	7.0nm,0.4s						
MAJO				eSn	Sn	14 37 56.0	-6.3
MAT	Matsushiro	11.80	347	P	Pn	14 35 50.8	-0.2
MAT				eS	Sn	14 37 56.8	-5.5
JNU	Nakatsue	12.26	313	P	P	14 36 00.3	-1.2
	0.2nm,0.3s,baz=109,slow=11,SNR=3.8						
JAW	Awa shima	13.51	353	P	Pn	14 36 11.8	-0.7
KSRS	Korea Array	16.92	320	P	Pn	14 36 54.9	+0.7
	1.6nm,0.3s,baz=134,slow=12,SNR=56						
ASAJ	Asahikawa	19.06	3	eP	Pn	14 37 20.5	+1.2
ASAJ	Asahikawa	19.06	3	P	Pn	14 37 19.0	-0.2
	2.9nm,0.3s,baz=168,slow=8.9,SNR=21						
USRK	Ussuriysk Arra	20.61	340	P	P	14 37 34.5	+1.6
	4.7nm,0.8s,baz=153,slow=8.4,SNR=7.3						
YSS	Yuzh-Sakhalins	21.90	2	eP	P	14 37 49.3	+3.1
PETK	Petropavlovsk-	30.59	19	P	P	14 39 08.4	+4.1
	1.9nm,0.9s,baz=252,slow=2.8,SNR=6.9						
SONM	Songino Array	35.78	319	P	P	14 39 50.4	+1.0
	0.2nm,0.3s,baz=131,slow=6.2,SNR=4.4						
SONM				ScP	ScP	14 45 43.6	+2.4
	0.4nm,0.6s,baz=135,slow=3.3,SNR=3.9						
COEN	Coen	38.80	177	eP	P	14 40 08.2	-6.8
CMAR	Chiang Mai Arr	39.90	269	P	P	14 40 22.4	-1.8
	1.2nm,0.6s,baz=64,slow=7.6,SNR=9.7						
WRAB	Tennant Creek	45.23	189	eP	P	14 41 01.5	-5.5
	15nm,0.5s						
WRA	Warramunga Arr	45.24	189	P	P	14 41 01.8	-5.3
	12nm,0.5s,baz=9.0,slow=8.7,SNR=203						
WRA				PcP	PcP	14 42 41.9	-1.8
	1.5nm,0.5s,baz=5.3,slow=3.6,SNR=7.0						
FITZ	Fitzroy Crossi	45.56	201	eP	P	14 41 02.9	-6.6
	7.9nm,0.8s						
BILL	Bilibino	45.60	13	eP	P	14 41 12.0	+2.7
	2.3nm,0.6s						
AS31	Alice Springs	48.97	189	eP	P	14 41 28.5	-7.3
ASAR	Alice Springs	48.97	189	P	P	14 41 30.4	-5.4
	0.9nm,0.4s,baz=8.2,slow=5.2,SNR=43						
ASAR				PcP	PcP	14 42 55.2	-1.7
	0.7nm,0.6s,baz=12,slow=3.9,SNR=6.6						
MBWA	Marble Bar	50.54	207	eP	P	14 41 40.3	-7.4
ZALV	Zalesovo Beam	50.63	320	P	P	14 41 48.0	0.0
	0.2nm,0.3s,baz=95,slow=8.7,SNR=3.1						
ZALV				ScP	ScP	14 46 42.2	+1.4
	0.3nm,0.3s,baz=50,slow=4.5,SNR=2.5						
MK31	Makanchi Array	51.30	311	eP	P	14 41 54.5	+1.4
MKAR	Makanchi Array	51.30	311	P	P	14 41 54.8	+1.6
	2.0nm,0.4s,baz=87,slow=9.5,SNR=71						
MKAR				ScP	ScP	14 46 46.1	+2.2
	0.2nm,0.6s,baz=88,slow=5.5,SNR=5.3						
KURK	Kurchatov	53.97	316	eP	P	14 42 13.5	+0.8
STKA	Stephens Creek	56.59	180	eP	P	14 42 26.0	-5.5
	0.7nm,0.8s						
STKA	Stephens Creek	56.59	180	P	P	14 42 27.4	-4.1
	2.1nm,0.4s,baz=345,slow=7.8,SNR=22						
FORT	Forrest	56.97	194	eP	P	14 42 27.4	-6.7
	34nm,0.6s						
KKAR	Karatay Array	59.77	307	eP	P	14 42 53.5	-0.1
	1.6nm,0.6s						
ILAR	Eielson Array	59.83	28	P	P	14 42 56.2	+2.7
	0.7nm,0.8s,baz=258,slow=5.6,SNR=8.6						
ILAR				pP	pP	14 43 30.7	-6.3
	1.3nm,1.0s,baz=262,slow=5.3,SNR=7.1						
NWAO	Narrogin (SRO)	62.09	203	eP	P	14 43 03.2	-5.9
AKTO	Aktyubinsk	67.05	316	P	P	14 43 40.1	-1.1
	0.8nm,0.6s,baz=71,slow=14,SNR=4.3						
SPITS	Spitsbergen Ar	72.28	350	P	P	14 44 14.2	+1.5
	7.6nm,1.0s,baz=118,slow=7.9,SNR=4.3						
YKA	Yellowknife Ar	74.26	28	P	P	14 44 26.9	+2.5
	1.4nm,0.4s,baz=294,slow=6.0,SNR=27						
ARCES	ARCESS Array B	75.26	341	P	P	14 44 31.4	+1.3
	1.6nm,0.8s,baz=74,slow=8.9,SNR=9.5						
JOF	Joensuu	76.63	334	ep	P	14 44 37.1	-0.8
	0.9nm,0.5s						
KBZ	Khabaz	78.93	313	P	P	14 44 50.6	-0.3
	2.7nm,0.7s,baz=87,slow=5.4,SNR=4.8						
FINES	FINESS Array B	79.50	334	P	P	14 44 53.5	-0.2
	1.4nm,0.4s,baz=74,slow=5.1,SNR=11						
NVAR	Mina Array Bea	82.31	51	P	P	14 45 11.7	+2.4
	0.7nm,0.6s,baz=293,slow=5.8,SNR=6.5						
RLMT	Red Lodge	85.11	42	eP	P	14 45 26.6	+3.2
	4.5nm,0.7s						
PDAR	Pinedale Array	86.14	44	P	P	14 45 30.4	+1.8
	0.4nm,0.4s,baz=294,slow=4.4,SNR=4.3						
TORD	Torodi Ar. Bea	125.41	309	PKP	PKPdf	14 51 46.1	-1.6
	0.3nm,0.6s,baz=14,slow=2.7,SNR=3.3						
PLCA	Paso Flores	149.11	128	PKPbc	PKPbc	14 52 33.5	-0.9
	3.8nm,0.8s,baz=196,slow=4.0,SNR=7.2						
LPAZ	La Paz	151.03	78	PKPbc	PKPbc	14 52 40.8	+0.4
	3.0nm,0.6s,baz=314,slow=1.6,SNR=13						

*VIE **09** 15:07:07.9±0.4, 44°.07N×16°.83E, h10km, mb2.8/8, ML2.7/9, Error ellipse: s-maj=4.7km s-min=3.2km az=61.0 68 km NNE of Split*
*PDG **09** 15:07:09.6±0.3, 44°.03N×16°.25E, h0km±11km, ML3.1/9, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
*CSEM **09** 15:07:11.1±0.1, 44°.27N×16°.48E, h2km, ML3.1/9, Error ellipse: s-maj=9.4km s-min=2.5km az=48.0*
ISC 09 15:07:10.2±1.3, 44°.15N±0°.03×16°.47E±0°.04, h2km±11km, n54, σ1s.42/90, 19C-11D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVLJ	Novalja	1.22	291	i Pg	Pg	15 07 31.2	-2.3
NVLJ				Sg	Sb	15 07 49.8	-0.3
SISC	Sisak	1.33	357	ePn	Pg	15 07 34.8	-0.8
SISC	Sisak	1.33	357	ePn	Pg	15 07 34.8	-0.8
STON	Ston	1.56	144	ePn	Pn	15 07 36.4	-2.5
STON				Sn	Sn	15 07 59.4	-0.3
BOJS	Bojanci	1.61	328	i Pn	Pn	15 07 38.9	-0.8
BOJS				i Sn	Sb	15 08 01.6	+0.1
BOJS							
	comp=Z,42nm,0.3s						
BOJS	Bojanci	1.61	328	Pn	Pn	15 07 38.9	-0.8
BOJS				i Sn	Sb	15 08 01.5	+0.1
	comp=Z,42nm,0.3s						
GBRS	Gornja Briga	1.82	320	i Pn	Pn	15 07 42.7	+0.1
GBRS				i Sn	Sb	15 08 07.1	-0.4
CRES	Cresnjev	1.83	337	i Pn	Pn	15 07 41.7	-1.0
CRES				i Sn	Sb	15 08 08.0	+0.3
CRES							
	comp=Z,56nm,0.4s						
CRES	Cresnjev	1.83	337	i Pn	Pn	15 07 41.7	-1.0
CRES				i Sn	Sb	15 08 08.0	+0.3

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,56nm,0.4s						
BRY	**Bratogost**	**1.95**	**129**	⇑*i*Pn	**Pn**	**15 07 45.5**	**+1.0**
BRY				*e*Sn	**Sg**	**15 08 15.3**	**+2.4**
BRY	**Bratogost**	**1.95**	**129**	⇑*i*Pn	**Pn**	**15 07 45.5**	**+1.0**
BRY				*e*Sn	**Sg**	**15 08 15.3**	**+2.4**
UPM	**Unac-Piva**	**2.00**	**117**	⇑*i*Pn	**Pb**	**15 07 47.1**	**-0.4**
UPM				*e*Sn	**Sg**	**15 08 16.8**	**+2.3**
UPM	**Unac-Piva**	**2.00**	**117**	⇑*i*Pn	**Pb**	**15 07 47.1**	**-0.4**
HCY	**Herceg Novi**	**2.25**	**138**	⇓*i*Pn	**Pn**	**15 07 49.7**	**+1.2**
HCY				*e*Sn	**Sb**	**15 08 20.8**	**+0.9**
HCY	**Herceg Novi**	**2.25**	**138**	⇓*i*Pn	**Pn**	**15 07 49.7**	**+1.2**
HCY				*e*Sn	**Sb**	**15 08 20.8**	**+0.9**
PLE	**Pljevlja**	**2.27**	**110**	⇑*i*Pn	**Pb**	**15 07 51.2**	**-0.7**
PLE				*e*Sn	**Sg**	**15 08 23.2**	**+0.1**
PLE	**Pljevlja**	**2.27**	**110**	⇑*i*Pn	**Pb**	**15 07 51.2**	**-0.7**
NKY	**Niksic**	**2.27**	**125**	⇓*i*Pn	**Pb**	**15 07 50.9**	**-1.1**
NKY				*e*Sn	**Sg**	**15 08 22.9**	**-0.2**
NKY	**Niksic**	**2.27**	**125**	⇓*i*Pn	**Pb**	**15 07 50.9**	**-1.1**
BEHE	**Becsehely**	**2.33**	**5**	*e*Pn	**Pn**	**15 07 49.0**	**-0.6**
BEHE				*e*Sn	**Sg**	**15 08 30.7**	**+5.5**
BUM	**Brajici-Budva**	**2.56**	**135**	⇓*i*Pn	**Pn**	**15 07 53.4**	**+0.7**
BUM				*e*Sn	**Sb**	**15 08 28.4**	**-0.4**
BUM	**Brajici-Budva**	**2.56**	**135**	⇓*i*Pn	**Pn**	**15 07 53.4**	**+0.7**
BUM				*e*Sn	**Sb**	**15 08 28.4**	**-0.4**
PKSM	**Moragy**	**2.58**	**36**	*e*Pn	**Pg**	**15 07 58.5**	**-1.0**
PKSM				*e*Sn	**Sg**	**15 08 34.0**	**+1.1**
VOY	**Vojsko**	**2.62**	**317**	*e*Pn	**Pn**	**15 07 53.9**	**+0.2**
VOY				*e*		15 07 58.3	
VOY				*e*Sn	**Sn**	**15 08 27.9**	**+1.8**
VOY	**Vojsko**	**2.62**	**317**	*e*Pn	**Pn**	**15 07 53.9**	**+0.2**
VOY				*e*Sn	**Sn**	**15 08 27.9**	**+1.8**
PDG	**Podgorica**	**2.66**	**129**	⇑*i*Pn	**Pn**	**15 07 55.9**	**+1.8**
PDG				*e*Sn	**Sb**	**15 08 31.5**	**-0.1**
TTG	**Podgorica**	**2.66**	**129**	⇑*i*Pn	**Pn**	**15 07 55.9**	**+1.8**
TTG				*e*Sn	**Sb**	**15 08 31.5**	**-0.1**
OBKA	**Obir**	**2.72**	**331**	⇑*e*Pn	**Pn**	**15 07 54.3**	**-0.7**
	SNR=27						
OBKA	**Obir**	**2.72**	**331**	Pn	**Pn**	**15 07 54.3**	**-0.7**
	SNR=27						
SOKA	**Soboth**	**2.73**	**339**	⇓*i*Pn	**Pn**	**15 07 54.2**	**-0.9**
SOKA				⇓*i*Sn	**Sn**	**15 08 29.6**	**+0.9**
SOKA	**Soboth**	**2.73**	**339**	Pn	**Pn**	**15 07 54.2**	**-0.9**
SOKA				Sn	**Sn**	**15 08 29.6**	**+0.9**
BEY	**Berane**	**2.80**	**116**	*e*Pn	**Pn**	**15 07 57.6**	**+1.5**
IVA	**Berane**	**2.80**	**116**	*e*Pn	**Pn**	**15 07 57.6**	**+1.5**
IVA				*e*Sn	**Sb**	**15 08 35.6**	**-0.1**
PVY	**Plav**	**2.98**	**120**	⇑*i*Pn	**Pn**	**15 08 00.9**	**+2.3**
PVY				*e*Sn	**Sb**	**15 08 39.6**	**-1.4**
PVY	**Plav**	**2.98**	**120**	⇑*i*Pn	**Pn**	**15 08 00.9**	**+2.3**
PVY				*e*Sn	**Sb**	**15 08 39.6**	**-1.4**
ULC	**Ulcinj**	**2.98**	**136**	⇑*i*Pn	**Pn**	**15 07 59.7**	**+1.2**
ULC				*e*Sn	**Sb**	**15 08 38.8**	**-2.2**
ULC	**Ulcinj**	**2.98**	**136**	⇑*i*Pn	**Pn**	**15 07 59.7**	**+1.2**
ULC				*e*Sn	**Sb**	**15 08 38.8**	**-2.2**
ARSA	**Arzberg**	**3.17**	**348**	⇑*i*Pn	**Pn**	**15 08 00.5**	**-0.7**
	SNR=9.5						
ARSA	**Arzberg**	**3.17**	**348**	Pn	**Pn**	**15 08 00.5**	**-0.7**
	SNR=9.5						
MYKA	**Terra Mystica**	**3.18**	**322**	⇑*i*Pn	**Pn**	**15 08 01.2**	**-0.2**
MYKA	**Terra Mystica**	**3.18**	**322**	Pn	**Pn**	**15 08 01.2**	**-0.2**
KBA	**Koelnbreinsper**	**3.66**	**324**	⇑*i*Pn	**Pn**	**15 08 08.0**	**0.0**
KBA	**Koelnbreinsper**	**3.66**	**324**	Pn	**Pn**	**15 08 08.0**	**0.0**
CONA	**Conrad Observa**	**3.81**	**354**	⇓*i*Pn	**Pn**	**15 08 08.5**	**-1.4**
CONA	**Conrad Observa**	**3.81**	**354**	Pn	**Pn**	**15 08 08.5**	**-1.4**
MOA	**Molln**	**4.01**	**338**	⇓*i*Pn	**Pn**	**15 08 12.0**	**-0.6**
	SNR=8.1						
MOA				⇑*i*Sn	**Sn**	**15 09 01.4**	**+1.2**
MOA	**Molln**	**4.01**	**338**	Pn	**Pn**	**15 08 12.0**	**-0.6**
	SNR=8.1						
MOA				Sn	**Sn**	**15 09 01.4**	**+1.2**
WTTA	**Wattenberg**	**4.60**	**314**	⇑*i*Pn	**Pn**	**15 08 21.1**	**+0.2**
WTTA				⇓*i*Sn	**Sn**	**15 09 18.1**	**+3.1**
WTTA	**Wattenberg**	**4.60**	**314**	Pn	**Pn**	**15 08 21.1**	**+0.2**
WTTA				Sn	**Sn**	**15 09 18.1**	**+3.1**
VYHS	**Vyhne**	**4.65**	**20**	*e*PN	**Pn**	**15 08 21.2**	**-0.2**
VYHS				*e*SN	**Sn**	**15 09 13.4**	**-2.5**
WATA	**Walderalm**	**4.68**	**315**	⇑*i*Pn	**Pn**	**15 08 21.5**	**-0.5**
WATA	**Walderalm**	**4.68**	**315**	Pn	**Pn**	**15 08 21.5**	**-0.5**
KHC	**Kasperske Hory**	**5.37**	**339**	*e*PN	**Pn**	**15 08 30.9**	**-0.4**
KHC				*e*SN	**Sn**	**15 09 31.3**	**-2.4**
KHC	**Kasperske Hory**	**5.37**	**339**	Pn	**Pn**	**15 08 30.9**	**-0.4**
KHC				Sn	**Sn**	**15 09 31.3**	**-2.4**

IDC 09 15:16:06.1±2.8**, 0.78S×133.29E, h0km, mb3.7**/2**, mb1 3.8**/4**, mb1mx3.5**/22**, mbtmp3.6**/4**, ML3.8**/2**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.3**/36**, Error ellipse: s-maj=124.7km s-min=23.4km az=79.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.79**	**203**	P	P	15 20 27.0	-0.2
	0.4nm,0.3s,baz=29,slow=11,SNR=15						
WRA	**Warramunga Arr**	**19.07**	**177**	P	P	15 20 29.9	-0.5
	0.2nm,0.3s,baz=359,slow=12,SNR=15						
WRA				S	Sn	15 23 53.4	-12
	0.1nm,0.3s,baz=354,slow=23,SNR=3.8						
ASAR	**Alice Springs**	**22.76**	**179**	P	P	15 21 10.8	+0.5
	0.7nm,0.4s,baz=358,slow=11,SNR=30						
CBIJ	**Chichi jima**	**29.00**	**17**	LR	LR	15 33 26.7	
	comp=Z,102nm,18.1s,baz=91,slow=36						
MKAR	**Makanchi Array**	**65.00**	**324**	P	P	15 26 48.1	0.0
	0.8nm,0.6s,baz=109,slow=8.0,SNR=13						
ZALV	**Zalesovo Beam**	**67.61**	**331**	LR	LR	15 55 36.5	
	comp=Z,20nm,21.0s,baz=43,slow=35						

*ISCJB **09** 15:17:32.3±0.9, 33.42N±0.05×35.57E±0.06, h10km±8km, Error ellipse: s-maj=9.0km s-min=7.9km az=31.9*
*CSEM **09** 15:17:32.4±0.4, 33.38N×35.56E, h5km, ML1.7, Error ellipse: s-maj=9.8km s-min=5.8km az=61.0*
*GRAL **09** 15:17:33.4±0.3, 33.44N×35.60E, h11km±4km, MD3.0*
*NSSC **09** 15:17:34.3±1.4, 33.26N×35.65E, h2km±17km, MD1.2, ML1.7*
ISC 09 15:17:32.3±1.2**, 33.38N**±0.03×**35.61E**±0.04**, h4km**±12km**, n14, σ0.71s**/25**, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCY	**Rachaya**	**0.22**	**59**	*e*P	**Pg**	**15 17 37.5**	**+0.8**
RCY				*e*S	**Sg**	**15 17 40.6**	**+0.9**
MATL	**Matarih**	**0.26**	**295**	*e*P	**Pg**	**15 17 37.9**	**+0.6**
MATL	**Matarih**	**0.26**	**295**	*e*P	**Pg**	**15 17 37.9**	**+0.6**
BHL	**Bhannes**	**0.52**	**4**	*e*P	**Pg**	**15 17 41.9**	**-0.5**
BHL				*e*S	**Sg**	**15 17 48.3**	**-0.9**
BHL	**Bhannes**	**0.52**	**4**	*e*P	**Pg**	**15 17 41.9**	**-0.5**
BHL				*e*S	**Sg**	**15 17 48.3**	**-0.9**
TOTH	**TOTAH**	**0.69**	**91**	*e*P	**Pb**	**15 17 47.2**	**+0.2**
TOTH				*e*S	**Sb**	**15 17 56.6**	**-0.3**
TOTH				AML	AML	15 18 05.1	
	comp=N,234nm,0.3s						
TOTH				AML	AML	15 18 13.3	
	comp=E,17nm,0.6s						
TOTH	**TOTAH**	**0.69**	**91**	*e*P	**Pb**	**15 17 47.2**	**+0.2**
	SNR=75						
TOTH				*e*S	**Sb**	**15 17 56.6**	**-0.3**
	comp=E,17nm,0.6s,SNR=59						
TCHB	**Talchebab**	**0.77**	**157**	*e*P	**Pg**	**15 17 46.7**	**-0.5**
TCHB				*e*S	**Sg**	**15 17 56.0**	**-1.2**
TCHB				AML	AML	15 18 06.7	
	comp=N,45nm,0.3s						
TCHB				AML	AML	15 18 18.9	
	comp=E,27nm,0.3s						
TCHB	**Talchebab**	**0.77**	**157**	*e*P	**Pg**	**15 17 46.7**	**-0.5**
	SNR=75						
TCHB				*e*S	**Sg**	**15 17 56.0**	**-1.2**
	comp=E,27nm,0.3s,SNR=59						
HWQ	**Hawqa**	**0.94**	**17**	*e*P	**Pg**	**15 17 49.1**	**-1.2**
SALA	**Sala**	**1.16**	**125**	*e*P	**Pn**	**15 17 56.2**	**+0.6**
SALA				*e*S	**Sg**	**15 18 09.6**	**0.0**
SALA				AML	AML	15 18 17.4	
	comp=N,365nm,0.3s						
SALA				AML	AML	15 18 20.5	
	comp=E,2.0nm,0.4s						
SALA	**Sala**	**1.16**	**125**	*e*P	**Pn**	**15 17 56.2**	**+0.6**
	SNR=67						
SALA				*e*S	**Sg**	**15 18 09.6**	**0.0**
	comp=E,2.0nm,0.4s,SNR=59						
ZALF	**Zalf**	**1.52**	**107**	*e*P	**Pg**	**15 18 01.6**	**+0.1**
ZALF				*e*S	**Sn**	**15 18 20.7**	**0.0**
ZALF				AML	AML	15 18 27.3	
	comp=E,18nm,0.8s						
ZALF				AML	AML	15 18 29.1	
	comp=N,9.3nm,0.5s						
ZALF	**Zalf**	**1.52**	**107**	*e*P	**Pg**	**15 18 01.6**	**+0.1**
	SNR=57						
ZALF				*e*S	**Sn**	**15 18 20.7**	**0.0**
	comp=N,9.3nm,0.5s,SNR=49						

*ISCJB **09** 15:18:14.5±0.2, 42.30N±0.02×13.50E±0.02, h11km±2km, mb3.3/2, Error ellipse: s-maj=3.0km s-min=2.4km az=148.9*
*CSEM **09** 15:18:14.9±0.1, 42.30N×13.50E, h2km, ML2.9, Error ellipse: s-maj=2.8km s-min=2.1km az=56.0*
*ROM **09** 15:18:14.5±0.1, 42.30N×13.49E, h10km, Ml3.3/30, Error ellipse: s-maj=1.0km s-min=0.7km az=55.0*
*IDC **09** 15:18:15.5±1.2, 42.45N×13.33E, h0km, mb3.6/3, mb1 3.6/7, mb1mx3.4/29, mbtmp3.4/7, ML3.1/4, MS2.6/1, Ms1 2.6/1, ms1mx1.4/47, Error ellipse: s-maj=23.2km s-min=14.1km az=100.0*
*LDG **09** 15:18:19.0±0.7, 42.45N×13.34E, h2km, Ml2.9/9, Error ellipse: s-maj=13.6km s-min=9.9km az=106.0*
ISC 09 15:18:15.1±0.8**, 42.30N**±0.02×**13.48E**±0.02**, h9km**±4km**, n117, σ1.43s**/159**, 16C-3D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.08**	**316**	⇑*i*Pg	**Pg**	**15 18 17.4**	**0.0**
AQU				Sg	**Sg**	**15 18 19.3**	**+0.2**
	24μm,0.3s						
AQU	**L'Aquila**	**0.08**	**316**	⇑*i*Pg	**Pg**	**15 18 17.4**	**0.0**
AQU				Sg	**Sg**	**15 18 19.3**	**+0.2**
	24μm,0.3s						
FAGN	**Fagnano**	**0.09**	**111**	Pg	**Pg**	**15 18 17.1**	**-0.4**
FAGN				Sg	**Sg**	**15 18 18.7**	**-0.5**
	63μm,0.3s						
FAGN	**Fagnano**	**0.09**	**111**	Pg	**Pg**	**15 18 17.1**	**-0.4**
FAGN				Sg	**Sg**	**15 18 18.7**	**-0.5**
	63μm,0.3s						
CAMP	**Campotosto**	**0.24**	**348**	⇓*i*Pg	**Pg**	**15 18 20.1**	**0.0**
CAMP				Sg	**Sg**	**15 18 23.9**	**+0.4**
	2μm,0.5s						
CAMP	**Campotosto**	**0.24**	**348**	⇓*i*Pg	**Pg**	**15 18 20.1**	**0.0**
CAMP				Sg	**Sg**	**15 18 23.9**	**+0.4**
	2μm,0.5s						
FIAM	**Fiamignano**	**0.27**	**264**	⇑*i*Pg	**Pg**	**15 18 20.9**	**+0.4**
FIAM				Sg	**Sg**	**15 18 25.4**	**+1.2**
	6μm,0.5s						
FIAM	**Fiamignano**	**0.27**	**264**	⇑*i*Pg	**Pg**	**15 18 20.9**	**+0.4**
FIAM				Sg	**Sg**	**15 18 25.4**	**+1.2**
	6μm,0.5s						
PTQR	**Pietraquaria**	**0.28**	**192**	⇑*i*Pg	**Pg**	**15 18 20.9**	**+0.1**
PTQR				Sg	**Sg**	**15 18 25.4**	**+0.9**
PTQR	**Pietraquaria**	**0.28**	**192**	⇑*i*Pg	**Pg**	**15 18 20.9**	**+0.1**
PTQR				Sg	**Sg**	**15 18 25.4**	**+0.9**
VCEL	**Villa Celiera**	**0.29**	**70**	Pg	**Pg**	**15 18 20.7**	**-0.2**
VCEL				Sg	**Sg**	**15 18 25.0**	**+0.2**
	12μm,0.5s						
VCEL	**Villa Celiera**	**0.29**	**70**	Pg	**Pg**	**15 18 20.7**	**-0.2**
VCEL				Sg	**Sg**	**15 18 25.0**	**+0.2**
	12μm,0.5s						
TERO	**Teramo**	**0.34**	**16**	Pg	**Pg**	**15 18 21.5**	**-0.3**
TERO				Sg	**Sg**	**15 18 26.2**	**-0.2**
	5μm,0.4s						
TERO	**Teramo**	**0.34**	**16**	Pg	**Pg**	**15 18 21.5**	**-0.3**
TERO				Sg	**Sg**	**15 18 26.2**	**-0.2**
	5μm,0.4s						
INTR	**Introdacqua**	**0.43**	**132**	Pg	**Pg**	**15 18 23.3**	**-0.2**
INTR				Sg	**Sg**	**15 18 29.8**	**+0.7**
	5μm,0.4s						
INTR	**Introdacqua**	**0.43**	**132**	Pg	**Pg**	**15 18 23.3**	**-0.2**
INTR				Sg	**Sg**	**15 18 29.8**	**+0.7**
	5μm,0.4s						
VVLD	**Villa Vallelon**	**0.44**	**166**	⇑*i*Pg	**Pg**	**15 18 23.4**	**-0.3**
VVLD				Sg	**Sg**	**15 18 30.1**	**+0.6**
	3μm,0.6s						
VVLD	**Villa Vallelon**	**0.44**	**166**	⇑*i*Pg	**Pg**	**15 18 23.4**	**-0.3**
VVLD				Sg	**Sg**	**15 18 30.1**	**+0.6**
	3μm,0.6s						
LNSS	**Leonessa**	**0.44**	**314**	Pg	**Pg**	**15 18 23.8**	**0.0**
LNSS				Sg	**Sg**	**15 18 30.6**	**+0.9**
	4μm,0.5s						
LNSS	**Leonessa**	**0.44**	**314**	Pg	**Pg**	**15 18 23.8**	**0.0**
LNSS				Sg	**Sg**	**15 18 30.6**	**+0.9**
	4μm,0.5s						
CERT	**Cerreto**	**0.51**	**227**	⇑*i*Pg	**Pg**	**15 18 24.7**	**-0.2**
CERT				Sg	**Sb**	**15 18 32.7**	**-1.0**
	4μm,0.5s						
CERT	**Cerreto**	**0.51**	**227**	⇑*i*Pg	**Pg**	**15 18 24.7**	**-0.2**
CERT				Sg	**Sb**	**15 18 32.7**	**-1.0**
	4μm,0.5s						
GUAR	**Guarcino**	**0.52**	**194**	⇑*i*Pg	**Pg**	**15 18 24.8**	**-0.3**
	1μm,0.4s						
GUAR	**Guarcino**	**0.52**	**194**	⇑*i*Pg	**Pg**	**15 18 24.8**	**-0.3**
	1μm,0.4s						
LPEL	**Lama dei Pelig**	**0.58**	**115**	Pg	**Pg**	**15 18 25.8**	**-0.6**
LPEL				Sg	**Sg**	**15 18 34.5**	**+0.5**
	5μm,0.7s						
LPEL	**Lama dei Pelig**	**0.58**	**115**	Pg	**Pg**	**15 18 25.8**	**-0.6**
LPEL				Sg	**Sg**	**15 18 34.5**	**+0.5**
	5μm,0.7s						
MNS	**Montasola**	**0.60**	**279**	Pg	**Pg**	**15 18 26.4**	**-0.3**
	1μm,0.5s						
MNS	**Montasola**	**0.60**	**279**	Pg	**Pg**	**15 18 26.4**	**-0.3**
	1μm,0.5s						
NRCA	**Norcia**	**0.60**	**334**	Pg	**Pg**	**15 18 26.2**	**-0.5**
NRCA				Sg	**Sg**	**15 18 35.4**	**+0.8**
	1μm,0.3s						
NRCA	**Norcia**	**0.60**	**334**	Pg	**Pg**	**15 18 26.2**	**-0.5**
NRCA				Sg	**Sg**	**15 18 35.4**	**+0.8**
	1μm,0.3s						
TRTR	**Tortoreto Alta**	**0.60**	**32**	Pg	**Pb**	**15 18 27.8**	**0.0**
	8μm,0.6s						
TRTR	**Tortoreto Alta**	**0.60**	**32**	Pg	**Pb**	**15 18 27.8**	**0.0**
	8μm,0.6s						
POFI	**Posta Fibreno**	**0.60**	**163**	Pg	**Pg**	**15 18 26.0**	**-0.8**
POFI	**Posta Fibreno**	**0.60**	**163**	Pg	**Pg**	**15 18 26.0**	**-0.8**
MTCE	**Montecelio**	**0.61**	**244**	⇑*i*Pg	**Pg**	**15 18 26.6**	**-0.3**
	1μm,0.8s						
MTCE	**Montecelio**	**0.61**	**244**	⇑*i*Pg	**Pg**	**15 18 26.6**	**-0.3**
	1μm,0.8s						
SDI	**San Donato**	**0.64**	**157**	⇑*i*Pg	**Pg**	**15 18 26.6**	**-0.8**
SDI				Sg	**Sb**	**15 18 37.1**	**-0.3**
SDI	**San Donato**	**0.64**	**157**	⇑*i*Pg	**Pg**	**15 18 26.6**	**-0.8**
SDI				Sg	**Sb**	**15 18 37.1**	**-0.3**
CAFR	**Castel Frentan**	**0.65**	**96**	Pg	**Pg**	**15 18 27.7**	**0.0**
	6μm,0.3s						
CAFR	**Castel Frentan**	**0.65**	**96**	Pg	**Pg**	**15 18 27.7**	**0.0**
	6μm,0.3s						
OFFI	**Offida**	**0.66**	**14**	Pg	**Pg**	**15 18 28.2**	**+0.4**
	6μm,0.7s						
OFFI	**Offida**	**0.66**	**14**	Pg	**Pg**	**15 18 28.2**	**+0.4**
	6μm,0.7s						
CESX	**Cesi**	**0.73**	**296**	Pg	**Pg**	**15 18 29.0**	**-0.2**
	1μm,1.0s						
CESX	**Cesi**	**0.73**	**296**	Pg	**Pg**	**15 18 29.0**	**-0.2**
	1μm,1.0s						
GIUL	**Giuliano Di Ro**	**0.76**	**193**	Pg	**Pg**	**15 18 29.1**	**-0.6**
	896nm,0.8s						
GIUL	**Giuliano Di Ro**	**0.76**	**193**	Pg	**Pg**	**15 18 29.1**	**-0.6**
	896nm,0.8s						
RNI2	**Rionero Sannit**	**0.78**	**139**	Pg	**Pg**	**15 18 29.8**	**-0.3**
	2μm,0.7s						
RNI2	**Rionero Sannit**	**0.78**	**139**	Pg	**Pg**	**15 18 29.8**	**-0.3**
	2μm,0.7s						
FDMO	**Fiordimonte**	**0.79**	**339**	Pg	**Pg**	**15 18 29.4**	**-1.0**
	548nm,0.5s						
FDMO	**Fiordimonte**	**0.79**	**339**	Pg	**Pg**	**15 18 29.4**	**-1.0**
	548nm,0.5s						
CERA	**Filignano**	**0.81**	**150**	Pg	**Pg**	**15 18 29.5**	**-1.1**
	2μm,0.8s						
CERA	**Filignano**	**0.81**	**150**	Pg	**Pg**	**15 18 29.5**	**-1.1**
	2μm,0.8s						
CESI	**CESI - Serrava**	**0.82**	**329**	Pg	**Pg**	**15 18 30.1**	**-0.9**
	462nm,0.9s						
CESI	**CESI - Serrava**	**0.82**	**329**	Pg	**Pg**	**15 18 30.1**	**-0.9**
	462nm,0.9s						
MIDA	**Miranda**	**0.88**	**138**	Pg	**Pg**	**15 18 30.7**	**-1.2**
	791nm,0.6s						
MIDA	**Miranda**	**0.88**	**138**	Pg	**Pg**	**15 18 30.7**	**-1.2**
	791nm,0.6s						
FRES	**Fresagrandinar**	**0.94**	**110**	Pg	**Pg**	**15 18 32.1**	**-1.1**
	1μm,0.8s						
FRES	**Fresagrandinar**	**0.94**	**110**	Pg	**Pg**	**15 18 32.1**	**-1.1**
	1μm,0.8s						
ASSB	**Assisi San Ben**	**0.96**	**321**	Pg	**Pg**	**15 18 32.6**	**-0.9**
	604nm,0.6s						
ASSB	**Assisi San Ben**	**0.96**	**321**	Pg	**Pg**	**15 18 32.6**	**-0.9**
	604nm,0.6s						
TRIV	**Trivento**	**0.96**	**123**	Pg	**Pg**	**15 18 32.9**	**-0.6**
	869nm,1.2s						
TRIV	**Trivento**	**0.96**	**123**	Pg	**Pg**	**15 18 32.9**	**-0.6**
	869nm,1.2s						
SNTG	**Esanatoglia**	**1.03**	**338**	Pg	**Pg**	**15 18 33.7**	**-1.3**
	176nm,0.4s						
SNTG	**Esanatoglia**	**1.03**	**338**	Pg	**Pg**	**15 18 33.7**	**-1.3**
	176nm,0.4s						
VAGA	**Valle Agricola**	**1.05**	**147**	Pg	**Pg**	**15 18 34.0**	**-1.2**
	304nm,0.3s						
VAGA	**Valle Agricola**	**1.05**	**147**	Pg	**Pg**	**15 18 34.0**	**-1.2**
	304nm,0.3s						
CING	**Cingoli**	**1.10**	**349**	Pg	**Pb**	**15 18 35.1**	**-1.2**
	618nm,0.5s						
CING	**Cingoli**	**1.10**	**349**	Pg	**Pb**	**15 18 35.1**	**-1.2**
	618nm,0.5s						
TOLF	**Tolfa**	**1.12**	**259**	Pg	**Pb**	**15 18 35.8**	**-0.8**
TOLF	**Tolfa**	**1.12**	**259**	Pg	**Pb**	**15 18 35.8**	**-0.8**
AOI	**Ancona**	**1.26**	**4**	Pn	**Pn**	**15 18 38.6**	**-0.2**
	451nm,0.7s						
AOI	**Ancona**	**1.26**	**4**	Pn	**Pn**	**15 18 38.6**	**-0.2**
	451nm,0.7s						
ARVD	**Arcevia**	**1.26**	**342**	Pn	**Pn**	**15 18 38.0**	**-0.9**
	468nm,0.8s						
ARVD	**Arcevia**	**1.26**	**342**	Pn	**Pn**	**15 18 38.0**	**-0.9**
	468nm,0.8s						
MS1	**Monte Sant'Ang**	**1.93**	**107**	*e*Sn	**Sg**	**15 19 18.1**	**+1.0**
NVLJ	**Novalja**	**2.48**	**24**	*i* Pn	**Pn**	**15 18 55.9**	**+0.3**
NVLJ				Sn	**Sn**	**15 19 26.8**	**+0.8**
NVLJ	**Novalja**	**2.48**	**24**	*i* Pn	**Pn**	**15 18 55.9**	**+0.3**
NVLJ				Sn	**Sn**	**15 19 26.8**	**+0.8**
STON	**Ston**	**3.17**	**78**	*e*Pn	**Pn**	**15 19 04.4**	**-0.7**
STON				Sn	**Sn**	**15 19 41.2**	**-1.8**
STON	**Ston**	**3.17**	**78**	*e*Pn	**Pn**	**15 19 04.4**	**-0.7**
STON				Sn	**Sn**	**15 19 41.2**	**-1.8**
PGF	**Pioggiola**	**3.32**	**276**	*e*Pn	**Pn**	**15 19 08.8**	**+1.5**
PGF				*e*Sn	**Sn**	**15 19 49.0**	**+2.0**
	5.5nm,0.5s						
PGF	**Pioggiola**	**3.32**	**276**	*e*Pn	**Pn**	**15 19 08.8**	**+1.5**
PGF				*e*Sn	**Sn**	**15 19 49.0**	**+2.0**
	2.8nm,0.5s						
JAVS	**Javornik**	**3.62**	**7**	*e*Pn	**Pn**	**15 19 11.8**	**+0.4**
JAVS				*i* Sn	**Sn**	**15 19 55.7**	**+1.4**
JAVS	**Javornik**	**3.62**	**7**	Pn	**Pn**	**15 19 11.8**	**+0.4**
JAVS				*i* Sn	**Sn**	**15 19 55.7**	**+1.4**
VOY	**Vojsko**	**3.75**	**4**	*e*Pn	**Pn**	**15 19 16.0**	**+2.9**
VOY				*e*		15 19 18.3	
VOY				*e*Sn	**Sn**	**15 19 58.3**	**+0.9**
VOY	**Vojsko**	**3.75**	**4**	*e*Pn	**Pn**	**15 19 16.0**	**+2.9**
VOY				*e*Sn	**Sn**	**15 19 58.3**	**+0.9**
ROBS	**Robic**	**3.95**	**0**	*i* Sn	**Sn**	**15 20 03.9**	**+1.7**
ROBS	**Robic**	**3.95**	**0**	*i* Sn	**Sn**	**15 20 03.9**	**+1.7**
ABTA	**Abfaltersbach**	**4.50**	**352**	⇓*i*Pn	**Pn**	**15 19 23.8**	**+0.3**
ABTA	**Abfaltersbach**	**4.50**	**352**	Pn	**Pn**	**15 19 23.8**	**+0.3**
SBF	**Sospel**	**4.69**	**292**	*e*Pn	**Pn**	**15 19 27.2**	**+1.1**
SBF				*e*Sn	**Sn**	**15 20 17.3**	**-3.4**
	3.2nm,0.3s						
SBF	**Sospel**	**4.69**	**292**	*e*Pn	**Pn**	**15 19 27.2**	**+1.1**
SBF				*e*Sn	**Sn**	**15 20 17.3**	**-3.4**
	1.6nm,0.3s						
DAVOX	**Davos/Dischmat**	**5.17**	**331**	Pn	**Pn**	**15 19 31.3**	**-1.4**
	0.2nm,0.3s,baz=167,slow=19,SNR=2.1						
DAVOX				Sn	**Sn**	**15 20 35.7**	**+3.2**
	1.1nm,0.3s,baz=327,slow=18,SNR=4.3						
FRF	**La Foret Royal**	**5.17**	**286**	*e*Pn	**Pn**	**15 19 33.5**	**+0.9**
FRF				*e*Sn	**Sn**	**15 20 28.4**	**-4.0**
	2.2nm,0.5s						
FRF	**La Foret Royal**	**5.17**	**286**	*e*Pn	**Pn**	**15 19 33.5**	**+0.9**
LMR	**La Mourre**	**5.23**	**284**	*e*Pn	**Pn**	**15 19 34.1**	**+0.7**
LMR				*e*Sn	**Sn**	**15 20 29.8**	**-4.0**
	3.2nm,0.5s						
LMR	**La Mourre**	**5.23**	**284**	*e*Pn	**Pn**	**15 19 34.1**	**+0.7**
MBDF	**Montbardon**	**5.45**	**299**	*e*P	**Pn**	**15 19 38.7**	**+2.2**
MBDF	**Montbardon**	**5.45**	**299**	*e*P	**Pn**	**15 19 38.7**	**+2.2**
LPG	**La Plagne**	**5.82**	**306**	*e*P	Pn	15 19 45.2	+3.5
LPG				*e*Sn	**Sn**	**15 20 44.3**	**-4.4**
	2.6nm,0.5s						
LPG	**La Plagne**	**5.82**	**306**	*e*P	Pn	15 19 45.2	+3.5
LPL	**La Plagne**	**5.84**	**306**	*e*P	Pn	15 19 45.2	+3.2
LPL				*e*Sn	**Sn**	**15 20 43.4**	**-5.7**
	1.4nm,0.3s						
LPL	**La Plagne**	**5.84**	**306**	*e*P	Pn	15 19 45.2	+3.2
SMRF	**Simiane la Rot**	**6.02**	**289**	*e*P	**Pn**	**15 19 46.1**	**+1.8**
SMRF	**Simiane la Rot**	**6.02**	**289**	*e*P	**Pn**	**15 19 46.1**	**+1.8**
GERES	**GERESS Array B**	**6.55**	**1**	Pn	**Pn**	**15 19 50.4**	**-1.3**
	0.4nm,0.3s,baz=175,slow=12,SNR=9.1						
GERES				Sn	**Sn**	**15 21 07.0**	**+0.5**
	0.8nm,0.3s,baz=176,slow=23,SNR=6.1						
KHC	**Kasperske Hory**	**6.83**	**1**	*e*PN	**Pn**	**15 19 57.5**	**+2.0**
KHC				*e*SN	**Sn**	**15 21 11.4**	**-2.0**
HINF	**Hinteralfeld**	**7.24**	**322**	*e*Pn	**Pn**	**15 20 01.3**	**+0.3**
HINF				*e*Sn	**Sn**	**15 21 17.7**	**-5.7**
	4.9nm,0.4s						
KEST	**Kesra**	**7.30**	**207**	Pn	Pn	15 20 05.8	+3.9
	0.3nm,0.3s,baz=127,slow=20,SNR=8.8						
VRAC	**Vranov**	**7.34**	**16**	LR	LR	15 23 03.8	
	comp=Z,39nm,18.2s,baz=101,slow=40						
CDF	**Champ du Feu**	**7.51**	**327**	*e*Pn	**Pn**	**15 20 04.7**	**-0.1**
CDF				*e*Sn	**Sn**	**15 21 24.7**	**-5.4**
	3.0nm,0.4s						
CDF	**Champ du Feu**	**7.51**	**327**	*e*Pn	**Pn**	**15 20 04.7**	**-0.1**
HAU	**Haudompre**	**7.61**	**321**	*e*Pn	**Pn**	**15 20 06.5**	**+0.4**
HAU				*e*Sn	Sn	15 21 25.3	-7.1
	9.7nm,0.6s						
HAU	**Haudompre**	**7.61**	**321**	*e*Pn	**Pn**	**15 20 06.5**	**+0.4**
MLR	**Muntele Rosu**	**9.55**	**66**	Pn	Pn	15 20 36.2	+3.4
	0.0nm,0.3s,baz=141,slow=16,SNR=4.6						
FINES	**FINESS Array B**	**20.62**	**17**	P	**P**	**15 22 54.9**	**+0.5**
	2.5nm,0.9s,baz=202,slow=9.7,SNR=4.5						
TORD	**Torodi Ar. Bea**	**30.79**	**203**	P	**P**	**15 24 33.9**	**+2.8**
	0.4nm,0.5s,baz=13,slow=8.5,SNR=4.0						
YKA	**Yellowknife Ar**	**67.58**	**337**	P	**P**	**15 29 12.4**	**+1.0**
	0.1nm,0.5s,baz=43,slow=5.5,SNR=4.5						

*MAN **09** 15:29:47, 13.30N×120.25E, h30km, mb4.2, ML3.0, MS2.8*
*ISCJB **09** 15:29:48.1±0.8, 13.35N±0.05×120.4E±0.1, h70km, mb3.3/3, Error ellipse: s-maj=15.2km s-min=7.6km az=7.1*
*IDC **09** 15:29:50.7±4.0, 13.43N×120.72E, h65km±40km, mb3.1/3, mb1 3.3/3, mb1mx2.9/24, mbtmp3.1/3, Error ellipse: s-maj=131.0km s-min=23.7km az=73.0*
ISC 09 15:29:48.9±1.1**, 13.35N**±0.05×**120.28E**±0.09**, h70km, n12, σ2.27s**/14**, mb3.4**/3**, 1C, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.38**	**355**	*e*P	**Pn**	**15 29 58.2**	**-2.5**
LUBP				*e*S	**Sn**	**15 30 04.9**	**-4.5**
TGY	**Tagaytay City**	**0.98**	**41**	⇑*e*P	**Pn**	**15 30 07.1**	**-0.2**
TGY	**Tagaytay City**	**0.98**	**41**	P	**Pn**	**15 30 07.0**	**-0.3**
	276nm,0.3s,baz=241,slow=2.7,SNR=24						
TGY				S	**Sn**	**15 30 17.3**	**-3.6**
	122nm,0.3s,baz=347,slow=17,SNR=7.1						
SJMP	**San Jose**	**1.21**	**137**	*e*P	**Pn**	**15 30 08.8**	**-1.3**
OTRP	**Odiongan**	**1.96**	**120**	*e*P	**Pn**	**15 30 19.0**	**-1.1**
ENPP	**El Nido**	**2.29**	**201**	*e*P	**Pn**	**15 30 24.0**	**-0.5**
CUYO	**Cuyo Island**	**2.59**	**164**	*e*P	**Pn**	**15 30 27.5**	**-1.2**
BALP	**Baler**	**2.69**	**28**	*e*P	**Pn**	**15 30 31.2**	**+1.3**
GUIM	**Jordan**	**3.53**	**140**	*e*P	**Pn**	**15 30 41.2**	**-0.2**
WRA	**Warramunga Arr**	**35.86**	**157**	P	**P**	**15 36 43.1**	**+0.9**
	0.2nm,0.4s,baz=332,slow=11,SNR=3.7						
SONM	**Songino Array**	**36.27**	**344**	P	**P**	**15 36 48.2**	**+2.6**
	0.2nm,0.4s,baz=165,slow=9.9,SNR=4.7						
ASAR	**Alice Springs**	**39.13**	**160**	P	**P**	**15 37 11.7**	**+1.8**
	0.2nm,0.5s,baz=337,slow=6.8,SNR=9.7						

*NNC **09** 15:45:46.9±8.2, 37.70N×71.73E, h156km±92km, mb2.8, mpv3.7, Error ellipse: s-maj=74.2km s-min=40.5km az=9.0*
*IDC **09** 15:45:48.4±6.9, 37.79N×71.83E, h185km±46km, mb3.3/4, mb1 3.3/10, mb1mx3.0/33, mbtmp3.2/10, Error ellipse: s-maj=64.2km s-min=32.7km az=3.0*
ISC 09 15:45:42.1±2.9**, 37.5N**±0.2×**71.7E**±0.1**, h109km, n36, σ2.17s**/25**, mb3.6**/4**, 4C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.92**	**18**	P	**Pn**	**15 46 56.3**	**+2.1**

	SNR=127						
UCH	**Uchtor**	**5.24**	**24**	P	**Pn**	**15 47 00.8**	**+2.2**
	SNR=5.8						
KZA	**Kyzart**	**5.38**	**30**	P	**Pn**	**15 47 01.2**	**+0.9**
	SNR=13						
EKS2	**Erkin-Say**	**5.45**	**17**	P	**Pn**	**15 47 03.3**	**+2.3**
	SNR=18						
AAK	**Ala-Archa**	**5.61**	**22**	P	**Pn**	**15 47 05.5**	**+2.2**
	SNR=48						
AAK	**Ala-Archa**	**5.61**	**22**	P	**Pn**	**15 47 05.6**	**+2.4**
	12nm,0.3s,baz=167,slow=6.4,SNR=120						
AAK				S	**Sn**	**15 48 07.6**	**+1.2**
	1.3nm,0.3s,baz=303,slow=21,SNR=12						
KK31	**Karatay Array**	**5.71**	**351**	⇓P	**Pn**	**15 47 07.7**	**+3.1**
	3.5nm,0.4s,baz=178,slow=14,SNR=98						
KK31				⇑Sn	**Sn**	**15 48 09.5**	**+0.7**
	43nm,0.4s,baz=187,slow=25,SNR=7.2						
KBK	**Karagaybulak**	**5.77**	**25**	P	**Pn**	**15 47 07.5**	**+2.1**
	SNR=14						
ULHL	**Ulahol**	**5.94**	**35**	P	**Pn**	**15 47 08.2**	**+0.4**
	SNR=6.2						
CHMS	**Chumysh**	**6.02**	**22**	P	**Pn**	**15 47 10.6**	**+2.0**
	SNR=13						
USP	**Ospenovka**	**6.19**	**19**	P	**Pn**	**15 47 12.4**	**+1.3**
	SNR=8.7						
TKM2	**Tokmak 2**	**6.23**	**28**	⇓Pn	**Pn**	**15 47 12.8**	**+1.0**
	5.6nm,0.7s						
TKM2				⇓Sn	**Sn**	**15 48 22.2**	**+0.6**
	3.4nm,0.7s						
TKM2	**Tokmak 2**	**6.23**	**28**	P	**Pn**	**15 47 13.2**	**+1.4**
	SNR=8.4						
MKAR	**Makanchi Array**	**12.20**	**37**	P	**Pn**	**15 48 30.2**	**-2.0**
	0.1nm,0.3s,baz=225,slow=14,SNR=8.1						
PYUN	**Piuthan**	**13.32**	**131**	*e*P	Pn	15 48 39.0	-8.1
DANN	**Dangsing**	**13.61**	**128**	*e*P	Pn	15 48 43.6	-7.4
	12nm,0.4s						
KOLN	**Koldanda**	**13.93**	**130**	*e*P	Pn	15 48 47.3	-7.7
KURBB	**Kurchatov Arra**	**14.05**	**18**	P	**Pn**	**15 48 55.9**	**-0.2**
	0.1nm,0.3s,baz=202,slow=10,SNR=9.1						
AB31	**Akbulak array**	**14.54**	**328**	⇓P	**Pn**	**15 49 03.9**	**+1.5**
	0.9nm,0.3s,baz=137,slow=14,SNR=45						
DMN	**Daman**	**14.97**	**127**	*e*P	Pn	15 49 01.2	-7.3
	8.7nm,0.5s						
PKIN	**Phulchoki**	**15.18**	**126**	*e*P	Pn	15 49 03.8	-7.3
	12nm,0.5s						
PKI	**Pulchoki**	**15.19**	**126**	*e*P	Pn	15 49 03.8	-7.5
	17nm,0.6s						
GUN	**Gumba**	**15.27**	**124**	*e*P	Pn	15 49 04.9	-7.4
	7.4nm,0.4s						
VOSK	**Vostochnaya**	**15.28**	**358**	⇑P	Pn	15 49 07.7	-4.0
	0.2nm,0.3s						
BVAR	**Borovoye Array**	**15.60**	**357**	P	**Pn**	**15 49 14.2**	**-1.5**
	0.3nm,0.3s,baz=156,slow=11,SNR=5.2						
ZRNK	**Zerenda**	**15.61**	**354**	⇑P	**Pn**	**15 49 16.2**	**+0.4**
	1.3nm,0.7s						
AKTO	**Aktyubinsk**	**16.25**	**327**	⇑P	**Pn**	**15 49 25.3**	**+1.5**
	0.2nm,0.5s						
AKTO	**Aktyubinsk**	**16.25**	**327**	P	**Pn**	**15 49 24.1**	**+0.3**
	0.5nm,0.3s,baz=136,slow=9.4,SNR=7.1						
AKTO				S	**Sn**	**15 52 17.8**	**-6.1**
	0.1nm,0.3s,baz=216,slow=14,SNR=4.8						
RAMN	**Ramite**	**16.39**	**125**	*e*P	Pn	15 49 18.6	-7.5
	13nm,0.6s						
TAPN	**Taplejung**	**16.86**	**122**	*e*P	Pn	15 49 25.3	-6.5
	4.3nm,0.4s						
ODAN	**Odare**	**16.96**	**124**	*e*P	Pn	15 49 26.1	-7.0
	5.9nm,0.5s						
ZALV	**Zalesovo Beam**	**18.82**	**25**	P	**P**	**15 49 50.9**	**-2.2**
	0.4nm,0.3s,baz=220,slow=10,SNR=12						
FINES	**FINESS Array B**	**37.00**	**325**	P	P	15 52 37.6	-3.1
	8.5nm,1.2s,baz=133,slow=8.1,SNR=5.1						
HFS	**Hagfors**	**42.66**	**321**	P	P	15 53 25.1	-2.4
	0.8nm,0.5s,baz=94,slow=11,SNR=5.8						
NOA	**NORSAR Array B**	**43.95**	**322**	P	P	15 53 35.1	-2.8
	0.6nm,0.9s,baz=95,slow=4.5,SNR=3.3						
YKA	**Yellowknife Ar**	**80.27**	**3**	P	P	15 57 36.2	-4.1
	0.1nm,0.5s,baz=349,slow=5.3,SNR=4.5						

IDC 09 15:57:38.6±2.3, 25.12N×144.31E, h0km, mb3.7/6, mb1 3.7/7, mb1mx3.5/26, mbtmp3.7/7, ML3.5/1, Error ellipse: s-maj=94.5km s-min=20.3km az=75.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.74**	**316**	Pn	Pn	15 58 23.7	-0.2
	7.6nm,0.3s,baz=304,slow=22,SNR=10						
CBIJ				Sn	Sn	15 58 52.7	-5.1
	14nm,0.3s,baz=108,slow=22,SNR=5.3						
WRA	**Warramunga Arr**	**45.83**	**193**	P	P	16 06 02.2	-0.3
	0.4nm,0.4s,baz=18,slow=9.0,SNR=14						
ASAR	**Alice Springs**	**49.54**	**193**	P	P	16 06 31.6	+0.2
	0.2nm,0.5s,baz=17,slow=14,SNR=7.7						
ZALV	**Zalesovo Beam**	**52.22**	**320**	P	P	16 06 50.9	-0.3
	0.4nm,0.5s,baz=111,slow=8.2,SNR=2.6						
MKAR	**Makanchi Array**	**53.20**	**311**	P	P	16 06 57.8	-0.9
	0.1nm,0.4s,baz=98,slow=8.9,SNR=4.2						
BVAR	**Borovoye Array**	**60.78**	**318**	P	P	16 07 52.8	+0.5
	1.0nm,0.7s,baz=81,slow=9.2,SNR=4.4						
FINES	**FINESS Array B**	**80.55**	**335**	P	P	16 09 53.1	+0.5
	2.1nm,0.9s,baz=54,slow=3.5,SNR=6.9						

*IDC **09** 16:14:16.4±0.8, 6°.65S×149°.72E, h0km, mb4.0/7, mb1 4.3/9, mb1mx4.0/19, mbtmp4.1/9, ML3.9/2, MS3.4/5, Ms1 3.4/5, ms1mx2.8/32, Error ellipse: s-maj=41.6km s-min=16.4km az=122.0*

*ISCJB **09** 16:14:21.8±0.6, 6°.7S±0°.1×149°.6E±0°.1, h49km, mb4.1/12, MS3.5/3, Error ellipse: s-maj=22.9km s-min=9.7km az=34.3*

*NEIC **09** 16:14:22.0±2.9, 6°.80S×149°.73E, h36km±24km, mb4.4/7, Error ellipse: s-maj=23.6km s-min=14.9km az=101.0*

ISC 09 16:14:23.2±0.7, 6.7S±0°.1×149.6E±0°.2, h49km, n35, σ1§14/34, mb4.0/12, MS3.1/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.64**	**222**	Pn	**Pn**	**16 15 16.9**	**-0.2**
PMG				*e*Sn	**Sn**	**16 15 56.3**	**-2.5**
PMG	**Port Moresby**	**3.64**	**222**	Pn	**Pn**	**16 15 16.9**	**-0.2**
	21nm,0.3s,baz=33,slow=5.3,SNR=70						
PMG				Sn	**Sn**	**16 16 02.7**	**+3.9**
	26nm,0.3s,baz=26,slow=22,SNR=20						
HNR	**Honiara**	**10.56**	**106**	LR	LR	16 19 50.1	
	comp=Z,102nm,19.1s,baz=90,slow=32						
CTA	**Charters Tower**	**13.71**	**194**	LR	LR	16 21 35.8	
	comp=Z,110nm,21.7s,baz=73,slow=32						
WRAB	**Tennant Creek**	**19.83**	**227**	*e*Pn	**P**	**16 18 49.9**	**-0.2**
	14nm,0.8s						
WRA	**Warramunga Arr**	**19.85**	**227**	P	**P**	**16 18 50.3**	**+0.1**
WRA	**Warramunga Arr**	**19.85**	**227**	P	**P**	**16 18 50.3**	**+0.1**
	0.8nm,0.3s,baz=52,slow=11,SNR=89						
GUMO	**Guam**	**20.71**	**347**	LR	LR	16 25 10.0	
	comp=Z,70nm,18.2s,baz=74,slow=32						
AS31	**Alice Springs**	**22.65**	**220**	*e*P	**P**	**16 19 19.6**	**-0.8**
ASAR	**Alice Springs**	**22.66**	**220**	P	**P**	**16 19 19.6**	**-0.9**
ASAR				S	**S**	**16 23 24.7**	**-0.6**
ASAR	**Alice Springs**	**22.66**	**220**	P	**P**	**16 19 19.6**	**-0.9**
	1.5nm,0.6s,baz=55,slow=9.0,SNR=30						
ASAR				S	**S**	**16 23 24.7**	**-0.6**
	2.3nm,1.2s,baz=33,slow=23,SNR=5.8						
ASAR				LR	LR	16 28 26.9	
	comp=Z,76nm,18.9s,baz=13,slow=37						
FITZ	**Fitzroy Crossi**	**26.00**	**242**	P	**P**	**16 19 50.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**26.00**	**242**	P	**P**	**16 19 50.9**	**-0.8**
	2.0nm,0.5s,baz=41,slow=11,SNR=19						
STKA	**Stephens Creek**	**26.15**	**196**	*e*P	**P**	**16 19 51.4**	**-1.5**
	1.5nm,1.0s						
STKA	**Stephens Creek**	**26.15**	**196**	P	**P**	**16 19 53.9**	**+0.9**
	4.7nm,1.0s,baz=353,slow=6.8,SNR=8.6						
MBWA	**Marble Bar**	**32.31**	**241**	P	**P**	**16 20 48.3**	**+0.5**
	8.7nm,1.2s						
PETK	**Petropavlovsk-**	**59.97**	**6**	P	**P**	**16 24 24.3**	**-0.1**
PETK	**Petropavlovsk-**	**59.97**	**6**	P	**P**	**16 24 24.3**	**-0.1**
	2.4nm,1.0s,baz=203,slow=14,SNR=2.7						
VNDA	**Vanda**	**71.07**	**177**	P	**P**	**16 25 35.6**	**-0.1**
VNDA	**Vanda**	**71.07**	**177**	P	**P**	**16 25 35.6**	**-0.1**
	1.3nm,0.8s,baz=316,slow=7.2,SNR=6.4						
SBA	**Scott Base**	**71.68**	**176**	P	**P**	**16 25 40.0**	**+0.6**
	4.1nm,1.2s						
MK31	**Makanchi Array**	**79.72**	**320**	P	**P**	**16 26 27.0**	**+1.1**
QSPA	**South Pole Qui**	**83.27**	**180**	*e*P	**P**	**16 26 45.1**	**+0.6**
	6.5nm,1.0s						
KURK	**Kurchatov**	**83.35**	**323**	P	**P**	**16 26 45.9**	**+0.9**
	1.5nm,1.0s						

AAK	**Ala-Archa**	**83.71**	**314**	P	P	16 26 50.9	+3.6
	1.2nm,0.8s						
ILAR	**Eielson Array**	**85.10**	**23**	P	**P**	**16 26 52.5**	**-1.1**
ILAR	**Eielson Array**	**85.10**	**23**	P	**P**	**16 26 52.5**	**-1.1**
	0.4nm,0.6s,baz=250,slow=5.2,SNR=7.4						
NVAR	**Mina Array Bea**	**95.72**	**52**	P	**P**	**16 27 44.9**	**+0.4**
NVAR	**Mina Array Bea**	**95.72**	**52**	P	**P**	**16 27 44.9**	**+0.4**
	1.1nm,0.8s,baz=260,slow=7.5,SNR=7.2						
SNAA	**Sanae**		**99.71 189**	LR	LR	17 09 58.8	
	comp=Z,62nm,19.4s,baz=130,slow=34						
GERES	**GERESS Array B**	**123.96**	**326**	PKP	**PKPdf**	**16 33 17.1**	**+0.9**
GERES	**GERESS Array B**	**123.96**	**326**	PKP	**PKPdf**	**16 33 17.1**	**+0.9**
	0.2nm,0.5s,baz=350,slow=3.0,SNR=3.6						
TOA0	**Torodi Ar. Sit**	**147.81**	**284**	*e*PKPbc	**PKPbc**	**16 34 04.3**	**+0.5**
TORD	**Torodi Ar. Bea**	**147.81**	**284**	PKPbc	**PKPab**	**16 34 04.9**	**-1.4**
TORD	**Torodi Ar. Bea**	**147.81**	**284**	PKPbc	**PKPab**	**16 34 04.9**	**-1.4**
	2.9nm,0.8s,baz=62,slow=2.4,SNR=19						

*CSEM **09** 16:24:52.9±0.1, 42°.29N×13°.46E, h10km, ML3.1/12, Error ellipse: s-maj=2.0km s-min=1.4km az=63.0*

ROM 09 16:24:52.6±0.1, 42°.30N×13°.46E, h10km, MI2.5/22, 6C-2D, Error ellipse: s-maj=0.8km s-min=0.6km az=51.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.07**	**322**	Pg	Pg	16 24 55.4	+0.5
AQU				Sg	Sg	16 24 56.9	+0.3
AQU	**L'Aquila**	**0.07**	**322**	Pg	Pg	16 24 55.4	+0.5
AQU				Sg	Sg	16 24 56.9	+0.3
FAGN	**Fagnano**	**0.09**	**109**	Pg	Pg	16 24 55.6	+0.4
FAGN				Sg	Sg	16 24 57.5	+0.5
	18μm,0.3s						
FAGN	**Fagnano**	**0.09**	**109**	Pg	Pg	16 24 55.6	+0.4
FAGN				Sg	Sg	16 24 57.5	+0.5
	18μm,0.3s						
CAMP	**Campotosto**	**0.24**	**350**	Pg	Pg	16 24 58.3	+0.5
CAMP				Sg	Sg	16 25 02.6	+1.3
	358nm,0.3s						
CAMP	**Campotosto**	**0.24**	**350**	Pg	Pg	16 24 58.3	+0.5
CAMP				Sg	Sg	16 25 02.6	+1.3
	358nm,0.3s						
FIAM	**Fiamignano**	**0.26**	**264**	⇑*i*Pg	Pg	16 24 58.7	+0.7
FIAM				Sg	Sg	16 25 02.9	+1.2
	1μm,0.7s						
FIAM	**Fiamignano**	**0.26**	**264**	⇑*i*Pg	Pg	16 24 58.7	+0.7
FIAM				Sg	Sg	16 25 02.9	+1.2
	1μm,0.7s						
PTQR	**Pietraquaria**	**0.28**	**190**	⇑*i*Pg	Pg	16 24 58.8	+0.5
PTQR				Sg	Sg	16 25 03.2	+1.0
	107nm,0.2s						
PTQR	**Pietraquaria**	**0.28**	**190**	⇑*i*Pg	Pg	16 24 58.8	+0.5
PTQR				Sg	Sg	16 25 03.2	+1.0
	107nm,0.2s						
VCEL	**Villa Celiera**	**0.30**	**70**	Pg	Pg	16 24 59.3	+0.6
VCEL				Sg	Sb	16 25 04.3	-1.0
	1μm,0.3s						
VCEL	**Villa Celiera**	**0.30**	**70**	Pg	Pg	16 24 59.3	+0.6
VCEL				Sg	Sb	16 25 04.3	-1.0
	1μm,0.3s						
TERO	**Teramo**	**0.34**	**18**	Pg	Pg	16 24 59.6	+0.1
TERO				Sg	Sg	16 25 04.9	+0.7
	609nm,0.6s						
TERO	**Teramo**	**0.34**	**18**	Pg	Pg	16 24 59.6	+0.1
TERO				Sg	Sg	16 25 04.9	+0.7
	609nm,0.6s						
INTR	**Introdacqua**	**0.43**	**131**	Pg	Pg	16 25 01.6	+0.4
INTR				Sg	Sb	16 25 08.2	-1.0
	2μm,0.9s						
INTR	**Introdacqua**	**0.43**	**131**	Pg	Pg	16 25 01.6	+0.4
INTR				Sg	Sb	16 25 08.2	-1.0
	2μm,0.9s						
LNSS	**Leonessa**	**0.44**	**315**	⇑*i*Pg	Pg	16 25 01.7	+0.3
LNSS				Sg	Sg	16 25 07.9	+0.6
	498nm,0.4s						
LNSS	**Leonessa**	**0.44**	**315**	⇑*i*Pg	Pg	16 25 01.7	+0.3
LNSS				Sg	Sg	16 25 07.9	+0.6
	498nm,0.4s						
VVLD	**Villa Vallelon**	**0.44**	**164**	Pg	Pg	16 25 01.4	0.0
VVLD				Sg	Sg	16 25 08.3	+1.0
	401nm,0.4s						
VVLD	**Villa Vallelon**	**0.44**	**164**	Pg	Pg	16 25 01.4	0.0
VVLD				Sg	Sg	16 25 08.3	+1.0
	401nm,0.4s						
CERT	**Cerreto**	**0.50**	**226**	Pg	Pg	16 25 02.6	+0.2
CERT				Sg	Sb	16 25 10.5	-0.5
	455nm,0.4s						
CERT	**Cerreto**	**0.50**	**226**	Pg	Pg	16 25 02.6	+0.2
CERT				Sg	Sb	16 25 10.5	-0.5
	455nm,0.4s						
GUAR	**Guarcino**	**0.51**	**193**	Pg	Pg	16 25 02.8	+0.1
	204nm,0.3s						
GUAR	**Guarcino**	**0.51**	**193**	Pg	Pg	16 25 02.8	+0.1
	204nm,0.3s						
MNS	**Montasola**	**0.59**	**279**	Pg	Pg	16 25 04.1	0.0
	163nm,0.8s						
MNS	**Montasola**	**0.59**	**279**	Pg	Pg	16 25 04.1	0.0
	163nm,0.8s						
LPEL	**Lama dei Pelig**	**0.59**	**115**	Pg	Pg	16 25 04.1	-0.1
LPEL				Sg	Sb	16 25 13.1	-0.5
	501nm,0.3s						
LPEL	**Lama dei Pelig**	**0.59**	**115**	Pg	Pg	16 25 04.1	-0.1
LPEL				Sg	Sb	16 25 13.1	-0.5
	501nm,0.3s						
NRCA	**Norcia**	**0.60**	**334**	⇓*i*Pg	Pg	16 25 04.4	+0.1
	60nm,0.4s						
NRCA	**Norcia**	**0.60**	**334**	⇓*i*Pg	Pg	16 25 04.4	+0.1
	60nm,0.4s						
MTCE	**Montecelio**	**0.60**	**243**	Pg	Pg	16 25 04.6	+0.3
	144nm,0.5s						
MTCE	**Montecelio**	**0.60**	**243**	Pg	Pg	16 25 04.6	+0.3
	144nm,0.5s						
POFI	**Posta Fibreno**	**0.61**	**162**	Pg	Pg	16 25 04.4	-0.1
POFI	**Posta Fibreno**	**0.61**	**162**	Pg	Pg	16 25 04.4	-0.1
SDI	**San Donato**	**0.64**	**156**	Pg	Pg	16 25 05.1	0.0
SDI				Sg	Sb	16 25 14.8	-0.3
	171nm,0.3s						
SDI	**San Donato**	**0.64**	**156**	Pg	Pg	16 25 05.1	0.0
SDI				Sg	Sb	16 25 14.8	-0.3
	171nm,0.3s						
OFFI	**Offida**	**0.66**	**14**	Pg	Pg	16 25 05.8	+0.4
	643nm,0.6s						
OFFI	**Offida**	**0.66**	**14**	Pg	Pg	16 25 05.8	+0.4
	643nm,0.6s						
CESX	**Cesi**	**0.73**	**296**	Pg	Pb	16 25 07.1	-0.3
	125nm,0.8s						
CESX	**Cesi**	**0.73**	**296**	Pg	Pb	16 25 07.1	-0.3
	125nm,0.8s						
GIUL	**Giuliano Di Ro**	**0.75**	**192**	Pg	Pg	16 25 07.1	-0.1
	85nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.75**	**192**	Pg	Pg	16 25 07.1	-0.1
	85nm,0.5s						
RNI2	**Rionero Sannit**	**0.78**	**139**	Pg	Pb	16 25 08.4	-0.1
	157nm,0.4s						
RNI2	**Rionero Sannit**	**0.78**	**139**	Pg	Pb	16 25 08.4	-0.1
	157nm,0.4s						
FDMO	**Fiordimonte**	**0.79**	**340**	Pg	Pg	16 25 07.8	-0.1
	75nm,0.4s						
FDMO	**Fiordimonte**	**0.79**	**340**	Pg	Pg	16 25 07.8	-0.1
	75nm,0.4s						
CERA	**Filignano**	**0.81**	**149**	Pg	Pg	16 25 07.9	-0.5
	177nm,0.8s						
CERA	**Filignano**	**0.81**	**149**	Pg	Pg	16 25 07.9	-0.5
	177nm,0.8s						
CESI	**CESI - Serrava**	**0.82**	**330**	Pg	Pg	16 25 08.8	+0.2
	33nm,0.4s						
CESI	**CESI - Serrava**	**0.82**	**330**	Pg	Pg	16 25 08.8	+0.2
	33nm,0.4s						
MIDA	**Miranda**	**0.88**	**138**	Pg	Pg	16 25 09.1	-0.6
	119nm,0.4s						
MIDA	**Miranda**	**0.88**	**138**	Pg	Pg	16 25 09.1	-0.6
	119nm,0.4s						
ASSB	**Assisi San Ben**	**0.95**	**322**	Pg	Pg	16 25 10.9	-0.2
	94nm,0.7s						
ASSB	**Assisi San Ben**	**0.95**	**322**	Pg	Pg	16 25 10.9	-0.2
	94nm,0.7s						
NVLJ	**Novalja**	**2.49**	**24**	*i* Pn	Pn	16 25 35.1	+1.9
NVLJ				Sn	Sn	16 26 04.4	+0.9
NVLJ	**Novalja**	**2.49**	**24**	*i* Pn	Pn	16 25 35.0	+1.9
NVLJ				Sn	Sn	16 26 04.4	+0.9

*SZGRF **09** 16:34:18.3, 35°.51N×72°.41E, h184km, mb4.9, Pakistan*

*BJI **09** 16:34:24.3, 36°.68N×70°.39E, h180km, mB4.7/25, mb4.7/37*

*ISCJB **09** 16:34:27.3±0.3, 36°.51N±0°.02×70°.96E±0°.02, h175km±3km, mb4.6/140, Error ellipse: s-maj=3.3km s-min=2.6km az=147.7*

*MOS **09** 16:34:27.8±0.8, 36°.51N×70°.97E, h182km, mb4.9/43, Error ellipse: s-maj=5.6km s-min=3.4km az=108.1*

*IDC **09** 16:34:29.7±0.5, 36°.45N×70°.94E, h187km±4km, mb4.1/30, mb1 4.3/35, mb1mx4.2/38, mbtmp4.2/35, Error ellipse: s-maj=10.9km s-min=6.7km az=20.0*

*NEIC **09** 16:34:29.4±0.2, 36°.51N×70°.97E, mb4.6/57, Error ellipse: s-maj=4.6km s-min=3.5km az=198.0*

NEIC Felt [III] at Kabul. Also felt at Jalalabad.

*DJA **09** 16:34:29.3±0.6, 36°.36N±7°×7°.1E±°, h168km±9km, MS5.4/7, mB5.6/2, mb4.9/7, MLv5.6/2, Mw(mB)5.1/2*

*NNC **09** 16:34:32.4±6.9, 36°.91N×70°.69E, h180km±66km, mb4.3, mpv5.3, Error ellipse: s-maj=59.9km s-min=31.7km az=5.0*

ISC 09 16:34:29.6±0.3, 36°.55N±0°.03×70°.96E±0°.03, h188km±2km, h188km:pP-P, n471, σ1§33/649, mb4.7/140, 41C-29D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.54**	**219**	*e*PN	**Pn**	**16 35 11.7**	**-1.9**
KBL	**Kabul**	**2.54**	**219**	*e*Pn	**Pn**	**16 35 11.7**	**-1.9**
KBL				*e*Sn	**Sn**	**16 35 42.5**	**-5.2**
CEP	**Cherat**	**2.83**	**164**	⇓P	**Pn**	**16 35 16.3**	**-0.5**
CEP				S	Sn	16 35 47.0	-6.6
CHCP	**Chirah Chowk**	**3.45**	**146**	⇓P	**Pn**	**16 35 24.3**	**+0.1**
THW	**Thamme Wali**	**3.80**	**170**	⇓P	**Pn**	**16 35 27.8**	**-0.8**
SARP	**Sargodha**	**4.83**	**162**	⇓P	**Pn**	**16 35 40.1**	**-1.5**
SARP				S	**Sn**	**16 36 33.0**	**-5.2**
KSH	**Kashi**	**4.94**	**52**	P	Pn	16 35 39.6	-3.5
KSH				smax	smax		
	comp=N,4μm,0.5s						
KSH				smax	smax		
	comp=E,2μm,0.6s						
JMU	**Jammu**	**5.02**	**139**	*e*P	**Pn**	**16 35 42.0**	**-2.0**
JMU				*e*S	**Sn**	**16 36 37.5**	**-4.9**
THN	**Thein Dam**	**5.68**	**135**	*e*P	**Pn**	**16 35 50.0**	**-2.6**
THN				*ex*	Sn	16 36 51.0	-6.9
AML	**Almayashu**	**5.96**	**20**	*i* PN	**Pn**	**16 35 56.0**	**-0.5**
AML	**Almayashu**	**5.96**	**20**	P	**Pn**	**16 35 56.0**	**-0.5**
	SNR=518						
UCH	**Uchtor**	**6.30**	**25**	*i* PN	**Pn**	**16 36 00.7**	**-0.3**
UCH	**Uchtor**	**6.30**	**25**	P	**Pn**	**16 36 00.7**	**-0.3**
	SNR=19						
KZA	**Kyzart**	**6.44**	**30**	*i* PN	**Pn**	**16 36 01.6**	**-1.2**
KZA	**Kyzart**	**6.44**	**30**	P	**Pn**	**16 36 01.6**	**-1.2**
	SNR=136						
EKS2	**Erkin-Say**	**6.48**	**19**	*e*PN	**Pn**	**16 36 02.0**	**-1.0**
EKS2				pmax	pmax		
	comp=Z,12nm,0.3s						
EKS2	**Erkin-Say**	**6.48**	**19**	*e*Pn	**Pn**	**16 36 02.0**	**-1.0**
	comp=Z,12nm,0.3s						
EKS2				*e*Sn	**Sn**	**16 37 13.5**	**-3.3**
EKS2	**Erkin-Say**	**6.48**	**19**	P	**Pn**	**16 36 02.7**	**-0.3**
	SNR=107						
KK31	**Karatay Array**	**6.55**	**357**	⇓P	**Pn**	**16 36 03.0**	**-0.9**
	comp=Z,100nm,0.3s,baz=180,slow=15,SNR=4808						
KK31				⇑S	**Sn**	**16 37 13.1**	**-5.3**
	comp=Z,493nm,0.4s,baz=184,slow=21,SNR=16						
KK31	**Karatay Array**	**6.55**	**357**	*e*PN	**Pn**	**16 36 03.0**	**-0.9**
KK31				pmax	pmax		
	comp=Z,189nm,0.3s						
KKAR	**Karatay Array**	**6.55**	**357**	*e*PN	**Pn**	**16 36 03.0**	**-0.9**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KKAR	**Karatay Array**	**6.55**	**357**	*e*Pn	**Pn**	**16 36 03.0**	**-0.9**
	comp=Z,0.5nm,0.3s						
KKAR				*e*Sn	Sn	16 37 08.4	-10
AAK	**Ala-Archa**	**6.66**	**23**	*e*PN	**Pn**	**16 36 05.1**	**-0.3**
AAK				pmax	pmax		
	comp=Z,100nm,0.4s						
AAK	**Ala-Archa**	**6.66**	**23**	*e*Pn	**Pn**	**16 36 05.1**	**-0.3**
	comp=Z,100nm,0.4s						
AAK				S	**Sn**	**16 37 18.7**	**-2.4**
AAK	**Ala-Archa**	**6.66**	**23**	P	**Pn**	**16 36 05.2**	**-0.3**
	comp=Z,39nm,0.3s,baz=179,slow=3.2,SNR=315						
AAK				S	**Sn**	**16 37 18.7**	**-2.4**
	comp=Z,23nm,0.3s,baz=218,slow=17,SNR=4.4						
KBK	**Karagaybulak**	**6.83**	**26**	*i* PN	**Pn**	**16 36 07.7**	**0.0**
KBK	**Karagaybulak**	**6.83**	**26**	P	**Pn**	**16 36 07.7**	**0.0**
	SNR=58						
BHK	**Bhakra**	**6.84**	**137**	*e*P	**Pn**	**16 36 06.0**	**-1.7**
BHK				*ex*	x	16 37 19.0	
FRU	**Bishkek**	**6.88**	**23**	⇓*i*PN	**Pn**	**16 36 08.5**	**+0.4**
FRU				*e*		16 37 25.5	
FRU				pmax	pmax		
	comp=Z,90nm,1.8s						
FRU				pmax	pmax		
	comp=E,1μm,1.8s						
ULHL	**Ulahol**	**7.00**	**34**	*i* PN	**Pn**	**16 36 10.0**	**+0.1**
ULHL	**Ulahol**	**7.00**	**34**	P	**Pn**	**16 36

comp=Z,38nm,0.5s,baz=144,slow=12,SNR=789
ABKAR Akbulak array 15.03 331 *e*Pn **Pn 16 37 50.6 -1.8**
comp=Z,0.1nm,0.4s
ABKAR *e*S Sn 16 40 26.9 -13
KURBB Kurchatov Arra 15.08 19 P **Pn 16 37 51.2 -2.0**
comp=Z,1.2nm,0.3s,baz=210,slow=11,SNR=62
PKIN Phulchoki 15.14 122 *e*P **Pn 16 37 52.5 -1.9**
PKI Pulchoki 15.16 122 *e*P **Pn 16 37 53.3 -1.3**
comp=Z,1µm,0.7s
KURK Kurchatov 15.19 19 ⇑P **Pn 16 37 53.2 -1.3**
comp=Z,71nm,1.2s
KURK Kurchatov 15.19 19 *e*P **Pn 16 37 52.8 -1.7**
KURK pmax pmax
comp=Z,60nm,1.0s
KURK Kurchatov 15.19 19 P **Pn 16 37 51.2 -3.3**
GUN Gumba 15.27 120 *e*P **Pn 16 37 54.0 -2.0**
JBP Jabalpur 15.45 147 ⇓*i*x **Pn 16 37 59.8 +2.0**
JBP *i* x x 16 38 00.2
comp=Z,90nm,0.4s
VOSK Vostochnaya 16.17 0 ⇓P **P 16 38 05.3 -0.7**
comp=Z,30nm,0.5s
VOSK Vostochnaya 16.17 0 P **P 16 38 05.2 -0.7**
VOSK pmax pmax
comp=Z,34nm,0.6s
RAMN Ramite 16.37 121 *e*P **P 16 38 07.0 -1.6**
comp=Z,512nm,0.6s
BANOM Banah 16.40 234 P **P 16 38 08.6 -0.1**
SNR=22
ZRNK Zerenda 16.46 356 P **Pn 16 38 09.8 0.0**
ZRNK pmax pmax
comp=Z,1.0nm,0.6s
BVA0 Borovoye Array 16.48 359 P **P 16 38 09.2 -0.1**
comp=Z,8.5nm,0.8s,baz=173,slow=13,SNR=339
BVA0 Borovoye Array 16.48 359 *i*P **P 16 38 09.2 -0.1**
BVA0 pmax pmax
comp=Z,11nm,0.7s
BVAR Borovoye Array 16.48 359 P **P 16 38 08.9 -0.4**
BVAR S **S 16 41 08.5 -3.1**
BVAR Borovoye Array 16.48 359 P **P 16 38 08.9 -0.4**
BVAR S **S 16 41 08.5 -3.1**
BVAR Borovoye Array 16.48 359 P **P 16 38 08.9 -0.4**
comp=Z,15nm,0.3s,baz=163,slow=15,SNR=173
BVAR S **S 16 41 08.5 -3.1**
comp=Z,1.5nm,0.3s,baz=165,slow=23,SNR=6.2
BRVK Borovoye 16.51 359*d i*P **P 16 38 09.6 -0.1**
BRVK pmax pmax
comp=Z,171nm,1.3s
BRVK Borovoye 16.51 359 *e*P **P 16 38 08.9 -0.8**
comp=Z,94nm,0.8s
BRVK *e*S **S 16 41 07.9 -4.4**
AKL Akola 16.65 160 ⇓*i*x S 16 41 07.7 -8.1
AKL *i* x x 16 47 24.9
AKTO Aktyubinsk 16.72 330 ⇓P **Pn 16 38 12.6 -0.3**
comp=Z,40nm,0.8s
AKTO Aktyubinsk 16.72 330 P **Pn 16 38 12.6 -0.3**
AKTO pmax pmax
comp=Z,40nm,0.8s
AKTO Aktyubinsk 16.72 330 P **P 16 38 12.3 +0.3**
AKTO S **S 16 41 13.9 -2.8**
AKTO Aktyubinsk 16.72 330 P **P 16 38 12.3 +0.3**
comp=Z,20nm,0.3s,baz=142,slow=8.9,SNR=550
AKTO S **S 16 41 13.9 -2.8**
comp=Z,4.6nm,0.3s,baz=14,slow=22,SNR=4.4
NGP Nagpur 16.89 153 *e*P **P 16 38 13.2 -0.9**
NGP *ex* x 16 38 14.1
comp=Z,89nm,0.9s
NGP *ex* x 16 41 10.5
TAPN Taplejung 16.90 118 *e*P **P 16 38 14.9 +0.4**
comp=Z,239nm,0.6s
ODAN Odare 16.97 120 *e*P **P 16 38 15.5 +0.2**
comp=Z,645nm,0.9s
ASHO Ashiyiah 17.42 231 P **P 16 38 20.2 +0.2**
SNR=11
ASUD Al Ashush, Dub 17.93 233 P **P 16 38 25.9 +0.5**
SNR=13
POO Poona 18.13 171⇑*i*P **P 16 38 27.0 -0.8**
comp=Z,40nm,1.0s
POO *i* S **S 16 41 45.0 -0.7**
POO *i* SSS SSS 16 42 20.5
LSA Lhasa 18.22 106 P **Pn 16 38 32.1 +0.8**
LSA pmax pmax
comp=Z,140nm,1.0s
KAD Karad 19.38 171 *e*P **P 16 38 42.0 +0.7**
KAD *e*S **S 16 42 12.1 +1.7**
ZAA0 Zalesovo Array 19.88 25 *e*P **P 16 38 46.4 +0.2**
ZAA0 *e*S **S 16 42 16.6 -2.9**
ZALV Zalesovo Beam 19.88 25 P **P 16 38 46.9 +0.6**
ZALV S **S 16 42 17.8 -1.7**
ZALV Zalesovo Beam 19.88 25 P **P 16 38 46.9 +0.6**
ZALV S **S 16 42 17.8 -1.7**
ZALV Zalesovo Beam 19.88 25 P **P 16 38 46.9 +0.6**
comp=Z,20nm,0.3s,baz=222,slow=11,SNR=645
ZALV S **S 16 42 17.8 -1.7**
comp=Z,0.7nm,0.3s,baz=213,slow=20,SNR=8.0
NVS Novosibirsk 20.14 21 ⇓*i*P **P 16 38 49.1 0.0**
NVS *i* 16 39 43.4
NVS *i* S **S 16 42 23.2 -1.4**
NVS pmax pmax
comp=N,89nm,1.0s
NVS pmax pmax
comp=Z,114nm,1.0s
NVS smax smax
comp=E,44nm,0.9s
NVS smax smax
comp=N,39nm,1.4s
HYB Hyderabad 20.21 159 *i*P **P 16 38 50.0 -0.1**
HYB *e*sP **sP 16 39 47.0 +1.4**
HYB *e*S **S 16 42 27.0 +0.4**
DGRG David-gareji 20.45 292 P **P 16 38 53.7 +1.2**
BWNR Bhubaneshwar 20.76 137 *ex* x 16 38 45.0
GNI Garni 20.85 288 P **P 16 38 58.4 +1.5**
GNI Garni 20.85 288 P **P 16 38 58.4 +1.5**
comp=N,24nm,0.5s,baz=337,slow=0.6,SNR=37
TBLG Delisi 20.95 292 P **P 16 38 59.3 +1.5**
SHL Shillong 20.96 116 *i*P **P 16 38 58.0 -0.2**
SHL *i* S **S 16 42 40.0 -1.0**
SVE Sverdlovsk 21.44 344*c i*P **P 16 39 03.4 +0.7**
SVE *e*S S 16 42 58.3 +10
SVE pmax pmax
comp=Z,122nm,1.1s
AGT Agartala 21.55 120 *e*P **P 16 39 05.0 +0.7**
ARU Arti 21.57 341*d i*P **P 16 39 04.6 +0.4**
ARU 16 39 34.6
ARU S **S 16 42 51.9 +1.4**
ARU pmax pmax
comp=Z,171nm,1.2s
ARU Arti 21.57 341 *e*P **P 16 39 04.0 -0.1**
comp=Z,175nm,1.2s
ARU *e*S S 16 42 58.0 +7.5
ZEI Tsey 21.69 295 *e*P **P 16 39 06.2 +0.4**
ZEI pmax pmax
comp=Z,40nm,1.0s
VIS Vishakhapatnam 21.71 147 *e*P **P 16 39 07.0 +1.1**
VIS *ex* x 16 43 01.5
BHD Baghdad 22.02 269 *ex* **P 16 39 08.7 -0.2**
BHD *ex* **S 16 43 00.7 +2.6**
KBZ Khabaz 22.55 297 P **P 16 39 13.6 -0.1**
KBZ Khabaz 22.55 297 P **P 16 39 13.6 -0.1**
KBZ Khabaz 22.55 297 P **P 16 39 13.6 -0.1**
comp=Z,20nm,0.9s,baz=118,slow=8.6,SNR=30
KIV Kislovodsk 22.74 298 *e*P **P 16 39 15.8 +0.2**
KIV *e**PP **pP 16 39 50.2 +0.8**
KIV *e**SP **sP 16 40 14.3 +1.3**
KIV *e*S **S 16 43 10.5 +0.7**
KIV pmax pmax
comp=Z,25nm,1.1s
KIV MLR MLR
comp=Z,57nm,15.0s
KIV Kislovodsk 22.74 298 *e*P **P 16 39 13.3 -2.3**
comp=Z,39nm,0.8s
GTA Gaotai 22.88 74 ⇑P **P 16 39 19.2 +2.3**
GTA sP **sP 16 40 15.1 +0.5**
GTA S **S 16 43 15.0 +2.7**
GTA SS **SnSn 16 44 17.5 +9.3**
GTA pmax pmax
comp=Z,23nm,1.8s
GTA pmax pmax
comp=Z,100nm,5.2s
GTA LR LR
comp=N,120nm,14.3s
GTA LR LR
comp=E,67nm,14.5s
GTA LR LR
comp=Z,49nm,14.0s
IMP Imphal 22.92 114 *e*P **P 16 39 18.0 +0.7**
IMP *ex* x 16 43 39.0
SOKR Solikamsk 24.80 343*d i*P **P 16 39 35.7 +1.8**
SOKR pmax pmax
comp=Z,70nm,1.2s
VRHR Novokhopersk 25.46 314 *e*P **P 16 39 40.2 +0.1**
VRHR *e**SP **pP 16 40 17.0 -1.0**
VRHR pmax pmax
comp=E,20nm,0.8s
VRHR pmax pmax
comp=Z,40nm,0.8s
VRHR pmax pmax
comp=N,7.0nm,0.4s
MALT Malatya 25.83 284 P **P 16 39 42.2 -1.4**
MALT Malatya 25.83 284 P **P 16 39 42.2 -1.4**
LZH Lanzhou 26.43 81 *e*P P 16 39 43.8 -5.3
LZH sP sP 16 40 40.1 -9.1
LZH *e*S S 16 44 01.4 -7.4
LZH sS sS 16 45 04.0 -13
LZH SS **SnSn 16 45 30.1 -3.9**
LZH pmax pmax
comp=Z,18nm,1.2s
LZH pmax pmax
comp=Z,62nm,5.0s
VORD Divnogorie 26.78 313 *e*P **P 16 39 51.6 -0.3**
VORD pmax pmax
comp=Z,40nm,1.1s
VORD pmax pmax
comp=N,20nm,1.0s
VORD pmax pmax
comp=E,40nm,1.0s
VSR Storozhevoye 26.95 313 *e*P **P 16 39 53.2 -0.1**
VSR pmax pmax
comp=N,20nm,0.9s
VSR pmax pmax
comp=Z,50nm,0.9s
VSR pmax pmax
comp=E,70nm,1.0s
ZAK Zakamensk 26.98 49 *e*P **P 16 39 55.5 +1.7**
ZAK *e* 16 40 35.6
ZAK pmax pmax
comp=Z,3.0nm,1.0s
ZAK pmax pmax
comp=Z,8.0nm,1.0s
CD2 Chengdu 27.76 92 P **P 16 40 02.4 +1.5**
CD2 pP **pP 16 40 39.3 0.0**
CD2 PP **PnPn 16 40 59.6 +1.4**
CD2 PcP **PcP 16 43 14.6 +2.1**
CD2 S **S 16 44 29.8 +0.2**
CD2 PcS **PcS 16 46 55.5 +0.8**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.2s
SONM Songino Array 28.33 55 P **P 16 40 07.8 +1.9**
SONM Songino Array 28.33 55 P **P 16 40 07.8 +1.9**
comp=Z,3.7nm,0.8s,baz=257,slow=9.3,SNR=34
ULN Ulaanbaatar 28.77 55 *e*P **P 16 40 10.9 +1.2**
comp=Z,3.0nm,0.8s
ULN Ulaanbaatar 28.77 55 P **P 16 40 11.3 +1.5**
comp=Z,6.5nm,0.9s
BR131 Keskin Array S 29.39 288 *e*P **P 16 40 15.9 +0.5**
comp=Z,1.5nm,0.6s
BRTR Keskin Array B 29.39 288 P **P 16 40 15.8 +0.5**
BRTR Keskin Array B 29.39 288 P **P 16 40 15.8 +0.5**
comp=Z,1.8nm,0.6s,baz=104,slow=9.4,SNR=14
KMI Kunming 29.44 104 P **P 16 40 18.2 +2.2**
KMI pmax pmax
comp=Z,4.0nm,0.6s
MOS Moscow 29.60 321 *e*P **P 16 40 16.8 0.0**
MOS *e* 16 41 15.0
MOS pmax pmax
comp=Z,100nm,1.2s
MOS pmax pmax
comp=Z,89nm,1.1s
OBN Obninsk 29.88 319⇓*e*P **P 16 40 20.1 +0.9**
OBN *e**PP **pP 16 40 58.0 +0.1**
OBN *e* 16 41 20.8
OBN *e*S **S 16 44 59.0 -3.1**
OBN pmax pmax
comp=Z,67nm,1.1s
OBN Obninsk 29.88 319 *e*P **P 16 40 19.5 +0.3**
comp=Z,28nm,0.5s
CHTO Chiang Mai 30.27 118 *e*P **P 16 40 23.4 +0.3**
CHTO pmax pmax
comp=Z,8.0nm,0.6s
CHTO Chiang Mai 30.27 118 *e*P **P 16 40 23.4 +0.3**
comp=Z,8.4nm,0.6s
CHTO Chiang Mai 30.27 118 P **P 16 40 24.4 +1.3**
comp=Z,17nm,1.1s
CMMT Chiang Mai 30.27 118 P **P 16 40 24.6 +1.4**
CM31 Chiang Mai Arr 30.50 119 *e*P **P 16 40 25.9 +0.8**
comp=Z,23nm,1.0s
CMAR Chiang Mai Arr 30.50 119 P **P 16 40 26.1 +0.9**
CMAR ScP **ScP 16 46 43.0 -1.0**
CMAR Chiang Mai Arr 30.50 119 P **P 16 40 26.1 +0.9**
comp=Z,15nm,0.9s,baz=298,slow=8.1,SNR=95
CMAR ScP **ScP 16 46 43.0 -1.0**
comp=Z,0.8nm,1.0s,baz=282,slow=5.4,SNR=3.5
XAN Xi'an 30.95 83 P **P 16 40 30.3 +1.3**
XAN pmax pmax
comp=Z,8.0nm,1.0s
XAN pmax pmax
comp=Z,19nm,3.8s
KLMR Klimovskoe 31.42 331*d i*P **P 16 40 33.1 +0.4**
KLMR *e**SP **sP 16 41 33.3 0.0**
KLMR *e* 16 41 46.7
KLMR pmax pmax
comp=Z,55nm,1.1s
HHC Hu-ho-hao-te 31.77 70 *e*P **P 16 40 34.4 -1.8**
HHC PP **PnPn 16 41 47.0 -1.7**
HHC PcP **PcP 16 43 22.3 -0.4**
HHC S **S 16 45 30.1 -2.2**
HHC ScP **ScP 16 46 47.2 -1.0**
HHC PcS **PcS 16 47 05.0 -2.6**
HHC ScS **ScS 16 50 44.1 -2.7**
HHC pmax pmax
comp=Z,43nm,0.6s
HHC pmax pmax
comp=Z,190nm,5.8s
GYA Guiyang 31.90 98⇓*i*P **P 16 40 39.2 +1.7**
GYA pP **pP 16 41 15.8 -0.6**
GYA sP **sP 16 41 38.0 0.0**
GYA PP **PP 16 41 52.7 -0.7**
GYA S **S 16 45 38.2 +3.7**
GYA ScP **ScP 16 46 50.8 +2.0**
GYA PcS **PcS 16 47 08.4 -0.1**
GYA ScS **ScS 16 50 47.9 0.0**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,90nm,5.2s
AKASG Malin Array Be 32.89 309 P **P 16 40 45.9 +0.3**
AKASG 16 42 01.8
AKASG Malin Array Be 32.89 309 P **P 16 40 45.9 +0.3**
AKASG PP **PnPn 16 42 01.8 -0.5**
AKASG Malin Array Be 32.89 309 P **P 16 40 45.9 +0.3**
comp=Z,31nm,0.7s,baz=80,slow=7.4,SNR=65
AKASG PP **PnPn 16 42 01.8 -0.5**
comp=Z,11nm,0.9s,baz=90,slow=11,SNR=6.1
AK02 Malin Array Si 32.90 309 *e*P **P 16 40 45.9 +0.2**
AK02 *ep*P **pP 16 41 23.7 -1.0**
AK02 *e*PP **PnPn 16 41 59.8 -2.5**
AK01 Malin Array Si 32.90 309 *e*P **P 16 40 45.8 +0.1**
AK01 *e*PP **PnPn 16 41 59.7 -2.6**
KIEV Kiev 32.90 309 *e*P **P 16 40 45.6 -0.1**
KIEV *e* 16 41 59.4
KIEV pmax pmax
comp=Z,28nm,0.6s
KIEV Kiev 32.90 309 *e*P **P 16 40 45.6 -0.1**
comp=Z,28nm,0.6s
KIEV *e*PP **PnPn 16 41 59.4 -3.0**
SRDT SRDT 33.48 124 P **P 16 40 52.7 +1.6**
TMCR Tamitsa 33.99 335 *e*P **P 16 40 55.4 +0.5**
TMCR pmax pmax
comp=Z,61nm,0.8s
TESR 34.23 301⇑*i*P **P 16 40 58.0 +0.7**
MLR Muntele Rosu 34.73 299 P **P 16 41 02.9 +1.2**
MLR Muntele Rosu 34.73 299⇑*i*P **P 16 41 03.2 +1.4**
MLR Muntele Rosu 34.73 299 P **P 16 41 02.9 +1.2**
comp=Z,7.6nm,0.9s,baz=92,slow=3.2,SNR=36
NACGM Naroch 35.15 316 *e* P 16 41 01.0 -4.1
BURAR Bucovina Array 35.23 303⇓*i*P **P 16 41 07.2 +1.2**
BUR08 Bucovina Ar. S 35.24 303 *e*P **P 16 41 07.2 +1.1**
IIGN Ignalina 35.57 316 *e*P **P 16 41 09.8 +1.2**
IIGN AMB AMB 16 41 10.9
comp=Z,30nm,1.1s
IZAR Zarasai 35.65 317 *e*P **P 16 41 10.6 +1.3**
IZAR AMB AMB 16 41 11.6
comp=Z,25nm,1.0s
ARR Arges 35.66 299⇑*i*P **P 16 41 11.3 +1.7**
ISAL Salakas 35.67 317 *e*P **P 16 41 10.8 +1.3**
ISAL AMB AMB 16 41 11.8
comp=Z,24nm,1.2s
JOF Joensuu 35.81 330 *e*P **P 16 41 10.1 -0.5**
JOF pmax pmax
comp=Z,17nm,0.3s
JOF Joensuu 35.81 330 *ep* **P 16 41 10.1 -0.5**
comp=Z,17nm,0.3s
LVV L'vov 36.11 307 *e*P **P 16 41 13.5 +0.2**
LVV *e* 16 41 53.3
LVV *e* 16 42 37.1
LVV *e*S **S 16 46 37.1 -1.3**
LVV *e* 16 47 42.7
LVV *e* 16 49 08.5
WHN Wuhan 36.42 87 P P 16 41 20.0 +3.9
WHN pmax pmax
comp=Z,66nm,1.0s
DRGR 36.94 301⇑*i*P **P 16 41 22.3 +1.8**
TRPA Tarpa 37.04 304⇑*i*P **P 16 41 22.7 +1.5**
SUW Suwalki 37.06 314 *e*P **P 16 41 20.9 -0.4**
SUW pmax pmax
comp=Z,51nm,0.8s
SUW Suwalki 37.06 314 *e*P **P 16 41 20.9 -0.4**
comp=Z,51nm,0.8s
SUW Suwalki 37.06 314 *e*P **P 16 41 21.3 +0.1**
UZH Uzhgorod 37.21 305 *e*P **P 16 41 20.8 -1.8**
KOLS Kolonicke sedl 37.22 305 *e*P **P 16 41 24.0 +1.3**
KOLS pmax pmax
comp=Z,11nm,0.9s
KOLS Kolonicke sedl 37.22 305 *e*P **P 16 41 24.0 +1.3**
KOLS *ep*P **pP 16 42 02.7 +0.3**
KOLS *e*PP **PnPn 16 42 53.6 -1.0**
UBPT Khong Chiam 37.28 115 P **P 16 41 23.9 +0.4**
LVZ Lovozero 37.40 338 *e*P **P 16 41 25.1 +1.1**
LVZ pmax pmax
comp=Z,44nm,0.8s
LVZ Lovozero 37.40 338 *e*P **P 16 41 24.6 +0.6**
comp=Z,34nm,0.8s
FINES FINESS Array B 37.42 326 P **P 16 41 25.1 +0.9**
FINES PP **PnPn 16 42 55.7 -1.0**
FINES FINESS Array B 37.42 326 P **P 16 41 25.1 +0.9**
comp=Z,32nm,0.8s,baz=120,slow=9.7,SNR=92
FINES PP **PnPn 16 42 55.7 -1.0**
comp=Z,5.2nm,0.6s,baz=108,slow=12,SNR=3.7
KAF Kangasniemi 37.57 327 *e*P **P 16 41 24.2 -1.2**
KAF pmax pmax
comp=Z,13nm,0.8s
KAF Kangasniemi 37.57 327 *ep* **P 16 41 24.2 -1.2**
comp=Z,13nm,0.8s
APA Apatity 37.58 337⇑*i*P **P 16 41 27.0 +1.6**
APA pmax pmax
comp=Z,22nm,0.9s
APA MLR MLR
comp=Z,500nm,13.0s
CRVS Cervenica-Dubn 37.76 305 *e*P **P 16 41 28.2 +1.0**
CRVS pmax pmax
comp=Z,4.0nm,1.0s
CRVS Cervenica-Dubn 37.76 305 *e*P **P 16 41 28.2 +1.0**
CRVS *ep*P **pP 16 42 10.5 +3.5**
CRVS *e*PP **PnPn 16 43 00.4 -0.5**
NIE Niedzica 38.51 306 *e*P **P 16 41 35.8 +2.3**
NIE Niedzica 38.51 306 *e*P **P 16 41 35.8 +2.3**
PSZ Piszkesteto 38.82 303 *e*P **P 16 41 37.4 +1.2**
PSZ pmax pmax
comp=Z,4.0nm,0.9s
PSZ Piszkesteto 38.82 303 *e*P **P 16 41 37.4 +1.2**
comp=Z,4.3nm,0.9s
OJC Ojcow 38.85 307 *e*P **P 16 41 36.7 +0.4**
OJC Ojcow 38.85 307 *e*P **P 16 41 36.7 +0.4**
NJ2 Nanjing 39.50 82 *e*P **P 16 41 43.6 +1.7**
NJ2 pmax pmax
comp=Z,30nm,1.0s
VYHS Vyhne 39.50 304 *e*P **P 16 41 43.2 +1.4**
VYHS Vyhne 39.50 304 *e*P **P 16 41 43.2 +1.4**
VYHS *ep*P **pP 16 42 23.0 +1.2**
VYHS *e*PP **PnPn 16 43 22.8 +1.5**
OKC Ostrava-Krasne 39.92 306 *e*P **P 16 41 46.3 +1.2**
OKC Ostrava-Krasne 39.92 306⇑*e*P **P 16 41 46.3 +1.2**
MORC Moravsky Berou 40.31 306 *e*P **P 16 41 49.6 +1.2**
MORC *e**PP **pP 16 42 28.8 +0.2**
MORC pmax pmax
comp=Z,22nm,1.1s
MORC Moravsky Berou 40.31 306 *e*P **P 16 41 49.6 +1.2**
comp=Z,22nm,1.1s
MORC *ep*P **pP 16 42 28.8 +0.2**
MORC Moravsky Berou 40.31 306⇑*i*P **P 16 41 49.8 +1.4**
SMOL Smolenice 40.44 304 *e*P **P 16 41 50.8 +1.4**
SMOL Smolenice 40.44 304 *e*P **P 16 41 50.8 +1.4**
GKP Gorka Klasztor 40.52 312 *e*P **P 16 41 51.1 +1.2**
KEV Kevo 40.74 338 *e*P **P 16 41 51.9 +0.3**
KEV pmax pmax
comp=Z,15nm,0.5s
KEV Kevo 40.74 338 *e*P **P 16 41 52.3 +0.8**
KEV *ep*P **pP 16 42 31.6 -0.2**
KEV Kevo 40.74 338 *ep* **P 16 41 51.9 +0.3**
comp=Z,15nm,0.5s
KRLC Kraliky 40.79 307⇑*e*P **P 16 41 53.5 +1.2**
VRAC Vranov 40.95 306 P **P 16 41 55.2 +1.6**
VRAC Vranov 40.95 306⇑*i*P **P 16 41 55.3 +1.7**
VRAC Vranov 40.95 306 P **P 16 41 55.2 +1.6**
comp=Z,18nm,0.9s,baz=83,slow=8.9,SNR=13
DPC Dobruska-Polom 41.08 307⇑*i*P **P 16 41 56.5 +1.8**
DPC *e* 16 42 36.3
DPC Dobruska-Polom 41.08 307⇑*i*P **P 16 41 56.5 +1.8**
DPC *ep*P **pP 16 42 36.3 +1.3**
KSP Ksiaz 41.08 308 *e*P **P 16 41 55.7 +1.1**
KSP Ksiaz 41.08 308 *e*P **P 16 41 56.0 +1.4**
ARCES ARCESS Array B 41.09 338 P **P 16 41 55.7 +1.3**
ARCES pP **pP 16 42 34.8 +0.1**
ARCES ARCESS Array B 41.09 338 P **P 16 41 55.7 +1.3**
comp=Z,58nm,0.8s,baz=113,slow=8.6,SNR=214
ARCES pP **pP 16 42 34.8 +0.1**
comp=Z,18nm,0.8s,baz=108,slow=7.8,SNR=5.3
ARE0 ARCESS Array S 41.09 338 *e*P **P 16 41 55.4 +1.0**
ARE0 *ep*P **pP 16 42 33.2 -1.5**
UPC Upice 41.27 308⇑*i*P **P 16 41 57.9 +1.7**
UPC *e* 16 42 37.2
UPC Upice 41.27 308⇑*i*P **P 16 41 57.9 +1.7**
UPC *ep*P **pP 16 42 37.2 +0.7**
KULM Kulim 41.33 132 *e*P **P 16 41 57.7 +0.6**
comp=Z,18nm,1.0s
CONA Conrad Observa 41.52 304⇑*i*P **P 16 41 59.7 +1.3**
comp=Z,21nm,0.9s
CONA Conrad Observa 41.52 304⇑*i*P **P 16 41 59.7 +1.3**
comp=Z,21nm,0.9s
KTK1 Kautokeino 41.56 336 *e*P P 16 41 48.5 -10
CN2 Changchun 41.61 63 *e*P **P 16 41 58.9 -0.1**
TREC Trest 41.67 306⇑*i*P **P 16 42 01.1 +1.6**
TREC *e* 16 42 41.1
TREC Trest 41.67 306⇑*i*P **P 16 42 01.1 +1.6**
TREC *ep*P **pP 16 42 41.1 +1.2**
BSD Bornholm Skovb 41.95 315⇓*i*P **P 16 42 01.0 -0.6**
BSD pmax pmax
comp=Z,24nm,0.9s
BSD Bornholm Skovb 41.95 315⇓*i*P **P 16 42 01.0 -0.6**
comp=Z,24nm,0.8s
PVCC Panska Ves 42.19 308 *e*P **P 16 42 05.3 +1.7**
PVCC Panska Ves 42.19 308⇑*e*P **P 16 42 05.3 +1.7**
IPM Ipoh 42.20 132 *e*P **P 16 42 04.2 +0.1**
comp=Z,49nm,1.0s
IPM Ipoh 42.20 132 P **P 16 42 04.3 +0.1**
comp=Z,57nm,0.9s
SOKA Soboth 42.22 302⇑*i*P **P 16 42 05.2 +1.2**
comp=Z,16nm,1.2s
SOKA Soboth 42.22 302⇑*i*P **P 16 42 05.2 +1.2**
comp=Z,16nm,1.2s
PRU Pruhonice 42.24 307⇑*i*P **P 16 42 05.6 +1.6**
PRU *e* 16 42 46.2
PRU Pruhonice 42.24 307⇑*i*P **P 16 42 05.6 +1.6**
PRU *ep*P **pP 16 42 46.2 +1.7**
PSI Prapat 42.34 136 P **P 16 42 05.0 -0.4**
PSI Prapat 42.34 136 P **P 16 42 04.6 -0.8**
comp=Z,54nm,1.0s,comp=Z,480nm
PSI Prapat 42.34 136 P **P 16 42 05.0 -0.4**
comp=Z,23nm,0.5s,baz=320,slow=7.3,SNR=37
BRG Berggiesshubel 42.57 308⇑*i*P **P 16 42 08.0 +1.2**
comp=Z,27nm,1.0s
BRG *i* pP **pP 16 42 47.1 -0.1**

comp=Z,20nm,1.3s
BRG Berggiesshubel 42.57 308⇑ *i*P **P** **16 42 07.9 +1.2**
BRG *i* *PP **pP** **16 42 47.1 -0.1**
BRG pmax pmax
comp=Z,35nm,1.0s
BRG pmax pmax
comp=Z,27nm,1.3s
BRG Berggiesshubel 42.57 308 *e*P **P** **16 42 08.2 +1.5**
BRG *e*pP **pP** **16 42 48.1 +0.9**
MOA Molln 42.60 304⇑ *i*P **P** **16 42 07.9 +0.8**
comp=Z,15nm,1.0s
MOA Molln 42.60 304⇑ *i*P **P** **16 42 07.9 +0.8**
comp=Z,15nm,1.0s
LJU Ljubljana 42.65 301 *e*P **P** **16 42 08.5 +1.1**
LJU *i* 16 42 26.1
LJU *i* 16 42 49.1
RGN Rugen 42.86 314 *e*P **P** **16 42 10.7 +1.8**
comp=Z,63nm,0.8s
RGN *e*pP **pP** **16 42 51.0 +1.5**
RGN Rugen 42.86 314 *e*P **P** **16 42 10.1 +1.1**
comp=Z,228nm,1.3s
RGN *e*pP **pP** **16 42 49.6 +0.1**
GEC2 GERESS Array S 42.88 305 *e*P **P** **16 42 10.5 +1.2**
GEC2 pmax pmax
comp=Z,4.0nm,1.0s
GEC2 GERESS Array S 42.88 305 *e*P **P** **16 42 10.5 +1.2**
comp=Z,4.0nm,1.0s
GERES GERESS Array B 42.88 305 P **P** **16 42 10.4 +1.1**
GERES PP **PP** **16 43 53.9 +1.3**
GERES GERESS Array B 42.88 305 P **P** **16 42 10.4 +1.1**
comp=Z,1.6nm,0.7s,baz=85,slow=7.1,SNR=16
GERES PP **PP** **16 43 53.9 +1.3**
comp=Z,2.0nm,0.8s,baz=81,slow=8.2,SNR=5.5
KHC Kasperske Hory 42.93 306 *e*P **P** **16 42 10.3 +0.6**
KHC *e* 16 43 52.9
KHC Kasperske Hory 42.93 306 *e*P **P** **16 42 10.3 +0.6**
comp=Z,1.8nm,0.8s
KHC *e*PP **PP** **16 43 52.9 -0.2**
KHC Kasperske Hory 42.93 306⇑ *e*P **P** **16 42 10.5 +0.8**
KHC *e*pP **pP** **16 42 51.7 +1.4**
CLL Collm 43.14 309 *i*P **P** **16 42 12.0 +0.8**
CLL *i* *PP **pP** **16 42 51.0 -0.9**
CLL pmax pmax
comp=Z,13nm,0.8s
CLL Collm 43.14 309 *e*P **P** **16 42 12.1 +0.8**
comp=Z,8.0nm,0.8s
CLL Collm 43.14 309 *i* P **P** **16 42 12.0 +0.8**
comp=Z,13nm,0.8s
CLL *i* pP **pP** **16 42 51.0 -0.9**
CLL *e*sP **sP** **16 43 13.0 -0.1**
CLL *e*PP **PP** **16 43 54.0 -1.2**
CLL *e*pPP 16 44 24.0
CLL *e*(S) S 16 48 12.0 -11
CLL *e*SS **ScS** **16 51 48.0 -2.8**
CADS Cadrg 43.16 301 *i*P **P** **16 42 12.3 +0.7**
CADS *i* 16 42 29.4
TRO Tromso 43.21 336 *e*P **P** **16 42 12.4 +0.9**
TRO AMB AMB 16 42 14.2
comp=Z,58nm,2.6s
KBA Koelnbreinsper 43.31 303⇑ *i*P **P** **16 42 13.0 +0.1**
KBA pmax pmax
comp=Z,4.0nm,0.5s
KBA Koelnbreinsper 43.31 303⇑ *i*P **P** **16 42 13.0 +0.1**
comp=Z,3.5nm,0.5s
KBA Koelnbreinsper 43.31 303⇑ *i*P **P** **16 42 13.0 +0.1**
comp=Z,3.5nm,0.5s
ROBS Robic 43.32 301 *i*P **P** **16 42 13.7 +1.0**
COP Copenhagen 43.38 315 *i*P **P** **16 42 13.2 +0.1**
COP pmax pmax
comp=Z,24nm,0.9s
COP Copenhagen 43.38 315 *i*P **P** **16 42 13.2 +0.1**
comp=Z,24nm,0.9s
LLD Lille Linde 43.50 315 *i*P **P** **16 42 15.3 +1.2**
LLD pmax pmax
comp=Z,52nm,0.8s
LLD Lille Linde 43.50 315 *i*P **P** **16 42 15.3 +1.2**
comp=Z,52nm,0.8s
TANN Tannenbergstha 43.54 308 *e*P **P** **16 42 16.0 +1.4**
comp=Z,5.0nm,0.9s
TANN *e*pP **pP** **16 42 56.7 +1.4**
NKC Novy Kostel 43.56 307⇑ *i*P **P** **16 42 16.4 +1.7**
NKC *e* 16 42 56.4
NKC Novy Kostel 43.56 307⇑ *i*P **P** **16 42 16.4 +1.7**
NKC *e*pP **pP** **16 42 56.4 +1.0**
ROTZ Rotzenmuhle 43.76 307 *e*P **P** **16 42 18.3 +2.0**
comp=Z,8.0nm,1.0s
NEUB Neuenburg 43.91 309 *e*P **P** **16 42 18.7 +1.3**
comp=Z,20nm,0.9s
STEI Steigen 43.91 333 *e*P **P** **16 42 18.2 +1.0**
STEI AMB AMB 16 42 18.8
comp=Z,52nm,0.9s
YAK Yakutsk 43.94 35 *e*P **P** **16 42 18.8 +1.3**
YAK *e**PP **pP** **16 42 59.3 +1.0**
YAK *e* 16 44 00.5
YAK *e* 16 44 03.7
YAK *e*S **S** **16 48 32.5 -1.9**
YAK *e**SS **sS** **16 49 47.3 +1.4**
YAK *e*SS **ScS** **16 51 50.1 -5.3**
YAK *e* 16 52 00.8
YAK pmax pmax
comp=Z,5.0nm,1.0s
YAK pmax pmax
comp=Z,15nm,1.2s
YAK smax smax
comp=E,108nm,3.0s
YAK smax smax
comp=N,72nm,3.0s
MOX Moxa 44.06 308 *e*P **P** **16 42 20.1 +1.5**
MOX *e**PP **pP** **16 43 00.2 +0.8**
MOX pmax pmax
comp=Z,9.0nm,1.0s
MOX Moxa 44.06 308 *e*P **P** **16 42 20.1 +1.5**
comp=Z,9.0nm,1.0s
MOX *e*pP **pP** **16 43 00.2 +0.8**
FLOS Flostrand 44.22 331 *e*P **P** **16 42 21.6 +2.0**
FLOS AMB AMB 16 42 23.4
comp=Z,110nm,1.6s
NB2 NORSAR Subarra 44.32 323 P **P** **16 42 20.4 -0.2**
baz=96,slow=7.9
NB2 NORSAR Subarra 44.32 323 P **P** **16 42 20.4 -0.2**
comp=Z,46nm,0.6s,baz=96,slow=7.9
NOA NORSAR Array B 44.32 323 P **P** **16 42 20.6 0.0**
NOA pP **pP** **16 43 01.2 -0.2**
NOA NORSAR Array B 44.32 323 P **P** **16 42 20.6 0.0**
comp=Z,52nm,0.7s,baz=96,slow=7.8,SNR=243
NOA pP **pP** **16 43 01.2 -0.2**
comp=Z,11nm,0.7s,baz=97,slow=8.0,SNR=3.9
KONS Konsvik 44.35 331 *e*P **P** **16 42 18.9 -1.7**
KONS AMB AMB 16 42 21.1
comp=Z,45nm,1.4s
STOK Stokkvaagen 44.36 331 *e*P **P** **16 42 21.4 +0.7**
STOK AMB AMB 16 42 22.0
comp=Z,36nm,1.1s
MDJ Mudanjiang 44.40 61 P **P** **16 42 20.2 -1.2**
MDJ PcP **PcP** **16 44 00.6 -1.1**
MDJ PP **PP** **16 44 08.1 -0.7**
MDJ ScP **ScP** **16 47 35.8 0.0**
MDJ PcS **PcS** **16 47 53.6 -1.6**
MDJ S **S** **16 48 39.3 -2.3**
MDJ ScS **ScS** **16 51 58.3 -0.8**
MDJ pmax pmax
comp=Z,110nm,5.3s
NSS Namsos 44.44 328 *e*P **P** **16 42 21.1 -0.3**
NAO01 NORSAR Array S 44.46 323 *e*P **P** **16 42 21.8 +0.1**
YHNB Yeheng 44.52 91 P **P** **16 42 24.2 +1.5**
BSEG Bad Segeberg 44.63 313 *e*P **P** **16 42 24.8 +1.7**
BSEG pmax pmax
comp=Z,37nm,0.8s
BSEG Bad Segeberg 44.63 313 *e*P **P** **16 42 24.8 +1.7**
comp=Z,37nm,0.8s
CLZ Clausthal 44.74 310 *e*P **P** **16 42 25.4 +1.4**
CLZ pmax pmax
comp=Z,14nm,1.0s
CLZ Clausthal 44.74 310 *e*P **P** **16 42 25.4 +1.4**
comp=Z,14nm,1.0s
NRDL Niedersach Rie 44.85 311 *e*P **P** **16 42 26.4 +1.7**
comp=Z,12nm,0.9s
KSAR Wonju Array Be 44.87 71 P **P** **16 42 26.3 +1.1**
KSAR pP **pP** **16 43 07.6 +1.5**
KSRS Korea Array 44.89 71 P **P** **16 42 26.3 +1.0**
comp=Z,2.1nm,0.8s,baz=273,slow=7.2,SNR=13
KSRS pP **pP** **16 43 07.6 +1.3**
comp=Z,1.5nm,0.6s,baz=281,slow=6.9,SNR=3.8
TBLU Trondheim 45.00 326 *e*P **P** **16 42 26.1 +0.3**
TBLU *e*pP **pP** **16 43 06.7 -0.1**
KONO Kongsberg 45.03 321 *e*P **P** **16 42 26.5 +0.4**
KONO Kongsberg 45.03 321 *e*P **P** **16 42 26.2 +0.1**
KONO pmax pmax
comp=Z,36nm,1.0s
KONO Kongsberg 45.03 321 *e*P **P** **16 42 26.2 +0.1**
comp=Z,36nm,1.0s
UBBA Unterbreizbach 45.06 308 *e*P **P** **16 42 27.7 +1.3**
comp=Z,4.0nm,0.6s
BJO Bjornoya 45.16 343 *e*P **P** **16 42 28.4 +1.4**
MUD Monsted U'grnd 45.21 316 *i*P **P** **16 42 26.5 -1.1**
MUD pmax pmax
comp=Z,14nm,1.0s
MUD Monsted U'grnd 45.21 316 *i*P **P** **16 42 26.5 -1.1**
comp=Z,14nm,1.0s
DAVA Damuels 45.62 304⇑ *i*P **P** **16 42 31.4 +0.2**
comp=Z,18nm,0.5s
DAVA Damuels 45.62 304⇑ *i*P **P** **16 42 31.4 +0.2**
comp=Z,18nm,0.4s
DAVOX Davos/Dischmat 45.71 303 P **P** **16 42 32.0 +0.1**
DAVOX pP **pP** **16 43 12.8 -0.2**
DAVOX Davos/Dischmat 45.71 303 P **P** **16 42 32.0 +0.1**
comp=Z,5.9nm,0.7s,baz=120,slow=5.8,SNR=10.0
DAVOX pP **pP** **16 43 12.8 -0.2**
comp=Z,5.0nm,0.7s,baz=102,slow=11,SNR=3.7
TIXI Tiksi 45.74 22*d* *i*P **P** **16 42 32.6 +1.1**
TIXI pmax pmax
comp=Z,8.0nm,1.2s
MYKOM Kota Tinggi 46.03 131 P **P** **16 42 36.1 +1.6**
TNS Taunus Mts 46.12 308 *e*P **P** **16 42 36.6 +1.7**
TNS pmax pmax
comp=Z,6.0nm,0.8s
TNS Taunus Mts 46.12 308 *e*P **P** **16 42 36.6 +1.7**
comp=Z,6.0nm,0.8s
USRK Ussuriysk Arra 46.18 61 P **P** **16 42 36.1 +0.8**
comp=Z,2.4nm,0.8s,baz=54,slow=11,SNR=4.2
SNART Snartemo 46.24 319 *e*P **P** **16 42 34.6 -1.0**
IBBN Ibbenburen 46.30 311 *e*P **P** **16 42 37.6 +1.4**
comp=Z,21nm,0.8s
ODD1 Odda 46.53 321 *e*P **P** **16 42 38.9 +1.0**
ODD1 AMB AMB 16 42 41.1
comp=Z,34nm,1.3s
BLS5 Blasjo 46.62 321 *e*P **P** **16 42 39.9 +1.2**
BUG Bochum--Univer 46.70 310 *e*P **P** **16 42 40.6 +1.3**
comp=Z,17nm,1.0s
BUG *e*pP **pP** **16 43 21.7 +1.2**
CDF Champ du Feu 47.16 305 *e*P **P** **16 42 43.6 +0.6**
CDF Champ du Feu 47.16 305 *e*P **P** **16 42 43.6 +0.6**
CDF Champ du Feu 47.16 305 *e*P **P** **16 42 43.6 +0.6**
RUND Rundenannen 47.16 322 *e*P **P** **16 42 42.8 0.0**
RUND AMB AMB 16 42 44.5
comp=Z,96nm,1.3s
BER Bergen 47.18 322 *e*P **P** **16 42 42.9 0.0**
BER AMB AMB 16 42 43.4
comp=Z,43nm,0.8s
PGF Pioggiola 47.22 297 *e*P **P** **16 42 43.4 -0.2**
comp=Z,8.5nm,0.7s
PGF *e*pP **pP** **16 43 24.2 -0.8**
PGF Pioggiola 47.22 297 *e*P **P** **16 42 43.4 -0.2**
PGF *e**PP **pP** **16 43 24.2 -0.8**
PGF pmax pmax
comp=Z,9.0nm,0.7s
PGF Pioggiola 47.22 297 *e*P **P** **16 42 43.4 -0.2**
comp=Z,8.5nm,0.7s
PGF *e*pP **pP** **16 43 24.2 -0.8**
EGD Espegrend 47.24 322 *e*P **P** **16 42 43.3 0.0**
EGD AMB AMB 16 42 43.9
comp=Z,47nm,1.1s
ASK Askoy 47.25 322 *e*P **P** **16 42 43.3 -0.1**
HINF Hinteralfeld 47.54 305 *e*P **P** **16 42 46.1 +0.1**
comp=Z,16nm,0.8s
HINF *e*pP **pP** **16 43 26.7 -0.7**
HINF Hinteralfeld 47.54 305 *e*P **P** **16 42 46.1 +0.1**
HINF *e**PP **pP** **16 43 26.7 -0.7**
HINF pmax pmax
comp=Z,16nm,0.8s
HINF Hinteralfeld 47.54 305 *e*P **P** **16 42 46.1 +0.1**
comp=Z,16nm,0.8s
HINF *e*pP **pP** **16 43 26.7 -0.7**
WLF Walferdange 47.67 307 P **P** **16 42 48.6 +1.9**
comp=Z,15nm,1.2s
WLF Walferdange 47.67 307 *e*P **P** **16 42 48.7 +1.9**
comp=Z,12nm,0.8s
HAU Haudompre 47.84 305 *e*P **P** **16 42 48.5 +0.3**
comp=Z,11nm,0.5s
HAU Haudompre 47.84 305 *e*P **P** **16 42 48.5 +0.3**
HAU pmax pmax
comp=Z,11nm,0.5s
HAU Haudompre 47.84 305 *e*P **P** **16 42 48.5 +0.3**
comp=Z,11nm,0.5s
SBF Sospel 48.00 299 *e*P **P** **16 42 49.9 +0.3**
comp=Z,16nm,0.6s
SBF Sospel 48.00 299 *e*P **P** **16 42 49.9 +0.3**
SBF pmax pmax
comp=Z,16nm,0.6s
SBF Sospel 48.00 299 *e*P **P** **16 42 49.9 +0.3**
comp=Z,16nm,0.6s
LPG La Plagne 48.09 302 *e*P **P** **16 42 51.5 +1.0**
comp=Z,11nm,0.6s
LPG *e*pP **pP** **16 43 32.2 +0.2**
LPG La Plagne 48.09 302 *e*P **P** **16 42 51.5 +1.0**
LPG *e**PP **pP** **16 43 32.2 +0.2**
LPG pmax pmax
comp=Z,11nm,0.6s
LPG La Plagne 48.09 302 *e*P **P** **16 42 51.5 +1.0**
comp=Z,11nm,0.6s
LPG *e*pP **pP** **16 43 32.2 +0.2**
LPL La Plagne 48.10 302 *e*P **P** **16 42 51.4 +0.9**
comp=Z,5.7nm,0.4s
LPL *e*pP **pP** **16 43 32.3 +0.3**
LPL La Plagne 48.10 302 *e*P **P** **16 42 51.4 +0.9**
LPL *e**PP **pP** **16 43 32.3 +0.3**
LPL pmax pmax
comp=Z,6.0nm,0.4s
LPL La Plagne 48.10 302 *e*P **P** **16 42 51.4 +0.9**
comp=Z,5.7nm,0.4s
LPL *e*pP **pP** **16 43 32.3 +0.3**
PAGF Fort de Pagny 48.15 306 *e*P **P** **16 42 51.5 +1.0**
comp=Z,6.0nm,0.6s
PAGF *e*pP **pP** **16 43 32.4 +0.4**
PAGF Fort de Pagny 48.15 306 *e*P **P** **16 42 51.5 +1.0**
comp=Z,6.0nm,0.6s
PAGF *e*pP **pP** **16 43 32.4 +0.4**
MBDF Montbardon 48.26 301 *e*P **P** **16 42 51.5 -0.1**
MBDF *e*pP **pP** **16 43 32.3 -0.8**
MBDF Montbardon 48.26 301 *e*P **P** **16 42 51.5 -0.1**
MBDF *e**PP **pP** **16 43 32.3 -0.8**
MBDF Montbardon 48.26 301 *e*P **P** **16 42 51.5 -0.1**
MBDF *e*pP **pP** **16 43 32.3 -0.8**
CABF La Chapelle 48.30 303 *e*P **P** **16 42 52.6 +0.8**
comp=Z,14nm,0.5s
CABF *e*pP **pP** **16 43 33.3 0.0**
CABF La Chapelle 48.30 303 *e*P **P** **16 42 52.6 +0.8**
CABF *e**PP **pP** **16 43 33.3 0.0**
CABF pmax pmax
comp=Z,14nm,0.5s
CABF La Chapelle 48.30 303 *e*P **P** **16 42 52.6 +0.8**
comp=Z,14nm,0.5s
CABF *e*pP **pP** **16 43 33.3 0.0**
GIVF Givet 48.44 308 *e*P **P** **16 42 53.9 +1.2**
comp=Z,6.1nm,0.5s
GIVF Givet 48.44 308 *e*P **P** **16 42 53.9 +1.2**
GIVF pmax pmax
comp=Z,6.0nm,0.5s
GIVF Givet 48.44 308 *e*P **P** **16 42 53.9 +1.2**
comp=Z,6.1nm,0.5s
KBS Kingsbay 48.55 347 *e*P **P** **16 42 54.9 +1.7**
KBS AMB AMB 16 42 56.8
comp=Z,67nm,1.2s
KBS Kingsbay 48.55 347*d* *i*P **P** **16 42 54.9 +1.7**
KBS pmax pmax
comp=Z,60nm,1.1s
KBS Kingsbay 48.55 347 *e*P **P** **16 42 54.4 +1.2**
comp=Z,60nm,1.1s
MEZF Maizieres J'vi 48.59 306 *e*P **P** **16 42 54.7 +0.8**
comp=Z,11nm,0.5s
MEZF *e*pP **pP** **16 43 35.7 +0.2**
MEZF Maizieres J'vi 48.59 306 *e*P **P** **16 42 54.7 +0.8**
comp=Z,11nm,0.5s
MEZF *e*pP **pP** **16 43 35.7 +0.2**
JNU Nakatsue 48.61 75 P **P** **16 42 54.9 +0.6**
JNU Nakatsue 48.61 75 P **P** **16 42 54.9 +0.6**
comp=Z,7.8nm,0.9s,baz=341,slow=9.9,SNR=6.0
FRF La Foret Royal 48.63 299 *e*P **P** **16 42 54.3 0.0**
comp=Z,4.6nm,0.6s
FRF La Foret Royal 48.63 299 *e*P **P** **16 42 54.3 0.0**
FRF pmax pmax
comp=Z,5.0nm,0.6s
FRF La Foret Royal 48.63 299 *e*P **P** **16 42 54.3 0.0**
comp=Z,4.6nm,0.6s
SFTF Sexfontaines 48.66 306 *e*P **P** **16 42 54.9 +0.4**
comp=Z,13nm,0.6s
SFTF Sexfontaines 48.66 306 *e*P **P** **16 42 54.9 +0.4**
comp=Z,13nm,0.6s
BAIF Baives 48.84 308 *e*P **P** **16 42 56.9 +1.2**
comp=Z,5.7nm,0.3s
BAIF *e*pP **pP** **16 43 37.8 +0.5**
BAIF Baives 48.84 308 *e*P **P** **16 42 56.9 +1.2**
BAIF *e**PP **pP** **16 43 37.8 +0.5**
BAIF pmax pmax
comp=Z,6.0nm,0.3s
BAIF Baives 48.84 308 *e*P **P** **16 42 56.9 +1.2**
comp=Z,5.7nm,0.3s
BAIF *e*pP **pP** **16 43 37.8 +0.5**
KMBO Kilima Mbogo 48.84 227 P **P** **16 42 56.1 -0.4**
KMBO Kilima Mbogo 48.84 227 P **P** **16 42 56.1 -0.4**
comp=Z,0.9nm,0.5s,baz=37,slow=14,SNR=6.0
KEST Kesra 48.99 288 P **P** **16 42 58.5 +1.2**
KEST Kesra 48.99 288 P **P** **16 42 58.5 +1.2**
comp=Z,1.3nm,0.6s,baz=34,slow=14,SNR=5.2
LOR Lormes 49.64 305 *e*P **P** **16 43 03.0 +1.1**
LOR *e*pP **pP** **16 43 42.9 -0.8**
LOR Lormes 49.64 305 *e*P **P** **16 43 03.0 +1.1**
LOR *e*pP **pP** **16 43 42.9 -0.8**
VIVF Saint-Julien-l 49.68 301 *e*P **P** **16 43 02.2 0.0**
VIVF *e*pP **pP** **16 43 43.8 -0.2**
VIVF Saint-Julien-l 49.68 301 *e*P **P** **16 43 02.2 0.0**
VIVF *e**PP **pP** **16 43 43.8 -0.2**
VIVF Saint-Julien-l 49.68 301 *e*P **P** **16 43 02.2 0.0**
VIVF *e*pP **pP** **16 43 43.8 -0.2**
SMF Signal de Mont 49.80 304 *e*P **P** **16 43 03.3 +0.2**
comp=Z,14nm,0.6s
SMF *e*pP **pP** **16 43 45.0 +0.1**
SMF Signal de Mont 49.80 304 *e*P **P** **16 43 03.3 +0.2**
SMF *e**PP **pP** **16 43 45.0 +0.1**
SMF pmax pmax
comp=Z,14nm,0.6s
SMF Signal de Mont 49.80 304 *e*P **P** **16 43 03.3 +0.2**
comp=Z,14nm,0.6s
SMF *e*pP **pP** **16 43 45.0 +0.1**
AVF Avril sur Loir 50.09 304 *e*P **P** **16 43 05.5 +0.2**
comp=Z,25nm,0.8s
AVF *e*pP **pP** **16 43 46.7 -0.4**
AVF Avril sur Loir 50.09 304 *e*P **P** **16 43 05.5 +0.2**
AVF *e**PP **pP** **16 43 46.7 -0.4**
AVF pmax pmax
comp=Z,25nm,0.8s
AVF Avril sur Loir 50.09 304 *e*P **P** **16 43 05.5 +0.2**
comp=Z,25nm,0.8s
AVF *e*pP **pP** **16 43 46.7 -0.4**
LASF Ste Croix 50.45 301 *e*P **P** **16 43 09.1 +1.1**
comp=Z,16nm,0.8s
LASF *e*pP **pP** **16 43 48.0 -1.9**
LASF Ste Croix 50.45 301 *e*P **P** **16 43 09.1 +1.1**
comp=Z,16nm,0.8s
LASF *e*pP **pP** **16 43 48.0 -1.9**
TCF Toulx Ste Croi 50.98 304 *e*P **P** **16 43 12.5 +0.5**
comp=Z,35nm,1.0s
TCF *e*pP **pP** **16 43 53.8 -0.1**
TCF Toulx Ste Croi 50.98 304 *e*P **P** **16 43 12.5 +0.5**
TCF *e**PP **pP** **16 43 53.8 -0.1**
TCF pmax pmax
comp=Z,35nm,1.0s
TCF Toulx Ste Croi 50.98 304 *e*P **P** **16 43 12.5 +0.5**
comp=Z,35nm,1.0s
TCF *e*pP **pP** **16 43 53.8 -0.1**
CAF Calviac 51.45 302 *e*P **P** **16 43 16.1 +0.6**
comp=Z,11nm,0.8s
CAF Calviac 51.45 302 *e*P **P** **16 43 16.1 +0.6**
CAF pmax pmax
comp=Z,11nm,0.8s
CAF Calviac 51.45 302 *e*P **P** **16 43 16.1 +0.6**
comp=Z,11nm,0.8s
MTLF Montolieu 51.79 300 *e*P **P** **16 43 18.5 +0.5**
MTLF Montolieu 51.79 300 *e*P **P** **16 43 18.5 +0.5**
MTLF Montolieu 51.79 300 *e*P **P** **16 43 18.5 +0.5**
LDF La Druitiere 51.92 307 *e*P **P** **16 43 19.2 +0.3**
LDF La Druitiere 51.92 307 *e*P **P** **16 43 19.2 +0.3**
LDF La Druitiere 51.92 307 *e*P **P** **16 43 19.2 +0.3**
FLN La Foliniere 52.11 307 *e*P **P** **16 43 20.2 -0.1**
FLN La Foliniere 52.11 307 *e*P **P** **16 43 20.2 -0.1**
FLN La Foliniere 52.11 307 *e*P **P** **16 43 20.2 -0.1**
EKA Eskdalemuir Ar 52.23 316 P **P** **16 43 21.0 -0.1**
EKA Eskdalemuir Ar 52.23 316 P **P** **16 43 21.0 -0.1**
comp=Z,16nm,0.9s,baz=85,slow=9.3,SNR=12
LFF La Frestale 52.34 302 *e*P **P** **16 43 22.7 +0.7**
LFF La Frestale 52.34 302 *e*P **P** **16 43 22.7 +0.7**
LFF La Frestale 52.34 302 *e*P **P** **16 43 22.7 +0.7**
GRR Gorron 52.45 307 *e*P **P** **16 43 22.7 -0.1**
comp=Z,7.4nm,0.5s
GRR Gorron 52.45 307 *e*P **P** **16 43 22.7 -0.1**
GRR pmax pmax
comp=Z,7.0nm,0.5s
GRR Gorron 52.45 307 *e*P **P** **16 43 22.7 -0.1**
comp=Z,7.4nm,0.5s
MJAR Matsushiro Arr 52.96 68 P **P** **16 43 27.0 +0.3**
MJAR Matsushiro Arr 52.96 68 P **P** **16 43 27.0 +0.3**
comp=Z,1.7nm,0.9s,baz=283,slow=10.0,SNR=10
EPF Esparros 53.20 300 *e*P **P** **16 43 29.1 +0.7**
comp=Z,2.4nm,0.4s
EPF Esparros 53.20 300 *e*P **P** **16 43 29.1 +0.7**
EPF pmax pmax
comp=Z,2.0nm,0.4s
EPF Esparros 53.20 300 *e*P **P** **16 43 29.1 +0.7**
comp=Z,2.4nm,0.4s
ETSF Etsaut 53.86 300 *e*P **P** **16 43 33.9 +0.6**
comp=Z,8.0nm,0.4s
ETSF Etsaut 53.86 300 *e*P **P** **16 43 33.9 +0.6**
ETSF pmax pmax
comp=Z,8.0nm,0.4s
ETSF Etsaut 53.86 300 *e*P **P** **16 43 33.9 +0.6**
comp=Z,8.0nm,0.4s
DAG Danmarks Havn 54.67 344⇓ *i*P **P** **16 43 39.7 +1.2**
DAG pmax pmax
comp=Z,19nm,0.8s
DAG Danmarks Havn 54.67 344⇓ *i*P **P** **16 43 39.7 +1.2**
comp=Z,25nm,0.8s
ESDC Sonseca Array 57.41 298 P **P** **16 43 59.2 +0.7**
ESDC pP **pP** **16 44 40.8 -0.7**
ESDC Sonseca Array 57.41 298 P **P** **16 43 59.2 +0.7**
comp=Z,0.6nm,0.5s,baz=60,slow=8.1,SNR=6.4
ESDC pP **pP** **16 44 40.8 -0.7**
comp=Z,2.6nm,0.8s,baz=58,slow=7.2,SNR=4.3
TAM Tamanrasset 57.50 276 P **P** **16 44 00.2 +0.7**
TAM Tamanrasset 57.50 276 P **P** **16 44 00.2 +0.7**
BILL Bilibino 58.57 26⇓ *e*P **P** **16 44 07.9 +1.8**
BILL *e**PP **pP** **16 44 51.2 +2.0**
BILL *e* 16 46 19.4
BILL *e*S S 16 52 12.0 +17
BILL pmax pmax
comp=Z,4.0nm,1.2s
BILL MLR MLR
comp=Z,100nm,20.0s
BILL Bilibino 58.57 26 *e*P **P** **16 44 07.8 +1.7**
comp=Z,2.5nm,0.8s
BILL *e*pP **pP** **16 44 49.5 +0.3**
PEA0B Petropavlovsk- 59.95 44 P P 16 44 11.7 -4.1
SUMG Summit 61.00 341 *i*P **P** **16 44 24.9 +1.9**
SUMG pmax pmax
comp=Z,18nm,0.9s
SUMG Summit 61.00 341 *e*P **P** **16 44 24.9 +1.9**
comp=Z,26nm,1.0s
SUMG *e*pP **pP** **16 45 06.6 +0.1**
SUMG Summit 61.00 341 *i*P **P** **16 44 24.9 +1.9**
comp=Z,18nm,0.9s
TOA0 Torodi Ar. Sit 65.69 269 *e*P **P** **16 44 52.1 -2.1**
TORD Torodi Ar. Bea 65.69 269 P **P** **16 44 52.4 -1.8**
TORD Torodi Ar. Bea 65.69 269 P **P** **16 44 52.4 -1.8**
comp=Z,3.7nm,0.5s,baz=50,slow=6.2,SNR=50
INK Inuvik 73.86 9 P **P** **16 45 44.1 +1.0**
INK pP **pP** **16 46 29.6 +1.4**
INK Inuvik 73.86 9 P **P** **16 45 44.1 +1.0**
comp=Z,3.7nm,0.7s,baz=1.0,slow=7.9,SNR=16
INK pP **pP** **16 46 29.6 +1.4**
comp=Z,6.4nm,0.9s,baz=353,slow=8.0,SNR=5.0
LBTB Lobatse 74.70 222 *e*P **P** **16 45 48.6 -0.1**
comp=Z,3.1nm,0.6s
ILAR Eielson Array 74.74 16 P **P** **16 45 49.0 +0.7**
ILAR pP **pP** **16 46 33.6 +0.1**

ILAR	**Eielson Array**	**74.74**	**16**	P		**P**	**16 45 49.0**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=323,slow=5.2,SNR=13							
ILAR				pP		**pP**	**16 46 33.6**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=320,slow=4.8,SNR=8.4							
FITZ	**Fitzroy Crossi**	**74.95**	**127**	*e*P		**P**	**16 45 49.8**	**-0.4**
	comp=Z,11nm,1.0s							
FITZ				pP		**pP**	**16 46 35.5**	**+0.2**
PAX	**Paxson**	**76.62**	**16**	*e*P		**P**	**16 45 59.9**	**+0.8**
PAX				*e*PP		**pP**	**16 46 44.2**	**-0.3**
PAX	**Paxson**	**76.62**	**16**	*e*P		**P**	**16 45 59.9**	**+0.8**
	comp=Z,2.2nm,0.6s							
PAX				*e*pP		**pP**	**16 46 44.1**	**-0.3**
SML	**Sawmill**	**76.94**	**18**	*e*P		**P**	**16 46 01.5**	**+0.6**
SML				*e**PP		**pP**	**16 46 45.5**	**-0.8**
SML	**Sawmill**	**76.94**	**18**	*e*P		**P**	**16 46 01.5**	**+0.6**
	comp=Z,4.1nm,1.3s							
SML				*e*pP		**pP**	**16 46 45.5**	**-0.8**
YKA	**Yellowknife Ar**	**81.19**	**3**	P		**P**	**16 46 24.9**	**+1.0**
YKA				pP		**pP**	**16 47 09.6**	**-0.1**
YKA	**Yellowknife Ar**	**81.19**	**3**	P		**P**	**16 46 24.9**	**+1.0**
	comp=Z,1.5nm,0.4s,baz=348,slow=5.4,SNR=56							
YKA				pP		**pP**	**16 47 09.6**	**-0.1**
	comp=Z,3.9nm,0.7s,baz=350,slow=5.6,SNR=7.7							
SCHQ	**Schefferville**	**82.04**	**337**	P		**P**	**16 46 28.8**	**+0.3**
SCHQ	**Schefferville**	**82.04**	**337**	P		**P**	**16 46 28.8**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=78,slow=7.5,SNR=3.7							
WRA	**Warramunga Arr**	**82.04**	**122**	P		**P**	**16 46 28.1**	**-0.9**
WRA				pP		**pP**	**16 47 15.5**	**+0.6**
WRA	**Warramunga Arr**	**82.04**	**122**	P		**P**	**16 46 28.1**	**-0.9**
	comp=Z,13nm,0.7s,baz=325,slow=5.0,SNR=217							
WRA				pP		**pP**	**16 47 15.5**	**+0.6**
	comp=Z,3.9nm,1.0s,baz=324,slow=5.0,SNR=3.5							
WRAB	**Tennant Creek**	**82.04**	**122**	*e*P		**P**	**16 46 28.0**	**-0.9**
WRAB				pmax		pmax		
	comp=Z,20nm,1.0s							
WRAB	**Tennant Creek**	**82.04**	**122**	*e*P		**P**	**16 46 28.0**	**-0.9**
	comp=Z,20nm,1.0s							
AS31	**Alice Springs**	**84.31**	**125**	*e*P		**P**	**16 46 39.4**	**-1.1**
AS31				*e*pP		**pP**	**16 47 26.6**	**-0.1**
ASAR	**Alice Springs**	**84.31**	**125**	P		**P**	**16 46 39.6**	**-0.9**
ASAR				pP		**pP**	**16 47 27.6**	**+0.8**
ASAR	**Alice Springs**	**84.31**	**125**	P		**P**	**16 46 39.6**	**-0.9**
	comp=Z,11nm,0.6s,baz=309,slow=5.0,SNR=284							
ASAR				pP		**pP**	**16 47 27.6**	**+0.8**
	comp=Z,2.4nm,0.7s,baz=312,slow=5.1,SNR=4.5							
FORT	**Forrest**	**85.72**	**134**	*e*P		**P**	**16 46 46.5**	**-0.8**
	comp=Z,15nm,0.6s							
FFC	**Flin Flon**	**88.89**	**356**	*e*P		**P**	**16 47 02.8**	**+0.6**
FFC				pmax		pmax		
	comp=Z,2.0nm,1.0s							
FFC	**Flin Flon**	**88.89**	**356**	*e*P		**P**	**16 47 02.8**	**+0.6**
	comp=Z,2.0nm,1.0s							
CTAO	**Charters Tower**	**90.59**	**115**	*e*P		**P**	**16 47 09.8**	**-0.9**
CTAO				pmax		pmax		
	comp=Z,5.0nm,0.6s							
CTAO	**Charters Tower**	**90.59**	**115**	*e*P		**P**	**16 47 09.8**	**-0.9**
	comp=Z,5.5nm,0.6s							
STKA	**Stephens Creek**	**94.84**	**126**	*e*P		**P**	**16 47 29.6**	**-0.4**
STKA	**Stephens Creek**	**94.84**	**126**	P		**P**	**16 47 30.6**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=338,slow=9.3,SNR=7.8							
CPUP	**Villa Florida**	**135.19**	**268**	PKP		**PKPdf**	**16 53 26.1**	**-0.7**
CPUP	**Villa Florida**	**135.19**	**268**	PKP		**PKPdf**	**16 53 26.1**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=225,slow=9.3,SNR=3.4							
PLCA	**Paso Flores**	**149.82**	**250**	PKPbc		**PKPbc**	**16 53 58.4**	**+1.3**
PLCA	**Paso Flores**	**149.82**	**250**	PKPbc		**PKPbc**	**16 53 58.4**	**+1.3**
	comp=Z,1.6nm,0.6s,baz=268,slow=4.4,SNR=4.2							

MAN 09 16:57:23.1, 16.80N × 122.37E, h88 km, mb 4.4, ML 3.2, MS 3.1, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.27**	**12**	↓*e*P	Pn	16 57 38.0	+1.9
CAUP	**Cauayan**	**0.54**	**285**	*e*P	Pn	16 57 40.2	+2.4
BALP	**Baler**	**1.30**	**216**	*e*P	Pn	16 57 47.7	+1.6

*CSEM **09** 16:59:30.9±0.2, 41.12N × 19.53E, h2 km, ML 2.7, Error ellipse: s-maj=4.6km s-min=2.9km az=60.0*
*THE **09** 16:59:30.5, 41.30N × 19.40E, h16 km ± 1 km, ML 2.6/2, Error ellipse: s-maj=3.1km s-min=1.0km az=308.0*
*TIR **09** 16:59:30.5, 41.12N × 19.63E, h0 km, ML 2.7*
*PDG **09** 16:59:31.8±0.4, 41.18N × 19.57E, h9 km, ML 2.7/8, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
*SKO **09** 16:59:32.1, 41.14N × 19.57E, h6 km, M1.9, ML 2.4*

ISC 09 16:59:31.4±1.1, 41.14N±0.02 × 19.57E±0.03, h10 km ± 8 km, n48, σ0 s76/89, 9C-10D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.30**	**47**	*e*PG	**Pg**	**16 59 37.5**	**0.0**
TIR				*e*SG	**Sg**	**16 59 42.4**	**+0.8**
TIR	**Tirane**	**0.30**	**47**	P	**Pg**	**16 59 37.7**	**+0.2**
TIR				S	**Sb**	**16 59 43.1**	**-0.9**
TIR	**Tirane**	**0.30**	**47**	*e*P	**Pg**	**16 59 37.7**	**+0.2**
TIR	**Tirane**	**0.30**	**47**	P	**Pg**	**16 59 37.7**	**+0.2**
TIR				*e*Sg	**Sg**	**16 59 42.4**	**+0.8**
TIR				S	**Sb**	**16 59 43.1**	**-0.9**
PHP	**Peshkopia**	**0.85**	**50**	*e*PG	**Pg**	**16 59 46.2**	**-1.6**
PHP				*e*SG	**Sg**	**16 59 57.0**	**-2.0**
PHP	**Peshkopia**	**0.85**	**50**	P	**Pg**	**16 59 46.4**	**-1.4**
PHP				S	**Sb**	**16 59 59.6**	**-0.2**
PHP	**Peshkopia**	**0.85**	**50**	P	**Pg**	**16 59 46.4**	**-1.4**
PHP				S	**Sb**	**16 59 59.6**	**-0.2**
ULC	**Ulcinj**	**0.85**	**344**	↑*i*Pg	**Pg**	**16 59 47.2**	**-0.7**
ULC				*e*Sg	**Sb**	**16 59 59.5**	**-0.5**
ULC	**Ulcinj**	**0.85**	**344**	↑*i*Pg	**Pg**	**16 59 47.2**	**-0.7**
ULC				*e*Sg	**Sb**	**16 59 59.5**	**-0.5**
PUK	**Puka**	**0.93**	**15**	*e*PG	**Pg**	**16 59 49.0**	**-0.4**
PUK				*e*SG	**Sn**	**17 00 03.9**	**-0.3**
PUK	**Puka**	**0.93**	**15**	*e*Pg	**Pg**	**16 59 49.0**	**-0.4**
PUK				*e*Sg	**Sn**	**17 00 03.9**	**-0.3**
BUM	**Brajici-Budva**	**1.26**	**337**	↑*i*Pg	**Pn**	**16 59 54.8**	**-0.4**
BUM				*e*Sg	**Sn**	**17 00 13.3**	**+1.0**
BCI	**Bajram Curri**	**1.28**	**17**	*e*PG	**Pg**	**16 59 55.9**	**-0.1**
BCI				*e*SG	**Sn**	**17 00 13.7**	**+1.1**
BCI	**Bajram Curri**	**1.28**	**17**	*e*Pg	**Pg**	**16 59 55.9**	**-0.1**
BCI				*e*Sg	**Sn**	**17 00 13.7**	**+1.1**
TTG	**Podgorica**	**1.31**	**350**	↓*i*Pg	**Pn**	**16 59 55.2**	**-0.5**
TTG				*e*Sg	**Sg**	**17 00 15.1**	**+1.6**
PDG	**Podgorica**	**1.31**	**350**	↓*i*Pg	**Pn**	**16 59 55.2**	**-0.6**
BIA	**Bitola**	**1.33**	**95**	*e*Pn	**Pn**	**16 59 56.0**	**-0.2**
BIA				*e*Sg	**Sn**	**17 00 14.5**	**+0.5**
BIA				*e*Lg	Lg	17 00 15.2	
	comp=N,9.3nm,0.2s						
BIA				*e*Lg	Lg	17 00 15.3	
	comp=E,33nm,0.5s						
BIA	**Bitola**	**1.33**	**95**	*e*Pn	**Pn**	**16 59 56.0**	**-0.2**
BIA				*e*Sg	**Sn**	**17 00 14.4**	**+0.5**
BIA				*e*Lg	Lg	17 00 15.3	
	comp=E,33nm,0.5s						
NEST	**Nestorio**	**1.34**	**122**	P	**Pb**	**16 59 56.7**	**0.0**
NEST	**Nestorio**	**1.34**	**122**	P	**Pb**	**16 59 56.7**	**0.0**
FNA	**Florina**	**1.42**	**104**	P	**Pn**	**16 59 57.6**	**+0.3**
FNA				S	**Sg**	**17 00 17.7**	**+0.7**
FNA	**Florina**	**1.42**	**104**	*e*P	**Pn**	**16 59 57.6**	**+0.3**
FNA	**Florina**	**1.42**	**104**	P	**Pn**	**16 59 57.6**	**+0.3**
FNA				S	**Sg**	**17 00 17.7**	**+0.7**
KEK	**Kerkira**	**1.44**	**173**	P	**Pn**	**16 59 57.4**	**-0.2**
KEK				S	**Sg**	**17 00 17.9**	**+0.2**
KEK	**Kerkira**	**1.44**	**173**	*e*P	**Pn**	**16 59 57.4**	**-0.2**
KEK	**Kerkira**	**1.44**	**173**	P	**Pn**	**16 59 57.4**	**-0.2**
KEK				S	**Sg**	**17 00 17.9**	**+0.2**
PVY	**Plav**	**1.48**	**11**	↑*i*Pg	**Pb**	**16 59 58.6**	**-0.5**
PVY				*e*Sg	**Sg**	**17 00 20.5**	**+1.5**
PVY	**Plav**	**1.48**	**11**	↑*i*Pg	**Pb**	**16 59 58.6**	**-0.5**
PVY				*e*Sg	**Sg**	**17 00 20.5**	**+1.5**
HCY	**Herceg Novi**	**1.53**	**329**	↓*i*Pg	**Pb**	**16 59 59.1**	**-0.8**
HCY				*e*Sg	**Sg**	**17 00 21.2**	**+0.5**
HCY	**Herceg Novi**	**1.53**	**329**	↓*i*Pg	**Pb**	**16 59 59.1**	**-0.8**
HCY				*e*Sg	**Sg**	**17 00 21.2**	**+0.5**
SKO	**Skopje**	**1.63**	**59**	*e*Pn	**Pb**	**17 00 01.3**	**-0.3**
SKO				*e*Sg	**Sg**	**17 00 24.1**	**+0.2**
SKO				*e*Lg	Lg	17 00 24.9	
	comp=N,66nm,0.5s						
SKO				*e*Lg	Lg	17 00 26.0	
	comp=E,62nm,0.6s						
SKO	**Skopje**	**1.63**	**59**	*e*Pn	**Pb**	**17 00 01.8**	**+0.2**
SKO				*e*Sg	**Sg**	**17 00 24.5**	**+0.7**
SKO				*e*Lg	Lg	17 00 26.5	
	comp=E,62nm,0.6s						

IGT	**Igoumenitsa**	**1.71**	**160**	P		**Pn**	**17 00 01.8**	**+0.5**
IGT				S		**Sg**	**17 00 26.8**	**+0.4**
IGT	**Igoumenitsa**	**1.71**	**160**	P		**Pn**	**17 00 01.8**	**+0.5**
IGT				S		**Sg**	**17 00 26.8**	**+0.4**
NKY	**Niksic**	**1.72**	**346**	↑*i*Pn		**Pn**	**17 00 02.1**	**+0.5**
NKY				*e*Sn		**Sg**	**17 00 26.2**	**-0.7**
NKY	**Niksic**	**1.72**	**346**	↑*i*Pn		**Pn**	**17 00 02.1**	**+0.5**
NKY				*e*Sn		**Sg**	**17 00 26.2**	**-0.7**
BEY	**Berane**	**1.74**	**8**	↑*i*Pn		**Pb**	**17 00 03.1**	**-0.5**
BEY				*e*Sn		**Sg**	**17 00 27.4**	**-0.1**
IVA	**Berane**	**1.75**	**8**	↑*i*Pn		**Pb**	**17 00 03.1**	**-0.5**
IVA				*e*Sn		**Sg**	**17 00 27.4**	**-0.1**
JAN	**Janina**	**1.78**	**146**	*e*P		**Pg**	**17 00 05.5**	**0.0**
BRY	**Bratogost**	**1.92**	**337**	↓*i*Pn		**Pn**	**17 00 05.1**	**+0.8**
BRY				*e*Sn		**Sb**	**17 00 31.1**	**+0.5**
BRY	**Bratogost**	**1.92**	**337**	↓*i*Pn		**Pn**	**17 00 05.1**	**+0.8**
BRY				*e*Sn		**Sb**	**17 00 31.1**	**+0.5**
UPM	**Unac-Piva**	**2.12**	**347**	↓*i*Pn		**Pn**	**17 00 08.2**	**+1.1**
UPM				*e*Sn		**Sb**	**17 00 35.9**	**-0.5**
UPM	**Unac-Piva**	**2.12**	**347**	↓*i*Pn		**Pn**	**17 00 08.2**	**+1.1**
UPM				*e*Sn		**Sb**	**17 00 35.9**	**-0.5**
GRG	**Griva**	**2.15**	**94**	*e*P		**Pn**	**17 00 08.4**	**+1.0**
PLE	**Pljevlja**	**2.19**	**357**	↓*i*Pn		**Pn**	**17 00 09.4**	**+1.4**
PLE				*e*Sn		**Sb**	**17 00 38.3**	**-0.2**
PLE	**Pljevlja**	**2.19**	**357**	↓*i*Pn		**Pn**	**17 00 09.4**	**+1.4**
PLE				*e*Sn		**Sb**	**17 00 38.3**	**-0.2**
VAY	**Valandovo**	**2.27**	**85**	*e*Pn		**Pn**	**17 00 10.5**	**+1.5**
VAY				*e*Sg		**Sg**	**17 00 44.2**	**-0.1**
VAY				*e*Lg		Lg	17 00 44.6	
	comp=N,11nm,0.7s							
VAY				*e*Lg		Lg	17 00 46.4	
	comp=E,7.8nm,0.8s							
VAY	**Valandovo**	**2.27**	**85**	*e*Pn		**Pb**	**17 00 10.9**	**-1.6**
VAY				*e*Sg		**Sg**	**17 00 44.7**	**+0.3**
VAY				*e*Lg		Lg	17 00 46.9	
	comp=E,7.8nm,0.8s							

IDC 09 17:03:11.0±5.5, 23.06S × 173.76W, h0 km, mb 3.7/5, mb1 3.9/5, mb1mx3.7/19, mbtmp3.7/5, MS3.6/1, Ms1 3.6/1, ms1mx2.7/27, Error ellipse: s-maj=226.3km s-min=40.7km az=143.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**18.31**	**269**	LR	LR	17 12 17.1	
	comp=Z,172nm,18.3s,baz=194,slow=30						
STKA	**Stephens Creek**	**40.34**	**247**	P	P	17 10 49.2	-1.3
	0.4nm,0.5s,baz=104,slow=17,SNR=2.8						
ASAR	**Alice Springs**	**47.82**	**258**	P	P	17 11 51.1	+0.4
	0.6nm,0.8s,baz=102,slow=8.1,SNR=8.0						
WRA	**Warramunga Arr**	**48.19**	**263**	P	P	17 11 52.9	-0.6
	1.0nm,0.6s,baz=101,slow=8.3,SNR=13						
FITZ	**Fitzroy Crossi**	**56.61**	**263**	P	P	17 12 56.9	+0.7
	1.4nm,0.8s,baz=90,slow=4.0						
ILAR	**Eielson Array**	**89.99**	**11**	P	P	17 16 11.7	-0.2
	0.4nm,0.9s,baz=210,slow=5.2,SNR=3.3						

*NSSP **09** 17:06:12.5, 39.82N × 44.15E, h18 km, Ms 2.9*
*TIF **09** 17:06:13.0, 39.87N × 44.16E, h13 km ± 1 km*
*ISK **09** 17:06:13.3, 39.86N × 44.16E, h10 km, MD 3.3*
*ISCJB **09** 17:06:13.7±0.4, 39.86N±0.02 × 44.14E±0.03, h1 km ± 3 km, Error ellipse: s-maj=3.9km s-min=2.6km az=31.4*
*DDA **09** 17:06:13.7, 39.79N × 44.22E, h7 km, MD 3.3*
*CSEM **09** 17:06:13.7±0.2, 39.87N × 44.14E, h5 km, ML 2.9, Error ellipse: s-maj=5.0km s-min=3.1km az=129.0*

ISC 09 17:06:13.8±0.8, 39.88N±0.02 × 44.16E±0.02, h16 km ± 6 km, n65, σ0 s95/109, 8C-23D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRNZ	**Vardanashen**	**0.17**	**8**	↓*i*P	**Pg**	**17 06 18.0**	**-0.2**
VRNZ				↑*i*S	**Sg**	**17 06 21.0**	**-0.2**
VRNZ	**Vardanashen**	**0.17**	**8**	↓P	**Pg**	**17 06 18.0**	**-0.2**
VRNZ				S	**Sg**	**17 06 21.0**	**-0.2**
PAAR	**P'arak'ar**	**0.32**	**32**	↓*i*P	**Pg**	**17 06 20.7**	**+0.1**
PAAR				↓*i*S	**Sg**	**17 06 25.8**	**+0.6**
PAAR	**P'arak'ar**	**0.32**	**32**	↓P	**Pg**	**17 06 20.7**	**+0.1**
PAAR				S	**Sg**	**17 06 25.8**	**+0.6**
VNNZ	**Vanand**	**0.34**	**311**	↓*i*P	**Pg**	**17 06 20.9**	**-0.1**
VNNZ				↓*i*S	**Sg**	**17 06 26.1**	**+0.1**
VNNZ	**Vanand**	**0.34**	**311**	↓P	**Pg**	**17 06 20.9**	**-0.1**
VNNZ				S	**Sg**	**17 06 26.1**	**+0.1**
ERE	**Yerevan**	**0.37**	**39**	↓P	**Pg**	**17 06 20.7**	**-0.9**
ERE				S	**Sg**	**17 06 27.0**	**+0.1**
AKSZ	**Araks**	**0.38**	**326**	↑*i*P	**Pg**	**17 06 27.4**	**-0.2**
AKSZ				↓*i*S	**Sg**	**17 06 27.2**	**+0.2**
AKSZ	**Araks**	**0.38**	**326**	↑P	**Pg**	**17 06 21.4**	**-0.2**
AKSZ				S	**Sg**	**17 06 27.2**	**+0.2**
ARUZ	**Aruch**	**0.41**	**352**	↓*i*P	**Pg**	**17 06 21.9**	**-0.2**
ARUZ				↓*i*S	**Sg**	**17 06 28.4**	**+0.7**
ARUZ	**Aruch**	**0.41**	**352**	↓P	**Pg**	**17 06 21.9**	**-0.2**
ARUZ				S	**Sg**	**17 06 28.5**	**+0.7**
DYDN	**Diyadin**	**0.50**	**227**	*i* P	**Pg**	**17 06 23.1**	**-0.7**
DYDN				*i* S	**Sb**	**17 06 31.5**	**+0.1**
DYDN	**Diyadin**	**0.50**	**227**	*i* P	**Pg**	**17 06 23.1**	**-0.7**
DYDN				*i* S	**Sb**	**17 06 31.5**	**+0.1**
AMBZ	**Amberd**	**0.51**	**8**	↓*i*P	**Pg**	**17 06 23.9**	**-0.3**
AMBZ				↓*i*S	**Sb**	**17 06 32.3**	**+0.3**
AMBZ	**Amberd**	**0.51**	**8**	↓P	**Pg**	**17 06 23.9**	**-0.3**
AMBZ				S	**Sb**	**17 06 32.3**	**+0.3**
GNI	**Garni**	**0.52**	**59**	*e*PG	**Pg**	**17 06 24.2**	**0.0**
GNI				*e*SG	**Sb**	**17 06 32.2**	**+0.1**
GNI	**Garni**	**0.52**	**59**	↑*i*P	**Pg**	**17 06 23.8**	**-0.5**
GNI				↓*i*S	**Sb**	**17 06 32.4**	**+0.3**
GNI	**Garni**	**0.52**	**59**	↑P	**Pg**	**17 06 23.8**	**-0.5**
GNI	**Garni**	**0.52**	**59**	*e*Pg	**Pg**	**17 06 24.3**	**0.0**
GNI				*e*Sg	**Sb**	**17 06 32.2**	**+0.1**
GNI				S	**Sb**	**17 06 32.4**	**+0.3**
KAPZ	**Kaputan**	**0.60**	**43**	↓*i*P	**Pg**	**17 06 25.6**	**-0.2**
KAPZ				↓*i*S	**Sg**	**17 06 34.2**	**+0.3**
KAPZ	**Kaputan**	**0.60**	**43**	↓P	**Pg**	**17 06 25.6**	**-0.2**
KAPZ				S	**Sg**	**17 06 34.2**	**+0.3**
CLDR	**Caldiran**	**0.76**	**195**	*e*PG	**Pg**	**17 06 27.6**	**-1.1**
CLDR				*e*SG	**Sb**	**17 06 39.2**	**+0.2**
KARS	**Kars**	**1.12**	**312**	*e*PN	**Pb**	**17 06 34.4**	**-0.5**
KARS				*e*SN	**Sg**	**17 06 51.0**	**+0.9**
KARS	**Kars**	**1.12**	**312**	*e*Pn	**Pb**	**17 06 34.4**	**-0.5**
KARS				*e*Sn	**Sg**	**17 06 51.0**	**+0.9**
STE	**Stepanavan**	**1.13**	**8**	↓P	**Pn**	**17 06 34.0**	**-1.1**
STE				S	**Sg**	**17 06 51.4**	**+0.9**
STEZ	**Stepenevan**	**1.13**	**9**	↓*i*P	**Pn**	**17 06 34.0**	**-1.9**
STEZ				↓*i*S	**Sg**	**17 06 51.4**	**+0.8**
TUTA	**Tutak**	**1.15**	**246**	*i* P	**Pn**	**17 06 34.9**	**-0.5**
TUTA				*i* S	**Sg**	**17 06 51.4**	**+0.4**
TUTA	**Tutak**	**1.15**	**246**	*i* P	**Pn**	**17 06 34.9**	**-0.5**
TUTA				*i* S	**Sg**	**17 06 51.4**	**+0.4**
VADZ	**Vardenis**	**1.25**	**76**	*e*P	**Pn**	**17 06 36.0**	**-0.9**
VADZ				↑S	**Sn**	**17 06 54.0**	**+0.5**
VADZ	**Vardenis**	**1.25**	**76**	P	**Pn**	**17 06 36.0**	**-0.9**
VADZ				S	**Sn**	**17 06 54.0**	**+0.5**
TVAN	**Van**	**1.47**	**204**	*i* P	**Pb**	**17 06 41.5**	**+0.6**
TVAN				*e*S	**Sn**	**17 06 59.2**	**+0.3**
TVAN	**Van**	**1.47**	**204**	*i* P	**Pb**	**17 06 41.5**	**+0.6**
TVAN				*e*S	**Sn**	**17 06 59.2**	**+0.3**
AKH	**Akhalkalaki**	**1.61**	**342**	P	**Pb**	**17 06 42.8**	**-0.5**
AKH				S	**Sb**	**17 07 04.7**	**+1.2**
AKH	**Akhalkalaki**	**1.61**	**342**	P	**Pb**	**17 06 42.8**	**-0.5**
AKH				S	**Sb**	**17 07 04.7**	**+1.2**
GRS	**Goris**	**1.72**	**102**	↑*i*P	**Pg**	**17 06 48.0**	**+1.1**
GRS				↑*i*S	**Sg**	**17 07 10.0**	**+0.8**
GEVA	**Gevas**	**1.79**	**209**	*i* P	**Pb**	**17 06 45.6**	**-0.7**
GEVA	**Gevas**	**1.79**	**209**	*i* P	**Pb**	**17 06 45.6**	**-0.7**
DGRG	**David-gareji**	**1.82**	**30**	P	**Pg**	**17 06 47.9**	**-0.9**
DGRG				S	**Sg**	**17 07 13.9**	**+1.5**
DGRG	**David-gareji**	**1.82**	**30**	P	**Pg**	**17 06 47.9**	**-0.9**
DGRG				S	**Sg**	**17 07 13.9**	**+1.5**
TBLG	**Delisi**	**1.90**	**13**	P	**Pb**	**17 06 48.0**	**-0.2**
TBLG				S	**Sg**	**17 07 14.1**	**-0.9**
TBLG	**Delisi**	**1.90**	**13**	P	**Pb**	**17 06 48.0**	**-0.2**
TBLG				S	**Sg**	**17 07 14.1**	**-0.9**
DAGI	**Agillar**	**2.09**	**306**	*i* P	**Pb**	**17 06 51.2**	**-0.2**
DAGI				*i* S	**Sg**	**17 07 24.0**	**+2.9**
DDEM	**Demirkent**	**2.10**	**300**	*i* P	**Pb**	**17 06 52.8**	**+1.2**
DDEM				*i* S	**Sn**	**17 07 09.3**	**-5.0**
DDEM	**Demirkent**	**2.10**	**300**	*i* P	**Pb**	**17 06 52.8**	**+1.2**
GOR	**Gori**	**2.10**	**359**	P	**Pb**	**17 06 51.6**	**0.0**
GOR				S	**Sg**	**17 07 21.4**	**-0.1**

GOR	**Gori**	**2.10**	**359**	P		**Pb**	**17 06 51.6**	**0.0**
GOR				S		**Sg**	**17 07 21.4**	**-0.1**
ERZM	**Erzurum**	**2.15**	**272**	*i* P		**Pg**	**17 06 54.4**	**-0.8**
ERZM	**Erzurum**	**2.15**	**272**	*i* P		**Pg**	**17 06 54.4**	**-0.8**
EZM	**Erzurum**	**2.15**	**272**	*e*PN		**Pn**	**17 06 50.4**	**+1.0**
VRTB	**Varto-Mus**	**2.21**	**252**	*e*PN		**Pn**	**17 06 51.0**	**+1.0**
VRTB	**Varto-Mus**	**2.21**	**252**	*e*Pn		**Pn**	**17 06 51.0**	**+1.0**
HAKT	**HAKKARI**	**2.35**	**189**	*i* P		**Pb**	**17 06 54.9**	**-1.0**
HAKT	**HAKKARI**	**2.35**	**189**	*i* P		**Pb**	**17 06 54.9**	**-1.0**
BCA	**Borcka**	**2.48**	**310**	*e*PN		**Pn**	**17 06 55.1**	**+1.5**
BCA	**Borcka**	**2.48**	**310**	*e*Pn		**Pn**	**17 06 55.1**	**+1.5**
CUKT	**Cukurca**	**2.66**	**190**	*e*PN		**Pn**	**17 06 57.2**	**+1.0**
CUKT	**Cukurca**	**2.66**	**190**	*e*Pn		**Pn**	**17 06 57.2**	**+1.0**
ONI	**Oni**	**2.76**	**349**	P		**Pb**	**17 07 03.3**	**+0.5**
ONI				S		**Sg**	**17 07 42.9**	**+0.3**
ONI	**Oni**	**2.76**	**349**	P		**Pb**	**17 07 03.3**	**+0.5**
BNGB	**Bing¨ll**	**2.84**	**253**	*e*PN		**Pn**	**17 06 60.0**	**+1.4**
BINT	**Bingol**	**3.02**	**252**	*e*Pn		**Pn**	**17 07 00.0**	**-1.1**
BAYT	**Ayd¨¬ntepe-Bay**	**3.12**	**281**	*e*PN		**Pn**	**17 07 04.2**	**+1.6**
BAYT	**Ayd¨¬ntepe-Bay**	**3.12**	**281**	*e*Pn		**Pn**	**17 07 04.2**	**+1.6**
ERZN	**Erzincan**	**3.44**	**267**	*e*PN		**Pn**	**17 07 08.3**	**+1.5**
EZC	**Erzincan**	**3.71**	**270**	*e*Pn		**Pn**	**17 07 08.3**	**-2.3**

*ISCJB **09** 17:13:52.7±0.6, 44.32N±0.03 × 129.39W±0.07, h10 km, mb 3.9/9, MS 3.4/5, Error ellipse: s-maj=7.2km s-min=3.7km az=1.7*
*IDC **09** 17:13:54.0±1.3, 44.31N × 129.13W, h0 km, mb 3.7/7, mb1 4.0/12, mb1mx3.8/32, mbtmp3.8/12, ML 3.5/4, MS 3.5/8, Ms1 3.5/8, ms1mx3.1/40, Error ellipse: s-maj=30.3km s-min=13.7km az=37.0*
*NEIC **09** 17:13:56.0±0.8, 44.32N × 129.24W, h10 km, mb 4.2/8, Error ellipse: s-maj=9.8km s-min=6.0km az=59.0*

ISC 09 17:13:55.2±0.9, 44.20N±0.07 × 129.22W±0.08, h10 km, n296, σ1 s32/284, mb 3.9/9, MS 3.4/5, 122C-83D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RNO	**Roman Nose**	**3.96**	**92**	P		**Pn**	**17 14 54.5**	**-1.6**
COR	**Corvallis**	**4.26**	**83**	*e*P		**Pn**	**17 14 59.7**	**-0.4**
KMOR	**Kings Mountain**	**4.31**	**68**	P		**Pn**	**17 14 60.0**	**-1.0**
F03A	**Seaside**	**4.37**	**65**	P		**Pn**	**17 15 01.2**	**-0.5**
E03A	**Lebam**	**4.62**	**57**	P		**Pn**	**17 15 04.3**	**-0.8**
BMW	**Boistfort Moun**	**4.80**	**60**	P		**Pn**	**17 15 06.4**	**-1.2**
HUMO	**Hull Mountain**	**4.83**	**107**	*e*P		**Pn**	**17 15 06.3**	**-1.7**
BROR	**Big Rock Looko**	**4.86**	**87**	P		**Pn**	**17 15 08.4**	**0.0**
NLWA	**Neilton Lookou**	**4.92**	**48**	P		**Pn**	**17 15 07.8**	**-1.4**
OSR	**Olympics--Salm**	**4.94**	**46**	P

SLMT	Seeley Lake 32nm,1.0s	11.41	69	*e*P	Pn	17 16 38.1	-0.2
CHMT	Chamberlain Mo 5.2nm,0.9s	11.52	71	*e*P	Pn	17 16 40.2	+0.3
MCMT	McKenzie Canyo 2.4nm,0.9s	11.71	81	*e*P	Pn	17 16 43.1	+0.6
B14A	Marquette Ranc baz=12	11.79	64	⇑P	Pn	17 16 43.5	0.0
H15A	Lima baz=12	11.87	82	⇑P	Pn	17 16 47.1	+2.5
A14A	Double T Ranch baz=12	11.87	61	⇑P	Pn	17 16 44.6	+0.1
E15A	Deer Lodge baz=12	11.88	73	⇓P	Pn	17 16 46.4	+1.6
G15A	Dillon baz=12	11.95	79	⇓P	Pn	17 16 47.5	+1.7
F15A	Butte baz=12,SNR=9.9	11.95	76	⇑P	Pn	17 16 47.5	+1.7
LRM	Limekiln Ridge 52nm,0.9s	11.98	76	*e*P	Pn	17 16 47.6	+1.3
D15A	Lincoln baz=12	12.03	70	⇑P	Pn	17 16 48.0	+1.1
C15A	Salmond Ranch, baz=12,SNR=12	12.09	67	⇑P	Pn	17 16 49.0	+1.3
J15A	Blackfoot baz=12,SNR=5.4	12.16	88	⇓P	Pn	17 16 51.2	+2.6
K15A	Arbon baz=12,SNR=7.6	12.22	91	⇑P	Pn	17 16 51.7	+2.2
B15A	Bradely Ranch, baz=12	12.24	64	⇑P	Pn	17 16 49.8	+0.2
A15A	Johnson Ranch, baz=12,SNR=35	12.30	61	⇑P	Pn	17 16 50.6	+0.1
G16A	Moss Hill, Enn baz=12,SNR=10	12.43	79	⇑P	Pn	17 16 54.4	+2.0
L15A	Malad City baz=12	12.50	94	⇑P	Pn	17 16 55.8	+2.6
BOZ	Bozeman (W) 7.6nm,1.1s	12.55	77	*e*P	Pn	17 16 54.6	+0.6
BOZ	Bozeman (W) baz=12,SNR=9.4	12.55	77	⇓P	Pn	17 16 55.2	+1.2
F16A	Kennard Place, baz=12	12.56	77	⇓P	Pn	17 16 55.2	+1.2
E16A	East Helena baz=12	12.56	73	⇓P	Pn	17 16 54.8	+0.8
C16A	Fuhringer Ranc baz=13,SNR=6.0	12.67	67	⇑P	Pn	17 16 57.1	+1.6
D16A	Dana Ranch, Ca baz=13,SNR=8.4	12.69	71	⇓P	Pn	17 16 57.2	+1.3
QLMT	Earthquake Lak 1.0nm,0.9s	12.71	81	*e*P	Pn	17 16 58.5	+2.3
I16A	Newdale baz=13,SNR=11	12.77	85	⇑P	Pn	17 16 59.4	+2.5
J16A	Bone baz=13	12.77	88	⇑P	Pn	17 16 59.5	+2.5
B16A	M & M Farms, S baz=13,SNR=11	12.82	65	⇑P	Pn	17 16 58.1	+0.6
H16A	Russell Place, baz=13,SNR=19	12.85	81	⇓P	Pn	17 17 00.2	+2.0
K16A	Soda Springs baz=13	12.87	90	⇑P	Pn	17 17 01.1	+2.8
A16A	West Butte Ran baz=13,SNR=9.1	13.01	62	⇑P	Pn	17 17 00.3	+0.1
GSC	Goldstone baz=13	13.03	129	⇓P	Pn	17 17 03.5	+3.1
E17A	Martinsdale baz=13	13.12	74	⇑P	Pn	17 17 02.8	+1.1
IMW	Indian Meadow	13.16	85	*e*P	Pn	17 17 05.4	+3.1
TPAW	Teton Pass	13.21	87	*e*P	Pn	17 17 06.1	+3.0
F17A	Fitzpatrick Pl baz=13,SNR=11	13.23	76	⇑P	Pn	17 17 04.2	+0.9
D17A	Six Diamond Ra baz=13,SNR=15	13.29	71	⇑P	Pn	17 17 04.9	+0.9
C17A	Wharram Farm, baz=13,SNR=8.7	13.30	69	⇓P	Pn	17 17 04.6	+0.5
MOOW	Moose Ponds	13.31	85	*e*P	Pn	17 17 06.8	+2.3
H17A	Grant Village baz=13,SNR=5.3	13.36	83	⇑P	Pn	17 17 08.1	+3.0
B17A	L&G Farms, Che baz=13	13.38	66	⇓P	Pn	17 17 05.6	+0.4
J17A	Brown Place, J baz=13	13.40	87	⇑P	Pn	17 17 07.9	+2.3
I17A	Pilgrim Ck. baz=13,SNR=6.3	13.41	85	⇓P	Pn	17 17 08.3	+2.6
LOHW	Long Hollow	13.44	86	*e*P	Pn	17 17 08.6	+2.5
ARUT	Antelope Range 24nm,1.4s	13.52	113	*e*P	Pn	17 17 10.1	+3.0
A17A	Triple J Farms baz=14,SNR=9.3	13.59	63	⇓P	Pn	17 17 07.7	-0.3
E18A	Harlowton baz=14	13.77	73	⇑P	Pn	17 17 12.2	+1.6
M17A	Scullys Gap (B baz=14	13.88	95	⇑P	Pn	17 17 14.8	+2.6
F18A	Big Timber baz=14	13.89	76	⇓P	Pn	17 17 13.7	+1.5
D18A	Linhart Farms, baz=14,SNR=5.3	13.89	71	⇓P	Pn	17 17 13.3	+1.1
GCMT	Greycliff 15nm,0.9s	13.93	77	*e*P	Pn	17 17 15.0	+2.3
N17A	Moffit Pass baz=14	13.93	97	⇑P	Pn	17 17 15.5	+2.6
MVU	Marysvale 16nm,1.2s	13.97	108	*e*P	Pn	17 17 15.2	+1.7
H18A	Shoshone NF, C baz=14	13.98	81	⇓P	Pn	17 17 15.8	+2.3
I18A	Diamond G Ranc baz=14,SNR=5.3	13.99	85	⇑P	Pn	17 17 16.5	+2.8
MSU	Marysvale 17nm,1.3s	13.99	108	*e*P	Pn	17 17 16.2	+2.5
K18A	Toltan Ranch, baz=14	14.03	90	⇑P	Pn	17 17 15.4	+1.2
EGMT	Eagleton 19nm,0.9s	14.03	67	*e*P	Pn	17 17 11.9	-2.1
GMRC	Granite Mounta baz=14	14.05	127	⇓P	Pn	17 17 16.1	+1.6
A18A	Metzger Ranch, baz=14	14.13	64	⇓P	Pn	17 17 15.5	+0.1
L18A	Fontenelle, Gr baz=14	14.21	93	⇓P	Pn	17 17 18.6	+2.0
O17A	Robinson Place baz=14	14.27	100	⇓P	Pn	17 17 20.1	+2.6
DLBC	Dease Lake comp=Z,135nm,19.8s,baz=166,slow=35	14.27	358	LR	LR	17 22 10.8	
PDAR	Pinedale Array	14.35	89	Pn	Pn	17 17 20.5	+2.0
PDAR	Pinedale Array baz=281,slow=10,SNR=4.1	14.35	89	Pn	Pn	17 17 20.5	+2.0
F19A	Roth Farm, Mol baz=14	14.43	76	⇑P	Pn	17 17 20.7	+1.1
C19A	Slack Wire Ran baz=14,SNR=15	14.46	69	⇑P	Pn	17 17 21.2	+1.3
H19A	Powell baz=14	14.46	81	⇓P	Pn	17 17 22.6	+2.6
Q16A	Castle Valley baz=14,SNR=7.4	14.49	105	⇑P	Pn	17 17 23.0	+2.4
D19A	Cripps Ranch, baz=14	14.52	71	⇓P	Pn	17 17 21.7	+1.0
I19A	Meeteetse baz=14,SNR=7.5	14.53	84	⇓P	Pn	17 17 23.2	+2.1
E19A	Rath Farm, Rou baz=14	14.55	74	⇑P	Pn	17 17 21.3	+0.2
P17A	Butcher Ranch, baz=15	14.55	103	⇓P	Pn	17 17 23.3	+2.0
J19A	Crowheart baz=15	14.61	87	⇑P	Pn	17 17 21.6	-0.5
B19A	Brinkman Farms baz=15	14.63	66	⇑P	Pn	17 17 22.2	0.0
N18A	Larsen Ranch, baz=15	14.75	96	⇓P	Pn	17 17 26.1	+2.1
O18A	Roosevelt baz=15	14.76	99	⇑P	Pn	17 17 26.4	+2.2
IRM	Iron Mountain baz=15,SNR=5.5	14.79	128	⇑P	P	17 17 28.5	-2.0
P18A	Preston Nutter baz=15	14.84	101	⇑P	Pn	17 17 27.2	+1.9
SRU	San Rafael 615nm,0.9s	14.86	104	*e*P	Pn	17 17 28.0	+2.5
SRU	San Rafael baz=15,SNR=7.5	14.86	104	⇑P	Pn	17 17 28.7	+3.2
W13A	Hualapai Mount baz=15	14.88	122	⇑P	Pn	17 17 28.7	+2.9
G20A	Bridger baz=15,SNR=5.0	14.97	79	⇓P	Pn	17 17 28.5	+1.6
F20A	Billings baz=15	14.99	76	⇑P	Pn	17 17 28.2	+1.0
BC3	Big Chuckawall baz=15	14.99	130	⇑P	Pn	17 17 28.2	+0.9
U15A	North Rim baz=15,SNR=17	15.04	115	⇑P	Pn	17 17 30.4	+2.3
MONP	Monument Peak baz=15	15.07	134	⇓P	Pn	17 17 28.7	+0.3
C20A	Veseth Ranch, baz=15	15.16	69	⇓P	Pn	17 17 29.8	+0.5
H20A	Greybull baz=15,SNR=6.5	15.18	81	⇓P	Pn	17 17 32.5	+2.7
B20A	Solberg Farm, baz=15	15.23	66	⇑P	Pn	17 17 30.5	+0.1
K20A	Yellowstone Ra baz=15	15.24	89	⇓P	Pn	17 17 32.4	+1.8
PDMCI	Parker Dam,Lak baz=15	15.28	125	⇓P	Pn	17 17 32.7	+1.8
A20A	Cobblestone Ra baz=15	15.37	65	⇑P	Pn	17 17 32.3	+0.2
M20A	Sweetwater, Wa baz=16	15.66	93	⇓P	Pn	17 17 36.1	0.0
P19A	Cripple Cowboy baz=16	15.73	100	⇑P	Pn	17 17 39.1	+2.0
J21A	Lysite baz=16,SNR=11	15.75	85	⇓P	Pn	17 17 38.4	+1.2
I21A	Big Trails, Te baz=16	15.78	84	⇑P	Pn	17 17 38.4	+0.8
C21A	Desert Coulee baz=16	15.78	69	⇓P	Pn	17 17 37.9	+0.5
N20A	Spence Gulch, baz=16,SNR=10	15.81	95	⇓P	Pn	17 17 39.1	+1.0
Q19A	Hogan Spring (baz=16	15.81	102	⇓P	Pn	17 17 39.9	+1.9
S18A	Hurst Farm, Bl baz=16,SNR=6.2	15.89	108	⇓P	Pn	17 17 40.9	+1.7
O20A	White River Ci baz=16	16.06	97	⇓P	Pn	17 17 43.6	+2.3
WUAZ	Wupatki 14nm,0.9s	16.19	116	*e*P	P	17 17 46.1	0.0
WUAZ	Wupatki baz=16	16.19	116	⇑P	Pn	17 17 45.0	+2.1
P20A	De Beque baz=16	16.20	100	⇑P	Pn	17 17 44.3	+1.2
M21A	Separation Pea baz=16,SNR=9.5	16.21	92	⇓P	Pn	17 17 45.1	+1.8
PV04	Paradox Valley	16.31	104	*e*P	Pn	17 17 45.3	+0.8
I22A	9 Mile Ranch, baz=16	16.34	83	⇑P	Pn	17 17 46.0	+1.2
N21A	Black Mountain baz=16	16.36	95	⇑P	Pn	17 17 45.9	+0.7
PV01	Paradox Valley 1µm,1.2s	16.67	104	*e*P	Pn	17 17 49.5	+0.4
A22A	Carney Farms, baz=17	16.69	65	⇑P	Pn	17 17 48.7	-0.5
R20A	Redvale baz=17	16.77	104	⇑P	Pn	17 17 51.7	+1.3
M22A	Cedar Creek Ra baz=17	16.82	92	⇓P	Pn	17 17 52.3	+1.2
X16A	Lo Mia Camp, P baz=17	16.84	119	⇓P	P	17 17 53.3	-0.1
P21A	Newcastle baz=17	16.86	99	⇓P	Pn	17 17 52.1	+0.6
S20A	Disappointment baz=17	16.95	105	⇑P	Pn	17 17 53.5	+0.7
G23A	Biddle baz=17	16.96	78	⇑P	Pn	17 17 53.0	+0.4
D23A	Lindsay baz=17	17.02	71	⇑P	Pn	17 17 53.2	-0.1
C23A	Lambert baz=17	17.06	69	⇑P	Pn	17 17 54.1	+0.3
N22A	Wattenberg Ran baz=17	17.11	94	⇑P	Pn	17 17 54.5	-0.2
MVCO	Mesa Verde 17nm,1.2s	17.16	107	*e*P	Pn	17 17 55.5	+0.2
MVCO	Mesa Verde baz=17	17.16	107	⇑P	Pn	17 17 56.7	+1.4
O22A	Kremmling baz=17,SNR=12	17.27	96	⇓P	Pn	17 17 57.2	+0.5
L23A	Garrett baz=17	17.27	89	⇓P	Pn	17 17 56.6	-0.1
R21A	Cimarron baz=17	17.27	102	⇑P	Pn	17 17 57.4	+0.7
P22A	Eagle baz=17	17.32	98	⇓P	Pn	17 17 57.7	+0.4
S21A	Coal Bank Pass baz=17,SNR=5.5	17.43	105	⇓P	Pn	17 17 60.0	+1.2
N23A	Red Feather La baz=17	17.45	93	⇑P	Pn	17 17 59.1	+0.2
Q22A	Crested Butte, baz=18	17.51	100	⇑P	Pn	17 18 00.7	+0.9
F24A	Ekalaka baz=18	17.57	76	⇑P	Pn	17 18 00.1	-0.1
U20A	Newcomb baz=18	17.59	109	⇓P	Pn	17 18 01.5	+0.9
H24A	Dirks Ranch, A baz=18	17.60	80	⇑P	Pn	17 18 00.6	0.0
O23A	Lake Granby, G baz=18	17.70	95	⇑P	Pn	17 18 02.6	+0.6
214A	Organ Pipe Nat baz=18	17.74	128	⇑P	P	17 18 06.5	+3.3
R22A	Saguache, Gunn baz=18	17.89	102	⇓P	P	17 18 05.8	+0.6
A24A	Westby baz=18	17.94	66	⇑P	P	17 18 05.2	0.0
T21A	Navajo Lake baz=18	17.94	106	⇑P	P	17 18 06.6	+1.1
V20A	Brimhall baz=18	17.94	111	⇑P	P	17 18 06.4	+0.9
S22A	4UR Ranch, Cre baz=18	18.06	103	⇓P	P	17 18 07.5	+0.5
ISCO	Idaho Springs 6.8nm,1.1s	18.07	96	*e*P	Pn	17 18 06.0	-0.5
ISCO	Idaho Springs baz=18	18.07	96	⇑P	P	17 18 07.8	+0.8
P23A	Jefferson baz=18	18.07	97	⇑P	Pn	17 18 07.2	+0.6
M24A	Cheyenne baz=18	18.08	90	⇑P	P	17 18 07.8	+0.7
U21A	Nageezi baz=18,SNR=6.4	18.15	108	⇓P	P	17 18 09.0	+1.2
T22A	Edith baz=18	18.37	105	⇓P	Pn	17 18 11.7	+1.5
R23A	Moffat baz=19	18.57	101	⇓P	Pn	17 18 13.5	+0.8
X20A	Quemado baz=19	18.65	114	⇓P	Pn	17 18 14.9	+1.2
U22A	Llaves baz=19	18.72	107	⇑P	Pn	17 18 15.9	+1.4
V22A	San Miguel Ran baz=19	18.93	108	⇓P	Pn	17 18 19.2	+2.1
K26A	Motz Farm, Whi baz=19	18.94	85	⇓P	P	17 18 15.5	-1.0
Z20A	Nine Sixteen R baz=20	19.49	118	⇓P	Pn	17 18 24.1	+0.4
Y21A	Point of Rocks baz=20,SNR=7.6	19.52	114	⇑P	Pn	17 18 25.1	+0.9
ANMO	Albuquerque 5.6nm,1.0s	19.77	110	*e*P	P	17 18 26.4	+0.8
ANMO	Albuquerque 0.1nm,0.3s,baz=318,slow=11,SNR=8.6	19.77	110	P	P	17 18 26.6	+0.9
ANMO				LR	LR	17 26 28.4	
	comp=Z,168nm,20.8s,baz=172,slow=38						
P26A	Davis Ranch, A baz=20	19.78	95	⇓P	Pn	17 18 27.4	+0.3
S25A	Robets Cordova baz=20	19.79	101	⇓P	Pn	17 18 27.7	+0.4
U24A	Moreno Valley baz=20	19.80	105	⇑P	Pn	17 18 28.2	+0.6
120A	U Bar Ranch, L baz=20	19.83	119	⇑P	Pn	17 18 27.7	-0.2
W23A	Werner Place, baz=20	19.86	109	⇑P	Pn	17 18 29.4	+1.1
Q26A	Hugo baz=20	19.90	96	⇓P	Pn	17 18 28.5	-0.1
Y22A	Socorro baz=20	20.03	113	⇑P	Pn	17 18 30.1	-0.1
T25A	Trinidad baz=20	20.05	102	⇓P	P	17 18 29.0	+0.4
V24A	Rampart Ranch, baz=20	20.16	107	⇓P	P	17 18 30.7	+0.9
R26A	Arlington baz=20	20.21	98	⇓P	P	17 18 31.1	+0.8
YKA	Yellowknife Ar	20.21	20	P	P	17 18 29.1	-0.8
YKA	Yellowknife Ar 2.5nm,0.9s,baz=208,slow=11,SNR=21	20.21	20	P	P	17 18 29.1	-0.8
319A	Douglas baz=20	20.23	123	⇓P	P	17 18 32.0	+1.4
YKW3	Yellowknife Ar 0.1nm,1.1s	20.26	20	*e*P	P	17 18 30.6	0.0
220A	Playas Peak, P baz=20,SNR=5.8	20.33	120	⇑P	P	17 18 31.8	+0.1
W24A	Lazy 6 Ranch, baz=20	20.34	108	⇑P	P	17 18 31.9	0.0
121A	Cookes Peak, D baz=20,SNR=5.9	20.38	118	⇑P	P	17 18 31.9	-0.4
U25A	Circle Dot Ran baz=20	20.41	104	⇑P	P	17 18 32.6	0.0
Z22A	Elephant Butte baz=20	20.45	115	⇑P	P	17 18 32.5	-0.5
FFC	Flin Flon 22nm,1.1s	20.47	49	*e*P	P	17 18 32.9	+0.1
V25A	Rancho No Teng baz=21	20.55	106	⇑P	P	17 18 33.6	-0.5
T26A	Comanche Natio baz=21	20.61	101	⇑P	P	17 18 34.3	-0.4
Y23A	Lovelace Mesa, baz=21	20.64	112	⇑P	P	17 18 34.7	-0.3
R27A	Eads baz=21,SNR=6.4	20.68	97	⇓P	P	17 18 34.7	-0.7
320A	Kipp Ranch, An baz=21	20.72	121	⇓P	P	17 18 36.3	+0.4
221A	Mesquite Ranch baz=21	20.73	119	⇑P	P	17 18 37.3	+1.3
122A	Conniff Cattle baz=21	20.77	116	⇑P	P	17 18 36.8	+0.3
U26A	Atchley Ranch, baz=21	20.88	103	⇑P	P	17 18 38.1	+0.5
Z23A	Rita Site, Whi baz=21	20.92	114	⇑P	P	17 18 38.5	+0.4
W25A	X Bar L Ranch, baz=21	20.99	107	⇑P	P	17 18 38.2	-0.6
V26A	Tequesquite Ra baz=21	21.15	105	⇑P	P	17 18 40.5	0.0
X25A	Clemmons Ranch baz=21	21.23	109	⇓P	P	17 18 41.5	+0.1
T27A	Campo baz=21	21.27	100	⇓P	P	17 18 40.5	-1.3
Z24A	Sheeppen Canyo baz=22	21.46	112	⇓P	P	17 18 43.3	-0.6
124A	Stringfield Ra baz=22	21.78	114	⇑P	P	17 18 47.1	-0.4
224A	Cornudas Mount baz=22	22.13	115	⇓P	P	17 18 50.6	-0.5
125A	Gardner Draw, baz=22,SNR=5.2	22.34	113	⇑P	P	17 18 52.8	-0.4
ILAR	Eielson Array	22.87	340	P	P	17 18 59.0	+0.5
ILAR	Eielson Array 1.5nm,1.0s,baz=155,slow=7.6,SNR=15	22.87	340	P	P	17 18 59.0	+0.5
Z27A	Tatum baz=23,SNR=5.5	22.91	109	⇓P	P	17 18 59.0	-0.4
ULM	Lac du Bonnet	23.30	63	P	P	17 19 02.8	-0.3
ULM	Lac du Bonnet 6.0nm,0.9s,baz=283,slow=11,SNR=9.8	23.30	63	P	P	17 19 02.8	-0.3
ULM				LR	LR	17 28 15.9	
	comp=Z,126nm,18.3s,baz=281,slow=37						
AGMN	Agassiz Nation 17nm,1.3s	23.32	68	*e*P	P	17 19 02.3	-1.0
425A	Indio Mountain baz=23	23.32	117	⇑P	P	17 19 03.3	-0.3
ECSD	EROS Data Cent 5.0nm,0.9s	23.39	80	*e*P	P	17 19 03.2	-0.9
426A	McDonald Obser baz=24	24.02	116	⇓P	P	17 19 11.4	+0.9
626A	Big Bend Ranch baz=25	24.69	118	⇑P	P	17 19 16.3	-0.2
428A	Kincaid Ranch, baz=25	24.86	114	⇑P	P	17 19 18.0	0.0
TXAR	Lajitas Array	25.14	118	P	P	17 19 21.5	+0.9
TXAR	Lajitas Array 2.3nm,0.9s,baz=314,slow=8.1,SNR=6.0	25.14	118	P	P	17 19 21.5	+0.9
TXAR				LR	LR	17 29 46.9	
	comp=Z,81nm,20.2s,baz=175,slow=38						
528A	Cox Ranch, San baz=25	25.16	115	⇓P	P	17 19 21.1	+0.4
627A	Terlingua Ranc baz=25	25.24	117	⇑P	P	17 19 21.7	+0.2
LPIG	La Paz comp=Z,8.8nm,20.7s,baz=247,slow=33	25.32	136	LR	LR	17 27 55.5	
330A	Mertzon baz=26	25.43	111	⇑P	P	17 19 22.9	-0.3
429A	Davenport Ranc baz=26	25.44	113	⇓P	P	17 19 23.1	-0.2
Z32A	Haskell baz=26	25.48	105	⇑P	P	17 19 23.4	-0.1
628A	Black Gap, Mar baz=26	25.54	116	⇑P	P	17 19 25.2	+1.1
529A	Stev Forest Ra baz=26	25.55	114	⇑P	P	17 19 24.9	+0.7
430A	Baggett Ranch, baz=26	25.78	112	⇑P	P	17 19 26.1	-0.2
431A	Sonora baz=26	26.26	111	⇑P	P	17 19 30.2	-0.5
631A	Perdido Creek baz=27	27.10	113	⇓P	P	17 19 37.8	-0.3
ACSO	Alum Creek Sta 9.7nm,0.6s	34.12	80	P	P	17 20 42.1	+2.0
CPCT	Cooper Cave	35.05	89	*e*P	P	17 20 47.4	-0.8
SCHQ	Schefferville comp=Z,87nm,20.3s,baz=36,slow=36	40.58	52	LR	LR	17 38 12.3	
SONM	Songino Array	76.14	325	P	P	17 25 42.4	-0.9
SONM	Songino Array 0.7nm,1.0s,baz=58,slow=3.6,SNR=5.1	76.14	325	P	P	17 25 42.4	-0.9
ZALV	Zalesovo Beam	78.00	340	P	P	17 25 53.6	+0.2
ZALV	Zalesovo Beam 0.3nm,0.4s,baz=24,slow=6.0,SNR=3.7	78.00	340	P	P	17 25 53.6	+0.2
MKAR	Makanchi Array	85.22	339	P	P	17 26 30.9	-0.9
MKAR	Makanchi Array 0.3nm,0.8s,baz=21,slow=5.2,SNR=3.1	85.22	339	P	P	17 26 30.9	-0.9
BDFB	Brasilia comp=Z,110nm,20.3s,baz=47,slow=39	94.60	107	LR	LR	18 15 17.7	

IDC ***09*** *17:14:59.6±0.8,20.°86N×121.°40E,h0km,mb3.7/10, mb1 3.9/11,mb1mx3.7/26,mbtmp3.7/11,ML3.3/1,MS3.1/5, Ms1 3.1/5,ms1mx2.7/40,Error ellipse: s-maj=29.0km s-min=16.2km az=74.0*

NIED ***09*** *17:15:00,20.°80N×121.°70E,h5km,Mw4.0 Best double couple: M0 1.03000×10^15 NP1:φ=146.00000°,δ79.00000°, λ95.00000°. NP2:φ=302.00000°,δ12.00000°,λ67.00000°.*

JMA ***09*** *17:15:02.9±0.4,20.°75N×121.°73E,h0km,M4.1*

ISCJB ***09*** *17:15:03.9±0.8,20.°76N±0.°05×121.°3E±0.°1,h46km±10km, mb3.6/10,MS3.1/3,Error ellipse: s-maj=17.4km s-min=5.5km az=24.1*

ISC 09 17:15:05.1±1.4,20.75N±0.°06×121.°3E±0.°1,h42km±15km, n22,σ1°12/25,mb3.7/10,MS2.9/3,1C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	2.49	195	⇑P	Pn	17 15 43.1	-0.1
PIP				*e*S	Sn	17 16 12.2	-0.2
YOJ	Yonaguni jima	4.02	23	P	Pn	17 16 05.5	+1.3
YOJ				*e*S	Sn	17 16 52.1	+2.0
HATJ	Hateruma jima	4.03	35	P	Pn	17 16 04.6	+0.3
HATJ				*e*S	Sn	17 16 50.1	-0.2
IRIF	Iriomote-Funau	4.22	32	P	Pn	17 16 07.3	+0.3
IRIF				*e*S	Sn	17 16 56.6	+1.6
JKRS	Kuro-shima	4.29	35	P	Pn	17 16 08.0	+0.2
JKRS				*e*S	Sn	17 16 57.1	+0.5
JIJ	Ishigaki jima	4.46	36	P	Pn	17 16 10.5	+0.3
JIJ				*e*S	Sn	17 16 59.6	-1.3
JTJ	Tarama	4.99	38	P	Pn	17 16 18.0	+0.5
JTJ				*e*S	Sn	17 17 12.5	-1.5
DAV	Davao City (W)	14.21	162	LR	LR	17 24 37.7	
	comp=Z,58nm,18.8s,baz=173,slow=40						
KSRS	Korea Array 0.1nm,0.3s,baz=198,slow=9.9,SNR=5.3	17.62	18	P	Pn	17 19 05.4	-2.1
KSRS				LR	LR	17 27 30.4	
	comp=Z,43nm,18.2s,baz=205,slow=43						
JHJ	Hachijo jima 2	20.54	49	LR	LR	17 26 22.4	
	comp=Z,48nm,20.7s,baz=76,slow=33						
CMAR	Chiang Mai Arr 1.3nm,0.8s,baz=74,slow=9.2,SNR=9.8	21.18	268	P	P	17 19 47.2	+0.1
MJAR	Matsushiro Arr comp=Z,53nm,21.6s,baz=195,slow=35	21.58	40	LR	LR	17 27 33.0	
SONM	Songino Array 0.8nm,0.8s,baz=160,slow=8.6,SNR=7.7	29.59	339	P	P	17 21 05.4	-0.9
MKAR	Makanchi Array 0.6nm,0.8s,baz=111,slow=7.9,SNR=5.9	40.93	319	P	P	17 22 43.1	-0.4
WRA	Warramunga Arr 1.8nm,0.6s,baz=343,slow=9.0,SNR=17	42.40	162	P	P	17 22 56.1	+0.4
PETK	Petropavlovsk- 1.3nm,0.8s,baz=224,slow=8.1,SNR=2.8	42.68	32	P	P	17 22 56.5	-1.3
ZALV	Zalesovo Beam 0.6nm,0.6s,baz=99,slow=8.9,SNR=3.3	43.21	329	P	P	17 23 03.7	+1.7
ASAR	Alice Springs 0.9nm,0.4s,baz=348,slow=6.9,SNR=25	45.82	164	P	P	17 23 24.6	+1.4
STKA	Stephens Creek 1.0nm,0.6s,baz=333,slow=9.2,SNR=4.6	55.82	159	P	P	17 24 39.5	+1.2

INK	**Inuvik**	**76.36**	**22**	P	**P**	**17 26 49.4**	**-0.2**
	0.7nm,0.9s,baz=289,slow=4.5,SNR=2.7						
NOA	**NORSAR Array B**	**81.31**	**332**	LR	LR	18 06 58.0	
	comp=Z,19nm,19.6s,baz=320,slow=38						
YKA	**Yellowknife Ar**	**86.08**	**23**	P	**P**	**17 27 41.0**	**-0.3**
	0.3nm,0.6s,baz=312,slow=4.6,SNR=9.5						

IDC 09 17:18:18.8±4.6, 23°.43S×178°.30W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/20, mbtmp4.0/4, Error ellipse: s-maj=219.4km s-min=58.4km az=157.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.04**	**269**	P	P	17 24 58.0	+1.8
	2.7nm,0.3s,baz=84,slow=12,SNR=6.2						
ASAR	**Alice Springs**	**43.65**	**260**	P	P	17 26 25.4	-0.1
	0.5nm,0.5s,baz=93,slow=7.2,SNR=14						
WRA	**Warramunga Arr**	**43.99**	**265**	P	P	17 26 27.4	-0.8
	1.1nm,0.3s,baz=102,slow=8.4,SNR=36						
FITZ	**Fitzroy Crossi**	**52.42**	**265**	P	P	17 27 32.0	-1.3
	0.8nm,0.5s,baz=113,slow=11,SNR=4.2						
BRTR	**Keskin Array B**	**148.52**	**309**	PKPbc	PKPbc	17 38 07.6	-0.3
	0.4nm,0.5s,baz=67,slow=3.2,SNR=3.3						

*ISCJB **09** 17:19:21.6±0.5, 10°.68N±0°.04×62°.40W±0°.03, h80km±7km, Error ellipse: s-maj=6.8km s-min=4.5km az=163.4*
*TRN **09** 17:19:25.5, 10°.85N×62°.11W, h90km, MD3.1*
*FUNV **09** 17:19:27.1, 10°.43N×62°.48W, h30km, MW3.2*

ISC 09 17:19:22.0±1.1, 10°.69N±0°.04×62°.37W±0°.03, h84km±9km, n20, σ1$81/32, 4C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.15**	**106**	*eS*	**Sn**	**17 19 41.6**	**-1.6**
CRUV	**Carupano**	**0.85**	**269**	⇓*iP*	**Pn**	**17 19 40.3**	**+0.8**
CRUV				*eS*	**Sn**	**17 19 51.9**	**-0.8**
TRN	**Trinidad (W)**	**0.96**	**92**	⇑*iP*	**Pn**	**17 19 41.8**	**+1.0**
TRN				*eS*	**Sn**	**17 19 53.9**	**-1.0**
TPP	**Pointe-a-Pierr**	**0.98**	**112**	⇑*eP*	Pn	17 19 44.2	+3.1
TPP				*eS*	**Sn**	**17 19 57.5**	**+2.2**
TBH	**Brigand Hill**	**1.30**	**99**	⇓*iP*	**Pn**	**17 19 46.5**	**+1.5**
TBH				*eS*	**Sn**	**17 20 02.3**	**0.0**
GRW	**Mount Saint Ca**	**1.62**	**26**	⇑*eP*	**Pn**	**17 19 49.0**	**-0.1**
GRW				*eS*	**Sn**	**17 20 07.8**	**-1.9**
TOSP	**Speyside**	**1.90**	**71**	*eP*	**Pn**	**17 19 52.6**	**-0.1**
TOSP				*eS*	**Sn**	**17 20 12.7**	**-3.5**
ORIV	**Oritupano**	**1.91**	**212**	*eP*	**Pn**	**17 19 53.1**	**+0.3**
ORIV				*eS*	**Sn**	**17 20 12.8**	**-3.4**
PCRV	**Puerto La Cruz**	**2.28**	**257**	⇑*eP*	**Pn**	**17 19 59.7**	**+1.9**
PCRV				*eS*	**Sn**	**17 20 24.0**	**-1.3**
RIOV	**Rio Grande**	**2.66**	**168**	*eP*	**Pn**	**17 20 03.8**	**+0.8**
RIOV				*eS*	**Sn**	**17 20 32.2**	**-2.2**
SVB	**Belmont**	**2.79**	**23**	*eP*	**Pn**	**17 20 05.6**	**+1.0**
SVB				*eS*	**Sn**	**17 20 35.2**	**-2.2**
PRGV	**PARIAGUAN**	**2.95**	**230**	*eP*	**Pn**	**17 20 08.3**	**+1.5**
PRGV				*eS*	**Sn**	**17 20 38.4**	**-2.9**
GURV	**El Guri**	**3.00**	**194**	*eP*	**Pn**	**17 20 08.2**	**+0.8**
CUPV	**Cœpira**	**3.42**	**260**	*eP*	**Pn**	**17 20 15.1**	**+1.9**
CUPV				*eS*	**Sn**	**17 20 51.0**	**-1.7**
BIRV	**Birongo**	**3.84**	**267**	*eP*	Pn	17 20 21.9	+3.1
BIRV				*eS*	**Sn**	**17 21 01.5**	**-1.3**
MERV	**Las Mercedes**	**4.12**	**250**	*eP*	**Pn**	**17 20 23.9**	**+1.3**
MERV				*eS*	**Sn**	**17 21 07.2**	**-2.5**
LUEV	**Luepa**	**4.90**	**169**	*eP*	**Pn**	**17 20 33.3**	**-0.2**
TURV	**Turiamo**	**5.38**	**268**	*eP*	**Pn**	**17 20 42.0**	**+2.2**
BAUV	**El Baul**	**5.85**	**253**	*eP*	**Pn**	**17 20 46.6**	**+0.4**
BAUV				*eS*	Sn	17 21 46.8	-5.1
MAPV	**Macapo**	**6.05**	**262**	*eP*	**Pn**	**17 20 50.8**	**+1.8**

*AUST **09** 17:27:22.6±30.0, 15°.93S×174°.67W, h489km±2km, Error ellipse: s-maj=5.8km s-min=2.8km az=235.0*
*ISCJB **09** 17:27:59.6±0.8, 17°.8S±0°.2×178°.6W±0°.1, h57km, mb4.0/16, Error ellipse: s-maj=26.3km s-min=10.4km az=142.0*
*IDC **09** 17:28:02.7±2.8, 17°.88S×178°.60W, h605km±30km, mb3.4/16, mb1 3.7/16, mb1mx3.5/23, mbtmp3.4/16, Error ellipse: s-maj=28.2km s-min=13.2km az=144.0*

ISC 09 17:28:00.4±0.9, 17°.9S±0°.2×178°.5W±0°.2, h579km, n55, σ0$67/52, mb4.1/16, 5C-6D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.34**	**260**	P	**P**	**17 33 52.0**	**+0.3**
	4.3nm,0.6s,baz=94,slow=11,SNR=12						
PMG	**Port Moresby**	**34.34**	**280**	P	**P**	**17 34 00.4**	**+0.1**
	13nm,0.8s,baz=104,slow=11,SNR=3.7						
CMSA	**Cobar Meteorol**	**35.07**	**240**	P	**P**	**17 34 06.4**	**+0.3**
	baz=39,SNR=11						
QLP	**Quilpie**	**35.44**	**249**	P	**P**	**17 34 09.4**	**+0.2**
	baz=40,SNR=18						
COEN	**Coen**	**36.99**	**270**	P	**P**	**17 34 23.4**	**+1.3**
	baz=41,SNR=14						
TOO	**Toolangi**	**37.10**	**231**	P	**P**	**17 34 23.3**	**+0.5**
	baz=41,SNR=5.2						
STKA	**Stephens Creek**	**38.54**	**241**	P	**P**	**17 34 35.1**	**+0.6**
	3.2nm,0.6s,baz=76,slow=9.0,SNR=12						
STKA	**Stephens Creek**	**38.54**	**241**	P	**P**	**17 34 35.2**	**+0.6**
	baz=43,SNR=7.9						
BBOO	**Buckleboo**	**43.32**	**241**	P	**P**	**17 35 12.2**	**-0.1**
	baz=48,SNR=13						
WRA	**Warramunga Arr**	**44.52**	**260**	P	**P**	**17 35 21.1**	**-0.7**
	2.6nm,0.5s,baz=95,slow=7.1,SNR=123						
WRA				PcP	**PcP**	**17 36 51.9**	**-0.4**
	0.3nm,0.3s,baz=89,slow=3.5,SNR=3.7						
ASAR	**Alice Springs**	**44.69**	**254**	P	**P**	**17 35 23.0**	**-0.1**
	12nm,0.5s,baz=87,slow=8.8,SNR=332						
ASAR				PcP	**PcP**	**17 36 52.5**	**-0.4**
	0.7nm,0.5s,baz=103,slow=4.0,SNR=4.3						
ASAR				S	**S**	**17 41 16.2**	**-2.2**
	1.0nm,1.1s,baz=86,slow=16,SNR=4.0						
KDU	**Kakadu**	**47.44**	**269**	P	**P**	**17 35 44.0**	**+0.1**
	baz=51,SNR=11						
MTN	**Manton Dam**	**48.68**	**268**	P	P	17 35 43.1	-10
	baz=52,SNR=15						
FITZ	**Fitzroy Crossi**	**52.92**	**261**	P	**P**	**17 36 23.9**	**+0.1**
	1.8nm,1.0s,baz=90,slow=9.1,SNR=5.4						
FITZ	**Fitzroy Crossi**	**52.92**	**261**	P	**P**	**17 36 24.0**	**+0.2**
	baz=57,SNR=3.7						
PCI	**Palu**	**62.79**	**278**	P	P	17 37 22.6	-8.1
	baz=66,SNR=7.2						
PCI				S	S	17 45 26.6	+11
	baz=66,SNR=10						
MJAR	**Matsushiro Arr**	**67.81**	**323**	P	**P**	**17 38 01.6**	**+0.1**
	2.4nm,0.6s,baz=165,slow=6.7,SNR=14						
MAT	**Matsushiro**	**67.81**	**323**	P	**P**	**17 38 01.6**	**0.0**
PETK	**Petropavlovsk-**	**73.62**	**345**	P	**P**	**17 38 35.3**	**0.0**
	4.0nm,0.6s,baz=133,slow=7.6,SNR=28						
KSRS	**Korea Array**	**74.60**	**318**	P	**P**	**17 38 42.1**	**+1.0**
	0.5nm,0.6s,baz=131,slow=6.3,SNR=3.3						
ILAR	**Eielson Array**	**85.88**	**13**	P	**P**	**17 39 38.1**	**-1.0**
	1.6nm,0.4s,baz=221,slow=5.0,SNR=45						
TXAR	**Lajitas Array**	**86.08**	**58**	P	**P**	**17 39 42.1**	**+1.1**
	2.6nm,0.7s,baz=224,slow=5.2,SNR=12						
PDAR	**Pinedale Array**	**87.41**	**43**	P	**P**	**17 39 46.9**	**-0.3**
	2.2nm,0.6s,baz=223,slow=3.2,SNR=20						
CMAR	**Chiang Mai Arr**	**88.76**	**290**	P	**P**	**17 39 54.9**	**+1.2**
	1.1nm,0.9s,baz=117,slow=1.9,SNR=6.7						
INK	**Inuvik**	**91.89**	**15**	P	**P**	**17 40 06.5**	**-0.5**
	1.8nm,0.6s,baz=220,slow=3.8,SNR=9.6						
SONM	**Songino Array**	**93.45**	**319**	P	**P**	**17 40 14.8**	**0.0**
	0.2nm,0.5s,baz=135,slow=4.5,SNR=3.2						
YKA	**Yellowknife Ar**	**94.35**	**25**	P	**P**	**17 40 17.8**	**-0.6**
	0.4nm,0.5s,baz=240,slow=4.5,SNR=12						
MKAR	**Makanchi Array**	**109.03**	**314**	PKiKP	**PKiKP**	**17 45 23.2**	**-1.7**
	0.4nm,0.5s,baz=125,slow=0.6,SNR=7.0						
ARCES	**ARCESS Array B**	**126.26**	**350**	PKP	**PKPdf**	**17 45 55.9**	**-1.3**
	2.4nm,0.7s,baz=17,slow=0.9,SNR=9.5						
FINES	**FINESS Array B**	**133.12**	**344**	PKP	**PKPdf**	**17 46 10.3**	**-0.1**
	2.5nm,0.9s,baz=48,slow=2.1,SNR=6.8						
NOA	**NORSAR Array B**	**136.33**	**353**	PKP	**PKPdf**	**17 46 16.8**	**+0.4**
	0.3nm,0.6s,baz=14,slow=3.7,SNR=3.1						
AKASG	**Malin Array Be**	**140.48**	**332**	PKP	**PKPdf**	**17 46 24.2**	**0.0**
	0.6nm,0.4s,baz=49,slow=2.9,SNR=2.8						
TLCR		**144.48**	**326**	⇑*iP*	PKPbc	17 46 31.8	+0.2
BURAR	**Bucovina Array**	**144.53**	**332**	⇑*iP*	**PKPab**	**17 46 32.8**	**+0.3**
OJC	**Ojcow**	**144.54**	**340**	*ePX*	PKPbc	17 46 31.3	-0.4
TESR		**144.67**	**329**	⇑*iP*	PKPbc	17 46 32.1	-0.1
BRTR	**Keskin Array B**	**144.68**	**315**	PKP	**PKPdf**	**17 46 32.2**	**0.0**
	1.3nm,0.5s,baz=104,slow=2.5,SNR=13						
CFR	**Carcaliu**	**144.84**	**327**	⇓*iP*	PKPbc	17 46 32.7	0.0
NIE	**Niedzica**	**145.05**	**338**	*ePX*	**PKPbc**	**17 46 33.8**	**+0.5**
PLOR	**Plostina**	**145.14**	**329**	⇓*iP*	**PKPbc**	**17 46 33.7**	**0.0**
TRPA	**Tarpa**	**145.27**	**335**	⇓*iP*	**PKPbc**	**17 46 33.9**	**0.0**
OKC	**Ostrava-Krasne**	**145.40**	**341**	*e*PKPDF	**PKPab**	**17 46 36.4**	**+0.8**
CLL	**Collm**	**145.41**	**347**	⇑*i*PKP	**PKPbc**	**17 46 33.7**	**-0.5**
	comp=Z,13nm,0.7s						
UPC	**Upice**	**145.43**	**344**	*e*PKPDF	**PKPbc**	**17 46 34.4**	**+0.1**
DPC	**Dobruska-Polom**	**145.48**	**343**	*e*PKPDF	**PKPbc**	**17 46 34.7**	**+0.2**
BRG	**Berggiesshubel**	**145.60**	**346**	*e*PKP	**PKPbc**	**17 46 34.4**	**-0.4**
	comp=Z,5.1nm,0.7s						
BRG				*i*		17 46 36.5	
	comp=Z,6.2nm,0.8s						
MORC	**Moravsky Berou**	**145.64**	**341**	⇓*iP*	**PKPbc**	**17 46 34.7**	**-0.3**
MLR	**Muntele Rosu**	**145.74**	**329**	⇓*iP*	**PKPbc**	**17 46 36.3**	**+0.7**
DRGR		**146.26**	**333**	⇓*iP*	**PKPbc**	**17 46 36.8**	**-0.1**
PRU	**Pruhonice**	**146.28**	**345**	*e*PKPDF	**PKPbc**	**17 46 36.4**	**-0.3**
ARR	**Arges**	**146.47**	**330**	⇑*iP*	**PKPbc**	**17 46 38.5**	**+1.0**
NKC	**Novy Kostel**	**146.54**	**347**	*e*PKPDF	**PKPbc**	**17 46 37.5**	**0.0**
KHC	**Kasperske Hory**	**147.31**	**345**	*e*PKPDF	**PKPbc**	**17 46 39.4**	**-0.2**
GERES	**GERESS Array B**	**147.55**	**345**	PKPbc	**PKPbc**	**17 46 39.9**	**-0.4**
	comp=Z,3.3nm,0.6s,baz=22,slow=3.0,SNR=29						
DAVOX	**Davos/Dischmat**	**150.35**	**348**	PKPbc	**PKPbc**	**17 46 46.9**	**-0.4**
	comp=Z,8.6nm,0.7s,baz=161,slow=1.7,SNR=10						

*ISCJB **09** 17:32:11.8±0.4, 1°.52N±0°.05×125°.98E±0°.04, h54km, mb4.0/13, Error ellipse: s-maj=6.6km s-min=5.8km az=7.4*
*DJA **09** 17:32:11.7±0.4, 2°.N±4°.×12°.6E±°, h50km±7km, M4.6/13, mB5.0/3, mb4.5/13, MLv4.6/9, Mw(mB)4.3/3*
*IDC **09** 17:32:15.6±2.4, 1°.33N×125°.73E, h86km±21km, mb3.7/13, mb1 3.8/15, mb1mx3.7/23, mbtmp3.7/15, Error ellipse: s-maj=24.1km s-min=8.9km az=80.0*

ISC 09 17:32:12.5±0.6, 1°.46N±0°.06×125°.92E±0°.06, h54km, n34, σ1$81/35, mb4.2/13, 1C, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**1.08**	**269**	P	**Pn**	**17 32 33.2**	**+1.8**
MNI				S	**Sn**	**17 32 47.1**	**+1.6**
TNTI	**Ternate**	**1.60**	**115**	P	Pn	17 32 42.2	+3.8
KMSI	**Cibinong**	**2.13**	**246**	P	**Pn**	**17 32 47.5**	**+1.8**
LBMI	**Labuha**	**2.62**	**143**	P	**Pn**	**17 32 54.8**	**+2.5**
LUWI	**Luwuk**	**4.01**	**232**	P	Pn	17 33 15.1	+3.6
LUWI				S	**Sn**	**17 34 00.2**	**+3.0**
MRSI	**Marisa**	**4.10**	**256**	P	**Pn**	**17 33 15.3**	**+2.6**
AAI	**Ambon**	**5.59**	**156**	P	**Pn**	**17 33 35.7**	**+2.5**
	132nm,0.4s,2µm0.7nm						
MSAI	**Masohi**	**5.64**	**148**	P	Pn	17 33 37.9	+4.0
	71nm,0.5s,1µm0.4nm						
CTBH	**Cotabato--PC H**	**5.96**	**344**	⇑*iP*	Pn	17 33 43.0	+4.7
BNDI	**Bandanaira**	**7.15**	**146**	P	**Pn**	**17 33 57.1**	**+2.5**
	66nm,0.5s,0.3nm						
TTSI	**Tana Toraja**	**7.56**	**234**	P	Pn	17 34 04.3	+4.1
	24nm,0.8s,0.1nm						
FAKI	**Fak Fak**	**7.68**	**125**	P	**Pn**	**17 34 03.5**	**+1.7**
	34nm,0.9s,0.1nm						
SPSI	**Sidrap Palu**	**8.18**	**229**	P	**Pn**	**17 34 10.9**	**+2.3**
	14nm,0.5s,436nm						
MYLDM	**Lahad Datu**	**8.28**	**297**	P	Pn	17 34 14.7	+4.7
	45nm,0.9s						
BKSI	**Bulukumba**	**8.88**	**221**	P	**Pn**	**17 34 20.1**	**+1.8**
	11nm,0.7s						
KAPI	**Kappang**	**8.91**	**224**	P	**Pn**	**17 34 18.6**	**0.0**
	0.9nm,0.3s,baz=45,slow=7.9,SNR=6.2						
KAPI				S	**Sn**	**17 35 54.4**	**-3.2**
	0.1nm,0.3s,baz=59,slow=18,SNR=1.8						
TLE	**Tual**	**9.80**	**136**	P	Pn	17 34 36.7	+5.8
	25nm,0.9s						
KKM	**Kota Kinabalu**	**10.70**	**295**	P	**Pn**	**17 34 40.9**	**-2.4**
	17nm,1.1s						
PCJI	**Pacitan**	**17.55**	**237**	P	**P**	**17 36 14.7**	**+0.7**
	46nm,2.5s						
FITZ	**Fitzroy Crossi**	**19.44**	**181**	P	**P**	**17 36 33.5**	**-1.2**
	2.2nm,0.3s,baz=147,slow=22,SNR=8.8						
WRA	**Warramunga Arr**	**22.82**	**159**	P	**P**	**17 37 10.2**	**-0.9**
	6.2nm,0.4s,baz=337,slow=10,SNR=36						
WRA				S	**S**	**17 41 13.0**	**-3.5**
	1.3nm,0.7s,baz=341,slow=17,SNR=5.7						
ASAR	**Alice Springs**	**26.16**	**163**	P	**P**	**17 37 42.4**	**+0.4**
	4.8nm,0.4s,baz=345,slow=11,SNR=47						
ASAR				PcP	**PcP**	**17 41 08.3**	**+0.1**
	0.7nm,0.6s,baz=356,slow=2.4,SNR=6.6						
ASAR				S	**S**	**17 42 07.4**	**-2.7**
	0.3nm,0.6s,baz=342,slow=12,SNR=4.5						
KSRS	**Korea Array**	**35.87**	**3**	P	**P**	**17 39 08.7**	**+1.5**
	0.6nm,0.6s,baz=179,slow=8.5,SNR=3.8						
STKA	**Stephens Creek**	**36.34**	**157**	P	**P**	**17 39 11.8**	**+0.4**
	1.3nm,0.3s,baz=355,slow=13,SNR=15						
MJAR	**Matsushiro Arr**	**36.71**	**17**	P	**P**	**17 39 15.3**	**+0.8**
	0.5nm,0.5s,baz=194,slow=9.6,SNR=3.5						
USRK	**Ussuriysk Arra**	**42.90**	**6**	P	**P**	**17 40 06.4**	**+0.7**
	0.8nm,0.5s,baz=195,slow=6.9,SNR=4.4						
SONM	**Songino Array**	**49.19**	**343**	P	**P**	**17 40 54.5**	**-0.9**
	0.4nm,0.9s,baz=165,slow=7.9,SNR=4.5						
SONM				PcP	**PcP**	**17 42 17.9**	**-0.1**
	0.3nm,0.7s,baz=156,slow=2.1,SNR=3.4						
MKAR	**Makanchi Array**	**58.97**	**326**	P	**P**	**17 42 05.5**	**-1.0**
	0.7nm,0.3s,baz=122,slow=7.3,SNR=24						
MKAR				PcP	**PcP**	**17 42 54.8**	**-0.4**
	0.5nm,0.5s,baz=132,slow=4.4,SNR=5.2						
ZALV	**Zalesovo Beam**	**62.24**	**334**	P	**P**	**17 42 27.2**	**-1.5**
	0.4nm,0.3s,baz=126,slow=7.3,SNR=2.9						
ILAR	**Eielson Array**	**87.49**	**25**	P	**P**	**17 44 54.2**	**+0.1**
	0.2nm,0.6s,baz=248,slow=4.6,SNR=2.0						
KMBO	**Kilima Mbogo**	**88.70**	**269**	P	**P**	**17 45 00.1**	**-1.1**
	1.8nm,0.7s,baz=57,slow=12,SNR=7.3						
ARCES	**ARCESS Array B**	**92.28**	**340**	P	**P**	**17 45 17.4**	**+1.0**
	2.2nm,0.9s,baz=92,slow=6.4,SNR=4.2						
FINES	**FINESS Array B**	**93.44**	**332**	P	**P**	**17 45 22.8**	**+0.9**
	1.8nm,0.9s,baz=80,slow=4.5,SNR=5.9						
TORD	**Torodi Ar. Bea**	**122.82**	**287**	PKP	**PKPdf**	**17 51 02.4**	**-1.2**
	0.6nm,0.8s,baz=80,slow=1.6,SNR=3.0						

*ISCJB **09** 17:34:03.5±0.4, 46°.77N±0°.02×8°.64E±0°.03, h11km±3km, Error ellipse: s-maj=4.4km s-min=3.0km az=154.2*
*CSEM **09** 17:34:03.8±0.1, 46°.76N×8°.58E, h8km, ML2.1/7, Error ellipse: s-maj=5.5km s-min=2.5km az=149.0*
*LDG **09** 17:34:04.4±0.2, 46°.77N×8°.66E, h2km, Ml1.9/8, Error ellipse: s-maj=5.5km s-min=1.7km az=93.0*
*ZUR **09** 17:34:04.1, 46°.80N×8°.71E, h2km±1km, ML1.8/9*
*VIE **09** 17:34:06.7±0.6, 46°.90N×8°.78E, h9km±2km, mb2.0/3, ML2.2/6, Error ellipse: s-maj=4.9km s-min=3.6km az=169.0 10 km ENE of Altdorf*

ISC 09 17:34:04.0±0.9, 46°.79N±0°.03×8°.67E±0°.02, h12km±6km, n40, σ0$90/65, 9C-11D, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MUO	**Muotathal**	**0.18**	**352**	⇓*iPg*	**Pg**	**17 34 08.1**	**-0.1**
	683nm,0.6s						
BNALP	**Bannalp**	**0.19**	**296**	⇓*iPg*	**Pg**	**17 34 08.4**	**+0.1**
	196nm,0.8s						
BNALP				*i* Sg	**Sg**	**17 34 11.7**	**+0.4**
	196nm,0.8s						
LLS	**Linth-Limmern**	**0.24**	**76**	⇑*iPg*	**Pg**	**17 34 08.5**	**-0.6**
	129nm,0.2s						
LLS				*i* Sg	**Sg**	**17 34 11.4**	**-1.2**
	129nm,0.2s						
FUSIO	**Fusio**	**0.34**	**181**	⇑*iPg*	**Pg**	**17 34 11.3**	**+0.5**
	107nm,0.6s						
FUSIO				*i* Sg	**Sg**	**17 34 16.2**	**+0.8**
	107nm,0.6s						
HASLI	**Hasliberg/Brie**	**0.36**	**265**	⇑*iPg*	**Pg**	**17 34 11.8**	**+0.5**
	147nm,0.5s						
PLONS	**Plons/SG**	**0.55**	**62**	⇑*iPg*	**Pg**	**17 34 14.5**	**-0.3**
	116nm,0.3s						
PLONS				*i* Sg	**Sg**	**17 34 21.4**	**-0.7**
	116nm,0.3s						
VDL	**Val di Lei**	**0.62**	**119**	⇑*iP*	**Pg**	**17 34 15.9**	**-0.2**
	49nm,0.5s						
WILA	**Wila**	**0.65**	**14**	⇓*iP*	**Pb**	**17 34 17.3**	**0.0**
	170nm,0.4s						
DAVA	**Damuels**	**0.96**	**59**	⇓*iPg*	**Pb**	**17 34 23.3**	**+0.6**
DAVA				⇓*iSg*	**Sg**	**17 34 35.4**	**+0.2**
	18nm,0.3s						
DAVA	**Damuels**	**0.96**	**59**	Pg	**Pb**	**17 34 23.3**	**+0.6**
DAVA				Sg	**Sg**	**17 34 35.4**	**+0.2**
	18nm,0.3s						
FUORN	**Ofenpass-Fuorn**	**1.11**	**98**	⇑*eP*	**Pb**	**17 34 24.7**	**-0.5**
	62nm,0.6s						
DIX	**Grande Dixence**	**1.13**	**231**	⇓*eP*	**Pn**	**17 34 25.8**	**0.0**
	49nm,0.6s						
FETA	**Feichten**	**1.43**	**80**	⇓*iPn*	**Pg**	**17 34 32.8**	**+1.3**
FETA				⇓*iSn*	**Sg**	**17 34 50.8**	**+0.8**
FETA	**Feichten**	**1.43**	**80**	Pn	**Pg**	**17 34 32.8**	**+1.3**
FETA				Sn	**Sg**	**17 34 50.8**	**+0.8**
RETA	**Reutte**	**1.59**	**63**	⇓*iPn*	**Pb**	**17 34 33.4**	**+0.1**
RETA				⇓*iSn*	**Sn**	**17 34 53.5**	**+1.0**
RETA	**Reutte**	**1.59**	**63**	Pn	**Pb**	**17 34 33.4**	**+0.1**
RETA				Sn	**Sn**	**17 34 53.5**	**+1.0**
HINF	**Hinteralfeld**	**1.61**	**310**	*ePn*	**Pn**	**17 34 31.8**	**-0.4**
HINF				*eSn*	**Sn**	**17 34 52.2**	**-0.7**
	3.5nm,0.3s						
HINF	**Hinteralfeld**	**1.61**	**310**	*ePn*	**Pn**	**17 34 31.8**	**-0.4**
MOTA	**Moosalm**	**1.75**	**71**	⇓*iPn*	**Pb**	**17 34 36.2**	**0.0**
MOTA	**Moosalm**	**1.75**	**71**	Pn	**Pb**	**17 34 36.2**	**0.0**
CABF	**La Chapelle**	**1.79**	**265**	*ePn*	**Pn**	**17 34 34.6**	**-0.1**
CABF				*eSn*	**Sn**	**17 34 56.3**	**-1.1**
	2.8nm,0.3s						
CABF	**La Chapelle**	**1.79**	**265**	*ePn*	**Pn**	**17 34 34.6**	**-0.1**
CABF				*eSn*	**Sn**	**17 34 56.3**	**-1.1**
	1.4nm,0.3s						
LPL	**La Plagne**	**1.85**	**227**	*ePn*	**Pn**	**17 34 34.9**	**-0.9**
LPL	**La Plagne**	**1.85**	**227**	*ePg*	**Pb**	**17 34 38.8**	**+0.9**
LPL				*eSn*	**Sn**	**17 34 58.1**	**-1.1**
	1.1nm,0.3s						
LPL	**La Plagne**	**1.85**	**227**	*ePn*	**Pn**	**17 34 34.9**	**-0.9**
LPL	**La Plagne**	**1.85**	**227**	*ePg*	**Pb**	**17 34 38.8**	**+0.9**
LPL				*eSn*	**Sn**	**17 34 58.1**	**-1.1**
	0.6nm,0.3s						
LPG	**La Plagne**	**1.86**	**227**	*ePn*	**Pn**	**17 34 35.7**	**-0.2**
LPG	**La Plagne**	**1.86**	**227**	*ePg*	**Pb**	**17 34 38.9**	**+0.9**
LPG				*eSn*	**Sn**	**17 34 58.1**	**-1.3**
	1.0nm,0.3s						
LPG	**La Plagne**	**1.86**	**227**	*ePn*	**Pn**	**17 34 35.7**	**-0.2**
LPG	**La Plagne**	**1.86**	**227**	*ePg*	**Pb**	**17 34 38.9**	**+0.9**
LPG				*eSn*	**Sn**	**17 34 58.1**	**-1.3**
	0.5nm,0.3s						
CDF	**Champ du Feu**	**1.88**	**330**	*ePn*	**Pn**	**17 34 36.0**	**0.0**
CDF				*eSn*	**Sn**	**17 34 59.0**	**-0.7**
	1.4nm,0.3s						
CDF	**Champ du Feu**	**1.88**	**330**	*ePn*	**Pn**	**17 34 36.0**	**0.0**
HAU	**Haudompre**	**1.99**	**308**	*ePn*	**Pn**	**17 34 38.1**	**+0.6**
HAU				*eSn*	**Sn**	**17 35 01.3**	**-1.1**
	2.7nm,0.4s						
HAU	**Haudompre**	**1.99**	**308**	*ePn*	**Pn**	**17 34 38.1**	**+0.6**
WTTA	**Wattenberg**	**2.08**	**76**	⇓*iPn*	**Pb**	**17 34 40.9**	**-0.9**
WTTA				⇑*iPg*	**Pg**	**17 34 44.6**	**+0.7**
WTTA				⇑*iSg*	**Sg**	**17 35 12.7**	**+1.7**
	12nm,0.5s						
WTTA	**Wattenberg**	**2.08**	**76**	Pn	**Pb**	**17 34 40.9**	**-0.9**
MBDF	**Montbardon**	**2.45**	**214**	*ePg*	**Pb**	**17 34 49.6**	**+1.5**
MBDF				*eSn*	**Sn**	**17 35 12.4**	**-1.5**
	1.7nm,0.5s						
MBDF	**Montbardon**	**2.45**	**214**	*ePg*	**Pb**	**17 34 49.6**	**+1.5**
MBDF				*eSn*	**Sn**	**17 35 12.4**	**-1.5**
	0.9nm,0.5s						
ORIF	**Oris-en-Rattie**	**2.70**	**227**	*ePn*	**Pn**	**17 34 46.6**	**-0.7**
ORIF				*eSn*	**Sn**	**17 35 18.3**	**-1.7**
	1.0nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.70**	**227**	*ePn*	**Pn**	**17 34 46.6**	**-0.7**
ORIF				*eSn*

FIU				Sg		Sb	18 10 09.7	-0.7	
	697nm,0.3s								
FIU	**Minerbio Fiu**	**0.51**	**319**	*e*Pg		**Pb**	18 10 02.2	-1.0	
FIU				*e*Sg		**Sb**	18 10 09.7	-0.7	
CRE	**Caprese Michel**	**0.64**	**181**	Pg		**Pb**	18 10 05.3	-0.3	
CRE				Sg		**Sn**	18 10 15.8	+0.7	
	170nm,0.3s								
CRE	**Caprese Michel**	**0.64**	**181**	*e*Pg		**Pb**	18 10 05.3	-0.3	
CRE				*e*Sg		**Sn**	18 10 15.8	+0.7	
PARC	**Parchiule**	**0.65**	**162**	Pg		**Pb**	18 10 05.4	-0.2	
PARC				Sg		**Sn**	18 10 16.0	+0.9	
	179nm,0.5s								
PARC	**Parchiule**	**0.65**	**162**	Pg		**Pb**	18 10 05.4	-0.2	
PARC				Sg		**Sn**	18 10 16.0	+0.9	
	179nm,0.5s								
PESA	**Pesaro**	**0.71**	**117**	Pg		**Pn**	18 10 07.8	+1.1	
	569nm,0.2s								
PESA	**Pesaro**	**0.71**	**117**	Pg		**Pn**	18 10 07.8	+1.1	
	569nm,0.2s								
ZCCA	**Zocca**	**0.71**	**278**	Pg		**Pb**	18 10 08.2	+1.5	
ZCCA	**Zocca**	**0.71**	**278**	Pg		**Pb**	18 10 08.2	+1.5	
ADRI	**Adria, Italy**	**0.78**	**3**	*e*Pg		**Pn**	18 10 08.4	+0.8	
ADRI				*e*Sg		**Sn**	18 10 21.5	+3.2	
ADRI	**Adria, Italy**	**0.78**	**3**	*e*Pg		**Pn**	18 10 08.4	+0.8	
ADRI				*e*Sg		**Sn**	18 10 21.5	+3.2	
BADI	**Badiali**	**0.78**	**165**	Pg		**Pn**	18 10 07.9	+0.2	
	285nm,0.6s								
BADI	**Badiali**	**0.78**	**165**	Pg		**Pn**	18 10 07.9	+0.2	
	285nm,0.6s								
PIEI	**Pieia**	**0.84**	**150**	Pg		**Pb**	18 10 08.4	-0.4	
	232nm,0.4s								
PIEI	**Pieia**	**0.84**	**150**	Pg		**Pb**	18 10 08.4	-0.4	
	232nm,0.4s								
CRMI	**Carmignano**	**0.86**	**237**	Pg		**Pb**	18 10 09.2	+0.1	
	114nm,0.3s								
CRMI	**Carmignano**	**0.86**	**237**	Pg		**Pb**	18 10 09.2	+0.1	
	114nm,0.3s								
CSNT	**Castellina Chi**	**0.93**	**212**	Pg		**Pb**	18 10 10.8	+0.5	
	130nm,0.4s								
CSNT	**Castellina Chi**	**0.93**	**212**	Pg		**Pb**	18 10 10.8	+0.5	
	130nm,0.4s								
CAFI	**Castiglion Fio**	**0.93**	**180**	Pg		**Pb**	18 10 10.4	0.0	
	175nm,0.6s								
CAFI	**Castiglion Fio**	**0.93**	**180**	Pg		**Pb**	18 10 10.4	0.0	
	175nm,0.6s								
BDI	**Bagni Di Lucca**	**1.00**	**259**	Pg		**Pn**	18 10 12.2	+1.4	
	143nm,0.5s								
BDI	**Bagni Di Lucca**	**1.00**	**259**	Pg		**Pn**	18 10 12.2	+1.4	
	143nm,0.5s								
ARVD	**Arcevia**	**1.04**	**137**	Pg		**Pn**	18 10 13.0	+1.7	
	72nm,0.3s								
ARVD	**Arcevia**	**1.04**	**137**	Pg		**Pn**	18 10 13.0	+1.7	
	72nm,0.3s								
CRDM	**Cardoso**	**1.09**	**258**	P		**Pn**	18 10 13.1	+1.2	
CRDM				S		**Sb**	18 10 26.8	-0.1	
MAIM	**Mastiano**	**1.11**	**252**	Pg		**Pn**	18 10 12.6	+0.4	
	83nm,0.8s								
MAIM	**Mastiano**	**1.11**	**252**	Pg		**Pn**	18 10 12.6	+0.4	
	83nm,0.8s								
MAIM	**Mastiano**	**1.11**	**252**	P		**Pn**	18 10 13.0	+0.8	
MAIM				S		**Sn**	18 10 26.5	-0.1	
TEOL	**Teolo**	**1.12**	**349**	⇑*i*Pg		**Pn**	18 10 12.7	+0.4	
TEOL				*i* Sg		**Sn**	18 10 29.4	+2.7	
TEOL	**Teolo**	**1.12**	**349**	⇑*i*Pg		**Pn**	18 10 12.7	+0.4	
TEOL				*i* Sg		**Sn**	18 10 29.4	+2.7	
VLC	**Villacollemand**	**1.14**	**265**	Pg		**Pb**	18 10 15.1	+1.3	
	180nm,1.4s								
VLC	**Villacollemand**	**1.14**	**265**	Pg		**Pb**	18 10 15.1	+1.3	
	180nm,1.4s								
MGAB	**Montegabbione**	**1.35**	**175**	Pg		**Pb**	18 10 17.2	-0.3	
MGAB	**Montegabbione**	**1.35**	**175**	Pg		**Pb**	18 10 17.2	-0.3	
SACS	**San Casciano d**	**1.41**	**181**	Pg		**Pn**	18 10 17.8	+1.4	
	46nm,0.6s								
ARCI	**Arcidosso**	**1.45**	**194**	Pg		**Pn**	18 10 18.5	+1.5	
	67nm,0.8s								
ARCI	**Arcidosso**	**1.45**	**194**	Pg		**Pn**	18 10 18.5	+1.5	
	67nm,0.8s								
FDMO	**Fiordimonte**	**1.47**	**146**	Pg		**Pb**	18 10 20.4	+0.9	
	45nm,0.4s								
FDMO	**Fiordimonte**	**1.47**	**146**	Pg		**Pb**	18 10 20.4	+0.9	
	45nm,0.4s								
CGRP	**Cima Grappa**	**1.62**	**356**	⇑*i*Pg		**Pn**	18 10 19.7	+0.3	
CGRP				*i* Sg		**Sn**	18 10 39.8	+0.4	
CGRP	**Cima Grappa**	**1.62**	**356**	⇑*i*Pg		**Pn**	18 10 19.7	+0.3	
CGRP				Sg		**Sn**	18 10 40.4	+1.0	
CGRP	**Cima Grappa**	**1.62**	**356**	⇑*i*Pg		**Pn**	18 10 19.7	+0.3	
CGRP				Sg		**Sn**	18 10 40.4	+1.0	
CASP	**Castiglione de**	**1.67**	**209**	Pn		**Pn**	18 10 20.8	+0.9	
	34nm,0.4s								
CASP	**Castiglione de**	**1.67**	**209**	Pn		**Pn**	18 10 20.8	+0.9	
	34nm,0.4s								
SALO	**Salr**	**1.70**	**324**	Pn		**Pn**	18 10 21.4	+1.1	
	170nm,0.7s								
SALO	**Salr**	**1.70**	**324**	Pn		**Pn**	18 10 21.4	+1.1	
	170nm,0.7s								
DDS	**Dosso del Somm**	**1.71**	**342**	⇑*i*Pn		**Pn**	18 10 21.0	+0.4	
DDS	**Dosso del Somm**	**1.71**	**342**	⇑*i*Pn		**Pn**	18 10 21.0	+0.4	
CAE	**Caneva**	**1.78**	**11**	⇑*e*Pn		**Pn**	18 10 21.5	0.0	
CAE	**Caneva**	**1.78**	**11**	⇑*e*Pn		**Pn**	18 10 21.5	0.0	
CTI	**Castel Tesino**	**1.80**	**353**	Pn		**Pn**	18 10 22.3	+0.5	
CTI				Sn		**Sn**	18 10 44.0	+0.3	
CTI	**Castel Tesino**	**1.80**	**353**	Pn		**Pn**	18 10 22.3	+0.5	
CTI				Sn		**Sn**	18 10 44.0	+0.3	
POLC	**Polcenigo**	**1.81**	**12**	*e*Pn		**Pn**	18 10 22.2	+0.4	
PANI	**Panarotta**	**1.85**	**346**	*e*Pn		**Pn**	18 10 23.0	+0.5	
PANI	**Panarotta**	**1.85**	**346**	*e*Pn		**Pn**	18 10 23.0	+0.5	
TRI	**Trieste**	**1.93**	**41**	⇑*e*Pn		**Pn**	18 10 22.6	-0.9	
TRI	**Trieste**	**1.93**	**41**	Pn		**Pn**	18 10 22.5	-0.9	
TRI	**Trieste**	**1.93**	**41**	⇑*e*Pn		**Pn**	18 10 22.6	-0.9	
MLNI	**Malnisio**	**1.94**	**13**	⇑*e*Pn		**Pn**	18 10 23.9	+0.1	
MLNI	**Malnisio**	**1.94**	**13**	⇑*e*Pn		**Pn**	18 10 23.9	+0.1	
RNI	**Roncone**	**1.96**	**332**	*e*Pn		**Pn**	18 10 24.8	+0.8	
RNI	**Roncone**	**1.96**	**332**	*e*Pn		**Pn**	18 10 24.8	+0.8	
SABO	**M.te Sabotino**	**2.07**	**33**	⇑*i*Pn		**Pn**	18 10 25.8	+0.3	
SABO	**M.te Sabotino**	**2.07**	**33**	⇑*i*Pn		**Pn**	18 10 25.8	+0.3	
SABO	**M.te Sabotino**	**2.07**	**33**	⇑*i*Pn		**Pn**	18 10 25.8	+0.3	
CIMO	**Cimolais**	**2.08**	**9**	⇑*e*Pn		**Pn**	18 10 25.5	-0.1	
CIMO	**Cimolais**	**2.08**	**9**	⇑*e*Pn		**Pn**	18 10 25.5	-0.1	
NVLJ	**Novalja**	**2.11**	**81**	*i* Pn		**Pn**	18 10 26.8	+0.9	
NVLJ				Sn		**Sb**	18 10 51.8	-4.2	
MPRI	**Monte Prat**	**2.11**	**20**	⇑*e*Pn		**Pn**	18 10 26.6	+0.6	
MPRI	**Monte Prat**	**2.11**	**20**	⇑*e*Pn		**Pn**	18 10 26.6	+0.6	
BUA	**Buia**	**2.12**	**22**	Pn		**Pn**	18 10 26.7	+0.6	
BUA	**Buia**	**2.12**	**22**	Pn		**Pn**	18 10 26.7	+0.6	
COLI	**Coloredo**	**2.12**	**28**	⇑*i*Pn		**Pn**	18 10 26.5	+0.4	
COLI				*i* Sn		**Sn**	18 10 52.5	+1.0	
COLI	**Coloredo**	**2.12**	**28**	⇑*i*Pn		**Pn**	18 10 26.5	+0.4	
COLI				*i* Sn		**Sn**	18 10 52.5	+1.0	
KNDS	**Knezji Dol**	**2.14**	**53**	⇑*i*Pn		**Pn**	18 10 26.5	+0.1	
KNDS				*i* Sn		**Sn**	18 10 52.6	+0.5	
KNDS	**Knezji Dol**	**2.14**	**53**	Pn		**Pn**	18 10 26.5	+0.1	
KNDS				*i* Sn		**Sn**	18 10 52.4	+0.5	
BAD	**Bernadia**	**2.17**	**24**	⇑*i*Pn		**Pn**	18 10 27.1	+0.2	
BAD	**Bernadia**	**2.17**	**24**	⇑*i*Pn		**Pn**	18 10 27.0	+0.2	
VINO	**Villanova**	**2.20**	**25**	⇑*i*Pn		**Pn**	18 10 27.4	+0.1	
VINO				*i* Sn		**Sn**	18 10 53.6	+0.2	
VINO	**Villanova**	**2.20**	**25**	⇑*i*Pn		**Pn**	18 10 27.4	+0.1	
VINO				Sn		**Sn**	18 10 53.4	-0.1	
VINO	**Villanova**	**2.20**	**25**	⇑*i*Pn		**Pn**	18 10 27.4	+0.1	
VINO				*i* Sn		**Sn**	18 10 53.7	+0.2	
JAVS	**Javornik**	**2.21**	**42**	⇑*i*Pn		**Pn**	18 10 27.3	-0.1	
JAVS				*i* Sn		**Sn**	18 10 54.3	+0.5	
JAVS	**Javornik**	**2.21**	**42**	⇑*i*Pn		**Pn**	18 10 27.3	-0.1	
JAVS				*i* Sn		**Sn**	18 10 54.3	+0.5	
VOY	**Vojsko**	**2.24**	**37**	*e*Pn		**Pn**	18 10 27.4	-0.4	
VOY				*e*Sn		**Sn**	18 10 55.2	+0.8	
VOY	**Vojsko**	**2.24**	**37**	*e*Pn		**Pn**	18 10 27.4	-0.4	
VOY				*e*Sn		**Sn**	18 10 55.2	+0.8	
KOSI	**Kohlern**	**2.24**	**350**	⇑*e*Pn		**Pn**	18 10 29.0	+1.1	
DRE	**Drenchia**	**2.25**	**31**	⇑*i*Pn		**Pn**	18 10 28.1	+0.1	
DRE				*i* Sn		**Sn**	18 10 55.6	+0.9	
DRE	**Drenchia**	**2.25**	**31**	⇑*i*Pn		**Pn**	18 10 28.1	+0.1	
DRE				*i* Sn		**Sn**	18 10 55.6	+0.9	
ROBS	**Robic**	**2.27**	**28**	⇑*i*Pn		**Pn**	18 10 28.3	+0.2	
ROBS				*i* Sn		**Sn**	18 10 55.5	+0.5	
ROBS	**Robic**	**2.27**	**28**	⇑*i*Pn		**Pn**	18 10 28.3	+0.2	
ROBS				*i* Sn		**Sn**	18 10 55.5	+0.5	
FUSE	**Fusea**	**2.27**	**18**	*e*Pn		**Pn**	18 10 28.6	+0.4	
FUSE	**Fusea**	**2.27**	**18**	*e*Pn		**Pn**	18 10 28.6	+0.4	
ZOU	**Zoufplan**	**2.40**	**17**	⇑*e*Pn		**Pn**	18 10 30.7	+0.5	
ABSI	**Aberstueckl**	**2.51**	**350**	⇓*e*Pn		**Pn**	18 10 32.7	+1.1	
ACOM	**Acomizza, Ital**	**2.54**	**25**	⇓*e*Pn		**Pn**	18 10 32.6	+0.6	
ACOM	**Acomizza, Ital**	**2.54**	**25**	⇓*e*Pn		**Pn**	18 10 32.6	+0.6	
MOSI	**Grossmontoni**	**2.56**	**338**	*e*Pn		**Pn**	18 10 34.6	+2.3	
RISI	**Rein**	**2.69**	**2**	*e*Pn		**Pn**	18 10 35.7	+1.6	
ROSI	**Rosskopf**	**2.69**	**352**	⇓*e*Pn		**Pn**	18 10 35.9	+1.7	
PGF	**Pioggiola**	**2.75**	**233**	*e*Pn		**Pn**	18 10 35.9	+1.0	
	SNR=1.0								
PGF				*e*Sn		**Sn**	18 11 08.4	+1.2	
	15nm,0.4s								
PGF	**Pioggiola**	**2.75**	**233**	*e*Pn		**Pn**	18 10 35.9	+1.0	
	SNR=1.0								
PGF				*e*Sn		**Sn**	18 11 08.4	+1.2	
	7.7nm,0.4s								
KBA	**Koelnbreinsper**	**2.98**	**19**	⇑*e*Pn		**Pn**	18 10 39.0	+0.9	
	SNR=8.9								
KBA				⇑*i*Sn		**Sn**	18 11 15.1	+2.2	
KBA	**Koelnbreinsper**	**2.98**	**19**	Pn		**Pn**	18 10 39.0	+0.9	
	SNR=8.9								
KBA				Sn		**Sn**	18 11 15.1	+2.2	
WTTA	**Wattenberg**	**3.01**	**356**	⇓*i*Pn		**Pn**	18 10 40.1	+1.6	
WTTA	**Wattenberg**	**3.01**	**356**	Pn		**Pn**	18 10 40.1	+1.6	
WATA	**Walderalm**	**3.09**	**355**	⇓*i*Pn		**Pn**	18 10 40.8	+1.3	
	SNR=13								
WATA	**Walderalm**	**3.09**	**355**	Pn		**Pn**	18 10 40.8	+1.3	
	SNR=13								
MOTA	**Moosalm**	**3.14**	**349**	⇓*i*Pn		**Pn**	18 10 41.4	+1.1	
	SNR=7.8								
MOTA	**Moosalm**	**3.14**	**349**	Pn		**Pn**	18 10 41.4	+1.1	
	SNR=7.8								
SBF	**Sospel**	**3.29**	**265**	*e*Pn		**Pn**	18 10 43.1	+0.9	
	SNR=1.0								
SBF				*e*Sn		**Sn**	18 11 20.6	+0.3	
	21nm,0.5s								
SBF	**Sospel**	**3.29**	**265**	*e*Pn		**Pn**	18 10 43.1	+0.9	
	SNR=1.0								
SBF				*e*Sn		**Sn**	18 11 20.6	+0.3	
	11nm,0.5s								
RETA	**Reutte**	**3.33**	**346**	⇑*i*Pn		**Pn**	18 10 45.2	+2.4	
RETA				⇓*i*Sn		**Sn**	18 11 25.4	+4.0	
RETA	**Reutte**	**3.33**	**346**	Pn		**Pn**	18 10 45.2	+2.4	
RETA				Sn		**Sn**	18 11 25.4	+4.0	
DAVA	**Damuels**	**3.36**	**335**	⇑*i*Pn		**Pn**	18 10 45.3	+2.0	
DAVA				⇑*i*Sn		**Sn**	18 11 27.1	+4.9	
DAVA	**Damuels**	**3.36**	**335**	Pn		**Pn**	18 10 45.3	+2.0	
DAVA				Sn		**Sn**	18 11 27.1	+4.9	
MBDF	**Montbardon**	**3.74**	**279**	*e*Pn		**Pn**	18 10 49.1	+0.6	
	SNR=1.0								
MBDF				*e*Sn		**Sn**	18 11 31.3	-0.3	
	2.1nm,0.2s								
MBDF	**Montbardon**	**3.74**	**279**	*e*Pn		**Pn**	18 10 49.1	+0.6	
	SNR=1.0								
MBDF				*e*Sn		**Sn**	18 11 31.3	-0.3	
	1.0nm,0.2s								
FRF	**La Foret Royal**	**3.90**	**262**	*e*Pn		**Pn**	18 10 51.4	+0.8	
	SNR=1.0								
FRF				*e*Sn		**Sn**	18 11 35.6	+0.2	
	5.1nm,0.2s,SNR=1.0								
FRF	**La Foret Royal**	**3.90**	**262**	*e*Pn		**Pn**	18 10 51.4	+0.8	
	SNR=1.0								
FRF				*e*Sn		**Sn**	18 11 35.6	+0.2	
	2.5nm,0.2s,SNR=1.0								
LPG	**La Plagne**	**3.90**	**290**	*e*Pn		**Pn**	18 10 51.1	+0.2	
LPG				*e*Sn		**Sn**	18 11 35.2	-0.6	
	12nm,0.6s								
LPG	**La Plagne**	**3.90**	**290**	*e*Pn		**Pn**	18 10 51.1	+0.2	
LPG				*e*Sn		**Sn**	18 11 35.2	-0.6	
	6.2nm,0.6s								
LPL	**La Plagne**	**3.92**	**290**	*e*Pn		**Pn**	18 10 51.5	+0.4	
LPL				*e*Sn		**Sn**	18 11 35.2	-0.9	
	3.7nm,0.3s								
LPL	**La Plagne**	**3.92**	**290**	*e*Pn		**Pn**	18 10 51.5	+0.4	
LPL				*e*Sn		**Sn**	18 11 35.2	-0.9	
	1.9nm,0.3s								
MOA	**Molln**	**3.93**	**23**	⇑*i*Pn		**Pn**	18 10 51.6	+0.6	
MOA				⇓*i*Sn		**Sn**	18 11 37.6	+1.5	
MOA	**Molln**	**3.93**	**23**	*i* Pn		**Pn**	18 10 51.6	+0.6	
MOA				Sn		**Sn**	18 11 37.6	+1.5	
LMR	**La Mourre**	**4.05**	**259**	*e*Pn		**Pn**	18 10 53.4	+0.7	
	SNR=1.0								
LMR				*e*Sn		**Sn**	18 11 38.8	-0.3	
	5.7nm,0.4s,SNR=1.0								
LMR	**La Mourre**	**4.05**	**259**	*e*Pn		**Pn**	18 10 53.4	+0.7	
	SNR=1.0								
LMR				*e*Sn		**Sn**	18 11 38.8	-0.3	
	2.8nm,0.4s,SNR=1.0								
ORIF	**Oris-en-Rattie**	**4.39**	**281**	*e*Pn		**Pn**	18 10 59.0	+1.6	
	SNR=1.0								
ORIF				*e*Sn		**Sn**	18 11 46.9	-0.7	
	3.6nm,0.2s,SNR=1.0								
ORIF	**Oris-en-Rattie**	**4.39**	**281**	*e*Pn		**Pn**	18 10 59.0	+1.6	
	SNR=1.0								
ORIF				*e*Sn		**Sn**	18 11 46.9	-0.7	
	1.8nm,0.2s,SNR=1.0								
STON	**Ston**	**4.40**	**106**	*i* Pn		**Pn**	18 10 58.4	+1.1	
STON				Sn		**Sn**	18 11 46.5	-1.0	
SMRF	**Simiane la Rot**	**4.61**	**269**	*e*Pn		**Pn**	18 11 00.9	+0.6	
SMRF	**Simiane la Rot**	**4.61**	**269**	*e*Pn		**Pn**	18 11 00.9	+0.6	
CABF	**La Chapelle**	**4.75**	**302**	*e*Pn		**Pn**	18 11 02.5	+0.1	
	SNR=1.0								
CABF				*e*Sn		**Sn**	18 11 54.2	-2.3	
	2.4nm,0.3s,SNR=1.0								
CABF	**La Chapelle**	**4.75**	**302**	*e*Pn		**Pn**	18 11 02.5	+0.1	
	SNR=1.0								
CABF				*e*Sn		**Sn**	18 11 54.2	-2.3	
	1.2nm,0.3s,SNR=1.0								
KHC	**Kasperske Hory**	**5.00**	**12**	*e*PN		**Pn**	18 11 06.0	+0.3	
KHC				*e*SN		**Sn**	18 12 00.9	-1.5	
KHC	**Kasperske Hory**	**5.00**	**12**	Pn		**Pn**	18 11 06.0	+0.3	
KHC				Sn		**Sn**	18 12 00.9	-1.5	
HINF	**Hinteralfeld**	**5.03**	**317**	*e*Pn		**Pn**	18 11 06.0	-0.1	
	SNR=1.0								
HINF				*e*Sn		**Sn**	18 12 00.3	-2.8	
	9.9nm,0.3s,SNR=1.0								
HINF	**Hinteralfeld**	**5.03**	**317**	*e*Pn		**Pn**	18 11 06.0	-0.1	
	SNR=1.0								
HINF				*e*Sn		**Sn**	18 12 00.3	-2.8	
	4.9nm,0.3s,SNR=1.0								
VIVF	**Saint-Julien-l**	**5.24**	**279**	*e*Pn		**Pn**	18 11 09.4	+0.4	
	SNR=1.0								
VIVF				*e*Sn		**Sn**	18 12 07.2	-1.2	
	1.8nm,0.2s								
VIVF	**Saint-Julien-l**	**5.24**	**279**	*e*Pn		**Pn**	18 11 09.4	+0.4	
	SNR=1.0								
VIVF				*e*Sn		**Sn**	18 12 07.2	-1.2	
	0.9nm,0.2s								
CDF	**Champ du Feu**	**5.27**	**324**	*e*Pn		**Pn**	18 11 09.7	+0.3	
	SNR=1.0								
CDF				*e*Sn		**Sn**	18 12 06.1	-3.0	
	4.5nm,0.4s,SNR=1.0								
CDF	**Champ du Feu**	**5.27**	**324**	*e*Pn		**Pn**	18 11 09.7	+0.3	
	SNR=1.0								
CDF				*e*Sn		**Sn**	18 12 06.1	-3.0	
	2.2nm,0.4s,SNR=1.0								
HAU	**Haudompre**	**5.41**	**316**	*e*Pn		**Pn**	18 11 11.1	-0.2	
	SNR=1.0								
HAU				*e*Sn		**Sn**	18 12 09.6	-2.8	
	17nm,0.3s,SNR=1.0								
HAU	**Haudompre**	**5.41**	**316**	*e*Pn		**Pn**	18 11 11.1	-0.2	
	SNR=1.0								
HAU				*e*Sn		**Sn**	18 12 09.6	-2.8	
	8.4nm,0.3s,SNR=1.0								
PAGF	**Fort de Pagny**	**6.08**	**317**	*e*Pn		**Pn**	18 11 20.2	-0.3	
PAGF				*e*Sn		**Sn**	18 12 25.8	-3.3	
	0.8nm,0.3s								
PAGF	**Fort de Pagny**	**6.08**	**317**	*e*Pn		**Pn**	18 11 20.2	-0.3	
PAGF				*e*Sn		**Sn**	18 12 25.8	-3.3	
	0.4nm,0.3s								
SMF	**Signal de Mont**	**6.19**	**295**	*e*Pn		**Pn**	18 11 22.2	+0.2	
	SNR=1.0								
SMF				*e*Sn		**Sn**	18 12 29.2	-2.5	
	7.5nm,0.4s,SNR=1.0								
SMF	**Signal de Mont**	**6.19**	**295**	*e*Pn		**Pn**	18 11 22.2	+0.2	
	SNR=1.0								
SMF				*e*Sn		**Sn**	18 12 29.2	-2.5	
	3.8nm,0.4s,SNR=1.0								
SFTF	**Sexfontaines**	**6.21**	**312**	*e*Pn		**Pn**	18 11 21.9	-0.4	
SFTF				*e*Sn		**Sn**	18 12 29.1	-3.1	
SFTF				*e*Sg		Sb	18 13 07.4	+13	
	2.8nm,0.3s								
SFTF	**Sexfontaines**	**6.21**	**312**	*e*Pn		**Pn**	18 11 21.9	-0.4	
SFTF				*e*Sn		**Sn**	18 12 29.1	-3.1	
SFTF				*e*Sg		Sb	18 13 07.4	+13	
	1.4nm,0.3s								
MEZF	**Maizieres J'vi**	**6.39**	**314**	*e*Pn		**Pn**	18 11 24.0	-0.7	
MEZF				*e*Sn		**Sn**	18 12 33.1	-3.4	
	5.0nm,0.4s								
MEZF	**Maizieres J'vi**	**6.39**	**314**	*e*Pn		**Pn**	18 11 24.0	-0.7	
MEZF				*e*Sn		**Sn**	18 12 33.1	-3.4	
	2.5nm,0.4s								
LOR	**Lormes**	**6.41**	**301**	*e*Pn		**Pn**	18 11 24.9	-0.2	
	SNR=1.0								
LOR				*e*Sn		**Sn**	18 12 34.4	-2.9	
	3.1nm,0.2s,SNR=1.0								
LOR	**Lormes**	**6.41**	**301**	*e*Pn		**Pn**	18 11 24.9	-0.2	
	SNR=1.0								
LOR				*e*Sn		**Sn**	18 12 34.4	-2.9	
	1.5nm,0.2s,SNR=1.0								
SSF	**Saint Saulge**	**6.55**	**298**	*e*Pn		**Pn**	18 11 26.8	-0.2	
SSF				*e*Sn		**Sn**	18 12 37.7	-2.9	
	2.9nm,0.4s								
SSF	**Saint Saulge**	**6.55**	**298**	*e*Pn		**Pn**	18 11 26.8	-0.2	
SSF				*e*Sn		**Sn**	18 12 37.7	-2.9	
	1.5nm,0.4s								
AVF	**Avril sur Loir**	**6.55**	**296**	*e*Pn		**Pn**	18 11 27.0	0.0	
	SNR=1.0								
AVF				*e*Sn		**Sn**	18 12 38.0	-2.6	
	2.5nm,0.6s								
AVF	**Avril sur Loir**	**6.55**	**296**	*e*Pn		**Pn**	18 11 27.0	0.0	
	SNR=1.0								
AVF				*e*Sn		**Sn**	18 12 38.0	-2.6	
	1.2nm,0.6s								
BGF	**Bois d'Agland**	**6.81**	**293**	*e*Pn		**Pn**	18 11 30.4	-0.2	
BGF				*e*Sn		**Sn**	18 12 44.2	-2.9	
	4.7nm,0.4s								
BGF	**Bois d'Agland**	**6.81**	**293**	*e*Pn		**Pn**	18 11 30.4	-0.2	
BGF				*e*Sn		**Sn**	18 12 44.2	-2.9	
	2.3nm,0.4s								

*ISK **09** 18:10:28.9,38˙97N×29˙01E,h6km,MD2.7*
*ISCJB **09** 18:10:29.2±0.5,38˙94N±0˙03×29˙04E±0˙04,h8km±9km, Error ellipse: s-maj=5.8km s-min=4.8km az=155.4*
*CSEM **09** 18:10:29.4±0.1,38˙96N×29˙02E,h5km,MD2.6,Error ellipse: s-maj=1.1km s-min=1.0km az=152.0*
*DDA **09** 18:10:29.1,38˙95N×29˙03E,h7km,MD2.6*
ISC 09 18:10:29.4±1.0,38˙96N±0˙03×29˙02E±0˙02,h11km±10km, n22,σ0919/31,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.25**	**288**	*i* P	**Pg**	**18 10 34.7**	**+0.1**
DEMI				*i* S	**Sg**	**18 10 38.1**	**-0.1**
DEMI	**Demirci**	**0.25**	**288**	*i* P	**Pg**	**18 10 34.7**	**+0.1**
DEMI			

FITZ	**Fitzroy Crossi**	**58.38**	**259**	LR	LR	18 47 52.5	
	comp=Z,170nm,18.1s,baz=130,slow=35						
FITZ	**Fitzroy Crossi**	**58.38**	**259**	P	**P**	**18 24 10.6**	**-0.1**
	baz=59,SNR=3.8						
VNDA	**Vanda**	**62.35**	**186**	P	**P**	**18 24 37.7**	**+0.7**
VNDA	**Vanda**	**62.35**	**186**	P	**P**	**18 24 37.7**	**+0.7**
	1.0nm,1.0s,baz=37,slow=6.5,SNR=2.7						
MBWA	**Marble Bar**	**63.44**	**254**	*eP*	**P**	**18 24 44.1**	**-1.1**
MEEK	**Meekatharra**	**63.77**	**248**	P	**P**	**18 24 46.6**	**-0.8**
	baz=64,SNR=3.2						
NWAO	**Narrogin (SRO)**	**64.44**	**241**	LR	LR	18 51 08.6	
	comp=Z,138nm,20.2s,baz=7.8,slow=34						
MJAR	**Matsushiro Arr**	**70.01**	**320**	P	**P**	**18 25 25.9**	**-0.9**
MJAR	**Matsushiro Arr**	**70.01**	**320**	P	**P**	**18 25 25.9**	**-0.9**
	1.0nm,0.6s,baz=156,slow=5.7,SNR=6.3						
LPIG	**La Paz**	**73.27**	**58**	LR	LR	18 49 33.1	
	comp=Z,9.8nm,18.4s,baz=90,slow=29						
PETK	**Petropavlovsk-**	**73.77**	**342**	P	**P**	**18 25 48.7**	**-0.2**
PETK	**Petropavlovsk-**	**73.77**	**342**	P	**P**	**18 25 48.7**	**-0.2**
	3.2nm,0.8s,baz=111,slow=8.2,SNR=3.8						
PETK				LR	LR	18 54 30.4	
	comp=Z,23nm,21.7s,baz=303,slow=33						
YBH	**Yreka Blue Hor**	**74.22**	**37**	P	**P**	**18 25 52.6**	**+0.7**
YBH	**Yreka Blue Hor**	**74.22**	**37**	P	**P**	**18 25 52.6**	**+0.7**
	2.3nm,0.7s,baz=202,slow=8.9,SNR=4.6						
YBH				LR	LR	18 52 53.2	
	comp=Z,83nm,18.7s,baz=200,slow=31						
NVAR	**Mina Array Bea**	**74.86**	**42**	P	**P**	**18 25 56.7**	**+0.8**
NVAR	**Mina Array Bea**	**74.86**	**42**	P	**P**	**18 25 56.7**	**+0.8**
	2.2nm,0.9s,baz=229,slow=8.2,SNR=9.6						
KSRS	**Korea Array**	**77.20**	**316**	P	**P**	**18 26 09.3**	**+0.4**
	0.4nm,0.5s,baz=123,slow=6.5,SNR=6.9						
KSRS				LR	LR	18 53 39.3	
	comp=Z,39nm,21.0s,baz=355,slow=31						
KSAR	**Wonju Array Be**	**77.22**	**316**	P	**P**	**18 26 09.3**	**+0.3**
BBB	**Bella Bella**	**78.67**	**26**	LR	LR	18 54 44.0	
	comp=Z,57nm,19.9s,baz=91,slow=31						
BMRM	**Bremner River**	**80.46**	**14**	*eP*	**P**	**18 26 24.8**	**-1.6**
	30nm,1.4s						
ANMO	**Albuquerque**	**81.19**	**50**	LR	LR	18 55 57.6	
	comp=Z,77nm,18.2s,baz=182,slow=31						
NEW	**Newport**	**81.37**	**34**	LR	LR	18 55 41.2	
	comp=Z,66nm,18.3s,baz=196,slow=31						
TRF	**Thorofare Moun**	**81.61**	**10**	*eP*	**P**	**18 26 31.0**	**-1.6**
	4.5nm,0.7s						
BSMT	**Bassoo Peak**	**82.41**	**35**	*eP*	**P**	**18 26 37.3**	**+0.1**
	2.8nm,0.9s						
DLBC	**Dease Lake**	**82.56**	**21**	P	**P**	**18 26 37.9**	**+0.3**
DLBC	**Dease Lake**	**82.56**	**21**	P	**P**	**18 26 37.9**	**+0.3**
	1.5nm,0.8s,baz=205,slow=4.4,SNR=5.2						
PDAR	**Pinedale Array**	**82.80**	**42**	P	**P**	**18 26 39.9**	**+0.5**
PDAR	**Pinedale Array**	**82.80**	**42**	P	**P**	**18 26 39.9**	**+0.5**
	2.6nm,0.8s,baz=231,slow=3.2,SNR=18						
PMSA	**Palmer Station**	**83.04**	**156**	*eP*	**P**	**18 26 41.2**	**+1.3**
COLA	**College**	**83.34**	**11**	*eP*	**P**	**18 26 40.2**	**-1.1**
	16nm,1.0s						
ILAR	**Eielson Array**	**83.42**	**11**	P	**P**	**18 26 41.4**	**-0.4**
ILAR	**Eielson Array**	**83.42**	**11**	P	**P**	**18 26 41.4**	**-0.4**
	2.4nm,0.7s,baz=237,slow=5.9,SNR=35						
EGAK	**Eagle**	**84.57**	**13**	*eP*	**P**	**18 26 47.5**	**-0.1**
	4.7nm,1.0s						
INK	**Inuvik**	**89.22**	**14**	P	**P**	**18 27 10.3**	**+0.2**
INK	**Inuvik**	**89.22**	**14**	P	**P**	**18 27 10.3**	**+0.2**
	1.2nm,0.9s,baz=206,slow=4.0,SNR=11						
YKA	**Yellowknife Ar**	**90.92**	**23**	P	**P**	**18 27 18.6**	**+0.4**
YKA	**Yellowknife Ar**	**90.92**	**23**	P	**P**	**18 27 18.6**	**+0.4**
	1.4nm,0.9s,baz=238,slow=4.2,SNR=19						
VNA3	**Neumayer Olymp**	**91.75**	**175**	*eP*	**P**	**18 27 25.2**	**+3.0**
SNAA	**Sanae**	**91.82**	**177**	*eP*	**P**	**18 27 25.1**	**+2.6**
VNA2	**Neumayer--Watz**	**92.25**	**175**	*eP*	P	18 27 27.9	+3.4
	baz=190,slow=2.5						
CMAR	**Chiang Mai Arr**	**93.32**	**288**	P	**P**	**18 27 30.1**	**-0.3**
CMAR	**Chiang Mai Arr**	**93.32**	**288**	P	**P**	**18 27 30.1**	**-0.3**
	1.3nm,0.4s,baz=96,slow=2.5,SNR=10						
CFAA	**Coronel Fontan**	**93.53**	**124**	LR	LR	18 59 24.3	
	comp=Z,19nm,20.7s,baz=251,slow=29						
SONM	**Songino Array**	**95.90**	**318**	P	**P**	**18 27 40.4**	**-1.3**
SONM	**Songino Array**	**95.90**	**318**	P	**P**	**18 27 40.4**	**-1.3**
	0.4nm,0.9s,baz=84,slow=4.5,SNR=3.2						
TKL	**Tuckaleechee C**	**98.80**	**55**	LR	LR	19 05 05.6	
	comp=Z,54nm,18.4s,baz=70,slow=31						
ARCES	**ARCESS Array B**	**125.72**	**352**	PKP	**PKPdf**	**18 33 16.2**	**+0.4**
ARCES	**ARCESS Array B**	**125.72**	**352**	PKP	**PKPdf**	**18 33 16.2**	**+0.4**
	2.5nm,0.8s,baz=14,slow=4.7,SNR=4.8						
MALT	**Malatya**	**144.90**	**315**	*eP*	**PKPdf**	**18 33 53.0**	**+0.6**
MALT	**Malatya**	**144.90**	**315**	⇑*iP*	**PKPdf**	**18 33 53.4**	**+1.1**
CLL	**Collm**	**144.92**	**353**	⇓*i*PKPdf	**PKPab**	**18 33 50.9**	**-0.1**
	comp=Z,6.0nm,0.9s						
UPC	**Upice**	**145.29**	**350**	*i* PKP	**PKPbc**	**18 33 51.9**	**-0.3**
KOLS	**Kolonicke sedl**	**145.31**	**342**	*e*PKP	**PKPdf**	**18 33 52.7**	**+0.1**
DPC	**Dobruska-Polom**	**145.38**	**349**	*i* PKP	**PKPab**	**18 33 53.2**	**+0.4**
DPC				*ex*	x	18 34 05.4	
KMBO	**Kilima Mbogo**	**145.41**	**242**	PKPbc	**PKPab**	**18 33 54.8**	**+0.6**
KMBO	**Kilima Mbogo**	**145.41**	**242**	PKPbc	**PKPab**	**18 33 54.8**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=69,slow=4.9,SNR=11						
BUR08	**Bucovina Ar. S**	**145.49**	**338**	*eP*	**PKPab**	**18 33 53.5**	**+0.2**
PVCC	**Panska Ves**	**145.49**	**351**	*i* PKP	**PKPab**	**18 33 54.2**	**+1.1**
BURAR	**Bucovina Array**	**145.51**	**338**	⇓*iP*	**PKPab**	**18 33 54.1**	**+0.7**
OKC	**Ostrava-Krasne**	**145.52**	**347**	*i* PKP	**PKPab**	**18 33 53.3**	**+0.1**
OKC				*ex*	x	18 34 05.3	
KRLC	**Kraliky**	**145.57**	**349**	*i* PKP	**PKPab**	**18 33 53.8**	**+0.3**
MORC	**Moravsky Berou**	**145.70**	**348**	*eP*	**PKPbc**	**18 33 53.7**	**+0.1**
MORC	**Moravsky Berou**	**145.70**	**348**	⇓*iP*	**PKPbc**	**18 33 53.8**	**+0.1**
TESR		**145.89**	**336**	⇓*iP*	**PKPab**	**18 33 54.5**	**-0.2**
PRU	**Pruhonice**	**146.02**	**351**	*i* PKP	**PKPab**	**18 33 55.0**	**-0.1**
TLCR		**146.02**	**332**	⇑*iP*	**PKPab**	**18 33 55.4**	**+0.2**
NKC	**Novy Kostel**	**146.04**	**354**	*i* PKP	**PKPbc**	**18 33 54.9**	**+0.3**
CFR	**Carcaliu**	**146.33**	**333**	⇑*iP*	**PKPab**	**18 33 56.1**	**-0.3**
VRI	**Vrincioaia**	**146.38**	**335**	⇑*iP*	**PKPbc**	**18 33 56.1**	**+0.3**
TREC	**Trest**	**146.55**	**350**	*i* PKP	**PKPbc**	**18 33 56.5**	**+0.3**
VYHS	**Vyhne**	**146.63**	**346**	*e*PKP	**PKPab**	**18 33 57.0**	**-0.5**
PSZ	**Piszkesteto**	**146.90**	**344**	⇑*iP*	**PKPab**	**18 33 58.2**	**-0.5**
SMOL	**Smolenice**	**146.93**	**347**	*e*PKP	**PKPab**	**18 33 58.5**	**-0.1**
KHC	**Kasperske Hory**	**146.99**	**352**	*eP*	**PKPbc**	**18 33 58.0**	**+0.5**
KHC	**Kasperske Hory**	**146.99**	**352**	*i* PKP	**PKPbc**	**18 33 58.0**	**+0.5**
KHC				*ep*PKP	**PKiKP**	**18 34 00.8**	**+0.8**
MLR	**Muntele Rosu**	**147.00**	**335**	⇑*iP*	**PKPab**	**18 33 58.5**	**-0.7**
DRGR		**147.08**	**340**	⇑*iP*	**PKPbc**	**18 33 57.1**	**-0.7**
BR131	**Keskin Array S**	**147.23**	**320**	*e*PKPbc	**PKPbc**	**18 33 59.0**	**+0.4**
BRTR	**Keskin Array B**	**147.23**	**320**	PKPbc	**PKPbc**	**18 33 58.4**	**-0.2**
BRTR	**Keskin Array B**	**147.23**	**320**	PKPbc	**PKPbc**	**18 33 58.4**	**-0.2**
	comp=Z,7.3nm,0.8s,baz=120,slow=2.1,SNR=48						
GERES	**GERESS Array B**	**147.26**	**352**	PKPbc	**PKPbc**	**18 33 58.5**	**+0.2**
GERES	**GERESS Array B**	**147.26**	**352**	PKPbc	**PKPbc**	**18 33 58.5**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=10,slow=3.0,SNR=31						
ARR	**Arges**	**147.62**	**337**	⇑*iP*	**PKPab**	**18 34 01.5**	**-0.1**
CONA	**Conrad Observa**	**147.80**	**349**	⇑*i*PKPab	**PKPbc**	**18 34 00.5**	**+0.7**
	comp=Z,10nm,0.7s						
CONA	**Conrad Observa**	**147.80**	**349**	⇑*iP*	**PKPbc**	**18 34 00.5**	**+0.7**
BFO	**Black Forest**	**148.21**	**358**	*e*PKPbc	**PKPbc**	**18 33 59.7**	**-1.1**
WTTA	**Wattenberg**	**149.06**	**354**	⇓*i*PKiKP	**PKPbc**	**18 34 03.6**	**+0.3**
	comp=Z,9.9nm,0.7s						
WTTA	**Wattenberg**	**149.06**	**354**	⇓*iP*	**PKPbc**	**18 34 03.6**	**+0.3**
PERS	**Pernice**	**149.18**	**349**	*e*PKPbc	**PKPbc**	**18 34 03.3**	**-0.1**
DAVA	**Damuels**	**149.19**	**356**	⇑*i*PKiKP	**PKPbc**	**18 34 03.9**	**+0.4**
	comp=Z,9.4nm,0.8s						
DAVA	**Damuels**	**149.19**	**356**	⇑*iP*	**PKPbc**	**18 34 03.9**	**+0.4**
ABTA	**Abfaltersbach**	**149.47**	**353**	⇑*ip*PKPdf	**PKPbc**	**18 34 03.8**	**-0.3**
	comp=Z,9.1nm,0.7s						
ABTA	**Abfaltersbach**	**149.47**	**353**	⇑*iP*	**PKPbc**	**18 34 03.8**	**-0.3**
PDKS	**Podkum**	**149.76**	**349**	*i* PKPbc	**PKPbc**	**18 34 04.7**	**-0.1**
LJU	**Ljubljana**	**149.86**	**350**	*e*PKPbc	**PKPbc**	**18 34 05.5**	**+0.4**
TUE	**Stuetta**	**150.03**	**357**	*e*PKPbc	**PKPbc**	**18 34 06.0**	**+0.4**
JAVS	**Javornik**	**150.08**	**350**	*e*PKPbc	**PKPbc**	**18 34 05.4**	**-0.3**
BOJS	**Bojanci**	**150.25**	**348**	*e*PKPbc	**PKPbc**	**18 34 06.6**	**+0.6**
VTS	**Vitosha**	**150.51**	**335**	⇓*iP*	**PKPbc**	**18 34 07.7**	**+0.8**
TORD	**Torodi Ar. Bea**	**173.89**	**122**	PKP	**PKPdf**	**18 34 25.2**	**-0.1**
TORD				PKPab	**PKPab**	**18 35 57.2**	**+1.4**
TORD	**Torodi Ar. Bea**	**173.89**	**122**	PKP	**PKPdf**	**18 34 25.2**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=322,slow=1.8,SNR=5.7						
TORD				PKPab	**PKPab**	**18 35 57.2**	**+1.4**
	comp=Z,0.8nm,0.8s,baz=260,slow=3.8,SNR=3.4						

*IDC **09** 18:20:06.9±1.4,23°.36S×179°.38E,h528km±13km, mb3.3/14,mb1 3.5/17,mb1mx3.4/23,mbtmp3.4/17, Error ellipse: s-maj=13.8km s-min=12.0km az=135.0*
*ISCJB **09** 18:20:07.3±0.5,23°.41S±0°.06×179°.33E±0°.10,h548km, mb3.7/14, Error ellipse: s-maj=11.9km s-min=7.7km az=3.8*
ISC 09 18:20:08.5±0.5,**23°.50S**±0°.08×**179°.30E**±0°.10,**h548**km,**n42,** σ1§**31**/50,**mb3.6**/14,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.95**	**274**	P	**P**	**18 22 45.3**	**-1.4**
	0.4nm,0.3s,baz=70,slow=18,SNR=3.5						
AFI	**Afiamalu**	**12.74**	**43**	P	P	18 22 50.5	-4.5
	5.8nm,0.3s,baz=214,slow=3.6,SNR=3.1						
URZ	**Urewera**	**14.83**	**187**	P	**P**	**18 23 14.7**	**-1.4**
	5.6nm,0.3s,baz=24,slow=3.0,SNR=18						
URZ				S	**S**	**18 25 47.3**	**-3.3**
	0.9nm,0.3s,baz=219,slow=20,SNR=14						
HIZ	**Hauiti**	**15.44**	**193**	*e*PN	**P**	**18 23 26.2**	**+3.9**
QRZ	**Quartz Range**	**18.19**	**197**	*e*PN	**P**	**18 23 50.8**	**+2.8**
NNZ	**Nelson**	**18.35**	**194**	*e*PN	**P**	**18 23 49.9**	**+0.4**
NNZ				*e*SN	**S**	**18 26 47.4**	**-1.9**
THZ	**Tophouse**	**18.98**	**195**	*e*PN	**P**	**18 23 55.7**	**+0.4**
RPZ	**Rata Peaks**	**21.28**	**197**	P	**P**	**18 24 17.5**	**+1.4**
	6.0nm,0.6s,baz=17,slow=14,SNR=4.2						
CTA	**Charters Tower**	**30.83**	**270**	P	**P**	**18 25 41.0**	**+0.6**
	16nm,0.4s,baz=95,slow=10.0,SNR=28						
PMG	**Port Moresby**	**33.76**	**289**	P	**P**	**18 26 05.4**	**+0.1**
	10nm,0.8s,baz=203,slow=13,SNR=5.1						
STKA	**Stephens Creek**	**34.28**	**247**	P	**P**	**18 26 10.7**	**+1.3**
	5.1nm,0.7s,baz=91,slow=9.3,SNR=12						
STKA				PcP	**PcP**	**18 28 31.1**	**+1.1**
	1.2nm,0.4s,baz=97,slow=5.3,SNR=4.0						
ASAR	**Alice Springs**	**41.47**	**260**	P	**P**	**18 27 08.3**	**+0.1**
	0.8nm,0.3s,baz=94,slow=7.7,SNR=18						
ASAR				PcP	**PcP**	**18 28 53.2**	**+0.3**
	0.9nm,0.8s,baz=118,slow=3.8,SNR=5.4						
ASAR				ScP	**ScP**	**18 31 53.3**	**+2.3**
	0.6nm,0.7s,baz=126,slow=3.9,SNR=4.4						
ASAR				S	**S**	**18 32 44.7**	**+0.3**
	0.4nm,0.7s,baz=96,slow=16,SNR=5.3						
WRA	**Warramunga Arr**	**41.80**	**266**	P	**P**	**18 27 10.2**	**-0.6**
	1.6nm,0.4s,baz=95,slow=8.5,SNR=88						
WRA				PcP	**PcP**	**18 28 54.4**	**+0.4**
	0.7nm,0.6s,baz=103,slow=3.2,SNR=4.5						
WRA				ScP	**ScP**	**18 31 54.8**	**+2.4**
	0.6nm,0.8s,baz=92,slow=4.0,SNR=3.7						
WRA				S	**S**	**18 32 46.0**	**-3.1**
	1.0nm,0.9s,baz=98,slow=15,SNR=3.6						
VNDA	**Vanda**	**54.72**	**185**	P	**P**	**18 28 45.8**	**-0.1**
	0.8nm,0.8s,baz=24,slow=8.4,SNR=5.0						
VNDA				PcP	**PcP**	**18 29 41.0**	**+0.9**
	0.8nm,0.6s,baz=348,slow=3.5,SNR=4.5						
MJAR	**Matsushiro Arr**	**71.21**	**326**	P	**P**	**18 30 32.2**	**-0.2**
	1.1nm,0.8s,baz=171,slow=7.5,SNR=6.2						
KSRS	**Korea Array**	**77.53**	**320**	P	**P**	**18 31 08.0**	**0.0**
	0.5nm,0.6s,baz=128,slow=6.3,SNR=4.8						
MAW	**Mawson**	**77.90**	**201**	P	**P**	**18 31 10.9**	**+1.4**
	4.3nm,0.5s,baz=113,slow=6.6,SNR=10						
PETK	**Petropavlovsk-**	**78.57**	**347**	P	**P**	**18 31 12.9**	**-0.3**
	1.0nm,0.6s,baz=118,slow=8.0,SNR=5.7						
NVAR	**Mina Array Bea**	**84.91**	**44**	P	**P**	**18 31 45.7**	**-0.5**
	0.5nm,0.7s,baz=226,slow=5.7,SNR=3.9						
SNAA	**Sanae**	**85.07**	**179**	*eP*	**P**	**18 31 46.3**	**0.0**
VNA3	**Neumayer Olymp**	**85.31**	**177**	*eP*	**P**	**18 31 47.6**	**+0.2**
VNA2	**Neumayer--Watz**	**85.72**	**178**	*eP*	**P**	**18 31 49.8**	**+0.5**
	baz=190,slow=3.9						
ILAR	**Eielson Array**	**91.80**	**14**	P	**P**	**18 32 15.9**	**-1.6**
	0.1nm,0.6s,baz=224,slow=5.0,SNR=3.1						
PDAR	**Pinedale Array**	**92.85**	**44**	P	**P**	**18 32 22.9**	**-0.3**
	0.3nm,0.7s,baz=252,slow=1.8,SNR=3.0						
MKAR	**Makanchi Array**	**111.41**	**313**	PKiKP	**PKiKP**	**18 37 39.6**	**-0.9**
	0.3nm,0.5s,baz=140,slow=0.8,SNR=7.1						
BVAR	**Borovoye Array**	**119.72**	**319**	PKP	**PKPdf**	**18 37 55.7**	**-0.5**
	1.1nm,0.3s,baz=125,slow=1.9,SNR=9.4						
FRB	**Frobisher Bay**	**120.60**	**29**	PKP	**PKPdf**	**18 37 56.7**	**-0.8**
	1.8nm,0.5s,baz=17,slow=3.1,SNR=4.2						
SPITS	**Spitsbergen Ar**	**124.68**	**356**	PKP	**PKPdf**	**18 38 05.1**	**0.0**
	2.2nm,0.6s,baz=170,slow=3.6,SNR=4.4						
ARCES	**ARCESS Array B**	**131.37**	**348**	PKP	**PKPdf**	**18 38 17.6**	**-0.4**
	2.8nm,0.7s,baz=59,slow=1.9,SNR=16						
FINES	**FINESS Array B**	**137.86**	**341**	PKhKP	PKPpre	18 38 19.9	
	2.9nm,0.9s,baz=53,slow=3.7,SNR=4.3						
FINES				PKP	**PKPdf**	**18 38 30.3**	**0.0**
	1.8nm,0.7s,baz=64,slow=3.2,SNR=9.0						
FINES				SKPbc	**SKPbc**	**18 41 13.9**	**+1.0**
	2.0nm,0.7s,baz=46,slow=4.0,SNR=7.0						
NB2	**NORSAR Subarra**	**141.59**	**351**	PKP	PKPpre	18 38 32.2	
	comp=Z,0.8nm,0.6s,baz=13,slow=3.1						
NOA	**NORSAR Array B**	**141.59**	**351**	PKhKP	PKPpre	18 38 32.3	
	comp=Z,1.2nm,0.7s,baz=16,slow=4.7,SNR=7.9						
AKASG	**Malin Array Be**	**144.29**	**327**	PKP	PKPbc	18 38 41.3	-0.6
	comp=Z,3.0nm,0.5s,baz=45,slow=4.2,SNR=15						
BRTR	**Keskin Array B**	**146.83**	**307**	PKPbc	**PKPbc**	**18 38 49.5**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=142,slow=4.2,SNR=5.9						
UPC	**Upice**	**150.06**	**338**	*e*PKP	**PKPbc**	**18 38 57.8**	**+0.5**
DPC	**Dobruska-Polom**	**150.09**	**338**	*e*PKP	**PKPbc**	**18 38 58.2**	**+0.8**
KRLC	**Kraliky**	**150.16**	**337**	*e*PKP	**PKPbc**	**18 38 58.2**	**+0.6**
PVCC	**Panska Ves**	**150.52**	**340**	*e*PKP	**PKPbc**	**18 38 59.1**	**+0.8**
PRU	**Pruhonice**	**151.00**	**340**	*e*PKP	**PKPbc**	**18 38 59.5**	**+0.1**
KHC	**Kasperske Hory**	**152.05**	**340**	*e*PKP	**PKPbc**	**18 39 02.2**	**+0.3**
GERES	**GERESS Array B**	**152.26**	**339**	PKPbc	**PKPbc**	**18 39 02.4**	**0.0**
	comp=Z,0.8nm,0.6s,baz=29,slow=2.2,SNR=7.4						
TORD	**Torodi Ar. Bea**	**169.46**	**193**	PKP	**PKPdf**	**18 39 13.5**	**-0.5**
	comp=Z,0.9nm,1.2s,baz=260,slow=1.5,SNR=3.6						
TORD				PKPab	**PKPab**	**18 40 31.4**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=167,slow=4.1,SNR=9.1						

*CRAAG **09** 18:23:22.1,36°.93N×3°.97E,Ml3.2*
*ISCJB **09** 18:23:25.3±0.8,37°.05N±0°.04×3°.79E±0°.07,h13km, Error ellipse: s-maj=8.5km s-min=5.5km az=169.5*
*CSEM **09** 18:23:25.4±0.4,36°.90N×3°.88E,h10km, mb3.8/3, Error ellipse: s-maj=10.9km s-min=7.7km az=86.0*
*MDD **09** 18:23:26.9±1.7,36°.87N×3°.87E,h15km±20km, mb3.8/3, Error ellipse: s-maj=18.4km s-min=8.5km az=38.0, PRXIMO*
ISC 09 18:23:24.6±1.0,**36°.91N**±0°.04×**3°.88E**±0°.05,**h13**km,**n28,** σ1§**85**/44,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.69**	**261**	P	**Pb**	**18 23 39.2**	**+0.7**
ABA	**Alger-Bouzarea**	**0.69**	**261**	P	**Pb**	**18 23 39.2**	**+0.7**
ABA	**Alger-Bouzarea**	**0.69**	**261**	P	**Pb**	**18 23 39.2**	**+0.7**
ADJB	**Djebel Djouab**	**0.83**	**206**	P	**Pg**	**18 23 40.5**	**-0.2**
ADJB	**Djebel Djouab**	**0.83**	**206**	P	**Pg**	**18 23 40.5**	**-0.2**
ADJB	**Djebel Djouab**	**0.83**	**206**	P	**Pg**	**18 23 40.5**	**-0.2**
EMHD	**Djebel Mahouad**	**1.03**	**227**	P	**Pn**	**18 23 45.7**	**+0.8**
EMHD	**Djebel Mahouad**	**1.03**	**227**	P	**Pn**	**18 23 45.7**	**+0.8**
EMHD	**Djebel Mahouad**	**1.03**	**227**	P	**Pn**	**18 23 45.7**	**+0.8**
SET	**Setif**	**1.41**	**120**	P	**Pn**	**18 23 51.0**	**+0.8**
SET	**Setif**	**1.41**	**120**	P	**Pn**	**18 23 51.0**	**+0.8**
SET	**Setif**	**1.41**	**120**	P	**Pn**	**18 23 51.0**	**+0.8**
EIBI	**Ibiza**	**2.91**	**317**	P	**Pn**	**18 24 11.5**	**+0.8**
	1.2nm,0.1s,SNR=7.6						
EIBI				S	**Sn**	**18 24 44.6**	**-1.0**
	2.9nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**2.91**	**317**	P	**Pn**	**18 24 11.5**	**+0.8**
	1.2nm,0.1s,SNR=7.6						
EIBI				S	**Sn**	**18 24 44.6**	**-1.0**
	2.9nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**3.71**	**300**	P	**Pn**	**18 24 22.5**	**+0.7**
	0.2nm,0.2s,SNR=7.9						
EBEN				S	**Sn**	**18 25 02.6**	**-2.8**
	0.6nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**3.71**	**300**	P	**Pn**	**18 24 22.5**	**+0.7**
	0.2nm,0.2s,SNR=7.9						
EBEN				S	**Sn**	**18 25 02.6**	**-2.8**
	0.6nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**4.64**	**294**	P	**Pn**	**18 24 36.6**	**+2.1**
	1.6nm,0.2s,SNR=8.7						
ETOB				S	**Sn**	**18 25 26.3**	**-1.9**
	0.7nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**4.64**	**294**	P	**Pn**	**18 24 36.6**	**+2.1**
	1.6nm,0.2s,SNR=8.7						
ETOB				S	**Sn**	**18 25 26.3**	**-1.9**
	0.7nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.85**	**317**	P	**Pn**	**18 24 39.7**	**+2.2**
	0.7nm,0.3s,SNR=7.9						
EMOS				S	**Sn**	**18 25 31.9**	**-1.7**
	0.6nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.85**	**317**	P	**Pn**	**18 24 39.7**	**+2.2**
	0.7nm,0.3s,SNR=7.9						
EMOS				S	**Sn**	**18 25 31.9**	**-1.7**
	0.6nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**4.94**	**335**	P	**Pn**	**18 24 39.5**	**+0.8**
	0.5nm,0.2s,SNR=7.9						
EPOB				S	**Sn**	**18 25 32.3**	**-3.5**
	0.8nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**4.94**	**335**	P	**Pn**	**18 24 39.5**	**+0.8**
	0.5nm,0.2s,SNR=7.9						
EPOB				S	**Sn**	**18 25 32.3**	**-3.5**
	0.8nm,0.2s,SNR=7.9						

CFON	**Fontmartina**	**4.98**	**347**	P	**Pn**	**18 24 39.9**	**+0.8**
	2.4nm,0.2s,SNR=8.4						
CFON				S	**Sn**	**18 25 33.6**	**-3.0**
	2.3nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**4.98**	**347**	P	**Pn**	**18 24 39.9**	**+0.8**
	2.4nm,0.2s,SNR=8.4						
CFON				S	**Sn**	**18 25 33.6**	**-3.0**
	2.3nm,0.2s,SNR=7.9						
CLLI	**Llivia**	**5.75**	**346**	P	**Pn**	**18 24 51.9**	**+2.0**
	0.3nm,0.2s,SNR=7.9						
CLLI				S	**Sn**	**18 25 56.1**	**+0.2**
	0.7nm,0.4s,SNR=7.9						
CLLI	**Llivia**	**5.75**	**346**	P	**Pn**	**18 24 51.9**	**+2.0**
	0.3nm,0.2s,SNR=7.9						
CLLI				S	**Sn**	**18 25 56.1**	**+0.2**
	0.7nm,0.4s,SNR=7.9						
CSOR	**Sort**	**5.86**	**340**	P	**Pn**	**18 24 54.2**	**+2.9**
	0.2nm,0.2s,SNR=7.9						
CSOR				S	**Sn**	**18 25 55.8**	**-2.5**
	0.8nm,0.2s,SNR=7.9						
CSOR	**Sort**	**5.86**	**340**	P	**Pn**	**18 24 54.2**	**+2.9**
	0.2nm,0.2s,SNR=7.9						
CSOR				S	**Sn**	**18 25 55.8**	**-2.5**
	0.8nm,0.2s,SNR=7.9						

*CSEM **09** 18:32:16.2±99.0,46°.39N×15°.07E,h0km, Suspected Mining induced. After LJU*
LJU 09 18:32:16.2,46°.39N×15°.07E,h0km **Rockburst, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDS	**Vrh nad Dolski**	**0.39**	**222**	*i* Pg	Pg	18 32 23.8	+0.1
VNDS				*i* Sg	Sg	18 32 29.4	+0.6

*CSEM **09** 18:32:58.9,42°.33N×13°.51E,h8km±1km,**Md2.6**/13, **Ml2.1/9,1C,Error ellipse: s-maj=1.4km s-min=1.0km az=35.0,Central Italy*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.08**	**285**	⇑*iP*	Pg	18 33 01.6	+0.5
AQU	**L'Aquila**	**0.08**	**285**	Pg	Pg	18 33 01.7	+0.6
AQU				Sg	Sg	18 33 03.7	+1.0
	3µm,0.8s						
AQU	**L'

0.3nm,0.5s,baz=103,slow=7.9,SNR=3.2
ZALV Zalesovo Beam 40.40 310 P **P 18 41 44.1 +0.3**
1.5nm,0.5s,baz=93,slow=7.7,SNR=12
CMAR Chiang Mai Arr 42.56 253 P **P 18 42 03.1 +1.1**
0.1nm,0.3s,baz=32,slow=6.7,SNR=2.6
MKAR Makanchi Array 43.03 300 P **P 18 42 06.0 +0.5**
0.7nm,0.6s,baz=88,slow=9.7,SNR=10
ILAR Eielson Array 47.05 34 P **P 18 42 34.1 -3.1**
0.3nm,0.8s,baz=262,slow=6.3,SNR=2.5
WRA Warramunga Arr 59.77 188 P **P 18 44 10.2 -0.6**
0.3nm,0.7s,baz=10,slow=6.9,SNR=3.1
ARCES ARCESS Array B 61.60 339 P **P 18 44 22.1 -0.6**
2.8nm,0.9s,baz=64,slow=8.2,SNR=3.3
FINES FINESS Array B 66.60 332 P **P 18 44 55.5 0.0**
1.2nm,0.8s,baz=32,slow=8.2,SNR=2.8

*IDC **09** 18:49:02.7±0.4, 15.97S×172.52W, h0km, mb4.5/23, mb1 4.7/25, mb1mx4.6/31, mbtmp4.6/25, ML4.2/2, MS3.8/15, Ms1 3.8/15, ms1mx3.6/38, Error ellipse: s-maj=17.4km s-min=10.4km az=120.0*
*ISCJB **09** 18:49:05.4±0.3, 15.87S±0.06×172.67W±0.07, h24km, mb4.6/49, MS3.9/15, Error ellipse: s-maj=11.2km s-min=6.1km az=39.9*
*BJI **09** 18:49:08.4, 15.585×172.53W, h36km, mB4.9/1, mb4.7/9, Ms5.0/1, Ms7 4.5/1*
*NEIC **09** 18:49:08.3±0.2, 15.84S×172.68W, h35km, mb4.6/22, Error ellipse: s-maj=11.1km s-min=5.2km az=131.0*
ISC 09 18:49:06.5±0.3, 15.89S±0.06×172.48W±0.07, h24km, n151, σ1.37/159, mb4.6/49, MS3.9/15, 13C-6D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.08**	**19**	Pn	**Pn**	**18 49 39.6**	**-0.4**
AFI				Sn	**Sn**	**18 50 02.3**	**-2.9**
AFI	**Afiamalu**	**2.08**	**19**	Pn	**Pn**	**18 49 39.6**	**-0.4**
	770nm,0.3s,baz=203,slow=15,SNR=587						
AFI				Sn	**Sn**	**18 50 02.3**	**-2.9**
	1µm,0.3s,baz=74,slow=21,SNR=17						
MSVF	**Nonsavu**	**9.26**	**257**	P	**Pn**	**18 51 20.5**	**+1.9**
	39nm,0.8s						
RAR	**Rarotonga**	**13.16**	**116**	Pn	**Pn**	**18 52 09.8**	**-2.1**
RAR				Sn	Sn	18 54 25.8	-12
RAR	**Rarotonga**	**13.16**	**116**	Pn	**Pn**	**18 52 09.8**	**-2.1**
	8.3nm,0.3s,baz=269,slow=8.3,SNR=16						
RAR				Sn	Sn	18 54 25.7	-12
	3.1nm,0.3s,baz=143,slow=20,SNR=3.8						
RAR				LR	LR	18 56 06.3	
	comp=Z,334nm,19.9s,baz=61,slow=32						
DZM	**Mont Dzumac**	**20.85**	**250**	*e*LR	LR	18 59 44.8	
	1µm,27.6s						
DZM	**Mont Dzumac**	**20.85**	**250**	P	**P**	**18 53 44.5**	**-2.3**
DZM	**Mont Dzumac**	**20.85**	**250**	P	**P**	**18 53 44.5**	**-2.3**
	12nm,0.9s,baz=82,slow=19,SNR=5.8						
DZM				LR	LR	18 59 46.2	
	comp=Z,235nm,19.4s,baz=234,slow=31						
PPT	**Papeete**	**21.99**	**98**	LR	LR	19 00 25.6	
	comp=Z,301nm,21.6s,baz=2.7,slow=31						
PPT2	**Papeete2**	**21.99**	**98**	*e*LQ	LQ	18 58 14.3	
	824nm,29.0s						
PPT2				*e*LR	LR	18 59 01.1	
	841nm,27.5s						
TBI	**Tubuai**	**22.89**	**113**	*e*LQ	LQ	18 58 28.1	
	700nm,26.5s						
TBI				*e*LR	LR	18 59 34.1	
	824nm,27.8s						
OUZ	**Omahuta**	**22.94**	**210**	*e*P	**P**	**18 54 09.2**	**+0.2**
	35nm,0.8s						
URZ	**Urewera**	**24.10**	**200**	*e*P	**P**	**18 54 20.1**	**-0.3**
	49nm,0.6s						
URZ				S	**S**	**18 58 37.5**	**+1.0**
URZ	**Urewera**	**24.10**	**200**	P	**P**	**18 54 19.3**	**-1.0**
	40nm,0.5s,baz=5.6,slow=3.2,SNR=33						
URZ				S	**S**	**18 58 37.5**	**+1.0**
	5.6nm,0.6s,baz=16,slow=19,SNR=5.4						
HNR	**Honiara**	**27.64**	**280**	LR	LR	19 04 24.1	
	comp=Z,315nm,19.7s,baz=150,slow=33						
KHZ	**Kahutara**	**29.04**	**202**	P	**P**	**18 55 07.0**	**+2.3**
	34nm,0.7s						
RPZ	**Rata Peaks**	**31.08**	**203**	P	**P**	**18 55 23.5**	**+0.7**
RPZ	**Rata Peaks**	**31.08**	**203**	P	**P**	**18 55 23.5**	**+0.7**
	16nm,1.0s,baz=11,slow=16,SNR=3.5						
ARMA	**Armidale**	**35.86**	**240**	*e*P	**P**	**18 56 03.3**	**-1.5**
	20nm,0.8s						
STKA	**Stephens Creek**	**44.57**	**241**	*e*P	**P**	**18 57 15.8**	**-1.1**
	4.2nm,0.8s						
STKA	**Stephens Creek**	**44.57**	**241**	P	**P**	**18 57 15.9**	**-0.9**
	21nm,0.7s,baz=90,slow=9.4,SNR=60						
STKA				LR	LR	19 13 25.9	
	comp=Z,109nm,19.1s,baz=298,slow=33						
BBOO	**Buckleboo**	**49.34**	**240**	*e*P	**P**	**18 57 52.9**	**-1.2**
	132nm,0.6s						
WRAB	**Tennant Creek**	**50.59**	**257**	*e*P	**P**	**18 58 02.0**	**-1.8**
	6.6nm,0.8s						
WRA	**Warramunga Arr**	**50.60**	**257**	P	**P**	**18 58 02.5**	**-1.3**
WRA				PcP	**PcP**	**18 59 21.6**	**+0.1**
WRA	**Warramunga Arr**	**50.60**	**257**	P	**P**	**18 58 02.5**	**-1.3**
	5.9nm,0.7s,baz=92,slow=7.0,SNR=55						
WRA				PcP	**PcP**	**18 59 21.6**	**+0.1**
	2.7nm,0.8s,baz=86,slow=4.1,SNR=4.7						
AS31	**Alice Springs**	**50.80**	**252**	*e*P	**P**	**18 58 04.1**	**-1.4**
ASAR	**Alice Springs**	**50.81**	**252**	P	**P**	**18 58 03.8**	**-1.6**
ASAR	**Alice Springs**	**50.81**	**252**	P	**P**	**18 58 03.8**	**-1.6**
	18nm,0.6s,baz=89,slow=7.8,SNR=295						
ASAR				LR	LR	19 17 56.9	
	comp=Z,155nm,21.1s,baz=91,slow=34						
FITZ	**Fitzroy Crossi**	**58.98**	**258**	*e*P	**P**	**18 59 03.6**	**-1.1**
	2.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**58.98**	**258**	LR	LR	19 21 15.0	
	comp=Z,142nm,19.7s,baz=109,slow=33						
SBA	**Scott Base**	**62.84**	**185**	*e*P	**P**	**18 59 31.5**	**+1.6**
	10nm,0.8s						
VNDA	**Vanda**	**62.98**	**186**	P	**P**	**18 59 30.4**	**-0.5**
VNDA	**Vanda**	**62.98**	**186**	P	**P**	**18 59 30.4**	**-0.5**
	7.2nm,0.9s,baz=7.5,slow=6.0,SNR=22						
MBWA	**Marble Bar**	**64.08**	**254**	*e*P	**P**	**18 59 38.3**	**-0.8**
NWAO	**Narrogin (SRO)**	**65.16**	**241**	*e*P	**P**	**18 59 44.3**	**-1.6**
NWAO	**Narrogin (SRO)**	**65.16**	**241**	P	**P**	**18 59 45.7**	**-0.2**
	14nm,0.8s,baz=95,slow=6.2,SNR=5.8						
NWAO				LR	LR	19 28 03.0	
	comp=Z,115nm,20.2s,baz=197,slow=36						
JHJ	**Hachijo jima 2**	**66.73**	**317**	LR	LR	19 28 26.9	
	comp=Z,26nm,18.8s,baz=103,slow=35						
MJAR	**Matsushiro Arr**	**69.89**	**319**	P	**P**	**19 00 15.8**	**+0.1**
MJAR	**Matsushiro Arr**	**69.89**	**319**	P	**P**	**19 00 15.8**	**+0.1**
	1.3nm,0.9s,baz=160,slow=6.1,SNR=5.8						
MJAR				LR	LR	19 25 19.6	
	comp=Z,42nm,21.9s,baz=195,slow=31						
JNU	**Nakatsue**	**72.78**	**313**	LR	LR	19 29 37.2	
	comp=Z,42nm,19.2s,baz=240,slow=33						
PETK	**Petropavlovsk-**	**73.37**	**342**	P	**P**	**19 00 36.7**	**+0.5**
PETK	**Petropavlovsk-**	**73.37**	**342**	P	**P**	**19 00 36.7**	**+0.5**
	1.3nm,0.7s,baz=151,slow=6.6,SNR=3.4						
NVAR	**Mina Array Bea**	**74.10**	**41**	P	**P**	**19 00 42.0**	**+0.9**
NVAR	**Mina Array Bea**	**74.10**	**41**	P	**P**	**19 00 42.0**	**+0.9**
	2.5nm,0.7s,baz=228,slow=9.5,SNR=20						
LDFC	**Landfair**	**74.34**	**46**	*e*P	**P**	**19 00 45.2**	**+2.7**
	94nm,0.5s						
KSRS	**Korea Array**	**77.13**	**315**	P	**P**	**19 00 59.6**	**+1.4**
	1.9nm,0.8s,baz=134,slow=6.4,SNR=13						
KSRS				LR	LR	19 27 56.8	
	comp=Z,41nm,21.9s,baz=127,slow=30						
KSAR	**Wonju Array Be**	**77.15**	**315**	P	**P**	**19 00 59.6**	**+1.3**
KSM	**Kuching**	**78.12**	**275**	*e*P	**P**	**19 01 03.2**	**-1.0**
	36nm,1.1s						
KSM				*e*		19 01 18.7	
MSU	**Marysvale**	**78.15**	**44**	*e*P	**P**	**19 01 06.1**	**+1.9**
	7.5nm,1.4s						
HLID	**Hailey**	**79.44**	**39**	*e*P	**P**	**19 01 11.9**	**+0.7**
	5.3nm,1.4s						
BMRM	**Bremner River**	**79.78**	**13**	*e*P	**P**	**19 01 12.7**	**+0.3**
	29nm,1.4s						
TXAR	**Lajitas Array**	**80.15**	**56**	P	**P**	**19 01 16.3**	**+1.2**
TXAR	**Lajitas Array**	**80.15**	**56**	P	**P**	**19 01 16.3**	**+1.2**
	0.8nm,0.7s,baz=227,slow=6.6,SNR=6.0						
TXAR				LR	LR	19 27 33.9	
	comp=Z,102nm,20.0s,baz=350,slow=29						
PV04	**Paradox Valley**	**80.31**	**46**	*e*P	**P**	**19 01 17.3**	**+1.3**
TRF	**Thorofare Moun**	**80.95**	**10**	*e*P	**P**	**19 01 17.4**	**-1.4**
	4.9nm,0.7s						
MCMT	**McKenzie Canyo**	**81.08**	**38**	*e*P	**P**	**19 01 20.4**	**+0.4**
	1.2nm,1.1s						
MCMT				*ep*P	**pP**	**19 01 31.9**	**+4.1**
NJ2	**Nanjing**	**81.17**	**307**	*e*P	**P**	**19 01 21.2**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TNA	**Tin City**	**81.28**	**2**	*e*P	**P**	**19 01 21.8**	**+1.5**
	comp=Z,2.4nm,0.5s						
BSMT	**Bassoo Peak**	**81.64**	**35**	*e*P	**P**	**19 01 23.4**	**+0.5**
	comp=Z,5.5nm,1.3s						
IMW	**Indian Meadow**	**81.75**	**40**	*e*P	**P**	**19 01 24.6**	**+0.9**
	comp=Z,3.9nm,1.2s						
DLBC	**Dease Lake**	**81.83**	**21**	P	**P**	**19 01 24.3**	**+0.8**
DLBC	**Dease Lake**	**81.83**	**21**	P	**P**	**19 01 24.3**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=228,slow=11,SNR=5.1						
CHMT	**Chamberlain Mo**	**81.98**	**36**	*e*P	**P**	**19 01 23.6**	**-1.1**
	comp=Z,1.5nm,1.0s						
SMCO	**Snowmass**	**82.01**	**46**	*e*P	**P**	**19 01 26.5**	**+1.3**
	comp=Z,2.8nm,0.8s						
PDAR	**Pinedale Array**	**82.04**	**41**	P	**P**	**19 01 25.6**	**+0.5**
PDAR	**Pinedale Array**	**82.04**	**41**	P	**P**	**19 01 25.6**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=209,slow=2.9,SNR=9.1						
PDAR				LR	LR	19 30 25.9	
	comp=Z,102nm,20.2s,baz=253,slow=30						
BOZ	**Bozeman (W)**	**82.25**	**38**	*e*P	**P**	**19 01 27.1**	**+1.0**
	comp=Z,1.8nm,1.0s						
DOT	**Dot Lake**	**82.29**	**12**	*e*P	**P**	**19 01 25.5**	**-0.1**
	comp=Z,21nm,1.7s						
COLA	**College**	**82.68**	**10**	*e*P	**P**	**19 01 26.9**	**-0.7**
	comp=Z,8.3nm,0.8s						
ILAR	**Eielson Array**	**82.75**	**11**	P	**P**	**19 01 27.9**	**-0.2**
ILAR	**Eielson Array**	**82.75**	**11**	P	**P**	**19 01 27.9**	**-0.2**
	comp=Z,2.8nm,0.6s,baz=227,slow=6.1,SNR=42						
MAW	**Mawson**	**87.61**	**198**	P	**P**	**19 01 52.3**	**-0.2**
MAW	**Mawson**	**87.61**	**198**	P	**P**	**19 01 52.3**	**-0.2**
	comp=Z,13nm,0.8s,baz=110,slow=6.6,SNR=8.8						
INK	**Inuvik**	**88.53**	**14**	P	**P**	**19 01 56.5**	**-0.1**
INK	**Inuvik**	**88.53**	**14**	P	**P**	**19 01 56.5**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=190,slow=5.1,SNR=5.7						
INK				LR	LR	19 33 44.9	
	comp=Z,65nm,19.8s,baz=271,slow=30						
GYA	**Guiyang**	**89.06**	**298**	*e*P	**P**	**19 02 01.0**	**+0.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PSI	**Prapat**	**89.41**	**273**	P	**P**	**19 02 01.7**	**-0.5**
PSI	**Prapat**	**89.41**	**273**	P	**P**	**19 02 01.7**	**-0.5**
	comp=Z,11nm,1.0s,baz=175,slow=9.9,SNR=7.9						
HHC	**Hu-ho-hao-te**	**90.01**	**313**	*e*P	**P**	**19 02 03.5**	**-0.9**
HHC				sP	**sP**	**19 02 18.1**	**+3.0**
HHC				PP	**PP**	**19 05 38.7**	**+0.8**
HHC				SKS	**SKSac**	**19 12 29.6**	**-4.4**
HHC				S	**SKKSac**	**19 12 50.8**	**+3.5**
HHC				sS	**sS**	**19 13 09.6**	**+0.4**
HHC				SS	**SS**	**19 18 52.9**	**-2.2**
HHC				LR	LR		
	comp=N,200nm,17.0s						
HHC				LR	LR		
	comp=E,240nm,17.3s						
HHC				LR	LR		
	comp=Z,140nm,17.6s						
TEIG	**Tepich**	**90.13**	**69**	P	**P**	**19 02 05.5**	**+0.3**
TEIG	**Tepich**	**90.13**	**69**	P	**P**	**19 02 05.5**	**+0.3**
	comp=Z,5.5nm,0.3s,baz=168,slow=2.4,SNR=5.0						
YKA	**Yellowknife Ar**	**90.19**	**23**	P	**P**	**19 02 04.7**	**+0.2**
YKA	**Yellowknife Ar**	**90.19**	**23**	P	**P**	**19 02 04.7**	**+0.2**
	comp=Z,4nm,0.6s,baz=236,slow=5.0,SNR=11						
KMI	**Kunming**	**92.04**	**295**	P	**P**	**19 02 16.1**	**+1.8**
KMI				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VNA3	**Neumayer Olymp**	**92.29**	**175**	*e*P	**P**	**19 02 14.6**	**+0.2**
SNAA	**Sanae**	**92.37**	**177**	*e*P	**P**	**19 02 14.9**	**+0.1**
VNA2	**Neumayer--Watz**	**92.79**	**175**	*e*P	**P**	**19 02 17.5**	**+0.8**
	baz=169,slow=1.9						
VNA1	**Neumayer--Stat**	**92.99**	**175**	*e*P	**P**	**19 02 18.5**	**+1.0**
CFAA	**Coronel Fontan**	**93.44**	**124**	P	**P**	**19 02 21.1**	**+0.5**
CFAA	**Coronel Fontan**	**93.44**	**124**	P	**P**	**19 02 21.1**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=260,slow=6.1,SNR=2.9						
CMAR	**Chiang Mai Arr**	**93.61**	**288**	P	**P**	**19 02 22.8**	**+1.4**
CMAR	**Chiang Mai Arr**	**93.61**	**288**	P	**P**	**19 02 22.8**	**+1.4**
	comp=Z,0.8nm,0.8s,baz=98,slow=2.9,SNR=5.5						
SONM	**Songino Array**	**95.80**	**318**	P	**P**	**19 02 30.8**	**-0.1**
SONM	**Songino Array**	**95.80**	**318**	P	**P**	**19 02 30.8**	**-0.1**
	comp=Z,0.3nm,0.9s,baz=108,slow=3.3,SNR=3.9						
GTA	**Gaotai**	**98.18**	**309**	*e*P	Pdif	19 02 43.9	+1.9
GTA				pP	pP	19 02 54.6	+4.8
GTA				sP	sP	19 02 58.3	+5.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSH	**Kashi**	**116.48**	**307**	*e*PKP	**PKPdf**	**19 07 50.2**	**+1.4**
KSH				sPKP		19 08 04.0	
KSH				PP	PP	19 09 02.0	+6.1
KSH				PKS	**PKSdf**	**19 11 25.2**	**-0.4**
KSH				SKS	**SKSdf**	**19 14 57.0**	**-2.7**
KSH				SKKS	**SKKSac**	**19 15 51.1**	**-4.4**
KSH				SS	**SS**	**19 25 02.7**	**+2.8**
BVAR	**Borovoye Array**	**118.81**	**322**	PKP	**PKPdf**	**19 07 51.8**	**-0.9**
BVAR	**Borovoye Array**	**118.81**	**322**	PKP	**PKPdf**	**19 07 51.8**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=112,slow=1.6,SNR=4.9						
ARCES	**ARCESS Array B**	**125.21**	**352**	PKP	**PKPdf**	**19 08 04.1**	**-0.5**
ARCES	**ARCESS Array B**	**125.21**	**352**	PKP	**PKPdf**	**19 08 04.1**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=46,slow=2.6,SNR=4.8						
KWP	**Kalwaria Pacla**	**144.15**	**343**	*e*PKPpre	**PKPab**	**19 08 37.5**	**-0.5**
KWP	**Kalwaria Pacla**	**144.15**	**343**	*i*P	**PKPab**	**19 08 37.8**	**-0.2**
CLL	**Collm**	**144.40**	**354**	*e*PKPdf	PKPbc	19 08 39.0	-0.1
UPC	**Upice**	**144.80**	**351**	*e*PKP	PKPbc	19 08 40.4	0.0
MALT	**Malatya**	**144.83**	**315**	*e*PKPdf	**PKPdf**	**19 08 42.0**	**0.0**
MALT	**Malatya**	**144.83**	**315**	*i*P	**PKPab**	**19 08 39.4**	**-1.6**
DPC	**Dobruska-Polom**	**144.90**	**350**	*e*PKP	PKPbc	19 08 40.8	0.0
DPC				*ep*PKP	pPKPdf	19 08 56.2	+6.5
KOLS	**Kolonicke sedl**	**144.91**	**343**	*e*PKP	**PKPab**	**19 08 40.8**	**0.0**
OKC	**Ostrava-Krasne**	**145.06**	**348**	*e*PKP	**PKPbc**	**19 08 41.0**	**-0.2**
KRLC	**Kraliky**	**145.09**	**350**	*e*PKP	**PKPbc**	**19 08 41.1**	**-0.3**
KRLC				*ep*PKP	**pPKPdf**	**19 08 56.8**	**+6.7**
BUR08	**Bucovina Ar. S**	**145.13**	**339**	*e*PKPdf	**PKPab**	**19 08 41.9**	**+0.1**
BURAR	**Bucovina Array**	**145.15**	**339**	*i*P	**PKPdf**	**19 08 42.2**	**0.0**
CRVS	**Cervenica-Dubn**	**145.16**	**344**	*e*PKP	**PKPab**	**19 08 41.8**	**+0.1**
MORC	**Moravsky Berou**	**145.23**	**349**	*i*P	**PKPbc**	**19 08 41.7**	**-0.2**
PRU	**Pruhonice**	**145.52**	**352**	*e*PKP	**PKPdf**	**19 08 42.7**	**+0.1**
TRPA	**Tarpa**	**145.55**	**342**	*i*P	**PKPdf**	**19 08 42.4**	**-0.3**
VRAC	**Vranov**	**145.86**	**349**	*i*P	**PKPdf**	**19 08 43.0**	**-0.3**
VRI	**Velenicoaia**	**146.06**	**336**	*i*P	**PKPab**	**19 08 44.9**	**-0.2**
KMBO	**Kilima Mbogo**	**146.11**	**243**	PKPbc	**PKPbc**	**19 08 45.8**	**-0.2**
KMBO	**Kilima Mbogo**	**146.11**	**243**	PKPbc	**PKPbc**	**19 08 45.8**	**-0.2**
	comp=Z,7.1nm,0.9s,baz=61,slow=4.8,SNR=18						
VYHS	**Vyhne**	**146.18**	**346**	*e*PKP	**PKPbc**	**19 08 44.6**	**-0.3**
KHC	**Kasperske Hory**	**146.48**	**353**	*e*PKPdf	**PKPdf**	**19 08 44.2**	**-0.1**
KHC	**Kasperske Hory**	**146.48**	**353**	*e*PKP	**PKPbc**	**19 08 45.9**	**+0.1**
MLR	**Muntele Rosu**	**146.68**	**336**	*i*P	**PKPdf**	**19 08 44.3**	**-0.6**
DRGR		**146.70**	**341**	*i*P	**PKPdf**	**19 08 45.6**	**+0.7**
GERES	**GERESS Array B**	**146.75**	**353**	PKPbc	**PKPbc**	**19 08 46.5**	**-0.2**
GERES	**GERESS Array B**	**146.75**	**353**	PKPbc	**PKPbc**	**19 08 46.5**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=27,slow=3.3,SNR=12						
BR131	**Keskin Array S**	**147.09**	**321**	*e*PKPdf	**PKPdf**	**19 08 46.7**	**+0.9**
BRTR	**Keskin Array B**	**147.09**	**321**	PKPbc	**PKPbc**	**19 08 47.8**	**-0.2**
BRTR	**Keskin Array B**	**147.09**	**321**	PKPbc	**PKPbc**	**19 08 47.8**	**-0.2**
	comp=Z,5.8nm,0.8s,baz=123,slow=2.6,SNR=35						
ARR	**Arges**	**147.28**	**337**	*i*P	**PKPab**	**19 08 49.6**	**-0.3**
CONA	**Conrad Observa**	**147.32**	**350**	*i*PKPab	**PKPbc**	**19 08 48.5**	**+0.3**
	comp=Z,7.4nm,0.8s						
CONA	**Conrad Observa**	**147.32**	**350**	*i*P	**PKPbc**	**19 08 48.5**	**+0.3**
GZR	**Gura Zlata**	**147.91**	**340**	*i*P	**PKPbc**	**19 08 49.8**	**-0.1**
BZS	**Buzias**	**148.09**	**341**	*i*P	**PKPbc**	**19 08 50.2**	**-0.1**
PERS	**Pernice**	**148.70**	**350**	*i* PKPbc	**PKPbc**	**19 08 50.8**	**-1.1**
PERS				*e*		19 09 06.3	
FETA	**Feichten**	**148.84**	**356**	*i*PKiKP	**PKPbc**	**19 08 52.7**	**+0.3**
	comp=Z,5.0nm,1.0s						
FETA	**Feichten**	**148.84**	**356**	*i*P	**PKPbc**	**19 08 52.7**	**+0.3**
ABTA	**Abfaltersbach**	**148.95**	**353**	*i*PKPbc	**PKPbc**	**19 08 51.9**	**-0.7**
	comp=Z,6.4nm,0.7s						
ABTA	**Abfaltersbach**	**148.95**	**353**	*i*P	**PKPbc**	**19 08 51.9**	**-0.7**
PDKS	**Podkum**	**149.28**	**350**	*i* PKPbc	**PKPbc**	**19 08 52.6**	**-0.8**
PDKS				*e*		19 09 18.0	
LJU	**Ljubljana**	**149.37**	**350**	*e*PKPbc	**PKPbc**	**19 08 52.8**	**-0.7**
LJU				*e*		19 09 08.2	
CRNS	**Crni Vrh**	**149.38**	**351**	*e*PKPbc	**PKPbc**	**19 08 52.6**	**-1.0**
JAVS	**Javornik**	**149.59**	**351**	*e*PKPbc	**PKPbc**	**19 08 53.6**	**-0.6**
VTS	**Vitosha**	**150.18**	**336**	*i*P	**PKPbc**	**19 08 55.8**	**-0.1**
MBAR	**Mbarara**	**151.82**	**237**	PKPab	**PKPab**	**19 09 09.1**	**-0.5**
MBAR	**Mbarara**	**151.82**	**237**	PKPab	**PKPab**	**19 09 09.1**	**-0.5**
	comp=Z,2.8nm,0.3s,baz=247,slow=3.7,SNR=4.8						
ESDC	**Sonseca Array**	**154.26**	**21**	PKPab	**PKPab**	**19 09 19.2**	**+0.3**
ESDC	**Sonseca Array**	**154.26**	**21**	PKPab	**PKPab**	**19 09 19.2**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=330,slow=3.6,SNR=3.7						
TORD	**Torodi Ar. Bea**	**173.73**	**115**	PKP	**PKPdf**	**19 09 13.1**	**-1.9**
TORD				PKPab	**PKPab**	**19 10 44.1**	**-0.8**
TORD	**Torodi Ar. Bea**	**173.73**	**115**	PKP	**PKPdf**	**19 09 13.1**	**-1.9**
	comp=Z,1.3nm,1.1s,baz=280,slow=1.6,SNR=4.7						
TORD				PKPab	**PKPab**	**19 10 44.1**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=259,slow=4.9,SNR=2.6						

IDC 09 18:55:21.1±1.6, 13.16S×66.67E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/23, mbtmp3.7/5, MS3.8/1, Ms1 3.8/1, ms1mx2.8/42, Error ellipse: s-maj=53.4km s-min=27.2km az=58.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**19.49**	**251**	LR	LR	19 05 27.4	
	comp=Z,238nm,18.1s,baz=104,slow=31						
CMAR	**Chiang Mai Arr**	**44.72**	**46**	P	P	19 03 36.8	+0.3
	0.2nm,0.4s,baz=240,slow=8.1,SNR=3.7						
MKAR	**Makanchi Array**	**61.31**	**12**	P	P	19 05 38.0	-0.4
	3.9nm,0.3s,baz=187,slow=6.7,SNR=6.2						
ASAR	**Alice Springs**	**64.16**	**110**	P	P	19 05 57.5	-0.5
	0.7nm,0.7s,baz=276,slow=6.1,SNR=15						
WRA	**Warramunga Arr**	**64.86**	**106**	P	P	19 06 02.8	+0.2
	1.4nm,0.7s,baz=271,slow=5.9,SNR=14						
ZALV	**Zalesovo Beam**	**68.62**	**11**	P	P	19 06 25.0	-0.8
	0.8nm,0.5s,baz=212,slow=6.4,SNR=6.3						
SONM	**Songino Array**	**70.27**	**27**	P	P	19 06 36.9	+0.5
	0.8nm,0.9s,baz=224,slow=5.9,SNR=5.9						
YKA	**Yellowknife Ar**	**130.73**	**1**	PKP	PKPdf	19 14 33.4	-0.4
	0.3nm,0.6s,baz=342,slow=2.1,SNR=7.1						
PDAR	**Pinedale Array**	**150.32**	**354**	PKPbc	PKPbc	19 15 14.8	-0.2
	1.3nm,0.7s,baz=81,slow=2.2,SNR=12						
NVAR	**Mina Array Bea**	**154.45**	**9**	PKPbc	PKPbc	19 15 25.1	+0.7
	0.4nm,0.6s,baz=316,slow=2.5,SNR=3.4						

*CSEM **09** 19:14:12.1, 15.53N×45.75E, h29km, ML4.2, After DHMR*
DHMR 09 19:14:12.1±1.0, 15.53N×45.75E, h30km±7km, ML4.2, 1C-6D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANA	**San'a**	**1.49**	**265**	*i*P	Pn	19 14 38.3	+1.0
SANA				*i* S	Sb	19 14 58.1	-0.4
SANA				AML	AML	19 15 00.3	
	comp=E,7µm,0.5s						
BDHA	**Al Bayda'**	**1.55**	**187**	*i*P	Pn	19 14 39.1	+1.0
BDHA				*i* S	Sb	19 14 59.6	-0.4
BDHA				AML	AML	19 15 01.9	
	comp=E,3µm,0.3s						
BDHA	**Al Bayda'**	**1.55**	**187**	*i*P	Pn	19 14 39.1	+1.0
BDHA				*i* S	Sb	19 14 59.6	-0.4
	comp=E,1µm,0.3s						
DHBB	**Dhamar BB**	**1.62**	**234**	*i* P	Pb	19 14 41.0	-0.8
DHBB				*i* S	Sb	19 15 02.1	0.0
LBOS		**1.71**	**196**	*i*P	Pn	19 14 41.6	+1.2
LBOS				*i* S	Sb	19 15 04.8	+0.1
HAJJ	**Hajjah**	**2.08**	**275**	*i*P	Pn	19 14 46.8	+1.6
HAJJ				*i* S	Sb	19 15 15.1	0.0
HAJJ				AML	AML	19 15 16.1	
	comp=Z,2µm,0.3s						
HAJJ	**Hajjah**	**2.08**	**275**	*i*P	Pn	19 14 46.8	+1.5

GGP	Refugio Guagua	4.06	19	P	Pn	19 35 29.6	+1.5
PINO	Pino	4.07	19	P	Pn	19 35 29.7	+1.4
OTAV	Otavalo	4.50	19	P	Pn	19 35 34.4	+0.5

STR **09** *19:38:08.6±3.3, 42°.09N×14°.25E, h10km, Ml4.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
BJI **09** *19:38:15.2, 42°.80N×13°.02E, h10km, mB5.4/40, mb5.1/48, Ms5.2/39, Ms7 4.8/38*
ISCJB **09** *19:38:16.5±0.2, 42°.559N±0°.009×13°.359E±0°.009, h6km±1km, mb4.8/142, MS4.6/56, Error ellipse: s-maj=1.5km s-min=1.1km az=23.2*
LDG **09** *19:38:16.6±0.1, 42°.55N×13°.42E, h2km, Ml4.8/18, Error ellipse: s-maj=3.3km s-min=2.1km az=48.0*
ROM **09** *19:38:16.9±0.1, 42°.50N×13°.35E, h9km, Ml5.0/49, Error ellipse: s-maj=0.9km s-min=0.6km az=73.0*
IDC **09** *19:38:16.7±0.4, 42°.58N×13°.24E, h0km, mb4.6/32, mb1 4.7/42, mb1mx4.7/44, mbtmp4.6/42, ML4.5/9, MS4.4/40, Ms1 4.4/40, ms1mx4.3/49, Error ellipse: s-maj=9.5km s-min=7.9km az=104.0*
CRAAG **09** *19:38:17.4, 42°.52N×13°.35E, Mw5.2*
IGIL **09** *19:38:17.9, 42°.52N×13°.35E, h2km, mb5.1*
PDG **09** *19:38:17.0±0.6, 42°.53N×13°.36E, h10km, MD4.9/5, ML4.9/9, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
PRU **09** *19:38:17.6, 42°.56N×13°.26E, h1km, M5.0*
MOS **09** *19:38:17.0±1.0, 42°.59N×13°.31E, h14km, mb5.2/45, MS4.6/29, Error ellipse: s-maj=3.5km s-min=2.5km az=103.1*
NEIC **09** *19:38:17.4±0.3, 42°.51N×13°.33E, h3km±2km, mb5.0/81, ML5.2(PDG), ML5.0(STR), ML4.8(LDG), MW5.0(USGS), MW5.3(ROM), Error ellipse: s-maj=2.1km s-min=1.7km az=205.0*
NEIC Felt [VI] at Cittaducale; [V] at Amatrice, Grottammare, Orte and Teramo; [IV] at Alba Adriatico, Ascoli Piceo, Atri, Bellante, Chieti, Fermo, Folignano, Foligno, Frosinone, Gualdo Tadino, Macerata, Mentana, Montorio al Vomano, Narni, Rieti, San Benedetto del Tronto, Sora, Spoleto, Terni and Tolentino. Felt [III] at Rome and [II] at Bologna, Florence and Naples. Felt throughout central Italy and from southern Veneto to Basilicata.
CSEM **09** *19:38:17.2±0.1, 42°.53N×13°.32E, h2km, mb5.0/11, Ms5.1, Mw5.2, Error ellipse: s-maj=1.9km s-min=1.5km az=29.0*
BEO **09** *19:38:18.9, 42°.76N×13°.34E, h0km, ML5.1/4*
SFS **09** *19:38:18.0, 42°.54N×13°.30E, h10km, ML5.2*
DJA **09** *19:38:19.2±0.7, 43°.N-8°×1°.3E±1°.2, h10km, M4.9/13, mB5.4/6, mb4.9/13, Mw(mB)4.9/6*
GCMT **09** *19:38:22.3±0.1, 42°.49N×13°.24E, h12km, MW5.2, Moment Tensor Solution. s60,c101; s9,c9; Moment tensor: Scale 10^{16}Nm; M_{rr}=7.13±.10; $M_{\theta\theta}$3.18±.10; $M_{\phi\phi}$3.96±.10; $M_{r\theta}$=2.87±.28; $M_{\theta\phi}$-3.57±.08; $M_{r\phi}$-0.25±.29; Best double couple: $M_0$7.70000×10^{16} NP1:ϕ_s333.00000°, δ40.00000°, λ-65.00000°. NP2:ϕ_s122.00000°, δ54.00000°, λ-109.00000°. Principal axes: T 7.3800, Plg7.0000°, Azm226.0000°; N 0.6300, Plg16.0000°, Azm134.0000°; P -7.9900, Plg73.0000°, Azm340.0000°; Data Used: ll IU IC G CN. Surface waves: sta=100, comp=190, per= 50.*

ISC 09 19:38:18.9±0.3, 42°.52N±0°.01×13°.36E±0°.01, h14km±1km, h14km:pP-P,n1556,σ19/49/1785, mb4.9/142, MS4.6/58, 235C-164D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.04**	**62**	*i*	Pg		**Pg**	**19 38 19.3**	**-2.5**
CAMP					Sg		**Sg**	**19 38 20.6**	**-3.1**
CAMP	**Campotosto**	**0.04**	**62**	*i*	Pg		**Pg**	**19 38 19.3**	**-2.5**
CAMP					Sg		**Sg**	**19 38 20.6**	**-3.1**
AQU	**L'Aquila**	**0.17**	**168**	*i*	Pg		**Pg**	**19 38 21.1**	**-1.9**
AQU				*e*	Sg		**Sg**	**19 38 23.9**	**-1.8**
AQU	**L'Aquila**	**0.17**	**168**	*e*	Pg		**Pg**	**19 38 21.1**	**-1.9**
AQU					Sg		**Sg**	**19 38 24.1**	**-1.6**
AQU	**L'Aquila**	**0.17**	**168**	*e*	Pg		**Pg**	**19 38 21.1**	**-1.9**
AQU					Sg		**Sg**	**19 38 24.1**	**-1.6**
TERO	**Teramo**	**0.21**	**59**		P		**Pg**	**19 38 21.7**	**-2.0**
TERO					S		**Sg**	**19 38 25.0**	**-1.9**
TERO	**Teramo**	**0.21**	**59**	*i*	Pg		**Pg**	**19 38 21.7**	**-2.0**
TERO					Sg		**Sg**	**19 38 25.4**	**-1.6**
TERO	**Teramo**	**0.21**	**59**	*i*	Pg		**Pg**	**19 38 21.7**	**-2.0**
TERO					S		**Sg**	**19 38 25.0**	**-1.9**
TERO					Sg		**Sg**	**19 38 25.4**	**-1.6**
LNSS	**Leonessa**	**0.25**	**290**		P		**Pg**	**19 38 22.8**	**-1.6**
LNSS					S		**Sg**	**19 38 27.3**	**-0.8**
LNSS	**Leonessa**	**0.25**	**290**	*e*	Pg		**Pg**	**19 38 22.8**	**-1.6**
LNSS					Sg		**Sg**	**19 38 27.2**	**-0.8**
LNSS	**Leonessa**	**0.25**	**290**	*e*	Pg		**Pg**	**19 38 22.8**	**-1.6**
LNSS					S		**Sg**	**19 38 27.3**	**-0.8**
FAGN	**Fagnano**	**0.30**	**146**		P		**Pg**	**19 38 23.3**	**-1.8**
FAGN					S		**Sg**	**19 38 28.7**	**-0.8**
FAGN	**Fagnano**	**0.30**	**146**		Pg		**Pg**	**19 38 23.4**	**-1.8**
FAGN					Sg		**Sg**	**19 38 28.7**	**-0.8**
FAGN	**Fagnano**	**0.30**	**146**		Pg		**Pg**	**19 38 23.4**	**-1.8**
FAGN					Sg		**Sg**	**19 38 28.7**	**-0.8**
FIAM	**Fiamignano**	**0.30**	**216**		P		**Pg**	**19 38 23.5**	**-1.8**
FIAM					S		**Sg**	**19 38 28.5**	**-1.2**
FIAM	**Fiamignano**	**0.30**	**216**	*i*	Pg		**Pg**	**19 38 23.6**	**-1.7**
FIAM					Sg		**Sg**	**19 38 28.6**	**-1.1**
	198µm,0.6s								
FIAM	**Fiamignano**	**0.30**	**216**	*i*	Pg		**Pg**	**19 38 23.6**	**-1.7**
FIAM					S		**Sg**	**19 38 28.5**	**-1.2**
NRCA	**Norcia**	**0.36**	**331**		P		**Pg**	**19 38 24.6**	**-1.7**
NRCA					S		**Sg**	**19 38 30.4**	**-1.0**
NRCA	**Norcia**	**0.36**	**331**		Pg		**Pg**	**19 38 24.7**	**-1.7**
NRCA					Sg		**Sg**	**19 38 30.5**	**-1.0**
	184µm,0.6s								
NRCA	**Norcia**	**0.36**	**331**		Pg		**Pg**	**19 38 24.7**	**-1.7**
NRCA					S		**Sg**	**19 38 30.4**	**-1.0**
VCEL	**Villa Celiera**	**0.38**	**109**		P		**Pg**	**19 38 24.8**	**-1.8**
VCEL					S		**Sg**	**19 38 31.1**	**-0.7**
VCEL	**Villa Celiera**	**0.38**	**109**		Pg		**Pg**	**19 38 24.8**	**-1.8**
VCEL					Sg		**Sg**	**19 38 31.5**	**-0.3**
VCEL	**Villa Celiera**	**0.38**	**109**		Pg		**Pg**	**19 38 24.8**	**-1.8**
VCEL					S		**Sg**	**19 38 31.1**	**-0.7**
VCEL					Sg		**Sg**	**19 38 31.5**	**-0.3**
GAVE	**Gavelli**	**0.39**	**297**		Pg		**Pg**	**19 38 25.3**	**-1.4**
GAVE	**Gavelli**	**0.39**	**297**		Pg		**Pg**	**19 38 25.3**	**-1.4**
OFFI	**Offida**	**0.48**	**30**		P		**Pg**	**19 38 27.5**	**-1.0**
OFFI	**Offida**	**0.48**	**30**	*i*	Pg		**Pg**	**19 38 27.5**	**-1.0**
OFFI	**Offida**	**0.48**	**30**	*i*	Pg		**Pg**	**19 38 27.5**	**-1.0**
PTQR	**Pietraquaria**	**0.49**	**176**		P		**Pg**	**19 38 26.4**	**-2.2**
PTQR	**Pietraquaria**	**0.49**	**176**	*i*	Pg		**Pg**	**19 38 26.5**	**-2.2**
PTQR	**Pietraquaria**	**0.49**	**176**	*i*	Pg		**Pg**	**19 38 26.5**	**-2.2**
TRTR	**Tortoreto Alta**	**0.50**	**54**		P		**Pg**	**19 38 28.4**	**-0.5**
TRTR	**Tortoreto Alta**	**0.50**	**54**	*i*	Pg		**Pg**	**19 38 28.2**	**-0.7**
TRTR	**Tortoreto Alta**	**0.50**	**54**	*i*	Pg		**Pg**	**19 38 28.2**	**-0.7**
MNS	**Montasola**	**0.52**	**256**		P		**Pg**	**19 38 27.1**	**-2.0**
MNS					S		**Sg**	**19 38 34.4**	**-1.7**
MNS	**Montasola**	**0.52**	**256**		P		**Pg**	**19 38 27.1**	**-2.0**
MNS					S		**Sg**	**19 38 34.4**	**-1.7**
MNS	**Montasola**	**0.52**	**256**	*i*	Pg		**Pg**	**19 38 27.1**	**-2.0**
MNS					Sg		**Sg**	**19 38 34.9**	**-1.2**
	186µm,0.5s								
MNS	**Montasola**	**0.52**	**256**	*i*	Pg		**Pg**	**19 38 27.1**	**-2.0**
MNS					S		**Sg**	**19 38 34.4**	**-1.7**
MNS					Sg		**Sg**	**19 38 34.9**	**-1.2**
	186µm,0.5s								
FDMO	**Fiordimonte**	**0.56**	**339**		P		**Pg**	**19 38 27.9**	**-2.0**
FDMO	**Fiordimonte**	**0.56**	**339**	*e*	Pg		**Pg**	**19 38 27.9**	**-2.0**
FDMO					Sg		**Sg**	**19 38 36.6**	**-0.7**
	50µm,0.6s								
FDMO	**Fiordimonte**	**0.56**	**339**	*e*	Pg		**Pg**	**19 38 27.9**	**-2.0**
FDMO					Sg		**Sg**	**19 38 36.6**	**-0.7**
	50µm,0.6s								
CESX	**Cesi**	**0.58**	**280**		P		**Pg**	**19 38 27.9**	**-2.4**
CESX	**Cesi**	**0.58**	**280**	*i*	Pg		**Pg**	**19 38 28.2**	**-2.1**
CESX					Sg		**Sg**	**19 38 37.2**	**-0.9**
	140µm,1.0s								
CESX	**Cesi**	**0.58**	**280**		P		**Pg**	**19 38 27.9**	**-2.4**
CESX	**Cesi**	**0.58**	**280**	*i*	Pg		**Pg**	**19 38 28.2**	**-2.1**
CESI	**CESI - Serrava**	**0.59**	**326**		P		**Pg**	**19 38 28.6**	**-1.9**
CESI					S		**Sg**	**19 38 37.9**	**-0.5**
CESI	**CESI - Serrava**	**0.59**	**326**	*e*	Pg		**Pg**	**19 38 28.6**	**-1.9**
CESI					Sg		**Sg**	**19 38 38.0**	**-0.4**
CESI	**CESI - Serrava**	**0.59**	**326**	*e*	Pg		**Pg**	**19 38 28.6**	**-1.9**
CESI					Sg		**Sg**	**19 38 38.0**	**-0.4**
CERT	**Cerreto**	**0.63**	**206**		P		**Pg**	**19 38 28.9**	**-2.4**
CERT	**Cerreto**	**0.63**	**206**	*e*	Pg		**Pg**	**19 38 28.9**	**-2.4**
CERT	**Cerreto**	**0.63**	**206**	*i*	Pg		**Pg**	**19 38 28.9**	**-2.4**
INTR	**Introdacqua**	**0.65**	**141**		P		**Pg**	**19 38 29.1**	**-2.4**
INTR	**Introdacqua**	**0.65**	**141**		Pg		**Pg**	**19 38 29.3**	**-2.3**
INTR					Sg		**Sg**	**19 38 39.7**	**-0.4**
	132µm,0.8s								
INTR	**Introdacqua**	**0.65**	**141**		Pg		**Pg**	**19 38 29.3**	**-2.3**
INTR					Sg		**Sg**	**19 38 39.7**	**-0.4**
	132µm,0.8s								
MTCE	**Montecelio**	**0.67**	**223**		P		**Pg**	**19 38 29.6**	**-2.4**
MTCE	**Montecelio**	**0.67**	**223**	*i*	Pg		**Pg**	**19 38 29.6**	**-2.4**
	138µm,1.1s								
MTCE	**Montecelio**	**0.67**	**223**	*i*	Pg		**Pg**	**19 38 29.6**	**-2.4**
	138µm,1.1s								
VVLD	**Villa Vallelon**	**0.67**	**163**		P		**Pg**	**19 38 29.4**	**-2.7**
VVLD	**Villa Vallelon**	**0.67**	**163**		Pg		**Pg**	**19 38 29.4**	**-2.7**
	79µm,0.6s								
VVLD	**Villa Vallelon**	**0.67**	**163**		Pg		**Pg**	**19 38 29.4**	**-2.7**
	79µm,0.6s								
GUAR	**Guarcino**	**0.72**	**183**		P		**Pg**	**19 38 30.3**	**-2.7**
GUAR	**Guarcino**	**0.72**	**183**	*e*	Pg		**Pg**	**19 38 30.3**	**-2.7**
	118µm,0.9s								
GUAR	**Guarcino**	**0.72**	**183**	*e*	Pg		**Pg**	**19 38 30.3**	**-2.7**
	118µm,0.9s								
ASSB	**Assisi San Ben**	**0.74**	**316**		Pg		**Pg**	**19 38 31.1**	**-2.1**
	41µm,0.5s								
ASSB	**Assisi San Ben**	**0.74**	**316**		Pg		**Pg**	**19 38 31.1**	**-2.1**
	41µm,0.5s								
LPEL	**Lama dei Pelig**	**0.77**	**127**		Pg		**Pg**	**19 38 31.1**	**-2.8**
LPEL					Sg		**Sg**	**19 38 42.8**	**-1.3**
	41µm,0.4s								
LPEL	**Lama dei Pelig**	**0.77**	**127**		Pg		**Pg**	**19 38 31.1**	**-2.8**
LPEL					Sg		**Sg**	**19 38 42.8**	**-1.3**
	41µm,0.4s								
CAFR	**Castel Frentan**	**0.79**	**111**		Pg		**Pg**	**19 38 32.1**	**-2.1**
	64µm,0.4s								
CAFR	**Castel Frentan**	**0.79**	**111**		Pg		**Pg**	**19 38 32.1**	**-2.1**
	64µm,0.4s								
SNTG	**Esanatoglia**	**0.80**	**338**		P		**Pg**	**19 38 32.1**	**-2.3**
SNTG	**Esanatoglia**	**0.80**	**338**	*i*	Pg		**Pg**	**19 38 32.1**	**-2.3**
SNTG	**Esanatoglia**	**0.80**	**338**	*i*	Pg		**Pg**	**19 38 32.1**	**-2.3**
POFI	**Posta Fibreno**	**0.84**	**162**		P		**Pg**	**19 38 32.3**	**-2.9**
POFI	**Posta Fibreno**	**0.84**	**162**		Pg		**Pg**	**19 38 32.3**	**-2.9**
POFI	**Posta Fibreno**	**0.84**	**162**		Pg		**Pg**	**19 38 32.3**	**-2.9**
RMP	**Rome, Mte Porz**	**0.86**	**215**	*e*	Pg		**Pg**	**19 38 32.8**	**-2.7**
	125µm,1.0s								
RMP	**Rome, Mte Porz**	**0.86**	**215**	*e*	Pg		**Pg**	**19 38 32.8**	**-2.7**
	125µm,1.0s								
CING	**Cingoli**	**0.87**	**352**		P		**Pg**	**19 38 33.4**	**-2.3**
CING	**Cingoli**	**0.87**	**352**	*e*	Pg		**Pg**	**19 38 33.4**	**-2.3**
	39µm,0.5s								
CING	**Cingoli**	**0.87**	**352**	*i*	Pg		**Pg**	**19 38 33.4**	**-2.3**
	39µm,0.5s								
SDI	**San Donato**	**0.87**	**157**		P		**Pg**	**19 38 32.8**	**-3.1**
SDI	**San Donato**	**0.87**	**157**		P		**Pg**	**19 38 32.8**	**-3.1**
SDI	**San Donato**	**0.87**	**157**		Pg		**Pg**	**19 38 32.7**	**-3.1**
SDI	**San Donato**	**0.87**	**157**		P		**Pg**	**19 38 32.8**	**-3.1**
RDP	**Rocca di Papa**	**0.89**	**212**	*e*	Pg		**Pb**	**19 38 33.6**	**-2.6**
	135µm,0.6s								
RDP	**Rocca di Papa**	**0.89**	**212**	*e*	Pg		**Pb**	**19 38 33.6**	**-2.6**
	135µm,0.6s								
MA9	**Marino**	**0.91**	**215**	*i*	Pg		**Pb**	**19 38 33.6**	**-2.8**
	129µm,0.6s								
MA9	**Marino**	**0.91**	**215**	*i*	Pg		**Pb**	**19 38 33.6**	**-2.8**
	129µm,0.6s								
ROM9	**Roma**	**0.93**	**223**	*i*	Pg		**Pb**	**19 38 34.2**	**-2.5**
	145µm,0.8s								
ROM9	**Roma**	**0.93**	**223**	*i*	Pg		**Pb**	**19 38 34.2**	**-2.5**
	145µm,0.8s								
GIUL	**Giuliano Di Ro**	**0.96**	**185**	*i*	Pg		**Pb**	**19 38 34.3**	**-3.0**
	252µm,2.3s								
GIUL	**Giuliano Di Ro**	**0.96**	**185**	*i*	Pg		**Pb**	**19 38 34.3**	**-3.0**
	252µm,2.3s								
MURB	**Monte Urbino**	**0.97**	**321**		Pg		**Pb**	**19 38 35.2**	**-2.2**
	107µm,0.9s								
MURB	**Monte Urbino**	**0.97**	**321**		Pg		**Pb**	**19 38 35.2**	**-2.2**
	107µm,0.9s								
MGAB	**Montegabbione**	**1.00**	**294**		Pg		**Pb**	**19 38 35.9**	**-2.1**
	164µm,1.1s								
MGAB	**Montegabbione**	**1.00**	**294**		Pg		**Pb**	**19 38 35.9**	**-2.1**
	164µm,1.1s								
RNI2	**Rionero Sannit**	**1.00**	**144**	*i*	Pg		**Pb**	**19 38 35.7**	**-2.4**
	234µm,2.1s								
RNI2	**Rionero Sannit**	**1.00**	**144**	*i*	Pg		**Pb**	**19 38 35.7**	**-2.4**
	234µm,2.1s								
ARVD	**Arcevia**	**1.03**	**343**		Pg		**Pb**	**19 38 36.2**	**-2.3**
	36µm,0.7s								
ARVD	**Arcevia**	**1.03**	**343**		Pg		**Pb**	**19 38 36.2**	**-2.3**
	36µm,0.7s								
AOI	**Ancona**	**1.05**	**10**		Pg		**Pb**	**19 38 36.7**	**-2.1**
	26µm,0.6s								
AOI	**Ancona**	**1.05**	**10**		Pg		**Pb**	**19 38 36.7**	**-2.1**
	26µm,0.6s								
MIDA	**Miranda**	**1.10**	**142**		Pg		**Pb**	**19 38 36.7**	**-3.0**
	76µm,1.7s								
MIDA	**Miranda**	**1.10**	**142**		Pg		**Pb**	**19 38 36.7**	**-3.0**
	76µm,1.7s								
TOLF	**Tolfa**	**1.10**	**246**	*i*	ePn		**Pb**	**19 38 37.3**	**-2.4**
	77µm,0.7s								
TOLF	**Tolfa**	**1.10**	**246**	*i*	ePn		**Pb**	**19 38 37.3**	**-2.4**
	77µm,0.7s								
SACS	**San Casciano d**	**1.12**	**288**	*i*	ePn		**Pb**	**19 38 38.0**	**-2.0**
	47µm,0.9s								
LATE	**Laterza**	**1.15**	**275**	*i*	ePn		**Pb**	**19 38 38.6**	**-2.0**
	191µm,1.2s								
LATE	**Laterza**	**1.15**	**275**	*i*	ePn		**Pb**	**19 38 38.6**	**-2.0**
	191µm,1.2s								
PIEI	**Pieia**	**1.19**	**330**		Pn		**Pn**	**19 38 38.8**	**-2.2**
	31µm,1.2s								
PIEI	**Pieia**	**1.19**	**330**		Pn		**Pn**	**19 38 38.8**	**-2.2**
	31µm,1.2s								
SENI	**Senigallia**	**1.19**	**356**		Pn		**Pn**	**19 38 40.1**	**-1.0**
	112µm,1.8s								
SENI	**Senigallia**	**1.19**	**356**		Pn		**Pn**	**19 38 40.1**	**-1.0**
	112µm,1.8s								
FSSB	**Fossombrone**	**1.25**	**340**	*i*	ePn		**Pn**	**19 38 40.2**	**-1.7**
	53µm,0.4s								
FSSB	**Fossombrone**	**1.25**	**340**	*i*	ePn		**Pn**	**19 38 40.2**	**-1.7**
	53µm,0.4s								
CDCA	**Citt' di Caste**	**1.25**	**319**		Pn		**Pn**	**19 38 41.1**	**-0.8**
	75µm,1.3s								
CDCA	**Citt' di Caste**	**1.25**	**319**		Pn		**Pn**	**19 38 41.1**	**-0.8**
	75µm,1.3s								
CAFI	**Castiglion Fio**	**1.31**	**309**		Pn		**Pn**	**19 38 41.4**	**-1.3**
	44µm,1.4s								
CAFI	**Castiglion Fio**	**1.31**	**309**		Pn		**Pn**	**19 38 41.4**	**-1.3**
	44µm,1.4s								
PARC	**Parchiule**	**1.40**	**324**		Pn		**Pn**	**19 38 43.6**	**-0.4**
	116µm,1.7s								
PARC	**Parchiule**	**1.40**	**324**		Pn		**Pn**	**19 38 43.6**	**-0.4**
	116µm,1.7s								
MODR	**Mondragone**	**1.42**	**164**		Pn		**Pn**	**19 38 43.7**	**-0.6**
MODR	**Mondragone**	**1.42**	**164**		Pn		**Pn**	**19 38 43.7**	**-0.6**
ARCI	**Arcidosso**	**1.43**	**284**		Pn		**Pn**	**19 38 43.5**	**-0.9**
ARCI	**Arcidosso**	**1.43**	**284**		Pn		**Pn**	**19 38 43.5**	**-0.9**
PESA	**Pesaro**	**1.47**	**345**		Pn		**Pn**	**19 38 44.7**	**-0.3**
	30µm,0.5s								
PESA	**Pesaro**	**1.47**	**345**		Pn		**Pn**	**19 38 44.7**	**-0.3**
	30µm,0.5s								
SACR	**S. Croce Del S**	**1.50**	**138**		Pn		**Pn**	**19 38 45.6**	**+0.2**
SACR	**S. Croce Del S**	**1.50**	**138**		Pn		**Pn**	**19 38 45.6**	**+0.2**
CRE	**Caprese Michel**	**1.51**	**317**		Pn		**Pn**	**19 38 44.7**	**-0.9**
CRE	**Caprese Michel**	**1.51**	**317**		Pn		**Pn**	**19 38 44.7**	**-0.9**
MAON	**Monte Argentar**	**1.65**	**268**		Pn		**Pn**	**19 38 46.1**	**-1.3**
	12µm,0.7s								
MAON	**Monte Argentar**	**1.65**	**268**		Pn		**Pn**	**19 38 46.1**	**-1.3**
	12µm,0.7s								
ASQU	**Asqua**	**1.72**	**319**		Pn		**Pn**	**19 38 46.9**	**-1.5**
ASQU	**Asqua**	**1.72**	**319**		Pn		**Pn**	**19 38 46.9**	**-1.5**
VENT	**Ventotene**	**1.72**	**178**		Pn		**Pn**	**19 38 47.5**	**-0.8**
	35µm,1.9s								
VENT	**Ventotene**	**1.72**	**178**		Pn		**Pn**	**19 38 47.5**	**-0.8**
	35µm,1.9s								
SFI	**Santa Sofia**	**1.77**	**322**		Pn		**Pn**	**19 38 48.1**	**-1.0**
	32µm,1.6s								
SFI	**Santa Sofia**	**1.77**	**322**		Pn		**Pn**	**19 38 48.1**	**-1.0**
	32µm,1.6s								
CSNT	**Castellina Chi**	**1.79**	**303**		Pn		**Pn**	**19 38 48.4**	**-1.0**
CSNT	**Castellina Chi**	**1.79**	**303**		Pn		**Pn**	**19 38 48.4**	**-1.0**
CASP	**Castiglione de**	**1.86**	**279**		Pn		**Pn**	**19 38 49.3**	**-1.0**
CASP	**Castiglione de**	**1.86**	**279**		Pn		**Pn**	**19 38 49.3**	**-1.0**
SGRT	**San Giovanni R**	**1.93**	**112**		Pn		**Pn**	**19 38 51.1**	**-0.2**
	10µm,0.9s								
SGRT	**San Giovanni R**	**1.93**	**112**		Pn		**Pn**	**19 38 51.1**	**-0.2**
	10µm,0.9s								
SGTA	**Sant Agata di**	**2.04**	**132**		Pn		**Pn**	**19 38 53.4**	**+0.6**
	38µm,2.3s								
MSAG	**Monte S. Angel**	**2.06**	**112**		Pn		**Pn**	**19 38 53.2**	**+0.1**
	11µm,0.6s								
MSAG	**Monte S. Angel**	**2.06**	**112**		Pn		**Pn**	**19 38 53.2**	**+0.1**
	11µm,0.6s								
MS1	**Monte Sant'Ang**	**2.09**	**112**	*e*	Pn		**Pn**	**19 38 54.5**	**+1.0**
CRMI	**Carmignano**	**2.16**	**307**		Pn		**Pn**	**19 38 53.8**	**-0.7**
CRMI	**Carmignano**	**2.16**	**307**		Pn		**Pn**	**19 38 53.8**	**-0.7**
NVLJ	**Novalja**	**2.32**	**28**	*e*	Pn		**Pn**	**19 38 56.4**	**-0.3**
NVLJ					Sn		**Sn**	**19 39 25.9**	**+0.9**
NVLJ	**Novalja**	**2.32**	**28**	*e*	Pn		**Pn**	**19 38 56.3**	**-0.3**
NVLJ					Sn		**Sn**	**19 39 25.8**	**+0.9**
CDRU	**Civita di Ruta**	**2.50**	**144**		Pn		**Pn**	**19 38 59.0**	**-0.1**
CDRU	**Civita di Ruta**	**2.50**	**144**		Pn		**Pn**	**19 38 59.0**	**-0.1**
PALZ	**Palazzo San Ge**	**2.50**	**128**		Pn		**Pn**	**19 38 59.5**	**+0.4**
	18µm,1.3s								
PALZ	**Palazzo San Ge**	**2.50**	**128**		Pn		**Pn**	**19 38 59.5**	**+0.4**
	18µm,1.3s								
MAIM	**Mastiano**	**2.52**	**305**		Pn		**Pn**	**19 38 58.7**	**-0.6**
	32µm,3.6s								
MAIM	**Mastiano**	**2.52**	**305**		Pn		**Pn**	**19 38 58.7**	**-0.6**
	32µm,3.6s								
MAIM	**Mastiano**	**2.52**	**305**		P		**Pn**	**19 38 59.5**	**+0.2**
BDI	**Bagni Di Lucca**	**2.54**	**308**		Pn		**Pn**	**19 38 58.6**	**-1.1**
	43µm,3.4s								
BDI	**Bagni Di Lucca**	**2.54**	**308**		Pn		**Pn**	**19 38 58.6**	**-1.1**
	43µm,3.4s								
MRVN	**Minervino Murg**	**2.57**	**123**		Pn		**Pn**	**19 39 00.0**	**-0.1**
MRVN	**Minervino Murg**	**2.57**	**123**		Pn		**Pn**	**19 39 00.0**	**-0.1**
CRDM	**Cardoso**	**2.59**	**307**		P		**Pn**	**19 38 59.5**	**-0.8**
CDT	**Castel del Mon**	**2.61**	**122**	*e*	Pn		**Pn**	**19 39 01.2**	**+0.6**
CDT					eSn		**Sb**	**19 39 35.1**	**-2.2**
VLC	**Villacollemand**	**2.72**	**308**	*e*	Pn		**Pn**	**19 39 01.1**	**-1.0**
VLC	**Villacollemand**	**2.72**	**308**	*e*	Pn		**Pn**	**19 39 01.1**	**-1.0**
ERBM	**Eremo**	**2.87**	**313**		Pn		**Pn**	**19 39 04.6**	**+0.4**
	21µm,1.8s								
ERBM	**Eremo**	**2.87**	**313**		Pn		**Pn**	**19 39 04.6**	**+0.4**
	21µm,1.8s								
AMUR	**Altamura**	**2.91**	**122**		Pn		**Pn**	**19 39 04.9**	**+0.1**
	4µm,1.0s								
AMUR	**Altamura**	**2.91**	**122**		Pn		**Pn**	**19 39 04.9**	**+0.1**
	4µm,1.0s								
BAI	**Bari**	**2.98**	**117**	*e*	Pn		**Pn**	**19 39 06.9**	**+1.2**
BAI					eSn		**Sn**	**19 39 43.4**	**+2.2**
CUC	**Castrocucco**	**3.13**	**143**	*e*	Pn		**Pn**	**19 39 08.1**	**+0.3**
CUC	**Castrocucco**	**3.13**	**143**	*e*	Pn		**Pn**	**19 39 08.1**	**+0.3**
TRI	**Trieste**	**3.21**	**5**	*e*	P		**Pn**	**19 39 06.9**	**-1.9**
TRI	**Trieste**	**3.21**	**5**	*e*	Pn		**Pn**	**19 39 06.9**	**-1.9**
TRI	**Trieste**	**3.21**	**5**		Pn		**Pn**	**19 39 07.5**	**-1.3**
	4µm,1.3s								
TRI	**Trieste**	**3.21**	**5**	*e*	P		**Pn**	**19 39 06.9**	**-1.9**
TRI	**Trieste**	**3.21**	**5**	

TTG	**Podgorica**	**4.36**	**89**	⇑P	**Pn**	19 39 25.0	+0.4
TTG				S	**Sn**	19 40 17.3	+2.0
TTG	**Podgorica**	**4.36**	**89**	⇑P	**Pn**	19 39 25.0	+0.4
TTG				S	**Sn**	19 40 17.3	+2.0
TTG	**Podgorica**	**4.36**	**89**	P	**Pn**	19 39 25.0	+0.4
TTG				S	**Sn**	19 40 17.3	+2.0
ULC	**Ulcinj**	**4.41**	**95**	*e*Pn	**Pn**	19 39 25.5	+0.2
ULC				*e*Sn	**Sn**	19 40 16.4	0.0
ULC	**Ulcinj**	**4.41**	**95**	*e*P	**Pn**	19 39 25.6	+0.2
ULC				S	**Sn**	19 40 17.8	+1.4
ULC	**Ulcinj**	**4.41**	**95**	*e*P	**Pn**	19 39 25.6	+0.3
ULC				S	**Sn**	19 40 17.8	+1.4
ULC	**Ulcinj**	**4.41**	**95**	*e*Pn	**Pn**	19 39 25.5	+0.3
ULC				*e*Sn	**Sn**	19 40 16.4	0.0
ULC				S	**Sn**	19 40 17.8	+1.4
SAOF	**Saorge**	**4.49**	**291**	P	**Pn**	19 39 26.5	+0.1
SAOF	**Saorge**	**4.49**	**291**	P	**Pn**	19 39 26.5	+0.1
SAOF	**Saorge**	**4.49**	**291**	P	**Pn**	19 39 26.5	+0.1
SAOF	**Saorge**	**4.49**	**291**	P	**Pn**	19 39 26.5	+0.1
PLE	**Pljevlja**	**4.50**	**78**	⇑*i*Pn	**Pn**	19 39 27.9	+1.2
PLE				*e*Sn	**Sn**	19 40 20.9	+2.0
PLE	**Pljevlja**	**4.50**	**78**	P	**Pn**	19 39 27.6	+0.9
PLE				S	**Sn**	19 40 20.6	+1.7
PLE	**Pljevlja**	**4.50**	**78**	P	**Pn**	19 39 27.6	+0.9
PLE				S	**Sn**	19 40 20.6	+1.7
PLE	**Pljevlja**	**4.50**	**78**	P	**Pn**	19 39 27.6	+0.9
PLE	**Pljevlja**	**4.50**	**78**	⇑*i*Pn	**Pn**	19 39 27.9	+1.2
PLE				S	**Sn**	19 40 20.6	+1.7
PLE				*e*Sn	**Sn**	19 40 20.9	+2.0
SBF	**Sospel**	**4.54**	**289**	*e*Pn	**Pn**	19 39 26.5	-0.6
SBF				*e*Sn	**Sn**	19 40 17.3	-2.3
	603nm,0.7s						
SBF	**Sospel**	**4.54**	**289**	*e*P	**Pn**	19 39 26.5	-0.6
SBF				*e*		19 40 17.3	
SBF	**Sospel**	**4.54**	**289**	*e*Pn	**Pn**	19 39 26.5	-0.6
SBF				*e*Sn	**Sn**	19 40 17.3	-2.3
SBF	**Sospel**	**4.54**	**289**	*e*Pn	**Pn**	19 39 26.5	-0.6
SBF				*e*Sn	**Sn**	19 40 17.3	-2.3
	302nm,0.7s						
REVF	**Revere**	**4.55**	**288**	P	**Pn**	19 39 27.2	-0.1
REVF	**Revere**	**4.55**	**288**	P	**Pn**	19 39 27.2	-0.1
REVF	**Revere**	**4.55**	**288**	P	**Pn**	19 39 27.2	-0.1
REVF	**Revere**	**4.55**	**288**	P	**Pn**	19 39 27.2	-0.1
KBA	**Koelnbreinsper**	**4.56**	**360**	*i*P	**Pn**	19 39 27.6	0.0
KBA				*i*		19 40 20.9	
KBA	**Koelnbreinsper**	**4.56**	**360**	*i*Pn	**Pn**	19 39 27.6	0.0
	SNR=292						
KBA				⇓*i*Sn	**Sn**	19 40 20.9	+0.5
KBA	**Koelnbreinsper**	**4.56**	**360**	*i*Pn	**Pn**	19 39 27.6	0.0
KBA				*i*Sn	**Sn**	19 40 20.9	+0.5
KBA	**Koelnbreinsper**	**4.56**	**360**	*i*P	**Pn**	19 39 27.6	0.0
KBA				*i*S	**Sn**	19 40 20.9	+0.5
AUTN	**L'Aution**	**4.58**	**291**	P	**Pn**	19 39 28.3	+0.5
AUTN	**L'Aution**	**4.58**	**291**	P	**Pn**	19 39 28.3	+0.5
AUTN	**L'Aution**	**4.58**	**291**	P	**Pn**	19 39 28.3	+0.5
AUTN	**L'Aution**	**4.58**	**291**	P	**Pn**	19 39 28.3	+0.5
BBLS	**Lazići**	**4.62**	**71**	*e*Pn	**Pn**	19 39 28.6	+0.3
BBLS	**Lazići**	**4.62**	**71**	*e*Pn	**Pn**	19 39 28.6	+0.3
BEHE	**Becsehely**	**4.65**	**31**	*e*Pn	**Pn**	19 39 29.3	+0.7
BEHE	**Becsehely**	**4.65**	**31**	*e*P	**Pn**	19 39 29.3	+0.7
CEL	**Celeste**	**4.67**	**155**	*e*Pn	**Pn**	19 39 30.0	+1.0
CEL	**Celeste**	**4.67**	**155**	*e*Pn	**Pn**	19 39 30.0	+1.0
TOUF	**Mont Tournerai**	**4.71**	**291**	P	**Pn**	19 39 30.2	+0.6
TOUF	**Mont Tournerai**	**4.71**	**291**	P	**Pn**	19 39 30.2	+0.6
TOUF	**Mont Tournerai**	**4.71**	**291**	P	**Pn**	19 39 30.2	+0.6
TOUF	**Mont Tournerai**	**4.71**	**291**	P	**Pn**	19 39 30.2	+0.6
MVIF	**Mont Vial**	**4.74**	**289**	P	**Pn**	19 39 30.2	+0.2
MVIF	**Mont Vial**	**4.74**	**289**	P	**Pn**	19 39 30.2	+0.2
MVIF	**Mont Vial**	**4.74**	**289**	P	**Pn**	19 39 30.2	+0.2
MVIF	**Mont Vial**	**4.74**	**289**	P	**Pn**	19 39 30.2	+0.2
BEY	**Berane**	**4.83**	**84**	⇑*i*Pn	**Pn**	19 39 33.0	+1.8
BEY				*e*Sn	**Sn**	19 40 30.0	+3.1
IVA	**Berane**	**4.83**	**84**	⇑*i*Pn	**Pn**	19 39 33.0	+1.8
IVA				*e*Sn	**Sn**	19 40 30.0	+3.1
PUK	**Puka**	**4.87**	**93**	*e*PN	**Pn**	19 39 33.4	+1.6
PUK				*e*SN	**Sn**	19 40 24.9	-3.0
PUK	**Puka**	**4.87**	**93**	*e*Pn	**Pn**	19 39 33.4	+1.6
PUK				*e*Sn	**Sn**	19 40 25.0	-3.0
PVY	**Plav**	**4.88**	**87**	*e*Pn	**Pn**	19 39 33.2	+1.3
PVY				*e*Sn	**Sn**	19 40 31.0	+2.9
PVY	**Plav**	**4.88**	**87**	*e*Pn	**Pn**	19 39 33.2	+1.3
PVY				*e*Sn	**Sn**	19 40 31.0	+2.9
FETA	**Feichten**	**4.88**	**338**	⇓*i*Pn	**Pn**	19 39 32.4	+0.5
	SNR=109						
FETA	**Feichten**	**4.88**	**338**	⇓*i*Pn	**Pn**	19 39 32.4	+0.5
FETA	**Feichten**	**4.88**	**338**	Pn	**Pn**	19 39 32.4	+0.5
	SNR=109						
TUE	**Stuetta**	**4.89**	**325**	*e*Pn	**Pn**	19 39 31.8	-0.3
TUE				*e*Sn	**Sn**	19 40 24.3	-4.1
TUE	**Stuetta**	**4.89**	**325**	*e*Pn	**Pn**	19 39 31.8	-0.3
TUE				*e*Sn	**Sn**	19 40 24.3	-4.1
CALN	**Calern**	**4.89**	**287**	P	**Pn**	19 39 32.4	+0.3
CALN	**Calern**	**4.89**	**287**	P	**Pn**	19 39 32.4	+0.3
CALN	**Calern**	**4.89**	**287**	P	**Pn**	19 39 32.4	+0.3
CALN	**Calern**	**4.89**	**287**	P	**Pn**	19 39 32.4	+0.3
WTTA	**Wattenberg**	**4.90**	**346**	⇑*i*P	**Pn**	19 39 33.0	+0.7
WTTA				*i*		19 40 30.3	
WTTA	**Wattenberg**	**4.90**	**346**	⇑*i*Pn	**Pn**	19 39 33.0	+0.7
	SNR=161						
WTTA				⇓*i*Sn	**Sn**	19 40 30.3	+1.5
WTTA	**Wattenberg**	**4.90**	**346**	⇑*i*Pn	**Pn**	19 39 33.0	+0.7
WTTA				*i*Sn	**Sn**	19 40 30.3	+1.5
WTTA	**Wattenberg**	**4.90**	**346**	Pn	**Pn**	19 39 33.0	+0.7
	SNR=161						
WTTA				Sn	**Sn**	19 40 30.3	+1.5
SJES	**Sjenica**	**4.92**	**79**	*e*Pn	**Pn**	19 39 33.1	+0.7
DAVOX	**Davos/Dischmat**	**4.93**	**331**	Pn	**Pn**	19 39 32.9	+0.2
DAVOX				Sn	**Sn**	19 40 31.2	+1.6
DAVOX	**Davos/Dischmat**	**4.93**	**331**	Pn	**Pn**	19 39 32.9	+0.2
	23nm,0.3s,baz=153,slow=16,SNR=234						
DAVOX				Sn	**Sn**	19 40 31.2	+1.6
	57nm,0.3s,baz=107,slow=19,SNR=8.6						
DAVOX	**Davos/Dischmat**	**4.93**	**331**	P	**Pn**	19 39 32.9	+0.2
DAVOX				S	**Sn**	19 40 31.2	+1.6
BCI	**Bajram Curri**	**4.97**	**89**	*e*PN	**Sn**	19 40 34.7	+4.5
ARSA	**Arzberg**	**4.98**	**17**	⇑*i*Pn	**Pn**	19 39 32.3	-0.8
	SNR=83						
ARSA	**Arzberg**	**4.98**	**17**	⇑*i*Pn	**Pn**	19 39 32.3	-0.8
ARSA	**Arzberg**	**4.98**	**17**	Pn	**Pn**	19 39 32.3	-0.8
	SNR=83						
WATA	**Walderalm**	**4.98**	**346**	⇓*i*P	**Pn**	19 39 34.1	+0.8
WATA				*i*		19 40 31.1	
WATA	**Walderalm**	**4.98**	**346**	⇓*i*Pn	**Pn**	19 39 34.1	+0.8
	SNR=144						
WATA				⇓*i*Sn	**Sn**	19 40 31.1	+0.3
WATA	**Walderalm**	**4.98**	**346**	⇓*i*Pn	**Pn**	19 39 34.1	+0.8
WATA				*i* Sn	**Sn**	19 40 31.1	+0.3
WATA	**Walderalm**	**4.98**	**346**	Pn	**Pn**	19 39 34.1	+0.8
	SNR=144						
WATA				Sn	**Sn**	19 40 31.1	+0.3
TIR	**Tirane**	**4.99**	**101**	*e*PN	**Sn**	19 40 33.8	+3.0
TIR	**Tirane**	**4.99**	**101**	P	**Pn**	19 39 35.0	+1.7
TIR	**Tirane**	**4.99**	**101**	P	**Pn**	19 39 35.0	+1.7
FRF	**La Foret Royal**	**5.03**	**284**	*e*Pn	**Pn**	19 39 33.3	-0.5
FRF				*e*Sn	**Sn**	19 40 28.4	-3.3
	248nm,0.8s						
FRF	**La Foret Royal**	**5.03**	**284**	*e*P	**Pn**	19 39 33.3	-0.5
FRF				*e*		19 40 28.4	
FRF	**La Foret Royal**	**5.03**	**284**	*e*Pn	**Pn**	19 39 33.3	-0.5
FRF				*e*Sn	**Sn**	19 40 28.4	-3.3
FRF	**La Foret Royal**	**5.03**	**284**	*e*Pn	**Pn**	19 39 33.3	-0.5
FRF				*e*Sn	**Sn**	19 40 28.4	-3.3
	124nm,0.8s						
MOTA	**Moosalm**	**5.09**	**342**	⇓*i*P	**Pn**	19 39 35.4	+0.7
MOTA	**Moosalm**	**5.09**	**342**	⇓*i*Pn	**Pn**	19 39 35.4	+0.7
	SNR=245						
MOTA	**Moosalm**	**5.09**	**342**	⇓*i*Pn	**Pn**	19 39 35.4	+0.7
MOTA	**Moosalm**	**5.09**	**342**	*i* P	**Pn**	19 39 35.4	+0.7
IVAS	**Ivanjica**	**5.09**	**76**	*e*Pn	**Pn**	19 39 35.3	+0.6
IVAS				*e*Sn	**Sn**	19 40 31.8	-1.5
IVAS	**Ivanjica**	**5.09**	**76**	*e*Pn	**Pn**	19 39 35.3	+0.6
IVAS				*e*Sn	**Sn**	19 40 31.8	-1.5
DIVS	**Divibare**	**5.09**	**70**	*e*Pn	**Pn**	19 39 34.9	+0.1
DIVS	**Divibare**	**5.09**	**70**	*e*Pn	**Pn**	19 39 34.9	+0.1
LMR	**La Mourre**	**5.09**	**282**	*e*Pn	**Pn**	19 39 34.0	-0.7
LMR				*e*Sn	**Sn**	19 40 29.9	-3.4
	336nm,1.0s						
LMR	**La Mourre**	**5.09**	**282**	*e*P	**Pn**	19 39 34.0	-0.7
LMR				*e*		19 40 29.9	
LMR	**La Mourre**	**5.09**	**282**	*e*Pn	**Pn**	19 39 34.0	-0.7
LMR				*e*Sn	**Sn**	19 40 29.9	-3.4
LMR	**La Mourre**	**5.09**	**282**	*e*Pn	**Pn**	19 39 34.0	-0.7
LMR				*e*Sn	**Sn**	19 40 29.9	-3.4
	168nm,1.0s						
SURF	**Saint Ours**	**5.15**	**295**	P	**Pn**	19 39 36.6	+0.9
SURF	**Saint Ours**	**5.15**	**295**	P	**Pn**	19 39 36.6	+0.9
SURF	**Saint Ours**	**5.15**	**295**	P	**Pn**	19 39 36.6	+0.9
OG22	**Abries**	**5.19**	**299**	P	**Pn**	19 39 36.2	0.0
OG22	**Abries**	**5.19**	**299**	P	**Pn**	19 39 36.2	0.0
OG22	**Abries**	**5.19**	**299**	P	**Pn**	19 39 36.2	0.0
RJOB	**Jochberg**	**5.24**	**356**	*e*Pn	**Pn**	19 39 37.2	+0.5
RJOB				*e*Sn	**Sn**	19 40 39.5	+2.6
MBDF	**Montbardon**	**5.27**	**297**	*e*P	**Pn**	19 39 37.9	+0.7
MBDF	**Montbardon**	**5.27**	**297**	*e*P	**Pn**	19 39 37.9	+0.7
MBDF	**Montbardon**	**5.27**	**297**	*e*P	**Pn**	19 39 37.9	+0.7
MBDF	**Montbardon**	**5.27**	**297**	*e*P	**Pn**	19 39 37.9	+0.7
PKSM	**Moragy**	**5.29**	**44**	⇓*i*P	**Pn**	19 39 36.8	-0.6
PKSM	**Moragy**	**5.29**	**44**	*e*Pn	**Pn**	19 39 35.8	-1.6
PKSM	**Moragy**	**5.29**	**44**	*e*Pn	**Pn**	19 39 37.3	-0.1
PKSM	**Moragy**	**5.29**	**44**	*e*Pn	**Pn**	19 39 35.8	-1.6
PKSM	**Moragy**	**5.29**	**44**	⇓*i*P	**Pn**	19 39 36.8	-0.6
RETA	**Reutte**	**5.30**	**341**	*i* Pn	**Pn**	19 39 39.1	+1.5
	SNR=25						
RETA				⇓*i*Sn	**Sn**	19 40 39.1	+0.6
RETA	**Reutte**	**5.30**	**341**	*i* Pn	**Pn**	19 39 39.1	+1.5
RETA				*i* Sn	**Sn**	19 40 39.1	+0.6
RETA	**Reutte**	**5.30**	**341**	Pn	**Pn**	19 39 39.1	+1.5
	SNR=25						
RETA				Sn	**Sn**	19 40 39.1	+0.6
PHP	**Peshkopia**	**5.33**	**97**	*e*PN	**Sn**	19 40 39.3	0.0
PHP	**Peshkopia**	**5.33**	**97**	P	**Pn**	19 39 39.0	+0.9
PHP	**Peshkopia**	**5.33**	**97**	P	**Pn**	19 39 39.0	+0.9
DAVA	**Damuels**	**5.37**	**334**	*i* Pn	**Pn**	19 39 40.1	+1.5
	SNR=93						
DAVA				⇑*i*Sn	**Sn**	19 40 41.6	+1.3
DAVA	**Damuels**	**5.37**	**334**	*i* Pn	**Pn**	19 39 40.1	+1.5
DAVA				*i* Sn	**Sn**	19 40 41.6	+1.3
DAVA	**Damuels**	**5.37**	**334**	Pn	**Pn**	19 39 40.1	+1.5
	SNR=93						
DAVA				Sn	**Sn**	19 40 41.6	+1.3
MOA	**Molln**	**5.37**	**7**	⇑*i*Pn	**Pn**	19 39 38.0	-0.6
	SNR=130						
MOA	**Molln**	**5.37**	**7**	⇑*i*Pn	**Pn**	19 39 38.0	-0.6
MOA	**Molln**	**5.37**	**7**	Pn	**Pn**	19 39 38.0	-0.6
	SNR=130						
PKS9	**Tamasi**	**5.38**	**39**	*e*Pn	**Pn**	19 39 37.4	-1.2
BNI	**Bardonecchia**	**5.46**	**300**	*e*P	**Pn**	19 39 40.1	+0.2
BNI	**Bardonecchia**	**5.46**	**300**	*e*Pn	**Pn**	19 39 40.1	+0.2
GRUS	**Gruza**	**5.55**	**73**	*e*Pn	**Pn**	19 39 41.2	+0.2
LPG	**La Plagne**	**5.62**	**304**	*e*P	**Pn**	19 39 43.4	+1.2
LPG				*e*Sn	**Sn**	19 40 44.3	-2.3
	408nm,0.8s						
LPG	**La Plagne**	**5.62**	**304**	*e*P	**Pn**	19 39 43.4	+1.2
LPG				*e*		19 40 44.3	
LPG	**La Plagne**	**5.62**	**304**	*e*P	**Pn**	19 39 43.4	+1.2
LPG				*e*Sn	**Sn**	19 40 44.3	-2.3
LPL	**La Plagne**	**5.64**	**304**	*e*P	**Pn**	19 39 43.3	+0.9
LPL				*e*Sn	**Sn**	19 40 43.4	-3.7
	375nm,0.9s						
LPL	**La Plagne**	**5.64**	**304**	*e*P	**Pn**	19 39 43.3	+0.9
LPL				*e*		19 40 43.4	
LPL	**La Plagne**	**5.64**	**304**	*e*P	**Pn**	19 39 43.3	+0.9
LPL				*e*Sn	**Sn**	19 40 43.4	-3.7
SOP	**Sopron**	**5.64**	**23**	*e*Pn	**Pn**	19 39 41.8	-0.4
BEO	**Beograd**	**5.65**	**64**	*e*Pn	**Pn**	19 39 42.1	-0.2
CONA	**Conrad Observa**	**5.69**	**17**	*i* Pn	**Pn**	19 39 42.5	-0.5
	SNR=241						
CONA				⇑*i*Sn	**Sn**	19 40 48.4	+0.3
CONA	**Conrad Observa**	**5.69**	**17**	*i* Pn	**Pn**	19 39 42.5	-0.5
CONA				*i* Sn	**Sn**	19 40 48.4	+0.3
CONA	**Conrad Observa**	**5.69**	**17**	Pn	**Pn**	19 39 42.5	-0.5
	SNR=241						
CONA				Sn	**Sn**	19 40 48.4	+0.3
SELS	**Selova**	**5.75**	**80**	*e*Pn	**Pn**	19 39 44.2	+0.5
SELS				*e*Sn	**Sn**	19 40 49.4	0.0
PKST	**T''s**	**5.79**	**33**	*e*Pn	**Pn**	19 39 43.8	-0.5
RSL	**Roselend**	**5.79**	**305**	P	**Pn**	19 39 46.9	+2.5
RSL	**Roselend**	**5.79**	**305**	P	**Pn**	19 39 46.9	+2.5
RSL	**Roselend**	**5.79**	**305**	P	**Pn**	19 39 46.9	+2.5
FUR	**Furstenfeldbru**	**5.84**	**346**	*e*P	**Pn**	19 39 46.0	+1.1
FUR	**Furstenfeldbru**	**5.84**	**346**	*e*Pn	**Pn**	19 39 46.0	+1.1
SMRF	**Simiane la Rot**	**5.87**	**287**	*e*Pn	**Pn**	19 39 46.4	+1.0
SMRF	**Simiane la Rot**	**5.87**	**287**	*e*Pn	**Pn**	19 39 46.4	+1.0
GDM	**Grand'Maison**	**5.88**	**300**	P	**Pn**	19 39 48.1	+2.4
GDM	**Grand'Maison**	**5.88**	**300**	P	**Pn**	19 39 48.1	+2.4
ORIF	**Oris-en-Rattie**	**5.93**	**296**	*e*P	**Pn**	19 39 48.1	+1.9
ORIF				*e*Sn	**Sn**	19 40 51.0	-2.9
	212nm,0.7s						
ORIF	**Oris-en-Rattie**	**5.93**	**296**	*e*P	**Pn**	19 39 48.1	+1.9
ORIF				*e*		19 40 51.0	
ORIF	**Oris-en-Rattie**	**5.93**	**296**	*e*P	**Pn**	19 39 48.1	+1.9
ORIF				*e*Sn	**Sn**	19 40 51.0	-2.9
SVIS	**Svilajnac**	**5.99**	**70**	*e*Pn	**Pn**	19 39 46.6	-0.3
SKO	**Skopje**	**6.02**	**92**	P	**Pn**	19 39 48.7	+1.3
SKO	**Skopje**	**6.02**	**92**	*e*Pn	**Pn**	19 39 48.8	+1.3
SKO	**Skopje**	**6.02**	**92**	*e*Pn	**Pn**	19 39 49.0	+1.5
SKO				*e*Sn	**Sn**	19 40 57.6	+1.4
SKO	**Skopje**	**6.02**	**92**	*e*Pn	**Pn**	19 39 49.2	+1.7
PKSG		**6.04**	**34**	*e*Pn	**Pn**	19 39 48.2	+0.5
IGT	**Igoumenitsa**	**6.06**	**117**	P	**Pn**	19 39 49.0	+1.0
PKS7	**Kunszentmiklos**	**6.13**	**40**	*e*Pn	**Pn**	19 39 49.3	+0.4
GRN	**Grenoble**	**6.14**	**299**	P	**Pn**	19 39 50.9	+1.7
GRN	**Grenoble**	**6.14**	**299**	P	**Pn**	19 39 50.9	+1.7
GRN	**Grenoble**	**6.14**	**299**	P	**Pn**	19 39 50.9	+1.7
BIA	**Bitola**	**6.14**	**101**	P	**Pn**	19 39 49.9	+0.7
BIA	**Bitola**	**6.14**	**101**	*e*Pn	**Pn**	19 39 49.8	+0.6
BIA	**Bitola**	**6.14**	**101**	*e*Pn	**Pn**	19 39 49.7	+0.6
NEST	**Nestorio**	**6.15**	**107**	P	**Pn**	19 39 50.6	+1.3
OCF	**Saint Nazaire**	**6.21**	**292**	P	**Pn**	19 39 51.5	+1.4
OG26	**St.-Nazaire-De**	**6.21**	**292**	P	**Pn**	19 39 51.5	+1.4
BARS	**Barje**	**6.24**	**84**	*e*Pn	**Pn**	19 39 51.2	+0.7
BARS				*e*Sn	**Sn**	19 41 01.4	-0.2
FNA	**Florina**	**6.25**	**103**	P	**Pn**	19 39 51.6	+0.9
GEC2	**GERESS Array S**	**6.33**	**2**	*e*P	**Pn**	19 39 50.9	-0.9
GEC2				*e*		19 41 03.9	
GEC2	**GERESS Array S**	**6.33**	**2**	*e*Pn	**Pn**	19 39 50.9	-0.9
GEC2				*e*Sn	**Sn**	19 41 03.9	-0.1
GERES	**GERESS Array B**	**6.33**	**2**	Pn	**Pn**	19 39 51.4	-0.5
GERES				Sn	**Sn**	19 41 02.5	-1.5
GERES	**GERESS Array B**	**6.33**	**2**	Pn	**Pn**	19 39 51.4	-0.5
	8.7nm,0.3s,baz=171,slow=13,SNR=147						
GERES				Sn	**Sn**	19 41 02.5	-1.5
	37nm,0.3s,baz=166,slow=23,SNR=14						
GERES				LR	LR	19 41 47.4	
	comp=Z,1µm,21.9s,baz=181,slow=34						
JAN	**Janina**	**6.34**	**114**	P	**Pn**	19 39 53.3	+1.4
JAN	**Janina**	**6.34**	**114**	*e*P	**Pn**	19 39 53.4	+1.5
PKSN	**Nyarlorinc**	**6.38**	**44**	*e*pPn	**Pn**	19 39 54.3	+2.0
BUD	**Budapest**	**6.39**	**37**	*e*pPn	**Pn**	19 39 54.6	+2.2
BOLS	**Boljevac**	**6.42**	**75**	*e*Pn	**Pn**	19 39 52.1	-0.8
SPAK	**Spaichingen-Ko**	**6.45**	**332**	P	**Pn**	19 39 53.8	+0.4
BBS	**Basel-Blauen**	**6.45**	**322**	P	**Pn**	19 39 53.1	-0.3
BBS	**Basel-Blauen**	**6.45**	**322**	P	**Pn**	19 39 53.1	-0.3
MEV	**Metsovon**	**6.54**	**112**	P	**Pn**	19 39 57.5	+2.8
FELD	**Feldberg im Sc**	**6.56**	**327**	P	**Pn**	19 39 54.0	-1.0
CABF	**La Chapelle**	**6.61**	**311**	*e*Pn	**Pn**	19 39 54.3	-1.3
CABF	**La Chapelle**	**6.61**	**311**	*e*P	**Pn**	19 39 54.3	-1.3
CABF	**La Chapelle**	**6.61**	**311**	*e*Pn	**Pn**	19 39 54.3	-1.3
KHC	**Kasperske Hory**	**6.62**	**1**	*e*P	**Pn**	19 39 54.4	-1.3
KHC	**Kasperske Hory**	**6.62**	**1**	*e*Pn	**Pn**	19 39 54.4	-1.3
KHC	**Kasperske Hory**	**6.62**	**1**	*e*Pn	**Pn**	19 39 54.4	-1.3
KHC				*e*SN	**Sn**	19 41 06.4	-4.5
KHC				AMS	AMS	19 43 10.0	
	comp=Z,4µm,6.6s						
KHC	**Kasperske Hory**	**6.62**	**1**	Pn	**Pn**	19 39 54.4	-1.3
KHC				Sn	**Sn**	19 41 06.4	-4.5
WET	**Wettzell**	**6.64**	**357**	*e*P	**Pn**	19 39 55.1	-0.8
WET	**Wettzell**	**6.64**	**357**	*e*Pn	**Pn**	19 39 55.1	-0.8
SMOL	**Smolenice**	**6.64**	**24**	*e*P	**Pn**	19 39 55.5	-0.5
SMOL				*e*		19 41 11.9	
SMOL	**Smolenice**	**6.64**	**24**	*e*PN	**Pn**	19 39 55.5	-0.5
SMOL				*e*SN	**Sn**	19 41 11.9	+0.4
LKD2	**Lefkada island**	**6.68**	**121**	P	**Pn**	19 39 57.8	+1.2
LOMF	**Lomont**	**6.70**	**318**	P	**Pn**	19 39 56.6	-0.2
LOMF	**Lomont**	**6.70**	**318**	P	**Pn**	19 39 56.6	-0.2
LOMF	**Lomont**	**6.70**	**318**	P	**Pn**	19 39 56.6	-0.2
KZN	**Kozani**	**6.70**	**106**	P	**Pn**	19 39 58.5	+1.7
KZN	**Kozani**	**6.70**	**106**	*e*P	**Pn**	19 39 57.1	+0.3
BZS	**Buzias**	**6.71**	**60**	⇑*i*P	**Pn**	19 39 57.7	+0.8
BZS	**Buzias**	**6.71**	**60**	*e*Pn	**Pn**	19 39 57.0	+0.1
VIVF	**Saint-Julien-l**	**6.72**	**293**	*e*Pn	**Pn**	19 39 57.8	+0.8
VIVF	**Saint-Julien-l**	**6.72**	**293**	*e*P	**Pn**	19 39 57.8	+0.8
VIVF	**Saint-Julien-l**	**6.72**	**293**	*e*Pn	**Pn**	19 39 57.8	+0.8
BFO	**Black Forest**	**6.80**	**330**	*e*P	**Pn**	19 39 57.0	-1.2
BFO				*e*		19 41 14.4	
BFO	**Black Forest**	**6.80**	**330**	*e*Pn	**Pn**	19 39 57.0	-1.2
BFO				*e*Sn	**Sn**	19 41 14.4	-1.0
BFO	**Black Forest**	**6.80**	**330**	*e*Pn	**Pn**	19 39 56.7	-1.5
BFO	**Black Forest**	**6.80**	**330**	Pn	**Pn**	19 39 57.1	-1.2
	666nm,0.6s,SNR=29						
ZAPS	**Zavoj**	**6.86**	**81**	*e*Pn	**Pn**	19 39 59.9	+1.0
ZAPS				*e*Sn	**Sn**	19 41 14.8	-1.9
STU	**Stuttgart**	**6.90**	**336**	*e*P	**Pn**	19 40 01.3	+1.8
STU	**Stuttgart**	**6.90**	**336**	*e*Pn	**Pn**	19 40 01.3	+1.8
MOF	**Molkenrain**	**6.91**	**323**	P	**Pn**	19 39 59.4	-0.4
MOF	**Molkenrain**	**6.91**	**323**	P	**Pn**	19 39 59.4	-0.4
MOF	**Molkenrain**	**6.91**	**323**	P	**Pn**	19 39 59.4	-0.4
LIBD	**Limburg**	**6.94**	**326**	P	**Pn**	19 39 59.6	-0.4
LIBD	**Limburg**	**6.94**	**326**	P	**Pn**	19 39 59.6	-0.4
SSB	**Saint Sauveur**	**6.94**	**296**	*e*P	**Pn**	19 40 00.1	0.0
SSB	**Saint Sauveur**	**6.94**	**296**	*e*Pn	**Pn**	19 40 00.1	0.0
TREC	**Trest**	**6.94**	**12**	*e*P	**Pn**	19 39 58.8	-1.3
TREC				*e*		19 41 14.8	
TREC				MLR	MLR		
	comp=Z,12µm,5.2s						
TREC	**Trest**	**6.94**	**12**	*e*PN	**Pn**	19 39 58.8	-1.3
TREC				*e*SN	**Sn**	19 41 14.8	-4.0
TREC			

LBL	Lubilhac	7.79	294	P		Pn	19 40 12.6	+0.8			
LBL	Lubilhac	7.79	294	P		Pn	19 40 12.6	+0.8			
LBL	Lubilhac	7.79	294	P		Pn	19 40 12.6	+0.8			
WERN	Wernitzgruen	7.80	355	*e*Pn		Pn	19 40 11.4	-0.5			
MORC	Moravsky Berou	7.82	20	*e*P		Pn	19 40 11.9	-0.3			
MORC	Moravsky Berou	7.82	20	*e*Pn		Pn	19 40 11.9	-0.3			
MORC	Moravsky Berou	7.82	20	⇑*i*P		Pn	19 40 12.7	+0.5			
TRIZ	Trizonia	7.83	119	P		Pn	19 40 14.6	+2.3			
LAKA	Lakka	7.84	120	P		Pn	19 40 14.7	+2.2			
KALE	Kalithea	7.86	119	P		Pn	19 40 15.0	+2.2			
PLG	Polygyros	7.88	102	P		Pn	19 40 13.2	+0.3			
PLG	Polygyros	7.88	102	*e*P		Pn	19 40 13.0	+0.1			
GUNZ	Gunzen	7.88	355	*e*Pn		Pn	19 40 13.5	+0.5			
DRGR		7.92	54	⇓*i*P		Pn	19 40 15.1	+1.5			
NVR	Nevrokopi	7.92	95	P		Pn	19 40 13.9	+0.4			
TANN	Tannenbergstha	7.93	356	*e*Pn		Pn	19 40 12.9	-0.7			
SMF	Signal de Mont	7.95	305	*e*Pn		Pn	19 40 13.1	-0.8			
SMF				*e*Sn		Sn	19 41 38.8	-4.7			
	comp=Z,218nm,0.7s										
SMF	Signal de Mont	7.95	305	*e*P		Pn	19 40 13.1	-0.8			
SMF				*e*			19 41 38.8				
SMF	Signal de Mont	7.95	305	*e*Pn		Pn	19 40 13.1	-0.8			
SMF				*e*Sn		Sn	19 41 38.8	-4.7			
WERD	Werda	7.97	355	*e*Pn		Pn	19 40 14.1	-0.1			
FILF	Fillols	7.97	274	P		Pn	19 40 14.7	+0.4			
FILF	Fillols	7.97	274	P		Pn	19 40 14.7	+0.4			
CKFL	Kef-Lekhel	7.98	222	P		Pn	19 40 16.7	+2.3			
CKFL	Kef-Lekhel	7.98	222	P		Pn	19 40 16.7	+2.3			
LRDF	Laroque-de-Fa	7.98	277	P		Pn	19 40 13.3	-1.0			
LRDF	Laroque-de-Fa	7.98	277	P		Pn	19 40 13.3	-1.0			
PGB	Panagyurishte	7.98	86	*i*P		Pn	19 40 15.7	+1.2			
AXAR	Agios Charalam	8.00	115	P		Pn	19 40 17.1	+2.4			
PLN	Plauen	8.02	354	*e*Pn		Pn	19 40 14.4	-0.4			
OKC	Ostrava-Krasne	8.04	23	*e*P		Pn	19 40 14.8	-0.3			
OKC				MLR		MLR					
	comp=Z,5µm,9.0s										
OKC	Ostrava-Krasne	8.04	23	*e*PN		Pn	19 40 14.8	-0.3			
OKC				AMS		AMS	19 44 00.0				
	comp=Z,5µm,9.0s										
OKC	Ostrava-Krasne	8.04	23	Pn		Pn	19 40 14.8	-0.3			
PVCC	Panska Ves	8.06	6	*e*P		Pn	19 40 14.6	-0.8			
PVCC				MLR		MLR					
	comp=Z,4µm,5.8s										
PVCC	Panska Ves	8.06	6	*e*PN		Pn	19 40 14.6	-0.8			
PVCC				AMS		AMS	19 44 10.0				
	comp=Z,4µm,5.8s										
PVCC	Panska Ves	8.06	6	Pn		Pn	19 40 14.6	-0.8			
LOT	Lotru	8.06	65	⇑*i*P		Pn	19 40 17.7	+2.2			
PAGF	Fort de Pagny	8.07	321	*e*Pn		Pn	19 40 14.7	-0.9			
PAGF	Fort de Pagny	8.07	321	*e*Pn		Pn	19 40 14.7	-0.9			
XOR	Xorichti	8.08	110	P		Pn	19 40 15.4	-0.4			
DPC	Dobruska-Polom	8.10	14	*e*P		Pn	19 40 15.1	-0.9			
DPC				MLR		MLR					
	comp=Z,5µm,7.8s										
DPC	Dobruska-Polom	8.10	14	*e*PN		Pn	19 40 15.1	-0.9			
DPC				AMS		AMS	19 43 30.0				
	comp=Z,5µm,7.8s										
DPC	Dobruska-Polom	8.10	14	Pn		Pn	19 40 15.1	-0.9			
DSF	Desfina	8.10	117	P		Pn	19 40 17.6	+1.5			
AMT	Artemida-Makis	8.11	125	P		Pn	19 40 19.0	+2.8			
PYM	Petit Puy Mans	8.12	297	P		Pn	19 40 17.6	+1.3			
NEO	Neokhori	8.13	110	*e*P		Pn	19 40 16.5	+0.1			
AGO	Saint Agoulin	8.14	299	P		Pn	19 40 16.1	-0.5			
AGO	Saint Agoulin	8.14	299	P		Pn	19 40 16.1	-0.5			
SFTF	Sexfontaines	8.16	317	*e*Pn		Pn	19 40 15.6	-1.2			
SFTF				*e*Sn		Sn	19 41 43.5	-5.3			
	comp=Z,505nm,1.1s										
SFTF	Sexfontaines	8.16	317	*e*Pn		Pn	19 40 15.6	-1.2			
SFTF				*e*Sn		Sn	19 41 43.5	-5.3			
PAIG	Paliouri	8.20	105	P		Pn	19 40 15.9	-1.4			
CASM	Ain Smara	8.20	223	P		Pn	19 40 17.0	-0.4			
CASM	Ain Smara	8.20	223	P		Pn	19 40 17.0	-0.4			
MTLF	Montolieu	8.22	280	*e*Pn		Pn	19 40 16.6	-1.0			
MTLF	Montolieu	8.22	280	*e*P		Pn	19 40 16.6	-1.0			
MTLF	Montolieu	8.22	280	*e*Pn		Pn	19 40 16.6	-1.0			
MOX	Moxa	8.22	352	*e*P		Pn	19 40 16.0	-1.6			
MOX				*e*			19 41 44.4				
MOX	Moxa	8.22	352	*e*Pn		Pn	19 40 16.0	-1.6			
MOX				*e*Sn		Sn	19 41 44.4	-5.8			
LOR	Lormes	8.25	308	*e*Pn		Pn	19 40 16.9	-1.1			
LOR				*e*Sn		Sn	19 41 47.2	-3.7			
	comp=Z,102nm,0.5s										
LOR	Lormes	8.25	308	*e*Pn		Pn	19 40 16.9	-1.1			
LOR				*e*Sn		Sn	19 41 47.2	-3.7			
GUR	Goura	8.25	121	P		Pn	19 40 20.1	+1.8			
GUR	Goura	8.25	121	*e*P		Pn	19 40 20.0	+1.8			
OUR	Ouranopolis	8.28	102	P		Pn	19 40 17.9	-0.5			
RAC	Raciborz	8.28	22	*e*P		Pn	19 40 21.5	+3.2			
ATAL	Atalanti	8.28	114	P		Pn	19 40 20.3	+1.8			
LKR	Lokris	8.29	115	P		Pn	19 40 19.2	+0.6			
LKR	Lokris	8.29	115	*e*P		Pn	19 40 19.1	+0.5			
AVF	Avril sur Loir	8.31	304	*e*Pn		Pn	19 40 16.5	-2.4			
AVF	Avril sur Loir	8.31	304	*e*P		Pn	19 40 16.5	-2.4			
AVF	Avril sur Loir	8.31	304	*e*Pn		Pn	19 40 16.5	-2.4			
SSF	Saint Saulge	8.35	306	*e*Pn		Pn	19 40 18.4	-1.0			
SSF	Saint Saulge	8.35	306	*e*P		Pn	19 40 18.4	-1.0			
SSF	Saint Saulge	8.35	306	*e*Pn		Pn	19 40 18.4	-1.0			
MEZF	Maizieres J'vi	8.35	319	*e*Pn		Pn	19 40 18.1	-1.3			
MEZF				*e*Sn		Sn	19 41 48.5	-5.0			
	comp=Z,98nm,0.6s										
MEZF	Maizieres J'vi	8.35	319	*e*Pn		Pn	19 40 18.1	-1.3			
MEZF				*e*Sn		Sn	19 41 48.5	-5.0			
SKIA	Skiathos	8.36	110	P		Pn	19 40 19.5	-0.1			
BRG	Berggiesshubel	8.37	3	*i* PN		Pn	19 40 18.2	-1.4			
BRG				*i*			19 41 47.9				
BRG	Berggiesshubel	8.37	3	*i* SN		Sn	19 41 54.9	+1.1			
BRG				*i* SG		Sg	19 43 04.7	+17			
	comp=Z,585nm,1.7s										
BRG											
	comp=N,2µm,9.6s										
BRG											
	comp=E,4µm,9.0s										
BRG											
	comp=Z,4µm,9.3s										
BRG	Berggiesshubel	8.37	3	*i* P		Pn	19 40 18.2	-1.4			
BRG				*i*			19 41 54.9				
BRG				smax		smax					
	comp=N,585nm,1.7s										
BRG				MLR		MLR					
	comp=N,2µm,9.6s										
BRG				MLR		MLR					
	comp=E,4µm,9.0s										
BRG				MLR		MLR					
	comp=Z,4µm,9.3s										
BRG	Berggiesshubel	8.37	3	*e*Pn		Pn	19 40 18.9	-0.7			
FBE	Freiberg	8.41	360	*e*Pn		Pn	19 40 18.8	-1.4			
FBE				*e*Sn		Sn	19 41 48.6	-6.2			
RUP	Ruppelstein	8.41	331	P		Pn	19 40 20.8	+0.5			
RUP	Ruppelstein	8.41	331	P		Pn	19 40 20.8	+0.5			
PLD	Plovdiv	8.42	89	P		Pn	19 40 21.2	+0.8			
TNS	Taunus Mts	8.42	338	*e*P		Pn	19 40 20.9	+0.5			
TNS	Taunus Mts	8.42	338	*e*Pn		Pn	19 40 20.9	+0.5			
NIE	Niedzica	8.43	33	*e*P		Pn	19 40 25.2	+4.7			
NIE	Niedzica	8.43	33	*e*P		Pn	19 40 25.2	+4.7			
ITM	Ithomi	8.47	126	P		Pn	19 40 22.9	+1.8			
ITM	Ithomi	8.47	126	*e*P		Pn	19 40 22.7	+1.6			
KAVA	Kavala	8.48	97	P		Pn	19 40 21.3	+0.2			
RZN	Rozhen	8.49	92	*i* P		Pn	19 40 22.6	+1.1			
BGF	Bois d'Agland	8.53	302	*e*Pn		Pn	19 40 21.3	-0.5			
BGF				*e*Sn		Sn	19 41 53.3	-4.4			
	comp=Z,72nm,0.5s										
BGF	Bois d'Agland	8.53	302	*e*P		Pn	19 40 21.3	-0.5			
BGF				*e*			19 41 53.3				
BGF	Bois d'Agland	8.53	302	*e*Pn		Pn	19 40 21.3	-0.5			
BGF				*e*Sn		Sn	19 41 53.3	-4.4			
CAF	Calviac	8.53	290	*e*P		Pn	19 40 22.8	+0.9			
CAF	Calviac	8.53	290	*e*P		Pn	19 40 22.8	+0.9			
CAF	Calviac	8.53	290	*e*P		Pn	19 40 22.8	+0.9			
CRVS	Cervenica-Dubn	8.54	39	*e*P		Pn	19 40 22.8	+0.8			
CRVS				MLR		MLR					
	comp=Z,700nm,2.5s										
CRVS	Cervenica-Dubn	8.54	39	*e*PN		Pn	19 40 22.8	+0.8			
CRVS				*e*			19 42 56.9				
PYL	PYLOS	8.56	128	P		Pn	19 40 22.7	+0.5			
PYL	PYLOS	8.56	128	*e*P		Pn	19 40 22.8	+0.5			
TRPA	Tarpa	8.56	46	⇓*i*P		Pn	19 40 23.3	+1.0			
TRPA	Tarpa	8.56	46	*e*pPn		Pn	19 40 25.7	+3.4			
KSP	Ksiaz	8.57	13	*e*P		Pn	19 40 22.5	+0.1			
KSP				*e*			19 41 54.5				
KSP	Ksiaz	8.57	13	*e*P		Pn	19 40 21.3	-1.1			
LTK	Loutraki	8.61	118	P		Pn	19 40 23.4	+0.4			
LTK	Loutraki	8.61	118	*e*P		Pn	19 40 24.1	+1.1			
UBBA	Unterbreizbach	8.62	346	*e*Pn		Pn	19 40 22.6	-0.4			
ARR	Arges	8.62	67	⇓*i*P		Pn	19 40 25.8	+2.6			
VLX	Vlachokerasia	8.62	124	P		Pn	19 40 25.9	+2.6			
VLX	Vlachokerasia	8.62	124	*e*P		Pn	19 40 28.2	+4.9			
AOS	Alonnisos	8.65	109	P		Pn	19 40 22.6	-0.9			
MRKA	Markates	8.66	113	P		Pn	19 40 23.8	+0.1			
WLF	Walferdange	8.72	328	P		Pn	19 40 25.2	+0.6			
WLF				SN		Sn	19 41 58.0	-4.6			
	comp=N,76nm,0.0s										
WLF	Walferdange	8.72	328	*e*P		Pn	19 40 24.7	+0.2			
WLF	Walferdange	8.72	328	*e*Pn		Pn	19 40 25.1	+0.6			
WLF				*e*Sn		Sn	19 42 02.2	-0.4			
WLF	Walferdange	8.72	328	*e*Pn		Pn	19 40 24.6	+0.2			
UZH	Uzhgorod	8.75	43	*e*P		Pn	19 40 24.0	-0.9			
UZH				*e*S		Sn	19 42 02.4	-0.8			
NEUB	Neuenburg	8.76	353	*e*Pn		Pn	19 40 24.8	-0.2			
CLL	Collm	8.80	359	*e*P		Pn	19 40 25.0	-0.5			
CLL				*e*			19 41 58.0				
CLL	Collm	8.80	359	*e*Pn		Pn	19 40 24.7	-0.8			
CLL	Collm	8.80	359	*e*Pn		Pn	19 40 25.0	-0.5			
CLL				*e*Sn		Sn	19 41 58.0	-6.4			
CLL				*e*			19 43 00.0				
CLL				*e*Sg		Sg	19 43 05.0	+4.0			
	comp=E,12µm,21.0s										
CLL				L		L	19 43 42.0				
	comp=Z,2µm,21.1s										
SET	Setif	8.81	227	P		Pn	19 40 29.0	+3.1			
SET	Setif	8.81	227	P		Pn	19 40 29.0	+3.1			
PVL	Pavlikeni	8.82	81	*i* P		Pn	19 40 25.5	-0.4			
TCF	Toulx Ste Croi	8.82	299	*e*Pn		Pn	19 40 26.6	+0.7			
TCF	Toulx Ste Croi	8.82	299	*e*P		Pn	19 40 26.6	+0.7			
TCF	Toulx Ste Croi	8.82	299	*e*Pn		Pn	19 40 26.6	+0.7			
OJC	Ojcow	8.90	28	*e*P		Pn	19 40 28.7	+1.8			
OJC	Ojcow	8.90	28	*e*P		Pn	19 40 28.7	+1.8			
VOIR		8.92	67	⇓*i*P		Pn	19 40 30.0	+2.7			
KOLS	Kolonicke sedl	8.94	41	*e*P		Pn	19 40 28.7	+1.2			
KOLS				MLR		MLR					
	comp=Z,500nm,2.0s										
KOLS	Kolonicke sedl	8.94	41	*e*PN		Pn	19 40 28.7	+1.2			
KOLS				*e*			19 43 05.4				
RJF	Les Rejaudoux	8.99	292	*e*P		Pn	19 40 29.3	+1.1			
RJF	Les Rejaudoux	8.99	292	*e*P		Pn	19 40 29.3	+1.1			
RJF	Les Rejaudoux	8.99	292	*e*P		Pn	19 40 29.3	+1.1			
DYR	Agios Nikonas	8.99	127	P		Pn	19 40 29.6	+1.3			
KDZ	Kurdzhali	9.01	91	*i* P		Pn	19 40 28.6	+0.1			
MLS	Moulis	9.04	277	P		Pn	19 40 28.8	-0.1			
MLS	Moulis	9.04	277	P		Pn	19 40 28.8	-0.1			
DID	Didima	9.08	120	P		Pn	19 40 30.6	+1.1			
DID	Didima	9.08	120	*e*P		Pn	19 40 30.4	+0.9			
DIDY	Didyma	9.08	120	P		Pn	19 40 30.4	+0.9			
NAIG	Nisos Aigina	9.10	118	*e*P		Pn	19 40 30.6	+1.0			
ATH	Athens Observa	9.13	116	*e*P		Pn	19 40 28.4	-1.7			
PTL	Penteli	9.18	116	P		Pn	19 40 31.9	+1.0			
SZH	Strazhica	9.26	81	*i* P		Pn	19 40 33.2	+1.3			
LIA	Limnos Island	9.29	102	*e*P		Pn	19 40 33.0	+0.7			
DOPR	Dopca	9.30	64	⇓*i*P		Pn	19 40 35.0	+2.6			
VLI	Veliai	9.38	125	P		Pn	19 40 36.4	+2.8			
LFF	La Frestale	9.45	289	*e*P		Pn	19 40 35.3	+0.8			
LFF	La Frestale	9.45	289	*e*P		Pn	19 40 35.3	+0.8			
LFF	La Frestale	9.45	289	*e*P		Pn	19 40 35.3	+0.8			
MEM	Membach	9.54	331	PN		Pn	19 40 36.3	+0.5			
MEM				SN		Sn	19 42 17.2	-5.5			
	comp=E,71nm,0.0s										
MLR	Muntele Rosu	9.55	68	Pn		Pn	19 40 38.2	+2.3			
MLR	Muntele Rosu	9.55	68	⇓*i*P		Pn	19 40 38.5	+2.6			
MLR	Muntele Rosu	9.55	68	Pn		Pn	19 40 38.2	+2.3			
	baz=270,slow=11										
MLR				LR		LR	19 44 30.2				
	comp=E,2µm,21.6s,baz=257,slow=39										
CLZ	Clausthal	9.55	349	*e*P		Pn	19 40 35.4	-0.4			
CLZ	Clausthal	9.55	349	*e*Pn		Pn	19 40 35.4	-0.4			
EPF	Esparros	9.59	277	*e*Pn		Pn	19 40 34.7	-1.7			
EPF				*e*Sn		Sn	19 42 17.2	-6.8			
	comp=E,39nm,0.9s										
EPF	Esparros	9.59	277	*e*P		Pn	19 40 34.7	-1.7			
EPF				*e*			19 42 17.2				
EPF	Esparros	9.59	277	*e*Pn		Pn	19 40 34.7	-1.7			
EPF				*e*Sn		Sn	19 42 17.2	-6.8			
RESF	Ens	9.60	276	P		Pn	19 40 38.4	+1.8			
RESF	Ens	9.60	276	P		Pn	19 40 38.4	+1.8			
GIVF	Givet	9.61	325	*e*Pn		Pn	19 40 37.2	+0.6			
GIVF				*e*Sn		Sn	19 42 17.8	-6.5			
	comp=E,122nm,0.8s										
GIVF	Givet	9.61	325	*e*P		Pn	19 40 37.2	+0.6			
GIVF				*e*			19 42 17.8				
GIVF	Givet	9.61	325	*e*Pn		Pn	19 40 37.2	+0.6			
GIVF				*e*Sn		Sn	19 42 17.8	-6.5			
ALN	Alexandroupoli	9.63	95	P		Pn	19 40 37.8	+0.9			
ALN	Alexandroupoli	9.63	95	*e*P		Pn	19 40 38.0	+1.1			
KWP	Kalwaria Pacla	9.63	39	*e*P		Pn	19 40 34.5	-2.4			
KWP	Kalwaria Pacla	9.63	39	*e*Pn		Pn	19 40 34.5	-2.4			
KWP	Kalwaria Pacla	9.63	39	*e*P		Pn	19 40 42.3	+5.4			
BCLA	Clavier	9.66	328	PN		Pn	19 40 37.5	+0.3			
BCLA				SN		Sn	19 42 19.7	-5.8			
	comp=E,30nm,0.0s										
HGN	Heimansgroeve	9.70	331	*e*P		Pn	19 40 38.5	+0.7			
	comp=E,21nm,0.6s										
HGN				*e*S		Sn	19 42 23.6	-2.8			
DOU	Dourbes	9.70	324	PN		Pn	19 40 39.0	+1.1			
DOU				SN		Sn	19 42 21.4	-5.2			
	comp=E,37nm,0.0s										
KYTH	Kithira	9.74	127	P		Pn	19 40 41.0	+2.5			
KYTH	Kithira	9.74	127	*e*P		Pn	19 40 41.6	+3.1			
ENEZ	Enez	9.75	96	*e*P		Pn	19 40 39.4	+0.8			
ALAS	Alassa	9.76	189	*i* P		Pn	19 40 43.9	+5.2			
	comp=E,379nm,1.5s,SNR=46										
JMB	Yambol	9.77	86	P		Pn	19 40 39.7	+0.8			
BURAR	Bucovina Array	9.81	55	⇓*i*P		Pn	19 40 42.0	+2.4			
BUR08	Bucovina Ar. S	9.82	54	*e*P		Pn	19 40 41.7	+2.1			
BAIF	Baives	9.84	323	*e*Pn		Pn	19 40 40.2	+0.4			
BAIF				*e*Sn		Sn	19 42 22.9	-7.1			
	comp=E,94nm,0.7s										
BAIF	Baives	9.84	323	*e*P		Pn	19 40 40.2	+0.4			
BAIF				*e*			19 42 22.9				
BAIF	Baives	9.84	323	*e*Pn		Pn	19 40 40.2	+0.4			
BAIF				*e*Sn		Sn	19 42 22.9	-7.1			
EDRB	Edirne	9.96	89	*e*P		Pn	19 40 41.2	-0.2			
GELI	Tayfur-Gelibol	10.07	98	*e*P		Pn	19 40 42.8	-0.2			
PLOR	Plostina	10.11	66	⇑*i*P		Pn	19 40 45.3	+1.7			
EZN	Ezine	10.14	101	*e*P		Pn	19 40 43.3	-0.6			
SNF	Seneffe	10.14	325	P		Pn	19 40 45.1	+1.2			
VRI	Vrincioaia	10.17	66	⇑*i*P		Pn	19 40 46.2	+1.9			
EMHD	Djebel Mahouad	10.23	235	P		Pn	19 40 49.1	+3.8			
EMHD	Djebel Mahouad	10.23	235	P		Pn	19 40 49.1	+3.8			
GRER		10.23	69	⇑*i*P		Pn	19 40 48.2	+3.1			
ETSF	Etsaut	10.25	277	*e*Pn		Pn	19 40 45.9	+0.3			
ETSF	Etsaut	10.25	277	*e*P		Pn	19 40 45.9	+0.3			
ETSF	Etsaut	10.25	277	*e*Pn		Pn	19 40 45.9	+0.3			
LMSR	Misrath	10.27	172	*i* P		Pn	19 40 48.7	+3.0			
	comp=E,128nm,1.1s,SNR=46										
LPK	Lapseki	10.29	98	*e*P		Pn	19 40 46.8	+0.8			
TESR		10.30	63	⇑*i*P		Pn	19 40 48.5	+2.4			
PRK	Paraskevi	10.31	104	P		Pn	19 40 46.6	+0.3			
PRK	Paraskevi	10.31	104	*e*P		Pn	19 40 40.6	-5.7			
GHAR	Gharyan	10.38	181	*i* P		Pn	19 40 52.1	+4.8			
	comp=E,210nm,1.5s,SNR=46										
GHAR				*e*S		Sn	19 42 48.6	+5.2			
	SNR=48										
LVV	L'vov	10.39	42	⇑*i*P		Pn	19 40 50.9	+3.6			
LVV				*e*S		Sn	19 42 53.1	+10			
LVV				pmax		pmax					
	comp=Z,1µm,2.4s										
LVV				MLR		MLR					
	comp=N,2µm,10.0s										
LVV				MLR		MLR					
	comp=E,2µm,10.0s										
LVV				MLR		MLR					
	comp=E,3µm,10.0s										
WTSB	Winterswijk	10.45	337	*e*P		Pn	19 41 01.3	+13			
	comp=Z,16nm,0.6s										
WTSB				*e*S		Sn	19 42 57.8	+13			
MFF	Saint Martin d	10.46	298	*e*P		Pn	19 40 51.6	+3.2			
MFF	Saint Martin d	10.46	298	*e*P		Pn	19 40 51.6	+3.2			
MFF	Saint Martin d	10.46	298	*e*Pn		Pn	19 40 51.6	+3.2			
RKY	Sarkoy-Tekirda	10.51	95	*e*P		Pn	19 40 50.5	+1.4			
CHOS	Chios island	10.52	109	P		Pn	19 40 50.1	+0.9			
CHOS	Chios island	10.52	109	*e*P		Pn	19 40 49.9	+0.7			
MFT	Murefte	10.56	95	*e*P		Pn	19 40 50.8	+1.0			
AYVA	Ayvalik	10.59	103	*i* P		Pn	19 40 52.0	+2.0			
AYVA	Ayvalik	10.59	103	*i* P		Pn	19 40 52.0	+2.0			
BEL	Belsk	10.60	26	*e*P		Pn	19 40 54.9	+4.7			
KRBG	Karabiga-Canak	10.68	97	*e*P		Pn	19 40 52.9	+1.6			
SJPF	Ste Jean	10.73	278	*e*Pn		Pn	19 40 51.4	-0.7			
SJPF	Ste Jean	10.73	278	*e*P		Pn	19 40 51.4	-0.7			
SJPF	Ste Jean	10.73	278	*e*Pn		Pn	19 40 51.4	-0.7			
CRLT	Corlu	10.82	93	*e*P		Pn	19 40 54.8	+1.5			
APE	Apeiranthos	10.83	116	*e*P		Pn	19 40 56.3	+2.9			
APE	Apeiranthos	10.83	116	⇑*i*P		Pn	19 40 56.0	+2.6			
APE	Apeiranthos	10.83	116	*e*P		Pn	19 40 53.5	+0.1			
VAM	Vamos	11.02	127	*e*P		Pn	19 40 58.4	+2.4			
EBNR	Beni Rached	11.06	240	P		Pn	19 40 57.0	+0.4			
EBNR	Beni Rached	11.06	240	P		Pn	19 40 57.0	+0.4			
GONE	Gonen-Balikesi	11.06	98	*e*P		Pn	19 40 58.4	+1.9			
GKP	Gorka Klasztor	11.07	12	*e*P		Pn	19 40 57.4	+0.8			
EDC	Edincik	11.11	96	*e*P		Pn	19 41 01.5	+4.3			
BALY	Balya	11.11	100	*i* P		Pn	19 40 56.1	-1.2			
BALY	Balya	11.11	100	*i* P		Pn	19 40 56.1	-1.2			
TIRR	Tirgusor	11.11	75	⇓*i*P		Pn	19 41 01.0	+3.8			
SLVT	Silivri	11.15	92	*e*P		Pn	19 40 59.8	+2.0			
CTYL	Yal??k??y-??at	11.16	90	*e*P		Pn	19 40 58.9	+1.0			
BLCB	Balcova	11.21	107	*e*P		Pn	19 41 01.2	+2.6			
LDF	La Druitiere	11.23	307	*e*Pn		Pn	19 40 58.2	-0.6			
LDF	La Druitiere	11.23	307	*e*P		Pn	19 40 58.2	-0.6			
LDF	La Druitiere	11.23	307	*e*Pn		Pn	19 40 58.2	-0.6			
ECHA	Ech Chlef	11.25	240	P		Pn	19 41 00.0	+0.9			
ECHA	Ech Chlef	11.25	240	P		Pn	19 41 00.0	+0.9			
IZM	Izmir	11.36	107	*e*P		Pn	19 41 05.2	+4.4			
CTKS	Kestan

comp=Z,149nm,1.4s,SNR=45
ANTB Antalya 14.44 107 *e*P **P 19 41 48.4 -1.1**
SAFT Safranbolu 14.46 89 *e*P **P 19 41 47.7 -2.0**
MELI Melilla 14.58 246 *i* P **Pn 19 41 44.3 -0.3**
MELI *i* S S 19 44 37.9 -7.3
KDHN Kadinhani 14.81 99 *i* P **Pn 19 41 48.2 +0.3**
LOD Lodumlu 14.84 94 *e*P **Pn 19 41 47.0 -1.3**
EMAL Malaga-Limoner 14.85 253 *i* P **Pn 19 41 47.4 -0.9**
EMAL *i* S **S 19 44 56.5 +5.7**
BALT Daday 14.92 87 *i* P Pn 19 41 45.3 -4.2
PBRG Braganca 14.93 274 *e*P **Pn 19 41 51.2 +1.8**
comp=Z,77nm,1.7s
PBRG Braganca 14.93 274 *e*P **Pn 19 41 51.2 +1.8**
comp=Z,77nm,1.7s
LADK Ladik-KONYA 15.11 100 *e*P **Pn 19 41 54.5 +2.5**
NACGM Naroch 15.20 31 *e*P **Pn 19 41 51.0 -1.8**
AFSR Afʿar-Bala (A 15.20 95 *e*P **Pn 19 41 55.1 +2.0**
SIM Simferopol' 15.20 74*d i*P **Pn 19 41 54.0 +1.0**
SIM *e*S **Sn 19 44 41.0 0.0**
SIM pmax pmax
comp=Z,20nm,1.0s
SIM MLR MLR
comp=Z,1μm,18.4s
BBAL Bala 15.21 95 *i* P **Pn 19 41 54.7 +1.5**
KONT Konya--Tatoy 15.21 101 *e*P **Pn 19 41 55.0 +1.9**
MVO Moncorvo 15.26 272 *e*P **Pn 19 41 54.0 +0.2**
comp=Z,70nm,1.9s
MVO *e*LR LR 19 46 01.0
comp=Z,1μm,18.0s
MVO Moncorvo 15.26 272 *e*P **Pn 19 41 54.0 +0.2**
comp=Z,70nm,1.9s
ILGA Ilgaz 15.26 89 *i* P **P 19 42 01.5 +2.6**
CANT Cankiri 15.29 90 *e*P **P 19 41 56.6 -2.4**
BZK Bozkurt 15.30 85 *e*P **Pn 19 41 54.8 +0.5**
MNK Minsk 15.32 34*de*P **Pn 19 41 51.0 -3.4**
MNK *e*S **Sn 19 44 38.0 -5.7**
MNK pmax pmax
comp=Z,310nm,2.0s
MNK pmax pmax
comp=N,540nm,2.0s
MNK pmax pmax
comp=E,440nm,2.0s
MNK MLR MLR
comp=Z,6μm,8.0s
MNK MLR MLR
comp=N,5μm,7.0s
MICGM Minsk 15.34 34‖ *e*P **Pn 19 41 51.0 -3.7**
IIGN Ignalina 15.34 29 *e*P **Pn 19 41 54.5 -0.2**
IIGN AMB AMB 19 42 04.3
comp=Z,60nm,1.1s
IIGN *e*S **S 19 45 00.5 -0.1**
ISAL Salakas 15.48 28 *e*P **Pn 19 41 56.6 0.0**
ISAL AMB AMB 19 42 05.8
comp=Z,31nm,1.7s
BR131 Keskin Array S 15.54 94 *e*P **Pn 19 41 59.0 +1.5**
comp=Z,22nm,0.8s
BRTR Keskin Array B 15.54 94 Pn **Pn 19 41 58.5 +1.0**
BRTR Keskin Array B 15.54 94 Pn **Pn 19 41 58.5 +1.0**
comp=Z,0.1nm,0.3s,baz=286,slow=11,SNR=10
BRTR LR LR 19 48 43.1
comp=Z,1μm,20.0s,baz=286,slow=40
IZAR Zarasai 15.66 28 *e*P **Pn 19 41 58.7 -0.2**
IZAR AMB AMB 19 42 07.8
comp=Z,35nm,1.1s
KAMT Kaman 15.70 95 *e*P **P 19 42 02.9 -0.7**
POLO Lamas de Olo 15.78 273 *e*P **P 19 42 04.4 -0.1**
comp=Z,54nm,1.6s
POLO Lamas de Olo 15.78 273 *e*P **P 19 42 04.4 -0.1**
comp=Z,54nm,1.6s
MTE Manteigas 15.81 269 *e*P **P 19 42 05.2 +0.4**
comp=Z,83nm,1.5s
MTE *e*LR LR 19 46 25.6
comp=Z,2μm,20.0s
MTE Manteigas 15.81 269 *e*P **P 19 42 05.2 +0.4**
comp=Z,83nm,1.5s
GAZI Gazipasa 15.93 107 *i* P **Pn 19 42 03.6 +1.0**
SULT Sultanhani-AKS 15.95 99 *e*P **P 19 42 05.8 -0.7**
PMRV Marv??o 15.97 266 *e*P **Pn 19 42 04.1 +1.1**
PMRV *e*LR LR 19 46 32.6
comp=Z,1μm,18.0s
PMRV Marv??o 15.97 266 *e*P **Pn 19 42 04.1 +1.1**
PGAV Gavieira, Arco 16.03 275 *e*P P 19 42 13.0 +5.8
comp=Z,184nm,1.8s
PGAV *e*LR LR 19 46 46.2
comp=Z,3μm,18.0s
CDAG Cicekdag 16.11 93 *i* P **P 19 42 07.0 -1.1**
PBAR Barrancos 16.14 261 *e*P **P 19 42 09.7 +1.3**
comp=Z,104nm,1.7s
PBAR Barrancos 16.14 261 *e*P **P 19 42 09.7 +1.3**
comp=Z,104nm,1.7s
CORM Corum 16.14 91 *e*P **P 19 42 07.6 -0.9**
SFS San Fernando 16.25 255 *i* P **Pn 19 42 07.4 +0.8**
SFS *e*S **Sn 19 45 10.6 +4.0**
DIKM Dikmen 16.28 86 *e*P **P 19 42 10.0 +0.1**
PESTR Estremoz 16.30 264 *e*P **Pn 19 42 08.4 +1.2**
comp=Z,64nm,1.6s
PESTR Estremoz 16.30 264 *e*P **Pn 19 42 08.4 +1.2**
comp=Z,64nm,1.6s
LUMB Murzuk 16.38 176 *i* P **P 19 42 13.0 +1.9**
comp=Z,275nm,1.6s,SNR=42
PTOM Tomar 16.66 267 *e*P **Pn 19 42 12.2 +0.3**
comp=Z,92nm,1.5s
PTOM Tomar 16.66 267 *e*P **Pn 19 42 12.2 +0.3**
comp=Z,92nm,1.5s
PMTG Montargil 16.70 265 *e*P **P 19 42 16.4 +1.8**
comp=Z,132nm,1.6s
PMTG Montargil 16.70 265 *e*P **P 19 42 16.4 +1.8**
comp=Z,132nm,1.6s
EVO Evora 16.72 263 *e*P **P 19 42 18.0 +3.2**
comp=Z,52nm,1.6s
EVO Evora 16.72 263 *e*P **P 19 42 18.0 +3.2**
comp=Z,52nm,1.6s
EKA Eskdalemuir Ar 16.74 326 Pn **Pn 19 42 11.9 -0.9**
EKA Eskdalemuir Ar 16.74 326 Pn **Pn 19 42 11.9 -0.9**
baz=137,slow=13,SNR=8.2
LEF Lefka 16.90 109 *e*P **Pn 19 42 13.2 -1.6**
PVAQ Vaqueiros 16.93 259 *e*P **P 19 42 19.2 +2.0**
comp=Z,64nm,1.6s
PVAQ *e*LR LR 19 46 55.4
comp=Z,2μm,18.0s
PVAQ Vaqueiros 16.93 259 *e*P **P 19 42 19.2 +2.0**
comp=Z,64nm,1.6s
KVT Kavak 16.98 87 *e*P **P 19 42 17.8 +0.1**
PCVE Castro Verde 17.07 261 *e*P **P 19 42 22.9 +4.1**
comp=Z,71nm,1.8s
PCVE Castro Verde 17.07 261 *e*P **P 19 42 22.9 +4.1**
comp=Z,71nm,1.8s
MESJ Messejana 17.13 261 *e*P **P 19 42 18.6 -0.7**
MESJ AMb AMB 19 42 32.1
comp=Z,53nm,1.7s
MESJ *e*S **Sn 19 45 30.2 +2.4**
MESJ Messejana 17.13 261 *e*P **P 19 42 18.6 -0.7**
comp=Z,53nm,1.7s
MESJ *e*S **Sn 19 45 30.3 +2.4**
MESJ Messejana 17.13 261 *e*P **P 19 42 18.5 -0.7**
MESJ *e*S **Sn 19 45 30.2 +2.4**
MESJ Messejana 17.13 261 *e*P **P 19 42 18.6 -0.7**
comp=Z,53nm,1.7s
MESJ *e*S **Sn 19 45 30.3 +2.4**
PBDV Barranco-do-Ve 17.15 259 *e*P P 19 42 25.0 +5.3
comp=Z,92nm,1.6s
PBDV Barranco-do-Ve 17.15 259 *e*P P 19 42 25.0 +5.3
comp=Z,92nm,1.6s
MDT Midelt 17.18 242 P **Pn 19 42 17.9 -0.6**
MDT Midelt 17.18 242 P **Pn 19 42 17.9 -0.6**
comp=Z,0.1nm,0.3s,baz=54,slow=12,SNR=3.2
MDT LR LR 19 48 44.1
comp=Z,346nm,20.6s,baz=44,slow=37
MERS Mersin 17.22 102 *e*P **Pn 19 42 18.9 -0.1**
PNCL Nicolau / Gran 17.25 263 *e*P P 19 42 27.6 +6.9
comp=Z,43nm,1.6s
PNCL Nicolau / Gran 17.25 263 *e*P P 19 42 27.6 +6.9
comp=Z,43nm,1.6s
LFK Lefkose 17.27 108 *e*P **Pn 19 42 17.0 -2.5**
CSS Prodhromos 17.29 109 *e*P **Pn 19 42 17.9 -1.9**
CSS Prodhromos 17.29 109 *e*P **Pn 19 42 19.3 -0.5**
comp=Z,72nm,1.2s
KONO Kongsberg 17.31 354 *e*P **P 19 42 20.6 -0.6**
KONO pmax pmax
comp=Z,355nm,2.3s
KONO Kongsberg 17.31 354 *e*P **P 19 42 20.6 -0.6**
comp=Z,355nm,2.3s
LIS Lisbon 17.49 265 *e*P **Pn 19 42 22.5 +0.2**
LIS AMb AMB 19 42 27.7
comp=Z,100nm,1.2s
LIS Lisbon 17.49 265 *e*P **Pn 19 42 22.5 +0.2**
comp=Z,100nm,1.2s
LIS Lisbon 17.49 265 *e*P **Pn 19 42 22.5 +0.2**
comp=Z,100nm,1.2s
ANN Anapa 17.56 74*c i*P **Pn 19 42 22.1 -0.9**
ANN *e*S **Sn 19 45 40.9 +2.7**
ANN pmax pmax
comp=Z,127nm,1.5s
ANN MLR MLR
comp=Z,2μm,13.0s
EREN Erenkoy 17.59 106 *e*P **P 19 42 26.1 +1.6**
MORF Marmelete 17.65 260 *e*P P 19 42 31.1 +5.9
comp=Z,96nm,1.7s
MORF Marmelete 17.65 260 *e*P **P 19 42 25.2 0.0**
MORF *e*S **Sn 19 45 42.8 +2.2**
MORF Marmelete 17.65 260 *e*P P 19 42 31.1 +5.9
comp=Z,96nm,1.7s
PFVI Vila Bisbo 17.85 260 *e*P **P 19 42 28.9 +1.6**
comp=Z,127nm,1.5s
PFVI Vila Bisbo 17.85 260 *e*P **P 19 42 28.9 +1.6**
comp=Z,127nm,1.5s
KOZT Kozan 17.92 99 *e*P **P 19 42 28.8 +0.7**
KRTS Karatas 17.97 102 *e*P **P 19 42 29.6 +1.0**
CEYT Ceyhan 18.05 100 *e*P **P 19 42 30.6 +1.1**
RSDY Resadiye-TOKAT 18.08 89 *e*P **P 19 42 30.6 +0.7**
SARI SarD1z-Kayseri 18.12 94 *e*P **P 19 42 30.9 +0.4**
ANDN Andirin 18.26 98 *i* P **P 19 42 34.0 +2.1**
ANDN Andirin 18.26 98 *i* P **P 19 42 34.0 +2.1**
NAO01 NORSAR Array S 18.42 356 *e*P **P 19 42 32.8 -0.6**
comp=Z,26nm,0.8s
VAL Valentia 18.52 309 *e*P P 19 42 29.1 -5.5
NB2 NORSAR Subarra 18.60 357 P **Pn 19 42 35.5 -0.2**
comp=Z,19nm,0.8s,baz=176,slow=10
NB2 NORSAR Subarra 18.60 357 P **Pn 19 42 35.5 -0.2**
comp=Z,19nm,0.8s,SNR=6.4
NOA NORSAR Array B 18.60 357 P **Pn 19 42 35.4 -0.2**
NOA NORSAR Array B 18.60 357 P **Pn 19 42 35.4 -0.2**
comp=Z,0.9nm,0.3s,baz=186,slow=11,SNR=23
NOA LR LR 19 49 44.5
comp=Z,1μm,21.4s,baz=175,slow=37
KMRS Kahramanmaras 18.69 98 *e*P **Pn 19 42 37.1 0.0**
DARE Darende-Malaty 18.85 93 *e*P **Pn 19 42 39.1 +0.1**
SOC Sochi 19.27 78 *e*P **Pn 19 42 43.6 -0.3**
SOC *e* 19 46 22.4
SOC pmax pmax
comp=Z,72nm,1.0s
SOC MLR MLR
comp=E,85nm,14.0s
SOC MLR MLR
comp=N,658nm,14.0s
SOC MLR MLR
comp=Z,821nm,14.0s
MALT Malatya 19.52 94 *e*P **Pn 19 42 47.6 +0.5**
MALT pmax pmax
comp=Z,76nm,1.3s
MALT Malatya 19.52 94 *e*P **Pn 19 42 47.6 +0.5**
comp=Z,76nm,1.3s
MALT Malatya 19.52 94⇑ *i*P **Pn 19 42 47.9 +0.8**
MALT Malatya 19.52 94 *e*P **Pn 19 42 47.7 +0.6**
VSR Storozhevoye 19.59 55 *e*P **P 19 42 45.5 -0.8**
VSR pmax pmax
comp=Z,50nm,0.9s
VSR pmax pmax
comp=N,40nm,1.2s
VSR pmax pmax
comp=E,130nm,1.2s
VSR MLR MLR
comp=Z,3μm,21.0s
VSR MLR MLR
comp=N,690nm,10.0s
VSR MLR MLR
comp=E,2μm,17.0s
VORD Divnogorie 19.60 56 *e*P **Pn 19 42 47.2 -0.6**
VORD pmax pmax
comp=Z,60nm,1.0s
VORD pmax pmax
comp=N,80nm,0.6s
VORD pmax pmax
comp=E,70nm,0.6s
OBN Obninsk 19.70 42⇑ *i*P **P 19 42 47.3 -0.1**
OBN *i* S **S 19 46 26.9 -2.0**
OBN pmax pmax
comp=Z,240nm,2.5s
OBN MLR MLR
comp=Z,2μm,21.0s
OBN Obninsk 19.70 42 *e*P **P 19 42 47.4 -0.1**
comp=Z,36nm,0.7s
OBN Obninsk 19.70 42 P **P 19 42 47.5 +0.1**
comp=Z,335nm,1.0s,SNR=11
VOR Voronezh 19.76 53 *e*P **P 19 42 48.0 -0.2**
VOR pmax pmax
comp=Z,350nm,2.0s
MMAI Mount Meron Ar 19.80 111 P **P 19 42 49.4 +0.6**
MMAI Mount Meron Ar 19.80 111 P **P 19 42 49.4 +0.6**
comp=Z,1.6nm,0.3s,baz=312,slow=10.0,SNR=15
KSDI Kefar Szold 19.87 111 *e*P **Pn 19 42 51.8 +0.6**
FINES FINESS Array B 20.44 18 P **P 19 42 54.5 -1.0**
FINES FINESS Array B 20.44 18 P **P 19 42 54.5 -1.0**
comp=Z,24nm,0.9s,baz=196,slow=9.7,SNR=30
MOS Moscow 20.53 42 *e*P **P 19 42 54.0 -2.5**
MOS *e* 19 43 12.1
MOS *e*S **S 19 46 44.0 -1.5**
MOS *e* 19 47 01.5
MOS pmax pmax
comp=Z,181nm,1.5s
MOS pmax pmax
comp=Z,1μm,3.5s
MOS MLR MLR
comp=Z,2μm,18.0s
MOS MLR MLR
comp=N,1μm,19.0s
MOS MLR MLR
comp=E,2μm,17.0s
TAM Tamanrasset 20.73 201 *e*P Pn 19 43 00.9 -0.6
TAM pmax pmax
comp=Z,371nm,2.0s
TAM Tamanrasset 20.73 201 *e*P Pn 19 43 00.9 -0.5
comp=Z,371nm,2.0s
VRHR Novokhopersk 21.06 56 *e*P **P 19 43 03.3 +1.0**
VRHR *e* 19 43 21.1
VRHR *e*S **S 19 46 52.2 -4.0**
VRHR pmax pmax
comp=N,30nm,0.8s
VRHR pmax pmax
comp=E,40nm,0.8s
VRHR pmax pmax
comp=Z,80nm,0.8s
VRHR pmax pmax
comp=N,70nm,1.4s
VRHR pmax pmax
comp=E,130nm,1.4s
VRHR pmax pmax
comp=Z,130nm,1.4s
VRHR smax smax
comp=N,170nm,2.4s
VRHR smax smax
comp=E,220nm,2.4s
VRHR smax smax
comp=Z,60nm,2.4s
VRHR MLR MLR
comp=E,1μm,14.0s
VRHR MLR MLR
comp=Z,2μm,14.0s
VRHR MLR MLR
comp=N,400nm,10.0s
KAF Kangasniemi 21.09 17 *e*P **P 19 43 00.4 -2.0**
KAF pmax pmax
comp=Z,20nm,0.7s
KAF Kangasniemi 21.09 17 *e*p **P 19 43 00.4 -2.0**
comp=Z,20nm,0.7s
ASF Jabal al Asfar 21.31 111 P **P 19 43 07.2 +2.0**
ASF Jabal al Asfar 21.31 111 P **P 19 43 07.2 +2.0**
comp=Z,17nm,1.1s,baz=153,slow=4.4,SNR=15
ASF LR LR 19 52 33.1
comp=Z,402nm,18.9s,baz=353,slow=40
KIV Kislovodsk 21.37 76 *e*P **P 19 43 07.0 +1.2**
KIV *e*S **S 19 47 02.8 +0.2**
KIV pmax pmax
comp=Z,85nm,1.1s
KIV MLR MLR
comp=Z,666nm,15.0s
KIV Kislovodsk 21.37 76 *e*P **P 19 43 07.2 +1.3**
comp=Z,115nm,1.2s
KIV Kislovodsk 21.37 76 P **P 19 43 08.2 +2.4**
SNR=12
KIV Kislovodsk 21.37 76 P **P 19 43 07.5 +1.7**
comp=Z,423nm,1.0s,SNR=11
KBZ Khabaz 21.55 77 P **P 19 43 09.1 +1.5**
KBZ Khabaz 21.55 77 P **P 19 43 09.1 +1.5**
KBZ Khabaz 21.55 77 P **P 19 43 09.1 +1.5**
comp=Z,27nm,0.8s,baz=278,slow=12,SNR=23
EIL Elat 21.58 119 P **P 19 43 09.9 +1.9**
EIL Elat 21.58 119 P **P 19 43 09.9 +1.9**
comp=Z,5.8nm,0.9s,baz=342,slow=11,SNR=7.1
ONI Oni 22.12 80 P **P 19 43 17.2 +3.3**
AKH Akhalkalaki 22.39 83 P **P 19 43 20.2 +3.4**
ZEI Tsey 22.41 79 *e*P **P 19 43 18.9 +1.7**
ZEI pmax pmax
comp=Z,65nm,1.9s
GOR Gori 22.71 81 P **P 19 43 23.9 +3.8**
JOF Joensuu 22.99 21 *e*P **P 19 43 21.9 -0.9**
JOF pmax pmax
comp=Z,14nm,0.6s
JOF Joensuu 22.99 21 *e*p **P 19 43 21.9 -0.9**
comp=Z,14nm,0.6s
TBLG Delisi 23.23 81 P **P 19 43 28.7 +3.2**
GNI Garni 23.62 85 *e*P **P 19 43 32.8 +3.3**
comp=Z,86nm,1.3s
GNI Garni 23.62 85 P **P 19 43 33.5 +4.0**
SNR=14
GNI Garni 23.62 85 P **P 19 43 31.5 +1.9**
comp=Z,21nm,0.9s,baz=289,slow=2.7,SNR=13
GNI Garni 23.62 85 P **P 19 43 30.8 +1.3**
SNR=15
DGRG David-gareji 23.75 82 P **P 19 43 34.8 +4.1**
KLMR Klimovskoe 24.22 32*c i*P **P 19 43 34.5 -0.3**
KLMR *e**PP pP 19 43 44.0 +4.8
KLMR *e*S **S 19 47 48.9 -3.5**
KLMR pmax pmax
comp=Z,115nm,2.2s
KLMR MLR MLR
comp=Z,766nm,11.0s
MAK Makhachkala 24.99 77 *e*P **P 19 43 44.3 +2.4**
MAK *e* 19 44 12.1
MAK *e*SSS SSS 19 49 04.9
MAK pmax pmax
comp=Z,188nm,0.9s
MAK MLR MLR
comp=Z,1μm,13.0s
TMCR Tamitsa 25.89 25 *e*P **P 19 43 49.4 -0.5**
TMCR pmax pmax
comp=Z,41nm,1.0s
BHD Baghdad 26.04 100 *i* x **P 19 43 53.0 +1.4**
BHD *i* x x 19 47 32.0
BHD *i* x x 19 52 17.5
BHD *i* x x 19 53 49.5
APA Apatity 27.34 17‖ *i*P P 19 44 10.2 +7.3
APA MLR MLR
comp=Z,2μm,18.0s
ARCES ARCESS Array B 27.81 9 P **P 19 44 06.9 -0.2**
ARCES ARCESS Array B 27.81 9 P **P 19 44 06.9 -0.2**
comp=Z,8.0nm,1.1s,baz=185,slow=7.1,SNR=9.2
KEV Kevo 28.20 10 *e*P **P 19 44 13.2 +2.6**
KEV Kevo 28.20 10 *e*p **P 19 44 13.2 +2.6**
comp=Z,0.4nm,0.4s
BORG Borgarnes 29.66 330 LR LR 19 57 27.1
comp=Z,835nm,18.8s,baz=34,slow=39
MIB Mutribah 30.02 104 *e*P **P 19 44 27.8 +0.6**
MIB AMb AMB 19 44 30.2
comp=Z,141nm,1.0s
MIB Mutribah 30.02 104 *e*P **P 19 44 27.8 +0.6**
comp=Z,141nm,1.0s
NAY Al-Naaiem 30.27 105 *e*P **P 19 44 29.6 +0.2**
NAY AMb AMB 19 44 34.9
comp=Z,31nm,1.2s
UMR Umm Al-Rimmam 30.43 104 *e*P **P 19 44 31.8 +1.0**
UMR AMb AMB 19 44 33.8
comp=Z,96nm,1.2s
JMIC Jan Mayen 30.57 346 LR LR 19 57 09.4
comp=Z,463nm,19.9s,baz=138,slow=37
TOA0 Torodi Ar. Sit 30.96 203 *e*P **P 19 44 35.8 +0.2**
TORD Torodi Ar. Bea 30.96 203 P **P 19 44 36.1 +0.6**
TORD PcP **PcP 19 47 31.7 0.0**
TORD Torodi Ar. Bea 30.96 203 P **P 19 44 36.1 +0.6**
comp=Z,19nm,0.9s,baz=15,slow=9.0,SNR=74
TORD PcP **PcP 19 47 31.7 0.0**
comp=Z,1.2nm,0.8s,baz=12,slow=2.8,SNR=2.7
TORD LR LR 19 58 02.5
comp=Z,858nm,19.6s,baz=25,slow=38
AKTO Aktyubinsk 31.36 60 *i* P **P 19 44 38.4 -0.4**
AKTO pmax pmax
comp=Z,4.0nm,2.2s
AKTO Aktyubinsk 31.36 60 P **P 19 44 38.9 +0.2**
AKTO Aktyubinsk 31.36 60 P **P 19 44 38.9 +0.2**
comp=Z,1.9nm,0.6s,baz=271,slow=8.6,SNR=9.6
AKTO LR LR 19 58 59.6
comp=Z,733nm,19.3s,baz=106,slow=40
SOKR Solikamsk 31.48 42*c i*P **P 19 44 41.5 +1.8**
SOKR S **S 19 49 45.1 -1.8**
SOKR pmax pmax
comp=Z,10.0nm,0.8s
SOKR MLR MLR
comp=Z,2μm,22.0s
ARU Arti 31.87 48*d i*P **P 19 44 42.7 -0.5**
ARU 19 45 45.3
ARU 19 47 32.8
ARU S **S 19 49 52.0 -1.2**
ARU pmax pmax
comp=Z,98nm,1.7s
ARU MLR MLR
comp=Z,2μm,15.0s
ARU Arti 31.87 48 *e*P **P 19 44 42.2 -1.0**
comp=Z,67nm,1.1s
ARU Arti 31.87 48 P **P 19 44 42.5 -0.7**
comp=Z,308nm,0.7s,SNR=21
ARU Arti 31.87 48 PcP **PcP 19 47 32.8 -0.7**
AB31 Akbulak array 32.69 62*ce*P **P 19 44 50.4 -0.1**
AB31 pmax pmax
comp=Z,4.0nm,0.8s
ABKAR Akbulak array 32.69 62 *e*P **P 19 44 50.3 -0.2**
comp=Z,2.2nm,0.6s
SVE Sverdlovsk 33.05 48‖ *e*P **P 19 44 54.1 +0.6**
SVE *e*S **S 19 50 16.2 +4.6**
SVE *e* 19 52 13.1
SVE pmax pmax
comp=Z,72nm,1.5s
SVE MLR MLR
comp=Z,2μm,15.0s
SPITS Spitsbergen Ar 35.80 1 P **P 19 45 16.9 -0.2**
SPITS Spitsbergen Ar 35.80 1 P **P 19 45 16.9 -0.2**
comp=Z,8.1nm,0.8s,baz=191,slow=7.9,SNR=7.1
SPITS LR LR 19 59 55.3
comp=Z,847nm,20.3s,baz=190,slow=36
DAG Danmarks Havn 36.91 348⇑ *i*P **P 19 45 27.3 +0.7**
DAG pmax pmax
comp=Z,8.0nm,0.9s
DAG Danmarks Havn 36.91 348 *i* P **P 19 45 26.7 +0.1**
comp=Z,9.1nm,0.9s
BRVK Borovoye 38.70 54*c i*P **P 19 45 43.1 +1.0**
BRVK pmax pmax
comp=Z,45nm,1.7s
BRVK Borovoye 38.70 54 *e*P **P 19 45 42.8 +0.8**
comp=Z,18nm,0.9s
BRVK Borovoye 38.70 54 P **P 19 45 43.6 +1.6**
SNR=16
BRVK Borovoye 38.70 54 P **P 19 45 43.0 +1.0**
comp=Z,117nm,1.0s,SNR=13
BANOM Banah 38.73 101 P **P 19 45 43.5 +0.9**
SNR=8.0
SUMG Summit 38.76 338 *e*P **P 19 45 43.7 +1.0**
SUMG Summit 38.76 338 *i* P **P 19 45 43.7 +1.0**
BVA0 Borovoye Array 38.77 54 *i* P **P 19 45 42.0 -0.6**
BVA0 pmax pmax
comp=Z,10.0nm,2.5s
BVAR Borovoye Array 38.77 54 P **P 19 45 43.3 +0.7**
BVAR Borovoye Array 38.77 54 P **P 19 45 43.3 +0.7**
BVAR Borovoye Array 38.77 54 P **P 19 45 43.3 +0.7**
comp=Z,2.7nm,0.7s,baz=247,slow=7.8,SNR=16
BVAR LR LR 20 02 39.7
comp=Z,1μm,18.1s,baz=276,slow=38
ASUD Al Ashush, Dub 38.80 104 P **P 19 45 44.6 +1.4**
SNR=7.9
ASUD Al Ashush, Dub 38.80 104 P **P 19 45 43.6 +0.4**
SNR=13
NAZ Nazwa, Dubai 38.82 103 P **P 19 45 44.3 +1.0**
SNR=14
NAZ Nazwa, Dubai 38.82 103 P **P 19 45 43.1 -0.2**
SNR=19
FAQ Al Faqa, Dubai 38.92 103 P **P 19 45 44.2 0.0**
SNR=13

DBIC **Dimbokro** **39.17 209** *e*P **P** **19 45 45.1 -1.2**
comp=Z,24nm,1.1s
DBIC **Dimbokro** **39.17 209** P **P** **19 45 46.2 0.0**
comp=Z,20nm,1.0s,baz=7.2,slow=9.7,SNR=12
DBIC LR LR 20 02 20.4
comp=Z,710nm,20.3s,baz=0.7,slow=37
HATD **Hatta, Dubai** **39.26 103** P **P** **19 45 47.4 +0.4**
SNR=11
HATD **Hatta, Dubai** **39.26 103** P **P** **19 45 46.9 -0.1**
SNR=24
ASHO **Ashiyiah** **39.29 103** P **P** **19 45 47.9 +0.5**
SNR=11
ASHO **Ashiyiah** **39.29 103** P **P** **19 45 47.1 -0.2**
SNR=12
ARQ **Araqi** **40.46 104** P **P** **19 45 57.8 +0.8**
SNR=12
HOQ **Hoqain** **40.87 103** P **P** **19 46 00.6 +0.2**
SNR=16
KKAR **Karatay Array** **41.22 69** *e*P **P** **19 46 03.8 +0.7**
KKAR pmax pmax
comp=Z,8.0nm,0.6s
KKAR **Karatay Array** **41.22 69** *e*P **P** **19 46 03.8 +0.7**
comp=Z,7.7nm,0.6s
BSY **Bisya** **41.31 104** P **P** **19 46 05.3 +1.2**
SNR=11
SFJD **Kangerlussuaq** **41.70 328** *e*P P 19 46 00.6 -6.1
comp=Z,5nm,1.1s
SFJD **Kangerlussuaq** **41.70 328** P **P** **19 46 06.3 -0.4**
comp=Z,9.4nm,0.3s,baz=95,slow=12,SNR=8.0
SMDO **Samad** **41.73 103** P **P** **19 46 07.6 +0.1**
SNR=22
JMDO **Jabal Madar** **42.20 104** P **P** **19 46 11.6 +0.3**
SNR=13
WBK **Wadi Bani Khal** **42.67 103** P **P** **19 46 16.8 +1.7**
SNR=7.1
KBL **Kabul** **43.61 81** *e*P **P** **19 46 23.8 +0.9**
KBL pmax pmax
comp=Z,2.0nm,0.6s
KBL **Kabul** **43.61 81** *e*P **P** **19 46 23.8 +0.9**
comp=Z,2.5nm,0.6s
EKS2 **Erkin-Say** **43.63 68** *e*P **P** **19 46 23.8 +1.0**
EKS2 pmax pmax
comp=Z,51nm,1.2s
EKS2 **Erkin-Say** **43.63 68** *e*P **P** **19 46 23.8 +1.0**
comp=Z,51nm,1.2s
AAK **Ala-Archa** **44.13 68***ce*P **P** **19 46 28.4 +1.5**
AAK pmax pmax
comp=Z,56nm,1.3s
AAK **Ala-Archa** **44.13 68** *e*P **P** **19 46 27.7 +0.8**
comp=Z,25nm,1.3s
AAK **Ala-Archa** **44.13 68** P **P** **19 46 29.0 +2.1**
SNR=14
AAK **Ala-Archa** **44.13 68** P **P** **19 46 28.3 +1.4**
comp=Z,79nm,1.6s,SNR=11
AAK **Ala-Archa** **44.13 68** LR LR 20 08 35.8
comp=Z,718nm,18.8s,baz=297,slow=41
FRU **Bishkek** **44.14 68** *e*P **P** **19 46 27.0 +0.2**
FRU *e* 19 48 12.0
FRU pmax pmax
comp=Z,90nm,2.2s
FRU **Bishkek** **44.14 68** *e*PcP **PcP** **19 48 12.0 +0.4**
KURK **Kurchatov** **44.24 56***ce*P **P** **19 46 27.9 +0.5**
KURK pmax pmax
comp=Z,30nm,1.7s
KURK **Kurchatov** **44.24 56** *e*P **P** **19 46 27.2 -0.2**
comp=Z,39nm,1.6s
KURK **Kurchatov** **44.24 56** P **P** **19 46 28.2 +0.7**
SNR=11
KURK **Kurchatov** **44.24 56** P **P** **19 46 27.4 0.0**
comp=Z,69nm,1.5s,SNR=10.0
NVS **Novosibirsk** **45.86 49**⇓ *i*P **P** **19 46 40.4 +0.1**
NVS *e* 19 48 26.0
NVS *e*S **S** **19 53 20.8 -2.9**
NVS pmax pmax
comp=Z,107nm,1.9s
NVS pmax pmax
comp=E,40nm,2.0s
NVS pmax pmax
comp=Z,46nm,2.5s
NVS pmax pmax
comp=E,30nm,2.3s
NVS smax smax
comp=N,22nm,2.5s
KSH **Kashi** **46.39 72** P **P** **19 46 45.2 +0.4**
KSH sP **sP** **19 46 51.9 +0.8**
KSH PcP **PcP** **19 48 21.0 +1.4**
KSH PP **PP** **19 48 34.0 +0.4**
KSH ScP **ScP** **19 52 13.3 +0.9**
KSH S **S** **19 53 30.7 -1.2**
KSH sS **sS** **19 53 38.2 -1.2**
KSH ScS **ScS** **19 56 38.0 -1.7**
KSH SS SS 19 56 48.1 -9.2
KSH pmax pmax
comp=Z,20nm,1.3s
KSH pmax pmax
comp=Z,430nm,5.2s
KSH LR LR
comp=N,770nm,9.6s
KSH LR LR
comp=E,1μm,13.1s
KSH LR LR
comp=Z,1μm,14.1s
ZAA0 **Zalesovo Array** **47.00 50** *e*P **P** **19 46 49.4 +0.2**
ZALV **Zalesovo Beam** **47.00 50** P **P** **19 46 49.4 +0.2**
ZALV 19 48 39.8
ZALV **Zalesovo Beam** **47.00 50** P **P** **19 46 49.4 +0.2**
ZALV PP **PP** **19 48 39.8 +0.3**
ZALV **Zalesovo Beam** **47.00 50** P **P** **19 46 49.4 +0.2**
comp=Z,3.6nm,0.6s,baz=292,slow=7.8,SNR=31
ZALV PP **PP** **19 48 39.8 +0.3**
comp=Z,2.6nm,0.8s,baz=300,slow=8.7,SNR=2.8
ZALV LR LR 20 06 23.9
comp=Z,354nm,20.0s,baz=97,slow=36
ZALV **Zalesovo Beam** **47.00 50** PP PP 19 48 39.8 +0.3
MK31 **Makanchi Array** **47.79 60***ce*P **P** **19 46 55.5 0.0**
MK31 pmax pmax
comp=Z,6.0nm,0.7s
MK31 **Makanchi Array** **47.79 60** *e*P **P** **19 46 55.0 -0.5**
MK31 **Makanchi Array** **47.79 60** *e*P **P** **19 46 55.5 0.0**
comp=Z,6.0nm,0.7s
MKAR **Makanchi Array** **47.79 60** P **P** **19 46 55.7 +0.2**
MKAR **Makanchi Array** **47.79 60** P **P** **19 46 55.7 +0.2**
MKAR **Makanchi Array** **47.79 60** P **P** **19 46 55.7 +0.2**
comp=Z,4.9nm,0.6s,baz=287,slow=6.6,SNR=69
MKAR LR LR 20 08 52.2
comp=Z,642nm,18.3s,baz=284,slow=38
MKAR **Makanchi Array** **47.79 60** P **P** **19 46 55.7 +0.2**
KMBO **Kilima Mbogo** **48.49 147** *e*P **P** **19 47 02.6 +1.2**
comp=Z,15nm,1.4s
KMBO **Kilima Mbogo** **48.49 147** P **P** **19 47 03.4 +1.9**
SNR=5.6
KMBO **Kilima Mbogo** **48.49 147** P **P** **19 47 02.8 +1.2**
comp=Z,2.6nm,0.8s,baz=332,slow=8.9,SNR=9.4
KMBO LR LR 20 09 15.7
comp=Z,174nm,19.8s,baz=288,slow=38
KMBO **Kilima Mbogo** **48.49 147** *e*P **P** **19 47 02.7 +1.2**
comp=Z,15nm,1.4s
SCHQ **Schefferville** **51.53 313** *e*P **P** **19 47 21.9 -2.0**
comp=Z,6.8nm,0.7s
SCHQ **Schefferville** **51.53 313** P **P** **19 47 23.7 -0.2**
comp=Z,6.9nm,0.7s,baz=84,slow=7.4,SNR=13
SCHQ LR LR 20 07 33.5
comp=Z,257nm,18.1s,baz=66,slow=34
SCHQ **Schefferville** **51.53 313** *e*P **P** **19 47 21.9 -2.0**
comp=Z,6.8nm,0.7s
DDI **Dehra Dun** **52.30 81** *ex* **P** **19 47 30.6 +0.6**
WMQ **Urumqi** **52.48 61** P **P** **19 47 33.0 +1.8**
WMQ sP **sP** **19 47 40.0 +2.4**
WMQ PcP **PcP** **19 48 43.0 +1.4**
WMQ PP **PP** **19 49 33.0 +3.2**
WMQ ScP **ScP** **19 52 38.0 -0.3**
WMQ S **S** **19 54 58.0 +1.0**
WMQ ScS **ScS** **19 57 19.0 -1.6**
WMQ SS **SS** **19 58 33.0 -1.6**
WMQ pmax pmax
comp=Z,15nm,1.2s
WMQ pmax pmax
comp=Z,360nm,5.0s
WMQ LR LR
comp=N,1μm,16.0s
WMQ LR LR
comp=E,1μm,16.0s
WMQ LR LR
comp=Z,870nm,16.0s
RES **Resolute Bay** **54.02 342** *e*P **P** **19 47 41.5 -0.4**
comp=Z,22nm,1.5s
RES **Resolute Bay** **54.02 342** *e*P **P** **19 47 41.5 -0.4**
comp=Z,22nm,1.5s
PYUN **Piuthan** **57.12 80** *e*P **P** **19 48 05.1 -0.1**
comp=Z,376nm,1.2s
TIXI **Tiksi** **57.47 20***ce*P **P** **19 48 07.2 +0.5**
TIXI pmax pmax
comp=Z,48nm,1.7s
TIXI **Tiksi** **57.47 20** *e*P **P** **19 48 07.4 +0.7**
comp=Z,36nm,1.3s
TIXI **Tiksi** **57.47 20** *e*P **P** **19 48 07.4 +0.7**
comp=Z,36nm,1.3s
DANN **Dangsing** **57.55 80** *e*P **P** **19 48 08.2 -0.1**
KOLN **Koldanda** **57.76 80** *e*P **P** **19 48 09.8 +0.1**
TLY **Talaya** **58.36 47** *e*P **P** **19 48 13.1 -0.2**
TLY *e*S **S** **19 56 15.5 +0.2**
TLY pmax pmax
comp=Z,31nm,1.1s
TLY MLR MLR
comp=Z,753nm,17.0s
TLY **Talaya** **58.36 47** *e*P **P** **19 48 14.4 +1.1**
comp=Z,44nm,1.3s
TLY **Talaya** **58.36 47** P **P** **19 48 15.1 +1.8**
SNR=23
TLY **Talaya** **58.36 47** P **P** **19 48 14.0 +0.7**
comp=Z,146nm,1.3s,SNR=10
TLY **Talaya** **58.36 47** *e*P **P** **19 48 14.4 +1.1**
comp=Z,44nm,1.3s
IRK **Irkutsk** **58.42 46** *e*P **P** **19 48 13.5 -0.2**
IRK pmax pmax
comp=Z,50nm,1.8s
IRK **Irkutsk** **58.42 46** *e*P **P** **19 48 13.5 -0.2**
comp=Z,50nm,1.8s
ZAK **Zakamensk** **58.81 48** *e*P **P** **19 48 15.9 -0.7**
ZAK pmax pmax
comp=Z,6.0nm,1.4s
ZAK **Zakamensk** **58.81 48** *e*P **P** **19 48 15.9 -0.7**
comp=Z,6.0nm,1.4s
DMN **Daman** **58.94 80** *e*P **P** **19 48 17.6 -0.4**
comp=Z,101nm,1.1s
KKN **Kakani** **58.97 79** *e*P **P** **19 48 17.4 -0.8**
comp=Z,28nm,0.8s
LSZ **Lusaka** **59.10 163** *e*P **P** **19 48 19.0 +0.1**
comp=Z,20nm,1.1s
LSZ **Lusaka** **59.10 163** *e*P **P** **19 48 19.0 +0.1**
comp=Z,20nm,1.1s
PKIN **Phulchoki** **59.17 80** *e*P **P** **19 48 19.3 -0.3**
comp=Z,32nm,1.1s
PKI **Pulchoki** **59.19 80** *e*P **P** **19 48 19.1 -0.7**
comp=Z,92nm,1.2s
GUN **Gumba** **59.33 79** *e*P **P** **19 48 20.1 -0.7**
comp=Z,170nm,1.1s
HYB **Hyderabad** **60.23 93** *i* P **P** **19 48 26.0 -0.8**
RAMN **Ramite** **60.41 79** *e*P **P** **19 48 27.3 -0.8**
comp=Z,87nm,0.9s
TAPN **Taplejung** **60.98 78** *e*P **P** **19 48 31.3 -0.8**
comp=Z,98nm,1.1s
ODAN **Odare** **61.03 79** *e*P **P** **19 48 31.6 -0.8**
comp=Z,92nm,1.2s
SONM **Songino Array** **61.89 50** P **P** **19 48 38.3 +0.5**
SONM **Songino Array** **61.89 50** P **P** **19 48 38.3 +0.5**
comp=Z,23nm,1.1s,baz=292,slow=7.7,SNR=98
SONM LR LR 20 17 15.8
comp=Z,778nm,18.8s,baz=301,slow=38
SONM **Songino Array** **61.89 50** P **P** **19 48 38.3 +0.5**
LSA **Lhasa** **62.10 74** P **P** **19 48 39.7 -0.1**
LSA pmax pmax
comp=Z,30nm,1.3s
ULN **Ulaanbaatar** **62.24 49** *e*P **P** **19 48 41.1 +0.9**
comp=Z,28nm,1.4s
ULN **Ulaanbaatar** **62.24 49** P **P** **19 48 40.7 +0.6**
SNR=14
ULN **Ulaanbaatar** **62.24 49** P **P** **19 48 40.3 +0.2**
comp=Z,16nm,1.4s,comp=Z,377nm
GTA **Gaotai** **62.54 61** ⇑P **P** **19 48 43.2 +1.0**
GTA pP **pP** **19 48 47.7 +0.8**
GTA sP **sP** **19 48 50.3 +1.7**
GTA PP **PP** **19 51 02.7 +3.2**
GTA S **S** **19 57 07.0 -2.4**
GTA SS **SS** **20 01 11.5 -1.4**
GTA pmax pmax
comp=Z,9.0nm,1.3s
GTA pmax pmax
comp=Z,300nm,5.9s
GTA LR LR
comp=N,520nm,17.1s
GTA LR LR
comp=E,580nm,17.1s
GTA LR LR
comp=Z,770nm,17.1s
SADO **Sadowa** **63.28 307** LR LR 20 17 21.9
comp=Z,296nm,18.0s,baz=99,slow=37
YAK **Yakutsk** **63.95 28** *e*P **P** **19 48 50.5 -0.5**
YAK *e**PP **pP** **19 48 59.4 +3.8**
YAK *e* 19 49 26.9
YAK *e* 19 51 11.8
YAK *e*S **S** **19 57 21.0 -4.9**
YAK *e* 19 58 42.4
YAK *e*SS **SS** **20 01 30.4 -3.1**
YAK pmax pmax
comp=Z,33nm,1.3s
YAK pmax pmax
comp=N,23nm,1.3s
YAK pmax pmax
comp=E,23nm,1.3s
YAK pmax pmax
comp=Z,29nm,2.2s
YAK pmax pmax
comp=N,17nm,2.2s
YAK smax smax
comp=N,76nm,3.5s
YAK smax smax
comp=E,55nm,3.2s
YAK **Yakutsk** **63.95 28** *e*P **P** **19 48 50.2 -0.7**
comp=E,28nm,0.7s
YAK **Yakutsk** **63.95 28** *e*P **P** **19 48 50.5 -0.5**
comp=E,23nm,1.3s
SHL **Shillong** **65.05 77** *e*P **P** **19 48 58.0 -1.0**
INK **Inuvik** **66.74 347** P **P** **19 49 08.8 -0.1**
INK **Inuvik** **66.74 347** P **P** **19 49 08.8 -0.1**
comp=E,6.2nm,0.9s,baz=21,slow=6.0,SNR=14
LZH **Lanzhou** **67.06 62** *e*P **P** **19 49 13.8 +2.0**
LZH pP **pP** **19 49 19.1 +2.6**
LZH sP **sP** **19 49 22.6 +4.4**
LZH PcP **PcP** **19 49 41.8 +1.8**
LZH PP **PP** **19 51 43.1 +3.9**
LZH *e*S **S** **19 58 02.4 -2.9**
LZH SS **SS** **20 02 21.3 -2.2**
LZH pmax pmax
comp=Z,21nm,1.0s
LZH pmax pmax
comp=Z,140nm,4.1s
LZH LR LR
comp=N,2μm,14.4s
LZH LR LR
comp=E,1μm,11.2s
LZH LR LR
comp=Z,2μm,14.3s
YKW3 **Yellowknife Ar** **67.30 337** *e*P **P** **19 49 12.6 0.0**
comp=Z,1.2nm,1.7s
YKA **Yellowknife Ar** **67.34 337** P **P** **19 49 12.8 -0.1**
YKA **Yellowknife Ar** **67.34 337** P **P** **19 49 12.8 -0.1**
comp=Z,4.1nm,0.7s,baz=42,slow=6.5,SNR=71
BILL **Bilibino** **67.90 11** ⇑ *i*P **P** **19 49 17.2 +0.9**
BILL *e**PP PcP 19 49 49.8 +7.1
BILL *e* 19 51 46.9
BILL *e*S S 19 58 06.4 -7.6
BILL pmax pmax
comp=Z,21nm,1.2s
BILL MLR MLR
comp=Z,500nm,22.0s
BILL **Bilibino** **67.90 11** *e*P **P** **19 49 17.0 +0.7**
comp=Z,34nm,1.3s
LBTB **Lobatse** **68.14 168** *e*P **P** **19 49 18.4 0.0**
comp=Z,23nm,1.1s
COWI **Conover** **68.14 313** *e*P **P** **19 49 17.9 -0.4**
comp=Z,12nm,1.2s
EYMN **Ely** **68.22 316** *e*P **P** **19 49 18.3 -0.4**
comp=Z,6.2nm,0.9s
FFC **Flin Flon** **68.60 326***ce*P **P** **19 49 20.9 0.0**
FFC **Flin Flon** **68.60 326** *e*P **P** **19 49 20.1 -0.9**
comp=Z,33nm,1.4s
FFC **Flin Flon** **68.60 326** P **P** **19 49 21.4 +0.5**
comp=Z,84nm,1.3s,SNR=11
ULM **Lac du Bonnet** **68.91 319** P **P** **19 49 22.4 -0.6**
ULM **Lac du Bonnet** **68.91 319** P **P** **19 49 22.4 -0.6**
comp=Z,6.3nm,0.9s,baz=51,slow=6.4,SNR=9.8
ULM LR LR 20 20 00.7
comp=Z,298nm,18.3s,baz=35,slow=36
HHC **Hu-ho-hao-te** **68.98 54** *e*P **P** **19 49 23.8 +0.1**
HHC PcP **PcP** **19 49 48.5 +0.6**
HHC PP **PP** **19 51 58.6 +2.9**
HHC PcS 19 53 52.0
HHC S **S** **19 58 27.4 -0.6**
HHC SKS **SKSac** **19 59 20.0 -3.0**
HHC ScS **SKKSac** **19 59 21.6 -1.5**
HHC SS **SS** **20 02 53.6 +0.7**
HHC pmax pmax
comp=Z,35nm,0.7s
HHC pmax pmax
comp=Z,400nm,6.7s
HHC LR LR
comp=N,940nm,17.4s
HHC LR LR
comp=E,860nm,17.1s
HHC LR LR
comp=Z,1μm,17.6s
COLD **Coldfoot** **69.87 353** *e*P **P** **19 49 29.5 +0.8**
comp=Z,11nm,1.1s
CD2 **Chengdu** **70.14 66** ⇑P **P** **19 49 32.0 +1.1**
CD2 pP **pP** **19 49 36.7 +1.0**
CD2 sP **sP** **19 49 39.0 +1.6**
CD2 PcP **PcP** **19 49 54.4 +1.5**
CD2 PP **PP** **19 52 08.7 +2.8**
CD2 S **S** **19 58 41.2 -0.6**
CD2 sS **sS** **19 58 48.5 -1.0**
CD2 SKS **SKSac** **19 59 28.9 -3.1**
CD2 SS **SS** **20 03 11.7 +0.6**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,270nm,4.5s
CD2 LR LR
comp=N,420nm,14.2s
CD2 LR LR
comp=E,410nm,13.2s
CD2 LR LR
comp=Z,440nm,16.2s
KMSC **Kings Mountain** **70.35 300** ⇑P **P** **19 49 31.5 -0.6**
baz=70
SFIN **Scholer Farm** **70.61 307** ⇑P **P** **19 49 32.2 -1.4**
baz=70
SPMN **St. Paul** **70.67 314** ⇑P **P** **19 49 33.1 -0.8**
baz=70
TKL **Tuckaleechee C** **71.58 302** LR LR 20 22 15.1
comp=Z,280nm,18.3s,baz=264,slow=37
XAN **Xi'an** **71.60 61** P **P** **19 49 40.1 +0.3**
XAN S **S** **19 59 00.7 +2.0**
XAN SKS SKSac 19 59 33.6 -9.3
XAN pmax pmax
comp=Z,10.0nm,1.2s
XAN pmax pmax
comp=Z,62nm,5.5s
XAN LR LR
comp=N,250nm,17.4s
XAN LR LR
comp=E,110nm,15.5s
XAN LR LR
comp=Z,110nm,17.4s
ILAR **Eielson Array** **71.93 351** P **P** **19 49 41.2 +0.1**
ILAR **Eielson Array** **71.93 351** P **P** **19 49 41.2 +0.1**
comp=Z,3.5nm,0.9s,baz=14,slow=4.8,SNR=29
ILAR LR LR 20 24 03.2
comp=Z,155nm,20.8s,baz=1.8,slow=38
BJI **Beijing** **72.21 52** P **P** **19 49 42.8 -0.4**
BJI S **S** **19 59 07.4 +2.1**
BJI pmax pmax
comp=Z,20nm,1.4s
BJI pmax pmax
comp=Z,170nm,4.2s
BJI LR LR
comp=N,850nm,15.5s
BJI LR LR
comp=E,940nm,17.0s
BJI LR LR
comp=Z,510nm,18.6s
TNA **Tin City** **72.26 1** *e*P **P** **19 49 45.0 +1.9**
comp=Z,19nm,1.2s
DOT **Dot Lake** **72.67 350** *e*P **P** **19 49 47.0 +1.4**
comp=Z,42nm,1.5s
KMI **Kunming** **73.05 71** P **P** **19 49 49.1 +0.3**
KMI pP **pP** **19 49 52.6 -0.9**
KMI sP **sP** **19 49 54.5 -0.8**
KMI PcP **PcP** **19 50 07.7 +2.1**
KMI PP **PP** **19 52 31.4 +0.2**
KMI S **S** **19 59 16.3 +0.4**
KMI SKS **SKSac** **19 59 50.9 -3.6**
KMI SS **SS** **20 03 57.9 +1.6**
KMI pmax pmax
comp=Z,15nm,1.3s
KMI pmax pmax
comp=Z,220nm,3.4s
KMI LR LR
comp=N,250nm,19.1s
KMI LR LR
comp=E,300nm,16.7s
KMI LR LR
comp=Z,380nm,27.3s
MENT **Mentasta** **73.30 349** *e*P **P** **19 49 50.2 +0.7**
SDDR **Presa de Saban** **73.56 281** *e*P **P** **19 49 52.2 +0.6**
comp=Z,59nm,1.1s
TRF **Thorofare Moun** **73.58 352** *e*P **P** **19 49 50.7 -0.5**
comp=Z,6.6nm,0.7s
A24A **Westby** **73.62 322** ⇓P **P** **19 49 52.0 +0.5**
baz=73
ECSD **EROS Data Cent** **73.69 315** *e*P **P** **19 49 51.2 -0.8**
comp=Z,17nm,1.2s
A23A **Redstone** **73.99 323** ⇓P **P** **19 49 53.9 +0.3**
baz=74
DGMT **Dagmar** **74.04 322** ⇓P **P** **19 49 54.5 +0.5**
baz=74
CHTO **Chiang Mai** **74.35 79** *e*P **P** **19 49 55.8 -0.4**
CHTO pmax pmax
comp=Z,30nm,1.3s
CHTO **Chiang Mai** **74.35 79** *e*P **P** **19 49 55.8 -0.4**
comp=Z,30nm,1.3s
CHTO **Chiang Mai** **74.35 79** P **P** **19 49 56.5 +0.3**
SNR=7.7
CHTO **Chiang Mai** **74.35 79** P **P** **19 49 56.0 -0.2**
comp=Z,22nm,1.2s,comp=Z,431nm
CMMT **Chiang Mai** **74.36 79** P **P** **19 49 56.3 0.0**
B23A **Brockton** **74.40 323** ⇓P **P** **19 49 56.4 +0.2**
baz=74
BRSD **Miller** **74.41 317** ⇑P **P** **19 49 55.9 -0.3**
baz=74
A22A **Carney Farms,** **74.42 323** ⇑P **P** **19 49 56.2 0.0**
baz=74
CM31 **Chiang Mai Arr** **74.58 79** *e*P **P** **19 49 57.4 -0.2**
comp=Z,8.7nm,0.9s
CMAR **Chiang Mai Arr** **74.58 79** P **P** **19 49 57.0 -0.6**
CMAR **Chiang Mai Arr** **74.58 79** P **P** **19 49 57.0 -0.6**
comp=Z,8.2nm,1.0s,baz=307,slow=7.1,SNR=42
CMAR LR LR 20 30 14.8
comp=Z,104nm,18.6s,baz=295,slow=42
CN2 **Changchun** **74.75 44** *e*P **P** **19 49 58.4 +0.3**
CN2 PcP **PcP** **19 50 13.2 +1.0**
CN2 *e*S **S** **19 59 31.8 -2.1**
CN2 *e*SS **SS** **20 04 19.6 -1.0**
CN2 pmax pmax
comp=Z,30nm,1.2s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,500nm,19.0s
CN2 LR LR
comp=E,500nm,19.0s
CN2 LR LR
comp=Z,800nm,20.0s
C24A **Savage** **74.83 322** ⇑P **P** **19 49 59.4 +0.8**
baz=74
DLBC **Dease Lake** **74.90 341** P **P** **19 49 58.6 -0.2**
DLBC **Dease Lake** **74.90 341** P **P** **19 49 58.6 -0.2**
comp=Z,1.0nm,0.4s,baz=24,slow=6.1,SNR=4.5
GYA **Guiyang** **74.92 68** P **P** **19 49 59.5 -0.1**
GYA PP **PP** **19 52 47.6 +0.7**
GYA S **S** **19 59 34.7 -2.0**
GYA SKS **SKSac** **20 00 03.8 -4.5**
GYA SS **SS** **20 04 22.0 -2.5**
GYA pmax pmax
comp=Z,20nm,1.2s
GYA pmax pmax
comp=Z,130nm,5.2s
GYA LR LR

comp=N,160nm,11.5s
GYA LR LR
comp=E,120nm,10.3s
GYA LR LR
comp=Z,180nm,11.4s
B22A Reddig Ranch S 74.97 323 ⇓P **P** 19 49 59.9 +0.5
baz=75
SML Sawmill 74.98 351 *e*P **P** 19 49 59.7 +0.5
SML pmax pmax
comp=Z,3.0nm,0.8s
SML Sawmill 74.98 351 *e*P **P** 19 49 59.7 +0.5
comp=Z,3.5nm,0.8s
C23A Lambert 74.98 322 ⇓P **P** 19 49 59.6 +0.1
baz=75
D24A Glendive 75.09 321 ⇓P **P** 19 50 00.3 +0.1
baz=75
PMR Palmer 75.28 351 *e*P **P** 19 50 01.5 +0.7
PMR pmax pmax
comp=Z,22nm,1.2s
PMR Palmer 75.28 351 *e*P **P** 19 50 01.5 +0.7
comp=Z,22nm,1.2s
LRAL Lakeview Retre 75.30 301 *e*P **P** 19 50 00.9 -0.6
comp=Z,18nm,0.9s
BMRM Bremner River 75.32 349 *e*P **P** 19 50 01.2 0.0
comp=Z,77nm,1.4s
B21A Ellsworth Farm 75.33 324 ⇑P **P** 19 50 01.9 +0.4
baz=75
C22A Vida 75.34 323 ⇓P **P** 19 50 01.9 +0.4
baz=75
A20A Cobblestone Ra 75.39 324 ⇑P **P** 19 50 01.9 +0.1
baz=75
D23A Lindsay 75.46 322 ⇓P **P** 19 50 02.4 +0.1
baz=75
E24A Baker 75.49 321 ⇑P **P** 19 50 02.7 +0.2
baz=75
A19A Klindworth Far 75.70 325 ⇓P **P** 19 50 03.8 +0.2
baz=75
PNL Peninsula 75.73 346 *e*P **P** 19 50 04.9 +1.3
comp=Z,13nm,0.7s
B20A Solberg Farm, 75.76 324 ⇓P **P** 19 50 04.0 0.0
baz=76,SNR=11
C21A Desert Coulee 75.82 323 ⇑P **P** 19 50 04.8 +0.5
baz=76
D22A Cohagen 75.92 322 ⇓P **P** 19 50 05.3 +0.4
baz=76
F24A Ekalaka 76.09 320 ⇑P **P** 19 50 06.2 +0.3
baz=76
BGNE Belgrade 76.13 314 ⇓P **P** 19 50 05.4 -0.8
baz=76
B19A Brinkman Farms 76.15 325 ⇓P **P** 19 50 06.4 +0.2
baz=76
A18A Metzger Ranch, 76.17 325 ⇓P **P** 19 50 06.2 -0.1
baz=76,SNR=6.5
MDJ Mudanjiang 76.24 41 P **P** 19 50 06.0 -0.7
MDJ pP **pP** 19 50 09.4 -2.0
MDJ sP **sP** 19 50 10.8 -2.4
MDJ PcP **PcP** 19 50 17.6 -1.1
MDJ PP **PP** 19 52 57.0 -0.3
MDJ S **S** 19 59 49.4 -1.0
MDJ ScS **ScS** 20 00 21.7 +0.4
MDJ SS **SS** 20 04 44.7 +1.6
MDJ pmax pmax
comp=Z,3.0nm,0.8s
MDJ pmax pmax
comp=Z,150nm,4.8s
MDJ LR LR
comp=N,620nm,16.5s
MDJ LR LR
comp=E,720nm,16.5s
MDJ LR LR
comp=Z,1μm,16.5s
C20A Veseth Ranch, 76.31 324 ⇑P **P** 19 50 07.5 +0.4
baz=76,SNR=20
E22A Miles City 76.34 322 ⇓P **P** 19 50 07.6 +0.2
baz=76
D21A La Casta Ranch 76.35 323 ⇓P **P** 19 50 07.6 +0.2
baz=76,SNR=6.9
G24A Alzada 76.46 320 ⇓P **P** 19 50 07.7 -0.3
baz=76
A17A Triple J Farms 76.51 326 ⇓P **P** 19 50 08.3 +0.1
baz=76,SNR=11
B18A Beardsley Farm 76.55 325 ⇑P **P** 19 50 08.6 +0.1
baz=76
C19A Slack Wire Ran 76.75 324 ⇓P **P** 19 50 10.1 +0.5
baz=76
E21A Keefer Ranch, 76.78 322 ⇑P **P** 19 50 10.3 +0.5
baz=76
EGMT Eagleton 76.83 325 *e*P **P** 19 50 11.1 +1.1
comp=Z,22nm,0.8s
EGMT Eagleton 76.83 325 ⇓P **P** 19 50 10.3 +0.2
baz=76
D20A Manuel Ranch, 76.84 323 ⇓P **P** 19 50 10.3 +0.2
baz=76,SNR=16
KSU1 Kansas State U 76.91 311 *e*P **P** 19 50 07.6 -3.0
H24A Dirks Ranch, A 76.95 320 ⇑P **P** 19 50 10.4 -0.4
baz=77
F22A Rosebud 76.98 321 ⇑P **P** 19 50 11.2 +0.2
baz=77
G23A Biddle 77.01 320 ⇓P **P** 19 50 10.9 -0.3
baz=77
B17A L&G Farms, Che 77.06 325 ⇑P **P** 19 50 11.4 +0.1
baz=77,SNR=11
D19A Cripps Ranch, 77.11 324 ⇓P **P** 19 50 11.5 -0.2
baz=77,SNR=5.6
RSSD Black Hills 77.17 319 *e*P **P** 19 50 12.6 +0.3
RSSD pmax pmax
comp=Z,11nm,1.3s
RSSD Black Hills 77.17 319 *e*P **P** 19 50 12.6 +0.3
comp=Z,11nm,1.3s
WRAK Wrangell Islan 77.27 341 *e*P **P** 19 50 13.3 +1.1
comp=Z,25nm,1.3s
E20A Meyer Farm, Mu 77.28 323 ⇓P **P** 19 50 13.1 +0.5
baz=77
A15A Johnson Ranch, 77.32 327 ⇑P **P** 19 50 12.3 -0.6
baz=77,SNR=14
K27A Flueckinger Fa 77.32 317 ⇓P **P** 19 50 12.8 -0.2
baz=77
B16A M & M Farms, S 77.34 326 ⇑P **P** 19 50 12.8 -0.2
baz=77
F21A Absaloka Mine, 77.35 322 ⇓P **P** 19 50 12.7 -0.3
baz=77
SRDT SRDT 77.36 82 P **P** 19 50 13.2 -0.2
G22A Birney 77.42 321 ⇑P **P** 19 50 13.8 +0.3
baz=77
D18A Linhart Farms, 77.48 324 ⇓P **P** 19 50 14.7 +0.9
baz=77
H23A Clabaugh Cattl 77.49 320 ⇑P **P** 19 50 13.6 -0.3
baz=77
C17A Wharram Farm, 77.56 325 ⇓P **P** 19 50 14.1 -0.1
baz=77,SNR=22
A14A Double T Ranch 77.60 327 ⇑P **P** 19 50 14.4 0.0
baz=77,SNR=35
E19A Rath Farm, Rou 77.61 323 ⇓P **P** 19 50 14.8 +0.3
baz=77,SNR=6.2
I24A Kuemmerle Ranc 77.64 319 ⇑P **P** 19 50 14.3 -0.5
baz=77
USRK Ussuriysk Arra 77.71 40 P **P** 19 50 14.7 -0.2
comp=Z,6.1nm,0.9s,baz=289,slow=5.8,SNR=12
USRK LR LR 20 27 45.3
comp=Z,374nm,21.3s,baz=101,slow=38
WALA Waterton Lakes 77.72 328 *e*P **P** 19 50 14.7 -0.4
comp=Z,0.5nm,1.1s
B15A Bradely Ranch, 77.77 326 ⇓P **P** 19 50 14.7 -0.7
baz=78,SNR=8.2
K26A Motz Farm, Whi 77.79 318 ⇑P **P** 19 50 15.3 -0.3
baz=78
G21A Lodge Grass 77.84 322 ⇓P **P** 19 50 15.4 -0.4
baz=78
C16A Fuhringer Ranc 77.84 326 ⇑P **P** 19 50 15.3 -0.5
baz=78,SNR=6.3
D17A Six Diamond Ra 77.90 325 ⇑P **P** 19 50 16.5 +0.4
baz=78,SNR=13
H22A Clearmont 77.92 321 ⇑P **P** 19 50 15.8 -0.5
baz=78
A13A Flathead Natio 78.02 328 ⇓P **P** 19 50 16.8 0.0
baz=78
E18A Harlowton 78.02 324 ⇓P **P** 19 50 17.2 +0.4
baz=78,SNR=8.7
B14A Marquette Ranc 78.02 327 ⇑P **P** 19 50 16.7 -0.1
baz=78
F19A Roth Farm, Mol 78.14 323 ⇓P **P** 19 50 17.6 0.0
baz=78,SNR=9.0
K25A Mack Ranch, Ha 78.20 318 ⇑P **P** 19 50 18.1 +0.2
baz=78
H21A Big Horn, Sher 78.21 321 ⇑P **P** 19 50 18.0 0.0
baz=78
C15A Salmond Ranch, 78.22 326 ⇓P **P** 19 50 17.3 -0.6
baz=78
M27A Reverse DX Ran 78.25 316 ⇑P **P** 19 50 18.4 +0.2
baz=78
G20A Bridger 78.30 322 ⇓P **P** 19 50 18.3 -0.1
baz=78,SNR=6.5
MIAR Mount Ida 78.33 306 *e*P **P** 19 50 18.5 -0.1
MIAR pmax pmax
comp=Z,17nm,1.1s
MIAR Mount Ida 78.33 306 *e*P **P** 19 50 18.5 -0.1
comp=Z,17nm,1.1s
F18A Big Timber 78.45 323 ⇑P **P** 19 50 19.6 +0.4
baz=78,SNR=7.5
VLA Vladivostok 78.46 41 ⇑*e*P **P** 19 50 16.7 -2.4
VLA *e* 19 50 25.6
VLA *e*S **S** 20 00 11.4 -3.2
VLA pmax pmax
comp=Z,33nm,1.2s
B13A Whitefish 78.49 327 ⇑P **P** 19 50 19.8 +0.5
baz=78,SNR=9.4
OGNE Ogallala 78.50 316 ⇑P **P** 19 50 19.5 0.0
baz=78
A12A Yaak River Ran 78.50 328 ⇑P **P** 19 50 19.2 -0.2
baz=78
I22A 9 Mile Ranch, 78.51 320 ⇑P **P** 19 50 19.1 -0.5
baz=78,SNR=6.7
E17A Martinsdale 78.51 324 ⇓P **P** 19 50 20.1 +0.4
baz=78,SNR=10
GCMT Greycliff 78.51 323 *e*P **P** 19 50 20.4 +0.8
comp=Z,5.7nm,1.1s
TUL1 Tulsa 78.68 309 ⇑P **P** 19 50 20.5 0.0
baz=78
YBMT Yellow Bay 78.72 327 *e*P **P** 19 50 21.1 +0.4
comp=Z,20nm,1.5s
BLMT Blacktail Moun 78.74 327 *e*P **P** 19 50 21.7 +0.8
comp=Z,37nm,1.4s
D15A Lincoln 78.76 326 ⇑P **P** 19 50 20.7 -0.3
baz=78
E16A East Helena 78.81 325 ⇓P **P** 19 50 21.0 -0.2
baz=78
G18A Lazy EL Ranch, 78.83 323 ⇑P **P** 19 50 21.1 -0.3
baz=78
RLMT Red Lodge 78.85 323 *e*P **P** 19 50 22.5 +0.9
comp=Z,23nm,1.5s
RLMT Red Lodge 78.85 323 ⇑P **P** 19 50 21.5 -0.1
baz=78
N27A Anderson Farm, 78.86 316 ⇓P **P** 19 50 21.0 -0.5
baz=79
F17A Fitzpatrick Pl 78.86 324 ⇑P **P** 19 50 21.3 -0.3
baz=78
JTMT Jette 78.92 327 *e*P **P** 19 50 22.3 +0.5
comp=Z,36nm,1.5s
I21A Big Trails, Te 78.95 321 ⇑P **P** 19 50 21.4 -0.6
baz=79
K23A Bowen Ranch, D 78.95 319 ⇑P **P** 19 50 21.5 -0.6
baz=79
SWMT Swartz Lake 79.00 327 *e*P **P** 19 50 22.8 +0.6
comp=Z,16nm,1.3s
SLMT Seeley Lake 79.01 326 *e*P **P** 19 50 22.2 -0.1
comp=Z,3.4nm,0.7s
BSMT Bassoo Peak 79.04 327 *e*P **P** 19 50 23.5 +0.9
comp=Z,3.8nm,0.7s
H19A Powell 79.08 322 ⇓P **P** 19 50 23.1 +0.4
baz=79,SNR=6.7
C13A Hot Springs 79.09 327 ⇓P **P** 19 50 23.0 +0.3
baz=79,SNR=17
D14A Greenough 79.14 326 ⇓P **P** 19 50 22.6 -0.4
baz=79
CHMT Chamberlain Mo 79.17 326 *e*P **P** 19 50 23.3 0.0
comp=Z,13nm,1.5s
M25A Palm-Egli Farm 79.17 317 ⇓P **P** 19 50 22.4 -0.9
baz=79
NJ2 Nanjing 79.17 56 *e*P **P** 19 50 23.1 -0.1
NJ2 pP **pP** 19 50 26.0 -2.0
NJ2 sP **sP** 19 50 28.0 -1.8
NJ2 S **S** 20 00 23.0 +0.5
NJ2 sS **sS** 20 00 28.0 -2.4
NJ2 pmax pmax
comp=Z,50nm,1.0s
NJ2 pmax pmax
comp=Z,180nm,4.6s
NJ2 LR LR
comp=E,1μm,19.0s
NJ2 LR LR
comp=Z,370nm,24.3s
I20A Worland 79.24 321 ⇑P **P** 19 50 23.1 -0.5
baz=79
E15A Deer Lodge 79.30 325 ⇑P **P** 19 50 24.4 +0.5
baz=79,SNR=13
F16A Kennard Place, 79.38 324 ⇑P **P** 19 50 24.7 +0.4
baz=79,SNR=8.3
H18A Shoshone NF, C 79.38 323 ⇑P **P** 19 50 24.4 -0.1
baz=79,SNR=9.2
C12B Naegeli Ranch, 79.43 328 ⇑P **P** 19 50 24.3 -0.1
baz=79,SNR=6.5
BOZ Bozeman (W) 79.48 324 *e*P **P** 19 50 25.3 +0.3
BOZ pmax pmax
comp=Z,22nm,1.5s
BOZ Bozeman (W) 79.48 324 *e*P **P** 19 50 25.3 +0.3
comp=Z,22nm,1.5s
BOZ Bozeman (W) 79.48 324 ⇓P **P** 19 50 24.7 -0.3
baz=79,SNR=12
D13A Huson 79.52 327 ⇑P **P** 19 50 24.8 -0.2
baz=79,SNR=24
MSO Missoula 79.52 326 *e*P **P** 19 50 25.1 +0.1
comp=Z,14nm,1.4s
MSO Missoula 79.52 326 ⇓P **P** 19 50 25.1 +0.1
baz=79,SNR=6.1
I19A Meeteetse 79.57 322 ⇓P **P** 19 50 25.5 +0.1
baz=79,SNR=8.3
NEW Newport 79.62 329 *e*P **P** 19 50 26.0 +0.5
comp=Z,22nm,1.4s
NEW Newport 79.62 329 ⇓P **P** 19 50 25.2 -0.3
baz=79,SNR=7.9
SDV Santo Domingo 79.64 273 *e*P **P** 19 50 27.2 +0.9
comp=Z,0.5nm,1.1s
LRM Limekiln Ridge 79.70 325 *e*P **P** 19 50 26.4 +0.2
comp=Z,177nm,1.6s
F15A Butte 79.70 325 ⇓P **P** 19 50 26.6 +0.4
baz=79,SNR=8.6
K21A Alcova 79.83 320 ⇑P **P** 19 50 26.5 -0.4
baz=80
G16A Moss Hill, Enn 79.89 324 ⇓P **P** 19 50 28.0 +0.8
baz=80,SNR=14
PETK Petropavlovsk- 79.92 21 P **P** 19 50 26.3 -0.7
PETK Petropavlovsk- 79.92 21 P **P** 19 50 26.2 -0.7
PETK Petropavlovsk- 79.92 21 P **P** 19 50 26.2 -0.7
comp=Z,7.8nm,1.0s,baz=11,slow=3.8,SNR=9.4
PETK LR LR 20 28 15.5
comp=Z,239nm,20.0s,baz=328,slow=38
YMR Madison River 79.96 323 *e*P **P** 19 50 29.1 +1.5
comp=Z,40nm,1.6s
H17A Grant Village 80.00 323 ⇑P **P** 19 50 29.5 +1.6
baz=80,SNR=11
T31A Randall Ranch, 80.03 312 ⇑P **P** 19 50 27.6 -0.3
baz=80
QLMT Earthquake Lak 80.04 324 *e*P **P** 19 50 29.5 +1.5
comp=Z,0.6nm,0.6s
H16A Russell Place, 80.06 323 ⇓P **P** 19 50 28.8 +0.6
baz=80,SNR=12
F14A Wisdom 80.10 325 ⇓P **P** 19 50 28.2 -0.1
baz=80
DLMT Dillon 80.13 325 *e*P **P** 19 50 29.2 +0.8
comp=Z,38nm,1.4s
J19A Crowheart 80.19 321 ⇑P **P** 19 50 28.3 -0.5
baz=80
P26A Davis Ranch, A 80.20 316 ⇓P **P** 19 50 28.6 -0.3
baz=80
I18A Diamond G Ranc 80.20 322 ⇓P **P** 19 50 28.6 -0.4
baz=80
KSCO Kaye Shedlock' 80.23 315 ⇓P **P** 19 50 29.2 +0.2
baz=80
G15A Dillon 80.24 324 ⇓P **P** 19 50 29.6 +0.6
baz=80,SNR=7.3
PET Petropavlovsk 80.25 20 *e*P **P** 19 50 30.1 +1.4
PET *e*S **S** 20 00 35.8 +2.7
PET *e*SS SS 20 05 52.3 +10
PET MLR MLR
comp=Z,300nm,16.0s
YSS Yuzh-Sakhalins 80.27 32 ⇓*e*P **P** 19 50 30.0 +1.1
YSS *e* 19 50 35.7
YSS pmax pmax
comp=Z,90nm,1.0s
YSS MLR MLR
comp=Z,1μm,20.0s
YSS MLR MLR
comp=N,800nm,16.0s
YSS MLR MLR
comp=E,700nm,16.0s
YSS Yuzh-Sakhalins 80.27 32 *e*P **P** 19 50 29.6 +0.7
comp=E,154nm,1.1s
K20A Yellowstone Ra 80.33 320 ⇓P **P** 19 50 29.9 +0.3
baz=80
I17A Pilgrim Ck. 80.38 323 ⇓P **P** 19 50 30.0 +0.1
baz=80
K19A Absolon Red Bu 80.44 321 ⇑P **P** 19 50 30.1 -0.1
baz=80
N23A Red Feather La 80.51 318 ⇑P **P** 19 50 30.7 0.0
baz=80
F13A Darby 80.52 326 ⇑P **P** 19 50 30.7 +0.2
baz=80,SNR=15
IMW Indian Meadow 80.56 323 *e*P **P** 19 50 32.8 +1.8
comp=E,34nm,1.7s
MOOW Moose Ponds 80.59 323 *e*P **P** 19 50 31.9 +0.9
comp=E,2.1nm,0.7s
KSAR Wonju Array Be 80.60 47 P **P** 19 50 31.3 +0.5
KSRS Korea Array 80.61 47 P **P** 19 50 31.3 +0.4
comp=E,14nm,1.1s,baz=324,slow=4.8,SNR=36
KSRS LR LR 20 30 27.9
comp=E,300nm,18.1s,baz=169,slow=39
LOHW Long Hollow 80.63 322 *e*P **P** 19 50 31.2 0.0
comp=E,2.4nm,0.6s
MCMT McKenzie Canyo 80.66 324 *e*P **P** 19 50 32.4 +0.9
comp=E,2.4nm,0.6s
J18A Kendall Valley 80.68 322 ⇑P **P** 19 50 31.9 +0.4
baz=80,SNR=18
H15A Lima 80.74 324 ⇓P **P** 19 50 31.8 0.0
baz=80
BDFB Brasilia 80.74 239 P **P** 19 50 31.9 -0.1
BDFB Brasilia 80.74 239 P **P** 19 50 31.9 -0.1
comp=E,9.1nm,1.0s,baz=52,slow=6.0,SNR=5.8
BDFB LR LR 20 23 07.0
comp=E,204nm,21.2s,baz=51,slow=33
Q26A Hugo 80.76 315 ⇓P **P** 19 50 31.7 -0.2
baz=80
PDAR Pinedale Array 80.81 321 P **P** 19 50 32.1 -0.2
PDAR Pinedale Array 80.81 321 P **P** 19 50 32.1 -0.2
comp=E,1.9nm,0.6s,baz=55,slow=5.0,SNR=16
PDAR LR LR 20 25 44.9
comp=E,175nm,19.4s,baz=44,slow=35
BW06 Boulder Array 80.81 321 ⇓P **P** 19 50 31.8 -0.5
baz=80
I16A Newdale 80.82 323 ⇑P **P** 19 50 32.4 +0.2
baz=80
L20A Wamsutter 80.83 320 ⇓P **P** 19 50 32.4 0.0
baz=80
N22A Wattenberg Ran 80.84 318 ⇓P **P** 19 50 32.5 0.0
baz=80
R27A Eads 80.85 314 ⇓P **P** 19 50 32.1 -0.3
baz=81
J17A Brown Place, J 80.87 322 ⇑P **P** 19 50 32.3 -0.2
baz=81
TPAW Teton Pass 80.88 322 *e*P **P** 19 50 33.9 +1.2
comp=E,3.3nm,0.6s
F12A Elk City 80.92 326 ⇑P **P** 19 50 32.7 0.0
baz=81,SNR=14
O23A Lake Granby, G 81.02 317 ⇓P **P** 19 50 33.9 +0.5
baz=81
G13A Cobalt 81.04 325 ⇑P **P** 19 50 33.3 0.0
baz=81,SNR=6.3
H14A Leadore 81.05 325 ⇓P **P** 19 50 33.6 +0.2
baz=81
K18A Toltan Ranch, 81.14 321 ⇑P **P** 19 50 33.6 -0.3
baz=81
M20A Sweetwater, Wa 81.15 320 ⇑P **P** 19 50 34.2 +0.2
baz=81
RRI2 Red Ridge 81.16 323 *e*P **P** 19 50 35.5 +1.3
comp=E,51nm,1.8s
ISCO Idaho Springs 81.18 317 *e*P **P** 19 50 35.1 +0.7
ISCO pmax pmax
comp=Z,11nm,1.0s
ISCO Idaho Springs 81.18 317 *e*P **P** 19 50 35.0 +0.7
comp=Z,11nm,1.0s
ISCO Idaho Springs 81.18 317 ⇑P **P** 19 50 34.8 +0.4
baz=81
L19A Farson 81.23 321 ⇓P **P** 19 50 34.8 +0.3
baz=81
O22A Kremmling 81.37 318 ⇓P **P** 19 50 35.6 +0.2
baz=81,SNR=8.9
N21A Black Mountain 81.39 319 ⇓P **P** 19 50 35.8 +0.4
baz=81,SNR=11
H13A Challis 81.47 325 ⇑P **P** 19 50 36.2 +0.6
baz=81
Q24A Divide 81.57 316 ⇑P **P** 19 50 36.5 +0.1
baz=81
P23A Jefferson 81.61 317 ⇓P **P** 19 50 36.9 +0.2
baz=81
J15A Blackfoot 81.61 323 ⇑P **P** 19 50 37.9 +1.5
baz=81,SNR=7.0
I14A Mackay 81.64 324 ⇑P **P** 19 50 37.9 +1.3
baz=81,SNR=20
K16A Soda Springs 81.69 322 ⇑P **P** 19 50 37.3 +0.4
baz=81
N20A Spence Gulch, 81.69 319 ⇑P **P** 19 50 37.5 +0.5
baz=81,SNR=12
H12A Diamond D Ranc 81.74 325 ⇓P **P** 19 50 37.0 -0.1
baz=81,SNR=12
O21A Pagoda 81.78 318 ⇓P **P** 19 50 37.9 +0.4
baz=82
P22A Eagle 81.91 318 ⇓P **P** 19 50 38.3 +0.2
baz=82
I13A Wildhorse Cree 81.94 325 ⇑P **P** 19 50 38.9 +0.8
baz=82,SNR=26
QIZ Qiongzhong 82.00 72 P **P** 19 50 38.6 0.0
QIZ S **S** 20 00 52.1 -0.4
QIZ LR LR
comp=N,320nm,25.4s
QIZ LR LR
comp=E,240nm,16.5s
QIZ LR LR
comp=Z,310nm,19.8s
N19A John Jarvie Ra 82.09 320 ⇓P **P** 19 50 39.1 +0.1
baz=82
R24A Sanders Place, 82.10 316 ⇓P **P** 19 50 39.6 +0.5
baz=82
S25A Robets Cordova 82.18 315 ⇑P **P** 19 50 39.9 +0.4
baz=82,SNR=12
K15A Arbon 82.23 323 ⇑P **P** 19 50 40.1 +0.5
baz=82
L16A Fish Haven 82.26 322 ⇑P **P** 19 50 39.7 -0.2
baz=82
M17A Scullys Gap (B 82.34 321 ⇑P **P** 19 50 40.6 +0.3
baz=82
J13A Cove Ranch, Pi 82.38 324 ⇑P **P** 19 50 40.8 +0.4
baz=82
BMO Blue Mountains 82.50 327 *e*P **P** 19 50 40.4 -0.6
comp=Z,77nm,1.6s
R23A Moffat 82.50 316 ⇑P **P** 19 50 41.6 +0.2
baz=82,SNR=5.9
O19A Miners Draw (B 82.52 319 ⇑P **P** 19 50 40.9 -0.4
baz=82
Q22A Crested Butte, 82.54 317 ⇑P **P** 19 50 41.8 +0.2
baz=82,SNR=6.5
T25A Trinidad 82.56 315 ⇑P **P** 19 50 41.6 +0.1
baz=82
S24A Houchin Ranch, 82.60 315 ⇓P **P** 19 50 41.4 -0.5
baz=82
K14A Jones Ranch, D 82.62 323 ⇑P **P** 19 50 42.2 +0.5
baz=82
X30A Coker Ranch, T 82.63 311 ⇑P **P** 19 50 42.0 +0.2
baz=82
HWUT Hardware Ranch 82.65 322 *e*P **P** 19 50 41.8 -0.1
comp=Z,12nm,0.8s
Z32A Haskell 82.66 309 ⇑P **P** 19 50 42.1 +0.1
baz=82
L15A Malad City 82.70 322 ⇑P **P** 19 50 42.3 +0.1
baz=82
U26A Atchley Ranch, 82.76 314 ⇓P **P** 19 50 42.7 +0.1
baz=82
N17A Moffit Pass 82.83 321 ⇓P **P** 19 50 43.2 +0.2
baz=82
T24A Torres, Weston 82.94 315 ⇓P **P** 19 50 43.8 +0.1
baz=83
R22A Saguache, Gunn 82.95 317 ⇓P **P** 19 50 43.9 +0.2
baz=83
P19A Cripple Cowboy 82.97 319 ⇑P **P** 19 50 43.6 -0.1
baz=83
Z31A Sharp Cattle R 83.04 309 ⇑P **P** 19 50 43.9 0.0
baz=83
MFID Camas Ranch 83.07 325 *e*P **P** 19 50 44.9 +0.9
comp=Z,23nm,1.5s
MFID Camas Ranch 83.07 325 ⇓P **P** 19 50 43.9 -0.1
baz=83
U25A Circle Dot Ran 83.11 314 ⇑P **P** 19 50 44.8 +0.4
baz=83
Q20A Ridgley Place, 83.16 318 ⇑P **P** 19 50 44.5 -0.1
baz=83

V26A	**Tequesquite Ra**	83.23	313	⇓P		P	19 50 45.2	+0.2
	baz=83							
R21A	**Cimarron**	83.24	317	⇑P		P	19 50 45.0	-0.1
	baz=83,SNR=6.9							
S22A	**4UR Ranch, Cre**	83.35	316	⇓P		P	19 50 46.1	+0.3
	baz=83,SNR=7.9							
W27A	**Bowe Ranch, En**	83.38	312	⇓P		P	19 50 45.9	+0.1
	baz=83							
JLU	**Jordanelle**	83.39	321	*e*P		P	19 50 46.2	+0.4
	comp=Z,12nm,1.1s							
T23A	**Casias Ranch,**	83.49	315	⇑P		P	19 50 46.7	+0.3
	baz=83							
P18A	**Preston Nutter**	83.59	320	⇓P		P	19 50 46.9	-0.1
	baz=83,SNR=7.4							
R20A	**Redvale**	83.79	318	⇓P		P	19 50 47.6	-0.3
	baz=84							
PV04	**Paradox Valley**	83.90	318	*e*P		P	19 50 48.8	+0.4
S21A	**Coal Bank Pass**	83.91	317	⇓P		P	19 50 49.1	+0.4
	baz=84,SNR=15							
PV01	**Paradox Valley**	83.93	318	*e*P		P	19 50 48.7	+0.1
	comp=Z,776nm,1.0s							
T22A	**Edith**	83.95	316	⇑P		P	19 50 48.9	+0.2
	baz=84							
W25A	**X Bar L Ranch,**	84.03	313	⇑P		P	19 50 49.1	+0.1
	baz=84							
S20A	**Disappointment**	84.06	317	⇑P		P	19 50 49.9	+0.5
	baz=84,SNR=9.3							
V24A	**Rampart Ranch,**	84.08	314	⇓P		P	19 50 50.0	+0.6
	baz=84							
SRU	**San Rafael**	84.12	320	*e*P		P	19 50 49.3	-0.3
SRU	**San Rafael**	84.12	320	*e*P		P	19 50 49.3	-0.3
	comp=Z,526nm,1.1s							
SRU	**San Rafael**	84.12	320	⇑P		P	19 50 49.3	-0.3
	baz=84,SNR=11							
X26A	**CR and CF Fran**	84.17	312	⇓P		P	19 50 50.0	+0.2
	baz=84							
P16A	**Fountain Green**	84.27	321	⇓P		P	19 50 50.5	+0.2
	baz=84							
DUG	**Dugway**	84.34	322	*e*P		P	19 50 50.8	+0.2
DUG				pmax		pmax		
	comp=Z,4.0nm,0.8s							
DUG	**Dugway**	84.34	322	*e*P		P	19 50 50.8	+0.2
	comp=Z,4.3nm,0.8s							
DUG	**Dugway**	84.34	322	⇓P		P	19 50 50.5	-0.1
	baz=84							
U22A	**Llaves**	84.41	316	⇑P		P	19 50 51.9	+0.8
	baz=84,SNR=8.1							
W24A	**Lazy 6 Ranch,**	84.54	314	⇓P		P	19 50 51.9	+0.1
	baz=84							
Q16A	**Castle Valley**	84.59	320	⇓P		P	19 50 51.6	-0.3
	baz=84							
P15A	**Leamington**	84.59	321	⇑P		P	19 50 51.8	-0.1
	baz=84							
MVCO	**Mesa Verde**	84.61	317	*e*P		P	19 50 52.5	+0.4
	comp=Z,21nm,1.5s							
MVCO	**Mesa Verde**	84.61	317	⇓P		P	19 50 51.9	-0.2
	baz=84							
432A	**Menard**	84.61	307	⇓P		P	19 50 52.6	+0.6
	baz=84							
230A	**Sterling City**	84.64	309	⇓P		P	19 50 52.3	+0.2
	baz=84							
331A	**San Angelo**	84.67	308	⇑P		P	19 50 52.4	+0.1
	baz=84							
Z27A	**Tatum**	84.77	311	⇓P		P	19 50 53.0	+0.1
	baz=84							
U21A	**Nageezi**	84.79	316	⇓P		P	19 50 52.6	-0.4
	baz=84							
V22A	**San Miguel Ran**	84.80	315	⇑P		P	19 50 52.9	-0.2
	baz=84							
128A	**Castleberry Fa**	84.88	310	⇑P		P	19 50 53.2	-0.2
	baz=85							
JCT	**Junction City**	84.91	307	*e*P		P	19 50 54.0	+0.5
JCT				pmax		pmax		
	comp=Z,12nm,1.0s							
JCT	**Junction City**	84.91	307	*e*P		P	19 50 54.0	+0.5
	comp=Z,12nm,1.0s							
JCT	**Junction City**	84.91	307	⇓P		P	19 50 53.5	0.0
	baz=85							
S18A	**Hurst Farm, Bl**	84.98	318	⇑P		P	19 50 54.0	0.0
	baz=85							
330A	**Mertzon**	85.03	309	⇓P		P	19 50 54.6	+0.5
	baz=85							
ROSC	**El Rosal**	85.05	272	LR		LR	20 24 09.6	
	comp=Z,388nm,21.5s,baz=17,slow=32							
532A	**Rocksprings**	85.22	307	⇑P		P	19 50 55.2	+0.1
	baz=85							
Z26A	**Caprock**	85.23	312	⇑P		P	19 50 55.0	-0.1
	baz=85,SNR=5.7							
431A	**Sonora**	85.23	308	⇑P		P	19 50 55.2	+0.1
	baz=85							
329A	**Wagon Wheel Ra**	85.43	309	⇓P		P	19 50 56.3	+0.2
	baz=85							
430A	**Baggett Ranch,**	85.52	308	⇓P		P	19 50 56.4	-0.1
	baz=85							
Y24A	**Capitan**	85.53	313	⇓P		P	19 50 56.2	-0.5
	baz=85							
632A	**Uvalde**	85.61	306	⇑P		P	19 50 57.4	+0.4
	baz=85							
V20A	**Brimhall**	85.69	316	⇑P		P	19 50 57.6	+0.1
	baz=85							
Y23A	**Lovelace Mesa,**	85.86	313	⇓P		P	19 50 58.9	+0.5
	baz=86							
328A	**Wristen Ranch,**	85.98	310	⇑P		P	19 50 58.8	0.0
	baz=86							
429A	**Davenport Ranc**	86.02	309	⇑P		P	19 50 59.2	+0.1
	baz=86							
530A	**J-C Ranch, Com**	86.05	308	⇑P		P	19 50 59.6	+0.4
	baz=86,SNR=6.4							
125A	**Gardner Draw,**	86.06	312	⇑P		P	19 50 59.5	+0.2
	baz=86							
631A	**Perdido Creek**	86.14	307	⇓P		P	19 50 59.6	-0.1
	baz=86							
SAML	**Samuel**	86.22	254	*e*P		P	19 51 00.2	+0.1
	comp=Z,21nm,1.3s							
226B	**Tecolote Peak,**	86.23	311	⇑P		P	19 51 00.3	+0.2
	baz=86							
Y22A	**Socorro**	86.34	314	⇓P		P	19 51 00.8	0.0
	baz=86							
529A	**Stev Forest Ra**	86.58	308	⇓P		P	19 51 02.2	+0.4
	baz=86,SNR=6.2							
MAT	**Matsushiro**	86.62	41	P		P	19 51 01.0	-0.8
MAT				S		S	20 01 24.6	-14
MJAR	**Matsushiro Arr**	86.62	41	P		P	19 51 01.4	-0.4
MJAR	**Matsushiro Arr**	86.62	41	P		P	19 51 01.4	-0.4
	comp=Z,5.9nm,1.1s,baz=317,slow=5.7,SNR=18							
MJAR				LR		LR	20 33 04.8	
	comp=Z,590nm,18.9s,baz=335,slow=38							
427A	**Hayter Ranch,**	86.72	310	⇓P		P	19 51 03.1	+0.5
	baz=86,SNR=6.6							
528A	**Cox Ranch, San**	86.88	309	⇑P		P	19 51 03.8	+0.4
	baz=87							
224A	**Cornudas Mount**	86.98	312	⇓P		P	19 51 03.8	0.0
	baz=87							
426A	**McDonald Obser**	87.21	310	⇑P		P	19 51 05.3	+0.3
	baz=87							
WUAZ	**Wupatki**	87.38	318	⇑P		P	19 51 05.9	+0.1
	baz=87							
526A	**Mary Lane Ranc**	87.70	310	⇑P		P	19 51 07.4	0.0
	baz=87							
Z20A	**Nine Sixteen R**	87.84	315	⇑P		P	19 51 08.3	+0.3
	baz=88							
121A	**Cookes Peak, D**	87.86	314	⇓P		P	19 51 08.0	-0.1
	baz=88							
TXAR	**Lajitas Array**	88.00	309	P		P	19 51 09.0	+0.2
TXAR	**Lajitas Array**	88.00	309	P		P	19 51 09.0	+0.2
	comp=Z,2.4nm,0.9s,baz=67,slow=4.2,SNR=9.6							
TXAR				LR		LR	20 29 19.8	
	comp=Z,234nm,20.8s,baz=70,slow=35							
626A	**Big Bend Ranch**	88.11	309	⇓P		P	19 51 09.2	-0.1
	baz=88							
NVAR	**Mina Array Bea**	88.24	324	P		P	19 51 09.7	-0.2
NVAR	**Mina Array Bea**	88.24	324	P		P	19 51 09.7	-0.2
	comp=Z,0.8nm,0.6s,baz=46,slow=5.4,SNR=5.7							
NVAR				LR		LR	20 33 26.3	
	comp=Z,173nm,19.8s,baz=61,slow=38							
X16A	**Lo Mia Camp, P**	88.28	317	⇑P		P	19 51 10.1	0.0
	baz=88							
220A	**Playas Peak, P**	88.74	314	⇓P		P	19 51 12.5	+0.2
	baz=88							
W13A	**Hualapai Mount**	88.94	319	⇓P		P	19 51 13.3	+0.1
	baz=89							
Z14A	**Wintersburg**	89.87	318	⇑P		P	19 51 17.8	+0.5
	baz=90							
IRM	**Iron Mountain**	90.31	320	⇓P		P	19 51 19.6	+0.2
	baz=90							
BC3	**Big Chuckawall**	90.86	319	⇓P		P	19 51 21.9	-0.2
	baz=91							
214A	**Organ Pipe Nat**	90.93	317	⇑P		P	19 51 22.2	-0.2
	baz=91							
OTAV	**Otavalo**	91.18	271	*e*P		P	19 51 24.7	+0.4
	comp=Z,8.3nm,1.0s							
MONP	**Monument Peak**	91.95	320	⇑P		P	19 51 27.9	+0.5
	baz=92							
CPUP	**Villa Florida**	94.45	238	LR		LR	20 30 46.7	
	comp=Z,234nm,21.9s,baz=13,slow=33							
LPAZ	**La Paz**	94.74	252	P		P	19 51 40.0	-0.7
LPAZ	**La Paz**	94.74	252	P		P	19 51 40.0	-0.7
	comp=Z,0.9nm,0.7s,baz=25,slow=12,SNR=4.3							
LPAZ				LR		LR	20 30 47.5	
	comp=Z,158nm,18.5s,baz=221,slow=33							
NNA	**Nana**	98.13	261	LR		LR	20 34 28.8	
	comp=Z,151nm,18.8s,baz=332,slow=34							
VNA2	**Neumayer--Watz**	114.12	187	*e*SKS		SKSdf	20 04 12.0	+4.8
VNA2	**Neumayer--Watz**	114.12	187	*e*Sdiff		Sdif	20 05 33.1	-0.3
VNA2	**Neumayer--Watz**	114.12	187	*e*		PS	20 07 29.6	+0.9
WRA	**Warramunga Arr**	125.90	85	PKP		PKPdf	19 57 19.3	-1.2
WRA	**Warramunga Arr**	125.90	85	PKP		PKPdf	19 57 19.3	-1.2
	comp=Z,1.4nm,1.1s,baz=320,slow=2.1,SNR=4.4							
ASAR	**Alice Springs**	127.83	89	PKP		PKPdf	19 57 23.3	-0.8
ASAR				PP		PP	19 59 27.3	+0.8
ASAR	**Alice Springs**	127.83	89	PKP		PKPdf	19 57 23.3	-0.8
	comp=Z,0.6nm,0.6s,baz=300,slow=1.6,SNR=13							
ASAR				PP		PP	19 59 27.3	+0.8
	comp=Z,0.6nm,0.8s,baz=308,slow=4.6,SNR=5.1							
STKA	**Stephens Creek**	138.00	93	PKP		PKPdf	19 57 43.1	+0.1
STKA	**Stephens Creek**	138.00	93	PKP		PKPdf	19 57 43.1	+0.1
	comp=Z,1.7nm,0.9s,baz=350,slow=2.0,SNR=4.3							

IDC 09 19:47:30.7±29.0, 20.96S×176.25W, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.7/20, mbtmp4.0/4, Error ellipse: s-maj=555.6km s-min=144.0km az=91.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	39.07	245	P		P	19 54 59.8	+0.1
	1.2nm,0.4s,baz=82,slow=10,SNR=8.9							
ASAR	**Alice Springs**	46.01	257	P		P	19 55 56.1	-0.2
	1.6nm,0.7s,baz=100,slow=7.4,SNR=22							
WRA	**Warramunga Arr**	46.16	262	P		P	19 55 57.2	-0.3
	0.5nm,0.3s,baz=99,slow=8.2,SNR=15							
FITZ	**Fitzroy Crossi**	54.59	262	P		P	19 57 01.3	-0.1
	1.6nm,0.9s,baz=102,slow=5.6,SNR=10							

IDC 09 19:49:21.5±4.5, 15.23S×174.63W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/19, mbtmp3.9/4, MS3.3/1, Ms1 3.3/1, ms1mx2.8/30, Error ellipse: s-maj=200.3km s-min=35.0km az=136.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTA	**Charters Tower**	37.53	257	LR		LR	20 09 44.0	
	comp=Z,49nm,20.6s,baz=62,slow=33							
STKA	**Stephens Creek**	43.10	239	P		P	19 57 23.7	0.0
	0.3nm,0.4s,baz=72,slow=9.6,SNR=2.7							
WRA	**Warramunga Arr**	48.73	257	P		P	19 58 08.2	-0.1
	0.7nm,0.6s,baz=92,slow=7.5,SNR=9.0							
ASAR	**Alice Springs**	49.04	252	P		P	19 58 10.5	-0.2
	6.1nm,0.5s,baz=89,slow=7.8,SNR=114							
ILAR	**Eielson Array**	82.52	12	P		P	20 01 45.7	0.0
	0.1nm,0.3s,baz=219,slow=4.9,SNR=4.1							

IDC 09 19:54:27.1±8.2, 24.56S×179.75W, h513km±54km, mb3.1/7, mb1 3.3/9, mb1mx3.1/22, mbtmp3.2/9, Error ellipse: s-maj=115.5km s-min=21.6km az=51.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	12.93	278	P		P	19 57 16.3	+0.8
	0.7nm,0.3s,baz=66,slow=20,SNR=4.4							
URZ	**Urewera**	13.92	190	P		P	19 57 24.8	-0.8
	1.4nm,0.3s,baz=18,slow=16,SNR=5.9							
RPZ	**Rata Peaks**	20.55	199	P		P	19 58 29.4	-0.4
	9.9nm,0.6s,baz=28,slow=6.8,SNR=7.0							
CTA	**Charters Tower**	31.72	271	P		P	20 00 08.9	+0.3
	5.5nm,0.4s,baz=93,slow=12,SNR=13							
STKA	**Stephens Creek**	34.70	249	P		P	20 00 34.1	+0.4
	0.4nm,0.5s,baz=107,slow=11,SNR=2.3							
ASAR	**Alice Springs**	42.16	261	P		P	20 01 34.1	-0.4
	0.3nm,0.4s,baz=96,slow=8.7,SNR=11							
WRA	**Warramunga Arr**	42.60	267	P		P	20 01 37.2	-0.8
	1.5nm,0.3s,baz=103,slow=8.3,SNR=18							
FITZ	**Fitzroy Crossi**	51.26	265	P		P	20 02 41.6	0.0
	2.0nm,0.8s,baz=101,slow=7.3,SNR=6.0							
VNDA	**Vanda**	53.74	185	P		P	20 03 00.8	+0.5
	0.2nm,0.5s,baz=10,slow=3.8,SNR=3.0							

WEL 09 19:59:30.0±0.3, 38.69S×178.49E, h28km±1km, ML3.7/8, 2C-5D, Error ellipse: s-maj=3.4km s-min=1.4km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CNGZ	**Carnagh Statio**	0.30	313	⇓P*		Pb	19 59 36.9	-0.3
CNGZ				S*		Sb	19 59 42.8	+0.6
PRGZ	**Paritu Road**	0.53	243	⇓P*		Pb	19 59 41.0	+0.2
PUZ	**Puketiti**	0.64	344	⇓P*		Pb	19 59 42.0	-0.7
MHGZ	**Mahia Peninsul**	0.65	224	P*		Pb	19 59 43.0	+0.1
MHGZ				*e*S*		Sn	19 59 52.5	-0.2
KNZ	**Kokohu**	0.72	242	⇓P*		Pb	19 59 43.6	-0.3
KNZ				*e*S*		Sb	19 59 53.1	-0.3
MWZ	**Matawai**	0.83	295	PN		Pn	19 59 44.7	-1.2
MWZ				SN		Sb	19 59 56.5	-0.3
RAHZ	**Arahi**	1.12	258	⇑PN		Pn	19 59 49.5	-0.4
MXZ	**Matakaoa Point**	1.13	353	⇓PN		Pn	19 59 50.0	0.0
URZ	**Urewera**	1.16	291	PN		Pn	19 59 49.6	-0.7
NMHZ	**Naumai**	1.37	252	PN		Pn	19 59 53.0	-0.4
BKZ	**Black Stump Fm**	1.63	252	PN		Pn	19 59 56.2	-0.7
KAHZ	**Kahuranaki**	1.67	228	PN		Pn	19 59 56.9	-0.6
PXZ	**Pawanui**	1.84	223	⇑PN		Pn	19 59 58.4	-1.3
BHHZ	**Black Hill Sta**	2.05	246	PN		Pn	20 00 02.2	-0.5
WPHZ	**Waipukurau**	2.10	228	PN		Pn	20 00 02.3	-1.1
MOVZ	**Moawhango**	2.25	250	PN		Pn	20 00 05.3	-0.2
TSZ	**Takapari Road**	2.39	234	PN		Pn	20 00 06.0	-1.3
DVHZ	**Dannevirke**	2.41	227	PN		Pn	20 00 06.2	-1.4
PKVZ	**Pokaka**	2.52	255	PN		Pn	20 00 09.3	+0.1
BFZ	**Birch Farm**	2.64	220	PN		Pn	20 00 08.3	-2.4
POWZ	**Post Office Ro**	2.71	230	PN		Pn	20 00 10.8	-0.8
MRZ	**Mangatainoka R**	2.99	228	PN		Pn	20 00 13.3	-2.2
TMWZ	**Te Maipa**	3.14	219	PN		Pn	20 00 14.7	-2.9
HOWZ	**Holdsworth Sta**	3.18	225	PN		Pn	20 00 16.2	-2.0
MTW	**Mount Morrison**	3.37	222	PN		Pn	20 00 17.6	-3.1
KIW	**Kapiti Island**	3.51	231	PN		Pn	20 00 20.9	-1.8
CAW	**Cannon Point**	3.57	226	PN		Pn	20 00 21.1	-2.5
QRZ	**Quartz Range**	5.06	243	PN		Pn	20 00 40.7	-3.3

*CSEM **09** 20:03:54.6±0.3, 49.87N×18.52E, h1km, ML2.6/4, Error ellipse: s-maj=7.9km s-min=3.5km az=167.0*
*IPEC **09** 20:03:55.1±0.2, 49.82N×18.57E, h0km, ML1.6/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
*PRU **09** 20:03:55.5, 49.87N×18.51E, h0km*

ISC 09 20:03:55.3±1.0, 49.87N±0.07×18.53E±0.03, h0km, n18, σ0.82/32, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OKC	**Ostrava-Krasne**	0.24	259	*e*PG		Pg	20 04 00.9	+0.9
OKC				*e*SG		Sg	20 04 03.8	+0.7
	comp=Z,23nm,0.5s							
OKC	**Ostrava-Krasne**	0.24	259	*e*Pg		Pg	20 04 00.5	+0.5
	baz=94							
OKC				Sg		Sg	20 04 03.8	+0.7
	23nm,0.5s							
MORC	**Moravsky Berou**	0.64	261	*e*Pg		Pg	20 04 08.1	+0.5
	baz=86							
MORC				*e*Sg		Sg	20 04 15.8	0.0
	8.4nm,0.2s,baz=86							
OJC	**Ojcow**	0.89	68	*e*Pg		Pg	20 04 12.2	-0.2
OJC				*e*Sg		Sg	20 04 24.3	+0.3
OJC	**Ojcow**	0.89	68	*e*Pg		Pg	20 04 12.0	-0.4
	baz=244							
OJC				*e*Sg		Sg	20 04 24.3	+0.3
KRLC	**Kraliky**	1.14	280	*e*PG		Pg	20 04 16.4	-0.7
KRLC				*e*SG		Sb	20 04 32.6	-0.6
KRLC	**Kraliky**	1.14	280	Pg		Pg	20 04 16.4	-0.7
KRLC				Sg		Sb	20 04 32.6	-0.6
VRAC	**Vranov**	1.38	246	*e*Pn		Pg	20 04 20.5	-1.2
VRAC	**Vranov**	1.38	246	*e*Pg		Pg	20 04 20.8	-0.9
	baz=68							
VRAC				*e*Sg		Sg	20 04 38.2	-1.4
	11nm,0.3s,baz=68							
DPC	**Dobruska-Polom**	1.49	289	*e*PG		Pn	20 04 23.2	-0.2
DPC				*e*SG		Sg	20 04 42.2	-0.9
	comp=Z,5.0nm,0.5s							
DPC	**Dobruska-Polom**	1.49	289	Pg		Pn	20 04 23.2	-0.2
DPC				*e*Sg		Sg	20 04 43.2	+0.1
	baz=109							
KRUC	**Moravsky**	1.61	240	*e*Sg		Sn	20 04 45.5	-1.0
	4.4nm,0.2s,baz=61							
UPC	**Upice**	1.73	292	*e*PG		Pn	20 04 27.0	+0.4
UPC				*e*SG		Sg	20 04 51.4	+0.7
UPC	**Upice**	1.73	292	Pg		Pn	20 04 27.0	+0.4
UPC				Sg		Sg	20 04 51.4	+0.7
PRU	**Pruhonice**	2.57	274	*e*PG		Pb	20 04 42.6	+0.3
PRU				*e*SG		Sg	20 05 17.5	-0.3
	comp=Z,2.1nm,0.2s							
PRU	**Pruhonice**	2.57	274	Pg		Pb	20 04 42.6	+0.3
PRU				Sg		Sg	20 05 17.5	-0.3
	2.1nm,0.2s							
KHC	**Kasperske Hory**	3.31	259	*e*SG		Sb	20 05 38.0	+2.4
	comp=Z,2.0nm,0.4s							
CLL	**Collm**	3.79	294	*e*Sg		Sg	20 05 56.0	-1.0

*ISCJB **09** 20:18:18.5±0.3, 23.16N±0.02×121.63E±0.02, h32km±2km, Error ellipse: s-maj=3.1km s-min=2.2km az=138.4*
*TAP **09** 20:18:18.8, 23.19N×121.54E, h40km, ML4.3, B*
*JMA **09** 20:18:19.7±0.2, 23.24N×121.67E, h94km, M3.7*

ISC 09 20:18:17.6±1.1, 23.17N±0.02×121.64E±0.02, h33km±4km, n74, σ1.29/128, 11C-11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHKT	**Chengkung**	0.26	255	⇓*i*P		Pb	20 18 26.0	+1.1
CHKT	baz=240			S		Sb	20 18 31.0	+1.2
TWF1	**Yuli**	0.36	301	⇓*i*P		Pn	20 18 26.9	+0.3
TWF1	baz=295			S		Sn	20 18 33.5	+1.0
EHY	**Hungye**	0.45	319	⇓*i*P		Pn	20 18 27.8	0.0
EHY	baz=317			S		Sn	20 18 35.2	+0.6
TEGC	**Jichi Village**	0.55	351	*e*P		Pb	20 18 30.2	+1.2
TEGC	baz=9.0			S		Sn	20 18 38.3	+1.2
ELDTW	**Lidau**	0.57	272	⇑*i*P		Pb	20 18 29.0	-0.5
ELDTW	baz=270			*e*S		Sb	20 18 35.3	-2.3
TTN	**Taitung**	0.61	228	⇑P		Pb	20 18 30.7	+0.7
TTN	baz=230			*e*S		Sn	20 18 40.1	+1.4
TWG	**Pinlang**	0.62	237	⇑*i*P		Pb	20 18 30.0	-0.3
TWG	baz=240			*e*S		Sn	20 18 37.4	-1.6
ESL	**Shilin**	0.67	344	⇓*e*P		Pb	20 18 30.8	-0.2
ESF	baz=341 **Shoufeng Towns**	0.71	350	*e*P		Pb	20 18 31.7	0.0
HWA	baz=346 **Hwalien**	0.81	358	*e*P		Pb	20 18 34.1	+0.8
ALS	baz=14 **Alishan**	0.84	294	⇓*i*P		Pb	20 18 34.2	+0.2
ALS	baz=296			*e*S		Sb	20 18 44.5	-0.6
ECL	**Taimali**	0.85	228	⇑*i*P		Pb	20 18 32.6	-1.3
ECL	baz=222			*e*S		Sn	20 18 42.6	-1.9
TWD	**Chiawan**	0.91	358	*e*P		Pb	20 18 34.9	-0.1
TWD	baz=353			*e*S		Sb	20 18 46.9	+0.1
WTP	**Ta-pu**	0.94	275	⇑*i*P		Pb	20 18 35.6	0.0
WTP	baz=269			*i* S		Sb	20 18 47.5	-0.3
SGST	**Jiashian**	0.97	265	⇑*e*P		Pb	20 18 36.3	+0.2
CHN4	baz=263 **Tsaushan**	0.98	281	⇑*i*P		Pb	20 18 36.2	+0.1
CHN4	baz=281			S		Sb	20 18 49.7	+1.0
CHN5	**Tsauling**	0.98	296	P		Pb	20 18 36.6	+0.4
CHN5	baz=298			*i* S		Sb	20 18 49.2	+0.3
SMLT	**Sun Moon Lake**	0.98	317	⇓*i*P		Pb	20 18 36.1	-0.2
SMLT	baz=325			*e*S		Sn	20 18 47.8	-0.3
SSD	baz=325 **Sandimen**	1.02	246	⇑*e*P		Pb	20 18 35.9	-0.9
CHN1	baz=238 **Nanshi**	1.02	271	⇑*i*P		Pb	20 18 37.0	+0.1
CHN1	baz=267			*i* S		Sb	20 18 50.4	+0.4
TYC	**Yuchr**	1.03	316	⇓*i*P		Pb	20 18 36.9	-0.1
TYC	baz=327			S		Sb	20 18 49.6	-0.5
WHF	**Hehuan Shan**	1.03	341	⇓*e*P		Pb	20 18 36.4	-0.9
WHF	baz=358			*e*S		Sn	20 18 48.9	-0.9
TAW	baz=358 **Tawu**	1.06	221	*e*P		Pb	20 18 36.0	-1.5
TAW	baz=215			*e*S		Sn	20 18 48.2	-1.5
TWK	baz=215 **Hsinying**	1.06	276	*i* P		Pb	20 18 37.3	-0.3
TWK	baz=275			S		Sb	20 18 50.8	-0.4
EAST	baz=275 **Anshuo**	1.07	223	⇑P		Pb	20 18 36.1	-1.5
WGK	baz=218 **Gukeng**	1.11	298	*e*P		Pb	20 18 38.6	+0.2
WGK	baz=311			*e*S		Sb	20 18 52.9	+0.3
WNT	baz=311 **Mingjian**	1.13	309	*e*P		Pb	20 18 38.8	+0.2
WNT	baz=312			*e*S		Sb	20 18 52.8	-0.2
CHN2	baz=312 **Minshiung**	1.13	289	*e

TCU	**Taichung**	**1.32**	**318**	*e*P		**Pb**	**20 18 42.1**	**+0.3**
	baz=309								
TCU				*e*S		**Sb**	**20 18 58.0**	**-0.3**
	baz=309								
CHN8	**Yiju**	**1.32**	**278**	P		**Pb**	**20 18 40.9**	**-1.0**
	baz=277								
CHN8				S		**Sb**	**20 18 57.8**	**-0.8**
	baz=277								
SCLT	**Jiali**	**1.33**	**271**	*e*P		**Pb**	**20 18 41.5**	**-0.5**
	baz=282								
SCLT				*e*S		**Sb**	**20 18 58.6**	**-0.1**
	baz=282								
KAU	**Kaohsiung**	**1.36**	**244**	*e*P		**Pb**	**20 18 43.2**	**+0.6**
	baz=258								
WSF	**Szhu**	**1.38**	**290**	*e*P		**Pb**	**20 18 41.4**	**-1.5**
	baz=290								
WSF				*e*S		**Sb**	**20 18 58.1**	**-2.1**
	baz=290								
TWQ1	**Liyutan**	**1.42**	**326**	*e*P		**Pb**	**20 18 43.4**	**-0.2**
	baz=331								
TWQ1				S		**Sb**	**20 19 01.2**	**-0.1**
	baz=331								
HEN	**Hengchun**	**1.42**	**216**	*e*P		**Pb**	**20 18 43.1**	**-0.5**
	baz=203								
WTCT	**Ta-ch'eng**	**1.43**	**299**	*e*P		**Pb**	**20 18 42.5**	**-1.2**
	baz=301								
WTCT				*e*S		**Sb**	**20 18 59.6**	**-1.8**
	baz=301								
TWP	**Hsiaoliuchiu**	**1.43**	**236**	*e*P		**Pb**	**20 18 45.1**	**+1.4**
	baz=233								
TSEB	**Hengchuen, Pin**	**1.43**	**209**	*e*P		**Pb**	**20 18 42.4**	**-1.4**
	baz=207								
TSEB				*e*S		**Sb**	**20 19 00.3**	**-1.4**
	baz=207								
TWK1	**Hengchun**	**1.44**	**212**	P		**Pb**	**20 18 42.2**	**-1.7**
	baz=198								
TWK1				*e*S		**Sb**	**20 18 59.5**	**-2.4**
	baz=198								
TWC	**Suao**	**1.45**	**8**	*e*P		**Pb**	**20 18 43.2**	**-0.9**
	baz=14								
TWC				*e*S		**Sn**	**20 19 00.4**	**+1.0**
	baz=14								
ENTT	**Nioudou**	**1.47**	**357**	*e*P		**Pb**	**20 18 42.9**	**-1.5**
	baz=4.0								
ENTT				*e*S		**Sb**	**20 19 01.1**	**-1.6**
	baz=4.0								
NSY	**Sanyi**	**1.48**	**327**	*e*P		**Pb**	**20 18 44.4**	**-0.2**
	baz=332								
NSY				S		**Sb**	**20 19 03.9**	**+0.8**
	baz=332								
NSK	**Sanguang**	**1.52**	**350⇓**	*e*P		**Pb**	**20 18 43.8**	**-1.6**
	baz=357								
NSK				*e*S		**Sn**	**20 19 01.6**	**+0.2**
	baz=357								
TWE	**Neicheng**	**1.55**	**1**	*e*P		**Pb**	**20 18 44.4**	**-1.3**
	baz=360								
TWE				*e*S		**Sb**	**20 19 03.6**	**-1.4**
	baz=360								
NSTT	**Nanjuang**	**1.57**	**338**	*e*P		**Pb**	**20 18 45.5**	**-0.6**
	baz=344								
NSTT				*e*S		**Sb**	**20 19 04.9**	**-0.8**
	baz=344								
ILA	**Ilan**	**1.60**	**4**	*e*P		**Pb**	**20 18 45.6**	**-1.0**
	baz=359								
YOJ	**Yonaguni jima**	**1.80**	**44⇓**	*i*P		**Pb**	**20 18 49.0**	**-1.0**
	baz=56								
YOJ				*e*S		**Sb**	**20 19 10.9**	**-1.3**
	baz=56								
YOJ	**Yonaguni jima**	**1.80**	**44**	P		**Pb**	**20 18 49.0**	**-1.0**
YOJ				S		**Sb**	**20 19 11.0**	**-1.3**
NCU	**National Centr**	**1.84**	**347**	*e*P		**Pn**	**20 18 47.7**	**+0.7**
	baz=352								
TWB1	**Santiao Chiao**	**1.86**	**10**	*e*P		**Pb**	**20 18 49.6**	**-1.4**
	baz=24								
TWB1				*e*S		**Sb**	**20 19 12.3**	**-1.7**
	baz=24								
TAP1	**Taipei**	**1.87**	**357**	*e*P		**Pb**	**20 18 49.8**	**-1.3**
	baz=2.0								
TAP1				*e*S		**Sb**	**20 19 11.9**	**-2.2**
	baz=2.0								
TAP	**Taipei**	**1.87**	**356**	*e*P		**Pn**	**20 18 48.6**	**+1.3**
	baz=2.0								
TAP				*e*S		**Sb**	**20 19 12.5**	**-1.7**
	baz=2.0								
NWF	**Wu-fen Shan**	**1.90**	**4**	*e*P		**Pb**	**20 18 50.3**	**-1.5**
	baz=358								
NWF				*e*S		**Sb**	**20 19 13.2**	**-2.0**
	baz=358								
TWS1	**Kuangyinshan**	**1.94**	**354**	*e*P		**Pb**	**20 18 50.0**	**-2.3**
	baz=11								
TWS1				*e*S		**Sb**	**20 19 15.4**	**-0.7**
	baz=11								
PNG	**Penghu**	**1.96**	**282**	*i* P		**Pn**	**20 18 48.9**	**+0.4**
	baz=269								
PNG				*e*S		**Sn**	**20 19 10.7**	**-1.2**
	baz=269								
TWY	**Chenhua**	**2.10**	**359**	*e*P		**Pb**	**20 18 53.1**	**-2.0**
	baz=4.0								
HATJ	**Hateruma jima**	**2.18**	**66**	P		**Pb**	**20 18 54.0**	**-2.4**
HATJ				S		**Sn**	**20 19 20.0**	**+2.6**
IRIF	**Iriomote-Funau**	**2.24**	**58**	P		**Pb**	**20 18 55.1**	**-2.4**
IRIF				*e*S		**Sn**	**20 19 21.8**	**+2.8**
JKRS	**Kuro-shima**	**2.42**	**63**	P		**Pb**	**20 18 57.6**	**-2.9**
JKRS				*e*S		**Sn**	**20 19 26.4**	**+3.0**
JIJ	**Ishigaki jima**	**2.59**	**62**	P		**Pn**	**20 18 59.3**	**+2.1**
JIJ				S		**Sn**	**20 19 29.3**	**+1.8**
JTJ	**Tarama**	**3.17**	**62**	P		**Pn**	**20 19 07.3**	**+2.2**
JTJ				S		**Sn**	**20 19 44.8**	**+3.0**
KNM	**Kinmen**	**3.19**	**294**	*e*P		**Pn**	**20 19 06.3**	**+0.9**
	baz=292								
JMJ	**Miyako jima 2**	**3.73**	**63**	P		**Pn**	**20 19 15.5**	**+2.7**
JOGS	**Gusukube**	**3.79**	**65**	P		Pn	20 19 16.6	+2.8
JKE	**Kume jima 2**	**5.64**	**55**	P		**Pn**	**20 19 40.5**	**+1.3**

*ISCJB **09** 20:47:00.9±0.2, 42°.50N±0°.02×13°.28E±0°.02, h13km±2km, Error ellipse: s-maj=2.8km s-min=2.2km az=41.7*
*CSEM **09** 20:47:01.5±0.1, 42°.50N×13°.28E, h5km, ML3.7/12, Error ellipse: s-maj=2.4km s-min=1.9km az=45.0*
*LDG **09** 20:47:01.2±0.2, 42°.50N×13°.35E, h2km, Ml2.9/13, Error ellipse: s-maj=6.0km s-min=3.8km az=50.0*
*ROM **09** 20:47:01.2±0.1, 42°.50N×13°.32E, h11km, Ml3.3/33, Error ellipse: s-maj=0.8km s-min=0.6km az=50.0*

ISC 09 20:47:01.8±0.7, 42°.50N±0°.01×13°.31E±0°.01, h13km±4km, n155, σ1§35/206, 15C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.08**	**65⇓**	*i*Pg	**Pg**	**20 47 04.2**	**-0.6**
CAMP				Sg	**Sg**	**20 47 05.9**	**-1.0**
	23μm,0.3s						
CAMP	**Campotosto**	**0.08**	**65⇓**	*i*Pg	**Pg**	**20 47 04.2**	**-0.6**
CAMP				Sg	**Sg**	**20 47 05.9**	**-1.0**
	23μm,0.3s						
AQU	**L'Aquila**	**0.16**	**156**	Pg	**Pg**	**20 47 05.4**	**-0.3**
AQU				Sg	**Sg**	**20 47 08.1**	**-0.3**
	11μm,0.3s						
AQU	**L'Aquila**	**0.16**	**156**	Pg	**Pg**	**20 47 05.4**	**-0.3**
AQU				Sg	**Sg**	**20 47 08.1**	**-0.3**
	11μm,0.3s						
LNSS	**Leonessa**	**0.23**	**297**	Pg	**Pg**	**20 47 06.7**	**-0.1**
LNSS				Sg	**Sg**	**20 47 10.7**	**+0.5**
	7μm,0.3s						
LNSS	**Leonessa**	**0.23**	**297**	Pg	**Pg**	**20 47 06.7**	**-0.1**
LNSS				Sg	**Sg**	**20 47 10.7**	**+0.5**
	7μm,0.3s						
TERO	**Teramo**	**0.25**	**61⇑**	*i*Pg	**Pg**	**20 47 06.5**	**-0.6**
TERO				Sg	**Sg**	**20 47 10.3**	**-0.4**
	7μm,0.3s						
TERO	**Teramo**	**0.25**	**61⇑**	*i*Pg	**Pg**	**20 47 06.5**	**-0.6**
TERO				Sg	**Sg**	**20 47 10.3**	**-0.4**
	7μm,0.3s						
FIAM	**Fiamignano**	**0.28**	**212⇑**	*i*Pg	**Pg**	**20 47 07.3**	**-0.3**
FIAM				Sg	**Sg**	**20 47 12.1**	**+0.6**
	3μm,0.3s						
FIAM	**Fiamignano**	**0.28**	**212⇑**	*i*Pg	**Pg**	**20 47 07.3**	**-0.3**
FIAM				Sg	**Sg**	**20 47 12.1**	**+0.6**
	3μm,0.3s						
FAGN	**Fagnano**	**0.31**	**139**	Pg	**Pg**	**20 47 07.7**	**-0.5**
FAGN				Sg	**Sg**	**20 47 12.8**	**+0.3**
FAGN	**Fagnano**	**0.31**	**139**	Pg	**Pg**	**20 47 07.7**	**-0.5**
FAGN				Sg	**Sg**	**20 47 12.8**	**+0.3**
NRCA	**Norcia**	**0.36**	**336**	Pg	**Pg**	**20 47 08.8**	**-0.4**
NRCA				Sg	**Sg**	**20 47 14.7**	**+0.5**
	8μm,0.1s						
NRCA	**Norcia**	**0.36**	**336**	Pg	**Pg**	**20 47 08.8**	**-0.4**
NRCA				Sg	**Sg**	**20 47 14.7**	**+0.5**
	8μm,0.1s						
VCEL	**Villa Celiera**	**0.41**	**105**	Pg	**Pg**	**20 47 10.0**	**+0.1**
VCEL				Sg	**Sg**	**20 47 15.7**	**+0.3**
	4μm,0.2s						
VCEL	**Villa Celiera**	**0.41**	**105**	Pg	**Pg**	**20 47 10.0**	**+0.1**
VCEL				Sg	**Sg**	**20 47 15.7**	**+0.3**
	4μm,0.2s						
MNS	**Montasola**	**0.48**	**256⇑**	*i*Pg	**Pg**	**20 47 10.8**	**-0.5**
MNS				Sg	**Sg**	**20 47 18.1**	**+0.3**
MNS	**Montasola**	**0.48**	**256⇑**	*i*Pg	**Pg**	**20 47 10.8**	**-0.5**
MNS				Sg	**Sg**	**20 47 18.1**	**+0.3**
PTQR	**Pietraquaria**	**0.48**	**172⇑**	*i*Pg	**Pg**	**20 47 10.6**	**-0.8**
PTQR				Sg	**Sg**	**20 47 17.7**	**-0.2**
PTQR	**Pietraquaria**	**0.48**	**172⇑**	*i*Pg	**Pg**	**20 47 10.6**	**-0.8**
PTQR				Sg	**Sg**	**20 47 17.7**	**-0.2**
OFFI	**Offida**	**0.51**	**32⇑**	*i*Pg	**Pg**	**20 47 12.1**	**+0.2**
	5μm,0.8s						
OFFI	**Offida**	**0.51**	**32⇑**	*i*Pg	**Pg**	**20 47 12.1**	**+0.2**
	5μm,0.8s						
TRTR	**Tortoreto Alta**	**0.54**	**55⇑**	*i*Pg	**Pb**	**20 47 12.8**	**-0.3**
	2μm,0.4s						
TRTR	**Tortoreto Alta**	**0.54**	**55⇑**	*i*Pg	**Pb**	**20 47 12.8**	**-0.3**
	2μm,0.4s						
CESX	**Cesi**	**0.55**	**282**	Pg	**Pg**	**20 47 12.0**	**-0.6**
	1μm,0.2s						
CESX	**Cesi**	**0.55**	**282**	Pg	**Pg**	**20 47 12.0**	**-0.6**
	1μm,0.2s						
FDMO	**Fiordimonte**	**0.56**	**343**	Pg	**Pg**	**20 47 12.2**	**-0.6**
FDMO				Sg	**Sg**	**20 47 20.7**	**+0.4**
	1μm,0.2s						
FDMO	**Fiordimonte**	**0.56**	**343**	Pg	**Pg**	**20 47 12.2**	**-0.6**
FDMO				Sg	**Sg**	**20 47 20.7**	**+0.4**
	1μm,0.2s						
CESI	**CESI - Serrava**	**0.59**	**329**	Pg	**Pg**	**20 47 12.8**	**-0.5**
CESI				Sg	**Sb**	**20 47 21.8**	**-0.4**
CESI	**CESI - Serrava**	**0.59**	**329**	Pg	**Pg**	**20 47 12.8**	**-0.5**
CESI				Sg	**Sb**	**20 47 21.8**	**-0.4**
CERT	**Cerreto**	**0.60**	**204⇑**	*i*Pg	**Pg**	**20 47 12.7**	**-0.9**
	2μm,0.5s						
CERT	**Cerreto**	**0.60**	**204⇑**	*i*Pg	**Pg**	**20 47 12.7**	**-0.9**
	2μm,0.5s						
MTCE	**Montecelio**	**0.64**	**222**	Pg	**Pg**	**20 47 13.3**	**-1.0**
	592nm,0.3s						
MTCE	**Montecelio**	**0.64**	**222**	Pg	**Pg**	**20 47 13.3**	**-1.0**
	592nm,0.3s						
INTR	**Introdacqua**	**0.66**	**138**	Pg	**Pg**	**20 47 13.6**	**-1.0**
INTR				Sg	**Sg**	**20 47 23.1**	**-0.2**
INTR	**Introdacqua**	**0.66**	**138**	Pg	**Pg**	**20 47 13.6**	**-1.0**
INTR				Sg	**Sg**	**20 47 23.1**	**-0.2**
VVLD	**Villa Vallelon**	**0.67**	**160**	Pg	**Pg**	**20 47 14.5**	**-0.4**
	1μm,0.7s						
VVLD	**Villa Vallelon**	**0.67**	**160**	Pg	**Pg**	**20 47 14.5**	**-0.4**
	1μm,0.7s						
GUAR	**Guarcino**	**0.71**	**180**	Pg	**Pg**	**20 47 15.2**	**-0.4**
	690nm,0.5s						
GUAR	**Guarcino**	**0.71**	**180**	Pg	**Pg**	**20 47 15.2**	**-0.4**
	690nm,0.5s						
ASSB	**Assisi San Ben**	**0.72**	**319**	Pg	**Pg**	**20 47 15.3**	**-0.6**
	770nm,0.3s						
ASSB	**Assisi San Ben**	**0.72**	**319**	Pg	**Pg**	**20 47 15.3**	**-0.6**
	770nm,0.3s						
LPEL	**Lama dei Pelig**	**0.79**	**125**	Pg	**Pg**	**20 47 15.6**	**-1.5**
LPEL				Sg	**Sg**	**20 47 27.4**	**-0.1**
	518nm,0.4s						
LPEL	**Lama dei Pelig**	**0.79**	**125**	Pg	**Pg**	**20 47 15.6**	**-1.5**
LPEL				Sg	**Sg**	**20 47 27.4**	**-0.1**
	518nm,0.4s						
SNTG	**Esanatoglia**	**0.80**	**340**	Pg	**Pg**	**20 47 16.4**	**-0.9**
SNTG				Sg	**Sg**	**20 47 27.1**	**-0.8**
	236nm,0.2s						
SNTG	**Esanatoglia**	**0.80**	**340**	Pg	**Pg**	**20 47 16.4**	**-0.9**
SNTG				Sg	**Sg**	**20 47 27.1**	**-0.8**
	236nm,0.2s						
CAFR	**Castel Frentan**	**0.81**	**109**	Pg	**Pg**	**20 47 16.6**	**-1.0**
	852nm,0.3s						
CAFR	**Castel Frentan**	**0.81**	**109**	Pg	**Pg**	**20 47 16.6**	**-1.0**
	852nm,0.3s						
RMP	**Rome, Mte Porz**	**0.83**	**214**	Pg	**Pg**	**20 47 16.6**	**-1.2**
	690nm,0.5s						
RMP	**Rome, Mte Porz**	**0.83**	**214**	Pg	**Pg**	**20 47 16.6**	**-1.2**
	690nm,0.5s						
POFI	**Posta Fibreno**	**0.84**	**159**	Pg	**Pg**	**20 47 17.0**	**-1.0**
POFI	**Posta Fibreno**	**0.84**	**159**	Pg	**Pg**	**20 47 17.0**	**-1.0**
RDP	**Rocca di Papa**	**0.86**	**211**	Pg	**Pg**	**20 47 17.2**	**-1.4**
	1μm,0.6s						
RDP	**Rocca di Papa**	**0.86**	**211**	Pg	**Pg**	**20 47 17.2**	**-1.4**
	1μm,0.6s						
SDI	**San Donato**	**0.87**	**155**	Pg	**Pg**	**20 47 17.5**	**-1.2**
	176nm,0.4s						
SDI	**San Donato**	**0.87**	**155**	Pg	**Pg**	**20 47 17.5**	**-1.2**
	176nm,0.4s						
CING	**Cingoli**	**0.88**	**354**	Pg	**Pg**	**20 47 17.8**	**-1.0**
	720nm,0.4s						
CING	**Cingoli**	**0.88**	**354**	Pg	**Pg**	**20 47 17.8**	**-1.0**
	720nm,0.4s						
GIUL	**Giuliano Di Ro**	**0.94**	**183**	Pg	**Pb**	**20 47 18.6**	**-1.4**
	293nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.94**	**183**	Pg	**Pb**	**20 47 18.6**	**-1.4**
	293nm,0.6s						
MURB	**Monte Urbino**	**0.96**	**323**	Pg	**Pb**	**20 47 19.5**	**-0.7**
	1μm,0.4s						
MURB	**Monte Urbino**	**0.96**	**323**	Pg	**Pb**	**20 47 19.5**	**-0.7**
	1μm,0.4s						
MGAB	**Montegabbione**	**0.98**	**295**	Pg	**Pb**	**20 47 19.9**	**-0.7**
	649nm,0.4s						
MGAB	**Montegabbione**	**0.98**	**295**	Pg	**Pb**	**20 47 19.9**	**-0.7**
	649nm,0.4s						
ARVD	**Arcevia**	**1.03**	**345**	Pg	**Pb**	**20 47 20.5**	**-1.0**
	628nm,0.6s						
ARVD	**Arcevia**	**1.03**	**345**	Pg	**Pb**	**20 47 20.5**	**-1.0**
	628nm,0.6s						
TOLF	**Tolfa**	**1.07**	**246**	Pg	**Pb**	**20 47 20.9**	**-1.2**
	453nm,0.5s						
TOLF	**Tolfa**	**1.07**	**246**	Pg	**Pb**	**20 47 20.9**	**-1.2**
	453nm,0.5s						
AOI	**Ancona**	**1.07**	**11**	Pg	**Pb**	**20 47 21.2**	**-0.9**
	551nm,0.7s						
AOI	**Ancona**	**1.07**	**11**	Pg	**Pb**	**20 47 21.2**	**-0.9**
	551nm,0.7s						
SACS	**San Casciano d**	**1.09**	**289**	Pg	**Pb**	**20 47 22.0**	**-0.5**
	203nm,0.6s						
MIDA	**Miranda**	**1.11**	**140**	Pg	**Pb**	**20 47 21.1**	**-1.7**
	204nm,0.5s						
MIDA	**Miranda**	**1.11**	**140**	Pg	**Pb**	**20 47 21.1**	**-1.7**
	204nm,0.5s						
LATE	**Laterza**	**1.12**	**276**	Pg	**Pb**	**20 47 22.7**	**-0.3**
	697nm,0.6s						
LATE	**Laterza**	**1.12**	**276**	Pg	**Pb**	**20 47 22.7**	**-0.3**
	697nm,0.6s						
PIEI	**Pieia**	**1.18**	**331**	Pg	**Pn**	**20 47 23.1**	**-0.9**
	249nm,0.4s						
PIEI	**Pieia**	**1.18**	**331**	Pg	**Pn**	**20 47 23.1**	**-0.9**
	249nm,0.4s						
FSSB	**Fossombrone**	**1.25**	**342**	Pn	**Pn**	**20 47 24.5**	**-0.5**
	1μm,0.4s						
FSSB	**Fossombrone**	**1.25**	**342**	Pn	**Pn**	**20 47 24.5**	**-0.5**
	1μm,0.4s						
CAFI	**Castiglion Fio**	**1.29**	**310**	Pn	**Pn**	**20 47 25.6**	**+0.1**
	159nm,0.7s						
CAFI	**Castiglion Fio**	**1.29**	**310**	Pn	**Pn**	**20 47 25.6**	**+0.1**
	159nm,0.7s						
PARC	**Parchiule**	**1.39**	**326**	Pn	**Pb**	**20 47 27.4**	**-0.2**
	314nm,0.7s						
PARC	**Parchiule**	**1.39**	**326**	Pn	**Pb**	**20 47 27.4**	**-0.2**
	314nm,0.7s						
MAON	**Monte Argentar**	**1.62**	**268**	Pn	**Pn**	**20 47 30.0**	**+0.1**
MAON	**Monte Argentar**	**1.62**	**268**	Pn	**Pn**	**20 47 30.0**	**+0.1**
MS1	**Monte Sant'Ang**	**2.11**	**111**	*e*Pn	**Pb**	**20 47 41.2**	**+1.3**
NVLJ	**Novalja**	**2.35**	**28**	*i*Pn	**Pn**	**20 47 40.2**	**+0.2**
NVLJ				Sn	**Sn**	**20 48 09.4**	**+0.7**
NVLJ	**Novalja**	**2.35**	**28**	*i*Pn	**Pn**	**20 47 40.2**	**+0.2**
NVLJ				Sn	**Sn**	**20 48 09.4**	**+0.7**
MAIM	**Mastiano**	**2.50**	**305**	P	**Pn**	**20 47 42.6**	**+0.5**
CRDM	**Cardoso**	**2.57**	**307**	P	**Pn**	**20 47 43.1**	**0.0**
CDT	**Castel del Mon**	**2.63**	**122**	*e*Pn	**Pb**	**20 47 46.4**	**-2.3**
CDT				*e*Sn	**Sb**	**20 48 19.6**	**-1.3**
KNDS	**Knezji Dol**	**3.12**	**14**	*i*Pn	**Pn**	**20 47 51.3**	**+0.6**
KNDS				*i*Sn	**Sn**	**20 48 29.6**	**+1.7**
KNDS	**Knezji Dol**	**3.12**	**14**	*i*Pn	**Pn**	**20 47 51.3**	**+0.6**
KNDS				*i*Sn	**Sn**	**20 48 29.6**	**+1.7**
PGF	**Pioggiola**	**3.19**	**272**	*e*Pn	**Pn**	**20 47 52.8**	**+1.1**
PGF				*e*Sn	**Sn**	**20 48 32.9**	**+3.3**
	5.5nm,0.4s						
PGF	**Pioggiola**	**3.19**	**272**	*e*Pn	**Pn**	**20 47 52.8**	**+1.1**
PGF				*e*Sn	**Sn**	**20 48 32.9**	**+3.3**
	2.8nm,0.4s						
STON	**Ston**	**3.25**	**82**	*i* Pn	**Pn**	**20 47 53.4**	**+0.9**
STON	**Ston**	**3.25**	**82**	*i* Pn	**Pn**	**20 47 53.3**	**+0.9**
JAVS	**Javornik**	**3.43**	**9**	*i* Pn	**Pn**	**20 47 55.3**	**+0.3**
JAVS	**Javornik**	**3.43**	**9**	*i* Pn	**Pn**	**20 47 55.3**	**+0.3**
VOY	**Vojsko**	**3.55**	**7**	*e*Pn	**Pn**	**20 47 56.7**	**0.0**
VOY				*e*Sn	**Sn**	**20 48 39.2**	**+0.6**
VOY	**Vojsko**	**3.55**	**7**	*e*Pn	**Pn**	**20 47 56.7**	**0.0**
VOY				*e*Sn	**Sn**	**20 48 39.2**	**+0.6**
BLY	**Banja Luka**	**3.60**	**50**	*e*Pn	Pb	20 48 01.8	-3.4
PDKS	**Podkum**	**3.76**	**18**	*i* Pn	**Pn**	**20 48 00.2**	**+0.8**
PDKS	**Podkum**	**3.76**	**18**	*i* Pn	**Pn**	**20 48 00.2**	**+0.8**
ABTA	**Abfaltersbach**	**4.28**	**353⇑**	*i*Pn	**Pn**	**20 48 07.4**	**+0.7**
	SNR=6.7						
ABTA	**Abfaltersbach**	**4.28**	**353**	Pn	**Pn**	**20 48 07.4**	**+0.7**
	SNR=6.7						
PDG	**Podgorica**	**4.40**	**89**	*e*Pn	**Pn**	**20 48 10.9**	**+2.7**
SBF	**Sospel**	**4.51**	**290**	*e*Pn	**Pn**	**20 48 10.6**	**+0.8**
SBF				*e*Sn	**Sn**	**20 49 01.2**	**-0.9**
	4.3nm,0.4s						
SBF	**Sospel**	**4.51**	**290**	*e*Pn	**Pn**	**20 48 10.6**	**+0.8**
SBF				*e*Sn	**Sn**	**20 49 01.2**	**-0.9**
	2.2nm,0.4s						
KBA	**Koelnbreinsper**	**4.58**	**0⇓**	*i*Pn	**Pn**	**20 48 11.6**	**+0.8**
	SNR=7.8						
KBA	**Koelnbreinsper**	**4.58**	**0**	Pn	**Pn**	**20 48 11.6**	**+0.8**
	SNR=7.8						
PUK	**Puka**	**4.90**	**93**	*e*PN	**Pn**	**20 48 18.0**	**+2.8**
PUK	**Puka**	**4.90**	**93**	*e*Pn	**Pn**	**20 48 18.0**	**+2.8**
FRF	**La Foret Royal**	**5.00**	**284**	*e*Pn	**Pn**	**20 48 17.4**	**+0.9**
FRF				*e*Sn	**Sn**	**20 49 12.4**	**-1.7**
	0.6nm,0.3s						
FRF	**La Foret Royal**	**5.00**	**284**	*e*Pn	**Pn**	**20 48 17.4**	**+0.9**
FRF				*e*Sn	**Sn**	**20 49 12.4**	**-1.7**
	0.3nm,0.3s						
BCI	**Bajram Curri**	**5.00**	**89**	*e*PN	**Pn**	**20 48 19.1**	**+2.6**
BCI	**Bajram Curri**	**5.00**	**89**	*e*Pn	**Pn**	**20 48 19.1**	**+2.6**
TIR	**Tirane**	**5.02**	**101**	*e*Pn	**Pn**	**20 48 19.3**	**+2.5**
LMR	**La Mourre**	**5.07**	**282**	*e*Pn	**Pn**	**20 48 18.0**	**+0.7**
LMR				*e*Sn	**Sn**	**20 49 13.9**	**-1.8**
	0.8nm,0.4s						
LMR	**La Mourre**	**5.07**	**282**	*e*Pn	**Pn**	**20 48 18.0**	**+0.7**
LMR				*e*Sn	**Sn**	**20 49 13.9**	**-1.8**
	0.4nm,0.4s						
IVAS	**Ivanjica**	**5.13**	**76**	*e*Pn	**Pn**	**20 48 19.9**	**+1.6**
DIVS	**Divibare**	**5.13**	**70**	*e*Pn	**Pn**	**20 48 19.2**	**+0.9**
MBDF	**Montbardon**	**5.24**	**297**	*e*P	**Pn**	**20 48 22.4**	**+2.4**
MBDF	**Montbardon**	**5.24**	**297**	*e*P	**Pn**	**20 48 22.4**	**+2.4**
PHP	**Peshkopia**	**5.37**	**96**	*e*PN	**Pn**	**20 48 24.2**	**+2.6**
PHP	**Peshkopia**	**5.37**	**96**	*e*Pn	**Pn**	**20 48 24.2**	**+2.6**
GRUS	**Gruza**	**5.59**	**73**	*e*Pn	**Pn**	**20 48 24.9**	**+0.4**
LPG	**La Plagne**	**5.60**	**305**	*e*P	Pn	20 48 28.8	+3.8
LPG				*e*Sn	**Sn**	**20 49 28.4**	**-0.9**
	1.4nm,0.3s						
LPL	**La Plagne**	**5.62**	**305**	*e*P	Pn	20 48 29.4	+4.2
LPL				*e*Sn	**Sn**	**20 49 27.5**	**-2.2**
	1.0nm,0.3s						
SMRF	**Simiane la Rot**	**5.84**	**287**	*e*P	**Pn**	**20 48 30.6**	**+2.5**
SMRF	**Simiane la Rot**	**5.84**	**287**	*e*P	**Pn**	**20 48 30.6**	**+2.5**
ORIF	**Oris-en-Rattie**	**5.90**	**297**	*e*P	Pn	20 48 32.7	+3.7
ORIF				*e*Sn	**Sn**	**20 49 34.9**	**-1.6**
	0.5nm,0.3s						
ORIF	**Oris-en-Rattie**	**5.90**	**297**	*e*Sn	**Sn**	**20 49 34.9**	**-1.6**
	0.2nm,0.3s						
BARS	**Barje**	**6.28**	**84**	*e*Pn	**Pn**	**20 48 36.5**	**+2.5**
CABF	**La Chapelle**	**6.60**	**311**	*e*Pn	**Pn**	**20 48 40.7**	**+2.2**
CABF	**La Chapelle**	**6.60**	**311**	*e*Pn	**Pn**	**20 48 40.7**	**+2.2**
KHC	**Kasperske Hory**	**6.63**	**2**	*e*PN	**Pn**	**20 48 39.2**	**+0.3**
KHC				*ex*	x	20 48 46.0	
KHC				*e*SN	**Sn**	**20 49 51.4**	**-2.9**
KHC	**Kasperske Hory**	**6.63**	**2**	Pn	**Pn**	**20 48 39.2**	**+0.3**
ZAPS	**Zavoj**	**6.89**	**80**	*e*Pn	**Pn**	**20 48 45.5**	**+3.0**
HINF	**Hinteralfeld**	**7.00**	**322**	*e*Pn	**Pn**	**20 48 45.0**	**+1.0**
HINF				*e*Sn	**Sn**	**20 50 01.8**	**-1.7**
	8.8nm,0.5s						
HINF	**Hinteralfeld**	**7.00**	**322**	*e*Pn	**Pn**	**20 48 45.0**	**+1.0**
VYHS	**Vyhne**	**7.14**	**31**

WRAB	**Tennant Creek**	**18.16**	**222**	*e*P	**P**	**20 56 05.4**	**-2.3**
	43nm,1.1s						
WRA	**Warramunga Arr**	**18.17**	**222**	P	**P**	**20 56 06.2**	**-1.8**
WRA				S	**Sn**	**20 59 30.8**	**+0.6**
WRA	**Warramunga Arr**	**18.17**	**222**	P	**P**	**20 56 06.2**	**-1.8**
	0.4nm,0.3s,baz=45,slow=12,SNR=36						
WRA				S	**Sn**	**20 59 30.8**	**+0.6**
	1.4nm,0.3s,baz=43,slow=25,SNR=3.7						
WRA				LR	LR	21 03 16.0	
	comp=Z,296nm,21.8s,baz=40,slow=38						
AAI	**Ambon**	**19.03**	**278**	P	**P**	**20 56 18.3**	**+0.9**
AAI	**Ambon**	**19.03**	**278**	P	**Pn**	**20 56 23.2**	**+4.6**
	baz=19,SNR=6.8						
EIDS	**Eidsvold**	**19.09**	**169**	*e*P	**Pn**	**20 56 19.4**	**+0.3**
	11nm,0.7s						
EIDS	**Eidsvold**	**19.09**	**169**	P	**Pn**	**20 56 19.8**	**+0.7**
	baz=19,SNR=7.6						
RMQ	**Roma**	**19.88**	**176**	P	**Pn**	**20 56 29.1**	**+0.6**
	baz=20,SNR=9.0						
QLP	**Quilpie**	**20.09**	**187**	P	Pn	20 56 30.4	-0.6
	baz=20,SNR=24						
GUMO	**Guam**	**20.14**	**354**	LR	LR	21 02 17.2	
	comp=Z,228nm,20.3s,baz=195,slow=31						
LBMI	**Labuha**	**20.41**	**286**	P	Pn	20 56 35.7	+0.8
TNTI	**Ternate**	**20.99**	**290**	P	**P**	**20 56 41.4**	**+2.7**
AS31	**Alice Springs**	**21.21**	**215**	*e*P	**P**	**20 56 41.3**	**+0.3**
ASAR	**Alice Springs**	**21.21**	**215**	P	**P**	**20 56 40.5**	**-0.5**
ASAR				S	Sn	21 00 39.0	-4.4
ASAR				ScP	**ScP**	**21 04 21.9**	**+3.7**
ASAR	**Alice Springs**	**21.21**	**215**	P	**P**	**20 56 40.6**	**-0.5**
	7.9nm,0.6s,baz=43,slow=10,SNR=38						
ASAR				S	Sn	21 00 39.0	-4.4
	5.0nm,0.9s,baz=31,slow=19,SNR=5.8						
ASAR				ScP	**ScP**	**21 04 21.9**	**+3.7**
	0.6nm,0.8s,baz=37,slow=2.1,SNR=3.2						
ASAR				LR	LR	21 05 11.3	
	comp=Z,276nm,21.7s,baz=38,slow=38						
MNI	**Manado**	**23.59**	**289**	P	**P**	**20 57 05.2**	**-0.7**
	190nm,1.0s,2μm88μm						
FITZ	**Fitzroy Crossi**	**23.85**	**239**	*e*P	**P**	**20 57 05.0**	**-3.3**
	19nm,0.8s						
FITZ	**Fitzroy Crossi**	**23.85**	**239**	P	**P**	**20 57 05.6**	**-2.6**
	3.7nm,0.4s,baz=66,slow=8.8,SNR=22						
FITZ				LR	LR	21 08 11.1	
	comp=Z,287nm,19.7s,baz=326,slow=41						
FITZ	**Fitzroy Crossi**	**23.85**	**239**	P	**P**	**20 57 05.8**	**-2.5**
	baz=24,SNR=33						
ARMA	**Armidale**	**24.11**	**170**	*e*P	**P**	**20 57 11.8**	**+1.2**
	31nm,1.2s						
ARMA	**Armidale**	**24.11**	**170**	P	**P**	**20 57 12.0**	**+1.4**
	baz=24,SNR=7.3						
KMSI	**Cibinong**	**24.13**	**286**	P	**P**	**20 57 13.0**	**+2.2**
DZM	**Mont Dzumac**	**24.23**	**131**	P	**P**	**20 57 11.3**	**-0.4**
DZM	**Mont Dzumac**	**24.23**	**131**	P	**P**	**20 57 11.3**	**-0.4**
	15nm,0.8s,baz=310,slow=19,SNR=10						
MMRI	**Maumere**	**24.72**	**264**	P	**P**	**20 57 19.3**	**+3.1**
LUWI	**Luwuk**	**24.87**	**282**	P	**P**	**20 57 18.1**	**+0.5**
CMSA	**Cobar Meteorol**	**24.88**	**183**	P	**P**	**20 57 17.7**	**+0.3**
	baz=25,SNR=12						
STKA	**Stephens Creek**	**25.70**	**191**	*e*P	**P**	**20 57 24.7**	**-0.2**
	2.1nm,0.8s						
STKA	**Stephens Creek**	**25.70**	**191**	P	**P**	**20 57 24.6**	**-0.3**
	3.4nm,0.6s,baz=352,slow=7.9,SNR=19						
STKA				LR	LR	21 08 21.4	
	comp=Z,403nm,18.9s,baz=144,slow=38						
STKA	**Stephens Creek**	**25.70**	**191**	P	**P**	**20 57 25.1**	**+0.1**
	baz=26,SNR=22						
MRSI	**Marisa**	**26.05**	**285**	P	**P**	**20 57 30.2**	**+1.9**
BKSI	**Bulukumba**	**26.85**	**271**	P	**P**	**20 57 36.8**	**+1.3**
KAPI	**Kappang**	**27.24**	**272**	LR	LR	21 09 22.7	
	comp=Z,120nm,19.6s,baz=309,slow=39						
YNG	**Young**	**27.62**	**178**	P	**P**	**20 57 44.1**	**+1.8**
	baz=28,SNR=8.9						
BBOO	**Buckleboo**	**28.06**	**200**	*e*P	**P**	**20 57 45.3**	**-0.9**
	152nm,0.8s						
NFK	**Norfolk Island**	**29.79**	**141**	P	P	20 58 19.4	+18
	baz=30,SNR=3.6						
MBWA	**Marble Bar**	**30.19**	**239**	*e*P	**P**	**20 58 03.2**	**-2.0**
MYLDM	**Lahad Datu**	**30.83**	**292**	P	**P**	**20 58 14.1**	**+3.2**
	24nm,1.1s						
MEEK	**Meekatharra**	**33.66**	**230**	P	**P**	**20 58 34.2**	**-1.5**
	baz=34,SNR=13						
MORW	**Morawa**	**36.87**	**229**	P	**P**	**20 59 01.9**	**-1.2**
	baz=37,SNR=6.6						
KLBR	**Kellerberrin**	**37.03**	**224**	P	**P**	**20 59 02.9**	**-1.7**
	baz=37,SNR=5.0						
KSM	**Kuching**	**37.57**	**281**	*e*P	**P**	**20 59 08.3**	**-1.0**
	12nm,0.8s						
KSM	**Kuching**	**37.57**	**281**	P	**P**	**20 59 12.0**	**+2.7**
	17nm,0.9s						
KSM	**Kuching**	**37.57**	**281**	P	P	20 59 14.1	+4.8
	baz=38,SNR=4.0						
TPI	**Tanjungpandan**	**39.48**	**274**	P	**P**	**20 59 27.3**	**+2.0**
	18nm,0.8s,272nm						
SSLB	**Suanglung**	**39.51**	**321**	*e*P	**P**	**20 59 23.8**	**-1.7**
URZ	**Urewera**	**41.65**	**144**	P	P	20 59 45.8	+2.9
URZ	**Urewera**	**41.65**	**144**	P	P	20 59 45.8	+2.9
	6.6nm,0.7s,baz=315,slow=14,SNR=2.9						
JNU	**Nakatsue**	**42.37**	**340**	LR	LR	21 16 24.1	
	comp=Z,105nm,18.4s,baz=46,slow=35						
MJAR	**Matsushiro Arr**	**43.68**	**350**	P	**P**	**20 59 57.7**	**-1.7**
MJAR	**Matsushiro Arr**	**43.68**	**350**	P	**P**	**20 59 57.7**	**-1.7**
	1.1nm,0.7s,baz=185,slow=9.4,SNR=6.4						
MAJO	**Matsushiro**	**43.68**	**350**	*e*P	**P**	**20 59 59.5**	**+0.1**
	4.9nm,0.6s						
MAT	**Matsushiro**	**43.68**	**350**	P	**P**	**21 00 02.1**	**+2.7**
IPM	**Ipoh**	**47.27**	**282**	P	**P**	**21 00 31.2**	**+2.9**
	19nm,0.9s						
KSRS	**Korea Array**	**47.31**	**339**	P	**P**	**21 00 26.9**	**-1.1**
	5.9nm,0.4s,baz=156,slow=8.9,SNR=35						
KSAR	**Wonju Array Be**	**47.31**	**339**	P	**P**	**21 00 26.9**	**-1.1**
KULM	**Kulim**	**47.83**	**283**	*e*P	**P**	**21 00 31.6**	**-0.9**
	15nm,0.9s						
PSI	**Prapat**	**48.98**	**279**	P	**P**	**21 00 42.8**	**+1.3**
	12nm,1.1s						
USRK	**Ussuriysk Arra**	**52.33**	**346**	P	**P**	**21 01 05.1**	**-0.9**
	4.4nm,0.7s,baz=181,slow=7.5,SNR=9.0						
CM31	**Chiang Mai Arr**	**53.59**	**299**	*e*P	**P**	**21 01 16.1**	**+0.2**
	5.7nm,0.5s						
CMAR	**Chiang Mai Arr**	**53.59**	**299**	P	**P**	**21 01 16.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**53.59**	**299**	P	**P**	**21 01 16.1**	**+0.2**
	5.6nm,0.6s,baz=122,slow=5.9,SNR=57						
CMMT	**Chiang Mai**	**53.73**	**299**	P	**P**	**21 01 19.3**	**+2.4**
	12nm,1.2s,334nm						
CHTO	**Chiang Mai**	**53.73**	**299**	*e*P	**P**	**21 01 16.6**	**-0.4**
	11nm,1.0s						
CHTO	**Chiang Mai**	**53.73**	**299**	P	**P**	**21 01 19.3**	**+2.4**
	14nm,1.2s						
PEA0B	**Petropavlovsk-**	**60.12**	**7**	*e*P	**P**	**21 02 02.0**	**+0.5**
PETK	**Petropavlovsk-**	**60.12**	**7**	P	**P**	**21 02 02.5**	**+1.0**
PETK	**Petropavlovsk-**	**60.12**	**7**	P	**P**	**21 02 02.5**	**+1.0**
	6.5nm,0.4s,baz=179,slow=7.4,SNR=9.8						
PETK				LR	LR	21 23 25.8	
	comp=Z,102nm,20.1s,baz=17,slow=32						
FX1	**Attu Island--F**	**63.23**	**17**	*e*P	**P**	**21 02 24.6**	**+2.2**
ULN	**Ulaanbaatar**	**64.64**	**331**	*e*P	**P**	**21 02 30.4**	**-1.7**
	5.2nm,0.8s						
ULN	**Ulaanbaatar**	**64.64**	**331**	P	P	21 02 36.3	+4.2
	7.3nm,0.8s						
SONM	**Songino Array**	**64.94**	**331**	P	**P**	**21 02 33.3**	**-0.6**
SONM	**Songino Array**	**64.94**	**331**	P	**P**	**21 02 33.3**	**-0.6**
	0.8nm,0.4s,baz=144,slow=5.6,SNR=11						
TAPN	**Taplejung**	**66.53**	**303**	*e*P	**P**	**21 02 44.3**	**-0.6**
ODAN	**Odare**	**66.62**	**303**	*e*P	**P**	**21 02 44.7**	**-0.7**
	14nm,0.5s						
GUN	**Gumba**	**68.25**	**303**	*e*P	**P**	**21 02 54.7**	**-1.1**
	28nm,0.7s						
PKI	**Pulchoki**	**68.52**	**303**	*e*P	**P**	**21 02 57.3**	**-0.2**
PKIN	**Phulchoki**	**68.54**	**303**	*e*P	**P**	**21 02 56.9**	**-0.6**
	10nm,0.8s						
KKN	**Kakani**	**68.70**	**303**	*e*P	**P**	**21 02 57.6**	**-0.9**
	18nm,0.8s						
DMN	**Daman**	**68.79**	**303**	*e*P	**P**	**21 02 58.7**	**-0.3**
	32nm,0.8s						
KOLN	**Koldanda**	**70.10**	**303**	*e*P	**P**	**21 03 06.4**	**-0.7**
	27nm,0.7s						
DANN	**Dangsing**	**70.16**	**303**	*e*P	**P**	**21 03 06.1**	**-1.4**
	20nm,0.6s						
PYUN	**Piuthan**	**70.72**	**303**	*e*P	**P**	**21 03 09.8**	**-1.0**
VNDA	**Vanda**	**71.35**	**177**	P	**P**	**21 03 14.2**	**+0.8**
VNDA	**Vanda**	**71.35**	**177**	P	**P**	**21 03 14.2**	**+0.8**
	4.9nm,0.7s,baz=328,slow=6.4,SNR=34						
BILL	**Bilibino**	**75.66**	**7**	*e*P	**P**	**21 03 39.8**	**+0.9**
	7.1nm,1.1s						
MK31	**Makanchi Array**	**77.99**	**321**	*e*P	**P**	**21 03 51.2**	**-1.3**
MKAR	**Makanchi Array**	**77.99**	**321**	P	**P**	**21 03 51.3**	**-1.2**
MKAR	**Makanchi Array**	**77.99**	**321**	P	**P**	**21 03 51.3**	**-1.2**
	1.1nm,0.5s,baz=110,slow=6.3,SNR=31						
TIXI	**Tiksi**	**78.98**	**354**	*e*P	**P**	**21 03 55.5**	**-1.9**
	3.5nm,0.8s						
ZAA0	**Zalesovo Array**	**79.53**	**328**	*e*P	**P**	**21 03 58.3**	**-2.4**
ZALV	**Zalesovo Beam**	**79.53**	**328**	P	**P**	**21 03 58.8**	**-2.0**
ZALV	**Zalesovo Beam**	**79.53**	**328**	P	**P**	**21 03 58.8**	**-2.0**
	2.5nm,0.5s,baz=112,slow=6.1,SNR=16						
KURK	**Kurchatov**	**81.71**	**323**	*e*P	**P**	**21 04 11.1**	**-1.4**
	2.8nm,0.8s						
AAK	**Ala-Archa**	**81.80**	**315**	*e*P	**P**	**21 04 12.2**	**-1.2**
	3.3nm,0.9s						
EKS2	**Erkin-Say**	**82.31**	**315**	*e*P	**P**	**21 04 15.1**	**-0.9**
	5.1nm,1.0s						
QSPA	**South Pole Qui**	**83.41**	**180**	*e*P	**P**	**21 04 21.1**	**-0.2**
	12nm,0.7s						
KBL	**Kabul**	**83.93**	**306**	*e*P	**P**	**21 04 23.3**	**-1.4**
	4.4nm,0.6s						
KBL	**Kabul**	**83.93**	**306**	P	**P**	**21 04 23.4**	**-1.2**
	baz=84,SNR=4.7						
TRF	**Thorofare Moun**	**84.04**	**24**	*e*P	**P**	**21 04 22.4**	**-2.2**
	18nm,1.5s						
KKAR	**Karatay Array**	**84.75**	**314**	*e*P	**P**	**21 04 28.0**	**-0.3**
	1.2nm,0.6s						
BMRM	**Bremner River**	**85.41**	**27**	*e*P	**P**	**21 04 31.6**	**+0.2**
	14nm,1.1s						
COLA	**College**	**85.63**	**23**	*e*P	**P**	**21 04 31.2**	**-1.0**
	3.1nm,0.6s						
COLD	**Coldfoot**	**85.83**	**20**	*e*P	**P**	**21 04 33.7**	**+0.4**
	5.0nm,0.9s						
ILAR	**Eielson Array**	**85.96**	**23**	P	**P**	**21 04 32.7**	**-1.2**
ILAR	**Eielson Array**	**85.96**	**23**	P	**P**	**21 04 32.7**	**-1.2**
	5.5nm,0.8s,baz=255,slow=5.1,SNR=48						
MENT	**Mentasta**	**86.54**	**25**	*e*P	**P**	**21 04 36.4**	**-0.4**
DOT	**Dot Lake**	**86.66**	**25**	*e*P	**P**	**21 04 37.4**	**0.0**
	8.5nm,1.0s						
EGAK	**Eagle**	**88.24**	**24**	*e*P	**P**	**21 04 45.2**	**+0.2**
	11nm,1.1s						
ABKAR	**Akkak array**	**93.06**	**319**	*e*P	**P**	**21 05 05.4**	**-2.3**
YBH	**Yreka Blue Hor**	**94.47**	**49**	P	**P**	**21 05 14.1**	**-0.5**
YBH	**Yreka Blue Hor**	**94.47**	**49**	P	**P**	**21 05 14.1**	**-0.5**
	0.4nm,0.3s,baz=337,slow=5.2,SNR=3.6						
NVAR	**Mina Array Bea**	**97.64**	**52**	P	Pdif	21 05 29.3	+0.1
NVAR	**Mina Array Bea**	**97.64**	**52**	P	Pdif	21 05 29.3	+0.1
	1.0nm,0.8s,baz=268,slow=6.3,SNR=4.8						
NEW	**Newport**	**98.71**	**42**	P	Pdif	21 05 33.7	+0.1
NEW	**Newport**	**98.71**	**42**	P	Pdif	21 05 33.7	+0.1
	1.3nm,0.4s,baz=291,slow=8.6,SNR=4.1						
MFID	**Camas Ranch**	**99.62**	**47**	*e*P	**Pdif**	**21 05 40.3**	**+2.5**
	4.9nm,0.6s						
YKA	**Yellowknife Ar**	**99.63**	**28**	P	**Pdif**	**21 05 37.3**	**+0.1**
YKA	**Yellowknife Ar**	**99.63**	**28**	P	**Pdif**	**21 05 37.3**	**+0.1**
	0.7nm,0.8s,baz=274,slow=4.6,SNR=11						
HVU	**Hansel Valley**	**101.90**	**49**	*e*P	**Pdif**	**21 05 47.1**	**-1.0**
	6.9nm,0.9s						
PLCA	**Paso Flores**	**121.60**	**147**	PKP	**PKPdf**	**21 10 48.7**	**+0.6**
PLCA	**Paso Flores**	**121.60**	**147**	PKP	**PKPdf**	**21 10 48.7**	**+0.6**
	1.9nm,0.8s,baz=240,slow=1.7,SNR=5.4						
GERES	**GERESS Array B**	**122.42**	**325**	PKP	**PKPdf**	**21 10 49.3**	**-0.1**
GERES	**GERESS Array B**	**122.42**	**325**	PKP	**PKPdf**	**21 10 49.3**	**-0.1**
	0.7nm,0.5s,baz=79,slow=1.3,SNR=10						
LPAZ	**La Paz**	**138.40**	**123**	PKP	**PKPdf**	**21 11 21.9**	**+0.8**
LPAZ	**La Paz**	**138.40**	**123**	PKP	**PKPdf**	**21 11 21.9**	**+0.8**
	1.4nm,0.5s,baz=207,slow=2.3,SNR=4.6						
CPUP	**Villa Florida**	**139.62**	**145**	PKP	**PKPdf**	**21 11 22.9**	**+0.6**
CPUP	**Villa Florida**	**139.62**	**145**	PKP	**PKPdf**	**21 11 22.9**	**+0.6**
	0.4nm,0.4s,baz=243,slow=8.7,SNR=2.6						
TOA0	**Torodi Ar. Sit**	**145.31**	**284**	*e*PKPdf	**PKPbc**	**21 11 32.5**	**-0.1**
TORD	**Torodi Ar. Bea**	**145.31**	**284**	PKPbc	**PKPbc**	**21 11 32.0**	**-0.5**
TORD	**Torodi Ar. Bea**	**145.31**	**284**	PKPbc	**PKPbc**	**21 11 32.0**	**-0.5**
	34nm,0.7s,baz=82,slow=4.0,SNR=144						
SAML	**Samuel**	**146.12**	**117**	*e*PKPbc	**PKPab**	**21 11 35.4**	**-0.4**
DBIC	**Dimbokro**	**152.13**	**272**	PKPbc	**PKPbc**	**21 11 50.6**	**+0.2**
DBIC	**Dimbokro**	**152.13**	**272**	PKPbc	**PKPbc**	**21 11 50.6**	**+0.2**
	7.2nm,0.7s,baz=50,slow=2.9,SNR=9.8						
BDFB	**Brasilia**	**153.34**	**146**	PKPbc	**PKPbc**	**21 11 53.9**	**+0.7**
BDFB	**Brasilia**	**153.34**	**146**	PKPbc	**PKPbc**	**21 11 53.9**	**+0.7**
	4.8nm,0.4s,baz=215,slow=1.0,SNR=13						

TAP 09 21:07:15.5,23.97N×121.02E,h14km,ML3.5,10C-2D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMLT	**Sun Moon Lake**	**0.14**	**231**	⇓*i*P	Pg	21 07 19.7	+0.3
	baz=227						
SMLT				*i* S	Sb	21 07 22.7	-0.5
	baz=227						
TYC	**Yuchr**	**0.17**	**245**	⇓*i*P	Pg	21 07 19.8	+0.3
	baz=243						
TYC				*i* S	Sg	21 07 22.5	+0.3
	baz=243						
WHF	**Hehuan Shan**	**0.28**	**53**	⇑*i*P	Pb	21 07 22.5	-0.4
	baz=63						
WHF				*i* S	Sg	21 07 26.8	+0.4
	baz=63						
TWT	**Tachien**	**0.31**	**27**	*i* P	Pg	21 07 22.0	-0.3
	baz=30						
TWT				*i* S	Sg	21 07 26.1	-0.8
	baz=30						
WNT	**Mingjian**	**0.32**	**253**	⇑*i*P	Pb	21 07 23.5	+0.4
	baz=251						
WNT				*i* S	Sb	21 07 29.2	+1.1
	baz=251						
TCU	**Taichung**	**0.36**	**299**	⇑*i*P	Pb	21 07 24.2	+0.5
	baz=299						
TCU				S	Sb	21 07 30.6	+1.4
	baz=299						
ESL	**Shilin**	**0.41**	**113**	⇑*i*P	Pb	21 07 24.4	-0.1
	baz=104						
ESL				*i* S	Sb	21 07 30.2	-0.5
	baz=104						
TWQ1	**Liyutan**	**0.43**	**329**	⇑*i*P	Pb	21 07 25.4	+0.4
	baz=339						
TWQ1				*i* S	Sb	21 07 32.4	+1.0
	baz=339						
ESF	**Shoufeng Towns**	**0.46**	**103**	*e*P	Pg	21 07 24.6	0.0
	baz=104						
CHN5	**Tsauling**	**0.49**	**220**	⇑*i*P	Pb	21 07 26.2	+0.2
	baz=219						
CHN5				*i* S	Sb	21 07 33.9	+0.8
	baz=219						
NSY	**Sanyi**	**0.50**	**332**	P	Pb	21 07 26.9	+0.8
	baz=341						
NSY				S	Sn	21 07 35.1	-1.6
	baz=341						
ALS	**Alishan**	**0.50**	**203**	*i* P	Pb	21 07 26.3	-0.2
	baz=194						
ALS				*i* S	Sb	21 07 33.7	-0.3
	baz=194						
WGK	**Gukeng**	**0.51**	**236**	P	Pb	21 07 26.6	+0.4
	baz=234						
WGK				S	Sb	21 07 34.9	+1.4
	baz=234						
HWA	**Hwalien**	**0.54**	**90**	⇑*i*P	Pb	21 07 26.8	+0.1
	baz=90						
HWA				*i* S	Sb	21 07 34.6	+0.4
	baz=90						
TWD	**Chiawan**	**0.54**	**79**	*i* P	Pg	21 07 26.3	+0.2
	baz=87						
TWD				*i* S	Sb	21 07 33.9	-0.4
	baz=87						
EHY	**Hungye**	**0.54**	**149**	⇑*i*P	Pb	21 07 26.6	-0.2
	baz=144						
EHY				*e*S	Sg	21 07 33.8	+0.3
	baz=144						
NNS	**Nan Shan**	**0.56**	**35**	P	Pg	21 07 26.6	-0.2
	baz=41						
NNS				*e*S	Sg	21 07 33.5	-1.0
	baz=41						
NSTT	**Nanjuang**	**0.65**	**358**	*e*P	Pb	21 07 28.8	+0.1
	baz=359						
NSTT				*e*S	Sb	21 07 38.7	+1.0
	baz=359						
CHN2	**Minshiung**	**0.67**	**229**	*e*P	Pb	21 07 29.3	+0.4
	baz=228						
CHN2				S	Sn	21 07 39.7	-1.1
	baz=228						
TWF1	**Yuli**	**0.67**	**158**	⇑*i*P	Pb	21 07 28.9	0.0
	baz=157						
TWF1				*i* S	Sb	21 07 38.4	+0.3
	baz=157						
WTCT	**Ta-ch'eng**	**0.69**	**261**	*e*P	Pb	21 07 29.6	+0.4
	baz=260						
WTCT				*e*S	Sb	21 07 39.6	+1.1
	baz=260						
CHY	**Chiayi**	**0.72**	**229**	P	Pb	21 07 30.5	+0.7
	baz=228						
CHY				S	Sn	21 07 41.0	-1.1
	baz=228						
CHN4	**Tsaushan**	**0.73**	**212**	P	Pb	21 07 30.4	+0.4
	baz=212						
CHN4				S	Sn	21 07 41.6	-0.8
	baz=212						
NSK	**Sanguang**	**0.76**	**24**	P	Pg	21 07 30.1	-0.4
	baz=25						
NSK				*e*S	Sg	21 07 39.3	-1.3
	baz=25						
ELDTW	**Lidau**	**0.78**	**180**	*e*P	Pg	21 07 30.6	-0.2
	baz=187						
ELDTW				*e*S	Sb	21 07 41.9	+0.3
	baz=187						
ENA	**Nanau**	**0.80**	**55**	⇑*i*P	Pg	21 07 31.0	0.0
	baz=56						
ENA				*e*S	Sg	21 07 41.4	-0.2
	baz=56						
WSF	**Szhu**	**0.80**	**246**	*e*P	Pb	21 07 31.7	+0.5
	baz=244						
WSF				*e*S	Sn	21 07 43.1	-1.0
	baz=244						
WTP	**Ta-pu**	**0.81**	**207**	*e*P	Pg	21 07 31.4	0.0
	baz=206						
WTP				*e*S	Sn	21 07 44.2	-0.4
	baz=206						
ENTT	**Nioudou**	**0.83**	**37**	*e*P	Pg	21 07 31.2	-0.5
	baz=31						
ENTT				*e*S	Sn	21 07 44.0	-0.9
	baz=31						
TWK	**Hsinying**	**0.86**	**215**	*e*P	Pg	21 07 31.8	-0.4
	baz=214						
TWK				*e*S	Sn	21 07 45.6	0.0
	baz=214						
CHN1	**Nanshi**	**0.91**	**210**	*e*P	Pb	21 07 33.0	-0.1
	baz=210						
CHN1				S	Sn	21 07 46.0	-0.8
	baz=210						
CHKT	**Chengkung**	**0.93**	**160**	P	Pn	21 07 34.1	0.0
	baz=160						
CHKT				*e*S	Sn	21 07 46.9	-0.3
	baz=160						
TWE	**Neicheng**	**0.95**	**38**	P	Pb	21 07 33.8	0.0
	baz=40						
TWE				S	Sg	21 07 47.0	+0.7
	baz=40						
CHN8	**Yiju**	**0.97**	**230**	*e*P	Pn	21 07 34.5	-0.1
	baz=229						
CHN8				*e*S	Sn	21 07 48.5	+0.2
	baz=229						
TWC	**Suao**	**0.99**	**50**	P	Pb	21 07 34.2	-0.1
	baz=51						
TWC				*e*S	Sn	21 07 48.3	-0.4
	baz=51						
NCU	**National Centr**	**1.00**	**9**	*e*P	Pn	21 07 35.4	+0.2
	baz=9.0						
NCU				*e*S	Sn	21 07 50.2	+1.1
	baz=9.0						
CHN3	**Shinhua**	**1.08**	**214**	*e*P	Pn	21 07 36.1	0.0
	baz=225						
CHN3				*e*S	Sn	21 07 52.6	+1.7
	baz=225						
SCLT	**Jiali**	**1.10**	**224**	*e*P	Pg	21 07 36.9	+0.2
	baz=223						
SCLT				*e*S	Sn	21 07 52.9	+1.5
	baz=223						
TAP	**Taipei**	**1.15**	**23**	*e*P	Pg	21 07 38.2	+0.6
	baz=23						
TAP				*e*S	Sg	21 07 54.3	+1.6
	baz=23						
TWG	**Pinlang**	**1.15**	**178**	P	Pg	21 07 38.0	+0.3
	baz=169						
TWG				*e*S	Sg	21 07 53.8	+1.1
	baz=169						
TAP1	**Taipei**	**1.16**	**23**	*e*P	Pg	21 07 38.4	+0.6
	baz=23						
TAP1				*e*S	Sg	21 07 54.5	+1.6
	baz=23						
TWS1	**Kuangyinshan**	**1.18**	**18**	*e*P	Pg	21 07 38.9	+0.6
	baz=18						
TWS1				*e*S	Sg	21 07 55.3	+1.6
	baz=18						
TAI1	**Yung-k'ang**	**1.18**	**218**	*e*P	Pg	21 07 38.3	+0.1
	baz=217						
TAI1				*e*S	Sg	21 07 55.2	+1.6
	baz=217						
TTN	**Taitung**	**1.22**	**174**	*e*P	Pn	21 07 38.0	-0.1
	baz=174						
TTN				*e*S	Sg	21 07 56.6	+1.7
	baz=174						
TWM1	**Shoushan**	**1.27**	**206**	*e*P	Pg	21 07 40.3	+0.3
	baz=203						
SSD	**Sandimen**	**1.27**	**196**	*e*P	Pg	21 07 39.7	-0.3
	baz=186						
SSD				*e*S	Sg	21 07 56.8	+0.2
	baz=186						
NWF	**Wu-fen Shan**	**1.29**	**32**	*e*P	Pg	21 07 41.4	+0.8
	baz=34						
SGLT	**Jiouru**	**1.33**	**201**	*e*P	Pn	21 07 39.6	-0.1
	baz=201						
SGLT				*e*S	Sg	21 08 01.2	+2.6
	baz=201						
TWB1	**Santiao Chiao**	**1.36**	**40**	*e*P	Pg	21 07 41.2	-0.4
	baz=41						
TWB1				*e*S	Sg	21 07 59.6	+0.3
	baz=41						
ECL	**Taimali**	**1.37**	**183**	P	Pb	21 07 41.4	+0.4
	baz=182					

OTRP	Odiongan	1.16	255	*e*P	Pn	21 12 39.8	-1.3
RCP	Roxas	1.18	201⇓	*e*P	Pg	21 12 41.6	-1.1
GQP	Guinayangan	1.41	330⇓	*e*P	Pn	21 12 43.3	-1.2
GQP				*e*S	Sn	21 13 01.1	-1.5
CNP	Catarman	1.47	96	*e*P	Pg	21 12 47.8	-0.4
BOAC	Boac	1.51	301	*e*P	Pn	21 12 43.8	-2.0
SJMP	San Jose	2.01	264	*e*P	Pn	21 12 52.2	-0.5
GUIM	Jordan	2.11	196	*e*P	Pb	21 12 56.9	-0.6
LQP	Lukban	2.14	312⇑	*e*P	Pn	21 12 54.0	-0.6
OCLP	Ormoc	2.14	139	*e*P	Pb	21 12 58.0	0.0
PLP	Palo	2.32	130⇓	*e*P	Pb	21 12 59.6	-1.4
LLP	Lapu-Lapu	2.47	161⇑	*e*P	Pb	21 13 01.8	-1.8
TGY	Tagaytay City	2.59	303	Pn	Pn	21 13 01.0	+0.1
	43nm,0.3s,baz=165,slow=3.6,SNR=18						
CUYO	Cuyo Island	2.78	230	*e*P	Pn	21 13 03.6	+0.3
MSLP	Maasin	3.02	146	*e*P	Pb	21 13 09.9	-3.1
LUBP	Lubang	3.04	291	*e*P	Pn	21 13 05.6	-1.2
TBP	Tagbilaran	3.04	167	*e*P	Pb	21 13 10.6	-2.7
PCPH	Palayan	3.51	325⇑	*e*P	Pn	21 13 12.6	-0.7
ENPP	El Nido	3.94	249	*e*P	Pn	21 13 19.4	+0.1
PALP	Palanan	4.42	351	*e*P	Pb	21 13 35.7	-1.3
CAUP	Cauayan	4.44	343	*e*P	Pn	21 13 26.0	-0.2
BUKP	Musuan	5.11	158	*e*P	Pb	21 13 42.2	-6.5
ABRA	Dolores	5.49	335	*e*P	Pn	21 13 45.6	+5.0
BATP	Bataraza	6.53	234	*e*P	Pn	21 13 57.5	+2.6
KAPI	Kappang	17.89	191	LR	LR	21 24 57.3	
	comp=Z,101nm,18.8s,baz=270,slow=43						
GUMO	Guam	21.15	85	LR	LR	21 25 11.6	
	comp=Z,65nm,18.3s,baz=328,slow=36						
CMAR	Chiang Mai Arr	24.02	287	P	P	21 17 34.1	+0.3
	1.3nm,1.0s,baz=98,slow=7.9,SNR=7.1						
KSRS	Korea Array	25.04	9	P	P	21 17 42.1	-0.8
	0.4nm,0.3s,baz=184,slow=11,SNR=4.7						
KSRS				LR	LR	21 27 04.7	
	comp=Z,71nm,18.9s,baz=348,slow=35						
PSI	Prapat	25.92	250	LR	LR	21 27 25.7	
	comp=Z,156nm,18.1s,baz=127,slow=35						
USRK	Ussuriysk Arra	32.32	12	P	P	21 18 50.4	+2.8
	4.0nm,0.8s,baz=198,slow=9.1,SNR=7.6						
USRK				LR	LR	21 33 39.2	
	comp=Z,18nm,18.9s,baz=181,slow=40						
WRA	Warramunga Arr	34.22	161	P	P	21 19 04.7	+0.2
	18nm,0.3s,baz=342,slow=9.0,SNR=1.2						
ASAR	Alice Springs	37.61	164	P	P	21 19 33.2	-0.4
	0.6nm,0.8s,baz=334,slow=5.7,SNR=6.3						
SONM	Songino Array	37.76	341	P	P	21 19 35.2	+0.5
	0.5nm,0.8s,baz=165,slow=7.4,SNR=4.3						
SONM				LR	LR	21 34 44.6	
	comp=Z,119nm,19.7s,baz=151,slow=36						
MKAR	Makanchi Array	48.29	323	P	P	21 21 01.1	+1.2
	0.6nm,0.7s,baz=120,slow=8.6,SNR=7.3						
MKAR				LR	LR	21 40 17.4	
	comp=Z,86nm,21.6s,baz=134,slow=35						
ZALV	Zalesovo Beam	51.08	332	P	P	21 21 21.7	+0.8
	0.5nm,0.5s,baz=116,slow=3.4,SNR=4.3						
BVAR	Borovoye Array	57.97	325	P	P	21 22 13.4	+2.3
	1.2nm,0.9s,baz=98,slow=5.0,SNR=4.4						
KBZ	Khabaz	74.35	312	P	P	21 23 56.6	+0.2
	3.9nm,1.1s,baz=97,slow=12,SNR=2.7						

GUC 09 21:17:43.8±0.6, 32°.54S×71°.59W, h6km±2km, MD3.6, ML2.2, 1C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	El Roble	0.65	131⇓	*i*P	Pb	21 17 57.4	-0.4
ROCH				*i* S	Sb	21 18 07.5	+0.1
ROCH				AML	AML	21 18 08.0	
	comp=N,174nm,0.1s						
CHNG	Los Chungos	0.66	7⇑	*i*P	Pb	21 17 57.3	-0.5
CHNG				*i* S	Sb	21 18 06.9	-0.3
CHNG				AML	AML	21 18 07.2	
	comp=E,150nm,0.2s						
PEL	Peldehue	0.97	128	AML	AML	21 18 18.4	
	comp=N,277nm,0.3s						
RCDM	Rinconada Maip	1.15	145⇓	*i*P	Pg	21 18 05.1	-0.8
RCDM				*i* S	Sg	21 18 20.8	-0.1
RCDM				AML	AML	21 18 22.9	
	comp=E,84nm,0.2s						
FCH	Farellones	1.34	126⇓	*i*P	Pn	21 18 05.3	-4.2
FCH				*i* S	Sb	21 18 24.5	-3.2
FCH				AML	AML	21 18 25.7	
	comp=E,52nm,0.1s						
LMEL	Las Melosas	1.74	139	*e*P	Pn	21 18 14.6	-0.2
LMEL				*e*S	Sb	21 18 38.2	-0.6
LMEL				AML	AML	21 18 42.2	
	comp=N,52nm,0.0s						
CACH	El Canelo	1.77	152	*e*P	Pn	21 18 15.4	+0.1
CACH				*i* S	Sb	21 18 40.1	+0.5

*ISCJB **09** 21:20:52.2±0.3, 42°.49N±0°.02×13°.31E±0°.03, h14km±3km, Error ellipse: s-maj=3.5km s-min=3.0km az=35.6*
*CSEM **09** 21:20:52.6±0.1, 42°.49N×13°.30E, h10km, ML3.5/8, Error ellipse: s-maj=2.2km s-min=1.9km az=57.0*
*ROM **09** 21:20:52.5±0.1, 42°.49N×13°.32E, h11km±1km, Ml2.8/28, Error ellipse: s-maj=1.0km s-min=1.0km az=122.0*

ISC 09 21:20:52.7±0.8, 42°.49N±0°.02×13°.31E±0°.02, h12km±5km, n76, σ0968/104, 18C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.09	58⇓	*i*Pg	Pg	21 20 55.4	-0.1
CAMP				Sg	Sg	21 20 57.1	-0.4
	12μm,0.5s						
CAMP	Campotosto	0.09	58⇓	*i*Pg	Pg	21 20 55.4	-0.1
CAMP				Sg	Sg	21 20 57.1	-0.4
	12μm,0.5s						
AQU	L'Aquila	0.15	154	Pg	Pb	21 20 56.7	-0.8
AQU				Sg	Sg	21 20 59.5	+0.6
	5μm,0.3s						
AQU	L'Aquila	0.15	154	Pg	Pb	21 20 56.7	-0.8
AQU				Sg	Sg	21 20 59.5	+0.6
	5μm,0.3s						
LNSS	Leonessa	0.23	299⇑	*i*Pg	Pb	21 20 57.9	-1.0
LNSS				Sg	Sg	21 21 01.9	+0.9
	2μm,0.2s						
LNSS	Leonessa	0.23	299⇑	*i*Pg	Pb	21 20 57.9	-1.0
LNSS				Sg	Sg	21 21 01.9	+0.9
	2μm,0.2s						
TERO	Teramo	0.25	59⇑	*i*Pg	Pg	21 20 57.8	-0.2
TERO				Sg	Sg	21 21 01.5	-0.1
	3μm,0.3s						
TERO	Teramo	0.25	59⇑	*i*Pg	Pg	21 20 57.8	-0.2
TERO				Sg	Sg	21 21 01.5	-0.1
	3μm,0.3s						
FIAM	Fiamignano	0.27	213⇑	*i*Pg	Pb	21 20 58.6	-0.9
FIAM				Sg	Sb	21 21 02.9	-1.1
FIAM	Fiamignano	0.27	213⇑	*i*Pg	Pb	21 20 58.6	-0.9
FIAM				Sg	Sb	21 21 02.9	-1.1
NRCA	Norcia	0.37	337	Pg	Pg	21 21 00.0	-0.2
NRCA				Sg	Sb	21 21 05.9	-1.2
NRCA	Norcia	0.37	337	Pg	Pg	21 21 00.0	-0.2
NRCA				Sg	Sb	21 21 05.9	-1.2
VCEL	Villa Celiera	0.40	104	Pg	Pg	21 21 00.8	+0.1
VCEL				Sg	Sb	21 21 07.7	-0.3
VCEL	Villa Celiera	0.40	104	Pg	Pg	21 21 00.8	+0.1
VCEL				Sg	Sb	21 21 07.7	-0.3
MNS	Montasola	0.48	257⇑	*i*Pg	Pg	21 21 02.1	0.0
MNS				Sg	Sb	21 21 09.6	-0.5
	865nm,0.2s						
MNS	Montasola	0.48	257⇑	*i*Pg	Pg	21 21 02.1	0.0
MNS				Sg	Sb	21 21 09.6	-0.5
	865nm,0.2s						
OFFI	Offida	0.52	32⇑	*i*Pg	Pb	21 21 03.3	-0.6
	2μm,0.5s						
OFFI	Offida	0.52	32⇑	*i*Pg	Pb	21 21 03.3	-0.6
	2μm,0.5s						
TRTR	Tortoreto Alta	0.55	54	Pg	Pb	21 21 04.0	-0.2
	2μm,0.6s						
TRTR	Tortoreto Alta	0.55	54	Pg	Pb	21 21 04.0	-0.2
	2μm,0.6s						
CESX	Cesi	0.55	283	Pg	Pg	21 21 03.2	-0.3
CESX				Sg	Sb	21 21 12.0	-0.2
	515nm,0.2s						
CESX	Cesi	0.55	283	Pg	Pg	21 21 03.2	-0.3
CESX				Sg	Sb	21 21 12.0	-0.2
	515nm,0.2s						
FDMO	Fiordimonte	0.57	343⇑	*i*Pg	Pg	21 21 03.4	-0.4
FDMO				Sg	Sb	21 21 11.8	-1.0
	624nm,0.2s						
FDMO	Fiordimonte	0.57	343⇑	*i*Pg	Pg	21 21 03.4	-0.4
FDMO				Sg	Sb	21 21 11.8	-1.0
	624nm,0.2s						
CERT	Cerreto	0.59	204⇑	*i*Pg	Pg	21 21 04.0	-0.3
	1μm,0.5s						
CERT	Cerreto	0.59	204⇑	*i*Pg	Pg	21 21 04.0	-0.3
	1μm,0.5s						
CESI	CESI - Serrava	0.59	330⇑	*i*Pg	Pg	21 21 04.0	-0.3
CESI				Sg	Sb	21 21 13.4	-0.1
	183nm,0.2s						
CESI	CESI - Serrava	0.59	330⇑	*i*Pg	Pg	21 21 04.0	-0.3
CESI				Sg	Sb	21 21 13.4	-0.1
	183nm,0.2s						
MTCE	Montecelio	0.63	222⇑	*i*Pg	Pg	21 21 04.6	-0.3
	287nm,0.4s						
MTCE	Montecelio	0.63	222⇑	*i*Pg	Pg	21 21 04.6	-0.3
	287nm,0.4s						
INTR	Introdacqua	0.65	137	Pg	Pg	21 21 05.0	-0.4
	564nm,0.6s						
INTR	Introdacqua	0.65	137	Pg	Pg	21 21 05.0	-0.4
	564nm,0.6s						
VVLD	Villa Vallelon	0.66	159	Pg	Pg	21 21 05.4	-0.1
	423nm,0.5s						
VVLD	Villa Vallelon	0.66	159	Pg	Pg	21 21 05.4	-0.1
	423nm,0.5s						
GUAR	Guarcino	0.70	180	Pg	Pg	21 21 06.0	-0.2
	287nm,0.4s						
GUAR	Guarcino	0.70	180	Pg	Pg	21 21 06.0	-0.2
	287nm,0.4s						
ASSB	Assisi San Ben	0.73	319	Pg	Pg	21 21 06.5	-0.4
	321nm,0.5s						
ASSB	Assisi San Ben	0.73	319	Pg	Pg	21 21 06.5	-0.4
	321nm,0.5s						
LPEL	Lama dei Pelig	0.79	124	Pg	Pg	21 21 07.0	-0.9
LPEL	Lama dei Pelig	0.79	124	Pg	Pg	21 21 07.0	-0.9
CAFR	Castel Frentan	0.81	109	Pg	Pg	21 21 08.1	-0.3
	404nm,0.4s						
CAFR	Castel Frentan	0.81	109	Pg	Pg	21 21 08.1	-0.3
	404nm,0.4s						
RMP	Rome, Mte Porz	0.82	214	Pg	Pg	21 21 08.1	-0.4
	306nm,0.5s						
RMP	Rome, Mte Porz	0.82	214	Pg	Pg	21 21 08.1	-0.4
	306nm,0.5s						
CING	Cingoli	0.89	355	Pg	Pg	21 21 09.0	-0.9
	380nm,0.8s						
CING	Cingoli	0.89	355	Pg	Pg	21 21 09.0	-0.9
	380nm,0.8s						
MGAB	Montegabbione	0.98	296	Pg	Pb	21 21 11.3	-0.3
	332nm,0.5s						
MGAB	Montegabbione	0.98	296	Pg	Pb	21 21 11.3	-0.3
	332nm,0.5s						
ARVD	Arcevia	1.04	345	Pg	Pg	21 21 11.7	-1.1
	283nm,0.6s						
ARVD	Arcevia	1.04	345	Pg	Pg	21 21 11.7	-1.1
	283nm,0.6s						
TOLF	Tolfa	1.06	247	Pg	Pg	21 21 12.3	-0.8
	270nm,1.0s						
TOLF	Tolfa	1.06	247	Pg	Pg	21 21 12.3	-0.8
	270nm,1.0s						
AOI	Ancona	1.08	11	Pg	Pb	21 21 12.6	-0.8
	184nm,0.3s						
AOI	Ancona	1.08	11	Pg	Pb	21 21 12.6	-0.8
	184nm,0.3s						
SACS	San Casciano d	1.09	290	Pg	Pb	21 21 13.3	-0.3
	86nm,0.6s						
PIEI	Pieia	1.19	332	Pg	Pb	21 21 14.4	-0.8
	102nm,0.4s						
PIEI	Pieia	1.19	332	Pg	Pb	21 21 14.4	-0.8
	102nm,0.4s						
FSSB	Fossombrone	1.26	342	Pg	Pn	21 21 16.0	-0.2
	343nm,0.3s						
FSSB	Fossombrone	1.26	342	Pg	Pn	21 21 16.0	-0.2
	343nm,0.3s						
BADI	Badiali	1.28	323	Pg	Pg	21 21 17.2	-0.2
	73nm,0.6s						
BADI	Badiali	1.28	323	Pg	Pg	21 21 17.2	-0.2
	73nm,0.6s						
CAFI	Castiglion Fio	1.29	311	Pg	Pg	21 21 17.3	-0.3
	37nm,0.6s						
CAFI	Castiglion Fio	1.29	311	Pg	Pg	21 21 17.3	-0.3
	37nm,0.6s						
PARC	Parchiule	1.40	326	Pg	Pb	21 21 18.7	-0.1
	35nm,0.6s						
PARC	Parchiule	1.40	326	Pg	Pb	21 21 18.7	-0.1
	35nm,0.6s						
NVLJ	Novalja	2.36	28	*e*Pn	Pn	21 21 31.5	+0.2
NVLJ				Sn	Sn	21 22 00.7	+0.5
NVLJ	Novalja	2.36	28	*e*Pn	Pn	21 21 31.5	+0.2
NVLJ				Sn	Sn	21 22 00.7	+0.5
MAIM	Mastiano	2.50	306	P	Pn	21 21 34.7	+1.4
SKDS	Skadanscina	3.10	9	*i* Pn	Pn	21 21 41.6	+0.2
SKDS				*i* Sn	Sn	21 22 19.8	+1.4
SKDS	Skadanscina	3.10	9	*i* Pn	Pn	21 21 41.7	+0.2
SKDS				*i* Sn	Sn	21 22 19.8	+1.4
STON	Ston	3.26	82	*e*Pn	Pn	21 21 44.6	+1.0
STON				Sn	Sn	21 22 22.4	+0.1
STON	Ston	3.26	82	*e*Pn	Pn	21 21 44.6	+1.0
STON				Sn	Sn	21 22 22.4	+0.1
BOJS	Bojanci	3.32	24	*i* Pn	Pn	21 21 46.0	+1.5
BOJS	Bojanci	3.32	24	*i* Pn	Pn	21 21 46.0	+1.5
ABTA	Abfaltersbach	4.29	353⇓	*i* Pn	Pn	21 21 59.2	+1.2
ABTA	Abfaltersbach	4.29	353	Pn	Pn	21 21 59.2	+1.2

IDC 09 21:21:35.7±60.0, 20°.43S×177°.01W, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/19, mbtmp3.5/3, Error ellipse: s-maj=1113.0km s-min=169.4km az=83.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.65	244	P	P	21 29 01.0	-0.2
	0.4nm,0.4s,baz=80,slow=12,SNR=4.1						
ASAR	Alice Springs	45.44	257	P	P	21 29 56.3	-0.5
	0.3nm,0.4s,baz=95,slow=8.0,SNR=6.7						
WRA	Warramunga Arr	45.53	262	P	P	21 29 57.6	+0.1
	0.2nm,0.3s,baz=96,slow=8.3,SNR=21						

*IDC **09** 21:25:08.0±1.3, 13°.40N×90°.23W, h0km, mb4.1/13, mb1 4.2/14, mb1mx4.0/28, mbtmp4.1/14, ML3.2/1, MS3.5/2, Ms1 3.5/2, ms1mx2.7/37, Error ellipse: s-maj=41.4km s-min=18.7km az=47.0*
*CASC **09** 21:25:09.7±2.2, 12°.84N×90°.77W, h25km, MD3.9*

ISC 09 21:25:09.5±0.8, 12°.94N±0°.07×90°.63W±0°.06, h24km, n31, σ1§50/34, mb4.3/12, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	1.24	8	*e*P	Pb	21 25 32.5	0.0
IXG				*e*S	Sb	21 25 54.0	+5.9
SBLS	San Blas	1.33	47	*e*P	Pb	21 25 34.7	+0.8
RTR	El Retiro	1.35	45	*e*P	Pb	21 25 35.1	+0.8
SNJE	San Jose	1.36	47	*e*P	Pb	21 25 35.0	+0.6
RBDL	Robledal	1.49	38	*e*P	Pb	21 25 36.9	+0.3
BOQS	Boqueron	1.53	59	*e*P	Pb	21 25 38.2	+0.8
FG6		1.63	351	*e*P	Pn	21 25 37.5	+0.4
FG6				*e*S	Sb	21 26 00.8	+1.4
NBG	Las Nubes	1.66	9	*e*P	Pb	21 25 39.9	+0.3
NBG				*e*S	Sb	21 26 02.6	+2.3
LBRS	Las Brisas	1.74	63	*e*P	Pb	21 25 41.2	+0.4
SNVI	San Vicente	1.87	69	*e*P	Pb	21 25 43.3	+0.2
MTO2	Montecristo 2	1.91	40	*e*P	Pb	21 25 43.0	-0.8
MRL	Marmol	2.30	23	*e*P	Pn	21 25 47.2	+1.1
MRL				*e*S	Sb	21 26 15.9	-2.7
BLLM	Bellamira	2.38	78	*e*P	Pb	21 25 50.0	-1.8
CAHU	Cacacuatique	2.50	70	*e*P	Pb	21 25 51.8	-2.0
CMIG	Matias Romero	5.83	316	Pn	Pn	21 26 34.7	+0.3
	0.7nm,0.3s,baz=146,slow=8.3,SNR=5.5						
CMIG				Sn	Sn	21 27 40.1	-0.4
	0.3nm,0.3s,baz=105,slow=22,SNR=2.4						
JTS	JuntasAbangare	6.15	115	Pn	Pn	21 26 42.6	+3.7
	1.3nm,0.3s,baz=318,slow=20,SNR=11						
JTS				Sn	Sn	21 27 50.2	+1.5
	0.8nm,0.3s,baz=283,slow=23,SNR=2.6						
TEIG	Tepich	7.59	17	Pn	Pn	21 27 01.2	+2.5
	2.2nm,0.3s,baz=334,slow=1.9,SNR=9.8						
TXAR	Lajitas Array	20.32	325	P	Pn	21 29 45.3	-0.9
	2.7nm,0.7s,baz=139,slow=12,SNR=13						
TKL	Tuckaleechee C	23.45	14	LR	LR	21 39 36.5	
	comp=Z,87nm,21.0s,baz=60,slow=38						
SADO	Sadowa	33.21	15	P	P	21 31 43.0	-1.4
	4.0nm,0.6s,baz=218,slow=9.8,SNR=4.1						
SADO				LR	LR	21 46 00.1	
	comp=Z,98nm,18.5s,baz=251,slow=38						
NVAR	Mina Array Bea	35.33	321	P	P	21 32 06.1	+2.8
	3.0nm,0.7s,baz=136,slow=8.4,SNR=5.8						
ULM	Lac du Bonnet	37.45	354	P	P	21 32 19.0	-1.9
	4.3nm,0.6s,baz=174,slow=11,SNR=8.4						
SIV	San Ignacio	41.00	134	P	P	21 32 53.1	+2.1
	1.6nm,0.7s,baz=305,slow=8.9,SNR=7.0						
SCHQ	Schefferville	45.77	19	P	P	21 33 27.1	-1.9
	5.8nm,0.7s,baz=212,slow=7.2,SNR=13						
YKA	Yellowknife Ar	52.37	346	P	P	21 34 18.5	-0.8
	0.6nm,0.7s,baz=148,slow=7.8,SNR=10.0						
YKA				PcP	PcP	21 35 30.4	+0.3
	0.1nm,0.4s,baz=147,slow=4.7,SNR=4.2						
FRB	Frobisher Bay	53.06	12	P	P	21 34 22.1	-2.3
	1.2nm,0.5s,baz=230,slow=8.3,SNR=4.6						
RES	Resolute Bay	61.78	359	P	P	21 35 23.9	-1.9
	1.4nm,0.6s,baz=190,slow=9.3,SNR=13						
INK	Inuvik	61.83	343	P	P	21 35 26.3	0.0
	1.5nm,0.7s,baz=114,slow=7.4,SNR=8.8						
ILAR	Eielson Array	64.34	337	P	P	21 35 43.0	0.0
	0.6nm,0.7s,baz=137,slow=4.4,SNR=6.2						
DBIC	Dimbokro	84.43	84	P	P	21 37 42.4	+1.6
	1.9nm,0.7s,baz=249,slow=4.9,SNR=4.5						
TORD	Torodi Ar. Bea	89.33	77	P	P	21 38 04.5	-0.2
	0.3nm,0.6s,baz=290,slow=5.9,SNR=2.2						

*NIED **09** 21:26:00, 35°.70N×143°.00E, h5km, Mw3.7 Best double couple: M0=4.20000×10^14 NP1:φs=40.00000°, δ51.00000°, λ=-74.00000°. NP2:φs=195.00000°, δ42.00000°, λ=-109.00000°.*
*IDC **09** 21:26:22.6±1.0, 35°.63N×143°.19E, h0km, mb3.7/7, mb1 3.8/10, mb1mx3.6/29, mbtmp3.7/10, ML3.6/3, Error ellipse: s-maj=24.5km s-min=19.5km az=93.0*
*JMA **09** 21:26:26.5±0.2, 35°.74N×142°.96E, h81km, M3.5*
*ISCJB **09** 21:26:27.8±0.7, 35°.65N±0°.04×142°.88E±0°.06, h59km, mb3.7/7, Error ellipse: s-maj=6.5km s-min=6.0km az=155.5*

ISC 09 21:26:29.7±1.0, 35°.66N±0°.05×142°.92E±0°.08, h59km, n24, σ1§87/34, mb3.6/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.68	272	P	Pn	21 26 55.5	-1.2
CHOJ				*e*S	Sn	21 27 17.4	+0.3
BSO1	Boso 1	1.88	238	P	Pn	21 26 57.2	-1.8
BSO1				*e*S	Sn	21 27 21.3	0.0
JHO	Hitachi	2.12	297	P	Pn	21 27 00.5	-2.3
BSO3	Boso 3	2.15	247	P	Pn	21 27 02.0	-0.9
BSO4	Boso 4	2.21	253	P	Pn	21 27 03.2	-0.7
JYT	Yasato	2.28	285	P	Pn	21 27 03.1	-1.8
JYT				*e*S	Sn	21 27 30.0	-1.9
JFK	Kawauchi	2.37	317	P	Pn	21 27 03.0	-3.2
JFK				*e*S	Sn	21 27 30.4	-3.7
JFT	Otama	2.78	313	P	Pn	21 27 09.8	-2.0
JFT				*e*S	Sn	21 27 42.0	-2.2
JAG	Ashikaga	2.91	286	P	Pn	21 27 11.9	-1.6
JAG				*e*S	Sn	21 27 45.8	-1.5
JHU	Hanno	2.96	275	P	Pn	21 27 12.6	-1.7
JOD2	Odawara 2	3.15	264	P	Pn	21 27 15.6	-1.2
JOD2				*e*S	Sn	21 27 52.8	-0.4
JRY	Ryogami san	3.28	277	P	Pn	21 27 52.8	+0.5
JRY				*e*S	Sn	21 27 57.0	+0.5
JHJ2	Mitsune	3.61	226	P	Pn	21 27 21.0	-2.1
JHJ2				*e*S	Sn	21 28 01.6	-2.9
JHJ	Hachijo jima 2	3.62	227	Pn	Pn	21 27 21.1	-2.2
	8.3nm,0.3s,baz=64,slow=22,SNR=22						
JHJ				Sn	Sn	21 28 01.2	-3.6
	86nm,0.3s,baz=85,slow=22,SNR=15						
MJAR	Matsushiro Arr	3.91	284	Pn	Pn	21 27 27.5	+0.2
	3.6nm,0.3s,baz=168,slow=9.4,SNR=18						
MJAR				Sn	Sn	21 28 14.9	+3.0
	2.3nm,0.3s,baz=62,slow=21,SNR=7.4						
MAT	Matsushiro	3.91	284	P	Pn	21 27 27.8	+0.5
MAT				S	Sn	21 28 11.2	-0.8
ASAJ	Asahikawa	8.45	358	Pn	Pn	21 28 24.7	-4.6
	1.0nm,0.3s,baz=353,slow=25,SNR=8.3						
SONM	Songino Array	29.56	306	P	P	21 32 31.7	+2.8
	0.8nm,0.7s,baz=102,slow=8.4,SNR=7.5						
ZALV	Zalesovo Beam	43.74	313	P	P	21 34 30.4	+1.5
	1.1nm,0.5s,baz=101,slow=7.4,SNR=7.0						
MKAR	Makanchi Array	45.88	303	P	P	21 34 48.0	+1.8
	0.4nm,0.7s,baz=90,slow=11,SNR=6.6						
WRA	Warramunga Arr	55.89	190	P	P	21 36 02.0	+0.5
	1.7nm,0.9s,baz=7.9,slow=7.7,SNR=4.8						
ASAR	Alice Springs	59.62	190	P	P	21 36 28.2	+0.7
	0.3nm,0.6s,baz=18,slow=9.5,SNR=6.9						
RES	Resolute Bay	63.62	15	P	P	21 36 54.8	+0.9
	1.1nm,0.9s,baz=320,slow=4.2,SNR=4.6						
YKA	Yellowknife Ar	64.38	30	P	P	21 36 59.7	+0.6
	0.6nm,0.9s,baz=308,slow=8.0,SNR=5.4						

*MDD **09** 21:28:03.9±1.3, 37°.02N×11°.33W, h0km, mb4.5/17, Error ellipse: s-maj=11.6km s-min=8.1km az=50.0, PRXIMO*
*IGIL **09** 21:28:03.9, 36°.94N×11°.42W, h5km, ML2.9*
*CSEM **09** 21:28:05.9±0.3, 37°.12N×11°.16W, h10km, ML3.6/40, Error ellipse: s-maj=5.2km s-min=3.4km az=48.0*
*INMG **09** 21:28:05.3±0.8, 36°.97N×11°.38W, h10km, MD2.8, ML2.8, Error ellipse: s-maj=3.1km s-min=2.0km az=74.0*
*LDG **09** 21:28:06.8±1.1, 37°.33N×10°.94W, h2km, Ml3.2/2, Error ellipse: s-maj=22.3km s-min=13.3km az=51.0*

ISC 09 21:28:01.8±2.8, 36°.99N±0°.08×11°.4W±0°.1, h10km, n131, σ1§33/218, 4C-1D, Azores-Cape St. Vincent Ridge

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

PBDV	**Barranco-do-Ve**	**2.78**	**84**	Pn	**Pn**	**21 28 47.9**	**+1.5**
PBDV				Sn	**Sn**	**21 29 20.1**	**+0.1**
	comp=E,25nm,0.4s						
PBDV	**Barranco-do-Ve**	**2.78**	**84**	*e*Pn	**Pn**	**21 28 47.9**	**+1.5**
PBDV				*e*Sn	**Sn**	**21 29 20.1**	**+0.1**
	comp=E,25nm,0.4s						
PVAQ	**Vaqueiros**	**2.96**	**81**	*e*Pn	**Pn**	**21 28 50.5**	**+1.6**
PVAQ				*e*Sn	**Sn**	**21 29 23.6**	**-0.9**
PVAQ				A	A	21 29 36.2	
	comp=E,27nm,0.4s						
PVAQ	**Vaqueiros**	**2.96**	**81**	⇑Pn	**Pn**	**21 28 50.5**	**+1.6**
PVAQ				Sn	**Sn**	**21 29 23.6**	**-0.9**
	comp=E,27nm,0.4s						
PBEJ	**Beja**	**2.99**	**69**	*e*Pn	**Pn**	**21 28 50.6**	**+1.3**
PBEJ				*e*Sn	**Sn**	**21 29 24.8**	**-0.3**
PBEJ				A	A	21 29 27.4	
	comp=E,16nm,0.1s						
PBEJ	**Beja**	**2.99**	**69**	Pn	**Pn**	**21 28 50.6**	**+1.3**
PBEJ				Sn	**Sn**	**21 29 24.8**	**-0.3**
	comp=E,7.9nm,0.1s						
PBEJ	**Beja**	**2.99**	**69**	*e*Pn	**Pn**	**21 28 50.6**	**+1.3**
PBEJ				Sn	**Sn**	**21 29 24.8**	**-0.3**
	comp=E,7.9nm,0.1s						
EVOP	**Sao Brissos**	**3.01**	**58**	*e*Sg	**Sn**	**21 29 25.8**	**+0.1**
	comp=E,12nm,0.2s						
EVO	**Evora**	**3.09**	**59**	*e*Pn	**Pn**	**21 28 50.9**	**+0.3**
EVO				*e*Sn	Sn	21 29 17.8	-10
EVO				*e*Sg	Sb	21 29 25.8	-8.8
	comp=E,24nm,0.2s						
EVO	**Evora**	**3.09**	**59**	*e*Pn	**Pn**	**21 28 52.1**	**+1.5**
EVO				*e*Sn	**Sn**	**21 29 26.7**	**-0.9**
EVO				A	A	21 29 30.8	
	comp=E,41nm,0.1s						
EVO	**Evora**	**3.09**	**59**	Pn	**Pn**	**21 28 52.1**	**+1.5**
EVO				Sn	**Sn**	**21 29 26.7**	**-0.9**
	comp=E,41nm,0.1s						
EVO	**Evora**	**3.09**	**59**	*e*Pn	**Pn**	**21 28 52.1**	**+1.5**
EVO				Sn	**Sn**	**21 29 26.7**	**-0.9**
	comp=E,41nm,0.1s						
ALMR	**Almeirim**	**3.10**	**45**	*e*P	**Pn**	**21 28 52.4**	**+1.6**
ALMR				*e*S	**Sn**	**21 29 27.7**	**-0.2**
ALMR				AML	AML	21 29 30.0	
	comp=E,29nm,0.3s						
ALMR	**Almeirim**	**3.10**	**45**	*e*P	**Pn**	**21 28 52.4**	**+1.6**
ALMR				*e*S	**Sn**	**21 29 27.7**	**-0.2**
ALMR	**Almeirim**	**3.10**	**45**	Pn	**Pn**	**21 28 52.4**	**+1.6**
ALMR				Sn	**Sn**	**21 29 27.7**	**-0.2**
ALMR	**Almeirim**	**3.10**	**45**	*e*P	**Pn**	**21 28 52.4**	**+1.6**
ALMR				*e*S	**Sn**	**21 29 27.7**	**-0.2**
EGRO	**El Granado**	**3.17**	**79**	Pn	**Pn**	**21 28 52.9**	**+1.2**
	comp=E,6.5nm,0.1s,SNR=30						
EGRO				Sn	**Sn**	**21 29 28.6**	**-0.9**
	comp=E,25nm,0.3s,SNR=12						
EGRO	**El Granado**	**3.17**	**79**	Pn	**Pn**	**21 28 52.9**	**+1.2**
	comp=E,6.5nm,0.1s,SNR=30						
EGRO				Sn	**Sn**	**21 29 28.6**	**-0.9**
	comp=E,25nm,0.3s,SNR=12						
PMTG	**Montargil**	**3.25**	**49**	*e*Pn	**Pn**	**21 28 54.2**	**+1.4**
PMTG				*e*Sn	**Sn**	**21 29 31.2**	**-0.4**
PMTG				A	A	21 29 35.1	
	comp=E,11nm,0.1s						
PMTG	**Montargil**	**3.25**	**49**	*e*Pn	**Pn**	**21 28 54.2**	**+1.4**
PMTG				*e*Sn	**Sn**	**21 29 31.2**	**-0.4**
	comp=E,11nm,0.1s						
PTOM	**Tomar**	**3.52**	**41**	*e*Pn	**Pn**	**21 28 58.1**	**+1.5**
PTOM				*e*Sn	**Sn**	**21 29 37.8**	**-0.4**
PTOM				A	A	21 29 42.1	
	comp=E,21nm,0.1s						
PTOM	**Tomar**	**3.52**	**41**	Pn	**Pn**	**21 28 58.1**	**+1.5**
PTOM				Sn	**Sn**	**21 29 37.8**	**-0.4**
	comp=E,11nm,0.1s						
PTOM	**Tomar**	**3.52**	**41**	*e*Pn	**Pn**	**21 28 58.1**	**+1.5**
PTOM				Sn	**Sn**	**21 29 37.8**	**-0.4**
	comp=E,11nm,0.1s						
PESTR	**Estremoz**	**3.54**	**57**	*e*Pn	**Pn**	**21 28 58.2**	**+1.3**
PESTR				*e*Sn	**Sn**	**21 29 39.0**	**+0.2**
PESTR				A	A	21 29 45.8	
	comp=E,6.6nm,0.3s						
PESTR	**Estremoz**	**3.54**	**57**	Pn	**Pn**	**21 28 58.2**	**+1.3**
PESTR				Sn	**Sn**	**21 29 39.0**	**+0.2**
	comp=E,3.3nm,0.3s						
PESTR	**Estremoz**	**3.54**	**57**	*e*Pn	**Pn**	**21 28 58.2**	**+1.3**
PESTR				Sn	**Sn**	**21 29 39.0**	**+0.2**
	comp=E,3.3nm,0.3s						
PBAR	**Barrancos**	**3.66**	**70**	*e*Pn	**Pn**	**21 28 59.7**	**+1.3**
PBAR				*e*Sn	**Sn**	**21 29 40.5**	**-1.1**
PBAR				A	A	21 29 43.6	
	comp=E,10nm,0.1s						
PBAR	**Barrancos**	**3.66**	**70**	Pn	**Pn**	**21 28 59.7**	**+1.3**
PBAR				Sn	**Sn**	**21 29 40.5**	**-1.1**
	comp=E,10nm,0.1s						
PBAR	**Barrancos**	**3.66**	**70**	*e*Pn	**Pn**	**21 28 59.7**	**+1.3**
PBAR				Sn	**Sn**	**21 29 40.5**	**-1.1**
	comp=E,10nm,0.1s						
EMIN	**Mina Concepcio**	**3.84**	**77**	⇑Pn	**Pn**	**21 29 02.1**	**+1.2**
	comp=E,4.6nm,0.1s,SNR=18						
EMIN				Sn	**Sn**	**21 29 44.8**	**-1.3**
	comp=E,13nm,0.1s,SNR=13						
EMIN	**Mina Concepcio**	**3.84**	**77**	Pn	**Pn**	**21 29 02.1**	**+1.2**
	comp=E,4.6nm,0.1s,SNR=18						
EMIN				Sn	**Sn**	**21 29 44.8**	**-1.3**
	comp=E,13nm,0.1s,SNR=13						
PMRV	**Marv??o**	**3.98**	**51**	*e*Pn	**Pn**	**21 29 04.2**	**+1.3**
PMRV				*e*Sn	**Sn**	**21 29 48.6**	**-1.1**
PMRV				A	A	21 29 51.1	
	comp=E,6.9nm,0.2s						
PMRV	**Marv??o**	**3.98**	**51**	Pn	**Pn**	**21 29 04.2**	**+1.3**
PMRV				Sn	**Sn**	**21 29 48.6**	**-1.1**
	comp=E,6.9nm,0.2s						
PMRV	**Marv??o**	**3.98**	**51**	*e*Pn	**Pn**	**21 29 04.2**	**+1.3**
PMRV				Sn	**Sn**	**21 29 48.6**	**-1.1**
	comp=E,6.9nm,0.2s						
PCBR	**Castelo Branco**	**4.19**	**46**	*e*Pn	**Pn**	**21 29 07.2**	**+1.4**
PCBR				*e*Sn	**Sn**	**21 29 53.7**	**-1.1**
PCBR				A	A	21 29 58.3	
	comp=E,4.6nm,0.1s						
PCBR	**Castelo Branco**	**4.19**	**46**	Pn	**Pn**	**21 29 07.2**	**+1.4**
PCBR				Sn	**Sn**	**21 29 53.7**	**-1.1**
	comp=E,2.3nm,0.1s						
PCBR	**Castelo Branco**	**4.19**	**46**	*e*Pn	**Pn**	**21 29 07.2**	**+1.4**
PCBR				Sn	**Sn**	**21 29 53.7**	**-1.1**
	comp=E,2.3nm,0.1s						
ESPR	**Espera**	**4.44**	**90**	⇓Pn	**Pn**	**21 29 10.7**	**+1.5**
	comp=E,7.8nm,0.1s,SNR=18						
ESPR				Sn	**Sn**	**21 29 59.4**	**-1.4**
	comp=E,58nm,0.2s,SNR=5.6						
ESPR	**Espera**	**4.44**	**90**	Pn	**Pn**	**21 29 10.7**	**+1.5**
	comp=E,7.8nm,0.1s,SNR=18						
ESPR				Sn	**Sn**	**21 29 59.4**	**-1.4**
	comp=E,58nm,0.2s,SNR=5.6						
MTE	**Manteigas**	**4.54**	**40**	*e*Pn	**Pn**	**21 29 12.2**	**+1.5**
MTE				*e*Sn	**Sn**	**21 30 03.2**	**-0.4**
MTE				A	A	21 30 05.2	
	comp=E,8.3nm,0.2s						
MTE	**Manteigas**	**4.54**	**40**	Pn	**Pn**	**21 29 12.2**	**+1.5**
MTE				Sn	**Sn**	**21 30 03.2**	**-0.4**
	comp=E,4.2nm,0.2s						
MTE	**Manteigas**	**4.54**	**40**	*e*Pn	**Pn**	**21 29 12.2**	**+1.5**
MTE				*e*Sn	**Sn**	**21 30 03.2**	**-0.4**
	comp=E,8.3nm,0.2s						
PVIS	**Viseu**	**4.62**	**35**	*e*Pn	**Pn**	**21 29 13.0**	**+1.3**
PVIS				*e*Sn	**Sn**	**21 30 03.7**	**-1.6**
PVIS				A	A	21 30 04.8	
	comp=E,14nm,0.1s						
PVIS	**Viseu**	**4.62**	**35**	⇑Pn	**Pn**	**21 29 13.0**	**+1.3**
PVIS				Sn	**Sn**	**21 30 03.7**	**-1.6**
	comp=E,6.8nm,0.1s						
PVIS	**Viseu**	**4.62**	**35**	Pn	**Pn**	**21 29 13.0**	**+1.3**
PVIS				Sn	**Sn**	**21 30 03.7**	**-1.6**
	comp=E,6.8nm,0.1s						
PTO	**Porto**	**4.68**	**27**	*e*Pn	**Pn**	**21 29 13.7**	**+1.2**
PTO				*e*Sn	**Sn**	**21 30 05.2**	**-1.6**
PTO				A	A	21 30 07.7	
	comp=E,21nm,0.1s						
PTO	**Porto**	**4.68**	**27**	Pn	**Pn**	**21 29 13.7**	**+1.2**
PTO				Sn	**Sn**	**21 30 05.2**	**-1.6**
	comp=E,10nm,0.1s						
PTO	**Porto**	**4.68**	**27**	*e*Pn	**Pn**	**21 29 13.7**	**+1.2**
PTO				Sn	**Sn**	**21 30 05.2**	**-1.6**
	comp=E,10nm,0.1s						
EPLA	**Plasencia**	**5.17**	**52**	Pn	**Pn**	**21 29 20.9**	**+1.6**
	comp=E,4.7nm,0.1s,SNR=49						
EPLA				Sn	**Sn**	**21 30 18.5**	**-0.6**
	comp=E,4.3nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**5.17**	**52**	Pn	**Pn**	**21 29 20.9**	**+1.6**
	comp=E,4.7nm,0.1s,SNR=49						
EPLA				Sn	**Sn**	**21 30 18.5**	**-0.6**
	comp=E,4.3nm,0.2s,SNR=7.9						
POLO	**Lamas de Olo**	**5.20**	**31**	*e*Pn	**Pn**	**21 29 21.0**	**+1.3**
POLO				*e*Sn	**Sn**	**21 30 17.4**	**-2.3**
POLO				A	A	21 30 20.5	
	comp=E,5.4nm,0.3s						
POLO	**Lamas de Olo**	**5.20**	**31**	*e*Pn	**Pn**	**21 29 21.0**	**+1.3**
POLO				*e*Sn	**Sn**	**21 30 17.4**	**-2.3**
	comp=E,5.4nm,0.3s						
EMIJ	**Mijas**	**5.33**	**93**	Pn	**Pn**	**21 29 22.4**	**+0.9**
	comp=E,0.4nm,0.1s,SNR=7.9						
EMIJ				Sn	Sn	21 30 18.1	-4.8
	comp=E,1.9nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**5.33**	**93**	Pn	**Pn**	**21 29 22.4**	**+0.9**
	comp=E,0.4nm,0.1s,SNR=7.9						
EMIJ				Sn	Sn	21 30 18.1	-4.8
	comp=E,1.9nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.38**	**38**	*e*Pn	**Pn**	**21 29 23.4**	**+1.3**
MVO				*e*Sn	**Sn**	**21 30 22.1**	**-2.0**
MVO				A	A	21 30 26.3	
	comp=E,11nm,0.3s						
MVO	**Moncorvo**	**5.38**	**38**	*e*Pn	**Pn**	**21 29 23.4**	**+1.3**
MVO				*e*Sn	**Sn**	**21 30 22.1**	**-2.0**
	comp=E,11nm,0.3s						
PCAB	**Cabril**	**5.39**	**28**	*e*Pn	**Pn**	**21 29 23.5**	**+1.2**
PCAB				*e*Sn	**Sn**	**21 30 22.3**	**-2.1**
PCAB				A	A	21 30 25.1	
	comp=E,17nm,0.1s						
PCAB	**Cabril**	**5.39**	**28**	Pn	**Pn**	**21 29 23.5**	**+1.2**
PCAB				Sn	**Sn**	**21 30 22.3**	**-2.1**
	comp=E,8.4nm,0.1s						
PCAB	**Cabril**	**5.39**	**28**	*e*Pn	**Pn**	**21 29 23.5**	**+1.2**
PCAB				Sn	**Sn**	**21 30 22.3**	**-2.1**
	comp=E,8.4nm,0.1s						
PGAV	**Gavieira, Arco**	**5.53**	**25**	*e*Pn	**Pn**	**21 29 25.2**	**+1.0**
PGAV				*e*Sn	Sn	21 30 25.3	-2.5
PGAV				A	A	21 30 28.5	
	comp=E,8.4nm,0.1s						
PGAV	**Gavieira, Arco**	**5.53**	**25**	*e*Pn	**Pn**	**21 29 25.2**	**+1.0**
PGAV				*e*Sn	Sn	21 30 25.3	-2.5
	comp=E,8.4nm,0.1s						
EZAM	**Zamans**	**5.56**	**21**	Pn	**Pn**	**21 29 25.1**	**+0.5**
	comp=E,2.4nm,0.2s,SNR=7.9						
EZAM				Sn	Sn	21 30 25.0	-3.5
	comp=E,7.2nm,0.1s,SNR=7.9						
EZAM	**Zamans**	**5.56**	**21**	Pn	**Pn**	**21 29 25.1**	**+0.5**
	comp=E,2.4nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**5.71**	**82**	Pn	**Pn**	**21 29 27.6**	**+0.9**
	comp=E,0.5nm,0.1s,SNR=7.9						
ELUQ				Sn	**Sn**	**21 30 30.9**	**-1.5**
	comp=E,2.5nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**5.71**	**82**	Pn	**Pn**	**21 29 27.6**	**+0.9**
	comp=E,0.5nm,0.1s,SNR=7.9						
ELUQ				Sn	**Sn**	**21 30 30.9**	**-1.5**
	comp=E,2.5nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**5.79**	**86**	Pn	**Pn**	**21 29 28.9**	**+1.1**
	comp=E,1.3nm,0.2s,SNR=7.9						
ELOJ				Sn	**Sn**	**21 30 32.8**	**-1.6**
	comp=E,0.7nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**5.79**	**86**	Pn	**Pn**	**21 29 28.9**	**+1.1**
	comp=E,1.3nm,0.2s,SNR=7.9						
ELOJ				Sn	Sn	21 30 32.8	-1.6
	comp=E,0.7nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**6.01**	**35**	*e*Pn	**Pn**	**21 29 32.4**	**+1.6**
PBRG				*e*Sn	Sn	21 30 37.0	-2.6
PBRG				A	A	21 30 40.2	
	comp=E,5.6nm,0.2s						
PBRG	**Braganca**	**6.01**	**35**	Pn	**Pn**	**21 29 32.4**	**+1.6**
PBRG				Sn	Sn	21 30 37.0	-2.6
	comp=E,2.8nm,0.2s						
PBRG	**Braganca**	**6.01**	**35**	*e*Pn	**Pn**	**21 29 32.4**	**+1.6**
PBRG				Sn	Sn	21 30 37.0	-2.6
	comp=E,2.8nm,0.2s						
ERON	**Agron**	**6.07**	**87**	Sn	**Sn**	**21 30 38.7**	**-2.7**
	comp=E,0.5nm,0.2s,SNR=7.9						
ERON	**Agron**	**6.07**	**87**	Sn	**Sn**	**21 30 38.7**	**-2.7**
	comp=E,0.5nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.12**	**35**	Pn	**Pn**	**21 29 33.6**	**+1.3**
	comp=E,3.2nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	21 30 39.5	-2.9
	comp=E,8.9nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.12**	**35**	Pn	**Pn**	**21 29 33.6**	**+1.3**
	comp=E,3.2nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	21 30 39.5	-2.9
	comp=E,8.9nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.24**	**17**	Pn	**Pn**	**21 29 34.8**	**+0.9**
	comp=E,3.7nm,0.2s,SNR=7.0						
EMAZ				Sn	Sn	21 30 39.1	-6.0
	comp=E,11nm,0.1s,SNR=8.7						
EMAZ	**Mazaricos**	**6.24**	**17**	Pn	**Pn**	**21 29 34.8**	**+0.9**
	comp=E,3.7nm,0.2s,SNR=7.0						
EGUA	**Guajares**	**6.27**	**89**	Pn	**Pn**	**21 29 36.3**	**+1.9**
	comp=E,3.2nm,0.2s,SNR=7.9						
EGUA				Sn	Sn	21 30 41.6	-4.6
	comp=E,2.3nm,0.2s,SNR=7.9						
STS	**Santiago**	**6.28**	**19**	Pn	**Pn**	**21 29 35.7**	**+1.2**
	comp=E,1.7nm,0.1s,SNR=7.9						
STS				Sn	Sn	21 30 41.9	-4.4
	comp=E,2.3nm,0.2s,SNR=7.9						
STS	**Santiago**	**6.28**	**19**	Pn	**Pn**	**21 29 35.7**	**+1.2**
	comp=E,1.7nm,0.1s,SNR=7.9						
ERUA	**La Rua**	**6.31**	**30**	Pn	**Pn**	**21 29 35.5**	**+0.6**
	comp=E,2.4nm,0.3s,SNR=7.9						
ERUA	**La Rua**	**6.31**	**30**	Pn	**Pn**	**21 29 35.5**	**+0.6**
	comp=E,2.4nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**6.42**	**63**	Pn	**Pn**	**21 29 37.3**	**+0.7**
	comp=E,7.2nm,0.1s,baz=249,slow=13,SNR=54						
ESDC				Sn	**Sn**	**21 30 47.6**	**-2.4**
	comp=E,1.4nm,0.3s,baz=246,slow=23,SNR=11						
ESDC	**Sonseca Array**	**6.42**	**63**	Pn	**Pn**	**21 29 37.3**	**+0.7**
	comp=E,7.2nm,0.1s,baz=249,slow=13,SNR=54						
ESDC				Sn	**Sn**	**21 30 47.6**	**-2.4**
	comp=E,1.4nm,0.3s,baz=246,slow=23,SNR=11						
EQES	**Quesada**	**6.67**	**80**	Pn	**Pn**	**21 29 41.1**	**+1.1**
	comp=E,1.1nm,0.2s,SNR=16						
EQES				Sn	**Sn**	**21 30 54.2**	**-2.0**
	comp=E,0.6nm,0.1s,SNR=8.7						
EQES	**Quesada**	**6.67**	**80**	Pn	**Pn**	**21 29 41.1**	**+1.1**
	comp=E,1.1nm,0.2s,SNR=16						
EQES				Sn	**Sn**	**21 30 54.2**	**-2.0**
	comp=E,0.6nm,0.1s,SNR=8.7						
GUD	**Guadarrama**	**6.73**	**55**	Pn	**Pn**	**21 29 42.2**	**+1.5**
	comp=E,2.6nm,0.2s,SNR=13						
GUD				Sn	Sn	21 30 54.1	-3.4
	comp=E,0.2nm,0.1s,SNR=7.9						
GUD	**Guadarrama**	**6.73**	**55**	Pn	**Pn**	**21 29 42.2**	**+1.5**
	comp=E,2.6nm,0.2s,SNR=13						
GUD				Sn	Sn	21 30 54.1	-3.4
	comp=E,0.2nm,0.1s,SNR=7.9						
EBER	**Berja**	**6.81**	**88**	Pn	**Pn**	**21 29 43.0**	**+1.1**
	comp=E,0.2nm,0.1s,SNR=7.9						
EBER				Sn	**Sn**	**21 30 57.4**	**-2.2**
	comp=E,0.2nm,0.2s,SNR=7.9						
EBER	**Berja**	**6.81**	**88**	Pn	**Pn**	**21 29 43.0**	**+1.1**
	comp=E,0.2nm,0.1s,SNR=7.9						
EBER				Sn	**Sn**	**21 30 57.4**	**-2.2**
	comp=E,0.2nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**7.05**	**81**	Pn	**Pn**	**21 29 46.1**	**+0.9**
	comp=E,0.6nm,0.2s,SNR=7.9						
EHUE				Sn	**Sn**	**21 31 02.9**	**-2.5**
	comp=E,0.9nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**7.05**	**81**	Pn	**Pn**	**21 29 46.1**	**+0.9**
	comp=E,0.6nm,0.2s,SNR=7.9						
EHUE				Sn	**Sn**	**21 31 02.9**	**-2.5**
	comp=E,0.9nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**7.12**	**26**	Pn	**Pn**	**21 29 46.4**	**+0.5**
	comp=E,1.5nm,0.1s,SNR=7.9						
EPON				Sn	Sn	21 31 02.1	-4.7
	comp=E,1.1nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**7.12**	**26**	Pn	**Pn**	**21 29 46.4**	**+0.5**
	comp=E,1.5nm,0.1s,SNR=7.9						
EVIA	**Vianos**	**7.23**	**74**	Pn	**Pn**	**21 29 47.9**	**+0.3**
	comp=E,2.1nm,0.1s,SNR=6.9						
EVIA				Sn	**Sn**	**21 31 07.0**	**-2.8**
	comp=E,1.4nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**7.23**	**74**	Pn	**Pn**	**21 29 47.9**	**+0.3**
	comp=E,2.1nm,0.1s,SNR=6.9						
EVIA				Sn	**Sn**	**21 31 07.0**	**-2.8**
	comp=E,1.4nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**7.88**	**35**	Pn	**Pn**	**21 29 58.1**	**+1.6**
	comp=E,0.6nm,0.2s,SNR=6.3						
EARI				Sn	Sn	21 31 22.3	-3.5
	comp=E,0.7nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**7.88**	**35**	Pn	**Pn**	**21 29 58.1**	**+1.6**
	comp=E,0.6nm,0.2s,SNR=6.3						
EARI				Sn	Sn	21 31 22.3	-3.5
	comp=E,0.7nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**7.96**	**75**	Pn	**Pn**	**21 29 57.9**	**+0.2**
	comp=E,1.5nm,0.3s,SNR=18						
ETOB				Sn	Sn	21 31 24.4	-3.5
	comp=E,0.1nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**7.96**	**75**	Pn	**Pn**	**21 29 57.9**	**+0.2**
	comp=E,1.5nm,0.3s,SNR=18						
ETOB				Sn	Sn	21 31 24.4	-3.5
	comp=E,0.1nm,0.1s,SNR=7.9						
ETOR	**Torete**	**8.22**	**59**	Pn	**Pn**	**21 30 02.6**	**+1.4**
	comp=E,24nm,0.2s,SNR=52						
ETOR				Sn	Sn	21 31 30.5	-3.7
	comp=E,2.8nm,0.2s,SNR=7.9						
ETOR	**Torete**	**8.22**	**59**	Pn	**Pn**	**21 30 02.6**	**+1.4**
	comp=E,24nm,0.2s,SNR=52						
ETOR				Sn	Sn	21 31 30.5	-3.7
	comp=E,2.8nm,0.2s,SNR=7.9						
ECHE	**Chera**	**8.60**	**69**	Pn	**Pn**	**21 30 07.9**	**+1.6**
	comp=E,0.9nm,0.2s,SNR=7.9						
ECHE	**Chera**	**8.60**	**69**	Pn	**Pn**	**21 30 07.9**	**+1.6**
	comp=E,0.9nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**8.72**	**42**	Pn	**Pn**	**21 30 09.1**	**+1.2**
	comp=E,0.2nm,0.1s,SNR=6.3						
ELAN				Sn	Sn	21 31 41.0	-5.2
	comp=E,0.1nm,0.1s,SNR=7.9						
ELAN	**Lanestosa**	**8.72**	**42**	Pn	**Pn**	**21 30 09.1**	**+1.2**
	comp=E,0.2nm,0.1s,SNR=6.3						
EMOS	**Mosqueruela**	**9.18**	**65**	Pn	**Pn**	**21 30 17.1**	**+2.6**
	comp=E,0.5nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	21 31 53.1	-4.8
	comp=E,0.1nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**9.18**	**65**	Pn	**Pn**	**21 30 17.1**	**+2.6**
	comp=E,0.5nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	21 31 53.1	-4.8
	comp=E,0.1nm,0.1s,SNR=7.9						
SJPF	**Ste Jean**	**9.90**	**49**	*e*Pn	**Pn**	**21 30 24.7**	**+0.5**
SJPF				*e*Sn	Sn	21 32 01.1	-14
	comp=E,0.6nm,0.2s						
SJPF	**Ste Jean**	**9.90**	**49**	*e*Pn	**Pn**	**21 30 24.7**	**+0.5**
ETSF	**Etsaut**	**10.19**	**51**	*e*Pn	**Pn**	**21 30 29.6**	**+1.4**
ETSF	**Etsaut**	**10.19**	**51**	*e*Pn	**Pn**	**21 30 29.6**	**+1.4**
EPF	**Esparros**	**10.83**	**53**	*e*Pn	**Pn**	**21 30 38.1**	**+1.2**
EPF	**Esparros**	**10.83**	**53**	*e*Pn	**Pn**	**21 30 38.1**	**+1.2**

IDC 09 21:29:24.3±10.0, 56.12S×27.39W, h154km±91km, mb3.7/4, mb1 3.9/4, mb1mx3.5/15, mbtmp3.7/4, Error ellipse: s-maj=36.7km s-min=22.7km az=72.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**46.50**	**183**	P	P	21 37 35.3	+0.1
	1.2nm,0.7s,baz=183,slow=8.1,SNR=9.8						
LPAZ	**La Paz**	**50.33**	**305**	P	P	21 38 05.7	-0.3
	0.9nm,0.3s,baz=119,slow=4.9,SNR=11						
TORD	**Torodi Ar. Bea**	**73.17**	**30**	P	P	21 40 37.9	0.0
	1.6nm,0.7s,baz=199,slow=6.7,SNR=9.3						
ASAR	**Alice Springs**	**98.95**	**163**	P	P	21 42 45.8	-1.4
	0.4nm,0.8s,baz=181,slow=4.4,SNR=3.2						
INK	**Inuvik**	**145.79**	**321**	PKPbc	PKPdf	21 48 43.0	+0.4
	0.5nm,0.4s,baz=148,slow=5.3,SNR=8.6						
ILAR	**Eielson Array**	**150.08**	**312**	PKPbc	PKPbc	21 48 54.6	-0.4
	1.7nm,0.8s,baz=135,slow=2.0,SNR=18						
ILAR				pPKPbc	pPKPbc	21 49 25.8	-10
	0.7nm,0.8s,baz=147,slow=1.8,SNR=4.3						
SONM	**Songino Array**	**150.84**	**87**	PKPbc	PKPbc	21 48 57.3	-0.2
	1.3nm,0.6s,baz=226,slow=3.4,SNR=17						

*ISCJB **09** 21:32:40.8±0.7, 44.31N±0.03×129.28W±0.08, h15km, mb3.6/4, MS3.3/3, Error ellipse: s-maj=8.4km s-min=5.0km az=2.5*

*IDC **09** 21:32:41.5±2.3, 44.36N×128.98W, h0km, mb3.6/4, mb1 3.9/9, mb1mx3.7/32, mbtmp3.6/9, ML3.4/3, MS3.4/8, Ms1 3.4/8, ms1mx3.0/49, Error ellipse: s-maj=42.3km s-min=16.7km az=56.0*

*NEIC **09** 21:32:42.6±1.3, 44.27N×129.22W, h10km, mb3.8/5, Error ellipse: s-maj=17.3km s-min=8.9km az=60.0*

**ISC 09 21:32:42.9±1.2, 44.22N±0.08×129.

baz=11
C14A Swan Lake 11.29 66 ⇓P Pn 21 35 24.5 +0.7
baz=11
H14A Leadore 11.31 82 ⇑P Pn 21 35 24.5 +0.5
baz=11
I14A Mackay 11.31 86 ⇓P Pn 21 35 26.2 +2.2
baz=11
D14A Greenough 11.33 70 ⇓P Pn 21 35 25.8 +1.6
baz=11,SNR=6.0
J14A Carey 11.35 89 ⇑P Pn 21 35 27.4 +2.8
baz=11,SNR=17
SLMT Seeley Lake 11.36 69 ePn Pn 21 35 25.0 +0.3
CHMT Chamberlain Mo 11.47 71 ePn Pn 21 35 28.4 +2.1
A14A Double T Ranch 11.82 61 ⇑P Pn 21 35 32.1 +1.2
baz=12
H15A Lima 11.82 82 ⇑P Pn 21 35 32.9 +1.8
baz=12
DLMT Dillon 11.83 79 Pn Pn 21 35 33.4 +2.3
F15A Butte 11.91 76 ⇓P Pn 21 35 33.9 +1.7
baz=12
G15A Dillon 11.91 80 ⇑P Pn 21 35 34.5 +2.3
baz=12
LRM Limekiln Ridge 11.94 76 ePn Pn 21 35 33.5 +0.9
D15A Lincoln 11.99 71 ⇑P Pn 21 35 35.1 +1.8
baz=12
C15A Salmond Ranch, 12.05 67 ⇓P Pn 21 35 36.2 +2.2
baz=12
MPMC Manual Prospec 12.08 128 ⇑P Pn 21 35 37.3 +2.7
baz=12
J15A Blackfoot 12.12 88 ⇑P Pn 21 35 37.2 +2.2
baz=12,SNR=10.0
K15A Arbon 12.19 91 ⇑P Pn 21 35 38.8 +2.8
baz=12
B15A Bradely Ranch, 12.19 65 ⇓P Pn 21 35 37.4 +1.4
baz=12
A15A Johnson Ranch, 12.26 61 ⇓P Pn 21 35 38.3 +1.4
baz=12,SNR=8.6
G16A Moss Hill, Enn 12.39 79 ⇓P Pn 21 35 40.2 +1.4
baz=12
BOZ Bozeman (W) 12.51 77 ePn Pn 21 35 41.7 +1.4
BOZ Bozeman (W) 12.51 77 ⇓P Pn 21 35 41.9 +1.5
baz=12
D16A Dana Ranch, Ca 12.65 71 ⇑P Pn 21 35 43.9 +1.7
baz=13
QLMT Earthquake Lak 12.67 81 ePn Pn 21 35 44.5 +1.9
I16A Newdale 12.72 85 ⇑P Pn 21 35 45.8 +2.5
baz=13,SNR=6.1
H16A Russell Place, 12.81 82 ⇓P Pn 21 35 46.6 +2.1
baz=13,SNR=8.0
K16A Soda Springs 12.83 90 ⇑P Pn 21 35 47.1 +2.2
baz=13
A16A West Butte Ran 12.97 62 ⇓P Pn 21 35 46.7 +0.1
baz=13
GSC Goldstone 13.01 129 ⇓P Pn 21 35 48.4 +1.1
baz=13
E17A Martinsdale 13.07 74 ⇓P Pn 21 35 48.5 +0.4
baz=13
L16A Fish Haven 13.14 93 ⇓P Pn 21 35 50.6 +1.5
baz=13
HWUT Hardware Ranch 13.16 95 ePn Pn 21 35 51.7 +2.4
TPAW Teton Pass 13.17 87 ePn Pn 21 35 51.3 +1.9
D17A Six Diamond Ra 13.24 71 ⇓P Pn 21 35 51.5 +1.1
baz=13
CCUT Cedar City 13.67 114 ePn Pn 21 35 59.0 +2.6
MSU Marysvale 13.96 108 ePn Pn 21 36 02.2 +1.9
DLBC Dease Lake 14.25 358 LR LR 21 41 02.2
comp=Z,282nm,18.2s,baz=67,slow=36
C19A Slack Wire Ran 14.41 69 ⇓P Pn 21 36 08.0 +1.7
baz=14
Q16A Castle Valley 14.46 105 ⇓P Pn 21 36 10.0 +2.8
baz=14,SNR=5.8
SRU San Rafael 14.83 104 ePn Pn 21 36 14.4 +2.3
U15A North Rim 15.02 115 ⇓P P 21 36 17.1 -3.1
baz=15,SNR=19
P19A Cripple Cowboy 15.69 100 ⇓P P 21 36 25.2 -2.4
baz=16
N20A Spence Gulch, 15.77 95 ⇓P Pn 21 36 25.8 +1.3
baz=16
S18A Hurst Farm, Bl 15.86 108 ⇓P P 21 36 28.5 -1.0
baz=16,SNR=7.1
M21A Separation Pea 16.18 92 ⇓P P 21 36 32.5 -0.5
baz=16,SNR=7.6
PV04 Paradox Valley 16.28 104 ePn P 21 36 32.6 -1.5
PV01 Paradox Valley 16.63 104 ePn Pn 21 36 36.2 +0.6
R20A Redvale 16.74 104 ⇓P P 21 36 37.8 -1.4
baz=17
P21A Newcastle 16.82 99 ⇑P P 21 36 38.6 -1.5
baz=17
S20A Disappointment 16.92 105 ⇑P P 21 36 40.0 -1.2
baz=17
MVCO Mesa Verde 17.13 107 ePn P 21 36 42.5 -1.0
9.3nm,0.9s
MVCO Mesa Verde 17.13 107 ⇑P P 21 36 43.6 0.0
baz=17
O22A Kremmling 17.23 96 ⇑P P 21 36 44.6 -0.1
baz=17
R21A Cimarron 17.24 102 ⇓P P 21 36 44.5 -0.3
baz=17
S21A Coal Bank Pass 17.40 105 ⇑P P 21 36 46.1 -0.4
baz=17
N23A Red Feather La 17.41 93 ⇑P P 21 36 46.1 -0.5
baz=17
214A Organ Pipe Nat 17.72 128 ⇑P P 21 36 50.4 +0.5
baz=18
R22A Saguache, Gunn 17.86 102 ⇓P P 21 36 51.9 +0.2
baz=18
T21A Navajo Lake 17.91 106 ⇑P P 21 36 52.3 +0.2
baz=18
V20A Brimhall 17.91 111 ⇑P P 21 36 52.7 +0.6
baz=18
S22A 4UR Ranch, Cre 18.03 103 ⇓P P 21 36 53.7 +0.2
baz=18
T22A Edith 18.33 105 ⇑P P 21 36 57.8 +1.0
baz=18
SDCO Great Sand Dun 18.96 102 ePn Pn 21 37 05.8 +1.4
9.1nm,1.5s
LAZ Ladron 19.61 112 eP P 21 37 10.5 -0.3
3.5nm,1.2s
ANMO Albuquerque 19.75 110 ePn Pn 21 37 16.7 +2.9
4.2nm,1.1s
ANMO Albuquerque 19.75 110 P Pn 21 37 13.6 -0.1
baz=322,slow=8.5,SNR=3.1
ANMO LR LR 21 45 02.4
comp=Z,122nm,20.7s,baz=266,slow=38
120A U Bar Ranch, L 19.81 119 ⇓P Pn 21 37 14.7 +0.2
baz=20
Y22A Socorro 20.00 113 ⇓P Pn 21 37 15.9 -0.8
baz=20
T25A Trinidad 20.01 102 ⇓P Pn 21 37 15.6 -1.3
baz=20
R26A Arlington 20.17 98 ⇑P Pn 21 37 17.3 -1.4
baz=20
YKA Yellowknife Ar 20.17 20 P P 21 37 16.7 +0.2
YKA Yellowknife Ar 20.17 20 P P 21 37 16.7 +0.2
baz=210,slow=11,SNR=10
319A Douglas 20.21 123 ⇑P Pn 21 37 18.5 -0.7
baz=20
220A Playas Peak, P 20.31 120 ⇓P Pn 21 37 19.6 -0.8
baz=20,SNR=6.1
W24A Lazy 6 Ranch, 20.31 108 ⇓P P 21 37 18.5 +0.1
baz=20
121A Cookes Peak, D 20.36 118 ⇑P Pn 21 37 20.4 -0.6
baz=20,SNR=5.8
Z22A Elephant Butte 20.42 115 ⇑P Pn 21 37 20.8 -1.0
baz=20,SNR=6.9
FFC Flin Flon 20.43 49 eP P 21 37 18.9 -0.3
5.5nm,0.9s
R27A Eads 20.64 98 ⇑P P 21 37 22.5 +0.6
baz=21
320A Kipp Ranch, An 20.70 121 ⇑P P 21 37 22.6 0.0
baz=21
Y24A Capitan 21.02 111 ⇑P P 21 37 26.7 +0.5
baz=21
V26A Tequesquite Ra 21.12 105 ⇑P P 21 37 27.2 +0.2
baz=21
X25A Clemmons Ranch 21.20 109 ⇑P P 21 37 28.6 +0.6
baz=21
Z24A Sheeppen Canyo 21.43 112 ⇓P P 21 37 31.9 +1.4
baz=22
T28A Walsh 21.64 100 ⇓P P 21 37 32.4 -0.2
baz=22
124A Stringfield Ra 21.76 114 ⇑P P 21 37 33.7 -0.4
baz=22
224A Cornudas Mount 22.11 115 ⇑P P 21 37 37.9 +0.2
baz=22
ILAR Eielson Array 22.86 340 P P 21 37 44.7 -0.6
ILAR Eielson Array 22.86 340 P P 21 37 44.7 -0.6
1.4nm,1.1s,baz=157,slow=10,SNR=5.3
Z27A Tatum 22.88 110 ⇑P P 21 37 45.8 -0.1
baz=23
226B Tecolote Peak, 23.00 113 ⇓P P 21 37 47.2 +0.1
baz=23
ULM Lac du Bonnet 23.26 63 P P 21 37 48.3 -1.2
ULM Lac du Bonnet 23.26 63 P P 21 37 48.3 -1.2
1.8nm,0.4s,baz=278,slow=10,SNR=6.8
425A Indio Mountain 23.30 117 ⇓P P 21 37 49.7 -0.5
baz=23
Z29A Hungry Hill Ra 23.94 108 ⇑P P 21 37 55.7 -0.8
baz=24
INK Inuvik 24.26 356 LR LR 21 46 42.5
comp=Z,42nm,21.7s,baz=32,slow=35
526A Mary Lane Ranc 24.36 117 ⇓P P 21 38 00.3 -0.1
baz=24
626A Big Bend Ranch 24.67 118 ⇓P P 21 38 02.8 -0.3
baz=25
428A Kincaid Ranch, 24.83 114 ⇑P P 21 38 05.2 +0.6
baz=25
TXAR Lajitas Array 25.12 118 P P 21 38 06.6 -0.6
TXAR Lajitas Array 25.12 118 P P 21 38 06.6 -0.6
1.1nm,0.8s,baz=303,slow=6.9,SNR=5.3
TXAR LR LR 21 49 18.1
comp=Z,80nm,18.9s,baz=330,slow=40
528A Cox Ranch, San 25.13 115 ⇓P P 21 38 08.2 +0.8
baz=25,SNR=6.5
429A Davenport Ranc 25.42 113 ⇓P P 21 38 10.1 +0.2
baz=25
529A Stev Forest Ra 25.52 114 ⇓P P 21 38 12.6 +1.8
baz=26,SNR=7.4
RES Resolute Bay 34.12 15 P P 21 39 26.3 -0.2
RES Resolute Bay 34.12 15 P P 21 39 26.3 -0.2
1.0nm,0.9s,baz=218,slow=8.9,SNR=4.2
TKL Tuckaleechee C 35.45 88 LR LR 21 54 43.0
comp=Z,146nm,19.4s,baz=274,slow=37
ULN Ulaanbaatar 75.84 325 eP P 21 44 23.9 -4.5
ULN ePcP PcP 21 44 42.0 +1.0

*ISCJB **09** 21:40:30.8±0.3,33°.24N±0°.04×93°.51E±0°.05,h10km, mb4.1/21,MS3.5/4,Error ellipse: s-maj=7.2km s-min=5.7km az=39.6*
*IDC **09** 21:40:31.2±0.6,33°.25N×93°.62E,h0km,mb3.9/15, mb1 4.0/19,mb1mx3.9/29,mbtmp3.8/19,ML3.5/4,MS3.1/5, Ms1 3.2/5,ms1mx2.8/39,Error ellipse: s-maj=24.6km s-min=13.5km az=45.0*
*BJI **09** 21:40:32.2,33°.45N×93°.40E,h10km,mB4.3/4,mb4.3/5, ML3.7/6,Ms3.9/6,Ms7 3.8/6*

ISC 09 21:40:32.0±0.6,33°.18N±0°.06×93°.58E±0°.09,h10km,n43, σ1s35/39,mb4.1/21,MS3.2/4,1C,Qinghai

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LSA Lhasa 4.04 212 Pn Pb 21 41 40.7 -2.9
LSA Sn Sb 21 42 33.1 +0.4
LSA LR LR
comp=E,550nm,5.8s
LSA LR LR
comp=Z,1μm,6.9s
TAPN Taplejung 7.71 223 eP Pn 21 42 26.0 +1.3
comp=Z,9.5nm,0.4s
GTA Gaotai 8.00 37 ⇑P Pn 21 42 30.5 +2.1
GTA pmax pmax
comp=Z,7.0nm,1.1s
GTA pmax pmax
comp=Z,83nm,6.4s
ODAN Odare 8.27 222 eP Pn 21 42 33.6 +1.3
comp=Z,21nm,0.6s
GUN Gumba 8.47 234 eP Pn 21 42 36.9 +1.9
comp=Z,30nm,0.5s
RAMN Ramite 8.67 226 eP Pn 21 42 38.6 +0.9
KKN Kakani 8.95 235 eP Pn 21 42 43.6 +2.0
comp=Z,14nm,0.5s
PKI Pulchoki 9.00 234 eP Pn 21 42 43.8 +1.4
comp=Z,36nm,0.6s
PKIN Phulchoki 9.01 234 eP Pn 21 42 43.5 +1.1
comp=Z,23nm,0.6s
DMN Daman 9.19 235 eP Pn 21 42 46.3 +1.5
comp=Z,18nm,0.6s
DANN Dangsing 9.72 243 eP Pn 21 42 53.1 +0.9
comp=Z,47nm,0.6s
KOLN Koldanda 10.16 241 eP Pn 21 42 58.3 +0.2
comp=Z,14nm,0.6s
PYUN Piuthan 10.43 244 eP Pn 21 43 01.7 -0.2
comp=Z,30nm,0.6s
KMI Kunming 11.33 133 P Pn 21 43 17.2 +3.0
KMI S Sn 21 45 35.2 +14
KMI pmax pmax
comp=Z,7.0nm,1.0s
KMI LR LR
comp=N,550nm,8.9s
KMI LR LR
comp=E,500nm,10.2s
KMI LR LR
comp=Z,350nm,8.3s
GYA Guiyang 13.18 117 P Pn 21 43 42.4 +3.0
GYA pmax pmax
comp=Z,60nm,3.3s
GYA LR LR
comp=N,410nm,15.9s
GYA LR LR
comp=E,400nm,17.3s
GYA LR LR
comp=Z,620nm,16.7s
CMAR Chiang Mai Arr 15.43 161 Pn P 21 44 12.1 -2.4
comp=Z,0.2nm,0.3s,baz=329,slow=11,SNR=7.9
CMAR LR LR 21 50 50.9
comp=Z,62nm,19.7s,baz=120,slow=40
MKAR Makanchi Array 16.09 331 Pn Pn 21 44 15.7 -2.6
comp=Z,0.1nm,0.3s,baz=142,slow=14,SNR=12
SONM Songino Array 17.55 30 P P 21 44 35.6 -2.2
comp=Z,0.1nm,0.3s,baz=214,slow=13,SNR=21
SONM LR LR 21 51 17.8
comp=Z,28nm,20.4s,baz=198,slow=37
AAK Ala-Archa 17.74 308 P P 21 44 40.2 +0.2
comp=Z,0.2nm,0.3s,baz=125,slow=6.5,SNR=15
ZALV Zalesovo Beam 21.68 346 P P 21 45 21.4 -1.3
comp=Z,2.0nm,0.7s,baz=166,slow=9.9,SNR=7.6
ZALV LR LR 21 54 28.0
comp=Z,50nm,19.0s,baz=209,slow=39
BVAR Borovoye Array 25.88 327 P P 21 46 05.6 +1.9
comp=Z,0.6nm,0.6s,baz=136,slow=11,SNR=3.6
BVAR LR LR 21 58 25.0
comp=Z,40nm,18.6s,baz=80,slow=42
KSRS Korea Array 28.25 72 P P 21 46 25.6 +0.4
comp=Z,2.5nm,0.7s,baz=276,slow=9.4,SNR=12
BRTR Keskin Array B 47.88 296 P P 21 49 10.6 +0.1
comp=Z,1.2nm,0.8s,baz=100,slow=9.4,SNR=7.2
AKASG Malin Array Be 49.37 311 P P 21 49 20.8 -0.7
comp=Z,0.3nm,0.3s,baz=74,slow=7.0,SNR=4.0
FINES FINESS Array B 50.81 325 P P 21 49 33.5 +1.3
comp=Z,1.2nm,0.7s,baz=76,slow=8.0,SNR=6.7
ARCES ARCESS Array B 51.68 335 LR LR 22 12 37.9
comp=Z,43nm,21.1s,baz=40,slow=37
NB2 NORSAR Subarra 57.99 325 P P 21 50 25.4 +0.8
comp=Z,0.9nm,0.6s,baz=79,slow=7.4
NOA NORSAR Array B 57.99 325 P P 21 50 26.1 +1.5
comp=Z,0.8nm,0.6s,baz=79,slow=7.0,SNR=5.2
GERES GERESS Array B 59.59 311 P P 21 50 36.7 +0.8
comp=Z,0.9nm,0.8s,baz=84,slow=5.5,SNR=5.9
LPG La Plagne 65.18 309 eP P 21 51 14.1 +0.4
comp=Z,7.2nm,0.8s
LPL La Plagne 65.18 309 eP P 21 51 14.1 +0.5
comp=Z,12nm,1.0s
SBF Sospel 65.36 307 eP P 21 51 14.9 +0.3
comp=Z,13nm,0.8s
MBDF Montbardon 65.46 309 eP P 21 51 15.8 +0.4
comp=Z,14nm,1.2s
WRA Warramunga Arr 65.61 138 P P 21 51 16.5 +0.1
comp=Z,2.2nm,0.9s,baz=332,slow=7.0,SNR=9.7
SMF Signal de Mont 66.58 311 eP P 21 51 21.4 -1.0
comp=Z,25nm,1.3s
ASAR Alice Springs 68.36 140 P P 21 51 35.6 +1.8
comp=Z,2.2nm,0.5s,baz=324,slow=6.6,SNR=48
ETSF Etsaut 71.04 309 eP P 21 51 50.6 +0.3
comp=Z,8.1nm,0.9s
ILAR Eielson Array 71.64 23 P P 21 51 53.8 +0.4
comp=Z,0.4nm,0.7s,baz=284,slow=4.8,SNR=4.0
ESDC Sonseca Array 74.85 308 P P 21 52 14.5 +1.6
comp=Z,1.4nm,0.8s,baz=55,slow=6.2,SNR=10
STKA Stephens Creek 78.99 140 P P 21 52 37.3 +1.3
comp=Z,0.7nm,0.5s,baz=88,slow=4.9,SNR=7.8
YKA Yellowknife Ar 82.00 13 P P 21 52 51.3 -0.5
comp=Z,0.2nm,0.5s,baz=325,slow=5.0,SNR=4.7
TORD Torodi Ar. Bea 84.48 282 P P 21 53 04.9 -0.6
comp=Z,1.5nm,0.8s,baz=47,slow=4.7,SNR=8.2
DZM Mont Dzumac 88.53 118 LR LR 22 30 03.0
comp=Z,183nm,18.9s,baz=289,slow=34

*ISCJB **09** 21:45:29.7±0.5,33°.14N±0°.03×116°.54W±0°.03,h12km±5km, Error ellipse: s-maj=4.4km s-min=3.7km az=172.6*
*NEIC **09** 21:45:30.7,33°.16N×116°.56W,h14km,ML3.4(PAS),After PAS.*
NEIC Felt [III] at Borrego Springs, El Cajon, Julian, Ramona, Ranchita and San Diego; Felt [II] at Alpine, Escondido, Lakeside, Poway, Santa Ysabel, Santee and Valley Center. Also felt at Descanso, Fallbrook, Hemet, Irvine, La Mesa, Murrieta, Pauma Valley, Pine Valley, Rancho Santa Fe, San Jacinto, San Marcos, Sun City, Vista, Warner Springs and Winchester.

ISC 09 21:45:29.9±0.9,33°.15N±0°.02×116°.53W±0°.02,h16km±8km, n30,σ0s98/45,12C-15D,Southern California

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MONP Monument Peak 0.28 160 ⇓P Pg 21 45 36.3 +0.3
baz=0.3
MONP ⇓S Sg 21 45 40.3 +0.3
baz=0.3
PFO Pinyon Flat Ob 0.46 8 ePg Pg 21 45 38.9 -0.3
PFO eSg Sg 21 45 45.0 -0.5
PFO Pinyon Flat Ob 0.46 8 ⇓P Pg 21 45 38.9 -0.3
baz=0.4
PFO ⇓S Sg 21 45 45.3 -0.2
baz=0.4
BAR Barrett 0.48 194 ePg Pg 21 45 39.7 +0.1
BAR eSg Sg 21 45 45.9 -0.2
109C Camp Elliot, M 0.55 242 ⇓P Pg 21 45 40.5 -0.2
baz=0.6
109C ⇓S Sg 21 45 47.7 -0.4
baz=0.6
DVTC Desert V Tower 0.61 144 ⇑P Pg 21 45 42.4 +0.5
baz=0.6
DVTC ⇑S Sg 21 45 50.6 +0.6
baz=0.6
SWSC Sam W. Stewart 0.65 109 ⇑P Pg 21 45 42.9 +0.3
baz=0.7
MURC Murrieta 0.72 309 ⇑P Pg 21 45 43.3 -0.6
baz=0.7
MURC ⇑S Sg 21 45 52.8 -0.7
baz=0.7
BELC Belle Mtn. Jos 0.96 27 ⇓P Pb 21 45 48.4 +0.1
baz=0.9
BELC ⇑S Sb 21 46 00.3 -0.4
baz=0.9
BC3 Big Chuckawall 1.03 60 ⇓P Pb 21 45 48.7 -0.8
baz=1.0
BC3 ⇓S Sb 21 46 01.5 -1.3
baz=1.0
BBRC Big Bear Solar 1.16 344 ⇑S Sb 21 46 06.5 -0.1
baz=1.1
GLA Glamis 1.43 93 ePg Pn 21 45 54.3 -1.1
GLA Glamis 1.43 93 ⇓P Pn 21 45 54.4 -0.9
baz=1.4
IRM Iron Mountain 1.53 48 ⇑P Pn 21 45 56.1 -0.6
baz=1.5
FMP Fort Macarthur 1.58 291 ⇑Sb Sb 21 46 19.1 +0.7
baz=1.6
CIS Catalina Islan 1.59 280 ⇓S Sn 21 46 17.3 -0.4
baz=1.6
MWC Mount Wilson 1.66 310 ePg Pn 21 45 59.3 +0.7
MWC eSg Sn 21 46 21.0 +1.2
SCI San Clemente I 1.70 265 ⇑Sn Sn 21 46 19.5 -1.0
baz=1.7
PASC Pasadena Art C 1.72 307 ePn Pn 21 45 57.6 -1.6
PASC eSn Sn 21 46 22.0 +1.1
GMRC Granite Mounta 1.78 24 ⇓Sb Sb 21 46 25.6 +1.2
baz=1.8
Y12C Blythe 1.78 70 ⇑P Pn 21 45 59.3 -0.7
baz=1.8
DECC Green Verdugo 1.86 307 ⇑Pb Pb 21 46 03.0 -0.5
baz=1.8
DECC ⇓Sb Sb 21 46 26.8 +0.2
baz=1.8
EDW2 Edwards Air Fo 2.11 325 ⇓Pb Pb 21 46 07.3 -0.5
baz=2.1
EDW2 ⇓Sb Sb 21 46 34.0 +0.2
baz=2.1
GSC Goldstone 2.16 354 ePn Pb 21 46 09.1 +0.4
GSC eSn Sb 21 46 37.7 +2.4
LDFC Landfair 2.25 31 ePn Pb 21 46 11.6 +1.3
LDFC eSn Sg 21 46 43.7 +1.3
OSI Osito Adit 2.34 309 ePn Pb 21 46 11.6 -0.1
ISA Isabella 2.98 328 ePn Pn 21 46 19.3 +2.7
ISA eSn Sb 21 47 00.5 +1.6
ARUT Antelope Range 5.27 28 ePg Pg 21 47 07.6 -3.2
49nm,1.2s
NV11 Mina Array Sit 5.43 346 ePg Pg 21 47 12.5 -1.4
SRU San Rafael 7.68 38 ePn Pn 21 47 20.3 -1.0
1μm,0.7s

IDC 09 21:53:51.6±2.4,21°.78S×178°.37W,h367km±27km, mb3.1/6,mb1 3.5/8,mb1mx3.3/21,mbtmp3.4/8,Error ellipse: s-maj=26.2km s-min=13.5km az=130.0,Fiji Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AFI Afiamalu 10.03 40 P P 21 56 10.7 -0.1
28nm,0.3s,baz=18,slow=2.8,SNR=17
AFI S S 21 57 59.9 -3.7
7.4nm,0.3s,baz=168,slow=17,SNR=4.2
URZ Urewera 16.88 192 P P 21 57 25.2 -0.5
8.5nm,0.3s,baz=2.3,slow=3.4,SNR=31
URZ S S 22 00 21.6 -1.4
2.4nm,0.3s,baz=86,slow=23,SNR=11
RPZ Rata Peaks 23.58 199 P P 21 58 31.2 +0.4
13nm,0.4s,baz=360,slow=0.2,SNR=15
STKA Stephens Creek 36.94 246 P P 22 00 26.0 -1.1
0.8nm,0.5s,baz=90,slow=18,SNR=5.7
ASAR Alice Springs 43.91 258 P P 22 01 22.6 -1.1
1.0nm,0.8s,baz=90,slow=8.1,SNR=9.5
WRA Warramunga Arr 44.10 263 P P 22 01 26.1 +0.8
0.3nm,0.3s,baz=95,slow=8.4,SNR=5.1
FITZ Fitzroy Crossi 52.53 263 P P 22 02 29.8 +0.9
1.9nm,1.1s,baz=159,slow=14,SNR=2.5
NVAR Mina Array Bea 82.18 43 P P 22 05 34.0 +1.2
0.8nm,0.5s,baz=227,slow=7.8,SNR=6.1
ILAR Eielson Array 89.63 13 P P 22 06 07.3 -0.7
0.3nm,0.6s,baz=227,slow=5.9,SNR=4.8
ARCES ARCESS Array B 130.11 349 PKP PKPdf 22 12 16.3 -1.3
2.7nm,0.9s,baz=14,slow=5.4,SNR=4.3
AKASG Malin Array Be 143.95 330 PKP PKPab 22 12 41.0 -1.1
2.3nm,0.5s,baz=45,slow=4.5,SNR=9.6
BRTR Keskin Array B 147.42 311 PKPbc PKPbc 22 12 52.5 -0.6
0.6nm,0.6s,baz=156,slow=5.4,SNR=4.4

*IDC **09** 21:57:03.0±2.6,35°.62N×143°.17E,h0km,mb3.4/6, mb1 3.5/7,mb1mx3.4/27,mbtmp3.4/7,ML3.3/1,MS4.2/2, Ms1 4.1/2,ms1mx2.9/31,Error ellipse: s-maj=85.4km s-min=21.4km az=64.0*
*JMA **09** 21:57:07.5±0.3,35°.77N×142°.89E,h99km,M3.3*
*ISCJB **09** 21:57:08.7±0.9,35°.71N±0°.06×142°.88E±0°.07,h59km, mb3.3/6,MS4.2/2,Error ellipse: s-maj=8.8km s-min=7.8km az=152.6*

ISC 09 21:57:11.0±1.3,35°.73N±0°.06×142°.9E±0°.1,h59km,n21, σ1s72/24,mb3.4/6,Off east coast of Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHOJ Chosi 1.64 270 P Pn 21 57 36.2 -1.3
CHOJ eS Sn 21 57 57.7 +0.1
BSO1 Boso 1 1.89 236 P Pn 21 57 38.3 -2.1
BSO1 eS Sn 21 58 02.2 -0.6
JHO Hitachi 2.06 296 P Pn 21 57 40.8 -2.5
BSO3 Boso 3 2.14 245 P Pn 21 57 42.9 -1.2
BSO4 Boso 4 2.20 251 P Pn 21 57 44.0 -1.0
JYT Yasato 2.23 284 P Pn 21 57 43.7 -1.8
JFK Kawauchi 2.30 316 P Pn 21 57 43.4 -3.1
JFK eS Sn 21 58 11.2 -2.5
JFT Otama 2.71 312 P Pn 21 57 50.5 -1.7
JOD2 Odawara 2 3.12 263 P Pn 21 57 56.0 -1.8
JOD2 eS Sn 21 58 33.2 -0.7
JHJ2 Mitsune 3.63 225 P Pn 21 58 01.9 -2.8
MJAR Matsushiro Arr 3.86 284 Pn Pn 21 58 06.6 -1.3
1.9nm,0.3s,baz=56,slow=22,SNR=15

MJAR Sn **Sn** **21 58 51.3 -0.7**
1.1nm,0.3s,baz=343,slow=29,SNR=5.4
MAT **Matsushiro** **3.87 284** P **Pn** **21 58 07.7 -0.2**
MAT *e*S **Sn** **21 58 52.3 +0.2**
KSRS **Korea Array** **12.14 283** LR LR 22 04 18.2
comp=Z,24nm,19.5s,baz=100,slow=35
SONM **Songino Array** **29.50 306** P **P** **22 03 11.5 +1.9**
0.5nm,0.7s,baz=99,slow=9.1,SNR=3.7
ZALV **Zalesovo Beam** **43.67 313** P **P** **22 05 11.1 +1.4**
0.4nm,0.6s,baz=86,slow=6.1,SNR=3.9
MKAR **Makanchi Array** **45.82 303** P **P** **22 05 28.6 +1.7**
0.2nm,0.7s,baz=84,slow=11,SNR=4.0
PSI **Prapat** **52.17 241** LR LR 22 29 22.4
comp=Z,315nm,18.4s,baz=96,slow=37
BVAR **Borovoye Array** **52.32 313** P **P** **22 06 17.9 +1.4**
0.1nm,0.4s,baz=56,slow=7.8,SNR=2.1
WRA **Warramunga Arr** **55.95 190** P **P** **22 06 42.2 -1.0**
0.6nm,0.8s,baz=9.6,slow=7.7,SNR=3.6
ASAR **Alice Springs** **59.68 190** P **P** **22 07 09.0 -0.3**
0.2nm,0.6s,baz=7.8,slow=7.5,SNR=2.9
STKA **Stephens Creek** **67.26 181** LR LR 22 34 07.9
comp=Z,128nm,21.7s,baz=215,slow=33

IDC 09 22:05:01.5±2.6, 4°.38N×123°.78E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/23, mbtmp3.3/3, Error ellipse: s-maj=363.9km s-min=26.0km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.31**	**157**	P	P	22 10 39.5	+0.3
	0.2nm,0.3s,baz=337,slow=9.7,SNR=3.7						
ASAR	**Alice Springs**	**29.58**	**161**	P	P	22 11 08.1	-0.4
	0.1nm,0.3s,baz=335,slow=8.4,SNR=5.2						
MKAR	**Makanchi Array**	**55.37**	**326**	P	P	22 14 37.4	-0.1
	0.2nm,0.4s,baz=129,slow=7.4,SNR=6.9						

WEL 09 22:07:33.4±0.7, 36°.47S×177°.93E, h152km±6km, ML4.1/8, 1C-2D, Error ellipse: s-maj=5.7km s-min=4.8km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.13**	**165**	⇓P	Pn	22 07 59.6	+0.2
MXZ				*e*S	Sn	22 08 17.9	-1.6
PUZ	**Puketiti**	**1.62**	**171**	⇑P	Pn	22 08 04.1	-0.2
PUZ				*e*S	Sn	22 08 26.1	-2.1
KUZ	**Kuaotunu**	**1.80**	**261**	⇓P	Pn	22 08 06.0	-0.2
MWZ	**Matawai**	**1.89**	**190**	PN	Pn	22 08 08.1	+0.8
MWZ				SN	Sn	22 08 34.2	+0.7
URZ	**Urewera**	**1.90**	**200**	PN	Pn	22 08 07.9	+0.5
URZ				*e*SN	Sn	22 08 34.3	+0.7
CNGZ	**Carnagh Statio**	**2.02**	**174**	PN	Pn	22 08 09.5	+0.7
PRGZ	**Paritu Road**	**2.45**	**181**	PN	Pn	22 08 13.5	-0.4
RAHZ	**Arahi**	**2.53**	**195**	PN	Pn	22 08 15.1	+0.1
KNZ	**Kokohu**	**2.55**	**184**	PN	Pn	22 08 14.5	-0.6
MHGZ	**Mahia Peninsul**	**2.68**	**180**	PN	Pn	22 08 16.4	-0.3
NMHZ	**Naumai**	**2.77**	**198**	PN	Pn	22 08 18.3	+0.3
BKZ	**Black Stump Fm**	**2.92**	**202**	PN	Pn	22 08 20.3	+0.5
MCHZ	**McNeill Hill**	**3.12**	**198**	PN	Pn	22 08 21.9	-0.4
BHHZ	**Black Hill Sta**	**3.35**	**206**	PN	Pn	22 08 25.9	+0.5
FWVZ	**Far West T-bar**	**3.35**	**213**	PN	Pn	22 08 27.1	+1.5
KAHZ	**Kahuranaki**	**3.42**	**194**	PN	Pn	22 08 25.3	-0.9
PXZ	**Pawanui**	**3.65**	**193**	PN	Pn	22 08 27.2	-1.8
TSZ	**Takapari Road**	**3.90**	**203**	*e*PN	Pn	22 08 30.7	-1.7
PRHZ	**Porangahau**	**3.92**	**195**	PN	Pn	22 08 30.7	-1.9
DVHZ	**Dannevirke**	**4.06**	**199**	PN	Pn	22 08 33.8	-0.7
MRZ	**Mangatainoka R**	**4.57**	**203**	PN	Pn	22 08 38.1	-3.0
HOWZ	**Holdsworth Sta**	**4.80**	**202**	PN	Pn	22 08 41.2	-3.0
OGWZ	**Otaki Gorge**	**4.85**	**206**	PN	Pn	22 08 42.4	-2.3
TMWZ	**Te Maipa**	**4.89**	**198**	PN	Pn	22 08 42.3	-3.0
KIW	**Kapiti Island**	**4.98**	**207**	PN	Pn	22 08 44.4	-2.1
CAW	**Cannon Point**	**5.14**	**205**	PN	Pn	22 08 45.3	-3.3
PLWZ	**Palliser**	**5.50**	**201**	PN	Pn	22 08 49.6	-3.8
TUWZ	**Tuamarina**	**5.84**	**211**	PN	Pn	22 08 55.8	-2.1

*BJI **09** 22:10:20.6, 2°.91N×126°.98E, h35km, mB4.9/32, mb4.8/41, Ms4.4/32, Ms7 4.1/33*
*IDC **09** 22:10:23.8±0.4, 3°.68N×126°.59E, h0km, mb4.7/23, mb1 4.7/23, mb1mx4.7/27, mbtmp4.7/23, MS4.0/18, Ms1 4.0/18, ms1mx3.7/41, Error ellipse: s-maj=20.5km s-min=10.2km az=74.0*
*MOS **09** 22:10:27.1±1.1, 3°.74N×126°.60E, h33km, mb5.2/27, Error ellipse: s-maj=13.9km s-min=6.3km az=117.4*
*NEIC **09** 22:10:29.0±0.2, 3°.71N×126°.66E, h35km, mb5.0/34, Error ellipse: s-maj=10.3km s-min=5.3km az=74.0*
*ISCJB **09** 22:10:30.6±0.5, 3°.71N±0°.02×126°.81E±0°.03, h67km±4km, mb4.8/90, Error ellipse: s-maj=5.7km s-min=3.4km az=157.3*
*AUST **09** 22:10:32.0±0.4, 3°.54N×126°.65E, h61km, Error ellipse: s-maj=0.9km s-min=0.7km az=229.0*
*DJA **09** 22:10:31.6±0.4, 4°.N±3°×12°.7E±°, h54km±4km, M4.9/39, mB5.3/14, mb4.9/39, MLv5.1/10, Mw(mB)4.8/14*
ISC 09 22:10:31.4±0.4, 3°.68N±0°.03×126°.69E±0°.04, h57km±3km, h57km:pP-P,n301,σ1°49/334,mb4.9/89,MS4.0/37,2C-8D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**2.89**	**220**	P	**Pn**	**22 11 16.4**	**+1.4**
TNTI	**Ternate**	**2.97**	**167**	*e*Pn	**Pn**	**22 11 15.8**	**-0.3**
TNTI				*e*Sn	**Sn**	**22 11 51.3**	**+0.9**
TNTI	**Ternate**	**2.97**	**167**	P	**Pn**	**22 11 15.8**	**-0.3**
MATI	**Mati**	**3.27**	**353**	*e*P	**Pn**	**22 11 21.3**	**+1.0**
DAV	**Davao City (W)**	**3.54**	**342**	*e*Pn	**Pn**	**22 11 25.0**	**+1.1**
DAV				Sn	Sn	22 12 15.6	+11
DAV	**Davao City (W)**	**3.54**	**342**	P	**Pn**	**22 11 22.4**	**-1.6**
DAV	**Davao City (W)**	**3.54**	**342**	Pn	**Pn**	**22 11 25.0**	**+1.1**
	19nm,0.3s,baz=234,slow=14,SNR=6.9						
DAV				Sn	Sn	22 12 15.6	+11
	68nm,0.3s,baz=89,slow=19,SNR=3.8						
DAV	**Davao City (W)**	**3.54**	**342**	P	Pn	22 11 32.9	+8.9
KCP	**Kidapawan**	**3.67**	**334**	⇓*e*P	Pn	22 11 30.8	+5.0
KCP				*e*S	Sn	22 12 14.9	+7.1
KMSI	**Cibinong**	**4.10**	**221**	P	Pn	22 11 35.5	+3.9
CTBH	**Cotabato--PC H**	**4.28**	**325**	⇓*i*P	**Pn**	**22 11 35.7**	**+1.7**
LBMI	**Labuha**	**4.36**	**169**	P	**Pn**	**22 11 39.9**	**+0.7**
BUKP	**Musuan**	**4.47**	**339**	*e*P	**Pn**	**22 11 38.1**	**+1.3**
PAGZ	**Pagadian**	**5.29**	**322**	*e*P	**Pn**	**22 11 49.3**	**+1.5**
MRSI	**Marisa**	**5.71**	**236**	P	**Pn**	**22 11 56.5**	**+2.9**
	251nm,0.9s,3μm1.2nm						
LUWI	**Luwuk**	**6.11**	**220**	P	Pn	22 12 02.9	+3.8
	461nm,1.1s,5μm2.5nm						
SWI	**Sorong**	**6.42**	**135**	P	**Pn**	**22 12 03.4**	**0.0**
	118nm,0.9s,2μm0.6nm						
SWI	**Sorong**	**6.42**	**135**	P	**Pn**	**22 12 03.5**	**+0.1**
	baz=6.4,SNR=12						
SWI				S	**Sn**	**22 13 14.2**	**-1.1**
	baz=6.4,SNR=9.8						
MSLP	**Maasin**	**6.67**	**344**	*e*P	Pn	22 12 10.2	+3.4
MSAI	**Masohi**	**7.33**	**162**	P	Pn	22 12 27.1	+11
AAI	**Ambon**	**7.47**	**168**	P	Pn	22 12 24.9	+7.1
	56nm,0.9s,0.3nm						
PCI	**Palu**	**8.22**	**237**	S	**Sn**	**22 13 55.4**	**-4.2**
	baz=8.1,SNR=8.3						
MYLDM	**Lahad Datu**	**8.30**	**281**	P	Pn	22 12 33.3	+4.2
MYLDM	**Lahad Datu**	**8.30**	**281**	P	Pn	22 12 32.5	+3.4
	172nm,1.3s,2μm						
PALU	**Palau**	**8.56**	**65**	P	Pn	22 12 36.6	+3.9
	baz=8.7,SNR=4.7						
PALU				S	**Sn**	**22 14 02.3**	**-5.6**
	baz=8.7,SNR=3.3						
FAKI	**Fak Fak**	**8.59**	**140**	P	**Pn**	**22 12 33.4**	**+0.2**
	59nm,1.2s,677nm						
FAKI	**Fak Fak**	**8.59**	**140**	P	Pn	22 12 43.4	+10
	59nm,1.2s,677nm						
KDI	**Kendari**	**8.61**	**208**	P	**Pn**	**22 12 33.7**	**+0.4**
	32nm,1.4s,577nm0.2nm						
TSM	**Tawau**	**8.81**	**274**	P	Pn	22 12 40.2	+4.0
TTSI	**Tana Toraja**	**9.58**	**226**	P	**Pn**	**22 12 46.0**	**-0.6**
	62nm,1.1s,863nm						
BBSI	**Bau Bau**	**9.99**	**204**	P	Pn	22 13 07.0	+15
KDM	**Kudat**	**10.32**	**289**	P	Pn	22 13 00.2	+3.3
BAKI	**Biak**	**10.59**	**117**	P	Pn	22 12 56.4	-4.0
	109nm,1.3s						
KKM	**Kota Kinabalu**	**10.70**	**283**	*e*Pn	Pn	22 13 05.5	+3.5
KKM	**Kota Kinabalu**	**10.70**	**283**	P	Pn	22 13 05.8	+3.7
KKM	**Kota Kinabalu**	**10.70**	**283**	P	**Pn**	**22 13 05.1**	**+3.1**
	34nm,1.4s						
KKM	**Kota Kinabalu**	**10.70**	**283**	P	Pn	22 13 05.9	+3.8
	baz=11,SNR=4.6						
KAPI	**Kappang**	**11.07**	**219**	*e*Pn	**Pn**	**22 13 07.3**	**+0.3**
KAPI	**Kappang**	**11.07**	**219**	P	Pn	22 13 19.8	+13
KAPI	**Kappang**	**11.07**	**219**	Pn	**Pn**	**22 13 08.8**	**+1.7**
	0.6nm,0.3s,baz=18,slow=10,SNR=3.8						
KAPI				LR	LR	22 18 01.2	
	comp=Z,1μm,19.2s,baz=322,slow=42						
BKSI	**Bulukumba**	**11.09**	**216**	P	Pn	22 13 24.4	+17
KBKI	**Kotabaru**	**12.59**	**237**	P	**P**	**22 13 35.5**	**-2.1**
	21nm,1.4s						
MMRI	**Maumere**	**13.01**	**200**	P	P	22 13 48.8	+6.6
BBKI	**Banjar Baru**	**13.80**	**239**	P	**P**	**22 13 50.0**	**-1.0**
	59nm,1.7s,3μm						
SBUM	**Sibu**	**14.50**	**266**	P	**P**	**22 13 57.3**	**-1.5**
SBUM	**Sibu**	**14.50**	**266**	P	**P**	**22 13 57.0**	**-1.8**
	48nm,1.3s,622nm						
JAY	**Jayapura**	**15.30**	**114**	P	**P**	**22 14 09.0**	**+1.2**
JAY	**Jayapura**	**15.30**	**114**	P	**P**	**22 14 08.2**	**+0.5**
	baz=15,SNR=14						
STKI	**Sintang**	**15.62**	**257**	P	**P**	**22 14 13.6**	**+2.4**
	50nm,1.3s,8μm						
KHKI	**Kahang-Kahang**	**16.29**	**223**	P	**P**	**22 14 20.4**	**+1.8**
	37nm,1.1s						
PBKI	**Pangkalan Bun**	**16.29**	**247**	P	P	22 14 28.7	+10
KSM	**Kuching**	**16.51**	**263**	*e*Pn	**P**	**22 14 21.5**	**+0.4**
	34nm,0.9s						
KSM	**Kuching**	**16.51**	**263**	P	**P**	**22 14 22.7**	**+1.6**
KSM	**Kuching**	**16.51**	**263**	P	**P**	**22 14 23.1**	**+2.0**
	45nm,1.0s						
KSM	**Kuching**	**16.51**	**263**	P	**P**	**22 14 22.0**	**+0.9**
	baz=16,SNR=4.2						
MTN	**Manton Dam**	**17.00**	**165**	P	**Pn**	**22 14 22.1**	**-3.2**
	baz=17,SNR=14						
KDU	**Kakadu**	**17.25**	**161**	P	**Pn**	**22 14 26.3**	**-2.1**
	baz=17,SNR=10						
BLJI	**Banyuglugur**	**17.30**	**229**	P	P	22 14 37.9	+8.0
GMJI	**Gumukmas**	**17.76**	**228**	P	**P**	**22 14 36.7**	**+1.8**
	46nm,1.2s						
MMPI	**Merauke**	**18.22**	**132**	P	Pn	22 15 00.7	+20
	baz=18,SNR=3.6						
PCJI	**Pacitan**	**19.45**	**233**	P	**Pn**	**22 14 55.3**	**+0.1**
	71nm,1.9s						
TPI	**Tanjungpandan**	**20.07**	**252**	P	Pn	22 15 05.1	+2.6
	14nm,1.5s						
YULB	**Yu-li**	**20.28**	**346**	*e*P	**P**	**22 14 58.0**	**-4.5**
	10nm,0.4s						
TPUB	**Ta-pu**	**20.37**	**344**	*e*P	**P**	**22 15 01.5**	**-1.9**
	258nm,1.9s						
GUMO	**Guam**	**20.48**	**60**	LR	LR	22 21 30.6	
	comp=Z,444nm,21.2s,baz=233,slow=32						
SSLB	**Suanglung**	**20.74**	**345**	*e*P	**P**	**22 15 05.0**	**-2.5**
	97nm,1.5s						
PPBI	**Pangkal Pinang**	**21.34**	**255**	P	P	22 15 18.9	+4.9
	18nm,1.1s						
FITZ	**Fitzroy Crossi**	**21.67**	**183**	*e*P	**P**	**22 15 15.6**	**-1.8**
	48nm,1.1s						
FITZ				*e*S	**S**	**22 19 08.4**	**-5.9**
FITZ	**Fitzroy Crossi**	**21.67**	**183**	P	**P**	**22 15 16.0**	**-1.3**
	31nm,1.0s,baz=18,slow=10,SNR=29						
FITZ	**Fitzroy Crossi**	**21.67**	**183**	P	**P**	**22 15 15.9**	**-1.5**
	baz=22,SNR=28						
DBJI	**Dramaga**	**22.35**	**243**	P	P	22 15 32.0	+7.2
	72nm,0.8s,2μm						
QIZ	**Qiongzhong**	**22.44**	**314**	P	**P**	**22 15 26.4**	**+0.6**
QIZ				pP	**pP**	**22 15 38.1**	**-0.4**
QIZ				S	**S**	**22 19 29.6**	**+1.0**
QIZ				pmax	pmax		
	comp=Z,140nm,5.7s						
QIZ				LR	LR		
	comp=Z,450nm,18.8s						
QZH	**Quanzhou**	**22.53**	**341**	P	**P**	**22 15 28.8**	**+2.2**
QZH				S	**S**	**22 19 29.0**	**-1.0**
QZH				LR	LR		
	comp=Z,1μm,22.2s						
SKJI	**Sukabumi**	**22.72**	**242**	P	P	22 15 45.6	+17
MYKOM	**Kota Tinggi**	**22.89**	**266**	P	**P**	**22 15 32.3**	**+1.8**
CGJI	**Cibinong**	**23.32**	**244**	P	**P**	**22 15 34.5**	**-0.2**
	comp=Z,77nm,0.9s						
KGM	**Kluang**	**23.40**	**267**	P	**P**	**22 15 36.8**	**+1.3**
KTGM	**Kuala Trenggan**	**23.54**	**275**	P	**P**	**22 15 38.0**	**+1.2**
UBPT	**Khong Chiam**	**23.86**	**300**	P	**P**	**22 15 39.3**	**-0.4**
	comp=Z,63nm,1.3s,comp=Z,2μm						
KASI	**Kota Agung**	**23.98**	**248**	P	**P**	**22 15 44.9**	**+4.1**
	comp=Z,40nm,0.9s						
LWLI	**Liwa**	**24.20**	**249**	P	**P**	**22 15 45.2**	**+2.2**
	comp=Z,59nm,0.9s						
WRAB	**Tennant Creek**	**24.64**	**162**	*e*P	**P**	**22 15 45.6**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,144nm,0.9s						
WRAB	**Tennant Creek**	**24.64**	**162**	*e*P	**P**	**22 15 45.6**	**-1.2**
	comp=Z,144nm,0.9s						
WRAB	**Tennant Creek**	**24.64**	**162**	P	**P**	**22 15 45.0**	**-1.8**
	comp=Z,955nm,1.0s,SNR=39						
WRA	**Warramunga Arr**	**24.65**	**163**	P	**P**	**22 15 45.4**	**-1.4**
WRA	**Warramunga Arr**	**24.65**	**163**	P	**P**	**22 15 45.4**	**-1.4**
	comp=Z,124nm,0.9s,baz=343,slow=11,SNR=168						
FRIM	**Kepong**	**25.02**	**270**	P	**P**	**22 15 51.5**	**+1.2**
IPM	**Ipoh**	**25.61**	**273**	P	**P**	**22 15 56.6**	**+0.9**
BKNI	**Bangkinang**	**25.84**	**263**	P	**P**	**22 16 01.7**	**+3.9**
	comp=Z,68nm,1.0s						
KULM	**Kulim**	**26.01**	**274**	P	**P**	**22 16 00.3**	**+1.0**
QIS	**Mount Isa**	**27.22**	**153**	P	**P**	**22 16 10.2**	**0.0**
	baz=27,SNR=8.8						
CBIJ	**Chichi jima**	**27.60**	**31**	LR	LR	22 26 02.0	
	comp=Z,412nm,18.9s,baz=166,slow=34						
PSI	**Prapat**	**27.73**	**269**	P	**P**	**22 16 14.2**	**-0.7**
PSI	**Prapat**	**27.73**	**269**	P	**P**	**22 16 15.5**	**+0.5**
	comp=Z,21nm,1.0s						
PSI	**Prapat**	**27.73**	**269**	P	**P**	**22 16 14.2**	**-0.7**
	comp=Z,12nm,0.9s,baz=83,slow=2.3,SNR=11						
PSI	**Prapat**	**27.73**	**269**	P	**P**	**22 16 15.4**	**+0.5**
	baz=28,SNR=5.7						
AS31	**Alice Springs**	**28.07**	**166**	*e*P	**P**	**22 16 17.3**	**-0.4**
AS31				*e*S	**S**	**22 21 00.7**	**+2.0**
ASAR	**Alice Springs**	**28.07**	**166**	P	**P**	**22 16 17.1**	**-0.7**
ASAR				PcP	**PcP**	**22 19 32.1**	**+0.8**
ASAR	**Alice Springs**	**28.07**	**166**	P	**P**	**22 16 17.1**	**-0.7**
	comp=Z,2.6nm,0.5s,baz=353,slow=7.9,SNR=46						
ASAR				PcP	**PcP**	**22 19 32.1**	**+0.8**
	comp=Z,2.7nm,0.6s,baz=316,slow=1.8,SNR=7.2						
WHN	**Wuhan**	**29.15**	**338**	P	**P**	**22 16 26.5**	**-0.7**
WHN				*e*S	**S**	**22 21 12.7**	**-2.8**
WHN				LR	LR		
	comp=Z,1μm,26.6s						
NJ2	**Nanjing**	**29.17**	**346**	*e*P	**P**	**22 16 28.1**	**+0.8**
NJ2				S	**S**	**22 21 21.5**	**+5.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,100nm,4.7s						
NJ2				LR	LR		
	comp=N,120nm,14.2s						
NJ2				LR	LR		
	comp=E,140nm,14.4s						
NJ2				LR	LR		
	comp=Z,90nm,12.9s						
JNU	**Nakatsue**	**29.55**	**7**	*e*P	**P**	**22 16 30.5**	**-0.3**
	comp=Z,8.3nm,1.0s						
JNU	**Nakatsue**	**29.55**	**7**	P	**P**	**22 16 30.4**	**-0.3**
	comp=Z,16nm,1.0s,baz=169,slow=3.3,SNR=7.4						
JNU				LR	LR	22 27 08.3	
	comp=Z,171nm,21.1s,baz=325,slow=34						
GYA	**Guiyang**	**29.68**	**322**	*e*P	**P**	**22 16 34.0**	**+1.9**
GYA				pP	**pP**	**22 16 44.2**	**-2.2**
GYA				PP	**PnPn**	**22 17 31.8**	**+2.3**
GYA				S	**S**	**22 21 26.8**	**+2.6**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.6s						
GYA				LR	LR		
	comp=N,460nm,16.9s						
GYA				LR	LR		
	comp=E,440nm,18.3s						
GYA				LR	LR		
	comp=Z,480nm,17.7s						
CM31	**Chiang Mai Arr**	**30.86**	**301**	*e*P	**P**	**22 16 42.9**	**+0.4**
	comp=Z,3.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.86**	**301**	P	**P**	**22 16 43.3**	**+0.8**
CMAR	**Chiang Mai Arr**	**30.86**	**301**	P	**P**	**22 16 43.3**	**+0.8**
	comp=Z,3.2nm,0.7s,baz=113,slow=7.0,SNR=23						
CMAR				LR	LR	22 30 52.6	
	comp=Z,189nm,19.2s,baz=277,slow=40						
CMMT	**Chiang Mai**	**31.01**	**301**	P	**P**	**22 16 44.4**	**+0.6**
	comp=Z,11nm,1.1s						
CHTO	**Chiang Mai**	**31.01**	**301**	*e*P	**P**	**22 16 43.4**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CHTO	**Chiang Mai**	**31.01**	**301**	*e*P	**P**	**22 16 43.4**	**-0.5**
	comp=Z,10.0nm,1.0s						
CHTO	**Chiang Mai**	**31.01**	**301**	P	**P**	**22 16 43.9**	**0.0**
	comp=Z,12nm,1.1s						
MEEK	**Meekatharra**	**31.13**	**194**	P	**P**	**22 16 44.8**	**0.0**
	baz=31,SNR=13						
KMI	**Kunming**	**31.39**	**315**	P	**P**	**22 16 49.6**	**+2.3**
KMI				PP	**PP**	**22 17 56.0**	**-3.1**
KMI				S	**S**	**22 21 52.2**	**+1.1**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,68nm,4.2s						
KMI				LR	LR		
	comp=N,200nm,13.5s						
KMI				LR	LR		
	comp=E,280nm,15.3s						
KMI				LR	LR		
	comp=Z,260nm,16.8s						
KSAR	**Wonju Array Be**	**33.62**	**2**	P	**P**	**22 17 07.0**	**+0.5**
KSAR				PcP	**PcP**	**22 19 47.5**	**+1.8**
KSRS	**Korea Array**	**33.63**	**2**	P	**P**	**22 17 07.0**	**+0.4**
	comp=Z,6.5nm,0.8s,baz=180,slow=10.0,SNR=30						
KSRS				PcP	**PcP**	**22 19 47.5**	**+1.8**
	comp=Z,1.9nm,0.9s,baz=179,slow=3.6,SNR=6.6						
MORW	**Morawa**	**34.13**	**197**	P	**P**	**22 17 11.2**	**+0.3**
	baz=34,SNR=7.6						
FORT	**Forrest**	**34.29**	**178**	*e*P	**P**	**22 17 11.5**	**-0.8**
	comp=Z,60nm,0.9s						
FORT	**Forrest**	**34.29**	**178**	P	**P**	**22 17 12.3**	**0.0**
	baz=34,SNR=16						
MJAR	**Matsushiro Arr**	**34.38**	**17**	P	**P**	**22 17 10.6**	**-2.6**
MJAR	**Matsushiro Arr**	**34.38**	**17**	P	**P**	**22 17 10.5**	**-2.6**
	comp=Z,1.0nm,0.7s,baz=205,slow=11,SNR=6.3						
MJAR				LR	LR	22 30 49.5	
	comp=Z,148nm,21.0s,baz=195,slow=36						
XAN	**Xi'an**	**34.44**	**333**	P	**P**	**22 17 12.0**	**-1.7**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,11nm,4.2s						
XAN				LR	LR		
	comp=N,130nm,20.7s						
XAN				LR	LR		
	comp=E,85nm,22.2s						
XAN				LR	LR		
	comp=Z,110nm,23.8s						
QLP	**Quilpie**	**34.54**	**152**	P	**P**	**22 17 14.0**	**-0.5**
	baz=35,SNR=4.6						
CD2	**Chengdu**	**34.66**	**324**	P	**P**	**22 17 15.8**	**+0.2**
CD2				pP	**pP**	**22 17 25.5**	**-4.5**
CD2				sP	sP	22 17 29.4	-7.3
CD2				PP	**PnPn**	**22 18 33.1**	**+0.1**
CD2				PcP	**PcP**	**22 19 49.5**	**+0.6**
CD2				S	**S**	**22 22 42.6**	**+1.1**
CD2				PcS	**PcS**	**22 23 34.9**	**-0.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,130nm,5.4s						
CD2				LR	LR		
	comp=N,350nm,19.6s						
CD2				LR	LR		
	comp=E,580nm,26.5s						
CD2				LR	LR		
	comp=Z,290nm,18.6s						
KMBL	**Kambalda**	**35.15**	**187**	P	**P**	**22 17 19.8**	**0.0**
	baz=35,SNR=8.4						
DL2	**Dalian**	**35.37**	**353**	P	**P**	**22 17 20.9**	**-0.6**
DL2				pmax	pmax		
	comp=Z,30nm,1.6s						
DL2				LR	LR		
	comp=N,120nm,21.1s						
DL2				LR	LR		
	comp=Z,190nm,22.2s						
BLDU	**Ballidu**	**35.41**	**195**	P	**P**	**22 17 22.1**	**+0.2**
	baz=36,SNR=14						
HNR	**Honiara**	**35.61**	**112**	LR	LR	22 30 27.9	
	comp=Z,272nm,21.6s,baz=138,slow=34						
KLBR	**Kellerberrin**	**36.09**	**193**	P	**P**	**22 17 28.2**	**+0.4**
	baz=36,SNR=20						
EIDS	**Eidsvold**	**37.34**	**142**	P	**P**	**22 17 38.5**	**0.0**
	baz=37,SNR=4.3						
BBOO	**Buckleboo**	**37.36**	**167**	*e*P	**P**	**22 17 38.6**	**0.0**
BBOO	**Buckleboo**	**37.36**	**167**	P	**P**	**22 17 38.4**	**-0.2**
	baz=37,SNR=17						
BJI	**Beijing**	**37.43**	**347**	P	**P**	**22 17 39.1**	**+0.1**
BJI				pP	**pP**	**22 17 53.3**	**-0.2**
BJI				S	**S**	**22 23 22.0**	**-1.4**
BJI				pmax	pmax		
	comp=Z,78nm,1.1s						
BJI				pmax	pmax		
	comp=Z,140nm,3.3s						
BJI				LR	LR		
	comp=N,95nm,23.5s						
BJI				LR	LR		
	comp=E,180nm,22.6s						
BJI				LR	LR		
	comp=Z,97nm,22.5s						
NWAO	**Narrogin (SRO)**	**37.49**	**193**	*e*P	**P**	**22 17 40.2**	**+0.6**
NWAO	**Narrogin (SRO)**	**37.49**	**193**	P	**P**	**22 17 40.3**	**+0.6**
	comp=Z,18nm,1.1s,baz=17,slow=10.0,SNR=13						
SNY	**Shenyang**	**38.09**	**356**	⇑P	**P**	**22 17 45.2**	**+0.6**
SNY				S	**S**	**22 23 34.1**	**+0.8**
SNY				pmax	pmax		
	comp=Z,19nm,1.3s						
SNY				LR	LR		
	comp=N,130nm,25.2s						
SNY				LR	LR		
	comp=E,270nm,22.8s						
SNY				LR	LR		
	comp=Z,160nm,25.2s						
STKA	**Stephens Creek**	**38.10**	**159**	*e*P	**P**	**

USRK Ussuriysk Arra 40.63 6 P **P** **22 18 06.6 +0.9**
comp=Z,6.4nm,0.8s,baz=189,slow=7.5,SNR=7.6
MDJ Mudanjiang 40.85 3 P **P** **22 18 08.3 +0.7**
MDJ pP **pP** **22 18 21.6 -0.6**
MDJ PcP **PcP** **22 20 09.1 +1.6**
MDJ ScP **ScP** **22 23 53.9 +1.4**
MDJ PcS **PcS** **22 23 58.4 +0.1**
MDJ S **S** **22 24 19.8 +5.0**
MDJ ScS **ScS** **22 28 08.0 +0.6**
MDJ pmax pmax
comp=Z,27nm,1.1s
MDJ pmax pmax
comp=Z,44nm,4.2s
MDJ LR LR
comp=N,91nm,31.7s
MDJ LR LR
comp=E,98nm,24.0s
MDJ LR LR
comp=Z,140nm,26.1s
ARMA Armidale 41.45 147 *e*P **P** **22 18 13.6 +0.8**
comp=Z,14nm,0.9s
ARMA Armidale 41.45 147 P **P** **22 18 13.6 +0.8**
baz=42,SNR=9.1
LSA Lhasa 42.44 311 P **P** **22 18 20.8 -0.6**
ARPS Mount Arapiles 42.65 162 P **P** **22 18 23.6 +1.3**
baz=43,SNR=12
ASAJ Asahikawa 42.65 17 *e*P **P** **22 18 22.5 +0.1**
comp=Z,30nm,1.2s
YNG Young 42.96 153 P **P** **22 18 26.8 +1.8**
baz=43,SNR=5.2
GTA Gaotai 43.12 329 *e*P P 22 18 29.6 +3.2
GTA PP **PcP** **22 20 14.2 -1.1**
GTA S **S** **22 24 54.3 +5.6**
GTA SS **SS** **22 28 03.1 0.0**
GTA pmax pmax
comp=Z,6.0nm,1.0s
GTA pmax pmax
comp=Z,55nm,4.3s
GTA LR LR
comp=N,170nm,20.4s
GTA LR LR
comp=E,310nm,20.0s
GTA LR LR
comp=Z,440nm,18.1s
TAPN Taplejung 44.01 306 *e*P **P** **22 18 33.1 -0.8**
ODAN Odare 44.06 306 *e*P **P** **22 18 33.4 -0.9**
TOO Toolangi 44.61 159 P **P** **22 18 40.4 +2.3**
baz=45,SNR=4.6
GUN Gumba 45.72 306 *e*P **P** **22 18 46.7 -0.9**
comp=Z,11nm,0.4s
PKI Pulchoki 45.96 305 *e*P **P** **22 18 48.1 -1.4**
KKN Kakani 46.16 306 *e*P **P** **22 18 49.8 -1.1**
DMN Daman 46.23 305 *e*P **P** **22 18 50.2 -1.3**
comp=Z,23nm,1.1s
DZM Mont Dzumac 46.54 125 *e*P **P** **22 18 52.6 -1.2**
comp=Z,15nm,0.7s
DZM Mont Dzumac 46.54 125 P **P** **22 18 54.5 +0.7**
comp=Z,16nm,0.9s,baz=230,slow=19,SNR=5.8
ULN Ulaanbaatar 47.15 342 P **P** **22 18 59.5 +1.2**
SONM Songino Array 47.33 341 P **P** **22 18 59.4 -0.2**
SONM PcP **PcP** **22 20 30.5 +0.7**
SONM Songino Array 47.33 341 P **P** **22 18 59.4 -0.2**
comp=Z,4.3nm,0.7s,baz=158,slow=8.2,SNR=31
SONM PcP **PcP** **22 20 30.5 +0.7**
comp=Z,2.6nm,0.8s,baz=149,slow=3.2,SNR=5.3
SONM LR LR 22 39 45.3
comp=Z,122nm,20.6s,baz=157,slow=37
KOLN Koldanda 47.52 305 *e*P **P** **22 19 00.8 -0.7**
comp=Z,19nm,0.3s
DANN Dangsing 47.61 306 *e*P **P** **22 19 00.9 -1.4**
comp=Z,22nm,0.5s
PYUN Piuthan 48.14 305 *e*P **P** **22 19 06.0 -0.3**
HYB Hyderabad 49.09 290 *i*P **P** **22 19 12.0 -1.6**
ZAK Zakamensk 50.56 341 *e*P **P** **22 19 24.8 +0.6**
ZAK *e* 22 20 42.2
ZAK pmax pmax
comp=Z,2.0nm,1.0s
TLY Talaya 51.56 342 *e*P **P** **22 19 30.3 -1.4**
TLY pmax pmax
comp=Z,5.0nm,1.0s
TLY MLR MLR
comp=Z,156nm,23.0s
MOY Mondy 52.41 340 *e*P **P** **22 19 38.7 +0.6**
WMQ Urumqi 52.74 325 P **P** **22 19 40.0 -0.6**
WMQ pP **pP** **22 19 56.0 +0.2**
WMQ PcP **PcP** **22 20 49.0 -0.6**
WMQ PP **PP** **22 21 40.0 -0.4**
WMQ ScP **ScP** **22 24 40.0 -2.3**
WMQ S **S** **22 27 02.0 -2.7**
WMQ pmax pmax
comp=Z,15nm,1.2s
WMQ pmax pmax
comp=Z,69nm,5.0s
WMQ LR LR
comp=N,330nm,18.0s
WMQ LR LR
comp=E,230nm,18.0s
WMQ LR LR
comp=Z,260nm,16.0s
DDI Dehra Dun 52.96 306 *ex* **P** **22 19 42.0 -0.5**
MSVF Nonsavu 54.93 115 *e*P **P** **22 19 58.9 +1.9**
MSVF pmax pmax
comp=Z,27nm,1.1s
MSVF Nonsavu 54.93 115 *e*P **P** **22 19 58.9 +1.9**
comp=Z,27nm,1.1s
PEA0B Petropavlovsk- 55.49 22 *e*P **P** **22 20 00.7 +0.3**
PETK Petropavlovsk- 55.49 22 P **P** **22 20 01.4 +1.0**
PETK Petropavlovsk- 55.49 22 P **P** **22 20 01.4 +1.0**
PETK Petropavlovsk- 55.49 22 P **P** **22 20 01.4 +1.0**
comp=Z,12nm,0.8s,baz=197,slow=5.6,SNR=19
PETK LR LR 22 39 32.8
comp=Z,82nm,21.4s,baz=6.4,slow=32
PET Petropavlovsk 55.79 23 *e*P **P** **22 20 04.5 +2.0**
PET pmax pmax
comp=Z,25nm,1.3s
MK31 Makanchi Array 57.57 325 *e*P **P** **22 20 14.5 -0.8**
MK31 Makanchi Array 57.57 325 *e*P **P** **22 20 14.5 -0.8**
MKAR Makanchi Array 57.57 325 *e*P **P** **22 20 14.8 -0.5**
MKAR Makanchi Array 57.57 325 *e*P **P** **22 20 14.8 -0.5**
MKAR Makanchi Array 57.57 325 P **P** **22 20 14.7 -0.7**
comp=Z,5.5nm,0.6s,baz=121,slow=7.4,SNR=55
MKAR LR LR 22 46 45.5
comp=Z,230nm,20.0s,baz=262,slow=38
KSH Kashi 58.05 315‖ *i*P **P** **22 20 19.3 +0.4**
KSH pP **pP** **22 20 35.2 +0.9**
KSH PcP **PcP** **22 21 10.0 -0.3**
KSH PP **PP** **22 22 30.3 +2.2**
KSH PcS **PcS** **22 25 10.3 -1.6**
KSH S **S** **22 28 15.1 -0.7**
KSH sS **sS** **22 28 42.1 +0.4**
KSH ScS **ScS** **22 30 00.0 -3.9**
KSH pmax pmax
comp=Z,31nm,1.3s
KSH LR LR
comp=N,160nm,5.0s
KSH LR LR
comp=E,290nm,5.3s
KSH LR LR
comp=Z,260nm,5.3s
YAK Yakutsk 58.26 2 *e*P **P** **22 20 19.0 -0.8**
YAK *e**PP **pP** **22 20 37.2 +2.1**
YAK *e* 22 21 10.0
YAK *e* 22 22 36.0
YAK *e*PPP PPP 22 23 51.8
YAK *e*S **S** **22 28 18.1 +0.7**
YAK *e* 22 29 57.2
YAK pmax pmax
comp=E,4.0nm,1.4s
YAK pmax pmax
comp=N,10.0nm,1.2s
YAK pmax pmax
comp=Z,14nm,0.8s
YAK pmax pmax
comp=Z,17nm,0.9s
YAK smax smax
comp=E,94nm,3.3s
YAK smax smax
comp=N,82nm,3.7s
ULHL Ulahol 59.03 318 *i*P **P** **22 20 26.7 +0.9**
ULHL Ulahol 59.03 318 P **P** **22 20 26.7 +0.9**
SNR=7.4
KZA Kyzart 59.62 318 *i*P **P** **22 20 31.4 +1.2**
KZA Kyzart 59.62 318 P **P** **22 20 31.4 +1.2**
SNR=12
TKM2 Tokmak 2 59.76 319 *i*P **P** **22 20 31.5 +0.7**
TKM2 Tokmak 2 59.76 319 *e*P **P** **22 20 30.1 -0.7**
comp=N,6.0nm,0.7s
TKM2 Tokmak 2 59.76 319 P **P** **22 20 31.6 +0.7**
SNR=8.0
AAK Ala-Archa 60.37 318 *d i*P **P** **22 20 35.1 +0.1**
AAK pmax pmax
comp=Z,15nm,1.7s
AAK Ala-Archa 60.37 318 *e*P **P** **22 20 35.5 +0.5**
comp=Z,25nm,1.6s
AAK Ala-Archa 60.37 318 P **P** **22 20 35.0 +0.1**
comp=Z,36nm,1.1s,SNR=5.4
FRU Bishkek 60.37 318 *e*P **P** **22 20 34.0 -0.8**
FRU *e* 22 21 22.5
ZAA0 Zalesovo Array 60.61 333 *e*P **P** **22 20 34.5 -1.6**
ZALV Zalesovo Beam 60.61 333 P **P** **22 20 35.0 -1.2**
ZALV Zalesovo Beam 60.61 333 P **P** **22 20 35.0 -1.2**
ZALV Zalesovo Beam 60.61 333 P **P** **22 20 35.0 -1.2**
comp=Z,1.4nm,0.4s,baz=114,slow=6.6,SNR=18
ZALV LR LR 22 49 22.3
comp=Z,87nm,20.3s,baz=247,slow=39
USP Ospenovka 60.63 319 *i*P **P** **22 20 37.0 +0.4**
USP Ospenovka 60.63 319 P **P** **22 20 37.0 +0.4**
SNR=11
AML Almayashu 60.70 317 *i*P **P** **22 20 38.5 +1.0**
AML Almayashu 60.70 317 P **P** **22 20 38.5 +1.0**
SNR=13
EKS2 Erkin-Say 60.86 318 *e*P **P** **22 20 38.0 -0.3**
EKS2 pmax pmax
comp=Z,12nm,0.9s
EKS2 Erkin-Say 60.86 318 *e*P **P** **22 20 38.0 -0.3**
comp=Z,12nm,0.9s
EKS2 Erkin-Say 60.86 318 P **P** **22 20 39.4 +1.1**
SNR=13
KBL Kabul 61.52 308 *e*P **P** **22 20 41.8 -1.2**
KBL pmax pmax
comp=Z,17nm,1.3s
KBL Kabul 61.52 308 *e*P **P** **22 20 41.8 -1.2**
comp=Z,17nm,1.3s
RPZ Rata Peaks 61.74 145 P **P** **22 20 44.3 +0.2**
RPZ Rata Peaks 61.74 145 P **P** **22 20 44.3 +0.2**
comp=Z,23nm,1.0s,baz=48,slow=9.0,SNR=3.8
KURK Kurchatov 61.76 328 *e*P **P** **22 20 43.4 -0.6**
KURK pmax pmax
comp=Z,34nm,1.3s
KURK Kurchatov 61.76 328 *e*P **P** **22 20 43.1 -0.9**
comp=Z,56nm,1.4s
KURK Kurchatov 61.76 328 P **P** **22 20 43.8 -0.2**
comp=Z,158nm,0.6s,SNR=9.6
NVS Novosibirsk 61.90 333 *e*P **P** **22 20 42.9 -1.9**
NVS *e*S **S** **22 29 02.2 -2.2**
NVS pmax pmax
comp=Z,29nm,2.7s
NVS smax smax
comp=E,19nm,2.6s
FX1 Attu Island--F 62.15 30 LR LR 22 42 30.9
comp=E,129nm,20.3s,baz=76,slow=31
KKAR Karatay Array 63.24 317 *e*P **P** **22 20 53.0 -1.1**
KKAR Karatay Array 63.24 317 *e*P **P** **22 20 53.0 -1.1**
BRVK Borovoye 67.41 327 *e*P **P** **22 21 20.4 -0.4**
BRVK pmax pmax
comp=Z,40nm,1.3s
BRVK Borovoye 67.41 327 *e*P **P** **22 21 20.5 -0.4**
comp=Z,28nm,1.0s
BRVK Borovoye 67.41 327 P **P** **22 21 20.1 -0.7**
comp=Z,161nm,0.9s,SNR=22
TIXI Tiksi 67.89 1 *d i*P **P** **22 21 23.3 -0.2**
TIXI pmax pmax
comp=Z,14nm,1.3s
TIXI Tiksi 67.89 1 *e*P **P** **22 21 23.4 -0.2**
comp=Z,9.3nm,1.0s
BILL Bilibino 69.61 15‖ *e*P **P** **22 21 34.7 +0.4**
BILL *e* 22 24 07.8
BILL *i*S **S** **22 30 33.6 -4.4**
BILL pmax pmax
comp=Z,4.0nm,1.7s
BILL MLR MLR
comp=Z,100nm,25.0s
ABKAR Akbulak array 72.16 321 *e*P **P** **22 21 49.4 -0.8**
SVE Sverdlovsk 73.98 328‖ *e*P **P** **22 22 00.5 -0.2**
SVE pmax pmax
comp=Z,27nm,1.3s
ARU Arti 74.96 328 *d i*P **P** **22 22 05.6 -0.8**
ARU S **S** **22 31 39.9 +0.4**
ARU pmax pmax
comp=Z,21nm,1.2s
ARU Arti 74.96 328 *e*P **P** **22 22 05.5 -0.9**
ARU Arti 74.96 328 P **P** **22 22 05.4 -0.9**
comp=Z,88nm,1.1s,SNR=8.5
GNI Garni 81.48 310 LR LR 23 02 56.6
comp=Z,43nm,19.5s,baz=196,slow=39
ZEI Tsey 82.22 312 *e*P **P** **22 22 45.9 -1.0**
ZEI pmax pmax
comp=Z,5.0nm,0.9s
VNDA Vanda 83.38 173 *e*P **P** **22 22 53.0 +1.1**
comp=Z,8.9nm,1.1s
VNDA Vanda 83.38 173 P **P** **22 22 52.6 +0.7**
comp=Z,5.4nm,1.0s,baz=305,slow=5.5,SNR=17
TRF Thorofare Moun 83.61 27 *e*P **P** **22 22 53.3 -0.3**
comp=Z,162nm,2.7s
COLD Coldfoot 83.95 23 *e*P **P** **22 22 56.5 +1.4**
comp=Z,27nm,1.4s
PMR Palmer 84.01 29 *e*P **P** **22 22 56.3 +0.9**
PMR Palmer 84.01 29 *e*P **P** **22 22 56.3 +0.9**
VRHR Novokhopersk 84.05 321 *e*P **P** **22 22 55.0 -0.9**
VRHR pmax pmax
comp=N,7.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s
SBA Scott Base 84.29 172 *e*P **P** **22 22 58.7 +2.1**
SBA pmax pmax
comp=Z,121nm,2.8s
SBA Scott Base 84.29 172 *e*P **P** **22 22 58.7 +2.1**
comp=Z,121nm,2.8s
SML Sawmill 84.40 28 *e*P **P** **22 22 58.8 +1.3**
SML pmax pmax
comp=Z,5.0nm,1.0s
SML Sawmill 84.40 28 *e*P **P** **22 22 58.8 +1.3**
comp=Z,5.4nm,1.0s
ILAR Eielson Array 85.17 25 LR LR 23 00 09.0
comp=Z,53nm,19.5s,baz=243,slow=35
KLMR Klimovskoe 85.43 331 *e*P **P** **22 23 00.2 -2.4**
KLMR pmax pmax
comp=Z,68nm,1.4s
VORD Divnogorie 85.52 321 *e*P **P** **22 23 02.3 -1.0**
VORD pmax pmax
comp=Z,20nm,1.2s
VORD pmax pmax
comp=N,10.0nm,1.1s
VORD pmax pmax
comp=E,10.0nm,1.0s
VSR Storozhevoye 85.60 321 *e*P **P** **22 23 02.4 -1.3**
VSR pmax pmax
comp=Z,10.0nm,1.1s
VSR pmax pmax
comp=N,8.0nm,1.3s
VSR pmax pmax
comp=E,10.0nm,1.0s
DIV Divide 85.61 29 *e*P **P** **22 23 06.0 +2.4**
comp=E,44nm,1.4s
TMCR Tamitsa 86.12 334 *e*P P 22 23 02.2 -3.8
TMCR pmax pmax
comp=Z,19nm,1.0s
MALT Malatya 86.38 308 *e*P **P** **22 23 08.6 +0.6**
MALT pmax pmax
comp=Z,13nm,1.5s
MALT Malatya 86.38 308 *e*P **P** **22 23 08.6 +0.6**
comp=Z,14nm,1.5s
MOS Moscow 86.46 325 *e*P **P** **22 23 06.7 -1.1**
MOS pmax pmax
comp=Z,37nm,1.1s
OBN Obninsk 87.08 325‖ *e*P **P** **22 23 10.5 -0.3**
OBN *e*S **SKSac** **22 33 32.7 -0.5**
OBN pmax pmax
comp=Z,56nm,1.7s
OBN MLR MLR
comp=Z,100nm,20.0s
FURI Furi 87.47 279 *e*P **P** **22 23 16.5 +2.5**
comp=Z,20nm,1.3s
KMBO Kilima Mbogo 89.51 269 *e*P **P** **22 23 24.1 +0.5**
comp=Z,12nm,1.1s
KMBO Kilima Mbogo 89.51 269 P **P** **22 23 24.1 +0.5**
comp=Z,7.1nm,1.0s,baz=36,slow=6.7,SNR=17
EIL Elat 89.71 300 LR LR 23 04 07.1
comp=Z,58nm,18.6s,baz=91,slow=36
EIL Elat 89.71 300 P **P** **22 23 24.3 +0.4**
baz=90,SNR=4.5
BR131 Keskin Array S 90.02 310 *e*P **P** **22 23 24.2 -1.0**
comp=Z,3.4nm,0.8s
BRTR Keskin Array B 90.02 310 P **P** **22 23 24.3 -1.0**
BRTR Keskin Array B 90.02 310 P **P** **22 23 24.3 -1.0**
comp=Z,4.4nm,0.9s,baz=117,slow=4.5,SNR=18
ARCES ARCESS Array B 90.48 340 P **P** **22 23 26.4 -0.2**
ARCES ARCESS Array B 90.48 340 P **P** **22 23 26.4 -0.2**
comp=Z,4.4nm,0.7s,baz=88,slow=6.5,SNR=23
ARCES LR LR 23 05 37.6
comp=Z,103nm,19.3s,baz=296,slow=37
CSS Prodhromos 90.67 305 *e*P **P** **22 23 28.2 -0.1**
comp=Z,8.6nm,1.0s
FINES FINESS Array B 91.86 332 P **P** **22 23 32.3 -0.9**
FINES FINESS Array B 91.86 332 P **P** **22 23 32.3 -0.9**
comp=Z,1.0nm,0.7s,baz=91,slow=5.5,SNR=7.8
FINES LR LR 23 10 28.2
comp=Z,75nm,18.1s,baz=220,slow=39
AKASG Malin Array Be 91.91 321 P **P** **22 23 32.4 -1.2**
AKASG Malin Array Be 91.91 321 P **P** **22 23 32.4 -1.2**
AKASG Malin Array Be 91.91 321 P **P** **22 23 32.4 -1.2**
comp=Z,2.4nm,0.7s,baz=69,slow=4.5,SNR=12
KIEV Kiev 91.92 321 *e*P **P** **22 23 32.8 -0.8**
KIEV pmax pmax
comp=Z,14nm,1.4s
KIEV Kiev 91.92 321 *e*P **P** **22 23 32.8 -0.8**
comp=Z,14nm,1.4s
QSPA South Pole Qui 93.58 180 P **P** **22 23 41.9 +0.7**
QSPA South Pole Qui 93.58 180 P **P** **22 23 41.8 +0.7**
comp=Z,2.5nm,0.9s,baz=314,slow=5.3,SNR=5.9
BUR08 Bucovina Ar. S 95.02 318 *e*P **P** **22 23 47.9 -0.3**
KOLS Kolonicke sedl 96.66 320 *e*P **P** **22 23 56.0 +0.5**
KOLS pmax pmax
comp=Z,8.0nm,1.4s
KOLS Kolonicke sedl 96.66 320 *e*P **P** **22 23 56.0 +0.5**
KOLS *e* 22 42 23.0
UZH Uzhgorod 96.71 320 *e*P **P** **22 23 55.8 +0.1**
UZH *e* 22 24 03.2
UZH *e* 22 24 14.6
CRVS Cervenica-Dubn 97.18 320 *e*P **P** **22 23 57.8 -0.1**
CRVS pmax pmax
comp=Z,9.0nm,1.2s
CRVS Cervenica-Dubn 97.18 320 *e*P **P** **22 23 57.8 -0.1**
CRVS *e* 22 42 19.9
NB2 NORSAR Subarra 98.81 334 P **P** **22 24 02.6 -2.3**
baz=67,slow=4.6
NB2 NORSAR Subarra 98.81 334 P **P** **22 24 02.6 -2.3**
comp=Z,2.4nm,0.8s,baz=67,slow=4.6
NOA NORSAR Array B 98.81 334 P **P** **22 24 02.8 -2.2**
NOA NORSAR Array B 98.81 334 P **P** **22 24 02.8 -2.2**
comp=Z,2.4nm,0.9s,baz=68,slow=4.5,SNR=5.5
NOA LR LR 23 13 55.0
comp=Z,97nm,19.9s,baz=60,slow=39
VYHS Vyhne 98.97 320 *e*P **P** **22 24 05.7 -0.2**
VYHS pmax pmax
comp=Z,6.0nm,1.8s
VYHS Vyhne 98.97 320 PDIF **P** **22 24 05.7 -0.2**
YKA Yellowknife Ar 99.56 24 P **Pdif** **22 24 07.7 -0.4**
YKA PP PP 22 28 17.5 +5.4
YKA Yellowknife Ar 99.56 24 P **Pdif** **22 24 07.7 -0.4**
comp=Z,0.1nm,0.4s,baz=285,slow=4.5,SNR=5.7
YKA PP PP 22 28 17.5 +5.4
comp=Z,0.1nm,0.3s,baz=298,slow=7.3,SNR=4.3
GERES GERESS Array B 102.10 322 P **Pdif** **22 24 19.9 0.0**
GERES GERESS Array B 102.10 322 P **Pdif** **22 24 19.9 0.0**
comp=Z,0.7nm,0.9s,baz=65,slow=4.7,SNR=6.2
TXAR Lajitas Array 121.66 52 PKP **PKPdf** **22 29 20.7 +1.0**
TXAR Lajitas Array 121.66 52 PKP **PKPdf** **22 29 20.7 +1.0**
comp=Z,0.6nm,0.7s,baz=316,slow=2.5,SNR=3.5
TORD Torodi Ar. Bea 122.89 288 PKP **PKPdf** **22 29 22.0 -0.3**
TORD PP **PP** **22 31 02.9 +1.6**
TORD Torodi Ar. Bea 122.89 288 PKP **PKPdf** **22 29 22.0 -0.3**
comp=Z,1.3nm,0.8s,baz=47,slow=2.0,SNR=7.6
TORD PP **PP** **22 31 02.9 +1.6**
comp=Z,1.6nm,1.2s,baz=64,slow=6.8,SNR=4.2
PLCA Paso Flores 139.97 160 PKP **PKPdf** **22 29 55.5 +1.6**
PLCA Paso Flores 139.97 160 PKP **PKPdf** **22 29 55.5 +1.6**
comp=Z,2.4nm,1.0s,baz=199,slow=4.5,SNR=3.0
CFAA Coronel Fontan 148.87 155 PKPbc **PKPbc** **22 30 13.9 +0.5**
CFAA Coronel Fontan 148.87 155 PKPbc **PKPbc** **22 30 13.9 +0.5**
comp=Z,1.1nm,0.5s,baz=235,slow=4.1,SNR=14
LCO Las Campanas 149.87 149 *e*PKPbc **PKPbc** **22 30 16.9 +0.6**
SIV San Ignacio 165.58 149 PKPab **PKPab** **22 31 29.7 +0.4**
SIV San Ignacio 165.58 149 PKPab **PKPab** **22 31 29.7 +0.4**
comp=Z,3.6nm,1.1s,baz=277,slow=12,SNR=4.1

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*ISCJB **09** 22:10:41.1±0.2, 42°.38N±0°.02×13°.33E±0°.02, h10km±2km, Error ellipse: s-maj=3.1km s-min=2.7km az=146.3*
*CSEM **09** 22:10:41.5±0.1, 42°.38N×13°.33E, h2km, ML3.5/11, Error ellipse: s-maj=3.1km s-min=2.6km az=53.0*
*ROM **09** 22:10:41.1±0.1, 42°.38N×13°.33E, h10km, Ml3.0/30, Error ellipse: s-maj=1.0km s-min=0.8km az=68.0*
*LDG **09** 22:10:43.1±0.2, 42°.34N×13°.28E, h2km, Ml2.7/7, Error ellipse: s-maj=7.1km s-min=4.8km az=38.0*

ISC 09 22:10:41.8±0.8, **42°.39N**±0°.02×**13°.31E**±0°.02, **h11**km±5km, **n103**,σ1**s27**/136, **1C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.08**	**118**	Pg	**Pg**	**22 10 43.7**	**-0.5**
AQU				Sg	**Sg**	**22 10 45.4**	**-0.6**
	24μm,0.4s						
AQU	**L'Aquila**	**0.08**	**118**	Pg	**Pg**	**22 10 43.7**	**-0.5**
AQU				Sg	**Sg**	**22 10 45.4**	**-0.6**
	24μm,0.4s						
CAMP	**Campotosto**	**0.16**	**26**	*e*Pn	**Pg**	**22 10 45.2**	**-0.3**
CAMP	**Campotosto**	**0.16**	**26**	Pg	**Pg**	**22 10 45.2**	**-0.3**
CAMP				Sg	**Sg**	**22 10 47.9**	**-0.2**
	6μm,0.6s						
CAMP	**Campotosto**	**0.16**	**26**	Pg	**Pg**	**22 10 45.2**	**-0.3**
CAMP				Sg	**Sg**	**22 10 47.9**	**-0.2**
	6μm,0.6s						
FIAM	**Fiamignano**	**0.19**	**230**	Pg	**Pg**	**22 10 45.9**	**0.0**
FIAM				Sg	**Sg**	**22 10 49.3**	**+0.6**
	4μm,0.5s						
FIAM	**Fiamignano**	**0.19**	**230**	Pg	**Pg**	**22 10 45.9**	**0.0**
FIAM				Sg	**Sg**	**22 10 49.3**	**+0.6**
	4μm,0.5s						
FAGN	**Fagnano**	**0.24**	**121**	Pg	**Pg**	**22 10 46.3**	**-0.4**
FAGN				Sg	**Sg**	**22 10 50.2**	**+0.2**
	13μm,0.5s						
FAGN	**Fagnano**	**0.24**	**121**	Pg	**Pg**	**22 10 46.3**	**-0.4**
FAGN				Sg	**Sg**	**22 10 50.2**	**+0.2**
	13μm,0.5s						
LNSS	**Leonessa**	**0.29**	**317**	Pg	**Pg**	**22 10 47.7**	**0.0**
LNSS				Sg	**Sg**	**22 10 52.7**	**+1.0**
	3μm,0.5s						
LNSS	**Leonessa**	**0.29**	**317**	Pg	**Pg**	**22 10 47.7**	**0.0**
LNSS				Sg	**Sg**	**22 10 52.7**	**+1.0**
	3μm,0.5s						
TERO	**Teramo**	**0.32**	**43**	Pg	**Pg**	**22 10 47.4**	**-0.8**
TERO				Sg	**Sg**	**22 10 52.1**	**-0.4**
	2μm,0.5s						
TERO	**Teramo**	**0.32**	**43**	Pg	**Pg**	**22 10 47.4**	**-0.8**
TERO				Sg	**Sg**	**22 10 52.1**	**-0.4**
	2μm,0.5s						
PTQR	**Pietraquaria**	**0.37**	**170**	Pg	**Pg**	**22 10 48.7**	**-0.5**
PTQR				Sg	**Sg**	**22 10 54.4**	**+0.2**
PTQR	**Pietraquaria**	**0.37**	**170**	Pg	**Pg**	**22 10 48.7**	**-0.5**
PTQR				Sg	**Sg**	**22 10 54.4**	**+0.2**
VCEL	**Villa Celiera**	**0.39**	**89**	Pg	**Pg**	**22 10 48.8**	**-0.8**
	3μm,0.4s						
VCEL	**Villa Celiera**	**0.39**	**89**	Pg	**Pg**	**22 10 48.8**	**-0.8**
	3μm,0.4s						
MNS	**Montasola**	**0.47**	**270**	Pg	**Pg**	**22 10 50.5**	**-0.4**
	928nm,0.5s						
MNS	**Montasola**	**0.47**	**270**	Pg	**Pg**	**22 10 50.5**	**-0.4**
	928nm,0.5s						
NRCA	**Norcia**	**0.47**	**342**	Pg	**Pg**	**22 10 50.7**	**-0.2**
NRCA				Sg	**Sg**	**22 10 58.1**	**+1.0**
	2μm,0.1s						
NRCA	**Norcia**	**0.47**	**342**	Pg	**Pg**	**22 10 50.7**	**-0.2**
NRCA				Sg	**Sg**	**22 10 58.1**	**+1.0**
	2μm,0.1s						
CERT	**Cerreto**	**0.50**	**209**	Pg	**Pg**	**22 10 51.0**	**-0.6**
	2μm,0.5s						
CERT	**Cerreto**	**0.50**	**209**	Pg	**Pg**	**22 10 51.0**	**-0.6**
	2μm,0.5s						
MTCE	**Montecelio**	**0.56**	**229**	Pg	**Pg**	**22 10 52.1**	**-0.5**
	610nm,0.7s						
MTCE	**Montecelio**	**0.56**	**229**	Pg	**Pg**	**22 10 52.1**	**-0.5**
	610nm,0.7s						

VVLD	**Villa Vallelon**	**0.57**	**156**	Pg	**Pg**	**22 10 51.8**	**-1.0**
	906nm,0.5s						
VVLD	**Villa Vallelon**	**0.57**	**156**	Pg	**Pg**	**22 10 51.8**	**-1.0**
	906nm,0.5s						
INTR	**Introdacqua**	**0.58**	**130**	Pg	**Pg**	**22 10 52.1**	**-1.0**
	1µm,0.7s						
INTR	**Introdacqua**	**0.58**	**130**	Pg	**Pg**	**22 10 52.1**	**-1.0**
	1µm,0.7s						
CESX	**Cesi**	**0.58**	**292**	Pg	**Pg**	**22 10 52.5**	**-0.6**
	666nm,0.7s						
CESX	**Cesi**	**0.58**	**292**	Pg	**Pg**	**22 10 52.5**	**-0.6**
	666nm,0.7s						
GUAR	**Guarcino**	**0.59**	**180**	Pg	**Pg**	**22 10 53.0**	**-0.3**
	645nm,0.5s						
GUAR	**Guarcino**	**0.59**	**180**	Pg	**Pg**	**22 10 53.0**	**-0.3**
	645nm,0.5s						
OFFI	**Offida**	**0.61**	**27**	Pg	**Pg**	**22 10 53.5**	**-0.1**
	3µm,0.5s						
OFFI	**Offida**	**0.61**	**27**	Pg	**Pg**	**22 10 53.5**	**-0.1**
	3µm,0.5s						
TRTR	**Tortoreto Alta**	**0.61**	**47**	Pg	**Pg**	**22 10 53.8**	**+0.2**
	3µm,0.9s						
TRTR	**Tortoreto Alta**	**0.61**	**47**	Pg	**Pg**	**22 10 53.8**	**+0.2**
	3µm,0.9s						
FDMO	**Fiordimonte**	**0.67**	**346**	Pg	**Pg**	**22 10 54.1**	**-0.6**
FDMO				Sg	**Sb**	**22 11 04.6**	**-0.2**
	289nm,0.4s						
FDMO	**Fiordimonte**	**0.67**	**346**	Pg	**Pg**	**22 10 54.1**	**-0.6**
FDMO				Sg	**Sb**	**22 11 04.6**	**-0.2**
	289nm,0.4s						
CESI	**CESI - Serrava**	**0.68**	**334**	Pg	**Pg**	**22 10 54.7**	**-0.3**
CESI				Sg	**Sb**	**22 11 05.3**	**0.0**
	195nm,0.5s						
CESI	**CESI - Serrava**	**0.68**	**334**	Pg	**Pg**	**22 10 54.7**	**-0.3**
CESI				Sg	**Sb**	**22 11 05.3**	**0.0**
	195nm,0.5s						
LPEL	**Lama dei Pelig**	**0.73**	**118**	Pg	**Pg**	**22 10 54.8**	**-1.1**
LPEL				Sg	**Sg**	**22 11 05.3**	**-0.2**
	666nm,0.7s						
LPEL	**Lama dei Pelig**	**0.73**	**118**	Pg	**Pg**	**22 10 54.8**	**-1.1**
LPEL				Sg	**Sg**	**22 11 05.3**	**-0.2**
	666nm,0.7s						
POFI	**Posta Fibreno**	**0.73**	**156**	Pg	**Pg**	**22 10 55.7**	**-0.3**
	287nm,0.7s						
POFI	**Posta Fibreno**	**0.73**	**156**	Pg	**Pg**	**22 10 55.7**	**-0.3**
	287nm,0.7s						
RMP	**Rome, Mte Porz**	**0.73**	**218**	Pg	**Pg**	**22 10 55.9**	**-0.1**
	572nm,0.3s						
RMP	**Rome, Mte Porz**	**0.73**	**218**	Pg	**Pg**	**22 10 55.9**	**-0.1**
	572nm,0.3s						
SDI	**San Donato**	**0.78**	**151**	Pg	**Pg**	**22 10 55.5**	**-1.2**
	353nm,0.8s						
SDI	**San Donato**	**0.78**	**151**	Pg	**Pg**	**22 10 55.5**	**-1.2**
	353nm,0.8s						
CAFR	**Castel Frentan**	**0.79**	**102**	Pg	**Pg**	**22 10 56.4**	**-0.5**
	927nm,0.7s						
CAFR	**Castel Frentan**	**0.79**	**102**	Pg	**Pg**	**22 10 56.4**	**-0.5**
	927nm,0.7s						
ASSB	**Assisi San Ben**	**0.81**	**324**	Pg	**Pg**	**22 10 56.5**	**-0.9**
	395nm,0.6s						
ASSB	**Assisi San Ben**	**0.81**	**324**	Pg	**Pg**	**22 10 56.5**	**-0.9**
	395nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.83**	**183**	Pg	**Pg**	**22 10 56.7**	**-1.1**
GIUL	**Giuliano Di Ro**	**0.83**	**183**	Pg	**Pg**	**22 10 56.7**	**-1.1**
CING	**Cingoli**	**0.99**	**355**	Pg	**Pg**	**22 10 59.4**	**-1.4**
	338nm,0.6s						
CING	**Cingoli**	**0.99**	**355**	Pg	**Pg**	**22 10 59.4**	**-1.4**
	338nm,0.6s						
MIDA	**Miranda**	**1.03**	**136**	Pg	**Pb**	**22 10 59.5**	**-2.1**
	266nm,0.8s						
MIDA	**Miranda**	**1.03**	**136**	Pg	**Pb**	**22 10 59.5**	**-2.1**
	266nm,0.8s						
MGAB	**Montegabbione**	**1.03**	**301**	Pg	**Pg**	**22 11 00.7**	**-0.8**
	403nm,0.5s						
MGAB	**Montegabbione**	**1.03**	**301**	Pg	**Pg**	**22 11 00.7**	**-0.8**
	403nm,0.5s						
TOLF	**Tolfa**	**1.03**	**252**	Pg	**Pb**	**22 11 00.3**	**-1.3**
	292nm,0.8s						
TOLF	**Tolfa**	**1.03**	**252**	Pg	**Pb**	**22 11 00.3**	**-1.3**
	292nm,0.8s						
ARVD	**Arcevia**	**1.14**	**346**	Pn	**Pb**	**22 11 02.3**	**-1.2**
	306nm,0.9s						
ARVD	**Arcevia**	**1.14**	**346**	Pn	**Pb**	**22 11 02.3**	**-1.2**
	306nm,0.9s						
AOI	**Ancona**	**1.18**	**10**	Pn	**Pb**	**22 11 03.2**	**-1.0**
	211nm,0.6s						
AOI	**Ancona**	**1.18**	**10**	Pn	**Pb**	**22 11 03.2**	**-1.0**
	211nm,0.6s						
PIEI	**Pieia**	**1.28**	**334**	Pn	**Pn**	**22 11 05.1**	**-0.6**
	113nm,0.3s						
PIEI	**Pieia**	**1.28**	**334**	Pn	**Pn**	**22 11 05.1**	**-0.6**
	113nm,0.3s						
MS1	**Monte Sant'Ang**	**2.08**	**108**	*e*Pn	**Pb**	**22 11 20.3**	**+0.8**
NVLJ	**Novalja**	**2.45**	**27**	*i* Pn	**Pn**	**22 11 21.6**	**-0.1**
NVLJ				*i* Sn	**Sn**	**22 11 52.1**	**+0.4**
NVLJ	**Novalja**	**2.45**	**27**	*i* Pn	**Pn**	**22 11 21.6**	**-0.1**
NVLJ				*i* Sn	**Sn**	**22 11 52.1**	**+0.4**
MAIM	**Mastiano**	**2.56**	**307**	P	**Pb**	**22 11 25.7**	**-2.1**
PGF	**Pioggiola**	**3.19**	**274**	*e*Pn	**Pn**	**22 11 33.1**	**+1.1**
PGF				*e*Sn	**Sn**	**22 12 13.2**	**+3.0**
	11nm,0.5s						
PGF	**Pioggiola**	**3.19**	**274**	*e*Pn	**Pn**	**22 11 33.1**	**+1.1**
PGF				*e*Sn	**Sn**	**22 12 13.2**	**+3.0**
	5.4nm,0.5s						
STON	**Ston**	**3.27**	**80**	*e*Pn	**Pn**	**22 11 33.4**	**+0.3**
STON				Sn	**Sn**	**22 12 12.2**	**+0.2**
STON	**Ston**	**3.27**	**80**	*e*Pn	**Pn**	**22 11 33.3**	**+0.3**
STON				Sn	**Sn**	**22 12 12.1**	**+0.2**
GBRS	**Gornja Briga**	**3.32**	**19**	Sn	**Sn**	**22 12 13.9**	**+0.7**
CRNS	**Crni Vrh**	**3.75**	**10**	*i* Pn	**Pn**	**22 11 41.7**	**+2.0**
CRNS				*i* Sn	**Sn**	**22 12 25.6**	**+1.7**
ABTA	**Abfaltersbach**	**4.39**	**353**	*i* Pn	**Pn**	**22 11 50.5**	**+2.0**
ABTA	**Abfaltersbach**	**4.39**	**353**	Pn	**Pn**	**22 11 50.5**	**+2.0**
SBF	**Sospel**	**4.55**	**291**	*e*Pn	**Pn**	**22 11 51.6**	**+1.0**
SBF				*e*Sn	**Sn**	**22 12 41.6**	**-1.9**
	6.1nm,0.4s						
SBF	**Sospel**	**4.55**	**291**	*e*Pn	**Pn**	**22 11 51.6**	**+1.0**
SBF				*e*Sn	**Sn**	**22 12 41.6**	**-1.9**
	3.0nm,0.4s						
FRF	**La Foret Royal**	**5.03**	**286**	*e*Pn	**Pn**	**22 11 57.8**	**+0.7**
FRF				*e*Sn	**Sn**	**22 12 52.7**	**-2.5**
	1.9nm,0.4s						
FRF	**La Foret Royal**	**5.03**	**286**	*e*Pn	**Pn**	**22 11 57.8**	**+0.7**
FRF				*e*Sn	**Sn**	**22 12 52.7**	**-2.5**
	0.9nm,0.4s						
LMR	**La Mourre**	**5.09**	**283**	*e*Pn	**Pn**	**22 11 58.4**	**+0.4**
LMR				*e*Sn	**Sn**	**22 12 54.2**	**-2.5**
	2.4nm,0.5s						
LMR	**La Mourre**	**5.09**	**283**	*e*Pn	**Pn**	**22 11 58.4**	**+0.4**
LMR				*e*Sn	**Sn**	**22 12 54.2**	**-2.5**
	1.2nm,0.5s						
IVAS	**Ivanjica**	**5.16**	**74**	*e*Pn	**Pn**	**22 12 00.3**	**+1.3**
DIVS	**Divibare**	**5.17**	**68**	*e*Pn	**Pn**	**22 12 01.9**	**+2.7**
MBDF	**Montbardon**	**5.29**	**298**	*e*P	**Pn**	**22 12 03.7**	**+2.7**
MBDF	**Montbardon**	**5.29**	**298**	*e*P	**Pn**	**22 12 03.7**	**+2.7**
GRUS	**Gruza**	**5.62**	**72**	*e*Pn	**Pn**	**22 12 06.3**	**+1.0**
LPG	**La Plagne**	**5.66**	**305**	*e*P	Pn	22 12 09.5	+3.4
LPG				*e*Sn	**Sn**	**22 13 08.6**	**-2.7**
	2.6nm,0.5s						
LPG	**La Plagne**	**5.66**	**305**	*e*P	Pn	22 12 09.5	+3.4
LPL	**La Plagne**	**5.68**	**306**	*e*P	Pn	22 12 09.6	+3.2
LPL				*e*Sn	**Sn**	**22 13 07.8**	**-3.9**
	1.0nm,0.3s						
LPL	**La Plagne**	**5.68**	**306**	*e*P	Pn	22 12 09.6	+3.2
SMRF	**Simiane la Rot**	**5.87**	**288**	*e*P	**Pn**	**22 12 11.0**	**+2.2**
SMRF	**Simiane la Rot**	**5.87**	**288**	*e*P	Pn	22 12 11.0	+2.2
ORIF	**Oris-en-Rattie**	**5.95**	**298**	*e*P	Pn	22 12 14.1	+4.1
ORIF				*e*Sn	**Sn**	**22 13 15.3**	**-2.9**
	2.0nm,0.5s						
KHC	**Kasperske Hory**	**6.75**	**1**	*e*SN	**Sn**	**22 13 34.6**	**-3.0**
KHC	**Kasperske Hory**	**6.75**	**1**	Sn	**Sn**	**22 13 34.6**	**-3.0**
CDF	**Champ du Feu**	**7.37**	**327**	*e*Pn	**Pn**	**22 12 29.3**	**0.0**
CDF	**Champ du Feu**	**7.37**	**327**	*e*Pn	**Pn**	**22 12 29.3**	**0.0**

CSEM ***09*** *22:21:47.2, 42°.52N×13°.28E, h10km, After ROM*
ROM 09 22:21:47.2±0.1, 42°.52N×13°.28E, h10km±1km, MI2.0/10, Error ellipse: s-maj=1.5km s-min=1.5km az=1.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.10**	**80**	Pg	Pg	22 21 50.4	+0.4
CAMP				Sg	Sg	22 21 52.4	+0.4
CAMP	**Campotosto**	**0.10**	**80**	Pg	Pg	22 21 50.4	+0.4
CAMP				Sg	Sg	22 21 52.4	+0.4
LNSS	**Leonessa**	**0.20**	**295**	Pg	Pg	22 21 52.1	+0.5
LNSS				Sg	Sg	22 21 55.7	+1.1
	800nm,0.2s						
LNSS	**Leonessa**	**0.20**	**295**	Pg	Pg	22 21 52.1	+0.5
LNSS				Sg	Sg	22 21 55.7	+1.1
	800nm,0.2s						
TERO	**Teramo**	**0.26**	**67**	Pg	Pg	22 21 52.7	+0.1
TERO				Sg	Sg	22 21 56.6	+0.4
	342nm,0.1s						
TERO	**Teramo**	**0.26**	**67**	Pg	Pg	22 21 52.7	+0.1
TERO				Sg	Sg	22 21 56.6	+0.4
	342nm,0.1s						
FIAM	**Fiamignano**	**0.28**	**206**	Pg	Pg	22 21 53.5	+0.5
FIAM				Sg	Sg	22 21 58.1	+1.2
	134nm,0.5s						
FIAM	**Fiamignano**	**0.28**	**206**	Pg	Pg	22 21 53.5	+0.5
FIAM				Sg	Sg	22 21 58.1	+1.2
	134nm,0.5s						
NRCA	**Norcia**	**0.34**	**339**	Pg	Pg	22 21 54.2	+0.1
NRCA				Sg	Sg	22 21 59.6	+0.9
	142nm,0.1s						
NRCA	**Norcia**	**0.34**	**339**	Pg	Pg	22 21 54.2	+0.1
NRCA				Sg	Sg	22 21 59.6	+0.9
	142nm,0.1s						
VCEL	**Villa Celiera**	**0.43**	**107**	Pg	Pg	22 21 56.4	+0.5
VCEL				Sg	Sb	22 22 03.4	-0.3
	139nm,0.4s						
VCEL	**Villa Celiera**	**0.43**	**107**	Pg	Pg	22 21 56.4	+0.5
VCEL				Sg	Sb	22 22 03.4	-0.3
	139nm,0.4s						
MNS	**Montasola**	**0.47**	**253**	Pg	Pg	22 21 56.5	+0.1
MNS				Sg	Sb	22 22 03.9	-0.6
MNS	**Montasola**	**0.47**	**253**	Pg	Pg	22 21 56.5	+0.1
MNS				Sg	Sb	22 22 03.9	-0.6
PTQR	**Pietraquaria**	**0.51**	**170**	Pg	Pg	22 21 57.2	0.0
	7.0nm,0.3s						
PTQR	**Pietraquaria**	**0.51**	**170**	Pg	Pg	22 21 57.2	0.0
	7.0nm,0.3s						
OFFI	**Offida**	**0.51**	**36**	Pg	Pb	22 21 58.0	-0.3
	141nm,0.4s						
OFFI	**Offida**	**0.51**	**36**	Pg	Pb	22 21 58.0	-0.3
	141nm,0.4s						
CESX	**Cesi**	**0.53**	**280**	Pg	Pg	22 21 57.5	0.0
	37nm,0.5s						
CESX	**Cesi**	**0.53**	**280**	Pg	Pg	22 21 57.5	0.0
	37nm,0.5s						
FDMO	**Fiordimonte**	**0.54**	**345**	Pg	Pg	22 21 57.6	-0.1
	76nm,0.2s						
FDMO	**Fiordimonte**	**0.54**	**345**	Pg	Pg	22 21 57.6	-0.1
	76nm,0.2s						
CESI	**CESI - Serrava**	**0.56**	**330**	Pg	Pg	22 21 58.2	0.0
CESI				Sg	Sb	22 22 07.3	0.0
	24nm,0.3s						
CESI	**CESI - Serrava**	**0.56**	**330**	Pg	Pg	22 21 58.2	0.0
CESI				Sg	Sb	22 22 07.3	0.0
	24nm,0.3s						
CERT	**Cerreto**	**0.61**	**201**	Pg	Pg	22 21 58.9	-0.3
	70nm,0.4s						
CERT	**Cerreto**	**0.61**	**201**	Pg	Pg	22 21 58.9	-0.3
	70nm,0.4s						

ISCJB ***09*** *22:25:21.1±0.8, 38°.82N±0°.03×25°.84E±0°.07, h10km±7km, Error ellipse: s-maj=9.4km s-min=5.6km az=178.0*
CSEM ***09*** *22:25:21.2±0.2, 38°.83N×25°.84E, h10km, ML2.0/2, Error ellipse: s-maj=5.0km s-min=3.6km az=79.0*
THE ***09*** *22:25:21.0, 38°.82N×25°.84E, h0km±2km, ML2.0/2, Error ellipse: s-maj=2.3km s-min=0.6km az=265.0*
DDA ***09*** *22:25:26.4, 38°.82N×26°.27E, h7km, MD2.8*
ISC 09 22:25:21.1±1.0, 38°.83N±0°.03×25°.83E±0°.05, h15km±10km, n14, σ0s36/22, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.39**	**3**	P	**Pg**	**22 25 28.7**	**-0.2**
SIGR				S	**Sg**	**22 25 34.7**	**+0.4**
SIGR	**SIGRI**	**0.39**	**3**	P	**Pg**	**22 25 28.7**	**-0.2**
SIGR				S	**Sg**	**22 25 34.7**	**+0.4**
CHOS	**Chios island**	**0.47**	**158**	P	**Pg**	**22 25 30.2**	**-0.3**
CHOS				S	**Sg**	**22 25 36.8**	**0.0**
CHOS	**Chios island**	**0.47**	**158**	P	**Pg**	**22 25 30.2**	**-0.3**
CHOS				S	**Sg**	**22 25 36.8**	**0.0**
PRK	**Paraskevi**	**0.54**	**39**	P	**Pg**	**22 25 31.4**	**-0.4**
PRK				S	**Sb**	**22 25 40.1**	**+0.2**
PRK	**Paraskevi**	**0.54**	**39**	P	**Pg**	**22 25 31.4**	**-0.4**
PRK				S	**Sb**	**22 25 40.1**	**+0.2**
URLA	**Izmir**	**0.76**	**128**	*e*P	**Pb**	**22 25 36.4**	**+0.4**
URLA	**Izmir**	**0.76**	**128**	*e*P	**Pb**	**22 25 36.4**	**+0.4**
AYVA	**Ayvalik**	**0.82**	**54**	*i* P	**Pg**	**22 25 36.5**	**-0.6**
AYVA				*i* S	**Sb**	**22 25 47.6**	**-0.4**
AYVA	**Ayvalik**	**0.82**	**54**	*i* P	**Pg**	**22 25 36.5**	**-0.6**
AYVA				*i* S	**Sb**	**22 25 47.6**	**-0.4**
LIA	**Limnos Island**	**1.18**	**335**	P	**Pn**	**22 25 43.2**	**+0.1**
LIA	**Limnos Island**	**1.18**	**335**	P	**Pn**	**22 25 43.2**	**+0.1**
AOS	**Alonnisos**	**1.56**	**283**	P	**Pb**	**22 25 49.6**	**0.0**
AOS	**Alonnisos**	**1.56**	**283**	P	**Pb**	**22 25 49.6**	**0.0**

ISCJB ***09*** *22:39:58.5±0.5, 37°.80N±0°.04×23°.37E±0°.04, h1km±6km, Error ellipse: s-maj=6.3km s-min=4.4km az=152.6*
CSEM ***09*** *22:39:58.7±0.2, 37°.78N×23°.40E, h15km, MD2.6, Error ellipse: s-maj=5.7km s-min=4.2km az=127.0*
THE ***09*** *22:39:59.2, 37°.81N×23°.36E, h10km±3km, ML1.4/2, Error ellipse: s-maj=3.2km s-min=0.8km az=188.0*
ATH ***09*** *22:39:59.1, 37°.76N×23°.40E, h12km±1km, MD2.6/20, ML1.2*
ISC 09 22:39:58.8±0.9, 37°.80N±0°.02×23°.39E±0°.03, h12km±8km, n52, σ0s47/59, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAIG	**Nisos Aigina**	**0.09**	**117**	*e*PG	**Pg**	**22 40 01.6**	**+0.1**
NAIG	**Nisos Aigina**	**0.09**	**117**	*e*Pg	**Pg**	**22 40 01.6**	**+0.1**
ATH	**Athens Observa**	**0.31**	**56**	*e*PB	**Pg**	**22 40 05.7**	**+0.6**
ATH				*e*SG	**Sb**	**22 40 10.9**	**-0.5**
ATH	**Athens Observa**	**0.31**	**56**	*e*Pb	**Pg**	**22 40 05.7**	**+0.6**
ATH				*e*Sg	**Sb**	**22 40 10.9**	**-0.5**
DID	**Didima**	**0.32**	**202**	P	**Pg**	**22 40 05.1**	**-0.1**
DID				S	**Sb**	**22 40 10.9**	**-0.6**
DID	**Didima**	**0.32**	**202**	*e*PG	**Pg**	**22 40 05.1**	**-0.1**
DID				*e*SG	**Sg**	**22 40 09.1**	**-0.4**
DID	**Didima**	**0.32**	**202**	P	**Pg**	**22 40 05.1**	**-0.1**
DID				*e*Sg	**Sg**	**22 40 09.1**	**-0.4**
DID				S	**Sb**	**22 40 10.9**	**-0.6**
LTK	**Loutraki**	**0.40**	**304**	P	**Pg**	**22 40 06.2**	**-0.6**
LTK	**Loutraki**	**0.40**	**304**	*e*PB	**Pb**	**22 40 08.2**	**+0.4**
LTK	**Loutraki**	**0.40**	**304**	P	**Pg**	**22 40 06.2**	**-0.6**
LTK	**Loutraki**	**0.40**	**304**	*e*Pb	**Pb**	**22 40 08.2**	**+0.4**
PTL	**Penteli**	**0.45**	**56**	P	**Pg**	**22 40 07.8**	**+0.1**
PTL	**Penteli**	**0.45**	**56**	*e*PB	**Pg**	**22 40 07.7**	**+0.1**
PTL	**Penteli**	**0.45**	**56**	P	**Pg**	**22 40 07.8**	**+0.1**
GUR	**Goura**	**0.84**	**280**	P	**Pg**	**22 40 14.5**	**-0.5**
GUR				S	**Sg**	**22 40 26.3**	**+0.3**
GUR	**Goura**	**0.84**	**280**	*e*PB	**Pb**	**22 40 16.2**	**+0.9**
GUR	**Goura**	**0.84**	**280**	P	**Pg**	**22 40 14.5**	**-0.5**
GUR	**Goura**	**0.84**	**280**	*e*Pb	**Pb**	**22 40 16.3**	**+0.9**
LKR	**Lokris**	**0.90**	**340**	P	**Pg**	**22 40 15.7**	**-0.5**
LKR	**Lokris**	**0.90**	**340**	*e*PB	**Pb**	**22 40 17.1**	**+0.7**
LKR	**Lokris**	**0.90**	**340**	P	**Pg**	**22 40 15.7**	**-0.5**
LKR	**Lokris**	**0.90**	**340**	*e*Pb	**Pb**	**22 40 17.1**	**+0.7**
DSF	**Desfina**	**0.91**	**312**	P	**Pg**	**22 40 16.5**	**+0.1**
DSF	**Desfina**	**0.91**	**312**	P	**Pg**	**22 40 16.5**	**+0.1**
MRKA	**Markates**	**0.92**	**10**	P	**Pg**	**22 40 16.6**	**+0.1**
MRKA	**Markates**	**0.92**	**10**	P	**Pg**	**22 40 16.6**	**+0.1**
VLI	**Veliai**	**1.14**	**199**	*e*PN	**Pb**	**22 40 20.3**	**-0.1**
VLI	**Veliai**	**1.14**	**199**	*e*Pn	**Pb**	**22 40 20.3**	**-0.1**
KALE	**Kalithea**	**1.15**	**301**	*e*PN	**Pb**	**22 40 21.0**	**+0.4**
KALE	**Kalithea**	**1.15**	**301**	*e*Pn	**Pb**	**22 40 21.0**	**+0.4**
TRIZ	**Trizonia**	**1.18**	**299**	*e*PG	**Pb**	**22 40 21.7**	**+0.6**
TRIZ	**Trizonia**	**1.18**	**299**	*e*Pg	**Pb**	**22 40 21.7**	**+0.6**
LAKA	**Lakka**	**1.20**	**292**	*e*PB	**Pb**	**22 40 22.2**	**+0.8**
LAKA	**Lakka**	**1.20**	**292**	*e*Pb	**Pb**	**22 40 22.2**	**+0.8**
ITM	**Ithomi**	**1.32**	**242**	*e*PG	**Pn**	**22 40 23.3**	**+0.3**
ITM	**Ithomi**	**1.32**	**242**	*e*Pg	**Pn**	**22 40 23.3**	**+0.3**
DYR	**Agios Nikonas**	**1.33**	**219**	*e*PG	**Pn**	**22 40 23.7**	**+0.4**
DYR	**Agios Nikonas**	**1.33**	**219**	*e*Pg	**Pn**	**22 40 23.7**	**+0.4**
AMT	**Artemida-Makis**	**1.36**	**259**	*e*PB	**Pg**	**22 40 25.1**	**+0.2**
AMT	**Artemida-Makis**	**1.36**	**259**	*e*Pb	**Pg**	**22 40 25.1**	**+0.2**
AOS	**Alonnisos**	**1.42**	**16**	*e*PN	**Pb**	**22 40 25.4**	**+0.2**
AOS	**Alonnisos**	**1.42**	**16**	*e*Pn	**Pb**	**22 40 25.4**	**+0.2**
AGG	**Agios Georgios**	**1.48**	**326**	*e*PG	**Pb**	**22 40 26.6**	**+0.4**
AGG	**Agios Georgios**	**1.48**	**326**	*e*Pg	**Pb**	**22 40 26.6**	**+0.4**
RLS	**Riolos of Patr**	**1.54**	**280**	*e*PB	**Pg**	**22 40 29.2**	**+0.8**
RLS	**Riolos of Patr**	**1.54**	**280**	*e*Pb	**Pg**	**22 40 29.2**	**+0.8**
XOR	**Xorichti**	**1.57**	**354**	P	**Pn**	**22 40 26.1**	**-0.4**
XOR	**Xorichti**	**1.57**	**354**	P	**Pn**	**22 40 26.1**	**-0.4**
PYL	**PYLOS**	**1.59**	**236**	*e*PG	**Pb**	**22 40 28.6**	**+0.5**
PYL	**PYLOS**	**1.59**	**236**	*e*Pg	**Pb**	**22 40 28.6**	**+0.5**
THL	**Klokotos Trika**	**2.06**	**329**	*e*PN	**Pb**	**22 40 36.0**	**-0.2**
VLS	**Valsamata**	**2.24**	**281**	*e*PN	**Pb**	**22 40 39.2**	**0.0**

PRU ***09*** *22:40:05.6, 42°.49N×13°.14E, h0km, M3.9*
ISCJB ***09*** *22:40:06.0±0.2, 42°.50N±0°.01×13°.26E±0°.01, h13km±1km, mb3.7/6, Error ellipse: s-maj=2.2km s-min=1.5km az=33.9*
NEIC ***09*** *22:40:06.0, 42°.48N×13°.30E, h11km, mb3.9/3, ML3.6(ROM), After ROM.*
NEIC Felt [III] at Ascoli Piceno, Rieti and Rome; [II] at Foligno, Frosinone, Gualdo Tadino, Macerata, Montesilvano, Spoleto, Sulmona and Terni.
IDC ***09*** *22:40:06.8±1.4, 42°.68N×13°.27E, h0km, mb3.5/5, mb1 3.8/10, mb1mx3.6/30, mbtmp3.5/10, ML3.2/5, MS3.0/1, Ms1 3.1/1, ms1mx2.2/40, Error ellipse: s-maj=22.3km s-min=16.3km az=71.0*
PDG ***09*** *22:40:06.7±0.7, 42°.51N×13°.29E, h9km, ML3.7/9, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
ROM ***09*** *22:40:06.1±0.1, 42°.48N×13°.31E, h11km, Ml3.8/37, Error ellipse: s-maj=0.4km s-min=0.3km az=174.0*
LDG ***09*** *22:40:06.1±0.1, 42°.52N×13°.36E, h2km, Ml3.4/13, Error ellipse: s-maj=3.7km s-min=2.3km az=40.0*
CSEM ***09*** *22:40:06.3±0.1, 42°.50N×13°.26E, h2km, mb3.9/3, ML4.0/13, Error ellipse: s-maj=2.3km s-min=1.7km az=42.0*
ISC 09 22:40:07.1±0.7, 42°.49N±0°.01×13°.28E±0°.01, h12km±4km, n313, σ1s40/403, mb3.7/6, 15C-17D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.10**	**65**	P	**Pg**	**22 40 09.2**	**-0.9**
CAMP				S	**Sg**	**22 40 11.3**	**-0.9**
CAMP	**Campotosto**	**0.10**	**65**	Pg	**Pg**	**22 40 09.1**	**-0.9**
CAMP				Sg	**Sg**	**22 40 11.3**	**-0.9**
	22µm,0.5s						
CAMP	**Campotosto**	**0.10**	**65**	Pg	**Pg**	**22 40 09.1**	**-0.9**
CAMP				Sg	**Sg**	**22 40 11.3**	**-0.9**
	22µm,0.5s						
AQU	**L'Aquila**	**0.16**	**147**	*e*Pg	**Pg**	**22 40 10.0**	**-0.9**
AQU				*e*Sg	**Sg**	**22 40 13.1**	**-0.4**
AQU	**L'Aquila**	**0.16**	**147**	Pg	**Pg**	**22 40 10.1**	**-0.7**
AQU				Sg	**Sg**	**22 40 13.0**	**-0.4**
	23µm,0.6s						
AQU	**L'Aquila**	**0.16**	**147**	Pg	**Pg**	**22 40 10.1**	**-0.7**
AQU				Sg	**Sg**	**22 40 13.0**	**-0.4**
	23µm,0.6s						
LNSS	**Leonessa**	**0.21**	**302**	P	**Pg**	**22 40 11.4**	**-0.3**
LNSS				S	**Sg**	**22 40 15.5**	**+0.7**
LNSS	**Leonessa**	**0.21**	**302**	Pg	**Pg**	**22 40 11.4**	**-0.3**
LNSS				Sg	**Sg**	**22 40 15.5**	**+0.7**
	28µm,0.3s						
LNSS	**Leonessa**	**0.21**	**302**	Pg	**Pg**	**22 40 11.4**	**-0.3**
LNSS				Sg	**Sg**	**22 40 15.5**	**+0.7**
	28µm,0.3s						
FIAM	**Fiamignano**	**0.26**	**209**	P	**Pg**	**22 40 11.9**	**-0.5**
FIAM				S	**Sg**	**22 40 16.1**	**+0.1**
FIAM	**Fiamignano**	**0.26**	**209**	Pg	**Pg**	**22 40 11.9**	**-0.5**
FIAM				Sg	**Sg**	**22 40 16.1**	**+0.1**
	24µm,0.8s						
FIAM	**Fiamignano**	**0.26**	**209**	Pg	**Pg**	**22 40 11.9**	**-0.5**
FIAM				Sg	**Sg**	**22 40 16.1**	**+0.1**
	24µm,0.8s						
TERO	**Teramo**	**0.27**	**61**	P	**Pg**	**22 40 11.6**	**-1.1**
TERO				S	**Sg**	**22 40 15.8**	**-0.7**
TERO	**Teramo**	**0.27**	**61**	Pg	**Pg**	**22 40 11.6**	**-1.1**
TERO				Sg	**Sg**	**22 40 15.8**	**-0.7**
	13µm,0.3s						
**TER

MTCE	Montecelio	0.62	221	P	Pg	22 40 18.0	-1.1
INTR	Introdacqua	0.67	136	Pg	Pg	22 40 18.3	-1.7
	4µm,0.6s						
INTR	Introdacqua	0.67	136	Pg	Pg	22 40 18.3	-1.7
	4µm,0.6s						
VVLD	Villa Vallelon	0.67	158	P	Pg	22 40 18.6	-1.5
VVLD	Villa Vallelon	0.67	158	Pg	Pg	22 40 18.6	-1.5
	4µm,0.7s						
VVLD	Villa Vallelon	0.67	158	Pg	Pg	22 40 18.6	-1.5
	4µm,0.7s						
GUAR	Guarcino	0.70	178	P	Pg	22 40 19.3	-1.3
GUAR	Guarcino	0.70	178	Pg	Pg	22 40 19.3	-1.3
	4µm,0.6s						
GUAR	Guarcino	0.70	178	Pg	Pg	22 40 19.3	-1.3
	4µm,0.6s						
ASSB	Assisi San Ben	0.72	320	Pg	Pg	22 40 20.2	-0.8
	2µm,0.5s						
ASSB	Assisi San Ben	0.72	320	Pg	Pg	22 40 20.2	-0.8
	2µm,0.5s						
LPEL	Lama dei Pelig	0.80	123	Pg	Pg	22 40 20.2	-2.4
	2µm,0.3s						
LPEL	Lama dei Pelig	0.80	123	Pg	Pg	22 40 20.2	-2.4
	2µm,0.3s						
SNTG	Esanatoglia	0.80	342	P	Pg	22 40 21.3	-1.3
SNTG	Esanatoglia	0.80	342	Pg	Pg	22 40 21.3	-1.3
SNTG	Esanatoglia	0.80	342	Pg	Pg	22 40 21.3	-1.3
RMP	Rome, Mte Porz	0.81	213	Pg	Pg	22 40 21.4	-1.2
	4µm,0.4s						
RMP	Rome, Mte Porz	0.81	213	Pg	Pg	22 40 21.4	-1.2
	4µm,0.4s						
CAFR	Castel Frentan	0.83	108	Pg	Pg	22 40 21.3	-1.8
	4µm,0.7s						
CAFR	Castel Frentan	0.83	108	Pg	Pg	22 40 21.3	-1.8
	4µm,0.7s						
POFI	Posta Fibreno	0.84	157	Pg	Pg	22 40 21.4	-1.8
	2µm,0.7s						
POFI	Posta Fibreno	0.84	157	Pg	Pg	22 40 21.4	-1.8
	2µm,0.7s						
RDP	Rocca di Papa	0.84	210	Pg	Pg	22 40 22.0	-1.4
	7µm,0.5s						
RDP	Rocca di Papa	0.84	210	Pg	Pg	22 40 22.0	-1.4
	7µm,0.5s						
CING	Cingoli	0.89	356	P	Pg	22 40 22.8	-1.4
CING	Cingoli	0.89	356	Pg	Pg	22 40 22.8	-1.4
	2µm,0.7s						
CING	Cingoli	0.89	356	Pg	Pg	22 40 22.8	-1.4
	2µm,0.7s						
GIUL	Giuliano Di Ro	0.93	181	Pg	Pg	22 40 23.2	-1.8
	6µm,1.5s						
GIUL	Giuliano Di Ro	0.93	181	Pg	Pg	22 40 23.2	-1.8
	6µm,1.5s						
MURB	Monte Urbino	0.95	324	Pg	Pg	22 40 24.1	-1.3
	3µm,0.3s						
MURB	Monte Urbino	0.95	324	Pg	Pg	22 40 24.1	-1.3
	3µm,0.3s						
MGAB	Montegabbione	0.96	296	Pg	Pg	22 40 24.6	-1.0
	3µm,0.4s						
MGAB	Montegabbione	0.96	296	Pg	Pg	22 40 24.6	-1.0
	3µm,0.4s						
ARVD	Arcevia	1.04	346	Pg	Pg	22 40 25.5	-1.5
ARVD	Arcevia	1.04	346	Pg	Pg	22 40 25.5	-1.5
TOLF	Tolfa	1.04	246	Pg	Pg	22 40 25.7	-1.4
	3µm,0.8s						
TOLF	Tolfa	1.04	246	Pg	Pg	22 40 25.7	-1.4
	3µm,0.8s						
CERA	Filignano	1.05	148	Pg	Pg	22 40 24.9	-2.3
	2µm,0.7s						
CERA	Filignano	1.05	148	Pg	Pg	22 40 24.9	-2.3
	2µm,0.7s						
SACS	San Casciano d	1.07	290	Pn	Pg	22 40 26.7	-1.0
	1µm,0.8s						
AOI	Ancona	1.08	12	Pg	Pg	22 40 26.2	-1.7
AOI	Ancona	1.08	12	Pg	Pg	22 40 26.2	-1.7
LATE	Laterza	1.10	277	Pn	Pg	22 40 27.1	-1.1
	2µm,0.7s						
LATE	Laterza	1.10	277	Pn	Pg	22 40 27.1	-1.1
	2µm,0.7s						
MIDA	Miranda	1.11	139	Pg	Pb	22 40 25.7	-2.6
PIEI	Pieia	1.18	333	Pn	Pb	22 40 27.9	-1.5
	876nm,0.7s						
PIEI	Pieia	1.18	333	Pn	Pb	22 40 27.9	-1.5
	876nm,0.7s						
CAFI	Castiglion Fio	1.28	311	Pn	Pn	22 40 30.3	-0.5
	855nm,0.7s						
CAFI	Castiglion Fio	1.28	311	Pn	Pn	22 40 30.3	-0.5
	855nm,0.7s						
ARCI	Arcidosso	1.38	286	Pn	Pb	22 40 32.5	-0.4
ARCI	Arcidosso	1.38	286	Pn	Pb	22 40 32.5	-0.4
PARC	Parchiule	1.39	327	Pn	Pb	22 40 32.3	-0.7
	2µm,0.9s						
PARC	Parchiule	1.39	327	Pn	Pb	22 40 32.3	-0.7
	2µm,0.9s						
MODR	Mondragone	1.42	162	Pn	Pn	22 40 32.4	-0.3
MODR	Mondragone	1.42	162	Pn	Pn	22 40 32.4	-0.3
PESA	Pesaro	1.48	348	Pn	Pb	22 40 34.1	-0.5
	1µm,0.6s						
PESA	Pesaro	1.48	348	Pn	Pb	22 40 34.1	-0.5
	1µm,0.6s						
MAON	Monte Argentar	1.59	268	Pn	Pn	22 40 34.5	-0.6
MAON	Monte Argentar	1.59	268	Pn	Pn	22 40 34.5	-0.6
CSNT	Castellina Chi	1.76	305	Pn	Pn	22 40 37.9	+0.5
CSNT	Castellina Chi	1.76	305	Pn	Pn	22 40 37.9	+0.5
CASP	Castiglione de	1.81	280	Pn	Pn	22 40 37.7	-0.4
CASP	Castiglione de	1.81	280	Pn	Pn	22 40 37.7	-0.4
MS1	Monte Sant'Ang	2.13	111	*e*Pn	Pb	22 40 45.7	+0.1
NVLJ	Novalja	2.37	29	*i* Pn	Pn	22 40 45.2	-0.6
NVLJ				Sn	Sn	22 41 15.0	+0.1
NVLJ	Novalja	2.37	29	*i* Pn	Pn	22 40 45.2	-0.6
NVLJ				Sn	Sn	22 41 14.9	+0.1
MAIM	Mastiano	2.49	306	P	Pn	22 40 48.7	+1.3
CRDM	Cardoso	2.56	308	P	Pn	22 40 49.4	+1.0
CDT	Castel del Mon	2.64	121	*e*Pn	Pb	22 40 52.4	-2.0
CDT				*e*Sn	Sb	22 41 25.2	-1.6
VLC	Villacollemand	2.69	309	*e*Pn	Pn	22 40 50.6	+0.4
VLC				*e*Sn	Sn	22 41 20.4	-2.4
VLC	Villacollemand	2.69	309	*e*Pn	Pn	22 40 50.6	+0.4
VLC				*e*Sn	Sn	22 41 20.4	-2.4
BAI	Bari	3.02	116	*e*Pn	Pn	22 40 56.4	+1.7
BAI				*e*Sn	Sn	22 41 33.4	+2.5
CUC	Castrocucco	3.14	142	*e*Pn	Pn	22 40 57.4	+0.9
CUC	Castrocucco	3.14	142	*e*Pn	Pn	22 40 57.4	+0.9
PGF	Pioggiola	3.17	272	*e*Pn	Pn	22 40 57.1	+0.3
PGF				*e*Sn	Sn	22 41 37.2	+2.6
	19nm,0.5s						
PGF	Pioggiola	3.17	272	*e*Pn	Pn	22 40 57.1	+0.3
PGF				*e*Sn	Sn	22 41 37.2	+2.6
	9.6nm,0.5s						
GBRS	Gornja Briga	3.23	19	Pn	Pn	22 40 57.6	-0.1
GBRS				*i* Sn	Sn	22 41 38.0	+1.9
TRI	Trieste	3.23	6	*e*Pn	Pn	22 40 56.4	-1.2
TRI				*e*Sn	Sn	22 41 33.4	-2.7
TRI	Trieste	3.23	6	*e*Pn	Pn	22 40 56.4	-1.2
TRI				*e*Sn	Sn	22 41 33.4	-2.7
STON	Ston	3.28	82	*i* Pn	Pn	22 40 58.7	+0.4
STON				Sn	Sn	22 41 37.2	+0.1
STON	Ston	3.28	82	*i* Pn	Pn	22 40 58.6	+0.4
STON				Sn	Sn	22 41 37.2	+0.1
SC2M	Scurtabo	3.33	306	P	Pn	22 41 00.4	+1.3
JAVS	Javornik	3.45	9	*i* Pn	Pn	22 41 00.0	-0.7
JAVS				*i* Sn	Sn	22 41 41.5	0.0
JAVS	Javornik	3.45	9	*i* Pn	Pn	22 41 00.0	-0.7
JAVS				*i* Sn	Sn	22 41 41.5	0.0
VOY	Vojsko	3.57	7	*e*Pn	Pn	22 41 01.4	-0.9
VOY				*e*Sn	Sn	22 41 45.3	+0.9
VOY	Vojsko	3.57	7	*e*Pn	Pn	22 41 01.4	-0.9
VOY				*e*Sn	Sn	22 41 45.3	+0.9
ROBS	Robic	3.76	2	*i* Pn	Pn	22 41 04.2	-0.6
ROBS				*i* Sn	Sn	22 41 48.4	-0.6
ROBS	Robic	3.76	2	*i* Pn	Pn	22 41 04.2	-0.6
ROBS				*i* Sn	Sn	22 41 48.4	-0.6
HCY	Herceg Novi	3.85	89	⇓*i* Pn	Pn	22 41 06.9	+0.7
HCY				*e*Sn	Sn	22 41 53.6	+2.2
HCY	Herceg Novi	3.85	89	⇓*i* Pn	Pn	22 41 06.9	+0.7
HCY				*e*Sn	Sn	22 41 53.6	+2.2
BRY	Bratogost	3.90	82	⇓*i* Pn	Pn	22 41 08.2	+1.3
BRY				*e*Sn	Sn	22 41 54.5	+1.9
BRY	Bratogost	3.90	82	⇓*i* Pn	Pn	22 41 08.2	+1.3
BRY				*e*Sn	Sn	22 41 54.5	+1.9
OBKA	Obir	4.12	12	⇓*i* Pn	Pn	22 41 09.6	-0.3
	SNR=9.6						
OBKA	Obir	4.12	12	⇓*i* Pn	Pn	22 41 09.6	-0.3
OBKA	Obir	4.12	12	⇓*i* Pn	Pn	22 41 09.6	-0.3
BUM	Brajici-Budva	4.16	91	⇓*i* Pn	Pn	22 41 11.6	+1.2
BUM				*e*Sn	Sn	22 42 01.4	+2.4
BUM	Brajici-Budva	4.16	91	⇓*i* Pn	Pn	22 41 11.6	+1.2
BUM				*e*Sn	Sn	22 42 01.4	+2.4
UPM	Unac-Piva	4.19	78	⇑*i* Pn	Pn	22 41 12.4	+1.4
UPM				*e*Sn	Sn	22 42 01.9	+1.8
UPM	Unac-Piva	4.19	78	⇑*i* Pn	Pn	22 41 12.4	+1.4
UPM				*e*Sn	Sn	22 42 01.9	+1.8
VSL	Villasalto	4.21	226	*e*Pn	Pn	22 41 11.5	+0.5
VSL				*e*Sn	Sn	22 42 00.1	0.0
VSL	Villasalto	4.21	226	*e*Pn	Pn	22 41 11.5	+0.5
VSL				*e*Sn	Sn	22 42 00.1	0.0
NKY	Niksic	4.22	84	⇑*i* Pn	Pn	22 41 12.8	+1.4
NKY				*e*Sn	Sn	22 42 02.0	+1.3
NKY	Niksic	4.22	84	⇑*i* Pn	Pn	22 41 12.8	+1.4
NKY				*e*Sn	Sn	22 42 02.0	+1.3
TIP	Timpagrande	4.23	140	*e*Pn	Pn	22 41 13.8	+2.4
TIP	Timpagrande	4.23	140	*e*Pn	Pn	22 41 13.9	+2.4
ABTA	Abfaltersbach	4.29	353	⇑*i* Pn	Pn	22 41 12.5	+0.2
	SNR=59						
ABTA	Abfaltersbach	4.29	353	⇑*i* Pn	Pn	22 41 12.5	+0.2
ABTA	Abfaltersbach	4.29	353	⇑*i* Pn	Pn	22 41 12.5	+0.2
PDG	Podgorica	4.42	89	⇑*i* Pn	Pn	22 41 14.9	+1.0
PDG				*e*Sn	Sn	22 42 07.6	+2.3
TTG	Podgorica	4.42	89	⇑*i* Pn	Pn	22 41 14.9	+1.0
TTG				*e*Sn	Sn	22 42 07.6	+2.3
ULC	Ulcinj	4.46	95	⇓*i* Pn	Pn	22 41 15.2	+0.7
ULC				*e*Sn	Sn	22 42 08.0	+1.7
ULC	Ulcinj	4.46	95	⇓*i* Pn	Pn	22 41 15.2	+0.7
SBF	Sospel	4.49	290	*e*Pn	Pn	22 41 15.6	+0.6
SBF				*e*Sn	Sn	22 42 05.7	-1.5
	25nm,0.6s						
SBF	Sospel	4.49	290	*e*Pn	Pn	22 41 15.6	+0.6
SBF				*e*Sn	Sn	22 42 05.7	-1.5
	13nm,0.6s						
PLE	Pljevlja	4.56	77	⇓*i* Pn	Pn	22 41 16.6	+0.6
PLE				*e*Sn	Sn	22 42 10.4	+1.4
PLE	Pljevlja	4.56	77	⇓*i* Pn	Pn	22 41 16.6	+0.6
PLE				*e*Sn	Sn	22 42 10.4	+1.4
KBA	Koelnbreinsper	4.59	1	⇑*i* Pn	Pn	22 41 16.5	+0.1
	SNR=12						
KBA	Koelnbreinsper	4.59	1	⇑*i* Pn	Pn	22 41 16.5	+0.1
KBA	Koelnbreinsper	4.59	1	⇑*i* Pn	Pn	22 41 16.5	+0.1
CEL	Celeste	4.67	154	*e*Pn	Pn	22 41 16.6	-0.9
CEL	Celeste	4.67	154	*e*Pn	Pn	22 41 16.6	-0.9
TUE	Stuetta	4.88	326	*e*Pn	Pn	22 41 19.9	-0.5
TUE				*e*Sn	Sn	22 42 13.1	-3.8
TUE	Stuetta	4.88	326	*e*Pn	Pn	22 41 19.9	-0.5
TUE				*e*Sn	Sn	22 42 13.1	-3.8
FETA	Feichten	4.88	339	⇓*i* Pn	Pn	22 41 21.6	+1.2
	SNR=19						
FETA	Feichten	4.88	339	⇓*i* Pn	Pn	22 41 21.6	+1.2
FETA	Feichten	4.88	339	⇓*i* Pn	Pn	22 41 21.6	+1.2
BEY	Berane	4.89	83	*e*Pn	Pn	22 41 22.2	+1.7
BEY	Berane	4.89	83	*e*Sn	Sn	22 42 18.5	+1.5
IVA	Berane	4.89	83	*e*Pn	Pn	22 41 22.2	+1.7
IVA				*e*Sn	Sn	22 42 18.5	+1.5
PUK	Puka	4.92	93	*e*PN	Pn	22 41 22.4	+1.4
PUK	Puka	4.92	93	*e*Pn	Pn	22 41 22.4	+1.4
DAVOX	Davos/Dischmat	4.93	332	Pn	Pn	22 41 23.6	+2.5
	2.0nm,0.3s,baz=163,slow=19,SNR=24						
DAVOX				Sn	Sn	22 42 18.9	+0.8
	1.7nm,0.3s,baz=160,slow=21,SNR=3.4						
PVY	Plav	4.93	87	⇓*i* Pn	Pn	22 41 23.1	+2.0
PVY				*e*Sn	Sn	22 42 19.8	+1.6
FRF	La Foret Royal	4.98	285	*e*Pn	Pn	22 41 21.8	+0.1
FRF				*e*Sn	Sn	22 42 16.7	-2.5
	8.2nm,0.6s						
FRF	La Foret Royal	4.98	285	*e*Pn	Pn	22 41 21.8	+0.1
FRF				*e*Sn	Sn	22 42 16.7	-2.5
	4.1nm,0.6s						
BCI	Bajram Curri	5.02	89	*e*PN	Pn	22 41 24.6	+2.3
BCI	Bajram Curri	5.02	89	*e*Pn	Pn	22 41 24.6	+2.3
TIR	Tirane	5.04	101	*e*PN	Pn	22 41 22.6	+0.1
TIR	Tirane	5.04	101	*e*Pn	Pn	22 41 22.6	+0.1
LMR	La Mourre	5.05	282	*e*Pn	Pn	22 41 22.3	-0.2
LMR				*e*Sn	Sn	22 42 18.2	-2.6
	6.3nm,0.5s						
LMR	La Mourre	5.05	282	*e*Pn	Pn	22 41 22.3	-0.2
LMR				*e*Sn	Sn	22 42 18.2	-2.6
	3.2nm,0.5s						
IVAS	Ivanjica	5.15	76	*e*Pn	Pn	22 41 24.9	+0.8
DIVS	Divibare	5.15	70	*e*Pn	Pn	22 41 25.7	+1.6
MBDF	Montbardon	5.23	298	*e*P	Pn	22 41 27.6	+2.4
MBDF	Montbardon	5.23	298	*e*P	Pn	22 41 27.6	+2.4
RJOB	Jochberg	5.26	356	*e*Pn	Pn	22 41 26.5	+1.0
RJOB				*e*Sn	Sn	22 42 24.8	-1.3
PHP	Peshkopia	5.39	96	*e*PN	Pn	22 41 28.7	+1.3
PHP	Peshkopia	5.39	96	P	Pn	22 41 28.6	+1.3
PHP	Peshkopia	5.39	96	P	Pn	22 41 28.6	+1.3
TRUS	Trudelj	5.47	69	*e*Pn	Pn	22 41 27.3	-1.1
LPG	La Plagne	5.59	305	*e*P	Pn	22 41 33.5	+3.2
LPG				*e*Sn	Sn	22 42 32.7	-1.8
	10nm,0.5s						
LPL	La Plagne	5.61	305	*e*P	Pn	22 41 33.6	+3.1
LPL				*e*Sn	Sn	22 42 31.9	-3.1
	11nm,0.6s						
GRUS	Gruza	5.61	73	*e*Pn	Pn	22 41 31.5	+1.2
KEK	Kerkira	5.65	117	P	Pn	22 41 31.7	+0.8
KEK	Kerkira	5.65	117	P	Pn	22 41 31.7	+0.8
CONA	Conrad Observa	5.73	18	⇑*i* Pn	Pn	22 41 31.7	-0.3
	SNR=12						
CONA	Conrad Observa	5.73	18	⇑*i* Pn	Pn	22 41 31.8	-0.3
CONA	Conrad Observa	5.73	18	⇑*i* Pn	Pn	22 41 31.8	-0.3
SELS	Selova	5.81	80	*e*Pn	Pn	22 41 33.9	+0.9
SMRF	Simiane la Rot	5.82	287	*e*P	Pn	22 41 35.0	+1.7
SMRF	Simiane la Rot	5.82	287	*e*P	Pn	22 41 35.0	+1.7
ORIF	Oris-en-Rattie	5.89	297	*e*P	Pn	22 41 38.2	+4.0
ORIF				*e*Sn	Sn	22 42 39.2	-2.5
	19nm,1.0s						
SKO	Skopje	6.08	92	*e*Pn	Pn	22 41 38.7	+1.9
SKO	Skopje	6.08	92	*e*Pn	Pn	22 41 38.7	+2.4
IGT	Igoumenitsa	6.10	117	P	Pn	22 41 38.2	+1.2
IGT	Igoumenitsa	6.10	117	P	Pn	22 41 38.2	+1.2
NEST	Nestorio	6.19	107	P	Pn	22 41 40.0	+1.6
NEST	Nestorio	6.19	107	P	Pn	22 41 40.0	+1.6
FNA	Florina	6.30	103	P	Pn	22 41 40.6	+0.8
FNA	Florina	6.30	103	P	Pn	22 41 40.6	+0.8
BARS	Barje	6.30	84	*e*Pn	Pn	22 41 40.5	+0.7
GEC2	GERESS Array S	6.36	2	*e*Pn	Pn	22 41 40.1	-0.6
GERES	GERESS Array B	6.36	2	Pn	Pn	22 41 39.5	-1.1
	0.6nm,0.3s,baz=171,slow=13,SNR=18						
GERES				Sn	Sn	22 42 51.2	-2.1
	0.7nm,0.3s,baz=191,slow=19,SNR=3.4						
CABF	La Chapelle	6.59	311	*e*Pn	Pn	22 41 45.2	+1.4
CABF	La Chapelle	6.59	311	*e*Pn	Pn	22 41 45.2	+1.4
KHC	Kasperske Hory	6.64	2	*e*Pn	Pn	22 41 43.4	-1.1
	3.6nm,0.6s						
KHC				*e*Sn	Sn	22 42 58.7	-1.5
KHC	Kasperske Hory	6.64	2	*e*PN	Pn	22 41 43.6	-0.9
KHC				*e*SN	Sn	22 42 58.5	-1.7
KHC	Kasperske Hory	6.64	2	Pn	Pn	22 41 43.6	-0.9
KHC				*e*Sn	Sn	22 42 58.7	-1.5
WET	Wettzell	6.66	358	*e*Pn	Pn	22 41 43.2	-1.5
VIVF	Saint-Julien-l	6.68	294	*e*Pn	Pn	22 41 46.9	+1.9
VIVF	Saint-Julien-l	6.68	294	*e*Pn	Pn	22 41 46.9	+1.9
LKD2	Lefkada island	6.72	121	*e*P	Pn	22 41 49.0	+3.5
BFO	Black Forest	6.80	331	*e*Pn	Pn	22 41 46.3	-0.3
BFO				*e*Sn	Sn	22 43 02.6	-1.4
ZAPS	Zavoj	6.91	80	*e*Pn	Pn	22 41 49.7	+1.5
TREC	Trest	6.97	12	*e*PN	Pn	22 41 48.5	-0.6
TREC	Trest	6.97	12	Pn	Pn	22 41 48.5	-0.6
HINF	Hinteralfeld	7.00	322	*e*Pn	Pn	22 41 49.6	+0.2
HINF				*e*Sn	Sn	22 43 06.1	-2.8
	9.6nm,0.4s						
HINF	Hinteralfeld	7.00	322	*e*Pn	Pn	22 41 49.6	+0.2
VAY	Valandovo	7.03	96	*e*Pn	Pn	22 41 50.7	+1.0
VAY	Valandovo	7.03	96	*e*Pn	Pn	22 41 51.2	+1.5
VLS	Valsamata	7.05	125	*e*P	Pn	22 41 52.5	+2.4
LASF	Ste Croix	7.06	286	*e*Pn	Pn	22 41 50.4	+0.2
LASF	Ste Croix	7.06	286	*e*Pn	Pn	22 41 50.4	+0.2
VYHS	Vyhne	7.16	31	*e*PN	Pn	22 41 52.0	+0.5
VYHS				*e*SN	Sn	22 43 01.3	-12
VYHS	Vyhne	7.16	31	*e*Pn	Pn	22 41 52.0	+0.5
ECH	Echery	7.17	325	*e*Pn	Pn	22 41 50.1	-1.6
	3.6nm,0.4s						
ECH				*e*Sn	Sn	22 43 11.7	-1.3
ECH	Echery	7.17	325	*e*Pn	Pn	22 41 50.1	-1.6
	3.6nm,0.4s						
ECH				*e*Sn	Sn	22 43 11.7	-1.3
VRAC	Vranov	7.20	18	Pn	Pn	22 41 52.0	-0.1
	0.2nm,0.3s,baz=213,slow=12,SNR=5.0						
THL	Klokotos Trika	7.22	111	*e*P	Pn	22 41 53.2	+0.8
CDF	Champ du Feu	7.27	327	*e*Pn	Pn	22 41 53.3	+0.1
CDF				*e*Sn	Sn	22 43 13.0	-2.7
	10nm,0.4s						
CDF	Champ du Feu	7.27	327	*e*Pn	Pn	22 41 53.3	+0.1
LIT	Litokhoron	7.33	106	*e*P	Pn	22 41 54.8	+0.8
VTS	Vitosha	7.33	86	*e*Pn	Pn	22 41 55.5	+1.4
GRFO	Grafenberg	7.34	349	*e*Pn	Pn	22 41 39.6	-14
HAU	Haudompre	7.37	321	*e*Pn	Pn	22 41 54.9	+0.4
HAU				*e*Sn	Sn	22 43 13.7	-4.3
	16nm,0.4s						
HAU	Haudompre	7.37	321	*e*Pn	Pn	22 41 54.9	+0.4
EVR	Evrytania	7.39	116	*e*P	Pn	22 41 57.3	+2.4
KEST	Kesra	7.41	206	Pn	Pn	22 42 00.3	+5.2
	0.3nm,0.3s,baz=291,slow=0.9,SNR=13						
PRU	Pruhonice	7.55	6	*e*SN	Sn	22 43 18.7	-3.7
RLS	Riolos of Patr	7.66	123	*e*P	Pn	22 42 01.8	+3.3
AGG	Agios Georgios	7.69	114	*e*P	Pn	22 42 00.2	+1.3
EFP	Efpalio	7.72	119	*e*P	Pn	22 42 03.0	+3.7
NKC	Novy Kostel	7.76	356	*e*SN	Sn	22 43 23.5	-4.2
WERN	Wernitzgruen	7.82	356	*e*Pn	Pn	22 42 01.6	+0.9
MORC	Moravsky Berou	7.86	21	*e*Pn	Pn	22 42 01.5	+0.2
	3.6nm,0.8s						
MORC	Moravsky Berou	7.86	21	*e*Pn	Pn	22 42 01.5	+0.2
	3.6nm,0.8s						
TRIZ	Trizonia	7.87	119	*e*P	Pn	22 42 05.0	+3.7
LAKA	Lakka	7.88	120	*e*P	Pn	22 42 04.6	+3.1
KALE	Kalithea	7.90	118	*e*P	Pn	22 42 06.3	+4.5
SMF	Signal de Mont	7.92	305	*e*Pn	Pn	22 42 02.7	+0.7
SMF				*e*Sn	Sn	22 43 27.2	-4.3
	8.2nm,0.6s						
SMF	Signal de Mont	7.92	305	*e*Pn	Pn	22 42 02.7	+0.7
PAGF	Fort de Pagny	8.05	321	*e*Pn	Pn	22 42 04.6	+0.8
PAGF	Fort de Pagny	8.05	321	*e*Pn	Pn	22 42 04.6	+0.8
AMT	Artemida-Makis	8.14	125	*e*P	Pn	22 42 12.5	+7.4
SFTF	Sexfontaines	8.14	317	*e*Pn	Pn	22 42 05.5	+0.4
SFTF				*e*Sn	Sn	22 43 32.1	-4.9
	9.7nm,0.6s						
SFTF	Sexfontaines	8.14	317	*e*Pn	Pn	22 42 05.5	+0.4
NEO	Neokhori	8.17	110	*e*P	Pn	22 42 07.2	+1.7
LOR	Lormes	8.22	309	*e*Pn	Pn	22 42 06.4	+0.3
LOR				*e*Sn	Sn	22 43 35.8	-3.1
	4.8nm,0.4s						
LOR	Lormes	8.22	309	*e*Pn	Pn	22 42 06.4	+0.3
MOX	Moxa	8.24	353	*e*Sn	Sn	22 43 33.4	-5.9
GUR	Goura	8.29	120	*e*P	Pn	22 42 09.6	+2.4
SSF	Saint Saulge	8.32	307	*e*Pn	Pn	22 42 07.8	+0.3
SSF	Saint Saulge	8.32	307	*e*Pn	Pn	22 42 07.8	+0.3
LKR	Lokris	8.33	114	*e*P	Pn	22 42 10.8	+3.2
MEZF	Maizieres J'vi	8.34	319	*e*Pn	Pn	22 42 08.4	+0.7
MEZF	Maizieres J'vi	8.34	319	*e*Pn	Pn	22 42 08.4	+0.7
BRG	Berggiesshubel	8.40	3	*e*(P)	Pb	22 42 29.3	-3.0
	1.9nm,0.8s						
BRG				*e*		22 43 38.5	
BRG				*e*		22 44 51.5	
BGF	Bois d'Agland	8.49	302	*e*Pn	Pn	22 42 10.6	+0.8
BGF	Bois d'Agland	8.49	302	*e*Pn	Pn	22 42 10.6	+0.8
ITM	Ithomi	8.50	126	*e*P	Pn	22 42 12.8	+2.7
PYL	PYLOS	8.59	128	*e*P	Pn	22 42 12.1	+1.0
AOS	Alonnisos	8.69	109	*e*P	Pn	22 42 13.6	+1.0
CLL	Collm	8.82	359	*e*(Pn)	Pn	22 42 14.0	-0.3
CLL	

VLS	Valsamata	3.51	342	*e*PN	Pn	22 49 48.9	-1.3
VLS				*e*SN	Sn	22 50 34.2	+2.6
VLS	Valsamata	3.51	342	*e*PN	Pn	22 49 48.9	-1.3
VLS				*e*Sn	Sn	22 50 34.2	+2.6
TRIZ	Trizonia	3.52	1	P	Pn	22 49 51.2	+0.9
TRIZ	Trizonia	3.52	1	*e*PN	Pn	22 49 51.4	+1.1
TRIZ	Trizonia	3.52	1	P	Pn	22 49 51.2	+0.9
KALE	Kalithea	3.54	2	*e*PN	Pn	22 49 51.0	+0.3
KALE	Kalithea	3.54	2	*e*Pn	Pn	22 49 51.0	+0.3
PTL	Penteli	3.54	25	P	Pn	22 49 51.0	+0.3
PTL	Penteli	3.54	25	*e*PN	Pn	22 49 50.5	-0.2
PTL	Penteli	3.54	25	*e*Pn	Pn	22 49 50.5	-0.2
PTL	Penteli	3.54	25	P	Pn	22 49 51.0	+0.3
EFP	Efpalio	3.58	359	P	Pn	22 49 52.6	+1.5
EFP	Efpalio	3.58	359	*e*PN	Pn	22 49 52.2	+1.1
EFP	Efpalio	3.58	359	*e*Pn	Pn	22 49 52.2	+1.1
EFP	Efpalio	3.58	359	P	Pn	22 49 52.6	+1.5
DSF	Desfina	3.59	7	P	Pn	22 49 51.7	+0.3
DSF	Desfina	3.59	7	P	Pn	22 49 51.7	+0.3
APE	Apeiranthos	3.64	51	P	Pn	22 49 52.7	+0.6
APE	Apeiranthos	3.64	51	P	Pn	22 49 52.7	+0.6
LKR	Lokris	3.89	12	P	Pn	22 49 55.3	-0.1
LKR	Lokris	3.89	12	*e*PN	Pn	22 49 55.1	-0.3
LKR	Lokris	3.89	12	P	Pn	22 49 55.3	-0.1
AXAR	Agios Charalam	3.95	8	P	Pn	22 49 56.4	+0.1
AXAR	Agios Charalam	3.95	8	P	Pn	22 49 56.4	+0.1
EVR	Evrytania	4.07	358	P	Pn	22 49 59.6	+1.6
EVR				S	Sn	22 50 45.3	-0.2
EVR	Evrytania	4.07	358	*e*PN	Pn	22 49 58.8	+0.8
EVR	Evrytania	4.07	358	*e*Pn	Pn	22 49 58.8	+0.8
EVR	Evrytania	4.07	358	P	Pn	22 49 59.6	+1.6
EVR				S	Sn	22 50 45.3	-0.2
LKD2	Lefkada island	4.08	345	*e*PN	Pn	22 49 58.4	+0.4
LKD2	Lefkada island	4.08	345	*e*Pn	Pn	22 49 58.4	+0.4
MAKR	Makrakomi, Fth	4.16	2	P	Pn	22 50 00.5	+1.3
MAKR	Makrakomi, Fth	4.16	2	P	Pn	22 50 00.5	+1.3
AGG	Agios Georgios	4.18	4	P	Pn	22 50 00.1	+0.6
AGG				S	Sn	22 50 46.6	-1.6
AGG	Agios Georgios	4.18	4	*e*PN	Pn	22 50 00.1	+0.6
AGG	Agios Georgios	4.18	4	P	Pn	22 50 00.1	+0.6
AGG				S	Sn	22 50 46.6	-1.6

*IDC **09** 22:49:05.2±1.1, 26°06S×68°91W, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.8/16, mbtmp3.8/5, ML3.8/1, Error ellipse: s-maj=48.3km s-min=31.2km az=164.0*

*GUC **09** 22:49:06.1±0.6, 26°19S×69°08W, h153km±26km, ML4.3*

*ISCJB **09** 22:49:11.5±0.7, 26°02S±0°04×69°26W±0°09, h101km, mb3.6/4, Error ellipse: s-maj=11.0km s-min=5.4km az=2.0*

ISC 09 22:49:12.0±1.1, 26°04S±0°06×69°3W±0°1, h101km, n16, σ1§85/12, mb3.6/4, 1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPCH	**Copiapo**	**1.60**	**215**	ǁ*i*P	**Pn**	**22 49 37.5**	**-2.1**
CPCH				*i* S	**Sn**	**22 50 01.3**	**+0.9**
CDCH	**Caldera**	**1.68**	**232**	*e*P	**Pn**	**22 49 39.5**	**-1.1**
CDCH				*i* S	**Sn**	**22 50 04.4**	**+2.1**
CDCH				AML	AML	22 50 06.4	
	comp=N,2μm,0.6s						
ANCH	**Antofagasta**	**2.55**	**337**	*e*P	**Pn**	**22 49 51.4**	**-0.4**
ANCH				*i* S	**Sn**	**22 50 25.2**	**+2.9**
ANCH				AML	AML	22 50 28.8	
	comp=N,1μm,0.4s						
CEN1	**Los Morros**	**2.76**	**343**	*e*P	**Pn**	**22 49 51.9**	**-2.9**
CEN1				*i* S	**Sn**	**22 50 27.8**	**+0.3**
CEN1				AML	AML	22 50 31.8	
	comp=N,1μm,0.7s						
LCO	**Las Campanas**	**3.20**	**202**	AML	AML	22 50 54.8	
	comp=E,364nm,0.3s						
CFAA	**Coronel Fontan**	**5.62**	**170**	Pn	**Pn**	**22 50 33.9**	**+0.7**
	comp=E,0.3nm,0.3s,baz=358,slow=13,SNR=10.0						
CFAA				Sn	Sn	22 51 40.1	+3.6
	comp=E,0.1nm,0.3s,baz=290,slow=23,SNR=3.8						
LPAZ	**La Paz**	**9.77**	**7**	Pn	**Pn**	**22 51 30.6**	**+0.3**
	comp=E,0.2nm,0.3s,baz=193,slow=7.2,SNR=4.8						
SIV	**San Ignacio**	**12.62**	**39**	Pn	Pn	22 52 02.8	-5.3
	comp=E,0.3nm,0.3s,baz=256,slow=12,SNR=5.3						
BDFB	**Brasilia**	**22.41**	**67**	P	**P**	**22 54 01.4**	**-1.2**
	comp=E,1.7nm,0.5s,baz=130,slow=10,SNR=3.3						
NVAR	**Mina Array Bea**	**78.84**	**323**	P	P	23 01 11.9	+7.7
	comp=E,0.2nm,0.5s,baz=163,slow=6.5,SNR=2.9						
TORD	**Torodi Ar. Bea**	**79.26**	**70**	P	P	23 01 11.3	+4.6
	comp=E,2.0nm,0.6s,baz=270,slow=6.0,SNR=15						
YKA	**Yellowknife Ar**	**95.33**	**341**	P	P	23 02 30.2	+6.0
	comp=E,0.1nm,0.6s,baz=147,slow=4.2,SNR=3.7						
ASAR	**Alice Springs**	**125.71**	**206**	PKP	PKPdf	23 08 09.1	+6.6
	comp=E,0.3nm,0.7s,baz=141,slow=2.3,SNR=5.5						
WRA	**Warramunga Arr**	**128.84**	**209**	PKP	PKPdf	23 08 15.4	+6.9
	comp=E,0.3nm,0.8s,baz=154,slow=1.7,SNR=4.8						
ZALV	**Zalesovo Beam**	**146.18**	**28**	PKPbc	PKPab	23 08 46.5	+5.5
	comp=E,1.1nm,0.6s,baz=315,slow=3.6,SNR=8.1						
MKAR	**Makanchi Array**	**149.44**	**40**	PKPbc	**PKPab**	**23 08 55.5**	**+1.2**
	comp=E,0.7nm,0.6s,baz=320,slow=2.9,SNR=11						

*IDC **09** 23:19:00.1±0.9, 8°38S×121°31E, h0km, mb3.8/5, mb1 4.0/7, mb1mx3.8/21, mbtmp3.9/7, ML4.0/2, MS3.3/2, Ms1 3.3/2, ms1mx2.3/34, Error ellipse: s-maj=90.6km s-min=18.1km az=65.0*

*ISCJB **09** 23:19:03.1±0.7, 8°29S±0°07×121°82E±0°09, h33km, mb3.8/5, MS3.3/1, Error ellipse: s-maj=13.3km s-min=9.1km az=150.7*

*AUST **09** 23:19:03.0±6.5, 8°42S×121°65E, h2km, Error ellipse: s-maj=1.2km s-min=1.0km az=33.0*

ISC 09 23:19:05.3±0.8, 8°27S±0°09×121°7E±0°1, h35km, n18, σ1§47/16, mb3.9/5, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**1.96**	**225**	P	**Pn**	**23 19 35.6**	**-0.4**
	baz=1.8,SNR=10.0						
PCI	**Palu**	**7.55**	**346**	S	Sn	23 22 28.9	+11
	baz=7.7,SNR=3.0						
MTN	**Manton Dam**	**10.33**	**117**	P	**Pn**	**23 21 31.9**	**+0.7**
	baz=10,SNR=4.6						
FITZ	**Fitzroy Crossi**	**10.50**	**159**	Pn	**Pn**	**23 21 32.9**	**-0.5**
	0.6nm,0.3s,baz=357,slow=8.3,SNR=16						
FITZ				Sn	**Sn**	**23 23 28.8**	**-1.0**
	0.2nm,0.3s,baz=90,slow=14,SNR=3.4						
FITZ	**Fitzroy Crossi**	**10.50**	**159**	P	**Pn**	**23 21 33.9**	**+0.5**
	baz=10,SNR=14						
KDU	**Kakadu**	**11.47**	**113**	P	**Pn**	**23 21 45.9**	**-0.8**
	baz=12,SNR=5.9						
DAV	**Davao City (W)**	**15.72**	**14**	LR	LR	23 28 14.9	
	comp=Z,83nm,21.9s,baz=241,slow=35						
WRA	**Warramunga Arr**	**16.86**	**135**	Pn	**Pn**	**23 22 54.4**	**-4.5**
	0.4nm,0.3s,baz=307,slow=14,SNR=13						
WRA				Sn	Sn	23 25 54.0	-11
	0.1nm,0.3s,baz=311,slow=25,SNR=3.7						
MEEK	**Meekatharra**	**18.50**	**189**	P	**Pn**	**23 23 19.5**	**+0.6**
	baz=18,SNR=7.3						
ASAR	**Alice Springs**	**19.27**	**144**	P	**Pn**	**23 23 27.6**	**-0.7**
	0.8nm,0.3s,baz=329,slow=14,SNR=61						
MORW	**Morawa**	**21.36**	**194**	P	**P**	**23 23 50.2**	**+0.4**
	baz=21,SNR=7.8						
NWAO	**Narrogin (SRO)**	**24.88**	**189**	LR	LR	23 33 01.0	
	comp=Z,106nm,21.8s,baz=180,slow=34						
STKA	**Stephens Creek**	**29.90**	**144**	P	**P**	**23 25 10.8**	**+0.8**
	1.1nm,0.7s,baz=311,slow=9.8,SNR=3.6						
SONM	**Songino Array**	**57.48**	**348**	P	**P**	**23 28 51.6**	**+0.6**
	0.8nm,0.8s,baz=165,slow=7.7,SNR=6.6						
MKAR	**Makanchi Array**	**65.07**	**331**	P	**P**	**23 29 42.2**	**-0.1**
	0.8nm,0.6s,baz=134,slow=7.8,SNR=10						
ZALV	**Zalesovo Beam**	**69.35**	**338**	P	**P**	**23 30 08.6**	**-0.6**
	0.4nm,0.4s,baz=129,slow=4.2,SNR=4.2						
VNDA	**Vanda**	**72.30**	**172**	P	**P**	**23 30 27.4**	**+0.5**
	0.5nm,0.4s,baz=288,slow=8.2,SNR=8.3						
TORD	**Torodi Ar. Bea**	**120.96**	**280**	PKP	**PKPdf**	**23 37 53.7**	**-1.4**
	0.4nm,0.7s,baz=74,slow=1.1,SNR=3.0						

*IDC **09** 23:22:13.5±1.4, 22°74S×171°00E, h0km, mb4.1/8, mb1 4.3/9, mb1mx4.1/19, mbtmp4.1/9, ML3.9/1, MS3.4/2, Ms1 3.4/2, ms1mx2.9/29, Error ellipse: s-maj=60.0km s-min=20.8km az=162.0*

*SZGRF **09** 23:22:16.3, 22°57S×172°92E, h33km, Southeast of Loyalty Islands*

*ISCJB **09** 23:22:18.6±1.0, 22°7S±0°3×170°86E±0°06, h42km, mb4.1/8, Error ellipse: s-maj=38.6km s-min=7.9km az=179.3*

ISC 09 23:22:19.7±1.1, 22°7S±0°3×170°91E±0°08, h42km, n58, σ0§88/62, mb4.2/8, 2C-1D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAYA	**Yate Dam**	**3.77**	**278**	*e*P	**Pn**	**23 23 17.5**	**+2.1**
BAYA				*e*S	**Sn**	**23 23 58.0**	**-0.5**
DZM	**Mont Dzumac**	**4.18**	**278**	Pn	**Pn**	**23 23 20.8**	**-0.3**
	6.7nm,0.3s,baz=103,slow=17,SNR=146						
DZM				Sn	**Sn**	**23 24 09.8**	**+0.9**
	21nm,0.3s,baz=156,slow=20,SNR=12						
DZM				LR	LR	23 24 46.0	
	comp=Z,271nm,20.5s,baz=44,slow=36						
NOUC	**Port Laguerre**	**4.31**	**277**	*e*P	**Pn**	**23 23 22.0**	**-0.8**
NOUC				*e*S	**Sn**	**23 24 10.0**	**-1.8**
URZ	**Urewera**	**16.38**	**162**	LR	LR	23 31 25.2	
	comp=Z,228nm,18.2s,baz=129,slow=34						
ASAR	**Alice Springs**	**33.97**	**261**	P	**P**	**23 28 58.7**	**-0.8**
	1.6nm,0.7s,baz=90,slow=9.3,SNR=16						
WRA	**Warramunga Arr**	**34.13**	**268**	P	**P**	**23 29 00.6**	**-0.3**
	0.5nm,0.3s,baz=97,slow=8.6,SNR=14						
FITZ	**Fitzroy Crossi**	**42.56**	**268**	P	**P**	**23 30 12.7**	**+1.0**
	3.9nm,0.7s,baz=129,slow=10.0,SNR=9.9						
PETK	**Petropavlovsk-**	**76.37**	**352**	P	**P**	**23 34 04.1**	**-0.1**
	3.3nm,0.8s,baz=168,slow=8.1,SNR=4.7						
CMAR	**Chiang Mai Arr**	**81.35**	**294**	P	**P**	**23 34 34.4**	**+2.0**
	0.5nm,0.3s,baz=141,slow=4.2,SNR=6.8						
NVAR	**Mina Array Bea**	**89.94**	**48**	P	**P**	**23 35 14.6**	**-0.3**
	1.0nm,0.7s,baz=224,slow=8.2,SNR=5.8						
SONM	**Songino Array**	**90.92**	**323**	P	**P**	**23 35 18.8**	**-0.3**
	1.5nm,0.9s,baz=136,slow=5.6,SNR=9.9						
ILAR	**Eielson Array**	**93.08**	**17**	P	**P**	**23 35 29.1**	**+0.5**
	0.2nm,0.7s,baz=217,slow=4.3,SNR=3.9						
ARCES	**ARCESS Array B**	**128.81**	**345**	PKP	**PKPdf**	**23 41 21.4**	**-0.5**
	2.2nm,0.9s,baz=46,slow=5.2,SNR=7.0						
OKC	**Ostrava-Krasne**	**145.50**	**328**	*e*PKPdf	**PKPab**	**23 41 53.8**	**+0.3**
OKC				*ex*	x	23 41 57.2	
BSEG	**Bad Segeberg**	**145.55**	**340**	*e*PKPbc	**PKPab**	**23 41 53.6**	**+0.1**
KRLC	**Kraliky**	**145.99**	**330**	*e*PKPdf	**PKPab**	**23 41 55.1**	**-0.3**
DPC	**Dobruska-Polom**	**146.01**	**331**	*e*PKPdf	**PKPab**	**23 41 55.3**	**-0.1**
VYHS	**Vyhne**	**146.03**	**326**	*e*	**PKPab**	**23 41 55.7**	**+0.1**
UPC	**Upice**	**146.04**	**331**	*e*PKPdf	**PKPab**	**23 41 55.2**	**-0.3**
PVCC	**Panska Ves**	**146.66**	**332**	*e*PKPdf	**PKPab**	**23 41 58.6**	**+0.8**
BRG	**Berggiesshubel**	**146.66**	**333**	*i* P	**PKPbc**	**23 41 56.9**	**+0.2**
	8.4nm,0.9s						
BRG				*e*		23 42 00.5	
	6.4nm,1.1s						
BRG	**Berggiesshubel**	**146.66**	**333**	*e*PKPbc	**PKPab**	**23 41 57.3**	**-0.6**
CLL	**Collm**	**146.71**	**335**	*e*PKPbc	**PKPbc**	**23 41 57.2**	**+0.4**
CLL	**Collm**	**146.71**	**335**	ǁ*i*PKP	**PKPbc**	**23 41 57.1**	**+0.3**
	comp=Z,7.0nm,0.6s						
CLL				*e*		23 42 00.0	
CLL				*e*		23 42 14.0	
NRDL	**Niedersach Rie**	**146.82**	**338**	*e*PKPbc	**PKPbc**	**23 41 57.3**	**+0.3**
PRU	**Pruhonice**	**147.06**	**332**	*e*PKPdf	**PKPbc**	**23 41 57.5**	**-0.4**
NEUB	**Neuenburg**	**147.27**	**336**	*e*PKPbc	**PKPbc**	**23 41 59.1**	**+0.7**
CLZ	**Clausthal**	**147.27**	**338**	*e*PKPbc	**PKPbc**	**23 41 59.1**	**+0.6**
TANN	**Tannenbergstha**	**147.62**	**334**	*e*PKPbc	**PKPbc**	**23 42 00.0**	**+0.5**
IBBN	**Ibbenburen**	**147.74**	**341**	*e*PKPbc	**PKPbc**	**23 42 00.1**	**+0.5**
NKC	**Novy Kostel**	**147.77**	**334**	*e*PKPdf	**PKPbc**	**23 42 00.4**	**+0.6**
NKC				*ex*	x	23 42 04.2	
MOX	**Moxa**	**147.78**	**335**	*e*PKPbc	**PKPbc**	**23 42 00.2**	**+0.4**
IDI	**Anoyia**	**147.91**	**301**	*e*P	**PKPab**	**23 42 02.4**	**-1.0**
KHC	**Kasperske Hory**	**148.12**	**331**	*e*PKPdf	**PKPbc**	**23 42 01.1**	**+0.3**
ROTZ	**Rotzenmuhle**	**148.23**	**333**	*e*PKPbc	**PKPbc**	**23 42 01.7**	**+0.6**
GEC2	**GERESS Array S**	**148.28**	**331**	*e*PKPbc	**PKPbc**	**23 42 01.9**	**+0.6**
GERES	**GERESS Array B**	**148.28**	**331**	PKPbc	**PKPbc**	**23 42 01.6**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=17,slow=1.4,SNR=21						
WET	**Wettzell**	**148.42**	**332**	*e*PKPbc	**PKPbc**	**23 42 02.2**	**+0.6**
VAM	**Vamos**	**148.43**	**301**	*e*P	**PKPbc**	**23 42 02.6**	**+0.6**
DID	**Didima**	**148.57**	**305**	*e*P	**PKPbc**	**23 42 00.8**	**-1.6**
LTK	**Loutraki**	**148.60**	**306**	*e*P	**PKPbc**	**23 42 00.7**	**-1.7**
GRF	**Grafenberg Arr**	**148.69**	**334**	*e*PKPbc	**PKPbc**	**23 42 01.5**	**-0.8**
KALE	**Kalithea**	**149.08**	**308**	*e*P	**PKPbc**	**23 42 02.0**	**-1.7**
GUR	**Goura**	**149.10**	**307**	*e*P	**PKPbc**	**23 42 03.2**	**-0.6**
TRIZ	**Trizonia**	**149.14**	**308**	*e*P	**PKPbc**	**23 42 03.6**	**-0.1**
LAKA	**Lakka**	**149.26**	**307**	*e*P	**PKPbc**	**23 42 04.8**	**+0.7**
CRES	**Cresnjev**	**149.52**	**325**	*i* PKPbc	**PKPbc**	**23 42 05.0**	**+0.6**
ITM	**Ithomi**	**149.66**	**305**	*e*P	**PKPbc**	**23 42 03.7**	**-1.4**
BOJS	**Bojanci**	**149.84**	**325**	*i* PKPbc	**PKPbc**	**23 42 06.2**	**+0.9**
LJU	**Ljubljana**	**149.86**	**326**	*i* PKPbc	**PKPbc**	**23 42 06.0**	**+0.8**
LJU				*i* pPKPbc	**PKPab**	**23 42 09.2**	**-1.6**
CRNS	**Crni Vrh**	**149.97**	**327**	*i* PKPbc	**PKPbc**	**23 42 05.9**	**+0.3**
CRNS				*i* pPKPbc	**PKPab**	**23 42 09.1**	**-2.2**
STU	**Stuttgart**	**150.22**	**335**	*e*PKPbc	**PKPbc**	**23 42 06.6**	**+0.5**
ABTA	**Abfaltersbach**	**150.36**	**329**	ǁ*i*PKPbc	**PKPbc**	**23 42 06.0**	**-0.6**
	comp=Z,3.3nm,0.6s						
WLF	**Walferdange**	**150.54**	**340**	*e*PKPbc	**PKPbc**	**23 42 07.6**	**+0.8**
BFO	**Black Forest**	**150.91**	**336**	*e*PKPbc	**PKPbc**	**23 42 07.9**	**+0.1**
FETA	**Feichten**	**150.97**	**331**	ǁ*i*PKPbc	**PKPbc**	**23 42 08.2**	**+0.1**
	comp=Z,12nm,1.1s						
DAVOX	**Davos/Dischmat**	**151.52**	**332**	PKPbc	**PKPbc**	**23 42 09.9**	**+0.5**
	comp=Z,9.1nm,0.8s,baz=73,slow=1.3,SNR=13						
TORD	**Torodi Ar. Bea**	**166.02**	**229**	PKP	**PKPdf**	**23 42 21.0**	**0.0**
	comp=Z,1.0nm,0.9s,baz=143,slow=0.8,SNR=4.9						

ISC 09 23:28:10.3±0.7, 7°21S×125°23E, h348km±116km, mb3.1/3, mb1 3.0/6, mb1mx2.8/20, mbtmp2.9/6, Error ellipse: s-maj=148.3km s-min=29.3km az=51.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.83**	**178**	P	Pn	23 30 37.5	-0.7
	0.2nm,0.3s,baz=4.2,slow=8.5,SNR=14						
WRA	**Warramunga Arr**	**15.44**	**146**	P	P	23 31 30.0	+0.1
	0.1nm,0.3s,baz=324,slow=11,SNR=8.4						
ASAR	**Alice Springs**	**18.36**	**154**	P	P	23 32 01.6	+0.3
	0.3nm,0.3s,baz=330,slow=9.9,SNR=19						
STKA	**Stephens Creek**	**28.90**	**150**	P	P	23 33 38.0	-0.3
	0.9nm,0.6s,baz=333,slow=11,SNR=3.9						
MKAR	**Makanchi Array**	**65.89**	**329**	P	P	23 38 20.0	+0.4
	0.6nm,0.5s,baz=124,slow=8.0,SNR=13						
ZALV	**Zalesovo Beam**	**69.76**	**336**	P	P	23 38 42.8	-0.5
	0.2nm,0.4s,baz=127,slow=9.6,SNR=2.3						

*IDC **09** 23:39:51.1±0.8, 12°56N×123°01E, h0km, mb3.8/11, mb1 4.0/12, mb1mx3.9/25, mbtmp3.8/12, ML4.0/1, MS3.7/19, Ms1 3.7/19, ms1mx3.6/41, Error ellipse: s-maj=30.0km s-min=14.7km az=69.0*

*ISCJB **09** 23:39:53.0±0.3, 12°70N±0°03×123°03E±0°04, h19km, mb4.0/17, MS3.7/19, Error ellipse: s-maj=6.7km s-min=3.5km az=145.3*

*MAN **09** 23:39:52, 12°73N×123°06E, h10km, mb5.1, ML4.0, MS4.1*

MAN INTENSITY III - MASBATE MASBATE; CABID-AN SORSOGON; SAN BENON IROSIN SORSOGON.

*NEIC **09** 23:39:55.7±0.4, 12°61N×123°15E, h35km, mb4.5/4, Error ellipse: s-maj=14.2km s-min=7.7km az=61.0*

NEIC Felt [III PIVS] at Masbate. Also felt [III PIVS] at Irosin and Sorsogon; [II PIVS] at Legaspi, Santa Misericordia and Santo Domingo, Luzon.

*BJI **09** 23:39:55.0, 13°19N×123°43E, h40km, mb4.0/3*

ISC 09 23:39:54.1±0.5, 12°71N±0°04×123°08E±0°04, h19km, n68, σ1§30/55, mb3.9/17, MS3.7/19, 3C-4D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	**Masbate**	**0.64**	**123**	*e*P	**Pb**	**23 40 04.8**	**-1.7**
MMPH				*i* S	**Sg**	**23 40 15.2**	**-0.1**
AUQP	**San Andres**	**0.73**	**327**	*e*P	**Pb**	**23 40 06.8**	**-1.3**
OTRP	**Odiongan**	**1.09**	**252**	*e*P	**Pn**	**23 40 12.8**	**-1.4**
RCP	**Roxas**	**1.19**	**196**	ǁ*e*P	**Pn**	**23 40 14.3**	**-1.4**
GQP	**Guinayangan**	**1.34**	**333**	ǁ*e*P	**Pn**	**23 40 16.2**	**-1.5**
GQP				*e*S	**Sn**	**23 40 35.2**	**+0.2**
CNP	**Catarman**	**1.56**	**97**	*e*P	**Pb**	**23 40 20.8**	**-1.5**
SJMP	**San Jose**	**1.93**	**263**	*e*P	**Pn**	**23 40 25.4**	**-0.5**
LQP	**Lukban**	**2.05**	**313**	*e*P	**Pn**	**23 40 26.7**	**-1.0**
GUIM	**Jordan**	**2.12**	**193**	*e*P	**Pb**	**23 40 31.4**	**-0.5**
OCLP	**Ormoc**	**2.23**	**138**	*e*P	**Pn**	**23 40 30.8**	**+0.8**
PLP	**Palo**	**2.41**	**129**	ǁ*e*P	**Pn**	**23 40 32.2**	**-0.4**
TGY	**Tagaytay City**	**2.50**	**304**	Pn	**Pn**	**23 40 34.1**	**+0.3**
TGY	**Tagaytay City**	**2.50**	**304**	Pn	**Pn**	**23 40 34.1**	**+0.3**
	34nm,0.3s,baz=153,slow=4.3,SNR=19						
LLP	**Lapu-Lapu**	**2.53**	**160**	ǁ*e*P	**Pn**	**23 40 34.7**	**+0.5**
LLP				*e*S	**Sn**	**23 41 06.6**	**+2.0**
CUYO	**Cuyo Island**	**2.73**	**228**	*e*P	**Pn**	**23 40 36.6**	**-0.4**
LUBP	**Lubang**	**2.94**	**291**	*e*P	**Pn**	**23 40 38.7**	**-1.0**
TBP	**Tagbilaran**	**3.10**	**166**	*e*P	**Pn**	**23 40 43.2**	**+1.3**
MSLP	**Maasin**	**3.10**	**145**	*e*P	**Pn**	**23 40 42.9**	**+0.9**
SNPH	**Sibulan**	**3.35**	**177**	ǁ*i*P	Pn	23 40 35.0	-10
PCPH	**Palayan**	**3.43**	**326**	ǁ*e*P	**Pn**	**23 40 45.6**	**-0.9**
PCPH				*e*S	**Sb**	**23 41 39.9**	**+4.4**
CAUP	**Cauayan**	**4.38**	**344**	*e*P	**Pn**	**23 40 59.2**	**-0.5**
CTBH	**Cotabato--PC H**	**5.57**	**168**	ǁ*i*P	**Pn**	**23 41 17.5**	**+1.4**
GUMO	**Guam**	**21.24**	**85**	*e*P	**P**	**23 44 36.2**	**-3.0**
GUMO	**Guam**	**21.24**	**85**	LR	LR	23 51 00.4	
	comp=Z,175nm,21.1s,baz=84,slow=31						
JNU	**Nakatsue**	**21.54**	**18**	LR	LR	23 53 52.4	
	comp=Z,115nm,20.5s,baz=187,slow=39						
KMI	**Kunming**	**22.82**	**306**	P	**P**	**23 44 54.1**	**-2.2**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**23.93**	**287**	P	**P**	**23 45 07.2**	**0.0**
CMAR	**Chiang Mai Arr**	**23.93**	**287**	P	**P**	**23 45 07.2**	**0.0**
	comp=Z,0.5nm,0.4s,baz=99,slow=7.1,SNR=6.0						
CMAR				LR	LR	23 55 00.5	
	comp=Z,78nm,19.0s,baz=95,slow=38						
KSAR	**Wonju Array Be**	**25.00**	**9**	P	**P**	**23 45 18.1**	**+1.4**
KSRS	**Korea Array**	**25.02**	**9**	P	**P**	**23 45 18.1**	**+1.3**
	comp=Z,1.4nm,0.7s,baz=185,slow=10,SNR=6.5						
KSRS				LR	LR	23 57 06.2	
	comp=Z,95nm,18.7s,baz=354,slow=41						
PSI	**Prapat**	**25.85**	**250**	LR	LR	23 55 41.9	
	comp=Z,122nm,19.6s,baz=55,slow=37						
LZH	**Lanzhou**	**29.02**	**327**	*e*P	P	23 46 02.0	+8.9
LZH				pP	pP	23 46 12.5	+14
LZH				sP	sP	23 46 16.5	+15
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
USRK	**Ussuriysk Arra**	**32.30**	**12**	P	**P**	**23 46 24.0**	**+2.3**
	comp=Z,3.7nm,0.7s,baz=198,slow=11,SNR=9.0						
LSA	**Lhasa**	**34.07**	**305**	P	**P**	**23 46 38.6**	**+0.6**
WRA	**Warramunga Arr**	**34.29**	**161**	P	**P**	**23 46 37.2**	**-2.1**
WRA	**Warramunga Arr**	**34.29**	**161**	P	**P**	**23 46 37.2**	**-2.1**
	comp=Z,1.2nm,0.8s,baz=341,slow=9.6,SNR=5.3						
ULN	**Ulaanbaatar**	**37.52**	**342**	*e*P	**P**	**23 47 08.2**	**+1.2**
	comp=Z,3.0nm,0.8s						
AS31	**Alice Springs**	**37.67**	**164**	*e*P	**P**	**23 47 07.1**	**-1.2**
ASAR	**Alice Springs**	**37.67**	**164**	P	**P**	**23 47 07.6**	**-0.7**
ASAR	**Alice Springs**	**37.67**	**164**	P	**P**	**23 47 07.6**	**-0.7**
	comp=Z,1.3nm,0.9s,baz=346,slow=7.0,SNR=16						
ASAR				LR	LR	00 02 47.7	
	comp=Z,101nm,18.5s,baz=359,slow=37						
SONM	**Songino Array**	**37.69**	**342**	P	**P**	**23 47 08.7**	**+0.3**
SONM	**Songino Array**	**37.69**	**342**	P	**P**	**23 47 08.7**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=167,slow=8.4,SNR=6.1						
SONM				LR	LR	00 03 06.3	
	comp=Z,131nm,20.0s,baz=156,slow=37						
NWAO	**Narrogin (SRO)**	**45.72**	**187**	*e*P	**P**	**23 48 13.2**	**-0.8**
BBOO	**Buckleboo**	**46.93**	**165**	*e*P	**P**	**23 48 22.3**	**-1.3**
STKA	**Stephens Creek**	**47.75**	**159**	*e*P	P	23 48 36.2	+6.2
STKA	**Stephens Creek**	**47.75**	**159**	P	**P**	**23 48 29.7**	**-0.3**
	comp=Z,1.

MLv3.7/5
IDC ***10*** *00:22:04.5±2.7,8°58S×121°21E,h44km±27km,mb3.6/4, mb1 3.8/8,mb1mx3.6/23,mbtmp3.7/8,ML3.5/4,Error ellipse: s-maj=94.0km s-min=16.0km az=63.0*
ISC 10 00:22:03.7±0.7,8°38S±0.05×121°86E±0.06,h35km,n14, σ2§40/19,mb3.8/4,Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.46**	**124**	P	**Pn**	**00 22 12.7**	**-1.0**
MMRI				S	**Sn**	**00 22 20.8**	**+0.1**
WSI	**Waingapu**	**2.00**	**230**	P	**Pn**	**00 22 34.0**	**-1.0**
WSI				S	**Sn**	**00 22 58.7**	**-0.2**
BBSI	**Bau Bau**	**2.96**	**14**	P	**Pn**	**00 22 47.5**	**-0.7**
BKSI	**Bulukumba**	**3.49**	**330**	P	**Pn**	**00 22 54.1**	**-1.4**
KAPI	**Kappang** 0.4nm,0.3s,baz=182,slow=11,SNR=5.6	**3.94**	**328**	P	**Pn**	**00 23 01.0**	**-0.8**
KDI	**Kendari**	**4.46**	**10**	P	**Pn**	**00 23 08.7**	**-0.1**
FITZ	**Fitzroy Crossi** 0.4nm,0.3s,baz=4.9,slow=9.0,SNR=13	**10.34**	**160**	P	**Pn**	**00 24 31.5**	**+1.9**
FITZ				S	**Sn**	**00 26 25.4**	**+1.0**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=310,slow=12,SNR=6.4	**16.68**	**135**	P	**P**	**00 26 00.2**	**+3.3**
WRA				S	**Sn**	**00 28 54.4**	**-4.7**
ASAR	**Alice Springs** 0.4nm,0.3s,baz=326,slow=12,SNR=36	**19.09**	**144**	P	**Pn**	**00 26 25.8**	**+1.3**
ASAR				S	**Sn**	**00 29 51.1**	**-6.3**
STKA	**Stephens Creek** 1.4nm,0.7s,baz=319,slow=8.1,SNR=3.8	**29.72**	**145**	P	**P**	**00 28 08.8**	**+2.1**
SONM	**Songino Array** 0.5nm,0.6s,baz=162,slow=7.9,SNR=6.0	**57.62**	**348**	P	**P**	**00 31 50.4**	**+0.1**
MKAR	**Makanchi Array** 0.8nm,0.7s,baz=138,slow=7.3,SNR=13	**65.23**	**331**	P	**P**	**00 32 40.8**	**-0.9**
ZALV	**Zalesovo Beam** 0.5nm,0.5s,baz=129,slow=5.7,SNR=3.3	**69.51**	**338**	P	**P**	**00 33 07.6**	**-0.9**
TORD	**Torodi Ar. Bea** 0.5nm,1.1s,baz=92,slow=2.6,SNR=2.4	**121.13**	**280**	PKP	**PKPdf**	**00 40 52.5**	**-1.3**

ISCJB ***10*** *00:42:04.3±0.6,44°35N±0°03×129°26W±0°07,h10km, mb3.6/6,MS3.3/8,Error ellipse: s-maj=7.5km s-min=4.8km az=2.8*
IDC ***10*** *00:42:05.6±1.4,44°42N×128°91W,h0km,mb3.6/6, mb1 3.8/10,mb1mx3.6/31,mbtmp3.5/10,ML3.2/4,MS3.4/12, Ms1 3.4/12,ms1mx3.1/36,Error ellipse: s-maj=37.7km s-min=15.2km az=42.0*
NEIC ***10*** *00:42:07.2±1.0,44°39N×129°21W,h10km,mb4.1/2,Error ellipse: s-maj=15.4km s-min=8.0km az=223.0*
ISC 10 00:42:06.8±0.9,44°32N±0°07×129°10W±0°09,h10km, n207,σ1§34/197,mb3.8/6,MS3.3/8,78C-72D,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COR	**Corvallis**	**4.16**	**84**	*e*Pn	**Pn**	**00 43 09.3**	**-0.9**
NLWA	**Neilton Lookou**	**4.78**	**48**	*e*Pn	**Pn**	**00 43 18.7**	**-0.1**
NLWA				*e*Sn	**Sn**	**00 44 14.9**	**+0.7**
HUMO	**Hull Mountain**	**4.79**	**109**	*e*Pn	**Pn**	**00 43 20.1**	**+1.1**
HUMO				*e*Sn	**Sn**	**00 44 12.2**	**-2.3**
YBH	**Yreka Blue Hor**	**5.35**	**117**	*e*Pn	**Pn**	**00 43 28.2**	**+1.5**
YBH	**Yreka Blue Hor** 0.3nm,0.3s,baz=310,slow=9.0,SNR=9.4	**5.35**	**117**	Pn	**Pn**	**00 43 28.1**	**+1.4**
YBH				LR	LR	00 45 22.1	
LON	**Longmire**	**5.67**	**62**	*e*Pn	**Pn**	**00 43 31.6**	**+0.4**
PGC	**Sidney**	**5.83**	**40**	*e*Pn	**Pn**	**00 43 33.1**	**-0.1**
PGC				*e*Sn	**Sn**	**00 44 39.8**	**-0.3**
MOD	**Modoc**	**6.87**	**107**	*e*Pn	**Pn**	**00 43 50.2**	**+2.4**
BMO	**Blue Mountains**	**8.44**	**82**	*e*Pn	**Pn**	**00 44 08.1**	**-1.0**
WCN	**Washoe City**	**8.59**	**122**	*e*Pn	Pn	00 44 16.4	+5.2
NEW	**Newport** comp=Z,255nm,18.8s,baz=242,slow=33	**9.18**	**60**	LR	LR	00 47 05.8	
C11A	**Tepee Creek (N** baz=9.6	**9.60**	**64**	⇓P	**Pn**	**00 44 25.5**	**+0.5**
BMN	**Battle Mountai**	**9.61**	**110**	*e*Pn	Pn	00 44 28.4	+3.2
MFID	**Camas Ranch**	**9.63**	**91**	*e*Pn	Pn	00 44 32.7	+7.2
MFID	**Camas Ranch** baz=9.7	**9.63**	**91**	⇓P	**Pn**	**00 44 26.8**	**+1.3**
G12A	**Big Creek, Yel** baz=9.9	**9.84**	**80**	⇑P	**Pn**	**00 44 29.6**	**+1.2**
F12A	**Elk City** baz=9.9	**9.91**	**77**	⇓P	**Pn**	**00 44 30.5**	**+1.2**
D12A	**Red Ives Fores** baz=10.0	**10.00**	**69**	⇑P	**Pn**	**00 44 32.5**	**+1.9**
NVAR	**Mina Array Bea**	**10.02**	**122**	Pn	**Pn**	**00 44 33.5**	**+2.6**
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=288,slow=10,SNR=4.4	**10.02**	**122**	Pn	**Pn**	**00 44 33.5**	**+2.6**
NVAR				LR	LR	00 48 17.2	
I12A	**Atlanta** baz=10,SNR=6.9	**10.07**	**88**	⇑P	**Pn**	**00 44 33.8**	**+2.2**
H12A	**Diamond D Ranc** baz=10	**10.19**	**84**	⇑P	**Pn**	**00 44 35.2**	**+1.9**
MLAC	**Mammoth Lakes** baz=10	**10.23**	**127**	⇓P	**Pn**	**00 44 36.1**	**+2.2**
F13A	**Darby** baz=11	**10.55**	**77**	⇓P	**Pn**	**00 44 40.1**	**+1.9**
D13A	**Huson** baz=11	**10.61**	**70**	⇓P	**Pn**	**00 44 40.6**	**+1.7**
G13A	**Cobalt** baz=11,SNR=8.6	**10.61**	**81**	⇑P	**Pn**	**00 44 41.1**	**+2.1**
HLID	**Hailey**	**10.62**	**89**	*e*Pn	Pn	00 44 42.4	+3.3
HLID	**Hailey** baz=11,SNR=16	**10.62**	**89**	⇓P	**Pn**	**00 44 41.7**	**+2.6**
H13A	**Challis** baz=11	**10.62**	**83**	⇓P	**Pn**	**00 44 41.8**	**+2.7**
C13A	**Hot Springs** baz=11	**10.65**	**66**	⇑P	**Pn**	**00 44 41.2**	**+1.8**
I13A	**Wildhorse Cree** baz=11	**10.78**	**87**	⇑P	**Pn**	**00 44 43.7**	**+2.3**
J13A	**Cove Ranch, Pi** baz=11,SNR=7.8	**10.82**	**90**	⇑P	**Pn**	**00 44 44.9**	**+3.0**
MSO	**Missoula**	**10.92**	**71**	*e*Pn	**Pn**	**00 44 45.8**	**+2.6**
MSO	**Missoula** baz=11	**10.92**	**71**	⇓P	**Pn**	**00 44 44.8**	**+1.6**
G14A	**Jackson** baz=11	**11.16**	**80**	⇓P	**Pn**	**00 44 48.5**	**+2.0**
C14A	**Swan Lake** baz=11	**11.21**	**67**	⇑P	**Pn**	**00 44 48.4**	**+1.3**
H14A	**Leadore** baz=11	**11.25**	**83**	⇑P	**Pn**	**00 44 50.0**	**+2.2**
D14A	**Greenough** baz=11	**11.25**	**70**	⇑P	**Pn**	**00 44 49.3**	**+1.6**
I14A	**Mackay** baz=11	**11.26**	**87**	⇑P	**Pn**	**00 44 49.9**	**+2.0**
SLMT	**Seeley Lake**	**11.29**	**69**	*e*Pn	**Pn**	**00 44 50.9**	**+2.7**
J14A	**Carey** baz=11	**11.30**	**90**	⇓P	**Pn**	**00 44 50.4**	**+1.9**
CHMT	**Chamberlain Mo**	**11.40**	**71**	*e*Pn	**Pn**	**00 44 51.4**	**+1.6**
MCMT	**McKenzie Canyo**	**11.61**	**82**	Pn	**Pn**	**00 44 55.5**	**+2.9**
K14A	**Jones Ranch, D** baz=12	**11.71**	**93**	⇑P	**Pn**	**00 44 55.9**	**+1.9**
A14A	**Double T Ranch** baz=12	**11.73**	**61**	⇑P	**Pn**	**00 44 55.7**	**+1.4**
PKM	**Peak Mountain** baz=12	**11.81**	**140**	⇓P	**Pn**	**00 44 58.2**	**+2.8**
F15A	**Butte** baz=12	**11.84**	**77**	⇓P	**Pn**	**00 44 57.8**	**+1.9**
G15A	**Dillon** baz=12	**11.85**	**80**	⇑P	**Pn**	**00 44 58.0**	**+2.1**
LRM	**Limekiln Ridge**	**11.87**	**77**	*e*Pn	**Pn**	**00 44 58.0**	**+1.7**
C15A	**Salmond Ranch,** baz=12,SNR=5.6	**11.97**	**67**	⇓P	**Pn**	**00 44 59.9**	**+2.4**
J15A	**Blackfoot** baz=12	**12.07**	**89**	⇑P	**Pn**	**00 45 01.3**	**+2.4**
K15A	**Arbon** baz=12	**12.14**	**92**	⇑P	**Pn**	**00 45 02.1**	**+2.2**
A15A	**Johnson Ranch,** baz=12	**12.17**	**62**	⇓P	**Pn**	**00 45 01.3**	**+1.0**
G16A	**Moss Hill, Enn** baz=12	**12.33**	**80**	⇓P	**Pn**	**00 45 04.3**	**+1.8**
L15A	**Malad City** baz=12	**12.42**	**95**	⇑P	**Pn**	**00 45 05.8**	**+2.1**
BOZ	**Bozeman (W)**	**12.44**	**78**	*e*Pn	**Pn**	**00 45 05.6**	**+1.5**
BOZ	**Bozeman (W)** baz=12,SNR=5.1	**12.44**	**78**	⇓P	**Pn**	**00 45 04.8**	**+0.7**
D16A	**Dana Ranch, Ca** baz=13	**12.57**	**71**	⇑P	**Pn**	**00 45 07.8**	**+2.0**
I16A	**Newdale** baz=13,SNR=7.9	**12.67**	**86**	⇓P	**Pn**	**00 45 09.3**	**+2.1**
J16A	**Bone** baz=13	**12.68**	**89**	⇑P	**Pn**	**00 45 09.1**	**+1.8**
H16A	**Russell Place,** baz=13,SNR=6.2	**12.75**	**82**	⇑P	**Pn**	**00 45 10.3**	**+2.0**
K16A	**Soda Springs** baz=13	**12.79**	**91**	⇓P	Pn	00 45 12.3	+3.5
RRI2	**Red Ridge**	**12.88**	**88**	*e*Pn	**Pn**	**00 45 11.9**	**+1.8**
IMW	**Indian Meadow**	**13.06**	**85**	*e*Pn	**Pn**	**00 45 15.2**	**+2.6**
L16A	**Fish Haven** baz=13	**13.10**	**94**	⇓P	**Pn**	**00 45 15.0**	**+1.9**
TPAW	**Teton Pass**	**13.12**	**87**	*e*Pn	**Pn**	**00 45 15.8**	**+2.4**
F17A	**Fitzpatrick Pl** baz=13	**13.12**	**77**	⇓P	**Pn**	**00 45 14.7**	**+1.4**
D17A	**Six Diamond Ra** baz=13	**13.17**	**71**	⇓P	**Pn**	**00 45 15.2**	**+1.3**
C17A	**Wharram Farm,** baz=13	**13.18**	**69**	⇑P	**Pn**	**00 45 15.3**	**+1.3**
MOOW	**Moose Ponds**	**13.22**	**86**	*e*Pn	**Pn**	**00 45 17.1**	**+2.3**
B17A	**L&G Farms, Che** baz=13	**13.26**	**66**	⇓P	**Pn**	**00 45 16.2**	**+1.2**
H17A	**Grant Village** baz=13	**13.26**	**83**	⇓P	**Pn**	**00 45 17.4**	**+2.1**
I17A	**Pilgrim Ck.** baz=13	**13.32**	**85**	⇓P	**Pn**	**00 45 18.3**	**+2.3**
LOHW	**Long Hollow**	**13.35**	**87**	*e*Pn	**Pn**	**00 45 18.1**	**+1.8**
N17A	**Moffit Pass** baz=14	**13.86**	**98**	⇑P	**Pn**	**00 45 25.4**	**+1.9**
I18A	**Diamond G Ranc** baz=14	**13.89**	**86**	⇑P	**Pn**	**00 45 26.3**	**+2.4**
MVU	**Marysvale**	**13.93**	**109**	*e*Pn	**P**	**00 45 32.0**	**-0.6**
L18A	**Fontenelle, Gr** baz=14	**14.13**	**93**	⇓P	**Pn**	**00 45 28.0**	**+0.9**
DLBC	**Dease Lake** comp=Z,314nm,18.5s,baz=124,slow=36	**14.15**	**358**	LR	LR	00 50 26.2	
O17A	**Robinson Place** baz=14	**14.20**	**100**	⇑P	**Pn**	**00 45 29.7**	**+1.6**
BW06	**Boulder Array** baz=14	**14.26**	**89**	⇑P	**Pn**	**00 45 30.5**	**+1.6**
PDAR	**Pinedale Array**	**14.26**	**89**	Pn	**Pn**	**00 45 29.9**	**+1.0**
PDAR	**Pinedale Array** 0.0nm,0.3s,baz=278,slow=11,SNR=4.0	**14.26**	**89**	Pn	**Pn**	**00 45 29.9**	**+1.0**
C19A	**Slack Wire Ran** baz=14	**14.34**	**69**	⇓P	**Pn**	**00 45 31.2**	**+1.4**
D19A	**Cripps Ranch,** baz=14	**14.40**	**71**	⇓P	**Pn**	**00 45 31.5**	**+0.9**
E19A	**Rath Farm, Rou** baz=14	**14.43**	**74**	⇓P	**Pn**	**00 45 32.8**	**+1.7**
I19A	**Meeteetse** baz=14	**14.43**	**84**	⇑P	**Pn**	**00 45 33.1**	**+1.9**
J19A	**Crowheart** baz=14	**14.52**	**87**	⇑P	**Pn**	**00 45 33.5**	**+1.1**
L19A	**Farson** baz=15	**14.57**	**92**	⇓P	**Pn**	**00 45 34.2**	**+1.1**
N18A	**Larsen Ranch,** baz=15	**14.68**	**96**	⇑P	**Pn**	**00 45 35.7**	**+1.1**
P18A	**Preston Nutter** baz=15	**14.78**	**102**	⇑P	**Pn**	**00 45 37.1**	**+1.0**
SRU	**San Rafael**	**14.81**	**104**	*e*Pn	**P**	**00 45 42.8**	**+0.5**
SRU	**San Rafael** baz=15,SNR=11	**14.81**	**104**	⇑P	**Pn**	**00 45 38.6**	**+2.3**
U15A	**North Rim** baz=15,SNR=5.4	**15.02**	**116**	⇓P	**Pn**	**00 45 40.5**	**+1.2**
H20A	**Greybull** baz=15	**15.08**	**82**	⇓P	**Pn**	**00 45 41.2**	**+1.2**
O19A	**Miners Draw (B** baz=15	**15.31**	**98**	⇓P	**Pn**	**00 45 44.7**	**+1.7**
L20A	**Wamsutter** baz=15	**15.32**	**91**	⇓P	**Pn**	**00 45 44.1**	**+0.9**
P19A	**Cripple Cowboy** baz=16	**15.67**	**100**	⇑P	**Pn**	**00 45 49.5**	**+1.7**
N20A	**Spence Gulch,** baz=16	**15.73**	**96**	⇓P	**Pn**	**00 45 48.9**	**+0.3**
Q19A	**Hogan Spring (** baz=16	**15.76**	**103**	⇑P	**Pn**	**00 45 49.6**	**+0.8**
S18A	**Hurst Farm, Bl** baz=16,SNR=6.6	**15.85**	**108**	⇓P	**Pn**	**00 45 51.6**	**+1.4**
O20A	**White River Ci** baz=16	**16.00**	**98**	⇑P	**Pn**	**00 45 53.2**	**+1.2**
L21A	**Rawlins** baz=16	**16.03**	**91**	⇓P	**Pn**	**00 45 53.4**	**+1.0**
M21A	**Separation Pea** baz=16,SNR=5.4	**16.14**	**92**	⇓P	**Pn**	**00 45 55.5**	**+1.7**
D22A	**Cohagen** baz=16	**16.24**	**72**	⇑P	**Pn**	**00 45 55.4**	**+0.4**
I22A	**9 Mile Ranch,** baz=16	**16.25**	**84**	⇑P	**Pn**	**00 45 55.4**	**+0.3**
PV04	**Paradox Valley**	**16.26**	**104**	*e*Pn	**Pn**	**00 45 55.0**	**-0.4**
N21A	**Black Mountain** baz=16	**16.29**	**95**	⇓P	**Pn**	**00 45 56.1**	**+0.3**
Q20A	**Ridgley Place,** baz=16	**16.43**	**102**	⇓P	**Pn**	**00 45 58.1**	**+0.5**
K22A	**Casper** baz=16	**16.46**	**88**	⇑P	**Pn**	**00 45 58.6**	**+0.7**
PV01	**Paradox Valley**	**16.61**	**105**	*e*Pn	**Pn**	**00 45 59.9**	**0.0**
R20A	**Redvale** baz=17	**16.72**	**104**	⇓P	**Pn**	**00 46 01.0**	**-0.3**
M22A	**Cedar Creek Ra** baz=17	**16.75**	**92**	⇑P	**Pn**	**00 46 01.6**	**0.0**
P21A	**Newcastle** baz=17	**16.80**	**99**	⇑P	**Pn**	**00 46 02.0**	**-0.3**
S20A	**Disappointment** baz=17	**16.91**	**105**	⇑P	**Pn**	**00 46 03.4**	**-0.3**
N22A	**Wattenberg Ran** baz=17	**17.04**	**94**	⇑P	**Pn**	**00 46 04.8**	**-0.5**
MVCO	**Mesa Verde** 49nm,1.7s	**17.12**	**107**	*e*Pn	**Pn**	**00 46 05.2**	**-1.1**
MVCO	**Mesa Verde** baz=17	**17.12**	**107**	⇑P	**Pn**	**00 46 06.2**	**-0.1**
O22A	**Kremmling** baz=17	**17.19**	**96**	⇓P	**Pn**	**00 46 08.6**	**+1.3**
R21A	**Cimarron** baz=17	**17.22**	**103**	⇑P	**Pn**	**00 46 08.0**	**+0.4**
N23A	**Red Feather La** baz=17	**17.37**	**93**	⇓P	**Pn**	**00 46 09.6**	**+0.1**
S21A	**Coal Bank Pass** baz=17,SNR=5.7	**17.38**	**105**	⇓P	**Pn**	**00 46 09.4**	**-0.3**
Q22A	**Crested Butte,** baz=18	**17.45**	**101**	⇑P	**Pn**	**00 46 11.4**	**+0.8**
H24A	**Dirks Ranch, A** baz=18	**17.50**	**80**	⇑P	**Pn**	**00 46 10.4**	**-0.4**
U20A	**Newcomb** baz=18	**17.55**	**110**	⇓P	**Pn**	**00 46 11.5**	**-0.1**
J24A	**Dixon Ranch, L** baz=18	**17.65**	**85**	⇓P	**Pn**	**00 46 13.3**	**+0.5**
T21A	**Najo Lake** baz=18	**17.89**	**107**	⇑P	**Pn**	**00 46 16.2**	**+0.2**
V20A	**Brimhall** baz=18	**17.90**	**111**	⇑P	**Pn**	**00 46 16.6**	**+0.5**
ISCO	**Idaho Springs** baz=18	**17.99**	**96**	⇓P	**Pn**	**00 46 17.7**	**+0.5**
P23A	**Jefferson** baz=18	**18.00**	**98**	⇑P	**Pn**	**00 46 17.6**	**+0.3**
S22A	**4UR Ranch, Cre** baz=18	**18.01**	**104**	⇑P	**Pn**	**00 46 17.7**	**+0.3**
U21A	**Nageezi** baz=18,SNR=7.8	**18.10**	**108**	⇑P	**P**	**00 46 19.5**	**+0.6**
O24A	**Longmont** baz=18	**18.26**	**95**	⇑P	**P**	**00 46 21.6**	**+1.1**
T22A	**Edith** baz=18	**18.32**	**106**	⇑P	**P**	**00 46 21.7**	**+0.4**
K25A	**Mack Ranch, Ha** baz=18	**18.38**	**86**	⇑P	**P**	**00 46 22.2**	**+0.4**
V21A	**Milan** baz=18	**18.46**	**110**	⇓P	**P**	**00 46 22.9**	**+0.1**
R23A	**Moffat** baz=19	**18.51**	**101**	⇑P	**Pn**	**00 46 24.3**	**+0.8**
M25A	**Palm-Egli Farm** baz=19	**18.56**	**90**	⇑P	**P**	**00 46 23.7**	**-0.1**
X20A	**Quemado** baz=19	**18.62**	**115**	⇑P	**P**	**00 46 24.9**	**+0.3**
Q24A	**Divide** baz=19	**18.65**	**98**	⇑P	**P**	**00 46 25.6**	**+0.5**
U22A	**Llaves** baz=19	**18.68**	**107**	⇑P	**Pn**	**00 46 26.5**	**+0.9**
K26A	**Motz Farm, Whi** baz=19	**18.85**	**86**	⇓P	**Pn**	**00 46 28.2**	**+0.7**
V22A	**San Miguel Ran** baz=19,SNR=6.9	**18.89**	**109**	⇓P	**Pn**	**00 46 28.6**	**+0.5**
T23A	**Casias Ranch,** baz=19	**18.91**	**105**	⇓P	**P**	**00 46 28.1**	**+0.3**
X21A	**Alamocita Cree** baz=19	**19.15**	**114**	⇑P	**P**	**00 46 31.2**	**+0.8**
S24A	**Houchin Ranch,** baz=19	**19.19**	**102**	⇓P	**Pn**	**00 46 32.2**	**+0.4**
Z20A	**Nine Sixteen R** baz=20	**19.47**	**118**	⇓P	**P**	**00 46 34.2**	**+0.3**
V23A	**Ortiz Mt. (NFS** baz=20	**19.48**	**108**	⇓P	**P**	**00 46 35.1**	**+1.1**
Y21A	**Point of Rocks** baz=20	**19.49**	**115**	⇑P	**P**	**00 46 34.9**	**+0.8**
S25A	**Robets Cordova** baz=20	**19.73**	**101**	⇑P	**P**	**00 46 37.1**	**+0.4**
120A	**U Bar Ranch, L** baz=20	**19.82**	**119**	⇓P	**P**	**00 46 37.7**	**0.0**
Z21A	**St. Cloud Mine** baz=20	**19.93**	**116**	⇑P	**P**	**00 46 38.9**	**0.0**
T25A	**Trinidad** baz=20	**19.99**	**102**	⇑P	**P**	**00 46 40.3**	**+0.8**
YKA	**Yellowknife Ar**	**20.07**	**20**	P	**P**	**00 46 39.3**	**-0.6**
YKA	**Yellowknife Ar** 0.0nm,0.3s,baz=209,slow=11,SNR=22	**20.07**	**20**	P	**P**	**00 46 39.3**	**-0.6**
V24A	**Rampart Ranch,** baz=20	**20.11**	**107**	⇑P	**P**	**00 46 41.2**	**+0.3**
YKW3	**Yellowknife Ar**	**20.12**	**20**	*e*P	**P**	**00 46 41.5**	**+1.0**
X23A	**Hourglass Bar** baz=20	**20.13**	**111**	⇑P	**P**	**00 46 41.1**	**0.0**
R26A	**Arlington** baz=20	**20.14**	**98**	⇑P	**P**	**00 46 41.6**	**+0.5**
W24A	**Lazy 6 Ranch,** baz=20	**20.30**	**108**	⇑P	**P**	**00 46 43.1**	**+0.2**
220A	**Playas Peak, P** baz=20	**20.32**	**121**	⇑P	**P**	**00 46 42.8**	**-0.3**
FFC	**Flin Flon** 5.1nm,1.0s	**20.33**	**50**	*e*P	**P**	**00 46 42.9**	**0.0**
121A	**Cookes Peak, D** baz=20	**20.36**	**118**	⇓P	**P**	**00 46 43.2**	**-0.4**
Z22A	**Elephant Butte** baz=20	**20.42**	**115**	⇓P	**P**	**00 46 44.1**	**-0.1**
V25A	**Rancho No Teng** baz=21	**20.50**	**106**	⇑P	**P**	**00 46 45.1**	**0.0**
T26A	**Comanche Natio** baz=21	**20.55**	**102**	⇓P	**P**	**00 46 45.9**	**+0.2**
Y23A	**Lovelace Mesa,** baz=21	**20.60**	**112**	⇑P	**P**	**00 46 46.3**	**+0.1**
R27A	**Eads** baz=21	**20.61**	**98**	⇓P	**P**	**00 46 46.4**	**+0.2**
320A	**Kipp Ranch, An** baz=21	**20.71**	**122**	⇑P	**P**	**00 46 47.3**	**0.0**
U26A	**Atchley Ranch,** baz=21	**20.82**	**104**	⇑P	**P**	**00 46 49.3**	**+0.7**
Z23A	**Rita Site, Whi** baz=21	**20.89**	**114**	⇓P	**P**	**00 46 50.0**	**+0.7**
W25A	**X Bar L Ranch,** baz=21	**20.94**	**107**	⇓P	**P**	**00 46 50.8**	**+0.9**
Y24A	**Capitan** baz=21	**21.02**	**111**	⇓P	**P**	**00 46 51.0**	**+0.3**
V26A	**Tequesquite Ra** baz=21	**21.10**	**105**	⇑P	**P**	**00 46 51.5**	**0.0**
X25A	**Clemmons Ranch** baz=21	**21.19**	**109**	⇓P	**P**	**00 46 52.7**	**+0.1**
T27A	**Campo** baz=21	**21.21**	**101**	⇑P	**P**	**00 46 53.1**	**+0.4**
Z24A	**Sheeppen Canyo** baz=22	**21.42**	**113**	⇓P	**P**	**00 46 55.8**	**+0.7**
124A	**Stringfield Ra** baz=22	**21.75**	**114**	⇑P	**P**	**00 46 58.3**	**-0.4**
224A	**Cornudas Mount** baz=22	**22.11**	**116**	⇓P	**P**	**00 47 02.9**	**+0.5**
125A	**Gardner Draw,** baz=22	**22.30**	**113**	⇓P	**P**	**00 47 04.6**	**+0.1**
ILAR	**Eielson Array**	**22.79**	**340**	P	**P**	**00 47 09.1**	**-0.1**
ILAR	**Eielson Array** 2.3nm,1.2s,baz=154,slow=8.3,SNR=7.0	**22.79**	**340**	P	**P**	**00 47 09.1**	**-0.1**
ILAR				LR	LR	00 54 23.1	
Z27A	**Tatum** baz=23	**22.87**	**110**	⇓P	**P**	**00 47 11.1**	**+0.6**
325A	**Bean Ranch, Si** baz=23	**22.92**	**116**	⇓P	**P**	**00 47 11.6**	**+0.5**
ULM	**Lac du Bonnet**	**23.18**	**63**	P	**P**	**00 47 11.8**	**-1.5**
ULM	**Lac du Bonnet** 1.3nm,0.4s,baz=281,slow=10,SNR=4.2	**23.18**	**63**	P	**P**	**00 47 11.8**	**-1.5**
Y29A	**Porterfield Fa** baz=24	**23.61**	**107**	⇑P	**P**	**00 47 18.7**	**+0.7**
426A	**McDonald Obser** baz=24	**23.99**	**116**	⇑P	**P**	**00 47 21.3**	**-0.5**
INK	**Inuvik** comp=Z,97nm,18.5s,baz=76,slow=34	**24.16**	**356**	LR	LR	00 55 40.0	
526A	**Mary Lane Ranc** baz=24	**24.36**	**117**	⇓P	**P**	**00 47 25.2**	**+0.1**
527A	**Woodward Ranch** baz=25	**24.61**	**116**	⇓P	**P**	**00 47 26.4**	**-0.9**
626A	**Big Bend Ranch** baz=25	**24.68**	**118**	⇓P	**P**	**00 47 27.4**	**-0.5**
TXAR	**Lajitas Array**	**25.12**	**118**	P	**P**	**00 47 30.0**	**-1.9**
TXAR	**Lajitas Array** 0.4nm,0.7s,baz=321,slow=7.0,SNR=4.1	**25.12**	**118**	P	**P**	**00 47 30.0**	**-1.9**
TXAR				LR	LR	00 58 34.9	
429A	**Davenport Ranc** baz=26	**25.41**	**113**	⇑P	**P**	**00 47 34.4**	**-0.1**
Z32A	**Haskell** baz=26	**25.43**	**105**	⇓P	**P**	**00 47 34.8**	**+0.2**
RES	**Resolute Bay**	**34.01**	**15**	P	**P**	**00 48 49.9**	**-0.3**
RES	**Resolute Bay** 1.4nm,0.7s,baz=226,slow=11,SNR=6.3	**34.01**	**15**	P	**P**	**00 48 49.9**	**-0.3**
SADO	**Sadowa** comp=Z,68nm,21.5s,baz=54,slow=37	**35.15**	**71**	LR	LR	01 03 40.6	
TKL	**Tuckaleechee C** comp=Z,148nm,18.2s,baz=95,slow=37	**35.41**	**88**	LR	LR	01 04 06.4	
ARCES	**ARCESS Array B** comp=Z,43nm,21.1s,baz=200,slow=35	**64.94**	**10**	LR	LR	01 19 54.0	
NOA	**NORSAR Array B** comp=Z,16nm,20.6s,baz=320,slow=33	**70.17**	**19**	LR	LR	01 20 59.0	
SONM	**Songino Array**	**76.09**	**325**	P	**P**	**00 53 55.0**	**+0.4**
SONM	**Songino Array** 0.4nm,0.6s,baz=38,slow=5.4,SNR=2.9	**76.09**	**325**	P	**P**	**00 53 55.0**	**+0.4**
ZALV	**Zalesovo Beam**	**77.91**	**340**	P	**P**	**00 54 04.3**	**-0.2**
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=0.0,slow=4.6,SNR=2.7	**77.91**	**340**	P	**P**	**00 54 04.3**	**-0.2**
GERES	**GERESS Array B** comp=Z,22nm,19.9s,baz=58,slow=36	**81.67**	**24**	LR	LR	01 31 26.8	

AUST ***10*** *01:09:59.3±1.1,2°94S×141°95E,h0km,Error ellipse: s-maj=1.9km s-min=1.0km az=236.0*
IDC ***10*** *01:09:59.5±0.6,2°95S×141°89E,h0km,mb4.2/11, mb1 4.4/14,mb1mx4.3/21,mbtmp4.3/14,ML4.0/2,MS3.4/7, Ms1 3.4/7,ms1mx3.1/28,Error ellipse: s-maj=22.5km s-min=14.8km az=81.0*
ISCJB ***10*** *01:10:02.2±0.3,3°02S±0°04×141°93E±0°06,h30km, mb4.3/25,MS3.4/5,Error ellipse: s-maj=8.1km s-min=5.9km az=164.6*
DJA ***10*** *01:10:02.0±0.9,3°S±9°×14°2E±1°0,h10km,M4.7/5, mb4.7/5*
NEIC ***10*** *01:10:05.2±1.4,3°04S×141°90E,h41km±13km,mb4.4/16, Error ellipse: s-maj=8.6km s-min=8.3km az=61.0*
ISC 10 01:10:04.2±0.4,3°00S±0°07×141°91E±0°07,h30km,n93, σ1§19/81,mb4.3/25,MS3.3/5,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.29**	**292**	P	**Pn**	**01 10 23.1**	**-3.2**
JAY	**Jayapura** baz=1.3,SNR=21	**1.29**	**292**	P	Pn	01 10 22.8	-3.5
SMPI	**Sarmi**	**3.35**	**287**	P	**Pn**	**01 10 55.1**	**+0.6**
PMG	**Port Moresby**	**8.23**	**141**	Pn	**Pn**	**01 12 03.1**	**+1.5**
PMG	**Port Moresby** 1.9nm,0.3s,baz=306,slow=14,SNR=5.4	**8.23**	**141**	Pn	**Pn**	**01 12 03.1**	**+1.5**
SWI	**S

8.9nm,0.8s,baz=40,slow=11,SNR=16
FITZ Fitzroy Crossi 21.90 226 P **P** 01 14 54.7 -0.3
baz=22,SNR=8.4
AS31 Alice Springs 21.95 200 *e*P **P** 01 14 54.4 -1.3
ASAR Alice Springs 21.95 200 P **P** 01 14 54.6 -1.0
ASAR Alice Springs 21.95 200 P **P** 01 14 54.7 -1.0
2.4nm,0.5s,baz=26,slow=11,SNR=40
TTSI Tana Toraja 22.06 269 P **P** 01 14 58.3 +1.5
SPSI Sidrap Palu 22.12 267 P **P** 01 14 59.6 +2.1
PCI Palu 22.15 275 P P 01 15 11.2 +13
baz=22,SNR=4.8
KAPI Kappang 22.19 264 *e*P **P** 01 14 59.2 +0.9
6.4nm,0.6s
WSI Waingapu 22.46 252 S Sn 01 19 13.3 -6.7
baz=22,SNR=7.2
QLP Quilpie 23.55 175 P **P** 01 15 11.8 -0.4
baz=24,SNR=6.6
EIDS Eidsvold 23.93 159 P **P** 01 15 19.1 +3.4
baz=24,SNR=5.4
RMQ Roma 24.26 165 P **P** 01 15 21.2 +2.4
baz=24,SNR=6.5
MYLDM Lahad Datu 24.75 289 P **P** 01 15 25.9 +2.5
28nm,1.0s
CMSA Cobar Meteorol 28.61 173 P **P** 01 15 59.1 +1.2
baz=29,SNR=7.9
STKA Stephens Creek 28.73 181 P **P** 01 15 58.5 -0.5
STKA Stephens Creek 28.73 181 P **P** 01 15 58.5 -0.5
0.9nm,0.3s,baz=358,slow=8.7,SNR=4.6
STKA LR LR 01 29 31.2
comp=Z,120nm,19.1s,baz=214,slow=41
BBOO Buckleboo 30.16 190 P **P** 01 16 12.8 +1.2
baz=30,SNR=6.1
FORT Forrest 30.57 204 *e*P **P** 01 16 15.2 -0.2
20nm,0.6s
FORT Forrest 30.57 204 P **P** 01 16 15.5 +0.1
baz=31,SNR=14
YNG Young 31.72 170 P P 01 16 29.7 +4.2
baz=32,SNR=5.0
KSM Kuching 31.90 278 S **S** 01 21 41.0 +4.3
baz=32,SNR=3.1
MEEK Meekatharra 32.41 221 P **P** 01 16 30.9 -0.8
baz=33,SNR=5.4
MORW Morawa 35.73 221 P **P** 01 16 59.7 -0.7
baz=36,SNR=11
PPI Padang Panjang 41.56 273 P **P** 01 17 50.7 +1.1
baz=42,SNR=3.4
KULM Kulim 42.03 281 *e*P **P** 01 17 52.7 -0.7
25nm,1.2s
KSRS Korea Array 42.30 343 LR LR 01 32 18.4
comp=Z,26nm,19.9s,baz=195,slow=32
GSI Gunungsitoli 44.52 275 P P 01 18 19.7 +6.1
baz=45,SNR=4.2
ASAJ Asahikawa 46.91 1 LR LR 01 35 11.0
comp=Z,36nm,21.7s,baz=138,slow=32
CMAR Chiang Mai Arr 47.37 298 P **P** 01 18 35.7 -0.2
CMAR Chiang Mai Arr 47.37 298 P **P** 01 18 35.7 -0.2
0.9nm,0.4s,baz=122,slow=6.9,SNR=4.6
CMAR LR LR 01 36 35.7
comp=Z,28nm,19.9s,baz=190,slow=34
PETK Petropavlovsk- 57.46 11 P **P** 01 19 50.0 -0.2
PETK Petropavlovsk- 57.46 11 P **P** 01 19 50.0 -0.2
0.6nm,0.4s,baz=179,slow=8.6,SNR=4.8
ULN Ulaanbaatar 59.11 333 *e*P **P** 01 20 02.5 +0.4
1.5nm,0.4s
SONM Songino Array 59.39 333 P **P** 01 20 04.3 +0.4
SONM Songino Array 59.39 333 P **P** 01 20 04.3 +0.4
0.8nm,0.7s,baz=149,slow=6.7,SNR=7.0
FX1 Attu Island--F 61.58 21 LR LR 01 41 42.5
comp=Z,79nm,19.9s,baz=276,slow=31
MK31 Makanchi Array 71.99 321 *e*P **P** 01 21 25.4 +0.3
MKAR Makanchi Array 71.99 321 P **P** 01 21 25.4 +0.3
MKAR Makanchi Array 71.99 321 P **P** 01 21 25.4 +0.3
2.9nm,1.0s,baz=111,slow=6.6,SNR=16
ZAA0 Zalesovo Array 73.81 329 *e*P **P** 01 21 34.1 -1.6
ZALV Zalesovo Beam 73.81 329 P **P** 01 21 35.1 -0.7
ZALV Zalesovo Beam 73.81 329 P **P** 01 21 35.1 -0.7
2.1nm,0.8s,baz=106,slow=7.9,SNR=9.0
TKM2 Tokmak 2 74.96 316 *e*P **P** 01 21 43.2 +0.2
VNDA Vanda 75.23 176 *e*P **P** 01 21 43.5 -0.1
2.2nm,1.0s
VNDA Vanda 75.23 176 P **P** 01 21 43.7 +0.1
0.7nm,0.5s,baz=330,slow=6.5,SNR=12
AAK Ala-Archa 75.64 315 *e*P **P** 01 21 47.4 +0.5
4.4nm,1.2s
KURK Kurchatov 75.80 324 *e*P **P** 01 21 47.1 -0.3
3.5nm,1.0s
EKS2 Erkin-Say 76.16 315 *e*P **P** 01 21 50.0 +0.2
1.5nm,0.4s
KBL Kabul 77.67 306 *e*P **P** 01 21 58.4 -0.2
KKAR Karatay Array 78.58 315 *e*P **P** 01 22 03.0 -0.2
2.5nm,1.0s
BRVK Borovoye 81.46 325 *e*P **P** 01 22 18.5 0.0
4.4nm,0.9s
COLD Coldfoot 84.35 21 *e*P **P** 01 22 33.5 +0.3
5.1nm,1.1s
COLA College 84.43 24 *e*P **P** 01 22 32.6 -1.0
3.8nm,0.8s
ILAR Eielson Array 84.78 24 P **P** 01 22 33.9 -1.5
ILAR Eielson Array 84.78 24 P **P** 01 22 33.9 -1.5
3.1nm,0.8s,baz=258,slow=4.9,SNR=30
ABKAR Akbulak array 87.01 319 *e*P **P** 01 22 45.9 -0.9
0.4nm,0.4s
EGAK Eagle 87.15 25 *e*P **P** 01 22 46.8 -0.3
4.8nm,1.1s
YKA Yellowknife Ar 98.87 27 P **P** 01 23 40.6 -0.6
YKA Yellowknife Ar 98.87 27 P **P** 01 23 40.6 -0.6
0.6nm,0.7s,baz=283,slow=4.7,SNR=9.4
TORD Torodi Ar. Bea 139.40 287 PKPpre PKPpre 01 29 24.0
TORD PKP **PKPdf** **01 29 28.7 -1.0**
TORD Torodi Ar. Bea 139.40 287 PKhKP PKPpre 01 29 24.0
0.7nm,1.1s,baz=77,slow=2.5,SNR=2.3
TORD PKP **PKPdf** **01 29 28.7 -1.0**
0.5nm,0.9s,baz=69,slow=1.9,SNR=3.5
ROSC El Rosal 143.80 86 *e*PKPdf PKPbc 01 29 36.0 +0.2
ROSC El Rosal 143.80 86 PKP PKPbc 01 29 36.3 +0.5
7.4nm,0.7s,baz=258,slow=9.3,SNR=8.1
LPAZ La Paz 144.66 124 *e*PKPdf PKPbc 01 29 39.0 +0.4
LPAZ La Paz 144.66 124 PKP **PKPdf** **01 29 39.7 -0.1**
5.8nm,0.5s,baz=271,slow=2.9,SNR=28
CPUP Villa Florida 145.41 149 PKPbc **PKPab** **01 29 41.3 +1.2**
CPUP Villa Florida 145.41 149 PKPbc **PKPab** **01 29 41.3 +1.2**
1.5nm,0.6s,baz=295,slow=1.3,SNR=5.6
DBIC Dimbokro 146.69 278 *e*PKPbc **PKPdf** **01 29 42.8 +0.3**
DBIC Dimbokro 146.69 278 PKPbc **PKPbc** **01 29 43.3 -0.9**
12nm,1.2s,baz=119,slow=4.6,SNR=6.0
SIV San Ignacio 150.46 130 PKPbc **PKPbc** **01 29 55.4 +1.4**
SIV PKPab **PKPab** **01 29 59.8 -0.7**
SIV San Ignacio 150.46 130 PKPbc **PKPbc** **01 29 55.4 +1.4**
2.8nm,0.7s,baz=270,slow=1.9,SNR=13
SIV PKPab **PKPab** **01 29 59.8 -0.7**
2.2nm,0.8s,baz=274,slow=5.2,SNR=4.6
SAML Samuel 152.31 116 *e*PKPbc **PKPbc** **01 29 57.5 -0.8**
SAML *e*PKPab **PKPab** **01 30 07.5 -0.8**

*CSEM **10** 01:32:58.3±0.3,35°.27N×38°.48E,h2km,ML2.2,Error ellipse: s-maj=9.0km s-min=5.8km az=124.0*
NSSC 10 01:32:58.1±2.9,35°.29N×38°.46E,h0km±8km,ML2.2,2C-6D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
JHLN	**Al Jahlan**	**0.38**	**357**	⇓*e*P	Pg		01 33 04.0	-1.5
JHLN				*e*S	Sg		01 33 11.3	+0.8
JHLN				AML	AML		01 33 19.3	
	comp=Z,249nm,0.4s							
JHLN	**Al Jahlan**	**0.38**	**357**	⇓*e*P	Pg		01 33 04.0	-1.5
	SNR=91							
JHLN				*e*S	Sg		01 33 11.3	+0.9
	comp=Z,249nm,0.4s,SNR=59							
KSRV	**Kasrt alli**	**0.72**	**38**	*e*P	Pb		01 33 14.5	+0.9
KSRV				*e*S	Sb		01 33 25.3	+1.3
KSRV				AML	AML		01 33 38.9	
	comp=N,34nm,0.5s							
KSRV				AML	AML		01 33 39.3	
	comp=E,70nm,0.4s							
KSRV	**Kasrt alli**	**0.72**	**38**	*e*P	Pn		01 33 14.8	-0.8
KSRV				AML	AML		01 33 15.4	
	comp=N,29nm,0.3s							
KSRV				*e*S	Sg		01 33 22.5	+1.1
KSRV				AML	AML		01 33 30.5	
	comp=E,68nm,0.2s							
SLMH	**Al Salmeh**	**1.02**	**335**	*e*P	Pn		01 33 21.8	+2.1
SLMH				*e*S	Sn		01 33 37.4	+2.7
SLMH				AML	AML		01 33 42.7	
	comp=Z,104nm,0.5s							
SLMH	**Al Salmeh**	**1.02**	**335**	*e*P	Pn		01 33 21.7	+2.0
SLMH				*e*S	Sn		01 33 34.9	+0.2
SLMH				AML	AML		01 33 42.1	
	comp=E,151nm,0.3s							
SLMH				AML	AML		01 33 42.7	
	comp=Z,103nm,0.5s							
KFRA	**Kufra**	**1.36**	**267**	*e*P	Pg		01 33 22.7	-1.6
KFRA				*e*S	Sg		01 33 41.6	-0.5
KFRA				AML	AML		01 33 46.8	
	comp=N,346nm,0.2s							
KFRA				AML	AML		01 33 47.5	
	comp=E,163nm,0.2s							
KFRA	**Kufra**	**1.36**	**267**	*e*P	Pb		01 33 26.4	+1.8
KFRA				*e*S	Sn		01 33 44.5	+1.1
KFRA				AML	AML		01 33 46.7	
	comp=N,346nm,0.2s							
KFRA				AML	AML		01 33 47.5	
	comp=E,163nm,0.2s							
KFRA	**Kufra**	**1.36**	**267**	*e*P	Pb		01 33 26.8	+2.2
KFRA				*e*S	Sn		01 33 45.1	+1.8
KFRA				AML	AML		01 33 46.6	
	comp=N,339nm,0.2s							
KFRA				AML	AML		01 33 47.4	
	comp=E,161nm,0.2s							
KFRA	**Kufra**	**1.36**	**267**	*e*P	Pg		01 33 22.7	-1.7
	SNR=57							
KFRA				*e*S	Sg		01 33 41.6	-0.5
	comp=E,4μm,0.4s,SNR=49							
BIDA	**Albida**	**1.78**	**262**	AML	AML		01 33 57.4	
	comp=E,201nm,0.4s							
BIDA				AML	AML		01 33 59.7	
	comp=N,4μm,0.4s							
BTCH	**Batrach**	**1.79**	**295**	⇓*e*P	Pg		01 33 32.5	-0.1
BTCH				*e*S	Sb		01 33 55.4	+0.3
BTCH				AML	AML		01 34 06.4	
	comp=E,91nm,0.7s							
BTCH				AML	AML		01 34 07.0	
	comp=N,61nm,0.3s							
BTCH	**Batrach**	**1.79**	**295**	*e*P	Pb		01 33 31.7	-0.2
BTCH				*e*S	Sg		01 33 55.8	-0.1
BTCH				AML	AML		01 34 06.4	
	comp=E,90nm,0.6s							
BTCH				AML	AML		01 34 06.9	
	comp=N,59nm,0.3s							
BTCH	**Batrach**	**1.79**	**295**	*e*P	Pg		01 33 32.6	0.0
BTCH				*e*S	Sn		01 33 54.4	+0.4
BTCH				AML	AML		01 34 02.8	
	comp=N,55nm,0.8s							
BTCH				AML	AML		01 34 06.3	
	comp=E,89nm,0.6s							
BTCH	**Batrach**	**1.79**	**295**	⇓*e*P	Pg		01 33 32.5	-0.1
	SNR=45							
BTCH				*e*S	Sb		01 33 55.4	+0.3
	comp=E,61nm,0.3s,SNR=40							
KUZU	**Kuzuini**	**1.86**	**323**	*i* P	Pg		01 33 33.9	+0.1
KUZU				*i* S	Sg		01 34 01.4	+3.4
KUZU	**Kuzuini**	**1.86**	**323**	*i* P	Pg		01 33 33.9	+0.1
KUZU				*i* S	Sg		01 34 01.4	+3.4
HAWK	**Haweek**	**1.86**	**246**	*e*P	Pb		01 33 33.1	0.0
HAWK				*e*S	Sn		01 33 54.4	-1.3
HAWK				AML	AML		01 34 00.3	
	comp=N,20nm,0.4s							
HAWK				AML	AML		01 34 00.5	
	comp=E,38nm,0.3s							
HAWK	**Haweek**	**1.86**	**246**	*e*P	Pn		01 33 32.0	+0.7
HAWK				*e*S	Sn		01 33 55.8	+0.1
HAWK				AML	AML		01 34 00.2	
	comp=N,20nm,0.4s							
HAWK				AML	AML		01 34 00.4	
	comp=E,37nm,0.3s							
HAWK	**Haweek**	**1.86**	**246**	*e*P	Pb		01 33 33.1	0.0
	SNR=45							
HAWK				*e*S	Sn		01 33 54.4	-1.2
	comp=E,38nm,0.3s,SNR=40							
MZRK	**Al-Mazaregh**	**1.86**	**73**	⇓*e*P	Pn		01 33 31.7	+0.4
MZRK				*e*S	Sn		01 33 55.3	-0.3
MZRK				AML	AML		01 34 03.5	
	comp=N,32nm,0.5s							
MZRK				AML	AML		01 34 05.3	
	comp=E,22nm,0.4s							
MZRK	**Al-Mazaregh**	**1.86**	**73**	*e*P	Pn		01 33 31.1	-0.2
MZRK				*e*S	Sn		01 33 55.7	+0.1
MZRK				AML	AML		01 34 03.5	
	comp=N,32nm,0.5s							
MZRK				AML	AML		01 34 05.3	
	comp=E,22nm,0.3s							
MZRK	**Al-Mazaregh**	**1.86**	**73**	⇓*e*P	Pn		01 33 31.7	+0.4
	SNR=45							
MZRK				*e*S	Sn		01 33 55.3	-0.3
	comp=E,22nm,0.4s,SNR=40							
YAYL	**Yayladag**	**2.06**	**292**	*i* P	Pn		01 33 33.9	-0.2
YAYL				*i* S	Sg		01 34 05.3	+0.8
YAYL	**Yayladag**	**2.06**	**292**	*i* P	Pn		01 33 33.9	-0.2
YAYL				*i* S	Sg		01 34 05.3	+0.8
COBT	**Iskenderun**	**2.17**	**305**	*i* P	Pb		01 33 38.8	+0.2
COBT				*i* S	Sg		01 34 08.4	+0.1
COBT	**Iskenderun**	**2.17**	**305**	*i* P	Pb		01 33 38.8	+0.2
COBT				*i* S	Sg		01 34 08.4	+0.1
KBSD	**Kabsdagh**	**2.40**	**44**	*e*P	Pn		01 33 38.1	-0.6
KBSD				*e*S	Sn		01 34 09.1	+0.3
KBSD				AML	AML		01 34 26.6	
	comp=Z,19nm,0.4s							
KBSD	**Kabsdagh**	**2.40**	**44**	*e*P	Pb		01 33 41.5	-0.7
KBSD				*e*S	Sb		01 34 12.3	0.0
KBSD				AML	AML		01 34 26.6	
	comp=Z,19nm,0.3s							
KBSD	**Kabsdagh**	**2.40**	**44**	*e*P	Pb		01 33 42.0	-0.2
KBSD				*e*S	Sn		01 34 10.4	+1.7
KBSD				AML	AML		01 34 25.7	
	comp=N,27nm,0.4s							
KBSD				AML	AML		01 34 26.6	
	comp=Z,18nm,0.4s							
KBSD				AML	AML		01 34 27.4	
	comp=E,34nm,0.4s							
KBSD	**Kabsdagh**	**2.40**	**44**	*e*P	Pn		01 33 38.1	-0.6
	SNR=45							
KBSD				*e*S	Sn		01 34 09.1	+0.3
	comp=E,19nm,0.4s,SNR=40							
ZALF	**Zalf**	**2.54**	**202**	*e*P	Pn		01 33 40.7	0.0
ZALF				*e*S	Sn		01 34 12.5	+0.1
ZALF				AML	AML		01 34 27.1	
	comp=N,8.2nm,0.5s							
ZALF				AML	AML		01 34 28.7	
	comp=E,11nm,0.6s							
ZALF	**Zalf**	**2.54**	**202**	*e*P	Pn		01 33 40.7	0.0
	SNR=45							
ZALF				*e*S	Sn		01 34 12.5	+0.1
	comp=E,11nm,0.6s,SNR=40							
TOTH	**TOTAH**	**2.56**	**222**	*e*P	Pn		01 33 40.2	-0.7
TOTH				*e*S	Sn		01 34 11.5	-1.3
TOTH				AML	AML		01 34 18.9	
	comp=N,19nm,0.6s							
TOTH				AML	AML		01 34 19.8	
	comp=E,14nm,0.5s							
TOTH	**TOTAH**	**2.56**	**222**	*e*P	Pn		01 33 40.2	-0.7
	SNR=45							
TOTH				*e*S	Sn		01 34 11.5	-1.3
	comp=E,14nm,0.5s,SNR=40							
BRBR	**Barbar**	**2.80**	**229**	⇑*e*P	Pn		01 33 44.4	-0.1
BRBR				*e*S	Sn		01 34 18.1	-1.0
BRBR				AML	AML		01 34 28.9	
	comp=N,14nm,0.7s							
BRBR				AML	AML		01 34 31.6	
	comp=E,7.4nm,0.5s							
BRBR	**Barbar**	**2.80**	**229**	*e*P	Pn		01 33 46.3	+1.8
BRBR				*e*S	Sn		01 34 16.7	-2.4
BRBR				AML	AML		01 34 28.9	
	comp=N,14nm,0.6s							
BRBR				AML	AML		01 34 31.7	
	comp=E,7.5nm,0.3s							
BRBR	**Barbar**	**2.80**	**229**	⇑*e*P	Pn		01 33 44.4	-0.1
	SNR=45							
BRBR				*e*S	Sn		01 34 18.1	-1.0
	comp=E,7.4nm,0.5s,SNR=40							
SALA	**Sala**	**2.95**	**210**	*e*P	Pn		01 33 46.6	+0.1
SALA				*e*S	Sn		01 34 22.4	-0.3
SALA				AML	AML		01 34 33.4	
	comp=E,1.0nm,0.5s							
SALA				AML	AML		01 34 35.3	
	comp=N,15nm,0.4s							
SALA	**Sala**	**2.95**	**210**	*e*P	Pn		01 33 46.6	+0.1
	SNR=45							
SALA				*e*S	Sn		01 34 22.4	-0.4
	comp=N,15nm,0.4s,SNR=40							
TCHB	**Talchebab**	**3.34**	**219**	*e*P	Pn		01 33 50.3	-1.3
TCHB				*e*S	Sn		01 34 32.8	+0.8
TCHB				AML	AML		01 34 46.8	
	comp=N,22nm,0.5s							
TCHB				AML	AML		01 35 02.0	
	comp=E,12nm,0.7s							
TCHB	**Talchebab**	**3.34**	**219**	*e*P	Pn		01 33 50.3	-1.3
	SNR=45							
TCHB				*e*S	Sn		01 34 32.8	+0.8
	comp=E,12nm,0.7s,SNR=40							

IDC 10 01:38:21.1±2.6,16°.40S×69°.20W,h188km±11km,mb3.2/2, mb1 3.4/2,mb1mx2.9/19,mbtmp3.2/2,Error ellipse: s-maj=86.8km s-min=42.6km az=13.0,Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
LPAZ	**La Paz**	**1.03**	**84**	P	P		01 38 50.2	-0.5
	11nm,0.3s,baz=274,slow=6.4,SNR=280							
LPAZ				S	Sn		01 39 13.9	+0.4
	1.5nm,0.3s,baz=11,slow=14,SNR=6.4							
TORD	**Torodi Ar. Bea**	**75.96**	**72**	P	P		01 49 47.8	0.0
	0.8nm,1.0s,baz=259,slow=4.2,SNR=5.5							
YKA	**Yellowknife Ar**	**86.31**	**341**	P	P		01 50 41.6	+0.3
	0.1nm,0.3s,baz=134,slow=4.8,SNR=5.7							

*CSEM **10** 01:44:33.5,39°.50N×29°.76W,h15km,ML2.7,After PDA*
PDA 10 01:44:33.5±0.8,39°.50N×29°.76W,h15km,MD3.7,ML2.7, Error ellipse: s-maj=19.7km s-min=6.1km az=50.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
PCED	**Cedros**	**1.20**	**136**	*e*P	Pn		01 44 51.4	-4.3
PCED				*e*S	Sb		01 45 04.7	-6.5
PCED				A	A		01 45 05.0	
	40nm,0.4s							
PCED	**Cedros**	**1.20**	**136**	*e*P	Pn		01 44 51.4	-4.3
PCED				*e*S	Sb		01 45 04.7	-6.5
CALA	**Caldeira**	**1.23**	**138**	*e*P	Pn		01 44 52.0	-4.3
CALA				*e*S	Sb		01 45 05.8	-6.6
CALA	**Caldeira**	**1.23**	**138**	*e*P	Pn		01 44 52.0	-4.3
CALA				*e*S	Sb		01 45 05.8	-6.6
HOR	**Horta**	**1.31**	**137**	*e*P	Pn		01 44 52.8	-4.5
HOR				*e*S	Sb		01 45 07.4	-7.0
HOR	**Horta**	**1.31**	**137**	*e*P	Pn		01 44 52.8	-4.5
HOR				*e*S	Sb		01 45 07.4	-7.0
PCAN	**Candelaria**	**1.44**	**136**	*e*P	Pn		01 44 54.5	-4.5
PCAN				*e*S	Sn		01 45 10.5	-7.1
PCAN				A	A		01 45 10.7	
	15nm,0.2s							
PCAN	**Candelaria**	**1.44**	**136**	*e*P	Pn		01 44 54.5	-4.5
PCAN				*e*S	Sn		01 45 10.5	-7.1
PICO	**Pico**	**1.44**	**133**	*e*P	Pn		01 44 55.2	-4.0
PICO				*e*S	Sn		01 45 11.3	-6.6
PICO	**Pico**	**1.44**	**133**	*e*P	Pn		01 44 55.2	-4.0
PICO				*e*S	Sn		01 45 11.3	-6.6
PMAN	**Manadas**	**1.56**	**123**	*e*S	Sn		01 45 13.5	-7.2
PMAN				A	A		01 45 13.9	
	24nm,0.7s							
PMAN	**Manadas**	**1.56**	**123**	*e*S	Sn		01 45 13.5	-7.2

IDC 10 02:48:10.4±30.0,8°.04N×102°.58W,h0km,mb3.3/3, mb1 3.8/3,mb1mx3.5/19,mbtmp3.4/3,MS3.5/2,Ms1 3.5/2, ms1mx2.9/17,Error ellipse: s-maj=1039.0km s-min=108.1km az=110.0,Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
TXAR	**Lajitas Array**	**21.21**	**357**	P	P		02 52 57.7	-0.3
	0.6nm,0.8s,baz=176,slow=13,SNR=7.5							
TXAR				LR	LR		03 00 45.8	
	comp=Z,145nm,18.2s,baz=95,slow=36							
PDAR	**Pinedale Array**	**35.13**	**351**	P	P		02 55 06.2	+0.2
	0.9nm,0.9s,baz=168,slow=8.9,SNR=5.8							
SIV	**San Ignacio**	**47.53**	**120**	LR	LR		03 14 35.5	
	comp=Z,39nm,20.5s,slow=33							
ILAR	**Eielson Array**	**64.58**	**341**	P	P		02 58 49.2	-0.1
	0.3nm,0.8s,baz=168,slow=4.6,SNR=3.7							

*AUST **10** 02:57:26.4±99.0,2°.87N×135°.15E,h0km,Error ellipse: s-maj=1.9km s-min=1.1km az=260.0*
*IDC **10** 02:58:13.1±1.9,0°.35S×132°.97E,h0km,mb3.7/3, mb1 3.8/5,mb1mx3.6/22,mbtmp3.6/5,ML3.7/2,Error ellipse: s-maj=81.1km s-min=23.1km az=74.0*
ISC 10 02:58:18.9±1.6,0°.6S±0°.1×132°.7E±0°.1,h33km,n10, σ2s11/9,mb3.6/3,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
SWI	**Sorong**	**1.48**	**259**	P	**Pb**		**02 58 45.5**	**-0.2**
	baz=5.4,SNR=73							
TLE	**Tual**	**5.03**	**180**	P	Pn		02 59 37.9	+5.8
	baz=8.8,SNR=6.3							
MTN	**Manton Dam**	**12.29**	**187**	P	**Pn**		**03 01 14.3**	**+2.7**
	baz=16,SNR=5.1							
PCI	**Palu**	**12.88**	**268**	P	Pn		03 01 11.6	-8.2
	baz=16,SNR=4.1							
FITZ	**Fitzroy Crossi**	**18.75**	**201**	P	**Pn**		**03 02 37.2**	**+1.4**
	0.1nm,0.3s,baz=26,slow=13,SNR=5.1							
FITZ				S	**Sn**		**03 06 03.3**	**-1.5**
	0.1nm,0.3s,baz=87,slow=18,SNR=3.0							
FITZ	**Fitzroy Crossi**	**18.75**	**201**	P	Pn		03 02 42.7	+6.9
	baz=23,SNR=4.5							
WRA	**Warramunga Arr**	**19.31**	**175**	P	**Pn**		**03 02 42.8**	**+0.2**
	0.3nm,0.3s,baz=354,slow=11,SNR=12							
WRA				S	**Sn**		**03 06 14.8**	**-3.6**
	0.1nm,0.3s,baz=352,slow=22,SNR=2.6							
ASAR	**Alice Springs**	**22.98**	**177**	P	**P**		**03 03 22.2**	**+1.3**
	0.9nm,0.4s,baz=358,slow=11,SNR=26							
STKA	**Stephens Creek**	**32.24**	**166**	P	**P**		**03 04 43.9**	**-0.4**
	1.2nm,0.4s,baz=332,slow=8.2,SNR=6.7							
MKAR	**Makanchi Array**	**64.50**	**324**	P	**P**		**03 08 51.7**	**-0.8**
	0.1nm,0.4s,baz=111,slow=7.9,SNR=3.1							

MAN 10 03:01:28,6°.82N×125°.63E,h38km,mb4.5,ML3.4,MS3.2, 3C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
DMPH	**Davao City--Mi**	**0.29**	**335**	⇑*i*P	Pn		03 01 37.1	+0.9
DMPH				*i* S	Sn		03 01 45.7	+2.4
KCP	**Kidapawan**	**0.57**	**289**	⇑*i*P	Pn		03 01 44.2	+4.4
KCP				*i* S	Sn		03 01 52.4	+4.3
MATI	**Mati**	**0.63**	**79**	*e*P	Pn		03 01 42.2	+1.6
BUKP	**Musuan**	**1.19**	**332**	*e*P	Pn		03 01 49.8	+1.6
BUKP				*e*S	Sn		03 02 03.3	0.0
CTBH	**Cotabato--PC H**	**1.43**	**286**	⇓*i*P	Pn		03 01 52.4	+1.0
CGP	**Cagayan de Oro**	**1.87**	**330**	⇑*e*P	Pn		03 01 59.3	+1.9
PAGZ	**Pagadian**	**2.45**	**295**	*e*P	Pn		03 02 07.3	+1.8

*NIED **10** 03:10:00,45°.90N×152°.40E,h38km,Mw4.9 Best double couple: M0±2.15000×10^16 NP1:φ0±329.00000°,δ83.00000°, λ50.00000°. NP2:φ0±231.00000°,δ41.00000°,λ170.00000°.*
*IDC **10** 03:10:13.3±0.4,46°.11N×151°.90E,h0km,mb4.8/36, mb1 4.9/41,mb1mx4.9/42,mbtmp4.8/41,ML4.2/5,MS4.1/36, Ms1 4.1/36,ms1mx4.0/55,Error ellipse: s-maj=12.6km s-min=9.4km az=132.0*
*JMA **10** 03:10:16.0±0.6,45°.92N×152°.41E,h30km,Ms3.3*
*ISCJB **10** 03:10:17.2±0.4,46°.07N±0°.03×151°.84E±0°.02,h35km±4km, mb5.0/233,MS4.3/59,Error ellipse: s-maj=4.8km s-min=2.1km az=168.5*
*SKHL **10** 03:10:17.6±0.1,45°.98N×152°.33E,h42km±12km,mb5.0/1, Ms4.4/6,msh4.8/2*
*DJA **10** 03:10:17.4±1.4,46°N±11°×15°1E±2°.5,h10km,M5.3/9, mB5.8/3,mb5.3/9,Mw(mB)5.3/3*
*MOS **10** 03:10:18.3±1.0,46°.16N×151°.83E,h43km,mb5.4/87, MS4.4/13,Error ellipse: s-maj=7.4km s-min=4.2km az=95.0*
*SZGRF **10** 03:10:19.0,47°.17N×151°.87E,h33km,mb5.1,Kuril Islands, Russia*
*BJI **10** 03:10:19.5,46°.28N×151°.96E,h65km,mB4.9/36,mb4.9/49, Ms4.5/

*GCMT **10** 03:10:22.5±0.3, 46.05N×152.09E, h41km±1km, MW4.9, Moment Tensor Solution. s38,c49; s70,c101; Moment tensor: Scale 10^16 Nm; Mrr 2.46±.15; Mθθ -0.73±.11; Mφφ -1.73±.10; Mrθ 0.38±.10; Mθφ -1.75±.07; Mφr 1.61±.08; Best double couple: M0 3.20000×10^16 NP1: φ 233.00000°, δ 33.00000°, λ 116.00000°. NP2: φ 23.00000°, δ 61.00000°, λ 74.00000°. Principal axes: T 3.0200, Plg 70.0000°, Azm 259.0000°; N 0.4300, Plg 14.0000°, Azm 31.0000°; P -3.4400, Plg 15.0000°, Azm 125.0000°; Data Used: II IU IC CN G.*

ISC 10 03:10:21.8±0.3, 46.13N±0.04×151.79E±0.03, h64km±2km, h63km:pP-P, n1156, σ1.04/1207, mb5.0/233, 290C-215D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.89**	**253**	⇓*i*	PN	**Pn**	**03 11 05.3**	**-0.1**
KUR				*i*	S	**Sn**	**03 11 41.0**	**+2.0**
KUR					pmax	pmax		
	comp=N,230nm,0.6s							
KUR					pmax	pmax		
	comp=Z,1μm,0.6s							
KUR					pmax	pmax		
	comp=E,280nm,0.8s							
KUR					pmax	pmax		
	comp=N,2μm,1.0s							
KUR					pmax	pmax		
	comp=Z,5μm,1.0s							
KUR					pmax	pmax		
	comp=E,2μm,2.0s							
KUR					smax	smax		
	comp=E,16μm,1.2s							
KUR					smax	smax		
	comp=N,11μm,1.6s							
KUR	**Kuril'sk**	**2.89**	**253**	⇓*i*	P	**Pn**	**03 11 05.3**	**-0.1**
KUR					AMB	AMB	03 11 06.2	
	comp=N,230nm,0.7s							
KUR					AMB	AMB	03 11 06.2	
	comp=N,280nm,0.7s							
KUR					AMB	AMB	03 11 06.2	
	comp=N,1μm,0.7s							
KUR					AMB	AMB	03 11 16.0	
	comp=N,5μm,1.0s							
KUR					AMB	AMB	03 11 16.0	
	comp=N,2μm,1.0s							
KUR					AMB	AMB	03 11 16.0	
	comp=N,2μm,2.0s							
KUR				*i*	S	**Sn**	**03 11 41.0**	**+2.0**
KUR					A	A	03 11 43.8	
	comp=N,11μm,1.4s							
KUR					A	A	03 11 43.8	
	comp=N,16μm,1.4s							
YUK	**Yuzh-Kuril'sk**	**4.69**	**246**	*c i*	PN	**Pn**	**03 11 30.4**	**+0.4**
YUK				*i*	S	**Sn**	**03 12 25.2**	**+2.2**
YUK					pmax	pmax		
	comp=N,221nm,0.6s							
YUK					pmax	pmax		
	comp=E,259nm,0.6s							
YUK					pmax	pmax		
	comp=Z,476nm,0.6s							
YUK					smax	smax		
	comp=E,994nm,0.7s							
YUK					smax	smax		
	comp=N,1μm,0.6s							
YUK	**Yuzh-Kuril'sk**	**4.69**	**246**	⇑*i*	P	**Pn**	**03 11 30.5**	**+0.4**
YUK					AMB	AMB	03 11 35.0	
	comp=N,221nm,0.7s							
YUK					AMB	AMB	03 11 35.0	
	comp=N,259nm,0.7s							
YUK					AMB	AMB	03 11 35.0	
	comp=N,476nm,0.7s							
YUK				*i*	S	**Sn**	**03 12 25.3**	**+2.2**
YUK					A	A	03 12 41.0	
	comp=N,1μm,0.6s							
YUK					A	A	03 12 41.0	
	comp=N,990nm,0.6s							
YUK					AMS	AMS	03 14 43.3	
	comp=N,419nm,14.0s							
YUK					AMS	AMS	03 14 43.3	
	comp=N,307nm,14.0s							
YUK					AMS	AMS	03 14 43.3	
	comp=N,407nm,14.0s							
NEM2	**Nemuro 2**	**5.12**	**239**		P	**Pn**	**03 11 33.7**	**-2.1**
NEM2					*e*S	**Sn**	**03 12 30.4**	**-3.1**
JRA	**Rausu**	**5.21**	**248**		P	**Pn**	**03 11 37.8**	**+0.7**
SKR	**Severo-Kuril's**	**5.39**	**31**	⇓*i*	PN	Pn	03 11 35.5	-4.1
SKR					pmax	pmax		
	comp=Z,90nm,0.5s							
SKR					MLR	MLR		
	comp=N,1μm,12.0s							
SKR					MLR	MLR		
	comp=E,2μm,12.0s							
SKR					MLR	MLR		
	comp=Z,2μm,12.0s							
SKR	**Severo-Kuril's**	**5.39**	**31**	⇓*i*	P	Pn	03 11 35.5	-4.1
SKR					AMB	AMB	03 11 36.0	
	comp=Z,90nm,0.5s							
SKR				*e*	S	Sn	03 12 30.5	-10
SKR					A	A	03 12 41.0	
	comp=Z,1μm,8.0s							
SKR					A	A	03 12 41.0	
	comp=Z,2μm,8.0s							
SKR					A	A	03 12 41.0	
	comp=Z,1μm,8.0s							
SKR					A	A	03 12 56.7	
	comp=Z,360nm,0.7s							
SKR					A	A	03 12 56.7	
	comp=Z,650nm,0.7s							
SKR					A	A	03 12 56.7	
	comp=Z,470nm,0.7s							
SKR					AMS	AMS	03 14 03.0	
	comp=Z,1μm,12.0s							
SKR					AMS	AMS	03 14 03.0	
	comp=Z,2μm,12.0s							
SKR					AMS	AMS	03 14 03.0	
	comp=Z,2μm,12.0s							
JNK	**Nakash**	**5.63**	**246**		P	**Pn**	**03 11 42.9**	**0.0**
JNK					*e*S	**Sn**	**03 12 47.1**	**+0.9**
JAK	**Akkeshi**	**5.96**	**241**		P	**Pn**	**03 11 45.3**	**-2.0**
JAK					*e*S	**Sn**	**03 12 51.8**	**-2.3**
JTKR	**Abashiri--Toko**	**5.99**	**252**		P	**Pn**	**03 11 48.8**	**+1.1**
YSS	**Yuzh-Sakhalins**	**6.29**	**281**	⇓*i*	PN	Pn	03 11 55.0	+3.2
YSS					pmax	pmax		
	comp=Z,150nm,0.8s							
YSS					MLR	MLR		
	comp=N,2μm,18.0s							
YSS					MLR	MLR		
	comp=E,3μm,18.0s							
YSS					MLR	MLR		
	comp=E,2μm,17.0s							
YSS	**Yuzh-Sakhalins**	**6.29**	**281**	*e*	Pn	**Pn**	**03 11 53.7**	**+1.8**
	comp=E,165nm,0.8s							
YSS	**Yuzh-Sakhalins**	**6.29**	**281**	⇓*i*	P	Pn	03 11 55.0	+3.2
YSS					AMB	AMB	03 11 57.0	
	comp=E,150nm,0.8s							
YSS				*e*	S	**Sn**	**03 13 02.0**	**-0.2**
YSS					A	A	03 13 05.0	
	comp=E,120nm,1.0s							
YSS				*e*	LQ	LQ	03 13 30.0	
YSS				*e*	LR	LR	03 13 44.0	
YSS					AMS	AMS	03 14 11.0	
	comp=E,2μm,17.0s							
YSS					AMS	AMS	03 14 11.0	
	comp=E,2μm,18.0s							
YSS					AMS	AMS	03 14 11.0	
	comp=E,3μm,18.0s							
JMP	**Maruseppu**	**6.33**	**253**		P	**Pn**	**03 11 54.4**	**+1.8**
JAR	**Ashorobuto**	**6.38**	**247**		P	**Pn**	**03 11 53.5**	**+0.4**
JOB	**Onbets**	**6.54**	**243**		P	**Pn**	**03 11 54.3**	**-1.0**
JOB					*e*S	**Sn**	**03 13 06.2**	**-2.1**
JSE	**Soyaes**	**6.57**	**263**		P	Pn	03 11 59.9	+4.2
JKK2	**Kamakawa 2**	**6.79**	**254**		P	**Pn**	**03 12 00.6**	**+1.8**
ASAJ	**Asahikawa**	**6.81**	**256**	*e*	Pn	**Pn**	**03 12 00.9**	**+1.9**
ASAJ	**Asahikawa**	**6.81**	**256**		P	**Pn**	**03 12 01.2**	**+2.2**
ASAJ	**Asahikawa**	**6.81**	**256**		Pn	**Pn**	**03 12 00.9**	**+1.9**
	comp=E,17nm,0.3s,baz=91,slow=16,SNR=54							
ASAJ					LR	LR	03 14 39.0	
	comp=E,2μm,19.9s,baz=345,slow=39							
JWK2	**Keihoku**	**6.97**	**267**		P	Pn	03 12 06.1	+4.9
JCH	**Churui**	**6.98**	**243**		P	**Pn**	**03 11 59.5**	**-1.9**
JCH					*e*S	**Sn**	**03 13 17.0**	**-2.4**
JFR	**Furan**	**7.20**	**249**		P	**Pn**	**03 12 04.9**	**+0.6**
UGL	**Uglegorsk**	**7.21**	**298**	*e*	PN	Pn	03 12 07.8	+3.4
UGL					pmax	pmax		
	comp=Z,210nm,0.7s							
UGL					MLR	MLR		
	comp=E,2μm,16.0s							
UGL					MLR	MLR		
	comp=N,950nm,18.0s							
UGL	**Uglegorsk**	**7.21**	**298**	*e*	P	Pn	03 12 07.8	+3.4
UGL					AMB	AMB	03 12 09.0	
	comp=N,210nm,0.7s							
UGL				*e*	S	**Sn**	**03 13 26.2**	**+1.5**
UGL					A	A	03 13 29.0	
	comp=N,120nm,0.5s							
UGL					A	A	03 13 29.0	
	comp=N,140nm,0.8s							
UGL				*e*	L	L	03 13 48.0	
UGL					AMS	AMS	03 15 04.0	
	comp=N,2μm,16.0s							
UGL					AMS	AMS	03 15 04.0	
	comp=N,950nm,18.0s							
JSS	**Shosan**	**7.22**	**260**		P	Pn	03 12 09.1	+4.5
JAB	**Ashibetsu**	**7.29**	**252**		P	**Pn**	**03 12 07.7**	**+2.1**
ERM	**Erimo**	**7.45**	**240**	*e*	PN	**Pn**	**03 12 07.4**	**-0.4**
ERM	**Erimo**	**7.45**	**240**	*e*	Pn	**Pn**	**03 12 07.4**	**-0.4**
ERM				*e*	Sn	Sn	03 13 24.9	-5.9
JEM	**Erimo**	**7.45**	**240**		P	**Pn**	**03 12 06.9**	**-0.9**
JEM				*e*	S	**Sn**	**03 13 28.3**	**-2.5**
JBT2	**Biratori 2**	**7.53**	**247**		P	**Pn**	**03 12 08.0**	**-0.9**
JHR	**Hokuryu**	**7.53**	**255**		P	**Pn**	**03 12 11.3**	**+2.4**
JNBK	**Urakawa-nobuka**	**7.54**	**243**		P	**Pn**	**03 12 06.8**	**-2.3**
JNBK				*e*	S	**Sn**	**03 13 29.9**	**-3.2**
TYV	**Tymovskoe**	**7.70**	**311**	*e*	P	**Pn**	**03 12 13.5**	**+2.4**
TYV					AMB	AMB	03 12 14.5	
	comp=N,26nm,0.8s							
TYV					AMB	AMB	03 12 14.5	
	comp=N,29nm,0.8s							
TYV					AMB	AMB	03 12 14.5	
	comp=N,53nm,0.8s							
TYV					AMS	AMS	03 15 14.0	
	comp=N,3μm,18.0s							
PEA0B	**Petropavlovsk-**	**7.97**	**27**	*e*	Pn	Pn	03 12 11.3	-3.6
PETK	**Petropavlovsk-**	**7.97**	**27**		PN	**Pn**	**03 12 12.7**	**-2.2**
PETK							03 13 51.6	
PETK	**Petropavlovsk-**	**7.97**	**27**		Pn	**Pn**	**03 12 12.7**	**-2.2**
PETK					Sn	Sn	03 13 51.6	+8.1
PETK	**Petropavlovsk-**	**7.97**	**27**		Pn	**Pn**	**03 12 12.7**	**-2.2**
	comp=N,1.6nm,0.3s,baz=181,slow=16,SNR=7.5							
PETK					Sn	Sn	03 13 51.6	+8.1
	baz=168,slow=16,SNR=2.1							
PETK					LR	LR	03 15 18.0	
	comp=N,489nm,20.9s,baz=208,slow=38							
JEW	**Eniwo**	**8.09**	**250**		P	**Pn**	**03 12 16.6**	**+0.1**
PET	**Petropavlovsk**	**8.22**	**30**	*e*	PN	**Pn**	**03 12 18.2**	**0.0**
PET					pmax	pmax		
	comp=Z,61nm,0.6s							
PET					MLR	MLR		
	comp=Z,500nm,15.0s							
PET					MLR	MLR		
	comp=Z,600nm,13.0s							
PET	**Petropavlovsk**	**8.22**	**30**	*e*	Pn	**Pn**	**03 12 20.2**	**+2.0**
	comp=Z,35nm,0.5s							
PET				*e*	Sn	**Sn**	**03 13 47.3**	**-2.1**
JKB	**Kayabe**	**8.83**	**245**		P	**Pn**	**03 12 24.8**	**-1.9**
JKB				*e*	S	Sn	03 13 58.8	-5.8
JSH	**Shimam**	**9.10**	**252**		P	**Pn**	**03 12 30.8**	**+0.5**
JYM2	**Yakumo 2**	**9.14**	**248**		P	**Pn**	**03 12 29.5**	**-1.3**
OKH	**Okha**	**9.37**	**326**	*e*	L	L	03 14 05.6	
OKH					AMS	AMS	03 16 37.0	
	comp=Z,1μm,15.0s							
OKH					AMS	AMS	03 16 37.0	
	comp=Z,2μm,15.0s							
OKH					AMS	AMS	03 16 37.0	
	comp=Z,1μm,12.0s							
JSR	**Shiriuchi**	**9.41**	**245**		P	**Pn**	**03 12 32.7**	**-1.9**
JANG	**Nango**	**9.44**	**236**		P	Pn	03 12 30.2	-4.9
JANG				*e*	S	Sn	03 14 09.4	-10
JTM	**Tenmabayashi**	**9.44**	**239**		P	Pn	03 12 31.7	-3.3
JTM				*e*	S	Sn	03 14 11.8	-7.8
JTH	**Tanohata**	**9.54**	**233**	*e*	S	Sn	03 14 11.0	-11
JOSM	**Okushiri--Mats**	**9.73**	**250**		P	**Pn**	**03 12 37.5**	**-1.5**
OFUJ	**Ofunato**	**10.25**	**230**		P	Pn	03 12 40.8	-5.3
OFUJ				*e*	S	Sn	03 14 28.7	-11
JRG	**Rokugo**	**10.60**	**235**		P	Pn	03 12 46.9	-3.9
JRG				*e*	S	Sn	03 14 40.8	-7.1
TEY	**Ternei**	**10.70**	**270**	*e*	P	Pn	03 12 56.6	+4.4
TEY					AMB	AMB	03 12 57.0	
	comp=Z,26nm,0.8s							
TEY				*e*	L	L	03 16 06.0	
JIO	**Ouri**	**10.88**	**229**		P	Pn	03 12 49.5	-5.2
JIO				*e*	S	Sn	03 14 43.3	-11
JYA	**Atsumi**	**11.67**	**234**		P	Pn	03 13 01.1	-4.4
JFK	**Kawauchi**	**11.95**	**227**		P	Pn	03 13 03.9	-5.4
JFK				*e*	S	Sn	03 15 07.8	-13
JAW	**Awa shima**	**12.03**	**235**		P	Pn	03 13 06.5	-3.8
JFY	**Yanaizu**	**12.53**	**230**		P	Pn	03 13 13.6	-3.6
JSD	**Sado**	**12.88**	**236**		P	Pn	03 13 17.9	-4.1
MAJO	**Matsushiro**	**13.97**	**232**	*e*	P	Pn	03 13 32.6	-4.1
MAJO	**Matsushiro**	**13.97**	**232**	*e*	Pn	Pn	03 13 32.6	-4.1
MAT	**Matsushiro**	**13.97**	**232**		P	Pn	03 13 32.2	-4.5
MAT					S	Sn	03 16 16.2	+6.1
MJAR	**Matsushiro Arr**	**13.97**	**232**		Pn	Pn	03 13 32.4	-4.3
MJAR	**Matsushiro Arr**	**13.97**	**232**		Pn	Pn	03 13 32.4	-4.3
	comp=Z,1.4nm,0.3s,baz=29,slow=13,SNR=73							
USRK	**Ussuriysk Arra**	**14.10**	**269**		Pn	**Pn**	**03 13 35.8**	**-2.4**
	comp=Z,1.2nm,0.3s,baz=83,slow=12,SNR=25							
USRK					LR	LR	03 19 14.2	
	comp=Z,1μm,18.2s,baz=68,slow=38							
JGN	**Niukaw**	**14.70**	**233**		P	Pn	03 13 43.0	-3.2
FX1	**Attu Island--F**	**15.41**	**56**	*e*	Pn	**Pn**	**03 13 51.7**	**-3.5**
FX1					Sn	Sn	03 16 31.1	-14
FX1	**Attu Island--F**	**15.41**	**56**		Pn	**Pn**	**03 13 51.9**	**-3.3**
	comp=Z,8.6nm,0.3s,baz=336,slow=8.4,SNR=12							
FX1					Sn	Sn	03 16 31.1	-14
	comp=Z,3.3nm,0.3s,baz=24,slow=20,SNR=4.4							
FX1					LR	LR	03 19 23.0	
	comp=Z,140nm,20.7s,baz=339,slow=36							
MDJ	**Mudanjiang**	**15.67**	**272**		P	**Pn**	**03 13 59.1**	**+0.6**
MDJ					S	**Sn**	**03 16 50.5**	**-0.6**
MDJ					PcP	**PcP**	**03 18 55.0**	**-0.5**
MDJ					ScS	**ScS**	**03 26 03.0**	**+0.5**
MDJ					pmax	pmax		
	comp=Z,31nm,1.2s							
MDJ					pmax	pmax		
	comp=Z,210nm,13.3s							
MDJ					LR	LR		
	comp=N,450nm,15.2s							
MDJ					LR	LR		
	comp=E,700nm,18.8s							
MDJ					LR	LR		
	comp=Z,990nm,19.4s							
JHJ	**Hachijo jima 2**	**15.92**	**220**		Pn	**Pn**	**03 13 59.3**	**-2.5**
	comp=Z,3.0nm,0.3s,baz=38,slow=17,SNR=2.3							
JHJ					Sn	Sn	03 16 41.8	-16
	comp=Z,8.4nm,0.3s,baz=59,slow=19,SNR=3.9							
JHJ					LR	LR	03 19 13.8	
	comp=Z,140nm,19.8s,baz=289,slow=34							
ZEA	**Zeya**	**17.47**	**305**	*e*	P	**Pn**	**03 14 19.0**	**-2.0**
ZEA					AMB	AMB	03 14 24.0	
	comp=Z,200nm,7.0s							
ZEA					AMB	AMB	03 14 24.1	
	comp=Z,36nm,1.2s							
ZEA					AMB	AMB	03 14 24.1	
	comp=Z,29nm,1.2s							
ZEA					AMB	AMB	03 14 24.1	
	comp=Z,39nm,1.2s							
ZEA					A	A	03 17 42.0	
	comp=Z,200nm,5.0s							
CN2	**Changchun**	**18.76**	**272**	*e*	P	**Pn**	**03 14 36.5**	**-0.1**
CN2				*e*	pP	**pP**	**03 14 50.0**	**+1.1**
CN2				*e*	sP	**sP**	**03 15 00.5**	**+3.5**
CN2				*e*	S	S	03 17 57.9	-7.5
CN2					pmax	pmax		
	comp=Z,50nm,0.7s							
CN2					pmax	pmax		
	comp=Z,200nm,7.0s							
CN2					LR	LR		
	comp=N,700nm,17.0s							
CN2					LR	LR		
	comp=E,700nm,17.0s							
CN2					LR	LR		
	comp=Z,900nm,20.0s							
KSRS	**Korea Array**	**19.74**	**252**		P	**P**	**03 14 46.4**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=59,slow=11,SNR=51							
KSRS					PcP	**PcP**	**03 19 03.7**	**+1.4**
	baz=332,slow=0.8,SNR=6.6							
KSRS					LR	LR	03 21 27.2	
	comp=Z,526nm,21.7s,baz=57,slow=34							
CLNS	**Chul'man**	**19.75**	**313**	*e*	P	Pn	03 14 55.9	+7.6
CLNS				*e*	S	**Sn**	**03 18 30.0**	**+0.6**
CLNS					pmax	pmax		
	comp=Z,7.0nm,1.1s							
CLNS					pmax	pmax		
	comp=N,14nm,1.2s							
CLNS					pmax	pmax		
	comp=E,29nm,1.5s							
CLNS					smax	smax		
	comp=E,90nm,11.4s							
CLNS					smax	smax		
	comp=N,64nm,13.4s							
CLNS					MLR	MLR		
	comp=Z,768nm,17.0s							
CLNS					MLR	MLR		
	comp=N,535nm,16.0s							
CLNS					MLR	MLR		
	comp=E,590nm,17.0s							
KSAR	**Wonju Array Be**	**19.77**	**252**		P	**P**	**03 14 46.4**	**-0.2**
KSAR					PcP	**PcP**	**03 19 03.7**	**+1.3**
YAK	**Yakutsk**	**20.37**	**329**	*e*	P	**P**	**03 14 53.2**	**+0.3**
YAK				*e**	PP	**pP**	**03 15 07.8**	**+1.4**
YAK				*e*	S	**S**	**03 18 36.4**	**-0.9**
YAK				*e*			03 19 01.8	
YAK				*e**	SS	sS	03 19 08.2	+8.7
YAK				*e*			03 26 12.2	
YAK					pmax	pmax		
	comp=Z,106nm,1.1s							
YAK					pmax	pmax		
	comp=N,63nm,1.1s							
YAK					pmax	pmax		
	comp=E,58nm,1.2s							
YAK					smax	smax		
	comp=N,21nm,1.7s							
YAK					smax	smax		
	comp=E,60nm,2.2s							
YAK	**Yakutsk**	**20.37**	**329**	*e*	P	**P**	**03 14 52.8**	**-0.1**
	comp=E,196nm,0.9s							
CBIJ	**Chichi jima**	**20.47**	**205**		P	**P**	**03 14 53.6**	**-0.7**
CBIJ	**Chichi jima**	**20.47**	**205**		P	**P**	**03 14 53.6**	**-0.7**
	comp=E,79nm,0.7s,baz=315,slow=17,SNR=3.6							
INCN	**Inchon**	**20.58**	**254**	*e*	P	**P**	**03 14 56.2**	**+0.8**
	comp=E,63nm,0.9s							
JNU	**Nakatsue**	**20.61**	**238**	*e*	P	**P**	**03 14 56.1**	**+0.3**
	comp=E,10nm,0.9s							
JNU	**Nakatsue**	**20.61**	**238**		P	**P**	**03 14 55.2**	**-0.6**
	comp=E,19nm,1.0s,baz=65,slow=7.0,SNR=8.9							
JNU					LR	LR	03 23 03.1	
	comp=E,511nm,21.9s,baz=41,slow=37							
SNY	**Shenyang**	**20.70**	**268**	⇓	P	**P**	**03 14 57.3**	**+0.7**
SNY					S	**S**	**03 18 39.6**	**-4.5**
SNY					pmax	pmax		
	comp=Z,140nm,2.3s							
SNY					LR	LR		
	comp=N,320nm,18.6s							
SNY					LR	LR		
	comp=E,1μm,18.0s							
SNY					LR	LR		
	comp=Z,890nm,18.3s							
BILL	**Bilibino**	**23.21**	**14**	*e*	P	**P**	**03 15 21.5**	**-1.4**
BILL				*e*			03 15 47.9	
BILL				*e*	S	**S**	**03 19 32.2**	**+2.6**
BILL					pmax	pmax		
	comp=E,14nm,1.0s							
BILL					MLR	MLR		
	comp=Z,400nm,19.0s							
BILL	**Bilibino**	**23.21**	**14**	*e*	P	**P**	**03 15 21.6**	**-1.4**
	comp=Z,16nm,0.8s							
DL2	**Dalian**	**23.27**	**263**		P	**P**	**03 15 24.5**	**+0.7**
DL2					S	**S**	**03 19 32.3**	**+1.2**
DL2					sS	**sS**	**03 19 54.8**	**-1.9**
DL2					pmax	pmax		
	comp=Z,20nm,0.8s							
DL2					pmax	pmax		
	comp=Z,100nm,6.5s							
DL2					LR	LR		
	comp=N,110nm,14.7s							
DL2					LR	LR		
	comp=E,150nm,14.3s							
DL2					LR	LR		
	comp=Z,210nm,16.8s							
BJI	**Beijing**	**26.55**	**270**		P	**P**	**03 15 54.0**	**+0.4**
BJI					pP	**pP**	**03 16 08.5**	**-0.4**
BJI					S	**S**	**03 20 24.2**	**+0.8**
BJI					sS	**sS**	**03 20 51.0**	**+1.3**
BJI					pmax	pmax		
	comp=Z,10.0nm,0.8s							
BJI					LR	LR		
	comp=N,280nm,15.9s							
BJI					LR	LR		
	comp=E,850nm,16.6s							
BJI					LR	LR		
	comp=Z,600nm,19.3s							
GAMB	**Gambell**	**26.86**	**36**	*e*	P	**P**	**03 15 54.0**	**-2.1**
	comp=Z,11nm,1.1s							
TIXI	**Tiksi**	**27.82**	**345**	*e*	P	**P**	**03 16 02.6**	**-2.0**
TIXI					pmax	pmax		
	comp=Z,5.0nm,0.9s							
TIXI	**Tiksi**	**27.82**	**345**	*e*	P	**P**	**03 16 02.6**	**-2.0**
	comp=Z,5.0nm,0.9s							
TNA	**Tin City**	**29.06**	**34**	*e*	P	**P**	**03 16 14.4**	**-1.3**
	comp=Z,5.2nm,1.0s							
HHC	**Hu-ho-hao-te**	**29.43**	**274**	*e*	P	**P**	**03 16 19.6**	**+0.3**
HHC					pP	**pP**	**03 16 34.4**	**-0.4**
HHC					sP	**sP**	**03 16 41.8**	**-0.5**
HHC					PP	**PnPn**	**03 17 16.7**	**+0.9**
HHC					S	**S**	**03 21 05.6**	**-3.2**
HHC					sS	**sS**	**03 21 31.8**	**-3.4**
HHC					pmax	pmax		
	comp=Z,31nm,0.7s							
HHC					pmax	pmax		
	comp=Z,200nm,3.6s							
HHC					LR	LR		
	comp=N,350nm,12.7s							
HHC					LR	LR		
	comp=E,1μm,14.7s							
HHC					LR	LR		
	comp=Z,1μm,15.2s							
ULN	**Ulaanbaatar**	**30.24**	**290**	*e*	P	**P**	**03 16 25.6**	**-0.9**
	comp=Z,4.7nm,0.9s							
ULN	**Ulaanbaatar**	**30.24**	**290**		P	**P**	**03 16 24.8**	**-1.7**
	comp=Z,6.2nm,0.9s							
SONM	**Songino Array**	**30.68**	**290**		P	**P**	**03 16 29.7**	**-0.7**
SONM					PcP	**PcP**	**03 19 27.5**	**+0.7**
SONM	**Songino Array**	**30.68**	**290**		P	**P**	**03 16 29.7**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=73,slow=6.7,SNR=14							
SONM					PcP	**PcP**	**03 19 27.5**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=106,slow=1.9,SNR=6.2							
SONM					LR	LR	03 29 48.1	
	comp=Z,490nm,19.2s,baz=45,slow=38							
TLY	**Talaya**	**31.66**	**298**	*e*	P	**P**	**03 16 38.2**	**-0.6**
TLY				*e*	S	**S**	**03 21 43.5**	**+0.2**
TLY					pmax	pmax		
	comp=Z,4.0nm,0.8s							
TLY					MLR	MLR		
	comp=Z,638nm,18.0s							
ZAK	**Zakamensk**	**32.12**	**296**	*e*	P	P	03 16 39.3	-3.6
ZAK				*e*			03 19 30.5	
ZAK					pmax	pmax		
	comp=Z,4.0nm,1.0s							
WHN	**Wuhan**	**32.89**	**255**		P	**P**	**03 16 50.2**	**+0.5**
WHN					S	**S**	**03 22 07.6**	**+4.9**
WHN					LR	LR		
	comp=Z,280nm,15.7s							
GUMO	**Guam**	**32.95**	**192**		LR	LR	03 30 10.0	
	comp=Z,265nm,19.0s,baz=49,slow=36							
TPUB	**Ta-pu**	**33.92**	**238**	*e*	P	**P**	**03 16 59.7**	**+0.9**
	comp=Z,39nm,0.8s							
TWG	**Pinlang**	**34.03**	**237**	*e*	P	**P**	**03 16 59.9**	**+0.1**
	comp=Z,148nm,0.9s							
XAN	**Xi'an**	**34.55**	**265**		P	**P**	**03 17 04.6**	**+0.4**
XAN					pmax	pmax		
	comp=Z,8.0nm,0.9s							
XAN					pmax	pmax		
	comp=Z,22nm,5.4s				

LZH **Lanzhou** 36.99 272 eP P 03 17 26.9 +1.7
LZH pP pP 03 17 45.5 +4.5
LZH sP sP 03 17 53.0 +4.6
LZH PcP PcP 03 19 46.0 +1.0
LZH eS S 03 23 01.3 -4.8
LZH sS sS 03 23 33.4 +0.5
LZH SS SnSn 03 25 37.0 -7.5
LZH pmax pmax
comp=Z,74nm,1.2s
LZH pmax pmax
comp=Z,130nm,4.6s
LZH LR LR
comp=N,1μm,12.8s
LZH LR LR
comp=E,1μm,11.8s
LZH LR LR
comp=Z,2μm,15.4s
SML Sawmill 37.05 43 eP P 03 17 25.2 -0.1
SML pmax pmax
comp=Z,9.0nm,0.7s
SML Sawmill 37.05 43 eP P 03 17 25.2 -0.1
comp=Z,8.5nm,0.7s
COLA College 37.19 38 eP P 03 17 25.4 -1.0
COLA pmax pmax
comp=Z,15nm,0.8s
COLA College 37.19 38 eP P 03 17 25.4 -1.0
comp=Z,15nm,0.8s
ILAR Eielson Array 37.60 38 P P 03 17 29.0 -0.9
ILAR Eielson Array 37.60 38 P P 03 17 29.0 -0.9
comp=Z,3.5nm,0.8s,baz=261,slow=7.2,SNR=35
ILAR LR LR 03 33 13.6
comp=Z,87nm,19.2s,baz=283,slow=37
GTA Gaotai 38.16 279 eP P 03 17 36.0 +1.0
GTA pP pP 03 17 51.2 +0.4
GTA sP sP 03 17 58.1 -0.1
GTA PcP PcP 03 19 50.2 +1.7
GTA S S 03 23 24.7 +0.9
GTA sS sS 03 23 49.9 -0.7
GTA SS SnSn 03 26 04.8 -7.8
GTA pmax pmax
comp=Z,6.0nm,1.1s
GTA pmax pmax
comp=Z,93nm,5.2s
GTA LR LR
comp=N,310nm,16.4s
GTA LR LR
comp=E,220nm,14.0s
GTA LR LR
comp=Z,360nm,16.1s
PAX Paxson 38.31 41 eP P 03 17 33.2 -2.7
PAX Paxson 38.31 41 eP P 03 17 33.2 -2.7
DOT Dot Lake 38.89 40 eP P 03 17 39.8 -0.9
comp=Z,6.6nm,0.8s
BMRM Bremner River 38.92 44 eP P 03 17 39.5 -1.5
comp=Z,21nm,1.0s
CD2 Chengdu 39.91 265 P P 03 17 50.8 +1.2
CD2 pP pP 03 18 06.0 +0.5
CD2 sP sP 03 18 13.2 +0.3
CD2 PP PnPn 03 19 27.4 +1.3
CD2 PcP PcP 03 19 56.0 +1.9
CD2 PcS PcS 03 23 45.6 +1.1
CD2 S S 03 23 50.5 +0.5
CD2 sS sS 03 24 16.5 -0.5
CD2 SS SS 03 26 42.3 -6.2
CD2 ScS ScS 03 27 50.4 -0.3
CD2 pmax pmax
comp=Z,80nm,0.8s
CD2 pmax pmax
comp=Z,90nm,5.4s
CD2 LR LR
comp=N,210nm,14.7s
CD2 LR LR
comp=E,240nm,15.7s
CD2 LR LR
comp=Z,350nm,16.0s
EGAK Eagle 40.05 38 eP P 03 17 49.4 -0.9
comp=Z,11nm,1.0s
GYA Guiyang 40.68 257⇑ iP P 03 17 56.7 +0.6
GYA pP pP 03 18 12.0 -0.1
GYA sP sP 03 18 22.4 +3.0
GYA PP PnPn 03 19 34.4 -0.9
GYA ScP ScP 03 23 40.2 -0.3
GYA PcS PcS 03 23 49.4 +1.6
GYA S S 03 23 59.0 -2.8
GYA sS sS 03 24 26.5 -2.3
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,90nm,4.6s
GYA LR LR
comp=N,460nm,17.1s
GYA LR LR
comp=E,310nm,18.9s
GYA LR LR
comp=Z,430nm,17.2s
ZALV Zalesovo Beam 42.23 306 P P 03 18 06.9 -1.5
ZALV 03 20 01.9
ZALV Zalesovo Beam 42.23 306 P P 03 18 06.9 -1.5
ZALV PcP PcP 03 20 01.9 +0.7
ZALV Zalesovo Beam 42.23 306 P P 03 18 06.9 -1.5
comp=Z,1.7nm,0.6s,baz=93,slow=5.9,SNR=4.1
ZALV PcP PcP 03 20 01.9 +0.7
comp=Z,10.0nm,0.8s,baz=81,slow=2.5,SNR=24
ZALV LR LR 03 36 55.8
comp=Z,872nm,18.8s,baz=69,slow=38
QIZ Qiongzhong 43.76 246 P P 03 18 22.2 +1.1
QIZ pP pP 03 18 37.1 0.0
QIZ sP sP 03 18 44.5 +0.1
QIZ S S 03 24 49.1 +2.2
QIZ pmax pmax
comp=Z,27nm,2.2s
QIZ pmax pmax
comp=Z,150nm,3.6s
QIZ LR LR
comp=Z,300nm,27.6s
KMI Kunming 44.23 259 P P 03 18 26.0 +1.0
KMI pP pP 03 18 43.5 +2.4
KMI sP sP 03 18 52.0 +3.6
KMI PP PP 03 20 11.6 +2.6
KMI S S 03 24 53.4 -0.7
KMI sS sS 03 25 23.9 +2.6
KMI SS SS 03 28 03.0 -11
KMI pmax pmax
comp=Z,23nm,1.2s
KMI pmax pmax
comp=Z,210nm,4.9s
KMI LR LR
comp=N,130nm,19.9s
KMI LR LR
comp=E,250nm,21.0s
KMI LR LR
comp=Z,160nm,16.1s
WMQ Urumqi 44.30 291 P P 03 18 27.0 +1.8
WMQ pP pP 03 18 42.0 +0.7
WMQ sP sP 03 18 50.0 +1.4
WMQ PP PP 03 20 12.0 +2.7
WMQ ScP ScP 03 23 56.0 +1.3
WMQ S S 03 24 55.0 +0.6
WMQ sS sS 03 25 22.0 +0.3
WMQ SS SS 03 28 07.0 -7.5
WMQ ScS ScS 03 28 17.0 -0.3
WMQ pmax pmax
comp=Z,14nm,0.6s
WMQ pmax pmax
comp=Z,64nm,5.0s
WMQ LR LR
comp=N,370nm,15.0s
WMQ LR LR
comp=E,380nm,15.0s
WMQ LR LR
comp=Z,410nm,15.0s
MK31 Makanchi Array 46.41 297 eP P 03 18 41.0 -0.8
MK31 e 03 20 16.4
MK31 Makanchi Array 46.41 297 eP P 03 18 41.0 -0.8
MK31 ePcP PcP 03 20 16.4 +0.7
MKAR Makanchi Array 46.41 297 eP P 03 18 41.3 -0.6
MKAR 03 20 16.5
MKAR Makanchi Array 46.41 297 eP P 03 18 41.3 -0.6
MKAR PcP PcP 03 20 16.5 +0.8
MKAR Makanchi Array 46.41 297 P P 03 18 40.9 -1.0
comp=Z,6.0nm,0.7s,baz=70,slow=7.2,SNR=50
MKAR PcP PcP 03 20 16.5 +0.8
comp=Z,7.1nm,0.7s,baz=65,slow=4.3,SNR=13
MKAR LR LR 03 39 16.2
comp=Z,560nm,19.6s,baz=65,slow=38
DLBC Dease Lake 46.68 45 eP P 03 18 44.9 +1.1
KURK Kurchatov 46.95 304c iP P 03 18 43.5 -2.4
KURK pmax pmax
comp=Z,7.0nm,0.8s
KURK Kurchatov 46.95 304 eP P 03 18 44.7 -1.2
comp=Z,7.8nm,0.9s
KURK ePcP PcP 03 20 17.3 -0.2
LSA Lhasa 49.39 273 P P 03 19 07.6 +2.0
BVAR Borovoye Array 50.55 309 LR LR 03 42 25.0
comp=Z,449nm,19.6s,baz=75,slow=38
BRVK Borovoye 50.59 309 eP P 03 19 12.9 -0.9
BRVK e 03 20 30.7
BRVK pmax pmax
comp=Z,5.0nm,0.8s
BRVK Borovoye 50.59 309 eP P 03 19 12.9 -0.9
comp=Z,5.2nm,0.8s
BRVK ePcP PcP 03 20 30.7 +0.2
CMMT Chiang Mai 51.08 256 P P 03 19 18.8 +0.9
comp=Z,42nm,0.9s
CHTO Chiang Mai 51.08 256 eP P 03 19 19.3 +1.4
CHTO pmax pmax
comp=Z,39nm,1.0s
CHTO Chiang Mai 51.08 256 eP P 03 19 19.3 +1.4
comp=Z,39nm,1.0s
CHTO Chiang Mai 51.08 256 P P 03 19 18.8 +0.9
comp=Z,47nm,0.9s,comp=Z,455nm
CM31 Chiang Mai Arr 51.33 256 eP P 03 19 21.5 +1.7
comp=Z,3.9nm,0.4s
CMAR Chiang Mai Arr 51.33 256 P P 03 19 21.3 +1.5
CMAR Chiang Mai Arr 51.33 256 P P 03 19 21.3 +1.5
comp=Z,13nm,0.8s,baz=36,slow=7.6,SNR=49
CMAR LR LR 03 42 50.4
comp=Z,140nm,18.1s,baz=51,slow=38
AAA Alma-Ata 51.42 296 i P P 03 19 26.1 +5.9
RES Resolute Bay 51.72 18 eP P 03 19 21.5 -0.4
comp=Z,5.4nm,0.8s
YKW3 Yellowknife Ar 51.93 36 eP P 03 19 23.6 -0.1
comp=Z,0.2nm,0.8s
YKW3 epP pP 03 19 38.7 -1.5
YKA Yellowknife Ar 51.97 36 P P 03 19 24.0 0.0
YKA Yellowknife Ar 51.97 36 P P 03 19 24.0 0.0
comp=Z,8.1nm,0.7s,baz=297,slow=7.0,SNR=119
TKM2 Tokmak 2 52.45 296 i P P 03 19 26.8 -1.3
TKM2 Tokmak 2 52.45 296 eP P 03 19 26.0 -2.1
comp=Z,28nm,0.5s
TKM2 Tokmak 2 52.45 296 P P 03 19 26.8 -1.3
SNR=7.7
CHMS Chumysh 52.94 296 i P P 03 19 33.8 +2.3
CHMS Chumysh 52.94 296 P P 03 19 33.8 +2.3
SNR=7.2
USP Ospenovka 52.95 297 P P 03 19 40.0 +8.4
SNR=22
KBS Kingsbay 52.97 351 eP P 03 19 31.5 +0.3
KBS pmax pmax
comp=Z,11nm,0.8s
KBK Karagaybulak 52.99 296 P P 03 19 27.3 -4.8
SNR=30
TAPN Taplejung 53.22 273 eP P 03 19 35.1 +1.1
comp=Z,29nm,0.8s
AAK Ala-Archa 53.29 296 eP P 03 19 31.0 -3.2
AAK pmax pmax
comp=Z,6.0nm,0.6s
AAK Ala-Archa 53.29 296 eP P 03 19 31.0 -3.2
comp=Z,6.1nm,0.6s
UCH Uchtor 53.49 296 P P 03 19 26.6 -9.5
SNR=9.2
EKS2 Erkin-Say 53.72 296 eP P 03 19 37.4 0.0
EKS2 pmax pmax
comp=Z,23nm,0.6s
EKS2 Erkin-Say 53.72 296 eP P 03 19 37.4 0.0
comp=Z,24nm,0.6s
ODAN Odare 53.74 273 eP P 03 19 39.0 +1.2
comp=Z,30nm,0.8s
SOKR Solikamsk 54.01 321 eP P 03 19 38.6 -0.4
SOKR pmax pmax
comp=Z,10.0nm,1.0s
SOKR MLR MLR
comp=Z,540nm,26.0s
KSH Kashi 54.04 292 eP P 03 19 43.1 +3.4
KSH pP pP 03 20 02.3 +6.0
KSH sP sP 03 20 10.8 +7.3
KSH PcP PcP 03 20 46.9 +2.9
KSH PP PP 03 21 46.9 +5.5
KSH ScP ScP 03 24 35.8 -0.5
KSH PcS PcS 03 24 45.2 +1.7
KSH S S 03 27 13.2 +2.1
KSH sS sS 03 27 46.0 +6.9
KSH ScS ScS 03 29 21.9 -1.3
KSH SS SS 03 30 55.0 +2.2
AML Almayashu 54.06 296 P P 03 19 28.4 -12
SNR=11
GUN Gumba 54.14 275 eP P 03 19 41.8 +1.0
comp=Z,85nm,0.9s
RAMN Ramite 54.24 273 eP P 03 19 42.6 +1.2
comp=Z,34nm,0.5s
KKN Kakani 54.63 275 eP P 03 19 45.8 +1.5
comp=Z,91nm,0.9s
PKI Pulchoki 54.68 275 eP P 03 19 45.7 +1.0
comp=Z,63nm,1.0s
PKIN Phulchoki 54.68 275 eP P 03 19 46.1 +1.4
comp=Z,25nm,0.8s
ARU Arti 54.85 317d iP P 03 19 44.2 -0.9
ARU 03 20 45.7
ARU S S 03 27 20.9 -0.3
ARU pmax pmax
comp=Z,15nm,1.1s
ARU Arti 54.85 317 eP P 03 19 44.0 -1.1
comp=Z,10nm,0.8s
DMN Daman 54.86 275 eP P 03 19 47.3 +1.3
comp=Z,168nm,1.2s
DANN Dangsing 55.34 276 eP P 03 19 51.1 +1.7
comp=Z,167nm,0.8s
KKAR Karatay Array 55.49 299 eP P 03 19 49.9 -0.2
KKAR Karatay Array 55.49 299 eP P 03 19 49.9 -0.2
HNR Honiara 55.79 170 LR LR 03 38 50.7
comp=Z,201nm,20.9s,baz=353,slow=31
KOLN Koldanda 55.81 276 eP P 03 19 54.2 +1.5
comp=Z,122nm,0.9s
PYUN Piuthan 56.02 277 eP P 03 19 55.7 +1.4
comp=Z,372nm,1.1s
DAG Danmarks Havn 57.23 357 i P P 03 20 00.9 -0.9
DAG pmax pmax
comp=Z,4.0nm,0.9s
DAG Danmarks Havn 57.23 357 i P P 03 20 00.9 -0.9
comp=Z,4.2nm,0.9s
APA Apatity 57.55 336⇑ eP P 03 20 06.0 +1.8
APA MLR MLR
comp=Z,400nm,15.0s
KEV Kevo 57.62 340 eP P 03 20 03.4 -1.3
KEV pmax pmax
comp=Z,2.0nm,0.7s
KEV Kevo 57.62 340 ep P 03 20 03.4 -1.3
comp=Z,2.4nm,0.7s
DDI Dehra Dun 58.03 282 eP P 03 20 09.8 +1.5
ABKAR Akbulak array 58.12 310 eP P 03 20 08.0 -0.5
ARCES ARCESS Array B 58.14 340 P P 03 20 09.2 +0.9
ARCES ARCESS Array B 58.14 340 P P 03 20 09.2 +0.9
comp=Z,2.5nm,0.7s,baz=39,slow=6.4,SNR=13
ARCES LR LR 03 49 53.3
comp=Z,144nm,19.3s,baz=29,slow=41
NEW Newport 58.28 52 eP P 03 20 09.0 -0.7
comp=Z,6.1nm,1.0s
NEW Newport 58.28 52 ⇓P P 03 20 09.5 -0.2
baz=58,SNR=7.3
KAPI Kappang 58.34 218 eP P 03 20 09.9 -0.4
comp=Z,19nm,1.1s
KAPI Kappang 58.34 218 P P 03 20 10.6 +0.3
comp=Z,20nm,1.2s
KAPI Kappang 58.34 218 P P 03 20 09.7 -0.7
comp=Z,7.7nm,0.6s,baz=166,slow=1.8,SNR=5.7
A12A Yaak River Ran 58.69 50 ⇑P P 03 20 12.9 +0.4
baz=58
C11A Tepee Creek (N 59.00 52 ⇑P P 03 20 14.6 -0.1
baz=59,SNR=10
A13A Flathead Natio 59.35 50 ⇑P P 03 20 17.5 +0.3
baz=59,SNR=8.5
C12B Naegeli Ranch, 59.50 52 ⇑P P 03 20 18.5 +0.3
baz=59
WALA Waterton Lakes 59.54 50 eP P 03 20 18.6 +0.1
comp=Z,0.6nm,1.3s
B13A Whitefish 59.65 50 ⇑P P 03 20 19.7 +0.5
baz=59,SNR=18
BSMT Bassoo Peak 59.79 51 eP P 03 20 21.5 +1.1
A14A Double T Ranch 59.85 49 ⇓P P 03 20 20.4 -0.2
baz=60,SNR=7.9
BLMT Blacktail Moun 59.93 51 eP P 03 20 22.5 +1.2
C13A Hot Springs 60.01 51 ⇑P P 03 20 22.2 +0.5
baz=60,SNR=7.1
JTMT Jette 60.13 51 eP P 03 20 23.3 +0.8
KLMR Klimovskoe 60.16 329 eP P 03 20 19.5 -2.9
KLMR e*PP pP 03 20 33.5 -5.7
KLMR eS S 03 28 25.3 -5.4
KLMR e 03 30 06.5
KLMR pmax pmax
comp=Z,18nm,1.8s
KLMR MLR MLR
comp=Z,167nm,15.0s
MOD Modoc 60.20 59 eP P 03 20 24.0 +0.9
comp=Z,13nm,0.8s
YBMT Yellow Bay 60.20 51 eP P 03 20 23.5 +0.4
comp=Z,2.1nm,0.8s
A15A Johnson Ranch, 60.21 49 ⇑P P 03 20 22.7 -0.4
baz=60,SNR=9.2
B14A Marquette Ranc 60.30 50 ⇑P P 03 20 23.9 +0.1
baz=60,SNR=8.6
COEN Coen 60.30 190 eP P 03 20 24.1 +0.2
C14A Swan Lake 60.40 51 ⇓P P 03 20 25.0 +0.6
baz=60
D13A Huson 60.42 52 ⇓P P 03 20 24.9 +0.4
baz=60,SNR=7.8
SWMT Swartz Lake 60.42 51 eP P 03 20 25.0 +0.4
B15A Bradely Ranch, 60.71 50 ⇑P P 03 20 26.3 -0.2
baz=60,SNR=10.0
F12A Elk City 60.79 53 ⇓P P 03 20 27.6 +0.4
baz=61,SNR=17
SLMT Seeley Lake 60.86 51 eP P 03 20 28.0 +0.4
MSO Missoula 60.87 52 eP P 03 20 27.6 0.0
comp=Z,14nm,1.1s
MSO Missoula 60.87 52 ⇑P P 03 20 27.8 +0.2
baz=61,SNR=15
D14A Greenough 60.95 51 ⇓P P 03 20 28.2 0.0
baz=61,SNR=30
E13A Victor 60.97 52 ⇓P P 03 20 28.6 +0.3
baz=61
C15A Salmond Ranch, 61.01 50 ⇓P P 03 20 29.1 +0.5
baz=61,SNR=24
OHCM Honcut 61.03 62 eP P 03 20 29.1 +0.5
B16A M & M Farms, S 61.10 49 ⇑P P 03 20 29.0 0.0
baz=61,SNR=6.8
G12A Big Creek, Yel 61.14 54 ⇓P P 03 20 29.2 -0.3
baz=61
CHMT Chamberlain Mo 61.19 51 eP P 03 20 30.1 +0.2
F13A Darby 61.29 53 ⇓P P 03 20 30.4 -0.1
baz=61,SNR=12
A17A Triple J Farms 61.29 48 ⇑P P 03 20 30.2 -0.2
baz=61,SNR=9.1
E14A Clinton 61.36 52 ⇑P P 03 20 31.2 +0.1
baz=61
SUMG Summit 61.38 3 i P P 03 20 31.3 +0.3
SUMG pmax pmax
comp=Z,26nm,0.8s
SUMG Summit 61.38 3 eP P 03 20 31.0 0.0
SUMG Summit 61.38 3 i P P 03 20 31.3 +0.3
comp=Z,26nm,0.8s
KBL Kabul 61.44 291 eP P 03 20 30.4 -1.4
KBL pmax pmax
comp=Z,62nm,1.0s
KBL Kabul 61.44 291 eP P 03 20 30.4 -1.4
comp=Z,62nm,1.0s
C16A Fuhringer Ranc 61.45 50 ⇓P P 03 20 31.8 +0.3
baz=61,SNR=20
JOF Joensuu 61.48 333 eP P 03 20 28.9 -2.4
JOF pmax pmax
comp=Z,4.0nm,0.6s
JOF Joensuu 61.48 333 ep P 03 20 28.9 -2.4
comp=Z,4.3nm,0.6s
D15A Lincoln 61.51 51 ⇑P P 03 20 32.0 0.0
baz=61,SNR=6.0
B17A L&G Farms, Che 61.65 49 ⇑P P 03 20 33.0 +0.2
baz=61,SNR=7.7
A18A Metzger Ranch, 61.75 48 ⇑P P 03 20 33.3 -0.1
baz=62
H12A Diamond D Ranc 61.76 54 ⇓P P 03 20 33.6 -0.1
baz=62,SNR=7.2
G13A Cobalt 61.77 53 ⇑P P 03 20 33.7 -0.1
baz=62,SNR=19
F14A Wisdom 61.80 52 ⇑P P 03 20 33.9 -0.1
baz=62
FFC Flin Flon 61.80 39 i P P 03 20 34.1 +0.5
FFC Flin Flon 61.80 39 eP P 03 20 33.6 0.0
comp=Z,9.9nm,0.9s
E15A Deer Lodge 61.82 51 ⇓P P 03 20 34.3 +0.2
baz=62,SNR=10
MFID Camas Ranch 61.90 56 eP P 03 20 35.2 +0.6
MFID Camas Ranch 61.90 56 ⇓P P 03 20 35.0 +0.4
baz=62,SNR=5.6
D16A Dana Ranch, Ca 62.03 50 ⇓P P 03 20 35.9 +0.4
baz=62,SNR=21
I12A Atlanta 62.06 55 ⇓P P 03 20 36.2 +0.4
baz=62,SNR=14
C17A Wharram Farm, 62.08 49 ⇓P P 03 20 35.7 0.0
baz=62,SNR=13
HRY Holter Researc 62.08 51 eP P 03 20 36.9 +1.1
H13A Challis 62.08 54 ⇑P P 03 20 36.0 +0.1
baz=62,SNR=20
G14A Jackson 62.11 53 ⇓P P 03 20 35.7 -0.4
baz=62
B18A Beardsley Farm 62.12 48 ⇑P P 03 20 36.4 +0.5
baz=62,SNR=7.9
F15A Butte 62.27 52 ⇑P P 03 20 37.9 +0.7
baz=62,SNR=17
E16A East Helena 62.28 51 ⇓P P 03 20 37.7 +0.6
baz=62,SNR=9.2
LRM Limekiln Ridge 62.30 52 eP P 03 20 38.4 +0.9
A19A Klindworth Far 62.31 47 ⇓P P 03 20 37.7 +0.5
baz=62,SNR=9.8
JMIC Jan Mayen 62.34 353 LR LR 03 44 14.4
comp=Z,101nm,21.4s,baz=54,slow=33
EGMT Eagleton 62.36 49 eP P 03 20 38.3 +0.7
EGMT Eagleton 62.36 49 ⇓P P 03 20 37.9 +0.3
baz=62
D17A Six Diamond Ra 62.42 50 ⇑P P 03 20 38.2 +0.1
baz=62,SNR=12
CMB Columbia Colle 62.50 63 eP P 03 20 39.6 +0.9
CMB Columbia Colle 62.50 63 eP P 03 20 39.6 +0.9
B19A Brinkman Farms 62.51 48 ⇑P P 03 20 38.9 +0.4
baz=62,SNR=12
DLMT Dillon 62.51 52 eP P 03 20 39.2 +0.5
H14A Leadore 62.55 53 ⇓P P 03 20 39.1 0.0
baz=62
I13A Wildhorse Cree 62.56 54 ⇓P P 03 20 39.7 +0.5
baz=62,SNR=12
HLID Hailey 62.62 55 eP P 03 20 40.1 +0.6
HLID Hailey 62.62 55 ⇑P P 03 20 40.0 +0.6
baz=62,SNR=9.6
G15A Dillon 62.69 52 ⇓P P 03 20 40.1 +0.1
baz=62,SNR=14
MCMT McKenzie Canyo 62.70 53 eP P 03 20 40.5 +0.3
comp=Z,2.6nm,0.8s
A20A Cobblestone Ra 62.76 47 ⇑P P 03 20 40.5 +0.3
baz=62,SNR=7.8
E17A Martinsdale 62.76 50 ⇓P P 03 20 41.3 +0.8
baz=62,SNR=18
F16A Kennard Place, 62.77 51 ⇓P P 03 20 40.9 +0.4
baz=62,SNR=5.6
J13A Cove Ranch, Pi 62.85 55 ⇑P P 03 20 41.8 +0.7
baz=63,SNR=12
BOZ Bozeman (W) 62.86 52 eP P 03 20 41.4 +0.4
BOZ pmax pmax
comp=Z,8.0nm,0.8s
BOZ Bozeman (W) 62.86 52 eP P 03 20 41.4 +0.4
comp=Z,8.4nm,0.8s
BOZ Bozeman (W) 62.86 52 ⇓P P 03 20 41.8 +0.8
baz=63,SNR=15
D18A Linhart Farms, 62.86 49 ⇑P P 03 20 41.6 +0.7
baz=63
C19A Slack Wire Ran 62.91 48 ⇓P P 03 20 42.0 +0.7
baz=63,SNR=17
I14A Mackay 62.93 54 ⇑P P 03 20 42.4 +0.8
baz=63,SNR=20
BMN Battle Mountai 62.93 59 eP P 03 20 42.3 +0.7
BMN pmax pmax
comp=Z,15nm,1.1s
BMN Battle Mountai 62.93 59 eP P 03 20 42.3 +0.7
comp=Z,15nm,1.1s
H15A Lima 62.95 53 ⇓P P 03 20 42.0 +0.2
baz=63
PSI Prapat 62.98 243 P P 03 20 42.7 +0.5
PSI Prapat 62.98 243 P P 03 20 44.5 +2.3
comp=Z,12nm,0.8s
PSI Prapat 62.98 243 P P 03 20 42.7 +0.5

comp=Z,9.2nm,0.8s,baz=21,slow=5.2,SNR=9.0
B20A **Solberg Farm,** 62.99 47 ⇑P P 03 20 42.2 +0.5
baz=63
G16A **Moss Hill, Enn** 63.03 52 ⇑P P 03 20 42.6 +0.4
baz=63,SNR=23
A21A **Bergtoll Ranch** 63.19 46 ⇑P P 03 20 43.5 +0.5
baz=63
E18A **Harlowton** 63.20 50 ⇑P P 03 20 44.1 +0.8
baz=63,SNR=7.9
F17A **Fitzpatrick Pl** 63.22 51 ⇓P P 03 20 44.0 +0.5
baz=63,SNR=9.0
J14A **Carey** 63.27 55 ⇓P P 03 20 45.0 +1.2
baz=63
D19A **Cripps Ranch,** 63.36 49 ⇓P P 03 20 44.9 +0.6
baz=63,SNR=7.9
I15A **Monteview** 63.43 53 ⇓P P 03 20 45.0 +0.2
baz=63
C20A **Veseth Ranch,** 63.47 48 ⇑P P 03 20 45.5 +0.6
baz=63,SNR=21
QLMT **Earthquake Lak** 63.48 52 *e*P P 03 20 46.5 +1.2
B21A **Ellsworth Farm** 63.51 47 ⇓P P 03 20 45.7 +0.5
baz=63
NVAR **Mina Array Bea** 63.53 61 P P 03 20 46.4 +0.7
NVAR **Mina Array Bea** 63.53 61 P P 03 20 46.4 +0.7
comp=Z,6.9nm,0.7s,baz=291,slow=7.0,SNR=49
G17A **Pierce Place,** 63.55 51 ⇑P P 03 20 46.5 +0.9
baz=63,SNR=9.8
SCO **Scoresbysund** 63.62 358 *i* P P 03 20 45.5 +0.1
SCO pmax pmax
comp=Z,9.0nm,1.0s
SCO **Scoresbysund** 63.62 358 *i* P P 03 20 45.5 +0.1
comp=Z,9.1nm,1.0s
KAF **Kangasniemi** 63.62 335 *e*P P 03 20 44.0 -1.6
KAF pmax pmax
comp=Z,6.0nm,0.7s
KAF **Kangasniemi** 63.62 335 *e*p P 03 20 44.0 -1.6
comp=Z,5.8nm,0.7s
NV11 **Mina Array Sit** 63.62 61 *e*P P 03 20 46.6 +0.4
H16A **Russell Place,** 63.67 52 ⇑P P 03 20 46.9 +0.5
baz=63,SNR=16
A22A **Carney Farms,** 63.70 46 ⇑P P 03 20 46.7 +0.3
baz=63,SNR=24
F18A **Big Timber** 63.73 50 ⇑P P 03 20 47.4 +0.7
baz=64,SNR=16
D20A **Manuel Ranch,** 63.80 49 ⇓P P 03 20 47.9 +0.7
baz=64,SNR=22
GCMT **Greycliff** 63.83 50 *e*P P 03 20 48.0 +0.6
comp=Z,9.2nm,1.1s
YMR **Madison River** 63.84 52 *e*P P 03 20 48.4 +0.8
comp=Z,3.5nm,0.7s
C21A **Desert Coulee** 63.86 47 ⇑P P 03 20 48.0 +0.5
baz=64,SNR=10
E19A **Rath Farm, Rou** 63.87 49 ⇑P P 03 20 48.4 +0.8
baz=64,SNR=13
ELK **Elko** 63.91 58 *e*P P 03 20 49.3 +1.1
K14A **Jones Ranch, D** 63.96 55 ⇓P P 03 20 49.3 +1.0
baz=64,SNR=9.0
I16A **Newdale** 64.06 53 ⇑P P 03 20 50.3 +1.3
baz=64,SNR=8.3
F19A **Roth Farm, Mol** 64.17 50 ⇑P P 03 20 50.4 +0.7
baz=64,SNR=13
E20A **Meyer Farm, Mu** 64.18 49 ⇑P P 03 20 50.5 +0.9
baz=64,SNR=5.9
G18A **Lazy EL Ranch,** 64.19 51 ⇓P P 03 20 50.0 +0.1
baz=64
FINES **FINESS Array B** 64.21 334 P P 03 20 48.6 -0.8
FINES **FINESS Array B** 64.21 334 P P 03 20 48.6 -0.8
comp=Z,11nm,0.6s,baz=38,slow=7.8,SNR=58
FINES LR LR 03 51 21.8
comp=Z,186nm,18.5s,baz=1.4,slow=38
LKWY **Lake** 64.22 52 *e*P P 03 20 51.9 +1.7
LKWY pmax pmax
comp=Z,8.0nm,0.9s
LKWY **Lake** 64.22 52 *e*P P 03 20 51.9 +1.7
comp=Z,8.1nm,0.9s
H17A **Grant Village** 64.23 52 ⇓P P 03 20 50.9 +0.7
baz=64,SNR=14
K15A **Arbon** 64.24 55 ⇓P P 03 20 51.1 +1.0
baz=64
L14A **Malta** 64.25 55 ⇓P P 03 20 50.9 +0.6
baz=64,SNR=8.7
IMW **Indian Meadow** 64.35 53 *e*P P 03 20 52.5 +1.4
D21A **La Casta Ranch** 64.41 48 ⇑P P 03 20 51.5 +0.4
baz=64,SNR=15
DCID1 **Drake Creek** 64.41 53 *e*P P 03 20 53.1 +1.8
TIN **Tinemaha** 64.45 62 ⇑P P 03 20 52.5 +0.9
baz=64
SMMC **Simmler** 64.45 65 ⇓P P 03 20 52.9 +1.3
baz=64
RLMT **Red Lodge** 64.47 51 *e*P P 03 20 52.5 +0.7
comp=Z,14nm,1.1s
RLMT **Red Lodge** 64.47 51 ⇓P P 03 20 52.5 +0.7
baz=64,SNR=14
RRI2 **Red Ridge** 64.50 53 *e*P P 03 20 53.4 +1.4
B23A **Brockton** 64.51 46 ⇓P P 03 20 51.9 +0.2
baz=64,SNR=12
C22A **Vida** 64.53 47 ⇑P P 03 20 51.9 0.0
baz=64
I17A **Pilgrim Ck.** 64.54 52 ⇓P P 03 20 53.7 +1.5
baz=64,SNR=14
H18A **Shoshone NF, C** 64.55 51 ⇓P P 03 20 53.0 +0.7
baz=64,SNR=9.5
MOOW **Moose Ponds** 64.56 53 *e*P P 03 20 53.5 +1.2
TPAW **Teton Pass** 64.61 53 *e*P P 03 20 54.1 +1.4
F20A **Billings** 64.63 50 ⇓P P 03 20 53.3 +0.7
baz=64
K16A **Soda Springs** 64.68 54 ⇓P P 03 20 54.1 +1.0
baz=64,SNR=15
HVU **Hansel Valley** 64.68 55 *e*P P 03 20 54.3 +1.2
HVU **Hansel Valley** 64.68 55 *e*P P 03 20 54.3 +1.2
A24A **Westby** 64.69 45 ⇑P P 03 20 53.1 +0.2
baz=64
VES **Vestal, Richgr** 64.69 64 ⇓P P 03 20 53.0 0.0
baz=64
LOHW **Long Hollow** 64.72 53 *e*P P 03 20 54.7 +1.3
SNOW **Snow King Moun** 64.73 53 *e*P P 03 20 55.1 +1.5
L15A **Malad City** 64.76 55 ⇑P P 03 20 54.1 +0.5
baz=64,SNR=6.7
D22A **Cohagen** 64.77 48 ⇑P P 03 20 53.6 +0.1
baz=64
J17A **Brown Place, J** 64.82 53 ⇓P P 03 20 54.3 +0.3
baz=65,SNR=21
PKM **Peak Mountain** 64.83 65 ⇑P P 03 20 54.9 +0.7
baz=65
C23A **Lambert** 64.85 47 ⇑P P 03 20 54.1 +0.1
baz=65
DGMT **Dagmar** 64.90 45 *e*P P 03 20 54.9 +0.7
DGMT **Dagmar** 64.90 45 ⇓P P 03 20 54.5 +0.2
baz=65,SNR=6.0
H19A **Powell** 64.92 51 ⇓P P 03 20 55.3 +0.7
baz=65,SNR=9.2
G20A **Bridger** 64.98 50 ⇑P P 03 20 55.0 +0.1
baz=65,SNR=8.1
GRAC **Grapevine Rang** 65.01 62 ⇑P P 03 20 56.0 +0.8
baz=65
I18A **Diamond G Ranc** 65.10 52 ⇓P P 03 20 56.9 +1.1
baz=65,SNR=8.7
ISA **Isabella** 65.19 64 *e*P P 03 20 56.2 -0.2
ISA **Isabella** 65.19 64 *e*P P 03 20 56.2 -0.2
ISA **Isabella** 65.19 64 ⇓P P 03 20 55.9 -0.5
baz=65,SNR=5.2
R11A **Troy Canyon, C** 65.23 60 ⇓P P 03 20 56.9 +0.2
baz=65,SNR=19
D23A **Lindsay** 65.25 47 ⇑P P 03 20 57.2 +0.6
baz=65
L16A **Fish Haven** 65.29 55 ⇓P P 03 20 57.7 +0.5
baz=65,SNR=10
OBN **Obninsk** 65.30 325 ⇓*i*P P 03 20 55.3 -1.3
OBN *e* 03 21 29.0
OBN pmax pmax
comp=Z,10.0nm,0.6s
OBN MLR MLR
comp=Z,200nm,18.0s
J18A **Kendall Valley** 65.31 53 ⇑P P 03 20 57.6 +0.3
baz=65,SNR=8.1
ARVC **Arvin** 65.31 64 ⇓P P 03 20 57.9 +0.9
baz=65
I19A **Meeteetse** 65.33 52 ⇑P P 03 20 57.9 +0.6
baz=65,SNR=7.7
E22A **Miles City** 65.36 48 ⇑P P 03 20 57.8 +0.5
baz=65
C24A **Savage** 65.41 46 ⇑P P 03 20 57.8 +0.2
baz=65
HWUT **Hardware Ranch** 65.48 55 *e*P P 03 20 58.8 +0.5
comp=Z,17nm,1.1s
G21A **Lodge Grass** 65.51 50 ⇓P P 03 20 58.2 -0.2
baz=65
MPMC **Manual Prospec** 65.54 63 ⇑P P 03 20 59.0 +0.2
baz=65,SNR=14
L17A **Cokeville** 65.55 54 ⇓P P 03 20 59.1 +0.3
baz=65,SNR=8.7
H20A **Greybull** 65.57 51 ⇓P P 03 20 59.0 +0.2
baz=65
F22A **Rosebud** 65.64 49 ⇑P P 03 20 59.5 +0.4
baz=65,SNR=14
E23A **Ismay** 65.66 48 ⇓P P 03 20 59.8 +0.6
baz=65,SNR=11
FURC **Furnace Creek,** 65.67 62 ⇑P P 03 20 59.8 +0.5
baz=66,SNR=6.6
K18A **Toltan Ranch,** 65.67 53 ⇑P P 03 21 00.3 +0.7
baz=65,SNR=20
DUG **Dugway** 65.68 57 *e*P P 03 21 00.4 +0.8
DUG **Dugway** 65.68 57 *e*P P 03 21 00.4 +0.8
DUG **Dugway** 65.68 57 ⇑P P 03 21 00.2 +0.6
baz=65,SNR=19
D24A **Glendive** 65.74 47 ⇓P P 03 21 00.5 +0.7
baz=66,SNR=8.6
J19A **Crowheart** 65.80 52 ⇓P P 03 21 01.1 +0.8
baz=66,SNR=16
BW06 **Boulder Array** 65.85 53 ⇑P P 03 21 01.0 +0.2
baz=66,SNR=22
PDAR **Pinedale Array** 65.85 53 P P 03 21 01.1 +0.3
PDAR **Pinedale Array** 65.85 53 P P 03 21 01.1 +0.3
comp=Z,9.7nm,0.8s,baz=291,slow=1.8,SNR=80
PDAR LR LR 03 51 59.2
comp=Z,65nm,19.1s,baz=327,slow=38
I20A **Worland** 65.86 51 ⇑P P 03 21 01.3 +0.7
baz=66,SNR=6.9
SFJD **Kangerlussuaq** 65.92 9 LR LR 03 49 46.0
comp=Z,159nm,19.2s,baz=348,slow=36
H21A **Big Horn, Sher** 65.99 50 ⇑P P 03 21 01.8 +0.3
baz=66,SNR=11
EDW2 **Edwards Air Fo** 65.99 64 ⇓P P 03 21 02.1 +0.5
baz=66,SNR=6.5
G22A **Birney** 66.00 49 ⇓P P 03 21 01.7 +0.2
baz=66,SNR=5.0
VRHR **Novokhopersk** 66.02 320 *e*P P 03 20 59.9 -1.4
VRHR pmax pmax
comp=N,4.0nm,0.6s
VRHR pmax pmax
comp=E,8.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s
M17A **Scullys Gap (B** 66.08 55 ⇑P P 03 21 02.4 +0.1
baz=66
HYB **Hyderabad** 66.09 271 *i* P P 03 21 01.0 -1.3
E24A **Baker** 66.12 47 ⇑P P 03 21 02.8 +0.6
baz=66
L18A **Fontenelle, Gr** 66.14 54 ⇓P P 03 21 02.7 +0.1
baz=66,SNR=5.7
JLU **Jordanelle** 66.20 56 *e*P P 03 21 04.1 +1.0
K19A **Absolon Red Bu** 66.21 52 ⇑P P 03 21 02.5 -0.5
baz=66,SNR=9.7
N17A **Moffit Pass** 66.33 55 ⇓P P 03 21 04.1 +0.2
baz=66,SNR=21
H22A **Clearmont** 66.38 50 ⇑P P 03 21 04.2 +0.2
baz=66
SHOC **Shoshone** 66.39 62 ⇑P P 03 21 04.5 +0.5
baz=66
P15A **Leamington** 66.40 57 ⇓P P 03 21 04.7 +0.5
baz=66
I21A **Big Trails, Te** 66.40 51 ⇓P P 03 21 04.4 +0.3
baz=66,SNR=20
L19A **Farson** 66.40 53 ⇓P P 03 21 04.6 +0.4
baz=66,SNR=5.5
DAU **Daniels Canyon** 66.44 56 *e*P P 03 21 05.6 +0.9
DAU **Daniels Canyon** 66.44 56 *e*P P 03 21 05.6 +0.9
M18A **Lyman** 66.45 54 ⇑P P 03 21 04.6 0.0
baz=66
GSC **Goldstone** 66.46 63 *e*P P 03 21 05.2 +0.6
GSC **Goldstone** 66.46 63 *e*P P 03 21 05.2 +0.6
GSC **Goldstone** 66.46 63 ⇑P P 03 21 04.8 +0.2
baz=66
G23A **Biddle** 66.48 49 ⇓P P 03 21 04.4 -0.2
baz=66,SNR=11
MPU **Maple Canyon** 66.48 56 *e*P P 03 21 05.9 +1.1
F24A **Ekalaka** 66.54 48 ⇑P P 03 21 04.9 0.0
baz=66,SNR=7.5
K20A **Yellowstone Ra** 66.60 52 ⇓P P 03 21 05.0 -0.5
baz=66,SNR=12
BFSC **Mount Baldy Ra** 66.62 64 ⇓P P 03 21 05.9 +0.2
baz=66
J21A **Lysite** 66.63 51 ⇓P P 03 21 05.5 -0.1
baz=66,SNR=6.6
I22A **9 Mile Ranch,** 66.78 50 ⇑P P 03 21 07.1 +0.6
baz=66,SNR=7.7
O17A **Robinson Place** 66.88 56 ⇑P P 03 21 07.8 +0.4
baz=67,SNR=8.8
ARUT **Antelope Range** 66.88 59 *e*P P 03 21 07.5 +0.2
ARUT *e**PP pP 03 21 23.3 -1.1
ARUT pmax pmax
comp=Z,7.0nm,0.9s
ARUT **Antelope Range** 66.88 59 *e*P P 03 21 07.5 +0.2
comp=Z,6.5nm,0.9s
ARUT *e*pP pP 03 21 23.3 -1.1
G24A **Alzada** 66.90 48 ⇓P P 03 21 07.1 -0.2
baz=67
M19A **Rock Springs** 66.91 54 ⇑P P 03 21 07.2 -0.4
baz=67
TUQ **Turquoise Moun** 66.92 62 ⇑P P 03 21 08.0 +0.4
baz=67
N18A **Larsen Ranch,** 66.97 54 ⇑P P 03 21 07.8 -0.1
baz=67,SNR=6.5
VSR **Storozhevoye** 67.02 321 *e*P P 03 21 06.9 -0.8
L20A **Wamsutter** 67.03 53 ⇑P P 03 21 08.4 +0.1
baz=67,SNR=8.5
HEC **Hector,Ludlow** 67.06 63 ⇑P P 03 21 08.6 +0.2
baz=67,SNR=7.3
CCUT **Cedar City** 67.09 59 *e*P P 03 21 08.9 +0.2
comp=Z,10nm,1.0s
MSU **Marysvale** 67.16 58 *e*P P 03 21 10.1 +1.0
MSU **Marysvale** 67.16 58 *e*P P 03 21 10.1 +1.0
TMUT **Trail Mountain** 67.20 57 *e*P P 03 21 10.5 +0.9
K21A **Alcova** 67.21 52 ⇑P P 03 21 09.4 0.0
baz=67,SNR=15
H24A **Dirks Ranch, A** 67.23 49 ⇓P P 03 21 09.0 -0.3
baz=67,SNR=11
O18A **Roosevelt** 67.25 55 ⇓P P 03 21 10.2 +0.6
baz=67,SNR=13
N19A **John Jarvie Ra** 67.31 54 ⇑P P 03 21 09.9 0.0
baz=67,SNR=6.0
MURC **Murrieta** 67.32 65 ⇑P P 03 21 10.4 +0.4
baz=67
P17A **Butcher Ranch,** 67.36 56 ⇑P P 03 21 10.8 +0.5
baz=67,SNR=6.4
M20A **Sweetwater, Wa** 67.46 53 ⇓P P 03 21 11.5 +0.5
baz=67,SNR=9.8
Q16A **Castle Valley** 67.48 57 ⇑P P 03 21 11.8 +0.7
baz=67
GMRC **Granite Mounta** 67.51 63 ⇑P P 03 21 11.6 +0.3
baz=67
P18A **Preston Nutter** 67.54 56 ⇑P P 03 21 12.0 +0.3
baz=67
MDND **Maddock** 67.57 44 ⇓P P 03 21 11.5 +0.3
baz=67,SNR=6.5
ULM **Lac du Bonnet** 67.59 40 P P 03 21 10.1 -1.3
ULM **Lac du Bonnet** 67.59 40 P P 03 21 10.1 -1.3
comp=Z,5.8nm,0.7s,baz=320,slow=7.8,SNR=14
ULM LR LR 03 48 19.9
comp=Z,82nm,21.9s,baz=12,slow=34
K22A **Casper** 67.60 51 ⇓P P 03 21 11.6 -0.2
baz=67,SNR=8.6
L21A **Rawlins** 67.60 52 ⇑P P 03 21 12.0 +0.1
baz=67
WRAB **Tennant Creek** 67.62 198 *e*P P 03 21 11.1 -0.7
WRAB pmax pmax
comp=Z,5.0nm,0.8s
WRAB **Tennant Creek** 67.62 198 *e*P P 03 21 11.1 -0.7
comp=Z,4.9nm,0.8s
WRA **Warramunga Arr** 67.63 198 P P 03 21 11.0 -0.8
WRA **Warramunga Arr** 67.63 198 P P 03 21 11.0 -0.8
comp=Z,5.2nm,0.7s,baz=16,slow=6.8,SNR=11
LDFC **Landfair** 67.65 62 *e*P P 03 21 12.3 +0.2
comp=Z,25nm,1.1s
SRU **San Rafael** 67.72 56 *e*P P 03 21 12.8 +0.1
SRU **San Rafael** 67.72 56 *e*P P 03 21 12.8 +0.1
comp=Z,615nm,0.9s
SRU **San Rafael** 67.72 56 ⇓P P 03 21 13.0 +0.4
baz=68,SNR=18
O19A **Miners Draw (B** 67.73 55 ⇑P P 03 21 12.7 0.0
baz=68,SNR=5.7
PFO **Pinyon Flat Ob** 67.78 64 ⇓P P 03 21 13.1 +0.1
baz=68
I24A **Kuemmerle Ranc** 67.79 49 ⇑P P 03 21 13.0 +0.1
baz=68
M21A **Separation Pea** 67.84 53 ⇓P P 03 21 13.1 -0.3
baz=68,SNR=6.5
N20A **Spence Gulch,** 67.86 54 ⇓P P 03 21 13.9 +0.4
baz=68,SNR=20
RSSD **Black Hills** 67.92 49 *e*P P 03 21 13.8 -0.1
RSSD pmax pmax
comp=Z,16nm,1.1s
RSSD **Black Hills** 67.92 49 *e*P P 03 21 13.8 -0.1
comp=Z,16nm,1.1s
K23A **Bowen Ranch, D** 68.01 51 ⇓P P 03 21 14.3 -0.1
baz=68
L22A **Ellis Ranch, M** 68.07 52 ⇓P P 03 21 15.4 +0.6
baz=68,SNR=11
J24A **Dixon Ranch, L** 68.14 50 ⇑P P 03 21 14.8 -0.3
baz=68
FITZ **Fitzroy Crossi** 68.17 207 P P 03 21 15.6 +0.4
FITZ **Fitzroy Crossi** 68.17 207 P P 03 21 15.6 +0.4
comp=Z,10nm,0.8s,baz=17,slow=6.5,SNR=21
IRM **Iron Mountain** 68.23 63 ⇑P P 03 21 16.2 +0.5
baz=68,SNR=7.5
P19A **Cripple Cowboy** 68.26 55 ⇓P P 03 21 16.2 +0.2
baz=68,SNR=17
N21A **Black Mountain** 68.33 53 ⇑P P 03 21 16.7 +0.2
baz=68,SNR=6.8
O20A **White River Ci** 68.34 54 ⇓P P 03 21 16.5 -0.1
baz=68,SNR=8.0
BC3 **Big Chuckawall** 68.38 64 ⇓P P 03 21 17.1 +0.4
baz=68
W13A **Hualapai Mount** 68.39 62 ⇑P P 03 21 17.0 +0.1
baz=68,SNR=8.2
M22A **Cedar Creek Ra** 68.40 52 ⇓P P 03 21 16.8 -0.2
baz=68,SNR=15
L23A **Garrett** 68.41 51 ⇑P P 03 21 16.8 -0.2
baz=68
U15A **North Rim** 68.47 60 ⇑P P 03 21 18.0 +0.6
baz=68,SNR=16
NB2 **NORSAR Subarra** 68.52 341 P P 03 21 16.8 -0.3
baz=27,slow=6.5
NB2 **NORSAR Subarra** 68.52 341 P P 03 21 16.8 -0.3
comp=Z,18nm,0.8s,baz=27,slow=6.5
NOA **NORSAR Array B** 68.52 341 P P 03 21 16.8 -0.3
NOA **NORSAR Array B** 68.52 341 P P 03 21 16.8 -0.3
comp=Z,12nm,0.8s,baz=28,slow=6.3,SNR=61
NOA LR LR 03 55 05.8
comp=Z,116nm,18.9s,baz=15,slow=39
Q19A **Hogan Spring (** 68.56 56 ⇑P P 03 21 17.7 -0.1
baz=68,SNR=23
P20A **De Beque** 68.69 55 ⇓P P 03 21 18.5 -0.2
baz=68,SNR=5.8
O21A **Pagoda** 68.72 54 ⇑P P 03 21 19.3 +0.4
baz=68
NAO01 **NORSAR Array S** 68.77 341 *e*P P 03 21 18.2 -0.4
comp=Z,11nm,0.9s
PDMCI **Parker Dam,Lak** 68.77 62 ⇑P P 03 21 19.3 +0.4
baz=68,SNR=6.7
M23A **Laramie** 68.84 52 ⇑P P 03 21 19.4 -0.3
baz=69
N22A **Wattenberg Ran** 68.89 53 ⇑P P 03 21 20.3 +0.3
baz=69,SNR=8.5
Y12C **Blythe** 68.89 63 ⇓P P 03 21 20.7 +0.9
baz=69
S18A **Hurst Farm, Bl** 68.98 57 ⇓P P 03 21 20.8 +0.2
baz=69,SNR=15
AGMN **Agassiz Nation** 69.00 41 *e*P P 03 21 19.3 -1.0
comp=Z,7.7nm,1.0s
K25A **Mack Ranch, Ha** 69.05 50 ⇑P P 03 21 21.4 +0.6
baz=69
N23A **Red Feather La** 69.11 52 ⇓P P 03 21 21.7 +0.3
baz=69,SNR=10
Q20A **Ridgley Place,** 69.11 55 ⇓P P 03 21 21.2 -0.1
baz=69,SNR=7.5
NACGM **Naroch** 69.14 330 *e* P 03 21 18.0 -2.9
PV04 **Paradox Valley** 69.14 56 *e*P P 03 21 21.7 +0.2
DZM **Mont Dzumac** 69.16 165 *e*LR LR 03 42 25.7
comp=Z,196nm,22.9s
DZM **Mont Dzumac** 69.16 165 LR LR 03 51 35.5
comp=Z,224nm,18.9s,baz=350,slow=36
GLA **Glamis** 69.17 64 ⇓P P 03 21 22.1 +0.5
baz=69
P21A **Newcastle** 69.21 54 ⇑P P 03 21 22.1 +0.2
baz=69,SNR=12
O22A **Kremmling** 69.28 53 ⇑P P 03 21 22.3 -0.2
baz=69
M24A **Cheyenne** 69.33 51 ⇑P P 03 21 23.1 +0.5
baz=69,SNR=5.8
PV01 **Paradox Valley** 69.51 56 *e*P P 03 21 24.0 +0.1
comp=Z,506nm,0.8s
P22A **Eagle** 69.55 54 ⇓P P 03 21 24.2 +0.1
baz=69,SNR=10
R20A **Redvale** 69.58 56 ⇓P P 03 21 24.6 +0.3
baz=69,SNR=7.2
O23A **Lake Granby, G** 69.59 53 ⇓P P 03 21 25.3 +0.9
baz=69,SNR=19
Q21A **Lamborn Mesa,** 69.61 55 ⇓P P 03 21 24.6 +0.2
baz=69,SNR=7.9
WUAZ **Wupatki** 69.63 60 *e*P P 03 21 25.0 +0.4
comp=Z,4.3nm,0.8s
WUAZ **Wupatki** 69.63 60 ⇓P P 03 21 25.5 +1.0
baz=69
SMCO **Snowmass** 69.71 54 *e*P P 03 21 25.4 +0.1
comp=Z,10nm,0.8s
M25A **Palm-Egli Farm** 69.77 51 ⇓P P 03 21 26.0 +0.7
baz=70
S20A **Disappointment** 69.84 56 ⇑P P 03 21 25.8 -0.1
baz=70,SNR=9.9
K27A **Flueckinger Fa** 69.85 49 ⇓P P 03 21 25.8 +0.1
baz=70
R21A **Cimarron** 69.94 55 ⇓P P 03 21 26.8 +0.3
baz=70,SNR=15
Q22A **Crested Butte,** 69.96 55 ⇓P P 03 21 27.2 +0.4
baz=70,SNR=17
113A **Mohawk Valley,** 70.02 63 ⇑P P 03 21 26.8 0.0
baz=70
ISCO **Idaho Springs** 70.05 53 *e*P P 03 21 27.8 +0.6
ISCO pmax pmax
comp=Z,18nm,1.2s
ISCO **Idaho Springs** 70.05 53 *e*P P 03 21 27.8 +0.6
comp=Z,18nm,1.2s
ISCO **Idaho Springs** 70.05 53 ⇑P P 03 21 27.7 +0.6
baz=70,SNR=17
Z14A **Wintersburg** 70.13 62 ⇑P P 03 21 28.2 +0.7
baz=70
N25A **Grover** 70.18 51 ⇓P P 03 21 28.7 +0.8
baz=70
MVCO **Mesa Verde** 70.18 57 *e*P P 03 21 28.3 +0.3
comp=Z,8.3nm,0.8s
MVCO **Mesa Verde** 70.18 57 ⇓P P 03 21 28.4 +0.4
baz=70,SNR=9.4
P23A **Jefferson** 70.22 54 ⇓P P 03 21 28.9 +0.6
baz=70,SNR=7.1
M26A **McRoberts Ranc** 70.24 50 ⇓P P 03 21 28.7 +0.6
baz=70
S21A **Coal Bank Pass** 70.28 56 ⇑P P 03 21 29.2 +0.5
baz=70,SNR=11
X16A **Lo Mia Camp, P** 70.34 61 ⇓P P 03 21 29.8 +0.8
baz=70,SNR=18
R22A **Saguache, Gunn** 70.49 55 ⇑P P 03 21 30.8 +0.8
baz=70,SNR=14
Q23A **Hartsel** 70.54 54 ⇑P P 03 21 30.8 +0.5
baz=70,SNR=5.7
KIV **Kislovodsk** 70.57 314 ⇓*e*P P 03 21 31.8 +1.7
KIV pmax pmax
comp=Z,17nm,0.7s
KIV MLR MLR
comp=Z,200nm,15.0s
KIV **Kislovodsk** 70.57 314 *e*P P 03 21 31.3 +1.3
comp=Z,21nm,0.8s
M27A **Reverse DX Ran** 70.60 50 ⇓P P 03 21 30.7 +0.4
baz=70
KBZ **Khabaz** 70.63 313 P P 03 21 31.4 +1.1
KBZ **Khabaz** 70.63 313 P P 03 21 31.4 +1.1
KBZ **Khabaz** 70.63 313 P P 03 21 31.4 +1.1
comp=Z,20nm,0.8s,baz=66,slow=4.1,SNR=34
KBZ LR LR 03 56 53.2
comp=Z,383nm,19.0s,baz=66,slow=40
P24A **Kohler Place,** 70.64 53 ⇑P P 03 21 31.4 +0.7
baz=70
N26A **Koester Ranch,** 70.64 51 ⇑P P 03 21 30.8 +0.2
baz=70,SNR=6.1
O25A **Wiggins** 70.65 52 ⇓P P 03 21 31.7 +1.0
baz=70
S22A **4UR Ranch, Cre** 70.78 55 ⇑P P 03 21 32.3 +0.6
baz=70,SNR=17
ZEI **Tsey** 70.80 312 *e*P P 03 21 31.7 0.0
ZEI pmax pmax
comp=Z,11nm,0.9s
Q24A **Divide** 70.89 53 ⇓P P 03 21 32.3 -0.1

baz=71,SNR=6.5
W18A Petrified Fore 70.89 59 ⇑P P 03 21 33.3 +1.1
baz=71
T21A Navajo Lake 70.89 56 ⇑P P 03 21 32.9 +0.6
baz=71
O26A Horse Wrangler 71.00 51 ⇓P P 03 21 33.1 +0.2
baz=71
N27A Anderson Farm, 71.03 51 ⇓P P 03 21 33.3 +0.4
baz=71,SNR=11
R23A Moffat 71.04 54 ⇓P P 03 21 33.9 +0.6
baz=71,SNR=13
P25A Willow Gulch B 71.05 53 ⇓P P 03 21 33.5 +0.3
baz=71,SNR=9.8
SUW Suwalki 71.10 331 *e*P P 03 21 33.2 +0.3
X18A Snowflake 71.16 60 ⇓P P 03 21 34.2 +0.3
baz=71
214A Organ Pipe Nat 71.17 63 ⇓P P 03 21 33.9 +0.1
baz=71
V20A Brimhall 71.17 58 ⇑P P 03 21 34.3 +0.3
baz=71,SNR=5.1
OGNE Ogallala 71.20 50 ⇓P P 03 21 34.1 +0.1
baz=71,SNR=9.4
U21A Nageezi 71.21 57 ⇑P P 03 21 34.6 +0.3
baz=71,SNR=5.9
EYMN Ely 71.23 39 *e*P P 03 21 33.4 -0.5
comp=Z,10nm,0.9s
T22A Edith 71.24 56 ⇑P P 03 21 34.9 +0.4
baz=71,SNR=6.8
S23A Nye Farm, Mont 71.28 55 ⇑P P 03 21 35.7 +1.0
baz=71,SNR=5.2
AS31 Alice Springs 71.33 197 *e*P P 03 21 34.6 0.0
ASAR Alice Springs 71.33 197 P P 03 21 35.0 +0.3
ASAR Alice Springs 71.33 197 P P 03 21 35.0 +0.3
comp=Z,2.6nm,0.6s,baz=12,slow=5.6,SNR=52
ASAR LR LR 03 49 58.2
comp=Z,147nm,18.8s,baz=337,slow=33
R24A Sanders Place, 71.42 54 ⇓P P 03 21 35.8 +0.3
baz=71,SNR=9.9
Q25A Bedland, Calha 71.42 53 ⇓P P 03 21 35.6 +0.2
baz=71,SNR=13
P26A Davis Ranch, A 71.47 52 ⇑P P 03 21 35.6 0.0
baz=71,SNR=6.2
O27A Beecher Island 71.49 51 ⇑P P 03 21 35.6 -0.1
baz=71
AKASG Malin Array Be 71.55 326 P P 03 21 35.2 -0.5
AKASG Malin Array Be 71.55 326 P P 03 21 35.1 -0.5
AKASG Malin Array Be 71.55 326 P P 03 21 35.1 -0.5
comp=Z,20nm,0.8s,baz=34,slow=6.3,SNR=39
AKASG LR LR 03 55 15.5
comp=Z,307nm,20.1s,baz=50,slow=38
AK01 Malin Array Si 71.56 326 *e*P P 03 21 35.2 -0.5
KIEV Kiev 71.56 326 *e*P P 03 21 35.3 -0.5
KIEV pmax pmax
comp=Z,19nm,0.8s
KIEV Kiev 71.56 326 *e*P P 03 21 35.3 -0.5
comp=Z,19nm,0.8s
AK02 Malin Array Si 71.59 326 *e*P P 03 21 35.4 -0.6
W20A Ramah 71.61 58 ⇑P P 03 21 37.0 +0.2
baz=71,SNR=6.0
U22A Llaves 71.71 56 ⇓P P 03 21 37.7 +0.5
baz=72,SNR=6.6
T23A Casias Ranch, 71.72 55 ⇓P P 03 21 37.8 +0.4
baz=72,SNR=5.5
S24A Houchin Ranch, 71.77 55 ⇑P P 03 21 38.2 +0.5
baz=72
Q26A Hugo 71.82 53 ⇓P P 03 21 37.4 -0.4
baz=72
P27A Ficken Ranch, 71.89 52 ⇑P P 03 21 37.9 -0.2
baz=72
R25A Fountain Ranch 71.94 54 ⇓P P 03 21 38.5 0.0
baz=72,SNR=6.4
ECSD EROS Data Cent 71.97 45 *e*P P 03 21 37.7 -0.7
comp=Z,20nm,1.1s
V22A San Miguel Ran 72.00 57 ⇓P P 03 21 39.5 +0.5
baz=72,SNR=6.7
X20A Quemado 72.02 59 ⇑P P 03 21 40.0 +0.9
baz=72,SNR=9.9
W21A San Fidel 72.12 58 ⇓P P 03 21 40.2 +0.5
baz=72
U23A El Rito 72.13 56 ⇓P P 03 21 40.5 +0.7
baz=72,SNR=11
TUC Tucson 72.18 62 *e*P P 03 21 39.7 -0.2
TUC Tucson 72.18 62 *e*P P 03 21 39.6 -0.2
comp=Z,1.2nm,1.1s
S25A Robets Cordova 72.20 54 ⇓P P 03 21 39.8 -0.3
baz=72,SNR=5.6
GNI Garni 72.23 310 *e*P P 03 21 41.9 +1.7
comp=Z,47nm,1.4s
GNI Garni 72.23 310 P P 03 21 42.3 +2.1
comp=Z,8.7nm,0.6s,baz=306,slow=8.7
T24A Torres, Weston 72.26 55 ⇓P P 03 21 41.4 +0.7
baz=72,SNR=7.2
R26A Arlington 72.30 53 ⇓P P 03 21 40.8 +0.2
baz=72
SOC Sochi 72.32 315 *i* P P 03 21 30.7 -10
SOC MLR MLR 03 21 40.8
comp=Z,543nm,20.0s
X21A Alamocita Cree 72.51 58 ⇓P P 03 21 42.9 +0.9
baz=72,SNR=9.3
Y20A Horse Springs, 72.53 59 ⇑P P 03 21 42.8 +0.6
baz=72,SNR=8.7
V23A Ortiz Mt. (NFS 72.54 57 ⇓P P 03 21 43.2 +1.0
baz=72,SNR=7.5
T25A Trinidad 72.58 54 ⇓P P 03 21 43.1 +0.7
baz=72,SNR=9.9
U24A Moreno Valley 72.60 55 ⇓P P 03 21 43.3 +0.6
baz=72,SNR=5.1
R27A Eads 72.67 53 ⇓P P 03 21 42.4 -0.4
baz=72,SNR=7.5
SPMN St. Paul 72.69 42 ⇓P P 03 21 42.2 -0.5
baz=72
BSD Bornholm Skovb 72.75 336 *i* P P 03 21 42.7 -0.1
BSD pmax pmax 03 21 42.7
comp=Z,11nm,0.8s
BSD Bornholm Skovb 72.75 336 *i* P P 03 21 42.7 -0.1
comp=Z,11nm,0.8s
S26A Kim 72.77 54 ⇑P P 03 21 42.7 -0.7
baz=72,SNR=5.7
Y21A Point of Rocks 72.88 59 ⇑P P 03 21 44.5 +0.3
baz=73
BGNE Belgrade 72.90 48 ⇑P P 03 21 43.3 -0.7
baz=73
LAZ Ladron 72.92 58 *e*P P 03 21 45.0 +0.6
comp=Z,5.3nm,1.3s
X22A Bernardo 72.92 58 ⇓P P 03 21 45.5 +1.1
baz=73
COP Copenhagen 72.94 337⇑ *i*P P 03 21 44.3 +0.4
COP pmax pmax 03 21 44.3
comp=Z,10.0nm,0.7s
COP Copenhagen 72.94 337⇑ *i*P P 03 21 44.3 +0.4
comp=Z,10nm,0.7s
ANMO Albuquerque 72.94 57 *e*P P 03 21 44.5 -0.1
comp=Z,4.8nm,1.0s
Z20A Nine Sixteen R 72.95 60 ⇑P P 03 21 45.3 +0.6
baz=73
W23A Werner Place, 72.97 57 ⇑P P 03 21 45.5 +0.7
baz=73
MBWA Marble Bar 73.00 211 *e*P P 03 21 44.6 0.0
comp=Z,12nm,0.9s
T26A Comanche Natio 73.02 54 ⇓P P 03 21 44.6 -0.4
baz=73,SNR=16
V24A Rampart Ranch, 73.08 56 ⇓P P 03 21 46.0 +0.6
baz=73,SNR=5.0
MUD Monsted U'grnd 73.09 339 *i* P P 03 21 45.1 +0.3
MUD pmax pmax 03 21 45.1
comp=Z,13nm,0.8s
MUD Monsted U'grnd 73.09 339 *i* P P 03 21 45.1 +0.3
comp=Z,13nm,0.7s
U25A Circle Dot Ran 73.10 55 ⇑P P 03 21 45.6 +0.1
baz=73,SNR=9.4
LLD Lille Linde 73.31 337 *i* P P 03 21 46.5 +0.4
LLD pmax pmax 03 21 46.5
comp=Z,20nm,0.8s
LLD Lille Linde 73.31 337 *i* P P 03 21 46.5 +0.4
comp=Z,20nm,0.7s
120A U Bar Ranch, L 73.32 60 ⇓P P 03 21 47.3 +0.5
baz=73,SNR=6.2
Y22A Socorro 73.35 58 ⇓P P 03 21 47.4 +0.5
baz=73
X23A Hourglass Bar 73.36 57 ⇑P P 03 21 47.4 +0.4
baz=73,SNR=11
W24A Lazy 6 Ranch, 73.37 56 ⇓P P 03 21 47.9 +0.8
baz=73,SNR=12
Z21A St. Cloud Mine 73.37 59 ⇓P P 03 21 47.8 +0.7
baz=73,SNR=12
V25A Rancho No Teng 73.38 56 ⇓P P 03 21 47.3 +0.1
baz=73
U26A Atchley Ranch, 73.48 55 ⇓P P 03 21 47.9 +0.1
baz=73
T27A Campo 73.58 53 ⇓P P 03 21 48.3 0.0
baz=73
COWI Conover 73.69 39 *e*P P 03 21 47.6 -0.9
RGN Rugen 73.70 336 *e*P P 03 21 49.6 +1.2
comp=Z,17nm,0.9s
319A Douglas 73.74 62 ⇓P P 03 21 49.7 +0.5
baz=74,SNR=16
X24A Lazy VL Ranch, 73.81 57 ⇓P P 03 21 50.2 +0.5
baz=74,SNR=10
Z22A Elephant Butte 73.83 59 ⇑P P 03 21 50.5 +0.8
baz=74
220A Playas Peak, P 73.83 61 ⇓P P 03 21 50.4 +0.6
baz=74,SNR=9.2
121A Cookes Peak, D 73.84 60 ⇑P P 03 21 50.5 +0.6
baz=74,SNR=6.3
T28A Walsh 73.88 53 ⇓P P 03 21 49.8 -0.2
baz=74
V26A Tequesquite Ra 73.89 55 ⇓P P 03 21 50.0 0.0
baz=74,SNR=6.7
Y23A Lovelace Mesa, 73.89 58 ⇑P P 03 21 50.5 +0.3
baz=74,SNR=12
W25A X Bar L Ranch, 73.91 56 ⇑P P 03 21 50.4 +0.2
baz=74,SNR=12
122A Conniff Cattle 74.20 59 ⇓P P 03 21 52.8 +0.9
baz=74
221A Mesquite Ranch 74.22 60 ⇑P P 03 21 53.4 +1.4
baz=74
320A Kipp Ranch, An 74.23 61 ⇓P P 03 21 53.1 +0.9
baz=74
SCHQ Schefferville 74.23 22 *e*P P 03 21 51.4 -0.1
comp=Z,7.3nm,0.9s
SCHQ Schefferville 74.23 22 P P 03 21 51.5 -0.1
comp=Z,7.1nm,0.8s,baz=352,slow=5.9,SNR=14
SCHQ LR LR 03 54 30.7
comp=Z,106nm,19.5s,baz=349,slow=36
Y24A Capitan 74.26 57 ⇑P P 03 21 52.6 +0.3
baz=74,SNR=8.8
Z23A Rita Site, Whi 74.26 58 ⇓P P 03 21 52.8 +0.5
baz=74
X25A Clemmons Ranch 74.28 56 ⇓P P 03 21 53.0 +0.6
baz=74
Y25A Mesa, Roswell 74.69 57 ⇓P P 03 21 54.6 -0.1
baz=74,SNR=7.0
Z24A Sheppen Canyo 74.72 58 ⇓P P 03 21 55.0 -0.1
baz=74,SNR=6.1
X26A CR and CF Fran 74.76 56 ⇑P P 03 21 55.2 +0.1
baz=74
V28A Channing 74.80 54 ⇓P P 03 21 55.2 -0.1
baz=75
KWP Kalwaria Pacla 74.88 328 *e*P P 03 21 56.0 +0.6
KWP pmax pmax 03 21 56.0
comp=Z,79nm,1.1s
KWP Kalwaria Pacla 74.88 328 *e*P P 03 21 56.0 +0.6
comp=Z,80nm,1.1s
KWP Kalwaria Pacla 74.88 328⇑ *i*P P 03 21 55.7 +0.3
KWP Kalwaria Pacla 74.88 328 *e*P P 03 21 56.3 +0.9
SCIA State Center 75.00 44 *e*P P 03 21 56.1 -0.2
comp=Z,24nm,0.8s
BSEG Bad Segeberg 75.06 338 *e*P P 03 21 57.3 +1.0
BSEG pmax pmax 03 21 57.3
comp=Z,15nm,0.8s
BSEG Bad Segeberg 75.06 338 *e*P P 03 21 57.3 +1.0
comp=Z,15nm,0.8s
X27A F and S Farms, 75.10 55 ⇓P P 03 21 57.6 +0.5
baz=75
124A Stringfield Ra 75.12 58 ⇓P P 03 21 57.8 +0.4
baz=75
Z25A Roswell 75.14 57 ⇓P P 03 21 57.6 +0.3
baz=75
W28A Vega 75.17 54 ⇓P P 03 21 57.8 +0.4
baz=75
KSU1 Kansas State U 75.40 48 *e*P P 03 21 57.2 -1.3
comp=Z,8.4nm,0.7s
224A Coudas Mount 75.52 59 ⇑P P 03 21 60.0 +0.4
baz=75
Z26A Caprock 75.58 57 ⇑P P 03 21 59.9 0.0
baz=75,SNR=15
BUR08 Bucovina Ar. S 75.58 326 *e*P P 03 21 59.8 +0.3
BURAR Bucovina Array 75.60 326⇓ *i*P P 03 22 00.1 +0.4
Y27A Causey 75.61 56 ⇑P P 03 21 59.9 -0.1
baz=75,SNR=9.6
125A Gardner Draw, 75.62 58 ⇑P P 03 22 00.2 +0.2
baz=75,SNR=7.7
KOLS Kolonicke sedl 75.62 328 *e*P P 03 22 00.5 +0.8
KOLS pmax pmax 03 22 00.5
comp=Z,18nm,0.9s
KOLS Kolonicke sedl 75.62 328 *e*P P 03 22 00.5 +0.8
X28A Dimmitt 75.71 55 ⇓P P 03 22 00.4 -0.1
baz=76
AMTX Amarillo 75.73 54 *e*P P 03 22 00.9 +0.2
comp=Z,19nm,0.8s
AMTX Amarillo 75.73 54 ⇓P P 03 22 00.8 +0.2
baz=76,SNR=9.5
MSTX Muenoe 75.77 56 ⇑P P 03 22 00.9 0.0
baz=76,SNR=6.5
UZH Uzhgorod 75.86 328⇑ *i*P P 03 22 01.5 +0.5
UZH *i* 03 22 20.3
MNTX Cornudas Mount 75.87 59 *e*P P 03 22 01.2 -0.2
comp=Z,12nm,1.6s
MNTX Cornudas Mount 75.87 59 ⇓P P 03 22 01.6 +0.2
baz=76
225A Deer Hill, Car 75.91 58 ⇓P P 03 22 01.8 0.0
baz=76
TESR 75.92 324⇓ *i*P P 03 22 01.5 +0.1
CRVS Cervenica-Dubn 75.94 329 *e*P P 03 22 02.0 +0.5
CRVS pmax pmax 03 22 02.0
comp=Z,12nm,1.0s
CRVS Cervenica-Dubn 75.94 329 *e*P P 03 22 02.0 +0.5
CRVS *e* 03 24 32.0
Z27A Tatum 75.99 56 ⇓P P 03 22 02.3 +0.2
baz=76,SNR=16
X29A Tulia 76.04 55 ⇓P P 03 22 02.6 +0.1
baz=76,SNR=7.6
KSP Ksiaz 76.04 333 *e*P P 03 22 02.5 +0.5
KSP Ksiaz 76.04 333 *e*P P 03 22 02.6 +0.5
TLCR 76.09 322⇓ *i*P P 03 22 03.2 +0.8
GDL2 Guadalupe Moun 76.12 58 *e*P P 03 22 03.0 0.0
comp=Z,11nm,1.1s
TRPA Tarpa 76.19 328⇑ *e*P P 03 22 04.2 +1.3
OKC Ostrava-Krasne 76.30 331 *i* P P 03 22 04.4 +0.9
OKC MLR MLR 03 22 04.4
comp=Z,200nm,18.3s
OKC Ostrava-Krasne 76.30 331 *i* P P 03 22 04.4 +0.9
OKC AMS AMS 04 02 00.0
comp=Z,200nm,18.3s
226B Tecolote Peak, 76.32 58 ⇑P P 03 22 04.2 +0.1
baz=76,SNR=9.7
325A Bean Ranch, Si 76.35 59 ⇑P P 03 22 04.5 +0.1
baz=76
CFR Carcaliu 76.39 323⇓ *i*P P 03 22 04.6 +0.6
NRDL Niedersach Rie 76.41 337 *e*P P 03 22 04.7 +0.7
comp=Z,12nm,0.9s
VRI Vrincioaia 76.42 324⇑ *i*P P 03 22 05.2 +1.0
VRI Vrincioaia 76.42 324⇓ *i*P P 03 22 06.5 +2.3
UPC Upice 76.42 333 *i* P P 03 22 05.2 +1.0
UPC Upice 76.42 333 *i* P P 03 22 05.2 +1.0
DPC Dobruska-Polom 76.46 332 *i* P P 03 22 05.5 +1.0
DPC MLR MLR 03 22 05.5
comp=Z,300nm,16.8s
DPC Dobruska-Polom 76.46 332 *i* P P 03 22 05.5 +1.0
DPC AMS AMS 03 59 30.0
comp=Z,300nm,16.8s
PLOR Plostina 76.46 324⇑ *i*P P 03 22 05.3 +0.8
Y29A Porterfield Fa 76.48 55 ⇓P P 03 22 05.1 +0.2
baz=76
Z28A Tucker Farm, M 76.49 56 ⇑P P 03 22 05.2 +0.2
baz=76
X30A Coker Ranch, T 76.51 54 ⇑P P 03 22 04.8 -0.2
baz=76
KRLC Kraliky 76.55 332 *i* P P 03 22 05.9 +0.9
MORC Moravsky Berou 76.56 331 *e*P P 03 22 05.5 +0.5
MORC pmax pmax 03 22 05.5
comp=Z,25nm,0.9s
MORC Moravsky Berou 76.56 331 *e*P P 03 22 05.5 +0.5
comp=Z,25nm,0.9s
MORC Moravsky Berou 76.56 331⇑ *i*P P 03 22 05.7 +0.7
CLL Collm 76.65 335⇑ *i*P P 03 22 05.5 +0.1
CLL pmax pmax 03 22 05.5
comp=Z,39nm,1.0s
CLL MLR MLR 03 22 05.5
comp=Z,200nm,20.1s
CLL Collm 76.65 335 *e*P P 03 22 06.0 +0.6
comp=Z,23nm,0.8s
CLL Collm 76.65 335⇑ *i*P P 03 22 05.5 +0.1
CLL comp=Z,39nm,1.0s *e*(pP) **pP** 03 22 21.0 -1.8
CLL Lm MLR 03 58 00.0
comp=Z,200nm,20.1s
EKA Eskdalemuir Ar 76.72 346 P P 03 22 06.3 +0.5
EKA Eskdalemuir Ar 76.72 346 P P 03 22 06.3 +0.5
comp=Z,1.2nm,0.3s,baz=20,slow=5.6,SNR=9.0
BRG Berggiesshubel 76.75 334⇓ *i*P P 03 22 06.2 +0.2
comp=Z,13nm,1.0s
BRG Berggiesshubel 76.75 334⇓ *i*P P 03 22 06.2 +0.2
BRG pmax pmax 03 22 06.2
comp=Z,13nm,1.0s
BRG Berggiesshubel 76.75 334 *e*P P 03 22 06.6 +0.6
comp=Z,7.0nm,0.8s
425A Indio Mountain 76.76 59 ⇓P P 03 22 06.9 +0.3
baz=76,SNR=8.6
TIRR Tirgusor 76.85 322⇑ *i*P P 03 22 07.3 +0.7
PVCC Panska Ves 76.86 334 *i* P P 03 22 07.2 +0.6
PVCC MLR MLR 03 22 07.2
comp=Z,200nm,21.3s
PVCC Panska Ves 76.86 334 *i* P P 03 22 07.2 +0.6
PVCC AMS AMS 03 58 10.0
comp=Z,200nm,21.3s
DOPR Dopca 76.88 325⇑ *i*P P 03 22 08.4 +1.5
X31A McDonald Ranch 76.88 54 ⇑P P 03 22 06.9 -0.2
baz=77,SNR=5.1
MALT Malatya 76.90 312 *e*P P 03 22 09.1 +1.9
MALT pmax pmax 03 22 09.1
comp=Z,15nm,0.8s
MALT Malatya 76.90 312 *e*P P 03 22 09.1 +1.9
comp=Z,15nm,0.8s
MALT Malatya 76.90 312⇑ *i*P P 03 22 08.6 +1.4
Z29A Hungry Hill Ra 76.90 56 ⇑P P 03 22 07.5 +0.2
baz=77,SNR=5.8
Y30A Stafford Cattl 76.91 55 ⇓P P 03 22 07.0 -0.3
baz=77
128A Castleberry Fa 76.91 57 ⇑P P 03 22 07.5 +0.1
baz=77,SNR=9.5
CLZ Clausthal 76.92 337 *e*P P 03 22 08.3 +1.3
CLZ pmax pmax 03 22 08.3
comp=Z,19nm,0.8s
CLZ Clausthal 76.92 337 *e*P P 03 22 08.3 +1.3
comp=Z,19nm,0.8s
326A Caldwell Ranch 76.98 58 ⇓P P 03 22 07.6 -0.1
baz=77,SNR=6.7
MLR Muntele Rosu 77.04 324 P P 03 22 09.0 +1.1
MLR Muntele Rosu 77.04 324⇑ *i*P P 03 22 08.1 +0.2
MLR Muntele Rosu 77.04 324 P P 03 22 09.0 +1.1
comp=Z,6.5nm,0.7s,baz=178,slow=5.4,SNR=44
NEUB Neuenburg 77.09 335 *e*P P 03 22 08.5 +0.6
comp=Z,25nm,1.0s
ISR Istrita 77.10 324⇑ *i*P P 03 22 09.6 +1.4
IBBN Ibbenburen 77.20 338 *e*P P 03 22 09.4 +0.9
comp=Z,26nm,0.8s
Y31A Rekieta Farm, 77.21 54 ⇑P P 03 22 08.7 -0.3
baz=77
Z30A Sanderson Ranc 77.21 55 ⇓P P 03 22 08.7 -0.3
baz=77,SNR=7.6
228A UT Block 9, Go 77.22 57 ⇓P P 03 22 09.7 +0.6
baz=77
VYHS Vyhne 77.22 330 *e*P P 03 22 09.7 +1.0
VYHS pmax pmax 03 22 09.7
comp=Z,14nm,1.1s
VYHS Vyhne 77.22 330 *e*P P 03 22 09.7 +1.0
DRGR 77.24 327⇑ *i*P P 03 22 09.8 +0.8
129A Stewart Farms, 77.26 56 ⇓P P 03 22 08.9 -0.4
baz=77,SNR=5.7
VRAC Vranov 77.27 332 P P 03 22 09.6 +0.6
VRAC Vranov 77.27 332 P P 03 22 09.6 +0.6
comp=Z,23nm,0.8s,baz=20,slow=5.8,SNR=22
PSZ Piszkesteto 77.33 329 *e*P P 03 22 10.2 +0.8
PSZ pmax pmax 03 22 10.2
comp=Z,65nm,1.5s
PSZ Piszkesteto 77.33 329 *e*P P 03 22 10.2 +0.8
comp=Z,65nm,1.5s
PSZ Piszkesteto 77.33 329⇓ *e*P P 03 22 11.0 +1.6
PRU Pruhonice 77.34 333 *i* P P 03 22 09.8 +0.5
PRU MLR MLR 03 22 09.8
comp=Z,200nm,23.4s
PRU Pruhonice 77.34 333 *i* P P 03 22 09.8 +0.5
PRU AMS AMS 03 59 50.0
comp=Z,200nm,23.4s
426A McDonald Obser 77.42 59 ⇓P P 03 22 09.7 -0.6
baz=77
VOIR 77.45 325⇑ *i*P P 03 22 11.6 +1.5
TANN Tannenbergstha 77.60 335 *e*P P 03 22 11.7 +0.9
comp=Z,5.0nm,0.8s
328A Wristen Ranch, 77.62 58 ⇓P P 03 22 11.3 0.0
baz=77,SNR=12
Y32A R-V Farms, Ver 77.64 54 ⇑P P 03 22 11.1 -0.3
baz=77,SNR=5.2
MOX Moxa 77.64 335 *e*P P 03 22 11.9 +0.9
MOX pmax pmax 03 22 11.9
comp=Z,15nm,1.0s
MOX Moxa 77.64 335 *e*P P 03 22 11.9 +0.9
comp=Z,15nm,1.0s
TREC Trest 77.65 332 *i* P P 03 22 11.9 +0.8
TREC MLR MLR 03 22 11.9
comp=Z,300nm,14.4s
TREC Trest 77.65 332 *i* P P 03 22 11.9 +0.8
TREC AMS AMS 04 00 40.0
comp=Z,300nm,14.4s
427A Hayter Ranch, 77.66 58 ⇑P P 03 22 11.2 -0.4
baz=77,SNR=5.2
ARR Arges 77.67 325⇓ *i*P P 03 22 13.2 +1.8
SMOL Smolenice 77.68 331 *e*P P 03 22 12.8 +1.5
SMOL Smolenice 77.68 331 *e*P P 03 22 12.8 +1.5
Z31A Sharp Cattle R 77.75 55 ⇑P P 03 22 11.6 -0.4
baz=78,SNR=7.9
WTSB Winterswijk 77.76 339 *e*P P 03 22 12.1 +0.5
comp=Z,46nm,0.7s
NKC Novy Kostel 77.76 335 *i* P P 03 22 12.3 +0.6
NKC Novy Kostel 77.76 335 *i* P P 03 22 12.3 +0.6
229A Bryant Ranch, 77.78 57 ⇓P P 03 22 12.6 +0.4
baz=78
526A Mary Lane Ranc 77.82 59 ⇓P P 03 22 12.6 +0.1
baz=78,SNR=9.7
UBBA Unterbreizbach 77.94 336 *e*P P 03 22 13.4 +0.8
comp=Z,5.0nm,0.8s
LOT Lotru 77.95 325⇑ *i*P P 03 22 11.6 -1.4
BUD Budapest 78.01 329⇓ *e*P P 03 22 14.8 +1.7
329A Wagon Wheel Ra 78.03 57 ⇓P P 03 22 13.6 0.0
baz=78,SNR=6.8
131A Roby 78.08 55 ⇑P P 03 22 13.7 -0.1
baz=78
BUG Bochum--Univer 78.12 338 *e*P P 03 22 14.4 +0.8
comp=Z,22nm,0.9s
Z32A Haskell 78.13 54 ⇓P P 03 22 14.0 -0.1
baz=78,SNR=7.3
UMR Umm Al-Rimmam 78.16 300 *e*P P 03 22 15.0 +0.8
UMR AMb AMB 03 22 16.2
comp=Z,90nm,1.0s
626A Big Bend Ranch 78.16 60 ⇑P P 03 22 14.3 -0.1
baz=78,SNR=8.3
428A Kincaid Ranch, 78.17 58 ⇓P P 03 22 15.0 +0.6
baz=78
STKA Stephens Creek 78.19 189 P P 03 22 14.3 +0.3
STKA Stephens Creek 78.19 189 P P 03 22 14.3 +0.3
comp=Z,2.4nm,0.8s,baz=335,slow=8.9,SNR=6.9
MIB Mutribah 78.20 301 *e*P P 03 22 15.2 +0.8
MIB AMb AMB 03 22 16.5
comp=Z,119nm,0.9s
LPIG La Paz 78.21 68 LR LR 03 49 06.4
comp=Z,5.4nm,20.3s,baz=7.0,slow=30
BR131 Keskin Array S 78.21 316 *e*P P 03 22 15.6 +1.0
comp=Z,15nm,0.9s
BRTR Keskin Array B 78.21 316 P P 03 22 15.8 +1.3
BRTR Keskin Array B 78.21 316 P P 03 22 15.8 +1.3
comp=Z,15nm,0.8s,baz=76,slow=4.7,SNR=84
BRTR LR LR 04 02 43.2
comp=Z,160nm,18.4s,baz=59,slow=40
TUL1 Tulsa 78.21 50 ⇓P P 03 22 14.8 +0.3
baz=78
HUMR Humele 78.22 324⇓ *i*P P 03 22 14.0 -0.3
230A Sterling City 78.24 56 ⇑P P 03 22 14.9 +0.1
baz=78
ROTZ Rotzenmuhle 78.25 335 *e*P P 03 22 15.7 +1.3
comp=Z,15nm,0.8s
GZR Gura Zlata 78.38 326⇑ *i*P P 03 22 15.8 +0.5
KHC Kasperske Hory 78.39 333 *e*P P 03 22 15.1 -0.2
KHC pmax pmax 03 22 15.1
comp=Z,37nm,0.9s
KHC Kasperske Hory 78.39 333 *e*P P 03 22 15.1 -0.2
comp=Z,37nm,0.9s
KHC Kasperske Hory 78.39 333 *i* P P 03 22 15.3 0.0
KHC *e*PCP **PcP** 03 22 24.3 0.0
KHC AMS AMS 04 00 40.0
comp=Z,200nm,14.6s

528A Cox Ranch, San 78.52 58 ⇓P P 03 22 16.5 +0.1
baz=78,SNR=5.8
ABTX Abilene, Hawle 78.54 55 ⇓P P 03 22 16.4 0.0
baz=78
330A Mertzon 78.56 57 ⇑P P 03 22 16.1 -0.4
baz=78
TXAR Lajitas Array 78.60 60 P P 03 22 17.0 +0.2
TXAR Lajitas Array 78.60 60 P P 03 22 17.0 +0.2
comp=Z,6.5nm,0.7s,baz=301,slow=4.2,SNR=86
WET Wettzell 78.60 334 eP P 03 22 17.7 +1.3
WET pmax pmax
comp=Z,23nm,0.9s
WET Wettzell 78.60 334 eP P 03 22 17.7 +1.3
comp=Z,23nm,0.9s
GRF Grafenberg Arr 78.61 335 eP P 03 22 17.8 +1.4
GRF pmax pmax
comp=Z,42nm,0.7s
GRF Grafenberg Arr 78.61 335 eP P 03 22 17.8 +1.4
comp=Z,42nm,0.7s
GEC2 GERESS Array S 78.61 333 eP P 03 22 17.3 +0.8
GEC2 pmax pmax
comp=Z,11nm,0.8s
GEC2 GERESS Array S 78.61 333 eP P 03 22 17.3 +0.8
comp=Z,11nm,0.8s
GERES GERESS Array B 78.61 333 P P 03 22 16.9 +0.4
GERES GERESS Array B 78.61 333 P P 03 22 16.9 +0.4
comp=Z,9.9nm,0.7s,baz=33,slow=5.1,SNR=114
GERES LR LR 04 01 15.1
comp=Z,183nm,18.5s,baz=192,slow=39
BZS Buzias 78.64 327 ⇑iP P 03 22 16.5 -0.1
NAY Al-Naaiem 78.66 300 eP P 03 22 17.6 +0.6
NAY AMb AMB 03 22 19.1
comp=Z,44nm,1.0s
231A Bronte 78.67 56 ⇑P P 03 22 17.0 -0.1
baz=78
627A Terlingua Ranc 78.68 59 ⇑P P 03 22 17.5 +0.2
baz=78
SOP Sopron 78.69 331⇑eP P 03 22 18.3 +1.4
RDF Al-Radifah 78.71 300 eP P 03 22 18.8 +1.5
RDF AMb AMB 03 22 20.5
comp=Z,100nm,1.1s
429A Davenport Ranc 78.71 58 ⇓P P 03 22 17.1 -0.2
baz=78
CONA Conrad Observa 78.71 332 iP P 03 22 18.3 +1.2
comp=Z,28nm,0.7s,SNR=42
CONA Conrad Observa 78.71 332 iP P 03 22 18.3 +1.2
comp=Z,28nm,0.7s
SZH Strazhica 78.86 323 iP P 03 22 18.3 +0.4
529A Stev Forest Ra 78.88 58 ⇑P P 03 22 18.2 -0.1
baz=79,SNR=7.6
TNS Taunus Mts 78.91 337 eP P 03 22 19.1 +1.0
TNS pmax pmax
comp=Z,24nm,0.8s
TNS Taunus Mts 78.91 337 eP P 03 22 19.1 +1.0
comp=Z,24nm,0.8s
628A Black Gap, Mar 78.95 59 ⇑P P 03 22 18.8 +0.1
baz=79
430A Baggett Ranch, 78.98 57 ⇓P P 03 22 18.5 -0.4
baz=79,SNR=7.3
331A San Angelo 79.06 56 ⇓P P 03 22 19.2 -0.1
baz=79,SNR=5.2
HGN Heimansgroeve 79.08 339 eP P 03 22 19.3 +0.5
comp=Z,43nm,0.9s
HGN ePP PP 03 25 52.0 +34
HGN Heimansgroeve 79.08 339 eL L 03 59 44.0
comp=Z,107nm,21.9s
232A Coleman 79.08 55 ⇑P P 03 22 19.4 0.0
baz=79,SNR=9.8
SFIN Scholer Farm 79.10 42 ⇑P P 03 22 18.8 -0.4
baz=79
BEBN Eben Emael 79.11 339 P P 03 22 19.6 +0.5
comp=Z,19nm,1.3s
MEM Membach 79.20 339 P P 03 22 20.1 +0.6
comp=Z,33nm,1.1s
PKSM Moragy 79.24 329⇑eP P 03 22 19.9 0.0
MOA Molln 79.30 332 iP P 03 22 21.0 +0.7
comp=Z,20nm,0.8s,SNR=21
MOA Molln 79.30 332 iP P 03 22 21.0 +0.7
comp=Z,20nm,0.8s
TOD Tromm 79.37 337 eP P 03 22 21.1 +0.5
TOD Tromm 79.37 337 eP P 03 22 21.1 +0.5
530A J-C Ranch, Com 79.38 57 ⇑P P 03 22 21.1 0.0
baz=79,SNR=5.4
332A Millersview 79.40 56 ⇓P P 03 22 20.9 -0.2
baz=79,SNR=9.1
ARSA Arzberg 79.42 331⇑iP P 03 22 21.6 +0.7
comp=Z,17nm,1.1s,SNR=10
ARSA Arzberg 79.42 331⇑iP P 03 22 21.6 +0.7
comp=Z,17nm,1.1s
431A Sonora 79.42 57 ⇑P P 03 22 20.9 -0.4
baz=79,SNR=6.6
ABH Alteburg 79.46 337 eP P 03 22 21.5 +0.4
BCLA Clavier 79.55 339 P P 03 22 22.3 +0.8
comp=Z,29nm,1.5s
BEHE Becsehely 79.67 330⇓eP P 03 22 22.3 +0.1
MPEP Malo Peshtene 79.69 324 P P 03 22 23.2 +0.8
SNF Seneffe 79.72 340 P P 03 22 22.8 +0.4
comp=Z,15nm,1.2s
432A Menard 79.75 56 ⇑P P 03 22 22.8 -0.2
baz=80
RUP Ruppelstein 79.76 338 eP P 03 22 23.2 +0.5
RUP Ruppelstein 79.76 338 eP P 03 22 23.2 +0.5
531A Rocksprings 79.84 57 ⇑P P 03 22 23.3 -0.2
baz=80
RJOB Jochberg 79.87 333 eP P 03 22 24.7 +1.3
comp=Z,19nm,0.8s
FUR Furstenfeldbru 79.95 334 eP P 03 22 25.0 +1.2
FUR pmax pmax
comp=Z,36nm,0.9s
FUR Furstenfeldbru 79.95 334 eP P 03 22 25.0 +1.2
comp=Z,36nm,0.9s
GIVF Givet 79.96 339 eP P 03 22 24.2 +0.5
comp=Z,33nm,1.0s
GIVF Givet 79.96 339 eP P 03 22 24.2 +0.5
GIVF pmax pmax
comp=Z,33nm,1.0s
GIVF Givet 79.96 339 eP P 03 22 24.2 +0.5
comp=Z,33nm,1.0s
STU Stuttgart 80.02 336 eP P 03 22 24.4 +0.3
STU pmax pmax
comp=Z,38nm,1.0s
STU Stuttgart 80.02 336 eP P 03 22 25.0 +0.9
comp=Z,21nm,0.8s
STU Stuttgart 80.02 336 eP P 03 22 24.4 +0.3
comp=Z,38nm,1.0s
DOU Dourbes 80.03 339 P P 03 22 24.6 +0.5
comp=Z,15nm,1.8s
DIM Dimitrovgrad 80.03 322 iP P 03 22 25.8 +1.6
WLF Walferdange 80.03 338 P P 03 22 24.9 +0.8
WLF Walferdange 80.03 338 eP P 03 22 23.5 -0.6
WLF pmax pmax
comp=Z,12nm,0.9s
WLF Walferdange 80.03 338 eP P 03 22 25.3 +1.2
comp=Z,9.0nm,0.9s
WLF Walferdange 80.03 338 eP P 03 22 23.5 -0.6
comp=Z,12nm,0.9s
JCT Junction City 80.03 56 ⇑P P 03 22 24.8 +0.3
baz=80
SOKA Soboth 80.08 331⇑iP P 03 22 25.1 +0.5
comp=Z,44nm,1.1s
SOKA Soboth 80.08 331⇑iP P 03 22 25.1 +0.5
comp=Z,44nm,1.1s
PERS Pernice 80.09 331 iP P 03 22 25.0 +0.4
GROS Grobnik 80.11 331 iP P 03 22 25.2 +0.5
BAIF Baives 80.16 339⇑iP P 03 22 25.3 +0.5
comp=Z,45nm,1.1s
BAIF Baives 80.16 339⇑iP P 03 22 25.3 +0.5
BAIF pmax pmax
comp=Z,45nm,1.1s
BAIF Baives 80.16 339⇑iP P 03 22 25.3 +0.5
comp=Z,45nm,1.1s
SIUC Southern Illin 80.19 45 eP P 03 22 25.0 -0.2
comp=Z,29nm,0.9s
LANF Langenberg 80.22 337 eP P 03 22 25.6 +0.4
LANF Langenberg 80.22 337 eP P 03 22 25.6 +0.4
LANF Langenberg 80.22 337 eP P 03 22 25.6 +0.4
532A Rocksprings 80.24 57 ⇑P P 03 22 25.4 -0.2
baz=80,SNR=8.9
WHTX Lake Whitney 80.25 54 ⇑P P 03 22 25.6 0.0
baz=80
KBA Koelnbreinsper 80.28 333⇑iP P 03 22 26.7 +1.0
KBA pmax pmax
comp=Z,55nm,0.9s
KBA Koelnbreinsper 80.28 333⇑iP P 03 22 26.7 +1.0
comp=Z,55nm,0.9s,SNR=9.8
KBA Koelnbreinsper 80.28 333⇑iP P 03 22 26.7 +1.0
comp=Z,55nm,0.9s
631A Perdido Creek 80.37 57 ⇓P P 03 22 26.3 0.0
baz=80,SNR=16
OBKA Obir 80.39 332⇑iP P 03 22 26.7 +0.4
comp=Z,12nm,0.8s,SNR=7.9
OBKA Obir 80.39 332⇑iP P 03 22 26.7 +0.4
comp=Z,12nm,0.8s
KDZ Kurdzhali 80.41 322 P P 03 22 27.4 +1.1
MIAR Mount Ida 80.43 50 eP P 03 22 26.1 -0.4
MIAR pmax pmax
comp=Z,13nm,0.9s
MIAR Mount Ida 80.43 50 eP P 03 22 26.1 -0.4
comp=Z,13nm,0.9s
DIVS Divibare 80.54 327 P P 03 22 27.1 0.0
VTS Vitosha 80.55 324 P P 03 22 27.8 +0.6
VTS Vitosha 80.55 324⇑iP P 03 22 27.6 +0.4
VTS Vitosha 80.55 324 iP P 03 22 27.9 +0.7
WATA Walderalm 80.61 334⇑iP P 03 22 28.4 +0.9
WATA pmax pmax
comp=Z,44nm,0.9s
WATA Walderalm 80.61 334⇑iP P 03 22 28.4 +0.9
comp=Z,44nm,0.9s,SNR=19
WATA Walderalm 80.61 334⇑iP P 03 22 28.4 +0.9
comp=Z,44nm,0.9s
WTTA Wattenberg 80.65 334⇑iP P 03 22 28.8 +1.0
WTTA pmax pmax
comp=Z,50nm,0.7s
WTTA Wattenberg 80.65 334⇑iP P 03 22 28.8 +1.0
comp=Z,50nm,0.7s,SNR=22
WTTA Wattenberg 80.65 334⇑iP P 03 22 28.8 +1.0
comp=Z,50nm,0.7s
BFO Black Forest 80.66 336 eP P 03 22 28.5 +0.9
BFO pmax pmax
comp=Z,21nm,0.9s
BFO Black Forest 80.66 336 eP P 03 22 28.5 +0.9
comp=Z,21nm,0.9s
BFO Black Forest 80.66 336 eP P 03 22 27.7 +0.1
comp=Z,33nm,1.0s
RZN Rozhen 80.67 323 P P 03 22 28.7 +0.7
RETA Reutte 80.72 334⇑iP P 03 22 28.7 +0.8
comp=Z,27nm,1.0s
RETA Reutte 80.72 334⇑iP P 03 22 28.7 +0.8
comp=Z,27nm,1.0s
SPAK Spaichingen-Ko 80.74 336 eP P 03 22 28.6 +0.5
MOTA Moosalm 80.74 334 iP P 03 22 29.0 +0.8
MOTA pmax pmax
comp=Z,51nm,0.9s
MOTA Moosalm 80.74 334 iP P 03 22 29.0 +0.8
comp=Z,51nm,0.9s,SNR=37
MOTA Moosalm 80.74 334 iP P 03 22 29.0 +0.8
comp=Z,51nm,0.9s
ALN Alexandroupoli 80.75 321 P P 03 22 28.7 +0.6
632A Uvalde 80.77 57 ⇓P P 03 22 28.5 +0.1
baz=80
CDF Champ du Feu 80.88 337⇑iP P 03 22 29.3 +0.5
comp=Z,80nm,1.0s
CDF Champ du Feu 80.88 337⇑iP P 03 22 29.3 +0.5
CDF pmax pmax
comp=Z,80nm,1.0s
CDF Champ du Feu 80.88 337⇑iP P 03 22 29.3 +0.5
comp=Z,80nm,1.0s
VISS Visnje 80.91 331 iP P 03 22 28.9 -0.1
BOJS Bojanci 81.03 331 iP P 03 22 29.8 +0.2
ECH Echery 81.09 337 eP P 03 22 30.1 +0.2
ECH pmax pmax
comp=Z,34nm,1.0s
ECH Echery 81.09 337 eP P 03 22 30.1 +0.2
comp=Z,34nm,1.0s
ECH eSn PP 03 25 28.9 -5.8
ECH Echery 81.09 337 eP P 03 22 30.4 +0.5
JAVS Javornik 81.09 332 iP P 03 22 29.4 -0.6
FETA Feichten 81.14 334 iP P 03 22 31.1 +0.8
comp=Z,22nm,1.0s,SNR=23
FETA Feichten 81.14 334 iP P 03 22 31.1 +0.8
comp=Z,22nm,1.0s
DAVA Damuels 81.16 335⇑iP P 03 22 31.0 +0.6
comp=Z,30nm,0.9s,SNR=17
DAVA Damuels 81.16 335⇑iP P 03 22 31.0 +0.6
comp=Z,30nm,0.9s
PAGF Fort de Pagny 81.16 338⇑iP P 03 22 31.2 +1.0
comp=Z,55nm,1.1s
PAGF Fort de Pagny 81.16 338⇑iP P 03 22 31.2 +1.0
comp=Z,55nm,1.1s
FELD Feberg im Sc 81.17 336 eP P 03 22 30.8 +0.4
MMB Musomiste 81.17 323 iP P 03 22 31.3 +0.9
WCI Wyandotte Cave 81.19 43 eP P 03 22 30.4 -0.2
WCI pmax pmax
comp=Z,8.0nm,0.8s
WCI Wyandotte Cave 81.19 43 eP P 03 22 30.4 -0.2
comp=Z,7.5nm,0.8s
KKB Krupnik 81.20 324 P P 03 22 31.5 +0.9
732A Laxson Ranch, 81.23 58 ⇑P P 03 22 31.2 +0.3
baz=81,SNR=6.2
NVR Nevrokopi 81.31 323 P P 03 22 31.9 +0.7
KAVA Kavala 81.33 322 P P 03 22 31.5 +0.3
TRI Trieste 81.35 332 eP P 03 22 30.4 -0.8
TRI pmax pmax
comp=Z,26nm,1.1s
TRI Trieste 81.35 332 eP P 03 22 30.4 -0.8
comp=Z,26nm,1.1s
MEZF Maizieres J'vi 81.38 338⇑iP P 03 22 32.3 +0.9
comp=Z,85nm,0.8s
MEZF Maizieres J'vi 81.38 338⇑iP P 03 22 32.3 +0.9
comp=Z,85nm,0.8s
THEF They Montfort 81.39 338 eP P 03 22 32.1 +0.6
THEF They Montfort 81.39 338 eP P 03 22 32.1 +0.6
THEF They Montfort 81.39 338 eP P 03 22 32.1 +0.6
PLE Pljevlja 81.42 327⇑iP P 03 22 32.5 +0.7
MOF Molkenrain 81.43 337 eP P 03 22 31.9 +0.2
MOF Molkenrain 81.43 337 eP P 03 22 31.9 +0.2
MOF Molkenrain 81.43 337 eP P 03 22 31.9 +0.2
PMOR Pomariorio Ree 81.49 122 eT T 04 51 53.4
comp=Z,19nm,0.2s
HAU Haudompre 81.50 337⇑iP P 03 22 32.4 +0.4
comp=Z,53nm,1.0s
HAU eR
comp=Z,174nm,21.0s
HAU Haudompre 81.50 337⇑iP P 03 22 32.4 +0.4
HAU pmax pmax
comp=Z,53nm,1.0s
HAU Haudompre 81.50 337⇑iP P 03 22 32.4 +0.4
comp=Z,53nm,1.0s
HINF Hinteralfeld 81.54 337⇑iP P 03 22 32.5 +0.2
comp=Z,26nm,0.9s
HINF Hinteralfeld 81.54 337⇑iP P 03 22 32.5 +0.2
HINF pmax pmax
comp=Z,26nm,0.9s
HINF Hinteralfeld 81.54 337⇑iP P 03 22 32.5 +0.2
comp=Z,26nm,0.9s
DAVOX Davos/Dischmat 81.62 335 P P 03 22 33.6 +0.7
DAVOX Davos/Dischmat 81.62 335 P P 03 22 33.6 +0.7
comp=Z,14nm,0.8s,baz=17,slow=3.1,SNR=22
IVA Berane 81.62 326⇑iP P 03 22 33.1 +0.2
SFTF Sexfontaines 81.66 338⇑iP P 03 22 33.5 +0.6
comp=Z,126nm,0.9s
SFTF Sexfontaines 81.66 338⇑iP P 03 22 33.5 +0.6
comp=Z,126nm,0.9s
BBS Basel-Blauen 81.68 336 eP P 03 22 33.6 +0.6
BBS Basel-Blauen 81.68 336 eP P 03 22 33.6 +0.6
UPM Unac-Piva 81.72 327⇑iP P 03 22 33.2 -0.3
SKO Skopje 81.78 325 eP P 03 22 34.9 +1.3
PVY Plav 81.83 326⇑iP P 03 22 34.0 0.0
LIA Limnos Island 81.95 321 P P 03 22 34.7 +0.2
LOMF Lomont 81.97 337 eP P 03 22 35.3 +0.7
LOMF Lomont 81.97 337 eP P 03 22 35.3 +0.7
LOMF Lomont 81.97 337 eP P 03 22 35.3 +0.7
NKY Niksic 82.02 327⇑iP P 03 22 34.5 -0.5
TUE Stuetta 82.05 335 eP P 03 22 36.1 +0.9
comp=Z,24nm,0.8s
CSS Prodhromos 82.09 313 eP P 03 22 36.0 +0.7
comp=Z,15nm,0.9s
BRY Bratgogast 82.11 327⇑iP P 03 22 35.0 -0.5
WVT Waverly 82.12 45 eP P 03 22 35.0 -0.5
WVT pmax pmax
comp=Z,8.0nm,0.9s
WVT Waverly 82.12 45 eP P 03 22 35.0 -0.5
comp=Z,7.5nm,0.9s
TTG Podgorica 82.25 327⇑iP P 03 22 35.9 -0.1
HORT Hortiatis 82.26 323 P P 03 22 35.6 -0.6
PLG Polygyros 82.30 323 P P 03 22 36.4 0.0
ASF Jabal al Asfar 82.39 309 P P 03 22 38.5 +1.4
ASF Jabal al Asfar 82.39 309 P P 03 22 38.5 +1.4
comp=Z,7.1nm,1.0s,baz=266,slow=3.3,SNR=13
ASF LR LR 04 03 01.1
comp=Z,95nm,20.2s,baz=86,slow=38
PHP Peshkopia 82.42 325 P P 03 22 36.9 -0.1
FLN La Foliniere 82.45 342⇑iP P 03 22 37.4 +0.5
comp=Z,80nm,1.1s
FLN eR
comp=Z,130nm,21.5s
FLN La Foliniere 82.45 342⇑iP P 03 22 37.4 +0.5
FLN pmax pmax
comp=Z,80nm,1.1s
FLN La Foliniere 82.45 342⇑iP P 03 22 37.4 +0.5
comp=Z,80nm,1.1s
BUM Brajici-Budva 82.49 327⇑iP P 03 22 37.3 -0.1
HCY Herceg Novi 82.52 327⇑iP P 03 22 37.1 -0.4
LDF La Druitiere 82.53 342⇑iP P 03 22 37.6 +0.2
comp=Z,16nm,0.9s
LDF La Druitiere 82.53 342⇑iP P 03 22 37.6 +0.2
LDF pmax pmax
comp=Z,16nm,0.9s
LDF La Druitiere 82.53 342⇑iP P 03 22 37.6 +0.2
comp=Z,16nm,0.9s
MMAI Mount Meron Ar 82.53 311 P P 03 22 38.8 +1.1
MMAI Mount Meron Ar 82.53 311 P P 03 22 38.8 +1.1
comp=Z,37nm,1.0s,baz=40,slow=6.6,SNR=26
MMAI LR LR 04 04 18.7
comp=Z,292nm,18.7s,baz=355,slow=39
PPT Papeete 82.55 125 LR LR 03 54 31.7
comp=Z,202nm,19.6s,baz=232,slow=32
PPT2 Papeete2 82.56 125 eLR LR 03 48 34.2
comp=Z,286nm,23.0s,baz=324
PPT2 eT T 04 53 14.0
comp=Z,5.1nm,0.3s
ULC Ulcinj 82.65 326⇑iP P 03 22 38.7 +0.5
TIAR Tiarei 82.67 125 eT T 04 53 21.4
comp=Z,7.8nm,0.2s
FNA Florina 82.81 324 P P 03 22 38.8 -0.3
LOR Lormes 82.83 339⇑iP P 03 22 39.5 +0.5
comp=Z,73nm,1.0s
LOR eR
comp=Z,274nm,22.2s
LOR Lormes 82.83 339⇑iP P 03 22 39.5 +0.5
comp=Z,73nm,1.0s
CABF La Chapelle 82.85 337⇑iP P 03 22 39.9 +0.7
comp=Z,22nm,1.0s
CABF La Chapelle 82.85 337⇑iP P 03 22 39.9 +0.7
CABF pmax pmax
comp=Z,22nm,1.0s
CABF La Chapelle 82.85 337⇑iP P 03 22 39.9 +0.7
comp=Z,22nm,1.0s
GRR Gorron 82.88 342⇑iP P 03 22 39.8 +0.6
comp=Z,46nm,1.0s
GRR Gorron 82.88 342⇑iP P 03 22 39.8 +0.6
GRR pmax pmax
comp=Z,46nm,1.0s
GRR Gorron 82.88 342⇑iP P 03 22 39.8 +0.6
comp=Z,46nm,1.0s
TIR Tirane 82.93 326 eP P 03 22 40.1 +0.5
TIR pmax pmax
comp=Z,21nm,0.7s
TIR Tirane 82.93 326 eP P 03 22 40.1 +0.5
comp=Z,21nm,0.7s
SSF Saint Saulge 83.11 339⇑iP P 03 22 41.0 +0.6
comp=Z,35nm,1.0s
SSF Saint Saulge 83.11 339⇑iP P 03 22 41.0 +0.6
SSF pmax pmax
comp=Z,35nm,1.0s
SSF Saint Saulge 83.11 339⇑iP P 03 22 41.0 +0.6
comp=Z,35nm,1.0s
HYF Humbligny 83.13 339 eP P 03 22 41.6 +1.0
HYF Humbligny 83.13 339 eP P 03 22 41.6 +1.0
XOR Xorichti 83.25 322 P P 03 22 40.8 -0.5
SGMF Saint Gilles 83.37 343 eP P 03 22 42.3 +0.6
SGMF Saint Gilles 83.37 343 eP P 03 22 42.3 +0.6
SGMF Saint Gilles 83.37 343 eP P 03 22 42.3 +0.6
AVF Avril sur Loir 83.40 339⇑iP P 03 22 42.7 +0.8
comp=Z,94nm,1.3s
AVF Avril sur Loir 83.40 339⇑iP P 03 22 42.7 +0.8
AVF pmax pmax
comp=Z,94nm,1.3s
AVF Avril sur Loir 83.40 339⇑iP P 03 22 42.7 +0.8
comp=Z,94nm,1.3s
SMF Signal de Mont 83.41 338⇑iP P 03 22 42.7 +0.7
comp=Z,177nm,1.1s
SMF Signal de Mont 83.41 338⇑iP P 03 22 42.7 +0.7
SMF pmax pmax
comp=Z,177nm,1.1s
SMF Signal de Mont 83.41 338⇑iP P 03 22 42.7 +0.7
comp=Z,177nm,1.1s
ROSF Rostrenen 83.43 344 eP P 03 22 42.4 +0.4
ROSF Rostrenen 83.43 344 eP P 03 22 42.4 +0.4
ROSF Rostrenen 83.43 344 eP P 03 22 42.4 +0.4
MRKA Markates 83.63 322 P P 03 22 42.9 -0.4
LPL La Plagne 83.68 336⇑iP P 03 22 44.8 +1.1
comp=Z,26nm,0.9s
LPL La Plagne 83.68 336⇑iP P 03 22 44.8 +1.1
LPL pmax pmax
comp=Z,27nm,0.9s
LPL La Plagne 83.68 336⇑iP P 03 22 44.8 +1.1
comp=Z,26nm,0.9s
LPG La Plagne 83.69 336⇑iP P 03 22 45.0 +1.2
comp=Z,28nm,0.9s
LPG La Plagne 83.69 336⇑iP P 03 22 45.0 +1.2
LPG pmax pmax
comp=Z,28nm,0.9s
LPG La Plagne 83.69 336⇑iP P 03 22 45.0 +1.2
comp=Z,28nm,0.9s
BGF Bois d'Agland 83.75 339 eP P 03 22 44.4 +0.7
comp=Z,7.5nm,0.5s
BGF Bois d'Agland 83.75 339 eP P 03 22 44.4 +0.7
BGF pmax pmax
comp=Z,8.0nm,0.5s
BGF Bois d'Agland 83.75 339 eP P 03 22 44.4 +0.7
comp=Z,7.5nm,0.5s
SWET Sewanee 83.78 44 eP P 03 22 43.5 -0.6
comp=Z,23nm,1.0s
AGG Agios Georgios 83.90 323 P P 03 22 42.9 -1.8
LKR Lokris 83.93 322 P P 03 22 44.0 -0.7
BNI Bardonecchia 84.12 336 eP P 03 22 46.7 +0.9
BNI pmax pmax
comp=Z,5.0nm,0.6s
BNI Bardonecchia 84.12 336 eP P 03 22 46.7 +0.9
comp=Z,4.7nm,0.6s
AGO Saint Agoulin 84.15 339 eP P 03 22 47.2 +1.4
AGO Saint Agoulin 84.15 339 eP P 03 22 47.2 +1.4
TCF Toulx Ste Croi 84.16 339 eP P 03 22 46.6 +0.8
comp=Z,22nm,1.0s
TCF Toulx Ste Croi 84.16 339 eP P 03 22 46.6 +0.8
TCF pmax pmax
comp=Z,22nm,1.0s
TCF Toulx Ste Croi 84.16 339 eP P 03 22 46.6 +0.8
comp=Z,22nm,1.0s
IGT Igoumenitsa 84.29 324 P P 03 22 46.1 -0.5
KEK Kerkira 84.35 325 P P 03 22 46.6 -0.3
MBDF Montbardon 84.39 336 eP P 03 22 47.8 +0.6
comp=Z,12nm,0.7s
MBDF Montbardon 84.39 336 eP P 03 22 47.8 +0.6
MBDF pmax pmax
comp=Z,12nm,0.7s
MBDF Montbardon 84.39 336 eP P 03 22 47.8 +0.6
comp=Z,12nm,0.7s
MFF Saint Martin d 84.42 341 eP P 03 22 47.2 +0.1
comp=Z,18nm,0.8s
MFF Saint Martin d 84.42 341 eP P 03 22 47.2 +0.1
MFF pmax pmax
comp=Z,18nm,0.8s
MFF Saint Martin d 84.42 341 eP P 03 22 47.2 +0.1
comp=Z,18nm,0.8s
PYM Petit Puy Mans 84.46 339 eP P 03 22 48.3 +0.9
PYM Petit Puy Mans 84.46 339 eP P 03 22 48.3 +0.9
PYM Petit Puy Mans 84.46 339 eP P 03 22 48.3 +0.9
ORIF Oris-en-Rattie 84.47 336⇑iP P 03 22 48.7 +1.2
comp=Z,27nm,0.8s
ORIF eR
comp=Z,200nm,20.8s
ORIF Oris-en-Rattie 84.47 336⇑iP P 03 22 48.7 +1.2
ORIF pmax pmax
comp=Z,27nm,0.8s
ORIF Oris-en-Rattie 84.47 336⇑iP P 03 22 48.7 +1.2
comp=Z,27nm,0.8s
SSB Saint Sauveur 84.50 337 eP P 03 22 48.3 +0.7
SSB pmax pmax
comp=Z,25nm,0.9s
SSB Saint Sauveur 84.50 337 eP P 03 22 48.3 +0.7
comp=Z,25nm,0.9s
SSB Saint Sauveur 84.50 337 eP P 03 22 48.6 +1.0
GUR Goura 84.81 322 P P 03 22 48.3 -1.1
SAOF Saorge 84.84 335 eP P 03 22 49.4 +0.1
SAOF Saorge 84.84 335 eP P 03 22 49.4 +0.1
SAOF Saorge 84.84 335 eP P 03 22 49.4 +0.1

VIVF	**Saint-Julien-I**	**84.85**	**337**⇑	*i*P		**P**	**03 22 50.6**	**+1.2**
	comp=Z,50nm,1.1s								
VIVF	**Saint-Julien-I**	**84.85**	**337**⇑	*i*P		**P**	**03 22 50.6**	**+1.2**
VIVF					pmax	pmax			
	comp=Z,50nm,1.1s								
VIVF	**Saint-Julien-I**	**84.85**	**337**⇑	*i*P		**P**	**03 22 50.6**	**+1.2**
	comp=Z,50nm,1.1s								
TOUF	**Mont Tournerai**	**84.91**	**335**	*e*P		**P**	**03 22 50.3**	**+0.4**
TOUF	**Mont Tournerai**	**84.91**	**335**	*e*P		**P**	**03 22 50.3**	**+0.4**
TOUF	**Mont Tournerai**	**84.91**	**335**	*e*P		**P**	**03 22 50.3**	**+0.4**
SBF	**Sospel**	**84.99**	**335**	*e*P		**P**	**03 22 50.3**	**+0.2**
	comp=Z,28nm,0.7s								
SBF	**Sospel**	**84.99**	**335**	*e*P		**P**	**03 22 50.3**	**+0.2**
SBF					pmax	pmax			
	comp=Z,28nm,0.7s								
SBF	**Sospel**	**84.99**	**335**	*e*P		**P**	**03 22 50.3**	**+0.2**
	comp=Z,28nm,0.7s								
MVIF	**Mont Vial**	**85.04**	**335**	*e*P		**P**	**03 22 50.9**	**+0.4**
MVIF	**Mont Vial**	**85.04**	**335**	*e*P		**P**	**03 22 50.9**	**+0.4**
MVIF	**Mont Vial**	**85.04**	**335**	*e*P		**P**	**03 22 50.9**	**+0.4**
RLS	**Riolos of Patr**	**85.08**	**323**	P		**P**	**03 22 50.5**	**0.0**
REVF	**Revere**	**85.12**	**335**	*e*P		**P**	**03 22 50.7**	**-0.1**
REVF	**Revere**	**85.12**	**335**	*e*P		**P**	**03 22 50.7**	**-0.1**
REVF	**Revere**	**85.12**	**335**	*e*P		**P**	**03 22 50.7**	**-0.1**
RJF	**Les Rejaudoux**	**85.25**	**339**	*e*P		**P**	**03 22 51.4**	**+0.1**
	comp=Z,23nm,1.0s								
RJF				*e*R					
	comp=Z,245nm,23.0s								
RJF	**Les Rejaudoux**	**85.25**	**339**	*e*P		**P**	**03 22 51.4**	**+0.1**
RJF					pmax	pmax			
	comp=Z,23nm,1.0s								
RJF	**Les Rejaudoux**	**85.25**	**339**	*e*P		**P**	**03 22 51.4**	**+0.1**
	comp=Z,23nm,1.0s								
VLS	**Valsamata**	**85.34**	**323**	P		**P**	**03 22 51.5**	**-0.4**
EIL	**Elat**	**85.38**	**309**	P		**P**	**03 22 53.2**	**+1.0**
EIL	**Elat**	**85.38**	**309**	P		**P**	**03 22 53.2**	**+1.0**
	comp=Z,16nm,0.7s,baz=348,slow=6.5,SNR=16								
EIL					LR	LR	04 06 50.3		
	comp=Z,149nm,18.8s,baz=50,slow=40								
AMT	**Artemida-Makis**	**85.42**	**322**	P		**P**	**03 22 51.9**	**-0.4**
SMRF	**Simiane la Rot**	**85.42**	**336**	*e*P		**P**	**03 22 53.6**	**+1.4**
	comp=Z,25nm,1.2s								
SMRF	**Simiane la Rot**	**85.42**	**336**	*e*P		**P**	**03 22 53.6**	**+1.4**
	comp=Z,25nm,1.2s								
CAF	**Calviac**	**85.47**	**339**	*e*P		**P**	**03 22 53.0**	**+0.6**
	comp=Z,14nm,0.7s								
CAF	**Calviac**	**85.47**	**339**	*e*P		**P**	**03 22 53.0**	**+0.6**
CAF					pmax	pmax			
	comp=Z,14nm,0.7s								
CAF	**Calviac**	**85.47**	**339**	*e*P		**P**	**03 22 53.0**	**+0.6**
	comp=Z,14nm,0.7s								
FRF	**La Foret Royal**	**85.50**	**335**	*e*P		**P**	**03 22 53.0**	**+0.4**
	comp=Z,32nm,1.1s								
FRF	**La Foret Royal**	**85.50**	**335**	*e*P		**P**	**03 22 53.0**	**+0.4**
FRF					pmax	pmax			
	comp=Z,32nm,1.1s								
FRF	**La Foret Royal**	**85.50**	**335**	*e*P		**P**	**03 22 53.0**	**+0.4**
	comp=Z,32nm,1.1s								
PGF	**Pioggiola**	**85.71**	**333**	*e*P		**P**	**03 22 54.1**	**+0.3**
	comp=Z,36nm,0.9s								
PGF	**Pioggiola**	**85.71**	**333**	*e*P		**P**	**03 22 54.1**	**+0.3**
PGF					pmax	pmax			
	comp=Z,36nm,0.9s								
PGF	**Pioggiola**	**85.71**	**333**	*e*P		**P**	**03 22 54.1**	**+0.3**
	comp=Z,36nm,0.9s								
LMR	**La Mourre**	**85.74**	**335**	*e*P		**P**	**03 22 54.5**	**+0.7**
	comp=Z,75nm,1.1s								
LMR	**La Mourre**	**85.74**	**335**	*e*P		**P**	**03 22 54.5**	**+0.7**
LMR					pmax	pmax			
	comp=Z,75nm,1.1s								
LMR	**La Mourre**	**85.74**	**335**	*e*P		**P**	**03 22 54.5**	**+0.7**
	comp=Z,75nm,1.1s								
LFF	**La Frestale**	**85.78**	**340**	*e*P		**P**	**03 22 53.9**	**0.0**
	comp=Z,34nm,1.0s								
LFF	**La Frestale**	**85.78**	**340**	*e*P		**P**	**03 22 53.9**	**0.0**
LFF					pmax	pmax			
	comp=Z,34nm,1.0s								
LFF	**La Frestale**	**85.78**	**340**	*e*P		**P**	**03 22 53.9**	**0.0**
	comp=Z,34nm,1.0s								
LASF	**Ste Croix**	**85.80**	**337**⇑	*i*P		**P**	**03 22 55.5**	**+1.4**
	comp=Z,37nm,1.2s								
LASF	**Ste Croix**	**85.80**	**337**⇑	*i*P		**P**	**03 22 55.5**	**+1.4**
	comp=Z,37nm,1.2s								
DYR	**Agios Nikonas**	**85.80**	**322**	P		**P**	**03 22 52.3**	**-1.9**
IDI	**Anoyia**	**85.89**	**319**	*e*P		**P**	**03 22 53.6**	**-1.2**
	comp=Z,11nm,0.6s								
PYL	**PYLOS**	**85.94**	**322**	P		**P**	**03 22 53.3**	**-1.6**
KMSC	**Kings Mountain**	**86.00**	**41**	⇓P		**P**	**03 22 55.1**	**-0.2**
	baz=86								
TIP	**Timpagrande**	**86.01**	**327**	*e*P		**P**	**03 22 55.1**	**-0.1**
	comp=Z,41nm,1.2s								
MTLF	**Montolieu**	**86.91**	**338**	*e*P		**P**	**03 22 59.6**	**+0.1**
	comp=Z,15nm,1.0s								
MTLF	**Montolieu**	**86.91**	**338**	*e*P		**P**	**03 22 59.6**	**+0.1**
MTLF					pmax	pmax			
	comp=Z,15nm,1.0s								
MTLF	**Montolieu**	**86.91**	**338**	*e*P		**P**	**03 22 59.6**	**+0.1**
	comp=Z,15nm,1.0s								
TBI	**Tubuai**	**87.22**	**128**	*e*LR		LR	03 50 29.0		
	comp=Z,208nm,25.2s,baz=322								
TBI				*e*T		T	04 59 02.4		
	comp=Z,13nm,0.3s								
EPF	**Esparros**	**87.67**	**339**	*e*P		**P**	**03 23 02.6**	**-0.7**
	comp=Z,7.2nm,0.9s								
EPF	**Esparros**	**87.67**	**339**	*e*P		**P**	**03 23 02.6**	**-0.7**
EPF					pmax	pmax			
	comp=Z,7.0nm,0.9s								
EPF	**Esparros**	**87.67**	**339**	*e*P		**P**	**03 23 02.6**	**-0.7**
	comp=Z,7.2nm,0.9s								
SJPF	**Ste Jean**	**87.97**	**341**	*e*P		**P**	**03 23 04.6**	**0.0**
	comp=Z,45nm,1.4s								
SJPF	**Ste Jean**	**87.97**	**341**	*e*P		**P**	**03 23 04.6**	**0.0**
SJPF					pmax	pmax			
	comp=Z,45nm,1.4s								
SJPF	**Ste Jean**	**87.97**	**341**	*e*P		**P**	**03 23 04.6**	**0.0**
	comp=Z,45nm,1.4s								
ETSF	**Etsaut**	**88.01**	**340**	*e*P		**P**	**03 23 04.9**	**0.0**
	comp=Z,14nm,0.9s								
ETSF	**Etsaut**	**88.01**	**340**	*e*P		**P**	**03 23 04.9**	**0.0**
ETSF					pmax	pmax			
	comp=Z,14nm,0.9s								
ETSF	**Etsaut**	**88.01**	**340**	*e*P		**P**	**03 23 04.9**	**0.0**
	comp=Z,14nm,0.9s								
KEST	**Kesra**	**91.77**	**330**	*e*P		**P**	**03 23 23.0**	**+0.4**
KEST	**Kesra**	**91.77**	**330**	P		**P**	**03 23 23.1**	**+0.6**
	comp=Z,3.7nm,0.9s,baz=238,slow=20,SNR=6.9								
KEST					LR	LR	04 07 00.3		
	comp=Z,58nm,20.6s,baz=332,slow=37								
ESDC	**Sonseca Array**	**91.86**	**342**	P		**P**	**03 23 21.5**	**-1.4**
ESDC	**Sonseca Array**	**91.86**	**342**	P		**P**	**03 23 21.5**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=2.6,slow=4.2,SNR=4.3								
ESDC					LR	LR	04 07 07.3		
	comp=Z,86nm,19.2s,baz=135,slow=37								
ATD	**Arta Tunnel**	**94.51**	**292**	LR		LR	04 12 29.4		
	comp=Z,121nm,18.4s,baz=55,slow=40								
TOA0	**Torodi Ar. Sit**	**115.14**	**328**	*e*PKP		**PKPdf**	**03 28 55.1**	**-1.0**
TORD	**Torodi Ar. Bea**	**115.14**	**328**	PKP		**PKPdf**	**03 28 55.6**	**-0.5**
TORD	**Torodi Ar. Bea**	**115.14**	**328**	PKP		**PKPdf**	**03 28 55.6**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=10,slow=2.4,SNR=9.5								
DBIC	**Dimbokro**	**123.46**	**332**	PKP		**PKPdf**	**03 29 11.8**	**-0.3**
DBIC				*e*PKPdf		**PKiKP**	**03 29 12.2**	**-0.2**
DBIC	**Dimbokro**	**123.46**	**332**	PKP		**PKPdf**	**03 29 11.8**	**-0.3**
	comp=Z,3.4nm,0.7s,baz=318,slow=2.0,SNR=7.6								
VNDA	**Vanda**	**123.53**	**177**	PKP		**PKPdf**	**03 29 08.6**	**-1.7**
VNDA				*e*PKPdf		**PKiKP**	**03 29 09.9**	**-0.6**
VNDA	**Vanda**	**123.53**	**177**	PKP		**PKPdf**	**03 29 08.6**	**-1.7**
	comp=Z,1.2nm,0.7s,baz=312,slow=3.2,SNR=5.9								
LIC	**Lamto**	**123.93**	**332**⇑	*i*PKIKP		**PKPdf**	**03 29 12.7**	**-0.3**
	comp=Z,9.7nm,0.7s								
LIC				*e*R					
	comp=Z,89nm,21.8s								
LIC	**Lamto**	**123.93**	**332**⇑	*i*PKPdf		**PKPdf**	**03 29 12.7**	**-0.3**
LSZ	**Lusaka**	**124.03**	**284**	*e*PKPdf		**PKPdf**	**03 29 13.7**	**+0.5**
LBTB	**Lobatse**	**132.44**	**277**	*e*PKPdf		**PKPdf**	**03 29 29.2**	**+0.2**
LPAZ	**La Paz**	**135.44**	**61**	*e*PKPdf		**PKPdf**	**03 29 35.9**	**+0.4**
LPAZ	**La Paz**	**135.44**	**61**	PKP		**PKPdf**	**03 29 35.8**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=24,slow=5.9,SNR=5.7								
QSPA	**South Pole Qui**	**135.86**	**180**	PKP		**PKPdf**	**03 29 34.9**	**+0.9**
QSPA	**South Pole Qui**	**135.86**	**180**	PKP		**PKPdf**	**03 29 34.9**	**+0.9**
	comp=Z,1.7nm,0.6s,baz=268,slow=1.9,SNR=20								
LCO	**Las Campanas**	**142.74**	**78**	*e*PKPdf		**PKPdf**	**03 29 47.7**	**-0.3**
BDFB	**Brasilia**	**145.38**	**35**	PKPbc		**PKPab**	**03 29 52.9**	**-0.1**
BDFB	**Brasilia**	**145.38**	**35**	PKPbc		**PKPab**	**03 29 52.9**	**-0.1**
	comp=Z,2.8nm,0.6s,baz=228,slow=2.3,SNR=6.5								
PLCA	**Paso Flores**	**149.06**	**95**	*e*PKPbc		**PKPbc**	**03 30 01.8**	**-0.6**
PLCA	**Paso Flores**	**149.06**	**95**	PKPbc		**PKPbc**	**03 30 02.4**	**0.0**
	comp=Z,5.4nm,0.7s,baz=244,slow=3.8,SNR=14								
CPUP	**Villa Florida**	**149.57**	**60**	PKPbc		**PKPbc**	**03 30 03.5**	**-0.4**
CPUP	**Villa Florida**	**149.57**	**60**	PKPbc		**PKPbc**	**03 30 03.5**	**-0.4**
	comp=Z,4.1nm,0.6s,baz=298,slow=2.1,SNR=13								
SNAA	**Sanae**	**151.70**	**197**	*e*PKPbc		**PKPbc**	**03 30 06.8**	**-0.8**
SNAA				*e*PKPab		**PKPab**	**03 30 17.1**	**+0.4**
SNAA	**Sanae**	**151.70**	**197**	PKPbc		**PKPbc**	**03 30 06.7**	**-1.0**
	comp=Z,1.7nm,0.7s,baz=185,slow=4.3,SNR=12								
SNAA				PKPab		**PKPab**	**03 30 17.6**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=153,slow=2.7,SNR=8.6								

IDC ***10*** *03:10:30.0±9.7, 1°.21N×125°.07E, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.7/22, mbtmp3.9/4, ML3.8/1, Error ellipse: s-maj=154.6km s-min=109.2km az=137.0*

ISCJB ***10*** *03:10:41.5±0.9, 0°.75N±0°.06×125°.44E±0°.06, h79km, mb4.0/3, Error ellipse: s-maj=11.2km s-min=6.4km az=43.7*

DJA ***10*** *03:10:42.3±1.0, 1°.N±6°×12°.5E±°, h15km±16km, M4.1/6, mb4.1/2, MLv4.1/6*

ISC 10 03:10:42.5±1.2, 0°.80N±0°.07×125°.45E±0°.07, h79km, n12, σ1§48/16, mb4.0/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**0.88**	**316**	P	**Pn**	**03 10 59.7**	**-0.5**
MNI				S	**Sn**	**03 11 12.6**	**-0.7**
KMSI	**Cibinong**	**1.49**	**261**	P	**Pn**	**03 11 06.0**	**-1.6**
KMSI				S	**Sn**	**03 11 23.9**	**-2.7**
LUWI	**Luwuk**	**3.25**	**236**	P	**Pn**	**03 11 31.6**	**+0.4**
LUWI				S	**Sn**	**03 12 10.4**	**+1.6**
MRSI	**Marisa**	**3.52**	**265**	P	**Pn**	**03 11 36.2**	**+1.2**
NLAI	**Namlea**	**4.34**	**158**	P	**Pn**	**03 11 45.6**	**-0.5**
NLAI				S	**Sn**	**03 12 33.6**	**-1.8**
KDI	**Kendari**	**5.51**	**211**	P	**Pn**	**03 12 01.1**	**-1.0**
	12nm,1.1s,0.1nm						
TTSI	**Tana Toraja**	**6.80**	**236**	P	**Pn**	**03 12 17.9**	**-1.8**
SPSI	**Sidrap Palu**	**7.39**	**230**	P	**Pn**	**03 12 28.9**	**+1.1**
FITZ	**Fitzroy Crossi**	**18.79**	**179**	P	**Pn**	**03 14 56.4**	**-0.6**
	0.2nm,0.3s,baz=14,slow=10,SNR=7.4						
WRA	**Warramunga Arr**	**22.38**	**158**	P	**P**	**03 15 34.9**	**+0.4**
	2.1nm,0.5s,baz=334,slow=11,SNR=17						
ASAR	**Alice Springs**	**25.67**	**162**	P	**P**	**03 16 06.8**	**+1.5**
	5.8nm,1.1s,baz=349,slow=13,SNR=24						
STKA	**Stephens Creek**	**35.92**	**156**	P	**P**	**03 17 36.5**	**+1.2**
	0.9nm,0.3s,baz=340,slow=8.7,SNR=11						

PRU 10 03:21:40.3, 49°.83N×18°.50E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.23**	**272**	*e*PG	Pg	03 21 44.6	-0.1
OKC				*e*SG	Sg	03 21 48.3	+0.6
	comp=Z,14nm,0.4s						
OJC	**Ojcow**	**0.92**	**65**	*i* P	Pb	03 21 59.3	+0.1
NIE	**Niedzica**	**1.25**	**109**	*e*P	Pg	03 22 02.9	-1.4
DPC	**Dobruska-Polom**	**1.50**	**291**	*e*SG	Sg	03 22 28.0	-0.6
	comp=Z,2.1nm,0.4s						

BJI ***10*** *03:22:21.0, 42°.50N×13°.40E, h5km, mB4.8/2, mb4.8/4*

ISCJB ***10*** *03:22:22.0±0.2, 42°.47N±0°.01×13°.35E±0°.02, h10km±1km, mb3.9/16, Error ellipse: s-maj=2.2km s-min=1.6km az=40.4*

NEIC ***10*** *03:22:22.0, 42°.47N×13°.42E, h9km, mb4.0/8, MW3.9(ROM), After ROM.*

NEIC Felt [III] at Ascoli Piceno, Rieti and Sulmona; [II] at Avezzano, Cascia, Chieti, Foligno, Frosinone, Gualdo Tadino, Macerata, Montesilvano, Pescara, Rome, Spoleto, Spoltore and Terni. Also felt at Castelli.

ROM ***10*** *03:22:22.2±0.1, 42°.46N×13°.42E, h10km, Ml3.9/31, Error ellipse: s-maj=1.1km s-min=0.7km az=73.0*

CSEM ***10*** *03:22:22.6±0.1, 42°.47N×13°.34E, h2km, mb3.9/8, ML4.4/7, Mw3.9, Error ellipse: s-maj=2.0km s-min=1.5km az=40.0*

IDC ***10*** *03:22:23.2±1.0, 42°.60N×13°.25E, h0km, mb3.7/7, mb1 3.8/11, mb1mx3.7/29, mbtmp3.7/11, ML3.5/4, MS2.8/1, Ms1 2.9/1, ms1mx2.2/43, Error ellipse: s-maj=19.0km s-min=13.2km az=95.0*

PRU ***10*** *03:22:23.1, 42°.49N×13°.61E, h1km, M4.0*

PDG ***10*** *03:22:23.0±1.4, 42°.52N×13°.44E, h4km±2km, ML3.9/9, Error ellipse: s-maj=1.5km s-min=1.9km az=0.0*

LDG ***10*** *03:22:23.2±0.1, 42°.50N×13°.44E, h2km, Ml3.5/12, Error ellipse: s-maj=5.2km s-min=3.0km az=40.0*

THE ***10*** *03:22:25.3, 42°.51N×13°.36E, h32km±68km, Error ellipse: s-maj=68.3km s-min=6.1km az=0.0*

BEO ***10*** *03:22:28.4±2.5, 42°.58N×13°.44E, h0km, ML4.2/5*

ISC 10 03:22:23.3±0.7, 42°.48N±0°.01×13°.40E±0°.01, h5km±4km, n387, σ1§50/475, mb4.0/16, 44C-16D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.05**	**4**	P	**Pg**	**03 22 24.9**	**+0.2**
CAMP				S	**Sg**	**03 22 26.5**	**+0.7**
CAMP	**Campotosto**	**0.05**	**4**⇑	*i*Pg	**Pg**	**03 22 24.9**	**+0.2**
CAMP				Sg	**Sg**	**03 22 26.5**	**+0.7**
	98μm,0.5s						
CAMP	**Campotosto**	**0.05**	**4**⇑	*i*Pg	**Pg**	**03 22 24.9**	**+0.2**
CAMP				Sg	**Sg**	**03 22 26.5**	**+0.7**
	98μm,0.5s						
AQU	**L'Aquila**	**0.13**	**181**	*e*Pg	**Pg**	**03 22 25.3**	**-0.6**
AQU	**L'Aquila**	**0.13**	**181**⇑	*i*P	**Pg**	**03 22 25.7**	**-0.2**
AQU	**L'Aquila**	**0.13**	**181**⇑	*i*Pg	**Pg**	**03 22 25.7**	**-0.2**
AQU				Sg	**Sg**	**03 22 27.9**	**+0.3**
AQU	**L'Aquila**	**0.13**	**181**	*e*Pg	**Pg**	**03 22 25.3**	**-0.6**
AQU	**L'Aquila**	**0.13**	**181**⇑	*i*P	**Pg**	**03 22 25.7**	**-0.2**
AQU				Sg	**Sg**	**03 22 27.9**	**+0.3**
TERO	**Teramo**	**0.20**	**46**	P	**Pg**	**03 22 27.0**	**-0.3**
TERO				S	**Sg**	**03 22 30.3**	**+0.3**
TERO	**Teramo**	**0.20**	**46**⇑	*i*Pg	**Pg**	**03 22 27.0**	**-0.3**
TERO				Sg	**Sg**	**03 22 30.3**	**+0.3**
	23μm,0.3s						
TERO	**Teramo**	**0.20**	**46**⇑	*i*Pg	**Pg**	**03 22 27.0**	**-0.3**
TERO				Sg	**Sg**	**03 22 30.3**	**+0.3**
	23μm,0.3s						
FAGN	**Fagnano**	**0.25**	**148**	P	**Pg**	**03 22 27.7**	**-0.5**
FAGN				S	**Sg**	**03 22 31.6**	**+0.1**
FAGN	**Fagnano**	**0.25**	**148**⇑	*e*Pg	**Pg**	**03 22 27.7**	**-0.5**
FAGN				Sg	**Sg**	**03 22 31.6**	**+0.1**
FAGN	**Fagnano**	**0.25**	**148**⇑	*e*Pg	**Pg**	**03 22 27.7**	**-0.5**
FAGN				Sg	**Sg**	**03 22 31.6**	**+0.1**
LNSS	**Leonessa**	**0.29**	**294**	P	**Pg**	**03 22 29.2**	**+0.2**
LNSS				S	**Sg**	**03 22 34.2**	**+1.3**
LNSS	**Leonessa**	**0.29**	**294**⇑	*i*Pg	**Pg**	**03 22 29.2**	**+0.2**
LNSS				Sg	**Sg**	**03 22 34.4**	**+1.5**
	15μm,0.4s						
LNSS	**Leonessa**	**0.29**	**294**⇑	*i*Pg	**Pg**	**03 22 29.2**	**+0.2**
LNSS				S	**Sg**	**03 22 34.2**	**+1.3**
FIAM	**Fiamignano**	**0.30**	**225**	P	**Pg**	**03 22 28.9**	**-0.2**
FIAM				S	**Sb**	**03 22 36.1**	**-0.5**
FIAM	**Fiamignano**	**0.30**	**225**⇑	*i*Pg	**Pg**	**03 22 28.9**	**-0.2**
FIAM				Sg	**Sg**	**03 22 34.0**	**+0.9**
	16μm,0.6s						
FIAM	**Fiamignano**	**0.30**	**225**⇑	*i*Pg	**Pg**	**03 22 28.9**	**-0.2**
FIAM				S	**Sb**	**03 22 36.1**	**-0.5**
VCEL	**Villa Celiera**	**0.34**	**105**	P	**Pg**	**03 22 29.4**	**-0.4**
VCEL				S	**Sg**	**03 22 35.6**	**+1.4**
VCEL	**Villa Celiera**	**0.34**	**105**	Pg	**Pg**	**03 22 29.2**	**-0.6**
VCEL				Sg	**Sg**	**03 22 34.3**	**+0.1**
VCEL	**Villa Celiera**	**0.34**	**105**	P	**Pg**	**03 22 29.4**	**-0.4**
VCEL				S	**Sg**	**03 22 34.9**	**+0.1**
VCEL				S	**Sg**	**03 22 35.6**	**+1.4**
NRCA	**Norcia**	**0.41**	**329**	P	**Pg**	**03 22 31.0**	**-0.2**
NRCA				S	**Sg**	**03 22 37.7**	**+1.1**
NRCA	**Norcia**	**0.41**	**329**⇑	*e*Pg	**Pg**	**03 22 31.0**	**-0.2**
NRCA				Sg	**Sg**	**03 22 37.7**	**+1.1**
	6μm,0.4s						
NRCA	**Norcia**	**0.41**	**329**⇑	*e*Pg	**Pg**	**03 22 31.0**	**-0.2**
PTQR	**Pietraquaria**	**0.46**	**180**	P	**Pg**	**03 22 31.1**	**-1.0**
PTQR	**Pietraquaria**	**0.46**	**180**⇑	*i*Pg	**Pg**	**03 22 31.1**	**-1.0**
PTQR	**Pietraquaria**	**0.46**	**180**⇑	*i*Pg	**Pg**	**03 22 31.1**	**-1.0**
OFFI	**Offida**	**0.50**	**25**	P	**Pb**	**03 22 33.3**	**-1.3**
OFFI				S	**Sb**	**03 22 42.6**	**+0.4**
OFFI	**Offida**	**0.50**	**25**	Pg	**Pb**	**03 22 33.3**	**-1.3**
	44μm,0.6s						
OFFI	**Offida**	**0.50**	**25**	Pg	**Pb**	**03 22 33.3**	**-1.3**
	44μm,0.6s						
OFFI				S	**Sb**	**03 22 42.6**	**+0.4**

TRTR	**Tortoreto Alta**	**0.50**	**49**	P		**Pb**	**03 22 33.5**	**-1.0**
TRTR	**Tortoreto Alta**	**0.50**	**49**⇑	*i*Pg		**Pb**	**03 22 33.5**	**-1.0**
	21μm,0.6s							
TRTR	**Tortoreto Alta**	**0.50**	**49**⇑	*i*Pg		**Pb**	**03 22 33.5**	**-1.0**
	21μm,0.6s							
MNS	**Montasola**	**0.54**	**260**	P		**Pg**	**03 22 33.1**	**-0.6**
MNS				S		**Sb**	**03 22 44.6**	**+1.1**
MNS	**Montasola**	**0.54**	**260**⇑	*i*Pg		**Pg**	**03 22 33.1**	**-0.6**
	4μm,0.7s							
MNS	**Montasola**	**0.54**	**260**⇑	*i*Pg		**Pg**	**03 22 33.1**	**-0.6**
	4μm,0.7s							
INTR	**Introdacqua**	**0.60**	**141**	P		**Pg**	**03 22 33.6**	**-1.2**
INTR	**Introdacqua**	**0.60**	**141**	Pg		**Pg**	**03 22 33.6**	**-1.2**
INTR				Sg		**Sg**	**03 22 42.9**	**+0.4**
	6μm,0.6s							
INTR	**Introdacqua**	**0.60**	**141**	Pg		**Pg**	**03 22 33.6**	**-1.2**
INTR				Sg		**Sg**	**03 22 42.9**	**+0.4**
	6μm,0.6s							
FDMO	**Fiordimonte**	**0.60**	**337**	P		**Pg**	**03 22 33.7**	**-1.1**
FDMO	**Fiordimonte**	**0.60**	**337**⇑	*i*Pg		**Pg**	**03 22 34.2**	**-0.6**
FDMO				Sg		**Sb**	**03 22 43.7**	**-1.5**
	3μm,0.4s							
FDMO	**Fiordimonte**	**0.60**	**337**	P		**Pg**	**03 22 33.7**	**-1.1**
FDMO	**Fiordimonte**	**0.60**	**337**⇑	*i*Pg		**Pg**	**03 22 34.2**	**-0.6**
CERT	**Cerreto**	**0.62**	**211**	P		**Pg**	**03 22 33.3**	**-1.8**
CERT				S		**Sg**	**03 22 44.9**	**+1.7**
CERT	**Cerreto**	**0.62**	**211**	Pg		**Pg**	**03 22 33.3**	**-1.8**
	14μm,0.7s							
CERT	**Cerreto**	**0.62**	**211**	Pg		**Pg**	**03 22 33.3**	**-1.8**
	14μm,0.7s							
CERT				S		**Sg**	**03 22 44.9**	**+1.7**
CESX	**Cesi**	**0.62**	**282**	P		**Pg**	**03 22 34.5**	**-0.7**
CESX	**Cesi**	**0.62**	**282**	Pg		**Pg**	**03 22 34.5**	**-0.7**
	3μm,0.4s							
CESX	**Cesi**	**0.62**	**282**	Pg		**Pg**	**03 22 34.5**	**-0.7**
	3μm,0.4s							
VVLD	**Villa Vallelon**	**0.63**	**165**	P		**Pg**	**03 22 34.0**	**-1.4**
VVLD				S		**Sg**	03 22 37.6	-6.0
VVLD	**Villa Vallelon**	**0.63**	**165**	Pg		**Pg**	**03 22 33.9**	**-1.4**
VVLD				Sg		**Sg**	**03 22 43.5**	**-0.1**
	7μm,0.6s							
VVLD	**Villa Vallelon**	**0.63**	**165**	P		**Pg**	**03 22 34.0**	**-1.4**
VVLD				Sg		**Sg**	**03 22 43.5**	**-0.1**
	7μm,0.6s							
CESI	**CESI - Serrava**	**0.64**	**325**	P		**Pg**	**03 22 35.0**	**-0.5**
CESI	**CESI - Serrava**	**0.64**	**325**⇑	*i*Pg		**Pg**	**03 22 35.0**	**-0.5**
CESI	**CESI - Serrava**	**0.64**	**325**⇑	*i*Pg		**Pg**	**03 22 35.0**	**-0.5**
MTCE	**Montecelio**	**0.67**	**227**	P		**Pg**	**03 22 34.7**	**-1.5**
MTCE	**Montecelio**	**0.67**	**227**	Pg		**Pg**	**03 22 35.0**	**-1.2**
	3μm,0.5s							
MTCE	**Montecelio**	**0.67**	**227**	P		**Pg**	**03 22 34.7**	**-1.5**
MTCE	**Montecelio**	**0.67**	**227**	Pg		**Pg**	**03 22 35.0**	**-1.2**
	3μm,0.5s							
GUAR	**Guarcino**	**0.69**	**186**	P		**Pg**	**03 22 33.6**	**-2.9**
GUAR	**Guarcino**	**0.69**	**186**	Pg		**Pg**	**03 22 34.9**	**-1.6**
	7μm,1.0s							
GUAR	**Guarcino**	**0.69**	**186**	P		**Pg**	**03 22 33.6**	**-2.9**
GUAR	**Guarcino**	**0.69**	**186**	Pg		**Pg**	**03 22 34.9**	**-1.6**
	7μm,1.0

comp=Z,48nm,0.2s
SKDS Skadanscina 3.10 8 *i* Pn **Pn** 03 23 11.9 -0.9
SKDS *i* Sn **Sn** 03 23 50.2 -0.1
comp=Z,48nm,0.2s
STON Ston 3.19 82 *e*Pn **Pn** 03 23 13.9 -0.2
STON Sn **Sn** 03 23 52.5 -0.1
STON Ston 3.19 82 *e*Pn **Pn** 03 23 13.9 -0.2
STON Sn **Sn** 03 23 52.4 -0.1
TRI Trieste 3.24 4 *e*Pn **Pn** 03 23 13.5 -1.3
TRI *e*Pg **Pg** 03 23 23.7 -1.6
TRI Trieste 3.24 4 *e*Pn **Pn** 03 23 13.5 -1.3
PGF Pioggiola 3.26 273 *e*Pn **Pn** 03 23 13.8 -1.3
PGF *e*Sn **Sn** 03 23 53.9 -0.5
comp=Z,33nm,0.8s
PGF Pioggiola 3.26 273 *e*Pn **Pn** 03 23 13.8 -1.3
PGF *e*Sn **Sn** 03 23 53.9 -0.5
comp=Z,16nm,0.8s
SC2M Scurtabo 3.41 306 P **Pn** 03 23 17.8 +0.6
BLY Banja Luka 3.56 49 *e*Pn **Pn** 03 23 19.9 +0.7
BLY Banja Luka 3.56 49 *e*Pn **Pn** 03 23 19.9 +0.7
VOY Vojsko 3.57 5 *e*Pn **Pn** 03 23 18.3 -1.1
VOY *e* 03 23 38.3
VOY *e*Sn **Sn** 03 24 02.4 +0.4
VOY Vojsko 3.57 5 *e*Pn **Pn** 03 23 18.3 -1.1
VOY *e*Sn **Sn** 03 24 02.4 +0.4
CADS Cadrg 3.75 4 *i* Pn **Pn** 03 23 21.0 -0.9
CADS *e*Sn **Sn** 03 24 06.5 0.0
CADS
comp=Z,53nm,0.3s
CADS Cadrg 3.75 4 *i* Pn **Pn** 03 23 21.0 -0.9
CADS *e*Sn **Sn** 03 24 06.5 0.0
comp=Z,53nm,0.3s
PDKS Podkum 3.76 17 *i* Pn **Pn** 03 23 21.7 -0.2
PDKS Podkum 3.76 17 *i* Pn **Pn** 03 23 21.7 -0.2
HCY Herceg Novi 3.77 89⇓ *i* Pn **Pn** 03 23 22.0 0.0
HCY *e*Sn **Sn** 03 24 08.3 +1.5
HCY Herceg Novi 3.77 89⇓ *i* Pn **Pn** 03 23 22.0 0.0
HCY *e*Sn **Sn** 03 24 08.3 +1.5
BRY Bratogost 3.81 82⇓ *i* Pn **Pn** 03 23 23.5 +0.7
BRY *e*Sn **Sn** 03 24 09.2 +1.2
BRY Bratogost 3.81 82⇓ *i* Pn **Pn** 03 23 23.5 +0.7
BRY *e*Sn **Sn** 03 24 09.2 +1.2
BUM Brajici-Budva 4.07 91⇑ *i* Pn **Pn** 03 23 26.9 +0.6
BUM *e*Sn **Sn** 03 24 15.3 +0.9
BUM Brajici-Budva 4.07 91⇑ *i* Pn **Pn** 03 23 26.9 +0.6
BUM *e*Sn **Sn** 03 24 15.3 +0.9
UPM Unac-Piva 4.11 78⇓ *i* Pn **Pn** 03 23 28.1 +1.2
UPM *e*Sn **Sn** 03 24 16.4 +0.9
UPM Unac-Piva 4.11 78⇓ *i* Pn **Pn** 03 23 28.1 +1.2
UPM *e*Sn **Sn** 03 24 16.4 +0.9
NKY Niksic 4.14 84⇑ *i* Pn **Pn** 03 23 27.4 +0.2
NKY *e*Sn **Sn** 03 24 17.0 +1.0
NKY Niksic 4.14 84⇑ *i* Pn **Pn** 03 23 27.4 +0.2
NKY *e*Sn **Sn** 03 24 17.0 +1.0
MYKA Terra Mystica 4.15 2⇑ *i* Pn **Pn** 03 23 27.2 -0.3
MYKA Terra Mystica 4.15 2⇑ *i* Pn **Pn** 03 23 27.1 -0.3
MYKA Terra Mystica 4.15 2⇑ *i* Pn **Pn** 03 23 27.1 -0.3
TIP Timpagrande 4.17 141 *e*Pn **Pn** 03 23 28.0 +0.4
TIP Timpagrande 4.17 141 *e*Pn **Pn** 03 23 28.0 +0.4
VSL Villasalto 4.26 227 *e*Pn **Pn** 03 23 28.7 -0.2
VSL Villasalto 4.26 227 *e*Pn **Pn** 03 23 28.7 -0.2
ABTA Abfaltersbach 4.31 352⇓ *i* Pn **Pn** 03 23 29.6 0.0
ABTA Abfaltersbach 4.31 352⇓ *i* Pn **Pn** 03 23 29.6 0.0
ABTA Abfaltersbach 4.31 352⇓ *i* Pn **Pn** 03 23 29.6 0.0
PDG Podgorica 4.33 89 *e*Pn **Pn** 03 23 30.4 +0.6
PDG *e*Sn **Sn** 03 24 17.4 -3.2
PDG Podgorica 4.33 89 *e*Pn **Pn** 03 23 30.4 +0.6
PDG *e*Sn **Sn** 03 24 21.8 +1.2
TTG Podgorica 4.33 89⇑ *i* Pn **Pn** 03 23 30.4 +0.6
TTG *e*Sn **Sn** 03 24 21.8 +1.1
ULC Ulcinj 4.37 95⇑ *i* Pn **Pn** 03 23 30.7 +0.4
ULC *e*Sn **Sn** 03 24 22.4 +0.8
ULC Ulcinj 4.37 95⇑ *i* Pn **Pn** 03 23 30.7 +0.4
ULC *e*Sn **Sn** 03 24 22.4 +0.8
PLE Pljevlja 4.48 77 *e*Pn **Pn** 03 23 33.5 +1.6
PLE *e*Sn **Sn** 03 24 24.9 +0.4
PLE Pljevlja 4.48 77 *e*Pn **Pn** 03 23 33.5 +1.6
PLE *e*Sn **Sn** 03 24 24.9 +0.4
SBF Sospel 4.58 290 *e*Pn **Pn** 03 23 32.2 -1.1
SBF *e*Sn **Sn** 03 24 22.1 -4.8
comp=Z,26nm,0.5s
SBF Sospel 4.58 290 *e*Pn **Pn** 03 23 32.2 -1.1
SBF *e*Sn **Sn** 03 24 22.1 -4.8
comp=Z,13nm,0.5s
CEL Celeste 4.63 155 *e*Pn **Pn** 03 23 34.1 +0.2
CEL Celeste 4.63 155 *e*Pn **Pn** 03 23 34.1 +0.2
BEY Berane 4.80 83⇓ *i* Pn **Pn** 03 23 37.7 +1.4
BEY *e*Sn **Sn** 03 24 33.4 +1.0
IVA Berane 4.80 83⇓ *i* Pn **Pn** 03 23 37.7 +1.3
IVA *e*Sn **Sn** 03 24 33.4 +0.9
PUK Puka 4.83 93 *e*PN **Pn** 03 23 37.9 +1.1
PUK Puka 4.83 93 *e*Pn **Pn** 03 23 37.9 +1.1
PVY Plav 4.84 86⇓ *i* Pn **Pn** 03 23 38.4 +1.4
PVY *e*Sn **Sn** 03 24 34.6 +1.1
PVY Plav 4.84 86⇓ *i* Pn **Pn** 03 23 38.4 +1.4
PVY *e*Sn **Sn** 03 24 34.6 +1.1
TUE Stuetta 4.93 325 *e*Pn **Pn** 03 23 38.6 +0.3
TUE *e*Sn **Sn** 03 24 33.9 -1.9
TUE Stuetta 4.93 325 *e*Pn **Pn** 03 23 38.6 +0.3
TUE *e*Sn **Sn** 03 24 33.9 -1.9
BCI Bajram Curri 4.93 89 *e*PN **Pn** 03 23 39.5 +1.4
BCI Bajram Curri 4.93 89 *e*Pn **Pn** 03 23 39.5 +1.4
WTTA Wattenberg 4.94 346⇑ *i* Pn **Pn** 03 23 39.4 +1.0
WTTA Wattenberg 4.94 346⇑ *i* Pn **Pn** 03 23 39.4 +1.0
WTTA Wattenberg 4.94 346⇑ *i* Pn **Pn** 03 23 39.4 +1.0
TIR Tirane 4.95 101 *e*PN **Pn** 03 23 38.6 +0.3
TIR Tirane 4.95 101 P **Pn** 03 23 38.9 +0.6
TIR Tirane 4.95 101 *e*Pn **Pn** 03 23 38.8 +0.4
TIR Tirane 4.95 101 *e*Pn **Pn** 03 23 38.7 +0.4
TIR *e*Sn **Sn** 03 24 32.5 -3.5
TIR Tirane 4.95 101 *e*Pn **Pn** 03 23 38.7 +0.4
TIR *e*Sn **Sn** 03 24 32.5 -3.5
DAVOX Davos/Dischmat 4.98 331 Pn **Pn** 03 23 40.7 +1.9
comp=Z,4.7nm,0.3s,baz=154,slow=18,SNR=21
DAVOX Sn **Sn** 03 24 38.9 +2.0
comp=Z,4.8nm,0.3s,baz=162,slow=21,SNR=4.8
IVAS Ivanjica 5.07 75 *e*Pn **Pn** 03 23 40.4 +0.4
IVAS Ivanjica 5.07 75 *e*Pn **Pn** 03 23 40.7 +0.7
IVAS *e*Sn **Sn** 03 24 34.2 -4.7
IVAS Ivanjica 5.07 75 *e*Pn **Pn** 03 23 40.4 +0.4
FRF La Foret Royal 5.07 285 *e*Pn **Pn** 03 23 38.3 -1.7
FRF *e*Sn **Sn** 03 24 33.3 -5.6
comp=Z,5.7nm,0.5s
FRF La Foret Royal 5.07 285 *e*Pn **Pn** 03 23 38.3 -1.7
FRF *e*Sn **Sn** 03 24 33.3 -5.6
comp=Z,2.8nm,0.5s
DIVS Divibare 5.07 69 P **Pn** 03 23 40.7 +0.6
DIVS Divibare 5.07 69 *e*Pn **Pn** 03 23 40.2 +0.1
DIVS *e*Sn **Sn** 03 24 34.0 -5.1
DIVS Divibare 5.07 69 *e*Pn **Pn** 03 23 40.2 +0.1
DIVS Divibare 5.07 69 P **Pn** 03 23 40.7 +0.6
LMR La Mourre 5.13 282 *e*Pn **Pn** 03 23 39.1 -1.7
LMR *e*Sn **Sn** 03 24 34.9 -5.6
comp=Z,1.7nm,0.3s
LMR La Mourre 5.13 282 *e*Pn **Pn** 03 23 39.1 -1.7
LMR *e*Sn **Sn** 03 24 34.9 -5.6
comp=Z,0.9nm,0.3s
PHP Peshkopia 5.30 96 *e*PN **Pn** 03 23 48.8 +5.7
PHP Peshkopia 5.30 96 P **Pn** 03 23 44.1 +1.0
PHP Peshkopia 5.30 96 P **Pn** 03 23 44.1 +1.0
MBDF Montbardon 5.31 297 *e*P **Pn** 03 23 44.3 +0.9
MBDF Montbardon 5.31 297 *e*P **Pn** 03 23 44.3 +0.9
TRUS Trudelj 5.39 69 *e*Pn **Pn** 03 23 44.4 0.0
TRUS Trudelj 5.39 69 *e*Pn **Pn** 03 23 44.4 0.0
MOA Molln 5.40 6⇓ *i* Pn **Pn** 03 23 44.0 -0.6
MOA Molln 5.40 6⇓ *i* Pn **Pn** 03 23 44.0 -0.6
MOA Molln 5.40 6⇓ *i* Pn **Pn** 03 23 44.0 -0.6
DAVA Damuels 5.42 334⇑ *i* Pn **Pn** 03 23 46.0 +1.1
DAVA Damuels 5.42 334⇑ *i* Pn **Pn** 03 23 46.0 +1.1
DAVA Damuels 5.42 334⇑ *i* Pn **Pn** 03 23 46.0 +1.1
BNI Bardonecchia 5.51 300 *e*Pn Pn 03 23 50.2 +4.2
GRUS Gruza 5.53 73 *e*Pn **Pn** 03 23 46.1 -0.1
GRUS *e*Sn **Sn** 03 24 44.8 -5.4
GRUS Gruza 5.53 73 *e*Pn **Pn** 03 23 46.1 -0.1
KEK Kerkira 5.57 118 P **Pn** 03 23 47.4 +0.6
KEK Kerkira 5.57 118 P **Pn** 03 23 47.4 +0.6
LPG La Plagne 5.67 304 *e*P **Pn** 03 23 50.2 +1.8
LPG *e*Sn **Sn** 03 24 49.2 -4.8
comp=Z,14nm,0.6s
LPL La Plagne 5.69 304 *e*P **Pn** 03 23 50.3 +1.7
LPL *e*Sn Sn 03 24 48.5 -6.0

comp=Z,13nm,0.5s
CONA Conrad Observa 5.72 17⇑ *i* Pn **Pn** 03 23 48.3 -0.6
CONA Conrad Observa 5.72 17⇑ *i* Pn **Pn** 03 23 48.3 -0.6
CONA Conrad Observa 5.72 17⇑ *i* Pn **Pn** 03 23 48.3 -0.6
SELS Selova 5.72 80 *e*Pn **Pn** 03 23 49.2 +0.3
SELS *e*Sn **Sn** 03 24 49.6 -5.3
SELS Selova 5.72 80 *e*Pn **Pn** 03 23 49.2 +0.3
SMRF Simiane la Rot 5.91 287 *e*P **Pn** 03 23 51.6 0.0
SMRF Simiane la Rot 5.91 287 *e*P **Pn** 03 23 51.6 0.0
SVIS Svilajnac 5.97 70 *e*Pn **Pn** 03 23 52.8 +0.6
SVIS *e*Sn **Sn** 03 24 54.7 -6.2
ORIF Oris-en-Rattie 5.97 297 *e*P **Pn** 03 23 54.8 +2.4
SKO Skopje 5.99 92 *e*Pn **Pn** 03 23 53.5 +1.0
SKO Skopje 5.99 92 *e*Pn **Pn** 03 23 53.4 +0.8
SKO Skopje 5.99 92 *e*Pn **Pn** 03 23 53.4 +0.8
IGT Igoumenitsa 6.01 117 P **Pn** 03 23 53.8 +0.9
IGT Igoumenitsa 6.01 117 P **Pn** 03 23 53.8 +0.9
NEST Nestorio 6.10 107 P **Pn** 03 23 55.9 +1.6
NEST Nestorio 6.10 107 P **Pn** 03 23 55.9 +1.6
FNA Florina 6.21 103 P **Pn** 03 23 56.3 +0.6
FNA Florina 6.21 103 P **Pn** 03 23 56.3 +0.6
BARS Barje 6.21 84 *e*Pn **Pn** 03 23 55.9 +0.2
BARS *e*Sn Sn 03 25 01.0 -6.1
BARS Barje 6.21 84 *e*Pn **Pn** 03 23 55.9 +0.2
JAN Janina 6.29 114 P **Pn** 03 23 57.9 +1.1
JAN Janina 6.29 114 P **Pn** 03 23 57.9 +1.1
GERES GERESS Array B 6.37 2 Pn **Pn** 03 23 57.0 -0.9
comp=Z,1.1nm,0.3s,baz=172,slow=12,SNR=21
GERES Sn **Sn** 03 25 08.5 -2.5
comp=Z,3.4nm,0.3s,baz=190,slow=28,SNR=9.3
BOLS Boljevac 6.40 75 *e*Pn **Pn** 03 23 57.7 -0.5
BOLS Boljevac 6.40 75 *e*Pn **Pn** 03 23 57.7 -0.5
LKD2 Lefkada island 6.64 121 P **Pn** 03 24 02.9 +1.4
LKD2 Lefkada island 6.64 121 P **Pn** 03 24 02.9 +1.4
KHC Kasperske Hory 6.65 1 *e*Pn **Pn** 03 24 00.9 -0.8
KHC *e*Sn **Sn** 03 25 13.8 -4.1
KHC Kasperske Hory 6.65 1 *e*PN **Pn** 03 24 01.0 -0.7
KHC *e*SN **Sn** 03 25 13.6 -4.3
KHC Kasperske Hory 6.65 1 Pn **Pn** 03 24 01.0 -0.7
KZN Kozani 6.66 106 P **Pn** 03 24 04.1 +2.3
KZN Kozani 6.66 106 P **Pn** 03 24 04.1 +2.3
CABF La Chapelle 6.66 311 *e*Pn **Pn** 03 24 01.8 -0.1
CABF La Chapelle 6.66 311 *e*Pn **Pn** 03 24 01.8 -0.1
SMOL Smolenice 6.66 24 *e*PN **Pn** 03 24 01.5 -0.3
SMOL *e* 03 25 18.6
SMOL Smolenice 6.66 24 *e*Pn **Pn** 03 24 01.5 -0.3
BZS Buzias 6.70 59 *e*Pn **Pn** 03 24 02.3 0.0
BZS Buzias 6.70 59 *e*Pn **Pn** 03 24 02.3 0.0
VIVF Saint-Julien-l 6.76 294 *e*Pn **Pn** 03 24 03.6 +0.4
VIVF Saint-Julien-l 6.76 294 *e*Pn **Pn** 03 24 03.6 +0.4
ZAPS Zavoj 6.83 80 *e*Pn **Pn** 03 24 05.0 +0.9
ZAPS *e*Sn Sn 03 25 15.8 -6.4
ZAPS Zavoj 6.83 80 *e*Pn **Pn** 03 24 05.0 +0.9
BFO Black Forest 6.85 330 *e*Pn **Pn** 03 24 05.2 +0.8
BFO *e*Sn **Sn** 03 25 21.4 -1.4
BFO Black Forest 6.85 330 *e*Pn **Pn** 03 24 05.2 +0.8
BFO *e*Sn **Sn** 03 25 21.4 -1.4
KRUC Moravsky 6.91 17 *e*Pn **Pn** 03 24 04.0 -1.1
STU Stuttgart 6.95 336 *e*Pn **Pn** 03 24 06.0 +0.3
STU Stuttgart 6.95 336 *e*Pn **Pn** 03 24 06.0 +0.3
TREC Trest 6.97 11 *e*PN **Pn** 03 24 05.1 -0.9
TREC Trest 6.97 11 Pn **Pn** 03 24 05.1 -0.9
VLS Valsamata 6.97 126 P **Pn** 03 24 06.8 +0.7
VLS Valsamata 6.97 126 P **Pn** 03 24 06.8 +0.7
SSB Saint Sauveur 6.99 297 *e*Pn **Pn** 03 24 05.3 -1.0
SSB Saint Sauveur 6.99 297 *e*Pn **Pn** 03 24 05.3 -1.0
HINF Hinteralfeld 7.06 321 *e*Pn **Pn** 03 24 06.2 -1.1
HINF *e*Sn **Sn** 03 25 22.6 -5.4
comp=Z,28nm,0.5s
HINF Hinteralfeld 7.06 321 *e*Pn **Pn** 03 24 06.2 -1.1
VYHS Vyhne 7.12 31 *e*PN **Pn** 03 24 08.1 0.0
VYHS *e*SN **Sn** 03 25 24.9 -4.5
VYHS Vyhne 7.12 31 *e*Pn **Pn** 03 24 08.1 0.0
THL Klokotos Trika 7.13 111 P **Pn** 03 24 09.7 +1.4
THL Klokotos Trika 7.13 111 P **Pn** 03 24 09.7 +1.4
KFL Anninata 7.13 125 P **Pn** 03 24 09.4 +1.1
KFL Anninata 7.13 125 P **Pn** 03 24 09.4 +1.1
LASF Ste Croix 7.15 286 *e*Pn **Pn** 03 24 07.1 -1.4
LASF Ste Croix 7.15 286 *e*Pn **Pn** 03 24 07.1 -1.4
ECH Echery 7.22 325 *e*Pn **Pn** 03 24 09.2 -0.4
ECH Echery 7.22 325 *e*Pn **Pn** 03 24 09.2 -0.4
VTS Vitosha 7.24 86 *e*Pn **Pn** 03 24 10.5 +0.6
VTS *e*Sn Sn 03 25 25.9 -6.7
VTS Vitosha 7.24 86 *e*Pn **Pn** 03 24 10.5 +0.6
EVR Evrytania 7.31 116 P **Pn** 03 24 12.9 +2.1
EVR Evrytania 7.31 116 P **Pn** 03 24 12.9 +2.1
CDF Champ du Feu 7.33 326 *e*Pn **Pn** 03 24 10.0 -1.0
CDF *e*Sn **Sn** 03 25 29.7 -4.9
comp=Z,14nm,0.4s
CDF Champ du Feu 7.33 326 *e*Pn **Pn** 03 24 10.0 -1.0
HAU Haudompre 7.43 320 *e*Pn **Pn** 03 24 11.7 -0.7
HAU *e*Sn Sn 03 25 30.2 -6.9
comp=Z,21nm,0.4s
HAU Haudompre 7.43 320 *e*Pn **Pn** 03 24 11.7 -0.7
KEST Kesra 7.44 206 *e*Pn Pn 03 24 16.2 +3.6
KEST Kesra 7.44 206 Pn Pn 03 24 16.0 +3.4
comp=Z,0.4nm,0.3s,baz=332,slow=4.9,SNR=12
MAKR Makrakomi, Fth 7.48 115 P **Pn** 03 24 14.5 +1.5
MAKR Makrakomi, Fth 7.48 115 P **Pn** 03 24 14.5 +1.5
PRU Pruhonice 7.55 6 *e*PN **Pn** 03 24 12.7 -1.3
PRU *e*SN **Sn** 03 25 34.5 -5.4
PRU Pruhonice 7.55 6 Pn **Pn** 03 24 12.7 -1.3
RLS Riolos of Patr 7.58 123 P **Pn** 03 24 16.7 +2.3
RLS Riolos of Patr 7.58 123 P **Pn** 03 24 16.7 +2.3
AGG Agios Georgios 7.61 114 P **Pn** 03 24 16.6 +1.8
AGG Agios Georgios 7.61 114 P **Pn** 03 24 16.6 +1.8
EFP Efpalio 7.64 119 P **Pn** 03 24 17.5 +2.2
EFP Efpalio 7.64 119 P **Pn** 03 24 17.5 +2.2
SRS Serrai 7.73 97 P **Pn** 03 24 16.4 -0.1
SRS Serrai 7.73 97 P **Pn** 03 24 16.4 -0.1
NKC Novy Kostel 7.78 355 *e*SN **Sn** 03 25 41.5 -4.2
TRIZ Trizonia 7.79 119 P **Pn** 03 24 19.3 +2.1
TRIZ Trizonia 7.79 119 P **Pn** 03 24 19.3 +2.1
MORC Moravsky Berou 7.84 20 *e*Pn **Pn** 03 24 20.1 +2.1
NVR Nevrokopi 7.88 95 P **Pn** 03 24 19.1 +0.5
NVR Nevrokopi 7.88 95 P **Pn** 03 24 19.1 +0.5
SMF Signal de Mont 8.00 305 *e*Pn **Pn** 03 24 19.4 -0.7
SMF Signal de Mont 8.00 305 *e*Pn **Pn** 03 24 19.4 -0.7
XOR Xorichti 8.04 110 P **Pn** 03 24 20.6 -0.1
XOR Xorichti 8.04 110 P **Pn** 03 24 20.6 -0.1
PAGF Fort de Pagny 8.12 321 *e*Pn **Pn** 03 24 21.1 -0.7
PAGF Fort de Pagny 8.12 321 *e*Pn **Pn** 03 24 21.1 -0.7
GUR Goura 8.21 121 P **Pn** 03 24 24.8 +1.7
GUR Goura 8.21 121 P **Pn** 03 24 24.8 +1.7
SFTF Sexfontaines 8.21 317 *e*Pn **Pn** 03 24 22.1 -1.0
SFTF Sexfontaines 8.21 317 *e*Pn **Pn** 03 24 22.1 -1.0
MTLF Montolieu 8.26 280 *e*Pn **Pn** 03 24 21.8 -1.9
MTLF Montolieu 8.26 280 *e*Pn **Pn** 03 24 21.8 -1.9
LOR Lormes 8.29 308 *e*Pn **Pn** 03 24 23.0 -1.2
LOR *e*Sn Sn 03 25 52.4 -5.9
comp=Z,4.0nm,0.4s
LOR Lormes 8.29 308 *e*Pn **Pn** 03 24 23.0 -1.2
SSF Saint Saulge 8.40 306 *e*Pn **Pn** 03 24 24.2 -1.4
SSF Saint Saulge 8.40 306 *e*Pn **Pn** 03 24 24.2 -1.4
BRG Berggiesshubel 8.40 2 PN Pn 03 24 32.6 +6.9
BRG *e* 03 25 03.3
BRG *e* 03 25 54.7
BRG *e* 03 26 10.2
BRG *e* 03 27 05.4
PYL PYLOS 8.51 128 P **Pn** 03 24 27.3 +0.1
PYL PYLOS 8.51 128 P **Pn** 03 24 27.3 +0.1
CRVS Cervenica-Dubn 8.54 39 *e*SN Sn 03 26 00.1 -4.2
CAF Calviac 8.57 290 *e*P **Pn** 03 24 27.9 -0.1
CAF Calviac 8.57 290 *e*P **Pn** 03 24 27.9 -0.1
BGF Bois d'Agland 8.57 302 *e*Pn **Pn** 03 24 27.2 -0.8
BGF Bois d'Agland 8.57 302 *e*Pn **Pn** 03 24 27.2 -0.8
CLL Collm 8.83 358 *e*Sn Sn 03 26 01.0 -10
CLL *e*Sg Sg 03 27 16.0 +9.3
RJF Les Rejaudoux 9.04 292 *e*P **Pn** 03 24 35.3 +0.9
RJF Les Rejaudoux 9.04 292 *e*P **Pn** 03 24 35.3 +0.9
MLR Muntele Rosu 9.53 67 Pn **Pn** 03 24 43.6 +2.4
comp=Z,0.1nm,0.3s,baz=307,slow=10,SNR=4.9
EPF Esparros 9.63 278 *e*Pn **Pn** 03 24 39.8 -2.7
EPF Esparros 9.63 278 *e*Pn **Pn** 03 24 39.8 -2.7
GIVF Givet 9.66 325 *e*Pn **Pn** 03 24 43.0 +0.2
GIVF *e*Sn Sn 03 26 24.0 -7.7
comp=Z,2.8nm,0.3s
GIVF Givet 9.66 325 *e*Pn **Pn** 03 24 43.0 +0.2
BAIF Baives 9.89 323 *e*Pn **Pn** 03 24 45.2 -0.9
BAIF *e*Sn Sn 03 26 30.2 -7.2

comp=Z,3.7nm,0.5s
BAIF Baives 9.89 323 *e*Pn **Pn** 03 24 45.2 -0.9
BRTR Keskin Array B 15.50 93 Pn **P** 03 26 08.2 +1.0
comp=Z,0.0nm,0.3s,baz=281,slow=6.9,SNR=3.9
NOA NORSAR Array B 18.63 357 P **P** 03 26 40.7 -0.9
comp=Z,0.1nm,0.3s,baz=173,slow=12,SNR=4.2
NOA LR LR 03 34 55.9
comp=Z,27nm,20.1s,baz=175,slow=41
MALT Malatya 19.48 94 *e*P **P** 03 26 51.2 0.0
comp=Z,3.3nm,1.0s
MALT Malatya 19.48 94 *e*P **P** 03 26 51.2 0.0
FINES FINESS Array B 20.46 18 P **P** 03 27 02.0 +0.5
comp=Z,4.0nm,0.7s,baz=202,slow=8.9,SNR=13
TAM Tamanrasset 20.71 201 *e*P **P** 03 27 05.0 +0.4
comp=Z,2.2nm,0.9s
TAM Tamanrasset 20.71 201 *e*P **P** 03 27 05.0 +0.4
comp=Z,2.2nm,0.9s
KAF Kangasniemi 21.11 17 *e*p **P** 03 27 07.0 -1.5
comp=Z,2.3nm,0.7s
KAF Kangasniemi 21.11 17 *e*P **P** 03 27 07.0 -1.5
comp=Z,2.3nm,0.7s
KBZ Khabaz 21.52 77 P **P** 03 27 14.9 +1.9
comp=Z,6.0nm,0.8s,baz=283,slow=6.7,SNR=11
JOF Joensuu 23.01 21 *e*p **P** 03 27 26.8 -2.0
comp=Z,0.9nm,0.5s
JOF Joensuu 23.01 21 *e*P **P** 03 27 26.8 -2.0
comp=Z,0.9nm,0.5s
GNI Garni 23.59 85 *e*P **P** 03 27 35.5 +0.5
comp=Z,12nm,1.1s
GNI Garni 23.59 85 *e*P **P** 03 27 35.5 +0.5
comp=Z,12nm,1.1s
TORD Torodi Ar. Bea 30.94 203 P **P** 03 28 41.8 +0.5
comp=Z,1.0nm,0.7s,baz=17,slow=8.8,SNR=16
KKAR Karatay Array 41.20 69 *e*P **P** 03 30 08.9 0.0
comp=Z,2.6nm,0.8s
KKAR Karatay Array 41.20 69 *e*P **P** 03 30 08.9 0.0
comp=Z,2.6nm,0.8s
EKS2 Erkin-Say 43.61 68 *e*P **P** 03 30 29.5 +0.9
comp=Z,3.1nm,0.8s
EKS2 Erkin-Say 43.61 68 *e*P **P** 03 30 29.5 +0.9
comp=Z,3.1nm,0.8s
AAK Ala-Archa 44.11 68 *e*P **P** 03 30 33.4 +0.7
comp=Z,1.6nm,0.8s
AAK Ala-Archa 44.11 68 *e*P **P** 03 30 33.4 +0.7
comp=Z,1.6nm,0.8s
KURK Kurchatov 44.23 56 *e*P **P** 03 30 33.3 0.0
comp=Z,1.7nm,1.0s
KURK Kurchatov 44.23 56 *e*P **P** 03 30 33.3 0.0
comp=Z,1.6nm,1.0s
ZALV Zalesovo Beam 46.99 50 P **P** 03 30 56.4 +1.3
comp=Z,0.5nm,0.5s,baz=280,slow=8.6,SNR=3.8
MK31 Makanchi Array 47.78 60 *e*P **P** 03 31 00.9 -0.5
MK31 Makanchi Array 47.78 60 *e*P **P** 03 31 00.9 -0.5
MKAR Makanchi Array 47.78 60 P **P** 03 31 01.4 0.0
comp=Z,0.4nm,0.5s,baz=287,slow=6.5,SNR=7.5
WMQ Urumqi 52.46 61 *e*P **P** 03 31 39.9 +2.9
WMQ pmax pmax
comp=Z,15nm,1.0s
SONM Songino Array 61.89 50 P **P** 03 32 44.4 +0.7
comp=Z,0.8nm,0.8s,baz=290,slow=7.3,SNR=6.8
YKA Yellowknife Ar 67.39 337 P **P** 03 33 19.1 0.0
comp=Z,0.2nm,0.5s,baz=43,slow=5.7,SNR=4.9
CN2 Changchun 74.75 44 *e*P **P** 03 34 04.5 +0.4
GYA Guiyang 74.90 68 *e*P **P** 03 34 05.2 -0.3
GYA pmax pmax
comp=Z,10.0nm,0.8s
BMO Blue Mountains 82.54 327 *e*P **P** 03 34 46.7 -0.5
comp=Z,1.3nm,0.9s
BMO Blue Mountains 82.54 327 *e*P **P** 03 34 46.7 -0.5
comp=Z,1.3nm,0.9s

IDC 10 03:25:09.3±12.0, 32°.01S×59°.28E, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.3/23, mbtmpg3.6/2, Error ellipse: s-maj=836.3km s-min=54.4km az=31.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**65.35**	**103**	P	P	03 35 53.9	+0.1
	0.3nm,0.7s,baz=242,slow=5.6,SNR=6.3						
WRA	**Warramunga Arr**	**67.36**	**100**	P	P	03 36 06.7	0.0
	0.3nm,0.3s,baz=245,slow=5.7,SNR=7.1						
YKA	**Yellowknife Ar**	**149.25**	**354**	PKPbc	PKPbc	03 44 58.6	-0.5
	0.1nm,0.4s,baz=1.3,slow=2.5,SNR=5.3						

IDC 10 03:29:42.8±5.4, 20°.37S×177°.51W, h576km, 60km, mb3.2/7, mb1 3.3/9, mb1mx3.1/21, mbtmpg3.2/9, Error ellipse: s-maj=36.5km s-min=20.9km az=62.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.06**	**261**	P	P	03 32 53.7	+1.3
	0.7nm,0.3s,baz=112,slow=19,SNR=5.5						
URZ	**Urewera**	**18.43**	**193**	P	P	03 33 24.0	+0.8
	0.5nm,0.3s,baz=90,slow=20,SNR=4.4						
CTA	**Charters Tower**	**33.96**	**264**	P	P	03 35 38.9	-0.6
	7.7nm,1.1s,baz=81,slow=11,SNR=5.3						
STKA	**Stephens Creek**	**38.26**	**244**	P	P	03 36 14.5	-0.2
	1.8nm,0.9s,baz=83,slow=12,SNR=4.3						
ASAR	**Alice Springs**	**44.99**	**257**	P	P	03 37 07.7	-0.2
	3.1nm,0.6s,baz=91,slow=7.7,SNR=65						
ASAR				PcP	PcP	03 38 38.6	+2.0
	0.5nm,0.7s,baz=93,slow=3.9,SNR=4.3						
WRA	**Warramunga Arr**	**45.07**	**262**	P	P	03 37 08.2	-0.3
	3.1nm,0.3s,baz=96,slow=7.6,SNR=47						
QSPA	**South Pole Qui**	**69.70**	**180**	P	P	03 39 54.5	-0.8
	0.9nm,0.6s,baz=347,slow=2.2,SNR=11						
MJAR	**Matsushiro Arr**	**70.37**	**323**	P	P	03 39 58.8	-0.7
	1.2nm,0.5s,baz=159,slow=6.6,SNR=5.7						
TXAR	**Lajitas Array**	**86.60**	**57**	P	P	03 41 30.4	+4.4
	0.3nm,0.9s,baz=215,slow=6.1,SNR=4.4						
ILAR	**Eielson Array**	**88.08**	**13**	P	P	03 41 32.5	+0.5
	0.3nm,0.6s,baz=222,slow=6.5,SNR=4.6						

*CSEM **10** 03:38:11.3, 42°.41N×13°.31E, h14km, After ROM*
ROM 10 03:38:11.3±0.1, 42°.41N×13°.31E, h14km±2km, MI1.4/5, Error ellipse: s-maj=1.3km s-min=0.9km az=116.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.09**	**130**	Pg	Pg	03 38 14.8	+0.5
AQU				Sg	Sg	03 38 16.8	+0.4
AQU	**L'Aquila**	**0.09**	**130**	Pg	Pg	03 38 14.8	+0.5
AQU				Sg	Sg	03 38 16.8	+0.4
CAMP	**Campotosto**	**0.14**	**30**	Pg	Pg	03 38 15.5	+0.3
CAMP				Sg	Sg	03 38 18.2	+0.4
	75nm,0.3s						
CAMP	**Campotosto**	**0.14**	**30**	Pg	Pg	03 38 15.5	+0.3
CAMP				Sg	Sg	03 38 18.2	+0.4
	75nm,0.3s						
FIAM	**Fiamignano**	**0.20**	**225**	Pg	Pg	03 38 16.3	+0.3
FIAM				Sg	Sg	03 38 19.8	+0.6
	46nm,0.6s						
FIAM	**Fiamignano**	**0.20**	**225**	Pg	Pg	03 38 16.

ASSB	**Assisi San Ben**	**0.79**	**323**	Pg	Pg	03 38 26.6	-0.2

*IDC **10** 03:39:55.9±2.0, 17.°32S×179.°10W, h498km, 30km, mb4.1/4, mb1 4.2/6, mb1mx3.5/21, mbtmp4.0/6, Error ellipse: s-maj=94.1km s-min=16.2km az=148.0*
*ISCJB **10** 03:39:56.9±0.7, 17.°85S±0.°1×178.°7W±0.°1, h558km±10km, mb4.5/19, Error ellipse: s-maj=22.4km s-min=12.4km az=150.8*
*AUST **10** 03:39:57.2±0.0, 17.°69S×178.°56W, h552km, Error ellipse: s-maj=2.3km s-min=1.4km az=347.0*
*BJI **10** 03:39:59.9, 18.°41S×179.°64W, h555km, mB4.8/5, mb4.4/8*
*NEIC **10** 03:40:00.3±1.1, 17.°70S×179.°07W, h556km±8km, mb4.4/10, Error ellipse: s-maj=33.2km s-min=11.5km az=143.0*

ISC 10 03:39:59.8±0.7, 18.°2S±0.°1×178.°65W±0.°09, h579km, n68, σ1°60/74, mb4.5/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.17**	**278**	*e*P	P	03 41 14.8	-3.5
AFI	**Afiamalu**	**7.86**	**58**	P	P	03 41 50.5	-6.7
	5.1nm,0.7s						
AFI	**Afiamalu**	**7.86**	**58**	P	P	03 41 50.5	-6.7
	12nm,0.3s,baz=359,slow=17,SNR=11						
NIUE	**Niue**	**8.32**	**97**	P	**P**	**03 41 59.3**	**-2.2**
	baz=8.3,SNR=5.3						
DZM	**Mont Dzumac**	**14.52**	**252**	P	**P**	**03 43 01.8**	**-2.4**
DZM	**Mont Dzumac**	**14.52**	**252**	P	**P**	**03 43 01.8**	**-2.4**
	0.7nm,0.3s,baz=90,slow=20,SNR=7.6						
LHI	**Lord Howe Isla**	**24.13**	**232**	P	P	03 44 22.2	-9.0
	baz=24,SNR=3.5						
EIDS	**Eidsvold**	**28.96**	**250**	*e*P	**P**	**03 45 13.8**	**+0.1**
	14nm,0.6s						
EIDS	**Eidsvold**	**28.96**	**250**	P	**P**	**03 45 13.8**	**+0.1**
	baz=29,SNR=7.7						
ARMA	**Armidale**	**29.60**	**240**	*e*P	**P**	**03 45 20.9**	**+1.5**
	21nm,0.6s						
ARMA	**Armidale**	**29.60**	**240**	P	**P**	**03 45 20.8**	**+1.4**
	baz=30,SNR=37						
MGCD	**Mangrove Creek**	**30.95**	**235**	P	**P**	**03 45 32.9**	**+2.1**
	baz=31,SNR=14						
RMQ	**Roma**	**31.19**	**249**	P	**P**	**03 45 34.0**	**+1.1**
	baz=31,SNR=12						
CNB	**Canberra Magne**	**33.08**	**233**	P	**P**	**03 45 50.6**	**+1.8**
	baz=33,SNR=36						
CTAO	**Charters Tower**	**33.17**	**261**	*e*P	**P**	**03 45 49.6**	**-0.2**
	22nm,0.9s						
PMG	**Port Moresby**	**34.28**	**280**	*e*P	**P**	**03 45 57.0**	**-2.2**
	12nm,0.9s						
CMSA	**Cobar Meteorol**	**34.81**	**241**	P	**P**	**03 46 04.4**	**+1.0**
	baz=35,SNR=49						
QLP	**Quilpie**	**35.22**	**250**	P	**P**	**03 46 07.0**	**+0.2**
	baz=36,SNR=67						
TOO	**Toolangi**	**36.82**	**231**	P	**P**	**03 46 21.6**	**+1.8**
	baz=37,SNR=28						
COEN	**Coen**	**36.88**	**271**	*e*P	**P**	**03 46 20.1**	**-0.5**
	159nm,0.8s						
COEN	**Coen**	**36.88**	**271**	P	**P**	**03 46 20.3**	**-0.3**
	baz=37,SNR=8.5						
STKA	**Stephens Creek**	**38.30**	**241**	*e*P	**P**	**03 46 33.2**	**+1.3**
	5.1nm,0.9s						
STKA	**Stephens Creek**	**38.30**	**241**	P	**P**	**03 46 33.3**	**+1.3**
	17nm,0.5s,baz=91,slow=9.3,SNR=96						
STKA	**Stephens Creek**	**38.30**	**241**	P	**P**	**03 46 33.2**	**+1.3**
	baz=39,SNR=45						
ARPS	**Mount Arapiles**	**39.30**	**234**	P	**P**	**03 46 41.3**	**+1.4**
	baz=40,SNR=5.4						
BBOO	**Buckleboo**	**43.07**	**241**	*e*P	**P**	**03 47 10.6**	**+0.8**
BBOO	**Buckleboo**	**43.07**	**241**	P	**P**	**03 47 10.8**	**+1.0**
	baz=43,SNR=71						
WRAB	**Tennant Creek**	**44.35**	**260**	*e*P	**P**	**03 47 18.7**	**-1.1**
	7.4nm,0.7s						
WRA	**Warramunga Arr**	**44.36**	**260**	P	**P**	**03 47 19.0**	**-0.9**
WRA	**Warramunga Arr**	**44.36**	**260**	P	**P**	**03 47 19.0**	**-0.9**
	6.3nm,0.6s,baz=94,slow=7.1,SNR=63						
AS31	**Alice Springs**	**44.49**	**255**	*e*P	**P**	**03 47 21.0**	**+0.1**
ASAR	**Alice Springs**	**44.49**	**255**	P	**P**	**03 47 21.2**	**+0.2**
ASAR	**Alice Springs**	**44.49**	**255**	P	**P**	**03 47 21.2**	**+0.2**
	69nm,0.7s,baz=88,slow=8.2,SNR=1016						
KDU	**Kakadu**	**47.32**	**269**	P	**P**	**03 47 42.2**	**-0.2**
	baz=47,SNR=6.7						
TLE	**Tual**	**49.02**	**278**	S	**S**	**03 54 15.6**	**-2.3**
	baz=49,SNR=4.4						
FORT	**Forrest**	**49.68**	**245**	*e*P	**P**	**03 48 00.1**	**+0.4**
	43nm,0.6s						
FORT	**Forrest**	**49.68**	**245**	P	**P**	**03 48 00.1**	**+0.4**
	baz=50,SNR=39						
FITZ	**Fitzroy Crossi**	**52.76**	**261**	*e*P	**P**	**03 48 22.3**	**+0.3**
	11nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.76**	**261**	P	**P**	**03 48 22.6**	**+0.5**
	baz=53,SNR=5.7						
MBWA	**Marble Bar**	**57.78**	**256**	*e*P	**P**	**03 48 56.9**	**0.0**
	6.8nm,0.6s						
MEEK	**Meekatharra**	**58.12**	**250**	P	**P**	**03 48 59.4**	**+0.2**
	baz=58,SNR=15						
KLBR	**Kellerberrin**	**58.50**	**244**	P	**P**	**03 49 02.1**	**+0.5**
	baz=59,SNR=16						
BLDU	**Ballidu**	**59.45**	**245**	P	**P**	**03 49 08.6**	**+0.6**
	baz=60,SNR=9.1						
MORW	**Morawa**	**60.16**	**246**	P	**P**	**03 49 13.1**	**+0.4**
	baz=60,SNR=5.3						
NJ2	**Nanjing**	**77.94**	**310**	*e*P	**P**	**03 50 57.1**	**-1.9**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
MDJ	**Mudanjiang**	**78.28**	**325**	P	**P**	**03 51 01.5**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,11nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,100nm,5.4s						
QIZ	**Qiongzhong**	**79.36**	**294**	P	**P**	**03 51 07.2**	**+0.4**
QIZ				pP	pP	03 53 02.5	-6.3
QIZ				S	**S**	**04 00 20.9**	**-0.2**
QIZ				sS	sS	04 03 48.6	-10
QIZ				pmax	pmax		
	comp=Z,25nm,2.5s						
CN2	**Changchun**	**80.10**	**323**	*e*P	P	03 51 13.1	+2.9
GSI	**Gunungsitoli**	**84.49**	**273**	P	**P**	**03 51 34.0**	**+0.9**
	baz=85,SNR=3.8						
GYA	**Guiyang**	**84.98**	**300**	*e*P	**P**	**03 51 35.2**	**-0.1**
GYA				pP	**pP**	**03 53 36.4**	**-3.1**
GYA				sP	**sP**	**03 54 32.8**	**-5.0**
GYA				PP	**PP**	**03 55 03.7**	**+0.4**
GYA				SKS	**SKSac**	**04 01 04.2**	**-1.1**
GYA				S	**S**	**04 01 15.0**	**-2.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ILAR	**Eielson Array**	**86.21**	**13**	P	**P**	**03 51 39.4**	**-0.7**
ILAR	**Eielson Array**	**86.21**	**13**	P	**P**	**03 51 39.4**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=219,slow=5.4,SNR=8.1						
HHC	**Hu-ho-hao-te**	**87.31**	**315**	*e*P	P	03 51 50.1	+4.2
HHC				pP	pP	03 53 47.7	-3.4
HHC				sP	sP	03 54 42.2	-7.0
HHC				PP	**PP**	**03 55 24.2**	**+2.7**
HHC				S	**ScS**	**04 01 41.8**	**-1.0**
HHC				sS	sS	04 05 11.5	-10
HHC				SS	**SS**	**04 07 43.3**	**+2.1**
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,4.3s						
KMI	**Kunming**	**87.75**	**297**	P	P	03 51 44.3	-4.3
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSH	**Kashi**	**113.06**	**306**	*e*PKP	**PKiKP**	**03 57 34.2**	**+1.9**
KSH				PP	PP	03 58 38.2	+5.1
KSH				sPKP		04 00 34.0	
KSH				PKS	**PKSdf**	**04 01 11.1**	**+2.1**
KSH				SKS	**SKSdf**	**04 03 56.0**	**+5.9**
KSH				SKKS	**SKKSac**	**04 04 34.9**	**+0.3**
KSH				SS	**SS**	**04 13 38.0**	**+3.4**
KSH				AMB	AMB		
	comp=Z,170nm,5.8s						
BUR08	**Bucovina Ar. S**	**144.74**	**332**	*e*PKPdf	**PKPab**	**03 58 33.7**	**+1.0**
BR131	**Keskin Array S**	**144.81**	**314**	*e*PKPdf	**PKPab**	**03 58 33.4**	**+0.1**
BRTR	**Keskin Array B**	**144.81**	**314**	PKP	**PKPab**	**03 58 33.4**	**+0.1**
BRTR	**Keskin Array B**	**144.81**	**314**	PKP	**PKPab**	**03 58 33.4**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=100,slow=1.4,SNR=4.4						
ASF	**Jabal al Asfar**	**145.12**	**300**	PKP	**PKPab**	**03 58 35.1**	**+0.4**
ASF	**Jabal al Asfar**	**145.12**	**300**	PKP	**PKPab**	**03 58 35.1**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=119,slow=1.8,SNR=3.6						
CLL	**Collm**	**145.68**	**347**	*e*PKPbc	**PKPab**	**03 58 36.0**	**-0.1**
MMAI	**Mount Meron Ar**	**146.10**	**302**	PKPbc	**PKPab**	**03 58 38.0**	**-0.5**
MMAI	**Mount Meron Ar**	**146.10**	**302**	PKPbc	**PKPab**	**03 58 38.0**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=77,slow=4.4,SNR=4.3						
GERES	**GERESS Array B**	**147.82**	**345**	PKPbc	**PKPbc**	**03 58 41.6**	**+1.3**
GERES	**GERESS Array B**	**147.82**	**345**	PKPbc	**PKPbc**	**03 58 41.6**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=27,slow=3.3,SNR=9.2						
DAVOX	**Davos/Dischmat**	**150.63**	**348**	PKPbc	**PKPbc**	**03 58 49.0**	**+1.7**
DAVOX	**Davos/Dischmat**	**150.63**	**348**	PKPbc	**PKPbc**	**03 58 49.0**	**+1.7**
	comp=Z,1.4nm,0.5s,baz=289,slow=3.8,SNR=3.6						

*IDC **10** 03:43:00.4±9.2, 50.°59N×153.°16E, h52km±61km, mb3.1/4, mb1 3.5/5, mb1mx3.1/26, mbtmp3.1/5, ML3.0/1, Error ellipse: s-maj=152.7km s-min=60.7km az=133.0*
*KRSC **10** 03:43:13.6±0.4, 50.°59N×157.°00E, h10km±10km, ML3.8*

ISC 10 03:43:13.8±2.2, 50.°6N±0.°1×156.°96E±0.°08, h14km±13km, n19, σ2°14/25, mb3.3/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.54**	**280**	*i* P	**Pg**	**03 43 24.2**	**-0.2**
SKR				*e*S	**Sb**	**03 43 32.9**	**+0.1**
MIPR	**Malaya Ipel'ka**	**1.69**	**356**	*e*P	**Pn**	**03 43 43.0**	**0.0**
MIPR				S	**Sn**	**03 44 04.0**	**-0.5**
MTVR	**Mutnovka**	**2.04**	**22**	*e*P	**Pb**	**03 43 49.2**	**-1.6**
MTVR				*e*S	**Sn**	**03 44 14.4**	**+1.1**
GRL	**Gorelyy**	**2.08**	**19**	P	**Pb**	**03 43 49.9**	**-1.6**
GRL				S	**Sb**	**03 44 17.2**	**-0.1**
RUS	**Russkaya**	**2.08**	**27**	P	**Pb**	**03 43 49.6**	**-1.8**
RUS				*e*S	**Sn**	**03 44 15.0**	**+0.9**
APC	**Apacha**	**2.34**	**3**	P	**Pb**	**03 43 53.4**	**-2.4**
APC				S	**Sb**	**03 44 22.4**	**-2.1**
PETK	**Petropavlovsk-**	**2.56**	**10**	P	**Pn**	**03 43 56.1**	**+1.2**
	1.1nm,0.3s,baz=204,slow=14,SNR=15						
PETK				S	**Sg**	**03 44 40.0**	**+4.0**
	1.3nm,0.3s,baz=126,slow=10.0,SNR=3.6						
PET	**Petropavlovsk**	**2.65**	**23**	S	**Sb**	**03 44 30.5**	**-3.0**
UGLR	**Uglovaya**	**2.87**	**23**	P	**Pb**	**03 44 01.6**	**-3.2**
UGLR				S	**Sb**	**03 44 37.3**	**-2.4**
AVH	**Avacha**	**2.90**	**22**	P	**Pb**	**03 44 02.3**	**-3.0**
SMAR	**Somma**	**2.91**	**22**	P	**Pn**	**03 44 02.0**	**+2.1**
SMAR				S	**Sn**	**03 44 37.6**	**+2.8**
SDLR	**Sedlovina**	**2.94**	**23**	P	Pb	03 44 02.7	-3.4
SDLR				S	**Sn**	**03 44 38.0**	**+2.5**
SPN	**Mys Shipunski**	**3.15**	**36**	P	**Pn**	**03 44 04.3**	**+1.3**
SPN				S	**Sn**	**03 44 40.6**	**+0.3**
GNL	**Ganaly**	**3.17**	**11**	*e*P	**Pn**	**03 44 04.9**	**+1.6**
MKZ	**Mys Kozlova**	**4.92**	**34**	P	**Pn**	**03 44 28.6**	**+1.3**
ILAR	**Eielson Array**	**31.97**	**42**	P	P	03 49 33.5	-5.5
	0.2nm,0.8s,baz=278,slow=6.3,SNR=3.4						
YKA	**Yellowknife Ar**	**46.33**	**40**	P	P	03 51 33.6	-5.1
	0.3nm,0.7s,baz=299,slow=7.5,SNR=5.1						
PDAR	**Pinedale Array**	**60.48**	**58**	P	P	03 53 18.6	-4.7
	0.5nm,1.0s,baz=339,slow=4.8,SNR=3.6						
TXAR	**Lajitas Array**	**73.45**	**64**	P	P	03 54 40.2	-5.6
	0.2nm,0.7s,baz=336,slow=2.7,SNR=4.0						

*CSEM **10** 03:45:37.7, 42.°25N×13.°46E, h10km, MD1.9/7, After ROM*

ROM 10 03:45:37.7±0.1, 42.°25N×13.°46E, h10km±1km, Md1.9/7, Ml1.4/4, Error ellipse: s-maj=1.4km s-min=1.2km az=21.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.09**	**80**	Pg	Pg	03 45 40.6	+0.3
FAGN				Sg	Sg	03 45 42.3	+0.2
	453nm,0.5s						
FAGN	**Fagnano**	**0.09**	**80**	Pg	Pg	03 45 40.6	+0.3
FAGN				Sg	Sg	03 45 42.3	+0.2
	453nm,0.5s						
AQU	**L'Aquila**	**0.11**	**337**	Pg	Pg	03 45 41.5	+0.9
AQU				Sg	Sg	03 45 43.0	+0.4
AQU	**L'Aquila**	**0.11**	**337**	Pg	Pg	03 45 41.5	+0.9
AQU				Sg	Sg	03 45 43.0	+0.4
PTQR	**Pietraquaria**	**0.23**	**191**	Pg	Pg	03 45 43.3	+0.7
PTQR				Sg	Sg	03 45 47.2	+1.3
	9.0nm,0.2s						
PTQR	**Pietraquaria**	**0.23**	**191**	Pg	Pg	03 45 43.3	+0.7
PTQR				Sg	Sg	03 45 47.2	+1.3
	9.0nm,0.2s						
FIAM	**Fiamignano**	**0.26**	**274**	Pg	Pg	03 45 43.5	+0.4
FIAM				Sg	Sg	03 45 47.9	+1.2
	27nm,0.4s						
FIAM	**Fiamignano**	**0.26**	**274**	Pg	Pg	03 45 43.5	+0.4
FIAM				Sg	Sg	03 45 47.9	+1.2
	27nm,0.4s						
VCEL	**Villa Celiera**	**0.32**	**63**	Pg	Pb	03 45 45.0	-0.6
	30nm,0.3s						
VCEL	**Villa Celiera**	**0.32**	**63**	Pg	Pb	03 45 45.0	-0.6
	30nm,0.3s						
VVLD	**Villa Vallelon**	**0.40**	**162**	Pg	Pb	03 45 46.6	-0.4
VVLD	**Villa Vallelon**	**0.40**	**162**	Pg	Pb	03 45 46.6	-0.4
INTR	**Introdacqua**	**0.41**	**126**	Pg	Pg	03 45 46.0	+0.2
INTR				Sg	Sb	03 45 52.4	-1.1
INTR	**Introdacqua**	**0.41**	**126**	Pg	Pg	03 45 46.0	+0.2
INTR				Sg	Sb	03 45 52.4	-1.1
LPEL	**Lama dei Pelig**	**0.57**	**110**	Pg	Pg	03 45 48.9	0.0
LPEL				Sg	Sg	03 45 57.3	+0.7
	19nm,0.4s						
LPEL	**Lama dei Pelig**	**0.57**	**110**	Pg	Pg	03 45 48.9	0.0
LPEL				Sg	Sg	03 45 57.3	+0.7
	19nm,0.4s						

*ISCJB **10** 03:45:57.4±0.8, 51.°46N±0.°04×16.°10E±0.°04, h0km, Error ellipse: s-maj=6.2km s-min=3.0km az=20.6*
*CSEM **10** 03:45:58.6±0.4, 51.°48N×16.°08E, h2km, ML3.2/5, Error ellipse: s-maj=6.9km s-min=3.7km az=11.0*
*PRU **10** 03:45:59.8, 51.°46N×16.°09E, h0km*
*WAR **10** 03:45:59.9, 51.°46N×16.°10E*

ISC 10 03:45:58.9±1.2, 51.°50N±0.°05×16.°09E±0.°03, h0km, n28, σ0°68/49, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**169**	*e*Pg	**Pg**	**03 46 11.6**	**-0.1**
KSP				*e*Sg	**Sg**	**03 46 21.0**	**+0.7**
KSP	**Ksiaz**	**0.67**	**169**	*e*Pg	**Pg**	**03 46 11.9**	**+0.2**
KSP				*e*Sg	**Sg**	**03 46 20.6**	**+0.3**
UPC	**Upice**	**0.99**	**183**	*e*PG	**Pg**	**03 46 18.1**	**+0.2**
UPC	**Upice**	**0.99**	**183**	Pg	**Pg**	**03 46 18.1**	**+0.2**
DPC	**Dobruska-Polom**	**1.16**	**172**	*e*PG	**Pg**	**03 46 20.8**	**-0.3**
DPC				*e*SG	**Sg**	**03 46 35.8**	**-0.3**
	comp=Z,16nm,0.3s						
DPC	**Dobruska-Polom**	**1.16**	**172**	Pg	**Pg**	**03 46 20.8**	**-0.3**
DPC				Sg	**Sg**	**03 46 35.8**	**-0.3**
	16nm,0.3s						
PVCC	**Panska Ves**	**1.36**	**225**	*e*PG	**Pn**	**03 46 25.1**	**-0.1**
PVCC				*e*SG	**Sn**	**03 46 43.8**	**-0.1**
	comp=Z,52nm,0.2s						
PVCC	**Panska Ves**	**1.36**	**225**	Pg	**Pn**	**03 46 25.1**	**-0.1**
PVCC				Sg	**Sn**	**03 46 43.8**	**-0.1**
	52nm,0.2s						
BRG	**Berggiesshubel**	**1.49**	**246**	PN	**Pn**	**03 46 26.0**	**-0.9**
BRG				PG	**Pg**	**03 46 27.5**	**+0.2**
BRG				SG	**Sn**	**03 46 47.7**	**+0.7**
	40nm,0.4s						
KRLC	**Kraliky**	**1.49**	**162**	*e*PG	**Pn**	**03 46 26.5**	**-0.5**
KRLC				*e*SG	**Sg**	**03 46 46.5**	**-0.2**
KRLC	**Kraliky**	**1.49**	**162**	Pg	**Pn**	**03 46 26.5**	**-0.5**
KRLC				Sg	**Sg**	**03 46 46.5**	**-0.2**
PRU	**Pruhonice**	**1.80**	**214**	*e*PG	**Pb**	**03 46 32.5**	**-0.2**
PRU				*e*SG	**Sg**	**03 46 56.4**	**-0.3**
	comp=Z,17nm,0.3s						
PRU	**Pruhonice**	**1.80**	**214**	Pg	**Pb**	**03 46 32.5**	**-0.2**
PRU				Sg	**Sg**	**03 46 56.4**	**-0.3**
	17nm,0.3s						
CLL	**Collm**	**1.94**	**266**	*e*Pg	**Pb**	**03 46 35.0**	**-0.1**
CLL				*e*		03 46 38.0	
CLL				*e*Sg	**Sg**	**03 47 02.0**	**+0.8**
	comp=Z,14nm,0.8s						
CLL				*i*		03 47 07.2	
MORC	**Moravsky Berou**	**1.96**	**151**	*e*Pn	**Pn**	**03 46 32.1**	**-1.3**
MORC				*e*Sg	**Sb**	**03 47 00.6**	**+0.2**
OKC	**Ostrava-Krasne**	**2.12**	**141**	*e*SG	**Sg**	**03 47 06.0**	**-0.9**
OKC	**Ostrava-Krasne**	**2.12**	**141**	Sg	**Sg**	**03 47 06.0**	**-0.9**
VRAC	**Vranov**	**2.22**	**171**	*e*Sg	**Sb**	**03 47 08.6**	**+0.8**
KRUC	**Moravsky**	**2.45**	**175**	*e*Sg	**Sg**	**03 47 16.0**	**-1.4**
NKC	**Novy Kostel**	**2.63**	**243**	*e*PN	**Pn**	**03 46 42.4**	**-0.2**
NKC				*e*PG	**Pg**	**03 46 48.7**	**-0.6**
NKC				*e*SG	**Sg**	**03 47 23.4**	**+0.1**
	comp=Z,17nm,0.3s						
NKC	**Novy Kostel**	**2.63**	**243**	Pn	**Pn**	**03 46 42.4**	**-0.2**
OJC	**Ojcow**	**2.68**	**117**	*e*Pg	**Pg**	**03 46 50.1**	**-0.1**
OJC				*e*Sg	**Sg**	**03 47 24.7**	**-0.2**
OJC	**Ojcow**	**2.68**	**117**	*e*Pg	**Pg**	**03 46 50.1**	**-0.1**
OJC				*e*Sg	**Sg**	**03 47 24.7**	**-0.2**
KHC	**Kasperske Hory**	**2.86**	**215**	*e*PN	**Pn**	**03 46 46.0**	**+0.2**
KHC				*e*PG	**Pb**	**03 46 51.8**	**+1.0**
KHC				*e*SG	**Sg**	**03 47 29.3**	**-1.5**
	comp=Z,4.5nm,0.4s						
KHC	**Kasperske Hory**	**2.86**	**215**	Pn	**Pn**	**03 46 46.0**	**+0.2**
KHC	**Kasperske Hory**	**2.86**	**215**	Pg	**Pb**	**03 46 51.8**	**+1.0**
KHC				Sg	**Sg**	**03 47 29.3**	**-1.5**
	comp=Z,4.5nm,0.4s						
VYHS	**Vyhne**	**3.49**	**148**	*e*SG	**Sg**	**03 47 52.5**	**+1.5**
VYHS	**Vyhne**	**3.49**	**148**	*e*Sg	**Sg**	**03 47 52.5**	**+1.5**

*CSEM **10** 03:46:32.0, 42.°45N×13.°39E, h10km, After ROM*

ROM 10 03:46:32.0±0.1, 42.°45N×13.°39E, h10km±1km, Ml2.1/20, Error ellipse: s-maj=1.7km s-min=1.2km az=64.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.08**	**10**	Pg	Pg	03 46 34.9	+0.2
CAMP				Sg	Sg	03 46 36.8	+0.2
	1µm,0.4s						
CAMP	**Campotosto**	**0.08**	**10**	Pg	Pg	03 46 34.9	+0.2
CAMP				Sg	Sg	03 46 36.8	+0.2
	1µm,0.4s						
AQU	**L'Aquila**	**0.10**	**175**	Pg	Pg	03 46 35.0	+0.3
AQU				Sg	Sg	03 46 37.9	+1.2
	1µm,0.4s						
AQU	**L'Aquila**	**0.10**	**175**	Pg	Pg	03 46 35.0	+0.3
AQU				Sg	Sg	03 46 37.9	+1.2
	1µm,0.4s						
TERO	**Teramo**	**0.23**	**43**	Pg	Pg	03 46 36.8	-0.1
TERO				Sg	Sg	03 46 40.3	+0.1
	293nm,0.2s						
TERO	**Teramo**	**0.23**	**43**	Pg	Pg	03 46 36.8	-0.1
TERO				Sg	Sg	03 46 40.3	+0.1
	293nm,0.2s						
FAGN	**Fagnano**	**0.24**	**142**	Pg	Pb	03 46 38.0	-0.4
FAGN				Sg	Sg	03 46 42.6	+2.3
	486nm,0.3s						
FAGN	**Fagnano**	**0.24**	**142**	Pg	Pb	03 46 38.0	-0.4
FAGN				Sg	Sg	03 46 42.6	+2.3
	486nm,0.3s						
FIAM	**Fiamignano**	**0.27**	**228**	Pg	Pg	03 46 38.1	+0.4
FIAM				Sg	Sg	03 46 42.0	+0.4
	172nm,0.6s						
FIAM	**Fiamignano**	**0.27**	**228**	Pg	Pg	03 46 38.1	+0.4
FIAM				Sg	Sg	03 46 42.0	+0.4
	172nm,0.6s						
LNSS	**Leonessa**	**0.30**	**300**	Pg	Pg	03 46 38.7	+0.5
LNSS				Sg	Sb	03 46 44.0	-0.7
	250nm,0.4s						
LNSS	**Leonessa**	**0.30**	**300**	Pg	Pg	03 46 38.7	+0.5
LNSS				Sg	Sb	03 46 44.0	-0.7
	250nm,0.4s						
VCEL	**Villa Celiera**	**0.34**	**100**	Pg	Pg	03 46 39.3	+0.4
VCEL				Sg	Sb	03 46 45.3	-0.5
	266nm,0.3s						
VCEL	**Villa Celiera**	**0.34**	**100**	Pg	Pg	03 46 39.3	+0.4
VCEL				Sg	Sb	03 46 45.3	-0.5
	266nm,0.3s						
NRCA	**Norcia**	**0.43**	**332**	Pg	Pg	03 46 40.8	+0.2
NRCA				Sg	Sb	03 46 47.6	-0.9
	215nm,0.1s						
NRCA	**Norcia**	**0.43**	**332**	Pg	Pg	03 46 40.8	+0.2
NRCA				Sg	Sb	03 46 47.6	-0.9
	215nm,0.1s						
PTQR	**Pietraquaria**	**0.43**	**179**	Pg	Pg	03 46 40.4	-0.2
	13nm,0.4s						
PTQR	**Pietraquaria**	**0.43**	**179**	Pg	Pg	03 46 40.4	-0.2
	13nm,0.4s						
OFFI	**Offida**	**0.53**	**24**	Pg	Pb	03 46 43.2	-0.2
	585nm,0.5s						
OFFI	**Offida**	**0.53**	**24**	Pg	Pb	03 46 43.2	-0.2
	585nm,0.5s						
MNS	**Montasola**	**0.53**	**263**	Pg	Pg	03 46 42.3	-0.1
	46nm,0.4s						
MNS	**Montasola**	**0.53**	**263**	Pg	Pg	03 46 42.3	-0.1
	46nm,0.4s						
INTR	**Introdacqua**	**0.58**	**139**	Pg	Pg	03 46 43.0	-0.5
INTR				Sg	Sg	03 46 51.9	+0.6
	135nm,0.5s						
INTR	**Introdacqua**	**0.58**	**139**	Pg	Pg	03 46 43.0	-0.5
INTR				Sg	Sg	03 46 51.9	+0.6
	135nm,0.5s						
CERT	**Cerreto**	**0.59**	**211**	Pg	Pg	03 46 43.1	-0.4
	196nm,0.6s						
CERT	**Cerreto**	**0.59**	**211**	Pg	Pg	03 46 43.1	-0.4
	196nm,0.6s						
VVLD	**Villa Vallelon**	**0.61**	**163**	Pg	Pg	03 46 44.1	+0.2
	78nm,0.8s						
VVLD	**Villa Vallelon**	**0.61**	**163**	Pg	Pg	03 46 44.1	+0.2
	78nm,0.8s						
CESX	**Cesi**	**0.62**	**285**	Pg	Pg	03 46 44.1	0.0
	39nm,0.3s						
CESX	**Cesi**	**0.62**	**285**	Pg	Pg	03 46 44.1	0.0
	39nm,0.3s			

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**7.48**	**83**	S	S	03 54 42.4	+11
	baz=9.0,SNR=3.9						
AFI	**Afiamalu**	**8.47**	**44**	P	**P**	**03 53 11.4**	**+0.9**
	14nm,0.3s,baz=38,slow=15,SNR=9.6						
AFI				S	**S**	**03 54 47.5**	**-2.6**
	14nm,0.3s,baz=219,slow=24,SNR=8.3						
DZM	**Mont Dzumac**	**14.84**	**260**	P	P	03 54 22.6	+4.9
	0.7nm,0.3s,baz=113,slow=16,SNR=5.4						
URZ	**Urewera**	**18.56**	**193**	P	**P**	**03 54 53.7**	**-0.7**
	0.5nm,0.3s,baz=317,slow=19,SNR=4.3						
CTA	**Charters Tower**	**33.73**	**264**	P	**P**	**03 57 08.4**	**0.0**
	9.6nm,0.8s,baz=87,slow=10,SNR=9.0						
CMSA	**Cobar Meteorol**	**34.61**	**243**	P	**P**	**03 57 16.3**	**+0.6**
	baz=34,SNR=5.5						
STKA	**Stephens Creek**	**38.12**	**244**	P	**P**	**03 57 44.2**	**-0.5**
	3.9nm,0.8s,baz=105,slow=9.3,SNR=11						
STKA				PcP	**PcP**	**03 59 46.2**	**-0.7**
	2.3nm,0.8s,baz=82,slow=4.6,SNR=5.0						
STKA	**Stephens Creek**	**38.12**	**244**	P	**P**	**03 57 45.2**	**+0.5**
	baz=37,SNR=6.9						
BBOO	**Buckleboo**	**42.88**	**243**	P	**P**	**03 58 22.5**	**-0.3**
	baz=42,SNR=20						
ASAR	**Alice Springs**	**44.79**	**256**	P	**P**	**03 58 37.8**	**-0.1**
	12nm,0.8s,baz=95,slow=7.5,SNR=154						
ASAR				PcP	**PcP**	**04 00 09.0**	**-0.5**
	2.6nm,0.7s,baz=104,slow=4.0,SNR=11						
WRA	**Warramunga Arr**	**44.85**	**262**	P	**P**	**03 58 37.7**	**-0.7**
	5.4nm,0.5s,baz=97,slow=8.4,SNR=51						
WRA				PcP	**PcP**	**04 00 09.5**	**-0.1**
	0.9nm,0.5s,baz=93,slow=3.1,SNR=4.2						
KDU	**Kakadu**	**48.15**	**271**	P	**P**	**03 59 03.4**	**0.0**
	baz=47,SNR=4.5						
KDU				S	S	04 05 31.2	+5.9
	baz=47,SNR=3.9						
MTN	**Manton Dam**	**49.36**	**270**	P	**P**	**03 59 11.9**	**-0.5**
	baz=48,SNR=5.6						
FORT	**Forrest**	**49.61**	**246**	P	**P**	**03 59 13.6**	**-0.5**
	baz=49,SNR=13						
FITZ	**Fitzroy Crossi**	**53.27**	**262**	P	**P**	**03 59 40.6**	**-0.2**
	2.4nm,0.5s,baz=144,slow=4.5,SNR=23						
FITZ	**Fitzroy Crossi**	**53.27**	**262**	P	**P**	**03 59 40.8**	**0.0**
	baz=52,SNR=3.7						
MEEK	**Meekatharra**	**58.22**	**251**	P	**P**	**04 00 14.3**	**-0.9**
	baz=57,SNR=5.7						
VNDA	**Vanda**	**58.25**	**185**	P	**P**	**04 00 15.8**	**+1.3**
	0.3nm,0.6s,baz=37,slow=5.1,SNR=5.1						
KLBR	**Kellerberrin**	**58.38**	**245**	P	**P**	**04 00 15.7**	**-0.5**
	baz=57,SNR=7.2						
MORW	**Morawa**	**60.14**	**247**	P	**P**	**04 00 27.3**	**-0.7**
	baz=59,SNR=6.2						
QSPA	**South Pole Qui**	**69.90**	**180**	P	**P**	**04 01 29.7**	**+0.7**
	5.0nm,0.7s,baz=41,slow=2.0,SNR=31						
MJAR	**Matsushiro Arr**	**70.07**	**323**	P	**P**	**04 01 30.8**	**+0.4**
	2.0nm,0.6s,baz=155,slow=5.6,SNR=7.9						
PETK	**Petropavlovsk-**	**76.01**	**345**	P	**P**	**04 02 04.8**	**+0.7**
	2.8nm,0.7s,baz=134,slow=8.5,SNR=4.6						
KSRS	**Korea Array**	**76.78**	**318**	P	**P**	**04 02 10.0**	**+1.4**
	0.8nm,0.5s,baz=137,slow=6.7,SNR=4.1						
USRK	**Ussuriysk Arra**	**78.80**	**326**	P	**P**	**04 02 20.9**	**+1.5**
	3.9nm,0.7s,baz=86,slow=3.7,SNR=6.4						
TXAR	**Lajitas Array**	**86.71**	**57**	P	**P**	**04 03 01.9**	**+2.1**
	0.2nm,0.6s,baz=226,slow=7.5,SNR=3.3						
ILAR	**Eielson Array**	**87.95**	**13**	P	**P**	**04 03 04.7**	**0.0**
	0.5nm,0.4s,baz=217,slow=5.8,SNR=12						
CMAR	**Chiang Mai Arr**	**90.20**	**289**	P	**P**	**04 03 17.2**	**+1.1**
	5.0nm,0.9s,baz=128,slow=3.1,SNR=16						
SONM	**Songino Array**	**95.64**	**319**	P	**P**	**04 03 40.8**	**+0.2**
	0.2nm,0.5s,baz=115,slow=3.0,SNR=2.7						
ZALV	**Zalesovo Beam**	**110.36**	**321**	PKiKP	**PKiKP**	**04 08 42.4**	**-1.3**
	0.7nm,0.6s,baz=129,slow=4.7,SNR=3.6						
MKAR	**Makanchi Array**	**111.12**	**313**	PKiKP	**PKiKP**	**04 08 44.3**	**-1.0**
	0.6nm,0.6s,baz=104,slow=0.3,SNR=11						
BVAR	**Borovoye Array**	**118.96**	**320**	PKP	**PKPdf**	**04 08 59.3**	**-0.9**
	2.2nm,0.6s,baz=102,slow=1.9,SNR=9.2						
AKTO	**Aktyubinsk**	**126.96**	**319**	PKP	**PKPdf**	**04 09 15.4**	**-0.1**
	1.4nm,0.7s,baz=21,slow=8.6,SNR=6.2						
ARCES	**ARCESS Array B**	**128.63**	**350**	PKP	**PKPdf**	**04 09 17.4**	**-0.8**
	3.2nm,1.0s,baz=10,slow=2.7,SNR=5.3						
FINES	**FINESS Array B**	**135.51**	**344**	PKhKP	PKPpre	04 09 26.7	
	1.1nm,0.7s,baz=100,slow=3.2,SNR=6.1						
AKASG	**Malin Array Be**	**142.82**	**331**	PKhKP	PKPpre	04 09 41.4	
	4.8nm,0.5s,baz=43,slow=4.4,SNR=22						
MUD	**Monsted U'grnd**	**143.40**	**354**	*i* P	PKPab	04 09 44.1	+0.3
	6.7nm,0.8s						
BSD	**Bornholm Skovb**	**143.81**	**348**	⇑*i* P	PKPbc	04 09 45.1	-0.4
	7.2nm,0.7s						
MALT	**Malatya**	**143.89**	**308**	⇓*i* P	PKPab	04 09 46.7	+0.2
EKA	**Eskdalemuir Ar**	**144.66**	**5**	PKP	**PKPdf**	**04 09 47.6**	**-0.4**
	0.6nm,0.4s,baz=345,slow=2.5,SNR=3.4						
BSEG	**Bad Segeberg**	**145.73**	**351**	*e*PKPbc	**PKPbc**	**04 09 51.9**	**+0.6**
BRTR	**Keskin Array B**	**146.77**	**313**	PKPbc	**PKPbc**	**04 09 54.6**	**-0.4**
	2.7nm,0.6s,baz=137,slow=5.0,SNR=18						
ASF	**Jabal al Asfar**	**146.80**	**298**	PKPbc	**PKPbc**	**04 09 55.5**	**+0.3**
	3.5nm,0.9s,baz=42,slow=0.9,SNR=8.2						
BURAR	**Bucovina Array**	**146.88**	**331**	⇑*i* P	**PKPab**	**04 09 56.5**	**-1.3**
VRI	**Vrincioaia**	**147.40**	**327**	⇓*i* P	**PKPbc**	**04 09 56.6**	**+0.3**
CLZ	**Clausthal**	**147.75**	**351**	*e*PKPbc	**PKPbc**	**04 09 57.6**	**+0.6**
CLL	**Collm**	**147.79**	**347**	*e*PKPbc	**PKPbc**	**04 09 57.5**	**+0.5**
CLL	**Collm**	**147.79**	**347**	⇓*i* PKP	**PKPbc**	**04 09 57.2**	**+0.2**
	comp=Z,13nm,0.7s						
UPC	**Upice**	**147.82**	**343**	*e*PKP	**PKPbc**	**04 09 57.6**	**+0.4**
MMAI	**Mount Meron Ar**	**147.83**	**300**	PKPbc	**PKPbc**	**04 09 57.5**	**-0.4**
	comp=Z,1.9nm,0.3s,baz=57,slow=3.1,SNR=8.5						
DPC	**Dobruska-Polom**	**147.87**	**343**	*e*PKP	**PKPbc**	**04 09 57.9**	**+0.5**
BRG	**Berggiesshubel**	**147.99**	**346**	*i* P	**PKPbc**	**04 09 57.8**	**+0.3**
	comp=Z,4.9nm,0.6s						
BRG				*e*		04 10 02.3	
	comp=Z,3.8nm,0.4s						
BRG	**Berggiesshubel**	**147.99**	**346**	*e*PKPbc	**PKPbc**	**04 09 58.1**	**+0.5**
MLR	**Muntele Rosu**	**148.06**	**328**	⇑*i* P	**PKPbc**	**04 09 56.8**	**-1.3**
MLR	**Muntele Rosu**	**148.06**	**328**	PKPbc	**PKPbc**	**04 09 56.9**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=319,slow=9.3,SNR=5.2						
NEUB	**Neuenburg**	**149.12**	**349**	*e*PKPbc	**PKPbc**	**04 09 58.4**	**+0.5**
PRU	**Pruhonice**	**148.67**	**345**	*e*PKP	**PKPbc**	**04 09 59.6**	**+0.3**
MOX	**Moxa**	**148.69**	**348**	*e*PKPbc	**PKPbc**	**04 09 59.6**	**+0.2**
TANN	**Tannenbergstha**	**148.75**	**347**	*e*PKPbc	**PKPbc**	**04 10 00.1**	**+0.5**
UBBA	**Unterbreizbach**	**148.80**	**350**	*e*PKPbc	**PKPbc**	**04 09 59.4**	**-0.1**
EIL	**Elat**	**148.93**	**294**	PKPbc	**PKPbc**	**04 10 01.0**	**+0.4**
	comp=Z,3.9nm,0.6s,baz=0.0,slow=0.0,SNR=4.6						
ROTZ	**Rotzenmuhle**	**149.41**	**347**	*e*PKPbc	**PKPbc**	**04 10 01.7**	**+0.6**
TNS	**Taunus Mts**	**149.61**	**352**	*e*PKPbc	**PKPbc**	**04 10 02.5**	**+0.8**
GRF	**Grafenberg Arr**	**149.68**	**348**	*e*PKPbc	**PKPbc**	**04 10 02.7**	**+0.9**
KHC	**Kasperske Hory**	**149.70**	**345**	*e*PKP	**PKPbc**	**04 10 02.0**	**+0.1**
GEC2	**GERESS Array S**	**149.94**	**345**	*e*PKPbc	**PKPbc**	**04 10 02.7**	**+0.1**
GERES	**GERESS Array B**	**149.94**	**345**	PKPbc	**PKPbc**	**04 10 02.6**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=40,slow=2.3,SNR=21						
TORD	**Torodi Ar. Bea**	**173.00**	**176**	PKP	**PKPdf**	**04 10 19.2**	**-2.0**
	comp=Z,1.0nm,1.0s,baz=235,slow=1.1,SNR=4.3						
TORD				PKPab	**PKPab**	**04 11 50.3**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=167,slow=4.1,SNR=2.7						

*CSEM **10** 04:01:39.6±0.1, 44°.71N×7°.26E, h12km, ML1.4/8, Error ellipse: s-maj=3.2km s-min=2.2km az=78.0*
*GEN **10** 04:01:39.9, 44°.74N×7°.21E, h6km, ML0.6*
LDG 10 04:01:40.8±0.1, 44°.70N×7°.21E, h2km, Md1.6/3, Ml1.5/6, Error ellipse: s-maj=2.8km s-min=1.3km az=75.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PZZ	**Stroppo**	**0.20**	**198**	P	Pg	04 01 44.9	0.0
PZZ				S	Sg	04 01 48.3	+0.7
OG22	**Abries**	**0.22**	**304**	Pg	Pg	04 01 45.8	+0.4
OG22				Sg	Sg	04 01 49.2	+0.7
OG22	**Abries**	**0.22**	**304**	Pg	Pg	04 01 45.8	+0.4
OG22				Sg	Sg	04 01 49.2	+0.7
MBDF	**Montbardon**	**0.31**	**276**	*e*Pg	Pg	04 01 47.4	+0.4
MBDF				*e*Sg	Sg	04 01 51.7	+0.5
	22nm,0.2s						
MBDF	**Montbardon**	**0.31**	**276**	*e*Pg	Pg	04 01 47.4	+0.4
MBDF				*e*Sg	Sg	04 01 51.7	+0.5
	11nm,0.2s						
RSP	**Reno Superiore**	**0.45**	**5**	P	Pg	04 01 47.8	-1.9
RSP				S	Sg	04 01 53.3	-2.5
LSD	**Lago del Serru**	**0.77**	**356**	P	Pg	04 01 53.9	-2.0
SBF	**Sospel**	**0.85**	**169**	*e*Pg	Pg	04 01 57.1	-0.1
SBF				*e*Sg	Sg	04 02 07.5	-0.8
	1.2nm,0.2s						
SBF	**Sospel**	**0.85**	**169**	*e*Pg	Pg	04 01 57.1	-0.1
SBF				*e*Sg	Sg	04 02 07.5	-0.8
	0.6nm,0.2s						
LPG	**La Plagne**	**0.86**	**338**	*e*Pg	Pg	04 01 57.2	-0.6
LPG				*e*Sg	Sg	04 02 08.1	-1.2
	1.3nm,0.2s						
LPG	**La Plagne**	**0.86**	**338**	*e*Pg	Pg	04 01 57.2	-0.6
LPG				*e*Sg	Sg	04 02 08.1	-1.2
	0.6nm,0.2s						
LPL	**La Plagne**	**0.89**	**338**	*e*Pg	Pg	04 01 57.9	-0.2
LPL				*e*Sg	Sg	04 02 08.9	-1.0
	1.2nm,0.3s						
LPL	**La Plagne**	**0.89**	**338**	*e*Pg	Pg	04 01 57.9	-0.2
LPL				*e*Sg	Sg	04 02 08.9	-1.0
	0.6nm,0.3s						
ORIF	**Oris-en-Rattie**	**0.97**	**284**	*e*Pg	Pg	04 01 59.1	-0.4
ORIF				*e*Sg	Sg	04 02 11.2	-1.0
	1.2nm,0.2s						
ORIF	**Oris-en-Rattie**	**0.97**	**284**	*e*Pg	Pg	04 01 59.1	-0.4
ORIF				*e*Sg	Sg	04 02 11.2	-1.0
	0.6nm,0.2s						
PCP	**Piancastagn**	**0.97**	**99**	P	Pg	04 01 57.4	-2.1
FRF	**La Foret Royal**	**1.20**	**200**	*e*Pg	Pg	04 02 03.2	-0.7
FRF				*e*Sg	Sg	04 02 18.5	-1.0
	1.1nm,0.3s						
FRF	**La Foret Royal**	**1.20**	**200**	*e*Pg	Pg	04 02 03.2	-0.7
FRF				*e*Sg	Sg	04 02 18.5	-1.0
	0.6nm,0.3s						
LMR	**La Mourre**	**1.45**	**200**	*e*Pg	Pn	04 02 07.8	-0.3
LMR				*e*Sg	Sb	04 02 26.1	-1.4
	0.7nm,0.2s						
LMR	**La Mourre**	**1.45**	**200**	*e*Pg	Pn	04 02 07.8	-0.3
LMR				*e*Sg	Sb	04 02 26.1	-1.4
	0.3nm,0.2s						
VIVF	**Saint-Julien-l**	**1.81**	**276**	*e*Pn	Pn	04 02 11.3	-1.8
VIVF				*e*Sn	Sn	04 02 33.3	-3.3
	0.6nm,0.2s						
VIVF	**Saint-Julien-l**	**1.81**	**276**	*e*Pn	Pn	04 02 11.3	-1.8
VIVF				*e*Sn	Sn	04 02 33.3	-3.3
	0.3nm,0.2s						

*CSEM **10** 04:02:19.2±0.1, 42°.28N×13°.48E, h12km, ML3.1/10, Error ellipse: s-maj=1.9km s-min=1.4km az=62.0*
ROM 10 04:02:19.1±0.1, 42°.28N×13°.50E, h10km, Ml2.5/26, Error ellipse: s-maj=1.0km s-min=0.8km az=52.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.07**	**103**	Pg	Pg	04 02 21.8	+0.4
FAGN				Sg	Sg	04 02 23.1	0.0
	4μm,0.2s						
FAGN	**Fagnano**	**0.07**	**103**	Pg	Pg	04 02 21.8	+0.4
FAGN				Sg	Sg	04 02 23.1	0.0
	4μm,0.2s						
AQU	**L'Aquila**	**0.10**	**316**	Pg	Pg	04 02 22.4	+0.5
AQU				Sg	Sg	04 02 24.3	+0.5
	4μm,0.4s						
AQU	**L'Aquila**	**0.10**	**316**	Pg	Pg	04 02 22.4	+0.5
AQU				Sg	Sg	04 02 24.3	+0.5
	4μm,0.4s						
CAMP	**Campotosto**	**0.26**	**346**	Pg	Pg	04 02 25.1	+0.4
CAMP				Sg	Sg	04 02 29.0	+0.6
	456nm,0.5s						
CAMP	**Campotosto**	**0.26**	**346**	Pg	Pg	04 02 25.1	+0.4
CAMP				Sg	Sg	04 02 29.0	+0.6
	456nm,0.5s						
PTQR	**Pietraquaria**	**0.27**	**196**	Pg	Pg	04 02 25.2	+0.5
PTQR				Sg	Sg	04 02 29.5	+1.1
PTQR	**Pietraquaria**	**0.27**	**196**	Pg	Pg	04 02 25.2	+0.5
PTQR				Sg	Sg	04 02 29.5	+1.1
VCEL	**Villa Celiera**	**0.28**	**66**	Pg	Pg	04 02 25.5	+0.6
VCEL				Sg	Sg	04 02 30.0	+1.1
	2μm,0.4s						
VCEL	**Villa Celiera**	**0.28**	**66**	Pg	Pg	04 02 25.5	+0.6
VCEL				Sg	Sg	04 02 30.0	+1.1
	2μm,0.4s						
FIAM	**Fiamignano**	**0.28**	**267**	Pg	Pg	04 02 25.5	+0.5
FIAM				Sg	Sg	04 02 30.0	+1.1
	1μm,0.2s						
FIAM	**Fiamignano**	**0.28**	**267**	Pg	Pg	04 02 25.5	+0.5
FIAM				Sg	Sg	04 02 30.0	+1.1
	1μm,0.2s						
TERO	**Teramo**	**0.35**	**13**	Pg	Pg	04 02 26.3	+0.1
TERO				Sg	Sg	04 02 31.8	+0.9
	526nm,0.3s						
TERO	**Teramo**	**0.35**	**13**	Pg	Pg	04 02 26.3	+0.1
TERO				Sg	Sg	04 02 31.8	+0.9
	526nm,0.3s						
INTR	**Introdacqua**	**0.41**	**131**	Pg	Pg	04 02 27.5	+0.3
INTR				Sg	Sg	04 02 33.6	+0.9
	597nm,0.5s						
INTR	**Introdacqua**	**0.41**	**131**	Pg	Pg	04 02 27.5	+0.3
INTR				Sg	Sg	04 02 33.6	+0.9
	597nm,0.5s						
VVLD	**Villa Vallelon**	**0.42**	**167**	Pg	Pg	04 02 27.5	0.0
VVLD				Sg	Sb	04 02 35.3	+0.1
	447nm,0.6s						
VVLD	**Villa Vallelon**	**0.42**	**167**	Pg	Pg	04 02 27.5	0.0
VVLD				Sg	Sb	04 02 35.3	+0.1
	447nm,0.6s						
LNSS	**Leonessa**	**0.47**	**314**	Pg	Pg	04 02 28.5	+0.1
	439nm,0.3s						
LNSS	**Leonessa**	**0.47**	**314**	Pg	Pg	04 02 28.5	+0.1
	439nm,0.3s						
GUAR	**Guarcino**	**0.51**	**196**	Pg	Pg	04 02 29.1	0.0
	295nm,0.3s						
GUAR	**Guarcino**	**0.51**	**196**	Pg	Pg	04 02 29.1	0.0
	295nm,0.3s						
CERT	**Cerreto**	**0.51**	**229**	Pg	Pg	04 02 29.1	0.0
	361nm,0.3s						
CERT	**Cerreto**	**0.51**	**229**	Pg	Pg	04 02 29.1	0.0
	361nm,0.3s						
LPEL	**Lama dei Pelig**	**0.56**	**114**	Pg	Pg	04 02 30.1	0.0
LPEL				Sg	Sb	04 02 38.5	-0.8
	389nm,0.4s						
LPEL	**Lama dei Pelig**	**0.56**	**114**	Pg	Pg	04 02 30.1	0.0
LPEL				Sg	Sb	04 02 38.5	-0.8
	389nm,0.4s						
POFI	**Posta Fibreno**	**0.59**	**164**	Pg	Pg	04 02 30.4	-0.2
	81nm,0.4s						
POFI	**Posta Fibreno**	**0.59**	**164**	Pg	Pg	04 02 30.4	-0.2
	81nm,0.4s						
MNS	**Montasola**	**0.61**	**280**	Pg	Pg	04 02 30.9	-0.2
	173nm,0.6s						
MNS	**Montasola**	**0.61**	**280**	Pg	Pg	04 02 30.9	-0.2
	173nm,0.6s						
SDI	**San Donato**	**0.62**	**158**	Pg	Pg	04 02 31.2	0.0
	104nm,0.2s						
SDI	**San Donato**	**0.62**	**158**	Pg	Pg	04 02 31.2	0.0
	104nm,0.2s						
MTCE	**Montecelio**	**0.62**	**246**	Pg	Pg	04 02 31.0	-0.1
	240nm,0.9s						
MTCE	**Montecelio**	**0.62**	**246**	Pg	Pg	04 02 31.0	-0.1
	240nm,0.9s						
NRCA	**Norcia**	**0.62**	**333**	Pg	Pg	04 02 31.2	-0.1
NRCA				Sg	Sb	04 02 40.7	-0.3
	307nm,0.2s						
NRCA	**Norcia**	**0.62**	**333**	Pg	Pg	04 02 31.2	-0.1
NRCA				Sg	Sb	04 02 40.7	-0.3
	307nm,0.2s						
CAFR	**Castel Frentan**	**0.63**	**95**	Pg	Pg	04 02 32.0	-0.3
	428nm,0.4s						
CAFR	**Castel Frentan**	**0.63**	**95**	Pg	Pb	04 02 32.0	-0.3
	428nm,0.4s						
OFFI	**Offida**	**0.67**	**12**	Pg	Pb	04 02 33.1	+0.2
	512nm,0.7s						
OFFI	**Offida**	**0.67**	**12**	Pg	Pb	04 02 33.1	+0.2
	512nm,0.7s						
GIUL	**Giuliano Di Ro**	**0.74**	**194**	Pg	Pg	04 02 33.2	-0.4
	98nm,0.4s						
GIUL	**Giuliano Di Ro**	**0.74**	**194**	Pg	Pg	04 02 33.2	-0.4
	98nm,0.4s						
CESX	**Cesi**	**0.75**	**296**	Pg	Pb	04 02 34.1	-0.3
	82nm,0.4s						
CESX	**Cesi**	**0.75**	**296**	Pg	Pb	04 02 34.1	-0.3
	82nm,0.4s						
RNI2	**Rionero Sannit**	**0.76**	**140**	Pg	Pg	04 02 34.1	+0.2
	174nm,0.7s						
RNI2	**Rionero Sannit**	**0.76**	**140**	Pg	Pg	04 02 34.1	+0.2
	174nm,0.7s						
CERA	**Filignano**	**0.79**	**150**	Pg	Pg	04 02 33.7	-0.7
	134nm,0.8s						
CERA	**Filignano**	**0.79**	**150**	Pg	Pg	04 02 33.7	-0.7
	134nm,0.8s						
FDMO	**Fiordimonte**	**0.81**	**338**	Pg	Pg	04 02 34.4	-0.5
	75nm,0.2s						
FDMO	**Fiordimonte**	**0.81**	**338**	Pg	Pg	04 02 34.4	-0.5
	75nm,0.2s						
CESI	**CESI - Serrava**	**0.84**	**329**	Pg	Pg	04 02 35.3	-0.2
	25nm,0.4s						
CESI	**CESI - Serrava**	**0.84**	**329**	Pg	Pg	04 02 35.3	-0.2
	25nm,0.4s						
ASSB	**Assisi San Ben**	**0.98**	**321**	Pg	Pg	04 02 37.6	-0.5
	84nm,0.7s						
ASSB	**Assisi San Ben**	**0.98**	**321**	Pg	Pg	04 02 37.6	-0.5
	84nm,0.7s						
CING	**Cingoli**	**1.12**	**349**	Pg	Pb	04 02 40.2	-0.4
	49nm,0.5s						
CING	**Cingoli**	**1.12**	**349**	Pg	Pb	04 02 40.2	-0.4
	49nm,0.5s						
TOLF	**Tolfa**	**1.13**	**259**	Pg	Pb	04 02 40.6	-0.2
	60nm,0.9s						
TOLF	**Tolfa**	**1.13**	**259**	Pg	Pb	04 02 40.6	-0.2
	60nm,0.9s						
NVLJ	**Novalja**	**2.49**	**23**	*i* Pn	Pn	04 03 00.9	+1.2
NVLJ					Sn	04 03 31.3	+1.2
NVLJ	**Novalja**	**2.49**	**23**	*i* Pn	Pn	04 03 00.8	+1.2
NVLJ	**Novalja**	**2.49**	**23**	Sn	Sn	04 03 31.3	+1.2

*CSEM **10** 04:07:38.5, 42°.49N×13°.34E, h9km, MD2.0/13, After ROM*
ROM 10 04:07:38.5±0.1, 42°.49N×13°.34E, h9km±1km, Md2.0/13, Ml1.9/8, Error ellipse: s-maj=1.2km s-min=1.1km az=53.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**46**	Pg	Pg	04 07 41.2	+0.5
CAMP				Sg	Sg	04 07 42.7	+0.4
	494nm,0.3s						
CAMP	**Campotosto**	**0.07**	**46**	Pg	Pg	04 07 41.2	+0.5
CAMP				Sg	Sg	04 07 42.7	+0.4
	494nm,0.3s						
AQU	**L'Aquila**	**0.14**	**162**	Pg	Pg	04 07 42.2	+0.5
AQU				Sg	Sg	04 07 44.9	+1.0
	265nm,0.3s						
AQU	**L'Aquila**	**0.14**	**162**	Pg	Pg	04 07 42.2	+0.5
AQU				Sg	Sg	04 07 44.9	+1.0
	265nm,0.3s						
TERO	**Teramo**	**0.23**	**55**	Pg	Pg	04 07 43.4	+0.1
TERO				Sg	Sg	04 07 46.9	+0.3
	176nm,0.2s						
TERO	**Teramo**	**0.23**	**55**	Pg	Pg	04 07 43.4	+0.1
TERO				Sg	Sg	04 07 46.9	+0.3
	176nm,0.2s						
LNSS	**Leonessa**	**0.25**	**297**	Pg	Pg	04 07 44.4	+0.7
LNSS				Sg	Sb	04 07 48.8	-1.3
	234nm,0.2s						
LNSS	**Leonessa**	**0.25**	**297**	Pg	Pg	04 07 44.4	+0.7
LNSS				Sg	Sb	04 07 48.8	-1.3
	234nm,0.2s						
FIAM	**Fiamignano**	**0.28**	**217**	Pg	Pg	04 07 44.9	+0.7
FIAM				Sg	Sb	04 07 49.4	-1.4
	50nm,0.4s						
FIAM	**Fiamignano**	**0.28**	**217**	Pg	Pg	04 07 44.9	+0.7
FIAM				Sg	Sb	04 07 49.4	-1.4
	50nm,0.4s						
FAGN	**Fagnano**	**0.28**	**141**	Pg	Pb	04 07 45.3	-0.6
	182nm,0.2s						
FAGN	**Fagnano**	**0.28**	**141**	Pg	Pb	04 07 45.3	-0.6
	182nm,0.2s						
VCEL	**Villa Celiera**	**0.38**	**104**	Pg	Pg	04 07 46.6	+0.5
VCEL				Sg	Sb	04 07 52.9	-0.8
	148nm,0.5s						
VCEL	**Villa Celiera**	**0.38**	**104**	Pg	Pg	04 07 46.6	+0.5
VCEL				Sg	Sb	04 07 52.9	-0.8
	148nm,0.5s						
NRCA	**Norcia**	**0.38**	**334**	Pg	Pg	04 07 46.4	+0.2
NRCA				Sg	Sg	04 07 52.5	+1.1
	270nm,0.1s						
NRCA	**Norcia**	**0.38**	**334**	Pg	Pg	04 07 46.4	+0.2
NRCA				Sg	Sg	04 07 52.5	+1.1
	270nm,0.1s						
MNS	**Montasola**	**0.50**	**258**	Pg	Pg	04 07 48.5	+0.2
MNS				Sg	Sb	04 07 56.2	-0.9
	35nm,0.6s						
MNS	**Montasola**	**0.50**	**258**	Pg	Pg	04 07 48.5	+0.2
MNS				Sg	Sb	04 07 56.2	-0.9
	35nm,0.6s						
OFFI	**Offida**	**0.51**	**29**	Pg	Pb	04 07 49.4	-0.3
OFFI	**Offida**	**0.51**	**29**	Pg	Pb	04 07 49.4	-0.3
FDMO	**Fiordimonte**	**0.58**	**341**	Pg	Pg	04 07 49.9	+0.1
FDMO				Sg	Sb	04 07

EIDS	**Eidsvold**	**22.07**	175	*e*P		**P**	04 14 35.2	0.0
	35nm,1.0s							
EIDS	**Eidsvold**	**22.07**	175	P		**P**	04 14 36.6	+1.4
	baz=22,SNR=4.9							
RMQ	**Roma**	**23.08**	180	P		**P**	04 14 46.0	+0.2
	baz=24,SNR=10							
QLP	**Quilpie**	**23.59**	190	P		**P**	04 14 50.7	-0.2
	baz=24,SNR=11							
AS31	**Alice Springs**	**24.88**	214	*e*P		**P**	04 15 02.5	-0.5
ASAR	**Alice Springs**	**24.88**	214	P		**P**	04 15 01.6	-1.4
ASAR	**Alice Springs**	**24.88**	214	P		**P**	04 15 01.6	-1.4
	5.8nm,0.7s,baz=43,slow=7.6,SNR=61							
ASAR				LR		LR	04 25 28.9	
	comp=Z,898nm,21.1s,baz=37,slow=38							
DZM	**Mont Dzumac**	**25.33**	139	*e*LR		LR	04 21 32.7	
	3µm,25.8s							
DZM	**Mont Dzumac**	**25.33**	139	*e*P		**P**	04 15 08.2	+1.1
	34nm,1.2s							
DZM	**Mont Dzumac**	**25.33**	139	P		**P**	04 15 06.9	-0.2
	21nm,1.2s,baz=358,slow=14,SNR=2.6							
DZM				LR		LR	04 23 36.9	
	comp=Z,2µm,19.6s,baz=333,slow=33							
LUWI	**Luwuk**	**26.13**	274	P		**P**	04 15 12.5	-1.9
	70nm,0.6s,1µm							
FITZ	**Fitzroy Crossi**	**27.08**	235	*e*P		**P**	04 15 21.9	-1.0
	34nm,1.0s							
FITZ	**Fitzroy Crossi**	**27.08**	235	P		**P**	04 15 19.8	-3.1
	21nm,0.8s,baz=67,slow=8.4,SNR=19							
FITZ				LR		LR	04 26 30.8	
	comp=Z,1µm,18.6s,baz=61,slow=38							
FITZ	**Fitzroy Crossi**	**27.08**	235	P		**P**	04 15 22.2	-0.7
	baz=28,SNR=20							
ARMA	**Armidale**	**27.13**	175	*e*P		**P**	04 15 21.4	-1.9
	15nm,1.1s							
ARMA	**Armidale**	**27.13**	175	P		**P**	04 15 27.9	+4.6
	baz=28,SNR=3.6							
WSI	**Wainggapu**	**29.04**	256	P		P	04 15 45.5	+5.0
	baz=29,SNR=5.1							
WSI				S		**S**	04 20 36.0	+4.9
	baz=29,SNR=5.2							
KAPI	**Kappang**	**29.05**	266	*e*P		**P**	04 15 39.1	-1.4
	18nm,1.3s							
STKA	**Stephens Creek**	**29.25**	193	P		**P**	04 15 40.1	-2.0
STKA	**Stephens Creek**	**29.25**	193	P		**P**	04 15 40.1	-2.0
	1.8nm,0.8s,baz=12,slow=7.6,SNR=6.4							
STKA				LR		LR	04 28 06.1	
	comp=Z,1µm,20.1s,baz=11,slow=38							
STKA	**Stephens Creek**	**29.25**	193	P		**P**	04 15 40.8	-1.4
	baz=30,SNR=4.4							
FORT	**Forrest**	**33.66**	213	*e*P		**P**	04 16 20.7	-0.3
	12nm,0.7s							
KKM	**Kota Kinabalu**	**33.86**	286	*e*P		**P**	04 16 21.1	-1.9
	12nm,0.9s							
ARPS	**Mount Arapiles**	**33.95**	190	P		P	04 16 26.8	+3.4
	baz=34,SNR=5.9							
MEEK	**Meekatharra**	**37.11**	228	P		**P**	04 16 50.3	-0.5
	baz=38,SNR=5.6							
KSM	**Kuching**	**38.79**	276	P		**P**	04 17 06.6	+1.5
	baz=39,SNR=3.2							
JNU	**Nakatsue**	**39.99**	336	*e*P		**P**	04 17 13.7	-1.1
	24nm,1.4s							
KLBR	**Kellerberrin**	**40.60**	223	P		**P**	04 17 19.4	-0.6
	baz=41,SNR=5.5							
MJAR	**Matsushiro Arr**	**40.83**	347	LR		LR	04 32 14.8	
	comp=Z,520nm,18.9s,baz=175,slow=33							
KSRS	**Korea Array**	**44.94**	336	P		**P**	04 17 55.0	0.0
	2.0nm,0.8s,baz=150,slow=10,SNR=12							
KSRS				LR		LR	04 35 25.2	
	comp=Z,471nm,21.4s,baz=161,slow=34							
KSAR	**Wonju Array Be**	**44.94**	336	P		**P**	04 17 55.0	-0.1
ASAJ	**Asahikawa**	**47.51**	354	LR		LR	04 36 49.4	
	comp=Z,476nm,21.3s,baz=139,slow=34							
USRK	**Ussuriysk Arra**	**49.62**	344	P		**P**	04 18 31.6	+0.3
	1.9nm,0.6s,baz=189,slow=8.1,SNR=5.0							
USRK				LR		LR	04 37 16.9	
	comp=Z,483nm,20.6s,baz=145,slow=33							
CMAR	**Chiang Mai Arr**	**53.65**	296	P		**P**	04 19 02.1	+0.2
CMAR	**Chiang Mai Arr**	**53.65**	296	P		**P**	04 19 02.1	+0.2
	1.2nm,0.4s,baz=111,slow=4.9,SNR=7.3							
CMAR				LR		LR	04 42 46.1	
	comp=Z,151nm,19.2s,baz=282,slow=37							
CHTO	**Chiang Mai**	**53.76**	296	*e*P		**P**	04 19 02.0	-0.8
	2.9nm,0.6s							
PETK	**Petropavlovsk-**	**56.67**	6	P		**P**	04 19 24.3	+1.1
PETK	**Petropavlovsk-**	**56.67**	6	P		**P**	04 19 24.3	+1.1
	2.8nm,0.7s,baz=166,slow=6.7,SNR=2.5							
PETK				LR		LR	04 40 03.1	
	comp=Z,286nm,21.9s,baz=188,slow=32							
PPT	**Papeete**	**61.96**	108	LR		LR	04 41 08.9	
	comp=Z,21nm,18.3s,baz=300,slow=30							
PPT2	**Papeete2**	**61.96**	108	*e*LR		LR	04 38 36.2	
	342nm,26.0s							
ULN	**Ulaanbaatar**	**62.65**	330	*e*P		**P**	04 20 05.2	+0.5
	7.1nm,1.1s							
TBI	**Tubuai**	**62.79**	114	*e*LR		LR	04 38 56.8	
	320nm,28.5s							
SONM	**Songino Array**	**62.97**	329	P		**P**	04 20 06.7	-0.1
SONM	**Songino Array**	**62.97**	329	P		**P**	04 20 06.7	-0.1
	2.9nm,0.7s,baz=148,slow=6.1,SNR=14							
SONM				LR		LR	04 46 17.6	
	comp=Z,314nm,18.9s,baz=299,slow=35							
BILL	**Bilibino**	**72.20**	7	*e*P		**P**	04 21 05.4	+0.8
	4.2nm,0.9s							
VNDA	**Vanda**	**74.52**	177	*e*P		**P**	04 21 17.6	-0.5
	1.6nm,0.7s							
VNDA	**Vanda**	**74.52**	177	P		**P**	04 21 17.6	-0.4
	1.1nm,0.8s,baz=311,slow=9.2,SNR=5.8							
VNDA				LR		LR	04 49 33.9	
	comp=Z,202nm,21.4s,baz=161,slow=32							
MK31	**Makanchi Array**	**76.59**	320	*e*P		**P**	04 21 29.9	-0.7
MKAR	**Makanchi Array**	**76.59**	320	P		**P**	04 21 31.1	+0.5
MKAR	**Makanchi Array**	**76.59**	320	P		**P**	04 21 31.1	+0.5
	1.6nm,0.8s,baz=98,slow=7.5,SNR=11							
MKAR				LR		LR	04 55 49.3	
	comp=Z,305nm,18.2s,baz=120,slow=36							
ZAA0	**Zalesovo Array**	**77.71**	327	*e*P		**P**	04 21 35.8	-0.9
ZALV	**Zalesovo Beam**	**77.71**	327	P		**P**	04 21 36.3	-0.3
ZALV	**Zalesovo Beam**	**77.71**	327	P		**P**	04 21 36.3	-0.3
	4.4nm,0.8s,baz=112,slow=5.2,SNR=18							
ZALV				LR		LR	04 56 22.1	
	comp=Z,234nm,19.0s,baz=245,slow=36							
TKM2	**Tokmak 2**	**80.03**	314	*e*P		**P**	04 21 49.8	-0.2
	1.8nm,0.6s							
KURK	**Kurchatov**	**80.15**	323	*e*P		**P**	04 21 50.1	0.0
	9.7nm,0.9s							
AAK	**Ala-Archa**	**80.76**	314	*e*P		**P**	04 21 53.5	-0.2
	3.8nm,1.1s							
EKS2	**Erkin-Say**	**81.28**	314	*e*P		**P**	04 21 57.9	+1.4
	9.2nm,1.4s							
ILAR	**Eielson Array**	**82.28**	23	P		**P**	04 22 01.1	0.0
ILAR	**Eielson Array**	**82.28**	23	P		**P**	04 22 01.1	0.0
	1.0nm,0.9s,baz=243,slow=4.4,SNR=9.6							
ILAR				LR		LR	04 54 12.8	
	comp=Z,112nm,20.9s,baz=282,slow=32							
KKAR	**Karatay Array**	**83.72**	314	*e*P		**P**	04 22 08.9	-0.2
	5.0nm,1.0s							
MAW	**Mawson**	**85.45**	203	LR		LR	04 57 15.5	
	comp=Z,372nm,21.0s,baz=87,slow=34							
BVAR	**Borovoye Array**	**85.66**	324	P		**P**	04 22 18.8	+0.2
BVAR	**Borovoye Array**	**85.66**	324	P		**P**	04 22 18.8	+0.2
	2.8nm,0.7s,baz=104,slow=6.3,SNR=11							
BVAR				LR		LR	04 59 47.2	
	comp=Z,133nm,20.6s,baz=308,slow=35							
BRVK	**Borovoye**	**85.73**	324	*e*P		**P**	04 22 19.0	0.0
	2.6nm,0.8s							
ABKAR	**Akbulak array**	**91.73**	319	*e*P		**P**	04 22 46.7	-0.9
	1.3nm,0.7s							
NVAR	**Mina Array Bea**	**94.26**	52	LR		LR	05 00 39.6	
	comp=Z,164nm,20.4s,baz=82,slow=32							
YKA	**Yellowknife Ar**	**95.93**	28	P		**P**	04 23 08.3	+1.8
YKA	**Yellowknife Ar**	**95.93**	28	P		**P**	04 23 08.3	+1.8
	0.7nm,0.7s,baz=274,slow=4.9,SNR=15							
SAML	**Samuel**	**145.85**	111	*e*PKPbc		**PKPbc**	04 29 20.3	-0.1
TOA0	**Torodi Ar. Sit**	**146.07**	289	*e*PKPbc		**PKPab**	04 29 21.2	-0.4
TORD	**Torodi Ar. Bea**	**146.07**	289	PKPbc		**PKPbc**	04 29 21.1	0.0
TORD	**Torodi Ar. Bea**	**146.07**	289	PKPbc		**PKPbc**	04 29 21.1	0.0
	4.8nm,1.1s,baz=42,slow=3.3,SNR=18							

MAN 10 04:17:40,10.44N×126.38E,h21km,mb4.5,ML3.4,MS3.3, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.53**	259	*e*P	Pn	04 18 06.7	+0.6
MSLP				*e*S	Sn	04 18 25.4	+0.1
TBP	**Tagbilaran**	**2.59**	254	*e*P	Pb	04 18 23.3	-2.4
BUKP	**Musuan**	**2.86**	207	*e*P	Pn	04 18 26.1	+1.7
PAGZ	**Pagadian**	**3.92**	229	*e*P	Pb	04 18 47.3	-1.2

ROM ***10*** *04:33:04.3±0.1,42.45N×13.38E,h11km,Ml3.3/40, Error ellipse: s-maj=0.8km s-min=0.5km az=58.0*
CSEM ***10*** *04:33:04.5±0.1,42.45N×13.34E,h5km,ML3.9/10, Error ellipse: s-maj=2.4km s-min=1.8km az=32.0*
IDC ***10*** *04:33:04.1±1.3,42.60N×13.23E,h0km,mb3.3/3, mb1 3.4/5,mb1mx3.2/27,mbtmp3.3/5,ML3.1/2,Error ellipse: s-maj=47.0km s-min=14.0km az=99.0*
ISCJB ***10*** *04:33:04.2±0.2,42.46N±0.02×13.36E±0.02,h12km±1km, mb3.3/2,Error ellipse: s-maj=2.9km s-min=2.1km az=25.4*
PDG ***10*** *04:33:04.3±0.3,42.48N×13.35E,h11km±1km,ML3.3/6, Error ellipse: s-maj=0.9km s-min=2.1km az=0.0*
LDG ***10*** *04:33:06.4±0.7,42.44N×13.33E,h2km,Ml2.9/9,Error ellipse: s-maj=12.9km s-min=9.5km az=106.0*

ISC 10 04:33:05.1±0.7, 42.47N±0.02×13.35E±0.02, h12km±4km, n159,σ1§23/211, 9C-12D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.08**	**34**	⇓*i*Pg	**Pg**	**04 33 07.5**	**-0.4**
CAMP				Sg	**Sg**	**04 33 09.5**	**-0.4**
	14µm,0.4s						
CAMP	**Campotosto**	**0.08**	**34**	⇓*i*Pg	**Pg**	**04 33 07.5**	**-0.4**
CAMP				Sg	**Sg**	**04 33 09.5**	**-0.4**
	14µm,0.4s						
AQU	**L'Aquila**	**0.12**	160	Pg	**Pg**	**04 33 07.8**	**-0.4**
AQU				Sg	**Sg**	**04 33 10.1**	**-0.4**
	23µm,0.3s						
AQU	**L'Aquila**	**0.12**	160	Pg	**Pg**	**04 33 07.8**	**-0.4**
AQU				Sg	**Sg**	**04 33 10.1**	**-0.4**
	23µm,0.3s						
TERO	**Teramo**	**0.25**	**51**	Pg	**Pg**	**04 33 09.7**	**-0.6**
TERO				Sg	**Sg**	**04 33 13.6**	**-0.2**
	9µm,0.5s						
TERO	**Teramo**	**0.25**	**51**	Pg	**Pg**	**04 33 09.7**	**-0.6**
TERO				Sg	**Sg**	**04 33 13.6**	**-0.2**
	9µm,0.5s						
FIAM	**Fiamignano**	**0.26**	221	⇑*i*Pg	**Pg**	**04 33 10.3**	**-0.3**
FIAM				Sg	**Sg**	**04 33 14.8**	**+0.6**
	5µm,0.7s						
FIAM	**Fiamignano**	**0.26**	221	⇑*i*Pg	**Pg**	**04 33 10.3**	**-0.3**
FIAM				Sg	**Sg**	**04 33 14.8**	**+0.6**
	5µm,0.7s						
LNSS	**Leonessa**	**0.26**	301	Pg	**Pg**	**04 33 10.5**	**-0.1**
LNSS				Sg	**Sb**	**04 33 15.5**	**-0.9**
	15µm,0.4s						
LNSS	**Leonessa**	**0.26**	301	Pg	**Pg**	**04 33 10.5**	**-0.1**
LNSS				Sg	**Sb**	**04 33 15.5**	**-0.9**
	15µm,0.4s						
FAGN	**Fagnano**	**0.27**	139	Pg	**Pg**	**04 33 10.0**	**-0.7**
FAGN				Sg	**Sg**	**04 33 14.8**	**+0.4**
	27µm,0.4s						
FAGN	**Fagnano**	**0.27**	139	Pg	**Pg**	**04 33 10.0**	**-0.7**
FAGN				Sg	**Sg**	**04 33 14.8**	**+0.4**
	27µm,0.4s						
VCEL	**Villa Celiera**	**0.37**	101	Pg	**Pg**	**04 33 11.9**	**-0.7**
	18µm,0.6s						
VCEL	**Villa Celiera**	**0.37**	101	Pg	**Pg**	**04 33 11.9**	**-0.7**
	18µm,0.6s						
GAVE	**Gavelli**	**0.40**	304	Pg	**Pg**	**04 33 13.0**	**-0.2**
GAVE	**Gavelli**	**0.40**	304	Pg	**Pg**	**04 33 13.0**	**-0.2**
NRCA	**Norcia**	**0.41**	335	Pg	**Pg**	**04 33 12.7**	**-0.5**
NRCA				Sg	**Sg**	**04 33 19.2**	**+0.6**
	4µm,0.1s						
NRCA	**Norcia**	**0.41**	335	Pg	**Pg**	**04 33 12.7**	**-0.5**
NRCA				Sg	**Sg**	**04 33 19.2**	**+0.6**
	4µm,0.1s						
PTQR	**Pietraquaria**	**0.45**	175	Pg	**Pg**	**04 33 13.0**	**-0.9**
PTQR	**Pietraquaria**	**0.45**	175	Pg	**Pg**	**04 33 13.0**	**-0.9**
MNS	**Montasola**	**0.50**	261	⇑*i*Pg	**Pg**	**04 33 14.3**	**-0.6**
MNS				Sg	**Sg**	**04 33 22.0**	**+0.5**
MNS	**Montasola**	**0.50**	261	⇑*i*Pg	**Pg**	**04 33 14.3**	**-0.6**
MNS				Sg	**Sg**	**04 33 22.0**	**+0.5**
OFFI	**Offida**	**0.53**	**28**	Pg	**Pg**	**04 33 15.5**	**0.0**
	7µm,0.5s						
OFFI	**Offida**	**0.53**	**28**	Pg	**Pg**	**04 33 15.5**	**0.0**
	7µm,0.5s						
TRTR	**Tortoreto Alta**	**0.54**	**51**	Pg	**Pb**	**04 33 16.0**	**-0.5**
	12µm,0.8s						
TRTR	**Tortoreto Alta**	**0.54**	**51**	Pg	**Pb**	**04 33 16.0**	**-0.5**
	12µm,0.8s						
CERT	**Cerreto**	**0.58**	208	Pg	**Pg**	**04 33 15.6**	**-0.9**
	5µm,0.6s						
CERT	**Cerreto**	**0.58**	208	Pg	**Pg**	**04 33 15.6**	**-0.9**
	5µm,0.6s						
CESX	**Cesi**	**0.58**	284	Pg	**Pg**	**04 33 15.7**	**-0.8**
CESX				Sg	**Sb**	**04 33 24.7**	**-0.8**
	2µm,0.5s						
CESX	**Cesi**	**0.58**	284	Pg	**Pg**	**04 33 15.7**	**-0.8**
CESX				Sg	**Sb**	**04 33 24.7**	**-0.8**
	2µm,0.5s						
FDMO	**Fiordimonte**	**0.60**	342	Pg	**Pg**	**04 33 16.0**	**-0.8**
FDMO				Sg	**Sb**	**04 33 25.7**	**-0.4**
	870nm,0.3s						
FDMO	**Fiordimonte**	**0.60**	342	Pg	**Pg**	**04 33 16.0**	**-0.8**
FDMO				Sg	**Sb**	**04 33 25.7**	**-0.4**
	870nm,0.3s						
INTR	**Introdacqua**	**0.61**	137	Pg	**Pg**	**04 33 15.6**	**-1.5**
	3µm,0.4s						
INTR	**Introdacqua**	**0.61**	137	Pg	**Pg**	**04 33 15.6**	**-1.5**
	3µm,0.4s						
CESI	**CESI - Serrava**	**0.63**	329	Pg	**Pg**	**04 33 16.7**	**-0.7**
CESI				Sg	**Sb**	**04 33 26.6**	**-0.3**
	336nm,0.4s						
CESI	**CESI - Serrava**	**0.63**	329	Pg	**Pg**	**04 33 16.7**	**-0.7**
CESI				Sg	**Sb**	**04 33 26.6**	**-0.3**
	336nm,0.4s						
VVLD	**Villa Vallelon**	**0.63**	161	Pg	**Pg**	**04 33 16.0**	**-1.4**
	2µm,0.5s						
VVLD	**Villa Vallelon**	**0.63**	161	Pg	**Pg**	**04 33 16.0**	**-1.4**
	2µm,0.5s						
MTCE	**Montecelio**	**0.63**	226	Pg	**Pg**	**04 33 16.4**	**-1.0**
	798nm,0.4s						
MTCE	**Montecelio**	**0.63**	226	Pg	**Pg**	**04 33 16.4**	**-1.0**
	798nm,0.4s						
GUAR	**Guarcino**	**0.67**	182	Pg	**Pg**	**04 33 16.9**	**-1.3**
	1µm,0.4s						
GUAR	**Guarcino**	**0.67**	182	Pg	**Pg**	**04 33 16.9**	**-1.3**
	1µm,0.4s						
LPEL	**Lama dei Pelig**	**0.75**	124	Pg	**Pg**	**04 33 17.7**	**-1.9**
	2µm,0.4s						
LPEL	**Lama dei Pelig**	**0.75**	124	Pg	**Pg**	**04 33 17.7**	**-1.9**
	2µm,0.4s						
ASSB	**Assisi San Ben**	**0.77**	319	Pg	**Pg**	**04 33 19.1**	**-0.9**
	692nm,0.3s						
ASSB	**Assisi San Ben**	**0.77**	319	Pg	**Pg**	**04 33 19.1**	**-0.9**
	692nm,0.3s						
CAFR	**Castel Frentan**	**0.78**	108	Pg	**Pg**	**04 33 19.2**	**-1.0**
	3µm,0.3s						
CAFR	**Castel Frentan**	**0.78**	108	Pg	**Pg**	**04 33 19.2**	**-1.0**
	3µm,0.3s						
POFI	**Posta Fibreno**	**0.80**	160	Pg	**Pg**	**04 33 18.9**	**-1.6**
	738nm,0.6s						
POFI	**Posta Fibreno**	**0.80**	160	Pg	**Pg**	**04 33 18.9**	**-1.6**
	738nm,0.6s						
RMP	**Rome, Mte Porz**	**0.81**	216	Pg	**Pg**	**04 33 20.4**	**-0.4**
	1µm,0.6s						
RMP	**Rome, Mte Porz**	**0.81**	216	Pg	**Pg**	**04 33 20.4**	**-0.4**
	1µm,0.6s						
SDI	**San Donato**	**0.83**	155	Pg	**Pg**	**04 33 19.6**	**-1.6**
SDI	**San Donato**	**0.83**	155	Pg	**Pg**	**04 33 19.6**	**-1.6**
SNTG	**Esanatoglia**	**0.84**	339	Pg	**Pg**	**04 33 20.1**	**-1.3**
	318nm,0.5s						
SNTG	**Esanatoglia**	**0.84**	339	Pg	**Pg**	**04 33 20.1**	**-1.3**
	318nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.91**	184	Pg	**Pg**	**04 33 21.1**	**-1.6**
	881nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.91**	184	Pg	**Pg**	**04 33 21.1**	**-1.6**
	881nm,0.6s						
CING	**Cingoli**	**0.92**	353	Pg	**Pg**	**04 33 21.3**	**-1.5**
	782nm,0.5s						
CING	**Cingoli**	**0.92**	353	Pg	**Pg**	**04 33 21.3**	**-1.5**
	782nm,0.5s						
MURB	**Monte Urbino**	**1.00**	323	Pg	**Pb**	**04 33 23.4**	**-1.0**
	2µm,0.3s						
MURB	**Monte Urbino**	**1.00**	323	Pg	**Pb**	**04 33 23.4**	**-1.0**
	2µm,0.3s						
CERA	**Filignano**	**1.00**	150	Pg	**Pb**	**04 33 22.3**	**-2.1**
	638nm,0.6s						
CERA	**Filignano**	**1.00**	150	Pg	**Pb**	**04 33 22.3**	**-2.1**
	638nm,0.6s						
MGAB	**Montegabbione**	**1.01**	297	Pg	**Pb**	**04 33 23.6**	**-1.0**
	1µm,0.4s						
MGAB	**Montegabbione**	**1.01**	297	Pg	**Pb**	**04 33 23.6**	**-1.0**
	1µm,0.4s						
MIDA	**Miranda**	**1.07**	140	Pg	**Pb**	**04 33 23.2**	**-2.3**
	843nm,0.8s						
MIDA	**Miranda**	**1.07**	140	Pg	**Pb**	**04 33 23.2**	**-2.3**
	843nm,0.8s						
ARVD	**Arcevia**	**1.07**	344	Pg	**Pb**	**04 33 24.3**	**-1.3**
	440nm,0.7s						
ARVD	**Arcevia**	**1.07**	344	Pg	**Pb**	**04 33 24.3**	**-1.3**
	440nm,0.7s						
AOI	**Ancona**	**1.10**	**10**	Pn	**Pb**	**04 33 24.9**	**-1.2**
	402nm,0.6s						
AOI	**Ancona**	**1.10**	**10**	Pn	**Pb**	**04 33 24.9**	**-1.2**
	402nm,0.6s						
SACS	**San Casciano d**	**1.13**	290	Pn	**Pb**	**04 33 25.8**	**-0.8**
	290nm,0.6s						
LATE	**Laterza**	**1.15**	278	Pn	**Pb**	**04 33 26.1**	**-0.8**
	641nm,0.7s						
LATE	**Laterza**	**1.15**	278	Pn	**Pb**	**04 33 26.1**	**-0.8**
	641nm,0.7s						
PIEI	**Pieia**	**1.22**	331	Pn	**Pn**	**04 33 27.0**	**-1.1**
	201nm,0.5s						
PIEI	**Pieia**	**1.22**	331	Pn	**Pn**	**04 33 27.0**	**-1.1**
	201nm,0.5s						
FSSB	**Fossombrone**	**1.29**	341	Pn	**Pn**	**04 33 28.5**	**-0.5**
	741nm,0.4s						
FSSB	**Fossombrone**	**1.29**	341	Pn	**Pn**	**04 33 28.5**	**-0.5**
	741nm,0.4s						
CAFI	**Castiglion Fio**	**1.33**	311	Pn	**Pn**	**04 33 29.4**	**-0.2**
	345nm,0.5s						
CAFI	**Castiglion Fio**	**1.33**	311	Pn	**Pn**	**04 33 29.4**	**-0.2**
	345nm,0.5s						
ARCI	**Arcidosso**	**1.43**	286	Pn	**Pb**	**04 33 31.4**	**-0.4**
	83nm,0.7s						
ARCI	**Arcidosso**	**1.43**	286	Pn	**Pb**	**04 33 31.4**	**-0.4**
	83nm,0.7s						
PARC	**Parchiule**	**1.43**	326	Pn	**Pb**	**04 33 31.5**	**-0.3**
	297nm,0.7s						
PARC	**Parchiule**	**1.43**	326	Pn	**Pb**	**04 33 31.5**	**-0.3**
	297nm,0.7s						
MAON	**Monte Argentar**	**1.64**	269	Pn	**Pn**	**04 33 33.4**	**-0.4**
	69nm,0.6s						
MAON	**Monte Argentar**	**1.64**	269	Pn	**Pn**	**04 33 33.4**	**-0.4**
	69nm,0.6s						
CSNT	**Castellina Chi**	**1.81**	304	Pn	**Pb**	**04 33 37.2**	**-1.0**
	50nm,0.6s						
CSNT	**Castellina Chi**	**1.81**	304	Pn	**Pb**	**04 33 37.2**	**-1.0**
	50nm,0.6s						
CASP	**Castiglione de**	**1.86**	281	Pn	**Pn**	**04 33 36.8**	**0.0**
	59nm,1.0s						
CASP	**Castiglione de**	**1.86**	281	Pn	**Pn**	**04 33 36.8**	**0.0**
	59nm,1.0s						
MS1	**Monte Sant'Ang**	**2.08**	111	*e*Pn	**Pb**	**04 33 42.8**	**0.0**
MS1				*e*Sn	**Sb**	**04 34 09.3**	**+0.8**
NVLJ	**Novalja**	**2.37**	**27**	*e*Pn	**Pn**	**04 33 43.3**	**-0.5**
NVLJ				Sn	**Sn**	**04 34 13.5**	**+0.6**
NVLJ	**Novalja**	**2.37**	**27**	*e*Pn	**Pn**	**04 33 43.3**	**-0.5**
NVLJ				Sn	**Sn**	**04 34 13.4**	**+0.6**
MAIM	**Mastiano**	**2.54**	306	P	**Pn**	**04 33 47.7**	**+1.6**
SKDS	**Skadanscina**	**3.12**	**9**	*i* Pn	**Pn**	**04 33 53.7**	**-0.4**
SKDS	**Skadanscina**	**3.12**	**9**	Pn	**Pn**	**04 33 53.7**	**-0.4**
KNDS	**Knezji Dol**	**3.15**	**13**	*i* Pn	**Pn**	**04 33 54.8**	**+0.2**
KNDS	**Knezji Dol**	**3.15**	**13**	*i* Pn	**Pn**	**04 33 54.8**	**+0.2**
PGF	**Pioggiola**	**3.21**	273	*e*Pn	**Pn**	**04 33 56.1**	**+0.6**
PGF				*e*Sn	**Sn**	**04 34 36.4**	**+2.6**
	4.7nm,0.4s						
PGF	**Pioggiola**	**3.21**	273	*e*Pn	**Pn**	**04 33 56.1**	**+0.6**
PGF				*e*Sn	**Sn**	**04 34 36.4**	**+2.6**
	2.3nm,0.4s						
STON	**Ston**	**3.24**	**81**	*e*Pn	**Pn**	**04 33 55.6**	**-0.1**
STON				Sn	**Sn**	**04 34 34.0**	**-0.2**
STON	**Ston**	**3.24**	**81**	*e*Pn	**Pn**	**04 33 55.6**	**-0.1**
STON				Sn	**Sn**	**04 34 33.9**	**-0.2**
SC2M	**Scurtabo**	**3.38**	306	P	**Pn**	**04 33 58.7**	**+0.9**
HCY	**Herceg Novi**	**3.81**	**89**	⇑*i*Pn	**Pn**	**04 34 03.6**	**0.0**
HCY				*e*Sn	**Sn**	**04 34 49.8**	**+1.5**
HCY	**Herceg Novi**	**3.81**	**89**	⇑*i*Pn	**Pn**	**04 34 03.6**	**0.0**
HCY				*e*Sn	**Sn**	**04 34 49.8**	**+1.5**
BRY	**Bratogost**	**3.85**	**82**	⇑*i*Pn	**Pn**	**04 34 04.5**	**+0.2**
BRY				*e*Sn	**Sn**	**04 34 51.1**	**+1.5**
BRY	**Bratogost**	**3.85**	**82**	⇑*i*Pn	**Pn**	**04 34 04.5**	**+0.2**
BRY				*e*Sn	**Sn**	**04 34 51.1**	**+1.5**
BUM	**Brajici-Budva**	**4.11**	**90**	⇓*i*Pn	**Pn**	**04 34 08.5**	**+0.7**
BUM				*e*Sn	**Sn**	**04 34 57.1**	**+1.2**
BUM	**Brajici-Budva**	**4.11**	**90**	⇓*i*Pn	**Pn**	**04 34 08.

1.6nm,0.4s
CDF Champ du Feu 7.32 326 *e*Pn **Pn** **04 34 52.4 +0.6**
KEST Kesra 7.41 206 Pn Pn 04 34 56.7 +3.6
0.1nm,0.3s,baz=342,slow=9.6,SNR=3.8
HAU Haudompre 7.42 321 *e*Pn **Pn** **04 34 54.0 +0.8**
HAU *e*Sn **Sn** **04 36 12.8 -4.4**
7.4nm,0.5s
HAU Haudompre 7.42 321 *e*Pn **Pn** **04 34 54.0 +0.8**
FINES FINESS Array B 20.49 18 P Pn 04 37 43.6 -1.1
1.2nm,0.7s,baz=179,slow=11,SNR=4.3
TORD Torodi Ar. Bea 30.91 203 P **P** **04 39 22.8 +1.1**
0.3nm,0.7s,baz=8.2,slow=9.3,SNR=3.4
MKAR Makanchi Array 47.82 60 P **P** **04 41 42.4 0.0**
0.2nm,0.6s,baz=281,slow=8.3,SNR=3.8

*ISCJB **10** 04:39:16.5±0.2, 42˚.44N±0˚.02×13˚.40E±0˚.03, h14km±2km, mb3.1/1, Error ellipse: s-maj=3.6km s-min=2.4km az=146.8*
*CSEM **10** 04:39:16.9±0.1, 42˚.44N×13˚.40E, h8km, ML3.7/11, Error ellipse: s-maj=2.5km s-min=1.7km az=63.0*
*ROM **10** 04:39:16.6±0.1, 42˚.44N×13˚.41E, h8km±1km, Ml3.0/34, Error ellipse: s-maj=1.4km s-min=0.9km az=68.0*
*IDC **10** 04:39:18.2±1.9, 42˚.62N×13˚.56E, h0km, mb3.1/1, mb1 3.2/4, mb1mx3.1/28, mbtmp3.1/4, ML2.9/3, Error ellipse: s-maj=36.3km s-min=19.2km az=85.0*
ISC 10 04:39:17.4±0.8, **42˚.45N**±0˚.02×**13˚.42E**±0˚.02, **h11**km±4km, **n94**, σ0**85**/131, **6C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.09**	**355**	⇑*i* Pg	**Pg**	**04 39 19.8**	**-0.3**
CAMP				Sg	**Sg**	**04 39 21.7**	**-0.4**
	9μm,0.6s						
CAMP	**Campotosto**	**0.09**	**355**	⇑*i* Pg	**Pg**	**04 39 19.8**	**-0.3**
CAMP				Sg	**Sg**	**04 39 21.7**	**-0.4**
	9μm,0.6s						
AQU	**L'Aquila**	**0.09**	**188**	Pg	**Pg**	**04 39 19.9**	**-0.2**
AQU				Sg	**Sg**	**04 39 21.9**	**-0.1**
AQU	**L'Aquila**	**0.09**	**188**	Pg	**Pg**	**04 39 19.9**	**-0.2**
AQU				Sg	**Sg**	**04 39 21.9**	**-0.1**
FAGN	**Fagnano**	**0.22**	**146**	Pg	**Pg**	**04 39 21.9**	**-0.1**
FAGN				Sg	**Sg**	**04 39 25.5**	**+0.3**
FAGN	**Fagnano**	**0.22**	**146**	Pg	**Pg**	**04 39 21.9**	**-0.1**
FAGN				Sg	**Sg**	**04 39 25.5**	**+0.3**
TERO	**Teramo**	**0.22**	**38**	⇑*i* Pg	**Pg**	**04 39 21.7**	**-0.4**
TERO				Sg	**Sg**	**04 39 25.2**	**-0.1**
	5μm,0.1s						
TERO	**Teramo**	**0.22**	**38**	⇑*i* Pg	**Pg**	**04 39 21.7**	**-0.4**
TERO				Sg	**Sg**	**04 39 25.2**	**-0.1**
	5μm,0.1s						
FIAM	**Fiamignano**	**0.29**	**231**	Pg	**Pg**	**04 39 22.9**	**-0.3**
FIAM				Sg	**Sg**	**04 39 26.9**	**-0.3**
	2μm,0.5s						
FIAM	**Fiamignano**	**0.29**	**231**	Pg	**Pg**	**04 39 22.9**	**-0.3**
FIAM				Sg	**Sg**	**04 39 26.9**	**-0.3**
	2μm,0.5s						
VCEL	**Villa Celiera**	**0.32**	**99**	Pg	**Pg**	**04 39 23.7**	**-0.1**
VCEL				Sg	**Sb**	**04 39 30.0**	**-0.3**
VCEL	**Villa Celiera**	**0.32**	**99**	Pg	**Pg**	**04 39 23.7**	**-0.1**
VCEL				Sg	**Sb**	**04 39 30.0**	**-0.3**
LNSS	**Leonessa**	**0.32**	**299**	Pg	**Pg**	**04 39 23.7**	**-0.2**
LNSS				Sg	**Sg**	**04 39 29.0**	**+0.8**
	2μm,0.6s						
LNSS	**Leonessa**	**0.32**	**299**	Pg	**Pg**	**04 39 23.7**	**-0.2**
LNSS				Sg	**Sg**	**04 39 29.0**	**+0.8**
	2μm,0.6s						
PTQR	**Pietraquaria**	**0.42**	**182**	Pg	**Pg**	**04 39 25.1**	**-0.7**
PTQR	**Pietraquaria**	**0.42**	**182**	Pg	**Pg**	**04 39 25.1**	**-0.7**
NRCA	**Norcia**	**0.45**	**330**	⇑*i* Pg	**Pg**	**04 39 25.7**	**-0.5**
NRCA				Sg	**Sg**	**04 39 32.4**	**+0.3**
	2μm,0.2s						
NRCA	**Norcia**	**0.45**	**330**	⇑*i* Pg	**Pg**	**04 39 25.7**	**-0.5**
NRCA				Sg	**Sg**	**04 39 32.4**	**+0.3**
	2μm,0.2s						
TRTR	**Tortoreto Alta**	**0.51**	**45**	Pg	**Pb**	**04 39 28.0**	**-0.4**
	3μm,0.7s						
TRTR	**Tortoreto Alta**	**0.51**	**45**	Pg	**Pb**	**04 39 28.0**	**-0.4**
	3μm,0.7s						
OFFI	**Offida**	**0.53**	**22**	Pg	**Pg**	**04 39 27.9**	**+0.3**
	7μm,0.4s						
OFFI	**Offida**	**0.53**	**22**	Pg	**Pg**	**04 39 27.9**	**+0.3**
	7μm,0.4s						
MNS	**Montasola**	**0.55**	**264**	Pg	**Pg**	**04 39 27.5**	**-0.6**
	470nm,0.4s						
MNS	**Montasola**	**0.55**	**264**	Pg	**Pg**	**04 39 27.5**	**-0.6**
	470nm,0.4s						
INTR	**Introdacqua**	**0.57**	**140**	Pg	**Pg**	**04 39 27.9**	**-0.5**
INTR				Sg	**Sb**	**04 39 37.1**	**-0.4**
	2μm,0.3s						
INTR	**Introdacqua**	**0.57**	**140**	Pg	**Pg**	**04 39 27.9**	**-0.5**
INTR				Sg	**Sb**	**04 39 37.1**	**-0.4**
	2μm,0.3s						
CERT	**Cerreto**	**0.59**	**213**	Pg	**Pg**	**04 39 28.0**	**-0.9**
	1μm,0.4s						
CERT	**Cerreto**	**0.59**	**213**	Pg	**Pg**	**04 39 28.0**	**-0.9**
	1μm,0.4s						
VVLD	**Villa Vallelon**	**0.60**	**165**	Pg	**Pg**	**04 39 28.2**	**-0.8**
	1μm,0.7s						
VVLD	**Villa Vallelon**	**0.60**	**165**	Pg	**Pg**	**04 39 28.2**	**-0.8**
	1μm,0.7s						
FDMO	**Fiordimonte**	**0.64**	**338**	Pg	**Pg**	**04 39 28.9**	**-0.9**
FDMO				Sg	**Sg**	**04 39 38.4**	**+0.2**
	581nm,0.4s						
FDMO	**Fiordimonte**	**0.64**	**338**	Pg	**Pg**	**04 39 28.9**	**-0.9**
FDMO				Sg	**Sg**	**04 39 38.4**	**+0.2**
	581nm,0.4s						
CESX	**Cesi**	**0.64**	**285**	Pg	**Pg**	**04 39 29.0**	**-0.8**
	415nm,0.5s						
CESX	**Cesi**	**0.64**	**285**	Pg	**Pg**	**04 39 29.0**	**-0.8**
	415nm,0.5s						
GUAR	**Guarcino**	**0.66**	**187**	Pg	**Pg**	**04 39 30.1**	**0.0**
	439nm,0.5s						
GUAR	**Guarcino**	**0.66**	**187**	Pg	**Pg**	**04 39 30.1**	**0.0**
	439nm,0.5s						
MTCE	**Montecelio**	**0.66**	**230**	Pg	**Pg**	**04 39 30.0**	**-0.1**
	805nm,0.6s						
MTCE	**Montecelio**	**0.66**	**230**	Pg	**Pg**	**04 39 30.0**	**-0.1**
	805nm,0.6s						
CESI	**CESI - Serrava**	**0.67**	**326**	Pg	**Pg**	**04 39 29.6**	**-0.9**
CESI				Sg	**Sb**	**04 39 40.2**	**-0.4**
	193nm,0.4s						
CESI	**CESI - Serrava**	**0.67**	**326**	Pg	**Pg**	**04 39 29.6**	**-0.9**
CESI				Sg	**Sb**	**04 39 40.2**	**-0.4**
	193nm,0.4s						
LPEL	**Lama dei Pelig**	**0.69**	**125**	Pg	**Pg**	**04 39 29.8**	**-1.0**
LPEL				Sg	**Sb**	**04 39 40.7**	**-0.5**
	849nm,0.6s						
LPEL	**Lama dei Pelig**	**0.69**	**125**	Pg	**Pg**	**04 39 29.8**	**-1.0**
LPEL				Sg	**Sb**	**04 39 40.7**	**-0.5**
	849nm,0.6s						
CAFR	**Castel Frentan**	**0.72**	**107**	Pg	**Pg**	**04 39 31.0**	**-0.4**
	817nm,0.3s						
CAFR	**Castel Frentan**	**0.72**	**107**	Pg	**Pg**	**04 39 31.0**	**-0.4**
	817nm,0.3s						
POFI	**Posta Fibreno**	**0.76**	**163**	Pg	**Pg**	**04 39 30.9**	**-1.2**
	239nm,0.6s						
POFI	**Posta Fibreno**	**0.76**	**163**	Pg	**Pg**	**04 39 30.9**	**-1.2**
	239nm,0.6s						
SDI	**San Donato**	**0.79**	**158**	Pg	**Pg**	**04 39 31.5**	**-1.2**
	188nm,0.3s						
SDI	**San Donato**	**0.79**	**158**	Pg	**Pg**	**04 39 31.5**	**-1.2**
	188nm,0.3s						
ASSB	**Assisi San Ben**	**0.82**	**317**	Pg	**Pg**	**04 39 32.2**	**-1.0**
ASSB				Sg	**Sb**	**04 39 44.6**	**-0.1**
	388nm,0.5s						
ASSB	**Assisi San Ben**	**0.82**	**317**	Pg	**Pg**	**04 39 32.2**	**-1.0**
ASSB				Sg	**Sb**	**04 39 44.6**	**-0.1**
	388nm,0.5s						
RMP	**Rome, Mte Porz**	**0.83**	**220**	Pg	**Pb**	**04 39 33.5**	**-0.3**
	544nm,0.6s						
RMP	**Rome, Mte Porz**	**0.83**	**220**	Pg	**Pb**	**04 39 33.5**	**-0.3**
	544nm,0.6s						
SNTG	**Esanatoglia**	**0.88**	**337**	Pg	**Pg**	**04 39 33.1**	**-1.3**
	135nm,0.3s						
SNTG	**Esanatoglia**	**0.88**	**337**	Pg	**Pg**	**04 39 33.1**	**-1.3**
	135nm,0.3s						
GIUL	**Giuliano Di Ro**	**0.90**	**188**	Pg	**Pg**	**04 39 34.5**	**-0.2**
	288nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.90**	**188**	Pg	**Pg**	**04 39 34.5**	**-0.2**
	288nm,0.6s						
RNI2	**Rionero Sannit**	**0.92**	**143**	Pg	**Pg**	**04 39 34.3**	**-0.9**
	407nm,0.7s						
RNI2	**Rionero Sannit**	**0.92**	**143**	Pg	**Pg**	**04 39 34.3**	**-0.9**
	407nm,0.7s						
CING	**Cingoli**	**0.94**	**350**	Pg	**Pg**	**04 39 34.3**	**-1.2**
CING				Sg	**Sb**	**04 39 48.7**	**+0.4**
	406nm,0.6s						
CING	**Cingoli**	**0.94**	**350**	Pg	**Pg**	**04 39 34.3**	**-1.2**
CING				Sg	**Sb**	**04 39 48.7**	**+0.4**
	406nm,0.6s						
CERA	**Filignano**	**0.96**	**152**	Pg	**Pg**	**04 39 34.2**	**-1.7**
	394nm,0.5s						
CERA	**Filignano**	**0.96**	**152**	Pg	**Pg**	**04 39 34.2**	**-1.7**
	394nm,0.5s						
MIDA	**Miranda**	**1.02**	**142**	Pg	**Pg**	**04 39 35.1**	**-1.9**
	190nm,0.4s						
MIDA	**Miranda**	**1.02**	**142**	Pg	**Pg**	**04 39 35.1**	**-1.9**
	190nm,0.4s						
MURB	**Monte Urbino**	**1.05**	**321**	Pg	**Pb**	**04 39 36.6**	**-1.0**
	684nm,0.3s						
MURB	**Monte Urbino**	**1.05**	**321**	Pg	**Pb**	**04 39 36.6**	**-1.0**
	684nm,0.3s						
MGAB	**Montegabbione**	**1.07**	**296**	Pg	**Pb**	**04 39 37.0**	**-0.9**
	306nm,0.5s						
MGAB	**Montegabbione**	**1.07**	**296**	Pg	**Pb**	**04 39 37.0**	**-0.9**
	306nm,0.5s						
ARVD	**Arcevia**	**1.11**	**342**	Pg	**Pb**	**04 39 37.0**	**-1.6**
	293nm,0.8s						
ARVD	**Arcevia**	**1.11**	**342**	Pg	**Pb**	**04 39 37.0**	**-1.6**
	293nm,0.8s						
AOI	**Ancona**	**1.11**	**7**	Pg	**Pb**	**04 39 37.7**	**-0.9**
	329nm,0.5s						
AOI	**Ancona**	**1.11**	**7**	Pg	**Pb**	**04 39 37.7**	**-0.9**
	329nm,0.5s						
SACS	**San Casciano d**	**1.18**	**290**	Pg	**Pb**	**04 39 39.2**	**-0.7**
	269nm,1.3s						
PIEI	**Pieia**	**1.27**	**330**	Pg	**Pn**	**04 39 40.2**	**-0.9**
	178nm,0.6s						
PIEI	**Pieia**	**1.27**	**330**	Pg	**Pn**	**04 39 40.2**	**-0.9**
	178nm,0.6s						
CAFI	**Castiglion Fio**	**1.38**	**310**	Pn	**Pn**	**04 39 42.9**	**+0.2**
	129nm,0.8s						
CAFI	**Castiglion Fio**	**1.38**	**310**	Pn	**Pn**	**04 39 42.9**	**+0.2**
	129nm,0.8s						
PARC	**Parchiule**	**1.48**	**325**	Pn	**Pn**	**04 39 44.3**	**+0.3**
	180nm,0.6s						
PARC	**Parchiule**	**1.48**	**325**	Pn	**Pn**	**04 39 44.3**	**+0.3**
	180nm,0.6s						
MS1	**Monte Sant'Ang**	**2.02**	**111**	*e*Pn	**Pg**	**04 39 55.3**	**-0.8**
MS1				*e*Sn	**Sg**	**04 40 21.1**	**-1.2**
NVLJ	**Novalja**	**2.36**	**26**	*e*Pn	**Pn**	**04 39 56.0**	**-0.2**
NVLJ				Sn	**Sn**	**04 40 25.8**	**+0.6**
NVLJ	**Novalja**	**2.36**	**26**	*e*Pn	**Pn**	**04 39 55.9**	**-0.2**
NVLJ				Sn	**Sn**	**04 40 25.7**	**+0.6**
STON	**Ston**	**3.19**	**81**	*e*Pn	**Pn**	**04 40 08.2**	**+0.7**
STON				Sn	**Sn**	**04 40 45.6**	**+0.3**
STON	**Ston**	**3.19**	**81**	*e*Pn	**Pn**	**04 40 08.1**	**+0.7**
STON				Sn	**Sn**	**04 40 45.6**	**+0.3**
VOY	**Vojsko**	**3.60**	**5**	*e*Pn	**Pn**	**04 40 13.9**	**+0.7**
VOY				*e*		04 40 25.3	
VOY				*e*Sn	**Sn**	**04 40 56.3**	**+0.6**
VOY	**Vojsko**	**3.60**	**5**	*e*Pn	**Pn**	**04 40 13.9**	**+0.7**
VOY				*e*Sn	**Sn**	**04 40 56.3**	**+0.6**
DAVOX	**Davos/Dischmat**	**5.01**	**331**	Pn	**Pn**	**04 40 35.5**	**+2.8**
	0.6nm,0.3s,baz=143,slow=18,SNR=5.2						
DAVOX				Sn	**Sn**	**04 41 32.8**	**+2.0**
	0.6nm,0.3s,baz=345,slow=18,SNR=2.2						
IVAS	**Ivanjica**	**5.07**	**75**	*e*Pn	**Pn**	**04 40 35.3**	**+2.0**
GERES	**GERESS Array B**	**6.40**	**2**	Pn	**Pn**	**04 40 50.4**	**-1.3**
	0.2nm,0.3s,baz=179,slow=12,SNR=6.5						
GERES				Sn	**Sn**	**04 42 04.3**	**-0.5**
	0.6nm,0.3s,baz=182,slow=25,SNR=6.5						
KHC	**Kasperske Hory**	**6.69**	**1**	*e*PN	**Pn**	**04 40 56.8**	**+1.3**
KHC				*e*SN	**Sn**	**04 42 09.7**	**-2.0**
KHC	**Kasperske Hory**	**6.69**	**1**	Pn	**Pn**	**04 40 56.8**	**+1.3**
ZAPS	**Zavoj**	**6.82**	**80**	*e*Pn	**Pn**	**04 40 57.6**	**+0.2**
KEST	**Kesra**	**7.42**	**207**	Pn	Pn	04 41 11.1	+5.5
	0.2nm,0.3s,baz=325,slow=7.2,SNR=4.4						
MKAR	**Makanchi Array**	**47.79**	**60**	P	**P**	**04 47 56.1**	**+1.5**
	0.1nm,0.5s,baz=278,slow=7.7,SNR=2.7						

*IDC **10** 05:24:31.1±4.2, 3˚.44S×149˚.55E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.8/18, mbtmp3.9/6, MS3.0/2, Ms1 3.0/2, ms1mx2.7/35, Error ellipse: s-maj=139.4km s-min=22.8km az=105.0*
*NEIC **10** 05:24:34.1±2.3, 3˚.41S×149˚.22E, h10km, mb4.5/4, Error ellipse: s-maj=79.0km s-min=12.2km az=103.0*
ISC 10 05:24:35.6±2.9, **3˚.5S**±0˚.2×**149˚.3E**±0˚.7, **h20**km, **n20,** σ0**˚79**/18, **mb4.0**/9, **Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**16.78**	**190**	LR	LR	05 34 13.9	
	comp=Z,77nm,19.3s,baz=230,slow=35						
GUMO	**Guam**	**17.50**	**346**	LR	LR	05 33 08.6	
	comp=Z,38nm,20.8s,baz=92,slow=30						
WRAB	**Tennant Creek**	**21.90**	**220**	*e*P	**P**	**05 29 26.2**	**-1.4**
	9.1nm,1.0s						
WRA	**Warramunga Arr**	**21.91**	**220**	P	**P**	**05 29 27.4**	**-0.5**
WRA	**Warramunga Arr**	**21.91**	**220**	P	**P**	**05 29 27.4**	**-0.5**
	1.9nm,0.7s,baz=44,slow=11,SNR=12						
AS31	**Alice Springs**	**24.97**	**215**	*e*P	**P**	**05 29 59.3**	**+1.2**
ASAR	**Alice Springs**	**24.97**	**215**	P	**P**	**05 29 58.6**	**+0.6**
ASAR	**Alice Springs**	**24.97**	**215**	P	**P**	**05 29 58.6**	**+0.6**
	1.8nm,0.7s,baz=45,slow=7.5,SNR=23						
FITZ	**Fitzroy Crossi**	**27.33**	**236**	*e*P	**P**	**05 30 19.8**	**+0.4**
	9.4nm,1.1s						
FITZ	**Fitzroy Crossi**	**27.33**	**236**	P	**P**	**05 30 20.6**	**+1.2**
	4.2nm,0.9s,baz=44,slow=10,SNR=7.3						
FORT	**Forrest**	**33.74**	**214**	*e*P	**P**	**05 31 16.0**	**0.0**
	11nm,0.8s						
SONM	**Songino Array**	**63.35**	**329**	P	**P**	**05 35 03.5**	**-0.1**
SONM	**Songino Array**	**63.35**	**329**	P	**P**	**05 35 03.5**	**-0.1**
	0.5nm,0.7s,baz=140,slow=7.6,SNR=3.3						
MKAR	**Makanchi Array**	**77.02**	**320**	P	**P**	**05 36 27.0**	**-0.2**
MKAR	**Makanchi Array**	**77.02**	**320**	P	**P**	**05 36 27.0**	**-0.2**
	1.2nm,1.1s,baz=101,slow=6.3,SNR=6.0						
ZALV	**Zalesovo Beam**	**78.11**	**327**	P	**P**	**05 36 32.0**	**-1.1**
ZALV	**Zalesovo Beam**	**78.11**	**327**	P	**P**	**05 36 32.0**	**-1.1**
	0.7nm,0.5s,baz=122,slow=5.4,SNR=5.0						
KURK	**Kurchatov**	**80.57**	**323**	*e*P	**P**	**05 36 46.5**	**-0.1**
	11nm,1.7s						
TORD	**Torodi Ar. Bea**	**146.55**	**289**	PKPbc	**PKPdf**	**05 44 15.7**	**+0.5**
TORD	**Torodi Ar. Bea**	**146.55**	**289**	PKPbc	**PKPdf**	**05 44 15.7**	**+0.5**
	0.6nm,1.0s,baz=83,slow=2.2,SNR=3.3						

*CSEM **10** 05:28:57.3, 42˚.36N×13˚.39E, h8km, MD1.8/6, After ROM*
ROM 10 05:28:57.3±0.1, **42˚.36N×13˚.39E, h8**km, **Md1.8**/6, **Ml1.6**/5, **2D, Error ellipse: s-maj=0.9km s-min=0.8km az=51.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.01**	**144**	⇓*i* Pg	Pg	05 28 59.1	+0.2
AQU				Sg	Sg	05 29 00.0	+0.1
	1μm,0.3s						
AQU	**L'Aquila**	**0.01**	**144**	⇓*i* Pg	Pg	05 28 59.1	+0.2
AQU				Sg	Sg	05 29 00.0	+0.1
	1μm,0.3s						
CAMP	**Campotosto**	**0.17**	**4**	Pg	Pg	05 29 01.7	+0.6
CAMP				Sg	Sg	05 29 04.6	+0.9
	72nm,0.5s						
CAMP	**Campotosto**	**0.17**	**4**	Pg	Pg	05 29 01.7	+0.6
CAMP				Sg	Sg	05 29 04.6	+0.9
	72nm,0.5s						
FAGN	**Fagnano**	**0.17**	**124**	Pg	Pg	05 29 01.7	+0.7
FAGN				Sg	Sg	05 29 04.7	+1.2
	226nm,0.3s						
FAGN	**Fagnano**	**0.17**	**124**	Pg	Pg	05 29 01.7	+0.7
FAGN				Sg	Sg	05 29 04.7	+1.2
	226nm,0.3s						
FIAM	**Fiamignano**	**0.23**	**245**	Pg	Pg	05 29 02.7	+0.7
FIAM				Sg	Sg	05 29 06.4	+1.2
	73nm,0.6s						
FIAM	**Fiamignano**	**0.23**	**245**	Pg	Pg	05 29 02.7	+0.7
FIAM				Sg	Sg	05 29 06.4	+1.2
	73nm,0.6s						
VCEL	**Villa Celiera**	**0.33**	**85**	Pg	Pg	05 29 04.6	+0.5
	78nm,0.4s						
VCEL	**Villa Celiera**	**0.33**	**85**	Pg	Pg	05 29 04.6	+0.5
	78nm,0.4s						
LNSS	**Leonessa**	**0.35**	**313**	Pg	Pg	05 29 05.0	+0.6
LNSS				Sg	Sb	05 29 11.1	-0.8
	58nm,0.3s						
LNSS	**Leonessa**	**0.35**	**313**	Pg	Pg	05 29 05.0	+0.6
LNSS				Sg	Sb	05 29 11.1	-0.8
	58nm,0.3s						

*ISCJB **10** 05:33:17.9±0.6, 45˚.68N±0˚.02×15˚.60E±0˚.04, h14km±5km, Error ellipse: s-maj=4.5km s-min=3.7km az=10.2*
*CSEM **10** 05:33:18.4±0.1, 45˚.68N×15˚.62E, h10km, ML2.7/8, Error ellipse: s-maj=2.0km s-min=1.4km az=117.0*
*VIE **10** 05:33:18.6±0.5, 45˚.71N×15˚.63E, h10km±1km, mb2.0/4, ML2.1/4, Error ellipse: s-maj=3.2km s-min=1.8km az=137.0 25 km NNE of Karlovac*
*LJU **10** 05:33:18.3, 45˚.67N×15˚.60E, h10km, ML2.0*
ISC 10 05:33:18.7±1.0, **45˚.69N**±0˚.02×**15˚.61E**±0˚.03, **h9**km±7km, **n49,** σ0**˚32**/75, **6C-15D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRES	**Cresnjev**	**0.18**	**323**	⇓*i* Pg	**Pg**	**05 33 22.2**	**-0.2**
CRES				*i* Sg	**Sg**	**05 33 24.9**	**-0.1**
CRES							
	comp=Z,184nm,0.1s						
CRES	**Cresnjev**	**0.18**	**323**	⇓*i* Pg	**Pg**	**05 33 22.2**	**-0.2**
CRES				*i* Sg	**Sg**	**05 33 24.9**	**-0.1**
	comp=Z,184nm,0.1s						
GCIS	**Gornji Cirnik**	**0.18**	**4**	⇓*i* Pg	**Pg**	**05 33 22.5**	**0.0**
GCIS				*i* Sg	**Sg**	**05 33 25.6**	**+0.5**
GCIS							
	comp=Z,168nm,0.1s						
GCIS	**Gornji Cirnik**	**0.18**	**4**	⇓*i* Pg	**Pg**	**05 33 22.5**	**0.0**
GCIS				*i* Sg	**Sg**	**05 33 25.6**	**+0.5**
	comp=Z,168nm,0.1s						
CESS	**Cesta pri Krsk**	**0.31**	**340**	*i* Pg	**Pg**	**05 33 24.6**	**-0.2**
CESS				*i* Sg	**Sg**	**05 33 29.2**	**+0.3**
CESS							
	comp=Z,109nm,0.2s						
CESS	**Cesta pri Krsk**	**0.31**	**340**	*i* Pg	**Pg**	**05 33 24.6**	**-0.2**
CESS				*i* Sg	**Sg**	**05 33 29.2**	**+0.3**
	comp=Z,109nm,0.2s						
BOJS	**Bojanci**	**0.31**	**234**	⇓*i* Pg	**Pg**	**05 33 24.7**	**-0.2**
BOJS				*i* Sg	**Sg**	**05 33 29.0**	**0.0**
BOJS							
	comp=Z,56nm,0.1s						
BOJS	**Bojanci**	**0.31**	**234**	⇓*i* Pg	**Pg**	**05 33 24.7**	**-0.2**
BOJS				*i* Sg	**Sg**	**05 33 29.0**	**0.0**
	comp=Z,56nm,0.1s						
GOLS	**Golise**	**0.33**	**2**	*e*Pg	**Pg**	**05 33 25.0**	**-0.2**
GOLS							
	comp=Z,74nm,0.2s						
GOLS	**Golise**	**0.33**	**2**	*e*Pg	**Pg**	**05 33 25.0**	**-0.2**
	comp=Z,74nm,0.2s						
LEGS	**Legarje**	**0.33**	**322**	⇓*i* Pg	**Pg**	**05 33 25.1**	**-0.2**
LEGS				*e*Sg	**Sg**	**05 33 30.0**	**+0.2**
LEGS	**Legarje**	**0.33**	**322**	⇓*i* Pg	**Pg**	**05 33 25.1**	**-0.2**
LEGS				*e*Sg	**Sg**	**05 33 30.0**	**+0.2**
DOBS	**Dobrina**	**0.47**	**348**	⇓*i* Pg	**Pg**	**05 33 28.1**	**+0.1**
DOBS	**Dobrina**	**0.47**	**348**	⇓*i* Pg	**Pg**	**05 33 28.1**	**+0.1**
VISS	**Visnje**	**0.55**	**283**	*i* Pg	**Pg**	**05 33 29.7**	**+0.3**
VISS				*i* Sg	**Sg**	**05 33 36.6**	**-0.1**
VISS							
	comp=Z,28nm,0.2s						
VISS	**Visnje**	**0.55**	**283**	*i* Pg	**Pg**	**05 33 29.7**	**+0.3**
VISS				*i* Sg	**Sg**	**05 33 36.6**	**-0.1**
	comp=Z,28nm,0.2s						
PDKS	**Podkum**	**0.57**	**311**	⇓*i* Pg	**Pg**	**05 33 29.9**	**+0.1**
PDKS				*i* Sg	**Sg**	**05 33 37.0**	**-0.2**
PDKS							
	comp=Z,28nm,0.1s						
PDKS	**Podkum**	**0.57**	**311**	⇓*i* Pg	**Pg**	**05 33 29.9**	**+0.1**
PDKS				*i* Sg	**Sg**	**05 33 37.0**	**-0.2**
	comp=Z,28nm,0.1s						
SISC	**Sisak**	**0.58**	**112**	Sg	**Sg**	**05 33 37.8**	**+0.4**
SISC	**Sisak**	**0.58**	**112**	Sg	**Sg**	**05 33 37.8**	**+0.4**
GBRS	**Gornja Briga**	**0.58**	**255**	*i* Pg	**Pg**	**05 33 30.2**	**+0.2**
VNDS	**Vrh nad Dolski**	**0.76**	**304**	*i* Pg	**Pg**	**05 33 33.4**	**0.0**
VNDS							
	comp=Z,10.0nm,0.1s						
GROS	**Grobnik**	**0.78**	**354**	*i* Pg	**Pg**	**05 33 33.7**	**0.0**
GROS							
	comp=Z,33nm,0.1s						
GROS	**Grobnik**	**0.78**	**354**	*i* Pg	**Pg**	**05 33 33.7**	**0.0**
	comp=Z,33nm,0.1s						
LJU	**Ljubljana**	**0.84**	**296**	*i* Pg	**Pg**	**05 33 34.9**	**+0.1**
LJU	**Ljubljana**	**0.84**	**296**	*i* Pg	**Pg**	**05 33 34.9**	**+0.1**
KOGS	**Kog**	**0.88**	**30**	*i* Pg	**Pg**	**05 33 35.8**	**+0.1**
KOGS	**Kog**	**0.88**	**30**	*i* Pg	**Pg**	**05 33 35.8**	**+0.1**
PERS	**Pernice**	**1.01**	**340**	*i* Pg	**Pg**	**05 33 37.9**	**-0.3**
PERS	**Pernice**	**1.01**	**340**	*i* Pg	**Pg**	**05 33 37.9**	**-0.3**
MOZS	**Mozjanca**	**1.02**	**307**	*i* Pg	**Pg**	**05 33 38.2**	**-0.1**
MOZS	**Mozjanca**	**1.02**	**307**	*i* Pg	**Pg**	**05 33 38.2**	**-0.1**
CRNS	**Crni Vrh**	**1.02**	**293**	*i* Pg	**Pg

AAI	**Ambon**	**0.88**	**129**	P	Pn	05 40 39.6	-10
	baz=0.9,SNR=101						
AAI				S	Sn	05 40 50.5	-11
	baz=0.9,SNR=16						
MSAI	**Masohi**	**1.44**	**99**	P	**Pn**	**05 40 57.3**	**+0.7**
MSAI				S	**Sn**	**05 41 15.9**	**+1.3**
LBMI	**Labuha**	**2.47**	**360**	P	Pn	05 41 07.0	-3.6
LBMI				S	**Sn**	**05 41 36.7**	**-3.0**
BNDI	**Bandanaira**	**2.76**	**120**	P	**Pn**	**05 41 14.8**	**+0.2**
TNTI	**Ternate**	**3.88**	**358**	P	Pn	05 41 26.0	-3.8
SWI	**Sorong**	**4.37**	**59**	P	**Pn**	**05 41 33.7**	**-2.9**
SWI				S	**Sn**	**05 42 24.6**	**-1.7**
SWI	**Sorong**	**4.37**	**59**	P	Pn	05 41 25.8	-11
	baz=4.3,SNR=50						
SWI				S	**Sn**	**05 42 24.7**	**-1.6**
	baz=4.3,SNR=9.6						
FAKI	**Fak Fak**	**4.74**	**88**	P	**Pn**	**05 41 39.3**	**-2.3**
FAKI				S	**Sn**	**05 42 31.8**	**-3.5**
KDI	**Kendari**	**4.95**	**260**	P	**Pn**	**05 41 41.5**	**-3.0**
	457nm,0.8s,10µm2.8nm						
KMSI	**Cibinong**	**5.09**	**316**	P	Pn	05 41 42.4	-4.1
LUWI	**Luwuk**	**5.17**	**294**	P	Pn	05 41 43.7	-3.8
	1µm,1.1s,17µm8.0nm						
MNI	**Manado**	**5.27**	**330**	P	Pn	05 41 44.9	-4.0
	694nm,0.7s,13µm4.6nm						
BBSI	**Bau Bau**	**5.45**	**244**	P	**Pn**	**05 41 53.9**	**+2.5**
	914nm,1.1s,9µm2.7nm						
TLE	**Tual**	**5.78**	**116**	P	**Pn**	**05 41 56.5**	**+0.6**
	589nm,1.1s,13µm2.5nm						
TLE	**Tual**	**5.78**	**116**	P	**Pn**	**05 41 56.9**	**+1.0**
	baz=5.8,SNR=18						
MMRI	**Maumere**	**7.58**	**224**	P	**Pn**	**05 42 21.8**	**+1.3**
	441nm,1.7s,7µm1.7nm						
TTSI	**Tana Toraja**	**7.68**	**270**	P	**Pn**	**05 42 21.0**	**-0.9**
	162nm,0.8s,2µm0.9nm						
BKSI	**Bulukumba**	**7.68**	**253**	P	**Pn**	**05 42 21.2**	**-0.7**
	634nm,1.0s,9µm2.2nm						
SPSI	**Sidrap Palu**	**7.77**	**264**	P	**Pn**	**05 42 22.4**	**-0.7**
	420nm,0.8s,4µm1.5nm						
KAPI	**Kappang**	**7.96**	**256**	*e*Pn	**Pn**	**05 42 24.7**	**-1.0**
KAPI				Sn	**Sn**	**05 43 50.6**	**-3.7**
KAPI				*e*Sn	Sn	05 43 55.4	+1.0
KAPI	**Kappang**	**7.96**	**256**	Pn	**Pn**	**05 42 25.1**	**-0.6**
	SNR=63						
KAPI	**Kappang**	**7.96**	**256**	Pn	**Pn**	**05 42 24.6**	**-1.1**
	2µm,1.0s,SNR=38						
KAPI	**Kappang**	**7.96**	**256**	P	**Pn**	**05 42 24.8**	**-1.0**
	542nm,1.1s,6µm						
KAPI	**Kappang**	**7.96**	**256**	Pn	**Pn**	**05 42 24.7**	**-1.0**
	12nm,0.3s,baz=104,slow=6.1,SNR=54						
KAPI				Sn	**Sn**	**05 43 50.6**	**-3.7**
	baz=95,slow=19,SNR=2.0						
KAPI				LR	LR	05 45 35.2	
	comp=Z,10µm,20.2s,baz=82,slow=39						
PCI	**Palu**	**7.98**	**286**	S	Sn	05 44 02.3	+7.5
	baz=8.0,SNR=3.5						
BAKI	**Biak**	**8.81**	**78**	P	Pn	05 42 34.1	-3.2
	386nm,1.3s,5µm						
WSI	**Waingapu**	**9.67**	**227**	P	**Pn**	**05 42 48.5**	**-0.6**
	680nm,1.3s,18µm41µm						
MATI	**Mati**	**10.09**	**353**	*e*P	**Pn**	**05 42 52.4**	**-2.4**
MATI				*e*S	Px	05 43 13.5	
MTN	**Manton Dam**	**10.30**	**160**	P	**Pn**	**05 42 58.9**	**+1.2**
	baz=10,SNR=30						
DAV	**Davao City (W)**	**10.31**	**349**	Pn	Pn	05 42 52.5	-5.4
DAV	**Davao City (W)**	**10.31**	**349**	Pn	Pn	05 42 53.8	-4.1
	SNR=6.8						
DAV	**Davao City (W)**	**10.31**	**349**	Pn	Pn	05 42 52.5	-5.4
	28nm,0.3s,baz=35,slow=13,SNR=6.0						
DMPH	**Davao City--Mi**	**10.34**	**349**	*e*P	Pn	05 42 53.1	-5.2
KDU	**Kakadu**	**10.69**	**153**	P	Pn	05 42 57.5	-5.6
	baz=11,SNR=88						
CTBH	**Cotabato--PC H**	**10.78**	**342**⇑	*i*P	Pn	05 42 59.0	-5.4
BUKP	**Musuan**	**11.20**	**347**	*e*P	Pn	05 43 04.8	-5.4
SMPI	**Sarmi**	**11.25**	**84**	P	**Pn**	**05 43 09.1**	**-1.6**
	148nm,1.2s,17µm						
KBKI	**Kotabaru**	**11.32**	**269**	P	**Pn**	**05 43 11.8**	**+0.1**
	84nm,1.1s						
PAGZ	**Pagadian**	**11.65**	**339**	*e*P	Pn	05 43 11.3	-4.9
TSM	**Tawau**	**12.13**	**307**	P	Pn	05 43 15.8	-6.9
TSM	**Tawau**	**12.13**	**307**	P	**Pn**	**05 43 22.3**	**-0.4**
MYLDM	**Lahad Datu**	**12.21**	**312**	P	Pn	05 43 17.9	-5.9
BBKI	**Banjar Baru**	**12.65**	**268**	P	**Pn**	**05 43 29.8**	**-0.1**
	129nm,0.9s,5µm						
KHKI	**Kahang-Kahang**	**12.93**	**246**	P	Pn	05 43 36.8	+3.2
	318nm,1.1s,5µm						
SRBI	**Singaraja**	**13.19**	**248**	P	**Pn**	**05 43 37.6**	**+0.5**
	212nm,2.0s,4µm						
JAY	**Jayapura**	**13.20**	**88**	P	**Pn**	**05 43 34.9**	**-2.5**
	baz=13,SNR=4.5						
IGBI	**Denpasar**	**13.53**	**245**	P	**Pn**	**05 43 43.8**	**+2.1**
	127nm,1.8s,59µm						
NBBI	**Negara**	**13.84**	**247**	P	**Pn**	**05 43 45.9**	**0.0**
	542nm,2.2s,15µm						
BYJI	**Banyuwangi**	**14.03**	**248**	P	**P**	**05 43 53.1**	**-1.2**
	943nm,1.4s,16µm						
KMMI	**Kalianget**	**14.04**	**253**	P	**P**	**05 43 56.0**	**+1.6**
KKM	**Kota Kinabalu**	**14.50**	**309**	*e*Pn	**Pn**	**05 43 55.5**	**+0.8**
	184nm,1.6s						
KKM				*e*Sn	**Sn**	**05 46 32.0**	**-2.3**
KKM	**Kota Kinabalu**	**14.50**	**309**	P	**Pn**	**05 43 51.6**	**-3.1**
BLJI	**Banyuglugur**	**14.59**	**251**	P	**P**	**05 44 00.2**	**-0.3**
	541nm,1.9s,10µm106µm						
GMJI	**Gumukmas**	**14.89**	**249**	P	**Pn**	**05 44 01.4**	**+1.7**
	361nm,1.9s,9µm						
FITZ	**Fitzroy Crossi**	**14.99**	**187**	*e*P	**Pn**	**05 44 00.7**	**-0.3**
	3.8nm,0.5s						
FITZ				Sn	**Sn**	**05 46 44.3**	**-1.8**
FITZ	**Fitzroy Crossi**	**14.99**	**187**	Pn	**Pn**	**05 43 58.3**	**-2.7**
	0.8nm,0.3s,baz=20,slow=12,SNR=35						
FITZ				Sn	**Sn**	**05 46 44.3**	**-1.8**
	0.3nm,0.3s,baz=307,slow=20,SNR=1.8						
FITZ				LR	LR	05 50 28.9	
	comp=Z,5µm,19.9s,baz=6.8,slow=40						
FITZ	**Fitzroy Crossi**	**14.99**	**187**	P	**Pn**	**05 44 00.6**	**-0.4**
	baz=15,SNR=24						
KRKI	**Karangkates**	**15.79**	**251**	P	**Pn**	**05 44 11.7**	**+0.5**
	900nm,1.5s,20µm						
SBUM	**Sibu**	**16.25**	**290**	P	**Pn**	**05 44 16.8**	**-0.3**
SJI	**Sawahan**	**16.32**	**253**	P	**P**	**05 44 19.9**	**0.0**
	319nm,2.0s,10µm						
STKI	**Sintang**	**16.33**	**281**	P	**Pn**	**05 44 17.9**	**-0.2**
	91nm,1.5s,15µm						
PWJI	**Pagerwojo**	**16.36**	**252**	P	**P**	**05 44 19.2**	**-1.1**
	237nm,1.6s						
PCJI	**Pacitan**	**17.01**	**252**	P	**Pn**	**05 44 26.4**	**-0.1**
	336nm,1.3s,6µm						
SMRI	**Semarang**	**17.44**	**256**	P	**P**	**05 44 33.9**	**+1.7**
	279nm,1.8s,8µm						
UGM	**Wanagama**	**17.56**	**254**	*e*Pn	**P**	**05 44 33.5**	**-0.1**
	993nm,1.5s						
UGM	**Wanagama**	**17.56**	**254**	P	**P**	**05 44 34.2**	**+0.7**
	407nm,2.5s,11µm						
UGM	**Wanagama**	**17.56**	**254**	P	**P**	**05 44 34.5**	**+0.9**
	baz=18,SNR=7.9						
YOGI	**Yogyakarta**	**17.75**	**254**	P	**Pn**	**05 44 35.1**	**-0.5**
	918nm,1.9s,19µm						
KSM	**Kuching**	**17.79**	**285**	*e*P	**P**	**05 44 36.3**	**+0.2**
	111nm,1.3s						
KSM	**Kuching**	**17.79**	**285**	P	**Pn**	**05 44 34.4**	**-1.7**
KSM	**Kuching**	**17.79**	**285**	P	**P**	**05 44 36.4**	**+0.4**
KSM	**Kuching**	**17.79**	**285**	P	**P**	**05 44 36.8**	**+0.7**
	baz=18,SNR=22						
KSM				S	**S**	**05 48 02.4**	**+5.4**
	baz=18,SNR=4.0						
WRAB	**Tennant Creek**	**17.99**	**159**	*e*P	**P**	**05 44 37.0**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,333nm,1.4s						
WRAB	**Tennant Creek**	**17.99**	**159**	*e*P	**P**	**05 44 37.0**	**-1.3**
	comp=Z,333nm,1.4s						
WRAB	**Tennant Creek**	**17.99**	**159**	P	**P**	**05 44 37.0**	**-1.3**
	comp=Z,989nm,1.4s,SNR=40						
WRA	**Warramunga Arr**	**17.99**	**159**	P	**P**	**05 44 35.1**	**-3.1**
WRA				S	**Sn**	**05 47 58.2**	**-0.5**
WRA				ScP	**ScP**	**05 52 44.9**	**+3.9**
WRA	**Warramunga Arr**	**17.99**	**159**	P	**P**	**05 44 35.1**	**-3.1**
	comp=Z,5.7nm,0.3s,baz=341,slow=12,SNR=128						
WRA				S	**Sn**	**05 47 58.2**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=342,slow=21,SNR=4.8						
WRA				LR	LR	05 52 14.9	
	comp=Z,4µm,18.6s,baz=340,slow=39						
WRA				ScP	**ScP**	**05 52 44.9**	**+3.9**
	comp=Z,0.4nm,0.3s,baz=330,slow=2.1,SNR=6.5						
BJII	**Banjamegara**	**18.21**	**256**	P	**Pn**	**05 44 41.3**	**+0.1**
	comp=Z,367nm,2.6s,comp=Z,10µm						
TGY	**Tagaytay City**	**18.32**	**339**	P	**Pn**	**05 44 42.4**	**-0.1**
	baz=182,slow=12,SNR=4.1						
TGJI	**Tegal**	**18.69**	**258**	P	**P**	**05 44 45.9**	**0.0**
	comp=Z,261nm,1.4s,comp=Z,5µm						
COEN	**Coen**	**18.84**	**126**	*e*P	**P**	**05 44 47.2**	**-0.4**
	comp=Z,1µm,1.1s						
COEN	**Coen**	**18.84**	**126**	P	**P**	**05 44 46.6**	**-1.0**
	baz=19,SNR=33						
COEN				S	S	05 48 10.8	-7.9
	baz=19,SNR=5.7						
CLJI	**Cilicap**	**18.96**	**255**	P	**P**	**05 44 46.7**	**-2.3**
	comp=Z,178nm,2.0s,comp=Z,3µm						
MBWA	**Marble Bar**	**19.45**	**202**	*e*P	**Pn**	**05 44 55.1**	**-0.9**
	comp=Z,781nm,2.5s						
MBWA	**Marble Bar**	**19.45**	**202**	P	**Pn**	**05 44 55.9**	**-0.1**
	SNR=8.9						
TPI	**Tanjungpandan**	**19.83**	**271**	P	**Pn**	**05 44 59.6**	**-0.9**
	comp=Z,30nm,2.1s,comp=Z,668nm						
CISI	**Cisompet, Garu**	**20.09**	**257**	P	**P**	**05 44 59.6**	**-1.7**
	comp=Z,609nm,1.8s,comp=Z,8µm						
LEM	**Lembang**	**20.15**	**259**	P	**P**	**05 45 01.5**	**-0.6**
	comp=Z,334nm,1.1s,comp=Z,5µm						
PMG	**Port Moresby**	**20.50**	**109**	*e*P	**P**	**05 45 06.2**	**+0.5**
	comp=Z,88nm,1.3s						
PMG	**Port Moresby**	**20.50**	**109**	P	Pn	05 45 08.1	-0.3
	comp=Z,45nm,1.2s,comp=Z,1µm						
PMG	**Port Moresby**	**20.50**	**109**	P	**P**	**05 45 06.1**	**+0.5**
	comp=Z,24nm,1.1s,baz=333,slow=2.3,SNR=3.6						
BCPH	**Baguio City Da**	**20.56**	**341**⇓	*e*P	**P**	**05 45 05.1**	**-1.4**
CNJI	**Cibinong**	**20.71**	**258**	P	**P**	**05 45 06.0**	**-2.0**
	comp=Z,420nm,1.3s,comp=Z,6µm						
QIS	**Mount Isa**	**20.96**	**147**	P	**P**	**05 45 10.3**	**-0.2**
	baz=21,SNR=70						
DBJI	**Dramaga**	**20.96**	**260**	P	**P**	**05 45 12.1**	**+1.4**
	comp=Z,110nm,1.6s,comp=Z,4µm						
AS31	**Alice Springs**	**21.33**	**164**	*e*P	**P**	**05 45 15.2**	**+0.6**
ASAR	**Alice Springs**	**21.34**	**164**	P	**P**	**05 45 13.6**	**-1.1**
ASAR				S	**S**	**05 49 08.2**	**-0.1**
ASAR				ScP	**ScP**	**05 52 52.9**	**+4.2**
ASAR	**Alice Springs**	**21.34**	**164**	P	**P**	**05 45 13.6**	**-1.1**
	comp=Z,102nm,0.7s,baz=344,slow=12,SNR=200						
ASAR				S	**S**	**05 49 08.2**	**-0.1**
	comp=Z,38nm,0.9s,baz=342,slow=18,SNR=18						
ASAR				ScP	**ScP**	**05 52 52.9**	**+4.2**
	comp=Z,3.9nm,0.7s,baz=341,slow=1.7,SNR=8.6						
ASAR				LR	LR	05 53 54.3	
	comp=Z,2µm,20.3s,baz=215,slow=38						
PPBI	**Pangkal Pinang**	**21.37**	**272**	P	**P**	**05 45 18.0**	**+2.9**
	comp=Z,58nm,1.5s,comp=Z,2µm						
GIRL	**Giralia**	**23.28**	**212**	P	**P**	**05 45 36.3**	**+1.3**
	baz=24,SNR=10						
LWLI	**Liwa**	**23.46**	**265**	P	**P**	**05 45 35.7**	**-1.3**
	comp=Z,150nm,1.4s,comp=Z,6µm						
GUMO	**Guam**	**23.93**	**46**	LR	LR	05 54 34.8	
	comp=Z,1µm,18.9s,baz=228,slow=35						
MYKOM	**Kota Tinggi**	**24.15**	**281**	P	**P**	**05 45 44.0**	**+1.0**
MYKOM	**Kota Tinggi**	**24.15**	**281**	P	**P**	**05 45 44.0**	**+1.0**
KGM	**Kluang**	**24.71**	**282**	P	**P**	**05 45 50.5**	**+2.3**
CTA	**Charters Tower**	**24.87**	**134**	P	**P**	**05 45 51.2**	**+1.6**
CTA	**Charters Tower**	**24.87**	**134**	P	**P**	**05 45 51.2**	**+1.6**
	comp=Z,12nm,0.8s,baz=317,slow=12,SNR=5.0						
CTAO	**Charters Tower**	**24.87**	**134**	*e*P	**P**	**05 45 51.5**	**+1.9**
CTAO				pmax	pmax		
	comp=Z,112nm,1.6s						
CTAO	**Charters Tower**	**24.87**	**134**	*e*P	**P**	**05 45 51.5**	**+1.9**
	comp=Z,112nm,1.6s						
KSI	**Kapahiang**	**24.88**	**268**	P	**P**	**05 45 53.2**	**+3.4**
	comp=Z,147nm,1.6s,comp=Z,4µm						
MEEK	**Meekatharra**	**24.88**	**199**	P	**P**	**05 45 47.3**	**-2.3**
	baz=25,SNR=66						
RGRI	**Rengat**	**25.31**	**276**	P	**P**	**05 45 53.2**	**-0.5**
	comp=Z,184nm,0.5s,comp=Z,75µm						
KTGM	**Kuala Trenggan**	**25.75**	**289**	P	**P**	**05 46 01.9**	**+4.3**
KRJI	**Kerinci**	**26.04**	**272**	P	**P**	**05 46 00.6**	**+0.2**
	comp=Z,372nm,1.6s,comp=Z,6µm						
BKNI	**Bangkinang**	**26.68**	**277**	P	**P**	**05 46 06.3**	**+0.3**
	comp=Z,120nm,1.8s,comp=Z,2µm						
PPI	**Padang Panjang**	**27.22**	**275**	P	**P**	**05 46 10.3**	**-0.6**
	comp=Z,137nm,1.5s,comp=Z,11µm						
FORT	**Forrest**	**27.51**	**179**	*e*P	**P**	**05 46 11.4**	**-1.8**
	comp=Z,76nm,0.9s						
FORT	**Forrest**	**27.51**	**179**	P	**P**	**05 46 11.8**	**-1.5**
	baz=28,SNR=12						
IPM	**Ipoh**	**27.52**	**286**	P	**P**	**05 46 14.5**	**+1.0**
MORW	**Morawa**	**28.01**	**202**	P	**P**	**05 46 18.1**	**+0.3**
	baz=28,SNR=20						
QIZ	**Qiongzhong**	**28.05**	**322**	P	**P**	**05 46 19.2**	**+1.0**
QIZ				pP	**pP**	**05 46 34.1**	**+0.4**
QIZ				sP	**sP**	**05 46 41.5**	**+0.3**
QIZ				S	**S**	**05 51 01.2**	**+2.6**
QIZ				pmax	pmax		
	comp=Z,32nm,2.0s						
QIZ				LR	LR		
	comp=N,1µm,20.1s						
QIZ				LR	LR		
	comp=E,490nm,18.9s						
QIZ				LR	LR		
	comp=Z,660nm,18.3s						
KULM	**Kulim**	**28.10**	**287**	P	P	05 46 13.4	-5.4
QLP	**Quilpie**	**28.30**	**147**	P	**P**	**05 46 21.6**	**+1.2**
	baz=28,SNR=6.7						
UBPT	**Khong Chiam**	**28.47**	**311**	P	**P**	**05 46 24.2**	**+2.2**
	comp=Z,25nm,1.7s,comp=Z,719nm						
KMBL	**Kambalda**	**28.59**	**190**	P	**P**	**05 46 21.4**	**-1.4**
	baz=29,SNR=12						
PSI	**Prapat**	**29.17**	**281**	P	**P**	**05 46 29.3**	**+0.8**
PSI	**Prapat**	**29.17**	**281**	P	**P**	**05 46 29.3**	**+0.8**
	comp=Z,5.1nm,0.7s						
BLDU	**Balliduu**	**29.18**	**199**	P	**P**	**05 46 27.8**	**-0.4**
	baz=29,SNR=11						
KLBR	**Kellerberrin**	**29.77**	**197**	P	**P**	**05 46 32.5**	**-0.8**
	baz=30,SNR=13						
GSI	**Gunungsitoli**	**30.24**	**278**	P	P	05 46 41.8	+4.0
BBOO	**Buckleboo**	**30.60**	**166**	*e*P	**P**	**05 46 39.3**	**-1.4**
	comp=Z,925nm,1.3s						
BBOO	**Buckleboo**	**30.60**	**166**	P	**P**	**05 46 39.7**	**-0.9**
	baz=31,SNR=11						
RMQ	**Roma**	**30.89**	**141**	P	**P**	**05 46 44.5**	**+1.2**
	baz=31,SNR=6.3						
NWAO	**Narrogin (SRO)**	**31.17**	**197**	*e*P	**P**	**05 46 46.0**	**+0.3**
	comp=Z,16nm,0.7s						
NWAO	**Narrogin (SRO)**	**31.17**	**197**	P	**P**	**05 46 44.0**	**-1.7**
	comp=Z,19nm,0.7s,baz=24,slow=10,SNR=15						
STKA	**Stephens Creek**	**31.52**	**157**	*e*P	**P**	**05 46 47.6**	**-1.2**
	comp=Z,9.7nm,1.1s						
STKA	**Stephens Creek**	**31.52**	**157**	P	**P**	**05 46 47.8**	**-1.0**
	comp=Z,13nm,0.5s,baz=326,slow=9.3,SNR=53						
STKA				LR	LR	06 00 52.0	
	comp=Z,3µm,20.0s,baz=106,slow=39						
STKA	**Stephens Creek**	**31.52**	**157**	P	**P**	**05 46 48.0**	**-0.9**
	baz=32,SNR=21						
RKGY	**Rocky Gully**	**32.82**	**196**	P	**P**	**05 47 01.3**	**+1.1**
	baz=33,SNR=5.9						
CMSA	**Cobar Meteorol**	**33.05**	**151**	P	**P**	**05 47 02.0**	**-0.1**
	baz=33,SNR=34						
CBIJ	**Chichi jima**	**33.22**	**24**	LR	LR	05 58 39.4	
	comp=Z,261nm,20.4s,baz=178,slow=33						
SSE	**Sheshan**	**34.56**	**350**	*e*P	**P**	**05 47 17.4**	**+2.1**
SSE				S	**S**	**05 52 42.8**	**+2.9**
SSE				pmax	pmax		
	comp=Z,31nm,0.7s						
SSE				pmax	pmax		
	comp=Z,100nm,3.8s						
SSE				LR	LR		
	comp=N,170nm,25.0s						
SSE				LR	LR		
	comp=E,450nm,25.0s						
SSE				LR	LR		
	comp=Z,270nm,26.7s						
CMAR	**Chiang Mai Arr**	**35.38**	**308**	P	**P**	**05 47 22.6**	**0.0**
CMAR				PcP	**PcP**	**05 49 51.8**	**+0.2**
CMAR				ScP	**ScP**	**05 53 38.8**	**+6.7**
CMAR	**Chiang Mai Arr**	**35.38**	**308**	P	**P**	**05 47 22.6**	**0.0**
	comp=Z,0.9nm,0.3s,baz=135,slow=7.9,SNR=8.7						
CMAR				PcP	**PcP**	**05 49 51.8**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=166,slow=2.7,SNR=5.1						
CMAR				ScP	**ScP**	**05 53 38.8**	**+6.7**
	comp=Z,4.5nm,1.1s,baz=156,slow=2.4,SNR=12						
CMAR				LR	LR	06 02 51.4	
	comp=Z,520nm,21.1s,baz=105,slow=38						
ARMA	**Armidale**	**35.46**	**143**	*e*P	**P**	**05 47 23.8**	**+0.5**
	comp=Z,26nm,1.2s						
ARMA	**Armidale**	**35.46**	**143**	P	**P**	**05 47 23.7**	**+0.5**
	baz=36,SNR=13						
CHTO	**Chiang Mai**	**35.58**	**309**	*e*P	**P**	**05 47 24.9**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,31nm,1.2s						
CHTO	**Chiang Mai**	**35.58**	**309**	P	**P**	**05 47 25.2**	**+1.0**
	SNR=11						
GYA	**Guiyang**	**35.66**	**327**⇑	*i*P	**P**	**05 47 27.2**	**+2.2**
GYA				pP	**pP**	**05 47 42.3**	**+1.6**
GYA				PP	**PP**	**05 48 49.7**	**+2.6**
GYA				S	**S**	**05 52 59.0**	**+1.9**
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,3.5s						
GYA				LR	LR		
	comp=N,570nm,20.4s						
GYA				LR	LR		
	comp=E,790nm,24.1s						
GYA				LR	LR		
	comp=Z,960nm,17.9s						
WHN	**Wuhan**	**35.76**	**340**	P	**P**	**05 47 26.0**	**+0.4**
WHN				S	**S**	**05 53 00.6**	**+2.2**
WHN				LR	LR		
	comp=N,550nm,10.7s						
WHN				LR	LR		
	comp=E,730nm,9.4s						
WHN				LR	LR		
	comp=Z,1µm,17.6s						
NJ2	**Nanjing**	**35.94**	**347**	*e*P	**P**	**05 47 27.6**	**+0.5**
NJ2				pP	**pP**	**05 47 43.4**	**+0.6**
NJ2				sP	**sP**	**05 47 50.6**	**+0.4**
NJ2				PP	**PP**	**05 48 51.3**	**+1.3**
NJ2				S	**S**	**05 53 04.0**	**+3.0**
NJ2				sS	**ScP**	**05 53 40.0**	**+6.2**
NJ2				pmax	pmax		
	comp=Z,80nm,1.5s						
NJ2				pmax	pmax		
	comp=Z,370nm,10.2s						
NJ2				LR	LR		
	comp=N,230nm,18.1s						
NJ2				LR	LR		
	comp=E,310nm,15.8s						
NJ2				LR	LR		
	comp=Z,730nm,24.0s						
ARPS	**Mount Arapiles**	**35.99**	**160**	P	**P**	**05 47 27.4**	**-0.2**
	baz=36,SNR=26						
JNU	**Nakatsue**	**36.19**	**5**	*e*P	**P**	**05 47 26.8**	**-2.6**
	comp=Z,9.9nm,1.3s						
JNU	**Nakatsue**	**36.19**	**5**	P	**P**	**05 47 28.2**	**-1.1**
	comp=Z,8.7nm,0.9s,baz=184,slow=7.6,SNR=6.7						
JNU				LR	LR	06 01 30.0	
	comp=Z,1µm,20.4s,baz=185,slow=35						
YNG	**Young**	**36.61**	**150**	P	**P**	**05 47 33.4**	**+0.5**
	baz=37,SNR=33						
KMI	**Kunming**	**36.96**	**321**	P	**P**	**05 47 38.5**	**+2.2**
KMI				pP	**pP**	**05 47 53.7**	**+1.7**
KMI				sP	sP	05 48 03.1	+3.7
KMI				PP	**PnPn**	**05 49 06.3**	**+3.9**
KMI				S	**S**	**05 53 18.6**	**+1.2**
KMI				sS	sS	05 53 47.8	+3.6
KMI				pmax	pmax		
	comp=Z,23nm,1.7s						
KMI				pmax	pmax		
	comp=Z,340nm,4.5s						
KMI				LR	LR		
	comp=N,510nm,16.8s						
KMI				LR	LR		
	comp=E,220nm,15.6s						
KMI				LR	LR		
	comp=Z,380nm,22.3s						
MGCD	**Mangrove Creek**	**37.19**	**146**	P	**P**	**05 47 39.1**	**+1.3**
	baz=37,SNR=4.0						
CAN	**Canberra**	**37.72**	**151**	*e*P	**P**	**05 47 43.0**	**+0.6**
CAN				pmax	pmax		
	comp=Z,32nm,0.7s						
CAN	**Canberra**	**37.72**	**151**	*e*P	**P**	**05 47 43.0**	**+0.6**
	comp=Z,32nm,0.7s						
JHJ	**Hachijo jima 2**	**37.88**	**17**	LR	LR	06 03 34.9	
	comp=Z,968nm,18.2s,baz=162,slow=37						
CNB	**Canberra Magne**	**37.90**	**150**	P	**P**	**05 47 44.4**	**+0.5**
	baz=38,SNR=9.3						
TOO	**Toolangi**	**38.04**	**157**	P	**P**	**05 47 45.8**	**+0.8**
	baz=38,SNR=11						
KSAR	**Wonju Array Be**	**40.37**	**0**	P	**P**	**05 48 04.1**	**-0.2**
KSAR				PcP	**PcP**	**05 50 07.8**	**+1.3**
KSRS	**Korea Array**	**40.38**	**1**	P	**P**	**05 48 04.1**	**-0.3**
	comp=Z,15nm,0.9s,baz=181,slow=9.7,SNR=45						
KSRS				PcP	**PcP**	**05 50 07.8**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=147,slow=1.0,SNR=3.3						
KSRS				LR	LR	06 03 18.1	
	comp=Z,489nm,21.8s,baz=178,slow=34						
MJAR	**Matsushiro Arr**	**40.71**	**13**	P	**P**	**05 48 05.8**	**-1.4**
MJAR				ScP	**ScP**	**05 53 56.4**	**+4.4**
MJAR	**Matsushiro Arr**	**40.71**	**13**	P	**P**	**05 48 05.8**	**-1.4**
	comp=Z,10nm,1.1s,baz=189,slow=11,SNR=15						
MJAR				ScP	**ScP**	**05 53 56.4**	**+4.4**
	comp=Z,2.1nm,0.8s,baz=219,slow=5.9,SNR=7.6						
MJAR				LR	LR	06 04 25.7	
	comp=Z,394nm,18.5s,baz=205,slow=35						
MAJO	**Matsushiro**	**40.71**	**13**	*e*P	**P**	**05 48 06.0**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,35nm,1.3s						
MAJO	**Matsushiro**	**40.71**	**13**	*

SHL *eS* **S** 05 55 19.0 +5.6
LZH Lanzhou 44.84 333 *eP* **P** 05 48 42.2 +1.3
LZH pP **pP** 05 48 59.1 +2.1
LZH sP sP 05 49 07.4 +3.1
LZH PcP **PcP** 05 50 23.3 +1.5
LZH *eS* **S** 05 55 16.2 +2.1
LZH sS **sS** 05 55 44.0 +2.6
LZH SS **SS** 05 58 36.0 -1.3
LZH pmax pmax
comp=Z,31nm,1.3s
LZH pmax pmax
comp=Z,210nm,5.4s
LZH LR LR
comp=N,1μm,13.5s
LZH LR LR
comp=E,1μm,15.7s
LZH LR LR
comp=Z,1μm,16.0s
SNY Shenyang 44.89 356 ⇓P **P** 05 48 38.4 -2.5
SNY S **S** 05 55 14.9 +0.8
SNY pmax pmax
comp=Z,230nm,7.2s
SNY LR LR
comp=N,650nm,17.4s
SNY LR LR
comp=E,1μm,18.6s
SNY LR LR
comp=Z,630nm,18.6s
HHC Hu-ho-hao-te 46.13 343 *eP* **P** 05 48 50.7 -0.2
HHC pP **pP** 05 49 06.0 -1.1
HHC sP **sP** 05 49 13.0 -1.4
HHC PP **PP** 05 50 40.2 0.0
HHC S **S** 05 55 31.9 -0.4
HHC ScS **ScS** 05 58 38.2 -2.5
HHC SS SS 05 58 51.4 -7.0
HHC pmax pmax
comp=Z,26nm,0.8s
HHC pmax pmax
comp=Z,640nm,4.5s
HHC LR LR
comp=N,610nm,15.5s
HHC LR LR
comp=E,510nm,17.8s
HHC LR LR
comp=Z,550nm,16.7s
CN2 Changchun 46.75 358 *eP* P 05 49 00.1 +4.5
CN2 *ep*P pP 05 49 15.6 +3.8
CN2 *eS* **S** 05 55 46.3 +5.4
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,500nm,20.0s
CN2 LR LR
comp=E,300nm,20.0s
CN2 LR LR
comp=Z,600nm,21.0s
USRK Ussuriysk Arra 47.29 4 P **P** 05 48 59.8 +0.2
comp=Z,14nm,0.8s,baz=191,slow=7.4,SNR=18
USRK LR LR 06 11 23.0
comp=Z,560nm,18.2s,baz=164,slow=39
MDJ Mudanjiang 47.57 2 P **P** 05 49 03.9 +2.0
MDJ pP **pP** 05 49 19.4 +1.2
MDJ sP **sP** 05 49 26.6 +1.2
MDJ PcP **PcP** 05 50 31.9 +1.0
MDJ PP **PP** 05 50 55.8 +1.8
MDJ S **S** 05 55 55.5 +3.0
MDJ sS sS 05 56 23.7 +3.7
MDJ pmax pmax
comp=Z,11nm,1.7s
MDJ pmax pmax
comp=Z,130nm,3.4s
MDJ LR LR
comp=N,360nm,18.3s
MDJ LR LR
comp=E,170nm,13.9s
MDJ LR LR
comp=Z,560nm,20.9s
LSA Lhasa 47.71 316 P **P** 05 49 04.8 +1.0
TAPN Taplejung 48.88 311 *eP* **P** 05 49 12.4 -0.3
comp=Z,45nm,0.9s
GTA Gaotai 49.41 332 *eP* **P** 05 49 16.6 +0.3
GTA pP **pP** 05 49 31.9 -0.8
GTA sP **sP** 05 49 38.8 -1.1
GTA S **S** 05 56 20.6 +1.7
GTA SS **SS** 05 59 50.3 -1.3
GTA pmax pmax
comp=Z,6.0nm,1.0s
GTA pmax pmax
comp=Z,100nm,5.2s
GTA LR LR
comp=N,460nm,19.0s
GTA LR LR
comp=E,360nm,15.4s
GTA LR LR
comp=Z,520nm,18.5s
RAMN Ramite 49.52 310 *eP* **P** 05 49 17.6 +0.1
comp=Z,76nm,0.8s
YUK Yuzh-Kuril'sk 49.76 17*c iP* **P** 05 49 15.9 -2.8
YUK *i* 05 51 14.9
YUK *i* PPP PPP 05 52 14.9
YUK *i* S **S** 05 56 18.3 -5.0
YUK *i* SS **SS** 05 59 55.2 -1.5
YUK pmax pmax
comp=Z,98nm,10.6s
YUK MLR MLR
comp=N,252nm,23.0s
YUK MLR MLR
comp=Z,358nm,23.0s
GUN Gumba 50.56 310 *eP* **P** 05 49 25.0 -0.5
comp=Z,53nm,0.8s
KKN Kakani 50.95 310 *eP* **P** 05 49 27.8 -0.5
comp=Z,28nm,0.8s
DMN Daman 51.00 310 *eP* **P** 05 49 28.3 -0.4
comp=Z,134nm,1.3s
KOLN Koldanda 52.24 309 *eP* **P** 05 49 37.8 -0.1
comp=Z,73nm,0.8s
KLR Kul'dur 52.28 4 *eP* P 05 49 33.2 -4.3
KLR *eS* **S** 05 56 56.0 -1.9
KLR pmax pmax
comp=Z,260nm,3.0s
DANN Dangsing 52.40 310 *eP* **P** 05 49 38.8 -0.4
comp=Z,103nm,0.8s
HYB Hyderabad 52.42 295 *i* P **P** 05 49 37.0 -2.2
HYB *ep*P **pP** 05 49 56.0 +0.3
PYUN Piuthan 52.87 309 *eP* **P** 05 49 42.4 -0.2
comp=Z,224nm,1.2s
ULN Ulaanbaatar 53.85 343 *eP* **P** 05 49 48.8 -0.5
comp=Z,17nm,0.9s
ULN Ulaanbaatar 53.85 343 P **P** 05 49 50.2 +0.8
SNR=14
SONM Songino Array 54.02 343 P **P** 05 49 50.3 -0.2
SONM Songino Array 54.02 343 P **P** 05 49 50.3 -0.2
comp=Z,6.4nm,0.9s,baz=152,slow=8.0,SNR=26
RPZ Rata Peaks 55.80 143 *eP* **P** 05 50 03.8 +0.4
comp=Z,70nm,1.2s
URZ Urewera 57.12 134 *eP* **P** 05 50 14.7 +1.8
comp=Z,16nm,0.8s
ZAK Zakamensk 57.23 342 *eP* **P** 05 50 11.3 -2.2
ZAK pmax pmax
comp=Z,5.0nm,1.2s
DDI Dehra Dun 57.72 309 *e*PN **P** 05 50 18.0 +0.7
DDI *e*SN Px 05 51 08.0
TLY Talaya 58.26 343 *eP* **P** 05 50 21.0 +0.5
TLY pmax pmax
comp=Z,6.0nm,0.9s
WMQ Urumqi 58.82 327 P **P** 05 50 25.0 +0.3
WMQ pP **pP** 05 50 41.0 -0.5
WMQ sP **sP** 05 50 48.0 -0.6
WMQ PcP **PcP** 05 51 14.0 +0.4
WMQ PP **PP** 05 52 37.0 +1.6
WMQ ScP **ScP** 05 55 07.0 -1.9
WMQ S **S** 05 58 24.0 -1.5
WMQ ScS **ScS** 06 00 06.0 -3.1
WMQ pmax pmax
comp=Z,24nm,1.0s
WMQ pmax pmax
comp=Z,330nm,6.0s
WMQ LR LR
comp=N,470nm,18.0s
WMQ LR LR
comp=E,330nm,18.0s
WMQ LR LR
comp=Z,400nm,18.0s

MOY Mondy 59.06 341 *eP* P 05 50 33.5 +7.2
MOY pmax pmax
comp=Z,34nm,2.7s
PETK Petropavlovsk- 61.50 20 P **P** 05 50 43.5 +0.7
PETK Petropavlovsk- 61.50 20 P **P** 05 50 43.5 +0.7
PETK Petropavlovsk- 61.50 20 P **P** 05 50 43.5 +0.7
comp=Z,8.8nm,0.8s,baz=183,slow=3.0,SNR=6.2
PETK LR LR 06 14 32.9
comp=Z,310nm,21.1s,baz=203,slow=33
PET Petropavlovsk 61.77 21 *eP* P 05 50 54.4 +10
PET *eS* S 05 59 13.6 +11
PET pmax pmax
comp=Z,200nm,16.4s
KSH Kashi 63.51 317 P **P** 05 50 56.3 -0.3
KSH pP **pP** 05 51 16.3 +2.8
KSH sP sP 05 51 24.2 +3.5
KSH PcP **PcP** 05 51 32.2 -0.6
KSH PP **PP** 05 53 19.2 +2.2
KSH ScP 05 55 26.2
KSH PcS 05 55 34.2
KSH S **S** 05 59 22.3 -3.1
KSH sS **sS** 05 59 56.1 +2.0
KSH ScS **SKSac** 06 00 39.3 -5.3
KSH pmax pmax
comp=Z,18nm,1.2s
KSH pmax pmax
comp=Z,270nm,3.8s
KSH LR LR
comp=N,210nm,5.9s
KSH LR LR
comp=E,280nm,5.2s
KSH LR LR
comp=Z,300nm,5.1s
MKAR Makanchi Array 63.65 327 P **P** 05 50 56.6 -0.7
MKAR Makanchi Array 63.65 327 P **P** 05 50 56.5 -0.7
MKAR Makanchi Array 63.65 327 P **P** 05 50 56.5 -0.7
comp=Z,13nm,0.7s,baz=127,slow=7.0,SNR=107
MKAR LR LR 06 18 38.1
comp=Z,279nm,21.7s,baz=240,slow=36
MK31 Makanchi Array 63.65 327*ceP* **P** 05 50 56.5 -0.7
MK31 pmax pmax
comp=Z,16nm,0.7s
MK31 Makanchi Array 63.65 327 *eP* **P** 05 50 56.4 -0.9
YAK Yakutsk 65.00 1 *eP* **P** 05 51 05.3 -0.4
YAK *e* 05 51 36.4
YAK *e* 05 53 29.1
YAK *e*PPP PPP 05 55 00.0
YAK *eS* **S** 05 59 40.2 -2.5
YAK *e**SS sS 06 00 23.5 +12
YAK *e* 06 00 54.0
YAK pmax pmax
comp=Z,37nm,1.0s
YAK pmax pmax
comp=N,10.0nm,1.2s
YAK pmax pmax
comp=Z,157nm,4.7s
YAK pmax pmax
comp=N,57nm,3.8s
YAK pmax pmax
comp=E,84nm,3.7s
YAK smax smax
comp=N,264nm,3.8s
YAK smax smax
comp=E,93nm,3.2s
KZA Kyzart 65.24 320 P **P** 05 51 08.4 +0.2
SNR=9.3
TKM2 Tokmak 2 65.44 321 *i* P **P** 05 51 08.9 -0.3
TKM2 Tokmak 2 65.44 321 *eP* **P** 05 51 08.8 -0.3
comp=E,10nm,0.8s
TKM2 Tokmak 2 65.44 321 P **P** 05 51 09.0 -0.3
SNR=13
AAK Ala-Archa 66.00 320 *eP* **P** 05 51 12.6 -0.2
AAK pmax pmax
comp=Z,3.0nm,1.1s
AAK Ala-Archa 66.00 320 *eP* **P** 05 51 12.6 -0.2
comp=Z,2.9nm,1.1s
AAK Ala-Archa 66.00 320 P **P** 05 51 13.1 +0.3
SNR=8.8
AAK Ala-Archa 66.00 320 P **P** 05 51 12.8 0.0
comp=Z,47nm,1.0s,SNR=5.8
AAK Ala-Archa 66.00 320 P **P** 05 51 12.7 -0.2
comp=Z,4.8nm,0.8s,baz=106,slow=4.9,SNR=15
AAK LR LR 06 18 43.2
comp=Z,161nm,19.8s,baz=110,slow=35
FRU Bishkek 66.02 320 *eP* P 05 51 22.0 +9.2
FRU *e* 05 51 40.0
AML Almayashu 66.28 319 P **P** 05 51 14.7 -0.2
SNR=14
USP Ospenovka 66.31 320 P **P** 05 51 14.6 0.0
SNR=5.1
KBL Kabul 66.39 310 *eP* **P** 05 51 15.1 -0.4
KBL pmax pmax
comp=Z,15nm,1.0s
KBL Kabul 66.39 310 *eP* **P** 05 51 15.1 -0.4
comp=Z,15nm,1.0s
EKS2 Erkin-Say 66.48 320 *eP* **P** 05 51 16.2 +0.4
EKS2 pmax pmax
comp=Z,19nm,1.1s
EKS2 Erkin-Say 66.48 320 *eP* **P** 05 51 16.2 +0.4
comp=Z,19nm,1.1s
EKS2 Erkin-Say 66.48 320 P **P** 05 51 16.2 +0.4
SNR=8.0
ZAA0 Zalesovo Array 67.04 334 *eP* **P** 05 51 17.9 -1.1
ZALV Zalesovo Beam 67.04 334 P **P** 05 51 17.7 -1.2
ZALV Zalesovo Beam 67.04 334 P **P** 05 51 17.7 -1.2
ZALV Zalesovo Beam 67.04 334 P **P** 05 51 17.7 -1.2
comp=Z,5.1nm,0.8s,baz=110,slow=5.3,SNR=21
KURK Kurchatov 67.94 329*c iP* **P** 05 51 23.6 -1.1
KURK pmax pmax
comp=Z,31nm,0.8s
KURK Kurchatov 67.94 329 *eP* **P** 05 51 23.9 -0.8
comp=Z,31nm,0.9s
KURK Kurchatov 67.94 329 P **P** 05 51 24.6 -0.1
SNR=13
KURK Kurchatov 67.94 329 P **P** 05 51 24.1 -0.6
comp=Z,194nm,0.8s,SNR=28
NVS Novosibirsk 68.32 334 *eP* **P** 05 51 24.8 -2.2
NVS *e* 05 51 45.8
NVS *eS* **S** **06 00 21.0 -2.1**
NVS *i* 06 01 17.5
NVS pmax pmax
comp=Z,38nm,1.9s
NVS pmax pmax
comp=N,23nm,2.0s
NVS pmax pmax
comp=E,15nm,1.5s
NVS smax smax
comp=N,25nm,2.5s
SEY Seymchan 68.52 12⇑*eP* **P** 05 51 29.8 +1.7
KK31 Karatay Array 68.81 319*ceP* **P** 05 51 29.5 -0.9
KK31 pmax pmax
comp=Z,4.0nm,0.7s
KKAR Karatay Array 68.81 319 *eP* **P** 05 51 29.6 -0.8
KKAR pmax pmax
comp=Z,6.0nm,0.9s
KKAR Karatay Array 68.81 319 *eP* **P** 05 51 29.6 -0.8
comp=Z,5.6nm,0.9s
VOSK Vostochnaya 73.03 328 P **P** 05 51 54.0 -1.7
VOSK pmax pmax
comp=Z,5.0nm,0.7s
BVA0 Borovoye Array 73.49 328 *i* P **P** 05 51 56.4 -2.0
BVA0 pmax pmax
comp=Z,3.0nm,1.4s
BVAR Borovoye Array 73.49 328 P **P** 05 51 57.8 -0.6
BVAR Borovoye Array 73.49 328 P **P** 05 51 57.8 -0.6
BVAR Borovoye Array 73.49 328 P **P** 05 51 57.8 -0.6
comp=Z,7.8nm,0.9s,baz=131,slow=8.1,SNR=24
BRVK Borovoye 73.56 328*c iP* **P** 05 51 57.8 -1.0
BRVK pmax pmax
comp=Z,13nm,1.3s
BRVK Borovoye 73.56 328 *eP* **P** 05 51 57.6 -1.2
comp=Z,17nm,1.2s
BRVK Borovoye 73.56 328 P **P** 05 51 58.6 -0.2
SNR=7.4
ZRNK Zerenda 74.19 328 *i* P **P** 05 52 00.9 -1.6
ZRNK pmax pmax
comp=Z,14nm,1.0s
TIXI Tiksi 74.65 0⇑*eP* **P** 05 52 04.3 -0.5
TIXI pmax pmax
comp=Z,10.0nm,0.8s
TIXI MLR MLR
comp=Z,471nm,19.0s
TIXI Tiksi 74.65 0 *eP* **P** 05 52 04.1 -0.7
comp=Z,8.8nm,0.6s
BILL Bilibino 75.96 14⇓*eP* **P** 05 52 13.2 +0.8

BILL pmax pmax
comp=Z,12nm,2.4s
VNDA Vanda 76.57 173 *eP* **P** 05 52 14.6 -1.2
comp=Z,125nm,2.5s
VNDA Vanda 76.57 173 P **P** 05 52 14.6 -1.2
comp=Z,4.4nm,0.8s,baz=325,slow=5.4,SNR=18
VNDA LR LR 06 26 23.4
comp=Z,819nm,18.2s,baz=333,slow=36
SBA Scott Base 77.48 172 *eP* **P** 05 52 20.2 -0.7
SBA pmax pmax
comp=Z,13nm,1.1s
SBA Scott Base 77.48 172 *eP* **P** 05 52 20.2 -0.7
comp=Z,13nm,1.1s
MAW Mawson 77.64 201 LR LR 06 21 36.8
comp=Z,777nm,21.8s,baz=70,slow=32
AB31 Akbulak array 77.95 322*ceP* **P** 05 52 22.8 -1.2
ABKAR Akbulak array 77.95 322 *eP* **P** 05 52 23.0 -1.0
comp=Z,2.9nm,0.8s
AKTO Aktyubinsk 79.51 322 *i* P **P** 05 52 31.3 -1.2
AKTO pmax pmax
comp=Z,3.0nm,1.1s
ARU Arti 81.13 328*d iP* **P** 05 52 39.8 -1.3
ARU 05 55 41.7
ARU S **S** **06 02 46.2 +0.4**
ARU pmax pmax
comp=Z,7.0nm,0.8s
ARU Arti 81.13 328 *eP* **P** 05 52 40.0 -1.1
comp=Z,5.5nm,0.7s
PPT2 Papeete2 82.31 107 *eS* **S** **06 03 03.1 +3.4**
comp=Z,615nm,24.8s
PPT2 *e*LR LR 06 18 45.6
comp=Z,515nm,28.8s
TBI Tubuai 82.38 113 *e*LR LR 06 18 52.1
comp=Z,469nm,29.2s
SOKR Solikamsk 83.04 331 *eP* **P** 05 52 50.5 -0.4
SOKR pmax pmax
comp=Z,10.0nm,0.9s
SYO Syowa Base 86.35 201⇑*eP* P 05 53 04.2 -3.3
SYO Syowa Base 86.35 201⇓*eP* **P** **05 53 06.8 -0.7**
QSPA South Pole Qui 86.82 180 *eP* **P** 05 53 07.7 -2.4
comp=Z,34nm,1.2s
QSPA South Pole Qui 86.82 180 LR LR 06 31 06.5
comp=Z,1μm,18.3s,baz=6.7,slow=35
KDAK Kodiak Island 87.25 32 LR LR 06 28 04.3
comp=Z,387nm,21.3s,baz=252,slow=33
ZEI Tsey 87.41 313 *eP* **P** **05 53 13.4 -0.1**
ZEI pmax pmax
comp=Z,24nm,1.3s
KIV Kislovodsk 88.42 314 *eP* P 05 53 25.4 +7.3
KIV *eS* **S** **06 04 00.1 +1.2**
KIV pmax pmax
comp=Z,11nm,0.8s
VRHR Novokhopersk 89.82 321 *eP* **P** **05 53 23.3 -1.1**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR pmax pmax
comp=E,4.0nm,0.4s
KMBO Kilima Mbogo 90.19 269 *eP* **P** **05 53 27.2 -0.1**
comp=E,65nm,2.3s
KMBO Kilima Mbogo 90.19 269 P **P** **05 53 27.3 0.0**
comp=E,1.4nm,1.0s,baz=83,slow=7.1,SNR=7.5
KMBO LR LR 06 29 16.5
comp=E,706nm,21.4s,baz=94,slow=32
ILAR Eielson Array 90.93 25 LR LR 06 29 19.3
comp=E,210nm,21.1s,baz=115,slow=32
MALT Malatya 91.19 308 *eP* **P** **05 53 31.9 +0.6**
MALT pmax pmax
comp=Z,4.0nm,0.8s
MALT Malatya 91.19 308 *eP* **P** **05 53 31.9 +0.6**
comp=Z,3.6nm,0.8s
VORD Divnogorie 91.28 321 *eP* **P** **05 53 29.8 -1.4**
VORD pmax pmax
comp=Z,9.0nm,1.1s
VORD pmax pmax
comp=N,9.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.8s
VSR Storozhevoye 91.37 321 *eP* **P** **05 53 29.7 -1.9**
VSR pmax pmax
comp=Z,10.0nm,1.2s
VSR pmax pmax
comp=N,9.0nm,1.3s
VSR pmax pmax
comp=E,3.0nm,0.4s
KLMR Klimovskoe 91.72 331 *eP* P 05 53 30.0 -3.0
KLMR *eS* **SKSac** **06 03 58.3 -1.8**
KLMR pmax pmax
comp=Z,18nm,1.7s
ASF Jabal al Asfar 92.16 302 P **P** **05 53 36.0 +0.1**
ASF Jabal al Asfar 92.16 302 P **P** **05 53 36.0 +0.1**
comp=Z,2.0nm,0.7s,baz=193,slow=3.2,SNR=5.2
ASF LR LR 06 43 39.0
comp=Z,250nm,18.6s,baz=333,slow=41
ANN Anapa 92.23 315 *eP* P 05 53 40.3 +4.6
OBN Obninsk 93.08 325⇑*eP* **P** **05 53 37.6 -1.8**
OBN pmax pmax
comp=Z,8.0nm,0.6s
MMAI Mount Meron Ar 93.45 303 LR LR 06 41 54.3
comp=Z,212nm,18.1s,baz=340,slow=40
EIL Elat 93.75 299 LR LR 06 43 22.9
comp=Z,300nm,18.1s,baz=92,slow=40
BRTR Keskin Array B 94.96 309 P **P** **05 53 47.4 -1.3**
BRTR Keskin Array B 94.96 309 P **P** **05 53 47.4 -1.3**
comp=Z,0.7nm,0.8s,baz=140,slow=6.4,SNR=3.9
INK Inuvik 96.21 22 LR LR 06 35 43.9
comp=Z,175nm,20.9s,baz=148,slow=34
ARCES ARCESS Array B 97.11 340 P **P** **05 53 55.9 -1.7**
ARCES ARCESS Array B 97.11 340 P **P** **05 53 55.9 -1.7**
comp=Z,4.7nm,0.8s,baz=78,slow=6.3,SNR=10
ARCES LR LR 06 45 23.5
comp=Z,239nm,18.0s,baz=90,slow=40
SPITS Spitsbergen Ar 97.31 349 LR LR 06 41 26.4
comp=Z,265nm,19.9s,baz=50,slow=38
FINES FINESS Array B 98.20 332 LR LR 06 44 40.3
comp=Z,172nm,20.4s,baz=93,slow=39
DLBC Dease Lake 99.18 31 LR LR 06 36 06.6
comp=Z,238nm,19.2s,baz=163,slow=34
BUR08 Bucovina Ar. S 100.59 318 *eP*dif **Pdif** **05 54 13.4 -0.3**
KOLS Kolonicke sedl 102.34 319 *eP* **Pdif** **05 54 22.9 +1.5**
KOLS Kolonicke sedl 102.34 319 PDIF **Pdif** **05 54 22.9 +1.5**
UZH Uzhgorod 102.38 319 *eP* **Pdif** **05 54 26.9 +5.4**
CRVS Cervenica-Dubn 102.88 319 *eP* **Pdif** **05 54 20.5 -3.3**
CRVS Cervenica-Dubn 102.88 319 PDIF **Pdif** **05 54 20.5 -3.3**
NB2 NORSAR Subarra105.22 333 P **Pdif** **05 54 32.9 -1.1**
baz=72,slow=4.3
NB2 NORSAR Subarra105.22 333 P **Pdif** **05 54 32.9 -1.1**
comp=Z,2.0nm,0.9s,baz=72,slow=4.3
NOA NORSAR Array B 105.22 333 Pdif **Pdif** **05 54 33.2 -0.7**
NOA NORSAR Array B 105.22 333 Pdiff **Pdif** **05 54 33.2 -0.7**
comp=Z,1.5nm,0.9s,baz=77,slow=4.3,SNR=4.6
YKA Yellowknife Ar 105.36 25 Pdif **Pdif** **05 54 34.9 +0.5**
YKA PKKPbc **PKKPbc** **06 10 11.8 -4.4**
YKA Yellowknife Ar 105.36 25 Pdiff **Pdif** **05 54 34.9 +0.5**
comp=Z,3.8nm,0.6s,baz=292,slow=10,SNR=6.6
YKA PKKPbc **PKKPbc** **06 10 11.8 -4.4**
comp=Z,0.4nm,0.8s,baz=106,slow=3.2,SNR=8.3
GERES GERESS Array B 107.88 321 PKiKP **PKiKP** **05 58 53.5 +0.3**
GERES GERESS Array B 107.88 321 PKiKP **PKiKP** **05 58 53.5 +0.3**
comp=Z,0.2nm,0.4s,baz=90,slow=2.7,SNR=3.7
PDAR Pinedale Array 115.88 43 PKP **PKPdf** **05 59 10.8 +2.0**
PDAR Pinedale Array 115.88 43 PKP **PKPdf** **05 59 10.8 +2.0**
comp=Z,0.5nm,0.8s,baz=322,slow=2.8,SNR=2.2
ULM Lac du Bonnet 120.49 31 PKP **PKPdf** **05 59 16.9 -0.2**
ULM Lac du Bonnet 120.49 31 PKP **PKPdf** **05 59 16.9 -0.2**
comp=Z,2.0nm,0.6s,baz=316,slow=6.8,SNR=3.2
TOA0 Torodi Ar. Sit 125.55 284 *e*PKPdf **PKPdf** **05 59 27.7 -0.1**
TORD Torodi Ar. Bea 125.55 284 PKP **PKPdf** **05 59 27.8 0.0**
TORD Torodi Ar. Bea 125.55 284 PKP **PKPdf** **05 59 27.8 0.0**
comp=Z,2.3nm,0.9s,baz=42,slow=2.4,SNR=11
PLCA Paso Flores 133.33 161 PKP **PKPdf** **05 59 43.5 +1.5**
PLCA SKPbc **SKPab** **06 03 09.6 +2.6**
PLCA Paso Flores 133.33 161 PKP **PKPdf** **05 59 43.5 +1.5**
comp=Z,4.1nm,0.8s,baz=156,slow=2.0,SNR=9.9
PLCA SKPbc **SKPab** **06 03 09.6 +2.6**
comp=Z,5.4nm,1.1s,baz=189,slow=6.5,SNR=4.4
LCO Las Campanas 143.58 153 *e*PKPdf PKPab 05 59 58.3 +0.4
JTS JuntasAbangare 147.01 76 *e*PKPdf **PKPdf** **06 00 06.5 -0.8**
CPUP Villa Florida 150.34 171 PKPbc **PKPbc** **06 00 18.1 +0.5**
CPUP Villa Florida 150.34 171 PKPbc **PKPbc** **06 00 18.1 +0.5**
comp=Z,16nm,1.0s,baz=192,slow=1.9,SNR=17
NNA Nana 151.51 122 *e*PKPdf **PKPdf** **06 00 15.5 +1.0**
OTAV Otavalo 153.90 96 *e*PKPdf **PKPdf** **06 00 19.3 +0.7**
LPAZ La Paz 155.28 142 *e*PKPdf **PKPdf** **06 00 21.2 +0.6**
LPAZ PKP **PKPdf** **06 00 21.6 +1.0**

LPAZ				PKPbc	PKPab	06 00 28.8	-17
LPAZ	**La Paz**	**155.28**	**142**	PKP	**PKPdf**	**06 00 21.6**	**+1.0**
	comp=Z,2.5nm,0.8s,baz=152,slow=1.6,SNR=4.2						
LPAZ				PKPbc	PKPbc	06 00 28.8	
	comp=Z,3.7nm,0.9s,baz=244,slow=4.7,SNR=6.3						
BDFB	**Brasilia**	**160.83**	**193**	PKPab	**PKPab**	**06 01 07.2**	**-1.7**
BDFB	**Brasilia**	**160.83**	**193**	PKPab	**PKPab**	**06 01 07.2**	**-1.7**
	comp=Z,2.3nm,0.8s,baz=162,slow=3.2,SNR=4.0						

MEX 10 05:44:55.4±0.7, 16°22N×97°41W, h34km±35km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.71**	**284**	*eP*	Pn	05 45 07.5	-1.6
PNIG				*i* S	Sn	05 45 16.0	-2.8
VHO	**Vista Hermosa**	**1.07**	**37**	*eP*	Pn	05 45 11.9	-2.3
VHO				*i* S	Sn	05 45 25.8	-2.2
HUIG	**Huatulco**	**1.33**	**110**	*eP*	Pn	05 45 16.0	-1.6
HUIG				*i* S	Sn	05 45 31.1	-3.0
CMIG	**Matias Romero**	**2.57**	**70**	*i* P	Pn	05 45 32.5	-2.1
CMIG				*i* S	Sn	05 46 03.3	-1.4

ISCJB ***10*** *05:50:08.6±0.7, 63°.55N×151°.85W±0°.03, h8km±4km, mb4.7/149, MS4.4/14, Error ellipse: s-maj=3.1km s-min=2.4km az=29.0*

BJI ***10*** *05:50:08.5, 63°.62N×152°.19W, h8km, mB5.2/17, mb4.9/34, Ms5.0/18, Ms7 4.6/18*

NEIC ***10*** *05:50:10.2, 63°.50N×151°.74W, h14km, mb4.7/83, ML4.8(AEIC), MW4.5(USGS), After AEIC.*

NEIC Felt [IV] at Nenana and [II] at Fairbanks, Fort Wainwright and Healy. Also felt at Cantwell, Denali National Park, Eielson AFB and North Pole.

IDC ***10*** *05:50:12.4±0.5, 63°.63N×151°.68W, h18km±2km, mb4.2/27, mb1 4.4/32, mb1mx4.3/37, mbtmp4.2/32, ML3.8/5, MS3.8/9, Ms1 3.8/9, ms1mx3.4/47, Error ellipse: s-maj=10.3km s-min=8.1km az=5.0*

MOS ***10*** *05:50:12.0±0.9, 63°.57N×151°.80W, h33km, mb5.1/43, Error ellipse: s-maj=10.6km s-min=4.8km az=100.8*

ISC 10 05:50:11.4±0.3, 63°.51N±0°.03×151°.74W±0°.02, h17km±1km, h16km; pP-P, n718, σ0s99/796, mb4.7/149, MS4.6/14, 172C-178D, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHUM	**Lake Minchumin**	**0.46**	**326**	P	**Pb**	**05 50 21.1**	**+0.1**
CHUM				S	**Sb**	**05 50 27.6**	**+0.1**
PPLA	**Purkeypile**	**0.65**	**199**	P	**Pg**	**05 50 22.3**	**-1.9**
TRF	**Thorofare Moun**	**0.65**	**94**	P	**Pg**	**05 50 22.9**	**-1.5**
TRF				S	**Sg**	**05 50 31.7**	**-1.4**
HUR	**Hurricane**	**1.09**	**118**	P	**Pb**	**05 50 30.8**	**-1.0**
MCK	**McKinley**	**1.27**	**79**	P	**Pn**	**05 50 33.8**	**-0.7**
MCK				S	**Sb**	**05 50 50.8**	**-0.3**
MCK	**McKinley**	**1.27**	**79**	P	**Pn**	**05 50 33.8**	**-0.7**
MCK				S	**Sb**	**05 50 50.8**	**-0.3**
CUT	**Chulitna**	**1.30**	**148**	P	**Pn**	**05 50 34.4**	**-0.3**
RND	**Reindeer**	**1.30**	**93**	P	**Pn**	**05 50 34.1**	**-0.8**
RND				S	**Sn**	**05 50 51.8**	**-0.2**
RND	**Reindeer**	**1.30**	**93**	P	**Pn**	**05 50 34.1**	**-0.8**
RND				S	**Sn**	**05 50 51.8**	**-0.2**
SKT	**Skwentna**	**1.54**	**176**	P	**Pn**	**05 50 37.1**	**-1.0**
NEA	**Nenana**	**1.59**	**46**	P	**Pn**	**05 50 37.5**	**-1.3**
MLY	**Manley**	**1.59**	**15**	P	**Pn**	**05 50 38.5**	**-0.4**
WRH	**Wood River Hil**	**1.88**	**57**	P	**Pn**	**05 50 41.3**	**-1.5**
STLK	**Strandline Lak**	**2.02**	**181**	P	**Pn**	**05 50 43.5**	**-1.2**
DHY	**Denali Highway**	**2.02**	**100**	P	**Pn**	**05 50 45.9**	**+1.0**
TT01	**Tatalina**	**2.03**	**255**	P	**Pn**	**05 50 43.2**	**-1.7**
CCB	**Clear Creek Bu**	**2.07**	**55**	P	**Pn**	**05 50 44.3**	**-1.1**
MDM	**Murphy Dome**	**2.11**	**45**	P	**Pn**	**05 50 45.2**	**-0.9**
MDM				S	**Sn**	**05 51 13.5**	**+1.6**
COLA	**College**	**2.19**	**49**	P	**Pn**	**05 50 47.0**	**0.0**
COLA	**College**	**2.19**	**49**	P	**Pn**	**05 50 47.0**	**0.0**
PMR	**Palmer**	**2.27**	**147**	P	**Pn**	**05 50 48.1**	**0.0**
PMR				S	**Sn**	**05 51 16.0**	**+0.3**
PMR	**Palmer**	**2.27**	**147**	P	**Pn**	**05 50 48.1**	**0.0**
PMR				S	**Sn**	**05 51 15.9**	**+0.3**
BGL	**Barrier Glacie**	**2.27**	**188**	P	**Pn**	**05 50 47.8**	**-0.5**
HDA	**Harding Lake**	**2.29**	**65**	P	**Pn**	**05 50 47.5**	**-1.1**
SML	**Sawmill**	**2.32**	**136**	P	**Pn**	**05 50 48.1**	**-0.8**
SML	**Sawmill**	**2.32**	**136**	P	**Pn**	**05 50 48.1**	**-0.8**
SPU	**Mount Spurr**	**2.34**	**184**	P	**Pn**	**05 50 48.6**	**-0.6**
GLM	**Gilmore Dome**	**2.41**	**50**	P	**Pn**	**05 50 50.8**	**+0.7**
IL1	**Eielson Array**	**2.48**	**57**	P	**Pn**	**05 50 50.8**	**-0.2**
ILAR	**Eielson Array**	**2.48**	**57**	Pn	**Pn**	**05 50 49.5**	**-1.5**
ILAR				Pg	**Pb**	**05 50 53.7**	**-1.8**
ILAR				Lg	Lg	05 51 27.8	
ILAR	**Eielson Array**	**2.48**	**57**	Pn	**Pn**	**05 50 49.5**	**-1.5**
	8.1nm,0.3s,baz=238,slow=13,SNR=144						
ILAR				Pg	**Pb**	**05 50 53.7**	**-1.8**
	102nm,0.3s,baz=240,slow=14,SNR=196						
ILAR				Lg	Lg	05 51 27.8	
	1µm,0.3s,baz=238,slow=29,SNR=32						
IM3	**Indian Mountai**	**2.63**	**342**	P	**Pn**	**05 50 53.0**	**-0.1**
DDM	**Donnelly Dome**	**2.64**	**81**	P	**Pn**	**05 50 54.0**	**+0.7**
PAX	**Paxson**	**2.89**	**98**	P	**Pn**	**05 50 56.6**	**-0.2**
PAX	**Paxson**	**2.89**	**98**	P	**Pn**	**05 50 56.5**	**-0.2**
DFR	**Drift River**	**2.96**	**189**	P	**Pn**	**05 50 58.2**	**+0.5**
SVW2	**Sparrevohn**	**3.01**	**218**	P	**Pn**	**05 50 56.3**	**-2.1**
SLKM	**Skilak Lake**	**3.10**	**166**	P	**Pn**	**05 51 00.0**	**+0.5**
SLKM	**Skilak Lake**	**3.10**	**166**	P	**Pn**	**05 51 00.0**	**+0.5**
HARP	**HAARP**	**3.20**	**107**	P	**Pn**	**05 51 02.1**	**+1.1**
PRP	**Porcupine Dome**	**3.36**	**50**	P	**Pn**	**05 51 02.5**	**-0.7**
DOT	**Dot Lake**	**3.44**	**84**	P	**Pn**	**05 51 04.3**	**+0.1**
VLZ	**Valdez**	**3.47**	**131**	P	**Pn**	**05 51 04.8**	**+0.1**
SEW	**Seward**	**3.59**	**161**	P	**Pn**	**05 51 07.8**	**+1.6**
DIV	**Divide**	**3.67**	**128**	P	**Pn**	**05 51 07.6**	**+0.2**
MENT	**Mentasta**	**3.67**	**95**	*e*Pn	**Pn**	**05 51 09.9**	**+2.4**
MENT				*e*Sg	**Sb**	**05 52 03.5**	**+3.4**
BRLK	**Bradley Lake**	**3.78**	**173**	P	**Pn**	**05 51 10.1**	**+1.1**
COLD	**Coldfoot**	**3.79**	**9**	P	**Pn**	**05 51 09.4**	**+0.4**
OPT	**Oil Point**	**3.94**	**191**	P	**Pn**	**05 51 10.6**	**-0.4**
EYAK	**Cordova Ski Ar**	**4.10**	**134**	P	**Pn**	**05 51 13.7**	**+0.5**
BMRM	**Bremner River**	**4.20**	**124**	P	**Pn**	**05 51 15.5**	**+0.8**
GOAT	**Goat Mountain**	**4.42**	**129**	P	**Pn**	**05 51 18.6**	**+0.8**
VRDI	**Verde Repeater**	**4.49**	**117**	P	**Pn**	**05 51 19.4**	**+0.6**
BCA3	**Beaver Creek A**	**4.51**	**91**	P	**Pn**	**05 51 18.5**	**-0.6**
EGAK	**Eagle**	**4.80**	**70**	*e*Pn	**Pn**	**05 51 22.8**	**-0.1**
MID	**Middleton Isla**	**4.84**	**145**	*eP*	**Pn**	**05 51 26.6**	**+3.2**
MID	**Middleton Isla**	**4.84**	**145**	*e*Pn	**Pn**	**05 51 26.6**	**+3.2**
MID				*e*Pg	Pg	05 51 40.7	-3.5
BERG	**Berg Lake**	**4.91**	**126**	P	**Pn**	**05 51 25.3**	**+0.9**
BM3	**Burnt Mountain**	**4.92**	**34**	P	**Pn**	**05 51 23.8**	**-0.9**
NICHA	**Nichawak Mount**	**4.93**	**128**	P	**Pn**	**05 51 25.5**	**+0.8**
BALM	**Baldy**	**5.04**	**115**	P	**Pn**	**05 51 26.6**	**+0.3**
BALM	**Baldy**	**5.04**	**115**	P	**Pn**	**05 51 26.6**	**+0.3**
KHIT	**Khitrov Hills**	**5.05**	**124**	P	**Pn**	**05 51 27.7**	**+1.3**
KIAG	**Kiagna River**	**5.10**	**116**	P	**Pn**	**05 51 27.1**	**0.0**
GRIN	**Grindle Hills**	**5.13**	**125**	P	**Pn**	**05 51 28.2**	**+0.7**
ISLE	**Juniper Island**	**5.29**	**119**	P	**Pn**	**05 51 29.9**	**0.0**
BARN	**Barnard Glacie**	**5.31**	**113**	P	**Pn**	**05 51 31.2**	**+1.2**
KAWH	**Katmai**	**5.35**	**198**	P	**Pn**	**05 51 30.4**	**-0.2**
BARK	**Barkley Ridge**	**5.36**	**121**	P	**Pn**	**05 51 31.3**	**+0.7**
KULT	**Kultieth River**	**5.37**	**123**	P	**Pn**	**05 51 31.0**	**+0.1**
KELA	**Mount Kelaz**	**5.45**	**203**	P	**Pn**	**05 51 31.0**	**-0.9**
BAGL	**Bagley Icefiel**	**5.46**	**119**	P	**Pn**	**05 51 33.0**	**+1.1**
KAKN	**Katmai Knife C**	**5.47**	**199**	P	**Pn**	**05 51 32.0**	**-0.2**
DAWY	**Dawson**	**5.50**	**79**	P	**Pn**	**05 51 31.8**	**-0.8**
KABU	**Katmai Buttres**	**5.53**	**200**	P	**Pn**	**05 51 33.3**	**+0.3**
KCE	**Katmai Mt Cerb**	**5.54**	**199**	P	**Pn**	**05 51 33.7**	**+0.5**
KABR	**Katmai Barrier**	**5.62**	**198**	P	**Pn**	**05 51 34.3**	**0.0**
MESA	**MESA**	**5.71**	**121**	P	**Pn**	**05 51 36.5**	**+0.9**
KDAK	**Kodiak Island**	**5.76**	**185**	Pn	**Pn**	**05 51 36.3**	**+0.3**
KDAK				Lg	Lg	05 53 05.9	
KDAK	**Kodiak Island**	**5.76**	**185**	Pn	**Pn**	**05 51 36.3**	**+0.3**
	1.4nm,0.3s,baz=325,slow=6.9,SNR=33						
KDAK				Lg	Lg	05 53 05.9	
	3.0nm,0.3s,baz=180,slow=20,SNR=2.9						
KDAK				LR	LR	05 53 38.9	
	comp=Z,574nm,18.7s,baz=21,slow=35						
TABL	**Table Mountain**	**5.87**	**117**	P	**Pn**	**05 51 38.5**	**+0.7**
SAMH	**Samovar Hills**	**6.20**	**118**	P	**Pn**	**05 51 42.9**	**+0.7**
OHAK	**Old Harbor**	**6.35**	**188**	P	**Pn**	**05 51 44.3**	**+0.1**
PNL	**Peninsula**	**7.03**	**118**	P	**Pn**	**05 51 53.3**	**-0.2**
HYT	**Haines Junctio**	**7.18**	**106**	P	**Pn**	**05 51 55.8**	**0.0**
TNA	**Tin City**	**7.27**	**294**	*e*Pn	**Pn**	**05 51 58.1**	**+1.4**
CHGN	**Chignik**	**7.97**	**208**	*e*Pn	**Pn**	**05 52 05.5**	**-0.8**
SKAG	**Skagway**	**8.83**	**110**	*e*Pn	**Pn**	**05 52 18.7**	**+0.7**
INK	**Inuvik**	**8.85**	**49**	Pn	**Pn**	**05 52 18.7**	**+0.4**
INK				Sn	**Sn**	**05 53 59.3**	**+1.9**
INK				Lg	Lg	05 54 45.0	
INK	**Inuvik**	**8.85**	**49**	Pn	**Pn**	**05 52 18.7**	**+0.4**
	1.7nm,0.3s,baz=234,slow=13,SNR=56						
INK				Sn	**Sn**	**05 53 59.3**	**+1.9**
	1.6nm,0.3s,baz=274,slow=16,SNR=2.4						
INK				Lg	Lg	05 54 45.0	
	1.6nm,0.3s,baz=98,slow=18,SNR=4.8						
INK				LR	LR	05 56 10.6	
	comp=Z,794nm,18.5s,baz=323,slow=41						
GAMB	**Gambell**	**8.88**	**281**	*e*Pn	**Pn**	**05 52 18.1**	**-0.7**
DLBC	**Dease Lake**	**11.67**	**106**	*e*Pn	**Pn**	**05 52 55.9**	**-1.2**
DLBC				Lg	Lg	05 56 18.6	
DLBC	**Dease Lake**	**11.67**	**106**	Pn	**Pn**	**05 52 56.8**	**-0.3**
	0.4nm,0.3s,baz=237,slow=18,SNR=8.1						
DLBC				Lg	Lg	05 56 18.6	
	0.8nm,0.3s,baz=103,slow=20,SNR=7.2						
DLBC				LR	LR	05 57 52.8	
	comp=Z,679nm,18.1s,baz=120,slow=39						
WRAK	**Wrangell Islan**	**11.99**	**117**	*e*Pn	**Pn**	**05 53 02.0**	**+0.6**
YKW3	**Yellowknife Ar**	**16.71**	**76**	*eP*	**Pn**	**05 54 04.1**	**-0.4**
YKA	**Yellowknife Ar**	**16.74**	**77**	Pn	**Pn**	**05 54 04.5**	**-0.3**
YKA	**Yellowknife Ar**	**16.74**	**77**	Pn	**Pn**	**05 54 04.5**	**-0.3**
	0.6nm,0.3s,baz=286,slow=11,SNR=39						
BBB	**Bella Bella**	**16.81**	**121**	Pn	**P**	**05 54 07.8**	**0.0**
BBB	**Bella Bella**	**16.81**	**121**	Pn	**P**	**05 54 07.8**	**0.0**
	0.2nm,0.3s,baz=302,slow=15,SNR=2.7						
BBB				LR	LR	06 00 17.9	
	comp=Z,261nm,20.7s,baz=55,slow=36						
BILL	**Bilibino**	**17.53**	**303**	*e*P	**Pn**	**05 54 14.7**	**0.0**
BILL				pmax	pmax		
	comp=Z,21nm,1.9s						
BILL				MLR	MLR		
	comp=Z,200nm,12.0s						
PGC	**Sidney**	**21.43**	**121**	*eP*	**P**	**05 55 00.1**	**+1.8**
	comp=Z,1.8nm,1.0s						
RES	**Resolute Bay**	**22.05**	**36**	*eP*	**P**	**05 55 05.0**	**+0.2**
	comp=Z,12nm,0.8s						
RES	**Resolute Bay**	**22.05**	**36**	P	**P**	**05 55 04.8**	**0.0**
	comp=Z,4.4nm,0.6s,baz=241,slow=12,SNR=15						
LON	**Longmire**	**23.62**	**121**	*eP*	**P**	**05 55 21.3**	**-0.1**
LON				pmax	pmax		
	comp=Z,13nm,1.2s						
LON	**Longmire**	**23.62**	**121**	*eP*	**P**	**05 55 21.3**	**-0.1**
	comp=Z,13nm,1.2s						
NEW	**Newport**	**24.27**	**113**	*eP*	**P**	**05 55 28.3**	**+0.7**
	comp=Z,16nm,1.1s						
NEW	**Newport**	**24.27**	**113**	⇓P	**P**	**05 55 27.9**	**+0.4**
	baz=24						
NEW	**Newport**	**24.27**	**113**	P	**P**	**05 55 28.0**	**+0.4**
	comp=Z,6.9nm,0.8s,baz=292,slow=6.0,SNR=7.3						
NEW				LR	LR	06 04 23.5	
	comp=Z,115nm,20.2s,baz=80,slow=35						
A12A	**Yaak River Ran**	**24.37**	**110**	⇑P	**P**	**05 55 28.6**	**+0.2**
	baz=24						
SEY	**Seymchan**	**24.51**	**294**	⇓*i*P	**P**	**05 55 29.1**	**-0.4**
B12A	**Libby**	**24.75**	**110**	⇑P	**P**	**05 55 32.7**	**+0.9**
	baz=25,SNR=17						
A13A	**Flathead Natio**	**24.89**	**108**	⇓P	**P**	**05 55 34.0**	**+0.8**
	baz=25						
WALA	**Waterton Lakes**	**25.01**	**107**	*eP*	**P**	**05 55 34.4**	**+0.1**
	comp=Z,0.9nm,1.1s						
A14A	**Double T Ranch**	**25.29**	**107**	⇓P	**P**	**05 55 37.2**	**+0.4**
	baz=25						
B13A	**Whitefish**	**25.30**	**109**	⇑P	**P**	**05 55 37.5**	**+0.6**
	baz=25,SNR=22						
BSMT	**Bassoo Peak**	**25.57**	**110**	*eP*	**P**	**05 55 39.8**	**+0.4**
A15A	**Johnson Ranch,**	**25.58**	**106**	⇓P	**P**	**05 55 39.9**	**+0.4**
	baz=26,SNR=7.3						
BLMT	**Blacktail Moun**	**25.63**	**110**	*eP*	**P**	**05 55 40.8**	**+0.9**
C13A	**Hot Springs**	**25.80**	**110**	⇓P	**P**	**05 55 41.7**	**+0.4**
	baz=26,SNR=12						
B14A	**Marquette Ranc**	**25.82**	**108**	⇓P	**P**	**05 55 41.9**	**+0.3**
	baz=26,SNR=24						
JTMT	**Jette**	**25.87**	**110**	*eP*	**P**	**05 55 42.9**	**+0.9**
YBMT	**Yellow Bay**	**25.89**	**109**	*eP*	**P**	**05 55 42.5**	**+0.2**
	comp=Z,13nm,1.0s						
D12A	**Red Ives Fores**	**25.96**	**112**	⇑P	**P**	**05 55 43.5**	**+0.6**
	baz=26						
C14A	**Swan Lake**	**26.07**	**109**	⇓P	**P**	**05 55 44.2**	**+0.3**
	baz=26						
A16A	**West Butte Ran**	**26.09**	**105**	⇑P	**P**	**05 55 44.5**	**+0.4**
	baz=26						
B15A	**Bradely Ranch,**	**26.16**	**107**	⇑P	**P**	**05 55 44.7**	**+0.1**
	baz=26,SNR=19						
SWMT	**Swartz Lake**	**26.17**	**110**	*eP*	**P**	**05 55 46.1**	**+1.3**
D13A	**Huson**	**26.30**	**111**	⇑P	**P**	**05 55 46.3**	**+0.3**
	baz=26,SNR=14						
FFC	**Flin Flon**	**26.35**	**86**	*ce*P	**P**	**05 55 47.0**	**+0.8**
FFC	**Flin Flon**	**26.35**	**86**	*eP*	**P**	**05 55 46.6**	**+0.4**
	comp=Z,14nm,0.9s						
A17A	**Triple J Farms**	**26.48**	**104**	⇓P	**P**	**05 55 48.0**	**+0.5**
	baz=26						
C15A	**Salmond Ranch,**	**26.55**	**108**	⇓P	**P**	**05 55 48.7**	**+0.4**
	baz=26,SNR=7.4						
SLMT	**Seeley Lake**	**26.59**	**110**	*eP*	**P**	**05 55 51.0**	**+2.3**
D14A	**Greenough**	**26.71**	**110**	⇑P	**P**	**05 55 50.1**	**+0.4**
	baz=27						
MSO	**Missoula**	**26.73**	**111**	*eP*	**P**	**05 55 49.9**	**0.0**
	comp=Z,23nm,1.8s						
MSO	**Missoula**	**26.73**	**111**	⇓P	**P**	**05 55 49.9**	**0.0**
	baz=27,SNR=13						
A18A	**Metzger Ranch,**	**26.88**	**103**	⇑P	**P**	**05 55 51.8**	**+0.7**
	baz=27						
C16A	**Fuhringer Ranc**	**26.90**	**107**	⇓P	**P**	**05 55 51.7**	**+0.3**
	baz=27,SNR=21						
E13A	**Victor**	**26.93**	**112**	⇓P	**P**	**05 55 52.1**	**+0.4**
	baz=27						
B17A	**L&G Farms, Che**	**26.94**	**105**	⇑P	**P**	**05 55 52.1**	**+0.5**
	baz=27,SNR=6.5						
CHMT	**Chamberlain Mo**	**26.95**	**110**	*eP*	**P**	**05 55 52.2**	**+0.2**
BMO	**Blue Mountains**	**26.96**	**117**	*eP*	**P**	**05 55 52.6**	**+0.7**
	comp=Z,6.3nm,0.9s						
F12A	**Elk City**	**27.05**	**114**	⇓P	**P**	**05 55 53.5**	**+0.8**
	baz=27						
D15A	**Lincoln**	**27.16**	**109**	⇓P	**P**	**05 55 53.8**	**0.0**
	baz=27						
E14A	**Clinton**	**27.25**	**111**	⇑P	**P**	**05 55 54.7**	**+0.1**
	baz=27,SNR=11						
B18A	**Beardsley Farm**	**27.30**	**104**	⇑P	**P**	**05 55 55.5**	**+0.6**
	baz=27						
A19A	**Klindworth Far**	**27.35**	**102**	⇑P	**P**	**05 55 56.1**	**+0.7**
	baz=27						
F13A	**Darby**	**27.40**	**113**	⇓P	**P**	**05 55 56.4**	**+0.5**
	baz=27						
C17A	**Wharram Farm,**	**27.46**	**106**	⇓P	**P**	**05 55 56.3**	**-0.1**
	baz=27,SNR=14						
G12A	**Big Creek, Yel**	**27.53**	**115**	⇑P	**P**	**05 55 57.7**	**+0.6**
	baz=27						
D16A	**Dana Ranch, Ca**	**27.59**	**108**	⇓P	**P**	**05 55 57.9**	**+0.4**
	baz=28,SNR=11						
EGMT	**Eagleton**	**27.59**	**104**	*eP*	**P**	**05 55 58.5**	**+1.0**
	comp=Z,12nm,0.7s						
EGMT	**Eagleton**	**27.59**	**104**	⇓P	**P**	**05 55 58.2**	**+0.7**
	baz=28						
YBH	**Yreka Blue Hor**	**27.60**	**128**	P	**P**	**05 55 58.7**	**+1.0**
YBH	**Yreka Blue Hor**	**27.60**	**128**	P	**P**	**05 55 58.7**	**+1.0**
	comp=Z,2.8nm,0.9s,baz=2.4,slow=5.7,SNR=3.8						
B19A	**Brinkman Farms**	**27.62**	**103**	⇑P	**P**	**05 55 58.5**	**+0.7**
	baz=28						
HRY	**Holter Researc**	**27.72**	**108**	*eP*	**P**	**05 55 59.1**	**+0.4**
A20A	**Cobblestone Ra**	**27.75**	**101**	⇓P	**P**	**05 56 00.2**	**+1.3**
	baz=28						
F14A	**Wisdom**	**27.78**	**111**	⇑P	**P**	**05 56 00.4**	**+1.1**
	baz=28						
D17A	**Six Diamond Ra**	**27.86**	**106**	⇓P	**P**	**05 56 00.8**	**+0.7**
	baz=28						
E16A	**East Helena**	**27.92**	**108**	⇑P	**P**	**05 56 01.1**	**+0.5**
	baz=28						
G13A	**Cobalt**	**28.00**	**113**	⇓P	**P**	**05 56 01.8**	**+0.5**
	baz=28						
B20A	**Solberg Farm,**	**28.04**	**102**	⇑P	**P**	**05 56 01.7**	**+0.2**
	baz=28						
A21A	**Bergtoll Ranch**	**28.11**	**100**	⇓P	**P**	**05 56 03.0**	**+1.0**
	baz=28,SNR=15						
C19A	**Slack Wire Ran**	**28.12**	**104**	⇓P	**P**	**05 56 03.7**	**+1.4**
	baz=28						
F15A	**Butte**	**28.13**	**110**	⇑P	**P**	**05 56 03.1**	**+0.7**
	baz=28						
LRM	**Limekiln Ridge**	**28.16**	**110**	*eP*	**P**	**05 56 02.7**	**-0.1**
	comp=Z,29nm,0.7s						
H12A	**Diamond D Ranc**	**28.19**	**115**	⇓P	**P**	**05 56 03.9**	**+0.8**
	baz=28						
G14A	**Jackson**	**28.20**	**112**	⇑P	**P**	**05 56 04.0**	**+0.8**
	baz=28						
E17A	**Martinsdale**	**28.33**	**108**	⇓P	**P**	**05 56 04.9**	**+0.7**
	baz=28						
H13A	**Challis**	**28.43**	**114**	⇑P	**P**	**05 56 05.7**	**+0.6**
	baz=28						
DLMT	**Dillon**	**28.47**	**111**	*eP*	**P**	**05 56 05.9**	**+0.4**
	comp=Z,7.6nm,1.0s						
B21A	**Ellsworth Farm**	**28.49**	**101**	⇓P	**P**	**05 56 06.1**	**+0.6**
	baz=28						
F16A	**Kennard Place,**	**28.54**	**109**	⇑P	**P**	**05 56 06.7**	**+0.6**
	baz=28						
A22A	**Carney Farms,**	**28.55**	**99**	⇑P	**P**	**05 56 07.1**	**+1.1**
	baz=28						
C20A	**Veseth Ranch,**	**28.59**	**103**	⇓P	**P**	**05 56 07.4**	**+1.0**
	baz=28						
D19A	**Cripps Ranch,**	**28.63**	**104**	⇓P	**P**	**05 56 07.5**	**+0.7**
	baz=28,SNR=13						
BOZ	**Bozeman (W)**	**28.64**	**109**	*eP*	**P**	**05 56 08.2**	**+1.2**
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BOZ	**Bozeman (W)**	**28.64**	**109**	*eP*	**P**	**05 56 08.2**	**+1.2**
	comp=Z,10nm,1.4s						
BOZ	**Bozeman (W)**	**28.64**	**109**	⇑P	**P**	**05 56 07.5**	**+0.5**
	baz=28						
E18A	**Harlowton**	**28.65**	**106**	⇓P	**P**	**05 56 07.8**	**+0.7**
	baz=28						
G15A	**Dillon**	**28.67**	**111**	⇑P	**P**	**05 56 08.1**	**+0.8**
	baz=29						
WDC	**Whiskeytown Da**	**28.68**	**129**	*eP*	**P**	**05 56 07.4**	**+0.3**
WDC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WDC	**Whiskeytown Da**	**28.68**	**129**	*eP*	**P**	**05 56 07.4**	**+0.3**
	comp=Z,4.1nm,0.8s						
I12A	**Atlanta**	**28.70**	**116**	⇑P	**P**	**05 56 08.3**	**+0.7**
	baz=29						
MFID	**Camas Ranch**	**28.74**	**117**	*eP*	**P**	**05 56 07.8**	**-0.1**
	comp=Z,4.1nm,0.9s						
MFID	**Camas Ranch**	**28.74**	**117**	⇑P	**P**	**05 56 08.4**	**+0.6**
	baz=29						
H14A	**Leadore**	**28.75**	**113**	⇑P	**P**	**05 56 08.2**	**+0.2**
	baz=29						
MCMT	**McKenzie Canyo**	**28.79**	**112**	*eP*	**P**	**05 56 08.2**	**-0.2**
	comp=Z,1.8nm,0.8s						
F17A	**Fitzpatrick Pl**	**28.85**	**108**	⇑P	**P**	**05 56 09.3**	**+0.5**
	baz=29						
C21A	**Desert Coulee**	**28.91**	**102**	⇓P	**P**	**05 56 09.9**	**+0.7**
	baz=29						
G16A	**Moss Hill, Enn**	**28.91**	**110**	⇓P	**P**	**05 56 10.0**	**+0.6**
	baz=29,SNR=14						
D20A	**Manuel Ranch,**	**29.01**	**104**	⇑P	**P**	**05 56 10.9**	**+0.7**
	baz=29,SNR=9.7						
I13A	**Wildhorse Cree**	**29.02**	**115**	⇑P	**P**	**05 56 11.0**	**+0.5**
	baz=29,SNR=11						
B22A	**Reddig Ranch S**	**29.03**	**100**	⇓P	**P**	**05 56 10.9**	**+0.6**
	baz=29						
A23A	**Redstone**	**29.04**	**98**	⇑P	**P**	**05 56 11.1**	**+0.7**
	baz=29						
H15A	**Lima**	**29.05**	**112**	⇓P	**P**	**05 56 11.2**	**+0.6**
	baz=29						
TIXI	**Tiksi**	**29.08**	**320**	⇓*e*P	**P**	**05 56 10.6**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
HLID	**Hailey**	**29.19**	**115**	*eP*	**P**	**05 56 12.1**	**+0.2**
	comp=Z,2.4nm,0.8s						
HLID	**Hailey**	**29.19**	**115**	⇓P	**P**	**05 56 12.2**	**+0.3**
	baz=29						
E19A	**Rath Farm, Rou**	**29.22**	**105**	⇓P	**P**	**05 56 12.8**	**+0.8**
	baz=29						
F18A	**Big Timber**	**29.25**	**107**	⇓P	**P**	**05 56 13.0**	**+0.6**
	baz=29						
I14A	**Mackay**	**29.28**	**114**	⇓P	**P**	**05 56 13.5**	**

I19A	Meeteetse	31.05	108	⇓	P		P	05 56 29.6	+1.1	CCUT	Cedar City	34.73	120	*e*	P		P	05 57 01.8	+1.2
	baz=31										comp=Z,6.6nm,1.0s								
E24A	Baker	31.10	100	⇑	P		P	05 56 29.4	+0.8	N22A	Wattenberg Ran	34.78	109	⇓	P		P	05 57 01.6	+0.5
	baz=31										baz=35								
H20A	Greybull	31.12	107	⇑	P		P	05 56 29.5	+0.6	PHWY	Pilot Hill	34.79	107	*e*	P		P	05 57 01.4	+0.2
	baz=31										comp=Z,4.6nm,0.8s								
AHID	Auburn Hatcher	31.21	112	*e*	P		P	05 56 31.3	+1.5	N23A	Red Feather La	34.92	108	⇑	P		P	05 57 02.9	+0.6
	comp=Z,9.8nm,1.1s										baz=35								
ELK	Elko	31.24	119	*e*	P		P	05 56 32.0	+1.9	K27A	Flueckinger Fa	35.05	103	⇓	P		P	05 57 03.6	+0.4
G22A	Birney	31.27	104	⇓	P		P	05 56 31.1	+0.9		baz=35								
	baz=31									Q19A	Hogan Spring (	35.16	114	⇓	P		P	05 57 04.4	+0.2
J18A	Kendall Valley	31.29	110	⇑	P		P	05 56 31.7	+1.1		baz=35								
	baz=31,SNR=14									M25A	Palm-Egli Farm	35.29	106	⇑	P		P	05 57 05.7	+0.3
K17A	Gardner Place,	31.29	112	⇓	P		P	05 56 30.8	+0.3		baz=35								
	baz=31									P21A	Newcastle	35.43	111	⇓	P		P	05 57 07.5	+0.9
L15A	Malad City	31.31	115	⇑	P		P	05 56 31.4	+0.7		baz=35								
	baz=31									O23A	Lake Granby, G	35.50	109	⇑	P		P	05 57 08.3	+1.0
H21A	Big Horn, Sher	31.42	106	⇓	P		P	05 56 32.4	+0.8		baz=35								
	baz=31									Q20A	Ridgley Place,	35.56	113	⇓	P		P	05 57 08.2	+0.5
I20A	Worland	31.50	108	⇑	P		P	05 56 32.9	+0.7		baz=36								
	baz=31									P22A	Eagle	35.66	110	⇓	P		P	05 57 09.4	+0.8
F24A	Ekalaka	31.59	101	⇓	P		P	05 56 34.0	+1.0		baz=36								
	baz=32									EYMN	Ely	35.78	87	*e*	P		P	05 57 09.7	+0.4
J19A	Crowheart	31.66	109	⇑	P		P	05 56 34.5	+0.8		comp=Z,49nm,0.9s								
	baz=32									PV04	Paradox Valley	35.78	114	*e*	P		P	05 57 11.6	+2.0
G23A	Biddle	31.68	103	⇑	P		P	05 56 34.5	+0.7	O24A	Longmont	35.93	108	⇓	P		P	05 57 11.6	+0.7
	baz=32										baz=36								
L16A	Fish Haven	31.69	113	⇑	P		P	05 56 34.6	+0.5	S18A	Hurst Farm, Bl	35.94	116	⇑	P		P	05 57 11.4	+0.3
	baz=32										baz=36								
K18A	Toltan Ranch,	31.75	111	⇑	P		P	05 56 35.2	+0.6	ISCO	Idaho Springs	35.97	109	*e*	P		P	05 57 12.2	+0.9
	baz=32									ISCO					pmax		pmax		
BW06	Boulder Array	31.85	110	*e*	P		P	05 56 36.1	+0.7		comp=Z,5.0nm,1.1s								
	comp=Z,13nm,1.0s									ISCO	Idaho Springs	35.97	109	*e*	P		P	05 57 12.2	+0.9
BW06	Boulder Array	31.85	110	⇓	P		P	05 56 36.2	+0.7		comp=Z,5.3nm,1.1s								
	baz=32,SNR=18									ISCO	Idaho Springs	35.97	109	⇓	P		P	05 57 11.8	+0.4
PDAR	Pinedale Array	31.85	110	P	P		P	05 56 36.5	+1.1		baz=36								
PDAR				PcP	PcP		PcP	05 59 25.2	-0.6	U15A	North Rim	36.12	120	⇑	P		P	05 57 13.4	+0.7
PDAR	Pinedale Array	31.85	110	P	P		P	05 56 36.5	+1.1		baz=36								
	comp=Z,4.9nm,0.9s,baz=314,slow=6.0,SNR=26									PV01	Paradox Valley	36.14	114	*e*	P		P	05 57 13.5	+0.7
PDAR				PcP	PcP		PcP	05 59 25.2	-0.6		comp=Z,1μm,0.9s								
	comp=Z,1.2nm,1.0s,baz=153,slow=0.8,SNR=3.9									R20A	Redvale	36.17	114	⇑	P		P	05 57 13.5	+0.5
PDAR				LR	LR			06 11 36.9			baz=36,SNR=14								
	comp=Z,181nm,18.9s,baz=273,slow=40									P23A	Jefferson	36.23	110	⇓	P		P	05 57 13.7	0.0
L17A	Cokeville	31.85	113	⇓	P		P	05 56 36.1	+0.6		baz=36								
	baz=32									LDFC	Landfair	36.24	124	*e*	P		P	05 57 14.7	+1.2
I21A	Big Trails, Te	31.96	107	⇓	P		P	05 56 36.9	+0.5		comp=Z,7.4nm,0.8s								
	baz=32,SNR=13									GMRC	Granite Mounta	36.30	125	⇑	P		P	05 57 14.2	+0.2
HWUT	Hardware Ranch	31.98	114	*e*	P		P	05 56 37.4	+0.8		baz=36								
	comp=Z,3.6nm,0.9s									R21A	Cimarron	36.36	112	⇑	P		P	05 57 14.6	-0.1
NVAR	Mina Array Bea	32.09	125	P	P		P	05 56 38.6	+1.0		baz=36								
NVAR				PcP	PcP		PcP	05 59 26.6	+0.1	S20A	Disappointment	36.49	114	⇑	P		P	05 57 15.8	0.0
NVAR				pPcP				05 59 32.6			baz=36								
NVAR	Mina Array Bea	32.09	125	P	P		P	05 56 38.6	+1.0	O26A	Horse Wrangler	36.59	106	⇑	P		P	05 57 17.0	+0.6
	comp=Z,1.6nm,0.7s,baz=317,slow=9.2,SNR=14										baz=36								
NVAR				PcP	PcP		PcP	05 59 26.6	+0.1	W13A	Hualapai Mount	36.68	123	⇑	P		P	05 57 17.9	+0.6
	comp=Z,1.9nm,0.7s,baz=281,slow=2.3,SNR=7.0										baz=37								
NVAR				pPcP				05 59 32.6		ECSD	EROS Data Cent	36.72	96	*e*	P		P	05 57 17.4	+0.1
	comp=Z,3.0nm,0.7s,baz=307,slow=2.7,SNR=8.9										comp=Z,26nm,1.1s								
K19A	Absolon Red Bu	32.10	110	⇓	P		P	05 56 38.2	+0.5	R22A	Saguache, Gunn	36.81	112	⇑	P		P	05 57 19.1	+0.6
	baz=32										baz=37								
ULM	Lac du Bonnet	32.13	88	*e*	P		P	05 56 38.3	+0.8	P25A	Willow Gulch B	36.83	108	⇑	P		P	05 57 19.1	+0.6
	comp=Z,24nm,1.0s										baz=37								
ULM	Lac du Bonnet	32.13	88	P	P		P	05 56 38.6	+1.1	S21A	Coal Bank Pass	36.86	113	⇓	P		P	05 57 19.1	+0.1
	comp=Z,20nm,0.9s,baz=311,slow=8.0,SNR=15										baz=37								
ULM				LR	LR			06 10 19.5		Q24A	Divide	36.87	109	⇑	P		P	05 57 19.2	+0.2
	comp=Z,178nm,20.1s,baz=291,slow=38										baz=37								
MDND	Maddock	32.22	94	⇑	P		P	05 56 38.9	+0.5	BELC	Belle Mtn. Jos	36.88	126	⇑	P		P	05 57 19.4	+0.4
	baz=32										baz=37								
I22A	9 Mile Ranch,	32.25	106	⇓	P		P	05 56 39.9	+1.1	DAG	Danmarks Havn	36.94	16	*i*	P		P	05 57 18.9	0.0
	baz=32,SNR=18									DAG					pmax		pmax		
J21A	Lysite	32.27	107	⇓	P		P	05 56 40.3	+1.1		comp=Z,6.0nm,0.7s								
	baz=32,SNR=17									DAG	Danmarks Havn	36.94	16	*i*	P		P	05 57 18.9	0.0
L18A	Fontenelle, Gr	32.34	112	⇑	P		P	05 56 40.3	+0.5		comp=Z,8.3nm,0.7s								
	baz=32									MVCO	Mesa Verde	36.96	115	*e*	P		P	05 57 20.8	+1.0
H24A	Dirks Ranch, A	32.41	103	⇑	P		P	05 56 40.5	+0.3		comp=Z,7.2nm,0.9s								
	baz=32,SNR=11									MVCO	Mesa Verde	36.96	115	⇓	P		P	05 57 20.1	+0.3
K20A	Yellowstone Ra	32.45	109	⇑	P		P	05 56 41.0	+0.3		baz=37								
	baz=32									SUMG	Summit	36.98	27	*i*	P		P	05 57 20.7	+1.0
M17A	Scullys Gap (B	32.46	113	⇓	P		P	05 56 41.2	+0.4	SUMG					pmax		pmax		
	baz=32										comp=Z,3.0nm,0.8s								
L19A	Farson	32.48	111	⇓	P		P	05 56 41.2	+0.2	SUMG	Summit	36.98	27	*i*	P		P	05 57 20.7	+1.0
	baz=32,SNR=5.9										comp=Z,3.3nm,0.8s								
DUG	Dugway	32.67	117	*e*	P		P	05 56 43.6	+1.0	O27A	Beecher Island	36.99	105	⇑	P		P	05 57 20.0	+0.1
DUG				pmax			pmax				baz=37								
	comp=Z,4.0nm,0.9s									PFO	Pinyon Flat Ob	37.06	127	⇑	P		P	05 57 20.8	+0.3
DUG	Dugway	32.67	117	*e*	P		P	05 56 43.6	+1.0		baz=37								
	comp=Z,4.3nm,0.9s									P26A	Davis Ranch, A	37.14	107	⇓	P		P	05 57 21.6	+0.5
DUG	Dugway	32.67	117	⇓	P		P	05 56 43.2	+0.6		baz=37								
	baz=33									S22A	4UR Ranch, Cre	37.19	112	⇓	P		P	05 57 22.9	+1.1
M18A	Lyman	32.75	112	⇓	P		P	05 56 43.9	+0.6		baz=37,SNR=15								
	baz=33									R23A	Moffat	37.23	111	⇑	P		P	05 57 22.8	+0.7
JLU	Jordanelle	32.87	115	*e*	P		P	05 56 44.9	+0.4		baz=37,SNR=14								
	comp=Z,4.0nm,1.0s									SPMN	St. Paul	37.26	91	⇓	P		P	05 57 22.6	+0.7
K21A	Alcova	32.94	108	⇓	P		P	05 56 45.3	+0.4		baz=37,SNR=20								
	baz=33									WUAZ	Wupatki	37.28	119	*e*	P		P	05 57 22.4	+0.1
L20A	Wamsutter	32.99	110	⇑	P		P	05 56 45.6	+0.2		comp=Z,26nm,1.1s								
	baz=33									WUAZ	Wupatki	37.28	119	⇑	P		P	05 57 23.3	+1.0
DAU	Daniels Canyon	33.11	115	*e*	P		P	05 56 47.9	+1.3		baz=37,SNR=16								
DAU	Daniels Canyon	33.11	115	*e*	P		P	05 56 47.9	+1.3	PDMCI	Parker Dam,Lak	37.30	124	⇓	P		P	05 57 23.1	+0.8
RSSD	Black Hills	33.13	103	*e*	P		P	05 56 47.7	+1.1		baz=37								
RSSD				pmax			pmax			BC3	Big Chuckawall	37.39	126	⇑	P		P	05 57 23.9	+0.7
	comp=Z,9.0nm,0.6s										baz=37								
RSSD	Black Hills	33.13	103	*e*	P		P	05 56 47.7	+1.1	KBS	Kingsbay	37.47	5	⇑	*e*	P		P	05 57 25.4	+2.1
	comp=Z,9.3nm,0.6s									KBS					pmax		pmax		
R11A	Troy Canyon, C	33.18	122	⇑	P		P	05 56 47.5	+0.5		comp=Z,48nm,2.5s								
	baz=33,SNR=10									P27A	Ficken Ranch,	37.47	106	⇑	P		P	05 57 24.4	+0.5
K22A	Casper	33.23	107	⇓	P		P	05 56 48.0	+0.5		baz=37								
	baz=33									R24A	Sanders Place,	37.50	110	⇓	P		P	05 57 25.3	+1.1
N18A	Larsen Ranch,	33.29	112	⇑	P		P	05 56 48.5	+0.5		baz=37,SNR=5.1								
	baz=33									T21A	Navajo Lake	37.54	114	⇓	P		P	05 57 25.5	+0.8
L21A	Rawlins	33.43	109	⇑	P		P	05 56 49.4	+0.1		baz=37								
	baz=33									S23A	Nye Farm, Mont	37.57	111	⇓	P		P	05 57 25.8	+0.9
M20A	Sweetwater, Wa	33.48	110	⇓	P		P	05 56 50.3	+0.6		baz=38								
	baz=33									Q26A	Hugo	37.59	108	⇓	P		P	05 57 25.4	+0.4
J24A	Dixon Ranch, L	33.49	104	⇑	P		P	05 56 50.1	+0.4		baz=38								
	baz=33,SNR=5.3									Y12C	Blythe	37.64	124	⇓	P		P	05 57 26.1	+0.9
O17A	Robinson Place	33.51	114	⇓	P		P	05 56 51.4	+1.5		baz=38								
	baz=33,SNR=16									SDCO	Great Sand Dun	37.74	111	*e*	P		P	05 57 27.7	+1.2
N19A	John Jarvie Ra	33.56	112	⇓	P		P	05 56 50.9	+0.5		comp=Z,7.7nm,1.0s								
	baz=34,SNR=16									T22A	Edith	37.78	113	⇑	P		P	05 57 27.8	+1.1
P16A	Fountain Green	33.63	116	⇑	P		P	05 56 52.2	+1.2		baz=38,SNR=8.8								
	baz=34									KSCO	Kaye Shedlock'	37.90	107	⇓	P		P	05 57 28.0	+0.4
RCTC	Rector, Farmer	33.65	128	⇑	P		P	05 56 52.0	+1.1		baz=38								
	baz=34									R25A	Fountain Ranch	37.92	109	⇓	P		P	05 57 28.3	+0.5
M21A	Separation Pea	33.73	109	⇓	P		P	05 56 52.5	+0.5		baz=38								
	baz=34									S24A	Houchin Ranch,	37.95	111	⇓	P		P	05 57 28.9	+0.7
O18A	Roosevelt	33.74	114	⇓	P		P	05 56 53.3	+1.3		baz=38								
	baz=34									U21A	Nageezi	37.98	114	⇓	P		P	05 57 29.1	+0.7
L22A	Ellis Ranch, M	33.78	108	⇑	P		P	05 56 54.0	+1.7		baz=38								
	baz=34,SNR=12									DVTC	Dert V Tower	38.05	127	⇑	P		P	05 57 29.5	+0.7
N20A	Spence Gulch,	33.99	111	⇓	P		P	05 56 55.5	+1.3		baz=38								
	baz=34,SNR=46									T23A	Casias Ranch,	38.12	112	⇑	P		P	05 57 29.9	+0.3
L23A	Garrett	34.02	107	⇑	P		P	05 56 55.4	+0.9		baz=38								
	baz=34									R26A	Arlington	38.15	108	⇓	P		P	05 57 30.3	+0.7
O19A	Miners Draw (B	34.08	112	⇓	P		P	05 56 55.8	+0.9		baz=38								
	baz=34,SNR=14									GLA	Glamis	38.16	125	⇑	P		P	05 57 30.6	+0.9
P17A	Butcher Ranch,	34.12	115	⇓	P		P	05 56 56.4	+1.2		baz=38								
	baz=34									V20A	Brimhall	38.19	116	⇓	P		P	05 57 30.9	+0.8
M22A	Cedar Creek Ra	34.22	109	⇓	P		P	05 56 56.9	+0.6		baz=38								
	baz=34									X16A	Lo Mia Camp, P	38.22	120	⇓	P		P	05 57 31.3	+1.0
MVU	Marysvale	34.35	118	*e*	P		P	05 56 59.0	+1.6		baz=38,SNR=12								
	comp=Z,12nm,1.0s									S25A	Robets Cordova	38.27	110	⇑	P		P	05 57 31.7	+1.0
FURC	Furnace Creek,	34.36	125	⇑	P		P	05 56 58.0	+0.9		baz=38								
	baz=34									U22A	Llaves	38.35	113	⇑	P		P	05 57 32.9	+1.4
MSU	Marysvale	34.36	118	*e*	P		P	05 56 59.1	+1.7		baz=38								
MSU	Marysvale	34.36	118	*e*	P		P	05 56 59.1	+1.7	R27A	Eads	38.44	107	⇑	P		P	05 57 33.0	+0.9
N21A	Black Mountain	34.37	110	⇓	P		P	05 56 58.0	+0.5		baz=38								
	baz=34									T24A	Torres, Weston	38.50	111	⇑	P		P	05 57 33.6	+0.7
Q16A	Castle Valley	34.41	116	⇓	P		P	05 56 59.0	+1.1		baz=38								
	baz=34,SNR=13									V21A	Milan	38.52	115	⇓	P		P	05 57 33.9	+1.0
ARUT	Antelope Range	34.49	120	*e*	P		P	05 56 59.5	+1.0		baz=38								
ARUT				pmax			pmax			Z14A	Wintersburg	38.58	123	⇑	P		P	05 57 34.0	+0.8
	comp=Z,9.0nm,0.9s										baz=38								
ARUT	Antelope Range	34.49	120	*e*	P		P	05 56 59.5	+1.0	U23A	El Rito	38.66	113	⇓	P		P	05 57 34.9	+0.8
	comp=Z,8.6nm,0.9s										baz=39								
MPMC	Manual Prospec	34.49	126	⇑	P		P	05 56 59.7	+1.1	X18A	Snowflake	38.70	118	⇑	P		P	05 57 35.2	+0.8
	baz=34										baz=39,SNR=13								
SRU	San Rafael	34.51	115	*e*	P		P	05 57 00.0	+1.3	S26A	Kim	38.71	109	⇓	P		P	05 57 35.0	+0.6
SRU	San Rafael	34.51	115	*e*	P		P	05 57 00.0	+1.3		baz=39								
	comp=Z,463nm,0.8s									T25A	Trinidad	38.72	110	⇑	P		P	05 57 35.2	+0.7
SRU	San Rafael	34.51	115	⇓	P		P	05 56 59.8	+1.1		baz=39								
	baz=34,SNR=20									V22A	San Miguel Ran	38.73	114	⇓	P		P	05 57 35.1	+0.5
O20A	White River Ci	34.59	112	⇑	P		P	05 56 59.9	+0.6		baz=39								
	baz=34									W20A	Ramah	38.76	116	⇓	P		P	05 57 35.7	+0.7
P19A	Cripple Cowboy	34.70	113	⇑	P		P	05 57 00.8	+0.5		baz=39								
	baz=35,SNR=13									113A	Mohawk Valley,	38.80	124	⇑	P		P	05 57 35.8	+0.8
PKM	Peak Mountain	34.72	130	⇑	P		P	05 57 01.4	+0.9		baz=39								
	baz=35									YSS	Yuzh-Sakhalins	38.88	277	*e*	P		P	05 57 37.0	+1.5

U24A	Moreno Valley	38.98	112	⇑	P		P	05 57 37.5	+0.7
	baz=39								
T26A	Comanche Natio	39.03	109	⇑	P		P	05 57 37.9	+0.7
	baz=39,SNR=12								
W21A	San Fidel	39.11	115	⇑	P		P	05 57 38.6	+0.7
	baz=39								
V23A	Ortiz Mt. (NFS	39.17	113	⇑	P		P	05 57 39.2	+0.8
	baz=39								
CLNS	Chul'man	39.18	300	*e*	P		P	05 57 37.7	-0.3
CLNS				pmax			pmax		
	comp=Z,11nm,1.1s								
CLNS				pmax			pmax		
	comp=N,6.0nm,0.9s								
CLNS				pmax			pmax		
	comp=E,7.0nm,1.0s								
X20A	Quemado	39.27	117	⇑	P		P	05 57 39.6	+0.4
	baz=39								
CBKS	Cedar Bluff	39.32	104	*e*	P		P	05 57 40.6	+1.2
CBKS				pmax			pmax		
	comp=Z,26nm,0.9s								
CBKS	Cedar Bluff	39.32	104	*e*	P		P	05 57 40.6	+1.2
	comp=Z,26nm,0.9s								
U25A	Circle Dot Ran	39.35	111	⇑	P		P	05 57 40.9	+1.1
	baz=39,SNR=27								
W22A	Albuquerque	39.47	114	⇑	P		P	05 57 41.8	+1.0
	baz=39								
T27A	Campo	39.50	108	⇑	P		P	05 57 41.8	+0.8
	baz=39								
V24A	Rampart Ranch,	39.56	112	⇑	P		P	05 57 42.8	+1.2
	baz=40,SNR=18								
U26A	Atchley Ranch,	39.63	110	⇓	P		P	05 57 43.1	+1.0
	baz=40,SNR=12								
X21A	Alamocita Cree	39.64	116	⇓	P		P	05 57 43.3	+1.0
	baz=40,SNR=12								
W23A	Werner Place,	39.69	114	⇑	P		P	05 57 43.5	+0.9
	baz=40								
T28A	Walsh	39.71	108	⇑	P		P	05 57 43.5	+0.8
	baz=40								
YUK	Yuzh-Kuril'sk	39.74	271	*c*	*i*	P		05 57 37.0	-5.7
YUK					*i*	SSS	SSS	06 07 38.9	
V25A	Rancho No Teng	39.74	111	⇓	P		P	05 57 43.9	+0.9
	baz=40,SNR=15								
ANMO	Albuquerque	39.75	114	*e*	P		P	05 57 44.3	+1.2
	comp=Z,3.5nm,0.8s								
Y20A	Horse Springs,	39.87	117	⇑	P		P	05 57 45.0	+0.7
	baz=40								
214A	Organ Pipe Nat	39.88	124	⇑	P		P	05 57 45.1	+1.0
	baz=40								
X22A	Bernardo	39.90	115	⇑	P		P	05 57 44.7	+0.3
	baz=40								
LAZ	Ladron	39.94	115	*e*	P		P	05 57 45.8	+1.1
	comp=Z,2.8nm,1.0s								
W24A	Lazy 6 Ranch,	39.95	113	⇑	P		P	05 57 45.1	+0.2
	baz=40								
Y21A	Point of Rocks	40.07	116	⇓	P		P	05 57 46.8	+1.0
	baz=40								
V26A	Tequesquite Ra	40.12	110	⇓	P		P	05 57 46.7	+0.6
	baz=40,SNR=15								
TUC	Tucson	40.34	121	*e*	P		P	05 57 49.3	+1.4
TUC	Tucson	40.34	121	*e*	P		P	05 57 49.3	+1.4
	comp=Z,1.1nm,1.1s								
W25A	X Bar L Ranch,	40.34	112	⇑	P		P	05 57 48.3	+0.3
	baz=40,SNR=10.0								
BNM	Barren Site	40.37	115	*e*	P		P	05 57 48.8	+0.5
	comp=Z,6.3nm,1.0s								
Y22A	Socorro	40.41	115	⇑	P		P	05 57 49.2	+0.6
	baz=40								
KSU1	Kansas State U	40.45	100	*e*	P		P	05 57 48.5	-0.2
	comp=Z,47nm,0.6s								
Z20A	Nine Sixteen R	40.48	118	⇓	P		P	05 57 50.1	+0.9
	baz=40								
X24A	Lazy VL Ranch,	40.50	113	⇓	P		P	05 57 50.5	+1.1
	baz=40								
Z21A	St. Cloud Mine	40.68	117	⇓	P		P	05 57 51.7	+0.8
	baz=41								
Y23A	Lovelace Mesa,	40.79	114	⇓	P		P	05 57 52.8	+1.0
	baz=41								
V28A	Channing	40.82	109	⇓	P		P	05 57 52.0	+0.1
	baz=41,SNR=11								
120A	U Bar Ranch, L	40.97	118	⇑	P		P	05 57 53.8	+0.6
	baz=41								
Z22A	Elephant Butte	41.01	116	⇓	P		P	05 57 54.5	+1.0
	baz=41								
Y24A	Capitan	41.05	114	⇓	P		P	05 57 54.8	+0.9
	baz=41,SNR=12								
W27A	Bowe Ranch, En	41.05	110	⇑	P		P	05 57 54.3	+0.5
	baz=41								
X26A	CR and CF Fran	41.18	111	⇑	P		P	05 57 55.4	+0.4
	baz=41								
SCHQ	Schefferville	41.23	61	*e*	P		P	05 57 55.0	0.0
	comp=Z,35nm,1.3s								
SCHQ	Schefferville	41.23	61	P	P		P	05 57 54.9	0.0
	comp=Z,11nm,0.9s,baz=329,slow=8.9,SNR=11								
SCHQ				LR		LR		06 14 39.2	
	comp=Z,118nm,18.1s,baz=355,slow=36								
Z23A	Rita Site, Whi	41.30	115	⇓	P		P	05 57 56.4	+0.5
	baz=41								
121A	Cookes Peak, D	41.31	117	⇓	P		P	05 57 56.8	+0.7
	baz=41								
Y25A	Mesa, Roswell	41.36	113	⇓	P		P	05 57 57.1	+0.7
	baz=41,SNR=12								
X27A	F and S Farms,	41.40	111	⇓	P		P	05 57 56.8	+0.1
	baz=41								
122A	Conniff Cattle	41.48	116	⇑	P		P	05 57 58.1	+0.6
	baz=41								
220A	Playas Peak, P	41.58	119	⇓	P		P	05 57 59.0	+0.8
	baz=42,SNR=12								
Z24A	Sheeppen Canyo	41.59	114	⇑	P		P	05 57 59.2	+0.8
	baz=42,SNR=11								
Y26A	Elida	41.72	112	⇓	P		P	05 58 00.0	+0.7
	baz=42								
319A	Douglas	41.75	120	⇑	P		P	05 58 00.7	+1.1
	baz=42								
AMTX	Amarillo	41.79	109	*e*	P		P	05 58 00.8	+0.9
	comp=Z,13nm,0.7s								
AMTX	Amarillo	41.79	109	⇓	P		P	05 58 01.0	+1.1
	baz=42								
123A	Bell Site, Whi	41.84	116

Z29A	**Hungry Hill Ra**	43.18	110	⇓	P		P		05 58 11.4	+0.3
	baz=43,SNR=15									
226B	**Tecolote Peak,**	43.18	114	⇓	P		P		05 58 11.7	+0.6
	baz=43									
Y31A	**Rekieta Farm,**	43.18	108	⇑	P		P		05 58 11.4	+0.3
	baz=43									
324A	**Moseley Ranch,**	43.20	116	⇓	P		P		05 58 11.9	+0.5
	baz=43									
Z30A	**Sanderson Ranc**	43.40	110	⇑	P		P		05 58 12.7	-0.2
	baz=43									
128A	**Castleberry Fa**	43.40	111	⇓	P		P		05 58 13.5	+0.5
	baz=43									
TUL1	**Tulsa**	43.47	102	⇓	P		P		05 58 14.0	+0.7
	baz=43									
325A	**Bean Ranch, Si**	43.47	115	⇓	P		P		05 58 14.1	+0.5
	baz=43									
Y32A	**R-V Farms, Ver**	43.50	107	⇑	P		P		05 58 13.9	+0.2
	baz=43									
227A	**Bennet, Jal**	43.59	113	⇓	P		P		05 58 15.2	+0.7
	baz=44									
129A	**Stewart Farms,**	43.65	111	⇑	P		P		05 58 15.1	+0.2
	baz=44									
Z31A	**Sharp Cattle R**	43.79	109	⇓	P		P		05 58 16.1	+0.1
	baz=44									
228A	**UT Block 9, Go**	43.79	112	⇓	P		P		05 58 16.4	+0.3
	baz=44									
326A	**Caldwell Ranch**	43.92	114	⇑	P		P		05 58 17.1	0.0
	baz=44									
425A	**Indio Mountain**	43.98	115	⇓	P		P		05 58 18.9	+1.3
	baz=44,SNR=14									
130A	**Snyder**	44.06	110	⇓	P		P		05 58 18.1	-0.2
	baz=44									
Z32A	**Haskell**	44.08	108	⇓	P		P		05 58 17.7	-0.7
	baz=44,SNR=14									
131A	**Roby**	44.24	109	⇓	P		P		05 58 19.6	0.0
	baz=44									
328A	**Wristen Ranch,**	44.34	113	⇑	P		P		05 58 20.3	-0.3
	baz=44									
426A	**McDonald Obser**	44.47	115	⇓	P		P		05 58 22.0	+0.3
	baz=44									
OLIL	**Olney**	44.54	93	*e*P	P		P		05 58 21.9	-0.1
	comp=Z,31nm,0.7s									
427A	**Hayter Ranch,**	44.56	114	⇑	P		P		05 58 22.3	0.0
	baz=44,SNR=8.1									
329A	**Wagon Wheel Ra**	44.60	112	⇑	P		P		05 58 22.5	0.0
	baz=44,SNR=20									
ABTX	**Abilene, Hawle**	44.60	108	⇓	P		P		05 58 22.8	+0.3
	baz=44									
230A	**Sterling City**	44.61	111	⇓	P		P		05 58 22.6	0.0
	baz=44,SNR=15									
SIUC	**Southern Illin**	44.88	94	*e*P	P		P		05 58 23.5	-1.2
	comp=Z,39nm,0.7s									
BLO	**Bloomington**	44.89	91	*e*P	P		P		05 58 24.4	-0.3
BLO				pmax	pmax					
	comp=Z,21nm,0.8s									
BLO	**Bloomington**	44.89	91	*e*P	P		P		05 58 24.4	-0.3
	comp=Z,21nm,0.8s									
231A	**Bronte**	44.91	110	⇓	P		P		05 58 24.7	-0.3
	baz=45									
428A	**Kincaid Ranch,**	44.97	113	⇓	P		P		05 58 25.5	0.0
	baz=45									
526A	**Mary Lane Ranc**	44.98	115	⇑	P		P		05 58 26.1	+0.4
	baz=45,SNR=20									
330A	**Mertzon**	45.00	111	⇑	P		P		05 58 25.5	-0.3
	baz=45,SNR=12									
232A	**Coleman**	45.23	109	⇓	P		P		05 58 27.6	+0.1
	baz=45,SNR=14									
USIN	**University of**	45.37	93	*e*P	P		P		05 58 28.1	-0.5
	comp=Z,58nm,0.9s									
429A	**Davenport Ranc**	45.38	112	⇓	P		P		05 58 28.9	+0.1
	baz=45,SNR=20									
331A	**San Angelo**	45.40	110	⇓	P		P		05 58 28.9	0.0
	baz=45									
MSNY	**Massena**	45.40	76	*e*P	P		P		05 58 27.9	-0.8
	comp=Z,123nm,0.8s									
626A	**Big Bend Ranch**	45.41	115	⇑	P		P		05 58 29.5	+0.5
	baz=45,SNR=11									
528A	**Cox Ranch, San**	45.42	114	⇓	P		P		05 58 30.2	+1.1
	baz=45,SNR=37									
430A	**Baggett Ranch,**	45.52	111	⇓	P		P		05 58 29.8	0.0
	baz=45,SNR=19									
MIAR	**Mount Ida**	45.59	101	*e*P	P		P		05 58 30.2	-0.1
MIAR				pmax	pmax					
	comp=Z,16nm,0.8s									
MIAR	**Mount Ida**	45.59	101	*e*P	P		P		05 58 30.2	-0.1
	comp=Z,16nm,0.8s									
ACSO	**Alum Creek Sta**	45.62	87	*e*P	P		P		05 58 30.8	+0.3
	comp=Z,56nm,0.8s									
332A	**Millersview**	45.63	109	⇑	P		P		05 58 30.7	0.0
	baz=46,SNR=19									
529A	**Stev Forest Ra**	45.69	113	⇓	P		P		05 58 31.6	+0.4
	baz=46									
ALLY	**Alegheny Colle**	45.74	83	*e*P	P		P		05 58 32.0	+0.5
	comp=Z,25nm,0.7s									
WCI	**Wyandotte Cave**	45.77	91	*e*P	P		P		05 58 31.2	-0.5
WCI				pmax	pmax					
	comp=Z,28nm,0.8s									
WCI	**Wyandotte Cave**	45.77	91	*e*P	P		P		05 58 31.2	-0.5
	comp=Z,28nm,0.8s									
TXAR	**Lajitas Array**	45.79	115	P	P		P		05 58 32.7	+0.6
TXAR				pP	pP		pP		05 58 38.4	+1.1
TXAR				PcP	PcP		PcP		06 00 09.2	-0.2
TXAR				pPcP					06 00 15.1	
TXAR	**Lajitas Array**	45.79	115	P	P		P		05 58 32.7	+0.6
	comp=Z,4.3nm,0.9s,baz=332,slow=5.3,SNR=36									
TXAR				pP	pP		pP		05 58 38.4	+1.1
	comp=Z,5.9nm,0.6s,baz=324,slow=5.6,SNR=26									
TXAR				PcP	PcP		PcP		06 00 09.2	-0.2
	comp=Z,1.6nm,0.8s,baz=291,slow=2.5,SNR=2.6									
TXAR				pPcP					06 00 15.1	
	comp=Z,3.5nm,0.9s,baz=283,slow=3.3,SNR=4.6									
TXAR				LR	LR				06 18 29.5	
	comp=Z,144nm,21.0s,baz=175,slow=37									
627A	**Terlingua Ranc**	45.80	115	⇓	P		P		05 58 32.9	+0.7
	baz=46,SNR=16									
431A	**Sonora**	45.87	111	⇑	P		P		05 58 32.9	+0.2
	baz=46,SNR=30									
UALR	**University of**	45.94	100	*e*P	P		P		05 58 33.1	0.0
	comp=Z,13nm,0.6s									
628A	**Black Gap, Mar**	45.97	114	⇑	P		P		05 58 33.9	+0.4
	baz=46,SNR=10									
530A	**J-O Ranch, Com**	46.03	112	⇑	P		P		05 58 34.2	+0.3
	baz=46,SNR=13									
432A	**Menard**	46.05	110	⇓	P		P		05 58 33.4	-0.6
	baz=46									
WHTX	**Lake Whitney**	46.08	107	⇓	P		P		05 58 34.1	-0.1
	baz=46									
FRNY	**Flat Rock**	46.09	75	*e*P	P		P		05 58 32.3	-1.8
	comp=Z,6.3nm,0.8s									
531A	**Rocksprings**	46.35	111	⇓	P		P		05 58 36.5	+0.1
	baz=46									
JCT	**Junction City**	46.39	110	*e*P	P		P		05 58 37.3	+0.6
JCT				pmax	pmax					
	comp=Z,30nm,0.8s									
JCT	**Junction City**	46.39	110	*e*P	P		P		05 58 37.2	+0.6
	comp=Z,30nm,0.8s									
JCT	**Junction City**	46.39	110	⇑	P		P		05 58 36.7	0.0
	baz=46,SNR=16									
532A	**Rocksprings**	46.65	110	⇑	P		P		05 58 38.8	0.0
	baz=47,SNR=26									
WVT	**Waverly**	46.81	94	*e*P	P		P		05 58 40.0	+0.1
WVT				pmax	pmax					
	comp=Z,14nm,0.6s									
WVT	**Waverly**	46.81	94	*e*P	P		P		05 58 40.0	+0.1
	comp=Z,14nm,0.6s									
631A	**Perdido Creek**	46.99	112	⇓	P		P		05 58 41.3	-0.2
	baz=47,SNR=12									
KEV	**Kevo**	47.01	1	*e*P	P		P		05 58 40.5	-0.5
KEV				pmax	pmax					
	comp=Z,6.0nm,0.6s									
KEV	**Kevo**	47.01	1	*e*p	P		P		05 58 40.5	-0.5
	comp=Z,6.4nm,0.6s									
BINY	**Binghamton**	47.14	79	*e*P	P		P		05 58 42.1	-0.4
	comp=Z,7.2nm,0.7s									
ARCES	**ARCESS Array B**	47.22	1	P	P		P		05 58 43.1	+0.3
ARCES				pP	pP		pP		05 58 48.4	+0.4
ARCES	**ARCESS Array B**	47.22	1	P	P		P		05 58 43.1	+0.3
	comp=Z,4.2nm,0.8s,baz=2.5,slow=8.1,SNR=11									
ARCES				pP	pP		pP		05 58 48.4	+0.4
	comp=Z,5.1nm,0.6s,baz=14,slow=8.7,SNR=6.3									
632A	**Uvalde**	47.24	111	⇓	P		P		05 58 43.0	-0.3
	baz=47,SNR=11									
OXF	**Oxford**	47.46	97	*e*P	P		P		05 58 45.3	+0.3
OXF	**Oxford**	47.46	97	*e*P	P		P		05 58 45.3	+0.3
	comp=Z,64nm,0.6s									
SSPA	**Standing Stone**	47.56	82	*e*P	P		P		05 58 44.0	-1.8
	comp=Z,7.2nm,0.9s									
732A	**Laxson Ranch,**	47.84	111	⇑	P		P		05 58 48.4	+0.4
	baz=48,SNR=10									
TZTN	**Tazewell**	48.39	90	*e*P	P		P		05 58 52.4	+0.2
	comp=Z,29nm,0.7s									
SWET	**Sewanee**	48.42	93	*e*P	P		P		05 58 52.3	-0.2
	comp=Z,37nm,0.6s									
CPCT	**Cooper Cave**	48.86	92	*e*P	P		P		05 58 55.8	-0.1
CN2	**Changchun**	48.92	288	*e*P	P		P		05 58 56.5	+0.3
CN2				pmax	pmax					
	comp=Z,10.0nm,0.7s									
TKL	**Tuckaleechee C**	49.02	91	*e*P	P		P		05 58 57.1	0.0
MJAR	**Matsushiro Arr**	49.23	272	P	P		P		05 58 58.6	0.0
MJAR	**Matsushiro Arr**	49.23	272	P	P		P		05 58 58.6	0.0
	comp=Z,3.8nm,0.9s,baz=8.8,slow=7.2,SNR=8.8									
BLA	**Blacksburg**	49.24	87	*e*P	P		P		05 58 58.7	0.0
BLA				pmax	pmax					
	comp=Z,27nm,0.8s									
BLA	**Blacksburg**	49.24	87	*e*P	P		P		05 58 58.7	0.0
	comp=Z,27nm,0.8s									
LRAL	**Lakeview Retre**	49.78	96	*e*P	P		P		05 59 02.5	-0.4
	comp=Z,19nm,0.7s									
KMSC	**Kings Mountain**	50.55	89	⇑	P		P		05 59 07.5	-1.1
	baz=50,SNR=6.4									
JSC	**Jenkinsville**	51.30	90	*e*P	P		P		05 59 14.6	+0.3
JSC	**Jenkinsville**	51.30	90	*e*P	P		P		05 59 14.6	+0.3
ZAK	**Zakamensk**	52.24	309	*e*P	P		P		05 59 19.5	-1.7
ZAK				pmax	pmax					
	comp=Z,3.0nm,0.9s									
TMCR	**Tamitsa**	52.43	355	*e*P	P		P		05 59 21.3	-1.0
TMCR				pmax	pmax					
	comp=Z,8.0nm,0.4s									
TIGA	**Tifton**	52.66	94	⇑	P		P		05 59 23.9	-0.5
	baz=52									
ULN	**Ulaanbaatar**	52.98	304	*e*P	P		P		05 59 27.5	+0.6
	comp=Z,3.1nm,0.7s									
KSRS	**Korea Array**	53.05	281	P	P		P		05 59 27.9	+0.6
	comp=Z,4.3nm,0.8s,baz=30,slow=6.4,SNR=19									
KSAR	**Wonju Array Be**	53.08	281	P	P		P		05 59 27.9	+0.4
SONM	**Songino Array**	53.25	305	P	P		P		05 59 29.9	+1.1
SONM	**Songino Array**	53.25	305	P	P		P		05 59 29.9	+1.1
	comp=Z,2.9nm,0.8s,baz=30,slow=6.7,SNR=20									
JOF	**Joensuu**	53.86	358	*e*P	P		P		05 59 31.8	-1.1
JOF				pmax	pmax					
	comp=Z,3.0nm,0.6s									
JOF	**Joensuu**	53.86	358	*e*p	P		P		05 59 31.8	-1.1
	comp=Z,3.0nm,0.6s									
NVS	**Novosibirsk**	54.53	324	*e*P	P		P		05 59 36.1	-1.8
NVS				pmax	pmax					
	comp=Z,10.0nm,1.1s									
NVS				pmax	pmax					
	comp=N,3.0nm,0.9s									
NVS				pmax	pmax					
	comp=E,3.0nm,0.7s									
KAF	**Kangasniemi**	54.68	1	*e*P	P		P		05 59 38.3	-0.6
KAF				pmax	pmax					
	comp=Z,3.0nm,0.5s									
KAF	**Kangasniemi**	54.68	1	*e*p	P		P		05 59 38.3	-0.6
	comp=Z,2.9nm,0.5s									
ZAA0	**Zalesovo Array**	54.91	323	*e*P	P		P		05 59 40.0	-0.6
ZALV	**Zalesovo Beam**	54.91	323	P	P		P		05 59 40.5	-0.1
ZALV	**Zalesovo Beam**	54.91	323	P	P		P		05 59 40.5	-0.1
ZALV	**Zalesovo Beam**	54.91	323	P	P		P		05 59 40.5	-0.1
	comp=Z,4.9nm,0.7s,baz=26,slow=6.6,SNR=29									
NB2	**NORSAR Subarra**	55.10	10	P	P		P		05 59 40.8	-1.1
	comp=Z,3.1nm,0.7s,baz=351,slow=7.4									
NOA	**NORSAR Array B**	55.10	10	P	P		P		05 59 40.9	-1.1
NOA				pP	pP		pP		05 59 47.2	0.0
NOA	**NORSAR Array B**	55.10	10	P	P		P		05 59 40.9	-1.1
	comp=Z,3.3nm,0.8s,baz=352,slow=7.1,SNR=14									
NOA				pP	pP		pP		05 59 47.2	0.0
	comp=Z,2.4nm,0.7s,baz=351,slow=7.2,SNR=6.7									
SOKR	**Solikamsk**	55.34	343	*e*P	P		P		05 59 43.3	-0.3
SOKR				pmax	pmax					
	comp=Z,20nm,1.2s									
FINES	**FINESS Array B**	55.35	1	P	P		P		05 59 44.0	+0.4
FINES				pP	pP		pP		05 59 49.7	+0.7
FINES	**FINESS Array B**	55.35	1	P	P		P		05 59 44.0	+0.4
	comp=Z,6.1nm,0.7s,baz=12,slow=9.8,SNR=16									
FINES				pP	pP		pP		05 59 49.7	+0.7
	comp=Z,8.3nm,0.7s,baz=3.1,slow=8.1,SNR=13									
JNU	**Nakatsue**	55.37	276	P	P		P		05 59 44.7	+0.4
JNU	**Nakatsue**	55.37	276	P	P		P		05 59 44.7	+0.4
	comp=Z,5.2nm,0.8s,baz=165,slow=10,SNR=4.1									
KLMR	**Klimovskoe**	55.66	353	*e*P	P		P		05 59 44.3	-1.6
KLMR				pmax	pmax					
	comp=Z,56nm,1.5s									
HHC	**Hu-ho-hao-te**	57.13	296	*e*P	P		P		05 59 56.7	-0.2
HHC				pP	pP		pP		06 00 01.6	-0.6
HHC				sP	sP		sP		06 00 04.0	-0.2
HHC				PP	PP		PP		06 02 03.8	+0.4
HHC				S	S		S		06 07 47.8	-3.3
HHC				sS	sS		sS		06 07 55.0	-4.8
HHC				SS	SS		SS		06 11 35.9	-3.4
HHC				pmax	pmax					
	comp=Z,11nm,0.9s									
HHC				pmax	pmax					
	comp=Z,150nm,4.0s									
HHC				LR	LR					
	comp=N,650nm,16.7s									
HHC				LR	LR					
	comp=E,670nm,14.3s									
HHC				LR	LR					
	comp=Z,1μm,15.4s									
SVE	**Sverdlovsk**	57.42	340	⇑	*e*P		P		05 59 59.3	+0.8
SVE				pmax	pmax					
	comp=Z,37nm,0.9s									
ARU	**Arti**	58.12	341	*e*P	P		P		06 00 03.0	-0.4
ARU				pmax	pmax					
	comp=Z,15nm,0.7s									
ARU	**Arti**	58.12	341	*e*P	P		P		06 00 03.0	-0.4
	comp=Z,15nm,0.7s									
EKA	**Eskdalemuir Ar**	59.01	20	P	P		P		06 00 09.2	-0.4
EKA				pP	pP		pP		06 00 15.4	+0.5
EKA	**Eskdalemuir Ar**	59.01	20	P	P		P		06 00 09.2	-0.4
	comp=Z,2.4nm,0.5s,baz=334,slow=5.1,SNR=12									
EKA				pP	pP		pP		06 00 15.4	+0.5
	comp=Z,1.3nm,0.4s,baz=334,slow=5.4,SNR=5.8									
BRVK	**Borovoye**	59.23	332	*c i*	P		P		06 00 10.5	-0.7
BRVK				pmax	pmax					
	comp=Z,25nm,1.7s									
BRVK	**Borovoye**	59.23	332	*e*P	P		P		06 00 11.4	+0.1
	comp=Z,11nm,0.9s									
BVA0	**Borovoye Array**	59.24	332	*i* P	P		P		06 00 10.5	-0.8
KURK	**Kurchatov**	59.47	325	*c i*	P		P		06 00 12.1	-0.7
KURK				pmax	pmax					
	comp=Z,15nm,1.3s									
KURK	**Kurchatov**	59.47	325	*e*P	P		P		06 00 11.6	-1.2
	comp=Z,8.7nm,0.9s									
ZRNK	**Zerenda**	59.60	333	P	P		P		06 00 12.4	-1.4
ZRNK				pmax	pmax					
	comp=Z,18nm,1.1s									
LLD	**Lille Linde**	60.84	10	*e*P	P		P		06 00 22.5	+0.3
LLD				pmax	pmax					
	comp=Z,22nm,0.8s									
LLD	**Lille Linde**	60.84	10	*i* P	P		P		06 00 22.5	+0.3
	comp=Z,22nm,0.8s									
BSD	**Bornholm Skovb**	61.26	9	*i* P	P		P		06 00 25.3	+0.3
BSD				pmax	pmax					
	comp=Z,5.0nm,0.9s									
BSD	**Bornholm Skovb**	61.26	9	*i* P	P		P		06 00 25.3	+0.3
	comp=Z,4.9nm,0.9s									
OBN	**Obninsk**	61.54	355	⇓	*e*P		P		06 00 26.6	-0.3
OBN					*i*				06 00 32.9	
OBN					*e*S		S		06 08 52.0	+4.7
OBN				pmax	pmax					
	comp=Z,31nm,1.2s									
NJ2	**Nanjing**	61.58	285	*e*P	P		P		06 00 25.7	-1.8
NJ2				pmax	pmax					
	comp=Z,10.0nm,1.0s									
MK31	**Makanchi Array**	62.07	321	*i* P	P		P		06 00 29.5	-1.2
MK31				pmax	pmax					
	comp=Z,1.0nm,0.5s									
MK31	**Makanchi Array**	62.07	321	*e*P	P		P		06 00 30.1	-0.5
MKAR	**Makanchi Array**	62.07	321	P	P		P		06 00 30.1	-0.6
MKAR	**Makanchi Array**	62.07	321	P	P		P		06 00 30.1	-0.6
MKAR				P'P'					06 29 43.3	
MKAR	**Makanchi Array**	62.07	321	P	P		P		06 00 30.1	-0.6
	comp=Z,2.8nm,0.6s,baz=45,slow=7.0,SNR=17									
MKAR				PKPPKP	P'P'df				06 29 43.3	-1.3
	comp=Z,0.7nm,1.0s,baz=219,slow=3.1,SNR=4.0									
GTA	**Gaotai**	62.92	304	*e*P	P		P		06 00 37.6	+1.0
GTA				pP	pP		pP		06 00 41.9	-0.1
GTA				sP	sP		sP		06 00 45.1	+1.1
GTA				S	S		S		06 09 08.7	+3.2
GTA				sS	sS		sS		06 09 16.8	+2.5
GTA				pmax	pmax					
	comp=Z,15nm,0.9s									
GTA				pmax	pmax					
	comp=Z,570nm,5.5s									
GTA				LR	LR					
	comp=N,220nm,16.6s									
GTA				LR	LR					
	comp=E,300nm,14.7s									
GTA				LR	LR					
	comp=Z,220nm,17.1s									
WMQ	**Urumqi**	63.15	316	P	P		P		06 00 40.0	+2.0
WMQ				sP	sP		sP		06 00 47.0	+1.6
WMQ				PcP	PcP		PcP		06 01 17.0	+1.6
WMQ				PP	PP		PP		06 03 00.0	+3.6
WMQ				ScP					06 05 18.0	
WMQ				S	S		S		06 09 09.0	+0.8
WMQ				ScS	ScS		ScS		06 10 29.0	-0.9
WMQ				SS	SS		SS		06 13 16.0	+2.7
WMQ				pmax	pmax					
	comp=Z,15nm,1.0s									
WMQ				pmax	pmax					
	comp=Z,57nm,6.0s									
WMQ				LR	LR					
	comp=N,430nm,18.0s									
WMQ				LR	LR					
	comp=E,330nm,18.0s									
WMQ				LR	LR					
	comp=Z,470nm,18.0s									
LZH	**Lanzhou**	64.30	299	*e*P	P		P		06 00 46.3	+0.5
LZH				pP	pP		pP		06 00 50.1	-1.1
LZH				sP	sP		sP		06 00 52.4	-0.8
LZH				pmax	pmax					
	comp=Z,42nm,1.3s									
LZH				LR	LR					
	comp=N,690nm,18.2s									
LZH				LR	LR					
	comp=E,190nm,11.8s									
LZH				LR	LR					
	comp=Z,620nm,19.8s									
AB31	**Akbulak array**	64.84	338	*i* P	P		P		06 00 47.8	-1.1
AB31				pmax	pmax					
	comp=Z,19nm,0.9s									
ABKAR	**Akbulak array**	64.84	338	*e*P	P		P		06 00 48.6	-0.3
	comp=Z,14nm,0.8s									
CLL	**Collm**	64.90	11	*e*P	P		P		06 00 48.0	-1.3
CLL				*i*					06 00 55.0	
CLL	**Collm**	64.90	11	*e*P	P		P		06 00 48.0	-1.3
CLL				*i* pP	pP		pP		06 00 55.0	+0.4
CLL				*e*PP	PP		PP		06 03 10.0	-1.4
VRHR	**Novokhopersk**	65.26	351	*e*P	P		P		06 00 49.5	-2.1
VRHR				pmax	pmax					
	comp=N,20nm,0.8s									
VRHR				pmax	pmax					
	comp=E,10.0nm,0.8s									
VRHR				pmax	pmax					
	comp=Z,10.0nm,0.8s									
VSR	**Storozhevoye**	65.30	352	*e*P	P		P		06 00 51.7	-0.1
VSR				*e**PP	pP		pP		06 00 56.9	-0.3
VSR				pmax	pmax					
	comp=Z,10.0nm,0.6s									
VSR				pmax	pmax					
	comp=N,10.0nm,1.2s									
VSR				pmax	pmax					
	comp=E,9.0nm,1.3s									
BRG	**Berggiesshubel**	65.41	10	*e*(P)	P		P		06 00 53.5	+0.9
	comp=E,4.8nm,1.1s									
BRG	**Berggiesshubel**	65.41	10	*e*P	P		P		06 00 53.5	+0.9
BRG				pmax	pmax					
	comp=Z,5.0nm,1.1s									
VORD	**Divnogorie**	65.54	352	*e*P	P		P		06 00 52.9	-0.5
VORD				*e**PP	pP		pP		06 00 58.1	-0.7
VORD				pmax	pmax					
	comp=Z,10.0nm,0.8s									
VORD				pmax	pmax					
	comp=N,20nm,0.9s									
VORD				pmax	pmax					
	comp=E,4.0nm,0.4s									
VORD				MLR	MLR					
	comp=N,400nm,19.0s									
VORD				MLR	MLR					
	comp=Z,230nm,19.0s									
VORD				MLR	MLR					
	comp=E,510nm,21.0s									
AKASG	**Malin Array Be**	66.13	359	P	P		P		06 00 56.7	-0.5
AKASG				*PP	pP		pP		06 01 02.6	0.0
AKASG	**Malin Array Be**	66.13	359	P	P		P		06 00 56.7	-0.5
AKASG				pP	pP		pP		06 01 02.6	0.0
AKASG	**Malin Array Be**	66.13	359	P	P		P		06 00 56.7	-0.5
	comp=E,1.1nm,0.4s,baz=359,slow=6.3,SNR=10									
AKASG				pP	pP		pP		06 01 02.6	0.0
	comp=E,4.6nm,0.4s,baz=0.4,slow=6.3,SNR=13									
KIEV	**Kiev**	66.14	359	*e*P	P		P		06 00 57.0	-0.3
KIEV				pmax	pmax					
	comp=Z,11nm,0.8s									
KIEV	**Kiev**	66.14	359	*e*P	P		P		06 00 57.0	-0.3
	comp=Z,11nm,0.8s									
AK01	**Malin Array Si**	66.14

CD2				LR	LR		
	comp=N,410nm,13.7s						
CD2				LR	LR		
	comp=E,410nm,13.2s						
CD2				LR	LR		
	comp=Z,360nm,17.6s						
BUR08	**Bucovina Ar. S**	**69.17**	**2**	*e*P	**P**	**06 01 16.2**	**-0.4**
KSH	**Kashi**	**70.55**	**323**	P	**P**	**06 01 27.3**	**+2.1**
KSH				pP	**pP**	**06 01 32.1**	**+1.5**
KSH				sP	**sP**	**06 01 34.2**	**+1.6**
KSH				PcP	**PcP**	**06 01 48.4**	**+2.0**
KSH				PP	PP	06 04 06.2	+5.4
KSH				S	**S**	**06 10 40.2**	**+2.5**
KSH				sS	**sS**	**06 10 48.1**	**+1.4**
KSH				SKS	**SKSac**	**06 11 24.0**	**-2.2**
KSH				ScS	**SKKSac**	**06 11 26.0**	**-0.3**
KSH				SS	**SS**	**06 15 14.1**	**+6.1**
KSH				pmax	pmax		
	comp=Z,25nm,0.9s						
KSH				pmax	pmax		
	comp=Z,380nm,4.2s						
KSH				LR	LR		
	comp=N,340nm,5.3s						
KSH				LR	LR		
	comp=E,250nm,5.0s						
KSH				LR	LR		
	comp=Z,400nm,12.6s						
GYA	**Guiyang**	**71.62**	**292** ⇑ *i*P		**P**	**06 01 32.1**	**+0.2**
GYA				PP	**PP**	**06 04 12.0**	**+1.5**
GYA				S	**S**	**06 10 48.6**	**-1.9**
GYA				SKS	**SKSac**	**06 11 29.3**	**-5.3**
GYA				SS	**SS**	**06 15 24.5**	**-0.7**
GYA				pmax	pmax		
	comp=Z,20nm,0.7s						
GYA				pmax	pmax		
	comp=Z,90nm,5.2s						
GYA				LR	LR		
	comp=N,370nm,19.4s						
GYA				LR	LR		
	comp=E,290nm,20.1s						
GYA				LR	LR		
	comp=Z,360nm,19.9s						
KIV	**Kislovodsk**	**72.27**	**349** ⇓ *e*P		**P**	**06 01 36.4**	**+0.9**
KIV				*e*		06 04 14.5	
KIV				*e*S	**S**	**06 10 53.2**	**-4.2**
KIV				pmax	pmax		
	comp=Z,15nm,0.8s						
KBZ	**Khabaz**	**72.48**	**349**	P	**P**	**06 01 37.4**	**+0.8**
KBZ				*PP	**pP**	**06 01 43.2**	**+1.2**
KBZ	**Khabaz**	**72.48**	**349**	P	**P**	**06 01 37.4**	**+0.8**
KBZ				pP	**pP**	**06 01 43.2**	**+1.2**
KBZ	**Khabaz**	**72.48**	**349**	P	**P**	**06 01 37.4**	**+0.8**
	comp=Z,4.4nm,0.8s,baz=304,slow=6.2,SNR=6.7						
KBZ				pP	**pP**	**06 01 43.2**	**+1.2**
	comp=Z,9.0nm,0.9s,baz=329,slow=3.1,SNR=9.0						
ZEI	**Tsey**	**73.34**	**348**	*e*P	P	06 01 46.9	+4.9
ZEI				pmax	pmax		
	comp=Z,14nm,1.7s						
ESDC	**Sonseca Array**	**74.01**	**25**	P	**P**	**06 01 45.5**	**-0.3**
ESDC				pP	**pP**	**06 01 51.2**	**0.0**
ESDC	**Sonseca Array**	**74.01**	**25**	P	**P**	**06 01 45.5**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=342,slow=5.8,SNR=7.5						
ESDC				pP	**pP**	**06 01 51.2**	**0.0**
	comp=Z,2.0nm,0.7s,baz=342,slow=6.0,SNR=8.1						
KMI	**Kunming**	**74.42**	**295**	P	**P**	**06 01 48.0**	**-0.6**
KMI				pP	**pP**	**06 01 52.8**	**-1.3**
KMI				sP	**sP**	**06 01 55.1**	**-0.9**
KMI				S	**S**	**06 11 21.5**	**-1.0**
KMI				SS	**SS**	**06 16 07.3**	**-0.8**
KMI				pmax	pmax		
	comp=Z,16nm,0.9s						
KMI				pmax	pmax		
	comp=Z,140nm,5.8s						
KMI				LR	LR		
	comp=N,130nm,18.0s						
KMI				LR	LR		
	comp=E,200nm,20.0s						
KMI				LR	LR		
	comp=Z,120nm,20.0s						
LSA	**Lhasa**	**74.77**	**307**	P	**P**	**06 01 52.1**	**+1.2**
GNI	**Garni**	**75.85**	**347**	P	**P**	**06 01 57.6**	**+1.1**
GNI	**Garni**	**75.85**	**347**	P	**P**	**06 01 57.6**	**+1.1**
	comp=Z,3.3nm,0.5s,baz=8.7,slow=13,SNR=2.7						
BR131	**Keskin Array S**	**77.02**	**356**	*e*P	**P**	**06 02 03.7**	**+0.5**
	comp=Z,2.2nm,0.8s						
BRTR	**Keskin Array B**	**77.02**	**356**	P	**P**	**06 02 02.8**	**-0.4**
BRTR	**Keskin Array B**	**77.02**	**356**	P	**P**	**06 02 02.8**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=27,slow=6.1,SNR=6.1						
KBL	**Kabul**	**77.05**	**326**	*e*P	**P**	**06 02 02.0**	**-1.5**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KBL	**Kabul**	**77.05**	**326**	*e*P	**P**	**06 02 02.0**	**-1.5**
	comp=Z,6.8nm,0.9s						
TAPN	**Taplejung**	**78.13**	**308**	*e*P	**P**	**06 02 10.1**	**+0.3**
	comp=Z,54nm,1.1s						
GUN	**Gumba**	**78.25**	**310**	*e*P	**P**	**06 02 10.7**	**+0.2**
	comp=Z,48nm,0.9s						
DDI	**Dehra Dun**	**78.54**	**318**	*e*P	**P**	**06 02 12.2**	**+0.5**
DANN	**Dangsing**	**78.56**	**312**	*e*P	**P**	**06 02 12.5**	**+0.4**
	comp=Z,94nm,0.8s						
ODAN	**Odare**	**78.69**	**309**	*e*P	**P**	**06 02 12.8**	**0.0**
	comp=Z,38nm,1.1s						
PKI	**Pulchoki**	**78.72**	**310**	*e*P	**P**	**06 02 13.2**	**+0.1**
	comp=Z,16nm,0.7s						
DMN	**Daman**	**78.79**	**311**	*e*P	**P**	**06 02 13.5**	**+0.1**
	comp=Z,30nm,0.9s						
RAMN	**Ramite**	**78.88**	**309**	*e*P	**P**	**06 02 14.0**	**+0.1**
	comp=Z,54nm,1.0s						
PYUN	**Piuthan**	**79.05**	**313**	*e*P	**P**	**06 02 14.3**	**-0.4**
	comp=Z,76nm,1.0s						
KOLN	**Koldanda**	**79.15**	**312**	*e*P	**P**	**06 02 15.2**	**-0.1**
	comp=Z,23nm,1.0s						
MDT	**Midelt**	**80.51**	**28**	P	**P**	**06 02 22.1**	**-0.4**
MDT	**Midelt**	**80.51**	**28**	P	**P**	**06 02 22.1**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=320,slow=5.6,SNR=3.3						
CMAR	**Chiang Mai Arr**	**81.93**	**295**	P	**P**	**06 02 29.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**81.93**	**295**	P	**P**	**06 02 29.4**	**-0.5**
	comp=Z,5.8nm,0.9s,baz=6.3,slow=6.2,SNR=33						
PLCA	**Paso Flores**	**121.92**	**118**	PKPpre	PKPpre	06 09 00.8	
PLCA				pPKP	pPKPdf	06 09 08.7	-0.8
PLCA	**Paso Flores**	**121.92**	**118**	PKhKP	PKPpre	06 09 00.8	
	comp=Z,1.2nm,0.7s,baz=221,slow=1.0,SNR=3.6						
PLCA				pPKP	pPKPdf	06 09 08.7	-0.8
	comp=Z,1.2nm,0.7s,baz=346,slow=4.2,SNR=2.5						
VNDA	**Vanda**	**143.62**	**195**	PKPpre	PKPpre	06 09 40.0	
VNDA	**Vanda**	**143.62**	**195**	PKhKP	PKPpre	06 09 40.0	
	comp=Z,1.1nm,0.8s,baz=322,slow=4.2,SNR=5.6						
QSPA	**South Pole Qui**	**153.32**	**180**	*e*PKPbc	**PKPbc**	**06 10 04.8**	**-2.0**

*CSEM **10** 05:58:20.6,42°.25N×13°.47E,h9km,After ROM*
ROM 10 05:58:20.6±0.0,42°.25N×13°.47E,h9km,Ml2.2/14,Error ellipse: s-maj=0.6km s-min=0.6km az=117.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.09**	**78**	Pg	Pg	05 58 23.6	+0.5
FAGN				Sg	Sg	05 58 25.2	+0.4
	6µm,0.5s						
FAGN	**Fagnano**	**0.09**	**78**	Pg	Pg	05 58 23.6	+0.5
FAGN				Sg	Sg	05 58 25.2	+0.4
	6µm,0.5s						
AQU	**L'Aquila**	**0.12**	**336**	Pg	Pg	05 58 24.1	+0.6
AQU				Sg	Sg	05 58 26.1	+0.6
AQU	**L'Aquila**	**0.12**	**336**	Pg	Pg	05 58 24.1	+0.6
AQU				Sg	Sg	05 58 26.1	+0.6
PTQR	**Pietraquaria**	**0.23**	**192**	Pg	Pg	05 58 26.4	+1.0
PTQR				Sg	Sg	05 58 30.2	+1.5
	148nm,0.2s						
PTQR	**Pietraquaria**	**0.23**	**192**	Pg	Pg	05 58 26.4	+1.0
PTQR				Sg	Sg	05 58 30.2	+1.5
	148nm,0.2s						
FIAM	**Fiamignano**	**0.26**	**275**	Pg	Pb	05 58 26.9	-0.7
FIAM				Sg	Sg	05 58 30.9	+1.2
	501nm,0.6s						
FIAM	**Fiamignano**	**0.26**	**275**	Pg	Pb	05 58 26.9	-0.7
FIAM				Sg	Sg	05 58 30.9	+1.2
	501nm,0.6s						
CAMP	**Campotosto**	**0.29**	**352**	Pg	Pg	05 58 27.3	+0.6
	245nm,0.5s						
CAMP	**Campotosto**	**0.29**	**352**	Pg	Pg	05 58 27.3	+0.6
	245nm,0.5s						
VCEL	**Villa Celiera**	**0.32**	**62**	Pg	Pg	05 58 27.3	+0.2
VCEL				Sg	Sb	05 58 33.2	-0.7
	521nm,0.4s						
VCEL	**Villa Celiera**	**0.32**	**62**	Pg	Pg	05 58 27.3	+0.2
VCEL				Sg	Sb	05 58 33.2	-0.7
	521nm,0.4s						
TERO	**Teramo**	**0.39**	**15**	Pg	Pg	05 58 28.8	+0.4
TERO				Sg	Sb	05 58 35.2	-0.7
	198nm,0.4s						
TERO	**Teramo**	**0.39**	**15**	Pg	Pg	05 58 28.8	+0.4
TERO				Sg	Sb	05 58 35.2	-0.7
	198nm,0.4s						
VVLD	**Villa Vallelon**	**0.39**	**163**	Pg	Pg	05 58 29.0	+0.5
VVLD				Sg	Sb	05 58 35.2	-0.9
	251nm,0.4s						
VVLD	**Villa Vallelon**	**0.39**	**163**	Pg	Pg	05 58 29.0	+0.5
VVLD				Sg	Sb	05 58 35.2	-0.9
	251nm,0.4s						
INTR	**Introdacqua**	**0.40**	**126**	Pg	Pg	05 58 29.2	+0.6
INTR				Sg	Sb	05 58 35.4	-0.9
	384nm,0.6s						
INTR	**Introdacqua**	**0.40**	**126**	Pg	Pg	05 58 29.2	+0.6
INTR				Sg	Sb	05 58 35.4	-0.9
	384nm,0.6s						
GUAR	**Guarcino**	**0.47**	**194**	Pg	Pg	05 58 30.4	+0.6
	128nm,0.4s						
GUAR	**Guarcino**	**0.47**	**194**	Pg	Pg	05 58 30.4	+0.6
	128nm,0.4s						
CERT	**Cerreto**	**0.47**	**231**	Pg	Pg	05 58 30.4	+0.6
	336nm,0.4s						
CERT	**Cerreto**	**0.47**	**231**	Pg	Pg	05 58 30.4	+0.6
	336nm,0.4s						
LNSS	**Leonessa**	**0.47**	**319**	Pg	Pb	05 58 30.8	-0.5
	168nm,0.4s						
LNSS	**Leonessa**	**0.47**	**319**	Pg	Pb	05 58 30.8	-0.5
	168nm,0.4s						
POFI	**Posta Fibreno**	**0.56**	**161**	Pg	Pg	05 58 31.8	+0.2
	58nm,0.4s						
POFI	**Posta Fibreno**	**0.56**	**161**	Pg	Pg	05 58 31.8	+0.2
	58nm,0.4s						
LPEL	**Lama dei Pelig**	**0.57**	**110**	Pg	Pg	05 58 31.9	+0.1
LPEL				Sg	Sb	05 58 40.6	-0.5
	140nm,0.4s						
LPEL	**Lama dei Pelig**	**0.57**	**110**	Pg	Pg	05 58 31.9	+0.1
LPEL				Sg	Sb	05 58 40.6	-0.5
	140nm,0.4s						
SDI	**San Donato**	**0.60**	**154**	Pg	Pg	05 58 32.5	+0.3
	80nm,0.2s						
SDI	**San Donato**	**0.60**	**154**	Pg	Pg	05 58 32.5	+0.3
	80nm,0.2s						
MNS	**Montasola**	**0.60**	**284**	Pg	Pg	05 58 32.5	+0.2
	72nm,0.5s						
MNS	**Montasola**	**0.60**	**284**	Pg	Pg	05 58 32.5	+0.2
	72nm,0.5s						
NRCA	**Norcia**	**0.64**	**336**	Pg	Pg	05 58 33.1	-0.1
	33nm,0.5s						
NRCA	**Norcia**	**0.64**	**336**	Pg	Pg	05 58 33.1	-0.1
	33nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.71**	**193**	Pg	Pg	05 58 34.3	0.0
	565nm,2.0s						
GIUL	**Giuliano Di Ro**	**0.71**	**193**	Pg	Pg	05 58 34.3	0.0
	565nm,2.0s						
CESI	**CESI - Serrava**	**0.86**	**332**	Pg	Pg	05 58 37.2	-0.2
	18nm,0.5s						
CESI	**CESI - Serrava**	**0.86**	**332**	Pg	Pg	05 58 37.2	-0.2
	18nm,0.5s						

*IDC **10** 05:59:03.7±2.1,1°.06S×127°.98E,h0km,mb3.2/2, mb1 3.4/3,mb1mx3.2/21,mbtmp3.2/3,ML3.6/1,Error ellipse: s-maj=163.6km s-min=25.3km az=67.0*
*DJA **10** 05:59:25.8±1.1,3°.5S±16°×12°.7E±1°.3,h38km±17km,M3.0/3, MLv3.0/3*
ISC 10 05:59:28.2±2.1,3°.2S±0°.2×127°.2E±0°.1,h35km,n6,σ1°.46/5, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.07**	**259**	P	**Pn**	**05 59 34.5**	**+0.4**
NLAI				S	Sn	05 59 40.5	+2.3
AAI	**Ambon**	**1.12**	**114**	P	Pn	05 59 46.7	-0.8
AAI				S	**Sn**	**06 00 02.9**	**+1.2**
MSAI	**Masohi**	**1.76**	**94**	P	Pn	05 59 54.4	-1.8
MSAI				S	**Sn**	**06 00 16.9**	**-0.6**
WRA	**Warramunga Arr**	**18.03**	**158**	P	**Pn**	**06 03 34.8**	**-1.4**
	0.2nm,0.3s,baz=341,slow=11,SNR=6.0						
ASAR	**Alice Springs**	**21.34**	**163**	P	**P**	**06 04 13.0**	**+0.5**
	0.9nm,0.7s,baz=346,slow=12,SNR=14						
MKAR	**Makanchi Array**	**63.55**	**327**	P	P	06 09 27.0	-28
	0.1nm,0.5s,baz=140,slow=7.0,SNR=2.0						

*ROM **10** 06:19:43.7±0.1,42°.58N×13°.34E,h9km±1km,Ml1.8/2, Error ellipse: s-maj=1.7km s-min=1.0km az=21.0*
*ISCJB **10** 06:19:44.6±0.7,42°.56N±0°.05×13°.34E±0°.05,h8km±6km, Error ellipse: s-maj=9.0km s-min=5.4km az=22.3*
*CSEM **10** 06:19:44.7±0.3,42°.58N×13°.35E,h2km, Error ellipse: s-maj=7.1km s-min=5.8km az=50.0*
ISC 10 06:19:44.9±0.9,42°.58N±0°.04×13°.34E±0°.03,h5km±8km, n18,σ1°.04/26,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**127**	Pg	**Pg**	**06 19 46.2**	**-0.3**
CAMP				Sg	**Sg**	**06 19 47.8**	**+0.2**
	169nm,0.5s						
CAMP	**Campotosto**	**0.07**	**127**	Pg	**Pg**	**06 19 46.2**	**-0.3**
CAMP				Sg	**Sg**	**06 19 47.8**	**+0.2**
	169nm,0.5s						
TERO	**Teramo**	**0.20**	**77**	Pg	**Pg**	**06 19 48.6**	**-0.2**
TERO				Sg	**Sg**	**06 19 52.1**	**+0.6**
TERO	**Teramo**	**0.20**	**77**	Pg	**Pg**	**06 19 48.6**	**-0.2**
TERO				Sg	**Sg**	**06 19 52.1**	**+0.6**
LNSS	**Leonessa**	**0.22**	**277**	Pg	**Pg**	**06 19 48.8**	**-0.4**
LNSS				Sg	**Sg**	**06 19 52.7**	**+0.6**
	102nm,0.5s						
LNSS	**Leonessa**	**0.22**	**277**	Pg	**Pg**	**06 19 48.8**	**-0.4**
LNSS				Sg	**Sg**	**06 19 52.7**	**+0.6**
	102nm,0.5s						
AQU	**L'Aquila**	**0.23**	**168**	Pg	**Pg**	**06 19 49.7**	**+0.4**
	178nm,0.2s						
AQU	**L'Aquila**	**0.23**	**168**	Pg	**Pg**	**06 19 49.7**	**+0.4**
	178nm,0.2s						
NRCA	**Norcia**	**0.30**	**328**	Pg	**Pg**	**06 19 50.7**	**-0.1**
NRCA				Sg	**Sb**	**06 19 56.0**	**-2.2**
NRCA	**Norcia**	**0.30**	**328**	Pg	**Pg**	**06 19 50.7**	**-0.1**
NRCA				Sg	**Sb**	**06 19 56.0**	**-2.2**
FAGN	**Fagnano**	**0.36**	**149**	Pg	**Pg**	**06 19 51.5**	**-0.3**
FAGN	**Fagnano**	**0.36**	**149**	Pg	**Pg**	**06 19 51.5**	**-0.3**
NVLJ	**Novalja**	**2.28**	**29**	*e*Pg	**Pb**	**06 20 26.5**	**+0.1**
NVLJ				Sg	Sn	06 20 43.9	-7.7
NVLJ	**Novalja**	**2.28**	**29**	*e*Pg	**Pb**	**06 20 26.5**	**+0.1**
STON	**Ston**	**3.23**	**83**	*i* Pn	**Pn**	**06 20 35.8**	**-0.4**
STON	**Ston**	**3.23**	**83**	*i* Pn	**Pn**	**06 20 35.7**	**-0.4**
VISS	**Visnje**	**3.40**	**18**	*i* Pn	**Pn**	**06 20 40.9**	**+2.3**
VISS	**Visnje**	**3.40**	**18**	*i* Pn	**Pn**	**06 20 40.9**	**+2.3**

*ISCJB **10** 06:20:05.3±1.2,44°.00N±0°.1×15°.7E±0°.2,h10km, Error ellipse: s-maj=21.6km s-min=5.7km az=44.6*
*CSEM **10** 06:20:05.0±0.2,44°.00N×15°.70E,h2km,ML2.9/8, Error ellipse: s-maj=9.5km s-min=2.6km az=46.0*
*PDG **10** 06:20:06.0±0.4,44°.05N×15°.97E,h2km±1km,ML2.9/8, Error ellipse: s-maj=0.8km s-min=1.7km az=0.0*
ISC 10 06:20:06.0±1.3,44°.0N±0°.1×15°.8E±0°.1,h10km,n26, σ0°.96/44,12C-5D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOJS	**Bojanci**	**1.53**	**347**	*i* Pn	**Pn**	**06 20 33.5**	**+0.2**
BOJS	**Bojanci**	**1.53**	**347**	*i* Pn	**Pn**	**06 20 33.5**	**+0.2**
STON	**Ston**	**1.82**	**128**	Sn	**Sb**	**06 21 01.0**	**-1.3**
STON	**Ston**	**1.82**	**128**	Sn	**Sb**	**06 21 01.0**	**-1.3**
PDKS	**Podkum**	**2.11**	**346**	*i* Pn	**Pn**	**06 20 41.9**	**+0.5**
PDKS	**Podkum**	**2.11**	**346**	*i* Pn	**Pn**	**06 20 41.9**	**+0.5**
BRY	**Bratogost**	**2.32**	**118** ⇑ *i* Pn		**Pn**	**06 20 44.6**	**+0.3**
BRY				*e*Sn	**Sb**	**06 21 14.5**	**-2.2**
BRY	**Bratogost**	**2.32**	**118** ⇑ *i* Pn		**Pn**	**06 20 44.6**	**+0.3**
BRY				*e*Sn	**Sb**	**06 21 14.5**	**-2.2**
VOY	**Vojsko**	**2.41**	**327**	*e*Pn	**Pb**	**06 20 50.0**	**+0.6**
VOY				*e*Sn	**Sg**	**06 21 22.1**	**-1.2**
VOY	**Vojsko**	**2.41**	**327**	*e*Sn	**Sg**	**06 21 22.1**	**-1.2**
VOY	**Vojsko**	**2.41**	**327**	*e*Pn	**Pb**	**06 20 50.0**	**+0.6**
UPM	**Unac-Piva**	**2.43**	**108** ⇑ *i* Pn		**Pn**	**06 20 46.2**	**+0.2**
UPM				*e*Sn	**Sn**	**06 21 17.0**	**+1.1**
UPM	**Unac-Piva**	**2.43**	**108** ⇑ *i* Pn		**Pn**	**06 20 46.2**	**+0.2**
UPM				*e*Sn	**Sn**	**06 21 17.0**	**+1.1**
HCY	**Herceg Novi**	**2.55**	**127** ⇑ *i* Pn		**Pn**	**06 20 47.7**	**+0.3**
HCY				*e*Sn	**Sn**	**06 21 19.9**	**+1.5**
HCY	**Herceg Novi**	**2.55**	**127** ⇑ *i* Pn		**Pn**	**06 20 47.7**	**+0.3**
HCY				*e*Sn	**Sn**	**06 21 19.9**	**+1.5**
NKY	**Niksic**	**2.65**	**116** ⇑ *i* Pn		**Pn**	**06 20 49.2**	**+0.3**
NKY				*e*Sn	**Sn**	**06 21 22.4**	**+1.2**
NKY	**Niksic**	**2.65**	**116** ⇑ *i* Pn		**Pn**	**06 20 49.2**	**+0.3**
NKY				*e*Sn	**Sn**	**06 21 22.4**	**+1.2**
BUM	**Brajici-Budva**	**2.87**	**126** ⇑ *i* Pn		**Pn**	**06 20 51.4**	**-0.5**
BUM				*e*Sn	**Sn**	**06 21 27.4**	**+0.9**
BUM	**Brajici-Budva**	**2.87**	**126** ⇑ *i* Pn		**Pn**	**06 20 51.4**	**-0.5**
BUM				*e*Sn	**Sn**	**06 21 27.4**	**+0.9**
PDG	**Podgorica**	**3.01**	**121** ⇓ *i* Pn		**Pn**	**06 20 54.5**	**+0.7**
PDG				*e*Sn	**Sn**	**06 21 31.0**	**+1.1**
TTG	**Podgorica**	**3.01**	**121** ⇓ *i* Pn		**Pn**	**06 20 54.5**	**+0.7**
TTG				*e*Sn	**Sn**	**06 21 31.0**	**+1.1**
BEY	**Berane**	**3.23**	**109** ⇓ *i* Pn		**Pn**	**06 20 57.3**	**+0.5**
BEY				*e*Sn	**Sn**	**06 21 36.5**	**+1.2**
IVA	**Berane**	**3.23**	**109** ⇓ *i* Pn		**Pn**	**06 20 57.3**	**+0.5**
IVA				*e*Sn	**Sn**	**06 21 36.5**	**+1.2**
ULC	**Ulcinj**	**3.29**	**127** ⇑ *i* Pn		**Pn**	**06 20 57.8**	**+0.3**
ULC				*e*Sn	**Sn**	**06 21 37.4**	**+0.7**
ULC	**Ulcinj**	**3.29**	**127** ⇑ *i* Pn		**Pn**	**06 20 57.8**	**+0.3**
ULC				*e*Sn	**Sn**	**06 21 37.4**	**+0.7**
PVY	**Plav**	**3.39**	**113** ⇓ *i* Pn		**Pn**	**06 20 59.4**	**+0.4**
PVY				*e*Sn	**Sn**	**06 21 39.7**	**+0.4**

*IDC **10** 06:19:47.7±12.0,7°.72S×114°.45E,h0km,mb3.5/3, mb1 3.7/3,mb1mx3.4/20,mbtmp3.5/3,Error ellipse: s-maj=226.9km s-min=150.2km az=174.0*
*ISCJB **10** 06:20:12.0±0.9,9°.91S±0°.09×115°.6E±0°.1,h29km,mb3.6/2, Error ellipse: s-maj=19.1km s-min=6.8km az=143.5*
*DJA **10** 06:20:16.7±1.5,9°.5S±16°×11°.6E±°,h81km±9km,M3.9/6, MLv3.9/6*
ISC 10 06:20:13.5±1.6,9°.7S±0°.1×115°.7E±0°.1,h29km,n10, σ1°.62/11,South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**1.06**	**328**	P	**Pb**	**06 20 33.9**	**+0.6**
IGBI				S	**Sn**	**06 20 47.7**	**+1.4**
DNP	**Denpasar**	**1.15**	**334**	P	**Pb**	**06 20 35.5**	**+0.6**
DNP				S	**Sn**	**06 20 50.6**	**+2.1**
KHKI	**Kahang-Kahang**	**1.35**	**355**	P	**Pb**	**06 20 38.0**	**-0.3**
SRBI	**Singaraja**	**1.70**	**343**	P	**Pb**	**06 20 42.2**	**-2.0**
NBBI	**Negara**	**1.73**	**321**	P	**Pn**	**06 20 39.9**	**-1.7**
GMJI	**Gumukmas**	**2.67**	**302**	P	**Pn**	**06 20 56.4**	**+1.8**
GMJI				S	**Sn**	**06 21 25.0**	**-1.0**
PWJI	**Pagerwojo**	**4.22**	**293**	P	**Sn**	**06 22 02.7**	**-1.6**
WRA	**Warramunga Arr**	**20.65**	**122**	P	P	06 24 50.7	-0.4
	0.5nm,0.5s,baz=296,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**22.23**	**131**	P	**P**	**06 25 08.3**	**+0.3**
	0.8nm,0.4s,baz=307,slow=8.5,SNR=8.8						
STKA	**Stephens Creek**	**32.56**	**136**	P	P	06 26 42.8	+0.3
	0.5nm,0.4s,baz=322,slow=12,SNR=3.6						

IDC 10 06:29:14.8±46.0,0°.62N×98°.62E,h0km,mb3.4/3, mb1 3.6/3,mb1mx3.3/24,mbtmp3.4/3,Error ellipse: s-maj=930.2km s-min=288.2km az=153.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.53**	**122**	P	P	06 36 56.1	0.0
	0.1nm,0.3s,baz=311,slow=9.0,SNR=3.5						
ASAR	**Alice Springs**	**41.92**	**128**	P	P	06 37 07.2	-0.4
	0.1nm,0.3s,baz=294,slow=7.3,SNR=5.0						
STKA	**Stephens Creek**	**51.92**	**133**	P	P	06 38 25.6	0.0
	0.6nm,0.6s,baz=327,slow=6.3,SNR=4.2						

*ISCJB **10** 06:34:33.1±0.3,3°.11S±0°.03×127°.44E±0°.03,h42km, mb4.2/13,Error ellipse: s-maj=4.9km s-min=4.4km az=164.5*
*DJA **10** 06:34:34.4±0.2,3°.S±3°×12°.7E±°,h10km,M4.5/9,mb4.8/7, mB4.9/5,MLv4.6/9,Mw(mB)4.2/5*
*AUST **10** 06:34:35.9±0.0,3°.08S×127°.54E,h63km,Error ellipse: s-maj=1.0km s-min=0.8km az=10.0*
*NEIC **10** 06:34:37.8±1.7,3°.18S×127°.43E,h73km±16km,mb4.4/7, Error ellipse: s-maj=15.8km s-min=6.4km az=57.0*
*IDC **10** 06:34:38.0±2.6,3°.17S×127°.30E,h75km±24km,mb3.9/10, mb1 4.1/13,mb1mx3.9/25,mbtmp4.0/13,MS3.4/2, Ms1 3.4/2,ms1mx2.7/47,Error ellipse: s-maj=23.7km s-min=8.7km az=67.0*
ISC 10 06:34:34.9±0.4,3°.10S±0°.03×127°.35E±0°.04,h42km,n71, σ1°.29/71,mb4.2/13,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.29**	**241**	P	**Pn**	**06 34 40.8**	**-2.4**
AAI	**Ambon**	**1.02**	**125**	P	**Pn**	**06 34 53.9**	**+1.1**
AAI	**Ambon**	**1.02**	**125**	P	**Pn**	**06 34 51.9**	**-0.9**
	baz=0.9,SNR=108						
MSAI	**Masohi**	**1.59**	**99**	P	**Pn**	**06 35 01.8**	**+1.2**
MSAI				S	**Sn**	**06 35 23.9**	**+3.9**
LBMI	**Labuha**	**2.45**	**3**	P	**Pn**	**06 35 12.0**	**-0.4**
LBMI				S	**Sn**	**06 35 41.3**	**+0.1**
BNDI	**Bandanaira**	**2.91**	**119**	P	**Pn**	**06 35 20.8**	**+2.1**
TNTI	**Ternate**	**3.85**	**0**	P	**Pn**	**06 35 31.8**	**+0.2**
SWI	**Sorong**	**4.49**	**60**	P	**Pn**	**06 35 39.3**	**-1.2**
SWI				S	**Sn**	**06 36 28.9**	**-2.6**
SWI	**Sorong**	**4.49**	**60**	P	**Pn**	**06 35 39.4**	**-1.2**
	baz=4.3,SNR

	6.0nm,0.6s								
QIS	**Mount Isa**	**21.06**	**146**	P		**P**	06 39 15.6	**0.0**	
	baz=21,SNR=47								
AS31	**Alice Springs**	**21.40**	**163**	*e*P		**P**	06 39 19.9	**+0.6**	
ASAR	**Alice Springs**	**21.41**	**163**	P		**P**	06 39 19.2	**0.0**	
ASAR				S		**S**	06 43 13.7	**-1.1**	
ASAR	**Alice Springs**	**21.41**	**163**	P		**P**	06 39 19.2	**0.0**	
	12nm,0.4s,baz=344,slow=12,SNR=223								
ASAR				S		**S**	06 43 13.7	**-1.1**	
	3.1nm,0.8s,baz=343,slow=20,SNR=11								
MEEK	**Meekatharra**	**24.86**	**199**	P		**P**	06 39 52.4	**-1.2**	
	baz=25,SNR=41								
FORT	**Forrest**	**27.54**	**179**	*e*P		**P**	06 40 16.6	**-1.2**	
	8.4nm,0.7s								
MORW	**Morawa**	**27.98**	**201**	P		**P**	06 40 22.4	**+0.7**	
	baz=28,SNR=5.0								
BLDU	**Ballidu**	**29.16**	**199**	P		**P**	06 40 32.3	**+0.1**	
	baz=29,SNR=5.1								
KLBR	**Kellerberrin**	**29.75**	**197**	P		**P**	06 40 37.8	**+0.3**	
	baz=30,SNR=4.9								
BBOO	**Buckleboo**	**30.66**	**166**	P		**P**	06 40 44.5	**-1.0**	
	baz=31,SNR=20								
NWAO	**Narrogin (SRO)**	**31.15**	**197**	P		**P**	06 40 49.0	**-0.8**	
	6.7nm,0.8s,baz=215,slow=2.5,SNR=5.9								
STKA	**Stephens Creek**	**31.61**	**156**	*e*P		**P**	06 40 52.9	**-1.0**	
	0.9nm,0.5s								
STKA	**Stephens Creek**	**31.61**	**156**	P		**P**	06 40 52.8	**-1.1**	
	4.3nm,0.5s,baz=330,slow=8.7,SNR=32								
STKA	**Stephens Creek**	**31.61**	**156**	P		**P**	06 40 53.2	**-0.7**	
	baz=32,SNR=22								
CMSA	**Cobar Meteorol**	**33.15**	**151**	P		**P**	06 41 07.2	**-0.1**	
	baz=33,SNR=9.7								
ARPS	**Mount Arapiles**	**36.07**	**160**	P		**P**	06 41 32.6	**+0.1**	
	baz=36,SNR=11								
YNG	**Young**	**36.71**	**150**	P		**P**	06 41 38.6	**+0.5**	
	baz=37,SNR=10								
KSAR	**Wonju Array Be**	**40.34**	**1**	P		**P**	06 42 09.2	**+0.8**	
KSRS	**Korea Array**	**40.35**	**1**	P		**P**	06 42 09.2	**+0.7**	
	0.9nm,0.5s,baz=180,slow=8.9,SNR=5.8								
LHI	**Lord Howe Isla**	**41.11**	**137**	P		P	06 42 32.7	+18	
	baz=41,SNR=3.6								
USRK	**Ussuriysk Arra**	**47.27**	**5**	P		**P**	06 43 03.4	**-0.6**	
	2.6nm,0.7s,baz=224,slow=5.0,SNR=4.2								
SONM	**Songino Array**	**53.95**	**343**	P		**P**	06 43 54.6	**+0.1**	
SONM	**Songino Array**	**53.95**	**343**	P		**P**	06 43 54.6	**+0.1**	
	0.7nm,0.7s,baz=146,slow=10,SNR=5.0								
MK31	**Makanchi Array**	**63.54**	**327**	*e*P		**P**	06 45 01.1	**-0.1**	
MKAR	**Makanchi Array**	**63.54**	**327**	P		**P**	06 45 01.4	**+0.3**	
MKAR	**Makanchi Array**	**63.54**	**327**	P		**P**	06 45 01.4	**+0.3**	
	3.1nm,0.8s,baz=126,slow=7.8,SNR=32								
AAK	**Ala-Archa**	**65.88**	**320**	*e*P		**P**	06 45 18.0	**+1.4**	
	0.9nm,0.6s								
ZALV	**Zalesovo Beam**	**66.94**	**334**	P		**P**	06 45 22.6	**-0.4**	
ZALV	**Zalesovo Beam**	**66.94**	**334**	P		**P**	06 45 22.6	**-0.4**	
	0.5nm,0.3s,baz=106,slow=4.8,SNR=3.9								
KURK	**Kurchatov**	**67.84**	**329**	*e*P		**P**	06 45 28.6	**-0.1**	
	4.7nm,0.8s								
VNDA	**Vanda**	**76.62**	**173**	P		**P**	06 46 18.7	**-2.0**	
VNDA	**Vanda**	**76.62**	**173**	P		**P**	06 46 18.7	**-2.0**	
	1.2nm,0.9s,baz=328,slow=7.1,SNR=5.1								
AKTO	**Aktyubinsk**	**79.39**	**322**	P		**P**	06 46 35.5	**-1.1**	
AKTO	**Aktyubinsk**	**79.39**	**322**	P		**P**	06 46 35.5	**-1.1**	
	0.6nm,0.2s,baz=90,slow=5.1,SNR=5.0								
TXAR	**Lajitas Array**	**125.08**	**56**	PKP		**PKPdf**	06 53 31.9	**+0.3**	
TXAR	**Lajitas Array**	**125.08**	**56**	PKP		**PKPdf**	06 53 31.9	**+0.3**	
	0.3nm,0.8s,baz=289,slow=5.4,SNR=3.7								
TORD	**Torodi Ar. Bea**	**125.39**	**284**	PKP		**PKPdf**	06 53 31.8	**-0.6**	
TORD	**Torodi Ar. Bea**	**125.39**	**284**	PKP		**PKPdf**	06 53 31.8	**-0.6**	
	0.8nm,0.9s,baz=59,slow=2.4,SNR=4.4								

ISCJB ***10*** *06:37:16.3s 0.6, 44°.33N × 0°.03 × 129°.46W ± 0°.07, h13km, mb4.0/11, MS3.9/4, Error ellipse: s-maj=6.9km s-min=3.6km az=5.7*

IDC ***10*** *06:37:18.5s 1.6, 44°.30N × 128°.96W, h0km, mb3.6/7, mb1 3.9/12, mb1mx3.7/34, mbtmp3.6/12, ML3.4/5, MS3.6/6, Ms1 3.6/6, ms1mx3.2/44, Error ellipse: s-maj=31.6km s-min=14.6km az=46.0*

NEIC ***10*** *06:37:19.9 ± 1.0, 44°.32N × 129°.29W, h10km, mb3.9/14, Error ellipse: s-maj=12.3km s-min=7.3km az=63.0*

ISC 10 06:37:16.5 ± 0.7, 44°.22N ± 0°.08 × 129°.54W ± 0°.07, h13km, n325, σ 19°41/310, mb3.9/11, MS3.8/4, 106C-123D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
COR	**Corvallis**	**4.49**	**83**	*e*Pn		**Pn**	**06 38 22.9**	**-1.1**
KMOR	**Kings Mountain**	**4.52**	**70**	P		**Pn**	**06 38 23.5**	**-1.2**
F03A	**Seaside**	**4.57**	**66**	P		**Pn**	**06 38 24.5**	**-0.7**
HUMO	**Hull Mountain**	**5.06**	**106**	*e*Pn		**Pn**	**06 38 30.6**	**-1.4**
HUMO				*e*Sn		**Sn**	**06 39 26.7**	**-3.6**
NLWA	**Neilton Lookou**	**5.08**	**49**	*e*Pn		**Pn**	**06 38 32.1**	**-0.2**
NLWA				*e*Sn		**Sn**	**06 39 30.2**	**-0.5**
OSR	**Olympics--Salm**	**5.09**	**48**	P		**Pn**	**06 38 32.5**	**-0.1**
OSD	**Olympics--Snow**	**5.43**	**46**	P		**Pn**	**06 38 37.3**	**0.0**
TDL	**Tradedollar La**	**5.59**	**65**	P		**Pn**	**06 38 39.2**	**-0.1**
YBH	**Yreka Blue Hor**	**5.59**	**114**	*e*Pn		**Pn**	**06 38 38.2**	**-1.2**
	8.0nm,0.9s							
YBH	**Yreka Blue Hor**	**5.59**	**114**	Pn		**Pn**	**06 38 38.2**	**-1.2**
	0.4nm,0.3s,baz=302,slow=11,SNR=9.0							
YBH				LR		LR	06 40 28.9	
	comp=Z,297nm,18.5s,baz=302,slow=36							
HDW	**Hoodsport**	**5.67**	**51**	P		**Pn**	**06 38 40.7**	**+0.2**
ASR	**Mount Adams--S**	**5.94**	**68**	P		**Pn**	**06 38 44.3**	**+0.2**
LON	**Longmire**	**5.99**	**62**	*e*Pn		**Pn**	**06 38 45.0**	**+0.1**
PGC	**Sidney**	**6.11**	**41**	*e*Pn		**Pn**	**06 38 46.7**	**+0.3**
PGC				*e*Sn		**Sn**	**06 39 53.9**	**-2.1**
HOPS	**Hopland**	**7.12**	**135**	*e*Pn		**Pn**	**06 38 59.3**	**-1.1**
MOD	**Modoc**	**7.15**	**106**	*e*Pn		Pn	06 39 04.3	+3.5
HAWA	**Hanford**	**7.38**	**69**	*e*Pn		**Pn**	**06 39 04.5**	**+0.6**
BBB	**Bella Bella**	**8.02**	**6**	Pn		Pn	06 39 17.4	+4.8
BBB	**Bella Bella**	**8.02**	**6**	Pn		Pn	06 39 17.4	+4.8
	0.3nm,0.3s,baz=195,slow=12,SNR=12							
BMO	**Blue Mountains**	**8.76**	**82**	*e*Pn		**Pn**	**06 39 22.4**	**-0.5**
CMB	**Columbia Colle**	**9.27**	**129**	*e*Pn		**Pn**	**06 39 31.1**	**+1.3**
NEW	**Newport**	**9.50**	**60**	*e*Pn		**Pn**	**06 39 35.9**	**+2.9**
NEW	**Newport**	**9.50**	**60**	⇑P		**Pn**	**06 39 33.6**	**+0.6**
	baz=9.3							
NEW	**Newport**	**9.50**	**60**	Pn		**Pn**	**06 39 31.5**	**-1.5**
	0.3nm,0.3s,baz=239,slow=10,SNR=10							
NEW				LR		LR	06 43 09.3	
	comp=Z,217nm,18.8s,baz=262,slow=38							
MFID	**Camas Ranch**	**9.95**	**90**	*e*Pn		Pn	06 39 42.4	+3.2
MFID	**Camas Ranch**	**9.95**	**90**	⇑P		**Pn**	**06 39 40.1**	**+1.0**
	baz=9.7,SNR=5.3							
G12A	**Big Creek, Yel**	**10.17**	**80**	⇓P		**Pn**	**06 39 43.1**	**+0.9**
	baz=9.9							
F12A	**Elk City**	**10.24**	**76**	⇓P		**Pn**	**06 39 44.5**	**+1.3**
	baz=10.0,SNR=7.9							
NVAR	**Mina Array Bea**	**10.24**	**121**	Pn		**Pn**	**06 39 44.6**	**+1.3**
NVAR	**Mina Array Bea**	**10.24**	**121**	Pn		**Pn**	**06 39 44.6**	**+1.3**
	0.2nm,0.3s,baz=298,slow=12,SNR=14							
D12A	**Red Ives Fores**	**10.33**	**69**	⇓P		**Pn**	**06 39 45.4**	**+1.0**
	baz=10							
I12A	**Atlanta**	**10.39**	**87**	⇑P		**Pn**	**06 39 46.6**	**+1.3**
	baz=10,SNR=16							
B12A	**Libby**	**10.54**	**61**	⇓P		**Pn**	**06 39 47.7**	**+0.6**
	baz=10							
BSMT	**Bassoo Peak**	**10.88**	**65**	*e*Pn		**Pn**	**06 39 52.7**	**+0.7**
F13A	**Darby**	**10.88**	**76**	⇓P		**Pn**	**06 39 53.2**	**+1.2**
	baz=11,SNR=7.8							
D13A	**Huson**	**10.94**	**70**	⇓P		**Pn**	**06 39 53.1**	**+0.4**
	baz=11							
HLID	**Hailey**	**10.94**	**88**	*e*Pn		**Pn**	**06 39 55.6**	**+2.8**
HLID	**Hailey**	**10.94**	**88**	⇓P		**Pn**	**06 39 55.4**	**+2.6**
	baz=11,SNR=34							
G13A	**Cobalt**	**10.94**	**80**	⇑P		**Pn**	**06 39 54.2**	**+1.4**
	baz=11,SNR=15							
H13A	**Challis**	**10.95**	**83**	⇓P		**Pn**	**06 39 53.9**	**+1.0**
	baz=11,SNR=13							
C13A	**Hot Springs**	**10.98**	**66**	⇓P		**Pn**	**06 39 53.5**	**+0.3**
	baz=11,SNR=13							
E13A	**Victor**	**11.04**	**73**	⇓P		**Pn**	**06 39 54.2**	**+0.2**
	baz=11							
I13A	**Wildhorse Cree**	**11.11**	**86**	⇓P		**Pn**	**06 39 57.0**	**+1.9**
	baz=11,SNR=11							
J13A	**Cove Ranch, Pi**	**11.14**	**89**	⇓P		**Pn**	**06 39 57.9**	**+2.4**
	baz=11,SNR=20							
RCTC	**Rector, Farmer**	**11.14**	**132**	⇑P		**Pn**	**06 39 57.6**	**+2.1**
	baz=11							
JTMT	**Jette**	**11.19**	**66**	*e*Pn		**Pn**	**06 39 56.8**	**+0.7**
BLMT	**Blacktail Moun**	**11.19**	**65**	*e*Pn		**Pn**	**06 39 55.7**	**-0.6**
B13A	**Whitefish**	**11.22**	**63**	⇓P		**Pn**	**06 39 57.0**	**+0.5**
	baz=11							
MSO	**Missoula**	**11.25**	**71**	*e*Pn		**Pn**	**06 39 59.7**	**+2.7**
	baz=11							
SWMT	**Swartz Lake**	**11.32**	**68**	*e*Pn		**Pn**	**06 39 59.6**	**+1.7**
A13A	**Flathead Natio**	**11.42**	**60**	⇑P		**Pn**	**06 39 59.0**	**-0.3**
	baz=11							
G14A	**Jackson**	**11.49**	**79**	⇑P		**Pn**	**06 40 01.5**	**+1.2**
	baz=11,SNR=8.4							
C14A	**Swan Lake**	**11.54**	**67**	⇑P		**Pn**	**06 40 00.8**	**-0.2**
	baz=11							
H14A	**Leadore**	**11.58**	**82**	⇑P		**Pn**	**06 40 02.7**	**+1.1**
	baz=11							
I14A	**Mackay**	**11.58**	**86**	⇑P		**Pn**	**06 40 04.1**	**+2.5**
	baz=11							
D14A	**Greenough**	**11.58**	**70**	⇑P		**Pn**	**06 40 02.4**	**+0.9**
	baz=11,SNR=8.1							
SLMT	**Seeley Lake**	**11.62**	**69**	*e*Pn		**Pn**	**06 40 02.4**	**+0.4**
J14A	**Carey**	**11.62**	**89**	⇑P		**Pn**	**06 40 05.0**	**+2.8**
	baz=11							
GRAC	**Grapevine Rang**	**11.72**	**124**	⇑P		**Pn**	**06 40 05.6**	**+2.2**
	baz=12							
CHMT	**Chamberlain Mo**	**11.73**	**71**	*e*Pn		**Pn**	**06 40 05.7**	**+2.0**
WALA	**Waterton Lakes**	**11.78**	**60**	*e*Pn		**Pn**	**06 40 04.0**	**-0.2**
MCMT	**McKenzie Canyo**	**11.93**	**81**	*e*Pn		**Pn**	**06 40 06.9**	**+0.4**
B14A	**Marquette Ranc**	**11.99**	**64**	⇑P		**Pn**	**06 40 07.3**	**+0.2**
	baz=12							
R11A	**Troy Canyon, C**	**12.02**	**114**	⇓P		**Pn**	**06 40 09.7**	**+2.1**
	baz=12							
K14A	**Jones Ranch, D**	**12.03**	**92**	⇓P		**Pn**	**06 40 09.1**	**+1.5**
	baz=12							
ISA	**Isabella**	**12.04**	**131**	*e*Pn		**Pn**	**06 40 09.2**	**+1.4**
ISA	**Isabella**	**12.04**	**131**	⇓P		**Pn**	**06 40 09.8**	**+2.0**
	baz=12,SNR=5.2							
A14A	**Double T Ranch**	**12.06**	**61**	⇓P		**Pn**	**06 40 08.7**	**+0.7**
	baz=12,SNR=6.0							
H15A	**Lima**	**12.09**	**82**	⇑P		**Pn**	**06 40 09.8**	**+1.2**
	baz=12,SNR=6.0							
DLMT	**Dillon**	**12.10**	**79**	*e*Pn		**Pn**	**06 40 11.2**	**+2.6**
F15A	**Butte**	**12.17**	**76**	⇓P		**Pn**	**06 40 10.5**	**+0.8**
	baz=12							
G15A	**Dillon**	**12.18**	**80**	⇓P		**Pn**	**06 40 10.7**	**+1.0**
	baz=12							
LRM	**Limekiln Ridge**	**12.20**	**76**	*e*Pn		**Pn**	**06 40 11.8**	**+1.7**
D15A	**Lincoln**	**12.24**	**71**	⇓P		**Pn**	**06 40 12.2**	**+1.6**
	baz=12,SNR=10.0							
C15A	**Salmond Ranch,**	**12.30**	**67**	⇓P		**Pn**	**06 40 11.7**	**+0.4**
	baz=12,SNR=12							
FURC	**Furnace Creek,**	**12.38**	**124**	⇑P		**Pn**	**06 40 15.2**	**+2.9**
	baz=12,SNR=6.1							
J15A	**Blackfoot**	**12.39**	**88**	⇑P		**Pn**	**06 40 14.0**	**+1.4**
	baz=12,SNR=14							
B15A	**Bradely Ranch,**	**12.44**	**65**	⇓P		**Pn**	**06 40 13.5**	**+0.4**
	baz=12							
K15A	**Arbon**	**12.46**	**91**	⇑P		**Pn**	**06 40 15.7**	**+2.1**
	baz=12,SNR=11							
A15A	**Johnson Ranch,**	**12.49**	**62**	⇑P		**Pn**	**06 40 14.8**	**+0.9**
	baz=12,SNR=26							
G16A	**Moss Hill, Enn**	**12.66**	**79**	⇑P		**Pn**	**06 40 17.5**	**+1.3**
	baz=13,SNR=12							
HRY	**Holter Researc**	**12.68**	**72**	*e*Pn		**Pn**	**06 40 18.6**	**+2.1**
L15A	**Malad City**	**12.73**	**94**	⇓P		**Pn**	**06 40 19.1**	**+1.8**
	baz=12,SNR=7.2							
E16A	**East Helena**	**12.77**	**73**	⇓P		**Pn**	**06 40 18.7**	**+0.9**
	baz=12							
BOZ	**Bozeman (W)**	**12.77**	**77**	*e*Pn		**Pn**	**06 40 19.4**	**+1.6**
BOZ	**Bozeman (W)**	**12.77**	**77**	⇓P		**Pn**	**06 40 18.6**	**+0.7**
	baz=12,SNR=6.3							
F16A	**Kennard Place,**	**12.78**	**77**	⇑P		**Pn**	**06 40 18.5**	**+0.6**
	baz=12							
C16A	**Fuhringer Ranc**	**12.88**	**68**	⇓P		**Pn**	**06 40 20.1**	**+0.9**
	baz=13,SNR=5.7							
D16A	**Dana Ranch, Ca**	**12.90**	**71**	⇑P		**Pn**	**06 40 20.3**	**+0.8**
	baz=13,SNR=7.6							
QLMT	**Earthquake Lak**	**12.94**	**81**	*e*Pn		**Pn**	**06 40 22.6**	**+2.4**
I16A	**Newdale**	**13.00**	**85**	⇓P		**Pn**	**06 40 22.8**	**+1.9**
	baz=13,SNR=16							
DUG	**Dugway**	**13.04**	**102**	⇑P		**Pn**	**06 40 22.9**	**+1.5**
	baz=13							
H16A	**Russell Place,**	**13.08**	**82**	⇓P		**Pn**	**06 40 23.6**	**+1.5**
	baz=13,SNR=14							
K16A	**Soda Springs**	**13.11**	**90**	⇑P		**Pn**	**06 40 24.2**	**+1.8**
	baz=13,SNR=5.9							
SHOC	**Shoshone**	**13.11**	**125**	⇓P		**Pn**	**06 40 24.3**	**+2.0**
	baz=13							
RRI2	**Red Ridge**	**13.20**	**87**	*e*Pn		**Pn**	**06 40 25.4**	**+1.7**
A16A	**West Butte Ran**	**13.21**	**63**	⇑P		**Pn**	**06 40 24.2**	**+0.5**
	baz=13							
GSC	**Goldstone**	**13.23**	**128**	⇓P		**Pn**	**06 40 25.8**	**+1.8**
	baz=13							
DCID1	**Drake Creek**	**13.26**	**86**	*e*Pn		Pn	06 40 27.9	+3.5
YMR	**Madison River**	**13.28**	**82**	*e*Pn		**Pn**	**06 40 26.3**	**+1.4**
E17A	**Martinsdale**	**13.33**	**74**	⇓P		**Pn**	**06 40 25.8**	**+0.3**
	baz=13							
IMW	**Indian Meadow**	**13.39**	**85**	*e*Pn		**Pn**	**06 40 28.5**	**+2.2**
G17A	**Pierce Place,**	**13.41**	**79**	⇑P		**Pn**	**06 40 26.8**	**+0.4**
	baz=13							
L16A	**Fish Haven**	**13.41**	**93**	⇑P		**Pn**	**06 40 28.2**	**+1.6**
	baz=13,SNR=12							
HWUT	**Haware Ranch**	**13.43**	**95**	*e*Pn		**Pn**	**06 40 29.2**	**+2.3**
TPAW	**Teton Pass**	**13.44**	**87**	*e*Pn		**Pn**	**06 40 29.9**	**+2.9**
F17A	**Fitzpatrick Pl**	**13.46**	**76**	⇑P		**Pn**	**06 40 28.3**	**+1.2**
	baz=13,SNR=17							
D17A	**Six Diamond Ra**	**13.50**	**71**	⇓P		**Pn**	**06 40 28.5**	**+0.7**
	baz=13,SNR=14							
C17A	**Wharram Farm,**	**13.51**	**69**	⇑P		**Pn**	**06 40 28.3**	**+0.6**
	baz=13,SNR=9.4							
MOOW	**Moose Ponds**	**13.55**	**85**	*e*Pn		**Pn**	**06 40 31.0**	**+2.5**
SNOW	**Snow King Moun**	**13.58**	**87**	*e*Pn		**Pn**	**06 40 29.8**	**+0.8**
B17A	**L&G Farms, Che**	**13.59**	**66**	⇑P		**Pn**	**06 40 29.5**	**+0.7**
	baz=13,SNR=7.1							
J17A	**Brown Place, J**	**13.63**	**87**	⇑P		**Pn**	**06 40 31.2**	**+1.6**
	baz=13,SNR=5.9							
TUQ	**Turquoise Moun**	**13.64**	**125**	⇑P		**Pn**	**06 40 31.3**	**+1.6**
	baz=14							
I17A	**Pilgrim Ck.**	**13.64**	**85**	⇓P		**Pn**	**06 40 32.7**	**+3.0**
	baz=13,SNR=6.0							
LOHW	**Long Hollow**	**13.67**	**86**	*e*Pn		**Pn**	**06 40 31.9**	**+1.8**
ARUT	**Antelope Range**	**13.74**	**112**	*e*Pn		**Pn**	**06 40 33.6**	**+2.5**
A17A	**Triple J Farms**	**13.78**	**63**	⇓P		**Pn**	**06 40 32.0**	**+0.5**
	baz=14,SNR=9.8							
CCUT	**Cedar City**	**13.93**	**113**	*e*Pn		P	06 40 37.8	-4.1
E18A	**Harlowton**	**13.99**	**73**	⇑P		**Pn**	**06 40 34.8**	**+0.4**
	baz=14,SNR=6.1							
DAU	**Daniels Canyon**	**14.05**	**99**	*e*Pn		**Pn**	**06 40 38.5**	**+3.1**
D18A	**Linhart Farms,**	**14.11**	**71**	⇑P		**Pn**	**06 40 36.7**	**+0.7**
	baz=14							
F18A	**Big Timber**	**14.11**	**76**	⇑P		**Pn**	**06 40 37.0**	**+0.9**
	baz=14,SNR=6.3							
M17A	**Scullys Gap (B**	**14.12**	**95**	⇑P		**Pn**	**06 40 37.4**	**+1.1**
	baz=14							
N17A	**Moffit Pass**	**14.17**	**97**	⇑P		**Pn**	**06 40 38.2**	**+1.2**
	baz=14							
MVU	**Marysvale**	**14.20**	**108**	*e*Pn		**P**	**06 40 43.7**	**-1.3**
H18A	**Shoshone NF, C**	**14.21**	**81**	⇓P		**Pn**	**06 40 39.2**	**+1.7**
	baz=14,SNR=6.8							
I18A	**Diamond G Ranc**	**14.22**	**85**	⇑P		**Pn**	**06 40 39.0**	**+1.3**
	baz=14							
MSU	**Marysvale**	**14.22**	**108**	*e*Pn		Pn	06 40 41.3	+3.6
EGMT	**Eagleton**	**14.23**	**68**	⇓P		**Pn**	**06 40 37.8**	**+0.1**
	baz=14,SNR=11							
G18A	**Lazy EL Ranch,**	**14.24**	**79**	⇑P		**Pn**	**06 40 40.0**	**+2.2**
	baz=14,SNR=14							
DLBC	**Dease Lake**	**14.24**	**359**	LR		LR	06 45 32.8	
	comp=Z,183nm,19.0s,baz=212,slow=35							
K18A	**Toltan Ranch,**	**14.26**	**90**	⇓P		**Pn**	**06 40 38.8**	**+0.6**
	baz=14							
B18A	**Beardsley Farm**	**14.28**	**66**	⇓P		**Pn**	**06 40 38.2**	**0.0**
	baz=14							
A18A	**Metzger Ranch,**	**14.33**	**64**	⇓P		**Pn**	**06 40 38.5**	**-0.5**
	baz=14							
LDFC	**Landfair**	**14.37**	**125**	*e*P		**P**	**06 40 47.8**	**+1.2**
L18A	**Fontenelle, Gr**	**14.44**	**92**	⇓P		**Pn**	**06 40 41.7**	**+1.0**
	baz=14							
RLMT	**Red Lodge**	**14.46**	**79**	*e*Pn		**Pn**	**06 40 43.9**	**+3.1**
RLMT	**Red Lodge**	**14.46**	**79**	⇑P		**Pn**	**06 40 42.5**	**+1.6**
	baz=14,SNR=13							
O17A	**Robinson Place**	**14.50**	**100**	⇑P		**Pn**	**06 40 42.6**	**+1.1**
	baz=14							
M18A	**Lyman**	**14.56**	**94**	⇓P		**Pn**	**06 40 43.6**	**+1.3**
	baz=14							
BW06	**Boulder Array**	**14.58**	**89**	⇓P		**Pn**	**06 40 43.7**	**+1.1**
	baz=14							
PDAR	**Pinedale Array**	**14.58**	**89**	Pn		**Pn**	**06 40 44.9**	**+2.3**
PDAR	**Pinedale Array**	**14.58**	**89**	Pn		**Pn**	**06 40 44.9**	**+2.3**
	0.0nm,0.3s,baz=279,slow=13,SNR=6.7							
F19A	**Roth Farm, Mol**	**14.65**	**76**	⇓P		**Pn**	**06 40 44.5**	**+1.0**
	baz=14							
C19A	**Slack Wire Ran**	**14.67**	**69**	⇓P		**Pn**	**06 40 44.4**	**+0.8**
	baz=14,SNR=10							
PFO	**Pinyon Flat Ob**	**14.68**	**132**	⇓P		**Pn**	**06 40 45.9**	**+2.0**
	baz=15							
H19A	**Powell**	**14.69**	**81**	⇑P		**Pn**	**06 40 46.6**	**+2.6**
	baz=14,SNR=10							
Q16A	**Castle Valley**	**14.73**	**105**	⇑P		**Pn**	**06 40 47.4**	**+2.8**
	baz=14,SNR=11							
D19A	**Cripps Ranch,**	**14.73**	**71**	⇓P		**Pn**	**06 40 45.8**	**+1.3**
	baz=14,SNR=7.3							
I19A	**Meeteetse**	**14.76**	**84**	⇓P		**Pn**	**06 40 46.5**	**+1.5**
	baz=14,SNR=7.9							
E19A	**Rath Farm, Rou**	**14.76**	**74**	⇓P		**Pn**	**06 40 46.0**	**+1.1**
	baz=14,SNR=6.8							
J19A	**Crowheart**	**14.84**	**87**	⇑P		**Pn**	**06 40 47.5**	**+1.4**
	baz=15							
L19A	**Farson**	**14.88**	**91**	⇑P		**Pn**	**06 40 48.0**	**+1.3**
	baz=15							
N18A	**Larsen Ranch,**	**14.98**	**96**	⇑P		**Pn**	**06 40 48.9**	**+0.8**
	baz=15							
O18A	**Roosevelt**	**14.99**	**99**	⇓P		**Pn**	**06 40 49.2**	**+1.1**
	baz=15							
IRM	**Iron Mountain**	**14.99**	**127**	⇑P		**Pn**	**06 40 50.0**	**+1.9**
	baz=15							
A19A	**Klindworth Far**	**15.04**	**64**	⇑P		**Pn**	**06 40 50.3**	**+1.6**
	baz=15,SNR=12							
K19A	**Absolon Red Bu**	**15.08**	**88**	⇑P		**Pn**	**06 40 50.3**	**+1.0**
	baz=15							
SRU	**San Rafael**	**15.09**	**103**	*e*P		**P**	**06 40 56.6**	**+1.8**
SRU	**San Rafael**	**15.09**	**103**	⇑P		**P**	**06 40 52.4**	**-2.4**
	baz=15,SNR=25							
M19A	**Rock Springs**	**15.19**	**93**	⇓P		**Pn**	**06 40 51.0**	**+0.2**
	baz=15							
BC3	**Big Chuckawall**	**15.19**	**129**	⇑P		**Pn**	**06 40 51.8**	**+1.0**
	baz=15							
G20A	**Bridger**	**15.19**	**79**	⇓P		**Pn**	**06 40 51.5**	**+0.8**
	baz=15,SNR=5.1							
F20A	**Billings**	**15.21**	**77**	⇑P		**Pn**	**06 40 51.2**	**+0.2**
	baz=15							
E20A	**Meyer Farm, Mu**	**15.22**	**74**	⇑P		**Pn**	**06 40 51.5**	**+0.5**
	baz=15							
D20A	**Manuel Ranch,**	**15.23**	**72**	⇓P		**Pn**	**06 40 51.5**	**+0.3**
	baz=15							
MONP	**Monument Peak**	**15.25**	**133**	⇓P		**Pn**	**06 40 52.4**	**+0.8**
	baz=15							
U15A	**North Rim**	**15.27**	**115**	⇑P		**Pn**	**06 40 54.0**	**+2.1**
	baz=15,SNR=14							
N19A	**John Jarvie Ra**	**15.37**	**95**	⇑P		**Pn**	**06 40 54.1**	**+1.0**
	baz=15							
C20A	**Veseth Ranch,**	**15.37**	**69**	⇑P		**Pn**	**06 40 53.0**	**0.0**
	baz=15							
I20A	**Worland**	**15.39**	**84**	⇑P		**Pn**	**06 40 54.6**	**+1.3**
	baz=15,SNR=8.0							
H20A	**Greybull**	**15.41**	**81**	⇑P		**Pn**	**06 40 54.7**	**+1.1**
	baz=15							
K20A	**Yellowstone Ra**	**15.48**	**88**	⇓P		**Pn**	**06 40 55.6**	**+1.1**
	baz=15							
SWSC	**Sam W. Stewart**	**15.54**	**132**	⇑P		**Pn**	**06 40 57.4**	**+2.1**
	baz=16

H24A	**Dirks Ranch, A**	**17.82**	**80**	⇓P		**P**	**06 41 24.7**	**-0.2**
	baz=18,SNR=6.2							
D24A	**Glendive**	**17.84**	**72**	⇑P		**P**	**06 41 24.9**	**0.0**
	baz=18							
I24A	**Kuemmerle Ranc**	**17.90**	**82**	⇓P		**Pn**	**06 41 24.7**	**-0.4**
	baz=18							
PHWY	**Pilot Hill**	**17.91**	**91**	*e*P		**P**	**06 41 27.4**	**+1.4**
	9.1nm,1.3s							
O23A	**Lake Granby, G**	**17.93**	**95**	⇑P		**Pn**	**06 41 25.7**	**0.0**
	baz=18							
DGMT	**Dagmar**	**17.97**	**67**	*e*P		**P**	**06 41 27.4**	**+0.9**
	112nm,2.1s							
K24A	**Anderson Ranch**	**18.00**	**86**	⇑P		**Pn**	**06 41 26.5**	**+0.1**
	baz=18							
R22A	**Saguache, Gunn**	**18.13**	**101**	⇓P		**Pn**	**06 41 28.3**	**+0.1**
	baz=18							
A24A	**Westby**	**18.14**	**66**	⇓P		**Pn**	**06 41 27.8**	**-0.1**
	baz=18,SNR=7.2							
V20A	**Brimhall**	**18.17**	**110**	⇓P		**P**	**06 41 29.1**	**+0.3**
	baz=18							
T21A	**Navajo Lake**	**18.17**	**106**	⇓P		**Pn**	**06 41 28.6**	**-0.1**
	baz=18							
RSSD	**Black Hills**	**18.28**	**81**	*e*P		**P**	**06 41 32.9**	**+2.9**
	6.2nm,0.9s							
S22A	**4UR Ranch, Cre**	**18.30**	**103**	⇓P		**Pn**	**06 41 30.2**	**-0.1**
	baz=18							
ISCO	**Idaho Springs**	**18.30**	**96**	*e*P		**P**	**06 41 33.3**	**+2.9**
	5.5nm,0.9s							
ISCO	**Idaho Springs**	**18.30**	**96**	⇑P		**P**	**06 41 30.4**	**0.0**
	baz=18,SNR=6.6							
P23A	**Jefferson**	**18.30**	**97**	⇑P		**Pn**	**06 41 30.2**	**-0.1**
	baz=18							
M24A	**Cheyenne**	**18.31**	**90**	⇑P		**Pn**	**06 41 30.3**	**0.0**
	baz=18							
U21A	**Nageezi**	**18.38**	**108**	⇓P		**Pn**	**06 41 32.5**	**+1.3**
	baz=18,SNR=15							
W20A	**Ramah**	**18.53**	**112**	⇑P		**Pn**	**06 41 34.1**	**+1.1**
	baz=18,SNR=5.1							
O24A	**Longmont**	**18.57**	**94**	⇑P		**Pn**	**06 41 33.6**	**+0.2**
	baz=18,SNR=5.3							
T22A	**Edith**	**18.60**	**105**	⇑P		**P**	**06 41 33.4**	**-0.2**
	baz=18							
R23A	**Moffat**	**18.80**	**101**	⇓P		**Pn**	**06 41 36.4**	**0.0**
	baz=19,SNR=5.5							
X20A	**Quemado**	**18.88**	**114**	⇑P		**Pn**	**06 41 37.6**	**+0.4**
	baz=19							
S23A	**Nye Farm, Mont**	**18.90**	**102**	⇓P		**Pn**	**06 41 38.0**	**+0.5**
	baz=19,SNR=5.9							
U22A	**Llaves**	**18.96**	**107**	⇑P		**Pn**	**06 41 38.6**	**+0.4**
	baz=19							
V22A	**San Miguel Ran**	**19.16**	**108**	⇓P		**Pn**	**06 41 41.1**	**+0.4**
	baz=19,SNR=7.9							
SDCO	**Great Sand Dun**	**19.23**	**101**	*e*P		**Pn**	**06 41 42.6**	**+1.1**
	5.3nm,1.0s							
X21A	**Alamocita Cree**	**19.41**	**113**	⇓P		**Pn**	**06 41 44.1**	**+0.5**
	baz=19,SNR=5.6							
Z20A	**Nine Sixteen R**	**19.71**	**117**	⇓P		**Pn**	**06 41 46.9**	**-0.3**
	baz=20							
V23A	**Ortiz Mt. (NFS**	**19.75**	**107**	⇑P		**Pn**	**06 41 47.7**	**-0.1**
	baz=20							
O26A	**Horse Wrangler**	**19.79**	**92**	⇑P		**Pn**	**06 41 48.1**	**0.0**
	baz=20							
K27A	**Flueckinger Fa**	**19.85**	**85**	⇓P		**P**	**06 41 47.4**	**+0.3**
	baz=20							
LAZ	**Ladron**	**19.86**	**112**	*e*P		**Pn**	**06 41 52.6**	**+3.6**
	2.3nm,1.1s							
ANMO	**Albuquerque**	**20.00**	**110**	*e*P		**Pn**	06 41 51.7	+0.9
	1.8nm,0.9s							
ANMO	**Albuquerque**	**20.00**	**110**	P		**Pn**	06 41 49.9	-0.9
	0.1nm,0.3s,baz=325,slow=12,SNR=4.2							
S25A	**Robets Cordova**	**20.02**	**100**	⇑P		**Pn**	06 41 50.3	-0.6
	baz=20							
120A	**U Bar Ranch, L**	**20.05**	**118**	⇓P		**Pn**	06 41 51.0	-0.3
	baz=20							
W23A	**Werner Place,**	**20.09**	**109**	⇑P		**Pn**	06 41 51.3	-0.6
	baz=20							
YKA	**Yellowknife Ar**	**20.26**	**20**	P		**Pn**	06 41 53.5	+0.2
YKA	**Yellowknife Ar**	**20.26**	**20**	P		**Pn**	06 41 53.4	+0.2
	1.2nm,0.9s,baz=209,slow=12,SNR=13							
T25A	**Trinidad**	**20.28**	**102**	⇑P		**Pn**	06 41 53.0	-0.9
	baz=20,SNR=9.4							
V24A	**Rampart Ranch,**	**20.39**	**106**	⇓P		**P**	**06 41 54.2**	**+1.0**
	baz=20,SNR=6.0							
R26A	**Arlington**	**20.44**	**98**	⇓P		**P**	**06 41 54.3**	**+0.7**
	baz=20,SNR=8.3							
220A	**Playas Peak, P**	**20.55**	**120**	⇓P		**P**	**06 41 55.9**	**+1.1**
	baz=20,SNR=7.2							
W24A	**Lazy 6 Ranch,**	**20.57**	**108**	⇓P		**P**	**06 41 56.0**	**+0.8**
	baz=20							
121A	**Cookes Peak, D**	**20.60**	**117**	⇓P		**Pn**	06 41 57.3	-0.4
	baz=20,SNR=7.5							
FFC	**Flin Flon**	**20.63**	**50**	*e*P		**Pn**	06 41 56.6	-1.0
	10.0nm,0.8s							
U25A	**Circle Dot Ran**	**20.64**	**104**	⇑P		**P**	**06 41 57.0**	**+1.1**
	baz=20,SNR=10							
Z22A	**Elephant Butte**	**20.67**	**114**	⇓P		**Pn**	06 41 57.5	-1.0
	baz=20,SNR=6.7							
S26A	**Kim**	**20.72**	**100**	⇑P		**P**	**06 41 57.3**	**+0.6**
	baz=20							
KSCO	**Kaye Shedlock'**	**20.74**	**95**	⇓P		**P**	**06 41 57.7**	**+0.9**
	baz=20,SNR=6.3							
V25A	**Rancho No Teng**	**20.78**	**105**	⇓P		**P**	**06 41 58.6**	**+1.1**
	baz=21,SNR=12							
T26A	**Comanche Natio**	**20.84**	**101**	⇓P		**P**	**06 41 59.2**	**+1.2**
	baz=21,SNR=10							
Y23A	**Lovelace Mesa,**	**20.86**	**112**	⇓P		**P**	**06 41 59.2**	**+0.9**
	baz=21							
R27A	**Eads**	**20.91**	**97**	⇑P		**P**	**06 41 59.7**	**+1.0**
	baz=21,SNR=13							
U26A	**Atchley Ranch,**	**21.11**	**103**	⇑P		**P**	**06 42 01.9**	**+0.9**
	baz=21,SNR=7.2							
W25A	**X Bar L Ranch,**	**21.22**	**106**	⇓P		**P**	**06 42 03.3**	**+1.2**
	baz=21							
V26A	**Tequesquite Ra**	**21.38**	**104**	⇓P		**P**	**06 42 05.2**	**+1.4**
	baz=21,SNR=8.7							
T27A	**Campo**	**21.51**	**100**	⇑P		**P**	**06 42 06.0**	**+0.8**
	baz=21,SNR=6.7							
Y25A	**Mesa, Roswell**	**21.79**	**110**	⇑P		**P**	**06 42 08.7**	**+0.5**
	baz=22							
T28A	**Walsh**	**21.91**	**99**	⇓P		**P**	**06 42 10.4**	**+0.9**
	baz=22,SNR=5.7							
124A	**Stringfield Ra**	**22.01**	**113**	⇓P		**P**	**06 42 10.6**	**0.0**
	baz=22							
Z25A	**Roswell**	**22.15**	**111**	⇑P		**P**	**06 42 13.8**	**+1.8**
	baz=22							
224A	**Cornudas Mount**	**22.36**	**115**	⇓P		**P**	**06 42 16.4**	**+2.0**
	baz=22							
MNTX	**Cornudas Mount**	**22.69**	**115**	*e*P		**P**	**06 42 20.2**	**+2.5**
	4.6nm,1.5s							
MNTX	**Cornudas Mount**	**22.69**	**115**	⇓P		**P**	**06 42 20.3**	**+2.5**
	baz=22							
ILAR	**Eielson Array**	**22.77**	**341**	P		**P**	**06 42 22.1**	**+3.8**
ILAR	**Eielson Array**	**22.77**	**341**	P		**P**	**06 42 22.1**	**+3.8**
	2.6nm,1.2s,baz=153,slow=7.7,SNR=11							
ILAR					LR	LR	06 50 27.8	
	comp=Z,96nm,18.8s,baz=199,slow=35							
324A	**Moseley Ranch,**	**22.79**	**116**	⇓P		**P**	**06 42 21.0**	**+2.1**
	baz=23							
Z27A	**Tatum**	**23.14**	**109**	⇑P		**P**	**06 42 24.3**	**+1.8**
	baz=23							
Y28A	**McKinney Farm,**	**23.46**	**107**	⇑P		**P**	**06 42 26.8**	**+1.1**
	baz=23							
ULM	**Lac du Bonnet**	**23.50**	**63**	*e*P		**P**	**06 42 26.4**	**+0.6**
	5.7nm,0.8s							
ULM	**Lac du Bonnet**	**23.50**	**63**	P		**P**	**06 42 26.0**	**+0.2**
	5.7nm,0.8s,baz=280,slow=9.8,SNR=12							
ULM					LR	LR	06 51 04.4	
	comp=Z,295nm,19.8s,baz=319,slow=36							
ECSD	**EROS Data Cent**	**23.62**	**80**	*e*P		**P**	**06 42 27.9**	**+0.9**
	24nm,1.4s							
INK	**Inuvik**	**24.23**	**356**	P		**P**	**06 42 34.7**	**+2.1**
INK	**Inuvik**	**24.23**	**356**	P		**P**	**06 42 34.7**	**+2.1**
	0.5nm,0.8s,baz=183,slow=9.3,SNR=3.6							
426A	**McDonald Obser**	**24.24**	**115**	⇓P		**P**	**06 42 34.2**	**+0.9**
	baz=24							
TXAR	**Lajitas Array**	**25.36**	**117**	P		**P**	**06 42 43.9**	**+0.6**
TXAR	**Lajitas Array**	**25.36**	**117**	P		**P**	**06 42 43.9**	**+0.6**
	1.5nm,1.0s,baz=298,slow=6.8,SNR=9.1							
528A	**Cox Ranch, San**	**25.38**	**115**	⇑P		**P**	**06 42 45.3**	**+1.8**
	baz=25							
WMOK	**Wichita Mounta**	**25.44**	**101**	*e*P		**P**	**06 42 45.4**	**+1.5**
	11nm,1.0s							
429A	**Davenport Ranc**	**25.67**	**113**	⇓P		**P**	**06 42 48.3**	**+2.2**
	baz=26							
Z32A	**Haskell**	**25.71**	**105**	⇑P		**P**	**06 42 48.2**	**+1.7**
	baz=26							
628A	**Black Gap, Mar**	**25.76**	**116**	⇑P		**P**	**06 42 48.9**	**+2.0**
	baz=26							
529A	**Stev Forest Ra**	**25.77**	**114**	⇑P		**P**	**06 42 48.9**	**+1.9**
	baz=26							
RES	**Resolute Bay**	**34.18**	**16**	P		P	06 44 05.3	+4.4
RES	**Resolute Bay**	**34.18**	**16**	P		P	06 44 05.3	+4.4
	1.2nm,0.7s,baz=254,slow=8.7,SNR=4.9							
CN2	**Changchun**	**69.84**	**312**	*e*P		**P**	**06 48 26.4**	**-0.2**
SONM	**Songino Array**	**75.98**	**325**	P		P	06 49 08.7	+5.6
SONM	**Songino Array**	**75.98**	**325**	P		P	06 49 08.7	+5.6
	0.6nm,0.8s,baz=46,slow=4.2,SNR=4.1							
HHC	**Hu-ho-hao-te**	**79.09**	**317**	*e*P		**P**	**06 49 20.5**	**-0.1**
HHC				pP		**pP**	**06 49 25.2**	**+0.3**
HHC				sP		**sP**	**06 49 27.9**	**+1.5**
HHC				PP		**PP**	**06 52 19.1**	**0.0**
HHC				S		**S**	**06 59 15.7**	**-3.8**
HHC				sS		**sS**	**06 59 22.6**	**-4.0**
HHC				SS		**SS**	**07 04 22.3**	**-2.0**
HHC				pmax		pmax		
	comp=Z,22nm,0.8s							
HHC				pmax		pmax		
	comp=Z,170nm,4.4s							
HHC				LR		LR		
	comp=N,220nm,17.8s							
HHC				LR		LR		
	comp=E,140nm,15.5s							
HHC				LR		LR		
	comp=Z,140nm,13.1s							
MKAR	**Makanchi Array**	**85.11**	**339**	LR		LR	07 27 05.6	
	comp=Z,49nm,19.4s,baz=348,slow=35							
WMQ	**Urumqi**	**86.26**	**334**	*e*P		**P**	**06 49 59.0**	**+1.2**
WMQ				pmax		pmax		
	comp=Z,13nm,1.0s							

IDC 10 06:37:54.5±4.8, 46°46S×96°24E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/13, mbtmp3.8/3, MS3.8/4, Ms1 3.8/4, ms1mx3.3/32, Error ellipse: s-maj=172.1km s-min=72.7km az=0.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**20.98**	**57**	LR	LR	06 48 17.9	
	comp=Z,222nm,18.6s,baz=83,slow=30						
FITZ	**Fitzroy Crossi**	**37.25**	**50**	LR	LR	06 57 53.2	
	comp=Z,98nm,18.4s,baz=186,slow=32						
STKA	**Stephens Creek**	**37.53**	**84**	P	P	06 45 10.1	-0.1
	1.5nm,0.8s,baz=248,slow=5.4,SNR=2.9						
STKA				LR	LR	06 57 34.2	
	comp=Z,158nm,19.8s,baz=204,slow=31						
ASAR	**Alice Springs**	**37.80**	**66**	P	P	06 45 12.9	+0.3
	0.7nm,0.8s,baz=212,slow=8.5,SNR=4.8						
WRA	**Warramunga Arr**	**40.82**	**63**	P	P	06 45 37.2	-0.6
	1.2nm,0.7s,baz=223,slow=8.7,SNR=6.3						
DZM	**Mont Dzumac**	**60.85**	**92**	LR	LR	07 10 03.0	
	comp=Z,125nm,19.0s,baz=211,slow=32						
INK	**Inuvik**	**146.80**	**31**	PKPbc	PKPbc	06 57 36.4	-0.8
	1.0nm,0.8s,baz=259,slow=1.4,SNR=3.0						

*BJI **10** 06:51:39.9, 18°.915S×65°.20E, h6km, mB5.1/24, mb5.0/43, Ms5.0/21, Ms7 4.6/21*
*IDC **10** 06:51:45.9±0.4, 18°.44S×65°.96E, h0km, mb4.7/26, mb1 4.9/26, mb1mx4.8/28, mbtmp4.7/26, MS4.2/17, Ms1 4.2/17, ms1mx3.7/44, Error ellipse: s-maj=14.9km s-min=12.7km az=36.0*
*ISCJB **10** 06:51:45.8±0.2, 18°.47S±0°.05×65°.98E±0°.04, h10km, mb5.0/139, MS4.3/23, Error ellipse: s-maj=6.5km s-min=5.5km az=9.4*
*MOS **10** 06:51:46.0±0.8, 18°.38S×66°.01E, h10km, mb5.4/65, Error ellipse: s-maj=10.4km s-min=5.2km az=110.6*
*NEIC **10** 06:51:47.5±0.1, 18°.47S×65°.94E, h10km, mb5.2/76, Error ellipse: s-maj=4.9km s-min=3.7km az=33.0*
*DJA **10** 06:51:49.2±7.4, 19°.S±9°×6°.6E±7°, h21km±56km, M5.0/11, mB5.5/4, mb5.1/11, Mw(mB)5.0/4*

ISC 10 06:51:47.8±0.3, 18°.47S±0°.06×65°.87E±0°.06, h10km, n744, σ0s87/796, mb5.2/139, MS4.3/23, 180C-172D, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**17.72**	**267**	P	P	06 56 01.3	+5.5
OPO	**Ambohidratompo**	**17.72**	**267**	P	P	06 56 01.3	+5.5
	0.3nm,0.3s,baz=89,slow=18,SNR=3.4						
OPO				LR	LR	07 00 55.7	
	comp=Z,1μm,19.5s,baz=12,slow=31						
KMBO	**Kilima Mbogo**	**32.95**	**298**	*e*P		**P**	**06 58 23.0**	**-0.2**
	2.8nm,1.0s						
KMBO	**Kilima Mbogo**	**32.95**	**298**	P		**P**	**06 58 24.1**	**+0.9**
	1.7nm,0.7s,baz=110,slow=8.3,SNR=5.1						
KMBO				LR	LR	07 10 12.5	
	comp=Z,334nm,18.4s,baz=98,slow=34						
LSZ	**Lusaka**	**36.16**	**269**	*e*P		**P**	**06 58 51.5**	**+0.7**
	5.9nm,1.1s						
HYB	**Hyderabad**	**37.78**	**20**	*i* P		**P**	**06 59 03.5**	**-0.9**
LBTB	**Lobatse**	**37.87**	**253**	*e*P		**P**	**06 59 04.7**	**-0.6**
	46nm,1.4s							
LBTB	**Lobatse**	**37.87**	**253**	P		**P**	**06 59 05.9**	**+0.7**
	21nm,1.1s,baz=101,slow=8.5,SNR=13							
TSUM	**Tsumeb**	**45.59**	**261**	*e*P		**P**	**07 00 09.4**	**+0.8**
	11nm,1.3s							
KSM	**Kuching**	**47.98**	**70**	*e*P		**P**	**07 00 27.0**	**-0.2**
	15nm,1.0s							
KSM	**Kuching**	**47.98**	**70**	P		**P**	**07 00 27.6**	**+0.4**
	16nm,1.3s,367nm							
CM31	**Chiang Mai Arr**	**49.02**	**43**	*e*P		**P**	**07 00 35.6**	**+0.6**
	3.0nm,0.4s							
CMAR	**Chiang Mai Arr**	**49.02**	**43**	P		**P**	**07 00 35.1**	**0.0**
CMAR	**Chiang Mai Arr**	**49.02**	**43**	P		**P**	**07 00 35.1**	**0.0**
	10.0nm,0.9s,baz=235,slow=7.8,SNR=42							
CMAR				LR	LR	07 18 04.0	
	comp=Z,135nm,19.3s,baz=176,slow=32						
KOLN	**Kolanda**	**49.07**	**21**	*e*P		**P**	**07 00 35.9**	**+0.3**
	75nm,1.3s							
MAW	**Mawson**	**49.15**	**182**	P		**P**	**07 00 36.0**	**+0.6**
MAW	**Mawson**	**49.15**	**182**	P		**P**	**07 00 36.0**	**+0.6**
	18nm,1.0s,baz=343,slow=10,SNR=4.5							
PYUN	**Piuthan**	**49.17**	**20**	*e*P		**P**	**07 00 36.5**	**+0.2**
	140nm,1.1s							
CHTO	**Chiang Mai**	**49.28**	**43**	*e*P		**P**	**07 00 37.1**	**0.0**
CHTO				pmax		pmax		
	comp=Z,15nm,1.4s							
CHTO	**Chiang Mai**	**49.28**	**43**	*e*P		**P**	**07 00 37.1**	**0.0**
	comp=Z,15nm,1.4s							
CHTO	**Chiang Mai**	**49.28**	**43**	P		**P**	**07 00 35.6**	**-1.5**
	comp=Z,14nm,1.3s							
CMMT	**Chiang Mai**	**49.28**	**43**	P		**P**	**07 00 36.1**	**-1.0**
	comp=Z,12nm,1.3s,comp=Z,467nm							
RAMN	**Ramite**	**49.43**	**25**	*e*P		**P**	**07 00 38.9**	**+0.5**
	comp=Z,47nm,0.8s							
DMN	**Daman**	**49.45**	**23**	*e*P		**P**	**07 00 38.9**	**+0.3**
	comp=Z,70nm,1.1s							
PKI	**Pulchoki**	**49.53**	**23**	*e*P		**P**	**07 00 39.3**	**+0.1**
DANN	**Dangsing**	**49.66**	**21**	*e*P		**P**	**07 00 40.1**	**-0.1**
	comp=Z,63nm,1.1s							
KKN	**Kakani**	**49.68**	**23**	*e*P		**P**	**07 00 40.3**	**+0.1**
	comp=Z,68nm,1.1s							
DDI	**Dehra Dun**	**49.91**	**14**	*e*P		**P**	**07 00 42.0**	**+0.3**
DDI				*e*S		Px	07 02 02.5	
GUN	**Gumba**	**50.01**	**23**	*e*P		**P**	**07 00 42.6**	**-0.3**
	comp=Z,57nm,1.0s							
TAPN	**Taplejung**	**50.23**	**25**	*e*P		**P**	**07 00 44.7**	**+0.2**
UBPT	**Khong Chiam**	**51.44**	**52**	P		**P**	**07 00 52.0**	**-1.5**
	comp=Z,50nm,1.1s							
KBL	**Kabul**	**52.80**	**3**	*e*P		**P**	**07 01 04.0**	**+0.4**
KBL				pmax		pmax		
	comp=Z,29nm,1.0s							
KBL	**Kabul**	**52.80**	**3**	*e*P		**P**	**07 01 04.0**	**+0.4**
	comp=Z,29nm,1.0s							
SYO	**Syowa Base**	**53.10**	**192**	*e*P		**P**	**07 01 04.0**	**-1.1**
KAPI	**Kappang**	**54.22**	**83**	*e*P		P	07 01 11.7	-2.4
	comp=Z,32nm,1.3s							
KAPI	**Kappang**	**54.22**	**83**	P		P	07 01 10.4	-3.7
	comp=Z,27nm,1.3s							
KMI	**Kunming**	**56.27**	**41**	P		**P**	**07 01 31.4**	**+2.5**
KMI				pP		**pP**	**07 01 36.0**	**+3.9**
KMI				sP		sP	07 01 38.6	+5.2
KMI				PP		**PP**	**07 03 36.6**	**+2.1**
KMI				S		**S**	**07 09 22.3**	**+3.0**
KMI				SS		**SS**	**07 13 08.3**	**+1.9**
KMI				pmax		pmax		
	comp=Z,17nm,1.1s							
KMI				pmax		pmax		
	comp=Z,100nm,4.4s							
KMI				LR		LR		
	comp=N,150nm,16.1s							
KMI				LR		LR		
	comp=E,97nm,17.8s							
KMI				LR		LR		
	comp=Z,91nm,20.3s							
FITZ	**Fitzroy Crossi**	**56.51**	**100**	*e*P		**P**	**07 01 29.6**	**-1.0**
	comp=Z,22nm,1.2s							
FITZ	**Fitzroy Crossi**	**56.51**	**100**	P		**P**	**07 01 30.0**	**-0.6**
	comp=Z,12nm,1.0s,baz=247,slow=7.9,SNR=15							
MYLDM	**Lahad Datu**	**56.94**	**71**	P		**P**	**07 01 33.0**	**-0.7**
	comp=Z,34nm,1.4s							
QIZ	**Qiongzhong**	**57.04**	**52**	P		**P**	**07 01 35.2**	**+1.0**
QIZ				S		**S**	**07 09 30.8**	**+1.6**
QIZ				pmax		pmax		
	comp=Z,180nm,4.7s							
QIZ				LR		LR		
	comp=Z,240nm,19.5s							
FORT	**Forrest**	**57.22**	**115**	*e*P		**P**	**07 01 35.0**	**-0.5**
	comp=Z,40nm,1.1s							
KSH	**Kashi**	**58.45**	**9**	⇑*i*P		P	07 01 40.5	-3.5
KSH				pP		pP	07 01 45.3	-1.9
KSH				sP		sP	07 01 47.6	-0.8
KSH				PcP		**PcP**	**07 02 31.5**	**-3.1**
KSH				PP		**PP**	**07 03 51.5**	**-2.1**
KSH				ScP		**ScP**	**07 06 29.5**	**-5.7**
KSH				PcS		PcS	07 06 31.5	-4.7
KSH				S		S	07 09 41.5	-5.8
KSH				sS		sS	07 09 49.5	-3.1
KSH				ScS		ScS	07 11 26.5	-7.5
KSH				SS		**SS**	**07 13 35.3**	**-4.9**
KSH				pmax		pmax		
	comp=Z,51nm,0.7s							
KSH				LR		LR		
	comp=N,220nm,4.9s							
KSH				LR		LR		
	comp=E,150nm,4.6s							
KSH				LR		LR		
	comp=Z,350nm,6.5s							
GYA	**Guiyang**	**59.70**	**43**	P		**P**	**07 01 54.5**	**+1.6**
GYA				PP		**PP**	**07 04 08.6**	**+3.7**
GYA				ScP		**ScP**	**07 06 40.2**	**-0.8**
GYA				S		**S**	**07 10 04.8**	**+0.9**
GYA				SS		**SS**	**07 14 02.3**	**+2.2**
GYA				pmax		pmax		
	comp=Z,20nm,1.2s							
GYA				pmax		pmax		
	comp=Z,130nm,5.9s							
GYA				LR		LR		
	comp=N,570nm,18.4s							
GYA				LR		LR		
	comp=E,490nm,19.1s							
GYA				LR		LR		
	comp=Z,560nm,18.9s							
AML	**Almayashu**	**60.73**	**7**	P		**P**	**07 01 59.3**	**-0.7**
	SNR=22							
KZA	**Kyzart**	**60.86**	**8**	P		**P**	**07 02 00.6**	**-0.3**
	SNR=22							
CD2	**Chengdu**	**61.13**	**37**	P		**P**	**07 02 02.3**	**-0.2**
CD2				pP		**pP**	**07 02 06.9**	**+1.2**
CD2				sP		**sP**	**07 02 09.3**	**+2.4**
CD2				PcP		**PcP**	**07 02 44.5**	**-0.9**
CD2				PP		**PP**	**07 04 19.4**	**+2.0**
CD2				PcS		**PcS**	**07 06 45.9**	**-2.4**
CD2				S		**S**	**07 10 20.8**	**-1.2**
CD2				pmax		pmax		
	comp=Z,40nm,0.5s							
CD2				pmax		pmax		
	comp=Z,120nm,4.2s							
ULHL	**Ulahol**	**61.17**	**9**	P		**P**	**07 02 02.3**	**-0.5**
	SNR=16							
EKS2	**Erkin-Say**	**61.26**	**7**	*e*P		**P**	**07 02 03.1**	**-0.1**
EKS2				pmax		pmax		
	comp=Z,23nm,1.0s							
EKS2	**Erkin-Say**	**61.26**	**7**	*e*P		**P**	**07 02 03.1**	**-0.1**
	comp=Z,23nm,1.0s							
EKS2	**Erkin-Say**	**61.26**	**7**	P		**P**	**07 02 03.3**	**0.0**
	SNR=16							
AAK	**Ala-Archa**	**61.32**	**7**	*c*e P		**P**	**07 02 03.5**	**-0.2**
AAK				pmax		pmax		
	comp=Z,68nm,1.3s							
AAK	**Ala-Archa**	**61.32**	**7**	*e*P		**P**	**07 02 03.0**	**-0.7**
	comp=Z,8.0nm,1.3s							
AAK	**Ala-Archa**	**61.32**	**7**	P		**P**	**07 02 03.4**	**-0.2**
	comp=Z,110nm,1.2s,SNR=16							
KK31	**Karatay Array**	**61.42**	**4**	*c*e P		**P**	**07 02 03.4**	**-0.7**
KK31				pmax		pmax		
	comp=Z,1.0nm,0.3s							
FRU	**Bishkek**	**61.53**	**7**	⇓*i*P		**P**	**07 02 05.0**	**+0.1**
FRU				pmax		pmax		
	comp=Z,40nm,2.0s							
GNI	**Garni**	**61.55**	**342**	*e*P		**P**	**07 02 06.8**	**+1.5**
	comp=Z,16nm,0.9s							
TKM2	**Tokmak 2**	**61.74**	**8**	*i* P		**P**	**07 02 06.0**	**-0.6**
TKM2	**Tokmak 2**	**61.74**	**8**	*e*P		**P**	**07 02 05.7**	**-0.9**
	comp=Z,32nm,1.1s							
TKM2	**Tokmak 2**	**61.74**	**8**	P		**P**	**07 02 06.0**	**-0.6**
	SNR=10							
USP	**Ospenovka**	**61.94**	**7**	P		**P**	**07 02 07.4**	**-0.4**
	SNR=10.0							
ASAR	**Alice Springs**	**63.18**	**108**	P		**P**	**07 02 15.3**	**-1.2**
ASAR	**Alice Springs**	**63.18**	**108**	P		**P**	**07 02 15.3**	**-1.2**
	comp=Z,15nm,0.9s,baz=272,slow=5.8,SNR=132							
ASAR				LR		LR	07 25 16.8	
	comp=Z,497nm,21.3s,baz=286,slow=32							
AS31	**Alice Springs**	**63.18**	**108**	*e*P	

GTA pmax pmax
comp=Z,19nm,1.2s
SNAA Sanae 65.93 199 *e*P **P 07 02 33.9 +0.1**
SNAA Sanae 65.93 199 *e* P 07 02 38.3 +4.6
SNAA Sanae 65.93 199 *e*P **P 07 02 33.8 +0.1**
comp=Z,11nm,1.1s
SNAA Sanae 65.93 199 P **P 07 02 33.6 -0.1**
comp=Z,3.4nm,1.1s,baz=120,slow=3.6,SNR=8.2
IDI Anoyia 66.11 324 *e*P **P 07 02 35.4 +0.1**
comp=Z,29nm,1.4s
XAN Xi'an 66.39 38 P **P 07 02 36.3 -0.9**
XAN pmax pmax
comp=Z,7.0nm,1.2s
XAN pmax pmax
comp=Z,16nm,4.0s
MK31 Makanchi Array 66.63 12*c*e**P P 07 02 36.9 -1.5**
MK31 pmax pmax
comp=Z,12nm,0.8s
MK31 Makanchi Array 66.63 12 *e*P **P 07 02 37.3 -1.0**
MKAR Makanchi Array 66.63 12 *e*P **P 07 02 37.4 -1.0**
MKAR Makanchi Array 66.63 12 *e*P **P 07 02 37.4 -1.0**
MKAR Makanchi Array 66.63 12 P **P 07 02 37.4 -1.0**
comp=Z,10nm,1.1s,baz=196,slow=6.8,SNR=59
VNA2 Neumayer--Watz 67.22 200 *e*P **P 07 02 42.6 +0.7**
baz=73,slow=5.7
VNA2 Neumayer--Watz 67.22 200 *e* P 07 02 46.9 +5.0
baz=73,slow=5.7
WHN Wuhan 67.45 44 P **P 07 02 44.3 +0.4**
AB31 Akbulak array 67.63 356*c*e**P P 07 02 43.7 -0.9**
AB31 pmax pmax
comp=Z,12nm,0.7s
ABKAR Akbulak array 67.63 356 *e*P **P 07 02 44.0 -0.6**
comp=Z,8.7nm,0.7s
VNA3 Neumayer Olymp 68.00 200 *e*P **P 07 02 47.3 +0.5**
VNA3 Neumayer Olymp 68.00 200 *e* P 07 02 51.6 +4.8
ANN Anapa 68.10 339 *e*P P 07 02 51.1 +3.5
ANN pmax pmax
comp=Z,25nm,1.0s
STKA Stephens Creek 68.62 118 *e*P **P 07 02 50.6 -0.9**
comp=Z,3.1nm,1.0s
STKA Stephens Creek 68.62 118 P **P 07 02 50.5 -0.9**
comp=Z,10nm,0.9s,baz=294,slow=6.1,SNR=21
STKA LR LR 07 27 30.5
comp=Z,198nm,19.6s,baz=208,slow=31
AKTO Aktyubinsk 68.95 355 *i*P **P 07 02 52.3 -0.6**
AKTO pmax pmax
comp=Z,4.0nm,1.2s
KURK Kurchatov 69.79 9*c i*P **P 07 02 57.2 -0.9**
KURK pmax pmax
comp=Z,32nm,1.3s
KURK Kurchatov 69.79 9 *e*P **P 07 02 57.5 -0.6**
comp=Z,38nm,1.3s
KURK Kurchatov 69.79 9 P **P 07 02 57.9 -0.2**
comp=Z,118nm,1.4s,SNR=6.0
TOA0 Torodi Ar. Sit 70.64 292 *e*P **P 07 03 03.9 -0.1**
TORD Torodi Ar. Bea 70.64 292 P **P 07 03 03.9 -0.1**
TORD Torodi Ar. Bea 70.64 292 P **P 07 03 03.9 -0.1**
comp=Z,8.8nm,1.1s,baz=121,slow=1.5,SNR=23
TORD LR LR 07 33 27.0
comp=Z,157nm,18.8s,baz=225,slow=35
VOSK Vostochnaya 71.03 3 P **P 07 03 03.9 -1.7**
VOSK pmax pmax
comp=Z,15nm,0.9s
ZRNK Zerenda 71.17 2 *i*P **P 07 03 04.6 -1.9**
ZRNK pmax pmax
comp=Z,43nm,1.0s
BVA0 Borovoye Array 71.30 3 *i*P **P 07 03 06.1 -1.2**
BVA0 pmax pmax
comp=Z,5.0nm,0.9s
BVAR Borovoye Array 71.30 3 LR LR 07 32 15.0
comp=Z,54nm,20.3s,baz=78,slow=34
BRVK Borovoye 71.33 3*c*e**P P 07 03 06.9 -0.5**
BRVK pmax pmax
comp=Z,47nm,1.3s
BRVK Borovoye 71.33 3 *e*P **P 07 03 06.5 -0.9**
comp=Z,26nm,0.8s
BRVK Borovoye 71.33 3 P **P 07 03 06.0 -1.4**
comp=Z,202nm,0.8s,SNR=13
NJ2 Nanjing 71.40 46 *e*P **P 07 03 07.8 -0.5**
NJ2 pmax pmax
comp=Z,20nm,0.9s
QSPA South Pole Qui 71.63 180 *e*P **P 07 03 08.8 -0.6**
comp=Z,38nm,1.2s
TAM Tamanrasset 71.82 302 *e*P **P 07 03 12.5 +1.3**
TAM pmax pmax
comp=Z,7.0nm,1.2s
TAM Tamanrasset 71.82 302 *e*P **P 07 03 12.5 +1.3**
comp=Z,7.1nm,1.2s
CFR Carcaliu 72.05 333 ⇓P **P 07 03 12.1 +0.2**
CFR Carcaliu 72.05 333 ⇓*i*P **P 07 03 12.1 +0.2**
VRHR Novokhopersk 72.47 344 *e*P **P 07 03 14.5 +0.2**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s
VRHR pmax pmax
comp=E,2.0nm,0.3s
HHC Hu-ho-hao-te 72.68 35 *e*P **P 07 03 15.7 -0.3**
HHC pP **pP 07 03 19.9 +0.7**
HHC sP **sP 07 03 23.5 +3.1**
HHC PP **PP 07 05 59.9 +2.0**
HHC S **S 07 12 40.0 -1.4**
HHC ScS **SKSac 07 13 19.1 -2.2**
HHC SS **SS 07 17 22.1 +0.8**
HHC pmax pmax
comp=Z,45nm,1.1s
HHC pmax pmax
comp=Z,210nm,4.8s
HHC LR LR
comp=N,180nm,13.1s
HHC LR LR
comp=E,230nm,15.5s
HHC LR LR
comp=Z,210nm,17.8s
VORD Divnogorie 72.98 343 *e*P **P 07 03 16.7 -0.6**
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.8s
VRI Vrincioaia 73.20 333 ⇓P **P 07 03 19.7 +0.9**
VRI Vrincioaia 73.20 333 ⇓*i*P **P 07 03 19.6 +0.8**
VSR Storozhevoye 73.24 343 *e*P **P 07 03 18.1 -0.7**
VSR pmax pmax
comp=Z,20nm,1.1s
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,9.0nm,0.5s
MLR Muntele Rosu 73.25 332 ⇓*i*P **P 07 03 20.3 +1.0**
VNDA Vanda 73.39 167 *e*P **P 07 03 19.2 -0.3**
comp=E,11nm,1.2s
VNDA Vanda 73.39 167 P **P 07 03 19.4 -0.1**
comp=E,5.1nm,1.0s,baz=268,slow=7.3,SNR=15
TIP Timpagrande 73.46 322 *e*P **P 07 03 20.4 -0.1**
comp=E,14nm,1.2s
VOIR 73.62 331 ⇓P **P 07 03 22.1 +0.7**
VOIR 73.62 331 ⇓*i*P **P 07 03 22.0 +0.7**
ZAA0 Zalesovo Array 73.94 12 *e*P **P 07 03 21.5 -1.4**
ZALV Zalesovo Beam 73.94 12 P **P 07 03 22.0 -1.0**
ZALV Zalesovo Beam 73.94 12 P **P 07 03 22.0 -1.0**
ZALV Zalesovo Beam 73.94 12 P **P 07 03 22.0 -1.0**
comp=E,12nm,0.7s,baz=205,slow=6.1,SNR=51
LIC Lamto 74.05 282 *e*P **P 07 03 24.3 -0.2**
comp=E,18nm,0.7s,baz=115
LIC *e*R
comp=E,243nm,22.2s
LIC Lamto 74.05 282 *e*P **P 07 03 24.3 -0.2**
comp=E,18nm,0.7s
DBIC Dimbokro 74.05 283 *e*P **P 07 03 24.4 -0.1**
comp=E,7.0nm,0.9s
DBIC Dimbokro 74.05 283 P **P 07 03 24.1 -0.4**
comp=E,7.8nm,1.0s,baz=99,slow=8.3,SNR=5.9
DBIC LR LR 07 35 07.2
comp=E,165nm,19.1s,baz=190,slow=35
SBA Scott Base 74.35 168 *e*P **P 07 03 25.6 +0.4**
SBA pmax pmax
comp=Z,11nm,1.3s
SBA Scott Base 74.35 168 *e*P **P 07 03 25.6 +0.4**
comp=Z,11nm,1.3s
NVS Novosibirsk 74.51 10 *i*P **P 07 03 24.6 -1.6**
NVS pmax pmax
comp=Z,30nm,1.3s
NVS pmax pmax
comp=N,19nm,1.4s

NVS pmax pmax
comp=E,10.0nm,1.5s
GZR Gura Zlata 74.64 330 ⇑P **P 07 03 28.0 +0.7**
GZR Gura Zlata 74.64 330 ⇑*i*P **P 07 03 28.0 +0.7**
BJI Beijing 74.72 38 P **P 07 03 27.8 0.0**
BJI pmax pmax
comp=Z,13nm,1.3s
BJI LR LR
comp=Z,43nm,23.2s
ARU Arti 74.86 356*c i*P **P 07 03 27.7 -0.5**
ARU S **S 07 13 06.4 +1.3**
ARU pmax pmax
comp=Z,61nm,1.2s
ARU Arti 74.86 356 *e*P **P 07 03 27.8 -0.5**
comp=Z,50nm,1.1s
CTAO Charters Tower 75.14 107 *e*P **P 07 03 30.2 -0.6**
CTAO pmax pmax
comp=Z,31nm,1.3s
CTAO Charters Tower 75.14 107 *e*P **P 07 03 30.2 -0.6**
comp=Z,31nm,1.3s
SVE Sverdlovsk 75.14 357⇑*i*P **P 07 03 29.7 -0.1**
SVE pmax pmax
comp=Z,47nm,1.2s
BURAR Bucovina Array 75.21 333 ⇓*i*P **P 07 03 31.3 +0.7**
BUR08 Bucovina Ar. S 75.24 333 *e*P **P 07 03 31.4 +0.6**
SONM Songino Array 75.32 27 P **P 07 03 31.0 -0.3**
SONM Songino Array 75.32 27 P **P 07 03 31.0 -0.3**
comp=Z,11nm,0.9s,baz=216,slow=6.0,SNR=54
BZS Buzias 75.36 330 ⇓P **P 07 03 31.6 +0.2**
BZS Buzias 75.36 330 ⇓*i*P **P 07 03 31.6 +0.2**
ULN Ulaanbaatar 75.63 27 *e*P **P 07 03 33.0 -0.1**
comp=Z,11nm,1.0s
AK02 Malin Array Si 76.01 337 *e*P **P 07 03 34.4 -0.6**
AK01 Malin Array Si 76.04 337 *e*P **P 07 03 34.7 -0.5**
AKASG Malin Array Be 76.04 337 P **P 07 03 34.8 -0.3**
AKASG Malin Array Be 76.04 337 P **P 07 03 34.8 -0.3**
AKASG Malin Array Be 76.04 337 P **P 07 03 34.8 -0.3**
comp=Z,9.1nm,1.0s,baz=142,slow=4.9,SNR=18
KIEV Kiev 76.04 337 *e*P **P 07 03 34.5 -0.6**
KIEV pmax pmax
comp=Z,16nm,1.1s
KIEV Kiev 76.04 337 *e*P **P 07 03 34.5 -0.6**
comp=Z,16nm,1.1s
ZAK Zakamensk 76.07 24 *e*P P 07 03 29.3 -6.2
UZH Uzhgorod 77.26 332 *e*P **P 07 03 41.2 -0.9**
UZH *e* 07 03 50.7
ARMA Armidale 77.33 118 *e*P **P 07 03 43.5 +0.3**
comp=Z,36nm,1.3s
LVV L'vov 77.40 334 *e*P **P 07 03 41.9 -1.0**
OBN Obninsk 77.42 343*c*e**P P 07 03 42.6 -0.2**
OBN *e* 07 03 51.0
OBN *e* 07 06 37.2
OBN pmax pmax
comp=Z,56nm,1.6s
OBN Obninsk 77.42 343 *e*P **P 07 03 42.8 0.0**
comp=Z,17nm,0.6s
KOLS Kolonicke sedl 77.50 332 *e*P **P 07 03 43.8 +0.4**
KOLS pmax pmax
comp=Z,13nm,1.3s
KOLS Kolonicke sedl 77.50 332 *e*P **P 07 03 43.8 +0.4**
MOS Moscow 77.69 344 *e*P **P 07 03 43.3 -1.0**
MOS pmax pmax
comp=Z,53nm,0.7s
KWP Kalwaria Pacla 77.83 333 ⇑P **P 07 03 45.8 +0.5**
KWP Kalwaria Pacla 77.83 333 *e*P **P 07 03 45.1 -0.2**
comp=Z,20nm,1.2s
KWP Kalwaria Pacla 77.83 333⇑*i*P **P 07 03 45.8 +0.5**
KWP Kalwaria Pacla 77.83 333 *e*P **P 07 03 45.5 +0.2**
CRVS Cervenica-Dubn 77.83 332 *e*P **P 07 03 45.1 -0.2**
CRVS pmax pmax
comp=Z,21nm,1.5s
CRVS Cervenica-Dubn 77.83 332 *e*P **P 07 03 45.1 -0.2**
SOKR Solikamsk 78.11 355*d i*P **P 07 03 47.3 +0.8**
SOKR pmax pmax
comp=Z,20nm,0.7s
EIDS Eidsvold 78.12 113 *e*P **P 07 03 46.6 -0.9**
comp=Z,9.6nm,1.0s
VYHS Vyhne 78.75 330 *e*P **P 07 03 50.0 -0.4**
VYHS pmax pmax
comp=Z,9.0nm,1.4s
VYHS Vyhne 78.75 330 *e*P **P 07 03 50.0 -0.4**
SMOL Smolenice 79.43 330 *e*P **P 07 03 54.3 +0.2**
SMOL Smolenice 79.43 330 *e*P **P 07 03 54.3 +0.2**
OJC Ojcow 79.53 332 *e*P **P 07 03 54.7 0.0**
OJC pmax pmax
comp=Z,18nm,1.3s
OJC Ojcow 79.53 332 *e*P **P 07 03 54.7 0.0**
comp=Z,18nm,1.3s
PGF Pioggiola 80.15 321 *e*P **P 07 03 57.7 -0.6**
comp=Z,30nm,1.2s
PGF Pioggiola 80.15 321 *e*P **P 07 03 57.7 -0.6**
PGF pmax pmax
comp=Z,30nm,1.2s
PGF Pioggiola 80.15 321 *e*P **P 07 03 57.7 -0.6**
comp=Z,30nm,1.2s
MORC Moravsky Berou 80.25 331 ⇑P **P 07 03 59.0 +0.4**
MORC Moravsky Berou 80.25 331 *e*P **P 07 03 58.6 -0.1**
comp=Z,5.2nm,1.1s
MORC Moravsky Berou 80.25 331⇑*i*P **P 07 03 59.0 +0.4**
JNU Nakatsue 80.49 50 *e*P **P 07 03 59.4 -0.8**
comp=Z,5.0nm,1.0s
JNU Nakatsue 80.49 50 P **P 07 03 59.4 -0.8**
comp=Z,13nm,1.0s,baz=168,slow=2.6,SNR=5.9
KSAR Wonju Array Be 80.57 45 P **P 07 03 59.9 -0.7**
KSRS Korea Array 80.60 45 P **P 07 03 59.9 -0.8**
comp=Z,9.3nm,0.9s,baz=238,slow=5.9,SNR=29
KSRS LR LR 07 41 11.7
comp=Z,59nm,19.6s,baz=345,slow=37
KRLC Kraliky 80.81 330 *e*P **P 07 04 01.7 +0.1**
TREC Trest 80.90 329 *e*P **P 07 04 02.2 +0.1**
TREC Trest 80.90 329 *e*P **P 07 04 02.2 +0.1**
SUW Suwalki 80.94 336 *e*P **P 07 04 02.5 +0.4**
SUW pmax pmax
comp=Z,30nm,0.8s
SUW Suwalki 80.94 336 *e*P **P 07 04 02.5 +0.4**
comp=Z,30nm,0.8s
SUW Suwalki 80.94 336 *e*P **P 07 04 02.5 +0.4**
DPC Dobruska-Polom 81.22 330 *e*P **P 07 04 04.1 +0.3**
DPC pmax pmax
comp=Z,14nm,1.2s
DPC Dobruska-Polom 81.22 330 *e*P **P 07 04 04.1 +0.3**
comp=Z,14nm,1.2s
DPC Dobruska-Polom 81.22 330 *e*P **P 07 04 03.9 +0.1**
UPC Upice 81.47 330 *e*P **P 07 04 05.5 +0.5**
UPC Upice 81.47 330 *e*P **P 07 04 05.5 +0.5**
GERES GERESS Array B 81.48 328 P **P 07 04 04.4 -0.9**
GERES GERESS Array B 81.48 328 P **P 07 04 04.4 -0.9**
comp=Z,1.0nm,0.8s,baz=133,slow=5.9,SNR=9.4
KSP Ksiaz 81.57 331 *e*P **P 07 04 06.6 +1.1**
KHC Kasperske Hory 81.73 328 *e*P **P 07 04 05.7 -0.8**
KHC Kasperske Hory 81.73 328 *e*P **P 07 04 05.5 -1.0**
comp=Z,9.0nm,1.2s
KHC Kasperske Hory 81.73 328 *e*P **P 07 04 05.7 -0.8**
PRU Pruhonice 81.82 329 *e*P **P 07 04 07.0 +0.1**
PRU Pruhonice 81.82 329 *e*P **P 07 04 07.0 +0.1**
SBF Sospel 81.84 321 *e*P **P 07 04 07.3 0.0**
comp=Z,104nm,1.4s
SBF Sospel 81.84 321 *e*P **P 07 04 07.3 0.0**
SBF pmax pmax
comp=Z,104nm,1.4s
SBF Sospel 81.84 321 *e*P **P 07 04 07.3 0.0**
comp=Z,104nm,1.4s
KLMR Klimovskoe 81.85 347*c i*P **P 07 04 06.4 -0.4**
KLMR pmax pmax
comp=Z,77nm,1.4s
FUORN Ofenpass-Fuorn 81.87 325 *e*P **P 07 04 07.8 +0.3**
comp=Z,11nm,1.1s
LMR La Mourre 82.09 321 *e*P **P 07 04 08.5 0.0**
comp=Z,47nm,1.3s
LMR La Mourre 82.09 321 *e*P **P 07 04 08.5 0.0**
LMR pmax pmax
comp=Z,47nm,1.3s
LMR La Mourre 82.09 321 *e*P **P 07 04 08.5 0.0**
comp=Z,47nm,1.3s
FRF La Foret Royal 82.14 321 *e*P **P 07 04 08.8 +0.1**
FRF La Foret Royal 82.14 321 *e*P **P 07 04 08.8 +0.1**
FRF La Foret Royal 82.14 321 *e*P **P 07 04 08.8 +0.1**
PVCC Panska Ves 82.17 330 *e*P **P 07 04 09.3 +0.6**
PVCC Panska Ves 82.17 330 *e*P **P 07 04 09.3 +0.6**
TUE Stuetta 82.29 324 *e*P **P 07 04 08.7 -1.0**
comp=Z,17nm,1.2s
CN2 Changchun 82.49 39 *e*P **P 07 04 12.0 +1.5**
CN2 *es*P **sP 07 04 19.0 +4.0**
CN2 *e*S **S 07 14 27.4 +0.2**

CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,16.0s
CN2 LR LR
comp=E,200nm,16.0s
CN2 LR LR
comp=Z,200nm,13.0s
BRG Berggiesshubel 82.69 330 *e*P **P 07 04 11.5 +0.1**
comp=Z,14nm,1.5s
BRG Berggiesshubel 82.69 330 *e*P **P 07 04 11.5 +0.1**
BRG pmax pmax
comp=Z,14nm,1.5s
MBDF Montbardon 82.73 322 *e*P **P 07 04 12.3 +0.3**
comp=Z,30nm,1.1s
MBDF Montbardon 82.73 322 *e*P **P 07 04 12.3 +0.3**
MBDF pmax pmax
comp=Z,30nm,1.1s
MBDF Montbardon 82.73 322 *e*P **P 07 04 12.3 +0.3**
comp=Z,30nm,1.1s
BNI Bardonecchia 82.97 322 *e*P **P 07 04 12.5 -0.7**
BNI pmax pmax
comp=Z,16nm,1.3s
BNI Bardonecchia 82.97 322 *e*P **P 07 04 12.5 -0.7**
comp=Z,16nm,1.3s
NKC Novy Kostel 83.00 329 *e*P **P 07 04 13.4 +0.3**
NKC Novy Kostel 83.00 329 *e*P **P 07 04 13.4 +0.3**
SMRF Simiane la Rot 83.01 321 *e*P **P 07 04 14.2 +0.9**
comp=Z,65nm,1.5s
SMRF Simiane la Rot 83.01 321 *e*P **P 07 04 14.2 +0.9**
comp=Z,65nm,1.5s
LPG La Plagne 83.18 323 *e*P **P 07 04 13.7 -0.8**
comp=Z,18nm,1.1s
LPG La Plagne 83.18 323 *e*P **P 07 04 13.7 -0.8**
LPG pmax pmax
comp=Z,18nm,1.1s
LPG La Plagne 83.18 323 *e*P **P 07 04 13.7 -0.8**
comp=Z,18nm,1.1s
LPL La Plagne 83.20 323 *e*P **P 07 04 13.8 -0.7**
LPL La Plagne 83.20 323 *e*P **P 07 04 13.8 -0.7**
LPL La Plagne 83.20 323 *e*P **P 07 04 13.8 -0.7**
ORIF Oris-en-Rattie 83.36 322 *e*P **P 07 04 15.4 +0.2**
comp=Z,50nm,1.4s
ORIF *e*R
comp=Z,106nm,21.5s
ORIF Oris-en-Rattie 83.36 322 *e*P **P 07 04 15.4 +0.2**
ORIF pmax pmax
comp=Z,51nm,1.4s
ORIF Oris-en-Rattie 83.36 322 *e*P **P 07 04 15.4 +0.2**
comp=Z,50nm,1.4s
CLL Collm 83.43 330 ⇓*i*P **P 07 04 15.8 +0.6**
CLL pmax pmax
comp=Z,12nm,1.2s
BFO Black Forest 83.95 326 *e*P **P 07 04 17.4 -0.7**
BFO pmax pmax
comp=Z,13nm,1.1s
BFO Black Forest 83.95 326 *e*P **P 07 04 17.4 -0.7**
comp=Z,13nm,1.1s
VIVF Saint-Julien-l 84.04 321 *e*P **P 07 04 18.5 -0.1**
comp=Z,21nm,1.3s
VIVF Saint-Julien-l 84.04 321 *e*P **P 07 04 18.5 -0.1**
VIVF pmax pmax
comp=Z,21nm,1.3s
VIVF Saint-Julien-l 84.04 321 *e*P **P 07 04 18.5 -0.1**
comp=Z,21nm,1.3s
LASF Ste Croix 84.11 320 *e*P **P 07 04 19.1 +0.2**
LASF Ste Croix 84.11 320 *e*P **P 07 04 19.1 +0.2**
CABF La Chapelle 84.19 323 *e*P **P 07 04 19.5 +0.1**
comp=Z,62nm,1.4s
CABF La Chapelle 84.19 323 *e*P **P 07 04 19.5 +0.1**
CABF pmax pmax
comp=Z,62nm,1.4s
CABF La Chapelle 84.19 323 *e*P **P 07 04 19.5 +0.1**
comp=Z,62nm,1.4s
MDT Midelt 84.43 307 LR LR 07 38 53.3
comp=Z,154nm,22.0s,baz=5.5,slow=34
HINF Hinteralfeld 84.45 325 *e*P **P 07 04 20.1 -0.5**
comp=Z,55nm,1.3s
HINF Hinteralfeld 84.45 325 *e*P **P 07 04 20.1 -0.5**
HINF pmax pmax
comp=Z,55nm,1.3s
HINF Hinteralfeld 84.45 325 *e*P **P 07 04 20.1 -0.5**
comp=Z,55nm,1.3s
CDF Champ du Feu 84.57 325 *e*P **P 07 04 20.9 -0.4**
comp=Z,29nm,1.2s
CDF Champ du Feu 84.57 325 *e*P **P 07 04 20.9 -0.4**
CDF pmax pmax
comp=Z,29nm,1.2s
CDF Champ du Feu 84.57 325 *e*P **P 07 04 20.9 -0.4**
comp=Z,29nm,1.2s
MTLF Montolieu 84.72 319 *e*P **P 07 04 22.2 +0.1**
comp=Z,40nm,1.2s
MTLF Montolieu 84.72 319 *e*P **P 07 04 22.2 +0.1**
MTLF pmax pmax
comp=Z,40nm,1.2s
MTLF Montolieu 84.72 319 *e*P **P 07 04 22.2 +0.1**
comp=Z,40nm,1.2s
HAU Haudompre 84.84 324 *e*P **P 07 04 22.3 -0.3**
comp=Z,50nm,1.3s
HAU *e*R
comp=Z,73nm,19.5s
HAU Haudompre 84.84 324 *e*P **P 07 04 22.3 -0.3**
HAU pmax pmax
comp=Z,50nm,1.3s
HAU Haudompre 84.84 324 *e*P **P 07 04 22.3 -0.3**
comp=Z,50nm,1.3s
TMCR Tamitsa 85.14 348 *e*P **P 07 04 22.6 -1.0**
TMCR pmax pmax
comp=Z,17nm,0.2s
MDJ Mudanjiang 85.43 40 P **P 07 04 25.5 -0.1**
MDJ pmax pmax
comp=Z,18nm,0.9s
MDJ pmax pmax
comp=Z,55nm,3.6s
PAGF Fort de Pagny 85.50 325 *e*P **P 07 04 25.8 0.0**
comp=Z,9.1nm,1.1s
PAGF Fort de Pagny 85.50 325 *e*P **P 07 04 25.8 0.0**
comp=Z,9.1nm,1.1s
SMF Signal de Mont 85.50 322 *e*P **P 07 04 25.4 -0.5**
SMF Signal de Mont 85.50 322 *e*P **P 07 04 25.4 -0.5**
SMF Signal de Mont 85.50 322 *e*P **P 07 04 25.4 -0.5**
JOF Joensuu 85.54 345 *e*P **P 07 04 24.4 -1.2**
JOF pmax pmax
comp=Z,17nm,0.7s
JOF Joensuu 85.54 345 *e*p **P 07 04 24.4 -1.2**
comp=Z,17nm,0.7s
CAF Calviac 85.64 320 *e*P **P 07 04 26.9 +0.2**
comp=Z,20nm,1.1s
CAF Calviac 85.64 320 *e*P **P 07 04 26.9 +0.2**
CAF pmax pmax
comp=Z,20nm,1.1s
CAF Calviac 85.64 320 *e*P **P 07 04 26.9 +0.2**
comp=Z,20nm,1.1s
SFTF Sexfontaines 85.68 324 *e*P **P 07 04 26.8 +0.1**
comp=Z,68nm,1.2s
SFTF Sexfontaines 85.68 324 *e*P **P 07 04 26.8 +0.1**
comp=Z,68nm,1.2s
FINES FINESS Array B 85.74 342 P **P 07 04 26.8 +0.1**
FINES FINESS Array B 85.74 342 P **P 07 04 26.8 +0.1**
comp=Z,13nm,1.0s,baz=120,slow=4.3,SNR=18
LOR Lormes 85.83 323 *e*P **P 07 04 27.4 -0.1**
LOR *e*R
comp=Z,94nm,20.2s
LOR Lormes 85.83 323 *e*P **P 07 04 27.4 -0.1**
AVF Avril sur Loir 85.86 322 *e*P **P 07 04 27.2 -0.4**
comp=Z,54nm,1.5s
AVF Avril sur Loir 85.86 322 *e*P **P 07 04 27.2 -0.4**
AVF pmax pmax
comp=Z,54nm,1.5s
AVF Avril sur Loir 85.86 322 *e*P **P 07 04 27.2 -0.4**
comp=Z,54nm,1.5s
SSF Saint Saulge 85.92 323 *e*P **P 07 04 27.8 -0.1**
comp=Z,32nm,1.3s
SSF Saint Saulge 85.92 323 *e*P **P 07 04 27.8 -0.1**
SSF pmax pmax
comp=Z,32nm,1.3s
SSF Saint Saulge 85.92 323 *e*P **P 07 04 27.8 -0.1**
comp=Z,32nm,1.3s
BGF Bois d'Agland 86.03 322 *e*P **P 07 04 28.7 +0.2**
comp=Z,35nm,1.0s
BGF Bois d'Agland 86.03 322 *e*P **P 07 04 28.7 +0.2**
BGF pmax pmax
comp=Z,35nm,1.0s
BGF Bois d'Agland 86.03 322 *e*P **P 07 04 28.7 +0.2**
comp=Z,35nm,1.0s

RJF Les Rejaudoux 86.17 320 *e*P **P** 07 04 29.5 +0.3
comp=Z,48nm,1.2s
RJF *e*R
comp=Z,146nm,23.0s
RJF Les Rejaudoux 86.17 320 *e*P **P** 07 04 29.5 +0.3
RJF pmax pmax
comp=Z,48nm,1.2s
RJF Les Rejaudoux 86.17 320 *e*P **P** 07 04 29.5 +0.3
comp=Z,48nm,1.2s
KAF Kangasniemi 86.21 343 *e*P **P** 07 04 27.3 -1.7
KAF pmax pmax
comp=Z,14nm,0.8s
KAF Kangasniemi 86.21 343 *e*p **P** 07 04 27.3 -1.7
comp=Z,14nm,0.8s
ETSF Etsaut 86.26 318 *e*P **P** 07 04 30.2 +0.4
ETSF Etsaut 86.26 318 *e*P **P** 07 04 30.2 +0.4
ETSF Etsaut 86.26 318 *e*P **P** 07 04 30.2 +0.4
TCF Toulx Ste Croi 86.27 321 *e*P **P** 07 04 29.6 -0.1
TCF Toulx Ste Croi 86.27 321 *e*P **P** 07 04 29.6 -0.1
TCF Toulx Ste Croi 86.27 321 *e*P **P** 07 04 29.6 -0.1
LFF La Frestale 86.46 320 *e*P **P** 07 04 31.0 +0.4
comp=Z,89nm,1.2s
LFF La Frestale 86.46 320 *e*P **P** 07 04 31.0 +0.4
LFF pmax pmax
comp=Z,89nm,1.2s
LFF La Frestale 86.46 320 *e*P **P** 07 04 31.0 +0.4
comp=Z,89nm,1.2s
CBIJ Chichi jima 86.70 60 LR LR 07 35 55.7
comp=Z,677nm,20.2s,baz=329,slow=31
USRK Ussuriysk Arra 86.71 41 P **P** 07 04 30.4 -1.5
comp=Z,1.9nm,0.6s,baz=235,slow=6.7,SNR=5.0
SJPF Ste Jean 86.79 317 *e*P **P** 07 04 33.0 +0.7
comp=Z,38nm,1.2s
SJPF Ste Jean 86.79 317 *e*P **P** 07 04 33.0 +0.7
SJPF pmax pmax
comp=Z,38nm,1.2s
SJPF Ste Jean 86.79 317 *e*P **P** 07 04 33.0 +0.7
comp=Z,38nm,1.2s
GIVF Givet 86.85 326 *e*P **P** 07 04 32.8 +0.4
comp=Z,26nm,1.0s
GIVF Givet 86.85 326 *e*P **P** 07 04 32.8 +0.4
GIVF pmax pmax
comp=Z,26nm,1.0s
GIVF Givet 86.85 326 *e*P **P** 07 04 32.8 +0.4
comp=Z,26nm,1.0s
ESDC Sonseca Array 87.00 313 P **P** 07 04 33.6 0.0
ESDC Sonseca Array 87.00 313 P **P** 07 04 33.6 0.0
comp=Z,5.3nm,0.8s,baz=109,slow=3.7,SNR=12
ESLA Sonseca Array 87.00 313 *e*P **P** 07 04 33.6 +0.1
comp=Z,8.6nm,1.3s
BAIF Baives 87.16 325 *e*P **P** 07 04 34.4 +0.5
comp=Z,47nm,1.3s
BAIF Baives 87.16 325 *e*P **P** 07 04 34.4 +0.5
BAIF pmax pmax
comp=Z,47nm,1.3s
BAIF Baives 87.16 325 *e*P **P** 07 04 34.4 +0.5
comp=Z,47nm,1.3s
MAJO Matsushiro 87.41 50 *e*P **P** 07 04 35.6 +0.1
MAJO pmax pmax
comp=Z,44nm,1.2s
MAJO Matsushiro 87.41 50 *e*P **P** 07 04 35.6 +0.1
comp=Z,44nm,1.2s
MAT Matsushiro 87.41 50 P **P** 07 04 34.7 -0.8
MJAR Matsushiro Arr 87.41 50 P **P** 07 04 35.4 -0.1
MJAR Matsushiro Arr 87.41 50 P **P** 07 04 35.4 -0.1
comp=Z,21nm,1.1s,baz=234,slow=5.8,SNR=37
MJAR LR LR 07 42 03.1
comp=Z,48nm,18.0s,baz=245,slow=34
BBTS Babate 87.58 286 LR LR 07 41 00.9
comp=Z,241nm,19.7s,baz=233,slow=34
MFF Saint Martin d 87.83 321 *e*P **P** 07 04 37.4 +0.2
comp=Z,57nm,1.3s
MFF Saint Martin d 87.83 321 *e*P **P** 07 04 37.4 +0.2
MFF pmax pmax
comp=Z,57nm,1.3s
MFF Saint Martin d 87.83 321 *e*P **P** 07 04 37.4 +0.2
comp=Z,57nm,1.3s
LDF La Druitiere 88.81 323 *e*P **P** 07 04 41.8 0.0
LDF La Druitiere 88.81 323 *e*P **P** 07 04 41.8 0.0
LDF La Druitiere 88.81 323 *e*P **P** 07 04 41.8 0.0
EVO Evora 89.36 311 *e*P **P** 07 04 45.4 +0.7
comp=Z,49nm,1.3s
EVO *e*R
comp=Z,135nm,18.8s
EVOP Sao Brissos 89.43 311 *e*P **P** 07 04 45.4 +0.4
EVOP pmax pmax
comp=Z,49nm,1.3s
EVOP Sao Brissos 89.43 311 *e*P **P** 07 04 45.4 +0.4
comp=Z,49nm,1.3s
ARCES ARCESS Array B 92.32 347 P **P** 07 04 57.6 -0.2
ARCES ARCESS Array B 92.32 347 P **P** 07 04 57.6 -0.2
comp=Z,6.2nm,1.0s,baz=132,slow=1.8,SNR=10
ASAJ Asahikawa 93.53 45 LR LR 07 49 14.7
comp=Z,47nm,19.2s,baz=101,slow=37
YUK Yuzh-Kuril'sk 95.69 46*c i*P P 07 05 10.4 -3.4
YUK *i* 07 09 02.2
YUK *i* S **SKSac** 07 15 46.2 -3.9
YUK pmax pmax
comp=Z,78nm,12.7s
TIXI Tiksi 99.33 17*ce*P **Pdif** 07 05 28.4 -1.2
TIXI pmax pmax
comp=Z,4.0nm,1.3s
TIXI Tiksi 99.33 17 *e*P **Pdif** 07 05 27.6 -2.0
comp=Z,1.1nm,0.8s
RES Resolute Bay 122.80 354 *e*PKPdf **PKPdf** 07 10 42.8 -0.4
LPAZ La Paz 123.05 236 *e*PKPdf **PKPdf** 07 10 45.6 -0.6
LPAZ La Paz 123.05 236 PKP **PKPdf** 07 10 45.7 -0.6
comp=Z,3.7nm,1.0s,baz=48,slow=2.3,SNR=4.5
ILAR Eielson Array 128.80 17 PKP **PKPdf** 07 10 54.1 -0.9
ILAR Eielson Array 128.80 17 PKP **PKPdf** 07 10 54.1 -0.9
comp=Z,2.2nm,1.0s,baz=318,slow=3.0,SNR=14
YKA Yellowknife Ar 136.02 0 PKPpre PKPpre 07 11 00.5
YKA PKP **PKPdf** 07 11 07.5 -1.1
YKA PP **PP** 07 13 43.6 -3.8
YKA Yellowknife Ar 136.02 0 PKhKP PKPpre 07 11 00.4
comp=Z,0.4nm,0.9s,baz=17,slow=3.3,SNR=7.3
YKA PKP **PKPdf** 07 11 07.5 -1.1
comp=Z,1.8nm,0.9s,baz=352,slow=2.3,SNR=16
YKA PP **PP** 07 13 43.6 -3.8
comp=Z,0.5nm,0.9s,baz=354,slow=7.0,SNR=7.9
OTAV Otavalo 140.56 247 *e*PKPdf **PKPdf** 07 11 20.3 +1.2
FFC Flin Flon 142.63 348 *i* PKIKP **PKPdf** 07 11 24.3 +3.3
AAM Ann Arbor 144.89 319 *e*PKIKP **PKPab** 07 11 24.1 -0.3
AAM Ann Arbor 144.89 319 *e*PKPdf **PKPab** 07 11 24.1 -0.3
ULM Lac du Bonnet 145.10 339 PKPbc **PKPbc** 07 11 23.5 -1.3
ULM Lac du Bonnet 145.10 339 PKPbc **PKPbc** 07 11 23.5 -1.3
comp=Z,15nm,0.7s,baz=28,slow=3.6,SNR=36
EYMN Ely 145.29 333 *e*PKPdf **PKPbc** 07 11 24.3 -1.3
ACSO Alum Creek Sta 145.53 316 *e*PKPdf **PKPdf** 07 11 26.4 -0.1
KMSC Kings Mountain 146.54 306 ⇑PKiKP **PKPdf** 07 11 29.6 +1.2
baz=147
JSC Jenkinsville 146.79 305 *e*PKP2 **PKPdf** 07 11 30.1 +1.3
JSC Jenkinsville 146.79 305 *e*PKPbc **PKPdf** 07 11 30.1 +1.3
TZTN Tazewell 147.64 310 *e*PKPbc **PKPdf** 07 11 32.3 +2.1
SPMN St. Paul 147.96 331 ⇓PKiKP **PKPdf** 07 11 32.5 +2.1
baz=148
SFIN Scholer Farm 148.11 319 ⇑PKiKP **PKPdf** 07 11 33.2 +2.4
baz=148
MDND Maddock 148.39 341 ⇑PKiKP **PKPbc** 07 11 34.1 -0.4
baz=148
A24A Westby 148.53 347 ⇓PKiKP **PKPbc** 07 11 35.1 +0.2
baz=148
A23A Redstone 148.68 348 ⇑PKiKP **PKPbc** 07 11 35.5 +0.2
baz=149
WCI Wyandotte Cave 148.77 315 *e*PKP2 **PKPdf** 07 11 34.7 +2.7
WCI Wyandotte Cave 148.77 315 *e*PKPbc **PKPdf** 07 11 34.7 +2.7
CPCT Cooper Cave 148.82 309 *e*PKPbc **PKPdf** 07 11 34.9 +2.7
A22A Carney Farms, 148.84 350 ⇑PKiKP **PKPbc** 07 11 35.7 0.0
baz=149
A21A Bergtoll Ranch 149.00 351 ⇑PKiKP **PKPbc** 07 11 36.0 -0.1
baz=149
DGMT Dagmar 149.01 347 *e*PKPdf **PKPdf** 07 11 32.2 +0.1
DGMT *e*PKPbc **PKPbc** 07 11 36.5 +0.4
DGMT *e*PKPab **PKPab** 07 11 40.9 +0.7
DGMT Dagmar 149.01 347 ⇓PKiKP **PKPbc** 07 11 36.3 +0.2
baz=149
B23A Brockton 149.17 348 ⇑PKiKP **PKPbc** 07 11 36.6 0.0
baz=149
A20A Cobblestone Ra 149.25 352 ⇓PKiKP **PKPbc** 07 11 36.4 -0.3
baz=149
A19A Klindworth Far 149.31 353 ⇑PKiKP **PKPbc** 07 11 36.5 -0.4
baz=149
HDIL Hopedale 149.34 321 *e*PKPbc **PKPbc** 07 11 36.8 -0.4
CMW Cultus Mountai 149.43 10 P **PKPbc** 07 11 37.2 0.0
A18A Metzger Ranch, 149.43 354 ⇓PKiKP **PKPbc** 07 11 36.6 -0.6
baz=149
A17A Triple J Farms 149.48 356 ⇓PKiKP **PKPbc** 07 11 37.0 -0.3
baz=149
WALA Waterton Lakes 149.49 360 *e*PKPbc **PKPbc** 07 11 36.7 -0.7
B22A Reddig Ranch S 149.52 349 ⇓PKiKP **PKPbc** 07 11 37.6 +0.1
baz=150
A16A West Butte Ran 149.53 357 ⇓PKiKP **PKPbc** 07 11 37.3 -0.2
baz=150
A15A Johnson Ranch, 149.55 358 ⇓PKiKP **PKPbc** 07 11 37.4 -0.2
baz=150
TIGA Tifton 149.56 301 ⇑PKiKP **PKPbc** 07 11 38.0 0.0
baz=150
B21A Ellsworth Farm 149.56 351 ⇓PKiKP **PKPbc** 07 11 37.6 +0.1
baz=150
A14A Double T Ranch 149.57 359 ⇑PKiKP **PKPbc** 07 11 37.2 -0.5
baz=150
A12A Yaak River Ran 149.59 2 ⇑PKiKP **PKPbc** 07 11 38.0 +0.4
baz=150
A13A Flathead Natio 149.61 0 ⇓PKiKP **PKPbc** 07 11 37.7 0.0
baz=150
B20A Solberg Farm, 149.70 352 ⇑PKiKP **PKPbc** 07 11 37.6 -0.3
baz=150
B19A Brinkman Farms 149.80 353 ⇑PKiKP **PKPbc** 07 11 37.9 -0.2
baz=150
C23A Lambert 149.84 348 ⇓PKiKP **PKPbc** 07 11 38.5 +0.3
baz=150
B18A Beardsley Farm 149.94 354 ⇓PKiKP **PKPbc** 07 11 38.3 -0.2
baz=150
C24A Savage 149.95 347 ⇑PKiKP **PKPbc** 07 11 38.6 +0.1
baz=150
SWET Sewanee 149.96 309 *e*PKPbc **PKPbc** 07 11 38.0 -1.0
C22A Vida 150.03 349 ⇑PKiKP **PKPbc** 07 11 38.8 +0.1
baz=150
B12A Libby 150.06 2 ⇓PKiKP **PKPbc** 07 11 38.8 +0.1
baz=150
B16A M & M Farms, S 150.07 357 ⇑PKiKP **PKPbc** 07 11 38.5 -0.3
baz=150
NLWA Nelson Lookou 150.07 13 *e*PKPbc **PKPbc** 07 11 38.0 -0.8
B17A L&G Farms, Che 150.13 356 ⇓PKiKP **PKPbc** 07 11 38.8 -0.2
baz=150
C21A Desert Coulee 150.16 350 ⇑PKiKP **PKPbc** 07 11 39.1 0.0
baz=150
B13A Whitefish 150.17 0 ⇓PKiKP **PKPbc** 07 11 39.0 0.0
baz=150
B14A Marquette Ranc 150.18 359 ⇓PKiKP **PKPbc** 07 11 38.9 -0.3
baz=150
NEW Newport 150.18 4 *e*PKPdf **PKPdf** 07 11 33.9 -0.1
NEW *e*PKPbc **PKPbc** 07 11 39.2 +0.1
NEW Newport 150.18 4 ⇑PKiKP **PKPbc** 07 11 39.0 0.0
baz=150
B15A Bradely Ranch, 150.21 358 ⇓PKiKP **PKPbc** 07 11 38.9 -0.2
baz=150
EGMT Eagleton 150.31 354 *e*PKPdf **PKPdf** 07 11 34.4 +0.1
EGMT *e*PKPbc **PKPbc** 07 11 39.1 -0.3
EGMT Eagleton 150.31 354 ⇓PKiKP **PKPbc** 07 11 39.3 -0.1
baz=150
D24A Glendive 150.32 346 ⇑PKiKP **PKPbc** 07 11 39.5 +0.1
baz=150
C20A Veseth Ranch, 150.41 352 ⇑PKiKP **PKPbc** 07 11 39.6 0.0
baz=150
D23A Lindsay 150.45 348 ⇑PKiKP **PKPbc** 07 11 40.0 +0.2
baz=150
C19A Slack Wire Ran 150.52 353 ⇓PKiKP **PKPbc** 07 11 40.2 +0.3
baz=150
BLMT Blacktail Moun 150.54 0 *e*PKPbc **PKPbc** 07 11 40.0 -0.1
SCIA State Center 150.62 327 *e*PKPbc **PKPbc** 07 11 39.7 -0.5
C11A Tepee Creek (N 150.66 3 ⇓PKiKP **PKPbc** 07 11 40.2 0.0
baz=151
D22A Cohagen 150.66 349 ⇓PKiKP **PKPbc** 07 11 40.7 +0.4
baz=151
C16A Fuhringer Banc 150.68 357 ⇑PKiKP **PKPbc** 07 11 40.1 -0.2
baz=151
YBMT Yellow Bay 150.68 360 *e*PKPbc **PKPbc** 07 11 40.2 -0.2
BSMT Bassoo Peak 150.69 1 *e*PKPbc **PKPbc** 07 11 40.2 -0.3
C15A Salmond Ranch, 150.75 358 ⇓PKiKP **PKPbc** 07 11 40.2 -0.3
baz=151
C14A Swan Lake 150.78 359 ⇓PKiKP **PKPbc** 07 11 40.6 +0.1
baz=151
C17A Wharram Farm, 150.78 355 ⇓PKiKP **PKPbc** 07 11 40.4 -0.1
baz=151
JTMT Jette 150.80 0 *e*PKPbc **PKPbc** 07 11 40.6 0.0
ECSD EROS Data Cent 150.81 333 *e*PKPdf **PKPdf** 07 11 34.5 -0.6
ECSD *e*PKPbc **PKPbc** 07 11 39.6 -1.1
C12B Naegeli Ranch, 150.82 2 ⇓PKiKP **PKPbc** 07 11 40.5 -0.1
baz=151
E24A Baker 150.84 346 ⇓PKiKP **PKPbc** 07 11 40.8 +0.1
baz=151
C13A Hot Springs 150.87 1 ⇑PKiKP **PKPbc** 07 11 40.5 -0.2
baz=151
D21A La Casta Ranch 150.88 350 ⇑PKiKP **PKPbc** 07 11 40.6 -0.1
baz=151
WVT Waverly 150.89 312 *e*PKIKP **PKPbc** 07 11 39.6 -1.4
WVT Waverly 150.89 312 *e*PKPbc **PKPbc** 07 11 39.6 -1.4
SIUC Southern Illin 150.99 316 *e*PKPbc **PKPbc** 07 11 41.1 -0.1
D20A Manuel Ranch, 151.03 352 ⇑PKiKP **PKPbc** 07 11 41.2 0.0
baz=151
SWMT Swartz Lake 151.04 360 *e*PKPdf **PKPdf** 07 11 34.9 -0.5
SWMT *e*PKPbc **PKPbc** 07 11 40.7 -0.5
D19A Cripps Ranch, 151.06 353 ⇓PKiKP **PKPbc** 07 11 41.4 +0.2
baz=151
E23A Imay 151.12 347 ⇓PKiKP **PKPbc** 07 11 41.4 +0.1
baz=151
D18A Linhart Farms, 151.13 354 ⇑PKiKP **PKPbc** 07 11 41.7 +0.3
baz=151
BRSD Miller 151.15 337 ⇓PKiKP **PKPbc** 07 11 41.3 -0.1
baz=151
D17A Six Diamond Ra 151.26 355 ⇑PKiKP **PKPbc** 07 11 41.7 0.0
baz=151
SLMT Seeley Lake 151.30 359 *e*PKPdf **PKPdf** 07 11 35.7 -0.2
SLMT *e*PKPbc **PKPbc** 07 11 41.7 -0.2
E22A Miles City 151.30 348 ⇑PKiKP **PKPbc** 07 11 41.6 -0.2
baz=151
E21A Keefer Ranch, 151.41 350 ⇑PKiKP **PKPbc** 07 11 42.1 +0.1
baz=151
D16A Dana Ranch, Ca 151.44 356 ⇓PKiKP **PKPbc** 07 11 42.0 -0.1
baz=151
D13A Huson 151.45 0 ⇑PKiKP **PKPbc** 07 11 41.6 -0.6
baz=151
D14A Greenough 151.46 359 ⇓PKiKP **PKPbc** 07 11 41.7 -0.5
baz=151
D15A Lincoln 151.48 358 ⇑PKiKP **PKPbc** 07 11 42.4 +0.1
baz=151
D12A Red Ives Fores 151.48 2 ⇓PKiKP **PKPbc** 07 11 42.0 -0.2
baz=151
F24A Ekalaka 151.54 346 ⇑PKiKP **PKPbc** 07 11 42.2 -0.2
baz=152
E20A Meyer Farm, Mu 151.61 351 ⇓PKiKP **PKPbc** 07 11 42.7 +0.2
baz=152
CHMT Chamberlain Mo 151.62 359 *e*PKPbc **PKPbc** 07 11 41.1 -1.6
CHMT *e*PKPab **PKPab** 07 11 51.6 +0.4
LRAL Lakeview Retre 151.69 306 *e*PKPbc **PKPbc** 07 11 42.3 -0.6
MSO Missoula 151.72 360 *e*PKPdf **PKPdf** 07 11 36.2 -0.3
MSO *e*PKPbc **PKPbc** 07 11 42.0 -0.7
MSO Missoula 151.72 360 ⇑PKiKP **PKPbc** 07 11 42.7 -0.1
baz=152
E19A Rath Farm, Rou 151.74 352 ⇑PKiKP **PKPbc** 07 11 42.9 +0.1
baz=152
E18A Harlowton 151.77 354 ⇓PKiKP **PKPbc** 07 11 43.0 +0.1
baz=152
E16A East Helena 151.94 356 ⇓PKiKP **PKPbc** 07 11 42.9 -0.4
baz=152
E17A Martinsdale 151.96 355 ⇓PKiKP **PKPbc** 07 11 43.0 -0.4
baz=152
F22A Rosebud 152.00 348 ⇑PKiKP **PKPbc** 07 11 43.1 -0.3
baz=152
G24A Alzada 152.03 345 ⇓PKiKP **PKPbc** 07 11 42.9 -0.6
baz=152
E15A Deer Lodge 152.10 358 ⇓PKiKP **PKPbc** 07 11 43.1 -0.6
baz=152
E13A Vector 152.11 0 ⇓PKiKP **PKPbc** 07 11 43.3 -0.4
baz=152
E14A Clinton 152.13 359 ⇑PKiKP **PKPbc** 07 11 43.5 -0.3
baz=152
F20A Billings 152.30 351 ⇑PKiKP **PKPbc** 07 11 44.0 -0.2
baz=152
F19A Roth Farm, Mol 152.36 352 ⇓PKiKP **PKPbc** 07 11 44.1 -0.1
baz=152
G23A Biddle 152.37 347 ⇑PKiKP **PKPbc** 07 11 43.8 -0.5
baz=152
F18A Big Timber 152.40 353 ⇑PKiKP **PKPbc** 07 11 44.6 +0.3
baz=152
F17A Fitzpatrick Pl 152.49 355 ⇓PKiKP **PKPbc** 07 11 44.7 0.0
baz=152
GCMT Greycliff 152.51 353 *e*PKPdf **PKPdf** 07 11 38.3 +0.6
GCMT *e*PKPbc **PKPbc** 07 11 45.4 +0.7
GCMT *e*PKPab **PKPab** 07 11 54.5 -0.4
G22A Birney 152.54 348 ⇑PKiKP **PKPbc** 07 11 44.3 -0.4
baz=152
H24A Dirks Ranch, A 152.60 345 ⇓PKiKP **PKPbc** 07 11 44.4 -0.5
baz=152
F15A Butte 152.67 358 ⇑PKiKP **PKPbc** 07 11 44.7 -0.4
baz=153
F16A Kennard Place, 152.69 356 ⇑PKPab **PKPab** 07 11 54.9 -0.6
baz=153
LRM Limekiln Ridge 152.69 357 *e*PKPbc **PKPbc** 07 11 44.4 -0.8
LRM *e*PKPab **PKPab** 07 11 55.5 -0.2
G21A Lodge Grass 152.71 349 ⇓PKPab **PKPab** 07 11 55.4 -0.3
baz=153
F14A Wisdom 152.73 359 ⇑PKiKP **PKPbc** 07 11 44.9 -0.3
baz=153
F13A Darby 152.76 0 ⇓PKiKP **PKPbc** 07 11 44.9 -0.3
baz=153
F12A Elk City 152.78 2 ⇑PKiKP **PKPbc** 07 11 44.8 -0.4
baz=153
BOZ Bozeman (W) 152.82 356 *e*PKIKP **PKPdf** 07 11 38.8 +0.6
BOZ *e* 07 11 44.5
BOZ Bozeman (W) 152.82 356 *e*PKPdf **PKPdf** 07 11 38.8 +0.6
BOZ *e*PKPbc **PKPbc** 07 11 44.5 -0.9
BOZ *e*PKPab **PKPab** 07 11 55.6 -0.6
BOZ Bozeman (W) 152.82 356 ⇓PKiKP **PKPbc** 07 11 45.1 -0.2
baz=153
G20A Bridger 152.88 351 ⇑PKiKP **PKPbc** 07 11 45.2 -0.2
baz=153
RSSD Black Hills 153.06 344 *e*PKIKP **PKPdf** 07 11 39.0 +0.3
RSSD *e* 07 11 45.4
RSSD Black Hills 153.06 344 *e*PKPdf **PKPdf** 07 11 39.0 +0.3
RSSD *e*PKPbc **PKPbc** 07 11 45.4 -0.6
G17A Pierce Place, 153.08 355 ⇑PKiKP **PKPbc** 07 11 46.0 +0.1
baz=153
RLMT Red Lodge 153.12 352 *e*PKPbc **PKPbc** 07 11 46.3 +0.2
RLMT Red Lodge 153.12 352 ⇑PKiKP **PKPbc** 07 11 46.3 +0.2
baz=153
H22A Clearmont 153.15 348 ⇓PKiKP **PKPbc** 07 11 46.1 0.0
baz=153
DLMT Dillon 153.16 358 *e*PKPdf **PKPdf** 07 11 39.4 +0.7
DLMT *e*PKPbc **PKPbc** 07 11 46.0 -0.1
G16A Moss Hill, Enn 153.25 356 ⇓PKiKP **PKPbc** 07 11 46.1 -0.2
baz=153
G14A Jackson 153.30 359 ⇓PKiKP **PKPbc** 07 11 46.1 -0.5
baz=153
G15A Dillon 153.35 357 ⇑PKiKP **PKPbc** 07 11 46.6 0.0
baz=153
I24A Kuemmerle Ranc 153.45 344 ⇓PKiKP **PKPbc** 07 11 46.6 -0.1
baz=153
G13A Cobalt 153.46 0 ⇑PKiKP **PKPbc** 07 11 46.7 -0.1
baz=153
H19A Powell 153.53 352 ⇓PKPab **PKPab** 07 11 58.6 -0.6
baz=154
H20A Greybull 153.56 350 ⇓PKPab **PKPab** 07 11 59.2 -0.1
baz=154
H18A Shoshone NF, C 153.61 353 ⇓PKiKP **PKPbc** 07 11 47.2 -0.1
baz=154
MCMT McKenzie Canyo 153.70 358 *e*PKPdf **PKPdf** 07 11 39.3 -0.4
MCMT *e*PKPbc **PKPbc** 07 11 47.8 +0.3
MCMT *e*PKPab **PKPab** 07 12 00.7 +0.7
H16A Russell Place, 153.73 355 ⇑PKiKP **PKPbc** 07 11 47.9 +0.4
baz=154
LKWY Lake 153.80 354 *e*PKIKP **PKPdf** 07 11 41.2 +1.4
LKWY *e* 07 11 49.7
LKWY Lake 153.80 354 *e*PKPdf **PKPdf** 07 11 41.2 +1.4
LKWY *e*PKPbc **PKiKP** 07 11 49.7 +2.0
LKWY *e*PKPab **PKPab** 07 12 00.6 +0.2
I22A 9 Mile Ranch, 153.85 347 ⇑PKiKP **PKPbc** 07 11 47.4 -0.3
baz=154
H15A Lima 153.90 358 ⇓PKiKP **PKPbc** 07 11 48.1 +0.3
baz=154
H14A Leadore 153.92 359 ⇓PKiKP **PKPbc** 07 11 48.1 +0.2
baz=154
J24A Dixon Ranch, L 153.96 344 ⇓PKiKP **PKPbc** 07 11 47.6 -0.3
baz=154
H17A Grant Village 153.98 354 ⇑PKPab **PKPab** 07 12 01.4 +0.2
baz=154
H13A Challis 153.98 0 ⇑PKiKP **PKPbc** 07 11 47.8 -0.2
baz=154
I21A Big Trails, Te 154.09 349 ⇑PKiKP **PKPbc** 07 11 47.5 -0.7
baz=154
I20A Worland 154.10 350 ⇑PKiKP **PKPbc** 07 11 47.9 -0.2
baz=154
I19A Meeteetse 154.15 351 ⇑PKPab **PKPab** 07 12 02.2 +0.3
baz=154
I17A Pilgrim Ck. 154.45 354 ⇑PKiKP **PKPbc** 07 11 49.5 +0.4
baz=154
IMW Indian Meadow 154.51 355 *e*PKPab **PKPab** 07 12 04.5 +0.9
I15A Monteview 154.51 357 ⇑PKPab **PKPab** 07 12 03.4 0.0
baz=154
K24A Anderson Ranch 154.57 344 ⇓PKPab **PKPab** 07 12 02.6 -1.0
baz=154
J21A Lysite 154.57 349 ⇓PKPab **PKPab** 07 12 02.8 -0.9
baz=154
I16A Newdale 154.57 356 ⇑PKPab **PKPab** 07 12 02.5 -1.2
baz=154
I18A Diamond G Ranc 154.59 353 ⇑PKPab **PKPab** 07 12 04.0 +0.1
baz=154
I14A Mackay 154.61 359 ⇑PKPab **PKPab** 07 12 03.6 -0.3
baz=154
I13A Wildhorse Cree 154.63 360 ⇑PKPab **PKPab** 07 12 03.6 -0.4
baz=155
I12A Atlanta 154.74 2 ⇑PKPab **PKPab** 07 12 04.0 -0.4
baz=155
J19A Crowheart 154.91 351 ⇑PKPab **PKPab** 07 12 05.0 -0.1
baz=155
HLID Hailey 154.99 0 ⇑PKPab **PKPab** 07 12 05.1 -0.3
baz=155
J17A Brown Place, J 155.02 354 ⇑PKPab **PKPab** 07 12 05.4 -0.2
baz=155
K22A Casper 155.05 347 ⇑PKPab **PKPab** 07 12 05.4 -0.3
baz=155
MFID Camas Ranch 155.09 3 *e*PKPdf **PKPdf** 07 11 41.7 +0.3
MFID Camas Ranch 155.09 3 ⇓PKPab **PKPab** 07 12 05.6 -0.2
baz=155
J18A Kendall Valley 155.09 353 ⇑PKPab **PKPab** 07 12 05.9 -0.1
baz=155
J15A Blackfoot 155.11 357 ⇓PKPab **PKPab** 07 12 06.0 +0.1
baz=155
J13A Cove Ranch, Pi 155.15 0 ⇓PKPab **PKPab** 07 12 05.8 -0.3
baz=155
J14A Carey 155.22 359 ⇑PKPab **PKPab** 07 12 06.5 +0.1
baz=155
K19A Absolon Red Bu 155.31 351 ⇑PKPab **PKPab** 07 12 06.2 -0.7
baz=155
L23A Garrett 155.36 345 ⇓PKPab **PKPab** 07 12 06.4 -0.8
baz=155
K20A Yellowstone Ra 155.39 350 ⇓PKPab **PKPab** 07 12 06.4 -0.8
baz=155
PDAR Pinedale Array 155.47 352 PKP **PKPdf** 07 11 41.2 -0.9
PDAR PKPbc PKPab 07 11 50.6 -17
PDAR Pinedale Array 155.47 352 PKP **PKPdf** 07 11 41.2 -0.9
comp=Z,1.5nm,1.0s,baz=0.0,slow=0.7,SNR=8.4
PDAR PKPbc PKPab 07 11 50.6 -17
comp=Z,1.7nm,1.0s,baz=55,slow=1.4,SNR=7.1
N27A Anderson Farm, 155.61 338 ⇑PKPab **PKPab** 07 12 07.9 -0.2
baz=156
L22A Ellis Ranch, M 155.62 346 ⇓PKPab **PKPab** 07 12 07.9 -0.4
baz=156
K16A Soda Springs 155.62 355 ⇓PKPab **PKPab** 07 12 07.7 -0.5
baz=156
K17A Gardner Place, 155.65 354 ⇓PKPab **PKPab** 07 12 08.1 -0.2
baz=156
K18A Toltan Ranch, 155.66 353 ⇓PKPab **PKPab** 07 12 08.3 -0.1
baz=156
M24A Cheyenne 155.74 343 ⇑PKPab **PKPab** 07 12 08.5 -0.2
baz=156
K15A Arbon 155.82 357 ⇓PKPab **PKPab** 07 12 08.5 -0.5
baz=156
L21A Rawlins 155.88 348 ⇑PKPab **PKPab** 07 12 09.0 -0.4
baz=156
K14A Jones Ranch, D 155.99 358 ⇓PKPab **PKPab** 07 12 09.3 -0.4
baz=156
L20A Wamsutter 156.03 349 ⇑PKPab **PKPab** 07 12 09.5 -0.5
baz=156
PHWY Pilot Hill 156.06 344 *e*PKPab **PKPab** 07 12 10.3 0.0
L19A Farson 156.10 351 ⇑PKPab **PKPab** 07 12 09.4 -0.8
baz=156
M21A Separation Pea 156.23 347 ⇑PKPab **PKPab** 07 12 10.0 -0.9
baz=156
TUL1 Tulsa 156.24 321 ⇑PKPab **PKPab** 07 12 10.6 -0.3
baz=156
M22A Cedar Creek Ra 156.25 346 ⇓PKPab **PKPab** 07 12 10.4 -0.7
baz=156
L17A Cokeville 156.28 354 ⇑PKPab **PKPab** 07 12 10.5 -0.6
baz=156
N24A Carr 156.34 342 ⇓PKPab **PKPab** 07 12 10.7 -0.6
baz=156
L18A Fontenelle, Gr 156.36 352 ⇓PKPab **PKPab** 07 12 10.8 -0.6
baz=156

O26A	Horse Wrangler baz=156	156.38	339	⇑PKPab	PKPab	07	12	11.0 -0.5
L16A	Fish Haven baz=156	156.42	355	⇑PKPab	PKPab	07	12	11.2 -0.4
L15A	Malad City baz=156	156.50	357	⇓PKPab	PKPab	07	12	11.4 -0.5
M20A	Sweetwater, Wa baz=156	156.50	349	⇓PKPab	PKPab	07	12	11.9 -0.2
L14A	Malta baz=156	156.50	358	⇓PKPab	PKPab	07	12	11.9 0.0
N23A	Red Feather La baz=156	156.57	344	⇓PKPab	PKPab	07	12	12.0 -0.4
O25A	Wiggins baz=157	156.77	340	⇑PKPab	PKPab	07	12	12.9 -0.2
N22A	Wattenberg Ran baz=157	156.79	345	⇑PKPab	PKPab	07	12	13.3 -0.1
HWUT	Hardware Ranch	156.84	355	ePKPdf	PKPdf	07	11	43.2 -0.8
HWUT				ePKPab	PKPab	07	12	13.6 +0.1
M18A	Lyman baz=157	156.86	352	⇑PKPab	PKPab	07	12	13.3 -0.2
M17A	Scullys Gap (B baz=157	156.88	353	⇑PKPab	PKPab	07	12	13.6 -0.1
P26A	Davis Ranch, A baz=157	157.00	338	⇓PKPab	PKPab	07	12	14.1 -0.1
O24A	Longmont baz=157	157.05	342	⇓PKPab	PKPab	07	12	14.2 -0.1
N21A	Black Mountain baz=157	157.07	347	⇑PKPab	PKPab	07	12	14.2 -0.3
N20A	Spence Gulch, baz=157	157.15	348	⇓PKPab	PKPab	07	12	14.2 -0.6
O23A	Lake Granby, G baz=157	157.21	344	⇓PKPab	PKPab	07	12	14.5 -0.7
KSCO	Kaye Shedlock' baz=157	157.22	336	⇓PKPab	PKPab	07	12	15.3 +0.2
N18A	Larsen Ranch, baz=157	157.25	351	⇓PKPab	PKPab	07	12	14.5 -0.7
O22A	Kremmling baz=157	157.41	345	⇓PKPab	PKPab	07	12	15.8 -0.4
N17A	Moffit Pass baz=157	157.43	353	⇑PKPab	PKPab	07	12	15.6 -0.5
ISCO	Idaho Springs baz=158	157.51	343	⇓PKPab	PKPab	07	12	16.1 -0.4
O20A	White River Ci baz=158	157.82	348	⇓PKPab	PKPab	07	12	17.2 -0.5
O19A	Miners Draw (B baz=158	157.82	350	⇓PKPab	PKPab	07	12	17.3 -0.4
R27A	Eads baz=158	157.92	336	⇓PKPdf	PKPdf	07	11	45.3 +0.1
P23A	Jefferson baz=158	157.97	343	⇑PKPab	PKPab	07	12	18.3 -0.3
O18A	Roosevelt baz=158	157.99	352	⇓PKPab	PKPab	07	12	18.2 -0.2
DAU	Daniels Canyon	157.99	354	ePKP2	PKPab	07	12	19.4 +0.8
DAU	Daniels Canyon	157.99	354	ePKPab	PKPab	07	12	19.4 +0.8
P22A	Eagle baz=158	158.00	345	⇑PKPab	PKPab	07	12	18.3 -0.3
Q24A	Divide baz=158	158.14	341	⇑PKPab	PKPab	07	12	19.0 -0.3
O17A	Robinson Place baz=158	158.15	353	⇑PKPab	PKPab	07	12	19.0 -0.2
R26A	Arlington baz=158	158.15	337	⇓PKPab	PKPab	07	12	19.0 -0.1
P21A	Newcastle baz=158	158.24	346	⇑PKPab	PKPab	07	12	19.6 0.0
DUG	Dugway baz=158	158.32	357	⇓PKPab	PKPab	07	12	19.8 0.0
P19A	Cripple Cowboy baz=158	158.45	349	⇑PKPab	PKPab	07	12	20.0 -0.4
T28A	Walsh baz=159	158.63	333	⇑PKPab	PKPab	07	12	21.4 +0.2
P18A	Preston Nutter baz=159	158.65	352	⇓PKPab	PKPab	07	12	21.4 -0.1
Q22A	Crested Butte, baz=159	158.73	344	⇑PKPab	PKPab	07	12	21.6 -0.2
S26A	Kim baz=159	158.76	336	⇑PKPdf	PKPdf	07	11	45.6 -0.7
Q21A	Lamborn Mesa, baz=159	158.92	346	⇓PKPab	PKPab	07	12	22.6 0.0
T27A	Campo baz=159	158.94	334	⇑PKPab	PKPab	07	12	21.8 -0.8
Q20A	Ridgley Place, baz=159	158.97	347	⇑PKPab	PKPab	07	12	21.8 -0.9
R23A	Moffat baz=159	159.06	341	⇑PKPab	PKPab	07	12	22.5 -0.8
W31A	Holland Ranch, baz=159	159.13	326	⇑PKPab	PKPab	07	12	23.9 +0.5
Q19A	Hogan Spring (baz=159	159.16	349	⇓PKPab	PKPab	07	12	24.1 +0.7
SRU	San Rafael baz=159	159.20	352	⇓PKPab	PKPab	07	12	23.8 +0.1
R22A	Saguache, Gunn baz=159	159.29	343	⇓PKPab	PKPab	07	12	24.1 -0.2
R21A	Cimarron baz=159	159.36	345	⇑PKPab	PKPab	07	12	24.5 0.0
S24A	Houchin Ranch, baz=159	159.37	340	⇓PKPab	PKPab	07	12	24.0 -0.7
Q16A	Castle Valley baz=159	159.47	353	⇑PKPab	PKPab	07	12	25.0 +0.1
T25A	Trinidad baz=160	159.54	337	⇓PKPdf	PKPdf	07	11	46.7 -0.7
Y32A	R-V Farms, Ver baz=160	159.72	323	⇑PKPab	PKPab	07	12	26.1 +0.1
R20A	Redvale baz=160	159.72	347	⇑PKPab	PKPab	07	12	25.7 -0.4
S22A	4UR Ranch, Cre baz=160	159.76	343	⇑PKPab	PKPab	07	12	26.3 -0.1
NVAR	Mina Array Bea	159.78	10	PKP	PKPdf	07	11	48.4 +0.8
NVAR				PKPab	PKPab	07	12	26.4 +0.1
NVAR				PP	PP	07	16	09.1 +2.3
NVAR	Mina Array Bea comp=Z,1.8nm,1.1s,baz=292,slow=0.9,SNR=7.7	159.78	10	PKP	PKPdf	07	11	48.4 +0.8
NVAR				PKPab	PKPab	07	12	26.4 +0.1
NVAR	comp=Z,3.5nm,0.9s,baz=336,slow=3.2,SNR=18			PP	PP	07	16	09.1 +2.3
WHTX	comp=Z,0.9nm,1.0s,baz=332,slow=4.4,SNR=4.4 Lake Whitney baz=160	159.82	315	⇑PKPab	PKPab	07	12	25.5 -1.0
T24A	Torres, Weston baz=160	159.82	339	⇑PKPab	PKPab	07	12	25.6 -1.0
U26A	Atchley Ranch, baz=160	159.93	335	⇓PKPab	PKPab	07	12	26.3 -0.7
MSU	Marysvale	159.96	356	ePKIKP	PKPdf	07	11	48.8 +1.0
MSU	Marysvale	159.96	356	ePKPdf	PKPdf	07	11	48.8 +1.0
MSU				ePKPab	PKPab	07	12	28.2 +1.2
S20A	Disappointment baz=160	160.06	347	⇑PKPab	PKPab	07	12	27.5 0.0
S21A	Coal Bank Pass baz=160	160.09	345	⇓PKPab	PKPab	07	12	27.4 -0.4
R11A	Troy Canyon, C baz=160	160.15	3	⇓PKPab	PKPab	07	12	27.2 -0.6
T23A	Casias Ranch, baz=160	160.19	341	⇓PKPab	PKPab	07	12	27.9 -0.3
X30A	Coker Ranch, T baz=160	160.19	326	⇑PKPab	PKPab	07	12	27.7 -0.3
U25A	Circle Dot Ran baz=160	160.19	336	⇓PKPab	PKPab	07	12	27.2 -1.0
Z32A	Haskell baz=160	160.24	321	⇑PKPab	PKPab	07	12	28.5 +0.3
T22A	Edith baz=160	160.47	342	⇑PKPab	PKPab	07	12	28.7 -0.6
V26A	Tequesquite Ra baz=160	160.47	334	⇑PKPab	PKPab	07	12	28.6 -0.7
Z31A	Sharp Cattle R baz=161	160.62	322	⇑PKPab	PKPab	07	12	30.4 +0.5
T21A	Navajo Lake baz=161	160.66	344	⇑PKPab	PKPab	07	12	30.2 +0.1
V25A	Rancho No Teng baz=161	160.76	336	⇓PKPdf	PKPdf	07	11	47.9 -0.8
ABTX	Abilene, Hawle baz=161	160.81	320	⇑PKPab	PKPab	07	12	30.8 0.0
U23A	El Rito baz=161	160.88	340	⇑PKPab	PKPab	07	12	31.6 +0.4
U22A	Llaves baz=161	161.04	342	⇑PKPab	PKPab	07	12	32.2 +0.3
Y29A	Porterfield Fa baz=161	161.06	326	⇑PKPab	PKPab	07	12	31.6 -0.2
V24A	Rampart Ranch, baz=161	161.11	337	⇑PKPdf	PKPdf	07	11	48.3 -0.9
U21A	Nageezi baz=161	161.22	344	⇑PKPab	PKPab	07	12	32.5 -0.1
W25A	X Bar L Ranch, baz=161	161.24	335	⇑PKPab	PKPab	07	12	32.0 -0.7
232A	Coleman baz=161	161.31	318	⇑PKPab	PKPab	07	12	33.1 0.0
Y28A	McKinney Farm, baz=161	161.32	328	⇑PKPab	PKPab	07	12	32.7 -0.4
GRAC	Grapevine Rang baz=161	161.32	8	⇑PKPab	PKPab	07	12	32.6 -0.2
V23A	Ortiz Mt. (NFS baz=161	161.41	339	⇓PKPdf	PKPdf	07	11	49.7 +0.3
V22A	San Miguel Ran baz=161	161.49	341	⇓PKPab	PKPab	07	12	33.9 +0.1
W24A	Lazy 6 Ranch, baz=162	161.62	337	⇑PKPdf	PKPdf	07	11	50.0 +0.3
231A	Bronte baz=162	161.70	320	⇑PKPab	PKPab	07	12	35.1 +0.4
332A	Millersview baz=162	161.71	317	⇓PKPab	PKPab	07	12	35.3 +0.5
Y27A	Causey baz=162	161.79	330	⇓PKPab	PKPab	07	12	35.0 -0.1
Z28A	Tucker Farm, M baz=162	161.88	327	⇑PKPab	PKPab	07	12	34.9 -0.6
FURC	Furnace Creek, baz=162	161.91	7	⇓PKPab	PKPab	07	12	36.0 +0.7
X25A	Clemmons Ranch baz=162	161.92	334	⇑PKPab	PKPab	07	12	35.5 -0.2
V20A	Brimhall baz=162	162.03	345	⇓PKPab	PKPab	07	12	36.0 -0.2
U15A	North Rim baz=162	162.04	355	⇑PKPab	PKPab	07	12	36.1 -0.1
432A	Menard baz=162	162.07	316	⇓PKPab	PKPab	07	12	36.3 -0.2
VES	Vestal, Richgr baz=162	162.15	13	⇓PKPdf	PKPdf	07	11	50.1 +0.2
331A	San Angelo baz=162	162.19	318	⇑PKPab	PKPab	07	12	37.3 +0.4
230A	Sterling City baz=162	162.21	321	⇓PKPab	PKPab	07	12	37.1 +0.1
MPMC	Manual Prospec baz=162	162.23	9	⇑PKPab	PKPab	07	12	36.7 -0.3
Z27A	Tatum baz=162	162.27	329	⇓PKPab	PKPab	07	12	37.2 -0.1
JCT	Junction City	162.33	315	ePKIKP	PKPdf	07	11	50.1 -0.3
JCT	Junction City	162.33	315	ePKPdf	PKPdf	07	11	50.1 -0.3
JCT	Junction City baz=162	162.33	315	⇓PKPdf	PKPdf	07	11	50.0 -0.3
128A	Castleberry Fa baz=162	162.44	326	⇓PKPab	PKPab	07	12	37.9 -0.1
W21A	San Fidel baz=162	162.45	342	⇓PKPab	PKPab	07	12	37.9 -0.2
Y25A	Mesa, Roswell baz=162	162.45	333	⇓PKPab	PKPab	07	12	37.5 -0.5
X23A	Hourglass Bar baz=162	162.47	338	⇑PKPdf	PKPdf	07	11	50.5 -0.1
SHOC	Shoshone baz=162	162.53	6	⇓PKPab	PKPab	07	12	38.3 +0.2
229A	Bryant Ranch, baz=163	162.56	323	⇓PKPab	PKPab	07	12	38.6 +0.1
330A	Mertzon baz=163	162.59	320	⇓PKPab	PKPab	07	12	38.6 0.0
532A	Rocksprings baz=163	162.62	315	⇓PKPab	PKPab	07	12	39.2 +0.4
W20A	Ramah baz=163	162.67	344	⇑PKPab	PKPab	07	12	39.0 0.0
Z26A	Caprock baz=163	162.68	330	⇓PKPab	PKPab	07	12	38.9 -0.1
431A	Sonora baz=163	162.73	317	⇓PKPab	PKPab	07	12	38.8 -0.5
Y24A	Capitan baz=163	162.76	335	⇓PKPdf	PKPdf	07	11	50.8 -0.1
LRMC	Laurel Mountai baz=163	162.77	10	⇓PKPdf	PKPdf	07	11	50.7 0.0
X22A	Bernardo baz=163	162.82	340	⇑PKPab	PKPab	07	12	39.7 +0.1
WUAZ	Wupatki baz=163	162.85	352	⇑PKPab	PKPab	07	12	40.3 +0.6
127A	Arkansas Junct baz=163	162.86	328	⇑PKPdf	PKPdf	07	11	50.9 0.0
PKM	Peak Mountain baz=163	162.88	16	⇓PKPab	PKPab	07	12	40.3 +0.5
228A	UT Block 9, Go baz=163	162.89	325	⇓PKPab	PKPab	07	12	39.8 -0.1
632A	Uvalde baz=163	162.92	313	⇑PKPab	PKPab	07	12	40.1 -0.1
Y23A	Lovelace Mesa, baz=163	163.00	336	⇑PKPab	PKPab	07	12	40.3 -0.2
Z25A	Roswell baz=163	163.01	332	⇑PKPab	PKPab	07	12	40.1 -0.3
329A	Wagon Wheel Ra baz=163	163.01	322	⇓PKPab	PKPab	07	12	40.1 -0.4
531A	Rocksprings baz=163	163.03	316	⇓PKPab	PKPab	07	12	40.5 -0.1
TUQ	Turquoise Moun baz=163	163.03	5	⇓PKPab	PKPab	07	12	40.3 -0.1
430A	Baggett Ranch, baz=163	163.06	319	⇓PKPab	PKPab	07	12	41.5 +0.7
GSC	Goldstone baz=163	163.07	8	⇓PKPab	PKPab	07	12	40.7 +0.1
X21A	Alamocita Cree baz=163	163.12	342	⇓PKPab	PKPab	07	12	41.5 +0.5
126A	Clayton Basin, baz=163	163.21	329	⇑PKPdf	PKPdf	07	11	51.0 -0.2
X20A	Quemado baz=163	163.23	344	⇓PKPab	PKPab	07	12	42.0 +0.5
Z24A	Sheeppen Canyo baz=163	163.25	334	⇑PKPdf	PKPdf	07	11	51.4 +0.1
EDW2	Edwards Air Fo baz=163	163.30	11	⇑PKPab	PKPab	07	12	40.9 -0.6
Y22A	Socorro baz=163	163.32	339	⇓PKPab	PKPab	07	12	42.1 +0.2
Y21A	Point of Rocks baz=163	163.49	341	⇓PKPab	PKPab	07	12	43.1 +0.5
125A	Gardner Draw, baz=164	163.50	331	⇑PKPab	PKPab	07	12	42.4 -0.2
732A	Laxson Ranch, baz=164	163.50	311	⇓PKPab	PKPab	07	12	42.7 0.0
631A	Perdido Creek baz=164	163.52	314	⇓PKPab	PKPab	07	12	42.1 -0.6
530A	J-C Ranch, Com baz=164	163.55	317	⇓PKPdf	PKPdf	07	11	51.2 -0.3
328A	Wristen Ranch, baz=164	163.57	324	⇑PKPab	PKPab	07	12	42.7 -0.2
429A	Davenport Ranc baz=164	163.58	320	⇓PKPab	PKPab	07	12	42.4 -0.7
X18A	Snowflake baz=164	163.58	348	⇑PKPab	PKPab	07	12	43.0 +0.1
HEC	Hector,Ludlow baz=164	163.59	6	⇑PKPab	PKPab	07	12	42.8 0.0
GMRC	Granite Mounta baz=164	163.70	4	⇓PKPab	PKPab	07	12	43.3 -0.1
226B	Tecolote Peak, baz=164	163.74	328	⇑PKPab	PKPab	07	12	43.0 -0.6
Y20A	Horse Springs, baz=164	163.79	343	⇑PKPab	PKPab	07	12	44.2 +0.2
124A	Stringfield Ra baz=164	163.83	333	⇓PKPdf	PKPdf	07	11	51.8 -0.2
Z22A	Elephant Butte baz=164	163.94	338	⇓PKPdf	PKPdf	07	11	52.3 +0.3
X16A	Lo Mia Camp, P baz=164	163.94	352	⇑PKPab	PKPab	07	12	44.1 -0.4
428A	Kincaid Ranch, baz=164	163.98	322	⇑PKPdf	PKPdf	07	11	52.2 +0.2
225A	Deer Hill, Car baz=164	164.04	330	⇓PKPdf	PKPdf	07	11	51.8 -0.3
529A	Stev Forest Ra baz=164	164.13	319	⇓PKPab	PKPab	07	12	45.8 +0.4
Z21A	St. Cloud Mine baz=164	164.13	340	⇓PKPab	PKPab	07	12	46.5 +1.1
PDMCI	Parker Dam,Lak baz=164	164.24	0	⇓PKPab	PKPab	07	12	45.5 -0.1
326A	Caldwell Ranch baz=164	164.25	326	⇓PKPab	PKPab	07	12	46.5 +0.5
427A	Hayter Ranch, baz=164	164.30	324	⇑PKPdf	PKPdf	07	11	51.9 -0.4
IRM	Iron Mountain baz=164	164.35	3	⇓PKPdf	PKPdf	07	11	52.3 +0.1
224A	Cornudas Mount baz=164	164.39	332	⇑PKPdf	PKPdf	07	11	53.1 +0.7
528A	Cox Ranch, San baz=164	164.45	321	⇑PKPdf	PKPdf	07	11	52.6 +0.1
Z20A	Nine Sixteen R baz=165	164.60	342	⇑PKPab	PKPab	07	12	48.2 +0.8
MNTX	Cornudas Mount baz=165	164.64	331	⇓PKPdf	PKPdf	07	11	52.4 -0.1
325A	Bean Ranch, Si baz=165	164.72	329	⇑PKPdf	PKPdf	07	11	52.6 -0.1
Y12C	Blythe baz=165	164.78	1	⇑PKPdf	PKPdf	07	11	52.6 +0.2
426A	McDonald Obser baz=165	164.78	325	⇓PKPab	PKPab	07	12	47.9 -0.6
121A	Cookes Peak, D baz=165	164.88	339	⇓PKPab	PKPab	07	12	48.9 +0.1
324A	Moseley Ranch, baz=165	164.90	330	⇑PKPab	PKPab	07	12	48.0 -0.9
628A	Black Gap, Mar baz=165	164.99	319	⇓PKPab	PKPab	07	12	49.6 +0.3
120A	U Bar Ranch, L baz=165	165.14	342	⇑PKPab	PKPab	07	12	50.2 +0.4
425A	Indio Mountain baz=165	165.20	328	⇓PKPdf	PKPdf	07	11	52.7 -0.4
526A	Mary Lane Ranc baz=165	165.28	323	⇓PKPab	PKPab	07	12	50.4 -0.3
627A	Terlingua Ranc baz=165	165.32	320	⇓PKPab	PKPab	07	12	50.6 -0.2
MONP	Monument Peak baz=165	165.50	8	⇓PKPab	PKPab	07	12	51.0 -0.4
SWSC	Sam W. Stewart baz=165	165.51	6	⇑PKPab	PKPab	07	12	51.8 +0.6
TXAR	Lajitas Array	165.57	320	PKP	PKPdf	07	11	53.5 +0.1
TXAR				PKPab	PKPab	07	12	52.0 +0.1
TXAR	Lajitas Array comp=Z,2.0nm,1.1s,baz=103,slow=1.7,SNR=8.1	165.57	320	PKP	PKPdf	07	11	53.5 +0.1
TXAR				PKPab	PKPab	07	12	52.0 +0.1
626A	comp=Z,4.3nm,1.0s,baz=77,slow=4.3,SNR=19 Big Bend Ranch baz=166	165.69	322	⇓PKPdf	PKPdf	07	11	53.3 -0.2
220A	Playas Peak, P baz=166	165.70	340	⇓PKPdf	PKPdf	07	11	52.9 -0.6
320A	Kipp Ranch, An baz=166	166.22	339	⇑PKPab	PKPab	07	12	55.0 +0.4
319A	Douglas baz=166	166.42	342	⇑PKPdf	PKPdf	07	11	54.1 0.0

ISCJB ***10*** *07:00:23.7±0.4, 37°.59N±0'.02×2°.60W±0'.02, h0km±2km, Error ellipse: s-maj=3.4km s-min=2.1km az=158.6*
CSEM ***10*** *07:00:24.3±0.1, 37°.46N×2°.50W, h2km, ML3.5/39, Error ellipse: s-maj=2.9km s-min=1.8km az=154.0*
MDD ***10*** *07:00:24.9±0.2, 37°.42N×2°.45W, h0km, mbLg2.9/45, Error ellipse: s-maj=2.5km s-min=2.0km az=136.0, PRXIMO*
MDD EMS: III INTENSIDAD MAXIMA.
IGIL ***10*** *07:00:25.1, 37°.41N×2°.46W, h0km, ML2.8*
INMG ***10*** *07:00:25.0±1.7, 37°.41N×2°.45W, h2km±3km, ML3.0, Error ellipse: s-maj=2.2km s-min=2.0km az=121.0*
SFS ***10*** *07:00:25.0, 37°.41N×2°.45W, h0km, ML2.9*
LDG ***10*** *07:00:25.2±0.2, 37°.39N×2°.45W, h2km, Ml3.4/4, Error ellipse: s-maj=4.3km s-min=2.7km az=141.0*

ISC 10 07:00:23.6±1.1, **37°.44N**±0'.02×**2°.46W**±0'.02, **h7**km±9km, **n160**, σ1**s35**/281, **5C-4D, Spain**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
EHUE	**Huescar** 5.5nm,0.1s,SNR=18	**0.39**	**344**	⇓Pg	**Pg**	**07 00 31.8**	**+0.5**
EHUE	507nm,0.3s,SNR=7.9			Lg	Lg	07 00 38.3	
EHUE	**Huescar** 5.5nm,0.1s,SNR=18	**0.39**	**344**	Pg	**Pg**	**07 00 31.8**	**+0.5**
EHUE	507nm,0.3s,SNR=7.9			Lg	Lg	07 00 38.3	
ENIJ	**Nijar** 192nm,0.2s,SNR=18	**0.51**	**157**	⇓Pg	**Pg**	**07 00 34.0**	**+0.6**
ENIJ	492nm,0.2s,SNR=7.9			Lg	Lg	07 00 39.8	
ENIJ	**Nijar** 192nm,0.2s,SNR=18	**0.51**	**157**	Pg	**Pg**	**07 00 34.0**	**+0.6**
ENIJ	492nm,0.2s,SNR=7.9			Lg	Lg	07 00 39.8	
EQES	**Quesada** 3.6nm,0.2s,SNR=34	**0.61**	**307**	Pg	**Pb**	**07 00 37.0**	**+0.4**
EQES	72nm,0.2s,SNR=24			Lg	Lg	07 00 43.7	
EQES	**Quesada** 3.6nm,0.2s,SNR=34	**0.61**	**307**	Pg	**Pb**	**07 00 37.0**	**+0.4**
EQES	72nm,0.2s,SNR=24			Lg	Lg	07 00 43.7	
EBER	**Berja** 396nm,0.2s,SNR=18	**0.64**	**213**	⇑Pg	**Pg**	**07 00 36.4**	**+0.4**
EBER	1μm,0.6s,SNR=11			Lg	Lg	07 00 45.0	
EBER	**Berja** 396nm,0.2s,SNR=18	**0.64**	**213**	Pg	**Pg**	**07 00 36.4**	**+0.4**
EBER	1μm,0.6s,SNR=11			Lg	Lg	07 00 45.0	
EQUE	**Quentar** 23nm,0.2s,SNR=18	**0.82**	**254**	⇑Pg	**Pg**	**07 00 39.3**	**0.0**
EQUE	124nm,0.2s,SNR=5.0			Lg	Lg	07 00 51.6	
EQUE	**Quentar** 23nm,0.2s,SNR=18	**0.82**	**254**	Pg	**Pg**	**07 00 39.3**	**0.0**
EQUE	124nm,0.2s,SNR=5.0			Lg	Lg	07 00 51.6	
ECOG	**Cogollos-Vega** 33nm,0.2s,SNR=52	**0.90**	**260**	Pg	**Pg**	**07 00 40.9**	**+0.1**
ECOG	117nm,0.2s,SNR=4.0			Lg	Lg	07 00 53.8	
ECOG	**Cogollos-Vega** 33nm,0.2s,SNR=52	**0.90**	**260**	Pg	**Pg**	**07 00 40.9**	**+0.1**
ECOG	117nm,0.2s,SNR=4.0			Lg	Lg	07 00 53.8	
EMUR	**La Murta** 160nm,0.3s,SNR=274	**1.05**	**67**	Pg	**Pg**	**07 00 43.8**	**0.0**
EMUR	205nm,0.3s,SNR=16			Lg	Lg	07 00 59.0	
EMUR	**La Murta** 160nm,0.3s,SNR=274	**1.05**	**67**	Pg	**Pg**	**07 00 43.8**	**0.0**
EMUR	205nm,0.3s,SNR=16			Lg	Lg	07 00 59.0	
EGUA	**Guajares** 171nm,0.2s,SNR=18	**1.07**	**236**	⇑Pg	**Pg**	**07 00 43.9**	**-0.3**
EGUA	360nm,0.3s,SNR=7.9			Lg	Lg	07 00 58.7	
EGUA	**Guajares** 171nm,0.2s,SNR=18	**1.07**	**236**	Pg	**Pg**	**07 00 43.9**	**-0.3**
EGUA	360nm,0.3s,SNR=7.9			Lg	Lg	07 00 58.7	
ERON	**Agron** 13nm,0.2s,SNR=7.9	**1.15**	**249**	Pg	**Pg**	**07 00 45.4**	**-0.4**
ERON	90nm,0.3s,SNR=7.9			Lg	Lg	07 01 03.0	
ERON	**Agron** 13nm,0.2s,SNR=7.9	**1.15**	**249**	Pg	**Pg**	**07 00 45.4**	**-0.4**
ERON	90nm,0.3s,SNR=7.9			Lg	Lg	07 01 03.0	
CART	**Cartagena**	**1.17**	**82**	⇑Pg	**Pg**	**07 00 45.8**	**-0.2**
CART				Lg	Lg	07 01 00.5	
CART	**Cartagena**	**1.17**	**82**	*i* P	**Pg**	**07 00 45.8**	**-0.2**
CART				*e*S	**Sg**	**07 01 00.5**	**-0.7**
CART				Lg	Lg	07 01 00.5	
EVIA	**Vianos** 6.6nm,0.1s,SNR=244	**1.20**	**358**	Pg	**Pn**	**07 00 47.0**	**0.0**
EVIA	383nm,0.2s,SNR=24			Lg	Lg	07 01 04.9	
EVIA	**Vianos** 6.6nm,0.1s,SNR=244	**1.20**	**358**	Pg	**Pn**	**07 00 47.0**	**0.0**
EVIA	383nm,0.2s,SNR=24			Lg	Lg	07 01 04.9	
EBAN	**Banos Encina** 42nm,0.2s,SNR=18	**1.27**	**305**	⇑Pg	**Pg**	**07 00 48.4**	**+0.3**
EBAN	167nm,0.2s,SNR=16			Lg	Lg	07 01 05.9	
EBAN	**Banos Encina** 42nm,0.2s,SNR=18	**1.27**	**305**	Pg	**Pg**	**07 00 48.4**	**+0.3**
EBAN	167nm,0.2s,SNR=16			Lg	Lg	07 01 05.9	
ELOJ	**Sierra Loja** 0.6nm,0.4s,SNR=39	**1.38**	**258**	Pg	**Pb**	**07 00 50.1**	**+0.3**
ELOJ	39nm,0.2s,SNR=7.9			Lg	Lg	07 01 10.5	
ELOJ	**Sierra Loja** 0.6nm,0.4s,SNR=39	**1.38**	**258**	Pg	**Pb**	**07 00 50.1**	**+0.3**
ELOJ	39nm,0.2s,SNR=7.9			Lg	Lg	07 01 10.5	
ETOB	**Tobarra** 72nm,0.2s,SNR=473	**1.40**	**31**	Pg	**Pg**	**07 00 51.3**	**+0.8**
ETOB	280nm,0.3s,SNR=15			Lg	Lg	07 01 11.2	
ETOB	**Tobarra** 72nm,0.2s,SNR=473	**1.40**	**31**	Pg	**Pg**	**07 00 51.3**	**+0.8**
ETOB	280nm,0.3s,SNR=15			Lg	Lg	07 01 11.2	
ELUQ	**Luque** 15nm,0.3s,SNR=18	**1.44**	**275**	⇓Pg	**Pg**	**07 00 52.1**	**+0.8**
ELUQ	219nm,0.2s,SNR=7.9			Lg	Lg	07 01 12.7	
ELUQ	**Luque** 15nm,0.3s,SNR=18	**1.44**	**275**	Pg	**Pg**	**07 00 52.1**	**+0.8**
ELUQ	219nm,0.2s,SNR=7.9			Lg	Lg	07 01 12.7	
EMAL	**Malaga-Limoner**	**1.71**	**247**	⇓Pg	**Pb**	**07 00 55.2**	**-0.2**
EMAL				Lg	Lg	07 01 19.7	
EMAL	**

EMAL Lg Lg 07 01 19.7
EMAL eS S 07 01 19.7
AFON Font Roja 1.95 50 Pn **Pn 07 00 58.2 +1.0**
2.2nm,0.2s,SNR=8.3
AFON Lg Lg 07 01 25.9
5.4nm,0.3s,SNR=8.6
AFON Font Roja 1.95 50 Pn **Pn 07 00 58.2 +1.0**
2.2nm,0.2s,SNR=8.3
AFON Lg Lg 07 01 25.9
5.4nm,0.3s,SNR=8.6
EMIJ Mijas 2.05 245 Pn **Pn 07 00 59.4 +0.8**
3.2nm,0.2s,SNR=7.9
EMIJ Lg Lg 07 01 31.8
43nm,0.5s,SNR=7.9
EMIJ Mijas 2.05 245 Pn **Pn 07 00 59.4 +0.8**
3.2nm,0.2s,SNR=7.9
EMIJ Lg Lg 07 01 31.8
43nm,0.5s,SNR=7.9
EBEN Beniarda 2.17 54 Pn **Pn 07 00 59.5 -0.7**
3.6nm,0.5s,SNR=20
EBEN Lg Lg 07 01 34.2
20nm,0.4s,SNR=5.0
EBEN Beniarda 2.17 54 Pn **Pn 07 00 59.5 -0.7**
3.6nm,0.5s,SNR=20
EBEN Lg Lg 07 01 34.2
20nm,0.4s,SNR=5.0
LIJA Lijar 2.41 258 Pg **Pb 07 01 06.0 -1.4**
LIJA Lg Lg 07 01 38.0
LIJA Lijar 2.41 258 *i* P **Pb 07 01 06.0 -1.4**
LIJA Lg Lg 07 01 38.0
LIJA eS S 07 01 38.0
ECHE Chera 2.45 28 Pn **Pn 07 01 05.3 +1.2**
0.9nm,0.2s,SNR=6.9
ECHE Pg **Pg 07 01 12.0 +1.5**
8.3nm,0.3s,SNR=16
ECHE Sn **Sn 07 01 35.6 +1.4**
8.2nm,0.2s,SNR=7.9
ECHE Lg Lg 07 01 44.8
50nm,0.4s,SNR=5.0
ECHE Chera 2.45 28 Pn **Pn 07 01 05.3 +1.2**
0.9nm,0.2s,SNR=6.9
ESDC Sonseca Array 2.52 333 Pn **Pn 07 01 06.1 +1.0**
3.9nm,0.2s,baz=148,slow=13,SNR=11
ESDC Pg **Pb 07 01 10.2 +0.9**
2.5nm,0.2s,baz=148,slow=18,SNR=4.0
ESDC Sn **Sn 07 01 36.0 -0.2**
8.0nm,0.1s,baz=150,slow=22,SNR=7.9
ESDC Lg Lg 07 01 43.8
17nm,0.3s,baz=142,slow=31,SNR=10
ESDC Sonseca Array 2.52 333 Pn **Pn 07 01 06.1 +1.0**
3.9nm,0.2s,slow=13,SNR=11
ESDC Sonseca Array 2.52 333 Pg **Pb 07 01 10.2 +0.9**
2.5nm,0.2s,slow=18,SNR=4.0
ESDC Sn **Sn 07 01 36.0 -0.2**
8.0nm,0.1s,baz=150,slow=22,SNR=7.9
ESDC Lg Lg 07 01 43.8
17nm,0.3s,slow=31,SNR=10
ESPR Espera 2.77 259 Pn **Pn 07 01 10.9 +2.4**
0.9nm,0.1s,SNR=9.7
ESPR Pg **Pg 07 01 15.8 -1.0**
4.8nm,0.3s,SNR=11
ESPR Sn **Sn 07 01 43.6 +1.4**
16nm,0.5s,SNR=4.0
ESPR Lg Lg 07 01 53.7
31nm,0.3s,SNR=7.9
ESPR Espera 2.77 259 Pn **Pn 07 01 10.9 +2.4**
0.9nm,0.1s,SNR=9.7
EMOS Mosqueruela 3.31 27 Pn **Pn 07 01 17.9 +1.9**
0.8nm,0.2s,SNR=8.7
EMOS Pg **Pg 07 01 26.0 -1.0**
0.8nm,0.4s,SNR=9.1
EMOS Sn **Sn 07 01 56.2 +0.5**
10nm,0.4s,SNR=8.4
EMOS Lg Lg 07 02 09.4
8.3nm,0.3s,SNR=5.0
EMOS Mosqueruela 3.31 27 Pn **Pn 07 01 17.9 +1.9**
0.8nm,0.2s,SNR=8.7
EMIN Mina Concepcio 3.36 277 Pn **Pn 07 01 16.8 +0.2**
2.4nm,0.2s,SNR=38
EMIN Sn **Sn 07 01 57.5 +0.7**
2.7nm,0.3s,SNR=7.9
EMIN Lg Lg 07 02 10.5
13nm,0.4s,SNR=5.0
EMIN Mina Concepcio 3.36 277 Pn **Pn 07 01 16.8 +0.2**
2.4nm,0.2s,SNR=38
EMIN Sn **Sn 07 01 57.5 +0.7**
2.7nm,0.3s,SNR=7.9
EMIN Lg Lg 07 02 10.5
13nm,0.4s,SNR=5.0
EIBI Ibiza 3.39 61 Pn **Pn 07 01 16.5 -0.4**
2.1nm,0.2s,SNR=20
EIBI Sn **Sn 07 01 55.7 -1.7**
9.9nm,0.2s,SNR=7.9
EIBI Ibiza 3.39 61 Pn **Pn 07 01 16.5 -0.4**
2.1nm,0.2s,SNR=20
EIBI Sn **Sn 07 01 55.7 -1.7**
9.9nm,0.2s,SNR=7.9
ETOR Torete 3.39 5 Pn **Pn 07 01 18.8 +1.7**
27nm,0.2s,SNR=40
ETOR Pg **Pg 07 01 28.6 0.0**
15nm,0.2s,SNR=6.6
ETOR Sn **Sn 07 01 56.9 -0.7**
48nm,0.3s,SNR=7.2
ETOR Lg Lg 07 02 13.3
82nm,0.2s,SNR=5.0
ETOR Torete 3.39 5 Pn **Pn 07 01 18.8 +1.7**
27nm,0.2s,SNR=40
GUD Guadarrama 3.46 338 Pn **Pn 07 01 18.9 +0.8**
0.3nm,0.2s,SNR=8.0
GUD Pg **Pg 07 01 29.4 -0.5**
3.5nm,0.2s,SNR=9.8
GUD Sn **Sn 07 01 58.6 -0.8**
3.7nm,0.4s,SNR=108
GUD Lg Lg 07 02 13.3
16nm,0.3s,SNR=5.0
GUD Guadarrama 3.46 338 Pn **Pn 07 01 18.9 +0.8**
0.3nm,0.2s,SNR=8.0
PBAR Barrancos 3.70 283 *e*Pn **Pn 07 01 22.1 +0.9**
PBAR *e*Sn **Sn 07 02 06.3 +1.2**
PBAR *e*Sg **Sg 07 02 20.3 -2.2**
PBAR Barrancos 3.70 283 Pn **Pn 07 01 22.1 +0.9**
PBAR Sn **Sn 07 02 06.3 +1.2**
PBAR Lg Lg 07 02 20.3
PBAR Barrancos 3.70 283 Pn **Pn 07 01 22.1 +0.9**
PBAR Sn **Sn 07 02 06.3 +1.2**
PBAR *e*Sg **Sg 07 02 20.3 -2.2**
PBAR Lg Lg 07 02 20.3
EPLA Plasencia 3.86 314 Pn **Pn 07 01 23.7 +0.3**
2.0nm,0.2s,SNR=10
EPLA Pg **Pg 07 01 36.6 -0.9**
2.7nm,0.2s,SNR=7.9
EPLA Sn **Sn 07 02 08.7 -0.3**
2.4nm,0.1s,SNR=7.9
EPLA Lg Lg 07 02 26.1
5.5nm,0.3s,SNR=5.0
EPLA Plasencia 3.86 314 Pn **Pn 07 01 23.7 +0.3**
2.0nm,0.2s,SNR=10
EGRO El Granado 4.00 273 Pn **Pn 07 01 25.7 +0.4**
0.8nm,0.1s,SNR=10
EGRO Sn **Sn 07 02 11.6 -0.8**
4.6nm,0.2s,SNR=7.9
EGRO Lg Lg 07 02 29.4
5.3nm,0.3s,SNR=6.4
EGRO El Granado 4.00 273 Pn **Pn 07 01 25.7 +0.4**
0.8nm,0.1s,SNR=10
EGRO Sn **Sn 07 02 11.6 -0.8**
4.6nm,0.2s,SNR=7.9
EGRO Lg Lg 07 02 29.4
5.3nm,0.3s,SNR=6.4
ERTA Horta de San J 4.13 31 Pn **Pn 07 01 29.6 +2.5**
2.5nm,0.1s,SNR=12
ERTA Sn **Sn 07 02 16.3 +0.6**
4.6nm,0.4s,SNR=7.9
ERTA Lg Lg 07 02 33.7
13nm,0.4s,SNR=7.9
ERTA Horta de San J 4.13 31 Pn **Pn 07 01 29.6 +2.5**
2.5nm,0.1s,SNR=12
ERTA Sn **Sn 07 02 16.3 +0.6**
4.6nm,0.4s,SNR=7.9
ERTA Lg Lg 07 02 33.7
13nm,0.4s,SNR=7.9
PVAQ Vaqueiros 4.18 271 *e*Pn **Pn 07 01 28.7 +0.8**
PVAQ *e*Sn **Sn 07 02 17.0 -0.1**
PVAQ A A 07 02 46.3
17nm,0.6s
PVAQ Vaqueiros 4.18 271 Pn **Pn 07 01 28.7 +0.8**
PVAQ Sn **Sn 07 02 17.0 -0.1**
17nm,0.6s
PVAQ Vaqueiros 4.18 271 Pn **Pn 07 01 28.7 +0.8**
PVAQ Sn **Sn 07 02 17.0 -0.1**
PESTR Estremoz 4.29 291 *e*Pn **Pn 07 01 30.1 +0.8**
PESTR *e*Sn **Sn 07 02 19.1 -0.5**
PESTR *e*Sg **Sg 07 02 40.1 -1.2**
PESTR A A 07 02 52.0
25nm,0.5s
PESTR Estremoz 4.29 291 Pn **Pn 07 01 30.1 +0.8**
PESTR Sn **Sn 07 02 19.1 -0.5**
PESTR Lg Lg 07 02 40.1
25nm,0.5s
PESTR Estremoz 4.29 291 Pn **Pn 07 01 30.1 +0.8**
PESTR Sn **Sn 07 02 19.1 -0.5**
PESTR Lg Lg 07 02 40.1
25nm,0.5s
PBEJ Beja 4.33 279 *e*Pn **Pn 07 01 31.0 +1.1**
PBEJ *e*Sn **Sn 07 02 21.0 +0.4**
PBEJ *e*Sg **Sg 07 02 42.1 -0.4**
PBEJ A A 07 02 49.3
13nm,0.6s
PBEJ Beja 4.33 279 Pn **Pn 07 01 31.0 +1.1**
PBEJ Sn **Sn 07 02 21.0 +0.4**
PBEJ Lg Lg 07 02 42.1
6.4nm,0.6s
PBEJ Beja 4.33 279 Pn **Pn 07 01 31.0 +1.1**
PBEJ Sn **Sn 07 02 21.0 +0.4**
PBEJ *e*Sg **Sg 07 02 42.1 -0.4**
13nm,0.6s
PMRV Marv??o 4.35 299 *e*Pn **Pn 07 01 31.3 +1.1**
PMRV *e*Sn **Sn 07 02 21.5 +0.3**
PMRV *e*Sg **Sg 07 02 43.6 +0.2**
PMRV A A 07 02 50.5
34nm,0.5s
PMRV Marv??o 4.35 299 Pn **Pn 07 01 31.3 +1.1**
PMRV Sn **Sn 07 02 21.5 +0.3**
PMRV Lg Lg 07 02 43.6
34nm,0.5s
PMRV Marv??o 4.35 299 Pn **Pn 07 01 31.3 +1.1**
PMRV Sn **Sn 07 02 21.5 +0.3**
PMRV *e*Sg **Sg 07 02 43.6 +0.2**
34nm,0.5s
PBDV Barranco-do-Ve 4.37 269 *e*Pn **Pn 07 01 31.6 +1.2**
PBDV *e*Sn **Sn 07 02 21.4 -0.2**
PBDV A A 07 02 53.0
15nm,0.6s
PBDV Barranco-do-Ve 4.37 269 Pn **Pn 07 01 31.6 +1.2**
PBDV Sn **Sn 07 02 21.4 -0.2**
15nm,0.6s
PBDV Barranco-do-Ve 4.37 269 Pn **Pn 07 01 31.6 +1.2**
PBDV *e*Sn **Sn 07 02 21.4 -0.2**
15nm,0.6s
PCVE Castro Verde 4.44 274 *e*Pn **Pn 07 01 32.3 +0.9**
PCVE *e*Sn **Sn 07 02 22.9 -0.4**
PCVE *e*Sg **Sg 07 02 43.6 -2.6**
PCVE A A 07 02 50.0
15nm,0.4s
PCVE Castro Verde 4.44 274 Pn **Pn 07 01 32.3 +0.9**
PCVE Sn **Sn 07 02 22.9 -0.4**
PCVE Lg Lg 07 02 43.6
15nm,0.4s
PCVE Castro Verde 4.44 274 Pn **Pn 07 01 32.3 +0.9**
PCVE Sn **Sn 07 02 22.9 -0.4**
PCVE Lg Lg 07 02 43.6
15nm,0.4s
EVO Evora 4.52 286 *e*Pn **Pn 07 01 35.0 +2.5**
EVO *e*Sn **Sn 07 02 25.1 -0.3**
EVO *e*Sg **Sg 07 02 50.3 +1.5**
36nm,0.4s
EVO Evora 4.52 286 *e*Pn **Pn 07 01 33.4 +0.9**
EVO *e*Sn **Sn 07 02 25.7 +0.3**
EVO *e*Sg **Sg 07 02 48.4 -0.4**
EVO A A 07 02 56.4
16nm,0.3s
EVO Evora 4.52 286 Pn **Pn 07 01 33.4 +0.9**
EVO Sn **Sn 07 02 25.7 +0.3**
EVO Lg Lg 07 02 48.4
16nm,0.3s
EVO Evora 4.52 286 Pn **Pn 07 01 33.4 +0.9**
EVO Sn **Sn 07 02 25.7 +0.3**
EVO *e*Sg **Sg 07 02 48.4 -0.4**
16nm,0.3s
ESAC San Caprasio 4.54 19 Sn **Sn 07 02 25.9 -0.1**
7.3nm,0.3s,SNR=4.0
ESAC Lg Lg 07 02 48.9
31nm,0.4s,SNR=7.9
ESAC San Caprasio 4.54 19 Sn **Sn 07 02 25.9 -0.1**
7.3nm,0.3s,SNR=4.0
ESAC Lg Lg 07 02 48.9
31nm,0.4s,SNR=7.9
MESJ Messejana 4.59 277 *e*P **Pn 07 01 33.8 +0.3**
MESJ *e*S **Sn 07 02 24.0 -3.0**
MESJ AML AML 07 02 29.6
comp=E,7.1nm,0.5s
MESJ Messejana 4.59 277 *e*P **Pn 07 01 33.8 +0.3**
MESJ *e*S **Sn 07 02 24.0 -3.0**
MESJ Messejana 4.59 277 P **Pn 07 01 33.8 +0.3**
MESJ S **Sn 07 02 24.0 -3.0**
MESJ Messejana 4.59 277 P **Pn 07 01 33.8 +0.3**
MESJ *e*S **Sn 07 02 24.0 -3.0**
PCBR Castelo Branco 4.60 303 *e*Pn **Pn 07 01 35.2 +1.6**
PCBR *e*Sn **Sn 07 02 27.3 0.0**
PCBR *e*Sg **Sg 07 02 51.3 -0.1**
PCBR A A 07 02 57.0
comp=E,20nm,0.7s
PCBR Castelo Branco 4.60 303 Pn **Pn 07 01 35.2 +1.6**
PCBR Sn **Sn 07 02 27.3 0.0**
PCBR Lg Lg 07 02 51.3
comp=E,10.0nm,0.7s
PCBR Castelo Branco 4.60 303 Pn **Pn 07 01 35.2 +1.6**
PCBR Sn **Sn 07 02 27.3 0.0**
PCBR *e*Sg **Sg 07 02 51.3 -0.1**
comp=E,20nm,0.7s
EVOP Sao Brissos 4.61 285 *e*Pn **Pn 07 01 35.0 +1.3**
EVOP *e*Sn **Sn 07 02 25.1 -2.3**
EVOP *e*Sg **Sg 07 02 50.3 -1.2**
comp=E,18nm,0.4s
EPOB Poblet 4.77 34 Pn **Pn 07 01 38.3 +2.2**
comp=E,1.1nm,0.2s,SNR=7.9
EPOB Sn **Sn 07 02 31.7 0.0**
comp=E,1.2nm,0.2s,SNR=7.9
EPOB Lg Lg 07 02 57.5
comp=E,1.8nm,0.4s,SNR=7.9
EPOB Poblet 4.77 34 Pn **Pn 07 01 38.3 +2.2**
comp=E,1.1nm,0.2s,SNR=7.9
EPOB Sn **Sn 07 02 31.7 0.0**
comp=E,1.2nm,0.2s,SNR=7.9
EPOB Lg Lg 07 02 57.5
comp=E,1.8nm,0.4s,SNR=7.9
PMTG Montargil 4.82 291 *e*Pn **Pn 07 01 37.6 +1.0**
PMTG *e*Sn **Sn 07 02 31.5 -1.2**
PMTG *e*Sg **Sg 07 02 57.7 -0.7**
PMTG A A 07 03 02.8
comp=E,21nm,0.5s
PMTG Montargil 4.82 291 *e*Pn **Pn 07 01 37.6 +1.0**
PMTG *e*Sn **Sn 07 02 31.5 -1.2**
PMTG *e*Sg **Sg 07 02 57.7 -0.7**
comp=E,21nm,0.5s
PNCL Nicolau / Gran 4.86 280 *e*Pn **Pn 07 01 38.2 +1.1**
PNCL *e*Sn **Sn 07 02 33.6 0.0**
PNCL A A 07 03 00.7
comp=E,12nm,0.5s
PNCL Nicolau / Gran 4.86 280 *e*Pn **Pn 07 01 38.2 +1.1**
PNCL *e*Sn **Sn 07 02 33.6 0.0**
comp=E,12nm,0.5s
MORF Marmelete 4.93 270 *e*Pn **Pn 07 01 39.8 +1.6**
MORF *e*Sn **Sn 07 02 35.0 -0.6**
MORF A A 07 02 39.1
comp=E,11nm,0.2s
MORF Marmelete 4.93 270 Pn **Pn 07 01 39.8 +1.6**
MORF Sn **Sn 07 02 35.0 -0.6**
comp=E,11nm,0.2s
MORF Marmelete 4.93 270 Pn **Pn 07 01 39.8 +1.6**
MORF *e*Sn **Sn 07 02 35.0 -0.6**
comp=E,11nm,0.2s
MTE Manteigas 4.95 308 *e*Sg **Sg 07 03 02.4 0.0**
MTE A A 07 03 11.0
comp=E,42nm,0.6s
MTE Manteigas 4.95 308 *e*Sg **Sg 07 03 02.4 0.0**
comp=E,42nm,0.6s
PTEO Sao Teotonio 4.98 273 *e*Pn **Pn 07 01 41.1 +2.2**
PTEO *e*Sn **Sn 07 02 36.7 0.0**
PTEO A A 07 03 09.7
comp=E,22nm,0.6s
PTEO Sao Teotonio 4.98 273 Pn **Pn 07 01 41.1 +2.2**
PTEO Sn **Sn 07 02 36.7 0.0**
comp=E,11nm,0.6s
PTEO Sao Teotonio 4.98 273 Pn **Pn 07 01 41.1 +2.2**
PTEO *e*Sn **Sn 07 02 36.7 0.0**
comp=E,22nm,0.6s
PFVI Vila Bisbo 5.09 268 *e*Pn **Pn 07 01 41.1 +0.8**
PFVI *e*Sn **Sn 07 02 37.7 -1.6**
MVO Moncorvo 5.14 318 *e*Pn **Pn 07 01 42.4 +1.3**
MVO *e*Sn **Sn 07 02 39.4 -1.3**
MVO *e*Sg **Sg 07 03 10.4 +1.8**
MVO A A 07 03 18.2
comp=E,15nm,0.4s
MVO Moncorvo 5.14 318 *e*Pn **Pn 07 01 42.4 +1.3**
MVO *e*Sn **Sn 07 02 39.4 -1.3**
MVO *e*Sg **Sg 07 03 10.4 +1.8**
comp=E,15nm,0.4s
PTOM Tomar 5.15 297 *e*Pn **Pn 07 01 42.3 +1.2**
PTOM *e*Sg **Sg 07 03 05.6 -3.3**
PTOM A A 07 03 12.8
comp=E,29nm,0.7s
PTOM Tomar 5.15 297 Pn **Pn 07 01 42.3 +1.2**
PTOM Lg Lg 07 03 05.6
comp=E,14nm,0.7s
PTOM Tomar 5.15 297 Pn **Pn 07 01 42.3 +1.2**
PTOM *e*Sg **Sg 07 03 05.6 -3.3**
comp=E,29nm,0.7s
PVIS Viseu 5.35 309 *e*Pn **Pn 07 01 45.7 +1.8**
PVIS A A 07 03 30.9
comp=E,16nm,0.5s
PVIS Viseu 5.35 309 *e*Pn **Pn 07 01 45.7 +1.8**
comp=E,16nm,0.5s
IUNC Unciti 5.36 8 Pn **Pn 07 01 46.8 +2.7**
comp=E,2.6nm,0.1s,SNR=7.9
IUNC Lg Lg 07 03 19.0
comp=E,8.4nm,0.4s,SNR=7.9
IUNC Unciti 5.36 8 Pn **Pn 07 01 46.8 +2.7**
comp=E,2.6nm,0.1s,SNR=7.9
IUNC Lg Lg 07 03 19.0
comp=E,8.4nm,0.4s,SNR=7.9
IEPA Eparoz 5.41 9 Pn Pn 07 01 48.8 +4.0
comp=E,1.1nm,0.2s,SNR=7.9
IEPA Sn **Sn 07 02 45.8 -1.6**
comp=E,7.0nm,0.4s,SNR=7.9
IEPA Lg Lg 07 03 20.1
comp=E,1.9nm,0.5s,SNR=7.9
IEPA Eparoz 5.41 9 Pn Pn 07 01 48.8 +4.0
comp=E,1.1nm,0.2s,SNR=7.9
IEPA Sn **Sn 07 02 45.8 -1.6**
comp=E,7.0nm,0.4s,SNR=7.9
IEPA Lg Lg 07 03 20.1
comp=E,1.9nm,0.5s,SNR=7.9
EMIR Miracle 5.42 33 Pn **Pn 07 01 46.8 +1.8**
comp=E,1.1nm,0.3s,SNR=4.0
EMIR Miracle 5.42 33 Pn **Pn 07 01 46.8 +1.8**
comp=E,1.1nm,0.3s,SNR=4.0
PBRG Braganca 5.47 324 *e*Pn **Pn 07 01 47.1 +1.5**
PBRG *e*Sg **Sg 07 03 18.3 -1.0**
PBRG A A 07 03 32.6
comp=E,8.5nm,0.5s
PBRG Braganca 5.47 324 Sn **Pn 07 01 47.1 +1.5**
PBRG Lg Lg 07 03 18.3
comp=E,4.2nm,0.5s
PBRG Braganca 5.47 324 Pn **Pn 07 01 47.1 +1.5**
PBRG *e*Sg **Sg 07 03 18.3 -1.0**
comp=E,8.5nm,0.5s
IELO Elcoad 5.48 9 Pn **Pn 07 01 48.5 +2.8**
comp=E,3.8nm,0.2s,SNR=7.9
IELO Sn **Sn 07 02 48.7 -0.4**
comp=E,3.8nm,0.2s,SNR=7.9
IELO Lg Lg 07 03 23.4
comp=E,2.4nm,0.2s,SNR=7.9
IELO Elcoad 5.48 9 Pn **Pn 07 01 48.5 +2.8**
comp=E,3.8nm,0.2s,SNR=7.9
IELO Sn **Sn 07 02 48.7 -0.4**
comp=E,3.8nm,0.2s,SNR=7.9
IELO Lg Lg 07 03 23.4
comp=E,2.4nm,0.2s,SNR=7.9
EORO Oroz-Betelu 5.52 9 Pn **Pn 07 01 48.8 +2.5**
comp=E,1.1nm,0.0s,SNR=7.9
EORO Sn **Sn 07 02 50.0 0.0**
comp=E,5.3nm,0.2s,SNR=7.9
EORO Lg Lg 07 03 23.1
comp=E,13nm,0.5s,SNR=7.9
EORO Oroz-Betelu 5.52 9 Pn **Pn 07 01 48.8 +2.5**
comp=E,1.1nm,0.0s,SNR=7.9
EORO Sn **Sn 07 02 50.0 0.0**
comp=E,5.3nm,0.2s,SNR=7.9
EORO Lg Lg 07 03 23.1
comp=E,13nm,0.5s,SNR=7.9
ECAL Calabor 5.58 325 Pn **Pn 07 01 47.7 +0.6**
comp=E,2.0nm,0.3s,SNR=7.9
ECAL Sn **Sn 07 02 49.0 -2.5**
comp=E,0.2nm,0.4s,SNR=7.9
ECAL Lg Lg 07 03 24.2
comp=E,26nm,0.8s,SNR=4.5
ECAL Calabor 5.58 325 Pn **Pn 07 01 47.7 +0.6**
comp=E,2.0nm,0.3s,SNR=7.9
ECAL Sn **Sn 07 02 49.0 -2.5**
comp=E,0.2nm,0.4s,SNR=7.9
ECAL Lg Lg 07 03 24.2
comp=E,26nm,0.8s,SNR=4.5
PMAFR Mafra 5.58 288 *e*Pn **Pn 07 01 48.3 +1.2**
PMAFR *e*Sn **Sn 07 02 50.4 -1.2**
PMAFR A A 07 03 37.0
comp=E,26nm,0.7s
PMAFR Mafra 5.58 288 *e*Pn **Pn 07 01 48.3 +1.2**
PMAFR *e*Sn **Sn 07 02 50.4 -1.2**
comp=E,26nm,0.7s
ETSF Etsaut 5.64 14 *e*Pn **Pn 07 01 49.9 +1.9**
ETSF *e*Sn **Sn 07 02 50.0 -3.1**
ETSF *e*Sg **Sg 07 03 23.3 -1.5**
comp=E,4.3nm,0.4s
ETSF Etsaut 5.64 14 *e*Pn **Pn 07 01 49.9 +1.9**
CSOR Sort 5.65 28 Pn **Pn 07 01 50.6 +2.4**
comp=E,3.0nm,0.2s,SNR=16
CSOR Sn **Sn 07 02 53.0 -0.4**
comp=E,4.1nm,0.5s,SNR=7.9
CSOR Lg Lg 07 03 21.9
comp=E,2.2nm,0.3s
CSOR Sort 5.65 28 Pn **Pn 07 01 50.6 +2.4**
comp=E,3.0nm,0.2s,SNR=16
CSOR Sn **Sn 07 02 53.0 -0.4**
comp=E,4.1nm,0.5s,SNR=7.9
CSOR Lg Lg 07 03 21.9
comp=E,2.2nm,0.3s
POLO Lamas de Olo 5.70 315 *e*Pn **Pn 07 01 49.8 +1.0**
POLO *e*Sn **Sn 07 02 53.5 -1.1**
POLO *e*Sg **Sg 07 03 26.1 -0.5**
POLO A A 07 03 43.7
comp=E,3.5nm,0.6s
POLO Lamas de Olo 5.70 315 *e*Pn **Pn 07 01 49.8 +1.0**
POLO *e*Sn **Sn 07 02 53.5 -1.1**
POLO *e*Sg **Sg 07 03 26.1 -0.5**
comp=E,3.5nm,0.6s
CFON Fontmartina 5.74 40 Pn **Pn 07 01 51.0 +1.7**
comp=E,0.9nm,0.3s,SNR=7.9
CFON Sn **Sn 07 02 55.4 -0.1**
comp=E,3.0nm,0.3s,SNR=7.9
CFON Fontmartina 5.74 40 Pn **Pn 07 01 51.0 +1.7**
comp=E,0.9nm,0.3s,SNR=7.9
CFON Sn **Sn 07 02 55.4 -0.1**
comp=E,3.0nm,0.3s,SNR=7.9
SJPF Ste Jean 5.75 9 *e*Pn **Pn 07 01 51.9 +2.5**
SJPF *e*Sn **Sn 07 02 52.7 -2.9**
SJPF *e*Sg **Sg 07 03 26.3 -1.8**
comp=E,11nm,0.6s
SJPF Ste Jean 5.75 9 *e*Pn **Pn 07 01 51.9 +2.5**
ELAN Lanestosa 5.83 353 Pn **Pn 07 01 52.1 +1.6**
comp=E,0.2nm,0.1s,SNR=7.6
ELAN Sn **Sn 07 02 56.1 -1.5**
comp=E,1.0nm,0.2s,SNR=7.9
ELAN Lg Lg 07 03 30.5
comp=E,8.0nm,0.3s,SNR=5.0
ELAN Lanestosa 5.83 353 Pn **Pn 07 01 52.1 +1.6**
comp=E,0.2nm,0.1s,SNR=7.6
ELAN Sn **Sn 07 02 56.1 -1.5**
comp=E,1.0nm,0.2s,SNR=7.9
ELAN Lg Lg 07 03 30.5
comp=E,8.0nm,0.3s,SNR=5.0
EPF Esparros 5.98 20 *e*Pn **Pn 07 01 52.9 +0.3**
EPF *e*Sn **Sn 07 02 58.3 -3.1**
EPF *e*Sg **Sg 07 03 33.6 -2.0**
comp=E,8.7nm,0.5s
EPF Esparros 5.98 20 *e*Pn **Pn 07 01 52.9 +0.3**

PCAB	**Cabril**	**6.06**	**316**	*e*Pn	**Pn**	07 01 54.7	**+1.1**
PCAB				*e*Sg	**Sg**	**07 03 37.2**	**-0.8**
PCAB				A	A	07 03 57.0	
	comp=E,14nm,0.6s						
PCAB	**Cabril**	**6.06**	**316**	*e*Pn	**Pn**	**07 01 54.7**	**+1.1**
PCAB				*e*Sg	**Sg**	**07 03 37.2**	**-0.8**
	comp=E,14nm,0.6s						
CLLI	**Llivia**	**6.08**	**33**	Pn	**Pn**	**07 01 56.6**	**+2.5**
	comp=E,0.0nm,0.1s,SNR=4.0						
CLLI	**Llivia**	**6.08**	**33**	Pn	**Pn**	**07 01 56.6**	**+2.5**
	SNR=4.0						
EARI	**Arriondas**	**6.22**	**341**	Pn	**Pn**	**07 01 57.6**	**+1.7**
	comp=E,1.0nm,0.2s,SNR=7.9						
EARI				Sn	**Sn**	**07 03 03.5**	**-3.8**
	comp=E,1.4nm,0.4s,SNR=7.9						
EARI				Lg	Lg	07 03 41.4	
	comp=E,1.5nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**6.22**	**341**	Pn	**Pn**	**07 01 57.6**	**+1.7**
	comp=E,1.0nm,0.2s,SNR=7.9						
EARI				Sn	**Sn**	**07 03 03.5**	**-3.8**
	comp=E,1.4nm,0.4s,SNR=7.9						
EARI				Lg	Lg	07 03 41.4	
	comp=E,1.5nm,0.3s,SNR=7.9						
PGAV	**Gavieira, Arco**	**6.36**	**317**	*e*Pn	**Pn**	**07 01 59.1**	**+1.2**
PGAV				*e*Sn	**Sn**	**07 03 09.4**	**-1.5**
PGAV				A	A	07 04 09.6	
	comp=E,8.8nm,0.6s						
EPON	**Pontenova**	**6.88**	**330**	Lg	Lg	07 04 05.8	
	comp=E,1.8nm,0.3s,SNR=7.9						
EPON	**Pontenova**	**6.88**	**330**	Lg	Lg	07 04 05.8	
	comp=E,1.8nm,0.3s,SNR=7.9						

*IDC **10** 07:04:38.8±1.4,35°.41N×143°.20E, h0km, mb3.4/4, mb1 3.5/6, mb1mx3.4/27, mbtmp3.4/6, ML3.4/2, Error ellipse: s-maj=33.6km s-min=27.1km az=93.0*
*ISCJB **10** 07:04:41.5±1.0, 35°.70N±0°.04×143°.02E±0°.07, h46km±14km, mb3.3/4, Error ellipse: s-maj=9.6km s-min=5.8km az=15.5*
*JMA **10** 07:04:42.1±0.2, 35°.67N×142°.97E, h79km, M3.3*

ISC 10 07:04:42.4±2.4, 35°.67N±0°.04×143°.02E±0°.06, h30km±20km, n21, σ1§05/29, mb3.4/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.76**	**272**	P	**Pn**	**07 05 10.8**	**0.0**
CHOJ				*e*S	**Sn**	**07 05 32.0**	**-0.2**
BSO1	**Boso 1**	**1.95**	**239**	P	**Pn**	**07 05 12.4**	**-0.6**
BSO1				*e*S	**Sn**	**07 05 36.7**	**+0.5**
BSO2	**Boso 2**	**2.07**	**244**	*e*S	**Sn**	**07 05 40.4**	**+1.0**
JHO	**Hitachi**	**2.20**	**296**	P	**Pn**	**07 05 16.3**	**-0.5**
JHO				*e*S	Sn	07 05 42.0	-1.0
BSO3	**Boso 3**	**2.23**	**248**	P	**Pn**	**07 05 17.5**	**+0.5**
BSO3				*e*S	**Sn**	**07 05 44.0**	**+0.6**
JFT	**Otama**	**2.84**	**311**	P	**Pn**	**07 05 26.2**	**+0.5**
JFT				*e*S	**Sn**	**07 05 58.3**	**-0.6**
JAG	**Ashikaga**	**2.99**	**286**	P	**Pn**	**07 05 27.6**	**-0.1**
JAG				*e*S	Sn	07 06 01.2	-1.3
JOD2	**Odawara 2**	**3.23**	**264**	P	**Pn**	**07 05 30.9**	**-0.2**
JOD2				S	**Sn**	**07 06 08.1**	**-0.5**
JRY	**Ryogami san**	**3.36**	**277**	P	**Pn**	**07 05 33.7**	**+0.8**
JRY				*e*S	**Sn**	**07 06 11.9**	**+0.1**
JMK	**Ichinoseki**	**3.58**	**337**	P	**Pn**	**07 05 35.3**	**-0.5**
JMK				*e*S	**Sn**	**07 06 15.7**	**-1.4**
JYN	**Shimob**	**3.65**	**269**	P	**Pn**	**07 05 37.3**	**+0.4**
JYN				*e*S	Sn	07 06 17.4	-1.6
JHJ2	**Mitsune**	**3.67**	**227**	P	**Pn**	**07 05 36.2**	**-0.9**
JHJ2				*e*S	Sn	07 06 15.9	-3.5
JHJ	**Hachijo jima 2**	**3.69**	**227**	Pn	**Pn**	**07 05 36.0**	**-1.4**
	8.4nm,0.3s,baz=66,slow=12,SNR=6.6						
JHJ				Sn	Sn	07 06 14.3	-5.5
	13nm,0.3s,baz=60,slow=20,SNR=8.9						
JYK	**Kaneyama**	**3.88**	**328**	P	**Pn**	**07 05 39.4**	**-0.5**
JYK				*e*S	**Sn**	**07 06 24.0**	**-0.5**
MJAR	**Matsushiro Arr**	**3.99**	**284**	Pn	**Pn**	**07 05 43.1**	**+1.6**
	1.9nm,0.3s,baz=121,slow=8.8,SNR=13						
MAT	**Matsushiro**	**3.99**	**284**	P	**Pn**	**07 05 42.2**	**+0.6**
MAT				*e*S	**Sn**	**07 06 30.5**	**+3.1**
JOM	**Ohasama**	**4.04**	**341**	P	**Pn**	**07 05 43.0**	**+0.8**
JOM				*e*S	Sn	07 06 26.4	-2.1
SONM	**Songino Array**	**29.63**	**306**	P	P	07 10 48.6	+3.5
	0.2nm,0.3s,baz=101,slow=7.6,SNR=3.3						
WRA	**Warramunga Arr**	**55.91**	**190**	P	**P**	**07 14 17.0**	**-0.5**
	0.5nm,0.9s,baz=7.8,slow=7.4,SNR=4.7						
ASAR	**Alice Springs**	**59.64**	**190**	P	**P**	**07 14 43.0**	**-0.7**
	0.1nm,0.3s,baz=15,slow=8.7,SNR=4.6						
YKA	**Yellowknife Ar**	**64.34**	**30**	P	**P**	**07 15 16.7**	**+1.9**
	0.2nm,0.8s,baz=298,slow=5.8,SNR=3.3						

*IDC **10** 07:10:43.2±0.9, 22°.51N×121°.08E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.7/25, mbtmp3.8/9, MS3.8/1, Ms1 3.8/1, ms1mx2.3/43, Error ellipse: s-maj=58.5km s-min=18.8km az=66.0*
*NEIC **10** 07:10:44.8±0.8, 22°.29N×120°.46E, h10km, mb4.2/1, ML4.2(TAP), Error ellipse: s-maj=30.7km s-min=14.8km az=82.0*
NEIC Recorded [5 TAP] in T'ai-tung and [2 TAP] in P'ing-tung.
*ISCJB **10** 07:10:45.7±0.4, 22°.46N±0°.02×121°.05E±0°.03, h9km±2km, mb3.7/10, MS3.9/1, Error ellipse: s-maj=4.2km s-min=3.3km az=25.2*
*TAP **10** 07:10:46.3, 22°.56N×120°.96E, h10km, ML4.0, C*

ISC 10 07:10:45.7±0.8, 22°.50N±0°.02×121°.01E±0°.03, h15km±5km, n75, σ1§06/112, mb3.8/10, 1C-11D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECL	**Taimali**	**0.11**	**335**	⇑*i*P	**Pg**	**07 10 48.4**	**-0.7**
ECL	baz=8.0			*e*S	**Sg**	**07 10 49.7**	**-1.7**
	baz=8.0						
TAW	**Tawu**	**0.17**	**216**	⇓*i*P	**Pg**	**07 10 51.0**	**+1.1**
TAW	baz=201			*i* S	**Sg**	**07 10 54.1**	**+1.4**
	baz=201						
EAST	**Anshuo**	**0.18**	**232**	⇓*i*P	**Pg**	**07 10 51.0**	**+0.8**
	baz=214						
TTN	**Taitung**	**0.29**	**27**	⇓*i*P	**Pb**	**07 10 52.9**	**+0.2**
TTN	baz=34			*e*S	**Sb**	**07 10 58.3**	**+1.0**
	baz=34						
TWG	**Pinlang**	**0.33**	**11**	⇓*i*P	**Pg**	**07 10 52.4**	**-0.2**
TWG	baz=18			S	**Sg**	**07 10 56.3**	**-1.0**
	baz=18						
SCZT	**Fangliau**	**0.38**	**251**	⇓*i*P	**Pb**	**07 10 53.9**	**-0.3**
SCZT	baz=239			S	**Sb**	**07 10 58.7**	**-1.1**
	baz=239						
SSD	**Sandimen**	**0.42**	**306**	⇓*i*P	**Pg**	**07 10 53.4**	**-0.9**
SSD	baz=306			*e*S	**Sg**	**07 10 57.8**	**-2.3**
	baz=306						
SGLT	**Jiouru**	**0.53**	**296**	*e*P	**Pb**	**07 10 56.5**	**-0.3**
SGLT	baz=291			*e*S	**Sb**	**07 11 03.4**	**-0.8**
	baz=291						
HEN	**Hengchun**	**0.55**	**207**	*e*P	**Pn**	**07 10 58.4**	**-0.6**
HEN	baz=200			*e*S	**Sn**	**07 11 07.0**	**-0.9**
	baz=200						
TWK1	**Hengchun**	**0.58**	**199**	⇓P	**Pn**	**07 10 59.1**	**-0.3**
	baz=193						
TSEB	**Hengchuen, Pin**	**0.60**	**189**	*e*P	**Pn**	**07 10 59.8**	**+0.1**
TSEB	baz=198			*e*S	**Sn**	**07 11 09.7**	**+0.5**
	baz=198						
TWP	**Hsiaoliuchiu**	**0.61**	**256**	⇓*e*P	**Pn**	**07 11 01.1**	**+1.2**
	baz=249						
TWM1	**Shoushan**	**0.63**	**301**	⇓*i*P	**Pb**	**07 10 58.8**	**+0.3**
TWM1	baz=298			*e*S	**Sb**	**07 11 07.8**	**+0.7**
	baz=298						
KAU	**Kaohsiung**	**0.65**	**276**	*e*P	**Pn**	**07 11 00.1**	**-0.3**
	baz=271						
CHKT	**Chengkung**	**0.69**	**29**	*e*P	**Pg**	**07 10 58.6**	**-0.6**
CHKT	baz=35			*e*S	**Sb**	**07 11 09.1**	**+0.4**
	baz=35						
ELDTW	**Lidau**	**0.69**	**1**	P	**Pg**	**07 10 58.6**	**-0.6**
ELDTW	baz=13			*e*S	**Sg**	**07 11 06.6**	**-1.8**
	baz=13						
SGST	**Jiashian**	**0.70**	**326**	⇓P	**Pb**	**07 10 59.2**	**-0.6**
	baz=331						
CHN1	**Nanshi**	**0.81**	**327**	*e*P	**Pb**	**07 11 01.7**	**0.0**
CHN1	baz=329			*e*S	**Sn**	**07 11 13.5**	**-1.1**
	baz=329						
CHN3	**Shinhua**	**0.83**	**314**	*e*P	**Pn**	**07 11 03.5**	**+0.6**
	baz=313						
CHN3				*e*S	**Sn**	**07 11 17.0**	**+2.2**
	baz=313						
WTP	**Ta-pu**	**0.83**	**334**	⇓P	**Pb**	**07 11 01.8**	**-0.2**
	baz=340						
WTP				*e*S	**Sb**	**07 11 13.2**	**+0.2**
	baz=340						
TWF1	**Yuli**	**0.89**	**17**	*e*P	**Pg**	**07 11 01.0**	**-2.1**
	baz=36						
TAI1	**Yung-k'ang**	**0.90**	**307**	*e*P	**Pn**	**07 11 05.1**	**+1.2**
	baz=306						
TAI1				*e*S	**Sn**	**07 11 18.5**	**+1.9**
	baz=306						
TWK	**Hsinying**	**0.90**	**328**	*e*P	**Pn**	**07 11 04.0**	**0.0**
	baz=329						
TWK				*e*S	**Sn**	**07 11 16.4**	**-0.4**
	baz=329						
CHN4	**Tsaushan**	**0.93**	**336**	*e*P	**Pn**	**07 11 04.1**	**-0.3**
	baz=349						
CHN4				S	**Sn**	**07 11 17.0**	**-0.5**
	baz=349						
SCLT	**Jiali**	**1.01**	**312**	*e*P	**Pn**	**07 11 06.5**	**+1.1**
	baz=312						
SCLT				S	**Sn**	**07 11 21.1**	**+1.8**
	baz=312						
EHY	**Hungye**	**1.05**	**16**	*e*P	**Pg**	**07 11 03.8**	**-2.2**
	baz=32						
CHN8	**Yiju**	**1.12**	**319**	*e*P	**Pn**	**07 11 07.4**	**+0.5**
	baz=321						
CHN8				*e*S	**Sn**	**07 11 23.7**	**+1.7**
	baz=321						
CHY	**Chiayi**	**1.13**	**332**	*e*P	**Pn**	**07 11 07.8**	**+0.8**
	baz=333						
CHY				*e*S	**Sn**	**07 11 23.8**	**+1.4**
	baz=333						
CHN5	**Tsauling**	**1.14**	**345**	*e*P	**Pn**	**07 11 07.7**	**+0.5**
	baz=356						
CHN5				S	**Sn**	**07 11 23.6**	**+0.9**
	baz=356						
CHN2	**Minshiung**	**1.14**	**335**	*e*P	**Pn**	**07 11 08.3**	**+1.1**
	baz=336						
CHN2				*e*S	**Sn**	**07 11 24.2**	**+1.6**
	baz=336						
WGK	**Gukeng**	**1.25**	**341**	*e*P	**Pg**	**07 11 10.2**	**+0.3**
	baz=343						
WGK				*e*S	**Sn**	**07 11 27.9**	**+2.5**
	baz=343						
ESL	**Shilin**	**1.37**	**17**	*e*P	**Pn**	**07 11 09.5**	**-0.9**
	baz=35						
SMLT	**Sun Moon Lake**	**1.38**	**356**	*e*P	**Pg**	**07 11 11.8**	**-0.7**
	baz=358						
SMLT				*e*S	**Sg**	**07 11 32.0**	**+1.5**
	baz=358						
WNT	**Mingjian**	**1.41**	**348**	*e*P	**Pg**	**07 11 13.2**	**+0.3**
	baz=331						
WNT				*e*S	**Sg**	**07 11 31.8**	**+0.6**
	baz=331						
TYC	**Yuchr**	**1.41**	**354**	P	**Pg**	**07 11 12.5**	**-0.4**
	baz=357						
TYC				*e*S	**Sg**	**07 11 32.6**	**+1.4**
	baz=357						
WDGT	**Dungji**	**1.46**	**302**	*e*P	**Pb**	**07 11 12.0**	**-0.5**
	baz=301						
WDGT				*e*S	**Sn**	**07 11 30.2**	**-0.1**
	baz=301						
HWA	**Hwalien**	**1.57**	**20**	*e*P	**Pg**	**07 11 15.5**	**-0.5**
	baz=35						
WHF	**Hehuan Shan**	**1.66**	**8**	*e*P	**Pn**	**07 11 14.5**	**-0.2**
	baz=22						
WHF				*e*S	**Sg**	**07 11 39.3**	**0.0**
	baz=22						
TWD	**Chiawan**	**1.67**	**19**	*e*P	**Pn**	**07 11 15.0**	**+0.5**
	baz=37						
TCU	**Taichung**	**1.67**	**350**	*e*P	**Pb**	**07 11 16.6**	**+0.3**
	baz=335						
PNG	**Penghu**	**1.71**	**309**	*e*P	**Pn**	**07 11 14.6**	**-0.4**
	baz=308						
PNG				*e*S	**Sn**	**07 11 35.5**	**-1.1**
	baz=308						
TWT	**Tachien**	**1.76**	**5**	*e*P	**Pb**	**07 11 18.1**	**+0.3**
	baz=18						
TWQ1	**Liyutan**	**1.86**	**353**	*e*P	**Pb**	**07 11 19.7**	**+0.3**
	baz=357						
TWQ1				*e*S	**Sg**	**07 11 44.7**	**-0.8**
	baz=357						
NSY	**Sanyi**	**1.93**	**353**	*e*P	**Pb**	**07 11 20.2**	**-0.4**
	baz=337						
NSY				*e*S	**Sg**	**07 11 46.9**	**-0.9**
	baz=337						
NNS	**Nan Shan**	**1.96**	**10**	*e*P	**Pb**	**07 11 21.6**	**+0.3**
	baz=24						
NNS				*e*S	**Sg**	**07 11 47.6**	**-1.4**
	baz=24						
ENA	**Nanau**	**2.04**	**19**	*e*P	**Pn**	**07 11 20.8**	**+1.2**
	baz=38						
NSTT	**Nanjuang**	**2.13**	**360**	*e*P	**Pb**	**07 11 24.2**	**+0.2**
	baz=345						
NSTT				*e*S	**Sg**	**07 11 52.4**	**-1.8**
	baz=345						
NSK	**Sanguang**	**2.19**	**8**	*e*P	**Pn**	**07 11 22.1**	**+0.3**
	baz=15						
NSK				*e*S	**Sb**	**07 11 53.9**	**+1.6**
	baz=15						
ENTT	**Nioudou**	**2.20**	**13**	*e*P	**Pn**	**07 11 23.8**	**+2.1**
	baz=34						
TWC	**Suao**	**2.24**	**20**	*e*P	**Pn**	**07 11 23.8**	**+1.4**
	baz=38						
TWE	**Neicheng**	**2.30**	**15**	*e*P	**Pb**	**07 11 26.7**	**-0.2**
	baz=34						
TATO	**Taipei**	**2.51**	**10**	*e*Pn	**Pb**	**07 11 31.9**	**+1.4**
TATO				*e*Sn	**Sg**	**07 12 06.1**	**-0.3**
NWF	**Wu-fen Shan**	**2.66**	**15**	*e*P	**Pn**	**07 11 30.3**	**+2.1**
	baz=38						
KNM	**Kinmen**	**3.04**	**310**	*e*P	**Pn**	**07 11 34.9**	**+1.6**
	baz=308						
SONM	**Songino Array**	**27.86**	**339**	P	**P**	**07 16 34.7**	**-0.2**
SONM	**Songino Array**	**27.86**	**339**	P	**P**	**07 16 34.7**	**-0.2**
	1.3nm,1.1s,baz=152,slow=9.6,SNR=5.0						
MK31	**Makanchi Array**	**39.45**	**317**	*e*P	**P**	**07 18 17.2**	**+1.9**
MKAR	**Makanchi Array**	**39.45**	**317**	P	**P**	**07 18 17.0**	**+1.7**
MKAR				PcP	**PcP**	**07 20 22.8**	**-0.4**
MKAR	**Makanchi Array**	**39.45**	**317**	P	**P**	**07 18 17.0**	**+1.7**
	1.2nm,0.8s,baz=112,slow=10.0,SNR=10.0						
MKAR				PcP	**PcP**	**07 20 22.8**	**-0.4**
	0.3nm,0.8s,baz=106,slow=4.7,SNR=3.4						
ZALV	**Zalesovo Beam**	**41.58**	**328**	P	**P**	**07 18 31.0**	**-1.8**
ZALV	**Zalesovo Beam**	**41.58**	**328**	P	**P**	**07 18 31.0**	**-1.8**
	0.9nm,0.4s,baz=106,slow=11,SNR=4.5						
WRA	**Warramunga Arr**	**44.14**	**162**	P	**P**	**07 18 53.9**	**-0.1**
WRA	**Warramunga Arr**	**44.14**	**162**	P	**P**	**07 18 53.9**	**-0.1**
	0.5nm,0.5s,baz=344,slow=9.0,SNR=4.8						
ASAR	**Alice Springs**	**47.57**	**164**	P	**P**	**07 19 20.5**	**-0.5**
ASAR	**Alice Springs**	**47.57**	**164**	P	**P**	**07 19 20.5**	**-0.5**
	0.3nm,0.3s,baz=343,slow=7.1,SNR=12						
TIXI	**Tiksi**	**49.38**	**3**	*e*P	**P**	**07 19 34.5**	**+0.2**
	1.5nm,0.5s						
NWAO	**Narrogin (SRO)**	**55.23**	**184**	LR	LR	07 46 52.7	
	comp=Z,94nm,19.5s,baz=50,slow=39						
FINES	**FINESS Array B**	**72.81**	**330**	P	**P**	**07 22 13.9**	**+0.4**
FINES	**FINESS Array B**	**72.81**	**330**	P	**P**	**07 22 13.9**	**+0.4**
	1.5nm,0.8s,baz=80,slow=4.6,SNR=7.1						
BRTR	**Keskin Array B**	**74.04**	**307**	P	**P**	**07 22 21.0**	**-0.4**
BRTR	**Keskin Array B**	**74.04**	**307**	P	**P**	**07 22 21.0**	**-0.4**
	0.2nm,0.3s,baz=38,slow=7.3,SNR=2.7						
NOA	**NORSAR Array B**	**79.63**	**332**	P	**P**	**07 22 52.0**	**-0.4**
NOA	**NORSAR Array B**	**79.63**	**332**	P	**P**	**07 22 52.0**	**-0.4**
	1.0nm,0.8s,baz=58,slow=5.9,SNR=3.3						
YKA	**Yellowknife Ar**	**84.58**	**23**	P	**P**	**07 23 18.4**	**+0.1**
YKA	**Yellowknife Ar**	**84.58**	**23**	P	**P**	**07 23 18.4**	**+0.1**
	0.4nm,0.7s,baz=314,slow=5.0,SNR=12						

IDC 10 07:31:27.0±3.7, 18°.59S×65°.71E, h0km, mb4.0/7, mb1 4.2/7, mb1mx3.8/25, mbtmp4.0/7, Error ellipse: s-maj=113.4km s-min=26.6km az=57.0, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**49.21**	**43**	P	P	07 40 17.2	-0.1
	0.8nm,0.3s,baz=234,slow=8.2,SNR=4.4						
ASAR	**Alice Springs**	**63.28**	**108**	P	P	07 41 58.0	-0.2
	1.3nm,0.6s,baz=272,slow=5.8,SNR=30						
WRA	**Warramunga Arr**	**64.36**	**104**	P	P	07 42 05.3	+0.1
	1.7nm,0.7s,baz=263,slow=5.3,SNR=18						
MKAR	**Makanchi Array**	**66.78**	**12**	P	P	07 42 19.4	-0.8
	0.7nm,0.9s,baz=198,slow=7.3,SNR=4.5						
BVAR	**Borovoye Array**	**71.43**	**3**	P	P	07 42 49.1	+0.2
	1.5nm,0.7s,baz=164,slow=7.2,SNR=8.4						
ZALV	**Zalesovo Beam**	**74.09**	**12**	P	P	07 43 04.9	+0.2
	1.2nm,0.5s,baz=192,slow=7.7,SNR=5.6						
SONM	**Songino Array**	**75.50**	**27**	P	P	07 43 13.6	+0.4
	0.8nm,0.7s,baz=215,slow=6.1,SNR=5.9						

*ISK **10** 07:44:41.8, 37°.90N×29°.15E, h5km, MD2.8*
*DDA **10** 07:44:41.5, 37°.86N×29°.21E, h7km, MD2.5, ML2.3*
*CSEM **10** 07:44:42.1±0.2, 37°.89N×29°.18E, h2km, MD2.8, Error ellipse: s-maj=7.2km s-min=2.8km az=119.0*

ISC 10 07:44:41.5±1.0, 37°.87N±0°.04×29°.22E±0°.06, h13km±9km, n12, σ0§24/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.19**	**231**	*e*PG	**Pg**	**07 44 45.9**	**+0.1**
DENT				*e*SG	**Sg**	**07 44 48.9**	**+0.2**
DENT	**Denizli**	**0.19**	**231**	*e*Pg	**Pg**	**07 44 45.9**	**+0.1**
DENT				*e*Sg	**Sg**	**07 44 48.9**	**+0.2**
DNZL	**Cakiroluk**	**0.23**	**217**	*i* P	**Pg**	**07 44 46.2**	**-0.3**
DNZL				*i* S	**Sg**	**07 44 49.6**	**-0.3**
DNZL	**Cakiroluk**	**0.23**	**217**	*i* P	**Pg**	**07 44 46.2**	**-0.3**
DNZL				*i* S	**Sg**	**07 44 49.6**	**-0.3**
KHL	**Karahalli**	**0.51**	**28**	*e*PG	**Pb**	**07 44 52.7**	**+0.2**
KHL				*e*SG	**Sb**	**07 44 59.8**	**0.0**
KHL	**Karahalli**	**0.51**	**28**	*e*Pg	**Pb**	**07 44 52.7**	**+0.2**
KHL				*e*Sg	**Sb**	**07 44 59.8**	**0.0**
KHAL	**Karahalli**	**0.54**	**23**	*i* P	**Pg**	**07 44 52.3**	**+0.1**
KHAL				*i* S	**Sg**	**07 44 59.0**	**-0.4**
KHAL	**Karahalli**	**0.54**	**23**	*i* P	**Pg**	**07 44 52.3**	**+0.1**
KHAL				*i* S	**Sg**	**07 44 59.0**	**-0.4**
KULA	**Kula-Manisa**	**0.78**	**326**	*e*PG	**Pg**	**07 44 56.4**	**-0.2**
KULA				*e*SG	**Sg**	**07 45 06.7**	**-0.1**
KULA	**Kula-Manisa**	**0.78**	**326**	*e*Pg	**Pg**	**07 44 56.4**	**-0.2**
KULA				*e*Sg	**Sg**	**07 45 06.7**	**-0.1**
YER	**Yerkesik**	**1.05**	**226**	*e*PG	**Pn**	**07 45 02.0**	**0.0**
YER	**Yerkesik**	**1.05**	**226**	*e*Pg	**Pn**	**07 45 02.0**	**0.0**

*ISCJB **10** 08:30:35.9±0.5, 43°.74N±0°.06×28°.6W±0°.1, h10km, mb3.7/10, MS3.6/26, Error ellipse: s-maj=13.8km s-min=7.4km az=158.1*
*IDC **10** 08:30:37.0±0.9, 43°.90N×28°.52W, h0km, mb3.7/10, mb1 3.9/12, mb1mx3.7/32, mbtmp3.7/12, ML4.2/2, MS3.6/27, Ms1 3.6/27, ms1mx3.5/55, Error ellipse: s-maj=31.5km s-min=16.5km az=16.0*

ISC 10 08:30:38.2±0.6, 43°.84N±0°.09×28°.5W±0°.1, h10km, n42, σ1§18/20, mb3.8/10, MS3.7/26, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADH	**Angra Heroismo**	**5.28**	**169**	*e*P	**Pn**	**08 31 55.1**	**-2.0**
ADH				*e*S	Pb	08 31 59.1	-11
ADH				A	A	08 32 02.2	
	18nm,0.2s						
PSET	**Sete Cidades**	**6.38**	**159**	*e*P	**Pn**	**08 32 10.7**	**-1.6**
PDA	**Ponta Delgada**	**6.47**	**159**	*e*P	**Pn**	**08 32 12.1**	**-1.3**
GRON	**Grota Negra**	**6.48**	**158**	*e*S	**Pb**	**08 32 32.9**	**+1.8**
GRON				A	A	08 32 36.5	
	16nm,0.2s						
CMLA	**Cha da Macela**	**6.49**	**158**	*e*P	**Pn**	**08 32 12.9**	**-0.9**
PSMA	**Santa Maria**	**7.32**	**158**	*e*P	**Pn**	**08 32 23.9**	**-1.2**
PSMN	**Pico do Norte,**	**7.33**	**158**	*e*P	**Pn**	**08 32 23.6**	**-1.7**
ESDC	**Sonseca Array**	**18.78**	**94**	P	**Pn**	**08 34 58.0**	**0.0**
	0.1nm,0.3s,baz=292,slow=11,SNR=6.6						
ESDC				LR	LR	08 40 28.3	
	comp=Z,134nm,21.1s,baz=295,slow=32						
EKA	**Eskdalemuir Ar**	**19.95**	**46**	P	**P**	**08 35 09.6**	**-0.6**
	baz=241,slow=8.8,SNR=3.5						
MDT	**Midelt**	**21.68**	**112**	LR	LR	08 42 03.8	
	comp=Z,81nm,20.6s,baz=308,slow=32						
SFJD	**Kangerlussuaq**	**26.07**	**340**	LR	LR	08 44 18.4	
	comp=Z,108nm,19.7s,baz=140,slow=32						
SCHQ	**Schefferville**	**26.93**	**308**	P	**P**	**08 36 19.2**	**-0.2**
	3.0nm,0.8s,baz=99,slow=9.3,SNR=5.2						
SCHQ				LR	LR	08 45 14.3	
	comp=Z,168nm,18.1s,baz=2.5,slow=33						
DAVOX	**Davos/Dischmat**	**27.00**	**70**	LR	LR	08 45 42.4	
	comp=Z,157nm,19.5s,baz=264,slow=34						
JMIC	**Jan Mayen**	**28.96**	**13**	LR	LR	08 46 01.4	
	comp=Z,66nm,19.4s,baz=290,slow=32						
GERES	**GERESS Array B**	**29.30**	**65**	LR	LR	08 47 03.1	
	comp=Z,146nm,19.0s,baz=87,slow=34						
KEST	**Kesra**	**30.01**	**93**	LR	LR	08 47 41.3	
	comp=Z,35nm,19.2s,baz=325,slow=34						
FINES	**FINESS Array B**	**36.23**	**42**	LR	LR	08 50 45.7	
	comp=Z,45nm,19.2s,baz=210,slow=33						
ARCES	**ARCESS Array B**	**37.29**	**28**	LR	LR	08 50 18.5	
	comp=Z,30nm,20.6s,baz=56,slow=32						
TORD	**Torodi Ar. Bea**	**40.09**	**130**	P	**P**	**08 38 14.3**	**+0.3**
	3.2nm,0.9s,baz=326,slow=8.2,SNR=14						
TORD				LR	LR	08 53 45.0	
	comp=Z,110nm,18.4s,baz=325,slow=35						
SJG	**San Juan**	**40.67**	**243**	LR	LR	08 49 43.4	
	comp=Z,573nm,19.3s,baz=51,slow=28						
DBIC	**Dimbokro**	**42.45**	**144**	LR	LR	08 55 00.3	
	comp=Z,54nm,19.7s,baz=212,slow=34						
ULM	**Lac du Bonnet**	**44.91**	**303**	LR	LR	08 56 03.2	
	comp=Z,136nm,20.6s,baz=343,slow=34						
BRTR	**Keskin Array B**	**45.59**	**73**	P	**P**	**08 38 59.3**	**+0.8**
	0.7nm,0.8s,baz=286,slow=7.3,SNR=3.2						
BRTR				LR	LR	08 58 41.2	
	comp=Z,51nm,19.2s,baz=295,slow=37						
YKA	**Yellowknife Ar**	**50.63**	**323**	P	**P**	**08 39 36.7**	**-0.2**
	0.3nm,0.7

ROCH	**El Roble**	**0.98**	**81**	⇓*iP*	Pn		08 51 00.4	0.0
ROCH				*i* S	Sn		08 51 14.4	+1.1
ROCH				AML	AML		08 51 16.9	
	comp=N,849nm,0.3s							
TACH	**Talagante**	**1.14**	**117**	⇑*iP*	Pn		08 51 03.2	+0.8
TACH				*i* S	Sn		08 51 18.5	+1.6
PEL	**Peldehue**	**1.24**	**91**	⇑*iP*	Pn		08 51 05.1	+1.4
PEL				*eS*	Sn		08 51 21.3	+2.1
PEL				AML	AML		08 51 24.5	
	comp=N,2μm,0.3s							
SAN	**Santiago**	**1.29**	**105**	⇓*iP*	Pn		08 51 05.9	+1.4
SAN				*eS*	Sn		08 51 23.3	+2.7
SAN				AML	AML		08 51 26.5	
	comp=E,3μm,0.2s							
STL	**Santa Lucia**	**1.30**	**104**	*eP*	Pn		08 51 05.6	+0.9
STL				*i* S	Sn		08 51 23.0	+2.1
STL				AML	AML		08 51 26.0	
	comp=N,276nm,0.2s							
ANTU	**Antumapu**	**1.35**	**109**	*eP*	Pn		08 51 06.7	+1.4
ANTU				AML	AML		08 51 27.0	
	comp=E,939nm,0.4s							
CLCH	**Cerro Calan**	**1.38**	**101**	⇓*iP*	Pn		08 51 07.2	+1.4
CLCH				*i* S	Sn		08 51 25.7	+2.8
CLCH				AML	AML		08 51 26.6	
	comp=E,782nm,0.5s							
JACH	**Jahuel**	**1.39**	**71**	*eP*	Pn		08 51 06.3	+0.3
FSR	**Penalolen**	**1.41**	**104**	*eP*	Pn		08 51 07.5	+1.4
FSR				*eS*	Sn		08 51 25.7	+2.2
FSR				AML	AML		08 51 28.0	
	comp=E,259nm,0.7s							
CHCH	**Chadas Angostu**	**1.49**	**123**	⇑*iP*	Pn		08 51 08.1	+0.9
SJCH	**San Jose de Ma**	**1.59**	**109**	*eP*	Pn		08 51 09.4	+0.8
SJCH				*eS*	Sn		08 51 30.1	+2.0
SJCH				AML	AML		08 51 33.8	
	comp=N,453nm,0.4s							
CACH	**El Canelo**	**1.63**	**127**	⇓*iP*	Pn		08 51 10.9	+1.7
CACH				*eS*	Sn		08 51 32.4	+3.3
LMEL	**Las Melosas**	**1.78**	**114**	⇑*iP*	Pn		08 51 13.1	+1.7
LMEL				AML	AML		08 51 37.6	
	comp=N,1μm,0.2s							

IDC 10 09:07:57.4±8.5, 18°65S×65°63E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/25, mbtmp3.7/5, Error ellipse: s-maj=286.9km s-min=30.4km az=55.0, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**63.34**	**108**	P	P	09 18 28.6	-0.3
	0.4nm,0.6s,baz=267,slow=6.1,SNR=8.0						
WRA	**Warramunga Arr**	**64.43**	**104**	P	P	09 18 36.5	+0.4
	0.6nm,0.7s,baz=262,slow=5.5,SNR=5.8						
BVAR	**Borovoye Array**	**71.50**	**3**	P	P	09 19 20.1	+0.4
	0.5nm,0.6s,baz=176,slow=7.9,SNR=3.3						
ZALV	**Zalesovo Beam**	**74.16**	**12**	P	P	09 19 35.1	-0.5
	0.4nm,0.4s,baz=184,slow=4.3,SNR=3.0						
SONM	**Songino Array**	**75.59**	**27**	P	P	09 19 44.4	+0.3
	0.3nm,0.6s,baz=216,slow=7.1,SNR=3.2						

WEL 10 09:08:58.8±0.3, 45°03S×167°54E, h127km±2km, ML3.5/4, 6C, Error ellipse: s-maj=2.8km s-min=1.7km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.45**	**38**	PN	Pn	09 09 17.4	+0.1
MSZ				SN	Sn	09 09 31.0	-0.2
DCZ	**Deep Cove**	**0.52**	**211**	PN	Pn	09 09 17.1	-0.6
DCZ				SN	Sn	09 09 30.8	-1.2
MLZ	**Mavora Lakes**	**0.55**	**126**	⇑PN	Pn	09 09 17.8	-0.1
MLZ				SN	Sn	09 09 32.2	-0.1
WHZ	**Wether Hill Ro**	**0.91**	**162**	⇑PN	Pn	09 09 20.6	-0.1
WHZ				SN	Sn	09 09 37.1	-0.2
WKZ	**Wanaka**	**1.07**	**80**	⇑PN	Pn	09 09 22.2	+0.1
WKZ				SN	Sn	09 09 39.3	-0.6
EAZ	**Earnscleugh**	**1.27**	**100**	⇑PN	Pn	09 09 24.0	-0.2
EAZ				SN	Sn	09 09 41.9	-1.5
JCZ	**Jackson Bay**	**1.29**	**43**	⇑PN	Pn	09 09 24.0	-0.6
JCZ				SN	Sn	09 09 43.0	-1.1
TUZ	**Tuapeka**	**1.74**	**123**	⇑PN	Pn	09 09 29.4	-0.1
APZ	**The Paps**	**1.83**	**170**	PN	Pn	09 09 30.4	-0.2
SYZ	**Scrubby Hill**	**1.88**	**144**	PN	Pn	09 09 31.0	-0.1
SYZ				SN	Sn	09 09 54.2	-1.6
LBZ	**Lake Benmore**	**1.99**	**72**	PN	Pn	09 09 31.0	-1.6
FOZ	**Fox Glacier**	**2.13**	**47**	PN	Pn	09 09 33.1	-1.1
RPZ	**Rata Peaks**	**2.84**	**64**	PN	Pn	09 09 41.0	-2.3
WVZ	**Waitaha Valley**	**3.02**	**51**	PN	Pn	09 09 44.1	-1.5
LTZ	**Lake Taylor**	**4.09**	**58**	PN	Pn	09 09 58.7	-1.0

IDC 10 09:20:40.5±1.1, 1°28N×126°64E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/22, mbtmp3.7/6, Error ellipse: s-maj=123.6km s-min=16.9km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.40**	**161**	P	P	09 25 42.0	+1.1
	2.7nm,0.5s,baz=340,slow=10,SNR=39						
ASAR	**Alice Springs**	**25.78**	**165**	P	P	09 26 13.4	0.0
	0.3nm,0.4s,baz=343,slow=7.6,SNR=14						
STKA	**Stephens Creek**	**35.90**	**158**	P	P	09 27 41.5	-1.1
	3.1nm,0.8s,baz=332,slow=7.7,SNR=8.7						
SONM	**Songino Array**	**49.58**	**342**	P	P	09 29 34.0	+0.4
	0.3nm,0.6s,baz=157,slow=6.8,SNR=3.3						
MKAR	**Makanchi Array**	**59.51**	**326**	P	P	09 30 46.6	+0.9
	0.5nm,0.4s,baz=117,slow=7.8,SNR=9.0						
BVAR	**Borovoye Array**	**69.32**	**328**	P	P	09 31 48.6	-1.2
	0.2nm,0.3s,baz=128,slow=9.3,SNR=3.4						

*IDC **10** 09:33:59.1±0.8, 29°81N×140°36E, h0km, mb3.6/10, mb1 3.8/12, mb1mx3.7/25, mbtmp3.6/12, ML3.4/2, Error ellipse: s-maj=28.9km s-min=17.7km az=86.0*
*NIED **10** 09:34:00, 30°10N×141°70E, h5km, Mw3.9 Best double couple: M₀8.62000×10¹⁴ NP1:φ≈299.00000°, δ76.00000°, λ-82.00000°. NP2:φ≈88.00000°, δ16.00000°, λ-119.00000°.*
*ISCJB **10** 09:34:04.8±0.5, 29°71N±0°06×140°5E±0°1, h57km, mb3.5/10, Error ellipse: s-maj=18.5km s-min=5.1km az=157.5*
*JMA **10** 09:34:04.2±0.1, 30°07N×141°69E, h82km, M3.8*

ISC 10 09:34:06.3±0.7, 29°69N±0°08×140°5E±0°1, h57km, n24, σ1§18/25, mb3.6/10, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.98**	**150**	P	**Pn**	**09 34 50.2**	**-0.9**
CBIJ				*eS*	**Sn**	**09 35 26.0**	**+0.4**
CBIJ	**Chichi jima**	**2.98**	**150**	Pn	**Pn**	**09 34 50.2**	**-0.9**
	18nm,0.3s,baz=343,slow=20,SNR=15						
CBIJ				Sn	**Sn**	**09 35 25.8**	**+0.2**
	25nm,0.3s,baz=306,slow=23,SNR=7.9						
JHHJ	**Haha-jima-NKT**	**3.39**	**154**	P	**Pn**	**09 34 56.7**	**0.0**
JHJ2	**Mitsune**	**3.46**	**350**	P	**Pn**	**09 34 56.4**	**-1.3**
JHJ	**Hachijo jima 2**	**3.48**	**350**	Pn	Pn	09 34 54.3	-3.6
	2.6nm,0.3s,baz=205,slow=19,SNR=3.1						
JKO	**Kozu shima**	**4.63**	**346**	P	**Pn**	**09 35 14.4**	**+0.6**
BSO1	**Boso 1**	**4.97**	**5**	P	**Pn**	09 35 12.8	-5.0
HMMJ	**Hamamatsu 2**	**5.67**	**336**	P	**Pn**	**09 35 29.8**	**+1.9**
JNY	**Yasuok**	**6.08**	**339**	P	**Pn**	**09 35 34.5**	**+0.9**
JAO	**Obara**	**6.20**	**335**	P	**Pn**	**09 35 37.4**	**+2.1**
JRY	**Ryogami san**	**6.45**	**348**	P	**Pn**	**09 35 37.8**	**-0.9**
MJAR	**Matsushiro Arr**	**7.10**	**345**	Pn	**Pn**	**09 35 46.9**	**-0.7**
	0.2nm,0.3s,baz=176,slow=12,SNR=9.9						
MAT	**Matsushiro**	**7.10**	**345**	P	**Pn**	**09 35 49.0**	**+1.4**
MAT				S	**Sn**	**09 37 06.8**	**-0.1**
KSRS	**Korea Array**	**13.03**	**310**	Pn	**Pn**	**09 37 07.5**	**-1.1**
	0.2nm,0.3s,baz=122,slow=16,SNR=2.7						
SONM	**Songino Array**	**31.84**	**314**	P	**P**	**09 40 23.6**	**-2.2**
	0.1nm,0.3s,baz=120,slow=8.5,SNR=2.8						
WRA	**Warramunga Arr**	**49.70**	**188**	P	**P**	**09 42 53.9**	**+1.1**
	0.4nm,0.5s,baz=5.7,slow=7.7,SNR=10						
ASAR	**Alice Springs**	**53.42**	**188**	P	**P**	**09 43 21.8**	**+1.3**
	0.1nm,0.4s,baz=15,slow=7.7,SNR=3.5						
ILAR	**Eielson Array**	**56.18**	**29**	P	**P**	**09 43 40.0**	**+0.1**
	0.9nm,1.1s,baz=261,slow=7.0,SNR=4.5						
YKA	**Yellowknife Ar**	**70.58**	**28**	P	**P**	**09 45 15.9**	**+0.9**
	0.1nm,0.8s,baz=294,slow=5.3,SNR=5.3						
FINES	**FINESS Array B**	**74.97**	**333**	P	**P**	**09 45 40.9**	**-0.3**
	3.3nm,0.9s,baz=79,slow=7.2,SNR=5.7						
NVAR	**Mina Array Bea**	**80.08**	**51**	P	**P**	**09 46 12.2**	**+1.8**
	0.5nm,0.8s,baz=306,slow=5.0,SNR=4.2						
BRTR	**Keskin Array B**	**83.16**	**312**	P	**P**	**09 46 26.9**	**+0.3**
	0.7nm,0.8s,baz=48,slow=2.1,SNR=3.6						
PDAR	**Pinedale Array**	**83.41**	**44**	P	**P**	**09 46 27.9**	**+0.1**
	0.4nm,0.9s,baz=297,slow=4.0,SNR=3.6						
TXAR	**Lajitas Array**	**95.22**	**52**	P	**P**	**09 47 23.1**	**-1.1**
	0.3nm,0.9s,baz=270,slow=1.8,SNR=3.1						

*IDC **10** 09:51:53.7±1.8, 2°50S×121°16E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.2/21, mbtmp3.2/3, Error ellipse: s-maj=395.5km s-min=29.1km az=59.0*
*ISCJB **10** 09:51:56.2±0.7, 2°27S±0°08×121°2E±0°1, h33km, mb3.1/3, Error ellipse: s-maj=17.1km s-min=9.0km az=32.1*
*DJA **10** 09:51:57.0±0.6, 2°S±5°×12°1E±°, h57km±23km, M4.4/5, mb5.7/1, mB6.4/1, MLv3.8/5, Mw(mB)6.1/1*

ISC 10 09:51:56.6±1.5, 2°2S±0°1×121°0E±0°1, h35km, n11, σ1§51/9, mb3.2/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**1.48**	**235**	P	**Pn**	**09 52 21.4**	**+0.5**
LUWI	**Luwuk**	**2.07**	**56**	P	**Pn**	**09 52 28.3**	**-0.7**
SPSI	**Sidrap Palu**	**2.17**	**216**	P	**Pn**	**09 52 31.3**	**+1.0**
KDI	**Kendari**	**2.35**	**138**	P	Pn	09 52 37.7	+4.9
MRSI	**Marisa**	**2.80**	**19**	P	**Pn**	**09 52 39.2**	**+0.2**
KAPI	**Kappang**	**3.08**	**205**	P	**Pn**	**09 52 45.0**	**+2.1**
BKSI	**Bulukumba**	**3.24**	**196**	P	**Pn**	**09 52 46.8**	**+1.8**
BLJI	**Banyuglugur**	**9.24**	**233**	P	**Pn**	**09 54 06.3**	**-1.2**
WRA	**Warramunga Arr**	**21.91**	**145**	P	**P**	**09 56 45.8**	**-1.2**
	0.5nm,0.8s,baz=324,slow=11,SNR=4.0						
ASAR	**Alice Springs**	**24.71**	**151**	P	**P**	**09 57 13.8**	**-1.0**
	0.7nm,1.0s,baz=328,slow=9.4,SNR=5.1						
MKAR	**Makanchi Array**	**59.48**	**330**	P	P	10 02 00.8	+4.5
	0.2nm,0.7s,baz=139,slow=6.0,SNR=2.5						

*IDC **10** 09:58:10.6±3.8, 36°40S×178°02E, h157km±31km, mb3.4/2, mb1 3.7/2, mb1mx3.3/16, mbtmp3.4/2, Error ellipse: s-maj=50.2km s-min=32.0km az=28.0*
*WEL **10** 09:58:14.2±0.3, 36°62S×177°68E, h176km±4km, ML4.0/10, Error ellipse: s-maj=3.8km s-min=3.4km az=0.0*
*NEIC **10** 09:58:14.3, 36°65S×177°70E, h178km, MG4.1(WEL), After WEL.*
*ISCJB **10** 09:58:15.2±1.1, 37°10S±0°09×177°7E±0°1, h213km±6km, mb3.5/2, Error ellipse: s-maj=16.2km s-min=14.4km az=172.6*

ISC 10 09:58:14.6±1.0, 36°91S±0°10×177°74E±0°08, h202km±7km, n129, σ1§15/136, 1C-4D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.80**	**146**	PN	**Pn**	**09 58 42.0**	**-1.3**
MXZ				SN	**S**	**09 59 03.3**	**-2.3**
MXZ	**Matakaoa Point**	**0.80**	**146**	Pn	**Pn**	**09 58 42.0**	**-1.3**
PUZ	**Puketiti**	**1.24**	**161**	PN	**Pn**	**09 58 45.9**	**-0.4**
PUZ				SN	**S**	**09 59 10.6**	**-0.2**
PUZ	**Puketiti**	**1.24**	**161**	Pn	**Pn**	**09 58 45.9**	**-0.4**
PUZ				Sn	**S**	**09 59 10.6**	**-0.2**
OPRZ	**Ohinepanea**	**1.33**	**225**	PN	**Pn**	**09 58 46.2**	**-0.8**
OPRZ	**Ohinepanea**	**1.33**	**225**	Pn	**Pn**	**09 58 46.0**	**-1.0**
MARZ	**Manawahe**	**1.37**	**218**	PN	**Pn**	**09 58 47.0**	**-0.4**
MARZ	**Manawahe**	**1.37**	**218**	Pn	**Pn**	**09 58 47.0**	**-0.4**
MWZ	**Matawai**	**1.44**	**187**	PN	**Pn**	**09 58 47.8**	**-0.2**
MWZ				SN	**S**	**09 59 13.8**	**+0.1**
MWZ	**Matawai**	**1.44**	**187**	Pn	**Pn**	**09 58 47.8**	**-0.2**
URZ	**Urewera**	**1.44**	**200**	PN	**Pn**	**09 58 47.5**	**-0.4**
URZ				SN	**S**	**09 59 13.4**	**-0.3**
URZ	**Urewera**	**1.44**	**200**	Pn	**Pn**	**09 58 47.6**	**-0.4**
URZ	**Urewera**	**1.44**	**200**	P	**Pn**	**09 58 47.0**	**-0.9**
	17nm,0.3s,baz=331,slow=3.8,SNR=194						
URZ				S	**S**	**09 59 13.4**	**-0.3**
	27nm,0.3s,baz=37,slow=20,SNR=20						
CNGZ	**Carnagh Statio**	**1.62**	**167**	PN	**Pn**	**09 58 50.6**	**+1.1**
CNGZ	**Carnagh Statio**	**1.62**	**167**	Pn	**Pn**	**09 58 50.6**	**+1.1**
PRRZ	**Plateau Road**	**1.92**	**213**	PN	**Pn**	**09 58 52.8**	**+0.3**
PRRZ	**Plateau Road**	**1.92**	**213**	Pn	**Pn**	**09 58 53.1**	**+0.7**
TOZ	**Tahuroa Road**	**1.97**	**245**	PN	**Pn**	**09 58 52.9**	**0.0**
TOZ	**Tahuroa Road**	**1.97**	**245**	Pn	**Pn**	**09 58 52.6**	**-0.3**
PRGZ	**Paritu Road**	**2.02**	**177**	PN	**Pn**	**09 58 54.0**	**+0.6**
PRGZ	**Paritu Road**	**2.02**	**177**	Pn	**Pn**	**09 58 54.2**	**+0.7**
RAHZ	**Arahi**	**2.08**	**194**	PN	**Pn**	**09 58 54.8**	**+0.7**
RAHZ	**Arahi**	**2.08**	**194**	Pn	**Pn**	**09 58 54.8**	**+0.7**
KNZ	**Kokohu**	**2.11**	**181**	PN	**Pn**	**09 58 55.1**	**+0.7**
KNZ	**Kokohu**	**2.11**	**181**	Pn	**Pn**	**09 58 55.1**	**+0.7**
MHGZ	**Mahia Peninsul**	**2.25**	**177**	PN	**Pn**	**09 58 57.0**	**+1.1**
MHGZ	**Mahia Peninsul**	**2.25**	**177**	Pn	**Pn**	**09 58 57.0**	**+1.1**
NMHZ	**Naumai**	**2.31**	**198**	PN	**Pn**	**09 58 57.6**	**+1.0**
NMHZ	**Naumai**	**2.31**	**198**	Pn	**Pn**	**09 58 57.6**	**+1.0**
BKZ	**Black Stump Fm**	**2.46**	**203**	PN	**Pn**	**09 58 58.5**	**+0.2**
BKZ	**Black Stump Fm**	**2.46**	**203**	Pn	**Pn**	**09 58 58.5**	**+0.2**
MCHZ	**McNeill Hill**	**2.67**	**198**	PN	**Pn**	**09 59 01.5**	**+1.0**
MCHZ	**McNeill Hill**	**2.67**	**198**	Pn	**Pn**	**09 59 01.5**	**+1.0**
OTVZ	**Oturere**	**2.79**	**215**	PN	**Pn**	**09 59 02.8**	**+0.8**
OTVZ	**Oturere**	**2.79**	**215**	Pn	**Pn**	**09 59 02.8**	**+0.8**
HIZ	**Hauiti**	**2.80**	**234**	PN	**Pn**	**09 59 03.1**	**+1.2**
HIZ	**Hauiti**	**2.80**	**234**	Pn	**Pn**	**09 59 03.2**	**+1.2**
NGZ	**Ngauruhoe**	**2.83**	**216**	PN	**Pn**	**09 59 03.5**	**+1.1**
NGZ	**Ngauruhoe**	**2.83**	**216**	Pn	**Pn**	**09 59 03.5**	**+1.1**
WPVZ	**Whakapapa**	**2.88**	**216**	PN	**Pn**	**09 59 04.4**	**+1.4**
WPVZ	**Whakapapa**	**2.88**	**216**	Pn	**Pn**	**09 59 04.4**	**+1.4**
TUVZ	**Tukino**	**2.88**	**214**	PN	**Pn**	**09 59 03.7**	**+0.7**
TUVZ	**Tukino**	**2.88**	**214**	Pn	**Pn**	**09 59 03.7**	**+0.7**
BHHZ	**Black Hill Sta**	**2.90**	**207**	PN	**Pn**	**09 59 03.3**	**+0.1**
BHHZ	**Black Hill Sta**	**2.90**	**207**	Pn	**Pn**	**09 59 03.3**	**+0.1**
FWVZ	**Far West T-bar**	**2.91**	**216**	PN	**Pn**	**09 59 04.1**	**+0.5**
FWVZ	**Far West T-bar**	**2.91**	**216**	Pn	**Pn**	**09 59 04.0**	**+0.5**
MOVZ	**Moawhango**	**2.95**	**211**	PN	**Pn**	**09 59 03.8**	**0.0**
MOVZ	**Moawhango**	**2.95**	**211**	Pn	**Pn**	**09 59 03.8**	**0.0**
WNVZ	**Wahianoa**	**2.95**	**214**	PN	**Pn**	**09 59 04.4**	**+0.5**
WNVZ	**Wahianoa**	**2.95**	**214**	Pn	**Pn**	**09 59 04.4**	**+0.5**
KAHZ	**Kahuranaki**	**2.96**	**193**	⇓PN	**Pn**	**09 59 04.7**	**+0.7**
KAHZ	**Kahuranaki**	**2.96**	**193**	Pn	**Pn**	**09 59 04.7**	**+0.7**
PKVZ	**Pokaka**	**3.04**	**218**	PN	**Pn**	**09 59 05.6**	**+0.7**
PKVZ	**Pokaka**	**3.04**	**218**	Pn	**Pn**	**09 59 05.6**	**+0.7**
MTVZ	**Mangateitei**	**3.06**	**215**	PN	**Pn**	**09 59 05.8**	**+0.7**
MTVZ	**Mangateitei**	**3.06**	**215**	Pn	**Pn**	**09 59 05.8**	**+0.7**
PXZ	**Pawanui**	**3.20**	**192**	⇓PN	**Pn**	**09 59 06.9**	**+0.3**
PXZ	**Pawanui**	**3.20**	**192**	Pn	**Pn**	**09 59 06.9**	**+0.3**
PNHZ	**Pukenui**	**3.24**	**201**	PN	**Pn**	**09 59 06.8**	**-0.4**
PNHZ	**Pukenui**	**3.24**	**201**	Pn	**Pn**	**09 59 06.8**	**-0.4**
WPHZ	**Waipukurau**	**3.32**	**198**	PN	**Pn**	**09 59 08.3**	**+0.2**
WPHZ	**Waipukurau**	**3.32**	**198**	Pn	**Pn**	**09 59 08.3**	**+0.2**
TSZ	**Takapari Road**	**3.45**	**203**	PN	**Pn**	**09 59 09.3**	**-0.3**
TSZ	**Takapari Road**	**3.45**	**203**	Pn	**Pn**	**09 59 09.3**	**-0.3**
PRHZ	**Porangahau**	**3.47**	**194**	PN	**Pn**	**09 59 09.7**	**-0.2**
PRHZ	**Porangahau**	**3.47**	**194**	Pn	**Pn**	**09 59 09.7**	**-0.2**
WAZ	**Wanganui**	**3.58**	**216**	PN	**Pn**	**09 59 12.0**	**+0.8**
WAZ	**Wanganui**	**3.58**	**216**	Pn	**Pn**	**09 59 12.0**	**+0.8**
DVHZ	**Dannevirke**	**3.61**	**200**	PN	**Pn**	**09 59 11.3**	**-0.3**
DVHZ	**Dannevirke**	**3.61**	**200**	Pn	**Pn**	**09 59 11.3**	**-0.3**
POWZ	**Post Office Ro**	**3.81**	**203**	PN	**Pn**	**09 59 13.7**	**-0.4**
POWZ	**Post Office Ro**	**3.81**	**203**	Pn	**Pn**	**09 59 13.7**	**-0.4**
BFZ	**Birch Farm**	**3.95**	**197**	PN	**Pn**	**09 59 15.4**	**-0.4**
BFZ	**Birch Farm**	**3.95**	**197**	Pn	**Pn**	**09 59 15.4**	**-0.4**
MRZ	**Mangatainoka R**	**4.12**	**204**	⇑PN	**Pn**	**09 59 16.9**	**-0.9**
MRZ	**Mangatainoka R**	**4.12**	**204**	Pn	**Pn**	**09 59 16.9**	**-0.9**
TIWZ	**Tintock**	**4.13**	**200**	PN	**Pn**	**09 59 17.7**	**-0.3**
TIWZ	**Tintock**	**4.13**	**200**	Pn	**Pn**	**09 59 17.8**	**-0.3**
HOWZ	**Holdsworth Sta**	**4.35**	**203**	PN	**Pn**	**09 59 19.7**	**-1.1**
HOWZ	**Holdsworth Sta**	**4.35**	**203**	Pn	**Pn**	**09 59 19.7**	**-1.1**
OGWZ	**Otaki Gorge**	**4.39**	**206**	⇓PN	**Pn**	**09 59 20.4**	**-0.9**
OGWZ	**Otaki Gorge**	**4.39**	**206**	Pn	**Pn**	**09 59 20.4**	**-0.9**
TMWZ	**Te Maipa**	**4.44**	**198**	PN	**Pn**	**09 59 21.2**	**-0.8**
TMWZ	**Te Maipa**	**4.44**	**198**	Pn	**Pn**	**09 59 21.2**	**-0.8**
KIW	**Kapiti Island**	**4.53**	**208**	PN	**Pn**	**09 59 22.0**	**-1.1**
KIW	**Kapiti Island**	**4.53**	**208**	Pn	**Pn**	**09 59 22.0**	**-1.1**
MTW	**Mount Morrison**	**4.59**	**202**	PN	**Pn**	**09 59 22.4**	**-1.4**
MTW	**Mount Morrison**	**4.59**	**202**	Pn	**Pn**	**09 59 22.4**	**-1.4**
CAW	**Cannon Point**	**4.69**	**206**	PN	**Pn**	**09 59 23.6**	**-1.4**
CAW	**Cannon Point**	**4.69**	**206**	Pn	**Pn**	**09 59 23.6**	**-1.4**
TRWZ	**Traveller**	**4.76**	**199**	PN	**Pn**	**09 59 25.2**	**-0.8**
TRWZ	**Traveller**	**4.76**	**199**	Pn	**Pn**	**09 59 25.2**	**-0.8**
PAWZ	**Paruwai Farm**	**4.82**	**201**	PN	**Pn**	**09 59 25.6**	**-1.1**
PAWZ	**Paruwai Farm**	**4.82**	**201**	Pn	**Pn**	**09 59 25.6**	**-1.1**
DUWZ	**D'Urville Isla**	**4.90**	**216**	PN	**Pn**	**09 59 26.3**	**-1.5**
DUWZ	**D'Urville Isla**	**4.90**	**216**	Pn	**Pn**	**09 59 26.3**	**-1.5**
MSWZ	**Moikau Station**	**4.90**	**202**	PN	**Pn**	**09 59 26.4**	**-1.4**
MSWZ	**Moikau Station**	**4.90**	**202**	Pn	**Pn**	**09 59 26.4**	**-1.4**
WEL	**Wellington**	**4.95**	**207**	PN	**Pn**	**09 59 27.0**	**-1.3**
WEL	**Wellington**	**4.95**	**207**	Pn	**Pn**	**09 59 27.0**	**-1.3**
SNZO	**South Karori**	**4.99**	**207**	PN	**Pn**	**09 59 27.2**	**-1.6**
SNZO	**South Karori**	**4.99**	**207**	Pn	**Pn**	**09 59 27.2**	**-1.6**
PLWZ	**Palliser**	**5.04**	**202**	PN	**Pn**	**09 59 28.1**	**-1.5**
PLWZ	**Palliser**	**5.04**	**202**	Pn	**Pn**	**09 59 28.1**	**-1.5**
TCW	**Tory Channel**	**5.08**	**211**	PN	**Pn**	**09 59 28.4**	**-1.6**
TCW	**Tory Channel**	**5.08**	**211**	Pn	**Pn**	**09 59 28.4**	**-1.6**
TUWZ	**Tuamarina**	**5.40**	**212**	PN	**Pn**	**09 59 32.2**	**-1.9**
TUWZ	**Tuamarina**	**5.40**	**212**	Pn	**Pn**	**09 59 32.2**	**-1.9**
NNZ	**Nelson**	**5.48**	**217**	⇓PN	**Pn**	**09 59 33.7**	**-1.4**
NNZ	**Nelson**	**5.48**	**217**	Pn	**Pn**	**09 59 33.8**	**-1.4**
QRZ	**Quartz Range**	**5.65**	**224**	PN	**Pn**	**09 59 35.1**	**-2.2**
QRZ	**Quartz Range**	**5.65**	**224**	Pn	**Pn**	**09 59 35.1**	**-2.2**
BSWZ	**Blackbirch Sta**	**5.66**	**211**	PN	**Pn**	**09 59 36.7**	**-0.8**
BSWZ	**Blackbirch Sta**	**5.66**	**211**	Pn	**Pn**	**09 59 36.1**	**-1.4**
THZ	**Tophouse**	**6.13**	**216**	PN	**Pn**	**09 59 41.9**	**-1.7**
THZ	**Tophouse**	**6.13**	**216**	Pn	**Pn**	**09 59 41.9**	**-1.7**
KHZ	**Kahutara**	**6.39**	**209**	PN	**Pn**	**09 59 45.2**	**-1.6**
KHZ	**Kahutara**	**6.39**	**209**	Pn	**Pn**	**09 59 45.2**	**-1.6**
LTZ	**Lake Taylor**	**7.22**	**214**	PN	**Pn**	**09 59 55.1**	**-2.6**
LTZ	**Lake Taylor**	**7.22**	**214**	Pn	**Pn**	**09 59 55.1**	**-2.6**
MQZ	**McQueen's Vall**	**7.83**	**208**	PN	**Pn**	**10 00 02.4**	**-3.1**
MQZ	**McQueen's Vall**	**7.83**	**208**	Pn	**Pn**	**10 00 02.4**	**-3.1**
ODZ	**Otahua Downs**	**9.74**	**211**	PN	**Pn**	**10 00 28.5**	**-1.8**
ODZ	**Otahua Downs**	**9.74**	**211**	Pn	**Pn**	**10 00 28.5**	**-1.8**
ASAR	**Alice Springs**	**39.76**	**277**	P	**P**	**10 05 29.5**	**+1.6**
	1.2nm,0.5s,baz=119,slow=8.0,SNR=20						
WRA	**Warramunga Arr**	**41.36**	**282**	P	**P**	**10 05 42.0**	**+1.0**
	0.8nm,0.5s,baz=120,slow=7.8,SNR=18						
FINES	**FINESS Array B**	**149.70**	**333**	PKPbc	**PKPbc**	**10 17 39.2**	**-0.2**
	1.1nm,0.9s,baz=46,slow=4.0,SNR=3.0						
FINES				PKPab	**PKPab**	**10 17 44.9**	**-0.6**
	2.0nm,0.9s,baz=42,slow=4.3,SNR=7.1						
TORD	**Torodi Ar. Bea**	**156.08**	**190**	PKPab	**PKPab**	**10 18 16.5**	**+3.0**
	0.2nm,0.7s,baz=172,slow=3.0,SNR=4.9						

GUC 10 10:30:37.0±0.7, 28°79S×71°41W, h40km±4km, ML3.6, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VACH	**Vallenar**	**0.61**	**70**	⇓*iP*	Pn	10 30 41.8	-7.6
VACH				*

*UPP **10** 10:44:03.0, 51°.80N×15°.71E, h0km, ML2.2, Suspected Mining explosion.*

ISC 10 10:44:00.3±0.7, 51°.46N±0°.02×16°.10E±0°.02, h0km, n108, σ1§16/171, 2C-4D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**169**	*e*Pg	**Pg**	**10 44 13.0**	**+0.6**
KSP				*e*Sg	**Sg**	**10 44 22.3**	**+1.7**
KSP	**Ksiaz**	**0.63**	**169**	*e*	Pn	10 44 25.1	+8.6
KSP	**Ksiaz**	**0.63**	**169**	*e*Pg	**Pg**	**10 44 12.8**	**+0.4**
	baz=355						
KSP				*i* Sg	**Sg**	**10 44 22.3**	**+1.7**
UPC	**Upice**	**0.96**	**183**	*e*PG	**Pg**	**10 44 18.9**	**+0.3**
UPC	**Upice**	**0.96**	**183**	Pg	**Pg**	**10 44 18.9**	**+0.3**
DPC	**Dobruska-Polom**	**1.12**	**173**	*e*PG	**Pg**	**10 44 21.8**	**0.0**
DPC				*e*SG	**Sg**	**10 44 36.2**	**-0.1**
	comp=Z,120nm,0.7s						
DPC	**Dobruska-Polom**	**1.12**	**173**	Pg	**Pg**	**10 44 21.8**	**0.0**
DPC				*e*Sg	**Sg**	**10 44 36.9**	**+0.6**
	baz=356						
PVCC	**Panska Ves**	**1.34**	**226**	*e*PG	**Pg**	**10 44 25.4**	**-0.6**
PVCC				*e*SG	**Sg**	**10 44 44.5**	**+1.0**
	comp=Z,225nm,0.4s						
PVCC	**Panska Ves**	**1.34**	**226**	Pg	**Pg**	**10 44 25.4**	**-0.6**
PVCC				*e*Sg	**Sg**	**10 44 44.4**	**+1.0**
	baz=43						
KRLC	**Kraliky**	**1.46**	**162**	*e*PG	**Pn**	**10 44 27.4**	**-0.5**
KRLC				*e*SG	**Sg**	**10 44 47.7**	**+0.7**
KRLC	**Kraliky**	**1.46**	**162**	Pg	**Pn**	**10 44 27.4**	**-0.5**
KRLC				Sg	**Sg**	**10 44 47.7**	**+0.7**
BRG	**Berggiesshubel**	**1.48**	**247**	PB	**Pn**	**10 44 26.2**	**-1.9**
BRG				PG	**Pb**	**10 44 27.7**	**-0.9**
BRG				SG	**Sg**	**10 44 48.2**	**+0.5**
	161nm,0.5s						
BRG	**Berggiesshubel**	**1.48**	**247**	*e*Pn	**Pn**	**10 44 26.5**	**-1.6**
BRG				*e*Pg	**Pn**	**10 44 28.0**	**-0.1**
BRG				*e*Sg	**Sg**	**10 44 48.3**	**+0.5**
BRG	**Berggiesshubel**	**1.48**	**247**	Pn	**Pn**	**10 44 26.5**	**-1.6**
BRG	**Berggiesshubel**	**1.48**	**247**	Pg	**Pn**	**10 44 28.0**	**-0.1**
BRG				Sg	**Sg**	**10 44 48.3**	**+0.5**
PRU	**Pruhonice**	**1.78**	**214**	*e*PG	**Pn**	**10 44 33.0**	**+0.8**
PRU				*e*SG	**Sb**	**10 44 57.0**	**+0.5**
	comp=Z,70nm,0.4s						
PRU	**Pruhonice**	**1.78**	**214**	Pg	**Pn**	**10 44 33.0**	**+0.8**
PRU				Sg	**Sb**	**10 44 57.0**	**+0.5**
	70nm,0.4s						
FBE	**Freiberg**	**1.81**	**254**	*e*Pn	**Pn**	**10 44 31.8**	**-0.9**
FBE				*e*Sg	**Sg**	**10 44 59.1**	**+0.7**
FBE	**Freiberg**	**1.81**	**254**	Pn	**Pn**	**10 44 31.8**	**-0.9**
MORC	**Moravsky Berou**	**1.92**	**151**	*e*Pn	**Pn**	**10 44 33.2**	**-1.1**
	baz=335						
MORC				*e*Sg	**Sb**	**10 45 01.1**	**+0.3**
	58nm,0.3s,baz=335						
GKP	**Gorka Klasztor**	**1.94**	**21**	*e*Pg	**Pg**	**10 44 39.1**	**+1.7**
GKP				*e*Sg	**Sg**	**10 45 02.5**	**0.0**
GKP	**Gorka Klasztor**	**1.94**	**21**	*e*Pg	**Pg**	**10 44 39.2**	**+1.8**
GKP				*e*Sg	**Sg**	**10 45 02.6**	**0.0**
CLL	**Collm**	**1.94**	**267**	*e*Pn	**Pn**	**10 44 32.5**	**-2.0**
CLL				*e*Sg	**Sb**	**10 45 02.1**	**+0.8**
CLL	**Collm**	**1.94**	**267**	*i* Pn	**Pn**	**10 44 32.6**	**-1.9**
CLL				*i* Pg	**Pb**	**10 44 36.1**	**-0.4**
CLL				*i*		10 44 39.3	
CLL				*i* Sg	**Sb**	**10 45 02.6**	**+1.3**
	comp=Z,95nm,0.5s						
CLL				*e*		10 45 08.0	
CLL	**Collm**	**1.94**	**267**	Pn	**Pn**	**10 44 32.5**	**-2.0**
CLL				Sg	**Sb**	**10 45 02.1**	**+0.8**
OKC	**Ostrava-Krasne**	**2.09**	**140**	*e*PG	**Pb**	**10 44 39.5**	**+0.5**
OKC				*e*SG	**Sb**	**10 45 06.2**	**+0.8**
OKC	**Ostrava-Krasne**	**2.09**	**140**	Pg	**Pb**	**10 44 39.5**	**+0.5**
OKC				Sg	**Sb**	**10 45 06.2**	**+0.8**
VRAC	**Vranov**	**2.18**	**171**	Pn	**Pn**	**10 44 37.6**	**-0.2**
	comp=Z,5.9nm,0.3s,baz=343,slow=16,SNR=11						
VRAC				Lg	Lg	10 45 10.5	
	comp=Z,9.3nm,0.3s,baz=323,slow=20,SNR=11						
VRAC	**Vranov**	**2.18**	**171**	*e*Pn	**Pn**	**10 44 37.2**	**-0.6**
	baz=354						
VRAC				*e*Sg	**Sb**	**10 45 09.9**	**+1.8**
	comp=Z,130nm,0.8s,baz=354						
TREC	**Trest**	**2.21**	**190**	*e*PG	**Pb**	**10 44 41.8**	**+0.8**
TREC	**Trest**	**2.21**	**190**	Pg	**Pb**	**10 44 41.8**	**+0.8**
KRUC	**Moravsky**	**2.41**	**175**	*e*Pn	**Pn**	**10 44 40.8**	**-0.1**
	baz=357						
KRUC				*e*Sg	**Sg**	**10 45 17.6**	**-0.1**
	comp=Z,43nm,0.5s,baz=357						
SCHF	**Schoenfels**	**2.46**	**253**	*e*Sg	**Sg**	**10 45 19.7**	**+0.5**
SCHF	**Schoenfels**	**2.46**	**253**	Sg	**Sg**	**10 45 19.7**	**+0.5**
HKWD	**Heukewalde**	**2.49**	**257**	*e*Pn	**Pn**	**10 44 40.9**	**-1.1**
HKWD				*e*Sg	**Sb**	**10 45 19.3**	**+2.2**
HKWD	**Heukewalde**	**2.49**	**257**	Pn	**Pn**	**10 44 40.9**	**-1.1**
HKWD				Sg	**Sb**	**10 45 19.3**	**+2.2**
TANN	**Tannenbergstha**	**2.53**	**247**	*e*Pn	**Pn**	**10 44 41.9**	**-0.7**
TANN				*e*Sg	**Sg**	**10 45 20.8**	**-0.6**
TANN	**Tannenbergstha**	**2.53**	**247**	Pn	**Pn**	**10 44 41.9**	**-0.7**
TANN				Sg	**Sg**	**10 45 20.8**	**-0.6**
MULD	**Muldenberg**	**2.56**	**247**	*e*Pn	**Pn**	**10 44 42.2**	**-0.9**
MULD				*e*Pg	**Pb**	**10 44 48.5**	**+1.5**
MULD				*e*Sg	**Sg**	**10 45 21.8**	**-0.7**
MULD	**Muldenberg**	**2.56**	**247**	Pn	**Pn**	**10 44 42.2**	**-0.9**
WERD	**Werda**	**2.60**	**248**	*e*Pn	**Pn**	**10 44 42.6**	**-1.0**
WERD				*e*Sg	**Sb**	**10 45 22.1**	**+1.8**
WERD	**Werda**	**2.60**	**248**	Pn	**Pn**	**10 44 42.6**	**-1.0**
WERD				Sg	**Sb**	**10 45 22.1**	**+1.8**
NKC	**Novy Kostel**	**2.62**	**243**	*e*Pn	**Pn**	**10 44 43.6**	**-0.2**
NKC				*e*Sg	**Sg**	**10 45 25.5**	**+1.1**
NKC	**Novy Kostel**	**2.62**	**243**	*e*PG	**Pb**	**10 44 49.4**	**+1.3**
NKC				*e*SG	**Sg**	**10 45 24.4**	**0.0**
	comp=Z,134nm,0.4s						
NKC	**Novy Kostel**	**2.62**	**243**	Pn	**Pn**	**10 44 43.6**	**-0.2**
NKC	**Novy Kostel**	**2.62**	**243**	Pg	**Pb**	**10 44 49.4**	**+1.3**
NKC				Sg	**Sg**	**10 45 24.4**	**0.0**
	comp=Z,134nm,0.4s						
GUNZ	**Gunzen**	**2.62**	**247**	*e*Pn	**Pn**	**10 44 43.1**	**-0.8**
GUNZ				*e*Sg	**Sg**	**10 45 23.7**	**-0.8**
GUNZ	**Gunzen**	**2.62**	**247**	Pn	**Pn**	**10 44 43.1**	**-0.8**
GUNZ				Sg	**Sg**	**10 45 23.7**	**-0.8**
WERN	**Wernitzgruen**	**2.63**	**245**	*e*Pn	**Pn**	**10 44 43.6**	**-0.5**
WERN				*e*Pg	**Pb**	**10 44 49.4**	**+1.1**
WERN				*e*Sg	**Sb**	**10 45 23.7**	**+2.5**
WERN	**Wernitzgruen**	**2.63**	**245**	Pn	**Pn**	**10 44 43.6**	**-0.5**
OJC	**Ojcow**	**2.66**	**117**	*e*Pn	Pn	10 44 41.4	-2.9
OJC				*e*Pg	**Pb**	**10 44 50.5**	**+1.8**
OJC				*e*Sn	**Sn**	**10 45 16.2**	**-1.0**
OJC				*e*Sg	**Sg**	**10 45 25.4**	**-0.2**
OJC	**Ojcow**	**2.66**	**117**	*e*Pn	Pn	10 44 41.4	-2.9
PLN	**Plauen**	**2.67**	**250**	*e*Pn	**Pn**	**10 44 43.6**	**-1.0**
PLN				*e*Sg	**Sb**	**10 45 25.0**	**+2.6**
PLN	**Plauen**	**2.67**	**250**	Pn	**Pn**	**10 44 43.6**	**-1.0**
PLN				Sg	**Sb**	**10 45 25.0**	**+2.6**
NEUB	**Neuenburg**	**2.72**	**266**	*e*Sg	**Sg**	**10 45 26.8**	**-0.8**
NEUB	**Neuenburg**	**2.72**	**266**	Sg	**Sg**	**10 45 26.8**	**-0.8**
TRIB	**Obertriebel**	**2.74**	**248**	*e*Pn	**Pn**	**10 44 44.4**	**-1.1**
TRIB				*e*Sg	**Sg**	**10 45 27.6**	**-0.7**
TRIB	**Obertriebel**	**2.74**	**248**	Pn	**Pn**	**10 44 44.4**	**-1.1**
TRIB				Sg	**Sg**	**10 45 27.6**	**-0.7**
TAUT	**Tautenburg**	**2.80**	**262**	*e*Pn	**Pn**	**10 44 45.0**	**-1.3**
TAUT				*e*Sg	**Sb**	**10 45 28.3**	**+2.4**
TAUT	**Tautenburg**	**2.80**	**262**	Pn	**Pn**	**10 44 45.0**	**-1.3**
TAUT				Sg	**Sb**	**10 45 28.3**	**+2.4**
KHC	**Kasperske Hory**	**2.84**	**216**	*e*PN	**Pn**	**10 44 45.5**	**-1.4**
KHC				*e*PG	**Pb**	**10 44 52.6**	**+0.8**
KHC				*e*SG	**Sb**	**10 45 30.1**	**+3.0**
	comp=Z,30nm,0.5s						
KHC	**Kasperske Hory**	**2.84**	**216**	Pn	**Pn**	**10 44 45.5**	**-1.4**
KHC	**Kasperske Hory**	**2.84**	**216**	Pg	**Pb**	**10 44 52.6**	**+0.8**
KHC				Sg	**Sb**	**10 45 30.1**	**+3.0**
	comp=Z,30nm,0.5s						
WIMM	**Wimmelburg**	**2.87**	**273**	Pn	**Pn**	**10 44 47.1**	**-0.1**
WIMM				Sg	**Sg**	**10 45 32.5**	**+0.1**
MOX	**Moxa**	**2.94**	**256**	*e*Pn	**Pn**	**10 44 47.0**	**-1.3**
MOX				*e*Sg	**Sg**	**10 45 35.0**	**+0.2**
MOX	**Moxa**	**2.94**	**256**	Pn	**Pn**	**10 44 47.0**	**-1.3**
MOX				Sg	**Sg**	**10 45 35.0**	**+0.2**
ROTZ	**Rotzenmuhle**	**3.00**	**237**	*e*Pn	**Pn**	**10 44 48.7**	**-0.4**
ROTZ				*e*Sg	**Sg**	**10 45 35.8**	**-0.9**
ROTZ	**Rotzenmuhle**	**3.00**	**237**	Pn	**Pn**	**10 44 48.7**	**-0.4**
ROTZ				Sg	**Sg**	**10 45 35.8**	**-0.9**
GEC2	**GERESS Array S**	**3.04**	**211**	*e*Pn	**Pn**	**10 44 50.0**	**+0.3**
GEC2	**GERESS Array S**	**3.04**	**211**	Pn	**Pn**	**10 44 50.0**	**+0.3**
GERES	**GERESS Array B**	**3.04**	**211**	Pn	**Pn**	**10 44 49.1**	**-0.6**
	comp=Z,2.9nm,0.3s,baz=31,slow=12,SNR=78						
GERES				Sn	**Sn**	**10 45 25.9**	**-0.9**
	comp=Z,2.9nm,0.3s,baz=24,slow=24,SNR=5.9						
GERES				Lg	Lg	10 45 36.7	
	comp=Z,5.8nm,0.3s,baz=32,slow=27,SNR=7.8						
SMOL	**Smolenice**	**3.08**	**163**	*e*	**Pg**	**10 44 58.9**	**-0.3**
WET	**Wettzell**	**3.11**	**223**	*e*Pn	**Pn**	**10 44 50.2**	**-0.3**
WET				*e*Sg	**Sg**	**10 45 38.9**	**-1.1**
WET	**Wettzell**	**3.11**	**223**	Pn	**Pn**	**10 44 50.2**	**-0.3**
WET				Sg	**Sg**	**10 45 38.9**	**-1.1**
SCHD	**Schmiedefeld**	**3.22**	**255**	*e*Pn	**Pn**	**10 44 50.6**	**-1.5**
SCHD				*e*Sg	**Sg**	**10 45 43.1**	**-0.6**
SCHD	**Schmiedefeld**	**3.22**	**255**	Pn	**Pn**	**10 44 50.6**	**-1.5**
SCHD				Sg	**Sg**	**10 45 43.1**	**-0.6**
NIE	**Niedzica**	**3.38**	**126**	*e*P	**Pb**	**10 45 03.8**	**+2.7**
NIE				*e*S	**Sg**	**10 45 47.8**	**-1.1**
VYHS	**Vyhne**	**3.46**	**148**	*e*PN	**Pn**	**10 44 54.2**	**-1.1**
VYHS				*e*		10 45 02.2	
VYHS	**Vyhne**	**3.46**	**148**	*e*Pn	**Pn**	**10 44 54.2**	**-1.1**
VYHS				*e*Sg	**Sg**	**10 45 50.2**	**-1.1**
CONA	**Conrad Observa**	**3.54**	**183**	⇓*i*Pn	**Pn**	**10 44 56.3**	**-0.3**
CONA				⇓*i*Sg	**Sg**	**10 45 52.7**	**-1.3**
	comp=Z,62nm,0.7s						
CONA	**Conrad Observa**	**3.54**	**183**	Pn	**Pn**	**10 44 56.3**	**-0.3**
CONA				Sg	**Sg**	**10 45 52.7**	**-1.3**
	comp=Z,62nm,0.7s						
GRA1	**Grafenberg Arr**	**3.58**	**242**	Pn	**Pn**	**10 44 56.4**	**-0.6**
GRA1				Sg	**Sg**	**10 45 54.7**	**-0.4**
GRF	**Grafenberg Arr**	**3.58**	**242**	*e*Pn	**Pn**	**10 44 56.4**	**-0.6**
GRF				*e*Sg	**Sg**	**10 45 54.7**	**-0.4**
MOA	**Molln**	**3.81**	**199**	⇑*i*Pn	**Pn**	**10 45 00.2**	**0.0**
MOA				⇓*i*Sg	**Sg**	**10 46 01.9**	**-0.6**
	comp=Z,50nm,0.6s						
MOA	**Molln**	**3.81**	**199**	Pn	**Pn**	**10 45 00.2**	**0.0**
MOA				Sg	**Sg**	**10 46 01.9**	**-0.6**
	comp=Z,50nm,0.6s						
CRVS	**Cervenica-Dubn**	**4.30**	**125**	*e*PN	**Pn**	**10 45 06.2**	**-0.7**
CRVS				*e*		10 45 22.0	
CRVS	**Cervenica-Dubn**	**4.30**	**125**	*e*Pn	**Pn**	**10 45 06.2**	**-0.7**
CRVS				*e*Sg	**Sg**	**10 46 17.1**	**-1.1**
KWP	**Kalwaria Pacla**	**4.60**	**111**	*e*Pb	**Pb**	**10 45 24.3**	**+2.5**
KWP				*e*Sn	**Sb**	**10 46 16.5**	**-1.1**
KWP				*e*Sg	Sg	10 46 37.5	+10
KWP	**Kalwaria Pacla**	**4.60**	**111**	*e*Pb	**Pb**	**10 45 24.4**	**+2.6**
KOLS	**Kolonicke sedl**	**4.71**	**120**	*e*PN	**Pn**	**10 45 11.5**	**-1.0**
KOLS				*e*		10 45 29.4	
KOLS	**Kolonicke sedl**	**4.71**	**120**	*e*Pn	**Pn**	**10 45 11.5**	**-1.0**
KOLS				*e*Sg	**Sg**	**10 46 29.1**	**-2.3**
KBA	**Koelnbreinsper**	**4.74**	**203**	⇓*i*Pn	**Pn**	**10 45 13.1**	**-0.1**
KBA				⇓*i*Sg	**Sg**	**10 46 32.3**	**-0.3**
	comp=Z,21nm,0.6s						
KBA	**Koelnbreinsper**	**4.74**	**203**	Pn	**Pn**	**10 45 13.1**	**-0.1**
KBA				Sg	**Sg**	**10 46 32.3**	**-0.3**
	comp=Z,21nm,0.6s						
BLEU	**Blekinge**	**4.85**	**358**	P	Pn	10 45 11.1	-3.3
DEL	**Delary**	**5.19**	**346**	P	Pn	10 45 15.1	-3.9
DEL				S	Sn	10 46 11.8	-7.7
VXJU	**Vaexsjoe**	**5.51**	**353**	P	Pn	10 45 20.2	-3.3
ASPU	**Aespoe**	**5.97**	**3**	P	Pn	10 45 27.3	-2.5
GNOU	**Gnosjoe**	**6.00**	**348**	P	Pn	10 45 26.4	-3.8
EKSU	**Eksjoe**	**6.14**	**356**	P	Pn	10 45 28.8	-3.3
DAVOX	**Davos/Dischmat**	**6.21**	**223**	Pn	**Pn**	**10 45 33.5**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=30,slow=12,SNR=5.0						
DAVOX				Sn	**Sn**	**10 46 44.1**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=42,slow=18,SNR=2.6						
DAVOX				Lg	Lg	10 47 17.5	
	comp=Z,0.7nm,0.3s,baz=43,slow=14,SNR=3.7						
VSTU	**Vaestervik**	**6.21**	**2**	P	Pn	10 45 30.1	-3.0
FKPU	**Falk**	**6.85**	**349**	P	**Pn**	**10 45 39.4**	**-2.5**
VIKU	**Vikbolandet**	**7.06**	**3**	P	Pn	10 45 41.5	-3.3
AKASG	**Malin Array Be**	**8.30**	**90**	Pn	Pn	10 45 58.2	-3.6
	comp=Z,1.5nm,0.3s,baz=279,slow=12,SNR=7.5						
NOA	**NORSAR Array B**	**9.97**	**346**	Pn	Pn	10 46 21.0	-3.7
	comp=Z,0.1nm,0.3s,baz=165,slow=14,SNR=2.7						
FINES	**FINESS Array B**	**11.41**	**25**	Pn	Pn	10 46 39.3	-4.9
	comp=Z,0.2nm,0.3s,baz=217,slow=10,SNR=10						
FINES				Sn	Sn	10 48 40.8	-12
	comp=Z,0.3nm,0.3s,baz=213,slow=20,SNR=5.6						
ARCES	**ARCESS Array B**	**18.67**	**10**	Pn	P	10 48 12.6	-6.9
	comp=Z,0.2nm,0.3s,baz=197,slow=12,SNR=10						
YKA	**Yellowknife Ar**	**59.90**	**336**	P	**P**	**10 54 05.5**	**-1.8**
	comp=Z,0.4nm,0.6s,baz=30,slow=6.7,SNR=8.7						

*DDA **10** 10:48:57.4, 35°.80N×27°.63E, h29km, MD3.2*
*ISK **10** 10:49:00.6, 36°.01N×27°.81E, h53km, MD3.7, ML3.7*
*ISCJB **10** 10:49:00.5±0.2, 36°.00N±0°.02×27°.94E±0°.02, h79km±6km, Error ellipse: s-maj=3.3km s-min=2.8km az=44.0*
*ATH **10** 10:49:02.5, 36°.25N×27°.60E, h27km±2km, MD3.3/5*
*CSEM **10** 10:49:02.1±0.1, 35°.99N×27°.97E, h60km, ML3.2/1, Error ellipse: s-maj=2.9km s-min=2.5km az=119.0*
*HLW **10** 10:49:04.7, 35°.65N×28°.06E, h33km±25km, Md4.0, Ml3.2*
*THE **10** 10:49:04.7, 36°.10N×27°.78E, h37km±4km, ML3.2/1, Error ellipse: s-maj=4.4km s-min=0.9km az=114.0*

ISC 10 10:49:01.9±1.0, 36°.06N±0°.03×27°.91E±0°.03, h58km±7km, n172, σ1§40/218, 1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.23**	**48**	P	Pn	**10 49 12.0**	**+0.7**
ARG				S	**Sn**	**10 49 18.7**	**+0.6**
ARG	**Arkhangelos**	**0.23**	**48**	⇓*i*PB	**Pn**	**10 49 12.0**	**+0.7**
ARG				*e*SB	**Sn**	**10 49 18.7**	**+0.6**
ARG	**Arkhangelos**	**0.23**	**48**	P	**Pn**	**10 49 12.0**	**+0.7**
ARG				S	**Sn**	**10 49 18.7**	**+0.6**
KARP	**Karpathos**	**0.80**	**230**	*e*PN	**Pn**	**10 49 18.0**	**+0.7**
KARP				*e*SN	**Sn**	**10 49 29.4**	**+0.8**
KARP	**Karpathos**	**0.80**	**230**	*e*Pn	**Pn**	**10 49 18.0**	**+0.7**
KARP				*e*Sn	**Sn**	**10 49 29.4**	**+0.8**
TURN	**Turunc**	**0.98**	**34**	*i* P	**Pn**	**10 49 18.0**	**-1.6**
TURN				*i* S	**Sn**	**10 49 29.7**	**-3.0**
TURN	**Turunc**	**0.98**	**34**	*i* P	**Pn**	**10 49 18.0**	**-1.6**
TURN				*i* S	**Sn**	**10 49 29.7**	**-3.0**
FETY	**Fethiye**	**1.10**	**59**	*e*PN	**Pn**	**10 49 22.0**	**+0.7**
FETY				*e*SN	**Sn**	**10 49 37.1**	**+1.5**
FETY	**Fethiye**	**1.10**	**59**	*e*Pn	**Pn**	**10 49 22.0**	**+0.7**
FETY				*e*Sn	**Sn**	**10 49 37.1**	**+1.5**
YER	**Yerkesik**	**1.11**	**15**	*e*PN	**Pn**	**10 49 22.4**	**+1.0**
YER				*e*SN	**Sn**	**10 49 37.2**	**+1.3**
YER	**Yerkesik**	**1.11**	**15**	*e*Pn	**Pn**	**10 49 22.4**	**+1.0**
YER				*e*Sn	**Sn**	**10 49 37.2**	**+1.3**
MLSB	**Milas**	**1.23**	**355**	*e*PN	**Pn**	**10 49 23.3**	**+0.3**
MLSB				*e*SN	**Sn**	**10 49 39.2**	**+0.4**
MLSB	**Milas**	**1.23**	**355**	*e*Pn	**Pn**	**10 49 23.3**	**+0.3**
MLSB				*e*Sn	**Sn**	**10 49 39.2**	**+0.4**
AYDN	**Tasoluk**	**1.59**	**359**	*i* P	**Pn**	**10 49 29.2**	**+1.3**
AYDN				*i* S	**Sn**	**10 49 48.2**	**+0.8**
AYDN	**Tasoluk**	**1.59**	**359**	*i* P	**Pn**	**10 49 29.2**	**+1.3**
AYDN				*i* S	**Sn**	**10 49 48.2**	**+0.8**
ZKR	**Zakros**	**1.68**	**236**	P	**Pn**	**10 49 30.4**	**+1.5**
ZKR				S	**Sn**	**10 49 50.6**	**+1.3**
ZKR	**Zakros**	**1.68**	**236**	*e*PN	**Pn**	**10 49 31.1**	**+2.2**
ZKR				*e*SN	**Sn**	**10 49 52.1**	**+2.8**
ZKR	**Zakros**	**1.68**	**236**	P	**Pn**	**10 49 30.4**	**+1.5**
ZKR	**Zakros**	**1.68**	**236**	*e*Pn	**Pn**	**10 49 31.1**	**+2.2**
ZKR				S	**Sn**	**10 49 50.6**	**+1.3**
ZKR				*e*Sn	Sn	10 49 52.1	+2.7
GLHS	**Glhisar (BURDU**	**1.68**	**49**	*e*PN	**Pn**	**10 49 30.3**	**+1.2**
GLHS	**Glhisar (BURDU**	**1.68**	**49**	*e*Pn	**Pn**	**10 49 30.3**	**+1.2**
GCAM	**G?zelcaml?**	**1.72**	**342**	*i* P	**Pn**	**10 49 30.4**	**+0.9**
GCAM				*i* S	**Sn**	**10 49 51.1**	**+0.6**
GCAM	**G?zelcaml?**	**1.72**	**342**	*i* P	**Pn**	**10 49 30.4**	**+0.9**
GCAM				*i* S	**Sn**	**10 49 51.1**	**+0.6**
ELL	**Elmali**	**1.75**	**66**	*e*PN	**Pn**	**10 49 30.6**	**+0.7**
ELL	**Elmali**	**1.75**	**66**	*e*Pn	**Pn**	**10 49 30.7**	**+0.7**
GOLH	**Golhisar**	**1.77**	**48**	*i* P	**Pn**	**10 49 32.4**	**+2.1**
GOLH				*i* S	**Sn**	**10 49 55.9**	**+4.2**
GOLH	**Golhisar**	**1.77**	**48**	*i* P	**Pn**	**10 49 32.4**	**+2.1**
GOLH				*i* S	**Sn**	**10 49 55.9**	**+4.2**
DNZL	**Cakiroluk**	**1.86**	**29**	*e*P	**Pn**	**10 49 32.9**	**+1.3**
DNZL				*i* S	Sn	10 50 00.9	+6.8
DNZL	**Cakiroluk**	**1.86**	**29**	*e*P	**Pn**	**10 49 32.9**	**+1.3**
DENT	**Denizli**	**1.91**	**28**	*e*PN	**Pn**	**10 49 32.9**	**+0.7**
DENT	**Denizli**	**1.91**	**28**	*e*Pn	**Pn**	**10 49 32.9**	**+0.7**
THR1	**Thera Island**	**2.01**	**280**	P	**Pn**	**10 49 34.2**	**+0.7**
THR1				S	**Sn**	**10 49 56.4**	**-1.1**
THR1	**Thera Island**	**2.01**	**280**	P	**Pn**	**10 49 34.2**	**+0.7**
NPS	**Neapolis**	**2.04**	**248**	P	**Pn**	**10 49 34.5**	**+0.7**
NPS				S	**Sn**	**10 49 57.8**	**-0.4**
NPS	**Neapolis**	**2.04**	**248**	*e*PN	**Pn**	**10 49 34.5**	**+0.7**
NPS	**Neapolis**	**2.04**	**248**	P	**Pn**	**10 49 34.5**	**+0.7**
NPS				S	**Sn**	**10 49 57.8**	**-0.4**
THR2	**Thira island,**	**2.04**	**282**	P	**Pn**	**10 49 34.8**	**+1.0**
THR2	**Thira island,**	**2.04**	**282**	P	**Pn**	**10 49 34.8**	**+1.0**
THR6	**Thira Island,**	**2.06**	**279**	P	**Pn**	**10 49 34.4**	**+0.3**
THR6	**Thira Island,**	**2.06**	**279**	P	**Pn**	**10 49 34.4**	**+0.3**
APE	**Apeiranthos**	**2.17**	**298**	*e*PN	**Pn**	**10 49 35.1**	**-0.5**
APE	**Apeiranthos**	**2.17**	**298**	P	**Pn**	**10 49 36.6**	**+1.0**
APE				S	**Sn**	**10 50 01.1**	**-0.2**
APE	**Apeiranthos**	**2.17**	**298**	*e*Pn	**Pn**	**10 49 35.1**	**-0.5**
APE	**Apeiranthos**	**2.17**	**298**	P	**Pn**	**10 49 36.6**	**+1.0**
XRY	**Khrisi**	**2.17**	**237**	*e*PN	**Pn**	**10 49 37.2**	**+1.7**
XRY	**Khrisi**	**2.17**	**237**	*e*Pn	**Pn**	**10 49 37.2**	**+1.7**
LAST	**Lasithi**	**2.18**	**246**	P	**Pn**	**10 49 36.7**	**+0.9**
LAST				S	**Sn**	**10 50 01.7**	**0.0**
LAST	**Lasithi**	**2.18**	**246**	*e*PN	**Pn**	**10 49 36.7**	**+0.9**
LAST	**Lasithi**	**2.18**	**246**	P	**Pn**	**10 49 36.7**	**+0.9**
LAST				S	**Sn**	**10 50 01.7**	**0.0**
ANTB	**Antalya**	**2.36**	**68**	*e*PN	**Pn**	**10 49 39.4**	**+1.2**
ANTB	**Antalya**	**2.36**	**68**	*e*Pn	**Pn**	**10 49 39.4**	**+1.2**
IZM	**Izmir**	**2.39**	**348**	*e*PN	**Pn**	**10 49 39.1**	**+0.5**
IZM	**Izmir**	**2.39**	**348**	*e*Pn	**Pn**	**10 49 39.1**	**+0.5**
BLCB	**Balcova**	**2.42**	**344**	*e*PN	**Pn**	**10 49 39.4**	**+0.4**
BLCB	**Balcova**	**2.42**	**344**	*e*Pn	**Pn**	**10 49 39.4**	**+0.4**
KULA	**Kula-Manisa**	**2.52**	**13**	*e*PN	**Pn**	**10 49 41.3**	**+0.8**
KULA	**Kula-Manisa**	**2.52**	**13**	*e*Pn	**Pn**	**10 49 41.3**	**+0.8**
URLA	**Izmir**	**2.52**	**336**	*i* P	**Pn**	**10 49 41.1**	**+0.6**
URLA				*i* S	**Sn**	**10 50 10.2**	**+0.1**
URLA	**Izmir**	**2.52**	**336**	*i* P	**Pn**	**10 49 41.1**	**+0.6**
URLA				*i* S	**Sn**	**10 50 10.2**	**+0.1**
BCK	**Bucak**	**2.56**	**56**	*e*PN	**Pn**	**10 49 42.7**	**+1.6**
BCK	**Bucak**	**2.56**	**56**	*e*Pn	**Pn**	**10 49 42.7**	**+1.6**
IDI	**Anoyia**	**2.58**	**253**	P	**Pn**	**10 49 41.8**	**+0.5**
IDI				S	**Sn**	**10 50 10.6**	**-0.9**
IDI	**Anoyia**	**2.58**	**253**	P	**Pn**	**10 49 41.8**	**+0.5**
IDI				S	**Sn**	**10 50 10.6**	**-0.9**
KHL	**Karahalli**	**2.60**	**29**	*e*PN	**Pn**	**10 49 42.8**	**+1.3**
KHL	**Karahalli

HSAF	**As Saff**	**7.12 154**	P		**Pn**	**10 50 41.6**	**-1.8**
	baz=152						
HSAF	**As Saff**	**7.12 154**	P		**Pn**	**10 50 41.7**	**-1.8**
GLL	**Jalalah**	**7.21 153**	P		**Pn**	**10 50 42.6**	**-2.2**
	baz=152						
GLL	**Jalalah**	**7.21 153**	P		**Pn**	**10 50 42.6**	**-2.2**
SUZ		**7.46 145**	P		**Pn**	**10 50 46.4**	**-1.6**
	baz=143						
SUZ		**7.46 145**	P		**Pn**	**10 50 46.4**	**-1.6**
ZAF		**7.81 149**	P		**Pn**	**10 50 51.5**	**-1.3**
	baz=147						
ZAF		**7.81 149**	P		**Pn**	**10 50 51.5**	**-1.3**
ZNM		**7.87 147**	P		**Pn**	**10 50 51.9**	**-1.8**
	baz=145						
ZNM		**7.87 147**	P		**Pn**	**10 50 51.9**	**-1.8**
HNKL	**Nakhl**	**7.96 139**	P		**Pn**	**10 50 53.2**	**-1.7**
	baz=137						
HNKL			AMP			10 52 00.0	
	comp=N,10µm,0.6s,logA/T=4.2,baz=137						
HNKL	**Nakhl**	**7.96 139**	P		**Pn**	**10 50 53.2**	**-1.7**
HFRF	**Wahat Farafira**	**8.89 178**	P		**Pn**	**10 51 05.9**	**-1.8**
	baz=178						
HFRF	**Wahat Farafira**	**8.89 178**	P		**Pn**	**10 51 05.9**	**-1.8**
TR2		**9.10 146**	P		**Pn**	**10 51 09.4**	**-1.1**
	baz=144						
TR2		**9.10 146**	P		**Pn**	**10 51 09.4**	**-1.1**

IDC 10 10:50:30.4±52.0, 19°28S×177°71W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.7/19, mbtmp4.2/3, Error ellipse: s-maj=956.8km s-min=160.0km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.57**	**243**	P	P	10 57 54.8	-0.3
	0.9nm,0.5s,baz=95,slow=11,SNR=4.1						
WRA	**Warramunga Arr**	**45.05**	**261**	P	P	10 58 48.5	+0.1
	1.8nm,0.3s,baz=96,slow=7.5,SNR=169						
ASAR	**Alice Springs**	**45.07**	**256**	P	P	10 58 48.2	-0.3
	3.1nm,0.6s,baz=92,slow=7.4,SNR=85						

*NIED **10** 11:01:00, 31°.50N×129°.60E, h5km, Mw3.3 Best double couple: M0 1.18000×10^14 NP1: φs 172.00000°, δ 62.00000°, λ -142.00000°. NP2: φs 62.00000°, δ 57.00000°, λ -34.00000°.*

JMA 10 11:01:59.4, 31°.51N×129°.65E, h13km±1km, M3.7, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.18**	**19**	P	Pg	11 02 03.6	+0.1
JSJ				eS	Sg	11 02 06.3	-0.1
JSU	**Suzuyama**	**0.69**	**90**	P	Pg	11 02 12.5	-0.3
JSU				eS	Sg	11 02 21.8	-0.2
JZO	**Okuchi**	**1.02**	**52**	P	Pb	11 02 18.6	-0.4
JZO				S	Sg	11 02 32.7	+0.1
JKC	**Kuchinoerabu**	**1.15**	**156**	P	Pb	11 02 20.2	-0.8
JKC				eS	Sb	11 02 35.3	-0.5
JTZ	**Takazaki**	**1.29**	**72**	P	Pn	11 02 22.4	-0.7
JTZ				eS	Sn	11 02 40.2	0.0

*AUST **10** 11:02:42.1±24.0, 25°.59S×174°.38W, h4km±2km, Error ellipse: s-maj=4.3km s-min=2.5km az=29.0*
*ISCJB **10** 11:04:04.0±0.7, 25°.98S±0°.08×179°.7E±0°.1, h450km, mb3.9/9, Error ellipse: s-maj=13.1km s-min=10.3km az=2.9*
*IDC **10** 11:04:07.1±1.8, 26°.08S×179°.67E, h471km±18km, mb3.5/9, mb1 3.8/10, mb1mx3.5/19, mbtmp3.5/10, Error ellipse: s-maj=18.0km s-min=13.2km az=166.0*

ISC 10 11:04:04.9±0.8, 26°.0S±0°.1×179°.7E±0°.1, h450km, n34, σ1§34/35, mb3.9/9, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NFK	**Norfolk Island**	**10.90**	**251**	P	P	11 06 26.4	-5.4
	baz=16,SNR=4.2						
URZ	**Urewera**	**12.42**	**190**	P	**P**	**11 06 48.4**	**+0.2**
	1.0nm,0.3s,baz=335,slow=22,SNR=26						
URZ				S	**S**	**11 09 03.2**	**+0.3**
	1.1nm,0.3s,baz=269,slow=22,SNR=8.6						
DZM	**Mont Dzumac**	**12.76**	**285**	P	P	11 06 57.4	+5.2
	2.0nm,0.3s,baz=98,slow=15,SNR=17						
EIDS	**Eidsvold**	**25.81**	**265**	P	**P**	**11 09 00.2**	**+1.6**
	baz=31,SNR=33						
RMQ	**Roma**	**27.75**	**262**	P	**P**	**11 09 18.4**	**+2.6**
	baz=33,SNR=45						
YNG	**Young**	**28.25**	**245**	P	**P**	**11 09 22.1**	**+2.0**
	baz=33,SNR=8.0						
CMSA	**Cobar Meteorol**	**30.27**	**252**	P	**P**	**11 09 38.7**	**+1.0**
	baz=35,SNR=17						
QLP	**Quilpie**	**31.77**	**261**	P	**P**	**11 09 51.8**	**+1.0**
	baz=37,SNR=8.4						
STKA	**Stephens Creek**	**33.76**	**251**	P	**P**	**11 10 08.6**	**+0.9**
	3.7nm,0.5s,baz=98,slow=10,SNR=25						
STKA	**Stephens Creek**	**33.76**	**251**	P	**P**	**11 10 08.7**	**+0.9**
	baz=39,SNR=12						
COEN	**Coen**	**36.26**	**282**	P	**P**	**11 10 30.6**	**+1.7**
	baz=41,SNR=15						
QIS	**Mount Isa**	**37.15**	**270**	P	**P**	**11 10 36.9**	**+0.7**
	baz=42,SNR=7.2						
BBOO	**Buckleboo**	**38.44**	**249**	P	**P**	**11 10 46.3**	**-0.4**
	baz=44,SNR=5.3						
ASAR	**Alice Springs**	**41.50**	**263**	P	**P**	**11 11 11.8**	**+0.2**
	4.8nm,0.5s,baz=94,slow=8.1,SNR=105						
ASAR				ScP	**ScP**	**11 16 03.3**	**-2.4**
	0.6nm,0.8s,baz=110,slow=4.8,SNR=4.9						
ASAR				S	**S**	**11 16 52.0**	**-1.7**
	0.7nm,0.7s,baz=100,slow=16,SNR=6.3						
WRA	**Warramunga Arr**	**42.07**	**269**	P	**P**	**11 11 15.2**	**-0.9**
	4.1nm,0.3s,baz=104,slow=7.8,SNR=31						
WRA				ScP	**ScP**	**11 16 06.2**	**-1.8**
	0.3nm,0.5s,baz=104,slow=3.7,SNR=5.2						
WRA				S	**S**	**11 16 59.7**	**-2.3**
	0.3nm,0.8s,baz=108,slow=14,SNR=4.7						
FORT	**Forrest**	**45.38**	**252**	P	**P**	**11 11 41.1**	**-0.7**
	baz=50,SNR=9.8						
KDU	**Kakadu**	**46.27**	**277**	P	**P**	**11 11 48.4**	**-0.5**
	baz=52,SNR=4.6						
MTN	**Manton Dam**	**47.41**	**276**	P	**P**	**11 11 57.1**	**-0.4**
	baz=53,SNR=4.3						
FITZ	**Fitzroy Crossi**	**50.46**	**267**	P	**P**	**11 12 20.4**	**+0.2**
	baz=56,SNR=13						
KLBR	**Kellerberrin**	**53.98**	**249**	P	**P**	**11 12 44.5**	**-1.0**
	baz=59,SNR=9.2						
BLDU	**Ballidu**	**55.05**	**250**	P	**P**	**11 12 51.9**	**-1.2**
	baz=60,SNR=9.6						
MORW	**Morawa**	**55.95**	**251**	P	**P**	**11 12 58.5**	**-0.9**
	baz=61,SNR=5.8						
QSPA	**South Pole Qui**	**64.09**	**180**	P	**P**	**11 13 52.8**	**-0.5**
	2.1nm,0.7s,baz=10,slow=3.5,SNR=18						
MJAR	**Matsushiro Arr**	**73.49**	**326**	P	**P**	**11 14 50.0**	**-0.6**
	2.7nm,0.8s,baz=161,slow=6.2,SNR=9.4						
MAT	**Matsushiro**	**73.50**	**326**	P	**P**	**11 14 50.3**	**-0.3**
KSRS	**Korea Array**	**79.70**	**321**	P	**P**	**11 15 25.6**	**+0.8**
	1.6nm,0.7s,baz=137,slow=5.9,SNR=13						
NVAR	**Mina Array Bea**	**86.43**	**44**	P	**P**	**11 15 59.6**	**+0.7**
	1.3nm,0.8s,baz=223,slow=8.8,SNR=13						
CMAR	**Chiang Mai Arr**	**90.03**	**290**	P	**P**	**11 16 16.9**	**+0.9**
	0.5nm,0.5s,baz=142,slow=4.6,SNR=4.2						
TXAR	**Lajitas Array**	**91.74**	**58**	P	**P**	**11 16 23.4**	**-0.4**
	0.9nm,0.9s,baz=216,slow=5.9,SNR=7.9						
ARCES	**ARCESS Array B**	**133.88**	**348**	SKPbc	**SKPbc**	**11 25 13.3**	**-2.1**
	3.4nm,0.9s,baz=60,slow=4.8,SNR=5.7						
FINES	**FINESS Array B**	**140.34**	**340**	SKPbc	**SKPbc**	**11 25 32.0**	**-2.4**
	2.3nm,1.0s,baz=82,slow=2.9,SNR=3.5						
NB2	**NORSAR Subarra**	**144.11**	**350**	PKP	PKPbc	11 22 46.2	-0.9
	comp=Z,0.5nm,0.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**144.11**	**350**	PKP	PKPbc	11 22 46.0	-1.1
	comp=Z,0.9nm,0.8s,baz=18,slow=4.6,SNR=3.2						
BRTR	**Keskin Array B**	**148.60**	**304**	PKPbc	**PKPbc**	**11 23 02.1**	**+1.5**
	comp=Z,1.3nm,0.6s,baz=114,slow=3.9,SNR=6.6						

IDC 10 11:17:00.3±1.3, 8°.29N×38°.06W, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/24, mbtmp3.6/4, Error ellipse: s-maj=45.5km s-min=29.2km az=168.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**38.50**	**231**	P	P	11 24 25.2	-0.2
	2.0nm,0.9s,baz=50,slow=9.0,SNR=5.0						
TORD	**Torodi Ar. Bea**	**39.33**	**79**	P	P	11 24 31.6	-0.1
	1.2nm,1.0s,baz=269,slow=7.8,SNR=5.7						
TXAR	**Lajitas Array**	**64.74**	**298**	P	P	11 27 41.2	+0.1
	0.3nm,0.7s,baz=100,slow=10,SNR=3.2						
YKA	**Yellowknife Ar**	**76.48**	**332**	P	P	11 28 51.8	-0.1
	0.4nm,0.9s,baz=99,slow=5.6,SNR=6.3						

*MDD **10** 11:18:41.2±1.2, 35°.95N×5°.69W, h45km±16km, mb3.6/5, Error ellipse: s-maj=12.0km s-min=5.8km az=6.0, PRXIMO*
*INMG **10** 11:18:41.6±1.2, 36°.11N×5°.75W, h14km±9km, ML1.7, Error ellipse: s-maj=7.0km s-min=3.5km az=153.0*
*CSEM **10** 11:18:41.4±0.3, 36°.04N×5°.71W, h40km, mb3.6/5, Error ellipse: s-maj=6.9km s-min=3.4km az=11.0*

ISC 10 11:18:40.4±3.1, 35°.99N±0°.08×5°.70W±0°.03, h35km±4km, n71, σ1§00/109, 1C-1D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ECEU	**Ceuta**	**0.28**	**109**	P	**Pn**	**11 18 49.0**	**+0.7**
	5.9nm,0.1s,SNR=4.0						
ECEU	**Ceuta**	**0.28**	**109**	P	**Pn**	**11 18 49.0**	**+0.7**
	5.9nm,0.1s,SNR=4.0						
ESPR	**Espera**	**0.89**	**352**	P	**Pn**	**11 18 57.8**	**+1.4**
	0.6nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**11 19 08.9**	**+0.9**
	10nm,0.3s,SNR=4.5						
ESPR	**Espera**	**0.89**	**352**	P	**Pn**	**11 18 57.8**	**+1.4**
	0.6nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**11 19 08.9**	**+0.9**
	10nm,0.3s,SNR=4.5						
EMIJ	**Mijas**	**0.94**	**52**	P	**Pn**	**11 18 57.6**	**+0.4**
	1.0nm,0.2s,SNR=6.1						
EMIJ				S	**Sn**	**11 19 09.8**	**+0.3**
	2.1nm,0.2s,SNR=7.6						
EMIJ	**Mijas**	**0.94**	**52**	P	**Pn**	**11 18 57.6**	**+0.4**
	1.0nm,0.2s,SNR=6.1						
EMIJ				S	**Sn**	**11 19 09.8**	**+0.3**
	2.1nm,0.2s,SNR=7.6						
EMIN	**Mina Concepcio**	**1.94**	**337**	⇓P	**Pn**	**11 19 11.1**	**+0.3**
	0.3nm,0.0s,SNR=18						
EMIN				S	**Sn**	**11 19 33.3**	**-0.7**
	1.2nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.94**	**337**	P	**Pn**	**11 19 11.1**	**+0.3**
	0.3nm,0.0s,SNR=18						
EMIN				S	**Sn**	**11 19 33.3**	**-0.7**
	1.2nm,0.1s,SNR=7.9						
ELUQ	**Luque**	**1.94**	**36**	P	**Pn**	**11 19 11.8**	**+0.9**
	1.3nm,0.1s,SNR=7.9						
ELUQ				S	**Sn**	**11 19 34.7**	**+0.5**
	2.3nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**1.94**	**36**	P	**Pn**	**11 19 11.8**	**+0.9**
	1.3nm,0.1s,SNR=7.9						
ELUQ				S	**Sn**	**11 19 34.7**	**+0.5**
	2.3nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**2.10**	**318**	P	**Pn**	**11 19 13.4**	**+0.3**
	1.1nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**11 19 37.4**	**-0.6**
	3.7nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**2.10**	**318**	P	**Pn**	**11 19 13.4**	**+0.3**
	1.1nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**11 19 37.4**	**-0.6**
	3.7nm,0.1s,SNR=7.9						
PVAQ	**Vaqueiros**	**2.15**	**312**	*e*Pn	**Pn**	**11 19 13.9**	**+0.2**
PVAQ				*e*Sn	**Sn**	**11 19 38.6**	**-0.6**
PVAQ				A	A	11 19 39.4	
	6.2nm,0.1s						
PVAQ	**Vaqueiros**	**2.15**	**312**	P	**Pn**	**11 19 13.9**	**+0.2**
PVAQ				S	**Sn**	**11 19 38.6**	**-0.6**
	6.2nm,0.1s						
PVAQ	**Vaqueiros**	**2.15**	**312**	P	**Pn**	**11 19 13.9**	**+0.2**
PVAQ				S	**Sn**	**11 19 38.6**	**-0.6**
	6.2nm,0.1s						
PBDV	**Barranco-do-Ve**	**2.19**	**305**	*e*Sn	**Sn**	**11 19 39.6**	**-0.6**
PBDV	**Barranco-do-Ve**	**2.19**	**305**	S	**Sn**	**11 19 39.6**	**-0.6**
PBDV	**Barranco-do-Ve**	**2.19**	**305**	S	**Sn**	**11 19 39.6**	**-0.6**
PBAR	**Barrancos**	**2.43**	**334**	*e*Pn	**Pn**	**11 19 18.1**	**+0.5**
PBAR				*e*Sn	**Sn**	**11 19 45.5**	**-0.6**
PBAR	**Barrancos**	**2.43**	**334**	P	**Pn**	**11 19 18.1**	**+0.5**
PBAR				S	**Sn**	**11 19 45.5**	**-0.6**
PBAR	**Barrancos**	**2.43**	**334**	P	**Pn**	**11 19 18.1**	**+0.5**
PBAR				S	**Sn**	**11 19 45.5**	**-0.6**
PCVE	**Castro Verde**	**2.49**	**312**	*e*Pn	**Pn**	**11 19 18.6**	**+0.2**
PCVE				*e*Sn	**Sn**	**11 19 46.6**	**-1.0**
PCVE	**Castro Verde**	**2.49**	**312**	P	**Pn**	**11 19 18.6**	**+0.2**
PCVE				S	**Sn**	**11 19 46.6**	**-1.0**
PCVE	**Castro Verde**	**2.49**	**312**	P	**Pn**	**11 19 18.6**	**+0.2**
PCVE				S	**Sn**	**11 19 46.6**	**-1.0**
EBAN	**Banos Encina**	**2.66**	**35**	S	**Sn**	**11 19 49.5**	**-2.1**
	3.3nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	**2.66**	**35**	S	**Sn**	**11 19 49.5**	**-2.1**
	3.3nm,0.1s,SNR=7.9						
PBEJ	**Beja**	**2.67**	**320**	*e*Sn	**Sn**	**11 19 51.2**	**-0.9**
PBEJ	**Beja**	**2.67**	**320**	S	**Sn**	**11 19 51.2**	**-0.9**
PBEJ	**Beja**	**2.67**	**320**	S	**Sn**	**11 19 51.2**	**-0.9**
MORF	**Marmelete**	**2.71**	**300**	*e*Sn	**Sn**	**11 19 53.1**	**0.0**
MORF	**Marmelete**	**2.71**	**300**	S	**Sn**	**11 19 53.1**	**0.0**
MORF	**Marmelete**	**2.71**	**300**	S	**Sn**	**11 19 53.1**	**0.0**
PFVI	**Vila Bisbo**	**2.77**	**295**	*e*Sn	**Sn**	**11 19 52.8**	**-1.5**
PFVI	**Vila Bisbo**	**2.77**	**295**	*e*Sn	**Sn**	**11 19 52.8**	**-1.5**
EQES	**Quesada**	**2.78**	**49**	P	**Pn**	**11 19 24.2**	**+1.7**
	0.0nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**11 19 53.7**	**-1.1**
	1.4nm,0.1s,SNR=7.9						
EQES	**Quesada**	**2.78**	**49**	P	**Pn**	**11 19 24.2**	**+1.7**
	SNR=7.9						
EQES				S	**Sn**	**11 19 53.7**	**-1.1**
	1.4nm,0.1s,SNR=7.9						
PTEO	**Sao Teotonio**	**2.88**	**303**	*e*Sn	**Sn**	**11 19 57.0**	**-0.2**
PTEO	**Sao Teotonio**	**2.88**	**303**	S	**Sn**	**11 19 57.0**	**-0.2**
PTEO	**Sao Teotonio**	**2.88**	**303**	S	**Sn**	**11 19 57.0**	**-0.2**
PNCL	**Nicolau / Gran**	**3.10**	**314**	*e*Pn	**Pn**	**11 19 27.0**	**+0.2**
PNCL				*e*Sn	**Sn**	**11 20 01.4**	**-1.2**
PNCL	**Nicolau / Gran**	**3.10**	**314**	*e*Pn	**Pn**	**11 19 27.0**	**+0.2**
PNCL				*e*Sn	**Sn**	**11 20 01.4**	**-1.2**
PESTR	**Estremoz**	**3.24**	**333**	*e*Pn	**Pn**	**11 19 29.8**	**+1.0**
PESTR				*e*Sn	**Sn**	**11 20 04.9**	**-1.2**
PESTR	**Estremoz**	**3.24**	**333**	P	**Pn**	**11 19 29.8**	**+1.0**
PESTR				S	**Sn**	**11 20 04.9**	**-1.2**
PESTR	**Estremoz**	**3.24**	**333**	P	**Pn**	**11 19 29.8**	**+1.0**
PESTR				S	**Sn**	**11 20 04.9**	**-1.2**
EVIA	**Vianos**	**3.67**	**43**	P	**Pn**	**11 19 35.2**	**+0.5**
	1.1nm,0.2s,SNR=7.9						
EVIA				S	Sn	11 20 13.4	-3.4
	0.9nm,0.1s,SNR=7.9						
EVIA	**Vianos**	**3.67**	**43**	P	**Pn**	**11 19 35.2**	**+0.5**
	1.1nm,0.2s,SNR=7.9						
PMTG	**Montargil**	**3.67**	**328**	*e*Sn	**Sn**	**11 20 15.9**	**-0.8**
PMTG	**Montargil**	**3.67**	**328**	*e*Sn	**Sn**	**11 20 15.9**	**-0.8**
PMRV	**Marv??o**	**3.69**	**339**	*e*Pn	**Pn**	**11 19 36.0**	**+1.1**
PMRV				*e*Sn	**Sn**	**11 20 16.6**	**-0.5**
PMRV	**Marv??o**	**3.69**	**339**	P	**Pn**	**11 19 36.0**	**+1.1**
PMRV				S	**Sn**	**11 20 16.6**	**-0.5**
PMRV	**Marv??o**	**3.69**	**339**	P	**Pn**	**11 19 36.0**	**+1.1**
PMRV				S	**Sn**	**11 20 16.6**	**-0.5**
ESDC	**Sonseca Array**	**3.93**	**20**	P	**Pn**	**11 19 38.8**	**+0.6**
	0.9nm,0.2s,baz=199,slow=12,SNR=3.6						
ESDC	**Sonseca Array**	**3.93**	**20**	P	**Pn**	**11 19 38.8**	**+0.6**
	0.9nm,0.2s,baz=199,slow=12,SNR=3.6						
EPLA	**Plasencia**	**4.08**	**356**	P	**Pn**	**11 19 41.5**	**+1.2**
	0.8nm,0.0s,SNR=7.9						
EPLA				S	**Sn**	**11 20 24.6**	**-2.2**
	0.8nm,0.4s,SNR=7.9						
EPLA	**Plasencia**	**4.08**	**356**	P	**Pn**	**11 19 41.5**	**+1.2**
	0.8nm,0.0s,SNR=7.9						
EPLA				S	**Sn**	**11 20 24.6**	**-2.2**
	0.8nm,0.4s,SNR=7.9						
PCBR	**Castelo Branco**	**4.09**	**340**	*e*Pn	**Pn**	**11 19 41.7**	**+1.3**
PCBR				*e*Sn	**Sn**	**11 20 25.9**	**-1.2**
PCBR	**Castelo Branco**	**4.09**	**340**	P	**Pn**	**11 19 41.7**	**+1.3**
PCBR				S	**Sn**	**11 20 25.9**	**-1.2**
PCBR	**Castelo Branco**	**4.09**	**340**	P	**Pn**	**11 19 41.7**	**+1.3**
PCBR				S	**Sn**	**11 20 25.9**	**-1.2**
PMAFR	**Mafra**	**4.11**	**317**	*e*Sn	**Sn**	**11 20 27.4**	**-0.1**
PMAFR	**Mafra**	**4.11**	**317**	*e*Sn	**Sn**	**11 20 27.4**	**-0.1**
PTOM	**Tomar**	**4.21**	**330**	*e*Pn	**Pn**	**11 19 43.4**	**+1.4**
PTOM	**Tomar**	**4.21**	**330**	P	**Pn**	**11 19 43.4**	**+1.4**
PTOM	**Tomar**	**4.21**	**330**	P	**Pn**	**11 19 43.4**	**+1.4**
ETOB	**Tobarra**	**4.24**	**50**	⇑P	**Pn**	**11 19 42.4**	**-0.1**
	0.5nm,0.1s,SNR=18						
ETOB				S	Sn	11 20 27.2	-3.6
	2.0nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**4.24**	**50**	P	**Pn**	**11 19 42.4**	**-0.1**
	0.5nm,0.1s,SNR=18						
MVO	**Moncorvo**	**5.27**	**349**	*e*Pn	**Pn**	**11 19 58.0**	**+1.3**
MVO				*e*Sn	**Sn**	**11 20 54.8**	**-1.4**
MVO	**Moncorvo**	**5.27**	**349**	*e*Pn	**Pn**	**11 19 58.0**	**+1.3**
MVO				*e*Sn	**Sn**	**11 20 54.8**	**-1.4**
ETOR	**Torete**	**5.61**	**30**	P	**Pn**	**11 20 01.7**	**+0.4**
	5.3nm,0.1s,SNR=7.9						
ETOR				S	**Sn**	**11 21 02.5**	**-2.0**
	1.5nm,0.2s,SNR=7.9						
ETOR	**Torete**	**5.61**	**30**	P	**Pn**	**11 20 01.7**	**+0.4**
	5.3nm,0.1s,SNR=7.9						
ETOR				S	**Sn**	**11 21 02.5**	**-2.0**
	1.5nm,0.2s,SNR=7.9						
POLO	**Lamas de Olo**	**5.62**	**344**	*e*Pn	**Pn**	**11 20 02.6**	**+1.1**
POLO	**Lamas de Olo**	**5.62**	**344**	*e*Pn	**Pn**	**11 20 02.6**	**+1.1**

WEL 10 11:27:56.8±0.2, 38°.07S×176°.46E, h123km±1km, ML3.7/13, 2C-7D, Error ellipse: s-maj=1.4km s-min=1.3km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TARZ	**Mount Tarawera**	**0.17**	**168**	PN	Pn	11 28 14.1	+0.1
TARZ				SN	Sn	11 28 27.7	+0.9
KARZ	**Kaharoa**	**0.18**	**286**	⇓PN	Pn	11 28 13.7	-0.2
KARZ				SN	Sn	11 28 27.1	+0.4
MARZ	**Manawahe**	**0.19**	**64**	PN	Pn	11 28 13.9	0.0
OPRZ	**Ohinepanea**	**0.24**	**18**	PN	Pn	11 28 13.7	-0.2
OPRZ				SN	Sn	11 28 26.7	-0.1
RRRZ	**Republican Roa**	**0.27**	**171**	PN	Pn	11 28 13.9	-0.3
RRRZ				SN	Sn	11 28 27.6	+0.4
TGRZ	**Tauranga**	**0.37**	**335**	⇓PN	Pn	11 28 14.4	-0.1
PRRZ	**Plateau Road**	**0.43**	**187**	PN	Pn	11 28 14.5	-0.3
PRRZ				SN	Sn	11 28 28.7	+0.3
ALRZ	**Allen Road**	**0.50**	**191**	PN	Pn	11 28 15.0	-0.1
URZ	**Urewera**	**0.55**	**111**	⇑PN	Pn	11 28 14.9	-0.5
URZ				SN	Sn	11 28 28.7	-0.7
TOZ	**Tahuroa Road**	**0.83**	**294**	PN	Pn	11 28 17.6	0.0
MWZ	**Matawai**	**0.88**	**108**	PN	Pn	11 28 17.9	-0.1
MWZ				SN	Sn	11 28 34.6	+0.5
RATZ	**Rangitukua**	**0.96**	**214**	PN	Pn	11 28 18.7	-0.1
RAHZ	**Arahi**	**0.98**	**150**	PN	Pn	11 28 19.2	+0.3
NMHZ	**Naumai**	**1.06**	**165**	PN	Pn	11 28 20.4	+0.6
NMHZ				*e*SN	Sn	11 28 36.3	-1.1
BKZ	**Black Stump Fm**	**1.10**	**179**	PN	Pn	11 28 19.8	-0.4
KRVZ	**Karewarewa**	**1.21**	**212**	PN	Pn	11 28 21.4	0.0
OTVZ	**Oturere**	**1.26**	**209**	PN	Pn	11 28 22.1	+0.2
NGZ	**Ngauruhoe**	**1.29**	**211**	PN	Pn	11 28 22.5	+0.1
HIZ	**Hauiti**	**1.34**	**250**	⇓PN	Pn	11 28 22.7	0.0
WPVZ	**Whakapapa**	**1.34**	**212**	PN	Pn	11 28 23.1	+0.3
KNZ	**Kokohu**	**1.34**	**135**	PN	Pn	11 28 22.5	-0.1
TUVZ	**Tukino**	**1.35**	**208**	PN	Pn	11 28 23.0	0.0
MCHZ	**McNeill Hill**	**1.39**	**172**	PN	Pn	11 28 23.3	+0.1
MKAZ	**Moumakai**	**1.40**	**313**	PN	Pn	11 28 23.3	+0.2
PRGZ	**Paritu Road**	**1.41**	**128**	⇓PN	Pn	11 28 23.5	+0.1
PUZ	**Puketiti**	**1.42**	**91**	PN	Pn	11 28 23.5	0.0
TRVZ	**Turoa**	**1.42**	**210**	PN	Pn	11 28 23.8	0.0
WNVZ	**Wahianoa**	**1.43**	**208**	PN	Pn	11 28 23.7	-0.2
CNGZ	**Carnagh Statio**	**1.44**	**107**	PN	Pn	11 28 24.5	+0.8
MOVZ	**Moawhango**	**1.45**	**202**	PN	Pn	11 28 23.3	-0.7
BHHZ	**Black Hill Sta**	**1.45**	**192**	⇑PN	Pn	11 28 23.4	-0.5
PKVZ	**Pokaka**	**1.50**	**215**	PN	Pn	11 28 24.8	+0.3
MTVZ	**Mangateitei**	**1.52**	**210**	PN	Pn	11 28 24.9	+0.1
MXZ	**Matakaoa Point**	**1.55**	**71**	PN	Pn	11 28 25.9	+1.0
MHGZ	**Mahia Peninsul**	**1.57**	**134**	PN	Pn	11 28 25.2	0.0
OTAZ	**Otara**	**1.66**	**312**	PN	Pn	11 28 26.7	+0.4
KAHZ	**Kahuranaki**	**1.75**	**169**	PN	Pn	11 28 27.0	-0.5
PNHZ	**Pukenui**	**1.85**	**186**	PN	Pn	11 28 27.5	-1.2
PXZ	**Pawanui**	**1.98**	**171**	PN	Pn	11 28 28.8	-1.4
WPHZ	**Waipukurau**	**1.99**	**180**	PN	Pn	11 28 29.1	-1.2
TSZ	**Takapari Road**	**2.02**	**191**	⇓PN	Pn	11 28 29.4	-1.4
WAZ	**Wanganui**	**2.04**	**214**	⇓PN	Pn	11 28 30.6	-2.3
PRHZ	**Porangahau**

0.3nm,0.3s,baz=42,slow=20,SNR=5.7
ZALV Zalesovo Beam 8.03 58 Pn **Pn 11 30 04.5 +1.5**
0.2nm,0.3s,baz=249,slow=14,SNR=3.0
ZALV Sn **Sn 11 31 35.6 +1.9**
0.3nm,0.3s,baz=244,slow=26,SNR=5.2
YKA Yellowknife Ar 67.38 4 P **P 11 39 02.5 +1.3**
0.1nm,0.5s,baz=356,slow=6.9,SNR=4.8

*ISCJB **10** 11:28:55.0±0.7, 51°.45N±0°.03×16°.23E±0°.04, h0km, Error ellipse: s-maj=5.2km s-min=3.1km az=20.8*
*CSEM **10** 11:28:56.2±0.3, 51°.48N×16°.20E, h2km, ML3.4/5, Error ellipse: s-maj=5.8km s-min=4.9km az=28.0*
*WAR **10** 11:28:57.5, 51°.47N×16°.10E*
*PRU **10** 11:28:58.0, 51°.40N×16°.21E, h0km*
ISC 10 11:28:56.2±0.9, 51°.53N±0°.03×16°.24E±0°.03, h0km, n30, σ0s99/56, 1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**177**	*e*Pg	**Pg**	**11 29 09.3**	**0.0**
KSP				*e*Sg	**Sg**	**11 29 17.5**	**-0.7**
KSP	**Ksiaz**	**0.69**	**177**	⇓*i*Pg	**Pg**	**11 29 09.4**	**+0.1**
KSP				*i* Sg	**Sg**	**11 29 17.5**	**-0.7**
UPC	**Upice**	**1.03**	**188**	*e*PG	**Pg**	**11 29 15.6**	**-0.4**
UPC	**Upice**	**1.03**	**188**	Pg	**Pg**	**11 29 15.6**	**-0.4**
DPC	**Dobruska-Polom**	**1.18**	**177**	*e*PG	**Pg**	**11 29 18.1**	**-0.7**
DPC				*e*SG	**Sg**	**11 29 32.1**	**-2.0**
	comp=Z,19nm,0.2s						
DPC	**Dobruska-Polom**	**1.18**	**177**	Pg	**Pg**	**11 29 18.1**	**-0.7**
DPC				Sg	**Sg**	**11 29 32.1**	**-2.0**
	19nm,0.2s						
PVCC	**Panska Ves**	**1.45**	**227**	*e*PG	**Pg**	**11 29 23.8**	**-0.2**
PVCC				*e*SG	**Sg**	**11 29 42.5**	**-0.4**
	comp=Z,135nm,0.2s						
PVCC	**Panska Ves**	**1.45**	**227**	Pg	**Pg**	**11 29 23.8**	**-0.2**
PVCC				Sg	**Sg**	**11 29 42.5**	**-0.4**
	135nm,0.2s						
KRLC	**Kraliky**	**1.49**	**166**	*e*PG	**Pn**	**11 29 24.4**	**+0.1**
KRLC				*e*SG	**Sg**	**11 29 42.2**	**-2.0**
KRLC	**Kraliky**	**1.49**	**166**	Pg	**Pn**	**11 29 24.4**	**+0.1**
KRLC				Sg	**Sg**	**11 29 42.2**	**-2.0**
BRG	**Berggiesshubel**	**1.59**	**247**	PN	**Pn**	**11 29 25.4**	**-0.1**
BRG				Pg	**Pg**	**11 29 26.4**	**-0.2**
BRG				SG	**Sg**	**11 29 46.9**	**-0.2**
	39nm,0.3s						
PRU	**Pruhonice**	**1.88**	**216**	*e*PG	**Pb**	**11 29 30.8**	**-0.6**
PRU				*e*SG	**Sn**	**11 29 54.0**	**0.0**
	comp=Z,24nm,0.3s						
PRU	**Pruhonice**	**1.88**	**216**	Pg	**Pb**	**11 29 30.8**	**-0.6**
PRU				Sg	**Sn**	**11 29 54.0**	**0.0**
	24nm,0.3s						
MORC	**Moravsky Berou**	**1.94**	**154**	*e*Pg	**Pn**	**11 29 30.0**	**-0.5**
MORC				*e*Sg	**Sn**	**11 29 55.7**	**+0.2**
CLL	**Collm**	**2.04**	**265**	*e*Pg	**Pb**	**11 29 34.0**	**-0.1**
CLL				*i* Sg	**Sg**	**11 30 01.6**	**-0.1**
	comp=Z,22nm,0.4s						
OKC	**Ostrava-Krasne**	**2.08**	**144**	*e*PG	**Pg**	**11 29 36.5**	**+0.4**
OKC				*e*SG	**Sb**	**11 30 00.4**	**-0.8**
OKC	**Ostrava-Krasne**	**2.08**	**144**	Pg	**Pg**	**11 29 36.5**	**+0.4**
OKC				Sg	**Sb**	**11 30 00.4**	**-0.8**
KRUC	**Moravsky**	**2.47**	**178**	*e*Pg	**Pn**	**11 29 38.6**	**+0.9**
KRUC				*e*Sg	**Sb**	**11 30 13.4**	**+1.0**
OJC	**Ojcow**	**2.61**	**119**	*e*Pg	**Pg**	**11 29 46.1**	**-0.1**
OJC				*e*Sg	**Sg**	**11 30 21.0**	**+1.1**
OJC	**Ojcow**	**2.61**	**119**	*e*Pg	**Pg**	**11 29 46.1**	**-0.1**
OJC				*e*Sg	**Sg**	**11 30 21.0**	**+1.1**
NKC	**Novy Kostel**	**2.73**	**243**	*e*PN	**Pn**	**11 29 41.7**	**+0.4**
NKC				*e*PG	**Pb**	**11 29 46.9**	**+1.0**
NKC				*e*SG	**Sg**	**11 30 24.6**	**+0.8**
	comp=Z,19nm,0.3s						
NKC	**Novy Kostel**	**2.73**	**243**	Pn	**Pn**	**11 29 41.7**	**+0.4**
NKC	**Novy Kostel**	**2.73**	**243**	Pg	**Pb**	**11 29 46.9**	**+1.0**
NKC				Sg	**Sg**	**11 30 24.6**	**+0.8**
	comp=Z,19nm,0.3s						
KHC	**Kasperske Hory**	**2.94**	**216**	*e*PN	**Pn**	**11 29 44.0**	**-0.2**
KHC				*e*PG	**Pb**	**11 29 50.1**	**+0.6**
KHC				*e*SG	**Sb**	**11 30 27.0**	**+0.9**
	comp=Z,7.7nm,0.4s						
KHC	**Kasperske Hory**	**2.94**	**216**	Pn	**Pn**	**11 29 44.0**	**-0.2**
VYHS	**Vyhne**	**3.47**	**150**	*e*PN	**Pn**	**11 29 51.8**	**+0.4**
VYHS				*e*		11 30 02.1	
VYHS	**Vyhne**	**3.47**	**150**	*e*SG	**Sb**	**11 30 43.6**	**+2.5**
VYHS	**Vyhne**	**3.47**	**150**	*e*Sg	**Sb**	**11 30 43.7**	**+2.6**
BSD	**Bornholm Skovb**	**3.68**	**348**	*i* P	**Pn**	**11 29 54.6**	**+0.3**
BSD				*i* S	**Sn**	**11 30 36.2**	**-2.1**
BSD	**Bornholm Skovb**	**3.68**	**348**	*i* P	**Pn**	**11 29 54.6**	**+0.3**
BSD				*i* S	**Sn**	**11 30 36.2**	**-2.1**

*DDA **10** 11:31:45.4, 38°.92N×35°.60E, h2km, ML3.7*
*ISK **10** 11:31:45.0, 38°.93N×35°.64E, h5km, MD3.4*
*CSEM **10** 11:31:46.7±0.1, 38°.91N×35°.61E, h2km, MD3.4, Error ellipse: s-maj=4.1km s-min=3.0km az=35.0*
ISC 10 11:31:46.3±1.1, 38°.92N±0°.02×35°.63E±0°.02, h5km±12km, n83, σ1s37/114, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNN	**Bunyan**	**0.18**	**113**	PG	**Pg**	**11 31 49.4**	**-0.6**
BNN				*e*SG	**Sg**	**11 31 53.3**	**+1.0**
BNN	**Bunyan**	**0.18**	**113**	*i* Pg	**Pg**	**11 31 49.4**	**-0.6**
BNN				*e*Sg	**Sg**	**11 31 53.3**	**+1.0**
PINB	**Pinarbasi**	**0.65**	**112**	*i* P	**Pg**	**11 31 57.4**	**-1.4**
PINB				*i* S	**Sg**	**11 32 07.7**	**+0.4**
PINB	**Pinarbasi**	**0.65**	**112**	*i* P	**Pg**	**11 31 57.4**	**-1.4**
PINB				*i* S	**Sg**	**11 32 07.7**	**+0.4**
YOZ	**Yozgat**	**0.76**	**341**	*e*PG	**Pg**	**11 31 59.9**	**-1.0**
YOZ				*e*SG	**Sb**	**11 32 12.1**	**-0.7**
YOZ	**Yozgat**	**0.76**	**341**	*e*Pg	**Pg**	**11 31 59.9**	**-1.0**
YOZ				*e*Sg	**Sb**	**11 32 12.1**	**-0.7**
SARI	**SarD1z-Kayseri**	**0.80**	**130**	*e*PG	**Pg**	**11 32 00.8**	**-0.9**
SARI				*e*SG	**Sb**	**11 32 13.4**	**-0.7**
NIG	**Nigde**	**1.14**	**225**	*e*PN	**Pb**	**11 32 07.8**	**-0.9**
NIG	**Nigde**	**1.14**	**225**	*e*Pn	**Pb**	**11 32 07.8**	**-0.9**
CDAG	**Cicekdag**	**1.20**	**306**	*i* P	**Pb**	**11 32 08.5**	**-1.2**
CDAG				*i* S	**Sg**	**11 32 25.1**	**+0.1**
CDAG	**Cicekdag**	**1.20**	**306**	*i* P	**Pb**	**11 32 08.5**	**-1.2**
CDAG				*i* S	**Sg**	**11 32 25.1**	**+0.1**
KOZT	**Kozan**	**1.45**	**174**	*e*PN	**Pg**	**11 32 13.6**	**-0.5**
KOZT	**Kozan**	**1.45**	**174**	*e*Pn	**Pg**	**11 32 13.6**	**-0.5**
ANDN	**Andirin**	**1.45**	**157**	*i* P	**Pg**	**11 32 14.0**	**-0.2**
ANDN				*i* S	**Sg**	**11 32 37.9**	**+4.9**
ANDN	**Andirin**	**1.45**	**157**	*i* P	**Pg**	**11 32 14.0**	**-0.2**
ANDN				*i* S	**Sg**	**11 32 37.9**	**+4.9**
CORM	**Corum**	**1.47**	**329**	*e*PN	**Pb**	**11 32 13.4**	**-0.9**
CORM	**Corum**	**1.47**	**329**	*e*Pn	**Pb**	**11 32 13.4**	**-0.9**
DARE	**Darende-Malaty**	**1.49**	**103**	*e*PN	**Pb**	**11 32 13.7**	**-0.9**
TOKA	**Tokat**	**1.54**	**25**	*e*Pn	**Pg**	**11 32 15.2**	**-0.8**
TOKA				*i* S	**Sg**	**11 32 38.0**	**+2.0**
TOKA	**Tokat**	**1.54**	**25**	*e*P	**Pg**	**11 32 15.2**	**-0.8**
TOKA				*i* S	**Sg**	**11 32 38.0**	**+2.0**
KAMT	**Kaman**	**1.56**	**287**	*e*PN	**Pb**	**11 32 15.2**	**-0.6**
KAMT	**Kaman**	**1.56**	**287**	*e*Pn	**Pb**	**11 32 15.2**	**-0.6**
KMRS	**Kahramanmaras**	**1.73**	**144**	*e*PN	**Pb**	**11 32 17.5**	**-1.2**
KMRS	**Kahramanmaras**	**1.73**	**144**	*e*Pn	**Pb**	**11 32 17.5**	**-1.2**
AYKD	**Aykdinkavak**	**1.77**	**148**	*i* P	**Pg**	**11 32 19.5**	**-0.7**
AYKD				*i* S	**Sg**	**11 32 43.3**	**+0.2**
SULT	**Sultanhani-AKS**	**1.81**	**247**	*e*PN	**Pb**	**11 32 18.7**	**-1.3**
SULT	**Sultanhani-AKS**	**1.81**	**247**	*e*Pn	**Pb**	**11 32 18.7**	**-1.3**
CTKT	**Corum**	**1.82**	**339**	*i* P	**Pb**	**11 32 20.1**	**-0.1**
CTKT				*i* S	**Sg**	**11 32 48.1**	**+3.3**
CTKT	**Corum**	**1.82**	**339**	*i* P	**Pb**	**11 32 20.1**	**-0.1**
CTKT				*i* S	**Sg**	**11 32 48.1**	**+3.3**
AKCD	**Akcadag**	**1.90**	**109**	*i* P	**Pb**	**11 32 21.7**	**+0.1**
AKCD				*i* S	**Sg**	**11 32 49.8**	**+2.4**
AKCD	**Akcadag**	**1.90**	**109**	*i* P	**Pb**	**11 32 21.7**	**+0.1**
AKCD				*i* S	**Sg**	**11 32 49.8**	**+2.4**
CEYT	**Ceyhan**	**1.91**	**177**	*e*PN	**Pb**	**11 32 20.1**	**-1.6**
CEYT	**Ceyhan**	**1.91**	**177**	*e*Pn	**Pb**	**11 32 20.1**	**-1.6**
ERBA	**Erbaa**	**1.96**	**26**	*e*P	**Pb**	**11 32 21.5**	**-1.0**
ERBA				*i* S	**Sg**	**11 32 49.9**	**+0.7**
ERBA	**Erbaa**	**1.96**	**26**	*e*P	**Pb**	**11 32 21.5**	**-1.0**
ERBA				*i* S	**Sg**	**11 32 49.9**	**+0.7**
RSDY	**Resadiye-TOKAT**	**1.97**	**41**	*e*PN	**Pb**	**11 32 21.2**	**-1.5**
RSDY	**Resadiye-TOKAT**	**1.97**	**41**	*e*Pn	**Pb**	**11 32 21.2**	**-1.5**
BBAL	**Bala**	**2.04**	**288**	*e*P	**Pb**	**11 32 23.3**	**-0.7**
BBAL				*i* S	**Sg**	**11 32 51.1**	**-1.0**
BBAL	**Bala**	**2.04**	**288**	*e*P	**Pb**	**11 32 23.3**	**-0.7**
BBAL				*i* S	**Sg**	**11 32 51.1**	**-1.0**
AFSR	**Af˙ar-Bala (A**	**2.06**	**286**	*e*PN	**Pn**	**11 32 22.0**	**+0.3**
AFSR	**Af˙ar-Bala (A**	**2.06**	**286**	*e*Pn	**Pn**	**11 32 22.0**	**+0.3**
GAZ	**Gaziantep**	**2.15**	**144**	*e*PN	**Pb**	**11 32 23.6**	**-2.1**
GAZ	**Gaziantep**	**2.15**	**144**	*e*Pn	**Pb**	**11 32 23.6**	**-2.1**
GZT	**Gaziantep**	**2.18**	**135**	*i* P	**Pg**	**11 32 27.1**	**-1.1**
GZT				*i* S	**Sg**	**11 33 00.2**	**+3.7**
MERS	**Mersin**	**2.23**	**204**	*e*PN	**Pn**	**11 32 24.2**	**+0.1**
MERS	**Mersin**	**2.23**	**204**	*e*Pn	**Pn**	**11 32 24.2**	**+0.1**
KEMA	**Kemaliye**	**2.25**	**80**	*e*P	**Pb**	**11 32 26.5**	**-1.1**
KEMA				*i* S	**Sg**	**11 32 59.7**	**+1.0**
KEMA	**Kemaliye**	**2.25**	**80**	*e*P	**Pb**	**11 32 26.5**	**-1.1**
KEMA				*i* S	**Sg**	**11 32 59.7**	**+1.0**
MYA	**Malataya**	**2.27**	**104**	*e*PN	**Pb**	**11 32 25.5**	**-2.3**
MYA	**Malataya**	**2.27**	**104**	*e*Pn	**Pb**	**11 32 25.5**	**-2.3**
MALT	**Malatya**	**2.27**	**105**	*e*PN	**Pn**	**11 32 24.9**	**+0.2**
MALT	**Malatya**	**2.27**	**105**	*e*Pn	**Pn**	**11 32 24.9**	**+0.2**
CANT	**Cankiri**	**2.29**	**318**	*e*PN	**Pn**	**11 32 25.3**	**+0.4**
ELDT	**Eldivan**	**2.31**	**313**	*i* P	**Pb**	**11 32 28.9**	**+0.2**
ELDT				*i* S	**Sg**	**11 33 01.5**	**+0.9**
ELDT	**Eldivan**	**2.31**	**313**	*i* P	**Pb**	**11 32 28.9**	**+0.2**
ELDT				*i* S	**Sg**	**11 33 01.5**	**+0.9**
ILIC	**ilic-Erzincan**	**2.34**	**76**	*e*PN	**Pn**	**11 32 26.1**	**+0.4**
ILIC	**ilic-Erzincan**	**2.34**	**76**	*e*Pn	**Pn**	**11 32 26.1**	**+0.4**
KRTS	**Karatas**	**2.35**	**185**	*e*PN	**Pn**	**11 32 26.3**	**+0.6**
KRTS	**Karatas**	**2.35**	**185**	*e*Pn	**Pn**	**11 32 26.3**	**+0.6**
SUSE	**Susehri**	**2.37**	**56**	*i* P	**Pb**	**11 32 28.4**	**-1.2**
SUSE				*i* S	**Sg**	**11 33 08.5**	**+6.2**
SUSE	**Susehri**	**2.37**	**56**	*i* P	**Pb**	**11 32 28.4**	**-1.2**
SUSE				*i* S	**Sg**	**11 33 08.5**	**+6.2**
LOD	**Lodumlu**	**2.42**	**294**	*e*PN	**Pn**	**11 32 27.7**	**+1.0**
LOD	**Lodumlu**	**2.42**	**294**	*e*Pn	**Pn**	**11 32 27.7**	**+1.0**
KUZU	**Kuzuini**	**2.43**	**152**	*e*P	**Pg**	**11 32 32.2**	**-0.7**
KUZU				*i* S	**Sg**	**11 33 04.3**	**-0.1**
KUZU	**Kuzuini**	**2.43**	**152**	*e*P	**Pg**	**11 32 32.2**	**-0.7**
KUZU				*i* S	**Sg**	**11 33 04.3**	**-0.1**
TOS	**Tosya**	**2.45**	**330**	*e*PN	**Pn**	**11 32 27.1**	**+0.1**
TOS	**Tosya**	**2.45**	**330**	*e*Pn	**Pn**	**11 32 27.1**	**+0.1**
ILGA	**Ilgaz**	**2.59**	**326**	*e*P	**Pb**	**11 32 31.4**	**-2.0**
ILGA				*i* S	**Sb**	**11 33 06.5**	**+1.0**
ILGA	**Ilgaz**	**2.59**	**326**	*e*P	**Pb**	**11 32 31.4**	**-2.0**
ILGA				*i* S	**Sb**	**11 33 06.5**	**+1.0**
BYBT	**Boyabat**	**2.63**	**346**	*e*PN	**Pn**	**11 32 29.8**	**+0.4**
BYBT	**Boyabat**	**2.63**	**346**	*e*Pn	**Pn**	**11 32 29.8**	**+0.4**
ELZG	**Elazig**	**2.66**	**98**	*e*P	**Pn**	**11 32 31.2**	**+1.2**
ELZG	**Elazig**	**2.66**	**98**	*e*P	**Pn**	**11 32 31.2**	**+1.2**
LADK	**Ladik-KONYA**	**2.66**	**255**	*e*PN	**Pn**	**11 32 31.2**	**+1.2**
LADK	**Ladik-KONYA**	**2.66**	**255**	*e*Pn	**Pn**	**11 32 31.2**	**+1.2**
DIKM	**Dikmen**	**2.74**	**354**	*e*PN	**Pn**	**11 32 32.0**	**+1.0**
DIKM	**Dikmen**	**2.74**	**354**	*e*Pn	**Pn**	**11 32 32.0**	**+1.0**
KIZT	**Kizilcal**	**2.93**	**270**	*e*PN	**Pn**	**11 32 34.9**	**+1.2**
KIZT	**Kizilcal**	**2.93**	**270**	*e*Pn	**Pn**	**11 32 34.9**	**+1.2**
SVRH	**Sivrihisar-ESK**	**3.24**	**281**	*e*PN	**Pn**	**11 32 38.7**	**+0.8**
SVRH	**Sivrihisar-ESK**	**3.24**	**281**	*e*Pn	**Pn**	**11 32 38.7**	**+0.8**
MDUB	**Mudurnu**	**3.75**	**296**	*e*PN	**Pn**	**11 32 46.2**	**+1.2**
MDUB	**Mudurnu**	**3.75**	**296**	*e*Pn	**Pn**	**11 32 46.2**	**+1.2**

IDC 10 11:34:58.5±2.0, 8°.35S×127°.88E, h0km, mb3.8/1, mb1 3.4/4, mb1mx3.2/19, mbtmp3.2/4, ML2.9/3, Error ellipse: s-maj=80.2km s-min=25.8km az=78.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.93**	**192**	Pn	**Pn**	**11 37 23.2**	**+0.6**
	0.1nm,0.3s,baz=14,slow=12,SNR=4.2						
FITZ				Sn	Sn	11 39 15.8	+0.9
	0.1nm,0.3s,baz=111,slow=15,SNR=3.0						
WRA	**Warramunga Arr**	**13.11**	**152**	Pn	**Pn**	**11 38 06.0**	**-0.2**
	0.1nm,0.3s,baz=326,slow=13,SNR=5.9						
ASAR	**Alice Springs**	**16.29**	**160**	Pn	**Pn**	**11 38 48.3**	**-0.5**
	0.1nm,0.3s,baz=339,slow=11,SNR=4.7						
MKAR	**Makanchi Array**	**68.23**	**328**	P	**P**	**11 46 01.0**	**0.0**
	0.9nm,0.8s,baz=115,slow=5.5,SNR=6.1						

*ISCJB **10** 11:36:46.5±0.7, 7°.09S×0°.05×129°.66E±0°.06, h139km, mb3.6/2, Error ellipse: s-maj=8.1km s-min=6.9km az=168.4*
*AUST **10** 11:36:49.7±0.0, 7°.08S×129°.89E, h162km, Error ellipse: s-maj=1.2km s-min=1.1km az=234.0*
*IDC **10** 11:36:52.5±5.7, 7°.05S×129°.26E, h230km±57km, mb3.4/2, mb1 3.6/5, mb1mx3.1/19, mbtmp3.4/5, MS3.3/1, Ms1 3.2/1, ms1mx2.4/19, Error ellipse: s-maj=76.6km s-min=22.5km az=63.0*
ISC 10 11:36:46.9±0.9, 7°.09S±0°.06×129°.63E±0°.07, h139km, n15, σ2s22/19, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**3.41**	**65**	P	**Pn**	**11 37 39.4**	**+0.2**
	baz=3.2,SNR=31						
TLE				S	**Sn**	**11 38 19.6**	**0.0**
	baz=3.2,SNR=4.9						
MTN	**Manton Dam**	**5.91**	**166**	P	Pn	11 38 15.6	+3.3
	baz=5.9,SNR=8.2						
MTN				S	**Sn**	**11 39 21.3**	**+2.3**
	baz=5.9,SNR=10						
KDU	**Kakadu**	**6.23**	**153**	P	**Pn**	**11 38 18.8**	**+2.2**
	baz=6.2,SNR=37						
KDU				S	**Sn**	**11 39 27.7**	**+1.0**
	baz=6.2,SNR=9.6						
SWI	**Sorong**	**6.40**	**15**	S	Sn	11 39 16.9	-14
	baz=6.4,SNR=4.8						
PCI	**Palu**	**11.54**	**302**	S	**Sn**	**11 41 35.6**	**+0.7**
	baz=12,SNR=4.1						
FITZ	**Fitzroy Crossi**	**11.61**	**199**	P	**Pn**	**11 39 31.0**	**+2.5**
	0.5nm,0.3s,baz=45,slow=11,SNR=9.4						
FITZ				S	**Sn**	**11 41 34.0**	**-2.7**
	1.5nm,0.3s,baz=116,slow=20,SNR=8.1						
FITZ	**Fitzroy Crossi**	**11.61**	**199**	P	**Pn**	**11 39 31.0**	**+2.5**
	baz=12,SNR=5.2						
FITZ				S	**Sn**	**11 41 32.9**	**-3.9**
	baz=12,SNR=3.7						
WRA	**Warramunga Arr**	**13.57**	**161**	P	**P**	**11 39 57.9**	**-0.2**
	1.2nm,0.3s,baz=335,slow=12,SNR=35						
WRA				S	**Sn**	**11 42 19.0**	**-4.9**
	1.1nm,0.3s,baz=335,slow=22,SNR=7.9						
COEN	**Coen**	**14.96**	**118**	P	**Pn**	**11 40 12.3**	**+0.8**
	baz=15,SNR=5.2						
QIS	**Mount Isa**	**16.51**	**145**	P	**P**	**11 40 30.9**	**+0.1**
	baz=16,SNR=5.4						
ASAR	**Alice Springs**	**16.98**	**166**	P	**Pn**	**11 40 36.9**	**+0.5**
	1.0nm,0.3s,baz=347,slow=10,SNR=50						
ASAR				S	**Sn**	**11 43 44.2**	**-1.9**
	0.2nm,0.3s,baz=347,slow=25,SNR=6.6						
QLP	**Quilpie**	**23.85**	**146**	P	**P**	**11 41 46.4**	**-1.2**
	baz=24,SNR=6.4						
STKA	**Stephens Creek**	**27.07**	**157**	P	**P**	**11 42 15.4**	**-1.1**
	1.0nm,0.3s,baz=331,slow=9.5,SNR=3.1						
STKA				LR	LR	11 52 38.4	
	comp=Z,67nm,21.1s,baz=205,slow=35						
CMSA	**Cobar Meteorol**	**28.58**	**150**	P	**P**	**11 42 28.9**	**-1.1**
	baz=29,SNR=8.2						
MKAR	**Makanchi Array**	**68.10**	**327**	P	P	11 47 26.2	-5.6
	0.3nm,0.4s,baz=119,slow=8.1,SNR=5.9						

*IDC **10** 11:37:31.9±4.2, 38°.92N×69°.81E, h0km, mb3.1/1, mb1 3.4/4, mb1mx3.2/29, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=139.0km s-min=26.7km az=144.0*
*NNC **10** 11:37:34.8±1.3, 39°.03N×69°.98E, h0km, mb3.6, mpv3.5, Error ellipse: s-maj=10.4km s-min=8.3km az=7.0*
ISC 10 11:37:33.3±2.2, 38°.6N±0°.2×69°.94E±0°.10, h27km, n8, σ1s26/13, 4C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.54**	**5**	Pn	**Pn**	**11 38 41.2**	**+0.9**
	2.1nm,0.4s,baz=178,slow=13,SNR=29						
KK31				⇓Sn	**Sn**	**11 39 33.6**	**+1.4**
	6.4nm,0.6s,baz=183,slow=29,SNR=4.2						
AAK	**Ala-Archa**	**5.33**	**39**	Pn	**Pn**	**11 38 52.3**	**+1.1**
	1.5nm,0.3s,baz=206,slow=8.3,SNR=15						
AAK				Sn	**Sn**	**11 39 53.3**	**+1.4**
	0.6nm,0.3s,baz=58,slow=21,SNR=6.9						
TKM2	**Tokmak 2**	**6.11**	**43**	⇑Pn	**Pn**	**11 39 01.3**	**-0.7**
	6.0nm,0.5s						
TKM2				⇑Sn	**Sn**	**11 40 10.3**	**-0.7**
	10nm,0.8s						
MKAR	**Makanchi Array**	**12.24**	**44**	Pn	**Pn**	**11 40 25.3**	**-0.4**
	0.0nm,0.3s,baz=236,slow=9.2,SNR=3.4						
AB31	**Akbulak array**	**12.87**	**329**	Pn	**Pn**	**11 40 34.8**	**+0.5**
	0.8nm,0.6s,baz=145,slow=13,SNR=14						
AB31				⇑Sn	**Sn**	**11 42 55.4**	**-1.1**
	1.2nm,0.6s,baz=151,slow=23,SNR=3.6						
AKTO	**Aktyubinsk**	**14.57**	**328**	⇑Pn	**Pn**	**11 40 57.6**	**0.0**
	0.3nm,0.9s						
AKTO				⇓Sn	**Sn**	**11 43 36.7**	**-1.4**
	0.3nm,0.8s						
ZALV	**Zalesovo Beam**	**18.44**	**29**	P	**P**	**11 41 44.4**	**-2.1**
	0.2nm,0.3s,baz=221,slow=12,SNR=5.3						
YKA	**Yellowknife Ar**	**79.21**	**2**	P	**P**	**11 49 36.6**	**+1.1**
	0.1nm,0.5s,baz=348,slow=6.5,SNR=4.0						

*ISCJB **10** 11:49:27.5±1.3, 67°.68N±0°.05×33°.7E±0°.2, h0km, Error ellipse: s-maj=12.3km s-min=7.2km az=170.7*
*HEL **10** 11:49:27.5±0.5, 67°.60N×34°.05E, h0km, ML2.8, Explosion*
*NAO **10** 11:49:29.6±1.5, 67°.60N×33°.73E, ML2.9*
*CSEM **10** 11:49:29.7±0.3, 67°.66N×33°.63E, h2km, ML2.9, Error ellipse: s-maj=6.2km s-min=4.2km az=64.0, Mining explosion.*
*IDC **10** 11:49:35.5±1.7, 67°.86N×32°.58E, h0km, mb1 3.5/4, mb1mx3.1/28, mbtmp3.5/4, ML2.9/4, Error ellipse: s-maj=17.5km s-min=9.2km az=84.0*
ISC 10 11:49:28.5±1.8, 67°.69N±0°.05×33°.74E±0°.10, h0km, n26, σ0s95/36, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.30**	**253**	Pg	**Pg**	**11 49 34.5**	**+0.3**
	baz=98,slow=16						
APA0				Lg	Lg	11 49 38.7	
	baz=84,slow=37						
APA0				Rg	Rg	11 49 40.9	
	baz=93,slow=28						
APA0	**Apatity Array**	**0.30**	**253**	Pg	**Pg**	**11 49 34.5**	**+0.3**
	baz=98,slow=16						
APA0				Lg	Lg	11 49 38.7	
	baz=84,slow=37						
APA0				Rg	Rg	11 49 40.9	
	baz=93,slow=28						
APA0	**Apatity Array**	**0.30**	**253**	Pg	**Pg**	**11 49 34.5**	**+0.3**
	baz=98,slow=15,SNR=90						
APA0				Lg	Lg	11 49 38.7	
	baz=84,slow=36,SNR=136						
VRF	**Varrio**	**1.57**	**274**	*e*P	**Pn**	**11 49 57.6**	**-0.1**
VRF				*e*S	**Sg**	**11 50 19.2**	**+0.1**
VRF	**Varrio**	**1.57**	**274**	P	**Pn**	**11 49 57.6**	**-0.1**
VRF				S	**Sg**	**11 50 19.1**	**+0.1**
MSF	**Maaselka**	**2.58**	**228**	*e*PG	**Pb**	**11 50 14.5**	**-1.1**
MSF	**Maaselka**	**2.58**	**228**	Pg	**Pb**	**11 50 14.5**	**-1.1**
SGF	**Sodankyl**	**2.78**	**268**	*e*P	**Pn**	**11 50 15.7**	**+1.5**
SGF	**Sodankyl**	**2.78**	**268**	P	**Pn**	**11 50 15.7**	**+1.5**
RNF	**Rovaniemi**	**3.21**	**254**	*e*P	**Pn**	**11 50 20.1**	**+0.1**
RNF	**Rovaniemi**	**3.21**	**254**	P	**Pn**	**11 50 20.1**	**+0.1**
KEV	**Kevo**	**3.21**	**313**	*e*P	**Pn**	**11 50 21.4**	**+1.2**
KEV				*e*SG	**Sg**	**11 51 11.4**	**-0.2**
KEV				MSG		11 51 13.9	
	comp=Z,39nm,0.3s						
KEV	**Kevo**	**3.21**	**313**	P	**Pn**	**11 50 21.3**	**+1.2**
KEV				Sg	**Sg**	**11 51 11.3**	**-0.2**
ARA0	**ARCESS Array S**	**3.54**	**305**	Pn	**Pn**	**11 50 25.2**	**+0.6**
	baz=123,slow=16						
ARA0				Sn	**Sn**	**11 51 08.3**	**+1.3**
	baz=122,slow=28						
ARA0				Lg	Lg	11 51 23.3	
	baz=122,slow=37						
ARA0	**ARCESS Array S**	**3.54**	**305**	Pn	**Pn**	**11 50 25.2**	**+0.6**
	baz=123,slow=16						
ARA0				Sn	**Sn**	**11 51 08.3**	**+1.3**
	baz=122,slow=28

TERO				Sg	**Sb**	**11 53 23.6**	**-0.8**		
	5µm,0.5s								
TERO	**Teramo**	**0.38**	**13**	Pg	**Pg**	**11 53 16.9**	**-0.4**		
TERO				Sg	**Sb**	**11 53 23.6**	**-0.8**		
	5µm,0.5s								
INTR	**Introdacqua**	**0.39**	**127**	Pg	**Pg**	**11 53 17.5**	**+0.1**		
INTR				Sg	**Sb**	**11 53 23.4**	**-1.2**		
	5µm,0.5s								
INTR	**Introdacqua**	**0.39**	**127**	Pg	**Pg**	**11 53 17.5**	**+0.1**		
INTR				Sg	**Sb**	**11 53 23.4**	**-1.2**		
	5µm,0.5s								
VVLD	**Villa Vallelon**	**0.39**	**165**	Pg	**Pg**	**11 53 17.3**	**-0.1**		
VVLD				Sg	**Sg**	**11 53 23.3**	**+0.6**		
	3µm,0.8s								
VVLD	**Villa Vallelon**	**0.39**	**165**	Pg	**Pg**	**11 53 17.3**	**-0.1**		
VVLD				Sg	**Sg**	**11 53 23.3**	**+0.6**		
	3µm,0.8s								
GUAR	**Guarcino**	**0.47**	**196**	Pg	**Pg**	**11 53 18.8**	**-0.1**		
	2µm,0.9s								
GUAR	**Guarcino**	**0.47**	**196**	Pg	**Pg**	**11 53 18.8**	**-0.1**		
	2µm,0.9s								
CERT	**Cerreto**	**0.48**	**232**	Pg	**Pg**	**11 53 18.9**	**-0.2**		
CERT				Sg	**Sb**	**11 53 26.4**	**-0.8**		
	3µm,0.8s								
CERT	**Cerreto**	**0.48**	**232**	Pg	**Pg**	**11 53 18.9**	**-0.2**		
CERT				Sg	**Sb**	**11 53 26.4**	**-0.8**		
	3µm,0.8s								
LNSS	**Leonessa**	**0.48**	**317**	Pg	**Pg**	**11 53 19.2**	**0.0**		
	1µm,0.4s								
LNSS	**Leonessa**	**0.48**	**317**	Pg	**Pg**	**11 53 19.2**	**0.0**		
	1µm,0.4s								
LPEL	**Lama dei Pelig**	**0.56**	**111**	Pg	**Pg**	**11 53 19.9**	**-0.6**		
LPEL				Sg	**Sb**	**11 53 28.7**	**-0.6**		
	2µm,0.2s								
LPEL	**Lama dei Pelig**	**0.56**	**111**	Pg	**Pg**	**11 53 19.9**	**-0.6**		
LPEL				Sg	**Sb**	**11 53 28.7**	**-0.6**		
	2µm,0.2s								
POFI	**Posta Fibreno**	**0.56**	**162**	Pg	**Pg**	**11 53 20.1**	**-0.4**		
	1µm,0.9s								
POFI	**Posta Fibreno**	**0.56**	**162**	Pg	**Pg**	**11 53 20.1**	**-0.4**		
	1µm,0.8s								
SDI	**San Donato**	**0.59**	**156**	Pg	**Pb**	**11 53 21.4**	**-0.6**		
SDI	**San Donato**	**0.59**	**156**	Pg	**Pb**	**11 53 21.4**	**-0.6**		
MTCE	**Montecelio**	**0.60**	**248**	Pg	**Pg**	**11 53 20.8**	**-0.5**		
	934nm,0.9s								
MTCE	**Montecelio**	**0.60**	**248**	Pg	**Pg**	**11 53 20.8**	**-0.5**		
	934nm,0.9s								
MNS	**Montasola**	**0.61**	**283**	Pg	**Pg**	**11 53 20.9**	**-0.7**		
	1µm,0.8s								
MNS	**Montasola**	**0.61**	**283**	Pg	**Pg**	**11 53 20.9**	**-0.7**		
	1µm,0.8s								
CAFR	**Castel Frentan**	**0.64**	**92**	Pg	**Pg**	**11 53 22.0**	**-0.1**		
	2µm,0.4s								
CAFR	**Castel Frentan**	**0.64**	**92**	Pg	**Pg**	**11 53 22.0**	**-0.1**		
	2µm,0.4s								
TRTR	**Tortoreto Alta**	**0.64**	**29**	Pg	**Pb**	**11 53 22.8**	**0.0**		
	4µm,0.7s								
TRTR	**Tortoreto Alta**	**0.64**	**29**	Pg	**Pb**	**11 53 22.8**	**0.0**		
	4µm,0.7s								
NRCA	**Norcia**	**0.65**	**335**	Pg	**Pg**	**11 53 21.5**	**-0.7**		
NRCA	**Norcia**	**0.65**	**335**	Pg	**Pg**	**11 53 21.5**	**-0.7**		
OFFI	**Offida**	**0.70**	**12**	Pg	**Pb**	**11 53 23.6**	**-0.2**		
	5µm,0.5s								
OFFI	**Offida**	**0.70**	**12**	Pg	**Pb**	**11 53 23.6**	**-0.2**		
	5µm,0.5s								
RMP	**Rome, Mte Porz**	**0.73**	**233**	Pg	**Pg**	**11 53 23.2**	**-0.6**		
	657nm,0.4s								
RMP	**Rome, Mte Porz**	**0.73**	**233**	Pg	**Pg**	**11 53 23.2**	**-0.6**		
	657nm,0.4s								
RNI2	**Rionero Sannit**	**0.74**	**138**	Pg	**Pg**	**11 53 23.9**	**0.0**		
	2µm,0.9s								
RNI2	**Rionero Sannit**	**0.74**	**138**	Pg	**Pg**	**11 53 23.9**	**0.0**		
	2µm,0.9s								
RDP	**Rocca di Papa**	**0.76**	**230**	Pg	**Pg**	**11 53 23.8**	**-0.5**		
	2µm,0.7s								
RDP	**Rocca di Papa**	**0.76**	**230**	Pg	**Pg**	**11 53 23.8**	**-0.5**		
	2µm,0.7s								
CERA	**Filignano**	**0.76**	**148**	Pg	**Pg**	**11 53 23.5**	**-0.9**		
	1µm,0.7s								
CERA	**Filignano**	**0.76**	**148**	Pg	**Pg**	**11 53 23.5**	**-0.9**		
	1µm,0.7s								
CESX	**Cesi**	**0.76**	**299**	Pg	**Pb**	**11 53 24.7**	**-0.2**		
	691nm,0.6s								
CESX	**Cesi**	**0.76**	**299**	Pg	**Pb**	**11 53 24.7**	**-0.2**		
	691nm,0.6s								
MIDA	**Miranda**	**0.83**	**136**	Pg	**Pg**	**11 53 24.8**	**-1.0**		
	594nm,0.5s								
MIDA	**Miranda**	**0.83**	**136**	Pg	**Pg**	**11 53 24.8**	**-1.0**		
	594nm,0.5s								
FDMO	**Fiordimonte**	**0.84**	**340**	Pg	**Pg**	**11 53 25.3**	**-0.6**		
	511nm,0.6s								
FDMO	**Fiordimonte**	**0.84**	**340**	Pg	**Pg**	**11 53 25.3**	**-0.6**		
	511nm,0.6s								
CESI	**CESI - Serrava**	**0.87**	**331**	Pg	**Pg**	**11 53 26.1**	**-0.3**		
	223nm,0.7s								
CESI	**CESI - Serrava**	**0.87**	**331**	Pg	**Pg**	**11 53 26.1**	**-0.3**		
	223nm,0.7s								
FRES	**Fresagrandinar**	**0.92**	**107**	Pg	**Pg**	**11 53 26.3**	**-1.1**		
	487nm,0.6s								
FRES	**Fresagrandinar**	**0.92**	**107**	Pg	**Pg**	**11 53 26.3**	**-1.1**		
	487nm,0.6s								
TRIV	**Trivento**	**0.93**	**121**	Pg	**Pg**	**11 53 27.1**	**-0.4**		
	430nm,0.8s								
TRIV	**Trivento**	**0.93**	**121**	Pg	**Pg**	**11 53 27.1**	**-0.4**		
	430nm,0.8s								
ASSB	**Assisi San Ben**	**1.00**	**323**	Pg	**Pg**	**11 53 28.3**	**-0.7**		
	473nm,0.8s								
ASSB	**Assisi San Ben**	**1.00**	**323**	Pg	**Pg**	**11 53 28.3**	**-0.7**		
	473nm,0.8s								
VAGA	**Valle Agricola**	**1.00**	**146**	Pg	**Pg**	**11 53 27.8**	**-1.2**		
	466nm,0.7s								
VAGA	**Valle Agricola**	**1.00**	**146**	Pg	**Pg**	**11 53 27.8**	**-1.2**		
	466nm,0.7s								
SNTG	**Esanatoglia**	**1.08**	**338**	Pg	**Pg**	**11 53 29.6**	**-0.9**		
	162nm,0.4s								
SNTG	**Esanatoglia**	**1.08**	**338**	Pg	**Pg**	**11 53 29.6**	**-0.9**		
	162nm,0.4s								
BSSO	**Busso**	**1.08**	**130**	Pg	**Pg**	**11 53 29.7**	**-0.8**		
	380nm,0.7s								
BSSO	**Busso**	**1.08**	**130**	Pg	**Pg**	**11 53 29.7**	**-0.8**		
	380nm,0.7s								
CING	**Cingoli**	**1.15**	**349**	Pg	**Pb**	**11 53 30.9**	**-0.6**		
	332nm,0.6s								
CING	**Cingoli**	**1.15**	**349**	Pg	**Pb**	**11 53 30.9**	**-0.6**		
	332nm,0.6s								
MGAB	**Montegabbione**	**1.21**	**304**	Pn	**Pg**	**11 53 33.0**	**0.0**		
	250nm,0.6s								
MGAB	**Montegabbione**	**1.21**	**304**	Pn	**Pg**	**11 53 33.0**	**0.0**		
	250nm,0.6s								
MURB	**Monte Urbino**	**1.24**	**325**	Pn	**Pn**	**11 53 32.8**	**-0.1**		
	767nm,0.6s								
MURB	**Monte Urbino**	**1.24**	**325**	Pn	**Pn**	**11 53 32.8**	**-0.1**		
	767nm,0.6s								
MS1	**Monte Sant'Ang**	**1.91**	**106**	*e*Pn	**Pg**	**11 53 46.2**	**-0.1**		
MS1				*e*Sn	**Sg**	**11 54 10.3**	**-0.7**		
CDT	**Castel del Mon**	**2.39**	**118**	*e*Sn	**Sb**	**11 54 22.4**	**+0.3**		
NVLJ	**Novalja**	**2.52**	**23**	*e*Pn	**Pn**	**11 53 51.2**	**+0.7**		
NVLJ				Sn	**Sn**	**11 54 22.7**	**+1.5**		
NVLJ	**Novalja**	**2.52**	**23**	*e*Pn	**Pn**	**11 53 51.2**	**+0.7**		
NVLJ				Sn	**Sn**	**11 54 22.6**	**+1.5**		
STON	**Ston**	**3.17**	**77**	*e*Pn	**Pn**	**11 54 01.3**	**+1.8**		
STON				Sn	**Sn**	**11 54 38.7**	**+1.5**		
STON	**Ston**	**3.17**	**77**	*e*Pn	**Pn**	**11 54 01.2**	**+1.8**		
STON				Sn	**Sn**	**11 54 38.6**	**+1.5**		
PGF	**Pioggiola**	**3.34**	**277**	*e*Pn	**Pn**	**11 54 03.6**	**+1.8**		
PGF				*e*Sn	**Sn**	**11 54 43.7**	**+2.3**		
	5.9nm,0.5s								
PGF	**Pioggiola**	**3.34**	**277**	*e*Pn	**Pn**	**11 54 03.6**	**+1.8**		
PGF				*e*Sn	**Sn**	**11 54 43.7**	**+2.3**		
	3.0nm,0.5s								
ABTA	**Abfaltersbach**	**4.55**	**352**	⇑*i*Pn	**Pn**	**11 54 20.0**	**+1.6**		
ABTA	**Abfaltersbach**	**4.55**	**352**	Pn	**Pn**	**11 54 20.0**	**+1.6**		
SBF	**Sospel**	**4.72**	**292**	*e*Pn	**Pn**	**11 54 22.0**	**+1.3**		
SBF				*e*Sn	**Sn**	**11 55 12.1**	**-3.3**		
	3.7nm,0.3s								
SBF	**Sospel**	**4.72**	**292**	*e*Pn	**Pn**	**11 54 22.0**	**+1.3**		
SBF				*e*Sn	**Sn**	**11 55 12.1**	**-3.3**		
	1.9nm,0.3s								
FRF	**La Foret Royal**	**5.19**	**287**	*e*Pn	**Pn**	**11 54 28.2**	**+1.0**		
FRF	**La Foret Royal**	**5.19**	**287**	*e*Pn	**Pn**	**11 54 28.2**	**+1.0**		
LMR	**La Mourre**	**5.25**	**284**	*e*Pn	**Pn**	**11 54 28.8**	**+0.9**		
LMR	**La Mourre**	**5.25**	**284**	*e*Pn	**Pn**	**11 54 28.8**	**+0.9**		
MBDF	**Montbardon**	**5.48**	**299**	*e*P	**Pn**	**11 54 34.1**	**+2.9**		
MBDF	**Montbardon**	**5.48**	**299**	*e*P	**Pn**	**11 54 34.1**	**+2.9**		
LPG	**La Plagne**	**5.85**	**306**	*e*P	Pn	11 54 39.9	+3.4		
LPG				*e*Sn	**Sn**	**11 55 39.1**	**-4.5**		
	3.3nm,0.2s								
LPG	**La Plagne**	**5.85**	**306**	*e*P	Pn	11 54 39.9	+3.4		
LPL	**La Plagne**	**5.87**	**306**	*e*P	Pn	11 54 40.2	+3.5		
LPL	**La Plagne**	**5.87**	**306**	*e*P	Pn	11 54 40.2	+3.5		
SMRF	**Simiane la Rot**	**6.04**	**289**	*e*P	**Pn**	**11 54 41.5**	**+2.6**		
SMRF	**Simiane la Rot**	**6.04**	**289**	*e*P	**Pn**	**11 54 41.5**	**+2.6**		
HINF	**Hinteralfeld**	**7.28**	**322**	*e*Pn	**Pn**	**11 54 56.1**	**+0.2**		
HINF				*e*Sn	Sn	11 56 12.5	-6.0		
	3.5nm,0.5s								
HINF	**Hinteralfeld**	**7.28**	**322**	*e*Pn	**Pn**	**11 54 56.1**	**+0.2**		
CDF	**Champ du Feu**	**7.56**	**327**	*e*Pn	**Pn**	**11 54 59.7**	**0.0**		
CDF				*e*Sn	Sn	11 56 19.5	-5.8		
	1.1nm,0.3s								
CDF	**Champ du Feu**	**7.56**	**327**	*e*Pn	**Pn**	**11 54 59.7**	**0.0**		
HAU	**Haudompre**	**7.65**	**321**	*e*Pn	**Pn**	**11 55 01.4**	**+0.4**		
HAU	**Haudompre**	**7.65**	**321**	*e*Pn	**Pn**	**11 55 01.4**	**+0.4**		

IDC 10 12:05:39.7±1.5,21°31'S×67°24'W,h184km±16km,mb3.4/2, mb1 3.5/6,mb1mx3.3/18,mbtmp3.4/6,Error ellipse: s-maj=25.7km s-min=14.3km az=80.0,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.07**	**350**	P	Pn	12 06 57.1	+1.6
	1.3nm,0.3s,baz=138,slow=12,SNR=22						
LPAZ				S	Sn	12 07 53.8	-1.2
	0.4nm,0.3s,baz=305,slow=17,SNR=7.7						
SIV	**San Ignacio**	**7.88**	**49**	P	Pn	12 07 30.3	-1.3
	9.3nm,0.3s,baz=245,slow=11,SNR=156						
SIV				S	Sn	12 08 54.3	-5.9
	0.9nm,0.3s,baz=158,slow=23,SNR=9.0						
CFAA	**Coronel Fontan**	**10.29**	**185**	P	Pn	12 08 03.6	+0.7
	0.1nm,0.3s,baz=356,slow=12,SNR=11						
CFAA				S	Sn	12 09 53.9	-3.6
	0.1nm,0.3s,baz=268,slow=22,SNR=9.5						
CPUP	**Villa Florida**	**10.35**	**121**	P	Pn	12 08 05.5	+1.7
	1.3nm,0.3s,baz=277,slow=11,SNR=7.0						
NNA	**Nana**	**13.06**	**314**	P	P	12 08 42.6	+0.4
	0.5nm,0.3s,baz=162,slow=7.8,SNR=5.3						
BDFB	**Brasilia**	**19.08**	**76**	P	P	12 09 49.3	+0.7
	1.0nm,0.3s,baz=242,slow=8.3,SNR=8.5						
TORD	**Torodi Ar. Bea**	**75.83**	**70**	P	P	12 17 05.5	-0.5
	1.8nm,0.6s,baz=256,slow=5.4,SNR=25						
YKA	**Yellowknife Ar**	**91.54**	**340**	P	P	12 18 25.7	+0.8
	0.1nm,0.4s,baz=137,slow=4.4,SNR=4.6						

*IDC **10** 12:46:02.1±0.6, 17°.00S×172°.94W,h0km,mb4.1/13, mb1 4.4/13,mb1mx4.3/22,mbtmp4.1/13,MS4.2/16, Ms1 4.2/16,ms1mx4.0/31,Error ellipse: s-maj=26.9km s-min=16.4km az=128.0*

*NEIC **10** 12:46:07.4±0.3, 17°.06S×172°.89W,h35km,mb4.5/13, Error ellipse: s-maj=14.8km s-min=7.8km az=141.0*

ISC 10 12:46:08.3±0.5,16°87S±0°.08×172°.5W±0°.1,h41km,n72, σ1s84/54,mb4.3/25,MS4.2/16,1C,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.02**	**14**	*e*Pn	Pn	12 46 48.9	-4.8
AFI				Sn	**Sn**	**12 47 24.0**	**-4.8**
AFI				*e*Sn	Sn	12 47 26.2	-2.7
AFI	**Afiamalu**	**3.02**	**14**	Pn	Pn	12 46 48.8	-5.0
	16nm,0.3s,baz=144,slow=2.1,SNR=21						
AFI				Sn	**Sn**	**12 47 24.0**	**-4.8**
	87nm,0.3s,baz=184,slow=12,SNR=11						
MSVF	**Nonsavu**	**9.05**	**263**	*e*Pn	Pn	12 48 11.0	-5.6
	135nm,1.4s						
RAR	**Rarotonga**	**12.80**	**112**	Pn	Pn	12 49 01.0	-6.7
	2.4nm,0.3s,baz=80,slow=0.8,SNR=3.8						
DZM	**Mont Dzumac**	**20.49**	**252**	*e*LR	LR	12 55 08.5	
	1µm,25.4s						
DZM	**Mont Dzumac**	**20.49**	**252**	LR	LR	12 56 55.9	
	comp=Z,982nm,20.5s,baz=72,slow=33						
PPT2	**Papeete2**	**21.92**	**95**	*e*S	**S**	**12 54 54.3**	**-4.2**
	627nm,26.5s						
PPT2				*e*LR	LR	12 56 05.4	
	849nm,27.0s,baz=269						
TBI	**Tubuai**	**22.58**	**110**	*e*S	S	12 55 04.4	-5.7
	1µm,27.5s						
TBI				*e*LR	LR	12 56 29.5	
	773nm,26.5s,baz=285						
URZ	**Urewera**	**23.18**	**201**	*e*P	**P**	**12 51 08.1**	**-3.2**
	9.8nm,0.6s						
URZ	**Urewera**	**23.18**	**201**	P	**P**	**12 51 08.3**	**-3.0**
	18nm,0.8s,baz=342,slow=2.6,SNR=10						
URZ				LR	LR	12 58 03.9	
	comp=Z,365nm,18.6s,baz=353,slow=32						
HNR	**Honiara**	**27.79**	**282**	LR	LR	13 01 12.8	
	comp=Z,1µm,18.3s,baz=105,slow=33						
RPZ	**Rata Peaks**	**30.17**	**204**	P	**P**	**12 52 11.5**	**-3.0**
	6.5nm,0.6s						
RPZ	**Rata Peaks**	**30.17**	**204**	P	**P**	**12 52 16.3**	**+1.7**
	7.4nm,0.8s,baz=61,slow=20,SNR=4.4						
STKA	**Stephens Creek**	**44.06**	**241**	*e*P	P	12 54 08.3	-4.1
	0.4nm,0.9s						
STKA	**Stephens Creek**	**44.06**	**241**	P	P	12 54 07.4	-5.0
	1.4nm,0.7s,baz=107,slow=12,SNR=5.1						
STKA				LR	LR	13 11 33.3	
	comp=Z,359nm,18.1s,baz=32,slow=35						
WRAB	**Tennant Creek**	**50.34**	**258**	*e*P	P	12 54 57.4	-4.1
	1.6nm,0.5s						
WRA	**Warramunga Arr**	**50.35**	**258**	P	P	12 54 56.6	-5.0
WRA	**Warramunga Arr**	**50.35**	**258**	P	P	12 54 56.6	-5.0
	1.4nm,0.5s,baz=97,slow=6.9,SNR=47						
AS31	**Alice Springs**	**50.48**	**253**	*e*P	P	12 54 58.0	-4.6
ASAR	**Alice Springs**	**50.48**	**253**	P	P	12 54 58.0	-4.6
ASAR	**Alice Springs**	**50.48**	**253**	P	P	12 54 58.0	-4.6
	4.8nm,0.7s,baz=89,slow=9.0,SNR=59						
ASAR				LR	LR	13 15 45.3	
	comp=Z,165nm,18.4s,baz=198,slow=36						
FITZ	**Fitzroy Crossi**	**58.75**	**259**	*e*P	**P**	**12 56 00.1**	**-2.5**
	0.8nm,0.5s						
VNDA	**Vanda**	**62.02**	**186**	P	**P**	**12 56 23.1**	**-0.8**
VNDA	**Vanda**	**62.02**	**186**	P	**P**	**12 56 23.1**	**-0.8**
	1.5nm,1.0s,baz=353,slow=7.4,SNR=4.4						
VNDA				LR	LR	13 15 54.2	
	comp=Z,175nm,21.6s,baz=167,slow=29						
MJAR	**Matsushiro Arr**	**70.60**	**320**	P	**P**	**12 57 21.3**	**+1.8**
MJAR	**Matsushiro Arr**	**70.60**	**320**	P	**P**	**12 57 21.3**	**+1.8**
	1.4nm,0.9s,baz=155,slow=6.7,SNR=4.3						
QSPA	**South Pole Qui**	**73.19**	**180**	*e*P	**P**	**12 57 34.0**	**-0.8**
	14nm,1.2s						
QSPA	**South Pole Qui**	**73.19**	**180**	P	**P**	**12 57 34.0**	**-0.8**
	8.0nm,1.0s,baz=23,slow=5.2,SNR=15						
YBH	**Yreka Blue Hor**	**74.26**	**36**	LR	LR	13 22 20.0	
	comp=Z,205nm,21.7s,baz=236,slow=29						
NVAR	**Mina Array Bea**	**74.85**	**41**	P	**P**	**12 57 46.2**	**+1.2**
NVAR	**Mina Array Bea**	**74.85**	**41**	P	**P**	**12 57 46.2**	**+1.2**
	1.3nm,0.8s,baz=228,slow=9.1,SNR=8.3						
KSRS	**Korea Array**	**77.79**	**315**	P	**P**	**12 58 01.6**	**+0.2**
	0.7nm,0.7s,baz=125,slow=6.3,SNR=6.4						
KSRS				LR	LR	13 27 42.7	
	comp=Z,73nm,19.4s,baz=359,slow=32						
KSAR	**Wonju Array Be**	**77.81**	**315**	P	**P**	**12 58 01.6**	**+0.1**
MSU	**Marysvale**	**78.88**	**44**	*e*P	**P**	**12 58 10.2**	**+2.5**
	5.4nm,1.2s						
USRK	**Ussuriysk Arra**	**79.05**	**323**	LR	LR	13 33 38.9	
	comp=Z,121nm,18.6s,baz=256,slow=36						
TXAR	**Lajitas Array**	**80.73**	**56**	P	**P**	**12 58 19.8**	**+2.0**
TXAR	**Lajitas Array**	**80.73**	**56**	P	**P**	**12 58 19.8**	**+2.0**
	1.5nm,1.0s,baz=216,slow=6.2,SNR=9.0						
TXAR				LR	LR	13 25 45.1	
	comp=Z,82nm,20.7s,baz=190,slow=29						
ANMO	**Albuquerqu**	**81.10**	**49**	LR	LR	13 24 46.8	
	comp=Z,114nm,21.9s,baz=214,slow=28						
MCMT	**McKenzie Canyo**	**81.86**	**38**	*e*P	**P**	**12 58 25.4**	**+1.8**
	1.4nm,1.1s						
BSMT	**Bassoo Peak**	**82.46**	**35**	*e*P	**P**	**12 58 27.8**	**+1.2**
	3.3nm,1.0s						
IMW	**Indian Meadow**	**82.52**	**40**	*e*P	**P**	**12 58 28.6**	**+1.5**
	6.2nm,1.3s						
SMCO	**Snowmass**	**82.72**	**46**	*e*P	**P**	**12 58 29.9**	**+1.5**
	7.9nm,1.4s						
PDAR	**Pinedale Array**	**82.79**	**41**	P	**P**	**12 58 29.2**	**+0.7**
PDAR	**Pinedale Array**	**82.79**	**41**	P	**P**	**12 58 29.2**	**+0.7**
	1.4nm,0.8s,baz=211,slow=2.6,SNR=6.2						
PDAR				LR	LR	13 31 42.7	
	comp=Z,69nm,18.9s,baz=258,slow=33						
YBMT	**Yellow Bay**	**82.90**	**35**	*e*P	**P**	**12 58 29.0**	**+0.3**
LKWY	**Lake**	**83.20**	**40**	*e*P	**P**	**12 58 32.9**	**+2.3**
	5.1nm,1.1s						
COLA	**College**	**83.64**	**10**	*e*P	**P**	**12 58 32.6**	**+0.7**
	9.3nm,1.0s						
ILAR	**Eielson Array**	**83.72**	**11**	P	**P**	**12 58 33.0**	**+0.5**
	0.9nm,0.6s,baz=228,slow=6.1,SNR=13						
GCMT	**Greycliff**	**84.28**	**39**	*e*P	**P**	**12 58 37.5**	**+1.6**
	4.1nm,1.3s						
PLCA	**Paso Flores**	**87.91**	**132**	LR	LR	13 31 23.8	
	comp=Z,201nm,19.7s,baz=184,slow=31						
YKA	**Yellowknife Ar**	**91.10**	**23**	P	**P**	**12 59 09.9**	**+1.7**
YKA	**Yellowknife Ar**	**91.10**	**23**	P	**P**	**12 59 09.9**	**+1.7**
	0.4nm,0.9s,baz=230,slow=4.3,SNR=4.5						
VNA3	**Neumayer Olymp**	**91.33**	**175**	*e*P	**P**	**12 59 09.0**	**-0.3**
VNA2	**Neumayer--Watz**	**91.83**	**175**	*e*P	**P**	**12 59 11.7**	**+0.1**
	baz=197,slow=2.3						
CMAR	**Chiang Mai Arr**	**93.88**	**288**	P	**P**	**12 59 21.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**93.88**	**288**	P	**P**	**12 59 21.6**	**-0.5**
	0.3nm,0.3s,baz=107,slow=3.0,SNR=2.6						
ULM	**Lac du Bonnet**	**94.53**	**39**	LR	LR	13 41 42.7	
	comp=Z,174nm,18.0s,baz=294,slow=35						
SONM	**Songino Array**	**96.50**	**318**	LR	LR	13 37 37.5	
	comp=Z,92nm,20.0s,baz=99,slow=32						
LPAZ	**La Paz**	**98.52**	**110**	LR	LR	13 34 33.6	
	comp=Z,72nm,18.6s,baz=42,slow=30						
CLL	**Collm**	**145.36**	**354**	⇑*i*PKPbc	**PKPdf**	**13 05 42.9**	**+1.3**
	comp=Z,13nm,1.6s						
CLL				*i* PKiKP	**PKiKP**	**13 05 47.4**	**+1.8**
CLL				*i* pPKPbc	pPKPbc	13 05 51.0	-3.4
BRG	**Berggiesshubel**	**145.68**	**353**	*e*P	**PKPab**	**13 05 44.1**	**+1.3**
	comp=Z,12nm,1.9s						
BRG				*e*		13 12 20.1	
	comp=Z,16nm,2.0s						
UPC	**Upice**	**145.75**	**350**	*e*PKP	**PKPab**	**13 05 44.5**	**+1.3**
UPC				*ep*PKP	**pPKPdf**	**13 05 54.6**	**-0.7**
KOLS	**Kolonicke sedl**	**145.82**	**343**	*e*PKP	PKPab	13 05 56.0	+13
DPC	**Dobruska-Polom**	**145.85**	**350**	*e*PKP	**PKPab**	**13 05 44.6**	**+1.0**
DPC				*ex*	x	13 05 50.5	
DPC				*ep*PKP	**pPKPdf**	**13 05 55.2**	**-0.3**
CRVS	**Cervenica-Dubn**	**146.07**	**343**	*e*PKP	**PKPab**	**13 05 45.4**	**+0.9**
VYHS	**Vyhne**	**147.12**	**346**	*e*PKP	**PKPab**	**13 05 47.8**	**-0.7**
KHC	**Kasperske Hory**	**147.44**	**353**	*e*PKP	**PKPab**	**13 05 49.5**	**-0.3**
KHC				*ep*PKP	**pPKPdf**	**13 05 58.4**	**+0.2**
GERES	**GERESS Array B**	**147.70**	**352**	PKPbc	**PKPbc**	**13 05 49.3**	**+0.7**
GERES	**GERESS Array B**	**147.70**	**352**	PKPbc	**PKPbc**	**13 05 49.3**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=59,slow=8.0,SNR=7.1						
BRTR	**Keskin Array B**	**147.82**	**320**	PKPbc	**PKPab**	**13 05 50.2**	**-1.6**
BRTR	**Keskin Array B**	**147.82**	**320**	PKPbc	**PKPab**	**13 05 50.2**	**-1.6**
	comp=Z,3.3nm,1.1s,baz=129,slow=3.3,SNR=11						

*ISCJB **10** 12:51:26.6±1.8,51°.88N±0°.07×162°.66W±0°.06, h30km±18km,mb3.4/2,Error ellipse: s-maj=11.6km s-min=6.3km az=3.0*

*IDC **10** 12:51:29.4±6.4,51°.91N×161°.64W,h0km,mb3.5/2, mb1 3.8/4,mb1mx3.4/30,mbtmp3.5/4,ML3.5/2,MS3.1/1, Ms1 3.1/1,ms1mx2.4/45,Error ellipse: s-maj=127.1km s-min=34.9km az=45.0*

*NEIC **10** 12:51:29.7,51°.97N×162°.77W,h18km,mb3.5/2, ML3.6(AEIC),After AEIC.*

ISC 10 12:51:27.4±5.0,51°.9N±0°.1×162°.69W±0°.06,h20km±28km, n29,σ0s80/34,South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WESE	**West Dahl East**	**2.82**	**337**	P	**Pn**	**12 52 12.4**	**+1.0**
AKSA	**Akutan Strait**	**2.89**	**322**	P	**Pn**	**12 52 11.9**	**-0.3**
AKSA				S	**Sn**	**12 52 45.8**	**-0.6**
WESN	**West Dahl Nort**	**2.91**	**338**	P	**Pn**	**12 52 12.1**	**-0

TOTH				AML	AML	12 54 01.5
	comp=N,9.1nm,0.7s					
TOTH				AML	AML	12 54 09.4
	comp=E,8.8nm,0.3s					
HHAG	**Hagoal**	**4.30**	**174**	P	**Pn**	**12 53 13.5 +1.2**
HHAG				S	**Sn**	**12 53 59.9 -1.6**
KOT	**Kottamia**	**4.30**	**177**	P	**Pn**	**12 53 13.6 +1.1**
KOT				S	**Sn**	**12 53 59.3 -2.4**
SUZ		**4.51**	**166**	P	**Pn**	**12 53 16.7 +1.4**
SALA	**Sala**	**4.55**	**108**	*e*P	**Pn**	**12 53 17.8 +1.8**
SALA				*e*S	**Sn**	**12 54 08.5 +0.4**
SALA				AML	AML	12 54 13.8
	comp=N,5.2nm,0.7s					
SALA				AML	AML	12 54 27.8
	comp=E,0.5nm,0.4s					
HSAF	**As Saff**	**4.61**	**181**	P	**Pn**	**12 53 18.4 +1.8**
GLL	**Jalalah**	**4.65**	**179**	P	**Pn**	**12 53 19.0 +1.8**
HNAT	**Natroun**	**4.67**	**191**	P	**Pn**	**12 53 18.9 +1.4**
HNKL	**Nakhl**	**4.75**	**154**	P	**Pn**	**12 53 20.0 +1.4**
HNKL				S	**Sn**	**12 54 10.8 -1.9**
ZALF	**Zalf**	**4.96**	**104**	*e*P	**Pn**	**12 53 23.7 +2.2**
ZALF				*e*S	**Sn**	**12 54 18.3 +0.3**
ZALF	**Zalf**	**4.96**	**104**	*e*P	**Pn**	**12 53 23.7 +2.2**
	SNR=90					
ZALF				*e*S	**Sn**	**12 54 18.3 +0.3**
	SNR=90					
ZNM		**4.97**	**167**	P	**Pn**	**12 53 22.9 +1.3**

CSEM ***10*** *13:09:12.6, 42°.51N× 13°.34E, h9km, MD2.2/11, After ROM*
ROM 10 13:09:12.6±0.1, 42°.51N×13°.34E, h9km, Md2.2/11, Ml1.7/7, Error ellipse: s-maj=1.1km s-min=1.1km az=1.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.06**	**66**	Pg	Pg	13 09 15.1	+0.4
CAMP				Sg	Sg	13 09 16.5	+0.3
	290nm,0.4s						
CAMP	**Campotosto**	**0.06**	**66**	Pg	Pg	13 09 15.1	+0.4
CAMP				Sg	Sg	13 09 16.5	+0.3
	290nm,0.4s						
AQU	**L'Aquila**	**0.17**	**164**	Pg	Pg	13 09 16.8	+0.6
AQU				Sg	Sg	13 09 19.8	+1.1
	129nm,0.3s						
AQU	**L'Aquila**	**0.17**	**164**	Pg	Pg	13 09 16.8	+0.6
AQU				Sg	Sg	13 09 19.8	+1.1
	129nm,0.3s						
TERO	**Teramo**	**0.22**	**61**	Pg	Pg	13 09 17.5	+0.2
TERO				Sg	Sg	13 09 21.2	+0.8
	112nm,0.3s						
TERO	**Teramo**	**0.22**	**61**	Pg	Pg	13 09 17.5	+0.2
TERO				Sg	Sg	13 09 21.2	+0.8
	112nm,0.3s						
LNSS	**Leonessa**	**0.24**	**292**	Pg	Pg	13 09 18.2	+0.6
LNSS				Sg	Sg	13 09 22.5	+1.5
	181nm,0.2s						
LNSS	**Leonessa**	**0.24**	**292**	Pg	Pg	13 09 18.2	+0.6
LNSS				Sg	Sg	13 09 22.5	+1.5
	181nm,0.2s						
FIAM	**Fiamignano**	**0.29**	**214**	Pg	Pg	13 09 19.2	+0.6
FIAM				Sg	Sb	13 09 24.1	-1.2
	47nm,0.5s						
FIAM	**Fiamignano**	**0.29**	**214**	Pg	Pg	13 09 19.2	+0.6
FIAM				Sg	Sb	13 09 24.1	-1.2
	47nm,0.5s						
NRCA	**Norcia**	**0.36**	**333**	Pg	Pg	13 09 20.2	+0.3
NRCA				Sg	Sg	13 09 25.9	+1.1
	136nm,0.1s						
NRCA	**Norcia**	**0.36**	**333**	Pg	Pg	13 09 20.2	+0.3
NRCA				Sg	Sg	13 09 25.9	+1.1
	136nm,0.1s						
VCEL	**Villa Celiera**	**0.39**	**108**	Pg	Pg	13 09 21.1	+0.7
VCEL				Sg	Sb	13 09 27.8	-0.3
	119nm,0.5s						
VCEL	**Villa Celiera**	**0.39**	**108**	Pg	Pg	13 09 21.1	+0.7
VCEL				Sg	Sb	13 09 27.8	-0.3
	119nm,0.5s						
MNS	**Montasola**	**0.50**	**255**	Pg	Pg	13 09 22.5	0.0
MNS				Sg	Sb	13 09 30.6	-0.6
	28nm,0.5s						
MNS	**Montasola**	**0.50**	**255**	Pg	Pg	13 09 22.5	0.0
MNS				Sg	Sb	13 09 30.6	-0.6
	28nm,0.5s						
FDMO	**Fiordimonte**	**0.56**	**341**	Pg	Pg	13 09 24.0	+0.5
FDMO				Sg	Sb	13 09 32.2	-0.5
FDMO	**Fiordimonte**	**0.56**	**341**	Pg	Pg	13 09 24.0	+0.5
FDMO				Sg	Sb	13 09 32.2	-0.5
CESI	**CESI - Serrava**	**0.59**	**327**	Pg	Pg	13 09 24.1	0.0
CESI				Sg	Sb	13 09 33.5	-0.2
CESI	**CESI - Serrava**	**0.59**	**327**	Pg	Pg	13 09 24.1	0.0
CESI				Sg	Sb	13 09 33.5	-0.2
INTR	**Introdacqua**	**0.65**	**140**	Pg	Pg	13 09 25.1	-0.3
INTR	**Introdacqua**	**0.65**	**140**	Pg	Pg	13 09 25.1	-0.3

BJI ***10*** *13:21:45.1, 9°.21S× 160°.42E, h125km, mB4.9/28, mb4.9/40*
MOS ***10*** *13:21:49.2±0.9, 8°.87S× 159°.57E, h116km, mb5.1/17, Error ellipse: s-maj=12.0km s-min=9.5km az=104.0*
IDC ***10*** *13:21:50.7±0.3, 8°.94S× 159°.77E, h120km±2km, mb4.5/20, mb1 4.6/21, mb1mx4.6/22, mbtmp4.5/21, MS3.3/6, Ms1 3.3/6, ms1mx3.1/31, Error ellipse: s-maj=12.4km s-min=8.7km az=79.0*
ISCJB ***10*** *13:21:50.4±0.1, 8°.90S±0°.04× 159°.56E±0°.03, h123km, mb4.9/78, Error ellipse: s-maj=5.3km s-min=4.4km az=143.9*
NEIC ***10*** *13:21:51.1±0.2, 8°.89S× 159°.63E, mb5.0/41, Error ellipse: s-maj=6.3km s-min=5.8km az=132.0*
NEIC Felt at Honiara.
AUST ***10*** *13:22:09.6, 9°.15S× 159°.53E, h300km*
DJA ***10*** *13:22:19.1±2.7, 9°S±10°× 15°.9E±1°.5, h365km±26km, M4.5/18, mB5.3/3, mb4.5/18, Mw(mB)4.7/3*
ISC 10 13:21:51.2±0.3, 8°.93S±0°.05× 159°.79E±0°.05, h126km±1km, h126km:pP-P, n313, σ1°42/379, mb4.8/78, 54C-43D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.52**	**163**	*e*Pn	**Pn**	**13 22 09.2**	**-0.7**
HNR				S	**Sn**	**13 22 23.6**	**-0.6**
HNR	**Honiara**	**0.52**	**163**	P	**Pn**	**13 22 09.3**	**-0.7**
	904nm,0.3s,baz=176,slow=4.0,SNR=368						
HNR				S	**Sn**	**13 22 23.6**	**-0.6**
PMG	**Port Moresby**	**12.48**	**267**	P	**Pn**	**13 24 45.4**	**+0.8**
PMG	**Port Moresby**	**12.48**	**267**	P	**Pn**	**13 24 45.4**	**+0.8**
	0.4nm,0.3s,baz=75,slow=12,SNR=3.2						
DZM	**Mont Dzumac**	**14.55**	**155**	*e*P	P	13 25 18.4	+4.1
	180nm,1.6s						
DZM				*e*LR	LR	13 28 45.5	
	272nm,33.9s						
DZM	**Mont Dzumac**	**14.55**	**155**	P	P	13 25 18.3	+4.0
DZM	**Mont Dzumac**	**14.55**	**155**	P	P	13 25 18.3	+4.0
	1.0nm,0.3s,baz=360,slow=16,SNR=7.3						
DZM				LR	LR	13 30 07.4	
	comp=Z,27nm,19.3s,baz=41,slow=34						
COEN	**Coen**	**17.03**	**251**	*e*Pn	**Pn**	**13 25 44.9**	**+2.9**
	141nm,1.0s						
COEN	**Coen**	**17.03**	**251**	P	**Pn**	**13 25 44.8**	**+2.9**
	baz=17,SNR=4.9						
CTA	**Charters Tower**	**17.15**	**228**	P	**Pn**	**13 25 46.5**	**+3.0**
CTA	**Charters Tower**	**17.15**	**228**	P	**Pn**	**13 25 46.5**	**+3.0**
	0.6nm,0.3s,baz=50,slow=13,SNR=11						
CTAO	**Charters Tower**	**17.15**	**228**	*e*P	**Pn**	**13 25 46.4**	**+3.0**
CTAO				pmax	pmax		
	comp=Z,52nm,1.3s						
CTAO	**Charters Tower**	**17.15**	**228**	*e*Pn	**Pn**	**13 25 46.4**	**+3.0**
	comp=Z,52nm,1.3s						
EIDS	**Eidsvold**	**18.33**	**206**	*e*Pn	**Pn**	**13 25 58.8**	**+1.3**
	comp=Z,32nm,0.9s						
EIDS	**Eidsvold**	**18.33**	**206**	P	**Pn**	**13 25 58.7**	**+1.3**
	baz=18,SNR=8.2						
JAY	**Jayapura**	**20.02**	**287**	P	Pn	13 26 17.7	+0.2
	baz=20,SNR=7.8						
RMQ	**Roma**	**20.36**	**210**	P	Pn	13 26 20.4	-0.8
	baz=20,SNR=19						
QIS	**Mount Isa**	**22.65**	**237**	P	**P**	**13 26 42.2**	**+0.1**
	baz=22,SNR=13						
ARMA	**Armidale**	**22.70**	**199**	*e*P	**P**	**13 26 43.4**	**+0.9**
ARMA	**Armidale**	**22.70**	**199**	P	**P**	**13 26 43.5**	**+1.0**
	baz=22,SNR=17						
QLP	**Quilpie**	**22.93**	**218**	P	**P**	**13 26 45.2**	**+0.6**
	baz=23,SNR=14						
MGCD	**Mangrove Creek**	**25.46**	**197**	P	**P**	**13 27 09.4**	**+1.9**
	baz=25,SNR=6.2						
CMSA	**Cobar Meteorol**	**26.04**	**208**	P	**P**	**13 27 12.9**	**+0.1**
	baz=26,SNR=8.6						
GUMO	**Guam**	**26.83**	**326**	LR	LR	13 35 59.3	
	comp=Z,52nm,19.7s,baz=83,slow=32						
WRAB	**Tennant Creek**	**26.91**	**243**	*e*P	**P**	**13 27 20.1**	**-0.8**
WRAB				*e**PP	**pP**	**13 27 46.3**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,29nm,1.0s						
WRAB	**Tennant Creek**	**26.91**	**243**	*e*P	**P**	**13 27 20.1**	**-0.8**
	comp=Z,29nm,1.0s						
WRAB				*e*pP	**pP**	**13 27 46.2**	**-1.6**
WRA	**Warramunga Arr**	**26.93**	**243**	P	**P**	**13 27 20.6**	**-0.4**
WRA				pP	**pP**	**13 27 47.2**	**-0.8**
WRA				PcP	**PcP**	**13 30 39.8**	**-0.3**
WRA	**Warramunga Arr**	**26.93**	**243**	P	**P**	**13 27 20.6**	**-0.4**
	comp=Z,15nm,0.9s,baz=68,slow=9.4,SNR=58						
WRA				pP	**pP**	**13 27 47.2**	**-0.8**
	comp=Z,11nm,0.8s,baz=71,slow=9.3,SNR=5.8						
WRA				PcP	**PcP**	**13 30 39.8**	**-0.3**
	comp=Z,3.6nm,0.9s,baz=76,slow=2.7,SNR=8.1						
KDU	**Kakadu**	**27.08**	**260**	P	P	13 27 27.4	+5.0
	baz=27,SNR=3.7						
CAN	**Canberra**	**28.06**	**199**	*e*P	**P**	**13 27 30.5**	**-0.5**
CAN				pmax	pmax		
	comp=Z,13nm,0.8s						
CAN	**Canberra**	**28.06**	**199**	*e*P	**P**	**13 27 30.5**	**-0.5**
	comp=Z,13nm,0.8s						
AFI	**Afiamalu**	**28.29**	**103**	P	**P**	**13 27 34.1**	**+0.9**
AFI	**Afiamalu**	**28.29**	**103**	P	**P**	**13 27 34.1**	**+0.9**
	comp=Z,43nm,0.9s,baz=302,slow=12,SNR=3.7						
STKA	**Stephens Creek**	**28.41**	**214**	P	**P**	**13 27 34.1**	**+0.1**
STKA				pP	**pP**	**13 28 01.7**	**+0.6**
STKA				PcP	**PcP**	**13 30 42.9**	**-0.6**
STKA	**Stephens Creek**	**28.41**	**214**	P	**P**	**13 27 34.1**	**+0.1**
	comp=Z,5.3nm,0.6s,baz=6.3,slow=7.5,SNR=22						
STKA				pP	**pP**	**13 28 01.7**	**+0.6**
	comp=Z,2.2nm,0.5s,baz=52,slow=17,SNR=2.7						
STKA				PcP	**PcP**	**13 30 42.9**	**-0.6**
	comp=Z,3.9nm,0.8s,baz=309,slow=1.2,SNR=3.8						
STKA				LR	LR	13 37 26.6	
	comp=Z,122nm,19.9s,baz=27,slow=33						
STKA	**Stephens Creek**	**28.41**	**214**	P	**P**	**13 27 33.9**	**-0.1**
	baz=28,SNR=24						
AS31	**Alice Springs**	**28.77**	**236**	*e*P	**P**	**13 27 35.5**	**-1.9**
ASAR	**Alice Springs**	**28.77**	**236**	P	**P**	**13 27 36.6**	**-0.8**
ASAR				pP	**pP**	**13 28 03.6**	**-0.9**
ASAR				PcP	**PcP**	**13 30 44.0**	**-0.5**
ASAR	**Alice Springs**	**28.77**	**236**	P	**P**	**13 27 36.6**	**-0.8**
	comp=Z,9.1nm,0.9s,baz=66,slow=9.2,SNR=67						
ASAR				pP	**pP**	**13 28 03.6**	**-0.9**
	comp=Z,2.7nm,0.7s,baz=65,slow=9.6,SNR=1.9						
ASAR				PcP	**PcP**	**13 30 44.0**	**-0.5**
	comp=Z,2.2nm,0.9s,baz=48,slow=4.1,SNR=5.0						
ASAR				LR	LR	13 37 33.5	
	comp=Z,106nm,21.7s,baz=134,slow=33						
TOO	**Toolangi**	**31.31**	**202**	P	**P**	**13 28 01.0**	**+1.4**
	baz=31,SNR=9.3						
ARPS	**Mount Arapiles**	**32.15**	**208**	P	**P**	**13 28 07.8**	**+0.9**
	baz=32,SNR=5.4						
BBOO	**Buckleboo**	**32.34**	**219**	*e*P	**P**	**13 28 08.4**	**-0.3**
	comp=Z,349nm,0.7s						
BBOO	**Buckleboo**	**32.34**	**219**	P	**P**	**13 28 08.4**	**-0.3**
	baz=32,SNR=23						
FITZ	**Fitzroy Crossi**	**34.38**	**251**	P	**P**	**13 28 25.4**	**-1.2**
	baz=34,SNR=3.4						
RPZ	**Rata Peaks**	**36.02**	**166**	P	**P**	**13 28 40.6**	**+0.3**
RPZ	**Rata Peaks**	**36.02**	**166**	P	**P**	**13 28 40.6**	**+0.3**
	comp=Z,13nm,0.7s,baz=154,slow=2.0,SNR=5.8						
MMRI	**Maumere**	**37.10**	**267**	P	**P**	**13 28 48.6**	**-1.3**
	comp=Z,62nm,1.2s,comp=Z,747nm						
WSI	**Waingapu**	**38.97**	**266**	S	S	13 34 40.0	-15
	baz=39,SNR=5.7						
CBIJ	**Chichi jima**	**39.67**	**335**	LR	LR	13 41 50.1	
	comp=Z,41nm,20.8s,baz=154,slow=30						
MBWA	**Marble Bar**	**40.43**	**248**	*e*P	**P**	**13 29 16.8**	**-0.8**
	comp=Z,18nm,1.0s						
PCI	**Palu**	**40.56**	**279**	P	**P**	**13 29 20.3**	**+1.6**
	baz=40,SNR=20						
PCI				S	S	13 34 58.2	-21
	baz=40,SNR=3.0						
MEEK	**Meekatharra**	**42.74**	**240**	P	**P**	**13 29 36.3**	**-0.1**
	baz=42,SNR=13						
MORW	**Morawa**	**45.63**	**238**	P	**P**	**13 29 59.0**	**-0.3**
	baz=45,SNR=4.1						
YULB	**Yu-li**	**49.48**	**311**	*e*P	**P**	**13 30 26.2**	**-3.0**
	comp=Z,17nm,0.8s						
MJAR	**Matsushiro Arr**	**49.57**	**337**	P	**P**	**13 30 28.1**	**-1.5**
MJAR	**Matsushiro Arr**	**49.57**	**337**	P	**P**	**13 30 28.1**	**-1.5**
	comp=Z,3.2nm,0.8s,baz=167,slow=9.4,SNR=14						
NACB	**Ninganchiao**	**49.73**	**312**	*e*P	**P**	**13 30 30.9**	**-0.1**
	comp=Z,39nm,0.8s						
PPT2	**Papeete2**	**49.90**	**105**	*e*LR	LR	13 45 00.9	
	comp=Z,74nm,24.2s						
TPUB	**Ta-pu**	**49.93**	**311**	*e*P	**P**	**13 30 31.4**	**-1.2**
SSLB	**Suanglung**	**49.97**	**311**	*e*P	**P**	**13 30 32.9**	**0.0**
	comp=Z,33nm,0.8s						
JNU	**Nakatsue**	**50.06**	**328**	*e*P	**P**	**13 30 32.7**	**-0.7**
	comp=Z,4.8nm,0.9s						
TIAR	**Tiarei**	**50.12**	**105**	*e*P	**P**	**13 30 36.0**	**+1.9**
	comp=Z,38nm,0.8s						
TIAR	**Tiarei**	**50.12**	**105**	*e*P	**P**	**13 30 36.0**	**+1.9**
	comp=Z,38nm,0.8s						
YHNB	**Yeheng**	**50.18**	**313**	*e*P	**P**	**13 30 33.4**	**-1.1**
	comp=Z,66nm,1.3s						
TVO	**Taravao**	**50.22**	**106**	*e*P	**P**	**13 30 36.4**	**+1.5**
	comp=Z,45nm,0.8s						
TVO	**Taravao**	**50.22**	**106**	*e*P	**P**	**13 30 36.4**	**+1.5**
TVO				pmax	pmax		
	comp=Z,45nm,0.8s						
TVO	**Taravao**	**50.22**	**106**	*e*P	**P**	**13 30 36.4**	**+1.5**
	comp=Z,45nm,0.8s						
KSM	**Kuching**	**50.37**	**279**	*e*pP	pP	13 31 04.5	-0.8
TBI	**Tubuai**	**50.56**	**113**	*e*S	**S**	**13 37 39.3**	**-3.0**
	comp=Z,71nm,27.0s						
TBI				*e*LR	LR	13 45 21.4	
	comp=Z,137nm,36.0s						
PMOR	**Pomariorio Ree**	**51.44**	**102**	*e*P	**P**	**13 30 45.6**	**+1.6**
	comp=Z,84nm,1.0s						
PMOR	**Pomariorio Ree**	**51.44**	**102**	*e*P	**P**	**13 30 45.6**	**+1.6**
	comp=Z,84nm,1.0s						
VAH	**Vaihoa**	**51.70**	**102**	*e*P	**P**	**13 30 47.7**	**+1.8**
	comp=Z,40nm,0.9s						
VAH	**Vaihoa**	**51.70**	**102**	*e*P	**P**	**13 30 47.7**	**+1.8**
	comp=Z,40nm,0.9s						
CGJI	**Cibinong**	**53.61**	**268**	P	**P**	**13 30 56.9**	**-3.2**
	comp=Z,5nm,1.0s,comp=Z,9um						
KSRS	**Korea Array**	**54.94**	**329**	P	**P**	**13 31 09.7**	**+0.4**
	comp=Z,14nm,1.1s,baz=149,slow=7.6,SNR=40						
KSRS				pP	**pP**	**13 31 39.2**	**+0.3**
	comp=Z,2.6nm,1.0s,baz=156,slow=7.7,SNR=2.6						
KSAR	**Wonju Array Be**	**54.95**	**329**	P	**P**	**13 31 09.7**	**+0.4**
KSAR				pP	**pP**	**13 31 39.2**	**+0.2**
INCN	**Inchon**	**55.63**	**328**	*e*P	**P**	**13 31 15.0**	**+0.8**
	comp=Z,26nm,0.8s						
YSS	**Yuzh-Sakhalins**	**57.67**	**346**	*e*P	**P**	**13 31 27.5**	**-0.9**
USRK	**Ussuriysk Arra**	**58.56**	**337**	P	**P**	**13 31 35.2**	**+0.6**
	comp=Z,8.6nm,0.8s,baz=157,slow=6.3,SNR=17						
USRK				pP	**pP**	**13 32 04.9**	**+0.2**
	comp=Z,3.4nm,0.8s,baz=130,slow=5.4,SNR=2.6						
MDJ	**Mudanjiang**	**59.87**	**335**	P	**P**	**13 31 45.2**	**+1.5**
MDJ				pP	**pP**	**13 32 13.9**	**+0.1**
MDJ				sP	**sP**	**13 32 27.4**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,83nm,4.6s						
CN2	**Changchun**	**61.03**	**332**	*e*P	**P**	**13 31 51.5**	**-0.1**
CN2				*e*pP	**pP**	**13 32 21.8**	**0.0**
CN2				*e*S	**S**	**13 39 59.4**	**-1.0**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
PETK	**Petropavlovsk-**	**61.82**	**359**	P	**P**	**13 31 57.2**	**+0.5**
PETK	**Petropavlovsk-**	**61.82**	**359**	P	**P**	**13 31 57.2**	**+0.5**
PETK	**Petropavlovsk-**	**61.82**	**359**	P	**P**	**13 31 57.2**	**+0.5**
	comp=Z,7.1nm,0.9s,baz=179,slow=9.8,SNR=5.3						
PETK				LR	LR	13 54 49.4	
	comp=Z,32nm,19.1s,baz=196,slow=32						
GYA	**Guiyang**	**62.41**	**306**	*e*P	**P**	**13 32 02.9**	**+1.6**
GYA				pP	**pP**	**13 32 33.8**	**+2.1**
GYA				sP	**sP**	**13 32 48.0**	**+2.6**
GYA				ScP	**ScP**	**13 36 29.6**	**-0.6**
GYA				PcS	**PcS**	**13 36 43.2**	**-0.2**
GYA				S	**S**	**13 40 17.3**	**-1.4**
GYA				sS	**sS**	**13 41 11.0**	**0.0**
GYA				SKS	**SKSac**	**13 41 38.6**	**-3.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,90nm,4.9s						
BJI	**Beijing**	**63.23**	**324**	P	**P**	**13 32 06.4**	**+0.1**
BJI				pmax	pmax		
	comp=Z,14nm,1.3s						
BJI				LR	LR		
	comp=Z,43nm,19.3s						
XAN	**Xi'an**	**64.41**	**314**	P	**P**	**13 32 13.8**	**-0.5**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KMI	**Kunming**	**65.04**	**303**	P	**P**	**13 32 19.8**	**+1.1**
KMI				pP	**PcP**	**13 32 51.9**	**+1.2**
KMI				sP	**sP**	**13 33 04.7**	**+1.7**
KMI				PP	**PP**	**13 34 43.6**	**+0.1**
KMI				S	**S**	**13 40 50.3**	**-1.2**
KMI				sS	**sS**	**13 41 44.3**	**+0.1**
KMI				SS	**SS**	**13 45 07.1**	**+0.9**
KMI				pmax	pmax		
	comp=Z,11nm,1.1s						
KMI				pmax	pmax		
	comp=Z,92nm,4.4s						
KMI				LR	LR		
	comp=N,93nm,17.2s						
KMI				LR	LR		
	comp=E,74nm,21.0s						
KMI				LR	LR		
	comp=Z,72nm,17.2s						
CMAR	**Chiang Mai Arr**	**65.90**	**295**	P	**P**	**13 32 23.8**	**-0.3**
CMAR				pP	**PcP**	**13 32 54.2**	**+0.1**
CMAR	**Chiang Mai Arr**	**65.90**	**295**	P	**P**	**13 32 23.8**	**-0.3**
	comp=Z,4.8nm,0.8s,baz=114,slow=4.6,SNR=25						
CMAR				pP	**PcP**	**13 32 54.2**	**+0.1**
	comp=Z,3.3nm,0.8s,baz=120,slow=4.6,SNR=4.6						
CMMT	**Chiang Mai**	**66.01**	**295**	P	**P**	**13 32 25.4**	**+0.5**
	comp=Z,11nm,1.1s,comp=Z,330nm						
CHTO	**Chiang Mai**	**66.01**	**295**	*e*P	**P**	**13 32 24.3**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,11nm,1.1s						
CHTO	**Chiang Mai**	**66.01**	**295**	*e*P	**P**	**13 32 24.3**	**-0.6**
	comp=Z,11nm,1.1s						
CHTO	**Chiang Mai**	**66.01**	**295**	P	**P**	**13 32 24.9**	**0.0**
	comp=Z,12nm,1.1s						
HHC	**Hu-ho-hao-te**	**66.49**	**322**	*e*P	**P**	**13 32 28.4**	**+0.8**
HHC				pP	**pP**	**13 32 58.5**	**+0.1**
HHC				sP	**sP**	**13 33 12.5**	**+0.5**
HHC				PP	**PP**	**13 34 59.0**	**+3.2**
HHC				S	**S**	**13 41 08.0**	**-0.4**
HHC				sS	**sS**	**13 42 00.2**	**-1.1**
HHC				SS	**SS**	**13 45 29.1**	**+1.1**
HHC				pmax	pmax		
	comp=Z,31nm,0.7s						
HHC				pmax	pmax		
	comp=Z,240nm,4.4s						
CD2	**Chengdu**	**66.69**	**309**	P	**P**	**13 32 28.9**	**-0.1**
CD2				PcP	**PcP**	**13 32 57.1**	**-0.1**
CD2				pP	**pP**	**13 32 58.5**	**-1.3**
CD2				sP	**sP**	**13 33 11.9**	**-1.5**
CD2				PP	**PP**	**13 34 58.9**	**+1.2**
CD2				PcS		13 37 00.4	
CD2				S	**S**	**13 41 08.7**	**-2.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
VNDA	**Vanda**	**68.58**	**180**	P	**P**	**13 32 40.6**	**+0.6**
VNDA	**Vanda**	**68.58**	**180**	P	**P**	**13 32 40.6**	**+0.6**
	comp=Z,18nm,0.8s,baz=340,slow=6.6,SNR=108						
SBA	**Scott Base**	**69.00**	**178**	*e*P	**P**	**13 32 44.2**	**+1.6**
SBA				pmax	pmax		
	comp=Z,237nm,2.8s						
SBA	**Scott Base**	**69.00**	**178**	*e*P	**P**	**13 32 44.1**	**+1.6**
	comp=Z,237nm,2.8s						
LZH	**Lanzhou**	**69.04**	**314**	*e*P	**P**	**13 32 45.5**	**+1.7**
LZH				pP	**pP**	**13 33 16.2**	**+1.5**
LZH				sP	**sP**	**13 33 30.1**	**+1.8**
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
LZH				pmax	pmax		
	comp=Z,53nm,4.4s						
SEY	**Seymchan**	**71.87**	**356⇑**	*e*P	**P**	**13 33 00.2**	**0.0**
ULN	**Ulaanbaatar**	**73.21**	**326**	*e*P	**P**	**13 33 09.6**	**+0.9**
	comp=Z,35nm,1.0s						
ULN				*e*pP	**pP**	**13 33 40.2**	**+0.3**
ULN	**Ulaanbaatar**	**73.21**	**326**	P	**P**	**13 33 09.5**	**+0.9**
GTA	**Gaotai**	**73.41**	**316**	*e*P	**P**	**13 33 10.7**	**+0.7**
GTA				pP	**pP**	**13 33 41.8**	**+0.5**
GTA				sP	**sP**	**13 33 56.1**	**+1.4**
GTA				S	**S**	**13 42 29.2**	**-0.1**
GTA				sS	**sS**	**13 43 24.4**	**+1.3**
GTA				SS	**SS**	**13 47 16.3**	**+1.8**
GTA				pmax	pmax		
	comp=Z,19nm,1.0s						
GTA				pmax	pmax		
	comp=Z,73nm,6.4s						
GTA				LR	LR		
	comp=N,190nm,13.5s						
GTA				LR	LR		
	comp=E,100nm,18.1s						
GTA				LR	LR		
	comp=Z,86nm,13.3s						
SONM	**Songino Array**	**73.56**	**326**	P	**P**	**13 33 11.4**	**+0.7**
SONM				pP	**pP**	**13 33 41.6**	**-0.3**
SONM	**Songino Array**	**73.56**	**326**	P	**P**	**13 33 11.4**	**+0.7**
	comp=Z,28nm,0.9s,baz=137,slow=5.6,SNR=160						
SONM				pP	**pP**	**13 33 41.6**	**-0.3**
	comp=Z,8.3nm,0.8s,baz=142,slow=6.1,SNR=5.7						
YAK	**Yakutsk**	**74.52**	**346**	*e*P	**P**	**13 33 15.2**	**-0.5**
YAK				pmax	pmax		
	comp=Z,35nm,0.8s						
YAK				pmax	pmax		
	comp=N,6.0nm,0.9s						
**Y

WMQ					pmax	pmax			
	comp=Z,57nm,7.0s								
WMQ					LR	LR			
	comp=N,140nm,20.0s								
WMQ					LR	LR			
	comp=E,120nm,20.0s								
WMQ					LR	LR			
	comp=Z,140nm,20.0s								
DOT	**Dot Lake**	**83.82**	**22**	*e*P	**P**		**13 34 07.3**	**+1.0**	
	comp=Z,37nm,0.9s								
COLD	**Coldfoot**	**83.96**	**17**	*e*P	**P**		**13 34 08.4**	**+1.4**	
	comp=Z,39nm,2.4s								
MAW	**Mawson**	**84.44**	**202**	P	**P**		**13 34 09.8**	**+0.4**	
MAW				pP	**pP**		**13 34 41.1**	**-0.4**	
MAW	**Mawson**	**84.44**	**202**	P	**P**		**13 34 09.8**	**+0.4**	
	comp=Z,9.4nm,0.7s,baz=80,slow=5.4,SNR=7.5								
MAW				pP	**pP**		**13 34 41.1**	**-0.4**	
	comp=Z,9.7nm,0.9s,baz=273,slow=1.0,SNR=3.3								
EGAK	**Eagle**	**85.50**	**22**	*e*P	**P**		**13 34 14.1**	**-0.6**	
	comp=Z,22nm,1.4s								
MK31	**Makanchi Array**	**88.00**	**318**	*e*P	**P**		**13 34 25.3**	**-2.0**	
MK31	**Makanchi Array**	**88.00**	**318**	*e*P	**P**		**13 34 25.2**	**-2.0**	
MKAR	**Makanchi Array**	**88.00**	**318**	P	**P**		**13 34 26.6**	**-0.7**	
MKAR				*e**PP	**pP**		**13 34 56.3**	**-3.3**	
MKAR	**Makanchi Array**	**88.00**	**318**	P	**P**		**13 34 26.6**	**-0.7**	
MKAR				*e*pP	**pP**		**13 34 56.3**	**-3.3**	
MKAR	**Makanchi Array**	**88.00**	**318**	P	**P**		**13 34 26.6**	**-0.7**	
	comp=Z,5.5nm,0.8s,baz=104,slow=5.5,SNR=52								
MKAR				pP	**pP**		**13 34 57.4**	**-2.2**	
	comp=Z,3.7nm,0.7s,baz=98,slow=5.8,SNR=9.0								
CIS	**Catalina Islan**	**88.09**	**56**	⇑P	**P**		**13 34 29.1**	**+1.0**	
	baz=88								
ZALV	**Zalesovo Beam**	**88.45**	**325**	P	**P**		**13 34 28.1**	**-1.1**	
ZALV				*PP	**pP**		**13 34 59.7**	**-1.8**	
ZALV	**Zalesovo Beam**	**88.45**	**325**	P	**P**		**13 34 28.1**	**-1.1**	
ZALV				pP	**pP**		**13 34 59.6**	**-1.8**	
ZALV	**Zalesovo Beam**	**88.45**	**325**	P	**P**		**13 34 28.1**	**-1.1**	
	comp=Z,5.1nm,0.9s,baz=108,slow=4.8,SNR=16								
ZALV				pP	**pP**		**13 34 59.6**	**-1.8**	
	comp=Z,1.5nm,0.8s,baz=121,slow=5.0,SNR=2.5								
ISA	**Isabella**	**88.50**	**54**	⇑P	**P**		**13 34 31.3**	**+1.3**	
	baz=89								
MWC	**Mount Wilson**	**88.54**	**55**	*e*P	**P**		**13 34 32.2**	**+1.8**	
MWC				pmax	pmax				
	comp=Z,28nm,1.4s								
MWC	**Mount Wilson**	**88.54**	**55**	*e*P	**P**		**13 34 32.1**	**+1.8**	
	comp=Z,28nm,1.4s								
EDW2	**Edwards Air Fo**	**88.73**	**55**	⇑P	**P**		**13 34 32.5**	**+1.4**	
	baz=89								
BFSC	**Mount Baldy Ra**	**88.87**	**55**	⇓P	**P**		**13 34 32.8**	**+0.9**	
	baz=89								
CWC	**Cottonwood Cre**	**88.97**	**53**	⇑P	**P**		**13 34 33.2**	**+0.9**	
	baz=89								
LRMC	**Laurel Mountai**	**89.09**	**54**	⇑P	**P**		**13 34 34.4**	**+1.6**	
	baz=89								
NVAR	**Mina Array Bea**	**89.21**	**51**	P	**P**		**13 34 34.4**	**+0.9**	
NVAR				pP	**pP**		**13 35 06.1**	**+0.3**	
NVAR	**Mina Array Bea**	**89.21**	**51**	P	**P**		**13 34 34.4**	**+0.9**	
	comp=Z,5.5nm,0.9s,baz=242,slow=5.9,SNR=29								
NVAR				pP	**pP**		**13 35 06.1**	**+0.3**	
	comp=Z,1.7nm,0.8s,baz=235,slow=6.5,SNR=3.7								
NV11	**Mina Array Sit**	**89.32**	**51**	*e*P	**P**		**13 34 34.7**	**+0.9**	
MPMC	**Manual Prospec**	**89.36**	**53**	⇓P	**P**		**13 34 35.3**	**+1.1**	
	baz=90								
BAR	**Barrett**	**89.37**	**57**	*e*P	**P**		**13 34 36.0**	**+1.9**	
	comp=Z,16nm,1.3s								
NVS	**Novosibirsk**	**89.59**	**326**	*i* P	**P**		**13 34 32.6**	**-1.9**	
MONP	**Monument Peak**	**89.62**	**57**	⇑P	**P**		**13 34 37.0**	**+1.5**	
	baz=90,SNR=9.1								
GRAC	**Grapevine Rang**	**89.64**	**53**	⇓P	**P**		**13 34 36.6**	**+1.3**	
	baz=90								
PFO	**Pinyon Flat Ob**	**89.73**	**56**	*e*P	**P**		**13 34 37.8**	**+1.9**	
PFO	**Pinyon Flat Ob**	**89.73**	**56**	⇓P	**P**		**13 34 37.4**	**+1.5**	
	baz=90								
GSC	**Goldstone**	**89.76**	**54**	*e*P	**P**		**13 34 37.9**	**+1.9**	
GSC				pmax	pmax				
	comp=Z,6.0nm,1.0s								
GSC	**Goldstone**	**89.76**	**54**	*e*P	**P**		**13 34 37.9**	**+1.9**	
	comp=Z,6.1nm,1.0s								
GSC	**Goldstone**	**89.76**	**54**	⇑P	**P**		**13 34 37.3**	**+1.4**	
	baz=90								
FURC	**Furnace Creek,**	**89.94**	**53**	⇑P	**P**		**13 34 38.0**	**+1.4**	
	baz=90								
HEC	**Hector,Ludlow**	**90.06**	**55**	⇓P	**P**		**13 34 38.9**	**+1.6**	
	baz=90								
SWSC	**Sam W. Stewart**	**90.15**	**57**	⇓P	**P**		**13 34 39.2**	**+1.6**	
	baz=90								
BELC	**Belle Mtn. Jos**	**90.17**	**56**	⇓P	**P**		**13 34 39.6**	**+1.6**	
	baz=90,SNR=14								
SHOC	**Shoshone**	**90.30**	**54**	⇓P	**P**		**13 34 39.8**	**+1.5**	
	baz=90								
TUQ	**Turquoise Moun**	**90.50**	**54**	⇑P	**P**		**13 34 40.8**	**+1.4**	
	baz=91								
BC3	**Big Chuckawall**	**90.56**	**56**	⇑P	**P**		**13 34 41.5**	**+1.8**	
	baz=91,SNR=6.9								
GMRC	**Granite Mounta**	**90.59**	**55**	⇑P	**P**		**13 34 41.3**	**+1.4**	
	baz=91,SNR=9.3								
KSH	**Kashi**	**90.88**	**310**	*e*P	**P**		**13 34 41.5**	**+0.4**	
KSH				pP	**pP**		**13 35 14.5**	**+1.1**	
KSH				sP	**sP**		**13 35 27.1**	**+0.4**	
KSH				PP	**PP**		**13 38 21.0**	**+2.1**	
KSH				SKS	**SKSac**		**13 44 59.5**	**-2.1**	
KSH				S	**S**		**13 45 25.4**	**-2.3**	
KSH				sS	**sS**		**13 46 22.0**	**-1.7**	
KSH				SS	**SS**		**13 51 35.9**	**+2.2**	
KSH				pmax	pmax				
	comp=Z,2.0nm,0.2s								
KSH				pmax	pmax				
	comp=Z,77nm,3.8s								
KSH				LR	LR				
	comp=N,150nm,5.5s								
KSH				LR	LR				
	comp=E,140nm,4.7s								
KSH				LR	LR				
	comp=Z,260nm,5.5s								
IRM	**Iron Mountain**	**90.89**	**56**	⇓P	**P**		**13 34 42.8**	**+1.7**	
	baz=91,SNR=11								
GLA	**Glamis**	**90.97**	**57**	⇓P	**P**		**13 34 43.1**	**+1.6**	
	baz=91								
LDFC	**Landfair**	**91.09**	**55**	*e*P	**P**		**13 34 44.4**	**+2.2**	
	comp=Z,25nm,1.1s								
BMO	**Blue Mountains**	**91.24**	**45**	*e*P	**P**		**13 34 43.7**	**+1.1**	
BMO				pmax	pmax				
	comp=Z,12nm,1.5s								
BMO	**Blue Mountains**	**91.24**	**45**	*e*P	**P**		**13 34 43.7**	**+1.1**	
	comp=Z,12nm,1.5s								
R11A	**Troy Canyon, C**	**91.29**	**52**	⇑P	**P**		**13 34 44.6**	**+1.5**	
	baz=92								
KURK	**Kurchatov**	**91.30**	**321**	*c i*P	**P**		**13 34 41.0**	**-1.5**	
KURK				pmax	pmax				
	comp=Z,14nm,1.5s								
KURK	**Kurchatov**	**91.30**	**321**	*e*P	**P**		**13 34 41.4**	**-1.1**	
Y12C	**Blythe**	**91.34**	**56**	⇑P	**P**		**13 34 44.8**	**+1.7**	
	baz=92								
PDMCI	**Parker Dam,Lak**	**91.74**	**56**	⇓P	**P**		**13 34 46.8**	**+1.8**	
	baz=92								
MFID	**Camas Ranch**	**92.01**	**47**	*e*P	**P**		**13 34 48.1**	**+1.9**	
	comp=Z,16nm,1.7s								
MFID	**Camas Ranch**	**92.01**	**47**	⇑P	**P**		**13 34 47.6**	**+1.4**	
	baz=92								
NEW	**Newport**	**92.02**	**42**	⇓P	**P**		**13 34 47.4**	**+1.3**	
	baz=92								
W13A	**Hualapai Mount**	**92.08**	**55**	⇓P	**P**		**13 34 48.3**	**+1.4**	
	baz=92								
C11A	**Tepee Creek (N**	**92.51**	**42**	⇓P	**P**		**13 34 49.8**	**+1.4**	
	baz=93								
AAK	**Ala-Archa**	**92.54**	**313**	⇑*e*P	**P**		**13 34 48.2**	**-0.5**	
AAK				pmax	pmax				
	comp=Z,10.0nm,1.6s								
I12A	**Atlanta**	**92.58**	**46**	⇓P	**P**		**13 34 50.2**	**+1.3**	
	baz=93,SNR=6.5								
F12A	**Elk City**	**92.82**	**44**	⇓P	**P**		**13 34 50.6**	**+0.7**	
	baz=93,SNR=6.8								
CCUT	**Cedar City**	**92.89**	**53**	*e*P	**P**		**13 34 53.0**	**+2.5**	
	comp=Z,3.5nm,1.0s								
H12A	**Diamond D Ranc**	**92.90**	**46**	⇓P	**P**		**13 34 50.9**	**+0.6**	
	baz=93								
HLID	**Hailey**	**93.05**	**47**	*e*P	**P**		**13 34 53.1**	**+2.0**	
	comp=Z,10nm,1.4s								
HLID	**Hailey**	**93.05**	**47**	⇑P	**P**		**13 34 52.6**	**+1.5**	
	baz=93,SNR=6.0								
J13A	**Cove Ranch, Pi**	**93.20**	**47**	⇓P	**P**		**13 34 53.3**	**+1.6**	
	baz=93,SNR=6.3								
I13A	**Wildhorse Cree**	**93.32**	**46**	⇑P	**P**		**13 34 53.7**	**+1.4**	
	baz=94,SNR=12								
H13A	**Challis**	**93.33**	**46**	⇓P	**P**		**13 34 53.5**	**+1.2**	
	baz=94,SNR=8.4								
G13A	**Cobalt**	**93.42**	**45**	⇓P	**P**		**13 34 53.8**	**+1.1**	
	baz=94,SNR=7.8								
F13A	**Darby**	**93.47**	**44**	⇑P	**P**		**13 34 53.5**	**+0.6**	
	baz=94,SNR=7.1								
U15A	**North Rim**	**93.57**	**54**	⇑P	**P**		**13 34 55.4**	**+1.7**	
	baz=94								
J14A	**Carey**	**93.66**	**47**	⇑P	**P**		**13 34 55.2**	**+1.3**	
	baz=94								
L14A	**Malta**	**93.67**	**48**	⇑P	**P**		**13 34 55.0**	**+1.0**	
	baz=94,SNR=8.6								
B13A	**Whitefish**	**93.78**	**42**	⇓P	**P**		**13 34 55.6**	**+1.4**	
	baz=94								
K14A	**Jones Ranch, D**	**93.79**	**48**	⇑P	**P**		**13 34 55.9**	**+1.4**	
	baz=94								
I14A	**Mackay**	**93.80**	**46**	⇓P	**P**		**13 34 55.8**	**+1.3**	
	baz=94								
H14A	**Leadore**	**93.96**	**46**	⇓P	**P**		**13 34 56.9**	**+1.6**	
	baz=94								
HVU	**Hansel Valley**	**93.97**	**49**	*e*P	**P**		**13 34 57.8**	**+2.5**	
HVU				pmax	pmax				
	comp=Z,8.0nm,1.0s								
HVU	**Hansel Valley**	**93.97**	**49**	*e*P	**P**		**13 34 57.8**	**+2.5**	
	comp=Z,8.1nm,1.0s								
G14A	**Jackson**	**93.99**	**45**	⇓P	**P**		**13 34 56.8**	**+1.4**	
	baz=94								
K15A	**Arbon**	**94.28**	**48**	⇑P	**P**		**13 34 58.4**	**+1.6**	
	baz=94								
L15A	**Malad City**	**94.29**	**48**	⇓P	**P**		**13 34 58.4**	**+1.6**	
	baz=94								
E15A	**Deer Lodge**	**94.72**	**44**	⇑P	**P**		**13 34 59.5**	**+0.8**	
	baz=95								
F15A	**Butte**	**94.75**	**44**	⇓P	**P**		**13 34 59.6**	**+0.7**	
	baz=95								
K16A	**Soda Springs**	**94.99**	**48**	⇓P	**P**		**13 35 01.5**	**+1.4**	
	baz=95								
L16A	**Fish Haven**	**95.00**	**48**	⇑P	**P**		**13 35 01.5**	**+1.4**	
	baz=95								
O17A	**Robinson Place**	**95.29**	**50**	⇑P	**P**		**13 35 03.2**	**+1.7**	
	baz=95								
BOZ	**Bozeman (W)**	**95.32**	**45**	⇑P	**P**		**13 35 02.4**	**+1.0**	
	baz=96								
F16A	**Kennard Place,**	**95.34**	**45**	⇑P	**P**		**13 35 02.3**	**+0.8**	
	baz=96								
319A	**Douglas**	**95.37**	**59**	⇑P	**P**		**13 35 03.6**	**+1.7**	
	baz=96								
H16A	**Russell Place,**	**95.47**	**46**	⇓P	**P**		**13 35 03.5**	**+1.3**	
	baz=96								
C16A	**Fuhringer Ranc**	**95.51**	**43**	⇓P	**P**		**13 35 03.0**	**+0.9**	
	baz=96								
D16A	**Dana Ranch, Ca**	**95.55**	**43**	⇓P	**P**		**13 35 03.9**	**+1.6**	
	baz=96								
S18A	**Hurst Farm, Bl**	**95.56**	**53**	⇓P	**P**		**13 35 04.4**	**+1.6**	
	baz=96								
MOOW	**Moose Ponds**	**95.71**	**47**	*e*P	**P**		**13 35 05.4**	**+2.0**	
	comp=Z,4.8nm,1.5s								
YKA	**Yellowknife Ar**	**95.82**	**28**	P	**P**		**13 35 03.1**	**+0.1**	
YKA				pP	**pP**		**13 35 33.8**	**-1.7**	
YKA	**Yellowknife Ar**	**95.82**	**28**	P	**P**		**13 35 03.1**	**+0.1**	
	comp=Z,2.0nm,0.8s,baz=258,slow=4.6,SNR=41								
YKA				pP	**pP**		**13 35 33.7**	**-1.7**	
	comp=Z,0.5nm,0.7s,baz=261,slow=4.4,SNR=3.5								
I17A	**Pilgrim Ck.**	**95.86**	**47**	⇑P	**P**		**13 35 05.6**	**+1.6**	
	baz=96								
320A	**Kipp Ranch, An**	**96.00**	**59**	⇑P	**P**		**13 35 07.1**	**+2.3**	
	baz=96								
F17A	**Fitzpatrick Pl**	**96.03**	**45**	⇓P	**P**		**13 35 06.5**	**+1.9**	
	baz=96								
220A	**Playas Peak, P**	**96.07**	**59**	⇑P	**P**		**13 35 07.3**	**+2.1**	
	baz=96								
D17A	**Six Diamond Ra**	**96.15**	**43**	⇑P	**P**		**13 35 06.1**	**+1.0**	
	baz=96								
C17A	**Wharram Farm,**	**96.15**	**43**	⇓P	**P**		**13 35 06.0**	**+1.0**	
	baz=96								
J18A	**Kendall Valley**	**96.18**	**47**	⇑P	**P**		**13 35 06.7**	**+1.2**	
	baz=96								
BW06	**Boulder Array**	**96.47**	**48**	*e*P	**P**		**13 35 07.7**	**+0.9**	
	comp=Z,2.7nm,0.9s								
BW06	**Boulder Array**	**96.47**	**48**	⇓P	**P**		**13 35 07.6**	**+0.8**	
	baz=97								
PDAR	**Pinedale Array**	**96.47**	**48**	P	**P**		**13 35 07.7**	**+0.9**	
PDAR				pP	**pP**		**13 35 37.6**	**-1.6**	
PDAR	**Pinedale Array**	**96.47**	**48**	P	**P**		**13 35 07.7**	**+0.9**	
	comp=Z,1.4nm,0.7s,baz=252,slow=2.3,SNR=14								
PDAR				pP	**pP**		**13 35 37.6**	**-1.6**	
	comp=Z,0.9nm,0.8s,baz=270,slow=2.4,SNR=3.2								
L19A	**Farson**	**96.54**	**49**	⇓P	**P**		**13 35 08.0**	**+0.8**	
	baz=97								
BVAR	**Borovoye Array**	**96.70**	**323**	P	**P**		**13 35 06.0**	**-1.3**	
BVAR				*PP	**pP**		**13 35 37.4**	**-2.4**	
BVAR	**Borovoye Array**	**96.70**	**323**	P	**P**		**13 35 06.0**	**-1.3**	
BVAR				pP	**pP**		**13 35 37.4**	**-2.4**	
BVAR	**Borovoye Array**	**96.70**	**323**	P	**P**		**13 35 06.0**	**-1.3**	
	comp=Z,4.2nm,0.8s,baz=103,slow=5.3,SNR=28								
BVAR				pP	**pP**		**13 35 37.4**	**-2.4**	
	comp=Z,2.1nm,0.7s,baz=106,slow=3.7,SNR=5.9								
BRVK	**Borovoye**	**96.77**	**323**	*ce*P	**P**		**13 35 05.8**	**-1.8**	
BRVK				pmax	pmax				
	comp=Z,10.0nm,1.5s								
BRVK	**Borovoye**	**96.77**	**323**	*e*P	**P**		**13 35 06.5**	**-1.1**	
	comp=Z,5.1nm,0.9s								
EGMT	**Eagleton**	**96.87**	**43**	⇓P	**P**		**13 35 09.7**	**+1.4**	
	baz=97								
J19A	**Crowheart**	**96.89**	**47**	⇓P	**P**		**13 35 09.1**	**+0.5**	
	baz=97								
RLMT	**Red Lodge**	**96.92**	**45**	⇑P	**P**		**13 35 09.8**	**+1.1**	
	baz=97								
Z21A	**St. Cloud Mine**	**96.95**	**57**	⇑P	**P**		**13 35 10.8**	**+1.7**	
	baz=97								
K19A	**Absolon Red Bu**	**96.99**	**48**	⇑P	**P**		**13 35 10.0**	**+0.8**	
	baz=97								
H19A	**Powell**	**97.07**	**46**	⇑P	Pdif		13 35 10.9	+1.5	
	baz=97								
F19A	**Roth Farm, Mol**	**97.21**	**45**	⇑P	Pdif		13 35 11.3	+1.3	
	baz=97								
N20A	**Spence Gulch,**	**97.23**	**50**	⇑P	Pdif		13 35 11.5	+1.1	
	baz=97								
L20A	**Wamsutter**	**97.29**	**49**	⇓P	Pdif		13 35 11.7	+1.1	
	baz=97								
C19A	**Slack Wire Ran**	**97.31**	**43**	⇓P	Pdif		13 35 11.8	+1.5	
	baz=98								
K20A	**Yellowstone Ra**	**97.35**	**48**	⇑P	Pdif		13 35 11.4	+0.6	
	baz=98								
E19A	**Rath Farm, Rou**	**97.38**	**44**	⇓P	Pdif		13 35 12.1	+1.4	
	baz=98								
B19A	**Brinkman Farms**	**97.45**	**42**	⇓P	Pdif		13 35 12.4	+1.5	
	baz=98								
Z22A	**Elephant Butte**	**97.53**	**58**	⇑P	Pdif		13 35 12.4	+0.6	
	baz=98								
G20A	**Bridger**	**97.67**	**45**	⇓P	Pdif		13 35 13.1	+1.0	
	baz=98								
E20A	**Meyer Farm, Mu**	**97.83**	**44**	⇑P	Pdif		13 35 13.8	+1.1	
	baz=98								
M21A	**Separation Pea**	**97.98**	**49**	⇑Pdiff	Pdif		13 35 14.5	+0.8	
	baz=98								
C20A	**Veseth Ranch,**	**98.01**	**43**	⇓Pdiff	Pdif		13 35 14.1	+0.6	
	baz=98								
Q22A	**Crested Butte,**	**98.09**	**52**	⇑Pdiff	Pdif		13 35 15.4	+1.0	
	baz=98								
224A	**Cornudas Mount**	**98.63**	**59**	⇑Pdiff	Pdif		13 35 17.3	+0.6	
	baz=99								
SNAA	**Sanae**	**98.75**	**185**	*e*Pn	Pdif		13 35 19.1	+2.8	
GDL2	**Guadalupe Moun**	**99.62**	**59**	*e*Pdif	**Pdif**		**13 35 15.6**	**-5.4**	
VNA3	**Neumayer Olymp**	**99.69**	**183**	*e*Pdiff	**Pdif**		**13 35 18.4**	**-2.0**	
VNA2	**Neumayer--Watz**	**99.85**	**184**	*e*Pdiff	**Pdif**		**13 35 21.5**	**+0.4**	
H24A	**Dirks Ranch, A**	**100.23**	**46**	⇑Pdiff	**Pdif**		**13 35 24.3**	**+0.8**	
	baz=100								
627A	**Terlingua Ranc**	**100.24**	**62**	⇑Pdiff	**Pdif**		**13 35 24.5**	**+0.6**	
	baz=100								
FINES	**FINESS Array B**	**117.60**	**337**	PKP	**PKPdf**		**13 40 21.8**	**-0.2**	
FINES	**FINESS Array B**	**117.60**	**337**	PKP	**PKPdf**		**13 40 21.8**	**-0.2**	
	comp=Z,2.8nm,0.9s,baz=104,slow=8.0,SNR=4.6								
AKASG	**Malin Array Be**	**121.84**	**325**	PKIKP	**PKPdf**		**13 40 29.6**	**-0.9**	
AKASG	**Malin Array Be**	**121.84**	**325**	PKP	**PKPdf**		**13 40 29.6**	**-0.9**	
AKASG	**Malin Array Be**	**121.84**	**325**	PKP	**PKPdf**		**13 40 29.6**	**-0.9**	
	comp=Z,0.5nm,0.4s,baz=50,slow=2.6,SNR=4.5								
KIEV	**Kiev**	**121.86**	**325**	*e*PKIKP	**PKPdf**		**13 40 29.9**	**-0.7**	
NB2	**NORSAR Subarra**	**123.03**	**342**	PKPdf	**PKPdf**		**13 40 31.2**	**-1.4**	
	comp=Z,1.4nm,0.9s,baz=39,slow=1.9								
NOA	**NORSAR Array B**	**123.03**	**342**	PKP	**PKPdf**		**13 40 32.0**	**-0.6**	
NOA	**NORSAR Array B**	**123.03**	**342**	PKP	**PKPdf**		**13 40 32.0**	**-0.6**	
	comp=Z,1.8nm,0.8s,baz=41,slow=1.9,SNR=8.3								
BRTR	**Keskin Array B**	**123.21**	**312**	PKP	**PKPdf**		**13 40 33.1**	**-0.7**	
BRTR	**Keskin Array B**	**123.21**	**312**	PKP	**PKPdf**		**13 40 33.1**	**-0.7**	
	comp=Z,1.0nm,1.0s,baz=29,slow=3.3,SNR=3.0								
ROSC	**El Rosal**	**126.16**	**90**	PKP	**PKPdf**		**13 40 39.7**	**-0.8**	
ROSC	**El Rosal**	**126.16**	**90**	PKP	**PKPdf**		**13 40 39.7**	**-0.8**	
	comp=Z,7.3nm,0.6s,baz=100,slow=21,SNR=5.2								
LPAZ	**La Paz**	**126.36**	**118**	PKP	**PKPdf**		**13 40 40.5**	**-0.5**	
LPAZ	**La Paz**	**126.36**	**118**	PKP	**PKPdf**		**13 40 40.5**	**-0.5**	
	comp=Z,5.7nm,0.9s,baz=277,slow=1.2,SNR=12								
CRVS	**Cervenica-Dubn**	**127.07**	**327**	*i* P	**Pdif**		**13 37 23.0**	**+0.4**	
CRVS	**Cervenica-Dubn**	**127.07**	**327**	PDIF	**Pdif**		**13 37 23.0**	**+0.4**	
VYHS	**Vyhne**	**128.72**	**328**	*i* P	**Pdif**		**13 37 37.3**	**+7.3**	
VYHS	**Vyhne**	**128.72**	**328**	PDIF	**Pdif**		**13 37 37.3**	**+7.3**	
BRG	**Berggiesshubel**	**129.59**	**333**	*e*P	**PKPdf**		**13 40 45.8**	**+0.4**	
	comp=Z,12nm,1.7s								
BRG	**Berggiesshubel**	**129.59**	**333**	*e*PKIKP	**PKPdf**		**13 40 45.8**	**+0.4**	
BRG				pmax	pmax				
	comp=Z,12nm,1.7s								
CPUP	**Villa Florida**	**129.72**	**135**	PKP	**PKPdf**		**13 40 45.9**	**-0.5**	
CPUP	**Villa Florida**	**129.72**	**135**	PKP	**PKPdf**		**13 40 45.9**	**-0.5**	
	comp=Z,3.3nm,0.9s,baz=200,slow=3.9,SNR=4.6								
GERES	**GERESS Array B**	**131.10**	**331**	PKP	**PKPdf**		**13 40 47.5**	**-1.0**	
GERES	**GERESS Array B**	**131.10**	**331**	PKP	**PKPdf**		**13 40 47.5**	**-1.0**	
	comp=Z,0.7nm,0.7s,baz=77,slow=1.8,SNR=7.5								
CDF	**Champ du Feu**	**134.34**	**335**	*e*PKIKP	**PKPdf**		**13 40 55.0**	**+0.4**	
	comp=Z,3.7nm,0.6s								
CDF	**Champ du Feu**	**134.34**	**335**	*e*PKIKP	**PKPdf**		**13 40 55.0**	**+0.4**	
CDF	**Champ du Feu**	**134.34**	**335**	*e*PKPdf	**PKPdf**		**13 40 55.0**	**+0.4**	
DAVOX	**Davos/Dischmat**	**134.39**	**331**	PKP	**PKPdf**		**13 40 55.2**	**+0.3**	
DAVOX	**Davos/Dischmat**	**134.39**	**331**	PKP	**PKPdf**		**13 40 55.2**	**+0.3**	
	comp=Z,2.6nm,0.7s,baz=332,slow=4.0,SNR=5.7								
LPL	**La Plagne**	**136.80**	**332**	*e*PKIKP	**PKPdf**		**13 40 59.4**	**0.0**	
LPL	**La Plagne**	**136.80**	**332**	*e*PKIKP	**PKPdf**		**13 40 59.4**	**0.0**	
LPL	**La Plagne**	**136.80**	**332**	*e*PKPdf	**PKPdf**		**13 40 59.4**	**0.0**	
PGF	**Pioggiola**	**137.83**	**328**	*e*PKIKP	**PKPdf**		**13 41 00.1**	**-1.2**	
	comp=Z,20nm,0.9s								
PGF	**Pioggiola**	**137.83**	**328**	*e*PKIKP	**PKPdf**		**13 41 00.1**	**-1.2**	
PGF	**Pioggiola**	**137.83**	**328**	*e*PKPdf	**PKPdf**		**13 41 00.1**	**-1.2**	
BDFB	**Brasilia**	**143.20**	**131**	PKPpre	PKPpre		13 41 08.2		
BDFB	**Brasilia**	**143.20**	**131**	PKhKP	PKPpre		13 41 08.2		
	comp=Z,1.2nm,0.4s,baz=158,slow=5.6,SNR=4.9								
PBRG	**Braganca**	**145.16**	**342**	*e*PKP	**PKPdf**		**13 41 14.6**	**+0.3**	
MVO	**Moncorvo**	**145.84**	**342**	*e*PKP	**PKPab**		**13 41 16.7**	**-0.1**	
POLO	**Lamas de Olo**	**145.87**	**343**	*e*PKP	**PKPbc**		**13 41 16.6**	**+0.2**	
POLO				*e*pPKP	**pPKPdf**		**13 41 50.4**	**+0.9**	
ESDC	**Sonseca Array**	**146.11**	**337**	PKPbc	**PKPbc**		**13 41 17.3**	**+0.1**	
ESDC				pPKPbc	pPKPbc		13 41 48.0	-2.5	
ESDC	**Sonseca Array**	**146.11**	**337**	PKPbc	**PKPbc**		**13 41 17.3**	**+0.1**	
	comp=Z,2.4nm,0.8s,baz=16,slow=3.9,SNR=12								
ESDC				pPKPbc	pPKPbc		13 41 48.0	-2.5	
	comp=Z,1.1nm,0.7s,baz=19,slow=3.4,SNR=3.3								
PVIS	**Viseu**	**146.50**	**343**	*e*PKP	**PKPab**		**13 41 19.0**	**-0.4**	
PMRV	**Marv??o**	**147.53**	**341**	*e*PKP	**PKPbc**		**13 41 21.5**	**+0.4**	
**PTOM

CMAR	**Chiang Mai Arr**	**7.06**	**26**	Pn	Pn	14 45 38.3	+1.7
	0.2nm,0.3s,baz=219,slow=15,SNR=16						
CMAR				LR	LR	14 48 55.4	
	comp=Z,102nm,18.0s,baz=215,slow=43						
PSI	**Prapat**	**9.74**	**161**	Pn	Pn	14 46 17.7	+4.0
	0.3nm,0.3s,baz=354,slow=20,SNR=4.3						
PSI				LR	LR	14 49 59.8	
	comp=Z,165nm,19.8s,baz=225,slow=37						
MKAR	**Makanchi Array**	**36.42**	**344**	P	P	14 50 59.3	+0.9
	0.4nm,0.7s,baz=155,slow=10.0,SNR=5.2						
SONM	**Songino Array**	**36.75**	**12**	P	P	14 50 59.3	-1.9
	0.1nm,0.3s,baz=200,slow=12,SNR=3.5						
ZALV	**Zalesovo Beam**	**42.66**	**350**	P	P	14 51 50.1	-0.2
	0.3nm,0.4s,baz=187,slow=11,SNR=2.7						
WRA	**Warramunga Arr**	**49.56**	**130**	P	P	14 52 45.1	0.0
	0.5nm,0.8s,baz=306,slow=8.4,SNR=4.3						
ASAR	**Alice Springs**	**51.52**	**134**	P	P	14 52 60.0	0.0
	0.5nm,0.9s,baz=310,slow=7.8,SNR=4.7						
BRTR	**Keskin Array B**	**60.97**	**309**	P	P	14 54 07.2	-0.2
	0.2nm,0.4s,baz=107,slow=4.3,SNR=3.6						
ARCES	**ARCESS Array B**	**71.88**	**340**	LR	LR	15 31 00.7	
	comp=Z,47nm,18.9s,baz=192,slow=39						
NOA	**NORSAR Array B**	**76.88**	**330**	LR	LR	15 31 33.5	
	comp=Z,19nm,18.4s,baz=255,slow=37						

CSEM ***10*** *14:45:39.5, 42°.36N×13°.38E, h10km, MD2.1/10, After ROM*

ROM 10 14:45:39.5±0.1, 42°.36N×13°.38E, h10km, Md2.1/10, MI1.5/7, 2C, Error ellipse: s-maj=1.5km s-min=1.3km az=68.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AQU	**L'Aquila**	**0.02**	**127**	*i* Pg		Pg	14 45 41.7	+0.3
AQU				Sg		Sg	14 45 42.8	0.0
AQU	**L'Aquila**	**0.02**	**127**	*i* Pg		Pg	14 45 41.7	+0.3
AQU				Sg		Sg	14 45 42.8	0.0
CAMP	**Campotosto**	**0.17**	**6**	Pg		Pg	14 45 44.1	+0.6
CAMP				Sg		Sg	14 45 47.3	+1.1
	22nm,0.3s							
CAMP	**Campotosto**	**0.17**	**6**	Pg		Pg	14 45 44.1	+0.6
CAMP				Sg		Sg	14 45 47.3	+1.1
	22nm,0.3s							
FAGN	**Fagnano**	**0.18**	**123**	Pg		Pb	14 45 44.4	-0.6
FAGN				Sg		Sg	14 45 47.3	+1.1
FAGN	**Fagnano**	**0.18**	**123**	Pg		Pb	14 45 44.4	-0.6
FAGN				Sg		Sg	14 45 47.3	+1.1
FIAM	**Fiamignano**	**0.22**	**244**	Pg		Pg	14 45 44.9	+0.7
FIAM				Sg		Sg	14 45 48.6	+1.1
	53nm,0.3s							
FIAM	**Fiamignano**	**0.22**	**244**	Pg		Pg	14 45 44.9	+0.7
FIAM				Sg		Sg	14 45 48.6	+1.1
	53nm,0.3s							
TERO	**Teramo**	**0.31**	**32**	Pg		Pg	14 45 46.1	+0.3
TERO				Sg		Sg	14 45 50.6	+0.6
	27nm,0.2s							
TERO	**Teramo**	**0.31**	**32**	Pg		Pg	14 45 46.1	+0.3
TERO				Sg		Sg	14 45 50.6	+0.6
	27nm,0.2s							
VCEL	**Villa Celiera**	**0.34**	**85**	Pg		Pg	14 45 45.9	-0.6
VCEL				Sg		Sb	14 45 53.1	-0.3
	92nm,0.3s							
VCEL	**Villa Celiera**	**0.34**	**85**	Pg		Pg	14 45 45.9	-0.6
VCEL				Sg		Sb	14 45 53.1	-0.3
	92nm,0.3s							
PTQR	**Pietraquaria**	**0.34**	**178**	Pg		Pg	14 45 46.8	+0.3
PTQR				Sg		Sg	14 45 51.5	+0.4
	9.0nm,0.2s							
PTQR	**Pietraquaria**	**0.34**	**178**	Pg		Pg	14 45 46.8	+0.3
PTQR				Sg		Sg	14 45 51.5	+0.4
	9.0nm,0.2s							
LNSS	**Leonessa**	**0.35**	**313**	Pg		Pg	14 45 47.0	+0.4
	51nm,0.4s							
LNSS	**Leonessa**	**0.35**	**313**	Pg		Pg	14 45 47.0	+0.4
	51nm,0.4s							
NRCA	**Norcia**	**0.51**	**337**	Pg		Pg	14 45 49.8	+0.2
NRCA				Sg		Sb	14 45 57.8	-0.4
	48nm,0.1s							
NRCA	**Norcia**	**0.51**	**337**	Pg		Pg	14 45 49.8	+0.2
NRCA				Sg		Sb	14 45 57.8	-0.4
	48nm,0.1s							
INTR	**Introdacqua**	**0.52**	**132**	Pg		Pg	14 45 50.0	+0.2
INTR				Sg		Sb	14 45 58.4	-0.2
	36nm,0.2s							
INTR	**Introdacqua**	**0.52**	**132**	Pg		Pg	14 45 50.0	+0.2
INTR				Sg		Sb	14 45 58.4	-0.2
	36nm,0.2s							

ISCJB ***10*** *14:54:18.4±0.7, 2°.49S±0°.07×121°.59E±0°.08, h22km, mb3.3/3, MS3.2/1, Error ellipse: s-maj=13.3km s-min=7.8km az=36.9*

DJA ***10*** *14:54:18.3±0.4, 2°.S±4°×12°.2E±°, h13km, M3.9/7, MLv3.9/7*

IDC ***10*** *14:54:28.5±14.0, 3°.87S×121°.67E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.3/22, mbtmp3.4/4, ML3.7/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/21, Error ellipse: s-maj=269.0km s-min=33.1km az=4.0*

ISC 10 14:54:19.8±1.2, 2°.49S±0°.07×121°.61E±0°.08, h22km, n13, σ1§47/12, mb3.3/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KDI	**Kendari**	**1.77**	**145**	P		**Pn**	**14 54 48.3**	**-0.8**
LUWI	**Luwuk**	**1.84**	**39**	P		**Pn**	**14 54 49.1**	**-1.0**
TTSI	**Tana Toraja**	**1.87**	**253**	P		**Pn**	**14 54 49.8**	**-0.7**
SPSI	**Sidrap Palu**	**2.35**	**231**	P		**Pn**	**14 54 57.3**	**+0.2**
MRSI	**Marisa**	**2.96**	**6**	P		**Pn**	**14 55 05.0**	**-0.5**
KAPI	**Kappang**	**3.12**	**216**	P		**Pn**	**14 55 06.7**	**-1.0**
KAPI	**Kappang**	**3.12**	**216**	Pn		**Pn**	**14 55 06.3**	**-1.4**
	22nm,0.3s,baz=35,slow=5.9,SNR=66							
KAPI				Sn		**Sn**	**14 55 43.3**	**-1.0**
	4.9nm,0.3s,baz=100,slow=23,SNR=7.9							
BBSI	**Bau Bau**	**3.13**	**162**	P		Pb	14 55 18.7	+3.9
BKSI	**Bulukumba**	**3.19**	**208**	P		**Pn**	**14 55 08.4**	**-0.2**
WRA	**Warramunga Arr**	**21.34**	**145**	P		**P**	**14 59 03.5**	**-2.2**
	0.5nm,0.7s,baz=319,slow=12,SNR=5.5							
PSI	**Prapat**	**23.28**	**283**	LR		LR	15 09 42.1	
	comp=Z,85nm,18.2s,baz=1.5,slow=39							
ASAR	**Alice Springs**	**24.18**	**152**	P		**P**	**14 59 34.7**	**-0.1**
	0.5nm,0.5s,baz=330,slow=8.1,SNR=11							
STKA	**Stephens Creek**	**34.77**	**149**	P		**P**	**15 01 11.6**	**+2.9**
	0.5nm,0.5s,baz=329,slow=10,SNR=4.0							

NIED ***10*** *14:55:00, 45°.60N×152°.10E, h5km, Mw4.1 Best double couple: M0 1.67000×10^15 NP1:φ=63.00000°, δ=86.00000°, λ=111.00000°. NP2:φ=164.00000°, δ=21.00000°, λ=12.00000°.*

IDC ***10*** *14:55:51.6±1.3, 45°.48N×151°.89E, h0km, mb3.9/18, mb1 4.1/23, mb1mx4.0/32, mbtmp3.9/23, ML3.3/5, MS3.4/2, Ms1 3.4/2, ms1mx2.5/62, Error ellipse: s-maj=34.4km s-min=14.1km az=158.0*

JMA ***10*** *14:55:51.4±0.6, 45°.64N×152°.14E, h30km, M4.3*

ISCJB ***10*** *14:55:53.7±0.5, 45°.33N±0°.07×151°.76E±0°.08, h30km, mb4.2/33, MS3.7/5, Error ellipse: s-maj=12.6km s-min=3.4km az=144.8*

NEIC ***10*** *14:55:54.1±3.8, 45°.45N×151°.87E, h17km±23km, mb4.7/8, Error ellipse: s-maj=15.4km s-min=8.2km az=146.0*

BJI ***10*** *14:55:56.1, 45°.43N×152°.07E, h60km, mB4.9/5, mb4.5/8, Ms4.3/3, Ms7 4.2/1*

MOS ***10*** *14:55:57.0±1.3, 45°.57N×151°.88E, h52km, mb4.8/11, Error ellipse: s-maj=10.1km s-min=7.8km az=104.2*

ISC 10 14:55:55.8±0.6, 45°.41N±0°.08×151°.83E±0°.06, h30km, n127, σ1§44/134, mb4.3/34, MS3.6/5, 7C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**2.80**	**268**	*e* PN		**Pb**	**14 56 43.0**	**-2.0**
KUR				pmax	pmax			
	comp=Z,110nm,0.6s							
YUK	**Yuzn-Kuril'sk**	**4.47**	**254**	*c i* PN		Pn	14 57 05.5	+4.1
YUK				*i* S		Sn	14 57 59.3	+7.0
YUK				pmax	pmax			
	comp=E,29nm,0.4s							
YUK				pmax	pmax			
	comp=Z,50nm,0.4s							
YUK				pmax	pmax			
	comp=N,22nm,0.4s							
YUK				smax	smax			
	comp=E,105nm,0.6s							
YUK				smax	smax			
	comp=N,11nm,0.6s							
YUK				MLR	MLR			
	comp=E,340nm,15.0s							
YUK				MLR	MLR			
	comp=Z,322nm,15.0s							
YUK				MLR	MLR			
	comp=N,778nm,15.0s							
NEM2	**Nemuro 2**	**4.81**	**247**	P		**Pn**	**14 57 05.0**	**-1.1**
NEM2				*e* S		**Sn**	**14 57 59.1**	**-1.7**
JRA	**Rausu**	**5.00**	**255**	P		**Pn**	**14 57 09.9**	**+1.2**
JAK	**Akkeshi**	**5.66**	**247**	P		**Pn**	**14 57 16.6**	**-1.2**
JAK				*e* S		**Sn**	**14 58 20.2**	**-1.5**
JTKR	**Abashiri--Toko**	**5.82**	**259**	P		**Pn**	**14 57 21.4**	**+1.4**
SKR	**Severo-Kuril's**	**6.01**	**27**	*e* PN		Pn	14 57 18.0	-4.6
SKR				pmax	pmax			
	comp=E,40nm,0.6s							
SKR				pmax	pmax			
	comp=Z,50nm,0.6s							
SKR				MLR	MLR			
	comp=E,2μm,14.0s							
SKR				MLR	MLR			
	comp=Z,2μm,14.0s							
JAR	**Ashorobuto**	**6.15**	**253**	P		**Pn**	**14 57 25.2**	**+0.7**
JAR				*e* S		**Sn**	**14 58 34.1**	**+0.3**
JMP	**Maruseppu**	**6.19**	**260**	P		**Pn**	**14 57 27.0**	**+1.9**
JOB	**Onbets**	**6.27**	**249**	P		**Pn**	**14 57 25.7**	**-0.4**
JOB				*e* S		**Sn**	**14 58 35.2**	**-1.5**
YSS	**Yuzh-Sakhalins**	**6.49**	**287**	*e* PN		Pn	14 57 35.2	+6.1
YSS	**Yuzh-Sakhalins**	**6.49**	**287**	*e* Pn		**Pn**	**14 57 28.3**	**-0.8**
JKK2	**Kamakawa 2**	**6.66**	**260**	P		**Pn**	**14 57 33.2**	**+1.7**
ASAJ	**Asahikawa**	**6.70**	**262**	Pn		**Pn**	**14 57 33.8**	**+1.8**
ASAJ	**Asahikawa**	**6.70**	**262**	P		**Pn**	**14 57 34.5**	**+2.5**
ASAJ	**Asahikawa**	**6.70**	**262**	Pn		**Pn**	**14 57 33.8**	**+1.8**
	comp=Z,1.0nm,0.3s,baz=83,slow=19,SNR=9.0							
ASAJ				LR		LR	15 00 35.3	
	comp=Z,207nm,18.8s,baz=346,slow=42							
JCH	**Churui**	**6.71**	**248**	P		**Pn**	**14 57 32.1**	**-0.1**
JCH				*e* S		**Sn**	**14 58 45.8**	**-1.7**
JFR	**Furan**	**7.00**	**255**	P		**Pn**	**14 57 37.2**	**+1.1**
JAB	**Ashibetsu**	**7.13**	**258**	P		**Pn**	**14 57 40.9**	**+3.0**
ERM	**Erimo**	**7.14**	**245**	*e* PN		**Pn**	**14 57 40.3**	**+2.3**
JEM	**Erimo**	**7.14**	**245**	*e* S		**Sn**	**14 58 56.3**	**-1.7**
JNBK	**Urakawa-nobuka**	**7.26**	**248**	P		**Pn**	**14 57 39.6**	**-0.2**
JNBK				*e* S		**Sn**	**14 58 59.3**	**-1.9**
JBT2	**Biratori 2**	**7.30**	**252**	P		**Pn**	**14 57 40.1**	**-0.2**
JBT2				*e* S		**Sn**	**14 59 01.7**	**-0.4**
JNB	**Noboribetsu**	**8.32**	**253**	*e* S		**Sn**	**14 59 25.5**	**-1.6**
JKB	**Kayabe**	**8.58**	**250**	P		**Pn**	**14 57 57.1**	**-0.7**
JKB				*e* S		**Sn**	**14 59 28.3**	**-5.2**
PETK	**Petropavlovsk-**	**8.61**	**24**	PN		**Pn**	**14 57 57.9**	**-0.3**
PETK	**Petropavlovsk-**	**8.61**	**24**	Pn		**Pn**	**14 57 57.9**	**-0.3**
PETK	**Petropavlovsk-**	**8.61**	**24**	Pn		**Pn**	**14 57 57.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=199,slow=16,SNR=3.0							
JYM2	**Yakumo 2**	**8.92**	**252**	P		**Pn**	**14 58 03.4**	**+0.9**
JANG	**Nango**	**9.08**	**240**	*e* S		Sn	14 59 37.5	-8.5
JTM	**Tenmabayashi**	**9.12**	**243**	P		**Pn**	**14 58 03.7**	**-1.6**
JTM				*e* S		Sn	14 59 40.4	-6.4
JTH	**Tanohata**	**9.14**	**237**	*e* S		Sn	14 59 38.3	-9.1
OFUJ	**Ofunato**	**9.83**	**234**	P		**Pn**	**14 58 11.8**	**-3.1**
OFUJ				*e* S		Sn	14 59 54.2	-10
JRG	**Rokugo**	**10.22**	**238**	P		**Pn**	**14 58 17.9**	**-2.4**
JRG				*e* S		Sn	15 00 06.2	-7.7
JIO	**Ouri**	**10.44**	**232**	P		Pn	14 58 20.0	-3.3
JIO				*e* S		Sn	15 00 08.2	-11
MJAR	**Matsushiro Arr**	**13.56**	**234**	Pn		**Pn**	**14 59 04.5**	**-1.5**
MJAR	**Matsushiro Arr**	**13.56**	**234**	Pn		**Pn**	**14 59 04.5**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=22,slow=12,SNR=5.1							
MAT	**Matsushiro**	**13.56**	**234**	P		**P**	**14 59 16.1**	**+1.4**
USRK	**Ussuriysk Arra**	**14.13**	**272**	Pn		**Pn**	**14 59 13.1**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=91,slow=12,SNR=4.4							
SEY	**Seymchan**	**17.57**	**1**	*e* P		**Pn**	**14 59 56.4**	**-1.6**
KSRS	**Korea Array**	**19.55**	**254**	P		**Pn**	**15 00 23.1**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=59,slow=11,SNR=13							
KSAR	**Wonju Array Be**	**19.59**	**254**	P		**Pn**	**15 00 23.1**	**+0.4**
YAK	**Yakutsk**	**21.01**	**330**	*e* P		**P**	**15 00 35.1**	**-1.4**
YAK				pmax	pmax			
	comp=Z,12nm,1.2s							
YAK	**Yakutsk**	**21.01**	**330**	*e* P		**P**	**15 00 34.7**	**-1.8**
	comp=Z,10nm,0.6s							
BILL	**Bilibino**	**23.91**	**13**	*e* P		**P**	**15 01 06.2**	**-0.3**
BILL				MLR	MLR			
	comp=Z,100nm,18.0s							
TIXI	**Tiksi**	**28.52**	**345**	*e* P		**P**	**15 01 45.8**	**-2.3**
TIXI				pmax	pmax			
	comp=Z,2.0nm,1.0s							
TIXI				MLR	MLR			
	comp=Z,74nm,19.0s							
HHC	**Hu-ho-hao-te**	**29.51**	**276**	*e* P		**P**	**15 01 58.0**	**+0.6**
HHC				pP		pP	15 02 11.9	+5.8
HHC				sP		sP	15 02 20.4	+11
HHC				PP		**PnPn**	**15 02 56.7**	**+4.5**
HHC				S		**S**	**15 06 48.3**	**-1.8**
HHC				sS		sS	15 07 14.5	+10
HHC				pmax	pmax			
	comp=Z,130nm,3.9s							
HHC				LR	LR			
	comp=N,310nm,14.3s							
HHC				LR	LR			
	comp=E,300nm,15.5s							
HHC				LR	LR			
	comp=Z,270nm,10.1s							
SONM	**Songino Array**	**30.96**	**291**	P		**P**	**15 02 09.8**	**-0.3**
SONM	**Songino Array**	**30.96**	**291**	P		**P**	**15 02 09.8**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=78,slow=7.8,SNR=17							
LZH	**Lanzhou**	**37.05**	**273**	*e* P		**P**	**15 03 04.7**	**+1.6**
LZH				pP		**pP**	**15 03 17.0**	**+5.1**
LZH				sP		sP	15 03 23.5	+8.0
ILAR	**Eielson Array**	**38.16**	**37**	P		**P**	**15 03 11.3**	**-0.6**
ILAR	**Eielson Array**	**38.16**	**37**	P		**P**	**15 03 11.3**	**-0.6**
	comp=Z,0.5nm,0.9s,baz=251,slow=7.8,SNR=6.4							
GTA	**Gaotai**	**38.31**	**280**	*e* P		**P**	**15 03 14.9**	**+1.2**
GTA				pmax	pmax			
	comp=Z,11nm,0.9s							
ZALV	**Zalesovo Beam**	**42.68**	**307**	P		**P**	**15 03 49.7**	**+0.2**
ZALV	**Zalesovo Beam**	**42.68**	**307**	P		**P**	**15 03 49.7**	**+0.2**
ZALV	**Zalesovo Beam**	**42.68**	**307**	P		**P**	**15 03 49.7**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=74,slow=5.1,SNR=2.7							
INK	**Inuvik**	**43.27**	**32**	P		**P**	**15 03 54.2**	**+0.2**
INK	**Inuvik**	**43.27**	**32**	P		**P**	**15 03 54.2**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=282,slow=8.3,SNR=6.2							
MK31	**Makanchi Array**	**46.77**	**298**	*e* P		**P**	**15 04 20.9**	**-1.3**
MK31	**Makanchi Array**	**46.77**	**298**	*e* P		**P**	**15 04 20.9**	**-1.3**
MKAR	**Makanchi Array**	**46.77**	**298**	*e* P		**P**	**15 04 21.7**	**-0.5**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
MKAR	**Makanchi Array**	**46.77**	**298**	*e* P		**P**	**15 04 21.9**	**-0.3**
MKAR	**Makanchi Array**	**46.77**	**298**	P		**P**	**15 04 21.8**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=72,slow=9.1,SNR=10							
MKAR				LR		LR	15 25 24.4	
	comp=Z,68nm,20.0s,baz=266,slow=38							
CMAR	**Chiang Mai Arr**	**51.18**	**256**	P		**P**	**15 04 57.5**	**+1.2**
CMAR	**Chiang Mai Arr**	**51.18**	**256**	P		**P**	**15 04 57.5**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=30,slow=7.3,SNR=3.7							
RES	**Resolute Bay**	**52.39**	**18**	P		**P**	**15 05 05.5**	**+1.0**
RES	**Resolute Bay**	**52.39**	**18**	P		**P**	**15 05 05.5**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=310,slow=8.4,SNR=5.1							
YKA	**Yellowknife Ar**	**52.54**	**36**	P		**P**	**15 05 05.9**	**+0.1**
YKA	**Yellowknife Ar**	**52.54**	**36**	P		**P**	**15 05 05.9**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=298,slow=7.0,SNR=8.2							
ULHL	**Ulahol**	**52.73**	**295**	*i* P		**P**	**15 05 08.5**	**+0.7**
ULHL	**Ulahol**	**52.73**	**295**	P		**P**	**15 05 08.5**	**+0.7**
	SNR=14							
TKM2	**Tokmak 2**	**52.79**	**296**	*e* P		**P**	**15 05 09.4**	**+1.2**
TKM2				pmax	pmax			
	comp=Z,4.0nm,1.0s							
TKM2	**Tokmak 2**	**52.79**	**296**	*e* P		**P**	**15 05 09.4**	**+1.2**
	comp=Z,3.8nm,1.0s							
KBK	**Karagaybulak**	**53.33**	**296**	*i* P		**P**	**15 05 13.5**	**+1.3**
KBK	**Karagaybulak**	**53.33**	**296**	P		**P**	**15 05 13.4**	**+1.3**
	SNR=5.1							
KZA	**Kyzart**	**53.44**	**296**	*i* P		**P**	**15 05 14.8**	**+1.5**
KZA	**Kyzart**	**53.44**	**296**	P		**P**	**15 05 14.8**	**+1.5**
	SNR=11							
AAK	**Ala-Archa**	**53.63**	**297**	*c i* P		**P**	**15 05 14.7**	**+0.3**
AAK				pmax	pmax			
	comp=Z,9.0nm,0.8s							
AAK	**Ala-Archa**	**53.63**	**297**	*e* P		**P**	**15 05 15.3**	**+1.0**
	comp=Z,1.0nm,0.8s							
EKS2	**Erkin-Say**	**54.07**	**297**	*e* P		**P**	**15 05 18.7**	**+1.2**
EKS2				pmax	pmax			
	comp=Z,7.0nm,0.6s							
EKS2	**Erkin-Say**	**54.07**	**297**	*e* P		**P**	**15 05 18.7**	**+1.2**
	comp=Z,6.7nm,0.6s							
EKS2	**Erkin-Say**	**54.07**	**297**	P		**P**	**15 05 18.5**	**+1.0**
	SNR=10							
AML	**Almayashu**	**54.40**	**296**	*i* P		**P**	**15 05 20.9**	**+0.6**
AML	**Almayashu**	**54.40**	**296**	P		**P**	**15 05 20.9**	**+0.6**
	SNR=6.2							
ARU	**Arti**	**55.40**	**318**	*c i* P		**P**	**15 05 25.5**	**-1.3**
ARU							15 07 28.7	
ARU				S		**S**	**15 13 07.6**	**-1.4**
ARU				SS		**SS**	**15 16 50.3**	**-2.8**
ARU				pmax	pmax			
	comp=Z,3.0nm,1.0s							
KKAR	**Karatay Array**	**55.86**	**299**	*e* P		**P**	**15 05 30.9**	**+0.6**
KKAR	**Karatay Array**	**55.86**	**299**	*e* P		**P**	**15 05 30.9**	**+0.6**
KEV	**Kevo**	**58.31**	**340**	*e* P		**P**	**15 05 45.4**	**-1.8**
KEV				pmax	pmax			
	comp=Z,5.0nm,0.5s							
KEV	**Kevo**	**58.31**	**340**	*ep*		**P**	**15 05 45.4**	**-1.8**
	comp=Z,5.0nm,0.5s							
ABKAR	**Akbulak array**	**58.60**	**310**	*e* P		**P**	**15 05 49.1**	**-0.4**
ARCES	**ARCESS Array B**	**58.83**	**341**	P		**P**	**15 05 50.4**	**-0.4**
ARCES	**ARCESS Array B**	**58.83**	**341**	P		**P**	**15 05 50.4**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=46,slow=7.6,SNR=19							
SUMG	**Summit**	**62.10**	**3**	*e* P		**P**	**15 06 15.3**	**+1.7**
SUMG				pmax	pmax			
	comp=Z,14nm,1.0s							
SUMG	**Summit**	**62.10**	**3**	*e* P		**P**	**15 06 15.3**	**+1.7**
	comp=Z,14nm,1.0s							
JOF	**Joensuu**	**62.14**	**334**	*e* P		**P**	**15 06 12.5**	**-1.0**
JOF				pmax	pmax			
	comp=Z,3.0nm,0.6s							
JOF	**Joensuu**	**62.14**	**334**	*ep*		**P**	**15 06 12.5**	**-1.0**
	comp=Z,2.5nm,0.6s							
NVAR	**Mina Array Bea**	**63.86**	**61**	P		**P**	**15 06 25.4**	**-0.2**
NVAR	**Mina Array Bea**	**63.86**	**61**	P		**P**	**15 06 25.4**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=292,slow=6.0,SNR=4.4							
KAF	**Kangasniemi**	**64.28**	**335**	*e* P		**P**	**15 06 26.2**	**-1.5**
KAF				pmax	pmax			
	comp=Z,3.0nm,0.7s							
KAF	**Kangasniemi**	**64.28**	**335**	*ep*		**P**	**15 06 26.2**	**-1.5**
	comp=Z,3.1nm,0.7s							
FINES	**FINESS Array B**	**64.87**	**334**	P		**P**	**15 06 30.9**	**-0.6**
FINES	**FINESS Array B**	**64.87**	**334**	P		**P**	**15 06 30.9**	**-0.6**
	comp=Z,4.0nm,0.4s,baz=33,slow=8.1,SNR=67							
FITZ	**Fitzroy Crossi**	**67.54**	**207**	*e* P		**P**	**15 06 49.5**	**+0.5**
	comp=Z,4.4nm,0.4s							
NB2	**NORSAR Subarra**	**69.20**	**341**	P		**P**	**15 06 58.8**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=31,slow=6.5							
NOA	**NORSAR Array B**	**69.20**	**341**	P		**P**	**15 06 58.8**	**-0.3**
NOA	**NORSAR Array B**	**69.20**	**341**	P		**P**	**15 06 58.8**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=29,slow=6.4,SNR=12							
KIV	**Kislovodsk**	**71.09**	**314**	*e* P		**P**	**15 07 13.0**	**+1.9**
KIV				pmax	pmax			
	comp=Z,12nm,1.0s							
KIV				MLR	MLR			
	comp=Z,100nm,17.0s							
KBZ	**Khabaz**	**71.14**	**314**	P		**P**	**15 07 12.4**	**+1.2**
KBZ	**Khabaz**	**71.14**	**314**	P		**P**	**15 07 12.3**	**+1.2**
KBZ	**Khabaz**	**71.14**	**314**	P		**P**	**15 07 12.3**	**+1.2**
	comp=Z,4.6nm,0.8s,baz=61,slow=7.5,SNR=9.0							
ZEI	**Tsey**	**71.30**	**312**	*e* P		**P**	**15 07 12.3**	**-0.2**
ZEI				pmax	pmax			
	comp=Z,4.0nm,1.0s							
AKASG	**Malin Array Be**	**72.16**	**326**	*e* P		**P**	**15 07 16.6**	**-0.6**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.5s							
AKASG	**Malin Array Be**	**72.16**	**326**	P		**P**	**15 07 16.6**	**-0.6**
AKASG	**Malin Array Be**	**72.16**	**326**	P		**P**	**15 07 16.6**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=36,slow=6.2,SNR=4.7							
KIEV	**Kiev**	**72.17**	**326**	*e* P		**P**	**15 07 17.1**	**-0.2**
KIEV				pmax	pmax			
	comp=Z,3.0nm,0.8s							
KIEV	**Kiev**	**72.17**	**326**	*e* P		**P**	**15 07 17.1**	**-0.2**
	comp=Z,2.7nm,0.8s							
BUR08	**Bucovina Ar. S**	**76.19**	**326**	*e* P		**P**	**15 07 38.8**	**-2.1**
MORC	**Moravsky Berou**	**77.20**	**332**	*e* P		**P**	**15 07 47.4**	**+0.8**
MORC				pmax	pmax			
	comp=Z,62nm,3.0s							
MORC	**Moravsky Berou**	**77.20**	**332**	*e* P		**P**	**15 07 47.4**	**+0.8**
	comp=Z,62nm,3.0s							
BRTR	**Keskin Array B**	**78.75**	**316**	P		**P**	**15 07 56.6**	**+1.2**
BRTR	**Keskin Array B**	**78.75**	**316**	P		**P**	**15 07 56.6**	**

ASAR ScP ScP 15 10 25.1 +2.3
0.8nm,0.6s,baz=116,slow=4.1,SNR=4.8
ASAR S S 15 11 37.5 -2.0
1.3nm,0.9s,baz=95,slow=14,SNR=9.3
ASAR PKiKP PKiKP 15 14 22.4 -1.2
0.1nm,0.3s,baz=74,slow=1.0,SNR=4.5
WRAB Tennant Creek 43.84 263 *eP* P 15 05 49.2 -1.0
23nm,1.0s
WRA Warramunga Arr 43.85 263 P P 15 05 49.9 -0.4
WRA PcP PcP 15 07 24.9 +0.5
WRA S S 15 11 38.2 -3.3
WRA PKiKP PKiKP 15 14 22.4 -1.4
WRA Warramunga Arr 43.85 263 P P 15 05 49.9 -0.4
7.0nm,0.3s,baz=96,slow=7.4,SNR=360
WRA PcP PcP 15 07 24.9 +0.5
1.6nm,0.6s,baz=99,slow=4.3,SNR=5.3
WRA S S 15 11 38.3 -3.3
1.1nm,1.0s,baz=98,slow=13,SNR=3.6
WRA PKiKP PKiKP 15 14 22.4 -1.4
0.5nm,0.7s,baz=85,slow=0.6,SNR=6.1
FORT Forrest 48.39 247 *eP* P 15 06 23.9 -0.7
37nm,0.6s
TLE Tual 49.49 281 P P 15 06 32.2 -0.7
38nm,0.9s
FAKI Fak Fak 51.04 284 P P 15 06 42.6 -1.6
17nm,1.1s
FITZ Fitzroy Crossi 52.28 263 P P 15 06 53.5 +0.4
FITZ Fitzroy Crossi 52.28 263 P P 15 06 53.5 +0.4
4.9nm,0.4s,baz=119,slow=3.7,SNR=50
BNDI Bandanaira 52.52 281 P P 15 06 53.0 -1.9
55nm,0.8s
SWI Sorong 52.81 286 P P 15 06 56.5 -0.5
93nm,0.8s
AAI Ambon 54.41 281 P P 15 07 07.6 -0.7
24nm,0.6s
LBMI Labuha 56.30 284 P P 15 07 21.7 +0.3
27nm,1.1s,535nm
MBWA Marble Bar 57.05 258 *eP* P 15 07 26.1 -0.3
22nm,0.7s
VNDA Vanda 57.09 185 P P 15 07 29.4 +3.6
VNDA PcP PcP 15 08 14.6 +1.9
VNDA ScP ScP 15 11 21.8 +2.5
VNDA Vanda 57.09 185 P P 15 07 29.4 +3.6
0.6nm,0.6s,baz=9.7,slow=8.2,SNR=6.4
VNDA PcP PcP 15 08 14.6 +1.9
2.1nm,0.9s,baz=322,slow=4.5,SNR=7.0
VNDA ScP ScP 15 11 21.8 +2.5
1.6nm,0.9s,baz=288,slow=2.5,SNR=5.9
MMRI Maumere 58.13 273 P P 15 07 32.6 -1.3
27nm,0.8s
MRSI Marisa 61.81 283 P P 15 07 57.5 -0.8
10nm,1.3s
KHKI Kahang-Kahang 64.40 271 P P 15 08 13.6 -1.3
14nm,0.9s
GMJI Gumukmas 66.45 270 P P 15 08 25.9 -1.8
24nm,1.2s
PWJI Pagerwojo 68.06 270 P P 15 08 36.5 -1.1
QSPA South Pole Qui 68.80 180 P P 15 08 44.0 +2.6
QSPA South Pole Qui 68.80 180 P P 15 08 43.9 +2.6
5.3nm,0.7s,baz=19,slow=1.8,SNR=43
MJAR Matsushiro Arr 70.44 324 P P 15 08 50.4 -1.0
MJAR Matsushiro Arr 70.44 324 P P 15 08 50.4 -1.0
2.6nm,0.7s,baz=163,slow=6.1,SNR=13
JNU Nakatsue 72.39 317 P P 15 09 02.1 -0.7
JNU Nakatsue 72.39 317 P P 15 09 02.1 -0.7
6.7nm,1.0s,baz=99,slow=7.1,SNR=3.7
KSM Kuching 72.87 279 *eP* P 15 09 04.4 -1.6
15nm,0.8s
PETK Petropavlovsk- 76.85 346 P P 15 09 26.9 -0.5
PETK Petropavlovsk- 76.85 346 P P 15 09 26.9 -0.5
2.7nm,0.7s,baz=219,slow=12,SNR=9.4
KSRS Korea Array 77.03 319 P P 15 09 29.4 +0.7
0.9nm,0.7s,baz=142,slow=7.1,SNR=6.4
KSAR Wonju Array Be 77.05 319 P P 15 09 29.4 +0.6
BSC Santa Cruz Isl 78.61 47 ⇓P P 15 09 38.4 +1.1
baz=79
SCI San Clemente I 78.77 48 ⇑P P 15 09 39.8 +1.6
baz=79
PKM Peak Mountain 79.00 46 ⇓P P 15 09 40.9 +1.3
baz=79
CIS Catalina Islan 79.11 48 ⇓P P 15 09 41.5 +1.5
baz=79
USRK Ussuriysk Arra 79.22 326 P P 15 09 39.0 -1.3
6.3nm,1.0s,baz=110,slow=4.2,SNR=6.2
VES Vestal, Richgr 80.04 45 ⇑P P 15 09 45.7 +0.9
baz=80
MURC Murrieta 80.05 48 ⇓P P 15 09 46.1 +1.1
baz=80
BFSC Mount Baldy Ra 80.09 47 ⇓P P 15 09 46.1 +0.8
baz=80
MONP Monument Peak 80.21 49 ⇓P P 15 09 46.9 +0.9
baz=80
EDW2 Edwards Air Fo 80.22 47 ⇓P P 15 09 46.8 +0.9
baz=80
DVTC Desert V Tower 80.31 49 ⇑P P 15 09 47.3 +0.9
baz=80
ISA Isabella 80.34 46 *eP* P 15 09 47.6 +1.1
14nm,1.3s
ISA Isabella 80.34 46 ⇓P P 15 09 47.5 +1.1
baz=80
CMB Columbia Colle 80.47 43 *eP* P 15 09 47.9 +0.8
18nm,1.4s
PFO Pinyon Flat Ob 80.58 48 ⇓P P 15 09 48.7 +0.9
baz=81
SWSC Sam W. Stewart 80.68 49 ⇓P P 15 09 49.3 +1.1
baz=81
WDC Whiskeytown Da 80.68 40 *eP* P 15 09 47.6 -0.4
17nm,1.3s
MDJ Mudanjiang 80.77 325 P P 15 09 49.7 +1.3
MDJ pmax pmax
comp=Z,10.0nm,1.1s
MDJ pmax pmax
comp=Z,48nm,4.0s
CWC Cottonwood Cre 81.05 45 ⇓P P 15 09 51.0 +0.8
baz=81
BELC Belle Mtn. Jos 81.11 48 ⇓P P 15 09 51.7 +1.1
baz=81
MPMC Manual Prospec 81.22 46 ⇓P P 15 09 51.9 +0.7
baz=81
MTUM Tungsten Hills 81.25 44 *eP* P 15 09 51.0 -0.3
GSC Goldstone 81.27 47 *eP* P 15 09 52.2 +0.9
comp=Z,11nm,1.3s
GSC Goldstone 81.27 47 ⇑P P 15 09 52.0 +0.7
baz=81
TIN Tinemaha 81.30 45 ⇓P P 15 09 52.8 +1.4
baz=82
YBH Yreka Blue Hor 81.30 39 P P 15 09 52.2 +0.9
YBH Yreka Blue Hor 81.30 39 P P 15 09 52.3 +0.9
comp=Z,12nm,0.8s,baz=254,slow=7.4
BC3 Big Chuckawall 81.30 49 ⇑P P 15 09 52.7 +1.1
baz=82
HEC Hector,Ludlow 81.33 48 ⇓P P 15 09 52.7 +1.0
baz=82
GLA Glamis 81.42 50 ⇑P P 15 09 53.4 +1.3
baz=82
WCN Washoe City 81.62 42 *eP* P 15 09 51.1 -2.0
comp=Z,8.1nm,1.1s
HUMO Hull Mountain 81.70 38 *eP* P 15 09 53.5 +0.2
comp=Z,18nm,1.1s
KDAK Kodiak Island 81.72 14 P P 15 09 53.0 +0.1
KDAK Kodiak Island 81.72 14 P P 15 09 53.0 +0.1
comp=Z,2.9nm,0.5s,baz=160,slow=6.9,SNR=6.9
GMRC Granite Mounta 81.77 48 ⇑P P 15 09 54.8 +0.9
baz=82
IRM Iron Mountain 81.79 49 ⇑P P 15 09 55.1 +1.2
baz=82
GRAC Grapevine Rang 81.83 45 ⇓P P 15 09 55.2 +1.0
baz=82
TUQ Turquoise Moun 81.94 47 ⇑P P 15 09 55.4 +0.6
baz=82
Y12C Blythe 82.01 49 ⇑P P 15 09 56.2 +1.2
baz=82
113A Mohawk Valley, 82.03 50 ⇑P P 15 09 56.3 +1.2
baz=82
NVAR Mina Array Bea 82.03 44 P P 15 09 56.0 +0.6
NVAR PKKPbc PKKPbc 15 28 22.3 +0.9
NVAR Mina Array Bea 82.03 44 P P 15 09 56.0 +0.6
comp=Z,7.7nm,0.7s,baz=225,slow=8.1,SNR=46
NVAR PKKPbc PKKPbc 15 28 22.3 +0.9
comp=Z,0.4nm,0.6s,baz=98,slow=3.7,SNR=4.1
NV11 Mina Array Sit 82.13 44 *eP* P 15 09 54.5 -1.3
LDFC Landfair 82.31 48 *eP* P 15 09 56.7 +0.1
comp=Z,22nm,0.8s
CN2 Changchun 82.51 323 *eP* P 15 10 01.4 +4.1
PDMCI Parker Dam,Lak 82.57 49 ⇑P P 15 09 59.3 +1.5
baz=83
IPM Ipoh 82.58 278 *eP* P 15 09 58.9 +0.5
comp=Z,18nm,0.7s
MOD Modoc 82.83 40 *eP* P 15 09 59.0 -0.2
comp=Z,15nm,0.8s
Z14A Wintersburg 82.93 50 ⇑P P 15 10 01.2 +1.5
baz=83
W13A Hualapai Mount 83.17 48 ⇓P P 15 10 02.0 +0.9
baz=83
R11A Troy Canyon, C 83.76 45 ⇓P P 15 10 05.0 +1.1
baz=84
PSI Prapat 83.91 275 P P 15 10 03.7 -1.4
PSI Prapat 83.91 275 P P 15 10 03.7 -1.4
comp=Z,1.7nm,0.4s,baz=135,slow=4.3,SNR=4.7
TUC Tucson 83.97 52 *eP* P 15 10 04.8 -0.1
comp=Z,1.8nm,0.9s
TDL Tradedollar La 84.46 35 P P 15 10 08.2 +1.1
X16A Lo Mia Camp, P 84.54 50 ⇓P P 15 10 09.1 +1.2
baz=85
319A Douglas 84.63 54 ⇓P P 15 10 09.9 +1.6
baz=85
CCUT Cedar City 84.81 46 *eP* P 15 10 09.7 +0.5
comp=Z,3.2nm,0.8s
U15A North Rim 84.97 48 ⇑P P 15 10 10.9 +0.9
baz=85
WUAZ Wupatki 85.14 49 ⇓P P 15 10 11.9 +1.1
baz=85
320A Kipp Ranch, An 85.18 54 ⇓P P 15 10 13.0 +2.0
baz=85
BBB Bella Bella 85.39 29 P P 15 10 11.2 0.0
BBB Bella Bella 85.39 29 P P 15 10 11.2 0.0
comp=Z,2.4nm,1.1s,baz=239,slow=9.2,SNR=4.0
220A Playas Peak, P 85.45 53 ⇓P P 15 10 13.5 +1.2
baz=86
X18A Snowflake 85.67 51 ⇑P P 15 10 14.2 +0.9
baz=86
120A U Bar Ranch, L 85.68 53 ⇑P P 15 10 14.6 +1.2
baz=86
SYO Syowa Base 85.83 193 *eP* P 15 10 12.4 -0.8
SYO Syowa Base 85.83 193 *ePcP* PcP 15 10 16.8 +1.7
HAWA Hanford 85.96 37 *eP* P 15 10 14.4 +0.2
comp=Z,15nm,1.0s
Z20A Nine Sixteen R 85.97 52 ⇓P P 15 10 16.0 +1.2
baz=86
MVU Marysvale 86.08 46 *eP* P 15 10 15.4 +0.2
comp=Z,3.4nm,1.0s
MSU Marysvale 86.11 46 *eP* P 15 10 15.3 -0.1
ETW Entiat 86.25 35 P P 15 10 16.1 +0.4
121A Cookes Peak, D 86.30 53 ⇓P P 15 10 17.5 +1.2
baz=86
BMO Blue Mountains 86.33 39 *eP* P 15 10 16.2 +0.1
comp=Z,7.1nm,0.8s
MFID Camas Ranch 86.39 41 *eP* P 15 10 17.3 +0.9
comp=Z,7.4nm,1.0s
MFID Camas Ranch 86.39 41 ⇑P P 15 10 17.1 +0.6
baz=87,SNR=5.6
GYA Guiyang 86.46 300 *eP* P 15 10 17.0 -0.2
GYA pP pP 15 12 19.6 +1.8
GYA sP sP 15 13 15.4 +1.6
GYA PP PP 15 13 51.2 +1.9
GYA SKS SKSac 15 19 48.6 -2.6
GYA S S 15 20 05.7 -1.9
GYA pmax pmax
comp=Z,10.0nm,1.0s
WTV Waterville 86.51 35 P P 15 10 17.2 +0.4
Y20A Horse Springs, 86.51 52 ⇓P P 15 10 18.4 +1.0
baz=87
X20A Quemado 86.72 51 ⇓P P 15 10 19.6 +1.2
baz=87
Z21A St. Cloud Mine 86.75 52 ⇑P P 15 10 19.8 +1.3
baz=87
Q16A Castle Valley 87.00 46 ⇑P P 15 10 20.8 +1.3
baz=87
W20A Ramah 87.00 51 ⇑P P 15 10 20.7 +1.1
baz=87
OD2 Odessa Site #2 87.00 36 P P 15 10 19.6 +0.5
I12A Atlanta 87.03 40 ⇑P P 15 10 20.4 +0.9
baz=87
Y21A Point of Rocks 87.07 52 ⇑P P 15 10 21.1 +1.0
baz=87
TMUT Trail Mountain 87.16 46 *eP* P 15 10 21.8 +1.4
comp=Z,8.3nm,1.0s
X21A Alamocita Cree 87.20 51 ⇑P P 15 10 21.3 +0.7
baz=87
Z22A Elephant Butte 87.25 53 ⇓P P 15 10 21.5 +0.7
baz=87,SNR=5.2
L14A Malta 87.25 43 ⇓P P 15 10 21.3 +0.7
baz=87
HLID Hailey 87.34 41 *eP* P 15 10 21.6 +0.7
comp=Z,7.0nm,0.9s
HLID Hailey 87.34 41 ⇓P P 15 10 21.8 +0.9
baz=88,SNR=9.3
TRF Thorofare Moun 87.34 12 *eP* P 15 10 18.9 -1.6
comp=Z,20nm,0.8s
J13A Cove Ranch, Pi 87.39 41 ⇑P P 15 10 22.2 +1.0
baz=88,SNR=14
HVU Hansel Valley 87.41 43 *eP* P 15 10 21.6 +0.3
comp=Z,4.7nm,0.9s
VNA3 Neumayer Olymp 87.42 176 *eP* P 15 10 21.6 +0.8
SRU San Rafael 87.53 46 *eP* P 15 10 22.0 0.0
comp=Z,236nm,0.8s
SRU San Rafael 87.53 46 ⇑P P 15 10 22.5 +0.5
baz=88
324A Moseley Ranch, 87.54 55 ⇑P P 15 10 23.1 +0.9
baz=88,SNR=6.9
K14A Jones Ranch, D 87.56 42 ⇓P P 15 10 22.7 +0.7
baz=88
Y22A Socorro 87.56 52 ⇓P P 15 10 22.8 +0.6
baz=88
P17A Butcher Ranch, 87.56 46 ⇓P P 15 10 23.2 +1.1
baz=88
U20A Newcomb 87.58 49 ⇑P P 15 10 23.2 +0.9
baz=88
H12A Diamond D Ranc 87.61 40 ⇑P P 15 10 22.7 +0.5
baz=88,SNR=22
425A Indio Mountain 87.63 56 ⇑P P 15 10 23.6 +1.0
baz=88,SNR=13
I13A Whorse Cree 87.71 41 ⇓P P 15 10 23.7 +0.9
baz=88
MNTX Cornudas Mount 87.73 55 *eP* P 15 10 21.9 -1.0
comp=Z,8.3nm,1.1s
MNTX Cornudas Mount 87.73 55 ⇓P P 15 10 24.1 +1.2
baz=88,SNR=12
626A Big Bend Ranch 87.75 57 ⇓P P 15 10 24.5 +1.4
baz=88,SNR=12
J14A Carey 87.76 42 ⇑P P 15 10 24.0 +1.1
baz=88,SNR=12
L15A Malad City 87.78 43 ⇑P P 15 10 23.8 +0.8
baz=88
224A Cornudas Mount 87.79 54 ⇑P P 15 10 24.5 +1.2
baz=88,SNR=7.4
Z23A Rita Site, Whi 87.80 53 ⇓P P 15 10 24.2 +0.9
baz=88
VNA2 Neumayer--Watz 87.85 177 *eP* P 15 10 23.9 +1.1
baz=208,slow=5.3
325A Bean Ranch, Si 87.90 55 ⇑P P 15 10 24.6 +0.7
baz=88,SNR=12
O17A Robinson Place 87.93 45 ⇑P P 15 10 24.6 +0.8
baz=88
P18A Preston Nutter 87.97 46 ⇓P P 15 10 24.8 +0.6
baz=88
H13A Challis 87.97 40 ⇑P P 15 10 24.8 +0.9
baz=88,SNR=8.8
526A Mary Lane Ranc 88.01 57 ⇑P P 15 10 25.3 +0.9
baz=88,SNR=8.8
TXAR Lajitas Array 88.02 58 P P 15 10 25.9 +1.5
TXAR PKKPbc PKKPbc 15 28 07.4 +0.7
TXAR Lajitas Array 88.02 58 P P 15 10 25.9 +1.5
comp=Z,5.8nm,0.8s,baz=220,slow=5.7,SNR=35
TXAR PKKPbc PKKPbc 15 28 07.4 +0.7
comp=Z,0.7nm,0.7s,baz=95,slow=2.7,SNR=5.4
F12A Elk City 88.03 39 ⇓P P 15 10 24.4 +0.3
baz=88,SNR=25
K15A Arbon 88.04 42 ⇓P P 15 10 24.7 +0.5
baz=88
VNA1 Neumayer--Stat 88.08 177 *eP* P 15 10 25.0 +1.2
I14A Mackay 88.12 41 ⇑P P 15 10 25.8 +1.2
baz=88,SNR=14
124A Stringfield Ra 88.12 54 ⇑P P 15 10 26.1 +1.1
baz=88,SNR=5.2
Y23A Lovelace Mesa, 88.23 53 ⇑P P 15 10 26.1 +0.7
baz=88
N17A Moffit Pass 88.24 45 ⇑P P 15 10 26.2 +0.8
baz=88
G13A Cobalt 88.27 40 ⇓P P 15 10 25.9 +0.7
baz=88,SNR=12
627A Terlingua Ranc 88.29 58 ⇑P P 15 10 26.9 +1.2
baz=88,SNR=13
Q19A Hogan Spring (88.31 47 ⇓P P 15 10 26.4 +0.8
baz=88
426A McDonald Obser 88.32 56 ⇑P P 15 10 26.9 +1.0
baz=88,SNR=11
225A Deer Hill, Car 88.34 55 ⇑P P 15 10 26.8 +0.9
baz=88
NEW Newport 88.38 36 P P 15 10 24.8 -0.8
NEW Newport 88.38 36 ⇑P P 15 10 25.7 +0.2
baz=89
NEW Newport 88.38 36 P P 15 10 24.8 -0.8
comp=Z,2.3nm,0.6s,baz=230,slow=9.3,SNR=4.7
S20A Disappointment 88.39 48 ⇑P P 15 10 26.7 +0.6
baz=89
L16A Fish Haven 88.39 43 ⇓P P 15 10 26.3 +0.3
baz=89,SNR=8.8
ANMO Albuquerque 88.40 52 *eP* P 15 10 25.9 -0.3
comp=Z,7.4nm,1.1s
J15A Blackfoot 88.47 42 ⇑P P 15 10 27.6 +1.3
baz=89,SNR=6.1
Z24A Sheeppen Canyo 88.47 53 ⇑P P 15 10 27.3 +0.7
baz=89
V22A San Miguel Ran 88.51 50 ⇓P P 15 10 27.8 +1.1
baz=89
H14A Leadore 88.54 40 ⇓P P 15 10 27.3 +0.7
baz=89,SNR=8.7
T21A Navajo Lake 88.57 49 ⇑P P 15 10 27.2 +0.3
baz=89
F13A Darby 88.59 39 ⇑P P 15 10 26.8 +0.1
baz=89,SNR=12
M17A Scullys Gap (B 88.61 44 ⇓P P 15 10 27.3 +0.3
baz=89
C11A Tepee Creek (N 88.62 37 ⇑P P 15 10 27.2 +0.5
baz=89
326A Caldwell Ranch 88.64 56 ⇑P P 15 10 27.9 +0.7
baz=89
Y24A Capitan 88.69 53 ⇑P P 15 10 28.7 +1.1
baz=89,SNR=8.4
D12A Red Ives Fores 88.69 38 ⇓P P 15 10 27.6 +0.6
baz=89
628A Black Gap, Mar 88.70 58 ⇓P P 15 10 28.3 +0.8
baz=89
S21A Coal Bank Pass 88.70 49 ⇓P P 15 10 28.2 +0.5
baz=89
125A Gardner Draw, 88.71 54 ⇑P P 15 10 28.3 +0.7
baz=89
K16A Soda Springs 88.71 43 ⇑P P 15 10 28.4 +1.0
baz=89,SNR=14
GDL2 Guadalupe Moun 88.73 55 *eP* P 15 10 28.1 +0.5
G14A Jackson 88.81 40 ⇑P P 15 10 28.4 +0.6
baz=89,SNR=6.7
P19A Cripple Cowboy 88.83 46 ⇓P P 15 10 28.8 +0.7
baz=89
226B Tecolote Peak, 88.83 55 ⇓P P 15 10 28.4 +0.3
baz=89,SNR=8.9
DOT Dot Lake 88.87 15 *eP* P 15 10 25.1 -2.4
comp=Z,6.9nm,0.9s
427A Hayter Ranch, 88.88 56 ⇑P P 15 10 29.5 +1.1
baz=89,SNR=15
Z25A Roswell 88.94 54 ⇑P P 15 10 29.6 +1.0
baz=89
MCMT McKenzie Canyo 88.96 40 P P 15 10 29.6 +1.0
Q20A Ridgley Place, 88.97 47 ⇑P P 15 10 29.4 +0.7
baz=89
H15A Lima 88.98 41 ⇓P P 15 10 29.6 +0.9
baz=89,SNR=10
M18A Lyman 88.98 44 ⇓P P 15 10 29.8 +1.0
baz=89
AHID Auburn Hatcher 88.99 43 *eP* P 15 10 29.5 +0.8
comp=Z,7.9nm,1.0s
DLBC Dease Lake 89.01 23 P P 15 10 28.0 -0.3
DLBC Dease Lake 89.01 23 P P 15 10 28.0 -0.3
comp=Z,2.7nm,0.8s,baz=269,slow=7.3,SNR=4.7
N18A Larsen Ranch, 89.02 45 ⇓P P 15 10 29.4 +0.5
baz=89,SNR=8.9
T22A Edith 89.03 50 ⇑P P 15 10 29.7 +0.6
baz=89
O19A Miners Draw (B 89.05 46 ⇓P P 15 10 29.6 +0.6
baz=89
K17A Gardner Place, 89.09 43 ⇓P P 15 10 29.8 +0.6
baz=89,SNR=5.3
COLA College 89.10 13 *eP* P 15 10 27.5 -0.9
comp=Z,11nm,0.8s
KMI Kunming 89.11 297 P P 15 10 31.4 +1.7
KMI pmax pmax
comp=Z,6.0nm,1.1s
RRI2 Red Ridge 89.14 42 *eP* P 15 10 29.6 +0.1
comp=Z,13nm,0.8s
P20A De Beque 89.16 47 ⇓P P 15 10 30.3 +0.8
baz=89
126A Clayton Basin, 89.19 54 ⇑P P 15 10 30.5 +0.7
baz=89
R21A Cimarron 89.20 48 ⇑P P 15 10 30.6 +0.7
baz=89,SNR=8.1
ILAR Eielson Array 89.21 13 P P 15 10 27.6 -1.4
ILAR Eielson Array 89.21 13 P P 15 10 27.6 -1.4
comp=Z,4.4nm,0.8s,baz=218,slow=5.1,SNR=65
U23A El Rito 89.22 50 ⇓P P 15 10 30.8 +0.8
baz=89
D13A Huson 89.22 38 ⇓P P 15 10 30.3 +0.8
baz=89
Y25A Mesa, Roswell 89.24 53 ⇑P P 15 10 30.4 +0.3
baz=89,SNR=6.2
W24A Lazy 6 Ranch, 89.28 52 ⇑P P 15 10 30.8 +0.5
baz=90
I16A Newdale 89.31 42 ⇑P P 15 10 31.6 +1.4
baz=90
B12A Libby 89.34 36 ⇑P P 15 10 30.7 +0.6
baz=90
G15A Dillon 89.36 40 ⇓P P 15 10 31.2 +0.8
baz=90,SNR=8.8
428A Kincaid Ranch, 89.39 57 ⇑P P 15 10 31.7 +1.0
baz=90
S22A 4UR Ranch, Cre 89.42 49 ⇓P P 15 10 31.6 +0.7
baz=90,SNR=7.2
E14A Clinton 89.42 39 ⇓P P 15 10 30.7 +0.2
baz=90
HHC Hu-ho-hao-te 89.42 315 *eP* P 15 10 31.8 +1.2
HHC pP pP 15 12 32.3 +0.1
HHC sP sP 15 13 24.4 -3.5
HHC PP PP 15 14 16.4 +4.0
HHC SKS SKSac 15 20 09.6 +1.6
HHC S ScS 15 20 35.7 -1.3
HHC pmax pmax
comp=Z,12nm,1.0s
HHC pmax pmax
comp=Z,170nm,8.7s
TPAW Teton Pass 89.45 42 *eP* P 15 10 31.5 +0.6
comp=Z,6.0nm,0.9s
Z26A Caprock 89.49 54 ⇓P P 15 10 31.5 +0.3
baz=90,SNR=5.7
529A Stev Forest Ra 89.50 57 ⇓P P 15 10 31.7 +0.5
baz=90
J17A Brown Place, J 89.53 43 ⇓P P 15 10 32.0 +0.7
baz=90,SNR=12
A12A Yaak River Ran 89.56 36 ⇓P P 15 10 31.9 +0.9
baz=90
K18A Toltan Ranch, 89.60 43 ⇓P P 15 10 32.1 +0.6
baz=90,SNR=17
V24A Rampart Ranch, 89.61 51 ⇑P P 15 10 32.6 +0.8
baz=90
M19A Rock Springs 89.62 45 ⇓P P 15 10 32.3 +0.6
baz=90
IMW Indian Meadow 89.66 42 *eP* P 15 10 32.4 +0.5
comp=Z,9.4nm,0.9s
127A Arkansas Junct 89.70 55 ⇓P P 15 10 32.6 +0.4
baz=90
MOOW Moose Ponds 89.71 42 *eP* P 15 10 32.0 -0.1
comp=Z,14nm,1.8s
F15A Butte 89.71 40 ⇑P P 15 10 32.6 +0.6
baz=90
LRM Limekiln Ridge 89.72 40 *eP* P 15 10 32.6 +0.5
LOHW Long Hollow 89.73 42 *eP* P 15 10 32.6 +0.5
comp=Z,4.7nm,0.6s
CMAR Chiang Mai Arr 89.75 290 P P 15 10 33.5 +0.9
CMAR Chiang Mai Arr 89.75 290 P P 15 10 33.5 +0.9
comp=Z,4.6nm,0.9s,baz=129,slow=2.9,SNR=26
D14A Greenough 89.77 38 ⇑P P 15 10 32.0 -0.2
baz=90
L19A Farson 89.78 44 ⇑P P 15 10 33.1 +0.7
baz=90,SNR=5.7
G16A Moss Hill, Enn 89.80 41 ⇑P P 15 10 33.1 +0.7
baz=90
QLMT Earthquake Lak 89.83 41 *eP* P 15 10 33.1 +0.5
H16A Russell Place, 89.88 41 ⇑P P 15 10 33.6 +0.8
baz=90,SNR=9.4
Q22A Crested Butte, 89.88 48 ⇓P P 15 10 33.7 +0.7
baz=90
N20A Spence Gulch, 89.89 46 ⇑P P 15 10 33.3 +0.3
baz=90,SNR=9.7

CHTO	**Chiang Mai**	89.89	290	*e*P		P	15 10 34.5	+1.4		
	comp=Z,3.7nm,0.7s									
Y26A	**Elida**	89.89	53	⇓P		P	15 10 33.3	+0.3		
	baz=90,SNR=5.1									
J18A	**Kendall Valley**	89.89	43	⇑P		P	15 10 33.5	+0.5		
	baz=90,SNR=45									
I17A	**Pilgrim Ck.**	89.90	42	⇓P		P	15 10 33.8	+0.8		
	baz=90,SNR=7.4									
B13A	**Whitefish**	89.91	37	⇓P		P	15 10 33.0	+0.3		
	baz=90									
BW06	**Boulder Array**	89.97	43	*e*P		P	15 10 33.5	+0.2		
	comp=Z,6.7nm,0.7s									
BW06	**Boulder Array**	89.97	43	⇓P		P	15 10 33.6	+0.2		
	baz=90,SNR=15									
PDAR	**Pinedale Array**	89.97	43	P		P	15 10 33.2	-0.1		
PDAR	**Pinedale Array**	89.97	43	P		P	15 10 33.2	-0.1		
	comp=Z,6.6nm,0.7s,baz=211,slow=3.4,SNR=60									
SMCO	**Snowmass**	89.98	48	*e*P		P	15 10 34.3	+0.6		
	comp=Z,2.8nm,0.7s									
W25A	**X Bar L Ranch,**	89.98	52	⇑P		P	15 10 33.7	+0.2		
	baz=90,SNR=6.0									
Z27A	**Tatum**	90.08	54	⇓P		P	15 10 34.2	+0.3		
	baz=90									
BOZ	**Bozeman (W)**	90.12	40	*e*P		P	15 10 34.6	+0.7		
	comp=Z,5.6nm,0.9s									
BOZ	**Bozeman (W)**	90.12	40	⇓P		P	15 10 34.5	+0.6		
	baz=90,SNR=6.4									
H17A	**Grant Village**	90.14	42	⇑P		P	15 10 35.9	+1.8		
	baz=90									
V25A	**Rancho No Teng**	90.14	51	⇓P		P	15 10 34.7	+0.4		
	baz=90									
F16A	**Kennard Place,**	90.20	40	⇑P		P	15 10 35.1	+0.9		
	baz=90									
530A	**J-C Ranch, Com**	90.20	58	⇑P		P	15 10 34.7	+0.3		
	baz=90									
A13A	**Flathead Natio**	90.25	36	⇓P		P	15 10 34.8	+0.6		
	baz=90									
M20A	**Sweetwater, Wa**	90.25	45	⇓P		P	15 10 35.4	+0.7		
	baz=90									
329A	**Wagon Wheel Ra**	90.26	56	⇓P		P	15 10 35.2	+0.5		
	baz=90									
I18A	**Diamond G Ranc**	90.27	43	⇑P		P	15 10 35.1	+0.4		
	baz=90,SNR=5.8									
D15A	**Lincoln**	90.32	39	⇑P		P	15 10 35.4	+0.7		
	baz=90									
P22A	**Eagle**	90.32	47	⇑P		P	15 10 35.3	+0.3		
	baz=90									
R23A	**Moffat**	90.33	49	⇑P		P	15 10 35.7	+0.5		
	baz=90									
128A	**Castleberry Fa**	90.34	55	⇓P		P	15 10 35.4	+0.3		
	baz=90									
N21A	**Black Mountain**	90.35	46	⇑P		P	15 10 35.8	+0.7		
	baz=90,SNR=6.8									
SDCO	**Great Sand Dun**	90.35	49	*e*P		P	15 10 35.1	-0.2		
	comp=Z,4.3nm,1.1s									
Y27A	**Causey**	90.37	54	⇑P		P	15 10 35.7	+0.4		
	baz=90									
T24A	**Torres, Weston**	90.37	50	⇑P		P	15 10 36.5	+1.1		
	baz=90									
L20A	**Wamsutter**	90.39	45	⇑P		P	15 10 36.0	+0.8		
	baz=91,SNR=5.6									
K19A	**Absolon Red Bu**	90.46	44	⇑P		P	15 10 35.3	-0.2		
	baz=91									
631A	**Perdido Creek**	90.50	59	⇓P		P	15 10 36.0	+0.2		
	baz=91									
S24A	**Houchin Ranch,**	90.51	50	⇑P		P	15 10 36.6	+0.6		
	baz=91									
EGAK	**Eagle**	90.52	15	*e*P		P	15 10 31.1	-3.8		
J19A	**Crowheart**	90.54	43	⇑P		P	15 10 36.5	+0.6		
	baz=91,SNR=11									
U25A	**Circle Dot Ran**	90.54	51	⇓P		P	15 10 36.4	+0.3		
	baz=91									
430A	**Baggett Ranch,**	90.55	57	⇑P		P	15 10 36.3	+0.3		
	baz=91									
E16A	**East Helena**	90.55	39	⇑P		P	15 10 36.4	+0.7		
	baz=91									
B14A	**Marquette Ranc**	90.58	37	⇑P		P	15 10 36.0	+0.1		
	baz=91									
WALA	**Waterton Lakes**	90.59	37	*e*P		P	15 10 34.4	-1.5		
	comp=Z,0.2nm,1.2s									
CD2	**Chengdu**	90.65	303	P		P	15 10 36.8	+0.3		
CD2				pP		pP	15 12 40.0	+1.8		
CD2				sP		sP	15 13 35.0	+1.1		
CD2				PP		PP	15 14 25.0	+2.9		
CD2				SKS		SKSac	15 20 14.8	-0.5		
CD2				S		S	15 20 44.0	-1.6		
CD2				sS		sS	15 24 22.3	-0.9		
CD2				SS		SS	15 27 07.6	+2.7		
CD2				pmax		pmax				
	comp=Z,10.0nm,0.5s									
CD2				pmax		pmax				
	comp=Z,80nm,6.2s									
C15A	**Salmond Ranch,**	90.65	38	⇑P		P	15 10 36.6	+0.4		
	baz=91									
MSTX	**Muleshoe**	90.70	54	⇑P		P	15 10 37.4	+0.7		
	baz=91									
K20A	**Yellowstone Ra**	90.70	44	⇓P		P	15 10 36.6	0.0		
	baz=91,SNR=5.6									
O22A	**Kremmling**	90.73	47	⇑P		P	15 10 37.4	+0.4		
	baz=91									
COLD	**Coldfoot**	90.75	11	*e*P		P	15 10 36.2	+0.2		
	comp=Z,6.7nm,1.2s									
531A	**Rocksprings**	90.83	58	⇑P		P	15 10 37.9	+0.5		
	baz=91									
F17A	**Fitzpatrick Pl**	90.84	40	⇓P		P	15 10 38.3	+1.1		
	baz=91									
H18A	**Shoshone NF, C**	90.84	42	⇑P		P	15 10 38.1	+0.8		
	baz=91									
330A	**Mertzon**	90.85	57	⇓P		P	15 10 37.5	0.0		
	baz=91									
M21A	**Separation Pea**	90.85	45	⇑P		P	15 10 37.6	+0.2		
	baz=91,SNR=8.8									
R24A	**Sanders Place,**	90.85	49	⇑P		P	15 10 38.3	+0.8		
	baz=91									
T25A	**Trinidad**	90.86	50	⇓P		P	15 10 37.9	+0.3		
	baz=91									
D16A	**Dana Ranch, Ca**	90.88	39	⇓P		P	15 10 37.9	+0.7		
	baz=91									
W27A	**Bowe Ranch, En**	90.95	53	⇑P		P	15 10 38.5	+0.6		
	baz=91									
I19A	**Meeteetse**	90.95	43	⇑P		P	15 10 38.3	+0.6		
	baz=91									
B15A	**Bradely Ranch,**	90.96	38	⇑P		P	15 10 37.1	-0.5		
	baz=91									
E17A	**Martinsdale**	91.00	40	⇑P		P	15 10 38.6	+0.7		
	baz=91									
L21A	**Rawlins**	91.01	45	⇓P		P	15 10 38.4	+0.2		
	baz=91									
U26A	**Atchley Ranch,**	91.02	51	⇑P		P	15 10 38.2	-0.1		
	baz=91									
N22A	**Wattenberg Ran**	91.08	46	⇓P		P	15 10 39.0	+0.5		
	baz=91,SNR=7.9									
C16A	**Fuhringer Ranc**	91.16	38	⇑P		P	15 10 39.0	+0.5		
	baz=91									
632A	**Uvalde**	91.17	59	⇑P		P	15 10 39.6	+0.7		
	baz=91									
ISCO	**Idaho Springs**	91.20	47	⇑P		P	15 10 39.7	+0.5		
	baz=91									
H19A	**Powell**	91.26	42	⇓P		P	15 10 39.9	+0.8		
	baz=91									
M22A	**Cedar Creek Ra**	91.26	46	⇑P		P	15 10 39.9	+0.5		
	baz=91,SNR=7.4									
RLMT	**Red Lodge**	91.31	42	⇓P		P	15 10 40.0	+0.6		
	baz=92									
532A	**Rocksprings**	91.33	58	⇓P		P	15 10 40.1	+0.5		
	baz=92									
R25A	**Fountain Ranch**	91.39	49	⇓P		P	15 10 40.2	+0.3		
	baz=92									
K21A	**Alcova**	91.40	44	⇑P		P	15 10 40.1	+0.3		
	baz=92,SNR=5.5									
F18A	**Big Timber**	91.41	41	⇓P		P	15 10 40.1	+0.4		
	baz=92									
D17A	**Six Diamond Ra**	91.45	39	⇑P		P	15 10 40.4	+0.5		
	baz=92									
I20A	**Worland**	91.45	43	⇓P		P	15 10 40.2	+0.2		
	baz=92									
N23A	**Red Feather La**	91.47	46	⇑P		P	15 10 41.1	+0.7		
	baz=92									
J21A	**Lysite**	91.61	44	⇓P		P	15 10 41.6	+0.8		
	baz=92									
E18A	**Harlowton**	91.62	40	⇓P		P	15 10 41.7	+1.0		
	baz=92									
C17A	**Wharram Farm,**	91.65	39	⇑P		P	15 10 41.0	+0.2		
	baz=92									
L22A	**Ellis Ranch, M**	91.66	45	⇓P		P	15 10 41.9	+0.8		
	baz=92									
X29A	**Tulia**	91.70	54	⇑P		P	15 10 41.5	+0.2		
	baz=92									
432A	**Menard**	91.72	58	⇑P		P	15 10 41.4	0.0		
	baz=92									
231A	**Bronte**	91.73	56	⇑P		P	15 10 41.5	0.0		
	baz=92									
S26A	**Kim**	91.75	50	⇓P		P	15 10 42.0	+0.5		
	baz=92									
Q25A	**Bedland, Calha**	91.76	49	⇓P		P	15 10 42.2	+0.6		
	baz=92									
A16A	**West Butte Ran**	91.83	37	⇑P		P	15 10 41.8	+0.2		
	baz=92									
V28A	**Channing**	91.86	52	⇓P		P	15 10 42.9	+0.8		
	baz=92									
F19A	**Roth Farm, Mol**	91.86	41	⇑P		P	15 10 42.3	+0.5		
	baz=92									
K22A	**Casper**	91.88	45	⇓P		P	15 10 42.6	+0.5		
	baz=92									
I21A	**Big Trails, Te**	91.92	43	⇑P		P	15 10 42.5	+0.3		
	baz=92									
B17A	**L&G Farms, Che**	91.96	38	⇑P		P	15 10 42.0	-0.1		
	baz=92									
332A	**Millersview**	91.96	57	⇑P		P	15 10 42.6	+0.1		
	baz=92									
R26A	**Arlington**	92.06	50	⇓P		P	15 10 43.2	+0.3		
	baz=92,SNR=8.0									
P25A	**Willow Gulch B**	92.07	48	⇑P		P	15 10 43.3	+0.3		
	baz=92									
S27A	**Las Animas**	92.18	50	⇓P		P	15 10 43.9	+0.4		
	baz=92									
L23A	**Garrett**	92.18	45	⇑P		P	15 10 44.0	+0.4		
	baz=92,SNR=6.8									
232A	**Coleman**	92.23	57	⇑P		P	15 10 43.9	+0.1		
	baz=92									
E19A	**Rath Farm, Rou**	92.25	41	⇓P		P	15 10 44.3	+0.8		
	baz=92									
Q26A	**Hugo**	92.27	49	⇑P		P	15 10 44.3	+0.4		
	baz=92									
A17A	**Triple J Farms**	92.34	38	⇑P		P	15 10 44.1	+0.2		
	baz=92									
Z31A	**Sharp Cattle R**	92.42	55	⇑P		P	15 10 44.6	0.0		
	baz=93									
EGMT	**Eagleton**	92.43	39	⇓P		P	15 10 44.9	+0.6		
	baz=93									
I22A	**9 Mile Ranch,**	92.48	44	⇑P		P	15 10 45.1	+0.3		
	baz=93									
R27A	**Eads**	92.51	50	⇓P		P	15 10 45.1	+0.2		
	baz=93									
D19A	**Cripps Ranch,**	92.53	40	⇓P		P	15 10 45.6	+0.8		
	baz=93									
L24A	**Wheatland**	92.66	46	⇑P		P	15 10 47.0	+1.4		
	baz=93									
C19A	**Slack Wire Ran**	92.70	39	⇑P		P	15 10 46.5	+0.9		
	baz=93									
Z32A	**Haskell**	92.93	55	⇑P		P	15 10 47.5	+0.6		
	baz=93									
G22A	**Birney**	93.21	42	⇓P		P	15 10 49.1	+1.1		
	baz=93									
C20A	**Veseth Ranch,**	93.31	40	⇓P		P	15 10 49.1	+0.8		
	baz=94									
D21A	**La Casta Ranch**	93.62	41	⇓P		P	15 10 50.5	+0.7		
	baz=94									
H24A	**Dirks Ranch, A**	94.10	43	⇓P		P	15 10 52.0	0.0		
	baz=94									
K26A	**Motz Farm, Whi**	94.12	46	⇓P		P	15 10 52.6	+0.4		
	baz=94									
INK	**Inuvik**	95.19	15	P		P	15 10 55.3	-0.9		
INK	**Inuvik**	95.19	15	P		P	15 10 55.3	-0.9		
	comp=Z,1.9nm,0.9s,baz=232,slow=4.5,SNR=7.8									
SONM	**Songino Array**	95.90	319	P		P	15 10 59.9	-0.2		
SONM	**Songino Array**	95.90	319	P		P	15 10 59.9	-0.2		
	comp=Z,0.2nm,0.6s,baz=73,slow=5.0,SNR=1.9									
YKA	**Yellowknife Ar**	97.48	25	P		Pdif	15 11 06.1	-0.6		
YKA				PKKPbc		**PKKPbc**	15 27 42.0	-1.4		
YKA	**Yellowknife Ar**	97.48	25	P		Pdif	15 11 06.1	-0.5		
	comp=Z,0.5nm,0.7s,baz=242,slow=4.5,SNR=14									
YKA				PKKPbc		**PKKPbc**	15 27 42.0	-1.4		
	comp=Z,0.1nm,0.5s,baz=48,slow=2.2,SNR=4.6									
RES	**Resolute Bay**	108.72	16	PKiKP		**PKiKP**	15 15 56.0	-1.9		
RES	**Resolute Bay**	108.72	16	PKiKP		**PKiKP**	15 15 56.0	-1.9		
	comp=Z,0.8nm,0.6s,baz=236,slow=5.0,SNR=5.1									
ZALV	**Zalesovo Beam**	110.67	321	PKiKP		**PKiKP**	15 16 00.6	-1.5		
ZALV	**Zalesovo Beam**	110.67	321	PKiKP		**PKiKP**	15 16 00.6	-1.5		
	comp=Z,1.5nm,0.5s,baz=123,slow=0.5,SNR=12									
MK31	**Makanchi Array**	111.24	313	*e*PKPdf		**PKiKP**	15 16 01.1	-2.4		
MKAR	**Makanchi Array**	111.24	313	PKiKP		**PKiKP**	15 16 02.2	-1.3		
MKAR				PKKPbc		**PKKPbc**	15 27 01.8	-0.1		
MKAR	**Makanchi Array**	111.24	313	PKiKP		**PKiKP**	15 16 02.2	-1.3		
	comp=Z,0.8nm,0.4s,baz=159,slow=0.9,SNR=17									
MKAR				PKKPbc		**PKKPbc**	15 27 01.8	-0.1		
	comp=Z,0.5nm,0.7s,baz=266,slow=4.1,SNR=7.5									
KSH	**Kashi**	114.78	305	*e*PKP		PKPdf	15 16 12.3	+1.7		
KSH				PP		PP	15 17 26.1	+6.5		
KSH				sPKP			15 19 11.3			
KSH				PKS		**PKSdf**	15 19 48.2	+0.8		
KSH				SKS		**SKSdf**	15 22 33.0	+2.6		
KSH				SKKS		**SKKSac**	15 23 23.1	+0.1		
KSH				SS		**SS**	15 32 39.4	+6.4		
KSH				AMB		AMB				
	comp=Z,170nm,4.8s									
KKAR	**Karatay Array**	119.20	308	*e*PKPdf		**PKPdf**	15 16 17.6	-1.3		
BVAR	**Borovoye Array**	119.24	320	PKP		**PKPdf**	15 16 17.6	-1.0		
BVAR	**Borovoye Array**	119.24	320	PKP		**PKPdf**	15 16 17.6	-1.0		
	comp=Z,4.3nm,0.4s,baz=100,slow=1.8,SNR=28									
SPITS	**Spitsbergen Ar**	122.59	356	PKP		**PKPdf**	15 16 23.7	-0.7		
SPITS	**Spitsbergen Ar**	122.59	356	PKP		**PKPdf**	15 16 23.7	-0.7		
	comp=Z,8.2nm,0.7s,baz=160,slow=33,SNR=15									
SFJD	**Kangerlussuaq**	123.90	22	PKP		**PKPdf**	15 16 26.4	-0.7		
SFJD	**Kangerlussuaq**	123.90	22	PKP		**PKPdf**	15 16 26.4	-0.7		
	comp=Z,5.2nm,0.5s,baz=250,slow=5.0,SNR=4.5									
ARU	**Arti**	125.45	325	*e*PKPdf		**PKPdf**	15 16 29.2	-1.2		
ABKAR	**Akbulak array**	126.19	316	PKPdf		**PKPdf**	15 16 31.2	-0.8		
AKTO	**Aktyubinsk**	127.20	318	PKP		**PKPdf**	15 16 34.2	+0.2		
AKTO	**Aktyubinsk**	127.20	318	PKP		**PKPdf**	15 16 34.2	+0.2		
	comp=Z,3.8nm,0.7s,baz=88,slow=2.4,SNR=16									
KEV	**Kevo**	129.09	349	*ep*		**PKPdf**	15 16 35.0	-2.0		
	comp=Z,5.0nm,0.7s									
ARCES	**ARCESS Array B**	129.55	349	PKP		**PKPdf**	15 16 37.1	-0.8		
ARCES	**ARCESS Array B**	129.55	349	PKhKP		PKPpre	15 16 31.7			
	comp=Z,3.4nm,0.6s,baz=350,slow=6.2,SNR=3.8									
ARCES				PKP		**PKPdf**	15 16 37.1	-0.8		
	comp=Z,6.7nm,0.6s,baz=52,slow=0.6,SNR=35									
JOF	**Joensuu**	133.65	342	*ep*		**PKPdf**	15 16 43.8	-2.0		
	comp=Z,6.6nm,0.5s									
KAF	**Kangasniemi**	135.70	343	*ep*		**PKPdf**	15 16 46.8	-2.8		
	comp=Z,5.4nm,0.6s									
FINES	**FINESS Array B**	136.32	343	PKP		**PKPdf**	15 16 50.1	-0.7		
FINES				SKPbc		**SKPbc**	15 19 31.5	+0.4		
FINES	**FINESS Array B**	136.32	343	PKhKP		PKPpre	15 16 37.2			
	comp=Z,1.1nm,0.8s,baz=59,slow=5.6,SNR=5.4									
FINES				PKP		**PKPdf**	15 16 50.1	-0.7		
	comp=Z,3.5nm,0.6s,baz=50,slow=3.0,SNR=14									
FINES				SKPbc		**SKPbc**	15 19 31.5	+0.4		
	comp=Z,2.7nm,0.8s,baz=46,slow=5.5,SNR=6.0									
KMBO	**Kilima Mbogo**	138.40	242	PKP		**PKPdf**	15 16 58.4	+2.0		
KMBO	**Kilima Mbogo**	138.40	242	PKP		**PKPdf**	15 16 58.4	+2.0		
	comp=Z,1.0nm,0.5s,baz=46,slow=22,SNR=4.8									
NB2	**NORSAR Subarra**	139.66	353	PKP		PKPpre	15 16 48.4			
	comp=Z,1.5nm,0.6s,baz=13,slow=3.1									
NOA	**NORSAR Array B**	139.66	353	PKP		**PKPdf**	15 16 58.9	+1.9		
NOA				SKPbc		**SKPbc**	15 19 41.5	+0.8		
NOA	**NORSAR Array B**	139.66	353	PKhKP		PKPpre	15 16 48.5			
	comp=Z,1.9nm,0.6s,baz=11,slow=2.3,SNR=11									
NOA				PKP		**PKPdf**	15 16 58.9	+1.9		
	comp=Z,2.0nm,0.7s,baz=13,slow=4.0,SNR=7.1									
NOA				SKPbc		**SKPbc**	15 19 41.5	+0.8		
	comp=Z,1.3nm,0.9s,baz=15,slow=4.3,SNR=3.6									
AKASG	**Malin Array Be**	143.36	330	PKP		PKPab	15 17 01.0	-1.1		
AKASG				PKiKP		**PKiKP**	15 17 06.5	-0.8		
AKASG	**Malin Array Be**	143.36	330	PKP		PKPab	15 17 01.0	-1.1		
	comp=Z,13nm,0.4s,baz=44,slow=4.2,SNR=79									
AKASG				PKiKP		**PKiKP**	15 17 06.5	-0.8		
	comp=Z,4.9nm,0.6s,baz=49,slow=2.4,SNR=10									
KAC	**Achnashellach**	143.49	6	*e*P		PKPab	15 17 01.7	-0.7		
KAC	**Achnashellach**	143.49	6	P		PKPab	15 17 01.7	-0.7		
MCD	**Coleburn Disti**	143.58	4	*e*P		PKPab	15 17 01.5	-1.2		
MCD	**Coleburn Disti**	143.58	4	P		PKPab	15 17 01.5	-1.2		
KPL	**Plockton**	143.62	6	*e*P		PKPab	15 17 01.6	-1.2		
KPL	**Plockton**	143.62	6	P		PKPab	15 17 01.6	-1.2		
MALT	**Malatya**	143.86	306	*e*PKPdf		PKPab	15 17 04.8	+0.2		
MALT	**Malatya**	143.86	306	⇓*i*P		**PKPdf**	15 17 05.0	-0.3		
MBAR	**Mbarara**	143.94	237	PKP		PKPab	15 17 05.8	+0.2		
MBAR	**Mbarara**	143.94	237	PKP		PKPab	15 17 05.8	+0.2		
	comp=Z,12nm,0.7s,baz=169,slow=23,SNR=17									
ESY	**Stoneypath**	145.28	4	*e*P		**PKPdf**	15 17 06.6	-0.3		
ESY	**Stoneypath**	145.28	4	P		**PKPdf**	15 17 06.6	-0.3		
EKA	**Eskdalemuir Ar**	145.82	5	PKPbc		**PKPbc**	15 17 09.0	-0.7		
EKA	**Eskdalemuir Ar**	145.82	5	PKPbc		**PKPbc**	15 17 09.0	-0.7		
	comp=Z,11nm,0.7s,baz=358,slow=2.7,SNR=23									
ESK	**Eskdalemuir**	145.84	5	*e*P		**PKPdf**	15 17 07.8	-0.1		
ESK	**Eskdalemuir**	145.84	5	P		**PKPdf**	15 17 07.8	-0.1		
KIS	**Kishinev**	146.00	326	*e*P		**PKPdf**	15 17 08.0	-0.5		
GAL1	**Galloway**	146.15	6	*e*P		**PKPdf**	15 17 08.9	+0.4		
GAL1	**Galloway**	146.15	6	P		**PKPdf**	15 17 08.9	+0.4		
ASF	**Jabal al Asfar**	146.54	296	PKPbc		**PKPbc**	15 17 13.0	+0.5		
ASF	**Jabal al Asfar**	146.54	296	PKPbc		**PKPbc**	15 17 13.0	+0.5		
	comp=Z,8.3nm,0.8s,baz=346,slow=2.7,SNR=14									
KESW	**Keswick, Cumbr**	146.57	5	*e*P		**PKPbc**	15 17 11.1	-0.7		
KESW	**Keswick, Cumbr**	146.57	5	P		**PKPbc**	15 17 11.1	-0.7		
BSEG	**Bad Segeberg**	146.67	350	*e*PKPbc		**PKPbc**	15 17 12.2	+0.2		
BRTR	**Keskin Array B**	146.85	311	PKPbc		**PKPbc**	15 17 12.7	-0.5		
BRTR	**Keskin Array B**	146.85	311	PKPbc		**PKPbc**	15 17 12.7	-0.5		
	comp=Z,8.2nm,0.7s,baz=139,slow=3.8,SNR=32									
TLCR		147.13	323	⇓*i*P		**PKPbc**	15 17 13.4	-0.1		
BUR08	**Bucovina Ar. S**	147.38	329	*e*PKPbc		**PKPbc**	15 17 14.1	-0.2		
BUR08				*e*PKPab		**PKPab**	15 17 18.1	-0.1		
BURAR	**Bucovina Array**	147.40	329	⇑*i*P		**PKPbc**	15 17 14.7	+0.4		
TESR		147.45	327	⇓*i*P		**PKPbc**	15 17 14.1	-0.3		
MMAI	**Mount Meron Ar**	147.61	298	PKPbc		**PKPbc**	15 17 15.8	+0.5		
MMAI	**Mount Meron Ar**	147.61	298	PKPbc		**PKPbc**	15 17 15.8	+0.5		
	comp=Z,14nm,0.6s,baz=40,slow=6.6,SNR=24									
OJC	**Ojcow**	147.63	338	*e*PKP		**PKPbc**	15 17 14.4	-0.3		
LHO	**Holmfirth**	147.69	4	*e*P		**PKPbc**	15 17 14.2	-0.6		
LHO	**Holmfirth**	147.69	4	P		**PKPbc**	15 17 14.2	-0.6		
KOLS	**Kolonicke sedl**	147.72	334	*e*PKP		**PKPbc**	15 17 15.2	+0.2		
WLF1	**Llynfaes**	147.74	6	*e*P		**PKPbc**	15 17 13.9	-1.0		
WLF1	**Llynfaes**	147.74	6	P		**PKPbc**	15 17 13.9	-1.0		
VRI	**Vrincioaia**	147.84	326	⇑*i*P		**PKPbc**	15 17 15.5	+0.1		
CRVS	**Cervenica-Dubn**	148.07	335	*e*PKP		**PKPbc**	15 17 15.7	-0.2		
NRDL	**Niedersach Rie**	148.09	350	*e*PKPbc		**PKPbc**	15 17 15.8	+0.1		
KSP	**Ksiaz**	148.22	342	*e*PKP		**PKPbc**	15 17 16.3	+0.1		
TRPA	**Tarpa**	148.22	333	⇓*i*P		**PKPbc**	15 17 15.7	-0.5		
TRPA	**Tarpa**	148.22	333	⇓*e*S		**PKPbc**	15 17 16.0	-0.2		
FOEL	**Foel Wylfa**	148.25	5	*e*P		**PKPbc**	15 17 15.3	-0.9		
FOEL	**Foel Wylfa**	148.25	5	P		**PKPbc**	15 17 15.3	-0.9		
ISR	**Istrita**	148.43	325	⇓*i*P		**PKPbc**	15 17 17.7	+0.8		
MLR	**Muntele Rosu**	148.50	326	PKPbc		**PKPbc**	15 17 16.6	-0.6		
MLR	**Muntele Rosu**	148.50	326	⇓*i*P		**PKPbc**	15 17 16.6	-0.6		
MLR	**Muntele Rosu**	148.50	326	PKPbc		**PKPbc**

ESDC	**Sonseca Array**	**161.11**	**13**	PKPab	**PKPab**	**15 18 14.9**	**-2.0**
ESDC	**Sonseca Array**	**161.11**	**13**	PKPab	**PKPab**	**15 18 14.9**	**-2.0**
	comp=Z,1.3nm,0.8s,baz=336,slow=4.6,SNR=5.4						
DBIC	**Dimbokro**	**164.31**	**157**	PKP	**PKPdf**	**15 17 33.4**	**-0.3**
DBIC	**Dimbokro**	**164.31**	**157**	PKP	**PKPdf**	**15 17 33.4**	**-0.3**
	comp=Z,6.5nm,0.9s,baz=154,slow=2.8,SNR=8.2						
TORD	**Torodi Ar. Bea**	**171.91**	**183**	PKP	**PKPdf**	**15 17 37.6**	**-1.0**
TORD				PKPab	**PKPab**	**15 19 05.7**	**+0.8**
TORD	**Torodi Ar. Bea**	**171.91**	**183**	PKP	**PKPdf**	**15 17 37.6**	**-1.0**
	comp=Z,3.8nm,0.9s,baz=319,slow=0.9,SNR=19						
TORD				PKPab	**PKPab**	**15 19 05.7**	**+0.8**
	comp=Z,1.8nm,0.9s,baz=166,slow=3.0,SNR=8.1						

*IDC **10** 15:01:39.3±1.5, 14°.83N×51°.74E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.5/27, mbtmp3.6/7, ML5.1/1, MS3.1/4, Ms1 3.1/4, ms1mx2.7/38, Error ellipse: s-maj=35.3km s-min=25.5km az=12.0*

*DHMR **10** 15:01:42.5±5.7, 14°.05N×51°.17E, h10km, ML4.2*

ISC 10 15:01:39.0±1.1,**14°.6N**±0°.2×**51°.50E**±0°.08,**h10**km,**n14,** σ1§**30**/14,**mb3.9**/7,**MS2.9**/3,**2C-1D,Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MUKL	**Al Mukalla**	**2.39**	**268** ⇓	*i*	**P**	**Pn**	**15 02 18.2**	**-0.1**
MUKL				*i*	S	**Sn**	**15 02 47.5**	**-0.2**
MUKL					AML	AML	15 02 49.3	
	comp=N,2μm,0.4s							
BDHA	**Al Bayda'**	**5.79**	**265** ⇑	*i*	**P**	**Pn**	**15 03 06.4**	**+1.2**
BDHA				*e*			15 03 06.5	
	baz=95,slow=16							
BDHA				*i*	S	**Sn**	**15 04 11.1**	**-0.8**
BDHA					AML	AML	15 04 27.4	
	comp=N,119nm,0.6s							
LBOS		**6.11**	**264** ⇑	*i*	**P**	**Pn**	**15 03 10.2**	**+0.5**
LBOS				*e*			15 03 10.4	
	baz=150,slow=16							
LBOS				*i*	S	**Sn**	**15 04 18.6**	**-1.2**
TRBA	**At Turbah**	**7.30**	**260**	*i*	P	**Pn**	**15 03 25.3**	**-0.7**
ATD	**Arta Tunnel**	**8.96**	**251**	Pn		Pn	15 03 53.6	+4.8
	comp=N,17nm,0.3s,baz=61,slow=22,SNR=25							
ATD					LR	LR	15 06 34.0	
	comp=N,90nm,20.4s,baz=76,slow=32							
EIL	**Elat**	**21.42**	**317**	LR		LR	15 14 08.4	
	comp=N,48nm,19.6s,baz=96,slow=35							
ASF	**Jabal al Asfar**	**22.01**	**325**	P		**P**	**15 06 36.0**	**+2.4**
	comp=N,0.9nm,0.6s,baz=164,slow=7.4,SNR=2.8							
ASF					LR	LR	15 16 35.3	
	comp=N,34nm,19.8s,baz=35,slow=41							
KBZ	**Khabaz**	**29.96**	**347**	LR		LR	15 21 56.8	
	comp=N,64nm,20.7s,baz=126,slow=41							
MKAR	**Makanchi Array**	**41.12**	**32**	P		**P**	**15 09 22.1**	**-1.2**
	comp=N,0.2nm,0.5s,baz=209,slow=6.7,SNR=3.8							
CMAR	**Chiang Mai Arr**	**45.55**	**78**	P		**P**	**15 10 00.5**	**+1.0**
	comp=N,1.4nm,0.7s,baz=272,slow=9.2,SNR=12							
ZALV	**Zalesovo Beam**	**47.15**	**26**	P		**P**	**15 10 09.7**	**-1.8**
	comp=N,0.4nm,0.4s,baz=230,slow=8.9,SNR=3.7							
FINES	**FINESS Array B**	**50.24**	**344**	P		**P**	**15 10 35.6**	**+0.5**
	comp=N,2.3nm,0.9s,baz=147,slow=11,SNR=7.1							
SONM	**Songino Array**	**55.94**	**42**	P		**P**	**15 11 16.1**	**-1.5**
	comp=N,0.2nm,0.5s,baz=264,slow=8.5,SNR=3.6							
WRA	**Warramunga Arr**	**88.35**	**111**	P		**P**	**15 14 32.5**	**+0.7**
	comp=N,0.4nm,0.7s,baz=295,slow=3.7,SNR=4.6							

*DDA **10** 15:09:57.9, 37°.11N×27°.71E, h6km, MD2.6*

*ISK **10** 15:09:58.5, 37°.13N×27°.89E, h5km, MD2.5*

*CSEM **10** 15:09:59.0±0.2, 37°.13N×27°.94E, h10km, MD2.5, Error ellipse: s-maj=6.5km s-min=4.6km az=24.0*

ISC 10 15:09:58.0±1.3,**37°.10N**±0°.03×**27°.93E**±0°.03,**h1**km±12km, **n18,**σ1§**06**/28,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MLSB	**Milas**	**0.23**	**328**	*e*P	G	**Pg**	**15 10 03.0**	**+0.6**
MLSB				*e*S	G	**Sg**	**15 10 06.7**	**+1.4**
MLSB	**Milas**	**0.23**	**328**	*e*Pg		**Pg**	**15 10 03.0**	**+0.6**
MLSB				*e*Sg		**Sg**	**15 10 06.7**	**+1.4**
YER	**Yerkesik**	**0.29**	**84**	*e*PG		**Pb**	**15 10 05.6**	**-0.5**
YER				*e*SG		**Sb**	**15 10 12.1**	**+0.7**
YER	**Yerkesik**	**0.29**	**84**	*e*Pg		**Pb**	**15 10 05.6**	**-0.5**
DAT	**Datca**	**0.47**	**217**	*e*PG		**Pb**	**15 10 08.9**	**-0.3**
DAT	**Datca**	**0.47**	**217**	*e*Pg		**Pb**	**15 10 08.9**	**-0.3**
BODT	**Bodrum**	**0.49**	**265**	*e*PG		**Pb**	**15 10 08.8**	**-0.8**
BODT				*e*SG		**Sb**	**15 10 16.7**	**-0.6**
BODT	**Bodrum**	**0.49**	**265**	*e*Pg		**Pb**	**15 10 08.8**	**-0.8**
BODT				*e*Sg		**Sb**	**15 10 16.7**	**-0.6**
AYDN	**Tasoluk**	**0.56**	**356**	*i* P		**Pb**	**15 10 09.7**	**-1.0**
AYDN				*i* S		**Sb**	**15 10 16.9**	**-2.3**
AYDN	**Tasoluk**	**0.56**	**356**	*i* P		**Pb**	**15 10 09.7**	**-1.0**
AYDN				*i* S		**Sb**	**15 10 16.9**	**-2.3**
TURN	**Turunc**	**0.59**	**113**	*i* P		**Pg**	**15 10 08.7**	**-0.7**
TURN				*i* S		**Sg**	**15 10 16.9**	**-0.1**
TURN	**Turunc**	**0.59**	**113**	*i* P		**Pg**	**15 10 08.7**	**-0.7**
TURN				*i* S		**Sg**	**15 10 16.9**	**-0.1**
DALT	**Dalyan (Mudla)**	**0.66**	**120**	*e*PG		**Pb**	**15 10 12.7**	**+0.3**
DALT	**Dalyan (Mudla)**	**0.66**	**120**	*e*Pg		**Pb**	**15 10 12.7**	**+0.3**
FETY	**Fethiye**	**1.04**	**116**	*e*PG		**Pn**	**15 10 19.7**	**-0.1**
FETY	**Fethiye**	**1.04**	**116**	*e*Pg		**Pn**	**15 10 19.7**	**-0.1**
DNZL	**Cakiroluk**	**1.07**	**56**	*i* P		**Pb**	**15 10 19.3**	**-0.2**
DNZL				*i* S		**Sn**	**15 10 38.4**	**+2.4**
DNZL	**Cakiroluk**	**1.07**	**56**	*i* P		**Pb**	**15 10 19.3**	**-0.2**

*IDC **10** 15:22:41.6±2.5, 42°.27N×14°.52E, h0km, mb3.3/1, mb1 3.3/4, mb1mx3.1/28, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=75.1km s-min=14.7km az=96.0*

*ISCJB **10** 15:22:43.3±0.2, 42°.25N±0°.02×13°.49E±0°.02, h12km±2km, mb3.1/1, Error ellipse: s-maj=3.2km s-min=2.8km az=144.8*

*CSEM **10** 15:22:43.7±0.1, 42°.25N×13°.50E, h2km, ML3.7/9, Error ellipse: s-maj=2.9km s-min=2.3km az=54.0*

*ROM **10** 15:22:43.3±0.1, 42°.25N×13°.48E, h10km, Ml3.3/11, Error ellipse: s-maj=0.8km s-min=0.7km az=76.0*

*LDG **10** 15:22:48.1±0.8, 42°.44N×13°.32E, h2km, Ml2.9/6, Error ellipse: s-maj=17.5km s-min=11.0km az=103.0*

ISC 10 15:22:44.2±0.8,**42°.26N**±0°.02×**13°.49E**±0°.02,**h10**km±4km, **n97,**σ1§**21**/126,**Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FAGN	**Fagnano**	**0.07**	**81**	Pg		**Pg**	**15 22 46.1**	**-0.4**
FAGN				Sg		**Sg**	**15 22 47.7**	**-0.5**
FAGN	**Fagnano**	**0.07**	**81**	Pg		**Pg**	**15 22 46.1**	**-0.4**
FAGN				Sg		**Sg**	**15 22 47.7**	**-0.5**
AQU	**L'Aquila**	**0.12**	**327**	Pg		**Pg**	**15 22 47.0**	**-0.1**
AQU				Sg		**Sg**	**15 22 49.2**	**0.0**
	9μm,0.3s							
AQU	**L'Aquila**	**0.12**	**327**	Pg		**Pg**	**15 22 47.0**	**-0.1**
AQU				Sg		**Sg**	**15 22 49.2**	**0.0**
	9μm,0.3s							
PTQR	**Pietraquaria**	**0.24**	**196**	Pg		**Pg**	**15 22 49.0**	**-0.2**
PTQR	**Pietraquaria**	**0.24**	**196**	Pg		**Pg**	**15 22 49.0**	**-0.2**
FIAM	**Fiamignano**	**0.28**	**273**	Pg		**Pg**	**15 22 49.6**	**-0.2**
FIAM				Sg		**Sg**	**15 22 54.0**	**+0.4**
	3μm,0.5s							
FIAM	**Fiamignano**	**0.28**	**273**	Pg		**Pg**	**15 22 49.6**	**-0.2**
FIAM				Sg		**Sg**	**15 22 54.0**	**+0.4**
	3μm,0.5s							
CAMP	**Campotosto**	**0.29**	**348**	Pg		**Pg**	**15 22 49.7**	**-0.3**
	2μm,0.5s							
CAMP	**Campotosto**	**0.29**	**348**	Pg		**Pg**	**15 22 49.7**	**-0.3**
	2μm,0.5s							
VCEL	**Villa Celiera**	**0.30**	**62**	Pg		**Pg**	**15 22 50.0**	**-0.2**
VCEL				Sg		**Sb**	**15 22 55.8**	**-0.9**
	4μm,0.7s							
VCEL	**Villa Celiera**	**0.30**	**62**	Pg		**Pg**	**15 22 50.0**	**-0.2**
VCEL				Sg		**Sb**	**15 22 55.8**	**-0.9**
	4μm,0.7s							
TERO	**Teramo**	**0.38**	**13**	Pg		**Pg**	**15 22 51.2**	**-0.5**
TERO				Sg		**Sg**	**15 22 57.3**	**+0.6**
	4μm,0.4s							
TERO	**Teramo**	**0.38**	**13**	Pg		**Pg**	**15 22 51.2**	**-0.5**
TERO				Sg		**Sg**	**15 22 57.3**	**+0.6**
	4μm,0.4s							
INTR	**Introdacqua**	**0.40**	**128**	Pg		**Pg**	**15 22 51.5**	**-0.5**
INTR				Sg		**Sg**	**15 22 57.5**	**+0.3**
	3μm,0.5s							
INTR	**Introdacqua**	**0.40**	**128**	Pg		**Pg**	**15 22 51.5**	**-0.5**
INTR				Sg		**Sg**	**15 22 57.5**	**+0.3**
	3μm,0.5s							
VVLD	**Villa Vallelon**	**0.40**	**165**	Pg		**Pg**	**15 22 51.4**	**-0.6**
VVLD					Sg	**Sg**	**15 22 57.4**	**+0.1**
	2μm,0.4s							
VVLD	**Villa Vallelon**	**0.40**	**165**	Pg		**Pg**	**15 22 51.4**	**-0.6**
VVLD					Sg	**Sg**	**15 22 57.4**	**+0.1**
	2μm,0.4s							
GUAR	**Guarcino**	**0.48**	**196**	Pg		**Pg**	**15 22 52.9**	**-0.6**
GUAR					Sg	**Sg**	**15 22 59.8**	**0.0**
	1μm,0.3s							
GUAR	**Guarcino**	**0.48**	**196**	Pg		**Pg**	**15 22 52.9**	**-0.6**
GUAR					Sg	**Sg**	**15 22 59.8**	**0.0**
	1μm,0.3s							
LNSS	**Leonessa**	**0.48**	**317**	Pg		**Pg**	**15 22 53.1**	**-0.5**
	2μm,0.5s							
LNSS	**Leonessa**	**0.48**	**317**	Pg		**Pg**	**15 22 53.1**	**-0.5**
	2μm,0.5s							
CERT	**Cerreto**	**0.48**	**231**	Pg		**Pg**	**15 22 53.0**	**-0.7**
CERT					Sg	**Sg**	**15 23 00.3**	**+0.2**
	2μm,0.4s							
CERT	**Cerreto**	**0.48**	**231**	Pg		**Pg**	**15 22 53.0**	**-0.7**
CERT					Sg	**Sg**	**15 23 00.3**	**+0.2**
	2μm,0.4s							
LPEL	**Lama dei Pelig**	**0.56**	**112**	Pg		**Pg**	**15 22 54.3**	**-0.7**
LPEL					Sg	**Sg**	**15 23 02.6**	**+0.2**
	1μm,0.3s							
LPEL	**Lama dei Pelig**	**0.56**	**112**	Pg		**Pg**	**15 22 54.3**	**-0.7**
LPEL					Sg	**Sg**	**15 23 02.6**	**+0.2**
	1μm,0.3s							
POFI	**Posta Fibreno**	**0.56**	**163**	Pg		**Pg**	**15 22 54.3**	**-0.8**
POFI	**Posta Fibreno**	**0.56**	**163**	Pg		**Pg**	**15 22 54.3**	**-0.8**
SDI	**San Donato**	**0.60**	**156**	Pg		**Pg**	**15 22 54.9**	**-0.9**
SDI					Sg	**Sg**	**15 23 04.2**	**+0.6**
SDI	**San Donato**	**0.60**	**156**	Pg		**Pg**	**15 22 54.9**	**-0.9**
SDI					Sg	**Sg**	**15 23 04.2**	**+0.6**
MTCE	**Montecelio**	**0.60**	**248**	Pg		**Pg**	**15 22 54.9**	**-0.9**
MTCE	**Montecelio**	**0.60**	**248**	Pg		**Pg**	**15 22 54.9**	**-0.9**
MNS	**Montasola**	**0.61**	**282**	Pg		**Pg**	**15 22 55.1**	**-1.0**
MNS	**Montasola**	**0.61**	**282**	Pg		**Pg**	**15 22 55.1**	**-1.0**
CAFR	**Castel Frentan**	**0.64**	**92**	Pg		**Pg**	**15 22 56.4**	**-0.2**
CAFR	**Castel Frentan**	**0.64**	**92**	Pg		**Pg**	**15 22 56.4**	**-0.2**
NRCA	**Norcia**	**0.64**	**335**	Pg		**Pg**	**15 22 55.6**	**-1.0**
NRCA	**Norcia**	**0.64**	**335**	Pg		**Pg**	**15 22 55.6**	**-1.0**
OFFI	**Offida**	**0.69**	**12**	Pg		**Pg**	**15 22 57.7**	**+0.1**
OFFI	**Offida**	**0.69**	**12**	Pg		**Pg**	**15 22 57.7**	**+0.1**
GIUL	**Giuliano Di Ro**	**0.72**	**194**	Pg		**Pg**	**15 22 56.9**	**-1.1**
GIUL	**Giuliano Di Ro**	**0.72**	**194**	Pg		**Pg**	**15 22 56.9**	**-1.1**
RMP	**Rome, Mte Porz**	**0.73**	**233**	Pg		**Pg**	**15 22 57.1**	**-1.3**
RMP	**Rome, Mte Porz**	**0.73**	**233**	Pg		**Pg**	**15 22 57.1**	**-1.3**
RNI2	**Rionero Sannit**	**0.74**	**138**	Pg		**Pg**	**15 22 57.8**	**-0.7**
RNI2	**Rionero Sannit**	**0.74**	**138**	Pg		**Pg**	**15 22 57.8**	**-0.7**
RDP	**Rocca di Papa**	**0.76**	**229**	Pg		**Pg**	**15 22 58.4**	**-0.4**
RDP	**Rocca di Papa**	**0.76**	**229**	Pg		**Pg**	**15 22 58.4**	**-0.4**
CESX	**Cesi**	**0.76**	**298**	Pg		**Pg**	**15 22 58.6**	**-0.2**
CESX	**Cesi**	**0.76**	**298**	Pg		**Pg**	**15 22 58.6**	**-0.2**
CERA	**Filignano**	**0.77**	**149**	Pg		**Pg**	**15 22 57.7**	**-1.3**
CERA	**Filignano**	**0.77**	**149**	Pg		**Pg**	**15 22 57.7**	**-1.3**
FDMO	**Fiordimonte**	**0.83**	**339**	Pg		**Pg**	**15 22 58.9**	**-1.4**
FDMO	**Fiordimonte**	**0.83**	**339**	Pg		**Pg**	**15 22 58.9**	**-1.4**
MIDA	**Miranda**	**0.84**	**137**	Pg		**Pg**	**15 22 58.9**	**-1.4**
MIDA	**Miranda**	**0.84**	**137**	Pg		**Pg**	**15 22 58.9**	**-1.4**
CESI	**CESI - Serrava**	**0.86**	**330**	Pg		**Pg**	**15 22 59.7**	**-1.2**
CESI	**CESI - Serrava**	**0.86**	**330**	Pg		**Pg**	**15 22 59.7**	**-1.2**
ASSB	**Assisi San Ben**	**1.00**	**322**	Pg		**Pg**	**15 23 02.2**	**-1.2**
ASSB	**Assisi San Ben**	**1.00**	**322**	Pg		**Pg**	**15 23 02.2**	**-1.2**
VAGA	**Valle Agricola**	**1.01**	**146**	Pg		**Pg**	**15 23 02.5**	**-1.1**
VAGA	**Valle Agricola**	**1.01**	**146**	Pg		**Pg**	**15 23 02.5**	**-1.1**
ARVD	**Arcevia**	**1.30**	**342**	Pn		**Pn**	**15 23 07.9**	**-0.6**
ARVD	**Arcevia**	**1.30**	**342**	Pn		**Pn**	**15 23 07.9**	**-0.6**
FSSB	**Fossombrone**	**1.53**	**340**	Pn		**Pn**	**15 23 11.7**	**+0.1**
FSSB	**Fossombrone**	**1.53**	**340**	Pn		**Pn**	**15 23 11.7**	**+0.1**
MS1	**Monte Sant'Ang**	**1.91**	**106**	*e*Pn		**Pg**	**15 23 21.2**	**+0.4**
NVLJ	**Novalja**	**2.52**	**23**	*e*Pn		**Pn**	**15 23 24.1**	**-1.0**
NVLJ					Sn	**Sn**	**15 23 56.0**	**+0.1**
NVLJ	**Novalja**	**2.52**	**23**	*e*Pn		**Pn**	**15 23 24.1**	**-1.0**
NVLJ					Sn	**Sn**	**15 23 55.9**	**+0.1**
STON	**Ston**	**3.17**	**77**	*e*Pn		**Pn**	**15 23 34.4**	**+0.3**
STON					Sn	**Sn**	**15 24 12.2**	**+0.3**
STON	**Ston**	**3.17**	**77**	*e*Pn		**Pn**	**15 23 34.4**	**+0.3**
STON					Sn	**Sn**	**15 24 12.2**	**+0.3**
PGF	**Pioggiola**	**3.34**	**277**	*e*Pn		**Pn**	**15 23 37.8**	**+1.3**
PGF				*e*Sn		**Sn**	**15 24 17.9**	**+1.7**
	7.5nm,0.5s							
PGF	**Pioggiola**	**3.34**	**277**	*e*Pn		**Pn**	**15 23 37.8**	**+1.3**
PGF				*e*Sn		**Sn**	**15 24 17.9**	**+1.7**
	3.8nm,0.5s							
SBF	**Sospel**	**4.72**	**292**	*e*Pn		**Pn**	**15 23 56.3**	**+0.9**
SBF				*e*Sn		**Sn**	**15 24 46.2**	**-4.0**
	1.4nm,0.2s							
SBF	**Sospel**	**4.72**	**292**	*e*Pn		**Pn**	**15 23 56.3**	**+0.9**
SBF				*e*Sn		**Sn**	**15 24 46.2**	**-4.0**
	0.7nm,0.2s							
FRF	**La Foret Royal**	**5.19**	**287**	*e*Pn		**Pn**	**15 24 02.5**	**+0.6**
FRF	**La Foret Royal**	**5.19**	**287**	*e*Pn		**Pn**	**15 24 02.5**	**+0.6**
DAVOX	**Davos/Dischmat**	**5.21**	**332**	Pn		Pn	15 24 05.5	+3.2
	0.8nm,0.3s,baz=152,slow=19,SNR=7.8							
DAVOX					Sn	**Sn**	**15 25 06.8**	**+4.4**
	0.5nm,0.3s,baz=323,slow=16,SNR=5.6							
LMR	**La Mourre**	**5.25**	**284**	*e*Pn		**Pn**	**15 24 03.1**	**+0.5**
LMR	**La Mourre**	**5.25**	**284**	*e*Pn		**Pn**	**15 24 03.1**	**+0.5**
MBDF	**Montbardon**	**5.47**	**299**	*e*P		**Pn**	**15 24 08.4**	**+2.5**
MBDF	**Montbardon**	**5.47**	**299**	*e*P		**Pn**	**15 24 08.4**	**+2.5**
LPG	**La Plagne**	**5.85**	**306**	*e*P		Pn	15 24 14.3	+3.1
LPG				*e*Sn		**Sn**	**15 25 13.4**	**-5.0**
	2.3nm,0.5s							
LPG	**La Plagne**	**5.85**	**306**	*e*P		Pn	15 24 14.3	+3.1
LPL	**La Plagne**	**5.87**	**306**	*e*P		**Pn**	**15 24 14.4**	**+3.0**
LPL				*e*Sn		Sn	15 25 12.5	-6.3
	2.0nm,0.4s							
LPL	**La Plagne**	**5.87**	**306**	*e*P		**Pn**	**15 24 14.4**	**+3.0**
SMRF	**Simiane la Rot**	**6.04**	**289**	*e*P		**Pn**	**15 24 15.6**	**+2.0**
SMRF	**Simiane la Rot**	**6.04**	**289**	*e*P		**Pn**	**15 24 15.6**	**+2.0**
GERES	**GERESS Array B**	**6.59**	**1**	Pn		**Pn**	**15 24 21.6**	**+0.4**
	0.2nm,0.3s,baz=180,slow=14,SNR=5.8							
GERES					Sn	**Sn**	**15 25 35.3**	**-1.1**
	0.5nm,0.3s,baz=173,slow=25,SNR=6.4							
KEST	**Kesra**	**7.27**	**208**	Pn		Pn	15 24 36.0	+5.5
	0.4nm,0.3s,baz=298,slow=3.0,SNR=8.7							
HINF	**Hinteralfeld**	**7.28**	**322**	*e*Pn		**Pn**	**15 24 30.3**	**-0.3**
HINF	**Hinteralfeld**	**7.28**	**322**	*e*Pn		**Pn**	**15 24 30.3**	**-0.3**
CDF	**Champ du Feu**	**7.55**	**327**	*e*Pn		**Pn**	**15 24 34.0**	**-0.3**
CDF				*e*Sn		Sn	15 25 53.7	-6.3
	2.8nm,0.5s							
CDF	**Champ du Feu**	**7.55**	**327**	*e*Pn		**Pn**	**15 24 34.0**	**-0.3**
HAU	**Haudompre**	**7.65**	**321**	*e*Pn		**Pn**	**15 24 35.7**	**+0.1**
HAU				*e*Sn		Sn	15 25 54.4	-7.9
	2.4nm,0.2s							
HAU	**Haudompre**	**7.65**	**321**	*e*Pn		**Pn**	**15 24 35.7**	**+0.1**
TORD	**Torodi Ar. Bea**	**30.76**	**203**	P		**P**	**15 29 00.9**	**+1.2**
	0.2nm,0.6s,baz=6.9,slow=9.1,SNR=3.4							

*NSSC **10** 15:24:22.2±47.0, 32°.96N×34°.56E, h5km±999km, ML1.7*

*GRAL **10** 15:24:59.7±0.4, 34°.07N×35°.71E, h8km±3km, MD2.7*

*CSEM **10** 15:24:59.7, 34°.07N×35°.71E, h7km, ML2.7, After GRAL*

ISC 10 15:24:58.9±1.6,**34°.02N**±0°.08×**35°.8E**±0°.2,**h16**km±13km,**n7,** σ0§**65**/11,**Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BHL	**Bhannes**	**0.15**	**218**	*e*P		**Pg**	**15 25 02.9**	**-0.1**
BHL				*e*S		**Sg**	**15 25 05.6**	**-0.1**
BHL	**Bhannes**	**0.15**	**218**	*e*P		**Pg**	**15 25 02.9**	**-0.1**
BHL				*e*S		**Sg**	**15 25 05.6**	**-0.1**
HWQ	**Hawqa**	**0.30**	**31**	*e*P		**Pg**	**15 25 05.1**	**-0.3**
HWQ	**Hawqa**	**0.30**	**31**	*e*P		**Pg**	**15 25 05.1**	**-0.3**
RCY	**Rachaya**	**0.53**	**173**	*e*P		**Pb**	**15 25 10.1**	**+0.2**
HAWK	**Haweek**	**0.73**	**47**	*e*P		Pg	15 25 09.8	-3.5
HAWK				*e*S		**Sn**	**15 25 25.8**	**+0.2**
HAWK					AML	AML	15 25 30.8	
	comp=E,22nm,0.5s							
HAWK					AML	AML	15 25 31.3	
	comp=N,13nm,0.5s							
ZALF	**Zalf**	**1.71**	**129**	*e*P		**Pb**	**15 25 30.8**	**+0.8**
ZALF				*e*P		**Pb**	**15 25 30.8**	**+0.8**
ZALF				*e*S		**Sn**	**15 25 48.5**	**-1.2**
ZALF					AML	AML	15 25 59.9	
	comp=N,8.5nm,0.6s							
ZALF					AML	AML	15 26 02.0	
	comp=E,6.2nm,0.3s							

*DDA **10** 15:30:21.3, 38°.73N×26°.15E, h5km, MD3.2*

*ATH **10** 15:30:22.3, 38°.70N×26°.23E, h27km±1km, MD2.9/5*

*ISCJB **10** 15:30:22.9±0.5, 38°.71N±0°.02×26°.10E±0°.03, h5km±4km, Error ellipse: s-maj=3.6km s-min=2.9km az=156.8*

*ISK **10** 15:30:22.4, 38°.64N×26°.09E, h3km, MD3.2*

*THE **10** 15:30:23.3, 38°.73N×26°.20E, h8km±1km, ML3.0/2, Error ellipse: s-maj=2.0km s-min=0.6km az=96.0*

*CSEM **10** 15:30:23.0±0.2, 38°.68N×26°.06E, h2km, MD2.9, Error ellipse: s-maj=4.5km s-min=4.1km az=30.0*

ISC 10 15:30:22.6±1.0,**38°.72N**±0°.02×**26°.15E**±0°.02,**h9**km±9km, **n108,**σ1§**01**/128,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHOS	**Chios island**	**0.34**	**193**	P		**Pb**	**15 30 30.7**	**-0.2**
CHOS				S		**Sb**	**15 30 35.6**	**-0.8**
CHOS	**Chios island**	**0.34**	**193**	*e*PB		**Pb**	**15 30 30.7**	**-0.2**
CHOS				*e*SB		**Sb**	**15 30 35.8**	**-0.6**
CHOS	**Chios island**	**0.34**	**193**	P		**Pb**	**15 30 30.7**	**-0.2**
URLA	**Izmir**	**0.50**	**136**	*i* P		**Pg**	**15 30 32.6**	**+0.2**
URLA				*i* S		**Sg**	**15 30 39.3**	**+0.3**
URLA	**Izmir**	**0.50**	**136**	*i* P		**Pg**	**15 30 32.6**	**+0.2**
URLA				*i* S		**Sg**	**15 30 39.3**	**+0.3**
PRK	**Paraskevi**	**0.53**	**10**	P		**Pg**	**15 30 33.6**	**+0.6**
PRK				S		**Sg**	**15 30 40.9**	**+0.8**
PRK	**Paraskevi**	**0.53**	**10**	*e*PN		**Pg**	**15 30 33.8**	**+0.8**
PRK				*e*SN		**Sb**	**15 30 41.6**	**-0.4**
PRK	**Paraskevi**	**0.53**	**10**	*e*Pn		**Pg**	**15 30 33.8**	**+0.8**
PRK				S		**Sg**	**15 30 40.9**	**+0.8**
PRK				*e*Sn		**Sb**	**15 30 41.6**	**-0.4**
SIGR	**SIGRI**	**0.54**	**335**	P		**Pb**	**15 30 34.1**	**-0.2**
SIGR				S		**Sb**	**15 30 41.8**	**-0.4**
SIGR	**SIGRI**	**0.54**	**335**	P		**Pb**	**15 30 34.1**	**-0.2**
SIGR				S		**Sb**	**15 30 41.8**	**-0.4**
AYVA	**Ayvalik**	**0.72**	**35**	*i* P		**Pg**	**15 30 36.8**	**+0.2**
AYVA				*i* S		**Sg**	**15 30 45.6**	**-0.5**
AYVA	**Ayvalik**	**0.72**	**35**	*i* P		**Pg**	**15 30 36.8**	**+0.2**
AYVA				*i* S		**Sg**	**15 30 45.6**	**-0.5**
BLCB	**Balcova**	**0.78**	**115**	*e*PG		**Pg**	**15 30 37.6**	**0.0**
BLCB				*e*SG		**Sb**	**15 30 49.2**	**+0.3**
BLCB	**Balcova**	**0.78**	**115**	*e*Pg		**Pg**	**15 30 37.6**	**0.0**
BLCB				*e*Sg		**Sb**	**15 30 49.2**	**+0.3**
IZM	**Izmir**	**0.93**	**110**	*e*PG		**Pn**	**15 30 41.7**	**-0.2**
IZM				*e*SG		**Sn**	**15 30 55.6**	**+0.2**
IZM	**Izmir**	**0.93**	**110**	*e*Pg		**Pn**	**15 30 41.7**	**-0.2**
EZN	**Ezine**	**1.11**	**7**	*e*PN		**Pn**	**15 30 45.6**	**+1.2**
EZN	**Ezine**	**1.11**	**7**	*e*Pn		**Pn**	**15 30 45.6**	**+1.2**
BOZC	**Bozcaada**	**1.12**	**356**	*i* P		**Pg**	**15 30 43.1**	**-1.1**
BOZC				*i* S		**Sg**	**15 30 57.9**	**-0.9**
AKS	**Akhisar**	**1.31**	**82**	*e*PN		**Pg**	**15 30 48.2**	**+0.4**
**

FINES FINESS Array B 55.59 328 P P 15 44 11.3 +0.9
1.6nm,0.9s,baz=100,slow=6.2,SNR=4.5
WRA Warramunga Arr 62.07 133 P P 15 44 55.6 -0.3
0.5nm,0.7s,baz=323,slow=7.2,SNR=9.2
ASAR Alice Springs 64.48 136 P P 15 45 11.7 -0.2
0.3nm,0.5s,baz=314,slow=6.2,SNR=11

DDA ***10*** *15:40:31.0,34˚.89N×28˚.94E,h27km,MD3.5*
NEIC ***10*** *15:40:31.7,35˚.03N×28˚.95E,h7km,mb4.4/16, ML4.2(HLW),ML3.9(ISK),ML3.9(NIC),ML3.6(THE),After ISK.*
ISK ***10*** *15:40:32.5,35˚.00N×28˚.94E,h16km, MD3.8,ML4.0*
ISCJB ***10*** *15:40:33.6±0.2,34˚.93N±0˚.01×28˚.95E±0˚.02,h70km±3km, mb3.9/26,Error ellipse: s-maj=2.5km s-min=1.9km az=37.6*
IDC ***10*** *15:40:33.2±1.0,35˚.04N×28˚.90E,h38km±6km, mb3.6/16, mb1 3.8/22,mb1mx3.7/31,mbtmp3.7/22,ML4.0/6,MS3.2/3, Ms1 3.2/3,ms1mx2.5/45,Error ellipse: s-maj=18.9km s-min=12.7km az=14.0*
ATH ***10*** *15:40:34.6,35˚.07N×28˚.92E,h35km±22km,MD3.5/7*
CSEM ***10*** *15:40:35.0±0.1,34˚.95N×28˚.94E,h41km,mb3.9/6,Mw3.8, Error ellipse: s-maj=3.0km s-min=2.1km az=42.0*
THE ***10*** *15:40:37.0,35˚.08N×28˚.95E,h78km±5km,ML3.6/2,Error ellipse: s-maj=5.6km s-min=1.1km az=355.0*
HLW ***10*** *15:40:37.2,34˚.77N×29˚.11E,h33km±43km,Md3.9,Ml3.8*
NIC ***10*** *15:40:38.4±0.3,35˚.15N×29˚.31E,h66km,mb4.3,ML3.9, MW3.3*
NSSC ***10*** *15:40:38.8±1.3,35˚.26N×29˚.42E,h37km±313km,MD1.9, ML3.1*

ISC 10 15:40:34.1±0.3,34˚.99N±0˚.02×29˚.03E±0˚.02,h47km±3km, h47km:pP-P,n465,σ1§65/534,mb3.8/26,MS3.4/3,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**1.43**	**329**	P		**Pn**	**Pn**	**15 40 58.6**	**+1.0**
ARG				S		**Sn**	**Sn**	**15 41 15.5**	**+0.2**
ARG	**Arkhangelos**	**1.43**	**329**	*e*P		**Pn**	**Pn**	**15 40 58.7**	**+1.1**
ARG				*e*S		**Sn**	**Sn**	**15 41 15.8**	**+0.6**
ARG	**Arkhangelos**	**1.43**	**329**	*e*PN		**Pn**	**Pn**	**15 40 58.7**	**+1.1**
ARG				*e*SN		**Sn**	**Sn**	**15 41 15.8**	**+0.6**
ARG	**Arkhangelos**	**1.43**	**329**	*e*P		**Pn**	**Pn**	**15 40 58.7**	**+1.1**
ARG				*e*S		**Sn**	**Sn**	**15 41 15.8**	**+0.6**
KARP	**Karpathos**	**1.63**	**291**	*e*P		**Pn**	**Pn**	**15 41 01.5**	**+1.2**
KARP				*e*S		**Sn**	**Sn**	**15 41 21.0**	**+0.8**
KARP	**Karpathos**	**1.63**	**291**	*e*PN		**Pn**	**Pn**	**15 41 01.5**	**+1.2**
KARP				*e*SN		**Sn**	**Sn**	**15 41 21.0**	**+0.8**
KARP	**Karpathos**	**1.63**	**291**	*e*P		**Pn**	**Pn**	**15 41 01.5**	**+1.2**
KARP				*e*S		**Sn**	**Sn**	**15 41 21.0**	**+0.8**
FETY	**Fethiye**	**1.65**	**1**	PN		**Pn**	**Pn**	**15 41 01.6**	**+1.0**
FETY				*e*SN		**Sn**	**Sn**	**15 41 21.8**	**+1.2**
FETY	**Fethiye**	**1.65**	**1**	Pn		**Pn**	**Pn**	**15 41 01.3**	**+0.7**
FETY	**Fethiye**	**1.65**	**1**	*i* Pn		**Pn**	**Pn**	**15 41 01.6**	**+1.0**
FETY				*e*Sn		**Sn**	**Sn**	**15 41 21.8**	**+1.2**
DALT	**Dalyan (Mudla)**	**1.81**	**350**	*e*PN		**Pn**	**Pn**	**15 41 04.4**	**+1.6**
DALT				*e*SN		**Sn**	**Sn**	**15 41 26.2**	**+1.7**
DALT	**Dalyan (Mudla)**	**1.81**	**350**	Pn		**Pn**	**Pn**	**15 41 03.4**	**+0.6**
DALT				Sg		**Sn**	**Sn**	**15 41 26.4**	**+1.8**
DALT	**Dalyan (Mudla)**	**1.81**	**350**	*e*Pn		**Pn**	**Pn**	**15 41 04.4**	**+1.6**
DALT				*e*Sn		**Sn**	**Sn**	**15 41 26.2**	**+1.7**
ELL	**Elmali**	**1.90**	**22**	*e*PN		**Pn**	**Pn**	**15 41 06.2**	**+2.1**
ELL				*e*SN		**Sn**	**Sn**	**15 41 29.7**	**+2.8**
ELL	**Elmali**	**1.90**	**22**	Pn		**Pn**	**Pn**	**15 41 05.5**	**+1.4**
ELL				Sg		**Sn**	**Sn**	**15 41 29.5**	**+2.6**
ELL	**Elmali**	**1.90**	**22**	Pn		**Pn**	**Pn**	**15 41 05.5**	**+1.4**
ELL				Sg		**Sn**	**Sn**	**15 41 29.5**	**+2.6**
TURN	**Turunc**	**1.91**	**350**	*i* P		**Pn**	**Pn**	**15 41 05.4**	**+1.2**
TURN				*i* S		**Sn**	**Sn**	**15 41 27.1**	**0.0**
TURN	**Turunc**	**1.91**	**350**	*i* P		**Pn**	**Pn**	**15 41 05.4**	**+1.2**
TURN				*i* S		**Sn**	**Sn**	**15 41 27.1**	**0.0**
DAT	**Datca**	**2.10**	**326**	*e*PN		**Pn**	**Pn**	**15 41 07.8**	**+0.9**
DAT	**Datca**	**2.10**	**326**	*e*Pn		**Pn**	**Pn**	**15 41 07.8**	**+0.9**
GLHS	**Glhisar (BURDU**	**2.20**	**10**	*e*PN		**Pn**	**Pn**	**15 41 09.7**	**+1.5**
GLHS	**Glhisar (BURDU**	**2.20**	**10**	Pn		**Pn**	**Pn**	**15 41 09.2**	**+1.0**
GLHS	**Glhisar (BURDU**	**2.20**	**10**	*e*Pn		**Pn**	**Pn**	**15 41 09.7**	**+1.5**
YER	**Yerkesik**	**2.23**	**344**	*e*PN		**Pn**	**Pn**	**15 41 10.3**	**+1.7**
YER	**Yerkesik**	**2.23**	**344**	Pn		**Pn**	**Pn**	**15 41 10.3**	**+1.7**
YER	**Yerkesik**	**2.23**	**344**	*e*Pn		**Pn**	**Pn**	**15 41 10.3**	**+1.7**
KORT	**Korkueli**	**2.28**	**28**	*i* P		**Pn**	**Pn**	**15 41 11.7**	**+2.4**
KORT				*i* S		**Sn**	**Sn**	**15 41 40.1**	**+3.9**
KORT	**Korkueli**	**2.28**	**28**	*i* P		**Pn**	**Pn**	**15 41 11.7**	**+2.4**
KORT				*i* S		**Sn**	**Sn**	**15 41 40.1**	**+3.9**
GOLH	**Golhisar**	**2.29**	**11**	*i* P		**Pn**	**Pn**	**15 41 11.9**	**+2.5**
GOLH				*i* S		**Sn**	**Sn**	**15 41 37.7**	**+1.3**
GOLH	**Golhisar**	**2.29**	**11**	*i* P		**Pn**	**Pn**	**15 41 11.9**	**+2.5**
GOLH				*i* S		**Sn**	**Sn**	**15 41 37.7**	**+1.3**
ZKR	**Zakros**	**2.31**	**274**	P		**Pn**	**Pn**	**15 41 10.6**	**+0.9**
ZKR				S		**Sn**	**Sn**	**15 41 36.7**	**-0.2**
ZKR	**Zakros**	**2.31**	**274**	P		**Pn**	**Pn**	**15 41 10.6**	**+0.9**
ZKR				S		**Sn**	**Sn**	**15 41 36.7**	**-0.2**
ZKR	**Zakros**	**2.31**	**274**	*e*PN		**Pn**	**Pn**	**15 41 10.9**	**+1.2**
ZKR	**Zakros**	**2.31**	**274**	P		**Pn**	**Pn**	**15 41 10.6**	**+0.9**
ZKR				S		**Sn**	**Sn**	**15 41 36.7**	**-0.2**
ANTB	**Antalya**	**2.32**	**34**	*e*PN		**Pn**	**Pn**	**15 41 12.2**	**+2.5**
ANTB	**Antalya**	**2.32**	**34**	*e*Pn		**Pn**	**Pn**	**15 41 12.2**	**+2.5**
BODT	**Bodrum**	**2.50**	**327**	*e*PN		**Pn**	**Pn**	**15 41 12.9**	**+0.7**
BODT	**Bodrum**	**2.50**	**327**	P		**Pn**	**Pn**	**15 41 12.9**	**+0.7**
BODT	**Bodrum**	**2.50**	**327**	*e*Pn		**Pn**	**Pn**	**15 41 12.9**	**+0.7**
MLSB	**Milas**	**2.52**	**337**	*e*PN		**Pn**	**Pn**	**15 41 13.3**	**+0.8**
MLSB	**Milas**	**2.52**	**337**	*e*Pn		**Pn**	**Pn**	**15 41 13.3**	**+0.8**
DNZL	**Cakiroluk**	**2.70**	**0**	*i* P		**Pn**	**Pn**	**15 41 16.5**	**+1.4**
DNZL				*i* S		Sn	Sn	15 41 40.7	-5.9
DNZL	**Cakiroluk**	**2.70**	**0**	*i* P		**Pn**	**Pn**	**15 41 16.5**	**+1.4**
AKMC	**Akamas**	**2.71**	**88**	P		**Pn**	**Pn**	**15 41 16.8**	**+1.7**
AKMC				S		**Sn**	**Sn**	**15 41 47.5**	**+0.8

PRNI	Paran	6.83	131	Pn		Pn	15 42 12.4	+0.6	
KMRS	Kahramanmaras	6.84	66	*e*PN		Pn	15 42 15.7	+3.9	
KMRS	Kahramanmaras	6.84	66	*e*Pn		Pn	15 42 15.7	+3.9	
HRFI	Mount Harif	7.08	133	Pn		Pn	15 42 15.9	+0.8	
ASF	Jabal al Asfar	7.14	111	Pn		Pn	15 42 17.6	+1.5	
ASF				Sn		Sn	15 43 38.9	+3.1	
ASF	Jabal al Asfar	7.14	111	Pn		Pn	15 42 17.6	+1.5	
	comp=E,0.3nm,0.3s,baz=4.8,slow=12,SNR=3.3								
ASF				Sn		Sn	15 43 38.9	+3.1	
	comp=E,1.1nm,0.3s,baz=250,slow=15,SNR=3.4								
MBRI	Mt Berech	7.18	135	Pn		Pn	15 42 17.3	+0.7	
ZALF	Zalf	7.20	104	*e*P		Pn	15 42 20.2	+3.4	
ZALF				*e*S		Sn	15 43 33.4	-3.8	
ZALF				AML		AML	15 43 57.2		
	comp=N,94nm,0.4s								
ZALF				AML		AML	15 44 11.8		
	comp=E,12nm,3.5s								
ZALF	Zalf	7.20	104	*e*P		Pn	15 42 20.2	+3.4	
	SNR=90								
EIL	Elat	7.29	135	Pn		Pn	15 42 18.7	+0.7	
EIL				Sn		Sn	15 43 35.8	-3.7	
EIL	Elat	7.29	135	Pn		Pn	15 42 18.7	+0.7	
	comp=E,1.7nm,0.3s,baz=300,slow=4.6,SNR=27								
EIL				Sn		Sn	15 43 35.8	-3.7	
	comp=E,7.0nm,0.3s,baz=332,slow=16,SNR=16								
EIL	Elat	7.29	135	Pn		Pn	15 42 18.7	+0.7	
KFL	Anninata	7.33	298	P		Pn	15 42 17.3	-1.2	
KFL	Anninata	7.33	298	P		Pn	15 42 17.3	-1.2	
GRB	Gharib	7.42	153	P		Pn	15 42 20.8	+1.0	
	baz=153								
GRB	Gharib	7.42	153	P		Pn	15 42 20.8	+1.0	
VLS	Valsamata	7.50	298	P		Pn	15 42 19.2	-1.6	
HBST	Basata	7.51	138	P		Pn	15 42 22.1	+1.0	
	baz=137								
HBST	Basata	7.51	138	P		Pn	15 42 22.1	+1.0	
TR2		7.70	147	P		Pn	15 42 24.6	+1.0	
	baz=147								
TR2		7.70	147	P		Pn	15 42 24.6	+1.0	
HKAT	Jabal Katrina	7.71	145	P		Pn	15 42 25.3	+1.4	
	baz=144								
HKAT	Jabal Katrina	7.71	145	P		Pn	15 42 25.3	+1.4	
HFRF	Wahat Farafira	7.84	185	P		Pn	15 42 26.2	+0.7	
	baz=186								
HFRF	Wahat Farafira	7.84	185	P		Pn	15 42 26.2	+0.7	
HDHB	Dhahab	7.85	141	P		Pn	15 42 26.6	+1.0	
HDHB	Dhahab	7.85	141	P		Pn	15 42 26.6	+1.0	
	baz=140								
HDHB	Dhahab	7.85	141	P		Pn	15 42 26.6	+1.0	
ASUT		7.87	163	P		Pn	15 42 27.1	+1.1	
	baz=163								
ASUT		7.87	163	P		Pn	15 42 27.1	+1.1	
TR1		8.13	148	P		Pn	15 42 30.6	+1.1	
	baz=147								
TR1		8.13	148	P		Pn	15 42 30.6	+1.1	
SHRM		8.31	147	P		Pn	15 42 33.6	+1.6	
	baz=146								
SHRM		8.31	147	P		Pn	15 42 33.6	+1.6	
LJBD	Adjabya	8.46	244	*i* P		Pn	15 42 33.1	-0.9	
	SNR=22								
HHRG	Al Ghardaqah	8.66	152	P		Pn	15 42 38.6	+1.8	
	baz=151								
HHRG	Al Ghardaqah	8.66	152	P		Pn	15 42 38.6	+1.8	
HSFG		9.39	152	P		Pn	15 42 48.0	+1.3	
	baz=151								
HSFG		9.39	152	P		Pn	15 42 48.0	+1.3	
HDK1	Dakhla	9.42	178	P		Pn	15 42 47.6	+0.4	
	baz=178								
HDK1	Dakhla	9.42	178	P		Pn	15 42 47.6	+0.4	
HQSR		10.30	152	P		Pn	15 43 01.2	+2.0	
	baz=151								
HQSR		10.30	152	P		Pn	15 43 01.2	+2.0	
CUC	Castrocucco	11.62	299	*e*Pn		Pn	15 43 14.5	-2.8	
KOLS	Kolonicke sedl	14.80	342	*e*P		P	15 44 05.9	+0.6	
KOLS	Kolonicke sedl	14.80	342	*e*P		P	15 44 05.9	+0.6	
VYHS	Vyhne	15.47	334	*e*P		P	15 44 11.6	-1.1	
KEST	Kesra	16.08	278	Pn		P	15 44 20.6	+0.9	
KEST	Kesra	16.08	278	Pn		P	15 44 20.6	+0.9	
	comp=E,0.2nm,0.3s,baz=146,slow=1.9,SNR=8.1								
KEST	Kesra	16.08	278	Pn		P	15 44 20.6	+0.9	
JAVC	Velka Javorina	16.21	332	*e*Pn		P	15 44 21.3	+0.4	
KRUC	Moravsky	16.88	330	*e*Pn		Pn	15 44 26.8	0.0	
VRAC	Vranov	16.99	331	Pn		P	15 44 28.8	-0.8	
VRAC	Vranov	16.99	331	Pn		P	15 44 28.8	-0.8	
	comp=E,0.4nm,0.3s,baz=128,slow=7.9,SNR=3.8								
VRAC	Vranov	16.99	331	Pn		P	15 44 28.8	-0.8	
GERES	GERESS Array B	17.89	325	P		Pn	15 44 38.9	-0.6	
GERES	GERESS Array B	17.89	325	P		Pn	15 44 38.9	-0.6	
	comp=E,0.3nm,0.3s,baz=138,slow=11,SNR=10								
GERES				LR		LR	15 51 36.8		
	comp=E,31nm,18.6s,baz=67,slow=37								
DAVOX	Davos/Dischmat	18.61	315	P		Pn	15 44 48.6	+0.3	
DAVOX	Davos/Dischmat	18.61	315	P		Pn	15 44 48.6	+0.3	
	comp=E,0.4nm,0.3s,baz=100,slow=12,SNR=3.5								
DAVOX	Davos/Dischmat	18.61	315	P		Pn	15 44 48.6	+0.3	
BRG	Berggiesshubel	19.28	330	*e*(P)		P	15 44 54.3	-0.4	
	comp=E,2.1nm,0.8s								
LMR	La Mourre	19.31	302	*e*P		P	15 44 54.3	-0.8	
LMR	La Mourre	19.31	302	*e*P		P	15 44 54.3	-0.8	
LMR	La Mourre	19.31	302	*e*P		P	15 44 54.3	-0.8	
MBDF	Montbardon	19.61	306	*e*P		P	15 44 58.2	-0.3	
	comp=E,13nm,0.7s								
MBDF	Montbardon	19.61	306	*e*P		P	15 44 58.2	-0.3	
	comp=E,13nm,0.7s								
MBDF	Montbardon	19.61	306	*e*P		P	15 44 58.2	-0.3	
	comp=E,6.5nm,0.7s								
LPG	La Plagne	19.92	309	*e*P		P	15 45 01.5	-0.6	
	comp=E,7.8nm,0.5s								
LPG	La Plagne	19.92	309	*e*P		P	15 45 01.5	-0.6	
	comp=E,7.8nm,0.5s								
LPG	La Plagne	19.92	309	*e*P		P	15 45 01.5	-0.6	
	comp=E,3.9nm,0.5s								
LPL	La Plagne	19.94	309	*e*P		P	15 45 01.7	-0.5	
	comp=E,12nm,0.5s								
LPL	La Plagne	19.94	309	*e*P		P	15 45 01.7	-0.5	
	comp=E,12nm,0.5s								
LPL	La Plagne	19.94	309	*e*P		P	15 45 01.7	-0.5	
	comp=E,5.8nm,0.5s								
ORIF	Oris-en-Rattie	20.27	306	*e*P		P	15 45 04.6	-1.0	
	comp=E,4.8nm,0.6s								
ORIF	Oris-en-Rattie	20.27	306	*e*P		P	15 45 04.6	-1.0	
	comp=E,4.8nm,0.6s								
ORIF	Oris-en-Rattie	20.27	306	*e*P		P	15 45 04.6	-1.0	
	comp=E,2.4nm,0.6s								
CABF	La Chapelle	20.81	311	*e*P		P	15 45 08.0	-3.5	
	comp=E,19nm,0.7s								
CABF	La Chapelle	20.81	311	*e*P		P	15 45 08.0	-3.5	
	comp=E,19nm,0.7s								
CABF	La Chapelle	20.81	311	*e*P		P	15 45 08.0	-3.5	
	comp=E,9.6nm,0.7s								
HINF	Hinteralfeld	20.91	315	*e*P		P	15 45 11.3	-1.2	
	comp=E,3.9nm,0.5s								
HINF	Hinteralfeld	20.91	315	*e*P		P	15 45 11.3	-1.2	
	comp=E,3.9nm,0.5s								
HINF	Hinteralfeld	20.91	315	*e*P		P	15 45 11.3	-1.2	
	comp=E,2.0nm,0.5s								
CDF	Champ du Feu	20.97	316	*e*P		P	15 45 12.0	-1.2	
	comp=E,7.9nm,0.8s								
CDF	Champ du Feu	20.97	316	*e*P		P	15 45 12.0	-1.2	
	comp=E,7.9nm,0.8s								
CDF	Champ du Feu	20.97	316	*e*P		P	15 45 12.0	-1.2	
	comp=E,4.0nm,0.8s								
VIVF	Saint-Julien-l	21.05	305	*e*P		P	15 45 12.6	-1.4	
	comp=E,14nm,0.7s								
VIVF	Saint-Julien-l	21.05	305	*e*P		P	15 45 12.6	-1.4	
	comp=E,14nm,0.7s								
VIVF	Saint-Julien-l	21.05	305	*e*P		P	15 45 12.6	-1.4	
	comp=E,7.2nm,0.7s								
HAU	Haudompre	21.30	315	*e*P		P	15 45 15.3	-1.3	
	comp=E,5.9nm,0.6s								
HAU	Haudompre	21.30	315	*e*P		P	15 45 15.3	-1.3	
	comp=E,5.9nm,0.6s								
HAU	Haudompre	21.30	315	*e*P		P	15 45 15.3	-1.3	
	comp=E,3.0nm,0.6s								
SFTF	Sexfontaines	22.17	314	*e*P		P	15 45 24.6	-1.3	
SFTF	Sexfontaines	22.17	314	*e*P		P	15 45 24.6	-1.3	
SFTF	Sexfontaines	22.17	314	*e*P		P	15 45 24.6	-1.3	
SMF	Signal de Mont	22.24	309	*e*P		P	15 45 24.7	-2.0	
SMF	Signal de Mont	22.24	309	*e*P		P	15 45 24.7	-2.0	
SMF	Signal de Mont	22.24	309	*e*P		P	15 45 24.7	-2.0	
LOR	Lormes	22.47	311	*e*P		P	15 45 28.0	-1.2	
	comp=E,4.2nm,0.5s								
LOR	Lormes	22.47	311	*e*P		P	15 45 28.0	-1.2	
	comp=E,4.2nm,0.5s								
LOR	Lormes	22.47	311	*e*P		P	15 45 28.0	-1.2	
	comp=E,2.1nm,0.5s								
SSF	Saint Saulge	22.61	310	*e*P		P	15 45 29.0	-1.7	
	comp=E,14nm,0.6s								
SSF	Saint Saulge	22.61	310	*e*P		P	15 45 29.0	-1.7	
	comp=E,14nm,0.6s								
SSF	Saint Saulge	22.61	310	*e*P		P	15 45 29.0	-1.7	
	comp=E,7.0nm,0.6s								
BGF	Bois d'Agland	22.84	308	*e*P		P	15 45 30.8	-2.3	
	comp=E,8.6nm,0.6s								
BGF	Bois d'Agland	22.84	308	*e*P		P	15 45 30.8	-2.3	
	comp=E,8.6nm,0.6s								
BGF	Bois d'Agland	22.84	308	*e*P		P	15 45 30.8	-2.3	
	comp=E,4.3nm,0.6s								
MFF	Saint Martin d	24.81	307	*e*P		P	15 45 51.7	+0.1	
	comp=E,6.1nm,0.5s								
MFF	Saint Martin d	24.81	307	*e*P		P	15 45 51.7	+0.1	
	comp=E,6.1nm,0.5s								
MFF	Saint Martin d	24.81	307	*e*P		P	15 45 51.7	+0.1	
	comp=E,3.0nm,0.5s								
LDF	La Druitiere	25.45	311	*e*P		P	15 45 55.1	-2.3	
LDF	La Druitiere	25.45	311	*e*P		P	15 45 55.1	-2.3	
LDF	La Druitiere	25.45	311	*e*P		P	15 45 55.1	-2.3	
FLN	La Foliniere	25.74	311	*e*P		P	15 45 57.1	-2.9	
	comp=E,6.9nm,0.3s								
FLN	La Foliniere	25.74	311	*e*P		P	15 45 57.1	-2.9	
	comp=E,6.9nm,0.3s								
GRR	Gorron	25.84	310	*e*P		P	15 45 59.1	-1.8	
	comp=E,20nm,0.5s								
GRR	Gorron	25.84	310	*e*P		P	15 45 59.1	-1.8	
	comp=E,20nm,0.5s								
AKTO	Aktyubinsk	26.09	45	P		P	15 46 03.4	+0.2	
AKTO				pP		pP	15 46 14.5	-0.9	
AKTO	Aktyubinsk	26.09	45	P		P	15 46 03.4	+0.2	
	comp=E,1.1nm,0.7s,baz=246,slow=9.0,SNR=7.4								
AKTO				pP		pP	15 46 14.5	-0.9	
	comp=E,0.9nm,0.6s,baz=260,slow=10,SNR=3.6								
AKTO	Aktyubinsk	26.09	45	P		P	15 46 03.3	+0.2	
AKTO				pP		pP	15 46 14.5	-0.9	
FINES	FINESS Array B	26.54	357	P		P	15 46 06.6	-0.5	
FINES				pP		pP	15 46 17.1	-2.4	
FINES	FINESS Array B	26.54	357	P		P	15 46 06.6	-0.5	
	comp=E,0.9nm,0.6s,baz=153,slow=12,SNR=7.4								
FINES				pP		pP	15 46 17.1	-2.4	
	comp=E,0.7nm,0.4s,baz=157,slow=11,SNR=2.5								
ESDC	Sonseca Array	26.56	290	P		P	15 46 07.0	-0.5	
ESDC	Sonseca Array	26.56	290	P		P	15 46 07.0	-0.5	
	comp=E,1.2nm,0.5s,baz=82,slow=10,SNR=16								
ESDC	Sonseca Array	26.56	290	P		P	15 46 07.1	-0.5	
ABKAR	Akbulak array	26.78	48	*e*P		P	15 46 09.4	0.0	
	comp=E,0.8nm,0.9s								
ABKAR	Akbulak array	26.78	48	*e*P		P	15 46 09.4	0.0	
	comp=E,0.8nm,0.9s								
MDT	Midelt	27.94	275	LR		LR	15 58 60.0		
	comp=E,86nm,18.6s,baz=342,slow=40								
NB2	NORSAR Subarra	28.47	342	P		P	15 46 22.5	-1.9	
	comp=Z,0.6nm,0.7s,baz=148,slow=9.3								
NOA	NORSAR Array B	28.47	342	P		P	15 46 22.7	-1.7	
NOA	NORSAR Array B	28.47	342	P		P	15 46 22.7	-1.7	
	comp=Z,0.4nm,0.7s,baz=161,slow=10,SNR=4.2								
TORD	Torodi Ar. Bea	32.91	235	P		P	15 47 04.0	0.0	
TORD	Torodi Ar. Bea	32.91	235	P		P	15 47 04.0	0.0	
	comp=Z,0.2nm,0.3s,baz=29,slow=9.0,SNR=5.9								
TORD				LR		LR	16 01 44.3		
	comp=Z,44nm,19.4s,baz=165,slow=39								
TORD	Torodi Ar. Bea	32.91	235	P		P	15 47 04.0	0.0	
ARCES	ARCESS Array B	34.66	358	P		P	15 47 17.8	-0.8	
ARCES	ARCESS Array B	34.66	358	P		P	15 47 17.8	-0.8	
	comp=Z,0.8nm,0.6s,baz=183,slow=9.2,SNR=6.4								
AAK	Ala-Archa	35.89	64	P		P	15 47 31.0	+1.3	
AAK	Ala-Archa	35.89	64	P		P	15 47 31.0	+1.3	
	comp=Z,0.6nm,0.4s,baz=172,slow=4.9,SNR=5.0								
AAK	Ala-Archa	35.89	64	P		P	15 47 31.0	+1.3	
MK31	Makanchi Array	41.22	57	*e*P		P	15 48 14.2	0.0	
MK31				*e*pP		pP	15 48 25.5	-1.4	
MK31	Makanchi Array	41.22	57	*e*P		P	15 48 14.2	0.0	
MK31				*e*pP		pP	15 48 25.5	-1.4	
MKAR	Makanchi Array	41.22	57	P		P	15 48 14.3	+0.1	
MKAR				pP		pP	15 48 25.4	-1.5	
MKAR	Makanchi Array	41.22	57	P		P	15 48 14.3	+0.1	
	comp=Z,0.9nm,0.7s,baz=275,slow=6.5,SNR=14								
MKAR				pP		pP	15 48 25.4	-1.5	
	comp=Z,0.6nm,0.6s,baz=277,slow=7.1,SNR=6.4								
MKAR	Makanchi Array	41.22	57	P		P	15 48 14.3	+0.1	
MKAR				pP		pP	15 48 25.4	-1.5	
ZALV	Zalesovo Beam	42.84	46	P		P	15 48 26.5	-0.7	
ZALV	Zalesovo Beam	42.84	46	P		P	15 48 26.5	-0.7	
	comp=Z,0.7nm,0.3s,baz=260,slow=9.9,SNR=5.3								
SPITS	Spitsbergen Ar	43.64	356	P		P	15 48 33.5	+0.1	
SPITS	Spitsbergen Ar	43.64	356	P		P	15 48 33.5	+0.1	
	comp=Z,0.6nm,0.4s,baz=169,slow=16,SNR=4.0								
SPITS	Spitsbergen Ar	43.64	356	P		P	15 48 33.5	+0.1	
SONM	Songino Array	57.12	52	P		P	15 50 16.8	+0.9	
SONM	Songino Array	57.12	52	P		P	15 50 16.8	+0.9	
	comp=Z,1.0nm,0.5s,baz=289,slow=7.6,SNR=11								
SONM	Songino Array	57.12	52	P		P	15 50 16.8	+0.9	
HHC	Hu-ho-hao-te	63.07	58	*e*P		P	15 50 54.4	-2.3	
HHC				pP		pP	15 51 10.4	+0.3	
HHC				sP		sP	15 51 17.7	+2.2	
HHC				PP		PP	15 53 14.3	-1.2	
HHC				S		S	15 59 16.8	-7.3	
HHC				sS		sS	15 59 44.2	-2.3	
HHC				SS		SS	16 03 25.2	-4.7	
HHC				pmax		pmax			
	comp=Z,27nm,0.9s								
HHC				pmax		pmax			
	comp=Z,190nm,3.7s								
HHC				LR		LR			
	comp=N,230nm,15.5s								
HHC				LR		LR			
	comp=E,110nm,14.3s								
HHC				LR		LR			
	comp=Z,150nm,15.5s								
SCHQ	Schefferville	65.35	321	P		P	15 51 10.4	-0.9	
SCHQ				pP		pP	15 51 21.6	-3.1	
SCHQ	Schefferville	65.35	321	P		P	15 51 10.4	-0.9	
	comp=Z,4.2nm,0.6s,baz=56,slow=6.9,SNR=12								
SCHQ				pP		pP	15 51 21.6	-3.1	
	comp=Z,3.1nm,0.5s,baz=56,slow=5.0,SNR=4.6								
USRK	Ussuriysk Arra	74.69	47	P		P	15 52 09.2	+0.6	
	comp=Z,1.8nm,0.6s,baz=273,slow=3.7,SNR=4.2								
KSAR	Wonju Array Be	75.82	54	P		P	15 52 15.6	+0.4	
KSAR	Wonju Array Be	75.82	54	P		P	15 52 15.6	+0.4	
KSRS	Korea Array	75.84	54	P		P	15 52 15.6	+0.3	
	comp=Z,0.7nm,0.6s,baz=308,slow=4.6,SNR=5.2								
YKA	Yellowknife Ar	78.55	344	P		P	15 52 29.4	-0.7	
YKA	Yellowknife Ar	78.55	344	P		P	15 52 29.4	-0.7	
	comp=Z,0.2nm,0.5s,baz=35,slow=5.5,SNR=3.9								
ILAR	Eielson Array	80.52	358	P		P	15 52 40.8	0.0	
ILAR	Eielson Array	80.52	358	P		P	15 52 40.8	0.0	
	comp=Z,0.3nm,0.8s,baz=3.1,slow=6.8,SNR=3.9								
ILAR	Eielson Array	80.52	358	P		P	15 52 40.8	0.0	
ASAR	Alice Springs	114.90	102	PKP		PKPdf	15 59 09.8	-0.1	
	comp=Z,0.1nm,0.6s,baz=329,slow=1.6,SNR=3.6								

ISCJB ***10*** *15:46:17.6±0.2, 42.35N±0.02×13.39E±0.02, h9km±2km, mb3.5/1, Error ellipse: s-maj=2.9km s-min=2.3km az=139.9*

LDG ***10*** *15:46:17.7±0.1, 42.34N×13.39E, h2km, Ml3.0/9, Error ellipse: s-maj=4.6km s-min=2.9km az=47.0*

ROM ***10*** *15:46:17.6±0.1, 42.35N×13.38E, h10km, Ml3.5/12, Error ellipse: s-maj=1.1km s-min=0.8km az=63.0*

CSEM ***10*** *15:46:17.9±0.1, 42.34N×13.39E, h5km, ML4.2/7, Error ellipse: s-maj=2.8km s-min=2.1km az=55.0*

IDC ***10*** *15:46:19.9±1.8, 42.57N×13.45E, h0km, mb3.4/2, mb1 3.5/6, mb1mx3.3/29, mbtmp3.4/6, ML3.2/4, Error ellipse: s-maj=24.3km s-min=16.7km az=62.0*

ISC 10 15:46:18.2±0.7, 42.35N±0.02×13.39E±0.01, h11km±4km, n161,σ1§33/203, 1C-6D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.01	68	Pg		Pg	15 46 19.8	-0.4
AQU				Sg		Sg	15 46 20.8	-0.9
	153μm,0.3s							
AQU	L'Aquila	0.01	68	Pg		Pg	15 46 19.8	-0.4
AQU				Sg		Sg	15 46 20.8	-0.9
	153μm,0.3s							
FAGN	Fagnano	0.17	119	Pg		Pg	15 46 22.1	+0.1
FAGN				Sg		Sg	15 46 25.4	+0.8
	66μm,0.5s							
FAGN	Fagnano	0.17	119	Pg		Pg	15 46 22.1	+0.1
FAGN				Sg		Sg	15 46 25.4	+0.8
	66μm,0.5s							
CAMP	Campotosto	0.19	5	Pg		Pg	15 46 22.2	-0.2
CAMP				Sg		Sg	15 46 25.4	+0.1
	10μm,0.5s							
CAMP	Campotosto	0.19	5	Pg		Pg	15 46 22.2	-0.2
CAMP				Sg		Sg	15 46 25.4	+0.1
	10μm,0.5s							
FIAM	Fiamignano	0.21	248	Pg		Pg	15 46 22.8	0.0
FIAM				Sg		Sg	15 46 26.2	+0.3
FIAM	Fiamignano	0.21	248	Pg		Pg	15 46 22.8	0.0
FIAM				Sg		Sg	15 46 26.2	+0.3
TERO	Teramo	0.32	30	Pg		Pg	15 46 24.2	-0.4
TERO				Sg		Sg	15 46 29.1	+0.2
	6μm,0.3s							
TERO	Teramo	0.32	30	Pg		Pg	15 46 24.2	-0.4
TERO				Sg		Sg	15 46 29.1	+0.2
	6μm,0.3s							
PTQR	Pietraquaria	0.33	178	Pg		Pg	15 46 24.6	-0.2
PTQR	Pietraquaria	0.33	178	Pg		Pg	15 46 24.6	-0.2
VCEL	Villa Celiera	0.34	82	Pg		Pg	15 46 25.1	0.0
	10μm,0.4s							
VCEL	Villa Celiera	0.34	82	Pg		Pg	15 46 25.1	0.0
	10μm,0.4s							
LNSS	Leonessa	0.36	315	Pg		Pg	15 46 25.1	-0.3
	8μm,0.3s							
LNSS	Leonessa	0.36	315	Pg		Pg	15 46 25.1	-0.3
	8μm,0.3s							
CERT	Cerreto	0.50	217	Pg		Pg	15 46 27.6	-0.4
CERT				Sg		Sg	15 46 35.2	+0.6
	4μm,0.7s							
CERT	Cerreto	0.50	217	Pg		Pg	15 46 27.6	-0.4
CERT				Sg		Sg	15 46 35.2	+0.6
	4μm,0.7s							
VVLD	Villa Vallelon	0.51	160	Pg		Pg	15 46 27.6	-0.5
	2μm,0.4s							
VVLD	Villa Vallelon	0.51	160	Pg		Pg	15 46 27.6	-0.5
	2μm,0.4s							
INTR	Introdacqua	0.51	131	Pg		Pg	15 46 27.8	-0.4
INTR				Sg		Sg	15 46 36.0	+1.0
INTR	Introdacqua	0.51	131	Pg		Pg	15 46 27.8	-0.4
INTR				Sg		Sg	15 46 36.0	+1.0
MNS	Montasola	0.52	274	Pg		Pg	15 46 27.8	-0.6
MNS				Sg		Sg	15 46 36.1	+0.8
	2μm,0.6s							
MNS	Montasola	0.52	274	Pg		Pg	15 46 27.8	-0.6
MNS				Sg		Sg	15 46 36.1	+0.8
	2μm,0.6s							
NRCA	Norcia	0.52	338	Pg		Pg	15 46 27.8	-0.6
NRCA				Sg		Sg	15 46 35.6	+0.2
	5μm,0.1s							
NRCA	Norcia	0.52	338	Pg		Pg	15 46 27.8	-0.6
NRCA				Sg		Sg	15 46 35.6	+0.2
	5μm,0.1s							
GUAR	Guarcino	0.56	186	Pg		Pg	15 46 28.5	-0.5
	1μm,0.3s							
GUAR	Guarcino	0.56	186	Pg		Pg	15 46 28.5	-0.5
	1μm,0.3s							
MTCE	Montecelio	0.58	236	Pg		Pg	15 46 28.9	-0.5
	790nm,0.4s							
MTCE	Montecelio	0.58	236	Pg		Pg	15 46 28.9	-0.5
	790nm,0.4s							
TRTR	Tortoreto Alta	0.60	40	Pg		Pb	15 46 30.4	-0.3
TRTR	Tortoreto Alta	0.60	40	Pg		Pb	15 46 30.4	-0.3
OFFI	Offida	0.63	21	Pg		Pg	15 46 30.6	+0.2
OFFI	Offida	0.63	21	Pg		Pg	15 46 30.6	+0.2
CESX	Cesi	0.65	294	Pg		Pg	15 46 29.9	-0.9
	1μm,0.4s							
CESX	Cesi	0.65	294	Pg		Pg	15 46 29.9	-0.9
	1μm,0.4s							
LPEL	Lama dei Pelig	0.67	117	Pg		Pg	15 46 30.4	-0.7
LPEL				Sg		Sb	15 46 40.8	-0.3
LPEL	Lama dei Pelig	0.67	117	Pg		Pg	15 46 30.4	-0.7
LPEL				Sg		Sb	15 46 40.8	-0.3
POFI	Posta Fibreno	0.68	159	Pg		Pg	15 46 30.2	-1.1
POFI	Posta Fibreno	0.68	159	Pg		Pg	15 46 30.2	-1.1
SDI	San Donato	0.71	154	Pg		Pg	15 46 31.0	-1.0
SDI	San Donato	0.71	154	Pg		Pg	15 46 31.0	-1.0
FDMO	Fiordimonte	0.72	342	Pg		Pg	15 46 31.2	-1.0
FDMO				Sg		Sb	15 46 42.5

CRNS	**Crni Vrh**	**3.78**	**9**	*e*Pn	**Pn**	**15 47 17.2**	**+0.8**
MYKA	**Terra Mystica**	**4.28**	**2**	⇓*i*Pn	**Pn**	**15 47 23.3**	**-0.1**
MYKA	**Terra Mystica**	**4.28**	**2**	Pn	**Pn**	**15 47 23.3**	**-0.1**
ABTA	**Abfaltersbach**	**4.44**	**352**	⇓*i*Pn	**Pn**	**15 47 25.9**	**+0.4**
	SNR=18						
ABTA	**Abfaltersbach**	**4.44**	**352**	Pn	**Pn**	**15 47 25.9**	**+0.4**
	SNR=18						
SOKA	**Soboth**	**4.49**	**15**	⇓*i*Pn	**Pn**	**15 47 26.8**	**+0.7**
SOKA	**Soboth**	**4.49**	**15**	Pn	**Pn**	**15 47 26.8**	**+0.7**
SBF	**Sospel**	**4.61**	**291**	*e*Pn	**Pn**	**15 47 28.8**	**+0.9**
SBF				*e*Sn	**Sn**	**15 48 18.8**	**-2.6**
	3.5nm,0.3s						
SBF	**Sospel**	**4.61**	**291**	*e*Pn	**Pn**	**15 47 28.8**	**+0.9**
SBF				*e*Sn	**Sn**	**15 48 18.8**	**-2.6**
	1.8nm,0.3s						
FETA	**Feichten**	**5.04**	**339**	⇓*i*Pn	**Pn**	**15 47 35.1**	**+1.3**
	SNR=8.6						
FETA	**Feichten**	**5.04**	**339**	Pn	**Pn**	**15 47 35.1**	**+1.3**
	SNR=8.6						
WTTA	**Wattenberg**	**5.07**	**346**	⇓*i*Pn	**Pn**	**15 47 36.0**	**+1.8**
WTTA	**Wattenberg**	**5.07**	**346**	Pn	**Pn**	**15 47 36.0**	**+1.8**
DAVOX	**Davos/Dischmat**	**5.09**	**332**	Pn	**Pn**	**15 47 37.0**	**+2.5**
	1.8nm,0.3s,baz=157,slow=18,SNR=19						
DAVOX				Sn	**Sn**	**15 48 34.9**	**+1.5**
	0.4nm,0.3s,baz=180,slow=20,SNR=1.8						
FRF	**La Foret Royal**	**5.09**	**286**	*e*Pn	**Pn**	**15 47 35.0**	**+0.6**
FRF	**La Foret Royal**	**5.09**	**286**	*e*Pn	**Pn**	**15 47 35.0**	**+0.6**
WATA	**Walderalm**	**5.15**	**346**	⇓*i*Pn	**Pn**	**15 47 37.6**	**+2.3**
	SNR=9.3						
WATA	**Walderalm**	**5.15**	**346**	Pn	**Pn**	**15 47 37.6**	**+2.3**
	SNR=9.3						
LMR	**La Mourre**	**5.15**	**283**	*e*Pn	**Pn**	**15 47 35.7**	**+0.5**
LMR				*e*Sn	**Sn**	**15 48 31.4**	**-3.2**
	0.7nm,0.2s						
LMR	**La Mourre**	**5.15**	**283**	*e*Pn	**Pn**	**15 47 35.7**	**+0.5**
MBDF	**Montbardon**	**5.36**	**299**	*e*P	**Pn**	**15 47 40.9**	**+2.7**
MBDF	**Montbardon**	**5.36**	**299**	*e*P	**Pn**	**15 47 40.9**	**+2.7**
RJOB	**Jochberg**	**5.40**	**356**	*e*Pn	**Pn**	**15 47 40.6**	**+1.9**
RJOB				*e*Sn	**Sn**	**15 48 43.8**	**+2.9**
LPG	**La Plagne**	**5.73**	**306**	*e*P	Pn	15 47 46.8	+3.4
LPG				*e*Sn	**Sn**	**15 48 45.9**	**-3.4**
	2.6nm,0.4s						
LPL	**La Plagne**	**5.75**	**306**	*e*P	Pn	15 47 46.9	+3.2
LPL				*e*Sn	**Sn**	**15 48 45.0**	**-4.8**
	1.7nm,0.3s						
LPL	**La Plagne**	**5.75**	**306**	*e*P	Pn	15 47 46.9	+3.2
CONA	**Conrad Observa**	**5.85**	**17**	⇑*i*Pn	**Pn**	**15 47 45.0**	**+0.2**
CONA	**Conrad Observa**	**5.85**	**17**	Pn	**Pn**	**15 47 45.0**	**+0.2**
SMRF	**Simiane la Rot**	**5.94**	**289**	*e*P	**Pn**	**15 47 48.2**	**+2.1**
SMRF	**Simiane la Rot**	**5.94**	**289**	*e*P	**Pn**	**15 47 48.2**	**+2.1**
ORIF	**Oris-en-Rattie**	**6.02**	**298**	*e*P	Pn	15 47 51.5	+4.3
ORIF				*e*Sn	**Sn**	**15 48 52.4**	**-3.8**
	1.1nm,0.3s						
GEC2	**GERESS Array S**	**6.50**	**2**	*e*Pn	**Pn**	**15 47 54.4**	**+0.6**
GEC2				*e*Sn	**Sn**	**15 49 07.2**	**-0.8**
GERES	**GERESS Array B**	**6.50**	**2**	Pn	**Pn**	**15 47 53.8**	**0.0**
	0.5nm,0.3s,baz=175,slow=12,SNR=12						
GERES				Sn	**Sn**	**15 49 05.2**	**-2.8**
	1.2nm,0.3s,baz=177,slow=24,SNR=5.1						
CABF	**La Chapelle**	**6.74**	**312**	*e*Pn	**Pn**	**15 47 58.2**	**+1.1**
CABF	**La Chapelle**	**6.74**	**312**	*e*Pn	**Pn**	**15 47 58.2**	**+1.1**
KHC	**Kasperske Hory**	**6.78**	**1**	*e*PN	**Pn**	**15 47 57.6**	**0.0**
KHC				*ex*	x	15 48 10.0	
KHC				*e*SN	**Sn**	**15 49 12.6**	**-2.3**
KHC	**Kasperske Hory**	**6.78**	**1**	Pn	**Pn**	**15 47 57.6**	**0.0**
WET	**Wettzell**	**6.80**	**357**	*e*Pn	**Pn**	**15 47 59.3**	**+1.4**
WET				*e*Sn	**Sn**	**15 49 12.4**	**-3.0**
HINF	**Hinteralfeld**	**7.16**	**322**	*e*Pn	**Pn**	**15 48 02.9**	**+0.1**
HINF				*e*Sn	**Sn**	**15 49 19.3**	**-4.8**
	6.1nm,0.4s						
HINF	**Hinteralfeld**	**7.16**	**322**	*e*Pn	**Pn**	**15 48 02.9**	**+0.1**
VYHS	**Vyhne**	**7.24**	**30**	*e*PN	Pn	15 48 07.6	+3.7
VYHS				*e*SN	**Sn**	**15 49 22.8**	**-3.3**
KEST	**Kesra**	**7.32**	**207**	Pn	Pn	15 48 10.4	+5.4
	0.5nm,0.3s,baz=260,slow=2.6,SNR=13						
CDF	**Champ du Feu**	**7.43**	**327**	*e*Pn	**Pn**	**15 48 06.5**	**-0.1**
CDF				*e*Sn	**Sn**	**15 49 26.2**	**-4.7**
	9.8nm,0.7s						
CDF	**Champ du Feu**	**7.43**	**327**	*e*Pn	**Pn**	**15 48 06.5**	**-0.1**
HAU	**Haudompre**	**7.53**	**321**	*e*Pn	**Pn**	**15 48 08.2**	**+0.4**
HAU				*e*Sn	Sn	15 49 26.9	-6.3
	7.3nm,0.3s						
HAU	**Haudompre**	**7.53**	**321**	*e*Pn	**Pn**	**15 48 08.2**	**+0.4**
MLR	**Muntele Rosu**	**9.59**	**67**	Pn	**Pn**	**15 48 39.0**	**+2.8**
	0.0nm,0.3s,baz=270,slow=3.0,SNR=2.7						
FINES	**FINESS Array B**	**20.59**	**17**	P	Pn	15 50 59.2	+0.1
	2.0nm,0.8s,baz=198,slow=9.8,SNR=6.2						
MKAR	**Makanchi Array**	**47.86**	**60**	P	**P**	**15 54 57.2**	**+1.3**
	0.3nm,0.5s,baz=290,slow=5.9,SNR=6.7						

*ISCJB **10** 15:59:58.1±0.7,50.33N±0.05×18.72E±0.04, h0km, Error ellipse: s-maj=7.0km s-min=3.9km az=0.8*
*CSEM **10** 15:59:58.6±0.2,50.36N×18.74E, h2km, ML2.5/6, Error ellipse: s-maj=6.7km s-min=3.0km az=175.0*
*PRU **10** 15:59:59.0,50.34N×18.75E, h0km*
*WAR **10** 15:59:59.1,50.28N×18.82E*
*IPEC **10** 15:59:59.0±0.2,50.31N×18.80E, h1km±1km, ML1.7/3, Error ellipse: s-maj=2.4km s-min=1.1km az=168.0*

ISC 10 15:59:58.8±0.9, 50.31N±0.05×18.77E±0.03, h0km, n18, σ0s95/32, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.62**	**221**	*e*PG	**Pg**	**16 00 11.4**	**+0.8**
OKC				*e*SG	**Sg**	**16 00 18.5**	**0.0**
	comp=Z,26nm,0.9s						
OKC	**Ostrava-Krasne**	**0.62**	**221**	Pg	**Pg**	**16 00 11.4**	**+0.8**
OKC				Sg	**Sg**	**16 00 18.5**	**0.0**
	26nm,0.9s						
OJC	**Ojcow**	**0.67**	**97**	*e*Pg	**Pg**	**16 00 11.7**	**+0.1**
OJC				*e*		16 00 12.3	
OJC				*e*Sg	**Sg**	**16 00 20.5**	**+0.3**
OJC	**Ojcow**	**0.67**	**97**	*e*Pg	**Pg**	**16 00 11.5**	**-0.1**
	baz=278						
OJC				*e*Sg	**Sg**	**16 00 20.5**	**+0.3**
MORC	**Moravsky Berou**	**0.95**	**237**	*e*Pg	**Pg**	**16 00 17.2**	**+0.2**
	baz=56						
MORC				*e*Sg	**Sg**	**16 00 29.4**	**+0.1**
	6.9nm,0.2s,baz=56						
KRLC	**Kraliky**	**1.30**	**261**	*e*SG	**Sg**	**16 00 40.7**	**+0.3**
KRLC	**Kraliky**	**1.30**	**261**	Sg	**Sg**	**16 00 40.7**	**+0.3**
DPC	**Dobruska-Polom**	**1.57**	**273**	*e*PG	**Pn**	**16 00 27.6**	**-0.3**
DPC				*e*SG	**Sn**	**16 00 48.5**	**-0.4**
	comp=Z,5.2nm,0.5s						
DPC	**Dobruska-Polom**	**1.57**	**273**	Pg	**Pn**	**16 00 27.6**	**-0.3**
DPC	**Dobruska-Polom**	**1.57**	**273**	*e*Pn	**Pn**	**16 00 27.9**	**0.0**
	baz=90						
DPC				Sg	**Sn**	**16 00 48.5**	**-0.4**
	5.2nm,0.5s						
KSP	**Ksiaz**	**1.67**	**290**	*e*Pg	**Pg**	**16 00 31.2**	**+0.5**
KSP				*e*Sg	**Sg**	**16 00 55.0**	**+2.7**
VRAC	**Vranov**	**1.73**	**235**	*e*Pn	**Pn**	**16 00 30.7**	**+0.6**
	baz=54						
VRAC				*e*Sg	**Sn**	**16 00 53.6**	**+0.8**
	9.0nm,0.4s,baz=54						
KRUC	**Moravsky**	**1.98**	**232**	*e*Pn	**Pn**	**16 00 34.1**	**+0.6**
	baz=50						
KRUC				*e*Sn	**Sb**	**16 01 00.5**	**-0.4**
	6.8nm,0.6s,baz=50						
PRU	**Pruhonice**	**2.74**	**265**	*e*PG	**Pb**	**16 00 47.0**	**-1.6**
PRU				*e*SG	**Sg**	**16 01 25.8**	**-0.8**
PRU	**Pruhonice**	**2.74**	**265**	Pg	**Pb**	**16 00 47.0**	**-1.6**
PRU				Sg	**Sg**	**16 01 25.8**	**-0.8**
BRG	**Berggiesshubel**	**3.13**	**282**	SG	**Sg**	**16 01 40.1**	**+0.9**
	2.7nm,0.5s						
KHC	**Kasperske Hory**	**3.57**	**253**	*e*PG	**Pb**	**16 01 03.4**	**+0.7**
KHC				*e*SG	**Sg**	**16 01 51.5**	**-1.8**
	comp=Z,3.9nm,0.8s						
KHC	**Kasperske Hory**	**3.57**	**253**	Pg	**Pb**	**16 01 03.4**	**+0.7**
KHC				Sg	**Sg**	**16 01 51.5**	**-1.8**
	3.9nm,0.8s						

IDC 10 16:03:23.8±1.7, 4.00N×126.83E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/24, mbtmp3.5/5, Error ellipse: s-maj=103.4km s-min=23.3km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.99**	**183**	P	P	16 08 19.5	-0.1
	0.9nm,0.4s,baz=19,slow=13,SNR=9.8						
WRA	**Warramunga Arr**	**24.91**	**163**	P	P	16 08 48.2	-0.5
	1.4nm,0.8s,baz=342,slow=11,SNR=9.8						
ASAR	**Alice Springs**	**28.35**	**166**	P	P	16 09 20.4	+0.8
	0.3nm,0.9s,baz=344,slow=7.4,SNR=5.6						
STKA	**Stephens Creek**	**38.34**	**160**	P	P	16 10 46.1	-0.5
	0.9nm,0.6s,baz=351,slow=9.8,SNR=4.8						
MKAR	**Makanchi Array**	**57.39**	**325**	P	P	16 13 14.2	0.0
	0.2nm,0.4s,baz=118,slow=7.8,SNR=7.4						

GUC 10 16:35:03.1±0.5, 28.47S×70.71W, h46km±2km, ML3.9, 2C-1D, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VACH	**Vallenar**	**0.11**	**204**	⇓*i*P	Pn	16 35 02.6	-7.9
VACH				*i* S	Sn	16 35 08.4	-7.4
VACH				AML	AML	16 35 08.5	
	comp=E,60μm,0.1s						
LCO	**Las Campanas**	**0.54**	**180**	⇑*i*P	Pn	16 35 15.5	+0.5
LCO				*e*S	Sn	16 35 24.7	+1.3
LCO				AML	AML	16 35 25.9	
	comp=E,4μm,0.3s						
CPCH	**Copiapo**	**1.15**	**16**	*e*P	Pn	16 35 23.3	+0.4
CPCH				*e*S	Sn	16 35 39.0	+1.5
CPCH				AML	AML	16 35 41.6	
	comp=N,6μm,0.0s						
CDCH	**Caldera**	**1.40**	**356**	*e*P	Pn	16 35 26.9	+0.7
CDCH				*i* S	Sn	16 35 44.3	+0.8
TLL	**Tololo Astrono**	**1.69**	**183**	⇑*i*P	Pn	16 35 31.6	+1.1
TLL				*i* S	Sn	16 35 53.0	+1.7

*JMA **10** 17:04:56.6±0.3,24.26N×121.67E, h63km, M2.9*
*TAP **10** 17:04:57.7,24.44N×121.78E, h29km, ML3.6, B*
*ISCJB **10** 17:04:58.5±0.3,24.44N±0.02×121.83E±0.02, h23km±2km, Error ellipse: s-maj=3.4km s-min=2.5km az=140.0*

ISC 10 17:04:58.6±0.9, 24.47N±0.02×121.79E±0.02, h26km±5km, n58, σ0s99/92, 7C-5D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.06**	**222**	⇓*i*P	**Pb**	**17 05 02.8**	**-0.3**
	baz=238						
ENA				*e*S	**Sb**	**17 05 06.4**	**+0.3**
	baz=238						
TWC	**Suao**	**0.15**	**23**	⇓*i*P	**Pb**	**17 05 03.8**	**0.0**
	baz=24						
TWC				S	**Sb**	**17 05 07.7**	**+0.4**
	baz=24						
EHP	**Heping Village**	**0.17**	**194**	*e*P	**Pb**	**17 05 03.5**	**-0.5**
	baz=191						
EHP				*e*S	**Sb**	**17 05 07.9**	**+0.2**
	baz=191						
ENTT	**Nioudou**	**0.26**	**310**	⇑*i*P	**Pb**	**17 05 05.0**	**-0.2**
	baz=311						
TWE	**Neicheng**	**0.27**	**336**	⇑*i*P	**Pn**	**17 05 05.3**	**-1.6**
	baz=342						
TWE				*i* S	**Sb**	**17 05 10.5**	**+0.7**
	baz=342						
ILA	**Ilan**	**0.29**	**353**	*e*P	**Pn**	**17 05 05.8**	**-1.5**
	baz=352						
ILA				S	**Sn**	**17 05 11.8**	**-1.0**
	baz=352						
NNS	**Nan Shan**	**0.38**	**265**	⇑*i*P	**Pb**	**17 05 06.4**	**-0.6**
	baz=269						
NNS				*i* S	**Sb**	**17 05 11.9**	**-0.7**
	baz=269						
TWD	**Chiawan**	**0.43**	**204**	*e*P	**Pb**	**17 05 06.5**	**-1.1**
	baz=207						
TWD				*e*S	**Sb**	**17 05 13.1**	**-0.7**
	baz=207						
NSK	**Sanguang**	**0.44**	**297**	⇑*i*P	**Pb**	**17 05 07.5**	**-0.4**
	baz=301						
NSK				S	**Sb**	**17 05 13.7**	**-0.5**
	baz=301						
HWA	**Hwalien**	**0.52**	**198**	*e*P	**Pb**	**17 05 08.7**	**-0.5**
	baz=206						
TWB1	**Santiao Chiao**	**0.56**	**19**	⇓P	**Pb**	**17 05 09.9**	**0.0**
	baz=22						
TWB1				S	**Sn**	**17 05 18.1**	**-1.4**
	baz=22						
WHF	**Hehuan Shan**	**0.58**	**236**	⇑*i*P	**Pb**	**17 05 09.4**	**-1.0**
	baz=237						
WHF				*i* S	**Sb**	**17 05 17.6**	**-0.8**
	baz=237						
NWF	**Wu-fen Shan**	**0.59**	**360**	⇑*i*P	**Pn**	**17 05 11.1**	**-0.4**
	baz=355						
NWF				S	**Sn**	**17 05 19.5**	**-0.9**
	baz=355						
TWT	**Tachien**	**0.60**	**249**	⇓*i*P	**Pb**	**17 05 10.3**	**-0.3**
	baz=246						
TWT				S	**Sb**	**17 05 18.9**	**+0.1**
	baz=246						
TAP1	**Taipei**	**0.61**	**337**	P	**Pn**	**17 05 11.1**	**-0.5**
	baz=325						
TAP1				*e*S	**Sn**	**17 05 20.0**	**-0.6**
	baz=325						
TAP	**Taipei**	**0.62**	**336**	P	**Pn**	**17 05 11.2**	**-0.5**
	baz=325						
TAP				*e*S	**Sn**	**17 05 20.2**	**-0.7**
	baz=325						
TWS1	**Kuangyinshan**	**0.71**	**332**	*e*P	**Pn**	**17 05 12.9**	**-0.1**
	baz=333						
TWS1				S	**Sn**	**17 05 24.0**	**+1.0**
	baz=333						
ESL	**Shilin**	**0.73**	**206**	*e*P	**Pb**	**17 05 10.9**	**-1.8**
	baz=206						
NSTT	**Nanjuang**	**0.73**	**283**	P	**Pn**	**17 05 12.5**	**-0.8**
	baz=284						
NSTT				S	**Sn**	**17 05 22.8**	**-0.8**
	baz=284						
NCU	**National Centr**	**0.73**	**312**	P	**Pn**	**17 05 13.1**	**-0.2**
	baz=314						
NCU				S	**Sn**	**17 05 24.6**	**+0.9**
	baz=314						
HSN	**Hsinchu**	**0.81**	**294**	*e*P	**Pn**	**17 05 14.3**	**-0.1**
	baz=298						
HSN				*e*S	**Sn**	**17 05 25.9**	**+0.3**
	baz=298						
TWY	**Chenhua**	**0.82**	**348**	*e*P	**Pn**	**17 05 14.4**	**-0.1**
	baz=358						
TWY				*e*S	**Sn**	**17 05 26.1**	**+0.3**
	baz=358						
TWQ1	**Liyutan**	**0.93**	**262**	⇑P	**Pn**	**17 05 16.5**	**+0.5**
	baz=264						
TWQ1				*e*S	**Sn**	**17 05 29.1**	**+0.5**
	baz=264						
NSY	**Sanyi**	**0.94**	**267**	*e*P	**Pn**	**17 05 16.9**	**+0.8**
	baz=268						
NSY				*e*S	**Sn**	**17 05 30.6**	**+2.0**
	baz=268						
SMLT	**Sun Moon Lake**	**1.00**	**234**	P	**Pn**	**17 05 16.4**	**-0.6**
	baz=228						
TYC	**Yuchr**	**1.02**	**236**	*e*P	**Pn**	**17 05 16.4**	**-0.8**
	baz=232						
EHY	**Hungye**	**1.05**	**204**	*e*P	**Pn**	**17 05 16.2**	**-1.5**
	baz=205						
TCU	**Taichung**	**1.06**	**252**	⇓P	**Pb**	**17 05 18.4**	**+0.1**
	baz=267						
TCU				*e*S	**Sn**	**17 05 34.1**	**+2.3**
	baz=267						
YOJ	**Yonaguni jima**	**1.12**	**90**	*i* P	**Pn**	**17 05 18.1**	**-0.5**
	baz=80						
YOJ				*e*S	**Sn**	**17 05 33.6**	**+0.5**
	baz=80						
YOJ	**Yonaguni jima**	**1.12**	**90**	P	**Pn**	**17 05 18.3**	**-0.3**
YOJ				S	**Sb**	**17 05 34.4**	**+1.0**
WNT	**Mingjian**	**1.17**	**240**	*e*P	**Pb**	**17 05 20.2**	**+0.1**
	baz=240						
WNT				*e*S	**Sb**	**17 05 36.8**	**+1.9**
	baz=240						
TWF1	**Yuli**	**1.20**	**202**	*e*P	**Pn**	**17 05 17.6**	**-2.2**
	baz=212						
CHN5	**Tsauling**	**1.34**	**229**	P	**Pb**	**17 05 22.3**	**-0.7**
	baz=230						
CHN5				*e*S	**Sb**	**17 05 41.3**	**+1.5**
	baz=230						
WGK	**Gukeng**	**1.37**	**235**	*e*P	**Pb**	**17 05 22.6**	**-0.9**
	baz=236						
WGK				*e*S	**Sb**	**17 05 42.5**	**+2.0**
	baz=236						
CHKT	**Chengkung**	**1.42**	**196**	*e*P	**Pn**	**17 05 21.8**	**-1.0**
	baz=209						
ELDTW	**Lidau**	**1.46**	**209**	*e*P	**Pn**	**17 05 21.6**	**-1.9**
	baz=201						
WTCT	**Ta-ch'eng**	**1.50**	**246**	*e*P	**Pn**	**17 05 23.6**	**-0.3**
	baz=248						
CHN2	**Minshiung**	**1.52**	**232**	*e*P	**Pb**	**17 05 26.4**	**+0.3**
	baz=249						
CHN4	**Tsaushan**	**1.56**	**225**	*e*P	**Pb**	**17 05 25.7**	**-1.2**
	baz=214						
CHN4				*e*S	**Sb**	**17 05 46.9**	**+0.7**
	baz=214						
CHY	**Chiayi**	**1.58**	**232**	*e*P	**Pb**	**17 05 26.1**	**-1.0**
	baz=249						
WTP	**Ta-pu**	**1.63**	**222**	*e*P	**Pn**	**17 05 26.4**	**+0.7**
	baz=210						
WTP				*e*S	**Sb**	**17 05 48.7**	**+0.6**
	baz=210						
WSF	**Szhu**	**1.65**	**240**	*e*P	**Pn**	**17 05 24.7**	**-1.2**
	baz=241						
TWK	**Hsinying**	**1.69**	**225**	*e*P	**Pn**	**17 05 27.4**	**+0.9**
	baz=227						
CHN1	**Nanshi**	**1.72**	**222**	*e*P	**Pn**	**17 05 27.0**	**0.0**
	baz=211						
CHN1				*e*S	**Sb**	**17 05 51.0**	**+0.1**
	baz=211						
TWG	**Pinlang**	**1.77**	**202**	*e*P	**Pn**	**17 05 25.1**	**-2.5**
	baz=191						
IRIF	**Iriomote-Funau**	**1.78**	**94**	P	**Pn**	**17 05 26.9**	**-0.8**
IRIF				*e*S	**Sn**	**17 05 49.7**	**+0.3**
CHN8	**Yiju**	**1.83**	**232**	*e*P	**Pb**	**17 05 30.0**	**-1.3**
	baz=234						
SCLT	**Jiali**	**1.95**	**229**	*e*P	**Pn**	**17 05 30.4**	**+0.4**
	baz=216						
ECL	**Taimali**	**2.02**	**202**	*e*P	**Pn**	**17 05 30.7**	**-0.3**
	baz=195						
SSD	**Sandimen**	**2.02**	**212**	*e*P	**Pn**	**17 05 32.3**	**+1.3**
	baz=214						
JKRS	**Kuro-shima**	**2.04**	**96**	P	**Pn**	**17 05 31.2**	**-0.1**
JKRS				*e*S	**Sn**	**17 05 56.7**	**+0.7**
JIJ	**Ishigaki jima**	**2.15**	**92**	P	**Pn**	**17 05 32.3**	**-0.5**
JIJ				*e*S	**Sn**	**17 05 58.1**	**-0.6**
PNG	**Penghu**	**2.23**	**247**	*e*P	**Pn**	**17 05 33.3**	**-0.6**
	baz=247						
EAST	**Anshuo**	**2.25**	**203**	*e*P	**Pn**	**17 05 36.2**	**+1.9**
	baz=198						
SCZT	**Fangliau**	**2.35**	**207**	*e*P	**Pn**	**17 05 36.7**	**+1.1**
	baz=198						
JTJ	**Tarama**	**2.66**	**86**	P	**Pn**	**17 05 39.9**	**+0.1**
JTJ				*e*S	**Sn**	**17 06 13.2**	**+2.0**
KNM	**Kinmen**	**3.06**	**270**	*e*P	**Pn**	**17 05 45.2**	**0.0**
	baz=268						
JOGS	**Gusukube**	**3.31**	**84**	P	**Pn**	**17 05 49.7**	**+1.0**

PGC 10 17:14:16.0±6.8, 51.39N×131.03W, h10km, ML3.4/9, Mw4.0, 2D, 214km Sse of Sandspit, Bc Queen Charlotte Islands Region, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNB	**Barry Inlet**	**1.27**	**340**	⇑P	Pn	17 14 37.8	-2.1
MOBC	**Moresby Island**	**1.85**	**342**	⇑Pn	Pn	17 14 45.8	-2.1
HOLB	**Holberg**	**1.98**	**111**	⇑Pn	Pn	17 14 47.4	-2.2
BBB	**Bella Bella**	**1.98**	**65**	⇑Pn	Pn	17 14 47.7	-1.8
BBB				⇑Sn	Sn	17 15 10.4	-3.9
DIB	**Dawson Inlet,**	**2.02**	**334**	⇑Pn	Pn	17 14 48.3	-1.8
PHC	**Port Hardy**	**2.37**	**105**	⇑Pn	Pn	17 14 53.2	-1.7
MAYB	**Maynard**	**2.63**	**110**	⇑Pn	Pn	17 14 57.3	-1.5
NDB	**Naden**	**2.82**	**336**	⇓Pn	Pn	17 14 59.7	-1.6
RUBB	**Prince Rupert**	**2.98**	**9**	⇓Pn	Pn	17 15 01.4	-1.9

*IDC **10** 17:20:46.9±1.6, 3.41S×139.13E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.6/18, mbtmp3.7/8, ML3.8/2, MS3.5/3, Ms1 3.5/3, ms1mx2.8/34, Error ellipse: s-maj=64.0km s-min=21.8km az=97.0*
*ISCJB **10** 17:20:54.7±0.6, 3.67S±0.05×138.76E±0.06, h71km, mb3.5/5, Error ellipse: s-maj=8.0km s-min=6.7km az=178.5*
*AUST **10** 17:21:01.9, 3.93S×138.53E, h100km*

ISC 10 17:20:55.8±0.7, 3.74S±0.06×138.75E±0.08, h71km, n18, σ2s90/20, mb3.6/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.31**	**58**	P	**Pn**	**17 21 30.7**	**-1.0**
	baz=2.6,SNR=14						
MMPI	**Merauke**	**4.97**	**161**	S	Sn	17 23 11.2	+7.1
	baz=4.9,SNR=4.3						
TLE	**Tual**	**6.28**	**252**	P	Pn	17 22 31.8	+5.9
	baz=6.0,SNR=5.5						
SWI	**Sorong**	**8.01**	**291**	P	Pn	17 22 54.0	+4.5
	baz=7.9,SNR=3.6						
SWI				S	**Sn**	**17 24 20.3**	**+1.6**
	baz=7.9,SNR=7.4						
KDU	**Kakadu**	**10.84**	**215**	P	**Pn**	**17 23 30.6**	**+2.4**
	baz=11,SNR=21						
KDU				S	**Sn**	**17 25 27.6**	**-0.3**
	baz=11,SNR=6.3						
COEN	**Coen**	**11.05**	**157**	P	**Pn**	**17 23 33.5**	**+2.3**
	baz=11,SNR=5.5						
COEN				S	**Sn**	**17 25 35.2**	**+2.1**
	baz=11,SNR=4.1						
MTN	**Manton Dam**	**11.77**	**219**	P	**Pn**	**17 23 42.9**	**+2.0**
	baz=12,SNR=20						
MTN				S	**Sn**	**17 25 51.6**	**+1.0**
	baz=12,SNR=5.3						
WRA	**Warramunga Arr**	**16.67**	**195**	P	**P**	**17 24 46.2**	**-0.1**
	0.4nm,0.3s,baz=16,slow=13,SNR=16						
WRA				S	**Sn**	**17 27 42.4**	**-7.2**
	0.3nm,0.3s,baz=12,slow=22,SNR=5.5						
FITZ	**Fitzroy Crossi**	**19.19**	**221**	P	**Pn**	**17 25 17.5**	**+1.8**
	0.2nm,0.3s,baz=68,slow=13,SNR=12						
FITZ				S	**S**	**17 28 41.2**	**-6.9**
	0.4nm,0.3s,baz=187,slow=10,SNR=7.0						
FITZ				LR	LR	17 33 26.4	
	comp=Z,58nm,18.1s,baz=170,slow=39						
FITZ	**Fitzroy Crossi**	**19.19**	**221**	P	**Pn**	**17 25 17.7**	**+2.0**

mb1 3.8/24,mb1mx3.7/32,mbtmp3.6/24,ML4.4/2,MS3.5/3, Ms1 3.5/3,ms1mx2.7/42,Error ellipse: s-maj=16.6km s-min=11.6km az=83.0

*NEIC **10** 17:36:38.4±1.2,33.°18N×140.°87E,h59km±11km,mb4.3/8, Error ellipse: s-maj=11.3km s-min=7.7km az=78.0*

NEIC Recorded [1 JMA] on Hachijo-jima.

ISC 10 17:36:35.8±0.6,33.°27N±0.°04×141.°02E±0.°06,h37km±1km, n91,σ1§23/106,mb4.0/33,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.02**	**262**	P	**Pn**	**17 36 54.2**	**+0.7**
JHJ2				S	**Sn**	**17 37 06.5**	**-0.1**
JHCJ	**Hachijojimakas**	**1.04**	**260**	P	**Pn**	**17 36 54.3**	**+0.4**
JHCJ				*e*S	**Sn**	**17 37 07.8**	**+0.7**
JHJ	**Hachijo jima 2**	**1.04**	**262**	P	**Pn**	**17 36 54.2**	**+0.3**
JHJ	684nm,0.3s,baz=100,slow=1.4,SNR=992			S	**Sn**	**17 37 06.7**	**-0.5**
BSO1	**Boso 1**	**1.39**	**359**	P	**Pn**	**17 36 58.7**	**+0.6**
JMY	**Miyakejima3**	**1.49**	**303**	P	**Pn**	**17 37 00.4**	**+0.3**
BSO3	**Boso 3**	**1.59**	**345**	P	**Pn**	**17 37 01.4**	**+0.2**
BSO3				*e*S	**Sn**	**17 37 20.3**	**0.0**
BSO4	**Boso 4**	**1.81**	**342**	P	**Pn**	**17 37 04.9**	**+0.6**
JKO	**Kozu shima**	**1.82**	**301**	P	**Pn**	**17 37 05.3**	**+0.8**
JKO				*e*S	**Sn**	**17 37 27.3**	**+1.0**
JIM2	**Oshima 3**	**1.96**	**318**	P	**Pn**	**17 37 06.6**	**+0.1**
JIM2				*e*S	**Sn**	**17 37 27.6**	**-2.2**
JIZS	**Izushimoda**	**2.29**	**310**	P	**Pn**	**17 37 12.0**	**+0.9**
JIZS				*e*S	**Sn**	**17 37 37.8**	**-0.2**
JOD2	**Odawara 2**	**2.56**	**322**	P	**Pn**	**17 37 14.7**	**0.0**
JOD2				*e*S	**Sn**	**17 37 42.8**	**-1.7**
TK02	**Tokai 2**	**2.81**	**285**	P	**Pn**	**17 37 19.5**	**+1.6**
TK02				*e*S	**Sn**	**17 37 51.0**	**+0.6**
TK04	**Tokai 4**	**2.84**	**294**	P	**Pn**	**17 37 20.5**	**+2.0**
TK04				*e*S	**Sn**	**17 37 51.3**	**-0.2**
SHZ3	**Shizuoka 3**	**2.94**	**308**	P	**Pn**	**17 37 21.9**	**+1.9**
JYN	**Shimob**	**3.02**	**318**	P	**Pn**	**17 37 22.3**	**+1.1**
JYN				*e*S	**Sn**	**17 37 57.1**	**+0.9**
JRY	**Ryogami san**	**3.25**	**328**	P	**Pn**	**17 37 24.8**	**+0.5**
JRY				*e*S	**Sn**	**17 38 02.9**	**+1.1**
MJAR	**Matsushiro Arr**	**4.00**	**326**	P	**Pn**	**17 37 36.4**	**+1.8**
MJAR				S	**Sn**	**17 38 20.3**	**+0.1**
MJAR	**Matsushiro Arr**	**4.00**	**326**	P	**Pn**	**17 37 36.4**	**+1.8**
MJAR	16nm,0.3s,baz=155,slow=11,SNR=262			S	**Sn**	**17 38 20.3**	**+0.1**
MAT	**Matsushiro**	**4.00**	**326**	P	**Pn**	**17 37 36.7**	**+2.1**
MAT	7.1nm,0.3s,baz=147,slow=16,SNR=5.6			S	**Sn**	**17 38 21.0**	**+0.7**
CBIJ	**Chichi jima**	**6.23**	**170**	P	**Pn**	**17 38 06.1**	**+0.9**
CBIJ				S	**Sn**	**17 39 11.6**	**-3.6**
CBIJ	**Chichi jima**	**6.23**	**170**	P	**Pn**	**17 38 06.1**	**+0.9**
CBIJ	14nm,0.3s,baz=303,slow=19,SNR=28			S	**Sn**	**17 39 11.6**	**-3.6**
JNU	**Nakatsue**	**8.50**	**272**	P	**Pn**	**17 38 39.3**	**+2.9**
JNU	**Nakatsue**	**8.50**	**272**	P	**Pn**	**17 38 39.3**	**+2.9**
JNU	0.6nm,0.3s,baz=56,slow=5.6,SNR=7.0			LR	LR	17 41 54.3	
ASAJ	**Asahikawa**	**10.90**	**6**	P	**Pn**	**17 39 08.1**	**-1.1**
ASAJ				S	Sn	17 40 59.2	-11
ASAJ	**Asahikawa**	**10.90**	**6**	P	**Pn**	**17 39 08.1**	**-1.1**
ASAJ	2.1nm,0.3s,baz=200,slow=9.9,SNR=26			S	Sn	17 40 59.2	-11
KSRS	**Korea Array**	**11.48**	**295**	P	Pn	17 39 22.1	+5.0
KSAR	**Wonju Array Be**	**11.50**	**295**	P	Pn	17 39 22.1	+4.6
YSS	**Yuzh-Sakhalins**	**13.74**	**5**	Pn	Pn	17 39 45.6	-2.3
YHNB	**Yeheng**	**19.18**	**249**	P	**P**	**17 40 53.2**	**-3.2**
NACB	**Ninganchiao**	**19.27**	**247**	P	**P**	**17 40 56.4**	**-0.9**
PETK	**Petropavlovsk-**	**23.16**	**26**	P	**P**	**17 41 40.6**	**+1.8**
PETK	**Petropavlovsk-**	**23.16**	**26**	P	**P**	**17 41 40.6**	**+1.8**
ULN	**Ulaanbaatar**	**29.36**	**310**	*e*P	**P**	**17 42 36.1**	**+0.7**
SONM	**Songino Array**	**29.78**	**310**	P	**P**	**17 42 39.6**	**+0.6**
SONM	**Songino Array**	**29.78**	**310**	P	**P**	**17 42 39.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**40.35**	**259**	P	**P**	**17 44 08.7**	**-1.4**
CMAR	**Chiang Mai Arr**	**40.35**	**259**	P	**P**	**17 44 08.7**	**-1.4**
KSM	**Kuching**	**42.77**	**229**	*e*P	P	17 44 24.1	-5.9
ZALV	**Zalesovo Beam**	**44.29**	**315**	P	**P**	**17 44 41.1**	**-0.5**
ZALV				PcP	**PcP**	**17 46 25.1**	**-0.3**
ZALV	**Zalesovo Beam**	**44.29**	**315**	P	**P**	**17 44 41.1**	**-0.5**
ZALV	0.3nm,0.3s,baz=94,slow=7.7,SNR=3.5			PcP	**PcP**	**17 46 25.1**	**-0.3**
MKAR	**Makanchi Array**	**45.93**	**305**	P	**P**	**17 44 54.7**	**-0.2**
MKAR				PcP	**PcP**	**17 46 30.9**	**-0.5**
MKAR	**Makanchi Array**	**45.93**	**305**	P	**P**	**17 44 54.7**	**-0.2**
MKAR	1.3nm,0.7s,baz=88,slow=9.7,SNR=15			PcP	**PcP**	**17 46 30.9**	**-0.5**
KURK	**Kurchatov**	**48.07**	**311**	*e*P	**P**	**17 45 08.4**	**-3.1**
TKM2	**Tokmak 2**	**51.21**	**301**	*e*P	**P**	**17 45 35.4**	**-0.4**
AAK	**Ala-Archa**	**52.07**	**301**	P	**P**	**17 45 42.0**	**-0.1**
AAK	**Ala-Archa**	**52.07**	**301**	P	**P**	**17 45 42.0**	**-0.1**
ILAR	**Eielson Array**	**52.87**	**31**	P	**P**	**17 45 47.9**	**+0.4**
ILAR	**Eielson Array**	**52.87**	**31**	P	**P**	**17 45 47.9**	**+0.4**
BVAR	**Borovoye Array**	**52.92**	**314**	P	**P**	**17 45 48.5**	**+0.5**
BVAR	**Borovoye Array**	**52.92**	**314**	P	**P**	**17 45 48.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**53.15**	**198**	P	**P**	**17 45 49.1**	**-0.9**
FITZ	**Fitzroy Crossi**	**53.15**	**198**	P	**P**	**17 45 49.1**	**-0.9**
WRAB	**Tennant Creek**	**53.28**	**188**	*e*P	**P**	**17 45 50.9**	**-0.1**
WRA	**Warramunga Arr**	**53.29**	**188**	P	**P**	**17 45 51.4**	**+0.3**
WRA	**Warramunga Arr**	**53.29**	**188**	P	**P**	**17 45 51.4**	**+0.3**
AS31	**Alice Springs**	**57.02**	**188**	*e*P	**P**	**17 46 18.1**	**+0.1**
ASAR	**Alice Springs**	**57.02**	**188**	P	**P**	**17 46 18.4**	**+0.4**
ASAR	**Alice Springs**	**57.02**	**188**	P	**P**	**17 46 18.4**	**+0.4**
ARU	**Arti**	**59.00**	**320**	P	**P**	**17 46 30.4**	**-1.1**
AKTO	**Aktyubinsk**	**60.99**	**313**	P	**P**	**17 46 46.8**	**+1.5**
AKTO	**Aktyubinsk**	**60.99**	**313**	P	**P**	**17 46 46.8**	**+1.5**
STKA	**Stephens Creek**	**64.80**	**179**	P	**P**	**17 47 09.2**	**-1.4**
STKA	**Stephens Creek**	**64.80**	**179**	P	**P**	**17 47 09.2**	**-1.4**
AFI	**Afiamalu**	**65.02**	**128**	LR	LR	18 10 41.9	
RES	**Resolute Bay**	**66.33**	**14**	P	**P**	**17 47 20.3**	**+0.3**
YKA	**Yellowknife Ar**	**67.24**	**29**	P	**P**	**17 47 27.4**	**+1.4**
YKA	**Yellowknife Ar**	**67.24**	**29**	P	**P**	**17 47 27.5**	**+1.4**
JOF	**Joensuu**	**69.14**	**333**	*ep*	**P**	**17 47 37.6**	**-0.3**
NWAO	**Narrogin (SRO)**	**69.55**	**201**	P	**P**	**17 47 41.1**	**+0.4**
NWAO	**Narrogin (SRO)**	**69.55**	**201**	P	**P**	**17 47 41.1**	**+0.4**
KAF	**Kangasniemi**	**71.51**	**333**	*ep*	**P**	**17 47 51.2**	**-1.2**
FINES	**FINESS Array B**	**72.00**	**333**	P	**P**	**17 47 55.5**	**+0.1**
FINES	**FINESS Array B**	**72.00**	**333**	P	**P**	**17 47 55.5**	**+0.1**
KBZ	**Khabaz**	**73.13**	**311**	P	**P**	**17 48 02.8**	**+0.4**
KBZ	**Khabaz**	**73.13**	**311**	P	**P**	**17 48 02.8**	**+0.4**
AKASG	**Malin Array Be**	**77.08**	**323**	P	**P**	**17 48 24.9**	**-0.2**
AKASG	**Malin Array Be**	**77.08**	**323**	P	**P**	**17 48 24.9**	**-0.2**
MIB	**Mutribah**	**77.10**	**297**	*e*P	**P**	**17 48 24.9**	**-0.6**
MIB				AMb	AMB	17 48 25.8	
RDF	**Al-Radifah**	**77.39**	**296**	*e*P	**P**	**17 48 27.6**	**+0.3**
RDF				AMb	AMB	17 48 28.2	
NAY	**Al-Naaiem**	**77.46**	**297**	*e*P	**P**	**17 48 26.9**	**-0.6**
NAY				AMb	AMB	17 48 27.8	
NVAR	**Mina Array Bea**	**77.53**	**52**	P	**P**	**17 48 29.0**	**+0.9**
	comp=Z,9.1nm,0.4s						
NVAR	**Mina Array Bea**	**77.53**	**52**	P	**P**	**17 48 29.0**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=302,slow=5.2,SNR=3.0						
NOA	**NORSAR Array B**	**77.53**	**337**	P	**P**	**17 48 26.9**	**-0.6**
NOA	**NORSAR Array B**	**77.53**	**337**	P	**P**	**17 48 26.9**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=43,slow=5.8,SNR=3.4						
PDAR	**Pinedale Array**	**80.55**	**45**	LR	LR	18 23 26.2	
	comp=Z,25nm,21.0s,baz=168,slow=35						
EKA	**Eskdalemuir Ar**	**86.57**	**340**	P	**P**	**17 49 14.0**	**-0.9**
EKA	**Eskdalemuir Ar**	**86.57**	**340**	P	**P**	**17 49 14.0**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=45,slow=5.1,SNR=4.4						
TXAR	**Lajitas Array**	**92.68**	**52**	P	**P**	**17 49 46.1**	**+1.8**
TXAR	**Lajitas Array**	**92.68**	**52**	P	**P**	**17 49 46.1**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=308,slow=3.3,SNR=3.8						
LPAZ	**La Paz**	**148.75**	**64**	PKPbc	**PKPab**	**17 56 22.7**	**-1.6**
LPAZ	**La Paz**	**148.75**	**64**	PKPbc	**PKPab**	**17 56 22.7**	**-1.6**
	comp=Z,1.3nm,0.7s,baz=14,slow=4.2,SNR=5.0						

*CSEM **10** 17:40:26.4±1.1,38.°40N×20.°25E,h2km,MD2.8,Error ellipse: s-maj=19.5km s-min=9.1km az=82.0*

*THE **10** 17:40:27.0,38.°42N×20.°38E,h2km±14km,ML1.8/1,Error ellipse: s-maj=14.8km s-min=0.4km az=94.0*

*ATH **10** 17:40:29.8,38.°17N×20.°42E,h13km±4km,MD2.8/7*

ISC 10 17:40:23.5±3.9,38.°39N×20.°1E±0.°2,h5km±13km,n19, σ1§18/32,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.43**	**119**	P	**Pg**	**17 40 32.6**	**+0.8**
VLS				S	**Sg**	**17 40 36.8**	**-0.6**
VLS	**Valsamata**	**0.43**	**119**	*e*PG	**Pg**	**17 40 32.7**	**+0.9**
VLS				*e*SG	**Sg**	**17 40 36.8**	**-0.6**
VLS	**Valsamata**	**0.43**	**119**	P	**Pg**	**17 40 32.6**	**+0.8**
VLS				S	**Sg**	**17 40 36.8**	**-0.6**
LKD2	**Lefkada island**	**0.58**	**47**	P	**Pg**	**17 40 35.1**	**+0.4**
LKD2				S	**Sg**	**17 40 41.2**	**-1.1**
LKD2	**Lefkada island**	**0.58**	**47**	P	**Pg**	**17 40 35.1**	**+0.4**
LKD2				S	**Sg**	**17 40 41.2**	**-1.1**
KFL	**Anninata**	**0.60**	**118**	P	**Pg**	**17 40 35.3**	**+0.3**
KFL				S	**Sg**	**17 40 42.1**	**-0.7**
KFL	**Anninata**	**0.60**	**118**	P	**Pg**	**17 40 35.3**	**+0.3**
KFL				S	**Sg**	**17 40 42.1**	**-0.7**
RLS	**Riolos of Patr**	**1.12**	**107**	*e*PG	**Pg**	**17 40 45.1**	**+0.2**
RLS	**Riolos of Patr**	**1.12**	**107**	*e*Pg	**Pg**	**17 40 45.1**	**+0.2**
EFP	**Efpalio**	**1.41**	**88**	*e*PB	**Pg**	**17 40 52.6**	**+2.1**
EFP				*e*SB	**Sn**	**17 41 09.0**	**+0.2**
EFP	**Efpalio**	**1.41**	**88**	*e*Pb	**Pg**	**17 40 52.6**	**+2.1**
EFP				*e*Sb	**Sn**	**17 41 09.0**	**+0.2**
LAKA	**Lakka**	**1.48**	**95**	*e*PN	**Pg**	**17 40 52.4**	**+0.6**
LAKA	**Lakka**	**1.48**	**95**	*e*Pn	**Pg**	**17 40 52.4**	**+0.6**
TRIZ	**Trizonia**	**1.54**	**90**	*e*PB	**Pg**	**17 40 54.8**	**+1.8**
TRIZ				*e*SB	**Sg**	**17 41 12.0**	**-1.0**
TRIZ	**Trizonia**	**1.54**	**90**	*e*Pb	**Pg**	**17 40 54.8**	**+1.8**
TRIZ				*e*Sb	**Sg**	**17 41 12.0**	**-1.0**
KALE	**Kalithea**	**1.59**	**89**	*e*PB	**Pg**	**17 40 56.2**	**+2.2**
KALE	**Kalithea**	**1.59**	**89**	*e*Pb	**Pg**	**17 40 56.2**	**+2.2**
GUR	**Goura**	**1.81**	**104**	*e*PB	**Pg**	**17 40 59.5**	**+1.2**
GUR				*e*SB	**Sb**	**17 41 19.6**	**-0.8**
GUR	**Goura**	**1.81**	**104**	*e*Pb	**Pg**	**17 40 59.5**	**+1.2**
GUR				*e*Sb	**Sb**	**17 41 19.6**	**-0.8**

IDC 10 17:41:55.9±10.0,31.°80N×139.°59E,h0km,mb3.2/3, mb1 3.5/3,mb1mx3.2/24,mbtmp3.2/3,Error ellipse: s-maj=396.4km s-min=31.3km az=65.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**45.81**	**306**	P	P	17 50 19.4	-0.1
	0.2nm,0.7s,baz=84,slow=8.0,SNR=2.7						
WRA	**Warramunga Arr**	**51.69**	**186**	P	P	17 51 05.0	+0.2
	0.1nm,0.3s,baz=4.5,slow=7.6,SNR=6.1						
ASAR	**Alice Springs**	**55.42**	**186**	P	P	17 51 31.8	-0.4
	0.2nm,0.5s,baz=3.1,slow=6.0,SNR=6.0						

*ISCJB **10** 17:58:01.9±0.5,0.°24N±0.°06×122.°22E±0.°06,h195km±6km, mb3.8/13,Error ellipse: s-maj=11.0km s-min=9.2km az=30.7*

*BJI **10** 17:58:02.6,0.°20N×122.°20E,h190km,mB4.5/3,mb4.5/6*

*IDC **10** 17:58:03.0±2.1,0.°26N×122.°31E,h193km±20km,mb3.5/11, mb1 3.6/13,mb1mx3.4/27,mbtmp3.5/13,MS3.3/1, Ms1 3.3/1,ms1mx2.3/26,Error ellipse: s-maj=25.5km s-min=9.9km az=62.0*

*DJA **10** 17:58:03.4±0.6,0.°N±7.°×12.°2E±.°,h167km±11km,M4.3/5, mb4.4/3,mB4.6/3,MLv4.3/5,Mw(mB)3.8/3*

ISC 10 17:58:03.2±0.6,0.°19N±0.°06×122.°23E±0.°07,h194km±5km, h194km:pP-P,n28,σ1§33/40,mb3.9/13,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**0.41**	**315**	P	**Pn**	**17 58 26.2**	**-3.2**
LUWI	**Luwuk**	**1.34**	**156**	P	**Pn**	**17 58 34.3**	**-0.7**
KMSI	**Cibinong**	**1.79**	**78**	P	**Pn**	**17 58 39.1**	**-0.1**
MNI	**Manado**	**2.89**	**64**	P	**Pn**	**17 58 51.1**	**-0.3**
TTSI	**Tana Toraja**	**4.01**	**217**	P	**Pn**	**17 59 04.9**	**-0.1**
SPSI	**Sidrap Palu**	**4.80**	**211**	P	**Pn**	**17 59 14.9**	**-0.1**
BNSI	**Bone**	**5.03**	**205**	P	**Pn**	**17 59 18.5**	**+0.6**
SMKI	**Samarinda**	**5.06**	**263**	P	**Pn**	**17 59 17.0**	**-1.3**
TNTI	**Ternate**	**5.17**	**84**	P	**Pn**	**17 59 18.9**	**-0.8**
KAPI	**Kappang**	**5.73**	**206**	P	**Pn**	**17 59 26.4**	**-0.6**
KAPI	**Kappang**	**5.73**	**206**	P	**Pn**	**17 59 26.3**	**-0.6**
BKSI	**Bulukumba**	**5.86**	**201**	P	**Pn**	**17 59 29.3**	**+0.6**
FITZ	**Fitzroy Crossi**	**18.48**	**170**	P	**P**	**18 02 05.4**	**+0.6**
WRA	**Warramunga Arr**	**23.26**	**150**	P	**P**	**18 02 53.4**	**-0.2**
WRA				*p*P	**pP**	**18 03 27.9**	**-1.4**
WRA				PcP	**PcP**	**18 06 35.1**	**-0.4**
PSI	**Prapat**	**23.44**	**277**	P	**P**	**18 02 55.5**	**0.0**
ASAR	**Alice Springs**	**26.28**	**155**	P	**P**	**18 03 21.5**	**+0.5**
ASAR				*p*P	**pP**	**18 03 59.3**	**-0.9**
ASAR				PcP	**PcP**	**18 06 41.9**	**-0.3**
ASAR				ScP	**ScP**	**18 10 03.0**	**-0.8**
CMAR	**Chiang Mai Arr**	**29.20**	**310**	P	**P**	**18 03 47.6**	**+0.7**
STKA	**Stephens Creek**	**36.78**	**152**	P	**P**	**18 04 53.2**	**+0.8**
MJAR	**Matsushiro Arr**	**39.09**	**21**	LR	LR	18 21 17.3	
HHC	**Hu-ho-hao-te**	**41.62**	**348**	*e*P	**P**	**18 05 34.7**	**+2.3**
HHC				*p*P	**pP**	**18 06 15.7**	**+1.7**
HHC				*s*P	**sP**	**18 06 36.6**	**+0.6**
HHC				PP	**PnPn**	**18 07 17.2**	**-2.5**
HHC				S	**S**	**18 11 36.9**	**+2.8**
HHC				*s*S	**sS**	**18 12 49.6**	**+2.4**
HHC				ScS	**ScS**	**18 15 14.2**	**-0.5**
HHC	comp=Z,11nm,0.7s			*p*max	*p*max		
HHC	comp=Z,270nm,4.9s			*p*max	*p*max		
GTA	**Gaotai**	**44.09**	**335**	*e*P	**P**	**18 05 53.3**	**+0.9**
GTA	comp=Z,8.0nm,0.9s			*p*max	*p*max		
SONM	**Songino Array**	**49.41**	**346**	P	**P**	**18 06 33.7**	**+0.2**
SONM	comp=Z,2.1nm,0.7s,baz=164,slow=8.8,SNR=25			PcP	**PcP**	**18 07 50.8**	**-2.0**
MKAR	**Makanchi Array**	**58.05**	**329**	P	**P**	**18 07 35.9**	**-0.2**
MKAR	comp=Z,1.9nm,0.3s,baz=126,slow=8.8,SNR=61			PcP	**PcP**	**18 08 24.6**	**-1.0**
AAK	**Ala-Archa**	**60.10**	**321**	P	**P**	**18 07 50.5**	**+0.1**
PETK	**Petropavlovsk-**	**60.42**	**24**	P	**P**	**18 07 50.3**	**-1.8**
ZALV	**Zalesovo Beam**	**61.83**	**336**	P	**P**	**18 08 00.0**	**-1.5**
BVAR	**Borovoye Array**	**67.92**	**329**	P	**P**	**18 08 41.3**	**+0.4**
TORD	**Torodi Ar. Bea**	**119.61**	**285**	PKP	**PKPdf**	**18 16 29.2**	**-1.8**
	comp=Z,0.3nm,0.9s,baz=93,slow=1.6,SNR=3.4						

IDC 10 18:06:56.5±5.5,8.°35S×159.°52E,h56km±70km,mb3.1/4, mb1 3.2/4,mb1mx3.1/19,mbtmp3.1/4,Error ellipse: s-maj=69.1km s-min=34.6km az=121.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.15**	**159**	P	Pn	18 07 15.7	-0.7
HNR	161nm,0.3s,baz=227,slow=4.0,SNR=352 643nm,0.3s,baz=68,slow=19,SNR=28			S	Sn	18 07 31.4	+0.2
WRA	**Warramunga Arr**	**26.95**	**242**	P	P	18 12 33.1	+0.1
	0.3nm,0.9s,baz=72,slow=10,SNR=2.5						
ASAR	**Alice Springs**	**28.87**	**235**	P	P	18 12 50.0	-0.1
	0.4nm,1.0s,baz=61,slow=10,SNR=3.3						
SONM	**Songino Array**	**72.94**	**326**	P	P	18 18 21.3	+1.2
	0.2nm,0.8s,baz=128,slow=4.2,SNR=4.2						
SONM				*p*P	pP	18 18 33.9	-1.8
	0.2nm,0.7s,baz=164,slow=5.9,SNR=2.3						
MKAR	**Makanchi Array**	**87.40**	**318**	P	P	18 19 36.7	-1.1
	0.2nm,0.6s,baz=100,slow=5.0,SNR=2.7						
MKAR				*p*P	pP	18 19 54.4	+0.5
	0.2nm,0.7s,baz=103,slow=4.4,SNR=2.4						

IDC 10 18:08:06.7±7.6,15.°51S×173.°26W,h0km,mb3.7/3, mb1 4.0/4,mb1mx3.6/22,mbtmp3.7/4,ML2.1/1,MS3.7/5, Ms1 3.8/5,ms1mx3.3/33,Error ellipse: s-maj=366.3km s-min=24.2km az=142.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.14**	**42**	Pn	Pn	18 08 42.0	-1.9
	38nm,0.3s,baz=175,slow=2.1,SNR=50						
AFI				Sn	Sn	18 09 05.9	-5.3
	52nm,0.3s,baz=49,slow=19,SNR=16						
PAE	**Paea**	**22.79**	**99**	*e*T	T	18 37 04.3	
	1.4nm,0.2s						
PPT2	**Papeete2**	**22.79**	**99**	*e*LQ	LQ	18 18 03.5	
	374nm,26.5s						
PPT2				*e*LR	LR	18 18 48.8	
	147nm,27.0s						
TBI	**Tubuai**	**23.73**	**113**	*e*LR	LR	18 19 24.7	
	176nm,27.0s						
TBI				*e*T	T	18 38 26.1	
	4.1nm,0.3s						
URZ	**Urewera**	**24.20**	**199**	LR	LR	18 21 40.4	
	comp=Z,159nm,19.3s,baz=115,slow=34						
WRA	**Warramunga Arr**	**49.95**	**257**	P	P	18 17 01.3	-1.6
	0.3nm,0.6s,baz=90,slow=7.3,SNR=4.2						
ASAR	**Alice Springs**	**50.21**	**252**	P	P	18 17 04.7	-0.1
	1.7nm,0.6s,baz=89,slow=7.8,SNR=25						
MJAR	**Matsushiro Arr**	**69.11**	**320**	LR	LR	18 44 09.8	
	comp=Z,55nm,20.3s,baz=80,slow=31						
NVAR	**Mina Array Bea**	**74.32**	**42**	LR	LR	18 43 03.5	
	comp=Z,75nm,21.0s,baz=87,slow=28						
KSRS	**Korea Array**	**76.33**	**316**	LR	LR	18 53 54.7	
	comp=Z,27nm,18.0s,baz=71,slow=36						
ILAR	**Eielson Array**	**82.53**	**11**	P	P	18 20 31.3	+0.4
	0.6nm,1.1s,baz=206,slow=10.0,SNR=3.0						
CMAR	**Chiang Mai Arr**	**92.78**	**288**	LR	LR	19 01 25.8	
	comp=Z,51nm,18.7s,baz=172,slow=34						
BRTR	**Keskin Array B**	**146.33**	**321**	PKPbc	PKPab	18 27 51.2	+0.6
	0.6nm,0.8s,baz=0.0,slow=2.9,SNR=3.1						

*CSEM **10** 18:25:21.4±0.4,42.°38N×13.°41E,h27km±3km,ML2.1/4, Error ellipse: s-maj=7.5km s-min=6.2km az=70.0*

ROM 10 18:25:22.5±0.1,42.°36N×13.°41E,h9km±1km,MI1.7/4, Error ellipse: s-maj=1.5km s-min=1.4km az=81.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.01**	**263**	Pg	Pg	18 25 24.3	+0.1
AQU				Sg	Sg	18 25 25.0	-0.3
	245nm,0.5s						
AQU	**L'Aquila**	**0.01**	**263**	Pg	Pg	18 25 24.3	+0.1
FAGN	**Fagnano**	**0.15**	**125**	Pg	Pg	18 25 26.7	+0.8
FAGN				Sg	Sg	18 25 29.8	+1.5
	522nm,0.6s						
FAGN	**Fagnano**	**0.15**	**125**	Pg	Pg	18 25 26.7	+0.8
FAGN				Sg	Sg	18 25 29.8	+1.5
	522nm,0.6s						
CAMP	**Campotosto**	**0.18**	**359**	Pg	Pg	18 25 27.3	+0.8
CAMP				Sg	Sg	18 25 30.3	+1.1
CAMP	**Campotosto**	**0.18**	**359**	Pg	Pg	18 25 27.3	+0.8
CAMP				Sg	Sg	18 25 30.3	+1.1
FIAM	**Fiamignano**	**0.24**	**249**	Pg	Pg	18 25 28.3	+0.8
FIAM				Sg	Sg	18 25 32.2	+1.4
	87nm,0.5s						
FIAM	**Fiamignano**	**0.24**	**249**	Pg	Pg	18 25 28.3	+0.8
FIAM				Sg	Sg	18 25 32.2	+1.4
	87nm,0.5s						
TERO	**Teramo**	**0.30**	**28**	Pg	Pg	18 25 29.0	+0.4
TERO				Sg	Sg	18 25 33.7	+0.9
	94nm,0.1s						
TERO	**Teramo**	**0.30**	**28**	Pg	Pg	18 25 29.0	+0.4
TERO				Sg	Sg	18 25 33.7	+0.9
	94nm,0.1s						
VCEL	**Villa Celiera**	**0.32**	**83**	Pg	Pb	18 25 30.1	-0.5
VCEL				Sg	Sb	18 25 35.1	-0.9
	96nm,1.2s						
VCEL	**Villa Celiera**	**0.32**	**83**	Pg	Pb	18 25 30.1	-0.5
VCEL				Sg	Sb	18 25 35.1	-0.9
	96nm,1.2s						
PTQR	**Pietraquaria**	**0.33**	**182**	Pg	Pg	18 25 29.9	+0.7
PTQR				Sg	Sg	18 25 34.9	+1.1
PTQR	**Pietraquaria**	**0.33**	**182**	Pg	Pg	18 25 29.9	+0.7
PTQR				Sg	Sg	18 25 34.9	+1.1
LNSS	**Leonessa**	**0.37**	**312**	Pg	Pb	18 25 31.0	-0.5
LNSS				Sg	Sb	18 25 37.2	-0.3
LNSS	**Leonessa**	**0.37**	**312**	Pg	Pb	18 25 31.0	-0.5
INTR	**Introdacqua**	**0.50**	**133**	Pg	Pg	18 25 32.7	+0.3
INTR				Sg	Sb	18 25 40.4	-0.7
INTR	**Introdacqua**	**0.50**	**133**	Pg	Pg	18 25 32.7	+0.3
INTR				Sg	Sb	18 25 40.4	-0.7
LPEL	**Lama dei Pelig**	**0.65**	**118**	Pg	Pg	18 25 35.0	-0.2
LPEL	**Lama dei Pelig**	**0.65**	**118**	Pg	Pg	18 25 35.0	-0.2

*IDC **10** 18:36:58.3±1.2,5.°23N×127.°49E,h0km,mb3.8/7, mb1 3.9/7,mb1mx3.7/24,mbtmp3.8/7,

STKA	**Stephens Creek**	**39.27**	**161**	P	**P**	**18 44 28.7**	**-0.1**
STKA	**Stephens Creek**	**39.27**	**161**	P	**P**	**18 44 28.7**	**-0.1**
	4.7nm,0.6s,baz=342,slow=7.4,SNR=24						
SONM	**Songino Array**	**46.14**	**341**	P	**P**	**18 45 25.1**	**+0.7**
SONM	**Songino Array**	**46.14**	**341**	P	**P**	**18 45 25.1**	**+0.7**
	0.2nm,0.6s,baz=173,slow=7.6,SNR=2.4						
MKAR	**Makanchi Array**	**56.71**	**324**	P	**P**	**18 46 44.2**	**+0.9**
MKAR	**Makanchi Array**	**56.71**	**324**	P	**P**	**18 46 44.2**	**+0.9**
	1.0nm,0.6s,baz=120,slow=8.6,SNR=20						
ZALV	**Zalesovo Beam**	**59.58**	**332**	P	**P**	**18 47 03.4**	**+0.2**
ZALV	**Zalesovo Beam**	**59.58**	**332**	P	**P**	**18 47 03.4**	**+0.2**
	0.3nm,0.4s,baz=134,slow=4.2,SNR=2.4						
KURK	**Kurchatov**	**60.85**	**327**	*e*P	**P**	**18 47 12.4**	**+0.6**
BRVK	**Borovoye**	**66.51**	**327**	*e*P	**P**	**18 47 49.3**	**+0.2**
	1.6nm,0.8s						
ABKAR	**Akbulak array**	**71.40**	**320**	*e*P	**P**	**18 48 19.6**	**+0.1**
	1.4nm,0.7s						

IDC 10 18:43:09.1±63.0, 16°21S×177°12W, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/19, mbtmp3.5/3, Error ellipse: s-maj=1161.0km s-min=182.0km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.54**	**240**	P	P	18 50 50.1	-0.2
	1.0nm,0.9s,baz=96,slow=9.2,SNR=2.9						
WRA	**Warramunga Arr**	**46.18**	**258**	P	P	18 51 36.1	+0.1
	0.2nm,0.7s,baz=90,slow=7.6,SNR=4.2						
ASAR	**Alice Springs**	**46.46**	**253**	P	P	18 51 38.0	-0.3
	0.7nm,0.5s,baz=90,slow=7.8,SNR=32						

*MOS **10** 19:02:27.8±1.4,51.2°N×155.9°E, h31km, mb4.2/1, Error ellipse: s-maj=30.3km s-min=12.6km az=67.3*
MOS Felt (II) at Severo-Kuril'sk.
*KRSC **10** 19:02:29.4±0.9,50.7°N×157.9°E, h10km±10km, ML4.1*
ISC 10 19:02:26.2±1.8, 50.4°N±0.1°×157.8°E±0.1°, h74km±23km, n27, σ1§76/40, 3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.99**	**289**	⇓*i* P	Pn	19 02 40.9	-3.8
SKR				*i*		19 02 44.6	
SKR	comp=E,810nm,0.4s			pmax	pmax		
SKR	comp=Z,2μm,0.4s			pmax	pmax		
SKR	comp=N,570nm,0.3s			pmax	pmax		
SKR	comp=Z,2μm,0.4s			pmax	pmax		
SKR	comp=N,6μm,0.4s			smax	smax		
SKR	comp=E,7μm,0.4s			smax	smax		
SKR	comp=N,4μm,0.4s			smax	smax		
SKR	comp=E,4μm,0.4s			smax	smax		
MIPR	**Malaya Ipel'ka**	**1.98**	**345**	P	**Pn**	**19 02 58.9**	**+1.2**
MIPR				*i* S	**Sn**	**19 03 20.3**	**-1.3**
RUS	**Russkaya**	**2.15**	**15**	PN	**Pn**	**19 03 00.2**	**+0.3**
RUS				S	**Sn**	**19 03 22.9**	**-2.7**
RUS	**Russkaya**	**2.15**	**15**	*i* P	**Pn**	**19 03 00.2**	**+0.3**
RUS				*i* S	**Sn**	**19 03 22.9**	**-2.7**
MTVR	**Mutnovka**	**2.15**	**10**	*i* P	**Pn**	**19 03 00.9**	**+0.8**
MTVR				*i* S	**Sn**	**19 03 24.0**	**-1.9**
GRL	**Gorelyy**	**2.21**	**8**	*i* P	**Pn**	**19 03 02.1**	**+1.3**
GRL				*i* S	**Sn**	**19 03 26.0**	**-1.3**
APC	**Apacha**	**2.57**	**354**	*e*P	**Pn**	**19 03 07.3**	**+1.7**
APC				*i* S	**Sn**	**19 03 35.0**	**-0.9**
PET	**Petropavlovsk**	**2.74**	**14**	*e*PN	**Pn**	**19 03 09.1**	**+1.2**
PET				*e*S	**Sn**	**19 03 38.8**	**-1.1**
PET	comp=Z,54nm,0.3s			pmax	pmax		
PET	comp=N,277nm,0.4s			smax	smax		
PET	**Petropavlovsk**	**2.74**	**14**	*e*P	**Pn**	**19 03 09.2**	**+1.3**
PET				*i* S	**Sn**	**19 03 38.5**	**-1.4**
UGLR	**Uglovaya**	**2.95**	**15**	*e*P	**Pn**	**19 03 12.8**	**+2.0**
UGLR				*i* S	**Sn**	**19 03 45.0**	**-0.1**
AVH	**Avacha**	**2.99**	**13**	*e*P	**Pn**	**19 03 14.2**	**+2.9**
AVH				*i* S	**Sn**	**19 03 46.6**	**+0.5**
SMAR	**Somma**	**3.00**	**14**	*e*P	**Pn**	**19 03 13.5**	**+1.9**
SMAR				*e*S	**Sn**	**19 03 45.9**	**-0.6**
KOK	**Koryaka**	**3.00**	**12**	*e*P	**Pn**	**19 03 14.2**	**+2.7**
KOK				*i* S	**Sn**	**19 03 47.6**	**+1.2**
SDLR	**Sedlovina**	**3.02**	**15**	*e*P	**Pn**	**19 03 13.3**	**+1.4**
SDLR				*i* S	**Sn**	**19 03 45.6**	**-1.4**
KRER	**Koryakskii**	**3.03**	**13**	*e*P	**Pn**	**19 03 14.3**	**+2.3**
KRER				*i* S	**Sn**	**19 03 47.6**	**+0.4**
SPN	**Mys Shipunski**	**3.13**	**28**	PN	**Pn**	**19 03 14.6**	**+1.5**
SPN	**Mys Shipunski**	**3.13**	**28**	P	**Pn**	**19 03 14.6**	**+1.5**
SPN				*i* S	**Sn**	**19 03 48.0**	**-1.3**
GNL	**Ganaly**	**3.34**	**4**	*e*P	**Pn**	**19 03 18.6**	**+2.5**
GNL				*i* S	**Sn**	**19 03 54.7**	**0.0**
MKZ	**Mys Kozlova**	**4.90**	**30**	PN	**Pn**	**19 03 39.0**	**+1.7**
MKZ	**Mys Kozlova**	**4.90**	**30**	*e*P	**Pn**	**19 03 39.0**	**+1.7**
MKZ				*i* S	**Sn**	**19 04 29.8**	**-2.8**
TUMR	**Tumrok**	**5.16**	**17**	P	Pn	19 03 44.7	+3.7
KMNR	**Kamenistaya**	**5.63**	**15**	P	Pn	19 03 51.7	+4.4
KBTR	**Krutoberegovo**	**6.64**	**26**	PN	**Pn**	**19 04 03.6**	**+2.6**
KBTR	**Krutoberegovo**	**6.64**	**26**	P	**Pn**	**19 04 03.6**	**+2.6**
ERM	**Erimo**	**13.01**	**236**	⇓*e*PN	**Pn**	**19 05 27.7**	**-0.1**
YAK	**Yakutsk**	**19.24**	**318**	*e*P	P	19 06 35.7	-8.5
BRVK	**Borovoye**	**50.91**	**309**	⇓*e*P	**P**	**19 11 18.2**	**-1.2**
BRVK	comp=Z,5.0nm,2.5s			pmax	pmax		

*ISCJB **10** 19:06:06.9±0.5, 39.62N±0.03°×27.14E±0.03, h9km±5km, Error ellipse: s-maj=4.7km s-min=3.9km az=166.4*
*DDA **10** 19:06:06.6, 39.59N×27.16E, h7km, MD2.9*
*ISK **10** 19:06:06.8, 39.64N×27.15E, h11km, MD2.7*
*CSEM **10** 19:06:07.1±0.1, 39.62N×27.14E, h12km, MD2.9, Error ellipse: s-maj=2.1km s-min=1.9km az=103.0*
ISC 10 19:06:06.8±1.0, 39.62N±0.02°×27.16E±0.02, h13km±11km, n33, σ0§29/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALY	**Balya**	**0.38**	**71**	*i* P	**Pb**	**19 06 15.2**	**-0.2**
BALY				*i* S	**Sb**	**19 06 20.9**	**-0.3**
BALY	**Balya**	**0.38**	**71**	*i* P	**Pb**	**19 06 15.2**	**-0.2**
BALY				*i* S	**Sb**	**19 06 20.9**	**-0.3**
AYVA	**Ayvalik**	**0.47**	**229**	*i* P	**Pg**	**19 06 16.3**	**+0.2**
AYVA				*i* S	**Sg**	**19 06 22.5**	**+0.1**
AYVA	**Ayvalik**	**0.47**	**229**	*i* P	**Pg**	**19 06 16.3**	**+0.2**
AYVA				*i* S	**Sg**	**19 06 22.5**	**+0.1**
BALB	**Balikesir**	**0.56**	**88**	*e*PG	**Pb**	**19 06 18.6**	**+0.2**
BALB				*e*SG	**Sb**	**19 06 26.5**	**+0.1**
BALB	**Balikesir**	**0.56**	**88**	*e*Pg	**Pb**	**19 06 18.6**	**+0.2**
BALB				*e*Sg	**Sb**	**19 06 26.5**	**+0.1**
GONE	**Gonen-Balikesi**	**0.59**	**44**	*e*PG	**Pg**	**19 06 18.5**	**+0.2**
GONE				*e*SG	**Sb**	**19 06 28.0**	**+0.7**
GONE	**Gonen-Balikesi**	**0.59**	**44**	*e*Pg	**Pg**	**19 06 18.5**	**+0.2**
GONE				*e*Sg	**Sb**	**19 06 28.0**	**+0.7**
EZN	**Ezine**	**0.67**	**288**	*e*PG	**Pb**	**19 06 20.4**	**0.0**
EZN	**Ezine**	**0.67**	**288**	*e*Pg	**Pb**	**19 06 20.4**	**0.0**
KRBG	**Karabiga-Canak**	**0.78**	**8**	*e*PG	**Pg**	**19 06 21.8**	**-0.1**
KRBG				*e*SG	**Sb**	**19 06 32.9**	**+0.1**
KRBG	**Karabiga-Canak**	**0.78**	**8**	*e*Pg	**Pg**	**19 06 21.8**	**-0.1**
KRBG				*e*Sg	**Sb**	**19 06 32.9**	**+0.1**
LPK	**Lapseki**	**0.81**	**338**	*e*PG	**Pg**	**19 06 22.6**	**+0.1**
LPK	**Lapseki**	**0.81**	**338**	*e*Pg	**Pg**	**19 06 22.6**	**+0.1**
BOZC	**Bozcaada**	**0.88**	**285**	*i* P	**Pn**	**19 06 24.6**	**-0.3**
BOZC				*i* S	**Sb**	**19 06 35.9**	**+0.3**
AKHS	**Akhisar**	**0.90**	**145**	*i* P	**Pg**	**19 06 24.1**	**0.0**
AKHS				*i* S	**Sg**	**19 06 35.9**	**0.0**
AKHS	**Akhisar**	**0.90**	**145**	*i* P	**Pg**	**19 06 24.1**	**0.0**
AKHS				*i* S	**Sg**	**19 06 35.9**	**0.0**
GELI	**Tayfur-Gelibol**	**0.94**	**326**	*e*PG	**Pg**	**19 06 24.7**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.94**	**326**	*e*Pg	**Pg**	**19 06 24.7**	**-0.2**
DURS	**Dursunbey**	**1.02**	**91**	*i* P	**Pb**	**19 06 26.6**	**+0.3**
DURS				*i* S	**Sg**	**19 06 39.1**	**-0.6**
DURS	**Dursunbey**	**1.02**	**91**	*i* P	**Pb**	**19 06 26.6**	**+0.3**
DURS				*i* S	**Sg**	**19 06 39.1**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.07**	**1**	*e*PG	**Pn**	**19 06 27.6**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.07**	**1**	*e*Pg	**Pn**	**19 06 27.6**	**+0.1**
MFT	**Murefte**	**1.17**	**5**	*e*PN	**Pg**	**19 06 29.4**	**+0.1**
MFT	**Murefte**	**1.17**	**5**	*e*Pn	**Pg**	**19 06 29.4**	**+0.1**
IZM	**Izmir**	**1.22**	**176**	*e*PN	**Pg**	**19 06 30.5**	**+0.2**
IZM	**Izmir**	**1.22**	**176**	*e*Pn	**Pg**	**19 06 30.5**	**+0.2**
BLCB	**Balcova**	**1.23**	**184**	*e*PN	**Pg**	**19 06 30.8**	**+0.3**
BLCB	**Balcova**	**1.23**	**184**	*e*Pn	**Pg**	**19 06 30.8**	**+0.3**
URLA	**Izmir**	**1.33**	**199**	*i* P	**Pn**	**19 06 31.1**	**0.0**
URLA				*i* S	**Sb**	**19 06 47.9**	**-0.7**
URLA	**Izmir**	**1.33**	**199**	*i* P	**Pn**	**19 06 31.1**	**0.0**
URLA				*i* S	**Sb**	**19 06 47.9**	**-0.7**
ENEZ	**Enez**	**1.35**	**326**	*e*PN	**Pb**	**19 06 32.1**	**+0.1**
ENEZ	**Enez**	**1.35**	**326**	*e*Pn	**Pb**	**19 06 32.1**	**+0.1**

*CSEM **10** 19:06:22.5, 42.35N×13.49E, h10km, After ROM*
ROM 10 19:06:22.5±0.1, 42.35N×13.49E, h10km, MI1.7/8, Error ellipse: s-maj=1.1km s-min=0.8km az=60.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**277**	Pg	Pg	19 06 24.9	+0.2
AQU				Sg	Sg	19 06 26.7	+0.4
	622nm,0.3s						
AQU	**L'Aquila**	**0.07**	**277**	Pg	Pg	19 06 24.9	+0.2
AQU				Sg	Sg	19 06 26.7	+0.4
	622nm,0.3s						
FAGN	**Fagnano**	**0.10**	**140**	Pg	Pg	19 06 25.6	+0.4
FAGN				Sg	Sg	19 06 27.4	+0.3
	669nm,0.5s						
FAGN	**Fagnano**	**0.10**	**140**	Pg	Pg	19 06 25.6	+0.4
FAGN				Sg	Sg	19 06 27.4	+0.3
	669nm,0.5s						
CAMP	**Campotosto**	**0.20**	**342**	Pg	Pg	19 06 27.5	+0.6
CAMP				Sg	Sg	19 06 31.2	+1.3
	51nm,0.5s						
CAMP	**Campotosto**	**0.20**	**342**	Pg	Pg	19 06 27.5	+0.6
CAMP				Sg	Sg	19 06 31.2	+1.3
	51nm,0.5s						
VCEL	**Villa Celiera**	**0.26**	**79**	Pg	Pb	19 06 28.8	-0.7
VCEL				Sg	Sg	19 06 32.8	+1.1
	149nm,0.3s						
VCEL	**Villa Celiera**	**0.26**	**79**	Pg	Pb	19 06 28.8	-0.7
VCEL				Sg	Sg	19 06 32.8	+1.1
	149nm,0.3s						
TERO	**Teramo**	**0.29**	**16**	Pg	Pg	19 06 28.8	+0.4
TERO				Sg	Sg	19 06 33.3	+0.9
	73nm,0.4s						
TERO	**Teramo**	**0.29**	**16**	Pg	Pg	19 06 28.8	+0.4
TERO				Sg	Sg	19 06 33.3	+0.9
	73nm,0.4s						
FIAM	**Fiamignano**	**0.29**	**255**	Pg	Pg	19 06 29.1	+0.6
FIAM				Sg	Sb	19 06 33.8	-1.2
	57nm,0.5s						
FIAM	**Fiamignano**	**0.29**	**255**	Pg	Pg	19 06 29.1	+0.6
FIAM				Sg	Sb	19 06 33.8	-1.2
	57nm,0.5s						
PTQR	**Pietraquaria**	**0.33**	**192**	Pg	Pg	19 06 29.5	+0.3
PTQR				Sg	Sg	19 06 34.6	+0.9
	12nm,0.2s						
PTQR	**Pietraquaria**	**0.33**	**192**	Pg	Pg	19 06 29.5	+0.3
PTQR				Sg	Sg	19 06 34.6	+0.9
	12nm,0.2s						
INTR	**Introdacqua**	**0.45**	**137**	Pg	Pg	19 06 31.6	+0.1
INTR				Sg	Sb	19 06 39.2	-0.4
INTR	**Introdacqua**	**0.45**	**137**	Pg	Pg	19 06 31.6	+0.1
INTR				Sg	Sb	19 06 39.2	-0.4
VVLD	**Villa Vallelon**	**0.48**	**169**	Pg	Pg	19 06 32.4	+0.3
VVLD				Sg	Sb	19 06 39.9	-0.7
	38nm,0.7s						
VVLD	**Villa Vallelon**	**0.48**	**169**	Pg	Pg	19 06 32.4	+0.3
VVLD				Sg	Sb	19 06 39.9	-0.7
	38nm,0.7s						
CERT	**Cerreto**	**0.55**	**224**	Pg	Pb	19 06 34.1	-0.3
CERT	**Cerreto**	**0.55**	**224**	Pg	Pb	19 06 34.1	-0.3
NRCA	**Norcia**	**0.56**	**330**	Pg	Pg	19 06 33.6	0.0
NRCA				Sg	Sb	19 06 42.4	-0.5
	46nm,0.1s						
NRCA	**Norcia**	**0.56**	**330**	Pg	Pg	19 06 33.6	0.0
NRCA				Sg	Sb	19 06 42.4	-0.5
	46nm,0.1s						
LPEL	**Lama dei Pelig**	**0.59**	**120**	Pg	Pg	19 06 34.5	+0.4
LPEL				Sg	Sb	19 06 43.5	-0.1
	25nm,0.2s						
LPEL	**Lama dei Pelig**	**0.59**	**120**	Pg	Pg	19 06 34.5	+0.4
LPEL				Sg	Sb	19 06 43.5	-0.1
	25nm,0.2s						
SDI	**San Donato**	**0.68**	**160**	Pg	Pg	19 06 35.8	+0.1
	12nm,0.4s						
SDI	**San Donato**	**0.68**	**160**	Pg	Pg	19 06 35.8	+0.1
	12nm,0.4s						

*CSEM **10** 19:07:21.7±0.1, 42.36N×13.39E, h2km, ML2.7, Error ellipse: s-maj=2.9km s-min=2.4km az=54.0*
*LDG **10** 19:07:24.8±0.7, 42.44N×13.33E, h2km, Ml2.7/8, Error ellipse: s-maj=14.4km s-min=9.8km az=102.0*
ROM 10 19:07:21.0±0.1, 42.37N×13.40E, h9km, MI3.2/27, 3C, Error ellipse: s-maj=1.1km s-min=0.9km az=68.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.01**	**172**	⇑*i* Pg	Pg	19 07 22.7	0.0
AQU				Sg	Sg	19 07 23.6	-0.3
	129μm,0.4s						
AQU	**L'Aquila**	**0.01**	**172**	⇑*i* Pg	Pg	19 07 22.7	0.0
AQU				Sg	Sg	19 07 23.6	-0.3
	129μm,0.4s						
CAMP	**Campotosto**	**0.17**	**3**	Pg	Pg	19 07 25.2	+0.4
CAMP				Sg	Sg	19 07 28.2	+0.8
	8μm,0.7s						
CAMP	**Campotosto**	**0.17**	**3**	Pg	Pg	19 07 25.2	+0.4
CAMP				Sg	Sg	19 07 28.2	+0.8
	8μm,0.7s						
FAGN	**Fagnano**	**0.17**	**127**	Pg	Pg	19 07 25.5	+0.8
FAGN				Sg	Sg	19 07 29.2	+1.9
	17μm,0.5s						
FAGN	**Fagnano**	**0.17**	**127**	Pg	Pg	19 07 25.5	+0.8
FAGN				Sg	Sg	19 07 29.2	+1.9
	17μm,0.5s						
FIAM	**Fiamignano**	**0.23**	**244**	Pg	Pg	19 07 26.8	+0.9
FIAM				Sg	Sg	19 07 30.7	+1.5
	6μm,0.6s						
FIAM	**Fiamignano**	**0.23**	**244**	Pg	Pg	19 07 26.8	+0.9
FIAM				Sg	Sg	19 07 30.7	+1.5
	6μm,0.6s						
TERO	**Teramo**	**0.29**	**31**	Pg	Pg	19 07 27.2	+0.2
TERO				Sg	Sg	19 07 32.1	+1.1
	4μm,0.6s						
TERO	**Teramo**	**0.29**	**31**	Pg	Pg	19 07 27.2	+0.2
TERO				Sg	Sg	19 07 32.1	+1.1
	4μm,0.6s						
VCEL	**Villa Celiera**	**0.33**	**85**	Pg	Pg	19 07 28.1	+0.4
VCEL				Sg	Sb	19 07 33.6	-1.1
	6μm,0.5s						
VCEL	**Villa Celiera**	**0.33**	**85**	Pg	Pg	19 07 28.1	+0.4
VCEL				Sg	Sb	19 07 33.6	-1.1
	6μm,0.5s						
PTQR	**Pietraquaria**	**0.35**	**180**	Pg	Pg	19 07 28.6	+0.6
PTQR				Sg	Sg	19 07 33.9	+1.2
PTQR	**Pietraquaria**	**0.35**	**180**	Pg	Pg	19 07 28.6	+0.6
PTQR				Sg	Sg	19 07 33.9	+1.2
LNSS	**Leonessa**	**0.35**	**312**	Pg	Pg	19 07 28.4	+0.2
LNSS				Sg	Sb	19 07 34.8	-0.7
	5μm,0.7s						
LNSS	**Leonessa**	**0.35**	**312**	Pg	Pg	19 07 28.4	+0.2
LNSS				Sg	Sb	19 07 34.8	-0.7
	5μm,0.7s						
NRCA	**Norcia**	**0.51**	**336**	Pg	Pg	19 07 31.1	0.0
NRCA				Sg	Sb	19 07 39.4	-0.5
	757nm,0.3s						
NRCA	**Norcia**	**0.51**	**336**	Pg	Pg	19 07 31.1	0.0
NRCA				Sg	Sb	19 07 39.4	-0.5
	757nm,0.3s						
INTR	**Introdacqua**	**0.52**	**133**	Pg	Pg	19 07 31.7	+0.5
INTR				Sg	Sb	19 07 39.7	-0.4
	4μm,0.9s						
INTR	**Introdacqua**	**0.52**	**133**	Pg	Pg	19 07 31.7	+0.5
INTR				Sg	Sb	19 07 39.7	-0.4
	4μm,0.9s						
CERT	**Cerreto**	**0.52**	**217**	Pg	Pg	19 07 31.8	+0.6
	3μm,0.4s						
CERT	**Cerreto**	**0.52**	**217**	Pg	Pg	19 07 31.8	+0.6
	3μm,0.4s						

MNS	**Montasola**	**0.53**	**272**	Pg	Pg	19 07 31.7	+0.3
	2μm,1.2s						
MNS	**Montasola**	**0.53**	**272**	Pg	Pg	19 07 31.7	+0.3
	2μm,1.2s						
GUAR	**Guarcino**	**0.58**	**186**	Pg	Pg	19 07 32.4	+0.1
	950nm,0.3s						
GUAR	**Guarcino**	**0.58**	**186**	Pg	Pg	19 07 32.4	+0.1
	950nm,0.3s						
TRTR	**Tortoreto Alta**	**0.58**	**41**	Pg	Pb	19 07 33.8	+0.4
	4μm,0.8s						
TRTR	**Tortoreto Alta**	**0.58**	**41**	Pg	Pb	19 07 33.8	+0.4
	4μm,0.8s						
MTCE	**Montecelio**	**0.60**	**235**	Pg	Pg	19 07 33.1	+0.5
	745nm,0.6s						
MTCE	**Montecelio**	**0.60**	**235**	Pg	Pg	19 07 33.1	+0.5
	745nm,0.6s						
OFFI	**Offida**	**0.60**	**20**	Pg	Pb	19 07 33.8	0.0
	6μm,0.6s						
OFFI	**Offida**	**0.60**	**20**	Pg	Pb	19 07 33.8	0.0
	6μm,0.6s						
CESX	**Cesi**	**0.65**	**292**	Pg	Pg	19 07 33.7	0.0
	585nm,0.5s						
CESX	**Cesi**	**0.65**	**292**	Pg	Pg	19 07 33.7	0.0
	585nm,0.5s						
LPEL	**Lama dei Pelig**	**0.67**	**119**	Pg	Pg	19 07 33.8	-0.2
	1μm,0.6s						
LPEL	**Lama dei Pelig**	**0.67**	**119**	Pg	Pg	19 07 33.8	-0.2
	1μm,0.6s						
POFI	**Posta Fibreno**	**0.69**	**160**	Pg	Pg	19 07 34.3	-0.2
	521nm,0.4s						
POFI	**Posta Fibreno**	**0.69**	**160**	Pg	Pg	19 07 34.3	-0.2
	521nm,0.4s						
FDMO	**Fiordimonte**	**0.71**	**341**	Pg	Pg	19 07 34.6	-0.1
	550nm,0.8s						
FDMO	**Fiordimonte**	**0.71**	**341**	Pg	Pg	19 07 34.6	-0.1
	550nm,0.8s						
CAFR	**Castel Frentan**	**0.72**	**101**	Pg	Pg	19 07 35.2	+0.3
	2μm,0.5s						
CAFR	**Castel Frentan**	**0.72**	**101**	Pg	Pg	19 07 35.2	+0.3
	2μm,0.5s						
SDI	**San Donato**	**0.73**	**155**	Pg	Pg	19 07 34.8	-0.3
SDI	**San Donato**	**0.73**	**155**	Pg	Pg	19 07 34.8	-0.3
CESI	**CESI - Serrava**	**0.73**	**330**	Pg	Pg	19 07 35.2	-0.1
	205nm,0.6s						
CESI	**CESI - Serrava**	**0.73**	**330**	Pg	Pg	19 07 35.2	-0.1
	205nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.82**	**188**	Pg	Pg	19 07 37.0	+0.2
	453nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.82**	**188**	Pg	Pg	19 07 37.0	+0.2
	453nm,0.5s						
RNI2	**Rionero Sannit**	**0.87**	**140**	Pg	Pg	19 07 37.9	0.0
RNI2	**Rionero Sannit**	**0.87**	**140**	Pg	Pg	19 07 37.9	0.0
CERA	**Filignano**	**0.90**	**149**	Pg	Pg	19 07 37.9	-0.5
	849nm,0.7s						
CERA	**Filignano**	**0.90**	**149**	Pg	Pg	19 07 37.9	-0.5
	849nm,0.7s						
MIDA	**Miranda**	**0.97**	**138**	Pg	Pg	19 07 38.9	-0.8
	435nm,0.7s						
MIDA	**Miranda**	**0.97**	**138**	Pg	Pg	19 07 38.9	-0.8
	435nm,0.7s						
CING	**Cingoli**	**1.02**	**352**	Pg	Pg	19 07 40.2	-0.5
	416nm,0.7s						
CING	**Cingoli**	**1.02**	**352**	Pg	Pg	19 07 40.2	-0.5
	416nm,0.7s						
TOLF	**Tolfa**	**1.08**	**254**	Pg	Pn	19 07 42.2	-0.2
	183nm,0.5s						
TOLF	**Tolfa**	**1.08**	**254**	Pg	Pn	19 07 42.2	-0.2
	183nm,0.5s						
MGAB	**Montegabbione**	**1.09**	**300**	Pg	Pg	19 07 41.5	-0.6
MGAB	**Montegabbione**	**1.09**	**300**	Pg	Pg	19 07 41.5	-0.6
ARVD	**Arcevia**	**1.18**	**344**	Pg	Pb	19 07 43.0	-0.6
	223nm,0.6s						
ARVD	**Arcevia**	**1.18**	**344**	Pg	Pb	19 07 43.0	-0.6
	223nm,0.6s						
AOI	**Ancona**	**1.19**	**7**	Pg	Pg	19 07 44.0	+0.1
	332nm,0.5s						
AOI	**Ancona**	**1.19**	**7**	Pg	Pg	19 07 44.0	+0.1
	332nm,0.5s						
MS1	**Monte Sant'Ang**	**2.01**	**108**	*e*Pn	Pg	19 07 59.7	+0.1
NVLJ	**Novalja**	**2.44**	**26**	*e*Pn	Pn	19 08 02.1	+1.1
NVLJ				*e*	Sn	19 08 33.1	-2.1
NVLJ	**Novalja**	**2.44**	**26**	*e*Pn	Pn	19 08 02.1	+1.1
NVLJ				*e*	Sn	19 08 33.1	-2.1
MAIM	**Mastiano**	**2.63**	**307**	P	Pn	19 08 04.7	+1.1
STON	**Ston**	**3.21**	**80**	*e*Pn	Pn	19 08 13.9	+2.3
STON					Sn	19 08 52.2	+2.2
STON	**Ston**	**3.21**	**80**	*e*Pn	Pn	19 08 13.8	+2.2
STON					Sn	19 08 52.1	+2.1
KNDS	**Knezji Dol**	**3.24**	**12**	*e*Pn	Pn	19 08 14.9	+2.8
KNDS	**Knezji Dol**	**3.24**	**12**	P	Pn	19 08 14.9	+2.8
PGF	**Pioggiola**	**3.26**	**275**	*e*Pn	Pn	19 08 14.6	+2.2
PGF				*e*Sn	Sn	19 08 54.8	+3.3
	2.8nm,0.4s						
PGF	**Pioggiola**	**3.26**	**275**	*e*Pn	Pn	19 08 14.6	+2.2
PGF				*e*Sn	Sn	19 08 54.8	+3.3
	1.4nm,0.4s						
VOY	**Vojsko**	**3.68**	**5**	*e*Pn	Pn	19 08 20.5	+2.3
VOY				*e*		19 08 42.1	
VOY				*e*Sn	Sn	19 09 05.1	+3.3
VOY	**Vojsko**	**3.68**	**5**	*e*Pn	Pn	19 08 20.5	+2.3
VOY				*e*Sn	Sn	19 09 05.1	+3.3
CRNS	**Crni Vrh**	**3.76**	**9**	*i* Pn	Pn	19 08 20.9	+1.6
ABTA	**Abfalt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.03**	**89⇓**	*i*Pg	**Pg**	**19 18 42.1**	**-0.4**
AQU				Sg	**Sg**	**19 18 43.4**	**-0.9**
	24μm,0.5s						
AQU	**L'Aquila**	**0.03**	**89⇓**	*i*Pg	**Pg**	**19 18 42.1**	**-0.4**
AQU				Sg	**Sg**	**19 18 43.4**	**-0.9**
	24μm,0.5s						
CAMP	**Campotosto**	**0.19**	**11⇑**	*i*Pg	**Pg**	**19 18 44.4**	**0.0**
CAMP				Sg	**Sg**	**19 18 47.6**	**+0.2**
	6μm,0.3s						
CAMP	**Campotosto**	**0.19**	**11⇑**	*i*Pg	**Pg**	**19 18 44.4**	**0.0**
CAMP				Sg	**Sg**	**19 18 47.6**	**+0.2**
	6μm,0.3s						
FAGN	**Fagnano**	**0.19**	**118**	Pg	**Pg**	**19 18 44.3**	**-0.1**
FAGN				Sg	**Sg**	**19 18 47.5**	**+0.2**
	14μm,0.5s						
FAGN	**Fagnano**	**0.19**	**118**	Pg	**Pg**	**19 18 44.3**	**-0.1**
FAGN				Sg	**Sg**	**19 18 47.5**	**+0.2**
	14μm,0.5s						
FIAM	**Fiamignano**	**0.20**	**245⇑**	*i*Pg	**Pg**	**19 18 44.6**	**0.0**
FIAM				Sg	**Sg**	**19 18 47.9**	**+0.2**
	6μm,0.6s						
FIAM	**Fiamignano**	**0.20**	**245⇑**	*i*Pg	**Pg**	**19 18 44.6**	**0.0**
FIAM				Sg	**Sg**	**19 18 47.9**	**+0.2**
	6μm,0.6s						
TERO	**Teramo**	**0.32**	**34**	Pg	**Pg**	**19 18 46.3**	**-0.4**
TERO				Sg	**Sb**	**19 18 52.5**	**-0.4**
	4μm,0.3s						
TERO	**Teramo**	**0.32**	**34**	Pg	**Pg**	**19 18 46.3**	**-0.4**
TERO				Sg	**Sb**	**19 18 52.5**	**-0.4**
	4μm,0.3s						
PTQR	**Pietraquaria**	**0.33**	**175**	Pg	**Pg**	**19 18 46.5**	**-0.4**
PTQR				Sg	**Sg**	**19 18 51.6**	**+0.1**
PTQR	**Pietraquaria**	**0.33**	**175**	Pg	**Pg**	**19 18 46.5**	**-0.4**
PTQR				Sg	**Sg**	**19 18 51.6**	**+0.1**
LNSS	**Leonessa**	**0.34**	**316**	Pg	**Pg**	**19 18 47.1**	**0.0**
	1μm,0.4s						
LNSS	**Leonessa**	**0.34**	**316**	Pg	**Pg**	**19 18 47.1**	**0.0**
	1μm,0.4s						
VCEL	**Villa Celiera**	**0.36**	**83**	Pg	**Pb**	**19 18 47.8**	**-0.5**
	6μm,0.4s						
VCEL	**Villa Celiera**	**0.36**	**83**	Pg	**Pb**	**19 18 47.8**	**-0.5**
	6μm,0.4s						
CERT	**Cerreto**	**0.49**	**215**	Pg	**Pg**	**19 18 49.3**	**-0.5**
CERT	**Cerreto**	**0.49**	**215**	Pg	**Pg**	**19 18 49.3**	**-0.5**
MNS	**Montasola**	**0.51**	**274**	Pg	**Pg**	**19 18 49.6**	**-0.4**
MNS	**Montasola**	**0.51**	**274**	Pg	**Pg**	**19 18 49.6**	**-0.4**
NRCA	**Norcia**	**0.51**	**339**	Pg	**Pg**	**19 18 49.8**	**-0.4**
NRCA	**Norcia**	**0.51**	**339**	Pg	**Pg**	**19 18 49.8**	**-0.4**
VVLD	**Villa Vallelon**	**0.52**	**158**	Pg	**Pg**	**19 18 49.6**	**-0.7**
	917nm,0.6s						
VVLD	**Villa Vallelon**	**0.52**	**158**	Pg	**Pg**	**19 18 49.6**	**-0.7**
	917nm,0.6s						
INTR	**Introdacqua**	**0.53**	**130**	Pg	**Pg**	**19 18 50.0**	**-0.5**
	1μm,0.6s						
INTR	**Introdacqua**	**0.53**	**130**	Pg	**Pg**	**19 18 50.0**	**-0.5**
	1μm,0.6s						
GUAR	**Guarcino**	**0.56**	**184**	Pg	**Pg**	**19 18 50.3**	**-0.7**
	669nm,0.4s						
GUAR	**Guarcino**	**0.56**	**184**	Pg	**Pg**	**19 18 50.3**	**-0.7**
	669nm,0.4s						
MTCE	**Montecelio**	**0.57**	**235**	Pg	**Pg**	**19 18 50.7**	**-0.5**
	430nm,0.4s						
MTCE	**Montecelio**	**0.57**	**235**	Pg	**Pg**	**19 18 50.7**	**-0.5**
	430nm,0.4s						
TRTR	**Tortoreto Alta**	**0.61**	**42**	Pg	**Pb**	**19 18 52.7**	**+0.1**
	3μm,0.6s						
TRTR	**Tortoreto Alta**	**0.61**	**42**	Pg	**Pb**	**19 18 52.7**	**+0.1**
	3μm,0.6s						
OFFI	**Offida**	**0.63**	**22**	Pg	**Pb**	**19 18 52.6**	**-0.3**
	6μm,0.5s						
OFFI	**Offida**	**0.63**	**22**	Pg	**Pb**	**19 18 52.6**	**-0.3**
	6μm,0.5s						
CESX	**Cesi**	**0.63**	**294**	Pg	**Pg**	**19 18 52.1**	**-0.3**
	802nm,0.4s						
CESX	**Cesi**	**0.63**	**294**	Pg	**Pg**	**19 18 52.1**	**-0.3**
	802nm,0.4s						
LPEL	**Lama dei Pelig**	**0.68**	**116**	Pg	**Pg**	**19 18 52.5**	**-0.9**
	751nm,0.7s						
LPEL	**Lama dei Pelig**	**0.68**	**116**	Pg	**Pg**	**19 18 52.5**	**-0.9**
	751nm,0.7s						
POFI	**Posta Fibreno**	**0.69**	**158**	Pg	**Pg**	**19 18 53.4**	**0.0**
	445nm,1.0s						
POFI	**Posta Fibreno**	**0.69**	**158**	Pg	**Pg**	**19 18 53.4**	**0.0**
	445nm,1.0s						
FDMO	**Fiordimonte**	**0.71**	**344**	Pg	**Pg**	**19 18 53.3**	**-0.6**
	568nm,0.5s						
FDMO	**Fiordimonte**	**0.71**	**344**	Pg	**Pg**	**19 18 53.3**	**-0.6**
	568nm,0.5s						
SDI	**San Donato**	**0.72**	**152**	Pg	**Pg**	**19 18 53.6**	**-0.5**
	128nm,0.3s						
SDI	**San Donato**	**0.72**	**152**	Pg	**Pg**	**19 18 53.6**	**-0.5**
	128nm,0.3s						
RMP	**Rome, Mte Porz**	**0.73**	**222**	Pg	**Pg**	**19 18 53.2**	**-1.1**
	609nm,0.6s						
RMP	**Rome, Mte Porz**	**0.73**	**222**	Pg	**Pg**	**19 18 53.2**	**-1.1**
	609nm,0.6s						
CESI	**CESI - Serrava**	**0.73**	**333**	Pg	**Pg**	**19 18 53.7**	**-0.6**
	225nm,0.5s						
CESI	**CESI - Serrava**	**0.73**	**333**	Pg	**Pg**	**19 18 53.7**	**-0.6**
	225nm,0.5s						
CAFR	**Castel Frentan**	**0.74**	**99**	Pg	**Pg**	**19 18 54.2**	**-0.2**
	983nm,0.4s						
CAFR	**Castel Frentan**	**0.74**	**99**	Pg	**Pg**	**19 18 54.2**	**-0.2**
	983nm,0.4s						
GIUL	**Giuliano Di Ro**	**0.80**	**186**	Pg	**Pg**	**19 18 54.6**	**-0.9**
	385nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.80**	**186**	Pg	**Pg**	**19 18 54.6**	**-0.9**
	385nm,0.5s						
SNTG	**Esanatoglia**	**0.95**	**341**	Pg	**Pg**	**19 18 57.5**	**-1.0**
	191nm,0.4s						
SNTG	**Esanatoglia**	**0.95**	**341**	Pg	**Pg**	**19 18 57.5**	**-1.0**
	191nm,0.4s						
MIDA	**Miranda**	**0.97**	**137**	Pg	**Pg**	**19 18 57.5**	**-1.4**
	217nm,0.6s						
MIDA	**Miranda**	**0.97**	**137**	Pg	**Pg**	**19 18 57.5**	**-1.4**
	217nm,0.6s						
CING	**Cingoli**	**1.03**	**353**	Pg	**Pg**	**19 18 58.8**	**-1.1**
	611nm,0.6s						
CING	**Cingoli**	**1.03**	**353**	Pg	**Pg**	**19 18 58.8**	**-1.1**
	611nm,0.6s						
MGAB	**Montegabbione**	**1.08**	**302**	Pg	**Pb**	**19 19 00.5**	**-0.1**
	433nm,0.6s						
MGAB	**Montegabbione**	**1.08**	**302**	Pg	**Pb**	**19 19 00.5**	**-0.1**
	433nm,0.6s						
MURB	**Monte Urbino**	**1.10**	**326**	Pg	**Pg**	**19 19 00.5**	**-0.7**
	1μm,0.3s						
MURB	**Monte Urbino**	**1.10**	**326**	Pg	**Pg**	**19 19 00.5**	**-0.7**
	1μm,0.3s						
SACS	**San Casciano d**	**1.18**	**295**	Pg	**Pn**	**19 19 02.6**	**+0.3**
	385nm,1.1s						
LATE	**Laterza**	**1.18**	**283**	Pg	**Pn**	**19 19 03.2**	**+0.9**
	633nm,0.9s						
LATE	**Laterza**	**1.18**	**283**	Pg	**Pn**	**19 19 03.2**	**+0.9**
	633nm,0.9s						
ARVD	**Arcevia**	**1.19**	**345**	Pg	**Pb**	**19 19 01.9**	**-0.5**
	299nm,0.6s						
ARVD	**Arcevia**	**1.19**	**345**	Pg	**Pg**	**19 19 01.9**	**-0.5**
	299nm,0.6s						
AOI	**Ancona**	**1.21**	**8**	Pg	**Pb**	**19 19 02.5**	**-0.3**
	272nm,0.7s						
AOI	**Ancona**	**1.21**	**8**	Pg	**Pb**	**19 19 02.5**	**-0.3**
	272nm,0.7s						
PIEI	**Pieia**	**1.33**	**333**	Pn	**Pn**	**19 19 04.5**	**+0.2**
	185nm,0.6s						
PIEI	**Pieia**	**1.33**	**333**	Pn	**Pn**	**19 19 04.5**	**+0.2**
	185nm,0.6s						
FSSB	**Fossombrone**	**1.41**	**342**	Pn	**Pb**	**19 19 05.8**	**-0.3**
	513nm,0.3s						
FSSB	**Fossombrone**	**1.41**	**342**	Pn	**Pb**	**19 19 05.8**	**-0.3**
	513nm,0.3s						
MS1	**Monte Sant'Ang**	**2.03**	**108**	*e*Pn	**Pg**	**19 19 18.1**	**-0.9**
NVLJ	**Novalja**	**2.47**	**26**	*e*Pn	**Pn**	**19 19 20.5**	**+0.6**
NVLJ				Sn	**Sn**	**19 19 51.1**	**+1.2**
NVLJ	**Novalja**	**2.47**	**26**	*e*Pn	**Pn**	**19 19 20.5**	**+0.6**
NVLJ				Sn	**Sn**	**19 19 51.1**	**+1.2**
MAIM	**Mastiano**	**2.62**	**308**	P	**Pn**	**19 19 23.2**	**+1.2**
PGF	**Pioggiola**	**3.23**	**275**	*e*Pn	**Pn**	**19 19 31.9**	**+1.3**
PGF				*e*Sn	**Sn**	**19 20 12.1**	**+3.1**
	3.5nm,0.4s						
PGF	**Pioggiola**	**3.23**	**275**	*e*Pn	**Pn**	**19 19 31.9**	**+1.3**
PGF				*e*Sn	**Sn**	**19 20 12.1**	**+3.1**
	1.8nm,0.4s						
STON	**Ston**	**3.24**	**79**	*i* Pn	**Pn**	**19 19 32.1**	**+1.5**
STON				Sn	**Sn**	**19 20 09.8**	**+0.8**
STON	**Ston**	**3.24**	**79**	*i* Pn	**Pn**	**19 19 32.0**	**+1.5**
STON				Sn	**Sn**	**19 20 09.8**	**+0.8**
VOY	**Vojsko**	**3.70**	**6**	*e*Pn	**Pn**	19 19 41.0	+4.1
VOY				*e*Sn	**Sn**	**19 20 21.7**	**+1.3**
VOY	**Vojsko**	**3.70**	**6**	Pn	**Pn**	19 19 41.0	+4.1
VOY				*e*Sn	**Sn**	**19 20 21.7**	**+1.3**
ABTA	**Abfaltersbach**	**4.43**	**352⇑**	*i*Pn	**Pn**	**19 19 48.6**	**+1.5**
ABTA	**Abfaltersbach**	**4.43**	**352**	Pn	**Pn**	**19 19 48.6**	**+1.5**
SBF	**Sospel**	**4.59**	**291**	*e*Pn	**Pn**	**19 19 50.4**	**+1.2**
SBF				*e*Sn	**Sn**	**19 20 40.4**	**-2.0**
	17nm,0.7s						
SBF	**Sospel**	**4.59**	**291**	*e*Pn	**Pn**	**19 19 50.4**	**+1.2**
SBF				*e*Sn	**Sn**	**19 20 40.4**	**-2.0**
	8.4nm,0.7s						
FRF	**La Foret Royal**	**5.07**	**286**	*e*Pn	**Pn**	**19 19 56.6**	**+0.9**
FRF	**La Foret Royal**	**5.07**	**286**	*e*Pn	**Pn**	**19 19 56.6**	**+0.9**
DAVOX	**Davos/Dischmat**	**5.08**	**332**	Pn	**Pn**	**19 19 58.5**	**+2.5**
	0.8nm,0.3s,baz=152,slow=18,SNR=9.8						
DAVOX				Sn	**Sn**	**19 20 59.6**	**+5.0**
	0.5nm,0.3s,baz=337,slow=23,SNR=3.6						
LMR	**La Mourre**	**5.13**	**283**	*e*Pn	**Pn**	**19 19 57.3**	**+0.8**
LMR	**La Mourre**	**5.13**	**283**	*e*Pn	**Pn**	**19 19 57.3**	**+0.8**
MBDF	**Montbardon**	**5.35**	**299**	*e*P	**Pn**	**19 20 02.5**	**+2.9**
MBDF	**Montbardon**	**5.35**	**299**	*e*P	**Pn**	**19 20 02.5**	**+2.9**
LPG	**La Plagne**	**5.71**	**306**	*e*P	**Pn**	19 20 08.4	+3.6
LPG				*e*Sn	**Sn**	**19 21 07.5**	**-2.9**
	1.6nm,0.4s						
LPL	**La Plagne**	**5.74**	**306**	*e*P	**Pn**	19 20 08.6	+3.5
LPL				*e*Sn	**Sn**	**19 21 06.6**	**-4.2**
	1.0nm,0.3s						
SMRF	**Simiane la Rot**	**5.92**	**289**	*e*P	**Pn**	**19 20 09.8**	**+2.4**
SMRF	**Simiane la Rot**	**5.92**	**289**	*e*P	**Pn**	**19 20 09.8**	**+2.4**
GERES	**GERESS Array B**	**6.50**	**2**	Pn	**Pn**	**19 20 16.8**	**+1.4**
	0.2nm,0.3s,baz=179,slow=13,SNR=6.9						
GERES				Sn	**Sn**	**19 21 29.2**	**-0.1**
	0.9nm,0.3s,baz=176,slow=25,SNR=8.4						
KHC	**Kasperske Hory**	**6.78**	**1**	*e*PN	**Pn**	**19 20 21.4**	**+2.2**
KHC				*e*SN	**Sn**	**19 21 34.7**	**-1.5**
KHC	**Kasperske Hory**	**6.78**	**1**	Pn	**Pn**	**19 20 21.4**	**+2.2**
HINF	**Hinteralfeld**	**7.14**	**322**	*e*Pn	**Pn**	**19 20 24.5**	**+0.3**
HINF	**Hinteralfeld**	**7.14**	**322**	*e*Pn	**Pn**	**19 20 24.5**	**+0.3**
KEST	**Kesra**	**7.31**	**207**	Pn	**Pn**	19 20 30.5	+3.9
	0.3nm,0.3s,baz=354,slow=19,SNR=12						
CDF	**Champ du Feu**	**7.42**	**327**	*e*Pn	**Pn**	**19 20 28.1**	**+0.1**
CDF				*e*Sn	**Sn**	**19 21 47.9**	**-4.1**
	2.6nm,0.4s						
CDF	**Champ du Feu**	**7.42**	**327**	*e*Pn	**Pn**	**19 20 28.1**	**+0.1**
HAU	**Haudompre**	**7.51**	**321**	*e*Pn	**Pn**	**19 20 29.8**	**+0.5**
HAU				*e*Sn	Sn	19 21 48.5	-5.8
	5.0nm,0.4s						
HAU	**Haudompre**	**7.51**	**321**	*e*Pn	**Pn**	**19 20 29.8**	**+0.5**
FINES	**FINESS Array B**	**20.59**	**17**	P	Pn	19 23 19.9	-0.8
	0.9nm,0.8s,baz=205,slow=9.1,SNR=2.2						

IDC 10 19:26:47.7±1.5, 10.24S×75.85W, h123km±18km, mb3.0/4, mb1 3.3/7, mb1mx3.2/23, mbtmp3.2/7, Error ellipse: s-maj=26.9km s-min=9.5km az=74.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.99**	**209**	P	Pn	19 27 21.8	+0.5
	72nm,0.3s,baz=29,slow=8.3,SNR=138						
NNA				S	Sn	19 27 47.3	+0.3
	323nm,0.3s,baz=246,slow=14,SNR=21						
ATAH	**Atahualpa**	**3.98**	**321**	P	Pn	19 27 48.3	+0.6
	14nm,0.3s,baz=150,slow=6.4,SNR=63						
ATAH				S	Sn	19 28 33.8	-0.3
	9.6nm,0.3s,baz=308,slow=16,SNR=7.2						
LPAZ	**La Paz**	**9.62**	**129**	P	Pn	19 29 04.5	+0.6
	0.3nm,0.3s,baz=281,slow=4.6,SNR=6.9						
SIV	**San Ignacio**	**15.48**	**113**	P	Pn	19 30 18.7	-0.8
	0.1nm,0.3s,baz=289,slow=9.8,SNR=4.5						
CFAA	**Coronel Fontan**	**22.40**	**163**	P	P	19 31 36.1	0.0
	0.2nm,0.5s,baz=358,slow=9.8,SNR=6.1						
CPUP	**Villa Florida**	**23.72**	**135**	P	P	19 31 47.8	-0.8
	1.7nm,0.6s,baz=306,slow=14,SNR=4.8						
PLCA	**Paso Flores**	**30.73**	**172**	P	P	19 32 51.3	+0.1
	0.7nm,0.5s,baz=342,slow=8.5,SNR=3.9						
YKA	**Yellowknife Ar**	**78.47**	**343**	P	P	19 38 35.1	+0.3
	0.1nm,0.5s,baz=138,slow=4.8,SNR=2.7						
YKA				pP	pP	19 39 03.5	-2.3
	0.5nm,0.6s,baz=134,slow=6.2,SNR=11						

*IDC **10** 19:29:17.9±2.6, 7.99S×108.51E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/21, mbtmp3.4/4, Error ellipse: s-maj=141.3km s-min=25.5km az=51.0*
*ISCJB **10** 19:29:26.3±0.8, 8.05S±0.1×108.74E±0.05, h78km, mb3.3/4, Error ellipse: s-maj=15.7km s-min=6.4km az=16.7*
*DJA **10** 19:29:26.3±1.0, 8°S±12"×10°9E±°, h53km±16km, M3.3/5, MLv3.3/5*

ISC 10 19:29:27.3±1.0, 8.30S±0.1×108.73E±0.06, h78km, n13, σ1s44/16, mb3.4/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLJI	**Cilicap**	**0.41**	**44**	P	**Pn**	**19 29 40.6**	**+0.4**
CISI	**Cisompet, Garu**	**1.01**	**297**	P	**Pn**	**19 29 46.3**	**-0.2**
CISI				S	**Sn**	**19 29 57.8**	**-3.0**
BJII	**Banjamegara**	**1.19**	**55**	P	**Pn**	**19 29 49.5**	**+0.9**
TGJI	**Tegal**	**1.21**	**19**	P	**Pn**	**19 29 49.7**	**+0.9**
LEM	**Lembang**	**1.61**	**317**	P	**Pn**	**19 29 54.0**	**-0.2**
UGM	**Wanagama**	**1.78**	**87**	P	**Pn**	**19 29 55.0**	**-1.3**
UGM				S	**Sn**	**19 30 17.0**	**-1.3**
SMRI	**Semarang**	**1.95**	**61**	P	**Pn**	**19 29 57.0**	**-1.5**
PCJI	**Pacitan**	**2.43**	**94**	P	**Pn**	**19 30 04.4**	**-0.6**
PCJI				S	**Sn**	**19 30 32.4**	**-1.4**
SJI	**Sawahan**	**3.02**	**85**	P	**Pn**	**19 30 11.9**	**-1.2**
WRA	**Warramunga Arr**	**27.49**	**118**	P	**P**	**19 35 08.0**	**+1.5**
	0.3nm,0.5s,baz=291,slow=12,SNR=3.9						
ASAR	**Alice Springs**	**28.71**	**126**	P	**P**	**19 35 19.5**	**+2.1**
	0.2nm,0.8s,baz=304,slow=9.7,SNR=4.1						
STKA	**Stephens Creek**	**38.69**	**132**	P	**P**	**19 36 44.4**	**+0.6**
	0.7nm,0.6s,baz=323,slow=10.0,SNR=3.6						
MKAR	**Makanchi Array**	**59.43**	**339**	P	**P**	**19 39 21.6**	**-0.2**
	0.3nm,0.5s,baz=138,slow=7.8,SNR=7.3						

IDC 10 19:45:16.8±1.3, 9.55S×151.26E, h0km, mb3.8/6, mb1 4.0/9, mb1mx3.8/19, mbtmp3.9/9, ML3.6/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/27, Error ellipse: s-maj=26.4km s-min=21.0km az=132.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.04**	**272**	Pn	Pn	19 46 20.0	0.0
	5.8nm,0.3s,baz=358,slow=20,SNR=18						
PMG				Pg	Pb	19 46 30.7	+1.8
	5.4nm,0.3s,baz=110,slow=10,SNR=12						
PMG				Lg	Lg	19 47 25.2	
	0.9nm,0.3s,baz=177,slow=15,SNR=2.8						
CTA	**Charters Tower**	**11.54**	**204**	Pn	Pn	19 48 02.8	-0.1
	0.3nm,0.3s,baz=26,slow=16,SNR=3.7						
WRA	**Warramunga Arr**	**19.33**	**236**	P	Pn	19 49 44.5	-0.4
	0.5nm,0.3s,baz=60,slow=11,SNR=22						
ASAR	**Alice Springs**	**21.72**	**228**	P	P	19 50 09.8	-0.1
	1.4nm,0.7s,baz=61,slow=9.0,SNR=17						
STKA	**Stephens Creek**	**23.96**	**201**	P	P	19 50 32.9	0.0
	1.4nm,0.8s,baz=3.4,slow=14,SNR=4.8						
STKA				LR	LR	19 59 38.3	
	comp=Z,67nm,21.1s,baz=24,slow=36						
FITZ	**Fitzroy Crossi**	**26.26**	**248**	P	P	19 50 53.8	-0.2
	3.8nm,0.6s,baz=89,slow=7.2,SNR=30						
SONM	**Songino Array**	**69.56**	**330**	P	P	19 56 28.4	+0.7
	0.7nm,0.7s,baz=141,slow=5.4,SNR=5.6						
MKAR	**Makanchi Array**	**82.91**	**320**	P	P	19 57 43.6	+0.1
	0.8nm,0.8s,baz=104,slow=5.1,SNR=8.4						
ZALV	**Zalesovo Beam**	**84.25**	**327**	P	P	19 57 49.3	-0.9
	0.3nm,0.3s,baz=114,slow=7.2,SNR=3.7						
TORD	**Torodi Ar. Bea**	**149.96**	**280**	PKPbc	PKPbc	20 05 09.7	-0.6
	1.5nm,0.9s,baz=57,slow=2.4,SNR=7.0						

*IDC **10** 19:56:48.4±3.0, 16.41S×174.01W, h53km±27km, mb4.0/10, mb1 4.2/12, mb1mx4.0/23, mbtmp4.0/12, ML3.2/2, MS3.5/2, Ms1 3.5/2, ms1mx3.0/30, Error ellipse: s-maj=27.1km s-min=14.3km az=121.0*
*NEIC **10** 19:56:49.6±1.6, 16.32S×174.17W, h62km±14km, mb4.6/4, Error ellipse: s-maj=16.3km s-min=11.0km az=130.0*
*ISCJB **10** 19:56:53.2±0.5, 16.4S±0.1×174.16W±0.10, h111km, mb4.2/12, Error ellipse: s-maj=15.3km s-min=12.5km az=151.3*

ISC 10 19:56:54.7±0.5, 16.4S±0.1×174.1W±0.1, h111km, n67, σ0s87/61, mb4.4/12, 7C-2D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.38**	**42**	*e*Pn	Pn	19 57 38.5	-7.4
AFI				*e*Sn	Sn	19 58 11.6	-14
AFI				S		19 58 12.0	
AFI	**Afiamalu**	**3.38**	**42**	P	Pn	19 57 38.8	-7.2
	57nm,0.3s,baz=58,slow=2.1,SNR=23						
AFI				S	Sn	19 58 12.0	-13
	159nm,0.3s,baz=84,slow=21,SNR=11						
RAR	**Rarotonga**	**14.39**	**111**	Pn	**Pn**	**20 00 13.1**	**-0.1**
DZM	**Mont Dzumac**	**19.18**	**250**	P	**P**	**20 01 08.2**	**-1.7**
DZM	**Mont Dzumac**	**19.18**	**250**	P	**P**	**20 01 08.2**	**-1.7**
	0.2nm,0.3s,baz=112,slow=19,SNR=3.9						
URZ	**Urewera**	**23.07**	**198**	P	**P**	**20 01 48.1**	**-2.5**
URZ	**Urewera**	**23.07**	**198**	P	**P**	**20 01 48.1**	**-2.5**
	13nm,0.8s,baz=208,slow=2.5,SNR=8.5						
PPT	**Papeete**	**23.49**	**96**	LR	LR	20 07 44.8	
	comp=Z,134nm,19.8s,baz=209,slow=28						
PPT2	**Papeete2**	**23.49**	**96**	*e*LQ	LQ	20 01 18.0	
	549nm,30.0s						
PPT2				*e*LR	LR	20 02 18.2	
	419nm,26.5s						
TBI	**Tubuai**	**24.16**	**110**	*e*LR	LR	20 02 51.9	
	493nm,26.5s,baz=298						
HNR	**Honiara**	**26.20**	**282**	LR	LR	20 10 53.2	
	comp=Z,97nm,18.9s,baz=233,slow=32						
STKA	**Stephens Creek**	**42.92**	**241**	*e*P	**P**	**20 04 42.9**	**+0.2**
	3.2nm,0.8s						
STKA	**Stephens Creek**	**42.92**	**241**	P	**P**	**20 04 43.4**	**+0.7**
	17nm,0.8s,baz=90,slow=9.3,SNR=41						
ASAR	**Alice Springs**	**49.14**	**253**	P	**P**	**20 05 32.1**	**+0.5**
ASAR	**Alice Springs**	**49.14**	**253**	P	**P**	**20 05 32.1**	**+0.5**
	15nm,0.9s,baz=88,slow=8.1,SNR=19						
SBA	**Scott Base**	**62.17**	**185**	*e*P	**P**	**20 07 05.8**	**+2.0**
	7.0nm,0.8s						
VNDA	**Vanda**	**62.28**	**186**	P	**P**	**20 07 05.3**	**+0.8**
VNDA				*e*PcP	**PcP**	**20 07 44.5**	**+1.2**
VNDA	**Vanda**	**62.28**	**186**	P	**P**	**20 07 05.3**	**+0.8**
	4.4nm,1.0s,baz=10,slow=5.0,SNR=17						
MBWA	**Marble Bar**	**62.41**	**254**	P	**P**	**20 07 05.9**	**-0.5**
KKM	**Kota Kinabalu**	**72.41**	**282**	P	**P**	**20 08 11.3**	**+1.7**
	19nm,1.0s						
PETK	**Petropavlovsk-**	**73.41**	**343**	P	**P**	**20 08 14.6**	**+0.1**
PETK	**Petropavlovsk-**	**73.41**	**343**	P	**P**	**20 08 14.6**	**+0.1**
	2.6nm,0.8s,baz=126,slow=7.3,SNR=3.6						
QSPA	**South Pole Qui**	**73.61**	**180**	*e*P	**P**	**20 08 16.3**	**+0.5**
	5.9nm,1.0s						
QSPA	**South Pole Qui**	**73.61**	**180**	P	**P**	**20 08 16.6**	**+0.8**
	7.1nm,0.9s,baz=31,slow=2.2,SNR=22						
NVAR	**Mina Array Bea**	**75.56**	**42**	P	**P**	**20 08 26.9**	**-0.6**
NVAR	**Mina Array Bea**	**75.56**	**42**	P	**P**	**20 08 26.9**	**-0.6**
	0.3nm,0.5s,baz=227,slow=11,SNR=3.1						
PDAR	**Pinedale Array**	**83.50**	**42**	P	**P**	**20 09 10.0**	**-0.5**
PDAR	**Pinedale Array**	**83.50**	**42**	P	**P**	**20 09 10.0**	**-0.5**
	0.7nm,0.8s,baz=242,slow=3.2,SNR=4.7						
ILAR	**Eielson Array**	**83.59**	**11**	P	**P**	**20 09 10.6**	**+0.4**
ILAR	**Eielson Array**	**83.59**	**11**	P	**P**	**20 09 10.6**	**+0.4**
	0.3nm,0.4s,baz=213,slow=5.2,SNR=5.9						
YKA	**Yellowknife Ar**	**91.32**	**24**	P	**P**	**20 09 46.3**	**-1.1**
YKA	**Yellowknife Ar**	**91.32**	**24**	P	**P**	**20 09 46.3**	**-1.1**
	0.1nm,0.3s,baz=236,slow=4.4,SNR=3.3						
ARCES	**ARCESS Array B**	**125.53**	**352**	PKP	**PKPdf**	**20 15 41.9**	**-0.4**
ARCES	**ARCESS Array B**	**125.53**	**352**	PKP	**PKPdf**	**20 15 41.9**	**-0.4**
	1.5nm,0.8s,baz=21,slow=4.0,SNR=3.9						
MALT	**Malatya**	**144.09**	**314**	*e*PKPdf	**PKPdf**	**20 16 17.7**	**-0.2**
KMBO	**Kilima Mbogo**	**144.46**	**244**	PKP	**PKPdf**	**20 16 19.4**	**0.0**
KMBO				*e*PKPdf	PKPbc	20 16 19.5	+1.4
KMBO	**Kilima Mbogo**	**144.46**	**244**	PKP	**PKPdf**	**20 16 19.4**	**0.0**
	4.3nm,0.9s,baz=52,slow=5.4,SNR=14						

WRAB	**Tennant Creek**	**17.90 217**	*e*P		**P**		**20 04 20.9**	**-1.6**
	14nm,0.6s							
WRA	**Warramunga Arr**	**17.92 217**	P		**P**		**20 04 22.3**	**-0.3**
WRA			PcP		**PcP**		**20 08 54.0**	**+1.2**
WRA			ScP		**ScP**		**20 12 18.1**	**+1.4**
WRA	**Warramunga Arr**	**17.92 217**	P		**P**		**20 04 22.3**	**-0.3**
	2.0nm,0.3s,baz=41,slow=11,SNR=33							
WRA			PcP		**PcP**		**20 08 54.0**	**+1.2**
	baz=33,slow=1.9,SNR=4.9							
WRA			ScP		**ScP**		**20 12 18.1**	**+1.4**
	0.1nm,0.3s,baz=29,slow=2.2,SNR=4.6							
LBMI	**Labuha**	**18.87 285**	P		**Pn**		**20 04 35.4**	**+0.4**
TNTI	**Ternate**	**19.43 289**	P		**Pn**		**20 04 40.8**	**-0.7**
EIDS	**Eidsvold**	**20.17 166**	P		**P**		**20 04 47.9**	**+0.9**
	baz=20,SNR=3.5							
QLP	**Quilpie**	**20.76 184**	P		Pn		20 04 56.8	-0.2
	baz=21,SNR=5.3							
AS31	**Alice Springs**	**21.12 211**	*e*P		**P**		**20 04 56.5**	**-0.7**
ASAR	**Alice Springs**	**21.12 211**	P		**P**		**20 04 56.8**	**-0.5**
ASAR			S		**S**		**20 08 45.0**	**-0.4**
ASAR			ScP		**ScP**		**20 12 25.6**	**+1.6**
ASAR	**Alice Springs**	**21.12 211**	P		**P**		**20 04 56.8**	**-0.5**
	14nm,0.8s,baz=42,slow=7.5,SNR=98							
ASAR			S		**S**		**20 08 45.0**	**-0.4**
	3.5nm,0.9s,baz=34,slow=24,SNR=5.3							
ASAR			ScP		**ScP**		**20 12 25.6**	**+1.6**
	0.9nm,0.8s,baz=45,slow=4.1,SNR=4.5							
FITZ	**Fitzroy Crossi**	**23.12 236**	*e*P		**P**		**20 05 15.6**	**-2.0**
	3.5nm,0.5s							
FITZ	**Fitzroy Crossi**	**23.12 236**	P		**P**		**20 05 15.9**	**-1.7**
	43nm,0.7s,baz=63,slow=9.9,SNR=121							
FITZ			LR		LR		20 15 58.5	
	comp=Z,106nm,18.4s,baz=335,slow=40							
FITZ	**Fitzroy Crossi**	**23.12 236**	P		**P**		**20 05 15.9**	**-1.7**
	baz=23,SNR=119							
MMRI	**Maumere**	**23.46 262**	P		**P**		**20 05 20.1**	**-0.7**
ARMA	**Armidale**	**25.16 168**	*e*P		**P**		**20 05 36.5**	**+0.4**
	9.3nm,0.8s							
ARMA	**Armidale**	**25.16 168**	P		**P**		**20 05 37.3**	**+1.2**
	baz=25,SNR=8.0							
WSI	**Waingapu**	**25.47 260**	P		**P**		**20 05 40.8**	**+1.7**
	baz=25,SNR=12							
CMSA	**Cobar Meteorol**	**25.65 180**	P		**P**		**20 05 41.7**	**+1.3**
	baz=26,SNR=5.6							
KAPI	**Kappang**	**25.85 270**	P		**P**		**20 05 41.6**	**-0.9**
KAPI	**Kappang**	**25.85 270**	P		**P**		**20 05 41.6**	**-0.9**
	10.0nm,0.8s,baz=76,slow=11,SNR=3.6							
PCI	**Palu**	**26.26 280**	P		**P**		**20 05 45.2**	**-1.0**
	baz=26,SNR=23							
PCI			S		S		20 09 46.2	-24
	baz=26,SNR=12							
STKA	**Stephens Creek**	**26.27 188**	*e*P		**P**		**20 05 45.9**	**-0.1**
	2.8nm,1.0s							
STKA	**Stephens Creek**	**26.27 188**	P		**P**		**20 05 46.4**	**+0.3**
	8.3nm,0.9s,baz=354,slow=11,SNR=7.3							
STKA			LR		LR		20 18 05.1	
	comp=Z,163nm,18.6s,baz=22,slow=40							
STKA	**Stephens Creek**	**26.27 188**	P		**P**		**20 05 46.6**	**+0.6**
	baz=26,SNR=6.8							
YNG	**Young**	**28.51 175**	P		**P**		**20 06 07.8**	**+1.8**
	baz=29,SNR=7.5							
TSM	**Tawau**	**29.54 289**	P		**P**		**20 06 13.2**	**-2.1**
TOO	**Toolangi**	**31.67 180**	P		**P**		**20 06 35.7**	**+1.9**
	baz=32,SNR=4.2							
CBIJ	**Chichi jima**	**32.84 354**	P		**P**		**20 06 42.2**	**-1.9**
CBIJ	**Chichi jima**	**32.84 354**	P		**P**		**20 06 42.2**	**-1.9**
	31nm,0.5s,baz=274,slow=11,SNR=7.9							
MEEK	**Meekatharra**	**33.14 228**	P		**P**		**20 06 47.2**	**+0.3**
	baz=33,SNR=29							
KMBL	**Kambalda**	**33.88 218**	P		**P**		**20 06 53.8**	**+0.6**
	baz=34,SNR=6.0							
KSM	**Kuching**	**36.07 280**	*e*P		**P**		**20 07 12.6**	**+0.3**
	8.2nm,0.8s							
KSM			*e*PP		**PP**		**20 08 35.0**	**-1.8**
KSM	**Kuching**	**36.07 280**	P		**P**		**20 07 13.1**	**+0.8**
KSM	**Kuching**	**36.07 280**	P		**P**		**20 07 13.1**	**+0.8**
	baz=36,SNR=8.6							
MORW	**Morawa**	**36.38 227**	P		**P**		**20 07 14.8**	**+0.1**
	baz=36,SNR=11							
KLBR	**Kellerberrin**	**36.68 222**	P		**P**		**20 07 17.1**	**-0.1**
	baz=37,SNR=4.9							
BLDU	**Ballidu**	**36.80 224**	P		**P**		**20 07 17.5**	**-0.6**
	baz=37,SNR=6.7							
NWAO	**Narrogin (SRO)**	**37.86 221**	P		**P**		**20 07 26.1**	**-1.0**
	26nm,1.3s							
JNU	**Nakatsue**	**41.15 341**	LR		LR		20 24 58.5	
	comp=Z,30nm,18.0s,baz=196,slow=36							
MYKOM	**Kota Tinggi**	**42.47 279**	P		**P**		**20 08 06.0**	**+0.6**
MJAR	**Matsushiro Arr**	**42.66 351**	P		**P**		**20 08 05.0**	**-1.6**
MJAR	**Matsushiro Arr**	**42.66 351**	P		**P**		**20 08 05.0**	**-1.6**
	1.7nm,0.6s,baz=173,slow=8.0,SNR=10.0							
MAT	**Matsushiro**	**42.66 351**	P		**P**		**20 08 05.1**	**-1.5**
KGM	**Kluang**	**43.03 279**	P		**P**		**20 08 10.8**	**+0.8**
FRIM	**Kepong**	**44.92 280**	P		**P**		**20 08 24.8**	**-0.3**
PPI	**Padang Panjang**	**45.53 275**	P		**P**		**20 08 29.6**	**-0.2**
	baz=45,SNR=4.7							
KSRS	**Korea Array**	**46.08 340**	P		**P**		**20 08 33.4**	**-0.3**
	1.7nm,0.7s,baz=161,slow=9.3,SNR=10							
KSRS			pP		**pP**		**20 09 02.9**	**+0.3**
	5.5nm,1.1s,baz=159,slow=9.1,SNR=5.3							
KSRS			LR		LR		20 25 15.1	
	comp=Z,42nm,19.8s,baz=120,slow=32							
KSAR	**Wonju Array Be**	**46.08 340**	P		**P**		**20 08 33.4**	**-0.4**
KSAR			pP		**pP**		**20 09 02.9**	**+0.2**
KULM	**Kulim**	**46.31 283**	P		**P**		**20 08 35.7**	**-0.2**
KULM	**Kulim**	**46.31 283**	P		**P**		**20 08 36.4**	**+0.4**
GYA	**Guiyang**	**49.56 312**	*e*P		**P**		**20 09 01.8**	**+0.8**
GYA			pP		**pP**		**20 09 31.4**	**+1.2**
GYA			sP		**sP**		**20 09 46.5**	**+2.3**
GYA			ScP		**ScP**		**20 14 04.5**	**-0.4**
GYA			PcS		**PcS**		**20 14 18.6**	**+0.5**
GYA			S		**S**		**20 16 01.2**	**+1.5**
GYA			ScS		**ScS**		**20 18 37.3**	**-3.2**
GYA			pmax		pmax			
	comp=Z,10.0nm,0.8s							
USRK	**Ussuriysk Arra**	**51.24 347**	P		**P**		**20 09 12.0**	**-1.1**
	comp=Z,1.6nm,0.5s,baz=182,slow=9.0,SNR=5.7							
USRK			pP		**pP**		**20 09 41.5**	**-1.0**
	comp=Z,2.5nm,0.8s,baz=156,slow=10,SNR=3.0							
KMI	**Kunming**	**51.83 308**	P		P		20 09 22.0	+3.8
KMI			pP		pP		20 09 49.4	+1.8
KMI			sP		sP		20 10 04.0	+2.4
KMI			PP		**PP**		**20 11 20.3**	**+3.0**
KMI			S		**S**		**20 16 30.3**	**-1.1**
KMI			SS		**SS**		**20 20 09.9**	**0.0**
KMI			pmax		pmax			
	comp=Z,5.0nm,1.0s							
KMI			pmax		pmax			
	comp=Z,65nm,4.0s							
KMI			LR		LR			
	comp=N,81nm,16.0s							
KMI			LR		LR			
	comp=E,64nm,10.5s							
KMI			LR		LR			
	comp=Z,110nm,15.0s							
CMAR	**Chiang Mai Arr**	**52.00 299**	P		**P**		**20 09 20.7**	**+1.4**
CMAR			pP		**pP**		**20 09 48.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**52.00 299**	P		**P**		**20 09 20.7**	**+1.4**
	comp=Z,4.3nm,0.6s,baz=120,slow=5.9,SNR=59							
CMAR			pP		**pP**		**20 09 48.6**	**-0.1**
	comp=Z,3.7nm,0.9s,baz=126,slow=5.8,SNR=4.3							
CN2	**Changchun**	**52.62 342**	*e*P		P		20 09 26.5	+3.2
BJI	**Beijing**	**53.07 332**	P		**P**		**20 09 27.2**	**+0.5**
BJI			LR		LR			
	comp=Z,34nm,23.3s							
CD2	**Chengdu**	**54.19 315**	P		**P**		**20 09 36.1**	**+1.0**
CD2			PP		**PP**		**20 11 40.6**	**+2.3**
CD2			PcS		**PcS**		**20 14 37.4**	**-0.4**
CD2			S		**S**		**20 17 03.1**	**+0.3**
CD2			SS		**SS**		**20 20 45.6**	**-1.0**
CD2			pmax		pmax			
	comp=Z,20nm,0.5s							
CD2			pmax		pmax			
	comp=Z,110nm,5.4s							
RAR	**Rarotonga**	**54.92 112**	LR		LR		20 27 24.8	
	comp=Z,3µm,20.9s,baz=102,slow=30							
HHC	**Hu-ho-hao-te**	**55.96 329**	*e*P		**P**		**20 09 49.4**	**+1.7**
HHC			pP		**pP**		**20 10 19.8**	**+2.2**
HHC			sP		**sP**		**20 10 34.1**	**+2.7**
HHC			PP		**PP**		**20 11 57.8**	**+3.8**
HHC			S		**S**		**20 17 25.6**	**-0.6**
HHC			pmax		pmax			
	comp=Z,19nm,0.8s							
HHC			pmax		pmax			
	comp=Z,130nm,4.1s							

PEA0B	**Petropavlovsk-**	**59.52 8**	*e*P		**P**		**20 10 12.3**	**0.0**
PETK	**Petropavlovsk-**	**59.52 8**	P		**P**		**20 10 12.7**	**+0.4**
PETK			pP		**pP**		**20 10 43.0**	**+0.6**
PETK	**Petropavlovsk-**	**59.52 8**	P		**P**		**20 10 12.7**	**+0.4**
	comp=Z,4.1nm,0.4s,baz=170,slow=8.1,SNR=19							
PETK			pP		**pP**		**20 10 43.0**	**+0.6**
	comp=Z,5.1nm,0.8s,baz=122,slow=5.4,SNR=3.6							
GTA	**Gaotai**	**61.74 321**	*e*P		**P**		**20 10 29.0**	**+1.2**
GTA			pmax		pmax			
	comp=Z,5.0nm,0.7s							
FX1	**Attu Island--F**	**62.88 18**	P		**P**		**20 10 35.5**	**+0.6**
FX1	**Attu Island--F**	**62.88 18**	P		**P**		**20 10 35.5**	**+0.6**
	comp=Z,8.8nm,0.7s,baz=186,slow=5.0,SNR=5.0							
ULN	**Ulaanbaatar**	**63.28 332**	*e*P		**P**		**20 10 38.3**	**+0.4**
	comp=Z,1.4nm,0.6s							
SONM	**Songino Array**	**63.57 332**	P		**P**		**20 10 40.4**	**+0.7**
SONM			pP		**pP**		**20 11 11.4**	**+1.1**
SONM	**Songino Array**	**63.57 332**	P		**P**		**20 10 40.4**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=159,slow=5.0,SNR=10							
SONM			pP		**pP**		**20 11 11.4**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=157,slow=4.8,SNR=3.0							
TAPN	**Taplejung**	**64.94 304**	*e*P		**P**		**20 10 50.1**	**+0.8**
	comp=Z,9.0nm,0.6s							
ODAN	**Odare**	**65.03 303**	*e*P		**P**		**20 10 50.5**	**+0.7**
	comp=Z,17nm,0.6s							
RAMN	**Ramite**	**65.72 303**	*e*P		**P**		**20 10 55.1**	**+0.8**
	comp=Z,8.4nm,0.6s							
GUN	**Gumba**	**66.66 304**	*e*P		**P**		**20 11 01.2**	**+0.8**
	comp=Z,13nm,0.4s							
PKI	**Pukhoki**	**66.93 303**	*e*P		**P**		**20 11 02.6**	**+0.5**
	comp=Z,7.5nm,0.7s							
PKIN	**Phulchoki**	**66.95 303**	*e*P		**P**		**20 11 02.8**	**+0.7**
	comp=Z,4.3nm,0.6s							
KKN	**Kakani**	**67.12 303**	*e*P		**P**		**20 11 03.6**	**+0.5**
	comp=Z,20nm,0.9s							
DMN	**Daman**	**67.20 303**	*e*P		**P**		**20 11 04.4**	**+0.7**
	comp=Z,18nm,0.7s							
KOLN	**Koldanda**	**68.51 303**	*e*P		**P**		**20 11 12.3**	**+0.4**
	comp=Z,18nm,0.7s							
DANN	**Dangsing**	**68.57 303**	*e*P		**P**		**20 11 12.6**	**+0.3**
	comp=Z,14nm,0.7s							
PYUN	**Piuthan**	**69.13 303**	*e*P		**P**		**20 11 15.9**	**+0.2**
	comp=Z,32nm,0.8s							
HYB	**Hyderabad**	**70.17 291**	*i* P		**P**		**20 11 20.0**	**-2.1**
WMQ	**Urumqi**	**71.77 320**	*e*P		**P**		**20 11 31.1**	**-0.2**
WMQ			pmax		pmax			
	comp=Z,14nm,1.0s							
VNDA	**Vanda**	**72.23 176**	P		**P**		**20 11 34.3**	**+1.0**
VNDA	**Vanda**	**72.23 176**	P		**P**		**20 11 34.3**	**+1.0**
	comp=Z,4.0nm,0.7s,baz=320,slow=6.5,SNR=23							
BILL	**Bilibino**	**75.04 8**	*e*P		**P**		**20 11 49.7**	**-0.1**
	comp=Z,1.6nm,0.4s							
MKAR	**Makanchi Array**	**76.50 321**	P		**P**		**20 11 58.2**	**-0.4**
MKAR			pP		**pP**		**20 12 28.6**	**-1.5**
MKAR	**Makanchi Array**	**76.50 321**	P		**P**		**20 11 58.2**	**-0.4**
	comp=Z,3.8nm,0.6s,baz=98,slow=7.3,SNR=53							
MKAR			pP		**pP**		**20 12 28.6**	**-1.5**
	comp=Z,2.0nm,0.9s,baz=111,slow=6.9,SNR=2.9							
ZAA0	**Zalesovo Array**	**78.12 328**	*e*P		**P**		**20 12 06.0**	**-1.4**
ZALV	**Zalesovo Beam**	**78.12 328**	P		**P**		**20 12 06.5**	**-1.0**
ZALV	**Zalesovo Beam**	**78.12 328**	P		**P**		**20 12 06.5**	**-1.0**
	comp=Z,4.2nm,0.5s,baz=115,slow=5.9,SNR=25							
KZA	**Kyzart**	**79.56 314**	P		**P**		**20 12 17.7**	**+1.6**
	SNR=13							
TKM2	**Tokmak 2**	**79.57 315**	*e*P		**P**		**20 12 16.2**	**+0.4**
	comp=Z,4.1nm,0.8s							
TKM2			*e*				20 12 44.2	
TKM2	**Tokmak 2**	**79.57 315**	P		**P**		**20 12 16.5**	**+0.6**
	SNR=11							
KURK	**Kurchatov**	**80.25 324**	*e*P		**P**		**20 12 18.4**	**-0.7**
	comp=Z,3.2nm,0.6s							
AAK	**Ala-Archa**	**80.26 315**	*e*P		**P**		**20 12 19.6**	**+0.1**
	comp=Z,2.8nm,0.7s							
AAK	**Ala-Archa**	**80.26 315**	P		**P**		**20 12 20.2**	**+0.7**
	SNR=7.3							
USP	**Ospenovka**	**80.44 315**	P		**P**		**20 12 20.6**	**+0.2**
	SNR=8.1							
AML	**Almayashu**	**80.68 314**	P		**P**		**20 12 23.1**	**+1.0**
	SNR=17							
EKS2	**Erkin-Say**	**80.77 315**	*e*P		**P**		**20 12 22.7**	**+0.5**
	comp=Z,7.5nm,1.0s							
EKS2	**Erkin-Say**	**80.77 315**	P		**P**		**20 12 22.9**	**+0.7**
	SNR=10							
KBL	**Kabul**	**82.34 306**	*e*P		**P**		**20 12 30.0**	**-0.8**
	comp=Z,8.2nm,1.0s							
KKAR	**Karatay Array**	**83.20 315**	*e*P		**P**		**20 12 34.8**	**0.0**
	comp=Z,1.7nm,0.6s							
QSPA	**South Pole Qui**	**84.21 180**	P		**P**		**20 12 39.9**	**+0.3**
QSPA	**South Pole Qui**	**84.21 180**	P		**P**		**20 12 39.9**	**+0.3**
	comp=Z,9.1nm,0.6s,baz=338,slow=1.9,SNR=86							
MCK	**McKinley**	**84.53 24**	*e*P		**P**		**20 12 39.7**	**-1.4**
	comp=Z,18nm,0.9s							
MCK			*e*pP		**pP**		**20 13 11.6**	**-1.5**
ILAR	**Eielson Array**	**85.77 23**	P		**P**		**20 12 45.4**	**-1.8**
ILAR			pP		**pP**		**20 13 17.8**	**-1.5**
ILAR	**Eielson Array**	**85.77 23**	P		**P**		**20 12 45.4**	**-1.8**
	comp=Z,11nm,0.6s,baz=252,slow=5.0,SNR=112							
ILAR			pP		**pP**		**20 13 17.8**	**-1.5**
	comp=Z,4.0nm,0.8s,baz=251,slow=5.0,SNR=4.6							
BRVK	**Bovoye**	**85.89 324**	*e*P		**P**		**20 12 47.1**	**-1.0**
	comp=Z,2.9nm,0.8s							
EGAK	**Eagle**	**88.07 24**	*e*P		**P**		**20 12 57.7**	**-0.6**
	comp=Z,8.0nm,0.8s							
EGAK			*e*pP		**pP**		**20 13 29.2**	**-1.4**
SYO	**Syowa Base**	**90.38 200**	*e*P		**P**		**20 13 08.2**	**-0.9**
SYO	**Syowa Base**	**90.38 200**	*e*PcP		**PcP**		**20 13 11.0**	**+0.9**
ABKAR	**Akbulak array**	**91.55 319**	*e*P		**P**		**20 13 13.3**	**-1.6**
	comp=Z,1.9nm,0.8s							
ABKAR			*e*				20 13 42.9	
INK	**Inuvik**	**91.90 22**	P		**P**		**20 13 15.3**	**-0.8**
INK	**Inuvik**	**91.90 22**	P		**P**		**20 13 15.3**	**-0.8**
	comp=Z,2.9nm,0.8s,baz=234,slow=7.0,SNR=9.7							
NVAR	**Mina Array Bea**	**98.23 52**	P		Pdif		20 13 46.1	+0.1
NVAR	**Mina Array Bea**	**98.23 52**	P		Pdif		20 13 46.1	+0.1
	comp=Z,0.6nm,0.6s,baz=273,slow=5.9,SNR=5.5							
NVAR			LR		LR		20 50 53.7	
	comp=Z,92nm,20.5s,baz=195,slow=31							
YKA	**Yellowknife Ar**	**99.56 28**	P		**Pdif**		**20 13 50.1**	**-0.8**
YKA	**Yellowknife Ar**	**99.56 28**	P		**Pdif**		**20 13 50.1**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=276,slow=5.0,SNR=12							
GERES	**GERESS Array B**	**120.98 325**	PKP		**PKPdf**		**20 19 00.1**	**-0.2**
GERES	**GERESS Array B**	**120.98 325**	PKP		**PKPdf**		**20 19 00.1**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=153,slow=1.2,SNR=5.7							
PLCA	**Paso Flores**	**123.02 148**	PKP		**PKPdf**		**20 19 05.7**	**+1.2**
PLCA	**Paso Flores**	**123.02 148**	PKP		**PKPdf**		**20 19 05.7**	**+1.2**
	comp=Z,3.9nm,0.8s,baz=163,slow=2.6,SNR=10							
LPAZ	**La Paz**	**139.99 124**	PKP		**PKPdf**		**20 19 38.2**	**+0.5**
LPAZ			*e*PKPdf		**PKiKP**		**20 19 38.8**	**-1.3**
LPAZ	**La Paz**	**139.99 124**	PKP		**PKPdf**		**20 19 38.2**	**+0.5**
	comp=Z,3.1nm,0.7s,baz=7.0,slow=4.1,SNR=7.6							
CPUP	**Villa Florida**	**141.06 146**	PKP		**PKPdf**		**20 19 39.2**	**+0.6**
CPUP	**Villa Florida**	**141.06 146**	PKP		**PKPdf**		**20 19 39.2**	**+0.6**
	comp=Z,4.5nm,0.7s,baz=217,slow=2.4,SNR=7.9							
MDT	**Midelt**	**141.42 318**	PKP		**PKPdf**		**20 19 38.2**	**-1.0**
MDT	**Midelt**	**141.42 318**	PKP		**PKPdf**		**20 19 38.2**	**-1.0**
	comp=Z,3.1nm,0.8s,baz=228,slow=8.1,SNR=3.7							
TOA0	**Torodi Ar. Sit**	**143.78 284**	*e*PKPdf		PKPbc		20 19 41.6	0.0
TORD	**Torodi Ar. Bea**	**143.78 284**	PKP		PKPbc		20 19 42.0	+0.3
TORD	**Torodi Ar. Bea**	**143.78 284**	PKP		PKPbc		20 19 42.0	+0.3
	comp=Z,3.9nm,0.5s,baz=69,slow=3.5,SNR=40							
SAML	**Samuel**	**147.71 117**	*e*PKPbc		**PKPbc**		**20 19 53.3**	**-0.1**
DBIC	**Dimbokro**	**150.72 273**	*e*PKPbc		**PKPbc**		**20 20 01.5**	**+0.5**
DBIC	**Dimbokro**	**150.72 273**	PKPbc		**PKPbc**		**20 20 01.8**	**+0.9**
	comp=Z,27nm,0.7s,baz=74,slow=3.1,SNR=50							
BDFB	**Brasilia**	**154.77 148**	PKP		**PKPdf**		**20 20 02.7**	**+1.4**
BDFB	**Brasilia**	**154.77 148**	PKP		**PKPdf**		**20 20 02.7**	**+1.4**
	comp=Z,4.4nm,1.0s,baz=244,slow=5.0,SNR=5.0							

ISCJB ***10*** *20:08:55.5±0.4,39.70N±0.02×27.56E±0.02,h6km±3km, Error ellipse: s-maj=3.2km s-min=2.9km az=33.2*
CSEM ***10*** *20:08:55.8±0.1,39.71N×27.58E,h8km, MD3.4, Error ellipse: s-maj=2.9km s-min=2.6km az=58.0*
ATH ***10*** *20:08:55.5,39.63N×27.59E,h24km±2km, MD3.2/4*
DDA ***10*** *20:08:55.9,39.72N×27.61E,h14km, MD3.4*
ISK ***10*** *20:08:55.4,39.73N×27.59E,h5km, MD3.4*

ISC 10 20:08:55.8±0.8,39.71N±0.02×27.59E±0.02,h14km±4km, n90,σ0980/120, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BALY	**Balya**	**0.04**	**33**	*i* P		**Pg**	**20 08 58.4**	**-0.1**
BALY				*i* S		**Sg**	**20 09 00.2**	**-0.1**
BALY	**Balya**	**0.04**	**33**	*i* P		**Pg**	**20 08 58.4**	**-0.1**
BALY				*i* S		**Sg**	**20 09 00.2**	**-0.1**

BALB	**Balikesir**	**0.23 107**	*e*PG		**Pg**		**20 09 00.5**	**-0.4**
BALB			*e*SG		**Sg**		**20 09 04.1**	**-0.2**
BALB	**Balikesir**	**0.23 107**	*e*Pg		**Pg**		**20 09 00.5**	**-0.4**
BALB			*e*Sg		**Sg**		**20 09 04.1**	**-0.2**
GONE	**Gonen-Balikesi**	**0.34 12**	*e*PG		**Pg**		**20 09 02.9**	**+0.1**
GONE			*e*SG		**Sb**		**20 09 08.4**	**-0.6**
GONE	**Gonen-Balikesi**	**0.34 12**	*e*Pg		**Pg**		**20 09 02.9**	**+0.1**
GONE			*e*Sg		**Sb**		**20 09 08.4**	**-0.6**
EDC	**Edincik**	**0.67 18**	*e*PG		**Pg**		**20 09 08.5**	**-0.4**
DURS	**Dursunbey**	**0.69 99**	*i* P		**Pg**		**20 09 08.6**	**-0.6**
DURS			*i* S		**Sg**		**20 09 17.7**	**-0.6**
DURS	**Dursunbey**	**0.69 99**	*i* P		**Pg**		**20 09 08.6**	**-0.6**
DURS			*i* S		**Sg**		**20 09 17.7**	**-0.6**
BNT	**Bandirma**	**0.69 21**	*e*PG		**Pg**		**20 09 08.4**	**-0.9**
KRBG	**Karabiga-Canak**	**0.72 342**	*e*PG		**Pg**		**20 09 09.3**	**-0.5**
KRBG			*e*SG		**Sg**		**20 09 19.1**	**-0.2**
KRBG	**Karabiga-Canak**	**0.72 342**	*e*Pg		**Pg**		**20 09 09.3**	**-0.5**
KRBG			*e*Sg		**Sg**		**20 09 19.1**	**-0.2**
DST	**Dursunbey**	**0.80 97**	*e*PG		**Pg**		**20 09 10.7**	**-0.6**
DST	**Dursunbey**	**0.80 97**	*e*Pg		**Pg**		**20 09 10.7**	**-0.6**
AYVA	**Ayvalik**	**0.81 240**	*i* P		**Pg**		**20 09 11.4**	**0.0**
AYVA			*i* S		**Sb**		**20 09 22.4**	**+0.2**
AYVA	**Ayvalik**	**0.81 240**	*i* P		**Pg**		**20 09 11.4**	**0.0**
AYVA			*i* S		**Sb**		**20 09 22.4**	**+0.2**
AKHS	**Akhisar**	**0.85 168**	*i* P		**Pg**		**20 09 11.5**	**-0.7**
AKHS			*i* S		**Sg**		**20 09 23.3**	**0.0**
AKHS	**Akhisar**	**0.85 168**	*i* P		**Pg**		**20 09 11.5**	**-0.7**
AKHS			*i* S		**Sg**		**20 09 23.3**	**0.0**
AKS	**Akhisar**	**0.85 168**	*e*PG		**Pb**		**20 09 12.6**	**+0.4**
LPK	**Lapseki**	**0.92 316**	*e*PG		**Pb**		**20 09 13.2**	**-0.3**
LPK	**Lapseki**	**0.92 316**	*e*Pg		**Pb**		**20 09 13.2**	**-0.3**
EZN	**Ezine**	**0.98 277**	*e*PG		**Pb**		**20 09 14.6**	**+0.1**
EZN	**Ezine**	**0.98 277**	*e*Pg		**Pb**		**20 09 14.6**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.03 342**	*e*PG		**Pb**		**20 09 15.1**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.03 342**	*e*Pg		**Pb**		**20 09 15.1**	**-0.3**
SART	**Tekirdag**	**1.03 342**	*e*P		**Pb**		**20 09 15.5**	**+0.1**
SART			*i* S		**Sb**		**20 09 28.8**	**0.0**
SART	**Tekirdag**	**1.03 342**	*e*P		**Pb**		**20 09 15.5**	**+0.1**
SART			*i* S		**Sb**		**20 09 28.8**	**0.0**
ORLT	**Orhaneli**	**1.06 71**	*e*PG		**Pb**		**20 09 15.9**	**+0.1**
DEMI	**Demirci**	**1.10 127**	*i* P		**Pb**		**20 09 16.2**	**-0.3**
DEMI			*i* S		**Sb**		**20 09 30.0**	**-0.7**
DEMI	**Demirci**	**1.10 127**	*i* P		**Pb**		**20 09 16.2**	**-0.3**
DEMI			*i* S		**Sb**		**20 09 30.0**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.10 309**	*e*PN		**Pb**		**20 09 16.5**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.10 309**	*e*Pn		**Pb**		**20 09 16.5**	**-0.1**
MFT	**Murefte**	**1.10 348**	*e*PN		**Pg**		**20 09 17.1**	**+0.1**
MFT	**Murefte**	**1.10 348**	*e*Pn		**Pg**		**20 09 17.1**	**+0.1**
PRK	**Paraskevi**	**1.12 246**	*e*PN		**Pb**		**20 09 16.8**	**-0.1**
PRK			*e*SN		**Sb**		**20 09 31.3**	**0.0**

JJT2	**Tamagusuku 2**	**2.24**	**245**	P	Pn	20 25 41.8	+1.3
JJT2				*e*S	Sn	20 26 07.8	+0.8
JAGN	**Aguni-jima**	**2.52**	**259**	P	Pn	20 25 45.3	+0.9
JAGN				*e*S	Sn	20 26 15.0	+1.0
JNN	**Nakanoshima**	**2.73**	**358**	*e*S	Sn	20 26 19.3	+0.2
JKE	**Kume jima 2**	**2.98**	**256**	P	Pn	20 25 51.2	+0.5
JKC	**Kuchinoerabu**	**3.35**	**3**	P	Pn	20 25 56.5	+0.8
JKC				*e*S	Sn	20 26 32.9	-1.4
JTN	**Tanegashima 3**	**3.64**	**13**	P	Pn	20 26 00.3	+0.6
JTN				*e*S	Sn	20 26 41.1	-0.3

*CSEM **10** 20:32:42.6, 42°.30N×13°.48E, h10km, MD2.0/8, After ROM*
ROM 10 20:32:42.6±0.1, 42°.30N×13°.48E, h10km, Md2.0/8, MI1.4/4, Error ellipse: s-maj=1.5km s-min=1.3km az=22.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.08**	**314**	Pg	Pg	20 32 45.5	+0.5
AQU				Sg	Sg	20 32 47.3	+0.5
	205nm,0.3s						
AQU	**L'Aquila**	**0.08**	**314**	Pg	Pg	20 32 45.5	+0.5
AQU				Sg	Sg	20 32 47.3	+0.5
	205nm,0.3s						
FAGN	**Fagnano**	**0.09**	**113**	Pg	Pg	20 32 45.5	+0.4
FAGN				Sg	Sg	20 32 46.8	-0.1
	566nm,0.6s						
FAGN	**Fagnano**	**0.09**	**113**	Pg	Pg	20 32 45.5	+0.4
FAGN				Sg	Sg	20 32 46.8	-0.1
	566nm,0.6s						
FIAM	**Fiamignano**	**0.27**	**263**	Pg	Pg	20 32 48.9	+0.7
FIAM				Sg	Sg	20 32 52.8	+0.8
	37nm,0.7s						
FIAM	**Fiamignano**	**0.27**	**263**	Pg	Pg	20 32 48.9	+0.7
FIAM				Sg	Sg	20 32 52.8	+0.8
	37nm,0.7s						
PTQR	**Pietraquaria**	**0.28**	**192**	Pg	Pg	20 32 48.9	+0.4
PTQR				Sg	Sg	20 32 53.4	+1.0
	10.0nm,0.5s						
PTQR	**Pietraquaria**	**0.28**	**192**	Pg	Pg	20 32 48.9	+0.4
PTQR				Sg	Sg	20 32 53.4	+1.0
	10.0nm,0.5s						
VCEL	**Villa Celiera**	**0.28**	**71**	Pg	Pb	20 32 49.4	-0.6
VCEL				Sg	Sg	20 32 53.7	+1.2
	89nm,0.4s						
VCEL	**Villa Celiera**	**0.28**	**71**	Pg	Pb	20 32 49.4	-0.6
VCEL				Sg	Sg	20 32 53.7	+1.2
	89nm,0.4s						
TERO	**Teramo**	**0.34**	**16**	Pg	Pg	20 32 49.4	0.0
TERO				Sg	Sg	20 32 55.1	+1.1
	40nm,0.4s						
TERO	**Teramo**	**0.34**	**16**	Pg	Pg	20 32 49.4	0.0
TERO				Sg	Sg	20 32 55.1	+1.1
	40nm,0.4s						
INTR	**Introdacqua**	**0.43**	**132**	Pg	Pg	20 32 51.6	+0.4
INTR				Sg	Sb	20 32 58.4	-0.6
	28nm,0.3s						
INTR	**Introdacqua**	**0.43**	**132**	Pg	Pg	20 32 51.6	+0.4
INTR				Sg	Sb	20 32 58.4	-0.6
	28nm,0.3s						
VVLD	**Villa Vallelon**	**0.44**	**166**	Pg	Pg	20 32 51.9	+0.5
VVLD	**Villa Vallelon**	**0.44**	**166**	Pg	Pg	20 32 51.9	+0.5

*CSEM **10** 20:33:39.0±0.1, 42°.29N×13°.49E, h20km, ML3.1/5, Error ellipse: s-maj=1.8km s-min=1.4km az=76.0*
ROM 10 20:33:39.1±0.1, 42°.30N×13°.50E, h19km±1km, Md2.8/21, Ml2.7/21, Error ellipse: s-maj=0.9km s-min=0.8km az=67.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.07**	**117**	Pg	Pg	20 33 42.9	+0.2
FAGN				Sg	Sg	20 33 45.4	+0.2
FAGN	**Fagnano**	**0.07**	**117**	Pg	Pg	20 33 42.9	+0.2
FAGN				Sg	Sg	20 33 45.4	+0.2
AQU	**L'Aquila**	**0.09**	**308**	Pg	Pg	20 33 42.8	-0.1
AQU				Sg	Sg	20 33 45.8	+0.4
AQU	**L'Aquila**	**0.09**	**308**	Pg	Pg	20 33 42.8	-0.1
AQU				Sg	Sg	20 33 45.8	+0.4
CAMP	**Campotosto**	**0.24**	**345**	Pg	Pg	20 33 45.0	0.0
CAMP				Sg	Sg	20 33 49.3	+0.3
	649nm,0.6s						
CAMP	**Campotosto**	**0.24**	**345**	Pg	Pg	20 33 45.0	0.0
CAMP				Sg	Sg	20 33 49.3	+0.3
	649nm,0.6s						
VCEL	**Villa Celiera**	**0.27**	**70**	Pg	Pb	20 33 45.8	+0.3
	1µm,0.3s						
VCEL	**Villa Celiera**	**0.27**	**70**	Pg	Pb	20 33 45.8	+0.3
	1µm,0.3s						
FIAM	**Fiamignano**	**0.28**	**264**	Pg	Pb	20 33 45.7	0.0
FIAM				Sg	Sb	20 33 50.6	+0.5
	718nm,0.6s						
FIAM	**Fiamignano**	**0.28**	**264**	Pg	Pb	20 33 45.7	0.0
FIAM				Sg	Sb	20 33 50.6	+0.5
	718nm,0.6s						
PTQR	**Pietraquaria**	**0.29**	**194**	Pg	Pb	20 33 45.7	-0.1
PTQR				Sg	Sb	20 33 50.9	+0.7
PTQR	**Pietraquaria**	**0.29**	**194**	Pg	Pb	20 33 45.7	-0.1
PTQR				Sg	Sb	20 33 50.9	+0.7
TERO	**Teramo**	**0.33**	**14**	Pg	Pg	20 33 46.2	-0.2
TERO				Sg	Sb	20 33 51.5	-0.2
	694nm,0.2s						
TERO	**Teramo**	**0.33**	**14**	Pg	Pg	20 33 46.2	-0.2
TERO				Sg	Sb	20 33 51.5	-0.2
	694nm,0.2s						
INTR	**Introdacqua**	**0.42**	**133**	Pg	Pg	20 33 47.6	-0.3
INTR				Sg	Sb	20 33 54.5	+0.3
	585nm,0.2s						
INTR	**Introdacqua**	**0.42**	**133**	Pg	Pg	20 33 47.6	-0.3
INTR				Sg	Sb	20 33 54.5	+0.3
	585nm,0.2s						
VVLD	**Villa Vallelon**	**0.44**	**168**	Pg	Pg	20 33 48.1	-0.2
	782nm,0.4s						
VVLD	**Villa Vallelon**	**0.44**	**168**	Pg	Pg	20 33 48.1	-0.2
	782nm,0.4s						
LNSS	**Leonessa**	**0.45**	**312**	Pg	Pg	20 33 48.5	-0.1
	807nm,0.5s						
LNSS	**Leonessa**	**0.45**	**312**	Pg	Pg	20 33 48.5	-0.1
	807nm,0.5s						
CERT	**Cerreto**	**0.52**	**228**	Pg	Pg	20 33 49.4	-0.3
	980nm,0.3s						
CERT	**Cerreto**	**0.52**	**228**	Pg	Pg	20 33 49.4	-0.3
	980nm,0.3s						
GUAR	**Guarcino**	**0.52**	**195**	Pg	Pg	20 33 49.6	-0.1
	438nm,0.4s						
GUAR	**Guarcino**	**0.52**	**195**	Pg	Pg	20 33 49.6	-0.1
	438nm,0.4s						
LPEL	**Lama dei Pelig**	**0.57**	**116**	Pg	Pb	20 33 50.0	-0.5
LPEL				Sg	Sg	20 33 58.7	+0.3
	360nm,0.1s						
LPEL	**Lama dei Pelig**	**0.57**	**116**	Pg	Pb	20 33 50.0	-0.5
LPEL				Sg	Sg	20 33 58.7	+0.3
	360nm,0.1s						
TRTR	**Tortoreto Alta**	**0.59**	**31**	Pg	Pn	20 33 51.8	-0.8
TRTR	**Tortoreto Alta**	**0.59**	**31**	Pg	Pn	20 33 51.8	-0.8
NRCA	**Norcia**	**0.60**	**332**	Pg	Pb	20 33 50.5	-0.6
	53nm,0.2s						
NRCA	**Norcia**	**0.60**	**332**	Pg	Pb	20 33 50.5	-0.6
	53nm,0.2s						
POFI	**Posta Fibreno**	**0.60**	**164**	Pg	Pb	20 33 50.7	-0.4
	203nm,0.6s						
POFI	**Posta Fibreno**	**0.60**	**164**	Pg	Pb	20 33 50.7	-0.4
	203nm,0.6s						
MTCE	**Montecelio**	**0.62**	**244**	Pg	Pb	20 33 51.2	-0.2
	280nm,0.5s						
MTCE	**Montecelio**	**0.62**	**244**	Pg	Pb	20 33 51.2	-0.2
	280nm,0.5s						
SDI	**San Donato**	**0.64**	**158**	Pg	Pb	20 33 51.4	-0.2
	183nm,0.2s						
SDI	**San Donato**	**0.64**	**158**	Pg	Pb	20 33 51.4	-0.2
	183nm,0.2s						
CAFR	**Castel Frentan**	**0.64**	**96**	Pg	Pg	20 33 51.7	0.0
	598nm,0.3s						
CAFR	**Castel Frentan**	**0.64**	**96**	Pg	Pg	20 33 51.7	0.0
	598nm,0.3s						
OFFI	**Offida**	**0.65**	**12**	Pg	Pg	20 33 52.4	+0.4
	588nm,0.6s						
OFFI	**Offida**	**0.65**	**12**	Pg	Pg	20 33 52.4	+0.4
	588nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.76**	**194**	Pg	Pb	20 33 53.7	-0.2
	253nm,0.7s						
GIUL	**Giuliano Di Ro**	**0.76**	**194**	Pg	Pb	20 33 53.7	-0.2
	253nm,0.7s						
RMP	**Rome, Mte Porz**	**0.77**	**231**	Pg	Pb	20 33 53.7	-0.2
	342nm,0.3s						
RMP	**Rome, Mte Porz**	**0.77**	**231**	Pg	Pb	20 33 53.7	-0.2
	342nm,0.3s						
RNI2	**Rionero Sannit**	**0.77**	**140**	Pg	Pb	20 33 53.9	-0.2
	225nm,0.6s						
RNI2	**Rionero Sannit**	**0.77**	**140**	Pg	Pb	20 33 53.9	-0.2
	225nm,0.6s						
FDMO	**Fiordimonte**	**0.80**	**338**	Pg	Pb	20 33 53.9	-0.5
	142nm,0.4s						
FDMO	**Fiordimonte**	**0.80**	**338**	Pg	Pb	20 33 53.9	-0.5
	142nm,0.4s						
CERA	**Filignano**	**0.80**	**151**	Pg	Pb	20 33 53.9	-0.7
	265nm,0.7s						
CERA	**Filignano**	**0.80**	**151**	Pg	Pb	20 33 53.9	-0.7
	265nm,0.7s						
CESI	**CESI - Serrava**	**0.83**	**328**	Pg	Pb	20 33 54.8	-0.2
	79nm,0.6s						
CESI	**CESI - Serrava**	**0.83**	**328**	Pg	Pb	20 33 54.8	-0.2
	79nm,0.6s						
MIDA	**Miranda**	**0.87**	**139**	Pg	Pb	20 33 54.9	-0.8
	96nm,0.4s						
MIDA	**Miranda**	**0.87**	**139**	Pg	Pb	20 33 54.9	-0.8
	96nm,0.4s						
NVLJ	**Novalja**	**2.47**	**23**	*e*Pn	Pn	20 34 19.1	+0.8
NVLJ					Sn	20 34 49.1	+1.0
NVLJ	**Novalja**	**2.47**	**23**	*e*Pn	Pn	20 34 19.1	+0.7
NVLJ					Sn	20 34 49.1	+1.0
STON	**Ston**	**3.16**	**78**	*i* Pn	Pn	20 34 29.6	+1.8
STON					Sn	20 35 05.0	+0.1
STON	**Ston**	**3.16**	**78**	*i* Pn	Pn	20 34 29.5	+1.7
STON					Sn	20 35 05.0	+0.1

IDC 10 20:35:24.9±2.9, 7.77N×127.77E, h0km, Error ellipse: s-maj=205.4km s-min=27.0km az=67.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.29**	**167**	P	P	20 41 19.9	-0.3
	0.5nm,0.4s,baz=347,slow=11,SNR=6.4						
ASAR	**Alice Springs**	**31.81**	**169**	P	P	20 41 51.7	+0.2
	0.3nm,1.0s,baz=355,slow=7.8,SNR=3.1						
MKAR	**Makanchi Array**	**54.91**	**323**	P	P	20 44 57.3	-0.1
	0.3nm,0.5s,baz=120,slow=7.7,SNR=5.8						

*ISCJB **10** 20:44:45.0±1.3, 44°.29N±0°.05×128°.8W±0°.1, h13km, mb3.2/2, MS3.0/2, Error ellipse: s-maj=14.0km s-min=6.7km az=161.7*
*IDC **10** 20:44:46.4±2.7, 44°.22N×128°.44W, h0km, mb3.2/2, mb1 3.7/7, mb1mx3.4/31, mbtmp3.3/7, ML3.7/3, MS3.1/6, Ms1 3.1/6, ms1mx2.8/17, Error ellipse: s-maj=58.4km s-min=17.3km az=54.0*
*NEIC **10** 20:44:47.4±2.1, 44°.23N×128°.54W, h10km, mb3.6/1, Error ellipse: s-maj=28.7km s-min=10.7km az=72.0*
ISC 10 20:44:47.8±1.3, 44°.21N±0°.08×128°.7W±0°.1, h13km, n44, σ1s73/37, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.41**	**112**	*e*Pn	Pn	20 45 36.6	-4.1
KEBM				*e*Sn	**Sn**	**20 46 23.2**	**+2.2**
RNO	**Roman Nose**	**3.55**	**93**	P	**Pn**	**20 45 42.5**	**-0.1**
COR	**Corvallis**	**3.85**	**82**	*e*Pn	**Pn**	**20 45 46.5**	**-0.2**
DBO	**Dodson Butte**	**4.07**	**104**	P	**Pn**	**20 45 47.8**	**-1.9**
HUMO	**Hull Mountain**	**4.44**	**109**	*e*Pn	**Pn**	**20 45 52.3**	**-2.6**
HUMO				*e*Sn	**Sn**	**20 46 47.8**	**+1.3**
BROR	**Big Rock Looko**	**4.45**	**87**	P	**Pn**	**20 45 54.9**	**-0.1**
IRO	**Indian Ridge**	**4.61**	**90**	P	**Pn**	**20 45 57.5**	**+0.2**
NLWA	**Neilton Lookou**	**4.62**	**45**	*e*Pn	**Pn**	**20 45 55.5**	**-1.8**
FRIS	**Frissel Point**	**4.71**	**88**	P	**Pn**	**20 45 58.9**	**+0.3**
OSD	**Olympics--Snow**	**5.00**	**42**	P	**Pn**	**20 46 00.9**	**-1.6**
YBH	**Yreka Blue Hor**	**5.01**	**118**	*e*Pn	**Pn**	**20 46 00.5**	**-2.2**
YBH	**Yreka Blue Hor**	**5.01**	**118**	Pn	**Pn**	**20 46 03.9**	**+1.2**
	0.5nm,0.3s,baz=316,slow=10,SNR=7.0						
YBH				LR	LR	20 47 46.1	
	comp=Z,164nm,21.4s,baz=351,slow=37						
TDL	**Tradedollar La**	**5.02**	**62**	P	**Pn**	**20 46 03.0**	**+0.1**
LON	**Longmire**	**5.44**	**60**	*e*Pn	**Pn**	**20 46 08.4**	**-0.2**
	9.0nm,0.8s						
PGC	**Sidney**	**5.72**	**37**	*e*Pn	**Pn**	**20 46 09.5**	**-2.7**
PGC				*e*Sn	**Sn**	**20 47 16.8**	**-0.9**
WDC	**Whiskeytown Da**	**5.79**	**127**	P	**Pn**	**20 46 14.4**	**+1.1**
MBW	**Mount Baker**	**6.53**	**43**	P	**Pn**	**20 46 23.3**	**-0.3**
MOD	**Modoc**	**6.53**	**108**	*e*P	Pn	20 46 28.0	+4.3
BBB	**Bella Bella**	**7.99**	**2**	LR	LR	20 49 09.1	
	comp=Z,78nm,21.6s,baz=92,slow=33						
CMB	**Columbia Colle**	**8.76**	**132**	Pn	**Pn**	**20 46 54.4**	**+0.2**
NVAR	**Mina Array Bea**	**9.68**	**123**	Pn	**Pn**	**20 47 07.7**	**+0.7**
NVAR	**Mina Array Bea**	**9.68**	**123**	Pn	**Pn**	**20 47 07.7**	**+0.7**
	0.1nm,0.3s,baz=280,slow=14,SNR=7.1						
HLID	**Hailey**	**10.30**	**89**	*e*Pn	Pn	20 47 18.3	+3.0
SLMT	**Seeley Lake**	**11.02**	**69**	*e*Pn	**Pn**	**20 47 26.8**	**+1.6**
WALA	**Waterton Lakes**	**11.23**	**59**	Pn	**Pn**	**20 47 30.1**	**+2.1**
IMW	**Indian Meadow**	**12.75**	**85**	*e*Pn	Pn	20 47 52.3	+3.3
TPAW	**Teton Pass**	**12.80**	**87**	*e*Pn	Pn	20 47 53.1	+3.5
MOOW	**Moose Ponds**	**12.91**	**86**	*e*Pn	Pn	20 47 54.0	+3.0
LOHW	**Long Hollow**	**13.03**	**86**	*e*Pn	Pn	20 47 56.2	+3.5
ARUT	**Antelope Range**	**13.15**	**114**	*e*Pn	**Pn**	**20 47 56.9**	**+2.6**
PDAR	**Pinedale Array**	**13.94**	**89**	Pn	**Pn**	**20 48 07.3**	**+2.2**
PDAR	**Pinedale Array**	**13.94**	**89**	Pn	**Pn**	**20 48 07.3**	**+2.2**
	0.0nm,0.3s,baz=262,slow=9.7,SNR=4.9						
DLBC	**Dease Lake**	**14.28**	**357**	Pn	**Pn**	**20 48 11.8**	**+2.3**
DLBC	**Dease Lake**	**14.28**	**357**	Pn	**Pn**	**20 48 11.8**	**+2.3**
	0.4nm,0.3s,baz=224,slow=26,SNR=9.3						
DLBC				LR	LR	20 53 01.9	
	comp=Z,114nm,18.2s,baz=249,slow=35						
SRU	**San Rafael**	**14.47**	**104**	*e*Pn	**P**	**20 48 16.4**	**-2.7**
ANMO	**Albuquerque**	**19.40**	**111**	LR	LR	20 57 19.0	
	comp=Z,106nm,19.7s,baz=157,slow=39						
YKA	**Yellowknife Ar**	**20.06**	**19**	P	**P**	**20 49 18.8**	**-1.6**
YKA	**Yellowknife Ar**	**20.06**	**19**	P	**P**	**20 49 18.8**	**-1.6**
	0.0nm,0.3s,baz=210,slow=12,SNR=11						
FFC	**Flin Flon**	**20.16**	**49**	*e*Pn	**P**	**20 49 19.8**	**-1.8**
	2.6nm,0.8s						
ILAR	**Eielson Array**	**23.00**	**340**	P	**P**	**20 49 53.0**	**+1.0**
ILAR	**Eielson Array**	**23.00**	**340**	P	**P**	**20 49 53.0**	**+1.0**
	1.8nm,1.3s,baz=161,slow=8.6,SNR=4.7						
TXAR	**Lajitas Array**	**24.79**	**118**	P	**P**	**20 50 07.4**	**-2.0**
TXAR	**Lajitas Array**	**24.79**	**118**	P	**P**	**20 50 07.4**	**-2.0**
	0.4nm,0.7s,baz=313,slow=9.7,SNR=3.1						
TXAR				LR	LR	21 00 45.9	
	comp=Z,36nm,19.9s,baz=35,slow=39						
SFJD	**Kangerlussuaq**	**45.77**	**32**	LR	LR	21 10 30.2	
	comp=Z,30nm,21.8s,baz=128,slow=34						

IDC 10 20:50:47.9±3.3, 7.54S×119.21E, h285km±28km, mb3.0/2, mb1 2.9/4, mb1mx2.7/21, mbtmp2.9/4, Error ellipse: s-maj=103.4km s-min=13.9km az=59.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.57**	**12**	P	Pn	20 51 38.4	-0.1
	1.3nm,0.3s,baz=103,slow=17,SNR=7.3						
FITZ	**Fitzroy Crossi**	**12.22**	**150**	P	P	20 53 34.3	-0.7
	0.1nm,0.3s,baz=323,slow=9.7,SNR=5.6						
WRA	**Warramunga Arr**	**19.16**	**132**	P	P	20 54 51.0	0.0
	baz=302,slow=13,SNR=1.5						
ASAR	**Alice Springs**	**21.35**	**140**	P	P	20 55 13.2	-0.1
	0.3nm,0.5s,baz=310,slow=9.2,SNR=8.7						
SONM	**Songino Array**	**56.29**	**350**	P	P	20 59 59.1	-0.3
	0.3nm,0.6s,baz=171,slow=8.2,SNR=4.0						
MKAR	**Makanchi Array**	**63.26**	**332**	P	P	21 00 46.6	+0.1
	0.4nm,0.3s,baz=157,slow=6.5,SNR=14						

*IDC **10** 21:01:09.6±0.8, 34°.73N×72°.89E, h0km, mb3.8/11, mb1 4.0/14, mb1mx3.8/28, mbtmp3.9/14, ML3.8/4, Error ellipse: s-maj=20.0km s-min=16.2km az=51.0*
*ISCJB **10** 21:01:11.3±0.3, 34°.71N±0°.03×73°.09E±0°.04, h21km, mb4.0/15, Error ellipse: s-maj=5.3km s-min=3.5km az=162.0*
*NDI **10** 21:01:12.6±1.7, 34°.59N×72°.41E, h10km, ML3.6*
*NNC **10** 21:01:20.1±2.8, 35°.04N×72°.13E, h45km±31km, mb3.7, mpv3.9, Error ellipse: s-maj=22.1km s-min=9.7km az=28.0*
ISC 10 21:01:13.1±0.5, 34°.72N±0°.04×72°.90E±0°.05, h21km, n59, σ1s75/62, mb3.9/15, 9C-5D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**1.10**	**164**	P	**Pb**	**21 01 34.6**	**+1.1**
CEP	**Cherat**	**1.22**	**223**	P	**Pn**	**21 01 34.9**	**-0.1**
CEP				S	**Sn**	**21 01 53.0**	**+2.0**
THW	**Thamme Wali**	**2.15**	**207**	P	**Pb**	**21 01 52.3**	**+0.9**
SARP	**Sargodha**	**2.80**	**184**	P	**Pb**	**21 02 00.9**	**-1.5**
THN	**Thein Dam**	**3.28**	**133**	*e*P	**Pn**	**21 02 06.0**	**+2.8**
THN				*ex*	**Sb**	**21 02 50.0**	**+0.1**
SDNR	**Sundarnagar**	**4.69**	**132**	*e*P	Pn	21 02 26.5	+3.8
SDNR				*ex*	x	21 03 38.5	
SMLA	**Simla**	**5.07**	**134**	*i* P	Pn	21 02 31.6	+3.8
SMLA				*i* S	**Sn**	**21 03 29.8**	**+4.0**
DDI	**Dehra Dun**	**6.18**	**134**	*e*P	Pn	21 02 47.5	+4.3
DDI				*ex*	**Sb**	**21 04 17.0**	**+3.5**
NDI	**New Delhi**	**7.05**	**147**	*e*S	**Sn**	**21 04 12.0**	**-2.7**
KHET	**Khetri**	**7.08**	**159**	*e*P	**Pn**	**21 02 57.0**	**+1.5**
KHET				*e*S	**Sn**	**21 04 12.3**	**-3.0**
KHET				AML	AML	21 05 04.9	
	comp=E,123nm,0.1s						
KHET				AML	AML	21 05 07.8	
	comp=N,181nm,0.1s						
KUDL	**Kundal**	**7.24**	**154**	*e*P	**Pn**	**21 02 58.2**	**+0.6**
KUDL				*e*S	**Sn**	**21 04 17.0**	**-2.2**
KUDL				AML	AML	21 05 18.3	
	comp=E,20nm,0.6s						
KUDL				AML	AML	21 05 18.7	
	comp=N,18nm,0.7s						
SONA	**Sohna**	**7.37**	**150**	*e*P	**Pn**	**21 03 00.6**	**+1.1**
SONA				*e*S	**Sn**	**21 04 19.8**	**-2.7**
SONA				AML	AML	21 04 27.2	
	comp=E,40nm,0.4s						
SONA				AML	AML	21 04 28.8	
	comp=N,32nm,0.5s						
AML	**Almayashu**	**7.42**	**5**	P	**Pn**	**21 03 03.4**	**+2.9**
	SNR=18						
KZA	**Kyzart**	**7.57**	**13**	P	**Pn**	**21 03 05.7**	**+3.1**
	SNR=8.6						
EKS2	**Erkin-Say**	**7.96**	**5**	P	Pn	21 03 11.7	+4.1
	SNR=10.0						
AAK	**Ala-Archa**	**8.00**	**8**	P	Pn	21 03 13.0	+4.8
	SNR=6.8						
AAK	**Ala-Archa**	**8.00**	**8**	Pn	**Pn**	**21 03 09.9**	**+1.8**
	comp=N,1.1nm,0.3s,baz=166,slow=7.6,SNR=19						
AAK					Sn	**Sn**	**21 04 38.8**	**+0.8**
	comp=N,0.5nm,0.3s,baz=322,slow=19,SNR=4.7						
TKM2	**Tokmak 2**	**8.45**	**14**	⇓P	Pn	21 03 17.8	+3.4
	comp=N,2.1nm,0.5s						
TKM2				⇑S	**Sn**	**21 04 51.0**	**+1.7**
	comp=N,5.4nm,0.6s						
TKM2	**Tokmak 2**	**8.45**	**14**	P	Pn	21 03 18.1	+3.6
	SNR=8.2						
KK31	**Karatay Array**	**8.57**	**348**	⇑P	**Pn**	**21 03 16.8**	**+0.8**
	comp=N,2.3nm,0.3s,baz=172,slow=12,SNR=127						
KK31				⇑S	**Sn**	**21 04 47.6**	**-4.3**
	comp=N,6.9nm,0.3s,baz=174,slow=22,SNR=4.6						
PYUN	**Piuthan**	**10.85**	**125**	*e*P	**Pn**	**21 03 47.4**	**0.0**
	comp=N,18nm,0.3s						
DANN	**Dangsing**	**11.23**	**121**	*e*P	**Pn**	**21 03 52.2**	**-0.4**
	comp=N,24nm,0.4s						
KOLN	**Koldanda**	**11.48**	**124**	*e*P	**Pn**	**21 03 55.7**	**-0.3**
	comp=N,13nm,0.4s						
DMN	**Daman**	**12.62**	**121**	*e*P	**Pn**	**21 04 10.8**	**-0.9**
	comp=N,12nm,0.4s						
KKN	**Kakani**	**12.64**	**120**	*e*P	**Pn**	**21 04 10.4**	**-1.5**
	comp=N,19nm,0.5s						
PKIN	**Phulchoki**	**12.85**	**120**	*e*P	**Pn**	**21 04 13.4**	**-1.4**
	comp=N,21nm,0.3s						
PKI	**Pulchoki**	**12.86**	**120**	*e*P	**Pn**	**21 04 13.5**	**-1.5**
	comp=N,27nm,0.6s						
GUN	**Gumba**	**13.00**	**118**	*e*P	**Pn**	**21 04 15.6**	**-1.3**
	comp=N,14nm,0.4s						
MK31	**Makanchi Array**	**13.98**	**28**	⇑P	**P**	**21 04 35.3**	**-2.5**
	comp=N,1.2nm,0.8s						
MKAR	**Makanchi Array**	**13.98**	**28**	Pn	**Pn**	**21 04 29.9**	**-0.1**
	comp=N,0.1nm,0.3s,baz=211,slow=16,SNR=5.0						
RAMN	**Ramite**	**14.08**	**120**	*e*P	**Pn**	**21 04 29.5**	**-2.1**
	comp=N,20nm,0.5s						
TAPN	**Taplejung**	**14.66**	**116**	*e*P	**Pn**	**21 04 37.2**	**-2.3**
	comp=N,11nm,0.4s						
ODAN	**Odare**	**14.70**	**118**	*e*P	**Pn**	**21 04 37.4**	**-2.7**
	comp=N,9.7nm,0.4s						
KURK	**Kurchatov**	**16.52**	**13**	⇑P	**P**	**21 05 05.7**	**-0.1**
	comp=N,4.5nm,1.2s						
AB31	**Akbulak array**	**17.39**	**331**	⇓P	**Pn**	**21 05 12.0**	**-2.2**
	comp=N,1.0nm,0.4s						
AB31				⇑S	Sn	21 08 18.3	-8.8
	comp=N,0.9nm,0.6s						
VOSK	**Vostochnaya**	**18.05**	**356**	⇓P	**P**	**21 05 23.4**	**+0.6**
	comp=N,2.9nm,0.8s						
BVA0	**Borovoye Array**	**18.38**	**355**	⇑P	**P**	**21 05 26.6**	**+0.2**
	comp=N,0.3nm,0.8s,baz=235,slow=41,SNR=11						
BVAR	**Borovoye Array**	**18.38**	**355**	P	**P**	**21 05 25.7**	**-0.8**
	comp=N,0.7nm,0.3s,baz=155,slow=11,SNR=9.2						
BRVK	**Borovoye**	**18.42**	**355**	⇓P	**P**	**21 05 27.3**	**+0.5**
	comp=N,4.5nm,0.7s						
ZRNK	**Zerenda**	**18.43**	**353**	⇓P	**P**	**21 05 27.5**	**+0.6**
	comp=N,3.8nm,0.8s						
AKTO	**Aktyubinsk**	**19.09**	**330**	⇑P

OJC				*i* Sg	**Sg**	**21**	**16**	**40.9 +0.4**
OJC	**Ojcow**	**0.90**	**84**	*i* Pg	**Pg**	**21**	**16**	**28.5 -0.4**
OJC				*i* Sg	**Sg**	**21**	**16**	**40.9 +0.4**
KRLC	**Kraliky**	**1.05**	**268**	*e*PG	**Pg**	**21**	**16**	**31.4 -0.5**
KRLC	**Kraliky**	**1.05**	**268**	Pg	**Pg**	**21**	**16**	**31.4 -0.5**
LIKS	**Likavka**	**1.17**	**157**	*e*SG	**Sb**	**21**	**16**	**51.6 +1.1**
LIKS	**Likavka**	**1.17**	**157**	*e*Sg	**Sb**	**21**	**16**	**51.6 +1.1**
JAVC	**Velka Javorina**	**1.36**	**201**	*e*Sg	**Sg**	**21**	**16**	**55.8 +0.5**
DPC	**Dobruska-Polom**	**1.36**	**280**	*e*PG	**Pg**	**21**	**16**	**37.8 0.0**
DPC	comp=Z,60nm,0.3s			*e*SG	**Sg**	**21**	**16**	**55.5 +0.1**
DPC	**Dobruska-Polom** baz=100	**1.36**	**280**	*e*Pg	**Pg**	**21**	**16**	**37.6 -0.2**
DPC	baz=100			*e*Sg	**Sg**	**21**	**16**	**55.4 +0.1**
NIE	**Niedzica**	**1.42**	**119**	*e*Pg	**Pn**	**21**	**16**	**38.3 -0.6**
NIE				*e*Sg	**Sg**	**21**	**16**	**57.4 0.0**
NIE	**Niedzica**	**1.42**	**119**	*e*Pg	**Pn**	**21**	**16**	**38.3 -0.6**
NIE				*e*Sg	**Sg**	**21**	**16**	**57.4 0.0**
VRAC	**Vranov** baz=56	**1.44**	**236**	*e*Pg	**Pn**	**21**	**16**	**38.2 -0.8**
VRAC	48nm,0.2s,baz=56			*e*Sg	**Sg**	**21**	**16**	**56.8 -1.0**
KSP	**Ksiaz**	**1.53**	**299**	*e*Pn	**Pn**	**21**	**16**	**39.8 -0.5**
KSP				*e*Sn	**Sn**	**21**	**17**	**01.1 +0.2**
KSP	**Ksiaz**	**1.53**	**299**	*e*Pg	**Pn**	**21**	**16**	**39.8 -0.5**
KSP				*e*Sg	**Sn**	**21**	**17**	**00.8 -0.1**
UPC	**Upice**	**1.58**	**285**	*e*PG	**Pn**	**21**	**16**	**41.3 +0.2**
UPC				*e*SG	**Sg**	**21**	**17**	**02.9 +0.3**
UPC	**Upice**	**1.58**	**285**	Pg	**Pn**	**21**	**16**	**41.3 +0.2**
UPC				Sg	**Sg**	**21**	**17**	**02.9 +0.3**
VYHS	**Vyhne**	**1.66**	**170**	*e*PN	**Pn**	**21**	**16**	**41.5 -0.6**
VYHS				*e*SN	**Sn**	**21**	**17**	**03.6 -0.5**
VYHS	**Vyhne**	**1.66**	**170**	*e*Pn	**Pn**	**21**	**16**	**41.5 -0.6**
VYHS				*e*Sn	**Sn**	**21**	**17**	**03.6 -0.5**
KRUC	**Moravsky** baz=52	**1.69**	**232**	*e*Pn	**Pn**	**21**	**16**	**42.3 -0.2**
KRUC	18nm,0.2s,baz=52			*e*Sg	**Sn**	**21**	**17**	**04.8 0.0**
SMOL	**Smolenice**	**1.74**	**202**	*e*PN	**Pn**	**21**	**16**	**42.3 -0.9**
SMOL				*e*SN	**Sb**	**21**	**17**	**07.2 +0.3**
SMOL	**Smolenice**	**1.74**	**202**	*e*Pn	**Pn**	**21**	**16**	**42.4 -0.8**
SMOL				*e*Sn	**Sb**	**21**	**17**	**07.2 +0.3**
CRVS	**Cervenica-Dubn**	**2.34**	**120**	*e*PN	**Pb**	**21**	**16**	**54.3 -0.4**
CRVS				*e*SG	**Sb**	**21**	**17**	**25.6 +1.5**
CRVS	**Cervenica-Dubn**	**2.34**	**120**	*e*Pn	**Pb**	**21**	**16**	**54.3 -0.4**
CRVS				*e*Sg	**Sb**	**21**	**17**	**25.6 +1.5**
PRU	**Pruhonice**	**2.50**	**268**	*e*PN	**Pn**	**21**	**16**	**52.2 -1.4**
PRU				*e*PG	**Pb**	**21**	**16**	**56.9 -0.5**
PRU	comp=Z,16nm,0.3s			*e*SG	**Sb**	**21**	**17**	**29.4 +0.7**
PRU	**Pruhonice**	**2.50**	**268**	Pn	**Pn**	**21**	**16**	**52.2 -1.4**
KOLS	**Kolonicke sedl**	**2.79**	**114**	*e*PN	**Pn**	**21**	**16**	**58.8 +1.2**
KOLS				*e*SG	**Sg**	**21**	**17**	**40.0 -1.2**
KOLS	**Kolonicke sedl**	**2.79**	**114**	*e*Pn	**Pn**	**21**	**16**	**58.9 +1.3**
KOLS				*e*Sg	**Sg**	**21**	**17**	**40.0 -1.2**
BRG	**Berggiesshubel**	**2.95**	**286**	PG	**Pb**	**21**	**17**	**05.4 +0.3**
BRG	9.5nm,0.5s			SG	**Sg**	**21**	**17**	**44.8 -1.6**
KHC	**Kasperske Hory**	**3.30**	**254**	*e*PN	**Pn**	**21**	**17**	**03.8 -0.8**
KHC				*e*PG	**Pb**	**21**	**17**	**11.8 +0.7**
KHC	comp=Z,13nm,0.5s			*e*SG	**Sb**	**21**	**17**	**54.0 +2.3**
KHC	**Kasperske Hory**	**3.30**	**254**	Pn	**Pn**	**21**	**17**	**03.8 -0.8**
NKC	**Novy Kostel** comp=Z,11nm,0.4s	**3.83**	**274**	*e*SG	**Sg**	**21**	**18**	**12.9 -1.9**
NKC	**Novy Kostel** 11nm,0.4s	**3.83**	**274**	Sg	**Sg**	**21**	**18**	**12.9 -1.9**

*ISCJB **10**21:27:47.9±1.2,47.1°N±0.2°×152.9°E±0.2°,h40km,mb3.4/2, Error ellipse: s-maj=30.3km s-min=8.2km az=136.2*
*MOS **10**21:27:48.0±1.8,46.94°N×152.98°E,h43km,mb4.1/1, Error ellipse: s-maj=39.6km s-min=17.5km az=58.7*
*IDC **10**21:27:48.6±4.9,46.49°N×153.38°E,h66km±32km,mb3.1/2, mb1 3.5/5,mb1mx3.1/28,mbtmp3.5/5,ML3.6/3,Error ellipse: s-maj=109.6km s-min=26.9km az=149.0*
ISC 10 21:27:49.8±1.5,46.9N±0.2°×153.0E±0.2°,h40km,n8, σ2.9 11/9,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**4.27**	**28**	*e*PN	**Pn**	**21 28 51.0**	**-1.2**
SKR				*e*S	**Sn**	**21 29 39.4**	**-1.4**
SKR	comp=N,40nm,0.5s			pmax	pmax		
SKR	comp=Z,50nm,0.5s			pmax	pmax		
SKR	comp=N,60nm,0.5s			smax	smax		
SKR	comp=E,80nm,0.5s			smax	smax		
SKR	comp=Z,50nm,0.8s			smax	smax		
PETK	**Petropavlovsk-**	**6.87**	**24**	PN	**Pn**	**21 29 31.0**	**+3.0**
PETK	comp=Z,1.0nm,0.3s			pmax	pmax		
PETK	**Petropavlovsk-** comp=Z,0.7nm,0.3s,baz=202,slow=15,SNR=10	**6.87**	**24**	P	**Pn**	**21 29 31.0**	**+3.0**
ASAJ	**Asahikawa** comp=Z,0.8nm,0.3s,baz=204,slow=28,SNR=6.4	**7.84**	**253**	P	**Pn**	**21 29 40.4**	**-0.8**
FX1	**Attu Island--F** comp=Z,0.9nm,0.3s,baz=332,slow=15,SNR=3.1	**14.26**	**58**	P	**Pn**	**21 31 08.7**	**-0.3**
FX1	comp=Z,0.5nm,0.3s,baz=8.8,slow=7.2,SNR=2.1			S	Sn	21 33 36.5	-9.1
MJAR	**Matsushiro Arr** comp=Z,0.2nm,0.3s,baz=43,slow=7.9,SNR=5.1	**15.14**	**232**	P	**Pn**	**21 31 21.4**	**+0.6**
SONM	**Songino Array** comp=Z,0.2nm,0.7s,baz=69,slow=7.9,SNR=3.0	**31.20**	**289**	P	**P**	**21 34 06.3**	**+1.0**
FINES	**FINESS Array B** comp=Z,1.0nm,0.9s,baz=35,slow=7.7,SNR=7.2	**63.84**	**335**	P	**P**	**21 38 16.0**	**-1.6**

IDC 10 21:31:38.3±2.3,3.40S×129.02E,h0km,mb3.2/1, mb1 3.6/1,mb1mx3.2/19,mbtmp3.4/1,ML5.3/1,Error ellipse: s-maj=174.1km s-min=27.2km az=69.0,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 12nm,0.3s,baz=345,slow=12,SNR=3.0	**17.24**	**163**	P	Pn	21 35 40.7	0.0
ASAR	**Alice Springs** 0.9nm,0.6s,baz=349,slow=12,SNR=20	**20.69**	**167**	P	P	21 36 20.1	-0.1
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=108,slow=9.3,SNR=3.2	**64.70**	**326**	P	P	21 42 18.3	0.0

*ISCJB **10**21:43:34.4±0.9,6.9N±0.1°×73.0W±0.1°,h166km,mb3.3/1, Error ellipse: s-maj=19.7km s-min=10.2km az=44.5*
*IDC **10**21:43:38.4±5.2,6.78N×74.18W,h174km±25km,mb2.9/1, mb1 3.3/1,mb1mx2.8/22,mbtmp2.9/1,Error ellipse: s-maj=403.2km s-min=32.0km az=91.0*
*FUNV **10**21:43:38.6,6.96N×72.88W,h154km,MW3.1*
ISC 10 21:43:33.9±1.0,6.83N±0.09×73.0W±0.1,h166km,n17, σ1.9 70/21,7C,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.22**	**33**	*i* P	**Pn**	**21 44 03.2**	**+0.9**
CAPV				*e*S	**Sn**	**21 44 22.7**	**-1.5**
ROSC	**El Rosal** 13nm,0.3s,baz=287,slow=21,SNR=23	**2.38**	**215**	P	**Pn**	**21 44 15.8**	**+0.9**
ROSC	23nm,0.3s,baz=84,slow=21,SNR=12			S	**Sn**	**21 44 43.0**	**-3.5**
SOCV	**Socops**	**2.55**	**55**	*e*P	**Pn**	**21 44 18.0**	**+1.5**
SOCV				*e*S	**Sn**	**21 44 47.0**	**-2.4**
VIGV	**El Vigia**	**2.56**	**39**	*i* P	**Pn**	**21 44 17.8**	**+1.3**
VIGV				*e*S	**Sn**	**21 44 46.0**	**-3.7**
ELOV	**Elorza**	**3.47**	**87**	*e*P	**Pn**	**21 44 29.6**	**+1.8**
QARV	**Quebrada Arrib**	**4.14**	**36**	*e*P	**Pn**	**21 44 38.1**	**+1.7**
SANV	**Sanarito**	**4.32**	**52**	*e*P	**Pn**	**21 44 39.9**	**+1.0**
CURV	**Curarigua**	**4.35**	**43**	*e*P	**Pn**	**21 44 40.1**	**+0.9**
TEPV	**Terepaima**	**4.87**	**50**	*i* P	**Pn**	**21 44 47.1**	**+1.1**
SIQV	**Siquisique**	**4.92**	**39**	*e*P	**Pn**	**21 44 47.2**	**+0.6**
BAUV	**El Baul**	**5.32**	**66**	*e*P	**Pn**	**21 44 51.8**	**0.0**
MAPV	**Macapo**	**5.37**	**56**	*e*P	**Pn**	**21 44 53.3**	**+0.7**
MONV	**Montecano**	**5.89**	**30**	*e*P	**Pn**	**21 44 59.4**	**0.0**
TURV	**Turiamo**	**6.22**	**54**	*e*P	**Pn**	**21 45 04.1**	**+0.4**
YKA	**Yellowknife Ar** 0.3nm,0.6s,baz=135,slow=6.8,SNR=9.3	**63.30**	**340**	P	**P**	**21 53 45.9**	**+1.1**
ASAR	**Alice Springs** 0.2nm,0.5s,baz=112,slow=2.1,SNR=3.6	**149.23**	**234**	PKPbc	**PKPbc**	**22 03 04.0**	**+0.2**
WRA	**Warramunga Arr**	**150.47**	**241**	PKPbc	**PKPbc**	**22 03 07.7**	**+0.9**

0.5nm,0.7s,baz=94,slow=2.5,SNR=2.0

IDC 10 21:44:31.3±7.7,5.53S×146.59E,h145km±45km,mb3.1/3, mb1 3.1/4,mb1mx2.8/18,mbtmp3.0/4,Error ellipse: s-maj=79.3km s-min=49.1km az=42.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby** 1.0nm,0.3s,baz=13,slow=14,SNR=6.2	**3.89**	**172**	P	Pn	21 45 31.1	+1.1
PMG	1.3nm,0.3s,baz=198,slow=20,SNR=6.6			S	Sn	21 46 15.6	0.0
WRA	**Warramunga Arr** 0.6nm,0.3s,baz=40,slow=12,SNR=45	**18.63**	**219**	P	P	21 48 38.7	+0.7
ASAR	**Alice Springs** 0.7nm,0.4s,baz=46,slow=8.3,SNR=11	**21.78**	**213**	P	P	21 49 11.6	-0.3
FITZ	**Fitzroy Crossi** 1.1nm,0.8s,baz=57,slow=12,SNR=6.0	**23.98**	**237**	P	P	21 49 32.0	-0.6
STKA	**Stephens Creek** 0.4nm,0.6s,baz=39,slow=11,SNR=2.4	**26.62**	**190**	P	P	21 49 56.5	+0.2

*IDC **10**22:01:04.0±2.4,19.42S×70.84W,h0km,mb3.9/3, mb1 3.9/5,mb1mx3.7/18,mbtmp3.8/5,ML3.6/2,Error ellipse: s-maj=70.2km s-min=43.3km az=179.0*
*ISCJB **10**22:01:16.7±0.6,18.40S±0.06×70.5W±0.1,h79km±5km, mb3.8/3,Error ellipse: s-maj=17.7km s-min=7.0km az=155.7*
*GUC **10**22:01:18.0±0.9,18.47S×70.44W,h72km±7km,ML3.8*
*NEIC **10**22:01:18.0,18.47S×70.44W,h72km,MG3.8(GUC),After GUC.*
NEIC Felt [II] at Arica.
ISC 10 22:01:17.4±1.0,18.44S±0.05×70.5W±0.1,h72km±7km,n24, σ1.5 15/30,mb3.9/3,4C-5D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARCH	**Arica**	**0.23**	**102**	*i* P	**Pn**	**22 01 28.5**	**+0.2**
ARCH				*i* S	**Sn**	**22 01 36.5**	**+0.1**
ARCH	**Arica**	**0.23**	**102**	*i* P	**Pn**	**22 01 28.5**	**+0.2**
ARCH				*i* S	**Sn**	**22 01 36.5**	**+0.1**
ARCH	comp=E,29µm,0.4s			AML	AML	22 01 37.3	
MNMC	**Miaee Miae**	**1.12**	**128**	*i* P	**Pn**	**22 01 38.0**	**+0.2**
MNMC	**Miaee Miae**	**1.12**	**128**	*i* P	**Pn**	**22 01 38.0**	**+0.2**
MNMC				*i* S	**Sn**	**22 01 52.7**	**-0.3**
MNMC	comp=E,3µm,0.2s			AML	AML	22 01 56.2	
PSGC	**Pisagua**	**1.21**	**161**	*i* P	**Pn**	**22 01 39.5**	**+0.7**
PSGC				*i* S	**Sn**	**22 01 55.3**	**+0.4**
PSGC	**Pisagua**	**1.21**	**161**	*i* P	**Pn**	**22 01 39.5**	**+0.7**
PSGC				*i* S	**Sn**	**22 01 55.3**	**+0.4**
PSGC	comp=N,740nm,0.4s			AML	AML	22 01 57.0	
ARE	**Arequipa**	**2.17**	**335**	*i* P	**Pn**	**22 01 51.6**	**-0.1**
ARE				*i* S	**Sn**	**22 02 17.0**	**-0.8**
PB01	**Plate Boundary**	**2.77**	**159**	*i* P	**Pn**	**22 01 59.9**	**+0.2**
PB01	**Plate Boundary**	**2.77**	**159**	*i* P	**Pn**	**22 01 59.9**	**+0.2**
PB01	comp=E,187nm,0.4s			AML	AML	22 02 54.2	
LPAZ	**La Paz**	**3.14**	**47**	*e*Pn	**Pn**	**22 02 07.3**	**+2.2**
LPAZ	**La Paz** comp=E,1.2nm,0.3s,baz=222,slow=5.5,SNR=23	**3.14**	**47**	Pn	**Pn**	**22 02 07.8**	**+2.6**
PB07	**Plate Boundary**	**3.33**	**170**	P	**Pn**	**22 02 07.7**	**+0.5**
PB07	**Plate Boundary**	**3.33**	**170**	*e*P	**Pn**	**22 02 07.7**	**+0.5**
PB07	comp=N,95nm,0.4s			AML	AML	22 03 06.4	
PB09	**Plate Boundary**	**3.55**	**160**	*e*P	**Pn**	**22 02 11.4**	**+1.0**
PB09	**Plate Boundary**	**3.55**	**160**	*e*P	**Pn**	**22 02 11.4**	**+1.0**
PB09	comp=N,456nm,0.6s			AML	AML	22 03 17.0	
SIV	**San Ignacio**	**9.36**	**76**	Pn	**Pn**	**22 03 27.5**	**-2.1**
SIV	**San Ignacio** comp=N,0.7nm,0.3s,baz=263,slow=12,SNR=9.3	**9.36**	**76**	Pn	**Pn**	**22 03 27.5**	**-2.1**
GLMI	**Grayling**	**64.26**	**349**	*e*P	**P**	**22 11 45.0**	**+0.1**
DBIC	**Dimbokro**	**69.39**	**75**	P	**P**	**22 12 19.2**	**+1.0**
DBIC	**Dimbokro** comp=N,1.4nm,0.5s,baz=217,slow=5.1,SNR=3.9	**69.39**	**75**	P	**P**	**22 12 19.2**	**+1.0**
TORD	**Torodi Ar. Bea**	**77.81**	**72**	P	**P**	**22 13 05.8**	**-1.8**
TORD	**Torodi Ar. Bea** comp=N,0.8nm,0.6s,baz=252,slow=4.8,SNR=9.1	**77.81**	**72**	P	**P**	**22 13 05.8**	**-1.8**
YKA	**Yellowknife Ar**	**87.81**	**341**	P	**P**	**22 13 58.6**	**+0.3**
YKA	**Yellowknife Ar** comp=N,0.6nm,0.9s,baz=132,slow=4.7,SNR=5.9	**87.81**	**341**	P	**P**	**22 13 58.6**	**+0.3**

IDC 10 22:04:18.7±2.0,23.61S×68.99W,h0km,mb4.0/3, mb1 4.0/5,mb1mx3.8/17,mbtmp3.9/5,ML3.5/2,MS3.4/1, Ms1 3.3/1,ms1mx2.5/26,Error ellipse: s-maj=51.4km s-min=41.3km az=3.0,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz** 0.2nm,0.3s,baz=174,slow=19,SNR=3.2	**7.33**	**7**	Pn	Pn	22 06 08.5	+0.6
SIV	**San Ignacio** 0.5nm,0.3s,baz=214,slow=17,SNR=8.8	**10.63**	**46**	Pn	Pn	22 06 51.3	-1.2
BDFB	**Brasilia** 2.9nm,0.5s,baz=237,slow=13,SNR=6.1	**21.27**	**72**	P	P	22 09 07.0	0.0
BDFB	comp=Z,96nm,20.4s,baz=144,slow=40			LR	LR	22 18 41.2	
TORD	**Torodi Ar. Bea** 0.7nm,0.4s,baz=249,slow=5.1,SNR=14	**78.14**	**70**	P	P	22 16 20.6	+0.3
YKA	**Yellowknife Ar** 0.5nm,0.8s,baz=139,slow=4.8,SNR=8.7	**93.14**	**341**	P	P	22 17 33.8	-0.4
ZALV	**Zalesovo Beam** 4.7nm,0.4s,baz=311,slow=1.1,SNR=2.8	**143.88**	**26**	PKP	PKPdf	22 23 54.7	-1.0
MKAR	**Makanchi Array** 0.4nm,0.7s,baz=308,slow=3.3,SNR=4.8	**147.36**	**38**	PKPbc	PKPbc	22 24 03.7	-0.7

*ISCJB **10**22:07:52.4±0.6,13.60S±0.09×167.2E±0.1,h200km, mb3.8/10,Error ellipse: s-maj=15.1km s-min=11.5km az=19.4*
*IDC **10**22:07:54.5±3.9,13.69S×167.13E,h202km±34km, mb3.6/10,mb1 3.8/11,mb1mx3.6/20,mbtmp3.6/11,Error ellipse: s-maj=25.1km s-min=19.0km az=90.0*
*AUST **10**22:07:55.6±14.0,13.89S×167.42E,h210km±1km,Error ellipse: s-maj=3.2km s-min=1.6km az=359.0*
ISC 10 22:07:53.7±0.7,13.6S±0.1×167.3E±0.1,h200km,n29, σ0.8 80/32,mb3.8/10,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac** 1.1nm,0.3s,baz=14,slow=17,SNR=6.4	**8.42**	**185**	P	**Pn**	**22 09 53.3**	**+0.7**
EIDS	**Eidsvold** baz=19,SNR=5.0	**19.19**	**230**	P	**P**	**22 12 03.8**	**+1.3**
RMQ	**Roma** baz=22,SNR=4.7	**21.55**	**231**	P	**P**	**22 12 28.6**	**+1.0**
ARMA	**Armidale** baz=22,SNR=8.2	**22.07**	**218**	P	**P**	**22 12 33.8**	**+1.1**
NIUE	**Niue** baz=22,SNR=3.4	**22.53**	**107**	P	**P**	**22 12 36.0**	**-1.0**
CNB	**Canberra Magne** baz=27,SNR=4.9	**26.95**	**214**	P	**P**	**22 13 17.5**	**+0.7**
STKA	**Stephens Creek** 4.7nm,0.6s,baz=47,slow=7.9,SNR=26	**29.71**	**228**	P	**P**	**22 13 41.6**	**+0.4**
STKA	1.4nm,1.0s,baz=49,slow=2.4,SNR=4.8			PcP	**PcP**	**22 16 39.9**	**-0.4**
STKA	**Stephens Creek** baz=30,SNR=18	**29.71**	**228**	P	**P**	**22 13 41.7**	**+0.5**
TOO	**Toolangi** baz=31,SNR=5.8	**30.73**	**215**	P	**P**	**22 13 50.8**	**+0.7**
WRA	**Warramunga Arr** 1.1nm,0.6s,baz=85,slow=9.4,SNR=7.6	**32.11**	**254**	P	**P**	**22 14 00.3**	**-2.1**
WRA	0.2nm,0.6s,baz=81,slow=2.9,SNR=6.1			PcP	**PcP**	**22 16 46.9**	**0.0**
ASAR	**Alice Springs** 2.9nm,0.6s,baz=74,slow=9.3,SNR=65	**33.08**	**248**	P	**P**	**22 14 09.4**	**-1.4**
ASAR	0.6nm,0.6s,baz=77,slow=2.2,SNR=8.5			PcP	**PcP**	**22 16 49.4**	**-0.2**
KDU	**Kakadu** baz=34,SNR=5.6	**33.88**	**267**	P	**P**	**22 14 18.1**	**+0.3**
BBOO	**Buckleboo** baz=34,SNR=7.6	**34.26**	**231**	P	**P**	**22 14 20.5**	**-0.4**
MTN	**Manton Dam** baz=35,SNR=3.1	**35.17**	**267**	P	P	22 14 34.8	+6.0
MEEK	**Meekatharra** baz=47,SNR=5.3	**47.21**	**246**	P	**P**	**22 16 06.4**	**-0.4**
KLBR	**Kellerberrin** baz=49,SNR=8.5	**48.64**	**240**	P	**P**	**22 16 16.6**	**-1.1**
MJAR	**Matsushiro Arr** 0.9nm,0.5s,baz=180,slow=8.7,SNR=5.5	**56.94**	**332**	P	**P**	**22 17 18.2**	**-0.1**
VNDA	**Vanda** 0.4nm,0.5s,baz=22,slow=7.0,SNR=7.7	**63.95**	**181**	P	**P**	**22 18 04.7**	**-0.3**
CMAR	**Chiang Mai Arr** 1.5nm,0.7s,baz=127,slow=5.1,SNR=8.7	**74.51**	**294**	P	**P**	**22 19 11.9**	**+1.1**
SONM	**Songino Array** 0.3nm,0.4s,baz=153,slow=5.8,SNR=10	**81.62**	**323**	P	**P**	**22 19 49.7**	**+0.2**
ILAR	**Eielson Array** 0.4nm,0.6s,baz=224,slow=6.1,SNR=4.2	**85.49**	**18**	P	**P**	**22 20 08.9**	**+0.3**
MKAR	**Makanchi Array** 0.9nm,0.6s,baz=95,slow=6.1,SNR=15	**96.42**	**316**	P	**P**	**22 21 00.7**	**+0.7**
ZALV	**Zalesovo Beam** 0.7nm,0.6s,baz=131,slow=4.5,SNR=3.9	**96.52**	**324**	P	**P**	**22 21 00.0**	**-0.3**
ARCES	**ARCESS Array B** 2.7nm,0.7s,baz=61,slow=1.9,SNR=15	**119.20**	**346**	PKP	**PKPdf**	**22 26 18.6**	**+0.2**
FINES	**FINESS Array B** 0.3nm,0.3s,baz=88,slow=3.1,SNR=6.9	**124.71**	**339**	PKP	**PKPdf**	**22 26 30.3**	**+1.2**
GERES	**GERESS Array B** 0.2nm,0.4s,baz=72,slow=4.3,SNR=3.8	**138.68**	**334**	PKP	**PKPdf**	**22 26 56.4**	**+0.4**
KEST	**Kesra** 1.5nm,0.6s,baz=229,slow=0.3,SNR=18	**150.37**	**322**	PKPbc	**PKPbc**	**22 27 21.9**	**0.0**
ESDC	**Sonseca Array** 0.2nm,0.5s,baz=1.5,slow=5.2,SNR=4.3	**152.94**	**345**	PKPab	**PKPab**	**22 27 39.2**	**-0.2**
TORD	**Torodi Ar. Bea** 0.9nm,0.8s,baz=19,slow=1.6,SNR=5.3	**165.96**	**270**	PKP	**PKPdf**	**22 27 35.4**	**-0.3**
TORD	0.4nm,0.4s,baz=79,slow=5.3,SNR=7.4			PKPab	**PKPab**	**22 28 36.6**	**-0.3**

*TAP **10**22:32:01.5,25.37N×122.46E,h211km±1km,ML3.4,C*
*ISCJB **10**22:32:02.2±1.0,25.24N±0.09×122.65E±0.03, h191km±9km,Error ellipse: s-maj=14.7km s-min=4.9km az=175.1*
*JMA **10**22:32:03.1±0.4,25.51N×122.50E,h150km,M2.8*
ISC 10 22:31:58.2±1.8,25.39N±0.09×122.62E±0.05, h219km±13km,n28,σ1.9 70/44,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCYT	**Pengchaiyu** baz=303	**0.55**	**296**	*e*P	**Pn**	**22 32 29.6**	**+2.0**
TWB1	**Santiao Chiao** baz=233	**0.69**	**236**	*e*P	**Pn**	**22 32 29.9**	**+1.6**
NWF	**Wu-fen Shan** baz=233	**0.83**	**247**	P	**Pn**	**22 32 30.6**	**+1.6**
TWY	**Chenhua** baz=270	**0.93**	**263**	*e*P	**Pn**	**22 32 31.7**	**+2.2**
TWC	**Suao** baz=210	**1.05**	**222**	P	**Pn**	**22 32 31.5**	**+1.2**
TWE	**Neicheng** baz=232	**1.09**	**233**	*e*P	**Pn**	**22 32 32.1**	**+1.6**
ENTT	**Nioudou** baz=230	**1.22**	**232**	P	**Pn**	**22 32 32.7**	**+1.2**
ENTT	baz=230			*e*S	**S**	**22 32 55.4**	**-1.8**
ENA	**Nanau** baz=213	**1.25**	**220**	P	**Pn**	**22 32 33.2**	**+1.5**
ENA	baz=213			S	**S**	**22 32 56.3**	**-1.3**
NSK	**Sanguang** baz=243	**1.35**	**238**	P	**Pn**	**22 32 33.6**	**+1.1**
NSK	baz=243			S	**S**	**22 32 57.2**	**-1.9**
IRIF	**Iriomote-Funau**	**1.46**	**136**	P	**Pn**	**22 32 34.0**	**+0.7**
IRIF				*e*S	**S**	**22 32 58.5**	**-1.9**
NNS	**Nan Shan** baz=225	**1.48**	**230**	*e*P	**Pn**	**22 32 35.1**	**+1.5**
NNS	baz=225			*e*S	**S**	**22 32 59.4**	**-1.6**
TWD	**Chiawan** baz=215	**1.60**	**216**	P	**Pn**	**22 32 35.5**	**+1.0**
TWD				S	**S**	**22 33 01.3**	**-1.3**
NSTT	**Nanjuang** baz=240	**1.65**	**243**	P	**Pn**	**22 32 36.4**	**+1.5**
NSTT	baz=240			*e*S	**S**	**22 33 01.4**	**-2.0**
JKRS	**Kuro-shima**	**1.71**	**132**	P	**Pn**	**22 32 36.9**	**+1.5**
JKRS				*e*S	**S**	**22 33 02.8**	**-1.4**
HATJ	**Hateruma jima**	**1.71**	**141**	P	**Pn**	**22 32 37.1**	**+1.6**
HATJ				*e*S	**S**	**22 33 02.7**	**-1.6**
JIJ	**Ishigaki jima**	**1.72**	**126**	P	**Pn**	**22 32 36.5**	**+1.0**
JIJ				*e*S	**S**	**22 33 02.1**	**-2.3**
TWT	**Tachien** baz=222	**1.73**	**230**	*e*S	**S**	**22 33 03.6**	**-1.5**
WHF	**Hehuan Shan** baz=221	**1.75**	**225**	*e*P	**Pn**	**22 32 38.2**	**+1.8**
WHF	baz=221			*e*S	**S**	**22 33 04.0**	**-1.8**
ESL	**Shilin** baz=213	**1.91**	**215**	*e*P	**Pn**	**22 32 39.2**	**+1.9**
JTJ	**Tarama**	**2.03**	**111**	P	**Pn**	**22 32 40.7**	**+2.3**
JTJ				*e*S	**S**	**22 33 09.1**	**-0.5**
SMLT	**Sun Moon Lake** baz=231	**2.17**	**227**	P	**Pn**	**22 32 41.5**	**+1.4**
SMLT	baz=231			*e*S	**S**	**22 33 10.9**	**-1.5**
TYC	**Yuchr** baz=232	**2.19**	**228**	P	**Pn**	**22 32 41.8**	**+1.7**
TYC	baz=232			*e*S	**S**	**22 33 11.1**	**-1.3**
TWF1	**Yuli** baz=209	**2.36**	**211**	*e*P	**Pn**	**22 32 42.9**	**+0.9**
CHN5	**Tsauling** baz=230	**2.52**	**225**	*e*P	**Pn**	**22 32 44.8**	**+1.2**
CHN5	baz=230			*e*S	**S**	**22 33 17.7**	**-1.1**
JOGS	**Gusukube**	**2.60**	**103**	*e*S	**S**	**22 33 20.7**	**+0.4**
JKE	**Kume jima 2**	**3.87**	**75**	P	**Pn**	**22 33 01.4**	**+2.4**
JOW	**Kunigami**	**5.28**	**73**	P	**Pn**	**22 33 16.7**	**+1.6**
JAMN	**Amaminishikomi**	**6.51**	**63**	P	**Pn**	**22 33 32.3**	**+0.1**
JAMN				*e*S	**S**	**22 34 43.4**	**-3.5**

IDC 10 22:47:42.1±0.8,19.02N×144.82E,h0km,mb3.7/10, mb1 3.9/10,mb1mx3.8/25,mbtmp3.7/10,Error ellipse: s-maj=30.5km s-min=18.0km az=87.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array** 1.1nm,0.6s,baz=146,slow=9.1,SNR=5.2	**23.57**	**325**	P	P	22 52 54.8	+0.5
WRA	**Warramun

ARG	**Arkhangelos**	**0.67**	**269**	*e*Pn	**Pb**	**23 03 10.8**	**-0.2**
ARG				*e*Sn	**Sn**	**23 00 22.0**	**-0.4**
TURN	**Turunc**	**0.70**	**337**	*i* P	**Pb**	**23 03 12.3**	**+0.7**
TURN				*i* S	**Sn**	**23 03 24.0**	**+0.7**
TURN	**Turunc**	**0.70**	**337**	*i* P	**Pb**	**23 03 12.3**	**+0.7**
TURN				*i* S	**Sn**	**23 03 24.0**	**+0.7**
ELL	**Elmali**	**0.93**	**56**	*e*PG	**Pb**	**23 03 14.7**	**-0.9**
ELL	**Elmali**	**0.93**	**56**	*e*Pg	**Pb**	**23 03 14.7**	**-0.9**
GLHS	**Glhisar (BURDU**	**1.03**	**25**	*e*PG	**Pb**	**23 03 16.5**	**-0.7**
GLHS	**Glhisar (BURDU**	**1.03**	**25**	*e*Pg	**Pb**	**23 03 16.5**	**-0.7**
YER	**Yerkesik**	**1.05**	**330**	*e*PN	**Pb**	**23 03 17.5**	**-0.1**
YER	**Yerkesik**	**1.05**	**330**	*e*Pn	**Pb**	**23 03 17.5**	**-0.1**
GOLH	**Golhisar**	**1.12**	**26**	*i* P	**Pn**	**23 03 18.2**	**-0.6**
GOLH				*i* S	**Sn**	**23 03 34.9**	**+1.1**
GOLH	**Golhisar**	**1.12**	**26**	*i* P	**Pn**	**23 03 18.2**	**-0.6**
GOLH				*i* S	**Sn**	**23 03 34.9**	**+1.1**
KORT	**Korkueli**	**1.36**	**55**	*i* P	**Pb**	**23 03 22.7**	**-0.3**
KORT				*i* S	**Sb**	**23 03 42.3**	**+2.2**
KORT	**Korkueli**	**1.36**	**55**	*i* P	**Pb**	**23 03 22.7**	**-0.3**
KORT				*i* S	**Sb**	**23 03 42.3**	**+2.2**
MLSB	**Milas**	**1.42**	**319**	*e*PN	**Pn**	**23 03 23.1**	**+0.2**
MLSB	**Milas**	**1.42**	**319**	*e*Pn	**Pn**	**23 03 23.1**	**+0.2**
DNZL	**Cakiroluk**	**1.46**	**3**	*i* P	**Pn**	**23 03 23.7**	**+0.1**
DNZL				*i* S	**Sn**	**23 03 42.5**	**+0.2**
DNZL	**Cakiroluk**	**1.46**	**3**	*i* P	**Pn**	**23 03 23.7**	**+0.1**
DNZL				*i* S	**Sn**	**23 03 42.5**	**+0.2**
DENT	**Denizli**	**1.52**	**2**	*e*PN	**Pn**	**23 03 24.2**	**-0.1**
DENT	**Denizli**	**1.52**	**2**	*e*Pn	**Pn**	**23 03 24.2**	**-0.1**
BODT	**Bodrum**	**1.56**	**303**	*e*PN	**Pn**	**23 03 23.9**	**-0.8**
BODT	**Bodrum**	**1.56**	**303**	*e*Pn	**Pn**	**23 03 23.9**	**-0.8**
KARP	**Karpathos**	**1.60**	**245**	*e*PB	**Pn**	**23 03 25.1**	**-0.3**
KARP				*e*SN	**Sn**	**23 03 46.0**	**+0.4**
KARP	**Karpathos**	**1.60**	**245**	*e*Pb	**Pn**	**23 03 25.1**	**-0.3**
KARP				*e*Sn	**Sn**	**23 03 46.0**	**+0.4**
AYDN	**Tasoluk**	**1.67**	**329**	*i* P	**Pb**	**23 03 27.4**	**-0.7**
AYDN				*i* S	**Sb**	**23 03 48.1**	**-0.7**
AYDN	**Tasoluk**	**1.67**	**329**	*i* P	**Pb**	**23 03 27.4**	**-0.7**
AYDN				*i* S	**Sb**	**23 03 48.1**	**-0.7**
GCAM	**G?zelcaml?**	**2.01**	**317**	*i* P	**Pn**	**23 03 30.8**	**-0.1**
GCAM				*i* S	**Sn**	**23 03 54.9**	**-0.7**
GCAM	**G?zelcaml?**	**2.01**	**317**	*i* P	**Pn**	**23 03 30.8**	**-0.1**
GCAM				*i* S	**Sn**	**23 03 54.9**	**-0.7**
KHAL	**Karahalli**	**2.18**	**11**	*e*P	**Pn**	**23 03 32.5**	**-0.9**
KHAL				*e*S	**Sn**	**23 03 58.5**	**-1.5**
KHAL	**Karahalli**	**2.18**	**11**	*e*P	**Pn**	**23 03 32.5**	**-0.9**
KHAL				*e*S	**Sn**	**23 03 58.5**	**-1.5**
KULA	**Kula-Manisa**	**2.29**	**354**	*e*PN	**Pn**	**23 03 34.8**	**-0.1**
KULA	**Kula-Manisa**	**2.29**	**354**	*e*Pn	**Pn**	**23 03 34.8**	**-0.1**
ZKR	**Zakros**	**2.49**	**244**	*e*PN	**Pn**	**23 03 37.7**	**+0.2**
ZKR				*e*SN	**Sn**	**23 04 07.3**	**-0.1**
ZKR	**Zakros**	**2.49**	**244**	*e*Pn	**Pn**	**23 03 37.7**	**+0.2**
BLCB	**Balcova**	**2.64**	**325**	*e*PN	**Pn**	**23 03 40.2**	**+0.7**
BLCB	**Balcova**	**2.64**	**325**	*e*Pn	**Pn**	**23 03 40.3**	**+0.7**
NPS	**Neapolis**	**2.88**	**251**	*e*PN	**Pn**	**23 03 42.5**	**-0.4**
NPS				*e*SN	**Sn**	**23 04 16.7**	**-0.4**
NPS	**Neapolis**	**2.88**	**251**	*e*Pn	**Pn**	**23 03 42.5**	**-0.4**
NPS				*e*Sn	**Sn**	**23 04 16.7**	**-0.4**
LAST	**Lasithi**	**3.02**	**250**	*e*PN	**Pn**	**23 03 44.5**	**-0.4**
LAST				*e*SN	**Sn**	**23 04 19.6**	**-1.0**
LAST	**Lasithi**	**3.02**	**250**	*e*Pn	**Pn**	**23 03 44.5**	**-0.4**
LAST				*e*Sn	**Sn**	**23 04 19.6**	**-1.0**
IDI	**Anoyia**	**3.43**	**255**	*e*PN	**Pn**	**23 03 49.6**	**-1.0**
IDI				*e*SN	**Sn**	**23 04 29.7**	**-1.1**
IDI	**Anoyia**	**3.43**	**255**	*e*Pn	**Pn**	**23 03 49.6**	**-1.0**
IDI				*e*Sn	**Sn**	**23 04 29.7**	**-1.1**
SIVA	**Sivas**	**3.58**	**252**	*e*PN	**Pn**	**23 03 53.6**	**+1.1**
SIVA	**Sivas**	**3.58**	**252**	*e*Pn	**Pn**	**23 03 53.6**	**+1.1**
VAM	**Vamos**	**3.95**	**259**	*e*PN	**Pn**	**23 03 57.8**	**+0.2**
VAM	**Vamos**	**3.95**	**259**	*e*Pn	**Pn**	**23 03 57.8**	**+0.2**
KARN	**Karanos**	**4.17**	**260**	*e*PN	**Pn**	**23 04 01.1**	**+0.4**
KARN				*e*SN	**Sn**	**23 04 48.7**	**-0.3**
KARN	**Karanos**	**4.17**	**260**	*e*Pn	**Pn**	**23 04 01.1**	**+0.4**
KARN				*e*Sn	**Sn**	**23 04 48.7**	**-0.3**
KYTH	**Kithira**	**4.78**	**272**	*e*PN	**Pn**	**23 04 09.7**	**+0.7**
KYTH	**Kithira**	**4.78**	**272**	*e*Pn	**Pn**	**23 04 09.7**	**+0.7**
VLI	**Veliai**	**4.87**	**278**	*e*PN	**Pn**	**23 04 10.8**	**+0.5**

*ISCJB **10** 23:28:26.4±0.2, 37.°03N±0.°02×71.°96E±0.°05, h142km, mb3.8/23, Error ellipse: s-maj=5.3km s-min=3.0km az=167.9*

*IDC **10** 23:28:26.9±2.8, 37.°04N×71.°92E, h130km±25km, mb3.5/16, mb1 3.7/21, mb1mx3.6/31, mbtmp3.6/21, MS2.2/1, Ms1 2.2/1, ms1mx1.9/33, Error ellipse: s-maj=18.1km s-min=12.6km az=178.0*

*NNC **10** 23:28:27.7±2.2, 37.°65N×71.°06E, h0km, mb4.1, mpv4.3, Error ellipse: s-maj=17.4km s-min=15.2km az=18.0*

*MOS **10** 23:28:28.3±1.0, 37.°14N×71.°92E, h156km, mb4.1/12, Error ellipse: s-maj=15.3km s-min=9.3km az=97.9*

ISC 10 23:28:27.4±0.5, 37.08N±0.04×71.97E±0.06, h142km, n83, σ1§83/89, mb3.9/23, 11C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CEP	**Cherat**	**3.25**	**181**	P		**Pn**	**23 29 18.2**	**+0.4**
CEP				S		**Sn**	**23 29 57.0**	**+0.3**
CHCP	**Chirah Chowk**	**3.57**	**162**	P		**Pn**	**23 29 23.4**	**+1.7**
THW	**Thamme Wali**	**4.28**	**183**	P		**Pn**	**23 29 30.9**	**+0.2**
SARP	**Sargodha**	**5.17**	**173**	P		Pn	23 29 46.9	+3.9
AML	**Almayashu** SNR=154	**5.22**	**14**	P		**Pn**	**23 29 44.3**	**+0.4**
UCH	**Uchtor** SNR=9.2	**5.51**	**20**	P		**Pn**	**23 29 49.6**	**+1.8**
KZA	**Kyzart** SNR=37	**5.60**	**26**	P		**Pn**	**23 29 49.7**	**+0.7**
EKS2	**Erkin-Say** SNR=64	**5.75**	**13**	P		**Pn**	**23 29 51.6**	**+0.9**
AAK	**Ala-Archa**	**5.88**	**19**	PN		**Pn**	**23 29 53.9**	**+1.4**
AAK	comp=Z,17nm,0.3s			pmax	pmax			
AAK	**Ala-Archa** SNR=118	**5.88**	**19**	P		**Pn**	**23 29 53.6**	**+1.2**
AAK	**Ala-Archa** comp=Z,17nm,0.3s,baz=173,slow=6.2,SNR=342	**5.88**	**19**	P		**Pn**	**23 29 53.9**	**+1.4**
AAK	comp=Z,4.7nm,0.3s,baz=126,slow=4.3,SNR=18			S		**Sn**	**23 30 57.4**	**-1.6**
KBK	**Karagaybulak** SNR=25	**6.03**	**21**	P		**Pn**	**23 29 55.7**	**+1.2**
KK31	**Karatay Array** comp=Z,12nm,0.3s,baz=174,slow=13,SNR=959	**6.12**	**350**	Pn		**Pn**	**23 29 54.0**	**-1.6**
KK31	comp=Z,28nm,0.3s,baz=177,slow=23,SNR=21			⇑Sn		**Sn**	**23 31 00.2**	**-4.4**
ULHL	**Ulahol** SNR=14	**6.13**	**31**	P		**Pn**	**23 29 57.0**	**+1.2**
CHMS	**Chumysh** SNR=34	**6.29**	**19**	P		**Pn**	**23 29 58.5**	**+0.7**
TKM2	**Tokmak 2** comp=Z,25nm,0.7s	**6.47**	**24**	⇑Pn		**Pn**	**23 30 02.0**	**+1.6**
TKM2	comp=Z,17nm,0.9s			⇓Sn		**Sn**	**23 31 16.7**	**+3.5**
TKM2	**Tokmak 2** SNR=58	**6.47**	**24**	P		**Pn**	**23 30 01.4**	**+1.0**
USP	**Ospenovka** SNR=22	**6.48**	**17**	P		**Pn**	**23 30 00.7**	**+0.3**
SDNR	**Sundarnagar**	**6.93**	**142**	*e*P		**Pn**	**23 30 07.5**	**+1.0**
SDNR				*e*S		**Sn**	**23 31 18.5**	**-5.7**
SMLA	**Simla**	**7.33**	**142**	*i* P		**Pn**	**23 30 12.3**	**+0.5**
SMLA				*i* S		**Sn**	**23 31 29.1**	**-4.6**
SMLA				*i* S			23 31 29.2	
DDI	**Dehra Dun**	**8.43**	**141**	*e*P		**Pn**	**23 30 28.0**	**+1.4**
DDI				*ex*		Sn	23 31 51.0	-9.3
NDI	**New Delhi**	**9.46**	**151**	*e*P		**Pn**	**23 30 38.0**	**-2.3**
NDI				*e*S		Sn	23 32 17.0	-8.1
KHET	**Khetri**	**9.54**	**159**	*e*P		**Pn**	**23 30 38.4**	**-3.1**
KHET				*e*S		Sn	23 32 14.7	-12
KHET	comp=E,163nm,0.1s				AML	AML	23 32 24.2	
KHET	comp=N,143nm,0.1s				AML	AML	23 32 24.4	
KUDL	**Kundal**	**9.69**	**156**	*e*P		**Pn**	**23 30 40.2**	**-3.1**
KUDL				*e*S		Sn	23 32 21.4	-9.1
KUDL	comp=N,22nm,0.6s				AML	AML	23 32 31.6	
KUDL	comp=E,20nm,0.6s				AML	AML	23 32 32.6	
AGRA	**Agra**	**11.04**	**151**	*e*S		Sn	23 32 54.4	-8.8
AGRA	comp=N,57nm,0.5s				AML	AML	23 33 01.1	
AGRA	comp=E,55nm,0.4s				AML	AML	23 33 03.3	
MK31	**Makanchi Array** comp=E,2.0nm,0.6s	**12.37**	**35**	⇑P		**Pn**	**23 31 19.3**	**+0.7**
MKAR	**Makanchi Array**	**12.37**	**35**	P		**Pn**	**23 31 18.7**	**+0.1**
MKAR	**Makanchi Array** comp=E,0.4nm,0.3s,baz=218,slow=15,SNR=31	**12.37**	**35**	P		**Pn**	**23 31 18.7**	**+0.1**
PYUN	**Piuthan** comp=E,132nm,0.7s	**12.89**	**131**	*e*P		**Pn**	**23 31 24.1**	**-1.6**
DANN	**Dangsing** comp=E,52nm,0.4s	**13.19**	**128**	*e*P		**Pn**	**23 31 27.9**	**-1.7**
KOLN	**Koldanda** comp=E,60nm,0.4s	**13.50**	**130**	*e*P		**Pn**	**23 31 32.4**	**-1.1**
KURK	**Kurchatov** comp=E,11nm,0.8s	**14.45**	**17**	⇑P		**P**	**23 31 50.1**	**+2.3**
KKN	**Kakani** comp=E,48nm,0.6s	**14.55**	**126**	*e*P		**Pn**	**23 31 45.0**	**-1.8**
DMN	**Daman** comp=E,28nm,0.4s	**14.56**	**127**	*e*P		**Pn**	**23 31 45.8**	**-1.1**
PKIN	**Phulchoki** comp=E,39nm,0.6s	**14.77**	**126**	*e*P		**Pn**	**23 31 48.4**	**-1.2**
PKI	**Pulchoki** comp=E,44nm,0.6s	**14.78**	**126**	*e*P		**Pn**	**23 31 48.3**	**-1.5**
GUN	**Gumba** comp=E,44nm,0.7s	**14.86**	**124**	*e*P		**Pn**	**23 31 48.8**	**-2.0**
AB31	**Akbulak array** comp=E,1.8nm,0.4s,baz=160,slow=12	**14.98**	**328**	⇑P		Pn	23 31 48.1	-3.6
AB31	comp=E,1.9nm,0.4s,baz=153,slow=23,SNR=4.7			⇓S		Sn	23 34 26.5	-11
VOSK	**Vostochnaya** comp=E,2.0nm,0.8s	**15.66**	**358**	⇑P		**P**	**23 32 01.4**	**+0.2**
VOSK	comp=E,2.5nm,1.3s			⇑S		**Sn**	**23 34 50.1**	**-4.0**
RAMN	**Ramite** comp=E,31nm,0.5s	**15.98**	**125**	*e*P		**Pn**	**23 32 03.7**	**-0.8**
BVA0	**Borovoye Array** comp=E,0.3nm,0.6s,baz=174,slow=15,SNR=7.7	**15.99**	**357**	⇓P		**P**	**23 32 05.0**	**+0.2**
BVA0	comp=E,0.5nm,0.8s,baz=168,slow=27,SNR=4.9			⇓S		**Sn**	**23 34 57.9**	**-4.0**
BVAR	**Borovoye Array**	**15.99**	**357**	P		**Pn**	**23 32 04.2**	**+0.1**
BVAR				S		Sn	23 34 52.8	-9.1
BVAR	**Borovoye Array** comp=E,0.4nm,0.3s,baz=172,slow=12,SNR=8.7	**15.99**	**357**	P		**Pn**	**23 32 04.2**	**+0.1**
BVAR	comp=E,0.1nm,0.3s,baz=161,slow=23,SNR=4.6			S		Sn	23 34 52.8	-9.1
ZRNK	**Zerenda** comp=E,1.5nm,0.6s	**16.01**	**353**	⇓P		**P**	**23 32 05.5**	**+0.5**
ZRNK	comp=E,0.8nm,0.5s			⇑S		**Sn**	**23 34 56.6**	**-5.8**
BRVK	**Borovoye** comp=E,4.4nm,1.0s	**16.03**	**356**	⇑P		**P**	**23 32 06.6**	**+1.4**
BRVK	comp=E,2.9nm,1.1s			⇑S		**Sn**	**23 34 58.7**	**-4.1**
TAPN	**Taplejung** comp=E,21nm,0.4s	**16.46**	**122**	*e*P		**Pn**	**23 32 09.4**	**-1.0**
ODAN	**Odare** comp=E,32nm,0.6s	**16.56**	**124**	*e*P		**Pn**	**23 32 11.3**	**-0.3**
AKTO	**Aktyubinsk** comp=E,0.6nm,0.6s	**16.69**	**328**	⇑P		**P**	**23 32 11.2**	**-1.4**
AKTO	comp=E,0.4nm,0.5s			⇓S		S	23 35 07.4	-11
AKTO	**Aktyubinsk**	**16.69**	**328**	P		**P**	**23 32 11.8**	**-0.8**
AKTO				S		S	23 35 09.7	-9.0
AKTO	comp=Z,1.0nm,0.3s			pmax	pmax			
AKTO	comp=N,1.0nm,0.3s			smax	smax			
AKTO	**Aktyubinsk** comp=N,0.8nm,0.3s,baz=127,slow=13,SNR=20	**16.69**	**328**	P		**P**	**23 32 11.8**	**-0.8**
AKTO	comp=N,0.5nm,0.3s,baz=131,slow=22,SNR=5.7			S		S	23 35 09.7	-9.0
ZALV	**Zalesovo Beam**	**19.07**	**24**	P		**Pn**	**23 32 40.5**	**-0.5**
ZALV	comp=Z,1.0nm,0.3s			pmax	pmax			
ZALV	**Zalesovo Beam** comp=Z,1.2nm,0.3s,baz=223,slow=10,SNR=38	**19.07**	**24**	P		**Pn**	**23 32 40.5**	**-0.5**
NVS	**Novosibirsk**	**19.37**	**20**	*e*P		**P**	**23 32 42.6**	**+0.8**
GNI	**Garni** comp=Z,1.8nm,0.5s,baz=338,slow=19,SNR=4.0	**21.46**	**287**	P		**P**	**23 33 06.1**	**+1.5**
MIB	**Mutribah**	**21.76**	**258**	*e*P		**P**	**23 33 06.3**	**-1.4**
MIB				AMb		AMB	23 33 10.9	
RDF	**Al-Radifah** comp=Z,9.8nm,1.3s	**21.99**	**255**	*e*P		**P**	**23 33 11.1**	**+1.0**
NAY	**Al-Naaiem**	**22.08**	**257**	*e*P		**P**	**23 33 09.1**	**-1.9**
NAY				AMb		AMB	23 33 18.9	
ZEI	**Tsey** comp=Z,5.5nm,0.9s	**22.21**	**294**	*e*P		**P**	**23 33 13.9**	**+1.5**
ZEI	comp=Z,3.0nm,0.8s			pmax	pmax			
KIV	**Kislovodsk**	**23.22**	**296**	*e*P		P	23 33 38.7	+17
KIV	comp=Z,6.0nm,0.6s			pmax	pmax			
SONM	**Songino Array** comp=Z,0.5nm,0.8s,baz=257,slow=9.8,SNR=6.2	**27.37**	**56**	P		**P**	**23 34 01.8**	**+2.5**
BRTR	**Keskin Array B** comp=Z,1.2nm,0.6s,baz=104,slow=8.9,SNR=9.2	**30.00**	**287**	P		**P**	**23 34 23.7**	**+1.0**
AKASG	**Malin Array Be**	**33.20**	**308**	P		**P**	**23 34 50.0**	**-0.4**
AKASG	comp=Z,1.0nm,0.4s			pmax	pmax			
AKASG	**Malin Array Be** comp=Z,1.2nm,0.4s,baz=80,slow=7.6,SNR=5.7	**33.20**	**308**	P		**P**	**23 34 50.0**	**-0.4**
JOF	**Joensuu**	**35.76**	**329**	*e*P		**P**	**23 35 12.5**	**+0.2**
JOF	comp=Z,5.0nm,0.5s			pmax	pmax			
JOF	**Joensuu** comp=Z,4.9nm,0.5s	**35.76**	**329**	*e*p		**P**	**23 35 12.5**	**+0.2**
FINES	**FINESS Array B** comp=Z,2.1nm,0.4s,baz=117,slow=9.7,SNR=39	**37.45**	**325**	P		**P**	**23 35 27.6**	**+1.1**
KAF	**Kangasniemi**	**37.57**	**327**	*e*P		**P**	**23 35 27.4**	**-0.2**
KAF	comp=Z,1.0nm,0.7s			pmax	pmax			
KAF	**Kangasniemi** comp=Z,1.4nm,0.7s	**37.57**	**327**	*e*p		**P**	**23 35 27.4**	**-0.2**
ARCES	**ARCESS Array B** comp=Z,1.7nm,0.5s,baz=116,slow=8.5,SNR=16	**40.91**	**337**	P		**P**	**23 35 56.7**	**+1.5**
BRG	**Berggiesshubel** comp=Z,2.6nm,0.9s	**42.88**	**308**	*e*(P)		**P**	**23 36 12.3**	**+0.8**
BRG	**Berggiesshubel**	**42.88**	**308**	*e*P		**P**	**23 36 12.3**	**+0.8**
BRG	comp=Z,3.0nm,0.9s			pmax	pmax			
NB2	**NORSAR Subarra** comp=Z,2.7nm,0.6s,baz=93,slow=7.9	**44.39**	**323**	P		**P**	**23 36 23.6**	**+0.2**
NOA	**NORSAR Array B** comp=Z,3.5nm,0.8s,baz=94,slow=7.8,SNR=14	**44.39**	**323**	P		**P**	**23 36 23.9**	**+0.5**
TGY	**Tagaytay City** comp=Z,2.8nm,21.4s,baz=323,slow=38	**49.10**	**104**	LR		LR	23 59 32.4	
KEST	**Kesra** comp=Z,0.9nm,0.7s,baz=360,slow=2.2,SNR=10.0	**49.59**	**288**	P		**P**	**23 37 05.4**	**+1.2**
KMBO	**Kilima Mbogo** comp=Z,0.5nm,0.5s,baz=29,slow=11,SNR=6.7	**49.79**	**228**	P		**P**	**23 37 07.2**	**+1.1**
ESDC	**Sonseca Array** comp=Z,0.9nm,0.5s,baz=55,slow=7.6,SNR=9.4	**57.88**	**298**	P		**P**	**23 38 03.7**	**-0.7**
TORD	**Torodi Ar. Bea** comp=Z,1.6nm,0.5s,baz=48,slow=5.8,SNR=33	**66.51**	**269**	P		**P**	**23 39 01.1**	**-1.0**
ILAR	**Eielson Array** comp=Z,0.2nm,0.7s,baz=309,slow=4.2,SNR=3.7	**74.01**	**16**	P		**P**	**23 39 48.0**	**+1.0**
YKA	**Yellowknife Ar** comp=Z,0.6nm,0.7s,baz=349,slow=5.4,SNR=14	**80.63**	**3**	P		**P**	**23 40 25.2**	**+1.4**
YKA	comp=Z,0.2nm,0.6s,baz=348,slow=5.6,SNR=4.8			pP		**pP**	**23 41 00.2**	**+1.0**
WRA	**Warramunga Arr** comp=Z,0.2nm,0.3s,baz=321,slow=5.2,SNR=2.5	**81.64**	**123**	P		**P**	**23 40 30.2**	**+0.4**
ASAR	**Alice Springs** comp=Z,0.3nm,0.6s,baz=302,slow=5.4,SNR=2.8	**83.95**	**126**	P		**P**	**23 40 42.8**	**+1.1**
STKA	**Stephens Creek** comp=Z,1.3nm,0.7s,baz=326,slow=8.8,SNR=3.5	**94.51**	**127**	P		**P**	**23 41 31.0**	**-0.5**

*IDC **10** 23:29:53.8±1.5, 8.°80S×124.°07E, h0km, mb3.9/2, mb1 4.2/5, mb1mx3.8/20, mbtmp3.9/5, ML4.0/3, Error ellipse: s-maj=103.9km s-min=23.0km az=61.0*

*AUST **10** 23:30:28.2, 11.°05S×125.°03E, h100km*

ISC 10 23:30:07.8±1.6, 9.7S±0.1×124.01E±0.07, h66km, n12, σ1§88/15, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WSI	**Waingapu** baz=4.8,SNR=4.5	**3.66**	**270**	P		**Sn**	**23 31 41.6**	**-2.3**
MTN	**Manton Dam** baz=6.3,SNR=4.3	**7.66**	**115**	P		**Pn**	**23 31 57.3**	**+0.6**
MTN	baz=6.3,SNR=12			S		**Sn**	**23 33 20.4**	**-1.7**
FITZ	**Fitzroy Crossi** 0.7nm,0.3s,baz=357,slow=10,SNR=30	**8.52**	**169**	Pn		**Pn**	**23 32 09.5**	**+1.1**
FITZ	5.6nm,0.3s,baz=329,slow=12,SNR=14			Sn		**Sn**	**23 33 42.0**	**-1.1**
FITZ	**Fitzroy Crossi** baz=7.1,SNR=36	**8.52**	**169**	P		**Pn**	**23 32 09.6**	**+1.1**
FITZ	baz=7.1,SNR=8.4			S		**Sn**	**23 33 43.1**	**0.0**
KDU	**Kakadu** baz=7.5,SNR=3.3	**8.82**	**111**	P		**Pn**	**23 32 12.2**	**-0.5**
KDU	baz=7.5,SNR=5.0			S		**Sn**	**23 33 51.4**	**+0.7**
WRA	**Warramunga Arr** 1.1nm,0.3s,baz=315,slow=15,SNR=22	**14.27**	**137**	Pn		**Pn**	**23 33 25.4**	**-1.1**
WRA	1.3nm,0.3s,baz=312,slow=24,SNR=8.0			Sn		Sn	23 35 56.4	-7.1
ASAR	**Alice Springs** 0.4nm,0.3s,baz=320,slow=12,SNR=41	**16.82**	**147**	P		**P**	**23 34 00.9**	**+0.7**
ASAR	0.5nm,0.3s,baz=314,slow=20,SNR=13			S		**Sn**	**23 37 00.8**	**-4.5**
MEEK	**Meekatharra** baz=17,SNR=5.2	**17.62**	**196**	P		P	23 34 15.7	+6.6
MEEK	baz=17,SNR=4.7			S		**Sn**	**23 37 26.4**	**+1.8**
QIS	**Mount Isa** baz=17,SNR=5.6	**18.52**	**128**	P		**Pn**	**23 34 21.8**	**+2.0**
MORW	**Morawa** baz=20,SNR=5.3	**20.68**	**200**	S		**S**	**23 38 30.1**	**+0.2**
CMAR	**Chiang Mai Arr** 1.0nm,0.4s,baz=144,slow=7.7,SNR=7.3	**37.33**	**318**	P		P	23 37 03.7	-10
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=131,slow=8.0,SNR=12	**67.40**	**330**	P		P	23 40 45.9	-10

IDC 11 00:02:04.8±1.9, 5.°08N×127.°03E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/24, mbtmp3.5/5, Error ellipse: s-maj=109.3km s-min=24.9km az=68.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FITZ	**Fitzroy Crossi** 1.2nm,0.9s,baz=4.1,slow=14,SNR=3.0	**23.08**	**183**	P		P	00 07 12.3	0.0
WRA	**Warramunga Arr** 0.9nm,0.4s,baz=344,slow=10,SNR=5.7	**25.89**	**164**	P		P	00 07 40.0	+1.4
ASAR	**Alice Springs** 0.1nm,0.3s,baz=345,slow=7.4,SNR=4.1	**29.35**	**167**	P		P	00 08 08.9	-0.8
STKA	**Stephens Creek** 2.4nm,1.0s,baz=345,slow=10,SNR=3.9	**39.28**	**160**	P		P	00 09 34.6	-1.0
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=118,slow=8.0,SNR=5.4	**56.63**	**325**	P		P	00 11 49.8	0.0

*BJI **11** 00:03:25.0, 0.°50N×97.°25E, h26km, mB5.1/6, mb4.7/17*

*ISCJB **11** 00:03:29.1±2.0, 1.°00N±0.°07×97.°05E±0.°09, h26km±12km, mb4.2/21, MS3.3/1, Error ellipse: s-maj=16.0km s-min=9.1km az=150.0*

*DJA **11** 00:03:29.1±1.3, 1.°N±6.°×97.°7E±.°, h17km±9km, M4.5/3, mb5.0/2, mB4.7/1, MLv4.3/3, Mw(mB)3.9/1*

*IDC **11** 00:03:30.7±0.7, 1.°08N×97.°10E, h21km±3km, mb3.9/16, mb1 4.0/18, mb1mx3.9/30, mbtmp3.9/18, ML4.0/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/36, Error ellipse: s-maj=23.6km s-min=11.7km az=53.0*

ISC 11 00:03:30.6±0.6, 1.°07N±0.°07×97.°05E±0.°07, h20km±2km, h20km:pP-P, n37, σ0§94/50, mb4.2/21, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GSI	**Gunungsitoli**	**0.57**	**66**	P		**Pb**	**00 03 42.1**	**+0.1**
GSI				S		**Sn**	**00 03 52.1**	**-0.4**
PSI	**Prapat**	**2.54**	**47**	P		**Pn**	**00 04 09.8**	**-1.1**
PSI	**Prapat** 12nm,0.3s,baz=206,slow=9.8,SNR=43	**2.54**	**47**	Pn		**Pn**	**00 04 09.7**	**-1.2**
PPI	**Padang Panjang**	**3.67**	**114**	P		**Pn**	**00 04 26.3**	**-0.1**
BSI	**Banda Aceh**	**4.73**	**338**	P		**Pn**	**00 04 39.3**	**-1.6**
IPM	**Ipoh**	**5.21**	**49**	P		**Pn**	**00 04 48.0**	**+0.4**
IPM	**Ipoh** 80nm,0.8s,619nm	**5.21**	**49**	P		**Pn**	**00 04 48.0**	**+0.4**
KULM	**Kulim**	**5.52**	**41**	P		**Pn**	**00 04 50.7**	**-1.1**
KGM	**Kluang**	**6.33**	**81**	P		**Pn**	**00 05 03.0**	**0.0**
KTGM	**Kuala Trenggan**	**7.40**	**55**	P		**Pn**	**00 05 17.0**	**-0.6**
MNAI	**Manna**	**8.00**	**132**	P		**Pn**	**00 05 25.3**	**-0.5**
SBUM	**Sibu**	**15.22**	**85**	P		**P**	**00 07 09.6**	**+0.1**
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=195,slow=12,SNR=10	**17.38**	**6**	P		**Pn**	**00 07 30.9**	**-1.2**
KMI	**Kunming**	**24.53**	**12**	P		**P**	**00 08 50.7**	**+1.3**
KMI				pP		**pP**	**00 08 56.3**	**+0.9**
KMI				sP		**sP**	**00 08 59.1**	**+1.2**
KMI	comp=Z,21nm,1.0s			pmax	pmax			
SHL	**Shillong**	**24.86**	**349**	*e*P		**P**	**00 08 54.0**	**+1.8**
FITZ	**Fitzroy Crossi** comp=Z,1.3nm,0.8s,baz=309,slow=6.5,SNR=4.2	**33.98**	**125**	P		**P**	**00 10 11.7**	**-1.5**
XAN	**Xi'an**	**34.63**	**17**	P		**P**	**00 10 17.3**	**-1.4**
XAN	comp=Z,2.0nm,0.6s			pmax	pmax			
GTA	**Gaotai**	**38.24**	**3**	*e*P		**P**	**00 10 50.2**	**+0.6**
GTA				pP		**pP**	**00 10 54.4**	**-1.3**
GTA				sP		**sP**	**00 10 57.4**	**-0.8**
GTA	comp=Z,9.0nm,0.8s			pmax	pmax			
HHC	**Hu-ho-hao-te**

ellipse: s-maj=8.8km s-min=7.2km az=96.3
*ISCJB **11** 00:09:10.6±0.5,44°.07N±0°.02×34°.09E±0°.03,h33km±4km, mb3.2/4, Error ellipse: s-maj=4.1km s-min=3.2km az=19.3*
*CSEM **11** 00:09:11.5±0.2,44°.10N×34°.13E,h20km,mb3.7, Error ellipse: s-maj=4.5km s-min=3.8km az=25.0*

ISC 11 00:09:09.8±1.4,44°.04N±0°.04×34°.16E±0°.03,h14km±9km, n92,σ1♀57/117,mb3.3/4,10C-18D,Crimea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAL	**Yalta**	**0.44**	**359**	*e*P	**Pb**	**00 09 19.7**	**+0.2**
YAL				*e*		00 09 26.9	
YAL	**Yalta**	**0.44**	**359**	*e*P	**Pb**	**00 09 19.7**	**+0.2**
YAL				*e*S	**Sb**	**00 09 26.9**	**+0.9**
SEV	**Sevastopol'**	**0.61**	**325**	⇓*i*P	**Pb**	**00 09 21.3**	**-1.0**
SEV				*e*		00 09 29.8	
SEV	**Sevastopol'**	**0.61**	**325**	*i*P	**Pb**	**00 09 21.3**	**-1.0**
SEV				*e*S	**Sb**	**00 09 29.8**	**-1.0**
ALU	**Alushta**	**0.66**	**15**	*i*P	**Pb**	**00 09 23.0**	**-0.2**
ALU				*i*		00 09 32.2	
ALU	**Alushta**	**0.66**	**15**	*i*P	**Pb**	**00 09 23.0**	**-0.2**
ALU				*i*S	**Sg**	**00 09 32.2**	**+0.7**
SIM	**Simferopol'**	**0.91**	**358**	*e*P	**Pb**	**00 09 27.4**	**+0.1**
SIM				*e*		01 09 39.7	
SIM	comp=Z,29nm,0.4s			pmax	pmax		
SIM	**Simferopol'** comp=Z,29nm,0.4s	**0.91**	**358**	*e*P	**Pb**	**00 09 27.4**	**+0.1**
SIM				*e*S	**Sg**	**00 09 39.7**	**+0.5**
SUDU	**Sudak**	**1.04**	**35**	⇓*i*P	**Pb**	**00 09 28.8**	**-0.8**
SUDU				*e*		00 09 43.2	
SUDU	**Sudak**	**1.04**	**35**	*i*P	**Pb**	**00 09 28.8**	**-0.8**
SUDU				*e*S	**Sn**	**00 09 43.2**	**-1.1**
FEO	**Feodosiya**	**1.31**	**42**	⇓*i*P	**Pb**	**00 09 34.0**	**-0.3**
FEO				*i*		00 09 51.9	
FEO	**Feodosiya**	**1.31**	**42**	*i*P	**Pb**	**00 09 34.0**	**-0.3**
FEO				*i*S	**Sg**	**00 09 51.9**	**-0.3**
ANN	**Anapa**	**2.46**	**71**	*e*P	**Pn**	**00 09 48.9**	**-0.7**
ANN				*e*S	**Sn**	**00 10 16.9**	**-2.5**
ANN	comp=Z,7.0nm,0.9s			pmax	pmax		
ANN	comp=N,60nm,0.3s			smax	smax		
ANN	comp=E,59nm,0.4s			smax	smax		
ANN	**Anapa** comp=E,7.0nm,0.9s	**2.46**	**71**	*e*P	**Pn**	**00 09 48.9**	**-0.7**
BALT	**Daday**	**2.57**	**193**	*i*P	**Pn**	**00 09 52.9**	**+1.6**
BALT				*i*S	**Sn**	**00 10 19.4**	**-3.1**
BALT	**Daday**	**2.57**	**193**	*i*P	**Pn**	**00 09 52.9**	**+1.6**
BALT				*i*S	**Sn**	**00 10 19.4**	**-3.1**
HAVZ	**Havza**	**3.18**	**158**	*i*P	**Pn**	**00 10 01.5**	**+2.0**
HAVZ				*i*S	**Sn**	**00 10 37.1**	**-0.2**
HAVZ	**Havza**	**3.18**	**158**	*i*P	**Pn**	**00 10 01.5**	**+2.0**
HAVZ				*i*S	**Sn**	**00 10 37.1**	**-0.2**
CTKT	**Corum**	**3.45**	**172**	*i*P	**Pn**	**00 10 05.4**	**+2.0**
CTKT				*e*S	Sn	00 10 27.9	-16
CTKT	**Corum**	**3.45**	**172**	*i*P	**Pn**	**00 10 05.4**	**+2.0**
ERBA	**Erbaa**	**3.87**	**149**	*i*P	**Pn**	**00 10 08.6**	**-0.4**
ERBA				*i*S	**Sn**	**00 10 50.7**	**-3.6**
ERBA	**Erbaa**	**3.87**	**149**	*i*P	**Pn**	**00 10 08.6**	**-0.4**
TLCR		**3.98**	**289**	⇓P	**Pn**	**00 10 11.0**	**+0.5**
TLCR				S	**Sn**	**00 10 55.2**	**-1.8**
TLCR		**3.98**	**289**	⇓*i*P	**Pn**	**00 10 11.0**	**+0.5**
TLCR		**3.98**	**289**	P	**Pn**	**00 10 11.0**	**+0.5**
TLCR				S	**Sn**	**00 10 55.2**	**-1.8**
SOC	**Sochi**	**4.05**	**95**	*e*P	Pn	00 10 14.7	+3.3
SOC				*e*		00 11 00.2	
SOC	comp=Z,11nm,0.8s			pmax	pmax		
SOC	comp=N,9.0nm,0.9s			pmax	pmax		
SOC	comp=E,10.0nm,0.9s			pmax	pmax		
SOC	comp=N,37nm,0.6s			smax	smax		
SOC	comp=E,24nm,0.6s			smax	smax		
SOC	**Sochi** comp=E,9.0nm,0.9s	**4.05**	**95**	*e*P	Pn	00 10 14.7	+3.3
SOC				*e*S	**Sn**	**00 11 00.2**	**+1.7**
TIRR	**Tirgusor**	**4.15**	**278**	⇑P	**Pn**	**00 10 12.8**	**0.0**
TIRR				S	**Sn**	**00 10 58.0**	**-3.1**
TIRR	**Tirgusor**	**4.15**	**278**	⇑*i*P	**Pn**	**00 10 12.8**	**0.0**
TIRR	**Tirgusor**	**4.15**	**278**	P	**Pn**	**00 10 12.8**	**0.0**
TIRR				S	**Sn**	**00 10 58.0**	**-3.1**
BRTR	**Keskin Array B** comp=E,0.2nm,0.3s,baz=19,slow=12,SNR=5.7	**4.33**	**185**	Pn	**Pn**	**00 10 18.2**	**+2.8**
BRTR	comp=E,0.2nm,0.3s,baz=16,slow=11,SNR=2.7			Sn	**Sn**	**00 11 06.3**	**+0.5**
BRTR	**Keskin Array B**	**4.33**	**185**	P	**Pn**	**00 10 18.3**	**+2.8**
BRTR				S	**Sn**	**00 11 06.3**	**+0.5**
CFR	**Carcaliu**	**4.45**	**287**	⇑P	**Pn**	**00 10 17.0**	**+0.2**
CFR				S	**Sn**	**00 11 05.7**	**-2.7**
CFR	**Carcaliu**	**4.45**	**287**	⇑*i*P	**Pn**	**00 10 17.0**	**+0.2**
CFR	**Carcaliu**	**4.45**	**287**	P	**Pn**	**00 10 17.0**	**+0.2**
CFR				S	**Sn**	**00 11 05.7**	**-2.7**
KIS	**Kishinev**	**4.78**	**310**	*e*P	**Pg**	**00 10 40.0**	**-1.3**
KIS				*e*		00 11 20.0	
KIS	**Kishinev**	**4.78**	**310**	*e*P	**Pg**	**00 10 40.0**	**-1.3**
BORA	**Eskisehir**	**5.00**	**215**	*e*P	**Pn**	**00 10 25.2**	**+0.7**
BORA	**Eskisehir**	**5.00**	**215**	*e*P	**Pn**	**00 10 25.2**	**+0.7**
DOMR	**Dombai**	**5.47**	**95**	*ce*P	Pn	00 10 35.9	+4.9
VRI	**Vrincioaia**	**5.58**	**292**	⇓P	**Pn**	**00 10 34.2**	**+1.8**
VRI	**Vrincioaia**	**5.58**	**292**	⇓*i*P	**Pn**	**00 10 34.2**	**+1.8**
VRI	**Vrincioaia**	**5.58**	**292**	P	**Pn**	**00 10 34.2**	**+1.8**
PLOR	**Plostina**	**5.63**	**291**	⇓P	**Pn**	**00 10 34.6**	**+1.5**
PLOR				S	**Sn**	**00 11 37.7**	**+0.1**
PLOR	**Plostina**	**5.63**	**291**	⇓*i*P	**Pn**	**00 10 34.6**	**+1.5**
PLOR	**Plostina**	**5.63**	**291**	P	**Pn**	**00 10 34.6**	**+1.5**
PLOR				S	**Sn**	**00 11 37.7**	**+0.1**
TESR		**5.85**	**298**	⇓*i*P	**Pn**	**00 10 37.3**	**+1.2**
TESR		**5.85**	**298**	⇓*i*P	**Pn**	**00 10 37.3**	**+1.2**
TESR				S	**Sn**	**00 11 40.7**	**-2.2**
CIOR	**Ciorogarla**	**5.96**	**277**	⇓*i*P	**Pn**	**00 10 37.0**	**-0.7**
CIOR	**Ciorogarla**	**5.96**	**277**	⇓*i*P	**Pn**	**00 10 37.0**	**-0.7**
MLR	**Muntele Rosu**	**6.03**	**287**	⇓*i*P	**Pn**	**00 10 40.3**	**+1.6**
MLR	**Muntele Rosu** baz=149,slow=12	**6.03**	**287**	Pn	**Pn**	**00 10 40.7**	**+2.0**
MLR	comp=E,0.2nm,0.3s,baz=254,slow=19,SNR=6.0			Sn	**Sn**	**00 11 48.6**	**+1.1**
MLR	**Muntele Rosu**	**6.03**	**287**	P	**Pn**	**00 10 40.3**	**+1.6**
MLR				S	**Sn**	**00 11 45.6**	**-1.9**
KIV	**Kislovodsk**	**6.15**	**88**	*e*P	Pn	00 10 43.7	+3.4
KIV	**Kislovodsk**	**6.15**	**88**	*e*P	Pn	00 10 43.7	+3.4
KBZ	**Khabaz**	**6.32**	**90**	P	**Pn**	**00 10 44.6**	**+2.0**
KBZ						00 11 55.3	
KBZ	**Khabaz** comp=E,0.1nm,0.3s,baz=263,slow=8.1,SNR=4.2	**6.32**	**90**	Pn	**Pn**	**00 10 44.6**	**+2.0**
KBZ	comp=E,0.2nm,0.3s,baz=287,slow=20,SNR=2.9			Sn	**Sn**	**00 11 55.3**	**+0.7**
KBZ	**Khabaz**	**6.32**	**90**	P	**Pn**	**00 10 44.6**	**+2.0**
KBZ				S	**Sn**	**00 11 55.3**	**+0.7**
DBAD	**Bademkaya**	**6.33**	**116**	*i*P	**Pn**	**00 10 43.0**	**+0.1**
DBAD				*i*S	Sn	00 11 44.7	-10
DBAD	**Bademkaya**	**6.33**	**116**	*i*P	**Pn**	**00 10 43.0**	**+0.1**
DDEM	**Demirkent**	**6.43**	**117**	*i*P	**Pn**	**00 10 46.4**	**+2.1**
DDEM				*i*S	**Sn**	**00 11 52.1**	**-5.4**
DDEM	**Demirkent**	**6.43**	**117**	*i*P	**Pn**	**00 10 46.4**	**+2.1**
DAGI	**Agillar**	**6.45**	**115**	*i*P	**Pn**	**00 10 44.4**	**-0.1**
DAGI				*i*S	Sn	00 11 50.3	-7.6
DOPR	**Dopca**	**6.51**	**290**	⇑*i*P	**Pn**	**00 10 46.5**	**+1.3**
DOPR	**Dopca**	**6.51**	**290**	⇑*i*P	**Pn**	**00 10 46.5**	**+1.3**
BURAR	**Bucovina Array**	**7.20**	**303**	⇑*i*P	**Pn**	**00 10 56.6**	**+1.9**
BURAR	**Bucovina Array**	**7.20**	**303**	⇑*i*P	**Pn**	**00 10 56.6**	**+1.9**
KIEV	**Kiev**	**7.45**	**335**	*e*P	**Pn**	**00 10 57.5**	**-0.6**
KIEV	**Kiev**	**7.45**	**335**	*e*P	**Pn**	**00 10 57.5**	**-0.6**
AKASG	**Malin Array Be**	**7.45**	**335**	P	**Pn**	**00 10 58.2**	**+0.1**
AKASG						00 12 20.9	
AKASG	comp=Z,1.0nm,0.3s			pmax	pmax		
AKASG	comp=N,2.0nm,0.3s			smax	smax		
AKASG	**Malin Array Be** comp=N,0.8nm,0.3s,baz=135,slow=13,SNR=3.3	**7.45**	**335**	Pn	**Pn**	**00 10 58.2**	**+0.1**
AKASG	comp=N,1.8nm,0.3s,baz=191,slow=15,SNR=5.5			Sn	**Sn**	**00 12 20.9**	**-1.5**
AKASG	comp=N,2.0nm,0.3s,baz=151,slow=29,SNR=5.5			Lg	Lg	00 12 59.5	
AKASG	**Malin Array Be** comp=N,1.0nm,0.3s	**7.45**	**335**	P	**Pn**	**00 10 58.2**	**+0.1**
AKASG				S	**Sn**	**00 12 20.9**	**-1.5**
GZR	**Gura Zlata**	**8.22**	**283**	⇓*i*P	**Pn**	**00 11 09.3**	**+0.6**
GZR	**Gura Zlata**	**8.22**	**283**	⇓*i*P	**Pn**	**00 11 09.3**	**+0.6**
DRGR		**8.51**	**293**	⇓*i*P	**Pn**	**00 11 13.9**	**+1.2**
DRGR		**8.51**	**293**	⇓*i*P	**Pn**	**00 11 13.9**	**+1.2**
KOLS	**Kolonicke sedl**	**9.54**	**305**	*e*PN	**Pn**	**00 11 29.1**	**+2.3**
KOLS				*e*		00 35 55.2	
CRVS	**Cervenica-Dubn**	**10.01**	**303**	*e*PN	Pn	00 11 37.7	+4.5
OBN	**Obninsk**	**11.19**	**7**	*e*P	**Pn**	**00 11 48.0**	**-1.2**
OBN	**Obninsk**	**11.19**	**7**	*e*P	**Pn**	**00 11 48.0**	**-1.2**
AKTO	**Aktyubinsk**	**17.37**	**60**	P	**Pn**	**00 13 08.3**	**-3.4**
AKTO	**Aktyubinsk** comp=N,0.1nm,0.3s,baz=269,slow=11,SNR=3.5	**17.37**	**60**	Pn	**Pn**	**00 13 08.3**	**-3.4**
FINES	**FINESS Array B** comp=N,0.1nm,0.3s,baz=148,slow=13,SNR=5.4	**18.08**	**347**	P	**P**	**00 13 20.5**	**-0.1**
FINES	**FINESS Array B**	**18.08**	**347**	P	**P**	**00 13 20.5**	**-0.1**
ARCES	**ARCESS Array B** comp=N,0.2nm,0.8s,baz=156,slow=9.3,SNR=8.0	**25.94**	**353**	P	**P**	**00 14 41.2**	**-0.1**
ARCES	**ARCESS Array B** comp=N,1.0nm,0.5s	**25.94**	**353**	P	**P**	**00 14 41.3**	**-0.1**
MKAR	**Makanchi Array**	**33.48**	**68**	*e*P	**P**	**00 15 49.7**	**+1.2**
MKAR	**Makanchi Array** comp=N,0.2nm,0.4s,baz=271,slow=7.9,SNR=4.7	**33.48**	**68**	P	**P**	**00 15 49.3**	**+0.8**
MKAR	**Makanchi Array**	**33.48**	**68**	*e*P	**P**	**00 15 49.7**	**+1.2**
TORD	**Torodi Ar. Bea** comp=N,0.2nm,0.4s,baz=35,slow=7.8,SNR=7.4	**41.47**	**232**	P	**P**	**00 16 57.1**	**+0.7**
YKA	**Yellowknife Ar** comp=N,0.1nm,0.7s,baz=14,slow=6.9,SNR=4.0	**70.89**	**345**	P	**P**	**00 20 26.4**	**+0.4**
YKA	**Yellowknife Ar**	**70.89**	**345**	P	**P**	**00 20 26.4**	**+0.4**

IDC 11 00:13:36.4±0.9,13°.03N×143°.44E,h211km±10km, mb3.4/14,mb1 3.6/14,mb1mx3.4/27,mbtmp3.4/14,Error ellipse: s-maj=24.5km s-min=10.4km az=98.0,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam** comp=N,0.3s,baz=276,slow=6.6,SNR=5.4	**1.50**	**68**	P	Pn	00 14 12.1	+1.0
GUMO	comp=N,0.3s,baz=179,slow=23,SNR=10			S	S	00 14 38.1	+0.3
MJAR	**Matsushiro Arr** 1.1nm,0.9s,baz=166,slow=11,SNR=4.2	**23.88**	**350**	P	P	00 18 30.3	-0.6
WRA	**Warramunga Arr** 3.5nm,0.6s,baz=16,slow=9.4,SNR=12	**33.36**	**195**	P	P	00 20 00.1	-0.1
FITZ	**Fitzroy Crossi** 0.4nm,0.3s,baz=34,slow=11,SNR=7.4	**35.57**	**210**	P	P	00 20 13.5	-0.4
ASAR	**Alice Springs** 1.1nm,0.5s,baz=17,slow=12,SNR=26	**37.64**	**194**	P	P	00 20 31.4	0.0
STKA	**Stephens Creek** 0.8nm,0.4s,baz=11,slow=9.4,SNR=6.1	**44.68**	**182**	P	P	00 21 28.3	-0.2
SONM	**Songino Array** 0.5nm,0.6s,baz=148,slow=7.7,SNR=8.0	**46.40**	**326**	P	P	00 21 42.8	+0.8
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=95,slow=7.9,SNR=5.6	**60.93**	**316**	P	P	00 23 27.0	-0.2
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=102,slow=8.5,SNR=3.1	**61.27**	**325**	P	P	00 23 29.1	-0.3
BVAR	**Borovoye Array** 1.6nm,0.3s,baz=102,slow=7.9,SNR=10	**69.51**	**322**	P	P	00 24 22.3	+0.2
ILAR	**Eielson Array** 0.8nm,0.6s,baz=248,slow=6.0,SNR=16	**69.67**	**25**	P	P	00 24 22.6	-0.4
YKA	**Yellowknife Ar** 0.4nm,0.6s,baz=285,slow=4.9,SNR=9.1	**84.00**	**27**	P	P	00 25 43.6	+0.7
ARCES	**ARCESS Array B** 0.3nm,0.4s,baz=62,slow=4.8,SNR=8.0	**87.19**	**342**	P	P	00 25 58.5	0.0
NVAR	**Mina Array Bea** 0.3nm,0.5s,baz=256,slow=6.1,SNR=3.2	**88.36**	**51**	P	P	00 26 05.8	+0.9
FINES	**FINESS Array B** 0.8nm,0.4s,baz=64,slow=5.6,SNR=21	**91.08**	**335**	P	P	00 26 15.6	-1.2

KRSC 11 00:30:15.2±0.9,54°.82N×158°.58E,h285km±25km,ML3.8, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMR	**Tumrok**	**1.01**	**62**	P	Pn	00 30 56.3	+2.2
ESO	**Esso**	**1.11**	**3**	P	Pn	00 30 55.9	+1.5
GNL	**Ganaly**	**1.19**	**199**	*i*P	Pn	00 30 57.0	+1.8
KMNR	**Kamenistaya**	**1.33**	**45**	P	Pn	00 30 57.8	+1.9
SDLR	**Sedlovina**	**1.56**	**177**	*e*P	Pn	00 30 59.5	+2.0
AVH	**Avacha**	**1.56**	**177**	P	Pn	00 30 58.3	+0.8
SMAR	**Somma**	**1.57**	**175**	P	Pn	00 30 59.3	+1.6
MKZ	**Mys Kozlova**	**1.85**	**97**	*e*P	Pn	00 31 00.5	+1.2
MKZ				*e*S	S	00 31 34.2	-0.2
APC	**Apacha**	**2.08**	**204**	*i*P	Pn	00 31 03.3	+2.0
MTVR	**Mutnovka**	**2.35**	**186**	P	Pn	00 31 05.8	+1.9
MTVR				S	S	00 31 41.9	-0.8
RUS	**Russkaya**	**2.39**	**181**	*e*P	Pn	00 31 04.7	+0.6
RUS				S	S	00 31 41.5	-1.4
KBTR	**Krutoberegovo**	**2.78**	**58**	*e*P	Pn	00 31 09.7	+2.1
BKI	**Bering**	**4.27**	**82**	*e*S	S	00 32 17.4	-0.9

*ISCJB **11** 00:34:02.7±0.2,35°.73N±0°.03×28°.96E±0°.02,h72km±11km, Error ellipse: s-maj=4.2km s-min=2.9km az=173.8*
*ISK **11** 00:34:02.4,35°.70N×28°.97E,h44km,MD3.4*
*DDA **11** 00:34:03.4,35°.83N×28°.84E,h29km,MD3.3*
*ATH **11** 00:34:04.6,35°.90N×28°.82E,h62km±3km*
*CSEM **11** 00:34:04.3±0.1,35°.75N×28°.97E,h40km,Mw2.9, Error ellipse: s-maj=2.1km s-min=1.8km az=48.0*
*THE **11** 00:34:05.9,35°.82N×28°.90E,h55km±7km,ML3.0/1, Error ellipse: s-maj=7.6km s-min=1.8km az=341.0*
*NIC **11** 00:34:06.5±0.1,36°.06N×29°.34E,h68km,ML3.2,MW2.9*

ISC 11 00:34:03.7±1.0,35°.80N×28°.94E±0°.02,h70km±13km, n126,σ1♀20/170,4C,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.78**	**302**	P	**Pn**	**00 34 19.2**	**-0.3**
ARG				S	**Sn**	**00 34 30.4**	**-0.9**
ARG	**Arkhangelos**	**0.78**	**302**	*e*P	**Pn**	**00 34 19.3**	**-0.3**
ARG				*e*S	**Sn**	**00 34 29.7**	**-1.6**
ARG	**Arkhangelos**	**0.78**	**302**	*e*P	**Pn**	**00 34 19.3**	**-0.3**
ARG				S	**Sn**	**00 34 30.4**	**-0.9**
FETY	**Fethiye**	**0.84**	**8**	PG	**Pn**	**00 34 19.8**	**-0.5**
FETY	**Fethiye**	**0.84**	**8**	*i* Pg	**Pn**	**00 34 19.8**	**-0.5**
DALT	**Dalyan (Mudla)**	**1.00**	**346**	PN	**Pn**	**00 34 22.6**	**+0.3**
DALT	**Dalyan (Mudla)**	**1.00**	**346**	*i* Pn	**Pn**	**00 34 22.6**	**+0.3**
TURN	**Turunc**	**1.10**	**346**	*i*P	**Pn**	**00 34 24.2**	**+0.7**
TURN				*i*S	**Sn**	**00 34 37.9**	**-0.4**
TURN	**Turunc**	**1.10**	**346**	*i*P	**Pn**	**00 34 24.2**	**+0.7**
TURN				*i*S	**Sn**	**00 34 37.9**	**-0.4**
ELL	**Elmali**	**1.23**	**39**	PN	**Pn**	**00 34 25.5**	**+0.3**
ELL	**Elmali**	**1.23**	**39**	*i* Pn	**Pn**	**00 34 25.5**	**+0.3**
GLHS	**Glhisar (BURDU**	**1.42**	**18**	*e*PN	**Pn**	**00 34 28.6**	**+0.8**
GLHS	**Glhisar (BURDU**	**1.42**	**18**	*e*Pn	**Pn**	**00 34 28.6**	**+0.8**
YER	**Yerkesik**	**1.43**	**338**	*e*PN	**Pn**	**00 34 28.9**	**+1.0**
YER				*e*SN	**Sn**	**00 34 46.7**	**+0.7**
YER	**Yerkesik**	**1.43**	**338**	*e*Pn	**Pn**	**00 34 28.9**	**+1.0**
YER				*e*Sn	**Sn**	**00 34 46.7**	**+0.7**
KARP	**Karpathos**	**1.47**	**261**	*e*P	**Pn**	**00 34 29.3**	**+0.9**
KARP				*e*S	**Sn**	**00 34 47.2**	**+0.2**
KARP	**Karpathos**	**1.47**	**261**	*e*P	**Pn**	**00 34 29.3**	**+0.9**
KARP				*e*S	**Sn**	**00 34 47.2**	**+0.2**
GOLH	**Golhisar**	**1.52**	**19**	*i*P	**Pn**	**00 34 31.1**	**+2.1**
GOLH				*i*S	**Sn**	**00 34 49.4**	**+1.4**
GOLH	**Golhisar**	**1.52**	**19**	*i*P	**Pn**	**00 34 31.1**	**+2.1**
GOLH				*i*S	**Sn**	**00 34 49.4**	**+1.4**
KORT	**Korkueli**	**1.65**	**43**	*i*P	**Pn**	**00 34 32.7**	**+1.9**
KORT				*i*S	**Sn**	**00 34 53.3**	**+2.0**
KORT	**Korkueli**	**1.65**	**43**	*i*P	**Pn**	**00 34 32.7**	**+1.9**
KORT				*i*S	**Sn**	**00 34 53.3**	**+2.0**
ANTB	**Antalya**	**1.76**	**51**	*e*PN	**Pn**	**00 34 31.7**	**-0.5**
ANTB				*e*SN	**Sn**	**00 34 53.7**	**0.0**
ANTB	**Antalya**	**1.76**	**51**	*e*Pn	**Pn**	**00 34 31.7**	**-0.5**
ANTB				*e*Sn	**Sn**	**00 34 53.7**	**0.0**
MLSB	**Milas**	**1.76**	**328**	*e*PN	**Pn**	**00 34 32.9**	**+0.7**
MLSB	**Milas**	**1.76**	**328**	*e*Pn	**Pn**	**00 34 32.9**	**+0.7**
BODT	**Bodrum**	**1.82**	**314**	*e*PN	**Pn**	**00 34 34.0**	**+1.0**
BODT	**Bodrum**	**1.82**	**314**	*e*Pn	**Pn**	**00 34 34.0**	**+1.0**
DNZL	**Cakiroluk**	**1.89**	**2**	*i*P	**Pn**	**00 34 35.0**	**+1.0**
DNZL				*i*S	**Sn**	**00 34 56.9**	**-0.1**
DNZL	**Cakiroluk**	**1.89**	**2**	*i*P	**Pn**	**00 34 35.0**	**+1.0**
DNZL				*i*S	**Sn**	**00 34 56.9**	**-0.1**
AYDN	**Tasoluk**	**2.04**	**336**	*i*P	**Pn**	**00 34 37.0**	**+1.0**
AYDN				*e*S	**Sn**	**00 34 57.1**	**-3.5**
AYDN	**Tasoluk**	**2.04**	**336**	*i*P	**Pn**	**00 34 37.0**	**+1.0**
AYDN				*e*S	**Sn**	**00 34 57.1**	**-3.5**
BCK	**Bucak**	**2.12**	**38**	*e*PN	**Pn**	**00 34 37.7**	**+0.6**
BCK	**Bucak**	**2.12**	**38**	*e*Pn	**Pn**	**00 34 37.7**	**+0.6**
ZKR	**Zakros**	**2.33**	**254**	P	**Pn**	**00 34 41.2**	**+1.4**
ZKR				S	**Sn**	**00 35 07.8**	**+0.4**
ZKR	**Zakros**	**2.33**	**254**	*e*P	**Pn**	**00 34 41.1**	**+1.3**
ZKR				*e*S	**Sn**	**00 35 07.8**	**+0.4**
GCAM	**G?zelcaml?**	**2.34**	**325**	*i*P	**Pn**	**00 34 40.7**	**+0.8**
GCAM				*i*S	**Sn**	**00 35 03.0**	**-4.6**
GCAM	**G?zelcaml?**	**2.34**	**325**	*i*P	**Pn**	**00 34 40.7**	**+0.8**
ISP	**Isparta**	**2.38**	**32**	P	**Pn**	**00 34 42.3**	**+1.7**
ISP	**Isparta**	**2.38**	**32**	P	**Pn**	**00 34 42.3**	**+1.7**
KHL	**Karahalli**	**2.56**	**10**	*e*PN	**Pn**	**00 34 43.6**	**+0.6**
KHL	**Karahalli**	**2.56**	**10**	*e*Pn	**Pn**	**00 34 43.6**	**+0.6**
KHAL	**Karahalli**	**2.60**	**10**	*i*P	**Pn**	**00 34 44.0**	**+0.4**
KHAL				*i*S	**Sn**	**00 35 13.2**	**-1.0**
KHAL	**Karahalli**	**2.60**	**10**	*i*P	**Pn**	**00 34 44.0**	**+0.4**
KHAL				*i*S	**Sn**	**00 35 13.2**	**-1.0**
KULA	**Kula-Manisa**	**2.72**	**355**	*e*PN	**Pn**	**00 34 45.4**	**+0.3**
KULA	**Kula-Manisa**	**2.72**	**355**	*e*Pn	**Pn**	**00 34 45.4**	**+0.3**
GAZI	**Gazipasa**	**2.77**	**80**	*i*P	**Pn**	**00 34 45.8**	**0.0**
GAZI				*e*S	Sn	00 35 11.3	-6.8
GAZI	**Gazipasa**	**2.77**	**80**	*i*P	**Pn**	**00 34 45.8**	**0.0**
NPS	**Neapolis**	**2.77**	**260**	P	**Pn**	**00 34 47.1**	**+1.3**
NPS				S	**Sn**	**00 35 17.6**	**-0.6**
NPS	**Neapolis**	**2.77**	**260**	*e*P	**Pn**	**00 34 46.2**	**+0.4**
NPS				*e*S	**Sn**	**00 35 17.7**	**-0.5**
NPS	**Neapolis**	**2.77**	**260**	*e*P	**Pn**	**00 34 46.2**	**+0.4**
NPS				*e*S	**Sn**	**00 35 17.7**	**-0.5**
AKMC	**Akamas**	**2.87**	**105**	⇑P	**Pn**	**00 34 47.6**	**+0.4**
AKMC				S	**Sn**	**00 35 19.6**	**-1.1**
AKMC	**Akamas**	**2.87**	**105**	⇑*i*P	**Pn**	**00 34 47.6**	**+0.4**
AKMC				S	**Sn**	**00 35 19.6**	**-1.1**
THR1	**Thera Island**	**2.88**	**282**	P	**Pn**	**00 34 48.8**	**+0.7**
LAST	**Lasithi**	**2.90**	**258**	P	**Pn**	**00 34 49.3**	**+1.7**
LAST				S	**Sn**	**00 35 21.1**	**-0.3**
LAST	**Lasithi**	**2.90**	**258**	*e*P	**Pn**	**00 34 49.0**	**+1.4**
LAST	**Lasithi**	**2.90**	**258**	*e*P	**Pn**	**00 34 49.0**	**+1.4**
LAST				S	**Sn**	**00 35 21.1**	**-0.3**
THR2	**Thira island,**	**2.91**	**284**	P	**Pn**	**00 34 48.6**	**+0.9**
PPCY	**Paphos**	**2.93**	**107**	P	**Pn**	**00 34 48.4**	**+0.5**
PPCY				S	**Sn**	**00 35 21.2**	**-0.8**
PPCY	**Paphos**	**2.93**	**107**	P	**Pn**	**00 34 48.4**	**+0.5**
PPCY				S	**Sn**	**00 35 21.2**	**-0.8**
BLCB	**Balcova**	**2.99**	**330**	*e*PN	**Pn**	**00 34 49.7**	**+0.9**
APE	**Apeiranthos**	**3.03**	**296**	*e*PN	**Pn**	**00 34 49.8**	**+0.5**
APE	**Apeiranthos**	**3.03**	**296**	P	**Pn**	**00 34 50.4**	**+1.0**
APE	**Apeiranthos**	**3.03**	**296**	*e*P	**Pn**	**00 34 50.4**	**+1.0**
APE	**Apeiranthos**	**3.03**	**296**	*e*Pn	**Pn**	**00 34 49.8**	**+0.5**
APE	**Apeiranthos**	**3.03**	**296**	*e*P	**Pn**	**00 34 50.4**	**+1.0**
SHUT	**Suhut-Afyon**	**3.03**	**25**	*e*PN	**Pn**	**00 34 50.0**	**+0.6**
SHUT	**Suhut-Afyon**	**3.03**	**25**	*e*Pn	**Pn**	**00 34 50.0**	**+0.6**
ALFC	**Alevga** 14nm,0.1s	**3.05**	**101**	⇑P	**Pn**	**00 34 49.6**	**-0.1**
ALFC				S	**Sn**	**00 35 23.6**	**-1.5**
ALFC	**Alevga** 14nm,0.1s	**3.05**	**101**	⇑P	**Pn**	**00 34 49.6**	**-0.1**
ALFC				S	**Sn**	**00 35 23.6**	**-1.5**
DEMI	**Demirci**	**3.24**	**357**	*i*P	**Pn**	**00 34 52.7**	**+0.4**
DEMI				*i*S	**Sn**	**00 35 25.2**	**-4.5**
DEMI	**Demirci**	**3.24**	**357**	*i*P	**Pn**	**00 34 52.7**	**+0.4**
LEF	**Lefka**	**3.29**	**101**	*e*PN

ROCH	**El Roble**	**2.07**	**358**	⇑*i*P	Pn	00 41 22.4	+0.3
ROCH				*i*S	Sn	00 41 49.0	+0.7
ROCH				AML	AML	00 41 52.3	
	comp=N,700nm,0.1s						
JACH	**Jahuel**	**2.38**	**7**	*e*P	Pn	00 41 26.2	+0.4

*ISK **11** 00:42:38.9, 41.°02N×42.°25E, h12km, MD2.8*
*CSEM **11** 00:42:39.6±0.2, 40.°96N×42.°22E, h1km, MD2.8, Error ellipse: s-maj=5.4km s-min=4.0km az=22.0*
*DDA **11** 00:42:40.7, 40.°97N×42.°14E, h13km, MD2.8*
ISC 11 00:42:40.5±1.1, **40.°98N**±0.°03×**42.°21E**±0.°02, **h9**km±9km, **n30**, σ0**°80**/51, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAGI	**Agillar**	**0.24**	**295**	*i*P	**Pg**	**00 42 45.3**	**-0.1**
DAGI				*i*S	**Sg**	**00 42 49.4**	**+0.6**
ARTV	**Artvin**	**0.30**	**315**	*i*P	**Pg**	**00 42 46.7**	**+0.2**
ARTV				*i*S	**Sg**	**00 42 51.5**	**+1.0**
ARTV	**Artvin**	**0.30**	**315**	*i*P	**Pg**	**00 42 46.7**	**+0.2**
ARTV				*i*S	**Sg**	**00 42 51.5**	**+1.0**
DDEM	**Demirkent**	**0.36**	**257**	*i*P	**Pg**	**00 42 46.5**	**-1.0**
DDEM				*i*S	**Sg**	**00 42 52.3**	**0.0**
DDEM	**Demirkent**	**0.36**	**257**	*i*P	**Pg**	**00 42 46.5**	**-1.0**
DDEM				*i*S	**Sg**	**00 42 52.3**	**0.0**
DBAD	**Bademkaya**	**0.39**	**276**	*i*P	**Pg**	**00 42 47.5**	**-0.6**
DBAD				*i*S	**Sg**	**00 42 53.0**	**-0.3**
DBAD	**Bademkaya**	**0.39**	**276**	*i*P	**Pg**	**00 42 47.5**	**-0.6**
DBAD				*i*S	**Sg**	**00 42 53.0**	**-0.3**
DBOC	**Borcka**	**0.55**	**312**	*i*P	**Pg**	**00 42 50.9**	**-0.2**
DBOC				*i*S	**Sg**	**00 42 58.5**	**+0.1**
DBOC	**Borcka**	**0.55**	**312**	*i*P	**Pg**	**00 42 50.9**	**-0.2**
DBOC				*i*S	**Sg**	**00 42 58.5**	**+0.1**
BCA	**Borcka**	**0.64**	**317**	*e*PG	**Pg**	**00 42 52.0**	**-0.9**
BCA				*e*SG	**Sg**	**00 43 01.2**	**-0.2**
BCA	**Borcka**	**0.64**	**317**	*e*Pg	**Pg**	**00 42 52.0**	**-0.9**
BCA				*e*Sg	**Sg**	**00 43 01.2**	**-0.2**
KARS	**Kars**	**0.75**	**118**	*e*PG	**Pg**	**00 42 53.6**	**-1.3**
KARS				*e*SG	**Sg**	**00 43 05.1**	**+0.5**
KARS	**Kars**	**0.75**	**118**	*e*Pg	**Pg**	**00 42 53.6**	**-1.3**
KARS				*e*Sg	**Sg**	**00 43 05.1**	**+0.5**
PZAR	**Pazar-Rize**	**1.01**	**282**	*e*PG	**Pg**	**00 42 58.8**	**-1.1**
PZAR				*e*SG	**Sb**	**00 43 13.8**	**+0.2**
PZAR	**Pazar-Rize**	**1.01**	**282**	*e*Pg	**Pg**	**00 42 58.8**	**-1.1**
PZAR				*e*Sg	**Sb**	**00 43 13.8**	**+0.2**
AKH	**Akhalkalaki**	**1.06**	**65**	P	**Pg**	**00 43 00.4**	**-0.5**
AKH				S	**Sg**	**00 43 14.9**	**+0.3**
AKH	**Akhalkalaki**	**1.06**	**65**	P	**Pg**	**00 43 00.4**	**-0.5**
ERZM	**Erzurum**	**1.25**	**211**	*e*P	**Pg**	**00 43 04.1**	**-0.3**
ERZM				*i*S	**Sb**	**00 43 22.3**	**+1.6**
ERZM	**Erzurum**	**1.25**	**211**	*e*P	**Pg**	**00 43 04.1**	**-0.3**
ERZM				*i*S	**Sb**	**00 43 22.3**	**+1.6**
EZM	**Erzurum**	**1.25**	**211**	*e*PN	**Pg**	**00 43 04.2**	**-0.2**
BAYT	**Ayd¨–ntepe-Bay**	**1.68**	**250**	*e*PN	**Pn**	**00 43 09.5**	**-0.7**
BAYT	**Ayd¨–ntepe-Bay**	**1.68**	**250**	*e*Pn	**Pn**	**00 43 09.5**	**-0.7**
MACK	**Trabzon**	**1.85**	**270**	*i*P	**Pn**	**00 43 12.1**	**-0.3**
MACK				*i*S	**Sn**	**00 43 35.9**	**0.0**
MACK	**Trabzon**	**1.85**	**270**	*i*P	**Pn**	**00 43 12.1**	**-0.3**
MACK				*i*S	**Sn**	**00 43 35.9**	**0.0**
GUMT	**Gumushane**	**2.14**	**257**	*e*PN	**Pn**	**00 43 16.3**	**-0.2**
GUMT	**Gumushane**	**2.14**	**257**	*e*Pn	**Pn**	**00 43 16.3**	**-0.2**
KELT	**Kelkit**	**2.40**	**251**	*i*P	**Pn**	**00 43 22.1**	**+2.0**
KELT				*i*S	**Sb**	**00 43 53.0**	**-0.6**
KELT	**Kelkit**	**2.40**	**251**	*i*P	**Pn**	**00 43 22.1**	**+2.0**
ESPY	**Espiye-Giresun**	**2.64**	**270**	*e*PN	**Pn**	**00 43 22.6**	**-0.6**
ESPY	**Espiye-Giresun**	**2.64**	**270**	*e*Pn	**Pn**	**00 43 22.6**	**-0.6**

*IDC **11** 00:43:10.7±0.9, 35.°55N×143.°09E, h0km, mb3.6/10, mb1 3.8/12, mb1mx3.7/27, mbtmp3.6/12, ML3.4/2, MS2.8/1, Ms1 2.8/1, ms1mx2.1/45, Error ellipse: s-maj=21.8km s-min=20.5km az=123.0*
*ISCJB **11** 00:43:12.5±1.7, 35.°68N±0.°04×143.°01E±0.°05, h24km±13km, mb3.6/10, Error ellipse: s-maj=6.7km s-min=5.6km az=44.6*
*JMA **11** 00:43:13.5±0.3, 35.°64N×143.°02E, h69km, M3.3*
ISC 11 00:43:12.3±2.6, **35.°65N**±0.°06×**143.°01E**±0.°05, **h10**km±16km, **n28**, σ0**°96**/32, **mb3.7**/10, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**1.75**	**272**	S	**Sn**	**00 44 04.7**	**-0.3**
BSO1	**Boso 1**	**1.94**	**240**	P	**Pn**	**00 43 44.3**	**-0.5**
BSO1				*e*S	**Sn**	**00 44 08.1**	**-0.8**
BSO2	**Boso 2**	**2.05**	**245**	S	**Sn**	**00 44 12.2**	**+0.1**
JHO	**Hitachi**	**2.19**	**297**	P	**Pn**	**00 43 48.4**	**-0.4**
JHO				*e*S	Sn	00 44 13.4	-2.6
BSO3	**Boso 3**	**2.21**	**248**	P	**Pn**	**00 43 48.4**	**-0.4**
BSO3				*e*S	**Sn**	**00 44 16.7**	**+0.6**
JFT	**Otama**	**2.84**	**312**	P	**Pn**	**00 43 58.1**	**+0.3**
JFT				S	Sn	00 44 30.5	-1.6
JAG	**Ashikaga**	**2.98**	**286**	P	**Pn**	**00 43 59.5**	**-0.1**
JAG				*e*S	Sn	00 44 33.5	-1.9
JOD2	**Odawara 2**	**3.22**	**264**	P	**Pn**	**00 44 02.9**	**-0.1**
JOD2				S	**Sn**	**00 44 40.0**	**-1.4**
JRY	**Ryogami san**	**3.35**	**277**	P	**Pn**	**00 44 05.8**	**+1.0**
JRY				*e*S	**Sn**	**00 44 44.2**	**-0.5**
JMK	**Ichinoseki**	**3.59**	**337**	P	**Pn**	**00 44 07.7**	**-0.3**
JMK				*e*S	Sn	00 44 47.6	-2.8
JYN	**Shimob**	**3.64**	**269**	P	**Pn**	**00 44 08.8**	**0.0**
JYN				*e*S	**Sn**	**00 44 50.9**	**-0.9**
JHJ2	**Mitsune**	**3.66**	**227**	P	Pn	00 44 08.1	-0.8
JHJ2				*e*S	Sn	00 44 48.4	-3.7
JHJ	**Hachijo jima 2**	**3.67**	**227**	Pn	Pn	00 44 08.1	-1.1
	7.8nm,0.3s,baz=68,slow=10,SNR=4.4						
JHJ				Sn	Sn	00 44 48.4	-4.1
	60nm,0.3s,baz=73,slow=23,SNR=9.9						
JYK	**Kaneyama**	**3.88**	**328**	P	Pn	00 44 11.5	-0.6
JYK				*e*S	**Sn**	**00 44 56.3**	**-1.4**
MJAR	**Matsushiro Arr**	**3.98**	**284**	Pn	**Pn**	**00 44 14.9**	**+1.4**
	2.7nm,0.3s,baz=94,slow=9.6,SNR=27						
MJAR				Sn	**Sn**	**00 45 03.0**	**+2.7**
	1.2nm,0.3s,baz=82,slow=12,SNR=5.9						
MAT	**Matsushiro**	**3.99**	**284**	P	**Pn**	**00 44 15.0**	**+1.5**
MAT				S	**Sn**	**00 45 01.6**	**+1.3**
JOM	**Ohasama**	**4.05**	**341**	P	**Pn**	**00 44 14.8**	**+0.5**
JOM				*e*S	Sn	00 44 58.9	-2.9
USRK	**Ussuriysk Arra**	**12.00**	**319**	LR	LR	00 49 22.2	
	comp=Z,54nm,21.4s,baz=86,slow=31						
SONM	**Songino Array**	**29.63**	**306**	P	**P**	**00 49 18.6**	**+0.7**
	0.7nm,0.8s,baz=111,slow=8.0,SNR=6.0						
ZALV	**Zalesovo Beam**	**43.79**	**313**	P	**P**	**00 51 18.9**	**+0.9**
	0.9nm,0.5s,baz=95,slow=7.3,SNR=5.4						
MKAR	**Makanchi Array**	**45.95**	**304**	P	**P**	**00 51 36.0**	**+0.6**
	0.6nm,0.8s,baz=89,slow=10,SNR=9.3						
ILAR	**Eielson Array**	**49.98**	**32**	P	**P**	**00 52 06.2**	**0.0**
	0.4nm,0.8s,baz=249,slow=6.6,SNR=3.2						
WRA	**Warramunga Arr**	**55.90**	**190**	P	**P**	**00 52 49.6**	**-0.8**
	0.7nm,0.7s,baz=5.8,slow=7.5,SNR=4.9						
ASAR	**Alice Springs**	**59.62**	**190**	P	**P**	**00 53 15.8**	**-0.8**
	0.5nm,0.8s,baz=28,slow=8.4,SNR=4.6						
YKA	**Yellowknife Ar**	**64.35**	**30**	P	**P**	**00 53 48.4**	**+0.5**
	0.4nm,0.7s,baz=300,slow=6.7,SNR=8.9						
FINES	**FINESS Array B**	**70.63**	**333**	P	**P**	**00 54 27.5**	**-0.1**
	0.9nm,0.8s,baz=39,slow=7.1,SNR=3.5						
PDAR	**Pinedale Array**	**77.71**	**46**	P	**P**	**00 55 10.2**	**+0.6**
	0.2nm,0.5s,baz=273,slow=5.2,SNR=3.2						
BRTR	**Keskin Array B**	**80.73**	**313**	P	**P**	**00 55 26.8**	**+0.8**
	0.4nm,0.7s,baz=94,slow=8.2,SNR=3.2						

*ISCJB **11** 00:48:02.3±0.6, 43.°31N±0.°06×144.°52E±0.°07, h142km±4km, mb3.4/5, Error ellipse: s-maj=10.0km s-min=7.8km az=174.4*
*JMA **11** 00:48:03.9±0.1, 43.°33N×144.°50E, h137km±1km, M3.1*
*IDC **11** 00:48:05.5±4.4, 43.°53N×144.°41E, h152km±15km, mb3.1/5, mb1 3.2/5, mb1mx3.0/24, mbtmp3.1/5, Error ellipse: s-maj=80.1km s-min=26.8km az=170.0*
*MOS **11** 00:48:14.0±1.3, 47.°73N×142.°61E, h11km, mb3.7/3, Error ellipse: s-maj=26.6km s-min=11.2km az=91.3*
ISC 11 00:48:03.2±0.8, **43.°31N**±0.°07×**144.°53E**±0.°05, **h141**km±6km, **n22**, σ0**°79**/32, **mb3.5**/5, **1C, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNK	**Nakash**	**0.31**	**26**	P	**Pn**	**00 48 23.0**	**+0.4**
JNK				*e*S	**Sn**	**00 48 37.0**	**-0.5**
JAK	**Akkeshi**	**0.33**	**159**	P	**Pn**	**00 48 23.1**	**+0.4**
JAK				*e*S	**Sn**	**00 48 37.6**	**+0.1**
JAR	**Ashorobuto**	**0.56**	**269**	P	**Pn**	**00 48 24.3**	**+0.5**
JAR				*e*S	**Sn**	**00 48 39.3**	**-0.1**
JOB	**Onbets**	**0.65**	**232**	P	**Pn**	**00 48 25.0**	**+0.7**
JOB				*e*S	**Sn**	**00 48 40.5**	**+0.1**
JRA	**Rausu**	**0.76**	**34**	P	**Pn**	**00 48 25.6**	**+0.5**
JTKR	**Abashiri--Toko**	**0.80**	**326**	P	**Pn**	**00 48 25.6**	**+0.2**
JTKR				*e*S	**Sn**	**00 48 41.7**	**-0.6**
NEM2	**Nemuro 2**	**0.88**	**86**	P	**Pn**	**00 48 26.2**	**+0.2**
NEM2				*e*S	**Sn**	**00 48 42.4**	**-1.0**
JMP	**Maruseppu**	**1.10**	**310**	P	**Pn**	**00 48 27.9**	**-0.1**
JMP				*e*S	**Sn**	**00 48 45.5**	**-1.5**
JCH	**Churui**	**1.10**	**232**	P	**Pn**	**00 48 28.3**	**+0.3**
JCH				*e*S	**Sn**	**00 48 46.2**	**-0.7**
JKK2	**Kamakawa 2**	**1.42**	**294**	P	**Pn**	**00 48 31.3**	**+0.2**
JKK2				*e*S	**Sn**	**00 48 51.7**	**-0.8**
JFR	**Furan**	**1.43**	**265**	P	**Pn**	**00 48 31.9**	**+0.7**
JFR				*e*S	**Sn**	**00 48 52.3**	**-0.3**
ASAJ	**Asahikawa**	**1.62**	**301**	P	**Pn**	**00 48 34.0**	**+0.7**
	14nm,0.3s,baz=129,slow=11,SNR=40						
ASAJ				S	**Sn**	**00 48 57.0**	**+0.6**
	0.8nm,0.3s,baz=292,slow=33,SNR=6.2						
JNBK	**Urakawa-nobuka**	**1.67**	**233**	P	**Pn**	**00 48 33.8**	**0.0**
JNBK				*e*S	**Sn**	**00 48 55.9**	**-1.4**
SONM	**Songino Array**	**26.89**	**293**	P	**P**	**00 53 31.0**	**+0.2**
	0.7nm,0.5s,baz=87,slow=8.3,SNR=8.2						
BILL	**Bilibino**	**27.34**	**18**	*e*P	P	00 53 29.5	-4.9
KRAR	**Krasnoyarsk**	**34.93**	**310**	*e*P	P	00 54 34.8	-6.3
ILAR	**Eielson Array**	**42.97**	**36**	P	**P**	**00 55 48.5**	**+0.7**
	0.3nm,0.5s,baz=255,slow=5.5,SNR=5.8						
MKAR	**Makanchi Array**	**43.10**	**297**	*e*P	**P**	**00 55 51.0**	**+1.8**
MKAR	**Makanchi Array**	**43.10**	**297**	P	**P**	**00 55 49.6**	**+0.4**
	0.2nm,0.6s,baz=87,slow=5.8,SNR=3.8						
FINES	**FINESS Array B**	**64.39**	**332**	P	**P**	**00 58 23.2**	**-0.4**
	0.9nm,0.5s,baz=44,slow=7.9,SNR=13						
AKASG	**Malin Array Be**	**70.79**	**322**	P	**P**	**00 59 02.6**	**-1.3**
AKASG	**Malin Array Be**	**70.79**	**322**	P	**P**	**00 59 02.6**	**-1.3**
	0.3nm,0.3s,baz=44,slow=6.7,SNR=4.6						

KRSC 11 00:54:32.2±0.9, **51.°94N×158.°85E, h76**km±55km, **ML3.7, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**0.54**	**337**	*i*P	Pn	00 54 46.7	+0.8
RUS				*i*S	Sn	00 54 57.7	+1.7
MTVR	**Mutnovka**	**0.68**	**323**	*i*P	Pn	00 54 48.3	+0.8
MTVR				*e*S	Sn	00 55 00.2	+1.3
GRL	**Gorelyy**	**0.78**	**322**	*e*P	Pn	00 54 49.9	+1.3
GRL				*e*S	Sn	00 55 02.5	+1.8
PET	**Petropavlovsk**	**1.09**	**354**	*e*P	Pn	00 54 52.9	+0.8
PET				*e*S	Sn	00 55 08.0	+1.0
UGLR	**Uglovaya**	**1.27**	**359**	*e*P	Pn	00 54 55.9	+1.4
UGLR				*e*S	Sn	00 55 13.2	+1.9
SMAR	**Somma**	**1.33**	**359**	*e*P	Pn	00 54 56.5	+1.1
SMAR				*e*S	Sn	00 55 14.6	+1.8
AVH	**Avacha**	**1.33**	**357**	*e*P	Pn	00 54 57.0	+1.8
AVH				*e*S	Sn	00 55 14.7	+2.1
MIPR	**Malaya Ipel'ka**	**1.33**	**285**	P	Pn	00 54 55.2	0.0
MIPR				S	Sn	00 55 11.9	-0.6
SDLR	**Sedlovina**	**1.34**	**1**	*e*P	Pn	00 54 56.4	+1.0
SDLR				*e*S	Sn	00 55 13.8	+0.9
KOK	**Koryaka**	**1.36**	**355**	*e*P	Pn	00 54 57.4	+1.7
KOK				*e*S	Sn	00 55 15.9	+2.6
SPN	**Mys Shipunski**	**1.36**	**31**	S	Sn	00 55 15.0	+1.9
KRER	**Koryakskii**	**1.37**	**357**	*e*P	Pn	00 54 57.3	+1.4
KRER				*e*S	Sn	00 55 15.6	+1.9
APC	**Apacha**	**1.43**	**314**	P	Pn	00 54 57.6	+1.2
GNL	**Ganaly**	**1.84**	**343**	*e*P	Pn	00 55 03.0	+1.0
GNL				S	Sn	00 55 25.2	+0.5
SKR	**Severo-Kuril's**	**2.13**	**235**	*e*P	Pn	00 55 04.0	-1.6
SKR				*e*S	Sn	00 55 27.5	-3.6
MKZ	**Mys Kozlova**	**3.14**	**32**	*e*P	Pn	00 55 20.1	+0.8
MKZ				*e*S	Sn	00 55 55.0	-0.6
TUMR	**Tumrok**	**3.44**	**12**	*e*P	Pn	00 55 25.8	+2.3
KMNR	**Kamenistaya**	**3.91**	**12**	*e*P	Pn	00 55 32.3	+2.4
ESO	**Esso**	**3.99**	**359**	*e*P	Pn	00 55 32.6	+1.6
KPT	**Kopyto**	**4.12**	**11**	P	Pn	00 55 34.8	+2.1
BZMR	**Bezymyannaya**	**4.12**	**13**	P	Pn	00 55 34.9	+2.1
BZWR	**Bezymyannyi-We**	**4.15**	**13**	P	Pn	00 55 35.7	+2.4
BZGR	**Bezymyannyi-Gr**	**4.15**	**14**	P	Pn	00 55 36.3	+2.0
KOZ	**Kozyrevsk**	**4.17**	**8**	P	Pn	00 55 35.6	+2.2
SRDR	**Sredinnyy**	**4.42**	**6**	P	Pn	00 55 38.2	+1.4
BDR	**Baidarnaya**	**4.84**	**16**	P	Pn	00 55 43.8	+1.2
KBTR	**Krutoberegovo**	**4.87**	**27**	P	Pn	00 55 43.8	+0.9
BKI	**Bering**	**5.36**	**50**	*e*S	Sn	00 56 46.1	-3.6

*BJI **11** 01:04:22.3, 44.°40N×129.°50W, h10km, mB4.9/1, mb4.4/2*
*IDC **11** 01:04:24.2±1.1, 44.°23N×129.°16W, h0km, mb3.7/13, mb1 3.9/18, mb1mx3.8/34, mbtmp3.7/18, ML3.7/5, MS3.3/8, Ms1 3.3/8, ms1mx2.9/57, Error ellipse: s-maj=27.9km s-min=12.7km az=37.0*
*ISCJB **11** 01:04:26.1±0.4, 44.°49N±0.°04×129.°39W±0.°05, h13km, mb3.8/19, MS3.1/2, Error ellipse: s-maj=5.9km s-min=4.4km az=41.5*
*NEIC **11** 01:04:26.6±0.7, 44.°40N×129.°39W, h10km, mb4.0/14, Error ellipse: s-maj=9.9km s-min=5.9km az=223.0*
ISC 11 01:04:26.6±0.6, **44.°34N**±0.°06×**129.°44W**±0.°04, **h13**km, **n185**, σ1**°52**/166, **mb3.9**/19, **24C-18D, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MPOR	**Mary's Peak**	**4.22**	**86**	P	**Pn**	**01 05 28.0**	**-2.8**
COR	**Corvallis**	**4.40**	**85**	*e*Pn	**Pn**	**01 05 31.1**	**-2.0**
COR				*e*Sn	**Sn**	**01 06 20.4**	**-3.7**
KMOR	**Kings Mountain**	**4.42**	**71**	P	**Pn**	**01 05 31.1**	**-2.3**
NLO	**Nicolai Mounta**	**4.58**	**65**	P	**Pn**	**01 05 34.6**	**-1.0**
HSO	**Harness Mounta**	**4.66**	**98**	P	**Pn**	**01 05 33.8**	**-2.9**
E03A	**Lebam**	**4.69**	**60**	P	**Pn**	**01 05 35.9**	**-1.2**
BMW	**Boistfort Moun**	**4.87**	**62**	P	**Pn**	**01 05 38.1**	**-1.5**
NLWA	**Neilton Lookou**	**4.95**	**50**	*e*Pn	**Pn**	**01 05 39.5**	**-1.1**
NLWA				*e*Sn	**Sn**	**01 06 36.1**	**-1.6**
HUMO	**Hull Mountain**	**5.02**	**108**	*e*Pn	Pn	01 05 38.1	-3.6
HUMO				*e*Sn	Sn	01 06 32.5	-7.1
RVW	**Rose Valley**	**5.06**	**67**	P	**Pn**	**01 05 41.0**	**-1.3**
OTR	**Olympics--Tyee**	**5.15**	**42**	P	**Pn**	**01 05 43.7**	**+0.2**
OBC	**Olympics--Boni**	**5.25**	**43**	P	**Pn**	**01 05 44.6**	**-0.2**
MTMW	**Mount Mitchell**	**5.38**	**69**	P	**Pn**	**01 05 45.7**	**-1.0**
YBH	**Yreka Blue Hor**	**5.58**	**116**	*e*Pn	**Pn**	**01 05 48.7**	**-0.6**
YBH				Sn	Sn	01 06 46.9	-6.4
YBH	**Yreka Blue Hor**	**5.58**	**116**	Pn	Pn	01 05 45.5	-3.8
	0.6nm,0.3s,baz=289,slow=11,SNR=8.8						
YBH				Sn	Sn	01 06 46.9	-6.4
	0.6nm,0.3s,baz=162,slow=20,SNR=3.0						
YBH				LR	LR	01 07 42.5	
	comp=Z,456nm,19.2s,baz=311,slow=37						
LON	**Longmire**	**5.88**	**63**	*e*Pn	**Pn**	**01 05 52.8**	**-0.6**
PGC	**Sidney**	**5.97**	**42**	*e*Pn	**Pn**	**01 05 53.8**	**-0.8**
MOD	**Modoc**	**7.11**	**107**	*e*Pn	**Pn**	**01 06 11.5**	**+1.0**
HAWA	**Hanford**	**7.27**	**70**	*e*Pn	**Pn**	**01 06 12.3**	**-0.3**
BBB	**Bella Bella**	**7.90**	**6**	Pn	**Pn**	**01 06 22.0**	**+0.9**
BBB	**Bella Bella**	**7.90**	**6**	Pn	**Pn**	**01 06 22.0**	**+0.9**
	0.6nm,0.3s,baz=187,slow=16,SNR=32						
BBB				LR	LR	01 09 03.2	
	comp=Z,164nm,19.3s,baz=242,slow=35						
BMO	**Blue Mountains**	**8.68**	**82**	*e*Pn	**Pn**	**01 06 30.1**	**-1.8**
DIB	**Dawson Inlet,**	**9.10**	**348**	T	T	01 16 22.0	
NEW	**Newport**	**9.38**	**61**	*e*Pn	**Pn**	**01 06 39.2**	**-2.4**
NEW	**Newport**	**9.38**	**61**	⇑P	**Pn**	**01 06 40.9**	**-0.6**
	baz=9.3						
NEW	**Newport**	**9.38**	**61**	Pn	**Pn**	**01 06 39.9**	**-1.7**
	0.7nm,0.3s,baz=241,slow=7.6,SNR=11						
NEW				LR	LR	01 10 13.9	
	comp=Z,144nm,18.9s,baz=26,slow=38						
MFID	**Camas Ranch**	**9.87**	**91**	*e*Pn	**Pn**	**01 06 49.2**	**+0.9**
F12A	**Elk City**	**10.14**	**77**	⇑P	**Pn**	**01 06 53.6**	**+1.6**
	baz=10,SNR=5.3						
NVAR	**Mina Array Bea**	**10.23**	**121**	Pn	**Pn**	**01 06 52.3**	**-1.1**
NVAR	**Mina Array Bea**	**10.23**	**121**	Pn	**Pn**	**01 06 52.3**	**-1.1**
	0.1nm,0.3s,baz=277,slow=12,SNR=9.4						
NVAR				LR	LR	01 10 24.3	
	comp=Z,155nm,21.8s,baz=104,slow=36						
H12A	**Diamond D Ranc**	**10.43**	**84**	⇑P	Pn	01 06 59.9	+3.9
	baz=10,SNR=7.7						
MLAC	**Mammoth Lakes**	**10.44**	**126**	⇓P	Pn	01 06 59.3	+3.1
	baz=10						
BSMT	**Bassoo Peak**	**10.77**	**66**	*e*Pn	**Pn**	**01 06 59.0**	**-1.5**
F13A	**Darby**	**10.79**	**77**	⇓P	**Pn**	**01 07 02.1**	**+1.3**
	baz=11,SNR=9.5						
G13A	**Cobalt**	**10.85**	**81**	⇑P	**Pn**	**01 07 03.8**	**+2.0**
	baz=11,SNR=9.5						
H13A	**Challis**	**10.86**	**83**	⇓P	**Pn**	**01 07 03.9**	**+2.0**
	baz=11						
HLID	**Hailey**	**10.86**	**89**	*e*Pn	**Pn**	**01 07 04.1**	**+2.2**
HLID	**Hailey**	**10.86**	**89**	P	**Pn**	**01 07 04.2**	**+2.3**
	baz=11,SNR=27						
C13A	**Hot Springs**	**10.87**	**67**	⇓P	**Pn**	**01 07 02.5**	**+0.6**
	baz=11,SNR=6.7						
I13A	**Wildhorse Cree**	**11.03**	**87**	P	Pn	01 07 08.2	+4.0
	baz=11,SNR=9.5						
J13A	**Cove Ranch, Pi**	**11.06**	**90**	P	Pn	01 07 08.2	+3.5
	baz=11,SNR=15						
JTMT	**Jette**	**11.07**	**67**	*e*Pn	**Pn**	**01 07 04.4**	**-0.4**
ELK	**Elko**	**11.07**	**104**	*e*Pn	**Pn**	**01 07 07.5**	**+2.6**
MSO	**Missoula**	**11.14**	**72**	*e*Pn	**Pn**	**01 07 05.8**	**0.0**
MSO	**Missoula**	**11.14**	**72**	⇓P	**Pn**	**01 07 08.2**	**+2.5**
	baz=11						
SWMT	**Swartz Lake**	**11.21**	**68**	*e*Pn	**Pn**	**01 07 06.0**	**-0.6**
A13A	**Flathead Natio**	**11.30**	**61**	⇑P	**Pn**	**01 07 09.8**	**+1.9**
	baz=11						
C14A	**Swan Lake**	**11.43**	**67**	⇓P	**Pn**	**01 07 09.8**	**+0.2**
	baz=11						
D14A	**Greenough**	**11.47**	**71**	⇓P	**Pn**	**01 07 11.8**	**+1.6**
	baz=11						
H14A	**Leadore**	**11.49**	**83**	P	Pn	01 07 14.8	+4.3
	baz=11,SNR=5.1						
I14A	**Mackay**	**11.50**	**86**	⇓P	**Pn**	**01 07 12.9**	**+2.3**
	baz=11,SNR=5.9						
SLMT	**Seeley Lake**	**11.51**	**70**	*e*Pn	**Pn**	**01 07 12.0**	**+1.3**
J14A	**Carey**	**11.55**	**89**	⇑P	Pn	01 07 14.6	+3.3
	baz=12						
CHMT	**Chamberlain Mo**	**11.62**	**72**	*e*Pn	**Pn**	**01 07 13.4**	**+1.0**
MCMT	**McKenzie Canyo**	**11.84**	**82**	*e*Pn	**Pn**	**01 07 14.7**	**-0.7**
E15A	**Deer Lodge**	**12.00**	**74**	⇑P	**Pn**	**01 07 18.9**	**+1.5**
	baz=12						
F15A	**Butte**	**12.07**	**77**	⇑P	**Pn**	**01 07 20.6**	**+2.1**
	baz=12						
LRM	**Limekiln Ridge**	**12.10**	**77**	*e*Pn	**Pn**	**01 07 18.4**	**-0.6**
C15A	**Salmond Ranch,**	**12.19**	**68**	⇓P	**Pn**	**01 07 21.7**	**+1.7**
	baz=12,SNR=7.8						
J15A	**Blackfoot**	**12.31**	**88**	P	Pn	01 07 25.0	+3.3
	baz=12,SNR=8.3						
A15A	**Johnson Ranch,**	**12.38**	**62**	⇑P	**Pn**	**01 07 23.9**	**+1.4**
	baz=12,SNR=13						
G16A	**Moss Hill, Enn**	**12.56**	**80**	⇑P	**Pn**	**01 07 27.7**	**+2.5**
	baz=12,SNR=6.8						
L15A	**Malad City**	**12.67**	**95**	⇓P	Pn	01 07 29.5	+3.0
	baz=13						
BOZ	**Bozeman (W)**	**12.68**	**78**	*e*Pn	**Pn**	**01 07 24.1**	**-2.6**
D16A	**Dana Ranch, Ca**	**12.80**	**72**	⇓P	**Pn**	**01 07 30.5**	**+2.2**
	baz=13,SNR=6.0						
QLMT	**Earthquake Lak**	**12.85**	**81**	*e*Pn	Pn	01 07 32.2	+3.1
I16A	**Newdale**	**12.91**	**86**	⇑P	**Pn**	**01 07 32.5**	**+2.5**
	baz=13,SNR=14						
J16A	**Bone**	**12.93**	**88**	⇓P	Pn	01 07 33.4	+3.3
	baz=13						
DUG	**Dugway**	**12.99**	**103**	*e*Pn	**Pn**	**01

comp=Z,165nm,18.5s,baz=228,slow=39
YKA Yellowknife Ar 20.13 20 P Pn 01 09 00.8 -1.2
YKA Yellowknife Ar 20.13 20 P Pn 01 09 00.7 -1.2
2.9nm,0.7s,baz=207,slow=11,SNR=38
YKW3 Yellowknife Ar 20.18 20 *eP* **P 01 09 00.9 +0.2**
V24A Rampart Ranch, 20.35 107 ⇓P Pn 01 09 05.7 +0.6
baz=20
FFC Flin Flon 20.50 50 *eP* **P 01 09 03.8 -0.3**
48nm,1.4s
W24A Lazy 6 Ranch, 20.54 108 P **P 01 09 05.0 0.0**
baz=20,SNR=6.5
U25A Circle Dot Ran 20.60 104 P Pn 01 09 08.0 0.0
baz=20,SNR=5.3
V25A Rancho No Teng 20.74 106 P **P 01 09 07.5 +0.3**
baz=21,SNR=7.0
R27A Eads 20.85 98 P Pn 01 09 09.8 -1.0
baz=21,SNR=6.3
Z24A Sheeppen Canyo 21.66 112 ⇑P **P 01 09 19.0 +2.0**
baz=22
124A Stringfield Ra 21.99 114 ⇑P **P 01 09 22.2 +1.6**
baz=22
ILAR Eielson Array 22.68 341 P **P 01 09 30.6 +3.1**
ILAR Eielson Array 22.68 341 P **P 01 09 30.6 +3.1**
1.0nm,1.0s,baz=159,slow=9.3,SNR=5.9
Z27A Tatum 23.11 109 ⇑P **P 01 09 32.8 +0.4**
baz=23
AMTX Amarillo 23.28 104 *eP* **P 01 09 32.9 -1.2**
11nm,1.0s
ULM Lac du Bonnet 23.38 63 P **P 01 09 33.6 -1.3**
ULM Lac du Bonnet 23.38 63 P **P 01 09 33.6 -1.3**
5.8nm,0.8s,baz=279,slow=9.2,SNR=12
AGMN Agassiz Nation 23.41 68 *eP* **P 01 09 34.8 -0.4**
3.0nm,0.8s
ECSD EROS Data Cent 23.52 80 *eP* **P 01 09 35.0 -1.3**
13nm,1.4s
INK Inuvik 24.12 356 P **P 01 09 43.1 +1.3**
INK Inuvik 24.12 356 P **P 01 09 43.1 +1.3**
1.2nm,0.9s,baz=184,slow=11,SNR=4.5
527A Woodward Ranch 24.84 116 ⇑P **P 01 09 49.3 +0.5**
baz=25
626A Big Bend Ranch 24.90 118 ⇓P **P 01 09 51.5 +2.2**
baz=25
428A Kincaid Ranch, 25.06 114 ⇑P **P 01 09 51.3 +0.6**
baz=25
TXAR Lajitas Array 25.35 118 P **P 01 09 51.9 -1.5**
TXAR Lajitas Array 25.35 118 P **P 01 09 51.9 -1.5**
0.9nm,0.9s,baz=308,slow=7.9,SNR=4.7
TXAR LR LR 01 20 24.6
comp=Z,61nm,21.9s,baz=180,slow=38
WMOK Wichita Mounta 25.39 102 *eP* **P 01 09 52.7 -0.9**
19nm,1.5s
429A Davenport Ranc 25.65 113 ⇑P **P 01 09 58.6 +2.5**
baz=26
529A Stev Forest Ra 25.75 114 ⇓P **P 01 09 58.2 +1.2**
baz=26
RES Resolute Bay 34.05 16 *eP* **P 01 11 10.6 +0.6**
3.9nm,0.7s
BILL Bilibino 40.32 328 *eP* **P 01 12 03.2 0.0**
PETK Petropavlovsk- 46.91 308 LR LR 01 32 10.5
comp=Z,27nm,18.5s,baz=166,slow=35
ARCES ARCESS Array B 64.95 9 P **P 01 15 05.5 0.0**
ARCES ARCESS Array B 64.95 9 P **P 01 15 05.5 0.0**
4.0nm,1.2s,baz=15,slow=7.5,SNR=4.0
MDJ Mudanjiang 67.05 310 P P 01 15 16.2 -3.1
MDJ pmax pmax
comp=Z,3.0nm,1.2s
MDJ pmax pmax
comp=Z,67nm,4.2s
CN2 Changchun 69.82 312 *eP* **P 01 15 38.8 +2.1**
FINES FINESS Array B 72.72 12 P **P 01 15 53.5 -0.4**
FINES FINESS Array B 72.72 12 P **P 01 15 53.5 -0.4**
comp=Z,1.9nm,0.9s,baz=345,slow=5.9,SNR=5.4
SONM Songino Array 75.93 325 P **P 01 16 14.1 +1.1**
SONM Songino Array 75.93 325 P **P 01 16 14.1 +1.1**
comp=Z,0.4nm,0.8s,baz=35,slow=5.3,SNR=3.1
ZALV Zalesovo Beam 77.81 340 P **P 01 16 23.8 +0.5**
ZALV Zalesovo Beam 77.81 340 P **P 01 16 23.8 +0.5**
comp=Z,0.2nm,0.3s,baz=26,slow=7.0,SNR=2.7
HHC Hu-ho-hao-te 79.05 317 *eP* **P 01 16 30.3 -0.3**
HHC pP **pP 01 16 35.2 +0.3**
HHC sP **sP 01 16 37.3 +0.9**
HHC S **S 01 26 24.8 -4.6**
HHC sS **sS 01 26 34.3 -2.1**
HHC ScS **SKKSac 01 26 47.4 -0.1**
HHC SS **SS 01 31 33.8 -0.1**
BVAR Borovoye Array 81.53 348 P **P 01 16 43.5 0.0**
BVAR Borovoye Array 81.53 348 P **P 01 16 43.5 0.0**
comp=Z,0.5nm,0.8s,baz=13,slow=3.1,SNR=2.8
GERES GERESS Array B 81.75 24 P **P 01 16 43.7 -1.2**
GERES GERESS Array B 81.75 24 P **P 01 16 43.7 -1.2**
comp=Z,0.2nm,0.6s,baz=317,slow=8.5,SNR=2.8
KURK Kurchatov 82.24 342 *eP* **P 01 16 46.3 -1.0**
comp=Z,2.2nm,1.1s
AKASG Malin Array Be 83.54 13 P **P 01 16 52.3 -1.7**
AKASG Malin Array Be 83.54 13 P **P 01 16 52.3 -1.7**
comp=Z,0.2nm,0.3s,baz=336,slow=6.1,SNR=3.8
MKAR Makanchi Array 85.03 339 P **P 01 17 03.3 +1.5**
MKAR Makanchi Array 85.03 339 P **P 01 17 03.3 +1.5**
comp=Z,0.1nm,0.6s,baz=30,slow=6.7,SNR=3.1
WMQ Urumqi 86.19 334 P **P 01 17 08.4 +0.8**
KMI Kunming 96.02 314 P **P 01 17 51.3 -2.8**

IDC 11 01:05:51.2±8.0, 20°.63S×178°.53W, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.6/19, mbtmp3.8/4, Error ellipse: s-maj=204.8km s-min=39.9km az=29.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.28**	**244**	P	P	01 13 04.7	-0.4
	0.6nm,0.4s,baz=96,slow=11,SNR=3.9						
ASAR	**Alice Springs**	**44.00**	**257**	P	P	01 14 00.6	-0.2
	1.1nm,0.7s,baz=100,slow=8.2,SNR=11						
WRA	**Warramunga Arr**	**44.09**	**262**	P	P	01 14 01.7	+0.2
	0.3nm,0.3s,baz=96,slow=8.2,SNR=6.3						
QSPA	**South Pole Qui**	**69.44**	**180**	P	P	01 17 01.2	+0.1
	1.1nm,0.6s,baz=104,slow=1.7,SNR=8.1						

IDC 11 01:31:07.5±1.8, 24°.93S×179°.85E, h482km±22km, mb3.6/14, mb1 3.8/17, mb1mx3.6/24, mbtmp3.6/17, Error ellipse: s-maj=18.3km s-min=12.4km az=157.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**12.62**	**280**	P	P	01 33 55.3	+2.3
	0.8nm,0.3s,baz=107,slow=19,SNR=6.3						
URZ	**Urewera**	**13.49**	**189**	P	P	01 34 01.1	-0.7
	8.7nm,0.3s,baz=360,slow=1.7,SNR=57						
URZ				S	S	01 36 26.4	+0.7
	1.2nm,0.3s,baz=220,slow=23,SNR=14						
AFI	**Afiamalu**	**13.51**	**37**	P	P	01 34 01.2	-1.2
	2.9nm,0.3s,baz=88,slow=20,SNR=4.1						
AFI				S	S	01 36 24.4	-2.3
	1.4nm,0.3s,baz=41,slow=20,SNR=2.4						
RAR	**Rarotonga**	**19.11**	**83**	P	P	01 34 58.8	-0.3
	2.0nm,0.3s,baz=263,slow=13,SNR=3.8						
RPZ	**Rata Peaks**	**20.08**	**199**	P	P	01 35 07.2	-0.3
	9.9nm,0.6s,baz=26,slow=4.7,SNR=13						
HNR	**Honiara**	**24.42**	**306**	P	P	01 35 46.2	-0.8
	329nm,0.8s,baz=259,slow=10,SNR=2.2						
CTA	**Charters Tower**	**31.36**	**272**	P	P	01 36 48.8	+1.0
	14nm,0.4s,baz=100,slow=11,SNR=34						
STKA	**Stephens Creek**	**34.22**	**249**	P	P	01 37 12.5	+0.5
	2.1nm,0.4s,baz=97,slow=10,SNR=7.1						
ASAR	**Alice Springs**	**41.74**	**262**	P	P	01 38 13.6	-0.1
	1.9nm,0.3s,baz=93,slow=7.3,SNR=58						
ASAR				S	S	01 43 49.8	-5.7
	0.3nm,0.8s,baz=103,slow=15,SNR=3.7						
WRA	**Warramunga Arr**	**42.21**	**267**	P	P	01 38 16.9	-0.5
	5.5nm,0.3s,baz=100,slow=6.8,SNR=76						
WRA				ScP	ScP	01 43 04.0	-1.1
	1.1nm,0.8s,baz=100,slow=3.8,SNR=4.8						
WRA				S	S	01 43 56.5	-5.8
	0.4nm,0.4s,baz=98,slow=14,SNR=3.3						
FITZ	**Fitzroy Crossi**	**50.62**	**266**	P	P	01 39 21.2	-0.3
	5.5nm,0.7s,baz=130,slow=8.2,SNR=21						
MJAR	**Matsushiro Arr**	**72.67**	**326**	P	P	01 41 45.3	-0.2
	1.0nm,0.7s,baz=155,slow=7.0,SNR=4.0						
FX1	**Attu Island--F**	**77.70**	**356**	P	P	01 42 12.8	-0.5
	12nm,1.0s,baz=225,slow=5.7,SNR=2.6						
KSRS	**Korea Array**	**78.94**	**320**	P	P	01 42 21.8	+1.4
	1.1nm,0.6s,baz=131,slow=4.5,SNR=3.3						
PETK	**Petropavlovsk-**	**80.06**	**347**	P	P	01 42 25.8	-0.1
	6.0nm,1.1s,baz=156,slow=11,SNR=4.1						

NVAR	**Mina Array Bea**	**85.59**	**44**	P	P	01 42 56.0	+1.5
	0.5nm,0.7s,baz=232,slow=7.6,SNR=3.8						
CMAR	**Chiang Mai Arr**	**89.75**	**290**	P	P	01 43 13.1	-1.1
	0.8nm,0.6s,baz=113,slow=4.1,SNR=3.4						
TXAR	**Lajitas Array**	**91.09**	**58**	P	P	01 43 21.9	+1.7
	0.6nm,0.7s,baz=210,slow=6.3,SNR=7.0						
ILAR	**Eielson Array**	**93.06**	**14**	P	P	01 43 27.2	-1.2
	0.1nm,0.5s,baz=230,slow=3.4,SNR=4.1						
ARCES	**ARCESS Array B**	**132.86**	**348**	SKPbc	SKPbc	01 52 06.9	-1.6
	2.5nm,0.9s,baz=20,slow=3.9,SNR=6.6						
FINES	**FINESS Array B**	**139.37**	**341**	SKPbc	SKPbc	01 52 26.2	-2.1
	1.5nm,0.8s,baz=29,slow=3.8,SNR=7.0						
AKASG	**Malin Array Be**	**145.75**	**326**	PKPbc	PKPdf	01 49 50.3	+0.1
	0.6nm,0.5s,baz=47,slow=4.2,SNR=4.1						
BRTR	**Keskin Array B**	**148.07**	**306**	PKPbc	PKPbc	01 49 58.0	-0.5
	0.5nm,0.6s,baz=134,slow=3.6,SNR=4.3						
EKA	**Eskdalemuir Ar**	**149.55**	**3**	PKPbc	PKPbc	01 50 00.2	-1.2
	1.1nm,0.8s,baz=354,slow=3.8,SNR=4.2						

MAN 11 01:33:25, 11°.32N×125°.51E, h21km, mb4.2, ML3.0, MS2.8, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	**0.54**	**253**	⇓*eP*	Pn	01 33 36.8	-0.7
PLP				*eS*	Sn	01 33 46.7	+0.7
OCLP	**Ormoc**	**0.92**	**253**	*eP*	Pn	01 33 45.7	+3.0
OCLP				*eS*	Sn	01 33 56.4	+1.0
MSLP	**Maasin**	**1.34**	**208**	*eP*	Pn	01 33 48.4	-0.1
MSLP				*eS*	Sn	01 33 59.9	-5.8

*BJI **11** 01:59:42.1, 0°.68N×97°.13E, h35km, mB5.1/39, mb5.1/52, Ms4.9/52, Ms7 4.8/50*
*ISCJB **11** 01:59:44.6±0.8, 1°.14N±0°.03×97°.18E±0°.03, h24km±5km, mb4.8/118, MS4.5/49, Error ellipse: s-maj=5.3km s-min=3.7km az=35.4*
*IDC **11** 01:59:46.2±0.5, 1°.15N×97°.27E, h25km±2km, mb4.2/29, mb1 4.3/31, mb1mx4.3/34, mbtmp4.2/31, ML4.4/2, MS4.3/24, Ms1 4.3/24, ms1mx4.1/50, Error ellipse: s-maj=14.4km s-min=10.6km az=39.0*
*MOS **11** 01:59:46.1±1.1, 1°.29N×97°.33E, h33km, mb5.1/35, MS4.5/9, Error ellipse: s-maj=10.6km s-min=4.9km az=112.8*
*DJA **11** 01:59:47.6±0.7, 1°N±3°×9°7E±°, h21km±5km, M4.8/27, mB5.2/17, mb4.9/27, MLv5.2/15, Mw(mB)4.6/17*
*GCMT **11** 01:59:48.6±0.4, 0°.79N×96°.74E, h37km±1km, MW4.9, Moment Tensor Solution. s34,c44; s45,c59; Moment tensor: Scale 10^{16}Nm; M_{rr}2.50±.18; $M_{\theta\theta}$-1.21±.14; $M_{\phi\phi}$-1.29±.16; $M_{r\theta}$1.38±.14; $M_{\theta\phi}$1.54±.09; $M_{\phi r}$-1.42±.16; Best double couple: $M_0$3.30000×10^{16} NP1:ϕ_s316.00000°, δ27.00000°, λ90.00000°. NP2:ϕ_s136.00000°, δ63.00000°, λ90.00000°. Principal axes: T 3.1600, Plg72.0000°, Azm46.0000°; N 0.2900, Plg0.0000°, Azm316.0000°; P -3.4500, Plg18.0000°, Azm226.0000°; Data Used: II IC IU CN G.*
*NEIC **11** 01:59:48.5±1.0, 1°.19N×97°.29E, h43km±8km, mb5.0/45 Error ellipse: s-maj=7.9km s-min=4.6km az=46.0*
ISC 11 01:59:47.5±0.3, 1°.15N±0°.03×97°.20E±0°.04, h33km±1km, h33km:pP-P, n424, σ1s50/509, mb4.9/118, MS4.5/49, 43C-27D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.41**	**68**	P	**Pb**	**01 59 55.7**	**-1.0**
PSI	**Prapat**	**2.38**	**46**	Pn	**Pn**	**02 00 23.5**	**-0.8**
PSI	**Prapat**	**2.38**	**46**	P	**Pn**	**02 00 24.1**	**-0.2**
PSI	**Prapat**	**2.38**	**46**	Pn	**Pn**	**02 00 23.5**	**-0.8**
	26nm,0.3s,baz=227,slow=13,SNR=161						
PSI				LR	LR	02 01 14.6	
	comp=Z,5μm,21.6s,baz=309,slow=39						
MNSI	**Mandailing Nat**	**2.41**	**98**	P	**Pn**	**02 00 24.4**	**-0.2**
TSI	**Tuntungan**	**2.70**	**30**	P	**Pn**	**02 00 28.9**	**+0.2**
PPI	**Padang Panjang**	**3.57**	**117**	P	**Pn**	**02 00 41.0**	**+0.3**
PPI				S	**Sn**	**02 01 24.2**	**+2.4**
BKNI	**Bangkinang**	**3.93**	**102**	P	**Pn**	**02 00 45.9**	**+0.4**
BKNI				S	**Sn**	**02 01 32.0**	**+1.5**
LHMI	**Lhok Sumawe**	**4.06**	**356**	P	**Pn**	**02 00 47.9**	**+0.5**
LHMI				S	**Sn**	**02 01 36.6**	**+2.8**
BSI	**Banda Aceh**	**4.72**	**336**	P	**Pn**	**02 00 57.1**	**+0.7**
FRIM	**Kepong**	**4.88**	**65**	P	**Pn**	**02 00 59.5**	**+0.8**
IPM	**Ipoh**	**5.05**	**49**	*e*Pn	**Pn**	**02 01 01.7**	**+0.6**
IPM	**Ipoh**	**5.05**	**49**	P	**Pn**	**02 01 01.6**	**+0.6**
IPM	**Ipoh**	**5.05**	**49**	P	**Pn**	**02 01 01.4**	**+0.3**
KRJI	**Kerinci**	**5.34**	**127**	P	**Pn**	**02 01 05.6**	**+0.5**
	368nm,1.0s,10μm5.2nm						
RGRI	**Rengat**	**5.35**	**106**	P	**Pn**	**02 01 06.2**	**+1.1**
	221nm,0.5s,141μm12nm						
KULM	**Kulim**	**5.36**	**40**	*e*Pn	**Pn**	**02 01 04.5**	**-0.8**
KULM	**Kulim**	**5.36**	**40**	P	**Pn**	**02 01 04.6**	**-0.7**
KULM	**Kulim**	**5.36**	**40**	P	**Pn**	**02 01 05.0**	**-0.3**
	504nm,1.0s,4μm1.6nm						
KGM	**Kluang**	**6.18**	**82**	P	**Pn**	**02 01 17.0**	**+0.5**
BTDF	**Bukit Timah Da**	**6.57**	**88**	P	**Pn**	**02 01 22.2**	**+0.2**
	26nm,0.9s,562nm0.4nm						
CMBY	**CAMPBELL BAY**	**6.67**	**331**	*e*P	**Pn**	**02 01 24.3**	**+0.9**
CMBY				AMB	AMB	02 02 44.9	
	comp=Z,200nm,1.7s						
MYKOM	**Kota Tinggi**	**6.68**	**84**	P	**Pn**	**02 01 23.9**	**+0.5**
	comp=Z,55nm,1.3s,comp=Z,905nmcomp=Z,0.6nm						
KSI	**Kapahiang**	**7.20**	**132**	P	**Pn**	**02 01 31.2**	**+0.6**
	comp=Z,122nm,0.9s,comp=Z,0.8nm						
KTGM	**Kuala Trenggan**	**7.23**	**55**	P	**Pn**	**02 01 32.2**	**+1.2**
TPI	**Tanjungpandan**	**11.15**	**110**	P	**Pn**	**02 02 25.3**	**+0.6**
	comp=Z,18nm,1.4s,comp=Z,921nm						
CHBT	**CHBT**	**12.60**	**24**	P	**Pn**	**02 02 45.1**	**+0.6**
	comp=Z,62nm,0.6s,comp=Z,711nm						
KSM	**Kuching**	**13.11**	**88**	*e*Pn	**Pn**	**02 02 51.3**	**-0.3**
KSM	**Kuching**	**13.11**	**88**	P	**Pn**	**02 02 51.5**	**-0.1**
	comp=Z,24nm,1.1s						
SRDT	**SRDT**	**13.25**	**8**	P	**Pn**	**02 02 53.5**	**0.0**
STKI	**Sintang**	**14.32**	**94**	P	**Pn**	**02 03 07.1**	**-1.0**
SBUM	**Sibu**	**15.07**	**85**	P	**Pn**	**02 03 20.0**	**+1.8**
SBUM	**Sibu**	**15.07**	**85**	P	**Pn**	**02 03 16.2**	**-2.0**
	comp=Z,39nm,1.6s,comp=Z,656nm						
UBPT	**Khong Chiam**	**16.24**	**30**	P	**Pn**	**02 03 32.4**	**-0.9**
	comp=Z,64nm,1.4s,comp=Z,1μm						
CM31	**Chiang Mai Arr**	**17.28**	**6**	*e*Pn	**P**	**02 03 47.7**	**0.0**
	comp=Z,25nm,1.0s						
CMAR	**Chiang Mai Arr**	**17.28**	**6**	P	**Pn**	**02 03 45.0**	**-1.4**
CMAR				S	**S**	**02 07 05.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**17.28**	**6**	P	**Pn**	**02 03 45.0**	**-1.4**
	comp=Z,1.3nm,0.3s,baz=197,slow=11,SNR=26						
CMAR				S	**S**	**02 07 05.3**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=202,slow=21,SNR=2.6						
CMAR				LR	LR	02 11 48.3	
	comp=Z,2μm,18.1s,baz=193,slow=42						
CMMT	**Chiang Mai**	**17.64**	**5**	P	**Pn**	**02 03 49.2**	**-1.6**
CHTO	**Chiang Mai**	**17.64**	**5**	*e*P	**Pn**	**02 03 46.7**	**-4.1**
CHTO				pmax	pmax		
	comp=Z,15nm,1.0s						
CHTO	**Chiang Mai**	**17.64**	**5**	*e*Pn	**Pn**	**02 03 46.7**	**-4.1**
	comp=Z,15nm,1.0s						
CHTO	**Chiang Mai**	**17.64**	**5**	P	**Pn**	**02 03 48.7**	**-2.1**
	comp=Z,18nm,1.0s,comp=Z,538nm						
KKM	**Kota Kinabalu**	**19.58**	**75**	*e*P	**Pn**	**02 04 14.1**	**-0.5**
	comp=Z,74nm,1.2s						
KKM	**Kota Kinabalu**	**19.58**	**75**	P	**Pn**	**02 04 14.5**	**-0.1**
KKM	**Kota Kinabalu**	**19.58**	**75**	P	**P**	**02 04 13.9**	**+0.7**
	comp=Z,54nm,1.4s,comp=Z,954nm						
VIS	**Vishakhapatnam**	**21.38**	**321**	*e*P	**P**	**02 04 31.9**	**-0.5**
MYLDM	**Lahad Datu**	**21.64**	**79**	P	**P**	**02 04 37.0**	**+1.8**
MYLDM	**Lahad Datu**	**21.64**	**79**	P	**P**	**02 04 36.1**	**+0.8**
	comp=Z,76nm,1.5s,comp=Z,1μm						
QIZ	**Qiongzhong**	**21.66**	**34**	P	**P**	**02 04 36.9**	**+1.4**
QIZ				pP	**pP**	**02 04 44.1**	**-0.3**
QIZ				sP	**sP**	**02 04 48.7**	**+0.2**
QIZ				S	**S**	**02 08 36.9**	**+3.1**
QIZ				LR	LR		
	comp=N,1μm,14.1s						
QIZ				LR	LR		
	comp=E,1μm,15.2s						
QIZ				LR	LR		
	comp=Z,2μm,13.0s						
TTSI	**Tana Toraja**	**22.99**	**100**	P	**P**	**02 04 50.8**	**+1.1**
	comp=Z,35nm,1.1s						
SPSI	**Sidrap Palu**	**23.12**	**103**	P	**P**	**02 04 52.2**	**+1.2**
	comp=Z,14nm,0.9s						
KAPI	**Kappang**	**23.35**	**105**	*e*P	**P**	**02 04 52.6**	**-0.6**
	comp=Z,27nm,1.1s						
KAPI	**Kappang**	**23.35**	**105**	P	**P**	**02 04 52.3**	**-1.0**
	comp=Z,22nm,1.3s,comp=Z,503nm						
KAPI	**Kappang**	**23.35**	**105**	P	**P**	**02 04 52.6**	**-0.6**
	comp=Z,17nm,1.0s,baz=264,slow=13,SNR=5.7						
BNSI	**Bone**	**23.54**	**104**	P	**P**	**02 04 55.8**	**+0.6**
	comp=Z,44nm,1.4s,comp=Z,774nm						
BKSI	**Bulukumba**	**23.78**	**106**	P	**P**	**02 04 57.8**	**+0.4**
	comp=Z,24nm,0.9s,comp=Z,887nm						
KMI	**Kunming**	**24.43**	**12**	P	**P**	**02 05 04.4**	**+0.9**
KMI				pP	**pP**	**02 05 11.1**	**-2.0**
KMI				sP	**sP**	**02 05 13.6**	**-3.5**
KMI				PP	**PnPn**	**02 05 41.8**	**+6.9**
KMI				S	**S**	**02 09 28.6**	**+7.0**
KMI				sS	**sS**	**02 09 39.7**	**+2.5**
KMI				pmax	pmax		
	comp=Z,160nm,1.2s						
KMI				pmax	pmax		
	comp=Z,660nm,3.4s						
KMI				LR	LR		
	comp=N,4μm,15.3s						
KMI				LR	LR		
	comp=E,1μm,13.6s						
KMI				LR	LR		
	comp=Z,4μm,15.8s						
HYB	**Hyderabad**	**24.44**	**312**	*i* P	**P**	**02 05 04.5**	**+0.9**
HYB				*eS*	S	02 09 32.0	+10
HYB	**Hyderabad**	**24.44**	**312**	*eP*	**P**	**02 05 04.0**	**+0.4**
HYB				AMB	AMB	02 05 13.9	
	comp=Z,22nm,0.0s						
MRSI	**Marisa**	**24.75**	**91**	P	**P**	**02 05 05.8**	**-0.5**
	comp=Z,59nm,1.2s,comp=Z,626nm						
SHL	**Shillong**	**24.81**	**348**	*eP*	**P**	**02 05 06.0**	**-1.0**
SHL				*eS*	**S**	**02 09 27.0**	**-0.7**
BOK	**Bokaro**	**25.04**	**335**	*eP*	**P**	**02 05 09.4**	**+0.5**
BOK				AMB	AMB	02 05 11.3	
	comp=Z,98nm,1.0s						
LUWI	**Luwuk**	**25.66**	**95**	P	**P**	**02 05 15.9**	**+1.2**
	comp=Z,141nm,1.1s,comp=Z,1μm						
KDI	**Kendari**	**25.91**	**101**	P	**P**	**02 05 17.3**	**+0.4**
	comp=Z,18nm,1.0s						
BBSI	**Bau Bau**	**26.18**	**105**	P	**P**	**02 05 19.9**	**+0.5**
	comp=Z,52nm,1.0s						
GYA	**Guiyang**	**26.76**	**19**	⇑*i*P	**P**	**02 05 24.1**	**-0.4**
GYA				pP	**pP**	**02 05 33.5**	**-0.6**
GYA				PP	**PnPn**	**02 06 12.6**	**+5.9**
GYA				PcP	**PcP**	**02 08 49.2**	**+1.8**
GYA				S	**S**	**02 10 01.5**	**+3.0**
GYA				SS	SnSn	02 11 21.2	+17
GYA				ScP	**ScP**	**02 12 25.0**	**-0.2**
GYA				pmax	pmax		
	comp=Z,30nm,1.2s						
GYA				pmax	pmax		
	comp=Z,140nm,5.3s						
GYA				LR	LR		
	comp=N,2μm,13.7s						
GYA				LR	LR		
	comp=E,1μm,13.3s						
GYA				LR	LR		
	comp=Z,2μm,14.6s						
ODAN	**Odare**	**27.24**	**341**	*eP*	**P**	**02 05 29.5**	**+0.5**
	comp=Z,134nm,1.0s						
TAPN	**Taplejung**	**27.59**	**342**	*eP*	**P**	**02 05 32.4**	**+0.1**
	comp=Z,236nm,1.0s						
RAMN	**Ramite**	**27.60**	**339**	*eP*	**P**	**02 05 33.1**	**+0.9**
	comp=Z,175nm,1.4s						
PKI	**Pulchoki**	**28.60**	**338**	*eP*	**P**	**02 05 41.8**	**+0.5**
	comp=Z,134nm,1.3s						
GUN	**Gumba**	**28.73**	**339**	*eP*	**P**	**02 05 42.7**	**+0.2**
	comp=Z,61nm,0.6s						
KKN	**Kakani**	**28.84**	**338**	*eP*	**P**	**02 05 44.0**	**+0.7**
	comp=Z,150nm,1.3s						
LSA	**Lhasa**	**28.97**	**349**	P	**P**	**02 05 43.2**	**-1.5**
LSA				sP	**sP**	**02 06 02.1**	**+3.8**
LSA				pmax	pmax		
	comp=Z,30nm,1.0s						
LSA				pmax	pmax		
	comp=Z,380nm,3.0s						
LSA				LR	LR		
	comp=N,340nm,23.0s						
LSA				LR	LR		
	comp=E,720nm,20.0s						
LSA				LR	LR		
	comp=Z,520nm,20.0s						
KOLN	**Koldanda**	**29.50**	**335**	*eP*	**P**	**02 05 49.9**	**+0.8**
	comp=Z,44nm,0.6s						
DANN	**Dangsing**	**29.94**	**336**	*eP*	**P**	**02 05 53.5**	**+0.3**
	comp=Z,77nm,1.0s						
PYUN	**Piuthan**	**30.05**	**334**	*eP*	**P**	**02 05 54.6**	**+0.6**
	comp=Z,64nm,1.0s						
CD2	**Chengdu**	**30.24**	**11**	P	**P**	**02 05 56.4**	**+0.9**
CD2				pP	**pP**	**02 06 06.9**	**+1.9**
CD2				sP	**sP**	**02 06 11.4**	**+2.3**
CD2				PP	**PnPn**	**02 06 56.6**	**+2.6**
CD2				PcP	**PcP**	**02 08 55.6**	**-0.2**
CD2				S	**S**	**02 10 53.3**	**+0.2**
CD2				sS	**sS**	**02 11 10.9**	**+2.0**
CD2				SS	**ScP**	**02 12 34.5**	**-1.4**
CD2				PcS	**PcS**	**02 12 38.1**	**-1.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,190nm,6.8s						
CD2				LR	LR		
	comp=N,3μm,14.2s						
CD2				LR	LR		
	comp=E,3μm,15.7s						
CD2				LR	LR		
	comp=Z,3μm,14.5s						
LBMI	**Labuha**	**30.35**	**93**	P	**P**	**02 05 56.8**	**+0.2**
	comp=Z,37nm,1.9s						
MBWA	**Marble Bar**	**31.26**	**136**	*eP*	**P**	**02 06 03.7**	**-0.8**
	comp=Z,6.3nm,0.8s						
YULB	**Yu-li**	**32.17**	**45**	*eP*	**P**	**02 06 13.3**	**+0.7**
	comp=Z,44nm,1.3s						
SSLB	**Suanglung**	**32.19**	**44**	*eP*	**P**	**02 06 11.5**	**-1.2**
	comp=Z,47nm,1.3s						
WHN	**Wuhan**	**33.46**	**27**	P	**P**	**02 06 24.0**	**+0.4**
WHN				S	**S**	**02 11 44.0**	**+0.9**
WHN				LR	LR		
	comp=N,1μm,14.4s						
WHN				LR	LR		
	comp=E,3μm,16.0s						
WHN				LR	LR		
	comp=Z,3μm,14.7s						
FITZ	**Fitzroy Crossi**	**33.90**	**126**	*eP*	**P**	**02 06 26.6**	**-1.0**
	comp=Z,6.2nm,0.8s						
FITZ	**Fitzroy Crossi**	**33.90**	**126**	P	**P**	**02 06 26.4**	**-1.2**
	comp=Z,2.1nm,0.7s,baz=266,slow=8.2,SNR=10.0			

NJ2 pP **pP** **02 07 03.1 +0.1**
NJ2 sP **sP** **02 07 06.8 -0.2**
NJ2 pmax pmax
comp=Z,30nm,1.1s
NJ2 pmax pmax
comp=Z,100nm,10.0s
NJ2 LR LR
comp=E,1μm,14.1s
NJ2 LR LR
comp=Z,1μm,14.3s
SSE Sheshan 37.45 35 P **P** **02 06 59.8 +1.8**
SSE S **S** **02 12 46.7 +2.2**
SSE sS **ScP** **02 13 05.4 +4.2**
SSE pmax pmax
comp=Z,36nm,0.8s
SSE pmax pmax
comp=Z,100nm,11.6s
SSE LR LR
comp=N,800nm,14.2s
SSE LR LR
comp=E,750nm,14.2s
SSE LR LR
comp=Z,1μm,15.4s
GTA Gaotai 38.15 3 *e*P **P** **02 07 03.8 -0.2**
GTA pP **pP** **02 07 13.1 -0.6**
GTA sP **sP** **02 07 17.4 -0.3**
GTA S **S** **02 12 56.0 +0.8**
GTA sS **sS** **02 13 11.4 +0.2**
GTA SS **SnSn** **02 15 35.4 -5.1**
GTA pmax pmax
comp=Z,34nm,1.2s
GTA pmax pmax
comp=Z,160nm,6.2s
GTA LR LR
comp=N,830nm,17.1s
GTA LR LR
comp=E,580nm,15.0s
GTA LR LR
comp=Z,940nm,15.0s
BTO Baotou 40.96 15 *e*P **P** **02 07 28.1 +0.8**
HHC Hu-ho-hao-te 41.60 16 *i* P **P** **02 07 33.6 +1.0**
HHC pP **pP** **02 07 43.3 +0.9**
HHC sP **sP** **02 07 47.5 +1.1**
HHC PP **PnPn** **02 09 12.6 -1.5**
HHC S **S** **02 13 48.3 +1.5**
HHC sS **sS** **02 14 06.4 +3.5**
HHC SS **SS** **02 16 47.4 -5.3**
HHC ScS **ScS** **02 17 30.4 -3.4**
HHC pmax pmax
comp=Z,47nm,0.7s
HHC pmax pmax
comp=Z,460nm,6.4s
HHC LR LR
comp=N,910nm,21.6s
HHC LR LR
comp=E,2μm,16.5s
HHC LR LR
comp=Z,860nm,18.8s
WRA Warramunga Arr 42.01 122 P **P** **02 07 34.6 -1.5**
WRA Warramunga Arr 42.01 122 P **P** **02 07 34.6 -1.5**
comp=Z,5.4nm,0.8s,baz=301,slow=9.1,SNR=25
WRA LR LR 02 28 47.0
comp=Z,511nm,20.2s,baz=310,slow=42
WRAB Tennant Creek 42.02 122 *e*P **P** **02 07 35.1 -1.1**
WRAB pmax pmax
comp=Z,15nm,0.8s
WRAB Tennant Creek 42.02 122 *e*P **P** **02 07 35.1 -1.1**
comp=Z,15nm,0.8s
KBL Kabul 42.36 325 *e*P **P** **02 07 39.6 +0.6**
KBL pmax pmax
comp=Z,3.0nm,0.8s
KBL Kabul 42.36 325 *e*P **P** **02 07 39.6 +0.6**
comp=Z,2.8nm,0.8s
BJI Beijing 42.38 22 P **P** **02 07 39.6 +0.8**
BJI sP **sP** **02 07 52.9 +0.3**
BJI S **S** **02 14 03.5 +5.4**
BJI sS **sS** **02 14 16.6 +2.4**
BJI pmax pmax
comp=Z,45nm,0.8s
BJI pmax pmax
comp=Z,170nm,5.0s
BJI LR LR
comp=N,500nm,16.4s
BJI LR LR
comp=E,700nm,19.6s
BJI LR LR
comp=Z,310nm,21.3s
KSH Kashi 42.81 336 P **P** **02 07 41.4 -1.1**
KSH PP **PP** **02 09 23.6 +1.3**
KSH PcP **PcP** **02 09 33.5 +0.1**
KSH ScP **ScP** **02 13 22.3 +0.1**
KSH PcS **PcS** **02 13 24.4 -1.3**
KSH S **S** **02 14 04.5 -0.3**
KSH SS **SS** **02 17 09.5 -7.2**
KSH ScS **ScS** **02 17 39.2 -2.1**
KSH pmax pmax
comp=Z,22nm,1.3s
KSH LR LR
comp=N,320nm,4.7s
KSH LR LR
comp=E,210nm,4.5s
KSH LR LR
comp=Z,150nm,5.1s
FORT Forrest 43.24 140 *e*P **P** **02 07 46.1 +0.2**
comp=Z,27nm,0.8s
WMQ Urumqi 43.32 350 P **P** **02 07 47.0 +0.5**
WMQ pP **pP** **02 07 57.0 +0.7**
WMQ sP **sP** **02 08 01.0 +0.7**
WMQ PP **PP** **02 09 30.0 +2.4**
WMQ ScP **ScP** **02 13 23.0 -1.0**
WMQ S **S** **02 14 12.0 +0.1**
WMQ sS **sS** **02 14 28.0 -0.1**
WMQ SS **SS** **02 17 20.0 -6.4**
WMQ ScS **ScS** **02 17 42.0 -2.2**
WMQ pmax pmax
comp=Z,46nm,1.1s
WMQ pmax pmax
comp=Z,130nm,5.0s
WMQ LR LR
comp=N,450nm,15.0s
WMQ LR LR
comp=E,500nm,16.0s
WMQ LR LR
comp=Z,410nm,15.0s
ASAR Alice Springs 43.37 127 P **P** **02 07 46.2 -0.9**
ASAR Alice Springs 43.37 127 P **P** **02 07 46.2 -0.9**
comp=Z,3.6nm,1.0s,baz=297,slow=7.6,SNR=31
ASAR LR LR 02 29 13.7
comp=Z,583nm,19.5s,baz=296,slow=41
AS31 Alice Springs 43.37 127 *e*P **P** **02 07 47.0 -0.2**
JNU Nakatsue 44.84 41 *e*P **P** **02 07 58.5 -0.3**
comp=Z,22nm,1.4s
JNU Nakatsue 44.84 41 P **P** **02 07 58.2 -0.6**
comp=Z,28nm,1.2s,baz=215,slow=2.9,SNR=7.2
ULHL Ulahol 45.04 338 P **P** **02 08 01.7 +1.2**
SNR=9.5
KZA Kyzart 45.28 337 P **P** **02 08 04.2 +1.6**
SNR=8.0
KSAR Wonju Array Be 45.86 34 P **P** **02 08 06.2 -0.6**
TKM2 Tokmak 2 45.86 338 *i* P **P** **02 08 08.4 +1.4**
TKM2 Tokmak 2 45.86 338 *e*P **P** **02 08 07.1 +0.1**
comp=Z,25nm,1.3s
TKM2 Tokmak 2 45.86 338 P **P** **02 08 08.4 +1.4**
SNR=22
KBK Karagaybulak 45.88 337 P **P** **02 08 09.2 +2.1**
SNR=14
KSRS Korea Array 45.89 34 P **P** **02 08 06.2 -0.8**
comp=Z,31nm,0.9s,baz=222,slow=8.8,SNR=79
KSRS LR LR 02 27 51.3
comp=Z,342nm,20.5s,baz=225,slow=37
AML Almayashu 45.95 336 P **P** **02 08 08.1 +0.2**
SNR=20
AAK Ala-Archa 46.04 337 *e*P **P** **02 08 09.6 +1.3**
AAK pmax pmax
comp=Z,27nm,1.3s
AAK Ala-Archa 46.04 337 *e*P **P** **02 08 09.6 +1.3**
comp=Z,27nm,1.3s
AAK Ala-Archa 46.04 337 P **P** **02 08 09.8 +1.5**
SNR=7.1
AAK Ala-Archa 46.04 337 P **P** **02 08 09.7 +1.3**
comp=Z,5.0nm,0.9s,baz=151,slow=9.5,SNR=10
FRU Bishkek 46.16 337 *e*P **P** **02 08 10.0 +0.9**
FRU pmax pmax
comp=Z,20nm,1.6s
EKS2 Erkin-Say 46.35 336 *e*P **P** **02 08 10.8 +0.1**
EKS2 pmax pmax
comp=Z,13nm,1.0s
EKS2 Erkin-Say 46.35 336 *e*P **P** **02 08 10.8 +0.1**
comp=Z,13nm,1.0s
EKS2 Erkin-Say 46.35 336 P **P** **02 08 12.6 +1.8**
SNR=8.4
USP Ospenovka 46.58 337 P **P** **02 08 13.7 +1.4**
SNR=13
SNY Shenyang 46.95 27 ⇑P **P** **02 08 15.1 -0.1**
SNY LR LR
comp=N,550nm,16.2s
SNY LR LR
comp=E,620nm,15.6s
SONM Songino Array 47.18 8 P **P** **02 08 16.5 -0.6**
SONM Songino Array 47.18 8 P **P** **02 08 16.5 -0.6**
comp=E,16nm,0.9s,baz=189,slow=7.2,SNR=55
MK31 Makanchi Array 47.29 346*c**e*P **P** **02 08 17.5 -0.4**
MK31 pmax pmax
comp=Z,12nm,0.5s
MK31 Makanchi Array 47.29 346 *e*P **P** **02 08 17.4 -0.4**
MKAR Makanchi Array 47.29 346 P **P** **02 08 17.2 -0.7**
MKAR Makanchi Array 47.29 346 P **P** **02 08 17.2 -0.7**
MKAR Makanchi Array 47.29 346 P **P** **02 08 17.2 -0.7**
comp=Z,5.9nm,0.5s,baz=160,slow=7.4,SNR=68
MKAR LR LR 02 32 18.9
comp=Z,262nm,21.3s,baz=159,slow=41
ULN Ulaanbaatar 47.31 9 *e*P **P** **02 08 17.8 -0.3**
comp=Z,16nm,0.9s
ULN Ulaanbaatar 47.31 9 P **P** **02 08 18.1 0.0**
COEN Coen 47.95 110 *e*P **P** **02 08 22.7 -0.8**
KK31 Karatay Array 48.10 334*c**e*P **P** **02 08 24.1 -0.1**
KK31 pmax pmax
comp=Z,6.0nm,0.7s
KKAR Karatay Array 48.10 334 *e*P **P** **02 08 24.2 0.0**
KKAR pmax pmax
comp=Z,22nm,1.2s
KKAR Karatay Array 48.10 334 *e*P **P** **02 08 24.2 0.0**
comp=Z,22nm,1.2s
ZAK Zakamensk 49.32 5⇑*i*P **P** **02 08 33.6 0.0**
ZAK pmax pmax
comp=Z,7.0nm,1.4s
CN2 Changchun 49.35 27 *e*P **P** **02 08 33.6 -0.1**
CN2 *e*pP **pP** **02 08 43.5 -0.2**
CN2 *e*sP **sP** **02 08 47.5 -0.1**
CN2 PcP **PcP** **02 09 55.2 -0.8**
CN2 PP **PP** **02 10 28.3 +0.3**
CN2 *e*S **S** **02 15 38.4 +0.2**
CN2 pmax pmax
comp=Z,40nm,0.9s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,700nm,14.0s
CN2 LR LR
comp=E,1μm,14.0s
CN2 LR LR
comp=Z,1μm,14.0s
CBIJ Chichi jima 50.25 55 LR LR 02 27 58.7
comp=Z,105nm,18.8s,baz=267,slow=34
MOY Mondy 50.44 3 *e*P **P** **02 08 42.9 +0.9**
TLY Talaya 50.64 5 *e*P **P** **02 08 42.3 -1.2**
TLY *e* 02 09 55.6
TLY *e*S S 02 15 44.7 -11
TLY *e*SS SS 02 19 23.1 -7.7
TLY pmax pmax
comp=Z,7.0nm,1.1s
TLY MLR MLR
comp=Z,755nm,19.0s
TLY Talaya 50.64 5 *e*P **P** **02 08 43.8 +0.4**
comp=Z,9.1nm,1.0s
IRK Irkutsk 51.26 6 *e*P **P** **02 08 47.7 -0.4**
IRK pmax pmax
comp=Z,45nm,1.7s
MJAR Matsushiro Arr 51.73 42 P **P** **02 08 51.0 -0.8**
MJAR Matsushiro Arr 51.73 42 P **P** **02 08 51.0 -0.8**
comp=Z,2.3nm,0.5s,baz=228,slow=6.7,SNR=11
MJAR LR LR 02 30 47.8
comp=Z,273nm,22.0s,baz=240,slow=36
KURK Kurchatov 51.84 345*c**i*P **P** **02 08 52.5 +0.1**
KURK pmax pmax
comp=Z,26nm,1.0s
KURK Kurchatov 51.84 345 *e*P **P** **02 08 52.2 -0.2**
comp=Z,24nm,1.0s
MDJ Mudanjiang 51.91 29 P **P** **02 08 53.3 +0.2**
MDJ pP **pP** **02 09 02.3 -0.7**
MDJ sP **sP** **02 09 06.3 -0.7**
MDJ ScP **ScP** **02 14 00.0 -0.1**
MDJ PcS **PcS** **02 14 04.1 +0.7**
MDJ S **S** **02 16 14.7 +1.0**
MDJ sS **sS** **02 16 30.0 -0.2**
MDJ pmax pmax
comp=Z,18nm,1.5s
MDJ pmax pmax
comp=Z,100nm,3.7s
MDJ LR LR
comp=N,550nm,16.5s
MDJ LR LR
comp=E,440nm,17.4s
MDJ LR LR
comp=Z,970nm,16.2s
CTA Charters Tower 52.48 116 LR LR 02 35 42.1
comp=Z,477nm,18.3s,baz=277,slow=41
CIT Chita 52.52 13 *e*P **P** **02 08 57.6 +0.1**
CIT *e* 02 09 05.7
CIT pmax pmax
comp=Z,99nm,1.4s
USRK Ussuriysk Arra 52.82 31 P **P** **02 08 59.7 -0.1**
comp=Z,28nm,0.9s,baz=229,slow=5.7,SNR=46
OPO Ambohidratompo 52.91 246 P **P** **02 09 00.9 -0.2**
OPO Ambohidratompo 52.91 246 P **P** **02 09 00.9 -0.2**
comp=Z,2.3nm,0.9s,baz=102,slow=9.3,SNR=2.7
STKA Stephens Creek 53.32 132 *e*P **P** **02 09 03.8 0.0**
comp=Z,2.7nm,0.9s
STKA Stephens Creek 53.32 132 P **P** **02 09 03.8 0.0**
comp=Z,4.1nm,0.7s,baz=272,slow=5.4,SNR=12
STKA LR LR 02 33 57.8
comp=Z,720nm,21.4s,baz=269,slow=38
ZAA0 Zalesovo Array 53.60 351 *e*P **P** **02 09 04.3 -1.1**
ZALV Zalesovo Beam 53.60 351 P **P** **02 09 04.7 -0.7**
ZALV Zalesovo Beam 53.60 351 P **P** **02 09 04.7 -0.7**
ZALV Zalesovo Beam 53.60 351 P **P** **02 09 04.7 -0.7**
comp=Z,18nm,0.6s,baz=172,slow=5.8,SNR=90
ZALV LR LR 02 37 18.8
comp=Z,245nm,18.3s,baz=167,slow=42
NVS Novosibirsk 54.72 350 *e*P **P** **02 09 12.5 -1.0**
NVS *e*S **S** **02 16 51.1 -0.5**
NVS pmax pmax
comp=Z,22nm,1.2s
NVS pmax pmax
comp=N,14nm,1.3s
NVS pmax pmax
comp=E,6.0nm,1.1s
NVS smax smax
comp=N,3.0nm,1.0s
NVS smax smax
comp=E,8.0nm,1.4s
RDF Al-Radifah 54.76 305 *e*P **P** **02 09 15.3 +1.0**
RDF AMb AMB 02 09 26.7
comp=Z,33nm,1.0s
KRAR Krasnoyarsk 54.80 357⇓*i*P **P** **02 09 15.0 +0.9**
KRAR pmax pmax
comp=Z,28nm,0.6s
ATD Arta Tunnel 54.90 283 LR LR 02 29 49.2
comp=Z,122nm,18.4s,baz=302,slow=33
NAY Al-Naaiem 55.12 305 *e*P **P** **02 09 17.6 +0.6**
NAY AMb AMB 02 09 27.6
comp=Z,16nm,1.7s
MIB Mutribah 55.24 306 *e*P **P** **02 09 18.7 +0.9**
MIB AMb AMB 02 09 26.8
comp=Z,37nm,1.1s
VOSK Vostochnaya 55.85 341 P **P** **02 09 20.7 -1.0**
VOSK pmax pmax
comp=Z,19nm,1.1s
BVA0 Borovoye Array 56.30 341 *i* P **P** **02 09 23.0 -1.9**
BVA0 pmax pmax
comp=Z,3.0nm,1.1s
BVAR Borovoye Array 56.30 341 LR LR 02 37 23.0
comp=Z,326nm,20.3s,baz=281,slow=40
KLR Kul'dur 56.30 27 *e*P **P** **02 09 22.8 -2.2**
KLR *e*S **S** **02 17 18.0 +5.1**
BRVK Borovoye 56.36 341*c**i*P **P** **02 09 24.7 -0.6**
BRVK pmax pmax
comp=Z,15nm,1.0s
BRVK Borovoye 56.36 341 *e*P **P** **02 09 24.5 -0.8**
comp=Z,12nm,0.8s
AB31 Akbulak array 57.56 332*c**e*P **P** **02 09 32.8 -1.1**
AB31 pmax pmax
comp=Z,3.0nm,0.4s
ABKAR Akbulak array 57.56 332 *e*P **P** **02 09 32.7 -1.2**
comp=Z,6.6nm,0.6s
AKTO Aktyubinsk 59.27 332 P **P** **02 09 45.6 -0.3**
AKTO Aktyubinsk 59.27 332 P **P** **02 09 45.6 -0.3**
AKTO Aktyubinsk 59.27 332 P **P** **02 09 45.6 -0.3**
comp=Z,3.6nm,0.8s,baz=126,slow=7.6,SNR=11
KMBO Kilima Mbogo 59.99 268 P **P** **02 09 52.3 +0.5**
KMBO Kilima Mbogo 59.99 268 P **P** **02 09 52.3 +0.5**
comp=Z,0.5nm,0.4s,baz=141,slow=14,SNR=1.8
KMBO LR LR 02 34 46.9
comp=Z,334nm,18.1s,baz=94,slow=35
YSS Yuzh-Sakhalins 60.39 34⇓*e*P **P** **02 09 55.3 +1.7**
YSS *e* 02 10 11.0
YSS pmax pmax
comp=Z,30nm,1.1s
YSS MLR MLR
comp=Z,300nm,15.0s
YSS Yuzh-Sakhalins 60.39 34 *e*P **P** **02 09 53.8 +0.2**
comp=Z,59nm,1.2s
YUK Yuzh-Kuril'sk 60.65 38 P P 02 09 51.0 -4.4
YUK S S 02 18 02.9 -6.8
YUK MLR MLR
comp=E,229nm,16.0s
YUK MLR MLR
comp=Z,306nm,16.0s
MAK Makhachkala 60.77 320 *e*P pP 02 10 08.3 +1.9
GNI Garni 61.33 316 *e*P **P** **02 09 58.7 -1.7**
GNI Garni 61.33 316 LR LR 02 41 45.8
comp=Z,129nm,18.1s,baz=274,slow=41
DGRG David-gareji 61.47 318 P **P** **02 10 02.9 +1.8**
TBLG Delisi 62.02 318 *e*P **P** **02 10 04.2 -0.6**
TBLG Delisi 62.02 318 P **P** **02 10 04.2 -0.6**
AKH Akhalkalaki 62.72 317 P P 02 09 58.6 -11
SVE Sverdlovsk 62.73 338⇑*e*P **P** **02 10 09.2 0.0**
SVE pmax pmax
comp=Z,33nm,1.5s
SVE MLR MLR
comp=Z,353nm,18.0s
ZEI Tsey 63.03 319 *e*P **P** **02 10 12.2 +0.4**
ZEI pmax pmax
comp=Z,4.0nm,0.7s
ARU Arti 63.23 337*c**i*P **P** **02 10 12.2 -0.3**
ARU 02 12 30.8
ARU S **S** **02 18 44.0 +2.1**
ARU SS SS 02 22 41.1 -7.5
ARU pmax pmax
comp=Z,25nm,1.7s
ARU MLR MLR
comp=Z,309nm,17.0s
ARU Arti 63.23 337 *e*P **P** **02 10 11.8 -0.7**
comp=Z,16nm,1.0s
KBZ Khabaz 64.11 319 P **P** **02 10 19.0 +0.5**
KBZ *PP **pP** **02 10 26.0 -2.8**
KBZ Khabaz 64.11 319 P **P** **02 10 19.0 +0.5**
KBZ pP **pP** **02 10 26.0 -2.8**
KBZ Khabaz 64.11 319 P **P** **02 10 19.0 +0.5**
comp=Z,4.1nm,0.9s,baz=132,slow=5.6,SNR=9.1
KBZ pP **pP** **02 10 26.0 -2.8**
comp=Z,7.2nm,0.9s,baz=132,slow=6.7,SNR=6.2
KIV Kislovodsk 64.34 319 *e*P **P** **02 10 20.8 +0.5**
KIV *i* 02 10 29.7
KIV *e* 02 10 53.4
KIV *i* S **S** **02 18 59.2 +2.8**
KIV *e*SS **SS** **02 23 09.0 +2.3**
KIV pmax pmax
comp=Z,10.0nm,1.0s
KIV MLR MLR
comp=Z,100nm,17.0s
KIV Kislovodsk 64.34 319 *e*P **P** **02 10 19.1 -1.2**
comp=Z,18nm,1.1s
ASF Jabal al Asfar 64.49 305 P **P** **02 10 21.7 +0.2**
ASF pP **pP** **02 10 30.4 -1.3**
ASF Jabal al Asfar 64.49 305 P **P** **02 10 21.7 +0.2**
comp=Z,1.4nm,0.7s,baz=32,slow=8.3,SNR=4.5
ASF pP **pP** **02 10 30.4 -1.3**
comp=Z,2.2nm,0.9s,baz=166,slow=4.2,SNR=6.0
ASF LR LR 02 39 52.2
comp=Z,202nm,18.3s,baz=161,slow=37
MALT Malatya 65.16 312 *e*P **P** **02 10 26.3 +0.6**
MALT pmax pmax
comp=Z,2.0nm,1.0s
MALT Malatya 65.16 312 *e*P **P** **02 10 26.3 +0.6**
comp=Z,2.5nm,1.0s
MALT Malatya 65.16 312⇑*i*P P 02 10 34.1 +8.4
YAK Yakutsk 65.47 16 *e*P **P** **02 10 24.4 -2.6**
YAK *e**PP **pP** **02 10 32.9 -4.4**
YAK *e* 02 11 03.0
YAK *e* 02 12 47.8
YAK *e*S **S** **02 19 03.9 -5.4**
YAK *e* 02 20 13.9
YAK *e*SS **SS** **02 23 16.5 -6.7**
YAK pmax pmax
comp=Z,68nm,1.4s
YAK pmax pmax
comp=E,24nm,1.6s
YAK pmax pmax
comp=N,28nm,1.6s
YAK pmax pmax
comp=Z,7.0nm,1.0s
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK smax smax
comp=E,90nm,4.2s
YAK smax smax
comp=N,92nm,4.0s
YAK MLR MLR
comp=Z,826nm,16.0s
YAK MLR MLR
comp=E,495nm,16.0s
YAK MLR MLR
comp=N,600nm,16.0s
YAK Yakutsk 65.47 16 *e*P **P** **02 10 25.1 -1.9**
comp=N,14nm,0.3s
EIL Elat 65.48 302 P **P** **02 10 29.6 +1.7**
EIL pP **pP** **02 10 36.3 -1.8**
EIL Elat 65.48 302 P **P** **02 10 29.6 +1.7**
comp=N,2.9nm,0.9s,baz=337,slow=2.1,SNR=5.3
EIL pP **pP** **02 10 36.3 -1.8**
comp=N,8.1nm,1.1s,baz=73,slow=5.1,SNR=4.8
EIL LR LR 02 39 29.2
comp=N,318nm,18.1s,baz=289,slow=36
MMAI Mount Meron Ar 65.93 306 P **P** **02 10 32.6 +1.9**
MMAI pP **pP** **02 10 39.4 -1.6**
MMAI Mount Meron Ar 65.93 306 P **P** **02 10 32.6 +1.9**
comp=N,1.3nm,0.6s,baz=99,slow=8.9,SNR=4.6
MMAI pP **pP** **02 10 39.4 -1.6**
comp=N,3.8nm,1.0s,baz=144,slow=7.2,SNR=3.8
MMAI LR LR 02 40 51.5
comp=N,179nm,18.5s,baz=115,slow=37
SOKR Solikamsk 66.13 339*d**i*P **P** **02 10 31.8 +0.5**
SOKR S S 02 19 23.8 +6.4
SOKR pmax pmax
comp=Z,20nm,1.3s
CSS Prodhromos 68.10 307 *e*P **P** **02 10 44.9 +0.5**
comp=Z,16nm,1.3s
VRHR Novokhopersk 68.17 326 *e*P **P** **02 10 43.5 -1.0**
VRHR pmax pmax
comp=N,2.0nm,0.6s
VRHR pmax pmax
comp=E,5.0nm,0.6s
VRHR pmax pmax
comp=Z,9.0nm,0.6s
BR131 Keskin Array S 69.14 312 *e*P **P** **02 10 50.8 -0.3**
comp=Z,1.8nm,0.7s
BRTR Keskin Array B 69.14 312 P **P** **02 10 50.4 -0.7**
BRTR pP **pP** **02 10 57.6 -3.7**
BRTR Keskin Array B 69.14 312 P **P** **02 10 50.4 -0.7**
comp=Z,1.5nm,0.8s,baz=145,slow=6.9,SNR=10.0
BRTR pP **pP** **02 10 57.6 -3.7**
comp=Z,2.6nm,0.9s,baz=132,slow=7.7,SNR=9.5
BRTR LR LR 02 45 48.7
comp=Z,56nm,19.9s,baz=254,slow=40
VORD Divnogorie 69.43 325 *e*P **P** **02 10 51.7 -0.6**
VORD pmax pmax
comp=Z,8.0nm,0.8s
VORD pmax pmax
comp=N,5.0nm,0.4s
VORD pmax pmax
comp=E,10.0nm,0.8s
VSR Storozhevoye 69.61 325 *e*P **P** **02 10 52.5 -1.0**
VSR pmax pmax
comp=Z,3.0nm,0.6s

VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,2.0nm,0.6s
LSZ Lusaka 70.10 253 *e*P **P 02 10 56.8 -0.6**
comp=E,10nm,1.4s
DZM Mont Dzumac 71.26 114 *e*LR LR 02 32 46.3
comp=E,309nm,23.2s
PET Petropavlovsk 72.27 34 *e*P **P 02 11 11.4 +1.8**
PET *e*S **S 02 20 31.5 +1.2**
PET pmax pmax
comp=Z,100nm,9.2s
PET MLR MLR
comp=Z,200nm,19.0s
MOS Moscow 72.37 329 *e*P P 02 11 19.2 +9.1
OBN Obninsk 72.66 328 *e*P **P 02 11 12.4 +0.6**
OBN *e* 02 11 26.9
OBN *i* 02 13 55.8
OBN *i* S **S 02 20 36.3 +1.7**
OBN *e*SS **SS 02 25 17.4 +3.0**
OBN pmax pmax
comp=Z,29nm,2.5s
OBN MLR MLR
comp=Z,100nm,17.0s
TIXI Tiksi 73.23 10⇓ *e*P **P 02 11 13.8 -1.1**
TIXI pmax pmax
comp=Z,31nm,1.7s
TIXI MLR MLR
comp=Z,632nm,14.0s
TIXI Tiksi 73.23 10 *e*P **P 02 11 13.3 -1.6**
comp=Z,27nm,1.3s
SEY Seymchan 73.81 23⇑ *e*P **P 02 11 18.3 -0.2**
AKASG Malin Array Be 75.30 322 P **P 02 11 27.3 -0.1**
AKASG Malin Array Be 75.30 322 P **P 02 11 27.2 -0.1**
AKASG Malin Array Be 75.30 322 P **P 02 11 27.2 -0.1**
comp=Z,2.3nm,0.8s,baz=79,slow=5.6,SNR=8.2
KIEV Kiev 75.30 322 *e*P **P 02 11 26.0 -1.4**
KIEV Kiev 75.30 322 *e*P **P 02 11 26.0 -1.4**
VRI Vrincioaia 75.65 317⇓ *i*P **P 02 11 30.3 +0.7**
VRI Vrincioaia 75.65 317⇓ *i*P **P 02 11 30.3 +0.7**
PLOR Plostina 75.70 317⇓ P P 02 11 39.2 +9.3
PLOR Plostina 75.70 317⇓ *i*P P 02 11 39.2 +9.3
TESR 75.86 318⇑ *i*P **P 02 11 31.7 +1.0**
MLR Muntele Rosu 76.10 317⇑ *i*P **P 02 11 33.2 +0.9**
BURAR Bucovina Array 77.08 319⇑ *i*P **P 02 11 38.4 +0.8**
BUR08 Bucovina Ar. S 77.08 319 *e*P **P 02 11 38.5 +0.8**
JOF Joensuu 78.19 335 *e*P **P 02 11 41.1 -2.3**
JOF pmax pmax
comp=Z,2.0nm,0.7s
JOF Joensuu 78.19 335 *e*p **P 02 11 41.1 -2.3**
comp=Z,2.3nm,0.7s
LVV L'vov 78.30 321 *e*P **P 02 11 45.1 +0.7**
DRGR 78.57 318⇑ P **P 02 11 47.1 +1.1**
DRGR 78.57 318⇑ *i*P **P 02 11 47.1 +1.1**
KWP Kalwaria Pacla 79.11 320⇑ P **P 02 11 48.8 0.0**
KWP Kalwaria Pacla 79.11 320⇑ *i*P **P 02 11 48.8 0.0**
SUW Suwalki 79.71 325 *e*P **P 02 11 51.9 -0.1**
SUW pmax pmax
comp=Z,24nm,0.9s
SUW Suwalki 79.71 325 *e*P **P 02 11 51.9 -0.1**
comp=Z,24nm,0.9s
SYO Syowa Base 79.96 198⇓ *e*PcP **PcP 02 12 01.8 +1.4**
FINES FINESS Array B 80.04 333 P **P 02 11 52.4 -1.2**
FINES sP **sP 02 12 06.1 -1.8**
FINES FINESS Array B 80.04 333 P **P 02 11 52.4 -1.2**
comp=Z,0.9nm,0.5s,baz=103,slow=5.9,SNR=12
FINES sP **sP 02 12 06.1 -1.8**
comp=Z,2.8nm,0.7s,baz=90,slow=5.6,SNR=5.7
KAF Kangasniemi 80.12 333 *e*P **P 02 11 52.8 -1.2**
KAF pmax pmax
comp=Z,3.0nm,0.5s
KAF Kangasniemi 80.12 333 *e*p **P 02 11 52.8 -1.2**
comp=Z,3.0nm,0.5s
PSZ Piszkesteto 80.64 318 *e*P **P 02 11 56.8 -0.5**
PSZ pmax pmax
comp=Z,9.0nm,1.1s
PSZ Piszkesteto 80.64 318 *e*P **P 02 11 56.8 -0.5**
comp=Z,8.8nm,1.1s
BILL Bilibino 81.21 21 P **P 02 11 59.0 -0.8**
BILL *i* 02 12 05.8
BILL pmax pmax
comp=Z,3.0nm,1.3s
BILL Bilibino 81.21 21 *e*P **P 02 11 59.4 -0.4**
comp=Z,5.8nm,1.1s
VYHS Vyhne 81.43 319 *e*P **P 02 12 01.8 +0.4**
VYHS *e*pP **pP 02 12 11.3 -0.5**
OKC Ostrava-Krasne 82.06 320 *e*P **P 02 12 05.3 +0.7**
OKC Ostrava-Krasne 82.06 320 *e*P **P 02 12 05.3 +0.7**
MORC Moravsky Berou 82.44 320 *e*P **P 02 12 07.1 +0.4**
MORC pmax pmax
comp=Z,2.0nm,1.0s
MORC Moravsky Berou 82.44 320 *e*P **P 02 12 07.1 +0.4**
comp=Z,2.4nm,1.0s
ARCES ARCESS Array B 82.58 340 P **P 02 12 06.3 -0.6**
ARCES ARCESS Array B 82.58 340 P **P 02 12 06.3 -0.6**
comp=Z,2.6nm,0.8s,baz=72,slow=7.8,SNR=12
ARCES LR LR 02 53 04.6
comp=Z,274nm,20.7s,baz=212,slow=39
DPC Dobruska-Polom 83.29 320 *e*P **P 02 12 12.2 +1.1**
DPC *e* 02 12 25.9
DPC Dobruska-Polom 83.29 320 *e*P **P 02 12 12.2 +1.1**
DPC *e*pP **pP 02 12 25.9 +4.3**
DOBS Dobrina 83.44 316 *e*P **P 02 12 12.0 +0.1**
UPC Upice 83.50 321 *e*P **P 02 12 13.1 +1.0**
UPC *e* 02 12 30.1
UPC Upice 83.50 321 *e*P **P 02 12 13.1 +1.0**
UPC *e*sP **sP 02 12 30.1 +3.7**
BOJS Bojanci 83.53 316 *i* P **P 02 12 12.1 -0.3**
PERS Pernice 83.72 317 *e*P **P 02 12 13.3 -0.1**
LJU Ljubljana 84.08 316 *e*P **P 02 12 15.7 +0.5**
LJU *e* 02 12 25.9
PRU Pruhonice 84.39 320 *e*P **P 02 12 16.9 +0.2**
PRU *e* 02 12 31.4
PRU Pruhonice 84.39 320 *e*P **P 02 12 16.9 +0.2**
PRU *e*pP **pP 02 12 31.4 +4.2**
BRG Berggiesshubel 84.85 321 *e*P **P 02 12 19.8 +0.9**
comp=Z,16nm,1.8s
BRG Berggiesshubel 84.85 321 *e*P **P 02 12 19.8 +0.9**
BRG pmax pmax
comp=Z,16nm,1.7s
GERES GERESS Array B 84.85 319 P **P 02 12 19.0 -0.2**
GERES GERESS Array B 84.85 319 P **P 02 12 19.0 -0.2**
comp=Z,3.0nm,1.1s,baz=93,slow=5.3,SNR=19
CLL Collm 85.47 321 *e*P **P 02 12 22.0 0.0**
CLL *i* 02 12 36.7
CLL Collm 85.47 321 *e*P **P 02 12 22.0 0.0**
CLL *i* pP **pP 02 12 36.7 +4.1**
CLL LmV 02 58 00.0
comp=Z,100nm,19.0s
VNDA Vanda 85.78 169 P **P 02 12 22.1 -0.9**
VNDA Vanda 85.78 169 P **P 02 12 22.1 -0.9**
comp=Z,0.6nm,0.9s,baz=297,slow=2.3,SNR=3.2
VNDA LR LR 02 48 19.1
comp=Z,224nm,18.1s,baz=308,slow=34
NB2 NORSAR Subarra 87.05 331 P **P 02 12 29.7 0.0**
comp=Z,9.4nm,1.2s,baz=90,slow=5.3
NOA NORSAR Array B 87.05 331 P **P 02 12 28.7 -1.0**
NOA NORSAR Array B 87.05 331 P **P 02 12 28.7 -1.0**
comp=Z,2.5nm,1.0s,baz=94,slow=5.3,SNR=3.3
NOA LR LR 02 57 19.8
comp=Z,131nm,20.2s,baz=90,slow=40
KEST Kesra 87.59 306 *e*P **P 02 12 33.1 +0.2**
KEST pP **pP 02 12 41.5 -2.0**
KEST Kesra 87.59 306 P **P 02 12 33.1 +0.2**
comp=Z,1.6nm,1.0s,baz=333,slow=2.3,SNR=3.8
KEST pP **pP 02 12 41.5 -2.0**
comp=Z,2.1nm,1.0s,baz=328,slow=8.0,SNR=5.2
PGF Pioggiola 87.90 312 *e*P **P 02 12 34.5 +0.2**
comp=Z,73nm,1.6s
PGF Pioggiola 87.90 312 *e*P **P 02 12 34.5 +0.2**
PGF pmax pmax
comp=Z,73nm,1.6s
PGF Pioggiola 87.90 312 *e*P **P 02 12 34.5 +0.2**
comp=Z,73nm,1.6s
SBF Sospel 89.04 314 *e*P **P 02 12 39.7 +0.1**
comp=Z,133nm,1.5s
SBF Sospel 89.04 314 *e*P **P 02 12 39.7 +0.1**
SBF pmax pmax
comp=Z,133nm,1.5s
SBF Sospel 89.04 314 *e*P **P 02 12 39.7 +0.1**
comp=Z,133nm,1.5s
CDF Champ du Feu 89.10 318 *e*P **P 02 12 39.9 +0.1**
CDF Champ du Feu 89.10 318 *e*P **P 02 12 39.9 +0.1**
CDF Champ du Feu 89.10 318 *e*P **P 02 12 39.9 +0.1**
LPG La Plagne 89.50 315 *e*P **P 02 12 42.3 +0.3**
comp=Z,31nm,1.5s
LPG La Plagne 89.50 315 *e*P **P 02 12 42.3 +0.3**
LPG pmax pmax
comp=Z,31nm,1.5s
LPG La Plagne 89.50 315 *e*P **P 02 12 42.3 +0.3**
comp=Z,31nm,1.5s
LPL La Plagne 89.52 315 *e*P **P 02 12 42.3 +0.3**
LPL La Plagne 89.52 315 *e*P **P 02 12 42.3 +0.3**
LPL La Plagne 89.52 315 *e*P **P 02 12 42.3 +0.3**
FRF La Foret Royal 89.62 313 *e*P **P 02 12 42.2 0.0**
FRF La Foret Royal 89.62 313 *e*P **P 02 12 42.2 0.0**
FRF La Foret Royal 89.62 313 *e*P **P 02 12 42.2 0.0**
HAU Haudompre 89.72 318 *e*P **P 02 12 42.8 +0.2**
HAU Haudompre 89.72 318 *e*P **P 02 12 42.8 +0.2**
HAU Haudompre 89.72 318 *e*P **P 02 12 42.8 +0.2**
CABF La Chapelle 89.94 316 *e*P **P 02 12 43.5 -0.3**
comp=Z,14nm,1.1s
CABF La Chapelle 89.94 316 *e*P **P 02 12 43.5 -0.3**
CABF pmax pmax
comp=Z,14nm,1.1s
CABF La Chapelle 89.94 316 *e*P **P 02 12 43.5 -0.3**
comp=Z,14nm,1.1s
ORIF Oris-en-Rattie 90.13 315 *e*P **P 02 12 45.4 +0.7**
ORIF Oris-en-Rattie 90.13 315 *e*P **P 02 12 45.4 +0.7**
ORIF Oris-en-Rattie 90.13 315 *e*P **P 02 12 45.4 +0.7**
SMRF Simiane la Rot 90.38 314 *e*P **P 02 12 45.8 0.0**
SMRF Simiane la Rot 90.38 314 *e*P **P 02 12 45.8 0.0**
SFTF Sexfontaines 90.59 318 *e*P **P 02 12 47.1 +0.4**
comp=Z,44nm,1.3s
SFTF Sexfontaines 90.59 318 *e*P **P 02 12 47.1 +0.4**
comp=Z,44nm,1.3s
GIVF Givet 90.65 320 *e*P **P 02 12 47.6 +0.7**
GIVF Givet 90.65 320 *e*P **P 02 12 47.6 +0.7**
GIVF Givet 90.65 320 *e*P **P 02 12 47.6 +0.7**
BAIF Baives 91.05 320 *e*P **P 02 12 49.6 +0.9**
comp=Z,15nm,1.2s
BAIF Baives 91.05 320 *e*P **P 02 12 49.6 +0.9**
BAIF pmax pmax
comp=Z,15nm,1.2s
BAIF Baives 91.05 320 *e*P **P 02 12 49.6 +0.9**
comp=Z,15nm,1.2s
TAM Tamanrasset 91.11 293 *e*P **P 02 12 50.1 +0.3**
TAM pmax pmax
comp=Z,6.0nm,1.4s
TAM Tamanrasset 91.11 293 *e*P **P 02 12 50.1 +0.3**
comp=Z,5.7nm,1.4s
LOR Lormes 91.44 317 *e*P **P 02 12 50.9 +0.3**
comp=Z,46nm,1.5s
LOR Lormes 91.44 317 *e*P **P 02 12 50.9 +0.3**
comp=Z,46nm,1.5s
SMF Signal de Mont 91.48 317 *e*P **P 02 12 51.1 +0.3**
comp=Z,34nm,1.4s
SMF Signal de Mont 91.48 317 *e*P **P 02 12 51.1 +0.3**
SMF pmax pmax
comp=Z,34nm,1.4s
SMF Signal de Mont 91.48 317 *e*P **P 02 12 51.1 +0.3**
comp=Z,34nm,1.4s
LASF Ste Croix 91.61 314 *e*P **P 02 12 52.3 +0.8**
comp=Z,34nm,1.2s
LASF Ste Croix 91.61 314 *e*P **P 02 12 52.3 +0.8**
comp=Z,34nm,1.2s
SSF Saint Saulge 91.69 317 *e*P **P 02 12 52.4 +0.6**
comp=Z,32nm,1.6s
SSF Saint Saulge 91.69 317 *e*P **P 02 12 52.4 +0.6**
SSF pmax pmax
comp=Z,32nm,1.6s
SSF Saint Saulge 91.69 317 *e*P **P 02 12 52.4 +0.6**
comp=Z,32nm,1.6s
AVF Avril sur Loir 91.81 317 *e*P **P 02 12 52.7 +0.4**
AVF Avril sur Loir 91.81 317 *e*P **P 02 12 52.7 +0.4**
AVF Avril sur Loir 91.81 317 *e*P **P 02 12 52.7 +0.4**
BGF Bois d'Agland 92.17 316 *e*P **P 02 12 54.9 +0.9**
BGF Bois d'Agland 92.17 316 *e*P **P 02 12 54.9 +0.9**
BGF Bois d'Agland 92.17 316 *e*P **P 02 12 54.9 +0.9**
TCF Toulx Ste Croi 92.63 316 *e*P **P 02 12 57.0 +0.8**
TCF Toulx Ste Croi 92.63 316 *e*P **P 02 12 57.0 +0.8**
TCF Toulx Ste Croi 92.63 316 *e*P **P 02 12 57.0 +0.8**
TORD Torodi Ar. Bea 95.10 283 P **P 02 13 08.5 +0.4**
TORD pP **pP 02 13 16.9 -1.9**
TORD Torodi Ar. Bea 95.10 283 P **P 02 13 08.5 +0.4**
comp=Z,0.8nm,1.2s,baz=69,slow=2.7,SNR=3.0
TORD pP **pP 02 13 16.9 -1.9**
comp=Z,0.7nm,1.1s,baz=90,slow=5.1,SNR=2.4
TORD LR LR 02 55 04.3
comp=Z,169nm,19.3s,baz=110,slow=35
ILAR Eielson Array 99.74 23 PP PP 02 17 29.8 -2.4
ILAR Eielson Array 99.74 23 PP PP 02 17 29.8 -2.4
comp=Z,0.9nm,1.0s,baz=294,slow=6.8,SNR=3.9
ILAR LR LR 03 05 09.4
comp=Z,219nm,19.3s,baz=308,slow=39
TBI Tubuai 111.83 115 *e*SS SS 02 34 38.7 +0.8
comp=Z,52nm,33.0s
TBI *e*LR LR 02 51 34.6
comp=Z,198nm,24.0s
YKA Yellowknife Ar 112.14 15 PP PP 02 19 01.1 -2.2
YKA Yellowknife Ar 112.14 15 PP PP 02 19 01.1 -2.2
comp=Z,0.8nm,1.0s,baz=328,slow=7.0,SNR=7.1
PPT2 Papete2 112.46 108 *e*LR LR 02 51 54.9
comp=Z,160nm,24.0s
FFC Flin Flon 122.11 13 *e*PKIKP **PKPdf 02 18 37.7 -1.1**
FFC Flin Flon 122.11 13 *e*PKPdf **PKPdf 02 18 37.7 -1.1**
C11A Tepee Creek (N 123.17 26⇑ P **PKPdf 02 18 40.8 -0.4**
baz=123
B15A Bradely Ranch, 124.37 24⇑ P **PKPdf 02 18 43.3 -0.2**
baz=124
C15A Salmond Ranch, 124.78 24⇑ P **PKPdf 02 18 44.5 +0.2**
baz=125
D14A Greenough 124.95 25⇑ P **PKPdf 02 18 44.5 -0.2**
baz=125
MSO Missoula 124.96 26⇑ P **PKPdf 02 18 44.3 -0.4**
baz=125
B17A L&G Farms, Che 125.08 23⇑ P **PKPdf 02 18 44.5 -0.3**
baz=125
C16A Fuhringer Ranc 125.11 24⇓ P **PKPdf 02 18 44.9 0.0**
baz=125
E13A Victor 125.15 26⇑ P **PKPdf 02 18 45.4 +0.3**
baz=125
C17A Wharram Farm, 125.63 23⇑ P **PKPdf 02 18 46.1 +0.1**
baz=125
EGMT Eagleton 125.69 22⇓ P **PKPdf 02 18 46.6 +0.5**
baz=126
D16A Dana Ranch, Ca 125.81 24⇑ P **PKPdf 02 18 47.0 +0.7**
baz=126
C19A Slack Wire Ran 126.20 22⇓ P **PKPdf 02 18 47.4 +0.4**
baz=126
A22A Carney Farms, 126.20 19⇓ P **PKPdf 02 18 47.5 +0.5**
baz=126
G14A Jackson 126.40 27⇓ P **PKPdf 02 18 47.8 +0.1**
baz=126
C20A Veseth Ranch, 126.60 21⇑ P **PKPdf 02 18 47.7 0.0**
baz=126
G15A Dillon 126.89 26⇓ P **PKPdf 02 18 49.6 +1.1**
baz=127
H14A Leadore 126.93 27⇓ P **PKPdf 02 18 49.6 +0.9**
baz=127
I13A Wildhorse Cree 127.12 28⇑ P **PKPdf 02 18 49.6 +0.5**
baz=127
HLID Hailey 127.24 29 *e*PKPdf **PKPdf 02 18 49.4 +0.2**
HLID Hailey 127.24 29⇑ P **PKPdf 02 18 49.5 +0.2**
baz=127
J13A Cove Ranch, Pi 127.48 29⇓ P **PKPdf 02 18 49.9 +0.2**
baz=127
D22A Cohagen 127.72 20⇑ P **PKPdf 02 18 50.8 +0.9**
baz=128
H16A Russell Place, 127.80 25⇓ P **PKPdf 02 18 51.1 +0.8**
baz=128
H19A Powell 128.77 24⇑ P **PKPdf 02 18 53.3 +1.2**
baz=128
NVAR Mina Array Bea 128.82 36 PKP **PKPdf 02 18 53.8 +1.3**
NVAR Mina Array Bea 128.82 36 PKP **PKPdf 02 18 53.8 +1.3**
comp=Z,0.5nm,0.8s,baz=135,slow=0.6,SNR=4.4
TPAW Teton Pass 128.89 26 *e*PKPdf **PKPdf 02 18 53.0 +0.5**
PDAR Pinedale Array 130.08 26 PKP **PKPdf 02 18 55.4 +0.6**
PDAR Pinedale Array 130.08 26 PKP **PKPdf 02 18 55.4 +0.6**
comp=Z,0.3nm,0.8s,baz=356,slow=2.1,SNR=4.1
HWUT Hardware Ranch 130.09 28 *e*PKPdf **PKPdf 02 18 54.4 -0.4**
R11A Troy Canyon, C 130.43 34⇓ P **PKPdf 02 18 56.1 +0.6**
baz=130
DUG Dugway 130.56 30 *e*PKIKP **PKPdf 02 18 55.8 +0.1**
DUG Dugway 130.56 30 *e*PKPdf **PKPdf 02 18 55.8 +0.1**
DUG Dugway 130.56 30⇓ P **PKPdf 02 18 57.1 +1.5**
baz=130
RSSD Black Hills 131.09 20 *e*PKIKP **PKPdf 02 18 57.4 +0.8**
RSSD Black Hills 131.09 20 *e*PKPdf **PKPdf 02 18 57.4 +0.8**
N20A Spence Gulch, 132.22 26⇑ P **PKPdf 02 18 58.6 -0.3**
baz=132
O19A Miners Draw (B 132.26 27⇑ P **PKPdf 02 18 59.7 +0.8**
baz=132
ANMO Albuquerque 137.81 29 *e*PKPdf **PKPdf 02 19 10.8 +1.4**
WMOK Wichita Mounta 141.28 21 *e*PKIKP **PKPdf 02 19 16.2 +0.7**
WMOK Wichita Mounta 141.28 21 *e*PKPdf **PKPdf 02 19 16.2 +0.7**
526A Mary Lane Ranc 142.91 31⇑ P **PKPdf 02 19 16.0 -2.7**
baz=143
MIAR Mount Ida 143.08 15 *e*PKIKP PKPbc 02 19 15.6 +0.1
MIAR Mount Ida 143.08 15 *e*PKPdf PKPbc 02 19 15.6 +0.1
527A Woodward Ranch1 43.09 31⇓ P PKPbc 02 19 16.5 +0.7
baz=143
626A Big Bend Ranch 143.29 32⇓ P PKPbc 02 19 16.8 +0.5
baz=143
528A Cox Ranch, San 143.49 30⇑ P PKPbc 02 19 17.4 +0.4
baz=143
331A San Angelo 143.63 26⇑ P PKPbc 02 19 17.2 0.0
baz=143
TXAR Lajitas Array 143.71 32 PKP PKPbc 02 19 18.5 +0.9
TXAR Lajitas Array 143.71 32 PKP PKPbc 02 19 18.5 +0.9
comp=Z,2.6nm,1.1s,baz=252,slow=4.6,SNR=10
627A Terlingua Ranc 143.76 31⇓ P PKPbc 02 19 17.4 -0.4
baz=144
332A Millersview 143.86 25⇑ P PKPab 02 19 17.2 0.0
baz=144
628A Black Gap, Mar 143.99 31⇑ P PKPbc 02 19 18.9 +0.5
baz=144
530A J-C Ranch, Com 144.20 28⇑ P PKPbc 02 19 19.1 +0.1
baz=144
531A Rocksprings 144.56 27⇑ P **PKPab 02 19 19.7 -0.2**
baz=144
JCT Junction City 144.62 26 *e*PKIKP **PKPab 02 19 20.1 0.0**
JCT Junction City 144.62 26 *e*PKPdf **PKPab 02 19 20.1 0.0**
JCT Junction City 144.62 26⇓ P **PKPab 02 19 19.0 -1.1**
baz=144
532A Rocksprings 144.88 26⇓ P **PKPab 02 19 20.0 -1.1**
baz=145
CPUP Villa Florida 144.97 222 PKPbc PKPbc 02 19 21.5 +0.1
CPUP pPKPbc **PKiKP 02 19 28.4 +2.4**
CPUP Villa Florida 144.97 222 PKPbc PKPbc 02 19 21.5 +0.1
comp=Z,5.5nm,0.8s,baz=94,slow=4.9,SNR=9.2
CPUP pPKPbc **PKiKP 02 19 28.4 +2.4**
comp=Z,8.3nm,0.9s,baz=64,slow=4.6,SNR=7.2
631A Perdido Creek 145.18 28⇑ P **PKPbc 02 19 22.0 -0.1**
baz=145
632A Uvalde 145.46 27⇓ P **PKPdf 02 19 23.0 0.0**
baz=145
LRAL Lakeview Retre 145.77 6 *e*PKPbc **PKPdf 02 19 23.4 0.0**
732A Laxson Ranch, 146.04 28⇓ P **PKPab 02 19 25.1 -0.2**
baz=146
HKT Hockley 146.66 21 *e*PKP2 **PKPbc 02 19 25.8 -0.7**
HKT Hockley 146.66 21 *e*PKPbc **PKPbc 02 19 25.8 -0.7**

SKHL 11 02:09:31.5±0.7, 55.30N×122.04E, h10km±2km, mb3.9/6, 2C, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TUP	**Tupik**	**1.49**	**235**	⇑ *i*Pg		Pn	02 09 58.8	+0.4
TUP					AMB	AMB	02 09 59.8	
42nm,0.3s								
TUP				*e*Sg		Sb	02 10 18.2	-0.2
TUP				A		A	02 10 18.9	
305nm,0.7s								
TNDR	**Tynda**	**1.54**	**95**	*e*Pg		Pb	02 09 59.8	-0.4
TNDR				*e*Sg		Sn	02 10 19.5	+0.3
IENR	**Iengra**	**1.84**	**59**	*e*Pn		Pn	02 10 03.4	+0.1
IENR				*e*Pg		Pb	02 10 05.1	-0.3
IENR				*e*Sg		Sb	02 10 28.7	+0.2
KHN	**Khani**	**2.06**	**323**	*e*Pg		Pn	02 10 07.4	+1.2
KHN				*e*Sg		Sb	02 10 33.7	-1.0
CRS	**Chara**	**2.65**	**309**	*e*Pg		Pb	02 10 19.2	+0.1
CRS					AMB	AMB	02 10 20.2	
9.0nm,0.4s								
CRS				*e*Sg		Sb	02 10 54.2	+2.4
CRS				A		A	02 10 55.2	
129nm,1.6s								
KROS	**Kirovskiy**	**2.98**	**105**	⇑ *i*Pg		Pb	02 10 24.3	-0.4
KROS					AMB	AMB	02 10 24.9	
32nm,0.5s								
KROS				sPg		sPg	02 10 27.3	
KROS				*e*Sg		Sb	02 11 03.5	+2.4
KROS				A		A	02 11 09.2	
120nm,0.5s								
KROS				A		A	02 11 09.2	
55nm,0.5s								
ZEA	**Zeya**	**3.42**	**115**	*e*Pg		Pb	02 10 34.4	+2.3
ZEA					AMB	AMB	02 10 35.5	
30nm,0.3s								
ZEA				*e*Sg		Sg	02 11 17.7	-3.5
ZEA				A		A	02 11 21.4	
88nm,0.6s								
NLYR	**Nelyaty**	**3.76**	**291**	*e*Pg		Pb	02 10 40.0	+2.0
NLYR				*e*Sg		Sg	02 11 29.4	-3.0
BMKR	**Bomnak**	**3.96**	**96**	*e*Pn		Pn	02 10 33.0	+0.7
BMKR				*e*Pg		Pb	02 10 43.5	+2.1
BMKR					AMB	AMB	02 10 45.0	
10.0nm,0.5s								
BMKR				sPg		sPg	02 10 47.4	
BMKR				*e*Sn		Sn	02 11 18.9	+0.1
BMKR				*e*Sg		Sg	02 11 34.0	-4.7
BMKR				A		A	02 11 38.4	
45nm,0.5s								
BMKR				A		A	02 11 38.4	
35nm,0.5s								
UKT	**Uakit**	**4.80**	**276**	*e*Pg		Pb	02 10 58.5	+2.7
UKT				*e*Sg		Sg	02 12 01.1	-4.7
EKMR	**Ekimchan**	**6.78**	**105**	*e*Pn		Pn	02 11 10.5	-0.5
EKMR					AMB	AMB	02 11 18.9	
5.0nm,0.4s								
EKMR				*e*Sg		Sg	02 13 04.0	-5.1
EKMR				A		A	02 13 22.0	
7.0nm,0.6s								
EKMR				A		A	02 13 22.0	
5.0nm,0.6s								

CSEM ***11*** *02:10:23.6, 42.37N×13.47E, h9km, After ROM*
ROM 11 02:10:23.6±0.1, 42.37N×13.47E, h9km±1km, Ml1.9/8, Error ellipse: s-maj=1.5km s-min=1.4km az=67.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**252**	Pg		Pg	02 10 25.6	+0.1
AQU				Sg		Sg	02 10 26.9	+0.1
3µm,0.6s								
AQU	**L'Aquila**	**0.05**	**252**	Pg		Pg	02 10 25.6	+0.1
AQU				Sg		Sg	02 10 26.9	+0.1
3µm,0.6s								
FAGN	**Fagnano**	**0.14**	**139**	Pg		Pg	02 10 27.0	+0.3
FAGN				Sg		Sg	02 10 29.7	+0.9
950nm,0.4s								
FAGN	**Fagnano**	**0.14**	**139**	Pg		Pg	02 10 27.0	+0.3
FAGN				Sg		Sg	02 10 29.7	+0.9
950nm,0.4s								
CAMP	**Campotosto**	**0.17**	**346**	Pg		Pg	02 10 28.1	+0.7
CAMP				Sg		Sg	02 10 31.6	+1.6
155nm,0.5s								
CAMP	**Campotosto**	**0.17**	**346**	Pg		Pg	02 10 28.1	+0.7
CAMP				Sg		Sg	02 10 31.6	+1.6
155nm,0.5s								
TERO	**Teramo**	**0.27**	**22**	Pg		Pg	02 10 29.6	+0.4
TERO				Sg		Sg	02 10 34.3	+1.4
155nm,0.5s								
TERO	**Teramo**	**0.27**	**22**	Pg		Pg	02 10 29.6	+0.4
TERO				Sg		Sg	02 10 34.3	+1.4
155nm,0.5s								
FIAM	**Fiamignano**	**0.28**	**249**	Pg		Pg	02 10 29.8	+0.5
FIAM				Sg		Sb	02 10 35.0	-0.9
102nm,0.4s								
FIAM	**Fiamignano**	**0.28**	**249**	Pg		Pg	02 10 29.8	+0.5
FIAM				Sg		Sb	02 10 35.0	-0.9
102nm,0.4s								
VCEL	**Villa Celiera**	**0.28**	**85**	Pg		Pb	02 10 30.5	-0.5
142nm,0.5s								
VCEL	**Villa Celiera**	**0.28**	**85**	Pg		Pb	02 10 30.5	-0.5
142nm,0.5s								
PTQR	**Pietraquaria**	**0.35**	**188**	Pg		Pg	02 10 31.0	+0.4
9.0nm,0.3s								
PTQR	**Pietraquaria**	**0.35**	**188**	Pg		Pg	02 10 31.0	+0.4
9.0nm,0.3s								
LNSS	**Leonessa**	**0.39**	**307**	Pg		Pg	02 10 31.9	+0.4
LNSS	**Leonessa**	**0.39**	**307**	Pg		Pg	02 10 31.9	+0.4

INTR	**Introdacqua**	**0.48**	**137**	Pg	Pg	02 10 33.3	+0.2
	73nm,0.5s							
INTR	**Introdacqua**	**0.48**	**137**	Pg	Pg	02 10 33.3	+0.2
	73nm,0.5s							
VVLD	**Villa Vallelon**	**0.51**	**167**	Pg	Pg	02 10 33.8	+0.1
VVLD	**Villa Vallelon**	**0.51**	**167**	Pg	Pg	02 10 33.8	+0.1
NRCA	**Norcia**	**0.53**	**331**	Pg	Pg	02 10 34.3	+0.2
	8.0nm,0.5s							
NRCA	**Norcia**	**0.53**	**331**	Pg	Pg	02 10 34.3	+0.2
	8.0nm,0.5s							
CERT	**Cerreto**	**0.55**	**221**	Pg	Pg	02 10 34.5	+0.1
	54nm,0.4s							
CERT	**Cerreto**	**0.55**	**221**	Pg	Pg	02 10 34.5	+0.1
	54nm,0.4s							
MNS	**Montasola**	**0.58**	**272**	Pg	Pb	02 10 36.4	+0.3
MNS	**Montasola**	**0.58**	**272**	Pg	Pb	02 10 36.4	+0.3
GUAR	**Guarcino**	**0.58**	**191**	Pg	Pb	02 10 36.5	+0.4
GUAR	**Guarcino**	**0.58**	**191**	Pg	Pb	02 10 36.5	+0.4
LPEL	**Lama dei Pelig**	**0.62**	**121**	Pg	Pg	02 10 35.8	0.0
LPEL				Sg	Sb	02 10 46.1	+0.4
	32nm,0.6s							
LPEL	**Lama dei Pelig**	**0.62**	**121**	Pg	Pg	02 10 35.8	0.0
LPEL				Sg	Sb	02 10 46.1	+0.4
	32nm,0.6s							
SDI	**San Donato**	**0.71**	**159**	Pg	Pg	02 10 37.1	-0.3
	7.0nm,0.3s							
SDI	**San Donato**	**0.71**	**159**	Pg	Pg	02 10 37.1	-0.3
	7.0nm,0.3s							
CESI	**CESI - Serrava**	**0.76**	**327**	Pg	Pg	02 10 38.0	-0.3
CESI	**CESI - Serrava**	**0.76**	**327**	Pg	Pg	02 10 38.0	-0.3

CSEM ***11*** *02:51:57.9, 42°.46N×13°.40E, h10km, After ROM*
ROM 11 02:51:57.9±0.1, 42°.46N×13°.40E, h10km±1km, MI2.2/3, Error ellipse: s-maj=2.0km s-min=1.3km az=90.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.08**	**6**	Pg	Pg	02 52 01.0	+0.6
CAMP				Sg	Sg	02 52 02.9	+0.7
CAMP	**Campotosto**	**0.08**	**6**	Pg	Pg	02 52 01.0	+0.6
CAMP				Sg	Sg	02 52 02.9	+0.7
AQU	**L'Aquila**	**0.10**	**178**	Pg	Pg	02 52 00.9	+0.3
AQU				Sg	Sg	02 52 02.9	+0.4
	643nm,0.2s						
AQU	**L'Aquila**	**0.10**	**178**	Pg	Pg	02 52 00.9	+0.3
AQU				Sg	Sg	02 52 02.9	+0.4
	643nm,0.2s						
TERO	**Teramo**	**0.23**	**42**	Pg	Pg	02 52 03.0	+0.3
TERO				Sg	Sg	02 52 06.7	+0.8
	157nm,0.3s						
TERO	**Teramo**	**0.23**	**42**	Pg	Pg	02 52 03.0	+0.3
TERO				Sg	Sg	02 52 06.7	+0.8
	157nm,0.3s						
FIAM	**Fiamignano**	**0.28**	**228**	Pg	Pg	02 52 04.2	+0.5
FIAM				Sg	Sb	02 52 09.1	-1.0
FIAM	**Fiamignano**	**0.28**	**228**	Pg	Pg	02 52 04.2	+0.5
FIAM				Sg	Sb	02 52 09.1	-1.0
LNSS	**Leonessa**	**0.30**	**299**	Pg	Pg	02 52 04.4	+0.3
LNSS				Sg	Sb	02 52 09.7	-1.1
LNSS	**Leonessa**	**0.30**	**299**	Pg	Pg	02 52 04.4	+0.3
LNSS				Sg	Sb	02 52 09.7	-1.1
NRCA	**Norcia**	**0.43**	**331**	Pg	Pg	02 52 06.8	+0.3
NRCA				Sg	Sb	02 52 13.4	-1.1
NRCA	**Norcia**	**0.43**	**331**	Pg	Pg	02 52 06.8	+0.3
NRCA				Sg	Sb	02 52 13.4	-1.1
OFFI	**Offida**	**0.52**	**24**	Pg	Pb	02 52 09.5	+0.2
OFFI	**Offida**	**0.52**	**24**	Pg	Pb	02 52 09.5	+0.2
INTR	**Introdacqua**	**0.58**	**140**	Pg	Pg	02 52 09.4	+0.1
INTR				Sg	Sb	02 52 18.5	-0.3
	209nm,0.3s						
INTR	**Introdacqua**	**0.58**	**140**	Pg	Pg	02 52 09.4	+0.1
INTR				Sg	Sb	02 52 18.5	-0.3
	209nm,0.3s						
FDMO	**Fiordimonte**	**0.62**	**339**	Pg	Pg	02 52 10.1	0.0
FDMO	**Fiordimonte**	**0.62**	**339**	Pg	Pg	02 52 10.1	0.0

SKHL ***11*** *02:56:21.3±2.3, 47°.92N×155°.35E, h38km±3km, mb4.5/2*
MOS ***11*** *02:56:21.6±0.9, 48°.25N×154°.37E, h17km, mb4.4/29, Error ellipse: s-maj=12.3km s-min=6.0km az=71.4*
KRSC ***11*** *02:56:24.1±1.8, 47°.95N×155°.79E, h5km±5km, ML4.7*
ISCJB ***11*** *02:56:24.8±0.3, 48°.17N±0°.04×154°.44E±0°.07, h42km, mb4.2/51, MS3.2/5, Error ellipse: s-maj=8.7km s-min=3.0km az=39.2*
NEIC ***11*** *02:56:26.5±0.7, 48°.06N×154°.29E, h50km±5km, mb4.4/26, Error ellipse: s-maj=9.0km s-min=4.2km az=152.0*
IDC ***11*** *02:56:29.9±2.5, 48°.27N×154°.27E, h69km±21km, mb3.6/24, mb1 3.9/26, mb1mx3.8/32, mbtmp3.7/26, MS3.2/10, Ms1 3.2/10, ms1mx3.0/44, Error ellipse: s-maj=18.8km s-min=11.2km az=150.0*
ISC 11 02:56:26.0±0.5, 48°.12N±0°.08×154°.47E±0°.07, h42km, n153, σ1s30/164, mb4.2/51, MS3.4/5, 2C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.79**	**22**	*e*PN	Pn	02 57 04.4	-3.7
SKR				*e*S	**Sn**	**02 57 35.0**	**-5.4**
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,230nm,0.5s						
SKR				smax	smax		
	comp=E,650nm,0.8s						
SKR				smax	smax		
	comp=N,480nm,0.6s						
SKR	**Severo-Kuril's**	**2.79**	**22**	*e*P	**Pn**	**02 57 08.3**	**+0.2**
SKR				*e*S	**Sn**	**02 57 40.5**	**+0.1**
SKR	**Severo-Kuril's**	**2.79**	**22**	*e*P	Pn	02 57 04.4	-3.7
SKR				AMB	AMB	02 57 06.1	
	comp=N,80nm,0.5s						
SKR				AMB	AMB	02 57 06.1	
	comp=N,230nm,0.5s						
SKR				*e*S	**Sn**	**02 57 35.0**	**-5.4**
SKR				A	A	02 57 41.0	
	comp=N,480nm,0.7s						
SKR				A	A	02 57 41.0	
	comp=N,650nm,0.7s						
SKR				A	A	02 57 41.0	
	comp=N,140nm,0.7s						
MIPR	**Malaya Ipel'ka**	**4.42**	**19**	P	**Pn**	**02 57 32.2**	**+1.7**
MIPR				S	**Sn**	**02 58 21.6**	**+1.0**
MTVR	**Mutnovka**	**4.98**	**27**	*e*P	**Pn**	**02 57 38.9**	**+0.6**
MTVR				*e*S	**Sn**	**02 58 33.3**	**-1.3**
GRL	**Gorelyy**	**5.01**	**26**	*e*P	**Pn**	**02 57 40.1**	**+1.4**
GRL				*e*S	**Sn**	**02 58 35.3**	**0.0**
RUS	**Russkaya**	**5.04**	**29**	PN	**Pn**	**02 57 38.6**	**-0.4**
RUS	**Russkaya**	**5.04**	**29**	*e*P	**Pn**	**02 57 38.6**	**-0.4**
RUS				*e*S	**Sn**	**02 58 32.9**	**-3.0**
APC	**Apacha**	**5.11**	**19**	P	**Pn**	**02 57 43.0**	**+3.0**
APC				S	**Sn**	**02 58 40.2**	**+2.5**
KUR	**Kuril'sk**	**5.38**	**240**	PN	**Pn**	**02 57 46.0**	**+2.3**
KUR				S	Sn	02 58 51.3	+7.0
KUR				smax	smax		
	comp=E,430nm,0.7s						
KUR				smax	smax		
	comp=N,150nm,0.4s						
KUR	**Kuril'sk**	**5.38**	**240**	*e*P	**Pn**	**02 57 46.0**	**+2.3**
KUR				*e*S	Sn	02 58 51.3	+7.0
KUR				A	A	02 59 09.7	
	comp=N,150nm,0.6s						
KUR				A	A	02 59 09.7	
	comp=N,430nm,0.6s						
PEA0B	**Petropavlovsk-**	**5.41**	**21**	*e*Pn	**Pn**	**02 57 46.1**	**+2.1**
PETK	**Petropavlovsk-**	**5.41**	**21**	PN	**Pn**	**02 57 46.2**	**+2.2**
PETK				S	**Sn**	**02 58 48.2**	**+3.3**
PETK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,209nm,19.1s						
PETK	**Petropavlovsk-**	**5.41**	**21**	P	**Pn**	**02 57 46.2**	**+2.2**
	comp=Z,7.4nm,0.3s,baz=176,slow=12,SNR=68						
PETK				S	**Sn**	**02 58 48.2**	**+3.3**
	baz=174,slow=19,SNR=2.2						
PETK				LR	LR	03 00 01.4	
	comp=Z,209nm,19.1s,baz=178,slow=40						
PET	**Petropavlovsk**	**5.59**	**27**	*e*PN	**Pn**	**02 57 49.7**	**+3.2**
PET				*e*S	**Sn**	**02 58 49.6**	**+0.2**
PET				pmax	pmax		
	comp=Z,30nm,0.9s						
PET				smax	smax		
	comp=E,138nm,0.7s						
PET				smax	smax		
	comp=N,166nm,0.9s						
PET				MLR	MLR		
	comp=Z,200nm,21.0s						
PET	**Petropavlovsk**	**5.59**	**27**	*e*Pn	**Pn**	**02 57 49.3**	**+2.8**
PET				*e*Sn	**Sn**	**02 58 50.6**	**+1.2**
PET	**Petropavlovsk**	**5.59**	**27**	P	**Pn**	**02 57 47.6**	**+1.1**
PET				*e*S	**Sn**	**02 58 48.7**	**-0.7**
UGLR	**Uglovaya**	**5.80**	**27**	*e*P	**Pn**	**02 57 50.6**	**+1.0**
UGLR				S	**Sn**	**02 58 55.0**	**+0.2**
KOK	**Koryaka**	**5.82**	**25**	P	**Pn**	**02 57 51.6**	**+1.8**
KOK				S	**Sn**	**02 58 55.2**	**0.0**
SMAR	**Somma**	**5.84**	**26**	P	**Pn**	**02 57 51.4**	**+1.2**
SMAR				S	**Sn**	**02 58 54.5**	**-1.5**
KRER	**Koryakskii**	**5.86**	**26**	*e*P	**Pn**	**02 57 52.4**	**+1.9**
KRER				S	**Sn**	**02 58 56.5**	**0.0**
SDLR	**Sedlovina**	**5.88**	**27**	*e*P	**Pn**	**02 57 51.3**	**+0.6**
SDLR				S	**Sn**	**02 58 55.2**	**-1.6**
GNL	**Ganaly**	**6.00**	**20**	*e*P	**Pn**	**02 57 54.6**	**+2.3**
SPN	**Mys Shipunski**	**6.11**	**33**	PN	**Pn**	**02 57 53.6**	**-0.1**
SPN	**Mys Shipunski**	**6.11**	**33**	P	**Pn**	**02 57 53.6**	**-0.1**
SPN				S	**Sn**	**02 58 58.4**	**-3.9**
MKZ	**Mys Kozlova**	**7.89**	**32**	PN	**Pn**	**02 58 16.5**	**-1.5**
MKZ	**Mys Kozlova**	**7.89**	**32**	*e*P	**Pn**	**02 58 16.5**	**-1.5**
MKZ				S	Sn	02 59 38.5	-7.4
TUMR	**Tumrok**	**8.00**	**24**	P	**Pn**	**02 58 21.3**	**+1.7**
YSS	**Yuzh-Sakhalins**	**8.01**	**266**	*e*Pn	Pn	02 58 25.8	+6.0
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS	**Yuzh-Sakhalins**	**8.01**	**266**	*e*Pn	**Pn**	**02 58 17.9**	**-1.9**
YSS				*e*Sn	**Sn**	**02 59 47.7**	**-1.3**
YSS	**Yuzh-Sakhalins**	**8.01**	**266**	*e*P	Pn	02 58 25.8	+6.0
YSS				AMB	AMB	02 58 26.7	
	comp=Z,10.0nm,0.8s						
YSS				A	A	02 59 52.9	
	comp=Z,20nm,0.8s						
YSS				A	A	02 59 52.9	
	comp=Z,40nm,0.8s						
SRDR	**Sredinnyy**	**8.82**	**19**	P	**Pn**	**02 58 32.8**	**+1.9**
ASAJ	**Asahikawa**	**9.16**	**249**	P	**Pn**	**02 58 37.0**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=86,slow=17,SNR=6.6						
ASAJ				LR	LR	03 01 57.2	
	comp=Z,72nm,19.1s,baz=186,slow=36						
KBTR	**Krutoberegovo**	**9.59**	**29**	PN	**Pn**	**02 58 40.7**	**-0.6**
KBTR	**Krutoberegovo**	**9.59**	**29**	P	**Pn**	**02 58 40.7**	**-0.6**
ERM	**Erimo**	**10.05**	**237**	*i* PN	Pn	02 58 52.0	+4.2
ERM	**Erimo**	**10.05**	**237**	*e*P	Pn	02 58 52.0	+4.2
NKL	**Nikolayevsk**	**10.10**	**305**	*e*P	Pn	02 58 52.0	+3.7
FX1	**Attu Island--F**	**12.81**	**61**	P	**Pn**	**02 59 24.0**	**-1.4**
	comp=Z,3.9nm,0.3s,baz=274,slow=16,SNR=17						
FX1				S	Sn	03 01 35.0	-12
	comp=Z,3.8nm,0.3s,baz=52,slow=17,SNR=7.0						
FX1				LR	LR	03 04 22.1	
	comp=Z,57nm,19.2s,baz=137,slow=37						
USRK	**Ussuriysk Arra**	**16.04**	**264**	LR	LR	03 05 41.1	
	comp=Z,84nm,20.9s,baz=123,slow=35						
MJA0	**Matsu Arr-Jizo**	**16.62**	**232**	*e*P	**Pn**	**03 00 16.1**	**+0.2**
MAJO	**Matsushiro**	**16.64**	**232**	*e*P	**Pn**	**03 00 14.7**	**-1.4**
MAJO	**Matsushiro**	**16.64**	**232**	*e*Pn	**Pn**	**03 00 14.7**	**-1.4**
MJAR	**Matsushiro Arr**	**16.64**	**232**	P	**Pn**	**03 00 14.6**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=28,slow=13,SNR=9.2						
MJAR				LR	LR	03 06 36.1	
	comp=Z,53nm,21.1s,baz=60,slow=36						
BILL	**Bilibino**	**20.86**	**12**	*i* P	**P**	**03 01 03.9**	**0.0**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BILL	**Bilibino**	**20.86**	**12**	*e*P	**P**	**03 01 03.8**	**-0.2**
	comp=Z,4.3nm,0.7s						
KSRS	**Korea Array**	**22.10**	**251**	P	**P**	**03 01 19.5**	**+2.0**
	comp=Z,1.1nm,0.6s,baz=40,slow=10,SNR=4.2						
KSRS				LR	LR	03 09 19.0	
	comp=Z,41nm,18.1s,baz=147,slow=35						
JNU	**Nakatsue**	**23.21**	**238**	LR	LR	03 09 53.9	
	comp=Z,58nm,21.8s,baz=233,slow=35						
GAMB	**Gambell**	**24.18**	**37**	*e*P	**P**	**03 01 38.6**	**+0.7**
	comp=Z,15nm,1.1s						
SONM	**Songino Array**	**31.77**	**288**	PcP	**PcP**	**03 05 35.1**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=124,slow=3.8,SNR=4.1						
MCK	**McKinley**	**34.02**	**42**	*e*P	**P**	**03 03 05.5**	**0.0**
MCK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MCK	**McKinley**	**34.02**	**42**	*e*P	**P**	**03 03 05.5**	**0.0**
	comp=Z,6.0nm,0.9s						
COLA	**College**	**34.50**	**40**	*e*P	**P**	**03 03 10.5**	**+1.0**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
COLA	**College**	**34.50**	**40**	*e*P	**P**	**03 03 10.5**	**+1.0**
	comp=Z,6.4nm,0.9s						
ILAR	**Eielson Array**	**34.91**	**40**	P	**P**	**03 03 13.6**	**+0.4**
	comp=Z,1.3nm,0.9s,baz=258,slow=7.4,SNR=16						
EGAK	**Eagle**	**37.36**	**40**	*e*P	**P**	**03 03 34.1**	**0.0**
	comp=Z,3.4nm,0.8s						
INK	**Inuvik**	**40.01**	**33**	P	**P**	**03 03 57.1**	**+0.9**
	comp=Z,3.2nm,0.7s,baz=301,slow=7.5,SNR=24						
ZALV	**Zalesovo Beam**	**42.57**	**305**	P	**P**	**03 04 16.6**	**-0.8**
ZALV						03 06 09.2	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**42.57**	**305**	P	**P**	**03 04 16.6**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=73,slow=5.8,SNR=3.3						
ZALV				PcP	**PcP**	**03 06 09.2**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=49,slow=4.5,SNR=6.2						
MK31	**Makanchi Array**	**47.14**	**297**	*e*P	**P**	**03 04 52.9**	**-1.0**
MK31	**Makanchi Array**	**47.14**	**297**	*e*P	**P**	**03 04 52.9**	**-1.0**
MKAR	**Makanchi Array**	**47.14**	**297**	P	**P**	**03 04 53.1**	**-0.8**
MKAR						03 06 24.7	
MKAR				MLR	MLR		
	comp=Z,39nm,18.7s						
MKAR	**Makanchi Array**	**47.14**	**297**	P	**P**	**03 04 53.1**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=72,slow=8.0,SNR=4.1						
MKAR				PcP	**PcP**	**03 06 24.7**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=82,slow=3.9,SNR=3.3						
MKAR				LR	LR	03 25 48.4	
	comp=Z,39nm,18.7s,baz=116,slow=38						
KURK	**Kurchatov**	**47.38**	**303**	*e*P	**P**	**03 04 54.6**	**-1.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KURK	**Kurchatov**	**47.38**	**303**	*e*P	**P**	**03 04 54.7**	**-1.0**
	comp=Z,2.6nm,0.8s						
YKW3	**Yellowknife Ar**	**49.24**	**38**	*e*P	**P**	**03 05 10.1**	**+0.3**
RES	**Resolute Bay**	**49.25**	**19**	*e*P	**P**	**03 05 09.7**	**0.0**
	comp=Z,2.1nm,0.9s						
YKA	**Yellowknife Ar**	**49.28**	**38**	P	**P**	**03 05 10.8**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=298,slow=7.6,SNR=26						
BVAR	**Borovoye Array**	**50.71**	**309**	P	**P**	**03 05 20.3**	**-0.8**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BVAR				MLR	MLR		
	comp=Z,43nm,19.3s						
BVAR	**Borovoye Array**	**50.71**	**309**	P	**P**	**03 05 20.3**	**-0.8**
	comp=Z,2.0nm,0.4s,baz=58,slow=6.6,SNR=14						
BVAR				LR	LR	03 28 33.2	
	comp=Z,43nm,19.3s,baz=112,slow=38						
BRVK	**Borovoye**	**50.74**	**309**	*e*P	**P**	**03 05 20.6**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	**Borovoye**	**50.74**	**309**	*e*P	**P**	**03 05 20.6**	**-0.8**
	comp=Z,2.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**53.58**	**256**	P	**P**	**03 05 44.2**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=40,slow=7.0,SNR=5.8						
AAK	**Ala-Archa**	**54.05**	**296**	LR	LR	03 30 15.9	
	comp=Z,41nm,19.4s,baz=308,slow=38						
ARCES	**ARCESS Array B**	**56.86**	**341**	P	**P**	**03 06 04.8**	**-1.0**
	comp=Z,1.8nm,0.8s,baz=29,slow=8.2,SNR=2.6						
ABKAR	**Akbulak array**	**58.26**	**310**	*e*P	**P**	**03 06 15.2**	**-0.7**
	comp=Z,0.7nm,0.5s						
FFC	**Flin Flon**	**59.10**	**41**	*e*P	**P**	**03 06 22.2**	**+0.5**
FFC				pmax	pmax		
	comp=Z,3.0nm,1.3s						
FFC	**Flin Flon**	**59.10**	**41**	*e*P	**P**	**03 06 22.2**	**+0.5**
	comp=Z,2.9nm,1.3s						
BOZ	**Bozeman (W)**	**60.20**	**54**	*e*P	**P**	**03 06 30.8**	**+1.2**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BOZ	**Bozeman (W)**	**60.20**	**54**	*e*P	**P**	**03 06 30.8**	**+1.2**
	comp=Z,1.7nm,0.8s						
NVAR	**Mina Array Bea**	**60.99**	**64**	P	**P**	**03 06 36.7**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=294,slow=6.9,SNR=9.8						
KAPI	**Kappang**	**61.03**	**220**	*e*P	**P**	**03 06 34.3**	**-1.1**
	comp=Z,7.2nm,1.1s						
MOOW	**Moose Ponds**	**61.91**	**55**	*e*P	**P**	**03 06 42.0**	**+0.7**
	comp=Z,3.0nm,1.5s						
TPAW	**Teton Pass**	**61.96**	**55**	*e*P	**P**	**03 06 42.2**	**+0.5**
	comp=Z,1.0nm,0.7s						
DUG	**Dugway**	**63.08**	**59**	*e*P	**P**	**03 06 50.2**	**+1.1**
DUG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DUG	**Dugway**	**63.08**	**59**	*e*P	**P**	**03 06 50.2**	**+1.1**
	comp=Z,2.4nm,0.9s						
FINES	**FINESS Array B**	**63.19**	**335**	P	**P**	**03 06 47.6**	**-1.6**
	comp=Z,1.7nm,0.6s,baz=33,slow=8.4,SNR=18						
BW06	**Boulder Array**	**63.20**	**55**	*e*P	**P**	**03 06 50.3**	**+0.3**
	comp=Z,2.1nm,1.0s						
PDAR	**Pinedale Array**	**63.20**	**55**	P	**P**	**03 06 51.2**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=281,slow=2.7,SNR=9.1						
ULM	**Lac du Bonnet**	**64.89**	**42**	P	**P**	**03 07 00.7**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=335,slow=5.3,SNR=3.2						
RSSD	**Black Hills**	**65.24**	**51**	*e*P	**P**	**03 07 03.6**	**+0.3**
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RSSD	**Black Hills**	**65.24**	**51**	*e*P	**P**	**03 07 03.5**	**+0.3**
	comp=Z,3.3nm,0.8s						
NOA	**NORSAR Array B**	**67.23**	**342**	P	**P**	**03 07 15.5**	**0.0**
	comp=Z,0.3nm,0.6s,baz=28,slow=6.5,SNR=3.7						
WRA	**Warramunga Arr**	**70.11**	**200**	P	**P**	**03 07 34.5**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=16,slow=6.6,SNR=3.1						
SCHQ	**Schefferville**	**71.69**	**24**	P	**P**	**03 07 43.7**	**+0.6**
	comp=Z,1.2nm,0.5s,baz=353,slow=8.1,SNR=3.6						
ASAR	**Alice Springs**	**73.80**	**200**	P	**P**	**03 07 58.0**	**+2.1**
	comp=Z,0.3nm,0.7s,baz=15,slow=5.8,SNR=3.2						
BUR08	**Bucovina Ar. S**	**74.93**	**327**	*e*P	**P**	**03 08 01.6**	**-0.8**
CLL	**Collm**	**75.59**	**336**	*i* P	**P**	**03 08 05.4**	**-0.6**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CLL	**Collm**	**75.59**	**336**	*i* P	**P**	**03 08 05.4**	**-0.6**
	comp=Z,4.0nm,0.7s						
MORC	**Moravsky Berou**	**75.65**	**333**	*e*P	**P**	**03 08 06.2**	**-0.3**
MORC				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MORC	**Moravsky Berou**	**75.65**	**333**	*e*P	**P**	**03 08 06.2**	**-0.3**
	comp=Z,2.2nm,1.0s						
TXAR	**Lajitas Array**	**76.03**	**62**	P	**P**	**03 08 10.0**	**+1.0**
	comp=Z,3.1nm,0.7s,baz=298,slow=4.5,SNR=20						
MLR	**Muntele Rosu**	**76.47**	**326**	P	**P**	**03 08 12.0**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=23,slow=7.7						
KHC	**Kasperske Hory**	**77.40**	**335**	*e*P	**P**	**03 08 16.2**	**-0.2**
KHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KHC	**Kasperske Hory**	**77.40**	**335**	*e*P	**P**	**03 08 16.1**	**-0.2**
	comp=Z,3.1nm,0.9s						
GERES	**GERESS Array B**	**77.62**	**335**	P	**P**	**03 08 17.2**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=35,slow=4.9,SNR=13						
BR131	**Keskin Array S**	**78.02**	**317**	*e*P	**P**	**03 08 19.7**	**-0.4**
	comp=Z,3.5nm,0.9s						
BRTR	**Keskin Array B**	**78.02**	**317**	P	**P**	**03 08 20.1**	**0.0**
	comp=Z,2.8nm,0.9s,baz=53,slow=2.5,SNR=12						
WVT	**Waverly**	**79.42**	**47**	*e*P	**P**	**03 08 27.2**	**-0.5**
WVT				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WVT	**Waverly**	**79.42**	**47**	*e*P	**P**	**03 08 27.2**	**-0.5**
	comp=Z,3.0nm,0.8s						
CDF	**Champ du Feu**	**79.73**	**338**	*e*P	**P**	**03 08 28.7**	**-0.6**
CDF	**Champ du Feu**	**79.73**	**338**	*e*P	**P**	**03 08 28.7**	**-0.6**
CDF	**Champ du Feu**	**79.73**	**338**	*e*P	**P**	**03 08 28.7**	**-0.6**
PAGF	**Fort de Pagny**	**79.97**	**340**	*e*P	**P**	**03 08 30.4**	**-0.1**
	comp=Z,2.2nm,0.8s						
PAGF	**Fort de Pagny**	**79.97**	**340**	*e*P	**P**	**03 08 30.4**	**-0.1**
	comp=Z,2.2nm,0.8s						
SFTF	**Sexfontaines**	**80.46**	**340**	*e*P	**P**	**03 08 32.8**	**-0.3**
	comp=Z,26nm,0.9s						
SFTF	**Sexfontaines**	**80.46**	**340**	*e*P	**P**	**03 08 32.8**	**-0.3**
	comp=Z,26nm,0.9s						
DAVOX	**Davos/Dischmat**	**80.57**	**336**	P	**P**	**03 08 34.6**	**+0.6**
	comp=Z,3.1nm,0.9s,baz=25,slow=10,SNR=4.3						
LOR	**Lormes**	**81.61**	**340**	*e*P	**P**	**03 08 38.7**	**-0.6**
	comp=Z,18nm,1.1s						
LOR	**Lormes**	**81.61**	**340**	*e*P	**P**	**03 08 38.7**	**-0.6**
	comp=Z,18nm,1.1s						
CABF	**La Chapelle**	**81.70**	**339**	*e*P	**P**	**03 08 39.7**	**-0.1**
CABF	**La Chapelle**	**81.70**	**339**	*e*P	**P**	**03 08 39.7**	**-0.1**
CABF	**La Chapelle**	**81.70**	**339**	*e*P	**P**	**03 08 39.7**	**-0.1**
SSF	**Saint Saulge**	**81.89**	**340**	*e*P	**P**	**03 08 40.4**	**-0.3**
	comp=Z,4.3nm,0.8s						
SSF	**Saint Saulge**	**81.89**	**340**	*e*P	**P**	**03 08 40.4**	**-0.3**
SSF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SSF	**Saint Saulge**	**81.89**	**340**	*e*P	**P**	**03 08 40.4**	**-0.3**
	comp=Z,4.3nm,0.8s						
AVF	**Avril sur Loir**	**82.18**	**340**	*e*P	**P**	**03 08 42.0**	**-0.2**
AVF	**Avril sur Loir**	**82.18**	**340**	*

LNSS	**Leonessa**	**0.41**	**314**	Pg	Pg	03 06 37.3	+0.4
LNSS	**Leonessa**	**0.41**	**314**	Pg	Pg	03 06 37.3	+0.4
INTR	**Introdacqua**	**0.47**	**131**	Pg	Pg	03 06 37.7	-0.2
INTR				Sg	Sb	03 06 45.8	-0.4
INTR	**Introdacqua**	**0.47**	**131**	Pg	Pg	03 06 37.7	-0.2
INTR				Sg	Sb	03 06 45.8	-0.4
NRCA	**Norcia**	**0.57**	**336**	Pg	Pg	03 06 39.6	-0.3
NRCA	**Norcia**	**0.57**	**336**	Pg	Pg	03 06 39.6	-0.3
LPEL	**Lama dei Pelig**	**0.62**	**116**	Pg	Pb	03 06 41.3	-0.4
LPEL	**Lama dei Pelig**	**0.62**	**116**	Pg	Pb	03 06 41.3	-0.4
SDI	**San Donato**	**0.67**	**155**	Pg	Pg	03 06 41.5	-0.3
SDI	**San Donato**	**0.67**	**155**	Pg	Pg	03 06 41.5	-0.3

*ISCJB **11** 03:14:30.0±0.2, 42°.39N±0'.02×13°.38E±0'.02, h7km±2km, Error ellipse: s-maj=3.2km s-min=2.3km az=140.6*
*CSEM **11** 03:14:30.2±0.1, 42°.39N×13°.40E, h2km, ML3.6/9, Error ellipse: s-maj=2.6km s-min=1.9km az=58.0*
*ROM **11** 03:14:30.2±0.1, 42°.38N×13°.40E, h10km, Ml2.9/40, Error ellipse: s-maj=1.3km s-min=0.8km az=63.0*
*LDG **11** 03:14:33.2±0.8, 42°.44N×13°.33E, h2km, Ml2.7/6, Error ellipse: s-maj=17.5km s-min=11.0km az=103.0*

ISC 11 03:14:30.6±0.6, 42°.40N±0'.02×13°.38E±0'.02, h13km±3km, n129, σ1§27/161, 32C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**160**	⇓*i*Pg	**Pg**	**03 14 32.7**	**-0.4**
AQU				Sg	**Sg**	**03 14 34.0**	**-0.9**
AQU	**L'Aquila**	**0.04**	**160**	⇓*i*Pg	**Pg**	**03 14 32.7**	**-0.4**
AQU				Sg	**Sg**	**03 14 34.0**	**-0.9**
CAMP	**Campotosto**	**0.14**	**8**	⇑*i*Pg	**Pg**	**03 14 34.1**	**-0.2**
CAMP				Sg	**Sg**	**03 14 36.7**	**-0.2**
	6µm,0.4s						
CAMP	**Campotosto**	**0.14**	**8**	⇑*i*Pg	**Pg**	**03 14 34.1**	**-0.2**
CAMP				Sg	**Sg**	**03 14 36.7**	**-0.2**
	6µm,0.4s						
FAGN	**Fagnano**	**0.20**	**131**	⇑*e*Pg	**Pg**	**03 14 34.8**	**-0.2**
FAGN				Sg	**Sg**	**03 14 37.6**	**-0.5**
	12µm,0.7s						
FAGN	**Fagnano**	**0.20**	**131**	⇑*e*Pg	**Pg**	**03 14 34.8**	**-0.2**
FAGN				Sg	**Sg**	**03 14 37.6**	**-0.5**
	12µm,0.7s						
FIAM	**Fiamignano**	**0.23**	**237**	⇑*e*Pg	**Pg**	**03 14 35.8**	**+0.1**
	2µm,0.4s						
FIAM	**Fiamignano**	**0.23**	**237**	⇑*e*Pg	**Pg**	**03 14 35.8**	**+0.1**
	2µm,0.4s						
TERO	**Teramo**	**0.28**	**36**	⇑*i*Pg	**Pg**	**03 14 35.9**	**-0.6**
	2µm,0.4s						
TERO	**Teramo**	**0.28**	**36**	⇑*i*Pg	**Pg**	**03 14 35.9**	**-0.6**
	2µm,0.4s						
LNSS	**Leonessa**	**0.33**	**309**	⇑*e*Pg	**Pg**	**03 14 37.5**	**+0.2**
LNSS				Sg	**Sg**	**03 14 43.3**	**+1.4**
	2µm,0.3s						
LNSS	**Leonessa**	**0.33**	**309**	⇑*e*Pg	**Pg**	**03 14 37.5**	**+0.2**
LNSS				Sg	**Sg**	**03 14 43.3**	**+1.4**
	2µm,0.3s						
VCEL	**Villa Celiera**	**0.34**	**90**	⇑*e*Pg	**Pg**	**03 14 36.9**	**-0.6**
VCEL				Sg	**Sg**	**03 14 43.2**	**+1.0**
	3µm,0.5s						
VCEL	**Villa Celiera**	**0.34**	**90**	⇑*e*Pg	**Pg**	**03 14 36.9**	**-0.6**
VCEL				Sg	**Sg**	**03 14 43.2**	**+1.0**
	3µm,0.5s						
PTQR	**Pietraquaria**	**0.37**	**178**	⇑*i*Pg	**Pg**	**03 14 37.7**	**-0.4**
PTQR				Sg	**Sg**	**03 14 42.9**	**-0.3**
PTQR	**Pietraquaria**	**0.37**	**178**	⇑*i*Pg	**Pg**	**03 14 37.7**	**-0.4**
PTQR				Sg	**Sg**	**03 14 42.9**	**-0.3**
NRCA	**Norcia**	**0.48**	**336**	⇑*e*Pg	**Pg**	**03 14 39.8**	**-0.3**
NRCA				Sg	**Sg**	**03 14 47.3**	**+0.8**
	1µm,0.1s						
NRCA	**Norcia**	**0.48**	**336**	⇑*e*Pg	**Pg**	**03 14 39.8**	**-0.3**
NRCA				Sg	**Sg**	**03 14 47.3**	**+0.8**
	1µm,0.1s						
MNS	**Montasola**	**0.52**	**269**	⇑*e*Pg	**Pg**	**03 14 40.6**	**-0.2**
	690nm,0.5s						
MNS	**Montasola**	**0.52**	**269**	⇑*e*Pg	**Pg**	**03 14 40.6**	**-0.2**
	690nm,0.5s						
CERT	**Cerreto**	**0.54**	**214**	⇑*e*Pg	**Pg**	**03 14 40.7**	**-0.4**
	1µm,0.4s						
CERT	**Cerreto**	**0.54**	**214**	⇑*e*Pg	**Pg**	**03 14 40.7**	**-0.4**
	1µm,0.4s						
INTR	**Introdacqua**	**0.55**	**134**	⇑*e*Pg	**Pg**	**03 14 40.6**	**-0.7**
INTR				Sg	**Sb**	**03 14 49.5**	**-0.3**
	971nm,0.6s						
INTR	**Introdacqua**	**0.55**	**134**	⇑*e*Pg	**Pg**	**03 14 40.6**	**-0.7**
INTR				Sg	**Sb**	**03 14 49.5**	**-0.3**
	971nm,0.6s						
VVLD	**Villa Vallelon**	**0.55**	**161**	⇑*e*Pg	**Pg**	**03 14 40.5**	**-0.9**
VVLD				Sg	**Sg**	**03 14 47.9**	**-0.9**
	953nm,0.6s						
VVLD	**Villa Vallelon**	**0.55**	**161**	⇑*e*Pg	**Pg**	**03 14 40.5**	**-0.9**
VVLD				Sg	**Sg**	**03 14 47.9**	**-0.9**
	953nm,0.6s						
TRTR	**Tortoreto Alta**	**0.57**	**43**	Pg	**Pg**	**03 14 42.2**	**+0.5**
	3µm,0.9s						
TRTR	**Tortoreto Alta**	**0.57**	**43**	Pg	**Pg**	**03 14 42.2**	**+0.5**
	3µm,0.9s						
OFFI	**Offida**	**0.58**	**22**	⇑*e*Pg	**Pg**	**03 14 42.3**	**+0.3**
	4µm,0.4s						
OFFI	**Offida**	**0.58**	**22**	⇑*e*Pg	**Pg**	**03 14 42.3**	**+0.3**
	4µm,0.4s						
GUAR	**Guarcino**	**0.60**	**185**	Pg	**Pg**	**03 14 42.4**	**0.0**
	544nm,0.6s						
GUAR	**Guarcino**	**0.60**	**185**	Pg	**Pg**	**03 14 42.4**	**0.0**
	544nm,0.6s						
MTCE	**Montecelio**	**0.60**	**232**	⇑*e*Pg	**Pg**	**03 14 41.9**	**-0.5**
	391nm,0.6s						
MTCE	**Montecelio**	**0.60**	**232**	⇑*e*Pg	**Pg**	**03 14 41.9**	**-0.5**
	391nm,0.6s						
CESX	**Cesi**	**0.63**	**290**	Pg	**Pg**	**03 14 42.5**	**-0.4**
	387nm,0.4s						
CESX	**Cesi**	**0.63**	**290**	Pg	**Pg**	**03 14 42.5**	**-0.4**
	387nm,0.4s						
FDMO	**Fiordimonte**	**0.68**	**341**	Pg	**Pg**	**03 14 43.1**	**-0.7**
	338nm,0.3s						
FDMO	**Fiordimonte**	**0.68**	**341**	Pg	**Pg**	**03 14 43.1**	**-0.7**
	338nm,0.3s						
LPEL	**Lama dei Pelig**	**0.69**	**120**	⇑*e*Pg	**Pg**	**03 14 42.9**	**-1.1**
LPEL				Sg	**Sg**	**03 14 53.3**	**+0.2**
	1µm,0.3s						
LPEL	**Lama dei Pelig**	**0.69**	**120**	⇑*e*Pg	**Pg**	**03 14 42.9**	**-1.1**
LPEL				Sg	**Sg**	**03 14 53.3**	**+0.2**
	1µm,0.3s						
CESI	**CESI - Serrava**	**0.70**	**330**	⇑*e*Pg	**Pg**	**03 14 43.7**	**-0.6**
	127nm,0.5s						
CESI	**CESI - Serrava**	**0.70**	**330**	⇑*e*Pg	**Pg**	**03 14 43.7**	**-0.6**
	127nm,0.5s						
POFI	**Posta Fibreno**	**0.72**	**160**	Pg	**Pg**	**03 14 43.3**	**-1.3**
	228nm,0.5s						
POFI	**Posta Fibreno**	**0.72**	**160**	Pg	**Pg**	**03 14 43.3**	**-1.3**
	228nm,0.5s						
CAFR	**Castel Frentan**	**0.73**	**103**	Pg	**Pg**	**03 14 44.1**	**-0.7**
	1µm,0.4s						
CAFR	**Castel Frentan**	**0.73**	**103**	Pg	**Pg**	**03 14 44.1**	**-0.7**
	1µm,0.4s						
SDI	**San Donato**	**0.76**	**155**	Pg	**Pg**	**03 14 43.9**	**-1.3**
	172nm,0.2s						
SDI	**San Donato**	**0.76**	**155**	Pg	**Pg**	**03 14 43.9**	**-1.3**
	172nm,0.2s						
RMP	**Rome, Mte Porz**	**0.77**	**221**	Pg	**Pg**	**03 14 44.7**	**-0.8**
	418nm,0.4s						
RMP	**Rome, Mte Porz**	**0.77**	**221**	Pg	**Pg**	**03 14 44.7**	**-0.8**
	418nm,0.4s						
GUMA	**Gualdo di Mace**	**0.78**	**31**	Pg	**Pg**	**03 14 43.3**	**-2.4**
GUMA	**Gualdo di Mace**	**0.78**	**31**	Pg	**Pg**	**03 14 43.3**	**-2.4**
RDP	**Rocca di Papa**	**0.81**	**218**	Pg	**Pg**	**03 14 45.4**	**-0.8**
	849nm,0.5s						
RDP	**Rocca di Papa**	**0.81**	**218**	Pg	**Pg**	**03 14 45.4**	**-0.8**
	849nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.84**	**187**	Pg	**Pg**	**03 14 46.2**	**-0.7**
	282nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.84**	**187**	Pg	**Pg**	**03 14 46.2**	**-0.7**
	282nm,0.6s						
RNI2	**Rionero Sannit**	**0.90**	**140**	Pg	**Pg**	**03 14 47.1**	**-0.9**
	443nm,0.9s						
RNI2	**Rionero Sannit**	**0.90**	**140**	Pg	**Pg**	**03 14 47.1**	**-0.9**
	443nm,0.9s						
SNTG	**Esanatoglia**	**0.92**	**339**	Pg	**Pg**	**03 14 47.4**	**-0.9**
	162nm,0.6s						
SNTG	**Esanatoglia**	**0.92**	**339**	Pg	**Pg**	**03 14 47.4**	**-0.9**
	162nm,0.6s						
CERA	**Filignano**	**0.93**	**149**	Pg	**Pg**	**03 14 46.8**	**-1.7**
CERA	**Filignano**	**0.93**	**149**	Pg	**Pg**	**03 14 46.8**	**-1.7**
CING	**Cingoli**	**0.99**	**352**	Pg	**Pg**	**03 14 48.5**	**-1.2**
	235nm,0.4s						
CING	**Cingoli**	**0.99**	**352**	Pg	**Pg**	**03 14 48.5**	**-1.2**
	235nm,0.4s						
MIDA	**Miranda**	**0.99**	**139**	Pg	**Pg**	**03 14 48.2**	**-1.6**
	219nm,0.4s						
MIDA	**Miranda**	**0.99**	**139**	Pg	**Pg**	**03 14 48.2**	**-1.6**
	219nm,0.4s						
FRES	**Fresagrandinar**	**1.05**	**113**	Pg	**Pg**	**03 14 49.4**	**-1.3**
	280nm,0.5s						
FRES	**Fresagrandinar**	**1.05**	**113**	Pg	**Pg**	**03 14 49.4**	**-1.3**
	280nm,0.5s						
MGAB	**Montegabbione**	**1.07**	**299**	Pg	**Pg**	**03 14 50.7**	**-0.5**
	249nm,0.7s						
MGAB	**Montegabbione**	**1.07**	**299**	Pg	**Pg**	**03 14 50.7**	**-0.5**
	249nm,0.7s						
MURB	**Monte Urbino**	**1.07**	**324**	Pg	**Pg**	**03 14 50.8**	**-0.5**
	359nm,0.3s						
MURB	**Monte Urbino**	**1.07**	**324**	Pg	**Pg**	**03 14 50.8**	**-0.5**
	359nm,0.3s						
TRIV	**Trivento**	**1.07**	**125**	Pg	**Pg**	**03 14 50.2**	**-1.0**
	190nm,0.8s						
TRIV	**Trivento**	**1.07**	**125**	Pg	**Pg**	**03 14 50.2**	**-1.0**
	190nm,0.8s						
TOLF	**Tolfa**	**1.08**	**253**	Pg	**Pg**	**03 14 50.9**	**-0.4**
	201nm,0.6s						
TOLF	**Tolfa**	**1.08**	**253**	Pg	**Pg**	**03 14 50.9**	**-0.4**
	201nm,0.6s						
ARVD	**Arcevia**	**1.15**	**344**	Pg	**Pg**	**03 14 51.5**	**-1.2**
	204nm,0.8s						
ARVD	**Arcevia**	**1.15**	**344**	Pg	**Pg**	**03 14 51.5**	**-1.2**
	204nm,0.8s						
AOI	**Ancona**	**1.17**	**8**	Pg	**Pg**	**03 14 52.1**	**-0.9**
	243nm,0.6s						
AOI	**Ancona**	**1.17**	**8**	Pg	**Pg**	**03 14 52.1**	**-0.9**
	243nm,0.6s						
VAGA	**Valle Agricola**	**1.17**	**147**	Pn	**Pg**	**03 14 52.4**	**-0.7**
	123nm,0.5s						
VAGA	**Valle Agricola**	**1.17**	**147**	Pn	**Pg**	**03 14 52.4**	**-0.7**
	123nm,0.5s						
SACS	**San Casciano d**	**1.18**	**293**	Pn	**Pg**	**03 14 53.5**	**+0.3**
	169nm,0.9s						
PIEI	**Pieia**	**1.30**	**332**	Pn	**Pn**	**03 14 54.3**	**-0.1**
	92nm,0.4s						
PIEI	**Pieia**	**1.30**	**332**	Pn	**Pn**	**03 14 54.3**	**-0.1**
	92nm,0.4s						
FSSB	**Fossombrone**	**1.37**	**341**	Pn	**Pn**	**03 14 55.5**	**+0.1**
	340nm,0.4s						
FSSB	**Fossombrone**	**1.37**	**341**	Pn	**Pn**	**03 14 55.5**	**+0.1**
	340nm,0.4s						
BADI	**Badiali**	**1.39**	**324**	Pn	**Pn**	**03 14 56.9**	**+1.2**
	137nm,0.6s						
BADI	**Badiali**	**1.39**	**324**	Pn	**Pn**	**03 14 56.9**	**+1.2**
	137nm,0.6s						
CAFI	**Castiglion Fio**	**1.40**	**312**	Pn	**Pn**	**03 14 56.8**	**+1.0**
	78nm,0.7s						
CAFI	**Castiglion Fio**	**1.40**	**312**	Pn	**Pn**	**03 14 56.8**	**+1.0**
	78nm,0.7s						
MS1	**Monte Sant'Ang**	**2.03**	**109**	*e*Pn	**Pb**	**03 15 08.3**	**+1.0**
NVLJ	**Novalja**	**2.42**	**26**	*e*Pn	**Pn**	**03 15 10.1**	**+0.3**
NVLJ				Sn	**Sn**	**03 15 40.2**	**+0.9**
NVLJ	**Novalja**	**2.42**	**26**	*e*Pn	**Pn**	**03 15 10.1**	**+0.3**
NVLJ				Sn	**Sn**	**03 15 40.2**	**+0.9**
CDT	**Castel del Mon**	**2.53**	**120**	*e*Pn	**Pn**	**03 15 13.7**	**+2.4**
CDT				*e*Sn	**Sb**	**03 15 46.1**	**-0.8**
MAIM	**Mastiano**	**2.60**	**307**	P	**Pn**	**03 15 13.4**	**+1.1**
BAI	**Bari**	**2.92**	**115**	*e*Pn	**Pn**	**03 15 19.6**	**+3.0**
BAI				*e*Sn	**Sn**	**03 15 55.0**	**+3.6**
STON	**Ston**	**3.22**	**80**	*i* Pn	**Pn**	**03 15 21.8**	**+1.0**
STON				Sn	**Sn**	**03 16 01.0**	**+2.1**
STON	**Ston**	**3.22**	**80**	*i* Pn	**Pn**	**03 15 21.7**	**+1.0**
STON				Sn	**Sn**	**03 16 01.0**	**+2.1**
PGF	**Pioggiola**	**3.25**	**274**	*e*Pn	**Pn**	**03 15 22.9**	**+1.7**
PGF				*e*Sn	**Sn**	**03 16 03.0**	**+3.2**
	6.0nm,0.5s						
PGF	**Pioggiola**	**3.25**	**274**	*e*Pn	**Pn**	**03 15 22.9**	**+1.7**
PGF				*e*Sn	**Sn**	**03 16 03.0**	**+3.2**
	3.0nm,0.5s						
GBRS	**Gornja Briga**	**3.30**	**18**	Pn	**Pn**	**03 15 23.8**	**+1.9**
BOJS	**Bojanci**	**3.39**	**23**	*e*Pn	**Pn**	**03 15 24.5**	**+1.4**
BOJS				*e*Sn	**Sn**	**03 16 05.4**	**+2.3**
BOJS							
	comp=Z,6.0nm,0.3s						
BOJS	**Bojanci**	**3.39**	**23**	*e*Pn	**Pn**	**03 15 24.5**	**+1.4**
BOJS				*e*Sn	**Sn**	**03 16 05.4**	**+2.3**
	comp=Z,6.0nm,0.3s						
JAVS	**Javornik**	**3.53**	**8**	*e*Pn	**Pn**	**03 15 26.2**	**+1.0**
JAVS	**Javornik**	**3.53**	**8**	*e*Pn	**Pn**	**03 15 26.2**	**+1.0**
VOJS	**Vojsko**	**3.65**	**5**	*e*Pn	**Pn**	**03 15 28.2**	**+1.4**
VOJS				*e*Sn	**Sn**	**03 16 12.6**	**+2.8**
VOJS	**Vojsko**	**3.65**	**5**	*e*Pn	**Pn**	**03 15 28.2**	**+1.4**
VOJS				*e*Sn	**Sn**	**03 16 12.6**	**+2.8**
ABTA	**Abfaltersbach**	**4.40**	**352**	⇓*i*Pn	**Pn**	**03 15 37.0**	**0.0**
ABTA	**Abfaltersbach**	**4.40**	**352**	Pn	**Pn**	**03 15 37.0**	**0.0**
SBF	**Sospel**	**4.59**	**291**	*e*Pn	**Pn**	**03 15 41.4**	**+1.7**
SBF				*e*Sn	**Sn**	**03 16 31.4**	**-1.5**
	comp=Z,4.1nm,0.4s						
SBF	**Sospel**	**4.59**	**291**	*e*Pn	**Pn**	**03 15 41.4**	**+1.7**
SBF				*e*Sn	**Sn**	**03 16 31.4**	**-1.5**
	comp=Z,2.0nm,0.4s						
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**03 15 47.6**	**+1.3**
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**03 15 47.6**	**+1.3**
LMR	**La Mourre**	**5.14**	**283**	*e*Pn	**Pn**	**03 15 48.2**	**+1.1**
LMR	**La Mourre**	**5.14**	**283**	*e*Pn	**Pn**	**03 15 48.2**	**+1.1**
MBDF	**Montbardon**	**5.34**	**298**	*e*P	Pn	03 15 53.4	+3.4
MBDF	**Montbardon**	**5.34**	**298**	*e*P	Pn	03 15 53.4	+3.4
LPG	**La Plagne**	**5.70**	**305**	*e*P	Pn	03 15 59.3	+4.1
LPG				*e*Sn	**Sn**	**03 16 58.4**	**-2.2**
	comp=Z,0.3nm,0.2s						
LPL	**La Plagne**	**5.72**	**305**	*e*P	Pn	03 15 59.5	+4.1
LPL				*e*Sn	**Sn**	**03 16 57.6**	**-3.4**
	comp=Z,0.8nm,0.3s						
SMRF	**Simiane la Rot**	**5.92**	**288**	*e*P	**Pn**	**03 16 00.8**	**+2.9**
SMRF	**Simiane la Rot**	**5.92**	**288**	*e*P	**Pn**	**03 16 00.8**	**+2.9**
KHC	**Kasperske Hory**	**6.74**	**1**	*e*SN	Sn	03 17 21.0	-4.7
KHC				*ex*	x	03 18 28.0	
HINF	**Hinteralfeld**	**7.12**	**322**	*e*Pn	**Pn**	**03 16 15.4**	**+1.0**
HINF	**Hinteralfeld**	**7.12**	**322**	*e*Pn	**Pn**	**03 16 15.4**	**+1.0**
CDF	**Champ du Feu**	**7.39**	**327**	*e*Pn	**Pn**	**03 16 19.1**	**+1.0**
CDF				*e*Sn	**Sn**	**03 17 38.9**	**-2.9**
	comp=Z,1.3nm,0.3s						
CDF	**Champ du Feu**	**7.39**	**327**	*e*Pn	**Pn**	**03 16 19.1**	**+1.0**
HAU	**Haudompre**	**7.49**	**321**	*e*Pn	**Pn**	**03 16 20.8**	**+1.4**
HAU				*e*Sn	Sn	03 17 39.5	-4.7
	comp=Z,1.7nm,0.3s						
HAU	**Haudompre**	**7.49**	**321**	*e*Pn	**Pn**	**03 16 20.8**	**+1.4**

*CSEM **11** 03:23:50.7, 42°.40N×13°.42E, h11km, MD2.0/5, After ROM*
ROM 11 03:23:50.7±0.2, 42°.40N×13°.42E, h11km±2km, Md2.0/5, Ml1.2/2, 2C-4D, Error ellipse: s-maj=5.0km s-min=2.7km az=115.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**197**	⇓*e*Pg	Pg	03 23 53.3	+0.4
AQU				Sg	Sg	03 23 54.7	+0.3
	810nm,0.2s						
AQU	**L'Aquila**	**0.04**	**197**	⇓*e*Pg	Pg	03 23 53.3	+0.4
AQU				Sg	Sg	03 23 54.7	+0.3
	810nm,0.2s						
FIAM	**Fiamignano**	**0.26**	**241**	Pg	Pg	03 23 56.4	+0.3
FIAM				Sg	Sg	03 24 00.5	+0.7
	24nm,0.4s						
FIAM	**Fiamignano**	**0.26**	**241**	Pg	Pg	03 23 56.4	+0.3
FIAM				Sg	Sg	03 24 00.5	+0.7
	24nm,0.4s						
TERO	**Teramo**	**0.27**	**31**	⇑*e*Pg	Pg	03 23 56.5	+0.2
TERO				Sg	Sg	03 24 00.6	+0.6
	32nm,0.1s						
TERO	**Teramo**	**0.27**	**31**	⇑*e*Pg	Pg	03 23 56.5	+0.2
TERO				Sg	Sg	03 24 00.6	+0.6
	32nm,0.1s						
PTQR	**Pietraquaria**	**0.37**	**182**	Pg	Pb	03 23 59.6	+0.1
PTQR				Sg	Sg	03 24 04.1	+0.8
PTQR	**Pietraquaria**	**0.37**	**182**	Pg	Pb	03 23 59.6	+0.1
PTQR				Sg	Sg	03 24 04.1	+0.8
NRCA	**Norcia**	**0.49**	**333**	Pg	Pg	03 24 00.5	0.0
NRCA				Sg	Sb	03 24 08.3	-0.6
	5.0nm,0.1s						
NRCA	**Norcia**	**0.49**	**333**	Pg	Pg	03 24 00.5	0.0
NRCA				Sg	Sb	03 24 08.3	-0.6
	5.0nm,0.1s						
OFFI	**Offida**	**0.57**	**20**	⇓*e*Pg	Pb	03 24 03.2	+0.4
OFFI	**Offida**	**0.57**	**20**	⇓*e*Pg	Pb	03 24 03.2	+0.4

*CSEM **11** 03:24:39.2±0.1, 42°.40N×13°.35E, h2km, ML3.1/6, Error ellipse: s-maj=3.3km s-min=2.5km az=73.0*
ROM 11 03:24:38.9±0.1, 42°.39N×13°.37E, h9km±1km, Md2.8/22, Ml2.6/16, 14C-4D, Error ellipse: s-maj=1.5km s-min=1.1km az=68.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**150**	⇑*e*Pg	Pg	03 24 41.1	+0.3
AQU				Sg	Sg	03 24 42.3	+0.2
AQU	**L'Aquila**	**0.04**	**150**	⇑*e*Pg	Pg	03 24 41.1	+0.3
AQU				Sg	Sg	03 24 42.3	+0.2
FIAM	**Fiamignano**	**0.23**	**237**	⇑*e*Pg	Pg	03 24 44.4	+0.7
FIAM				Sg	Sg	03 24 48.3	+1.4
	2µm,0.4s						
FIAM	**Fiamignano**	**0.23**	**237**	⇑*e*Pg	Pg	03 24 44.4	+0.7
FIAM				Sg	Sg	03 24 48.3	+1.4
	2µm,0.4s						
TERO	**Teramo**	**0.29**	**37**	⇑*e*Pg	Pg	03 24 45.0	+0.3
TERO				Sg	Sg	03 24 49.6	+0.9
	929nm,0.3s						
TERO	**Teramo**	**0.29**	**37**	⇑*e*Pg	Pg	03 24 45.0	+0.3
TERO				Sg	Sg	03 24 49.6	+0.9
	929nm,0.3s						
PTQR	**Pietraquaria**	**0.37**	**177**	⇑*i*Pg	Pg	03 24 46.7	+0.4
PTQR				Sg	Sb	03 24 52.6	-1.2
	67nm,0.3s						
PTQR	**Pietraquaria**	**0.37**	**177**	⇑*i*Pg	Pg	03 24 46.7	+0.4
PTQR				Sg	Sb	03 24 52.6	-1.2
	67nm,0.3s						
NRCA	**Norcia**	**0.48**	**337**	⇓*i*Pg	Pg	03 24 48.4	0.0
NRCA				Sg	Sb	03 24 56.2	-0.8
NRCA	**Norcia**	**0.48**	**337**	⇓*i*Pg	Pg	03 24 48.4	0.0
NRCA				Sg	Sb	03 24 56.2	-0.8
CERT	**Cerreto**	**0.53**	**213**	⇑*e*Pg	Pg	03 24 49.3	0.0
CERT				Sg	Sb	03 24 57.6	-0.7
	954nm,0.3s						
CERT	**Cerreto**	**0.53**	**213**	⇑*e*Pg	Pg	03 24 49.3	0.0
CERT				Sg	Sb	03 24 57.6	-0.7
	954nm,0.3s						
INTR	**Introdacqua**	**0.55**	**134**	Pg	Pg	03 24 49.8	+0.1
INTR				Sg	Sb	03 24 58.7	-0.2
	419nm,0.7s						
INTR	**Introdacqua**	**0.55**	**134**	Pg	Pg	03 24 49.8	+0.1
INTR				Sg	Sb	03 24 58.7	-0.2
	419nm,0.7s						
TRTR	**Tortoreto Alta**	**0.58**	**44**	Pg	Pb	03 24 51.5	+0.3
TRTR	**Tortoreto Alta**	**0.58**	**44**	Pg	Pb	03 24 51.5	+0.3
OFFI	**Offida**	**0.59**	**23**	⇑*e*Pg	Pb	03 24 51.2	-0.2
	2µm,0.4s						
OFFI	**Offida**	**0.59**	**23**	⇑*e*Pg	Pb	03 24 51.2	-0.2
	2µm,0.4s						
FDMO	**Fiordimonte**	**0.68**	**342**	⇓*e*Pg	Pg	03 24 51.8	-0.3
FDMO				Sg	Sb	03 25 02.2	-0.3
	161nm,0.3s						
FDMO	**Fiordimonte**	**0.68**	**342**	⇓*e*Pg	Pg	03 24 51.8	-0.3
FDMO				Sg	Sb	03 25 02.2	-0.3
	161nm,0.3s						
POFI	**Posta Fibreno**	**0.72**	**159**	Pg	Pb	03 24 53.5	-0.3
	90nm,0.8s						
POFI	**Posta Fibreno**	**0.72**	**159**	Pg	Pb	03 24 53.5	-0.3
	90nm,0.8s						
CAFR	**Castel Frentan**	**0.74**	**103**	Pg	Pb	03 24 54.1	+0.1
	235nm,0.4s						
CAFR	**Castel Frentan**	**0.74**	**103**	Pg	Pb	03 24 54.1	+0.1
	235nm,0.4s						
SDI	**San Donato**	**0.76**	**154**	Pg	Pg	03 24 53.9	+0.3
	66nm,0.2s						
SDI	**San Donato**	**0.76**	**154**	Pg	Pg	03 24 53.9	+0.3
	66nm,0.2s						
GUMA	**Gualdo di Mace**	**0.79**	**32**	⇑*e*Pg	Pg	03 24 52.2	-2.0
	515nm,0.3s						
GUMA	**Gualdo di Mace**	**0.79**	**32**	⇑*e*Pg	Pg	03 24 52.2	-2.0
	515nm,0.3s						
SNTG	**Esanatoglia**	**0.92**	**340**	Pg	Pg	03 24 56.1	-0.6
	61nm,0.5s						
SNTG	**Esanatoglia**	**0.92**	**340**	Pg	Pg	03 24 56.1	-0.6
	61nm,0.

ellipse: s-maj=11.3km s-min=4.7km az=137.0
ISC 11 03:48:13.0S0.5,**16°34'S**0'09"x**173°92'W**0'08,
h102km,3km,**h102**km:**pP-P,n227,**c0°**90**/241,**mb4.4**/48,
45C-34D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.18**	**41**	*e*Pn	Pn	03 48 55.3	-6.1
AFI				S	Sn	03 49 28.1	-11
AFI	**Afiamalu**	**3.18**	**41**	P	Pn	03 48 55.7	-5.7
	664nm,0.3s,baz=96,slow=1.0,SNR=862						
AFI				S	Sn	03 49 28.1	-11
	634nm,0.3s,baz=48,slow=22,SNR=12						
MSVF	**Nonsavu**	**7.81**	**259**	*e*Pn	Pn	03 50 12.4	+8.4
RAR	**Rarotonga**	**14.24**	**112**	*e*Pn	Pn	03 51 22.4	-7.7
RAR				S	Sn	03 53 53.5	-14
RAR	**Rarotonga**	**14.24**	**112**	P	Pn	03 51 22.5	-7.5
	3.9nm,0.3s,baz=258,slow=7.7,SNR=8.5						
RAR				S	Sn	03 53 53.5	-14
	2.9nm,0.3s,baz=287,slow=20,SNR=5.9						
RAR				LR	LR	03 54 53.1	
	comp=Z,148nm,19.2s,baz=75,slow=29						
DZM	**Mont Dzumac**	**19.39**	**250**	*e*LR	LR	03 57 58.3	
	348nm,31.4s						
DZM	**Mont Dzumac**	**19.39**	**250**	P	**P**	**03 52 32.0**	**+0.8**
DZM	**Mont Dzumac**	**19.39**	**250**	P	**P**	**03 52 32.0**	**+0.8**
	0.4nm,0.3s,baz=97,slow=18,SNR=3.8						
DZM				LR	LR	03 58 02.0	
	comp=Z,119nm,18.2s,baz=58,slow=30						
NOUC	**Port Laguerre**	**19.53**	**250**	*e*P	**Pn**	**03 52 37.0**	**+2.2**
OUZ	**Omahuta**	**21.87**	**208**	*e*P	**P**	**03 52 56.0**	**-1.5**
	49nm,1.1s						
URZ	**Urewera**	**23.22**	**198**	*e*P	**P**	**03 53 08.8**	**-2.4**
	127nm,0.6s						
URZ	**Urewera**	**23.22**	**198**	P	**P**	**03 53 09.5**	**-1.7**
	118nm,0.6s,baz=360,slow=3.1,SNR=110						
PAE	**Paea**	**23.31**	**97**	*e*T	T	04 16 27.7	
	5.8nm,0.3s						
PPT	**Papeete**	**23.31**	**97**	LR	LR	04 00 18.6	
	comp=Z,79nm,21.2s,baz=67,slow=31						
PPT2	**Papeete2**	**23.31**	**97**	*e*LR	LR	03 58 10.4	
	257nm,31.8s						
PPT2				*e*T	T	04 16 29.1	
	6.3nm,0.3s						
TIAR	**Tiarei**	**23.53**	**97**	*e*T	T	04 16 44.3	
	15nm,0.3s						
TVO	**Taravao**	**23.62**	**97**	*e*T	T	04 16 51.5	
	12nm,0.3s						
TBI	**Tubuai**	**24.02**	**111**	*e*LR	LR	03 58 33.2	
	168nm,33.2s						
TBI				*e*T	T	04 17 34.0	
	20nm,0.4s						
VAH	**Vaihoa**	**25.32**	**91**	*e*T	T	04 18 53.2	
	12nm,0.3s						
HNR	**Honiara**	**26.37**	**282**	LR	LR	04 01 42.9	
	comp=Z,120nm,19.9s,baz=97,slow=30						
KHZ	**Kahutara**	**28.13**	**200**	*e*P	**P**	**03 53 56.2**	**+0.9**
	43nm,0.8s						
RPZ	**Rata Peaks**	**30.13**	**202**	*e*P	**P**	**03 54 13.5**	**+0.4**
	36nm,1.1s						
RPZ	**Rata Peaks**	**30.13**	**202**	P	**P**	**03 54 12.7**	**-0.4**
	8.6nm,0.6s,baz=20,slow=3.2,SNR=9.3						
ARMA	**Armidale**	**34.44**	**240**	*e*P	**P**	**03 54 51.0**	**-0.1**
	15nm,0.7s						
RKT	**Rikitea**	**37.19**	**107**	*e*T	T	04 33 56.8	
	7.7nm,0.4s						
STKA	**Stephens Creek**	**43.14**	**241**	*e*P	**P**	**03 56 03.5**	**-0.2**
	3.7nm,0.8s						
STKA	**Stephens Creek**	**43.14**	**241**	P	**P**	**03 56 03.4**	**-0.2**
	19nm,0.8s,baz=85,slow=9.5,SNR=54						
WRAB	**Tennant Creek**	**49.14**	**258**	*e*P	**P**	**03 56 50.5**	**-0.3**
	2.6nm,0.5s						
WRA	**Warramunga Arr**	**49.15**	**258**	P	**P**	**03 56 50.4**	**-0.5**
WRA	**Warramunga Arr**	**49.15**	**258**	P	**P**	**03 56 50.4**	**-0.5**
	2.4nm,0.5s,baz=94,slow=7.2,SNR=42						
AS31	**Alice Springs**	**49.35**	**253**	*e*P	**P**	**03 56 51.6**	**-0.8**
ASAR	**Alice Springs**	**49.35**	**253**	P	**P**	**03 56 52.0**	**-0.4**
ASAR				pP	**pP**	**03 57 16.4**	**-0.4**
ASAR	**Alice Springs**	**49.35**	**253**	P	**P**	**03 56 52.0**	**-0.4**
	24nm,0.7s,baz=87,slow=8.5,SNR=192						
ASAR				pP	**pP**	**03 57 16.4**	**-0.4**
	6.3nm,0.7s,baz=87,slow=8.6,SNR=3.0						
ASAR				LR	LR	04 16 17.3	
	comp=Z,64nm,18.7s,baz=98,slow=34						
FORT	**Forrest**	**54.55**	**244**	*e*P	**P**	**03 57 29.5**	**-1.3**
	21nm,0.7s						
FITZ	**Fitzroy Crossi**	**57.53**	**259**	P	**P**	**03 57 52.7**	**+0.4**
FITZ	**Fitzroy Crossi**	**57.53**	**259**	P	**P**	**03 57 52.7**	**+0.4**
	0.7nm,0.5s,baz=171,slow=9.5,SNR=6.1						
SBA	**Scott Base**	**62.28**	**185**	*e*P	**P**	**03 58 24.9**	**+1.1**
	139nm,2.7s						
VNDA	**Vanda**	**62.40**	**186**	*e*P	**P**	**03 58 24.5**	**0.0**
	2.6nm,0.8s						
VNDA	**Vanda**	**62.40**	**186**	P	**P**	**03 58 24.4**	**-0.2**
	2.8nm,0.9s,baz=14,slow=5.6,SNR=8.3						
MBWA	**Marble Bar**	**62.62**	**254**	*e*P	**P**	**03 58 26.3**	**-0.7**
	6.6nm,0.6s						
NWAO	**Narrogin (SRO)**	**63.73**	**241**	LR	LR	04 24 01.2	
	comp=Z,74nm,19.0s,baz=233,slow=34						
MJAR	**Matsushiro Arr**	**69.33**	**320**	P	**P**	**03 59 12.2**	**+2.5**
MJAR	**Matsushiro Arr**	**69.33**	**320**	P	**P**	**03 59 12.2**	**+2.5**
	0.5nm,0.3s,baz=216,slow=5.7,SNR=6.2						
EDW2	**Edwards Air Fo**	**73.56**	**45**	⇑P	**P**	**03 59 35.4**	**+0.2**
	baz=74						
ISA	**Isabella**	**73.67**	**44**	⇓P	**P**	**03 59 36.2**	**+0.4**
	baz=74						
MPMC	**Manual Prospec**	**74.55**	**44**	⇑P	**P**	**03 59 41.5**	**+0.4**
	baz=75						
TUQ	**Turquoise Moun**	**75.28**	**46**	⇓P	**P**	**03 59 45.4**	**+0.2**
	baz=76						
NVAR	**Mina Array Bea**	**75.36**	**42**	P	**P**	**03 59 45.6**	**-0.1**
NVAR				pP	**pP**	**04 00 09.8**	**-2.1**
NVAR	**Mina Array Bea**	**75.36**	**42**	P	**P**	**03 59 45.6**	**-0.1**
	1.8nm,0.9s,baz=230,slow=8.5,SNR=11						
NVAR				pP	**pP**	**04 00 09.8**	**-2.1**
	2.1nm,0.8s,baz=226,slow=8.9,SNR=7.2						
NV11	**Mina Array Sit**	**75.45**	**42**	*e*P	**P**	**03 59 45.8**	**-0.3**
R11A	**Troy Canyon, C**	**77.08**	**43**	⇑P	**P**	**03 59 55.6**	**+0.2**
	baz=77						
TUC	**Tucson**	**77.37**	**51**	*e*P	**P**	**03 59 56.6**	**-0.4**
	0.6nm,0.9s						
X16A	**Lo Mia Camp, P**	**77.91**	**49**	⇑P	**P**	**04 00 00.6**	**+0.5**
	baz=78						
CCUT	**Cedar City**	**78.14**	**45**	*e*P	**P**	**04 00 01.9**	**+0.5**
	6.2nm,1.2s						
U15A	**North Rim**	**78.31**	**46**	⇑P	**P**	**04 00 03.0**	**+0.6**
	baz=78						
ELK	**Elko**	**78.61**	**41**	*e*P	**P**	**04 00 03.9**	**-0.1**
Z20A	**Nine Sixteen R**	**79.38**	**51**	⇓P	**P**	**04 00 08.6**	**+0.4**
	baz=80						
MSU	**Marysvale**	**79.44**	**45**	*e*P	**P**	**04 00 09.2**	**+0.7**
MDJ	**Mudanjiang**	**79.46**	**323**	P	**P**	**04 00 09.2**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
221A	**Mesquite Ranch**	**79.49**	**52**	⇑P	**P**	**04 00 09.2**	**+0.4**
	baz=80						
121A	**Cookes Peak, D**	**79.72**	**52**	⇓P	**P**	**04 00 10.5**	**+0.4**
	baz=80						
DUG	**Dugway**	**79.89**	**43**	*e*P	**P**	**04 00 10.5**	**-0.3**
	comp=Z,6.4nm,1.4s						
DUG	**Dugway**	**79.89**	**43**	⇑P	**P**	**04 00 10.9**	**+0.2**
	baz=80						
I12A	**Atlanta**	**80.36**	**39**	⇑P	**P**	**04 00 13.6**	**+0.3**
	baz=81						
W20A	**Ramah**	**80.37**	**49**	⇓P	**P**	**04 00 14.2**	**+0.5**
	baz=80						
Y21A	**Point of Rocks**	**80.47**	**50**	⇓P	**P**	**04 00 14.9**	**+0.7**
	baz=81						
TMUT	**Trail Mountain**	**80.49**	**44**	*e*P	**P**	**04 00 12.8**	**-1.5**
	comp=Z,6.8nm,0.8s						
HLID	**Hailey**	**80.67**	**39**	*e*P	**P**	**04 00 14.7**	**-0.2**
	comp=Z,2.7nm,1.0s						
HLID				*ep*P	**pP**	**04 00 40.3**	**-1.1**
HLID	**Hailey**	**80.67**	**39**	P	**P**	**04 00 15.0**	**+0.1**
	baz=81,SNR=5.2						
SRU	**San Rafael**	**80.86**	**45**	*e*P	**P**	**04 00 16.1**	**0.0**
	comp=Z,135nm,1.0s						
SRU	**San Rafael**	**80.86**	**45**	⇓P	**P**	**04 00 16.0**	**0.0**
	baz=81						
Y22A	**Socorro**	**80.96**	**51**	⇑P	**P**	**04 00 16.9**	**+0.2**
	baz=81						
324A	**Moseley Ranch,**	**81.00**	**54**	⇑P	**P**	**04 00 16.8**	**-0.1**
	baz=81						
J14A	**Carey**	**81.09**	**40**	P	**P**	**04 00 17.8**	**+0.7**
	baz=81,SNR=5.8						
425A	**Indio Mountain**	**81.11**	**54**	P	**P**	**04 00 17.3**	**-0.2**
	baz=81,SNR=8.8						
M16A	**Huntsville**	**81.23**	**42**	⇓P	**P**	**04 00 17.9**	**-0.1**
	baz=81						
626A	**Big Bend Ranch**	**81.27**	**56**	⇑P	**P**	**04 00 18.3**	**0.0**
	baz=81						
325A	**Bean Ranch, Si**	**81.36**	**54**	⇑P	**P**	**04 00 18.7**	**-0.2**
	baz=82						
F12A	**Elk City**	**81.38**	**37**	P	**P**	**04 00 18.0**	**-0.6**
	baz=82,SNR=8.7						
HWUT	**Hardware Ranch**	**81.42**	**42**	*e*P	**P**	**04 00 18.1**	**-0.9**
	comp=Z,1.9nm,0.8s						
CN2	**Changchun**	**81.48**	**320**	*e*P	**P**	**04 00 19.9**	**+0.9**
TXAR	**Lajitas Array**	**81.55**	**56**	P	**P**	**04 00 19.2**	**-0.6**
TXAR				pP	**pP**	**04 00 45.9**	**-0.4**
TXAR	**Lajitas Array**	**81.55**	**56**	P	**P**	**04 00 19.2**	**-0.6**
	comp=Z,1.6nm,1.0s,baz=223,slow=6.8,SNR=12						
TXAR				pP	**pP**	**04 00 45.9**	**-0.4**
	comp=Z,0.5nm,0.9s,baz=219,slow=3.2,SNR=2.8						
TXAR				LR	LR	04 28 54.5	
	comp=Z,31nm,20.8s,baz=180,slow=30						
124A	**Stringfield Ra**	**81.56**	**52**	⇑P	**P**	**04 00 20.1**	**+0.1**
	baz=82						
N17A	**Moffit Pass**	**81.56**	**43**	⇑P	**P**	**04 00 20.0**	**+0.1**
	baz=82						
U21A	**Nageezi**	**81.58**	**48**	P	**P**	**04 00 20.4**	**+0.4**
	baz=82,SNR=6.9						
ANMO	**Albuquerque**	**81.78**	**50**	*e*P	**P**	**04 00 20.7**	**-0.3**
	comp=Z,0.6nm,0.6s						
426A	**McDonald Obser**	**81.81**	**55**	P	**P**	**04 00 21.1**	**-0.2**
	baz=82,SNR=7.1						
627A	**Terlingua Ranc**	**81.82**	**56**	⇑P	**P**	**04 00 21.5**	**+0.2**
	baz=82						
H14A	**Leadore**	**81.87**	**39**	P	**P**	**04 00 21.6**	**+0.3**
	baz=82,SNR=5.3						
S21A	**Coal Bank Pass**	**82.05**	**47**	P	**P**	**04 00 22.9**	**+0.3**
	baz=82,SNR=9.1						
Y24A	**Capitan**	**82.10**	**51**	⇓P	**P**	**04 00 22.6**	**-0.1**
	baz=82						
MCK	**McKinley**	**82.14**	**11**	*e*P	**P**	**04 00 22.2**	**+0.2**
	comp=Z,8.6nm,1.1s						
G14A	**Jackson**	**82.15**	**38**	⇑P	**P**	**04 00 23.1**	**+0.3**
	baz=82						
P19A	**Cripple Cowboy**	**82.16**	**45**	⇓P	**P**	**04 00 23.0**	**0.0**
	baz=82						
GDL2	**Guadalupe Moun**	**82.18**	**53**	*e*P	**P**	**04 00 23.0**	**-0.1**
	comp=Z,10nm,1.1s						
628A	**Black Gap, Mar**	**82.23**	**56**	⇓P	**P**	**04 00 23.2**	**-0.2**
	baz=82						
J16A	**Bone**	**82.25**	**41**	⇑P	**P**	**04 00 23.9**	**+0.6**
	baz=82						
226B	**Tecolote Peak,**	**82.28**	**53**	P	**P**	**04 00 23.4**	**-0.1**
	baz=82,SNR=5.9						
MCMT	**McKenzie Canyo**	**82.30**	**39**	*e*P	**P**	**04 00 23.3**	**-0.3**
	comp=Z,1.5nm,1.0s						
MCMT				*ep*P	**pP**	**04 00 50.5**	**+0.4**
Q20A	**Ridgley Place,**	**82.30**	**46**	P	**P**	**04 00 23.7**	**+0.1**
	baz=82,SNR=6.2						
H15A	**Lima**	**82.31**	**39**	P	**P**	**04 00 24.1**	**+0.5**
	baz=82,SNR=6.4						
427A	**Hayter Ranch,**	**82.37**	**55**	⇓P	**P**	**04 00 24.1**	**0.0**
	baz=82						
RRI2	**Red Ridge**	**82.47**	**41**	*e*P	**P**	**04 00 24.2**	**-0.4**
	comp=Z,9.2nm,1.3s						
RRI2				*ep*P	**pP**	**04 00 51.1**	**0.0**
R21A	**Cimarron**	**82.55**	**47**	P	**P**	**04 00 25.4**	**+0.4**
	baz=83,SNR=7.4						
528A	**Cox Ranch, San**	**82.58**	**56**	⇓P	**P**	**04 00 25.1**	**-0.1**
	baz=83						
U23A	**El Rito**	**82.59**	**49**	P	**P**	**04 00 25.6**	**+0.3**
	baz=83,SNR=9.9						
I16A	**Newdale**	**82.63**	**40**	P	**P**	**04 00 25.9**	**+0.6**
	baz=83,SNR=7.9						
W24A	**Lazy 6 Ranch,**	**82.67**	**50**	P	**P**	**04 00 25.4**	**-0.3**
	baz=83,SNR=6.8						
G15A	**Dillon**	**82.69**	**39**	P	**P**	**04 00 25.7**	**+0.1**
	baz=83,SNR=8.7						
DLMT	**Dillon**	**82.73**	**39**	*e*P	**P**	**04 00 25.2**	**-0.5**
	comp=Z,4.7nm,1.1s						
S22A	**4UR Ranch, Cre**	**82.77**	**47**	P	**P**	**04 00 26.4**	**+0.2**
	baz=83,SNR=11						
TPAW	**Teton Pass**	**82.77**	**41**	*e*P	**P**	**04 00 25.6**	**-0.5**
	comp=Z,4.6nm,0.9s						
BSMT	**Bassoo Peak**	**82.81**	**36**	*e*P	**P**	**04 00 25.4**	**-0.7**
BSMT				*ep*P	**pP**	**04 00 52.9**	**+0.2**
J17A	**Brown Place, J**	**82.86**	**41**	P	**P**	**04 00 26.1**	**-0.3**
	baz=83,SNR=7.2						
SNOW	**Snow King Moun**	**82.88**	**41**	*e*P	**P**	**04 00 26.7**	**+0.1**
	comp=Z,7.0nm,1.0s						
K18A	**Toltan Ranch,**	**82.92**	**42**	P	**P**	**04 00 27.0**	**+0.2**
	baz=83,SNR=10						
X25A	**Clemmons Ranch**	**82.93**	**51**	P	**P**	**04 00 26.6**	**-0.4**
	baz=83,SNR=5.4						
IMW	**Indian Meadow**	**82.98**	**40**	*e*P	**P**	**04 00 27.4**	**+0.1**
	comp=Z,6.4nm,1.0s						
IMW				*ep*P	**pP**	**04 00 53.9**	**+0.1**
V24A	**Rampart Ranch,**	**83.00**	**50**	⇑P	**P**	**04 00 27.4**	**-0.1**
	baz=83						
529A	**Stev Forest Ra**	**83.02**	**56**	⇓P	**P**	**04 00 27.1**	**-0.3**
	baz=83						
MOOW	**Moose Ponds**	**83.03**	**41**	*e*P	**P**	**04 00 27.7**	**+0.3**
	comp=Z,1.9nm,1.0s						
R22A	**Saguache, Gunn**	**83.04**	**47**	P	**P**	**04 00 28.2**	**+0.5**
	baz=83,SNR=6.3						
F15A	**Butte**	**83.05**	**38**	⇑P	**P**	**04 00 27.5**	**+0.1**
	baz=83						
L19A	**Farson**	**83.10**	**43**	P	**P**	**04 00 27.7**	**-0.1**
	baz=83,SNR=6.3						
G16A	**Moss Hill, Enn**	**83.14**	**39**	⇑P	**P**	**04 00 28.0**	**+0.2**
	baz=83						
CHMT	**Chamberlain Mo**	**83.17**	**37**	*e*P	**P**	**04 00 27.4**	**-0.6**
CHMT				*ep*P	**pP**	**04 00 54.0**	**-0.7**
H16A	**Russell Place,**	**83.20**	**40**	P	**P**	**04 00 28.8**	**+0.5**
	baz=83,SNR=17						
N20A	**Spence Gulch,**	**83.21**	**44**	⇓P	**P**	**04 00 28.5**	**+0.1**
	baz=83						
J18A	**Kendall Valley**	**83.22**	**41**	P	**P**	**04 00 28.3**	**-0.1**
	baz=83,SNR=18						
Q22A	**Crested Butte,**	**83.22**	**46**	P	**P**	**04 00 28.4**	**-0.2**
	baz=83,SNR=6.8						
BW06	**Boulder Array**	**83.29**	**42**	*e*P	**P**	**04 00 27.8**	**-1.0**
	comp=Z,5.1nm,0.9s						
BW06	**Boulder Array**	**83.29**	**42**	P	**P**	**04 00 28.2**	**-0.5**
	baz=84,SNR=6.8						
PDAR	**Pinedale Array**	**83.29**	**42**	P	**P**	**04 00 28.0**	**-0.8**
PDAR				pP	**pP**	**04 00 53.3**	**-2.0**
PDAR	**Pinedale Array**	**83.29**	**42**	P	**P**	**04 00 28.0**	**-0.8**
	comp=Z,4.5nm,0.8s,baz=210,slow=3.0,SNR=34						
PDAR				pP	**pP**	**04 00 53.3**	**-2.0**
	comp=Z,1.1nm,0.8s,baz=186,slow=2.8,SNR=2.7						
PDAR				LR	LR	04 30 44.4	
	comp=Z,38nm,18.7s,baz=66,slow=31						
SMCO	**Snowmass**	**83.32**	**46**	*e*P	**P**	**04 00 29.1**	**-0.1**
	comp=Z,5.9nm,1.1s						
COLA	**College**	**83.37**	**11**	*e*P	**P**	**04 00 28.4**	**+0.1**
	comp=Z,4.5nm,0.9s						
W25A	**X Bar L Ranch,**	**83.38**	**51**	⇑P	**P**	**04 00 29.0**	**-0.3**
	baz=84						
BOZ	**Bozeman (W)**	**83.46**	**39**	*e*P	**P**	**04 00 29.4**	**-0.1**
	comp=Z,4.5nm,1.0s						
BOZ	**Bozeman (W)**	**83.46**	**39**	⇑P	**P**	**04 00 29.6**	**+0.2**
	baz=84,SNR=5.7						
ILAR	**Eielson Array**	**83.46**	**11**	P	**P**	**04 00 29.6**	**+0.7**
ILAR				pP	**pP**	**04 00 56.7**	**+1.3**
ILAR	**Eielson Array**	**83.46**	**11**	P	**P**	**04 00 29.6**	**+0.7**
	comp=Z,0.7nm,1.0s,baz=234,slow=5.0,SNR=6.2						
ILAR				pP	**pP**	**04 00 56.7**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=230,slow=6.1,SNR=5.3						
H17A	**Grant Village**	**83.46**	**40**	⇓P	**P**	**04 00 30.9**	**+1.2**
	baz=84						
429A	**Davenport Ranc**	**83.47**	**56**	P	**P**	**04 00 29.1**	**-0.7**
	baz=84,SNR=6.0						
Z27A	**Tatum**	**83.52**	**53**	⇑P	**P**	**04 00 29.6**	**-0.4**
	baz=84						
V25A	**Rancho No Teng**	**83.53**	**50**	⇑P	**P**	**04 00 30.0**	**-0.1**
	baz=84						
I18A	**Diamond G Ranc**	**83.59**	**41**	P	**P**	**04 00 30.1**	**-0.2**
	baz=84,SNR=5.0						
A13A	**Flathead Natio**	**83.62**	**35**	⇓P	**P**	**04 00 30.1**	**0.0**
	baz=84						
LKWY	**Lake**	**83.66**	**40**	*e*P	**P**	**04 00 32.0**	**+1.4**
	comp=Z,6.4nm,1.0s						
LKWY				*ep*P	**pP**	**04 00 56.6**	**-0.6**
D15A	**Lincoln**	**83.66**	**37**	⇑P	**P**	**04 00 30.6**	**+0.1**
	baz=84						
N21A	**Black Mountain**	**83.68**	**44**	P	**P**	**04 00 30.4**	**-0.3**
	baz=84,SNR=6.7						
L20A	**Wamsutter**	**83.72**	**43**	P	**P**	**04 00 31.1**	**+0.1**
	baz=84,SNR=5.3						
Y27A	**Causey**	**83.79**	**52**	P	**P**	**04 00 30.9**	**-0.6**
	baz=84,SNR=5.2						
128A	**Castleberry Fa**	**83.80**	**54**	⇑P	**P**	**04 00 31.3**	**-0.2**
	baz=84						
G17A	**Pierce Place,**	**83.83**	**39**	⇓P	**P**	**04 00 32.2**	**+0.8**
	baz=84						
J19A	**Crowheart**	**83.86**	**42**	P	**P**	**04 00 31.2**	**-0.4**
	baz=84,SNR=6.4						
E16A	**East Helena**	**83.89**	**38**	⇑P	**P**	**04 00 31.7**	**+0.1**
	baz=84						
U25A	**Circle Dot Ran**	**83.92**	**49**	⇓P	**P**	**04 00 31.9**	**-0.2**
	baz=84						
631A	**Perdido Creek**	**84.06**	**57**	⇓P	**P**	**04 00 32.3**	**-0.4**
	baz=84						
O22A	**Kremmling**	**84.06**	**45**	⇑P	**P**	**04 00 32.9**	**0.0**
	baz=84						
M21A	**Separation Pea**	**84.17**	**44**	P	**P**	**04 00 32.8**	**-0.5**
	baz=84,SNR=5.5						
F17A	**Fitzpatrick Pl**	**84.17**	**39**	P	**P**	**04 00 33.6**	**+0.5**
	baz=84,SNR=5.1						
D16A	**Dana Ranch, Ca**	**84.22**	**38**	⇑P	**P**	**04 00 33.5**	**+0.2**
	baz=84						
I19A	**Meeteetse**	**84.27**	**41**	⇑P	**P**	**04 00 33.8**	**+0.1**
	baz=84						
B15A	**Bradely Ranch,**	**84.31**	**36**	⇑P	**P**	**04 00 34.2**	**+0.5**
	baz=84						
E17A	**Martinsdale**	**84.34**	**38**	⇓P	**P**	**04 00 34.2**	**+0.3**
	baz=84						
531A	**Rocksprings**	**84.37**	**56**	⇓P	**P**	**04 00 33.9**	**-0.3**
	baz=84						
U26A	**Atchley Ranch,**	**84.40**	**50**	⇑P	**P**	**04 00 34.2**	**-0.4**
	baz=84						
S25A	**Robets Cordova**	**84.44**	**48**	⇑P	**P**	**04 00 34.8**	**+0.1**
	baz=85						
C16A	**Fuhringer Ranc**	**84.51**	**37**	⇓P	**P**	**04 00 34.3**	**-0.3**
	baz=85						
O23A	**Lake Granby, G**	**84.51**	**46**	⇓P	**P**	**04 00 35.2**	**+0.1**
	baz=85						
J20A	**Shoshoni**	**84.52**	**42**	⇑P	**P**	**04 00 34.9**	**0.0**
	baz=85						
G18A	**Lazy EL Ranch,**	**84.55**	**40**	⇓P	**P**	**04 00 35.3**	**+0.3**
	baz=85						
H19A	**Powell**	**84.59**	**40**	⇑P	**P**	**04 00 35.6**	**+0.4**
	baz=85						
RLMT	**Red Lodge**	**84.63**	**40**	*e*P	**P**	**04 00 35.7**	**+0.2**
	comp=Z,3.2nm,0.9s						
RLMT	**Red Lodge**	**84.63**	**40**	⇓P	**P**	**04 00 35.9**	**+0.4**
	baz=85						
632A	**Uvalde**	**84.73**	**57**	⇓P	**P**	**04 00 35.6**	**-0.5**
	baz=85						
I20A	**Worland**	**84.78**	**41**	⇓P	**P**	**04 00 36.0**	**-0.1**
	baz=85						
D17A	**Six Diamond Ra**	**84.79**	**38**	⇓P	**P**	**04 00 36.3**	**+0.2**
	baz=85						
N23A	**Red Feather La**	**84.80**	**45**	⇑P	**P**	**04 00 36.4**	**-0.1**
	baz=85						
B16A	**M & M Farms, S**	**84.85**	**36**	⇓P	**P**	**04 00 36.4**	**0.0**
	baz=85						
Y29A	**Porterfield Fa**	**84.92**	**53**	⇑P	**P**	**04 00 36.6**	**-0.4**
	baz=85						
J21A	**Lysite**	**84.93**	**42**	P	**P**	**04 00 36.8**	**-0.3**
	baz=85,SNR=5.4						
E18A	**Harlowton**	**84.95**	**39**	⇑P	**P**	**04 00 37.7**	**+0.7**
	baz=85						
130A	**Snyder**	**84.97**	**54**	⇑P	**P**	**04 00 37.0**	**-0.3**
	baz=85						
C17A	**Wharram Farm,**	**84.99**	**37**	⇓P	**P**	**04 00 37.1**	**0.0**
	baz=85						
Z30A	**Sanderson Ranc**	**85.11**	**53**	⇑P	**P**	**04 00 37.2**	**-0.8**
	baz=85						
A16A	**West Butte Ran**	**85.19**	**36**	⇑P	**P**	**04 00 37.9**	**-0.2**
	baz=85						
231A	**Bronte**	**85.22**	**55**	⇓P	**P**	**04 00 37.5**	**-1.1**
	baz=85						
I21A	**Big Trails, Te**	**85.25**	**42**	⇓P	**P**	**04 00 38.0**	**-0.6**
	baz=85						
PHWY	**Pilot Hill**	**85.31**	**45**	*e*P	P	04 00 35.7	-3.4
Z31A	**Sharp Cattle R**	**85.89**	**54**	⇑P	**P**	**04 00 41.2**	**-0.6**
	baz=86						
ABTX	**Abilene, Hawle**	**86.01**	**55**	⇑P	**P**	**04 00 42.1**	**-0.3**
	baz=86						
C19A	**Slack Wire Ran**	**86.05**	**38**	⇓P	**P**	**04 00 42.6**	**+0.3**
	baz=86						
Z32A	**Haskell**	**86.40**	**54**	⇑P	**P**	**04 00 44.1**	**-0.1**
	baz=86						
GYA	**Guiyang**	**88.04**	**298**	*e*P	**P**	**04 00 53.0**	**+0.5**
GYA				pP	**pP**	**04 01 20.4**	**+1.1**
GYA				sP	**sP**	**04 01 31.6**	**+1.4**
GYA				PP	**PP**	**04 04 23.2**	**+2.5**
GYA				SKS	**SKSac**	**04 11 09.8**	**-2.3**
GYA				S	**S**	**04 11 27.0**	**-1.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PLCA	**Paso Flores**	**89.25**	**132**	*e*P	**P**	**04 01 00.1**	**+2.1**
	comp=Z

IDC 11 03:57:22.2±4.1, 10°06'S×120°42'E, h72km±36km, mb3.1/2, mb1 3.3/6, mb1mx3.2/20, mbtmp3.2/6, ML3.2/4, Error ellipse: s-maj=115.8km s-min=21.0km az=63.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**5.06**	**352**	P	Pn	03 58 36.4	+0.8
	3.2nm,0.3s,baz=180,slow=10,SNR=14						
FITZ	**Fitzroy Crossi**	**9.46**	**148**	P	Pn	03 59 34.3	-1.5
	0.2nm,0.3s,baz=334,slow=13,SNR=8.1						
FITZ				S	Sn	04 01 12.2	-8.3
	1.3nm,0.3s,baz=223,slow=19,SNR=14						
WRA	**Warramunga Arr**	**16.64**	**128**	P	Pn	04 01 09.9	-1.1
	0.1nm,0.3s,baz=303,slow=13,SNR=3.5						
WRA				S	Sn	04 03 59.3	-16
	0.2nm,0.3s,baz=297,slow=25,SNR=4.1						
ASAR	**Alice Springs**	**18.67**	**138**	P	Pn	04 01 36.8	+0.9
	0.1nm,0.3s,baz=315,slow=10,SNR=7.0						
ASAR				S	S	04 04 53.7	-10
	0.1nm,0.3s,baz=305,slow=22,SNR=4.4						
SONM	**Songino Array**	**58.97**	**349**	P	P	04 07 13.6	-0.8
	0.3nm,0.5s,baz=167,slow=8.9,SNR=3.4						
MKAR	**Makanchi Array**	**66.04**	**332**	P	P	04 08 01.7	+0.3
	0.3nm,0.8s,baz=163,slow=5.6,SNR=2.7						

IDC 11 04:00:26.6±10.0, 28°12'S×178°93'W, h341km±81km, mb2.9/3, mb1 3.2/4, mb1mx3.0/19, mbtmp3.1/4, Error ellipse: s-maj=102.5km s-min=24.1km az=45.0

ISC 11 04:00:26.2±2.0, 28°25'S±0°1×178°18'W±0°3, h351km, n11, σ2s19/12, mb2.7/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**10.59**	**196**	*e*PN	**Pn**	**04 02 50.4**	**-0.8**
URZ	**Urewera**	**10.63**	**198**	*e*PN	**Pn**	**04 02 49.4**	**-2.2**
URZ	**Urewera**	**10.63**	**198**	P	**Pn**	**04 02 51.2**	**-0.3**
	1.6nm,0.3s,baz=96,slow=9.2,SNR=17						
URZ				S	**S**	**04 04 51.2**	**+0.4**
	1.2nm,0.3s,baz=93,slow=18,SNR=11						
PXZ	**Pawanui**	**12.36**	**196**	*e*PN	**P**	**04 03 09.4**	**-2.2**
OGWZ	**Otaki Gorge**	**13.55**	**200**	*e*PN	P	04 03 21.5	-3.4
TUWZ	**Tuamarina**	**14.50**	**202**	*e*PN	**P**	**04 03 32.8**	**-2.3**
KHZ	**Kahutara**	**15.52**	**202**	*e*PN	**P**	**04 03 45.6**	**-0.6**
KHZ				*e*SN	**S**	**04 06 36.7**	**+4.5**
ASAR	**Alice Springs**	**42.55**	**265**	P	**P**	**04 07 50.0**	**+1.0**
	0.2nm,0.4s,baz=93,slow=7.6,SNR=4.6						
WRA	**Warramunga Arr**	**43.34**	**270**	P	**P**	**04 07 54.7**	**-0.5**
	0.2nm,0.4s,baz=112,slow=6.4,SNR=5.1						
QSPA	**South Pole Qui**	**61.94**	**180**	P	**P**	**04 10 11.7**	**+2.2**
	1.5nm,0.6s,baz=20,slow=0.1,SNR=15						
TORD	**Torodi Ar. Bea**	**165.05**	**182**	PKPab	**PKPab**	**04 20 48.2**	**+0.1**
	0.3nm,0.6s,baz=182,slow=2.8,SNR=9.2						

MEX 11 04:38:08.9±1.0, 17°53N×100°89W, h30km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.56**	**278**	*i* P	Pb	04 38 17.9	-2.3
ZIIG				*i* S	Sb	04 38 26.6	-1.4
CAIG	**El Cayaco**	**0.76**	**129**	*i* P	Pn	04 38 20.9	-2.7
CAIG				*i* S	Sb	04 38 31.5	-2.2
ARIG	**Puente Sto Nin**	**0.91**	**34**	*i* P	Pn	04 38 23.1	-2.6
ARIG				*e*S	Sn	04 38 35.4	-2.3
MEIG	**Mezcala**	**1.27**	**72**	*i* P	Pn	04 38 29.1	-1.6
MEIG				*e*S	Sn	04 38 43.5	-3.3
YAIG	**Yautepec**	**2.18**	**52**	*i* P	Pn	04 38 40.7	-2.6
YAIG				*e*S	Sn	04 39 07.5	-2.0
PPM	**Popocatepetl**	**2.63**	**54**	*i* P	Pn	04 38 47.4	-2.7
PPM				*e*S	Sn	04 39 17.8	-3.7

DDA 11 04:43:06.9, 37°11N×30°46E, h5km, MD3.0
ISK 11 04:43:07.8, 37°11N×30°41E, h13km, MD2.7
ISCJB 11 04:43:08.1±0.5, 37°10N±0°03×30°39E±0°05, h9km±6km, Error ellipse: s-maj=6.5km s-min=5.6km az=26.2
CSEM 11 04:43:08.0±0.2, 37°09N×30°40E, h8km, MD3.0, Error ellipse: s-maj=4.1km s-min=3.5km az=125.0

ISC 11 04:43:07.9±0.9, 37°10N±0°03×30°39E±0°03, h8km±7km, n26, σ0s38/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KORT	**Korkueli**	**0.10**	**200**	*i* P	**Pg**	**04 43 10.1**	**-0.4**
KORT				*i* S	**Sg**	**04 43 12.5**	**+0.3**
KORT	**Korkueli**	**0.10**	**200**	*i* P	**Pg**	**04 43 10.1**	**-0.4**
KORT				*i* S	**Sg**	**04 43 12.5**	**+0.3**
ANTB	**Antalya**	**0.29**	**133**	*e*PG	**Pg**	**04 43 14.0**	**+0.4**
ANTB				*e*SG	**Sb**	**04 43 18.8**	**-1.4**
ANTB	**Antalya**	**0.29**	**133**	*e*Pg	**Pg**	**04 43 14.0**	**+0.4**
BCK	**Bucak**	**0.40**	**23**	*e*PG	**Pg**	**04 43 15.8**	**+0.1**
BCK				*e*SG	**Sg**	**04 43 21.5**	**+0.6**
BCK	**Bucak**	**0.40**	**23**	*e*Pg	**Pg**	**04 43 15.8**	**+0.1**
BCK				*e*Sg	**Sg**	**04 43 21.5**	**+0.6**
ELL	**Elmali**	**0.52**	**228**	*e*PG	**Pg**	**04 43 18.5**	**+0.4**
ELL	**Elmali**	**0.52**	**228**	*e*Pg	**Pg**	**04 43 18.5**	**+0.4**
GOLH	**Golhisar**	**0.68**	**282**	*i* P	**Pg**	**04 43 20.7**	**-0.4**
GOLH				*i* S	**Sb**	**04 43 31.7**	**0.0**
GOLH	**Golhisar**	**0.68**	**282**	*i* P	**Pg**	**04 43 20.7**	**-0.4**
GOLH				*i* S	**Sb**	**04 43 31.7**	**0.0**
GLHS	**Glhisar (BURDU**	**0.72**	**275**	*e*PG	**Pb**	**04 43 22.7**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.72**	**275**	*e*Pg	**Pb**	**04 43 22.7**	**-0.1**
ISP	**Isparta**	**0.73**	**8**	*e*PG	**Pb**	**04 43 23.0**	**0.0**
ISP	**Isparta**	**0.73**	**8**	*e*Pg	**Pb**	**04 43 23.0**	**0.0**
FETY	**Fethiye**	**1.15**	**247**	*e*PN	**Pg**	**04 43 30.2**	**+0.2**
FETY	**Fethiye**	**1.15**	**247**	*e*Pn	**Pg**	**04 43 30.2**	**+0.2**
KHL	**Karahalli**	**1.41**	**331**	*e*PN	**Pn**	**04 43 33.8**	**-0.2**
KHL	**Karahalli**	**1.41**	**331**	*e*Pn	**Pn**	**04 43 33.8**	**-0.2**
DALT	**Dalyan (Mudla)**	**1.45**	**257**	*e*PN	**Pn**	**04 43 34.8**	**+0.3**
DALT	**Dalyan (Mudla)**	**1.45**	**257**	*e*Pn	**Pn**	**04 43 34.8**	**+0.3**
KHAL	**Karahalli**	**1.46**	**331**	*e*P	**Pn**	**04 43 34.7**	**0.0**
KHAL				*e*S	**Sn**	**04 43 54.0**	**-0.1**
KHAL	**Karahalli**	**1.46**	**331**	*e*P	**Pn**	**04 43 34.7**	**0.0**
KHAL				*e*S	**Sn**	**04 43 54.0**	**-0.1**
YER	**Yerkesik**	**1.69**	**272**	*e*PN	**Pn**	**04 43 37.8**	**0.0**
YER	**Yerkesik**	**1.69**	**272**	*e*Pn	**Pn**	**04 43 37.8**	**0.0**
KULA	**Kula-Manisa**	**1.97**	**316**	*e*PN	**Pn**	**04 43 41.8**	**0.0**
KULA	**Kula-Manisa**	**1.97**	**316**	*e*Pn	**Pn**	**04 43 41.8**	**0.0**

IDC 11 05:07:57.3±2.4, 20°78S×69°61W, h0km, mb3.9/2, mb1 4.1/4, mb1mx3.8/16, mbtmp3.9/4, ML3.9/2, MS3.1/1, Ms1 3.1/1, ms1mx2.2/23, Error ellipse: s-maj=58.5km s-min=46.5km az=1.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.68**	**18**	Pn	Pn	05 09 09.4	-0.4
	1.6nm,0.3s,baz=193,slow=8.6,SNR=36						
SIV	**San Ignacio**	**9.40**	**61**	Pn	Pn	05 10 14.8	+0.7
	2.1nm,0.3s,baz=267,slow=13,SNR=38						
ATAH	**Atahualpa**	**16.01**	**327**	LR	LR	05 18 23.5	
	comp=Z,66nm,20.8s,baz=320,slow=39						
BDFB	**Brasilia**	**21.14**	**80**	P	P	05 12 49.3	+5.2
	2.3nm,0.5s,baz=256,slow=10,SNR=9.9						
TORD	**Torodi Ar. Bea**	**77.73**	**71**	P	P	05 19 56.5	-0.1
	0.6nm,0.5s,baz=257,slow=5.7,SNR=12						
YKA	**Yellowknife Ar**	**90.29**	**341**	P	P	05 20 59.7	+0.1
	0.5nm,0.7s,baz=135,slow=4.8,SNR=13						

TRN 11 05:18:32.1, 17°46N×62°15W, h13km, MD3.8, M3.8(FDF), 8C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPA	**Boggy Peak**	**0.50**	**146**	⇓*i*P	Pn	05 18 44.1	-0.8
BPA				*e*S	Sn	05 18 52.4	-1.0
SKI	**Saint Kitts**	**0.58**	**257**	⇑*i*P	Pn	05 18 45.9	-0.1
SKI				*e*S	Sn	05 18 55.1	-0.2
MBWH		**0.71**	**183**	⇑*i*P	Pn	05 18 48.7	+0.8
MBWH				*e*S	Sn	05 19 00.6	+1.8
MBGB		**0.73**	**186**	⇑*i*P	Pn	05 18 49.1	+1.0
MBGB				*i* S	Sn	05 19 01.5	+2.5
MBLG		**0.73**	**181**	⇓*i*P	Pn	05 18 49.3	+1.1
MBLG				*e*S	Sn	05 19 01.2	+2.0
MLYT	**Lee's Yard**	**0.74**	**183**	⇑*i*P	Pn	05 18 49.2	+1.0
MLYT				*e*S	Sn	05 19 01.8	+2.5
MBRY		**0.75**	**180**	⇑*i*P	Pn	05 18 49.5	+1.1
MBRY				*e*S	Sn	05 19 01.1	+1.4
SEUS	**St. Eustatius**	**0.79**	**272**	*e*Pg	Pn	05 18 49.0	0.0
	520nm,0.3s						
SEUS				*e*Sg	Sn	05 19 00.9	+0.2
SABA	**Saba**	**1.05**	**279**	*e*Pg	Pn	05 18 53.1	+0.5
	272nm,0.3s						
SABA				*e*Sg	Sn	05 19 08.0	+0.9
SEG	**Port Louis**	**1.22**	**149**	⇑*i*P	Pg	05 18 55.9	+0.3
LZG	**Guadaloupe-1**	**1.36**	**165**	⇑*i*P	Pg	05 18 58.9	+0.6
BCG	**Bois Riant Cap**	**1.46**	**160**	*e*P	Pg	05 19 00.0	-0.2
SCG	**Saint Claude**	**1.49**	**162**	*e*P	Pg	05 19 01.1	+0.2
SFG	**Saint Francois**	**1.51**	**143**	*e*P	Pb	05 19 00.2	+0.3
DOG	**Dongo Capester**	**1.51**	**160**	*e*P	Pg	05 19 00.8	-0.4
PHG	**Guadaloupe-2**	**1.52**	**161**	*e*P	Pg	05 19 01.1	-0.3
HMG	**Houelmont**	**1.53**	**164**	*e*P	Pg	05 19 01.5	-0.1
TBG	**Guadaloupe-3**	**1.67**	**163**	*e*P	Pb	05 19 02.2	-0.5
MGG	**Marie-Galante**	**1.73**	**152**	⇑*i*P	Pb	05 19 03.6	-0.1
DVCT	**Vielle Casse P**	**1.97**	**159**	*e*P	Pb	05 19 06.8	-0.9
DVCT				*e*S	Sb	05 19 32.0	-0.2
DWS	**Wesley**	**2.05**	**157**	*e*S	Sb	05 19 35.3	+0.8
FDF	**Fort de France**	**2.88**	**160**	*e*P	Pb	05 19 22.0	-1.4
FDF				*e*S	Sb	05 19 58.6	+0.1
MVM	**Montagne Vaucl**	**3.13**	**157**	*e*P	Pn	05 19 23.6	+2.4

ISCJB 11 05:19:41.1±1.2, 39°29N±0°08×74°1E±0°1, h28km, mb3.6/4, Error ellipse: s-maj=12.9km s-min=10.9km az=43.7
NNC 11 05:19:44.6±3.7, 39°69N×74°24E, h4km±26km, mb3.6, mpv3.2, Error ellipse: s-maj=34.3km s-min=14.9km az=173.0
IDC 11 05:19:45.6±5.6, 39°35N×74°47E, h59km±43km, mb3.3/4, mb1 3.4/6, mb1mx3.1/28, mbtmp3.2/6, ML2.6/2, Error ellipse: s-maj=48.1km s-min=38.9km az=93.0

ISC 11 05:19:42.7±1.6, 39°3N±0°1×74°2E±0°1, h28km, n16, σ1s24/19, mb3.6/4, 3C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.83**	**352**	P	**Pn**	**05 20 26.6**	**+0.3**
	SNR=39						
KZA	**Kyzart**	**2.85**	**16**	P	**Pn**	**05 20 26.1**	**-0.7**
	SNR=23						
ULHL	**Ulahol**	**3.29**	**27**	P	**Pn**	**05 20 34.8**	**+2.2**
	SNR=21						
AAK	**Ala-Archa**	**3.31**	**4**	P	**Pn**	**05 20 33.5**	**+0.8**
	SNR=14						
AAK	**Ala-Archa**	**3.31**	**4**	P	**Pn**	**05 20 33.6**	**+0.9**
	1.8nm,0.3s,baz=161,slow=7.1,SNR=31						
AAK				S	**Sn**	**05 21 13.4**	**+2.2**
	3.6nm,0.3s,baz=352,slow=15,SNR=9.1						
EKS2	**Erkin-Say**	**3.34**	**354**	P	**Pn**	**05 20 34.6**	**+1.4**
	SNR=7.1						
KBK	**Karagaybulak**	**3.37**	**9**	P	**Pn**	**05 20 34.5**	**+0.9**
	SNR=21						
TKM2	**Tokmak 2**	**3.74**	**16**	⇓Pn	**Pn**	**05 20 38.3**	**-0.4**
	3.2nm,0.2s						
TKM2				⇑Sn	**Sn**	**05 21 20.3**	**-1.6**
	41nm,0.8s						
TKM2	**Tokmak 2**	**3.74**	**16**	P	**Pn**	**05 20 38.6**	**-0.1**
	SNR=20						
KK31	**Karatay Array**	**4.69**	**325**	Pn	**Pn**	**05 20 53.2**	**+1.5**
	0.8nm,0.2s,baz=123,slow=12,SNR=53						
KK31				⇓Sn	**Sn**	**05 21 45.2**	**+0.1**
	3.3nm,0.7s,baz=191,slow=41,SNR=3.5						
KK31				⇑Lg	Lg	05 22 04.9	
	3.1nm,0.4s,baz=132,slow=26,SNR=4.2						
MKAR	**Makanchi Array**	**9.51**	**36**	P	**Pn**	**05 21 58.9**	**+1.1**
	0.0nm,0.3s,baz=214,slow=12,SNR=2.7						
AB31	**Akbulak array**	**14.22**	**319**	⇑P	**Pn**	**05 23 00.7**	**-1.4**
	0.8nm,0.7s,baz=123,slow=13,SNR=9.6						
FINES	**FINESS Array B**	**36.65**	**323**	P	**P**	**05 26 46.7**	**+0.2**
	2.0nm,0.9s,baz=97,slow=12,SNR=3.1						
ARCES	**ARCESS Array B**	**39.56**	**335**	P	**P**	**05 27 10.7**	**-0.3**
	1.3nm,0.8s,baz=112,slow=8.8,SNR=5.6						
TORD	**Torodi Ar. Bea**	**68.31**	**269**	P	**P**	**05 30 42.5**	**+1.0**
	0.2nm,0.5s,baz=44,slow=7.7,SNR=2.8						
YKA	**Yellowknife Ar**	**78.27**	**4**	P	**P**	**05 31 38.5**	**-1.0**
	0.2nm,0.7s,baz=350,slow=5.3,SNR=5.7						

CSEM 11 05:24:49.5, 42°37N×13°36E, h12km, MD1.7/4, After ROM

ROM 11 05:24:49.5±0.1, 42°37N×13°36E, h12km±2km, Md1.7/4, Ml1.3/2, 6C, Error ellipse: s-maj=1.7km s-min=1.2km az=108.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**116**	⇑*e*Pg	Pg	05 24 52.3	+0.5
AQU				Sg	Sg	05 24 53.7	+0.3
	490nm,0.3s						
AQU	**L'Aquila**	**0.04**	**116**	⇑*e*Pg	Pg	05 24 52.3	+0.5
AQU				Sg	Sg	05 24 53.7	+0.3
	490nm,0.3s						
CAMP	**Campotosto**	**0.17**	**12**	⇑*i*Pg	Pg	05 24 54.1	+0.5
CAMP				Sg	Sg	05 24 57.0	+0.6
	54nm,0.4s						
CAMP	**Campotosto**	**0.17**	**12**	⇑*i*Pg	Pg	05 24 54.1	+0.5
CAMP				Sg	Sg	05 24 57.0	+0.6
	54nm,0.4s						
FIAM	**Fiamignano**	**0.21**	**241**	⇑*i*Pg	Pg	05 24 54.6	+0.5
FIAM				Sg	Sg	05 24 57.8	+0.5
	59nm,0.7s						
FIAM	**Fiamignano**	**0.21**	**241**	⇑*i*Pg	Pg	05 24 54.6	+0.5
FIAM				Sg	Sg	05 24 57.8	+0.5
	59nm,0.7s						
TERO	**Teramo**	**0.31**	**35**	Pg	Pg	05 24 55.7	-0.2
TERO	**Teramo**	**0.31**	**35**	Pg	Pg	05 24 55.7	-0.2
PTQR	**Pietraquaria**	**0.35**	**175**	Pg	Pg	05 24 57.2	+0.6
PTQR				Sg	Sg	05 25 02.3	+0.9
	5.0nm,0.2s						
PTQR	**Pietraquaria**	**0.35**	**175**	Pg	Pg	05 24 57.2	+0.6
PTQR				Sg	Sg	05 25 02.3	+0.9
	5.0nm,0.2s						
NRCA	**Norcia**	**0.50**	**339**	Pg	Pg	05 24 59.7	+0.3
NRCA				Sg	Sg	05 25 06.9	+0.7
	3.0nm,0.2s						
NRCA	**Norcia**	**0.50**	**339**	Pg	Pg	05 24 59.7	+0.3
NRCA				Sg	Sg	05 25 06.9	+0.7
	3.0nm,0.2s						

WEL 11 05:35:45.6±0.4, 38°78S×175°29E, h214km±3km, ML3.8/15, 33C-6D, Error ellipse: s-maj=2.2km s-min=1.8km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWVZ	**Taurewa**	**0.31**	**158**	PN	Pn	05 36 13.6	-0.3
RATZ	**Rangitukua**	**0.39**	**103**	⇑PN	Pn	05 36 13.6	-0.5
WTVZ	**West Tongariro**	**0.41**	**145**	PN	Pn	05 36 14.0	-0.2
WTVZ				SN	S	05 36 35.9	-0.7
KRVZ	**Karewarewa**	**0.42**	**139**	⇑PN	Pn	05 36 14.0	-0.2
HIZ	**Hauiti**	**0.43**	**308**	⇑PN	Pn	05 36 13.6	-0.6
HIZ				SN	S	05 36 36.1	-0.3
NGZ	**Ngauruhoe**	**0.46**	**148**	⇓PN	Pn	05 36 14.2	-0.2
NGZ				SN	S	05 36 36.5	-0.5
WPVZ	**Whakapapa**	**0.47**	**155**	⇑PN	Pn	05 36 14.3	0.0
OTVZ	**Oturere**	**0.48**	**143**	PN	Pn	05 36 14.4	0.0
RITZ	**Rihia Road**	**0.48**	**114**	PN	Pn	05 36 14.3	0.0
PKVZ	**Pokaka**	**0.51**	**175**	⇑PN	Pn	05 36 14.3	-0.1
FWVZ	**Far West T-bar**	**0.52**	**157**	⇑PN	Pn	05 36 14.5	-0.1
DRZ	**Dome Shelter**	**0.54**	**152**	PN	Pn	05 36 14.8	-0.1
VRZ	**Vera Road**	**0.54**	**230**	PN	Pn	05 36 14.0	-0.4
TRVZ	**Turoa**	**0.55**	**159**	⇑PN	Pn	05 36 14.8	-0.1
TUVZ	**Tukino**	**0.56**	**150**	⇑PN	Pn	05 36 14.8	0.0
TUVZ				SN	S	05 36 36.8	-0.8
WNVZ	**Wahianoa**	**0.59**	**156**	PN	Pn	05 36 14.8	-0.1
MTVZ	**Mangateitei**	**0.62**	**167**	⇑PN	Pn	05 36 14.9	0.0
MOVZ	**Moawhango**	**0.72**	**150**	⇑PN	Pn	05 36 15.0	-0.4
MOVZ				SN	S	05 36 36.7	-1.9
RAEZ	**Rainy Point**	**0.86**	**234**	PN	Pn	05 36 15.6	-0.4
BHHZ	**Black Hill Sta**	**0.93**	**140**	⇑PN	Pn	05 36 16.1	-0.3
WAZ	**Wanganui**	**1.00**	**194**	⇑PN	Pn	05 36 17.0	+0.2
BKZ	**Black Stump Fm**	**1.01**	**113**	⇑PN	Pn	05 36 16.5	-0.5
NEZ	**North Egmont**	**1.05**	**242**	⇑PN	Pn	05 36 17.3	+0.1
DFE	**Dawson Falls**	**1.07**	**239**	PN	Pn	05 36 17.3	-0.1
PKE	**Pukeiti**	**1.09**	**248**	PN	Pn	05 36 17.1	-0.4
NRZ	**Ngariki Road**	**1.19**	**242**	PN	Pn	05 36 18.0	-0.1
NMHZ	**Naumai**	**1.22**	**105**	⇓PN	Pn	05 36 18.8	+0.3
MCHZ	**McNeill Hill**	**1.28**	**122**	PN	Pn	05 36 19.3	+0.6
PNHZ	**Pukenui**	**1.33**	**148**	PN	Pn	05 36 19.2	0.0
TSZ	**Takapari Road**	**1.38**	**158**	⇑PN	Pn	05 36 19.5	0.0
TSZ				SN	S	05 36 44.8	-1.3
RAHZ	**Arahi**	**1.41**	**96**	PN	Pn	05 36 19.5	-0.3
URZ	**Urewera**	**1.52**	**70**	⇓PN	Pn	05 36 18.9	-1.9
WPHZ	**Waipukurau**	**1.56**	**146**	⇑PN	Pn	05 36 21.1	0.0
KAHZ	**Kahuranaki**	**1.59**	**130**	⇑PN	Pn	05 36 21.6	+0.2
CKHZ	**Cape Kidnapper**	**1.64**	**123**	PN	Pn	05 36 22.0	+0.2
POWZ	**Post Office Ro**	**1.65**	**167**	PN	Pn	05 36 21.6	-0.2
DVHZ	**Dannevirke**	**1.66**	**156**	PN	Pn	05 36 21.6	-0.3
PXZ	**Pawanui**	**1.74**	**136**	⇑PN	Pn	05 36 22.4	-0.2
MWZ	**Matawai**	**1.81**	**76**	⇓PN	Pn	05 36 21.7	-1.7
PRHZ	**Porangahau**	**1.81**	**145**	⇑PN	Pn	05 36 23.2	-0.1
KNZ	**Kokohu**	**1.88**	**98**	PN	Pn	05 36 23.2	-0.7
MRZ	**Mangatainoka R**	**1.89**	**173**	⇑PN	Pn	05 36 23.5	-0.6
PRGZ	**Paritu Road**	**2.03**	**95**	PN	Pn	05 36 24.6	-0.9
BFZ	**Birch Farm**	**2.03**	**159**	PN	Pn	05 36 24.9	-0.6
OGWZ	**Otaki Gorge**	**2.04**	**183**	⇑PN	Pn	05 36 25.1	-0.3
TIWZ	**Tintock**	**2.04**	**167**	PN	Pn	05 36 25.0	-0.6
MHGZ	**Mahia Peninsul**	**2.07**	**101**	PN	Pn	05 36 25.3	-0.6
KIW	**Kapiti Island**	**2.10**	**188**	PN	Pn	05 36 25.3	-0.8
HOWZ	**Holdsworth Sta**	**2.12**	**175**	⇑PN	Pn	05 36 25.5	-0.8
DUWZ	**D'Urville Isla**	**2.28**	**207**	⇑PN	Pn	05 36 26.8	-1.2
CNGZ	**Carnagh Statio**	**2.30**	**83**	PN	Pn	05 36 27.4	-0.9
CAW	**Cannon Point**	**2.33**	**184**	⇑PN	Pn	05 36 27.7	-0.8
TMWZ	**Te Maipa**	**2.37**	**169**	⇑PN	Pn	05 36 28.0	-1.0
MTW	**Mount Morrison**	**2.38**	**176**	⇑PN	Pn	05 36 27.8	-1.2
PUZ	**Puketiti**	**2.44**	**74**	PN	Pn	05 36 27.6	-2.1
WEL	**Wellington**	**2.53**	**189**	PN	Pn	05 36 29.5	-1.1
TCW	**Tory Channel**	**2.55**	**197**	PN	Pn	05 36 29.9	-1.0
SNZO	**South Karori**	**2.56**	**190**	PN	Pn	05 36 29.7	-1.2
PAWZ	**Paruwai Farm**	**2.60**	**178**	⇑PN	Pn	05 36 30.2	-1.2
MSWZ	**Moikau Station**	**2.63**	**181**	⇑PN	Pn	05 36 30.5	-1.3
TRWZ	**Traveller**	**2.63**	**173**	PN	Pn	05 36 30.6	-1.2
BHW	**Baring Head**	**2.64**	**187**	PN	Pn	05 36 30.6	-1.2
MXZ	**Matakaoa Point**	**2.67**	**64**	PN	Pn	05 36 30.1	-2.2
PLWZ	**Palliser**	**2.79**	**181**	⇑PN	Pn	05 36 32.0	-1.5
TUWZ	**Tuamarina**	**2.84**	**201**	⇓PN	Pn	05 36 32.7	-1.3
NNZ	**Nelson**	**2.84**	**210**	PN	Pn	05 36 32.2	-1.8
QRZ	**Quartz Range**	**2.95**	**225**	⇑PN	Pn	05 36 32.7	-2.6
BSWZ	**Blackbirch Sta**	**3.12**	**200**	PN	Pn	05 36 36.1	-1.2
THZ	**Tophouse**	**3.49**	**211**	⇓PN	Pn	05 36 39.4	-2.4
KHZ	**Kahutara**	**3.87**	**200**	⇑PN	Pn	05 36 44.4	-1.7
DSZ	**Denniston Nort**	**3.98**	**221**	⇑PN	Pn	05 36 44.5	-3.1
LTZ	**Lake Taylor**	**4.61**	**209**	⇑PN	Pn	05 36 52.7	-2.7
MQZ	**McQueen's Vall**	**5.31**	**201**	PN	Pn	05 37 00.5	-3.6
FOZ	**Fox Glacier**	**6.38**	**220**	PN	Pn	05 37 12.7	-5.1
LBZ	**Lake Benmore**	**6.78**	**213**	PN	Pn	05 37 19.3	-3.7
ODZ	**Otahua Downs**	**7.15**	**207**	PN	Pn	05 37 24.7	-3.0
JCZ	**Jackson Bay**	**7.21**	**221**	PN	Pn	05 37 24.4	-4.3

BEO 11 05:38:59.4±0.8, 42°38N×13°26E, h0km, ML3.6/9
CSEM 11 05:39:00.4±0.1, 42°38N×13°39E, h2km, ML3.8/9, Error ellipse: s-maj=2.1km s-min=1.7km az=28.0
IDC 11 05:39:00.2±1.3, 42°49N×13°22E, h0km, mb3.4/5, mb1 3.6/8, mb1mx3.5/28, mbtmp3.4/8, ML3.3/3, MS2.7/1, Ms1 2.7/1, ms1mx1.6/30, Error ellipse: s-maj=23.5km s-min=15.4km az=88.0
LDG 11 05:39:00.4±0.1, 42°39N×13°44E, h2km, Ml3.1/11, Error ellipse: s-maj=4.4km s-min=2.6km az=35.0
PDG 11 05:39:00.6±0.3, 42°37N×13°36E, h11km, ML3.4/9, Error ellipse: s-maj=0.8km s-min=1.8km az=0.0
PRU 11 05:39:00.0, 42°37N×13°18E, h1km
ROM 11 05:39:00.2±0.1, 42°39N×13°42E, h11km, Ml3.3/44, Error ellipse: s-maj=1.2km s-min=0.9km az=64.0
ISCJB 11 05:39:00.0±0.2, 42°39N±0°01×13°40E±0°02, h9km±1km, mb3.5/4, Error ellipse: s-maj=2.6km s-min=1.9km az=28.9

ISC 11 05:39:01.4±0.7, 42°40N±0°02×13°40E±0°02, h10km±4km, n227, σ1s54/300, mb3.5/4, 60C-36D, Central Italy

| Code | Station Name | Δ° | AZ°

FDMO	**Fiordimonte**	**0.68**	**340**⇑	*e*Pg		**Pg**	**05 39 13.2**	**-1.3**
FDMO					Sg	**Sg**	**05 39 23.5**	**+0.1**
	753nm,0.2s							
CESI	**CESI - Serrava**	**0.71**	**329**⇑	*e*Pg		**Pg**	**05 39 13.8**	**-1.3**
	361nm,0.6s							
CESI	**CESI - Serrava**	**0.71**	**329**⇑	*e*Pg		**Pg**	**05 39 13.8**	**-1.3**
	361nm,0.6s							
POFI	**Posta Fibreno**	**0.72**	**161**⇑	*e*Pg		**Pg**	**05 39 13.2**	**-2.0**
	1µm,0.5s							
POFI	**Posta Fibreno**	**0.72**	**161**⇑	*e*Pg		**Pg**	**05 39 13.2**	**-2.0**
	1µm,0.5s							
CAFR	**Castel Frentan**	**0.72**	**103**⇑	*e*Pg		**Pg**	**05 39 13.8**	**-1.5**
	4µm,0.4s							
CAFR	**Castel Frentan**	**0.72**	**103**⇑	*e*Pg		**Pg**	**05 39 13.8**	**-1.5**
	4µm,0.4s							
SDI	**San Donato**	**0.75**	**156**⇑	*e*Pg		**Pg**	**05 39 14.0**	**-1.9**
SDI	**San Donato**	**0.75**	**156**⇑	*e*Pg		**Pg**	**05 39 14.0**	**-1.9**
RMP	**Rome, Mte Porz**	**0.79**	**222**⇑	*e*Pg		**Pg**	**05 39 14.8**	**-1.7**
	2µm,0.6s							
RMP	**Rome, Mte Porz**	**0.79**	**222**⇑	*e*Pg		**Pg**	**05 39 14.8**	**-1.7**
	2µm,0.6s							
GIUL	**Giuliano Di Ro**	**0.85**	**188**⇑	*e*Pg		**Pg**	**05 39 15.6**	**-2.1**
GIUL	**Giuliano Di Ro**	**0.85**	**188**⇑	*e*Pg		**Pg**	**05 39 15.6**	**-2.1**
RNI2	**Rionero Sannit**	**0.89**	**141**	Pg		**Pg**	**05 39 16.8**	**-1.7**
	1µm,0.6s							
RNI2	**Rionero Sannit**	**0.89**	**141**	Pg		**Pg**	**05 39 16.8**	**-1.7**
	1µm,0.6s							
SNTG	**Esanatoglia**	**0.92**	**338**⇑	*e*Pg		**Pg**	**05 39 17.4**	**-1.7**
	350nm,0.5s							
SNTG	**Esanatoglia**	**0.92**	**338**⇑	*e*Pg		**Pg**	**05 39 17.4**	**-1.7**
	350nm,0.5s							
CERA	**Filignano**	**0.92**	**150**	Pg		**Pg**	**05 39 16.8**	**-2.3**
	956nm,0.4s							
CERA	**Filignano**	**0.92**	**150**	Pg		**Pg**	**05 39 16.8**	**-2.3**
	956nm,0.4s							
MIDA	**Miranda**	**0.99**	**140**	Pg		**Pg**	**05 39 18.0**	**-2.3**
	747nm,0.5s							
MIDA	**Miranda**	**0.99**	**140**	Pg		**Pg**	**05 39 18.0**	**-2.3**
	747nm,0.5s							
CING	**Cingoli**	**0.99**	**351**⇑	*e*Pg		**Pg**	**05 39 18.6**	**-1.8**
	617nm,0.4s							
CING	**Cingoli**	**0.99**	**351**⇑	*e*Pg		**Pg**	**05 39 18.6**	**-1.8**
	617nm,0.4s							
FRES	**Fresagrandinar**	**1.03**	**114**	Pg		**Pg**	**05 39 19.5**	**-1.7**
	1µm,0.6s							
FRES	**Fresagrandinar**	**1.03**	**114**	Pg		**Pg**	**05 39 19.5**	**-1.7**
	1µm,0.6s							
TRIV	**Trivento**	**1.06**	**126**	Pg		**Pg**	**05 39 20.2**	**-1.6**
	932nm,1.1s							
TRIV	**Trivento**	**1.06**	**126**	Pg		**Pg**	**05 39 20.2**	**-1.6**
	932nm,1.1s							
MURB	**Monte Urbino**	**1.08**	**323**	Pg		**Pg**	**05 39 20.6**	**-1.5**
	1µm,0.6s							
MURB	**Monte Urbino**	**1.08**	**323**	Pg		**Pg**	**05 39 20.6**	**-1.5**
	1µm,0.6s							
MGAB	**Montegabbione**	**1.08**	**299**	Pg		**Pg**	**05 39 20.9**	**-1.3**
MGAB	**Montegabbione**	**1.08**	**299**	Pg		**Pg**	**05 39 20.9**	**-1.3**
TOLF	**Tolfa**	**1.09**	**253**	Pg		**Pb**	**05 39 21.6**	**-0.8**
	664nm,0.6s							
TOLF	**Tolfa**	**1.09**	**253**	Pg		**Pb**	**05 39 21.6**	**-0.8**
	664nm,0.6s							
ARVD	**Arcevia**	**1.15**	**343**	Pg		**Pb**	**05 39 21.4**	**-2.0**
	652nm,0.8s							
ARVD	**Arcevia**	**1.15**	**343**	Pg		**Pb**	**05 39 21.4**	**-2.0**
	652nm,0.8s							
AOI	**Ancona**	**1.16**	**7**	Pg		**Pb**	**05 39 21.8**	**-1.7**
	863nm,0.7s							
AOI	**Ancona**	**1.16**	**7**	Pg		**Pb**	**05 39 21.8**	**-1.7**
	863nm,0.7s							
VAGA	**Valle Agricola**	**1.16**	**147**	Pg		**Pb**	**05 39 22.1**	**-1.5**
	456nm,0.6s							
VAGA	**Valle Agricola**	**1.16**	**147**	Pg		**Pb**	**05 39 22.1**	**-1.5**
	456nm,0.6s							
SACS	**San Casciano d**	**1.19**	**293**	Pn		**Pb**	**05 39 23.1**	**-1.0**
	480nm,0.8s							
LATE	**Laterza**	**1.20**	**281**	Pn		**Pb**	**05 39 23.3**	**-1.0**
	769nm,0.7s							
LATE	**Laterza**	**1.20**	**281**	Pn		**Pb**	**05 39 23.3**	**-1.0**
	769nm,0.7s							
BSSO	**Busso**	**1.23**	**133**	Pn		**Pn**	**05 39 23.1**	**-1.6**
	1µm,1.5s							
BSSO	**Busso**	**1.23**	**133**	Pn		**Pn**	**05 39 23.1**	**-1.6**
	1µm,1.5s							
MODR	**Mondragone**	**1.30**	**164**	Pn		**Pn**	**05 39 25.2**	**-0.4**
	54nm,0.5s							
MODR	**Mondragone**	**1.30**	**164**	Pn		**Pn**	**05 39 25.2**	**-0.4**
	54nm,0.5s							
PIEI	**Pieia**	**1.30**	**331**	Pn		**Pn**	**05 39 24.1**	**-1.6**
	333nm,0.7s							
PIEI	**Pieia**	**1.30**	**331**	Pn		**Pn**	**05 39 24.1**	**-1.6**
	333nm,0.7s							
BADI	**Badiali**	**1.40**	**323**	Pn		**Pn**	**05 39 26.7**	**-0.3**
	492nm,0.7s							
BADI	**Badiali**	**1.40**	**323**	Pn		**Pn**	**05 39 26.7**	**-0.3**
	492nm,0.7s							
CAFI	**Castiglion Fio**	**1.41**	**312**	Pn		**Pn**	**05 39 26.9**	**-0.2**
	249nm,0.7s							
CAFI	**Castiglion Fio**	**1.41**	**312**	Pn		**Pn**	**05 39 26.9**	**-0.2**
	249nm,0.7s							
ARCI	**Arcidosso**	**1.49**	**288**	Pn		**Pb**	**05 39 28.9**	**-0.4**
	164nm,1.2s							
ARCI	**Arcidosso**	**1.49**	**288**	Pn		**Pb**	**05 39 28.9**	**-0.4**
	164nm,1.2s							
PARC	**Parchiule**	**1.51**	**326**	Pn		**Pn**	**05 39 28.5**	**-0.1**
	720nm,1.1s							
PARC	**Parchiule**	**1.51**	**326**	Pn		**Pn**	**05 39 28.5**	**-0.1**
	720nm,1.1s							
MAON	**Monte Argentar**	**1.68**	**272**	Pn		**Pn**	**05 39 30.5**	**-0.4**
	270nm,1.0s							
MAON	**Monte Argentar**	**1.68**	**272**	Pn		**Pn**	**05 39 30.5**	**-0.4**
	270nm,1.0s							
CASP	**Castiglione de**	**1.92**	**283**	Pn		**Pn**	**05 39 34.1**	**0.0**
	88nm,0.9s							
CASP	**Castiglione de**	**1.92**	**283**	Pn		**Pn**	**05 39 34.1**	**0.0**
	88nm,0.9s							
MS1	**Monte Sant'Ang**	**2.01**	**109**	*e*Pn		**Pb**	**05 39 38.3**	**+0.2**
NVLJ	**Novalja**	**2.41**	**26**	*i* Pn		**Pn**	**05 39 40.4**	**-0.5**
NVLJ					Sn	**Sn**	**05 40 10.6**	**+0.1**
NVLJ	**Novalja**	**2.41**	**26**	*i* Pn		**Pn**	**05 39 40.3**	**-0.5**
NVLJ					Sn	**Sn**	**05 40 10.5**	**+0.1**
CDT	**Castel del Mon**	**2.52**	**121**	*e*Pn		**Pn**	**05 39 43.0**	**+0.6**
CDT					*e*Sn	**Sb**	**05 40 15.8**	**-1.9**
MAIM	**Mastiano**	**2.62**	**306**	P		**Pn**	**05 39 44.4**	**+0.7**
CRDM	**Cardoso**	**2.69**	**308**	P		**Pn**	**05 39 45.0**	**+0.3**
BAI	**Bari**	**2.90**	**115**	*e*Pn		**Pn**	**05 39 48.6**	**+1.0**
BAI					*e*Sn	**Sn**	**05 40 24.8**	**+2.3**
STON	**Ston**	**3.21**	**80**	*e*Pn		**Pn**	**05 39 52.0**	**+0.3**
STON					Sn	**Sn**	**05 40 29.2**	**-0.8**
STON	**Ston**	**3.21**	**80**	*e*Pn		**Pn**	**05 39 52.0**	**+0.3**
STON					Sn	**Sn**	**05 40 29.1**	**-0.8**
PGF	**Pioggiola**	**3.26**	**274**	*e*Pn		**Pn**	**05 39 53.3**	**+0.6**
PGF					*e*Sn	**Sn**	**05 40 33.4**	**+1.8**
	43nm,0.8s							
PGF	**Pioggiola**	**3.26**	**274**	*e*Pn		**Pn**	**05 39 53.3**	**+0.6**
PGF					*e*Sn	**Sn**	**05 40 33.4**	**+1.8**
	21nm,0.8s							
GBRS	**Gornja Briga**	**3.29**	**17**	Pn		**Pn**	**05 39 53.0**	**0.0**
BOJS	**Bojanci**	**3.38**	**23**	*e*Pn		**Pn**	**05 39 54.7**	**+0.6**
BOJS					*e*Sn	**Sn**	**05 40 34.9**	**+0.6**
BOJS								
	comp=Z,25nm,0.5s							
BOJS	**Bojanci**	**3.38**	**23**⇓	*i*Pn		**Pn**	**05 39 54.3**	**+0.1**
BOJS					*e*Sn	**Sn**	**05 40 34.9**	**+0.6**
BOJS	**Bojanci**	**3.38**	**23**⇓	*i*Pn		**Pn**	**05 39 54.3**	**+0.1**
BOJS					*e*Sn	**Sn**	**05 40 34.9**	**+0.6**
BLY	**Banja Luka**	**3.61**	**48**	*e*Pn		**Pn**	**05 39 58.2**	**+0.8**
BLY	**Banja Luka**	**3.61**	**48**	*e*Pn		**Pn**	**05 39 58.2**	**+0.8**
VOJS	**Vojsko**	**3.65**	**5**	*e*Pn		**Pn**	**05 39 58.2**	**+0.2**
VOJS					*e*Sn	**Sn**	**05 40 42.6**	**+1.5**
VOJS								
	comp=Z,14nm,0.4s							
VOJS	**Vojsko**	**3.65**	**5**	*e*Pn		**Pn**	**05 39 58.2**	**+0.2**
VOJS					*e*Sn	**Sn**	**05 40 42.6**	**+1.5**
	comp=Z,14nm,0.4s							
HCY	**Herceg Novi**	**3.77**	**88**⇓	*i*Pn		**Pn**	**05 39 59.9**	**+0.4**
HCY					*e*Sn	**Sn**	**05 40 45.6**	**+1.7**
HCY	**Herceg Novi**	**3.77**	**88**⇓	*i*Pn		**Pn**	**05 39 59.9**	**+0.4**
HCY					*e*Sn	**Sn**	**05 40 45.6**	**+1.7**
BRY	**Bratogost**	**3.82**	**81**⇓	*i*Pn		**Pn**	**05 40 01.6**	**+1.2**
BRY					*e*Sn	**Sn**	**05 40 47.4**	**+2.0**
BRY	**Bratogost**	**3.82**	**81**⇓	*i*Pn		**Pn**	**05 40 01.6**	**+1.2**
BRY					*e*Sn	**Sn**	**05 40 47.4**	**+2.0**
BUM	**Brajici-Budva**	**4.07**	**90**⇓	*i*Pn		**Pn**	**05 40 04.6**	**+0.9**
BUM					*e*Sn	**Sn**	**05 40 53.6**	**+2.1**
BUM	**Brajici-Budva**	**4.07**	**90**⇓	*i*Pn		**Pn**	**05 40 04.6**	**+0.9**
BUM					*e*Sn	**Sn**	**05 40 53.6**	**+2.1**
UPM	**Unac-Piva**	**4.13**	**77**⇓	*i*Pn		**Pn**	**05 40 05.8**	**+1.2**
UPM					*e*Sn	**Sn**	**05 40 55.4**	**+2.4**
UPM	**Unac-Piva**	**4.13**	**77**⇓	*i*Pn		**Pn**	**05 40 05.8**	**+1.2**
UPM					*e*Sn	**Sn**	**05 40 55.4**	**+2.4**
NKY	**Niksic**	**4.15**	**82**⇓	*i*Pn		**Pn**	**05 40 06.2**	**+1.4**
NKY					*e*Sn	**Sn**	**05 40 55.1**	**+1.7**
NKY	**Niksic**	**4.15**	**82**⇓	*i*Pn		**Pn**	**05 40 06.2**	**+1.4**
NKY					*e*Sn	**Sn**	**05 40 55.1**	**+1.7**
PDG	**Podgorica**	**4.33**	**88**⇓	*i*Pn		**Pn**	**05 40 08.4**	**+1.1**
PDG					*e*Sn	**Sn**	**05 40 58.9**	**+1.1**
PDG	**Podgorica**	**4.33**	**88**⇓	*i*Pn		**Pn**	**05 40 07.9**	**+0.6**
PDG					*e*Sn	**Sn**	**05 40 59.6**	**+1.8**
TTG	**Podgorica**	**4.33**	**88**⇓	*i*Pn		**Pn**	**05 40 07.9**	**+0.6**
TTG					*e*Sn	**Sn**	**05 40 59.6**	**+1.8**
ULC	**Ulcinj**	**4.36**	**94**⇑	*i*Pn		**Pn**	**05 40 08.4**	**+0.7**
ULC					*e*Sn	**Sn**	**05 41 00.0**	**+1.4**
ULC	**Ulcinj**	**4.36**	**94**⇑	*i*Pn		**Pn**	**05 40 08.4**	**+0.7**
ULC					*e*Sn	**Sn**	**05 41 00.0**	**+1.4**
ABTA	**Abfaltersbach**	**4.39**	**352**	*i* Pn		**Pn**	**05 40 08.7**	**+0.5**
	SNR=31							
ABTA	**Abfaltersbach**	**4.39**	**352**	P		**Pn**	**05 40 08.7**	**+0.5**
	SNR=31							
SOKA	**Soboth**	**4.43**	**15**⇓	*i*Pn		**Pn**	**05 40 07.9**	**-0.8**
SOKA	**Soboth**	**4.43**	**15**	Pn		**Pn**	**05 40 07.9**	**-0.8**
PLE	**Pljevlja**	**4.50**	**76**⇓	*i*Pn		**Pn**	**05 40 11.3**	**+1.7**
PLE					*e*Sn	**Sn**	**05 41 04.0**	**+1.9**
PLE	**Pljevlja**	**4.50**	**76**⇓	*i*Pn		**Pn**	**05 40 11.3**	**+1.7**
PLE					*e*Sn	**Sn**	**05 41 04.0**	**+1.9**
SBF	**Sospel**	**4.61**	**291**	*e*Pn		**Pn**	**05 40 11.6**	**+0.5**
SBF					*e*Sn	**Sn**	**05 41 01.7**	**-3.0**
	comp=Z,2.9nm,0.3s							
SBF	**Sospel**	**4.61**	**291**	*e*Pn		**Pn**	**05 40 11.6**	**+0.5**
SBF					*e*Sn	**Sn**	**05 41 01.7**	**-3.0**
	comp=Z,1.5nm,0.3s							
BEY	**Berane**	**4.81**	**82**	*e*Pn		**Pn**	**05 40 15.8**	**+1.9**
BEY					*e*Sn	**Sn**	**05 41 11.7**	**+1.9**
IVA	**Berane**	**4.81**	**82**	*e*Pn		**Pn**	**05 40 15.8**	**+1.9**
IVA					*e*Sn	**Sn**	**05 41 11.7**	**+1.9**
PVY	**Plav**	**4.85**	**85**⇓	*i*Pn		**Pn**	**05 40 16.1**	**+1.6**
PVY					*e*Sn	**Sn**	**05 41 12.8**	**+2.0**
FETA	**Feichten**	**5.00**	**339**	*i* P		**Pn**	**05 40 18.0**	**+1.4**
	SNR=14							
FETA	**Feichten**	**5.00**	**339**	P		**Pn**	**05 40 18.0**	**+1.4**
	SNR=14							
DAVOX	**Davos/Dischmat**	**5.05**	**331**	Pn		**Pn**	**05 40 18.7**	**+1.4**
	comp=Z,2.6nm,0.3s,baz=173,slow=14,SNR=20							
DAVOX					Sn	**Sn**	**05 41 14.9**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=137,slow=19,SNR=3.8							
IVAS	**Ivanjica**	**5.09**	**74**	*e*Pn		**Pn**	**05 40 18.2**	**+0.5**
IVAS					*e*Sn	**Sn**	**05 41 16.0**	**-0.6**
IVAS	**Ivanjica**	**5.09**	**74**	*e*Pn		**Pn**	**05 40 18.2**	**+0.5**
IVAS					*e*Sn	**Sn**	**05 41 16.0**	**-0.6**
FRF	**La Foret Royal**	**5.09**	**285**	*e*Pn		**Pn**	**05 40 17.8**	**+0.1**
FRF					*e*Sn	**Sn**	**05 41 12.8**	**-3.8**
	comp=Z,13nm,0.7s							
FRF	**La Foret Royal**	**5.09**	**285**	*e*Pn		**Pn**	**05 40 17.8**	**+0.1**
FRF					*e*Sn	**Sn**	**05 41 12.8**	**-3.8**
	comp=Z,6.6nm,0.7s							
DIVS	**Divibare**	**5.10**	**68**	*e*Pn		**Pn**	**05 40 17.3**	**-0.6**
DIVS					*e*Sn	**Sn**	**05 41 17.8**	**+0.9**
DIVS	**Divibare**	**5.10**	**68**	*e*Pn		**Pn**	**05 40 17.3**	**-0.6**
DIVS					*e*Sn	**Sn**	**05 41 17.8**	**+0.9**
LMR	**La Mourre**	**5.15**	**283**	*e*Pn		**Pn**	**05 40 18.5**	**0.0**
LMR					*e*Sn	**Sn**	**05 41 14.3**	**-3.8**
	comp=Z,3.2nm,0.5s							
LMR	**La Mourre**	**5.15**	**283**	*e*Pn		**Pn**	**05 40 18.5**	**0.0**
LMR					*e*Sn	**Sn**	**05 41 14.3**	**-3.8**
	comp=Z,1.6nm,0.5s							
MOTA	**Moosalm**	**5.21**	**343**⇓	*i*Pn		**Pn**	**05 40 20.9**	**+1.4**
	SNR=11							
MOTA	**Moosalm**	**5.21**	**343**	Pn		**Pn**	**05 40 20.9**	**+1.4**
	SNR=11							
MBDF	**Montbardon**	**5.35**	**298**	*e*P		**Pn**	**05 40 23.7**	**+2.3**
MBDF	**Montbardon**	**5.35**	**298**	*e*P		**Pn**	**05 40 23.7**	**+2.3**
TRUS	**Trudelj**	**5.42**	**68**	*e*Pn		**Pn**	**05 40 21.6**	**-0.7**
TRUS	**Trudelj**	**5.42**	**68**	*e*Pn		**Pn**	**05 40 21.6**	**-0.7**
GRUS	**Gruza**	**5.55**	**72**⇓	*i*Pn		**Pn**	**05 40 24.6**	**+0.6**
GRUS					*e*Sn	**Sn**	**05 41 27.6**	**-0.3**
GRUS	**Gruza**	**5.55**	**72**⇓	*i*Pn		**Pn**	**05 40 24.6**	**+0.6**
GRUS					*e*Sn	**Sn**	**05 41 27.6**	**-0.3**
LPG	**La Plagne**	**5.71**	**305**	*e*P		**Pn**	**05 40 29.6**	**+3.1**
LPG					*e*Sn	**Sn**	**05 41 28.7**	**-3.6**
	comp=Z,2.5nm,0.4s							
SELS	**Selova**	**5.73**	**79**	*e*Pn		**Pn**	**05 40 26.4**	**-0.2**
SELS					*e*Sn	**Sn**	**05 41 32.5**	**+0.1**
SELS	**Selova**	**5.73**	**79**	*e*Pn		**Pn**	**05 40 26.4**	**-0.2**
SELS					*e*Sn	**Sn**	**05 41 32.5**	**+0.1**
LPL	**La Plagne**	**5.74**	**305**	*e*P		**Pn**	**05 40 29.8**	**+3.0**
LPL					*e*Sn	**Sn**	**05 41 27.9**	**-4.8**
	comp=Z,4.9nm,0.7s							
CONA	**Conrad Observa**	**5.80**	**17**⇓	*i*Pn		**Pn**	**05 40 26.7**	**-0.8**
	SNR=10							
CONA	**Conrad Observa**	**5.80**	**17**	Pn		**Pn**	**05 40 26.7**	**-0.8**
	SNR=10							
SMRF	**Simiane la Rot**	**5.94**	**288**	*e*P		**Pn**	**05 40 31.1**	**+1.7**
SMRF	**Simiane la Rot**	**5.94**	**288**	*e*P		**Pn**	**05 40 31.1**	**+1.7**
ORIF	**Oris-en-Rattie**	**6.01**	**297**	*e*P		**Pn**	05 40 34.2	+3.8
ORIF					*e*Sn	**Sn**	**05 41 35.4**	**-3.9**
	comp=Z,2.1nm,0.5s							
BARS	**Barje**	**6.22**	**83**⇓	*i*Pn		**Pn**	**05 40 33.7**	**+0.5**
BARS					*e*Sn	**Sn**	**05 41 43.5**	**-0.9**
BARS	**Barje**	**6.22**	**83**⇓	*i*Pn		**Pn**	**05 40 33.7**	**+0.5**
BARS					*e*Sn	**Sn**	**05 41 43.5**	**-0.9**
GERES	**GERESS Array B**	**6.45**	**2**	Pn		**Pn**	**05 40 36.0**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=176,slow=14,SNR=20							
GERES					Sn	**Sn**	**05 41 47.4**	**-2.7**
	comp=Z,1.9nm,0.3s,baz=185,slow=22,SNR=9.5							
CABF	**La Chapelle**	**6.71**	**311**	*e*Pn		**Pn**	**05 40 41.2**	**+1.1**
CABF	**La Chapelle**	**6.71**	**311**	*e*Pn		**Pn**	**05 40 41.2**	**+1.1**
KHC	**Kasperske Hory**	**6.73**	**1**	*e*PN		**Pn**	**05 40 39.7**	**-0.6**
KHC				*ex*		x	05 40 50.5	
KHC					*e*SN	**Sn**	**05 41 54.0**	**-3.0**
KHC	**Kasperske Hory**	**6.73**	**1**	Pn		**Pn**	**05 40 39.7**	**-0.6**
BZS	**Buzias**	**6.74**	**59**⇑	*i*P		**Pn**	**05 40 43.0**	**+2.7**
BZS	**Buzias**	**6.74**	**59**⇑	*i*P		**Pn**	**05 40 43.0**	**+2.7**
VIVF	**Saint-Julien-l**	**6.79**	**294**	*e*Pn		**Pn**	**05 40 43.0**	**+1.9**
VIVF	**Saint-Julien-l**	**6.79**	**294**	*e*Pn		**Pn**	**05 40 43.0**	**+1.9**
ZAPS	**Zavoj**	**6.84**	**80**	*e*Pn		**Pn**	**05 40 41.0**	**-0.8**
ZAPS					*e*Sn	**Sn**	**05 41 57.7**	**-2.0**
HINF	**Hinteralfeld**	**7.13**	**322**	*e*Pn		**Pn**	**05 40 45.8**	**+0.1**
HINF					*e*Sn	**Sn**	**05 42 02.2**	**-4.5**
	comp=Z,6.6nm,0.5s							
HINF	**Hinteralfeld**	**7.13**	**322**	*e*Pn		**Pn**	**05 40 45.8**	**+0.1**
LASF	**Ste Croix**	**7.17**	**287**	*e*Pn		**Pn**	**05 40 46.5**	**+0.2**
LASF	**Ste Croix**	**7.17**	**287**	*e*Pn		**Pn**	**05 40 46.5**	**+0.2**
VYHS	**Vyhne**	**7.19**	**30**	*e*PN		**Pn**	**05 40 47.1**	**+0.6**
VYHS					*e*SN	Sn	05 42 02.3	-6.0
VYHS	**Vyhne**	**7.19**	**30**	*e*Pn		**Pn**	**05 40 47.1**	**+0.6**
VTS	**Vitosha**	**7.25**	**85**⇑	*i*P		**Pn**	**05 40 48.0**	**+0.5**
VTS	**Vitosha**	**7.25**	**85**	*e*Pn		**Pn**	**05 40 46.1**	**-1.4**
VTS					*e*Sn	**Sn**	**05 42 08.9**	**-1.0**
VTS	**Vitosha**	**7.25**	**85**	*e*Pn		**Pn**	**05 40 46.1**	**-1.4**
VTS	**Vitosha**	**7.25**	**85**⇑	*i*P		**Pn**	**05 40 48.0**	**+0.5**
VTS					*e*Sn	**Sn**	**05 42 08.9**	**-1.0**
KEST	**Kesra**	**7.37**	**207**	Pn		**Pn**	05 40 52.3	+3.2
	comp=Z,0.6nm,0.3s,baz=345,slow=4.7,SNR=21							
CDF	**Champ du Feu**	**7.40**	**326**	*e*Pn		**Pn**	**05 40 48.9**	**-0.5**
CDF					*e*Sn	**Sn**	**05 42 09.1**	**-4.3**
	comp=Z,5.5nm,0.5s							
CDF	**Champ du Feu**	**7.40**	**326**	*e*Pn		**Pn**	**05 40 48.9**	**-0.5**
GZR	**Gura Zlata**	**7.40**	**63**⇓	*i*P		**Pn**	**05 40 51.3**	**+1.8**
GZR	**Gura Zlata**	**7.40**	**63**⇓	*i*P		**Pn**	**05 40 51.3**	**+1.8**
HAU	**Haudompre**	**7.50**	**321**	*e*Pn		**Pn**	**05 40 51.0**	**+0.2**
HAU					*e*Sn	Sn	05 42 09.8	-6.0
	comp=Z,6.5nm,0.4s							
HAU	**Haudompre**	**7.50**	**321**	*e*Pn		**Pn**	**05 40 51.0**	**+0.2**
NKC	**Novy Kostel**	**7.86**	**356**	*e*SN		**Sn**	**05 42 19.9**	**-4.9**
DRGR		**7.96**	**53**⇑	*i*P		**Pn**	**05 40 59.9**	**+2.7**
DRGR		**7.96**	**53**⇑	*i*P		**Pn**	**05 40 59.9**	**+2.7**
SMF	**Signal de Mont**	**8.04**	**305**	*e*Pn		**Pn**	**05 40 58.8**	**+0.6**
SMF	**Signal de Mont**	**8.04**	**305**	*e*Pn		**Pn**	**05 40 58.8**	**+0.6**
MTLF	**Montolieu**	**8.27**	**280**	*e*Pn		**Pn**	**05 41 01.3**	**-0.1**
MTLF	**Montolieu**	**8.27**	**280**	*e*Pn		**Pn**	**05 41 01.3**	**-0.1**
LOR	**Lormes**	**8.35**	**309**	*e*Pn		**Pn**	**05 41 02.4**	**0.0**
LOR					*e*Sn	**Sn**	**05 42 31.9**	**-4.8**
	comp=Z,2.1nm,0.5s							
LOR	**Lormes**	**8.35**	**309**	*e*Pn		**Pn**	**05 41 02.4**	**0.0**
BRG	**Berggiesshubel**	**8.49**	**2**	*e*(SN)		**Sn**	**05 42 36.9**	**-3.1**
BRG					*e*(SG)	Sg	05 43 45.6	+12
BRG					PG		06 53 43.1	
BRG					SG		06 54 03.2	
	comp=Z,2.3nm,0.4s							
BRG					*e*(SN)		07 07 51.0	
BRG					*e*		07 09 08.8	
CAF	**Calviac**	**8.60**	**291**	*e*P		**Pn**	**05 41 07.5**	**+1.6**
CAF	**Calviac**	**8.60**	**291**	*e*P		**Pn**	**05 41 07.5**	**+1.6**
CLL	**Collm**	**8.92**	**358**	*e*Sn		Sn	05 42 42.0	-8.6
CLL					*e*Sg	Sg	05 43 57.0	+10
MLR	**Muntele Rosu**	**9.56**	**67**⇓	*i*P		**Pn**	**05 41 21.2**	**+2.1**
MLR	**Muntele Rosu**	**9.56**	**67**	Pn		**Pn**	**05 41 20.7**	**+1.6**
	comp=Z,0.0nm,0.3s,baz=148,slow=13,SNR=2.7							
MLR	**Muntele Rosu**	**9.56**	**67**⇓	*i*P		**Pn**	**05 41 21.2**	**+2.1**
BURAR	**Bucovina Array**	**9.85**	**54**⇓	*i*P		**Pn**	**05 41 26.2**	**+3.1**
BURAR	**Bucovina Array**	**9.85**	**54**⇓	*i*P		**Pn**	**05 41 26.2**	**+3.1**
MDT	**Midelt**	**17.16**	**242**	LR		LR	05 49 47.4	
	comp=Z,28nm,21.0s,baz=153,slow=38							
NOA	**NORSAR Array B**	**18.72**	**357**	P		**Pn**	**05 43 20.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=182,slow=11,SNR=3.2							
FINES	**FINESS Array B**	**20.54**	**17**	P		**P**	**05 43 40.1**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=193,slow=10.0,SNR=6.7							
KBZ	**Khabaz**	**21.54**	**76**	P		**P**	**05 43 53.5**	**+2.9**
	comp=Z,1.5nm,0.4s,baz=284,slow=9.6,SNR=5.3							
TORD	**Torodi Ar. Bea**	**30.86**	**203**	P		**P**	**05 45 17.9**	**0.0**
	comp=Z,0.4nm,0.7s,baz=17,slow=7.7,SNR=5.7							
MKAR	**Makanchi Array**	**47.82**	**60**	P		**P**	**05 47 39.8**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=294,slow=6.0,SNR=4.7							
YKA	**Yellowknife Ar**	**67.47**	**337**	P		**P**	**05 49 56.6**	**-0.2**
	comp=Z,0.2nm,0.8s,baz=40,slow=5.8,SNR=4.4							

*ISCJB **11** 05:39:59.8±0.9,21.3N±0

FAGN				Sg		Sg	06 13 35.9 +0.3
	3µm,0.3s						
FAGN	**Fagnano**	**0.24**	**146**⇑	*e*Pg		Pg	06 13 32.3 +0.1
FAGN				Sg		Sg	06 13 35.9 +0.3
	3µm,0.3s						
FIAM	**Fiamignano**	**0.29**	**227**⇑	*e*Pg		Pg	06 13 33.4 +0.4
FIAM				Sg		Sb	06 13 39.7 +0.5
	2µm,0.6s						
FIAM	**Fiamignano**	**0.29**	**227**⇑	*e*Pg		Pg	06 13 33.4 +0.4
LNSS	**Leonessa**	**0.30**	**297**⇑	*e*Pg		Pg	06 13 33.6 +0.4
LNSS				Sg		Sb	06 13 39.1 -0.5
	3µm,0.3s						
LNSS	**Leonessa**	**0.30**	**297**⇑	*e*Pg		Pg	06 13 33.6 +0.4
LNSS				Sg		Sb	06 13 39.1 -0.5
	3µm,0.3s						
VCEL	**Villa Celiera**	**0.33**	**102**⇑	*e*Pg		Pg	06 13 33.7 -0.2
VCEL				Sg		Sb	06 13 40.3 -0.3
	5µm,0.4s						
VCEL	**Villa Celiera**	**0.33**	**102**⇑	*e*Pg		Pg	06 13 33.7 -0.2
VCEL				Sg		Sb	06 13 40.3 -0.3
	5µm,0.4s						
NRCA	**Norcia**	**0.42**	**330**⇑	*i*Pg		Pg	06 13 35.6 +0.1
NRCA	**Norcia**	**0.42**	**330**⇑	*i*Pg		Pg	06 13 35.6 +0.1
PTQR	**Pietraquaria**	**0.45**	**180**⇑	*i*Pg		Pg	06 13 35.7 -0.2
	191nm,0.4s						
PTQR	**Pietraquaria**	**0.45**	**180**⇑	*i*Pg		Pg	06 13 35.7 -0.2
	191nm,0.4s						
TRTR	**Tortoreto Alta**	**0.51**	**48**	Pg		Pb	06 13 38.1 0.0
	4µm,0.5s						
TRTR	**Tortoreto Alta**	**0.51**	**48**	Pg		Pb	06 13 38.1 0.0
	4µm,0.5s						
OFFI	**Offida**	**0.51**	**24**	Pg		Pg	06 13 37.8 +0.6
	9µm,0.7s						
OFFI	**Offida**	**0.51**	**24**	Pg		Pg	06 13 37.8 +0.6
	9µm,0.7s						
MNS	**Montasola**	**0.54**	**261**⇑	*e*Pg		Pg	06 13 37.5 -0.1
MNS				Sg		Sg	06 13 45.9 +1.1
	623nm,0.4s						
MNS	**Montasola**	**0.54**	**261**⇑	*e*Pg		Pg	06 13 37.5 -0.1
MNS				Sg		Sg	06 13 45.9 +1.1
	623nm,0.4s						
INTR	**Introdacqua**	**0.59**	**140**	Pg		Pg	06 13 38.5 -0.1
INTR				Sg		Sb	06 13 47.8 -0.1
	856nm,0.5s						
INTR	**Introdacqua**	**0.59**	**140**	Pg		Pg	06 13 38.5 -0.1
INTR				Sg		Sb	06 13 47.8 -0.1
	856nm,0.5s						
CERT	**Cerreto**	**0.60**	**211**	Pg		Pg	06 13 38.5 -0.4
	2µm,0.5s						
CERT	**Cerreto**	**0.60**	**211**	Pg		Pg	06 13 38.5 -0.4
	2µm,0.5s						
FDMO	**Fiordimonte**	**0.61**	**338**	Pg		Pg	06 13 38.7 -0.4
FDMO				Sg		Sg	06 13 48.2 +1.0
	486nm,0.3s						
FDMO	**Fiordimonte**	**0.61**	**338**	Pg		Pg	06 13 38.7 -0.4
FDMO				Sg		Sg	06 13 48.2 +1.0
	486nm,0.3s						
VVLD	**Villa Vallelon**	**0.62**	**164**	Pg		Pg	06 13 38.9 -0.2
	766nm,0.5s						
VVLD	**Villa Vallelon**	**0.62**	**164**	Pg		Pg	06 13 38.9 -0.2
	766nm,0.5s						
CESX	**Cesi**	**0.62**	**284**	Pg		Pg	06 13 39.2 0.0
CESX				Sg		Sb	06 13 48.9 +0.1
	621nm,0.4s						
CESX	**Cesi**	**0.62**	**284**	Pg		Pg	06 13 39.2 0.0
CESX				Sg		Sb	06 13 48.9 +0.1
	621nm,0.4s						
CESI	**CESI - Serrava**	**0.65**	**326**	Pg		Pg	06 13 39.8 0.0
CESI				Sg		Sb	06 13 49.7 +0.1
	239nm,0.2s						
CESI	**CESI - Serrava**	**0.65**	**326**	Pg		Pg	06 13 39.8 0.0
CESI				Sg		Sb	06 13 49.7 +0.1
	239nm,0.2s						
MTCE	**Montecelio**	**0.66**	**228**	Pg		Pg	06 13 39.6 -0.3
	418nm,0.5s						
MTCE	**Montecelio**	**0.66**	**228**	Pg		Pg	06 13 39.6 -0.3
	418nm,0.5s						
GUAR	**Guarcino**	**0.68**	**186**	Pg		Pg	06 13 40.4 +0.2
	620nm,0.6s						
GUAR	**Guarcino**	**0.68**	**186**	Pg		Pg	06 13 40.4 +0.2
	620nm,0.6s						
GUMA	**Gualdo di Mace**	**0.71**	**33**	Pg		Pg	06 13 39.3 -1.7
	2µm,0.4s						
GUMA	**Gualdo di Mace**	**0.71**	**33**	Pg		Pg	06 13 39.3 -1.7
	2µm,0.4s						
LPEL	**Lama dei Pelig**	**0.72**	**126**	Pg		Pg	06 13 40.3 -0.7
LPEL				Sg		Sb	06 13 50.9 -0.6
	520nm,0.4s						
LPEL	**Lama dei Pelig**	**0.72**	**126**	Pg		Pg	06 13 40.3 -0.7
LPEL				Sg		Sb	06 13 50.9 -0.6
	520nm,0.4s						
CAFR	**Castel Frentan**	**0.74**	**109**	Pg		Pg	06 13 41.2 -0.3
	805nm,0.4s						
CAFR	**Castel Frentan**	**0.74**	**109**	Pg		Pg	06 13 41.2 -0.3
	805nm,0.4s						
POFI	**Posta Fibreno**	**0.78**	**163**	Pg		Pg	06 13 42.0 -0.3
	258nm,0.6s						
POFI	**Posta Fibreno**	**0.78**	**163**	Pg		Pg	06 13 42.0 -0.3
	258nm,0.6s						
SDI	**San Donato**	**0.82**	**158**	Pg		Pg	06 13 42.2 -0.7
SDI	**San Donato**	**0.82**	**158**	Pg		Pg	06 13 42.2 -0.7
RMP	**Rome, Mte Porz**	**0.84**	**219**	Pg		Pg	06 13 43.8 +0.5
	523nm,0.4s						
RMP	**Rome, Mte Porz**	**0.84**	**219**	Pg		Pg	06 13 43.8 +0.5
	523nm,0.4s						
SNTG	**Esanatoglia**	**0.86**	**337**	Pg		Pg	06 13 43.0 -0.7
	135nm,0.3s						
SNTG	**Esanatoglia**	**0.86**	**337**	Pg		Pg	06 13 43.0 -0.7
	135nm,0.3s						
RDP	**Rocca di Papa**	**0.87**	**216**	Pg		Pg	06 13 44.3 +0.4
	1µm,0.5s						
RDP	**Rocca di Papa**	**0.87**	**216**	Pg		Pg	06 13 44.3 +0.4
	1µm,0.5s						
GIUL	**Giuliano Di Ro**	**0.91**	**187**	Pg		Pg	06 13 44.9 +0.1
	322nm,0.7s						
GIUL	**Giuliano Di Ro**	**0.91**	**187**	Pg		Pg	06 13 44.9 +0.1
	322nm,0.7s						
CING	**Cingoli**	**0.92**	**351**	Pg		Pg	06 13 44.6 -0.3
	307nm,0.4s						
CING	**Cingoli**	**0.92**	**351**	Pg		Pg	06 13 44.6 -0.3
	307nm,0.4s						
RNI2	**Rionero Sannit**	**0.95**	**143**	Pg		Pg	06 13 45.1 -0.3
	299nm,0.6s						
RNI2	**Rionero Sannit**	**0.95**	**143**	Pg		Pg	06 13 45.1 -0.3
	299nm,0.6s						
CERA	**Filignano**	**0.98**	**152**	Pg		Pg	06 13 45.2 -0.9
	307nm,0.6s						
CERA	**Filignano**	**0.98**	**152**	Pg		Pg	06 13 45.2 -0.9
	307nm,0.6s						
MURB	**Monte Urbino**	**1.02**	**321**	Pg		Pg	06 13 46.6 -0.2
	760nm,0.3s						
MURB	**Monte Urbino**	**1.02**	**321**	Pg		Pg	06 13 46.6 -0.2
	760nm,0.3s						
MIDA	**Miranda**	**1.04**	**142**	Pg		Pg	06 13 46.2 -1.0
	187nm,0.6s						
MIDA	**Miranda**	**1.04**	**142**	Pg		Pg	06 13 46.2 -1.0
	187nm,0.6s						
MGAB	**Montegabbione**	**1.05**	**296**	Pg		Pg	06 13 47.2 -0.1
	426nm,0.4s						
MGAB	**Montegabbione**	**1.05**	**296**	Pg		Pg	06 13 47.2 -0.1
	426nm,0.4s						
ARVD	**Arcevia**	**1.08**	**342**	Pg		Pg	06 13 47.4 -0.6
	243nm,0.5s						
ARVD	**Arcevia**	**1.08**	**342**	Pg		Pg	06 13 47.4 -0.6
	243nm,0.5s						
AOI	**Ancona**	**1.09**	**8**	Pg		Pg	06 13 48.0 -0.2
	361nm,0.5s						
AOI	**Ancona**	**1.09**	**8**	Pg		Pg	06 13 48.0 -0.2
	361nm,0.5s						
NVLJ	**Novalja**	**2.35**	**27**	*e*Pn		Pn	06 14 06.9 +1.2
NVLJ				Sn		Sn	06 14 34.7 +0.1
NVLJ	**Novalja**	**2.35**	**27**	*e*Pn		Pn	06 14 06.9 +1.2
NVLJ				Sn		Sn	06 14 34.6 +0.1
STON	**Ston**	**3.20**	**81**	*e*Pn		Pn	06 14 18.5 +1.2
STON				Sn		Sn	06 14 57.0 +1.6
STON	**Ston**	**3.20**	**81**	*e*Pn		Pn	06 14 18.5 +1.2
STON				Sn		Sn	06 14 56.9 +1.6
GBRS	**Gornja Briga**	**3.23**	**18**	Pn		Pn	06 14 21.0 +3.2
GBRS				*e*Sn		Sn	06 14 59.1 +2.9
PGF	**Pioggiola**	**3.25**	**273**	*e*Pn		Pn	06 14 18.2 0.0
PGF				*e*Sn		Sn	06 14 58.3 +1.3
	2.9nm,0.4s						
PGF	**Pioggiola**	**3.25**	**273**	*e*Pn		Pn	06 14 18.2 0.0
PGF				*e*Sn		Sn	06 14 58.3 +1.3
	1.5nm,0.4s						
BOJS	**Bojanci**	**3.32**	**23**	*e*Pn		Pn	06 14 21.2 +2.3
BOJS	**Bojanci**	**3.32**	**23**	*e*Pn		Pn	06 14 21.2 +2.3
JAVS	**Javornik**	**3.46**	**8**	*e*Pn		Pn	06 14 21.7 +0.7
JAVS				*e*Sn		Sn	06 15 03.8 +1.8
JAVS	**Javornik**	**3.46**	**8**	*e*Pn		Pn	06 14 21.7 +0.7
JAVS				*e*Sn		Sn	06 15 03.8 +1.8
VOY	**Vojsko**	**3.58**	**6**	*e*Pn		Pn	06 14 26.9 +4.2
VOY				*e*			06 15 06.7
VOY	**Vojsko**	**3.58**	**6**	*e*Pn		Pn	06 14 26.9 +4.2
VOY				*e*Sn		Sn	06 15 06.7 +1.7
ABTA	**Abfaltersbach**	**4.33**	**352**⇑	*i*Pn		Pn	06 14 33.7 +0.8
ABTA	**Abfaltersbach**	**4.33**	**352**	Pn		Pn	06 14 33.7 +0.8
SBF	**Sospel**	**4.58**	**290**	*e*Pn		Pn	06 14 36.6 +0.2
SBF				*e*Sn		Sn	06 15 26.6 -3.0
	6.4nm,0.4s						
SBF	**Sospel**	**4.58**	**290**	*e*Pn		Pn	06 14 36.6 +0.2
SBF				*e*Sn		Sn	06 15 26.6 -3.0
	3.2nm,0.4s						
FRF	**La Foret Royal**	**5.07**	**285**	*e*Pn		Pn	06 14 42.8 -0.3
FRF	**La Foret Royal**	**5.07**	**285**	*e*Pn		Pn	06 14 42.8 -0.3
LMR	**La Mourre**	**5.14**	**282**	*e*Pn		Pn	06 14 43.4 -0.5
LMR	**La Mourre**	**5.14**	**282**	*e*Pn		Pn	06 14 43.4 -0.5
MBDF	**Montbardon**	**5.32**	**297**	*e*P		Pn	06 14 48.7 +2.1
MBDF	**Montbardon**	**5.32**	**297**	*e*P		Pn	06 14 48.7 +2.1
LPG	**La Plagne**	**5.67**	**305**	*e*P		Pn	06 14 54.5 +2.9
LPG				*e*Sn		Sn	06 15 53.6 -3.2
	1.1nm,0.3s						
LPG	**La Plagne**	**5.67**	**305**	*e*P		Pn	06 14 54.5 +2.9
LPL	**La Plagne**	**5.69**	**305**	*e*P		Pn	06 14 54.7 +2.9
LPL				*e*Sn		Sn	06 15 52.9 -4.4
	1.4nm,0.4s						
LPL	**La Plagne**	**5.69**	**305**	*e*P		Pn	06 14 54.7 +2.9
SMRF	**Simiane la Rot**	**5.91**	**287**	*e*P		Pn	06 14 56.0 +1.3
SMRF	**Simiane la Rot**	**5.91**	**287**	*e*P		Pn	06 14 56.0 +1.3
KHC	**Kasperske Hory**	**6.67**	**1**	*e*PN		Pn	06 15 07.8 +2.8
KHC				*e*SN		Sn	06 16 20.3 -0.6
KHC	**Kasperske Hory**	**6.67**	**1**	Pn		Pn	06 15 07.8 +2.8
KHC				Sn		Sn	06 16 20.3 -0.6
HINF	**Hinteralfeld**	**7.07**	**321**	*e*Pn		Pn	06 15 10.3 -0.3
HINF				*e*Sn		Sn	06 16 27.1 -3.8
	6.0nm,0.6s						
HINF	**Hinteralfeld**	**7.07**	**321**	*e*Pn		Pn	06 15 10.3 -0.3
CDF	**Champ du Feu**	**7.34**	**326**	*e*Pn		Pn	06 15 14.3 0.0
CDF				*e*Sn		Sn	06 16 34.1 -3.5
	2.6nm,0.5s						
CDF	**Champ du Feu**	**7.34**	**326**	*e*Pn		Pn	06 15 14.3 0.0
HAU	**Haudompre**	**7.44**	**320**	*e*Pn		Pn	06 15 15.9 +0.3
HAU				*e*Sn		Sn	06 16 34.7 -5.3
	3.2nm,0.3s						
HAU	**Haudompre**	**7.44**	**320**	*e*Pn		Pn	06 15 15.9 +0.3

NNC **11** *06:18:49.4±2.7,39°.06N×73°.66E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=21.6km s-min=12.4km az=170.0*

ISC 11 06:18:47.6±3.2, 38°.7N±0°.2×73°.7E±0°.1, h107km, n11, σ0§62/13, 4C-1D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.48**	**359**	P	Pn	06 19 40.6	+0.4
	SNR=27						
KZA	**Kyzart**	**3.61**	**18**	P	Pn	06 19 41.9	-0.1
	SNR=15						
UCH	**Uchtor**	**3.62**	**9**	P	Sn	06 20 24.7	+0.4
	SNR=9.2						
EKS2	**Erkin-Say**	**4.01**	**0**	P	Pn	06 19 47.9	+0.8
	SNR=23						
AAK	**Ala-Archa**	**4.02**	**8**	P	Pn	06 19 48.2	+0.9
	SNR=8.4						
ULHL	**Ulahol**	**4.07**	**27**	P	Pn	06 19 48.0	0.0
	SNR=5.9						
TKM2	**Tokmak 2**	**4.49**	**18**	⇓Pn	Pn	06 19 53.6	-0.1
	1.3nm,0.3s						
TKM2				⇑Sn	Sn	06 20 44.2	-0.7
	14nm,0.6s						
TKM2	**Tokmak 2**	**4.49**	**18**	P	Pn	06 19 53.9	+0.3
	SNR=8.4						
KK31	**Karatay Array**	**5.08**	**332**	⇑Pn	Pn	06 20 01.5	+0.1
	2.5nm,0.3s,baz=136,slow=13,SNR=53						
KK31				⇑Sn	Sn	06 20 57.8	-1.1
	12nm,0.6s,baz=149,slow=20,SNR=13						
AB31	**Akbulak array**	**14.51**	**321**	⇑P	P	06 22 11.0	-0.2
	1.1nm,0.6s,baz=130,slow=12,SNR=7.6						
AB31				S	Sn	06 24 47.7	+0.3
	0.5nm,0.3s,baz=122,slow=37,SNR=4.5						
BVA0	**Borovoye Array**	**14.56**	**352**	P	P	06 22 13.0	+1.2
	0.4nm,0.5s,baz=161,slow=11,SNR=22						

CSEM **11** *06:56:17.8, 42°.25N×13°.48E, h10km, After ROM*

ROM 11 06:56:17.8±0.1, 42°.25N×13°.48E, h10km, Ml1.9/4, Error ellipse: s-maj=0.9km s-min=0.8km az=53.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.08**	**81**	Pg	Pg	06 56 20.7	+0.5
FAGN				Sg	Sg	06 56 22.2	+0.2
FAGN	**Fagnano**	**0.08**	**81**	Pg	Pg	06 56 20.7	+0.5
FAGN				Sg	Sg	06 56 22.2	+0.2
AQU	**L'Aquila**	**0.12**	**331**	Pg	Pg	06 56 21.1	+0.4
AQU				Sg	Sg	06 56 23.3	+0.5
AQU	**L'Aquila**	**0.12**	**331**	Pg	Pg	06 56 21.1	+0.4
AQU				Sg	Sg	06 56 23.3	+0.5
PTQR	**Pietraquaria**	**0.24**	**194**	Pg	Pg	06 56 23.6	+0.8
PTQR				Sg	Sg	06 56 27.6	+1.4
PTQR	**Pietraquaria**	**0.24**	**194**	Pg	Pg	06 56 23.6	+0.8
PTQR				Sg	Sg	06 56 27.6	+1.4
CAMP	**Campotosto**	**0.29**	**350**	Pg	Pg	06 56 24.3	+0.5
CAMP				Sg	Sg	06 56 28.6	+0.8
CAMP	**Campotosto**	**0.29**	**350**	Pg	Pg	06 56 24.3	+0.5
CAMP				Sg	Sg	06 56 28.6	+0.8
VCEL	**Villa Celiera**	**0.30**	**62**	Pg	Pb	06 56 25.2	-0.3
VCEL				Sg	Sg	06 56 29.3	+1.0
VCEL	**Villa Celiera**	**0.30**	**62**	Pg	Pb	06 56 25.2	-0.3
VCEL				Sg	Sg	06 56 29.3	+1.0
TERO	**Teramo**	**0.38**	**14**	Pg	Pg	06 56 25.3	-0.1
TERO				Sg	Sg	06 56 31.6	+1.0
TERO	**Teramo**	**0.38**	**14**	Pg	Pg	06 56 25.3	-0.1
TERO				Sg	Sg	06 56 31.6	+1.0
VVLD	**Villa Vallelon**	**0.40**	**164**	Pg	Pg	06 56 26.1	+0.3
VVLD				Sg	Sg	06 56 32.1	+1.0
	93nm,0.2s						
VVLD	**Villa Vallelon**	**0.40**	**164**	Pg	Pg	06 56 26.1	+0.3
VVLD				Sg	Sg	06 56 32.1	+1.0
	93nm,0.2s						
INTR	**Introdacqua**	**0.40**	**127**	Pg	Pg	06 56 26.3	+0.5
INTR				Sg	Sb	06 56 32.3	-1.1
INTR	**Introdacqua**	**0.40**	**127**	Pg	Pg	06 56 26.3	+0.5
INTR				Sg	Sb	06 56 32.3	-1.1
GUAR	**Guarcino**	**0.47**	**195**	Pg	Pg	06 56 27.5	+0.3
	71nm,0.3s						
GUAR	**Guarcino**	**0.47**	**195**	Pg	Pg	06 56 27.5	+0.3
	71nm,0.3s						
LNSS	**Leonessa**	**0.48**	**317**	Pg	Pb	06 56 28.3	-0.2
LNSS	**Leonessa**	**0.48**	**317**	Pg	Pb	06 56 28.3	-0.2
CERT	**Cerreto**	**0.48**	**231**	Pg	Pg	06 56 27.6	+0.3
CERT				Sg	Sb	06 56 34.9	-0.7
CERT	**Cerreto**	**0.48**	**231**	Pg	Pg	06 56 27.6	+0.3
CERT				Sg	Sb	06 56 34.9	-0.7
LPEL	**Lama dei Pelig**	**0.56**	**111**	Pg	Pg	06 56 29.0	+0.1
LPEL				Sg	Sb	06 56 37.5	-0.6
	126nm,0.2s						
LPEL	**Lama dei Pelig**	**0.56**	**111**	Pg	Pg	06 56 29.0	+0.1
LPEL				Sg	Sb	06 56 37.5	-0.6
	126nm,0.2s						
POFI	**Posta Fibreno**	**0.56**	**162**	Pg	Pg	06 56 29.2	+0.3
POFI	**Posta Fibreno**	**0.56**	**162**	Pg	Pg	06 56 29.2	+0.3
NRCA	**Norcia**	**0.64**	**335**	Pg	Pg	06 56 30.3	0.0
NRCA				Sg	Sb	06 56 39.6	-0.7
NRCA	**Norcia**	**0.64**	**335**	Pg	Pg	06 56 30.3	0.0
NRCA				Sg	Sb	06 56 39.6	-0.7
GIUL	**Giuliano Di Ro**	**0.71**	**194**	Pg	Pg	06 56 31.3	-0.4
	22nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.71**	**194**	Pg	Pg	06 56 31.3	-0.4
	22nm,0.5s						
CERA	**Filignano**	**0.77**	**148**	Pg	Pg	06 56 32.4	-0.4
CERA	**Filignano**	**0.77**	**148**	Pg	Pg	06 56 32.4	-0.4

BEO **11** *06:57:00.3±1.0, 42°.22N×13°.14E, h0km, ML3.5/7*
IDC **11** *06:57:02.8±1.4, 42°.53N×13°.27E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.3/27, mbtmp3.4/5, ML3.5/2, Error ellipse: s-maj=45.0km s-min=14.8km az=98.0*
LDG **11** *06:57:02.9±0.1, 42°.38N×13°.41E, h2km, Ml3.2/8, Error ellipse: s-maj=4.6km s-min=2.7km az=42.0*
ISCJB **11** *06:57:02.3±0.2, 42°.40N±0°.02×13°.42E±0°.02, h11km±1km, mb3.3/2, Error ellipse: s-maj=2.8km s-min=2.3km az=38.7*
CSEM **11** *06:57:02.7±0.1, 42°.39N×13°.40E, h2km, ML3.8/6, Error ellipse: s-maj=2.2km s-min=1.8km az=48.0*
ROM **11** *06:57:02.5±0.1, 42°.39N×13°.41E, h10km, Ml3.2/39, Error ellipse: s-maj=1.4km s-min=0.9km az=62.0*

ISC 11 06:57:03.2±0.7, 42°.40N±0°.01×13°.40E±0°.02, h11km±4km, n167, σ1§44/219, 22C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**178**⇓	*i*Pg	Pg	06 57 05.0	-0.3
AQU				Sg	Sg	06 57 06.4	-0.5
	39µm,0.4s						
AQU	**L'Aquila**	**0.05**	**178**⇓	*i*Pg	Pg	06 57 05.0	-0.3
AQU				Sg	Sg	06 57 06.4	-0.5
	39µm,0.4s						
CAMP	**Campotosto**	**0.14**	**3**⇑	*i*Pg	Pg	06 57 06.4	-0.1
CAMP				Sg	Sg	06 57 09.0	+0.1
	11µm,0.6s						
CAMP	**Campotosto**	**0.14**	**3**⇑	*i*Pg	Pg	06 57 06.4	-0.1
CAMP				Sg	Sg	06 57 09.0	+0.1
	11µm,0.6s						
FAGN	**Fagnano**	**0.19**	**134**⇑	*e*Pg	Pg	06 57 07.1	-0.2
FAGN				Sg	Sg	06 57 09.9	-0.3
FAGN	**Fagnano**	**0.19**	**134**⇑	*e*Pg	Pg	06 57 07.1	-0.2
FAGN				Sg	Sg	06 57 09.9	-0.3
FIAM	**Fiamignano**	**0.25**	**238**⇑	*i*Pg	Pg	06 57 08.1	-0.2
FIAM				Sg	Sg	06 57 12.0	+0.2
FIAM	**Fiamignano**	**0.25**	**238**⇑	*i*Pg	Pg	06 57 08.1	-0.2
FIAM				Sg	Sg	06 57 12.0	+0.2
TERO	**Teramo**	**0.27**	**34**⇑	*i*Pg	Pg	06 57 08.2	-0.5
TERO				Sg	Sg	06 57 12.5	+0.1
	4µm,0.4s						
TERO	**Teramo**	**0.27**	**34**⇑	*i*Pg	Pg	06 57 08.2	-0.5
TERO				Sg	Sg	06 57 12.5	+0.1
	4µm,0.4s						
VCEL	**Villa Celiera**	**0.33**	**91**⇑	*e*Pg	Pg	06 57 09.2	-0.6
	5µm,0.4s						
VCEL	**Villa Celiera**	**0.33**	**91**⇑	*e*Pg	Pg	06 57 09.2	-0.6
	5µm,0.4s						
LNSS	**Leonessa**	**0.33**	**307**⇑	*e*Pg	Pg	06 57 09.8	-0.1
LNSS				Sg	Sb	06 57 15.8	-0.8
	3µm,0.3s						
LNSS	**Leonessa**	**0.33**	**307**⇑	*e*Pg	Pg	06 57 09.8	-0.1
LNSS				Sg	Sb	06 57 15.8	-0.8
	3µm,0.3s						
PTQR	**Pietraquaria**	**0.38**	**180**⇑	*i*Pg	Pg	06 57 10.0	-0.7
PTQR				Sg	Sg	06 57 15.7	0.0
PTQR	**Pietraquaria**	**0.38**	**180**⇑	*i*Pg	Pg	06 57 10.0	-0.7
PTQR				Sg	Sg	06 57 15.7	0.0
NRCA	**Norcia**	**0.48**	**334**⇑	*e*Pg	Pg	06 57 12.1	-0.5
NRCA				Sg	Sg	06 57 20.0	+1.0
	2µm,0.1s						
NRCA	**Norcia**	**0.48**	**334**⇑	*e*Pg	Pg	06 57 12.1	-0.5
NRCA				Sg	Sg	06 57 20.0	+1.0
	2µm,0.1s						
MNS	**Montasola**	**0.53**	**269**⇑	*e*Pg	Pg	06 57 12.9	-0.6
	2µm,0.6s						
MNS	**Montasola**	**0.53**	**269**⇑	*e*Pg	Pg	06 57 12.9	-0.6
	2µm,0.6s						
INTR	**Introdacqua**	**0.54**	**136**⇑	*e*Pg	Pg	06 57 12.9	-0.8
INTR				Sg	Sg	06 57 21.9	+1.1
	3µm,0.9s						
INTR	**Introdacqua**	**0.54**	**136**⇑	*e*Pg	Pg	06 57 12.9	-0.8
INTR				Sg	Sg	06 57 21.9	+1.1
	3µm,0.9s						
CERT	**Cerreto**	**0.55**	**215**⇑	*i*Pg	Pg	06 57 12.9	-0.9
	3µm,0.6s						
CERT	**Cerreto**	**0.55**	**215**⇑	*i*Pg	Pg	06 57 12.9	-0.9
	3µm,0.6s						
VVLD	**Villa Vallelon**	**0.55**	**163**	Pg	Pg	06 57 13.2	-0.8
	2µm,0.4s						
VVLD	**Villa Vallelon**	**0.55**	**163**	Pg	Pg	06 57 13.2	-0.8
	2µm,0.4s						
TRTR	**Tortoreto Alta**	**0.56**	**43**	Pg	Pg	06 57 14.4	+0.4
	6µm,1.1s						
TRTR	**Tortoreto Alta**	**0.56**	**43**	Pg	Pg	06 57 14.4	+0.4
	6µm,1.1s						
OFFI	**Offida**	**0.57**	**21**	Pg	Pg	06 57 14.6	+0.2
	5µm,0.4s						
OFFI	**Offida**	**0.57**	**21**	Pg	Pg	06 57 14.6	+0.2
	5µm,0.4s						
GUAR	**Guarcino**	**0.61**	**186**	Pg	Pg	06 57 13.9	-1.1
	1µm,0.4s						
GUAR	**Guarcino**	**0.61**	**186**	Pg	Pg	06 57 13.9	-1.1
	1µm,0.4s						
MTCE	**Montecelio**	**0.62**	**233**	Pg	Pg	06 57 14.2	-0.9
	927nm,0.5s						
MTCE	**Montecelio**	**0.62**	**233**	Pg	Pg	06 57 14.2	-0.9
	927nm,0.5s						
CESX	**Cesi**	**0.64**

MGAB	**Montegabbione** 347nm,0.4s	**1.08**	**299**	Pg	**Pb**	06 57 23.1	-0.8
MGAB	**Montegabbione** 347nm,0.4s	**1.08**	**299**	Pg	**Pb**	06 57 23.1	-0.8
TOLF	**Tolfa** 461nm,0.7s	**1.09**	**253**	Pg	**Pb**	06 57 23.6	-0.5
TOLF	**Tolfa** 461nm,0.7s	**1.09**	**253**	Pg	**Pb**	06 57 23.6	-0.5
AOI	**Ancona** 581nm,0.6s	**1.16**	**7**	Pg	**Pb**	06 57 23.9	-1.3
AOI	**Ancona** 581nm,0.6s	**1.16**	**7**	Pg	**Pb**	06 57 23.9	-1.3
SACS	**San Casciano d** 603nm,1.3s	**1.19**	**293**	Pn	**Pb**	06 57 25.7	0.0
PIEI	**Pieia** 198nm,0.5s	**1.30**	**331**	Pn	**Pn**	06 57 26.8	-0.5
PIEI	**Pieia** 198nm,0.5s	**1.30**	**331**	Pn	**Pn**	06 57 26.8	-0.5
MODR	**Mondragone** 57nm,0.5s	**1.30**	**164**	Pn	**Pn**	06 57 27.4	+0.1
MODR	**Mondragone** 57nm,0.5s	**1.30**	**164**	Pn	**Pn**	06 57 27.4	+0.1
BADI	**Badiali**	**1.40**	**323**	Pn	**Pb**	06 57 29.1	-0.2
BADI	**Badiali**	**1.40**	**323**	Pn	**Pb**	06 57 29.1	-0.2
CAFI	**Castiglion Fio** 175nm,0.6s	**1.40**	**312**	Pn	**Pb**	06 57 29.2	-0.2
CAFI	**Castiglion Fio** 175nm,0.6s	**1.40**	**312**	Pn	**Pb**	06 57 29.2	-0.2
ARCI	**Arcidosso** 89nm,1.1s	**1.49**	**288**	Pn	**Pb**	06 57 31.0	+0.1
ARCI	**Arcidosso** 89nm,1.1s	**1.49**	**288**	Pn	**Pb**	06 57 31.0	+0.1
PARC	**Parchiule** 347nm,0.8s	**1.51**	**326**	Pn	**Pb**	06 57 30.8	-0.4
PARC	**Parchiule** 347nm,0.8s	**1.51**	**326**	Pn	**Pb**	06 57 30.8	-0.4
PESA	**Pesaro** 309nm,0.5s	**1.59**	**345**	Pn	**Pb**	06 57 32.8	+0.2
PESA	**Pesaro** 309nm,0.5s	**1.59**	**345**	Pn	**Pb**	06 57 32.8	+0.2
MAON	**Monte Argentar** 177nm,1.0s	**1.68**	**272**	Pn	**Pn**	06 57 32.7	+0.2
MAON	**Monte Argentar** 177nm,1.0s	**1.68**	**272**	Pn	**Pn**	06 57 32.7	+0.2
MS1	**Monte Sant'Ang**	**2.02**	**109**	*e*Pn	**Pb**	06 57 40.4	+0.5
MS1				*e*Sn	**Sg**	06 58 08.5	+0.5
NVLJ	**Novalja**	**2.41**	**26**	*i* Pn	**Pn**	06 57 42.7	+0.1
NVLJ				Sn	**Sn**	06 58 12.7	+0.6
NVLJ	**Novalja**	**2.41**	**26**	*i* Pn	**Pn**	06 57 42.6	+0.1
NVLJ				Sn	**Sn**	06 58 12.6	+0.6
CDT	**Castel del Mon**	**2.52**	**121**	*e*Pn	**Pn**	06 57 45.0	+0.9
CDT				*e*Sn	**Sb**	06 58 18.1	-1.4
MAIM	**Mastiano**	**2.61**	**306**	P	**Pn**	06 57 47.1	+1.8
STON	**Ston**	**3.21**	**80**	*e*Pn	**Pn**	06 57 54.3	+0.8
STON				Sn	**Sn**	06 58 31.1	-0.6
STON	**Ston**	**3.21**	**80**	*e*Pn	**Pn**	06 57 54.2	+0.8
STON				Sn	**Sn**	06 58 31.0	-0.6
PGF	**Pioggiola** 14nm,0.6s	**3.26**	**274**	*e*Pn	**Pn**	06 57 55.0	+0.7
PGF				*e*Sn	**Sn**	06 58 35.1	+2.0
PGF	**Pioggiola** 7.0nm,0.6s	**3.26**	**274**	*e*Pn	**Pn**	06 57 55.0	+0.7
PGF				*e*Sn	**Sn**	06 58 35.1	+2.0
GBRS	**Gornja Briga**	**3.29**	**18**	Pn	**Pn**	06 57 55.6	+0.9
BOJS	**Bojanci**	**3.38**	**23**	*e*Pn	**Pn**	06 57 57.5	+1.7
BOJS	**Bojanci**	**3.38**	**23**	*e*Pn	**Pn**	06 57 56.7	+0.9
BOJS				*e*Sn	**Sb**	06 58 40.9	-3.2
BOJS	**Bojanci**	**3.38**	**23**	*e*Pn	**Pn**	06 57 56.7	+0.9
BOJS				*e*Sn	**Sb**	06 58 40.9	-3.2
JAVS	**Javornik**	**3.52**	**8**	*e*Pn	**Pn**	06 57 58.1	+0.1
JAVS				*e*Sn	**Sn**	06 58 41.0	+1.3
JAVS	**Javornik**	**3.52**	**8**	*e*Pn	**Pn**	06 57 58.1	+0.1
JAVS				*e*Sn	**Sn**	06 58 41.0	+1.3
BLY	**Banja Luka**	**3.62**	**48**	*e*Pn	**Pn**	06 58 00.7	+1.6
BLY	**Banja Luka**	**3.62**	**48**	*e*Pn	**Pn**	06 58 00.7	+1.6
VOY	**Vojsko**	**3.65**	**5**	*e*Pn	**Pn**	06 57 59.7	+0.1
VOY				*e*Sn	**Sn**	06 58 44.1	+1.4
VOY	**Vojsko**	**3.65**	**5**	*e*Pn	**Pn**	06 57 59.7	+0.1
VOY				*e*Sn	**Sn**	06 58 44.1	+1.4
PDG	**Podgorica**	**4.34**	**88**	*e*Pn	**Pn**	06 58 10.2	+1.2
PDG				*e*Sn	**Sn**	06 59 02.5	+3.0
PDG	**Podgorica**	**4.34**	**88**	*e*Pn	**Pn**	06 58 10.2	+1.2
PDG				*e*Sn	**Sn**	06 59 02.5	+3.0
ABTA	**Abfaltersbach** SNR=16	**4.39**	**352**	*i* Pn	**Pn**	06 58 11.1	+1.3
ABTA	**Abfaltersbach** SNR=16	**4.39**	**352**	P	**Pn**	06 58 11.1	+1.3
SBF	**Sospel** 16nm,0.6s	**4.60**	**291**	*e*Pn	**Pn**	06 58 13.3	+0.6
SBF				*e*Sn	**Sn**	06 59 03.4	-2.8
SBF	**Sospel** 7.9nm,0.6s	**4.60**	**291**	*e*Pn	**Pn**	06 58 13.3	+0.6
SBF				*e*Sn	**Sn**	06 59 03.4	-2.8
DAVOX	**Davos/Dischmat** 1.4nm,0.3s,baz=150,slow=20,SNR=15	**5.05**	**331**	Pn	**Pn**	06 58 21.2	+2.3
DAVOX	0.3nm,0.3s,baz=142,slow=19,SNR=2.3			Sn	**Sn**	06 59 17.5	+0.1
FRF	**La Foret Royal**	**5.09**	**285**	*e*Pn	**Pn**	06 58 19.6	+0.3
FRF	**La Foret Royal**	**5.09**	**285**	*e*Pn	**Pn**	06 58 19.6	+0.3
DIVS	**Divibare**	**5.11**	**68**	*e*Pn	**Pn**	06 58 20.3	+0.7
DIVS				*e*Sn	**Sn**	06 59 21.0	+2.4
DIVS	**Divibare**	**5.11**	**68**	*e*Pn	**Pn**	06 58 20.3	+0.7
DIVS				*e*Sn	**Sn**	06 59 21.0	+2.4
LMR	**La Mourre**	**5.15**	**283**	*e*Pn	**Pn**	06 58 20.2	0.0
LMR	**La Mourre**	**5.15**	**283**	*e*Pn	**Pn**	06 58 20.2	0.0
MBDF	**Montbardon**	**5.35**	**298**	*e*P	**Pn**	06 58 25.4	+2.4
MBDF	**Montbardon**	**5.35**	**298**	*e*P	**Pn**	06 58 25.4	+2.4
GRUS	**Gruza**	**5.55**	**72**	*e*Pn	**Pn**	06 58 26.6	+0.9
GRUS				*e*Sn	**Sn**	06 59 32.2	+2.6
GRUS	**Gruza**	**5.55**	**72**	*e*Pn	**Pn**	06 58 26.6	+0.9
GRUS				*e*Sn	**Sn**	06 59 32.2	+2.6
LPG	**La Plagne** 5.4nm,0.6s	**5.71**	**305**	*e*P	**Pn**	06 58 31.2	+3.1
LPG				*e*Sn	**Sn**	06 59 30.4	-3.4
LPG	**La Plagne** 1.7nm,0.3s	**5.71**	**305**	*e*P	**Pn**	06 58 31.2	+3.1
LPL	**La Plagne**	**5.73**	**305**	*e*P	**Pn**	06 58 31.4	+3.0
LPL				*e*Sn	**Sn**	06 59 29.6	-4.6
LPL	**La Plagne** 1.1nm,0.3s,baz=182,slow=22,SNR=6.4	**5.73**	**305**	*e*P	**Pn**	06 58 31.4	+3.0
SELS	**Selova**	**5.74**	**79**	*e*Pn	**Pn**	06 58 28.8	+0.5
SELS	**Selova**	**5.74**	**79**	*e*Pn	**Pn**	06 58 28.8	+0.5
SMRF	**Simiane la Rot**	**5.93**	**288**	*e*P	**Pn**	06 58 32.7	+1.7
SMRF	**Simiane la Rot**	**5.93**	**288**	*e*P	**Pn**	06 58 32.7	+1.7
ORIF	**Oris-en-Rattie**	**6.01**	**297**	*e*P	Pn	06 58 35.9	+3.9
BARS	**Barje**	**6.22**	**83**	*e*Pn	**Pn**	06 58 36.1	+1.2
BARS				*e*Sn	**Sn**	06 59 46.5	+0.4
BARS	**Barje**	**6.22**	**83**	*e*Pn	**Pn**	06 58 36.1	+1.2
BARS				*e*Sn	**Sn**	06 59 46.5	+0.4
GERES	**GERESS Array B** 0.8nm,0.3s,baz=170,slow=12,SNR=15	**6.45**	**2**	Pn	**Pn**	06 58 37.7	-0.4
GERES	1.1nm,0.3s,baz=182,slow=22,SNR=6.4			Sn	**Sn**	06 59 50.3	-1.4
CABF	**La Chapelle**	**6.71**	**311**	*e*Pn	**Pn**	06 58 42.9	+1.2
CABF	**La Chapelle**	**6.71**	**311**	*e*Pn	**Pn**	06 58 42.9	+1.2
KHC	**Kasperske Hory** 5.0nm,0.5s	**6.73**	**1**	*e*PN	**Pn**	06 58 43.1	+1.2
KHC				*ex*	x	06 58 52.3	
KHC				*e*SN	**Sn**	06 59 55.9	-2.7
KHC	**Kasperske Hory**	**6.73**	**1**	Pn	**Pn**	06 58 43.1	+1.2
VIVF	**Saint-Julien-l**	**6.79**	**294**	*e*Pn	**Pn**	06 58 44.8	+2.1
VIVF	**Saint-Julien-l**	**6.79**	**294**	*e*Pn	**Pn**	06 58 44.8	+2.1
ZAPS	**Zavoj**	**6.84**	**80**	*e*Pn	**Pn**	06 58 44.3	+0.8
ZAPS				*e*Sn	**Sn**	07 00 01.4	0.0
ZAPS	**Zavoj**	**6.84**	**80**	*e*Pn	**Pn**	06 58 44.3	+0.8
ZAPS				*e*Sn	**Sn**	07 00 01.4	0.0
HINF	**Hinteralfeld** 5.0nm,0.5s	**7.12**	**322**	*e*Pn	**Pn**	06 58 47.4	+0.1
HINF				*e*Sn	**Sn**	07 00 03.9	-4.3
HINF	**Hinteralfeld**	**7.12**	**322**	*e*Pn	**Pn**	06 58 47.4	+0.1
VYHS	**Vyhne**	**7.19**	**30**	*e*PN	**Pn**	06 58 49.0	+0.8
VYHS				*e*SN	**Sn**	07 00 04.6	-5.3
VYHS	**Vyhne**	**7.19**	**30**	*e*Pn	**Pn**	06 58 49.0	+0.8
KEST	**Kesra** 0.3nm,0.3s,baz=284,slow=5.8,SNR=8.3	**7.37**	**207**	Pn	Pn	06 58 54.8	+4.1
CDF	**Champ du Feu** 4.2nm,0.4s	**7.39**	**326**	*e*Pn	**Pn**	06 58 51.0	-0.1
CDF				*e*Sn	**Sn**	07 00 10.8	-4.1
CDF	**Champ du Feu**	**7.39**	**326**	*e*Pn	**Pn**	06 58 51.0	-0.1
HAU	**Haudompre** 7.9nm,0.7s	**7.50**	**321**	*e*Pn	**Pn**	06 58 52.7	+0.3
HAU				*e*Sn	**Sn**	07 00 11.5	-5.8
HAU	**Haudompre**	**7.50**	**321**	*e*Pn	**Pn**	06 58 52.7	+0.3
SFTF	**Sexfontaines**	**8.27**	**317**	*e*Pn	**Pn**	06 59 03.3	+0.3
SFTF	**Sexfontaines**	**8.27**	**317**	*e*Pn	**Pn**	06 59 03.3	+0.3
LOR	**Lormes**	**8.34**	**309**	*e*Pn	**Pn**	06 59 04.2	+0.2
LOR	1.5nm,0.3s			*e*Sn	**Sn**	07 00 33.6	-4.6
LOR	**Lormes**	**8.34**	**309**	*e*Pn	**Pn**	06 59 04.2	+0.2
FINES	**FINESS Array B** 1.4nm,0.6s,baz=198,slow=8.7,SNR=7.4	**20.54**	**17**	P	**P**	07 01 42.3	+1.0
TORD	**Torodi Ar. Bea** 0.2nm,0.5s,baz=15,slow=9.0,SNR=3.3	**30.86**	**203**	P	**P**	07 03 20.5	+1.0
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=297,slow=6.3,SNR=4.2	**47.82**	**60**	P	**P**	07 05 42.2	+1.6

*ISCJB **11** 07:01:06.4±0.5, 10°.73N±0°.04×62°.40W±0°.03, h98km±6km, Error ellipse: s-maj=7.1km s-min=4.1km az=156.5*
*FUNV **11** 07:01:07.7, 10°.74N×62°.27W, h91km, MW3.4*
*TRN **11** 07:01:10.8, 10°.83N×62°.17W, h95km, MD3.3*

ISC 11 07:01:06.7±1.3, **10.71N**±0°.04×**62°.38W**±0.04, **h101**km±10km, **n23,** σ1§**45**/40, **3C-4D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.17**	**111**	⇓*i*P		**Pn**	**07 01 20.7**	**-0.2**
GUIV				*e*S		**Sn**	**07 01 29.3**	**-2.2**
CRUV	**Carupano**	**0.84**	**268**	⇓*i*P		**Pn**	**07 01 26.3**	**+0.8**
CRUV				*e*S		**Sn**	**07 01 39.3**	**-0.4**
TRN	**Trinidad (W)**	**0.96**	**93**	⇑*i*P		**Pn**	**07 01 28.5**	**+1.7**
TRN				*e*S		**Sn**	**07 01 41.0**	**-0.9**
TPP	**Pointe-a-Pierr**	**0.99**	**113**	*e*P		**Pn**	**07 01 30.2**	**+3.1**
TPP				*e*S		**Sn**	**07 01 43.4**	**+0.9**
TBH	**Brigand Hill**	**1.31**	**100**	*e*P		**Pn**	**07 01 32.9**	**+2.2**
TBH				*e*S		**Sn**	**07 01 48.4**	**-0.5**
GRW	**Mount Saint Ca**	**1.61**	**26**	*e*P		**Pn**	**07 01 36.1**	**+1.6**
GRW				*e*S		**Sn**	**07 01 54.2**	**-1.3**
TPR	**Prospect**	**1.65**	**73**	*e*P		**Pn**	**07 01 36.3**	**+1.5**
TPR				*e*S		**Sn**	**07 01 54.6**	**-1.6**
TOSP	**Speyside**	**1.90**	**72**	*e*P		**Pn**	**07 01 38.3**	**+0.2**
TOSP				*e*S		**Sn**	**07 01 59.8**	**-2.2**
ORIV	**Oritupano**	**1.92**	**212**	*e*P		**Pn**	**07 01 39.8**	**+1.5**
ORIV				*e*S		**Sn**	**07 02 03.7**	**+1.3**
PCRV	**Puerto La Cruz**	**2.28**	**257**	⇑*e*P		**Pn**	**07 01 44.4**	**+1.4**
PCRV				*e*S		**Sn**	**07 02 09.9**	**-1.0**
SVB	**Belmont**	**2.78**	**23**	*e*P		**Pn**	**07 01 52.0**	**+2.4**
SVB				*e*S		**Sn**	**07 02 21.7**	**-0.8**
PRGV	**PARIAGUAN**	**2.96**	**229**	*e*P		**Sn**	**07 01 53.0**	**+1.1**
PRGV				*e*S		**Sn**	**07 02 27.2**	**+0.5**
GURV	**El Guri**	**3.01**	**193**	⇑*e*P		**Pn**	**07 01 53.5**	**+0.9**
GURV				*e*S		**Sn**	**07 02 26.1**	**-1.9**
CUPV	**Cœpira**	**3.41**	**259**	*e*P		**Pn**	**07 01 59.6**	**+1.5**
CUPV				*e*S		**Sn**	**07 02 38.4**	**+0.6**
BIRV	**Birongo**	**3.83**	**267**	*e*P		**Pn**	**07 02 04.5**	**+0.9**
BIRV				*e*S		**Sn**	**07 02 46.9**	**-0.8**
MERV	**Las Mercedes**	**4.12**	**250**	*e*P		**Pn**	**07 02 08.1**	**+0.5**
MERV				*e*S		**Sn**	**07 02 54.1**	**-0.7**
LUEV	**Luepa**	**4.92**	**169**	⇓*e*P		**Pn**	**07 02 18.0**	**-0.5**
TURV	**Turiamo**	**5.37**	**268**	*e*P		**Pn**	**07 02 25.7**	**+1.2**
BAUV	**El Baul**	**5.85**	**253**	⇓*e*P		**Pn**	**07 02 31.0**	**+0.1**
BAUV				*e*S		**Sn**	**07 03 33.6**	**-3.0**
MAPV	**Macapo**	**6.04**	**262**	*e*P		**Pn**	**07 02 34.0**	**+0.4**
TEPV	**Terepaima**	**6.74**	**264**	*e*P		**Pn**	**07 02 43.7**	**+0.5**
SANV	**Sanarito**	**7.15**	**261**	*e*P		**Pn**	**07 02 48.6**	**-0.2**
SOCV	**Socops**	**8.70**	**255**	*e*P		**Pn**	**07 03 09.2**	**-0.5**

*ISK **11** 07:02:19.4, 37°.31N×28°.27E, h8km, MD2.7*
*ISCJB **11** 07:02:20.1±0.5, 37°.30N±0°.03×28°.29E±0°.04, h0km, Error ellipse: s-maj=5.9km s-min=3.5km az=136.3*
*DDA **11** 07:02:20.6, 37°.24N×28°.21E, h7km, MD2.7*
*CSEM **11** 07:02:20.2±0.2, 37°.29N×28°.28E, h1km, MD2.7, Error ellipse: s-maj=6.5km s-min=4.6km az=43.0*

ISC 11 07:02:19.8±0.9, **37°.32N**±0°.03×**28°.27E**±0°.03, **h0**km, **n22,** σ0§**59**/32, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.19**	**176**	PG		**Pg**	**07 02 23.5**	**+0.2**
YER				*e*SG		**Sg**	**07 02 26.7**	**+1.0**
YER	**Yerkesik**	**0.19**	**176**	*i* Pg		**Pg**	**07 02 23.5**	**+0.2**
YER				*e*Sg		**Sg**	**07 02 26.7**	**+1.0**
MLSB	**Milas**	**0.39**	**267**	*e*PG		**Pg**	**07 02 27.8**	**+0.5**
MLSB				*e*SG		**Sg**	**07 02 33.5**	**+1.2**
MLSB	**Milas**	**0.39**	**267**	*e*Pg		**Pg**	**07 02 27.8**	**+0.5**
MLSB				*e*Sg		**Sg**	**07 02 33.5**	**+1.2**
AYDN	**Tasoluk**	**0.46**	**318**	*i* P		**Pb**	**07 02 30.5**	**-0.3**
AYDN				*i* S		**Sb**	**07 02 37.6**	**-0.6**
AYDN	**Tasoluk**	**0.46**	**318**	*i* P		**Pb**	**07 02 30.5**	**-0.3**
AYDN				*i* S		**Sb**	**07 02 37.6**	**-0.6**
TURN	**Turunc**	**0.52**	**149**	*i* P		**Pg**	**07 02 29.8**	**+0.1**
TURN				*i* S		**Sg**	**07 02 36.8**	**+0.3**
TURN	**Turunc**	**0.52**	**149**	*i* P		**Pg**	**07 02 29.8**	**+0.1**
TURN				*i* S		**Sg**	**07 02 36.8**	**+0.3**
DALT	**Dalyan (Mudla)**	**0.62**	**152**	*e*PG		**Pg**	**07 02 31.7**	**0.0**
DALT	**Dalyan (Mudla)**	**0.62**	**152**	*e*Pg		**Pg**	**07 02 31.7**	**0.0**
DNZL	**Cakiroluk**	**0.72**	**59**	*i* P		**Pb**	**07 02 36.1**	**+0.8**
DNZL	**Cakiroluk**	**0.72**	**59**	*i* P		**Pb**	**07 02 36.1**	**+0.8**
BODT	**Bodrum**	**0.81**	**252**	*e*PG		**Pg**	**07 02 35.0**	**-0.2**
BODT	**Bodrum**	**0.81**	**252**	*e*Pg		**Pg**	**07 02 35.0**	**-0.2**
GCAM	**G?zelcaml?**	**0.91**	**295**	*i* P		**Pb**	**07 02 38.5**	**+0.2**
GCAM				*i* S		**Sb**	**07 02 50.7**	**-0.2**
GCAM	**G?zelcaml?**	**0.91**	**295**	*i* P		**Pb**	**07 02 38.5**	**+0.2**
GCAM				*i* S		**Sb**	**07 02 50.7**	**-0.2**
FETY	**Fethiye**	**0.95**	**136**	*e*PG		**Pg**	**07 02 37.7**	**-0.2**
FETY	**Fethiye**	**0.95**	**136**	*e*Pg		**Pg**	**07 02 37.7**	**-0.2**
KULA	**Kula-Manisa**	**1.23**	**14**	*e*PN		**Pg**	**07 02 43.8**	**+0.4**
KULA	**Kula-Manisa**	**1.23**	**14**	*e*Pn		**Pg**	**07 02 43.8**	**+0.4**
KHL	**Karahalli**	**1.41**	**44**	*e*PN		**Pn**	**07 02 45.8**	**-1.0**
KHL	**Karahalli**	**1.41**	**44**	*e*Pn		**Pn**	**07 02 45.8**	**-1.0**

*ISCJB **11** 07:04:14.2±0.2, 42°.39N±0°.02×13°.41E±0°.02, h11km±2km, mb3.3/4, Error ellipse: s-maj=3.0km s-min=2.4km az=144.5*
*CSEM **11** 07:04:14.6±0.1, 42°.39N×13°.42E, h5km, ML3.1/6, Error ellipse: s-maj=2.4km s-min=1.9km az=63.0*
*ROM **11** 07:04:14.4±0.1, 42°.38N×13°.41E, h10km±1km, Ml3.3/24, Error ellipse: s-maj=1.3km s-min=0.9km az=70.0*
*IDC **11** 07:04:14.6±1.4, 42°.52N×13°.12E, h0km, mb3.3/5, mb1 3.6/6, mb1mx3.5/26, mbtmp3.4/6, ML3.6/1, Error ellipse: s-maj=34.7km s-min=16.6km az=92.0*
*LDG **11** 07:04:17.1±0.9, 42°.42N×13°.31E, h2km, Ml3.1/6, Error ellipse: s-maj=20.5km s-min=10.9km az=98.0*

ISC 11 07:04:15.3±0.7, **42°.40N**±0°.01×**13°.40E**±0°.02, **h10**km±4km, **n142,** σ1§**30**/187, **mb3.4**/4, **8C-5D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**182**	⇓*i*Pg		**Pg**	**07 04 18.8**	**-0.5**
AQU				Sg		**Sg**	**07 04 18.2**	**-0.6**
AQU	**L'Aquila**	**0.04**	**182**	⇓*i*Pg		**Pg**	**07 04 16.8**	**-0.5**
AQU				Sg		**Sg**	**07 04 18.2**	**-0.6**
CAMP	**Campotosto**	**0.14**	**2**	⇑*i*Pg		**Pg**	**07 04 18.3**	**-0.3**
CAMP				Sg		**Sg**	**07 04 20.9**	**0.0**
CAMP	**Campotosto**	**0.14**	**2**	⇑*i*Pg		**Pg**	**07 04 18.3**	**-0.3**
CAMP				Sg		**Sg**	**07 04 20.9**	**0.0**
FAGN	**Fagnano**	**0.19**	**134**	Pg		**Pg**	**07 04 19.0**	**-0.3**
FAGN				Sg		**Sg**	**07 04 21.9**	**-0.2**
FAGN	**Fagnano**	**0.19**	**134**	Pg		**Pg**	**07 04 19.0**	**-0.3**
FAGN				Sg		**Sg**	**07 04 21.9**	**-0.2**
FIAM	**Fiamignano**	**0.25**	**239**	⇑*i*Pg		**Pg**	**07 04 20.0**	**-0.4**
FIAM				Sg		**Sg**	**07 04 24.0**	**+0.1**
FIAM	**Fiamignano**	**0.25**	**239**	⇑*i*Pg		**Pg**	**07 04 20.0**	**-0.4**
FIAM				Sg		**Sg**	**07 04 24.0**	**+0.1**
TERO	**Teramo**	**0.27**	**33**	⇑*i*Pg		**Pg**	**07 04 20.1**	**-0.7**
TERO				Sg		**Sg**	**07 04 25.5**	**+1.0**
TERO	**Teramo**	**0.27**	**33**	⇑*i*Pg		**Pg**	**07 04 20.1**	**-0.7**
TERO				Sg		**Sg**	**07 04 25.5**	**+1.0**
VCEL	**Villa Celiera**	**0.32**	**90**	Pg		**Pg**	**07 04 21.1**	**-0.7**
VCEL				Sg		**Sg**	**07 04 26.2**	**0.0**
VCEL	**Villa Celiera**	**0.32**	**90**	Pg		**Pg**	**07 04 21.1**	**-0.7**
VCEL				Sg		**Sg**	**07 04 26.2**	**0.0**
LNSS	**Leonessa**	**0.34**	**308**	Pg		**Pg**	**07 04 21.8**	**-0.3**
LNSS				Sg		**Sg**	**07 04 27.7**	**+1.1**
LNSS	**Leonessa**	**0.34**	**308**	Pg		**Pg**	**07 04 21.8**	**-0.3**
LNSS				Sg		**Sg**	**07 04 27.7**	**+1.1**
PTQR	**Pietraquaria**	**0.38**	**180**	⇑*i*Pg		**Pg**	**07 04 21.9**	**-0.8**
PTQR				Sg		**Sg**	**07 04 27.2**	**-0.5**
PTQR	**Pietraquaria**	**0.38**	**180**	⇑*i*Pg		**Pg**	**07 04 21.9**	**-0.8**
PTQR				Sg		**Sg**	**07 04 27.2**	**-0.5**
NRCA	**Norcia**	**0.49**	**334**	Pg		**Pg**	**07 04 24.1**	**-0.7**
NRCA				Sg		**Sg**	**07 04 31.7**	**+0.4**
NRCA	**Norcia**	**0.49**	**334**	Pg		**Pg**	**07 04 24.1**	**-0.7**
NRCA				Sg		**Sg**	**07 04 31.7**	**+0.4**
INTR	**Introdacqua**	**0.54**	**136**	Pg		**Pg**	**07 04 24.9**	**-0.8**
INTR				Sg		**Sg**	**07 04 33.4**	**+0.6**
INTR	**Introdacqua**	**0.54**	**136**	Pg		**Pg**	**07 04 24.9**	**-0.8**
INTR				Sg		**Sg**	**07 04 33.4**	**+0.6**
MNS	**Montasola** 2µm,0.5s	**0.54**	**269**	Pg		**Pg**	**07 04 24.8**	**-0.9**
MNS	**Montasola** 2µm,0.5s	**0.54**	**269**	Pg		**Pg**	**07 04 24.8**	**-0.9**
CERT	**Cerreto** 3µm,0.6s	**0.55**	**215**	Pg		**Pg**	**07 04 24.8**	**-1.1**
CERT	**Cerreto** 3µm,0.6s	**0.55**	**215**	Pg		**Pg**	**07 04 24.8**	**-1.1**
VVLD	**Villa Vallelon**	**0.55**	**163**	Pg		**Pg**	**07 04 24.7**	**-1.3**
VVLD	**Villa Vallelon**	**0.55**	**163**	Pg		**Pg**	**07 04 24.7**	**-1.3**
TRTR	**Tortoreto Alta** 6µm,0.9s	**0.56**	**42**	Pg		**Pg**	**07 04 26.4**	**+0.3**
TRTR	**Tortoreto Alta** 6µm,0.9s	**0.56**	**42**	Pg		**Pg**	**07 04 26.4**	**+0.3**
OFFI	**Offida** 8µm,0.5s	**0.58**	**21**	Pg		**Pg**	**07 04 26.5**	**0.0**
OFFI	**Offida** 8µm,0.5s	**0.58**	**21**	Pg		**Pg**	**07 04 26.5**	**0.0**
GUAR	**Guarcino**	**0.61**	**186**	Pg		**Pg**	**07 04 26.9**	**-0.2**
GUAR	**Guarcino**	**0.61**	**186**	Pg		**Pg**	**07 04 26.9**	**-0.2**
MTCE	**Montecelio** 893nm,0.6s	**0.62**	**233**	Pg		**Pg**	**07 04 26.1**	**-1.2**
MTCE	**Montecelio** 893nm,0.6s	**0.62**	**233**	Pg		**Pg**	**07 04 26.1**	**-1.2**
CESX	**Cesi** 927nm,0.5s	**0.65**	**290**	Pg		**Pg**	**07 04 27.1**	**-0.7**
CESX	**Cesi** 927nm,0.5s	**0.65**	**290**	Pg		**Pg**	**07 04 27.1**	**-0.7**
LPEL	**Lama dei Pelig** LPEL	**0.68**	**121**	Pg Sg		**Pg** **Sg**	**07 04 26.9** **07 04 37.8**	**-1.5** **+0.5**
LPEL	**Lama dei Pelig** LPEL	**0.68**	**121**	Pg Sg		**Pg** **Sg**	**07 04 26.9** **07 04 37.8**	**-1.5** **+0.5**
FDMO	**Fiordimonte** FDMO	**0.68**	**340**	Pg Sg		**Pg** **Sg**	**07 04 27.3** **07 04 38.0**	**-1.2** **+0.6**
FDMO	**Fiordimonte** FDMO	**0.68**	**340**	Pg Sg		**Pg** **Sg**	**07 04 27.3** **07 04 38.0**	**-1.2** **+0.6**
CESI	**CESI - Serrava**	**0.71**	**329**	Pg		**Pg**	**07 04 28.0**	**-1.1**
CESI	**CESI - Serrava**	**0.71**	**329**	Pg		**Pg**	**07 04 28.0**	**-1.1**
POFI	**Posta Fibreno**	**0.72**	**161**	Pg		**Pg**	**07 04 27.8**	**-1.4**
POFI	**Posta Fibreno**	**0.72**	**161**	Pg		**Pg**	**07 04 27.8**	**-1.4**
CAFR	**Castel Frentan** 2µm,0.3s	**0.72**	**103**	Pg		**Pg**	**07 04 28.4**	**-0.8**
CAFR	**Castel Frentan** 2µm,0.3s	**0.72**	**103**	Pg		**Pg**	**07 04 28.4**	**-0.8**
SDI	**San Donato**	**0.75**	**156**	Pg		**Pg**	**07 04 28.4**	**-1.4**
SDI	**San Donato**	**0.75**	**156**	Pg		**Pg**	**07 04 28.4**	**-1.4**
GUMA	**Gualdo di Mace** 2µm,0.4s	**0.77**	**30**	Pg		**Pg**	**07 04 27.5**	**-2.7**
**GUM

SBF	Sospel	4.61	291	ePn	Pn	07 05 25.4	+0.4		
DAVOX	Davos/Dischmat	5.05	331	Pn	Pn	07 05 32.8	+1.5		
	0.9nm,0.3s,baz=158,slow=19,SNR=10.0								
DAVOX				Sn	Sn	07 06 29.0	-0.7		
	baz=143,slow=20,SNR=2.4								
FRF	La Foret Royal	5.09	285	ePn	Pn	07 05 31.6	0.0		
FRF	La Foret Royal	5.09	285	ePn	Pn	07 05 31.6	0.0		
LMR	La Mourre	5.15	283	ePn	Pn	07 05 32.2	-0.3		
LMR	La Mourre	5.15	283	ePn	Pn	07 05 32.2	-0.3		
MOTA	Moosalm	5.21	343	⇓iPn	Pn	07 05 35.3	+1.9		
	SNR=7.9								
MOTA	Moosalm	5.21	343	Pn	Pn	07 05 35.3	+1.9		
	SNR=7.9								
MBDF	Montbardon	5.35	298	eP	Pn	07 05 37.4	+2.1		
MBDF	Montbardon	5.35	298	eP	Pn	07 05 37.4	+2.1		
MOA	Molln	5.49	6	⇓iPn	Pn	07 05 37.0	0.0		
	SNR=7.2								
MOA	Molln	5.49	6	Pn	Pn	07 05 37.0	0.0		
	SNR=7.2								
LPG	La Plagne	5.71	305	eP	Pn	07 05 43.4	+3.0		
LPG				eSn	Sn	07 06 42.5	-3.7		
	3.9nm,0.5s								
LPL	La Plagne	5.74	305	eP	Pn	07 05 43.5	+2.8		
LPL				eSn	Sn	07 06 41.6	-5.0		
	1.4nm,0.3s								
CONA	Conrad Observa	5.80	17	⇓iPn	Pn	07 05 41.1	-0.3		
	SNR=7.8								
CONA	Conrad Observa	5.80	17	Pn	Pn	07 05 41.1	-0.3		
	SNR=7.8								
SMRF	Simiane la Rot	5.94	288	eP	Pn	07 05 44.8	+1.5		
SMRF	Simiane la Rot	5.94	288	eP	Pn	07 05 44.8	+1.5		
GERES	GERESS Array B	6.45	2	Pn	Pn	07 05 50.1	-0.3		
	0.7nm,0.3s,baz=175,slow=13,SNR=16								
GERES				Sn	Sn	07 07 00.9	-3.1		
	1.2nm,0.3s,baz=185,slow=21,SNR=5.7								
KHC	Kasperske Hory	6.74	1	ePN	Pn	07 05 53.3	-0.9		
KHC				eSN	Sn	07 07 08.1	-2.9		
KHC	Kasperske Hory	6.74	1	Pn	Pn	07 05 53.3	-0.9		
KHC				Sn	Sn	07 07 08.1	-2.9		
HINF	Hinteralfeld	7.13	322	ePn	Pn	07 05 59.4	-0.2		
HINF				eSn	Sn	07 07 15.9	-4.8		
	7.1nm,0.6s								
HINF	Hinteralfeld	7.13	322	ePn	Pn	07 05 59.4	-0.2		
VYHS	Vyhne	7.19	30	ePN	Pn	07 06 01.2	+0.7		
VYHS				eSN	Sn	07 07 20.4	-1.8		
VYHS	Vyhne	7.19	30	ePn	Pn	07 06 01.2	+0.7		
VYHS				eSn	Sn	07 07 20.4	-1.8		
CDF	Champ du Feu	7.40	326	ePn	Pn	07 06 03.1	-0.3		
CDF				eSn	Sn	07 07 22.9	-4.5		
	4.9nm,0.5s								
CDF	Champ du Feu	7.40	326	ePn	Pn	07 06 03.1	-0.3		
HAU	Haudompre	7.50	321	ePn	Pn	07 06 04.7	0.0		
HAU				eSn	Sn	07 07 23.5	-6.3		
	4.2nm,0.3s								
HAU	Haudompre	7.50	321	ePn	Pn	07 06 04.7	0.0		
FINES	FINESS Array B	20.54	17	P	P	07 08 54.3	+0.7		
	2.1nm,0.7s,baz=188,slow=8.4,SNR=8.6								
KBZ	Khabaz	21.54	76	P	P	07 09 07.5	+2.9		
	1.8nm,0.7s,baz=312,slow=14,SNR=4.0								
TORD	Torodi Ar. Bea	30.86	203	P	P	07 10 32.4	+0.6		
	0.3nm,0.9s,baz=20,slow=8.8,SNR=2.6								
MKAR	Makanchi Array	47.82	60	P	P	07 12 54.3	+1.4		
	0.3nm,0.6s,baz=282,slow=8.8,SNR=5.2								
YKA	Yellowknife Ar	67.47	337	P	P	07 15 10.9	+0.1		
	0.1nm,0.7s,baz=41,slow=5.4,SNR=3.3								

ISCJB ***11*** *07:09:30.4±0.3, 42°.34N±0°.02×13°.39E±0°.03, h13km±3km, Error ellipse: s-maj=3.5km s-min=2.8km az=157.4*
CSEM ***11*** *07:09:30.7±0.1, 42°.34N×13°.39E, h10km, ML3.7/10, Error ellipse: s-maj=2.4km s-min=1.8km az=66.0*
ROM ***11*** *07:09:30.6±0.1, 42°.34N×13°.40E, h9km, Md2.8/32, Ml2.8/28, Error ellipse: s-maj=1.0km s-min=0.8km az=66.0*

ISC 11 07:09:30.9±0.8, 42°.33N±0°.02×13°.40E±0°.02, h10km±4km, n77, σ0.971/105, 14C-16D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.02	1	⇓iPg	Pg	07 09 32.6	-0.3
AQU				Sg	Sg	07 09 33.6	-0.7
	18μm,0.3s						
AQU	L'Aquila	0.02	1	⇓iPg	Pg	07 09 32.6	-0.3
AQU				Sg	Sg	07 09 33.6	-0.7
	18μm,0.3s						
FAGN	Fagnano	0.15	117	⇑ePg	Pg	07 09 34.6	+0.2
FAGN				Sg	Sg	07 09 37.6	+0.8
	18μm,0.3s						
FAGN	Fagnano	0.15	117	⇑ePg	Pg	07 09 34.6	+0.2
FAGN				Sg	Sg	07 09 37.6	+0.8
	18μm,0.3s						
CAMP	Campotosto	0.20	2	⇓iPg	Pg	07 09 35.3	0.0
CAMP				Sg	Sg	07 09 38.8	+0.5
CAMP	Campotosto	0.20	2	⇓iPg	Pg	07 09 35.3	0.0
CAMP				Sg	Sg	07 09 38.8	+0.5
FIAM	Fiamignano	0.22	253	⇑ePg	Pg	07 09 36.0	+0.4
FIAM				Sg	Sg	07 09 40.1	+1.4
	1μm,0.3s						
FIAM	Fiamignano	0.22	253	⇑ePg	Pg	07 09 36.0	+0.4
FIAM				Sg	Sg	07 09 40.1	+1.4
	1μm,0.3s						
PTQR	Pietraquaria	0.31	180	⇓ePg	Pb	07 09 37.5	-1.1
PTQR				Sg	Sb	07 09 42.5	-1.3
PTQR	Pietraquaria	0.31	180	⇓ePg	Pb	07 09 37.5	-1.1
PTQR				Sg	Sb	07 09 42.5	-1.3
TERO	Teramo	0.33	27	⇓ePg	Pg	07 09 37.1	-0.4
TERO				Sg	Sg	07 09 42.1	+0.2
	3μm,0.3s						
TERO	Teramo	0.33	27	⇓ePg	Pg	07 09 37.1	-0.4
TERO				Sg	Sg	07 09 42.1	+0.2
	3μm,0.3s						
VCEL	Villa Celiera	0.33	79	⇑ePg	Pg	07 09 37.6	0.0
VCEL				Sg	Sb	07 09 43.7	-0.7
	3μm,0.4s						
VCEL	Villa Celiera	0.33	79	⇑ePg	Pg	07 09 37.6	0.0
VCEL				Sg	Sb	07 09 43.7	-0.7
	3μm,0.4s						
LNSS	Leonessa	0.38	315	⇓iPg	Pg	07 09 38.6	+0.1
LNSS	Leonessa	0.38	315	⇓iPg	Pg	07 09 38.6	+0.1
VVLD	Villa Vallelon	0.49	160	⇓ePg	Pg	07 09 40.3	-0.2
	531nm,0.5s						
VVLD	Villa Vallelon	0.49	160	⇓ePg	Pg	07 09 40.3	-0.2
	531nm,0.5s						
INTR	Introdacqua	0.49	131	⇑ePg	Pg	07 09 40.3	-0.3
INTR				Sg	Sb	07 09 48.4	-0.6
	1μm,0.3s						
INTR	Introdacqua	0.49	131	⇑ePg	Pg	07 09 40.3	-0.3
INTR				Sg	Sb	07 09 48.4	-0.6
	1μm,0.3s						
CERT	Cerreto	0.49	219	⇑iPg	Pg	07 09 40.6	0.0
CERT				Sg	Sb	07 09 48.6	-0.4
	1μm,0.2s						
CERT	Cerreto	0.49	219	⇑iPg	Pg	07 09 40.6	0.0
CERT				Sg	Sb	07 09 48.6	-0.4
	1μm,0.2s						
MNS	Montasola	0.54	276	⇑ePg	Pg	07 09 41.2	-0.2
	345nm,0.4s						
MNS	Montasola	0.54	276	⇑ePg	Pg	07 09 41.2	-0.2
	345nm,0.4s						
NRCA	Norcia	0.54	337	⇓ePg	Pg	07 09 41.1	-0.4
NRCA				Sg	Sb	07 09 49.6	-0.8
	613nm,0.1s						
NRCA	Norcia	0.54	337	⇓ePg	Pg	07 09 41.1	-0.4
NRCA				Sg	Sb	07 09 49.6	-0.8
	613nm,0.1s						
GUAR	Guarcino	0.54	187	⇑ePg	Pg	07 09 41.4	-0.1
	350nm,0.4s						
GUAR	Guarcino	0.54	187	⇑ePg	Pg	07 09 41.4	-0.1
	350nm,0.4s						
MTCE	Montecelio	0.58	238	Pg	Pg	07 09 42.0	-0.2
	210nm,0.5s						
MTCE	Montecelio	0.58	238	Pg	Pg	07 09 42.0	-0.2
	210nm,0.5s						
TRTR	Tortoreto Alta	0.61	38	Pg	Pb	07 09 43.4	-0.2
TRTR	Tortoreto Alta	0.61	38	Pg	Pb	07 09 43.4	-0.2
OFFI	Offida	0.64	19	Pg	Pb	07 09 43.9	-0.2
	1μm,0.5s						
OFFI	Offida	0.64	19	Pg	Pb	07 09 43.9	-0.2
	1μm,0.5s						
LPEL	Lama dei Pelig	0.65	116	Pg	Pg	07 09 43.1	-0.4
LPEL				Sg	Sb	07 09 52.9	-0.5
	507nm,0.3s						
LPEL	Lama dei Pelig	0.65	116	Pg	Pg	07 09 43.1	-0.4
LPEL				Sg	Sb	07 09 52.9	-0.5
	507nm,0.3s						

POFI	Posta Fibreno	0.66	159	Pg	Pg	07 09 43.1	-0.6		
	132nm,0.5s								
POFI	Posta Fibreno	0.66	159	Pg	Pg	07 09 43.1	-0.6		
	132nm,0.5s								
CESX	Cesi	0.67	295	Pg	Pb	07 09 43.8	-0.8		
	313nm,0.4s								
CESX	Cesi	0.67	295	Pg	Pb	07 09 43.8	-0.8		
	313nm,0.4s								
SDI	San Donato	0.69	154	Pg	Pg	07 09 43.7	-0.7		
	200nm,0.2s								
SDI	San Donato	0.69	154	Pg	Pg	07 09 43.7	-0.7		
	200nm,0.2s								
CAFR	Castel Frentan	0.71	98	Pg	Pb	07 09 44.7	-0.7		
CAFR	Castel Frentan	0.71	98	Pg	Pb	07 09 44.7	-0.7		
RMP	Rome, Mte Porz	0.74	225	Pg	Pb	07 09 45.6	-0.2		
	364nm,0.6s								
RMP	Rome, Mte Porz	0.74	225	Pg	Pb	07 09 45.6	-0.2		
	364nm,0.6s								
FDMO	Fiordimonte	0.74	342	⇓ePg	Pg	07 09 44.5	-0.7		
FDMO				Sg	Sb	07 09 56.0	-0.1		
	214nm,0.4s								
FDMO	Fiordimonte	0.74	342	⇓ePg	Pg	07 09 44.5	-0.7		
FDMO				Sg	Sb	07 09 56.0	-0.1		
	214nm,0.4s								
CESI	CESI - Serrava	0.76	332	Pg	Pg	07 09 45.1	-0.6		
	125nm,0.4s								
CESI	CESI - Serrava	0.76	332	Pg	Pg	07 09 45.1	-0.6		
	125nm,0.4s								
GIUL	Giuliano Di Ro	0.78	188	Pg	Pb	07 09 46.1	-0.5		
	118nm,0.4s								
GIUL	Giuliano Di Ro	0.78	188	Pg	Pb	07 09 46.1	-0.5		
	118nm,0.4s								
RNI2	Rionero Sannit	0.84	138	Pg	Pb	07 09 47.1	-0.6		
	261nm,0.6s								
RNI2	Rionero Sannit	0.84	138	Pg	Pb	07 09 47.1	-0.6		
	261nm,0.6s								
CERA	Filignano	0.87	148	Pg	Pg	07 09 46.5	-1.2		
	193nm,0.5s								
CERA	Filignano	0.87	148	Pg	Pg	07 09 46.5	-1.2		
	193nm,0.5s								
MIDA	Miranda	0.94	137	Pg	Pg	07 09 47.9	-1.1		
	163nm,0.4s								
MIDA	Miranda	0.94	137	Pg	Pg	07 09 47.9	-1.1		
	163nm,0.4s								
SNTG	Esanatoglia	0.98	340	Pg	Pg	07 09 48.8	-1.0		
	57nm,0.2s								
SNTG	Esanatoglia	0.98	340	Pg	Pg	07 09 48.8	-1.0		
	57nm,0.2s								
FRES	Fresagrandinar	1.01	111	Pg	Pg	07 09 49.8	-0.5		
	139nm,0.6s								
FRES	Fresagrandinar	1.01	111	Pg	Pg	07 09 49.8	-0.5		
	139nm,0.6s								
CING	Cingoli	1.05	352	Pg	Pg	07 09 50.1	-1.1		
	132nm,0.6s								
CING	Cingoli	1.05	352	Pg	Pg	07 09 50.1	-1.1		
	132nm,0.6s								
MGAB	Montegabbione	1.11	302	Pg	Pb	07 09 51.7	-0.6		
	223nm,0.6s								
MGAB	Montegabbione	1.11	302	Pg	Pb	07 09 51.7	-0.6		
	223nm,0.6s								
MURB	Monte Urbino	1.13	325	Pg	Pb	07 09 52.0	-0.6		
	343nm,0.3s								
MURB	Monte Urbino	1.13	325	Pg	Pb	07 09 52.0	-0.6		
	343nm,0.3s								
ARVD	Arcevia	1.21	344	Pg	Pn	07 09 53.1	-0.8		
	120nm,0.9s								
ARVD	Arcevia	1.21	344	Pg	Pn	07 09 53.1	-0.8		
	120nm,0.9s								
AOI	Ancona	1.22	7	Pg	Pb	07 09 53.8	-0.4		
	75nm,0.4s								
AOI	Ancona	1.22	7	Pg	Pb	07 09 53.8	-0.4		
	75nm,0.4s								
MS1	Monte Sant'Ang	2.00	108	ePn	Pg	07 10 08.6	-0.6		
NVLJ	Novalja	2.47	25	ePn	Pn	07 10 12.1	+0.9		
NVLJ				Sn	Sn	07 10 42.6	+1.2		
NVLJ	Novalja	2.47	25	ePn	Pn	07 10 12.1	+0.9		
NVLJ				Sn	Sn	07 10 42.5	+1.2		
STON	Ston	3.22	79	ePn	Pn	07 10 23.3	+1.9		
STON				Sn	Sn	07 11 00.4	+0.6		
STON	Ston	3.22	79	ePn	Pn	07 10 23.3	+1.9		
STON				Sn	Sn	07 11 00.4	+0.6		

IDC 11 07:16:10.2±12.0, 17°.37S×178°.90W, h492km±120km, mb2.9/5, mb1 3.1/5, mb1mx2.9/20, mbtmp2.9/5, Error ellipse: s-maj=117.0km s-min=46.5km az=132.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.48	240	P	P	07 22 49.8	+0.3
	0.6nm,0.3s,baz=83,slow=8.1,SNR=5.8						
WRA	Warramunga Arr	44.27	259	P	P	07 23 34.7	-1.0
	0.2nm,0.3s,baz=96,slow=7.4,SNR=6.4						
ASAR	Alice Springs	44.49	254	P	P	07 23 37.2	-0.1
	4.1nm,0.5s,baz=90,slow=8.1,SNR=69						
ASAR				PcP	PcP	07 25 09.8	-0.6
	0.3nm,0.4s,baz=107,slow=4.0,SNR=4.6						
FITZ	Fitzroy Crossi	52.65	260	P	P	07 24 38.6	+0.4
	0.4nm,0.3s,baz=98,slow=7.1,SNR=4.7						
ILAR	Eielson Array	85.47	13	P	P	07 27 54.7	-0.3
	0.1nm,0.4s,baz=227,slow=5.2,SNR=6.4						
GERES	GERESS Array B	146.97	345	PKPbc	PKPbc	07 34 56.8	-0.4
	0.2nm,0.2s,baz=1.4,slow=3.9,SNR=2.9						

BJI ***11*** *07:18:37.8, 44°.40N×129°.20W, h10km, mB4.9/3, mb4.5/4*
IDC ***11*** *07:18:38.7±1.1, 44°.30N×128°.95W, h0km, mb3.9/11, mb1 4.1/17, mb1mx4.0/33, mbtmp3.9/17, ML3.5/6, MS3.7/18, Ms1 3.7/18, ms1mx3.4/45, Error ellipse: s-maj=25.5km s-min=12.8km az=43.0*
ISCJB ***11*** *07:18:39.8±0.3, 44°.38N±0°.02×129°.16W±0°.04, h13km, mb4.2/25, MS3.6/14, Error ellipse: s-maj=4.1km s-min=3.1km az=172.7*
NEIC ***11*** *07:18:41.0±0.5, 44°.36N×129°.21W, h10km, mb4.2/22, Error ellipse: s-maj=7.4km s-min=4.7km az=54.0*

ISC 11 07:18:40.0±0.6, 44°.26N±0°.06×129°.24W±0°.06, h13km, n450, σ1.933/417, mb4.3/25, MS3.6/14, 109C-148D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	Edson Butte	3.82	110	ePn	Pn	07 19 34.3	-4.3
KEBM				eSn	Sn	07 20 21.8	-1.6
COR	Corvallis	4.26	83	ePn	Pn	07 19 43.9	-0.6
KMOR	Kings Mountain	4.31	69	P	Pn	07 19 44.1	-1.2
F03A	Seaside	4.36	65	P	Pn	07 19 45.4	-0.4
NLO	Nicolai Mounta	4.48	64	P	Pn	07 19 47.5	-0.2
HUMO	Hull Mountain	4.86	108	ePn	Pn	07 19 51.0	-1.8
HUMO				eSn	Sn	07 20 46.4	-2.6
NLWA	Neilton Lookou	4.89	48	ePn	Pn	07 19 52.7	-0.5
NLWA				eSn	Sn	07 20 48.9	-0.8
OOW	Octopus West	4.95	44	P	Pn	07 19 53.8	-0.2
RVW	Rose Valley	4.96	65	P	Pn	07 19 54.0	-0.2
H04A	Detroit Lake	5.07	83	P	Pn	07 19 54.7	-0.9
F04A	Amboy	5.11	68	P	Pn	07 19 56.2	0.0
FL2	Flat Top 2	5.24	66	P	Pn	07 19 58.1	0.0
MTMW	Mount Mitchell	5.28	68	P	Pn	07 19 57.8	-0.8
ERK	Elk Rock	5.28	65	P	Pn	07 19 58.5	-0.1
VALT	Mount Saint He	5.35	66	P	Pn	07 20 00.1	+0.4
YBH	Yreka Blue Hor	5.41	116	ePn	Pn	07 20 02.6	+2.2
	11nm,0.8s						
YBH				Sn	Sn	07 21 02.6	0.0
YBH	Yreka Blue Hor	5.41	116	Pn	Pn	07 19 58.8	-1.6
	0.3nm,0.3s,baz=309,slow=15,SNR=8.2						
YBH				Sn	Sn	07 21 02.6	0.0
	0.1nm,0.3s,baz=240,slow=20,SNR=2.5						
HDW	Hoodsport	5.49	50	P	Pn	07 20 00.9	-0.5
LON	Longmire	5.79	62	ePn	Pn	07 20 05.3	-0.2
PGC	Sidney	5.94	40	ePn	Pn	07 20 06.8	-0.7
	2.3nm,0.6s						
PGC				eSn	Sn	07 21 14.5	-0.9
WDC	Whiskeytown Da	6.17	124	ePn	Pn	07 20 12.9	+2.2
	7.7nm,0.8s						
MOD	Modoc	6.95	107	ePn	Pn	07 20 20.9	-0.8
HOPS	Hopland	7.00	137	ePn	Pn	07 20 21.2	-0.9
HAWA	Hanford	7.17	69	ePn	Pn	07 20 24.5	0.0
BBB	Bella Bella	7.97	5	Pn	Pn	07 20 34.9	-0.5
BBB	Bella Bella	7.97	5	Pn	Pn	07 20 34.9	-0.5
	1.0nm,0.3s,baz=190,slow=13,SNR=35						
BBB				LR	LR	07 23 16.8	
	comp=Z,321nm,18.6s,baz=162,slow=35						
BMO	Blue Mountains	8.54	82	ePn	Pn	07 20 42.9	-0.5
WCN	Washoe City	8.64	122	ePn	Pn	07 20 45.9	+1.0

	6.5nm,0.9s								
CMB	Columbia Colle	9.12	130	ePn	Pn	07 20 52.3	+1.0		
NEW	Newport	9.30	60	ePn	Pn	07 20 52.8	-0.9		
NEW	Newport	9.30	60	⇑P	Pn	07 20 52.6	-1.1		
	baz=9.2,SNR=24								
NEW	Newport	9.30	60	Pn	Pn	07 20 52.1	-1.6		
	1.0nm,0.3s,baz=240,slow=14,SNR=15								
NEW				LR		07 24 21.7			
	comp=Z,621nm,21.8s,baz=252,slow=38								
BMN	Battle Mountai	9.68	109	ePn	Pn	07 21 02.2	+3.1		
C11A	Tepee Creek (N	9.71	64	⇓P	Pn	07 20 59.1	-0.3		
	baz=9.6								
MFID	Camas Ranch	9.73	90	ePn	Pn	07 21 00.8	+1.1		
MFID	Camas Ranch	9.73	90	⇑P	Pn	07 21 00.8	+1.1		
	baz=9.7								
G12A	Big Creek, Yel	9.95	80	⇑P	Pn	07 21 02.6	-0.2		
	baz=9.9								
F12A	Elk City	10.02	76	⇓P	Pn	07 21 04.0	+0.3		
	baz=9.9,SNR=19								
NVAR	Mina Array Bea	10.07	122	Pn	Pn	07 21 05.4	+1.0		
NVAR	Mina Array Bea	10.07	122	Pn	Pn	07 21 05.4	+1.0		
	0.5nm,0.3s,baz=298,slow=14,SNR=19								
D12A	Red Ives Fores	10.12	69	⇑P	Pn	07 21 04.7	-0.3		
	baz=10.0								
NV11	Mina Array Sit	10.16	121	ePn	Pn	07 21 06.0	+0.4		
I12A	Atlanta	10.17	88	⇑P	Pn	07 21 07.4	+1.5		
	baz=10,SNR=26								
C12B	Naegeli Ranch,	10.18	65	⇓P	Pn	07 21 06.2	+0.4		
	baz=10								
H12A	Diamond D Ranc	10.30	83	⇓P	Pn	07 21 08.1	+0.6		
	baz=10,SNR=23								
F13A	Darby	10.67	77	⇓P	Pn	07 21 13.2	+0.7		
	baz=11,SNR=23								
BSMT	Bassoo Peak	10.67	65	ePn	Pn	07 21 13.2	+0.6		
HLID	Hailey	10.72	89	ePn	Pn	07 21 15.9	+2.6		
HLID	Hailey	10.72	89	⇑P	Pn	07 21 13.8	+0.5		
	baz=11,SNR=62								
G13A	Cobalt	10.72	80	⇑P	Pn	07 21 13.5	+0.2		
	baz=11,SNR=31								
D13A	Huson	10.73	69	P	Pn	07 21 13.2	-0.1		
	baz=11,SNR=11								
H13A	Challis	10.73	83	⇓P	Pn	07 21 13.6	+0.2		
	baz=11,SNR=22								
C13A	Hot Springs	10.77	66	P	Pn	07 21 15.1	+1.2		
	baz=11,SNR=40								
E13A	Victor	10.82	73	⇑P	Pn	07 21 14.6	+0.1		
	baz=11,SNR=16								
I13A	Wildhorse Cree	10.89	87	⇓P	Pn	07 21 16.0	+0.4		
	baz=10,SNR=16								
ELK	Elko	10.91	104	ePn	Pn	07 21 18.2	+2.2		
J13A	Cove Ranch, Pi	10.92	89	⇓P	Pn	07 21 18.8	+2.7		
	baz=11,SNR=37								
JTMT	Jette	10.97	66	ePn	Pn	07 21 17.3	+0.6		
BLMT	Blacktail Moun	10.98	65	ePn	Pn	07 21 16.5	-0.4		
B13A	Whitefish	11.01	63	⇑P	Pn	07 21 17.1	0.0		
	baz=11,SNR=9.2								
MSO	Missoula	11.04	71	ePn	Pn	07 21 17.9	+0.4		
MSO	Missoula	11.04	71	P	Pn	07 21 18.0	+0.4		
	baz=11,SNR=17								
SWMT	Swartz Lake	11.11	68	ePn	Pn	07 21 19.3	+0.8		
YBMT	Yellow Bay	11.18	66	ePn	Pn	07 21 19.1	-0.4		
	7.5nm,1.0s								
A13A	Flathead Natio	11.22	60	⇑P	Pn	07 21 19.7	-0.3		
	baz=11								
G14A	Jackson	11.27	79	⇓P	Pn	07 21 21.6	+0.7		
	baz=11,SNR=19								
E14A	Clinton	11.29	73	⇑P	Pn	07 21 22.3	+1.2		
	baz=11								
C14A	Swan Lake	11.33	67	⇓P	Pn	07 21 21.4	-0.2		
	baz=11								
F14A	Wisdom	11.34	77	⇓P	Pn	07 21 23.8	+2.0		
	baz=11,SNR=10								
H14A	Leadore	11.36	83	⇑P	Pn	07 21 22.3	+0.3		
	baz=11,SNR=16								
I14A	Mackay	11.36	86	⇓P	Pn	07 21 23.9	+1.8		
	baz=11,SNR=18								
D14A	Greenough	11.37	70	P	Pn	07 21 22.2	+0.1		
	baz=11,SNR=16								
SLMT	Seeley Lake	11.40	69	ePn	Pn	07 21 22.6	0.0		
J14A	Carey	11.40	89	P	Pn	07 21 25.9	+3.2		
	baz=11,SNR=48								
CHMT	Chamberlain Mo	11.52	71	ePn	Pn	07 21 24.9	+0.7		
WALA	Waterton Lakes	11.57	60	ePn	Pn	07 21 24.1	-0.8		
	0.2nm,0.7s								
MCMT	McKenzie Canyo	11.71	81	ePn	Pn	07 21 27.6	+0.6		
B14A	Marquette Ranc	11.78	64	⇑P	Pn	07 21 27.8	+0.1		
	baz=12								
K14A	Jones Ranch, D	11.81	93	⇑P	Pn	07 21 30.4	+2.2		
	baz=12,SNR=9.9								
R11A	Troy Canyon, C	11.84	115	⇑P	Pn	07 21 30.2	+1.6		
	baz=12								
A14A	Double T Ranch	11.85	61	⇓P	Pn	07 21 29.6	+0.9		
	baz=12,SNR=9.3								
H15A	Lima	11.87	82	P	Pn	07 21 30.5	+1.4		
	baz=12,SNR=8.8								

	baz=13							
HWUT	Hardware Ranch	13.22	95	ePn	Pn	07 21 49.0	+1.6	
TPAW	Teton Pass	13.22	87	ePn	Pn	07 21 50.5	+3.0	
F17A	Fitzpatrick Pl	13.24	76	⇑P	Pn	07 21 49.0	+1.4	
	baz=13,SNR=30							
M16A	Huntsville	13.26	97	⇑P	Pn	07 21 49.8	+1.7	
	baz=13							
D17A	Six Diamond Ra	13.29	71	P	Pn	07 21 49.2	+0.9	
	baz=13,SNR=26							
C17A	Wharram Farm,	13.29	69	P	Pn	07 21 49.2	+0.8	
	baz=13,SNR=18							
MOOW	Moose Ponds	13.33	86	ePn	Pn	07 21 51.4	+2.4	
SNOW	Snow King Moun	13.37	87	ePn	Pn	07 21 52.6	+3.1	
H17A	Grant Village	13.37	83	P	Pn	07 21 53.4	+3.8	
	baz=13,SNR=12							
B17A	L&G Farms, Che	13.37	66	P	Pn	07 21 50.0	+0.6	
	baz=13,SNR=21							
J17A	Brown Place, J	13.41	87	⇓P	Pn	07 21 53.0	+2.9	
	baz=13,SNR=8.4							
I17A	Pilgrim Ck.	13.42	85	⇑P	Pn	07 21 53.8	+3.5	
	baz=13,SNR=30							
LOHW	Long Hollow	13.45	86	ePn	Pn	07 21 53.2	+2.6	
LKWY	Lake	13.47	82	ePn	Pn	07 21 54.9	+3.8	
TUQ	Turquoise Moun	13.48	126	⇑P	Pn	07 21 53.4	+2.4	
	baz=14							
ARUT	Antelope Range	13.56	113	ePn	Pn	07 21 54.5	+2.5	
	12nm,1.0s							
A17A	Triple J Farms	13.57	63	⇓P	Pn	07 21 52.1	-0.1	
	baz=14,SNR=16							
JLU	Jordanelle	13.64	99	ePn	P	07 21 57.7	-4.4	
CCUT	Cedar City	13.74	114	ePn	Pn	07 21 57.9	+3.3	
E18A	Harlowton	13.77	74	⇑P	Pn	07 21 56.0	+1.1	
	baz=14							
DAU	Daniels Canyon	13.84	100	ePn	Pn	07 21 57.1	+1.0	
D18A	Linhart Farms,	13.89	71	⇑P	Pn	07 21 57.8	+1.3	
	baz=14,SNR=9.4							
F18A	Big Timber	13.89	76	⇑P	Pn	07 21 58.2	+1.7	
	baz=14							
M17A	Scullys Gap (B	13.90	95	⇓P	Pn	07 21 59.6	+2.8	
	baz=14,SNR=12							
J18A	Kendall Valley	13.94	88	⇓P	Pn	07 22 00.3	+2.9	
	baz=14,SNR=5.5							
N17A	Moffit Pass	13.96	97	P	Pn	07 21 59.5	+2.0	
	baz=14,SNR=8.1							
H18A	Shoshone NF, C	13.99	81	P	Pn	07 22 00.4	+2.4	
	baz=14,SNR=6.4							
I18A	Diamond G Ranc	14.00	85	⇓P	Pn	07 22 00.7	+2.5	
	baz=14,SNR=9.2							
MVU	Marysvale	14.01	108	ePn	Pn	07 22 01.0	+2.7	
G18A	Lazy EL Ranch,	14.02	79	⇓P	Pn	07 22 00.0	+1.7	
	baz=14,SNR=16							
EGMT	Eagleton	14.02	68	ePn	Pn	07 21 57.6	-0.6	
EGMT	Eagleton	14.02	68	⇓P	Pn	07 21 58.8	+0.5	
	baz=14,SNR=14							
MSU	Marysvale	14.03	108	ePn	Pn	07 22 00.8	+2.2	
	32nm,1.4s							
K18A	Toltan Ranch,	14.04	90	⇓P	Pn	07 22 01.4	+2.6	
	baz=14							
B18A	Beardsley Farm	14.06	66	P	Pn	07 21 58.9	0.0	
	baz=14,SNR=9.6							
GMRC	Granite Mounta	14.10	128	⇑P	Pn	07 22 00.7	+1.2	
	baz=14							
A18A	Metzger Ranch,	14.12	64	P	Pn	07 21 58.9	-0.7	
	baz=14,SNR=8.8							
DLBC	Dease Lake	14.21	358	Pn	P	07 22 04.5	-3.7	
DLBC	Dease Lake	14.21	358	Pn	P	07 22 04.5	-3.7	
	0.0nm,0.3s,baz=161,slow=11,SNR=3.8							
DLBC				LR	LR	07 26 53.4		
	comp=Z,477nm,18.2s,baz=172,slow=35							
LDFC	Landfair	14.21	125	ePn	Pn	07 22 02.0	+1.0	
L18A	Fontenelle, Gr	14.22	93	⇑P	Pn	07 22 02.9	+1.6	
	baz=14							
RLMT	Red Lodge	14.23	80	ePn	Pn	07 22 04.1	+2.7	
RLMT	Red Lodge	14.23	80	⇓P	Pn	07 22 04.1	+2.7	
	baz=14,SNR=15							
TMUT	Trail Mountain	14.33	104	ePn	Pn	07 22 04.3	+1.5	
	11nm,1.0s							
TMUT				eP	P	07 22 14.2	+4.2	
M18A	Lyman	14.35	95	⇓P	Pn	07 22 04.3	+1.4	
	baz=14							
BW06	Boulder Array	14.36	89	ePn	Pn	07 22 04.8	+1.7	
	5.2nm,0.9s							
BW06	Boulder Array	14.36	89	⇓P	Pn	07 22 05.3	+2.2	
	baz=14							
PDAR	Pinedale Array	14.36	89	Pn	Pn	07 22 04.0	+0.9	
PDAR	Pinedale Array	14.36	89	Pn	Pn	07 22 04.0	+0.9	
	0.0nm,0.3s,baz=282,slow=14,SNR=13							
PDAR				LR	LR	07 27 41.6		
	comp=Z,338nm,20.9s,baz=316,slow=38							
F19A	Roth Farm, Mol	14.43	77	⇑P	Pn	07 22 04.4	+0.4	
	baz=14							
C19A	Slack Wire Ran	14.45	69	P	Pn	07 22 05.0	+0.8	
	baz=14,SNR=25							
H19A	Powell	14.47	81	⇑P	P	07 22 08.0	-3.2	
	baz=14,SNR=22							
D19A	Cripps Ranch,	14.52	71	P	Pn	07 22 06.5	+1.5	
	baz=14,SNR=18							
Q16A	Castle Valley	14.53	105	⇓P	Pn	07 22 06.9	+1.5	
	baz=14,SNR=12							
I19A	Meeteetse	14.54	84	⇓P	Pn	07 22 08.5	+3.0	
	baz=14,SNR=18							
E19A	Rath Farm, Rou	14.55	74	⇓P	Pn	07 22 06.2	+0.7	
	baz=14,SNR=9.0							
J19A	Crowheart	14.62	87	⇓P	Pn	07 22 08.9	+2.3	
	baz=14,SNR=8.5							
L19A	Farson	14.66	92	⇑P	Pn	07 22 08.8	+1.6	
	baz=15,SNR=7.3							
N18A	Larsen Ranch,	14.77	96	P	Pn	07 22 08.8	+0.1	
	baz=15,SNR=7.5							
A19A	Klindworth Far	14.83	64	P	Pn	07 22 09.5	+0.1	
	baz=15,SNR=30							
K19A	Absolon Red Bu	14.86	88	⇑P	Pn	07 22 11.3	+1.5	
	baz=15							
P18A	Preston Nutter	14.87	102	⇓P	Pn	07 22 12.2	+2.1	
	baz=15							
SRU	San Rafael	14.89	104	ePn	P	07 22 13.7	-2.3	
SRU				eP	Pn	07 22 18.3	+8.0	
SRU	San Rafael	14.89	104	⇓P	Pn	07 22 12.6	+2.3	
	baz=15,SNR=35							
W13A	Hualapai Mount	14.93	123	⇓P	Pn	07 22 12.9	+2.0	
	baz=15							
G20A	Bridger	14.97	79	⇑P	Pn	07 22 12.5	+1.2	
	baz=15,SNR=11							
M19A	Rock Springs	14.97	94	P	Pn	07 22 11.4	0.0	
	baz=15,SNR=9.6							
F20A	Billings	14.99	77	⇓P	Pn	07 22 12.7	+1.1	
	baz=15							
E20A	Meyer Farm, Mu	15.00	74	P	Pn	07 22 11.9	+0.3	
	baz=15,SNR=7.5							
D20A	Manuel Ranch,	15.02	72	⇓P	Pn	07 22 13.9	+2.1	
	baz=15,SNR=7.0							
U15A	North Rim	15.09	115	⇓P	Pn	07 22 15.5	+2.4	
	baz=15,SNR=21							
C20A	Veseth Ranch,	15.15	69	P	Pn	07 22 14.4	+0.8	
	baz=15,SNR=10							
N19A	John Jarvie Ra	15.15	96	⇓P	Pn	07 22 15.4	+1.6	
	baz=15							
I20A	Worland	15.17	84	⇑P	P	07 22 17.2	-1.8	
	baz=15,SNR=7.4							
H20A	Greybull	15.19	82	⇑P	Pn	07 22 16.5	+2.3	
	baz=15,SNR=12							
B20A	Solberg Farm,	15.23	67	P	Pn	07 22 16.4	+1.8	
	baz=15,SNR=5.7							
K20A	Yellowstone Ra	15.26	89	⇓P	Pn	07 22 15.6	+0.4	
	baz=15,SNR=10							
J20A	Shoshoni	15.30	86	⇓P	Pn	07 22 17.7	+2.0	
	baz=15							
A20A	Cobblestone Ra	15.36	65	⇑P	Pn	07 22 16.5	+0.2	
	baz=15							
O19A	Miners Draw (B	15.40	98	⇓P	Pn	07 22 17.7	+0.7	
	baz=15							
L20A	Wamsutter	15.42	91	⇑P	Pn	07 22 18.3	+1.0	
	baz=15,SNR=11							
M20A	Sweetwater, Wa	15.68	93	⇑P	Pn	07 22 22.7	+2.0	
	baz=16,SNR=9.4							
G21A	Lodge Grass	15.68	79	⇑P	Pn	07 22 21.5	+0.8	
	baz=16,SNR=5.3							
P19A	Cripple Cowboy	15.76	100	⇓P	Pn	07 22 23.0	+1.3	
	baz=16,SNR=7.3							
J21A	Lysite	15.76	86	⇓P	P	07 22 25.9	+0.2	
	baz=16,SNR=36							
C21A	Desert Coulee	15.77	69	⇓P	Pn	07 22 23.0	+1.2	
	baz=16,SNR=6.1							
I21A	Big Trails, Te	15.79	84	⇓P	P	07 22 24.3	-1.7	
	baz=16,SNR=14							
D21A	La Casta Ranch	15.79	72	⇓P	Pn	07 22 22.8	+0.8	
	baz=16							
N20A	Spence Gulch,	15.83	95	⇓P	Pn	07 22 23.5	+0.8	
	baz=16,SNR=33							
Q19A	Hogan Spring (	15.84	103	⇓P	Pn	07 22 24.0	+1.2	
	baz=16,SNR=12							
H21A	Big Horn, Sher	15.86	81	⇓P	Pn	07 22 23.8	+0.9	
	baz=16							
S18A	Hurst Farm, Bl	15.93	108	⇑P	P	07 22 26.4	-1.3	
	baz=16							
A21A	Bergtoll Ranch	16.02	65	⇑P	Pn	07 22 25.0	0.0	
	baz=16							
K21A	Alcova	16.05	88	⇓P	Pn	07 22 26.6	+1.1	
	baz=16							
O20A	White River Ci	16.09	98	⇓P	Pn	07 22 26.3	+0.4	
	baz=16,SNR=12							
L21A	Rawlins	16.13	91	⇓P	Pn	07 22 27.1	+0.6	
	baz=16,SNR=16							
WUAZ	Wupatki	16.23	116	eP	P	07 22 31.2	+0.3	
	14nm,1.4s							
WUAZ	Wupatki	16.23	116	⇑P	P	07 22 30.0	-0.8	
	baz=16							
M21A	Separation Pea	16.23	92	⇑P	Pn	07 22 29.2	+1.4	
	baz=16,SNR=39							
F22A	Rosebud	16.31	77	⇓P	Pn	07 22 28.7	0.0	
	baz=16,SNR=11							
G22A	Birney	16.33	79	⇓P	Pn	07 22 29.9	+0.9	
	baz=16,SNR=6.2							
PV04	Paradox Valley	16.34	104	eP	Pn	07 22 29.8	+0.6	
H22A	Clearmont	16.35	81	⇓P	Pn	07 22 30.2	+1.0	
	baz=16							
I22A	9 Mile Ranch,	16.35	83	⇑P	Pn	07 22 30.6	+1.4	
	baz=16,SNR=9.5							
D22A	Cohagen	16.35	72	P	Pn	07 22 29.6	+0.4	
	baz=16,SNR=8.3							
N21A	Black Mountain	16.38	95	⇓P	Pn	07 22 29.5	-0.3	
	baz=16,SNR=11							
Q20A	Ridgley Place,	16.52	101	⇓P	Pn	07 22 32.0	+0.5	
	baz=16,SNR=8.3							
B22A	Reddig Ranch S	16.55	68	⇑P	Pn	07 22 32.3	+0.6	
	baz=16							
K22A	Casper	16.57	88	⇓P	P	07 22 33.5	-1.1	
	baz=16,SNR=6.6							
C22A	Vida	16.58	70	⇓P	P	07 22 33.5	-1.1	
	baz=16							
O21A	Pagoda	16.61	97	⇑P	P	07 22 34.8	-0.4	
	baz=17							
A22A	Carney Farms,	16.68	65	P	Pn	07 22 33.1	-0.2	
	baz=17,SNR=10.0							
L22A	Ellis Ranch, M	16.78	90	⇓P	P	07 22 36.3	-0.7	
	baz=17							
R20A	Redvale	16.80	104	P	Pn	07 22 35.9	+0.8	
	baz=17,SNR=19							
M22A	Cedar Creek Ra	16.84	92	⇓P	Pn	07 22 36.2	+0.6	
	baz=17							
X16A	Lo Mia Camp, P	16.88	120	⇑P	P	07 22 38.9	+0.8	
	baz=17							
P21A	Newcastle	16.89	99	P	Pn	07 22 36.5	+0.4	
	baz=17,SNR=8.0							
E23A	Ismay	16.95	74	⇑P	Pn	07 22 36.9	+0.1	
	baz=17,SNR=12							
G23A	Biddle	16.96	78	⇑P	Pn	07 22 36.7	-0.2	
	baz=17,SNR=12							
S20A	Disappointment	16.99	105	⇓P	Pn	07 22 38.1	+0.7	
	baz=17							
D23A	Linsay	17.02	72	⇓P	Pn	07 22 37.7	+0.1	
	baz=17,SNR=20							
C23A	Lambert	17.06	70	⇓P	Pn	07 22 38.7	+0.7	
	baz=17,SNR=24							
N22A	Wattenberg Ran	17.13	94	⇑P	Pn	07 22 39.3	0.0	
	baz=17,SNR=7.4							
K23A	Bowen Ranch, D	17.19	87	⇓P	P	07 22 41.2	-0.3	
	baz=17							
MVCO	Mesa Verde	17.20	107	eP	P	07 22 41.2	-0.5	
	33nm,1.4s							
MVCO	Mesa Verde	17.20	107	⇑P	P	07 22 40.9	-0.8	
	baz=17							
B23A	Brockton	17.23	67	⇑P	Pn	07 22 40.9	+0.6	
	baz=17							
O22A	Kremmling	17.29	96	⇑P	P	07 22 42.1	-0.6	
	baz=17,SNR=22							
L23A	Garrett	17.29	89	⇑P	P	07 22 42.6	0.0	
	baz=17							
R21A	Cimarron	17.30	102	⇑P	P	07 22 42.7	-0.1	
	baz=17							
P22A	Eagle	17.35	98	⇓P	P	07 22 43.0	-0.3	
	baz=17							
SMCO	Snowmass	17.36	99	eP	P	07 22 44.6	+0.9	
	32nm,1.6s							
S21A	Coal Bank Pass	17.46	105	⇓P	P	07 22 44.5	-0.2	
	baz=17,SNR=14							
N23A	Red Feather La	17.47	93	⇓P	Pn	07 22 43.9	+0.4	
	baz=17,SNR=8.8							
W18A	Petrified Fore	17.53	115	⇓P	P	07 22 45.9	+0.6	
	baz=18							
Q22A	Crested Butte,	17.54	100	⇓P	Pn	07 22 44.6	+0.2	
	baz=18							
C24A	Savage	17.56	71	⇓P	Pn	07 22 44.7	+0.4	
	baz=17,SNR=20							
F24A	Ekalaka	17.58	76	⇑P	Pn	07 22 44.5	-0.1	
	baz=18,SNR=5.2							
H24A	Dirks Ranch, A	17.60	80	⇑P	Pn	07 22 44.9	-0.1	
	baz=18,SNR=15							
G24A	Alzada	17.64	78	⇑P	Pn	07 22 45.7	+0.3	
	baz=18							
I24A	Kuemmerle Ranc	17.68	83	⇑P	Pn	07 22 45.7	-0.3	
	baz=18							
PHWY	Pilot Hill	17.69	91	eP	Pn	07 22 45.7	-0.6	
	12nm,1.2s							
O23A	Lake Granby, G	17.72	95	⇓P	Pn	07 22 46.8	+0.2	
	baz=18,SNR=10							
J24A	Dixon Ranch, L	17.76	84	⇑P	Pn	07 22 47.0	+0.1	
	baz=18							
X18A	Snowflake	17.76	117	⇑P	P	07 22 48.5	+0.7	
	baz=18,SNR=6.0							
DGMT	Dagmar	17.76	67	eP	P	07 22 47.4	-0.2	
	53nm,1.3s							
A24A	Westby	17.93	66	⇓P	Pn	07 22 48.7	-0.2	
	baz=18,SNR=7.0							
T21A	Navajo Lake	17.97	106	⇓P	P	07 22 51.2	+1.0	
	baz=18							
V20A	Brimhall	17.98	111	⇓P	P	07 22 51.1	+0.9	
	baz=18,SNR=9.6							
RSSD	Black Hills	18.06	82	eP	P	07 22 53.2	+2.0	
	14nm,1.0s							
ISCO	Idaho Springs	18.09	96	eP	Pn	07 22 51.1	-0.1	
	12nm,0.9s							
ISCO	Idaho Springs	18.09	96	⇓P	P	07 22 51.8	+0.2	
	baz=18,SNR=10							
P23A	Jefferson	18.09	98	⇓P	P	07 22 52.3	+0.7	
	baz=18							
S22A	4UR Ranch, Cre	18.09	103	P	P	07 22 52.1	+0.5	
	baz=18,SNR=14							
M24A	Cheyenne	18.10	90	⇓P	P	07 22 52.0	+0.5	
	baz=18							
U21A	Nageezi	18.18	108	⇓P	P	07 22 53.6	+1.1	
	baz=18							
W20A	Ramah	18.34	113	⇓P	P	07 22 55.3	+1.0	
	baz=18,SNR=6.3							
O24A	Longmont	18.36	95	⇓P	Pn	07 22 55.4	+1.1	
	baz=18,SNR=6.4							
T22A	Edith	18.40	105	⇓P	Pn	07 22 55.6	+0.6	
	baz=18							
K25A	Mack Ranch, Ha	18.48	86	⇑P	Pn	07 22 56.9	+1.2	
	baz=18							
V21A	Milan	18.53	110	⇓P	Pn	07 22 58.4	+1.8	
	baz=18,SNR=6.1							
R23A	Moffat	18.59	101	P	Pn	07 22 58.1	+0.8	
	baz=18,SNR=8.0							
X20A	Quemado	18.69	114	⇓P	Pn	07 23 00.2	+1.7	
	baz=19							
S23A	Nye Farm, Mont	18.69	102	⇓P	Pn	07 22 59.2	+0.7	
	baz=19							
P24A	Kohler Place,	18.70	96	⇓P	Pn	07 22 58.6	0.0	
	baz=19							
TUC	Tucson	18.71	123	eP	Pn	07 23 00.9	+2.2	
	0.8nm,1.0s							
Q24A	Divide	18.75	98	⇑P	Pn	07 23 00.1	+0.9	
	baz=19							
U22A	Llaves	18.76	107	P	Pn	07 23 00.8	+1.5	
	baz=19,SNR=13							
V22A	San Miguel Ran	18.97	108	⇓P	Pn	07 23 02.8	+1.0	
	baz=19							
T23A	Casias Ranch,	18.99	104	P	Pn	07 23 03.4	+1.3	
	baz=19,SNR=8.9							
O25A	Wiggins	19.04	94	⇓P	Pn	07 23 04.2	+1.5	
	baz=19							
R24A	Sanders Place,	19.09	100	⇓P	Pn	07 23 03.8	+0.5	
	baz=19							
X21A	Alamocita Cree	19.22	113	⇓P	Pn	07 23 05.9	+1.0	
	baz=19,SNR=8.1							
P25A	Willow Gulch B	19.23	96	⇑P	Pn	07 23 05.9	+1.0	
	baz=19							
U23A	El Rito	19.24	106	⇑P	Pn	07 23 05.4	+0.3	
	baz=19							
S24A	Houchin Ranch,	19.28	102	⇓P	Pn	07 23 06.3	+0.7	
	baz=19,SNR=8.4							
Q25A	Bedland, Calha	19.41	97	⇑P	Pn	07 23 07.1	0.0	
	baz=19,SNR=5.4							
Z20A	Nine Sixteen R	19.53	118	⇑P	Pn	07 23 09.5	+1.0	
	baz=20							
Y21A	Point of Rocks	19.56	114	⇓P	Pn	07 23 09.9	+1.0	
	baz=20,SNR=9.4							
O26A	Horse Wrangler	19.58	93	⇑P	Pn	07 23 08.8	-0.3	
	baz=20,SNR=5.3							
K27A	Flueckinger Fa	19.63	85	⇓P	Pn	07 23 09.4	-0.2	
	baz=20,SNR=7.4							
T24A	Torres, Weston	19.66	103	⇑P	Pn	07 23 10.9	+0.7	
	baz=20							
R25A	Fountain Ranch	19.70	99	⇑P	Pn	07 23 11.7	+1.1	
	baz=20							
ANMO	Albuquerque	19.81	110	eP	Pn	07 23 11.3	-0.6	
	6.3nm,1.0s							
ANMO	Albuquerque	19.81	110	P	P	07 23 10.8	+0.4	
	0.0nm,0.3s,baz=318,slow=16,SNR=8.8							
ANMO				LR	LR	07 31 11.9		
	comp=Z,92nm,18.5s,baz=125,slow=38							
S25A	Robets Cordova	19.82	101	⇑P	P	07 23 11.0	+0.6	
	baz=20							
U24A	Moreno Valley	19.83	105	⇑P	Pn	07 23 13.2	+0.9	
	baz=20							
120A	U Bar Ranch, L	19.88	119	⇓P	Pn	07 23 13.3	+0.7	
	baz=20							
W23A	Werner Place,	19.90	109	⇑P	Pn	07 23 12.9	-0.1	
	baz=20							
LENM	Lemitar	19.92	113	eP	Pn	07 23 14.6	+1.4	
	7.9nm,1.1s							
Q26A	Hugo	19.92	97	⇑P	P	07 23 12.1	+0.5	
	baz=20							
Z21A	St. Cloud Mine	19.99	116	⇑P	Pn	07 23 14.0	-0.2	
	baz=20							
Y22A	Socorro	20.07	113	⇑P	Pn	07 23 14.9	-0.1	
	baz=20							
T25A	Trinidad	20.08	102	⇑P	Pn	07 23 14.9	-0.3	
	baz=20,SNR=10							
YKA	Yellowknife Ar	20.16	20	P	P	07 23 13.9	+0.3	
YKA	Yellowknife Ar	20.16	20	P	P	07 23 13.9	+0.3	
	3.4nm,0.9s,baz=210,slow=11,SNR=26							
BNM	Barren Site	20.16	112	eP	Pn	07 23 15.6	-0.5	
	12nm,1.2s							
V24A	Rampart Ranch,	20.19	107	P	Pn	07 23 16.3	-0.2	
	baz=20,SNR=18							
O27A	Beecher Island	20.19	92	⇑P	Pn	07 23 16.0	-0.3	
	baz=20							
X23A	Hourglass Bar	20.20	111	⇓P	Pn	07 23 15.9	-0.7	
	baz=20							
YKW3	Yellowknife Ar	20.21	20	eP	Pn	07 23 15.2	-1.0	
	0.2nm,1.3s							
R26A	Arlington	20.23	98	P	P	07 23 15.7	+0.8	
	baz=20,SNR=18							
319A	Douglas	20.28	123	⇓P	Pn	07 23 17.5	+0.1	
	baz=20							
220A	Playas Peak, P	20.38	120	⇓P	Pn	07 23 17.6	-0.9	
	baz=20,SNR=7.2							
W24A	Lazy 6 Ranch,	20.38	108	⇓P	Pn	07 23 17.9	-0.7	
	baz=20,SNR=9.8							
121A	Cookes Peak, D	20.42	118	⇓P	Pn	07 23 19.2	0.0	
	baz=20,SNR=6.6							
U25A	Circle Dot Ran	20.44	104	P	Pn	07 23 18.4	-0.9	
	baz=20,SNR=28							
FFC	Flin Flon	20.44	50	eP	P	07 23 17.0	+0.2	
	22nm,0.8s							
Z22A	Elephant Butte	20.49	115	P	Pn	07 23 19.5	-0.4	
	baz=20,SNR=11							
S26A	Kim	20.51	100	⇓P	Pn	07 23 19.5	-0.7	
	baz=20							
KSCO	Kaye Shedlock'	20.52	96	⇑P	Pn	07 23 19.3	-1.0	
	baz=20							
V25A	Rancho No Teng	20.58	106	⇓P	P	07 23 19.0	+0.2	
	baz=20,SNR=26							
T26A	Comanche Natio	20.63	101	⇓P	P	07 23 19.1	-0.3	
	baz=21,SNR=8.2							
Y23A	Lovelace Mesa,	20.67	112	P	Pn	07 23 21.4	-0.7	
	baz=21,SNR=6.8							
R27A	Eads	20.70	98	P	P	07 23 21.0	+1.1	
	baz=21,SNR=26							
320A	Kipp Ranch, An	20.77	121	⇓P	Pn	07 23 22.9	-0.3	
	baz=21							
221A	Mesquite Ranch	20.77	119	⇑P	Pn	07 23 23.3	+0.1	
	baz=21							
122A	Conniff Cattle	20.82	116	⇓P	Pn	07 23 22.6	-1.1	
	baz=21							
MDND	Maddock	20.82	70	⇑P	Pn	07 23 23.5	+0.1	
	baz=21							
U26A	Atchley Ranch,	20.91	103	⇑P	Pn	07 23 23.6	-1.2	
	baz=21,SNR=10							
Z23A	Rita Site, Whi	20.96	114	P	P	07 23 21.2	-1.6	
	baz=21,SNR=42							
W25A	X Bar L Ranch,	21.02	107	⇓P	P	07 23 24.8	+1.3	
	baz=21,SNR=16							
Y24A	Capitan	21.09	111	⇓P	P	07 23 25.8	+1.6	
	baz=21							
V26A	Tequesquite Ra	21.18	105	P	P	07 23 26.5	+1.3	
	baz=21,SNR=12							
T27A	Campo	21.30	101	⇑P	P	07 23 28.2	+1.8	
	baz=21,SNR=7.2							
Z24A	Sheeppen Canyo	21.49	112	⇑P	P	07 23 30.5	+1.9	
	baz=22,SNR=9.9							
W26A	Owens Ranch, T	21.57	106	⇓P	P	07 23 30.3	+1.0	
	baz=22							
Y25A	Mesa, Roswell	21.59	110	⇑P	P	07 23 31.0	+1.4	
	baz=22							
SPU	Mount Spurr	21.68	329	eP	P	07 23 31.6	+1.4	
T28A	Walsh

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ULM	Lac du Bonnet	23.29	63	P	P	07 23 46.1	-1.1
ULM	Lac du Bonnet	23.29	63	P	P	07 23 46.1	-1.1
	14nm,0.8s,baz=281,slow=10,SNR=14						
ULM				LR	LR	07 32 59.4	
	comp=Z,215nm,19.9s,baz=297,slow=37						
X29A	Tulia	23.34	105	⇓P	P	07 23 49.2	+1.2
	baz=23						
425A	Indio Mountain	23.36	117	⇓P	P	07 23 49.7	+1.4
	baz=23						
V30A	Spur Ranch, Mi	23.36	101	⇑P	P	07 23 49.4	+1.2
	baz=23,SNR=5.3						
ECSD	EROS Data Cent	23.40	80	eP	P	07 23 48.2	-0.2
	42nm,1.4s						
T31A	Randall Ranch,	23.45	98	⇓P	P	07 23 49.9	+0.9
	baz=23						
326A	Caldwell Ranch	23.67	115	⇑P	P	07 23 52.5	+1.2
	baz=24						
Y29A	Porterfield Fa	23.69	107	⇑P	P	07 23 52.4	+1.0
	baz=24						
Z29A	Hungry Hill Ra	24.00	108	⇓P	P	07 23 55.4	+1.0
	baz=24						
426A	McDonald Obser	24.06	116	⇑P	P	07 23 55.7	+0.6
	baz=24						
INK	Inuvik	24.21	356	P	P	07 23 55.6	-0.3
INK	Inuvik	24.21	356	P	P	07 23 55.6	-0.3
	1.0nm,0.8s,baz=164,slow=13,SNR=5.2						
INK				LR	LR	07 32 40.7	
	comp=Z,112nm,21.8s,baz=315,slow=35						
427A	Hayter Ranch,	24.35	115	⇑P	P	07 23 58.1	+0.5
	baz=24						
526A	Mary Lane Ranc	24.42	117	⇓P	P	07 23 59.2	+0.8
	baz=24						
X31A	McDonald Ranch	24.44	103	⇓P	P	07 23 58.3	-0.1
	baz=24						
527A	Woodward Ranch	24.67	116	⇑P	P	07 24 01.3	+0.6
	baz=25						
626A	Big Bend Ranch	24.74	118	⇑P	P	07 24 02.4	+1.2
	baz=25						
KSU1	Kansas State U	24.81	91	eP	P	07 24 03.0	+1.4
	17nm,1.0s						
428A	Kincaid Ranch,	24.90	114	⇓P	P	07 24 03.6	+1.0
	baz=25						
TXAR	Lajitas Array	25.18	118	P	P	07 24 04.7	-0.5
TXAR	Lajitas Array	25.18	118	P	P	07 24 04.7	-0.5
	2.5nm,0.9s,baz=313,slow=7.3,SNR=11						
TXAR				LR	LR	07 33 46.6	
	comp=Z,74nm,19.4s,baz=0.0,slow=36						
528A	Cox Ranch, San	25.20	115	⇑P	P	07 24 06.7	+1.4
	baz=25						
WMOK	Wichita Mounta	25.23	102	eP	P	07 24 05.8	+0.3
	22nm,1.0s						
627A	Terlingua Ranc	25.28	117	⇓P	P	07 24 06.7	+0.6
	baz=25						
LPIG	La Paz	25.37	136	LR	LR	07 32 23.1	
	comp=Z,12nm,21.5s,baz=227,slow=33						
330A	Mertzon	25.47	111	⇑P	P	07 24 08.3	+0.5
	baz=26						
429A	Davenport Ranc	25.48	113	⇓P	P	07 24 08.5	+0.6
	baz=26						
Z32A	Haskell	25.51	105	⇓P	P	07 24 08.5	+0.4
	baz=26						
628A	Black Gap, Mar	25.58	116	⇑P	P	07 24 10.1	+1.3
	baz=26						
529A	Stev Forest Ra	25.59	114	⇓P	P	07 24 10.1	+1.2
	baz=26,SNR=8.5						
231A	Bronte	25.73	109	⇑P	P	07 24 11.0	+0.9
	baz=26						
SPMN	St. Paul	25.76	75	⇓P	P	07 24 10.5	+0.2
	baz=26						
ABTX	Abilene, Hawle	25.79	107	⇓P	P	07 24 12.0	+1.4
	baz=26						
430A	Baggett Ranch,	25.82	112	⇑P	P	07 24 12.0	+1.0
	baz=26						
331A	San Angelo	26.04	110	⇓P	P	07 24 12.5	-0.4
	baz=26						
232A	Coleman	26.21	108	⇑P	P	07 24 15.6	+1.1
	baz=26						
EYMN	Ely	26.25	68	eP	P	07 24 14.7	0.0
	10nm,1.0s						
431A	Sonora	26.30	111	⇑P	P	07 24 16.5	+1.2
	baz=26						
531A	Rocksprings	26.67	112	⇓P	P	07 24 19.4	+0.8
	baz=27						
432A	Menard	26.73	110	⇑P	P	07 24 21.1	+1.9
	baz=27						
JCT	Junction City	26.97	111	⇓P	P	07 24 22.1	+0.8
	baz=27						
532A	Rocksprings	27.12	111	⇓P	P	07 24 24.0	+1.3
	baz=27						
OXF	Oxford	32.01	94	eP	P	07 25 05.5	-0.5
	52nm,1.0s						
RES	Resolute Bay	34.09	16	eP	P	07 25 25.8	+2.1
	4.3nm,0.9s						
SCHQ	Schefferville	40.55	52	LR	LR	07 43 13.7	
	comp=Z,191nm,20.0s,baz=303,slow=36						
MDJ	Mudanjiang	67.21	311	P	P	07 29 33.2	-0.5
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CN2	Changchun	69.98	312	eP	P	07 29 48.7	-2.3
NB2	NORSAR Subarra	70.25	19	P	P	07 29 57.6	+5.2
	comp=Z,3.3nm,1.0s,baz=332,slow=5.9						
NOA	NORSAR Array B	70.25	19	P	P	07 29 56.0	+3.6
NOA	NORSAR Array B	70.25	19	P	P	07 29 56.0	+3.6
	comp=Z,1.5nm,0.9s,baz=330,slow=6.3,SNR=4.6						
NOA				LR	LR	08 01 08.3	
	comp=Z,18nm,19.7s,baz=170,slow=36						
FINES	FINESS Array B	72.77	12	P	P	07 30 07.8	+0.3
FINES	FINESS Array B	72.77	12	P	P	07 30 07.8	+0.3
	comp=Z,2.4nm,0.9s,baz=4.6,slow=7.0,SNR=5.8						
SONM	Songino Array	76.08	325	P	P	07 30 29.1	+1.9
SONM	Songino Array	76.08	325	P	P	07 30 29.1	+1.9
	comp=Z,1.0nm,0.7s,baz=46,slow=4.2,SNR=4.5						
ZALV	Zalesovo Beam	77.93	340	P	P	07 30 38.3	+1.0
ZALV	Zalesovo Beam	77.93	340	P	P	07 30 38.3	+1.0
	comp=Z,0.4nm,0.4s,baz=23,slow=7.8,SNR=2.9						
ZALV				LR	LR	08 08 19.6	
	comp=Z,26nm,19.3s,baz=271,slow=38						
HHC	Hu-ho-hao-te	79.21	318	eP	P	07 30 42.8	-2.0
HHC				pP	pP	07 30 47.8	-1.3
HHC				sP	sP	07 30 49.9	-0.7
HHC				S	S	07 40 39.0	-5.4
HHC				SKS	SKSac	07 40 52.5	-8.1
HHC				ScS	SKKSac	07 41 00.3	-1.7
HHC				pmax	pmax		
	comp=Z,37nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,6.8s						
BVAR	Borovoye Array	81.64	348	LR	LR	08 08 44.4	
	comp=Z,46nm,20.9s,baz=127,slow=37						
GERES	GERESS Array B	81.76	24	P	P	07 30 59.3	+1.0
GERES	GERESS Array B	81.76	24	P	P	07 30 59.3	+1.0
	comp=Z,0.2nm,0.2s,baz=348,slow=4.3,SNR=2.8						
LPAZ	La Paz	81.98	122	P	P	07 30 58.7	-1.7
LPAZ	La Paz	81.98	122	P	P	07 30 58.7	-1.7
	comp=Z,1.3nm,0.7s,baz=333,slow=4.5,SNR=5.0						
HNR	Honiara	83.12	250	LR	LR	07 59 48.2	
	comp=Z,122nm,20.4s,baz=88,slow=30						
MKAR	Makanchi Array	85.15	339	P	P	07 31 17.1	+1.4
MKAR	Makanchi Array	85.15	339	P	P	07 31 17.1	+1.4
	comp=Z,0.6nm,0.8s,baz=20,slow=5.1,SNR=3.3						
MKAR				LR	LR	08 09 16.8	
	comp=Z,36nm,19.6s,baz=85,slow=36						
AKTO	Aktyubinsk	85.48	355	LR	LR	08 08 37.7	
	comp=Z,24nm,20.2s,baz=198,slow=35						
WMQ	Urumqi	86.33	334	eP	P	07 31 22.4	+0.8
WMQ				pmax	pmax		
	comp=Z,15nm,1.0s						
DZM	Mont Dzumac	88.33	237	LR	LR	08 06 36.1	
	comp=Z,114nm,18.8s,baz=224,slow=32						
BRTR	Keskin Array B	94.99	13	LR	LR	08 16 33.9	
	comp=Z,21nm,18.0s,baz=318,slow=37						
KMI	Kunming	96.18	314	P	P	07 32 10.2	+2.1

IDC 11 07:23:04.1±18.0**, 23°.38S**×**175°.30W, h0km, mb4.2**/5**, mb1 4.3**/5**, mb1mx3.9**/21**, mbtmp4.2**/5**, Error ellipse: s-maj=337.6km s-min=134.1km az=83.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	35.80	268	P	P	07 30 06.5	+1.2
	4.1nm,0.4s,baz=82,slow=10,SNR=7.1						
STKA	Stephens Creek	38.91	248	P	P	07 30 30.4	-1.3
	0.9nm,0.4s,baz=90,slow=8.1,SNR=6.6						
ASAR	Alice Springs	46.37	259	P	P	07 31 31.8	-0.7
	0.7nm,0.3s,baz=92,slow=6.9,SNR=25						
WRA	Warramunga Arr	46.75	264	P	P	07 31 35.1	-0.3
	1.5nm,0.3s,baz=100,slow=8.4,SNR=22						
FITZ	Fitzroy Crossi	55.17	264	P	P	07 32 39.7	+0.8
	1.3nm,0.6s,baz=110,slow=7.6,SNR=5.7						

CASC 11 07:39:52.8±1.7**, 13°.34N**×**89°.58W, h51km**±12km**, MD3.8, ML4.2, 3C-8D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNET	Serv Nac Est T	0.48	44	⇓iP	Pn	07 40 03.9	-0.2
SNET				eS	Sn	07 40 12.7	+0.5
SNET				AML	AML	07 40 15.2	
	comp=Z,8μm,0.2s						
BOQS	Boqueron	0.49	36	⇑iP	Pn	07 40 04.4	0.0
BOQS				eS	Sn	07 40 14.2	+1.6
SBLS	San Blas	0.50	355	⇓iP	Pn	07 40 04.0	-0.5
SNJE	San Jose	0.53	357	⇓iP	Pn	07 40 04.6	-0.2
RTR	El Retiro	0.56	353	⇓iP	Pn	07 40 05.0	-0.2
RTR				eS	Sn	07 40 14.8	+0.8
LFRS	El Faro	0.58	60	⇓iP	Pn	07 40 05.2	-0.1
LFU	La Fuente	0.61	48	⇓iP	Pn	07 40 05.9	+0.3
LFU				eS	Sn	07 40 16.2	+1.4
LBRS	Las Brisas	0.66	52	⇓iP	Pn	07 40 06.5	+0.4
SNVI	San Vicente	0.77	69	eP	Pn	07 40 07.7	-0.1
SNVI				eS	Sn	07 40 19.4	+0.8
RBDL	Robledal	0.78	352	eP	Pn	07 40 08.1	+0.2
MTO2	Montecristo 2	1.08	11	⇓iP	Pn	07 40 11.8	-0.1
MTO2				eS	Sn	07 40 25.4	-0.6
VSM	San Miguel	1.27	86	eP	Pn	07 40 14.8	+0.2
BLLM	Bellamira	1.31	85	eP	Pn	07 40 15.1	+0.3
BLLM				eS	Sn	07 40 32.1	+0.8
CAHU	Cacacuatique	1.40	72	eP	Pn	07 40 15.9	-0.3
NBG	Las Nubes	1.45	329	eP	Pn	07 40 18.2	+1.2
PCG	Pacaya	1.45	317	eP	Pn	07 40 17.7	+0.7
FUG	Fuego 3	1.65	312	eP	Pn	07 40 19.9	+0.2
CNCH	Conchagua	1.70	92	eP	Pn	07 40 20.0	-0.3
CNCH				eS	Sn	07 40 41.6	+0.6
MRL	Marmol	1.72	356	⇑eP	Pn	07 40 22.3	+1.6
FG6		1.76	314	⇑eP	Pn	07 40 21.8	+0.6
FG6				eS	Sn	07 40 44.0	+1.2
JAT	Jato	2.23	296	eP	Pn	07 40 28.1	+0.8

IDC 11 07:43:36.4±1.7**, 23°.86S**×**66°.55W, h202km**±17km**, mb3.0**/3**, mb1 3.3**/8**, mb1mx3.2**/19**, mbtmp3.1**/8**, Error ellipse: s-maj=21.2km s-min=16.4km az=105.0, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	7.68	349	P	Pn	07 45 26.5	+0.1
	1.7nm,0.3s,baz=164,slow=7.2,SNR=45						
LPAZ				S	S	07 46 50.0	-3.7
	0.2nm,0.3s,baz=41,slow=20,SNR=4.1						
CFAA	Coronel Fontan	7.86	191	P	Pn	07 45 27.1	-0.8
	0.1nm,0.3s,baz=30,slow=8.7,SNR=35						
CFAA				S	S	07 46 50.6	-6.0
	0.3nm,0.3s,baz=127,slow=20,SNR=20						
CPUP	Villa Florida	8.71	108	P	Pn	07 45 39.0	+0.1
	0.3nm,0.3s,baz=282,slow=12,SNR=7.9						
SIV	San Ignacio	9.37	34	P	Pn	07 45 47.4	-0.2
	0.5nm,0.3s,baz=228,slow=13,SNR=12						
PLCA	Paso Flores	17.16	190	P	Pn	07 47 24.2	-0.2
	0.1nm,0.3s,baz=12,slow=12,SNR=2.7						
BDFB	Brasilia	19.25	68	P	P	07 47 45.9	0.0
	0.3nm,0.3s,baz=232,slow=14,SNR=5.3						
TXAR	Lajitas Array	63.81	324	P	P	07 53 46.8	-0.5
	0.1nm,0.4s,baz=151,slow=8.0,SNR=4.0						
TORD	Torodi Ar. Bea	76.13	69	P	P	07 55 01.5	-1.0
	0.4nm,0.4s,baz=267,slow=5.7,SNR=4.7						
YKA	Yellowknife Ar	94.14	340	P	P	07 56 31.4	-0.1
	0.2nm,0.6s,baz=140,slow=4.5,SNR=8.2						
ASAR	Alice Springs	128.75	204	PKP	PKPdf	08 02 18.6	-1.8
	0.2nm,0.5s,baz=135,slow=1.2,SNR=4.8						
WRA	Warramunga Arr	131.94	207	PKP	PKPdf	08 02 26.9	+0.4
	0.2nm,0.5s,baz=159,slow=1.5,SNR=3.9						
MKAR	Makanchi Array	146.15	40	PKPbc	PKPab	08 02 53.5	-0.3
	0.8nm,0.6s,baz=268,slow=3.5,SNR=1.9						

MEX 11 07:44:59.8±0.7**, 14°.41N**×**93°.12W, h26km**±35km**, MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.97	59	iP	Pn	07 45 14.6	-3.1
THIG				iS	Sb	07 45 26.7	-3.6
CCIG	Comitan	2.09	27	eP	Pn	07 45 31.9	-1.4
CCIG				eS	Sn	07 45 55.8	-3.0
TGIG		2.35	0	eP	Pn	07 45 35.1	-1.8
TGIG				eS	Sn	07 46 01.8	-3.2
CMIG	Matias Romero	3.16	328	eP	Pn	07 45 45.9	-1.9
CMIG				eS	Sn	07 46 21.2	-3.5
HUIG	Huatulco	3.18	295	eP	Pn	07 45 46.3	-1.9
HUIG				eS	Sn	07 46 22.9	-2.4
VHO	Vista Hermosa	4.37	308	iP	Pn	07 46 04.0	-0.8
VHO				iS	Sn	07 46 52.5	-2.5

IDC 11 07:47:24.5±2.3**, 21°.39S**×**67°.69W, h148km**±22km**, mb3.2**/2**, mb1 3.3**/4**, mb1mx3.1**/16**, mbtmp3.1**/4**, Error ellipse: s-maj=41.4km s-min=25.6km az=96.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	5.09	355	P	Pn	07 48 40.4	+0.6
	1.1nm,0.3s,baz=188,slow=12,SNR=23						
SIV	San Ignacio	8.25	51	P	Pn	07 49 20.6	-0.8
	0.6nm,0.3s,baz=216,slow=15,SNR=12						
CFAA	Coronel Fontan	10.19	183	P	Pn	07 49 47.0	0.0
	0.0nm,0.3s,baz=0.0,slow=14,SNR=7.3						
TORD	Torodi Ar. Bea	76.25	70	P	P	07 58 57.8	+0.5
	0.4nm,0.5s,baz=253,slow=5.3,SNR=4.6						
YKA	Yellowknife Ar	91.47	340	P	P	08 00 13.0	-0.6
	0.1nm,0.6s,baz=135,slow=4.8,SNR=5.7						

IDC 11 07:50:48.4±48.0**, 16°.51S**×**171°.18W, h0km, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/21**, mbtmp3.6**/3**, Error ellipse: s-maj=948.7km s-min=193.2km az=80.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	45.35	241	P	P	07 59 09.1	+0.5
	0.6nm,0.6s,baz=98,slow=7.1,SNR=2.9						
WRA	Warramunga Arr	51.67	257	P	P	07 59 57.0	-0.6
	0.4nm,0.4s,baz=97,slow=6.9,SNR=9.8						
ASAR	Alice Springs	51.81	253	P	P	07 59 58.4	-0.1
	0.2nm,0.3s,baz=87,slow=8.2,SNR=9.1						

*IDC **11** 07:52:52.3±1.2, 30°.87S×177°.73W, h0km, mb4.2/4, mb1 4.3/5, mb1mx3.9/20, mbtmp4.1/5, ML3.2/1, Error ellipse: s-maj=31.0km s-min=28.2km az=87.0*
*ISCJB **11** 07:52:56.0±1.4, 31°.02S±0°.07×177°.7W±0°.2, h46km, mb4.1/5, Error ellipse: s-maj=30.5km s-min=8.2km az=9.9*
*NEIC **11** 07:52:57.7±0.8, 30°.86S×177°.83W, h35km, mb4.2/2, Error ellipse: s-maj=21.7km s-min=12.0km az=101.0*
ISC 11 07:52:58.4±1.0**, 30°.93S**±0°.09×**177°.8W**±0°.2**, h46km, n26,** σ1§55/26**, mb4.3**/5**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.67	357	Pn	Pn	07 53 24.0	-1.2
PUZ	Puketiti	7.82	203	ePN	Pn	07 54 48.4	-1.2
PUZ				eSN	Sn	07 56 17.2	+0.3
MWZ	Matawai	8.32	206	ePN	Pn	07 54 55.4	-1.0
OUZ	Omahuta	8.37	237	ePn	Pn	07 55 04.5	+7.4
URZ	Urewera	8.42	208	ePn	Pn	07 54 58.0	+0.2
URZ				eSn	Sn	07 56 26.3	-5.0
URZ	Urewera	8.42	208	ePN	Pn	07 54 56.9	-0.8
URZ				eSN	Sn	07 56 31.2	-0.1
URZ	Urewera	8.42	208	Pn	Pn	07 54 56.6	-1.1
	0.3nm,0.3s,baz=180,slow=20,SNR=11						
URZ				Sn	Sn	07 56 32.5	+1.1
	1.6nm,0.3s,baz=278,slow=22,SNR=14						
MQZ	McQueen's Vall	14.82	208	eSN	Sn	07 58 56.0	-12
STKA	Stephens Creek	34.50	258	eP	P	07 59 44.2	+2.0
	1.5nm,0.7s						
STKA	Stephens Creek	34.50	258	P	P	07 59 44.7	+2.5
	8.2nm,0.7s,baz=94,slow=11,SNR=37						
ASAR	Alice Springs	43.23	267	P	P	08 00 55.5	+0.1
ASAR	Alice Springs	43.23	267	P	P	08 00 55.5	+0.1
	0.8nm,0.5s,baz=105,slow=7.7,SNR=14						
WRAB	Tennant Creek	44.26	273	eP	P	08 01 03.4	-0.3
	2.3nm,0.4s						
WRA	Warramunga Arr	44.26	273	P	P	08 01 03.5	-0.2
WRA	Warramunga Arr	44.26	273	P	P	08 01 03.5	-0.2
	2.4nm,0.3s,baz=111,slow=7.9,SNR=40						
QSPA	South Pole Qui	59.18	180	P	P	08 02 54.7	+0.2
QSPA	South Pole Qui	59.18	180	P	P	08 02 54.7	+0.2
	0.7nm,0.6s,baz=90,slow=2.0,SNR=9.1						
VNA3	Neumayer Olymp	77.77	176	eP	P	08 05 00.0	+10
VNA2	Neumayer--Watz	78.20	177	eP	P	08 05 02.8	+10
	baz=186,slow=5.8						
KAF	Kangasniemi	145.09	340	ep	PKPbc	08 12 27.9	-1.6
	1.4nm,0.5s						
FINES	FINESS Array B	145.69	340	PKPbc	PKPab	08 12 30.9	-0.9
FINES	FINESS Array B	145.69	340	PKPbc	PKPab	08 12 30.9	-0.9
	2.0nm,0.4s,baz=51,slow=4.4,SNR=40						
NOA	NORSAR Array B	149.29	351	PKPbc	PKPbc	08 12 41.9	+0.5
NOA	NORSAR Array B	149.29	351	PKPbc	PKPbc	08 12 41.9	+0.5
	0.5nm,0.5s,baz=14,slow=4.1,SNR=2.9						
TORD	Torodi Ar. Bea	162.30	178	PKPab	PKPab	08 13 44.6	+1.9
TORD	Torodi Ar. Bea	162.30	178	PKPab	PKPab	08 13 44.6	+1.9
	0.3nm,0.6s,baz=193,slow=4.0,SNR=3.6						

IDC 11 08:35:51.5±3.1**, 48°.28N**×**154°.32E, h92km**±29km**, mb2.9**/5**, mb1 3.2**/7**, mb1mx3.0**/27**, mbtmp3.0**/7**, Error ellipse: s-maj=36.6km s-min=18.8km az=135.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	5.29	23	P	Pn	08 37 07.0	-0.9
	0.5nm,0.3s,baz=182,slow=13,SNR=17						
ASAJ	Asahikawa	9.13	247	P	Pn	08 38 01.7	+1.4
	0.4nm,0.3s,baz=85,slow=16,SNR=4.8						
MKAR	Makanchi Array	46.98	297	P	P	08 44 12.8	-0.2
	0.2nm,0.5s,baz=67,slow=9.8,SNR=2.5						
YKA	Yellowknife Ar	49.21	38	P	P	08 44 29.4	-0.5
	0.2nm,0.8s,baz=297,slow=7.5,SNR=3.6						
WRA	Warramunga Arr	70.23	200	P	P	08 46 53.6	-0.8
	0.6nm,1.1s,baz=16,slow=6.5,SNR=5.1						
ASAR	Alice Springs	73.92	199	P	P	08 47 16.5	+0.1
	0.2nm,0.6s,baz=5.7,slow=5.3,SNR=5.0						
TXAR	Lajitas Array	76.03	62	P	P	08 47 29.7	+0.9
	0.1nm,0.4s,baz=303,slow=7.1,SNR=2.9						

*TIR **11** 08:51:57.1, 40°.64N×19°.29E, h0km, ML3.5*
*THE **11** 08:51:58.9, 40°.63N×19°.64E, h2km±1km, ML2.8/6, Error ellipse: s-maj=2.5km s-min=1.2km az=134.0*
*ATH **11** 08:51:59.5, 40°.56N×19°.46E, h41km±3km, MD3.4/15*
*CSEM **11** 08:52:00.9±0.3, 40°.57N×19°.61E, h20km, MD3.4, Error ellipse: s-maj=6.2km s-min=3.4km az=87.0*
*BEO **11** 08:52:00.3±1.0, 40°.65N×19°.68E, h0km, ML2.3/5*
ISC 11 08:51:59.6±1.2**, 40°.57N**±0°.02×**19°.70E**±0°.04**, h11km**±10km**, n60,** σ1§26/93**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEK	Kerkira	0.86	175	P	Pb	08 52 16.1	-0.4
KEK				S	Sn	08 52 30.0	-0.2
KEK	Kerkira	0.86	175	eP	Pn	08 52 17.1	-0.6
KEK				eS	Sn	08 52 29.7	-0.5
KEK	Kerkira	0.86	175	eP	Pn	08 52 17.1	-0.6
KEK				eS	Sn	08 52 29.7	-0.5
NEST	Nestorio	1.04	98	P	Pg	08 52 18.5	-1.1
NEST				S	Sn	08 52 35.5	+0.6
NEST	Nestorio	1.04	98	P	Pg	08 52 18.5	-1.1
NEST				S	Sn	08 52 35.5	+0.6
IGT	Igoumenitsa	1.14	155	P	Pg	08 52 21.7	+0.1
IGT				S	Sn	08 52 38.6	+1.3
IGT	Igoumenitsa	1.14	155	P	Pg	08 52 21.7	+0.1
IGT				S	Sn	08 52 38.6	+1.3
PHP	Peshkopia	1.25	26	ePG	Pg	08 52 24.1	+0.4
PHP				eSG	Sn	08 52 44.0	+4.1
PHP	Peshkopia	1.25	26	ePg	Pg	08 52 24.0	+0.4
PHP				eSg	Sn	08 52 44.0	+4.1
JAN	Janina	1.27	136	P	Pg	08 52 24.0	0.0
JAN				S	Sg	08 52 42.3	+1.9
JAN	Janina	1.27	136	eP	Pg	08 52 24.0	0.0
JAN				eS	Sg	08 52 41.3	+0.9
JAN	Janina	1.27	136	eP	Pg	08 52 24.0	0.0
JAN				eS	Sg	08 52 41.3	+0.9
FNA	Florina	1.29	80	P	Pn	08 52 23.1	-0.6
FNA				S	Sg	08 52 42.8	+1.6
FNA	Florina	1.29	80	P	Pn	08 52 23.1	-0.6
FNA				S	Sg	08 52 42.8	+1.6
BIA	Bitola	1.31	69	ePn	Pn	08 52 23.1	-0.9
BIA				eSg	Sg	08 52 42.9	+1.0
BIA	Bitola	1.31	69	ePn	Pn	08 52 23.1	-0.9
BIA				eSg	Sg	08 52 42.9	+1.0
PUK	Puka	1.48	6	ePG	Pg	08 52 27.1	-0.9
PUK				eSG	Sg	08 52 51.3	+4.0
PUK	Puka	1.48	6	ePg	Pg	08 52 27.1	-0.9
KZN	Kozani	1.60	99	P	Pb	08 52 28.7	-0.6
KZN				S	Sg	08 52 51.7	+0.6
KZN	Kozani	1.60	99	eP	Pg	08 52 29.8	-0.6
KZN				eS	Sg	08 52 51.8	+0.6
KZN	Kozani	1.60	99	eP	Pg	08 52 29.8	-0.6
KZN				S	Sg	08 52 51.7	+0.6
BCI	Bajram Curri	1.82	9	ePG	Pb	08 52 31.7	-1.2
BCI				eSG	Sn	08 52 52.6	-1.4
BCI	Bajram Curri	1.82	9	ePg	Pb	08 52 31.7	-1.2
BCI				eSg	Sn	08 52 52.6	-1.4
PDG	Podgorica	1.89	350	ePg	Pb	08 52 33.3	-0.8
PDG				eSg	Sb	08 52 57.0	-0.8
PDG	Podgorica	1.89	350	ePg	Pb	08 52 33.3	-0.8
PDG				eSg	Sb	08 52 57.0	-0.8
SKO	Skopje	1.92	43	ePg	Pb	08 52 33.2	-1.5
SKO				eSg	Sg	08 52 59.8	-1.5
SKO	Skopje	1.92	43	ePg	Pb	08 52 33.2	-1.5
SKO				eSg	Sg	08 52 59.8	-1.5
LKD2	Lefkada island	1.93	157	P	Pn	08 52 32.2	-0.2
LKD2	Lefkada island	1.93	157	eP	Pn	08 52 33.0	+0.6
LKD2				eS	Sn	08 52 56.0	-0.6
LKD2	Lefkada island	1.93	157	eP	Pn	08 52 33.0	+0.6
LKD2				eS	Sn	08 52 56.0	-0.6
THL	Klokotos Trika	2.04	119	eP	Pb	08 52 35.2	-1.5
THL	Klokotos Trika	2.04	119	eP	Pb	08 52 35.2	-1.5
VAY	Valandovo	2.30	70	ePn	Pb	08 52 40.9	-0.2
VAY				eSg	Sg	08 53 12.6	-1.0
VAY	Valandovo	2.30	70	ePn	Pb	08 52 39.0	-2.1
VAY	Valandovo	2.30	70	ePn	Pb	08 52 39.0	-2.1
EVR	Evrytania	2.32	135	eP	Pn	08 52 39.4	+1.6
EVR	Evrytania	2.32	135	eP	Pn	08 52 39.4	+1.6
AGG	Agios Georgios	2.55	126	eP	Pn	08 52 41.5	+0.6
AGG	Agios Georgios	2.55	126	eP	Pn	08 52 41.5	+0.6
EFP	Efpalio	2.74	141	eP	Pn	08 52 44.8	+1.3
EFP	Efpalio	2.74	141	eP	Pn	08 52 44.8	+1.3
BARS	Barje	2.75	34	ePn	Pn	08 52 44.1	+0.4
PLG	Polygyros	2.86	93	eP	Pn	08 52 46.8	+1.5
PLG	Polygyros	2.86	93	eP	Pn	08 52 46.6	+1.3
PLG	Polygyros	2.86	93	eP	Pn	08 52 46.6	+1.3
TRIZ	Trizonia	2.87	139	eP	Pn	08 52 45.7	+0.5
TRIZ	Trizonia	2.87	139	eP	Pn	08 52 45.7	+0.5
KALE	Kalithea	2.88	138	P	Pn	08 52 46.8	+1.3
KALE	Kalithea	2.88	138	eP	Pn	08 52 46.6	+1.1
KALE	Kalithea	2.88	138	eP	Pn	08 52 46.6	+1.1
LAKA	Lakka	2.92	142	eP	Pn	08 52 46.2	+0.2
LAKA	Lakka	2.92	142	eP	Pn	08 52 46.2	+0.2
GUR	Goura	3.33	141	eP	Pn	08 52 52.0	+0.2
GUR	Goura	3.33	141	eP	Pn	08 52 52.0	+0.2
ZAPS	Zavoj	3.48	38	ePn	Pn	08 52 55.3	+1.6
ZAPS				eSn	Sn	08 53 35.9	+1.0
ZAPS	Zavoj	3.48	38	ePn	Pn	08 52 55.3	+1.6
ZAPS				eSn	Sn	08 53 35.9	+1.0
DIVS	Divibare	3.53	3	ePn	Pn	08 52 55.3	+0.8
DIVS				eSn	Sn	08 53 36.2	-0.2
DIVS	Divibare	3.53	3	ePn	Pn	08 52 55.3	+0.8
DIVS				eSn	Sn	08 53 36.2	-0.2
DID	Didima	4.12	137	eP	Pn	08 53 03.8	+1.3
DID	Didima	4.12	137	eP	Pn	08 53 03.8	+1.3

*DDA **11** 08:57:18.0, 40°.40N×40°.59E, h5km, MD3.3*
*ISCJB **11** 08:57:18.3±0.5, 40°.37N±0°.02×40°.58E±0°.02, h6km±4km, mb3.3/1, Error ellipse: s-maj=3.8km s-min=2.7km az=162.3*

CSEM ***11*** *09:18:48.4±0.1, 42.45N×13.42E, h9km, After ROM*
ROM 11 09:18:48.4±0.1, **42.45N×13.42E, h9**km±1km, **MI2.4**/11,
Error ellipse: s-maj=1.4km s-min=1.1km az=74.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.09**	**357**	Pg	Pg	09 18 51.5	+0.6
CAMP				Sg	Sg	09 18 53.4	+0.7
CAMP	**Campotosto**	**0.09**	**357**	Pg	Pg	09 18 51.5	+0.6
CAMP				Sg	Sg	09 18 53.4	+0.7
AQU	**L'Aquila**	**0.10**	**186**	Pg	Pg	09 18 51.3	+0.4
AQU				Sg	Sg	09 18 53.3	+0.6
AQU	**L'Aquila**	**0.10**	**186**	Pg	Pg	09 18 51.3	+0.4
AQU				Sg	Sg	09 18 53.3	+0.6
FAGN	**Fagnano** 2µm,0.4s	**0.22**	**146**	Pg	Pg	09 18 53.8	+0.8
FAGN	**Fagnano** 2µm,0.4s	**0.22**	**146**	Pg	Pg	09 18 53.8	+0.8
TERO	**Teramo**	**0.22**	**39**	Pg	Pg	09 18 53.4	+0.3
TERO				Sg	Sg	09 18 57.0	+0.8
TERO	**Teramo**	**0.22**	**39**	Pg	Pg	09 18 53.4	+0.3
TERO				Sg	Sg	09 18 57.0	+0.8
FIAM	**Fiamignano**	**0.28**	**231**	Pg	Pg	09 18 54.3	0.0
FIAM	372nm,0.4s			Sg	Sb	09 19 00.4	-0.4
FIAM	**Fiamignano**	**0.28**	**231**	Pg	Pg	09 18 54.3	0.0
FIAM	372nm,0.4s			Sg	Sb	09 19 00.4	-0.4
LNSS	**Leonessa**	**0.32**	**299**	Pg	Pg	09 18 55.4	+0.5
LNSS	450nm,0.4s			Sg	Sg	09 19 00.5	+1.3
LNSS	**Leonessa**	**0.32**	**299**	Pg	Pg	09 18 55.4	+0.5
LNSS	450nm,0.4s			Sg	Sg	09 19 00.5	+1.3
VCEL	**Villa Celiera**	**0.32**	**100**	Pg	Pg	09 18 55.7	+0.8
VCEL				Sg	Sb	09 19 01.6	-0.3
VCEL	**Villa Celiera**	**0.32**	**100**	Pg	Pg	09 18 55.7	+0.8
VCEL				Sg	Sb	09 19 01.6	-0.3
PTQR	**Pietraquaria** 25nm,0.2s	**0.43**	**181**	Pg	Pg	09 18 56.5	-0.4
PTQR	**Pietraquaria** 25nm,0.2s	**0.43**	**181**	Pg	Pg	09 18 56.5	-0.4
NRCA	**Norcia**	**0.44**	**330**	Pg	Pg	09 18 57.4	+0.2
NRCA				Sg	Sg	09 19 04.1	+0.9
NRCA	**Norcia**	**0.44**	**330**	Pg	Pg	09 18 57.4	+0.2
NRCA				Sg	Sg	09 19 04.1	+0.9
OFFI	**Offida** 882nm,0.4s	**0.53**	**22**	Pg	Pb	09 18 59.8	0.0
OFFI	**Offida** 882nm,0.4s	**0.53**	**22**	Pg	Pb	09 18 59.8	0.0
MNS	**Montasola** 108nm,0.6s	**0.55**	**264**	Pg	Pg	09 18 58.9	-0.2
MNS	**Montasola** 108nm,0.6s	**0.55**	**264**	Pg	Pg	09 18 58.9	-0.2
INTR	**Introdacqua** 226nm,0.3s	**0.57**	**140**	Pg	Pg	09 18 59.4	-0.2
INTR				Sg	Sb	09 19 08.4	-0.6
INTR	**Introdacqua** 226nm,0.3s	**0.57**	**140**	Pg	Pg	09 18 59.4	-0.2
INTR				Sg	Sb	09 19 08.4	-0.6
CERT	**Cerreto** 343nm,0.3s	**0.59**	**213**	Pg	Pg	09 19 00.2	+0.2
CERT				Sg	Sb	09 19 09.4	-0.2
CERT	**Cerreto** 343nm,0.3s	**0.59**	**213**	Pg	Pg	09 19 00.2	+0.2
CERT				Sg	Sb	09 19 09.4	-0.2
VVLD	**Villa Vallelon** 171nm,0.7s	**0.60**	**165**	Pg	Pg	09 19 00.2	+0.1
VVLD	**Villa Vallelon** 171nm,0.7s	**0.60**	**165**	Pg	Pg	09 19 00.2	+0.1
FDMO	**Fiordimonte** 101nm,0.2s	**0.64**	**338**	Pg	Pg	09 19 01.1	+0.3
FDMO				Sg	Sb	09 19 10.8	0.0
FDMO	**Fiordimonte** 101nm,0.2s	**0.64**	**338**	Pg	Pg	09 19 01.1	+0.3
FDMO				Sg	Sb	09 19 10.8	0.0
MTCE	**Montecelio** 92nm,0.6s	**0.66**	**230**	Pg	Pg	09 19 01.6	+0.5
MTCE	**Montecelio** 92nm,0.6s	**0.66**	**230**	Pg	Pg	09 19 01.6	+0.5
GUAR	**Guarcino** 98nm,0.4s	**0.66**	**187**	Pg	Pb	09 19 01.7	-0.5
GUAR	**Guarcino** 98nm,0.4s	**0.66**	**187**	Pg	Pb	09 19 01.7	-0.5
CESI	**CESI - Serrava**	**0.67**	**326**	Pg	Pg	09 19 01.3	-0.2
CESI	**CESI - Serrava**	**0.67**	**326**	Pg	Pg	09 19 01.3	-0.2
LPEL	**Lama dei Peligo**	**0.70**	**125**	Pg	Pg	09 19 01.5	-0.5
LPEL				Sg	Sb	09 19 11.9	-0.7
LPEL	**Lama dei Peligo**	**0.70**	**125**	Pg	Pg	09 19 01.5	-0.5
LPEL				Sg	Sb	09 19 11.9	-0.7
POFI	**Posta Fibreno**	**0.76**	**163**	Pg	Pg	09 19 03.0	-0.2
POFI	**Posta Fibreno**	**0.76**	**163**	Pg	Pg	09 19 03.0	-0.2
GIUL	**Giuliano Di Ro**	**0.90**	**188**	Pg	Pb	09 19 06.1	-0.1
GIUL	**Giuliano Di Ro**	**0.90**	**188**	Pg	Pb	09 19 06.1	-0.1
MIDA	**Miranda**	**1.02**	**142**	Pg	Pg	09 19 06.6	-1.6
MIDA	**Miranda**	**1.02**	**142**	Pg	Pg	09 19 06.6	-1.6

ISCJB ***11*** *09:22:09.0±0.2, 17.97N±0.02×102.31W±0.02, h28km, mb4.9/175, MS4.5/32, Error ellipse: s-maj=4.1km s-min=1.9km az=41.5*
BJI ***11*** *09:22:09.6, 18.20N×102.00W, h29km, mB5.4/7, mb5.3/2, Ms5.1/7, Ms7 4.7/7*
MEX ***11*** *09:22:10.8±0.9, 17.71N×102.41W, h2km±7km, MD4.7*
IDC ***11*** *09:22:11.0±0.4, 18.20N×102.20W, h29km±2km, mb4.5/32, mb1 4.6/34, mb1mx4.5/37, mbtmp4.5/34, ML3.9/2, MS4.4/27, Ms1 4.4/27, ms1mx4.3/38, Error ellipse: s-maj=15.1km s-min=8.2km az=59.0*
MOS ***11*** *09:22:11.2±1.0, 18.25N×102.09W, h33km, mb5.4/39, Error ellipse: s-maj=7.8km s-min=4.4km az=87.4*
NEIC ***11*** *09:22:11.4±0.2, 18.17N×102.14W, mb5.0/125, MD4.8(MEX), Error ellipse: s-maj=5.5km s-min=3.0km az=45.0*
NEIC Felt [III] at Lazaro Cardenas and [II] at Mexico. Also felt at Huatulco, La Mira and Patzcuaro.
GCMT ***11*** *09:22:15.0±0.4, 17.97N×102.26W, h25km, MW5.1, Moment Tensor Solution. s56,c75; s72,c111; Moment tensor: Scale 10^{16}Nm; M_{rr}3.67±.17; $M_{\theta\theta}$-2.62±.12; $M_{\phi\phi}$-1.06±.14; $M_{r\theta}$-2.91±.26; $M_{\theta\phi}$2.17±.11; $M_{\phi r}$0.23±.30; Best double couple: $M_0$4.90000×10^{16} NP1:ϕ_s143.00000°, δ31.00000°, λ122.00000°. NP2:ϕ_s287.00000°, δ64.00000°, λ72.00000°. Principal axes: T 4.8700, Plg66.0000°, Azm165.0000°; N 0.0400, Plg16.0000°, Azm295.0000°; P -4.9200, Plg17.0000°, Azm30.0000°; Data Used: II IU G CN IC.*
ISC 11 09:22:10.7±0.3, **18.09N**±0.04×**102.26W**±0.03, **h30**km±1km,
h30km**:pP-P, n900,** σ1§**42**/994**, mb5.0**/175**, MS4.5**/32,
115C-112D, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.90**	**122**	*eP*	**Pn**	**09 22 26.4**	**-0.9**
ZIIG				*eS*	**Sn**	**09 22 38.8**	**-0.5**
ZIIG	**Zihuatanejo**	**0.90**	**122**	*eP*	**Pn**	**09 22 26.4**	**-0.9**
ZIIG				*eS*	**Sn**	**09 22 38.8**	**-0.5**
MMIG	**Aquila**	**1.05**	**281**	*iP*	**Pn**	**09 22 27.9**	**-1.5**
MMIG				*iS*	**Sn**	**09 22 43.1**	**+0.1**
MMIG	**Aquila**	**1.05**	**281**	*iP*	**Pn**	**09 22 27.9**	**-1.5**
MMIG				*iS*	**Sn**	**09 22 43.1**	**+0.1**
ARIG	**Puente Sto Nin**	**1.83**	**84**	*iP*	**Pb**	**09 22 42.2**	**-1.4**
ARIG				*eS*	**Sb**	**09 23 07.6**	**+1.4**
CAIG	**El Cayaco**	**2.17**	**118**	*iP*	**Pn**	**09 22 44.6**	**-0.2**
CAIG				*eS*	**Sn**	**09 23 09.6**	**-1.1**
CAIG	**El Cayaco**	**2.17**	**118**	*iP*	**Pn**	**09 22 44.6**	**-0.2**
CAIG				*eS*	**Sn**	**09 23 09.6**	**-1.1**
MEIG	**Mezcala**	**2.52**	**93**	*iP*	**Pn**	**09 22 52.4**	**+2.7**
MEIG				*eS*	**Sb**	**09 23 23.7**	**-2.3**
MEIG	**Mezcala**	**2.52**	**93**	*iP*	**Pn**	**09 22 52.4**	**+2.7**
MEIG				*eS*	**Sb**	**09 23 23.7**	**-2.3**
CJM	**Chamela**	**2.98**	**299**	*iP*	**Pn**	**09 22 58.0**	**+2.0**
CJM				*eS*	**Sn**	**09 23 33.6**	**+2.9**
CJM	**Chamela**	**2.98**	**299**	*iP*	**Pn**	**09 22 58.0**	**+2.0**
CJM				*eS*	**Sn**	**09 23 33.6**	**+2.9**
CHVM	**Chichinautzin**	**3.12**	**71**	*eP*	Pn	09 23 01.4	+3.1
CHVM				*iS*	**Sb**	**09 23 43.3**	**-0.3**
YAIG	**Yautepec**	**3.13**	**75**	*iP*	Pn	09 23 01.4	+3.3
YAIG				*iS*	**Sb**	**09 23 41.4**	**-2.2**
YAIG	**Yautepec**	**3.13**	**75**	*iP*	Pn	09 23 01.4	+3.3
YAIG				*iS*	**Sb**	**09 23 41.4**	**-2.2**
UNM	**Universidad Na**	**3.17**	**67**	*iP*	**Pb**	**09 23 03.6**	**-3.0**
UNM	**Universidad Na**	**3.17**	**67**	*iP*	**Pb**	**09 23 03.6**	**-3.0**
UNM				*iS*	**Sb**	**09 23 43.7**	**-1.3**
UNM	**Universidad Na**	**3.17**	**67**	*iP*	**Pb**	**09 23 03.6**	**-3.0**
UNM				*iS*	**Sb**	**09 23 43.7**	**-1.3**
PPM	**Popocatepetl**	**3.58**	**74**	*iP*	Pn	09 23 08.8	+4.1
PPM	**Popocatepetl**	**3.58**	**74**	*iP*	Pn	09 23 08.8	+4.1
PPM				*eS*	**Sb**	**09 23 52.9**	**-4.1**
PPM	**Popocatepetl**	**3.58**	**74**	*iP*	Pn	09 23 08.8	+4.1
PPM				*eS*	**Sb**	**09 23 52.9**	**-4.1**
ANIG	**Ahuacatlan**	**3.64**	**325**	*iP*	Pn	09 23 08.4	+3.3
ANIG				*iS*	**Sb**	**09 23 54.6**	**-3.5**
ANIG	**Ahuacatlan**	**3.64**	**325**	*iP*	Pn	09 23 08.4	+3.3
ANIG				*iS*	**Sb**	**09 23 54.6**	**-3.5**
PNIG	**Pinotepa**	**4.30**	**112**	*iP*	**Pn**	**09 23 15.7**	**+1.5**
PNIG				*iS*	**Sn**	**09 24 03.9**	**+0.6**
PNIG	**Pinotepa**	**4.30**	**112**	*iP*	**Pn**	**09 23 15.7**	**+1.5**
PNIG				*iS*	**Sn**	**09 24 03.9**	**+0.6**
ZAIG	**Zacatecas**	**4.67**	**357**	*iP*	Pb	09 23 26.1	-5.9
ZAIG				*iS*	**Sb**	**09 24 24.2**	**-3.7**
ZAIG	**Zacatecas**	**4.67**	**357**	*iP*	Pb	09 23 26.1	-5.9
ZAIG				*iS*	**Sb**	**09 24 24.2**	**-3.7**
TPIG	**Tehuac#an**	**4.67**	**85**	*iP*	**Pn**	**09 23 22.1**	**+2.7**
TPIG				*eS*	Sn	09 24 18.8	+6.1
TPIG	**Tehuac#an**	**4.67**	**85**	*iP*	**Pn**	**09 23 22.1**	**+2.7**
TPIG				*eS*	Sn	09 24 18.8	+6.1
VHO	**Vista Hermosa**	**5.37**	**100**	*iP*	**Pn**	**09 23 31.9**	**+2.9**
VHO				*iS*	**Sn**	**09 24 33.0**	**+3.0**
VHO	**Vista Hermosa**	**5.37**	**100**	*iP*	**Pn**	**09 23 31.9**	**+2.9**
VHO				*iS*	**Sn**	**09 24 33.0**	**+3.0**
HUIG	**Huatulco**	**6.33**	**110**	*iP*	**Pn**	**09 23 44.4**	**+2.4**
HUIG				*eS*	**Sn**	**09 24 54.7**	**+1.4**
HUIG	**Huatulco**	**6.33**	**110**	*iP*	**Pn**	**09 23 44.4**	**+2.4**
HUIG				*eS*	**Sn**	**09 24 54.7**	**+1.4**
CMIG	**Matias Romero**	**7.11**	**97**	Pn	**Pn**	**09 23 55.1**	**+2.4**
CMIG				Lg	Lg	09 25 40.7	
CMIG	**Matias Romero** 7.9nm,0.3s,baz=253,slow=22,SNR=5.1	**7.11**	**97**	Pn	**Pn**	**09 23 55.1**	**+2.4**
CMIG	29nm,0.3s,baz=220,slow=22,SNR=5.1			Lg	Lg	09 25 40.7	
CMIG	comp=Z,3µm,20.1s,baz=270,slow=41			LR	LR	09 27 00.1	
LPIG	**La Paz** comp=Z,209nm,19.5s,baz=131,slow=35	**9.60**	**310**	LR	LR	09 27 43.1	
CCIG	**Comitan**	**9.84**	**99**	*iP*	Pn	09 24 34.5	+4.0
CCIG				*eS*	**Sn**	**09 26 24.3**	**+4.2**
CCIG	**Comitan**	**9.84**	**99**	*iP*	Pn	09 24 34.5	+4.0
CCIG				*eS*	**Sn**	**09 26 24.3**	**+4.2**
732A	**Laxson Ranch,** baz=11,SNR=23	**10.80**	**11**	⇓P	Pn	09 24 47.1	+3.8
TXAR	**Lajitas Array**	**11.27**	**354**	Pn	Pn	09 24 54.0	+4.1
TXAR				Lg	Lg	09 28 00.4	
TXAR	**Lajitas Array** 0.2nm,0.3s,baz=171,slow=7.5,SNR=46	**11.27**	**354**	Pn	Pn	09 24 54.0	+4.1
TXAR	0.3nm,0.3s,baz=177,slow=17,SNR=3.9			Lg	Lg	09 28 00.4	
TXAR	comp=Z,3µm,19.3s,baz=85,slow=41			LR	LR	09 29 48.0	
627A	**Terlingua Ranc** baz=11,SNR=55	**11.36**	**355**	⇑P	Pn	09 24 55.6	+4.5
628A	**Black Gap, Mar** baz=11,SNR=24	**11.36**	**357**	⇓P	Pn	09 24 55.4	+4.3
631A	**Perdido Creek** baz=11,SNR=46	**11.38**	**7**	⇓P	Pn	09 24 54.5	+3.3
626A	**Big Bend Ranch** baz=12,SNR=16	**11.54**	**352**	⇓P	Pn	09 24 57.9	+4.3
632A	**Uvalde** baz=12,SNR=32	**11.59**	**11**	⇑P	Pn	09 24 57.3	+3.1
529A	**Stev Forest Ra** baz=12,SNR=16	**11.98**	**0**	⇓P	Pn	09 25 03.8	+4.2
528A	**Cox Ranch, San** baz=12,SNR=6.5	**12.03**	**358**	⇑P	Pn	09 25 03.3	+3.1
526A	**Mary Lane Ranc** baz=12,SNR=24	**12.04**	**352**	⇓P	Pn	09 25 04.6	+4.3
530A	**J-C Ranch, Com** baz=12,SNR=18	**12.04**	**4**	⇓P	Pn	09 25 04.1	+3.7
527A	**Woodward Ranch** baz=12	**12.07**	**354**	⇓P	Pn	09 25 04.8	+4.0
531A	**Rocksprings** baz=12,SNR=29	**12.12**	**7**	⇑P	Pn	09 25 06.8	+5.3
532A	**Rocksprings** baz=12,SNR=75	**12.18**	**10**	P	Pn	09 25 05.8	+3.6
429A	**Davenport Ranc** baz=12,SNR=36	**12.49**	**1**	⇑P	Pn	09 25 10.9	+4.4
JCT	**Junction City**	**12.54**	**10**	*eP*	**Pn**	**09 25 08.1**	**+0.9**
JCT				*e*		09 27 31.0	
JCT	**Junction City**	**12.54**	**10**	*ePn*	**Pn**	**09 25 08.1**	**+0.9**
JCT				*eSn*	**Sn**	**09 27 31.0**	**+5.1**
JCT	**Junction City** baz=12,SNR=49	**12.54**	**10**	⇑P	**Pn**	**09 25 09.8**	**+2.6**
428A	**Kincaid Ranch,** baz=13,SNR=20	**12.59**	**358**	⇑P	Pn	09 25 11.3	+3.4
426A	**McDonald Obser** baz=13,SNR=9.8	**12.63**	**353**	⇓P	Pn	09 25 12.7	+4.2
431A	**Sonora** baz=13,SNR=18	**12.63**	**7**	P	Pn	09 25 13.3	+4.9
430A	**Baggett Ranch,** baz=13,SNR=50	**12.68**	**4**	⇓P	Pn	09 25 13.5	+4.4
427A	**Hayter Ranch,** baz=13	**12.75**	**356**	⇑P	Pn	09 25 14.4	+4.3
425A	**Indio Mountain** baz=13,SNR=17	**12.88**	**349**	⇓P	Pn	09 25 16.0	+4.1
432A	**Menard** baz=13,SNR=43	**12.93**	**10**	⇓P	Pn	09 25 15.9	+3.4
HKT	**Hockley**	**13.19**	**25**	*eP*	**Pn**	**09 25 15.3**	**-0.6**
HKT	**Hockley**	**13.19**	**25**	*ePn*	**Pn**	**09 25 15.2**	**-0.6**
326A	**Caldwell Ranch** baz=13,SNR=34	**13.26**	**354**	⇑P	Pn	09 25 20.6	+3.5
331A	**San Angelo** baz=13,SNR=14	**13.27**	**7**	⇓P	Pn	09 25 20.5	+3.4
330A	**Mertzon** baz=13,SNR=22	**13.30**	**4**	⇑P	Pn	09 25 20.8	+3.2
329A	**Wagon Wheel Ra** baz=13,SNR=5.8	**13.34**	**1**	⇓P	Pn	09 25 21.1	+2.9
TEIG	**Tepich**	**13.39**	**79**	Pn	**Pn**	**09 25 20.0**	**+1.2**
TEIG	**Tepich** 0.6nm,0.3s,baz=328,slow=19,SNR=3.9	**13.39**	**79**	Pn	**Pn**	**09 25 20.0**	**+1.2**
TEIG	comp=Z,945nm,20.0s,baz=277,slow=41			LR	LR	09 31 15.0	
332A	**Millersview** baz=13,SNR=6.8	**13.43**	**9**	⇑P	Pn	09 25 22.3	+3.0
325A	**Bean Ranch, Si** baz=14,SNR=13	**13.45**	**350**	⇑P	Pn	09 25 23.2	+3.5
324A	**Moseley Ranch,** baz=14,SNR=9.1	**13.61**	**348**	⇓P	P	09 25 26.3	-4.2
230A	**Sterling City** baz=14	**13.78**	**4**	⇓P	**P**	**09 25 29.5**	**-2.8**
MNTX	**Cornudas Mount**	**13.84**	**349**	*ePn*	**Pn**	**09 25 27.2**	**+2.3**
MNTX	**Cornudas Mount** baz=14,SNR=29	**13.84**	**349**	⇑P	Pn	09 25 28.4	+3.5
231A	**Bronte** baz=14,SNR=7.0	**13.90**	**7**	⇓P	**Pn**	**09 25 28.1**	**+2.4**
232A	**Coleman** baz=14,SNR=10	**13.94**	**9**	⇓P	**Pn**	**09 25 28.7**	**+2.4**
226B	**Tecolote Peak,** baz=14,SNR=20	**14.04**	**353**	⇓P	P	09 25 31.8	-3.4
225A	**Deer Hill, Car** baz=14,SNR=7.8	**14.15**	**351**	⇑P	P	09 25 32.8	-3.7
GDL2	**Guadalupe Moun** 67nm,0.9s	**14.18**	**353**	*ePn*	**Pn**	**09 25 29.2**	**-0.4**
224A	**Cornudas Mount** baz=14,SNR=16	**14.24**	**349**	P	Pn	09 25 33.7	+3.3
320A	**Kipp Ranch, An** baz=14,SNR=9.1	**14.36**	**338**	⇑P	**P**	**09 25 36.0**	**-2.8**
128A	**Castleberry Fa** baz=14,SNR=29	**14.47**	**359**	⇑P	**P**	**09 25 39.0**	**-1.0**
129A	**Stewart Farms,** baz=14	**14.49**	**1**	⇑P	**Pn**	**09 25 36.1**	**+2.3**
130A	**Snyder** baz=14,SNR=11	**14.49**	**4**	⇑P	**P**	**09 25 37.6**	**-2.6**
WHTX	**Lake Whitney** baz=14	**14.51**	**17**	⇑P	**Pn**	**09 25 36.4**	**+2.4**
127A	**Arkansas Junct** baz=15,SNR=11	**14.56**	**356**	⇑P	**Pn**	**09 25 37.4**	**+2.6**
126A	**Clayton Basin,** baz=15,SNR=13	**14.58**	**354**	⇑P	**Pn**	**09 25 37.8**	**+2.7**
131A	**Roby** baz=15,SNR=14	**14.62**	**6**	⇓P	**P**	**09 25 40.4**	**-1.2**
ABTX	**Abilene, Hawle** baz=15,SNR=14	**14.67**	**9**	⇓P	**Pn**	**09 25 37.8**	**+1.7**
125A	**Gardner Draw,** baz=15,SNR=42	**14.67**	**352**	⇑P	**P**	**09 25 40.8**	**-1.5**
319A	**Douglas** baz=15,SNR=6.4	**14.68**	**336**	⇑P	**P**	**09 25 39.9**	**-2.4**
221A	**Mesquite Ranch** baz=15,SNR=11	**14.73**	**341**	⇓P	**P**	**09 25 43.5**	**+0.6**
124A	**Stringfield Ra** baz=15,SNR=31	**14.83**	**349**	⇓P	**P**	**09 25 42.2**	**-2.0**
220A	**Playas Peak, P** baz=15,SNR=12	**14.88**	**339**	⇑P	**P**	**09 25 42.6**	**-1.9**
CPRX	**Cap Rock** 121nm,1.0s	**14.95**	**355**	*eP*	**P**	**09 25 44.6**	**-0.8**
TGUH	**Tegucigalpa,Un**	**14.95**	**103**	*ePn*	**Pn**	**09 25 38.5**	**-1.5**
Z29A	**Hungry Hill Ra** baz=15,SNR=19	**15.12**	**2**	⇓P	**P**	**09 25 45.7**	**-1.5**
Z28A	**Tucker Farm, M** baz=15,SNR=5.8	**15.14**	**360**	⇑P	**P**	**09 25 45.0**	**-2.4**
122A	**Conniff Cattle** baz=15	**15.16**	**345**	⇑P	**P**	**09 25 48.8**	**+1.1**
Z30A	**Sanderson Ranc** baz=15,SNR=16	**15.17**	**4**	⇓P	**P**	**09 25 45.3**	**-2.4**
Z27A	**Tatum** baz=15,SNR=23	**15.19**	**357**	⇓P	**Pn**	**09 25 44.6**	**+1.4**
Z26A	**Caprock** baz=15,SNR=20	**15.20**	**355**	⇑P	**Pn**	**09 25 45.1**	**+1.8**
121A	**Cooks Peak, D** baz=15,SNR=12	**15.22**	**342**	⇓P	**Pn**	**09 25 45.2**	**+1.5**
Z31A	**Sharp Cattle R** baz=15,SNR=16	**15.29**	**7**	⇓P	**Pn**	**09 25 45.4**	**+0.9**
Z25A	**Roswell** baz=15	**15.29**	**352**	⇑P	**Pn**	**09 25 46.6**	**+2.1**
Z32A	**Haskell** baz=15,SNR=29	**15.36**	**9**	⇑P	**Pn**	**09 25 46.8**	**+1.4**
Z24A	**Sheeppen Canyo** baz=15,SNR=16	**15.43**	**350**	⇓P	**P**	**09 25 49.9**	**-0.9**
120A	**U Bar Ranch, L** baz=16,SNR=7.3	**15.50**	**339**	⇓P	**P**	**09 25 50.3**	**-1.2**
Z23A	**Rita Site, Whi** baz=16,SNR=10	**15.53**	**347**	⇑P	**P**	**09 25 51.3**	**-0.4**
Z22A	**Elephant Butte** baz=16,SNR=12	**15.68**	**345**	⇓P	**P**	**09 25 53.8**	**+0.3**
RFTA	**Plano**	**15.68**	**18**	*ePn*	**Pn**	**09 25 49.2**	**-0.3**
Y29A	**Porterfield Fa** baz=16,SNR=18	**15.72**	**2**	⇑P	**P**	**09 25 53.5**	**-0.3**
Y27A	**Causey** baz=16,SNR=18	**15.75**	**357**	⇓P	**P**	**09 25 54.7**	**+0.5**
Y28A	**McKinney Farm,** baz=16,SNR=15	**15.76**	**0**	⇑P	**P**	**09 25 54.0**	**-0.3**
MSTX	**Muleshoe** baz=16,SNR=15	**15.82**	**358**	⇑P	**P**	**09 25 55.0**	**0.0**

Y26A	Elida	15.83	355	⇑P		P		09 25 55.6	+0.5
	baz=16								
Y31A	Rekieta Farm,	15.91	6	⇓P		P		09 25 54.8	-1.1
	baz=16,SNR=20								
Z21A	St. Cloud Mine	15.92	343	⇓P		P		09 25 55.4	-0.8
	baz=16,SNR=19								
Y25A	Mesa, Roswell	15.92	353	⇑P		P		09 25 54.9	-1.2
	baz=16,SNR=10								
Z20A	Nine Sixteen R	16.01	340	⇓P		P		09 25 58.1	+0.9
	baz=16,SNR=10								
Y24A	Capitan	16.03	350	P		P		09 25 57.0	-0.3
	baz=16,SNR=17								
Y32A	R-V Farms, Ver	16.05	9	P		P		09 25 57.8	+0.4
	baz=16,SNR=21								
TUC	Tucson	16.11	333	eP		Pn		09 25 56.3	+1.1
TUC				pmax		pmax			
	comp=Z,11nm,1.2s								
TUC	Tucson	16.11	333	ePn		Pn		09 25 56.3	+1.1
	comp=Z,11nm,1.2s								
TUC				ePcP		PcP		09 30 47.5	-2.6
Y23A	Lovelace Mesa,	16.14	349	P		P		09 25 58.0	-0.6
	baz=16,SNR=29								
X29A	Tulia	16.30	2	P		P		09 25 59.2	-1.0
	baz=16,SNR=30								
Y22A	Socorro	16.34	346	⇑P		P		09 26 01.6	+0.9
	baz=16,SNR=24								
X30A	Coker Ranch, T	16.34	4	⇑P		P		09 25 59.3	-1.4
	baz=16,SNR=21								
X26A	CR and CF Fran	16.45	355	⇓P		P		09 26 01.5	-0.6
	baz=16,SNR=25								
Y22D	IRIS PASSCAL I	16.46	346	⇓P		P		09 26 03.6	+1.5
	baz=16,SNR=7.2								
BNM	Barren Site	16.47	347	ePn		P		09 26 01.9	-0.4
X27A	F and S Farms,	16.51	358	⇑P		P		09 26 02.2	-0.5
	baz=16								
X25A	Clemmons Ranch	16.51	353	⇑P		P		09 26 04.3	+1.6
	baz=16								
LENM	Lemitar	16.56	346	ePn		P		09 26 02.1	-1.1
Y21A	Point of Rocks	16.58	344	⇑P		P		09 26 06.0	+2.5
	baz=17,SNR=8.2								
X31A	McDonald Ranch	16.60	7	⇑P		P		09 26 03.7	+0.1
	baz=17,SNR=16								
LPM	Los Pinos Moun	16.62	347	ePn		Pn		09 26 02.1	+0.4
X24A	Lazy VL Ranch,	16.65	351	P		P		09 26 04.8	+0.5
	baz=17,SNR=8.2								
Y20A	Horse Springs,	16.68	342	⇓P		P		09 26 06.2	+1.6
	baz=17,SNR=6.5								
AMTX	Amarillo	16.74	2	ePn		Pn		09 26 03.7	+0.6
	comp=Z,49nm,0.8s								
AMTX				ePcP		PcP		09 31 00.5	+9.4
AMTX	Amarillo	16.74	2	P		P		09 26 05.3	+0.2
	baz=17,SNR=6.6								
LAZ	Ladron	16.82	346	eP		P		09 26 06.7	+0.6
WMOK	Wichita Mounta	16.87	10	eP		Pn		09 26 04.0	-0.7
WMOK				pmax		pmax			
	comp=Z,46nm,0.9s								
WMOK	Wichita Mounta	16.87	10	ePn		Pn		09 26 04.0	-0.7
	comp=Z,46nm,0.9s								
WMOK				ePcP		PcP		09 30 47.1	-4.1
X22A	Bernardo	16.89	346	⇑P		P		09 26 09.7	+2.8
	baz=17,SNR=5.8								
W27A	Bowe Ranch, En	16.92	358	⇓P		P		09 26 07.8	+0.6
	baz=17,SNR=9.2								
W29A	Amraillo	16.98	2	⇑P		P		09 26 07.1	-0.7
	baz=17								
W26A	Owens Ranch, T	16.99	356	⇓P		P		09 26 08.4	+0.5
	baz=17								
X21A	Alamocita Cree	17.02	344	⇓P		P		09 26 11.2	+2.8
	baz=17,SNR=9.8								
W28A	Vega	17.10	0	⇑P		Pn		09 26 08.1	+0.4
	baz=17								
W31A	Holland Ranch,	17.16	6	⇑P		P		09 26 09.7	0.0
	baz=17,SNR=7.6								
W25A	X Bar L Ranch,	17.17	354	⇓P		P		09 26 10.3	+0.3
	baz=17								
ANMO	Albuquerque	17.20	348	eP		P		09 26 11.4	+1.1
ANMO				eS		S		09 29 30.7	+2.5
ANMO				Lg		Lg		09 31 20.8	
ANMO	Albuquerque	17.20	348	P		P		09 26 11.3	+0.9
	comp=Z,0.2nm,0.3s,baz=155,slow=14,SNR=11								
ANMO				Lg		Lg		09 31 20.8	
	comp=Z,0.1nm,0.3s,baz=237,slow=18,SNR=5.3								
ANMO				LR		LR		09 33 32.0	
	comp=Z,2μm,18.7s,baz=174,slow=40								
W24A	Lazy 6 Ranch,	17.28	351	P		P		09 26 12.8	+1.5
	baz=17,SNR=36								
X20A	Quemado	17.31	342	⇓P		P		09 26 14.3	+2.7
	baz=17,SNR=7.5								
W23A	Werner Place,	17.35	349	P		P		09 26 14.1	+2.0
	baz=17,SNR=15								
W22A	Albuquerque	17.41	347	⇓P		P		09 26 13.9	+1.3
	baz=17,SNR=5.7								
V28A	Channing	17.59	0	P		P		09 26 15.6	+0.9
	baz=18,SNR=14								
VBMS	Vicksburg	17.61	35	ePn		Pn		09 26 13.6	-0.3
	comp=Z,214nm,1.6s								
W21A	San Fidel	17.62	345	P		P		09 26 18.3	+3.2
	baz=18,SNR=9.1								
V26A	Tequesquite Ra	17.69	356	P		P		09 26 17.1	+1.4
	baz=18,SNR=21								
V29A	Stinnett	17.73	2	⇓P		P		09 26 18.0	+1.9
	baz=18								
V31A	Spring Creek L	17.75	6	P		P		09 26 16.8	+0.5
	baz=18,SNR=16								
X18A	Snowflake	17.75	339	⇑P		P		09 26 17.7	+1.2
	baz=18,SNR=14								
V24A	Rampart Ranch,	17.77	352	⇓P		P		09 26 17.6	+0.9
	baz=18,SNR=22								
V25A	Rancho No Teng	17.80	354	P		P		09 26 18.0	+1.0
	baz=18,SNR=8.7								
W20A	Ramah	17.85	343	⇓P		P		09 26 19.3	+1.7
	baz=18								
V23A	Ortiz Mt. (NFS	17.93	350	⇓P		P		09 26 19.8	+1.4
	baz=18								
MIAR	Mount Ida	18.13	24	eP		Pn		09 26 19.4	-0.9
MIAR				pmax		pmax			
	comp=Z,71nm,1.1s								
MIAR	Mount Ida	18.13	24	eP		Pn		09 26 19.4	-0.9
	comp=Z,71nm,1.1s								
X16A	Lo Mia Camp, P	18.21	335	⇓P		P		09 26 23.6	+2.1
	baz=18,SNR=9.6								
V22A	San Miguel Ran	18.23	348	⇓P		P		09 26 23.7	+2.0
	baz=18								
V21A	Milan	18.28	346	⇑P		Pn		09 26 23.0	+0.7
	baz=18								
U26A	Atchley Ranch,	18.28	356	⇓P		Pn		09 26 23.4	+1.1
	baz=18,SNR=12								
U25A	Circle Dot Ran	18.34	354	⇑P		Pn		09 26 23.7	+0.6
	baz=18,SNR=17								
U30A	WK&E Inc. Balk	18.43	4	P		Pn		09 26 25.4	+1.4
	baz=18,SNR=14								
U24A	Moreno Valley	18.44	352	⇓P		Pn		09 26 25.3	+0.9
	baz=18								
JTS	JuntasAbangare	18.48	112	P		P		09 26 24.3	-0.1
	comp=Z,40nm,0.9s								
JTS	JuntasAbangare	18.48	112	P		Pn		09 26 25.5	+0.8
	comp=Z,0.5nm,0.3s,baz=311,slow=6.9,SNR=9.4								
V20A	Brimhall	18.48	344	⇓P		Pn		09 26 26.6	+1.8
	baz=18								
U23A	El Rito	18.50	350	P		Pn		09 26 26.1	+1.1
	baz=18,SNR=18								
SOR	Soroa	18.64	72	e		Pn		09 26 27.2	+0.6
TUL1	Tulsa	18.66	17	P		P		09 26 25.5	-0.7
	baz=19,SNR=15								
U22A	Llaves	18.66	348	⇑P		Pn		09 26 28.7	+1.6
	baz=19,SNR=10								
UALR	University of	18.82	26	eP		P		09 26 27.0	-1.0
	comp=Z,40nm,1.0s								
U21A	Nageezi	18.88	346	⇑P		Pn		09 26 32.6	+2.9
	baz=19,SNR=20								
T27A	Campo	18.91	359	P		Pn		09 26 29.8	0.0
	baz=19,SNR=5.6								
T30A	Plains	18.95	4	⇓P		Pn		09 26 30.5	+0.1
	baz=19								
T28A	Walsh	18.96	0	⇓P		Pn		09 26 30.5	0.0
	baz=19								
T29A	Hugoton	19.02	2	⇓P		Pn		09 26 30.8	-0.3
	baz=19								
U20A	Newcomb	19.04	344	P		Pn		09 26 34.1	+2.7
	baz=19,SNR=7.2								
T26A	Comanche Natio	19.05	357	P		Pn		09 26 31.9	+0.3
	baz=19,SNR=8.9								
T24A	Torres, Weston	19.07	353	P		Pn		09 26 34.3	+2.3
	baz=19,SNR=23								
T25A	Trinidad	19.07	355	⇑P		Pn		09 26 32.2	+0.3
	baz=19								
T31A	Randall Ranch,	19.07	6	P		Pn		09 26 31.5	-0.2
	baz=19,SNR=18								
WUAZ	Wupatki	19.15	337	eP		Pn		09 26 34.2	+1.3
	comp=Z,81nm,1.1s								
WUAZ	Wupatki	19.15	337	⇑P		Pn		09 26 35.6	+2.7
	baz=19,SNR=9.7								
T23A	Casias Ranch,	19.17	351	P		Pn		09 26 35.4	+2.2
	baz=19,SNR=10								
T22A	Edith	19.29	349	P		Pn		09 26 35.6	+1.0
	baz=19,SNR=12								
PDMCI	Parker Dam,Lak	19.32	329	⇓P		Pn		09 26 36.8	+2.1
	baz=19								
T21A	Navajo Lake	19.39	347	⇓P		Pn		09 26 37.1	+1.3
	baz=19,SNR=11								
MONP	Monument Peak	19.48	322	⇑P		Pn		09 26 39.8	+3.0
	baz=20								
BAR	Barrett	19.48	321	eP		Pn		09 26 39.2	+2.5
	comp=Z,34nm,1.0s								
S26A	Kim	19.49	357	P		Pn		09 26 36.6	-0.3
	baz=20,SNR=18								
BC3	Big Chuckawall	19.49	325	⇓P		Pn		09 26 39.1	+2.2
	baz=20								
S25A	Robets Cordova	19.59	355	P		Pn		09 26 38.0	-0.1
	baz=20,SNR=17								
S24A	Houchin Ranch,	19.65	353	P		Pn		09 26 39.0	+0.1
	baz=20,SNR=13								
IRM	Iron Mountain	19.72	327	⇑P		Pn		09 26 42.0	+2.6
	baz=20								
S23A	Nye Farm, Mont	19.82	351	⇑P		Pn		09 26 44.0	+3.1
	baz=20,SNR=6.2								
MVCO	Mesa Verde	19.82	345	eP		Pn		09 26 40.1	-0.8
	comp=Z,54nm,0.9s								
MVCO	Mesa Verde	19.82	345	P		Pn		09 26 43.2	+2.3
	baz=20,SNR=7.2								
W13A	Hualapai Mount	19.85	331	⇑P		Pn		09 26 43.0	+1.8
	baz=20								
OXF	Oxford	19.98	33	eP		P		09 26 40.0	-0.7
OXF				pmax		pmax			
	comp=Z,270nm,1.1s								
OXF	Oxford	19.98	33	eP		P		09 26 40.0	-0.7
	comp=Z,270nm,1.1s								
BELC	Belle Mtn. Jos	20.05	325	⇓P		Pn		09 26 46.2	+2.6
	baz=20,SNR=8.1								
R25A	Fountain Ranch	20.06	355	P		Pn		09 26 42.9	-0.8
	baz=20,SNR=20								
S21A	Coal Bank Pass	20.09	347	P		Pn		09 26 44.0	-0.4
	baz=20,SNR=24								
R27A	Eads	20.13	359	P		Pn		09 26 43.3	-1.2
	baz=20,SNR=46								
R26A	Arlington	20.17	357	P		Pn		09 26 43.9	-1.0
	baz=20,SNR=28								
HBAR	Harrisburg	20.22	28	eP		P		09 26 42.3	-0.9
R24A	Sanders Place,	20.22	354	P		Pn		09 26 45.0	-0.7
	baz=20,SNR=30								
LRAL	Lakeview Retre	20.24	40	eP		P		09 26 42.5	-1.0
	comp=Z,28nm,0.6s								
LRAL				eS		Sn		09 30 33.5	+0.8
R23A	Moffat	20.27	352	⇓P		Pn		09 26 45.7	-0.6
	baz=20								
U15A	North Rim	20.30	336	⇑P		Pn		09 26 47.8	+1.1
	baz=20,SNR=12								
S20A	Disappointment	20.38	346	P		Pn		09 26 48.0	+0.4
	baz=20,SNR=7.6								
LDFC	Landfair	20.42	328	eP		Pn		09 26 48.6	+0.7
	comp=Z,59nm,1.0s								
R22A	Saguache, Gunn	20.45	350	⇓P		Pn		09 26 48.4	0.0
	baz=20								
GMRC	Granite Mounta	20.46	327	P		Pn		09 26 49.1	+0.7
	baz=20,SNR=6.8								
S18A	Hurst Farm, Bl	20.67	342	P		Pn		09 26 50.0	-0.9
	baz=21,SNR=26								
PV01	Paradox Valley	20.72	346	eP		P		09 26 46.0	-3.0
R21A	Cimarron	20.73	348	⇓P		Pn		09 26 51.5	-0.1
	baz=21,SNR=13								
R20A	Redvale	20.73	346	⇑P		Pn		09 26 51.7	+0.1
	baz=21,SNR=14								
Q25A	Bedland, Calha	20.82	356	P		P		09 26 50.8	+0.7
	baz=21,SNR=30								
GNAR	Gosnell	20.85	29	eP		P		09 26 47.2	-2.9
	comp=Z,291nm,0.7s								
KSCO	Kaye Shedlock'	20.85	359	P		P		09 26 51.1	+0.9
	baz=21,SNR=11								
Q24A	Divide	20.95	354	⇓P		Pn		09 26 55.4	+1.1
	baz=21,SNR=5.6								
PV04	Paradox Valley	21.05	345	eP		P		09 26 53.0	+0.5
PV10	Paradox Valley	21.06	345	eP		P		09 26 53.5	+0.8
PV10				eSn		Sn		09 30 59.5	+6.5
Q22A	Crested Butte,	21.09	350	P		P		09 26 54.4	+1.3
	baz=21,SNR=15								
TUQ	Turquoise Moun	21.11	328	⇑P		P		09 26 56.3	+3.2
	baz=21,SNR=13								
Q21A	Lamborn Mesa,	21.18	348	⇑P		P		09 26 56.7	+2.8
	baz=21,SNR=9.9								
MGV	Manicaragua	21.30	75	e		P		09 26 55.0	-0.1
MWC	Mount Wilson	21.38	322	P		P		09 26 59.6	+3.5
MWC				pmax		pmax			
	comp=Z,63nm,1.3s								
MWC	Mount Wilson	21.38	322	P		P		09 26 59.6	+3.5
	comp=Z,63nm,1.3s								
SMCO	Snowmass	21.41	350	eP		P		09 26 57.5	+1.0
	comp=Z,43nm,0.9s								
P23A	Jefferson	21.44	352	⇓P		P		09 26 57.9	+1.1
	baz=21,SNR=13								
Q20A	Ridgley Place,	21.44	347	⇓P		P		09 26 58.0	+1.3
	baz=22,SNR=12								
GSC	Goldstone	21.47	326	eP		P		09 27 01.0	+4.2
GSC				pmax		pmax			
	comp=Z,32nm,1.0s								
GSC	Goldstone	21.47	326	eP		P		09 27 01.0	+4.2
	comp=Z,32nm,1.0s								
GSC	Goldstone	21.47	326	P		P		09 27 01.1	+4.2
	baz=22,SNR=11								
P24A	Kohler Place,	21.47	354	⇓P		P		09 26 57.6	+0.6
	baz=22,SNR=6.1								
KSU1	Kansas State U	21.51	12	eP		P		09 26 56.4	-0.8
	comp=Z,87nm,0.8s								
PARMO	Parma	21.54	28	eP		P		09 26 55.9	-1.6
DWPF	Disney	21.57	59	eP		P		09 26 56.5	-1.4
	comp=Z,69nm,0.6s								
SHOC	Shoshone	21.65	328	⇓P		P		09 27 00.9	+2.1
	baz=22								
Q19A	Hogan Spring (	21.67	345	⇓P		P		09 27 00.2	+1.2
	baz=22								
CCUT	Cedar City	21.70	336	eP		P		09 27 01.7	+2.2
	comp=Z,20nm,1.2s								
CCUT				e				09 31 01.5	
P22A	Eagle	21.78	351	P		P		09 27 02.2	+1.8
	baz=22,SNR=14								
EDW2	Edwards Air Fo	21.81	323	⇓P		P		09 27 02.3	+1.8
	baz=22								
P21A	Newcastle	21.83	349	P		P		09 27 03.0	+2.1
	baz=22,SNR=10								
ISCO	Idaho Springs	21.83	353	eP		P		09 27 00.6	-0.4
ISCO				pmax		pmax			
	comp=Z,21nm,0.8s								
ISCO	Idaho Springs	21.83	353	eP		P		09 27 00.6	-0.4
	comp=Z,21nm,0.8s								
ISCO	Idaho Springs	21.83	353	⇑P		P		09 27 01.9	+0.9
	baz=22,SNR=20								
ARUT	Antelope Range	21.93	336	eP		P		09 27 04.0	+2.0
ARUT	Antelope Range	21.93	336	eP		P		09 27 04.0	+2.0
P20A	De Beque	21.99	347	⇓P		P		09 27 04.1	+1.5
	baz=22								
WVT	Waverly	22.04	33	eP		P		09 27 00.8	-2.2
WVT				pmax		pmax			
	comp=Z,28nm,0.9s								
WVT	Waverly	22.04	33	eP		P		09 27 00.8	-2.2
	comp=Z,28nm,0.9s								
PAYG	Puerto Ayora	22.06	146	eP		P		09 27 07.2	+3.9
	comp=Z,90nm,1.3s								
LRMC	Laurel Mountai	22.08	325	⇑P		P		09 27 05.9	+2.4
	baz=22								
O24A	Longmont	22.09	354	P		P		09 27 04.7	+1.0
	baz=22,SNR=23								
O26A	Horse Wrangler	22.10	358	⇓P		P		09 27 04.7	+1.0
	baz=22								
MSU	Marysvale	22.11	339	eP		P		09 27 05.2	+1.3
MSU	Marysvale	22.11	339	eP		P		09 27 05.2	+1.3
MVU	Marysvale	22.12	339	eP		P		09 27 05.4	+1.4
	comp=Z,45nm,1.4s								
MVU				ePcP		PcP		09 31 02.4	+1.6
SRU	San Rafael	22.14	343	eP		P		09 27 04.8	+0.6
SRU				e				09 31 00.3	
SRU				pmax		pmax			
	comp=Z,892nm,0.8s								
SRU	San Rafael	22.14	343	eP		P		09 27 04.8	+0.6
	comp=Z,892nm,0.8s								
SRU				ePcP		PcP		09 31 00.3	-0.5
SRU	San Rafael	22.14	343	P		P		09 27 05.0	+0.7
	baz=22,SNR=14								
Q16A	Castle Valley	22.16	341	P		P		09 27 05.7	+1.3
	baz=22,SNR=16								
P19A	Cripple Cowboy	22.25	346	P		P		09 27 06.7	+1.4
	baz=22,SNR=9.5								
O23A	Lake Granby, G	22.27	353	P		P		09 27 06.5	+0.8
	baz=22,SNR=26								
O22A	Kremmling	22.31	351	⇓P		P		09 27 07.1	+1.0
	baz=22,SNR=18								
SWET	Sewanee	22.40	37	eP		P		09 27 05.1	-1.7
	comp=Z,142nm,1.9s								
MPMC	Manual Prospec	22.40	326	⇓P		P		09 27 09.1	+2.0
	baz=22,SNR=9.6								
ARVC	Arvin	22.47	322	⇑P		P		09 27 09.8	+2.3
	baz=22,SNR=7.3								
O21A	Pagoda	22.50	350	P		P		09 27 10.9	+2.7
	baz=22,SNR=5.5								
TMUT	Trail Mountain	22.52	342	eP		P		09 27 08.1	-0.3
	comp=Z,32nm,0.8s								
P17A	Butcher Ranch,	22.54	343	P		P		09 27 09.0	+0.5
	baz=23,SNR=9.6								
P18A	Preston Nutter	22.55	344	⇑P		P		09 27 09.7	+1.0
	baz=23								
O20A	White River Ci	22.57	348	⇑P		P		09 27 09.9	+1.1
	baz=23,SNR=6.1								
N27A	Anderson Farm,	22.64	359	P		P		09 27 10.4	+1.0
	baz=23,SNR=8.0								
ISA	Isabella	22.65	324	eP		P		09 27 11.9	+2.4
ISA				pmax		pmax			
	comp=Z,67nm,1.2s								
ISA	Isabella	22.65	324	eP		P		09 27 11.8	+2.4
	comp=Z,67nm,1.2s								
ISA	Isabella	22.65	324	⇑P		P		09 27 11.6	+2.0
	baz=23,SNR=19								
SIUC	Southern Illin	22.65	28	eP		P		09 27 08.0	-1.5
	comp=Z,221nm,2.0s								
OGNE	Ogallala	22.78	0	eP		P		09 27 11.0	+0.1
	comp=Z,46nm,0.6s								
OGNE	Ogallala	22.78	0	P		P		09 27 12.0	+1.1
	baz=23,SNR=9.2								
O19A	Miners Draw (B	22.91	346	⇑P		P		09 27 13.7	+1.3
	baz=23								
N22A	Wattenberg Ran	22.92	352	P		P		09 27 14.8	+2.3
	baz=23,SNR=8.5								
P16A	Fountain Green	22.94	341	⇑P		P		09 27 15.0	+2.3
	baz=23								
N23A	Red Feather La	22.95	353	⇑P		P		09 27 14.6	+1.8
	baz=23,SNR=13								
CWC	Cottonwood Cre	23.00	326	⇓P		P		09 27 15.9	+2.6
	baz=23,SNR=5.4								
SLM	Saint Louis	23.00	25	eP		P		09 27 12.6	-0.5
SLM				pmax		pmax			
	comp=Z,34nm,0.9s								
SLM	Saint Louis	23.00	25	eP		P		09 27 12.6	-0.5
	comp=Z,34nm,0.9s								
N21A	Black Mountain	23.04	350	⇓P		P		09 27 15.5	+1.7
	baz=23,SNR=12								
GRAC	Grapevine Rang	23.06	328	⇓P		P		09 27 16.8	+3.0
	baz=23,SNR=6.9								
P15A	Leamington	23.10	340	⇓P		P		09 27 16.2	+2.0
	baz=23								
VES	Vestal, Richgr	23.12	323	⇓P		P		09 27 17.5	+3.2
	baz=23								
N20A	Spence Gulch,	23.25	348	⇑P		P		09 27 16.9	+1.1
	baz=23,SNR=11								
PHWY	Pilot Hill	23.30	354	eP		P		09 27 15.6	-0.7
	comp=Z,31nm,1.0s								
R11A	Troy Canyon, C	23.30	333	P		P		09 27 19.1	+2.8
	baz=23,SNR=8.9								
MPU	Maple Canyon	23.31	342	eP		P		09 27 16.2	-0.2
	comp=Z,33nm,1.3s								
MPU				ePcP		PcP		09 31 03.9	+0.7
M26A	McRoberts Ranc	23.31	358	⇑P		P		09 27 17.1	+0.8
	baz=23								
M25A	Palm-Egli Farm	23.32	357	⇑P		P		09 27 17.3	+0.9
	baz=23								
M27A	Reverse DX Ran	23.36	360	⇓P		P		09 27 17.8	+1.0
	baz=23,SNR=6.1								
CPCT	Cooper Cave	23.39	39	eP		P		09 27 15.0	-2.0
M24A	Cheyenne	23.41	355	P		P		09 27 18.1	+0.8
	baz=23,SNR=22								
M23A	Laramie	23.49	353	P		P		09 27 19.1	+0.9
	baz=24,SNR=14								
N19A	John Jarvie Ra	23.49	347	⇑P		P		09 27 18.7	+0.5
	baz=24,SNR=16								
BCIP	Isla Barro Col	23.51	109	eP		P		09 27 17.9	-0.4
	comp=Z,169nm,1.8s								
BGNE	Belgrade	23.51	8	⇓P		P		09 27 18.3	+0.2
	baz=24,SNR=5.5								
M22A	Cedar Creek Ra	23.53	352	P		P		09 27 19.9	+1.3
	baz=24,SNR=6.3								
RCTC	Rector, Farmer	23.54	324	⇑P		P		09 27 21.0	+2.5
	baz=24,SNR=6.1								
DAU	Daniels Canyon	23.56	343	eP		P		09 27 19.7	+0.7
DAU	Daniels Canyon	23.56	343	eP		P		09 27 19.7	+0.7
USIN	University of	23.57	30	eP		P		09 27 17.5	-1.2
	comp=Z,273nm,1.5s								
N18A	Larsen Ranch,	23.68	346	P		P		09 27 20.4	+0.4
	baz=24,SNR=13								
JLU	Jordanelle	23.79	342	eP		P		09 27 22.5	+1.4
	comp=Z,12nm,1.1s								
DUG	Dugway	23.84	340	eP		P		09 27 22.3	+0.8
DUG				e				09 31 05.0	
DUG				pmax		pmax			
	comp=Z,9.0nm,0.8s								
DUG	Dugway	23.84	340	eP		P		09 27 22.3	+0.8
	comp=Z,9.1nm,0.8s								
DUG				ePcP		PcP		09 31 05.0	+0.8
DUG	Dugway

baz=25,SNR=6.8
L19A **Farson** 24.69 347 P P 09 27 29.6 +0.2
baz=25,SNR=18
TZTN **Tazewell** 24.71 38 eP P 09 27 27.4 -1.9
comp=Z,86nm,1.4s
K22A **Casper** 24.75 352 P P 09 27 30.1 +0.3
baz=25,SNR=22
K23A **Bowen Ranch, D** 24.75 354 ⇑P P 09 27 30.3 +0.5
baz=25
HWUT **Hardware Ranch** 24.76 343 eP P 09 27 28.6 -1.4
comp=Z,18nm,1.0s
HWUT ePcP PcP 09 31 06.8 +0.6
K21A **Alcova** 24.83 351 ⇑P P 09 27 30.8 +0.2
baz=25,SNR=33
SCIA **State Center** 24.97 16 eP P 09 27 30.0 -1.6
comp=Z,48nm,0.8s
SCIA epP pP 09 27 39.3 -1.0
K20A **Yellowstone Ra** 25.03 349 P P 09 27 32.2 -0.2
baz=25,SNR=12
L17A **Cokeville** 25.04 345 P P 09 27 33.4 +0.9
baz=25,SNR=5.6
BLO **Bloomington** 25.07 30 eP P 09 27 31.1 -1.4
BLO pmax pmax
comp=Z,42nm,0.6s
BLO **Bloomington** 25.07 30 eP P 09 27 31.1 -1.4
comp=Z,42nm,0.6s
L16A **Fish Haven** 25.10 344 ⇑P P 09 27 34.3 +1.3
baz=25
RCC **Rio Carpintero** 25.18 81 e P 09 27 35.9 +2.2
KMSC **Kings Mountain** 25.19 43 ⇓P P 09 27 32.2 -1.5
baz=25
ELK **Elko** 25.19 336 eP P 09 27 34.2 +0.3
ELK epP pP 09 27 42.9 +0.2
J24A **Dixon Ranch, L** 25.25 356 ⇑P P 09 27 35.0 +0.8
baz=25
HVU **Hansel Valley** 25.27 341 eP P 09 27 34.8 +0.3
HVU pmax pmax
comp=Z,14nm,0.9s
HVU **Hansel Valley** 25.27 341 eP P 09 27 34.8 +0.3
comp=Z,14nm,0.9s
K19A **Absolon Red Bu** 25.28 349 ⇓P P 09 27 34.4 -0.2
baz=25,SNR=16
K18A **Toltan Ranch,** 25.35 347 P P 09 27 35.8 +0.5
baz=25,SNR=11
L15A **Malad City** 25.36 342 P P 09 27 35.4 +0.1
baz=25,SNR=14
BW06 **Boulder Array** 25.37 347 eP P 09 27 35.3 -0.2
comp=Z,28nm,1.2s
BW06 **Boulder Array** 25.37 347 P P 09 27 35.3 -0.2
baz=25,SNR=25
PDAR **Pinedale Array** 25.37 347 P P 09 27 35.1 -0.3
PDAR PcP PcP 09 31 07.3 -0.3
PDAR **Pinedale Array** 25.37 347 P P 09 27 35.1 -0.3
comp=Z,8.8nm,0.9s,baz=155,slow=11,SNR=41
PDAR PcP PcP 09 31 07.3 -0.3
comp=Z,2.5nm,1.0s,baz=140,slow=4.4,SNR=4.2
PDAR LR LR 09 38 34.8
comp=Z,2µm,18.6s,baz=188,slow=39
CMB **Columbia Colle** 25.42 325 eP P 09 27 36.3 +0.5
CMB pmax pmax
comp=Z,21nm,0.9s
CMB **Columbia Colle** 25.42 325 eP P 09 27 36.3 +0.5
comp=Z,21nm,0.9s
J21A **Lysite** 25.56 351 P P 09 27 37.2 0.0
baz=26,SNR=16
L14A **Malta** 25.64 341 ⇓P P 09 27 39.0 +1.1
baz=26
K17A **Gardner Place,** 25.66 345 ⇓P P 09 27 38.7 +0.6
baz=26,SNR=11
J20A **Shoshoni** 25.66 350 P P 09 27 38.8 +0.7
baz=26,SNR=21
GTBY **Guantanamo Bay** 25.73 82 P P 09 27 38.0 -0.8
comp=Z,139nm,0.9s
BMN **Battle Mountai** 25.73 333 eP P 09 27 40.2 +1.4
BMN pmax pmax
comp=Z,25nm,1.0s
BMN **Battle Mountai** 25.73 333 eP P 09 27 40.1 +1.4
comp=Z,25nm,1.0s
J19A **Crowheart** 25.75 349 ⇑P P 09 27 38.8 -0.1
baz=26,SNR=12
SFIN **Scholer Farm** 25.78 27 P P 09 27 38.0 -1.0
baz=26,SNR=6.1
J18A **Kendall Valley** 25.89 347 P P 09 27 40.2 -0.1
baz=26,SNR=34
I22A **9 Mile Ranch,** 25.97 353 P P 09 27 41.5 +0.7
baz=26,SNR=8.8
I21A **Big Trails, Te** 25.99 352 P P 09 27 41.3 +0.2
baz=26,SNR=11
RSSD **Black Hills** 26.00 357 eP P 09 27 40.7 -0.5
RSSD pmax pmax
comp=Z,8.0nm,1.0s
RSSD **Black Hills** 26.00 357 eP P 09 27 40.7 -0.5
comp=Z,8.4nm,1.0s
ECSD **EROS Data Cent** 26.01 9 eP P 09 27 40.4 -0.7
comp=Z,30nm,0.9s
K15A **Arbon** 26.03 343 ⇓P P 09 27 42.0 +0.6
baz=26,SNR=12
WCN **Washoe City** 26.03 328 eP P 09 27 42.3 +0.9
WCN e*PP pP 09 27 51.5 +1.4
WCN pmax pmax
comp=Z,38nm,1.2s
WCN **Washoe City** 26.03 328 eP P 09 27 42.3 +0.9
comp=Z,38nm,1.2s
WCN epP pP 09 27 51.5 +1.4
K14A **Jones Ranch, D** 26.09 341 P P 09 27 42.5 +0.6
baz=26,SNR=13
J17A **Brown Place, J** 26.19 346 P P 09 27 43.2 +0.3
baz=26,SNR=36
REDW **Red Top Meadow** 26.22 346 eP P 09 27 43.6 +0.4
comp=Z,0.3nm,0.8s
I20A **Worland** 26.25 350 P P 09 27 43.9 +0.5
baz=26,SNR=38
SNOW **Snow King Moun** 26.30 346 eP P 09 27 44.0 0.0
comp=Z,22nm,0.8s
I18A **Diamond G Ranc** 26.32 348 P P 09 27 44.4 +0.3
baz=26,SNR=10.0
RRI2 **Red Ridge** 26.32 345 eP P 09 27 44.2 +0.1
comp=Z,13nm,0.8s
J16A **Bone** 26.33 344 P P 09 27 44.3 +0.2
baz=26,SNR=14
TPAW **Teton Pass** 26.37 346 eP P 09 27 44.9 +0.4
comp=Z,15nm,0.9s
TPAW ePcP PcP 09 31 10.8 +0.8
LOHW **Long Hollow** 26.40 346 eP P 09 27 44.8 -0.1
comp=Z,20nm,0.8s
LOHW epP pP 09 27 53.8 +0.2
LOHW ePcP PcP 09 31 11.4 +1.4
I19A **Meeteetse** 26.48 349 P P 09 27 46.2 +0.7
baz=26,SNR=11
DCID1 **Drake Creek** 26.52 345 eP P 09 27 46.4 +0.6
comp=Z,17nm,0.8s
MOOW **Moose Ponds** 26.56 346 eP P 09 27 45.8 -0.5
comp=Z,10nm,0.9s
H22A **Clearmont** 26.65 353 ⇓P P 09 27 47.7 +0.8
baz=27
H24A **Dirks Ranch, A** 26.65 356 ⇓P P 09 27 47.1 +0.2
baz=27,SNR=9.2
J15A **Blackfoot** 26.66 343 ⇓P P 09 27 47.8 +0.8
baz=27
I17A **Pilgrim Ck.** 26.69 347 P P 09 27 48.0 +0.5
baz=27,SNR=20
IMW **Indian Meadow** 26.75 346 eP P 09 27 48.4 +0.3
comp=Z,14nm,0.8s
IMW ePcP PcP 09 31 12.7 +1.9
H20A **Greybull** 26.76 351 P P 09 27 48.0 +0.1
baz=27,SNR=7.2
H21A **Big Horn, Sher** 26.76 352 ⇓P P 09 27 48.4 +0.4
baz=27
I16A **Newdale** 26.86 345 P P 09 27 50.1 +1.2
baz=27,SNR=11
J14A **Carey** 26.90 342 P P 09 27 50.0 +0.7
baz=27,SNR=7.8
BLA **Blacksburg** 27.04 41 eP P 09 27 48.8 -1.6
BLA pmax pmax
comp=Z,31nm,0.8s
BLA **Blacksburg** 27.04 41 eP P 09 27 48.8 -1.6
comp=Z,31nm,0.8s
H19A **Powell** 27.10 349 P P 09 27 51.1 +0.1
baz=27,SNR=10
H17A **Grant Village** 27.14 347 ⇓P P 09 27 52.5 +0.9
baz=27
G23A **Biddle** 27.16 355 ⇑P P 09 27 51.5 0.0
baz=27,SNR=5.5
J13A **Cove Ranch, Pi** 27.17 341 P P 09 27 52.1 +0.4
baz=27,SNR=6.4
G24A **Alzada** 27.22 357 P P 09 27 52.5 +0.4
baz=27,SNR=6.2

H18A **Shoshone NF, C** 27.23 348 P P 09 27 52.3 +0.1
baz=27,SNR=11
I15A **Monteview** 27.23 344 ⇑P P 09 27 53.6 +1.4
baz=27
YFT **Old Faithful** 27.25 347 eP P 09 27 54.1 +1.6
comp=Z,18nm,1.0s
G22A **Birney** 27.26 354 ⇓P P 09 27 52.8 +0.4
baz=27,SNR=14
LKWY **Lake** 27.27 347 eP P 09 27 53.4 +0.7
LKWY e 09 31 14.2
LKWY pmax pmax
comp=Z,10.0nm,0.9s
LKWY **Lake** 27.27 347 eP P 09 27 53.4 +0.7
comp=Z,9.6nm,0.9s
LKWY ePcP PcP 09 31 14.2 +2.2
HLID **Hailey** 27.39 341 eP P 09 27 53.9 +0.2
comp=Z,6.0nm,0.9s
HLID **Hailey** 27.39 341 P P 09 27 54.1 +0.4
baz=27,SNR=8.1
I14A **Mackay** 27.43 342 ⇓P P 09 27 55.2 +1.1
baz=28
YMR **Madison River** 27.49 346 eP P 09 27 55.5 +0.9
comp=Z,22nm,1.0s
G20A **Bridger** 27.51 351 ⇑P P 09 27 54.5 -0.1
baz=28
RLMT **Red Lodge** 27.58 349 eP P 09 27 55.4 -0.1
comp=Z,20nm,1.4s
RLMT **Red Lodge** 27.58 349 ⇑P P 09 27 55.6 +0.2
baz=28,SNR=14
H16A **Russell Place,** 27.59 346 P P 09 27 56.3 +0.9
baz=28,SNR=17
I13A **Wildhorse Cree** 27.62 341 P P 09 27 56.6 +0.8
baz=28,SNR=8.7
ACSO **Alum Creek Sta** 27.64 33 eP P 09 27 53.9 -1.9
comp=Z,36nm,1.0s
MFID **Camas Ranch** 27.73 338 eP P 09 27 57.3 +0.6
comp=Z,4.9nm,0.9s
MFID **Camas Ranch** 27.73 338 ⇑P P 09 27 57.5 +0.8
baz=28
F24A **Ekalaka** 27.74 357 ⇑P P 09 27 57.0 +0.3
baz=28,SNR=7.6
QLMT **Earthquake Lak** 27.75 346 eP P 09 27 57.9 +0.9
F22A **Rosebud** 27.81 354 ⇓P P 09 27 57.2 -0.1
baz=28,SNR=6.2
G18A **Lazy EL Ranch,** 27.82 349 ⇑P P 09 27 57.7 +0.2
baz=28,SNR=8.0
I12A **Atlanta** 27.83 340 P P 09 27 58.5 +0.9
baz=28,SNR=9.0
H15A **Lima** 27.85 344 ⇑P P 09 27 58.8 +1.0
baz=28
H14A **Leadore** 28.04 343 P P 09 28 00.2 +0.7
baz=28,SNR=11
G17A **Pierce Place,** 28.06 347 P P 09 28 01.4 +1.8
baz=28,SNR=15
F20A **Billings** 28.06 351 ⇓P P 09 27 59.8 +0.2
baz=28
MCMT **McKenzie Canyo** 28.10 344 eP P 09 28 00.9 +0.9
G16A **Moss Hill, Enn** 28.21 346 P P 09 28 01.8 +0.8
baz=28,SNR=20
H13A **Challis** 28.25 342 P P 09 28 02.5 +1.2
baz=28,SNR=7.2
MOD **Modoc** 28.30 331 eP P 09 28 03.2 +1.4
comp=Z,30nm,1.0s
MOD ePcP PcP 09 31 13.4 -1.0
GCMT **Greycliff** 28.30 349 eP P 09 28 02.0 +0.2
G15A **Dillon** 28.32 345 P P 09 28 02.7 +0.7
baz=28,SNR=13
H12A **Diamond D Ranc** 28.42 341 ⇓P P 09 28 03.9 +1.1
baz=28
F18A **Big Timber** 28.42 349 ⇑P P 09 28 03.2 +0.4
baz=28
E22A **Miles City** 28.44 355 ⇓P P 09 28 02.6 -0.2
baz=28,SNR=6.6
E24A **Baker** 28.44 357 ⇑P P 09 28 03.1 +0.1
baz=28
DLMT **Dillon** 28.53 345 eP P 09 28 04.2 +0.4
comp=Z,17nm,1.0s
BOZ **Bozeman (W)** 28.57 346 eP P 09 28 04.1 0.0
BOZ e 09 31 16.2
BOZ pmax pmax
comp=Z,13nm,1.0s
BOZ **Bozeman (W)** 28.57 346 eP P 09 28 04.1 0.0
comp=Z,13nm,1.0s
BOZ ePcP PcP 09 31 16.2 +1.2
BOZ **Bozeman (W)** 28.57 346 P P 09 28 04.2 +0.1
baz=29,SNR=20
F17A **Fitzpatrick Pl** 28.60 348 P P 09 28 05.4 +1.0
baz=29,SNR=21
G14A **Jackson** 28.64 343 P P 09 28 05.2 +0.3
baz=29,SNR=13
F16A **Kennard Place,** 28.69 346 P P 09 28 06.0 +0.8
baz=29,SNR=30
G13A **Cobalt** 28.72 342 P P 09 28 05.9 +0.4
baz=29,SNR=11
E20A **Meyer Farm, Mu** 28.75 352 P P 09 28 05.9 +0.3
baz=29,SNR=14
E19A **Rath Farm, Rou** 28.80 351 P P 09 28 06.3 +0.1
baz=29,SNR=7.9
AAM **Ann Arbor** 28.87 29 eP P 09 28 05.3 -1.4
AAM pmax pmax
comp=Z,45nm,0.6s
AAM **Ann Arbor** 28.87 29 eP P 09 28 05.3 -1.4
comp=Z,45nm,0.6s
LRM **Limekiln Ridge** 28.92 345 eP P 09 28 07.8 +0.4
LRM epP pP 09 28 15.9 -0.2
F15A **Butte** 28.95 345 P P 09 28 08.3 +0.7
baz=29,SNR=11
D24A **Glendive** 29.00 357 P P 09 28 08.2 +0.4
baz=29,SNR=11
G12A **Big Creek, Yel** 29.09 341 ⇓P P 09 28 09.6 +0.8
baz=29
E18A **Harlowton** 29.09 349 ⇓P P 09 28 09.2 +0.4
baz=29
F14A **Wisdom** 29.15 344 ⇑P P 09 28 10.1 +0.8
baz=29
D21A **La Casta Ranch** 29.16 353 ⇑P P 09 28 10.2 +0.9
baz=29
D22A **Cohagen** 29.16 355 P P 09 28 09.3 0.0
baz=29,SNR=26
E17A **Martinsdale** 29.18 348 P P 09 28 09.7 +0.1
baz=29,SNR=23
KHMM **Horse Mountain** 29.26 325 eP P 09 28 14.2 +3.9
comp=Z,53nm,1.2s
D20A **Manuel Ranch,** 29.33 352 P P 09 28 10.7 -0.1
baz=29,SNR=11
YBH **Yreka Blue Hor** 29.34 328 P P 09 28 09.2 -1.8
YBH PcP PcP 09 31 16.8 -0.2
YBH **Yreka Blue Hor** 29.34 328 P P 09 28 09.2 -1.8
comp=Z,1.8nm,0.9s,baz=127,slow=4.1,SNR=3.3
YBH PcP PcP 09 31 16.8 -0.2
comp=Z,1.0nm,0.7s,baz=56,slow=3.6,SNR=3.5
YBH LR LR 09 42 06.6
comp=Z,283nm,19.2s,baz=301,slow=41
SDDR **Presa de Saban** 29.37 83 P P 09 28 12.1 +0.7
comp=Z,32nm,1.1s
OTAV **Otavalo** 29.37 125 eP P 09 28 14.1 +2.2
comp=Z,27nm,1.3s
OTAV epP pP 09 28 23.8 +3.2
F13A **Darby** 29.39 343 P P 09 28 11.5 +0.1
baz=29,SNR=22
E16A **East Helena** 29.41 347 P P 09 28 12.8 +1.1
baz=29,SNR=13
C24A **Savage** 29.42 357 P P 09 28 12.0 +0.5
baz=29,SNR=16
D19A **Cripps Ranch,** 29.50 351 P P 09 28 12.6 +0.2
baz=30,SNR=28
BMO **Blue Mountains** 29.51 338 eP P 09 28 12.2 -0.2
comp=Z,5.8nm,0.9s
BMO ePP PP 09 29 18.0 -1.3
BMO ePcP PcP 09 31 17.9 +0.5
E15A **Deer Lodge** 29.53 345 P P 09 28 12.7 0.0
baz=30,SNR=12
HRY **Holter Researc** 29.62 347 eP P 09 28 13.8 +0.3
comp=Z,10.0nm,0.6s
HRY epP pP 09 28 21.8 -0.4
HRY esP sP 09 28 26.4 +0.6
F12A **Elk City** 29.63 341 P P 09 28 13.8 +0.2
baz=30,SNR=21
D18A **Linhart Farms,** 29.68 350 P P 09 28 14.5 +0.5
baz=30,SNR=14
C22A **Vida** 29.73 355 P P 09 28 14.7 +0.4
baz=30,SNR=11
C23A **Lambert** 29.73 356 P P 09 28 14.8 +0.4
baz=30,SNR=15
E14A **Clinton** 29.74 344 ⇓P P 09 28 15.2 +0.7
baz=30
MDND **Maddock** 29.76 4 ⇑P P 09 28 14.3 -0.2
baz=30
D17A **Six Diamond Ra** 29.80 348 P P 09 28 15.1 0.0
baz=30,SNR=41
D16A **Dana Ranch, Ca** 29.86 347 P P 09 28 15.8 +0.2
baz=30,SNR=11
C20A **Veseth Ranch,** 29.92 352 P P 09 28 16.4 +0.4
baz=30,SNR=16
C21A **Desert Coulee** 29.92 353 ⇑P P 09 28 16.4 +0.4
baz=30
E13A **Victor** 29.95 343 P P 09 28 16.4 +0.1
baz=30,SNR=29
D15A **Lincoln** 30.09 346 P P 09 28 17.7 +0.1
baz=30,SNR=13
C19A **Slack Wire Ran** 30.09 351 P P 09 28 17.9 +0.4
baz=30,SNR=12
CHMT **Chamberlain Mo** 30.14 345 eP P 09 28 18.2 +0.1
CHMT epP pP 09 28 26.3 -0.6
MSO **Missoula** 30.24 344 eP P 09 28 16.4 -2.5
comp=Z,8.8nm,1.0s
MSO epP pP 09 28 26.7 -1.0
MSO **Missoula** 30.24 344 ⇓P P 09 28 19.4 +0.5
baz=30
C17A **Wharram Farm,** 30.28 349 ⇑P P 09 28 19.5 +0.3
baz=30,SNR=24
B22A **Reddig Ranch S** 30.29 355 ⇑P P 09 28 20.2 +0.9
baz=30
ROSC **El Rosal** 30.31 112 P P 09 28 15.6 -4.6
DGMT **Dagmar** 30.34 357 eP P 09 28 20.5 +0.8
comp=Z,28nm,1.0s
DGMT **Dagmar** 30.34 357 ⇓P P 09 28 20.4 +0.8
baz=30
D14A **Greenough** 30.36 345 ⇑P P 09 28 20.0 0.0
baz=30,SNR=20
B23A **Brockton** 30.38 356 P P 09 28 20.7 +0.6
baz=30,SNR=14
EGMT **Eagleton** 30.48 350 eP P 09 28 21.1 +0.1
comp=Z,23nm,1.0s
EGMT epP pP 09 28 29.2 -0.5
EGMT **Eagleton** 30.48 350 P P 09 28 21.4 +0.4
baz=30,SNR=16
SLMT **Seeley Lake** 30.51 345 eP P 09 28 20.9 -0.4
SLMT epP pP 09 28 29.5 -0.6
B21A **Ellsworth Farm** 30.51 354 ⇑P P 09 28 21.9 +0.8
baz=30
D13A **Huson** 30.62 344 ⇓P P 09 28 22.2 0.0
baz=31,SNR=34
C16A **Fuhringer Ranc** 30.64 347 ⇑P P 09 28 22.4 0.0
baz=31,SNR=15
SSPA **Standing Stone** 30.73 38 eP P 09 28 21.9 -1.3
comp=Z,27nm,1.5s
A24A **Westby** 30.79 358 P P 09 28 24.3 +0.7
baz=31,SNR=7.9
B18A **Beardsley Farm** 30.84 350 P P 09 28 24.6 +0.4
baz=31,SNR=17
SWMT **Swartz Lake** 30.88 344 eP P 09 28 23.9 -0.7
SWMT ePcP PcP 09 31 21.6 +0.7
B17A **L&G Farms, Che** 30.92 349 ⇓P P 09 28 24.9 0.0
baz=31,SNR=12
A22A **Carney Farms,** 30.97 355 ⇓P P 09 28 25.9 +0.7
baz=31
KEBM **Edson Butte** 30.99 328 eP P 09 28 27.5 +2.0
comp=Z,48nm,1.0s
EYMN **Ely** 31.05 14 eP P 09 28 24.2 -1.8
comp=Z,18nm,1.1s
EYMN ePcP PcP 09 31 21.3 +0.1
A20A **Cobblestone Ra** 31.06 353 P P 09 28 25.9 -0.1
baz=31,SNR=12
A21A **Bergtoll Ranch** 31.06 354 ⇑P P 09 28 26.7 +0.7
baz=31
C14A **Swan Lake** 31.06 345 ⇓P P 09 28 26.6 +0.5
baz=31
JTMT **Jette** 31.18 344 eP P 09 28 27.1 -0.1
JTMT epP pP 09 28 35.2 -0.7
JTMT ePcP PcP 09 31 22.6 +0.9
A19A **Klindworth Far** 31.21 352 P P 09 28 27.4 0.0
baz=31,SNR=8.4
B16A **M & M Farms, S** 31.21 348 ⇑P P 09 28 27.3 -0.1
baz=31
YBMT **Yellow Bay** 31.21 345 eP P 09 28 26.8 -0.7
B15A **Bradely Ranch,** 31.29 347 P P 09 28 28.0 -0.2
baz=31,SNR=16
A18A **Metzger Ranch,** 31.36 350 P P 09 28 28.7 0.0
baz=31,SNR=8.2
BSMT **Bassoo Peak** 31.40 344 eP P 09 28 28.3 -1.0
comp=Z,6.7nm,1.4s
C12B **Naegeli Ranch,** 31.46 343 ⇑P P 09 28 30.5 +0.9
baz=32
A17A **Triple J Farms** 31.53 349 P P 09 28 30.1 -0.1
baz=32,SNR=26
A16A **West Butte Ran** 31.70 348 ⇑P P 09 28 31.9 +0.1
baz=32
B13A **Whitefish** 31.80 344 ⇓P P 09 28 32.7 +0.1
baz=32,SNR=12
A15A **Johnson Ranch,** 31.96 347 P P 09 28 33.9 -0.1
baz=32,SNR=18
SDV **Santo Domingo** 32.04 102 P P 09 28 36.0 +0.7
comp=Z,0.1nm,0.8s
WALA **Waterton Lakes** 32.30 346 eP P 09 28 37.2 +0.2
comp=Z,0.6nm,1.1s
WALA epP pP 09 28 45.5 -0.3
A13A **Flathead Natio** 32.31 345 ⇑P P 09 28 37.9 +0.9
baz=32
NEW **Newport** 32.44 341 eP P 09 28 38.1 -0.1
NEW PcP PcP 09 31 25.4 +0.5
NEW ePcP PcP 09 31 25.6 +0.6
NEW **Newport** 32.44 341 P P 09 28 38.2 -0.1
baz=32,SNR=7.9
NEW **Newport** 32.44 341 P P 09 28 37.9 -0.4
comp=Z,3.7nm,0.7s,baz=143,slow=8.4,SNR=16
NEW PcP PcP 09 31 25.4 +0.5
comp=Z,4.8nm,0.9s,baz=286,slow=0.8,SNR=6.1
NEW LR LR 09 42 28.1
comp=Z,814nm,21.2s,baz=159,slow=38
ULM **Lac du Bonnet** 32.49 8 eP P 09 28 36.4 -2.2
comp=Z,35nm,1.2s
ULM PcP PcP 09 31 24.4 -0.6
ULM **Lac du Bonnet** 32.49 8 P P 09 28 36.3 -2.2
comp=Z,12nm,0.7s,baz=189,slow=9.1,SNR=23
ULM PcP PcP 09 31 24.4 -0.6
comp=Z,2.5nm,0.4s,baz=104,slow=4.9,SNR=2.6
ULM LR LR 09 42 58.5
comp=Z,1µm,18.6s,baz=152,slow=38
A12A **Yaak River Ran** 32.63 344 ⇑P P 09 28 40.8 +1.0
baz=33
LON **Longmire** 32.81 335 eP P 09 28 42.6 +1.1
LON e 09 31 26.3
LON pmax pmax
comp=Z,9.0nm,1.1s
LON **Longmire** 32.81 335 eP P 09 28 42.6 +1.1
comp=Z,8.7nm,1.1s
LON ePcP PcP 09 31 26.3 +0.2
BINY **Binghamton** 32.83 37 eP P 09 28 39.8 -1.9
comp=Z,60nm,1.5s
SADO **Sadowa** 32.89 31 P P 09 28 39.4 -2.8
SADO **Sadowa** 32.89 31 P P 09 28 39.4 -2.8
comp=Z,6.4nm,0.6s,baz=244,slow=9.4,SNR=9.4
SJG **San Juan** 34.29 84 P P 09 28 55.2 +0.6
SJG **San Juan** 34.29 84 P P 09 28 55.2 +0.6
comp=Z,10nm,0.3s,baz=342,slow=21,SNR=6.0
SJG LR LR 09 43 42.6
comp=Z,384nm,20.8s,baz=102,slow=38
ATAH **Atahualpa** 34.40 135 P P 09 28 59.1 +3.1
ATAH **Atahualpa** 34.40 135 P P 09 28 59.1 +3.1
comp=Z,18nm,0.9s,baz=329,slow=6.2,SNR=13
FRNY **Flat Rock** 35.84 36 eP P 09 29 06.8 -0.9
comp=Z,2.1nm,0.6s
FFC **Flin Flon** 36.57 0 eP P 09 29 13.0 -0.8
FFC e*PP pP 09 29 21.6 -1.0
FFC pmax pmax
comp=Z,22nm,1.0s
FFC **Flin Flon** 36.57 0 eP P 09 29 13.0 -0.8
comp=Z,22nm,1.0s
FFC epP pP 09 29 21.6 -1.0
DLBC **Dease Lake** 45.16 340 eP P 09 30 24.4 -0.1
DLBC epP pP 09 30 34.6 +1.1
YKA **Yellowknife Ar** 45.19 352 P P 09 30 22.7 -1.9
YKA pP pP 09 30 31.1 -2.5
YKA PcP PcP 09 32 04.1 -0.3
YKA **Yellowknife Ar** 45.19 352 P P 09 30 22.7 -1.9
comp=Z,6.3nm,0.6s,baz=162,slow=7.5,SNR=198
YKA pP pP 09 30 31.1 -2.5
comp=Z,15nm,0.9s,baz=162,slow=7.5,SNR=18
YKA PcP PcP 09 32 04.1 -0.3
YKW3 **Yellowknife Ar** 45.26 352 eP P 09 30 24.0 -1.1
comp=Z,0.6nm,1.1s
YKW3 epP pP 09 30 32.3 -1.8

RPN Rapa Nui 45.47 189 LR LR 09 45 05.1
comp=Z,457nm,19.9s,baz=73,slow=30
SCHQ Schefferville 45.56 28 P P 09 30 26.2 -1.6
SCHQ pP pP 09 30 35.0 -1.8
SCHQ Schefferville 45.56 28 P P 09 30 26.2 -1.6
comp=Z,4.1nm,0.4s,baz=240,slow=6.4,SNR=30
SCHQ pP pP 09 30 35.0 -1.8
comp=Z,10nm,0.8s,baz=243,slow=6.9,SNR=7.4
SCHQ LR LR 09 51 04.5
comp=Z,651nm,18.6s,baz=147,slow=38
TAOE Nuku Hiva Isla 46.00 238 *e*T T 10 19 13.6
comp=Z,87nm,0.2s
SAML Samuel 47.02 122 *e*P P 09 30 38.8 -0.9
comp=Z,38nm,1.1s
SAML *ep*P pP 09 30 47.6 -1.1
SAML *e*PcP PcP 09 32 12.2 +0.5
LPAZ La Paz 47.92 133 *e*P P 09 30 47.8 +0.4
LPAZ *ep*P pP 09 30 57.0 +0.6
LPAZ *e*PcP PcP 09 32 16.2 +0.6
LPAZ La Paz 47.92 133 P P 09 30 47.0 -0.4
comp=Z,8.5nm,0.6s,baz=305,slow=5.4,SNR=37
LPAZ PcP PcP 09 32 16.3 +0.6
comp=Z,2.8nm,0.6s,baz=339,slow=8.7,SNR=3.3
LPAZ LR LR 09 49 01.4
comp=Z,328nm,19.4s,baz=127,slow=34
RKT Rikitea 51.95 219 *e*LR LR 09 46 22.4
comp=Z,458nm,25.8s,baz=37
RKT *e*T T 10 26 45.5
comp=Z,28nm,0.3s
LVC Limon Verde 51.96 140 *e*P P 09 31 19.1 +1.6
comp=Z,32nm,1.3s
LVC *ep*P pP 09 31 28.7 +2.0
LVC *e*PcP PcP 09 32 31.2 +1.4
BMRM Bremner River 52.24 335 *e*P P 09 31 20.3 +1.4
comp=Z,54nm,1.4s
SIV San Ignacio 52.85 127 P P 09 31 23.3 -0.7
SIV pP pP 09 31 32.7 -0.4
SIV PcP PcP 09 32 33.3 +0.3
SIV San Ignacio 52.85 127 P P 09 31 23.3 -0.7
comp=Z,19nm,0.7s,baz=310,slow=8.2,SNR=80
SIV pP pP 09 31 32.7 -0.4
comp=Z,16nm,0.8s,baz=305,slow=6.7,SNR=16
SIV PcP PcP 09 32 33.3 +0.3
comp=Z,3.2nm,0.7s,baz=328,slow=9.5,SNR=1.8
MENT Mentasta 53.09 338 *e*P P 09 31 26.5 +1.3
MENT *ep*P pP 09 31 34.8 +0.4
DOT Dot Lake 53.66 338 *e*P P 09 31 30.6 +1.3
comp=Z,89nm,1.2s
DOT *ep*P pP 09 31 39.0 +0.5
PAX Paxson 53.75 337 *e*P P 09 31 31.3 +1.2
PAX *e**PP pP 09 31 39.5 +0.2
PAX pmax pmax
comp=Z,23nm,0.8s
PAX Paxson 53.75 337 *e*P P 09 31 31.3 +1.2
comp=Z,23nm,0.8s
PAX *ep*P pP 09 31 39.5 +0.2
KDAK Kodiak Island 54.13 329 P P 09 31 33.3 +0.5
KDAK pP pP 09 31 42.4 +0.5
KDAK Kodiak Island 54.13 329 P P 09 31 33.3 +0.5
comp=Z,5.8nm,0.8s,baz=136,slow=16,SNR=4.3
KDAK pP pP 09 31 42.4 +0.5
comp=Z,6.6nm,0.6s,baz=206,slow=1.9,SNR=2.8
SML Sawmill 54.20 335 *e*P P 09 31 34.8 +1.5
SML pmax pmax
comp=Z,7.0nm,0.9s
SML Sawmill 54.20 335 *e*P P 09 31 34.8 +1.5
comp=Z,6.6nm,0.9s
PMR Palmer 54.41 335 *e*P P 09 31 35.3 +0.6
PMR *e**PP pP 09 31 44.0 +0.1
PMR pmax pmax
comp=Z,28nm,0.7s
PMR Palmer 54.41 335 *e*P P 09 31 35.3 +0.6
comp=Z,28nm,0.7s
PMR *ep*P pP 09 31 44.0 +0.1
ILAR Eielson Array 55.32 339 P P 09 31 41.9 +0.5
ILAR pP pP 09 31 50.3 -0.2
ILAR Eielson Array 55.32 339 P P 09 31 41.9 +0.5
comp=Z,5.3nm,0.8s,baz=146,slow=6.0,SNR=63
ILAR pP pP 09 31 50.3 -0.2
comp=Z,24nm,0.8s,baz=146,slow=5.7,SNR=49
ILAR LR LR 09 57 37.2
comp=Z,990nm,18.5s,baz=307,slow=38
SPU Mount Spurr 55.42 333 *e*P P 09 31 43.3 +1.1
MCK McKinley 55.47 337 *e*P P 09 31 43.7 +1.2
MCK *e**PP pP 09 31 51.9 +0.2
MCK pmax pmax
comp=Z,26nm,0.9s
MCK McKinley 55.47 337 *e*P P 09 31 43.6 +1.2
comp=Z,26nm,0.9s
MCK *ep*P pP 09 31 51.9 +0.2
VAH Vaihoa 55.63 236 *e*T T 10 31 22.8
comp=Z,9.8nm,0.3s
COLA College 55.72 338 *e*P P 09 31 44.4 +0.3
COLA *e**PP pP 09 31 53.1 -0.2
COLA pmax pmax
comp=Z,18nm,1.0s
COLA College 55.72 338 *e*P P 09 31 44.4 +0.3
comp=Z,18nm,1.0s
COLA *ep*P pP 09 31 53.1 -0.2
TRF Thorofare Moun 55.84 336 *e*P P 09 31 45.9 +0.6
comp=Z,76nm,0.7s
TRF *ep*P pP 09 31 54.3 -0.2
LCO Las Campanas 55.88 146 *e*P P 09 31 46.8 +0.7
comp=Z,21nm,1.0s
LCO *ep*P pP 09 31 55.0 -0.3
LCO *e*PcP PcP 09 32 45.9 +1.2
RES Resolute Bay 56.76 2 P P 09 31 50.0 -1.5
comp=Z,2.4nm,0.6s
RES PcP PcP 09 32 47.0 0.0
RES Resolute Bay 56.76 2 P P 09 31 50.0 -1.5
comp=Z,4.7nm,0.6s,baz=191,slow=11,SNR=44
RES PcP PcP 09 32 47.0 0.0
comp=Z,2.7nm,0.7s,baz=178,slow=8.7,SNR=5.3
SVW2 Sparrevohn 56.92 332 *e*P P 09 31 53.0 +0.1
comp=Z,17nm,0.7s
TVO Taravao 58.36 235 *e*T T 10 34 42.3
comp=Z,1.6nm,0.2s
PPT Papeete 58.49 235 LR LR 09 51 20.0
comp=Z,296nm,20.2s,baz=352,slow=30
PPT2 Papeete2 58.50 235 *e*S S 09 40 07.0 +0.4
comp=Z,104nm,25.0s
PPT2 *e*LR LR 09 49 01.3
comp=Z,527nm,25.2s,baz=48
CFAA Coronel Fontan 59.22 146 P P 09 32 10.4 +1.0
CFAA PcP PcP 09 32 57.9 +0.4
CFAA Coronel Fontan 59.22 146 P P 09 32 10.4 +1.0
comp=Z,1.5nm,0.9s,baz=315,slow=6.2,SNR=34
CFAA PcP PcP 09 32 57.9 +0.4
comp=Z,0.8nm,0.7s,baz=303,slow=6.3,SNR=5.6
UNV Unalaska Valle 60.42 322 *e*P P 09 32 16.7 -0.6
comp=Z,116nm,1.4s
UNV *ep*P pP 09 32 27.2 +0.6
TBI Tubuai 61.81 230 *e*S S 09 40 50.5 +1.8
comp=Z,118nm,29.2s
TBI *e*LR LR 09 50 43.7
comp=Z,539nm,25.8s,baz=54
TBI *e*T T 10 39 07.3
comp=Z,5.0nm,0.4s
CPUP Villa Florida 62.09 134 P P 09 32 28.6 -0.3
CPUP pP pP 09 32 38.1 -0.1
CPUP Villa Florida 62.09 134 P P 09 32 28.6 -0.3
comp=Z,12nm,0.6s,baz=310,slow=7.0,SNR=46
CPUP pP pP 09 32 38.1 -0.1
comp=Z,9.5nm,0.6s,baz=307,slow=6.9,SNR=13
BDFB Brasilia 63.08 119 P P 09 32 36.5 +0.6
BDFB pP pP 09 32 45.9 +0.7
BDFB Brasilia 63.08 119 P P 09 32 36.5 +0.6
comp=Z,12nm,0.7s,baz=278,slow=7.9,SNR=22
BDFB pP pP 09 32 45.9 +0.7
comp=Z,6.2nm,0.6s,baz=285,slow=11,SNR=4.6
TNA Tin City 63.66 335 *e*P P 09 32 40.1 +1.4
TNA *ep*P pP 09 32 49.0 +0.9
GAMB Gambell 64.86 333 *e*P P 09 32 46.2 -0.4
comp=Z,6.2nm,1.0s
SUMG Summit 65.12 17 *i* P P 09 32 48.4 -0.4
SUMG pmax pmax
comp=Z,5.0nm,0.9s
SUMG Summit 65.12 17 *e*P P 09 32 48.2 -0.5
comp=Z,16nm,1.3s
SUMG Summit 65.12 17 *i* P P 09 32 48.4 -0.4
comp=Z,5.4nm,0.9s
PLCA Paso Flores 65.52 154 *e*P P 09 32 52.5 +1.1
PLCA Paso Flores 65.52 154 P P 09 32 52.4 +1.1
comp=Z,15nm,0.9s,baz=324,slow=7.9,SNR=18
PLCA LR LR 09 55 47.2
comp=Z,299nm,18.1s,baz=100,slow=31

ALE Alert 66.31 5 P P 09 32 55.0 -0.9
comp=Z,76nm,1.2s,SNR=7.1
TRQA Tornquist 67.46 146 *e*P P 09 33 04.4 +0.6
RCBR Riachuelo 69.62 104 P P 09 33 19.4 +1.6
RCBR Riachuelo 69.62 104 P P 09 33 19.4 +1.6
comp=Z,8.9nm,0.7s,baz=277,slow=7.4,SNR=7.1
SCO Scoresbysund 69.85 21 *e*P pP 09 33 28.7 +1.1
SCO pmax pmax
comp=Z,3.0nm,0.8s
SCO Scoresbysund 69.85 21 *i* P pP 09 33 28.7 +1.1
comp=Z,3.2nm,0.8s
BORG Borgarnes 69.94 27 LR LR 10 04 31.7
comp=Z,223nm,21.2s,baz=228,slow=36
DAG Danmarks Havn 71.05 14 *i* P P 09 33 24.5 -0.9
DAG pmax pmax
comp=Z,5.0nm,0.8s
DAG Danmarks Havn 71.05 14 *i* P P 09 33 24.5 -0.9
comp=Z,6.5nm,0.8s
BILL Bilibino 73.93 337 ⇓ *i* P P 09 33 43.5 +0.8
BILL *i* 09 33 51.7
BILL *i* 09 33 57.4
BILL pmax pmax
comp=Z,12nm,1.1s
BILL MLR MLR
comp=Z,700nm,19.0s
BILL Bilibino 73.93 337 *e*P P 09 33 43.5 +0.8
BILL *ep*P pP 09 33 52.3 +0.1
JMIC Jan Mayen 74.27 20 LR LR 10 07 45.3
comp=Z,159nm,20.4s,baz=258,slow=37
SPITS Spitsbergen Ar 78.00 11 P P 09 34 06.2 +0.4
SPITS pP pP 09 34 14.8 -0.5
SPITS Spitsbergen Ar 78.00 11 P P 09 34 06.2 +0.4
comp=Z,14nm,1.0s,baz=149,slow=1.8,SNR=6.8
SPITS pP pP 09 34 14.8 -0.5
comp=Z,10nm,0.8s,baz=94,slow=4.3,SNR=2.9
EKA Eskdalemuir Ar 80.37 35 P P 09 34 19.8 +0.7
EKA pP pP 09 34 28.8 +0.2
EKA Eskdalemuir Ar 80.37 35 P P 09 34 19.8 +0.7
comp=Z,2.2nm,0.6s,baz=271,slow=4.5,SNR=10
EKA pP pP 09 34 28.8 +0.2
comp=Z,4.7nm,0.8s,baz=292,slow=5.3,SNR=7.2
SEY Seymchan 80.84 333 *c*eP P 09 34 23.0 +1.5
PCAB Cabril 81.26 49 *e*P P 09 34 26.1 +1.9
comp=Z,62nm,1.6s
PCAB *ep*P pP 09 34 33.9 +0.1
POLO Lamas de Olo 81.52 49 *e*P P 09 34 27.3 +1.6
comp=Z,31nm,1.4s
POLO *ep*P pP 09 34 35.3 0.0
PTOM Tomar 81.57 51 *ep*P pP 09 34 35.8 +0.4
PETK Petropavlovsk- 81.59 323 P P 09 34 26.8 +1.1
PETK *PP pP 09 34 36.1 +0.8
PETK Petropavlovsk- 81.59 323 P P 09 34 26.8 +1.1
PETK pP pP 09 34 36.1 +0.8
PETK Petropavlovsk- 81.59 323 P P 09 34 26.8 +1.1
comp=Z,4.6nm,0.6s,baz=90,slow=11,SNR=6.8
PETK pP pP 09 34 36.1 +0.8
comp=Z,11nm,0.8s,baz=76,slow=8.4,SNR=7.1
BBTS Babate 81.60 77 LR LR 10 05 36.2
comp=Z,209nm,21.0s,baz=233,slow=32
PVIS Viseu 81.64 50 *e*P P 09 34 27.0 +0.7
comp=Z,77nm,1.8s
PVIS *ep*P pP 09 34 35.9 +0.1
PMTG Montargil 81.86 52 *e*P P 09 34 28.9 +1.5
comp=Z,43nm,1.7s
PMTG *ep*P pP 09 34 37.3 +0.3
PNCL Nicolau / Gran 81.91 53 *ep*P pP 09 34 37.2 0.0
PTEO Sao Teotonio 81.92 53 *ep*P pP 09 34 37.8 +0.5
MTE Manteigas 81.98 50 *e*P P 09 34 30.1 +2.0
comp=Z,42nm,1.7s
MTE *ep*P pP 09 34 37.6 -0.1
MORF Marmelete 82.04 53 *ep*P pP 09 34 38.5 +0.5
EVOP Sao Brissos 82.09 52 *e*P P 09 34 29.2 +0.6
EVOP pmax pmax
comp=Z,125nm,1.3s
EVOP Sao Brissos 82.09 52 *e*P P 09 34 29.2 +0.6
comp=Z,125nm,1.3s
MVO Meyncorvo 82.14 49 *e*P P 09 34 29.6 +0.7
comp=Z,70nm,1.7s
MVO *ep*P pP 09 34 38.4 -0.1
PBRG Braganca 82.16 49 *ep*P pP 09 34 38.8 +0.3
EVO Evora 82.17 52 *e*P P 09 34 29.2 +0.1
comp=Z,125nm,1.3s
EVO *e*R
comp=Z,150nm,20.5s
PCBR Castelo Branco 82.19 51 *ep*P pP 09 34 38.9 +0.2
PMRV Marv??o 82.38 51 *e*P P 09 34 32.0 +1.9
comp=Z,68nm,1.3s
PMRV *ep*P pP 09 34 39.7 0.0
PESTR Estremoz 82.39 52 *ep*P pP 09 34 39.6 -0.2
PCVE Castro Verde 82.42 53 *ep*P pP 09 34 40.6 +0.7
PBEJ Beja 82.43 53 *ep*P pP 09 34 40.3 +0.3
ROSF Rostrenen 82.49 42 *e*P P 09 34 31.3 +0.8
ROSF Rostrenen 82.49 42 *e*P P 09 34 31.3 +0.8
ROSF Rostrenen 82.49 42 *e*P P 09 34 31.3 +0.8
PBDV Barranco-do-Ve 82.61 53 *ep*P pP 09 34 41.3 +0.3
QUIF Quistinic 82.69 42 *e*P P 09 34 32.4 +0.9
comp=Z,71nm,1.3s
QUIF Quistinic 82.69 42 *e*P P 09 34 32.4 +0.9
QUIF pmax pmax
comp=Z,71nm,1.3s
QUIF Quistinic 82.69 42 *e*P P 09 34 32.4 +0.9
comp=Z,71nm,1.3s
PVAQ Vaqueiros 82.73 53 *e*P P 09 34 34.2 +2.2
comp=Z,54nm,1.4s
PVAQ *ep*P pP 09 34 41.7 +0.2
SGMF Saint Gilles 82.97 42 *e*P P 09 34 34.5 +1.5
SGMF Saint Gilles 82.97 42 *e*P P 09 34 34.5 +1.5
SGMF Saint Gilles 82.97 42 *e*P P 09 34 34.5 +1.5
PBAR Barrancos 83.01 52 *ep*P pP 09 34 43.5 +0.5
GRR Gorron 83.99 41 *e*P P 09 34 39.5 +1.3
comp=Z,232nm,1.4s
GRR Gorron 83.99 41 *e*P P 09 34 39.5 +1.3
GRR pmax pmax
comp=Z,232nm,1.4s
GRR Gorron 83.99 41 *e*P P 09 34 39.5 +1.3
comp=Z,232nm,1.4s
FLN La Foliniere 84.10 41 *e*P P 09 34 40.0 +1.2
comp=Z,282nm,1.3s
FLN *e*R
comp=Z,272nm,22.8s
FLN La Foliniere 84.10 41 *e*P P 09 34 40.0 +1.2
FLN pmax pmax
comp=Z,282nm,1.3s
FLN La Foliniere 84.10 41 *e*P P 09 34 40.0 +1.2
comp=Z,282nm,1.3s
LDF La Druitiere 84.38 41 *e*P P 09 34 41.2 +1.0
comp=Z,154nm,1.2s
LDF La Druitiere 84.38 41 *e*P P 09 34 41.2 +1.0
LDF pmax pmax
comp=Z,154nm,1.2s
LDF La Druitiere 84.38 41 *e*P P 09 34 41.2 +1.0
comp=Z,154nm,1.2s
PAB San Pablo 84.58 50 *e*P P 09 34 40.3 -1.2
PAB *e**PP pP 09 34 51.7 +0.6
PAB pmax pmax
comp=Z,33nm,1.2s
PAB San Pablo 84.58 50 *e*P P 09 34 40.3 -1.2
comp=Z,33nm,1.2s
PAB *ep*P pP 09 34 51.7 +0.6
ESDC Sonseca Array 84.82 50 P P 09 34 44.0 +1.2
ESDC pP pP 09 34 52.7 +0.3
ESDC Sonseca Array 84.82 50 P P 09 34 44.0 +1.2
comp=Z,1.6nm,0.8s,baz=309,slow=4.5,SNR=10.0
ESDC pP pP 09 34 52.7 +0.3
comp=Z,6.5nm,0.8s,baz=303,slow=5.2,SNR=13
ESDC LR LR 10 13 07.4
comp=Z,134nm,19.7s,baz=285,slow=36
MFF Saint Martin d 85.08 43 *e*P P 09 34 44.6 +0.8
comp=Z,162nm,1.3s
MFF Saint Martin d 85.08 43 *e*P P 09 34 44.6 +0.8
MFF pmax pmax
comp=Z,162nm,1.3s
MFF Saint Martin d 85.08 43 *e*P P 09 34 44.6 +0.8
comp=Z,162nm,1.3s
NB2 NORSAR Subarra 85.12 27 P P 09 34 44.3 +0.6
comp=Z,7.8nm,1.0s,baz=303,slow=4.8
NOA NORSAR Array B 85.12 27 P P 09 34 45.0 +1.2
NOA pP pP 09 34 53.9 +0.5
NOA NORSAR Array B 85.12 27 P P 09 34 45.0 +1.2
comp=Z,3.3nm,1.0s,baz=298,slow=4.7,SNR=6.3
NOA pP pP 09 34 53.9 +0.5
comp=Z,4.6nm,0.9s,baz=304,slow=4.9,SNR=9.3
NOA LR LR 10 13 29.6
comp=Z,153nm,20.5s,baz=310,slow=36
ARCES ARCESS Array B 85.18 16 P P 09 34 44.3 +0.4

ARCES ARCESS Array B 85.18 16 P P 09 34 44.3 +0.4
comp=Z,4.3nm,0.9s,baz=305,slow=4.3,SNR=12
ARCES LR LR 10 13 24.0
comp=Z,314nm,20.5s,baz=292,slow=36
KEV Kevo 85.43 16 *e*P P 09 34 54.0 +9.0
KEV pmax pmax
comp=Z,7.0nm,0.8s
KEV Kevo 85.43 16 *ep* P 09 34 54.0 +9.0
comp=Z,7.4nm,0.8s
SJPF Ste Jean 85.60 46 *e*P P 09 34 47.7 +1.2
comp=Z,216nm,1.6s
SJPF Ste Jean 85.60 46 *e*P P 09 34 47.7 +1.2
SJPF pmax pmax
comp=Z,216nm,1.6s
SJPF Ste Jean 85.60 46 *e*P P 09 34 47.7 +1.2
comp=Z,216nm,1.6s
ETSF Etsaut 86.13 46 *e*P P 09 34 50.5 +1.3
comp=Z,188nm,1.2s
ETSF Etsaut 86.13 46 *e*P P 09 34 50.5 +1.3
ETSF pmax pmax
comp=Z,188nm,1.2s
ETSF Etsaut 86.13 46 *e*P P 09 34 50.5 +1.3
comp=Z,188nm,1.2s
LFF La Frestale 86.26 44 *e*P P 09 34 50.8 +1.1
comp=Z,218nm,1.2s
LFF La Frestale 86.26 44 *e*P P 09 34 50.8 +1.1
LFF pmax pmax
comp=Z,219nm,1.2s
LFF La Frestale 86.26 44 *e*P P 09 34 50.8 +1.1
comp=Z,218nm,1.2s
BAIF Baives 86.44 38 *e*P P 09 34 51.7 +1.3
comp=Z,31nm,1.1s
BAIF Baives 86.44 38 *e*P P 09 34 51.7 +1.3
BAIF pmax pmax
comp=Z,31nm,1.1s
BAIF Baives 86.44 38 *e*P P 09 34 51.7 +1.3
comp=Z,31nm,1.1s
VIEF Viey 86.53 46 *e*P P 09 34 53.7 +2.5
MDT Midelt 86.57 57 P P 09 34 52.0 +0.4
MDT pP pP 09 35 02.1 +0.9
MDT Midelt 86.57 57 P P 09 34 52.0 +0.4
comp=Z,3.1nm,0.7s,baz=277,slow=6.9,SNR=4.6
MDT pP pP 09 35 02.1 +0.9
comp=Z,11nm,0.9s,baz=257,slow=6.1,SNR=7.9
HYF Humbligny 86.60 41 *e*P P 09 34 52.4 +1.1
HYF Humbligny 86.60 41 *e*P P 09 34 52.4 +1.1
RJF Les Rejaudoux 86.63 43 *e*P P 09 34 52.5 +1.0
comp=Z,78nm,0.9s
RJF *e*R
comp=Z,166nm,21.5s
RJF Les Rejaudoux 86.63 43 *e*P P 09 34 52.5 +1.0
RJF pmax pmax
comp=Z,78nm,0.9s
RJF Les Rejaudoux 86.63 43 *e*P P 09 34 52.5 +1.0
comp=Z,78nm,0.9s
EPF Esparros 86.70 46 *e*P P 09 34 52.9 +0.9
comp=Z,71nm,1.1s
EPF Esparros 86.70 46 *e*P P 09 34 52.9 +0.9
EPF pmax pmax
comp=Z,71nm,1.1s
EPF Esparros 86.70 46 *e*P P 09 34 52.9 +0.9
comp=Z,71nm,1.1s
TCF Toulx Ste Croi 86.70 42 *e*P P 09 34 52.7 +0.8
comp=Z,121nm,1.2s
TCF Toulx Ste Croi 86.70 42 *e*P P 09 34 52.7 +0.8
TCF pmax pmax
comp=Z,121nm,1.2s
TCF Toulx Ste Croi 86.70 42 *e*P P 09 34 52.7 +0.8
comp=Z,121nm,1.2s
RESF Ems 86.78 46 *e*P P 09 34 54.1 +1.7
GIVF Givet 86.78 38 *e*P P 09 34 52.5 +0.4
comp=Z,29nm,1.1s
GIVF Givet 86.78 38 *e*P P 09 34 52.5 +0.4
GIVF pmax pmax
comp=Z,29nm,1.1s
GIVF Givet 86.78 38 *e*P P 09 34 52.5 +0.4
comp=Z,29nm,1.1s
BCLA Clavier 86.93 38 AP pP 09 35 02.5 0.0
BGF Bois d'Agland 87.00 42 *e*P P 09 34 54.0 +0.7
comp=Z,111nm,1.3s
BGF Bois d'Agland 87.00 42 *e*P P 09 34 54.0 +0.7
BGF pmax pmax
comp=Z,111nm,1.3s
BGF Bois d'Agland 87.00 42 *e*P P 09 34 54.0 +0.7
comp=Z,111nm,1.3s
CAF Calviac 87.14 44 *e*P P 09 34 54.9 +0.9
comp=Z,17nm,0.8s
CAF Calviac 87.14 44 *e*P P 09 34 54.9 +0.9
CAF pmax pmax
comp=Z,17nm,0.8s
CAF Calviac 87.14 44 *e*P P 09 34 54.9 +0.9
comp=Z,17nm,0.8s
SSF Saint Saulge 87.22 41 *e*P P 09 34 55.0 +0.7
comp=Z,69nm,1.1s
SSF Saint Saulge 87.22 41 *e*P P 09 34 55.0 +0.7
SSF pmax pmax
comp=Z,69nm,1.1s
SSF Saint Saulge 87.22 41 *e*P P 09 34 55.0 +0.7
comp=Z,69nm,1.1s
AVF Avril sur Loir 87.23 41 *e*P P 09 34 54.9 +0.5
comp=Z,36nm,1.1s
AVF Avril sur Loir 87.23 41 *e*P P 09 34 54.9 +0.5
AVF pmax pmax
comp=Z,36nm,1.1s
AVF Avril sur Loir 87.23 41 *e*P P 09 34 54.9 +0.5
comp=Z,36nm,1.1s
MLS Moulis 87.24 46 *e*P P 09 34 56.4 +1.9
LOR Lormes 87.36 41 *e*P P 09 34 55.9 +0.9
comp=Z,132nm,1.3s
LOR *e*R
comp=Z,303nm,21.2s
LOR Lormes 87.36 41 *e*P P 09 34 55.9 +0.9
comp=Z,132nm,1.3s
PYM Petit Puy Mans 87.43 43 *e*P P 09 34 57.6 +2.1
MEZF Maizieres J'vi 87.58 39 *e*P P 09 34 56.2 +0.2
comp=Z,55nm,1.2s
MEZF Maizieres J'vi 87.58 39 *e*P P 09 34 56.2 +0.2
comp=Z,55nm,1.2s
SMF Signal de Mont 87.60 41 *e*P P 09 34 56.6 +0.4
comp=Z,22nm,1.0s
SMF Signal de Mont 87.60 41 *e*P P 09 34 56.6 +0.4
SMF pmax pmax
comp=Z,22nm,1.0s
SMF Signal de Mont 87.60 41 *e*P P 09 34 56.6 +0.4
comp=Z,22nm,1.0s
SFTF Sexfontaines 87.70 40 *e*P P 09 34 56.5 -0.1
SFTF Sexfontaines 87.70 40 *e*P P 09 34 56.5 -0.1
WLF Walferdange 87.75 38 AP pP 09 35 06.7 +0.2
comp=Z,21nm,1.5s
LBL Lubilhac 87.79 43 *e*P P 09 34 59.0 +1.8
MTLF Montolieu 87.85 45 *e*P P 09 34 58.6 +1.1
comp=Z,42nm,1.0s
MTLF Montolieu 87.85 45 *e*P P 09 34 58.6 +1.1
MTLF pmax pmax
comp=Z,42nm,1.0s
MTLF Montolieu 87.85 45 *e*P P 09 34 58.6 +1.1
comp=Z,42nm,1.0s
PAGF Fort de Pagny 87.97 39 *e*P P 09 34 58.2 +0.3
comp=Z,17nm,1.3s
PAGF Fort de Pagny 87.97 39 *e*P P 09 34 58.2 +0.3
comp=Z,17nm,1.3s
HAU Haudompre 88.58 40 *e*P P 09 35 00.8 0.0
comp=Z,40nm,1.2s
HAU *e*R
comp=Z,286nm,22.2s
HAU Haudompre 88.58 40 *e*P P 09 35 00.8 0.0
HAU pmax pmax
comp=Z,40nm,1.2s
HAU Haudompre 88.58 40 *e*P P 09 35 00.8 0.0
comp=Z,40nm,1.2s
LASF Ste Croix 88.65 44 *e*P P 09 35 01.9 +0.6
comp=Z,70nm,1.2s
LASF Ste Croix 88.65 44 *e*P P 09 35 01.9 +0.6
comp=Z,70nm,1.2s
VIVF Saint-Julien-l 88.86 43 *e*P P 09 35 03.0 +0.7
VIVF Saint-Julien-l 88.86 43 *e*P P 09 35 03.0 +0.7
VIVF Saint-Julien-l 88.86 43 *e*P P 09 35 03.0 +0.7
CDF Champ du Feu 88.96 39 *e*P P 09 35 02.4 -0.3
comp=Z,24nm,1.2s
CDF Champ du Feu 88.96 39 *e*P P 09 35 02.4 -0.3
CDF pmax pmax
comp=Z,24nm,1.2s
CDF Champ du Feu 88.96 39 *e*P P 09 35 02.4 -0.3
comp=Z,24nm,1.2s
HINF Hinteralfeld 88.97 40 *e*P P 09 35 02.4 -0.3
comp=Z,58nm,1.6s
HINF Hinteralfeld 88.97 40 *e*P P 09 35 02.4 -0.3

HINF pmax pmax
comp=Z,58nm,1.6s
HINF Hinteralfeld 88.97 40 *e*P **P 09 35 02.4 -0.3**
comp=Z,58nm,1.6s
ECH Echery 88.98 39 *e*P **P 09 35 03.3 +0.6**
ECH *e**PP **pP 09 35 11.7 -0.7**
ECH pmax pmax
comp=Z,8.0nm,1.0s
ECH Echery 88.98 39 *e*P **P 09 35 03.3 +0.6**
comp=Z,8.1nm,1.0s
ECH *ep*P **pP 09 35 11.7 -0.7**
CABF La Chapelle 89.02 41 *e*P **P 09 35 02.9 -0.1**
comp=Z,20nm,1.1s
CABF La Chapelle 89.02 41 *e*P **P 09 35 02.9 -0.1**
CABF pmax pmax
comp=Z,20nm,1.1s
CABF La Chapelle 89.02 41 *e*P **P 09 35 02.9 -0.1**
comp=Z,20nm,1.1s
ORIF Oris-en-Rattie 89.61 42 *e*P **P 09 35 06.0 +0.1**
ORIF *e*R
comp=Z,215nm,20.5s
ORIF Oris-en-Rattie 89.61 42 *e*P **P 09 35 06.0 +0.1**
ORIF Oris-en-Rattie 89.61 42 *e*P **P 09 35 06.0 +0.1**
LPG La Plagne 89.92 42 *e*P **P 09 35 08.2 +0.7**
comp=Z,39nm,1.2s
LPG La Plagne 89.92 42 *e*P **P 09 35 08.2 +0.7**
LPG pmax pmax
comp=Z,39nm,1.2s
LPG La Plagne 89.92 42 *e*P **P 09 35 08.2 +0.7**
comp=Z,39nm,1.2s
YAK Yakutsk 90.25 338 *e*P **P 09 35 08.4 +0.1**
YAK pmax pmax
comp=E,9.0nm,1.2s
YAK pmax pmax
comp=Z,33nm,1.3s
YAK pmax pmax
comp=N,8.0nm,1.6s
MBDF Montbardon 90.27 42 *e*P **P 09 35 09.2 +0.2**
MBDF Montbardon 90.27 42 *e*P **P 09 35 09.2 +0.2**
MBDF Montbardon 90.27 42 *e*P **P 09 35 09.2 +0.2**
KAF Kangasniemi 90.37 22 *e*P **P 09 35 07.2 -1.7**
KAF pmax pmax
comp=Z,2.0nm,0.5s
KAF Kangasniemi 90.37 22 *ep* **P 09 35 07.2 -1.7**
comp=Z,1.6nm,0.5s
LMR La Mourre 90.71 44 *e*P **P 09 35 10.9 +0.1**
LMR La Mourre 90.71 44 *e*P **P 09 35 10.9 +0.1**
LMR La Mourre 90.71 44 *e*P **P 09 35 10.9 +0.1**
FINES FINESS Array B 90.74 22 P **P 09 35 09.9 -0.6**
FINES pP **pP 09 35 18.9 -1.4**
FINES FINESS Array B 90.74 22 P **P 09 35 09.9 -0.6**
comp=Z,3.5nm,1.0s,baz=342,slow=12,SNR=4.5
FINES pP **pP 09 35 18.9 -1.4**
comp=Z,3.2nm,0.8s,baz=335,slow=8.4,SNR=4.5
FINES LR LR 10 15 46.5
comp=Z,324nm,21.9s,baz=344,slow=36
CLL Collm 90.84 35 *i* P **pP 09 35 19.4 -1.5**
CLL *e* 09 35 31.0
CLL pmax pmax
comp=Z,17nm,1.5s
CLL Collm 90.84 35 *i* pP **pP 09 35 19.4 -1.5**
comp=Z,17nm,1.5s
CLL *e*PS **PnS 09 47 18.0 +0.8**
NKC Novy Kostel 91.08 36 *e*P **P 09 35 13.5 +1.0**
NKC *e* 09 35 22.1
NKC Novy Kostel 91.08 36 *e*P **P 09 35 13.5 +1.0**
NKC *ep*P **pP 09 35 22.1 0.0**
SBF Sospel 91.08 43 *e*P **P 09 35 13.5 +0.8**
SBF Sospel 91.08 43 *e*P **P 09 35 13.5 +0.8**
SBF Sospel 91.08 43 *e*P **P 09 35 13.5 +0.8**
DAVOX Davos/Dischmat 91.27 40 pP pP 09 35 23.4 0.0
DAVOX Davos/Dischmat 91.27 40 pP pP 09 35 23.4 0.0
comp=Z,2.4nm,0.8s,baz=280,slow=10,SNR=3.9
JOF Joensuu 91.47 19 *e*P **P 09 35 11.9 -2.1**
JOF pmax pmax
comp=Z,1.0nm,0.8s
JOF Joensuu 91.47 19 *ep* **P 09 35 11.9 -2.1**
comp=Z,1.0nm,0.8s
BRG Berggiesshubel 91.57 35 *e*P **P 09 35 15.6 +0.9**
comp=Z,6.9nm,1.3s
BRG *e* 09 35 24.2
comp=Z,17nm,1.2s
BRG Berggiesshubel 91.57 35 *e*P **P 09 35 15.6 +0.9**
BRG *e* 09 35 24.2
BRG pmax pmax
comp=Z,7.0nm,1.3s
BRG pmax pmax
comp=Z,17nm,1.2s
KHC Kasperske Hory 92.27 36 *e*P **P 09 35 19.6 +1.6**
KHC *e* 09 35 26.7
KHC Kasperske Hory 92.27 36 *e*P **P 09 35 19.6 +1.6**
KHC *ep*P **pP 09 35 26.7 -1.0**
PRU Pruhonice 92.36 35 *e*P **P 09 35 19.1 +0.7**
PRU *e* 09 35 27.8
PRU Pruhonice 92.36 35 *e*P **P 09 35 19.1 +0.7**
PRU *ep*P **pP 09 35 27.8 -0.2**
GERES GERESS Array B 92.49 36 P **P 09 35 19.4 +0.3**
GERES pP **pP 09 35 28.4 -0.4**
GERES GERESS Array B 92.49 36 P **P 09 35 19.4 +0.3**
comp=Z,0.8nm,0.7s,baz=320,slow=6.0,SNR=7.6
GERES pP **pP 09 35 28.4 -0.4**
comp=Z,2.3nm,0.8s,baz=319,slow=3.9,SNR=12
UPC Upice 92.88 34 *e*P **P 09 35 21.3 +0.5**
UPC *e* 09 35 29.8
UPC Upice 92.88 34 *e*P **P 09 35 21.3 +0.5**
UPC *ep*P **pP 09 35 29.8 -0.6**
DPC Dobruska-Polom 93.13 34 *e*P **P 09 35 23.1 +1.1**
DPC *e* 09 35 31.1
DPC Dobruska-Polom 93.13 34 *e*P **P 09 35 23.1 +1.1**
DPC *ep*P **pP 09 35 31.1 -0.6**
VRAC Vranov 93.85 35 P **P 09 35 26.0 +0.8**
VRAC pP **pP 09 35 35.0 0.0**
VRAC Vranov 93.85 35 P **P 09 35 26.0 +0.8**
comp=Z,1.9nm,0.5s,baz=14,slow=4.2,SNR=3.0
VRAC pP **pP 09 35 35.0 0.0**
comp=Z,3.4nm,0.5s,baz=289,slow=5.1,SNR=4.1
CADS Cadrg 93.86 39 *e*P pP 09 35 34.7 -0.4
MORC Moravsky Berou 94.10 34 *e*P **P 09 35 27.1 +0.6**
MORC *e**PP **pP 09 35 36.1 -0.1**
MORC pmax pmax
comp=Z,27nm,1.4s
MORC Moravsky Berou 94.10 34 *e*P **P 09 35 27.1 +0.6**
comp=Z,27nm,1.4s
MORC *ep*P **pP 09 35 36.1 -0.1**
CRNS Crni Vrh 94.25 39 *e*P P 09 35 36.5 +9.2
OKC Ostrava-Krasne 94.39 34 *e*P **P 09 35 28.8 +1.1**
OKC *e* 09 35 36.5
OKC Ostrava-Krasne 94.39 34 *e*P **P 09 35 28.8 +1.1**
OKC *ep*P **pP 09 35 36.5 -0.9**
LJU Ljubljana 94.43 39 *e*P pP 09 35 37.5 -0.1
PERS Pernice 94.46 38 *e*P pP 09 35 37.4 -0.5
SOP Sopron 94.72 36‖ *e* pP 09 35 39.2 +0.2
LIC Lamto 94.93 82 *e*P **P 09 35 30.7 -0.2**
baz=278
LIC *e*R
comp=Z,162nm,22.5s
LIC Lamto 94.93 82 *e*P **P 09 35 30.7 -0.2**
DBIC Dimbokro 94.95 81 P **P 09 35 30.5 -0.4**
DBIC pP **pP 09 35 39.8 -0.8**
DBIC Dimbokro 94.95 81 P **P 09 35 30.5 -0.4**
comp=Z,1.3nm,0.6s,baz=263,slow=5.8,SNR=2.7
DBIC pP **pP 09 35 39.8 -0.8**
comp=Z,4.6nm,0.9s,baz=213,slow=3.9,SNR=4.6
BOJS Bojanci 95.14 39 *e*P P 09 35 41.1 +10
VYHS Vyhne 95.53 35 *e*P **P 09 35 34.2 +1.2**
VYHS *ep*P **pP 09 35 42.7 0.0**
KEST Kesra 96.06 50 LR LR 10 18 12.5
comp=Z,49nm,18.1s,baz=323,slow=35
BUD Budapest 96.22 36‖ *e* pP 09 35 46.3 +0.5
PSZ Piszkesteto 96.44 35‖ *e* pP 09 35 47.6 +0.7
CRVS Cervenica-Dubn 96.70 34 *e*P **P 09 35 39.0 +0.7**
CRVS *ep*P **pP 09 35 47.8 -0.2**
PKSM Moragy 96.73 37‖ *e*P pP 09 35 47.6 -0.5
KOLS Kolonicke sedl 97.10 33 *e*P Pdif 09 35 40.5 +0.3
KOLS *ep*P pP 09 35 49.9 +0.1
UZH Uzhgorod 97.30 33 *e*P Pdif 09 35 42.5 +1.5
UZH *i* 09 35 50.0
DZM Mont Dzumac 97.77 249 *e*LR LR 10 07 27.7
comp=Z,422nm,22.4s
DZM Mont Dzumac 97.77 249 LR LR 10 10 15.0
comp=Z,326nm,19.9s,baz=32,slow=30
TORD Torodi Ar. Bea 98.84 73 P **P 09 35 47.7 -0.9**
TORD pP **pP 09 35 56.6 -1.7**
TORD PP **PP 09 39 47.8 -2.5**
TORD PKKPbc **PKKPbc 09 52 16.3 +0.9**
TORD Torodi Ar. Bea 98.84 73 P **P 09 35 47.7 -0.9**
comp=Z,0.7nm,1.0s,baz=302,slow=2.7,SNR=2.8
TORD pP **pP 09 35 56.6 -1.7**
comp=Z,0.8nm,0.9s,baz=301,slow=5.1,SNR=3.6
TORD PP **PP 09 39 47.8 -2.5**
comp=Z,1.1nm,1.1s,baz=273,slow=5.7,SNR=3.7
TORD PKKPbc **PKKPbc 09 52 16.3 +0.9**
comp=Z,1.2nm,0.9s,baz=90,slow=2.3,SNR=5.8
OBN Obninsk 99.14 23 *e*P **Pdif 09 35 49.0 0.0**
OBN pmax pmax
comp=Z,19nm,1.3s
OBN MLR MLR
comp=Z,300nm,20.0s
AKASG Malin Array Be 99.36 29 P **Pdif 09 35 58.0 +7.8**
AKASG Malin Array Be 99.36 29 pP Pdif 09 35 58.0 +7.8
AKASG Malin Array Be 99.36 29 pP Pdif 09 35 58.0 +7.8
comp=Z,4.5nm,0.9s,baz=316,slow=3.9,SNR=3.3
AKASG LR LR 10 27 12.6
comp=Z,114nm,18.6s,baz=305,slow=39
MJAR Matsushiro Arr 101.22 314 P **Pdif 09 36 00.1 +1.3**
MJAR pP pP 09 36 09.2 +0.5
MJAR Matsushiro Arr 101.22 314 P **Pdif 09 36 00.1 +1.3**
comp=Z,0.7nm,0.7s,baz=64,slow=4.5,SNR=3.4
MJAR pP pP 09 36 09.2 +0.5
comp=Z,0.8nm,0.6s,baz=70,slow=3.3,SNR=3.3
MDJ Mudanjiang 101.75 325 P **Pdif 09 36 02.5 +1.6**
MDJ PP **PP 09 40 12.9 +1.9**
MDJ S **Sdif 09 47 41.7 +1.2**
MDJ SS **SS 09 54 45.2 +2.9**
MDJ pmax pmax
comp=Z,2.0nm,0.5s
MDJ pmax pmax
comp=Z,43nm,4.4s
MDJ LR LR
comp=N,59nm,23.0s
MDJ LR LR
comp=E,39nm,23.5s
JNU Nakatsue 108.12 315 *e*PKPdf **PKiKP 09 40 32.5 -3.8**
BRTR Keskin Array B 109.29 35 PKKPbc PKKPbc 09 51 44.4 -0.7
BRTR Keskin Array B 109.29 35 PKKPbc PKKPbc 09 51 44.4 -0.7
comp=E,1.2nm,1.0s,baz=107,slow=1.3,SNR=4.2
SONM Songino Array 109.53 340 PKKPbc PKKPbc 09 51 41.3 -3.3
SONM Songino Array 109.53 340 PKKPbc PKKPbc 09 51 41.3 -3.3
comp=E,0.6nm,0.9s,baz=174,slow=5.0,SNR=3.7
AKTO Aktyubinsk 109.59 13 PKKPab PKKPab 09 51 52.5 -4.8
AKTO Aktyubinsk 109.59 13 PKKPab PKKPab 09 51 52.5 -4.8
comp=E,1.7nm,0.8s,baz=183,slow=2.7,SNR=5.6
HHC Hu-ho-hao-te 113.47 333 *e*PKP **PKiKP 09 40 43.0 -3.3**
HHC sPKP 09 40 58.3
HHC PP **PP 09 41 40.8 +4.0**
HHC SKS **SKSdf 09 47 52.6 -4.0**
HHC SKKS SKKSac 09 48 27.9 -10
HHC SS **SS 09 57 24.2 +3.2**
HHC AMB AMB
comp=Z,140nm,7.3s
HHC LR LR
comp=N,220nm,20.1s
HHC LR LR
comp=E,190nm,20.6s
HHC LR LR
comp=Z,180nm,20.8s
MKAR Makanchi Array 115.29 357 PKIKP **PKPdf 09 40 48.6 -0.9**
MKAR 09 51 23.2
MKAR Makanchi Array 115.29 357 PKP **PKPdf 09 40 48.6 -0.9**
MKAR PKKPbc **PKKPbc 09 51 23.2 -2.1**
MKAR Makanchi Array 115.29 357 PKP **PKPdf 09 40 48.6 -0.9**
comp=Z,0.6nm,0.6s,baz=7.3,slow=1.8,SNR=9.0
MKAR PKKPbc **PKKPbc 09 51 23.2 -2.1**
comp=Z,1.1nm,0.8s,baz=170,slow=3.3,SNR=9.6
WMQ Urumqi 117.72 352 PKP **PKPdf 09 40 54.0 -0.3**
WMQ sPKP 09 41 08.0
WMQ PP PP 09 42 13.0 +6.8
WMQ PKS **PKSdf 09 44 29.0 -2.1**
WMQ SKS **SKSdf 09 48 01.0 -3.5**
WMQ SKKS **SKKSac 09 49 02.0 -4.1**
WMQ SS **SS 09 58 19.0 +3.2**
WMQ AMB AMB
comp=Z,29nm,10.0s
WMQ LR LR
comp=N,230nm,25.0s
WMQ LR LR
comp=E,190nm,25.0s
WMQ LR LR
comp=Z,210nm,25.0s
LZH Lanzhou 120.72 336 *e*PKP PKPdf 09 41 09.7 +9.2
LZH sPKP 09 41 23.0
LZH LR LR
comp=N,410nm,19.1s
LZH LR LR
comp=E,430nm,20.5s
LZH LR LR
comp=Z,130nm,18.0s
STKA Stephens Creek 121.25 243 PKP **PKPdf 09 41 01.1 -0.1**
STKA pPKP **pPKPdf 09 41 10.8 -0.4**
STKA Stephens Creek 121.25 243 PKP **PKPdf 09 41 01.1 -0.1**
comp=Z,5.9nm,0.7s,baz=20,slow=3.6,SNR=23
STKA pPKP **pPKPdf 09 41 10.8 -0.4**
comp=Z,2.9nm,0.7s,baz=355,slow=4.1,SNR=5.5
KSH Kashi 122.67 2 PKP **PKPdf 09 41 04.1 0.0**
KSH sPKP 09 41 19.0
KSH PP PP 09 42 46.0 +5.9
KSH PKS **PKSdf 09 44 40.0 -0.9**
KSH SKS **SKSdf 09 48 11.1 -3.2**
KSH SKKS **SKKSac 09 49 34.1 -4.7**
KSH SS **SS 09 59 23.0 +3.5**
KSH AMB AMB
comp=Z,94nm,5.6s
KSH LR LR
comp=N,110nm,4.1s
KSH LR LR
comp=E,100nm,4.0s
KSH LR LR
comp=Z,260nm,6.0s
CD2 Chengdu 125.23 333 PKP **PKPdf 09 41 07.5 -1.6**
CD2 sPKP 09 41 21.9
CD2 PP **PP 09 43 00.5 +2.8**
CD2 PKS **PKSdf 09 44 42.8 -3.1**
CD2 SKS **SKSdf 09 48 14.6 -4.6**
CD2 SKKS **SKKSac 09 49 48.9 -6.5**
CD2 SS **SS 09 59 51.9 -0.7**
CD2 AMB AMB
comp=Z,120nm,6.4s
CD2 LR LR
comp=N,210nm,21.1s
CD2 LR LR
comp=Z,170nm,19.6s
WRAB Tennant Creek 126.66 258 *e*PKIKP **PKPdf 09 41 11.9 -0.1**
WRAB Tennant Creek 126.66 258 *e*PKPdf **PKPdf 09 41 11.9 -0.1**
WRA Warramunga Arr 126.67 258 PKP **PKPdf 09 41 11.8 -0.2**
WRA pPKP **pPKPdf 09 41 21.6 -0.3**
WRA Warramunga Arr 126.67 258 PKP **PKPdf 09 41 11.8 -0.2**
comp=Z,5.3nm,0.8s,baz=81,slow=2.4,SNR=46
WRA pPKP **pPKPdf 09 41 21.6 -0.3**
comp=Z,3.0nm,0.8s,baz=14,slow=0.8,SNR=9.3
SUR Sutherland 127.14 117 PKP **PKPdf 09 41 11.9 -0.9**
SUR Sutherland 127.14 117 PKP **PKPdf 09 41 11.9 -0.9**
comp=Z,5.4nm,0.9s,baz=281,slow=5.2,SNR=4.0
ASAR Alice Springs 127.50 254 PKPpre PKPpre 09 41 04.2
ASAR PKP **PKPdf 09 41 13.3 -0.2**
ASAR pPKP pPKPdf 09 41 22.8 -0.7
ASAR Alice Springs 127.50 254 PKhKP PKPpre 09 41 04.2
comp=Z,0.3nm,0.8s,baz=89,slow=3.4,SNR=5.0
ASAR PKP **PKPdf 09 41 13.3 -0.2**
comp=Z,4.1nm,0.8s,baz=94,slow=2.0,SNR=29
ASAR pPKP pPKPdf 09 41 22.8 -0.7
comp=Z,2.5nm,0.9s,baz=97,slow=2.3,SNR=8.3
GYA Guiyang 127.56 327 *e*Pdif **Pdif 09 37 55.8 -0.5**
GYA PKP **PKPdf 09 41 13.0 -0.8**
GYA PP **PP 09 43 17.3 +3.9**
GYA PKS **PKSdf 09 44 48.5 -2.1**
GYA SKKS 09 50 06.2
GYA SS **SS 10 00 22.0 -0.1**
GYA AMB AMB
comp=Z,90nm,7.8s
GYA LR LR
comp=N,110nm,20.7s
GYA LR LR
comp=E,90nm,21.3s
GYA LR LR
comp=Z,120nm,20.6s
KMI Kunming 130.63 330 PKP **PKPdf 09 41 19.0 -0.8**
KMI LR LR
comp=Z,77nm,18.9s
FITZ Fitzroy Crossi 134.57 262 PKP **PKPdf 09 41 28.3 +1.3**
FITZ Fitzroy Crossi 134.57 262 PKP **PKPdf 09 41 28.3 +1.3**
comp=Z,3.2nm,0.8s,baz=131,slow=4.5,SNR=5.1
CMAR Chiang Mai Arr 138.13 329 PKP **PKPdf 09 41 33.8 +0.1**
CMAR Chiang Mai Arr 138.13 329 PKP **PKPdf 09 41 33.8 +0.1**
comp=Z,2.3nm,0.9s,baz=338,slow=2.0,SNR=8.9
HYB Hyderabad 144.71 359 *i* PKP **PKPab 09 41 43.0 -1.2**
HYB *ep*PKP **pPKPdf 09 42 00.0 +4.5**
PSI Prapat 150.56 313 PKPbc **PKPbc 09 41 59.8 -1.0**
PSI Prapat 150.56 313 PKPbc **PKPbc 09 41 59.8 -1.0**
comp=Z,22nm,0.6s,baz=197,slow=5.2,SNR=15
ABPO Ambohimpanom 151.08 97 *e*PKIKP **PKPbc 09 42 02.8 +0.9**
ABPO Ambohimpanom 151.08 97 *e*PKPbc **PKPbc 09 42 02.8 +0.9**

KRSC 11 09:22:32.8±0.8, 53.47N×160.93E, h41km±40km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
SPN	**Mys Shipunski**	**0.66**	**236**	*e*P			Pn	09 22 45.6	-0.1
SPN				*e*S			Sn	09 22 55.0	+0.1
SDLR	**Sedlovina**	**1.24**	**262**	*i* P			Pn	09 22 54.6	+0.8
SDLR				*e*S			Sn	09 23 10.2	+0.7
UGLR	**Uglovaya**	**1.29**	**259**	*e*P			Pn	09 22 55.5	+1.0
UGLR				*e*S			Sn	09 23 11.7	+1.1
SMAR	**Somma**	**1.29**	**262**	*i* P			Pn	09 22 55.4	+0.8
SMAR				*e*S			Sn	09 23 11.5	+0.6
KRER	**Koryakskii**	**1.32**	**264**	*i* P			Pn	09 22 56.1	+1.1
KRER				*e*S			Sn	09 23 12.6	+1.1
AVH	**Avacha**	**1.33**	**262**	*e*P			Pn	09 22 56.2	+1.2
AVH				*e*S			Sn	09 23 13.3	+1.8
KOK	**Koryaka**	**1.39**	**264**	*e*P			Pn	09 22 56.6	+0.8
KOK				*e*S			Sn	09 23 13.6	+0.6
PET	**Petropavlovsk**	**1.44**	**253**	*i* P			Pn	09 22 57.2	+0.9
PET				*e*S			Sn	09 23 14.6	+0.6
RUS	**Russkaya**	**1.79**	**236**	*e*P			Pn	09 23 01.7	+0.5
RUS				*e*S			Sn	09 23 22.7	0.0
GNL	**Ganaly**	**1.80**	**278**	*i* P			Pn	09 23 03.1	+1.7
GNL				*e*S			Sn	09 23 25.1	+2.0
TUMR	**Tumrok**	**1.87**	**346**	*i* P			Pn	09 23 03.1	+0.6
TUMR				*e*S			Sn	09 23 25.3	+0.3
MTVR	**Mutnovka**	**1.93**	**240**	*e*P			Pn	09 23 04.2	+0.9
MTVR				*e*S			Sn	09 23 27.5	+1.0
GRL	**Gorelyy**	**1.96**	**243**	*e*P			Pn	09 23 05.0	+1.4
GRL				S			Sn	09 23 28.1	+1.0
KMNR	**Kamenistaya**	**2.33**	**350**	*e*P			Pn	09 23 10.0	+1.3
KMNR				*e*S			Sn	09 23 37.3	+1.2
APC	**Apacha**	**2.33**	**258**	P			Pn	09 23 12.4	+3.8
APC				S			Sn	09 23 40.7	+4.7
BZGR	**Bezymyannyi-Gr**	**2.48**	**357**	P			Pn	09 23 12.0	+1.2
BZGR				S			Sn	09 23 40.7	+0.8
BZMR	**Bezymyannaya**	**2.48**	**354**	P			Pn	09 23 12.5	+1.6
BZMR				S			Sn	09 23 41.3	+1.2
BZWR	**Bezymyannyi-We**	**2.51**	**354**	P			Pn	09 23 13.0	+1.7
BZWR				S			Sn	09 23 42.1	+1.2
KPT	**Kopyto**	**2.54**	**351**	P			Pn	09 23 12.6	+1.1
KPT				S			Sn	09 23 41.6	+0.4
KOZ	**Kozyrevsk**	**2.67**	**347**	P			Pn	09 23 14.3	+1.1
KOZ				S			Sn	09 23 44.6	+0.3
ESO	**Esso**	**2.78**	**333**	*e*P			Pn	09 23 15.8	+1.0
MIPR	**Malaya Ipel'ka**	**2.80**	**246**	P			Pn	09 23 17.5	+2.5
KLY	**Klyuchi**	**2.85**	**357**	P			Pn	09 23 18.2	+2.4
KLY				S			Sn	09 23 50.7	+1.9
SRDR	**Sredinnyy**	**2.94**	**347**	P			Pn	09 23 17.7	+0.7
KBTR	**Krutoberegovo**	**2.95**	**21**	P			Pn	09 23 17.4	+0.3
SMKR	**Semkarok**	**3.13**	**5**	P			Pn	09 23 21.1	+1.4
SRKR	**Sorokina**	**3.19**	**2**	P			Pn	09 23 22.8	+2.2
SRKR				S			Sn	09 23 59.2	+1.8
BKI	**Bering**	**3.42**	**57**	*e*S			Sn	09 23 56.8	-6.1

CASC 11 09:27:46.2±3.8, 14.34N×90.44W, h6km±46km, MD3.9, ML3.3, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
PCG	**Pacaya**	**0.18**	**289**	*e*P			Pg	09 27 50.5	+0.3
NBG	**Las Nubes**	**0.27**	**19**	*e*P			Pg	09 27 52.6	+0.8
GCG	**Guatemala City**	**0.27**	**339**	*e*P			Pg	09 27 52.1	+0.4
GCG				*e*S			Sg	09 27 55.8	+0.4
FUG	**Fuego 3**	**0.41**	**286**	*e*P			Pg	09 27 54.3	-0.1
FG6		**0.49**	**297**	*e*P			Pg	09 27 56.0	-0.1
FG6				*e*S			Sg	09 28 02.8	+0.1
RBDL	**Robledal**	**0.76**	**107**	*e*P			Pg	09 28 01.6	+0.5
RBDL				*e*S			Sg	09 28 08.8	-2.3
RTR	**El Retiro**	**0.88**	**120**	*e*P			Pb	09 28 03.9	-0.3
RTR				*e*S			Sg	09 28 13.5	-1.5
SNJE	**San Jose**	**0.93**	**120**	*e*P			Pb	09 28 04.7	-0.3
SNJE				*e*S			Sg	09 28 15.0	-1.6
SBLS	**San Blas**	**0.93**	**122**	*e*P			Pb	09 28 04.8	-0.3
MRL	**Marmol**	**1.02**	**45**	*e*P			Pb	09 28 06.5	0.0
MRL				*e*S			Sb	09 28 20.6	+0.1
MTO2	**Montecristo 2**	**1.04**	**86**	*e*P			Pg	09 28 05.9	-0.6
MTO2				*e*S			Sg	09 28 16.6	-3.8
JAT	**Jato**	**1.16**	**269**	*e*P			Pg	09 28 08.7	0.0
JAT				*e*S			Sn	09 28 28.2	+2.9
SNET	**Serv Nac Est T**	**1.33**	**119**	*e*P			Pn	09 28 11.6	+0.1
SNET					AML	AML		09 28 34.0	
	comp=Z,496nm,0.3s								
SNVI	**San Vicente**	**1.71**	**115**	*e*P			Pn	09 28 17.4	+0.7

BJI ***11*** *09:50:18.7, 13.07N×125.92E, h12km, mB5.0/17, mb4.4/30, Ms4.4/13, Ms7 4.0/12*
ISCJB ***11*** *09:50:21.6±1.3, 13.49N±0.03×125.61E±0.04, h8km±8km, mb4.5/53, MS3.6/15, Error ellipse: s-maj=6.6km s-min=4.9km az=3.8*
IDC ***11*** *09:50:21.7±0.5, 13.51N×125.64E, h0km, mb4.3/23, mb1 4.4/24, mb1mx4.4/33, mbtmp4.4/24, ML4.9/1, MS3.5/11, Ms1 3.5/11, ms1mx3.3/46, Error ellipse: s-maj=18.9km s-min=12.5km az=85.0*
NEIC ***11*** *09:50:23.4±0.2, 13.48N×125.64E, h10km, mb4.7/19, Error ellipse: s-maj=6.5km s-min=4.6km az=82.0*
MAN ***11*** *09:50:24, 13.55N×125.56E, h56km, mb5.4, ML4.4, MS4.6*
ISC 11 09:50:24.9±0.4, 13.48N±0.04×125.62E±0.06, h18km±1km, n121, σ1§36/159, mb4.5/53, MS3.6/15, 3C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
CNP	**Catarman**	**1.34**	**224**	*e*P			**Pn**	**09 50 47.8**	**-0.9**
PLP	**Palo**	**2.38**	**195**‖	*e*P			**Pn**	**09 51 02.4**	**-0.7**
PLP				*e*S			Sn	09 51 23.0	-8.9
OCLP	**Ormoc**	**2.61**	**202**	*e*P			**Pn**	**09 51 07.0**	**+0.8**
AUQP	**San Andres**	**2.87**	**267**	*e*P			**Pn**	**09 51 10.4**	**+0.6**
GQP	**Guinayangan**	**3.11**	**278**‖	*e*P			**Pn**	**09 51 11.6**	**-1.5**
GQP				*e*S			**Sn**	**09 51 47.7**	**-2.6**
RCP	**Roxas**	**3.39**	**236**‖	*e*P			**Pn**	**09 51 16.7**	**-0.3**
MSLP	**Maasin**	**3.41**	**193**	*e*P			**Pn**	**09 51 17.8**	**+0.6**
LLP	**Lapu-Lapu**	**3.54**	**207**‖	*e*P			**Pn**	**09 51 18.4**	**-0.6**
LLP				*e*S			**Sn**	**09 51 59.9**	**-0.5**
BOAC	**Boac**	**3.67**	**270**	*e*P			**Pn**	**09 51 19.8**	**-1.0**
OTRP	**Odiongan**	**3.68**	**253**	*e*P			**Pn**	**09 51 20.0**	**-0.9**
GUIM	**Jordan**	**4.10**	**227**	*e*P			**Pn**	**09 51 26.6**	**-0.2**
SJMP	**San Jose**	**4.50**	**257**	*e*P			**Pn**	**09 51 33.1**	**+0.9**
TGY	**Tagaytay City**	**4.59**	**278**	Pn			**Pn**	**09 51 33.4**	**-0.1**
TGY	**Tagaytay City**	**4.59**	**278**	Pn			**Pn**	**09 51 33.4**	**-0.1**
	51nm,0.3s,baz=356,slow=6.2,SNR=5.9								
PALP	**Palanan**	**4.71**	**320**‖	*e*P			**Pn**	**09 51 32.8**	**-2.3**
PALP				*e*S			**Sn**	**09 52 25.0**	**-4.3**
PCPH	**Palayan**	**4.84**	**296**‖	*e*P			Pn	09 51 33.3	-3.7
PCPH				*e*S			Sn	09 52 24.8	-7.7
CAUP	**Cauayan**	**5.03**	**314**	*e*P			**Pn**	**09 51 37.7**	**-1.7**
CUYO	**Cuyo Island**	**5.20**	**240**	*e*P			**Pn**	**09 51 41.3**	**-0.6**
LUBP	**Lubang**	**5.23**	**273**	*e*P			**Pn**	**09 51 41.2**	**-1.0**
SCZP	**Santa Cruz**	**5.97**	**293**	*e*P			Pn	09 51 48.8	-3.7
PAGZ	**Pagadian**	**6.01**	**202**	*e*P			**Pn**	**09 51 53.6**	**+0.6**
BOLP	**Bolinao**	**6.22**	**298**	*e*P			Pn	09 51 52.6	-3.3
KKM	**Kota Kinabalu**	**11.85**	**232**	*e*Pn			**Pn**	**09 53 12.4**	**-0.8**
JOW	**Kunigami**	**13.52**	**10**	*e*Pn			Pn	**09 53 35.0**	**-0.8**
GUMO	**Guam**	**18.72**	**87**	LR		LR	LR	10 00 19.5	
	comp=Z,109nm,19.8s,baz=258,slow=32								
KAPI	**Kappang**	**19.27**	**198**	*e*P			**Pn**	**09 54 49.4**	**-0.4**
	28nm,0.9s								
KAPI				*e*S			S	09 58 34.9	+8.4
KAPI	**Kappang**	**19.27**	**198**	P			**Pn**	**09 54 51.5**	**+1.6**
	0.8nm,0.3s,baz=14,slow=7.3,SNR=9.1								
KAPI						LR	LR	10 02 43.5	
	comp=Z,97nm,20.5s,baz=344,slow=38								
KSM	**Kuching**	**19.28**	**233**	*e*P		**P**	**09 54 48.8**	**-0.1**	

5.1nm,0.5s
JNU Nakatsue 20.13 13 *e*P **P** 09 54 57.9 -0.2
JNU Nakatsue 20.13 13 P **P** 09 54 56.5 -1.7
10.0nm,1.0s,baz=184,slow=14,SNR=3.7
JNU LR LR 10 02 09.5
comp=Z,42nm,19.3s,baz=217,slow=35
CBIJ Chichi jima 20.58 46 LR LR 10 01 06.9
comp=Z,181nm,18.5s,baz=209,slow=31
GYA Guiyang 21.96 309 *e*P **P** 09 55 19.8 +1.8
GYA pmax pmax
comp=Z,10.0nm,0.8s
JHJ Hachijo jima 2 23.43 31 LR LR 10 02 31.6
comp=Z,105nm,21.0s,baz=271,slow=31
KSAR Wonju Array Be 23.95 4 P **P** 09 55 38.0 -0.1
KSRS Korea Array 23.96 5 P **P** 09 55 38.0 -0.2
comp=Z,10nm,0.9s,baz=183,slow=11,SNR=34
KSRS LR LR 10 03 44.0
comp=Z,66nm,19.6s,baz=158,slow=34
KMI Kunming 24.46 302 P **P** 09 55 46.1 +2.9
KMI pP **pP** 09 55 49.5 +0.8
KMI sP **sP** 09 55 51.6 +0.6
KMI pmax pmax
comp=Z,12nm,1.0s
XAN Xi'an 25.47 326 P **P** 09 55 54.5 +2.4
XAN pmax pmax
comp=Z,5.0nm,0.9s
MJAR Matsushiro Arr 25.59 24 P **P** 09 55 52.1 -1.1
MJAR Matsushiro Arr 25.59 24 P **P** 09 55 52.1 -1.1
comp=Z,1.1nm,0.7s,baz=196,slow=9.4,SNR=5.6
MJAR LR LR 10 03 50.5
comp=Z,143nm,20.6s,baz=210,slow=32
CM31 Chiang Mai Arr 26.10 284 *e*P **P** 09 55 57.2 -0.8
comp=Z,6.6nm,0.6s
CMAR Chiang Mai Arr 26.10 284 P **P** 09 55 57.0 -0.9
CMAR Chiang Mai Arr 26.10 284 P **P** 09 55 57.0 -0.9
comp=Z,9.0nm,0.7s,baz=96,slow=7.6,SNR=55
CMAR LR LR 10 06 40.6
comp=Z,46nm,18.0s,baz=95,slow=38
CHTO Chiang Mai 26.15 285 *e*P **P** 09 55 57.0 -1.4
comp=Z,3.8nm,0.7s
CD2 Chengdu 26.57 314 P **P** 09 56 03.2 +1.1
CD2 pP **pP** 09 56 07.5 -0.1
CD2 sP **sP** 09 56 10.2 +0.4
CD2 PP **PnPn** 09 56 47.0 +4.3
CD2 PcP **PcP** 09 59 27.9 +1.4
CD2 S **S** 10 00 35.9 -0.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.4s
CD2 LR LR
comp=N,210nm,21.2s
CD2 LR LR
comp=Z,170nm,19.6s
BJI Beijing 27.73 344 P **P** 09 56 12.7 +0.4
BJI pmax pmax
comp=Z,10.0nm,0.6s
BJI pmax pmax
comp=Z,34nm,22.6s
BJI LR LR
comp=N,56nm,15.0s
BJI LR LR
comp=E,110nm,13.8s
PSI Prapat 28.43 250 P **P** 09 56 18.6 -0.5
PSI Prapat 28.43 250 P **P** 09 56 18.6 -0.5
comp=E,6.5nm,0.6s,baz=76,slow=7.5,SNR=5.4
PSI LR LR 10 07 33.7
comp=E,183nm,18.7s,baz=251,slow=36
LZH Lanzhou 29.82 323 *e*P **P** 09 56 32.0 +0.8
LZH pP **pP** 09 56 35.5 -1.2
LZH sP **sP** 09 56 37.0 -2.0
LZH pmax pmax
comp=Z,16nm,1.1s
LZH LR LR
comp=N,110nm,10.5s
LZH LR LR
comp=E,140nm,13.8s
LZH LR LR
comp=Z,120nm,10.6s
HHC Hu-ho-hao-te 29.91 338 *e*P **P** 09 56 31.8 -0.1
HHC pP **pP** 09 56 36.2 -1.2
HHC sP **sP** 09 56 39.0 -0.6
HHC S **S** 09 56 41.2 -0.9
HHC SS **SnSn** 10 03 07.2 +7.2
HHC ScS **ScS** 10 07 08.0 -3.3
HHC pmax pmax
comp=Z,31nm,0.6s
HHC pmax pmax
comp=Z,210nm,5.4s
HHC LR LR
comp=N,280nm,8.5s
HHC LR LR
comp=E,250nm,10.4s
HHC LR LR
comp=Z,190nm,14.3s
CN2 Changchun 30.22 360 *e*P **P** 09 56 37.1 +2.7
CN2 *e*S **S** 10 01 34.8 +1.8
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,9.0s
CN2 LR LR
comp=E,200nm,9.0s
CN2 LR LR
comp=Z,200nm,11.0s
USRK Ussuriysk Arra 31.10 9 P **P** 09 56 42.4 +0.3
comp=Z,2.0nm,0.7s,baz=186,slow=11,SNR=6.1
MDJ Mudanjiang 31.22 5 P **P** 09 56 44.7 +1.5
MDJ pP **pP** 09 56 47.6 -1.1
MDJ sP **sP** 09 56 49.0 -2.0
MDJ S **S** 10 01 52.8 +4.1
MDJ sS **sS** 10 01 58.1 +0.4
MDJ ScP **ScP** 10 03 21.2 +1.1
MDJ PcS **PcS** 10 03 22.5 +0.7
MDJ pmax pmax
comp=Z,4.0nm,1.6s
MDJ pmax pmax
comp=Z,14nm,3.5s
FITZ Fitzroy Crossi 31.38 180 P **P** 09 56 43.7 -1.2
comp=Z,2.2nm,0.4s
FITZ Fitzroy Crossi 31.38 180 P **P** 09 56 43.7 -1.2
comp=Z,2.0nm,0.4s,baz=0.0,slow=5.1,SNR=3.7
COEN Coen 32.34 147 *e*P **P** 09 56 51.6 -1.8
comp=Z,23nm,0.7s
GTA Gaotai 34.41 323 *e*P **P** 09 57 13.0 +1.5
GTA pP **pP** 09 57 17.7 +0.7
GTA sP **sP** 09 57 20.9 +1.7
GTA pmax pmax
comp=Z,4.0nm,1.0s
ULN Ulaanbaatar 37.61 339 *e*P **P** 09 57 39.0 +0.3
comp=Z,10nm,1.0s
ASAR Alice Springs 37.80 168 P **P** 09 57 40.6 +0.2
ASAR Alice Springs 37.80 168 P **P** 09 57 40.6 +0.2
comp=Z,3.8nm,0.6s,baz=352,slow=6.8,SNR=11
SONM Songino Array 37.81 339 P **P** 09 57 40.6 +0.2
SONM PcP **PcP** 09 59 56.3 -0.6
SONM Songino Array 37.81 339 P **P** 09 57 40.6 +0.2
comp=Z,6.2nm,0.9s,baz=153,slow=9.1,SNR=23
SONM PcP **PcP** 09 59 56.3 -0.6
comp=Z,0.4nm,0.7s,baz=176,slow=4.2,SNR=3.6
TLY Talaya 42.02 340 *e*P **P** 09 58 15.5 +0.3
comp=Z,3.0nm,0.9s
FORT Forrest 44.07 177 *e*P **P** 09 58 33.7 +1.8
comp=Z,23nm,1.0s
WMQ Urumqi 44.33 320 P **P** 09 58 35.0 +0.9
WMQ sP **sP** 09 58 42.0 0.0
WMQ PP **PcP** 10 00 19.0 +0.9
WMQ ScP **ScP** 10 04 10.0 +0.5
WMQ S **S** 10 05 08.0 +0.4
WMQ SS SS 10 08 19.0 -7.4
WMQ pmax pmax
comp=Z,14nm,1.0s
WMQ pmax pmax
comp=Z,52nm,5.0s
WMQ LR LR
comp=N,220nm,15.0s
WMQ LR LR
comp=E,160nm,15.0s
WMQ LR LR
comp=Z,210nm,15.0s
HYB Hyderabad 45.45 281 *i*P **P** 09 58 43.0 -0.3
EIDS Eidsvold 45.90 147 *e*P **P** 09 58 46.3 -0.3
comp=Z,11nm,1.0s
NWAO Narrogin (SRO) 46.84 190 P **P** 09 58 54.3 +0.5
comp=Z,14nm,1.1s,baz=342,slow=6.4,SNR=4.3
BBOO Buckleboo 47.10 168 *e*P **P** 09 58 55.6 -0.4
comp=Z,552nm,1.1s
STKA Stephens Creek 47.63 162 P **P** 09 58 59.9 -0.2
STKA Stephens Creek 47.63 162 P **P** 09 58 59.9 -0.2
comp=Z,20nm,0.8s,baz=336,slow=7.7,SNR=29
MK31 Makanchi Array 49.12 321 *e*P **P** 09 59 12.1 +0.6
MKAR Makanchi Array 49.12 321 P **P** 09 59 11.6 +0.1
MKAR Makanchi Array 49.12 321 P **P** 09 59 11.6 +0.1
comp=Z,6.0nm,0.9s,baz=113,slow=8.6,SNR=32
ARMA Armidale 50.32 151 *e*P **P** 09 59 20.9 0.0
comp=Z,4.0nm,0.6s
KSH Kashi 50.65 310 P **P** 09 59 25.4 +2.0
KSH pP **pP** 09 59 29.7 +0.6
KSH sP **sP** 09 59 32.4 +1.1
KSH PcP **PcP** 10 00 42.7 +1.9
KSH PP **PP** 10 01 22.4 +3.0
KSH ScP **ScP** 10 04 36.5 +0.2
KSH PcS **PcS** 10 04 38.4 +0.2
KSH S **S** 10 06 39.3 +1.6
KSH ScS **ScS** 10 09 12.4 -1.5
KSH SS **SS** 10 10 11.9 -0.2
KSH pmax pmax
comp=Z,5.0nm,0.9s
KSH pmax pmax
comp=Z,130nm,3.5s
KSH LR LR
comp=N,130nm,4.6s
KSH LR LR
comp=E,150nm,5.3s
KSH LR LR
comp=Z,330nm,5.3s
TKM2 Tokmak 2 51.95 314 *e*P **P** 09 59 34.0 +0.8
comp=Z,25nm,0.6s
AAK Ala-Archa 52.63 314 P **P** 09 59 38.5 +0.2
AAK PcP **PcP** 10 00 46.7 -1.5
AAK Ala-Archa 52.63 314 P **P** 09 59 38.5 +0.2
comp=Z,1.0nm,0.6s,baz=99,slow=10,SNR=4.1
AAK PcP **PcP** 10 00 46.7 -1.5
comp=Z,1.3nm,0.7s,baz=169,slow=5.2,SNR=2.0
KURK Kurchatov 53.09 324 *e*P **P** 09 59 41.6 +0.4
comp=Z,25nm,1.0s
EKS2 Erkin-Say 53.15 314 *e*P **P** 09 59 43.1 +1.2
comp=Z,8.9nm,1.3s
CAN Canberra 53.35 156 *e*P **P** 09 59 43.3 -0.1
comp=Z,7.4nm,0.8s
KBL Kabul 55.03 303 *e*P **P** 09 59 56.3 +0.3
comp=Z,4.4nm,0.6s
KKAR Karatay Array 55.58 313 *e*P **P** 10 00 00.0 +0.5
BVAR Borovoye Array 58.69 324 P **P** 10 00 21.3 0.0
BVAR Borovoye Array 58.69 324 P **P** 10 00 21.3 0.0
comp=Z,3.3nm,0.6s,baz=120,slow=9.0,SNR=19
BRVK Borovoye 58.76 325 *e*P **P** 10 00 22.4 +0.6
comp=Z,12nm,0.9s
COLD Coldfoot 75.42 24 *e*P **P** 10 02 08.2 +0.8
comp=Z,8.5nm,0.9s
MCK McKinley 76.01 27 *e*P **P** 10 02 10.2 -0.6
comp=Z,12nm,1.0s
ILAR Eielson Array 76.85 26 P **P** 10 02 14.3 -1.2
ILAR Eielson Array 76.85 26 P **P** 10 02 14.3 -1.2
comp=Z,1.3nm,0.6s,baz=240,slow=5.4,SNR=20
JOF Josus 80.06 332 *ep* **P** 10 02 31.4 -1.9
comp=Z,1.7nm,0.5s
SPITS Spitsbergen Ar 80.76 349 P **P** 10 02 36.1 -0.8
SPITS Spitsbergen Ar 80.76 349 P **P** 10 02 36.1 -0.8
comp=Z,6.3nm,0.8s,baz=90,slow=3.9,SNR=10
ARCES ARCESS Array B 80.98 339 P **P** 10 02 38.0 -0.2
ARCES ARCESS Array B 80.98 339 P **P** 10 02 38.0 -0.2
comp=Z,2.7nm,0.8s,baz=76,slow=6.5,SNR=11
ASF Jabal al Asfar 81.88 301 P **P** 10 02 44.5 +0.6
ASF Jabal al Asfar 81.88 301 P **P** 10 02 44.5 +0.6
comp=Z,1.1nm,0.4s,baz=242,slow=3.1,SNR=5.1
KAF Kangasniemi 82.50 332 *ep* **P** 10 02 44.4 -1.9
comp=Z,2.5nm,0.7s
FINES FINESS Array B 82.78 331 P **P** 10 02 47.1 -0.7
FINES FINESS Array B 82.78 331 P **P** 10 02 47.1 -0.7
comp=Z,2.0nm,0.5s,baz=64,slow=5.1,SNR=21
BRTR Keskin Array B 83.02 309 P **P** 10 02 49.2 -0.4
BRTR Keskin Array B 83.02 309 P **P** 10 02 49.2 -0.4
comp=Z,0.6nm,0.6s,baz=81,slow=7.6,SNR=3.8
AKASG Malin Array Be 83.69 321 P **P** 10 02 51.2 -1.5
AKASG Malin Array Be 83.69 321 P **P** 10 02 51.2 -1.5
comp=Z,0.5nm,0.4s,baz=68,slow=5.3,SNR=4.7
BUR08 Bucovina Ar. S 87.03 318 *e*P **P** 10 03 09.6 -0.1
CRVS Cervenica-Dubn 89.02 320 *e*P **P** 10 03 18.1 -0.8
PPT Papeete 89.17 108 LR LR 10 38 22.5
comp=Z,114nm,19.7s,baz=358,slow=32
NOA NORSAR Array B 89.61 334 P **P** 10 03 19.6 -1.9
NOA NORSAR Array B 89.61 334 P **P** 10 03 19.6 -1.9
comp=Z,0.9nm,1.0s,baz=60,slow=4.7,SNR=3.2
NOA LR LR 10 46 52.0
comp=Z,20nm,18.9s,baz=295,slow=38
YKA Yellowknife Ar 91.10 24 P **P** 10 03 27.8 -0.5
YKA Yellowknife Ar 91.10 24 P **P** 10 03 27.8 -0.5
comp=Z,0.6nm,0.8s,baz=298,slow=4.6,SNR=12
NVAR Mina Array Bea 101.10 46 P **Pdif** 10 04 14.9 +0.3
NVAR Mina Array Bea 101.10 46 P **Pdif** 10 04 14.9 +0.3
comp=Z,0.3nm,0.6s,baz=258,slow=4.5,SNR=3.7
TXAR Lajitas Array 116.18 48 PKP **PKPdf** 10 09 07.3 -0.7
TXAR Lajitas Array 116.18 48 PKP **PKPdf** 10 09 07.3 -0.7
comp=Z,0.4nm,0.7s,baz=195,slow=0.7,SNR=5.5
JCT Junction City 118.20 44 *e*PKPdf **PKPdf** 10 09 11.4 -0.4
TORD Torodi Ar. Bea 118.45 293 PKP **PKPdf** 10 09 11.4 -1.1
TORD PKKPbc **PKKPbc** 10 19 30.1 +0.7
TORD Torodi Ar. Bea 118.45 293 PKP **PKPdf** 10 09 11.4 -1.1
comp=Z,0.5nm,0.5s,baz=69,slow=2.5,SNR=7.9
TORD PKKPbc **PKKPbc** 10 19 30.1 +0.7
comp=Z,0.5nm,0.7s,baz=269,slow=4.2,SNR=4.0
PLCA Paso Flores 149.38 155 PKPbc **PKPbc** 10 10 13.6 +0.3
PLCA Paso Flores 149.38 155 PKPbc **PKPbc** 10 10 13.6 +0.3
comp=Z,2.8nm,0.9s,baz=269,slow=10,SNR=4.3

IDC ***11*** *09:50:51.7±1.9, 3°.72N×125°.40E, h128km±16km, mb3.8/14, mb1 3.9/15, mb1mx3.8/26, mbtmp3.9/15, Error ellipse: s-maj=34.2km s-min=10.2km az=81.0*
DJA ***11*** *09:50:59.8±0.6, 3°N±5°×12°6E±°, h142km±8km, M4.8/9, mB5.4/5, mb4.8/9, MLv4.8/6, Mw(mB)4.8/5*
ISC 11 09:50:50.6±0.6, 3°.69N±0°.04×125°.5E±0°.1, h116km, n32, σ1ᵌ75/35, mb4.2/14, 2C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**2.34**	**197**	P		Pn	09 51 33.8	+5.6
MATI	**Mati**	**3.31**	**13**	*e*P		**Pn**	**09 51 40.9**	**0.0**
DAV	**Davao City (W)**	**3.36**	**1**	P		**Pn**	**09 51 41.1**	**-0.4**
	33nm,0.3s,baz=204,slow=12,SNR=3.9							
DAV				S		Sn	09 52 27.5	+6.7
	154nm,0.3s,baz=3.7,slow=15,SNR=3.7							
DMPH	**Davao City--Mi**	**3.37**	**360**	*i*P		**Pn**	**09 51 43.9**	**+2.2**
DMPH				*i*S		**Sn**	**09 52 25.4**	**+4.3**
TNTI	**Ternate**	**3.43**	**148**	P		**Pn**	**09 51 44.0**	**+1.5**
TNTI				S		**Sn**	**09 52 23.4**	**+0.8**
KMSI	**Cibinong**	**3.46**	**207**	P		Pn	09 51 49.0	+6.1
CTBH	**Cotabato--PC H**	**3.73**	**340**	*i*P		**Pn**	**09 51 49.0**	**+2.5**
BUKP	**Musuan**	**4.19**	**354**	*e*P		**Pn**	**09 51 54.3**	**+1.7**
LBMI	**Labuha**	**4.73**	**155**	P		**Pn**	**09 52 01.5**	**+1.6**
LBMI				S		**Sn**	**09 52 53.0**	**-0.7**
MRSI	**Marisa**	**4.80**	**228**	P		Pn	09 52 08.1	+7.2
LUWI	**Luwuk**	**5.45**	**210**	P		Pn	09 52 15.8	+6.2
NLAI	**Namlea**	**7.06**	**167**	P		**Pn**	**09 52 32.6**	**+1.2**
	488nm,0.5s,20µm2.6nm							
NLAI				S		**Sn**	**09 53 46.0**	**-4.2**
	488nm,0.5s,20µm2.6nm							
SWI	**Sorong**	**7.30**	**128**	P		**Pn**	**09 52 34.8**	**+0.2**
	63nm,0.6s,1µm							
MSAI	**Masohi**	**7.77**	**154**	P		**Pn**	**09 52 43.1**	**+2.1**
	17nm,0.7s,1µm							
MSAI				S		**Sn**	**09 54 06.3**	**-1.1**
	17nm,0.7s,1µm							
AAI	**Ambon**	**7.80**	**160**	P		**Pn**	**09 52 42.8**	**+1.4**
	436nm,0.5s,13µm							
KDI	**Kendari**	**8.14**	**201**	P		Pn	09 52 50.2	+4.2
	19nm,0.8s,0.1nm							
FAKI	**Fak Fak**	**9.39**	**134**	P		**Pn**	**09 53 03.7**	**+0.8**
	37nm,1.5s							
BAKI	**Biak**	**11.63**	**114**	P		P	09 53 36.6	-5.1
	99nm,0.9s,2µm							
FITZ	**Fitzroy Crossi**	**21.66**	**180**	P		**P**	**09 55 32.4**	**+0.5**
	2.3nm,0.3s,baz=14,slow=9.3,SNR=20							
WRA	**Warramunga Arr**	**25.03**	**160**	P		**P**	**09 56 04.5**	**+0.4**
	13nm,0.5s,baz=339,slow=10,SNR=80							
ASAR	**Alice Springs**	**28.39**	**164**	P		**P**	**09 56 34.5**	**+0.2**
	0.7nm,0.4s,baz=342,slow=7.2,SNR=33							
ASAR				ScP		**ScP**	**10 03 11.9**	**-2.8**
	0.9nm,0.8s,baz=350,slow=2.5,SNR=7.9							
KSRS	**Korea Array**	**33.67**	**3**	P		**P**	**09 57 20.6**	**+0.2**
	3.4nm,0.6s,baz=181,slow=9.8,SNR=9.0							
MJAR	**Matsushiro Arr**	**34.71**	**18**	P		**P**	**09 57 30.2**	**+0.7**
	1.1nm,0.8s,baz=182,slow=7.1,SNR=3.4							
STKA	**Stephens Creek**	**38.53**	**158**	P		**P**	**09 58 03.0**	**+1.1**
	1.7nm,0.3s,baz=325,slow=6.3,SNR=13							
USRK	**Ussuriysk Arra**	**40.74**	**7**	P		**P**	**09 58 20.1**	**+0.1**
	3.4nm,0.6s,baz=196,slow=6.2,SNR=9.0							
ASAJ	**Asahikawa**	**42.99**	**18**	P		**P**	**09 58 38.7**	**+0.4**
	2.4nm,0.4s,baz=245,slow=10,SNR=5.3							
SONM	**Songino Array**	**46.96**	**342**	P		**P**	**09 59 08.8**	**-1.1**
	1.1nm,0.7s,baz=157,slow=8.6,SNR=3.9							
SONM				PcP		**PcP**	**10 00 40.6**	**+0.1**
	0.6nm,0.7s,baz=166,slow=3.0,SNR=2.7							
MKAR	**Makanchi Array**	**56.91**	**326**	P		**P**	**10 00 22.6**	**-1.0**
	0.9nm,0.4s,baz=119,slow=7.6,SNR=14							
MKAR				PcP		**PcP**	**10 01 17.2**	**-0.5**
	1.0nm,0.5s,baz=110,slow=5.8,SNR=4.5							
MKAR				ScP		**ScP**	**10 05 03.3**	**-3.5**
	0.5nm,0.5s,baz=118,slow=5.4,SNR=6.1							
ILAR	**Eielson Array**	**85.65**	**25**	P		**P**	**10 03 14.2**	**-1.9**
	0.4nm,0.6s,baz=250,slow=4.5,SNR=5.1							
ARCES	**ARCESS Array B**	**90.07**	**340**	P		**P**	**10 03 35.5**	**-1.6**
	2.6nm,0.9s,baz=75,slow=5.0,SNR=5.5							
SPITS	**Spitsbergen Ar**	**90.28**	**349**	P		**P**	**10 03 37.2**	**-0.7**
	6.4nm,0.8s,baz=86,slow=10.0,SNR=5.7							
AKASG	**Malin Array Be**	**91.17**	**321**	P		**P**	**10 03 43.0**	**+0.5**
	0.6nm,0.6s,baz=69,slow=4.8,SNR=4.5							

ISCJB ***11*** *09:56:28.3±0.6, 10°.17N±0°.03×61°.17W±0°.05, h71km±6km, Error ellipse: s-maj=8.3km s-min=4.6km az=26.4*
FUNV ***11*** *09:56:28.9, 10°.17N×60°.96W, h37km, MW3.4*
TRN ***11*** *09:56:32.1, 10°.29N×61°.12W, h45km, MD3.4*
ISC 11 09:56:28.4±1.3, 10°.12N±0°.04×61°.10W±0°.06, h63km±9km, n22, σ1ᵌ38/35, 5C, Trinidad

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBH	**Brigand Hill**	**0.37**	**5**	*i*P		**Pn**	**09 56 40.1**	**+0.7**
TBH				*e*S		**Sn**	**09 56 45.7**	**-1.7**
TPP	**Pointe-a-Pierr**	**0.40**	**300**	*i*P		**Pn**	**09 56 41.2**	**+1.6**
TPP				*e*S		**Sn**	**09 56 47.2**	**-0.7**
TRN	**Trinidad (W)**	**0.61**	**330**	*i*P		**Pn**	**09 56 42.5**	**+0.7**
TRN				*e*S		**Sn**	**09 56 50.7**	**-0.9**
BOT	**Bacolet**	**1.11**	**20**	*e*P		**Pn**	**09 56 49.9**	**+1.9**
TPR	**Prospect**	**1.11**	**16**	*i*P		**Pn**	**09 56 49.9**	**+1.8**
GUIV	**Guiria**	**1.23**	**296**	*e*P		**Pn**	**09 56 49.9**	**+0.4**
GUIV				*e*S		**Sn**	**09 57 05.5**	**+0.2**
TOSP	**Speyside**	**1.30**	**25**	*e*P		**Pn**	**09 56 51.3**	**+0.8**
TOSP				*e*S		**Sn**	**09 57 06.4**	**-0.6**
GRW	**Mount Saint Ca**	**2.11**	**345**	*e*P		**Pn**	**09 57 03.6**	**+2.1**
GRW				*e*S		**Sn**	**09 57 24.9**	**-1.7**
RIOV	**Rio Grande**	**2.15**	**199**	*e*P		**Pn**	**09 57 03.7**	**+1.7**
RIOV				*e*S		**Sn**	**09 57 28.8**	**+1.1**
ORIV	**Oritupano**	**2.50**	**246**	*e*P		**Pn**	**09 57 08.5**	**+1.7**
ORIV				*e*S		**Sn**	**09 57 38.0**	**+1.8**
GURV	**El Guri**	**3.06**	**220**	*e*P		**Pn**	**09 57 15.1**	**+0.7**
GURV				*e*S		**Sn**	**09 57 49.4**	**-0.4**
SVB	**Belmont**	**3.14**	**357**	*e*P		**Pn**	**09 57 16.8**	**+1.3**
SVB				*e*S		**Sn**	**09 57 50.1**	**-1.8**
PCRV	**Puerto La Cruz**	**3.48**	**271**	*e*P		**Pn**	**09 57 21.0**	**+0.7**
MCLT	**Moule a Chique**	**3.58**	**2**	*e*P		**Pn**	**09 57 23.0**	**+1.5**
MCLT				*e*S		**Sn**	**09 58 00.9**	**-1.6**
LUEV	**Luepa**	**4.26**	**185**	*e*P		**Pn**	**09 57 31.0**	**0.0**
LUEV				*e*S		**Sn**	**09 58 16.3**	**-3.3**
CUPV	**Cœpira**	**4.62**	**270**	*e*P		**Pn**	**09 57 36.5**	**+0.7**
CUPV				*e*S		**Sn**	**09 58 26.6**	**-1.6**
BIRV	**Birongo**	**5.10**	**274**	*e*P		**Pn**	**09 57 43.0**	**+0.6**
MERV	**Las Mercedes**	**5.20**	**261**	*e*P		**Pn**	**09 57 44.4**	**+0.7**
TURV	**Turiamo**	**6.54**	**273**	*e*P		**Pn**	**09 58 03.8**	**+0.3**
BAUV	**El Baul**	**6.95**	**261**	*e*P		**Pn**	**09 58 07.1**	**-0.5**
MAPV	**Macapo**	**7.25**	**268**	*e*P		**Pn**	**09 58 11.6**	**-0.3**
MONV	**Montecano**	**8.90**	**283**	*e*P		**Pn**	**09 58 34.4**	**0.0**

IDC 11 10:00:45.3±1.4, 15°.40N×120°.34E, h106km±14km, mb2.9/5, mb1 3.1/5, mb1mx2.9/25, mbtmp2.9/5, Error ellipse: s-maj=49.5km s-min=16.5km az=60.0, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**1.42**	**156**	P		Pn	10 01 11.2	+0.2
	96nm,0.3s,baz=142,slow=5.1,SNR=8.8							
TGY				S		Sn	10 01 30.4	-0.1
	107nm,0.3s,baz=149,slow=21,SNR=5.0							
CMAR	**Chiang Mai Arr**	**20.69**	**281**	P		P	10 05 17.0	-0.1
	1.2nm,0.8s,baz=84,slow=7.7,SNR=5.8							
SONM	**Songino Array**	**34.34**	**343**	P		P	10 07 21.7	-0.2
	0.3nm,0.7s,baz=161,slow=9.2,SNR=2.2							
WRA	**Warramunga Arr**	**37.73**	**158**	P		P	10 07 50.5	-0.5
	0.4nm,0.6s,baz=338,slow=9.2,SNR=6.3							
ASAR	**Alice Springs**	**41.03**	**161**	P		P	10 08 18.6	+0.3
	0.3nm,0.6s,baz=343,slow=7.5,SNR=5.8							
MKAR	**Makanchi Array**	**44.47**	**323**	P		P	10 08 45.8	-0.1
	0.1nm,0.6s,baz=119,slow=11,SNR=2.3							

ISCJB ***11*** *10:09:45.8±0.3, 46°.50N±0°.02×12°.68E±0°.02, h8km±3km, Error ellipse: s-maj=2.9km s-min=2.2km az=6.5*
VIE ***11*** *10:09:45.9±0.1, 46°.49N×12°.69E, h10km±1km, mb1.8/11, ML2.1/11, Error ellipse: s-maj=1.3km s-min=0.6km az=8.0*
11 km NW of Ampezzo
ROM ***11*** *10:09:45.6±0.1, 46°.47N×12°.73E, h5km±1km, Md2.5/9, Ml1.8/8, Error ellipse: s-maj=1.6km s-min=1.2km az=46.0*
CSEM ***11*** *10:09:45.8±0.1, 46°.48N×12°.69E, h8km, ML2.5/7, Error ellipse: s-maj=2.1km s-min=1.6km az=11.0*
ISC 11 10:09:45.8±0.9, 46°.47N±0°.02×12°.70E±0°.01, h4km±6km, n59, σ0ᵌ63/112, 20C-27D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSMI	**Casera Mimoias**	**0.06**	**322**	*e*Pg		**Pg**	**10 09 47.1**	**-0.1**
CSMI				*e*Sg		**Sg**	**10 09 48.4**	**+0.1**
CSMI	**Casera Mimoias**	**0.06**	**322**	*e*Pg		**Pg**	**10 09 47.1**	**-0.1**
CSMI				*e*Sg		**Sg**	**10 09 48.4**	**+0.1**
FVI	**Forni Avoltri**	**0.14**	**23**	*e*Pg		**Pg**	**10 09 48.7**	**+0.1**
FVI				Sg		**Sg**	**10 09 51.1**	**+0.6**
	183nm,0.4s							
FVI	**Forni Avoltri**	**0.14**	**23**	*e*Pg		**Pg**	**10 09 48.7**	**+0.1**
FVI				*e*Sg		**Sg**	**10 09 51.1**	**+0.6**
ZOU	**Zoufplan**	**0.21**	**65**	*e*Pg		**Pg**	**10 09 50.3**	**+0.4**
ZOU				*e*Sg		**Sg**	**10 09 54.7**	**+2.1**
FUSE	**Fusea**	**0.21**	**105**	*e*Pg		**Pg**	**10 09 50.3**	**+0.4**
FUSE				*e*Sg		**Sg**	**10 09 54.1**	**+1.4**
FUSE	**Fusea**	**0.21**	**105**	*e*Pg		**Pg**	**10 09 50.3**	**+0.4**
FUSE				*e*Sg		**Sg**	**10 09 54.1**	**+1.4**
CIMO	**Cimolais**	**0.24**	**229**	*e*Pg		**Pg**	**10 09 50.5**	**+0.1**
CIMO				*e*Sg		**Sg**	**10 09 54.1**	**+0.5**
CIMO	**Cimolais**	**0.24**	**229**	*e*Pg		**Pg**	**10 09 50.5**	**+0.1**
CIMO				*e*Sg		**Sg**	**10 09 54.1**	**+0.5**
ABTA	**Abfaltersbach**	**0.31**	**335**	*e*Pg		**Pg**	**10 09 52.0**	**+0.3**
	SNR=137							
ABTA				*i*Sg		**Sg**	**10 09 56.5**	**+0.6**
	22nm,0.2s							
ABTA	**Abfaltersbach**	**0.31**	**335**	Pg		**Pg**	**10 09 52.0**	**+0.3**
	SNR=137							
ABTA				Sg		**Sg**	**10 09 56.5**	**+0.6**
	22nm,0.2s							
BOO	**Bordano**	**0.31**	**118**	*e*Pg		**Pg**	**10 09 52.0**	**+0.2**
BOO	**Bordano**	**0.31**	**118**	*e*Pg		**Pg**	**10 09 52.0**	**+0.2**
PLRO	**Paularo**	**0.32**	**75**	*e*Pg		**Pg**	**10 09 52.3**	**+0.3**
PLRO				*e*Sg		**Sb**	**10 09 58.8**	**-0.8**
PLRO	**Paularo**	**0.32**	**75**	*e*Pg		**Pg**	**10 09 52.3**	**+0.3**
PLRO				*e*Sg		**Sb**	**10 09 58.8**	**-0.8**
MLNI	**Malnisio**	**0.33**	**191**	*e*Pg		**Pg**	**10 09 52.4**	**+0.4**
MLNI				*e*Sg		**Sb**	**10 09 59.0**	**-0.7**
MLNI	**Malnisio**	**0.33**	**191**	*e*Pg		**Pg**	**10 09 52.4**	**+0.4**
MLNI				*e*Sg		**Sb**	**10 09 59.0**	**-0.7**
CSO	**Casso**	**0.33**	**233**	*e*Pg		**Pg**	**10 09 52.1**	**0.0**
CSO				*e*Sg		**Sg**	**10 09 57.4**	**+1.0**
CSO	**Casso**	**0.33**	**233**	*e*Pg		**Pg**	**10 09 52.1**	**0.0**
CSO				*e*Sg		**Sg**	**10 09 57.4**	**+1.0**
BAD	**Bernadia**	**0.44**	**122**	*e*Pg		**Pg**	**10 09 54.5**	**+0.3

VINO					Sg		Sb	10 10 02.1	-1.3
	23nm,0.5s								
VINO	**Villanova**		**0.45**	**118**⇑	*e*Pg		**Pg**	**10 09 54.7**	**+0.2**
VINO					*e*Sg		**Sb**	**10 10 02.3**	**-1.1**
PTCC	**Patocco-Chiusa**		**0.46**	**98**⇓	*i*Pg		**Pg**	**10 09 54.7**	**+0.2**
PTCC					Sg		**Sb**	**10 10 02.5**	**-1.0**
	1.0nm,0.4s								
PTCC	**Patocco-Chiusa**		**0.46**	**98**⇓	*i*Pg		**Pg**	**10 09 54.7**	**+0.2**
PTCC					*e*Sg		**Sb**	**10 10 02.5**	**-1.0**
POLC	**Polcenigo**		**0.46**	**198**⇓	*e*Pg		**Pb**	**10 09 55.8**	**-0.6**
POLC					Sg		**Sb**	**10 10 03.9**	**+0.3**
	96nm,0.5s								
ACOM	**Acomizza, Ital**		**0.57**	**82**⇑	*e*Pg		**Pg**	**10 09 57.1**	**+0.5**
ACOM					*e*Sg		**Sb**	**10 10 06.1**	**-0.7**
ACOM	**Acomizza, Ital**		**0.57**	**82**	Pg		**Pg**	**10 09 57.3**	**+0.6**
ACOM					Sg		**Sb**	**10 10 06.2**	**-0.6**
	65nm,0.7s								
ACOM	**Acomizza, Ital**		**0.57**	**82**⇑	*e*Pg		**Pg**	**10 09 57.1**	**+0.5**
ACOM					*e*Sg		**Sb**	**10 10 06.1**	**-0.7**
ROBS	**Robic**		**0.60**	**112**	*e*Pg		**Pg**	**10 09 57.7**	**+0.4**
ROBS	**Robic**		**0.60**	**112**	*e*Pg		**Pg**	**10 09 57.7**	**+0.4**
VARN	**Col Varnada, M**		**0.63**	**221**	*e*Pg		**Pg**	**10 09 57.6**	**-0.2**
VARN	**Col Varnada, M**		**0.63**	**221**	*e*Pg		**Pg**	**10 09 57.6**	**-0.2**
RISI	**Rein**		**0.64**	**318**	Pg		**Pg**	**10 09 58.3**	**+0.1**
	72nm,0.3s								
RISI	**Rein**		**0.64**	**318**⇓	*e*Pg		**Pg**	**10 09 58.2**	**+0.1**
MYKA	**Terra Mystica**		**0.67**	**76**⇓	*i*Pg		**Pg**	**10 09 58.6**	**0.0**
MYKA					⇑*i*Sg		**Sb**	**10 10 08.5**	**-1.1**
	3.7nm,0.2s								
MYKA	**Terra Mystica**		**0.67**	**76**⇓	*i*Pg		**Pg**	**10 09 58.6**	**0.0**
MYKA					*i* Sg		**Sb**	**10 10 08.5**	**-1.1**
KBA	**Koelnbreinsper**		**0.75**	**36**⇓	*e*Pg		**Pg**	**10 10 00.4**	**+0.2**
	SNR=13								
KBA					⇓*i*Sg		**Sg**	**10 10 10.1**	**+0.1**
	8.6nm,0.3s								
KBA	**Koelnbreinsper**		**0.75**	**36**⇓	*e*Pg		**Pg**	**10 10 00.4**	**+0.2**
KBA					*i* Sg		**Sg**	**10 10 10.1**	**+0.1**
GORS	**Gorjuse**		**0.91**	**99**	*e*Pg		**Pg**	**10 10 03.3**	**+0.1**
GORS					*e*Sg		**Sn**	**10 10 18.4**	**-0.4**
GORS									
	comp=Z,6.0nm,0.3s								
GORS	**Gorjuse**		**0.91**	**99**	*e*Pg		**Pg**	**10 10 03.3**	**+0.1**
GORS					*e*Sg		**Sn**	**10 10 18.5**	**-0.4**
	comp=Z,6.0nm,0.3s								
ABSI	**Aberstueckl**		**0.99**	**286**	Pg		**Pg**	**10 10 04.8**	**+0.1**
ABSI					Sg		**Sb**	**10 10 19.3**	**+0.4**
	comp=Z,34nm,0.6s								
ABSI	**Aberstueckl**		**0.99**	**286**	Pg		**Pg**	**10 10 04.8**	**+0.1**
ABSI					*e*Sg		**Sb**	**10 10 19.3**	**+0.4**
ROSI	**Rosskopf**		**1.00**	**298**	Pg		**Pg**	**10 10 05.0**	**+0.1**
ROSI					Sg		**Sb**	**10 10 19.8**	**+0.5**
	comp=Z,25nm,0.4s								
ROSI	**Rosskopf**		**1.00**	**298**⇑	*e*Pg		**Pg**	**10 10 05.0**	**+0.1**
ROSI					Sg		**Sb**	**10 10 19.8**	**+0.5**
	comp=Z,25nm,0.4s								
WTTA	**Wattenberg**		**1.08**	**318**⇑	*i*Pg		**Pg**	**10 10 06.5**	**0.0**
WTTA					*i* Sg		**Sg**	**10 10 21.4**	**+0.9**
	comp=Z,14nm,0.3s								
WTTA	**Wattenberg**		**1.08**	**318**	Pg		**Pg**	**10 10 06.5**	**0.0**
WTTA					Sg		**Sg**	**10 10 21.4**	**+0.9**
	comp=Z,14nm,0.3s								
OBKA	**Obir**		**1.28**	**88**⇑	*i*Pn		**Pg**	**10 10 10.1**	**-0.1**
OBKA					⇑*i*Pg		**Pn**	**10 10 10.8**	**+0.4**
OBKA					⇓*i*Sg		**Sn**	**10 10 28.6**	**+0.6**
	comp=Z,9.0nm,0.5s								
OBKA	**Obir**		**1.28**	**88**⇑	*i*Pn		**Pg**	**10 10 10.1**	**-0.1**
OBKA	**Obir**		**1.28**	**88**	Pg		**Pn**	**10 10 10.8**	**+0.4**
OBKA					Sg		**Sn**	**10 10 28.6**	**+0.6**
	comp=Z,9.0nm,0.5s								
FETA	**Feichten**		**1.47**	**293**⇑	*i*Pn		**Pn**	**10 10 12.3**	**-0.7**
FETA					*e*Pg		**Pb**	**10 10 13.4**	**-0.2**
	SNR=9.6								
FETA	**Feichten**		**1.47**	**293**	Pn		**Pn**	**10 10 12.3**	**-0.7**
RETA	**Reutte**		**1.67**	**308**⇓	*e*Pg		**Pg**	**10 10 18.3**	**+0.5**
	SNR=9.7								
RETA					⇓*i*Sn		**Sn**	**10 10 37.6**	**-0.2**
RETA					⇓*i*Sg		**Sg**	**10 10 40.5**	**+1.0**
	comp=Z,6.2nm,0.3s								
RETA	**Reutte**		**1.67**	**308**	Pg		**Pg**	**10 10 18.3**	**+0.5**
	SNR=9.7								
RETA					Sn		**Sn**	**10 10 37.6**	**-0.2**
RETA					Sg		**Sg**	**10 10 40.5**	**+1.0**
	comp=Z,6.2nm,0.3s								
MOA	**Molln**		**1.75**	**37**⇓	*i*Pn		**Pn**	**10 10 16.1**	**-0.7**
MOA					*e*Pg		**Pg**	**10 10 19.5**	**+0.3**
	SNR=9.9								
MOA					⇑*i*Sn		**Sn**	**10 10 39.7**	**+0.2**
MOA					⇓*i*Sg		**Sg**	**10 10 43.5**	**+1.6**
	comp=Z,3.8nm,0.2s								
MOA	**Molln**		**1.75**	**37**⇓	*i*Pn		**Pn**	**10 10 16.1**	**-0.7**
KHC	**Kasperske Hory**		**2.73**	**12**	*e*PN		**Pn**	**10 10 31.3**	**+1.0**
KHC					*e*PG		**Pg**	**10 10 36.9**	**-1.1**
KHC					*e*SG		**Sg**	**10 11 13.5**	**+0.1**
	comp=Z,2.7nm,0.5s								
KHC	**Kasperske Hory**		**2.73**	**12**	Pn		**Pn**	**10 10 31.3**	**+1.0**

IDC 11 10:10:33.8±4.3,3°02'N×126°07'E,h0km,mb3.8/3, mb1 4.0/3,mb1mx3.4/22,mbtmp3.8/3,Error ellipse: s-maj=177.8km s-min=66.4km az=71.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.22**	**161**	P		10 15 50.5	-1.9
	1.1nm,0.4s,baz=341,slow=9.9,SNR=21						
ASAR	**Alice Springs**	**27.60**	**164**	P		10 16 23.1	0.0
	0.8nm,0.3s,baz=343,slow=11,SNR=32						
STKA	**Stephens Creek**	**37.71**	**158**	P		10 17 52.7	+1.5
	1.0nm,0.8s,baz=333,slow=11,SNR=3.4						

*IDC **11** 10:21:35.8±1.3,22°.87S×176°.30W,h0km,mb3.8/7, mb1 4.2/8,mb1mx3.9/21,mbtmp4.0/8,ML4.7/1,Error ellipse: s-maj=81.9km s-min=19.8km az=155.0*
*ISCJB **11** 10:21:38.2±0.7,23°.6S±0°.2×176°.03W±0°.09,h33km, mb4.0/9,Error ellipse: s-maj=24.1km s-min=11.4km az=171.4*
*NEIC **11** 10:21:42.5±1.9,23°.53S×176°.01W,h60km±16km,mb4.4/2, Error ellipse: s-maj=25.7km s-min=10.7km az=170.0*
ISC 11 10:21:40.3±0.7,23°.6S±0°.2×175°.98W±0°.10,h33km,n27, σ1s27/26,mb3.9/9,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.11**	**315**	*e*Pn		**Pn**	**10 23 36.6**	**+0.7**
	119nm,1.4s						
RAR	**Rarotonga**	**15.18**	**84**	Pn		**Pn**	**10 25 12.8**	**+0.5**
RAR	**Rarotonga**	**15.18**	**84**	Pn		**Pn**	**10 25 12.7**	**+0.5**
	2.9nm,0.3s,baz=249,slow=8.3,SNR=5.7						
CTAO	**Charters Tower**	**35.16**	**268**	*e*P		**P**	**10 28 31.4**	**+0.1**
	4.3nm,0.6s						
STKA	**Stephens Creek**	**38.24**	**248**	P		**P**	**10 28 58.2**	**+0.9**
STKA	**Stephens Creek**	**38.24**	**248**	P		**P**	**10 28 58.2**	**+0.9**
	0.9nm,0.6s,baz=75,slow=3.5,SNR=6.7						
AS31	**Alice Springs**	**45.71**	**259**	*e*P		**P**	**10 29 57.7**	**-0.8**
ASAR	**Alice Springs**	**45.71**	**259**	P		**P**	**10 29 57.8**	**-0.7**
ASAR				PcP		**PcP**	**10 31 36.1**	**0.0**
ASAR	**Alice Springs**	**45.71**	**259**	P		**P**	**10 29 57.8**	**-0.7**
	1.2nm,0.8s,baz=94,slow=7.2,SNR=32						
ASAR				PcP		**PcP**	**10 31 36.1**	**0.0**
	0.3nm,0.6s,baz=110,slow=3.7,SNR=4.9						
WRAB	**Tennant Creek**	**46.09**	**265**	*e*P		P	10 29 59.5	-2.0
	4.2nm,0.9s						
WRA	**Warramunga Arr**	**46.10**	**265**	P		**P**	**10 30 00.1**	**-1.5**
WRA	**Warramunga Arr**	**46.10**	**265**	P		**P**	**10 30 00.1**	**-1.5**
	0.7nm,0.3s,baz=90,slow=5.9,SNR=76						
YBH	**Yreka Blue Hor**	**81.60**	**37**	P		**P**	**10 33 54.2**	**-0.7**
YBH	**Yreka Blue Hor**	**81.60**	**37**	P		**P**	**10 33 54.2**	**-0.7**
	1.2nm,0.8s,baz=177,slow=3.9,SNR=3.8						
NVAR	**Mina Array Bea**	**82.05**	**42**	P		**P**	**10 33 56.9**	**-0.6**
NVAR	**Mina Array Bea**	**82.05**	**42**	P		**P**	**10 33 56.9**	**-0.6**
	0.6nm,0.8s,baz=219,slow=10.0,SNR=4.2						
TXAR	**Lajitas Array**	**87.19**	**56**	P		**P**	**10 34 23.9**	**+0.3**
TXAR	**Lajitas Array**	**87.19**	**56**	P		**P**	**10 34 23.9**	**+0.3**
	0.5nm,0.8s,baz=210,slow=7.2,SNR=4.5						
ILAR	**Eielson Array**	**90.97**	**12**	P		P	10 34 37.3	-3.1
ILAR	**Eielson Array**	**90.97**	**12**	P		P	10 34 37.3	-3.1
	0.6nm,0.9s,baz=233,slow=5.7,SNR=4.8						
ARCES	**ARCESS Array B**	**132.33**	**350**	PKP		**PKPdf**	**10 40 49.3**	**-1.0**
ARCES	**ARCESS Array B**	**132.33**	**350**	PKP		**PKPdf**	**10 40 49.3**	**-1.0**
	2.0nm,0.9s,baz=29,slow=2.1,SNR=3.5						
AKASG	**Malin Array Be**	**146.66**	**330**	PKPbc		**PKPdf**	**10 41 15.7**	**-1.0**
AKASG	**Malin Array Be**	**146.66**	**330**	PKPbc		**PKPdf**	**10 41 15.7**	**-1.0**
	0.8nm,0.4s,baz=42,slow=4.6,SNR=4.7						
BRTR	**Keskin Array B**	**150.31**	**310**	PKPbc		**PKPdf**	**10 41 26.4**	**+3.2**
BRTR	**Keskin Array B**	**150.31**	**310**	PKPbc		**PKPdf**	**10 41 26.4**	**+3.2**
	0.6nm,0.5s,baz=141,slow=5.5,SNR=3.2						
CLL	**Collm**	**151.52**	**348**	*i* PKPbc		**PKPbc**	**10 41 29.3**	**-1.4**

*ISCJB **11** 10:23:24.8±0.5,49°.21S±0°.07×8°.3W±0°.2,h10km,mb4.3/13, MS3.8/11,Error ellipse: s-maj=15.4km s-min=10.8km az=1.0*
*IDC **11** 10:23:24.9±0.6,49°.27S×8°.22W,h0km,mb4.0/8,mb1 4.1/8, mb1mx4.0/19,mbtmp4.0/8,MS3.8/11,Ms1 3.8/11, ms1mx3.7/20,Error ellipse: s-maj=25.0km s-min=17.8km az=95.0*
*NEIC **11** 10:23:26.4±0.4,49°.30S×8°.22W,h10km,mb4.8/4,Error ellipse: s-maj=13.4km s-min=11.7km az=110.0*
ISC 11 10:23:26.5±0.5,49°.28S±0°.10×8°.2W±0°.1,h10km,n49, σ0s97/48,mb4.2/13,MS3.9/11,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**21.44**	**180**	*e*P		**P**	**10 28 15.9**	**+1.5**
VNA2	**Neumayer--Watz**	**21.71**	**179**	*e*P		**P**	**10 28 17.5**	**+0.1**
	baz=6.2,slow=11						
VNA3	**Neumayer Olymp**	**22.04**	**181**	*e*P		**P**	**10 28 23.0**	**+2.1**
SNAA	**Sanae**	**22.60**	**176**	*e*P		**P**	**10 28 26.6**	**-0.3**
SNAA	**Sanae**	**22.60**	**176**	*e*P		**P**	**10 28 26.6**	**-0.3**
	27nm,1.3s						
SNAA				*e*PcP		**PcP**	**10 32 18.0**	**-1.5**
SNAA	**Sanae**	**22.60**	**176**	P		**P**	**10 28 26.9**	**0.0**
	3.4nm,1.1s,baz=1.0,slow=10,SNR=12						
SNAA				LR		LR	10 34 25.8	
	comp=Z,42nm,21.8s,baz=53,slow=29						
SUR	**Sutherland**	**27.45**	**63**	*e*P		**P**	**10 29 12.5**	**-0.3**
	15nm,1.0s						
SUR	**Sutherland**	**27.45**	**63**	LR		LR	10 37 04.8	
	comp=Z,337nm,20.5s,baz=97,slow=30						
TSUM	**Tsumeb**	**36.45**	**44**	P		**P**	**10 30 32.0**	**+0.4**
TSUM	**Tsumeb**	**36.45**	**44**	P		**P**	**10 30 32.0**	**+0.4**
	2.2nm,0.6s,baz=211,slow=14,SNR=7.5						
QSPA	**South Pole Qui**	**40.97**	**180**	P		**P**	**10 31 08.8**	**-0.4**
QSPA	**South Pole Qui**	**40.97**	**180**	P		**P**	**10 31 08.8**	**-0.4**
	6.6nm,1.1s,baz=224,slow=6.3,SNR=7.0						
PLCA	**Paso Flores**	**43.77**	**257**	LR		LR	10 48 59.6	
	comp=Z,150nm,18.1s,baz=172,slow=35						
CPUP	**Villa Florida**	**44.12**	**283**	LR		LR	10 46 24.3	
	comp=Z,149nm,20.3s,baz=288,slow=31						
BDFB	**Brasilia**	**46.60**	**302**	LR		LR	10 47 12.6	
	comp=Z,175nm,21.4s,baz=222,slow=31						
CFAA	**Coronel Fontan**	**47.69**	**268**	P		**P**	**10 32 03.6**	**+0.4**
CFAA	**Coronel Fontan**	**47.69**	**268**	P		**P**	**10 32 03.6**	**+0.4**
	0.6nm,0.9s,baz=127,slow=7.2,SNR=6.7						
VNDA	**Vanda**	**53.32**	**177**	P		**P**	**10 32 45.8**	**+0.7**
VNDA	**Vanda**	**53.32**	**177**	P		**P**	**10 32 45.8**	**+0.7**
	2.8nm,1.1s,baz=238,slow=8.9,SNR=5.4						
LVC	**Limon Verde**	**54.21**	**276**	*e*P		**P**	**10 32 51.6**	**-1.0**
	22nm,1.1s						
DBIC	**Dimbokro**	**55.80**	**4**	P		**P**	**10 33 02.1**	**-1.6**
DBIC	**Dimbokro**	**55.80**	**4**	P		**P**	**10 33 02.1**	**-1.6**
	2.7nm,0.9s,baz=195,slow=12,SNR=2.7						
DBIC				LR		LR	10 52 09.1	
	comp=Z,70nm,19.5s,baz=339,slow=31						
LPAZ	**La Paz**	**58.29**	**282**	P		**P**	**10 33 21.0**	**-1.2**
LPAZ	**La Paz**	**58.29**	**282**	P		**P**	**10 33 21.0**	**-1.2**
	2.6nm,1.1s,baz=144,slow=5.0,SNR=6.4						
LPAZ				LR		LR	10 55 10.8	
	comp=Z,101nm,18.9s,baz=250,slow=33						
SAML	**Samuel**	**60.80**	**292**	*e*P		**P**	**10 33 39.1**	**+0.3**
	11nm,1.3s						
SAML				*e*PcP		**PcP**	**10 34 23.2**	**+0.6**
KMBO	**Kilima Mbogo**	**61.70**	**54**	LR		LR	10 59 47.6	
	comp=Z,185nm,18.9s,baz=93,slow=35						
TORD	**Torodi Ar. Bea**	**62.77**	**11**	P		**P**	**10 33 52.7**	**+0.8**
TORD	**Torodi Ar. Bea**	**62.77**	**11**	P		**P**	**10 33 52.7**	**+0.8**
	1.3nm,0.8s,baz=165,slow=3.5,SNR=8.1						
TORD				LR		LR	10 54 50.1	
	comp=Z,80nm,20.1s,baz=160,slow=30						
OTAV	**Otavalo**	**77.41**	**285**	*e*P		**P**	**10 35 22.2**	**-0.3**
	8.5nm,1.2s						
KEST	**Kesra**	**86.07**	**14**	LR		LR	11 09 38.0	
	comp=Z,28nm,18.0s,baz=275,slow=32						
ESDC	**Sonseca Array**	**88.66**	**3**	P		**P**	**10 36 22.0**	**+2.5**
ESDC	**Sonseca Array**	**88.66**	**3**	P		**P**	**10 36 22.0**	**+2.5**
	0.6nm,0.7s,baz=161,slow=6.7,SNR=3.9						
BRTR	**Keskin Array B**	**96.02**	**31**	LR		LR	11 16 46.3	
	comp=Z,26nm,21.4s,baz=97,slow=33						
PDAR	**Pinedale Array**	**127.33**	**295**	PKP		**PKPdf**	**10 42 30.9**	**-0.1**
PDAR	**Pinedale Array**	**127.33**	**295**	PKP		**PKPdf**	**10 42 30.9**	**-0.1**
	0.5nm,0.8s,baz=140,slow=5.8,SNR=3.2						
RES	**Resolute Bay**	**135.94**	**338**	PKP		**PKPdf**	**10 42 46.4**	**+0.5**
RES	**Resolute Bay**	**135.94**	**338**	PKP		**PKPdf**	**10 42 46.4**	**+0.5**
	1.2nm,0.8s,baz=65,slow=1.4,SNR=6.5						
YKA	**Yellowknife Ar**	**139.05**	**317**	PKP		**PKPdf**	**10 42 51.6**	**-0.4**
YKA	**Yellowknife Ar**	**139.05**	**317**	PKP		**PKPdf**	**10 42 51.6**	**-0.4**
	1.3nm,0.9s,baz=107,slow=2.1,SNR=18						
DLBC	**Dease Lake**	**145.53**	**308**	PKPbc		**PKPab**	**10 43 04.7**	**+0.4**
DLBC	**Dease Lake**	**145.53**	**308**	PKPbc		**PKPab**	**10 43 04.7**	**+0.4**
	8.5nm,1.2s,baz=27,slow=3.1,SNR=4.4						
KSAR	**Wonju Array Be**	**146.40**	**94**	PKPbc		**PKPbc**	**10 43 06.9**	**-0.3**
KSRS	**Korea Array**	**146.43**	**94**	PKPbc		**PKPbc**	**10 43 06.9**	**-0.4**
	1.7nm,0.7s,baz=248,slow=3.8,SNR=6.8						
INK	**Inuvik**	**147.39**	**326**	PKPbc		**PKPbc**	**10 43 08.9**	**-0.1**
INK	**Inuvik**	**147.39**	**326**	PKPbc		**PKPbc**	**10 43 08.9**	**-0.1**
	16nm,0.9s,baz=64,slow=3.7,SNR=59						
MJAR	**Matsushiro Arr**	**152.53**	**105**	PKPbc		**PKPbc**	**10 43 21.3**	**-1.4**
MJAR				PKPab		**PKPab**	**10 43 32.7**	**-0.5**
MJAR	**Matsushiro Arr**	**152.53**	**105**	PKPbc		**PKPbc**	**10 43 21.3**	**-1.4**
	1.9nm,1.0s,baz=227,slow=2.5,SNR=6.0						
MJAR				PKPab		**PKPab**	**10 43 32.7**	**-0.5**
	2.6nm,1.0s,baz=233,slow=5.3,SNR=6.7						
ILAR	**Eielson Array**	**153.34**	**321**	PKP		**PKPdf**	**10 43 14.9**	**-1.0**
ILAR				PKPbc		**PKPbc**	**10 43 23.1**	**-0.4**
ILAR	**Eielson Array**	**153.34**	**321**	PKP		**PKPdf**	**10 43 14.9**	**-1.0**
	0.5nm,1.0s,baz=178,slow=2.6,SNR=3.6						
ILAR				PKPbc		**PKPbc**	**10 43 23.1**	**-0.4**
	1.5nm,0.8s,baz=338,slow=1.7,SNR=18						

*NEIC **11** 10:34:34.0±0.8,39°.41N×111°.09W,h6km,ML3.0(SLC),After SLC.*
*IDC **11** 10:34:37.0±1.3,39°.49N×110°.45W,h0km,mb2.7/1, mb1 3.2/4,mb1mx3.1/30,mbtmp2.9/4,ML3.3/3,Error ellipse: s-maj=19.1km s-min=12.3km az=124.0*
ISC 11 10:34:34.4±0.8,39°.41N±0°.02×111°.04W±0°.02,h17km±6km, n71,σ1s61/71,15C-22D,Utah

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TMUT	**Trail Mountain**	**0.17**	**230**	*e*Pg		**Pg**	**10 34 38.5**	**-0.6**
TMUT				*e*Sg		**Sg**	**10 34 42.2**	**0.0**
P17A	**Butcher Ranch,**	**0.24**	**74**	P		**Pg**	**10 34 40.0**	**-0.1**
	baz=0.3,SNR=903						
P17A				⇑S		**Sg**	**10 34 44.5**	**+0.6**
	baz=0.3						
Q16A	**Castle Valley**	**0.50**	**192**	⇑P		**Pb**	**10 34 44.4**	**-0.4**
	baz=0.5,SNR=59						
Q16A				⇓S		**Sb**	**10 34 51.5**	**-0.4**
	baz=0.5						
SRU	**San Rafael**	**0.50**	**126**	*e*Pg		**Pb**	**10 34 45.0**	**+0.1**
SRU				*e*Sg		**Sb**	**10 34 52.5**	**+0.6**
SRU	**San Rafael**	**0.50**	**126**	⇑P		**Pb**	**10 34 44.8**	**0.0**
	baz=0.5,SNR=218						
SRU				⇑S		**Sb**	**10 34 52.5**	**+0.6**
	baz=0.5						
P16A	**Fountain Green**	**0.52**	**293**	⇑P		**Pb**	**10 34 44.9**	**-0.3**
	baz=0.5,SNR=50						
P18A	**Preston Nutter**	**0.65**	**70**	⇓P		**Pn**	**10 34 47.9**	**-1.2**
	baz=0.7						
P18A				⇓S		**Sb**	**10 34 57.4**	**+0.9**
	baz=0.7						
MPU	**Maple Canyon**	**0.76**	**323**	*e*Pg		**Pb**	**10 34 48.7**	**-0.6**
MPU				*e*Sg		**Sb**	**10 34 58.9**	**-0.6**
NLU	**North Lily Min**	**0.97**	**305**	*e*P		**Pn**	**10 34 53.6**	**+0.2**
P15A	**Leamington**	**0.97**	**280**	⇓P		**Pb**	**10 34 52.5**	**-0.4**
	baz=0.9,SNR=18						
DAU	**Daniels Canyon**	**1.02**	**351**	*e*Pg		**Pn**	**10 34 53.9**	**-0.3**
JLU	**Jordanelle**	**1.23**	**345**	*e*Pg		**Pg**	**10 34 58.5**	**+0.2**
MSU	**Marysvale**	**1.26**	**225**	*e*Pg		**Pg**	**10 34 57.6**	**-1.1**
MVU	**Marysvale**	**1.28**	**226**	*e*P		**Pg**	**10 34 58.0**	**-1.2**
CTU	**Camp Tracy**	**1.40**	**337**	*e*Pn		**Pg**	**10 35 00.9**	**-0.4**
Q19A	**Hogan Spring (**	**1.45**	**107**	⇑P		**Pg**	**10 35 02.1**	**-0.3**
	baz=1.5,SNR=93						
N17A	**Moffit Pass**	**1.54**	**6**	⇓P		**Pg**	**10 35 03.3**	**-0.9**
	baz=1.5,SNR=74						
DUG	**Dugway**	**1.58**	**301**	*e*Pn		**Pb**	**10 35 02.9**	**-0.3**
DUG	**Dugway**	**1.58**	**301**	⇓P		**Pb**	**10 35 02.7**	**-0.4**
	baz=1.5						
P19A	**Cripple Cowboy**	**1.61**	**81**	⇓Pb		**Pg**	**10 35 05.3**	**-0.1**
	baz=1.6,SNR=66						
O19A	**Miners Draw (B**	**1.72**	**58**	⇑Pb		**Pg**	**10 35 07.0**	**-0.6**
	baz=1.7						
O19A				⇓Sb		**Sg**	**10 35 30.7**	**+0.7**
	baz=1.7						
PV10	**Paradox Valley**	**1.87**	**123**	*e*Pn		**Pg**	**10 35 10.7**	**+0.4**
N18A	**Larsen Ranch,**	**1.89**	**33**	⇓Pb		**Pg**	**10 35 09.1**	**-1.6**
	baz=1.9,SNR=49						
S18A	**Hurst Farm, BI**	**1.90**	**154**	⇑Pb		**Pg**	**10 35 09.9**	**-1.0**
	baz=1.9						
S18A				⇑Sb		**Sg**	**10 35 35.0**	**-0.6**
	baz=1.9						
PV04	**Paradox Valley**	**1.95**	**121**	*e*Pn		**Pg**	**10 35 11.5**	**-0.3**
PV04				*e*Sn		**Sg**	**10 35 39.1**	**+1.9**
M16A	**Huntsville**	**1.96**	**347**	⇑Pb		**Pb**	**10 35 09.6**	**-0.1**
	baz=1.9,SNR=8.1						
P20A	**De Beque**	**2.05**	**87**	⇓Pb		**Pg**	**10 35 12.6**	**-1.2**
	baz=2.1						
N19A	**John Jarvie Ra**	**2.06**	**43**	⇓Pb		**Pg**	**10 35 12.0**	**-2.0**
	baz=2.1,SNR=78						
M17A	**Scullys Gap (B**	**2.08**	**8**	⇑Pb		**Pg**	**10 35 12.8**	**-1.7**
	baz=2.1,SNR=11						
HWUT	**Hardware Ranch**	**2.23**	**350**	*e*Pn		**Pb**	**10 35 14.2**	**-0.3**
O20A	**White River Ci**	**2.28**	**70**	⇑Pb		**Pg**	**10 35 16.3**	**-1.8**
	baz=2.3						
PV01	**Paradox Valley**	**2.31**	**123**	*e*Pn		**Pb**	**10 35 16.0**	**+0.2**
R20A	**Redvale**	**2.41**	**119**	⇓Pb		**Pb**	**10 35 17.4**	**-0.1**
	baz=2.4						
ARUT	**Antelope Range**	**2.48**	**230**	*e*Pn		**Pb**	**10 35 19.0**	**+0.4**
M19A	**Rock Springs**	**2.54**	**34**	⇑Pb		**Pb**	**10 35 20.3**	**+0.6**
	baz=2.6						
M19A				⇓Sb		**Sg**	**10 35 53.8**	**-2.4**
	baz=2.6						
N20A	**Spence Gulch,**	**2.56**	**55**	⇓Pb		**Pg**	**10 35 21.9**	**-1.6**
	baz=2.6						
CCUT	**Cedar City**	**2.60**	**225**	*e*Pn		**Pb**	**10 35 19.0**	**-1.6**
L18A	**Fontenelle, Gr**	**2.63**	**17**	⇓Sb		**Sg**	**10 35 56.4**	**-2.5**
	baz=2.6						
HVU	**Hansel Valley**	**2.71**	**331**	*e*Pn		**Pn**	**10 35 19.3**	**+1.9**
MVCO	**Mesa Verde**	**2.97**	**137**	*e*Pn		**Pb**	**10 35 24.5**	**-2.4**
L19A	**Farson**	**2.98**	**25**	⇓P		**Pb**	**10 35 25.0**	**-2.2**
	baz=3.0,SNR=19						
N21A	**Black Mountain**	**3.02**	**62**	⇑Pb		**Pg**	**10 35 29.3**	**-3.0**
	baz=3.0						
S21A	**Coal Bank Pass**	**3.09**	**123**	⇓P		**Pb**	**10 35 26.7**	**-2.3**
	baz=3.1						
SMCO	**Snowmass**	**3.16**	**93**	*e*Pn		**Pb**	**10 35 27.9**	**-2.5**
Q22A	**Crested Butte,**	**3.26**	**98**	⇓P

FX1	**Attu Island--F**	**6.45**	**299**	Pn	**Pn**	**11 31 32.1**	**+0.8**
	1.7nm,0.3s,baz=281,slow=17,SNR=15							
FX1				Sn	**Sn**	**11 32 39.6**	**-4.6**
	0.4nm,0.3s,baz=60,slow=20,SNR=4.1							
UNV	**Unalaska Valle**	**7.73**	**57**	*e*Pn	**Pn**	**11 31 48.9**	**+0.1**
PETK	**Petropavlovsk-**	**15.67**	**291**	Pn	**P**	**11 33 39.9**	**-1.0**
	0.1nm,0.3s,baz=98,slow=20,SNR=4.0							
KDAK	**Kodiak Island**	**16.46**	**53**	Pn	**P**	**11 33 48.0**	**-1.6**
	1.5nm,0.3s,baz=276,slow=9.3,SNR=27							
KDAK				Sn	**Sn**	**11 36 49.8**	**+1.0**
	0.1nm,0.3s,baz=162,slow=20,SNR=4.5							
ILAR	**Eielson Array**	**21.73**	**36**	P	**P**	**11 34 47.5**	**+0.5**
	0.3nm,0.4s,baz=227,slow=9.5,SNR=14							
INK	**Inuvik**	**28.03**	**33**	P	**P**	**11 35 46.1**	**-0.5**
	0.2nm,0.3s,baz=243,slow=9.0,SNR=4.6							
YKA	**Yellowknife Ar**	**35.50**	**45**	P	**P**	**11 36 53.7**	**+1.4**
	0.2nm,0.6s,baz=280,slow=8.5,SNR=6.4							
SONM	**Songino Array**	**47.96**	**298**	P	**P**	**11 38 36.2**	**+1.6**
	0.3nm,0.7s,baz=72,slow=9.3,SNR=2.2							
TXAR	**Lajitas Array**	**58.02**	**81**	P	**P**	**11 39 49.0**	**+0.2**
	0.4nm,0.8s,baz=316,slow=5.2,SNR=3.4							

MEX 11 11:33:05.0±0.3, 17°.36N×100°.80W, h4km±4km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.59**	**122**	*e*P	Pg	11 33 15.8	-0.6
CAIG				*i* S	Sg	11 33 24.6	+0.5
ZIIG	**Zihuatanejo**	**0.68**	**291**	*e*P	Pg	11 33 17.3	-0.9
ZIIG				*i* S	Sg	11 33 26.9	-0.2
ARIG	**Puente Sto Nin**	**1.01**	**25**	*e*P	Pg	11 33 22.0	-2.5
ARIG				*i* S	Sg	11 33 35.1	-2.5
MEIG	**Mezcala**	**1.25**	**63**	*e*P	Pg	11 33 26.1	-3.1
MEIG				*e*S	Sg	11 33 41.0	-4.6

KRSC 11 11:40:40.4±0.8, 53°.92N×160°.72E, h62km±58km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.87**	**43**	*i* P	Pn	11 40 57.5	+0.7
MKZ				*e*S	Sn	11 41 09.7	+0.8
SPN	**Mys Shipunski**	**0.92**	**207**	*e*P	Pn	11 40 58.1	+0.6
SPN				*e*S	Sn	11 41 10.8	+0.7
SDLR	**Sedlovina**	**1.27**	**240**	*i* P	Pn	11 41 03.3	+1.1
SDLR				*e*S	Sn	11 41 19.6	+1.1
SMAR	**Somma**	**1.32**	**241**	*i* P	Pn	11 41 04.0	+1.0
SMAR				*e*S	Sn	11 41 21.0	+1.1
KRER	**Koryakskii**	**1.33**	**243**	*e*P	Pn	11 41 04.3	+1.2
KRER				*e*S	Sn	11 41 21.8	+1.8
UGLR	**Uglovaya**	**1.34**	**239**	*i* P	Pn	11 41 04.3	+1.2
UGLR				*e*S	Sn	11 41 21.6	+1.5
AVH	**Avacha**	**1.35**	**242**	*e*P	Pn	11 41 04.7	+1.5
AVH				*e*S	Sn	11 41 22.0	+1.7
KOK	**Koryaka**	**1.39**	**244**	*e*P	Pn	11 41 04.8	+1.0
KOK				*e*S	Sn	11 41 22.5	+1.1
TUMR	**Tumrok**	**1.41**	**346**	*i* P	Pn	11 41 05.0	+1.0
TUMR				*e*S	Sn	11 41 22.6	+0.8
PET	**Petropavlovsk**	**1.53**	**235**	*i* P	Pn	11 41 06.4	+1.0
PET				*e*S	Sn	11 41 25.7	+1.4
GNL	**Ganaly**	**1.66**	**263**	*i* P	Pn	11 41 08.4	+0.9
GNL				*e*S	Sn	11 41 28.6	+0.7
KMNR	**Kamenistaya**	**1.86**	**352**	*e*P	Pn	11 41 12.1	+2.0
KMNR				*e*S	Sn	11 41 35.1	+2.4
RUS	**Russkaya**	**2.00**	**223**	*e*P	Pn	11 41 12.2	+0.4
RUS				*e*S	Sn	11 41 35.2	-0.5
BZGR	**Bezymyannyi-Gr**	**2.02**	**360**	P	Pn	11 41 14.0	+1.7
BZGR				S	Sn	11 41 38.5	+1.8
KPT	**Kopyto**	**2.07**	**352**	P	Pn	11 41 14.5	+1.6
KPT				S	Sn	11 41 39.1	+1.4
MTVR	**Mutnovka**	**2.10**	**228**	*i* P	Pn	11 41 14.5	+1.1
MTVR				*e*S	Sn	11 41 39.4	+0.9
GRL	**Gorelyy**	**2.10**	**230**	*e*P	Pn	11 41 15.0	+1.6
ZLN	**Zelenaya**	**2.10**	**1**	P	Pn	11 41 14.1	+0.7
KOZ	**Kozyrevsk**	**2.20**	**348**	S	Sn	11 41 39.9	-0.8
ESO	**Esso**	**2.32**	**331**	*e*P	Pn	11 41 16.8	+0.5
ESO				*e*S	Sn	11 41 43.8	+0.1
APC	**Apacha**	**2.35**	**246**	P	Pn	11 41 18.4	+1.8
KLY	**Klyuchi**	**2.40**	**359**	P	Pn	11 41 18.3	+1.1
KLY				*e*S	Sn	11 41 46.0	+0.5
SRDR	**Sredinnyy**	**2.47**	**347**	P	Pn	11 41 18.3	0.0
KBTR	**Krutoberegovo**	**2.59**	**27**	*e*P	Pn	11 41 20.8	+0.9
KBTR				S	Sn	11 41 50.2	0.0
BKI	**Bering**	**3.32**	**65**	*e*S	Sn	11 42 03.3	-4.6

*ISK **11** 11:45:58.9, 38°.96N×29°.83E, h9km, MD2.5*
*CSEM **11** 11:45:59.4±0.1, 38°.96N×29°.85E, h1km, MD2.5, Error ellipse: s-maj=2.5km s-min=2.0km az=163.0*
*DDA **11** 11:45:59.0, 38°.93N×29°.85E, h7km, MD2.8*
ISC 11 11:45:59.3±1.0, 38°.94N±0°.03×29°.84E±0°.02, h9km±9km, n28, σ0°53/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALT	**Altintas**	**0.24**	**60**	PG	**Pg**	**11 46 04.3**	**+0.1**
ALT				*e*SG	**Sg**	**11 46 08.2**	**+0.7**
ALT	**Altintas**	**0.24**	**60**	*i* Pg	**Pg**	**11 46 04.3**	**+0.1**
ALT				*e*Sg	**Sg**	**11 46 08.2**	**+0.7**
GDZ	**Gediz**	**0.32**	**299**	*i* P	**Pg**	**11 46 05.6**	**-0.1**
GDZ				*i* S	**Sg**	**11 46 10.1**	**+0.1**
GDZ	**Gediz**	**0.32**	**299**	*i* P	**Pg**	**11 46 05.6**	**-0.1**
GDZ				*i* S	**Sg**	**11 46 10.1**	**+0.1**
TVSB	**Tavsanli**	**0.59**	**330**	PG	**Pg**	**11 46 10.3**	**-0.5**
TVSB				*e*SG	**Sg**	**11 46 18.9**	**+0.3**
TVSB	**Tavsanli**	**0.59**	**330**	*i* Pg	**Pg**	**11 46 10.3**	**-0.5**
TVSB				*e*Sg	**Sg**	**11 46 18.9**	**+0.3**
KHAL	**Karahalli**	**0.63**	**206**	*i* P	**Pb**	**11 46 12.1**	**-0.4**
KHAL				*i* S	**Sb**	**11 46 20.4**	**-1.0**
KHAL	**Karahalli**	**0.63**	**206**	*i* P	**Pb**	**11 46 12.1**	**-0.4**
KHAL				*i* S	**Sb**	**11 46 20.4**	**-1.0**
KHL	**Karahalli**	**0.66**	**202**	*e*PG	**Pb**	**11 46 12.4**	**-0.6**
KHL				*e*SG	**Sb**	**11 46 22.6**	**+0.3**
KHL	**Karahalli**	**0.66**	**202**	*e*Pg	**Pb**	**11 46 12.4**	**-0.6**
KHL				*e*Sg	**Sb**	**11 46 22.6**	**+0.3**
SHUT	**Suhut-Afyon**	**0.67**	**124**	*e*PG	**Pb**	**11 46 12.7**	**-0.6**
SHUT	**Suhut-Afyon**	**0.67**	**124**	*e*Pg	**Pb**	**11 46 12.7**	**-0.6**
DEMI	**Demirci**	**0.88**	**277**	*i* P	**Pb**	**11 46 16.6**	**-0.2**
DEMI				*i* S	**Sb**	**11 46 28.3**	**-0.5**
DEMI	**Demirci**	**0.88**	**277**	*i* P	**Pb**	**11 46 16.6**	**-0.2**
DEMI				*i* S	**Sb**	**11 46 28.3**	**-0.5**
BOLV	**Bolvadin**	**0.89**	**104**	*i* P	**Pb**	**11 46 17.0**	**0.0**
BOLV				*i* S	**Sg**	**11 46 28.0**	**-0.1**
BOLV	**Bolvadin**	**0.89**	**104**	*i* P	**Pb**	**11 46 17.0**	**0.0**
BOLV				*i* S	**Sg**	**11 46 28.0**	**-0.1**
SEYT	**Eskypehyr**	**0.98**	**53**	*i* P	**Pb**	**11 46 18.0**	**-0.4**
SEYT				*i* S	**Sb**	**11 46 31.3**	**-0.2**
SEYT	**Eskypehyr**	**0.98**	**53**	*i* P	**Pb**	**11 46 18.0**	**-0.4**
SEYT				*i* S	**Sb**	**11 46 31.3**	**-0.2**
KULA	**Kula-Manisa**	**1.02**	**246**	*e*PG	**Pb**	**11 46 18.7**	**-0.4**
KULA				*e*SG	**Sb**	**11 46 32.5**	**-0.1**
KULA	**Kula-Manisa**	**1.02**	**246**	*e*Pg	**Pb**	**11 46 18.7**	**-0.4**
KULA				*e*Sg	**Sb**	**11 46 32.5**	**-0.1**
BORA	**Eskisehir**	**1.06**	**26**	*i* P	**Pb**	**11 46 19.4**	**-0.4**
BORA				*i* S	**Sg**	**11 46 32.5**	**-0.8**
BORA	**Eskisehir**	**1.06**	**26**	*i* P	**Pb**	**11 46 19.4**	**-0.4**
BORA				*i* S	**Sg**	**11 46 32.5**	**-0.8**
DURS	**Dursunbey**	**1.25**	**302**	*i* P	**Pn**	**11 46 24.1**	**+1.0**
DURS				*i* S	**Sn**	**11 46 41.0**	**+0.9**
DURS	**Dursunbey**	**1.25**	**302**	*i* P	**Pn**	**11 46 24.1**	**+1.0**
DURS				*i* S	**Sn**	**11 46 41.0**	**+0.9**
SVRH	**Sivrihisar-ESK**	**1.40**	**68**	*e*PN	**Pb**	**11 46 25.4**	**-0.3**
SVRH	**Sivrihisar-ESK**	**1.40**	**68**	*e*Pn	**Pb**	**11 46 25.4**	**-0.3**
YLV	**Yalova**	**1.67**	**348**	*e*PN	**Pn**	**11 46 28.6**	**-0.2**
YLV	**Yalova**	**1.67**	**348**	*e*Pn	**Pn**	**11 46 28.6**	**-0.2**

*DJA **11** 11:46:15.4±0.5, 6°.S±4°×12°.3E±°, h10km, M4.1/11, mb4.3/2, mB5.3/1, MLv4.0/11, Mw(mB)4.7/1*
*IDC **11** 11:46:19.8±1.3, 5°.59S×122°.71E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.5/22, mbtmp3.6/5, ML3.3/2, MS3.5/1, Ms1 3.5/1, ms1mx2.4/31, Error ellipse: s-maj=45.7km s-min=21.5km az=45.0*
ISC 11 11:46:23.2±1.4, 5°.8S±0°.1×122°.77E±0°.08, h35km, n18, σ1°60/15, Sulawesi

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

BBSI	**Bau Bau**	**0.35**	**325**	P	Pn	11 46 25.1	-6.7
KDI	**Kendari**	**1.81**	**355**	P	**Pn**	**11 46 51.3**	**-0.7**
BKSI	**Bulukumba**	**2.68**	**280**	P	**Pn**	**11 47 02.0**	**-1.8**
BKSI				S	**Sn**	**11 47 35.2**	**+0.1**
MMRI	**Maumere**	**2.89**	**191**	P	Pn	11 47 00.1	-6.7
BNSI	**Bone**	**2.99**	**297**	P	**Pn**	**11 47 06.7**	**-1.4**
KAPI	**Kappang**	**3.10**	**284**	P	**Pn**	**11 47 07.3**	**-2.4**
KAPI	**Kappang**	**3.10**	**284**	Pn	**Pn**	**11 47 08.3**	**-1.4**
	4.9nm,0.3s,baz=156,slow=9.9,SNR=18							
KAPI				Sn	**Sn**	**11 47 46.1**	**+0.6**
	5.6nm,0.3s,baz=357,slow=19,SNR=3.2							
SPSI	**Sidrap Palu**	**3.49**	**301**	P	**Pn**	**11 47 14.4**	**-0.7**
TTSI	**Tana Toraja**	**4.01**	**313**	P	**Pn**	**11 47 21.8**	**-0.3**
LUWI	**Luwuk**	**4.71**	**360**	P	**Pn**	**11 47 29.0**	**-2.7**
PCI	**Palu**	**5.66**	**329**	P	**Pn**	**11 47 46.1**	**+1.2**
MRSI	**Marisa**	**6.27**	**352**	P	**Pn**	**11 47 51.4**	**-1.8**
	17nm,1.1s,0.1nm							
MSAI	**Masohi**	**6.59**	**69**	P	Pn	11 47 52.9	-4.8
WRA	**Warramunga Arr**	**18.02**	**142**	P	**P**	**11 50 32.2**	**+1.0**
	0.1nm,0.3s,baz=316,slow=13,SNR=7.6							
ASAR	**Alice Springs**	**20.76**	**150**	P	Pn	11 51 05.8	+2.0
	2.0nm,0.9s,baz=324,slow=10,SNR=14							
PSI	**Prapat**	**25.30**	**289**	LR	LR	12 02 38.7		
	comp=Z,96nm,18.0s,baz=13,slow=39							
MKAR	**Makanchi Array**	**63.43**	**330**	P	**P**	**11 56 51.1**	**+1.7**
	0.4nm,0.7s,baz=140,slow=7.6,SNR=5.6							
ZALV	**Zalesovo Beam**	**67.48**	**337**	P	**P**	**11 57 15.4**	**0.0**
	0.3nm,0.4s,baz=127,slow=9.4,SNR=2.8							

*IDC **11** 11:53:27.7±1.5, 34°.50N×26°.60E, h0km, mb3.7/3, mb1 3.8/5, mb1mx3.5/25, mbtmp3.7/5, ML3.8/2, MS3.4/1, Ms1 3.4/1, ms1mx2.6/36, Error ellipse: s-maj=30.8km s-min=28.1km az=77.0*
*ISCJB **11** 11:53:40.0±0.8, 35°.44N±0°.07×26°.23E±0°.05, h24km, mb3.6/3, MS3.2/1, Error ellipse: s-maj=10.7km s-min=5.4km az=175.5*
*CSEM **11** 11:53:40.0, 35°.41N×26°.25E, h42km, MD3.8, After ATH*
*ATH **11** 11:53:40.0, 35°.41N×26°.25E, h42km±2km, MD3.8/17*
ISC 11 11:53:39.3±1.3, 35°.35N±0°.08×26°.29E±0°.04, h24km, n40, σ0°96/42, mb3.5/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.56**	**261**	*e*P	**Pn**	**11 53 51.7**	**-0.1**
NPS	**Neapolis**	**0.56**	**261**	*e*P	**Pn**	**11 53 51.7**	**-0.1**
KARP	**Karpathos**	**0.74**	**75**	*e*P	**Pn**	**11 53 55.3**	**+1.0**
KARP	**Karpathos**	**0.74**	**75**	*e*P	**Pn**	**11 53 55.3**	**+1.0**
VAM	**Vamos**	**1.71**	**272**	*e*P	**Pn**	**11 54 07.8**	**+0.2**
VAM	**Vamos**	**1.71**	**272**	*e*P	**Pn**	**11 54 07.8**	**+0.2**
ARG	**Arkhangelos**	**1.73**	**59**	*e*P	**Pn**	**11 54 08.2**	**+0.4**
ARG				*e*S	**Sb**	**11 54 31.1**	**-0.5**
ARG	**Arkhangelos**	**1.73**	**59**	*e*P	**Pn**	**11 54 08.3**	**+0.4**
ARG				*e*S	**Sb**	**11 54 31.1**	**-0.5**
APE	**Apeiranthos**	**1.82**	**341**	*e*P	**Pn**	**11 54 09.1**	**-0.1**
APE				*e*S	**Sn**	**11 54 31.3**	**-0.2**
APE	**Apeiranthos**	**1.82**	**341**	*e*P	**Pn**	**11 54 09.1**	**-0.1**
APE				*e*S	**Sn**	**11 54 31.3**	**-0.2**
KYTH	**Kithira**	**2.80**	**290**	*e*P	**Pn**	**11 54 24.1**	**+1.5**
KYTH	**Kithira**	**2.80**	**290**	*e*P	**Pn**	**11 54 24.1**	**+1.5**
CHOS	**Chios island**	**3.03**	**357**	*e*P	**Pn**	**11 54 26.4**	**+0.5**
CHOS	**Chios island**	**3.03**	**357**	*e*P	**Pn**	**11 54 26.4**	**+0.5**
VLI	**Veliai**	**3.04**	**298**	*e*P	**Pn**	**11 54 26.4**	**+0.5**
VLI				*e*S	**Sn**	**11 55 01.3**	**-0.2**
VLI	**Veliai**	**3.04**	**298**	*e*P	**Pn**	**11 54 26.4**	**+0.5**
VLI				*e*S	**Sn**	**11 55 01.3**	**-0.2**
DYR	**Agios Nikonas**	**3.50**	**295**	*e*P	**Pn**	**11 54 33.5**	**+1.3**
DYR	**Agios Nikonas**	**3.50**	**295**	*e*P	**Pn**	**11 54 33.5**	**+1.3**
LTK	**Loutraki**	**3.77**	**316**	*e*P	**Pn**	**11 54 36.6**	**+0.6**
LTK	**Loutraki**	**3.77**	**316**	*e*P	**Pn**	**11 54 36.6**	**+0.6**
ITM	**Ithomi**	**3.97**	**299**	*e*P	**Pn**	**11 54 39.5**	**+0.8**
ITM	**Ithomi**	**3.97**	**299**	*e*P	**Pn**	**11 54 39.5**	**+0.8**
PYL	**PYLOS**	**3.99**	**294**	*e*P	**Pn**	**11 54 40.3**	**+1.3**
PYL	**PYLOS**	**3.99**	**294**	*e*P	**Pn**	**11 54 40.3**	**+1.3**
GUR	**Goura**	**4.09**	**310**	*e*P	**Pn**	**11 54 41.6**	**+1.2**
GUR	**Goura**	**4.09**	**310**	*e*P	**Pn**	**11 54 41.6**	**+1.2**
KALE	**Kalithea**	**4.50**	**314**	*e*P	**Pn**	**11 54 47.5**	**+1.5**
KALE	**Kalithea**	**4.50**	**314**	*e*P	**Pn**	**11 54 47.5**	**+1.5**
LAKA	**Lakka**	**4.50**	**311**	*e*P	**Pn**	**11 54 47.6**	**+1.6**
LAKA	**Lakka**	**4.50**	**311**	*e*P	**Pn**	**11 54 47.6**	**+1.6**
TRIZ	**Trizonia**	**4.52**	**313**	*e*P	**Pn**	**11 54 47.8**	**+1.5**
TRIZ	**Trizonia**	**4.52**	**313**	*e*P	**Pn**	**11 54 47.8**	**+1.5**
RLS	**Riolos of Patr**	**4.72**	**306**	*e*P	**Pn**	**11 54 49.7**	**+0.7**
RLS	**Riolos of Patr**	**4.72**	**306**	*e*P	**Pn**	**11 54 49.7**	**+0.7**
MMAI	**Mount Meron Ar**	**7.90**	**105**	Pn	Pn	11 55 18.1	-15
	2.4nm,0.3s,baz=310,slow=12,SNR=7.3							
EIL	**Elat**	**9.25**	**125**	Pn	Pn	11 55 33.0	-18
	0.8nm,0.3s,baz=277,slow=8.8,SNR=7.9							
MDT	**Midelt**	**25.67**	**273**	LR	LR	12 13 30.1		
	comp=Z,74nm,18.3s,baz=56,slow=46							
FINES	**FINES Array B**	**26.11**	**360**	P	**P**	**11 59 10.9**	**-0.1**
	0.9nm,0.8s,baz=159,slow=12,SNR=4.3							
TORD	**Torodi Ar. Bea**	**31.32**	**231**	P	P	11 59 47.0	-11
	0.5nm,0.6s,baz=42,slow=8.4,SNR=4.8							
ARCES	**ARCESS Array B**	**34.24**	**360**	P	**P**	**12 00 21.9**	**-1.0**
	1.8nm,0.8s,baz=176,slow=8.5,SNR=7.9							

*CSEM **11** 11:53:56.3±0.1, 34°.57N×26°.64E, h2km, mb4.0/18, Ms2.9, Error ellipse: s-maj=7.1km s-min=3.2km az=27.0*
*IDC **11** 11:53:56.2±0.7, 34°.54N×26°.66E, h0km, mb4.0/21, mb1 4.0/28, mb1mx4.0/35, mbtmp3.9/28, ML3.8/7, MS3.3/6, Ms1 3.3/6, ms1mx2.9/37, Error ellipse: s-maj=17.6km s-min=13.1km az=178.0*
*ISCJB **11** 11:53:57.5±0.3, 34°.32N±0°.04×26°.57E±0°.04, h33km, mb3.9/29, MS3.8/2, Error ellipse: s-maj=6.6km s-min=3.3km az=27.0*
*NEIC **11** 11:53:57.5±0.4, 34°.57N×26°.63E, h10km, mb4.3/9, Error ellipse: s-maj=8.8km s-min=4.6km az=195.0*
*MOS **11** 11:53:59.2±1.4, 34°.54N×26°.50E, h31km, mb4.3/20, Error ellipse: s-maj=8.2km s-min=5.6km az=104.7*
ISC 11 11:54:00.1±0.5, 34°.47N±0°.05×26°.64E±0°.04, h33km, n233, σ1°36/232, mb4.0/29, 1D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**2.64**	**12**	*e*P	**Pb**	**11 54 45.2**	**-1.5**
APE	**Apeiranthos**	**2.75**	**341**	*e*P	**Pn**	**11 54 46.1**	**-2.5**
DALT	**Dalyan (Mudla)**	**2.81**	**35**	*e*P	**Pn**	**11 54 45.2**	**+2.5**
FETY	**Fethiye**	**2.94**	**42**	*e*P	**Pn**	**11 54 45.2**	**+0.7**
YER	**Yerkesik**	**2.97**	**26**	*e*P	**Pn**	**11 54 45.2**	**+0.2**
ELL	**Elmali**	**3.50**	**49**	*e*P	**Pn**	**11 54 53.5**	**+1.2**
GLHS	**Glhisar (BURDU**	**3.54**	**40**	*e*P	**Pn**	**11 54 53.5**	**+0.6**
IZM	**Izmir**	**3.95**	**7**	*e*P	**Pn**	**11 55 00.1**	**+1.6**
KULA	**Kula-Manisa**	**4.35**	**21**	*e*P	**Pn**	**11 55 05.1**	**+1.1**
BCK	**Bucak**	**4.37**	**46**	*e*P	**Pn**	**11 55 05.1**	**+0.8**
CSS	**Prodhromos**	**5.53**	**83**	*e*Pn	**Pn**	**11 55 20.0**	**-0.2**
	41nm,0.6s							
CSS	**Prodhromos**	**5.53**	**83**	Pn	**Pn**	**11 55 20.7**	**+0.6**
CSS				Sn	**Sn**	**11 56 21.6**	**-1.0**
SLTI	**Sal'it**	**7.37**	**105**	Pn	**Pn**	**11 55 45.4**	**0.0**
KZIT	**Kziot**	**7.44**	**116**	Pn	**Pn**	**11 55 45.5**	**-0.9**
MMAI	**Mount Meron Ar**	**7.44**	**99**	Pn	**Pn**	**11 55 45.2**	**-1.2**
MMAI				Sn	**Sn**	**11 57 07.0**	**-2.7**
MMAI	**Mount Meron Ar**	**7.44**	**99**	Pn	**Pn**	**11 55 45.2**	**-1.2**
	3.6nm,0.3s,baz=288,slow=12,SNR=8.1							
MMAI				Sn	**Sn**	**11 57 07.0**	**-2.7**
	3.8nm,0.3s,baz=287,slow=12,SNR=3.4							
MMAI	**Mount Meron Ar**	**7.44**	**99**	Pn	**Pn**	**11 55 45.2**	**-1.2**
RTMI	**Retamim**	**7.58**	**114**	Pn	**Pn**	**11 55 48.7**	**+0.3**
KSDI	**Kefar Szold**	**7.61**	**97**	Pn	**Pn**	**11 55 48.1**	**-0.6**
MMLI	**Mount Malkishu**	**7.61**	**103**	Pn	**Pn**	**11 55 48.1**	**-0.6**
BR131	**Keskin Array S**	**7.66**	**45**	*e*Pn	**Pn**	**11 55 48.4**	**-1.1**
	3.0nm,0.7s							
BR131				*e*Sn	**Sn**	**11 57 15.2**	**0.0**
BR131	**Keskin Array S**	**7.66**	**45**	*e*Pn	**Pn**	**11 55 48.4**	**-1.1**
	3.0nm,0.7s							
BR131				*e*Sn	**Sn**	**11 57 15.2**	**0.0**
BRTR	**Keskin Array B**	**7.66**	**45**	Pn	**Pn**	**11 55 49.3**	**-0.2**
BRTR	**Keskin Array B**	**7.66**	**45**	Pn	**Pn**	**11 55 49.3**	**-0.2**
	0.2nm,0.3s,baz=284,slow=12,SNR=4.2							
BRTR	**Keskin Array B**	**7.66**	**45**	P	**Pn**	**11 55 49.3**	**-0.2**
YTIR	**Yattir**	**7.77**	**111**	Pn	**Pn**	**11 55 51.2**	**+0.2**
RMNI	**Mount Ramon**	**7.87**	**117**	Pn	**Pn**	**11 55 52.5**	**+0.2**
DSI	**Dead Sea**	**7.89**	**109**	Pn	**Pn**	**11 55 52.6**	**+0.1**
MZDA	**Masada**	**7.98**	**111**	Pn	**Pn**	**11 55 53.0**	**-0.7**
KRMI	**Paran Flat**	**8.10**	**120**	Pn	**Pn**	**11 55 55.6**	**+0.1**
PRNI	**Paran**	**8.17**	**118**	Pn	**Pn**	**11 55 56.5**	**0.0**
HRFI	**Mount Harif**	**8.37**	**120**	Pn	**Pn**	**11 55 59.8**	**+0.6**
MBRI	**Mt Berech**	**8.42**	**121**	Pn	**Pn**	**11 56 00.4**	**+0.5**

EIL	**Elat**	**8.52**	**122**	Pn	**Pn**	**11 56 01.2**	**+0.1**
EIL				Sn	**Sn**	**11 57 32.3**	**-3.9**
EIL	**Elat**	**8.52**	**122**	Pn	**Pn**	**11 56 01.2**	**+0.1**
	1.6nm,0.3s,baz=326,slow=14,SNR=11							
EIL				Sn	**Sn**	**11 57 32.3**	**-3.9**
	4.0nm,0.3s,baz=44,slow=18,SNR=6.5							
EIL	**Elat**	**8.52**	**122**	Pn	**Pn**	**11 56 01.3**	**+0.1**
ASF	**Jabal al Asfar**	**8.88**	**102**	Pn	**Pn**	**11 56 04.9**	**-1.3**
ASF				Sn	**Sn**	**11 57 43.5**	**-1.7**
ASF	**Jabal al Asfar**	**8.88**	**102**	Pn	**Pn**	**11 56 04.9**	**-1.3**
	0.6nm,0.3s,baz=159,slow=7.5,SNR=2.6							
ASF				Sn	**Sn**	**11 57 43.5**	**-1.7**
	0.9nm,0.3s,baz=270,slow=9.1,SNR=3.0							
TIP	**Timpagrande**	**9.21**	**304**	*e*Pn	**Pn**	**11 56 10.5**	**-0.2**
	6.7nm,0.4s							
TIP				*e*Sn	**Sn**	**11 57 52.0**	**-1.2**
TIP	**Timpagrande**	**9.21**	**304**	*e*Pn	**Pn**	**11 56 10.5**	**-0.2**
	6.7nm,0.4s							
TIP				*e*Sn	**Sn**	**11 57 52.0**	**-1.2**
CUC	**Castrocucco**	**10.24**	**306**	*e*Pn	**Pn**	**11 56 24.1**	**-0.7**
	12nm,0.6s							
CUC				*e*Sn	Sn	11 58 12.1	-6.3
CUC	**Castrocucco**	**10.24**	**306**	*e*Pn	**Pn**	**11 56 24.1**	**-0.7**
	12nm,0.6s							
MLR	**Muntele Rosu**	**11.02**	**357**	LR	LR	12 01 41.1		
	comp=Z,45nm,18.5s,baz=131,slow=42							
AQU	**L'Aquila**	**13.02**	**311**	*e*Pn	Pn	11 56 57.6	-5.1
ANN	**Anapa**	**13.23**	**36**	*e*P	**P**	**11 57 17.4**	**+2.4**
ANN				pmax	pmax			
	comp=Z,33nm,1.5s							
KOLS	**Kolonicke sedl**	**14.81**	**349**	*e*	P	11 57 36.0	+3.4
KOLS				*e*		11 57 50.1		
GNI	**Garni**	**15.47**	**63**	LR	LR	12 05 09.4		
	comp=Z,163nm,18.6s,baz=304,slow=44							
KIV	**Kislovodsk**	**15.61**	**48**	*e*P	**Pn**	**11 57 37.7**	**0.0**
KIV				pmax	pmax			
	comp=Z,6.0nm,1.1s							
KIV				MLR	MLR			
	comp=Z,100nm,15.0s							
KBZ	**Khabaz**	**15.62**	**49**	P	**P**	**11 57 40.7**	**-0.9**
KBZ	**Khabaz**	**15.62**	**49**	Pn	**P**	**11 57 40.6**	**-0.9**
KBZ	**Khabaz**	**15.62**	**49**	Pn	**P**	**11 57 40.6**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=206,slow=13,SNR=5.8							
KBZ	**Khabaz**	**15.62**	**49**	P	**P**	**11 57 40.7**	**-0.9**
ZEI	**Tsey**	**15.81**	**53**	*e*P	**P**	**11 57 42.6**	**-1.3**
ZEI				pmax	pmax			
	comp=Z,12nm,1.0s							
ZEI	**Tsey**	**15.81**	**53**	*e*P	**P**	**11 57 42.6**	**-1.3**
	comp=Z,12nm,1.0s							
PGF	**Pioggiola**	**15.97**	**306**	*e*P	**Pn**	**11 57 40.7**	**-1.7**
PGF	**Pioggiola**	**15.97**	**306**	*e*P	**Pn**	**11 57 40.7**	**-1.7**
PGF	**Pioggiola**	**15.97**	**306**	*e*P	**Pn**	**11 57 40.7

PAGF	Fort de Pagny	20.96	318	eP		P		11 58 39.7	-0.5
PAGF	Fort de Pagny	20.96	318	eP		P		11 58 39.7	-0.5
SMF	Signal de Mont	21.08	312	eP		P		11 58 41.2	-0.3
SMF	Signal de Mont	21.08	312	eP		P		11 58 41.2	-0.3
SMF	Signal de Mont	21.08	312	eP		P		11 58 41.2	-0.3
SMF	Signal de Mont	21.08	312	eP		P		11 58 41.2	-0.3
SFTF	Sexfontaines	21.15	317	eP		P		11 58 41.6	-0.7
SFTF	Sexfontaines	21.15	317	eP		P		11 58 41.6	-0.7
SFTF	Sexfontaines	21.15	317	eP		P		11 58 41.6	-0.7
MEZF	Maizieres J'vi	21.30	318	eP		P		11 58 43.3	-0.6
	comp=Z,8.7nm,0.5s								
MEZF	Maizieres J'vi	21.30	318	eP		P		11 58 43.3	-0.6
	comp=Z,8.7nm,0.5s								
MEZF	Maizieres J'vi	21.30	318	eP		P		11 58 43.3	-0.6
	comp=Z,4.3nm,0.5s								
LOR	Lormes	21.36	314	eP		P		11 58 43.0	-1.5
LOR				eR					
	comp=Z,114nm,18.0s								
LOR	Lormes	21.36	314	eP		P		11 58 43.0	-1.5
LOR	Lormes	21.36	314	eP		P		11 58 43.0	-1.5
SSF	Saint Saulge	21.48	313	eP		P		11 58 46.1	+0.3
	comp=Z,16nm,0.9s								
SSF	Saint Saulge	21.48	313	eP		P		11 58 46.1	+0.3
SSF				pmax		pmax			
	comp=Z,17nm,0.9s								
SSF	Saint Saulge	21.48	313	eP		P		11 58 46.1	+0.3
	comp=Z,16nm,0.9s								
SSF	Saint Saulge	21.48	313	eP		P		11 58 46.1	+0.3
	comp=Z,8.2nm,0.9s								
BGF	Bois d'Agland	21.66	311	eP		P		11 58 47.0	-0.7
BGF	Bois d'Agland	21.66	311	eP		P		11 58 47.0	-0.7
BGF	Bois d'Agland	21.66	311	eP		P		11 58 47.0	-0.7
BGF	Bois d'Agland	21.66	311	eP		P		11 58 47.0	-0.7
OBN	Obninsk	21.77	15	eP		P		11 58 50.1	+1.4
OBN				i				11 59 02.8	
OBN				i				11 59 12.9	
OBN					pmax		pmax		
	comp=Z,6.0nm,1.0s								
OBN					MLR		MLR		
	comp=Z,100nm,16.0s								
OBN	Obninsk	21.77	15	eP		P		11 58 50.1	+1.4
	comp=Z,6.0nm,1.0s								
TAM	Tamanrasset	21.84	243	eP		P		11 58 51.7	+1.7
TAM					pmax		pmax		
	comp=Z,6.0nm,1.0s								
TAM	Tamanrasset	21.84	243	eP		P		11 58 51.7	+1.7
	comp=Z,5.7nm,1.0s								
TAM	Tamanrasset	21.84	243	eP		P		11 58 51.7	+1.7
	comp=Z,6.0nm,1.0s								
GIVF	Givet	22.34	321	eP		P		11 58 53.3	-1.7
GIVF	Givet	22.34	321	eP		P		11 58 53.3	-1.7
GIVF	Givet	22.34	321	eP		P		11 58 53.3	-1.7
GIVF	Givet	22.34	321	eP		P		11 58 53.3	-1.7
BAIF	Baives	22.64	320	eP		P		11 58 57.1	-1.0
	comp=Z,8.2nm,0.6s								
BAIF	Baives	22.64	320	eP		P		11 58 57.1	-1.0
BAIF					pmax		pmax		
	comp=Z,8.0nm,0.6s								
BAIF	Baives	22.64	320	eP		P		11 58 57.1	-1.0
	comp=Z,8.2nm,0.6s								
BAIF	Baives	22.64	320	eP		P		11 58 57.1	-1.0
	comp=Z,4.1nm,0.6s								
LDF	La Druitiere	24.35	314	eP		P		11 59 13.9	-1.0
LDF	La Druitiere	24.35	314	eP		P		11 59 13.9	-1.0
LDF	La Druitiere	24.35	314	eP		P		11 59 13.9	-1.0
LDF	La Druitiere	24.35	314	eP		P		11 59 13.9	-1.0
FLN	La Foliniere	24.64	314	eP		P		11 59 16.6	-0.9
FLN				eR					
	comp=Z,70nm,19.8s								
FLN	La Foliniere	24.64	314	eP		P		11 59 16.6	-0.9
FLN	La Foliniere	24.64	314	eP		P		11 59 16.6	-0.9
FLN	La Foliniere	24.64	314	eP		P		11 59 16.6	-0.9
GRR	Gorron	24.71	313	eP		P		11 59 16.3	-1.8
GRR	Gorron	24.71	313	eP		P		11 59 16.3	-1.8
GRR	Gorron	24.71	313	eP		P		11 59 16.3	-1.8
GRR	Gorron	24.71	313	eP		P		11 59 16.3	-1.8
ESDC	Sonseca Array	24.90	291	P		P		11 59 20.7	+0.7
ESDC	Sonseca Array	24.90	291	P		P		11 59 20.7	+0.7
	comp=Z,0.4nm,0.5s,baz=85,slow=10,SNR=3.3								
ESDC	Sonseca Array	24.90	291	P		P		11 59 20.7	+0.7
FINES	FINESS Array B	26.99	359	P		P		11 59 38.0	-0.6
FINES	FINESS Array B	26.99	359	P		P		11 59 38.0	-0.6
	comp=Z,1.3nm,0.5s,baz=156,slow=10,SNR=9.6								
FINES	FINESS Array B	26.99	359	P		P		11 59 38.0	-0.6
	comp=Z,1.0nm,0.5s								
AKTK	Aktyubinsk	27.84	45	P		P		11 59 46.7	+0.3
	comp=Z,1.0nm,0.4s								
AKTO	Aktyubinsk	27.84	45	P		P		11 59 46.7	+0.3
AKTO					pmax		pmax		
	comp=Z,1.0nm,0.4s								
AKTO	Aktyubinsk	27.84	45	P		P		11 59 46.7	+0.3
AKTO	Aktyubinsk	27.84	45	P		P		11 59 46.7	+0.3
	comp=Z,1.3nm,0.4s,baz=250,slow=13,SNR=7.7								
AKTO	Aktyubinsk	27.84	45	P		P		11 59 46.7	+0.3
NB2	NORSAR Subarra	28.38	344	P		P		11 59 50.7	-0.4
	comp=Z,1.0nm,0.8s,baz=156,slow=9.3								
NB2	NORSAR Subarra	28.38	344	P		P		11 59 50.7	-0.4
	comp=Z,1.0nm,0.8s,SNR=4.6								
NOA	NORSAR Array B	28.38	344	P		P		11 59 50.4	-0.8
NOA	NORSAR Array B	28.38	344	P		P		11 59 50.4	-0.8
	comp=Z,0.3nm,0.5s,baz=149,slow=9.5,SNR=2.7								
NOA	NORSAR Array B	28.38	344	P		P		11 59 50.3	-0.8
EKA	Eskdalemuir Ar	29.31	325	P		P		12 00 00.9	+1.6
EKA	Eskdalemuir Ar	29.31	325	P		P		12 00 00.9	+1.6
	comp=Z,1.6nm,0.7s,baz=122,slow=9.2,SNR=5.6								
EKA	Eskdalemuir Ar	29.31	325	P		P		12 00 00.9	+1.6
	comp=Z,2.2nm,0.7s								
TORD	Torodi Ar. Bea	31.02	233	P		P		12 00 15.5	+0.7
TORD	Torodi Ar. Bea	31.02	233	P		P		12 00 15.5	+0.7
	comp=Z,1.1nm,0.5s,baz=30,slow=8.8,SNR=12								
TORD	Torodi Ar. Bea	31.02	233	P		P		12 00 15.5	+0.7
ARCES	ARCESS Array B	35.12	359	P		P		12 00 48.9	-1.3
ARCES	ARCESS Array B	35.12	359	P		P		12 00 48.9	-1.3
	comp=Z,8.5nm,1.1s,baz=177,slow=9.7,SNR=19								
ARCES	ARCESS Array B	35.12	359	P		P		12 00 48.8	-1.3
BVAR	Borovoye Array	35.95	45	P		P		12 00 58.6	+1.2
BVAR					pmax		pmax		
	comp=Z,1.0nm,0.8s								
BVAR	Borovoye Array	35.95	45	P		P		12 00 58.6	+1.2
BVAR	Borovoye Array	35.95	45	P		P		12 00 58.6	+1.2
	comp=Z,1.1nm,0.8s,baz=245,slow=6.4,SNR=5.8								
BVAR	Borovoye Array	35.95	45	P		P		12 00 58.6	+1.2
	comp=Z,1.0nm,0.8s								
AAK	Ala-Archa	37.87	63	⇓eP		P		12 01 16.4	+2.3
AAK	Ala-Archa	37.87	63	P		P		12 01 15.8	+1.7
AAK	Ala-Archa	37.87	63	P		P		12 01 15.8	+1.7
	comp=Z,1.3nm,0.7s,baz=193,slow=9.1,SNR=4.9								
AAK	Ala-Archa	37.87	63	P		P		12 01 15.8	+1.7
DBIC	Dimbokro	40.12	234	P		P		12 01 34.0	+1.1
DBIC	Dimbokro	40.12	234	P		P		12 01 34.0	+1.1
	comp=Z,1.7nm,0.5s,baz=34,slow=8.9,SNR=3.9								
DBIC	Dimbokro	40.12	234	P		P		12 01 34.0	+1.1
	comp=Z,2.0nm,0.5s								
KURK	Kurchatov	40.67	50	*i* P		P		12 01 42.2	+5.1
MKAR	Makanchi Array	43.14	56	P		P		12 01 58.6	+1.2
MKAR					pmax		pmax		
	comp=Z,2.0nm,0.7s								
MKAR	Makanchi Array	43.14	56	P		P		12 01 58.6	+1.2
MKAR	Makanchi Array	43.14	56	P		P		12 01 58.6	+1.2
	comp=Z,1.7nm,0.7s,baz=283,slow=6.8,SNR=5.4								
MKAR	Makanchi Array	43.14	56	P		P		12 01 58.6	+1.2
	comp=Z,2.0nm,0.7s								
SPITS	Spitsbergen Ar	44.03	357	P		P		12 02 04.0	-0.1
SPITS	Spitsbergen Ar	44.03	357	P		P		12 02 04.0	-0.1
	comp=Z,4.5nm,0.9s,baz=178,slow=11,SNR=3.8								
SPITS	Spitsbergen Ar	44.03	357	P		P		12 02 04.0	-0.1
	comp=Z,5.0nm,0.9s								
ZALV	Zalesovo Beam	44.60	46	P		P		12 02 08.2	-0.8
ZALV					pmax		pmax		
	comp=Z,2.0nm,0.5s								
ZALV	Zalesovo Beam	44.60	46	P		P		12 02 08.2	-0.8
ZALV	Zalesovo Beam	44.60	46	P		P		12 02 08.2	-0.8
	comp=Z,2.1nm,0.5s,baz=266,slow=9.0,SNR=6.8								
ZALV	Zalesovo Beam	44.60	46	P		P		12 02 08.2	-0.8
	comp=Z,2.0nm,0.5s								
ZAK	Zakamensk	56.28	48	eP		P		12 03 38.9	+1.4
ZAK					pmax		pmax		
	comp=Z,2.0nm,1.2s								
ZAK	Zakamensk	56.28	48	eP		P		12 03 38.9	+1.4
	comp=Z,2.0nm,1.2s								
SONM	Songino Array	58.98	51	P		P		12 03 57.5	+1.0
SONM	Songino Array	58.98	51	P		P		12 03 57.5	+1.0
	comp=Z,1.9nm,0.6s,baz=286,slow=9.4,SNR=14								
SONM	Songino Array	58.98	51	P		P		12 03 57.5	+1.0
	comp=Z,2.0nm,0.6s								
SCHQ	Schefferville	64.50	320	P		P		12 04 34.9	+1.5
SCHQ	Schefferville	64.50	320	P		P		12 04 34.9	+1.5
	comp=Z,1.2nm,0.4s,baz=55,slow=6.4,SNR=8.2								
SCHQ	Schefferville	64.50	320	P		P		12 04 34.8	+1.5
CMAR	Chiang Mai Arr	65.43	84	P		P		12 04 40.1	+0.1
CMAR	Chiang Mai Arr	65.43	84	P		P		12 04 40.1	+0.1
	comp=Z,1.1nm,0.8s,baz=292,slow=7.5,SNR=5.5								
CMAR	Chiang Mai Arr	65.43	84	P		P		12 04 40.1	+0.1
	comp=Z,1.0nm,0.8s								
BILL	Bilibino	73.42	15	eP		P		12 05 33.2	+4.6
BILL					pmax		pmax		
	comp=Z,2.0nm,1.3s								
USRK	Ussuriysk Arra	76.46	46	P		P		12 05 47.3	+0.8
	comp=Z,2.8nm,0.7s,baz=285,slow=4.1,SNR=6.2								
KSAR	Wonju Array Be	77.71	53	P		P		12 05 55.6	+2.0
KSAR	Wonju Array Be	77.71	53	P		P		12 05 55.6	+2.0
KSRS	Korea Array	77.73	53	P		P		12 05 55.6	+1.9
	comp=Z,1.1nm,0.8s,baz=309,slow=5.1,SNR=3.8								
KSRS	Korea Array	77.73	53	P		P		12 05 55.6	+1.9
	comp=Z,1.0nm,0.8s								
YKA	Yellowknife Ar	78.47	343	P		P		12 05 59.1	+1.7
YKA	Yellowknife Ar	78.47	343	P		P		12 05 59.1	+1.7
	comp=Z,0.2nm,0.6s,baz=34,slow=4.9,SNR=4.2								
YKA	Yellowknife Ar	78.47	343	P		P		12 05 59.1	+1.7
ILAR	Eielson Array	80.95	357	P		P		12 06 13.1	+2.2
ILAR	Eielson Array	80.95	357	P		P		12 06 13.1	+2.2
	comp=Z,0.3nm,0.8s,baz=340,slow=4.8,SNR=3.8								
ILAR	Eielson Array	80.95	357	P		P		12 06 13.1	+2.2
MJAR	Matsushiro Arr	84.87	49	P		P		12 06 32.8	+1.1
MJAR	Matsushiro Arr	84.87	49	P		P		12 06 32.8	+1.1
	comp=Z,1.1nm,0.8s,baz=312,slow=4.6,SNR=4.5								
MJAR	Matsushiro Arr	84.87	49	P		P		12 06 32.8	+1.1
MJA0	Matsu Arr-Jizo	84.89	49	eP		P		12 06 33.1	+1.2
MJA0					pmax		pmax		
	comp=Z,1.0nm,0.8s								
CPUP	Villa Florida	99.83	245	LR		LR		12 54 21.4	
	comp=Z,73nm,18.5s,baz=6.1,slow=36								

NIED ***11*** *11:58:00.3±1.7, 31.30N×130.70E, h110km, Mw4.2 Best double couple: M0 1.93000×10^15 NP1:ϕ=16.00000°, δ=87.00000°, λ=93.00000°. NP2:ϕ=154.00000°, δ=4.00000°, λ=47.00000°.*

ISCJB ***11*** *11:58:16.7±0.3, 31.32N±0.04×130.74E±0.05, h118km±2km, mb4.0/24, Error ellipse: s-maj=7.9km s-min=5.8km az=22.0*

JMA ***11*** *11:58:18.4±0.1, 31.31N×130.76E, h106km±1km, M3.8*

JMA Felt II J1.

IDC ***11*** *11:58:19.5±1.3, 31.46N×130.71E, h124km±10km, mb3.6/18, mb1 3.7/20, mb1mx3.7/29, mbtmp3.6/20, MS2.5/1, Ms1 2.5/1, ms1mx1.9/39, Error ellipse: s-maj=16.3km s-min=13.5km az=47.0*

ISC 11 11:58:17.7±0.6, 31.30N±0.05×130.74E±0.06, h112km±5km, n44, σ0 90/57, mb4.0/24, 4C-5D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JTSR	Tashiro 2	0.20	132	⇑P		Pn	11 58 33.3	-0.1
JTSR				S		Sn	11 58 44.3	-0.8
JSU	Suzuyama	0.32	309	⇓P		Pn	11 58 33.9	+0.1
JSU				S		Sn	11 58 45.5	-0.4
JNAR	Kushima--Naru	0.50	64	⇑P		Pn	11 58 34.9	+0.2
JNAR				eS		Sn	11 58 47.5	0.0
JTZ	Takazaki	0.66	26	⇑P		Pn	11 58 36.0	+0.1
JTZ				S		Sn	11 58 49.1	-0.6
JTN	Tanegashima 3	0.68	163	⇑P		Pn	11 58 36.3	+0.2
JTN				S		Sn	11 58 49.7	-0.2
JZO	Okuchi	0.84	352	⇓P		Pn	11 58 37.7	+0.2
JZO				S		Sn	11 58 52.2	-0.3
JSJ	Shimokoshiki	0.95	293	⇓P		Pn	11 58 39.1	+0.6
JSJ				S		Sn	11 58 54.8	+0.5
JKC	Kuchinoerabu	0.96	209	⇓P		Pn	11 58 38.8	+0.2
JKC				S		Sn	11 58 54.4	0.0
JIU2	Izumi 2	1.24	3	⇓P		Pn	11 58 42.1	+0.5
JIU2				S		Sn	11 58 59.8	+0.1
JNN	Nakanoshima	1.64	207	P		Pn	11 58 46.8	+0.5
JNU	Nakatsue	1.82	4	P		Pn	11 58 49.0	+0.5
	19nm,0.3s,baz=228,slow=3.8,SNR=188							
JNU				S		Sn	11 59 11.7	-0.3
	34nm,0.3s,baz=284,slow=2.4,SNR=22							
KSRS	Korea Array	6.56	340	P		Pn	11 59 53.0	+1.4
	0.3nm,0.3s,baz=158,slow=15,SNR=8.0							
JHJ	Hachijo jima 2	7.87	74	P		Pn	12 00 10.2	+0.9
	8.5nm,0.3s,baz=228,slow=20,SNR=6.9							
JHJ				LR		LR	12 03 12.4	
	comp=Z,36nm,21.0s,baz=73,slow=37							
MAT	Matsushiro	8.11	48	P		Pn	12 00 13.6	+1.0
MAT				S		Sn	12 01 41.4	-1.1
MJAR	Matsushiro Arr	8.11	48	P		Pn	12 00 14.6	+2.0
	1.4nm,0.3s,baz=240,slow=14,SNR=42							
MJAR				S		Sn	12 01 36.0	-6.6
	0.3nm,0.3s,baz=227,slow=17,SNR=7.8							
USRK	Ussuriysk Arra	12.91	4	P		P	12 01 24.7	+1.5
	0.5nm,0.3s,baz=192,slow=9.5,SNR=9.2							
SONM	Songino Array	24.84	319	P		P	12 03 29.4	-0.2
	1.7nm,0.6s,baz=141,slow=9.5,SNR=17							
GTA	Gaotai	26.39	296	eP		P	12 03 44.3	+0.5
GTA				pP		pP	12 03 48.1	-20
GTA				sP		sP	12 03 50.9	-30
GTA				pmax		pmax		
	comp=Z,9.0nm,0.7s							
CMAR	Chiang Mai Arr	31.44	254	P		P	12 04 28.6	+0.1
	comp=Z,0.7nm,0.5s,baz=51,slow=7.5,SNR=5.7							
ZALV	Zalesovo Beam	39.74	318	P		P	12 05 38.1	-1.0
	comp=Z,0.5nm,0.4s,baz=87,slow=10,SNR=4.5							
ZALV				PcP		PcP	12 07 42.9	-0.3
	comp=Z,0.6nm,0.4s,baz=94,slow=4.5,SNR=4.2							
MKAR	Makanchi Array	40.03	307	P		P	12 05 41.4	-0.2
	comp=Z,2.1nm,0.7s,baz=92,slow=10,SNR=17							
MKAR				PcP		PcP	12 07 43.3	-1.1
	comp=Z,0.4nm,0.5s,baz=83,slow=3.0,SNR=5.9							
AAK	Ala-Archa	45.58	301	P		P	12 06 26.7	0.0
	comp=Z,1.0nm,0.5s,baz=124,slow=7.3,SNR=3.9							
BVAR	Borovoye Array	48.10	315	P		P	12 06 45.7	-0.2
	comp=Z,5.1nm,0.3s,baz=99,slow=9.6,SNR=38							
BVAR				PcP		PcP	12 08 11.5	-0.4
	comp=Z,1.7nm,0.6s,baz=98,slow=4.5,SNR=5.8							
WRA	Warramunga Arr	51.07	176	P		P	12 07 10.6	+1.9
	comp=Z,0.5nm,1.0s,baz=350,slow=5.3,SNR=3.6							
ASAR	Alice Springs	54.74	176	P		P	12 07 37.4	+1.7
	comp=Z,0.3nm,0.7s,baz=6.7,slow=15,SNR=4.9							
AKTO	Aktyubinsk	55.94	313	P		P	12 07 44.5	+0.5
	comp=Z,2.6nm,0.6s,baz=68,slow=12,SNR=9.6							
ILAR	Eielson Array	58.95	30	P		P	12 08 04.8	-0.1
	comp=Z,0.5nm,0.7s,baz=275,slow=6.3,SNR=10							
KEV	Kevo	65.55	338	ep		P	12 08 45.5	-3.2
	comp=Z,5.9nm,0.8s							
ARCES	ARCESS Array B	66.12	338	P		P	12 08 51.1	-1.3
	comp=Z,1.3nm,0.5s,baz=51,slow=7.9,SNR=9.3							
JOF	Joensuu	66.70	331	ep		P	12 08 54.1	-2.1
	comp=Z,5.3nm,0.6s							
KBZ	Khabaz	67.70	308	P		P	12 09 03.6	+0.8
	comp=Z,10nm,0.8s,baz=82,slow=2.1,SNR=24							
KAF	Kangasniemi	69.15	331	ep		P	12 09 09.4	-2.2
	comp=Z,5.3nm,0.7s							
FINES	FINESS Array B	69.56	330	P		P	12 09 13.2	-0.8
	comp=Z,9.4nm,0.6s,baz=66,slow=6.1,SNR=110							
MIB	Mutribah	70.05	293	eP		P	12 09 17.5	-0.2
RDF	Al-Radifah	70.26	292	eP		P	12 09 19.5	+0.5
NAY	Al-Naaiem	70.37	293	eP		P	12 09 19.4	-0.3
YKA	Yellowknife Ar	73.01	26	P		P	12 09 34.9	0.0
	comp=Z,0.3nm,0.7s,baz=309,slow=5.5,SNR=6.8							
AKASG	Malin Array Be	73.12	319	P		P	12 09 34.9	-0.8
	comp=Z,1.9nm,0.3s,baz=55,slow=6.7,SNR=7.0							
BRTR	Keskin Array B	75.67	309	P		P	12 09 51.2	+0.3
	comp=Z,5.1nm,0.8s,baz=93,slow=4.9,SNR=18							
NB2	NORSAR Subarra	75.74	334	P		P	12 09 49.8	-1.0
	comp=Z,1.3nm,0.8s,baz=46,slow=5.9							
NOA	NORSAR Array B	75.74	334	P		P	12 09 49.7	-1.1
	comp=Z,1.5nm,0.7s,baz=50,slow=5.6,SNR=7.1							
GERES	GERESS Array B	82.47	324	P		P	12 10 27.3	-0.4
	comp=Z,0.6nm,0.6s,baz=38,slow=5.0,SNR=5.3							
EKA	Eskdalemuir Ar	85.11	336	P		P	12 10 39.5	-1.4
	comp=Z,0.3nm,0.4s,baz=51,slow=4.5,SNR=4.5							
NVAR	Mina Array Bea	85.43	47	P		P	12 10 44.2	+1.0
	comp=Z,0.2nm,0.5s,baz=325,slow=7.7,SNR=2.5							

IDC ***11*** *12:00:02.6±1.7, 60.44S×26.97W, h0km, mb3.9/5, mb1 3.9/5, mb1mx3.7/16, mbtmp3.9/5, Error ellipse: s-maj=57.8km s-min=29.0km az=3.0*

ISCJB ***11*** *12:00:03.4±0.7, 60.55±0.1×26.9W±0.4, h19km, mb3.8/5, Error ellipse: s-maj=32.6km s-min=10.2km az=148.7*

ISC 11 12:00:05.4±0.8, 60.5S±0.2×27.0W±0.2, h19km, n12, σ0 78/13, mb4.0/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	12.73	151	eP		Pn	12 03 06.0	+0.9
VNA3	Neumayer Olymp	12.84	154	eP		Pn	12 03 06.0	-0.6
VNA2	Neumayer--Watz	13.12	151	eP		Pn	12 03 11.0	+0.5
	baz=315,slow=14							
SNAA	Sanae	14.73	149	eP		Pn	12 03 31.7	-0.8
CFAA	Coronel Fontan	39.58	298	P		P	12 07 36.2	+0.9
	0.4nm,0.6s,baz=157,slow=7.9,SNR=7.7							
SIV	San Ignacio	50.78	316	P		P	12 09 04.0	-0.3
	0.6nm,0.5s,baz=207,slow=14,SNR=4.6							
LPAZ	La Paz	53.11	308	P		P	12 09 22.2	-0.1
	1.0nm,0.6s,baz=106,slow=8.2,SNR=5.6							
DBIC	Dimbokro	69.19	24	P		P	12 11 10.0	-0.5
	1.1nm,0.6s,baz=117,slow=5.2,SNR=2.9							
TORD	Torodi Ar. Bea	76.89	29	P		P	12 11 56.6	+0.6
	1.2nm,0.5s,baz=198,slow=6.4,SNR=14							
YKA	Yellowknife Ar	139.46	314	PKP		PKPdf	12 19 29.6	-0.1
	0.3nm,0.8s,baz=129,slow=2.3,SNR=6.8							
SONM	Songino Array	150.59	94	PKPbc		PKPbc	12 19 55.8	+0.8
	0.6nm,0.7s,baz=217,slow=3.5,SNR=5.7							
ILAR	Eielson Array	152.97	305	PKPbc		PKPbc	12 19 59.2	-0.5
	0.3nm,0.7s,baz=60,slow=0.2,SNR=7.2							
ILAR				PKPab		PKPab	12 20 10.0	-1.2
	0.4nm,0.8s,baz=90,slow=1.9,SNR=5.1							

MEX 11 12:12:28.0±0.3, 15.94N×96.82W, h16km±4km, MD3.5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
HUIG	Huatulco	0.71	104	eP		Pg	12 12 39.5	-2.3
HUIG				*i* S		Sg	12 12 48.1	-3.2
VHO	Vista Hermosa	1.13	4	eP		Pn	12 12 45.7	-3.7
VHO				*i* S		Sb	12 12 59.4	-4.7
PNIG	Pinotepa	1.33	290	eP		Pn	12 12 48.2	-3.7
PNIG				eS		Sn	12 13 04.5	-4.9
CMIG	Matias Romero	2.18	58	eP		Pn	12 13 00.6	-3.0
CMIG				eS		Sn	12 13 26.5	-3.9

CASC 11 12:16:39.5±2.3, 14.82N×92.21W, h80km±13km, MD3.7, 1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JAT	Jato	0.74	131	eP		Pn	12 16 54.6	-1.0
JAT				eS		Sn	12 17 09.3	+1.7
FG6		1.31	101	eP		Pn	12 17 03.8	+1.0
FG6				eS		Sn	12 17 23.8	+3.1
FUG	Fuego 3	1.38	105	⇓eP		Pn	12 17 04.0	+0.5
PCG	Pacaya	1.61	105	eP		Pn	12 17 07.6	+1.0
PCG				eS		Sn	12 17 28.6	+1.5
RBDL	Robledal	2.54	106	eP		Pn	12 17 19.3	+0.4
SBLS	San Blas	2.69	111	eP		Pn	12 17 21.6	+0.6
SBLS				eS		Sn	12 17 53.8	+0.9
LFRS	El Faro	3.28	111	eP		Pn	12 17 29.1	+0.3
LFRS				eS		Sn	12 18 06.4	-0.4
SNVI	San Vicente	3.48	110	eP		Pn	12 17 31.8	+0.2
SNVI				eS		Sn	12 18 11.9	-0.1

IDC 11 12:17:01.3±1.1, 18.99N×145.09E, h0km, mb3.3/5, mb1 3.6/5, mb1mx3.4/25, mbtmp3.3/5, Error ellipse: s-maj=56.5km s-min=22.8km az=105.0, Mariana Islands

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

TRTR	**Tortoreto Alta**	**0.55**	**43**	Pg	**Pb**	**12 28 51.5**	**-0.3**
	2µm,0.6s						
VVLD	**Villa Vallelon**	**0.56**	**163**	Pg	**Pg**	**12 28 50.1**	**-0.9**
	747nm,0.5s						
VVLD	**Villa Vallelon**	**0.56**	**163**	Pg	**Pg**	**12 28 50.1**	**-0.9**
	747nm,0.5s						
OFFI	**Offida**	**0.57**	**22**	Pg	**Pb**	**12 28 51.8**	**-0.3**
	4µm,0.6s						
OFFI	**Offida**	**0.57**	**22**	Pg	**Pb**	**12 28 51.8**	**-0.3**
	4µm,0.6s						
GUAR	**Guarcino**	**0.61**	**186**	Pg	**Pg**	**12 28 51.1**	**-0.9**
	522nm,0.5s						
GUAR	**Guarcino**	**0.61**	**186**	Pg	**Pg**	**12 28 51.1**	**-0.9**
	522nm,0.5s						
MTCE	**Montecelio**	**0.62**	**232**	Pg	**Pg**	**12 28 51.5**	**-0.6**
	578nm,0.8s						
MTCE	**Montecelio**	**0.62**	**232**	Pg	**Pg**	**12 28 51.5**	**-0.6**
	578nm,0.8s						
CESX	**Cesi**	**0.64**	**289**	Pg	**Pg**	**12 28 51.9**	**-0.6**
	418nm,0.4s						
CESX	**Cesi**	**0.64**	**289**	Pg	**Pg**	**12 28 51.9**	**-0.6**
	418nm,0.4s						
FDMO	**Fiordimonte**	**0.67**	**340**	Pg	**Pg**	**12 28 52.5**	**-0.6**
FDMO				Sg	**Sb**	**12 29 03.3**	**+0.2**
	346nm,0.2s						
FDMO	**Fiordimonte**	**0.67**	**340**	Pg	**Pg**	**12 28 52.5**	**-0.6**
FDMO				Sg	**Sb**	**12 29 03.3**	**+0.2**
	346nm,0.2s						
LPEL	**Lama dei Pelig**	**0.68**	**121**	Pg	**Pg**	**12 28 52.4**	**-0.9**
LPEL				Sg	**Sg**	**12 29 03.0**	**+0.7**
	1µm,0.6s						
LPEL	**Lama dei Pelig**	**0.68**	**121**	Pg	**Pg**	**12 28 52.4**	**-0.9**
LPEL				Sg	**Sg**	**12 29 03.0**	**+0.7**
	1µm,0.6s						
CESI	**CESI - Serrava**	**0.70**	**329**	Pg	**Pg**	**12 28 53.1**	**-0.6**
	158nm,0.6s						
CESI	**CESI - Serrava**	**0.70**	**329**	Pg	**Pg**	**12 28 53.1**	**-0.6**
	158nm,0.6s						
CAFR	**Castel Frentan**	**0.73**	**104**	Pg	**Pg**	**12 28 53.7**	**-0.4**
	874nm,0.3s						
CAFR	**Castel Frentan**	**0.73**	**104**	Pg	**Pg**	**12 28 53.7**	**-0.4**
	874nm,0.3s						
POFI	**Posta Fibreno**	**0.73**	**161**	Pg	**Pg**	**12 28 52.8**	**-1.3**
	276nm,0.5s						
POFI	**Posta Fibreno**	**0.73**	**161**	Pg	**Pg**	**12 28 52.8**	**-1.3**
	276nm,0.5s						
SDI	**San Donato**	**0.76**	**156**	Pg	**Pg**	**12 28 53.5**	**-1.3**
	170nm,0.2s						
SDI	**San Donato**	**0.76**	**156**	Pg	**Pg**	**12 28 53.5**	**-1.3**
	170nm,0.2s						
GUMA	**Gualdo di Mace**	**0.77**	**31**	Pg	**Pg**	**12 28 52.9**	**-2.0**
GUMA	**Gualdo di Mace**	**0.77**	**31**	Pg	**Pg**	**12 28 52.9**	**-2.0**
RMP	**Rome, Mte Porz**	**0.79**	**221**	Pg	**Pg**	**12 28 54.2**	**-1.1**
	383nm,0.5s						
RMP	**Rome, Mte Porz**	**0.79**	**221**	Pg	**Pg**	**12 28 54.2**	**-1.1**
	383nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.85**	**187**	Pg	**Pg**	**12 28 55.3**	**-1.2**
GIUL	**Giuliano Di Ro**	**0.85**	**187**	Pg	**Pg**	**12 28 55.3**	**-1.2**
RNI2	**Rionero Sannit**	**0.90**	**141**	Pg	**Pg**	**12 28 56.6**	**-0.8**
	304nm,0.7s						
RNI2	**Rionero Sannit**	**0.90**	**141**	Pg	**Pg**	**12 28 56.6**	**-0.8**
	304nm,0.7s						
SNTG	**Esanatoglia**	**0.91**	**339**	Pg	**Pg**	**12 28 56.8**	**-0.9**
	92nm,0.3s						
SNTG	**Esanatoglia**	**0.91**	**339**	Pg	**Pg**	**12 28 56.8**	**-0.9**
	92nm,0.3s						
CERA	**Filignano**	**0.93**	**150**	Pg	**Pg**	**12 28 56.3**	**-1.7**
	239nm,0.6s						
CERA	**Filignano**	**0.93**	**150**	Pg	**Pg**	**12 28 56.3**	**-1.7**
	239nm,0.6s						
CING	**Cingoli**	**0.98**	**351**	Pg	**Pg**	**12 28 57.9**	**-1.1**
	249nm,0.4s						
CING	**Cingoli**	**0.98**	**351**	Pg	**Pg**	**12 28 57.9**	**-1.1**
	249nm,0.4s						
MIDA	**Miranda**	**0.99**	**140**	Pg	**Pg**	**12 28 57.6**	**-1.6**
	228nm,0.5s						
MIDA	**Miranda**	**0.99**	**140**	Pg	**Pg**	**12 28 57.6**	**-1.6**
	228nm,0.5s						
MURB	**Monte Urbino**	**1.07**	**323**	Pg	**Pg**	**12 28 59.9**	**-0.8**
	450nm,0.3s						
MURB	**Monte Urbino**	**1.07**	**323**	Pg	**Pg**	**12 28 59.9**	**-0.8**
	450nm,0.3s						
MGAB	**Montegabbione**	**1.08**	**299**	Pg	**Pg**	**12 29 00.3**	**-0.5**
	155nm,0.4s						
MGAB	**Montegabbione**	**1.08**	**299**	Pg	**Pg**	**12 29 00.3**	**-0.5**
	155nm,0.4s						
ARVD	**Arcevia**	**1.14**	**343**	Pg	**Pg**	**12 29 01.3**	**-0.7**
	250nm,0.7s						
ARVD	**Arcevia**	**1.14**	**343**	Pg	**Pg**	**12 29 01.3**	**-0.7**
	250nm,0.7s						
AOI	**Ancona**	**1.15**	**7**	Pg	**Pg**	**12 29 01.5**	**-0.8**
	240nm,0.4s						
AOI	**Ancona**	**1.15**	**7**	Pg	**Pg**	**12 29 01.5**	**-0.8**
	240nm,0.4s						
PIEI	**Pieia**	**1.29**	**331**	Pg	**Pg**	**12 29 03.8**	**-1.2**
	107nm,0.4s						
PIEI	**Pieia**	**1.29**	**331**	Pg	**Pg**	**12 29 03.8**	**-1.2**
	107nm,0.4s						
FSSB	**Fossombrone**	**1.36**	**341**	Pn	**Pn**	**12 29 04.9**	**-0.1**
	418nm,0.5s						
FSSB	**Fossombrone**	**1.36**	**341**	Pn	**Pn**	**12 29 04.9**	**-0.1**
	418nm,0.5s						
MS1	**Monte Sant'Ang**	**2.02**	**109**	*e*Pn	**Pg**	**12 29 18.1**	**-0.7**
NVLJ	**Novalja**	**2.41**	**26**	*e*Pn	**Pn**	**12 29 20.0**	**+0.6**
NVLJ				*e*Sn	**Sn**	**12 29 50.2**	**+1.4**
NVLJ	**Novalja**	**2.41**	**26**	*e*Pn	**Pn**	**12 29 19.9**	**+0.6**
NVLJ				*e*Sn	**Sn**	**12 29 50.2**	**+1.4**
MAIM	**Mastiano**	**2.61**	**306**	P	**Pn**	**12 29 22.7**	**+0.6**
STON	**Ston**	**3.21**	**80**	*e*Pn	**Pn**	**12 29 30.8**	**+0.4**
STON				*e*Sn	**Sn**	**12 30 10.7**	**+2.1**
STON	**Ston**	**3.21**	**80**	*e*Pn	**Pn**	**12 29 30.7**	**+0.4**
STON				*e*Sn	**Sn**	**12 30 10.6**	**+2.1**
PGF	**Pioggiola**	**3.26**	**274**	*e*Pn	**Pn**	**12 29 32.5**	**+1.4**
PGF				*e*Sn	**Sn**	**12 30 12.6**	**+2.7**
	6.2nm,0.5s						
PGF	**Pioggiola**	**3.26**	**274**	*e*Pn	**Pn**	**12 29 32.5**	**+1.4**
PGF				*e*Sn	**Sn**	**12 30 12.6**	**+2.7**
	3.1nm,0.5s						
GBRS	**Gornja Briga**	**3.29**	**18**	Pn	**Pn**	**12 29 32.8**	**+1.3**
BOJS	**Bojanci**	**3.37**	**23**	*e*Pn	**Pn**	**12 29 34.6**	**+2.0**
BOJS	**Bojanci**	**3.37**	**23**	*e*Pn	**Pn**	**12 29 34.6**	**+2.0**
JAVS	**Javornik**	**3.52**	**8**	*e*Pn	**Pn**	**12 29 35.3**	**+0.6**
JAVS				*e*Sn	**Sn**	**12 30 18.1**	**+1.7**
JAVS	**Javornik**	**3.52**	**8**	*e*Pn	**Pn**	**12 29 35.3**	**+0.6**
JAVS				*e*Sn	**Sn**	**12 30 18.1**	**+1.7**
ABTA	**Abfaltersbach**	**4.39**	**352**	⇑*i*Pn	**Pn**	**12 29 46.4**	**-0.2**
ABTA	**Abfaltersbach**	**4.39**	**352**	Pn	**Pn**	**12 29 46.4**	**-0.2**
SBF	**Sospel**	**4.60**	**290**	*e*Pn	**Pn**	**12 29 50.8**	**+1.2**
SBF	**Sospel**	**4.60**	**290**	*e*Pn	**Pn**	**12 29 50.8**	**+1.2**
DAVOX	**Davos/Dischmat**	**5.04**	**331**	Pn	Pn	12 29 59.3	+3.5
	1.4nm,0.3s,baz=160,slow=23,SNR=12						
DAVOX				Sn	**Sn**	**12 30 55.1**	**+1.0**
	0.1nm,0.3s,baz=293,slow=22,SNR=2.1						
FRF	**La Foret Royal**	**5.09**	**285**	*e*Pn	**Pn**	**12 29 57.1**	**+0.9**
FRF				*e*Sn	**Sn**	**12 30 52.1**	**-2.7**
	1.9nm,0.4s						
FRF	**La Foret Royal**	**5.09**	**285**	*e*Pn	**Pn**	**12 29 57.1**	**+0.9**
FRF				*e*Sn	**Sn**	**12 30 52.1**	**-2.7**
	0.9nm,0.4s						
LMR	**La Mourre**	**5.15**	**283**	*e*Pn	**Pn**	**12 29 57.7**	**+0.7**
LMR	**La Mourre**	**5.15**	**283**	*e*Pn	**Pn**	**12 29 57.7**	**+0.7**
MBDF	**Montbardon**	**5.34**	**298**	*e*P	**Pn**	**12 30 02.9**	**+3.0**
MBDF	**Montbardon**	**5.34**	**298**	*e*P	**Pn**	**12 30 02.9**	**+3.0**
LPG	**La Plagne**	**5.71**	**305**	*e*P	Pn	12 30 08.9	+3.9
LPG				*e*Sn	**Sn**	**12 31 07.9**	**-2.7**
	1.2nm,0.4s						
LPL	**La Plagne**	**5.73**	**305**	*e*P	Pn	12 30 09.0	+3.8
LPL				*e*Sn	**Sn**	**12 31 07.1**	**-3.9**
	3.6nm,0.2s						
SMRF	**Simiane la Rot**	**5.93**	**288**	*e*P	**Pn**	**12 30 10.3**	**+2.5**
SMRF	**Simiane la Rot**	**5.93**	**288**	*e*P	**Pn**	**12 30 10.3**	**+2.5**
GERES	**GERESS Array B**	**6.44**	**2**	Pn	**Pn**	**12 30 15.4**	**+0.5**
	0.3nm,0.3s,baz=174,slow=13,SNR=7.4						
GERES				Sn	**Sn**	**12 31 27.6**	**-0.9**
	0.7nm,0.3s,baz=169,slow=23,SNR=6.3						
KHC	**Kasperske Hory**	**6.73**	**1**	*e*PN	Pb	12 30 30.0	-7.0
KHC				*e*SN	**Sn**	**12 31 35.0**	**-0.3**
HINF	**Hinteralfeld**	**7.12**	**322**	*e*Pn	**Pn**	**12 30 24.9**	**+0.8**
HINF				*e*Sn	**Sn**	**12 31 41.4**	**-3.6**
	3.3nm,0.6s						
HINF	**Hinteralfeld**	**7.12**	**322**	*e*Pn	**Pn**	**12 30 24.9**	**+0.8**
KEST	**Kesra**	**7.37**	**207**	Pn	Pn	12 30 33.1	+5.4
	0.2nm,0.3s,baz=301,slow=4.5,SNR=5.0						
KEST				Sn	Sn	12 32 03.0	+12
	0.2nm,0.3s,baz=148,slow=20,SNR=4.1						
CDF	**Champ du Feu**	**7.39**	**326**	*e*Pn	**Pn**	**12 30 28.5**	**+0.6**
CDF				*e*Sn	**Sn**	**12 31 48.4**	**-3.3**
	1.5nm,0.4s						
CDF	**Champ du Feu**	**7.39**	**326**	*e*Pn	**Pn**	**12 30 28.5**	**+0.6**
HAU	**Haudompre**	**7.49**	**321**	*e*Pn	**Pn**	**12 30 29.9**	**+0.7**
HAU				*e*Sn	Sn	12 31 49.0	-5.1
	4.2nm,0.5s						
HAU	**Haudompre**	**7.49**	**321**	*e*Pn	**Pn**	**12 30 29.9**	**+0.7**
FINES	**FINESS Array B**	**20.54**	**17**	P	Pn	12 33 21.0	+0.7
	1.6nm,1.0s,baz=198,slow=8.7,SNR=2.3						
TORD	**Torodi Ar. Bea**	**30.87**	**203**	P	P	12 35 00.2	+3.8
	0.6nm,1.1s,baz=358,slow=9.5,SNR=3.5						
DBIC	**Dimbokro**	**39.09**	**210**	LR	LR	12 54 49.0	
	comp=2,46nm,19.1s,baz=112,slow=40						

IDC 11 12:45:00.4±1.4, 22°18S×176°40W, h0km, mb3.9/6, mb1 4.2/7, mb1mx4.0/17, mbtmp4.0/7, ML3.0/1, MS4.1/15, Ms1 4.1/15, ms1mx3.8/46, Error ellipse: s-maj=71.0km s-min=19.2km az=146.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.32**	**29**	Pn	Pn	12 47 16.1	-0.2
	8.0nm,0.3s,baz=12,slow=21,SNR=9.2						
AFI				Sn	Sn	12 49 00.4	-1.6
	3.0nm,0.3s,baz=253,slow=20,SNR=4.3						
RAR	**Rarotonga**	**15.48**	**90**	LR	LR	12 53 18.2	
	comp=2,711nm,20.9s,baz=285,slow=32						
DZM	**Mont Dzumac**	**15.90**	**267**	*e*LR	LR	12 52 31.9	
	542nm,24.1s						
TBI	**Tubuai**	**24.85**	**98**	*e*S	S	12 54 30.3	-18
	344nm,24.2s						
TBI				*e*LR	LR	12 56 22.8	
	454nm,23.0s,baz=275						
PPT2	**Papeete2**	**25.61**	**85**	*e*S	S	12 54 44.8	-16
	379nm,23.2s						
PPT2				*e*LR	LR	12 56 43.3	
	356nm,21.8s,baz=247						
PPT	**Papeete**	**25.62**	**84**	LR	LR	12 59 04.0	
	comp=2,631nm,18.1s,baz=261,slow=33						
STKA	**Stephens Creek**	**38.45**	**246**	P	P	12 52 24.1	0.0
	0.6nm,0.5s,baz=99,slow=13,SNR=3.4						
STKA				LR	LR	13 07 29.5	
	comp=2,326nm,18.9s,baz=298,slow=35						
ASAR	**Alice Springs**	**45.61**	**258**	P	P	12 53 22.9	+0.1
	4.1nm,1.1s,baz=93,slow=5.4,SNR=26						
ASAR				LR	LR	13 12 31.1	
	comp=2,371nm,18.7s,baz=106,slow=36						
WRA	**Warramunga Arr**	**45.87**	**263**	P	P	12 53 25.0	+0.1
	2.5nm,0.8s,baz=99,slow=8.2,SNR=33						
DAV	**Davao City (W)**	**63.82**	**290**	LR	LR	13 20 28.7	
	comp=2,50nm,19.9s,baz=227,slow=33						
JNU	**Nakatsue**	**74.52**	**316**	LR	LR	13 26 43.6	
	comp=2,74nm,18.9s,baz=344,slow=34						
FX1	**Attu Island--F**	**75.29**	**353**	LR	LR	13 27 36.5	
	comp=2,187nm,18.0s,baz=339,slow=34						
KSRS	**Korea Array**	**79.13**	**318**	LR	LR	13 28 46.8	
	comp=2,75nm,19.9s,baz=326,slow=33						
USRK	**Ussuriysk Arra**	**81.18**	**325**	P	P	12 57 23.0	+5.1
	5.1nm,1.1s,baz=150,slow=4.2,SNR=11						
NVAR	**Mina Array Bea**	**81.23**	**42**	P	P	12 57 19.1	+0.5
	0.5nm,0.8s,baz=229,slow=9.0,SNR=4.0						
SNAA	**Sanae**	**86.29**	**178**	LR	LR	13 33 46.0	
	comp=2,74nm,19.7s,baz=238,slow=34						
TXAR	**Lajitas Array**	**86.71**	**57**	P	P	12 57 47.3	+0.6
	0.4nm,0.8s,baz=242,slow=3.9,SNR=3.4						
TXAR				LR	LR	13 30 36.5	
	comp=2,97nm,18.4s,baz=0.0,slow=32						
PLCA	**Paso Flores**	**87.04**	**133**	LR	LR	13 31 53.9	
	comp=2,91nm,18.9s,baz=80,slow=32						
PDAR	**Pinedale Array**	**89.17**	**43**	LR	LR	13 32 58.0	
	comp=2,87nm,18.6s,baz=11,slow=32						
ILAR	**Eielson Array**	**89.62**	**12**	P	P	12 58 00.9	+1.3
	0.4nm,1.0s,baz=223,slow=4.9,SNR=2.8						
CMAR	**Chiang Mai Arr**	**92.08**	**289**	P	P	12 58 15.4	+3.3
	5.8nm,1.1s,baz=128,slow=2.9,SNR=26						
CMAR				LR	LR	13 38 56.3	
	comp=2,66nm,18.8s,baz=288,slow=35						
NNA	**Nana**	**94.19**	**105**	LR	LR	13 31 34.6	
	comp=2,176nm,21.8s,baz=299,slow=30						
ATAH	**Atahualpa**	**94.69**	**100**	LR	LR	13 31 24.3	
	comp=2,154nm,21.9s,baz=48,slow=29						
AKASG	**Malin Array Be**	**145.20**	**331**	PKPbc	PKPbc	13 04 38.4	-1.1
	0.6nm,0.4s,baz=35,slow=3.5,SNR=3.6						
BRTR	**Keskin Array B**	**149.07**	**311**	PKP	PKPdf	13 04 43.8	-3.1
	0.5nm,0.7s,baz=336,slow=3.2,SNR=2.4						
BRTR				PKPbc	PKPbc	13 04 50.5	-0.5
	1.7nm,1.0s,baz=333,slow=1.4,SNR=4.9						
BRTR				PKPab	PKPab	13 04 55.5	+0.3
	0.7nm,0.7s,baz=93,slow=2.5,SNR=4.1						
GERES	**GERESS Array B**	**152.20**	**346**	PKPbc	PKPbc	13 04 56.3	-1.8
	0.1nm,0.3s,baz=33,slow=3.8,SNR=2.8						

IDC 11 13:21:51.7±1.9, 13°44N×125°65E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/24, mbtmp3.4/4, MS4.4/1, Ms1 4.4/1, ms1mx2.5/25, Error ellipse: s-maj=180.9km s-min=21.3km az=69.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.26**	**165**	P	P	13 28 39.5	-0.2
	0.6nm,1.1s,baz=344,slow=9.0,SNR=2.4						
ASAR	**Alice Springs**	**37.76**	**169**	P	P	13 29 09.6	-0.1
	0.2nm,0.5s,baz=348,slow=6.9,SNR=7.7						
SONM	**Songino Array**	**37.86**	**339**	P	P	13 29 10.0	-0.4
	0.4nm,0.6s,baz=145,slow=11,SNR=4.5						
HNR	**Honiara**	**40.94**	**122**	LR	LR	13 43 53.8	
	comp=2,520nm,19.4s,baz=186,slow=32						
MKAR	**Makanchi Array**	**49.16**	**321**	P	P	13 30 41.6	+0.2
	0.6nm,0.7s,baz=113,slow=9.5,SNR=8.1						

*IDC **11** 13:41:31.3±8.8, 36°61N×71°47E, h129km±57km, mb2.7/1, mb1 3.0/6, mb1mx2.8/30, mbtmp2.9/6, Error ellipse: s-maj=75.5km s-min=56.1km az=165.0*

ISC 11 13:41:39.6±2.4, 37°2N±0°2×71°4E±0°2, h188km, n8, σ2s23/10, 2C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.92**	**354**	⇑P	**Pn**	**13 43 03.4**	**-2.2**
	4.3nm,0.5s,baz=182,slow=13,SNR=60						
KK31				⇑S	**Sn**	**13 44 13.1**	**-0.4**
	1.7nm,0.4s,baz=188,slow=24,SNR=8.4						
AAK	**Ala-Archa**	**5.93**	**23**	P	**Pn**	**13 43 04.1**	**-1.7**
	1.7nm,0.3s,baz=178,slow=7.7,SNR=20						
AAK				S	**Sn**	**13 44 17.2**	**+3.2**
	0.5nm,0.3s,baz=334,slow=22,SNR=13						
TKM2	**Tokmak 2**	**6.57**	**28**	⇓P	**Pn**	**13 43 11.7**	**-2.5**
	2.9nm,0.7s						
MKAR	**Makanchi Array**	**12.55**	**37**	P	**Pn**	**13 44 30.4**	**-1.3**
	0.0nm,0.3s,baz=226,slow=12,SNR=4.5						
BVAR	**Besovoye Array**	**15.83**	**358**	P	**Pn**	**13 45 13.4**	**+1.2**
	0.2nm,0.3s,baz=187,slow=10.0,SNR=3.5						
AKTO	**Aktyubinsk**	**16.31**	**328**	P	**Pn**	**13 45 19.6**	**+1.5**
	0.2nm,0.3s,baz=135,slow=12,SNR=4.0						
ZALV	**Zalesovo Beam**	**19.15**	**25**	P	**Pn**	**13 45 49.9**	**-1.6**
	0.3nm,0.3s,baz=218,slow=9.4,SNR=10.0						
YKA	**Yellowknife Ar**	**80.52**	**3**	P	**P**	**13 53 31.9**	**+1.6**
	0.1nm,0.7s,baz=352,slow=5.5,SNR=4.6						

IDC 11 13:49:34.5±1.6, 2°55N×126°68E, h0km, mb3.3/5, mb1 3.5/5, mb1mx3.3/23, mbtmp3.4/5, MS2.9/1, Ms1 2.9/1, ms1mx2.4/21, Error ellipse: s-maj=101.9km s-min=22.3km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.55**	**183**	P	Pn	13 54 16.0	-1.0
	1.2nm,0.8s,baz=17,slow=14,SNR=2.5						
WRA	**Warramunga Arr**	**23.58**	**162**	P	P	13 54 47.2	+0.1
	0.5nm,0.5s,baz=340,slow=12,SNR=12						
ASAR	**Alice Springs**	**26.99**	**165**	P	P	13 55 18.2	-0.1
	0.2nm,0.5s,baz=343,slow=7.8,SNR=9.3						
JHJ	**Hachijo jima 2**	**32.80**	**21**	LR	LR	14 08 57.3	
	comp=2,19nm,18.5s,baz=287,slow=35						
STKA	**Stephens Creek**	**37.05**	**159**	P	P	13 56 46.1	-0.3
	1.1nm,0.8s,baz=333,slow=9.0,SNR=2.7						
MKAR	**Makanchi Array**	**58.49**	**326**	P	P	13 59 32.2	-0.4
	0.1nm,0.6s,baz=126,slow=8.2,SNR=2.5						

*CSEM **11** 13:56:01.9±0.1, 42°40N×13°35E, h2km, ML3.4/8, Error ellipse: s-maj=2.6km s-min=2.0km az=56.0*

LDG 11 13:56:05.3±1.9, 42°46N×13°24E, h2km, Ml2.9/3, Error ellipse: s-maj=43.6km s-min=15.5km az=108.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.15**	**59**	Pg	Pg	13 56 05.5	-2.9
CAMP				Sg	Sg	13 56 07.9	-2.6
	7µm,0.3s						
CAMP	**Campotosto**	**0.15**	**59**	Pg	Pg	13 56 05.5	-2.9
CAMP				Sg	Sg	13 56 07.9	-2.6
	7µm,0.3s						
AQU	**L'Aquila**	**0.16**	**131**	Pg	Pg	13 56 04.2	-4.3
AQU				Sg	Sg	13 56 05.3	-5.4
	16µm,0.3s						
AQU	**L'Aquila**	**0.16**	**131**	Pg	Pg	13 56 04.2	-4.3
AQU				Sg	Sg	13 56 05.3	-5.4
	16µm,0.3s						
LNSS	**Leonessa**	**0.20**	**314**	Pg	Pg	13 56 08.4	-1.0
LNSS				Sg	Sg	13 56 13.8	+1.6
	3µm,0.3s						
LNSS	**Leonessa**	**0.20**	**314**	Pg	Pg	13 56 08.4	-1.0
LNSS				Sg	Sg	13 56 13.8	+1.6
	3µm,0.3s						
FIAM	**Fiamignano**	**0.21**	**205**	Pg	Pg	13 56 07.0	-2.5
FIAM				Sg	Sg	13 56 10.9	-1.5
	3µm,0.4s						
FIAM	**Fiamignano**	**0.21**	**205**	Pg	Pg	13 56 07.0	-2.5
FIAM				Sg	Sg	13 56 10.9	-1.5
	3µm,0.4s						
TERO	**Teramo**	**0.32**	**59**	Pg	Pg	13 56 07.8	-3.7
TERO				Sg	Sg	13 56 12.2	-3.4
	3µm,0.4s						
TERO	**Teramo**	**0.32**	**59**	Pg	Pg	13 56 07.8	-3.7
TERO				Sg	Sg	13 56 12.2	-3.4
	3µm,0.4s						
FAGN	**Fagnano**	**0.32**	**127**	Pg	Pg	13 56 06.9	-4.7
FAGN				Sg	Sg	13 56 11.2	-4.6
	8µm,0.4s						
FAGN	**Fagnano**	**0.32**	**127**	Pg	Pg	13 56 06.9	-4.7
FAGN				Sg	Sg	13 56 11.2	-4.6
	8µm,0.4s						
NRCA	**Norcia**	**0.38**	**346**	Pg	Pg	13 56 11.0	-1.8
NRCA	**Norcia**	**0.38**	**346**	Pg	Pg	13 56 11.0	-1.8
MNS	**Montasola**	**0.42**	**260**	Pg	Pg	13 56 11.6	-1.8
	693nm,0.6s						
MNS	**Montasola**	**0.42**	**260**	Pg	Pg	13 56 11.6	-1.8
	693nm,0.6s						
VCEL	**Villa Celiera**	**0.45**	**98**	Pg	Pg	13 56 09.4	-4.7
VCEL				Sg	Sg	13 56 16.1	-4.0
VCEL	**Villa Celiera**	**0.45**	**98**	Pg	Pg	13 56 09.4	-4.7
VCEL				Sg	Sg	13 56 16.1	-4.0
PTQR	**Pietraquaria**	**0.45**	**165**	Pg	Pg	13 56 09.6	-4.6
PTQR	**Pietraquaria**	**0.45**	**165**	Pg	Pg	13 56 09.6	-4.6
CESX	**Cesi**	**0.51**	**287**	Pg	Pg	13 56 13.5	-1.6
	447nm,0.5s						
CESX	**Cesi**	**0.51**	**287**	Pg	Pg	13 56 13.5	-1.6
	447nm,0.5s						
CERT	**Cerreto**	**0.55**	**201**	Pg	Pg	13 56 12.2	-3.7
	2µm,0.4s						
CERT	**Cerreto**	**0.55**	**201**	Pg	Pg	13 56 12.2	-3.7
	2µm,0.4s						
MTCE	**Montecelio**	**0.57**	**220**	Pg	Pg	13 56 13.2	-3.1
	308nm,0.4s						
MTCE	**Montecelio**	**0.57**	**220**	Pg	Pg	13 56 13.2	-3.1
	308nm,0.4s						
OFFI	**Offida**	**0.58**	**35**	Pg	Pg	13 56 14.2	-2.2
	7µm,0.7s						
OFFI	**Offida**	**0.58**	**35**	Pg	Pg	13 56 14.2	-2.2
	7µm,0.7s						
FDMO	**Fiordimonte**	**0.59**	**349**	Pg	Pg	13 56 14.5	-2.2
	392nm,0.6s						
FDMO	**Fiordimonte**	**0.59**	**349**	Pg	Pg	13 56 14.5	-2.2
	392nm,0.6s						
CESI	**CESI - Serrava**	**0.60**	**336**	Pg	Pg	13 56 14.8	-2.1
	128nm,0.3s						
CESI	**CESI - Serrava**	**0.60**	**336**	Pg	Pg	13 56 14.8	-2.1
	128nm,0.3s						
TRTR	**Tortoreto Alta**	**0.61**	**55**	Pg	Pg	13 56 14.2	-2.8
TRTR	**Tortoreto Alta**	**0.61**	**55**	Pg	Pg	13 56 14.2	-2.8
VVLD	**Villa Vallelon**	**0.65**	**154**	Pg	Pg	13 56 12.7	-5.3
VVLD	**Villa Vallelon**	**0.65**	**154**	Pg	Pg	13 56 12.7	-5.3
GUAR	**Guarcino**	**0.67**	**175**	Pg	Pg	13 56 13.4	-4.8
	535nm,

NVLJ	**Novalja**	**2.42**	**29**	*e*Pn	Pn	13 56 42.4	-3.4
NVLJ				Sn	Sn	13 57 11.1	-4.8
PGF	**Pioggiola**	**3.13**	**273**	*e*Pn	Pn	13 56 54.4	-1.5
PGF				*e*Sn	Sn	13 57 34.5	+0.5
	9.6nm,0.5s						
PGF	**Pioggiola**	**3.13**	**273**	*e*Pn	Pn	13 56 54.4	-1.5
PGF				*e*Sn	Sn	13 57 34.5	+0.5
	4.8nm,0.5s						
GBRS	**Gornja Briga**	**3.27**	**20**	Pn	Pn	13 56 53.2	-4.5
STON	**Ston**	**3.32**	**81**	*e*Pn	Pn	13 56 53.7	-4.3
STON				Sn	Sn	13 57 32.7	-5.4
STON	**Ston**	**3.32**	**81**	*e*Pn	Pn	13 56 53.8	-4.4
STON				Sn	Sn	13 57 32.6	-5.5
BOJS	**Bojanci**	**3.37**	**25**	*e*Pn	Pn	13 56 57.2	-1.8
BOJS	**Bojanci**	**3.37**	**25**	*e*Pn	Pn	13 56 57.2	-1.8
JAVS	**Javornik**	**3.48**	**10**	*e*Pn	Pn	13 56 58.8	-1.9
JAVS	**Javornik**	**3.48**	**10**	*e*Pn	Pn	13 56 58.8	-1.9
SBF	**Sospel**	**4.47**	**290**	*e*Pn	Pn	13 57 12.8	-1.4
SBF	**Sospel**	**4.47**	**290**	*e*Pn	Pn	13 57 12.8	-1.4
FRF	**La Foret Royal**	**4.96**	**285**	*e*Pn	Pn	13 57 19.0	-1.8
FRF	**La Foret Royal**	**4.96**	**285**	*e*Pn	Pn	13 57 19.0	-1.8
LMR	**La Mourre**	**5.02**	**282**	*e*Pn	Pn	13 57 19.6	-2.0
LMR	**La Mourre**	**5.02**	**282**	*e*Pn	Pn	13 57 19.6	-2.0
MBDF	**Montbardon**	**5.21**	**298**	*e*P	Pn	13 57 24.9	+0.4
MBDF	**Montbardon**	**5.21**	**298**	*e*P	Pn	13 57 24.9	+0.4
LPG	**La Plagne**	**5.58**	**305**	*e*P	Pn	13 57 30.7	+1.0
LPL	**La Plagne**	**5.60**	**305**	*e*P	Pn	13 57 30.9	+1.0
SMRF	**Simiane la Rot**	**5.80**	**288**	*e*P	Pn	13 57 32.2	-0.2
SMRF	**Simiane la Rot**	**5.80**	**288**	*e*P	Pn	13 57 32.2	-0.2
HINF	**Hinteralfeld**	**7.00**	**322**	*e*Pn	Pn	13 57 46.8	-2.1
HINF	**Hinteralfeld**	**7.00**	**322**	*e*Pn	Pn	13 57 46.8	-2.1
CDF	**Champ du Feu**	**7.28**	**327**	*e*Pn	Pn	13 57 50.5	-2.3
CDF				*e*Sn	Sn	13 59 10.3	-5.7
	0.7nm,0.3s						
CDF	**Champ du Feu**	**7.28**	**327**	*e*Pn	Pn	13 57 50.5	-2.3
HAU	**Haudompre**	**7.37**	**321**	*e*Pn	Pn	13 57 52.1	-1.9
HAU				*e*Sn	Sn	13 59 10.9	-7.3
	2.5nm,0.4s						
HAU	**Haudompre**	**7.37**	**321**	*e*Pn	Pn	13 57 52.1	-1.9

*CSEM **11** 13:57:03.1,42°.31N×13°.38E,h9km,After ROM*
ROM 11 13:57:03.1±0.1,42°.31N×13°.38E,h9km,MI2.8/10,Error ellipse: s-maj=1.1km s-min=0.9km az=57.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**25**	Pn	Pg	13 57 05.5	+0.5
AQU				Sn	Sg	13 57 06.9	+0.5
	13μm,0.4s						
AQU	**L'Aquila**	**0.05**	**25**	Pn	Pg	13 57 05.5	+0.5
AQU				Sn	Sg	13 57 06.9	+0.5
	13μm,0.4s						
FAGN	**Fagnano**	**0.16**	**106**	Pn	Pg	13 57 07.3	+0.6
FAGN				Sn	Sg	13 57 10.2	+1.1
FAGN	**Fagnano**	**0.16**	**106**	Pn	Pg	13 57 07.3	+0.6
FAGN				Sn	Sg	13 57 10.2	+1.1
FIAM	**Fiamignano**	**0.20**	**257**	Pn	Pg	13 57 07.9	+0.6
FIAM				Sn	Sg	13 57 11.2	+1.0
	3μm,0.4s						
FIAM	**Fiamignano**	**0.20**	**257**	Pn	Pg	13 57 07.9	+0.6
FIAM				Sn	Sg	13 57 11.2	+1.0
	3μm,0.4s						
CAMP	**Campotosto**	**0.23**	**6**	Pn	Pg	13 57 08.0	+0.1
CAMP				Sn	Sg	13 57 11.4	+0.2
CAMP	**Campotosto**	**0.23**	**6**	Pn	Pg	13 57 08.0	+0.1
CAMP				Sn	Sg	13 57 11.4	+0.2
PTQR	**Pietraquaria**	**0.29**	**176**	Pn	Pg	13 57 09.5	+0.5
PTQR				Sn	Sg	13 57 14.2	+1.2
PTQR	**Pietraquaria**	**0.29**	**176**	Pn	Pg	13 57 09.5	+0.5
PTQR				Sn	Sg	13 57 14.2	+1.2
TERO	**Teramo**	**0.35**	**28**	Pn	Pg	13 57 10.5	+0.3
TERO				Sn	Sg	13 57 15.9	+0.9
TERO	**Teramo**	**0.35**	**28**	Pn	Pg	13 57 10.5	+0.3
TERO				Sn	Sg	13 57 15.9	+0.9
VCEL	**Villa Celiera**	**0.35**	**76**	Pn	Pb	13 57 11.1	-0.7
VCEL				Sn	Sb	13 57 16.4	-1.2
VCEL	**Villa Celiera**	**0.35**	**76**	Pn	Pb	13 57 11.1	-0.7
VCEL				Sn	Sb	13 57 16.4	-1.2
LNSS	**Leonessa**	**0.38**	**320**	Pn	Pg	13 57 11.4	+0.6
LNSS				Sn	Sb	13 57 17.9	-0.5
LNSS	**Leonessa**	**0.38**	**320**	Pn	Pg	13 57 11.4	+0.6
LNSS				Sn	Sb	13 57 17.9	-0.5
CERT	**Cerreto**	**0.47**	**219**	Pn	Pg	13 57 12.5	+0.2
CERT	**Cerreto**	**0.47**	**219**	Pn	Pg	13 57 12.5	+0.2
VVLD	**Villa Vallelon**	**0.48**	**157**	Pn	Pg	13 57 12.8	+0.3
VVLD	**Villa Vallelon**	**0.48**	**157**	Pn	Pg	13 57 12.8	+0.3
INTR	**Introdacqua**	**0.49**	**127**	Pn	Pg	13 57 13.1	+0.2
INTR				Sn	Sb	13 57 21.1	-0.4
	1μm,0.8s						
INTR	**Introdacqua**	**0.49**	**127**	Pn	Pg	13 57 13.1	+0.2
INTR				Sn	Sb	13 57 21.1	-0.4
	1μm,0.8s						
GUAR	**Guarcino**	**0.52**	**185**	Pn	Pb	13 57 14.5	0.0
	535nm,0.6s						
GUAR	**Guarcino**	**0.52**	**185**	Pn	Pb	13 57 14.5	0.0
	535nm,0.6s						
MNS	**Montasola**	**0.52**	**278**	Pn	Pg	13 57 13.7	+0.4
	693nm,0.6s						
MNS	**Montasola**	**0.52**	**278**	Pn	Pg	13 57 13.7	+0.4
	693nm,0.6s						
MTCE	**Montecelio**	**0.55**	**239**	Pn	Pg	13 57 14.0	+0.2
MTCE				Sn	Sb	13 57 22.2	-0.8
	308nm,0.4s						
MTCE	**Montecelio**	**0.55**	**239**	Pn	Pg	13 57 14.0	+0.2
MTCE				Sn	Sb	13 57 22.2	-0.8
	308nm,0.4s						
NRCA	**Norcia**	**0.56**	**340**	Pn	Pg	13 57 14.1	0.0
NRCA				Sn	Sg	13 57 22.4	+0.9
NRCA	**Norcia**	**0.56**	**340**	Pn	Pg	13 57 14.1	0.0
NRCA				Sn	Sg	13 57 22.4	+0.9
LPEL	**Lama dei Pelig**	**0.66**	**113**	Pn	Pg	13 57 15.8	-0.1
LPEL				Sn	Sb	13 57 25.5	-0.6
	639nm,0.4s						
LPEL	**Lama dei Pelig**	**0.66**	**113**	Pn	Pg	13 57 15.8	-0.1
LPEL				Sn	Sb	13 57 25.5	-0.6
	639nm,0.4s						
OFFI	**Offida**	**0.66**	**20**	Pn	Pb	13 57 17.2	+0.3
OFFI	**Offida**	**0.66**	**20**	Pn	Pb	13 57 17.2	+0.3
SDI	**San Donato**	**0.68**	**152**	Pn	Pg	13 57 16.7	+0.3
	296nm,0.6s						
SDI	**San Donato**	**0.68**	**152**	Pn	Pg	13 57 16.7	+0.3
	296nm,0.6s						
FDMO	**Fiordimonte**	**0.76**	**344**	Pn	Pg	13 57 17.7	-0.1
FDMO				Sn	Sb	13 57 29.1	+0.1
	392nm,0.6s						
FDMO	**Fiordimonte**	**0.76**	**344**	Pn	Pg	13 57 17.7	-0.1
FDMO				Sn	Sb	13 57 29.1	+0.1
	392nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.76**	**187**	Pn	Pb	13 57 18.9	+0.4
	283nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.76**	**187**	Pn	Pb	13 57 18.9	+0.4
	283nm,0.6s						
CESI	**CESI - Serrava**	**0.78**	**334**	Pn	Pg	13 57 18.2	0.0
CESI				Sn	Sb	13 57 29.7	+0.1
	128nm,0.3s						
CESI	**CESI - Serrava**	**0.78**	**334**	Pn	Pg	13 57 18.2	0.0
CESI				Sn	Sb	13 57 29.7	+0.1
	128nm,0.3s						
ASSB	**Assisi San Ben**	**0.90**	**324**	Pn	Pg	13 57 20.6	0.0
	394nm,0.5s						
ASSB	**Assisi San Ben**	**0.90**	**324**	Pn	Pg	13 57 20.6	0.0
	394nm,0.5s						

*IDC **11** 14:07:45.6±1.3,6°.28S×130°.95E,h0km,mb4.0/3, mb1 4.5/6,mb1mx4.0/18,mbtmp4.3/6,ML4.7/3,Error ellipse: s-maj=68.4km s-min=19.1km az=71.0*
*ISCJB **11** 14:07:51.9±0.8,6°.48S±0°.05×131°.05E±0°.06,h84km±12km, mb3.7/4,Error ellipse: s-maj=10.0km s-min=7.7km az=161.0*
*DJA **11** 14:07:55.3±0.3,6°.S±3°.×13°.1E±°,h131km±6km,M4.6/8, mb4.7/8,mB5.4/4,MLv4.5/8,Mw(mB)4.8/4*
ISC 11 14:07:52.8±0.9,6°.57S±0°.05×130°.91E±0°.05,h73km±13km, n16,σ2s72/26,mb3.7/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.04**	**63**	P	**Pn**	**14 08 27.3**	**+2.2**
TLE				S	**Sn**	**14 08 53.9**	**+4.2**
BNDI	**Bandanaira**	**2.27**	**334**	P	**Pn**	**14 08 30.5**	**+2.3**
BNDI				S	**Sn**	**14 08 55.3**	**+0.1**
MSAI	**Masohi**	**3.76**	**328**	P	**Pn**	**14 08 48.5**	**0.0**
MSAI				S	**Sn**	**14 09 33.4**	**+1.8**
FAKI	**Fak Fak**	**3.86**	**20**	P	**Pn**	**14 08 50.0**	**+0.1**
FAKI				S	**Sn**	**14 09 30.3**	**-3.8**
AAI	**Ambon**	**3.94**	**317**	P	**Pn**	**14 08 52.0**	**+1.1**
AAI				S	**Sn**	**14 09 35.8**	**-0.1**
SWI	**Sorong**	**5.68**	**4**	P	**Pn**	**14 09 13.9**	**-0.8**
	188nm,0.4s,6μm1.3nm						
SWI				S	Sn	14 10 10.4	-8.2
	188nm,0.4s,6μm1.3nm						
LBMI	**Labuha**	**6.80**	**330**	P	**Pn**	**14 09 29.2**	**-0.9**
	39nm,0.7s,1μm						
LBMI				S	**Sn**	**14 10 42.6**	**-3.5**
	39nm,0.7s,1μm						
BAKI	**Biak**	**7.44**	**44**	P	**Pn**	**14 09 35.8**	**-3.1**
	54nm,1.2s,0.2nm						
BAKI				S	**Sn**	**14 10 58.0**	**-3.9**
	54nm,1.2s,0.2nm						
FITZ	**Fitzroy Crossi**	**12.56**	**204**	Pn	**Pn**	**14 10 49.6**	**+0.9**
	7.1nm,0.3s,baz=32,slow=9.4,SNR=114						
FITZ				Sn	**Sn**	**14 13 01.3**	**-5.5**
	3.6nm,0.3s,baz=78,slow=19,SNR=4.5						
WRA	**Warramunga Arr**	**13.71**	**166**	Pn	**Pn**	**14 11 04.3**	**+0.3**
	2.6nm,0.3s,baz=348,slow=13,SNR=68						
WRA				Sn	**Sn**	**14 13 31.5**	**-3.2**
	3.9nm,0.3s,baz=348,slow=23,SNR=8.3						
ASAR	**Alice Springs**	**17.24**	**171**	P	**P**	**14 11 51.8**	**+2.2**
	2.3nm,0.3s,baz=346,slow=7.8,SNR=130						
ASAR				S	**Sn**	**14 14 56.5**	**-3.9**
	0.9nm,0.3s,baz=354,slow=25,SNR=8.1						
TGJI	**Tegal**	**21.64**	**268**	P	**P**	**14 12 37.0**	**-0.4**
STKA	**Stephens Creek**	**27.09**	**160**	P	**P**	**14 13 32.5**	**+3.8**
	1.2nm,0.5s,baz=330,slow=11,SNR=9.2						
CMAR	**Chiang Mai Arr**	**40.16**	**309**	P	**P**	**14 15 22.5**	**+0.4**
	0.4nm,0.3s,baz=123,slow=7.0,SNR=4.2						
SONM	**Songino Array**	**58.33**	**341**	P	**P**	**14 17 40.7**	**+0.3**
	0.2nm,0.4s,baz=160,slow=5.8,SNR=3.0						
MKAR	**Makanchi Array**	**68.37**	**326**	P	**P**	**14 18 47.5**	**+0.8**
	1.3nm,0.4s,baz=115,slow=7.9,SNR=35						

IDC 11 14:41:50.7±5.6,20°.28S×176°.61W,h0km,mb3.8/4, mb1 4.0/4,mb1mx3.7/20,mbtmp3.8/4,Error ellipse: s-maj=174.8km s-min=89.5km az=144.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.05**	**244**	P	P	14 49 19.8	+0.2
	1.7nm,1.0s,baz=102,slow=11,SNR=4.0						
ASAR	**Alice Springs**	**45.84**	**256**	P	P	14 50 14.2	-0.6
	0.8nm,0.8s,baz=100,slow=7.5,SNR=11						
WRA	**Warramunga Arr**	**45.92**	**262**	P	P	14 50 15.4	-0.1
	0.3nm,0.3s,baz=97,slow=7.4,SNR=13						
FITZ	**Fitzroy Crossi**	**54.35**	**262**	P	P	14 51 19.7	+0.2
	0.7nm,0.3s,baz=104,slow=8.3,SNR=7.9						
AKASG	**Malin Array Be**	**143.44**	**332**	PKP	PKPdf	15 01 26.4	-0.7
	0.2nm,0.3s,baz=45,slow=4.9,SNR=4.8						

IDC 11 14:46:21.5±3.1,12°.61S×166°.97E,h205km±27km, mb3.8/19,mb1 3.9/19,mb1mx3.9/22,mbtmp3.8/19, MS3.4/2,Ms1 3.4/2,ms1mx2.7/31,Error ellipse: s-maj=17.5km s-min=11.7km az=102.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.43**	**183**	P	Pn	14 48 36.9	+3.5
	1.2nm,0.3s,baz=9.4,slow=17,SNR=13						
DZM				S	S	14 50 21.6	+2.4
	0.6nm,0.3s,baz=325,slow=15,SNR=3.1						
DZM				LR	LR	14 51 42.0	
	comp=Z,50nm,20.1s,baz=7.7,slow=34						
STKA	**Stephens Creek**	**30.19**	**226**	P	P	14 52 13.8	+1.1
	4.2nm,0.6s,baz=48,slow=8.4,SNR=25						
STKA				PcP	PcP	14 55 08.2	-0.5
	0.8nm,0.5s,baz=68,slow=3.9,SNR=4.6						
RPZ	**Rata Peaks**	**31.20**	**174**	P	P	14 52 22.1	+0.6
	5.4nm,0.5s,baz=9.0,slow=8.1,SNR=7.8						
WRA	**Warramunga Arr**	**32.12**	**253**	P	P	14 52 29.0	-0.8
	1.2nm,0.7s,baz=82,slow=8.4,SNR=11						
ASAR	**Alice Springs**	**33.21**	**246**	P	P	14 52 38.6	-0.7
	1.5nm,0.6s,baz=72,slow=9.5,SNR=41						
ASAR				PcP	PcP	14 55 16.4	-0.7
	0.5nm,0.6s,baz=86,slow=2.1,SNR=5.5						
ASAR				ScP	ScP	14 58 42.5	+0.4
	0.7nm,0.9s,baz=81,slow=3.6,SNR=5.9						
FITZ	**Fitzroy Crossi**	**40.16**	**257**	P	P	14 53 36.9	-1.1
	2.0nm,0.6s,baz=111,slow=10,SNR=9.0						
MJAR	**Matsushiro Arr**	**55.90**	**332**	P	P	14 55 37.4	-0.8
	3.2nm,0.9s,baz=172,slow=7.8,SNR=9.7						
ASAJ	**Asahikawa**	**60.66**	**340**	P	P	14 56 11.1	+0.2
	5.1nm,0.5s,baz=244,slow=8.9,SNR=17						
KSRS	**Korea Array**	**61.83**	**325**	P	P	14 56 19.6	+0.7
	0.5nm,0.6s,baz=138,slow=7.7,SNR=5.3						
USRK	**Ussuriysk Arra**	**64.87**	**333**	P	P	14 56 39.9	+1.3
	1.0nm,0.6s,baz=131,slow=8.8,SNR=4.7						
VNDA	**Vanda**	**64.97**	**181**	P	P	14 56 39.0	+0.1
	1.7nm,0.8s,baz=334,slow=4.8,SNR=8.1						
PETK	**Petropavlovsk-**	**65.93**	**354**	P	P	14 56 46.0	+0.7
	1.5nm,0.7s,baz=134,slow=8.5,SNR=5.0						
CMAR	**Chiang Mai Arr**	**73.83**	**294**	P	P	14 57 35.4	+1.2
	1.9nm,0.8s,baz=126,slow=4.4,SNR=11						
KDAK	**Kodiak Island**	**77.59**	**21**	LR	LR	15 32 57.9	
	comp=Z,78nm,18.7s,baz=118,slow=36						
SONM	**Songino Array**	**80.62**	**324**	P	P	14 58 11.8	+0.3
	0.5nm,0.3s,baz=134,slow=5.7,SNR=11						
ILAR	**Eielson Array**	**84.61**	**18**	P	P	14 58 30.8	-0.7
	4.8nm,0.6s,baz=245,slow=5.0,SNR=108						
NVAR	**Mina Array Bea**	**86.12**	**49**	P	P	14 58 40.1	+0.3
	0.7nm,0.5s,baz=228,slow=6.5,SNR=5.2						
MKAR	**Makanchi Array**	**95.47**	**317**	P	P	14 59 22.9	0.0
	1.7nm,0.6s,baz=90,slow=6.5,SNR=27						
ZALV	**Zalesovo Beam**	**95.51**	**324**	P	P	14 59 22.2	-0.7
	1.1nm,0.7s,baz=99,slow=5.8,SNR=6.3						
TXAR	**Lajitas Array**	**95.52**	**61**	P	P	14 59 23.4	-0.3
	0.4nm,0.7s,baz=216,slow=6.2,SNR=3.8						
YKA	**Yellowknife Ar**	**95.80**	**27**	P	P	14 59 22.7	-1.3
	0.4nm,0.5s,baz=259,slow=4.5,SNR=15						
ARCES	**ARCESS Array B**	**118.14**	**346**	PKP	PKPdf	15 04 43.0	-0.4
	2.4nm,0.8s,baz=56,slow=1.7,SNR=13						
FINES	**FINESS Array B**	**123.65**	**339**	PKP	PKPdf	15 04 52.9	-1.3
	0.6nm,0.7s,baz=104,slow=3.9,SNR=8.4						
KEST	**Kesra**	**149.38**	**323**	PKPbc	PKPbc	15 05 46.5	-0.2
	1.7nm,0.7s,baz=173,slow=3.6,SNR=4.8						
ESDC	**Sonseca Array**	**151.87**	**345**	PKPbc	PKPbc	15 05 51.6	-0.8
	1.2nm,0.7s,baz=19,slow=2.6,SNR=6.8						
ESDC				PKPab	PKPab	15 06 01.9	-0.3
	1.9nm,0.6s,baz=7.2,slow=3.9,SNR=9.9						
TORD	**Torodi Ar. Bea**	**165.63**	**274**	PKP	PKPdf	15 06 02.2	-0.3
	0.9nm,1.0s,baz=90,slow=0.3,SNR=3.1						
TORD				PKPab	PKPab	15 07 01.9	-0.7
	1.7nm,1.0s,baz=84,slow=5.2,SNR=7.4						

*CSEM **11** 14:55:43.9,42°.30N×13°.47E,h9km,After ROM*
ROM 11 14:55:43.9±0.1,42°.30N×13°.47E,h9km±1km,MI1.4/4, Error ellipse: s-maj=2.9km s-min=1.4km az=22.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.08**	**318**	Pg	Pg	14 55 46.5	+0.3
AQU				Sg	Sg	14 55 48.2	+0.4
AQU	**L'Aquila**	**0.08**	**318**	Pg	Pg	14 55 46.5	+0.3
AQU				Sg	Sg	14 55 48.2	+0.4
FAGN	**Fagnano**	**0.09**	**110**	Pg	Pg	14 55 46.5	+0.2
FAGN				Sg	Sg	14 55 48.2	+0.2
FAGN	**Fagnano**	**0.09**	**110**	Pg	Pg	14 55 46.5	+0.2
FAGN				Sg	Sg	14 55 48.2	+0.2
CAMP	**Campotosto**	**0.24**	**349**	Pg	Pg	14 55 49.8	+0.8
CAMP	**Campotosto**	**0.24**	**349**	Pg	Pg	14 55 49.8	+0.8
CAMP				Sg	Sg	14 55 51.1	-1.4
CAMP	**Campotosto**	**0.24**	**349**	Pg	Pg	14 55 49.8	+0.8
FIAM	**Fiamignano**	**0.26**	**264**	Pg	Pg	14 55 50.0	+0.6
FIAM				Sg	Sb	14 55 54.8	-1.0
	24nm,0.4s						
FIAM	**Fiamignano**	**0.26**	**264**	Pg	Pg	14 55 50.0	+0.6
FIAM				Sg	Sb	14 55 54.8	-1.0
	24nm,0.4s						
VCEL	**Villa Celiera**	**0.29**	**70**	Pg	Pb	14 55 51.1	-0.4
	52nm,0.3s						
VCEL	**Villa Celiera**	**0.29**	**70**	Pg	Pb	14 55 51.1	-0.4
	52nm,0.3s						

TERO	**Teramo**	**0.34**	**17**	Pg	Pb	14 55 52.1	-0.2
TERO				Sg	Sg	14 55 55.2	-0.1
INTR	**Introdacqua**	**0.43**	**131**	Pg	Pg	14 55 52.9	+0.5
INTR				Sg	Sb	14 56 00.2	-0.3
	22nm,0.3s						
INTR	**Introdacqua**	**0.43**	**131**	Pg	Pg	14 55 52.9	+0.5
INTR				Sg	Sb	14 56 00.2	-0.3
	22nm,0.3s						
LNSS	**Leonessa**	**0.44**	**314**	Pg	Pb	14 55 54.0	-0.1
LNSS				Sg	Sg	14 55 58.8	+0.1
LNSS	**Leonessa**	**0.44**	**314**	Pg	Pb	14 55 54.0	-0.1
LNSS				Sg	Sg	14 55 58.8	+0.1
	32nm,0.2s						
LNSS	**Leonessa**	**0.44**	**314**	Pg	Pb	14 55 54.0	-0.1
LNSS				Sg	Sg	14 55 58.8	+0.1
LPEL	**Lama dei Pelig**	**0.58**	**115**	Pg	Pg	14 55 55.3	0.0
LPEL				Sg	Sb	14 56 04.6	-0.3
	66nm,0.1s						
LPEL	**Lama dei Pelig**	**0.58**	**115**	Pg	Pg	14 55 55.3	0.0
LPEL				Sg	Sb	14 56 04.6	-0.3
	66nm,0.1s						
NRCA	**Norcia**	**0.60**	**334**	Pg	Pg	14 55 55.7	+0.1
NRCA				Sg	Sg	14 56 01.6	-2.0
FDMO	**Fiordimonte**	**0.79**	**339**	Pg	Pg	14 55 58.9	-0.3
FDMO				Sg	Sg	14 56 07.9	-1.7
	10.0nm,0.2s						

*ISCJB **11** 15:02:27.3±0.4,60°.00N±0°.03×152°.77W±0°.08, h114km±4km,mb3.9/1,Error ellipse: s-maj=6.9km s-min=4.3km az=28.6*
*IDC **11** 15:02:27.3±1.6,60°.00N×152°.86W,h87km±28km,mb3.5/1, mb1 3.7/4,mb1mx3.1/28,mbtmp3.5/4,Error ellipse: s-maj=35.9km s-min=11.2km az=107.0*
*NEIC **11** 15:02:29.8,59°.97N×152°.80W,h98km,MG3.0(AEIC), After AEIC.*
ISC 11 15:02:28.4±0.9,59°.98N±0°.03×152°.82W±0°.05, h109km±6km,n61,σ0s69/69,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILIM	**Iliamna**	**0.12**	**323**	P	**Pn**	**15 02 43.2**	**-0.3**
ILIM				S	**Sn**	**15 02 54.7**	**-0.2**
OPT	**Oil Point**	**0.39**	**212**	P	**Pn**	**15 02 44.5**	**0.0**
OPT				S	**Sn**	**15 02 55.1**	**-1.4**
RED	**Redoubt Volcan**	**0.44**	**3**	P	**Pn**	**15 02 44.7**	**-0.2**
REF	**Redoubt East F**	**0.51**	**6**	P	**Pn**	**15 02 45.1**	**-0.3**
REF				S	**Sn**	**15 02 57.6**	**-0.5**
NCT	**North Crescent**	**0.58**	**354**	P	**Pn**	**15 02 45.6**	**-0.2**
DFR	**Drift River**	**0.61**	**6**	P	**Pn**	**15 02 45.9**	**-0.2**
HOM	**Homer**	**0.68**	**118**	P	**Pn**	**15 02 47.0**	**+0.6**
HOM				S	**Sn**	**15 03 00.3**	**+0.4**
AUNW	**Augustine NWes**	**0.69**	**209**	P	**Pn**	**15 02 46.6**	**+0.1**
AUP	**Augustine Pinn**	**0.69**	**207**	P	**Pn**	**15 02 46.8**	**0.0**
BRLK	**Bradley Lake**	**1.00**	**102**	P	**Pn**	**15 02 49.9**	**+0.4**
BRLK				S	**Sn**	**15 03 05.6**	**+0.2**
BKG	**Blockade Glaci**	**1.12**	**14**	P	**Pn**	**15 02 51.0**	**+0.1**
SPU	**Mount Spurr**	**1.26**	**17**	P	**Pn**	**15 02 52.4**	**0.0**
FOSS	**Fourpeaked Sta**	**1.27**	**201**	P	**Pn**	**15 02 52.4**	**-0.1**
BGL	**Barrier Glacie**	**1.30**	**9**	P	**Pn**	**15 02 53.2**	**+0.3**
SLKM	**Skilak Lake**	**1.40**	**67**	P	**Pn**	**15 02 54.0**	**+0.1**
STLK	**Strandline Lak**	**1.59**	**17**	P	**Pn**	**15 02 56.7**	**+0.3**
SEW	**Seward**	**1.69**	**84**	P	**Pn**	**15 02 57.2**	**+0.2**
KAWH	**Katmai**	**1.90**	**213**	P	**Pn**	**15 03 00.2**	**+0.1**
KAKN	**Katmai Knife C**	**2.05**	**215**	P	**Pn**	**15 03 02.0**	**-0.1**
SKT	**Skwentna**	**2.10**	**17**	P	**Pn**	**15 03 02.6**	**0.0**
KCE	**Katmai Mt Cerb**	**2.13**	**216**	P	**Pn**	**15 03 03.6**	**+0.6**
KABU	**Katmai Buttres**	**2.14**	**218**	P	**Pn**	**15 03 03.4**	**+0.2**
KELA	**Mount Kelaz**	**2.16**	**225**	P	**Pn**	**15 03 03.1**	**-0.3**
KABR	**Katmai Barrier**	**2.17**	**212**	P	**Pn**	**15 03 03.4**	**-0.1**
KDAK	**Kodiak Island**	**2.21**	**177**	P	**Pn**	**15 03 03.0**	**-1.0**
KDAK				S	**Sn**	**15 03 29.8**	**-1.4**
KDAK				S		15 03 30.2	
KDAK	**Kodiak Island**	**2.21**	**177**	P	**Pn**	**15 03 03.0**	**-1.0**
	4.8nm,0.3s,baz=22,slow=9.9,SNR=28						
KDAK				S	**Sn**	**15 03 29.8**	**-1.4**
	21nm,0.3s,baz=280,slow=19,SNR=14						
PMR	**Palmer**	**2.42**	**47**	*e*Pn	**Pn**	**15 03 05.9**	**-0.8**
PMR				*e*Sn	**Sn**	**15 03 34.1**	**-1.9**
TRAP	**Trapper Creek**	**2.67**	**27**	P	**Pn**	**15 03 10.3**	**+0.4**
SML	**

STKA	**Stephens Creek**	**39.21**	**243**	P	P	15 25 31.8	-0.4
	1.0nm,0.8s,baz=91,slow=15,SNR=4.4						
WRA	**Warramunga Arr**	**45.67**	**260**	P	P	15 26 25.0	0.0
	0.5nm,0.3s,baz=96,slow=7.4,SNR=23						
ASAR	**Alice Springs**	**45.71**	**255**	P	P	15 26 25.1	-0.1
	1.4nm,0.7s,baz=89,slow=8.5,SNR=20						

IDC 11 15:21:29.4±1.6, 54°.11N×169°.22E, h0km, mb3.2/2, mb1 3.6/4, mb1mx3.3/29, mbtmp3.4/4, ML3.3/1, Error ellipse: s-maj=36.8km s-min=16.8km az=25.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**2.66**	**116**	Pn	Pn	15 22 12.1	-1.4
	22nm,0.3s,baz=323,slow=8.0,SNR=35						
FX1				Sn	Sn	15 22 43.0	-3.4
	23nm,0.3s,baz=174,slow=23,SNR=8.2						
PETK	**Petropavlovsk-**	**6.93**	**266**	Pn	Pn	15 23 13.2	+1.1
	0.5nm,0.3s,baz=103,slow=20,SNR=6.6						
PETK				Sn	Sn	15 24 30.9	-0.7
	0.2nm,0.3s,baz=276,slow=16,SNR=3.1						
ILAR	**Eielson Array**	**24.20**	**46**	P	P	15 26 46.6	-0.6
	0.2nm,0.7s,baz=261,slow=6.5,SNR=5.5						
TXAR	**Lajitas Array**	**65.18**	**74**	P	P	15 32 12.1	-0.2
	0.4nm,0.6s,baz=305,slow=4.4,SNR=3.9						

MAN 11 15:29:05, 10°.57N×124°.62E, h9km, mb3.8, ML2.5, MS2.1, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**1.15**	**221**	*e*P	Pb	15 29 26.4	-0.6
TBP				*e*S	Sn	15 29 43.5	+0.4

CSEM 11 15:41:51.6, 42°.30N×13°.47E, h10km, MD2.1/9, After ROM
ROM 11 15:41:51.6±0.1, 42°.30N×13°.47E, h10km, Md2.1/9, Ml1.9/10, Error ellipse: s-maj=1.2km s-min=0.9km az=48.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**317**	Pg	Pg	15 41 54.3	+0.3
AQU				Sg	Sg	15 41 55.8	+0.1
	515nm,0.2s						
AQU	**L'Aquila**	**0.07**	**317**	Pg	Pg	15 41 54.3	+0.3
AQU				Sg	Sg	15 41 55.8	+0.1
	515nm,0.2s						
FAGN	**Fagnano**	**0.09**	**113**	Pg	Pg	15 41 54.6	+0.3
FAGN				Sg	Sg	15 41 56.7	+0.5
	2µm,0.4s						
FAGN	**Fagnano**	**0.09**	**113**	Pg	Pg	15 41 54.6	+0.3
FAGN				Sg	Sg	15 41 56.7	+0.5
	2µm,0.4s						
CAMP	**Campotosto**	**0.24**	**350**	Pg	Pg	15 41 57.4	+0.7
CAMP				Sg	Sg	15 42 00.6	+0.5
	71nm,0.6s						
CAMP	**Campotosto**	**0.24**	**350**	Pg	Pg	15 41 57.4	+0.7
CAMP				Sg	Sg	15 42 00.6	+0.5
	71nm,0.6s						
FIAM	**Fiamignano**	**0.26**	**262**	Pg	Pg	15 41 57.7	+0.6
FIAM				Sg	Sg	15 42 01.8	+1.0
	129nm,0.2s						
FIAM	**Fiamignano**	**0.26**	**262**	Pg	Pg	15 41 57.7	+0.6
FIAM				Sg	Sg	15 42 01.8	+1.0
	129nm,0.2s						
PTQR	**Pietraquaria**	**0.28**	**190**	Pg	Pg	15 41 57.9	+0.4
PTQR				Sg	Sg	15 42 02.4	+0.9
	36nm,0.2s						
PTQR	**Pietraquaria**	**0.28**	**190**	Pg	Pg	15 41 57.9	+0.4
PTQR				Sg	Sg	15 42 02.4	+0.9
	36nm,0.2s						
VCEL	**Villa Celiera**	**0.29**	**72**	Pg	Pg	15 41 58.0	+0.3
VCEL				Sg	Sg	15 42 02.4	+0.6
	191nm,0.4s						
VCEL	**Villa Celiera**	**0.29**	**72**	Pg	Pg	15 41 58.0	+0.3
VCEL				Sg	Sg	15 42 02.4	+0.6
	191nm,0.4s						
TERO	**Teramo**	**0.34**	**18**	Pg	Pb	15 41 59.4	-0.4
	113nm,0.5s						
TERO	**Teramo**	**0.34**	**18**	Pg	Pb	15 41 59.4	-0.4
	113nm,0.5s						
LNSS	**Leonessa**	**0.43**	**314**	Pg	Pb	15 42 01.0	-0.5
	52nm,0.4s						
LNSS	**Leonessa**	**0.43**	**314**	Pg	Pb	15 42 01.0	-0.5
	52nm,0.4s						
INTR	**Introdacqua**	**0.44**	**132**	Pg	Pg	15 42 00.6	+0.3
INTR				Sg	Sb	15 42 07.3	-0.9
	84nm,0.3s						
INTR	**Introdacqua**	**0.44**	**132**	Pg	Pg	15 42 00.6	+0.3
INTR				Sg	Sb	15 42 07.3	-0.9
	84nm,0.3s						
VVLD	**Villa Vallelon**	**0.45**	**165**	Pg	Pb	15 42 01.2	-0.5
VVLD				Sg	Sg	15 42 07.4	+0.9
	53nm,0.3s						
VVLD	**Villa Vallelon**	**0.45**	**165**	Pg	Pb	15 42 01.2	-0.5
VVLD				Sg	Sg	15 42 07.4	+0.9
	53nm,0.3s						
CERT	**Cerreto**	**0.51**	**226**	Pg	Pb	15 42 02.6	0.0
CERT	**Cerreto**	**0.51**	**226**	Pg	Pb	15 42 02.6	0.0
GUAR	**Guarcino**	**0.52**	**193**	Pg	Pg	15 42 01.8	-0.1
	33nm,0.5s						
GUAR	**Guarcino**	**0.52**	**193**	Pg	Pg	15 42 01.8	-0.1
	33nm,0.5s						
LPEL	**Lama dei Pelig**	**0.59**	**115**	Pg	Pg	15 42 03.1	-0.1
LPEL				Sg	Sb	15 42 12.0	-0.6
	45nm,0.2s						
LPEL	**Lama dei Pelig**	**0.59**	**115**	Pg	Pg	15 42 03.1	-0.1
LPEL				Sg	Sb	15 42 12.0	-0.6
	45nm,0.2s						
NRCA	**Norcia**	**0.59**	**334**	Pg	Pg	15 42 03.1	-0.1
NRCA				Sg	Sb	15 42 11.9	-0.8
NRCA	**Norcia**	**0.59**	**334**	Pg	Pg	15 42 03.1	-0.1
NRCA				Sg	Sb	15 42 11.9	-0.8

ISCJB 11 15:42:29.2±0.2, 42°.53N±0°.02×13°.32E±0°.02, h12km±2km, Error ellipse: s-maj=3.1km s-min=2.7km az=135.9
CSEM 11 15:42:29.7±0.1, 42°.53N×13°.31E, h5km, ML3.7/12, Error ellipse: s-maj=2.1km s-min=1.9km az=63.0
ROM 11 15:42:29.2±0.1, 42°.52N×13°.32E, h8km±1km, Ml3.2/26, Error ellipse: s-maj=1.1km s-min=1.0km az=39.0
LDG 11 15:42:30.0±0.9, 42°.44N×13°.37E, h2km, Ml3.2/6, Error ellipse: s-maj=18.9km s-min=10.1km az=98.0
ISC 11 15:42:29.9±0.8, 42°.53N±0°.02×13°.32E±0°.02, h10km±5km, n103, σ0s94/143, 1C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**88**	Pg	**Pg**	**15 42 31.9**	**-0.3**
CAMP				Sg	**Sg**	**15 42 33.3**	**-0.6**
	9µm,0.4s						
CAMP	**Campotosto**	**0.07**	**88**	Pg	**Pg**	**15 42 31.9**	**-0.3**
CAMP				Sg	**Sg**	**15 42 33.3**	**-0.6**
	9µm,0.4s						
AQU	**L'Aquila**	**0.19**	**160**	Pg	**Pg**	**15 42 33.8**	**-0.1**
AQU				Sg	**Sg**	**15 42 36.7**	**0.0**
	7µm,0.4s						
AQU	**L'Aquila**	**0.19**	**160**	Pg	**Pg**	**15 42 33.8**	**-0.1**
AQU				Sg	**Sg**	**15 42 36.7**	**0.0**
	7µm,0.4s						
LNSS	**Leonessa**	**0.21**	**289**	Pg	**Pg**	**15 42 34.7**	**+0.3**
LNSS				Sg	**Sg**	**15 42 38.4**	**+0.9**
	14µm,0.3s						
LNSS	**Leonessa**	**0.21**	**289**	Pg	**Pg**	**15 42 34.7**	**+0.3**
LNSS				Sg	**Sg**	**15 42 38.4**	**+0.9**
	14µm,0.3s						
TERO	**Teramo**	**0.23**	**67**	Pg	**Pg**	**15 42 34.3**	**-0.4**
TERO				Sg	**Sg**	**15 42 37.9**	**0.0**
TERO	**Teramo**	**0.23**	**67**	Pg	**Pg**	**15 42 34.3**	**-0.4**
TERO				Sg	**Sg**	**15 42 37.9**	**0.0**
FIAM	**Fiamignano**	**0.30**	**209**	Pg	**Pg**	**15 42 35.9**	**-0.1**
FIAM				Sg	**Sg**	**15 42 40.6**	**+0.5**
FIAM	**Fiamignano**	**0.30**	**209**	Pg	**Pg**	**15 42 35.9**	**-0.1**
FIAM				Sg	**Sg**	**15 42 40.6**	**+0.5**
NRCA	**Norcia**	**0.34**	**334**	Pg	**Pg**	**15 42 36.5**	**-0.1**
NRCA				Sg	**Sg**	**15 42 41.9**	**+0.8**
	6µm,0.1s						
NRCA	**Norcia**	**0.34**	**334**	Pg	**Pg**	**15 42 36.5**	**-0.1**
NRCA				Sg	**Sg**	**15 42 41.9**	**+0.8**
	6µm,0.1s						
GAVE	**Gavelli**	**0.35**	**297**	Pg	**Pg**	**15 42 36.9**	**0.0**
GAVE	**Gavelli**	**0.35**	**297**	Pg	**Pg**	**15 42 36.9**	**0.0**
OFFI	**Offida**	**0.49**	**34**	Pg	**Pg**	**15 42 39.8**	**+0.4**
	8µm,0.5s						
OFFI	**Offida**	**0.49**	**34**	Pg	**Pg**	**15 42 39.8**	**+0.4**
	8µm,0.5s						
MNS	**Montasola**	**0.49**	**253**	Pg	**Pg**	**15 42 39.1**	**-0.4**
MNS				Sg	**Sg**	**15 42 46.9**	**+0.9**
	1µm,0.3s						
MNS	**Montasola**	**0.49**	**253**	Pg	**Pg**	**15 42 39.1**	**-0.4**
MNS				Sg	**Sg**	**15 42 46.9**	**+0.9**
	1µm,0.3s						
TRTR	**Tortoreto Alta**	**0.52**	**58**	Pg	**Pb**	**15 42 40.7**	**-0.4**
	5µm,0.4s						
TRTR	**Tortoreto Alta**	**0.52**	**58**	Pg	**Pb**	**15 42 40.7**	**-0.4**
	5µm,0.4s						
FDMO	**Fiordimonte**	**0.53**	**342**	Pg	**Pg**	**15 42 39.8**	**-0.4**
FDMO				Sg	**Sg**	**15 42 48.1**	**+0.9**
	1µm,0.3s						
FDMO	**Fiordimonte**	**0.53**	**342**	Pg	**Pg**	**15 42 39.8**	**-0.4**
FDMO				Sg	**Sg**	**15 42 48.1**	**+0.9**
	1µm,0.3s						
CESX	**Cesi**	**0.55**	**278**	Pg	**Pg**	**15 42 40.1**	**-0.4**
CESX				Sg	**Sg**	**15 42 48.1**	**+0.3**
	1µm,0.3s						
CESX	**Cesi**	**0.55**	**278**	Pg	**Pg**	**15 42 40.1**	**-0.4**
CESX				Sg	**Sg**	**15 42 48.1**	**+0.3**
	1µm,0.3s						
CESI	**CESI - Serrava**	**0.56**	**327**	Pg	**Pg**	**15 42 40.6**	**-0.2**
CESI				Sg	**Sb**	**15 42 49.9**	**-0.1**
	439nm,0.3s						
CESI	**CESI - Serrava**	**0.56**	**327**	Pg	**Pg**	**15 42 40.6**	**-0.2**
CESI				Sg	**Sb**	**15 42 49.9**	**-0.1**
	439nm,0.3s						
CERT	**Cerreto**	**0.63**	**203**	Pg	**Pg**	**15 42 41.4**	**-0.8**
CERT	**Cerreto**	**0.63**	**203**	Pg	**Pg**	**15 42 41.4**	**-0.8**
MTCE	**Montecelio**	**0.66**	**220**	Pg	**Pg**	**15 42 41.8**	**-0.9**
	418nm,0.5s						
MTCE	**Montecelio**	**0.66**	**220**	Pg	**Pg**	**15 42 41.8**	**-0.9**
	418nm,0.5s						
INTR	**Introdacqua**	**0.68**	**140**	Pg	**Pg**	**15 42 42.1**	**-0.9**
INTR				Sg	**Sg**	**15 42 52.3**	**+0.3**
	740nm,0.6s						
INTR	**Introdacqua**	**0.68**	**140**	Pg	**Pg**	**15 42 42.1**	**-0.9**
INTR				Sg	**Sg**	**15 42 52.3**	**+0.3**
	740nm,0.6s						
VVLD	**Villa Vallelon**	**0.70**	**161**	Pg	**Pg**	**15 42 43.7**	**+0.3**
	494nm,0.5s						
VVLD	**Villa Vallelon**	**0.70**	**161**	Pg	**Pg**	**15 42 43.7**	**+0.3**
	494nm,0.5s						
ASSB	**Assisi San Ben**	**0.70**	**317**	Pg	**Pg**	**15 42 42.9**	**-0.6**
ASSB				Sg	**Sg**	**15 42 53.3**	**+0.7**
	713nm,0.4s						
ASSB	**Assisi San Ben**	**0.70**	**317**	Pg	**Pg**	**15 42 42.9**	**-0.6**
ASSB				Sg	**Sg**	**15 42 53.3**	**+0.7**
	713nm,0.4s						
GUAR	**Guarcino**	**0.74**	**180**	Pg	**Pg**	**15 42 44.2**	**+0.1**
	606nm,0.5s						
GUAR	**Guarcino**	**0.74**	**180**	Pg	**Pg**	**15 42 44.2**	**+0.1**
	606nm,0.5s						
SNTG	**Esanatoglia**	**0.77**	**339**	Pg	**Pg**	**15 42 44.1**	**-0.7**
SNTG				Sg	**Sb**	**15 42 56.0**	**0.0**
	273nm,0.2s						
SNTG	**Esanatoglia**	**0.77**	**339**	Pg	**Pg**	**15 42 44.1**	**-0.7**
SNTG				Sg	**Sb**	**15 42 56.0**	**0.0**
	273nm,0.2s						
LPEL	**Lama dei Pelig**	**0.81**	**127**	Pg	**Pg**	**15 42 44.2**	**-1.2**
	358nm,0.4s						
LPEL	**Lama dei Pelig**	**0.81**	**127**	Pg	**Pg**	**15 42 44.2**	**-1.2**
	358nm,0.4s						
CING	**Cingoli**	**0.85**	**354**	Pg	**Pg**	**15 42 45.4**	**-0.8**
	1µm,0.5s						
CING	**Cingoli**	**0.85**	**354**	Pg	**Pg**	**15 42 45.4**	**-0.8**
	1µm,0.5s						
RMP	**Rome, Mte Porz**	**0.85**	**212**	Pg	**Pg**	**15 42 45.5**	**-0.8**
	687nm,0.6s						
RMP	**Rome, Mte Porz**	**0.85**	**212**	Pg	**Pg**	**15 42 45.5**	**-0.8**
	687nm,0.6s						
SDI	**San Donato**	**0.90**	**156**	Pg	**Pg**	**15 42 46.8**	**-0.4**
	724nm,1.2s						
SDI	**San Donato**	**0.90**	**156**	Pg	**Pg**	**15 42 46.8**	**-0.4**
	724nm,1.2s						
MURB	**Monte Urbino**	**0.93**	**322**	Pg	**Pg**	**15 42 47.2**	**-0.6**
	1µm,0.3s						
MURB	**Monte Urbino**	**0.93**	**322**	Pg	**Pg**	**15 42 47.2**	**-0.6**
	1µm,0.3s						
MGAB	**Montegabbione**	**0.96**	**294**	Pg	**Pg**	**15 42 47.8**	**-0.6**
MGAB	**Montegabbione**	**0.96**	**294**	Pg	**Pg**	**15 42 47.8**	**-0.6**
ARVD	**Arcevia**	**1.00**	**344**	Pg	**Pg**	**15 42 48.3**	**-0.9**
	521nm,0.4s						
ARVD	**Arcevia**	**1.00**	**344**	Pg	**Pg**	**15 42 48.3**	**-0.9**
	521nm,0.4s						
AOI	**Ancona**	**1.04**	**12**	Pg	**Pg**	**15 42 49.1**	**-0.7**
	597nm,0.4s						
AOI	**Ancona**	**1.04**	**12**	Pg	**Pg**	**15 42 49.1**	**-0.7**
	597nm,0.4s						
TOLF	**Tolfa**	**1.08**	**245**	Pg	**Pg**	**15 42 49.7**	**-1.0**
	371nm,0.7s						
TOLF	**Tolfa**	**1.08**	**245**	Pg	**Pg**	**15 42 49.7**	**-1.0**
	371nm,0.7s						
SACS	**San Casciano d**	**1.08**	**287**	Pg	**Pg**	**15 42 50.0**	**-0.7**
	294nm,0.7s						
PIEI	**Pieia**	**1.15**	**331**	Pg	**Pb**	**15 42 51.1**	**-0.9**
	318nm,0.7s						
PIEI	**Pieia**	**1.15**	**331**	Pg	**Pb**	**15 42 51.1**	**-0.9**
	318nm,0.7s						
BADI	**Badiali**	**1.25**	**322**	Pg	**Pn**	**15 42 53.5**	**0.0**
	457nm,0.8s						
BADI	**Badiali**	**1.25**	**322**	Pg	**Pn**	**15 42 53.5**	**0.0**
	457nm,0.8s						
CAFI	**Castiglion Fio**	**1.27**	**309**	Pn	**Pn**	**15 42 53.5**	**-0.2**
	297nm,0.8s						
CAFI	**Castiglion Fio**	**1.27**	**309**	Pn	**Pn**	**15 42 53.5**	**-0.2**
	297nm,0.8s						
PARC	**Parchiule**	**1.36**	**325**	Pn	**Pb**	**15 42 55.6**	**0.0**
	359nm,0.7s						
PARC	**Parchiule**	**1.36**	**325**	Pn	**Pb**	**15 42 55.6**	**0.0**
	359nm,0.7s						
NVLJ	**Novalja**	**2.32**	**29**	*e*Pn	**Pn**	**15 43 08.3**	**+0.2**
NVLJ				Sn	**Sn**	**15 43 37.1**	**+0.3**
NVLJ	**Novalja**	**2.32**	**29**	*e*Pn	**Pn**	**15 43 08.3**	**+0.2**
NVLJ				Sn	**Sn**	**15 43 37.1**	**+0.3**
MAIM	**Mastiano**	**2.48**	**305**	P	**Pn**	**15 43 10.7**	**+0.3**
GBRS	**Gornja Briga**	**3.19**	**19**	Pn	**Pn**	**15 43 21.9**	**+1.8**
GBRS				*e*Sn	**Sn**	**15 43 58.5**	**+0.4**
PGF	**Pioggiola**	**3.19**	**272**	*e*Pn	**Pn**	**15 43 20.4**	**+0.2**
PGF				*e*Sn	**Sn**	**15 44 00.4**	**+2.1**
	6.7nm,0.4s						
PGF	**Pioggiola**	**3.19**	**272**	*e*Pn	**Pn**	**15 43 20.4**	**+0.2**
PGF				*e*Sn	**Sn**	**15 44 00.4**	**+2.1**
	3.3nm,0.4s						
STON	**Ston**	**3.25**	**83**	*e*Pn	**Pn**	**15 43 21.7**	**+0.8**
STON				Sn	**Sn**	**15 43 59.6**	**0.0**
STON	**Ston**	**3.25**	**83**	*e*Pn	**Pn**	**15 43 21.6**	**+0.8**
STON				Sn	**Sn**	**15 43 59.6**	**0.0**
BOJS	**Bojanci**	**3.28**	**25**	*e*Pn	**Pn**	**15 43 22.7**	**+1.3**
BOJS				*e*Sn	**Sn**	**15 44 02.2**	**+1.8**
BOJS	**Bojanci**	**3.28**	**25**	*e*Pn	**Pn**	**15 43 22.7**	**+1.3**
BOJS				*e*Sn	**Sn**	**15 44 02.2**	**+1.8**
JAVS	**Javornik**	**3.40**	**9**	*e*Pn	**Pn**	**15 43 23.2**	**+0.1**
JAVS	**Javornik**	**3.40**	**9**	*e*Pn	**Pn**	**15 43 23.2**	**+0.1**
ABTA	**Abfaltersbach**	**4.25**	**353**	⇑*i*Pn	**Pn**	**15 43 35.2**	**+0.4**
ABTA	**Abfaltersbach**	**4.25**	**353**	P	**Pn**	**15 43 35.9**	**+1.1**
	SNR=12						
ABTA	**Abfaltersbach**	**4.25**	**353**	Pn	**Pn**	**15 43 35.2**	**+0.4**
SBF	**Sospel**	**4.50**	**289**	*e*Pn	**Pn**	**15 43 38.7**	**+0.5**
SBF	**Sospel**	**4.50**	**289**	*e*Pn	**Pn**	**15 43 38.7**	**+0.5**
FRF	**La Foret Royal**	**4.99**	**284**	*e*Pn	**Pn**	**15 43 45.0**	**+0.1**
FRF	**La Foret Royal**	**4.99**	**284**	*e*Pn	**Pn**	**15 43 45.0**	**+0.1**
LMR	**La Mourre**	**5.06**	**281**	*e*Pn	**Pn**	**15 43 45.6**	**-0.2**
LMR	**La Mourre**	**5.06**	**281**	*e*Pn	**Pn**	**15 43 45.6**	**-0.2**
MBDF	**Montbardon**	**5.23**	**297**	*e*P	**Pn**	**15 43 50.8**	**+2.5**
MBDF	**Montbardon**	**5.23**	**297**	*e*P	**Pn**	**15 43 50.8**	**+2.5**
GRUS	**Gruza**	**5.58**	**73**	*e*Pn	**Pn**	**15 43 54.3**	**+1.4**
LPG	**La Plagne**	**5.58**	**304**	*e*P	Pn	15 43 56.7	+3.5
LPG				*e*Sn	**Sn**	**15 44 55.8**	**-1.8**
	1.5nm,0.4s						
LPL	**La Plagne**	**5.60**	**304**	*e*P	Pn	15 43 56.9	+3.4
LPL				*e*Sn	**Sn**	**15 44 55.0**	**-3.0**
	2.6nm,0.4s						
SMRF	**Simiane la Rot**	**5.83**	**287**	*e*P	**Pn**	**15 43 58.1**	**+1.6**
SMRF	**Simiane la Rot**	**5.83**	**287**	*e*P	**Pn**	**15 43 58.1**	**+1.6**
KHC	**Kasperske Hory**	**6.60**	**2**	*e*PN	**Pn**	**15 44 06.9**	**-0.1**
KHC				*ex*	x	15 44 14.6	
KHC				*e*SN	**Sn**	**15 45 21.0**	**-1.3**
KHC	**Kasperske Hory**	**6.60**	**2**	Pn	**Pn**	**15 44 06.9**	**-0.1**
KHC				Sn	**Sn**	**15 45 21.0**	**-1.3**
HINF	**Hinteralfeld**	**6.98**	**321**	*e*Pn	**Pn**	**15 44 12.6**	**+0.4**
HINF				*e*Sn	**Sn**	**15 45 29.2**	**-2.4**
	9.6nm,0.7s						
HINF	**Hinteralfeld**	**6.98**	**321**	*e*Pn	**Pn**	**15 44 12.6**	**+0.4**
CDF	**Champ du Feu**	**7.25**	**326**	*e*Pn	**Pn**	**15 44 16.0**	**+0.1**
CDF				*e*Sn	**Sn**	**15 45 35.9**	**-2.4**
	10.0nm,0.7s						
CDF	**Champ du Feu**	**7.25**	**326**	*e*Pn	**Pn**	**15 44 16.0**	**+0.1**
HAU	**Haudompre**	**7.35**	**320**	*e*Pn	**Pn**	**15 44 17.7**	**+0.4**
HAU				*e*Sn	**Sn**	**15 45 36.8**	**-4.0**
	8.2nm,0.3s						
HAU	**Haudompre**	**7.35**	**320**	*e*Pn	**Pn**	**15 44 17.7**	**+0.4**

IDC 11 16:07:46.9±1.6, 43°.98N×105°.40W, h0km, mb3.5/1, mb1 3.4/4, mb1mx3.2/29, mbtmp3.1/4, ML3.6/3, Error ellipse: s-maj=24.6km s-min=13.5km az=155.0
ISCJB 11 16:07:47.7±0.3, 43°.97N±0°.02×105°.27W±0°.03, h0km, mb3.6/1, Error ellipse: s-maj=3.1km s-min=2.5km az=158.2
NEIC 11 16:07:47.5±1.4, 44°.04N×104°.83W, h0km, ML2.7, Error ellipse: s-maj=19.4km s-min=12.3km az=61.0, Suspected Mining explosion.
NEIC 55 km [35 miles] WNW of Newcastle.
ISC 11 16:07:47.2±0.7, 44°.00N±0°.02×105°.25W±0°.03, h0km, n62, σ1s17/71, 20C-31D, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I23A	**Meade Ranch, G**	**0.16**	**256**	⇑P	**Pg**	**16 07 51.5**	**+1.2**
	baz=0.5,SNR=1000						
I24A	**Kuemmerle Ranc**	**0.47**	**107**	⇓P	**Pb**	**16 07 57.8**	**-0.7**
	baz=0.2,SNR=38						
H23A	**Clabaugh Cattl**	**0.57**	**349**	⇓P	**Pb**	**16 08 00.1**	**-0.1**
	baz=0.7						
J23A	**Dilts Ranch, B**	**0.64**	**200**	⇓P	**Pg**	**16 07 59.7**	**+0.3**
	baz=0.8						
J24A	**Dixon Ranch, L**	**0.79**	**147**	⇓P	**Pb**	**16 08 03.0**	**-0.9**
	baz=0.7,SNR=57						
J24A				⇑S	**Sb**	**16 08 14.5**	**-0.8**
	baz=0.7						
H24A	**Dirks Ranch, A**	**0.90**	**33**	⇑P	**Pb**	**16 08 05.7**	**0.0**
	baz=0.7,SNR=46						
I22A	**9 Mile Ranch,**	**0.90**	**264**	⇑P	**Pg**	**16 08 04.7**	**+0.3**
	baz=1.2,SNR=47						
I22A				⇑S	**Sg**	**16 08 17.0**	**+0.9**
	baz=1.2						
H22A	**Clearmont**	**0.99**	**307**	⇓P	**Pb**	**16 08 07.2**	**-0.1**
	baz=1.2						
G23A	**Biddle**	**1.21**	**355**	⇓P	**Pn**	**16 08 11.4**	**0.0**
	baz=1.2,SNR=46						
K24A	**Anderson Ranch**	**1.32**	**166**	⇑P	**Pg**	**16 08 11.9**	**-0.5**
	baz=1.3,SNR=27						
G22A	**Birney**	**1.43**	**329**	⇑Pb	**Pb**	**16 08 15.0**	**+0.2**
	baz=1.6,SNR=31						
H21A	**Big Horn, Sher**	**1.43**	**297**	⇓Pb	**Pg**	**16 08 14.8**	**+0.1**
	baz=1.7,SNR=24						
G24A	**Alzada**	**1.45**	**24**	⇓Pb	**Pb**	**16 08 16.1**	**+0.9**
	baz=1.3,SNR=36						
I21A	**Big Trails, Te**	**1.49**	**263**	⇑P	**Pn**	**16 08 14.4**	**-0.9**
	baz=1.8,SNR=42						
K22A	**Casper**	**1.64**	**215**	⇓Pb	**Pn**	**16 08 17.1**	**-0.3**
	baz=1.9,SNR=272						
K22A				⇑Sb	**Sn**	**16 08 38.6**	**-0.8**
	baz=1.9						
K25A	**Mack Ranch, Ha**	**1.71**	**144**	⇑Pb	**Pb**	**16 08 19.6**	**-0.1**
	baz=1.6,SNR=32						
J21A	**Lysite**	**1.73**	**248**	⇑P	**Pn**	**16 08 18.2**	**-0.5**
	baz=2.0,SNR=45						
J21A				⇓Sb	**Sn**	**16 08 40.8**	**-0.7**
	baz=2.0						
G21A	**Lodge Grass**	**1.86**	**312**	⇑P	**Pb**	**16 08 21.6**	**-0.5**
	baz=2.1,SNR=20						
G21A				⇓Sb	**Sg**	**16 08 47.1**	**+0.2**
	baz=2.1						
L23A	**Garrett**	**1.92**	**190**	⇑P	**Pn**	**16 08 21.3**	**0.0**
	baz=2.0,SNR=49						
F22A	**Rosebud**	**1.92**	**338**	⇓Pb	**Pb**	**16 08 23.1**	**0.0**
	baz=2.0,SNR=38						
F22A				⇑Sb	**Sg**	**16 08 49.4**	**+0.6**
	baz=2.0						
F24A	**Ekalaka**	**1.93**	**17**	⇓Pb	**Pg**	**16 08 23.8**	**-0.4**
	baz=1.8,SNR=13						
L24A	**Wheatland**	**1.97**	**173**	⇑Pb	**Pb**	**16 08 23.0**	**-1.0**
	baz=2.0,SNR=10						
K26A	**Motz Farm, Whi**	**1.99**	**130**	⇓Pb	**Pb**	**16 08 23.5**	**-0.8**
	baz=1.8,SNR=14						
K21A	**Alcova**	**2.00**	**228**	⇓Pb	**Pn**	**16 08 23.0**	**+0.6**
	baz=2.3,SNR=75						
K21A				⇓Sb	**Sn**	**16 08 48.8**	**+0.5**
	baz=2.3						
H20A	**Greybull**	**2.04**	**285**	⇑Sb	**Sb**	**16 08 51.2**	**+0.1**
	baz=2.3						
L25A	**Engebretsen Ra**	**2.07**	**153**	⇓Pb	**Pb**	**16 08 24.8**	**-0.9**
	baz=2.0,SNR=28						
L25A				⇓Sb	**Sb**	**16 08 52.6**	**+0.5**
	baz=2.0						
I20A	**Worland**	**2.08**	**270**	⇓Pb	**Pn**	**16 08 24.3**	**+0.9**
	baz=2.4,SNR=46	

*IDC **11** 16:31:29.8±1.6, 44°.34N×129°.05W, h0km, mb3.4/6, mb1 3.7/10, mb1mx3.5/31, mbtmp3.4/10, ML3.6/4, MS2.9/2, Ms1 2.9/2, ms1mx2.4/26, Error ellipse: s-maj=33.0km s-min=15.7km az=39.0*

*ISCJB **11** 16:31:30.3±0.8, 44°.36N±0°.06×129°.22W±0°.08, h10km, mb3.3/5, MS3.0/1, Error ellipse: s-maj=9.7km s-min=6.5km az=138.2*

*NEIC **11** 16:31:31.3±0.7, 44°.27N×129°.22W, h10km, mb3.6/3, Error ellipse: s-maj=9.1km s-min=5.8km az=49.0*

ISC 11 16:31:31.0±0.8, 44°.23N±0°.06×129°.28W±0°.08, h10km, n88, σ1§26/72, mb3.4/5, 11C-7D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.84**	**109**	Pn	Pn	16 32 25.5	-4.8
COR	**Corvallis**	**4.30**	**83**	*e*Pn	**Pn**	**16 32 35.2**	**-1.2**
KMOR	**Kings Mountain**	**4.35**	**69**	P	**Pn**	**16 32 35.6**	**-1.6**
BMW	**Boistfort Moun**	**4.82**	**60**	P	**Pn**	**16 32 42.6**	**-1.1**
HUMO	**Hull Mountain**	**4.88**	**107**	*e*Pn	**Pn**	**16 32 42.2**	**-2.4**
BROR	**Big Rock Looko**	**4.91**	**87**	P	**Pn**	**16 32 43.9**	**-0.9**
SSOR	**Sweet Springs**	**4.92**	**80**	P	**Pn**	**16 32 44.4**	**-0.7**
NLWA	**Neilton Lookou**	**4.93**	**48**	*e*Pn	**Pn**	**16 32 44.0**	**-1.2**
RVW	**Rose Valley**	**5.01**	**65**	P	**Pn**	**16 32 45.4**	**-0.8**
H04A	**Detroit Lake**	**5.10**	**82**	P	**Pn**	**16 32 46.3**	**-1.2**
FRIS	**Frissel Point**	**5.16**	**88**	P	**Pn**	**16 32 47.7**	**-0.8**
FL2	**Flat Top 2**	**5.28**	**66**	P	**Pn**	**16 32 49.4**	**-0.6**
MTMW	**Mount Mitchell**	**5.32**	**68**	P	**Pn**	**16 32 50.1**	**-0.5**
TDL	**Tradedollar La**	**5.42**	**64**	P	**Pn**	**16 32 51.3**	**-0.7**
YBH	**Yreka Blue Hor**	**5.43**	**115**	Pn	**Pn**	**16 32 52.4**	**+0.4**
YBH				Sn	**Sn**	**16 33 52.2**	**-2.4**
YBH	**Yreka Blue Hor**	**5.43**	**115**	Pn	**Pn**	**16 32 52.4**	**+0.4**
	0.2nm,0.3s,baz=261,slow=9.0,SNR=11						
YBH				Sn	**Sn**	**16 33 52.2**	**-2.4**
	0.2nm,0.3s,baz=203,slow=7.7,SNR=3.2						
TDH	**Tom, Dick, Har**	**5.44**	**76**	P	**Pn**	**16 32 52.0**	**-0.3**
VBEM	**Beaver Butte**	**5.55**	**79**	P	**Pn**	**16 32 54.0**	**+0.2**
LON	**Longmire**	**5.83**	**62**	*e*Pn	**Pn**	**16 32 57.1**	**-0.4**
	22nm,1.0s						
WPW	**White Pass**	**5.98**	**63**	P	**Pn**	**16 32 59.8**	**+0.2**
PGC	**Sidney**	**5.98**	**40**	*e*Pn	**Pn**	**16 32 58.1**	**-1.4**
VIPM	**Ingram Point**	**6.22**	**84**	P	**Pn**	**16 33 02.2**	**-0.8**
JCW	**Jim Creek**	**6.46**	**50**	P	**Pn**	**16 33 06.2**	**0.0**
HAWA	**Hanford**	**7.21**	**69**	Pn	**Pn**	**16 33 15.3**	**-1.1**
	3.8nm,0.8s						
BMO	**Blue Mountains**	**8.58**	**82**	*e*Pn	**Pn**	**16 33 33.8**	**-1.5**
	1.2nm,0.4s						
NEW	**Newport**	**9.34**	**60**	Pn	**Pn**	**16 33 43.3**	**-2.4**
NEW	**Newport**	**9.34**	**60**	Pn	**Pn**	**16 33 43.3**	**-2.4**
	0.3nm,0.3s,baz=256,slow=16,SNR=4.0						
NEW				LR	LR	16 36 29.7	
	comp=Z,44nm,20.7s,baz=318,slow=33						
F12A	**Elk City**	**10.06**	**76**	⇑P	Pn	16 33 58.1	+2.5
	baz=10.0						
NVAR	**Mina Array Bea**	**10.08**	**121**	Pn	**Pn**	**16 33 57.0**	**+1.0**
NVAR	**Mina Array Bea**	**10.08**	**121**	Pn	**Pn**	**16 33 57.0**	**+1.0**
	0.1nm,0.3s,baz=296,slow=13,SNR=3.4						
I12A	**Atlanta**	**10.21**	**87**	⇑P	**Pn**	**16 34 00.1**	**+2.4**
	baz=10						
F13A	**Darby**	**10.71**	**76**	⇑P	**Pn**	**16 34 06.6**	**+2.2**
	baz=11,SNR=6.5						
BSMT	**Bassoo Peak**	**10.71**	**65**	*e*Pn	**Pn**	**16 34 04.5**	**0.0**
	2.2nm,0.8s						
HLID	**Hailey**	**10.76**	**88**	*e*Pn	**Pn**	**16 34 07.3**	**+2.1**
	7.3nm,0.9s						
G13A	**Cobalt**	**10.76**	**80**	P	Pn	16 34 08.0	+2.8
	baz=11,SNR=5.9						
H13A	**Challis**	**10.76**	**83**	⇑P	Pn	16 34 08.0	+2.7
	baz=11						
C13A	**Hot Springs**	**10.81**	**66**	P	**Pn**	**16 34 07.7**	**+1.9**
	baz=11,SNR=5.5						
I13A	**Wildhorse Cree**	**10.92**	**86**	P	Pn	16 34 10.7	+3.2
	baz=11,SNR=6.3						
J13A	**Cove Ranch, Pi**	**10.95**	**89**	P	Pn	16 34 11.4	+3.5
	baz=11,SNR=6.0						
SWMT	**Swartz Lake**	**11.15**	**68**	*e*Pn	**Pn**	**16 34 11.4**	**+0.9**
	4.1nm,1.0s						
I14A	**Mackay**	**11.40**	**86**	⇑P	Pn	16 34 17.5	+3.5
	baz=11						
J14A	**Carey**	**11.44**	**89**	P	Pn	16 34 17.4	+2.9
	baz=11,SNR=14						
SLMT	**Seeley Lake**	**11.44**	**69**	*e*Pn	**Pn**	**16 34 14.7**	**+0.2**
	9.8nm,0.9s						
CHMT	**Chamberlain Mo**	**11.55**	**71**	*e*Pn	**Pn**	**16 34 15.3**	**-0.9**
MCMT	**McKenzie Canyo**	**11.75**	**81**	*e*Pn	Pn	16 34 13.6	-5.3
	0.9nm,0.8s						
ISA	**Isabella**	**11.90**	**132**	Pn	**Pn**	**16 34 20.0**	**-0.8**
D15A	**Lincoln**	**12.07**	**71**	⇓P	Pn	16 34 26.4	+3.3
	baz=12						
C15A	**Salmond Ranch,**	**12.13**	**67**	P	**Pn**	**16 34 26.2**	**+2.3**
	baz=12,SNR=5.6						
D16A	**Dana Ranch, Ca**	**12.73**	**71**	⇓P	Pn	16 34 35.2	+3.2
	baz=13						
I16A	**Newdale**	**12.81**	**85**	⇓P	Pn	16 34 36.1	+2.8
	baz=13						
J16A	**Bone**	**12.82**	**88**	⇑P	Pn	16 34 36.1	+2.7
	baz=13						
H16A	**Russell Place,**	**12.90**	**82**	⇑P	Pn	16 34 37.4	+2.9
	baz=13,SNR=6.9						
TPAW	**Teton Pass**	**13.25**	**87**	*e*Pn	**Pn**	**16 34 41.4**	**+1.9**
	3.3nm,1.0s						
F17A	**Fitzpatrick Pl**	**13.27**	**76**	P	**Pn**	**16 34 41.3**	**+1.7**
	baz=13,SNR=5.1						
H17A	**Grant Village**	**13.40**	**83**	⇓P	Pn	16 34 44.8	+3.4
	baz=13						
LOHW	**Long Hollow**	**13.48**	**86**	*e*Pn	**Pn**	**16 34 44.0**	**+1.5**
CCUT	**Cedar City**	**13.76**	**114**	Pn	**Pn**	**16 34 46.1**	**-0.1**
MSU	**Marysvale**	**14.05**	**108**	*e*Pn	**Pn**	**16 34 51.3**	**+1.1**
	9.9nm,1.4s						
EGMT	**Eagleton**	**14.06**	**67**	*e*Pn	**Pn**	**16 34 49.5**	**-0.8**
	4.2nm,0.9s						
DLBC	**Dease Lake**	**14.24**	**358**	Pn	**Pn**	**16 34 51.7**	**-0.9**
RLMT	**Red Lodge**	**14.27**	**79**	*e*Pn	Pn	16 34 47.4	-5.9
	3.2nm,0.8s						
PDAR	**Pinedale Array**	**14.39**	**89**	Pn	**Pn**	**16 34 55.5**	**+0.6**
PDAR	**Pinedale Array**	**14.39**	**89**	Pn	**Pn**	**16 34 55.5**	**+0.6**
	0.1nm,0.3s,baz=271,slow=12,SNR=3.3						
I19A	**Meeteetse**	**14.57**	**84**	⇓P	Pn	16 35 00.5	+3.1
	baz=14						
SRU	**San Rafael**	**14.91**	**104**	Pn	**Pn**	**16 35 01.2**	**-0.8**
	269nm,1.1s						
S18A	**Hurst Farm, BI**	**15.95**	**108**	⇑P	**P**	**16 35 17.5**	**-1.8**
	baz=16						
WUAZ	**Wupatki**	**16.24**	**116**	Pn	**Pn**	**16 35 19.7**	**+0.3**
	5.2nm,0.9s						
M21A	**Separation Pea**	**16.27**	**92**	⇑P	**P**	**16 35 22.7**	**-0.1**
	baz=16,SNR=6.2						
O22A	**Kremmling**	**17.32**	**96**	P	**P**	**16 35 35.9**	**+1.4**
	baz=17,SNR=5.9						
S21A	**Coal Bank Pass**	**17.49**	**105**	⇓P	**P**	**16 35 37.0**	**+0.6**
	baz=17						
U21A	**Nageezi**	**18.20**	**108**	⇑P	**P**	**16 35 46.0**	**+1.8**
	baz=18,SNR=5.2						
ANMO	**Albuquerque**	**19.83**	**110**	P	**P**	**16 36 00.9**	**-1.1**
	1.5nm,0.9s						
YKA	**Yellowknife Ar**	**20.20**	**20**	P	**P**	**16 36 04.9**	**-0.7**
YKA	**Yellowknife Ar**	**20.20**	**20**	P	**P**	**16 36 04.9**	**-0.7**
	1.0nm,0.9s,baz=210,slow=11,SNR=13						
W24A	**Lazy 6 Ranch,**	**20.40**	**108**	⇑P	Pn	16 36 09.3	-1.0
	baz=20						
FFC	**Flin Flon**	**20.49**	**49**	*e*P	**P**	**16 36 08.5**	**-0.3**
	4.7nm,0.8s						
MCK	**McKinley**	**22.52**	**337**	P	**P**	**16 36 32.5**	**+1.9**
ILAR	**Eielson Array**	**22.82**	**340**	P	**P**	**16 36 34.4**	**+0.5**
ILAR	**Eielson Array**	**22.82**	**340**	P	**P**	**16 36 34.4**	**+0.5**
	0.5nm,0.9s,baz=159,slow=9.2,SNR=5.5						
ULM	**Lac du Bonnet**	**23.33**	**63**	P	**P**	**16 36 38.4**	**-0.8**
ULM	**Lac du Bonnet**	**23.33**	**63**	P	**P**	**16 36 38.4**	**-0.8**
	1.3nm,0.4s,baz=277,slow=7.7,SNR=6.0						
428A	**Kincaid Ranch,**	**24.91**	**114**	⇓P	**P**	**16 36 56.0**	**+1.7**
	baz=25						
TXAR	**Lajitas Array**	**25.20**	**118**	P	**P**	**16 36 56.2**	**-0.7**
TXAR	**Lajitas Array**	**25.20**	**118**	P	**P**	**16 36 56.2**	**-0.7**
	0.6nm,0.9s,baz=332,slow=7.7,SNR=4.3						
TXAR				LR	LR	16 47 31.3	
	comp=Z,46nm,18.9s,baz=0.0,slow=38						
SONM	**Songino Array**	**76.08**	**325**	P	**P**	**16 43 18.3**	**-0.4**
SONM	**Songino Array**	**76.08**	**325**	P	**P**	**16 43 18.3**	**-0.4**
	0.2nm,0.6s,baz=58,slow=5.4,SNR=2.9						
ZALV	**Zalesovo Beam**	**77.95**	**340**	P	**P**	**16 43 28.8**	**-0.2**
ZALV	**Zalesovo Beam**	**77.95**	**340**	P	**P**	**16 43 28.8**	**-0.2**
	0.2nm,0.3s,baz=359,slow=7.2,SNR=2.6						

WEL 11 16:36:59.9±0.3, 38°.58S×175°.81E, h166km±2km, ML3.7/7,

9C-7D, Error ellipse: s-maj=1.5km s-min=1.4km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALRZ	**Allen Road**	**0.41**	**88**	⇑PN	Pn	16 37 22.9	+0.1
PRRZ	**Plateau Road**	**0.46**	**80**	PN	Pn	16 37 22.9	-0.1
KRVZ	**Karewarewa**	**0.54**	**195**	PN	Pn	16 37 23.4	0.0
WTVZ	**West Tongariro**	**0.57**	**198**	PN	Pn	16 37 23.6	+0.1
TWVZ	**Taurewa**	**0.57**	**211**	⇓PN	Pn	16 37 23.6	0.0
RRRZ	**Republican Roa**	**0.60**	**67**	PN	Pn	16 37 23.5	-0.1
NGZ	**Ngauruhoe**	**0.62**	**195**	PN	Pn	16 37 24.0	+0.1
TARZ	**Mount Tarawera**	**0.64**	**58**	PN	Pn	16 37 24.3	+0.4
WPVZ	**Whakapapa**	**0.66**	**198**	PN	Pn	16 37 24.3	+0.2
TUVZ	**Tukino**	**0.70**	**190**	⇓PN	Pn	16 37 24.6	+0.2
TUVZ				SN	Sn	16 37 43.0	-0.3
FWVZ	**Far West T-bar**	**0.71**	**197**	PN	Pn	16 37 24.4	-0.1
TRVZ	**Turoa**	**0.75**	**196**	PN	Pn	16 37 24.9	+0.1
HIZ	**Hauiti**	**0.76**	**274**	PN	Pn	16 37 24.0	-0.4
WNVZ	**Wahianoa**	**0.77**	**193**	PN	Pn	16 37 24.9	+0.1
BKZ	**Black Stump Fm**	**0.79**	**138**	PN	Pn	16 37 24.9	+0.1
BKZ				SN	Sn	16 37 43.3	-0.6
PKVZ	**Pokaka**	**0.80**	**207**	⇓PN	Pn	16 37 24.8	0.0
MOVZ	**Moawhango**	**0.83**	**183**	PN	Pn	16 37 24.9	-0.1
MOVZ				SN	Sn	16 37 43.2	-1.4
MTVZ	**Mangateitei**	**0.85**	**198**	PN	Pn	16 37 25.2	0.0
TOZ	**Tahuroa Road**	**0.88**	**344**	PN	Pn	16 37 25.3	-0.1
BHHZ	**Black Hill Sta**	**0.93**	**168**	PN	Pn	16 37 25.8	0.0
NMHZ	**Naumai**	**0.93**	**124**	PN	Pn	16 37 26.7	+0.9
OPRZ	**Ohinepanea**	**0.93**	**39**	⇑PN	Pn	16 37 25.5	-0.3
VRZ	**Vera Road**	**0.99**	**236**	⇓PN	Pn	16 37 26.0	-0.1
RAHZ	**Arahi**	**1.05**	**109**	⇑PN	Pn	16 37 27.2	+0.6
URZ	**Urewera**	**1.07**	**73**	PN	Pn	16 37 26.1	-0.6
URZ				SN	Sn	16 37 47.0	-0.4
MCHZ	**McNeill Hill**	**1.10**	**142**	⇑PN	Pn	16 37 28.1	+1.0
MHEZ	**Mangahewa**	**1.27**	**246**	PN	Pn	16 37 28.5	+0.1
RAEZ	**Rainy Point**	**1.32**	**237**	PN	Pn	16 37 28.8	-0.1
WAZ	**Wanganui**	**1.34**	**208**	⇓PN	Pn	16 37 28.9	-0.3
MWZ	**Matawai**	**1.37**	**80**	⇑PN	Pn	16 37 29.1	-0.4
MWZ				SN	Sn	16 37 50.9	-1.3
PNHZ	**Pukenui**	**1.37**	**168**	PN	Pn	16 37 29.4	-0.1
PNHZ				SN	Sn	16 37 51.3	-1.1
CKHZ	**Cape Kidnapper**	**1.46**	**138**	⇑PN	Pn	16 37 30.9	+0.6
KAHZ	**Kahuranaki**	**1.47**	**146**	PN	Pn	16 37 31.0	+0.5
TSZ	**Takapari Road**	**1.48**	**176**	PN	Pn	16 37 30.3	-0.3
NEZ	**North Egmont**	**1.51**	**242**	PN	Pn	16 37 30.8	-0.1
KNZ	**Kokohu**	**1.52**	**108**	PN	Pn	16 37 31.0	+0.1
DFE	**Dawson Falls**	**1.53**	**240**	PN	Pn	16 37 30.8	-0.3
WPHZ	**Waipukurau**	**1.56**	**162**	PN	Pn	16 37 31.3	0.0
PRGZ	**Paritu Road**	**1.65**	**103**	PN	Pn	16 37 32.3	0.0
PXZ	**Pawanui**	**1.67**	**151**	⇑PN	Pn	16 37 32.3	0.0
NWEZ	**Newall Road**	**1.67**	**245**	PN	Pn	16 37 31.6	-0.8
MHGZ	**Mahia Peninsul**	**1.73**	**110**	⇑PN	Pn	16 37 33.4	+0.3
DVHZ	**Dannevirke**	**1.74**	**171**	⇓PN	Pn	16 37 32.5	-0.7
PRHZ	**Porangahau**	**1.80**	**160**	PN	Pn	16 37 33.6	-0.2
POWZ	**Post Office Ro**	**1.81**	**181**	PN	Pn	16 37 33.1	-0.8
CNGZ	**Carnagh Statio**	**1.88**	**88**	PN	Pn	16 37 35.0	+0.3
PUZ	**Puketiti**	**1.99**	**76**	PN	Pn	16 37 35.1	-0.8
MRZ	**Mangatainoka R**	**2.09**	**185**	⇓PN	Pn	16 37 35.7	-1.3
MRZ				SN	Sn	16 38 03.0	-2.8
BFZ	**Birch Farm**	**2.13**	**171**	⇑PN	Pn	16 37 36.4	-1.1
TIWZ	**Tintock**	**2.20**	**179**	PN	Pn	16 37 37.0	-1.3
MXZ	**Matakaoa Point**	**2.21**	**64**	PN	Pn	16 37 37.8	-0.7
OGWZ	**Otaki Gorge**	**2.29**	**192**	PN	Pn	16 37 37.9	-1.4
HOWZ	**Holdsworth Sta**	**2.33**	**186**	PN	Pn	16 37 38.1	-1.7
KIW	**Kapiti Island**	**2.39**	**197**	PN	Pn	16 37 38.7	-1.8
TMWZ	**Te Maipa**	**2.53**	**179**	PN	Pn	16 37 40.4	-1.8
MTW	**Mount Morrison**	**2.59**	**185**	PN	Pn	16 37 40.7	-2.1
CAW	**Cannon Point**	**2.59**	**193**	PN	Pn	16 37 41.0	-1.9
DUWZ	**D'Urville Isla**	**2.66**	**213**	PN	Pn	16 37 41.5	-2.2
PAWZ	**Paruwai Farm**	**2.82**	**186**	PN	Pn	16 37 43.3	-2.4
TRWZ	**Traveller**	**2.82**	**182**	PN	Pn	16 37 43.5	-2.2
WEL	**Wellington**	**2.82**	**196**	PN	Pn	16 37 43.5	-2.2
SNZO	**South Karori**	**2.86**	**197**	PN	Pn	16 37 43.7	-2.4
MSWZ	**Moikau Station**	**2.87**	**189**	PN	Pn	16 37 43.8	-2.5
TCW	**Tory Channel**	**2.89**	**204**	PN	Pn	16 37 44.2	-2.2
BHW	**Baring Head**	**2.92**	**194**	PN	Pn	16 37 44.4	-2.5
PLWZ	**Palliser**	**3.02**	**188**	PN	Pn	16 37 45.5	-2.7
TUWZ	**Tuamarina**	**3.19**	**206**	PN	Pn	16 37 47.4	-2.8
NNZ	**Nelson**	**3.23**	**215**	PN	Pn	16 37 47.8	-3.0
QRZ	**Quartz Range**	**3.39**	**227**	PN	Pn	16 37 49.0	-3.7
BSWZ	**Blackbirch Sta**	**3.47**	**205**	PN	Pn	16 37 51.1	-2.7
THZ	**Tophouse**	**3.89**	**214**	PN	Pn	16 37 55.9	-3.2
KHZ	**Kahutara**	**4.21**	**204**	PN	Pn	16 38 00.2	-3.0
DSZ	**Denniston Nort**	**4.41**	**223**	PN	Pn	16 38 01.9	-4.1
LTZ	**Lake Taylor**	**4.99**	**212**	PN	Pn	16 38 08.8	-4.6
CRLZ	**Canterbury Las**	**5.55**	**205**	PN	Pn	16 38 15.9	-4.8
MQZ	**McQueen's Vall**	**5.65**	**204**	PN	Pn	16 38 17.0	-5.1
WVZ	**Waitaha Valley**	**5.92**	**219**	*e*PN	Pn	16 38 21.1	-4.4
RPZ	**Rata Peaks**	**6.26**	**213**	PN	Pn	16 38 29.8	-4.3
FOZ	**Fox Glacier**	**6.80**	**221**	PN	Pn	16 38 31.7	-5.5
ODZ	**Otahua Downs**	**7.53**	**209**	PN	Pn	16 38 42.3	-4.5

*KRSC **11** 16:38:52.6±1.5, 48°.47N×155°.94E, h10km±10km, ML4.7*

*MOS **11** 16:38:52.4±1.6, 48°.68N×154°.88E, h51km, mb4.2/15, Error ellipse: s-maj=12.3km s-min=6.0km az=66.9*

*ISCJB **11** 16:38:52.8±0.5, 48°.64N±0°.05×154°.74E±0°.08, h56km±5km, mb4.0/28, MS3.1/6, Error ellipse: s-maj=12.1km s-min=3.1km az=135.3*

*BJI **11** 16:38:53.5, 48°.60N×154°.80E, h33km, mB4.4/7, mb4.3/7*

*NEIC **11** 16:38:54.1±0.7, 48°.68N×154°.70E, h59km±9km, mb4.2/8, Error ellipse: s-maj=14.5km s-min=6.9km az=141.0*

*IDC **11** 16:38:54.1±0.7, 48°.75N×154°.65E, h47km±7km, mb3.7/19, mb1 3.9/22, mb1mx3.8/30, mbtmp3.7/22, ML4.0/2, MS3.1/8, Ms1 3.1/8, ms1mx2.9/50, Error ellipse: s-maj=18.3km s-min=10.6km az=144.0*

ISC 11 16:38:53.8±0.7, 48°.57N±0°.07×154°.87E±0°.06, h52km±6km, n136, σ1§62/152, mb4.0/28, MS3.2/6, 1C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.26**	**21**	*e*PN	Pn	16 39 23.7	-5.0
SKR				*i* S	Sn	16 39 49.0	-6.4
SKR				pmax	pmax		
	comp=E,110nm,0.5s						
SKR				pmax	pmax		
	comp=Z,110nm,0.5s						
SKR				smax	smax		
	comp=N,1μm,0.5s						
SKR				smax	smax		
	comp=E,540nm,0.5s						
SKR	**Severo-Kuril's**	**2.26**	**21**	*e*P	**Pn**	**16 39 28.0**	**-0.7**
SKR				*e*S	**Sn**	**16 39 53.8**	**-1.6**
MIPR	**Malaya Ipel'ka**	**3.90**	**17**	P	**Pn**	**16 39 52.8**	**+1.6**
MTVR	**Mutnovka**	**4.45**	**27**	*e*P	**Pn**	**16 40 00.0**	**+1.2**
MTVR				*e*S	**Sn**	**16 40 48.8**	**-0.6**
GRL	**Gorelyy**	**4.48**	**26**	P	**Pn**	**16 40 00.6**	**+1.4**
GRL				S	**Sn**	**16 40 50.0**	**0.0**
RUS	**Russkaya**	**4.51**	**30**	PN	**Pn**	**16 39 59.4**	**-0.1**
RUS				S	**Sn**	**16 40 47.7**	**-2.9**
RUS	**Russkaya**	**4.51**	**30**	*e*P	**Pn**	**16 39 59.4**	**-0.1**
RUS				*e*S	**Sn**	**16 40 47.7**	**-2.9**
APC	**Apacha**	**4.59**	**18**	P	Pn	16 40 04.1	+3.5
PEA0B	**Petropavlovsk-**	**4.88**	**20**	*e*Pn	**Pn**	**16 40 06.8**	**+2.1**
PETK	**Petropavlovsk-**	**4.88**	**20**	PN	**Pn**	**16 40 06.7**	**+2.0**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,84nm,19.2s						
PETK	**Petropavlovsk-**	**4.88**	**20**	P	**Pn**	**16 40 06.7**	**+2.0**
PETK	**Petropavlovsk-**	**4.88**	**20**	P	**Pn**	**16 40 06.7**	**+2.0**
	comp=Z,2.6nm,0.3s,baz=182,slow=15,SNR=37						
PETK				LR	LR	16 42 22.9	
	comp=Z,84nm,19.2s,baz=36,slow=44						
PET	**Petropavlovsk**	**5.06**	**27**	*e*PN	**Pn**	**16 40 08.5**	**+1.5**
PET				*e*S	**Sn**	**16 41 03.7**	**-0.4**
PET				smax	smax		
	comp=N,116nm,0.5s						
PET				smax	smax		
	comp=E,187nm,0.6s						
PET	**Petropavlovsk**	**5.06**	**27**	*e*Pn	**Pn**	**16 40 07.6**	**+0.6**
PET	**Petropavlovsk**	**5.06**	**27**	*e*P	**Pn**	**16 40 07.9**	**+0.9**
PET				*e*S	**Sn**	**16 41 02.4**	**-1.7**
KOK	**Koryaka**	**5.29**	**25**	P	**Pn**	**16 40 10.9**	**+0.6**
SMAR	**Somma**	**5.32**	**26**	P	**Pn**	**16 40 11.9**	**+1.2**
SDLR	**Sedlovina**	**5.35**	**27**	P	**Pn**	**16 40 11.8**	**+0.6**
GNL	**Ganaly**	**5.48**	**20**	P	**Pn**	**16 40 14.5**	**+1.6**
SPN	**Mys Shipunski**	**5.59**	**34**	PN	**Pn**	**16 40 13.7**	**-0.5**
SPN	**Mys Shipunski**	**5.59**	**34**	P	**Pn**	**16 40 13.7**	**-0.5**
SPN				S	**Sn**	**16 41 12.2**	**-4.8**
KUR	**Kuril'sk**	**5.84**	**238**	*e*PN	Pn	16 40 21.5	+3.7
KUR				S	**Sn**	**16 41 28.0**	**+4.6**
KUR				pmax	pmax		
	comp=Z,280nm,1.0s						
KUR				smax	smax		
	comp=N,160nm,0.8s						
KUR				smax	smax		
	comp=E,190nm,1.0s						
TUMR	**Tumrok**	**7.47**	**24**	P	**Pn**	**16 40 41.3**	**+1.2**
YUK	**Yuzh-Kuril'sk**	**7.71**	**237**	*c i*PN	**Pn**	**16 40 45.8**	**+2.5**
YUK				*i* S	Sn	16 42 17.2	+8.0
YUK				pmax	pmax		
	comp=N,15nm,0.3s						
YUK				pmax	pmax		
	comp=E,12nm,0.3s						
YUK				pmax	pmax		
	comp=Z,116nm,0.3s						
YUK				MLR	MLR		
	comp=N,75nm,17.0s						
YUK				MLR	MLR		
	comp=Z,129nm,17.0s						
KMNR	**Kamenistaya**	**7.91**	**23**	P	**Pn**	**16 40 47.7**	**+1.5**
JRA	**Rausu**	**8.19**	**239**	P	**Pn**	**16 40 52.2**	**+2.3**
NEM2	**Nemuro 2**	**8.21**	**234**	P	**Pn**	**16 40 49.7**	**-0.5**
NEM2				*e*S	**Sn**	**16 42 17.8**	**-3.8**
YSS	**Yuzh-Sakhalins**	**8.32**	**263**	⇓*e*PN	Pn	16 40 56.6	+4.9
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS	**Yuzh-Sakhalins**	**8.32**	**263**	*e*Pn	Pn	16 40 54.8	+3.1
	comp=Z,29nm,0.4s						
YSS				*e*Sn	**Sn**	**16 42 22.5**	**-1.7**
JNK	**Nakash**	**8.63**	**239**	P	**Pn**	**16 40 57.5**	**+1.5**
JNK				*e*S	**Sn**	**16 42 33.3**	**+1.3**
JTKR	**Abashiri--Toko**	**8.87**	**243**	P	**Pn**	**16 41 02.1**	**+2.8**
JAK	**Akkeshi**	**9.03**	**236**	P	**Pn**	**16 41 00.8**	**-0.6**
JAK				*e*S	**Sn**	**16 42 37.5**	**-4.0**
KBTR	**Krutoberegovo**	**9.06**	**29**	PN	**Pn**	**16 41 02.3**	**+0.6**
KBTR	**Krutoberegovo**	**9.06**	**29**	P	Pn	16 41 07.8	+4.5
JSE	**Soyaes**	**9.17**	**251**	P	Pn	16 41 07.8	+4.5
JMP	**Maruseppu**	**9.18**	**244**	P	**Pn**	**16 41 06.7**	**+3.2**
JAR	**Ashorobuto**	**9.36**	**240**	P	**Pn**	**16 41 07.6**	**+1.7**
JAR				*e*S	**Sn**	**16 42 51.3**	**+1.7**
JWK2	**Keihoku**	**9.45**	**255**	P	Pn	16 41 13.1	+6.0
JOB	**Onbets**	**9.57**	**238**	*e*S	**Sn**	**16 42 50.7**	**-4.1**
ASAJ	**Asahikawa**	**9.58**	**247**	P	Pn	16 41 13.4	+4.4
ASAJ	**Asahikawa**	**9.58**	**247**	P	Pn	16 41 13.3	+4.3
ASAJ	**Asahikawa**	**9.58**	**247**	P	Pn	16 41 13.4	+4.4
	comp=Z,6.3nm,0.3s,baz=71,slow=14,SNR=104						
ASAJ				LR	LR	16 44 19.4	
	comp=Z,94nm,21.9s,baz=324,slow=34						
JKK2	**Kamakawa 2**	**9.62**	**245**	P	Pn	16 41 12.9	+3.4
JCH	**Churui**	**10.02**	**238**	P	**Pn**	**16 41 14.3**	**-0.7**
JCH				*e*S	**Sn**	**16 43 00.1**	**-5.7**
JFR	**Furan**	**10.12**	**242**	P	**Pn**	**16 41 18.6**	**+2.2**
JEM	**Erimo**	**10.53**	**236**	P	**Pn**	**16 41 21.1**	**-0.8**
JEM				*e*S

YKA					pP	**pP**		**16 47 47.4**	**+0.7**
YKA					PcP	**PcP**		**16 48 58.2**	**+1.2**
YKA	**Yellowknife Ar**	**48.76**	**38**		P	**P**		**16 47 32.9**	**0.0**
	comp=Z,1.1nm,0.8s,baz=298,slow=7.5,SNR=15								
YKA					pP	**pP**		**16 47 47.4**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=296,slow=7.3,SNR=6.0								
YKA					PcP	**PcP**		**16 48 58.2**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=305,slow=3.7,SNR=6.3								
BVAR	**Borovoye Array**	**50.62**	**309**		P	**P**		**16 47 44.9**	**-2.3**
BVAR								16 49 04.1	
BVAR					pmax	pmax			
	comp=Z,1.0nm,0.4s								
BVAR					pmax	pmax			
	comp=Z,1.0nm,0.5s								
BVAR	**Borovoye Array**	**50.62**	**309**		P	**P**		**16 47 44.9**	**-2.3**
BVAR					PcP	**PcP**		**16 49 04.1**	**+0.1**
BVAR	**Borovoye Array**	**50.62**	**309**		P	**P**		**16 47 44.9**	**-2.3**
	comp=Z,0.5nm,0.4s,baz=50,slow=7.7,SNR=6.2								
BVAR					PcP	**PcP**		**16 49 04.1**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=64,slow=3.4,SNR=7.7								
CHTO	**Chiang Mai**	**53.69**	**257**	*eP*		**P**		**16 48 11.1**	**+0.7**
CHTO					pmax	pmax			
	comp=Z,10.0nm,0.9s								
CHTO	**Chiang Mai**	**53.69**	**257**	*eP*		**P**		**16 48 11.1**	**+0.7**
	comp=Z,9.9nm,0.9s								
CM31	**Chiang Mai Arr**	**53.95**	**257**	*eP*		**P**		**16 48 13.6**	**+1.3**
	comp=Z,10nm,1.0s								
CMAR	**Chiang Mai Arr**	**53.95**	**257**		P	**P**		**16 48 13.6**	**+1.2**
CMAR					PcP	**PcP**		**16 49 18.4**	**+1.3**
CMAR	**Chiang Mai Arr**	**53.95**	**257**		P	**P**		**16 48 13.6**	**+1.2**
	comp=Z,5.5nm,0.8s,baz=33,slow=7.2,SNR=48								
CMAR					PcP	**PcP**		**16 49 18.4**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=24,slow=2.1,SNR=4.8								
ARU	**Arti**	**54.47**	**317**		P	P		16 48 10.9	-4.7
ARU	**Arti**	**54.47**	**317**		P	P		16 48 10.9	-4.7
ARCES	**ARCESS Array B**	**56.52**	**341**		P	**P**		**16 48 29.8**	**-0.3**
ARCES	**ARCESS Array B**	**56.52**	**341**		P	**P**		**16 48 29.8**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=34,slow=9.8,SNR=4.4								
ARCES					LR	LR		17 13 58.2	
	comp=Z,28nm,20.8s,baz=226,slow=37								
FFC	**Flin Flon**	**58.58**	**41**	*iP*		**P**		**16 48 47.2**	**+2.4**
FFC	**Flin Flon**	**58.58**	**41**	*eP*		**P**		**16 48 45.9**	**+1.1**
	comp=Z,2.1nm,0.7s								
JOF	**Joensuu**	**60.22**	**334**	*eP*		**P**		**16 48 56.7**	**+0.7**
JOF	**Joensuu**	**60.22**	**334**	*ep*		**P**		**16 48 56.7**	**+0.7**
	comp=Z,0.4nm,0.3s								
KSM	**Kuching**	**60.52**	**234**	*eP*		**P**		**16 48 58.5**	**-0.1**
NVAR	**Mina Array Bea**	**60.55**	**64**		P	**P**		**16 49 00.0**	**+1.1**
NVAR	**Mina Array Bea**	**60.55**	**64**		P	**P**		**16 49 00.0**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=288,slow=6.6,SNR=4.6								
PDAR	**Pinedale Array**	**62.73**	**56**		P	**P**		**16 49 14.6**	**+1.0**
PDAR	**Pinedale Array**	**62.73**	**56**		P	**P**		**16 49 14.6**	**+1.0**
	comp=Z,1.8nm,0.8s,baz=323,slow=2.4,SNR=14								
FINES	**FINESS Array B**	**62.89**	**335**		P	**P**		**16 49 13.1**	**-0.9**
FINES					PcP	**PcP**		**16 49 51.4**	**-0.4**
FINES	**FINESS Array B**	**62.89**	**335**		P	**P**		**16 49 13.1**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=30,slow=9.2,SNR=8.7								
FINES					PcP	**PcP**		**16 49 51.4**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=67,slow=5.0,SNR=3.6								
NOA	**NORSAR Array B**	**66.88**	**342**		P	**P**		**16 49 38.7**	**-1.2**
NOA	**NORSAR Array B**	**66.88**	**342**		P	**P**		**16 49 38.7**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=28,slow=6.5,SNR=4.3								
NOA					LR	LR		17 22 16.1	
	comp=Z,18nm,18.6s,baz=150,slow=39								
WRA	**Warramunga Arr**	**70.63**	**200**		P	**P**		**16 50 04.1**	**+0.5**
WRA	**Warramunga Arr**	**70.63**	**200**		P	**P**		**16 50 04.1**	**+0.5**
	comp=Z,2.0nm,0.9s,baz=17,slow=6.5,SNR=13								
SCHQ	**Schefferville**	**71.17**	**24**		P	**P**		**16 50 06.9**	**+0.3**
SCHQ	**Schefferville**	**71.17**	**24**		P	**P**		**16 50 06.9**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=336,slow=10.0,SNR=4.2								
ASAR	**Alice Springs**	**74.32**	**200**		P	**P**		**16 50 27.1**	**+1.5**
ASAR					pP	**PcP**		**16 50 39.8**	**-0.3**
ASAR	**Alice Springs**	**74.32**	**200**		P	**P**		**16 50 27.1**	**+1.5**
	comp=Z,0.8nm,0.4s,baz=13,slow=5.0,SNR=39								
ASAR					pP	**PcP**		**16 50 39.8**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=14,slow=5.7,SNR=3.8								
TXAR	**Lajitas Array**	**75.58**	**62**		P	**P**		**16 50 34.6**	**+1.5**
TXAR					pP	**pP**		**16 50 47.9**	**+0.1**
TXAR	**Lajitas Array**	**75.58**	**62**		P	**P**		**16 50 34.6**	**+1.5**
	comp=Z,1.7nm,0.8s,baz=297,slow=4.2,SNR=13								
TXAR					pP	**pP**		**16 50 47.9**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=302,slow=4.4,SNR=6.8								
GERES	**GERESS Array B**	**77.32**	**335**		P	**P**		**16 50 41.9**	**-0.8**
GERES	**GERESS Array B**	**77.32**	**335**		P	**P**		**16 50 41.9**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=27,slow=6.6,SNR=2.9								
VNA2	**Neumayer--Watz**	**156.06**	**194**	*es*PKPdf		sPKPdf		16 58 56.0	-6.0
VNA2	**Neumayer--Watz**	**156.06**	**194**	*e*PKPab		**PKPab**		**16 59 09.4**	**+0.9**
VNA3	**Neumayer Olymp**	**156.13**	**192**	*es*PKPdf		sPKPdf		16 58 54.4	-7.7
VNA3	**Neumayer Olymp**	**156.13**	**192**	*e*PKPab		**PKPab**		**16 59 08.5**	**-0.3**

*IDC **11** 16:56:16.3±3.0,49.54N×156.55E,h0km,mb3.2/2, mb1 3.5/3,mb1mx3.2/26,mbtmp3.3/3,ML3.5/1,MS3.4/1, Ms1 3.4/1,ms1mx2.4/21,Error ellipse: s-maj=61.5km s-min=35.6km az=147.0*

*MOS **11** 16:56:18.2±1.1,49.60N×156.50E,h29km,mb4.3/1,Error ellipse: s-maj=50.4km s-min=12.2km az=79.2*

*KRSC **11** 16:56:28.5±0.9,50.39N×157.16E,h5km±5km, ML4.2*

ISC 11 16:56:25.7±2.8,50.0N±0.2×156.76E±0.1,h55km±20km, n28,σ1$80/39,1C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.79**	**329**	⇑*iP*		Pn	16 56 37.5	-3.2
SKR				*i* S		**Sn**	**16 56 47.4**	**-4.3**
SKR				pmax	pmax			
	comp=N,2μm,0.2s							
SKR				pmax	pmax			
	comp=E,2μm,0.2s							
SKR				pmax	pmax			
	comp=Z,6μm,0.2s							
SKR				smax	smax			
	comp=N,6μm,0.2s							
SKR				smax	smax			
	comp=E,7μm,0.7s							
SKR	**Severo-Kuril's**	**0.79**	**329**	*i* P		**Pn**	**16 56 42.5**	**+1.8**
SKR				*i* S		**Sn**	**16 56 52.5**	**+0.8**
MIPR	**Malaya Ipel'ka**	**2.27**	**360**	P		**Pn**	**16 57 02.2**	**+1.5**
MIPR				*i* S		**Sn**	**16 57 26.4**	**-1.1**
MTVR	**Mutnovka**	**2.63**	**19**	*eP*		**Pn**	**16 57 07.1**	**+1.3**
MTVR				*i* S		**Sn**	**16 57 35.4**	**-1.1**
RUS	**Russkaya**	**2.66**	**24**	PN		**Pn**	**16 57 06.4**	**+0.3**
RUS	**Russkaya**	**2.66**	**24**	*eP*		**Pn**	**16 57 06.4**	**+0.3**
RUS				*i* S		**Sn**	**16 57 34.5**	**-2.6**
GRL	**Gorelyy**	**2.67**	**17**	*eP*		**Pn**	**16 57 08.0**	**+1.6**
GRL				*i* S		**Sn**	**16 57 36.4**	**-1.2**
APC	**Apacha**	**2.93**	**5**	P		**Pn**	**16 57 10.9**	**+1.2**
APC				*i* S		**Sn**	**16 57 42.4**	**-1.2**
PETK	**Petropavlovsk-**	**3.15**	**10**	PN		**Pn**	**16 57 14.5**	**+1.7**
PETK							16 57 58.2	
PETK				pmax	pmax			
	comp=Z,4.0nm,0.3s							
PETK				smax	smax			
	comp=N,2.0nm,0.3s							
PETK	**Petropavlovsk-**	**3.15**	**10**	Pn		**Pn**	**16 57 14.5**	**+1.7**
	comp=N,4.3nm,0.3s,baz=167,slow=14,SNR=64							
PETK				Sn		Sn	16 57 58.2	+8.9
	comp=N,2.0nm,0.3s,baz=144,slow=16,SNR=2.8							
PET	**Petropavlovsk**	**3.24**	**21**	PN		**Pn**	**16 57 15.3**	**+1.4**
PET	**Petropavlovsk**	**3.24**	**21**	*i* P		**Pn**	**16 57 15.3**	**+1.4**
PET				*i* S		**Sn**	**16 57 49.5**	**-1.7**
UGLR	**Uglovaya**	**3.45**	**21**	*eP*		**Pn**	**16 57 19.1**	**+2.1**
UGLR				*i* S		**Sn**	**16 57 56.6**	**0.0**
KOK	**Koryaka**	**3.49**	**19**	*eP*		**Pn**	**16 57 20.2**	**+2.8**
KOK				*i* S		**Sn**	**16 57 57.6**	**+0.1**
SMAR	**Somma**	**3.50**	**21**	P		**Pn**	**16 57 19.5**	**+1.8**
KRER	**Koryakskii**	**3.52**	**20**	*eP*		**Pn**	**16 57 20.3**	**+2.3**
KRER				*i* S		**Sn**	**16 57 58.3**	**-0.2**
SDLR	**Sedlovina**	**3.53**	**21**	*eP*		**Pn**	**16 57 19.3**	**+1.3**
SDLR				*i* S		**Sn**	**16 57 56.6**	**-1.9**
SPN	**Mys Shipunski**	**3.70**	**32**	PN		**Pn**	**16 57 21.2**	**+0.9**
SPN	**Mys Shipunski**	**3.70**	**32**	*eP*		**Pn**	**16 57 21.2**	**+0.9**
SPN				*i* S		**Sn**	**16 58 00.4**	**-2.2**
GNL	**Ganaly**	**3.76**	**11**	*eP*		**Pn**	**16 57 22.5**	**+1.3**
TUMR	**Tumrok**	**5.67**	**20**	P		**Pn**	**16 57 50.4**	**+3.1**
KMNR	**Kamenistaya**	**6.13**	**19**	P		**Pn**	**16 57 56.6**	**+3.0**
KBTR	**Krutoberegovo**	**7.20**	**28**	PN		**Pn**	**16 58 08.3**	**+0.2**
KBTR	**Krutoberegovo**	**7.20**	**28**	*eP*		**Pn**	**16 58 08.3**	**+0.2**
KDAK	**Kodiak Island**	**30.20**	**55**	LR		LR	17 13 53.4	
	comp=N,79nm,21.6s,baz=204,slow=35							
YKA	**Yellowknife Ar**	**46.85**	**40**	P		**P**		**17 04 50.9**	**+1.2**
	comp=N,0.3nm,0.5s,baz=296,slow=7.5,SNR=6.6								
MKAR	**Makanchi Array**	**47.64**	**296**	P		**P**		**17 04 54.6**	**-1.5**
	comp=N,0.1nm,0.4s,baz=64,slow=6.8,SNR=4.9								

*MOS **11** 17:14:31.8±1.3,59.61S×26.17W,h33km,mb5.2/30, MS4.4/9,Error ellipse: s-maj=23.7km s-min=10.9km az=98.8*

*IDC **11** 17:14:34.8±1.4,59.56S×26.32W,h47km±11km,mb4.8/19, mb1 4.8/20,mb1mx4.7/23,mbtmp4.7/20,ML5.7/1,MS4.5/24, Ms1 4.4/24,ms1mx4.4/25,Error ellipse: s-maj=14.5km s-min=12.0km az=49.0*

*ISCJB **11** 17:14:34.6±0.3,59.68S±0.05×26.2W±0.1,h61km, mb5.0/42,Error ellipse: s-maj=8.5km s-min=6.0km az=138.6*

*NEIC **11** 17:14:36.7±1.4,59.60S×26.27W,h68km±11km,mb5.1/27, Error ellipse: s-maj=7.5km s-min=5.5km az=220.0*

*BJI **11** 17:14:38.0,59.60S×26.30W,h65km,mB5.4/21,Ms5.3/18, Ms7 4.9/19*

*GCMT **11** 17:14:39.9±0.2,60.13S×26.04W,h47km±1km,MW5.2, Moment Tensor Solution. s63,c91; s80,c125; Moment tensor: Scale 10^{16}Nm; M_{rr}4.90±.23; $M_{\theta\theta}$2.08±.22; $M_{\phi\phi}$-6.98±.19; $M_{r\theta}$-2.63±.18; $M_{\theta\phi}$-3.65±.14; $M_{\phi r}$2.63±.17; Best double couple: M_o8.10000×10^{16} NP1:ϕ_s232.00000°, δ50.00000°,λ142.00000°. NP2:ϕ_s348.00000°,δ62.00000°, λ47.00000°. Principal axes: T 7.6700, Plg52.0000°, Azm207.0000°; N 0.8000, Plg37.0000°, Azm12.0000°; P -8.4700, Plg7.0000°, Azm107.0000°; Data Used: ll IU IC G CN.*

ISC 11 17:14:36.4±0.2,59.68S±0.06×26.39W±0.05,h61km,n321, σ1$35/355,mb5.0/39,40C-39D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.30**	**153**	*eP*n		**Pn**	**17 17 39.5**	**-2.5**
VNA1	**Neumayer--Stat**	**13.30**	**153**	*e*Sn		Sn	17 19 56.7	-11
VNA3	**Neumayer Olymp**	**13.45**	**156**	*eP*n		**Pn**	**17 17 41.1**	**-2.9**
VNA3	**Neumayer Olymp**	**13.45**	**156**	*eP*nPn		P	17 17 47.7	-3.6
VNA3	**Neumayer Olymp**	**13.45**	**156**	*e*Sn		Sn	17 20 00.8	-11
VNA3	**Neumayer Olymp**	**13.45**	**156**	*eP*cP		**PcP**	**17 23 07.6**	**+0.9**
VNA2	**Neumayer--Watz**	**13.70**	**153**	*eP*n		Pn	17 17 44.4	-3.0
VNA2	**Neumayer--Watz**	**13.70**	**153**	*eP*nPn		**P**	**17 17 53.4**	**-0.7**
VNA2	**Neumayer--Watz**	**13.70**	**153**	*e*Sn		Sn	17 20 04.0	-14
VNA2	**Neumayer--Watz**	**13.70**	**153**	*eP*cP		**PcP**	**17 23 08.5**	**+1.5**
SNAA	**Sanae**	**15.29**	**151**	*eP*n		**Pn**	**17 18 05.4**	**-2.8**
SNAA	**Sanae**	**15.29**	**151**	*eP*n		**Pn**	**17 18 05.2**	**-3.0**
	76nm,0.5s							
SNAA				*e*Sn		Sn	17 20 41.1	-15
SNAA				S		S	17 20 41.7	-28
SNAA				ScP		**ScP**	**17 26 43.5**	**+5.8**
SNAA				TT			17 32 53.6	
SNAA	**Sanae**	**15.29**	**151**	P		**Pn**	**17 18 05.3**	**-2.8**
	4.6nm,0.3s,baz=316,slow=13,SNR=167							
SNAA				S		Sn	17 20 41.7	-15
	0.8nm,0.3s,baz=337,slow=23,SNR=4.9							
SNAA				LR		LR	17 22 50.9	
	comp=Z,679nm,19.6s,baz=145,slow=32							
SNAA				ScP		**ScP**	**17 26 43.5**	**+5.8**
	0.1nm,0.3s,baz=270,slow=6.1,SNR=4.5							
SNAA				T			17 32 53.6	
	0.1nm,0.3s,baz=317,slow=21,SNR=3.6							
PMSA	**Palmer Station**	**18.07**	**238**	*eP*n		**Pn**	**17 18 43.8**	**+1.1**
PMSA	**Palmer Station**	**18.07**	**238**	P		**Pn**	**17 18 43.9**	**+1.3**
	2.4nm,0.3s,baz=83,slow=7.1,SNR=7.1							
PMSA				LR		LR	17 24 16.4	
	comp=Z,2μm,19.5s,baz=75,slow=32							
MAIT	**Maitri**	**19.04**	**141**	*eP*		P	17 18 43.7	-9.3
MAIT				*e*			17 18 50.8	
MAIT				*e*S		S	17 22 00.1	-25
EFI	**East Falkland**	**19.41**	**280**	*eP*		**Pn**	**17 19 00.9**	**+2.0**
EFI	**East Falkland**	**19.41**	**280**	*eP*		**Pn**	**17 18 59.4**	**+0.5**
	61nm,0.5s							
EFI	**East Falkland**	**19.41**	**280**	P		**Pn**	**17 18 59.4**	**+0.5**
	734nm,0.6s,SNR=23							
USHA	**Ushuaia**	**22.95**	**264**	P		**P**	**17 19 36.2**	**+1.0**
USHA	**Ushuaia**	**22.95**	**264**	P		**P**	**17 19 36.2**	**+1.0**
	56nm,0.7s,baz=86,slow=9.3,SNR=18							
USHA				LR		LR	17 26 28.6	
	comp=Z,2μm,19.9s,baz=223,slow=31							
SYO	**Syowa Base**	**28.57**	**137**	*e*pP		pP	17 20 37.4	-3.5
QSPA	**South Pole Qui**	**30.56**	**180**	PcP		**PcP**	**17 23 41.4**	**+0.5**
QSPA	**South Pole Qui**	**30.56**	**180**	PcP		**PcP**	**17 23 41.4**	**+0.5**
	7.0nm,0.7s,baz=150,slow=2.0,SNR=5.3							
QSPA				LR		LR	17 32 47.0	
	comp=Z,1μm,19.1s,baz=11,slow=36							
TRQA	**Tornquist**	**31.27**	**298**	*eP*		**P**	**17 20 50.9**	**+0.7**
	6.9nm,0.6s							
PLCA	**Paso Flores**	**33.20**	**285**	*eP*		**P**	**17 21 06.7**	**-0.5**
	16nm,0.7s							
PLCA				ScP		**ScP**	**17 27 30.1**	**+3.0**
PLCA	**Paso Flores**	**33.20**	**285**	P		**P**	**17 21 06.8**	**-0.3**
	14nm,0.6s,baz=144,slow=7.5,SNR=41							
PLCA				ScP		**ScP**	**17 27 30.1**	**+3.0**
	1.1nm,0.7s,baz=41,slow=5.6,SNR=4.8							
PLCA				LR		LR	17 33 39.5	
	comp=Z,523nm,20.1s,baz=155,slow=34							
MAW	**Mawson**	**37.02**	**140**	P		**P**	**17 21 40.4**	**+0.9**
MAW				PcP		**PcP**	**17 23 59.7**	**+0.8**
MAW	**Mawson**	**37.02**	**140**	P		**P**	**17 21 40.4**	**+0.9**
	14nm,1.1s,baz=268,slow=14,SNR=4.3							
MAW				PcP		**PcP**	**17 23 59.7**	**+0.8**
	6.3nm,0.8s,baz=238,slow=10,SNR=3.5							
MAW				LR		LR	17 35 16.4	
	comp=Z,933nm,20.2s,baz=239,slow=34							
FCH	**Farellones**	**38.99**	**293**	*eP*		**P**	**17 21 58.5**	**+1.7**
CLCH	**Cerro Calan**	**39.05**	**292**	*eP*		**P**	**17 21 58.2**	**+1.2**
CFAA	**Coronel Fontan**	**39.48**	**296**	LR		LR	17 37 22.7	
	comp=Z,101nm,21.2s,baz=55,slow=35							
CPUP	**Villa Florida**	**39.58**	**314**	P		**P**	**17 22 00.8**	**-0.6**
CPUP				ScP		**ScP**	**17 27 54.0**	**+3.4**
CPUP	**Villa Florida**	**39.58**	**314**	P		**P**	**17 22 00.8**	**-0.6**
	6.2nm,0.4s,baz=135,slow=7.1,SNR=30							
CPUP				ScP		**ScP**	**17 27 54.0**	**+3.4**
	0.8nm,0.5s,baz=123,slow=5.8,SNR=3.2							
CPUP				LR		LR	17 37 50.6	
	comp=Z,389nm,19.1s,baz=147,slow=35							
SUR	**Sutherland**	**41.33**	**70**	P		**P**	**17 22 15.4**	**-0.7**
SUR	**Sutherland**	**41.33**	**70**	P		**P**	**17 22 15.4**	**-0.7**
	6.9nm,0.8s,baz=218,slow=13,SNR=3.7							
TLL	**Tololo Astrono**	**41.87**	**295**	*eP*		**P**	**17 22 20.9**	**+0.3**
SBA	**Scott Base**	**42.48**	**184**	*eP*		**P**	**17 22 27.3**	**+2.6**
SBA				pmax	pmax			
	comp=Z,20nm,0.8s							
SBA	**Scott Base**	**42.48**	**184**	*eP*		**P**	**17 22 27.2**	**+2.6**
	comp=Z,20nm,0.8s							
LCO	**Las Campanas**	**42.80**	**296**	*eP*		**P**	**17 22 26.9**	**-1.2**
	comp=Z,27nm,0.7s							
VNDA	**Vanda**	**42.96**	**183**	*eP*		**P**	**17 22 30.6**	**+2.0**
	comp=Z,19nm,0.8s							
VNDA				*e*PcP		**PcP**	**17 24 19.1**	**+1.2**
VNDA				PcP		PP	17 24 19.5	+11
VNDA	**Vanda**	**42.96**	**183**	P		**P**	**17 22 30.7**	**+2.0**
	comp=Z,22nm,0.7s,baz=187,slow=6.6,SNR=88							
VNDA				PcP		**PcP**	**17 24 19.5**	**+1.6**
	comp=Z,4.8nm,0.7s,baz=264,slow=3.5,SNR=4.1							
VNDA				LR		LR	17 39 09.4	
	comp=Z,471nm,18.3s,baz=179,slow=34							
SHEL	**Horse Pasture**	**46.19**	**28**	P		**P**	**17 22 57.1**	**+2.0**
SHEL				pmax	pmax			
	comp=Z,130nm,1.0s							
SHEL	**Horse Pasture**	**46.19**	**28**	P		**P**	**17 22 57.1**	**+2.0**
	comp=Z,130nm,1.0s							
BOSA	**Boshof**	**46.58**	**72**	P		**P**	**17 22 57.3**	**-0.8**
BOSA				PcP		**PcP**	**17 24 31.7**	**+0.4**
BOSA	**Boshof**	**46.58**	**72**	P		**P**	**17 22 57.3**	**-0.8**
	comp=Z,8.7nm,0.6s,baz=205,slow=8.0,SNR=21							
BOSA				PcP		**PcP**	**17 24 31.7**	**+0.4**
	comp=Z,4.3nm,0.8s,baz=173,slow=4.9,SNR=3.2							
BOSA				LR		LR	17 39 23.0	
	comp=Z,445nm,18.0s,baz=37,slow=32							
BDFB	**Brasilia**	**46.74**	**331**	P		**P**	**17 22 58.2**	**-1.2**
BDFB	**Brasilia**	**46.74**	**331**	P		**P**	**17 22 58.2**	**-1.2**
	comp=Z,10nm,0.8s,baz=130,slow=4.6,SNR=14							
BDFB				LR		LR	17 39 44.3	
	comp=Z,468nm,21.0s,baz=99,slow=32							
LVC	**Limon Verde**	**47.55**	**302**	*eP*		**P**	**17 23 05.8**	**0.0**
	comp=Z,44nm,0.8s							
LBTB	**Lobatse**	**49.77**	**69**	*eP*		**P**	**17 23 22.2**	**-0.5**
	comp=Z,27nm,1.3s							
SIV	**San Ignacio**	**50.42**	**315**	LR		LR	17 45 00.4	
	comp=Z,356nm,18.1s,slow=36							
TSUM	**Tsumeb**	**51.18**	**57**	*eP*		**P**	**17 23 33.2**	**-0.2**
	comp=Z,7.0nm,1.0s							
LPAZ	**La Paz**	**52.86**	**307**	*eP*		**P**	**17 23 46.6**	**+0.2**
	comp=Z,13nm,0.6s							
LPAZ				ScP		**ScP**	**17 28 47.3**	**+0.7**
LPAZ	**La Paz**	**52.86**	**307**	P		**P**	**17 23 46.6**	**+0.2**
	comp=Z,12nm,0.5s,baz=113,slow=5.3,SNR=42							
LPAZ				ScP		**ScP**	**17 28 47.3**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=158,slow=5.4,SNR=4.0							
DRV	**Dumont d'Urvil**	**53.56**	**173**	PP		PP	17 25 46.0	-4.8
DRV				S		**S**	**17 31 15.0**	**-3.3**
DRV				SS		SS	17 35 12.0	+14
DRV				R			17 40 00.0	
RCBR	**Riachuelo**	**54.21**	**348**	*eP*		**P**	**17 23 54.9**	**-0.7**
	comp=Z,17nm,1.3s							
SAML	**Samuel**	**57.68**	**316**	*eP*		**P**	**17 24 18.9**	**-1.5**
	comp=Z,19nm,0.6s							
LSZ	**Lusaka**	**59.37**	**66**	*eP*		**P**	**17 24 31.9**	**-0.5**
	comp=Z,19nm,0.8s							
NNA	**Nana**	**60.40**	**300**	*eP*		**P**	**17 24 39.0**	**-0.3**
	comp=Z,19nm,0.7s							
NNA	**Nana**	**60.40**	**300**	LR		LR	17 48 37.2	
	comp=Z,220nm,19.3s,baz=154,slow=34							
ATAH	**Atahualpa**	**65.40**	**301**	LR		LR	17 51 42.9	
	comp=Z,139nm,21.4s,baz=9.6,slow=34							
ABPO	**Ambohimpanom**	**65.51**	**86**	*eP*		**P**	**17 25 11.2**	**-2.1**
ABPO	**Ambohimpanom**	**65.51**	**86**	*eP*		**P**	**17 25 11.2**	**-2.1**
ABPO	**Ambohimpanom**	**65.51**	**86**	P		pP	17 25 27.6	-2.2
	comp=Z,94nm,0.4s,SNR=6.9							
DBIC	**Dimbokro**	**68.32**	**23**	*eP*		**P**	**17 25 30.5**	**-0.4**
DBIC	**Dimbokro**	**68.32**	**23**	P		**P**	**17 25 30.7**	**-0.2**
	comp=Z,5.7nm,0.6s,baz=170,slow=7.7,SNR=13							
DBIC				LR		LR	17 48 21.5	
	comp=Z,143nm,20.7s,baz=150,slow=30							
OTAV	**Otavalo**	**72.04**	**304**	*eP*		**P**	**17 25 54.4**	**+0.1**
	comp=Z,3.9nm,1.2s							
ROSC	**El Rosal**	**74.56**	**310**	*eP*		**P**	**17 26 08.1**	**-0.9**
ROSC	**El Rosal**	**74.56**	**310**	P		**P**	**17 26 08.9**	**-0.1**
	comp=Z,11nm,0.7s,baz=156,slow=2.9,SNR=8.4							
ROSC				LR		LR	17 59 04.5	
	comp=Z,284nm,20.1s,baz=11,slow=36							
RPZ	**Rata Peaks**	**75.97**	**193**	P		**P**	**17 26 16.8**	**+0.5**
RPZ	**Rata Peaks**	**75.97**	**193**	P		**P**	**17 26 16.8**	**+0.5**
	comp=Z,13nm,0.9s,baz=119,slow=2.8,SNR=6.5							
KMBO	**Kilima Mbogo**	**75.99**	**67**	LR		LR	17 56 43.9	
	comp=Z,918nm,19.4s,baz=97,slow=33							
TOA0	**Torodi Ar. Sit**	**76.03**	**28**	*eP*		**P**	**17 26 17.2**	**+0.3**
TORD	**Torodi Ar. Bea**	**76.03**	**28**	P		**P**	**17 26 17.2**	**+0.4**
TORD	**Torodi Ar. Bea**	**76.03**	**28**	P		**P**	**17 26 17.2**	**+0.4**
	comp=Z,14nm,0.4s,baz=195,slow=6.3,SNR=114							
TORD				LR		LR	17 54 44.7	
	comp=Z,218nm,20.1s,baz=195,slow=32							
SDV	**Santo Domingo**	**76.88**	**315**	P		**P**	**17 26 20.8**	**-1.2**
	comp=Z,0.2nm,0.7s							
TAU	**Tasmania Unive**	**77.64**	**175**	*eP*		**P**	**17 26 25.3**	**-0.4**
TAU				pmax	pmax			
	comp=Z,220nm,2.1s							
TAU	**Tasmania Unive**	**77.64**	**175**	*eP*		**P**	**17 26 25.3**	**-0.4**
	comp=Z,220nm,2.1s							
TAU	**Tasmania Unive**	**77.64**	**175**	P		**P**	**17 26 26.0**	**+0.3**
	comp=Z,172nm,0

baz=118
SCHQ Schefferville 118.65 335 PKP PKPdf 17 33 15.1 -0.9
SCHQ Schefferville 118.65 335 PKP PKPdf 17 33 15.1 -0.9
comp=Z,1.5nm,0.3s,baz=34,slow=1.4,SNR=9.3
S18A Hurst Farm, Bl 118.67 296 ⇑P PKPdf 17 33 16.6 -0.3
baz=119
AKASG Malin Array Be 118.87 37 PKIKP PKPdf 17 33 15.2 -1.3
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 118.87 37 PKP PKPdf 17 33 15.2 -1.3
AKASG Malin Array Be 118.87 37 PKP PKPdf 17 33 15.2 -1.3
comp=Z,1.3nm,0.6s,baz=245,slow=1.0,SNR=5.1
O23A Lake Granby, G 118.92 301 ⇓P PKPdf 17 33 16.8 -0.5
baz=119
N23A Red Feather La 119.49 301 ⇑P PKPdf 17 33 18.2 -0.2
baz=120
N22A Wattenberg Ran 119.64 301 ⇓P PKPdf 17 33 18.1 -0.6
baz=120
P19A Cripple Cowboy 119.80 298 ⇓P PKPdf 17 33 18.5 -0.5
baz=120
O20A White River Ci 119.88 299 ⇑P PKPdf 17 33 18.4 -0.7
baz=120
SRU San Rafael 120.07 297 ⇑P PKPdf 17 33 19.0 -0.5
baz=120
EDW2 Edwards Air Fo 120.15 288 ⇑P PKPdf 17 33 19.0 -0.6
baz=120
Q16A Castle Valley 120.21 296 ⇓P PKPdf 17 33 19.3 -0.5
baz=120
P18A Preston Nutter 120.36 297 ⇑P PKPdf 17 33 19.5 -0.7
baz=121
O19A Miners Draw (B 120.40 298 ⇓P PKPdf 17 33 19.2 -0.8
baz=121
TMUT Trail Mountain 120.53 296 ePKPdf PKPdf 17 33 19.8 -0.7
R11A Troy Canyon, C 121.79 292 ⇓P PKPdf 17 33 22.8 0.0
baz=122
DUG Dugway 121.99 296 ePKIKP PKPdf 17 33 22.3 -0.7
DUG Dugway 121.99 296 ePKPdf PKPdf 17 33 22.3 -0.7
DUG Dugway 121.99 296 ⇑P PKPdf 17 33 22.8 -0.3
baz=122
H24A Dirks Ranch, A 122.03 305 ⇓P PKPdf 17 33 21.3 -1.6
baz=122
M17A Scullys Gap (B 122.04 298 ⇑P PKPdf 17 33 21.4 -1.8
baz=122
J21A Lysite 122.13 302 ⇑P PKPdf 17 33 22.4 -0.9
baz=122
K19A Absolon Red Bu 122.32 300 ⇑P PKPdf 17 33 22.1 -1.6
baz=123
I21A Big Trails, Te 122.44 302 ⇑P PKPdf 17 33 22.0 -1.8
baz=123
HWUT Hardware Ranch 122.55 298 ePKPdf PKPdf 17 33 23.4 -0.7
PDAR Pinedale Array 122.59 300 PKP PKPdf 17 33 22.8 -1.5
PDAR Pinedale Array 122.59 300 PKP PKPdf 17 33 22.8 -1.5
comp=Z,0.9nm,0.5s,baz=139,slow=5.8,SNR=10
L16A Fish Haven 122.82 298 ⇓P PKPdf 17 33 24.0 -0.7
baz=123
I20A Worland 122.91 302 ⇓P PKPdf 17 33 23.7 -1.0
baz=123
ULM Lac du Bonnet 123.13 314 PKP PKPdf 17 33 23.2 -1.5
ULM Lac du Bonnet 123.13 314 PKP PKPdf 17 33 23.2 -1.5
comp=Z,3.6nm,0.5s,baz=185,slow=3.3,SNR=12
NVAR Mina Array Bea 123.14 290 PKP PKPdf 17 33 25.9 +0.4
NVAR Mina Array Bea 123.14 290 PKP PKPdf 17 33 25.9 +0.4
comp=Z,1.6nm,0.6s,baz=145,slow=3.3,SNR=11
J18A Kendall Valley 123.14 300 ⇓P PKPdf 17 33 24.9 -0.4
baz=123
K17A Gardner Place, 123.18 299 ⇑P PKPdf 17 33 24.8 -0.5
baz=123
L15A Malad City 123.24 297 ⇓P PKPdf 17 33 24.5 -0.9
baz=124
CM31 Chiang Mai Arr 123.34 112 ePKPdf PKPdf 17 33 25.8 -0.3
CMAR Chiang Mai Arr 123.34 112 PKP PKPdf 17 33 26.2 +0.1
CMAR Chiang Mai Arr 123.34 112 PKP PKPdf 17 33 26.2 +0.1
comp=Z,6.8nm,0.8s,baz=228,slow=3.9,SNR=57
I18A Diamond G Ranc 123.45 300 ⇓P PKPdf 17 33 24.9 -1.0
baz=124
J17A Brown Place, J 123.57 299 ⇓P PKPdf 17 33 25.7 -0.4
baz=124
CHTO Chiang Mai 123.65 112 ePKIKP PKPdf 17 33 26.1 -0.6
CHTO Chiang Mai 123.65 112 ePKPdf PKPdf 17 33 26.1 -0.6
LOHW Long Hollow 123.72 300 ePKPdf PKPdf 17 33 25.6 -0.7
TPAW Teton Pass 123.78 299 ePKPdf PKPdf 17 33 26.1 -0.5
RRI2 Red Ridge 123.83 299 ePKPdf PKPdf 17 33 25.9 -0.8
K15A Arbon 123.84 298 ⇑P PKPdf 17 33 26.4 -0.1
baz=124
D24A Glendive 123.85 306 ⇑P PKPdf 17 33 26.3 0.0
baz=124
NB2 NORSAR Subarra 123.86 21 PKPdf PKPdf 17 33 25.0 -0.8
comp=Z,1.2nm,0.7s,baz=197,slow=1.8
NOA NORSAR Array B 123.86 21 PKP PKPdf 17 33 25.4 -0.4
NOA NORSAR Array B 123.86 21 PKP PKPdf 17 33 25.4 -0.4
comp=Z,1.5nm,0.7s,baz=202,slow=1.8,SNR=8.8
MOOW Moose Ponds 123.89 300 ePKPdf PKPdf 17 33 25.9 -0.8
J16A Bone 123.90 299 ⇓P PKPdf 17 33 26.6 -0.1
baz=124
I17A Pilgrim Ck. 123.95 300 ⇑P PKPdf 17 33 26.7 -0.2
baz=124
IMW Indian Meadow 124.09 300 ePKPdf PKPdf 17 33 26.0 -1.1
RLMT Red Lodge 124.34 302 ⇓P PKPdf 17 33 27.1 -0.4
baz=125
D22A Cohagen 124.64 305 ⇓P PKPdf 17 33 27.4 -0.4
baz=125
C23A Lambert 124.75 306 ⇑P PKPdf 17 33 27.7 -0.3
baz=125
F19A Roth Farm, Mol 124.78 302 ⇑P PKPdf 17 33 27.7 -0.4
baz=125
F18A Big Timber 125.15 302 ⇓P PKPdf 17 33 29.1 +0.2
baz=125
I14A Mackay 125.24 298 ⇑P PKPdf 17 33 29.6 +0.4
baz=126
G16A Moss Hill, Enn 125.53 300 ⇑P PKPdf 17 33 29.9 +0.2
baz=126
F17A Fitzpatrick Pl 125.56 301 ⇑P PKPdf 17 33 29.9 +0.2
baz=126
H14A Leadore 125.74 299 ⇓P PKPdf 17 33 30.4 +0.2
baz=126
E18A Harlowton 125.75 302 ⇓P PKPdf 17 33 29.8 -0.3
baz=126
D19A Cripps Ranch, 125.78 303 ⇓P PKPdf 17 33 29.5 -0.5
baz=126
C20A Veseth Ranch, 125.84 304 ⇓P PKPdf 17 33 29.6 -0.4
baz=126
I12A Atlanta 125.89 297 ⇑P PKPdf 17 33 30.5 0.0
baz=126
G14A Jackson 126.27 299 ⇓P PKPdf 17 33 31.6 +0.4
baz=126
C19A Slack Wire Ran 126.30 304 ⇑P PKPdf 17 33 30.9 0.0
baz=126
F15A Butte 126.31 300 ⇓P PKPdf 17 33 31.2 0.0
baz=126
H12A Diamond D Ranc 126.35 297 ⇑P PKPdf 17 33 31.4 +0.1
baz=127
G13A Cobalt 126.50 298 ⇓P PKPdf 17 33 31.2 -0.3
baz=127
D17A Six Diamond Ra 126.54 302 ⇓P PKPdf 17 33 31.3 -0.3
baz=127
HRY Holter Researc 126.69 301 ePKPdf PKPdf 17 33 32.2 +0.3
A20A Cobblestone Ra 126.72 305 ⇓P PKPdf 17 33 31.6 -0.1
baz=127
D16A Dana Ranch, Ca 126.82 302 ⇑P PKPdf 17 33 32.2 +0.1
baz=127
C17A Wharram Farm, 126.95 303 ⇓P PKPdf 17 33 32.3 +0.1
baz=127
G12A Big Creek, Yel 127.01 298 ⇓P PKPdf 17 33 32.2 -0.4
baz=127
A19A Klindworth Far 127.10 305 ⇑P PKPdf 17 33 32.1 -0.3
baz=127
E14A Clinton 127.19 300 ⇑P PKPdf 17 33 33.0 +0.1
baz=127
FRB Frobisher Bay 127.19 338 PKP PKPdf 17 33 31.6 -0.3
FRB Frobisher Bay 127.19 338 PKP PKPdf 17 33 31.6 -0.3
comp=Z,10nm,0.6s,baz=145,slow=2.8,SNR=28
D15A Lincoln 127.25 301 ⇓P PKPdf 17 33 33.2 +0.2
baz=128
FINES FINESS Array B 127.39 29 PKP PKPdf 17 33 32.0 -0.5
FINES SKPab SKiKP 17 36 43.2 -20
FINES FINESS Array B 127.39 29 PKP PKPdf 17 33 32.0 -0.5
comp=Z,3.8nm,0.5s,baz=136,slow=1.8,SNR=47
FINES SKPab SKiKP 17 36 43.2 -20
comp=Z,0.8nm,0.6s,baz=163,slow=3.1,SNR=4.9
B17A L&G Farms, Che 127.47 303 ⇓P PKPdf 17 33 32.6 -0.6
baz=128
C16A Fuhringer Ranc 127.50 302 ⇓P PKPdf 17 33 33.0 -0.3
baz=128
SFJD Kangerlussuaq 127.63 348 ePKPdf PKPdf 17 33 32.6 -0.2
BMO Blue Mountains 127.70 296 ePKIKP PKPdf 17 33 33.2 -0.6
BMO Blue Mountains 127.70 296 ePKPdf PKPdf 17 33 33.2 -0.6
D14A Greenough 127.71 300 ⇓P PKPdf 17 33 33.2 -0.6
baz=128
C15A Salmond Ranch, 127.85 302 ⇑P PKPdf 17 33 33.7 -0.3
baz=128
A17A Triple J Farms 127.93 304 ⇑P PKPdf 17 33 34.1 0.0
baz=128
B16A M & M Farms, S 127.95 303 ⇑P PKPdf 17 33 33.8 -0.3
baz=128
KAF Kangasniemi 128.02 28 ePKIKP PKPdf 17 33 32.3 -1.4
KAF pmax pmax
comp=Z,6.0nm,0.5s
KAF Kangasniemi 128.02 28 epkp PKPdf 17 33 32.3 -1.4
comp=Z,5.9nm,0.5s
D13A Huson 128.14 300 ⇑P PKPdf 17 33 34.3 -0.2
baz=128
A16A West Butte Ran 128.32 303 ⇓P PKPdf 17 33 34.6 -0.3
baz=129
C14A Swan Lake 128.34 301 ⇓P PKPdf 17 33 34.7 -0.2
baz=129
D12A Red Ives Fores 128.50 299 ⇓P PKPdf 17 33 34.9 -0.3
baz=129
JTMT Jette 128.56 300 ePKPdf PKPdf 17 33 35.1 -0.3
B14A Marquette Ranc 128.59 302 ⇑P PKPdf 17 33 35.1 -0.3
baz=129
AB31 Akbulak array 129.03 57 i PKIKP PKPdf 17 33 35.6 -0.4
AB31 pmax pmax
comp=Z,1.0nm,0.3s
ABKAR Akbulak array 129.03 57 ePKPdf PKPdf 17 33 35.5 -0.5
KSH Kashi 129.06 77 PKP PKPdf 17 33 36.3 -0.3
KSH PP PP 17 35 47.4 +1.6
KSH PKS PKSdf 17 37 11.2 -1.9
KSH SKS SKSdf 17 40 46.2 +3.6
KSH AMB AMB
comp=Z,100nm,3.5s
KSH LR LR
comp=N,490nm,8.2s
KSH LR LR
comp=E,280nm,6.0s
KSH LR LR
comp=Z,290nm,5.5s
B13A Whitefish 129.12 301 ⇑P PKPdf 17 33 36.1 -0.2
baz=129
A14A Double T Ranch 129.12 302 ⇓P PKPdf 17 33 36.1 -0.3
baz=129
KK31 Karatay Array 129.15 70 PKIKP PKPdf 17 33 36.0 -0.5
KK31 pmax pmax
comp=Z,2.0nm,0.6s
KKAR Karatay Array 129.15 70 ePKIKP PKPdf 17 33 36.1 -0.4
KKAR Karatay Array 129.15 70 ePKPdf PKPdf 17 33 36.1 -0.4
JOF Joensuu 129.94 30 ePKIKP PKPdf 17 33 36.7 -0.6
JOF pmax pmax
comp=Z,2.0nm,0.6s
JOF Joensuu 129.94 30 epkp PKPdf 17 33 36.7 -0.6
comp=Z,2.2nm,0.6s
EKS2 Erkin-Say 130.38 72 ePKIKP PKPdf 17 33 39.0 0.0
EKS2 Erkin-Say 130.38 72 ePKPdf PKPdf 17 33 39.0 0.0
AAK Ala-Archa 130.71 73 ePKIKP PKPdf 17 33 39.6 -0.1
AAK Ala-Archa 130.71 73 ePKPdf PKPdf 17 33 39.6 -0.1
KMI Kunming 130.85 112 PKP PKPdf 17 33 41.6 +1.0
KMI PP PP 17 36 02.6 +5.3
KMI SS SS 17 53 30.0 +7.3
KMI AMB AMB
comp=Z,110nm,4.5s
KMI LR LR
comp=N,110nm,23.7s
KMI LR LR
comp=E,91nm,26.5s
KMI LR LR
comp=Z,130nm,19.2s
TKM2 Tokmak 2 131.46 73 ePKIKP PKPdf 17 33 40.5 -0.6
TKM2 Tokmak 2 131.46 73 ePKPdf PKPdf 17 33 40.5 -0.6
GYA Guiyang 133.82 115 Pdif Pdif 17 30 46.2 +1.3
GYA PKP PKiKP 17 33 47.5 +0.2
GYA PP PP 17 36 20.9 +4.7
GYA PKS PKSdf 17 37 22.4 -0.2
GYA SKKS 17 43 10.8
GYA SS SS 17 54 05.6 +7.1
GYA AMB AMB
comp=Z,130nm,7.9s
GYA LR LR
comp=N,140nm,24.7s
GYA LR LR
comp=E,120nm,25.3s
GYA LR LR
comp=Z,150nm,24.6s
ARCES ARCESS Array B 134.15 23 PKPpre PKPpre 17 33 36.0
ARCES PKP PKPdf 17 33 44.0 -1.1
ARCES SKPbc SKPbc 17 37 08.6 -0.2
ARCES ARCESS Array B 134.15 23 PKhKP PKPpre 17 33 36.0
comp=Z,1.4nm,0.7s,baz=228,slow=3.3,SNR=6.1
ARCES PKP PKPdf 17 33 44.0 -1.1
comp=Z,5.0nm,0.6s,baz=204,slow=3.8,SNR=20
ARCES SKPbc SKPbc 17 37 08.6 -0.2
comp=Z,1.8nm,0.6s,baz=204,slow=2.7,SNR=6.4
ARE0 ARCESS Array S 134.15 23 ePKPdf PKPdf 17 33 44.4 -0.7
APA Apatity 134.25 28 lePKHKP PKPpre 17 33 32.0
APA MLR MLR
comp=Z,300nm,22.0s
CD2 Chengdu 136.19 108 PKP PKPdf 17 33 51.1 +0.9
CD2 PP PP 17 36 35.1 +3.9
CD2 PKS PKSdf 17 37 26.0 -0.5
CD2 SKS SKSdf 17 40 59.2 +3.6
CD2 SKKS SKKSac 17 43 24.9 +4.8
CD2 SS SS 17 54 33.7 +6.8
CD2 AMB AMB
comp=Z,180nm,6.2s
CD2 LR LR
comp=N,230nm,16.6s
CD2 LR LR
comp=Z,170nm,15.2s
BVA0 Borovoye Array 136.29 60 i PKIKP PKPdf 17 33 47.8 -1.8
BVA0 pmax pmax
comp=Z,1.0nm,1.0s
BVAR Borovoye Array 136.29 60 PKHKP PKPpre 17 33 37.3
BVAR 17 33 48.1
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BVAR pmax pmax
comp=N,2.0nm,0.8s
BVAR Borovoye Array 136.29 60 PKPpre PKPpre 17 33 37.3
BVAR PKP PKPdf 17 33 48.1 -1.5
BVAR SKPbc SKPbc 17 37 17.0 +0.9
BVAR Borovoye Array 136.29 60 PKhKP PKPpre 17 33 37.3
comp=N,0.8nm,0.6s,baz=242,slow=3.2,SNR=5.3
BVAR PKP PKPdf 17 33 48.1 -1.5
comp=N,2.6nm,0.6s,baz=242,slow=2.1,SNR=12
BVAR SKPbc SKPbc 17 37 17.0 +0.9
comp=N,1.6nm,0.8s,baz=242,slow=3.2,SNR=5.7
MK31 Makanchi Array 137.54 75 ePKHKP PKPpre 17 33 40.5
MK31 Makanchi Array 137.54 75 ePKPpre PKPpre 17 33 40.5
MKAR Makanchi Array 137.54 75 PKHKP PKPpre 17 33 40.5
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR pmax pmax
comp=N,1.0nm,0.7s
MKAR Makanchi Array 137.54 75 PKPpre PKPpre 17 33 40.5
MKAR SKPbc SKPbc 17 37 20.3 +0.2
MKAR Makanchi Array 137.54 75 PKhKP PKPpre 17 33 40.5
comp=N,0.6nm,0.6s,baz=222,slow=1.6,SNR=6.8
MKAR SKPbc SKPbc 17 37 20.3 +0.2
comp=N,0.5nm,0.7s,baz=228,slow=2.6,SNR=3.5
WMQ Urumqi 138.11 82 PKP PKPdf 17 33 55.0 +1.6
WMQ PP PP 17 36 47.0 +3.7
WMQ PKS PKSdf 17 37 30.0 +0.6
WMQ SS SS 17 54 57.0 +7.0
WMQ AMB AMB
comp=Z,28nm,12.0s
WMQ LR LR
comp=N,140nm,26.0s
WMQ LR LR
comp=E,110nm,26.0s
WMQ LR LR
comp=Z,140nm,26.0s
KURK Kurchatov 138.48 68 i PKIKP PKPdf 17 33 50.5 -3.2
YKA Yellowknife Ar 139.10 315 PKPpre PKPpre 17 33 45.5
YKA PKP PKPdf 17 33 53.6 -0.8
YKA SKPbc SKPbc 17 37 23.6 -0.3
YKA PKKP PKKPdf 17 43 22.3 -0.1
YKA Yellowknife Ar 139.10 315 PKhKP PKPpre 17 33 45.4
comp=Z,1.8nm,0.6s,baz=128,slow=3.5,SNR=8.1
YKA PKP PKPdf 17 33 53.6 -0.8
comp=Z,2.8nm,0.5s,baz=130,slow=2.3,SNR=33
YKA SKPbc SKPbc 17 37 23.5 -0.3
comp=Z,1.0nm,0.6s,baz=130,slow=2.3,SNR=8.8
YKA PKKP PKKPdf 17 43 22.3 -0.1
comp=Z,0.2nm,0.7s,baz=318,slow=1.8,SNR=4.5
YKW3 Yellowknife Ar 139.15 315 ePKPpre PKPpre 17 33 53.4
YKW3 eSKP 17 37 23.1
SPITS Spitsbergen Ar 140.03 13 PKPpre PKPpre 17 33 49.5
SPITS Spitsbergen Ar 140.03 13 PKhKP PKPpre 17 33 49.5
comp=Z,6.5nm,0.8s,baz=215,slow=2.4,SNR=6.0
LZH Lanzhou 140.42 104 ePKP PKPdf 17 33 57.5 -0.5
GTA Gaotai 140.99 97 ePKP PKPdf 17 33 56.9 -1.9
GTA PKS PKSdf 17 37 31.5 -3.3
GTA SKS SKSdf 17 41 05.7 +2.3
GTA SKKS SKKSac 17 43 48.2 -0.1
GTA SS SS 17 55 28.4 +4.5
GTA AMB AMB
comp=Z,130nm,7.4s
GTA LR LR
comp=N,110nm,15.9s
GTA LR LR
comp=E,120nm,17.6s
GTA LR LR
comp=Z,120nm,16.9s
XAN Xi'an 141.23 111 PKP PKPdf 17 33 57.9 -1.4
RES Resolute Bay 141.38 337 ePKPpre PKPpre 17 33 52.3
NVS Novosibirsk 143.27 66 ePKIKP PKPbc 17 33 58.9 -0.6
NVS pmax pmax
comp=N,9.0nm,0.8s
NVS pmax pmax
comp=E,5.0nm,0.8s
NVS pmax pmax
comp=Z,23nm,0.8s
ZAA0 Zalesovo Array 143.47 68 ePKPpre PKPab 17 33 58.6 -0.4
ZALV Zalesovo Beam 143.47 68 PKIKP PKPab 17 33 59.1 +0.1
ZALV pmax pmax
comp=Z,6.0nm,0.4s
ZALV Zalesovo Beam 143.47 68 PKPpre PKPab 17 33 59.0 +0.1
ZALV Zalesovo Beam 143.47 68 PKhKP PKPab 17 33 59.0 +0.1
comp=Z,6.0nm,0.4s,baz=224,slow=4.0,SNR=34
PNL Peninsula 147.47 300 ePKPbc PKPbc 17 34 11.7 -0.2
HHC Hu-ho-hao-te 147.92 107 ePKPbc PKPbc 17 34 12.7 -1.2
HHC PP PP 17 37 46.8 +4.5
HHC AMB AMB
comp=Z,200nm,11.6s
HHC LR LR
comp=N,250nm,17.5s
HHC LR LR
comp=E,230nm,22.2s
HHC LR LR
comp=Z,150nm,12.7s
INK Inuvik 148.82 317 PKP PKPdf 17 34 08.2 -2.9
INK PKPbc PKPbc 17 34 14.0 -1.1
INK Inuvik 148.82 317 PKP PKPdf 17 34 08.2 -2.9
comp=Z,4.2nm,0.6s,baz=120,slow=4.0,SNR=4.7
INK PKPbc PKPbc 17 34 14.0 -1.1
comp=Z,8.1nm,0.6s,baz=88,slow=3.1,SNR=44
JNU Nakatsue 149.47 140 ePKPbc PKPbc 17 34 17.9 -0.1
JNU Nakatsue 149.47 140 PKPbc PKPbc 17 34 17.9 -0.1
comp=Z,10nm,0.8s,baz=195,slow=10.0,SNR=11
BJI Beijing 149.48 113 PKPbc PKPdf 17 34 13.8 +0.7
BJI PKPbc PKiKP 17 34 17.9 -0.8
BJI LR LR
comp=Z,69nm,32.0s
MOY Mondy 150.00 82 ePKP2 PKPbc 17 34 19.1 +0.3
MOY pmax pmax
comp=Z,59nm,2.4s
SONM Songino Array 150.34 92 PKPbc PKPbc 17 34 19.8 +0.1
SONM Songino Array 150.34 92 PKPbc PKPbc 17 34 19.8 +0.1
comp=Z,27nm,0.8s,baz=220,slow=2.7,SNR=169
ZAK Zakamensk 150.38 86 ePKIKP PKPdf 17 34 15.0 +0.6
ZAK pmax pmax
comp=Z,17nm,1.0s
EGAK Eagle 150.42 308 ePKPdf PKPdf 17 34 12.3 -1.6
EGAK ePKPbc PKPbc 17 34 18.3 -0.9
ULN Ulaanbaatar 150.69 93 ePKPbc PKPbc 17 34 20.1 -0.5
DIV Divide 150.96 299 ePKPbc PKPbc 17 34 20.2 -0.4
DOT Dot Lake 151.20 305 ePKPbc PKPbc 17 34 20.6 -0.5
TLY Talaya 151.34 84 ePKIKP PKPbc 17 34 21.2 -0.6
TLY pmax pmax
comp=Z,14nm,0.9s
TLY MLR MLR
comp=Z,92nm,18.0s
TLY Talaya 151.34 84 ePKPbc PKPbc 17 34 21.9 +0.1
PAX Paxson 151.55 303 ePKIKP PKPbc 17 34 20.9 -1.1
PAX Paxson 151.55 303 ePKPbc PKPbc 17 34 20.9 -1.1
IRK Irkutsk 151.99 83 ePKIKP PKPbc 17 34 22.3 -0.9
IRK pmax pmax
comp=Z,28nm,1.7s
SEW Seward 152.19 296 ePKPbc PKPbc 17 34 22.9 -0.5
KSAR Wonju Array Be 152.31 132 PKP PKPdf 17 34 18.1 +0.5
KSAR PKPbc PKiKP 17 34 24.2 -0.4
KSRS Korea Array 152.34 132 PKP PKPdf 17 34 18.1 +0.4
comp=Z,0.8nm,0.8s,baz=204,slow=2.8,SNR=4.6
KSRS PKPbc PKiKP 17 34 24.2 -0.5
comp=Z,4.6nm,0.8s,baz=196,slow=2.6,SNR=4.7
SML Sawmill 152.35 300 ePKIKP PKPbc 17 34 23.1 -0.7
SML Sawmill 152.35 300 ePKPbc PKPbc 17 34 23.1 -0.7
KDAK Kodiak Island 152.64 290 ePKPbc PKPbc 17 34 23.7 -0.7
KDAK Kodiak Island 152.64 290 PKPbc PKPbc 17 34 23.8 -0.7
comp=Z,17nm,0.6s,baz=151,slow=2.8,SNR=9.3
ILAR Eielson Array 152.74 306 PKP PKPdf 17 34 13.7 -3.7
ILAR PKPbc PKPbc 17 34 23.5 -1.0
ILAR Eielson Array 152.74 306 PKP PKPdf 17 34 13.7 -3.7
comp=Z,0.4nm,0.8s,baz=107,slow=0.9,SNR=5.6
ILAR PKPbc PKPbc 17 34 23.5 -1.0
comp=Z,6.2nm,0.7s,baz=123,slow=3.3,SNR=17
COLA College 153.16 306 ePKIKP PKPbc 17 34 24.1 -1.3
COLA College 153.16 306 ePKPbc PKPbc 17 34 24.1 -1.3
MCK McKinley 153.28 303 ePKIKP PKPdf 17 34 16.9 -1.3
MCK e 17 34 25.1
MCK McKinley 153.28 303 ePKPdf PKPdf 17 34 16.9 -1.3
MCK ePKPbc PKPbc 17 34 25.1 -0.7
TRF Thorofare Moun 153.76 302 ePKPdf PKPdf 17 34 21.3 +2.2
TRF ePKPbc PKPbc 17 34 25.7 -1.3
COLD Coldfoot 154.64 311 ePKPbc PKPbc 17 34 28.4 -0.1
MAJO Matsushiro 154.79 150 ePKIKP PKPbc 17 34 29.1 -0.8
MAJO Matsushiro 154.79 150 ePKPbc PKPbc 17 34 29.1 -0.8
MAT Matsushiro 154.79 150 PKP PKPbc 17 34 29.9 0.0
MJAR Matsushiro Arr 154.79 150 PKP PKPbc 17 34 29.9 0.0
MJAR PKPab PKPab 17 34 45.0 -0.2
MJAR Matsushiro Arr 154.79 150 PKPbc PKPbc 17 34 29.9 0.0
comp=Z,1.6nm,0.7s,baz=179,slow=3.3,SNR=8.2
MJAR PKPab PKPab 17 34 45.0 -0.2
comp=Z,3.0nm,0.7s,baz=188,slow=4.9,SNR=9.9
CN2 Changchun 156.67 120 ePKP PKPdf 17 34 21.9 -1.5
CN2 ePKPab PKPab 17 34 53.0 -0.1
CN2 PP PP 17 38 32.6 +0.8
CN2 LR LR
comp=N,100nm,16.0s
CN2 LR LR
comp=E,100nm,16.0s
CN2 LR LR
comp=Z,200nm,18.0s
MDJ Mudanjiang 159.09 125 PKP PKPdf 17 34 27.4 +1.0
MDJ SKS SKSdf 17 41 28.0 +1.9
MDJ SS SS 17 58 48.9 +4.5
MDJ AMB AMB
comp=Z,100nm,6.7s
MDJ LR LR
comp=N,57nm,26.5s
MDJ LR LR
comp=E,41nm,28.1s
MDJ LR LR
comp=Z,89nm,31.2s
USRK Ussuriysk Arra 159.71 130 PKPab PKPab 17 35 05.8 -0.3
comp=Z,1.1nm,0.7s,baz=194,slow=5.4,SNR=3.4
PETK Petropavlovsk- 173.04 201 PKP2 PKPab 17 36 04.4 -0.3
PETK pmax pmax
comp=Z,6.0nm,0.7s
PETK Petropavlovsk- 173.04 201 PKPab PKPab 17 36 04.4 -0.3
PETK Petropavlovsk- 173.04 201 PKPab PKPab 17 36 04.4 -0.3
comp=Z,5.6nm,0.7s,baz=124,slow=10,SNR=4.8

IDC 11 17:37:52.4±7.4, 22.202S×67.21W, h193km±53km, mb3.4/2, mb1 3.3/4, mb1mx3.2/17, mbtmp3.2/4, Error ellipse: s-maj=73.8km s-min=27.9km az=15.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	5.77	351	P	Pn	17 39 17.2	-0.3
	0.5nm,0.3s,baz=168,slow=10,SNR=10						
LPAZ				S	Sn	17 40 25.2	+0.6
	baz=162,slow=6.4,SNR=2.1						
SIV	San Ignacio	8.35	45	P	Pn	17 39 50.2	-0.2

0.8nm,0.3s,baz=211,slow=14,SNR=12
SIV S Sn 17 41 24.2 -0.1
0.8nm,0.3s,baz=204,slow=10,SNR=8.3
TORD Torodi Ar. Bea 76.05 69 P P 17 49 19.3 +0.2
0.7nm,0.4s,baz=251,slow=5.6,SNR=13
YKA Yellowknife Ar 92.21 340 P P 17 50 39.1 -0.5
0.1nm,0.5s,baz=136,slow=4.0,SNR=6.2

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*CSEM **11** 17:43:19.8,42.47N×13.37E,h9km,MD1.9/11, After ROM*
ROM 11 17:43:19.8±0.2, 42.47N×13.37E, h9km±1km, Md1.9/11, Ml1.9/5, Error ellipse: s-maj=2.4km s-min=1.5km az=39.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**23**	Pg	Pg	17 43 22.7	+0.5
CAMP				Sg	Sg	17 43 24.6	+0.8
CAMP	**Campotosto**	**0.07**	**23**	Pg	Pg	17 43 22.7	+0.5
CAMP				Sg	Sg	17 43 24.6	+0.8
TERO	**Teramo**	**0.23**	**48**	Pg	Pg	17 43 24.9	+0.3
TERO				Sg	Sg	17 43 28.5	+0.6
	233nm,0.1s						
TERO	**Teramo**	**0.23**	**48**	Pg	Pg	17 43 24.9	+0.3
TERO				Sg	Sg	17 43 28.5	+0.6
	233nm,0.1s						
FIAM	**Fiamignano**	**0.28**	**223**	Pg	Pb	17 43 26.6	-0.5
FIAM				Sg	Sg	17 43 30.2	+0.9
FIAM	**Fiamignano**	**0.28**	**223**	Pg	Pb	17 43 26.6	-0.5
FIAM				Sg	Sg	17 43 30.2	+0.9
LNSS	**Leonessa**	**0.28**	**299**	Pg	Pg	17 43 26.1	+0.5
LNSS				Sg	Sb	17 43 31.0	-1.1
	176nm,0.2s						
LNSS	**Leonessa**	**0.28**	**299**	Pg	Pg	17 43 26.1	+0.5
LNSS				Sg	Sb	17 43 31.0	-1.1
	176nm,0.2s						
VCEL	**Villa Celiera**	**0.36**	**102**	Pg	Pg	17 43 27.7	+0.7
VCEL				Sg	Sb	17 43 33.5	-0.8
	67nm,0.4s						
VCEL	**Villa Celiera**	**0.36**	**102**	Pg	Pg	17 43 27.7	+0.7
VCEL				Sg	Sb	17 43 33.5	-0.8
	67nm,0.4s						
NRCA	**Norcia**	**0.41**	**333**	Pg	Pg	17 43 28.2	+0.2
NRCA				Sg	Sg	17 43 34.6	+1.1
	133nm,0.1s						
NRCA	**Norcia**	**0.41**	**333**	Pg	Pg	17 43 28.2	+0.2
NRCA				Sg	Sg	17 43 34.6	+1.1
	133nm,0.1s						
OFFI	**Offida**	**0.52**	**26**	Pg	Pb	17 43 31.4	+0.3
OFFI	**Offida**	**0.52**	**26**	Pg	Pb	17 43 31.4	+0.3
FDMO	**Fiordimonte**	**0.60**	**340**	Pg	Pg	17 43 31.6	0.0
FDMO	**Fiordimonte**	**0.60**	**340**	Pg	Pg	17 43 31.6	0.0
INTR	**Introdacqua**	**0.61**	**139**	Pg	Pg	17 43 31.3	-0.4
INTR				Sg	Sb	17 43 41.4	0.0
INTR	**Introdacqua**	**0.61**	**139**	Pg	Pg	17 43 31.3	-0.4
INTR				Sg	Sb	17 43 41.4	0.0
CESI	**CESI - Serrava**	**0.64**	**327**	Pg	Pg	17 43 32.6	+0.4
CESI				Sg	Sb	17 43 42.0	-0.3
CESI	**CESI - Serrava**	**0.64**	**327**	Pg	Pg	17 43 32.6	+0.4
CESI				Sg	Sb	17 43 42.0	-0.3
LPEL	**Lama dei Pelig**	**0.74**	**125**	Pg	Pg	17 43 34.0	-0.1
LPEL				Sg	Sg	17 43 44.3	+0.5
	22nm,0.3s						
LPEL	**Lama dei Pelig**	**0.74**	**125**	Pg	Pg	17 43 34.0	-0.1
LPEL				Sg	Sg	17 43 44.3	+0.5
	22nm,0.3s						

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*CSEM **11** 17:43:45.8,42.29N×13.51E,h6km,MD1.5/2, After ROM*
ROM 11 17:43:45.8±0.2, 42.29N×13.51E, h6km±2km, Md1.5/2, Error ellipse: s-maj=1.3km s-min=0.9km az=3.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.06**	**116**	Pg	Pg	17 43 47.4	-0.2
FAGN				Sg	Sg	17 43 49.3	+0.5
FAGN	**Fagnano**	**0.06**	**116**	Pg	Pg	17 43 47.4	-0.2
FAGN				Sg	Sg	17 43 49.3	+0.5
AQU	**L'Aquila**	**0.10**	**308**	Pg	Pg	17 43 48.6	+0.5
AQU				Sg	Sg	17 43 50.3	+0.6
AQU	**L'Aquila**	**0.10**	**308**	Pg	Pg	17 43 48.6	+0.5
AQU				Sg	Sg	17 43 50.3	+0.6
VCEL	**Villa Celiera**	**0.27**	**68**	Pg	Pg	17 43 51.9	+0.6
VCEL				Sg	Sg	17 43 56.4	+1.4
VCEL	**Villa Celiera**	**0.27**	**68**	Pg	Pg	17 43 51.9	+0.6
VCEL				Sg	Sg	17 43 56.4	+1.4
PTQR	**Pietraquaria**	**0.28**	**196**	Pg	Pb	17 43 52.5	-0.9
PTQR				Sg	Sb	17 43 57.1	-1.4
PTQR	**Pietraquaria**	**0.28**	**196**	Pg	Pb	17 43 52.5	-0.9
PTQR				Sg	Sb	17 43 57.1	-1.4
FIAM	**Fiamignano**	**0.29**	**265**	Pg	Pb	17 43 52.7	-0.8
FIAM				Sg	Sg	17 43 56.9	+1.3
FIAM	**Fiamignano**	**0.29**	**265**	Pg	Pb	17 43 52.7	-0.8
FIAM				Sg	Sg	17 43 56.9	+1.3

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*IDC **11** 17:49:41.3±10.0, 38.48N×71.51E, h28km±49km, mb3.8/2, mb1 3.6/4, mb1mx3.1/29, mbtmp3.5/4, ML2.8/2, Error ellipse: s-maj=87.7km s-min=38.4km az=168.0*
ISC 11 17:49:37.6±2.6, 38°2N±0°2×71°2E±0°2, h10km, n7, σ1§56/9, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.92**	**354**	Pn	**Pn**	**17 50 50.9**	**-0.7**
	0.5nm,0.3s,baz=182,slow=14,SNR=28						
KK31				⇑Pg	**Pb**	**17 51 03.3**	**-0.5**
	0.7nm,0.3s						
KK31				⇑Sn	**Sn**	**17 51 49.4**	**+0.8**
	3.5nm,0.7s,baz=171,slow=23,SNR=3.8						
KK31				⇓Lg	Lg	17 52 11.8	
	4.4nm,0.6s						
AAK	**Ala-Archa**	**5.07**	**28**	Pn	**Pn**	**17 50 54.8**	**+0.9**
	0.5nm,0.3s,baz=230,slow=4.8,SNR=8.0						
AAK				Pg	Pb	17 51 08.0	+1.4
	1.0nm,0.3s,baz=196,slow=11,SNR=11						
AAK				Lg	Lg	17 52 12.9	
	0.1nm,0.3s,baz=353,slow=16,SNR=2.5						
TKM2	**Tokmak 2**	**5.76**	**34**	⇑Pn	**Pn**	**17 51 04.7**	**+1.3**
	4.6nm,1.2s						
TKM2				⇓Lg	Lg	17 52 47.7	
	4.4nm,0.9s						
MKAR	**Makanchi Array**	**11.83**	**40**	Pn	**Pn**	**17 52 24.9**	**-1.5**
	0.0nm,0.3s,baz=228,slow=13,SNR=8.4						
AKTO	**Aktyubinsk**	**15.42**	**327**	Pn	**Pn**	**17 53 17.9**	**+2.8**
	0.1nm,0.3s,baz=132,slow=9.4,SNR=3.7						
FINES	**FINESS Array B**	**36.18**	**325**	P	**P**	**17 56 39.7**	**-0.2**
	0.4nm,0.5s,baz=120,slow=11,SNR=4.5						
ARCES	**ARCESS Array B**	**39.64**	**337**	P	**P**	**17 57 09.4**	**+0.3**
	4.2nm,1.0s,baz=99,slow=6.3,SNR=3.8						

IDC 11 17:59:03.4±2.7, 0.70S×132.98E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, ML3.4/1, Error ellipse: s-maj=141.1km s-min=25.8km az=74.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.17**	**176**	P	P	18 03 28.5	-0.2
	0.1nm,0.3s,baz=355,slow=11,SNR=3.0						
ASAR	**Alice Springs**	**22.85**	**178**	P	P	18 04 08.7	+0.2
	0.8nm,0.3s,baz=358,slow=11,SNR=54						
MKAR	**Makanchi Array**	**64.75**	**324**	P	P	18 09 43.8	0.0
	0.1nm,0.4s,baz=108,slow=10,SNR=3.1						

IDC 11 18:17:10.3±40.0, 20.33S×179.02W, h651km±341km, mb2.9/4, mb1 3.1/4, mb1mx2.7/19, mbtmp2.9/4, Error ellipse: s-maj=375.9km s-min=115.8km az=75.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.55**	**264**	P	P	18 22 51.5	+0.2
	2.4nm,0.4s,baz=96,slow=9.1,SNR=4.8						
STKA	**Stephens Creek**	**37.00**	**244**	P	P	18 23 27.9	+0.1
	0.9nm,0.6s,baz=80,slow=11,SNR=3.4						
ASAR	**Alice Springs**	**43.63**	**257**	P	P	18 24 20.4	+0.2
	1.8nm,0.6s,baz=100,slow=7.7,SNR=38						
ASAR				⇑PcP	PcP	18 25 52.1	-0.2
	0.2nm,0.6s,baz=105,slow=4.1,SNR=4.4						
WRA	**Warramunga Arr**	**43.68**	**262**	P	P	18 24 20.3	-0.3
	0.6nm,0.3s,baz=96,slow=8.0,SNR=8.4						

IDC 11 18:22:15.1±1.7, 11.99S×166.24E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.7/20, mbtmp3.8/7, ML3.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.7/26, Error ellipse: s-maj=48.5km s-min=27.2km az=117.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.03**	**179**	Pn	Pn	18 24 40.6	-0.1
	0.2nm,0.3s,baz=330,slow=20,SNR=3.4						
CTA	**Charters Tower**	**20.81**	**245**	LR	LR	18 33 56.9	
	comp=Z,67nm,18.5s,baz=156,slow=34						
STKA	**Stephens Creek**	**30.10**	**225**	P	P	18 28 26.8	+0.2
	1.1nm,0.6s,baz=61,slow=10,SNR=6.2						
WRA	**Warramunga Arr**	**31.63**	**251**	P	P	18 28 39.9	-0.3
	0.5nm,0.7s,baz=83,slow=9.3,SNR=3.6						
ASAR	**Alice Springs**	**32.82**	**245**	P	P	18 28 50.5	-0.1
	0.7nm,0.7s,baz=66,slow=9.6,SNR=16						
CMAR	**Chiang Mai Arr**	**72.93**	**294**	P	P	18 33 47.4	+0.5
	0.8nm,0.7s,baz=125,slow=4.8,SNR=6.1						
ILAR	**Eielson Array**	**84.25**	**18**	P	P	18 34 48.4	0.0
	0.3nm,0.6s,baz=228,slow=5.7,SNR=5.1						
MKAR	**Makanchi Array**	**94.54**	**317**	P	P	18 35 37.1	-0.6
	0.3nm,0.6s,baz=97,slow=3.3,SNR=4.5						

IDC 11 18:33:53.0±2.3, 5.88S×130.11E, h0km, mb3.4/1, mb1 4.2/3, mb1mx3.6/18, mbtmp3.9/3, ML4.0/2, Error ellipse: s-maj=145.0km s-min=30.6km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.57**	**164**	Pn	Pn	18 37 19.7	-1.0
	0.8nm,0.3s,baz=347,slow=13,SNR=14						
WRA				Sn	Sn	18 39 50.5	-13
	0.5nm,0.3s,baz=332,slow=24,SNR=5.0						
ASAR	**Alice Springs**	**18.06**	**169**	P	P	18 38 06.0	-0.1
	0.3nm,0.3s,baz=343,slow=11,SNR=34						
ASAR				S	Sn	18 41 13.7	-14
	baz=346,slow=23						
MKAR	**Makanchi Array**	**67.36**	**327**	P	P	18 44 50.1	0.0
	0.2nm,0.3s,baz=121,slow=6.9,SNR=7.2						

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*IDC **11** 18:38:24.5±2.6, 44.25N×128.88W, h0km, mb3.0/3, mb1 3.4/6, mb1mx3.3/30, mbtmp3.2/6, ML3.5/3, MS2.8/1, Ms1 2.8/1, ms1mx2.4/11, Error ellipse: s-maj=48.2km s-min=22.6km az=33.0*
*ISCJB **11** 18:38:25.7±1.4, 44.2N±0.1×129.0W±0.1, h15km, mb3.1/2, Error ellipse: s-maj=18.5km s-min=9.1km az=38.9*
*NEIC **11** 18:38:25.7±1.5, 44.21N×129.23W, h10km, mb3.8/1, Error ellipse: s-maj=21.1km s-min=11.6km az=218.0*
ISC 11 18:38:26.4±1.4, 44.2N±0.1×129.1W±0.1, h15km, n30, σ1§16/29, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COR	**Corvallis**	**4.17**	**83**	*e*P	**Pn**	**18 39 29.8**	**+0.3**
HUMO	**Hull Mountain**	**4.75**	**107**	*e*Pn	**Pn**	**18 39 36.6**	**-0.9**
HUMO				*e*Sn	**Sn**	**18 40 31.4**	**-0.9**
BROR	**Big Rock Looko**	**4.78**	**87**	P	**Pn**	**18 39 38.5**	**+0.7**
NLWA	**Neilton Lookou**	**4.86**	**47**	*e*Pn	**Pn**	**18 39 38.5**	**-0.4**
YBH	**Yreka Blue Hor**	**5.29**	**115**	Pn	**Pn**	**18 39 45.2**	**+0.2**
YBH	**Yreka Blue Hor**	**5.29**	**115**	Pn	**Pn**	**18 39 45.2**	**+0.2**
	0.2nm,0.3s,baz=293,slow=7.7,SNR=3.8						
YBH				LR	LR	18 41 45.6	
	comp=Z,119nm,21.9s,baz=220,slow=39						
TDL	**Tradedollar La**	**5.32**	**64**	P	**Pn**	**18 39 45.9**	**+0.6**
LON	**Longmire**	**5.73**	**61**	*e*Pn	**Pn**	**18 39 51.1**	**+0.2**
	12nm,0.9s						
VIPM	**Ingram Point**	**6.09**	**84**	P	**Pn**	**18 39 56.8**	**+0.8**
NEW	**Newport**	**9.24**	**60**	Pn	**Pn**	**18 40 38.8**	**-0.3**
NEW	**Newport**	**9.24**	**60**	Pn	**Pn**	**18 40 38.8**	**-0.3**
	0.3nm,0.3s,baz=250,slow=12,SNR=4.0						
BSMT	**Bassoo Peak**	**10.60**	**65**	*e*Pn	**Pn**	**18 40 57.2**	**-0.7**
	2.7nm,1.1s						
HLID	**Hailey**	**10.62**	**88**	*e*Pn	Pn	18 41 01.8	+3.6
	5.8nm,1.0s						
SWMT	**Swartz Lake**	**11.04**	**67**	*e*Pn	**Pn**	**18 41 06.2**	**+2.4**
	3.6nm,1.0s						
SLMT	**Seeley Lake**	**11.33**	**69**	*e*Pn	**Pn**	**18 41 10.5**	**+2.7**
	9.7nm,1.0s						
WALA	**Waterton Lakes**	**11.52**	**60**	*e*Pn	**Pn**	**18 41 12.9**	**+2.6**
MCMT	**McKenzie Canyo**	**11.62**	**81**	*e*Pn	**Pn**	**18 41 13.3**	**+1.4**
	1.0nm,0.9s						
HWUT	**Hardware Ranch**	**13.12**	**95**	*e*Pn	**Pn**	**18 41 34.2**	**+2.0**
TPAW	**Teton Pass**	**13.12**	**87**	*e*Pn	Pn	18 41 35.7	+3.3
	4.1nm,1.1s						
EGMT	**Eagleton**	**13.95**	**67**	*e*Pn	**Pn**	**18 41 45.0**	**+1.5**
	5.6nm,1.0s						
RLMT	**Red Lodge**	**14.15**	**79**	Pn	**P**	**18 41 54.0**	**+0.1**
	4.6nm,1.2s						
PDAR	**Pinedale Array**	**14.26**	**89**	Pn	**Pn**	**18 41 48.3**	**+0.4**
PDAR	**Pinedale Array**	**14.26**	**89**	Pn	**Pn**	**18 41 48.3**	**+0.4**
	0.0nm,0.3s,baz=280,slow=11,SNR=3.2						
YKA	**Yellowknife Ar**	**20.18**	**20**	P	**P**	**18 42 59.1**	**-1.0**
YKA	**Yellowknife Ar**	**20.18**	**20**	P	**P**	**18 42 59.1**	**-1.0**
	0.5nm,0.8s,baz=209,slow=12,SNR=5.7						
FFC	**Flin Flon**	**20.41**	**49**	*e*P	**P**	**18 43 02.4**	**-0.2**
	3.9nm,0.9s						
ILAR	**Eielson Array**	**22.90**	**340**	P	**P**	**18 43 29.4**	**+0.2**
ILAR	**Eielson Array**	**22.90**	**340**	P	**P**	**18 43 29.4**	**+0.2**
	0.6nm,0.9s,baz=150,slow=9.2,SNR=6.1						
MKAR	**Makanchi Array**	**85.25**	**339**	P	**P**	**18 51 02.8**	**+0.5**
MKAR	**Makanchi Array**	**85.25**	**339**	P	**P**	**18 51 02.8**	**+0.5**
	0.1nm,0.6s,baz=26,slow=7.0,SNR=2.5						

IDC 11 18:51:28.9±2.8, 32.77S×178.47W, h0km, mb3.5/1, mb1 3.7/2, mb1mx3.5/17, mbtmp3.6/2, ML3.7/1, Error ellipse: s-maj=69.7km s-min=43.3km az=126.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.56**	**212**	Pn	Pn	18 53 06.0	-0.5
	1.6nm,0.3s,baz=27,slow=2.3,SNR=13						
ASAR	**Alice Springs**	**42.64**	**270**	P	P	18 59 27.2	-0.1
	0.5nm,0.7s,baz=109,slow=8.0,SNR=8.2						
WRA	**Warramunga Arr**	**43.84**	**275**	P	P	18 59 37.0	-0.1
	117nm,0.7s,baz=115,slow=7.7,SNR=0.8						
JOF	**Joensuu**	**144.46**	**337**	*e*p	PKPab	19 11 04.2	-0.4
	1.2nm,0.7s						
FINES	**FINESS Array B**	**147.21**	**338**	PKPbc	PKPbc	19 11 12.5	-0.8
	0.9nm,0.5s,baz=45,slow=3.6,SNR=18						

IDC 11 18:56:15.1±5.5, 8.34S×158.40E, h75km±69km, mb3.5/3, mb1 3.6/3, mb1mx3.2/17, mbtmp3.5/3, Error ellipse: s-maj=53.4km s-min=34.1km az=115.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.87**	**126**	P	Pn	18 56 45.2	0.0
	173nm,0.3s,baz=236,slow=7.3,SNR=97						
HNR				S	Sn	18 57 08.4	+0.4
	306nm,0.3s,baz=292,slow=23,SNR=47						
WRA	**Warramunga Arr**	**25.99**	**241**	P	P	19 01 41.5	+0.3
	68nm,0.8s,baz=68,slow=9.0,SNR=0.2						
ASAR	**Alice Springs**	**27.98**	**234**	P	P	19 01 58.6	-0.4
	0.7nm,0.6s,baz=64,slow=9.4,SNR=12						
STKA	**Stephens Creek**	**28.16**	**211**	P	P	19 02 00.5	+0.1
	0.8nm,0.4s,baz=48,slow=15,SNR=7.5						
SONM	**Songino Array**	**72.31**	**326**	P	P	19 07 32.9	+0.1
	0.2nm,0.5s,baz=117,slow=5.0,SNR=2.1						

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*NIED **11** 19:05:00,27.10N×130.00E, h11km, Mw4.1 Best double couple: Mo1.66000×10^15 NP1:φ=235.00000°, δ61.00000°, λ=-66.00000°. NP2:φ=13.00000°, δ37.00000°, λ=-126.00000°.*
*IDC **11** 19:05:09.3±0.6, 27.19N×130.02E, h0km, mb3.9/17, mb1 4.1/19, mb1mx4.0/27, mbtmp3.9/19, ML3.5/2, MS3.1/6, Ms1 3.1/6, ms1mx2.7/46, Error ellipse: s-maj=23.1km s-min=13.4km az=72.0*
*ISCJB **11** 19:05:11.3±1.0, 27.12N±0.03×130.01E±0.03, h26km±7km, mb4.1/27, MS3.3/2, Error ellipse: s-maj=5.3km s-min=4.5km az=37.1*
*JMA **11** 19:05:12.1±0.1, 27.11N×130.01E, h57km, M3.6*
*NEIC **11** 19:05:15.1±0.4, 27.13N×129.85E, h40km, mb4.3/9, Error ellipse: s-maj=9.6km s-min=8.0km az=119.0*

ISC 11 19:05:12.9±2.3, 27.15N±0.03×130.04E±0.04, h24km±16km, n89, σ1§19/102, mb4.0/27, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.15**	**304**	P	**Pn**	**19 05 32.4**	**-1.1**
JTK				S	**Sn**	**19 05 47.0**	**-1.5**
JZK	**Kikaishima**	**1.16**	**357**	P	**Pn**	**19 05 33.4**	**-0.2**
JZK				S	**Sb**	**19 05 49.3**	**+0.3**
JAM	**Amami Oshima**	**1.31**	**343**	P	**Pn**	**19 05 35.0**	**-0.7**
JAM				S	**Sn**	**19 05 51.1**	**-1.4**
JAMN	**Amaminishikomi**	**1.33**	**325**	P	**Pn**	**19 05 34.8**	**-1.1**
JAMN				S	**Sn**	**19 05 51.2**	**-1.7**
JOW	**Kunigami**	**1.60**	**259**	*e*Pn	**Pn**	**19 05 38.4**	**-1.3**
JOW	**Kunigami**	**1.60**	**259**	P	**Pn**	**19 05 38.6**	**-1.1**
JOW				S	**Sn**	**19 05 58.1**	**-1.5**
JMZ	**Minamidaito 2**	**1.70**	**141**	P	**Pn**	**19 05 39.4**	**-1.6**
JMZ				S	**Sn**	**19 05 59.6**	**-2.3**
JIH	**Iheya**	**1.85**	**267**	P	**Pn**	**19 05 42.0**	**-1.0**
JIH				S	**Sn**	**19 06 04.1**	**-1.5**
JJT2	**Tamagusuku 2**	**2.28**	**244**	P	**Pn**	**19 05 48.0**	**-1.0**
JJT2				S	**Sn**	**19 06 14.8**	**-1.5**
JAGN	**Aguni-jima**	**2.56**	**258**	P	**Pn**	**19 05 51.5**	**-1.3**
JAGN				S	**Sn**	**19 06 19.9**	**-3.2**
JNN	**Nakanoshima**	**2.69**	**357**	P	**Pn**	**19 05 54.7**	**+0.1**
JNN				S	**Sn**	**19 06 24.8**	**-1.6**
JKE	**Kume jima 2**	**3.02**	**255**	P	**Pn**	**19 05 57.3**	**-1.9**
JKE				S	**Sn**	**19 06 32.5**	**-2.1**
JKC	**Kuchinoerabu**	**3.30**	**2**	P	**Pn**	**19 06 02.8**	**-0.3**
JKC				S	**Sn**	**19 06 38.8**	**-2.8**
JNU	**Nakatsue**	**6.00**	**7**	Pn	**Pn**	**19 06 39.8**	**-0.3**
JNU				Sn	**Sn**	**19 07 44.0**	**-4.0**
JNU	**Nakatsue**	**6.00**	**7**	Pn	**Pn**	**19 06 39.8**	**-0.3**
	2.5nm,0.3s,baz=184,slow=2.6,SNR=51						
JNU				Sn	**Sn**	**19 07 44.0**	**-4.0**
	1.6nm,0.3s,baz=220,slow=18,SNR=3.7						
TATO	**Taipei**	**7.99**	**256**	*e*Pn	**Pn**	**19 07 06.7**	**-0.7**
NACB	**Ninganchiao**	**8.17**	**251**	*e*Pn	Pn	19 07 06.0	-4.0
YHNB	**Yeheng**	**8.18**	**254**	*e*Pn	**Pn**	**19 07 08.4**	**-1.7**
	23nm,0.8s						
SSLB	**Suanglung**	**8.86**	**250**	*e*Pn	Pn	19 07 15.0	-4.5
	8.7nm,0.4s						
SSLB				*e*Sn	Sn	19 08 49.2	-9.5
JHJ	**Hachijo jima 2**	**10.32**	**52**	LR	LR	19 10 51.8	
	comp=Z,115nm,19.3s,baz=335,slow=33						
KSAR	**Wonju Array Be**	**10.42**	**350**	Pn	**Pn**	**19 07 42.9**	**+2.1**
KSRS	**Korea Array**	**10.43**	**351**	Pn	**Pn**	**19 07 42.9**	**+2.0**
	0.1nm,0.3s,baz=169,slow=13,SNR=5.8						
KSRS				LR	LR	19 12 13.3	
	comp=Z,59nm,18.1s,baz=160,slow=41						
MJAR	**Matsushiro Arr**	**11.65**	**35**	Pn	**Pn**	**19 07 58.4**	**+0.7**
MJAR	**Matsushiro Arr**	**11.65**	**35**	Pn	**Pn**	**19 07 58.4**	**+0.7**
	0.1nm,0.3s,baz=207,slow=15,SNR=2.6						
MJAR				LR	LR	19 12 13.0	
	comp=Z,61nm,21.1s,baz=290,slow=36						
GUMO	**Guam**	**19.35**	**131**	LR	LR	19 15 31.2	
	comp=Z,51nm,20.1s,baz=12,slow=32						
ULN	**Ulaanbaatar**	**27.38**	**325**	*e*P	**P**	**19 10 57.3**	**+0.9**
	2.5nm,1.0s						
SONM	**Songino Array**	**27.70**	**324**	P	**P**	**19 10 59.4**	**+0.1**
SONM	**Songino Array**	**27.70**	**324**	P	**P**	**19 10 59.4**	**+0.1**
	1.1nm,0.6s,baz=142,slow=10,SNR=8.1						
CHTO	**Chiang Mai**	**29.74**	**260**	*e*P	**P**	**19 11 17.0**	**-0.5**
	3.3nm,0.8s						
CM31	**Chiang Mai Arr**	**29.88**	**260**	P	**P**	**19 11 21.3**	**+2.5**
CMAR	**Chiang Mai Arr**	**29.88**	**260**	P	**P**	**19 11 19.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**29.88**	**260**	P	**P**	**19 11 19.4**	**+0.6**
	0.9nm,0.6s,baz=62,slow=6.8,SNR=8.5						
PETK	**Petropavlovsk-**	**33.08**	**31**	LR	LR	19 24 24.6	
	comp=Z,25nm,18.8s,baz=145,slow=35						
TAPN	**Taplejung**	**37.50**	**280**	*e*P	**P**	**19 12 25.1**	**-0.1**
	15nm,1.1s						
ODAN	**Odare**	**37.86**	**280**	*e*P	**P**	**19 12 27.4**	**-0.9**
	21nm,0.6s						
RAMN	**Ramite**	**38.54**	**280**	*e*P	**P**	**19 12 33.6**	**-0.4**
	9.4nm,0.7s						
GUN	**Gumba**	**39.00**	**282**	*e*P	**P**	**19 12 38.1**	**+0.1**
	24nm,1.0s						
PKI	**Pulchoki**	**39.47**	**281**	*e*P	**P**	**19 12 41.5**	**-0.4**
	18nm,0.7s						
PKIN	**Phulchoki**	**39.48**	**281**	*e*P	**P**	**19 12 41.6**	**-0.3**
	7.0nm,0.5s						
KKN	**Kakani**	**39.55**	**282**	*e*P	**P**	**19 12 42.3**	**-0.1**
	21nm,0.9s						
DMN	**Daman**	**39.73**	**281**	*e*P	**P**	**19 12 43.6**	**-0.4**
	19nm,1.0s						
DANN	**Dangsing**	**40.78**	**283**	*e*P	**P**	**19 12 52.9**	**+0.2**
	26nm,0.8s						
KOLN	**Koldanda**	**41.02**	**282**	*e*P	**P**	**19 12 54.5**	**0.0**
	12nm,0.8s						
PYUN	**Piuthan**	**41.49**	**283**	*e*P	**P**	**19 12 58.5**	**+0.1**
	36nm,1.0s						
MKAR	**Makanchi Array**	**42.14**	**311**	P	**P**	**19 13 02.1**	**-1.2**
MKAR	**Makanchi Array**	**42.14**	**311**	P	**P**	**19 13 02.1**	**-1.2**
	0.3nm,0.6s,baz=93,slow=9.9,SNR=9.6						
ZALV	**Zalesovo Beam**	**42.51**	**322**	P	**P**	**19 13 05.1**	**-1.1**
ZALV				PcP	**PcP**	**19 14 59.2**	**+0.7**
ZALV	**Zalesovo Beam**	**42.51**	**322**	P	**P**	**19 13 05.1**	**-1.1**
	0.6nm,0.4s,baz=104,slow=9.2,SNR=5.7						
ZALV				PcP	**PcP**	**19 14 59.2**	**+0.7**
	0.3nm,0.4s,baz=112,slow=3.4,SNR=2.7						
TKM2	**Tokmak 2**	**46.48**	**305**	*e*P	**P**	**19 13 37.7**	**-0.6**
	1.5nm,0.7s						
WRAB

comp=Z,0.7nm,0.8s,baz=44,slow=4.1,SNR=5.9
DAVOX **Davos/Dischmat 88.73 324** LR LR 20 00 53.6
comp=Z,30nm,19.6s,baz=87,slow=38
PDAR **Pinedale Array 91.44 39** P **P** **19 18 16.7 -0.8**
PDAR **Pinedale Array 91.44 39** P **P** **19 18 16.7 -0.8**
comp=Z,0.6nm,1.0s,baz=48,slow=2.2,SNR=3.8

IDC ***11*** *19:16:00.4±0.8,37.˚38N×144.˚97E,h0km,mb3.7/11, mb1 3.9/15,mb1mx3.8/28,mbtmp3.8/15,ML3.5/4,MS2.7/2, Ms1 2.7/2,ms1mx1.9/54,Error ellipse: s-maj=23.6km s-min=18.3km az=117.0*
NIED ***11*** *19:16:00,37.˚50N×144.˚60E,h8km,Mw3.7 Best double couple: M₀4.24000×10¹⁴ NP1:φs42.00000°,δ66.00000°, λ-63.00000°. NP2:φs171.00000°,δ36.00000°, λ-136.00000°.*
ISCJB ***11*** *19:16:04.5±0.6,37.˚64N±0.˚04×144.˚73E±0.˚05,h33km, mb3.9/12,Error ellipse: s-maj=6.3km s-min=5.3km az=137.5*
JMA ***11*** *19:16:06.3±0.2,37.˚54N×144.˚61E,h56km,M4.2*
ISC 11 19:16:06.3±0.8,37.˚60N±0.˚06×144.˚77E±0.˚07,h35km,n31, σ1§55/40,mb3.8/12,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**2.83**	**288**	P	**Pn**	**19 16 49.1**	**+0.1**
JIO				*e*S	**Sn**	**19 17 20.7**	**-1.2**
OFUJ	**Ofunato**	**2.85**	**302**	P	**Pn**	**19 16 49.4**	**+0.1**
OFUJ				*e*S	**Sn**	**19 17 21.9**	**-0.4**
JMK	**Ichinoseki**	**3.10**	**297**	P	**Pn**	**19 16 53.1**	**+0.4**
JMK				*e*S	**Sn**	**19 17 28.1**	**-0.4**
JRY	**Ryogami san**	**4.97**	**253**	P	**Pn**	**19 17 17.3**	**-1.1**
JRY				*e*S	**Sn**	**19 18 09.9**	**-4.8**
JCH	**Churui**	**5.12**	**348**	P	**Pn**	**19 17 20.1**	**-0.3**
JCH				*e*S	**Sn**	**19 18 16.6**	**-1.7**
JOD2	**Odawara 2**	**5.14**	**245**	P	**Pn**	**19 17 19.1**	**-1.7**
JKB	**Kayabe**	**5.16**	**327**	P	**Pn**	**19 17 21.7**	**+0.8**
JKB				*e*S	**Sn**	**19 18 17.2**	**-2.0**
MJAR	**Matsushiro Arr**	**5.35**	**261**	Pn	**Pn**	**19 17 24.0**	**+0.3**
	2.4nm,0.3s,baz=89,slow=15,SNR=88						
MJAR				Sn	**Sn**	**19 18 23.2**	**-0.9**
	0.8nm,0.3s,baz=88,slow=28,SNR=3.6						
MAT	**Matsushiro**	**5.35**	**261**	P	**Pn**	**19 17 24.3**	**+0.6**
MAT				S	**Sn**	**19 18 23.2**	**-1.0**
MAT	**Matsushiro**	**5.35**	**261**	P	**Pn**	**19 17 24.7**	**+1.0**
NEM2	**Nemuro 2**	**5.80**	**7**	P	**Pn**	**19 17 27.9**	**-1.9**
NEM2				*e*S	**Sn**	**19 18 31.2**	**-3.9**
JHJ	**Hachijo jima 2**	**6.05**	**224**	Pn	Pn	19 17 29.3	-4.0
	5.4nm,0.3s,baz=71,slow=8.7,SNR=10						
JHJ				Sn	Sn	19 18 31.8	-9.5
	45nm,0.3s,baz=54,slow=23,SNR=8.4						
JTKR	**Abashiri--Toko**	**6.39**	**354**	P	**Pn**	**19 17 38.0**	**+0.1**
JTKR				*e*S	**Sn**	**19 18 46.6**	**-3.0**
JHR	**Hokuryu**	**6.55**	**340**	*e*S	**Sn**	**19 18 53.4**	**-0.2**
ASAJ	**Asahikawa**	**6.71**	**346**	Pn	**Pn**	**19 17 43.2**	**+0.9**
	1.8nm,0.3s,baz=212,slow=11,SNR=25						
ASAJ				Sn	**Sn**	**19 18 57.3**	**-0.2**
	0.8nm,0.3s,baz=229,slow=20,SNR=4.8						
ASAJ				LR	LR	19 20 21.3	
	comp=Z,58nm,20.2s,baz=152,slow=37						
USRK	**Ussuriysk Arra**	**11.69**	**308**	Pn	Pn	19 18 53.3	+2.8
	0.4nm,0.3s,baz=129,slow=14,SNR=5.8						
KSRS	**Korea Array**	**13.38**	**274**	Pn	P	19 19 17.2	-5.4
	0.1nm,0.3s,baz=87,slow=14,SNR=7.2						
KSRS				LR	LR	19 24 25.7	
	comp=Z,28nm,19.4s,baz=225,slow=37						
ZALV	**Zalesovo Beam**	**43.52**	**312**	P	**P**	**19 24 06.4**	**+0.3**
	0.2nm,0.4s,baz=87,slow=7.7,SNR=2.5						
ZALV				PcP	**PcP**	**19 25 52.5**	**-1.0**
	0.5nm,0.5s,baz=80,slow=4.0,SNR=4.3						
MKAR	**Makanchi Array**	**46.08**	**302**	P	**P**	**19 24 28.1**	**+1.3**
	0.2nm,0.6s,baz=81,slow=6.2,SNR=3.9						
ILAR	**Eielson Array**	**47.58**	**33**	P	**P**	**19 24 38.6**	**+0.5**
	0.6nm,0.9s,baz=253,slow=6.2,SNR=4.8						
INK	**Inuvik**	**52.65**	**28**	P	**P**	**19 25 16.9**	**+0.4**
	1.3nm,0.8s,baz=260,slow=6.3,SNR=6.0						
WRA	**Warramunga Arr**	**58.08**	**192**	P	**P**	**19 25 54.0**	**-2.0**
	264nm,0.5s,baz=10,slow=7.2,SNR=1.7						
ASAR	**Alice Springs**	**61.80**	**191**	P	**P**	**19 26 20.1**	**-1.4**
	0.3nm,0.6s,baz=4.3,slow=7.1,SNR=4.8						
YKA	**Yellowknife Ar**	**61.95**	**31**	P	**P**	**19 26 22.0**	**-0.2**
	0.2nm,0.7s,baz=295,slow=6.4,SNR=3.5						
FINES	**FINESS Array B**	**69.53**	**333**	P	**P**	**19 27 12.5**	**+1.4**
	2.2nm,0.8s,baz=46,slow=12,SNR=5.9						
KBZ	**Khabaz**	**72.54**	**312**	P	**P**	**19 27 31.8**	**+2.2**
	2.9nm,1.0s,baz=34,slow=3.6,SNR=4.8						
NB2	**NORSAR Subarra**	**74.67**	**339**	P	**P**	**19 27 43.0**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=40,slow=5.9						
NOA	**NORSAR Array B**	**74.67**	**339**	P	**P**	**19 27 43.0**	**+1.2**
	comp=Z,1.3nm,0.8s,baz=38,slow=5.8,SNR=5.4						
PDAR	**Pinedale Array**	**75.34**	**47**	P	**P**	**19 27 46.2**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=298,slow=3.8,SNR=3.1						
AKASG	**Malin Array Be**	**75.45**	**324**	P	**P**	**19 27 47.4**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=45,slow=5.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**118.76**	**318**	PKP	**PKPdf**	**19 34 50.5**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=315,slow=2.4,SNR=2.6						

MAN 11 19:24:44,16.˚67N×122.˚60E,h19km,mb4.6,ML3.5,MS3.4, 1C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.43**	**337**↓	*e*P	Pb	19 24 54.0	+0.9
CAUP	**Cauayan**	**0.79**	**291**	*e*P	Pb	19 24 58.5	-0.7
BALP	**Baler**	**1.34**	**227**	*e*P	Pn	19 25 06.8	-1.0
PCPH	**Palayan**	**1.81**	**233**‖	*e*P	Pn	19 25 14.5	+0.3
PCPH				*e*S	Sb	19 25 38.0	-1.0
ABRA	**Dolores**	**2.05**	**299**	*e*P	Pn	19 25 17.8	+0.3

IDC 11 19:35:19.2±1.1,5.˚01N×125.˚50E,h0km,mb3.6/4, mb1 3.6/5,mb1mx3.4/23,mbtmp3.6/5,ML3.7/1,1C,Error ellipse: s-maj=67.5km s-min=18.9km az=77.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.05**	**2**	Pn	Pn	19 35 55.4	+0.5
	26nm,0.3s,baz=281,slow=5.2,SNR=5.5						
DAV				Sn	Sb	19 36 24.2	+0.8
	18nm,0.3s,baz=91,slow=22,SNR=3.9						
CTBH	**Cotabato--PC H**	**2.52**	**331**‖	*i*P	Pg	19 36 11.0	+3.4
WRA	**Warramunga Arr**	**26.27**	**161**	P	P	19 40 56.6	+0.1
	45nm,0.4s,baz=343,slow=10,SNR=2.4						
ASAR	**Alice Springs**	**29.66**	**164**	P	P	19 41 27.1	+0.3
	0.2nm,0.7s,baz=352,slow=8.2,SNR=4.7						
MKAR	**Makanchi Array**	**55.81**	**325**	P	P	19 44 58.0	-0.3
	0.7nm,0.6s,baz=119,slow=7.2,SNR=16						
ZALV	**Zalesovo Beam**	**58.90**	**333**	P	P	19 45 19.4	-0.5
	0.6nm,0.6s,baz=132,slow=2.1,SNR=3.7						
FINES	**FINESS Array B**	**90.13**	**332**	P	P	19 48 20.9	-0.1
	1.5nm,1.0s,baz=46,slow=8.0,SNR=4.2						

ISCJB ***11*** *19:49:38.9±0.4,23.˚89S±0.˚05×179.˚98E±0.˚07,h518km, mb4.3/29,Error ellipse: s-maj=9.4km s-min=5.9km az=20.4*
NEIC ***11*** *19:49:38.8±0.9,23.˚94S×179.˚92W,h508km±10km, mb4.5/18,Error ellipse: s-maj=16.8km s-min=8.5km az=145.0*
IDC ***11*** *19:49:39.8±1.7,23.˚83S×179.˚92W,h517km±16km, mb3.7/13,mb1 3.9/14,mb1mx3.7/22,mbtmp3.7/14,Error ellipse: s-maj=15.8km s-min=14.8km az=40.0*
ISC 11 19:49:39.3±0.5,23.˚95S±0.˚08×179.˚90W±0.˚09,h518km, n52,σ1§15/61,mb4.4/29,1D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.47**	**342**	P	**P**	**19 51 20.4**	**-0.7**
AFI	**Afiamalu**	**12.60**	**39**	P	**P**	**19 52 23.4**	**-0.8**
URZ	**Urewera**	**14.49**	**189**	*e*Pn	**P**	**19 52 42.6**	**-1.1**
	16nm,0.6s						
URZ	**Urewera**	**14.49**	**189**	P	**P**	**19 52 43.4**	**-0.3**
	1.7nm,0.3s,baz=56,slow=0.4,SNR=12						
URZ				S	**S**	**19 55 12.6**	**-3.3**
	2.2nm,0.3s,baz=62,slow=23,SNR=18						
QRZ	**Quartz Range**	**17.99**	**199**	*e*PN	**P**	**19 53 20.2**	**+1.8**
NNZ	**Nelson**	**18.12**	**196**	*e*PN	**P**	**19 53 20.8**	**+1.3**
THZ	**Tophouse**	**18.75**	**197**	*e*PN	**P**	**19 53 26.4**	**+0.9**
THZ				SN	**S**	**19 56 26.3**	**-3.3**
LTZ	**Lake Taylor**	**19.87**	**197**	*e*PN	**P**	**19 53 36.4**	**+0.8**
LTZ				SN	**S**	**19 56 47.6**	**-0.1**
RPZ	**Rata Peaks**	**21.07**	**198**	P	**P**	**19 53 47.9**	**+1.4**
	4.2nm,0.3s,baz=14,slow=20,SNR=6.9						
RPZ				S	**S**	**19 57 05.0**	**-1.7**
	4.9nm,0.6s,baz=0.0,slow=18,SNR=2.2						
ARMA	**Armidale**	**26.09**	**249**	*e*P	**P**	**19 54 30.0**	**-1.5**
	12nm,0.8s						
EIDS	**Eidsvold**	**26.39**	**261**	*e*P	**P**	**19 54 35.5**	**+1.4**
	15nm,0.6s						
CTA	**Charters Tower**	**31.56**	**270**	P	**P**	**19 55 20.0**	**+0.8**
	28nm,0.5s,baz=99,slow=10,SNR=34						
CTAO	**Charters Tower**	**31.56**	**270**‖	*i*P	**P**	**19 55 20.2**	**+1.0**
	31nm,0.6s						
TAU	**Tasmania Unive**	**32.97**	**227**	*e*P	**P**	**19 55 32.7**	**+1.9**
	7.5nm,0.6s						
PMG	**Port Moresby**	**34.59**	**289**	P	P	19 55 37.0	-7.9
	19nm,1.0s						
PMG	**Port Moresby**	**34.59**	**289**	P	**P**	**19 55 44.1**	**-0.8**
	23nm,0.8s,baz=126,slow=8.6,SNR=4.3						
STKA	**Stephens Creek**	**34.79**	**248**	*e*P	**P**	**19 55 46.3**	**0.0**
	1.9nm,0.9s						
STKA	**Stephens Creek**	**34.79**	**248**	P	**P**	**19 55 46.5**	**+0.2**
	8.3nm,0.8s,baz=84,slow=9.8,SNR=27						
AS31	**Alice Springs**	**42.11**	**261**	*e*P	**P**	**19 56 45.8**	**-0.2**
ASAR	**Alice Springs**	**42.11**	**261**	P	**P**	**19 56 46.4**	**+0.4**
	16nm,0.8s,baz=99,slow=6.5,SNR=144						
ASAR				ScP	**ScP**	**20 01 29.6**	**-0.3**
	3.8nm,0.8s,baz=108,slow=4.3,SNR=22						
ASAR				S	**S**	**20 02 26.4**	**-1.7**
	0.8nm,1.0s,baz=108,slow=15,SNR=3.3						
WRAB	**Tennant Creek**	**42.48**	**266**	*e*P	**P**	**19 56 48.3**	**-0.6**
	22nm,0.8s						
WRA	**Warramunga Arr**	**42.49**	**266**	P	**P**	**19 56 48.8**	**-0.2**
	38nm,0.3s,baz=101,slow=8.2,SNR=2.2						
WRA				ScP	**ScP**	**20 01 31.7**	**+0.3**
	62nm,0.4s,baz=96,slow=3.8,SNR=3.1						
FORT	**Forrest**	**46.38**	**250**	*e*P	**P**	**19 57 18.7**	**-0.1**
	76nm,0.6s						
FITZ	**Fitzroy Crossi**	**50.91**	**266**	P	**P**	**19 57 53.1**	**+0.4**
	13nm,0.8s,baz=140,slow=5.4,SNR=34						
MBWA	**Marble Bar**	**55.45**	**260**	*e*P	**P**	**19 58 24.6**	**-0.4**
	20nm,0.9s						
QSPA	**South Pole Qui**	**66.14**	**180**	*e*P	**P**	**19 59 36.4**	**+1.6**
QSPA	**South Pole Qui**	**66.14**	**180**	P	**P**	**19 59 36.8**	**+2.0**
	3.4nm,0.8s,baz=15,slow=0.7,SNR=20						
KKM	**Kota Kinabalu**	**69.00**	**287**	*e*P	**P**	**19 59 52.8**	**-0.4**
	7.6nm,0.7s						
MJAR	**Matsushiro Arr**	**71.99**	**326**	P	**P**	**20 00 09.6**	**-0.6**
	1.4nm,0.8s,baz=173,slow=6.7,SNR=7.2						
KSM	**Kuching**	**72.20**	**280**	*e*P	**P**	**20 00 11.9**	**-0.1**
	11nm,0.7s						
KSRS	**Korea Array**	**78.34**	**320**	P	**P**	**20 00 46.7**	**+1.0**
	0.9nm,0.7s,baz=140,slow=5.2,SNR=6.7						
KULM	**Kulim**	**82.54**	**279**	P	**P**	**20 01 08.4**	**+0.3**
	6.6nm,1.0s						
ISA	**Isabella**	**82.99**	**46**	P	**P**	**20 01 10.8**	**+0.8**
	12nm,1.3s						
CMB	**Columbia Colle**	**83.17**	**43**	P	**P**	**20 01 09.8**	**-1.0**
	3.1nm,0.9s						
NVAR	**Mina Array Bea**	**84.72**	**44**	P	**P**	**20 01 17.8**	**-0.9**
	1.3nm,0.7s,baz=222,slow=6.6,SNR=5.7						
CMAR	**Chiang Mai Arr**	**89.63**	**290**	P	**P**	**20 01 43.5**	**+1.4**
	2.0nm,0.9s,baz=140,slow=3.4,SNR=16						
CHTO	**Chiang Mai**	**89.78**	**291**	*e*P	**P**	**20 01 42.4**	**-0.4**
	1.3nm,0.8s						
TMUT	**Trail Mountain**	**89.81**	**46**	*e*P	**P**	**20 01 43.8**	**+0.9**
	5.3nm,0.8s						
SRU	**San Rafael**	**90.17**	**47**	*e*P	**P**	**20 01 44.8**	**+0.4**
	130nm,0.8s						
LENM	**Lemitar**	**90.17**	**52**	*e*P	**P**	**20 01 45.7**	**+1.2**
TXAR	**Lajitas Array**	**90.38**	**58**	P	**P**	**20 01 46.3**	**+0.8**
	1.7nm,0.7s,baz=242,slow=2.7,SNR=7.4						
ANMO	**Albuquerque**	**90.92**	**52**	P	**P**	**20 01 49.1**	**+1.1**
	4.0nm,1.3s						
PDAR	**Pinedale Array**	**92.66**	**44**	P	**P**	**20 01 56.1**	**+0.3**
	0.3nm,0.4s,baz=215,slow=3.3,SNR=5.6						
MKAR	**Makanchi Array**	**112.25**	**313**	PKiKP	**PKiKP**	**20 07 14.8**	**-1.0**
	0.3nm,1.0s,baz=77,slow=3.3,SNR=2.5						
BVAR	**Borovoye Array**	**120.53**	**319**	PKP	**PKPdf**	**20 07 30.3**	**-1.2**
	0.2nm,0.3s,baz=96,slow=1.4,SNR=4.1						
FINES	**FINESS Array B**	**138.52**	**341**	PKP	**PKPdf**	**20 08 05.8**	**+0.5**
	1.8nm,1.1s,baz=346,slow=2.9,SNR=4.8						
FINES				SKPbc	**SKPbc**	**20 10 49.2**	**-1.8**
	2.4nm,0.7s,baz=46,slow=5.5,SNR=9.5						
AKASG	**Malin Array Be**	**145.06**	**327**	PKP	**PKPdf**	**20 08 16.7**	**-0.5**
	0.4nm,0.3s,baz=46,slow=4.2,SNR=6.5						
BRTR	**Keskin Array B**	**147.68**	**307**	PKPbc	**PKPbc**	**20 08 24.5**	**-1.3**
	1.0nm,0.7s,baz=74,slow=3.4,SNR=4.6						
BRTR				PKPab	**PKPab**	**20 08 30.1**	**+0.2**
	1.9nm,0.8s,baz=72,slow=3.8,SNR=7.3						
MMAI	**Mount Meron Ar**	**147.80**	**294**	PKPbc	**PKPbc**	**20 08 27.0**	**+0.9**
	4.6nm,0.6s,baz=75,slow=6.1,SNR=13						
EIL	**Elat**	**148.45**	**288**	PKPbc	**PKPbc**	**20 08 28.5**	**+0.7**
	3.3nm,0.8s,baz=22,slow=4.4,SNR=5.1						
EIL				PKPab	**PKPab**	**20 08 33.8**	**+0.7**
	3.9nm,0.7s,baz=77,slow=2.2,SNR=5.6						
EKA	**Eskdalemuir Ar**	**148.56**	**4**	PKPbc	**PKPbc**	**20 08 26.5**	**-0.7**
	0.5nm,0.7s,baz=349,slow=2.6,SNR=3.5						
TORD	**Torodi Ar. Bea**	**169.15**	**188**	PKPab	**PKPab**	**20 10 03.1**	**+0.2**
	0.6nm,0.9s,baz=171,slow=4.8,SNR=3.0						

CSEM ***11*** *19:52:53.4,36.˚42N×21.˚64E,h0km,ML2.1/4,After THE*
THE 11 19:52:53.4,36.˚42N×21.˚64E,h0km±3km,ML2.1/4,Error ellipse: s-maj=4.4km s-min=1.3km az=217.0,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.48**	**10**	P	Pg	19 53 02.5	-0.3
PYL				S	Sg	19 53 09.2	+0.1
PYL	**PYLOS**	**0.48**	**10**	P	Pg	19 53 02.5	-0.3
PYL				S	Sg	19 53 09.2	+0.1
DYR	**Agios Nikonas**	**0.66**	**58**	P	Pg	19 53 05.6	-0.5
DYR				S	Sg	19 53 16.0	+1.3
DYR	**Agios Nikonas**	**0.66**	**58**	P	Pg	19 53 05.6	-0.5
DYR				S	Sg	19 53 16.0	+1.3
ITM	**Ithomi**	**0.80**	**17**	P	Pg	19 53 08.6	-0.1
ITM				S	Sb	19 53 20.9	-0.6
ITM	**Ithomi**	**0.80**	**17**	P	Pg	19 53 08.6	-0.1
ITM				S	Sb	19 53 20.9	-0.6
AMT	**Artemida-Makis**	**1.11**	**3**	P	Pg	19 53 14.4	-0.5
AMT				S	Sb	19 53 30.8	0.0
AMT	**Artemida-Makis**	**1.11**	**3**	P	Pg	19 53 14.4	-0.5
AMT				S	Sb	19 53 30.8	0.0
VLX	**Vlachokerasia**	**1.12**	**32**	P	Pg	19 53 14.0	-1.1
VLX				S	Sg	19 53 30.3	+0.5
VLX	**Vlachokerasia**	**1.12**	**32**	P	Pg	19 53 14.0	-1.1
VLX				S	Sg	19 53 30.3	+0.5
KYTH	**Kithira**	**1.14**	**96**	P	Pg	19 53 14.5	-0.8
KYTH	**Kithira**	**1.14**	**96**	P	Pg	19 53 14.5	-0.8
GUR	**Goura**	**1.62**	**20**	P	Pn	19 53 22.9	-0.5
GUR				S	Sn	19 53 45.1	+0.1
GUR	**Goura**	**1.62**	**20**	P	Pn	19 53 22.9	-0.5
GUR				S	Sn	19 53 45.1	+0.1

ROM ***11*** *19:53:53.9±0.1,42.˚34N×13.˚51E,h10km,Md3.2/29, Ml3.0/29,Error ellipse: s-maj=1.0km s-min=0.8km az=55.0*
ISCJB ***11*** *19:53:54.1±0.2,42.˚33N±0.˚02×13.˚52E±0.˚02,h9km±2km, mb3.4/1,Error ellipse: s-maj=3.2km s-min=2.6km az=141.2*
CSEM ***11*** *19:53:54.4±0.1,42.˚32N×13.˚53E,h2km,ML3.4/9,Error ellipse: s-maj=3.0km s-min=2.3km az=60.0*
IDC ***11*** *19:53:55.5±2.0,42.˚46N×13.˚74E,h0km,mb3.2/2, mb1 3.2/5,mb1mx3.1/29,mbtmp3.1/5,ML2.6/3,Error ellipse: s-maj=37.4km s-min=20.0km az=87.0*
LDG ***11*** *19:53:59.2±1.3,42.˚44N×13.˚32E,h2km,Ml2.7/4,Error ellipse: s-maj=30.4km s-min=11.8km az=104.0*
ISC 11 19:53:54.9±0.8,42.˚34N±0.˚02×13.˚53E±0.˚02,h8km±5km, n107,σ1§39/139,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.08**	**148**	Pg	**Pg**	**19 53 56.6**	**-0.5**
FAGN				Sg	**Sg**	**19 53 58.7**	**0.0**
	11μm,0.5s						
FAGN	**Fagnano**	**0.08**	**148**	Pg	**Pg**	**19 53 56.6**	**-0.5**
FAGN				Sg	**Sg**	**19 53 58.7**	**0.0**
	11μm,0.5s						
AQU	**L'Aquila**	**0.09**	**280**	Pg	**Pg**	**19 53 56.7**	**-0.5**
AQU				Sg	**Sg**	**19 53 58.8**	**-0.1**
AQU	**L'Aquila**	**0.09**	**280**	Pg	**Pg**	**19 53 56.7**	**-0.5**
AQU				Sg	**Sg**	**19 53 58.8**	**-0.1**
CAMP	**Campotosto**	**0.22**	**337**	Pg	**Pg**	**19 53 59.0**	**-0.3**
CAMP				Sg	**Sg**	**19 54 02.6**	**+0.3**
	6μm,1.1s						
CAMP	**Campotosto**	**0.22**	**337**	Pg	**Pg**	**19 53 59.0**	**-0.3**
CAMP				Sg	**Sg**	**19 54 02.6**	**+0.3**
	6μm,1.1s						
VCEL	**Villa Celiera**	**0.24**	**76**	Pg	**Pg**	**19 53 59.6**	**-0.1**
VCEL				Sg	**Sg**	**19 54 04.4**	**+1.4**
	12μm,1.5s						
VCEL	**Villa Celiera**	**0.24**	**76**	Pg	**Pg**	**19 53 59.6**	**-0.1**
VCEL				Sg	**Sg**	**19 54 04.4**	**+1.4**
	12μm,1.5s						
TERO	**Teramo**	**0.29**	**12**	Pg	**Pg**	**19 54 00.2**	**-0.5**
TERO				Sg	**Sg**	**19 54 04.9**	**+0.3**
	5μm,1.1s						
TERO	**Teramo**	**0.29**	**12**	Pg	**Pg**	**19 54 00.2**	**-0.5**
TERO				Sg	**Sg**	**19 54 04.9**	**+0.3**
	5μm,1.1s						
FIAM	**Fiamignano**	**0.31**	**257**	Pg	**Pg**	**19 54 00.7**	**-0.3**
FIAM				Sg	**Sg**	**19 54 06.3**	**+1.1**
	5μm,0.6s						
FIAM	**Fiamignano**	**0.31**	**257**	Pg	**Pg**	**19 54 00.7**	**-0.3**
FIAM				Sg	**Sg**	**19 54 06.3**	**+1.1**
	5μm,0.6s						
PTQR	**Pietraquaria**	**0.33**	**196**	Pg	**Pg**	**19 54 01.3**	**-0.1**
PTQR				Sg	**Sg**	**19 54 06.7**	**+1.0**
PTQR	**Pietraquaria**	**0.33**	**196**	Pg	**Pg**	**19 54 01.3**	**-0.1**
PTQR				Sg	**Sg**	**19 54 06.7**	**+1.0**
INTR	**Introdacqua**	**0.43**	**139**	Pg	**Pg**	**19 54 02.9**	**-0.4**
INTR				Sg	**Sg**	**19 54 10.1**	**+1.2**
	3μm,0.8s						
INTR	**Introdacqua**	**0.43**	**139**	Pg	**Pg**	**19 54 02.9**	**-0.4**
INTR				Sg	**Sg**	**19 54 10.1**	**+1.2**
	3μm,0.8s						
LNSS	**Leonessa**	**0.45**	**307**	Pg	**Pg**	**19 54 02.9**	**-0.7**
LNSS				Sg	**Sg**	**19 54 10.3**	**+0.8**
	3μm,0.9s						
LNSS	**Leonessa**	**0.45**	**307**	Pg	**Pg**	**19 54 02.9**	**-0.7**
LNSS				Sg	**Sg**	**19 54 10.3**	**+0.8**
	3μm,0.9s						
VVLD	**Villa Vallelon**	**0.47**	**171**	Pg	**Pg**	**19 54 03.5**	**-0.5**
	1μm,0.7s						
VVLD	**Villa Vallelon**	**0.47**	**171**	Pg	**Pg**	**19 54 03.5**	**-0.5**
	1μm,0.7s						
TRTR	**Tortoreto Alta**	**0.55**	**31**	Pg	**Pb**	**19 54 06.5**	**-0.3**
	4μm,0.8s						
TRTR	**Tortoreto Alta**	**0.55**	**31**	Pg	**Pb**	**19 54 06.5**	**-0.3**
	4μm,0.8s						
CERT	**Cerreto**	**0.56**	**226**	Pg	**Pg**	**19 54 04.9**	**-0.8**
	4μm,1.2s						
CERT	**Cerreto**	**0.56**	**226**	Pg	**Pg**	**19 54 04.9**	**-0.8**
	4μm,1.2s						
GUAR	**Guarcino**	**0.56**	**196**	Pg	**Pg**	**19 54 04.9**	**-0.9**
	927nm,1.0s						
GUAR	**Guarcino**	**0.56**	**196**	Pg	**Pg**	**19 54 04.9**	**-0.9**
	927nm,1.0s						
LPEL	**Lama dei Pelig**	**0.57**	**120**	Pg	**Pg**	**19 54 05.1**	**-0.8**
LPEL				Sg	**Sb**	**19 54 14.6**	**-0.8**
	818nm,0.8s						
LPEL	**Lama dei Pelig**	**0.57**	**120**	Pg	**Pg**	**19 54 05.1**	**-0.8**
LPEL				Sg	**Sb**	**19 54 14.6**	**-0.8**
	818nm,0.8s						
NRCA	**Norcia**	**0.58**	**329**	Pg	**Pg**	**19 54 05.1**	**-1.0**
NRCA				Sg	**Sg**	**19 54 14.5**	**+0.7**
	517nm,0.6s						
NRCA	**Norcia**	**0.58**	**329**	Pg	**Pg**	**19 54 05.1**	**-1.0**
NRCA				Sg	**Sg**	**19 54 14.5**	**+0.7**
	517nm,0.6s						
OFFI	**Offida**	**0.61**	**11**	Pg	**Pg**	**19 54 07.0**	**+0.3**
	3μm,0.8s						
OFFI	**Offida**	**0.61**	**11**	Pg	**Pg**	**19 54 07.0**	**+0.3**
	3μm,0.8s						
CAFR	**Castel Frentan**	**0.62**	**100**	Pg	**Pg**	**19 54 06.9**	**+0.1**
	1μm,0.9s						
CAFR	**Castel Frentan**	**0.62**	**100**	Pg	**Pg**	**19 54 06.9**	**+0.1**
	1μm,0.9s						
MNS	**Montasola**	**0.63**	**275**	Pg	**Pg**	**19 54 05.9**	**-1.1**
	888nm,0.9s						
MNS	**Montasola**	**0.63**	**275**	Pg	**Pg**	**19 54 05.9**	**-1.1**
	888nm,0.9s						
POFI	**Posta Fibreno**	**0.64**	**167**	Pg	**Pg**	**19 54 06.3**	**-0.8**
	678nm,1.1s						
POFI	**Posta Fibreno**	**0.64**	**167**	Pg	**Pg**	**19 54 06.3**	**-0.8**
	678nm,1.1s						
MTCE	**

SBF	**Sospel**	**4.71**	**291**	*e*Pn	**Pn**	**19 55 07.4**	**+1.1**
SBF	**Sospel**	**4.71**	**291**	*e*Pn	**Pn**	**19 55 07.4**	**+1.1**
DAVOX	**Davos/Dischmat**	**5.15**	**331**	Pn	**Pn**	**19 55 14.7**	**+2.3**
	0.3nm,0.3s,baz=156,slow=17,SNR=7.8						
DAVOX				Sn	**Sn**	**19 56 17.1**	**+5.1**
	0.2nm,0.3s,baz=127,slow=20,SNR=3.2						
FRF	**La Foret Royal**	**5.20**	**286**	*e*Pn	**Pn**	**19 55 13.6**	**+0.8**
FRF	**La Foret Royal**	**5.20**	**286**	*e*Pn	**Pn**	**19 55 13.6**	**+0.8**
LMR	**La Mourre**	**5.25**	**283**	*e*Pn	**Pn**	**19 55 14.2**	**+0.6**
LMR	**La Mourre**	**5.25**	**283**	*e*Pn	**Pn**	**19 55 14.2**	**+0.6**
MBDF	**Montbardon**	**5.46**	**298**	*e*P	**Pn**	**19 55 19.5**	**+2.9**
MBDF	**Montbardon**	**5.46**	**298**	*e*P	**Pn**	**19 55 19.5**	**+2.9**
LPG	**La Plagne**	**5.82**	**305**	*e*P	Pn	19 55 25.4	+3.7
LPL	**La Plagne**	**5.84**	**305**	*e*P	Pn	19 55 25.5	+3.5
SMRF	**Simiane la Rot**	**6.04**	**288**	*e*P	**Pn**	**19 55 26.8**	**+2.3**
SMRF	**Simiane la Rot**	**6.04**	**288**	*e*P	**Pn**	**19 55 26.8**	**+2.3**
GERES	**GERESS Array B**	**6.51**	**1**	Pn	**Pn**	**19 55 30.3**	**-0.7**
	0.1nm,0.3s,baz=181,slow=13,SNR=4.4						
GERES				Sn	**Sn**	**19 56 44.1**	**-1.3**
	0.2nm,0.3s,baz=182,slow=26,SNR=4.5						
KHC	**Kasperske Hory**	**6.79**	**0**	*e*PN	**Pn**	**19 55 35.2**	**+0.4**
KHC				*e*SN	**Sn**	**19 56 51.6**	**-0.7**
KHC	**Kasperske Hory**	**6.79**	**0**	Pn	**Pn**	**19 55 35.2**	**+0.4**
KHC				Sn	**Sn**	**19 56 51.6**	**-0.7**
HINF	**Hinteralfeld**	**7.23**	**322**	*e*Pn	**Pn**	**19 55 41.4**	**+0.6**
HINF				*e*Sn	**Sn**	**19 56 57.9**	**-5.2**
	4.4nm,0.6s						
HINF	**Hinteralfeld**	**7.23**	**322**	*e*Pn	**Pn**	**19 55 41.4**	**+0.6**
KEST	**Kesra**	**7.35**	**208**	Pn	Pn	19 55 46.4	+3.9
	0.1nm,0.3s,baz=28,slow=15,SNR=4.3						
CDF	**Champ du Feu**	**7.50**	**326**	*e*Pn	**Pn**	**19 55 45.1**	**+0.6**
CDF				*e*Sn	**Sn**	**19 57 04.9**	**-4.8**
	1.2nm,0.4s						
CDF	**Champ du Feu**	**7.50**	**326**	*e*Pn	**Pn**	**19 55 45.1**	**+0.6**
HAU	**Haudompre**	**7.60**	**321**	*e*Pn	**Pn**	**19 55 46.7**	**+0.8**
HAU				*e*Sn	Sn	19 57 05.5	-6.7
	0.7nm,0.2s						
HAU	**Haudompre**	**7.60**	**321**	*e*Pn	**Pn**	**19 55 46.7**	**+0.8**
FINES	**FINESS Array B**	**20.57**	**17**	P	Pn	19 58 35.5	-0.5
	1.1nm,0.9s,baz=238,slow=10,SNR=5.9						
MKAR	**Makanchi Array**	**47.77**	**60**	P	**P**	**20 02 32.6**	**+0.3**
	0.3nm,0.7s,baz=285,slow=8.5,SNR=3.9						

IDC 11 20:04:58.5±0.9, 3°.51N×128°.75E, h0km, mb3.7/10, mb1 3.8/10, mb1mx3.7/23, mbtmp3.7/10, Error ellipse: s-maj=38.1km s-min=18.6km az=75.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.94**	**167**	P	P	20 10 14.6	0.0
	27nm,0.4s,baz=346,slow=10,SNR=2.5						
ASAR	**Alice Springs**	**27.47**	**170**	P	P	20 10 46.6	-0.1
	0.1nm,0.5s,baz=355,slow=7.1,SNR=4.9						
ASAR				PcP	PcP	20 14 05.2	-0.3
	0.2nm,0.5s,baz=353,slow=2.2,SNR=6.1						
CMAR	**Chiang Mai Arr**	**32.73**	**299**	P	P	20 11 34.0	+0.8
	0.4nm,0.6s,baz=102,slow=6.5,SNR=5.0						
KSRS	**Korea Array**	**33.79**	**359**	P	P	20 11 42.9	+0.6
	0.5nm,0.6s,baz=177,slow=9.1,SNR=4.5						
MJAR	**Matsushiro Arr**	**34.01**	**14**	P	P	20 11 43.9	-0.3
	2.0nm,0.8s,baz=188,slow=9.9,SNR=8.3						
SONM	**Songino Array**	**48.17**	**340**	P	P	20 13 41.1	+0.3
	0.4nm,0.5s,baz=157,slow=6.2,SNR=4.5						
MKAR	**Makanchi Array**	**58.90**	**324**	P	P	20 14 59.6	+0.1
	0.9nm,0.3s,baz=112,slow=8.2,SNR=35						
ZALV	**Zalesovo Beam**	**61.71**	**332**	P	P	20 15 17.2	-1.3
	0.3nm,0.3s,baz=108,slow=7.7,SNR=2.8						
BVAR	**Borovoye Array**	**68.61**	**326**	P	P	20 16 02.6	-0.7
	0.9nm,0.6s,baz=129,slow=7.8,SNR=7.9						
ILAR	**Eielson Array**	**84.44**	**25**	P	P	20 17 33.4	+0.6
	0.1nm,0.4s,baz=246,slow=5.7,SNR=4.4						
YKA	**Yellowknife Ar**	**98.86**	**25**	P	P	20 18 39.7	-0.7
	0.1nm,0.6s,baz=294,slow=4.5,SNR=3.5						

KRSC 11 20:09:03.8±0.5, 54°.92N×162°.09E, h28km±18km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.42**	**210**	*i* P	Pb	20 09 13.2	+0.4
MKZ				*i* S	Sn	20 09 20.0	-0.7
TUMR	**Tumrok**	**1.18**	**289**	*e*P	Pb	20 09 25.1	-0.5
TUMR				*e*S	Sb	20 09 40.7	+0.1
BZGR	**Bezymyannyi-Gr**	**1.29**	**323**	*i* P	Pb	20 09 27.1	-0.6
BZGR				*e*S	Sb	20 09 44.3	+0.3
ZLN	**Zelenaya**	**1.32**	**327**	*i* P	Pb	20 09 27.6	-0.5
ZLN				*e*S	Sb	20 09 44.7	0.0
KMNR	**Kamenistaya**	**1.35**	**309**	*e*P	Pb	20 09 27.9	-0.7
KMNR				*e*S	Sb	20 09 45.3	-0.2
KBTR	**Krutoberegovo**	**1.36**	**17**	*e*P	Pn	20 09 27.3	+0.5
KBTR				*e*S	Sn	20 09 44.6	+0.7
BZMR	**Bezymyannaya**	**1.37**	**319**	*e*P	Pn	20 09 27.5	+0.3
BZMR				*e*S	Sn	20 09 44.6	+0.1
BZWR	**Bezymyannyi-We**	**1.39**	**320**	*e*P	Pn	20 09 27.9	+0.4
BZWR				*e*S	Sn	20 09 45.8	+0.8
LGNR	**Loginova**	**1.41**	**326**	*e*P	Pb	20 09 29.2	-0.7
LGNR				*e*S	Sb	20 09 48.3	+0.3
KPT	**Kopyto**	**1.49**	**315**	*e*P	Pb	20 09 30.9	-0.1
KPT				*e*S	Sb	20 09 50.4	+0.8
KRSR	**Krestovskiy**	**1.56**	**327**	P	Pn	20 09 30.1	+0.3
KRSR				S	Sn	20 09 48.8	-0.4
KLY	**Klyuchi**	**1.62**	**330**	*e*P	Pn	20 09 30.1	-0.3
KLY				*e*S	Sn	20 09 49.5	-0.8
KOZ	**Kozyrevsk**	**1.70**	**313**	*e*P	Pb	20 09 33.5	-0.9
KOZ				*e*S	Sb	20 09 54.6	-0.8
SMKR	**Semkarok**	**1.70**	**348**	*e*P	Pn	20 09 32.3	+0.6
SMKR				*e*S	Sn	20 09 52.9	+0.3
BDR	**Baidarnaya**	**1.73**	**344**	*e*P	Pn	20 09 32.6	+0.6
BDR				*e*S	Sn	20 09 54.1	+0.9
SRKR	**Sorokina**	**1.81**	**344**	*e*P	Pn	20 09 33.6	+0.3
SRKR				*e*S	Sn	20 09 55.4	0.0
SRDR	**Sredinnyy**	**1.94**	**317**	*e*P	Pn	20 09 36.4	+1.4
SRDR				*e*S	Sn	20 10 00.3	+1.8
ESO	**Esso**	**2.18**	**299**	*e*P	Pn	20 09 38.8	+0.6
ESO				*e*S	Sn	20 10 03.9	-0.4
SPN	**Mys Shipunski**	**2.20**	**215**	P	Pn	20 09 38.1	-0.3
SPN				*e*S	Sn	20 10 02.5	-2.1
BKI	**Bering**	**2.25**	**81**	*e*P	Pn	20 09 38.3	-0.8
BKI				*e*S	Sn	20 10 03.4	-2.5
SDLR	**Sedlovina**	**2.50**	**230**	*e*P	Pn	20 09 44.3	+1.5
SDLR				*e*S	Sn	20 10 13.5	+1.0
SMAR	**Somma**	**2.55**	**231**	*e*P	Pn	20 09 45.0	+1.4
SMAR				S	Sn	20 10 14.4	+0.5
UGLR	**Uglovaya**	**2.58**	**230**	*i* P	Pn	20 09 45.4	+1.6
UGLR				*e*S	Sn	20 10 15.5	+1.2
KOK	**Koryaka**	**2.61**	**233**	P	Pn	20 09 44.5	+0.3
GNL	**Ganaly**	**2.72**	**245**	*e*P	Pn	20 09 47.5	+1.7
GNL				S	Sn	20 10 18.9	+1.0
PET	**Petropavlovsk**	**2.78**	**228**	*e*P	Pn	20 09 48.1	+1.7
PET				*e*S	Sn	20 10 20.0	+1.0
RUS	**Russkaya**	**3.28**	**222**	S	Sn	20 10 30.7	-0.5
GRL	**Gorelyy**	**3.36**	**227**	P	Pn	20 09 56.0	+1.4
GRL				S	Sn	20 10 33.7	0.0
MTVR	**Mutnovka**	**3.37**	**225**	P	Pn	20 09 55.8	+1.1
MTVR				*e*S	Sn	20 10 34.1	+0.2
APC	**Apacha**	**3.54**	**238**	S	Sb	20 10 43.6	-4.4

MEX 11 20:10:20.2±0.7, 16°.71N×99°.71W, h10km±10km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.63**	**303**	*e*P	Pg	20 10 31.0	-1.5
CAIG				*e*S	Sg	20 10 39.5	-1.4
MEIG	**Mezcala**	**1.22**	**4**	*e*P	Pn	20 10 39.1	-4.3
MEIG				*i* S	Sb	20 10 54.2	-5.1
PNIG	**Pinotepa**	**1.55**	**101**	*e*P	Pn	20 10 44.0	-3.8
PNIG				*e*S	Sn	20 11 03.5	-4.5
ARIG	**Puente Sto Nin**	**1.68**	**339**	*e*P	Pn	20 10 46.9	-2.8
ARIG				*e*S	Sn	20 11 06.9	-4.5
ZIIG	**Zihuatanejo**	**1.90**	**298**	*e*P	Pn	20 10 49.5	-3.2
ZIIG				*e*S	Sn	20 11 11.6	-5.1

*ISCJB **11** 20:17:03.0±0.6, 37°.94N±0°.03×27°.17E±0°.06, h4km±13km, Error ellipse: s-maj=9.4km s-min=3.9km az=153.7*
*DDA **11** 20:17:02.6, 37°.93N×27°.15E, h7km, MD2.6*
*ISK **11** 20:17:02.5, 37°.94N×27°.19E, h21km, MD2.7*

*CSEM **11** 20:17:03.3±0.2, 37°.94N×27°.17E, h2km, MD2.6, Error ellipse: s-maj=5.4km s-min=2.7km az=72.0*
ISC 11 20:17:02.7±1.1, 37°.96N±0°.03×27°.15E±0°.04, h8km±11km, n18, σ0°42/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.26**	**165**	*i* P	**Pg**	**20 17 07.7**	**-0.2**
GCAM				*i* S	**Sg**	**20 17 11.2**	**-0.2**
GCAM	**G?zelcaml?**	**0.26**	**165**	*i* P	**Pg**	**20 17 07.7**	**-0.2**
GCAM				*i* S	**Sg**	**20 17 11.2**	**-0.2**
BLCB	**Balcova**	**0.44**	**349**	*e*PG	**Pb**	**20 17 12.3**	**-0.3**
BLCB				*e*SG	**Sb**	**20 17 19.4**	**0.0**
BLCB	**Balcova**	**0.44**	**349**	*e*Pg	**Pb**	**20 17 12.3**	**-0.3**
BLCB				*e*Sg	**Sb**	**20 17 19.4**	**0.0**
IZM	**Izmir**	**0.45**	**11**	*e*PG	**Pb**	**20 17 12.7**	**-0.2**
IZM	**Izmir**	**0.45**	**11**	*e*Pg	**Pb**	**20 17 12.7**	**-0.2**
URLA	**Izmir**	**0.59**	**313**	*i* P	**Pg**	**20 17 14.8**	**+0.6**
URLA				*i* S	**Sb**	**20 17 23.5**	**-0.4**
URLA	**Izmir**	**0.59**	**313**	*i* P	**Pg**	**20 17 14.8**	**+0.6**
URLA				*i* S	**Sb**	**20 17 23.5**	**-0.4**
AYDN	**Tasoluk**	**0.65**	**117**	*i* P	**Pg**	**20 17 15.7**	**+0.5**
AYDN				*i* S	**Sg**	**20 17 24.1**	**+0.5**
AYDN	**Tasoluk**	**0.65**	**117**	*i* P	**Pg**	**20 17 15.7**	**+0.5**
AYDN				*i* S	**Sg**	**20 17 24.1**	**+0.5**
MLSB	**Milas**	**0.82**	**143**	*e*PG	**Pg**	**20 17 18.6**	**+0.1**
MLSB				*e*SG	**Sb**	**20 17 30.1**	**-0.4**
MLSB	**Milas**	**0.82**	**143**	*e*Pg	**Pg**	**20 17 18.6**	**+0.1**
MLSB				*e*Sg	**Sb**	**20 17 30.1**	**-0.4**
BODT	**Bodrum**	**0.90**	**172**	*e*PG	**Pg**	**20 17 20.2**	**+0.2**
BODT				*e*SG	**Sb**	**20 17 33.0**	**+0.3**
BODT	**Bodrum**	**0.90**	**172**	*e*Pg	**Pg**	**20 17 20.2**	**+0.2**
BODT				*e*Sg	**Sb**	**20 17 33.0**	**+0.3**
AKHS	**Akhisar**	**1.06**	**29**	*i* P	**Pn**	**20 17 23.8**	**0.0**
AKHS				*i* S	**Sb**	**20 17 37.9**	**+0.7**
AKHS	**Akhisar**	**1.06**	**29**	*i* P	**Pn**	**20 17 23.8**	**0.0**
AKHS				*i* S	**Sb**	**20 17 37.9**	**+0.7**
AKS	**Akhisar**	**1.06**	**29**	*e*PG	**Pg**	**20 17 22.4**	**-0.6**
AKS	**Akhisar**	**1.06**	**29**	*e*Pg	**Pg**	**20 17 22.4**	**-0.6**

*ISCJB **11** 20:22:04.0±0.2, 42°.26N±0°.02×13°.47E±0°.02, h14km±2km, Error ellipse: s-maj=3.1km s-min=2.6km az=153.4*
*ROM **11** 20:22:04.1±0.1, 42°.26N×13°.47E, h10km, Ml2.9/31, Error ellipse: s-maj=0.8km s-min=0.7km az=86.0*
*CSEM **11** 20:22:04.5±0.1, 42°.26N×13°.47E, h2km, ML3.5/11, Error ellipse: s-maj=2.7km s-min=2.0km az=54.0*
*LDG **11** 20:22:08.7±0.5, 42°.42N×13°.32E, h2km, Ml2.9/4, Error ellipse: s-maj=9.8km s-min=5.0km az=105.0*
ISC 11 20:22:04.5±0.6, 42°.26N±0°.01×13°.46E±0°.02, h10km±4km, n102, σ0°94/132, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.09**	**86**	Pg	**Pg**	**20 22 07.0**	**-0.1**
FAGN				Sg	**Sg**	**20 22 08.8**	**-0.2**
	34μm,0.5s						
FAGN	**Fagnano**	**0.09**	**86**	Pg	**Pg**	**20 22 07.0**	**-0.1**
FAGN				Sg	**Sg**	**20 22 08.8**	**-0.2**
	34μm,0.5s						
AQU	**L'Aquila**	**0.10**	**336**	Pg	**Pg**	**20 22 07.4**	**+0.2**
AQU				Sg	**Sg**	**20 22 09.4**	**+0.2**
	8μm,0.6s						
AQU	**L'Aquila**	**0.10**	**336**	Pg	**Pg**	**20 22 07.4**	**+0.2**
AQU				Sg	**Sg**	**20 22 09.4**	**+0.2**
	8μm,0.6s						
PTQR	**Pietraquaria**	**0.24**	**190**	Pg	**Pg**	**20 22 09.9**	**+0.5**
PTQR				Sg	**Sg**	**20 22 13.9**	**+1.1**
PTQR	**Pietraquaria**	**0.24**	**190**	Pg	**Pg**	**20 22 09.9**	**+0.5**
PTQR				Sg	**Sg**	**20 22 13.9**	**+1.1**
FIAM	**Fiamignano**	**0.25**	**272**	Pg	**Pg**	**20 22 10.2**	**+0.5**
FIAM				Sg	**Sg**	**20 22 14.5**	**+1.3**
	2μm,0.5s						
FIAM	**Fiamignano**	**0.25**	**272**	Pg	**Pg**	**20 22 10.2**	**+0.5**
FIAM				Sg	**Sg**	**20 22 14.5**	**+1.3**
	2μm,0.5s						
CAMP	**Campotosto**	**0.28**	**353**	Pg	**Pg**	**20 22 10.2**	**0.0**
CAMP				Sg	**Sg**	**20 22 15.0**	**+1.0**
CAMP	**Campotosto**	**0.28**	**353**	Pg	**Pg**	**20 22 10.2**	**0.0**
CAMP				Sg	**Sg**	**20 22 15.0**	**+1.0**
VCEL	**Villa Celiera**	**0.31**	**64**	Pg	**Pg**	**20 22 10.8**	**0.0**
VCEL				Sg	**Sg**	**20 22 15.8**	**+0.7**
	4μm,0.5s						
VCEL	**Villa Celiera**	**0.31**	**64**	Pg	**Pg**	**20 22 10.8**	**0.0**
VCEL				Sg	**Sg**	**20 22 15.8**	**+0.7**
	4μm,0.5s						
TERO	**Teramo**	**0.38**	**16**	Pg	**Pg**	**20 22 11.7**	**-0.3**
TERO				Sg	**Sg**	**20 22 17.9**	**+0.8**
	1μm,0.5s						
TERO	**Teramo**	**0.38**	**16**	Pg	**Pg**	**20 22 11.7**	**-0.3**
TERO				Sg	**Sg**	**20 22 17.9**	**+0.8**
	1μm,0.5s						
VVLD	**Villa Vallelon**	**0.41**	**162**	Pg	**Pg**	**20 22 12.5**	**0.0**
VVLD				Sg	**Sg**	**20 22 18.8**	**+0.9**
	1μm,0.6s						
VVLD	**Villa Vallelon**	**0.41**	**162**	Pg	**Pg**	**20 22 12.5**	**0.0**
VVLD				Sg	**Sg**	**20 22 18.8**	**+0.9**
	1μm,0.6s						
INTR	**Introdacqua**	**0.41**	**127**	Pg	**Pg**	**20 22 12.6**	**0.0**
INTR				Sg	**Sg**	**20 22 19.0**	**+0.9**
	2μm,0.4s						
INTR	**Introdacqua**	**0.41**	**127**	Pg	**Pg**	**20 22 12.6**	**0.0**
INTR				Sg	**Sg**	**20 22 19.0**	**+0.9**
	2μm,0.4s						
LNSS	**Leonessa**	**0.46**	**318**	Pg	**Pg**	**20 22 13.7**	**+0.1**
	1μm,0.6s						
LNSS	**Leonessa**	**0.46**	**318**	Pg	**Pg**	**20 22 13.7**	**+0.1**
	1μm,0.6s						
CERT	**Cerreto**	**0.47**	**229**	Pg	**Pg**	**20 22 13.8**	**+0.1**
CERT				Sg	**Sg**	**20 22 21.3**	**+1.4**
	2μm,0.6s						
CERT	**Cerreto**	**0.47**	**229**	Pg	**Pg**	**20 22 13.8**	**+0.1**
CERT				Sg	**Sg**	**20 22 21.3**	**+1.4**
	2μm,0.6s						
GUAR	**Guarcino**	**0.48**	**193**	Pg	**Pg**	**20 22 13.9**	**+0.1**
GUAR				Sg	**Sg**	**20 22 21.2**	**+1.1**
	557nm,0.3s						
GUAR	**Guarcino**	**0.48**	**193**	Pg	**Pg**	**20 22 13.9**	**+0.1**
GUAR				Sg	**Sg**	**20 22 21.2**	**+1.1**
	557nm,0.3s						
POFI	**Posta Fibreno**	**0.57**	**161**	Pg	**Pg**	**20 22 15.1**	**-0.5**
	533nm,0.7s						
POFI	**Posta Fibreno**	**0.57**	**161**	Pg	**Pg**	**20 22 15.1**	**-0.5**
	533nm,0.7s						
LPEL	**Lama dei Pelig**	**0.58**	**111**	Pg	**Pg**	**20 22 15.2**	**-0.5**
LPEL				Sg	**Sg**	**20 22 23.8**	**+0.4**
	2μm,0.4s						
LPEL	**Lama dei Pelig**	**0.58**	**111**	Pg	**Pg**	**20 22 15.2**	**-0.5**
LPEL				Sg	**Sg**	**20 22 23.8**	**+0.4**
	2μm,0.4s						
MTCE	**Montecelio**	**0.58**	**246**	Pg	**Pg**	**20 22 15.7**	**-0.1**
	348nm,0.6s						
MTCE	**Montecelio**	**0.58**	**246**	Pg	**Pg**	**20 22 15.7**	**-0.1**
	348nm,0.6s						
MNS	**Montasola**	**0.59**	**283**	Pg	**Pg**	**20 22 15.7**	**-0.2**
	541nm,0.8s						
MNS	**Montasola**	**0.59**	**283**	Pg	**Pg**	**20 22 15.7**	**-0.2**
	541nm,0.8s						
SDI	**San Donato**	**0.61**	**154**	Pg	**Pg**	**20 22 15.8**	**-0.5**
SDI	**San Donato**	**0.61**	**154**	Pg	**Pg**	**20 22 15.8**	**-0.5**
NRCA	**Norcia**	**0.63**	**336**	Pg	**Pg**	**20 22 16.3**	**-0.4**
NRCA				Sg	**Sg**	**20 22 25.6**	**+0.6**
	292nm,0.4s						
NRCA	**Norcia**	**0.63**	**336**	Pg	**Pg**	**20 22 16.3**	**-0.4**
NRCA				Sg	**Sg**	**20 22 25.6**	**+0.6**
	292nm,0.4s						
TRTR	**Tortoreto Alta**	**0.64**	**31**	Pg	**Pg**	**20 22 17.7**	**+0.7**
	4μm,1.1s						
TRTR	**Tortoreto Alta**	**0.64**	**31**	Pg	**Pg**	**20 22 17.7**	**+0.7**
	4μm,1.1s						
CAFR	**Castel Frentan**	**0.66**	**92**	Pg	**Pg**	**20 22 17.3**	**0.0**
	2μm,0.4s						
CAFR	**Castel Frentan**	**0.66**	**92**	Pg	**Pg**	**20 22 17.3**	**0.0**
	2μm,0.4s						
OFFI	**Offida**	**0.70**	**14**	Pg	**Pg**	**20 22 18.3**	**+0.3**
	2μm,0.7s						
OFFI	**Offida**	**0.70**	**14**	Pg	**Pg**	**20 22 18.3**	**+0.3**
	2μm,0.7s						
GIUL	**Giuliano Di Ro**	**0.72**	**192**	Pg	**Pg**	**20 22 17.8**	**-0.5**
	551nm,1.1s						
GIUL	**Giuliano Di Ro**	**0.72**	**192**	Pg	**Pg**	**20 22 17.8**	**-0.5**
	551nm,1.1s						
RMP	**Rome, Mte Porz**	**0.72**	**232**	Pg	**Pg**	**20 22 18.0**	**-0.4**
	763nm,0.9s						
RMP	**Rome, Mte Porz**	**0.72**	**232**	Pg	**Pg**	**20 22 18.0**	**-0.4**
	763nm,0.9s						
CESX	**Cesi**	**0.74**	**299**	Pg	**Pg**	**20 22 18.3**	**-0.4**
	358nm,0.6s						
CESX	**Cesi**	**0.74**	**299**	Pg	**Pg**	**20 22 18.3**	**-0.4**
	358nm,0.6s						
RNI2	**Rionero Sannit**	**0.76**	**137**	Pg	**Pg**	**20 22 18.9**	**-0.2**
RNI2	**Rionero Sannit**	**0.76**	**137**	Pg	**Pg**	**20 22 18.9**	**-0.2**
CERA	**Filignano**	**0.78**	**147**	Pg	**Pg**	**20 22 18.6**	**-1.0**
	455nm,0.4s						
CERA	**Filignano**	**0.78**	**147**	Pg	**Pg**	**20 22 18.6**	**-1.0**
	455nm,0.4s						
FDMO	**Fiordimonte**	**0.82**	**341**	Pg	**Pg**	**20 22 19.5**	**-0.9**
	231nm,0.5s						
FDMO	**Fiordimonte**	**0.82**	**341**	Pg	**Pg**	**20 22 19.5**	**-0.9**
	231nm,0.5s						
CESI	**CESI - Serrava**	**0.85**	**331**	Pg	**Pg**	**20 22 20.1**	**-0.8**
	79nm,0.5s						
CESI	**CESI - Serrava**	**0.85**	**331**	Pg	**Pg**	**20 22 20.1**	**-0.8**
	79nm,0.5s						
TRIV	**Trivento**	**0.95**	**121**	Pg	**Pg**	**20 22 22.0**	**-0.8**
	190nm,0.8s						
TRIV	**Trivento**	**0.95**	**121**	Pg	**Pg**	**20 22 22.0**	**-0.8**
	190nm,0.8s						
SNTG	**Esanatoglia**	**1.07**	**339**	Pg	**Pg**	**20 22 23.8**	**-1.2**
	91nm,0.5s						
SNTG	**Esanatoglia**	**1.07**	**339**	Pg	**Pg**	**20 22 23.8**	**-1.2**
	91nm,0.5s						
TOLF	**Tolfa**	**1.10**	**260**	Pg	**Pb**	**20 22 25.4**	**-0.2**
	147nm,1.0s						
TOLF	**Tolfa**	**1.10**	**260**	Pg	**Pb**	**20 22 25.4**	**-0.2**
	147nm,1.0s						
BSSO	**Busso**	**1.11**	**130**	Pg	**Pb**	**20 22 24.9**	**-0.8**
	599nm,1.9s						
BSSO	**Busso**	**1.11**	**130**	Pg	**Pb**	**20 22 24.9**	**-0.8**
	599nm,1.9s						
SGG	**Gregorio Mates**	**1.11**	**141**	Pg	**Pb**	**20 22 25.5**	**-0.3**
	150nm,0.6s						
SGG	**Gregorio Mates**	**1.11**	**141**	Pg	**Pb**	**20 22 25.5**	**-0.3**
	150nm,0.6s						
CING	**Cingoli**	**1.13**	**350**	Pg	**Pb**	**20 22 25.3**	**-0.9**
	180nm,0.6s						
CING	**Cingoli**	**1.13**	**350**	Pg	**Pb**	**20 22 25.3**	**-0.9**
	180nm,0.6s						
MGAB	**Montegabbione**	**1.19**	**304**	Pn	**Pb**	**20 22 27.1**	**0.0**
	149nm,0.5s						
MGAB	**Montegabbione**	**1.19**	**304**	Pn	**Pb**	**20 22 27.1**	**0.0**
	149nm,0.5s						
PTRJ	**Pietraroja**	**1.20**	**138**	Pg	**Pn**	**20 22 27.1**	**-0.3**
	527nm,1.0s						
PTRJ	**Pietraroja**	**1.20**	**138**	Pg	**Pn**	**20 22 27.1**	**-0.3**
	527nm,1.0s						
ARVD	**Arcevia**	**1.30**	**343**	Pn	**Pn**	**20 22 28.1**	**-0.5**
	227nm,1.2s						
ARVD	**Arcevia**	**1.30**	**343**	Pn	**Pn**	**20 22 28.1**	**-0.5**
	227nm,1.2s						
MS1	**Monte Sant'Ang**	**1.93**	**106**	*e*Pn	**Pg**	**20 22 42.1**	**+0.6**
CDT	**Castel del Mon**	**2.42**	**118**	*e*Pn	**Pb**	**20 22 48.0**	**0.0**
CDT				*e*Sn	**Sb**	**20 23 17.4**	**-0.4**
NVLJ	**Novalja**	**2.52**	**24**	*e*Pn	**Pn**	**20 22 46.3**	**+0.9**
NVLJ				Sn	**Sn**	**20 23 18.9**	**+2.6**
NVLJ	**Novalja**	**2.52**	**24**	*e*Pn	**Pn**	**20 22 46.3**	**+0.9**
NVLJ				Sn	**Sn**	**20 23 18.8**	**+2.6**
STON	**Ston**	**3.19**	**78**	*e*Pn	**Pn**	**20 22 55.4**	**+0.8**
STON				Sn	**Sn**	**20 23 33.7**	**+0.9**
STON	**Ston**	**3.19**	**78**	*e*Pn	**Pn**	**20 22 55.4**	**+0.8**
STON				Sn	**Sn**	**20 23 33.6**	**+0.9**
PGF	**Pioggiola**	**3.31**	**277**	*e*Pn	**Pn**	**20 22 58.3**	**+1.8**
PGF	**Pioggiola**	**3.31**	**277**	*e*Pn	**Pn**	**20 22 58.3**	**+1.8**
SBF	**Sospel**	**4.70**	**292**	*e*Pn	**Pn**	**20 23 16.7**	**+1.3**
SBF				*e*Sn	**Sn**	**20 24 06.7**	**-3.2**
	5.2nm,0.3s						
SBF	**Sospel**	**4.70**	**292**	*e*Pn	**Pn**	**20 23 16.7**	**+1.3**
SBF				*e*Sn	**Sn**	**20 24 06.7**	**-3.2**
	2.6nm,0.3s						
FRF	**La Foret Royal**	**5.17**	**287**	*e*Pn	**Pn**	**20 23 22.9**	**+1.1**

Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	**Gevas**	**2.11**	**302**	*i* P	**Pn**	**20 25 16.7**	**-0.7**
GEVA				*i* S	**Sn**	**20 25 43.7**	**-0.1**
SIRN	**S¨–rnak**	**2.34**	**278**	*i* P	**Pn**	**20 25 19.2**	**-1.3**
SIRN				*i* S	**Sn**	**20 25 47.0**	**-2.3**
BEST	**Besiri**	**3.29**	**283**	*i* P	**Pn**	**20 25 35.6**	**+2.0**
BEST				*i* S	**Sn**	**20 26 14.5**	**+1.6**
MARD	**Mardin**	**3.63**	**273**	*e*P	Pn	20 25 33.9	-4.4
MARD				*i* S	**Sn**	**20 26 21.7**	**+0.5**
DGRG	**David-gareji**	**4.24**	**0**	P	**Pg**	**20 26 03.2**	**+0.1**

ISK ***11*** *20:30:55.2, 37°.52N×37°.40E, h9km, MD2.6*
DDA ***11*** *20:30:56.0, 37°.49N×37°.40E, h7km, MD3.0*
CSEM ***11*** *20:30:56.4±0.2, 37°.49N×37°.41E, h15km, MD2.6, Error ellipse: s-maj=6.1km s-min=3.7km az=139.0*

ISC 11 20:30:55.7±1.3**, 37°.53N**±0°.03**×37°.43E**±0°.03**, h0**km±16km**, n23,** σ0**°40/38, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZT	**Gaziantep**	**0.20**	**148**	*i* P	**Pg**	**20 30 59.5**	**-0.1**
GZT				*i* S	**Sg**	**20 31 02.1**	**-0.2**
GAZ	**Gaziantep**	**0.40**	**206**	*e*PG	**Pg**	**20 31 03.5**	**+0.2**
GAZ				*e*SG	**Sg**	**20 31 08.7**	**+0.3**
GAZ	**Gaziantep**	**0.40**	**206**	*e*Pg	**Pg**	**20 31 03.5**	**+0.2**
GAZ				*e*Sg	**Sg**	**20 31 08.7**	**+0.3**
KMRS	**Kahramanmaras**	**0.42**	**267**	*e*PG	**Pg**	**20 31 03.8**	**0.0**
KMRS				*e*SG	**Sg**	**20 31 09.3**	**0.0**
KMRS	**Kahramanmaras**	**0.42**	**267**	*e*Pg	**Pg**	**20 31 03.8**	**0.0**
KMRS				*e*Sg	**Sg**	**20 31 09.3**	**0.0**
AYKD	**Aykdinkavak**	**0.51**	**257**	*i* P	**Pg**	**20 31 05.3**	**-0.2**
AYKD				*i* S	**Sg**	**20 31 12.2**	**+0.2**
AYKD	**Aykdinkavak**	**0.51**	**257**	*i* P	**Pg**	**20 31 05.3**	**-0.2**
AYKD				*i* S	**Sg**	**20 31 12.2**	**+0.2**
KUZU	**Kuzuini**	**0.81**	**201**	*i* P	**Pb**	**20 31 12.1**	**-0.5**
KUZU				*i* S	**Sg**	**20 31 22.0**	**+0.5**
KUZU	**Kuzuini**	**0.81**	**201**	*i* P	**Pb**	**20 31 12.1**	**-0.5**
KUZU				*i* S	**Sg**	**20 31 22.0**	**+0.5**
AKCD	**Akcadag**	**0.86**	**27**	*i* P	**Pn**	**20 31 15.0**	**-0.2**
AKCD				*i* S	**Sb**	**20 31 26.2**	**+0.5**
AKCD	**Akcadag**	**0.86**	**27**	*i* P	**Pn**	**20 31 15.0**	**-0.2**
AKCD				*i* S	**Sb**	**20 31 26.2**	**+0.5**
ANDN	**Andirin**	**0.86**	**274**	*i* P	**Pb**	**20 31 13.5**	**-0.1**
ANDN				*i* S	**Sg**	**20 31 24.4**	**+1.0**
ANDN	**Andirin**	**0.86**	**274**	*i* P	**Pb**	**20 31 13.5**	**-0.1**
ANDN				*i* S	**Sg**	**20 31 24.4**	**+1.0**
DARE	**Darende-Malaty**	**1.04**	**2**	*e*PG	**Pg**	**20 31 15.4**	**-0.3**
DARE	**Darende-Malaty**	**1.04**	**2**	*e*Pg	**Pg**	**20 31 15.4**	**-0.3**
URFA	**Urfa**	**1.11**	**94**	*e*PN	**Pb**	**20 31 17.6**	**-0.2**
URFA	**Urfa**	**1.11**	**94**	*e*Pn	**Pb**	**20 31 17.6**	**-0.2**
MALT	**Malatya**	**1.11**	**45**	*e*PN	**Pb**	**20 31 17.7**	**-0.2**
MALT				*e*SN	**Sb**	**20 31 33.5**	**+0.5**
MALT	**Malatya**	**1.11**	**45**	*e*Pn	**Pb**	**20 31 17.7**	**-0.2**
MALT				*e*Sn	**Sb**	**20 31 33.5**	**+0.5**
MYA	**Malataya**	**1.12**	**44**	*e*PN	**Pg**	**20 31 17.1**	**-0.1**
MYA	**Malataya**	**1.12**	**44**	*e*Pn	**Pg**	**20 31 17.1**	**-0.1**
KOZT	**Kozan**	**1.27**	**268**	*e*PN	**Pg**	**20 31 19.5**	**-0.7**
KOZT	**Kozan**	**1.27**	**268**	*e*Pn	**Pg**	**20 31 19.5**	**-0.7**

TIR ***11*** *21:03:19.0, 41°.24N×20°.06E, h0km, ML3.2*
BEO ***11*** *21:03:40.5±1.4, 41°.26N×20°.00E, h16km±9km, ML2.0/2*
THE ***11*** *21:03:41.6, 41°.32N×20°.05E, h7km±2km, MD2.1/2, Error ellipse: s-maj=3.0km s-min=1.0km az=32.0*
SKO ***11*** *21:03:41.3, 41°.25N×20°.01E, h10km*
CSEM ***11*** *21:03:41.3±0.2, 41°.34N×20°.06E, h10km, MD3.3, Error ellipse: s-maj=5.8km s-min=4.1km az=72.0*
ISCJB ***11*** *21:03:41.2±0.5, 41°.34N±0°.03×20°.04E±0°.04, h13km±4km, Error ellipse: s-maj=4.8km s-min=4.1km az=42.2*
ATH ***11*** *21:03:41.7, 41°.28N×19°.91E, h34km, MD3.3/9*

ISC 11 21:03:41.7±0.8**, 41°.34N**±0°.02**×20°.05E**±0°.03**, h13**km±7km**, n52,** σ0**°81/72, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.14**	**275**	*i* PG	**Pg**	**21 03 44.8**	**-0.5**
TIR				*i* SG	**Sg**	**21 03 48.6**	**+0.8**
TIR	**Tirane**	**0.14**	**275**	P	**Pg**	**21 03 45.0**	**-0.4**
TIR	**Tirane**	**0.14**	**275**	*e*Pg	**Pg**	**21 03 44.9**	**-0.4**
TIR				*e*Sg	**Sg**	**21 03 48.4**	**+0.6**
TIR	**Tirane**	**0.14**	**275**	*e*Pg	**Pg**	**21 03 44.9**	**-0.4**
TIR				*e*Sb	**Sg**	**21 03 47.9**	**+0.1**
TIR				*e*Sg	Sg	21 03 48.4	+0.6
PHP	**Peshkopia**	**0.46**	**40**	*i* PG	**Pg**	**21 03 49.8**	**-1.0**
PHP				*i* SG	**Sb**	**21 03 58.1**	**-0.2**
PHP	**Peshkopia**	**0.46**	**40**	P	**Pg**	**21 03 49.8**	**-1.0**
PHP				S	**Sb**	**21 03 57.8**	**-0.5**
PHP	**Peshkopia**	**0.46**	**40**	P	**Pg**	**21 03 49.8**	**-1.0**
PHP				S	**Sb**	**21 03 57.8**	**-0.5**
PHP				*i* Sg	**Sb**	**21 03 58.1**	**-0.2**
PUK	**Puka**	**0.72**	**350**	*i* PG	**Pg**	**21 03 54.4**	**-1.3**
PUK				*i* SG	**Sb**	**21 04 07.1**	**+1.2**
PUK	**Puka**	**0.72**	**350**	*i* Pg	**Pg**	**21 03 54.4**	**-1.3**
PUK				*i* Sg	**Sb**	**21 04 07.1**	**+1.2**
BIA	**Bitola**	**1.01**	**108**	*e*Pg	**Pg**	**21 04 00.1**	**-1.1**
BIA				*e*Sg	**Sg**	**21 04 14.0**	**-0.5**
BIA	**Bitola**	**1.01**	**108**	*e*Pg	**Pg**	**21 04 00.1**	**-1.1**
BIA				*e*Sg	**Sg**	**21 04 13.9**	**-0.5**
BCI	**Bajram Curri**	**1.03**	**1**	*e*PG	**Pb**	**21 04 01.6**	**+0.2**
BCI				*e*SG	**Sn**	**21 04 17.1**	**+0.9**
BCI	**Bajram Curri**	**1.03**	**1**	*e*Pg	**Pb**	**21 04 01.6**	**+0.2**
BCI				*e*Sg	**Sn**	**21 04 17.1**	**+0.9**
FNA	**Florina**	**1.14**	**118**	P	**Pb**	**21 04 02.6**	**-0.7**
FNA				S	**Sn**	**21 04 19.7**	**+0.8**
FNA	**Florina**	**1.14**	**118**	P	**Pb**	**21 04 02.6**	**-0.7**
FNA				S	**Sn**	**21 04 19.7**	**+0.8**
NEST	**Nestorio**	**1.19**	**140**	P	**Pb**	**21 04 03.6**	**-0.6**
NEST				S	**Sn**	**21 04 21.1**	**+0.9**
NEST	**Nestorio**	**1.19**	**140**	P	**Pb**	**21 04 03.6**	**-0.6**
NEST				S	**Sn**	**21 04 21.1**	**+0.9**
SKO	**Skopje**	**1.22**	**58**	*e*Pg	**Pg**	**21 04 05.0**	**-0.2**
SKO				*e*Sg	**Sn**	**21 04 21.8**	**+1.1**
SKO	**Skopje**	**1.22**	**58**	*e*Pg	Pn	21 04 01.4	-3.0
SKO				*e*Sg	**Sn**	**21 04 22.3**	**+1.5**
PDG	**Podgorica**	**1.25**	**332**	*e*Pg	**Pn**	**21 04 03.4**	**-1.4**
PDG				*e*Sg	**Sg**	**21 04 22.3**	**+0.4**
PDG	**Podgorica**	**1.25**	**332**	*e*Pg	**Pn**	**21 04 03.4**	**-1.4**
PDG				*e*Sg	**Sg**	**21 04 22.3**	**+0.4**
KEK	**Kerkira**	**1.63**	**187**	*e*PN	**Pn**	**21 04 09.2**	**-0.9**
KEK	**Kerkira**	**1.63**	**187**	*e*Pn	**Pn**	**21 04 09.2**	**-0.9**
JAN	**Janina**	**1.78**	**160**	*e*PB	**Pn**	**21 04 12.4**	**+0.2**
JAN	**Janina**	**1.78**	**160**	*e*Pn	**Pn**	**21 04 12.4**	**+0.2**
IGT	**Igoumenitsa**	**1.81**	**173**	P	**Pn**	**21 04 12.5**	**-0.1**
IGT	**Igoumenitsa**	**1.81**	**173**	P	**Pn**	**21 04 12.5**	**-0.1**
BARS	**Barje**	**1.98**	**41**	*e*Pn	**Pn**	**21 04 14.4**	**-0.5**
BARS	**Barje**	**1.98**	**41**	*e*Pn	**Pn**	**21 04 14.4**	**-0.5**
LIT	**Litokhoron**	**2.23**	**123**	*e*PN	**Pn**	**21 04 19.1**	**+0.8**
LIT	**Litokhoron**	**2.23**	**123**	*e*Pn	**Pn**	**21 04 19.1**	**+0.8**
THL	**Klokotos Trika**	**2.32**	**139**	*e*PN	**Pn**	**21 04 19.8**	**+0.3**
THL	**Klokotos Trika**	**2.32**	**139**	*e*Pn	**Pn**	**21 04 19.8**	**+0.3**
SOH	**Sokhos**	**2.55**	**101**	*e*PN	**Pn**	**21 04 24.4**	**+1.7**
SOH	**Sokhos**	**2.55**	**101**	*e*Pn	**Pn**	**21 04 24.4**	**+1.7**
LKD2	**Lefkada island**	**2.59**	**169**	P	**Pn**	**21 04 22.5**	**-0.8**
LKD2	**Lefkada island**	**2.59**	**169**	*e*PN	**Pn**	**21 04 22.4**	**-0.8**
LKD2	**Lefkada island**	**2.59**	**169**	P	**Pn**	**21 04 22.5**	**-0.8**
GRUS	**Gruza**	**2.60**	**11**	*e*Pn	**Pn**	**21 04 23.9**	**+0.5**
GRUS	**Gruza**	**2.60**	**11**	*e*Pn	**Pn**	**21 04 23.9**	**+0.5**
VTS	**Vitosha**	**2.67**	**61**	*e*Pn	**Pn**	**21 04 24.4**	**-0.1**
VTS	**Vitosha**	**2.67**	**61**	*e*Pn	**Pn**	**21 04 24.4**	**-0.1**
ZAPS	**Zavoj**	**2.72**	**44**	*e*Pn	**Pn**	**21 04 24.8**	**-0.3**
ZAPS	**Zavoj**	**2.72**	**44**	*e*Pn	**Pn**	**21 04 24.8**	**-0.3**
DIVS	**Divibare**	**2.76**	**359**	*e*Pn	**Pn**	**21 04 24.9**	**-0.8**
DIVS	**Divibare**	**2.76**	**359**	*e*Pn	**Pn**	**21 04 24.9**	**-0.8**
AGG	**Agios Georgios**	**2.90**	**142**	*e*PN	**Pn**	**21 04 28.4**	**+0.9**
AGG	**Agios Georgios**	**2.90**	**142**	*e*Pn	**Pn**	**21 04 28.4**	**+0.9**
TRIZ	**Trizonia**	**3.35**	**152**	*e*PN	**Pn**	**21 04 34.4**	**+0.7**
TRIZ	**Trizonia**	**3.35**	**152**	*e*Pn	**Pn**	**21 04 34.4**	**+0.7**
KALE	**Kalithea**	**3.35**	**151**	*e*PN	**Pn**	**21 04 34.3**	**+0.5**
KALE	**Kalithea**	**3.35**	**151**	*e*Pn	**Pn**	**21 04 34.3**	**+0.5**

ISCJB ***11*** *21:06:27.4±0.5, 24°.83N×0°.04×122°.47E±0°.02, h6km±4km, Error ellipse: s-maj=6.1km s-min=2.8km az=6.9*
TAP ***11*** *21:06:28.7, 24°.78N×122°.32E, h4km, ML3.0, D*
JMA ***11*** *21:06:29.0±0.2, 24°.93N×122°.56E, h27km, M2.3*

ISC 11 21:06:27.3±1.2**, 24°.83N**±0°.04**×122°.46E**±0°.02**, h9**km±9km**, n32,** σ0**°72/54, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.46**	**293**	*i* P	**Pb**	**21 06 37.1**	**-0.5**
	baz=307						
TWB1				S	**Sg**	**21 06 42.7**	**+0.3**
	baz=307						
TWC	**Suao**	**0.60**	**249**	*i* P	**Pg**	**21 06 38.4**	**-0.4**
	baz=248						
TWC				*e*S	**Sg**	**21 06 46.1**	**-0.5**
	baz=248						
YOJ	**Yonaguni jima**	**0.62**	**126**	P	**Pb**	**21 06 40.9**	**+0.6**
YOJ				S	**Sg**	**21 06 49.2**	**+1.7**
ILA	**Ilan**	**0.65**	**265**	*e*P	**Pg**	**21 06 40.2**	**+0.4**
	baz=268						
ILA				*e*S	**Sb**	**21 06 49.3**	**-0.6**
	baz=268						
NWF	**Wu-fen Shan**	**0.66**	**292**	P	**Pb**	**21 06 41.6**	**+0.6**
	baz=300						
NWF				*e*S	**Sb**	**21 06 49.9**	**-0.5**
	baz=300						
TWE	**Neicheng**	**0.73**	**262**	P	**Pg**	**21 06 41.1**	**-0.2**
	baz=264						
TWE				*e*S	**Sg**	**21 06 50.1**	**-0.7**
	baz=264						
ENA	**Nanau**	**0.77**	**239**	*e*P	**Pg**	**21 06 41.7**	**-0.4**
	baz=236						
ENA				*e*S	**Sg**	**21 06 52.0**	**0.0**
	baz=236						
ENTT	**Nioudou**	**0.83**	**257**	P	**Pg**	**21 06 43.1**	**-0.2**
	baz=258						
ENTT				*e*S	**Sg**	**21 06 54.5**	**+0.4**
	baz=258						
PCYT	**Pengchaiyu**	**0.87**	**336**	P	**Pn**	**21 06 46.6**	**+0.9**
	baz=345						
TWY	**Chenhua**	**0.90**	**300**	*e*P	**Pb**	**21 06 45.2**	**+0.2**
	baz=307						
TWY				*e*S	**Sb**	**21 06 57.4**	**+0.4**
	baz=307						
NSK	**Sanguang**	**1.01**	**262**	P	**Pg**	**21 06 46.4**	**-0.3**
	baz=263						
NSK				*e*S	**Sg**	**21 06 58.1**	**-1.8**
	baz=263						
NNS	**Nan Shan**	**1.06**	**249**	*e*P	**Pb**	**21 06 47.2**	**-0.7**
	baz=248						
NNS				*e*S	**Sg**	**21 07 01.4**	**-0.1**
	baz=248						
TWD	**Chiawan**	**1.08**	**227**	*e*P	**Pb**	**21 06 47.8**	**-0.4**
	baz=223						
TWD				*e*S	**Sb**	**21 07 02.2**	**-0.2**
	baz=223						
IRIF	**Iriomote-Funau**	**1.26**	**113**	P	**Pn**	**21 06 50.2**	**-0.8**
IRIF				S	**Sb**	**21 07 06.8**	**-0.7**
WHF	**Hehuan Shan**	**1.28**	**238**	P	**Pn**	**21 06 51.3**	**-0.4**
	baz=236						
WHF				*e*S	**Sb**	**21 07 08.7**	**+0.1**
	baz=236						
TWT	**Tachien**	**1.30**	**244**	*e*P	**Pg**	**21 06 52.8**	**+0.5**
	baz=243						
TWT				*e*S	**Sn**	**21 07 09.5**	**+0.2**
	baz=243						
NSTT	**Nanjuang**	**1.34**	**262**	*e*P	**Pg**	**21 06 53.6**	**+0.6**
	baz=263						
NSTT				*e*S	**Sn**	**21 07 09.8**	**-0.2**
	baz=263						
ESL	**Shilin**	**1.38**	**223**	*e*P	**Pb**	**21 06 53.4**	**+0.2**
	baz=219						
ESL				*e*S	**Sb**	**21 07 11.8**	**+0.9**
	baz=219						
HATJ	**Hateruma jima**	**1.45**	**122**	S	**Sn**	**21 07 11.9**	**-0.8**
JKRS	**Kuro-shima**	**1.53**	**112**	P	**Pn**	**21 06 54.5**	**-0.3**
JKRS				S	**Sn**	**21 07 13.2**	**-1.6**
NSY	**Sanyi**	**1.60**	**255**	*e*P	**Pn**	**21 06 55.1**	**-0.6**
	baz=255						
JIJ	**Ishigaki jima**	**1.60**	**106**	P	**Pn**	**21 06 54.9**	**-0.9**
TWQ1	**Liyutan**	**1.61**	**253**	*e*P	**Pg**	**21 06 59.1**	**+1.0**
	baz=253						
EHY	**Hungye**	**1.68**	**218**	*e*P	**Pb**	**21 06 58.5**	**+0.2**
	baz=215						
EHY				*e*S	**Sb**	**21 07 20.1**	**+0.6**
	baz=215						
SMLT	**Sun Moon Lake**	**1.71**	**237**	*e*P	**Pb**	**21 06 59.2**	**+0.3**
	baz=235						
TYC	**Yuchr**	**1.73**	**238**	*e*P	**Pb**	**21 06 59.3**	**+0.2**
	baz=236						
TYC				*e*S	**Sb**	**21 07 20.8**	**-0.2**
	baz=236						
TWF1	**Yuli**	**1.81**	**216**	*e*P	**Pn**	**21 06 59.4**	**+0.7**
	baz=213						
TWF1				*e*S	**Sn**	**21 07 23.1**	**+1.3**
	baz=213						
CHN5	**Tsauling**	**2.04**	**233**	*e*P	**Pb**	**21 07 04.1**	**-0.4**
	baz=231						
JTJ	**Tarama**	**2.05**	**95**	P	**Pn**	**21 07 02.1**	**+0.2**
CHN4	**Tsaushan**	**2.25**	**230**	*e*P	**Pb**	**21 07 07.6**	**-0.5**
	baz=228						
CHN4				*e*S	**Sn**	**21 07 34.4**	**+1.8**
	baz=228						
WTP	**Ta-pu**	**2.31**	**227**	*e*P	**Pb**	**21 07 08.2**	**-0.9**
	baz=225						
CHN1	**Nanshi**	**2.41**	**228**	*e*P	**Pb**	**21 07 10.4**	**-0.3**
	baz=225						

ISCJB ***11*** *21:16:03.9±0.4, 39°.33N±0°.02×27°.82E±0°.02, h3km±3km, Error ellipse: s-maj=2.9km s-min=2.6km az=167.9*
DDA ***11*** *21:16:03.4, 39°.32N×27°.85E, h22km, MD3.1*
ATH ***11*** *21:16:03.8, 39°.41N×27°.90E, h21km±2km, MD3.4/6*
ISK ***11*** *21:16:03.8, 39°.33N×27°.79E, h6km, MD3.3*
CSEM ***11*** *21:16:04.1±0.1, 39°.32N×27°.82E, h2km, MD3.3, Error ellipse: s-maj=2.3km s-min=2.0km az=85.0*

ISC 11 21:16:03.2±1.2**, 39°.31N**±0°.02**×27°.86E**±0°.02**, h4**km±10km**, n118,** σ1**°00/149, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.33**	**3**	PG	**Pb**	**21 16 10.7**	**-0.9**
BALB				*e*SG	**Sb**	**21 16 15.7**	**-1.5**
BALB	**Balikesir**	**0.33**	**3**	*i* Pg	**Pb**	**21 16 10.7**	**-0.9**
BALB				*e*Sg	**Sb**	**21 16 15.7**	**-1.5**
AKHS	**Akhisar**	**0.43**	**184**	*i* P	**Pb**	**21 16 12.7**	**-0.7**
AKHS				*i* S	**Sb**	**21 16 19.6**	**-0.6**
AKHS	**Akhisar**	**0.43**	**184**	*i* P	**Pb**	**21 16 12.7**	**-0.7**
AKHS				*i* S	**Sb**	**21 16 19.6**	**-0.6**
AKS	**Akhisar**	**0.43**	**184**	PG	**Pb**	**21 16 13.0**	**-0.4**
AKS				*e*SG	**Sb**	**21 16 20.1**	**-0.1**
AKS	**Akhisar**	**0.43**	**184**	*i* Pg	**Pb**	**21 16 13.0**	**-0.4**
AKS				*e*Sg	**Sb**	**21 16 20.1**	**-0.1**
BALY	**Balya**	**0.47**	**337**	*i* P	**Pb**	**21 16 13.0**	**-0.9**
BALY				*i* S	**Sb**	**21 16 19.5**	**-1.7**
DURS	**Dursunbey**	**0.56**	**59**	*i* P	**Pb**	**21 16 14.6**	**-1.0**
DURS				*i* S	**Sb**	**21 16 23.1**	**-0.9**
DURS	**Dursunbey**	**0.56**	**59**	*i* P	**Pb**	**21 16 14.6**	**-1.0**
DURS				*i* S	**Sb**	**21 16 23.1**	**-0.9**
DST	**Dursunbey**	**0.66**	**63**	*e*PG	**Pn**	**21 16 18.0**	**-1.3**
DST	**Dursunbey**	**0.66**	**63**	*e*Pg	**Pn**	**21 16 18.0**	**-1.3**
DEMI	**Demirci**	**0.72**	**112**	*i* P	**Pb**	**21 16 18.2**	**-0.1**
DEMI				*i* S	**Sb**	**21 16 27.8**	**-0.8**
DEMI	**Demirci**	**0.72**	**112**	*i* P	**Pb**	**21 16 18.2**	**-0.1**
DEMI				*i* S	**Sb**	**21 16 27.8**	**-0.8**
GONE	**Gonen-Balikesi**	**0.75**	**350**	*e*PG	**Pb**	**21 16 17.8**	**-0.9**
GONE				*e*SG	**Sb**	**21 16 28.5**	**-0.7**
GONE	**Gonen-Balikesi**	**0.75**	**350**	*e*Pg	**Pb**	**21 16 17.8**	**-0.9**
GONE				*e*Sg	**Sb**	**21 16 28.5**	**-0.7**
AYVA	**Ayvalik**	**0.90**	**270**	*i* P	**Pn**	**21 16 22.4**	**-0.2**
AYVA				*i* S	**Sb**	**21 16 33.5**	**-0.2**
AYVA	**Ayvalik**	**0.90**	**270**	*i* P	**Pn**	**21 16 22.4**	**-0.2**
AYVA				*i* S	**Sb**	**21 16 33.5**	**-0.2**
KULA	**Kula-Manisa**	**1.01**	**141**	*e*PG	**Pn**	**21 16 23.7**	**-0.5**
KULA	**Kula-Manisa**	**1.01**	**141**	*e*Pg	**Pn**	**21 16 23.7**	**-0.5**
IZM	**Izmir**	**1.02**	**207**	*e*PG	**Pn**	**21 16 23.8**	**-0.5**
IZM	**Izmir**	**1.02**	**207**	*e*Pg	**Pn**	**21 16 23.8**	**-0.5**
EDC	**Edincik**	**1.03**	**0**	*e*PG	**Pn**	**21 16 24.5**	**+0.1**
EDC	**Edincik**	**1.03**	**0**	*e*Pg	**Pn**	**21 16 24.5**	**+0.1**
BNT	**Bandirma**	**1.04**	**3**	*e*PG	**Pb**	**21 16 23.6**	**-0.2**
BNT	**Bandirma**	**1.04**	**3**	*e*Pg	**Pb**	**21 16 23.6**	**-0.2**
ORLT	**Orhaneli**	**1.09**	**47**	*e*PN	**Pn**	**21 16 25.6**	**+0.4**
ORLT	**Orhaneli**	**1.09**	**47**	*e*Pn	**Pn**	**21 16 25.6**	**+0.4**
BLCB	**Balcova**	**1.12**	**215**	*e*PN	**Pn**	**21 16 25.1**	**-0.5**
BLCB	**Balcova**	**1.12**	**215**	*e*Pn	**Pn**	**21 16 25.1**	**-0.5**
PRK	**Paraskevi**	**1.23**	**267**	*e*PN	**Pn**	**21 16 27.5**	**+0.4**
PRK				*e*SN	**Sn**	**21 16 45.8**	**+1.7**
PRK	**Paraskevi**	**1.23**	**267**	*e*Pn	**Pn**	**21 16 27.5**	**+0.4**
PRK				*e*Sn	**Sn**	**21 16 45.8**	**+1.7**
TVSB	**Tavsanli**	**1.25**	**83**	*e*PN	**Pn**	**21 16 28.8**	**+1.3**
TVSB	**Tavsanli**	**1.25**	**83**	*e*Pn	**Pn**	**21 16 28.8**	**+1.3**
GDZ	**Gediz**	**1.28**	**99**	*i* P	**Pn**	**21 16 28.3**	**+0.3**
GDZ				*i* S	**Sn**	**21 16 46.2**	**+0.5**
GDZ	**Gediz**	**1.28**	**99**	*i* P	**Pn**	**21 16 28.3**	**+0.3**
GDZ				*i* S	**Sn**	**21 16 46.2**	**+0.5**
EZN	**Ezine**	**1.29**	**294**	*e*PN	**Pn**	**21 16 27.6**	**-0.3**
EZN	**Ezine**	**1.29**	**294**	*e*Pn	**Pn**	**21 16 27.6**	**-0.3**
MDNY	**Mudanya-Bursa**	**1.32**	**37**	*e*PN	**Pb**	**21 16 28.6**	**+0.2**
MDNY	**Mudanya-Bursa**	**1.32**	**37**	*e*Pn	**Pb**	**21 16 28.7**	**+0.2**
LPK	**Lapseki**	**1.35**	**322**	*e*PN	**Pb**	**21 16 28.8**	**-0.3**
LPK	**Lapseki**	**1.35**	**322**	*e*Pn	**Pb**	**21 16 28.8**	**-0.3**
URLA	**Izmir**	**1.37**	**226**	*i* P	**Pb**	**21 16 29.1**	**-0.2**
URLA				*i* S	**Sn**	**21 16 47.5**	**-0.1**
URLA	**Izmir**	**1.37**	**226**	*i* P	**Pb**	**21 16 29.1**	**-0.2**
URLA				*i* S	**Sn**	**21 16 47.5**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.47**	**339**	*e*PN	**Pg**	**21 16 31.1**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.47**	**339**	*e*Pn	**Pg**	**21 16 31.1**	**-0.2**
ARMT	**Armutlu**	**1.47**	**31**	*e*PN	**Pg**	**21 16 31.4**	**+0.1**
ARMT	**Armutlu**	**1.47**	**31**	*e*Pn	**Pg**	**21 16 31.5**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.52**	**316**	*e*PN	**Pg**	**21 16 31.8**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.52**	**316**	*e*Pn	**Pg**	**21 16 31.8**	**-0.5**
GEMT	**Gemlik**	**1.52**	**42**	*e*PN	**Pg**	**21 16 32.4**	**+0.1**
GEMT	**Gemlik**	**1.52**	**42**	*e*Pn	**Pg**	**21 16 32.4**	**+0.1**
MFT	**Murefte**	**1.54**	**344**	*e*PN	**Pg**	**21 16 32.9**	**+0.2**
MFT	**Murefte**	**1.54**	**344**	*e*Pn	**Pg**	**21 16 32.9**	**+0.2**
KHAL	**Karahalli**	**1.59**	**126**	*i* P	**Pg**	**21 16 32.8**	**-0.8**
KHAL				*i* S	**Sg**	**21 16 55.5**	**+1.4**
KHAL	**Karahalli**	**1.59**	**126**	*i* P	**Pg**	**21 16 32.8**	**-0.8**
KHAL				*i* S	**Sg**	**21 16 55.5**	**+1.4**
KHL	**Karahalli**	**1.64**	**127**	*e*PN	**Pg**	**21 16 34.8**	**+0.3**
KHL	**Karahalli**	**1.64**	**127**	*e*Pn	**Pg**	**21 16 34.8**	**+0.3**
AYDN	**Tasoluk**	**1.65**	**179**	*i* P	**Pn**	**21 16 32.8**	**-0.1**
AYDN				*i* S	**Sg**	**21 16 57.0**	**+0.9**
AYDN	**Tasoluk**	**1.65**	**179**	*i* P	**Pn**	**21 16 32.8**	**-0.1**
AYDN				*i* S	**Sg**	**21 16 57.0**	**+0.9**
CHOS	**Chios island**	**1.68**	**237**	*e*PN	**Pg**	**21 16 34.9**	**-0.5**
CHOS				*e*SN	**Sg**	**21 16 58.5**	**+1.3**
CHOS	**Chios island**	**1.68**	**237**	*e*Pn	**Pg**	**21 16 34.9**	**-0.5**
CHOS				*e*Sn	**Sg**	**21 16 58.5**	**+1.3**
TKR	**Tekirdag**	**1.69**	**352**	*e*PN	**Pb**	**21 16 34.5**	**-0.4**
TKR	**Tekirdag**	**1.69**	**352**	*e*Pn	**Pb**	**21 16 34.5**	**-0.4**
YLV	**Yalova**	**1.71**	**42**	*e*PN	**Pg**	**21 16 36.0**	**0.0**
YLV	**Yalova**	**1.71**	**42**	*e*Pn	**Pg**	**21 16 36.0**	**0.0**
CAVI	**Cavuskoy**	**1.77**	**59**	*e*PN	**Pg**	**21 16 36.1**	**-1.0**
CAVI	**Cavuskoy**	**1.77**	**59**	*e*Pn	**Pg**	**21 16 36.1**	**-1.0**
CRLT	**Corlu**	**1.82**	**357**	*e*PN	**Pb**	**21 16 36.1**	**-0.9**
CRLT	**Corlu**	**1.82**	**357**	*e*Pn	**Pb**	**21 16 36.1**	**-0.9**
ENEZ	**Enez**	**1.93**	**318**	*e*PN	**Pb**	**21 16 37.5**	**-1.4**
ENEZ	**Enez**	**1.93**	**318**	*e*Pn	**Pb**	**21 16 37.5**	**-1.4**
SLVT	**Silivri**	**1.94**	**8**	*e*PN	**Pb**	**21 16 37.8**	**-1.2**
SLVT	**Silivri**	**1.94**	**8**	*e

MRSI S Sn 21 47 39.9 +0.2
902nm,0.8s,9µm3.0nm
LBMI Labuha 5.28 159 P Pn 21 46 38.8 -0.5
328nm,0.9s,21µm6.3nm
LBMI S Sn 21 47 38.2 -1.7
328nm,0.9s,21µm6.3nm
TBP Tagbilaran 5.60 342 eP Pn 21 46 43.3 -0.2
MSLP Maasin 5.82 353 eP Pn 21 46 45.9 -0.5
LUWI Luwuk 6.03 208 P Pn 21 46 50.3 +1.2
1µm,1.1s,11µm3.8nm
LLP Lapu-Lapu 6.17 345‖ eP Pn 21 46 51.2 +0.1
LLP eS Sn 21 48 05.3 +4.3
MYLDM Lahad Datu 7.12 277 P Pn 21 47 06.6 +3.0
MYLDM Lahad Datu 7.12 277 P Pn 21 47 06.7 +3.0
MYLDM Lahad Datu 7.12 277 P Pn 21 47 06.6 +3.0
518nm,1.5s,6µm2.2nm
SWI Sorong 7.66 132 P Pn 21 47 11.5 +0.7
84nm,0.6s,2µm0.5nm
SWI S Sn 21 48 35.9 -0.6
84nm,0.6s,2µm0.5nm
TSM Tawau 7.70 270 P Pn 21 47 12.4 +1.1
RCP Roxas 7.72 339‖ eP Pn 21 47 13.4 +1.7
MSAI Masohi 8.32 156 P Pn 21 47 20.2 +0.6
27nm,0.7s,719nm0.2nm
MSAI S Sn 21 48 47.2 -5.2
27nm,0.7s,719nm0.2nm
AAI Ambon 8.37 162 P Pn 21 47 19.2 -1.1
224nm,0.9s,6µm
AAI S Sn 21 48 46.7 -7.0
224nm,0.9s,6µm
KDI Kendari 8.74 200 P Pn 21 47 22.1 -3.2
150nm,0.9s,1µm
KDI S Sn 21 48 57.6 -5.0
150nm,0.9s,1µm
TTSI Tana Toraja 9.32 218 P Pn 21 47 34.3 +1.4
694nm,0.9s,7µm
KKM Kota Kinabalu 9.49 281 ePn Pn 21 47 37.5 +2.2
KKM Kota Kinabalu 9.49 281 P Pn 21 47 37.9 +2.6
KKM Kota Kinabalu 9.49 281 P Pn 21 47 39.5 +4.2
94nm,0.9s,801nm
SMKI Samarinda 9.62 241 P Pn 21 47 39.9 +3.0
209nm,0.8s,3µm
FAKI Fak Fak 9.80 137 P Pn 21 47 41.4 +2.1
88nm,1.5s,1µm
BBSI Bau Bau 10.20 197 P Pn 21 47 44.0 -0.5
88nm,1.0s,798nm
TGY Tagaytay City 10.75 335 P Pn 21 47 51.9 +0.2
TGY Tagaytay City 10.75 335 P Pn 21 47 51.9 +0.2
33nm,0.3s,baz=123,slow=8.5,SNR=3.9
KAPI Kappang 10.96 212 ePn Pn 21 47 54.0 -0.4
KAPI Kappang 10.96 212 Pn Pn 21 47 54.7 +0.3
SNR=35
KAPI Kappang 10.96 212 P Pn 21 47 54.4 -0.1
521nm,0.9s,4µm
KAPI Kappang 10.96 212 P Pn 21 47 54.2 -0.2
7.8nm,0.3s,baz=41,slow=9.4,SNR=97
BKSI Bulukumba 11.03 210 P Pn 21 47 55.9 +0.5
153nm,1.0s,2µm
BAKI Biak 11.85 117 P Pn 21 48 08.8 +2.7
284nm,1.3s,3µm
TLE Tual 12.20 144 P Pn 21 48 11.1 +0.5
99nm,1.1s
BTM Bintulu 12.53 265 P P 21 48 22.8 +2.6
BBKI Banjar Baru 13.23 234 P P 21 48 29.7 +1.7
958nm,1.0s,7µm
MMRI Maumere 13.30 195 P P 21 48 28.0 -0.7
235nm,1.0s,3µm
SBUM Sibu 13.48 262 P Pn 21 48 28.6 +1.6
STKI Sintang 14.72 254 P P 21 48 44.4 -0.2
134nm,1.0s,12µm
WSI Waingapu 14.87 201 P P 21 48 46.5 +0.4
427nm,1.0s,5µm
KSM Kuching 15.52 260 eP P 21 48 53.4 -0.1
134nm,0.8s
KSM Kuching 15.52 260 P P 21 48 53.8 +0.3
KSM Kuching 15.52 260 P P 21 48 54.2 +0.7
KSM Kuching 15.52 260 P P 21 48 55.9 +2.4
KSM Kuching 15.52 260 P P 21 48 54.4 +1.0
207nm,0.9s,2µm
PBKI Pangkalan Bun 15.56 244 P P 21 48 55.5 +1.6
834nm,1.0s,6µm
KHKI Kahang-Kahang 16.06 218 P P 21 49 00.2 +0.8
256nm,1.1s,2µm
KMMI Kalianget 16.19 226 P P 21 49 03.8 +3.0
253nm,0.9s,2µm
BWJI Bawean 16.40 232 P Pn 21 49 05.3 +2.1
160nm,1.2s
DNP Denpasar 16.55 219 P Pn 21 49 06.6 +1.6
1µm,1.3s,18µm
JAY Jayapura 16.56 114 P Pn 21 49 06.1 +0.9
59nm,1.6s,41µm
BLJI Banyuglugur 16.94 225 P Pn 21 49 11.1 +1.4
147nm,0.9s,11µm
GMJI Gumukmas 17.42 224 P Pn 21 49 16.3 +0.9
159nm,0.8s,2µm
KRKI Karangkates 18.04 227 P Pn 21 49 23.4 +0.6
445nm,0.8s
PWJI Pagerwojo 18.43 228 P P 21 49 26.2 +0.9
112nm,1.1s
SMRI Semarang 18.87 233 P Pn 21 49 32.4 -0.3
596nm,1.0s,5µm
TWG Pinlang 18.90 347 eP P 21 49 28.3 -2.2
PCJI Pacitan 19.01 229 P Pn 21 49 33.7 -0.5
244nm,1.0s,2µm
TPI Tanjungpandan 19.25 249 P Pn 21 49 36.0 -1.1
283nm,1.0s,3µm
UGM Wanagama 19.33 231 eP P 21 49 36.7 +1.5
392nm,1.1s
UGM Wanagama 19.33 231 P Pn 21 49 37.6 -0.4
430nm,1.4s,5µm
YULB Yu-li 19.41 348 eP P 21 49 32.6 -3.3
18nm,0.7s
YULB eS S 21 52 58.5 -8.4
YOGI Yogyakarta 19.45 232 P Pn 21 49 39.2 -0.2
1µm,1.5s,10µm
TPUB Ta-pu 19.47 346 eP P 21 49 35.0 -1.6
29nm,0.7s
TPUB eS S 21 53 00.5 -7.6
BJII Banjamegara 19.63 234 P Pn 21 49 41.1 -0.5
460nm,1.4s,5µm
TGJI Tegal 19.84 236 P P 21 49 42.1 +1.4
304nm,1.1s,2µm
SSLB Suanglung 19.86 347 eP P 21 49 38.6 -2.2
27nm,0.7s
SSLB eS S 21 53 08.1 -7.9
CLJI Cilicap 20.41 234 P P 21 49 48.9 +2.1
186nm,1.1s,2µm
PPBI Pangkal Pinang 20.48 252 P P 21 49 48.1 +0.6
154nm,1.1s,2µm
YHNB Yeheng 20.63 349 eP P 21 49 48.5 -0.6
LEM Lembang 21.08 238 P P 21 49 56.2 +2.0
431nm,1.0s,3µm
GUMO Guam 21.13 63 eP P 21 49 56.4 +1.9
800nm,1.4s
GUMO Guam 21.13 63 P P 21 49 55.4 +0.9
108nm,0.3s,baz=101,slow=5.2,SNR=21
QIZ Qiongzhong 21.22 315 P P 21 49 56.0 +0.6
QIZ pP pP 21 50 21.7 -1.7
QIZ sP sP 21 50 41.3 -2.1
QIZ S S 21 53 43.3 +1.3
QIZ pmax pmax
comp=Z,81nm,0.9s
QIZ pmax pmax
comp=Z,160nm,7.0s
QIZ LR LR
comp=N,260nm,12.4s
QIZ LR LR
comp=Z,240nm,18.3s
CISI Cisompet, Garu 21.30 236 P P 21 49 56.7 +0.3
comp=Z,158nm,0.9s,comp=Z,2µm
TPRI Tanjung Pinang 21.31 261 P P 21 49 59.3 +2.9
comp=Z,1µm,0.9s,comp=Z,45µmcomp=Z,352µm
CBJI Citeko 21.54 240 P P 21 50 01.7 +2.8
comp=Z,696nm,1.0s,comp=Z,6µm
DBJI Dramaga 21.69 240 P P 21 50 02.2 +1.7
comp=Z,139nm,1.5s
MYKOM Kota Tinggi 21.85 264 P P 21 50 02.8 +0.6
MYKOM Kota Tinggi 21.85 264 P P 21 50 03.1 +0.9
MYKOM Kota Tinggi 21.85 264 P P 21 50 02.8 +0.6
comp=Z,216nm,1.1s,comp=Z,2µm
SBJI Serang 22.03 242 P P 21 50 04.8 +0.9
comp=Z,199nm,1.5s
SKJI Sukabumi 22.08 239 P P 21 50 05.3 +0.9
comp=Z,231nm,1.1s
FITZ Fitzroy Crossi 22.28 180 eP P 21 50 05.5 -0.8
comp=Z,91nm,0.8s
FITZ e 21 53 57.2
FITZ S S 21 53 59.0 -0.9
FITZ Fitzroy Crossi 22.28 180 P P 21 50 06.3 0.0
comp=Z,52nm,0.4s,baz=8.0,slow=9.5,SNR=171
FITZ S S 21 53 59.0 -0.9
comp=Z,15nm,1.0s,baz=66,slow=20,SNR=7.7
KGM Kluang 22.35 265 P P 21 50 07.9 +0.8
BLSI Bandar Lampung 22.48 245 P P 21 50 10.0 +1.7
comp=Z,251nm,0.9s
JOW Kunigami 22.53 6 eP P 21 50 09.3 +0.7
comp=Z,15nm,1.0s
UBPT Khong Chiam 22.59 300 P P 21 50 09.2 -0.1
comp=Z,372nm,1.2s,comp=Z,4µm
CGJI Cibinong 22.64 241 P P 21 50 10.6 +0.8
comp=Z,160nm,1.0s,comp=Z,2µm
KASI Kota Agung 23.23 245 P P 21 50 16.0 +0.9
comp=Z,289nm,0.9s,comp=Z,2µm
LWLI Liwa 23.42 247 P P 21 50 19.5 +2.4
comp=Z,414nm,0.9s,comp=Z,3µm
FRIM Kepong 23.94 268 P P 21 50 23.2 +1.5
MNAI Manna 24.20 249 P P 21 50 26.5 +2.4
comp=Z,464nm,0.9s
KSI Kapahiang 24.31 251 P P 21 50 27.6 +2.5
comp=Z,403nm,0.9s,comp=Z,4µm
CHBT CHBT 24.46 291 P P 21 50 27.4 +1.0
comp=Z,216nm,0.9s
IPM Ipoh 24.49 271 eP P 21 50 26.9 +0.1
comp=Z,114nm,0.9s
IPM Ipoh 24.49 271 P P 21 50 27.1 +0.4
IPM Ipoh 24.49 271 P P 21 50 28.2 +1.5
IPM Ipoh 24.49 271 P P 21 50 27.5 +0.8
comp=Z,152nm,1.2s,comp=Z,2µm
BKNI Bangkinang 24.84 261 P P 21 50 31.5 +1.6
comp=Z,671nm,1.0s,comp=Z,6µm
KULM Kulim 24.87 273 eP P 21 50 29.4 -0.7
KULM Kulim 24.87 273 P P 21 50 30.3 +0.2
KULM Kulim 24.87 273 P P 21 50 31.0 +0.9
KULM Kulim 24.87 273 P P 21 50 31.0 +0.9
comp=Z,120nm,1.4s,comp=Z,1µm
KRJI Kerinci 24.94 256 P P 21 50 33.5 +2.6
comp=Z,192nm,1.4s,comp=Z,7µm
COEN Coen 25.18 136 eP P 21 50 33.8 +0.8
comp=Z,216nm,1.1s
PMG Port Moresby 25.46 122 eP P 21 50 37.0 +1.6
PMG ScP ScP 21 57 27.4 -0.5
PMG Port Moresby 25.46 122 P P 21 50 37.6 +2.2
comp=Z,59nm,1.3s
PMG Port Moresby 25.46 122 P P 21 50 35.4 0.0
comp=Z,37nm,1.0s,baz=287,slow=9.5,SNR=6.6
PMG ScP ScP 21 57 27.4 -0.5
comp=Z,20nm,1.0s,baz=302,slow=7.5,SNR=3.2
WRAB Tennant Creek 25.60 161 eP P 21 50 36.8 +0.2
comp=Z,33nm,0.8s
WRAB eS S 21 54 48.9 -4.0
WRA Warramunga Arr 25.60 161 P P 21 50 36.8 +0.1
WRA pP pP 21 51 08.2 -1.4
WRA S S 21 54 49.1 -3.9
WRA ScP ScP 21 57 28.0 -0.2
WRA ScS ScS 22 01 15.2 -2.6
WRA Warramunga Arr 25.60 161 P P 21 50 36.8 +0.1
comp=Z,9.9nm,0.3s,baz=340,slow=9.8,SNR=172
WRA pP pP 21 51 08.2 -1.4
comp=Z,11nm,0.6s,baz=340,slow=10,SNR=3.4
WRA S S 21 54 49.1 -3.9
comp=Z,11nm,0.9s,baz=338,slow=17,SNR=12
WRA ScP ScP 21 57 28.0 -0.2
comp=Z,5.6nm,0.7s,baz=341,slow=3.0,SNR=12
WRA ScS ScS 22 01 15.2 -2.6
comp=Z,0.7nm,0.9s,baz=356,slow=14,SNR=4.8
PPI Padang Panjang 25.62 260 P P 21 50 39.0 +2.1
comp=Z,124nm,0.9s,comp=Z,83µm
MBWA Marble Bar 25.97 193 eP P 21 50 39.3 -0.6
comp=Z,125nm,0.9s
MBWA Marble Bar 25.97 193 P P 21 50 40.1 +0.2
SNR=14
MNSI Mandailing Nat 26.22 263 P P 21 50 43.6 +1.3
comp=Z,222nm,1.1s,comp=Z,2µm
PSI Prapat 26.66 268 P P 21 50 47.0 +0.6
PSI ScP ScP 21 57 30.9 -0.7
PSI Prapat 26.66 268 P P 21 50 47.3 +0.9
comp=Z,47nm,0.9s,comp=Z,785nm
PSI Prapat 26.66 268 P P 21 50 47.0 +0.6
comp=Z,29nm,0.8s,baz=74,slow=7.4,SNR=26
PSI ScP ScP 21 57 30.9 -0.7
comp=Z,4.3nm,0.7s,baz=208,slow=3.4,SNR=3.6
TSI Tuntungan 26.98 269 P P 21 50 52.0 +2.9
comp=Z,68nm,0.8s
CBIJ Chichi jima 27.64 33 P P 21 50 54.5 -0.3
CBIJ Chichi jima 27.64 33 P P 21 50 54.5 -0.3
comp=Z,64nm,0.4s,baz=216,slow=14,SNR=6.5
SRDT SRDT 27.92 293 P P 21 50 58.8 +1.3
comp=Z,27nm,1.0s,comp=Z,3µm
GSI Gunungsitoli 28.14 265 P P 21 51 00.8 +1.4
comp=Z,108nm,1.1s
NJ2 Nanjing 28.30 348 eP P 21 51 03.2 +2.6
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
GYA Guiyang 28.50 322 P P 21 51 02.9 +0.2
GYA pP pP 21 51 36.2 +0.2
GYA sP sP 21 51 55.0 +0.6
GYA PP PnPn 21 52 01.3 0.0
GYA PcP PcP 21 54 11.3 +0.7
GYA S S 21 55 38.3 -0.6
GYA sS sS 21 56 35.5 -2.3
GYA SS SnSn 21 57 15.5 -2.1
GYA ScP ScP 21 57 35.9 -1.1
GYA ScS ScS 22 01 29.0 -1.7
GYA pmax pmax
comp=Z,20nm,0.7s
GYA pmax pmax
comp=Z,190nm,5.1s
AS31 Alice Springs 28.98 164 eP P 21 51 07.3 +0.5
AS31 eS S 21 55 44.5 -1.7
ASAR Alice Springs 28.98 164 P P 21 51 07.2 +0.5
ASAR S S 21 55 45.2 -0.9
ASAR ScP ScP 21 57 38.0 -0.4
ASAR Alice Springs 28.98 164 P P 21 51 07.2 +0.5
comp=Z,9.5nm,0.6s,baz=348,slow=9.7,SNR=149
ASAR S S 21 55 45.2 -0.9
comp=Z,8.5nm,0.9s,baz=358,slow=23,SNR=8.5
ASAR ScP ScP 21 57 38.0 -0.4
comp=Z,5.2nm,0.9s,baz=337,slow=2.1,SNR=10
JNU Nakatsue 29.07 9 eP P 21 51 07.2 -0.3
comp=Z,9.5nm,1.1s
JNU Nakatsue 29.07 9 P P 21 51 07.2 -0.3
comp=Z,10nm,0.8s,baz=165,slow=3.1,SNR=10
CMAR Chiang Mai Arr 29.59 300 P P 21 51 13.3 +1.0
CMAR PcP PcP 21 54 13.6 +0.2
CMAR ScP ScP 21 57 40.4 -0.1
CMAR Chiang Mai Arr 29.59 300 P P 21 51 13.3 +1.0
comp=Z,35nm,0.9s,baz=112,slow=7.0,SNR=48
CMAR PcP PcP 21 54 13.6 +0.2
comp=Z,1.7nm,0.7s,baz=122,slow=1.7,SNR=4.8
CMAR ScP ScP 21 57 40.4 -0.1
comp=Z,7.4nm,1.0s,baz=126,slow=1.0,SNR=20
CMMT Chiang Mai 29.74 301 P P 21 51 15.0 +1.4
comp=Z,90nm,1.0s,comp=Z,775nm
CHTO Chiang Mai 29.74 301 eP P 21 51 14.2 +0.6
comp=Z,70nm,0.9s
CHTO ePcP PcP 21 54 13.9 +0.2
CHTO eScP ScP 21 57 40.2 -0.8
CHTO Chiang Mai 29.74 301 P P 21 51 14.6 +1.0
SNR=34
CHTO Chiang Mai 29.74 301 P P 21 51 14.5 +0.9
comp=Z,100nm,1.0s,comp=Z,797nm
KMI Kunming 30.16 316 P P 21 51 18.8 +1.3
KMI pP pP 21 51 54.2 +3.2
KMI sP sP 21 52 11.0 +1.7
KMI PP PnPn 21 52 25.3 +2.7
KMI S S 21 56 01.6 -3.5
KMI sS sS 21 57 01.0 -3.1
KMI pmax pmax
comp=Z,8.0nm,0.7s
KMI pmax pmax
comp=Z,110nm,5.7s
KMI LR LR
comp=N,160nm,23.6s
KMI LR LR
comp=E,160nm,18.7s
KMI LR LR
comp=Z,170nm,25.2s
CTA Charters Tower 31.64 141 P P 21 51 31.8 +1.6
CTA Charters Tower 31.64 141 P P 21 51 31.8 +1.6
comp=Z,20nm,0.9s,baz=314,slow=9.8
CTAO Charters Tower 31.64 141 eP P 21 51 31.5 +1.3
comp=Z,143nm,1.7s
KSAR Wonju Array Be 33.03 3 P P 21 51 42.8 +0.7
KSAR PcP PcP 21 54 23.2 +1.1
KSAR ScP ScP 21 57 51.5 -0.1
KSRS Korea Array 33.04 3 P P 21 51 42.8 +0.6
comp=Z,5.4nm,0.7s,baz=181,slow=9.8,SNR=27
KSRS PcP PcP 21 54 23.2 +1.1
comp=Z,2.7nm,0.6s,baz=178,slow=2.8,SNR=10
KSRS ScP ScP 21 57 51.5 -0.2
comp=Z,2.8nm,0.7s,baz=191,slow=3.4,SNR=13
KSRS LR LR 22 04 43.6
comp=Z,82nm,20.5s,baz=17,slow=35
XAN Xi'an 33.39 334 P P 21 51 43.9 -1.5
XAN pP pP 21 52 19.3 +0.2
XAN sP sP 21 52 37.5 +0.1
XAN pmax pmax
comp=Z,2.0nm,0.7s
CD2 Chengdu 33.50 325 P P 21 51 47.2 +0.8
CD2 pP pP 21 52 21.3 +1.1
CD2 sP sP 21 52 39.8 +1.3
CD2 PP PP 21 53 05.4 -0.1
CD2 PcP PcP 21 54 24.4 +0.7
CD2 S S 21 56 56.3 -0.3
CD2 sS sS 21 57 56.1 +0.1
CD2 PcS PcS 21 58 09.2 -0.6
CD2 SS SnSn 21 59 12.1 -6.6
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,220nm,5.4s
CD2 LR LR
comp=N,230nm,20.6s
CD2 LR LR
comp=Z,240nm,14.2s
MJAR Matsushiro Arr 34.10 18 P P 21 51 50.5 -1.0
MJAR S S 21 57 04.0 -1.6
MJAR ScP ScP 21 57 55.4 0.0
MJAR Matsushiro Arr 34.10 18 P P 21 51 50.5 -1.0
comp=Z,15nm,0.9s,baz=198,slow=9.9,SNR=43
MJAR S S 21 57 04.0 -1.6
comp=Z,0.7nm,0.6s,baz=192,slow=22,SNR=3.6
MJAR ScP ScP 21 57 55.4 0.0
comp=Z,2.6nm,0.9s,baz=210,slow=5.0,SNR=6.5
MAJO Matsushiro 34.10 18 eP P 21 51 50.7 -0.7
comp=Z,23nm,1.0s
MAT Matsushiro 34.10 18 P P 21 51 50.5 -1.0
FORT Forrest 34.98 176 eP P 21 51 59.6 +0.5
BJI Beijing 36.56 348 P P 21 52 14.8 +2.4
BJI pP pP 21 52 48.8 +2.2
BJI PcP PcP 21 54 33.5 +1.1
BJI S S 21 57 46.1 +3.1
BJI ScP ScP 21 58 04.2 0.0
BJI ScS ScS 22 02 12.9 +1.8
BJI pmax pmax
comp=Z,12nm,0.6s
BJI pmax pmax
comp=Z,120nm,4.1s
HNR Honiara 36.87 112 LR LR 22 05 01.4
comp=Z,171nm,18.9s,baz=106,slow=32
SNY Shenyang 37.39 358‖ P P 21 52 19.2 -0.1
SNY pmax pmax
comp=Z,9.0nm,0.6s
SNY LR LR
comp=N,140nm,14.4s
SNY LR LR
comp=E,270nm,14.4s
SNY LR LR
comp=Z,120nm,15.3s
LZH Lanzhou 37.42 330 eP P 21 52 20.6 +0.6
LZH pP pP 21 52 55.8 +1.5
LZH sP sP 21 53 14.0 +1.6
LZH ScP ScP 21 58 07.5 -0.3
LZH pmax pmax
comp=Z,39nm,1.1s
LZH pmax pmax
comp=Z,140nm,4.7s
NWAO Narrogin (SRO) 37.88 191 eP P 21 52 23.8 +0.2
comp=Z,39nm,1.0s
BBOO Buckleboo 38.24 166 eP P 21 52 27.7 +1.1
comp=Z,1µm,0.6s
BBOO ePP PP 21 53 56.1 -1.5
HHC Hu-ho-hao-te 38.49 343 eP P 21 52 28.0 -0.8
HHC pP pP 21 53 03.5 +0.3
HHC sP sP 21 53 21.4 0.0
HHC S ScP 21 58 10.1 -1.6
HHC PcS PcS 21 58 25.8 -2.2
HHC sS sS 21 59 11.6 -1.2
HHC SS SS 22 00 59.7 -9.1
HHC ScS ScS 22 02 18.7 -3.7
HHC pmax pmax
comp=Z,26nm,0.7s
HHC pmax pmax
comp=Z,200nm,5.9s
HHC LR LR
comp=N,200nm,15.7s
HHC LR LR
comp=E,320nm,13.9s
HHC LR LR
comp=Z,250nm,11.8s
EIDS Eidsvold 38.52 141 eP P 21 52 29.9 +0.8
comp=Z,34nm,1.0s
SHL Shillong 38.61 307 eP P 21 52 31.5 +1.4
STKA Stephens Creek 39.09 158 eP P 21 52 35.0 +1.3
comp=Z,9.5nm,0.8s
STKA S S 21 58 21.3 -0.1
STKA eS S 21 58 22.1 +0.7
STKA Stephens Creek 39.09 158 P P 21 52 35.0 +1.3
comp=Z,52nm,0.8s,baz=333,slow=8.6,SNR=128
STKA S S 21 58 21.3 -0.1
comp=Z,17nm,1.1s,baz=164,slow=16,SNR=13
CN2 Changchun 39.32 360 eP P 21 52 35.8 +0.4
CN2 epP pP 21 53 10.0 0.0
CN2 eSP sP 21 53 29.7 +1.6
CN2 eS S 21 58 25.1 +0.6
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
USRK Ussuriysk Arra 40.11 7 P P 21 52 42.8 +0.8
comp=Z,6.1nm,0.6s,baz=190,slow=8.3,SNR=32
USRK PcP PcP 21 54 43.4 0.0
comp=Z,1.5nm,0.5s,baz=179,slow=2.1,SNR=5.0
USRK ScP ScP 21 58 15.6 -2.1
comp=Z,5.1nm,1.1s,baz=209,slow=3.6,SNR=7.1
MDJ Mudanjiang 40.28 4 P P 21 52 44.6 +1.2
MDJ pP pP 21 53 17.5 -0.6
MDJ sP sP 21 53 34.7 -1.5
MDJ PP PP 21 54 20.2 +0.7
MDJ ScP ScP 21 58 20.4 +2.0
MDJ PcS PcS 21 58 36.2 +1.7
MDJ S S 21 58 40.8 +1.9
MDJ pmax pmax
comp=Z,12nm,1.0s
MDJ pmax pmax
comp=Z,96nm,5.6s
ERM Erimo 40.68 20 eP P 21 52 48.1 +1.4
comp=Z,31nm,1.0s
LSA Lhasa 41.20 312 P P 21 52 51.2 -0.5
LSA pmax pmax
comp=Z,20nm,1.0s
GTA Gaotai 42.01 330 eP P 21 52 58.3 +0.5
GTA pP pP 21 53 33.5 +0.7
GTA sP sP 21 53 51.7 +1.0
GTA ScP ScP 21 58 24.3 -1.3
GTA S S 21 59 04.8 -0.1
GTA sS sS 22 00 05.6 -0.3
GTA SS SS 22 02 11.1 -7.4
GTA pmax pmax
comp=Z,7.0nm,1.4s
GTA pmax pmax
comp=Z,160nm,8.6s
GTA LR LR
comp=N,71nm,10.0s
GTA LR LR
comp=E,100nm,6.4s
GTA LR LR
comp=Z,110nm,13.8s
ASAJ Asahikawa 42.37 18 eP P 21 53 00.7 +0.3
comp=Z,23nm,0.8s
ASAJ Asahikawa 42.37 18 P P 21 53 01.5 +1.0
comp=Z,45nm,0.8s,baz=218,slow=9.7
ARMA Armidale 42.59 146 eP P 21 53 04.6 +2.1
comp=Z,29nm,1.0s
TAPN Taplejung 42.75 306 eP P 21 53 03.6 -0.6
comp=Z,55nm,0.9s
ODAN Odare 42.80 306 eP P 21 53 03.9 -0.6
comp=Z,74nm,0.8s

RAMN Ramite 43.48 305 *e*P P 21 53 09.5 -0.5
comp=Z,32nm,0.6s
GUN Gumba 44.46 306 *e*P P 21 53 17.0 -0.9
comp=Z,54nm,0.7s
PKI Pulchoki 44.70 305 *e*P P 21 53 19.0 -0.8
comp=Z,13nm,0.7s
KKN Kakani 44.90 306 *e*P P 21 53 20.6 -0.6
comp=Z,18nm,0.8s
DMN Daman 44.96 305 *e*P P 21 53 21.3 -0.5
comp=Z,32nm,0.8s
CAN Canberra 45.15 153 *e*P P 21 53 24.7 +1.8
comp=Z,45nm,0.9s
ULN Ulaanbaatar 46.21 343 *e*P P 21 53 29.8 -1.3
comp=Z,22nm,1.8s
KOLN Koldanda 46.25 305 *e*P P 21 53 30.9 -0.9
comp=Z,98nm,0.7s
DANN Dangsing 46.35 306 *e*P P 21 53 31.6 -1.1
comp=Z,114nm,0.7s
SONM Songino Array 46.38 342 P P 21 53 31.4 -1.0
SONM PcP **PcP** 21 55 05.4 +0.7
SONM ScP **ScP** 21 58 42.1 -1.2
SONM Songino Array 46.38 342 P P 21 53 31.4 -1.0
comp=Z,2.8nm,0.6s,baz=158,slow=6.6,SNR=13
SONM PcP **PcP** 21 55 05.4 +0.7
comp=Z,5.0nm,0.6s,baz=164,slow=3.7,SNR=9.9
SONM ScP **ScP** 21 58 42.1 -1.2
comp=Z,5.5nm,0.8s,baz=155,slow=4.6,SNR=15
PYUN Piuthan 46.88 305 *e*P P 21 53 35.9 -0.8
comp=Z,82nm,0.7s
HYB Hyderabad 47.85 290 *i* P P 21 53 43.0 -1.1
HYB *e*pP **pP** 21 54 20.0 +0.1
TAU Tasmania Unive 50.97 160 *e*P P 21 54 09.7 +2.4
comp=Z,12nm,0.7s
WMQ Urumqi 51.59 325 P P 21 54 13.0 +0.9
WMQ pP **pP** 21 54 50.0 +1.7
WMQ sP **sP** 21 55 08.0 +2.0
WMQ PcP **PcP** 21 55 25.0 +1.3
WMQ PP **PP** 21 56 13.0 +1.9
WMQ ScP **ScP** 21 59 05.0 -0.5
WMQ S **S** 22 01 19.0 -1.7
WMQ sS **sS** 22 02 23.0 -0.7
WMQ ScS **ScS** 22 03 43.0 -3.2
WMQ SS **SS** 22 04 57.0 -2.1
WMQ pmax pmax
comp=Z,26nm,1.1s
WMQ pmax pmax
comp=Z,270nm,5.0s
WMQ LR LR
comp=N,330nm,18.0s
WMQ LR LR
comp=E,210nm,18.0s
WMQ LR LR
comp=Z,160nm,18.0s
PETK Petropavlovsk- 55.32 23 P P 21 54 40.1 +1.1
PETK Petropavlovsk- 55.32 23 P P 21 54 40.1 +1.1
comp=Z,15nm,0.7s,baz=193,slow=5.9,SNR=10
MK31 Makanchi Array 56.42 326 *e*P P 21 54 46.1 -0.8
MK31 *e*ScP **ScP** 21 59 24.4 -2.1
MKAR Makanchi Array 56.42 326 P P 21 54 46.0 -1.0
MKAR PcP **PcP** 21 55 43.6 +1.5
MKAR ScP **ScP** 21 59 24.3 -2.3
MKAR S **S** 22 02 27.0 +1.6
MKAR *e* 22 32 02.3
MKAR Makanchi Array 56.42 326 P P 21 54 46.0 -1.0
comp=Z,12nm,0.7s,baz=120,slow=6.5,SNR=133
MKAR PcP **PcP** 21 55 43.6 +1.5
comp=Z,12nm,0.9s,baz=122,slow=4.9,SNR=5.3
MKAR ScP **ScP** 21 59 24.3 -2.3
comp=Z,16nm,0.8s,baz=120,slow=4.4,SNR=31
MKAR S **S** 22 02 27.0 +1.6
comp=Z,2.5nm,1.1s,baz=131,slow=15,SNR=7.8
MKAR P4KPbc 22 32 02.3
comp=Z,0.4nm,0.8s,baz=116,slow=5.5,SNR=4.7
KSH Kashi 56.83 315 P P 21 54 50.7 +0.6
KSH pP **pP** 21 55 27.6 +0.6
KSH PcP **PcP** 21 55 43.4 -0.5
KSH sP **sP** 21 55 45.9 +1.4
KSH PP **PP** 21 57 00.7 +2.5
KSH ScP **ScP** 21 59 27.4 -1.2
KSH PcS **PcS** 21 59 43.4 -1.6
KSH S **S** 22 02 30.6 -0.5
KSH sS **sS** 22 03 35.7 +0.5
KSH ScS **ScS** 22 04 19.8 -4.0
KSH SS **SS** 22 06 22.8 +0.9
KSH pmax pmax
comp=Z,9.0nm,1.3s
KSH pmax pmax
comp=Z,270nm,4.9s
KSH LR LR
comp=N,120nm,5.0s
KSH LR LR
comp=E,210nm,4.4s
KSH LR LR
comp=Z,470nm,5.0s
YAK Yakutsk 57.66 2 *e*P P 21 54 55.7 +0.4
comp=Z,59nm,0.7s
YAK *e*pP **pP** 21 55 29.6 -2.7
TKM2 Tokmak 2 58.55 319 *e*P P 21 55 01.2 -1.0
AAK Ala-Archa 59.16 318 *e*P P 21 55 05.5 -0.8
comp=Z,3.2nm,0.9s
ZALV Zalesovo Beam 59.55 333 P P 21 55 06.7 -1.9
ZALV ScP **ScP** 21 59 37.0 -3.1
ZALV S **S** 22 03 04.1 -1.6
ZALV Zalesovo Beam 59.55 333 P P 21 55 06.7 -1.9
comp=Z,12nm,0.9s,baz=125,slow=6.2,SNR=36
ZALV ScP **ScP** 21 59 37.0 -3.1
comp=Z,0.9nm,0.5s,baz=156,slow=4.2,SNR=4.8
ZALV S **S** 22 03 04.1 -1.6
comp=Z,0.6nm,0.6s,baz=106,slow=9.4,SNR=5.3
EKS2 Erkin-Say 59.65 318 *e*P P 21 55 09.3 -0.3
comp=Z,9.6nm,1.1s
KBL Kabul 60.26 308 *e*P P 21 55 12.8 -1.2
comp=Z,6.9nm,0.7s
KURK Kurchatov 60.63 328 *e*P P 21 55 15.5 -0.5
KURK *e*ScP **ScP** 21 59 43.4 -1.6
KURK Kurchatov 60.63 328 P P 21 55 15.5 -0.5
SNR=21
RPZ Rata Peaks 62.90 145 *e*P P 21 55 33.3 +2.1
BVAR Borovoye Array 66.21 327 ScP 22 00 07.6
comp=Z,2.4nm,0.8s,baz=131,slow=4.5,SNR=5.9
BVAR S **S** 22 04 30.7 +2.0
comp=Z,0.4nm,0.8s,baz=124,slow=13,SNR=3.9
BRVK Borovoye 66.28 327 *e*P P 21 55 52.8 -0.2
comp=Z,29nm,0.9s
BRVK Borovoye 66.28 327 P P 21 55 52.6 -0.4
SNR=14
TIXI Tiksi 67.27 1 *e*P P 21 55 58.4 -0.5
comp=Z,6.2nm,0.4s
TIXI *e*pP **pP** 21 56 34.7 -2.3
BILL Bilibino 69.28 15 *e*P P 21 56 10.9 -0.6
comp=Z,10nm,1.0s
ABKAR Akbulak array 70.97 321 *e*P P 21 56 20.6 -1.5
comp=Z,2.7nm,0.6s
ABKAR *e* 21 56 41.6
ARU Arti 73.83 328 *e*P P 21 56 37.9 -1.0
comp=Z,8.7nm,0.8s
GAMB Gambell 74.32 24 *e*P P 21 56 42.6 +1.0
comp=Z,24nm,1.2s
RDF Al-Radifah 77.46 299 *e*P P 21 56 58.6 -1.6
MIB Mutribah 77.67 299 *e*P P 21 56 59.1 -2.2
NAY Al-Naaiem 77.74 299 *e*P P 21 56 59.4 -2.3
DGRG David-gareji 79.82 311 P P 21 57 15.0 +2.1
TBLG Delisi 80.31 311 P P 21 57 16.6 +1.1
ONI Oni 81.30 312 P P 21 57 24.4 +3.6
KBZ Khabaz 81.75 313 P P 21 57 23.1 +0.1
KBZ Khabaz 81.75 313 P P 21 57 23.1 +0.1
comp=Z,2.6nm,1.0s,baz=103,slow=3.8,SNR=4.5
KDAK Kodiak Island 82.00 32 P P 21 57 25.1 +1.1
KDAK Kodiak Island 82.00 32 P P 21 57 25.1 +1.1
comp=Z,7.4nm,0.8s,baz=292,slow=5.4,SNR=4.1
TRF Thorofare Moun 83.53 27 *e*P P 21 57 31.9 -0.1
comp=Z,14nm,1.2s
COLD Coldfoot 83.79 23 *e*P P 21 57 34.5 +1.5
comp=Z,30nm,1.1s
MAW Mawson 83.92 200 *e*P P 21 57 34.3 +0.7
comp=Z,1.9nm,0.8s
MAW Mawson 83.92 200 P P 21 57 34.3 +0.7
comp=Z,15nm,0.8s,baz=71,slow=6.5,SNR=9.2
PMR Palmer 83.97 29 *e*P P 21 57 34.4 +0.3
comp=Z,10nm,1.1s
MCK McKinley 84.14 26 *e*P P 21 57 35.8 +0.8
comp=Z,48nm,1.4s
VNDA Vanda 84.16 173 *e*P P 21 57 35.4 +0.8
comp=Z,5.5nm,0.7s
VNDA Vanda 84.16 173 P P 21 57 35.6 +0.9
comp=Z,6.8nm,0.7s,baz=320,slow=6.5,SNR=29
ILAR Eielson Array 85.06 25 P P 21 57 38.6 -0.9
ILAR pP **pP** 21 58 16.9 -2.4
ILAR Eielson Array 85.06 25 P P 21 57 38.6 -0.9
comp=Z,1.2nm,0.5s,baz=261,slow=4.8,SNR=25
ILAR pP **pP** 21 58 16.9 -2.4
comp=Z,2.2nm,0.9s,baz=235,slow=5.7,SNR=5.1
MALT Malatya 85.12 308 *e*P P 21 57 40.4 -0.2
comp=Z,7.5nm,1.4s
MALT Malatya 85.12 308 ⇑*i*P P 21 57 40.9 +0.4
OBN Obninsk 85.92 325 *e*P P 21 57 43.5 -0.4
comp=Z,22nm,0.8s
JOF Joensuu 88.14 333 *e*p P 21 57 52.5 -1.9
comp=Z,11nm,0.7s
KMBO Kilima Mbogo 88.43 269 *e*P P 21 57 55.7 -1.5
comp=Z,2.8nm,0.9s
KMBO Kilima Mbogo 88.43 269 P P 21 57 56.5 -0.6
comp=Z,2.7nm,0.8s,baz=78,slow=3.0,SNR=7.7
BR131 Keskin Array S 88.77 310 *e*P P 21 57 57.5 -0.6
comp=Z,3.5nm,0.8s
BRTR Keskin Array B 88.77 310 P P 21 57 56.1 -2.0
BRTR Keskin Array B 88.77 310 P P 21 57 56.1 -2.0
comp=Z,4.9nm,0.9s,baz=82,slow=4.3,SNR=19
ARCES ARCESS Array B 89.50 340 P P 21 57 59.8 -1.0
ARCES ARCESS Array B 89.50 340 P P 21 57 59.8 -1.0
comp=Z,4.0nm,0.7s,baz=79,slow=5.9,SNR=11
SPITS Spitsbergen Ar 89.68 349 P P 21 58 01.2 -0.3
SPITS Spitsbergen Ar 89.68 349 P P 21 58 01.2 -0.3
comp=Z,3.0nm,0.7s,baz=142,slow=9.8,SNR=6.8
INK Inuvik 90.03 21 P P 21 58 02.7 -0.5
INK PKKPbc **PKKPdf** 22 15 33.4 +2.1
INK Inuvik 90.03 21 P P 21 58 02.7 -0.5
comp=Z,1.9nm,0.7s,baz=296,slow=6.2,SNR=11
INK PKKPbc **PKKPdf** 22 15 33.4 +2.1
comp=Z,1.1nm,0.6s,baz=171,slow=1.0,SNR=9.9
KAF Kangasniemi 90.55 332 *e*p P 21 58 03.4 -2.3
comp=Z,5.4nm,0.7s
AKASG Malin Array Be 90.72 321 P P 21 58 06.2 -0.6
AKASG Malin Array Be 90.72 321 P P 21 58 06.2 -0.6
comp=Z,1.9nm,0.7s,baz=70,slow=4.4,SNR=5.5
FIA1 FINESS Array S 90.77 332 *e*P P 21 58 07.7 +0.9
FINES FINESS Array B 90.78 332 P P 21 58 05.4 -1.4
FINES PKiKP **PKiKP** 22 02 59.7 0.0
FINES FINESS Array B 90.78 332 P P 21 58 05.4 -1.4
comp=Z,3.8nm,0.8s,baz=104,slow=5.9,SNR=13
FINES PKiKP **PKiKP** 22 02 59.7 0.0
comp=Z,0.6nm,0.7s,baz=132,slow=2.1,SNR=3.1
TESR 93.03 317 ⇑*i*P P 21 58 15.5 -2.1
VRI Vrincioaia 93.08 316 ⇓*i*P P 21 58 18.6 +0.7
SUW Suwalki 93.79 325 *e*P P 21 58 20.2 -0.7
comp=Z,20nm,0.8s
SUW Suwalki 93.79 325 *e*P P 21 58 20.1 -0.7
BURAR Bucovina Array 93.81 318 ⇑*i*P P 21 58 21.7 +0.4
BUR08 Bucovina Ar. S 93.81 318 *e*P P 21 58 20.9 -0.4
QSPA South Pole Qui 94.22 180 P P 21 58 23.1 +0.4
QSPA PKKPbc **PKKPdf** 22 15 22.9 -2.1
QSPA South Pole Qui 94.22 180 P P 21 58 23.1 +0.4
comp=Z,6.6nm,0.9s,baz=314,slow=4.3,SNR=38
QSPA PKKPbc **PKKPdf** 22 15 22.9 -2.1
comp=Z,0.9nm,1.0s,baz=138,slow=6.1,SNR=5.8
ARR Arges 94.62 316 ⇑*i*P P 21 58 25.5 +0.5
KWP Kalwaria Pacla 95.03 320 ⇑*i*P P 21 58 27.8 +1.1
KWP Kalwaria Pacla 95.03 320 *e*P P 21 58 27.9 +1.2
LOT Lotru 95.20 316 ⇓*i*P P 21 58 26.5 -1.2
KOLS Kolonicke sedl 95.46 320 *e*P P 21 58 30.9 +2.2
DRGR 95.64 318 ⇓*i*P P 21 58 30.1 +0.5
CRVS Cervenica-Dubn 95.99 320 *e*P P 21 58 31.3 +0.2
NB2 NORSAR Subarra 97.75 333 P P 21 58 35.8 -3.0
comp=Z,1.9nm,0.8s,baz=67,slow=4.6
NOA NORSAR Array B 97.75 333 P P 21 58 36.7 -2.1
NOA NORSAR Array B 97.75 333 P P 21 58 36.7 -2.1
comp=Z,2.0nm,0.8s,baz=68,slow=4.5,SNR=8.8
NOA LR LR 22 46 02.5
comp=Z,37nm,19.8s,baz=65,slow=37
VYHS Vyhne 97.78 320 *e*P Pdif 21 58 39.8 +0.6
YKA Yellowknife Ar 99.43 24 P **Pdif** 21 58 46.7 +0.5
YKA pP **pP** 21 59 22.9 -3.6
YKA PKiKP **PKiKP** 22 03 14.8 +0.1
YKA PKKPbc PKKPbc 22 15 05.0 -6.4
YKA Yellowknife Ar 99.43 24 P **Pdif** 21 58 46.7 +0.5
comp=Z,1.3nm,0.9s,baz=301,slow=4.8,SNR=16
YKA pP **pP** 21 59 22.9 -3.6
comp=Z,0.9nm,0.8s,baz=298,slow=4.8,SNR=4.1
YKA PKiKP **PKiKP** 22 03 14.8 +0.1
comp=Z,0.2nm,0.5s,baz=300,slow=1.9,SNR=4.6
YKA PKKPbc PKKPbc 22 15 04.9 -6.4
comp=Z,0.3nm,0.5s,baz=121,slow=3.4,SNR=6.6
GERES GERESS Array B 100.92 321 P **Pdif** 21 58 52.3 -0.9
GERES GERESS Array B 100.92 321 P **Pdif** 21 58 52.3 -0.9
comp=Z,0.6nm,0.8s,baz=64,slow=4.5,SNR=7.0
NVAR Mina Array Bea 107.36 48 PKiKP **PKiKP** 22 03 31.1 +0.8
NVAR PP PP 22 03 59.8 +8.6
NVAR PKKPbc **PKKPbc** 22 14 46.5 -0.8
NVAR Mina Array Bea 107.36 48 PKiKP **PKiKP** 22 03 31.1 +0.8
comp=Z,0.3nm,0.5s,baz=298,slow=1.9,SNR=2.6
NVAR PP PP 22 03 59.8 +8.6
comp=Z,0.4nm,0.6s,baz=281,slow=10,SNR=4.6
NVAR PKKPbc **PKKPbc** 22 14 46.5 -0.8
comp=Z,1.5nm,0.7s,baz=142,slow=4.6,SNR=10
PDAR Pinedale Array 111.65 41 PKiKP **PKiKP** 22 03 39.2 +1.0
PDAR PKKPbc **PKKPbc** 22 14 30.9 -2.9
PDAR PKKPab **PKKPab** 22 14 41.2 -1.9
PDAR Pinedale Array 111.65 41 PKiKP **PKiKP** 22 03 39.2 +1.0
comp=Z,0.4nm,0.6s,baz=207,slow=3.7,SNR=4.4
PDAR PKKPbc **PKKPbc** 22 14 30.9 -2.9
comp=Z,0.8nm,0.7s,baz=120,slow=5.3,SNR=6.7
PDAR PKKPab **PKKPab** 22 14 41.2 -1.9
comp=Z,2.3nm,0.8s,baz=123,slow=6.6,SNR=15
ANMO Albuquerque 117.46 47 PKP **PKPdf** 22 03 50.6 +1.1
ANMO Albuquerque 117.46 47 PKP **PKPdf** 22 03 50.6 +1.1
comp=Z,0.8nm,0.5s,baz=335,slow=1.0,SNR=6.5
SCHQ Schefferville 120.16 8 PKP **PKPdf** 22 03 54.4 +0.4
SCHQ Schefferville 120.16 8 PKP **PKPdf** 22 03 54.4 +0.4
comp=Z,2.0nm,0.4s,baz=330,slow=2.8,SNR=14
TOA0 Torodi Ar. Sit 121.66 288 *e*PKPdf **PKPdf** 22 03 57.3 -0.6
TORD Torodi Ar. Bea 121.66 288 PKP **PKPdf** 22 03 57.1 -0.8
TORD pPKP **pPKPdf** 22 04 37.0 -2.9
TORD PP **PP** 22 05 36.4 +3.9
TORD Torodi Ar. Bea 121.66 288 PKP **PKPdf** 22 03 57.1 -0.8
comp=Z,2.5nm,0.7s,baz=88,slow=1.6,SNR=22
TORD pPKP **pPKPdf** 22 04 37.0 -2.9
comp=Z,2.1nm,0.7s,baz=50,slow=2.1,SNR=5.7
TORD PP **PP** 22 05 36.4 +3.9
comp=Z,1.0nm,1.0s,baz=45,slow=3.6,SNR=3.8
TXAR Lajitas Array 122.13 51 PKP **PKPdf** 22 03 59.6 +1.1
TXAR Lajitas Array 122.13 51 PKP **PKPdf** 22 03 59.6 +1.1
comp=Z,1.1nm,0.6s,baz=253,slow=0.9,SNR=7.3
JCT Junction City 124.52 48 *e*PKPdf **PKPdf** 22 04 04.3 +1.2
DBIC Dimbokro 129.34 282 PKP **PKPdf** 22 04 12.4 -0.2
DBIC *e*PKPdf **PKiKP** 22 04 12.7 -0.7
DBIC pPKP **pPKPdf** 22 04 52.6 -2.0
DBIC SKPbc SKPab 22 07 17.9 -1.0
DBIC Dimbokro 129.34 282 PKP **PKPdf** 22 04 12.4 -0.2
comp=Z,2.3nm,0.5s,baz=66,slow=4.9,SNR=6.4
DBIC pPKP **pPKPdf** 22 04 52.6 -2.0
comp=Z,3.5nm,0.8s,baz=351,slow=10.0,SNR=3.3
DBIC SKPbc SKPab 22 07 17.9 -1.0
comp=Z,3.8nm,0.7s,baz=73,slow=4.1,SNR=8.3
CMIG Matias Romero 134.72 61 PKP **PKPdf** 22 04 24.1 +1.4
CMIG Matias Romero 134.72 61 PKP **PKPdf** 22 04 24.1 +1.4
comp=Z,1.8nm,0.6s,baz=318,slow=3.9,SNR=5.1
PLCA Paso Flores 140.95 160 SKPbc **SKPbc** 22 07 56.6 +1.0
PLCA Paso Flores 140.95 160 SKPbc **SKPbc** 22 07 56.6 +1.0
comp=Z,3.3nm,0.8s,baz=192,slow=3.5,SNR=7.2
JTS JuntasAbangare 146.29 64 *e*PKPdf **PKPdf** 22 04 43.7 +0.1
LCO Las Campanas 150.99 150 *e*PKPbc **PKPbc** 22 04 57.9 +0.8
CPUP Villa Florida 157.94 173 PKPab **PKPab** 22 05 34.9 +0.8
CPUP Villa Florida 157.94 173 PKPab **PKPab** 22 05 34.9 +0.8
comp=Z,3.6nm,0.7s,baz=169,slow=5.5,SNR=14
ROSC El Rosal 158.11 66 PKPab **PKPab** 22 05 38.5 +2.6
ROSC El Rosal 158.11 66 PKPab **PKPab** 22 05 38.5 +2.6
comp=Z,3.5nm,0.5s,baz=84,slow=21,SNR=5.6
LPAZ La Paz 162.03 132 PKP **PKPdf** 22 05 07.7 +1.6
LPAZ pPKP **pPKPdf** 22 05 47.5 -0.8
LPAZ La Paz 162.03 132 PKP **PKPdf** 22 05 07.7 +1.6
comp=Z,0.5nm,0.3s,baz=207,slow=2.3,SNR=4.5
LPAZ pPKP **pPKPdf** 22 05 47.5 -0.8
comp=Z,1.5nm,0.8s,baz=293,slow=3.8,SNR=3.4
BDFB Brasilia 167.11 209 PKPab **PKPab** 22 06 14.8 +0.1
BDFB Brasilia 167.11 209 PKPab **PKPab** 22 06 14.8 +0.1
comp=Z,7.7nm,1.0s,baz=111,slow=4.2,SNR=7.5

*ISCJB **11** 21:57:11.4±0.7,36°.84N±0°.04×7°.43W±0°.03,h10km, Error ellipse: s-maj=6.0km s-min=2.8km az=23.7*
*MDD **11** 21:57:11.9±1.1,36°.56N×7°.68W,h29km±18km,mbLg2.3/24, Error ellipse: s-maj=14.8km s-min=4.9km az=29.0, PRXIMO*
*CSEM **11** 21:57:11.0±0.3,36°.64N×7°.62W,h20km,ML3.1/4,Error ellipse: s-maj=6.7km s-min=3.5km az=27.0*
*IGIL **11** 21:57:12.7,36°.59N×7°.74W,h24km,ML2.0*
*INMG **11** 21:57:12.7±1.3,36°.60N×7°.75W,h24km±6km,ML2.1,Error ellipse: s-maj=4.5km s-min=3.6km az=67.0*
*LDG **11** 21:57:13.8±0.4,36°.87N×7°.24W,h10km,Ml2.8/4,Error ellipse: s-maj=8.2km s-min=4.6km az=32.0*

ISC 11 21:57:11.3±1.2,36.76N±0°.05×7°.44W±0°.03,h10km,n89,
σ1§43/148,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PBDV	**Barranco-do-Ve**	**0.62**	**321**	*e*P	**Pg**	**21 57 25.0**	**+1.6**
PBDV				*e*S	**Sg**	**21 57 34.3**	**+2.7**
PBDV				A	A	21 57 41.7	
	28nm,0.5s						
PBDV	**Barranco-do-Ve**	**0.62**	**321**	P	**Pg**	**21 57 25.0**	**+1.6**
PBDV				S	**Sg**	**21 57 34.3**	**+2.7**
	28nm,0.5s						
PBDV	**Barranco-do-Ve**	**0.62**	**321**	*e*P	**Pg**	**21 57 25.0**	**+1.6**
PBDV				S	**Sg**	**21 57 34.3**	**+2.7**
	28nm,0.5s						
PVAQ	**Vaqueiros**	**0.68**	**341**	*e*P	**Pb**	**21 57 26.8**	**+1.5**
PVAQ				*e*S	**Sn**	**21 57 37.9**	**+0.2**
PVAQ				A	A	21 57 38.5	
	56nm,0.3s						
PVAQ	**Vaqueiros**	**0.68**	**341**	P	**Pb**	**21 57 26.8**	**+1.5**
PVAQ				S	**Sn**	**21 57 37.9**	**+0.2**
	56nm,0.3s						
PVAQ	**Vaqueiros**	**0.68**	**341**	*e*P	**Pb**	**21 57 26.8**	**+1.5**
PVAQ				S	**Sn**	**21 57 37.9**	**+0.2**
	56nm,0.3s						
EGRO	**El Granado**	**0.78**	**357**	P	**Pn**	**21 57 28.9**	**+0.7**
	0.9nm,0.1s,SNR=8.6						
EGRO				S	**Sn**	**21 57 41.5**	**+1.5**
	60nm,0.2s						
EGRO	**El Granado**	**0.78**	**357**	P	**Pn**	**21 57 29.0**	**+0.7**
	0.9nm,0.1s,SNR=8.6						
EGRO				S	**Sn**	**21 57 41.5**	**+1.5**
	60nm,0.2s						
PCVE	**Castro Verde**	**0.99**	**331**	*e*P	**Pg**	**21 57 30.7**	**+0.3**
PCVE				*e*S	**Sg**	**21 57 44.1**	**+0.7**
PCVE				A	A	21 57 45.2	
	29nm,0.2s						
PCVE	**Castro Verde**	**0.99**	**331**	P	**Pg**	**21 57 30.7**	**+0.3**
PCVE				S	**Sg**	**21 57 44.1**	**+0.7**
	29nm,0.2s						
PCVE	**Castro Verde**	**0.99**	**331**	*e*P	**Pg**	**21 57 30.7**	**+0.3**
PCVE				S	**Sg**	**21 57 44.1**	**+0.7**
	29nm,0.2s						
MORF	**Marmelete**	**1.11**	**300**	*e*S	Sb	21 57 43.1	-4.1
MORF	**Marmelete**	**1.11**	**300**	S	Sb	21 57 43.1	-4.1
MORF	**Marmelete**	**1.11**	**300**	*e*S	Sb	21 57 43.1	-4.1
PFVI	**Vila Bisbo**	**1.17**	**289**	*e*P	Pn	21 57 29.8	-3.9
PFVI				*e*S	Sb	21 57 42.9	-6.0
PFVI				A	A	21 57 47.7	
	1.7nm,0.7s						
PFVI	**Vila Bisbo**	**1.17**	**289**	*e*P	Pn	21 57 29.8	-3.9
PFVI				*e*S	Sb	21 57 42.9	-6.0
	1.7nm,0.7s						
EMIN	**Mina Concepcio**	**1.18**	**31**	P	**Pn**	**21 57 34.8**	**+1.0**
	0.7nm,0.1s,SNR=8.5						
EMIN				S	**Sn**	**21 57 51.3**	**+1.3**
	3.9nm,0.1s,SNR=7.2						
EMIN	**Mina Concepcio**	**1.18**	**31**	P	**Pn**	**21 57 34.8**	**+1.0**
	0.7nm,0.1s,SNR=8.5						
EMIN				S	**Sn**	**21 57 51.3**	**+1.3**
	3.9nm,0.1s,SNR=7.2						
MESJ	**Messejana**	**1.25**	**330**	*e*P	**Pn**	**21 57 33.8**	**-1.0**
MESJ				*e*S	**Sb**	**21 57 49.5**	**-1.5**
MESJ				AML	AML	21 57 51.7	
	comp=E,22nm,0.1s						
MESJ	**Messejana**	**1.25**	**330**	*e*P	**Pn**	**21 57 33.8**	**-1.0**
MESJ				*e*S	**Sb**	**21 57 49.5**	**-1.5**
MESJ	**Messejana**	**1.25**	**330**	P	**Pn**	**21 57 33.8**	**-1.0**
MESJ				S	**Sb**	**21 57 49.5**	**-1.5**
MESJ	**Messejana**	**1.25**	**330**	*e*P	**Pn**	**21 57 33.8**	**-1.0**
MESJ				*e*S	**Sb**	**21 57 49.5**	**-1.5**
ESPR	**Espera**	**1.28**	**85**	P	**Pn**	**21 57 36.0**	**+0.9**
	comp=E,1.4nm,0.2s,SNR=8.2						
ESPR				S	**Sn**	**21 57 53.9**	**+1.6**
	comp=E,58nm,0.2s,SNR=8.5						
ESPR	**Espera**	**1.28**	**85**	P	**Pn**	**21 57 36.0**	**+0.9**
	comp=E,1.4nm,0.2s,SNR=8.2						
ESPR				S	**Sn**	**21 57 53.9**	**+1.6**
	comp=E,58nm,0.2s,SNR=8.5						
PTEO	**Sao Teotonio**	**1.29**	**308**	*e*P	Pn	21 57 33.0	-2.4
PTEO				*e*S	Sb	21 57 48.2	-4.1
PTEO				A	A	21 57 48.8	
	comp=E,7.8nm,0.1s						
PTEO	**Sao Teotonio**	**1.29**	**308**	P	Pn	21 57 33.0	-2.4
PTEO				S	Sb	21 57 48.2	-4.1
	comp=E,3.9nm,0.1s						
PTEO	**Sao Teotonio**	**1.29**	**308**	*e*P	Pn	21 57 33.0	-2.4
PTEO				S	Sb	21 57 48.2	-4.1
	comp=E,3.9nm,0.1s						
PBEJ	**Beja**	**1.31**	**345**	*e*S	**Sb**	**21 57 52.8**	**-0.1**
PBEJ				A	A	21 57 53.4	
	comp=E,12nm,0.2s						
PBEJ	**Beja**	**1.31**	**345**	S	**Sb**	**21 57 52.8**	**-0.1**
	comp=E,6.1nm,0.2s						
PBEJ	**Beja**	**1.31**	**345**	S	**Sb**	**21 57 52.8**	**-0.1**
	comp=E,6.1nm,0.2s						
PBAR	**Barrancos**	**1.45**	**13**	*e*Pn	**Pg**	**21 57 38.5**	**-0.6**
PBAR				*e*Sn	**Sg**	**21 57 58.8**	**+0.8**
PBAR	**Barrancos**	**1.45**	**13**	P	**Pg**	**21 57 38.5**	**-0.6**
PBAR				S	**Sg**	**21 57 58.8**	**+0.8**
PBAR	**Barrancos**	**1.45**	**13**	P	**Pg**	**21 57 38.5**	**-0.6**
PBAR				S	**Sg**	**21 57 58.8**	**+0.8**
EVO	**Evora**	**1.83**	**346**	*e*Pn	**Pn**	**21 57 42.4**	**-0.4**
EVO				*e*Sn	**Sn**	**21 58 03.7**	**-2.3**
	comp=E,7.2nm,0.2s						
EVO	**Evora**	**1.83**	**346**	*e*Pn	**Pn**	**21 57 41.6**	**-1.2**
EVO				*e*Sn	**Sn**	**21 58 05.2**	**-0.8**
EVO				A	A	21 58 08.3	
	comp=E,13nm,0.1s						
EVO	**Evora**	**1.83**	**346**	P	**Pn**	**21 57 41.6**	**-1.2**
EVO				S	**Sn**	**21 58 05.2**	**-0.8**
	comp=E,13nm,0.1s						
EVO	**Evora**	**1.83**	**346**	P	**Pn**	**21 57 41.6**	**-1.2**
EVO				S	**Sn**	**21 58 05.2**	**-0.8**
	comp=E,13nm,0.1s						
EVOP	**Sao Brissos**	**1.85**	**343**	*e*Pn	**Pn**	**21 57 42.4**	**-0.6**
EVOP				*e*Sn	**Sn**	**21 58 03.7**	**-2.8**
	comp=E,3.6nm,0.2s						
PESTR	**Estremoz**	**2.11**	**357**	*e*Pn	**Pn**	**21 57 46.9**	**+0.2**
PESTR				*e*Sn	**Sb**	**21 58 13.6**	**-2.3**
PESTR				A	A	21 58 25.7	
	comp=E,4.6nm,0.3s						
PESTR	**Estremoz**	**2.11**	**357**	P	**Pn**	**21 57 46.9**	**+0.2**
PESTR				S	**Sb**	**21 58 13.6**	**-2.3**
	comp=E,4.6nm,0.3s						
PESTR	**Estremoz**	**2.11**	**357**	P	**Pn**	**21 57 46.9**	**+0.2**
PESTR				S	**Sb**	**21 58 13.6**	**-2.3**
	comp=E,4.6nm,0.3s						
EMIJ	**Mijas**	**2.15**	**94**	P	**Pn**	**21 57 46.8**	**-0.4**
	comp=E,0.2nm,0.2s,SNR=7.9						
EMIJ				S	**Sb**	**21 58 13.9**	**-3.3**
	comp=E,4.1nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**2.15**	**94**	P	**Pn**	**21 57 46.8**	**-0.4**
	comp=E,0.2nm,0.2s,SNR=7.9						
EMIJ				S	**Sb**	**21 58 13.9**	**-3.3**
	comp=E,4.1nm,0.4s,SNR=7.9						
PMTG	**Montargil**	**2.39**	**345**	*e*Pn	**Pn**	**21 57 50.5**	**0.0**
PMTG				*e*Sn	**Sn**	**21 58 18.5**	**-1.3**
PMTG				A	A	21 58 21.9	
	comp=E,6.3nm,0.2s						
PMTG	**Montargil**	**2.39**	**345**	*e*Pn	**Pn**	**21 57 50.5**	**0.0**
PMTG				*e*Sn	**Sn**	**21 58 18.5**	**-1.3**
	comp=E,6.3nm,0.2s						
PMAFR	**Mafra**	**2.63**	**327**	*e*Pn	**Pn**	**21 57 53.0**	**-0.9**
PMAFR				*e*Sn	**Sn**	**21 58 22.7**	**-3.2**
PMAFR				A	A	21 58 24.7

comp=E,1.7nm,0.1s,SNR=7.9
PMRV Marv??o 2.67 1 *e*Pn **Pn 21 57 54.8 +0.5**
PMRV *e*Sn **Sn 21 58 26.8 +0.1**
PMRV A A 21 58 27.8
comp=E,4.5nm,0.3s
PMRV Marv??o 2.67 1 P **Pn 21 57 54.8 +0.5**
PMRV S **Sn 21 58 26.8 +0.1**
comp=E,4.5nm,0.3s
PMRV Marv??o 2.67 1 P **Pn 21 57 54.8 +0.5**
PMRV S **Sn 21 58 26.8 +0.1**
comp=E,4.5nm,0.3s
PTOM Tomar 2.96 345 *e*Pn **Pn 21 57 58.6 +0.3**
PTOM *e*Sn **Sn 21 58 31.7 -2.1**
PTOM A A 21 58 34.8
comp=E,7.6nm,0.5s
PTOM Tomar 2.96 345 P **Pn 21 57 58.6 +0.3**
PTOM S **Sn 21 58 31.7 -2.1**
comp=E,3.8nm,0.5s
PTOM Tomar 2.96 345 P **Pn 21 57 58.6 +0.3**
PTOM S **Sn 21 58 31.7 -2.1**
comp=E,3.8nm,0.5s
PCBR Castelo Branco 3.08 359 *e*Pn **Pn 21 58 00.4 +0.5**
PCBR *e*Sn **Sn 21 58 36.9 +0.1**
PCBR A A 21 58 37.8
comp=E,3.5nm,0.2s
PCBR Castelo Branco 3.08 359 P **Pn 21 58 00.4 +0.5**
PCBR S **Sn 21 58 36.9 +0.1**
comp=E,1.8nm,0.2s
PCBR Castelo Branco 3.08 359 P **Pn 21 58 00.4 +0.5**
PCBR S **Sn 21 58 36.9 +0.1**
comp=E,1.8nm,0.2s
EPLA Plasencia 3.47 18 P **Pn 21 58 07.1 +1.7**
comp=E,1.7nm,0.1s,SNR=7.5
EPLA S **Sn 21 58 46.7 +0.2**
comp=E,2.0nm,0.1s,SNR=7.9
EPLA Plasencia 3.47 18 P **Pn 21 58 07.1 +1.7**
comp=E,1.7nm,0.1s,SNR=7.5
EPLA S **Sn 21 58 46.7 +0.2**
comp=E,2.0nm,0.1s,SNR=7.9
EQES Quesada 3.64 72 P **Pn 21 58 09.8 +2.1**
comp=E,0.2nm,0.2s,SNR=7.9
EQES S **Sn 21 58 51.5 +0.7**
comp=E,1.1nm,0.2s,SNR=7.9
EQES Quesada 3.64 72 P **Pn 21 58 09.9 +2.1**
comp=E,0.2nm,0.2s,SNR=7.9
EQES S **Sn 21 58 51.5 +0.7**
comp=E,1.1nm,0.2s,SNR=7.9
PVIS Viseu 3.97 355 *e*Pn **Pn 21 58 12.6 +0.4**
PVIS *e*Sn **Sn 21 58 57.2 -1.7**
PVIS A A 21 58 59.4
comp=E,3.9nm,0.2s
PVIS Viseu 3.97 355 P **Pn 21 58 12.6 +0.4**
PVIS S **Sn 21 58 57.2 -1.7**
comp=E,1.9nm,0.2s
PVIS Viseu 3.97 355 P **Pn 21 58 12.6 +0.4**
PVIS S **Sn 21 58 57.2 -1.7**
comp=E,1.9nm,0.2s
ESDC Sonseca Array 4.00 42 P **Pn 21 58 14.1 +1.4**
comp=E,2.1nm,0.1s,baz=226,slow=13,SNR=9.3
ESDC S **Sn 21 58 58.9 -0.7**
comp=E,1.5nm,0.2s,baz=226,slow=23,SNR=5.6
ESDC Sonseca Array 4.00 42 P **Pn 21 58 14.1 +1.4**
comp=E,2.1nm,0.1s,baz=226,slow=13,SNR=9.3
ESDC S **Sn 21 58 58.9 -0.7**
comp=E,1.5nm,0.2s,baz=226,slow=23,SNR=5.6
EHUE Huescar 4.01 73 P **Pn 21 58 13.9 +1.1**
comp=E,0.3nm,0.1s,SNR=7.9
EHUE S **Sn 21 58 59.9 0.0**
comp=E,0.4nm,0.1s,SNR=7.9
EHUE Huescar 4.01 73 P **Pn 21 58 13.9 +1.1**
comp=E,0.3nm,0.1s,SNR=7.9
EHUE S **Sn 21 58 59.9 0.0**
comp=E,0.4nm,0.1s,SNR=7.9
EVIA Vianos 4.34 63 S **Sn 21 59 07.8 -0.4**
comp=E,1.4nm,0.2s,SNR=7.9
EVIA Vianos 4.34 63 S **Sn 21 59 07.8 -0.4**
comp=E,1.4nm,0.2s,SNR=7.9
MVO Moncorvo 4.41 4 *e*Pn **Pn 21 58 19.1 +0.7**
MVO *e*Sn **Sn 21 59 07.8 -2.0**
MVO A A 21 59 10.3
comp=E,4.7nm,0.5s
MVO Moncorvo 4.41 4 *e*Pn **Pn 21 58 19.1 +0.7**
POLO Lamas de Olo 4.62 357 *e*Pn **Pn 21 58 21.4 +0.2**
POLO *e*Sn **Sn 21 59 14.0 -0.9**
POLO A A 21 59 15.1
comp=E,2.5nm,0.3s
POLO Lamas de Olo 4.62 357 *e*Pn **Pn 21 58 21.4 +0.2**
POLO *e*Sn **Sn 21 59 14.0 -0.9**
comp=E,2.5nm,0.3s
GUD Guadarrama 4.65 33 P **Pn 21 58 23.5 +1.8**
comp=E,0.2nm,0.1s,SNR=7.9
GUD S **Sn 21 59 15.0 -0.9**
comp=E,0.8nm,0.3s,SNR=7.9
GUD Guadarrama 4.65 33 P **Pn 21 58 23.5 +1.8**
comp=E,0.2nm,0.1s,SNR=7.9
GUD S **Sn 21 59 15.0 -0.9**
comp=E,0.8nm,0.3s,SNR=7.9
PCAB Cabril 4.97 355 *e*Sn **Sn 21 59 21.9 -1.5**
PCAB A A 21 59 23.9
comp=E,3.9nm,0.2s
PCAB Cabril 4.97 355 S **Sn 21 59 21.9 -1.5**
comp=E,1.9nm,0.2s
PCAB Cabril 4.97 355 S **Sn 21 59 21.9 -1.5**
comp=E,1.9nm,0.2s
ETOB Tobarra 5.04 66 P **Pn 21 58 27.1 +0.1**
comp=E,0.2nm,0.2s,SNR=7.9
ETOB S **Sn 21 59 24.4 -0.9**
comp=E,2.5nm,0.2s,SNR=7.9
ETOB Tobarra 5.04 66 P **Pn 21 58 27.1 +0.1**
comp=E,0.2nm,0.2s,SNR=7.9
ETOB S **Sn 21 59 24.4 -0.9**
comp=E,2.5nm,0.2s,SNR=7.9
ECAL Calabor 5.21 6 P **Pn 21 58 30.2 +0.9**
comp=E,1.0nm,0.2s,SNR=7.9
ECAL S **Sn 21 59 28.2 -1.2**
comp=E,3.8nm,0.2s,SNR=7.9
ECAL Calabor 5.21 6 P **Pn 21 58 30.2 +0.9**
comp=E,1.0nm,0.2s,SNR=7.9
ECAL S **Sn 21 59 28.2 -1.2**
comp=E,3.8nm,0.2s,SNR=7.9
ETOR Torete 5.84 44 P **Pn 21 58 39.7 +1.7**
comp=E,1.4nm,0.2s,SNR=7.9
ETOR S **Sn 21 59 45.7 +0.6**
comp=E,7.1nm,0.2s,SNR=7.9
ETOR Torete 5.84 44 P **Pn 21 58 39.7 +1.7**
comp=E,1.4nm,0.2s,SNR=7.9
ETOR S **Sn 21 59 45.7 +0.6**
comp=E,7.1nm,0.2s,SNR=7.9
SJPF Ste Jean 7.94 35 *e*Pn **Pn 21 59 04.4 -2.4**
SJPF *e*Sn Sn 22 00 27.1 -10
comp=E,1.6nm,0.4s
ETSF Etsaut 8.10 39 *e*Pn **Pn 21 59 06.6 -2.4**
ETSF *e*Sn Sn 22 00 31.0 -10
comp=E,2.2nm,0.5s
EPF Esparros 8.66 41 *e*Pn **Pn 21 59 14.4 -2.2**
EPF *e*Sn Sn 22 00 44.2 -10
comp=E,0.4nm,0.3s

IDC **11** *21:57:49.8±0.5,51°.83N×175°.93E,h0km,mb4.3/30, mb1 4.5/31,mb1mx4.4/36,mbtmp4.3/31,ML4.8/1,MS3.8/21, Ms1 3.8/21,ms1mx3.7/37,Error ellipse: s-maj=14.0km s-min=8.6km az=176.0*
MOS **11** *21:57:54.0±0.9,51°.94N×175°.80E,h33km,mb4.9/50,Error ellipse: s-maj=10.2km s-min=5.6km az=99.5*
ISCJB **11** *21:57:55.6±0.6,51°.88N±0°.05×175°.74E±0°.04,h50km±4km, mb4.6/99,MS3.9/30,Error ellipse: s-maj=8.8km s-min=3.8km az=0.4*
NEIC **11** *21:57:57.6±0.5,51°.88N×175°.76E,h54km±4km,mb4.8/44, ML4.4(AEIC),Error ellipse: s-maj=7.5km s-min=3.9km az=176.0*
BJI **11** *21:58:01.0,52°.68N×174°.82E,h59km,mB5.1/17,mb4.8/35, Ms4.5/16,Ms7 4.2/13*
ISC 11 21:57:58.1±0.4,51°.95N±0°.07×175°.66E±0°.03,h56km±2km, h56km:pP-P,n306,σ1s25/362,mb4.7/99,MS3.9/30,18C-6D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.23**	**310**	P	**Pn**	**21 58 17.4**	**-1.6**
SMY				S	**Sn**	**21 58 34.5**	**-0.1**
SMY	**Shemya**	**1.23**	**310**	P	**Pn**	**21 58 17.4**	**-1.6**
SMY				S	**Sn**	**21 58 34.5**	**-0.1**
FX1	**Attu Island--F**	**1.79**	**302**	Pn	**Pn**	**21 58 25.2**	**-1.3**
FX1				Sn	**Sn**	**21 58 47.8**	**-0.4**
FX1				S		21 58 48.2	
FX1	**Attu Island--F**	**1.79**	**302**	Pn	**Pn**	**21 58 25.2**	**-1.3**
	416nm,0.3s,baz=181,slow=6.6,SNR=239						
FX1				Sn	**Sn**	**21 58 47.8**	**-0.4**
	994nm,0.3s,baz=267,slow=18,SNR=17						
GAEA	**Gareloi East**	**3.47**	**91**	P	**Pn**	**21 58 47.8**	**-1.8**
TAFP	**Tanaga Falls P**	**3.94**	**88**	P	**Pn**	**21 58 54.0**	**-2.0**
TAFP				S	**Sn**	**21 59 39.9**	**-0.9**
GSCK	**Great Sitkin C**	**5.06**	**86**	P	**Pn**	**21 59 09.8**	**-1.5**
GSCK				S	**Sn**	**22 00 07.3**	**-1.0**
GSTD	**Great Sitkin T**	**5.07**	**86**	P	**Pn**	**21 59 12.6**	**+1.1**
KOKL	**Mount Kliuchef**	**6.26**	**83**	P	**Pn**	**21 59 26.5**	**-1.2**
UNV	**Unalaska Valle**	**10.94**	**73**	*e*Pn	**Pn**	**22 00 32.4**	**+0.7**
PETK	**Petropavlovsk-**	**11.00**	**283**	P	**Pn**	**22 00 33.6**	**+1.0**
PETK						22 02 29.9	
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				smax	smax		
	comp=N,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**11.00**	**283**	Pn	**Pn**	**22 00 33.6**	**+1.0**
PETK				Sn	**Sn**	**22 02 29.9**	**-4.0**
PETK	**Petropavlovsk-**	**11.00**	**283**	Pn	**Pn**	**22 00 33.6**	**+1.0**
	comp=N,0.5nm,0.3s,baz=92,slow=17,SNR=6.4						
PETK				Sn	**Sn**	**22 02 29.9**	**-4.0**
	comp=N,1.0nm,0.3s,baz=44,slow=30,SNR=5.7						
GAMB	**Gambell**	**13.59**	**24**	*e*Pn	**Pn**	**22 01 09.5**	**+1.8**
	comp=N,18nm,0.9s						
TNA	**Tin City**	**16.00**	**25**	*e*Pn	**P**	**22 01 42.1**	**+0.4**
	comp=N,13nm,0.9s						
SEY	**Seymchan**	**16.55**	**321**	*i* P	**P**	**22 01 48.9**	**+1.1**
BILL	**Bilibino**	**16.77**	**348**	*i* P	**P**	**22 01 52.2**	**+2.0**
BILL				pmax	pmax		
	comp=Z,18nm,1.5s						
BILL				MLR	MLR		
	comp=Z,200nm,15.0s						
BILL	**Bilibino**	**16.77**	**348**	*e*Pn	**P**	**22 01 51.6**	**+1.5**
	comp=Z,26nm,1.4s						
KDAK	**Kodiak Island**	**19.06**	**60**	P	**P**	**22 02 13.2**	**-2.3**
KDAK	**Kodiak Island**	**19.06**	**60**	P	**P**	**22 02 13.2**	**-2.3**
	comp=Z,2.8nm,0.3s,baz=282,slow=7.5,SNR=37						
SPU	**Mount Spurr**	**19.84**	**50**	*e*P	**P**	**22 02 25.0**	**+0.9**
SEW	**Seward**	**20.91**	**53**	*e*P	**P**	**22 02 36.2**	**+0.6**
	comp=Z,215nm,1.9s						
TRF	**Thorofare Moun**	**21.23**	**44**	*e*P	**P**	**22 02 39.5**	**+0.3**
	comp=Z,21nm,1.0s						
SML	**Sawmill**	**21.72**	**49**	*e*P	**P**	**22 02 43.8**	**-0.4**
SML				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SML	**Sawmill**	**21.72**	**49**	*e*P	**P**	**22 02 43.8**	**-0.4**
	comp=Z,9.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**21.84**	**270**	*e*P	**P**	**22 02 50.0**	**+4.4**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
MCK	**McKinley**	**21.89**	**44**	*e*P	**P**	**22 02 45.6**	**-0.4**
MCK				pmax	pmax		
	comp=Z,18nm,1.2s						
MCK	**McKinley**	**21.89**	**44**	*e*P	**P**	**22 02 45.6**	**-0.4**
	comp=Z,18nm,1.2s						
ILAR	**Eielson Array**	**23.04**	**42**	P	**P**	**22 02 56.5**	**-1.6**
ILAR				PcP	**PcP**	**22 06 44.6**	**-0.7**
ILAR	**Eielson Array**	**23.04**	**42**	P	**P**	**22 02 56.5**	**-1.6**
	comp=Z,3.4nm,0.8s,baz=246,slow=8.8,SNR=26						
ILAR				PcP	**PcP**	**22 06 44.6**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=299,slow=3.6,SNR=6.3						
ILAR				LR	LR	22 12 25.0	
	comp=Z,340nm,18.4s,baz=176,slow=38						
PAX	**Paxson**	**23.24**	**47**	*e*P	**P**	**22 02 59.6**	**-0.6**
PAX				pmax	pmax		
	comp=Z,27nm,1.2s						
PAX	**Paxson**	**23.24**	**47**	*e*P	**P**	**22 02 59.6**	**-0.6**
	comp=Z,27nm,1.2s						
ASAJ	**Asahikawa**	**23.30**	**263**	*e*P	**P**	**22 03 02.6**	**+1.8**
	comp=Z,10nm,1.1s						
ASAJ	**Asahikawa**	**23.30**	**263**	P	**P**	**22 03 01.2**	**+0.5**
	comp=Z,15nm,0.9s,baz=80,slow=11,SNR=7.7						
BMRM	**Bremner River**	**23.39**	**52**	*e*P	**P**	**22 03 00.5**	**-1.1**
DOT	**Dot Lake**	**23.99**	**45**	*e*P	**P**	**22 03 04.9**	**-2.2**
	comp=Z,22nm,0.9s						
ERM	**Erimo**	**24.11**	**259**	*i* P	**P**	**22 03 08.8**	**+0.5**
EGAK	**Eagle**	**25.43**	**43**	*e*P	**P**	**22 03 18.9**	**-1.2**
	comp=Z,305nm,1.2s						
YAK	**Yakutsk**	**26.43**	**310**	*e*P	**P**	**22 03 28.2**	**-0.9**
YAK				pmax	pmax		
	comp=Z,62nm,1.0s						
YAK				pmax	pmax		
	comp=E,27nm,1.3s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK	**Yakutsk**	**26.43**	**310**	*e*P	**P**	**22 03 29.0**	**-0.1**
	comp=N,60nm,0.8s						
KLR	**Kul'dur**	**27.69**	**282**	*e*P	**P**	**22 03 36.8**	**-3.8**
TIXI	**Tiksi**	**28.45**	**331**	*i* P	**P**	**22 03 46.8**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TIXI				MLR	MLR		
	comp=Z,394nm,27.0s						
INK	**Inuvik**	**29.01**	**36**	P	**P**	**22 03 51.5**	**-0.6**
INK				PcP	**PcP**	**22 06 57.9**	**-1.1**
INK	**Inuvik**	**29.01**	**36**	P	**P**	**22 03 51.5**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=271,slow=7.7,SNR=13						
INK				PcP	**PcP**	**22 06 57.9**	**-1.1**
	comp=Z,2.2nm,1.0s,baz=227,slow=3.2,SNR=3.7						
INK				LR	LR	22 15 59.3	
	comp=Z,194nm,19.4s,baz=161,slow=38						
USRK	**Ussuriysk Arra**	**29.80**	**272**	P	**P**	**22 03 59.0**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=58,slow=10,SNR=9.1						
USRK				PcP	**PcP**	**22 07 01.6**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=119,slow=2.4,SNR=6.5						
USRK				LR	LR	22 15 10.7	
	comp=Z,104nm,19.7s,baz=9.1,slow=35						
MJAR	**Matsushiro Arr**	**30.53**	**255**	P	**P**	**22 04 06.7**	**+0.8**
MJAR	**Matsushiro Arr**	**30.53**	**255**	P	**P**	**22 04 06.7**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=56,slow=6.3,SNR=6.4						
DLBC	**Dease Lake**	**30.91**	**56**	P	**P**	**22 04 08.4**	**-0.7**
DLBC	**Dease Lake**	**30.91**	**56**	P	**P**	**22 04 08.4**	**-0.7**
	comp=Z,4.5nm,0.8s,baz=292,slow=12,SNR=6.1						
DLBC				LR	LR	22 15 49.7	
	comp=Z,249nm,18.9s,baz=322,slow=35						
MDJ	**Mudanjiang**	**31.07**	**275**	P	**P**	**22 04 10.3**	**-0.3**
MDJ				pP	**pP**	**22 04 23.2**	**-1.5**
MDJ				sP	**sP**	**22 04 29.3**	**-2.0**
MDJ				S	**S**	**22 09 10.4**	**-1.3**
MDJ				sS	**sS**	**22 09 33.0**	**-2.6**
MDJ				ScP	**ScP**	**22 10 44.9**	**+2.3**
MDJ				PcS	**PcS**	**22 10 50.5**	**+1.7**
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,19nm,2.7s						
CN2	**Changchun**	**34.05**	**276**	*e*P	**P**	**22 04 36.4**	**-0.2**
CN2				*e*S	**S**	**22 09 59.7**	**+1.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,14.0s						
CN2				LR	LR		
	comp=E,200nm,14.0s						
CN2				LR	LR		
	comp=Z,200nm,19.0s						
KSRS	**Korea Array**	**36.20**	**266**	P	**P**	**22 04 56.9**	**+1.7**
	comp=Z,4.3nm,0.9s,baz=58,slow=8.2,SNR=17						
KSRS				LR	LR	22 18 16.2	
	comp=Z,58nm,20.9s,baz=242,slow=34						
KSAR	**Wonju Array Be**	**36.24**	**266**	P	**P**	**22 04 56.9**	**+1.4**
JNU	**Nakatsue**	**37.27**	**257**	*e*P	**P**	**22 05 05.8**	**+1.5**
	comp=Z,5.9nm,1.1s						
JNU	**Nakatsue**	**37.27**	**257**	P	**P**	**22 05 05.3**	**+1.0**
	comp=Z,8.9nm,0.8s,baz=46,slow=9.0,SNR=8.9						
YKW3	**Yellowknife Ar**	**37.30**	**46**	*e*P	**P**	**22 05 03.4**	**-0.8**
	comp=Z,0.1nm,1.3s						
YKA	**Yellowknife Ar**	**37.33**	**46**	P	**P**	**22 05 03.8**	**-0.7**
YKA				PcP	**PcP**	**22 07 22.6**	**+0.2**
YKA	**Yellowknife Ar**	**37.33**	**46**	P	**P**	**22 05 03.7**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=287,slow=8.4,SNR=23						
YKA				PcP	**PcP**	**22 07 22.5**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=294,slow=3.3,SNR=6.6						
RES	**Resolute Bay**	**40.64**	**24**	*e*P	**P**	**22 05 31.6**	**-0.3**
	comp=Z,8.2nm,1.2s						
BJI	**Beijing**	**41.87**	**278**	P	**P**	**22 05 43.5**	**+1.0**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJI				LR	LR		
	comp=Z,57nm,18.7s						
NEW	**Newport**	**41.88**	**67**	P	**P**	**22 05 41.1**	**-1.4**
NEW	**Newport**	**41.88**	**67**	P	**P**	**22 05 41.1**	**-1.4**
	comp=Z,1.8nm,0.9s,baz=327,slow=9.0,SNR=3.5						
YBH	**Yreka Blue Hor**	**42.19**	**79**	P	**P**	**22 05 45.3**	**+0.1**
YBH	**Yreka Blue Hor**	**42.19**	**79**	P	**P**	**22 05 45.3**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=316,slow=7.7,SNR=6.8						
YBH				LR	LR	22 20 02.1	
	comp=Z,126nm,19.0s,baz=304,slow=32						
ULN	**Ulaanbaatar**	**42.88**	**293**	*e*P	**P**	**22 05 51.6**	**+0.8**
	comp=Z,5.7nm,0.8s						
ULN				*e*PcP	**PcP**	**22 07 40.4**	**-0.3**
SONM	**Songino Array**	**43.27**	**293**	P	**P**	**22 05 54.6**	**+0.7**
SONM				PcP	**PcP**	**22 07 42.5**	**+0.5**
SONM	**Songino Array**	**43.27**	**293**	P	**P**	**22 05 54.6**	**+0.7**
	comp=Z,5.9nm,0.6s,baz=61,slow=7.7,SNR=30						
SONM				PcP	**PcP**	**22 07 42.5**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=61,slow=2.7,SNR=5.8						
SONM				LR	LR	22 25 21.5	
	comp=Z,133nm,18.4s,baz=244,slow=38						
ZAK	**Zakamensk**	**43.66**	**298**	*i* P	**P**	**22 05 57.6**	**+0.6**
ZAK				*e*		22 07 43.6	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
HHC	**Hu-ho-hao-te**	**44.20**	**282**	*e*P	**P**	**22 05 59.1**	**-2.3**
HHC				pP	**pP**	**22 06 14.6**	**-1.4**
HHC				sP	**sP**	**22 06 21.8**	**-0.7**
HHC				S	**S**	**22 12 25.4**	**-5.2**
HHC				sS	**sS**	**22 12 53.0**	**-2.2**
HHC				SS	SS	22 15 36.0	-14
HHC				pmax	pmax		
	comp=Z,17nm,0.6s						
HHC				pmax	pmax		
	comp=Z,190nm,5.6s						
HHC				LR	LR		
	comp=N,260nm,19.0s						
HHC				LR	LR		
	comp=E,220nm,14.1s						
HHC				LR	LR		
	comp=Z,190nm,13.9s						
MOY	**Mondy**	**44.23**	**301**	*e*P	**P**	**22 06 02.1**	**+0.5**
FFC	**Flin Flon**	**46.56**	**52**	*i* P	**P**	**22 06 20.1**	**+0.3**
FFC	**Flin Flon**	**46.56**	**52**	*e*PcP	**PcP**	**22 07 53.2**	**+0.2**
NVAR	**Mina Array Bea**	**46.87**	**80**	P	**P**	**22 06 22.1**	**-0.6**
NVAR	**Mina Array Bea**	**46.87**	**80**	P	**P**	**22 06 22.1**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=298,slow=8.5,SNR=4.5						
WHN	**Wuhan**	**49.19**	**269**	P	**P**	**22 06 40.5**	**+0.1**
WHN				pmax	pmax		
	comp=Z,22nm,0.8s						
PDAR	**Pinedale Array**	**49.38**	**69**	P	**P**	**22 06 39.9**	**-2.1**
PDAR	**Pinedale Array**	**49.38**	**69**	P	**P**	**22 06 39.9**	**-2.1**
	comp=Z,1.0nm,0.8s,baz=304,slow=3.2,SNR=7.6						
SPITS	**Spitsbergen Ar**	**49.51**	**354**	P	**P**	**22 06 41.9**	**-0.4**
SPITS	**Spitsbergen Ar**	**49.51**	**354**	P	**P**	**22 06 41.9**	**-0.4**
	comp=Z,8.3nm,0.4s,baz=7.6,slow=5.9,SNR=52						
ZALV	**Zalesovo Beam**	**51.08**	**311**	P	**P**	**22 06 53.4**	**-1.0**
ZALV				*e*		22 08 10.1	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZALV				MLR	MLR		
	comp=Z,82nm,18.7s						
ZALV	**Zalesovo Beam**	**51.08**	**311**	P	**P**	**22 06 53.4**	**-1.0**
ZALV				PcP	**PcP**	**22 08 10.1**	**+0.7**
ZALV	**Zalesovo Beam**	**51.08**	**311**	P	**P**	**22 06 53.4**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=61,slow=5.7,SNR=7.8						
ZALV				PcP	**PcP**	**22 08 10.1**	**+0.7**
	comp=Z,2.4nm,0.8s,baz=36,slow=5.4,SNR=6.8						
ZALV				LR	LR	22 32 00.8	
	comp=Z,82nm,18.7s,baz=66,slow=40						
DAG	**Danmarks Havn**	**51.22**	**4**	*i* P	**P**	**22 06 53.9**	**-1.2**
DAG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DAG	**Danmarks Havn**	**51.22**	**4**	*i* P	**P**	**22 06 53.9**	**-1.2**
	comp=Z,4.1nm,0.7s						
NVS	**Novosibirsk**	**51.27**	**312**	*e*P	**P**	**22 06 53.8**	**-2.0**
NVS				pmax	pmax		
	comp=N,3.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LZH	**Lanzhou**	**51.90**	**282**	*e*P	P	22 07 10.0	+9.1
LZH				pP	pP	22 07 25.8	+10
LZH				sP	sP	22 07 33.0	+11
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
GTA	**Gaotai**	**52.12**	**288**	*e*P	**P**	**22 07 03.6**	**+1.0**
GTA				pP	**pP**	**22 07 19.1**	**+1.6**
GTA				sP	**sP**	**22 07 26.0**	**+2.1**
GTA				S	**S**	**22 14 23.4**	**+0.8**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,130nm,5.2s						
GTA				LR	LR		
	comp=N,100nm,9.3s						
GTA				LR	LR		
	comp=E,130nm,13.1s						
GTA				LR	LR		
	comp=Z,87nm,15.7s						
ULM	**Lac du Bonnet**	**52.20**	**54**	P	**P**	**22 07 01.8**	**-1.0**
ULM				PcP	**PcP**	**22 08 13.2**	**-0.5**
ULM	**Lac du Bonnet**	**52.20**	**54**	P	**P**	**22 07 01.8**	**-1.0**
	comp=Z,1.6nm,0.4s,baz=307,slow=5.9,SNR=5.1						
ULM				PcP	**PcP**	**22 08 13.2**	**-0.5**
	comp=Z,6.2nm,1.1s,baz=351,slow=4.5,SNR=4.0						
ULM				LR	LR	22 29 17.5	
	comp=Z,130nm,20.6s,baz=294,slow=36						
SUMG	**Summit**	**53.51**	**12**	*e*P	**P**	**22 07 12.5**	**-0.1**
SUMG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SUMG	**Summit**	**53.51**	**12**	*e*P	**P**	**22 07 12.5**	**-0.1**
	comp=Z,7.9nm,0.8s						
SUMG	**Summit**	**53.51**	**12**	*i* P	**P**	**22 07 13.0**	**+0.4**
	comp=Z,6.6nm,0.7s						
CD2	**Chengdu**	**55.47**	**277**	P	**P**	**22 07 28.2**	**+1.2**
CD2				pP	**pP**	**22 07 43.9**	**+1.8**
CD2				sP	**sP**	**22 07 50.8**	**+2.3**
CD2				PcP	**PcP**	**22 08 28.3**	**+1.8**
CD2				PP	**PP**	**22 09 33.7**	**+2.5**
CD2				PcS	**PcS**	**22 12 26.9**	**+0.1**
CD2				S	**S**	**22 15 05.5**	**-2.4**
CD2				sS	**sS**	**22 15 32.3**	**-0.9**
CD2				SS	**SS**	**22 18 50.1**	**-2.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.4s						
EYMN	**Ely**	**55.89**	**54**	*e*P	**P**	**22 07 28.7**	**-1.0**
	comp=Z,23nm,1.5s						
KURK	**Kurchatov**	**56.07**	**310**	*c* iP	**P**	**22 07 31.2**	**+0.2**
KURK				pmax	pmax		
	comp=Z,38nm,1.1s						
KURK	**Kurchatov**	**56.07**	**310**	*e*P	**P**	**22 07 31.1**	**+0.2**
	comp=Z,26nm,0.9s						
WMQ	**Urumqi**	**56.09**	**299**	P	**P**	**22 07 32.0**	**+0.7**
WMQ				pP	**pP**	**22 07 48.0**	**+1.7**
WMQ				sP	**sP**	**22 07 55.0**	**+2.3**
WMQ				PcP	**PcP**	**22 08 30.0**	**+1.2**
WMQ				PP	**PP**	**22 09 39.0**	**+2.6**
WMQ				ScP	**ScP**	**22 12 22.0**	**-0.8**
WMQ				S	**S**	**22 15 14.0**	**-1.8**
WMQ				ScS	**ScS**	**22 17 12.0**	**-3.2**
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,64nm,5.0s						
WMQ				LR	LR		
	comp=N,190nm,16.0s						

comp=Z,10.0nm,0.8s
ARCES **ARCESS Array B** 56.87 348 P **P** 22 07 36.2 -0.2
ARCES **ARCESS Array B** 56.87 348 P **P** 22 07 36.2 -0.2
comp=Z,4.6nm,0.8s,baz=20,slow=9.4,SNR=24
ARCES LR LR 22 30 49.5
comp=Z,102nm,21.8s,baz=45,slow=35
MK31 Makanchi Array 56.92 305 *eP* **P** **22 07 36.3 -0.8**
MK31 Makanchi Array 56.92 305 *eP* **P** **22 07 36.3 -0.8**
MKAR Makanchi Array 56.92 305 *eP* **P** **22 07 36.5 -0.6**
MKAR Makanchi Array 56.92 305 *eP* **P** **22 07 36.5 -0.6**
MKAR Makanchi Array 56.92 305 P **P** **22 07 36.4 -0.6**
comp=Z,4.0nm,0.4s,baz=55,slow=6.4,SNR=94
MKAR LR LR 22 32 59.9
comp=Z,135nm,20.4s,baz=35,slow=37
BVAR Borovoye Array 58.16 317 P **P** **22 07 45.7 0.0**
BVAR pmax pmax
comp=Z,8.0nm,0.6s
BVAR Borovoye Array 58.16 317 P **P** **22 07 45.7 0.0**
BVAR Borovoye Array 58.16 317 P **P** **22 07 45.7 0.0**
comp=Z,7.8nm,0.6s,baz=53,slow=6.4,SNR=62
BRVK Borovoye 58.18 317 *c iP* **P** **22 07 45.8 0.0**
BRVK pmax pmax
comp=Z,9.0nm,0.6s
BRVK MLR MLR
comp=Z,125nm,18.0s
BRVK Borovoye 58.18 317 *eP* **P** **22 07 45.8 0.0**
comp=Z,10.0nm,0.7s
SVE Sverdlovsk 59.18 325 ⇑*iP* **P** **22 07 54.4 +1.7**
SVE pmax pmax
comp=Z,20nm,1.1s
ARU Arti 60.23 325 *d iP* **P** **22 08 00.4 +0.5**
ARU 22 10 09.5
ARU S **S** **22 16 10.9 +1.7**
ARU pmax pmax
comp=Z,21nm,1.0s
ARU Arti 60.23 325 *eP* **P** **22 08 00.3 +0.5**
comp=Z,19nm,1.0s
KMI Kunming 60.23 273 P **P** **22 08 01.9 +1.2**
KMI pP **pP** **22 08 18.5 +2.6**
KMI sP **sP** **22 08 24.9 +2.7**
KMI PP **PP** **22 10 14.1 +0.4**
KMI S **S** **22 16 08.0 -2.5**
KMI sS **sS** **22 16 34.3 -1.8**
KMI pmax pmax
comp=Z,7.0nm,1.1s
KMI pmax pmax
comp=Z,160nm,5.3s
KMI LR LR
comp=N,120nm,18.6s
KMI LR LR
comp=E,65nm,18.1s
KMI LR LR
comp=Z,76nm,22.1s
SCHQ Schefferville 61.62 36 *eP* **P** **22 08 08.9 -0.5**
SCHQ Schefferville 61.62 36 P **P** **22 08 08.1 -1.3**
comp=Z,9.0nm,0.8s,baz=300,slow=8.7,SNR=16
TXAR Lajitas Array 61.94 78 P **P** **22 08 10.3 -1.7**
TXAR Lajitas Array 61.94 78 P **P** **22 08 10.3 -1.7**
comp=Z,0.4nm,0.3s,baz=334,slow=8.0,SNR=4.5
JOF Joensuu 62.08 342 *eP* **P** **22 08 12.2 -0.1**
JOF pmax pmax
comp=Z,6.0nm,0.6s
JOF Joensuu 62.08 342 *ep* **P** **22 08 12.2 -0.1**
comp=Z,5.8nm,0.6s
TKM2 Tokmak 2 63.03 306 *eP* **P** **22 08 19.8 +0.6**
TKM2 *e* 22 08 57.3
TKM2 pmax pmax
comp=Z,4.0nm,0.8s
TKM2 Tokmak 2 63.03 306 *eP* **P** **22 08 19.8 +0.6**
comp=Z,4.5nm,0.8s
TKM2 *eP*cP **PcP** **22 08 57.3 +0.7**
KAF Kangasniemi 63.71 344 *eP* **P** **22 08 22.0 -1.1**
KAF pmax pmax
comp=Z,5.0nm,0.6s
KAF Kangasniemi 63.71 344 *ep* **P** **22 08 22.0 -1.1**
comp=Z,5.2nm,0.6s
AAK Ala-Archa 63.79 306 ⇑*eP* **P** **22 08 24.8 +0.6**
AAK pmax pmax
comp=Z,17nm,1.3s
AAK MLR MLR
comp=Z,249nm,23.0s
AAK Ala-Archa 63.79 306 *eP* **P** **22 08 24.9 +0.6**
comp=Z,1.4nm,1.0s
EKS2 Erkin-Say 64.12 307 *eP* **P** **22 08 26.9 +0.5**
EKS2 pmax pmax
comp=Z,8.0nm,1.0s
EKS2 Erkin-Say 64.12 307 *eP* **P** **22 08 26.9 +0.5**
comp=Z,8.5nm,1.0s
SADO Sadowa 64.17 50 LR LR 22 36 42.1
comp=Z,106nm,18.6s,baz=274,slow=36
FINES FINESS Array B 64.38 344 P **P** **22 08 27.0 -0.5**
FINES FINESS Array B 64.38 344 P **P** **22 08 27.0 -0.5**
comp=Z,5.6nm,0.7s,baz=32,slow=8.2,SNR=19
FINES LR LR 22 38 22.0
comp=Z,55nm,21.0s,baz=347,slow=38
ABKAR Akbulak array 65.32 319 *eP* **P** **22 08 34.2 +0.3**
comp=Z,6.3nm,0.6s
KSH Kashi 65.33 303 ⇑*iP* P 22 08 37.8 +3.5
KSH pP pP 22 08 54.2 +4.5
KSH sP sP 22 09 02.1 +6.1
KSH PcP **PcP** **22 09 09.4 +3.3**
KSH PP PP 22 11 04.6 +6.5
KSH ScP 22 13 05.6
KSH PcS 22 13 12.3
KSH S **S** **22 17 16.3 +2.4**
KSH sS sS 22 17 43.6 +3.8
KSH ScS **SKKSac** **22 18 24.6 +0.1**
KSH SS **SS** **22 21 31.5 +4.6**
KSH pmax pmax
comp=Z,21nm,0.9s
KSH LR LR
comp=N,150nm,5.3s
KSH LR LR
comp=E,130nm,4.5s
KKAR Karatay Array 65.39 309 *eP* **P** **22 08 34.5 0.0**
KKAR Karatay Array 65.39 309 *eP* **P** **22 08 34.5 0.0**
NB2 NORSAR Subarra 66.67 352 P **P** **22 08 42.2 -0.2**
comp=Z,12nm,0.8s,baz=11,slow=6.5
NOA NORSAR Array B 66.67 352 P **P** **22 08 42.4 0.0**
NOA NORSAR Array B 66.67 352 P **P** **22 08 42.4 0.0**
comp=Z,9.5nm,0.8s,baz=11,slow=6.4,SNR=43
NOA LR LR 22 37 17.9
comp=Z,57nm,21.8s,baz=60,slow=35
CHTO Chiang Mai 67.26 272 *eP* **P** **22 08 47.5 +0.8**
CHTO Chiang Mai 67.26 272 *eP* **P** **22 08 47.5 +0.8**
CMAR Chiang Mai Arr 67.53 271 P **P** **22 08 48.5 +0.1**
CMAR Chiang Mai Arr 67.53 271 P **P** **22 08 48.5 +0.1**
comp=Z,1.8nm,0.8s,baz=29,slow=6.8,SNR=18
CMAR LR LR 22 41 40.2
comp=Z,41nm,20.3s,baz=45,slow=39
TAPN Taplejung 67.75 286 *eP* **P** **22 08 50.5 +0.4**
comp=Z,39nm,1.0s
OBN Obninsk 68.02 336 *eP* **P** **22 08 51.6 +0.7**
OBN pmax pmax
comp=Z,16nm,1.6s
ODAN Odare 68.30 286 *eP* **P** **22 08 54.2 +0.7**
comp=Z,17nm,1.0s
GUN Gumba 68.41 288 *eP* **P** **22 08 54.9 +0.6**
comp=Z,47nm,0.7s
RAMN Ramite 68.70 287 *eP* **P** **22 08 56.2 +0.2**
comp=Z,55nm,0.8s
KKN Kakani 68.86 288 *eP* **P** **22 08 57.5 +0.6**
comp=Z,18nm,0.6s
PKI Pulchoki 68.94 288 *eP* **P** **22 08 58.0 +0.4**
comp=Z,55nm,1.0s
DANN Dangsing 69.33 290 *eP* **P** **22 09 00.3 +0.4**
comp=Z,37nm,0.9s
KOLN Koldanda 69.86 289 *eP* **P** **22 09 03.2 +0.2**
comp=Z,15nm,0.8s
PYUN Piuthan 69.96 290 *eP* **P** **22 09 03.9 +0.2**
comp=Z,43nm,0.9s
VRHR Novokhopersk 70.22 331 *eP* **P** **22 09 04.4 -0.2**
VRHR *e**PP **pP** **22 09 15.3 -4.8**
VRHR pmax pmax
comp=Z,9.0nm,0.9s
VRHR pmax pmax
comp=N,3.0nm,0.4s
VRHR pmax pmax
comp=E,7.0nm,0.9s
VSR Storozhevoye 70.83 333 *eP* **P** **22 09 09.0 +0.7**
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,7.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s
VORD Divnogorie 71.02 333 *eP* **P** **22 09 09.9 +0.5**
VORD pmax pmax
comp=Z,7.0nm,1.0s
VORD pmax pmax
comp=N,2.0nm,0.5s
VORD pmax pmax
comp=E,4.0nm,1.0s
KBL Kabul 72.70 304 *eP* **P** **22 09 19.1 -1.1**
KBL pmax pmax
comp=Z,9.0nm,0.7s
KBL Kabul 72.70 304 *eP* **P** **22 09 19.1 -1.1**
comp=Z,9.5nm,0.7s
PMOR Pomariorio Ree 73.80 143 *eT* T 23 29 45.0
comp=Z,50nm,0.2s
AKASG Malin Array Be 73.84 339 P **P** **22 09 26.4 +0.1**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 73.84 339 P **P** **22 09 26.4 +0.1**
AKASG Malin Array Be 73.84 339 P **P** **22 09 26.4 +0.1**
comp=Z,2.0nm,0.4s,baz=24,slow=6.0,SNR=7.5
DZM Mont Dzumac 74.15 189 *eLR* LR 22 32 19.4
comp=Z,196nm,25.1s
DZM Mont Dzumac 74.15 189 LR LR 22 37 49.2
comp=Z,98nm,18.5s,baz=187,slow=32
PPT Papeete 75.56 146 LR LR 22 39 34.6
comp=Z,33nm,18.2s,baz=345,slow=33
PPT2 Papeete2 75.58 146 *eLR* LR 22 33 00.7
comp=Z,114nm,22.0s
PPT2 *eT* T 23 31 59.8
comp=Z,2.2nm,0.2s
CLL Collm 76.07 349 *eP* P 22 09 45.0 +5.9
KIV Kislovodsk 76.19 327 *c iP* **P** **22 09 41.3 +1.2**
KIV *i* 22 09 51.2
KIV pmax pmax
comp=Z,7.0nm,0.8s
KIV Kislovodsk 76.19 327 *eP* **P** **22 09 41.4 +1.2**
comp=Z,8.5nm,0.9s
CTA Charters Tower 76.20 208 LR LR 22 39 05.4
comp=Z,80nm,20.3s,baz=53,slow=32
KWP Kalwaria Pacla 76.21 342 ⇑P **P** **22 09 41.3 +1.3**
KWP Kalwaria Pacla 76.21 342 *eP* **P** **22 09 41.3 +1.3**
comp=Z,24nm,1.0s
KWP Kalwaria Pacla 76.21 342 ⇑*iP* **P** **22 09 41.3 +1.3**
KWP Kalwaria Pacla 76.21 342 *eP* **P** **22 09 41.7 +1.7**
KBZ Khabaz 76.32 327 P **P** **22 09 42.0 +1.4**
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KBZ MLR MLR
comp=Z,57nm,20.6s
KBZ Khabaz 76.32 327 P **P** **22 09 42.0 +1.4**
KBZ Khabaz 76.32 327 P **P** **22 09 42.0 +1.4**
comp=Z,6.9nm,0.8s,baz=352,slow=3.3,SNR=15
KBZ LR LR 22 50 06.4
comp=Z,57nm,20.6s,baz=210,slow=41
MEH Mehetia 76.38 145 *eT* T 23 32 58.8
comp=Z,57nm,0.3s
BRG Berggiesshubel 76.38 348 *eP* **P** **22 09 40.8 -0.1**
comp=Z,3.9nm,1.2s
BRG Berggiesshubel 76.38 348 *eP* **P** **22 09 40.8 -0.1**
BRG pmax pmax
comp=Z,4.0nm,1.2s
DPC Dobruska-Polom 76.57 347 *eP* **P** **22 09 43.3 +1.2**
DPC Dobruska-Polom 76.57 347 *eP* **P** **22 09 42.6 +0.5**
comp=Z,5.1nm,1.0s
DPC Dobruska-Polom 76.57 347 *eP* **P** **22 09 43.3 +1.2**
OKC Ostrava-Krasne 76.80 345 *eP* **P** **22 09 44.2 +0.9**
OKC Ostrava-Krasne 76.80 345 *eP* **P** **22 09 44.2 +0.9**
ZEI Tsey 76.82 326 *eP* **P** **22 09 44.2 +0.4**
ZEI pmax pmax
comp=Z,17nm,0.9s
KOLS Kolonicke sedl 76.96 342 *eP* **P** **22 09 45.4 +1.2**
ANN Anapa 77.11 331 *eP* **P** **22 09 43.7 -1.4**
ANN *e**PP **pP** **22 09 59.5 -1.3**
ANN *eS* **S** **22 19 26.4 -3.0**
ANN pmax pmax
comp=Z,35nm,1.1s
ONI Oni 77.14 326 P P 22 09 48.6 +3.2
CRVS Cervenica-Dubn 77.14 343 *eP* **P** **22 09 46.2 +1.0**
CRVS *eP*CP **PcP** **22 09 57.8 +1.9**
PRU Pruhonice 77.17 348 *eP* **P** **22 09 46.6 +1.2**
PRU Pruhonice 77.17 348 *eP* **P** **22 09 46.6 +1.2**
TBLG Delisi 77.44 325 *eP* **P** **22 09 48.1 +1.1**
TBLG Delisi 77.44 325 P **P** **22 09 48.2 +1.1**
DGRG David-gareji 77.45 324 P **P** **22 09 48.9 +1.7**
VRAC Vranov 77.55 346 ⇑*iP* **P** **22 09 49.2 +1.7**
BUR08 Bucovina Ar. S 77.61 340 *eP* **P** **22 09 48.8 +0.8**
BURAR Bucovina Array 77.63 340 ⇓*iP* **P** **22 09 49.1 +1.0**
VYHS Vyhne 77.99 344 *eP* **P** **22 09 49.9 -0.1**
GIVF Givet 78.02 354 *eP* **P** **22 09 50.5 +0.4**
GIVF Givet 78.02 354 *eP* **P** **22 09 50.5 +0.4**
GIVF Givet 78.02 354 *eP* **P** **22 09 50.5 +0.4**
BAIF Baives 78.10 354 *eP* **P** **22 09 51.2 +0.7**
comp=Z,15nm,1.1s
BAIF Baives 78.10 354 *eP* **P** **22 09 51.2 +0.7**
BAIF pmax pmax
comp=Z,15nm,1.1s
BAIF Baives 78.10 354 *eP* **P** **22 09 51.2 +0.7**
comp=Z,15nm,1.1s
KHC Kasperske Hory 78.14 348 *eP* **P** **22 09 51.9 +1.1**
KHC Kasperske Hory 78.14 348 *eP* **P** **22 09 51.9 +1.1**
GERES GERESS Array B 78.40 348 P **P** **22 09 52.4 0.0**
GERES GERESS Array B 78.40 348 P **P** **22 09 52.4 0.0**
comp=Z,0.8nm,0.9s,baz=17,slow=7.2,SNR=6.6
DRGR 78.93 341 ⇑P **P** **22 09 56.3 +1.0**
DRGR 78.93 341 ⇑*iP* **P** **22 09 56.3 +1.0**
CFR Carcaliu 79.28 337 ⇓P **P** **22 09 57.4 +0.3**
CFR Carcaliu 79.28 337 ⇓*iP* **P** **22 09 57.4 +0.3**
PAGF Fort de Pagny 79.50 353 *eP* **P** **22 09 59.1 +0.8**
comp=Z,4.7nm,0.9s
PAGF Fort de Pagny 79.50 353 *eP* **P** **22 09 59.1 +0.8**
comp=Z,4.7nm,0.9s
CDF Champ du Feu 79.52 352 *eP* **P** **22 09 58.7 +0.2**
CDF Champ du Feu 79.52 352 *eP* **P** **22 09 58.7 +0.2**
CDF Champ du Feu 79.52 352 *eP* **P** **22 09 58.7 +0.2**
MEZF Maizieres J'vi 79.60 354 *eP* **P** **22 09 59.4 +0.6**
MEZF Maizieres J'vi 79.60 354 *eP* **P** **22 09 59.4 +0.6**
FLN La Foliniere 79.61 357 *eP* **P** **22 09 59.0 +0.2**
comp=Z,28nm,1.0s
FLN *eR*
comp=Z,41nm,17.2s
FLN La Foliniere 79.61 357 *eP* **P** **22 09 59.0 +0.2**
FLN pmax pmax
comp=Z,28nm,1.0s
FLN La Foliniere 79.61 357 *eP* **P** **22 09 59.0 +0.2**
comp=Z,28nm,1.0s
LDF La Druitiere 79.77 357 *eP* **P** **22 09 59.7 0.0**
comp=Z,31nm,1.1s
LDF La Druitiere 79.77 357 *eP* **P** **22 09 59.7 0.0**
LDF pmax pmax
comp=Z,31nm,1.1s
LDF La Druitiere 79.77 357 *eP* **P** **22 09 59.7 0.0**
comp=Z,31nm,1.1s
ARR Arges 79.89 340 ⇑*iP* **P** **22 10 00.9 +0.4**
SFTF Sexfontaines 79.90 354 *eP* **P** **22 10 00.9 +0.5**
comp=Z,20nm,0.9s
SFTF Sexfontaines 79.90 354 *eP* **P** **22 10 00.9 +0.5**
comp=Z,20nm,0.9s
GRR Gorron 79.99 358 *eP* **P** **22 10 01.1 +0.2**
comp=Z,18nm,0.9s
GRR Gorron 79.99 358 *eP* **P** **22 10 01.1 +0.2**
GRR pmax pmax
comp=Z,18nm,0.9s
GRR Gorron 79.99 358 *eP* **P** **22 10 01.1 +0.2**
comp=Z,18nm,0.9s
HAU Haudompre 80.00 353 *eP* **P** **22 10 01.4 +0.4**
comp=Z,8.3nm,1.0s
HAU *eR*
comp=Z,73nm,21.5s
HAU Haudompre 80.00 353 *eP* **P** **22 10 01.4 +0.4**
HAU pmax pmax
comp=Z,8.0nm,1.0s
HAU Haudompre 80.00 353 *eP* **P** **22 10 01.4 +0.4**
comp=Z,8.3nm,1.0s
ROSF Rostrenen 80.08 359 *eP* **P** **22 10 01.8 +0.4**
ROSF Rostrenen 80.08 359 *eP* **P** **22 10 01.8 +0.4**
ROSF Rostrenen 80.08 359 *eP* **P** **22 10 01.8 +0.4**
HINF Hinteralfeld 80.15 352 *eP* **P** **22 10 01.9 +0.1**
HINF Hinteralfeld 80.15 352 *eP* **P** **22 10 01.9 +0.1**
HINF Hinteralfeld 80.15 352 *eP* **P** **22 10 01.9 +0.1**
SGMF Saint Gilles 80.16 359 *eP* **P** **22 10 02.2 +0.4**
SGMF Saint Gilles 80.16 359 *eP* **P** **22 10 02.2 +0.4**
SGMF Saint Gilles 80.16 359 *eP* **P** **22 10 02.2 +0.4**
WRA Warramunga Arr 80.16 219 P **P** **22 10 00.8 -1.2**
WRA Warramunga Arr 80.16 219 P **P** **22 10 00.8 -1.2**
comp=Z,1.5nm,0.8s,baz=32,slow=6.4,SNR=8.8
PKSM Moragy 80.23 344 ⇑P **P** **22 10 02.9 +0.7**
PKSM Moragy 80.23 344 ⇑*iP* **P** **22 10 02.9 +0.7**
GZR Gura Zlata 80.25 341 ⇓P **P** **22 10 03.8 +1.3**
GZR Gura Zlata 80.25 341 ⇓*iP* **P** **22 10 03.8 +1.3**
GROS Grobnik 80.49 346 *i* P **P** **22 10 04.7 +0.9**
QUIF Quistinic 80.50 359 *eP* **P** **22 10 04.4 +0.8**
QUIF Quistinic 80.50 359 *eP* **P** **22 10 04.4 +0.8**
QUIF Quistinic 80.50 359 *eP* **P** **22 10 04.4 +0.8**
LOR Lormes 80.91 354 *eP* **P** **22 10 06.2 +0.3**
comp=Z,9.0nm,1.0s
LOR *eR*
comp=Z,54nm,22.5s
LOR Lormes 80.91 354 *eP* **P** **22 10 06.2 +0.3**
comp=Z,9.0nm,1.0s
TBI Tubuai 80.97 148 *e*LR LR 22 35 30.6
comp=Z,120nm,25.2s
FUORN Ofenpass-Fuorn 81.01 350 *eP* **P** **22 10 08.1 +1.4**
comp=Z,66nm,2.8s
GCIS Gornji Cirnik 81.05 346 *eP* **P** **22 10 07.5 +0.9**
SSF Saint Saulge 81.13 355 *eP* **P** **22 10 07.4 +0.3**
comp=Z,8.7nm,0.9s
SSF Saint Saulge 81.13 355 *eP* **P** **22 10 07.4 +0.3**
SSF pmax pmax
comp=Z,9.0nm,0.9s
SSF Saint Saulge 81.13 355 *eP* **P** **22 10 07.4 +0.3**
comp=Z,8.7nm,0.9s
AVF Avril sur Loir 81.41 355 *eP* **P** **22 10 08.9 +0.4**
comp=Z,24nm,1.3s
AVF Avril sur Loir 81.41 355 *eP* **P** **22 10 08.9 +0.4**
AVF pmax pmax
comp=Z,24nm,1.3s
AVF Avril sur Loir 81.41 355 *eP* **P** **22 10 08.9 +0.4**
comp=Z,24nm,1.3s
SMF Signal de Mont 81.53 354 *eP* **P** **22 10 08.8 -0.4**
comp=Z,12nm,0.9s
SMF Signal de Mont 81.53 354 *eP* **P** **22 10 08.8 -0.4**
SMF pmax pmax
comp=Z,12nm,0.9s
SMF Signal de Mont 81.53 354 *eP* **P** **22 10 08.8 -0.4**
comp=Z,12nm,0.9s
TCF Toulx Ste Croi 81.97 355 *eP* **P** **22 10 12.0 +0.4**
comp=Z,32nm,1.4s
TCF Toulx Ste Croi 81.97 355 *eP* **P** **22 10 12.0 +0.4**
TCF pmax pmax
comp=Z,32nm,1.4s
TCF Toulx Ste Croi 81.97 355 *eP* **P** **22 10 12.0 +0.4**
comp=Z,32nm,1.4s
FITZ Fitzroy Crossi 82.20 227 P **P** **22 10 12.2 -0.7**
FITZ Fitzroy Crossi 82.20 227 P **P** **22 10 12.2 -0.7**
comp=Z,3.9nm,0.9s,baz=23,slow=4.4,SNR=7.5
LPL La Plagne 82.44 352 *eP* **P** **22 10 15.6 +1.3**
LPL La Plagne 82.44 352 *eP* **P** **22 10 15.6 +1.3**
LPL La Plagne 82.44 352 *eP* **P** **22 10 15.6 +1.3**
LPG La Plagne 82.46 352 *eP* **P** **22 10 14.3 -0.1**
LPG La Plagne 82.46 352 *eP* **P** **22 10 14.3 -0.1**
LPG La Plagne 82.46 352 *eP* **P** **22 10 14.3 -0.1**
MALT Malatya 82.67 327 ⇑P **P** **22 10 17.5 +2.1**
MALT Malatya 82.67 327 ⇑*iP* **P** **22 10 17.5 +2.1**
BR131 Keskin Array S 82.89 331 *eP* **P** **22 10 16.7 +0.1**
comp=Z,1.9nm,0.7s
BRTR Keskin Array B 82.89 331 P **P** **22 10 17.1 +0.5**
BRTR Keskin Array B 82.89 331 P **P** **22 10 17.1 +0.5**
comp=Z,3.7nm,0.7s,baz=28,slow=5.7,SNR=15
BRTR LR LR 22 53 30.1
comp=Z,39nm,19.3s,baz=184,slow=40
ORIF Oris-en-Rattie 83.10 353 *eP* **P** **22 10 18.8 +1.3**
comp=Z,18nm,0.9s
ORIF *eR*
comp=Z,97nm,21.0s
ORIF Oris-en-Rattie 83.10 353 *eP* **P** **22 10 18.8 +1.3**
ORIF pmax pmax
comp=Z,18nm,0.9s
ORIF Oris-en-Rattie 83.10 353 *eP* **P** **22 10 18.8 +1.3**
comp=Z,18nm,0.9s
MBDF Montbardon 83.22 352 *eP* **P** **22 10 18.5 +0.3**
comp=Z,13nm,0.9s
MBDF Montbardon 83.22 352 *eP* **P** **22 10 18.5 +0.3**
MBDF pmax pmax
comp=Z,13nm,0.9s
MBDF Montbardon 83.22 352 *eP* **P** **22 10 18.5 +0.3**
comp=Z,13nm,0.9s
CAF Calviac 83.34 355 *eP* **P** **22 10 19.5 +0.8**
CAF Calviac 83.34 355 *eP* **P** **22 10 19.5 +0.8**
CAF Calviac 83.34 355 *eP* **P** **22 10 19.5 +0.8**
ASAR Alice Springs 83.70 218 P **P** **22 10 20.1 -0.5**
ASAR Alice Springs 83.70 218 P **P** **22 10 20.1 -0.5**
comp=Z,1.0nm,0.8s,baz=15,slow=5.3,SNR=11
MTLF Montolieu 84.91 355 *eP* **P** **22 10 26.8 +0.1**
comp=Z,6.1nm,0.7s
MTLF Montolieu 84.91 355 *eP* **P** **22 10 26.8 +0.1**
MTLF pmax pmax
comp=Z,6.0nm,0.7s
MTLF Montolieu 84.91 355 *eP* **P** **22 10 26.8 +0.1**
comp=Z,6.1nm,0.7s
STKA Stephens Creek 88.66 208 LR LR 22 51 08.3
comp=Z,84nm,19.4s,baz=206,slow=36
BDFB Brasilia 129.92 60 PKP **PKPdf** **22 17 01.6 +0.1**
BDFB Brasilia 129.92 60 PKP **PKPdf** **22 17 01.6 +0.1**
comp=Z,0.8nm,0.4s,baz=356,slow=6.4,SNR=3.4
PLCA Paso Flores 134.45 103 PKP **PKPdf** **22 17 09.0 -0.2**
PLCA Paso Flores 134.45 103 PKP **PKPdf** **22 17 09.0 -0.2**
comp=Z,1.6nm,0.7s,baz=271,slow=2.4,SNR=3.8
BOSA Boshof 147.92 305 PKPbc **PKPbc** **22 17 36.2 -0.6**
BOSA Boshof 147.92 305 PKPbc **PKPbc** **22 17 36.2 -0.6**
comp=Z,3.4nm,0.8s,baz=39,slow=4.0,SNR=7.2

CASC 11 22:04:24.7±2.5, 14°35N×90°49W, h2km±6km, MD3.7, ML3.6, Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.12**	**292**	*eP*			Pg	22 04 28.9	+1.4
IXG	**Ixpaco**	**0.18**	**169**	*eP*			Pg	22 04 29.5	+1.2
GCG	**Guatemala City**	**0.24**	**350**	*eP*			Pg	22 04 30.7	+1.1
GCG				*eS*			Sg	22 04 34.8	+1.8
NBG	**Las Nubes**	**0.28**	**30**	*eP*			Pg	22 04 31.5	+1.1
FUG	**Fuego 3**	**0.35**	**286**	*eP*			Pg	22 04 32.5	+0.7
FG6		**0.43**	**299**	*eP*			Pg	22 04 33.9	+0.4
FG6				*eS*			Sg	22 04 41.0	+1.6
RTR	**El Retiro**	**0.93**	**119**	*i P*			Pg	22 04 42.6	-0.3
RTR				*eS*			Sb	22 04 57.4	+0.5
SBLS	**San Blas**	**0.98**	**121**	*i P*			Pg	22 04 43.5	-0.4
SNJE	**San Jose**	**0.98**	**119**	*i P*			Pg	22 04 43.2	-0.6
MRL	**Marmol**	**1.05**	**47**	*eP*			Pg	22 04 45.2	0.0
MRL				*eS*			Sb	22 04 59.7	-0.6
JAT	**Jato**	**1.11**	**269**	*eP*			Pb	22 04 46.7	0.0
JAT				*eS*			Sn	22 05 05.9	+2.7
BOQS	**Boqueron**	**1.32**	**117**	*i P*			Pg	22 04 49.3	-1.1
BOQS				*eS*			Sg	22 05 07.9	+0.1
SNET	**Serv Nac Est T**	**1.39**	**118**	*i P*			Pn	22 04 50.2	-1.0
SNET				*eS*			Sg	22 05 09.5	-0.1
SNET				AML			AML	22 05 15.7	
comp=Z,968nm,0.4s									
LFU	**La Fuente**	**1.46**	**114**	*eP*			Pn	22 04 51.4	-0.9
LFU				*eS*			Sn	22 05 12.7	+0.6
LBRS	**Las Brisas**	**1.53**	**113**	*i P*			Pn	22 04 52.4	-0.8
LBRS				*eS*			Sg	22 05 14.4	+0.3
LFRS	**El Faro**	**1.56**	**117**	*i P*			Pn	22 04 52.9	-0.8
LFRS				*eS*			Sg	22 05 15.1	-0.2
CAHU	**Cacacuatique**	**2.29**	**104**	*i P*			Pn	22 05 05.1	+1.3
CAHU				*eS*			Sb	22 05 37.0	+1.1
TGUH	**Tegucigalpa,Un**	**3.13**	**95**	*i P*			Pb	22 05 19.5	-1.7
TGUH				*eS*			Sb	22 06 01.7	+1.9

*ISCJB **11** 22:14:20.2±0.8, 28°.87N±0°.05×98°.47W±0°.04, h10km, Error ellipse: s-maj=6.6km s-min=5.0km az=167.9*
*NEIC **11** 22:14:20.1±1.8, 28°.88N×98°.53W, h5km, MN2.8, Error ellipse: s-maj=25.2km s-min=13.0km az=176.0*
NEIC Felt at Jourdanton and Pleasanton.
ISC 11 22:14:20.4±1.3, 28°.89N±0°.05×98°.54W±0°.04, h10km, n20, σ1°.55/35, 12C-9D, Southern Texas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
632A	**Uvalde**	**1.25**	**300**	⇓P			**Pg**	**22 14 44.5**	**0.0**
baz=1.3,SNR=235									
732A	**Laxson Ranch,**	**1.27**	**263**	⇑P			**Pg**	**22 14 45.2**	**+0.5**
baz=1.3,SNR=25									
732A				⇑S			**Sg**	**22 15 02.4**	**+1.3**
baz=1.3									
532A	**Rocksprings**	**1.72**	**316**	⇑P			**Pb**	**22 14 51.7**	**-0.3**
baz=1.7,SNR=86									

532A				⇑Sb		**Sg**	**22 15 15.2**	**-0.4**
	baz=1.7							
631A	**Perdido Creek**	**1.86 287**		⇓P		**Pb**	**22 14 53.5**	**-0.9**
	baz=1.9,SNR=16							
631A				⇓Sn		**Sb**	**22 15 17.5**	**-0.1**
	baz=1.9							
JCT	**Junction City**	**1.93 326**	*e*Pn			**Pb**	**22 14 54.6**	**-1.1**
JCT			*e*S			**Sb**	**22 15 20.5**	**+0.7**
JCT	**Junction City**	**1.93 326**	⇑P			**Pb**	**22 14 54.7**	**-1.1**
	baz=1.9,SNR=18							
JCT				⇓Sb		**Sb**	**22 15 20.7**	**+0.8**
	baz=1.9							
531A	**Rocksprings**	**2.16 307**	⇑Pb			**Pb**	**22 15 00.4**	**+0.8**
	baz=2.2,SNR=163							
432A	**Menard**	**2.26 332**	⇓P			**Pn**	**22 14 59.5**	**+1.6**
	baz=2.3,SNR=71							
432A				⇓Sb		**Sb**	**22 15 30.5**	**+1.1**
	baz=2.3							
431A	**Sonora**	**2.54 315**	⇓P			**Pn**	**22 15 03.8**	**+2.1**
	baz=2.6,SNR=38							
431A				⇑Sb		**Sb**	**22 15 39.0**	**+1.7**
	baz=2.6							
HKT	**Hockley**	**2.59 65**	*e*Pn			**Pn**	**22 15 02.7**	**+0.5**
HKT			*e*S			**Sn**	**22 15 34.1**	**+0.4**
332A	**Millersview**	**2.70 338**	⇓P			**Pn**	**22 15 05.2**	**+1.4**
	baz=2.7,SNR=17							
332A				⇑Sb		**Sb**	**22 15 43.2**	**+1.3**
	baz=2.7							
530A	**J-C Ranch, Com**	**2.74 298**	⇓P			**Pn**	**22 15 06.2**	**+1.7**
	baz=2.8,SNR=16							
WHTX	**Lake Whitney**	**3.23 17**	⇑Sn			**Sn**	**22 15 51.8**	**+2.1**
	baz=3.2							
330A	**Mertzon**	**3.39 318**	⇑P			**Pn**	**22 15 15.3**	**+1.9**
	baz=3.4,SNR=15							
130A	**Snyder**	**4.25 331**	⇑Sn			**Sn**	**22 16 16.7**	**+1.9**
	baz=4.3							
Z32A	**Haskell**	**4.48 350**	⇑Sn			**Sn**	**22 16 22.2**	**+1.7**
	baz=4.5							
TX31	**Lajitas Ar. Si**	**4.51 277**	Pn			**Pn**	**22 15 29.1**	**+0.3**
TX31			Pg			**Pg**	**22 15 45.1**	**-1.7**
TX31			Sg			**Sg**	**22 16 42.2**	**-3.0**
WMOK	**Wichita Mounta**	**5.84 358**	*e*Pn			**Pn**	**22 15 46.9**	**-0.1**
WMOK			*e*Sn			**Sn**	**22 16 52.1**	**-1.9**
WMOK			*e*Sg			**Sg**	**22 17 24.7**	**-3.1**
MNTX	**Cornudas Mount**	**6.55 297**	*e*Sn			**Sn**	**22 17 10.4**	**-1.1**
MNTX			*e*Sg			**Sg**	**22 17 47.3**	**-3.2**
AMTX	**Amarillo**	**6.55 337**	*e*Pn			**Pn**	**22 15 57.4**	**+0.6**
AMTX			*e*Pg			Pg	22 16 22.5	-3.3
AMTX			*e*Sg			**Sg**	**22 17 49.7**	**-0.9**

*ISCJB **11** 22:20:07.2±0.9,51°.50N±0°.04×16°.12E±0°.04,h0km, Error ellipse: s-maj=6.4km s-min=3.2km az=16.8*
*IPEC **11** 22:20:07.1±0.3,51°.63N×16°.27E,h0km,ML1.5/3, Error ellipse: s-maj=2.0km s-min=1.6km az=33.0*
*CSEM **11** 22:20:08.3±0.7,51°.51N×16°.13E,h1km,ML2.7/6, Error ellipse: s-maj=11.0km s-min=6.0km az=14.0*
*WAR **11** 22:20:08.0,51°.57N×16°.00E*
*PRU **11** 22:20:09.2,51°.50N×16°.14E,h0km*

ISC 11 22:20:09.2±1.3,51°.51N±0°.06×16°.13E±0°.03,h0km,n26, σ0s75/43,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.67**	**171**	*e*Pg	**Pg**	**22 20 21.9**	**-0.2**
KSP				*e*Sg	**Sg**	**22 20 31.0**	**+0.2**
KSP	**Ksiaz**	**0.67**	**171**	*e*Pg	**Pg**	**22 20 21.9**	**-0.2**
	baz=359						
UPC	**Upice**	**1.00**	**184**	*e*PG	**Pg**	**22 20 28.0**	**-0.4**
UPC	**Upice**	**1.00**	**184**	Pg	**Pg**	**22 20 28.0**	**-0.4**
DPC	**Dobruska-Polom**	**1.17**	**174**	*e*PG	**Pg**	**22 20 30.3**	**-1.2**
DPC				*e*SG	**Sg**	**22 20 46.0**	**-0.6**
	comp=Z,5.4nm,0.3s						
DPC	**Dobruska-Polom**	**1.17**	**174**	*e*Pg	**Pg**	**22 20 30.8**	**-0.7**
	baz=359						
DPC				*e*Sg	**Sg**	**22 20 47.4**	**+0.8**
	baz=359						
DPC	**Dobruska-Polom**	**1.17**	**174**	*e*	**Pg**	**22 20 30.3**	**-1.2**
PVCC	**Panska Ves**	**1.39**	**226**	*e*PG	**Pn**	**22 20 35.5**	**-0.3**
PVCC				*e*SG	**Sg**	**22 20 53.4**	**-0.4**
	comp=Z,22nm,0.2s						
PVCC	**Panska Ves**	**1.39**	**226**	*e*Pg	**Pn**	**22 20 35.2**	**-0.6**
	baz=44						
PVCC				*e*Sg	**Sn**	**22 20 55.4**	**+0.5**
	baz=44						
BRG	**Berggiesshubel**	**1.52**	**246**	Pg	**Pn**	**22 20 36.9**	**-0.7**
BRG				SG	**Sn**	**22 20 57.8**	**-0.2**
	9.6nm,0.4s						
PRU	**Pruhonice**	**1.82**	**214**	*e*PG	**Pn**	**22 20 42.3**	**+0.5**
PRU				*e*SG	**Sb**	**22 21 07.3**	**+0.5**
	comp=Z,4.0nm,0.2s						
PRU	**Pruhonice**	**1.82**	**214**	Pg	**Pn**	**22 20 42.3**	**+0.5**
PRU				Sg	**Sb**	**22 21 07.3**	**+0.5**
	4.0nm,0.2s						
MORC	**Moravsky Berou**	**1.95**	**152**	*e*Pn	**Pn**	**22 20 42.5**	**-1.1**
MORC				*e*Sg	**Sb**	**22 21 10.8**	**+0.3**
	4.0nm,0.2s,baz=337						
CLL	**Collm**	**1.97**	**265**	*e*Pg	**Pb**	**22 20 45.0**	**-0.9**
CLL				*e*		22 20 49.0	
CLL				*e*Sg	**Sg**	**22 21 12.0**	**-0.4**
	comp=Z,6.0nm,0.8s						
OKC	**Ostrava-Krasne**	**2.11**	**142**	*e*SG	**Sb**	**22 21 14.5**	**-0.4**
	comp=Z,6.3nm,0.5s						
OKC	**Ostrava-Krasne**	**2.11**	**142**	Sg	**Sb**	**22 21 14.5**	**-0.4**
	comp=Z,6.3nm,0.5s						
VRAC	**Vranov**	**2.22**	**172**	*e*Pn	**Pn**	**22 20 47.2**	**-0.1**
VRAC				*e*Sg	**Sg**	**22 21 19.9**	**-0.6**
	comp=Z,2.9nm,0.3s,baz=355						
TREC	**Trest**	**2.25**	**191**	*e*PG	**Pb**	**22 20 50.6**	**-0.1**
TREC	**Trest**	**2.25**	**191**	Pg	**Pb**	**22 20 50.6**	**-0.1**
KRUC	**Moravsky**	**2.45**	**176**	*e*Pn	**Pn**	**22 20 50.4**	**-0.1**
KRUC				*e*Sg	**Sg**	**22 21 27.9**	**-0.1**
	comp=Z,1.2nm,0.2s,baz=358						
OJC	**Ojcow**	**2.66**	**118**	*e*Pg	**Pg**	**22 21 00.2**	**+0.1**
OJC				*e*Sg	**Sg**	**22 21 35.4**	**+0.9**
NKC	**Novy Kostel**	**2.66**	**243**	*e*PG	**Pb**	**22 20 58.6**	**+0.9**
NKC				*e*SG	**Sg**	**22 21 36.0**	**+1.4**
	comp=Z,8.1nm,0.3s						
NKC	**Novy Kostel**	**2.66**	**243**	Pg	**Pb**	**22 20 58.6**	**+0.9**
NKC				Sg	**Sg**	**22 21 36.0**	**+1.4**
	comp=Z,8.1nm,0.3s						
KHC	**Kasperske Hory**	**2.89**	**216**	*e*PN	**Pn**	**22 20 57.0**	**+0.5**
KHC				*e*PG	**Pb**	**22 21 01.8**	**+0.2**
KHC				*e*SG	**Sg**	**22 21 40.9**	**-1.0**
KHC	**Kasperske Hory**	**2.89**	**216**	Pn	**Pn**	**22 20 57.0**	**+0.5**
VYHS	**Vyhne**	**3.48**	**149**	*e*SG	**Sg**	**22 22 03.1**	**+2.0**

IDC 11 22:23:32.2±27.0,21°.19S×173°.53W,h0km,mb4.2/4, mb1 4.4/4,mb1mx3.8/21,mbtmp4.2/4,Error ellipse: s-maj=504.1km s-min=150.0km az=76.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**37.59**	**264**	P	P	22 30 49.6	+0.8
	6.3nm,0.6s,baz=95,slow=9.6,SNR=9.5						
STKA	**Stephens Creek**	**41.28**	**245**	P	P	22 31 18.3	-1.2
	0.8nm,0.7s,baz=89,slow=9.2,SNR=7.9						
ASAR	**Alice Springs**	**48.43**	**257**	P	P	22 32 16.4	-0.3
	1.5nm,0.6s,baz=94,slow=7.4,SNR=32						
WRA	**Warramunga Arr**	**48.65**	**262**	P	P	22 32 18.5	+0.1
	1.2nm,0.3s,baz=92,slow=8.5,SNR=16						

*CSEM **11** 22:30:57.3,42°.45N×13°.44E,h8km, After ROM*

ROM 11 22:30:57.3±0.1,42°.45N×13°.44E,h8km±1km,Ml1.7/5, Error ellipse: s-maj=2.1km s-min=1.9km az=130.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.09**	**347**	Pg	Pg	22 31 00.3	+0.6
CAMP				Sg	Sg	22 31 02.1	+0.7
CAMP	**Campotosto**	**0.09**	**347**	Pg	Pg	22 31 00.3	+0.6
CAMP				Sg	Sg	22 31 02.1	+0.7
AQU	**L'Aquila**	**0.10**	**194**	Pg	Pg	22 30 59.7	-0.1
AQU				Sg	Sg	22 31 02.3	+0.8
AQU	**L'Aquila**	**0.10**	**194**	Pg	Pg	22 30 59.7	-0.1
AQU				Sg	Sg	22 31 02.3	+0.8
TERO	**Teramo**	**0.21**	**36**	Pg	Pg	22 31 02.0	+0.3
TERO				Sg	Sg	22 31 05.3	+0.6
TERO	**Teramo**	**0.21**	**36**	Pg	Pg	22 31 02.0	+0.3
TERO				Sg	Sg	22 31 05.3	+0.6
VCEL	**Villa Celiera**	**0.31**	**100**	Pg	Pb	22 31 04.4	-0.8
VCEL				Sg	Sb	22 31 09.7	-0.8
VCEL	**Villa Celiera**	**0.31**	**100**	Pg	Pb	22 31 04.4	-0.8
VCEL				Sg	Sb	22 31 09.7	-0.8
LNSS	**Leonessa**	**0.33**	**298**	Pg	Pg	22 31 04.6	+0.6
LNSS				Sg	Sb	22 31 09.9	-1.3
	88nm,0.2s						
LNSS	**Leonessa**	**0.33**	**298**	Pg	Pg	22 31 04.6	+0.6
LNSS				Sg	Sb	22 31 09.9	-1.3
	88nm,0.2s						
NRCA	**Norcia**	**0.45**	**328**	Pg	Pg	22 31 06.5	+0.3
NRCA				Sg	Sg	22 31 13.4	+1.2
	75nm,0.1s						
NRCA	**Norcia**	**0.45**	**328**	Sg	Pg	22 31 06.5	+0.3
NRCA				Sg	Sg	22 31 13.4	+1.2
	75nm,0.1s						
OFFI	**Offida**	**0.52**	**21**	Pg	Pb	22 31 08.6	-0.1
	184nm,0.6s						
OFFI	**Offida**	**0.52**	**21**	Pg	Pb	22 31 08.6	-0.1
	184nm,0.6s						
FDMO	**Fiordimonte**	**0.64**	**336**	Pg	Pg	22 31 10.0	+0.3
FDMO				Sg	Sb	22 31 19.6	-0.3
FDMO	**Fiordimonte**	**0.64**	**336**	Pg	Pg	22 31 10.0	+0.3
FDMO				Sg	Sb	22 31 19.6	-0.3
CESI	**CESI - Serrava**	**0.68**	**325**	Pg	Pb	22 31 11.9	+0.4
	3.0nm,0.3s						
CESI	**CESI - Serrava**	**0.68**	**325**	Pg	Pb	22 31 11.9	+0.4
	3.0nm,0.3s						
CING	**Cingoli**	**0.94**	**349**	Pg	Pb	22 31 16.1	+0.2
	11nm,0.3s						
CING	**Cingoli**	**0.94**	**349**	Pg	Pb	22 31 16.1	+0.2
	11nm,0.3s						

*CSEM **11** 22:32:59.8,45°.82N×26°.71E,h76km, MD2.5/2, After BUC*

BUC 11 22:32:59.8±1.5,45°.82N×26°.71E,h76km±15km,MD2.5/2, 12C-15D,Error ellipse: s-maj=13.9km s-min=8.4km az=355.0,Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRI	**Vrincioaia**	**0.05**	**12**	⇓*i*P	Pn	22 33 10.9	+0.1
VRI	**Vrincioaia**	**0.05**	**12**	⇓*i*P	Pn	22 33 10.9	+0.1
VRI				*i* S	Sn	22 33 18.2	-0.6
VRI	**Vrincioaia**	**0.05**	**12**	⇓*i*P	Pn	22 33 10.9	+0.1
VRI				*i* S	Sn	22 33 18.2	-0.6
PLOR	**Plostina**	**0.06**	**308**	⇑*i*P	Pn	22 33 10.6	-0.2
PLOR	**Plostina**	**0.06**	**308**	⇑*i*P	Pn	22 33 10.6	-0.2
PLOR				*i* S	Sn	22 33 18.3	-0.6
PLOR	**Plostina**	**0.06**	**308**	⇑*i*P	Pn	22 33 10.6	-0.2
PLOR				*i* S	Sn	22 33 18.3	-0.6
PETR		**0.38**	**104**	⇑*i*P	Pn	22 33 12.7	+0.6
PETR		**0.38**	**104**	⇑*i*P	Pn	22 33 12.7	+0.6
PETR				*i* S	Sn	22 33 22.4	+1.2
PETR		**0.38**	**104**	⇑*i*P	Pn	22 33 12.7	+0.6
PETR				*i* S	Sn	22 33 22.4	+1.2
GHRR		**0.54**	**63**	⇓*i*P	Pn	22 33 14.2	+0.6
GHRR		**0.54**	**63**	⇓*i*P	Pn	22 33 14.2	+0.6
GHRR				*i* S	Sn	22 33 24.6	+0.9
GHRR		**0.54**	**63**	⇓*i*P	Pn	22 33 14.2	+0.6
GHRR				*i* S	Sn	22 33 24.6	+0.9
MLR	**Muntele Rosu**	**0.63**	**239**	⇓*i*P	Pn	22 33 14.8	+0.2
MLR	**Muntele Rosu**	**0.63**	**239**	⇓*i*P	Pn	22 33 14.8	+0.2
MLR				*i* S	Sn	22 33 25.4	-0.1
MLR	**Muntele Rosu**	**0.63**	**239**	⇓*i*P	Pn	22 33 14.8	+0.2
MLR				*i* S	Sn	22 33 25.4	-0.1
TESR		**0.70**	**356**	⇓*i*P	Pn	22 33 15.0	-0.1
TESR		**0.70**	**356**	⇓*i*P	Pn	22 33 15.0	-0.1
TESR				*i* S	Sn	22 33 25.5	-1.0
TESR		**0.70**	**356**	⇓*i*P	Pn	22 33 15.0	-0.1
TESR				*i* S	Sn	22 33 25.5	-1.0
CFR	**Carcaliu**	**1.19**	**122**	⇓*i*P	Pn	22 33 21.0	+0.1
CFR	**Carcaliu**	**1.19**	**122**	⇓*i*P	Pn	22 33 21.0	+0.1
CFR				*i* S	Sn	22 33 35.5	-1.2
CFR	**Carcaliu**	**1.19**	**122**	⇓*i*P	Pn	22 33 21.0	+0.1
CFR				*i* S	Sn	22 33 35.5	-1.2
AMRR	**Amara**	**1.28**	**160**	S	Sn	22 33 39.8	+0.9
AMRR	**Amara**	**1.28**	**160**	*i* S	Sn	22 33 39.8	+0.9
AMRR	**Amara**	**1.28**	**160**	*i* S	Sn	22 33 39.8	+0.9
ARR	**Arges**	**1.53**	**254**	⇑*i*P	Pn	22 33 26.8	+1.4
ARR	**Arges**	**1.53**	**254**	⇑*i*P	Pn	22 33 26.8	+1.4
ARR				*i* S	Sn	22 33 45.9	+1.1
ARR	**Arges**	**1.53**	**254**	⇑*i*P	Pn	22 33 26.8	+1.4
ARR				*i* S	Sn	22 33 45.9	+1.1
TLCR		**1.61**	**112**	S	Sn	22 33 47.7	+1.3
TLCR		**1.61**	**112**	*i* S	Sn	22 33 47.7	+1.3
TLCR		**1.61**	**112**	*i* S	Sn	22 33 47.7	+1.3
TIRR	**Tirgusor**	**1.81**	**138**	⇑*i*P	Pn	22 33 29.5	+0.4
TIRR	**Tirgusor**	**1.81**	**138**	⇑*i*P	Pn	22 33 29.5	+0.4
TIRR	**Tirgusor**	**1.81**	**138**	⇑*i*P	Pn	22 33 29.5	+0.4

WEL 11 22:40:57.2±0.5,37°.86S×176°.32E,h177km±4km,ML3.7/18, 9C-1D,Error ellipse: s-maj=3.3km s-min=3.3km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARZ	**Mount Tarawera**	**0.40**	**159**	*e*PN	Pn	22 41 22.0	+0.6
TOZ	**Tahuroa Road**	**0.66**	**281**	PN	Pn	22 41 22.9	+0.5
TOZ				SN	Sn	22 41 43.9	+2.2
ALRZ	**Allen Road**	**0.70**	**179**	PN	Pn	22 41 22.9	+0.3
URZ	**Urewera**	**0.74**	**123**	⇑PN	Pn	22 41 22.3	-0.5
URZ				SN	Sn	22 41 42.1	-0.5
MWZ	**Matawai**	**1.06**	**117**	PN	Pn	22 41 24.9	-0.2
MWZ				SN	Sn	22 41 46.2	-0.4
RAHZ	**Arahi**	**1.22**	**151**	PN	Pn	22 41 26.7	+0.4
NMHZ	**Naumai**	**1.30**	**163**	PN	Pn	22 41 27.7	+0.6
BKZ	**Black Stump Fm**	**1.31**	**174**	PN	Pn	22 41 26.9	-0.3
BKZ				SN	Sn	22 41 50.3	-0.3
KRVZ	**Karewarewa**	**1.35**	**203**	*e*PN	Pn	22 41 27.6	0.0
OTVZ	**Oturere**	**1.40**	**201**	PN	Pn	22 41 28.3	+0.2
NGZ	**Ngauruhoe**	**1.43**	**203**	PN	Pn	22 41 28.7	+0.3
WPVZ	**Whakapapa**	**1.48**	**204**	PN	Pn	22 41 28.4	-0.4
TUVZ	**Tukino**	**1.50**	**200**	⇑PN	Pn	22 41 29.0	0.0
FWVZ	**Far West T-bar**	**1.52**	**203**	PN	Pn	22 41 29.2	-0.1
TRVZ	**Turoa**	**1.56**	**203**	PN	Pn	22 41 29.7	-0.1
KNZ	**Kokohu**	**1.57**	**138**	PN	Pn	22 41 29.4	-0.1
WNVZ	**Wahianoa**	**1.57**	**201**	⇑PN	Pn	22 41 29.6	-0.2
MXZ	**Matakaoa Point**	**1.60**	**80**	PN	Pn	22 41 28.9	-1.0
MCHZ	**McNeill Hill**	**1.61**	**170**	⇑PN	Pn	22 41 30.3	+0.3
MOVZ	**Moawhango**	**1.61**	**196**	PN	Pn	22 41 29.3	-0.7
CNGZ	**Carnagh Statio**	**1.61**	**113**	⇓PN	Pn	22 41 30.3	+0.4
PKVZ	**Pokaka**	**1.62**	**208**	PN	Pn	22 41 30.1	0.0
PRGZ	**Paritu Road**	**1.62**	**131**	PN	Pn	22 41 29.8	-0.3
BHHZ	**Black Hill Sta**	**1.64**	**187**	⇑PN	Pn	22 41 29.8	-0.5
MTVZ	**Mangateitei**	**1.67**	**203**	PN	Pn	22 41 30.3	-0.2
MHGZ	**Mahia Peninsul**	**1.79**	**137**	PN	Pn	22 41 31.7	-0.1
CKHZ	**Cape Kidnapper**	**1.89**	**162**	⇑PN	Pn	22 41 32.8	0.0
KAHZ	**Kahuranaki**	**1.98**	**168**	PN	Pn	22 41 33.7	-0.1
PNHZ	**Pukenui**	**2.06**	**183**	PN	Pn	22 41 33.9	-0.8
WAZ	**Wanganui**	**2.16**	**208**	PN	Pn	22 41 35.3	-0.5
WPHZ	**Waipukurau**	**2.21**	**178**	PN	Pn	22 41 35.4	-0.9
TSZ	**Takapari Road**	**2.22**	**187**	⇑PN	Pn	22 41 35.4	-1.1
PKE	**Pukeiti**	**2.27**	**233**	*e*PN	Pn	22 41 37.7	+0.7
PRHZ	**Porangahau**	**2.42**	**174**	PN	Pn	22 41 37.6	-1.2
DVHZ	**Dannevirke**	**2.44**	**183**	PN	Pn	22 41 37.6	-1.4
POWZ	**Post Office Ro**	**2.57**	**189**	PN	Pn	22 41 38.9	-1.6
BFZ	**Birch Farm**	**2.82**	**181**	PN	Pn	22 41 41.5	-1.9
MRZ	**Mangatainoka R**	**2.86**	**191**	⇑PN	Pn	22 41 41.8	-2.1
OGWZ	**Otaki Gorge**	**3.09**	**196**	PN	Pn	22 41 44.5	-2.2
HOWZ	**Holdsworth Sta**	**3.10**	**191**	PN	Pn	22 41 44.4	-2.5
KIW	**Kapiti Island**	**3.19**	**200**	PN	Pn	22 41 45.4	-2.6
TMWZ	**Te Maipa**	**3.26**	**186**	PN	Pn	22 41 46.3	-2.6
MTW	**Mount Morrison**	**3.36**	**191**	PN	Pn	22 41 47.0	-3.0
CAW	**Cannon Point**	**3.39**	**196**	PN	Pn	22 41 47.6	-2.9
DUWZ	**D'Urville Isla**	**3.48**	**212**	PN	Pn	22 41 48.6	-3.0
TRWZ	**Traveller**	**3.57**	**188**	PN	Pn	22 41 49.8	-2.9
PAWZ	**Paruwai Farm**	**3.59**	**191**	PN	Pn	22 41 49.8	-3.1
MSWZ	**Moikau Station**	**3.65**	**193**	PN	Pn	22 41 50.3	-3.4
SNZO	**South Karori**	**3.67**	**199**	PN	Pn	22 41 50.6	-3.3
TCW	**Tory Channel**	**3.71**	**205**	PN	Pn	22 41 51.3	-3.0
BHW	**Baring Head**	**3.72**	**197**	PN	Pn	22 41 51.1	-3.4
PLWZ	**Palliser**	**3.80**	**192**	PN	Pn	22 41 52.1	-3.5
TUWZ	**Tuamarina**	**4.01**	**206**	PN	Pn	22 41 54.9	-3.4
NNZ	**Nelson**	**4.05**	**213**	⇑PN	Pn	22 41 55.1	-3.7
QRZ	**Quartz Range**	**4.18**	**224**	PN	Pn	22 41 56.4	-4.0
BSWZ	**Blackbirch Sta**	**4.29**	**205**	PN	Pn	22 41 58.5	-3.3
THZ	**Tophouse**	**4.71**	**213**	PN	Pn	22 42 03.9	-3.4
KHZ	**Kahutara**	**5.03**	**204**	PN	Pn	22 42 07.6	-3.7
MQZ	**McQueen's Vall**	**6.47**	**204**	PN	Pn	22 42 24.4	-5.8
ODZ	**Otahua Downs**	**8.35**	**209**	PN	Pn	22 42 50.0	-5.0

*MAN **11** 22:45:48,8°.97N×126°.26E,h37km,mb4.8,ML3.7,MS3.7*
*ISCJB **11** 22:45:49.8±1.2,8°.96N±0°.06×126°.2E±0°.1,h99km±12km, mb3.7/14, Error ellipse: s-maj=21.7km s-min=6.7km az=158.4*
*IDC **11** 22:45:50.4±1.9,9°.00N×126°.23E,h86km±18km,mb3.7/13, mb1 3.8/14,mb1mx3.7/25,mbtmp3.7/14,MS3.0/3, Ms1 3.0/3,ms1mx2.3/46, Error ellipse: s-maj=26.0km s-min=11.8km az=80.0*

ISC 11 22:45:51.7±1.6,8°.93N±0°.07×126°.1E±0°.1,h98km±15km, n25,σ1s29/32,mb3.7/14,3C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGP	**Cagayan de Oro**	**1.43**	**251**	⇑*i*P	**Pn**	**22 46 15.0**	**-2.0**
CGP				*i* S	**Sn**	**22 46 35.1**	**-1.0**
DAV	**Davao City (W)**	**1.91**	**194**	P	**Pn**	**22 46 22.2**	**-0.9**
	44nm,0.3s,baz=260,slow=6.1,SNR=3.1						
DAV				S	**Sn**	**22 46 48.3**	**+1.3**
	48nm,0.3s,baz=88,slow=23,SNR=6.4						
DAV				LR	LR	22 46 51.9	
	comp=Z,305nm,18.0s,baz=54,slow=30						
DMPH	**Davao City--Mi**	**1.92**	**197**	*i* P	**Pn**	**22 46 23.6**	**+0.4**
DMPH				*i* S	**Sn**	**22 46 51.5**	**+4.3**
KCP	**Kidapawan**	**2.14**	**207**	⇑*e*P	**Pn**	**22 46 24.5**	**-1.6**
KCP				*i* S	**Sn**	**22 46 52.5**	**+0.1**
TBP	**Tagbilaran**	**2.30**	**289**	*e*P	**Pn**	**22 46 28.1**	**0.0**
TBP				*e*S	**Sn**	**22 46 57.0**	**+1.0**
CTBH	**Cotabato--PC H**	**2.47**	**227**	⇑*i*P	**Pn**	**22 46 29.4**	**-1.0**
LLP	**Lapu-Lapu**	**2.48**	**304**	⇓*e*P	**Pn**	**22 46 30.3**	**-0.2**
LLP				*e*S	**Sn**	**22 47 01.7**	**+1.3**
RCP	**Roxas**	**4.18**	**309**	⇓*e*P	**Pn**	**22 46 54.2**	**+0.9**
FITZ	**Fitzroy Crossi**	**26.86**	**181**	P	**P**	**22 51 24.7**	**+1.4**
	0.8nm,0.6s,baz=0.0,slow=9.1,SNR=7.2						
CMAR	**Chiang Mai Arr**	**27.96**	**293**	P	**P**	**22 51 34.5**	**+1.3**
	1.1nm,0.7s,baz=109,slow=7.1,SNR=8.9						
KSRS	**Korea Array**	**28.45**	**3**	P	**P**	**22 51 36.8**	**-0.5**
	1.1nm,0.7s,baz=177,slow=10.0,SNR=7.4						
KSRS				LR	LR	23 02 55.3	
	comp=Z,14nm,19.9s,baz=228,slow=36						
MJAR	**Matsushiro Arr**	**29.62**	**20**	P	**P**	**22 51 46.1**	**-1.7**
	0.6nm,0.7s,baz=206,slow=10,SNR=2.9						
WRA	**Warramunga Arr**	**29.83**	**164**	P	**P**	**22 51 48.2**	**-1.5**
	0.3nm,0.3s,baz=342,slow=7.9,SNR=11						
ASAR	**Alice Springs**	**33.29**	**167**	P	**P**	**22 52 19.5**	**-0.6**
	0.5nm,0.3s,baz=349,slow=7.0,SNR=20						
ASAR				PcP	**PcP**	**22 55 00.9**	**+0.6**
	0.5nm,0.7s,baz=358,slow=2.5,SNR=6.4						
USRK	**Ussuriysk Arra**	**35.51**	**7**	P	**P**	**22 52 38.8**	**-0.2**
	4.7nm,0.6s,baz=190,slow=7.6,SNR=12						
STKA	**Stephens Creek**	**43.21**	**161**	P	**P**	**22 53 43.5**	**+0.3**
	0.7nm,0.5s,baz=324,slow=8.7,SNR=4.4						
MKAR	**Makanchi Array**	**52.97**	**323**	P	**P**	**22 54 58.4**	**+0.3**
	2.2nm,0.8s,baz=124,slow=7.7,SNR=28						
MKAR				PcP	**PcP**	**22 56 06.3**	**+0.6**
	1.0nm,0.6s,baz=102,slow=5.4,SNR=7.2						
ZALV	**Zalesovo Beam**	**55.70**	**332**	P	**P**	**22 55 16.6**	**-1.2**
	0.8nm,0.6s,baz=123,slow=7.6,SNR=5.1						
AAK	**Ala-Archa**	**56.13**	**316**	LR	LR	23 22 50.9	
	comp=Z,29nm,18.3s,baz=349,slow=40						
ILAR	**Eielson Array**	**80.73**	**26**	P	**P**	**22 57 53.3**	**-0.6**
	0.4nm,0.6s,baz=271,slow=4.8,SNR=6.0						
ARCES	**ARCESS Array B**	**85.37**	**340**	P	**P**	**22 58 17.6**	**-0.1**
	1.7nm,0.9s,baz=74,slow=6.7,SNR=4.7						
FINES	**FINES

DANN	**Dangsing**	**13.61**	**123**	*e*P		**Pn**	**23 22 07.4**	**-0.5**
	comp=E,25nm,0.5s								
KOLN	**Koldanda**	**13.88**	**125**	*e*P		**Pn**	**23 22 09.5**	**-1.8**
	comp=E,9.8nm,0.5s								
KKN	**Kakani**	**15.00**	**121**	*e*P		**Pn**	**23 22 24.8**	**-0.3**
	comp=E,27nm,0.6s								
AB31	**Akbulak array**	**15.00**	**331**	⇑P		**Pn**	**23 22 24.0**	**-0.7**
	comp=E,0.6nm,0.3s,baz=147,slow=13,SNR=38								
AB31				⇓S		**Sn**	**23 25 06.8**	**-5.4**
	comp=E,1.5nm,0.6s,baz=152,slow=24,SNR=5.3								
PKI	**Pulchoki**	**15.23**	**122**	*e*P		**Pn**	**23 22 28.8**	**+0.9**
	comp=E,83nm,0.6s								
KURK	**Kurchatov**	**15.25**	**19**	⇑P		**P**	**23 22 29.1**	**+0.8**
	comp=E,2.6nm,0.7s								
GUN	**Gumba**	**15.34**	**120**	*e*P		**Pn**	**23 22 30.2**	**+0.8**
	comp=E,33nm,0.8s								
VOSK	**Vostochnaya**	**16.20**	**0**	⇑P		**P**	**23 22 38.9**	**+0.1**
VOSK	comp=E,3.7nm,0.9s			⇑S		**S**	**23 25 36.5**	**-1.7**
	comp=E,2.0nm,0.8s								
RAMN	**Ramite**	**16.44**	**121**	*e*P		**P**	**23 22 42.5**	**+0.6**
	comp=E,34nm,0.6s								
ZRNK	**Zerenda**	**16.48**	**356**	⇑P		**Pn**	**23 22 43.8**	**+1.3**
	comp=E,3.9nm,0.6s								
BVA0	**Borovoye Array**	**16.50**	**359**	⇓P		**Pn**	**23 22 44.3**	**+1.4**
	comp=E,0.2nm,0.5s,baz=294,slow=34,SNR=26								
BVA0				S		**S**	**23 25 43.7**	**-1.0**
	comp=E,0.4nm,1.0s,baz=170,slow=22,SNR=6.1								
BVAR	**Borovoye Array**	**16.50**	**359**	P		**P**	**23 22 43.5**	**+1.4**
	comp=E,1.1nm,0.3s,baz=161,slow=9.3,SNR=27								
BVAR				S		**S**	**23 25 42.8**	**-1.9**
	comp=E,0.2nm,0.3s,baz=167,slow=20,SNR=6.9								
AKTO	**Aktyubinsk**	**16.70**	**330**	⇑S		**S**	**23 25 47.9**	**-0.9**
	comp=E,0.6nm,0.8s								
AKTO	**Aktyubinsk**	**16.70**	**330**	P		**P**	**23 22 45.6**	**+1.4**
	comp=E,0.4nm,0.3s,baz=149,slow=12,SNR=26								
AKTO				S		**S**	**23 25 47.1**	**-1.6**
	comp=E,0.1nm,0.3s,baz=253,slow=19,SNR=3.6								
TAPN	**Taplejung**	**16.97**	**118**	*e*P		**Pn**	**23 22 50.5**	**+1.5**
	comp=E,15nm,0.5s								
ODAN	**Odare**	**17.04**	**120**	*e*P		**Pn**	**23 22 50.5**	**+0.7**
	comp=E,38nm,0.7s								
ZALV	**Zalesovo Beam**	**19.95**	**25**	P		**P**	**23 23 21.1**	**+1.7**
	comp=E,16nm,0.5s,baz=217,slow=11,SNR=116								
ZALV				S		**S**	**23 26 52.6**	**-0.7**
	comp=E,0.9nm,0.6s,baz=225,slow=18,SNR=4.8								
SONM	**Songino Array**	**28.43**	**55**	P		P	23 24 43.1	+3.9
	comp=E,0.5nm,0.4s,baz=244,slow=9.5,SNR=3.4								
CMAR	**Chiang Mai Arr**	**30.58**	**118**	P		**P**	**23 24 59.3**	**+0.9**
	comp=E,0.4nm,0.7s,baz=307,slow=8.9,SNR=5.5								
AKASG	**Malin Array Be**	**32.83**	**309**	P		**P**	**23 25 20.1**	**+2.5**
	comp=E,1.0nm,0.6s,baz=108,slow=8.0,SNR=3.4								
FINES	**FINESS Array B**	**37.39**	**326**	P		**P**	**23 25 57.5**	**+1.1**
	comp=E,0.7nm,0.6s,baz=116,slow=9.4,SNR=7.2								
ARCES	**ARCESS Array B**	**41.08**	**338**	P		**P**	**23 26 28.5**	**+1.6**
	comp=E,0.8nm,0.6s,baz=108,slow=8.6,SNR=5.0								
NB2	**NORSAR Subarra**	**44.28**	**323**	P		**P**	**23 26 53.5**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=97,slow=7.9								
NOA	**NORSAR Array B**	**44.28**	**323**	P		**P**	**23 26 53.5**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=97,slow=7.8,SNR=4.9								
TORD	**Torodi Ar. Bea**	**65.59**	**269**	P		**P**	**23 29 24.5**	**-1.5**
	comp=Z,0.3nm,0.8s,baz=50,slow=7.0,SNR=2.9								
YKA	**Yellowknife Ar**	**81.23**	**3**	P		**P**	**23 30 57.9**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=351,slow=5.4,SNR=12								
WRA	**Warramunga Arr**	**82.11**	**122**	P		**P**	**23 31 01.2**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=329,slow=4.7,SNR=5.7								
ASAR	**Alice Springs**	**84.37**	**125**	P		**P**	**23 31 12.5**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=304,slow=5.3,SNR=5.6								

DDA ***11*** *23:24:06.9, 40.04N×40.02E, h7km, MD2.9*
ISK ***11*** *23:24:06.8, 40.02N×40.04E, h5km, MD2.7*
ISCJB ***11*** *23:24:07.1±0.5, 40.02N±0.03×40.01E±0.03, h4km±4km, Error ellipse: s-maj=5.0km s-min=3.4km az=162.8*
CSEM ***11*** *23:24:07.2±0.2, 40.01N×40.01E, h2km, MD2.9, Error ellipse: s-maj=4.2km s-min=2.7km az=171.0*

ISC 11 23:24:06.7±1.1, **40.00N**±0.03×**40.02E**±0.02, **h8**km±9km, **n34**, σ0**s50**/55, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.37**	**86**	*i* P	**Pg**	**23 24 14.4**	**+0.4**
KOPT				*i* S	**Sb**	**23 24 20.8**	**-0.8**
KOPT	**Kop Dagi**	**0.37**	**86**	*i* P	**Pg**	**23 24 14.4**	**+0.4**
KOPT				*i* S	**Sb**	**23 24 20.8**	**-0.8**
BAYT	**Ayd¨–ntepe-Bay**	**0.41**	**14**	*e*PG	**Pg**	**23 24 14.9**	**+0.2**
BAYT				*e*SG	**Sg**	**23 24 20.6**	**+0.4**
BAYT	**Ayd¨–ntepe-Bay**	**0.41**	**14**	*e*Pg	**Pg**	**23 24 14.9**	**+0.2**
BAYT				*e*Sg	**Sg**	**23 24 20.6**	**+0.4**
ERZN	**Erzincan**	**0.47**	**209**	*e*PG	**Pb**	**23 24 17.0**	**-0.2**
ERZN				*e*SG	**Sb**	**23 24 24.1**	**-0.1**
EZC	**Erzincan**	**0.56**	**245**	*e*Pg	**Pg**	**23 24 17.0**	**-0.6**
EZC				*e*Sg	**Sg**	**23 24 24.2**	**-0.9**
KELT	**Kelkit**	**0.60**	**285**	*i* P	**Pb**	**23 24 19.4**	**-0.2**
KELT				*i* S	**Sb**	**23 24 27.7**	**-0.6**
KELT	**Kelkit**	**0.60**	**285**	*i* P	**Pb**	**23 24 19.4**	**-0.2**
KELT				*i* S	**Sb**	**23 24 27.7**	**-0.6**
GUMT	**Gumushane**	**0.62**	**319**	*e*PG	**Pb**	**23 24 19.4**	**-0.4**
GUMT	**Gumushane**	**0.62**	**319**	*e*Pg	**Pb**	**23 24 19.4**	**-0.4**
MACK	**Trabzon**	**0.96**	**349**	*i* P	**Pb**	**23 24 25.7**	**+0.1**
MACK				*i* S	**Sg**	**23 24 37.7**	**-0.1**
MACK	**Trabzon**	**0.96**	**349**	*i* P	**Pb**	**23 24 25.7**	**+0.1**
MACK				*i* S	**Sg**	**23 24 37.7**	**-0.1**
KTUT	**Trabzon**	**1.01**	**349**	*e*PG	**Pg**	**23 24 26.2**	**+0.2**
KTUT	**Trabzon**	**1.01**	**349**	*e*Pg	**Pg**	**23 24 26.2**	**+0.2**
EZM	**Erzurum**	**1.04**	**95**	*e*PG	**Pg**	**23 24 26.9**	**+0.2**
ERZM	**Erzurum**	**1.04**	**95**	*i* P	**Pg**	**23 24 27.0**	**+0.3**
ERZM				*i* S	**Sb**	**23 24 41.4**	**+0.4**
ERZM	**Erzurum**	**1.04**	**95**	*i* P	**Pg**	**23 24 27.0**	**+0.3**
ERZM				*i* S	**Sb**	**23 24 41.4**	**+0.4**
ILIC	**ilic-Erzincan**	**1.24**	**245**	*e*PN	**Pg**	**23 24 31.4**	**+0.9**
ILIC	**ilic-Erzincan**	**1.24**	**245**	*e*Pn	**Pg**	**23 24 31.4**	**+0.9**
ESPY	**Espiye-Giresun**	**1.35**	**314**	*e*PN	**Pg**	**23 24 33.1**	**+0.6**
ESPY	**Espiye-Giresun**	**1.35**	**314**	*e*Pn	**Pg**	**23 24 33.1**	**+0.6**
SUSE	**Susehri**	**1.41**	**279**	*i* P	**Pb**	**23 24 33.5**	**+0.2**
SUSE				*i* S	**Sn**	**23 24 51.9**	**+0.4**
SUSE	**Susehri**	**1.41**	**279**	*i* P	**Pb**	**23 24 33.5**	**+0.2**
SUSE				*i* S	**Sn**	**23 24 51.9**	**+0.4**
DDEM	**Demirkent**	**1.60**	**55**	*i* P	**Pn**	**23 24 35.6**	**+0.3**
DDEM				*i* S	**Sn**	**23 24 55.8**	**-0.3**
DDEM	**Demirkent**	**1.60**	**55**	*i* P	**Pn**	**23 24 35.6**	**+0.3**
DDEM				*i* S	**Sn**	**23 24 55.8**	**-0.3**
DAGI	**Agillar**	**1.81**	**53**	*i* P	**Pg**	**23 24 41.1**	**-0.2**
DAGI				*i* S	**Sn**	**23 25 01.9**	**+0.6**
DBOC	**Borcka**	**1.84**	**42**	*i* P	**Pb**	**23 24 40.0**	**-0.6**
DBOC				*i* S	**Sb**	**23 25 03.1**	**-0.7**
DBOC	**Borcka**	**1.84**	**42**	*i* P	**Pb**	**23 24 40.0**	**-0.6**
DBOC				*i* S	**Sb**	**23 25 03.1**	**-0.7**
ARTV	**Artvin**	**1.88**	**50**	*i* P	**Pb**	**23 24 40.9**	**-0.4**
ARTV				*i* S	**Sb**	**23 25 05.3**	**+0.2**
ARTV	**Artvin**	**1.88**	**50**	*i* P	**Pb**	**23 24 40.9**	**-0.4**
ARTV				*i* S	**Sb**	**23 25 05.3**	**+0.2**
MALT	**Malatya**	**2.08**	**217**	*e*PN	**Pb**	**23 24 44.5**	**-0.3**
MALT	**Malatya**	**2.08**	**217**	*e*Pn	**Pb**	**23 24 44.5**	**-0.3**
RSDY	**Resadiye-TOKAT**	**2.10**	**282**	*e*PN	**Pb**	**23 24 44.0**	**-1.0**
RSDY	**Resadiye-TOKAT**	**2.10**	**282**	*e*Pn	**Pb**	**23 24 44.0**	**-1.0**

IDC ***11*** *23:41:15.1±1.9, 37.05N×22.93E, h65km±17km, mb3.8/20, mb1 3.8/25, mb1mx3.8/34, mbtmp3.8/25, Error ellipse: s-maj=14.7km s-min=13.2km az=177.0*
ATH ***11*** *23:41:16.3, 37.12N×22.77E, h86km±1km, ML4.1*
NEIC ***11*** *23:41:16.3, 37.12N×22.77E, h86km, mb4.2/3, After ATH. NEIC Felt at Athens, Nafplio and Sparta.*
CSEM ***11*** *23:41:16.8±0.1, 37.06N×22.73E, h86km±1km, mb4.1/22, Error ellipse: s-maj=3.7km s-min=2.4km az=52.0*
ISCJB ***11*** *23:41:16.2±0.2, 37.10N±0.01×22.70E±0.02, h92km±1km, mb4.0/33, Error ellipse: s-maj=2.7km s-min=2.0km az=138.0*
BEO ***11*** *23:41:17.5±1.2, 37.36N×22.14E, h0km, ML3.9/5*
MOS ***11*** *23:41:17.3±1.1, 37.12N×22.74E, h97km, mb4.0/18, Error ellipse: s-maj=8.6km s-min=4.9km az=70.9*
THE ***11*** *23:41:18.0, 37.14N×22.79E, h74km±1km, ML3.9/19, Error ellipse: s-maj=1.5km s-min=0.6km az=239.0*
PDG ***11*** *23:41:18.6±0.5, 37.46N×22.40E, h16km±4km, ML4.1/8, Error ellipse: s-maj=4.8km s-min=2.7km az=90.0*
HLW ***11*** *23:41:19.9, 36.72N×23.40E, h33km±61km, Md4.5, Ml4.2*
DDA ***11*** *23:41:20.9, 37.40N×23.45E, h7km, MD3.6*

ISC 11 23:41:17.2±0.3, **37.09N**±0.02×**22.73E**±0.02, **h84**km±2km, **n560**, σ1**s31**/631, **mb4.0**/33, **15C-34D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLX	**Vlachokerasia**	**0.39**	**315**	P	**Pn**	**23 41 30.9**	**+0.2**
VLX				S	**Sn**	**23 41 39.0**	**-1.6**
VLX	**Vlachokerasia**	**0.39**	**315**	⇓*i* P	**Pn**	**23 41 30.9**	**+0.2**
VLX				*e*S	**Sn**	**23 41 40.0**	**-0.6**
VLX	**Vlachokerasia**	**0.39**	**315**	⇓*i* P	**Pn**	**23 41 30.9**	**+0.2**
VLX				*e*S	**Sn**	**23 41 40.0**	**-0.6**
VLX	**Vlachokerasia**	**0.39**	**315**	⇓*i* P	**Pn**	**23 41 30.9**	**+0.2**
VLX				*e*S	**Sn**	**23 41 40.0**	**-0.6**
VLI	**Veliai**	**0.41**	**156**	P	**Pn**	**23 41 30.4**	**-0.3**
VLI				S	**Sn**	**23 41 39.4**	**-1.2**
VLI	**Veliai**	**0.41**	**156**	*e*P	**Pn**	**23 41 30.3**	**-0.4**
VLI	**Veliai**	**0.41**	**156**	*e*P	**Pn**	**23 41 30.3**	**-0.4**
VLI	**Veliai**	**0.41**	**156**	P	**Pn**	**23 41 30.4**	**-0.3**
VLI				S	**Sn**	**23 41 39.4**	**-1.2**
DYR	**Agios Nikonas**	**0.46**	**224**	P	**Pn**	**23 41 31.5**	**+0.4**
DYR	**Agios Nikonas**	**0.46**	**224**	*e*P	**Pn**	**23 41 31.4**	**+0.4**
DYR				*e*S	**Sn**	**23 41 42.4**	**+1.1**
DYR	**Agios Nikonas**	**0.46**	**224**	P	**Pn**	**23 41 31.5**	**+0.4**
DYR				*e*S	**Sn**	**23 41 42.4**	**+1.1**
DIDY	**Didyma**	**0.54**	**45**	P	**Pn**	**23 41 31.4**	**-0.5**
DIDY				S	**Sn**	**23 41 41.6**	**-1.1**
DIDY	**Didyma**	**0.54**	**45**	P	**Pn**	**23 41 31.4**	**-0.5**
DIDY				S	**Sn**	**23 41 41.6**	**-1.1**
DID	**Didima**	**0.58**	**44**	P	**Pn**	**23 41 31.7**	**-0.4**
DID				S	**Sn**	**23 41 41.5**	**-1.7**
DID	**Didima**	**0.58**	**44**	*e*P	**Pn**	**23 41 31.6**	**-0.5**
DID				*e*S	**Sn**	**23 41 42.0**	**-1.2**
DID	**Didima**	**0.58**	**44**	*e*P	**Pn**	**23 41 31.6**	**-0.5**
DID				*e*S	**Sn**	**23 41 42.0**	**-1.2**
DID	**Didima**	**0.58**	**44**	P	**Pn**	**23 41 31.7**	**-0.4**
DID				*e*S	**Sn**	**23 41 42.0**	**-1.2**
ITM	**Ithomi**	**0.65**	**278**	P	**Pn**	**23 41 33.3**	**+0.6**
ITM				S	**Sn**	**23 41 44.8**	**+0.6**
ITM	**Ithomi**	**0.65**	**278**	*e*P	**Pn**	**23 41 33.3**	**+0.6**
ITM				*e*S	**Sn**	**23 41 44.8**	**+0.6**
ITM	**Ithomi**	**0.65**	**278**	*e*P	**Pn**	**23 41 33.2**	**+0.6**
ITM				*e*S	**Sn**	**23 41 44.8**	**+0.6**
ITM	**Ithomi**	**0.65**	**278**	*e*P	**Pn**	**23 41 33.3**	**+0.6**
ITM				S	**Sn**	**23 41 44.8**	**+0.6**
PYL	**PYLOS**	**0.81**	**256**	P	**Pn**	**23 41 34.4**	**0.0**
PYL				S	**Sn**	**23 41 47.8**	**+0.6**
PYL	**PYLOS**	**0.81**	**256**	*e*P	**Pn**	**23 41 34.3**	**-0.1**
PYL				*e*S	**Sn**	**23 41 47.8**	**+0.6**
PYL	**PYLOS**	**0.81**	**256**	*e*P	**Pn**	**23 41 34.3**	**-0.1**
PYL				*e*S	**Sn**	**23 41 47.8**	**+0.6**
PYL	**PYLOS**	**0.81**	**256**	P	**Pn**	**23 41 34.4**	**0.0**
PYL				S	**Sn**	**23 41 47.8**	**+0.6**
KYTH	**Kithira**	**0.85**	**163**	P	**Pn**	**23 41 35.4**	**+0.6**
KYTH	**Kithira**	**0.85**	**163**	*e*P	**Pn**	**23 41 35.4**	**+0.6**
KYTH	**Kithira**	**0.85**	**163**	*e*P	**Pn**	**23 41 35.4**	**+0.6**
KYTH	**Kithira**	**0.85**	**163**	*e*P	**Pn**	**23 41 35.4**	**+0.6**
GUR	**Goura**	**0.90**	**340**	P	**Pn**	**23 41 35.7**	**+0.3**
GUR				S	**Sn**	**23 41 47.7**	**-1.3**
GUR	**Goura**	**0.90**	**340**	*e*P	**Pn**	**23 41 35.7**	**+0.3**
GUR				*e*S	**Sn**	**23 41 48.3**	**-0.7**
GUR	**Goura**	**0.90**	**340**	*e*P	**Pn**	**23 41 35.7**	**+0.3**
GUR				*e*S	**Sn**	**23 41 48.3**	**-0.7**
GUR	**Goura**	**0.90**	**340**	P	**Pn**	**23 41 35.6**	**+0.2**
GUR				*e*S	**Sn**	**23 41 48.3**	**-0.7**
NAIG	**Nisos Aigina**	**0.90**	**42**	*e*P	**Pn**	**23 41 34.8**	**-0.6**
NAIG	**Nisos Aigina**	**0.90**	**42**	*e*P	**Pn**	**23 41 34.8**	**-0.6**
NAIG	**Nisos Aigina**	**0.90**	**42**	*e*P	**Pn**	**23 41 34.8**	**-0.6**
AMT	**Artemida-Makis**	**0.92**	**299**	P	**Pn**	**23 41 36.8**	**+1.2**
AMT				S	**Sn**	**23 41 50.8**	**+1.4**
AMT	**Artemida-Makis**	**0.92**	**299**	*e*P	**Pn**	**23 41 36.7**	**+0.9**
AMT				*e*S	**Sn**	**23 41 50.6**	**+1.2**
AMT	**Artemida-Makis**	**0.92**	**299**	P	**Pn**	**23 41 36.7**	**+0.9**
AMT				S	**Sn**	**23 41 49.5**	**+0.1**
LTK	**Loutraki**	**0.95**	**12**	P	**Pn**	**23 41 35.8**	**-0.2**
LTK				S	**Sn**	**23 41 49.3**	**-0.6**
LTK	**Loutraki**	**0.95**	**12**	*e*P	**Pn**	**23 41 35.7**	**-0.2**
LTK				*e*S	**Sn**	**23 41 49.0**	**-0.9**
LTK	**Loutraki**	**0.95**	**12**	*e*P	**Pn**	**23 41 35.7**	**-0.2**
LTK				*e*S	**Sn**	**23 41 49.0**	**-0.9**
LTK	**Loutraki**	**0.95**	**12**	P	**Pn**	**23 41 35.8**	**-0.2**
LTK				S	**Sn**	**23 41 49.3**	**-0.6**
ATH	**Athens Observa**	**1.18**	**42**	P	**Pn**	**23 41 38.6**	**0.0**
ATH				S	**Sn**	**23 41 53.6**	**-1.1**
ATH	**Athens Observa**	**1.18**	**42**	*e*P	**Pn**	**23 41 38.4**	**-0.2**
ATH	**Athens Observa**	**1.18**	**42**	*e*P	**Pn**	**23 41 38.4**	**-0.2**
ATH	**Athens Observa**	**1.18**	**42**	*e*P	**Pn**	**23 41 38.4**	**-0.2**
ATH	**Athens Observa**	**1.18**	**42**	P	**Pn**	**23 41 38.6**	**0.0**
ATH				S	**Sn**	**23 41 53.9**	**-1.1**
ATHU	**Athens Univers**	**1.21**	**44**	P	**Pn**	**23 41 39.0**	**-0.1**
ATHU				S	**Sn**	**23 41 53.8**	**-1.7**
ATHU	**Athens Univers**	**1.21**	**44**	P	**Pn**	**23 41 39.0**	**-0.1**
ATHU				S	**Sn**	**23 41 53.8**	**-1.7**
LAKA	**Lakka**	**1.29**	**333**	P	**Pn**	**23 41 40.4**	**+0.4**
LAKA				S	**Sn**	**23 41 56.3**	**-1.0**
LAKA	**Lakka**	**1.29**	**333**	*e*P	**Pn**	**23 41 40.5**	**+0.4**
LAKA				*e*S	**Sn**	**23 41 56.7**	**-0.6**
LAKA	**Lakka**	**1.29**	**333**	P	**Pn**	**23 41 40.4**	**+0.4**
LAKA				*e*S	**Sn**	**23 41 56.7**	**-0.6**
PTL	**Penteli**	**1.31**	**43**	P	**Pn**	**23 41 40.4**	**0.0**
PTL				S	**Sn**	**23 41 56.7**	**-1.1**
PTL	**Penteli**	**1.31**	**43**	*e*P	**Pn**	**23 41 40.2**	**-0.2**
PTL	**Penteli**	**1.31**	**43**	P	**Pn**	**23 41 40.2**	**-0.2**
PTL				S	**Sn**	**23 41 56.7**	**-1.1**
DSF	**Desfina**	**1.32**	**353**	P	**Pn**	**23 41 40.6**	**+0.1**
DSF	**Desfina**	**1.32**	**353**	P	**Pn**	**23 41 40.6**	**+0.1**
TRIZ	**Trizonia**	**1.37**	**338**	P	**Pn**	**23 41 41.3**	**+0.2**
TRIZ	**Trizonia**	**1.37**	**338**	*e*P	**Pn**	**23 41 41.2**	**+0.2**
TRIZ				*e*S	**Sn**	**23 41 59.0**	**0.0**
TRIZ	**Trizonia**	**1.37**	**338**	P	**Pn**	**23 41 41.3**	**+0.2**
TRIZ				*e*S	**Sn**	**23 41 59.0**	**0.0**
KALE	**Kalithea**	**1.38**	**340**	P	**Pn**	**23 41 41.2**	**0.0**
KALE				S	**Sn**	**23 41 58.7**	**-0.6**
KALE	**Kalithea**	**1.38**	**340**	*e*P	**Pn**	**23 41 41.2**	**0.0**
KALE				*e*S	**Sn**	**23 41 58.5**	**-0.8**
KALE	**Kalithea**	**1.38**	**340**	P	**Pn**	**23 41 41.2**	**0.0**
KALE				S	**Sn**	**23 41 58.7**	**-0.6**
RLS	**Riolos of Patr**	**1.39**	**314**	P	Pn	23 41 43.4	+2.2
RLS				S	**Sn**	**23 42 00.1**	**+0.7**
RLS	**Riolos of Patr**	**1.39**	**314**	*e*P	**Pn**	**23 41 43.3**	**+2.0**
RLS	**Riolos of Patr**	**1.39**	**314**	P	**Pn**	**23 41 43.2**	**+2.0**
RLS				S	**Sn**	**23 42 00.1**	**+0.7**
PSA1	**Psathopyrgos**	**1.40**	**332**	*e*P	**Pn**	**23 41 41.7**	**+0.3**
UPR	**University Cam**	**1.40**	**328**	P	**Pn**	**23 41 41.6**	**+0.8**
UPR	**University Cam**	**1.40**	**328**	*e*P	**Pn**	**23 41 42.2**	**+0.8**
UPR				*e*S	**Sn**	**23 42 00.1**	**+0.4**
UPR	**University Cam**	**1.40**	**328**	P	**Pn**	**23 41 42.1**	**+0.7**
UPR				*e*S	**Sn**	**23 42 00.1**	**+0.4**
EFP	**Efpalio**	**1.48**	**334**	P	**Pn**	**23 41 42.9**	**+0.5**
EFP	**Efpalio**	**1.48**	**334**	*e*P	**Pn**	**23 41 42.7**	**+0.3**
EFP				*e*S	**Sn**	**23 42 02.0**	**+0.5**
EFP	**Efpalio**	**1.48**	**334**	P	**Pn**	**23 41 42.6**	**+0.2**
EFP				*e*S	**Sn**	**23 42 02.0**	**+0.5**
LKR	**Lokris**	**1.57**	**8**	P	**Pn**	**23 41 43.7**	**+0.1**
LKR				S	**Sn**	**23 42 02.6**	**-0.9**
LKR	**Lokris**	**1.57**	**8**	*e*P	**Pn**	**23 41 43.6**	**0.0**
LKR	**Lokris**	**1.57**	**8**	P	**Pn**	**23 41 43.6**	**0.0**
LKR				S	**Sn**	**23 42 02.6**	**-0.9**
ATAL	**Atalanti**	**1.61**	**8**	P	**Pn**	**23 41 44.4**	**+0.2**
ATAL				S	**Sn**	**23 42 03.9**	**-0.7**
ATAL	**Atalanti**	**1.61**	**8**	P	**Pn**	**23 41 44.4**	**+0.2**
ATAL				S	**Sn**	**23 42 03.9**	**-0.7**
MRMA	**Marmari**	**1.63**	**53**	P	**Pn**	**23 41 44.5**	**+0.2**
MRMA				S	**Sn**	**23 42 04.1**	**-0.8**
MRMA	**Marmari**	**1.63**	**53**	P	**Pn**	**23 41 44.5**	**+0.2**
MRMA				S	**Sn**	**23 42 04.1**	**-0.8**
AXAR	**Agios Charalam**	**1.67**	**358**	P	**Pn**	**23 41 45.3**	**+0.4**
AXAR	**Agios Charalam**	**1.67**	**358**	P	**Pn**	**23 41 45.3**	**+0.4**
MRKA	**Markates**	**1.75**	**23**	P	**Pn**	**23 41 46.1**	**+0.2**
MRKA				S	**Sn**	**23 42 07.2**	**-0.5**
MRKA	**Markates**	**1.75**	**23**	P	**Pn**	**23 41 46.1**	**+0.2**
MRKA				S	**Sn**	**23 42 07.2**	**-0.5**
KFL	**Anninata**	**1.84**	**304**	P	**Pn**	**23 41 47.9**	**+0.8**
KFL	**Anninata**	**1.84**	**304**	P	**Pn**	**23 41 47.8**	**+0.7**
KARN	**Karanos**	**1.94**	**150**	P	**Pn**	**23 41 50.0**	**+1.5**
KARN				S	**Sn**	**23 42 12.8**	**+0.5**
KARN	**Karanos**	**1.94**	**150**	*e*P	**Pn**	**23 41 49.0**	**+0.5**
KARN	**Karanos**	**1.94**	**150**	*e*P	**Pn**	**23 41 49.0**	**+0.5**
KARN	**Karanos**	**1.94**	**150**	*e*P	**Pn**	**23 41 49.0**	**+0.5**
KARN				S	**Sn**	**23 42 12.8**	**+0.5**
AGG	**Agios Georgios**	**1.95**	**351**	P	**Pn**	**23 41 49.1**	**+0.5**
AGG				S	**Sn**	**23 42 13.0**	**+0.5**
AGG	**Agios Georgios**	**1.95**	**351**	*e*P	**Pn**	**23 41 48.8**	**+0.2**
AGG	**Agios Georgios**	**1.95**	**351**	*e*P	**Pn**	**23 41 48.8**	**+0.2**
AGG				S	**Sn**	**23 42 13.0**	**+0.5**
EVR	**Evrytania**	**1.96**	**339**	P	**Pn**	**23 41 49.4**	**+0.6**
EVR	**Evrytania**	**1.96**	**339**	*e*P	**Pn**	**23 41 49.4**	**+0.6**
EVR	**Evrytania**	**1.96**	**339**	*e*P	**Pn**	**23 41 49.4**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.97**	**346**	P	**Pn**	**23 41 49.9**	**+1.0**
MAKR				S	**Sn**	**23 42 13.4**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.97**	**346**	P	**Pn**	**23 41 49.9**	**+1.0**
MAKR				S	**Sn**	**23 42 13.4**	**+0.4**
VLS	**Valsamata**	**2.01**	**303**	P	**Pn**	**23 41 49.5**	**+0.1**
VLS				S	**Sn**	**23 42 13.6**	**-0.3**
VLS	**Valsamata**	**2.01**	**303**	*e*P	**Pn**	**23 41 49.3**	**-0.1**
VLS	**Valsamata**	**2.01**	**303**	P	**Pn**	**23 41 49.5**	**+0.1**
VLS				S	**Sn**	**23 42 13.6**	**-0.3**
APE	**Apeiranthos**	**2.24**	**90**	P	**Pn**	**23 41 52.6**	**+0.1**
APE				S	**Sn**	**23 42 18.2**	**-1.2**
APE	**Apeiranthos**	**2.24**	**90**	⇓P	**Pn**	**23 41 52.3**	**-0.2**
APE				S	**Sn**	**23 42 18.7**	**-0.7**
APE	**Apeiranthos**	**2.24**	**90**	*e*P	**Pn**	**23 41 52.4**	**-0.1**
APE	**Apeiranthos**	**2.24**	**90**	*e*P	**Pn**	**23 41 52.4**	**-0.1**
APE				S	**Sn**	**23 42 18.7**	**-0.7**
NEO	**Neokhori**	**2.24**	**10**	*e*P	**Pn**	**23 41 52.5**	**0.0**
NEO	**Neokhori**	**2.24**	**10**	*e*P	**Pn**	**23 41 52.5**	**0.0**
THR3	**Thira Island,**	**2.25**	**107**	P	**Pn**	**23 41 53.3**	**+0.7**
THR3	**Thira Island,**	**2.25**	**107**	P	**Pn**	**23 41 53.3**	**+0.7**
AOS	**Alonnisos**	**2.26**	**23**	P	**Pn**	**23 41 52.6**	**-0.1**
AOS				S	**Sn**	**23 42 18.7**	**-1.2**
AOS	**Alonnisos**	**2.26**	**23**	*e*P	**Pn**	**23 41 52.5**	**-0.1**
AOS	**Alonnisos**	**2.26**	**23**	P	**Pn**	**23 41 52.6**	**-0.1**
AOS				S	**Sn**	**23 42 18.7**	**-1.2**
THR2	**Thira island,**	**2.27**	**106**	P	**Pn**	**23 41 53.5**	**+0.7**
THR2	**Thira island,**	**2.27**	**106**	P	**Pn**	**23 41 53.5**	**+0.7**
XOR	**Xorichti**	**2.30**	**9**	P	**Pn**	**23 41 53.3**	**+0.1**
XOR				S	**Sn**	**23 42 21.4**	**+0.7**
XOR	**Xorichti**	**2.30**	**9**	P	**Pn**	**23 41 53.3**	**+0.1**
XOR				S	**Sn**	**23 42 21.4**	**+0

MLSB	Milas	4.04	86	eP		Pn	23 42 18.1	+1.4	
KNT	Kendrikon	4.07	2	P		Pn	23 42 18.1	+1.1	
KNT				S		Sn	23 43 04.4	+1.0	
KNT	Kendrikon	4.07	2	P		Pn	23 42 18.1	+1.1	
KNT				S		Sn	23 43 04.4	+1.0	
BIA	Bitola	4.07	345	ePn		Pn	23 42 17.2	+0.1	
BIA				eSn		Sn	23 42 52.6	-11	
BIA	Bitola	4.07	345	ePn		Pn	23 42 17.2	+0.1	
SRS	Serrai	4.07	9	P		Pn	23 42 17.6	+0.4	
SRS	Serrai	4.07	9	P		Pn	23 42 17.6	+0.4	
AYDN	Tasoluk	4.14	81	iP		Pn	23 42 19.6	+1.5	
AYDN				eS		Sn	23 43 01.5	-3.9	
AYDN	Tasoluk	4.14	81	iP		Pn	23 42 19.6	+1.5	
AYDN				eS		Sn	23 43 01.5	-3.9	
VLO	Vlora	4.21	324	P		Pn	23 42 20.3	+1.3	
VLO	Vlora	4.21	324	P		Pn	23 42 20.3	+1.3	
VAY	Valandovo	4.22	358	P		Pn	23 42 20.5	+1.3	
VAY	Valandovo	4.22	358	ePn		Pn	23 42 20.5	+1.3	
VAY				eSg		Sn	23 43 06.4	-0.8	
VAY	Valandovo	4.22	358	P		Pn	23 42 20.5	+1.3	
VAY	Valandovo	4.22	358	ePn		Pn	23 42 20.9	+1.7	
NVR	Nevrokopi	4.34	11	P		Pn	23 42 21.4	+0.6	
NVR	Nevrokopi	4.34	11	eP		Pn	23 42 21.0	+0.2	
NVR	Nevrokopi	4.34	11	eP		Pn	23 42 21.0	+0.2	
NVR	Nevrokopi	4.34	11	eP		Pn	23 42 21.0	+0.2	
AKHS	Akhisar	4.40	65	iP		Pn	23 42 22.4	+0.8	
AKHS	Akhisar	4.40	65	iP		Pn	23 42 22.4	+0.8	
AKS	Akhisar	4.40	65	eP		Pn	23 42 22.5	+0.9	
GELI	Tayfur-Gelibol	4.41	40	eP		Pn	23 42 22.0	+0.3	
ARG	Arkhangelos	4.43	100	P		Pn	23 42 23.9	+1.9	
ARG	Arkhangelos	4.43	100	P		Pn	23 42 23.9	+1.9	
YER	Yerkesik	4.44	88	eP		Pn	23 42 24.2	+2.0	
ENEZ	Enez	4.51	35	eP		Pn	23 42 22.1	-1.0	
LPK	Lapseki	4.55	43	eP		Pn	23 42 23.1	-0.4	
ALN	Alexandroupoli	4.59	33	eP		Pn	23 42 24.1	-0.1	
ALN	Alexandroupoli	4.59	33	eP		Pn	23 42 24.1	-0.1	
ALN	Alexandroupoli	4.59	33	eP		Pn	23 42 24.1	-0.1	
ALN	Alexandroupoli	4.59	33	eP		Pn	23 42 24.1	-0.1	
BALY	Balya	4.66	54	iP		Pn	23 42 25.9	+0.7	
BALY	Balya	4.66	54	iP		Pn	23 42 25.9	+0.7	
DALT	Dalyan (Mudla)	4.75	92	eP		Pn	23 42 28.0	+1.7	
BALB	Balikesir	4.78	56	eP		Pn	23 42 27.6	+0.9	
TIR	Tirane	4.79	333	eSn		Sn	23 43 14.1	-7.1	
GONE	Gonen-Balikesi	4.88	51	eP		Pn	23 42 28.8	+0.8	
KULA	Kula-Manisa	4.91	71	eP		Pn	23 42 30.1	+1.5	
PHP	Peshkopia	4.92	340	P		Pn	23 42 28.6	0.0	
PHP	Peshkopia	4.92	340	P		Pn	23 42 28.6	0.0	
RKY	Sarkoy-Tekirda	4.99	43	eP		Pn	23 42 29.7	0.0	
FETY	Fethiye	5.12	93	eP		Pn	23 42 33.1	+1.7	
LTBQ	Tobruq SNR=36	5.12	169	iP		Pn	23 42 31.5	+0.1	
TIP	Timpagrande 36nm,0.4s	5.14	296	ePn		Pn	23 42 30.9	-0.8	
TIP				eS		Sn	23 43 25.0	-4.9	
TIP	Timpagrande 36nm,0.4s	5.14	296	ePn		Pn	23 42 31.0	-0.8	
DURS	Dursunbey	5.17	59	iP		Pn	23 42 32.8	+0.7	
DURS	Dursunbey	5.17	59	iP		Pn	23 42 32.8	+0.7	
EDC	Edincik	5.17	49	eP		Pn	23 42 32.7	+0.7	
DST	Dursunbey	5.27	60	eP		Pn	23 42 34.8	+1.4	
GLHS	Glhisar (BURDU	5.41	87	eP		Pn	23 42 37.5	+2.0	
VTS	Vitosha	5.50	4	P		Pn	23 42 38.7	+2.0	
VTS	Vitosha	5.50	4	⇑P		Pn	23 42 38.3	+1.6	
VTS	Vitosha	5.50	4	⇑iP		Pn	23 42 38.3	+1.6	
VTS	Vitosha	5.50	4	S		Sn	23 43 39.7	+1.0	
VTS	Vitosha	5.50	4	ePn		Pn	23 42 37.8	+1.1	
VTS	Vitosha	5.50	4	ePn		Pn	23 42 37.8	+1.1	
VTS	Vitosha	5.50	4	P		Pn	23 42 38.3	+1.6	
KHL	Karahalli	5.53	75	eP		Pn	23 42 39.2	+2.2	
CEL	Celeste 18nm,0.4s	5.54	284	ePn		Pn	23 42 36.6	-0.6	
CEL				eS		Sn	23 43 29.3	-10	
CEL	Celeste 18nm,0.4s	5.54	284	ePn		Pn	23 42 36.6	-0.6	
ULC	Ulcinj	5.56	332	⇓iPn		Pn	23 42 36.0	-1.4	
ULC				eSn		Sn	23 43 34.9	-5.0	
ULC	Ulcinj	5.56	332	⇓iPn		Pn	23 42 36.0	-1.4	
BARS	Barje	5.76	353	ePn		Pn	23 42 39.6	-0.5	
BARS	Barje	5.76	353	ePn		Pn	23 42 39.6	-0.5	
ELL	Elmali	5.76	91	eP		Pn	23 42 42.3	+2.0	
TVSB	Tavsanli	5.80	64	eP		Pn	23 42 42.1	+1.4	
PVY	Plav	5.89	340	⇓iPn		Pn	23 42 41.9	-0.1	
PVY				eSn		Sn	23 43 43.3	-4.9	
PVY	Plav	5.89	340	⇓iPn		Pn	23 42 41.9	-0.1	
ARMT	Armutlu	5.91	52	eP		Pn	23 42 43.1	+0.9	
TTG	Podgorica	5.96	334	⇑iPn		Pn	23 42 41.4	-1.4	
TTG				eSn		Sn	23 43 44.9	-4.7	
PDG	Podgorica	5.96	334	ePn		Pn	23 42 41.0	-1.8	
PDG				eSn		Sn	23 43 44.4	-5.3	
PDG	Podgorica	5.96	334	⇑iPn		Pn	23 42 41.4	-1.4	
BUM	Brajici-Budva	5.98	332	⇓iPn		Pn	23 42 41.8	-1.4	
BUM				eSn		Sn	23 43 45.0	-5.2	
BUM	Brajici-Budva	5.98	332	⇓iPn		Pn	23 42 41.8	-1.4	
BAI	Bari	6.06	313	ePn		Pn	23 42 43.5	-0.7	
CTKS	Kestanelik-??a	6.11	46	eP		Pn	23 42 45.3	+0.5	
CUC	Castrocucco 17nm,0.5s	6.14	300	ePn		Pn	23 42 46.0	+0.7	
CUC				eS		Sn	23 43 49.9	-4.3	
CUC	Castrocucco 17nm,0.5s	6.14	300	ePn		Pn	23 42 46.0	+0.7	
ALT	Altintas	6.14	69	eP		Pn	23 42 47.2	+1.7	
ZAPS	Zavoj	6.17	359	ePn		Pn	23 42 46.1	+0.3	
BGKT	Bogazkoy	6.22	47	eP		Pn	23 42 47.0	+0.6	
SELS	Selova	6.24	349	ePn		Pn	23 42 44.8	-1.9	
ISP	Isparta	6.24	81	⇓P		Pn	23 42 48.7	+1.9	
ISP	Isparta	6.24	81	⇓iP		Pn	23 42 48.7	+1.9	
ISP	Isparta	6.24	81	P		Pn	23 42 48.7	+1.9	
HCY	Herceg Novi	6.26	330	⇓iPn		Pn	23 42 44.9	-2.0	
HCY				eSn		Sn	23 43 51.4	-5.6	
HCY	Herceg Novi	6.26	330	⇓iPn		Pn	23 42 44.9	-2.0	
BCK	Bucak	6.28	84	eP		Pn	23 42 49.1	+1.9	
ISK	Istanbul-Kandi	6.32	49	eP		Pn	23 42 48.3	+0.6	
ANTB	Antalya	6.35	89	eP		Pn	23 42 50.2	+2.1	
SHUT	Suhut-Afyon	6.36	74	eP		Pn	23 42 50.0	+1.6	
NKY	Niksic	6.39	335	⇓iPn		Pn	23 42 48.8	0.0	
NKY				eSn		Sn	23 43 54.9	-5.4	
NKY	Niksic	6.39	335	⇓iPn		Pn	23 42 48.8	0.0	
CDT	Castel del Mon	6.41	310	ePn		Pn	23 42 47.9	-1.0	
LJBD	Adjabya SNR=36	6.51	200	iP		Pn	23 42 49.4	-1.0	
BRY	Bratogost	6.63	332	⇑iPn		Pn	23 42 50.5	-1.6	
BRY				eSn		Sn	23 44 00.8	-5.4	
BRY	Bratogost	6.63	332	⇑iPn		Pn	23 42 50.5	-1.6	
PLE	Pljevlja	6.73	339	ePn		Pn	23 42 52.6	-0.8	
PLE				eSn		Sn	23 44 03.5	-5.1	
PLE	Pljevlja	6.73	339	ePn		Pn	23 42 52.6	-0.8	
IVAS	Ivanjica	6.77	344	ePn		Pn	23 42 51.6	-2.3	
IVAS				eSn		Sn	23 44 02.8	-6.6	
IVAS	Ivanjica	6.77	344	ePn		Pn	23 42 51.6	-2.3	
UPM	Unac-Piva	6.77	336	⇑iPn		Pn	23 42 53.8	-0.2	
UPM				eSn		Sn	23 44 04.6	-5.0	
UPM	Unac-Piva	6.77	336	⇑iPn		Pn	23 42 53.8	-0.2	
STON	Ston	6.94	328	ePn		Pn	23 42 53.5	-2.6	
STON				Sn		Sn	23 44 05.3	-8.2	
GRUS	Gruza	6.96	348	ePn		Pn	23 42 54.4	-2.0	
GRUS	Gruza	6.96	348	ePn		Pn	23 42 54.4	-2.0	
MS1	Monte Sant'Ang	6.99	313	ePn		Pn	23 42 56.0	-0.9	
HMAT	Matruh baz=150	7.00	148	P		Pn	23 42 52.7	-4.3	
HMAT				S		Sn	23 44 03.2	-12	
HMAT	Matruh baz=150	7.00	148	P		Pn	23 42 52.7	-4.3	
HMAT				S		Sn	23 44 03.2	-12	
DIVS	Divibare	7.30	344	ePn		Pn	23 42 59.1	-2.1	
DIVS				eSn		Sn	23 44 15.4	-7.1	
DIVS	Divibare	7.30	344	ePn		Pn	23 42 59.1	-2.1	
KONT	Konya--Tatoy	7.70	81	eP		Pn	23 43 08.4	+1.7	
LADK	Ladik-KONYA	7.73	79	eP		Pn	23 43 08.6	+1.6	
SWA2	baz=166	8.16	163	P		Pn	23 43 10.5	-2.3	
SWA2	comp=E,400µm,0.2s,logA/T=6.3,baz=166			AMP			23 44 00.0		
SWA2	baz=166			S		Sn	23 44 33.1	-10	
SWA2		8.16	163	P		Pn	23 43 10.5	-2.3	
SWA2				S		Sn	23 44 33.1	-10	
ARR	Arges	8.39	9	⇑iP		Pn	23 43 18.7	+2.7	
BZS	Buzias	8.56	355	⇓P		Pn	23 43 20.3	+2.1	
BZS	Buzias	8.56	355	⇓iP		Pn	23 43 20.3	+2.1	
BZS	Buzias	8.56	355	P		Pn	23 43 20.3	+2.1	
BLY	Banja Luka	8.72	333	ePn		Pn	23 43 17.4	-3.0	
MLR	Muntele Rosu	8.73	15	P		Pn	23 43 23.2	+2.5	
MLR				S		Sn	23 45 00.5	+3.0	
MLR	Muntele Rosu	8.73	15	⇓iP		Pn	23 43 23.0	+2.3	
MLR	Muntele Rosu comp=E,0.1nm,0.3s,baz=204,slow=12,SNR=15	8.73	15	P		Pn	23 43 23.2	+2.5	
MLR	comp=E,0.0nm,0.3s,baz=287,slow=19,SNR=2.8			S		Sn	23 45 00.5	+3.0	
MLR	Muntele Rosu	8.73	15	P		Pn	23 43 23.0	+2.3	
CSS	Prodhromos comp=E,5.3nm,0.3s	8.85	101	ePn		Pn	23 43 19.5	-2.8	
CSS				eS		Sn	23 44 54.0	-6.3	
BRTR	Keskin Array B	8.96	70	P		Pn	23 43 26.9	+3.1	
BRTR	Keskin Array B comp=E,0.7nm,0.3s,baz=254,slow=14,SNR=31	8.96	70	P		Pn	23 43 26.9	+3.1	
PLOR	Plostina	9.23	17	⇓P		Pn	23 43 30.8	+3.4	
PLOR				S		Sn	23 45 12.8	+3.3	
PLOR	Plostina	9.23	17	⇓iP		Pn	23 43 30.8	+3.4	
VRI	Vrincioaia	9.26	18	⇓P		Pn	23 43 31.2	+3.3	
VRI				S		Sn	23 45 15.0	+4.7	
VRI	Vrincioaia	9.26	18	⇓iP		Pn	23 43 31.2	+3.3	
TLCR		9.29	28	⇓P		Pn	23 43 29.6	+1.4	
TLCR		9.29	28	⇓iP		Pn	23 43 29.6	+1.4	
TLCR		9.29	28	P		Pn	23 43 29.6	+1.4	
NVLJ	Novalja	9.54	324	iPn		Pn	23 43 29.8	-1.8	
NVLJ				Sn		Sn	23 45 07.5	-9.5	
NVLJ	Novalja	9.54	324	iPn		Pn	23 43 29.8	-1.8	
HNAT	Natroun baz=137	9.94	136	P		Pn	23 43 33.3	-3.8	
HNAT	Natroun	9.94	136	P		Pn	23 43 33.3	-3.8	
BOJS	Bojanci	10.11	329	ePn		Pn	23 43 37.0	-2.3	
BOJS				eSn		Sn	23 45 23.8	-7.0	
KOT	Kottamia baz=131	10.43	131	P		Pn	23 43 39.9	-3.9	
KOT	Kottamia	10.43	131	P		Pn	23 43 39.9	-3.9	
HSAF	As Saff baz=133	10.48	133	P		Pn	23 43 41.4	-3.2	
HSAF	As Saff	10.48	133	P		Pn	23 43 41.4	-3.2	
VISS	Visnje	10.52	328	ePn		Pn	23 43 42.6	-2.4	
VISS				eSn		Sn	23 45 33.4	-7.5	
HHAG	Hagoal baz=130	10.57	130	P		Pn	23 43 42.5	-3.2	
HHAG	comp=N,80µm,0.2s,logA/T=5.7,baz=130			AMP			23 45 00.0		
HHAG				S		Sn	23 45 30.1	-12	
HHAG	Hagoal baz=130	10.57	130	P		Pn	23 43 42.6	-3.2	
HHAG				S		Sn	23 45 30.1	-12	
BUR08	Bucovina Ar. S	10.70	9	ePn		Pn	23 43 50.5	+3.0	
AMAG	Maghara baz=123	10.83	123	P		Pn	23 43 44.3	-5.0	
AMAG	Maghara	10.83	123	P		Pn	23 43 44.3	-5.0	
KEST	Kesra	10.87	267	P		Pn	23 43 49.9	0.0	
KEST				S		Sn	23 45 46.6	-3.0	
KEST	Kesra comp=N,0.1nm,0.3s,baz=86,slow=14,SNR=7.6	10.87	267	P		Pn	23 43 49.9	0.0	
KEST	comp=N,0.2nm,0.3s,baz=75,slow=22,SNR=6.9			S		Sn	23 45 46.6	-3.0	
KEST	Kesra	10.87	267	P		Pn	23 43 49.9	0.0	
TRI	Trieste	10.92	325	eP		Pn	23 43 47.1	-3.3	
TRI	comp=Z,4.0nm,0.5s			pmax		pmax			
TRI	Trieste comp=Z,3.5nm,0.5s	10.92	325	ePn		Pn	23 43 47.1	-3.3	
TRI				eS		Sn	23 45 37.2	-13	
HFRF	Wahat Farafira baz=155	10.98	153	P		Pn	23 43 48.3	-3.1	
HFRF	Wahat Farafira	10.98	153	P		Pn	23 43 48.3	-3.1	
VOY	Vojsko	11.11	326	ePn		Pn	23 43 50.7	-2.3	
VOY				eSn		Sn	23 45 45.0	-10	
SUZ	baz=128	11.11	128	P		Pn	23 43 50.0	-3.1	
SUZ		11.11	128	P		Pn	23 43 50.0	-3.1	
MMAI	Mount Meron Ar	11.16	108	P		Pn	23 43 49.2	-4.5	
MMAI				S		Sn	23 45 46.8	-10	
MMAI	Mount Meron Ar comp=Z,3.7nm,0.3s,baz=304,slow=12,SNR=38	11.16	108	P		Pn	23 43 49.2	-4.5	
MMAI	comp=Z,5.9nm,0.3s,baz=267,slow=20,SNR=9.6			S		Sn	23 45 46.8	-10	
SOKA	Soboth	11.16	332	⇑iPn		Pn	23 43 50.8	-2.9	
SOKA	Soboth	11.16	332	⇓iPn		Pn	23 43 50.5	-3.2	
OBKA	Obir	11.21	330	⇓iPn		Pn	23 43 52.6	-1.8	
OBKA	Obir	11.21	330	⇓iPn		Pn	23 43 50.8	-3.6	
OBKA	Obir	11.21	330	Pn		Pn	23 43 52.6	-1.8	
ZAF	baz=131	11.32	131	P		Pn	23 43 52.5	-3.6	
ZAF		11.32	131	P		Pn	23 43 52.4	-3.6	
VYHS	Vyhne	11.74	347	ePN		Pn	23 44 01.8	+0.2	
VYHS	Vyhne	11.74	347	eSN		Sn	23 46 07.5	-3.2	
HNKL	Nakhl baz=124	11.79	124	P		Pn	23 43 58.9	-3.5	
HNKL	baz=124			S		Sn	23 45 59.5	-13	
HNKL	comp=E,20µm,0.5s,logA/T=4.6,baz=124			AMP			23 46 00.0		
HNKL	Nakhl	11.79	124	P		Pn	23 43 58.9	-3.5	
HNKL				S		Sn	23 45 59.5	-13	
GRB	Gharib baz=134	12.21	133	P		Pn	23 44 04.7	-3.3	
GRB	Gharib	12.21	133	P		Pn	23 44 04.7	-3.3	
MOA	Molln	12.42	333	⇓iPn		Pn	23 44 11.0	+0.3	
MOA	Molln	12.42	333	⇓iPn		Pn	23 44 07.4	-3.3	
MOA	Molln	12.42	333	Pn		Pn	23 44 11.0	+0.3	
MALT	Malatya	12.50	80	eP		Pn	23 44 13.3	+1.4	
MALT	comp=Z,3.0nm,0.6s			pmax		pmax			
MALT	Malatya comp=Z,2.6nm,0.6s	12.50	80	ePn		Pn	23 44 13.3	+1.4	
MALT	Malatya comp=Z,3.0nm,0.6s	12.50	80	eP		Pn	23 44 13.3	+1.4	
EIL	Elat	12.61	122	P		Pn	23 44 09.0	-4.3	
EIL				S		Sn	23 46 18.2	-14	
EIL	Elat comp=Z,1.3nm,0.3s,baz=329,slow=12,SNR=14	12.61	122	P		Pn	23 44 09.0	-4.3	
EIL	comp=Z,4.0nm,0.3s,baz=156,slow=18,SNR=8.8			S		Sn	23 46 18.2	-14	
HKAT	Jabal Katrina baz=129	12.75	129	P		Pn	23 44 12.4	-3.1	
HKAT	Jabal Katrina	12.75	129	P		Pn	23 44 12.4	-3.1	
HBST	Basata baz=125	12.75	125	P		Pn	23 44 12.0	-3.3	
HBST	Basata	12.75	125	P		Pn	23 44 12.0	-3.3	
WTTA	Wattenberg	13.06	325	⇑iP		Pn	23 44 15.9	-3.5	
WTTA	Wattenberg	13.06	325	⇑iPn		Pn	23 44 18.4	-1.0	
WTTA	Wattenberg	13.06	325	⇑iPn		Pn	23 44 15.9	-3.5	
WTTA	Wattenberg	13.06	325	Pn		Pn	23 44 18.4	-1.0	
WATA	Walderalm	13.14	325	⇑iP		Pn	23 44 16.9	-3.6	
WATA	Walderalm	13.14	325	⇑iPn		Pn	23 44 19.2	-1.2	
WATA	Walderalm	13.14	325	⇑iPn		Pn	23 44 16.9	-3.6	
WATA	Walderalm	13.14	325	Pn		Pn	23 44 19.2	-1.2	
AKRG	Al Kharijah baz=149	13.32	148	P		Pn	23 44 19.1	-3.8	
GTR	Jabal at Tayr baz=149	13.34	148	P		Pn	23 44 19.7	-3.4	
GTR	Jabal at Tayr	13.34	148	P		Pn	23 44 19.7	-3.4	
GERES	GERESS Array B	13.46	334	P		Pn	23 44 23.7	-0.9	
GERES				S		Sn	23 46 44.9	-7.6	
GERES	GERESS Array B comp=Z,0.3nm,0.3s,baz=157,slow=13,SNR=12	13.46	334	P		Pn	23 44 23.7	-0.9	
GERES	comp=Z,0.5nm,0.3s,baz=154,slow=23,SNR=11			S		Sn	23 46 44.9	-7.6	
ANN	Anapa	13.51	51	eP		P	23 44 29.6	-1.7	
ANN	comp=Z,44nm,1.1s			pmax		pmax			
ANN	Anapa comp=Z,44nm,1.1s	13.51	51	eP		P	23 44 29.6	-1.7	
DAVOX	Davos/Dischmat	13.59	319	P		Pn	23 44 25.6	-0.8	
DAVOX				S		Sn	23 46 50.5	-5.2	
DAVOX	Davos/Dischmat comp=Z,0.2nm,0.3s,baz=171,slow=20,SNR=4.2	13.59	319	P		Pn	23 44 25.6	-0.8	
DAVOX	comp=Z,0.3nm,0.3s,baz=348,slow=20,SNR=3.5			S		Sn	23 46 50.5	-5.2	
TUE	Stuetta	13.68	317	ePn		Pn	23 44 26.9	-0.6	
TUE	Stuetta	13.68	317	ePn		Pn	23 44 27.0	-0.6	
KHC	Kasperske Hory	13.75	334	eP		P	23 44 35.0	+1.0	
KHC				eS		Sn	23 46 54.0	-5.4	
KHC	Kasperske Hory	13.75	334	eP		P	23 44 35.0	+1.0	
KHC				ex		x	23 46 54.0		
KHC	Kasperske Hory	13.75	334	eP		P	23 44 35.0	+1.0	
AK02	Malin Array Si	14.33	17	ePn		Pn	23 44 35.8	0.0	
AK02	Malin Array Si	14.33	17	ePn		Pn	23 44 35.8	0.0	
AKASG	Malin Array Be	14.38	17	P		P	23 44 40.3	-0.6	
AKASG	comp=Z,3.0nm,0.3s			pmax		pmax			
AKASG	Malin Array Be	14.38	17	P		P	23 44 40.3	-0.6	
AKASG	comp=Z,3.2nm,0.3s,baz=206,slow=8.6,SNR=14			P		P	23 44 40.3	-0.6	
AKASG	Malin Array Be comp=Z,3.0nm,0.3s	14.38	17	P		P	23 44 40.3	-0.6	
CLL	Collm	15.81	337	eP		P	23 44 59.0	+2.2	
CLL	comp=Z,5.0nm,1.3s			pmax		pmax			
CLL	Collm comp=Z,5.0nm,1.3s	15.81	337	eP		P	23 44 59.0	+2.2	
KIV	Kislovodsk	16.63	59	iP		Pn	23 45 05.9	+0.8	
KIV	comp=Z,5.0nm,1.0s			pmax		pmax			
KIV	Kislovodsk	16.63	59	ePn		Pn	23 45 03.9	-1.2	
KIV	Kislovodsk	16.63	59	ePn		Pn	23 45 03.9	-1.2	
KIV	Kislovodsk comp=Z,5.0nm,1.0s	16.63	59	iP		Pn	23 45 05.9	+0.8	
KBZ	Khabaz	16.71	60	P		P	23 45 07.9	+1.0	
KBZ	Khabaz	16.71	60	P		P	23 45 07.9	+1.0	
KBZ	Khabaz comp=Z,0.4nm,0.3s,baz=258,slow=10.0,SNR=17	16.71	60	P		P	23 45 07.9	+1.0	
KBZ	Khabaz	16.71	60	P		P	23 45 07.9	+1.0	
ONI	Oni	16.82	65	P		P	23 45 09.3	+1.0	
ONI	Oni	16.82	65	P		P	23 45 09.3	+1.0	
ZEI	Tsey	17.18	64	eP		P	23 45 13.0	+0.6	
ZEI	comp=Z,8.0nm,0.8s			pmax		pmax			
ZEI	Tsey comp=Z,8.0nm,0.8s	17.18	64	eP		P	23 45 13.0	+0.6	
TBLG	Delisi	17.61	68	eP		Pn	23 45 11.1	-5.9	
TBLG	Delisi	17.61	68	P		Pn	23 45 11.2	-5.9	
VORD	Divnogorie	18.22	35	eP		P	23 45 23.5	+0.1	
VORD	comp=N,9.0nm,0.6s			pmax		pmax			
VORD	comp=E,7.0nm,0.6s			pmax		pmax			
VORD	comp=Z,5.0nm,0.6s			pmax		pmax			
VORD	Divnogorie	18.22	35	eP		P	23 45 23.5	+0.1	
VSR	Storozhevoye	18.34	34	eP		P	23 45 24.3	-0.4	
VSR	comp=N,2.0nm,0.4s			pmax		pmax			
VSR	comp=E,1.0nm,0.4s			pmax		pmax			
VSR	comp=Z,6.0nm,0.4s			pmax		pmax			
VSR	Storozhevoye	18.34	34	eP		P	23 45 24.3	-0.4	
VRHR	Novokhopersk	19.42	38	eP		Pn	23 45 38.1	-0.4	
VRHR	comp=N,10.0nm,0.8s			pmax		pmax			
VRHR	comp=E,8.0nm,0.8s			pmax		pmax			
VRHR	comp=Z,20nm,0.8s			pmax		pmax			
VRHR	Novokhopersk	19.42	38	eP		Pn	23 45 38.1	-0.4	
OBN	Obninsk	20.35	23	eP		P	23 45 45.5	-1.0	
OBN	comp=Z,11nm,1.0s			pmax		pmax			
OBN	Obninsk comp=Z,11nm,1.0s	20.35	23	eP		P	23 45 45.5	-1.0	
ESDC	Sonseca Array	21.05	285	P		P	23 45 58.0	+3.6	
ESDC	Sonseca Array comp=Z,0.3nm,0.4s,baz=84,slow=9.5,SNR=6.5	21.05	285	P		P	23 45 58.0	+3.6	
MIB	Mutribah	21.75	102	eP		P	23 46 01.1	-0.7	
MIB	comp=Z,47nm,0.4s			AMb		AMB	23 46 02.8		
MIB	Mutribah comp=Z,47nm,0.4s	21.75	102	eP		P	23 46 01.1	-0.7	
NAY	Al-Naaiem	21.92	104	eP		P	23 46 02.8	-0.9	
NAY	comp=Z,21nm,0.4s			AMb		AMB	23 46 04.8		
NAY	Al-Naaiem comp=Z,21nm,0.4s	21.92	104	eP		P	23 46 02.8	-0.9	
UMR	Umm Al-Rimmam	22.15	103	eP		P	23 46 05.5	-0.6	
UMR	comp=Z,27nm,0.4s			AMb		AMB	23 46 12.1		
UMR	Umm Al-Rimmam comp=Z,27nm,0.4s	22.15	103	eP		P	23 46 05.5	-0.6	
FINES	FINESS Array B	24.46	4	P		P	23 46 27.1	-0.8	
FINES				PcP		PcP	23 50 04.3	0.0	
FINES	FINESS Array B comp=Z,1.3nm,0.4s,baz=175,slow=10.0,SNR=46	24.46	4	P		P	23 46 27.1	-0.8	
FINES	comp=Z,0.4nm,0.4s,baz=135,slow=0.6,SNR=4.3			PcP		PcP	23 50 04.3	0.0	
FINES	FINESS Array B comp=Z,1.0nm,0.4s	24.46	4	P		P	23 46 27.1	-0.8	
NAO01	NORSAR Array S comp=

KURK					pmax	pmax			
	comp=Z,6.0nm,1.5s								
KURK	**Kurchatov**	**41.53**	**53**	*e*P		**P**	**23 48 55.2**	**-0.8**	
	comp=Z,2.4nm,0.6s								
KURK	**Kurchatov**	**41.53**	**53**	*i* P		**P**	**23 48 55.3**	**-0.8**	
	comp=Z,6.0nm,1.5s								
NVS	**Novosibirsk**	**44.15**	**46**	*e*P		**P**	**23 49 15.3**	**-1.8**	
NVS					pmax	pmax			
	comp=N,2.0nm,0.6s								
NVS					pmax	pmax			
	comp=Z,6.0nm,0.6s								
NVS					pmax	pmax			
	comp=E,4.0nm,0.8s								
NVS	**Novosibirsk**	**44.15**	**46**	*e*P		**P**	**23 49 15.3**	**-1.8**	
MK31	**Makanchi Array**	**44.38**	**58**	*e*P		**P**	**23 49 18.7**	**-0.5**	
MK31	**Makanchi Array**	**44.38**	**58**	*e*P		**P**	**23 49 18.7**	**-0.5**	
MK31	**Makanchi Array**	**44.38**	**58**	*e*P		**P**	**23 49 18.7**	**-0.5**	
MKAR	**Makanchi Array**	**44.38**	**58**	P		**P**	**23 49 18.7**	**-0.5**	
MKAR							23 51 02.4		
MKAR					pmax	pmax			
	comp=Z,2.0nm,0.4s								
MKAR					pmax	pmax			
	comp=Z,1.0nm,0.7s								
MKAR	**Makanchi Array**	**44.38**	**58**	P		**P**	**23 49 18.7**	**-0.5**	
MKAR				PcP		**PcP**	**23 51 02.4**	**+0.7**	
MKAR				ScP		**ScP**	**23 54 45.8**	**-0.3**	
MKAR	**Makanchi Array**	**44.38**	**58**	P		**P**	**23 49 18.7**	**-0.5**	
	comp=Z,1.7nm,0.3s,baz=269,slow=8.3,SNR=63								
MKAR				PcP		**PcP**	**23 51 02.4**	**+0.7**	
	comp=Z,0.5nm,0.7s,baz=276,slow=6.9,SNR=3.1								
MKAR				ScP		**ScP**	**23 54 45.8**	**-0.3**	
	comp=Z,0.1nm,0.5s,baz=270,slow=6.2,SNR=3.3								
MKAR	**Makanchi Array**	**44.38**	**58**	P		**P**	**23 49 18.7**	**-0.5**	
	comp=Z,2.0nm,0.4s								
MKAR	**Makanchi Array**	**44.38**	**58**	PcP		**PcP**	**23 51 02.4**	**+0.7**	
	comp=Z,1.0nm,0.7s								
ZAA0	**Zalesovo Array**	**45.12**	**47**	*e*P		**P**	**23 49 23.9**	**-1.0**	
ZAA0	**Zalesovo Array**	**45.12**	**47**	*e*P		**P**	**23 49 23.9**	**-1.0**	
ZALV	**Zalesovo Beam**	**45.12**	**47**	P		**P**	**23 49 24.1**	**-0.8**	
ZALV					pmax	pmax			
	comp=Z,6.0nm,0.3s								
ZALV	**Zalesovo Beam**	**45.12**	**47**	P		**P**	**23 49 24.1**	**-0.8**	
ZALV	**Zalesovo Beam**	**45.12**	**47**	P		**P**	**23 49 24.1**	**-0.8**	
	comp=Z,5.9nm,0.3s,baz=271,slow=8.9,SNR=45								
ZALV	**Zalesovo Beam**	**45.12**	**47**	P		**P**	**23 49 24.1**	**-0.8**	
	comp=Z,6.0nm,0.3s								
SONM	**Songino Array**	**59.79**	**51**	P		**P**	**23 51 13.0**	**-0.5**	
SONM	**Songino Array**	**59.79**	**51**	P		**P**	**23 51 13.0**	**-0.5**	
	comp=Z,0.3nm,0.4s,baz=288,slow=8.0,SNR=3.2								
SONM	**Songino Array**	**59.79**	**51**	P		**P**	**23 51 13.0**	**-0.5**	
SCHQ	**Schefferville**	**60.44**	**318**	P		**P**	**23 51 18.8**	**+1.1**	
SCHQ	**Schefferville**	**60.44**	**318**	P		**P**	**23 51 18.8**	**+1.1**	
	comp=Z,0.7nm,0.3s,baz=67,slow=4.9,SNR=7.2								
SCHQ	**Schefferville**	**60.44**	**318**	P		**P**	**23 51 18.8**	**+1.1**	
CMAR	**Chiang Mai Arr**	**68.30**	**83**	P		**P**	**23 52 09.2**	**-0.4**	
CMAR	**Chiang Mai Arr**	**68.30**	**83**	P		**P**	**23 52 09.2**	**-0.4**	
	comp=Z,0.9nm,0.6s,baz=308,slow=7.7,SNR=6.7								
CMAR	**Chiang Mai Arr**	**68.30**	**83**	P		**P**	**23 52 09.2**	**-0.4**	
	comp=Z,1.0nm,0.6s								
SEY	**Seymchan**	**72.51**	**22**	*de*P		**P**	**23 52 34.8**	**+0.4**	
SEY	**Seymchan**	**72.51**	**22**	*e*P		**P**	**23 52 34.8**	**+0.4**	
INK	**Inuvik**	**73.42**	**351**	P		**P**	**23 52 40.1**	**+0.4**	
INK	**Inuvik**	**73.42**	**351**	P		**P**	**23 52 40.1**	**+0.4**	
	comp=Z,0.7nm,0.8s,baz=13,slow=5.6,SNR=3.7								
INK	**Inuvik**	**73.42**	**351**	P		**P**	**23 52 40.1**	**+0.4**	
	comp=Z,1.0nm,0.8s								
YKA	**Yellowknife Ar**	**75.00**	**341**	P		**P**	**23 52 49.7**	**+0.7**	
YKA	**Yellowknife Ar**	**75.00**	**341**	P		**P**	**23 52 49.7**	**+0.7**	
	comp=Z,0.3nm,0.5s,baz=32,slow=5.3,SNR=11								
YKA	**Yellowknife Ar**	**75.00**	**341**	P		**P**	**23 52 49.7**	**+0.7**	
USRK	**Ussuriysk Arra**	**76.86**	**44**	P		**P**	**23 52 58.1**	**-1.7**	
	comp=Z,0.6nm,0.5s,baz=306,slow=6.0,SNR=3.2								
ULM	**Lac du Bonnet**	**77.60**	**325**	P		**P**	**23 53 04.4**	**+0.4**	
ULM	**Lac du Bonnet**	**77.60**	**325**	P		**P**	**23 53 04.4**	**+0.4**	
	comp=Z,0.7nm,0.3s,baz=25,slow=6.0,SNR=3.5								
ULM	**Lac du Bonnet**	**77.60**	**325**	P		**P**	**23 53 04.4**	**+0.4**	
	comp=Z,1.0nm,0.3s								
ILAR	**Eielson Array**	**78.14**	**355**	P		**P**	**23 53 07.8**	**+1.1**	
ILAR	**Eielson Array**	**78.14**	**355**	P		**P**	**23 53 07.8**	**+1.1**	
	comp=Z,0.4nm,0.5s,baz=350,slow=4.0,SNR=7.4								
ILAR	**Eielson Array**	**78.14**	**355**	P		**P**	**23 53 07.8**	**+1.1**	
KSAR	**Wonju Array Be**	**78.63**	**52**	P		**P**	**23 53 09.2**	**-0.7**	
KSAR	**Wonju Array Be**	**78.63**	**52**	P		**P**	**23 53 09.2**	**-0.7**	
KSRS	**Korea Array**	**78.65**	**52**	P		**P**	**23 53 09.2**	**-0.7**	
	comp=Z,0.6nm,0.4s,baz=315,slow=5.3,SNR=3.5								
KSRS	**Korea Array**	**78.65**	**52**	P		**P**	**23 53 09.2**	**-0.7**	
	comp=Z,1.0nm,0.4s								
MJAR	**Matsushiro Arr**	**85.47**	**47**	P		**P**	**23 53 45.9**	**+0.2**	
MJAR	**Matsushiro Arr**	**85.47**	**47**	P		**P**	**23 53 45.9**	**+0.2**	
	comp=Z,0.3nm,0.3s,baz=293,slow=5.7,SNR=4.5								
MJAR	**Matsushiro Arr**	**85.47**	**47**	P		**P**	**23 53 45.9**	**+0.2**	
MJA0	**Matsu Arr-Jizo**	**85.49**	**47**	*e*P		**P**	**23 53 46.8**	**+0.9**	
MJA0	**Matsu Arr-Jizo**	**85.49**	**47**	*e*P		**P**	**23 53 46.8**	**+0.9**	
WRA	**Warramunga Arr**	**118.73**	**94**	PKP		**PKPdf**	**23 59 54.7**	**-1.2**	
WRA	**Warramunga Arr**	**118.73**	**94**	PKP		**PKPdf**	**23 59 54.7**	**-1.2**	
	comp=Z,0.2nm,0.3s,baz=317,slow=1.6,SNR=3.7								
ASAR	**Alice Springs**	**120.30**	**98**	PKP		**PKPdf**	**23 59 58.4**	**-0.5**	
ASAR	**Alice Springs**	**120.30**	**98**	PKP		**PKPdf**	**23 59 58.4**	**-0.5**	
	comp=Z,0.2nm,0.4s,baz=327,slow=2.0,SNR=3.2								

IDC 11 23:50:19.9±1.3, 0.13°N×98.38°E, h0km, mb3.8/8, mb1 3.8/10, mb1mx3.6/27, mbtmp3.7/10, ML3.4/2, Error ellipse: s-maj=57.7km s-min=16.5km az=61.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PSI	**Prapat**	**2.70**	**12**	Pn		Pn	23 51 03.5	-1.3
	1.5nm,0.3s,baz=186,slow=12,SNR=6.4							
CMAR	**Chiang Mai Arr**	**18.22**	**2**	P		Pn	23 54 33.8	-0.6
	0.1nm,0.3s,baz=189,slow=10,SNR=4.1							
WRA	**Warramunga Arr**	**40.47**	**122**	P		P	23 57 59.6	-1.0
	0.6nm,0.5s,baz=302,slow=8.9,SNR=6.6							
ASAR	**Alice Springs**	**41.81**	**127**	P		P	23 58 11.0	-0.7
	0.8nm,0.8s,baz=304,slow=8.3,SNR=11							
ASAR				PcP		PcP	00 00 08.8	+0.8
	0.4nm,0.7s,baz=294,slow=2.7,SNR=4.5							
SONM	**Songino Array**	**48.02**	**7**	P		P	23 59 01.5	+0.6
	0.4nm,0.4s,baz=191,slow=9.0,SNR=3.2							
MKAR	**Makanchi Array**	**48.56**	**345**	P		P	23 59 05.7	+0.8
	0.7nm,0.5s,baz=154,slow=9.1,SNR=19							
STKA	**Stephens Creek**	**51.77**	**132**	P		P	23 59 30.6	+1.1
	0.4nm,0.5s,baz=311,slow=9.3,SNR=4.0							
ZALV	**Zalesovo Beam**	**54.80**	**350**	P		P	23 59 50.8	-0.7
	0.6nm,0.4s,baz=172,slow=6.7,SNR=2.5							
BVAR	**Borovoye Array**	**57.64**	**340**	P		P	00 00 11.0	-0.8
	0.9nm,0.5s,baz=144,slow=8.2,SNR=9.8							
FINES	**FINESS Array B**	**81.48**	**332**	P		P	00 02 38.4	-0.4
	0.9nm,0.9s,baz=101,slow=7.2,SNR=5.2							

*IDC **12** 00:03:30.9±3.2, 42.°97N×105.°00W, h0km, mb2.4/1, mb1 3.6/3, mb1mx3.3/29, mbtmp3.4/3, ML3.7/2, Error ellipse: s-maj=64.4km s-min=10.1km az=159.0*

*ISCJB **12** 00:03:34.6±0.2, 43.°68N±0.°02×105.°30W±0.°03, h0km, Error ellipse: s-maj=2.9km s-min=2.6km az=169.8*

*NEIC **12** 00:03:35.7±0.4, 43.°71N×105.°23W, h0km, ML2.8, Error ellipse: s-maj=6.8km s-min=4.9km az=170.0, Suspected Mining explosion.*

NEIC 70 km [40 miles] SSE of Gillette.

ISC 12 00:03:35.1±0.7, 43.°64N±0.°02×105.°23W±0.°02, h0km, n79, σ1§23/90, 24C-29D, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
J23A	**Dilts Ranch, B**	**0.33**	**225**	⇑P		**Pg**	**00 03 42.2**	**+0.8**
	baz=0.4,SNR=582							
I23A	**Meade Ranch, G**	**0.36**	**333**	⇓P		**Pg**	**00 03 42.2**	**+0.2**
	baz=0.3,SNR=74							
I23A				⇑S		**Sg**	**00 03 45.9**	**-0.9**
	baz=0.3							
I24A	**Kuemmerle Ranc**	**0.49**	**63**	⇑P		**Pb**	**00 03 46.0**	**-0.7**
	baz=0.5,SNR=125							
J24A	**Dixon Ranch, L**	**0.52**	**126**	⇓P		**Pb**	**00 03 46.8**	**-0.3**
	baz=0.6,SNR=64							
J24A				⇑S		**Sb**	**00 03 55.6**	**+0.4**
	baz=0.6							
H23A	**Clabaugh Cattl**	**0.93**	**353**	⇑P		**Pg**	**00 03 52.2**	**-0.8**
	baz=0.9,SNR=16							
I22A	**9 Mile Ranch,**	**0.94**	**286**	P		**Pg**	**00 03 52.1**	**-1.0**
	baz=0.9,SNR=292							
K24A	**Anderson Ranch**	**0.96**	**161**	⇑P		**Pn**	**00 03 54.6**	**-1.5**
	baz=1.0							
RSSD	**Black Hills**	**0.99**	**60**	*e*Pg		**Pb**	**00 03 54.8**	**-0.5**
RSSD				*e*S		**Sg**	**00 04 06.1**	**-0.9**
H24A	**Dirks Ranch, A**	**1.21**	**24**	⇑P		**Pg**	**00 03 57.6**	**-0.8**
	baz=1.1,SNR=333							
K22A	**Casper**	**1.37**	**224**	⇑Pb		**Pg**	**00 04 00.3**	**-1.0**
	baz=1.4							
K25A	**Mack Ranch, Ha**	**1.43**	**135**	⇑Pg		**Pb**	**00 04 03.8**	**+1.1**
	baz=1.5,SNR=33							
L23A	**Garrett**	**1.56**	**193**	⇑Pb		**Pg**	**00 04 04.3**	**-0.7**
	baz=1.6							
G23A	**Biddle**	**1.57**	**356**	⇑Pb		**Pn**	**00 04 03.5**	**-0.8**
	baz=1.5,SNR=59							
L24A	**Wheatland**	**1.61**	**172**	⇓Pb		**Pg**	**00 04 05.7**	**-0.2**
	baz=1.7,SNR=23							
H21A	**Big Horn, Sher**	**1.64**	**308**	⇓Pb		**Pn**	**00 04 04.5**	**-0.8**
	baz=1.6,SNR=79							
J21A	**Lysite**	**1.64**	**260**	⇓Pb		**Pb**	**00 04 04.0**	**-1.3**
	baz=1.6,SNR=36							
L25A	**Engebretsen Ra**	**1.75**	**147**	⇓Pb		**Pg**	**00 04 09.0**	**+0.4**
	baz=1.8,SNR=14							
G22A	**Birney**	**1.75**	**335**	⇑Pb		**Pn**	**00 04 06.7**	**-0.2**
	baz=1.7,SNR=63							
K21A	**Alcova**	**1.79**	**236**	⇑Pb		**Pn**	**00 04 07.5**	**+0.1**
	baz=1.8,SNR=133							
K21A				⇓Sb		**Sn**	**00 04 30.6**	**-0.3**
	baz=1.8							
G24A	**Alzada**	**1.79**	**19**	⇓Pb		**Pb**	**00 04 07.8**	**-1.0**
	baz=1.7,SNR=29							
L22A	**Ellis Ranch, M**	**1.83**	**209**	⇑Pb		**Pb**	**00 04 08.8**	**-0.9**
	baz=1.9,SNR=92							
J20A	**Shoshoni**	**2.09**	**263**	⇓Pb		**Pb**	**00 04 12.8**	**-1.2**
	baz=2.1,SNR=91							
I20A	**Worland**	**2.12**	**279**	⇓Pb		**Pn**	**00 04 12.4**	**+0.5**
	baz=2.1,SNR=85							
G21A	**Lodge Grass**	**2.12**	**319**	⇓Pb		**Pn**	**00 04 11.8**	**-0.2**
	baz=2.1,SNR=34							
H20A	**Greybull**	**2.17**	**294**	⇓Pb		**Pn**	**00 04 12.0**	**-0.6**
	baz=2.1							
M24A	**Cheyenne**	**2.19**	**172**	⇓Pb		**Pb**	**00 04 15.2**	**-0.5**
	baz=2.3,SNR=44							
M23A	**Laramie**	**2.20**	**190**	⇓Pb		**Pb**	**00 04 15.4**	**-0.4**
	baz=2.3,SNR=32							
F24A	**Ekalaka**	**2.28**	**14**	⇑Pb		**Pn**	**00 04 14.9**	**+0.9**
	baz=2.2,SNR=12							
L21A	**Rawlins**	**2.30**	**224**	⇓Pb		**Pn**	**00 04 15.3**	**+0.9**
	baz=2.3,SNR=34							
PHWY	**Pilot Hill**	**2.34**	**184**	*e*Pn		**Pb**	**00 04 16.9**	**-1.5**
PHWY				*e*S		**Sg**	**00 04 49.4**	**-0.9**
M25A	**Palm-Egli Farm**	**2.37**	**158**	⇓Pb		**Pb**	**00 04 17.8**	**-0.9**
	baz=2.4							
K27A	**Flueckinger Fa**	**2.38**	**112**	⇑Pb		**Pg**	**00 04 18.9**	**-1.8**
	baz=2.4							
M22A	**Cedar Creek Ra**	**2.45**	**205**	⇓Pb		**Pb**	**00 04 18.8**	**-1.4**
	baz=2.5,SNR=258							
K20A	**Yellowstone Ra**	**2.48**	**248**	⇓Pb		**Pb**	**00 04 18.8**	**-1.8**
	baz=2.5,SNR=139							
M21A	**Separation Pea**	**2.57**	**218**	⇓Pb		**Pb**	**00 04 20.2**	**-1.9**
	baz=2.6,SNR=72							
G20A	**Bridger**	**2.66**	**308**	⇓P		**Pn**	**00 04 18.3**	**-1.0**
	baz=2.6,SNR=140							
I19A	**Meeteetse**	**2.75**	**280**	⇓P		**Pn**	**00 04 21.0**	**+0.4**
	baz=2.7,SNR=76							
K19A	**Absolon Red Bu**	**2.76**	**254**	⇓Pb		**Pb**	**00 04 23.5**	**-2.0**
	baz=2.8,SNR=168							
N23A	**Red Feather La**	**2.79**	**191**	⇓P		**Pb**	**00 04 23.0**	**-3.0**
	baz=2.9,SNR=29							
J19A	**Crowheart**	**2.81**	**264**	⇓Pb		**Pn**	**00 04 22.4**	**+1.0**
	baz=2.8,SNR=222							
L20A	**Wamsutter**	**2.81**	**236**	⇑Pb		**Pb**	**00 04 23.5**	**-2.7**
	baz=2.8,SNR=12							
E22A	**Miles City**	**2.85**	**350**	⇓P		**Pn**	**00 04 21.0**	**-0.8**
	baz=2.8,SNR=6.8							
E23A	**Ismay**	**2.86**	**359**	⇑P		**Pn**	**00 04 21.7**	**-0.3**
	baz=2.8							
H19A	**Powell**	**2.89**	**292**	⇓P		**Pn**	**00 04 22.6**	**+0.1**
	baz=2.9,SNR=19							
N22A	**Wattenberg Ran**	**2.98**	**198**	⇑Pb		**Pb**	**00 04 28.8**	**-0.3**
	baz=3.0,SNR=50							
E24A	**Baker**	**3.00**	**12**	P		**Pn**	**00 04 25.0**	**+1.1**
	baz=2.9,SNR=22							
F20A	**Billings**	**3.00**	**317**	⇓P		**Pn**	**00 04 22.9**	**-1.1**
	baz=2.9							
M20A	**Sweetwater, Wa**	**3.06**	**226**	⇑Pb		**Pb**	**00 04 29.9**	**-0.6**
	baz=3.1							
RLMT	**Red Lodge**	**3.25**	**299**	*e*Pn		**Pn**	**00 04 27.3**	**-0.2**
RLMT				*e*S		**Sb**	**00 05 14.2**	**+0.2**
RLMT	**Red Lodge**	**3.25**	**299**	⇓P		**Pn**	**00 04 27.3**	**-0.2**
	baz=3.2,SNR=69							
BW06	**Boulder Array**	**3.28**	**256**	*e*Pn		**Pn**	**00 04 28.2**	**+0.2**
BW06	**Boulder Array**	**3.28**	**256**	P		**Pn**	**00 04 28.2**	**+0.2**
	baz=3.3,SNR=44							
PDAR	**Pinedale Array**	**3.28**	**256**	Pn		**Pn**	**00 04 28.2**	**+0.2**
PDAR				Lg		Lg	00 05 15.0	
PDAR	**Pinedale Array**	**3.28**	**256**	Pn		**Pn**	**00 04 28.2**	**+0.2**
	3.8nm,0.3s,baz=77,slow=14,SNR=87							
PDAR				Lg		Lg	00 05 15.0	
	15nm,0.3s,baz=76,slow=31,SNR=19							
N21A	**Black Mountain**	**3.34**	**211**	⇑P		**Pn**	**00 04 30.7**	**+1.9**
	baz=3.4,SNR=13							
F19A	**Roth Farm, Mol**	**3.45**	**311**	⇑P		**Pn**	**00 04 29.8**	**-0.3**
	baz=3.4,SNR=135							
G18A	**Lazy EL Ranch,**	**3.52**	**300**	⇓P		**Pn**	**00 04 30.9**	**-0.4**
	baz=3.5,SNR=62							
D22A	**Cohagen**	**3.58**	**350**	⇑P		**Pn**	**00 04 31.5**	**-0.3**
	baz=3.6,SNR=5.7							
D21A	**La Casta Ranch**	**3.65**	**341**	⇑P		**Pn**	**00 04 32.1**	**-0.7**
	baz=3.6,SNR=14							
GCMT	**Greycliff**	**3.82**	**306**	*e*Pn		**Pn**	**00 04 34.8**	**-0.6**
LKWY	**Lake**	**3.83**	**286**	*e*Pn		**Pn**	**00 04 37.3**	**+1.7**
ISCO	**Idaho Springs**	**3.85**	**184**	*e*Pn		**Pn**	**00 04 37.8**	**+1.9**
ISCO				*e*S		**Sg**	**00 05 36.9**	**-1.7**
LOHW	**Long Hollow**	**3.90**	**271**	*e*Pn		**Pn**	**00 04 38.0**	**+1.5**
MOOW	**Moose Ponds**	**4.00**	**273**	*e*Pn		**Pn**	**00 04 38.6**	**+0.8**
SNOW	**Snow King Moun**	**4.02**	**269**	*e*Pn		**Pn**	**00 04 38.5**	**+0.4**
IMW	**Indian Meadow**	**4.14**	**276**	*e*Pn		**Pn**	**00 04 40.4**	**+0.5**
IMW				*e*S		**Sb**	**00 05 41.4**	**+1.7**
TPAW	**Teton Pass**	**4.16**	**270**	*e*Pn		**Pn**	**00 04 40.9**	**+0.9**
TPAW				*e*S		**Sb**	**00 05 43.7**	**+3.5**
YMR	**Madison River**	**4.25**	**286**	*e*Pn		**Pn**	**00 04 42.8**	**+1.5**
RRI2	**Red Ridge**	**4.44**	**268**	*e*Pn		**Pn**	**00 04 44.7**	**+0.8**
HWUT	**Hardware Ranch**	**5.09**	**249**	*e*Pn		**Pn**	**00 04 52.9**	**+0.1**
EGMT	**Eagleton**	**5.41**	**326**	*e*Pn		**Pn**	**00 04 56.6**	**-0.4**
	5.8nm,0.3s							
EGMT				*e*S		Sn	00 05 53.0	-6.9
MCMT	**McKenzie Canyo**	**5.60**	**285**	*e*Pn		**Pn**	**00 04 59.2**	**-0.7**
	0.8nm,0.3s							
MCMT				*e*S		**Sg**	**00 06 37.5**	**+2.6**
SRU	**San Rafael**	**6.02**	**223**	*e*Pn		**Pn**	**00 05 05.9**	**+0.2**
	178nm,0.3s							
SRU				*e*S		Sb	00 06 40.9	+7.1
ECSD	**EROS Data Cent**	**6.25**	**86**	*e*Pn		**Pn**	**00 05 09.4**	**+0.9**
	2.4nm,0.3s							
ECSD				*e*S		**Sg**	**00 06 55.2**	**-0.6**
YBMT	**Yellow Bay**	**7.45**	**308**	*e*Pn		**Pn**	**00 05 25.8**	**+0.6**
	3.5nm,0.3s							
ULM	**Lac du Bonnet**	**9.20**	**41**	Pn		**Pn**	**00 05 47.1**	**-1.8**
ULM	**Lac du Bonnet**	**9.20**	**41**	Pn		**Pn**	**00 05 47.1**	**-1.8**
	2.3nm,0.3s,baz=231,slow=14,SNR=12							
YKA	**Yellowknife Ar**	**19.67**	**347**	P		**Pn**	**00 08 09.7**	**+3.1**
YKA	**Yellowknife Ar**	**19.67**	**347**	P		**Pn**	**00 08 09.7**	**+3.1**
	0.1nm,0.3s,baz=155,slow=9.3,SNR=4.2							

*MOS **12** 00:08:34.8±1.0, 46.°56N×153.°17E, h35km, mb4.2/9, Error ellipse: s-maj=15.4km s-min=12.4km az=145.0*

*JMA **12** 00:08:34.0±0.7, 46.°90N×153.°22E, h30km, M4.0*

*ISCJB **12** 00:08:35.0±0.8, 46.°5N±0.°1×153.°3E±0.°1, h40km, mb3.8/14, Error ellipse: s-maj=20.0km s-min=5.5km az=141.6*

*IDC **12** 00:08:37.6±3.0, 46.°50N×153.°29E, h43km±27km, mb3.5/12, mb1 3.7/15, mb1mx3.5/29, mbtmp3.5/15, ML3.1/3, Error ellipse: s-maj=30.7km s-min=16.9km az=138.0*

ISC 12 00:08:37.0±1.0, 46.°4N±0.°1×153.°2E±0.°1, h40km, n43, σ1§75/47, mb3.9/14, 3C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.92**	**254**	*e*PN		**Pn**	**00 09 32.0**	**-2.6**
KUR				*e*S		Sn	00 10 26.5	+7.2
KUR				pmax	pmax			
	comp=Z,160nm,0.4s							
KUR				smax	smax			
	comp=N,190nm,1.0s							
KUR				smax	smax			
	comp=E,140nm,0.9s							
YUK	**Yuzh-Kuril'sk**	**5.71**	**248**	⇑ePN		**Pn**	**00 10 00.3**	**+1.1**
YUK				*e*S		**Sn**	**00 11 06.8**	**+3.3**
YUK				pmax	pmax			
	comp=Z,16nm,0.5s							
YUK				pmax	pmax			
	comp=E,16nm,0.5s							
YUK				pmax	pmax			
	comp=Z,36nm,0.5s							
YUK				smax	smax			
	comp=E,62nm,0.5s							
YUK				smax	smax			
	comp=N,56nm,0.6s							
NEM2	**Nemuro 2**	**6.12**	**243**	P		**Pn**	**00 10 04.6**	**-0.3**
NEM2				*e*S		**Sn**	**00 11 12.0**	**-1.6**
JRA	**Rausu**	**6.24**	**249**	P		**Pn**	**00 10 09.3**	**+2.9**
JNK	**Nakash**	**6.66**	**248**	P		**Pn**	**00 10 13.3**	**+1.1**
JAK	**Akkeshi**	**6.97**	**243**	*e*S		**Sn**	**00 11 31.5**	**-2.9**
JTKR	**Abashiri--Toko**	**7.01**	**253**	P		**Pn**	**00 10 19.2**	**+2.1**
YSS	**Yuzh-Sakhalins**	**7.21**	**278**	*e*PN		**Pn**	**00 10 19.4**	**-0.3**
PETK	**Petropavlovsk-**	**7.28**	**22**	*e*PN		Pn	00 10 26.7	+6.0
PETK	**Petropavlovsk-**	**7.28**	**22**	P		**Pn**	**00 10 19.5**	**-1.2**
	comp=N,0.2nm,0.3s,baz=190,slow=14,SNR=3.9							
JMP	**Maruseppu**	**7.37**	**254**	P		**Pn**	**00 10 24.3**	**+2.4**
JAR	**Ashorobuto**	**7.40**	**248**	P		**Pn**	**00 10 23.6**	**+1.2**
JAR				*e*S		**Sn**	**00 11 47.3**	**+2.3**
JOB	**Onbets**	**7.56**	**245**	P		**Pn**	**00 10 23.8**	**-0.7**
JOB				*e*S		**Sn**	**00 11 46.3**	**-2.5**
JKK2	**Kamakawa 2**	**7.82**	**255**	P		**Pn**	**00 10 30.9**	**+2.7**
ASAJ	**Asahikawa**	**7.83**	**257**	P		**Pn**	**00 10 31.2**	**+2.9**
	comp=N,0.9nm,0.3s,baz=76,slow=12,SNR=8.7							
JCH	**Churui**	**8.00**	**245**	P		**Pn**	**00 10 30.5**	**-0.1**
JCH				*e*S		**Sn**	**00 11 56.3**	**-3.5**
JEM	**Erimo**	**8.46**	**242**	*e*S		**Sn**	**00 12 07.8**	**-3.2**
ERM	**Erimo**	**8.46**	**242**	*e*PN		**Pn**	**00 10 39.3**	**+2.4**
JNBK	**Urakawa-nobuka**	**8.56**	**245**	*e*S		**Sn**	**00 12 09.9**	**-3.7**
JKB	**Kayabe**	**9.86**	**247**	P		**Pn**	**00 10 55.3**	**-0.7**
USRK	**Ussuriysk Arra**	**15.08**	**269**	P		**Pn**	**00 12 08.4**	**+1.3**
	comp=N,0.1nm,0.3s,baz=82,slow=16,SNR=2.7							
KSRS	**Korea Array**	**20.77**	**253**	P		**P**	**00 13 13.9**	**-0.4**
	comp=N,0.5nm,0.3s,baz=55,slow=11,SNR=4.1							
ILAR	**Eielson Array**	**36.75**	**38**	P		**P**	**00 15 39.2**	**-0.9**
	comp=N,0.2nm,0.8s,baz=278,slow=8.1,SNR=3.2							
MKAR	**Makanchi Array**	**47.14**	**298**	P		**P**	**00 17 05.1**	**0.0**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
MKAR	**Makanchi Array**	**47.14**	**298**	P		**P**	**00 17 05.1**	**0.0**
	comp=Z,1.1nm,0.8s,baz=68,slow=7.1,SNR=11							
KURK	**Kurchatov**	**47.59**	**304**	⇑*i*P		**P**	**00 17 07.9**	**-0.6**
KURK				pmax	pmax			
	comp=Z,6.0nm,2.5s							
BVAR	**Borovoye Array**	**51.11**	**310**	P		**P**	**00 17 35.2**	**-0.1**
BVAR				pmax	pmax			
	com

mb4.1/18,MS3.5/10,Error ellipse: s-maj=6.7km s-min=3.0km az=34.7

CASC ***12*** *00:18:55.8±1.5, 14°.33N×90°.50W,h10km, MD3.8,ML3.7, mb4.3(NEIC)*

NEIC ***12*** *00:18:56.6±0.7, 14°.33N×90°.54W,h10km, mb4.3/7, MD3.9(MEX),Error ellipse: s-maj=15.5km s-min=7.9km az=214.0*

NEIC Felt at Guatemala.

IDC ***12*** *00:19:00.2±3.0, 14°.36N×90°.50W,h39km±25km, mb3.8/13, mb1 4.0/16,mb1mx3.8/29,mbtmp3.8/16,ML3.7/3, MS3.6/12, Ms1 3.6/12,ms1mx3.4/31,Error ellipse: s-maj=28.3km s-min=17.4km az=48.0*

ISC 12 00:18:55.9±1.1, 14°.32N±0°.03×90°.42W±0°.02, h7km±7km, n118, σ1§31/113, mb4.1/18, MS3.6/10, 16C-23D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IXG	Ixpaco	0.14	192	eP	Pg	00 18 59.2	+0.2
PCG	Pacaya	0.19	293	eP	Pg	00 18 59.1	-0.8
NBG	Las Nubes	0.28	15	eP	Pg	00 19 02.2	+0.7
GCG	Guatemala City	0.29	338	eP	Pg	00 19 01.5	-0.1
GCG				eS	Sg	00 19 06.3	+0.8
FUG	Fuego 3	0.43	288	eP	Pg	00 19 03.2	-1.1
FG6		0.51	298	eP	Pg	00 19 04.8	-0.9
FG6				eS	Sg	00 19 12.1	-0.4
RBDL	Robledal	0.74	106	eP	Pg	00 19 10.4	+0.1
RTR	El Retiro	0.86	119	eP	Pg	00 19 12.8	+0.3
SBLS	San Blas	0.91	121	eP	Pg	00 19 13.8	+0.4
SNJE	San Jose	0.91	119	eP	Pg	00 19 13.5	+0.1
MRL	Marmol	1.03	43	eP	Pg	00 19 16.1	+0.4
MRL				eS	Sn	00 19 31.2	-0.4
MTO2	Montecristo 2	1.03	85	eP	Pg	00 19 15.8	0.0
JAT	Jato	1.18	270	eP	Pg	00 19 17.9	-0.7
JAT				eS	Sn	00 19 36.9	+1.9
BOQS	Boqueron	1.25	117	eP	Pn	00 19 19.5	-0.5
BOQS				eS	Sn	00 19 39.1	+1.9
SNET	Serv Nac Est T	1.31	118	eP	Pn	00 19 20.7	0.0
SNET				eS	Sn	00 19 39.8	+1.2
SNET				AML	AML	00 19 43.6	
	comp=Z,1µm,0.3s						
LFU	La Fuente	1.39	114	eP	Pn	00 19 22.1	+0.3
LBRS	Las Brisas	1.46	113	eP	Pn	00 19 22.9	+0.2
LFRS	El Faro	1.49	117	eP	Pn	00 19 23.1	-0.1
SNVI	San Vicente	1.69	114	eP	Pn	00 19 26.8	+0.8
THIG		1.88	288	P	Pn	00 19 29.3	+0.9
THIG				S	Sb	00 19 54.1	-0.1
CAHU	Cacacuatique	2.21	104	eP	Pn	00 19 34.0	+0.8
CCIG	Comitan	2.56	320	P	Pn	00 19 39.3	+1.3
CCIG				S	Sn	00 20 09.8	+0.3
TGUH	Tegucigalpa,Un	3.07	94	ePn	Pb	00 19 50.5	-0.3
TGUH				eSn	Sg	00 20 33.1	-1.3
TGIG		3.57	314	P	Pn	00 19 51.5	-0.3
TGIG				S	Sn	00 20 34.4	+0.1
CMIG	Matias Romero	5.11	303	Pn	Pn	00 20 11.4	-1.5
CMIG				Sn	Sn	00 21 17.3	+5.3
CMIG				Lg	Lg	00 21 33.7	
CMIG	Matias Romero	5.11	303	Pn	Pn	00 20 11.4	-1.5
	comp=Z,0.9nm,0.3s,baz=123,slow=12,SNR=14						
CMIG				Sn	Sn	00 21 17.3	+5.3
	comp=Z,4.9nm,0.3s,baz=127,slow=20,SNR=7.4						
CMIG				Lg	Lg	00 21 33.7	
	comp=Z,9.8nm,0.3s,baz=234,slow=23,SNR=6.5						
TEIG	Tepich	6.22	19	ePn	Pn	00 20 29.0	+0.8
TEIG				eSn	Sn	00 21 38.8	-0.9
TEIG				Lg	Lg	00 22 12.9	
TEIG	Tepich	6.22	19	Pn	Pn	00 20 29.6	+1.4
	comp=Z,35nm,0.3s,baz=194,slow=12,SNR=126						
TEIG				Sn	Sn	00 21 38.0	-1.6
	comp=Z,25nm,0.3s,baz=142,slow=23,SNR=15						
TEIG				Lg	Lg	00 22 12.9	
	comp=Z,14nm,0.3s,baz=184,slow=23,SNR=5.9						
TEIG				LR	LR	00 23 25.1	
	comp=Z,484nm,21.2s,baz=153,slow=43						
JTS	JuntasAbangare	6.68	126	ePn	Pn	00 20 35.5	+1.0
	comp=Z,7.9nm,0.6s						
JTS	JuntasAbangare	6.68	126	Pn	Pn	00 20 38.5	+4.0
	comp=Z,0.6nm,0.3s,baz=293,slow=18,SNR=3.5						
732A	Laxson Ranch,	16.86	330	⇓P	P	00 22 55.6	+1.0
	baz=17,SNR=5.8						
632A	Uvalde	17.42	332	⇑P	P	00 23 02.3	+1.5
	baz=17						
631A	Perdido Creek	17.72	330	⇓P	P	00 23 05.2	+1.1
	baz=18						
532A	Rocksprings	18.00	332	⇓P	P	00 23 09.2	+1.9
	baz=18,SNR=10						
JCT	Junction City	18.26	333	ePn	Pn	00 23 09.5	-0.4
	comp=Z,13nm,0.9s						
JCT	Junction City	18.26	333	⇑P	P	00 23 12.4	+2.3
	baz=18,SNR=5.7						
531A	Rocksprings	18.33	331	⇑P	P	00 23 12.6	+1.7
	baz=18						
ROSC	El Rosal	18.43	119	LR	LR	00 30 13.3	
	comp=Z,106nm,18.2s,baz=7.5,slow=36						
432A	Menard	18.60	334	⇓P	Pn	00 23 15.7	+1.7
	baz=19						
530A	J-C Ranch, Com	18.70	329	⇓P	Pn	00 23 17.3	+2.0
	baz=19,SNR=7.0						
WHTX	Lake Whitney	18.73	341	⇓P	Pn	00 23 19.9	+4.3
	baz=19						
431A	Sonora	18.79	332	⇑P	Pn	00 23 17.5	+1.1
	baz=19,SNR=9.0						
628A	Black Gap, Mar	18.99	325	⇓P	Pn	00 23 19.6	+0.8
	baz=19,SNR=9.6						
332A	Millersview	19.02	335	⇓P	Pn	00 23 20.4	+1.3
	baz=19,SNR=22						
529A	Stev Forest Ra	19.13	327	⇑P	Pn	00 23 22.0	+1.5
	baz=19,SNR=6.2						
430A	Baggett Ranch,	19.17	331	⇑P	Pn	00 23 21.3	+0.2
	baz=19,SNR=6.4						
331A	San Angelo	19.24	333	⇓P	Pn	00 23 22.1	+0.3
	baz=19,SNR=12						
627A	Terlingua Ranc	19.25	324	⇓P	Pn	00 23 22.9	+0.8
	baz=19,SNR=9.2						
TXAR	Lajitas Array	19.32	323	P	P	00 23 21.9	0.0
TXAR	Lajitas Array	19.32	323	P	P	00 23 21.9	0.0
	comp=Z,0.2nm,0.3s,baz=148,slow=12,SNR=9.1						
429A	Davenport Ranc	19.36	329	⇓P	Pn	00 23 24.4	+1.1
	baz=19,SNR=6.1						
528A	Cox Ranch, San	19.46	326	⇑P	Pn	00 23 24.8	+0.3
	baz=19						
330A	Mertzon	19.66	332	⇑P	Pn	00 23 26.9	0.0
	baz=20,SNR=9.6						
626A	Big Bend Ranch	19.76	322	⇓P	Pn	00 23 28.4	+0.2
	baz=20,SNR=6.2						
428A	Kincaid Ranch,	19.85	327	⇑P	Pn	00 23 29.7	+0.5
	baz=20						
527A	Woodward Ranch	19.90	325	⇓P	Pn	00 23 30.3	+0.5
	baz=20						
230A	Sterling City	20.04	333	⇓P	Pn	00 23 30.9	-0.5
	baz=20						
329A	Wagon Wheel Ra	20.11	330	⇓P	Pn	00 23 31.6	-0.6
	baz=20						
526A	Mary Lane Ranc	20.11	323	⇑P	Pn	00 23 33.0	+0.7
	baz=20,SNR=10						
SDV	Santo Domingo	20.12	103	ePn	Pn	00 23 35.4	+2.7
	comp=Z,13nm,0.9s						
427A	Hayter Ranch,	20.32	326	⇓P	Pn	00 23 34.1	-0.7
	baz=20						
MIAR	Mount Ida	20.34	353	eP	Pn	00 23 34.1	-0.8
	comp=Z,17nm,1.1s						
328A	Wristen Ranch,	20.43	328	P	Pn	00 23 35.5	-0.6
	baz=20,SNR=9.5						
UALR	University of	20.44	355	eP	P	00 23 33.1	-0.9
	comp=Z,16nm,1.0s						
426A	McDonald Obser	20.53	325	⇑P	Pn	00 23 36.7	-0.7
	baz=20						
Z32A	Haskell	20.62	338	⇓P	Pn	00 23 37.8	-0.4
	baz=21,SNR=8.7						
Z31A	Sharp Cattle R	20.88	337	⇑P	P	00 23 39.3	+0.6
	baz=21,SNR=11						
228A	UT Block 9, Go	20.92	330	⇓P	P	00 23 40.2	+1.0
	baz=21						
LPIG	La Paz	21.13	300	LR	LR	00 31 15.2	
	comp=Z,16nm,21.2s,baz=39,slow=35						
425A	Indio Mountain	21.16	323	⇑P	P	00 23 43.1	+1.2
	baz=21						
128A	Castleberry Fa	21.28	331	P	P	00 23 43.9	+0.7
	baz=21,SNR=7.7						
226B	Tecolote Peak,	21.69	327	⇓P	P	00 23 48.7	+1.2
	baz=22,SNR=11						
225A	Deer Hill, Car	22.07	326	⇑P	P	00 23 53.0	+1.3
	baz=22						
TKL	Tuckaleechee C	22.07	15	P	P	00 23 51.7	+0.2
	comp=Z,7.1nm,1.0s,baz=197,slow=11,SNR=4.1						
TKL				LR	LR	00 32 39.5	
	comp=Z,190nm,18.6s,baz=197,slow=37						
Z27A	Tatum	22.20	331	⇑P	P	00 23 53.5	+0.5
	baz=22,SNR=6.2						
125A	Gardner Draw,	22.40	327	⇓P	P	00 23 56.2	+1.0
	baz=22						
224A	Cornudas Mount	22.43	325	P	P	00 23 56.3	+0.8
	baz=22,SNR=6.0						
124A	Stringfield Ra	22.86	326	⇑P	P	00 24 02.0	+1.9
	baz=23						
SIUC	Southern Illin	23.33	2	eP	P	00 24 06.1	+1.4
	comp=Z,39nm,1.1s						
SJG	San Juan	23.60	78	LR	LR	00 33 07.0	
	comp=Z,122nm,18.1s,baz=92,slow=36						
WCI	Wyandotte Cave	24.10	8	eP	P	00 24 12.0	-0.2
	comp=Z,7.7nm,0.7s						
ATAH	Atahualpa	24.43	150	LR	LR	00 31 46.9	
	comp=Z,90nm,21.2s,baz=194,slow=31						
TUC	Tucson	25.81	317	eP	P	00 24 30.7	+2.8
	comp=Z,22nm,2.4s						
P20A	De Beque	29.65	331	⇓P	P	00 25 12.9	+11
	baz=30,SNR=10						
PDAR	Pinedale Array	32.79	334	P	P	00 25 28.5	-1.6
PDAR	Pinedale Array	32.79	334	P	P	00 25 28.5	-1.6
	comp=Z,0.4nm,0.8s,baz=121,slow=8.8,SNR=2.6						
NVAR	Mina Array Bea	34.41	319	P	P	00 25 44.2	0.0
NVAR	Mina Array Bea	34.41	319	P	P	00 25 44.2	0.0
	comp=Z,1.7nm,0.9s,baz=120,slow=8.2,SNR=7.3						
ULM	Lac du Bonnet	36.11	354	P	P	00 25 57.2	-1.1
ULM	Lac du Bonnet	36.11	354	P	P	00 25 57.2	-1.1
	comp=Z,1.1nm,0.4s,baz=173,slow=8.3,SNR=2.8						
LPAZ	La Paz	37.55	143	LR	LR	00 41 44.2	
	comp=Z,73nm,21.0s,baz=56,slow=36						
SIV	San Ignacio	41.81	135	P	P	00 26 46.6	0.0
SIV	San Ignacio	41.81	135	P	P	00 26 46.6	0.0
	comp=Z,1.2nm,0.9s,baz=326,slow=9.9,SNR=4.5						
SCHQ	Schefferville	44.41	19	P	P	00 27 08.3	+1.2
SCHQ	Schefferville	44.41	19	P	P	00 27 08.3	+1.2
	comp=Z,6.1nm,0.9s,baz=215,slow=6.6,SNR=10						
SCHQ				LR	LR	00 45 24.6	
	comp=Z,94nm,20.0s,baz=4.7,slow=36						
YKA	Yellowknife Ar	51.08	346	P	P	00 27 58.5	-0.3
YKA	Yellowknife Ar	51.08	346	P	P	00 27 58.4	-0.3
	comp=Z,5.4nm,0.8s,baz=149,slow=7.7,SNR=83						
YKW3	Yellowknife Ar	51.14	346	eP	P	00 27 59.2	-0.1
	comp=Z,0.2nm,0.9s						
BDFB	Brasilia	51.41	124	LR	LR	00 50 42.0	
	comp=Z,100nm,20.4s,baz=274,slow=37						
FRB	Frobisher Bay	51.67	12	P	P	00 28 01.6	-1.6
FRB	Frobisher Bay	51.67	12	P	P	00 28 01.6	-1.6
	comp=Z,1.9nm,0.8s,baz=227,slow=8.4,SNR=5.4						
DLBC	Dease Lake	53.00	335	P	P	00 28 14.7	+1.4
DLBC	Dease Lake	53.00	335	P	P	00 28 14.7	+1.4
	comp=Z,3.8nm,0.9s,baz=111,slow=8.6,SNR=5.8						
RES	Resolute Bay	60.41	359	P	P	00 29 05.1	-0.5
RES	Resolute Bay	60.41	359	P	P	00 29 05.1	-0.5
	comp=Z,0.9nm,0.8s,baz=177,slow=8.6,SNR=4.7						
INK	Inuvik	60.58	343	P	P	00 29 05.8	-0.9
INK	Inuvik	60.58	343	P	P	00 29 05.8	-0.9
	comp=Z,3.6nm,0.9s,baz=131,slow=9.6,SNR=13						
ILAR	Eielson Array	63.16	336	P	P	00 29 23.8	-0.5
ILAR	Eielson Array	63.16	336	P	P	00 29 23.8	-0.5
	comp=Z,2.0nm,1.2s,baz=142,slow=4.8,SNR=5.5						
PPT	Papeete	66.40	243	LR	LR	00 50 07.2	
	comp=Z,42nm,20.1s,baz=194,slow=28						
ESDC	Sonseca Array	78.32	52	P	P	00 30 56.0	-1.2
ESDC	Sonseca Array	78.32	52	P	P	00 30 56.0	-1.2
	comp=Z,0.8nm,0.8s,baz=286,slow=5.1,SNR=3.2						
ESDC				LR	LR	01 02 23.8	
	comp=Z,82nm,18.4s,baz=105,slow=33						
AFI	Afiamalu	85.25	254	LR	LR	00 58 14.2	
	comp=Z,53nm,20.4s,baz=96,slow=28						
FINES	FINESS Array B	89.56	25	P	P	00 31 53.8	-0.2
FINES	FINESS Array B	89.56	25	P	P	00 31 53.8	-0.2
	comp=Z,2.4nm,1.1s,baz=325,slow=2.2,SNR=2.8						
WRA	Warramunga Arr	136.96	256	PKP	PKPdf	00 38 19.5	-0.9
WRA	Warramunga Arr	136.96	256	PKP	PKPdf	00 38 19.5	-0.9
	comp=Z,0.3nm,0.6s,baz=93,slow=2.9,SNR=2.8						

IDC 12 00:26:57.4±8.8, 11°.88S×166°.33E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.5/19, mbtmp3.5/3, Error ellipse: s-maj=266.9km s-min=54.8km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.75	251	P	P	00 33 23.4	-0.1
	0.3nm,0.6s,baz=83,slow=9.4,SNR=2.2						
ASAR	Alice Springs	32.95	245	P	P	00 33 34.0	+0.1
	0.4nm,0.6s,baz=71,slow=9.8,SNR=8.3						
MKAR	Makanchi Array	94.52	317	P	P	00 40 19.6	-0.2
	0.4nm,0.7s,baz=99,slow=4.0,SNR=5.3						

IDC 12 00:56:52.8±54.0, 16°.56S×178°.43W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/19, mbtmp4.0/3, Error ellipse: s-maj=988.2km s-min=170.3km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.27	240	P	P	01 04 23.7	+0.2
	1.1nm,0.7s,baz=92,slow=9.4,SNR=4.1						
WRA	Warramunga Arr	44.87	258	P	P	01 05 09.0	-0.4
	0.7nm,0.4s,baz=94,slow=7.5,SNR=6.2						
ASAR	Alice Springs	45.15	253	P	P	01 05 11.4	-0.2
	4.2nm,0.6s,baz=87,slow=8.5,SNR=56						

IDC ***12*** *01:17:06.5±0.8, 58°.27N×31°.83W,h0km, mb3.8/11, mb1 4.0/14,mb1mx3.8/34,mbtmp3.8/14,ML3.2/3,MS3.5/17, Ms1 3.5/17,ms1mx3.3/48,Error ellipse: s-maj=27.0km s-min=14.2km az=18.0*

ISCJB ***12*** *01:17:07.1±0.4, 58°.31N±0°.09×31°.83W±0°.10, h13km, mb4.0/22,MS3.5/14,Error ellipse: s-maj=13.9km s-min=5.8km az=19.7*

CSEM ***12*** *01:17:07.8±0.2, 58°.26N×31°.84W,h10km, mb4.3/11,Ms3.1, Error ellipse: s-maj=15.1km s-min=6.3km az=19.0*

NEIC ***12*** *01:17:08.2±0.3, 58°.24N×31°.83W,h10km, mb4.4/12,Error ellipse: s-maj=12.7km s-min=5.3km az=199.0*

ISC 12 01:17:08.7±0.6, 58°.3N±0°.1×31°.78W±0°.07, h13km, n115, σ0§99/101, mb4.1/22, MS3.4/14, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	Borgarnes	8.20	33	Pn	Pn	01 19 08.1	+0.9
BORG	Borgarnes	8.20	33	Pn	Pn	01 19 08.1	+0.9
	0.5nm,0.3s,baz=231,slow=13,SNR=2.9						
BORG	Borgarnes	8.20	33	Pn	Pn	01 19 08.1	+0.9
SFJD	Kangerlussuaq	12.27	323	LR	LR	01 23 58.7	
	comp=Z,240nm,20.1s,baz=126,slow=34						
EKA	Eskdalemuir Ar	15.89	88	Pn	Pn	01 20 49.6	-2.2
EKA	Eskdalemuir Ar	15.89	88	Pn	Pn	01 20 49.6	-2.2
	baz=297,slow=11,SNR=3.9						
EKA	Eskdalemuir Ar	15.89	88	Pn	Pn	01 20 49.6	-2.2
FRB	Frobisher Bay	18.45	303	P	P	01 21 23.8	+0.1
FRB	Frobisher Bay	18.45	303	P	P	01 21 23.8	+0.1
	0.0nm,0.3s,baz=102,slow=8.8,SNR=4.2						
FRB				LR	LR	01 27 13.0	
	comp=Z,190nm,19.4s,baz=62,slow=33						
FRB	Frobisher Bay	18.45	303	P	P	01 21 23.8	+0.1
SCHQ	Schefferville	19.49	275	LR	LR	01 27 32.6	
	comp=Z,125nm,18.8s,baz=39,slow=32						
FLN	La Foliniere	20.71	104	eP	P	01 21 49.3	+0.8
	27nm,0.9s						
FLN				eR			
	96nm,23.0s						
FLN	La Foliniere	20.71	104	eP	P	01 21 49.3	+0.8
	27nm,0.9s						
FLN	La Foliniere	20.71	104	eP	P	01 21 49.3	+0.8
	14nm,0.9s						
LDF	La Druitiere	21.00	104	eP	P	01 21 52.5	+0.9
LDF	La Druitiere	21.00	104	eP	P	01 21 52.5	+0.9
LDF	La Druitiere	21.00	104	eP	P	01 21 52.5	+0.9
NOA	NORSAR Array B	21.61	64	LR	LR	01 28 52.1	
	comp=Z,45nm,18.6s,baz=275,slow=33						
BAIF	Baives	22.37	96	eP	P	01 22 06.0	-0.3
	29nm,1.2s						
BAIF	Baives	22.37	96	eP	P	01 22 06.0	-0.3
	29nm,1.2s						
BAIF	Baives	22.37	96	eP	P	01 22 06.0	-0.3
	15nm,1.2s						
GIVF	Givet	22.67	95	eP	P	01 22 08.4	-1.1
GIVF	Givet	22.67	95	eP	P	01 22 08.4	-1.1
GIVF	Givet	22.67	95	eP	P	01 22 08.4	-1.1
MEZF	Maizieres J'vi	23.75	98	eP	P	01 22 20.2	-0.2
MEZF	Maizieres J'vi	23.75	98	eP	P	01 22 20.2	-0.2
MEZF	Maizieres J'vi	23.75	98	eP	P	01 22 20.2	-0.2
BGF	Bois d'Agland	23.86	104	eP	P	01 22 21.5	0.0
	23nm,1.0s						
BGF	Bois d'Agland	23.86	104	eP	P	01 22 21.5	0.0
	23nm,1.0s						
BGF	Bois d'Agland	23.86	104	eP	P	01 22 21.5	0.0
	12nm,1.0s						
SSF	Saint Saulge	23.86	103	eP	P	01 22 22.7	+1.2
	10.0nm,1.0s						
SSF	Saint Saulge	23.86	103	eP	P	01 22 22.7	+1.2
	10.0nm,1.0s						
SSF	Saint Saulge	23.86	103	eP	P	01 22 22.7	+1.2
	5.0nm,1.0s						
LOR	Lormes	23.91	102	eP	P	01 22 21.7	-0.3
LOR				eR			
	83nm,18.5s						
LOR	Lormes	23.91	102	eP	P	01 22 21.7	-0.3
LOR	Lormes	23.91	102	eP	P	01 22 21.7	-0.3
AVF	Avril sur Loir	23.96	103	eP	P	01 22 22.2	-0.2
AVF	Avril sur Loir	23.96	103	eP	P	01 22 22.2	-0.2
AVF	Avril sur Loir	23.96	103	eP	P	01 22 22.2	-0.2
HAU	Haudompre	24.74	98	eP	P	01 22 29.9	+0.3
HAU				eR			
	131nm,19.5s						
HAU	Haudompre	24.74	98	eP	P	01 22 29.9	+0.3
HAU	Haudompre	24.74	98	eP	P	01 22 29.9	+0.3
CDF	Champ du Feu	24.97	96	eP	P	01 22 31.9	+0.2
CDF	Champ du Feu	24.97	96	eP	P	01 22 31.9	+0.2
CDF	Champ du Feu	24.97	96	eP	P	01 22 31.9	+0.2
HINF	Hinteralfeld	25.12	98	eP	P	01 22 33.5	+0.5
HINF	Hinteralfeld	25.12	98	eP	P	01 22 33.5	+0.5
HINF	Hinteralfeld	25.12	98	eP	P	01 22 33.5	+0.5
ESDC	Sonseca Array	25.75	124	P	P	01 22 38.9	0.0
ESDC	Sonseca Array	25.75	124	P	P	01 22 38.9	0.0
	1.1nm,0.7s,baz=325,slow=9.1,SNR=6.4						
ESDC	Sonseca Array	25.75	124	P	P	01 22 38.9	0.0
LPG	La Plagne	26.58	102	eP	P	01 22 48.1	+1.5
	14nm,1.1s						
LPG	La Plagne	26.58	102	eP	P	01 22 48.1	+1.5
	14nm,1.1s						
LPG	La Plagne	26.58	102	eP	P	01 22 48.1	+1.5
	2.2nm,1.1s						
DAVOX	Davos/Dischmat	27.37	96	LR	LR	01 32 42.4	
	comp=Z,98nm,18.8s,baz=290,slow=34						
GERES	GERESS Array B	28.10	90	LR	LR	01 34 02.8	
	comp=Z,66nm,18.2s,baz=281,slow=36						
RES	Resolute Bay	28.14	330	LR	LR	01 33 06.8	
	comp=Z,52nm,21.6s,baz=272,slow=34						
FINES	FINESS Array B	28.41	59	P	P	01 23 01.5	-0.9
FINES	FINESS Array B	28.41	59	P	P	01 23 01.5	-0.9
	1.8nm,0.8s,baz=294,slow=10,SNR=3.9						
FINES	FINESS Array B	28.41	59	P	P	01 23 01.5	-0.9
VRAC	Vranov	29.35	86	LR	LR	01 35 04.4	
	comp=Z,72nm,18.4s,baz=283,slow=37						
AKASG	Malin Array Be	35.11	75	P	P	01 24 00.3	-1.0
AKASG	Malin Array Be	35.11	75	P	P	01 24 00.3	-1.0
	0.2nm,0.3s,baz=318,slow=9.1,SNR=5.1						
AKASG	Malin Array Be	35.11	75	P	P	01 24 00.3	-1.0
KEST	Kesra	35.16	112	LR	LR	01 36 56.5	
	comp=Z,23nm,18.6s,baz=323,slow=34						
ULM	Lac du Bonnet	36.96	286	P	P	01 24 16.9	-0.3
ULM	Lac du Bonnet	36.96	286	P	P	01 24 16.9	-0.3
	1.0nm,0.3s,baz=48,slow=12,SNR=3.0						
ULM	Lac du Bonnet	36.96	286	P	P	01 24 16.9	-0.3
YKW3	Yellowknife Ar	38.49	312	eP	P	01 24 30.3	+0.4
YKW3	Yellowknife Ar	38.49	312	eP	P	01 24 30.3	+0.4
YKA	Yellowknife Ar	38.52	312	P	P	01 24 28.1	-2.1
YKA	Yellowknife Ar	38.52	312	P	P	01 24 28.1	-2.1
	0.9nm,0.7s,baz=58,slow=9.5,SNR=13						
YKA	Yellowknife Ar	38.52	312	P	P	01 24 28.1	-2.1
INK	Inuvik	41.59	327	LR	LR	01 43 11.1	
	comp=Z,78nm,20.2s,baz=346,slow=38						
TAM	Tamanrasset	44.35	127	eP	P	01 25 19.2	+0.6
	6.6nm,1.5s						
TAM	Tamanrasset	44.35	127	eP	P	01 25 19.2	+0.6
	6.6nm,1.5s						
BRTR	Keskin Array B	44.77	85	P	P	01 25 23.6	+1.7
BRTR	Keskin Array B	44.77	85	P	P	01 25 23.6	+1.7
	1.2nm,0.9s,baz=321,slow=9.4,SNR=3.8						
BRTR				LR	LR	01 44 09.0	
	comp=Z,37nm,18.5s,baz=308,slow=36						
BRTR	Keskin Array B	44.77	85	P	P	01 25 23.6	+1.7
DLBC	Dease Lake	47.00	315	LR	LR	01 45 47.5	
	comp=Z,160nm,19.0s,baz=345,slow=37						
ILAR	Eielson Array	47.88	328	P	P	01 25 45.7	0.0
ILAR	Eielson Array	47.88	328	P	P	01 25 45.7	0.0
	1.3nm,0.9s,baz=34,slow=6.0,SNR=12						
ILAR	Eielson Array	47.88	328	P	P	01 25 45.7	0.0
BOZ	Bozeman (W)	47.91	291	eP	P	01 25 46.1	-0.4
	1.8nm,0.9s						
BOZ	Bozeman (W)	47.91	291	eP	P	01 25 46.1	-0.4
	1.8nm,0.9s						
NEW	Newport	48.69	298	eP	P	01 25 51.2	-1.1
	2.5nm,0.9s						
NEW	Newport	48.69	298	LR	LR	01 47 55.4	
	comp=Z,34nm,21.9s,baz=325,slow=38						
NEW	Newport	48.69	298	eP	P	01 25 51.2	-1.1
	2.5nm,0.9s						
B

GLB	Gilahina Butte	0.66	228	P	Pg	01 37 51.5	-2.0
GLB				S	Sg	01 38 00.1	-2.1
VRDI	Verde Repeater	0.73	207	P	Pg	01 37 52.8	-2.0
VRDI				S	Sg	01 38 02.4	-2.1
BALM	Baldy	0.88	166	P	Pg	01 37 55.6	-1.9
BARN	Barnard Glacie	0.98	147	P	Pg	01 37 57.9	-1.8
BARN				S	Sg	01 38 11.3	-1.1
KIAG	Kiagna River	0.98	168	P	Pg	01 37 57.5	-2.1
KIAG				S	Sg	01 38 11.4	-1.0
MENT	Mentasta	1.15	338	*e*Pn	Pb	01 38 00.2	-2.3
MENT				*e*Sn	Sb	01 38 15.2	-2.3
HARP	HAARP	1.23	296	P	Pn	01 38 02.1	-1.9
BCA3	Beaver Creek A	1.27	21	P	Pn	01 38 03.9	-0.7
BMRM	Bremner River	1.27	225	P	Pn	01 38 02.1	-2.5
ISLE	Juniper Island	1.30	171	P	Pn	01 38 03.2	-1.9
ISLE				S	Sb	01 38 20.7	-1.4
BAGL	Bagley Icefiel	1.44	166	P	Pn	01 38 05.4	-1.3
KHIT	Khitrov Hills	1.47	189	P	Pn	01 38 06.1	-1.1
KHIT				S	Sn	01 38 25.1	-1.3
BARK	Barkley Ridge	1.49	175	P	Pn	01 38 06.6	-1.0
BERG	Berg Lake	1.56	197	P	Pn	01 38 07.7	-0.8
GOAT	Goat Mountain	1.61	217	P	Pn	01 38 08.1	-1.2
DIV	Divide	1.62	244	P	Pn	01 38 08.3	-1.1
TABL	Table Mountain	1.65	151	P	Pn	01 38 09.5	-0.4
PAX	Paxson	1.66	312	P	Pn	01 38 08.7	-1.2
VLZ	Valdez	1.86	248	P	Pn	01 38 11.9	-0.7
DOT	Dot Lake	1.87	342	P	Pn	01 38 12.2	-0.5
EYAK	Cordova Ski Ar	1.97	228	P	Pn	01 38 14.2	+0.2
DDM	Donnelly Dome	2.38	325	P	Pn	01 38 19.9	+0.2
DHY	Denali Highway	2.45	301	P	Pn	01 38 21.2	+0.4
SML	Sawmill	2.64	271	P	Pn	01 38 23.9	+0.7
DAWY	Dawson	2.68	34	P	Pn	01 38 24.1	+0.3
DAWY	Dawson	2.68	34	⇓P	Pn	01 38 24.1	+0.3
DAWY				⇑Sg	Sg	01 39 04.1	-2.5
HYT	Haines Junctio	2.75	110	P	Pn	01 38 25.8	+0.9
HYT	Haines Junctio	2.75	110	⇑Pn	Pn	01 38 26.4	+1.4
HYT				⇑Sg	Sg	01 39 06.8	-2.2
PNL	Peninsula	2.77	142	P	Pn	01 38 25.9	+0.8
EGAK	Eagle	3.00	13	*e*Pn	Pn	01 38 27.8	-0.3
EGAK				*e*Pg	Pg	01 38 35.5	-2.5
EGAK				*e*Sg	Sg	01 39 13.9	-2.8
PMR	Palmer	3.04	267	*e*Pn	Pn	01 38 30.2	+1.5
PMR				*e*Sg	Sb	01 39 10.6	-1.3
MCK	McKinley	3.38	306	*e*Pn	Pn	01 38 35.3	+1.8
IL1	Eielson Array	3.44	329	P	Pn	01 38 33.0	-1.3
ILAR	Eielson Array	3.44	329	Pn	Pn	01 38 32.9	-1.4
ILAR				Pg	Pb	01 38 40.6	-1.0
ILAR				Lg	Lg	01 39 26.3	
ILAR	Eielson Array	3.44	329	Pn	Pn	01 38 32.9	-1.4
	0.8nm,0.3s,baz=152,slow=12,SNR=84						
ILAR				Pg	Pb	01 38 40.6	-1.0
	7.4nm,0.3s,baz=152,slow=16,SNR=84						
ILAR				Lg	Lg	01 39 26.3	
	7.0nm,0.3s,baz=145,slow=28,SNR=6.0						
WRH	Wood River Hil	3.54	319	P	Pn	01 38 35.4	-0.3
CUT	Chulitna	3.56	282	P	Pn	01 38 35.6	-0.2
CCB	Clear Creek Bu	3.58	323	P	Pn	01 38 36.7	+0.5
SEW	Seward	3.71	244	P	Pn	01 38 38.5	+0.6
COLA	College	3.77	325	*e*Pn	Pn	01 38 39.7	+0.9
COLA				*e*Pg	Pb	01 38 47.5	+0.2
COLA				*e*Sg	Sb	01 39 35.9	+3.0
TRF	Thorofare Moun	3.81	298	P	Pn	01 38 40.2	+0.8
NEA	Nenana	3.93	316	P	Pn	01 38 40.9	-0.1
WHY	Whitehorse	4.00	104	Pn	Pn	01 38 42.5	+0.4
WHY				Pg	Pb	01 38 52.6	+1.3
WHY				Sg	Sg	01 39 46.7	-2.5
WHY	Whitehorse	4.00	104	⇑Pn	Pn	01 38 42.5	+0.4
WHY				⇑Pg	Pb	01 38 52.6	+1.3
WHY				⇑Sg	Sg	01 39 46.7	-2.5
STLK	Strandline Lak	4.33	269	P	Pn	01 38 47.6	+1.0
SKAG	Skagway	4.39	120	*e*Pn	Pn	01 38 49.0	+1.6
SKAG				*e*Pg	Pg	01 39 00.7	-4.1
SKAG				*e*Sg	Sb	01 39 48.8	-2.1
PPLA	Purkeypile	4.50	287	P	Pn	01 38 49.8	+0.9
BRLK	Bradley Lake	4.50	245	P	Pn	01 38 49.5	+0.6
MLY	Manley	4.77	315	P	Pn	01 38 52.7	+0.1
DFR	Drift River	4.96	259	P	Pn	01 38 55.7	+0.5
BM3	Burnt Mountain	5.61	353	P	Pn	01 39 04.5	+0.3
SIT	Sitka	6.15	139	P	Pn	01 39 12.0	+0.6
COLD	Coldfoot	6.24	332	P	Pn	01 39 10.1	+0.3
TT01	Tatalina	6.24	285	P	Pn	01 39 12.3	-0.5
IM3	Indian Mountai	6.34	315	P	Pn	01 39 13.8	-0.3
KDAK	Kodiak Island	6.43	235	Pn	Pn	01 39 16.3	+1.0
KDAK				Sn	Sn	01 40 27.5	-1.1
KDAK	Kodiak Island	6.43	235	Pn	Pn	01 39 16.3	+1.0
	3.5nm,0.3s,baz=39,slow=12,SNR=28						
KDAK				Sn	Sn	01 40 27.5	-1.1
	0.2nm,0.3s,baz=143,slow=20,SNR=3.0						
OHAK	Old Harbor	7.09	233	P	Pn	01 39 23.5	-0.8
DLBC	Dease Lake	7.24	113	*e*Pn	Pn	01 39 29.3	+2.8
DLBC				*e*Pg	Pg	01 39 52.1	-7.0
DLBC				*e*Sg	Sg	01 41 27.5	-5.1
DLBC				Lg	Lg	01 41 30.4	
DLBC	Dease Lake	7.24	113	⇑Pn	Pb	01 39 27.7	+1.2
DLBC				⇓Pg	Pb	01 39 50.6	+4.3
DLBC				⇑Sg	Sg	01 41 27.1	-5.5
DLBC	Dease Lake	7.24	113	Pn	Pn	01 39 27.6	+1.2
	0.2nm,0.3s,baz=310,slow=11,SNR=6.1						
DLBC				Lg	Lg	01 41 30.4	
	2.6nm,0.3s,baz=23,slow=26,SNR=8.2						
INK	Inuvik	7.53	27	P	Pn	01 39 29.4	-1.0
INK				Sn	Sn	01 40 53.6	-2.0
INK				Lg	Lg	01 41 32.5	
INK	Inuvik	7.53	27	⇑Pn	Pn	01 39 29.3	-1.0
INK				⇓Sn	Sn	01 40 51.8	-3.8
INK	Inuvik	7.53	27	Pn	Pn	01 39 29.3	-1.0
	0.7nm,0.3s,baz=248,slow=19,SNR=33						
INK				Sn	Sn	01 40 53.6	-2.0
	1.4nm,0.3s,baz=263,slow=28,SNR=3.5						
INK				Lg	Lg	01 41 32.5	
	0.8nm,0.3s,baz=304,slow=22,SNR=3.9						
FNBB	Fort Nelson	10.22	98	Pn	Pn	01 40 07.0	-0.3
FNBB				Sg	Sn	01 42 59.9	+58
FNBB	Fort Nelson	10.22	98	⇑Pn	Pn	01 40 07.0	-0.3
FNBB				⇓Sg	Sn	01 42 59.9	+58
TNA	Tin City	11.69	299	*e*Pn	Pn	01 40 27.3	0.0
	7.3nm,1.0s						
YKW3	Yellowknife Ar	13.11	75	*e*Pn	Pn	01 40 48.0	+1.4
YKW3				*e*Lg	Lg	01 44 37.3	
YKA	Yellowknife Ar	13.12	75	Pn	Pn	01 40 46.6	-0.2
YKA	Yellowknife Ar	13.12	75	Pn	Pn	01 40 46.6	-0.2
	0.2nm,0.3s,baz=278,slow=13,SNR=18						
NEW	Newport	19.86	122	P	Pn	01 42 14.7	+1.5
NEW	Newport	19.86	122	P	Pn	01 42 14.7	+1.5
	0.2nm,0.3s,baz=266,slow=14,SNR=2.3						
RES	Resolute Bay	21.02	33	*e*P	P	01 42 25.7	+1.8
	12nm,1.3s						
RES	Resolute Bay	21.02	33	P	P	01 42 24.8	+0.8
	2.2nm,0.7s,baz=251,slow=9.4,SNR=9.8						
BILL	Bilibino	21.84	308	*e*P	P	01 42 33.6	+0.9
	8.9nm,1.0s						
FFC	Flin Flon	22.27	90	*e*P	P	01 42 37.8	+0.3
	4.2nm,1.1s						
YBH	Yreka Blue Hor	23.50	140	P	P	01 42 53.9	+3.4
YBH	Yreka Blue Hor	23.50	140	P	P	01 42 53.9	+3.4
	1.3nm,0.7s,baz=6.3,slow=9.2,SNR=2.8						
BOZ	Bozeman (W)	24.21	118	*e*P	P	01 42 56.2	-1.1
MCMT	McKenzie Canyo	24.37	121	*e*P	P	01 43 02.2	+3.3
HLID	Hailey	24.80	125	*e*P	P	01 43 03.9	+1.2
	1.3nm,0.7s						
LOHW	Long Hollow	26.29	119	*e*P	P	01 43 14.9	-1.3
	3.2nm,1.0s						
PDAR	Pinedale Array	27.42	119	P	P	01 43 28.5	+2.1
PDAR	Pinedale Array	27.42	119	P	P	01 43 28.5	+2.1
	1.1nm,0.9s,baz=336,slow=6.4,SNR=6.0						
NVAR	Mina Array Bea	27.90	136	P	P	01 43 32.0	+1.2
NVAR	Mina Array Bea	27.90	136	P	P	01 43 32.0	+1.2
	0.4nm,0.5s,baz=318,slow=8.7,SNR=2.8						
DUG	Dugway	28.30	126	*e*P	P	01 43 30.9	-3.4
	2.6nm,1.1s						
TUC	Tucson	36.03	130	*e*P	P	01 44 39.1	-2.9
	0.3nm,0.6s						
SCHQ	Schefferville	38.29	65	P	P	01 45 02.0	+1.2
SCHQ	Schefferville	38.29	65	P	P	01 45 02.0	+1.2
	0.7nm,0.6s,baz=309,slow=13,SNR=3.4						
TXAR	Lajitas Array	41.39	124	P	P	01 45 29.7	+2.7
TXAR	Lajitas Array	41.39	124	P	P	01 45 29.7	+2.7
	0.4nm,0.5s,baz=321,slow=7.0,SNR=2.4						
SONM	Songino Array	57.50	312	P	P	01 47 32.2	+2.5
SONM	Songino Array	57.50	312	P	P	01 47 32.2	+2.5
	0.8nm,0.8s,baz=46,slow=6.2,SNR=7.2						
ZAA0	Zalesovo Array	58.57	329	*e*P	P	01 47 36.6	-0.3
ZALV	Zalesovo Beam	58.57	329	P	P	01 47 36.5	-0.4
ZALV	Zalesovo Beam	58.57	329	P	P	01 47 36.5	-0.4
	1.4nm,0.7s,baz=29,slow=6.9,SNR=7.2						
KURK	Kurchatov	63.01	332	*e*P	P	01 48 07.3	+0.2
	8.7nm,1.5s						
MK31	Makanchi Array	65.80	328	*e*P	P	01 48 25.3	-0.2
MKAR	Makanchi Array	65.80	328	P	P	01 48 24.9	-0.7
MKAR	Makanchi Array	65.80	328	P	P	01 48 24.9	-0.7
	0.9nm,0.7s,baz=45,slow=8.5,SNR=8.8						
AKASG	Malin Array Be	67.58	5	P	P	01 48 37.8	+1.0
AKASG	Malin Array Be	67.58	5	P	P	01 48 37.7	+1.0
	0.4nm,0.4s,baz=358,slow=6.4,SNR=3.7						
ABKAR	Akbulak array	67.73	344	*e*P	P	01 48 38.3	+0.6
	0.9nm,0.6s						
ESDC	Sonseca Array	73.45	32	P	P	01 49 14.3	+1.5
ESDC	Sonseca Array	73.45	32	P	P	01 49 14.3	+1.5
	0.7nm,0.7s,baz=338,slow=6.6,SNR=4.2						

NNC ***12*** *01:46:11.4±11.0, 36.82N×70.55E, h158km±159km, mb2.8, mpv4.0, Error ellipse: s-maj=98.3km s-min=55.8km az=11.0*

ISC 12 01:46:11.1±3.6, 36.8N±0.2×70.7E±0.2, h213km, n11, σ0°74/12, 4C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AML	Almayashu	5.80	23	P			Pn	01 47 36.3	0.0
	SNR=56								
KK31	Karatay Array	6.29	359	P			Pn	01 47 42.4	+0.2
	2.6nm,0.5s,baz=178,slow=13,SNR=85								
KK31				⇑S			S	01 48 53.1	-1.3
	2.9nm,0.3s,baz=182,slow=23,SNR=10								
EKS2	Erkin-Say	6.31	21	P			Pn	01 47 43.1	+0.6
	SNR=7.1								
KZA	Kyzart	6.33	32	P			Pn	01 47 42.4	-0.7
	SNR=8.2								
KBK	Karagaybulak	6.70	28	P			Pn	01 47 48.0	+0.5
	SNR=10								
ULHL	Ulahol	6.92	37	P			Pn	01 47 49.4	-1.0
	SNR=5.5								
CHMS	Chumysh	6.92	26	P			Pn	01 47 50.9	+0.6
	SNR=5.5								
TKM2	Tokmak 2	7.17	30	⇓P			Pn	01 47 53.8	+0.1
	7.7nm,0.4s								
TKM2				⇑S			S	01 49 16.3	+0.9
	3.1nm,0.7s								
TKM2	Tokmak 2	7.17	30	P			Pn	01 47 54.0	+0.3
	SNR=13								
AB31	Akbulak array	14.69	331	⇑P			P	01 49 34.6	+5.0
	0.9nm,0.7s,baz=17,slow=6.5,SNR=13								
AKTO	Aktyubinsk	16.39	330	⇑P			P	01 49 48.4	+0.2
	0.2nm,0.8s								

NIED ***12*** *01:54:00, 45.90N×152.30E, h44km, Mw4.6 Best double couple: M09.68000×10^15 NP1:φs139.00000°, δ75.00000°, λ-33.00000°. NP2:φs238.00000°, δ58.00000°, λ-163.00000°.*

ISCJB ***12*** *01:54:28.6±0.9, 45.90N±0.04×151.95E±0.04, h29km±6km, mb4.6/151, MS4.1/34, Error ellipse: s-maj=7.3km s-min=3.2km az=149.2*

BJI ***12*** *01:54:29.2, 46.09N×152.09E, h38km, mB4.8/29, mb4.7/44, Ms4.3/31, Ms7 4.1/32*

JMA ***12*** *01:54:29.0±0.5, 45.89N×152.32E, h30km, M5.0*

SKHL ***12*** *01:54:29.3±0.7, 45.97N×152.43E, h49km±6km, mb5.0/6, Ms4.2/3*

IDC ***12*** *01:54:30.7±3.5, 46.07N×151.84E, h29km±23km, mb4.1/27, mb1 4.3/32, mb1mx4.2/39, mbtmp4.1/32, ML4.0/2, MS3.9/24, Ms1 3.9/24, ms1mx3.7/38, Error ellipse: s-maj=15.7km s-min=11.5km az=149.0*

NEIC ***12*** *01:54:31.8±0.2, 46.10N×151.80E, h35km, mb4.7/79, Error ellipse: s-maj=7.6km s-min=4.3km az=151.0*

MOS ***12*** *01:54:31.5±1.2, 46.14N×151.75E, h43km, mb4.9/61, Error ellipse: s-maj=8.2km s-min=5.1km az=105.4*

SZGRF ***12*** *01:54:43.4, 47.79N×150.99E, h33km, mb4.7, Kuril Islands, Russia*

ISC 12 01:54:31.5±0.4, 45.96N±0.05×151.93E±0.04, h39km±1km, h39km:pP-P, n467, σ1°38/515, mb4.7/151, MS4.1/34, 25C-34D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.94	257	*e*PN			Pn	01 55 18.0	+2.3
KUR				*e*S			Sn	01 55 54.0	+4.3
KUR				smax		smax			
	comp=N,2μm,0.5s								
KUR				smax		smax			
	comp=E,710nm,0.7s								
KUR				smax		smax			
	comp=N,12μm,1.8s								
KUR				smax		smax			
	comp=E,8μm,1.8s								
KUR	Kuril'sk	2.94	257	*e*P			Pn	01 55 18.0	+2.3
KUR				*e*S			Sn	01 55 54.0	+4.3
KUR				A		A		01 56 02.0	
	comp=E,710nm,0.6s								
KUR				A		A		01 56 02.0	
	comp=E,2μm,0.6s								
KUR				A		A		01 56 08.4	
	comp=E,12μm,1.8s								
KUR				A		A		01 56 08.4	
	comp=E,8μm,1.8s								
YUK	Yuzh-Kuril'sk	4.72	248	*c*PN			Pn	01 55 42.6	+2.6
YUK				*i* S			Sn	01 56 38.0	+4.7
YUK				pmax		pmax			
	comp=N,57nm,0.4s								
YUK				pmax		pmax			
	comp=E,102nm,0.4s								
YUK				pmax		pmax			
	comp=Z,192nm,0.4s								
YUK				smax		smax			
	comp=E,428nm,0.9s								
YUK				smax		smax			
	comp=N,474nm,0.9s								
YUK	Yuzh-Kuril'sk	4.72	248	⇑*i*P			Pn	01 55 42.6	+2.6
YUK				AMB		AMB		01 55 46.0	
	comp=N,57nm,0.4s								
YUK				AMB		AMB		01 55 46.0	
	comp=N,102nm,0.4s								
YUK				AMB		AMB		01 55 46.0	
	comp=N,192nm,0.4s								
YUK				*i* S			Sn	01 56 38.1	+4.7
YUK				A		A		01 56 48.7	
	comp=N,474nm,0.9s								
YUK				A		A		01 56 48.7	
	comp=N,428nm,0.9s								
NEM2	Nemuro 2	5.12	242	P			Pn	01 55 45.8	+0.3
NEM2				*e*S			Sn	01 56 42.6	-0.7
JRA	Rausu	5.24	250	P			Pn	01 55 50.5	+3.3
SKR	Severo-Kuril's	5.49	29	*e*PN			Pn	01 55 46.0	-4.6
SKR				pmax		pmax			
	comp=E,80nm,0.6s								
SKR				pmax		pmax			
	comp=Z,160nm,0.6s								
SKR	Severo-Kuril's	5.49	29	*e*P			Pn	01 55 46.0	-4.6
SKR				AMB		AMB		01 55 49.6	
	comp=Z,80nm,0.6s								
SKR				AMB		AMB		01 55 49.6	
	comp=Z,160nm,0.6s								
SKR				*e*S			Sn	01 56 48.0	-4.4
SKR				A		A		01 56 50.0	
	comp=Z,230nm,0.5s								
SKR				A		A		01 56 50.0	
	comp=Z,110nm,0.5s								
SKR				A		A		01 56 50.0	
	comp=Z,80nm,0.5s								
JNK	Nakash	5.66	248	P			Pn	01 55 54.9	+2.0
JAK	Akkeshi	5.96	243	P			Pn	01 55 57.4	+0.3
JAK				*e*S			Sn	01 57 03.2	-0.9
JTKR	Abashiri--Toko	6.03	254	P			Pn	01 56 01.3	+3.3
JMP	Maruseppu	6.39	255	P			Pn	01 56 06.3	+3.3
JAR	Ashorobuto	6.40	248	P			Pn	01 56 05.4	+2.2
JAR				*e*S			Sn	01 57 15.3	+0.3
YSS	Yuzh-Sakhalins	6.42	282	⇑*e*PN			Pn	01 56 07.7	+4.3
YSS				*e*S			Sn	01 57 18.8	+3.5
YSS				pmax		pmax			
	comp=E,50nm,0.8s								
YSS				pmax		pmax			
	comp=Z,50nm,0.8s								
YSS				MLR		MLR			
	comp=Z,2μm,16.0s								
YSS				MLR		MLR			
	comp=N,500nm,14.0s								
YSS				MLR		MLR			
	comp=E,500nm,14.0s								
YSS	Yuzh-Sakhalins	6.42	282	⇑*e*Pn			Pn	01 56 06.6	+3.2
	comp=E,47nm,0.7s								
YSS	Yuzh-Sakhalins	6.42	282	⇑*e*P			Pn	01 56 07.7	+4.3
YSS				AMB		AMB		01 56 09.9	
	comp=E,50nm,0.8s								
YSS				AMB		AMB		01 56 09.9	
	comp=E,50nm,0.8s								
YSS				*e*S			Sn	01 57 18.8	+3.5
YSS				*e*LQ		LQ		01 57 50.0	
YSS				AMS		AMS		01 58 34.0	
	comp=E,2μm,16.0s								
YSS				AMS		AMS		01 58 34.0	
	comp=E,500nm,14.0s								
JOB	Onbets	6.55	245	P			Pn	01 56 06.1	+0.9
JOB				*e*S			Sn	01 57 18.3	-0.3
JSE	Soyaes	6.65	265	P			Pn	01 56 11.5	+4.9
JKK2	Kamakawa 2	6.85	256	P			Pn	01 56 12.8	+3.5
ASAJ	Asahikawa	6.87	258	*e*Pn			Pn	01 56 13.8	+4.3
ASAJ	Asahikawa	6.87	258	P			Pn	01 56 13.6	+4.1
ASAJ	Asahikawa	6.87	258	Pn			Pn	01 56 13.6	+4.1
	comp=E,6.0nm,0.3s,baz=85,slow=17,SNR=50								
ASAJ				LR		LR		01 58 52.8	
	comp=E,1μm,19.4s,baz=15,slow=38								
JCH	Churui	7.00	245	P			Pn	01 56 11.7	+0.4
JCH				*e*S			Sn	01 57 28.6	-1.0
JWK2	Keihoku	7.07	268	P			Pn	01 56 19.4	+7.2
JFR	Furan	7.23	251	P			Pn	01 56 17.3	+2.7
JAB	Ashibetsu	7.34	254	P			Pn	01 56 20.1	+4.1
UGL	Uglegorsk	7.37	299	*e*P			Pn	01 56 20.5	+4.0
UGL				AMB		AMB		01 56 22.0	
	comp=E,69nm,0.4s								
UGL				*e*L		L		01 58 30.0	
UGL				AMS		AMS		01 59 26.0	
	comp=E,500nm,16.0s								
ERM	Erimo	7.45	241	*c e*PN			Pn	01 56 19.2	+1.6
ERM				pmax		pmax			
	comp=Z,115nm,1.0s								
ERM	Erimo	7.45	241	*e*Pn			Pn	01 56 18.0	+0.4
ERM				*e*Sn			Sn	01 57 37.2	-3.6
JEM	Erimo	7.45	241	P			Pn	01 56 18.2	+0.6
JBT2	Biratori 2	7.56	249	P			Pn	01 56 20.1	+1.1
JNBK	Urakawa-nobuka	7.56	244	P			Pn	01 56 19.0	0.0
TYV	Tymovskoe	7.88	312	*e*P			Pn	01 56 26.0	+2.6
TYV				AMB		AMB		01 56 29.0	
	comp=Z,22nm,0.8s								
TYV				AMB		AMB		01 56 29.0	
	comp=Z,13nm,0.8s								
TYV				AMB		AMB		01 56 29.0	
	comp=Z,31nm,0.8s								
TYV				AMS		AMS		01 59 30.0	
	comp=Z,2μm,16.0s								
TYV				AMS		AMS		01 59 30.0	
	comp=Z,2μm,18.0s								
PETK	Petropavlovsk-	8.08	26	*e*PN			Pn	01 56 26.5	+0.4
PETK				pmax		pmax			
	comp=Z,1.0nm,0.3s								
PETK	Petropavlovsk-	8.08	26	Pn			Pn	01 56 25.9	-0.2
PETK	Petropavlovsk-	8.08	26	Pn			Pn	01 56 25.9	-0.2
	comp=Z,1.2nm,0.3s,baz=192,slow=13,SNR=14								
PETK				LR		LR		01 59 37.8	
	comp=Z,161nm,18.4s,baz=222,slow=38								
JEW	Eniwo	8.13	251	P			Pn	01 56 29.0	+2.2
PET	Petropavlovsk	8.31	29	*e*PN			Pn	01 56 27.1	-2.2
PET				MLR		MLR			
	comp=Z,800nm,16.0s								
PET				MLR		MLR			
	comp=Z,400nm,16.0s								
JNB	Noboribetsu	8.57	250	P			Pn	01 56 34.3	+1.5
JNB				*e*S			Sn	01 58 08.5	+0.4
JKB	Kayabe	8.86	247	P			Pn	01 56 36.9	+0.1
JKB				*e*S			Sn	01 58 10.2	-5.0
JYM2	Yakumo 2	9.17	249	P			Pn	01 56 41.9	+0.8
JANG	Nango	9.44	237	P			Pn	01 56 42.0	-2.8
JANG				*e*S			Sn	01 58 21.5	-8.0
JTM	Tenmabayashi	9.45	241	P			Pn	01 56 44.0	-0.9
JTM				*e*S			Sn	01 58 22.9	-6.8
JTH	Tanohata	9.52	234	P			Pn	01 56 43.1	-2.8
JTH				*e*S			Sn	01 58 22.5	-9.0
JOSM	Okushiri--Mats	9.77	251	P			Pn	01 56 50.1	+0.7
OFUJ	Ofunato	10.22	231	P			Pn	01 56 53.1	-2.4
OFUJ				*e*S			Sn	01 58 40.8	-8.0
NKL	Nikolayevsk	10.25	319	*e*P			Pn	01 56 58.8	+3.0
NKL				AMB		AMB		01 57 03.0	
	comp=Z,70nm,1.1s								
NKL				AMB		AMB		01 57 03.0	
	comp=Z,60nm,1.2s								
NKL				*e*L		L		02 00 02.0	
NKL				AMS		AMS		02 01 50.0	
	comp=Z,800nm,15.0s								
NKL				AMS		AMS		02 01 50.0	
	comp=Z,1μm,15.0s								
JRG	Rokugo	10.59	236	P			Pn	01 56 59.2	-1.3
JIO	Ouri	10.85	230	P			Pn	01 57 02.1	-2.0
JYA	Atsumi	11.66	235	P			Pn	01 57 13.6	-1.5
JFY	Yanaizu	12.50	231	P			Pn	01 57 25.9	-0.8
MJA0	Matsu Arr-Jizo	13.93	232	*e*P			Pn	01 57 45.0	-1.2
MJA0				pmax		pmax			
	comp=Z,1.0nm,0.3s								
MAJO	Matsushiro	13.95	232	*e*P			Pn	01 57 45.1	-1.4
MAJO	Matsushiro	13.95	232	*e*Pn			Pn	01 57 45.1	-1.4
MJAR	Matsushiro Arr	13.95	232	Pn			Pn	01 57 44.6	-1.9
MJAR	Matsushiro Arr	13.95	232	Pn			Pn	01 57 44.6	-1.9
	comp=Z,0.6nm,0.3s,baz=26,slow=13,SNR=29								
KLR	Kul'dur

CLNS pmax pmax
comp=N,6.0nm,0.9s
YAK Yakutsk 20.57 329 *e*P Pn 01 59 11.3 +2.4
YAK *e**PP pP 01 59 27.8 +11
YAK *e*S Sn 02 02 56.5 -3.2
YAK *e*S Sn 02 02 56.5 -3.2
YAK *e* 02 03 18.3
YAK *e**SS sS 02 03 27.2 +17
YAK *e* 02 10 28.6
YAK pmax pmax
comp=Z,75nm,1.1s
YAK pmax pmax
comp=E,28nm,1.2s
YAK pmax pmax
comp=N,29nm,1.1s
YAK smax smax
comp=E,132nm,5.0s
YAK smax smax
comp=N,136nm,5.2s
YAK Yakutsk 20.57 329 *e*P **P 01 59 07.2 +0.7**
comp=N,68nm,0.9s
JNU Nakatsue 20.61 239 *e*P Pn 01 59 09.5 -0.3
comp=N,11nm,1.1s
JNU Nakatsue 20.61 239 P **P 01 59 08.9 +1.6**
comp=N,6.6nm,1.0s,baz=210,slow=8.1,SNR=3.4
INCN Inchon 20.63 255 *e*P Pn 01 59 10.1 +0.2
comp=N,17nm,0.6s
BILL Bilibino 23.35 14⇑*i*P **P 01 59 36.0 0.0**
BILL *e**PP **pP 01 59 46.8 +0.6**
BILL *e* 02 00 01.0
BILL *e*S **S 02 03 44.9 -0.8**
BILL pmax pmax
comp=Z,6.0nm,1.0s
BILL MLR MLR
comp=Z,400nm,20.0s
BILL Bilibino 23.35 14 *e*P **P 01 59 34.3 -1.6**
comp=Z,4.8nm,0.8s
BJI Beijing 26.66 270 P **P 02 00 07.2 +0.8**
BJI pmax pmax
comp=Z,11nm,1.1s
BJI pmax pmax
comp=Z,100nm,7.4s
BJI LR LR
comp=N,430nm,16.0s
BJI LR LR
comp=E,200nm,19.7s
BJI LR LR
comp=Z,310nm,20.6s
GAMB Gambell 26.94 36 *e*P **P 02 00 06.9 -1.8**
NJ2 Nanjing 28.98 253 *e*P **P 02 00 28.2 +0.9**
NJ2 pP **pP 02 00 37.1 -1.0**
NJ2 sP **sP 02 00 41.2 -1.6**
NJ2 S **S 02 05 17.0 +1.4**
NJ2 sS **sS 02 05 31.0 -2.6**
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 pmax pmax
comp=Z,110nm,8.8s
NJ2 LR LR
comp=N,270nm,16.6s
NJ2 LR LR
comp=E,200nm,19.5s
NJ2 LR LR
comp=Z,240nm,16.6s
HHC Hu-ho-hao-te 29.54 275 *e*P **P 02 00 32.7 +0.4**
HHC sP **sP 02 00 46.7 -1.1**
HHC PP **PnPn 02 01 28.6 +1.0**
HHC PcP **PcP 02 03 38.9 +2.3**
HHC S **S 02 05 22.1 -2.3**
HHC ScP **ScP 02 07 17.1 +1.9**
HHC PcS **PcS 02 07 20.9 +1.1**
HHC ScS **ScS 02 11 10.0 0.0**
HHC pmax pmax
comp=Z,43nm,0.5s
HHC pmax pmax
comp=Z,170nm,5.4s
HHC LR LR
comp=N,520nm,13.9s
HHC LR LR
comp=E,810nm,13.1s
HHC LR LR
comp=Z,920nm,13.2s
ULN Ulaanbaatar 30.40 290 *e*P **P 02 00 37.8 -2.1**
comp=Z,2.5nm,1.0s
SONM Songino Array 30.83 290 P **P 02 00 42.6 -1.1**
SONM Songino Array 30.83 290 P **P 02 00 42.6 -1.1**
comp=Z,1.0nm,0.8s,baz=68,slow=8.3,SNR=6.7
SONM LR LR 02 14 02.8
comp=Z,302nm,18.5s,baz=322,slow=38
TLY Talaya 31.82 298 *e*P **P 02 00 49.8 -2.4**
TLY pmax pmax
comp=Z,2.0nm,1.1s
TLY MLR MLR
comp=Z,361nm,18.0s
ZAK Zakamensk 32.28 296 *e*P **P 02 00 53.7 -2.7**
ZAK pmax pmax
comp=Z,2.0nm,1.0s
GUMO Guam 32.81 193 LR LR 02 12 58.9
comp=Z,74nm,20.7s,baz=79,slow=34
WHN Wuhan 32.94 255 P **P 02 01 03.0 +0.8**
WHN S **S 02 06 20.6 +3.1**
WHN pmax pmax
comp=Z,32nm,0.6s
WHN LR LR
comp=N,300nm,10.5s
WHN LR LR
comp=E,330nm,12.8s
WHN LR LR
comp=Z,380nm,20.9s
XAN Xi'an 34.63 265 P **P 02 01 17.9 +1.0**
XAN pmax pmax
comp=Z,4.0nm,1.0s
XAN pmax pmax
comp=Z,18nm,4.6s
MCK McKinley 36.78 40 *e*P **P 02 01 34.7 -0.3**
MCK pmax pmax
comp=Z,7.0nm,0.9s
MCK McKinley 36.78 40 *e*P **P 02 01 34.7 -0.3**
comp=Z,7.2nm,0.9s
LZH Lanzhou 37.10 272 *e*P **P 02 01 39.8 +1.6**
LZH pP **pP 02 01 50.0 +0.9**
LZH sP **sP 02 01 53.5 -0.3**
LZH pmax pmax
comp=Z,43nm,1.0s
LZH pmax pmax
comp=Z,120nm,6.1s
LZH LR LR
comp=N,210nm,15.0s
LZH LR LR
comp=E,180nm,15.4s
LZH LR LR
comp=Z,330nm,18.0s
COLA College 37.27 38 *e*P **P 02 01 37.9 -1.1**
COLA pmax pmax
comp=Z,5.0nm,0.8s
COLA College 37.27 38 *e*P **P 02 01 37.9 -1.1**
comp=Z,4.6nm,0.8s
ILAR Eielson Array 37.68 38 P **P 02 01 42.1 -0.4**
ILAR Eielson Array 37.68 38 P **P 02 01 42.1 -0.4**
comp=Z,1.2nm,1.0s,baz=262,slow=6.6,SNR=6.8
ILAR LR LR 02 18 56.8
comp=Z,122nm,18.4s,baz=240,slow=39
GTA Gaotai 38.29 279 *e*P **P 02 01 49.7 +1.5**
GTA pP **pP 02 01 58.8 -0.4**
GTA sP **sP 02 02 02.9 -0.9**
GTA S **S 02 07 39.6 0.0**
GTA sS **sS 02 07 55.5 -2.4**
GTA SS **SnSn 02 10 17.3 -9.0**
GTA pmax pmax
comp=Z,5.0nm,0.9s
GTA pmax pmax
comp=Z,160nm,6.7s
GTA LR LR
comp=N,180nm,14.2s
GTA LR LR
comp=E,210nm,15.0s
GTA LR LR
comp=Z,160nm,13.8s
CD2 Chengdu 40.00 265 P **P 02 02 03.4 +1.0**
CD2 pP **pP 02 02 13.6 +0.1**
CD2 sP **sP 02 02 17.9 -0.2**
CD2 PP **PnPn 02 03 39.7 +1.4**
CD2 PcS **PcS 02 07 58.7 +1.3**
CD2 S **S 02 08 05.2 -0.1**
CD2 sS **sS 02 08 22.1 -1.5**
CD2 SS **SS 02 10 55.6 -7.5**
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,120nm,5.6s
CD2 LR LR
comp=N,250nm,15.7s
CD2 LR LR
comp=Z,220nm,15.9s
GYA Guiyang 40.74 257⇓*i*P **P 02 02 09.7 +1.0**
GYA pP **pP 02 02 19.5 -0.3**
GYA PP **PnPn 02 03 47.7 +0.5**
GYA S **S 02 08 18.8 +2.2**
GYA sS **sS 02 08 34.4 -0.6**
GYA SS **SS 02 11 15.1 -3.1**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,70nm,4.8s
GYA LR LR
comp=N,130nm,15.1s
GYA LR LR
comp=E,120nm,16.2s
GYA LR LR
comp=Z,220nm,14.3s
ZALV Zalesovo Beam 42.42 306 P **P 02 02 19.7 -2.2**
ZALV 02 04 14.5
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV pmax pmax
comp=Z,5.0nm,0.8s
ZALV MLR MLR
comp=Z,415nm,18.7s
ZALV Zalesovo Beam 42.42 306 P **P 02 02 19.7 -2.2**
ZALV PcP **PcP 02 04 14.5 +0.1**
ZALV Zalesovo Beam 42.42 306 P **P 02 02 19.7 -2.2**
comp=Z,0.5nm,0.5s,baz=68,slow=11,SNR=3.2
ZALV PcP **PcP 02 04 14.5 +0.1**
comp=Z,4.9nm,0.8s,baz=64,slow=3.4,SNR=14
ZALV LR LR 02 21 10.9
comp=Z,415nm,18.6s,baz=252,slow=38
QIZ Qiongzhong 43.78 246 P P 02 02 28.3 -5.1
QIZ S S 02 08 48.1 -13
QIZ pmax pmax
comp=Z,21nm,1.4s
QIZ LR LR
comp=Z,180nm,16.6s
KMI Kunming 44.29 259 P **P 02 02 39.0 +1.3**
KMI pP **pP 02 02 47.2 -1.6**
KMI sP **sP 02 02 52.0 -1.4**
KMI PP **PcP 02 04 23.3 +1.8**
KMI S **S 02 09 09.8 +0.7**
KMI sS **sS 02 09 26.1 -1.5**
KMI SS SS 02 12 19.0 -9.2
KMI pmax pmax
comp=Z,13nm,1.1s
KMI pmax pmax
comp=Z,110nm,5.0s
KMI LR LR
comp=N,160nm,21.1s
KMI LR LR
comp=E,190nm,24.9s
KMI LR LR
comp=Z,110nm,16.4s
WMQ Urumqi 44.45 291 P **P 02 02 40.0 +1.4**
WMQ pP **pP 02 02 50.0 +0.3**
WMQ sP **sP 02 02 54.0 -0.3**
WMQ PP **PP 02 04 24.0 +1.5**
WMQ ScP **ScP 02 08 13.0 +2.6**
WMQ S **S 02 09 11.0 +0.2**
WMQ sS **sS 02 09 27.0 -2.2**
WMQ SS SS 02 12 20.0 -11
WMQ ScS **ScS 02 12 33.0 -0.2**
WMQ pmax pmax
comp=Z,16nm,0.8s
WMQ pmax pmax
comp=Z,130nm,5.0s
WMQ LR LR
comp=N,160nm,16.0s
WMQ LR LR
comp=E,120nm,16.0s
WMQ LR LR
comp=Z,130nm,16.0s
MK31 Makanchi Array 46.58 298 *e*P **P 02 02 53.6 -1.7**
MK31 *e* 02 04 29.1
MK31 Makanchi Array 46.58 298 *e*P **P 02 02 53.6 -1.7**
MK31 *e*PcP **PcP 02 04 29.1 +0.3**
MKAR Makanchi Array 46.58 298 *e*P **P 02 02 54.2 -1.1**
MKAR 02 04 29.1
MKAR Makanchi Array 46.58 298 *e*P **P 02 02 54.2 -1.1**
MKAR PcP **PcP 02 04 29.1 +0.2**
MKAR ScP **ScP 02 08 19.3 +0.2**
MKAR Makanchi Array 46.58 298 P **P 02 02 54.0 -1.3**
comp=Z,2.1nm,0.8s,baz=68,slow=7.5,SNR=21
MKAR PcP **PcP 02 04 29.1 +0.2**
comp=Z,3.1nm,0.8s,baz=62,slow=2.1,SNR=9.5
MKAR ScP **ScP 02 08 19.3 +0.2**
comp=Z,0.8nm,0.9s,baz=64,slow=3.4,SNR=4.9
MKAR LR LR 02 23 31.5
comp=Z,346nm,18.1s,baz=50,slow=38
KURK Kurchatov 47.12 304*ce*P **P 02 02 57.0 -2.4**
KURK pmax pmax
comp=Z,3.0nm,0.7s
KURK Kurchatov 47.12 304 *e*P **P 02 02 57.1 -2.3**
comp=Z,4.2nm,1.0s
BVAR Borovoye Array 50.73 309 P **P 02 03 25.5 -1.5**
BVAR 02 04 44.1
BVAR pmax pmax
comp=Z,2.0nm,0.8s
BVAR pmax pmax
comp=Z,2.0nm,0.9s
BVAR MLR MLR
comp=Z,193nm,19.6s
BVAR Borovoye Array 50.73 309 P **P 02 03 25.5 -1.5**
BVAR PcP **PcP 02 04 44.1 +0.4**
BVAR Borovoye Array 50.73 309 P **P 02 03 25.5 -1.5**
comp=Z,1.5nm,0.8s,baz=53,slow=9.6,SNR=7.0
BVAR PcP **PcP 02 04 44.1 +0.4**
comp=Z,1.8nm,0.9s,baz=72,slow=4.7,SNR=5.4
BVAR LR LR 02 26 39.8
comp=Z,193nm,19.6s,baz=86,slow=38
BRVK Borovoye 50.77 310⇓*i*P **P 02 03 25.1 -2.3**
BRVK pmax pmax
comp=Z,3.0nm,0.8s
BRVK Borovoye 50.77 310 *e*P **P 02 03 26.0 -1.3**
comp=Z,2.6nm,0.7s
CHTO Chiang Mai 51.14 256 *e*P **P 02 03 31.8 +1.3**
CHTO pmax pmax
comp=Z,14nm,0.9s
CHTO Chiang Mai 51.14 256 *e*P **P 02 03 31.8 +1.3**
comp=Z,14nm,0.9s
CM31 Chiang Mai Arr 51.39 256 *e*P **P 02 03 34.2 +1.8**
comp=Z,7.7nm,0.8s
CMAR Chiang Mai Arr 51.39 256 P **P 02 03 33.0 +0.6**
CMAR Chiang Mai Arr 51.39 256 P **P 02 03 33.0 +0.6**
comp=Z,5.5nm,0.8s,baz=35,slow=7.6,SNR=36
CMAR LR LR 02 25 37.2
comp=Z,100nm,19.0s,baz=283,slow=36
RES Resolute Bay 51.85 18 *e*P **P 02 03 34.0 -1.0**
comp=Z,2.8nm,0.9s
YKW3 Yellowknife Ar 52.01 36 *e*P **P 02 03 36.5 +0.1**
YKA Yellowknife Ar 52.05 36 P **P 02 03 37.0 +0.3**
YKA Yellowknife Ar 52.05 36 P **P 02 03 37.0 +0.3**
comp=Z,1.1nm,0.8s,baz=298,slow=7.1,SNR=18
TKM2 Tokmak 2 52.61 296 *e*P **P 02 03 40.9 -0.6**
TKM2 pmax pmax
comp=Z,4.0nm,1.2s
TKM2 Tokmak 2 52.61 296 *e*P **P 02 03 40.9 -0.6**
comp=Z,4.4nm,1.2s
TAPN Taplejung 53.33 273 *e*P **P 02 03 47.7 +0.6**
AAK Ala-Archa 53.45 296⇑*i*P **P 02 03 47.1 -0.6**
AAK pmax pmax
comp=Z,8.0nm,1.1s
AAK Ala-Archa 53.45 296 *e*P **P 02 03 47.5 -0.1**
comp=Z,0.6nm,1.0s
AAK Ala-Archa 53.45 296 P **P 02 03 46.1 -1.6**
comp=Z,3.1nm,1.0s,baz=90,slow=7.1,SNR=9.1
ODAN Odare 53.85 273 *e*P **P 02 03 51.0 +0.1**
EKS2 Erkin-Say 53.89 297 *e*P **P 02 03 49.2 -1.6**
EKS2 pmax pmax
comp=Z,6.0nm,1.1s
EKS2 Erkin-Say 53.89 297 *e*P **P 02 03 49.2 -1.6**
comp=Z,5.5nm,1.1s
KSH Kashi 54.20 292 P P 02 03 57.6 +4.5
KSH pP pP 02 04 08.5 +4.0
KSH sP sP 02 04 11.6 +2.6
KSH PcP **PcP 02 05 02.2 +5.0**
KSH PP PP 02 06 01.2 +6.4
KSH ScP **ScP 02 08 56.1 +4.1**
KSH PcS **PcS 02 08 59.0 +2.3**
KSH S **S 02 11 31.5 +4.0**
KSH ScS **ScS 02 13 41.5 +2.3**
KSH SS **SS 02 15 12.8 +3.7**
KSH pmax pmax
comp=Z,7.0nm,0.6s
KSH LR LR
comp=N,54nm,3.9s
KSH LR LR
comp=E,110nm,3.4s
KSH LR LR
comp=Z,410nm,4.9s
GUN Gumba 54.25 275 *e*P **P 02 03 54.8 +0.9**
comp=Z,34nm,0.8s
RAMN Ramite 54.35 273 *e*P **P 02 03 55.2 +0.7**
comp=Z,30nm,0.6s
KKN Kakani 54.74 275 *e*P **P 02 03 58.5 +1.2**
comp=Z,21nm,0.6s
PKI Pulchoki 54.79 275 *e*P **P 02 03 58.5 +0.7**
PKIN Phulchoki 54.80 275 *e*P **P 02 03 58.4 +0.7**
comp=Z,12nm,0.6s
DMN Daman 54.98 275 *e*P **P 02 04 00.2 +1.2**
comp=Z,15nm,0.4s
ARU Arti 55.04 317*d i*P **P 02 03 56.2 -2.6**
ARU 02 05 57.3
ARU S **S 02 11 34.9 -3.2**
ARU SS SS 02 15 13.7 -7.7
ARU pmax pmax
comp=Z,7.0nm,1.0s
ARU Arti 55.04 317 *e*P **P 02 03 56.0 -2.7**
comp=Z,5.6nm,1.0s
DANN Dangsing 55.45 277 *e*P **P 02 04 03.8 +1.3**
comp=Z,70nm,0.9s
KKAR Karatay Array 55.66 299 *e*P **P 02 04 01.4 -2.1**
KKAR pmax pmax
comp=Z,3.0nm,0.9s
KKAR Karatay Array 55.66 299 *e*P **P 02 04 01.4 -2.1**
comp=Z,3.2nm,0.9s
KOLN Koldanda 55.92 276 *e*P **P 02 04 07.1 +1.3**
comp=Z,37nm,0.9s
PYUN Piuthan 56.14 277 *e*P **P 02 04 08.6 +1.3**
comp=Z,133nm,1.0s
KEV Kevo 57.82 340 *e*P P 02 04 08.9 -9.4
KEV Kevo 57.82 340 *ep* P 02 04 08.9 -9.4
comp=Z,0.4nm,0.5s
KAPI Kappang 58.27 219 *e*P **P 02 04 19.9 -2.2**
comp=Z,19nm,1.3s
ABKAR Akbulak array 58.31 310 *e*P **P 02 04 20.4 -1.6**
ARCES ARCESS Array B 58.33 341 LR LR 02 32 45.9
comp=Z,62nm,19.1s,baz=224,slow=39
AKTO Aktyubinsk 58.65 312 P **P 02 04 24.4 0.0**
AKTO 02 05 13.8
AKTO pmax pmax
comp=Z,1.0nm,1.0s
AKTO pmax pmax
comp=Z,2.0nm,0.9s
AKTO Aktyubinsk 58.65 312 P **P 02 04 24.4 0.0**
AKTO PcP **PcP 02 05 13.8 -0.3**
AKTO Aktyubinsk 58.65 312 P **P 02 04 24.4 0.0**
comp=Z,1.3nm,1.0s,baz=56,slow=11,SNR=2.9
AKTO PcP **PcP 02 05 13.8 -0.3**
comp=Z,2.0nm,0.9s,baz=65,slow=3.8,SNR=4.8
YBH Yreka Blue Hor 58.84 61 LR LR 02 25 18.1
comp=Z,76nm,18.8s,baz=317,slow=31
KULM Kulim 59.99 244 *e*P **P 02 04 34.7 +0.5**
comp=Z,7.7nm,0.9s
SLMT Seeley Lake 60.89 51 *e*P **P 02 04 40.3 +0.2**
comp=Z,2.7nm,0.7s
KBL Kabul 61.60 291 *e*P **P 02 04 44.9 -0.3**
KBL pmax pmax
comp=Z,22nm,1.0s
KBL Kabul 61.60 291 *e*P **P 02 04 44.9 -0.3**
comp=Z,22nm,1.0s
JOF Joensuu 61.68 333 *e*P **P 02 04 43.8 -1.1**
JOF pmax pmax
comp=Z,1.0nm,0.5s
JOF Joensuu 61.68 333 *ep* **P 02 04 43.8 -1.1**
comp=Z,1.0nm,0.5s
FFC Flin Flon 61.87 39*ce*P **P 02 04 47.8 +1.4**
FFC Flin Flon 61.87 39 *e*P **P 02 04 46.5 +0.1**
comp=Z,2.9nm,0.9s
LRM Limekiln Ridge 62.33 52 *e*P **P 02 04 51.0 +1.1**
EGMT Eagleton 62.40 49 *e*P **P 02 04 47.4 -2.8**
comp=Z,33nm,1.9s
HLID Hailey 62.63 55 *e*P **P 02 04 52.0 +0.1**
comp=Z,1.1nm,0.9s
BOZ Bozeman (W) 62.89 52 *e*P **P 02 04 54.6 +1.1**
BOZ pmax pmax
comp=Z,5.0nm,1.2s
BOZ Bozeman (W) 62.89 52 *e*P **P 02 04 54.6 +1.1**
comp=Z,4.5nm,1.2s
NVAR Mina Array Bea 63.53 61 P **P 02 04 58.8 +0.8**
NVAR Mina Array Bea 63.53 61 P **P 02 04 58.8 +0.8**
comp=Z,1.9nm,0.7s,baz=288,slow=6.6,SNR=11
KAF Kangasniemi 63.81 335 *e*P **P 02 04 57.3 -1.9**
KAF pmax pmax
comp=Z,2.0nm,0.7s
KAF Kangasniemi 63.81 335 *ep* **P 02 04 57.3 -1.9**
comp=Z,2.1nm,0.7s
FINES FINESS Array B 64.41 334 P **P 02 05 01.7 -1.3**
FINES FINESS Array B 64.41 334 P **P 02 05 01.7 -1.3**
comp=Z,3.8nm,0.6s,baz=32,slow=8.2,SNR=28
FINES LR LR 02 35 37.2
comp=Z,87nm,18.7s,baz=22,slow=38
RRI2 Red Ridge 64.52 53 *e*P **P 02 05 05.7 +1.2**
comp=Z,5.7nm,0.7s
MOOW Moose Ponds 64.58 53 *e*P **P 02 05 05.9 +1.1**
comp=Z,1.1nm,0.7s
TPAW Teton Pass 64.63 53 *e*P **P 02 05 07.1 +1.9**
comp=Z,4.8nm,0.9s
LOHW Long Hollow 64.74 53 *e*P **P 02 05 07.7 +1.8**
comp=Z,14nm,1.8s
SNOW Snow King Moun 64.76 53 *e*P **P 02 05 07.2 +1.2**
comp=Z,3.2nm,0.9s
HWUT Hardware Ranch 65.50 55 *e*P **P 02 05 11.5 +0.7**
comp=Z,1.8nm,0.7s
OBN Obninsk 65.50 325 *e*P **P 02 05 09.3 -0.9**
OBN *e* 02 05 42.1
OBN *e* 02 07 33.2
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN MLR MLR
comp=Z,100nm,17.0s
DUG Dugway 65.69 57 *e*P **P 02 05 13.0 +1.0**
DUG pmax pmax
comp=Z,5.0nm,1.2s
DUG Dugway 65.69 57 *e*P **P 02 05 12.9 +1.0**
comp=Z,5.0nm,1.2s
BW06 Boulder Array 65.88 53 *e*P **P 02 05 14.0 +0.8**
comp=Z,50nm,2.8s
PDAR Pinedale Array 65.88 53 P **P 02 05 13.8 +0.6**
PDAR Pinedale Array 65.88 53 P **P 02 05 13.8 +0.6**
comp=Z,1.6nm,0.7s,baz=256,slow=1.9,SNR=11
PDAR LR LR 02 32 39.2
comp=Z,54nm,18.3s,baz=151,slow=35
VRHR Novokhopersk 66.21 320 *e*P **P 02 05 12.9 -2.0**
VRHR pmax pmax
comp=Z,9.0nm,0.8s
VRHR pmax pmax
comp=N,2.0nm,0.4s
VRHR pmax pmax
comp=E,7.0nm,0.8s
VSR Storozhevoye 67.22 321 *e*P **P 02 05 20.2 -1.1**
VSR pmax pmax
comp=N,5.0nm,0.8s
VSR pmax pmax
comp=E,6.0nm,0.8s
VSR pmax pmax
comp=Z,6.0nm,0.8s
VORD Divnogorie 67.34 321 *e*P **P 02 05 20.6 -1.5**
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
VORD pmax pmax
comp=Z,5.0nm,0.6s
WRAB Tennant Creek 67.49 198 *e*P P 02 05 26.7 +3.4
WRAB pmax pmax
comp=Z,4.0nm,0.8s
WRAB Tennant Creek 67.49 198 *e*P P 02 05 26.7 +3.4
comp=Z,4.1nm,0.8s
WRA Warramunga Arr 67.50 198 P **P 02 05 23.3 -0.1**

WRA Warramunga Arr 67.50 198 P P 02 05 23.3 -0.1
comp=Z,0.6nm,0.5s,baz=15,slow=6.8,SNR=4.7
ULM Lac du Bonnet 67.66 40 LR LR 02 38 52.1
comp=Z,54nm,18.1s,baz=350,slow=39
SRU San Rafael 67.73 56 *eP* **P 02 05 26.1 +1.0**
SRU pmax pmax
comp=Z,113nm,0.8s
SRU San Rafael 67.73 56 *eP* **P 02 05 26.1 +1.0**
comp=Z,113nm,0.8s
RSSD Black Hills 67.96 49 *eP* **P 02 05 26.3 -0.1**
RSSD pmax pmax
comp=Z,8.0nm,1.3s
RSSD Black Hills 67.96 49 *eP* **P 02 05 26.3 -0.1**
comp=Z,8.1nm,1.3s
FITZ Fitzroy Crossi 68.06 207 P P 02 05 27.9 +1.0
FITZ Fitzroy Crossi 68.06 207 P P 02 05 27.9 +1.0
comp=Z,2.7nm,0.9s,baz=5.2,slow=11,SNR=4.9
NB2 NORSAR Subarra 68.71 341 P P 02 05 30.1 -0.5
comp=Z,8.1nm,1.0s,baz=27,slow=6.5
NOA NORSAR Array B 68.71 341 P P 02 05 30.3 -0.3
NOA NORSAR Array B 68.71 341 P P 02 05 30.3 -0.3
comp=Z,4.2nm,0.8s,baz=27,slow=6.4,SNR=18
NOA LR LR 02 39 32.0
comp=Z,51nm,18.5s,baz=0.0,slow=39
NAO01 NORSAR Array S 68.96 341 *eP* **P 02 05 31.2 -0.9**
comp=Z,8.0nm,1.0s
KIV Kislovodsk 70.76 314 *eP* **P 02 05 45.3 +1.7**
KIV pmax pmax
comp=Z,14nm,1.1s
KIV MLR MLR
comp=Z,122nm,19.0s
KIV Kislovodsk 70.76 314 *eP* **P 02 05 45.7 +2.1**
comp=Z,12nm,0.9s
KBZ Khabaz 70.82 313 P P 02 05 44.5 +0.7
KBZ pmax pmax
comp=Z,11nm,1.0s
KBZ MLR MLR
comp=Z,159nm,19.2s
KBZ Khabaz 70.82 313 P P 02 05 44.5 +0.7
KBZ Khabaz 70.82 313 P P 02 05 44.5 +0.7
comp=Z,11nm,1.0s,baz=46,slow=4.8,SNR=20
KBZ LR LR 02 41 08.7
comp=Z,159nm,19.1s,baz=142,slow=40
ZEI Tsey 70.99 312 *eP* **P 02 05 44.3 -0.9**
ZEI pmax pmax
comp=Z,4.0nm,0.9s
ASAR Alice Springs 71.20 197 P P 02 05 47.3 +1.1
ASAR Alice Springs 71.20 197 P P 02 05 47.3 +1.1
comp=Z,0.5nm,0.7s,baz=13,slow=5.9,SNR=9.4
AKASG Malin Array Be 71.75 326 P P 02 05 47.7 -1.6
AKASG pmax pmax
comp=Z,10.0nm,0.8s
AKASG MLR MLR
comp=Z,125nm,20.2s
AKASG Malin Array Be 71.75 326 P P 02 05 47.7 -1.6
AKASG Malin Array Be 71.75 326 P P 02 05 47.7 -1.6
comp=Z,10nm,0.8s,baz=34,slow=6.0,SNR=17
AKASG LR LR 02 39 20.3
comp=Z,125nm,20.2s,baz=45,slow=38
KIEV Kiev 71.76 326 *eP* **P 02 05 48.5 -0.8**
KIEV pmax pmax
comp=Z,11nm,0.9s
KIEV Kiev 71.76 326 *eP* **P 02 05 48.5 -0.8**
comp=Z,12nm,0.9s
AK01 Malin Array Si 71.76 326 *eP* **P 02 05 48.1 -1.2**
AK02 Malin Array Si 71.79 326 *eP* **P 02 05 48.4 -1.1**
ECSD EROS Data Cent 72.02 45 *eP* **P 02 05 51.4 +0.2**
comp=Z,113nm,2.6s
TUC Tucson 72.17 62 *eP* **P 02 05 53.1 +0.8**
TUC Tucson 72.17 62 *eP* **P 02 05 53.1 +0.8**
comp=Z,0.3nm,0.9s
GNI Garni 72.42 310 *eP* **P 02 05 51.1 -2.6**
comp=Z,15nm,1.0s
ANN Anapa 72.71 317 *eP* **P 02 05 54.3 -0.8**
ANN *e**PP **pP 02 06 07.8 +0.9**
ANN *e*PPP PPP 02 10 26.1
ANN *eS* **S 02 15 17.2 -0.3**
ANN *e*SSS SSS 02 23 01.9
ANN pmax pmax
comp=Z,37nm,1.4s
KWP Kalwaria Pacla 75.08 329 ⇓P P 02 06 09.8 +0.8
KWP Kalwaria Pacla 75.08 329 ⇓*i*P P 02 06 09.8 +0.8
BSEG Bad Segeberg 75.26 338 *eP* **P 02 06 10.2 +0.4**
BSEG pmax pmax
comp=Z,7.0nm,0.9s
BSEG Bad Segeberg 75.26 338 *eP* **P 02 06 10.2 +0.4**
comp=Z,7.0nm,0.9s
LEOM Leova 75.50 324 ⇓P P 02 06 11.7 +0.3
LEOM Leova 75.50 324 ⇓*i*P P 02 06 11.7 +0.3
OJC Ojcow 75.61 331 *eP* **P 02 06 12.0 0.0**
OJC pmax pmax
comp=Z,10.0nm,1.0s
OJC Ojcow 75.61 331 *eP* **P 02 06 12.0 0.0**
comp=Z,10.0nm,1.0s
OJC Ojcow 75.61 331 *eP* **P 02 06 12.4 +0.4**
BUR08 Bucovina Ar. S 75.78 326 *eP* **P 02 06 13.0 -0.1**
BURAR Bucovina Array 75.79 326 ⇓*i*P P 02 06 13.5 +0.3
KOLS Kolonicke sedl 75.82 328 *eP* **P 02 06 13.5 +0.3**
NIE Niedzica 76.11 330 *eP* **P 02 06 15.9 +1.0**
TESR 76.12 324 ⇓*i*P P 02 06 15.3 +0.3
CRVS Cervenica-Dubn 76.14 329 *eP* **P 02 06 15.0 0.0**
OKC Ostrava-Krasne 76.50 331 *eP* **P 02 06 17.6 +0.6**
OKC *e* 02 06 30.7
OKC Ostrava-Krasne 76.50 331 *eP* **P 02 06 17.6 +0.6**
OKC *ep*P **PcP 02 06 30.7 +2.1**
PETR 76.52 324 ⇑*i*P P 02 06 18.9 +1.7
CFR Carcaliu 76.58 323 ⇑P P 02 06 17.7 +0.1
CFR Carcaliu 76.58 323 ⇑*i*P P 02 06 17.7 +0.1
NRDL Niedersach Rie 76.61 337 *eP* **P 02 06 17.7 +0.2**
comp=Z,6.0nm,0.9s
VRI Vrincioaia 76.61 324 ⇑P P 02 06 18.5 +0.7
VRI Vrincioaia 76.61 324 ⇑*i*P P 02 06 18.5 +0.7
UPC Upice 76.62 333 *eP* **P 02 06 18.1 +0.4**
UPC *e* 02 06 31.7
UPC Upice 76.62 333 *eP* **P 02 06 18.1 +0.4**
UPC *ex* x 02 06 23.6
UPC *ep*P **pP 02 06 31.7 +2.1**
DPC Dobruska-Polom 76.66 333 *eP* **P 02 06 18.6 +0.6**
DPC *e* 02 06 23.7
DPC Dobruska-Polom 76.66 333 *eP* **P 02 06 18.3 +0.3**
comp=Z,14nm,1.1s
DPC Dobruska-Polom 76.66 333 *eP* **P 02 06 18.6 +0.6**
DPC *ex* x 02 06 23.7
MORC Moravsky Berou 76.75 332 ⇓P P 02 06 19.1 +0.6
MORC Moravsky Berou 76.75 332 *eP* **P 02 06 18.6 +0.1**
comp=Z,16nm,1.1s
MORC Moravsky Berou 76.75 332 ⇓*i*P P 02 06 19.1 +0.6
CLL Collm 76.84 335 ⇓*i*P P 02 06 18.8 -0.2
CLL pmax pmax
comp=Z,17nm,1.0s
CLL Collm 76.84 335 *eP* **P 02 06 18.7 -0.2**
comp=Z,10.0nm,0.9s
CLL Collm 76.84 335 ⇓*i*P P 02 06 18.8 -0.2
comp=Z,17nm,1.0s
ESK Eskdalemuir 76.94 346 *eP* **P 02 06 19.6 +0.2**
ESK Eskdalemuir 76.94 346 *eP* **P 02 06 19.6 +0.2**
BRG Berggiesshubel 76.94 334 *eP* **P 02 06 19.2 -0.3**
comp=Z,4.9nm,1.0s
BRG Berggiesshubel 76.94 334 *eP* **P 02 06 19.2 -0.3**
BRG pmax pmax
comp=Z,5.0nm,1.0s
BRG Berggiesshubel 76.94 334 *eP* **P 02 06 19.5 0.0**
comp=Z,3.0nm,0.9s
MALT Malatya 77.09 312 ⇓P P 02 06 22.2 +1.5
MALT Malatya 77.09 312 *eP* **P 02 06 21.8 +1.1**
comp=Z,8.2nm,0.9s
MALT Malatya 77.09 312 ⇓*i*P P 02 06 22.2 +1.5
CLZ Clausthal 77.12 337 *eP* **P 02 06 21.2 +0.7**
CLZ pmax pmax
comp=Z,10.0nm,0.9s
CLZ Clausthal 77.12 337 *eP* **P 02 06 21.2 +0.7**
comp=Z,10.0nm,0.9s
MLR Muntele Rosu 77.24 324 P P 02 06 22.6 +1.2
MLR Muntele Rosu 77.24 324 ⇑*i*P P 02 06 22.8 +1.4
MLR Muntele Rosu 77.24 324 P P 02 06 22.6 +1.2
comp=Z,2.4nm,0.8s,baz=159,slow=10,SNR=12
NEUB Neuenburg 77.29 336 *eP* **P 02 06 22.0 +0.6**
comp=Z,11nm,1.0s
ISR Istrita 77.30 324 ⇓P P 02 06 22.4 +0.7
ISR Istrita 77.30 324 ⇓*i*P P 02 06 22.4 +0.7
IBBN Ibbenburen 77.40 338 *eP* **P 02 06 22.4 +0.4**
comp=Z,9.0nm,0.8s
VYHS Vyhne 77.41 330 *eP* **P 02 06 22.6 +0.4**
DRGR 77.44 327 ⇓*i*P P 02 06 22.7 +0.2
VRAC Vranov 77.47 332 P P 02 06 23.3 +0.8
VRAC Vranov 77.47 332 ⇓*i*P P 02 06 23.1 +0.6
VRAC Vranov 77.47 332 P P 02 06 23.3 +0.8
comp=Z,11nm,0.9s,baz=30,slow=6.9,SNR=22
PSZ Piszkesteto 77.53 329 ⇓P P 02 06 23.4 +0.4
PSZ Piszkesteto 77.53 329 *eP* **P 02 06 22.9 0.0**
comp=Z,6.7nm,0.9s
PSZ Piszkesteto 77.53 329 ⇓*i*P P 02 06 23.4 +0.4
PSZ Piszkesteto 77.53 329 ⇓*e*P P 02 06 23.7 +0.7
PRU Pruhonice 77.54 333 *eP* **P 02 06 23.3 +0.4**
PRU *e* 02 06 26.5
PRU Pruhonice 77.54 333 *eP* **P 02 06 23.3 +0.4**
PRU *ex* x 02 06 26.5
VOIR 77.64 325 ⇓P P 02 06 25.0 +1.3
VOIR 77.64 325 ⇓*i*P P 02 06 25.0 +1.3
TANN Tannenbergstha 77.79 335 *eP* **P 02 06 24.4 0.0**
comp=Z,2.0nm,0.8s
MOX Moxa 77.84 335 *eP* **P**
MOX pmax pmax
comp=Z,6.0nm,1.0s
MOX Moxa 77.84 335 *eP* **P 02 06 24.7 +0.2**
comp=Z,6.0nm,1.0s
TREC Trest 77.84 333 *eP* **P 02 06 25.1 +0.5**
TREC Trest 77.84 333 *eP* **P 02 06 25.1 +0.5**
ARR Arges 77.87 325 ⇓*i*P P 02 06 26.5 +1.6
SMOL Smolenice 77.88 331 *eP* **P 02 06 26.2 +1.4**
WTSB Winterswijk 77.95 339 *eP* **P 02 06 24.9 -0.2**
UBBA Unterbreizbach 78.14 336 *eP* **P 02 06 26.1 0.0**
comp=Z,2.0nm,0.8s
BUG Bochum--Univer 78.31 338 *eP* **P 02 06 27.4 +0.3**
comp=Z,9.0nm,0.9s
UMR Umm Al-Rimmam 78.33 300 *eP* **P 02 06 28.1 +0.5**
UMR AMb AMB 02 06 29.3
comp=Z,39nm,0.7s
MIB Mutribah 78.37 301 *eP* **P 02 06 28.1 +0.2**
MIB AMb AMB 02 06 29.9
comp=Z,39nm,1.0s
BR131 Keskin Array S 78.40 316 *eP* **P 02 06 27.9 -0.1**
comp=Z,6.9nm,0.9s
BRTR Keskin Array B 78.40 316 P P 02 06 28.3 +0.3
BRTR Keskin Array B 78.40 316 P P 02 06 28.3 +0.3
comp=Z,6.1nm,0.9s,baz=69,slow=3.9,SNR=22
BRTR LR LR 02 46 58.1
comp=Z,88nm,18.1s,baz=198,slow=40
ROTZ Rotzenmuhle 78.44 335 *eP* **P 02 06 28.6 +0.7**
comp=Z,6.0nm,0.9s
PKSG 78.51 330 *eP* **P 02 06 29.0 +0.7**
KHC Kasperske Hory 78.59 334 *eP* **P 02 06 29.4 +0.6**
KHC pmax pmax
comp=Z,21nm,1.1s
KHC Kasperske Hory 78.59 334 *eP* **P 02 06 29.4 +0.6**
comp=Z,22nm,1.1s
KHC Kasperske Hory 78.59 334 *eP* **P 02 06 29.3 +0.6**
KHC AMS AMS 02 45 00.0
comp=Z,100nm,14.9s
TXAR Lajitas Array 78.60 60 P P 02 06 29.5 +0.3
TXAR Lajitas Array 78.60 60 P P 02 06 29.5 +0.3
comp=Z,0.8nm,0.5s,baz=303,slow=5.0,SNR=7.0
ANTO Ankara 78.70 317 *eP* **P 02 06 31.0 +1.4**
ANTO pmax pmax
comp=Z,14nm,1.0s
ANTO Ankara 78.70 317 *eP* **P 02 06 31.0 +1.4**
comp=Z,14nm,1.0s
PKST T"s 78.75 330 *eP* **P 02 06 30.1 +0.4**
WET Wettzell 78.80 334 *eP* **P 02 06 30.6 +0.7**
WET pmax pmax
comp=Z,10.0nm,0.9s
WET Wettzell 78.80 334 *eP* **P 02 06 30.6 +0.7**
comp=Z,10.0nm,0.9s
GRF Grafenberg Arr 78.80 335 *eP* **P 02 06 30.6 +0.7**
GRF pmax pmax
comp=Z,13nm,0.9s
GRF Grafenberg Arr 78.80 335 *eP* **P 02 06 30.6 +0.7**
comp=Z,13nm,0.9s
GEC2 GERESS Array S 78.80 333 *eP* **P 02 06 30.3 +0.3**
GEC2 pmax pmax
comp=Z,4.0nm,0.9s
GEC2 GERESS Array S 78.80 333 *eP* **P 02 06 30.3 +0.3**
comp=Z,4.0nm,0.9s
GERES GERESS Array B 78.80 333 P P 02 06 29.9 -0.1
GERES GERESS Array B 78.80 333 P P 02 06 29.9 -0.1
comp=Z,3.9nm,0.8s,baz=32,slow=5.8,SNR=41
GERES LR LR 02 45 29.6
comp=Z,88nm,18.4s,baz=281,slow=39
NAY Al-Naaiem 78.83 300 *eP* **P 02 06 30.5 +0.1**
NAY AMb AMB 02 06 32.0
comp=Z,17nm,1.0s
BZS Buzias 78.84 327 ⇑P P 02 06 30.4 +0.3
BZS Buzias 78.84 327 ⇑*i*P P 02 06 30.4 +0.3
RDF Al-Radifah 78.88 300 *eP* **P 02 06 31.7 +1.0**
RDF AMb AMB 02 06 33.7
comp=Z,53nm,1.4s
SOP Sopron 78.89 331 ⇓*e*P P 02 06 31.4 +1.0
CONA Conrad Observa 78.91 332 *i* P **P 02 06 31.5 +0.9**
SNR=12
CONA Conrad Observa 78.91 332 *i* P **P 02 06 31.5 +0.9**
TNS Taunus Mts 79.11 337 *eP* **P 02 06 32.1 +0.5**
TNS pmax pmax
comp=Z,8.0nm,0.8s
TNS Taunus Mts 79.11 337 *eP* **P 02 06 32.1 +0.5**
comp=Z,8.0nm,0.8s
PKS9 Tamasi 79.24 329 ⇓*e*P P 02 06 31.6 -0.7
HGN Heimansgroeve 79.27 339 *eP* **P 02 06 32.4 0.0**
comp=Z,16nm,1.1s
MEM Membach 79.39 339 P **P 02 06 33.5 +0.4**
comp=Z,12nm,1.3s
PKSM Moragy 79.43 329 ⇓P P 02 06 32.8 -0.6
PKSM Moragy 79.43 329 ⇓*i*P P 02 06 32.8 -0.6
PKSM Moragy 79.43 329 ⇓*e*P P 02 06 33.0 -0.4
MOA Molln 79.50 333 *i* P **P 02 06 34.2 +0.4**
SNR=7.0
MOA Molln 79.50 333 *i* P **P 02 06 34.2 +0.4**
ARSA Arzberg 79.61 331 *i* P **P 02 06 35.2 +0.8**
SNR=5.5
ARSA Arzberg 79.61 331 *i* P **P 02 06 35.2 +0.8**
BCLA Clavier 79.75 339 P **P 02 06 35.2 +0.2**
comp=Z,9.4nm,1.4s
SNF Seneffe 79.92 340 P **P 02 06 36.2 +0.3**
RJOB Jochberg 80.07 333 *eP* **P 02 06 37.7 +0.8**
comp=Z,6.0nm,0.9s
FUR Furstenfeldbru 80.15 334 *eP* **P 02 06 37.8 +0.5**
FUR pmax pmax
comp=Z,12nm,0.9s
FUR Furstenfeldbru 80.15 334 *eP* **P 02 06 37.8 +0.5**
comp=Z,12nm,0.9s
GIVF Givet 80.16 339 *eP* **P 02 06 37.4 +0.2**
comp=Z,17nm,1.1s
GIVF Givet 80.16 339 *eP* **P 02 06 37.4 +0.2**
GIVF pmax pmax
comp=Z,17nm,1.0s
GIVF Givet 80.16 339 *eP* **P 02 06 37.4 +0.2**
comp=Z,17nm,1.0s
STU Stuttgart 80.21 336 *eP* **P 02 06 37.6 0.0**
STU pmax pmax
comp=Z,4.0nm,0.6s
STU Stuttgart 80.21 336 *eP* **P 02 06 38.0 +0.4**
comp=Z,7.0nm,0.9s
STU Stuttgart 80.21 336 *eP* **P 02 06 37.6 0.0**
comp=Z,3.5nm,0.6s
DOU Dourbes 80.22 339 P **P 02 06 37.9 +0.3**
comp=Z,4.1nm,1.3s
WLF Walferdange 80.22 338 *eP* **P 02 06 37.5 -0.1**
WLF pmax pmax
comp=Z,9.0nm,1.1s
WLF Walferdange 80.22 338 *eP* **P 02 06 37.5 -0.1**
comp=Z,9.3nm,1.1s
SOKA Soboth 80.28 331 ⇓*i*P P 02 06 38.3 +0.2
comp=Z,14nm,1.0s
SOKA Soboth 80.28 331 ⇓*i*P P 02 06 38.3 +0.2
comp=Z,14nm,1.0s
BAIF Baives 80.35 340 *eP* **P 02 06 38.7 +0.4**
comp=Z,7.1nm,0.8s
BAIF Baives 80.35 340 *eP* **P 02 06 38.7 +0.4**
BAIF pmax pmax
comp=Z,7.0nm,0.8s
BAIF Baives 80.35 340 *eP* **P 02 06 38.7 +0.4**
comp=Z,7.1nm,0.8s
KBA Koelnbreinsper 80.48 333 *i* P **P 02 06 40.2 +1.0**
KBA Koelnbreinsper 80.48 333 *i* P **P 02 06 40.2 +1.0**
SNR=11
KBA Koelnbreinsper 80.48 333 *i* P **P 02 06 40.2 +1.0**
VTS Vitosha 80.74 324 ⇓P P 02 06 40.6 -0.1
VTS Vitosha 80.74 324 ⇓*i*P P 02 06 40.6 -0.1
MYKA Terra Mystica 80.78 332 ⇑*i*P P 02 06 40.2 -0.6
comp=Z,5.6nm,1.3s
MYKA Terra Mystica 80.78 332 ⇑*i*P P 02 06 40.2 -0.6
comp=Z,5.6nm,1.3s
WATA Walderalm 80.80 334 *i* P **P 02 06 41.4 +0.5**
WATA Walderalm 80.80 334 *i* P **P 02 06 41.4 +0.5**
SNR=13
WATA Walderalm 80.80 334 *i* P **P 02 06 41.4 +0.5**
WTTA Wattenberg 80.85 334 ⇑*i*P P 02 06 41.7 +0.4
WTTA pmax pmax
comp=Z,14nm,0.7s
WTTA Wattenberg 80.85 334 ⇑*i*P P 02 06 41.7 +0.4
comp=Z,14nm,0.7s
WTTA Wattenberg 80.85 334 ⇑*i*P P 02 06 41.6 +0.4
comp=Z,14nm,0.7s
BFO Black Forest 80.86 336 *eP* **P 02 06 41.3 +0.2**
BFO pmax pmax
comp=Z,8.0nm,0.9s
BFO Black Forest 80.86 336 *eP* **P 02 06 41.3 +0.2**
comp=Z,8.0nm,0.9s
BFO Black Forest 80.86 336 *eP* **P 02 06 41.3 +0.2**
comp=Z,8.1nm,0.9s
RETA Reutte 80.91 334 ⇑*i*P P 02 06 41.8 +0.3
comp=Z,9.4nm,1.1s
RETA Reutte 80.91 334 ⇑*i*P P 02 06 41.8 +0.3
comp=Z,9.4nm,1.1s
MOTA Moosalm 80.94 334 *i* P **P 02 06 42.1 +0.4**
MOTA Moosalm 80.94 334 *i* P **P 02 06 42.1 +0.4**
SNR=18
MOTA Moosalm 80.94 334 *i* P **P 02 06 42.1 +0.4**
CDF Champ du Feu 81.07 337 *eP* **P 02 06 42.7 +0.4**
comp=Z,25nm,1.1s
CDF Champ du Feu 81.07 337 *eP* **P 02 06 42.7 +0.4**
CDF pmax pmax
comp=Z,25nm,1.1s
CDF Champ du Feu 81.07 337 *eP* **P 02 06 42.7 +0.4**
comp=Z,25nm,1.1s
ECH Echery 81.29 337 *eP* **P 02 06 43.3 -0.1**
ECH pmax pmax
comp=Z,13nm,1.3s
ECH Echery 81.29 337 *eP* **P 02 06 43.3 -0.1**
comp=Z,13nm,1.3s
PMOR Pomariorio Ree 81.31 122 *e*T T 03 36 05.6
comp=Z,6.7nm,0.2s
PAGF Fort de Pagny 81.36 338 *eP* **P 02 06 44.4 +0.7**
comp=Z,8.3nm,0.8s
PAGF Fort de Pagny 81.36 338 *eP* **P 02 06 44.4 +0.7**
comp=Z,8.3nm,0.8s
MEZF Maizieres J'vi 81.58 338 *eP* **P 02 06 45.5 +0.7**
comp=Z,22nm,0.9s
MEZF Maizieres J'vi 81.58 338 *eP* **P 02 06 45.5 +0.7**
comp=Z,22nm,0.9s
HAU Haudompre 81.70 337 *eP* **P 02 06 45.7 +0.2**
comp=Z,10nm,1.0s
HAU *e*R
comp=Z,106nm,19.8s
HAU Haudompre 81.70 337 *eP* **P 02 06 45.7 +0.2**
HAU pmax pmax
comp=Z,11nm,1.0s
HAU Haudompre 81.70 337 *eP* **P 02 06 45.7 +0.2**
comp=Z,10nm,1.0s
HINF Hinteralfeld 81.73 337 *eP* **P 02 06 45.8 +0.1**
comp=Z,8.3nm,1.0s
HINF Hinteralfeld 81.73 337 *eP* **P 02 06 45.8 +0.1**
HINF pmax pmax
comp=Z,8.0nm,1.0s
HINF Hinteralfeld 81.73 337 *eP* **P 02 06 45.8 +0.1**
comp=Z,8.3nm,1.0s
FUORN Ofenpass-Fuorn 81.84 334 *eP* **P 02 06 47.4 +0.8**
comp=Z,9.1nm,1.1s
SFTF Sexfontaines 81.86 338 *eP* **P 02 06 46.7 +0.4**
comp=Z,19nm,0.7s
SFTF Sexfontaines 81.86 338 *eP* **P 02 06 46.7 +0.4**
comp=Z,19nm,0.7s
TUE Stuetta 82.25 335 *eP* **P 02 06 49.2 +0.6**
comp=Z,6.7nm,0.9s
CSS Prodhromos 82.28 313 *eP* **P 02 06 48.8 +0.1**
comp=Z,12nm,1.2s
PPT Papeete 82.36 125 LR LR 02 38 48.0
comp=Z,200nm,20.0s,baz=340,slow=32
PPT2 Papeete2 82.38 125 *e*LR LR 02 32 31.6
comp=Z,157nm,23.5s
ASF Jabal al Asfar 82.57 309 P P 02 06 51.6 +1.2
ASF Jabal al Asfar 82.57 309 P P 02 06 51.6 +1.2
comp=Z,0.9nm,0.4s,baz=232,slow=5.5,SNR=4.4
MMAI Mount Meron Ar 82.72 311 P P 02 06 52.2 +1.0
MMAI Mount Meron Ar 82.72 311 P P 02 06 52.3 +1.0
comp=Z,2.6nm,0.5s,baz=47,slow=7.0,SNR=10.0
LOR Lormes 83.03 339 *eP* **P 02 06 52.7 +0.2**
comp=Z,6.6nm,0.6s
LOR *e*R
comp=Z,117nm,22.8s
LOR Lormes 83.03 339 *eP* **P 02 06 52.7 +0.2**
comp=Z,6.6nm,0.6s
SSF Saint Saulge 83.31 339 *eP* **P 02 06 54.2 +0.3**
comp=Z,3.6nm,0.6s
SSF Saint Saulge 83.31 339 *eP* **P 02 06 54.2 +0.3**
SSF pmax pmax
comp=Z,4.0nm,0.6s
SSF Saint Saulge 83.31 339 *eP* **P 02 06 54.2 +0.3**
comp=Z,3.6nm,0.6s
AVF Avril sur Loir 83.60 339 *eP* **P 02 06 55.8 +0.4**
comp=Z,17nm,1.1s
AVF Avril sur Loir 83.60 339 *eP* **P 02 06 55.8 +0.4**
AVF pmax pmax
comp=Z,17nm,1.1s
AVF Avril sur Loir 83.60 339 *eP* **P 02 06 55.8 +0.4**
comp=Z,17nm,1.1s
SMF Signal de Mont 83.61 339 *eP* **P 02 06 56.0 +0.5**
comp=Z,45nm,1.2s
SMF Signal de Mont 83.61 339 *eP* **P 02 06 56.0 +0.5**
SMF pmax pmax
comp=Z,45nm,1.2s
SMF Signal de Mont 83.61 339 *eP* **P 02 06 56.0 +0.5**
comp=Z,45nm,1.2s
ROSF Rostrenen 83.62 344 *eP* **P 02 06 55.8 +0.3**
comp=Z,48nm,1.3s
ROSF Rostrenen 83.62 344 *eP* **P 02 06 55.8 +0.3**
ROSF pmax pmax
comp=Z,48nm,1.3s
ROSF Rostrenen 83.62 344 *eP* **P 02 06 55.8 +0.3**
comp=Z,48nm,1.3s
LPL La Plagne 83.87 336 *eP* **P 02 06 57.8 +0.7**
LPL La Plagne 83.87 336 *eP* **P 02 06 57.8 +0.7**
LPL La Plagne 83.87 336 *eP* **P 02 06 57.8 +0.7**
LPG La Plagne 83.89 336 *eP* **P 02 06 58.2 +0.9**
comp=Z,17nm,1.1s
LPG La Plagne 83.89 336 *eP* **P 02 06 58.2 +0.9**
LPG pmax pmax
comp=Z,17nm,1.1s
LPG La Plagne 83.89 336 *eP* **P 02 06 58.2 +0.9**
comp=Z,17nm,1.1s
BGF Bois d'Agland 83.94 339 *eP* **P 02 06 57.7 +0.5**
BGF Bois d'Agland 83.94 339 *eP* **P 02 06 57.7 +0.5**
BGF Bois d'Agland 83.94 339 *eP* **P 02 06 57.7 +0.5**
TCF Toulx Ste Croi 84.35 339 *eP* **P 02 07 00.5 +1.2**
comp=Z,12nm,1.1s
TCF Toulx Ste Croi 84.35 339 *eP* **P 02 07 00.5 +1.2**
TCF pmax pmax
comp=Z,12nm,1.1s
TCF Toulx Ste Croi 84.35 339 *eP* **P 02 07 00.5 +1.2**
comp=Z,12nm,1.1s
MBDF Montbardon 84.59 336 *eP* **P 02 07 00.8 +0.1**
comp=Z,4.0nm,0.6s
MBDF Montbardon 84.59 336 *eP* **P 02 07 00.8 +0.1**
MBDF pmax pmax
comp=Z,4.0nm,0.6s
MBDF Montbardon 84.59 336 *eP* **P 02 07 00.8 +0.1**
comp=Z,4.0nm,0.6s
MFF Saint Martin d 84.61 341 *eP* **P 02 07 00.9 +0.4**
comp=Z,37nm,1.4s
MFF Saint Martin d 84.61 341 *eP* **P 02 07 00.9 +0.4**
MFF pmax pmax
comp=Z,37nm,1.4s
MFF Saint Martin d 84.61 341 *eP* **P 02 07 00.9 +0.4**
comp=Z,37nm,1.4s
ORIF Oris-en-Rattie 84.66 337 *eP* **P 02 07 02.0 +1.0**
comp=Z,15nm,0.9s
ORIF *e*R
comp=Z,90nm,19.5s
ORIF Oris-en-Rattie 84.66 337 *eP* **P 02 07 02.0 +1.0**
ORIF pmax pmax
comp=Z,15nm,0.9s
ORIF Oris-en-Rattie 84.66 337 *eP* **P 02 07 02.0 +1.0**
comp=Z,15nm,0.9s
RJF Les Rejaudoux 85.44 340 *eP* **P 02 07 04.5 -0.3**
RJF *e*R
comp=Z,116nm,20.8s
RJF Les Rejaudoux 85.44 340 *eP* **P 02 07 04.5 -0.3**
RJF Les Rejaudoux 85.44 340 *eP* **P 02 07 04.5 -0.3**

EIL	**Elat**	**85.56**	**309**	P	**P**	**02**	**07**	**06.5 +0.9**
EIL	**Elat**	**85.56**	**309**	P	**P**	**02**	**07**	**06.5 +0.9**
	comp=Z,6.6nm,0.8s,baz=18,slow=6.5,SNR=10							
CAF	**Calviac**	**85.66**	**339**	*e*P	**P**	**02**	**07**	**06.0 +0.1**
CAF	**Calviac**	**85.66**	**339**	*e*P	**P**	**02**	**07**	**06.0 +0.1**
CAF	**Calviac**	**85.66**	**339**	*e*P	**P**	**02**	**07**	**06.0 +0.1**
PGF	**Pioggiola**	**85.91**	**333**	*e*P	**P**	**02**	**07**	**07.0 -0.2**
	comp=Z,80nm,1.2s							
PGF	**Pioggiola**	**85.91**	**333**	*e*P	**P**	**02**	**07**	**07.0 -0.2**
PGF				pmax	pmax			
	comp=Z,80nm,1.2s							
PGF	**Pioggiola**	**85.91**	**333**	*e*P	**P**	**02**	**07**	**07.0 -0.2**
	comp=Z,80nm,1.2s							
TIP	**Timpagrande**	**86.20**	**327**	*e*P	**P**	**02**	**07**	**09.2 +0.5**
	comp=Z,18nm,1.3s							
TBI	**Tubuai**	**87.04**	**128**	*e*LR	LR	02	34	38.5
	comp=Z,103nm,31.8s							
TBI				*e*T	T	03	43	15.0
	comp=Z,2.3nm,0.3s							
EPF	**Esparros**	**87.87**	**340**	*e*P	**P**	**02**	**07**	**15.5 -1.2**
EPF	**Esparros**	**87.87**	**340**	*e*P	**P**	**02**	**07**	**15.5 -1.2**
EPF	**Esparros**	**87.87**	**340**	*e*P	**P**	**02**	**07**	**15.5 -1.2**
TORD	**Torodi Ar. Bea**	**115.34**	**328**	PKP	**PKPdf**	**02**	**13**	**08.5 -0.6**
TORD	**Torodi Ar. Bea**	**115.34**	**328**	PKP	**PKPdf**	**02**	**13**	**08.5 -0.6**
	comp=Z,0.4nm,1.0s,baz=323,slow=0.6,SNR=3.5							
LCO	**Las Campanas**	**142.68**	**78**	*e*PKPdf	**PKPdf**	**02**	**14**	**02.7 +2.1**
SNAA	**Sanae**	**151.56**	**196**	*e*PKiKP	**PKPbc**	**02**	**14**	**19.5 -0.5**
SNAA	**Sanae**	**151.56**	**196**	*e*PKPbc	**PKPbc**	**02**	**14**	**19.5 -0.5**
VNA2	**Neumayer--Watz**	**153.03**	**195**	*e*PKiKP	**PKPbc**	**02**	**14**	**23.8 +0.6**
	baz=82,slow=2.4							
VNA3	**Neumayer Olymp**	**153.14**	**193**	*e*PKiKP	**PKPbc**	**02**	**14**	**22.9 -0.6**

IDC 12 01:58:24.0±50.0, 17°21'S×179°55'W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/19, mbtmp3.9/3, Error ellipse: s-maj=901.0km s-min=148.9km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.02**	**240**	P	P	02 05 44.8	+0.6
	0.7nm,0.5s,baz=93,slow=8.9,SNR=5.3						
WRA	**Warramunga Arr**	**43.69**	**259**	P	P	02 06 30.8	-0.3
	0.4nm,0.5s,baz=95,slow=7.9,SNR=4.4						
ASAR	**Alice Springs**	**43.94**	**254**	P	P	02 06 32.5	-0.5
	3.1nm,0.5s,baz=88,slow=8.2,SNR=55						

*AUST **12** 02:06:29.6±0.0, 6.66S×119.64E, h167km, Error ellipse: s-maj=1.5km s-min=1.1km az=237.0*
*IDC **12** 02:06:34.2±2.1, 7.62S×119.15E, h272km±20km, mb3.4/9, mb1 3.4/12, mb1mx3.3/27, mbtmp3.3/12, Error ellipse: s-maj=52.7km s-min=10.3km az=56.0*
ISC 12 02:06:32.6±0.6, 7.7S±0.1×119.1E±0.1, h250km, n26, σ1§74/29, mb3.7/9, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.31**	**149**	P	**Pn**	**02**	**07**	**18.2 +0.3**
	baz=3.1,SNR=3.8							
WSI				S	**S**	**02**	**07**	**57.7 +3.9**
	baz=3.1,SNR=6.1							
KAPI	**Kappang**	**2.73**	**14**	P	**Pn**	**02**	**07**	**24.2 +2.0**
	1.2nm,0.3s,baz=200,slow=7.4,SNR=4.6							
UGM	**Wanagama**	**8.49**	**268**	P	Pn	02	08	38.1 +5.8
	baz=9.1,SNR=4.5							
FITZ	**Fitzroy Crossi**	**12.16**	**149**	P	**P**	**02**	**09**	**19.9 -1.2**
	0.4nm,0.3s,baz=349,slow=6.5,SNR=17							
FITZ				S	**S**	**02**	**11**	**33.6 -0.2**
	0.5nm,0.3s,baz=276,slow=17,SNR=3.0							
FITZ	**Fitzroy Crossi**	**12.16**	**149**	P	**P**	**02**	**09**	**23.8 +2.8**
	baz=13,SNR=6.5							
MTN	**Manton Dam**	**12.91**	**114**	P	**Pn**	**02**	**09**	**27.8 +0.3**
	baz=13,SNR=62							
KDU	**Kakadu**	**14.08**	**112**	P	**Pn**	**02**	**09**	**41.5 -0.3**
	baz=14,SNR=15							
WRA	**Warramunga Arr**	**19.16**	**131**	P	**P**	**02**	**10**	**37.6 -0.2**
	0.7nm,0.3s,baz=305,slow=13,SNR=16							
WRA				S	**S**	**02**	**13**	**55.6 -5.9**
	0.1nm,0.3s,baz=298,slow=20,SNR=5.4							
ASAR	**Alice Springs**	**21.32**	**140**	P	**P**	**02**	**11**	**00.8 +0.4**
	1.2nm,0.3s,baz=316,slow=8.9,SNR=45							
ASAR				S	**S**	**02**	**14**	**39.4 -1.0**
	1.2nm,0.8s,baz=328,slow=24,SNR=7.1							
STKA	**Stephens Creek**	**31.92**	**142**	P	**P**	**02**	**12**	**35.4 +0.3**
	0.5nm,0.3s,baz=346,slow=8.3,SNR=5.5							
CMAR	**Chiang Mai Arr**	**32.71**	**323**	P	**P**	**02**	**12**	**43.5 +1.5**
	0.5nm,0.4s,baz=159,slow=6.3,SNR=4.1							
RAMN	**Ramite**	**46.65**	**319**	*e*P	**P**	**02**	**14**	**37.5 +0.7**
	8.6nm,0.4s							
GUN	**Gumba**	**47.77**	**319**	*e*P	**P**	**02**	**14**	**44.7 -0.8**
	9.9nm,0.6s							
PKI	**Pulchoki**	**47.85**	**318**	*e*P	**P**	**02**	**14**	**45.9 -0.2**
	9.7nm,0.4s							
PKIN	**Phulchoki**	**47.87**	**318**	*e*P	**P**	**02**	**14**	**45.8 -0.3**
	4.8nm,0.4s							
KOLN	**Koldanda**	**49.19**	**317**	*e*P	**P**	**02**	**14**	**56.0 -0.1**
DANN	**Dangsing**	**49.46**	**318**	*e*P	**P**	**02**	**14**	**57.9 -0.3**
	27nm,0.5s							
PYUN	**Piuthan**	**49.81**	**317**	*e*P	**P**	**02**	**15**	**00.3 -0.5**
	15nm,0.5s							
SONM	**Songino Array**	**56.40**	**350**	P	**P**	**02**	**15**	**48.2 0.0**
	0.5nm,0.4s,baz=169,slow=8.0,SNR=5.9							
MKAR	**Makanchi Array**	**63.33**	**333**	P	**P**	**02**	**16**	**34.8 -0.4**
	2.6nm,0.5s,baz=157,slow=5.9,SNR=44							
AAK	**Ala-Archa**	**64.45**	**325**	P	**P**	**02**	**16**	**42.2 -0.6**
	2.2nm,0.6s,baz=127,slow=4.9,SNR=12							
ZALV	**Zalesovo Beam**	**67.85**	**339**	P	**P**	**02**	**17**	**01.9 -1.8**
	1.5nm,0.5s,baz=133,slow=4.5,SNR=9.6							
BVAR	**Borovoye Array**	**73.18**	**332**	P	**P**	**02**	**17**	**34.9 -1.1**
	0.7nm,0.6s,baz=112,slow=9.8,SNR=7.5							
AKTO	**Aktyubinsk**	**78.20**	**325**	P	**P**	**02**	**18**	**03.3 -1.1**
	1.0nm,0.7s,baz=98,slow=7.9,SNR=7.7							
TORD	**Torodi Ar. Bea**	**118.31**	**281**	PKP	**PKPdf**	**02**	**24**	**49.4 -1.8**
	0.3nm,0.4s,baz=57,slow=1.7,SNR=11							
CMIG	**Matias Romero**	**145.57**	**71**	PKPbc	**PKPdf**	**02**	**25**	**41.2 -0.8**
	1.1nm,0.7s,baz=119,slow=10,SNR=3.1							

*CSEM **12** 02:24:16.9±0.1, 42.28N×13.49E, h2km, MD2.9/21, Error ellipse: s-maj=2.6km s-min=2.0km az=64.0*
ROM 12 02:24:16.5±0.1, 42.28N×13.50E, h8km±1km, Md2.9/21, Ml2.4/18, 1C, Error ellipse: s-maj=1.4km s-min=1.1km az=56.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.06**	**99**	Pg	Pg	02	24	18.9 +0.5
FAGN				Sg	Sg	02	24	20.7 +0.9
FAGN	**Fagnano**	**0.06**	**99**	Pg	Pg	02	24	18.9 +0.5
FAGN				Sg	Sg	02	24	20.7 +0.9
AQU	**L'Aquila**	**0.11**	**317**	Pg	Pg	02	24	19.5 +0.4
AQU				Sg	Sg	02	24	21.7 +0.9
AQU	**L'Aquila**	**0.11**	**317**	Pg	Pg	02	24	19.5 +0.4
AQU				Sg	Sg	02	24	21.7 +0.9
PTQR	**Pietraquaria**	**0.26**	**196**	Pg	Pg	02	24	22.7 +0.8
PTQR				Sg	Sb	02	24	27.1 -1.4
PTQR	**Pietraquaria**	**0.26**	**196**	Pg	Pg	02	24	22.7 +0.8
PTQR				Sg	Sb	02	24	27.1 -1.4
CAMP	**Campotosto**	**0.27**	**346**	Pg	Pg	02	24	22.2 +0.2
CAMP				Sg	Sg	02	24	26.7 +0.9
CAMP	**Campotosto**	**0.27**	**346**	Pg	Pg	02	24	22.2 +0.2
CAMP				Sg	Sg	02	24	26.7 +0.9
VCEL	**Villa Celiera**	**0.28**	**65**	Pg	Pg	02	24	22.6 +0.4
VCEL				Sg	Sb	02	24	27.6 -1.4
VCEL	**Villa Celiera**	**0.28**	**65**	Pg	Pg	02	24	22.6 +0.4
VCEL				Sg	Sb	02	24	27.6 -1.4
FIAM	**Fiamignano**	**0.28**	**269**	Pg	Pg	02	24	22.8 +0.5
FIAM				Sg	Sg	02	24	27.4 +1.2
FIAM	**Fiamignano**	**0.28**	**269**	Pg	Pg	02	24	22.8 +0.5
FIAM				Sg	Sg	02	24	27.4 +1.2
TERO	**Teramo**	**0.35**	**13**	Pg	Pg	02	24	23.6 0.0
TERO				Sg	Sg	02	24	28.9 +0.5
TERO	**Teramo**	**0.35**	**13**	Pg	Pg	02	24	23.6 0.0
TERO				Sg	Sg	02	24	28.9 +0.5
INTR	**Introdacqua**	**0.40**	**131**	Pg	Pg	02	24	24.9 +0.4
INTR				Sg	Sb	02	24	31.4 -1.0
INTR	**Introdacqua**	**0.40**	**131**	Pg	Pg	02	24	24.9 +0.4
INTR				Sg	Sb	02	24	31.4 -1.0
VVLD	**Villa Vallelon**	**0.41**	**167**	Pg	Pg	02	24	25.1 +0.4
VVLD				Sg	Sb	02	24	31.8 -1.0
	492nm,0.4s							
VVLD	**Villa Vallelon**	**0.41**	**167**	Pg	Pg	02	24	25.1 +0.4
VVLD				Sg	Sb	02	24	31.8 -1.0
	492nm,0.4s							
LNSS	**Leonessa**	**0.47**	**314**	Pg	Pg	02	24	25.9 +0.1
LNSS				Sg	Sb	02	24	34.9 +0.4
	541nm,0.4s							
LNSS	**Leonessa**	**0.47**	**314**	Pg	Pg	02	24	25.9 +0.1
CERT	**Cerreto**	**0.51**	**230**	Pg	Pg	02	24	26.6 +0.2
CERT	**Cerreto**	**0.51**	**230**	Pg	Pg	02	24	26.6 +0.2
LPEL	**Lama dei Pelig**	**0.56**	**114**	Pg	Pg	02	24	27.5 +0.1
LPEL				Sg	Sb	02	24	36.5 -0.4
LPEL	**Lama dei Pelig**	**0.56**	**114**	Pg	Pg	02	24	27.5 +0.1
LPEL				Sg	Sb	02	24	36.5 -0.4
TRTR	**Tortoreto Alta**	**0.61**	**30**	Pg	Pb	02	24	29.7 +0.2
	721nm,0.6s							
TRTR	**Tortoreto Alta**	**0.61**	**30**	Pg	Pb	02	24	29.7 +0.2
	721nm,0.6s							
MTCE	**Montecelio**	**0.62**	**246**	Pg	Pg	02	24	28.4 -0.1
	305nm,1.1s							
MTCE	**Montecelio**	**0.62**	**246**	Pg	Pg	02	24	28.4 -0.1
	305nm,1.1s							
NRCA	**Norcia**	**0.63**	**333**	Pg	Pg	02	24	28.5 -0.2
NRCA				Sg	Sg	02	24	37.9 +0.9
NRCA	**Norcia**	**0.63**	**333**	Pg	Pg	02	24	28.5 -0.2
NRCA				Sg	Sg	02	24	37.9 +0.9
GIUL	**Giuliano Di Ro**	**0.74**	**194**	Pg	Pg	02	24	31.1 +0.3
	129nm,0.6s							
GIUL	**Giuliano Di Ro**	**0.74**	**194**	Pg	Pg	02	24	31.1 +0.3
	129nm,0.6s							
RMP	**Rome, Mte Porz**	**0.75**	**232**	Pg	Pg	02	24	31.3 +0.2
	189nm,0.3s							
RMP	**Rome, Mte Porz**	**0.75**	**232**	Pg	Pg	02	24	31.3 +0.2
	189nm,0.3s							
FDMO	**Fiordimonte**	**0.82**	**338**	Pg	Pg	02	24	31.9 -0.4
FDMO				Sg	Sb	02	24	44.3 0.0
FDMO	**Fiordimonte**	**0.82**	**338**	Pg	Pg	02	24	31.9 -0.4
FDMO				Sg	Sb	02	24	44.3 0.0
MIDA	**Miranda**	**0.85**	**138**	Pg	Pg	02	24	32.4 -0.5
MIDA				Sg	Sb	02	24	46.4 +1.1
MIDA	**Miranda**	**0.85**	**138**	Pg	Pg	02	24	32.4 -0.5
MIDA				Sg	Sb	02	24	46.4 +1.1
GUMA	**Gualdo di Mace**	**0.85**	**22**	Pg	Pg	02	24	32.1 -0.8
GUMA				Sg	Sb	02	24	44.9 -0.3
GUMA	**Gualdo di Mace**	**0.85**	**22**	Pg	Pg	02	24	32.1 -0.8
GUMA				Sg	Sb	02	24	44.9 -0.3
FRES	**Fresagrandinar**	**0.92**	**109**	Pg	Pg	02	24	33.9 -0.4
	150nm,0.6s							
FRES	**Fresagrandinar**	**0.92**	**109**	Pg	Pg	02	24	33.9 -0.4
	150nm,0.6s							
ASSB	**Assisi San Ben**	**0.98**	**321**	Pg	Pg	02	24	35.3 -0.3
	103nm,0.7s							
ASSB	**Assisi San Ben**	**0.98**	**321**	Pg	Pg	02	24	35.3 -0.3
	103nm,0.7s							
VAGA	**Valle Agricola**	**1.02**	**147**	Pg	Pg	02	24	35.7 -0.5
	66nm,0.5s							
VAGA	**Valle Agricola**	**1.02**	**147**	Pg	Pg	02	24	35.7 -0.5
	66nm,0.5s							
BSSO	**Bussoo**	**1.09**	**131**	Pg	Pg	02	24	37.1 -0.6
	58nm,0.7s							
BSSO	**Bussoo**	**1.09**	**131**	Pg	Pg	02	24	37.1 -0.6
	58nm,0.7s							
SGG	**Gregorio Mates**	**1.10**	**143**	Pg	Pb	02	24	38.1 +0.1
	63nm,0.6s							
SGG	**Gregorio Mates**	**1.10**	**143**	Pg	Pb	02	24	38.1 +0.1
	63nm,0.6s							
CING	**Cingoli**	**1.12**	**349**	Pg	Pg	02	24	37.6 -0.5
CING	**Cingoli**	**1.12**	**349**	Pg	Pg	02	24	37.6 -0.5
TOLF	**Tolfa**	**1.13**	**260**	Pg	Pg	02	24	38.2 -0.1
	97nm,1.1s							
TOLF	**Tolfa**	**1.13**	**260**	Pg	Pg	02	24	38.2 -0.1
	97nm,1.1s							
MGAB	**Montegabbione**	**1.21**	**302**	Pg	Pn	02	24	40.0 +0.2
	53nm,0.5s							
MGAB	**Montegabbione**	**1.21**	**302**	Pg	Pn	02	24	40.0 +0.2
	53nm,0.5s							
AOI	**Ancona**	**1.28**	**3**	Pg	Pg	02	24	41.1 0.0
	55nm,0.6s							
AOI	**Ancona**	**1.28**	**3**	Pg	Pg	02	24	41.1 0.0
	55nm,0.6s							
ARVD	**Arcevia**	**1.29**	**342**	Pg	Pn	02	24	40.4 -0.5
	60nm,0.7s							
ARVD	**Arcevia**	**1.29**	**342**	Pg	Pn	02	24	40.4 -0.5
	60nm,0.7s							
PIEI	**Pieia**	**1.45**	**331**	Pg	Pn	02	24	43.0 -0.1
	25nm,0.3s							
PIEI	**Pieia**	**1.45**	**331**	Pg	Pn	02	24	43.0 -0.1
	25nm,0.3s							
CAFI	**Castiglion Fio**	**1.54**	**314**	Pn	Pg	02	24	46.1 -0.1
	21nm,0.7s							
CAFI	**Castiglion Fio**	**1.54**	**314**	Pn	Pg	02	24	46.1 -0.1
	21nm,0.7s							
PARC	**Parchiule**	**1.66**	**326**	Pn	Pg	02	24	47.9 -0.4
	39nm,0.8s							
PARC	**Parchiule**	**1.66**	**326**	Pn	Pg	02	24	47.9 -0.4
	39nm,0.8s							
NVLJ	**Novalja**	**2.50**	**23**	*e*Pn	Pn	02	24	58.4 +1.0
NVLJ				Sn	Sn	02	25	29.9 +1.9
NVLJ	**Novalja**	**2.50**	**23**	*e*Pn	Pn	02	24	58.4 +1.0
NVLJ				Sn	Sn	02	25	29.9 +1.9
BOJS	**Bojanci**	**3.47**	**21**	*i* Pn	Pn	02	25	12.8 +2.0
BOJS				*i* Sn	Sb	02	25	56.7 -3.8
BOJS	comp=Z,2.0nm,0.3s							
BOJS	**Bojanci**	**3.47**	**21**	*i* Pn	Pn	02	25	12.8 +2.0
BOJS				*i* Sn	Sb	02	25	56.7 -3.7
	comp=Z,2.0nm,0.3s							
VISS	**Visnje**	**3.66**	**15**	*i* Pn	Pb	02	25	18.7 -2.7
VISS				*i* Sn	Sn	02	26	00.7 +4.2
VISS	**Visnje**	**3.66**	**15**	*i* Pn	Pb	02	25	18.7 -2.7
VISS				*i* Sn	Sn	02	26	00.9 +4.2
ABTA	**Abfaltersbach**	**4.53**	**351**	*i* Pn	Pn	02	25	26.6 +1.1
ABTA	**Abfaltersbach**	**4.53**	**351**	Pn	Pn	02	25	26.6 +1.1

WEL 12 02:40:05.0±0.3, 37.36S×176.68E, h219km±2km, ML3.9/11, 10C-8D, Error ellipse: s-maj=3.0km s-min=3.0km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARZ	**Mount Tarawera**	**0.89**	**189**	PN	Pn	02	40	36.6 +0.5
URZ	**Urewera**	**0.96**	**159**	↑PN	Pn	02	40	36.1 -0.3
URZ				SN	S	02	41	00.6 -0.4
MWZ	**Matawai**	**1.19**	**146**	PN	Pn	02	40	37.8 -0.1
MWZ				SN	S	02	41	03.2 -0.5
ALRZ	**Allen Road**	**1.23**	**192**	PN	Pn	02	40	38.4 +0.1
MXZ	**Matakaoa Point**	**1.31**	**100**	PN	Pn	02	40	38.8 0.0
MXZ				SN	S	02	41	05.4 +0.3
PUZ	**Puketiti**	**1.44**	**120**	PN	Pn	02	40	39.8 0.0
PUZ				SN	S	02	41	06.2 -0.8
RAHZ	**Arahi**	**1.59**	**169**	↑PN	Pn	02	40	41.3 +0.2
RAHZ				SN	S	02	41	09.3 -0.1
CNGZ	**Carnagh Statio**	**1.65**	**133**	↑PN	Pn	02	40	42.1 +0.5
NMHZ	**Naumai**	**1.74**	**177**	PN	Pn	02	40	42.8 +0.2
NMHZ				SN	S	02	41	12.1 +0.3
RITZ	**Rihia Road**	**1.74**	**202**	PN	Pn	02	40	42.8 +0.3
KATZ	**Kakaramea**	**1.79**	**205**	PN	Pn	02	40	43.2 +0.1
BKZ	**Black Stump Fm**	**1.81**	**185**	↓PN	Pn	02	40	42.4 -0.8
BKZ				SN	S	02	41	11.7 -1.3
PRGZ	**Paritu Road**	**1.83**	**149**	PN	Pn	02	40	43.2 -0.1
KNZ	**Kokohu**	**1.84**	**155**	↑PN	Pn	02	40	42.9 -0.4
KRVZ	**Karewarewa**	**1.92**	**205**	↓PN	Pn	02	40	44.1 -0.1
WTVZ	**West Tongariro**	**1.96**	**206**	PN	Pn	02	40	44.1 -0.5
TWVZ	**Taurewa**	**1.97**	**209**	PN	Pn	02	40	44.2 -0.5
OTVZ	**Oturere**	**1.97**	**204**	↓PN	Pn	02	40	44.6 -0.2
NGZ	**Ngauruhoe**	**2.01**	**205**	PN	Pn	02	40	44.9 -0.2
MHGZ	**Mahia Peninsul**	**2.04**	**152**	PN	Pn	02	40	44.9 -0.4
WPVZ	**Whakapapa**	**2.05**	**205**	PN	Pn	02	40	45.0 -0.5
TUVZ	**Tukino**	**2.07**	**203**	PN	Pn	02	40	45.5 -0.2
MCHZ	**McNeill Hill**	**2.08**	**180**	↑PN	Pn	02	40	45.5 -0.2
FWVZ	**Far West T-bar**	**2.09**	**205**	↓PN	Pn	02	40	45.5 -0.6
DRZ	**Dome Shelter**	**2.11**	**204**	PN	Pn	02	40	46.0 -0.4
TRVZ	**Turoa**	**2.13**	**204**	PN	Pn	02	40	45.9 -0.6
WNVZ	**Wahianoa**	**2.15**	**203**	PN	Pn	02	40	45.8 -0.8
MOVZ	**Moawhango**	**2.17**	**199**	↑PN	Pn	02	40	45.6 -1.1
BHHZ	**Black Hill Sta**	**2.18**	**193**	PN	Pn	02	40	45.8 -1.0
PKVZ	**Pokaka**	**2.20**	**208**	PN	Pn	02	40	46.3 -0.6
MTVZ	**Mangateitei**	**2.24**	**205**	PN	Pn	02	40	46.6 -0.7
CKHZ	**Cape Kidnapper**	**2.32**	**172**	PN	Pn	02	40	47.3 -0.8
VRZ	**Vera Road**	**2.33**	**220**	PN	Pn	02	40	48.2 0.0
KAHZ	**Kahuranaki**	**2.44**	**176**	↑PN	Pn	02	40	48.5 -0.9
PNHZ	**Pukenui**	**2.58**	**188**	PN	Pn	02	40	49.4 -1.5
PXZ	**Pawanui**	**2.67**	**177**	↑PN	Pn	02	40	50.3 -1.6
WPHZ	**Waipukurau**	**2.71**	**184**	PN	Pn	02	40	50.8 -1.5
WAZ	**Wanganui**	**2.74**	**209**	PN	Pn	02	40	51.4 -1.2
TSZ	**Takapari Road**	**2.76**	**192**	PN	Pn	02	40	51.0 -1.8
PKE	**Pukeiti**	**2.80**	**228**	PN	Pn	02	40	53.5 +0.1
PRHZ	**Porangahau**	**2.91**	**181**	PN	Pn	02	40	52.6 -1.9
DVHZ	**Dannevirke**	**2.97**	**188**	PN	Pn	02	40	53.0 -2.2
POWZ	**Post Office Ro**	**3.11**	**193**	PN	Pn	02	40	54.8 -2.1
BFZ	**Birch Farm**	**3.34**	**186**	PN	Pn	02	40	56.9 -2.6
MRZ	**Mangatainoka R**	**3.41**	**194**	↑PN	Pn	02	40	57.5 -2.9
HOWZ	**Holdsworth Sta**	**3.65**	**194**	↓PN	Pn	02	41	00.0 -3.2
OGWZ	**Otaki Gorge**	**3.65**	**198**	↑PN	Pn	02	41	00.2 -2.9
KIW	**Kapiti Island**	**3.76**	**201**	PN	Pn	02	41	01.3 -3.2
TMWZ	**Te Maipa**	**3.80**	**189**	PN	Pn	02	41	02.2 -2.8
MTW	**Mount Morrison**	**3.91**	**193**	PN	Pn	02	41	02.5 -3.7
CAW	**Cannon Point**	**3.95**	**198**	PN	Pn	02	41	03.3 -3.5
DUWZ	**D'Urville Isla**	**4.06**	**211**	PN	Pn	02	41	04.5 -3.6
TRWZ	**Traveller**	**4.11**	**190**	PN	Pn	02	41	05.7 -3.0
PAWZ	**Paruwai Farm**	**4.14**	**193**	PN	Pn	02	41	05.5 -3.5
WEL	**Wellington**	**4.19**	**200**	PN	Pn	02	41	06.1 -3.6
MSWZ	**Moikau Station**	**4.20**	**195**	PN	Pn	02	41	05.9 -3.9
SNZO	**South Karori**	**4.23**	**201**	PN	Pn	02	41	06.5 -3.7
TCW	**Tory Channel**	**4.28**	**205**	↓PN	Pn	02	41	07.2 -3.6
BHW	**Baring Head**	**4.28**	**199**	PN	Pn	02	41	07.2 -3.6
PLWZ	**Palliser**	**4.35**	**194**	PN	Pn	02	41	07.7 -4.0
TUWZ	**Tuamarina**	**4.59**	**207**	↓PN	Pn	02	41	10.5 -4.1
NNZ	**Nelson**	**4.63**	**213**	PN	Pn	02	41	11.0 -4.1
QRZ	**Quartz Range**	**4.74**	**222**	PN	Pn	02	41	11.9 -4.6
BSWZ	**Blackbirch Sta**	**4.86**	**206**	PN	Pn	02	41	14.2 -3.8
THZ	**Tophouse**	**5.28**	**212**	PN	Pn	02	41	18.6 -4.8
KHZ	**Kahutara**	**5.60**	**205**	PN	Pn	02	41	23.2 -4.1
DSZ	**Denniston Nort**	**5.78**	**219**	↓PN	Pn	02	41	24.0 -5.7
LTZ	**Lake Taylor**	**6.39**	**211**	PN	Pn	02	41	32.5 -5.0
MQZ	**McQueen's Hall**	**7.05**	**205**	PN	Pn	02	41	40.1 -5.7
WVZ	**Waitaha Valley**	**7.30**	**217**	PN	Pn	02	41	43.5 -5.5

*ISCJB **12** 03:19:22.8±0.3, 32.36N×115.21W±0.02, h10km, mb3.9/9, MS3.1/2, Error ellipse: s-maj=3.0km s-min=2.2km az=177.4*
*ECX **12** 03:19:24.8±0.7, 32.36N×115.25W, h4km, MD4.3, ML4.4, MW4.6, Fault plane solution: NP1:φ≈110.00000°, δ90.00000°, λ0.00000°.*
*IDC **12** 03:19:24.6±1.5, 32.36N×114.99W, h0km, mb3.9/5, mb1 4.0/10, mb1mx3.8/28, mbtmp3.8/10, ML3.6/5, MS3.2/6, Ms1 3.2/6, ms1mx2.9/50, Error ellipse: s-maj=30.7km s-min=13.5km az=41.0*
*NEIC **12** 03:19:24.4, 32.35N×115.23W, h0km, mb4.0/7, ML4.4(ECX), MW4.0(PAS), After ECX.*
NEIC Felt [II] at Mexicali. Also felt at Guadalupe Victoria. Felt [III] at El Centro and [II] at Imperial, California. Also felt at Brawley, Calexico and in parts of San Diego County. Felt [II] at Yuma, Arizona. Also felt at Somerton.
**ISC 12 03:19:24.6±0.4, 32.36N±0.02×115.22W±0.02, h10km, n127, σ

WUAZ					*e*Pg		**Pg**	**03 20 48.1 -2.4**
WUAZ					*e*Sg		**Sg**	**03 21 46.3 -2.3**
CCUT	**Cedar City**	**5.39**	**16**	*e*Pn			**Pn**	**03 20 45.8 +0.4**
CCUT					*e*Pg		**Pg**	**03 21 05.7 -2.2**
ARUT	**Antelope Range**	**5.61**	**15**	*e*Pn			**Pn**	**03 20 48.4 +0.2**
	comp=N,171nm,1.0s							
ARUT					*e*Pg		**Pg**	**03 21 10.3 -1.7**
ARUT					*e*Sg		**Sg**	**03 22 20.1 -4.4**
MTUM	**Tungsten Hills**	**5.69**	**332**	*e*Pb			**Pg**	**03 21 12.3 -1.3**
NV11	**Mina Array Sit**	**6.51**	**339**	*e*Pn			**Pn**	**03 21 01.5 +0.9**
NV11					*e*Pg		**Pg**	**03 21 28.3 -1.1**
NVAR	**Mina Array Bea**	**6.56**	**338**	Pn			Pn	03 21 06.9 +4.7
NVAR					Lg		Lg	03 22 58.7
NVAR	**Mina Array Bea**	**6.56**	**338**	Pn			Pn	03 21 06.0 +4.7
	comp=N,0.2nm,0.3s,baz=166,slow=15,SNR=6.9							
NVAR					Lg		Lg	03 22 58.7
	baz=166,slow=34,SNR=2.3							
NVAR					LR		LR	03 23 50.2
	comp=N,90nm,19.0s,baz=73,slow=40							
MVU	**Marysvale**	**6.60**	**21**	*e*Pn			Pn	03 21 06.1 +4.2
MVU					*e*Pb		**Pb**	**03 21 17.4 -2.2**
MVU					*e*Pg		**Pg**	**03 21 28.3 -2.7**
MVU					*e*Sg		Sg	03 22 49.6 -6.8
MSU	**Marysvale**	**6.62**	**21**	*e*Pn			Pn	03 21 05.9 +3.8
MSU					*e*Pg		Pg	03 21 26.9 -4.4
MSU					*e*Sg		**Sg**	**03 22 52.0 -5.1**
LAZ	**Ladron**	**7.06**	**71**	*e*Pn			**Pn**	**03 21 08.9 +0.8**
	comp=N,18nm,1.0s							
LAZ					*e*Pg		Pb	03 21 31.2 +3.9
CMB	**Columbia Colle**	**7.07**	**325**	*e*Pg			Pg	03 21 42.5 +2.7
LENM	**Lemitar**	**7.13**	**73**	*e*Pn			**Pn**	**03 21 09.3 +0.2**
	comp=N,18nm,0.4s							
MVCO	**Mesa Verde**	**7.34**	**47**	*e*Pn			**Pn**	**03 21 13.5 +1.4**
	comp=N,62nm,0.8s							
MVCO					*e*Sg		Sg	03 23 13.9 -6.4
BNM	**Barren Site**	**7.41**	**74**	*e*Pn			**Pn**	**03 21 13.0 -0.1**
	comp=N,13nm,0.4s							
BNM					*e*Pg		Pb	03 21 39.1 +5.6
LPM	**Los Pinos Moun**	**7.44**	**73**	*e*Pn			**Pn**	**03 21 13.6 +0.2**
TMUT	**Trail Mountain**	**7.64**	**24**	*e*Pn			Pn	03 21 19.1 +2.8
	comp=N,33nm,0.6s							
TMUT					*e*Pg		Pb	03 21 43.4 +6.0
TMUT					*e*Sg		**Sb**	**03 23 12.7 +3.9**
SRU	**San Rafael**	**7.74**	**28**	*e*Pn			Pn	03 21 20.7 +3.2
	comp=N,2µm,0.9s							
SRU					*e*Pg		Pb	03 21 43.8 +4.8
SRU					*e*Sg		Sb	03 23 18.5 +7.2
ANMO	**Albuquerque**	**7.74**	**68**	*e*Pn			**Pn**	**03 21 18.2 +0.7**
ANMO					*e*Pg		Pg	03 21 48.6 -4.3
ANMO					*e*Sn		**Sn**	**03 22 43.6 -1.8**
ANMO					*e*Sg		Sb	03 23 19.4 +7.9
ANMO					Lg		Lg	03 23 26.3
ANMO	**Albuquerque**	**7.74**	**68**	Pn			**Pn**	**03 21 17.6 +0.1**
	comp=N,0.3nm,0.3s,baz=263,slow=12,SNR=10							
ANMO					Lg		Lg	03 23 26.3
	comp=N,0.2nm,0.3s,baz=29,slow=19,SNR=2.7							
ANMO					LR		LR	03 24 24.7
	comp=N,240nm,21.0s,baz=303,slow=40							
DUG	**Dugway**	**8.05**	**13**	*e*Pn			**Pn**	**03 21 23.6 +1.8**
DUG					*e*Pg		Pb	03 21 49.8 +5.5
DUG					*e*Sg		Sg	03 23 34.5 -8.5
MPU	**Maple Canyon**	**8.17**	**20**	*e*Pn			**Pn**	**03 21 20.8 -2.5**
	comp=N,8.3nm,1.0s							
MPU					*e*Pg		**Pg**	**03 21 57.8 -3.1**
BMN	**Battle Mountai**	**8.21**	**349**	*e*Pg			**Pg**	**03 21 58.8 -3.0**
BMN					*e*Sg		Sb	03 23 34.1 +9.0
ELK	**Elko**	**8.37**	**360**	*e*Pn			**Pn**	**03 21 26.1 0.0**
	comp=N,31nm,1.3s							
ELK					*e*Pg		**Pg**	**03 22 02.8 -1.9**
ELK					*e*Sg		Sb	03 23 38.1 +8.4
MNTX	**Cornudas Mount**	**8.38**	**92**	*e*Pn			**Pn**	**03 21 25.3 -0.8**
DAU	**Daniels Canyon**	**8.64**	**21**	*e*Pn			**Pn**	**03 21 29.7 -0.3**
DAU					*e*Pg		Pg	03 22 04.4 -5.7
DAU					*e*Sg		Sg	03 23 51.9 -10
JLU	**Jordanelle**	**8.76**	**19**	*e*Pn			**Pn**	**03 21 30.6 -1.0**
JLU					*e*Pg		Pg	03 22 06.2 -6.1
GDL2	**Guadalupe Moun**	**9.19**	**88**	*e*Pn			**Pn**	**03 21 37.3 -0.1**
SMCO	**Snowmass**	**9.54**	**42**	*e*Pn			**Pn**	**03 21 44.3 +1.9**
SMCO					*e*Lg		Lg	03 22 21.7
CLNB	**Carlsbad**	**9.60**	**88**	*e*Pn			**Pn**	**03 21 44.4 +1.5**
	comp=N,1.2nm,0.4s							
HWUT	**Hardware Ranch**	**9.68**	**17**	*e*Pn			Pn	03 21 49.4 +5.4
TXAR	**Lajitas Array**	**10.38**	**104**	Pn			**Pn**	**03 21 54.4 +0.8**
TXAR					Sn		**Sn**	**03 23 50.2 +0.2**
TXAR					Lg		Lg	03 24 50.9
TXAR	**Lajitas Array**	**10.38**	**104**	Pn			**Pn**	**03 21 54.4 +0.8**
	comp=N,0.8nm,0.3s,baz=279,slow=12,SNR=12							
TXAR					Sn		**Sn**	**03 23 50.2 +0.2**
	comp=N,0.2nm,0.3s,baz=293,slow=16,SNR=3.1							
TXAR					Lg		Lg	03 24 50.9
	comp=N,0.3nm,0.3s,baz=301,slow=32,SNR=5.5							
TXAR					LR		LR	03 26 16.9
	comp=N,244nm,19.9s,baz=205,slow=40							
ISCO	**Idaho Springs**	**10.74**	**44**	*e*Pn			Pn	03 22 02.1 +3.3
YBH	**Yreka Blue Hor**	**11.10**	**330**	LR			LR	03 26 06.6
	comp=N,76nm,19.7s,baz=79,slow=36							
HLID	**Hailey**	**11.20**	**3**	*e*Pn			Pn	03 22 09.4 +4.5
HLID					*e*Lg		Lg	03 25 18.2
BWU6	**Boulder Array**	**11.31**	**22**	*e*Pn			**Pn**	**03 22 05.8 -0.6**
PDAR	**Pinedale Array**	**11.31**	**22**	Pn			Pn	03 22 09.2 +2.7
PDAR					Lg		Lg	03 25 22.6
PDAR	**Pinedale Array**	**11.31**	**22**	Pn			Pn	03 22 09.2 +2.7
	comp=N,0.1nm,0.3s,baz=208,slow=8.4,SNR=7.2							
PDAR					Lg		Lg	03 25 22.6
	comp=N,0.1nm,0.3s,baz=186,slow=23,SNR=3.0							
RRI2	**Red Ridge**	**11.39**	**15**	*e*Pn			Pn	03 22 12.6 +5.0
AMTX	**Amarillo**	**11.56**	**74**	*e*Pn			Pn	03 22 13.9 +4.1
TPAW	**Teton Pass**	**11.61**	**16**	*e*Pn			Pn	03 22 15.2 +4.7
SNOW	**Snow King Moun**	**11.62**	**16**	*e*Pn			Pn	03 22 19.6 +8.8
LOHW	**Long Hollow**	**11.80**	**17**	*e*Pn			Pn	03 22 28.3 +15
MOOW	**Moose Ponds**	**11.90**	**16**	*e*Pn			Pn	03 22 19.1 +4.6
IMW	**Indian Meadow**	**11.99**	**15**	*e*Pn			**Pn**	**03 22 15.5 -0.4**
DLMT	**Dillon**	**13.14**	**8**	*e*Pn			**Pn**	**03 22 33.0 +1.7**
	comp=N,16nm,1.3s							
JCT	**Junction City**	**13.30**	**94**	*e*Pn			Pn	03 22 28.8 -4.7
RLMT	**Red Lodge**	**13.55**	**18**	*e*Pn			**P**	**03 22 45.2 -1.1**
LRM	**Limekiln Ridge**	**13.61**	**8**	*e*Pn			**Pn**	**03 22 37.5 -0.3**
	comp=N,79nm,1.4s							
WMOK	**Wichita Mounta**	**13.91**	**76**	*e*Pn			Pn	03 22 44.8 +2.9
MSO	**Missoula**	**14.48**	**4**	*e*Pn			P	03 23 00.6 +4.2
CHMT	**Chamberlain Mo**	**14.61**	**5**	*e*Pn			**Pn**	**03 22 51.9 +0.4**
RSSD	**Black Hills**	**14.64**	**34**	*e*Pn			**Pn**	**03 22 52.6 +0.6**
	comp=N,14nm,1.5s							
SLMT	**Seeley Lake**	**14.92**	**5**	*e*Pn			**Pn**	**03 22 57.3 +1.6**
BSMT	**Bassoo Peak**	**15.47**	**1**	*e*Pn			**Pn**	**03 23 02.4 -0.7**
	comp=N,8.2nm,1.4s							
NEW	**Newport**	**15.95**	**355**	*e*Pn			**Pn**	**03 23 09.3 +0.3**
	comp=N,8.4nm,0.9s							
NEW	**Newport**	**15.95**	**355**	Pn			**P**	**03 23 13.2 +0.5**
	comp=N,0.1nm,0.3s,baz=181,slow=12,SNR=14							
KSU1	**Kansas State U**	**16.52**	**61**	*e*Pn			**P**	**03 23 20.6 +1.6**
	comp=N,22nm,1.1s							
HKT	**Hockley**	**16.77**	**93**	*e*Pn			**P**	**03 23 20.1 -1.6**
MIAR	**Mount Ida**	**18.19**	**77**	*e*P			**P**	**03 23 38.5 +1.0**
	comp=N,10nm,1.1s							
ULM	**Lac du Bonnet**	**22.91**	**33**	P			**P**	**03 24 32.2 +3.7**
ULM	**Lac du Bonnet**	**22.91**	**33**	P			**P**	**03 24 32.2 +3.7**
	comp=N,1.5nm,0.6s,baz=229,slow=7.5,SNR=3.0							
WVT	**Waverly**	**22.92**	**73**	*e*P			**P**	**03 24 28.2 -0.5**
	comp=N,3.5nm,0.8s							
CMIG	**Matias Romero**	**23.86**	**125**	LR			LR	03 35 35.5
	comp=N,58nm,18.9s,baz=7.2,slow=41							
TKL	**Tuckaleechee C**	**26.21**	**74**	LR			LR	03 35 11.4
	comp=N,77nm,21.2s,baz=282,slow=36							
YKA	**Yellowknife Ar**	**30.15**	**1**	P			**P**	**03 25 34.8 +0.4**
YKA					PcP		**PcP**	**03 28 36.1 +0.7**
YKA	**Yellowknife Ar**	**30.15**	**1**	P			**P**	**03 25 34.8 +0.4**
	comp=N,1.2nm,1.1s,baz=176,slow=9.6,SNR=11							
YKA					PcP		**PcP**	**03 28 36.1 +0.7**
	comp=N,0.3nm,0.8s,baz=176,slow=2.5,SNR=6.7							
ILAR	**Eielson Array**	**37.81**	**338**	P			**P**	**03 26 42.8 +1.9**
ILAR	**Eielson Array**	**37.81**	**338**	P			**P**	**03 26 42.8 +1.9**
	comp=N,1.7nm,0.9s,baz=149,slow=7.9,SNR=16							
OTAV	**Otavalo**	**47.15**	**125**	*e*P			**P**	**03 27 58.2 +0.3**
	comp=N,3.3nm,1.0s							
BILL	**Bilibino**	**56.15**	**334**	*e*P			**P**	**03 29 05.5 +1.5**
	comp=N,3.8nm,0.8s							
FINES	**FINESS Array B**	**81.38**	**18**	P			**P**	**03 31 42.2 +1.0**
FINES	**FINESS Array B**	**81.38**	**18**	P			**P**	**03 31 42.2 +1.0**
	comp=N,2.1nm,0.9s,baz=342,slow=7.3,SNR=5.5							
SONM	**Songino Array**	**91.87**	**333**	P			**P**	**03 32 35.1 +1.9**
SONM	**Songino Array**	**91.87**	**333**	P			**P**	**03 32 35.1 +1.9**
	comp=N,0.2nm,0.6s,baz=38,slow=2.6,SNR=2.7							
ZALV	**Zalesovo Beam**	**92.31**	**348**	P			**P**	**03 32 35.2 +0.3**
ZALV	**Zalesovo Beam**	**92.31**	**348**	P			**P**	**03 32 35.2 +0.3**
	comp=N,0.5nm,0.7s,baz=8.5,slow=2.9,SNR=5.1							

NEIC ***12*** *03:26:28.4, 19.49N×68.39W, h65km, MD3.6(RSPR), After RSPR.*

RSPR 12 03:26:28.4, 19.49N×68.39W, h65km±10km, MD3.6/7, 17C-2D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DR12	**Loma Pena Alta**	**1.17**	**234**	*e*P		Pn	03 26 47.9 -1.1
DR12				*e*S		Sn	03 27 03.6 -0.7
DR12	**Loma Pena Alta**	**1.17**	**234**	*e*P		Pn	03 26 47.9 -1.1
DR12				*e*S		Sn	03 27 03.6 -0.7
AGPR	**Aguadilla, PR**	**1.58**	**130**	*e*P		Pn	03 26 53.6 -0.7
AGPR	**Aguadilla, PR**	**1.58**	**130**	*e*S		Sn	03 27 13.0 -0.8
AGPR	**Aguadilla, PR**	**1.58**	**130**	*e*P		Pn	03 26 53.6 -0.7
AGPR				*e*S		Sn	03 27 13.0 -0.8
LSP	**Las Mesas**	**1.80**	**136**	*e*P		Pn	03 26 57.0 -0.3
LSP	**Las Mesas**	**1.80**	**136**	*e*P		Pn	03 26 57.0 -0.3
LRS	**Lares**	**1.89**	**129**	*e*P		Pn	03 26 58.0 -0.5
LRS	**Lares**	**1.89**	**129**	*e*P		Pn	03 26 58.0 -0.5
CRPR	**Cabo Rojo, PR**	**1.91**	**140**	*e*P		Pn	03 26 56.3 -2.4
CRPR	**Cabo Rojo, PR**	**1.91**	**140**	*e*S		Sn	03 27 21.0 -0.8
CRPR	**Cabo Rojo, PR**	**1.91**	**140**	*e*P		Pn	03 26 56.3 -2.4
CRPR				*e*S		Sn	03 27 21.0 -0.8
AOPR	**Arecibo Observ**	**1.92**	**126**	*e*P		Pn	03 26 58.0 -0.9
AOPR	**Arecibo Observ**	**1.92**	**126**	*e*P		Pn	03 26 58.0 -0.9
CELP	**Cerrillos**	**2.22**	**129**	*e*P		Pn	03 27 02.6 -0.4
CELP	**Cerrillos**	**2.22**	**129**	*e*P		Pn	03 27 02.6 -0.4
OBIP	**Obispado Ponce**	**2.22**	**130**	*e*Pn		Pn	03 27 02.9 -0.1
OBIP				*e*Sn		Sn	03 27 27.6 -1.7
SJG	**San Juan**	**2.52**	**122**	*e*P		Pn	03 27 06.5 -0.6
SJG	**San Juan**	**2.52**	**122**	*e*P		Pn	03 27 06.1 -1.0
SJG	**San Juan**	**2.52**	**122**	*e*P		Pn	03 27 06.5 -0.6
SDDR	**Presa de Saban**	**2.79**	**260**	*e*Pn		Pn	03 27 17.1 +6.3
SDDR				*e*Sn		Sn	03 27 52.6 +9.3
MTP	**Monte Pirata**	**3.02**	**117**	*e*P		Pn	03 27 13.5 -0.4
MTP	**Monte Pirata**	**3.02**	**117**	*e*P		Pn	03 27 13.5 -0.4

IDC 12 03:53:55.1±0.9, 57.12N×33.53W, h0km, mb3.6/11, mb1 3.8/13, mb1mx3.7/33, mbtmp3.7/13, ML2.8/2, MS3.3/6, Ms1 3.3/6, ms1mx3.0/37, Error ellipse: s-maj=31.7km s-min=14.8km az=14.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**9.67**	**33**	Pn		03 56 18.9	+3.6
	0.6nm,0.3s,baz=216,slow=14,SNR=3.1						
BORG				LR		LR	03 58 13.3
	comp=Z,105nm,20.1s,baz=60,slow=27						
FRB	**Frobisher Bay**	**18.31**	**306**	P		Pn	03 58 09.4	-0.8
	0.1nm,0.3s,baz=93,slow=13,SNR=5.1						
SCHQ	**Schefferville**	**18.67**	**277**	P		P	03 58 14.3	-0.1
	0.3nm,0.3s,baz=84,slow=9.7,SNR=15						
NOA	**NORSAR Array B**	**22.97**	**61**	LR		LR	04 06 15.8
	comp=Z,37nm,18.5s,baz=90,slow=32						
ESDC	**Sonseca Array**	**25.96**	**120**	P		P	03 59 29.7	+0.6
	0.8nm,0.8s,baz=324,slow=9.1,SNR=4.3						
RES	**Resolute Bay**	**28.66**	**331**	LR		LR	04 10 58.4
	comp=Z,49nm,21.6s,baz=344,slow=36						
FINES	**FINESS Array B**	**29.82**	**56**	P		P	04 00 02.9	-0.4
	1.2nm,0.8s,baz=308,slow=6.8,SNR=2.4						
FINES				LR		LR	04 10 00.4
	comp=Z,30nm,18.2s,baz=332,slow=32						
AKASG	**Malin Array Be**	**36.33**	**73**	P		P	04 00 59.7	-0.5
	0.4nm,0.4s,baz=311,slow=8.5,SNR=4.4						
ULM	**Lac du Bonnet**	**36.38**	**287**	LR		LR	04 14 52.8
	comp=Z,98nm,20.7s,baz=36,slow=35						
YKA	**Yellowknife Ar**	**38.59**	**313**	P		P	04 01 18.9	-0.3
	0.3nm,0.6s,baz=58,slow=9.2,SNR=9.7						
BRTR	**Keskin Array B**	**45.83**	**82**	P		P	04 02 19.8	+1.0
	2.7nm,1.0s,baz=334,slow=5.4,SNR=6.2						
ILAR	**Eielson Array**	**48.35**	**328**	P		P	04 02 38.6	+0.8
	0.4nm,0.9s,baz=40,slow=6.9,SNR=6.0						
PDAR	**Pinedale Array**	**48.39**	**287**	P		P	04 02 38.4	-0.5
	0.4nm,0.6s,baz=63,slow=8.2,SNR=2.7						
PDAR				LR		LR	04 21 08.6
	comp=Z,78nm,21.2s,baz=345,slow=34						
TORD	**Torodi Ar. Bea**	**51.43**	**134**	P		P	04 03 00.9	-0.8
	0.5nm,0.8s,baz=336,slow=7.6,SNR=4.5						
NVAR	**Mina Array Bea**	**56.09**	**290**	P		P	04 03 36.4	+0.3
	0.1nm,0.3s,baz=11,slow=10,SNR=3.0						
MKAR	**Makanchi Array**	**63.53**	**44**	P		P	04 04 26.2	-0.6
	0.2nm,0.5s,baz=335,slow=4.4,SNR=6.0						
KSRS	**Korea Array**	**84.49**	**15**	P		P	04 06 29.9	+0.5
	0.4nm,0.3s,baz=350,slow=6.2,SNR=3.7						
ASAR	**Alice Springs**	**145.36**	**21**	PKPbc		PKPbc	04 13 33.1	-1.3
	1.1nm,0.8s,baz=350,slow=2.8,SNR=8.0						

IDC ***12*** *04:01:21.5±4.7, 5.43N×125.30E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/24, mbtmp3.6/3, Error ellipse: s-maj=211.1km s-min=12.5km az=93.0*

ISCJB ***12*** *04:01:23.0±0.9, 5.68N×124.6E±0.1, h62km, mb3.3/3, Error ellipse: s-maj=17.5km s-min=9.0km az=6.7*

MAN ***12*** *04:01:26, 5.98N×124.60E, h27km, mb4.2, ML3.0, MS2.7*

ISC 12 04:01:24.6±1.2, 5.75N±0.09×124.6E±0.1, h62km, n8, σ0.63/9, mb3.2/3, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**1.50**	**347**	*i*P		**Pn**	**04 01 48.6**	**-0.9**
DMPH	**Davao City--Mi**	**1.61**	**35**	*e*P		**Pn**	**04 01 50.5**	**-0.5**
DMPH				*e*S		**Sn**	**04 02 11.2**	**+0.4**
DAV	**Davao City (W)**	**1.64**	**37**	Pg		**Pn**	**04 01 51.5**	**+0.2**
	49nm,0.3s,baz=51,slow=5.1,SNR=6.7						
DAV				Lg		Lg	04 02 13.8
	98nm,0.3s,baz=59,slow=22,SNR=6.2						
BUKP	**Musuan**	**2.17**	**13**	*e*P		**Pn**	**04 01 58.5**	**-0.1**
BUKP				*e*S		Sn	04 02 12.0	-12
PAGZ	**Pagadian**	**2.41**	**330**	*e*P		**Pn**	**04 02 02.2**	**+0.5**
PAGZ				*e*S		Sn	04 02 15.0	-15
WRA	**Warramunga Arr**	**27.27**	**160**	P		**P**	**04 07 02.6**	**-0.8**
	0.4nm,0.5s,baz=339,slow=10,SNR=3.0						
ASAR	**Alice Springs**	**30.62**	**161**	P		**P**	**04 07 32.9**	**-0.2**
	0.1nm,0.4s,baz=350,slow=14,SNR=5.9						
STKA	**Stephens Creek**	**40.78**	**158**	P		**P**	**04 09 00.4**	**+0.5**
	0.9nm,0.5s,baz=343,slow=9.3,SNR=3.8						

IDC 12 04:06:26.1±1.9, 21.61N×143.06E, h292km±18km, mb3.1/9, mb1 3.4/12, mb1mx3.2/28, mbtmp3.3/12, Error ellipse: s-maj=24.3km s-min=14.2km az=91.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.52**	**352**	P		Pn	04 07 49.8	+0.4
	baz=248,slow=19						
CBIJ				S		S	04 08 56.6	+0.2
JHJ	**Hachijo jima 2**	**11.83**	**346**	P		Pn	04 09 05.8	-0.9
	4.5nm,0.3s,baz=207,slow=18,SNR=3.3						
MJAR	**Matsushiro Arr**	**15.47**	**345**	P		P	04 09 48.7	0.0
	0.6nm,0.3s,baz=169,slow=10,SNR=9.0						
MAT	**Matsushiro**	**15.47**	**345**	P		Pn	04 09 49.6	-0.7
KSRS	**Korea Array**	**20.52**	**324**	P		P	04 10 43.9	+1.2
	0.8nm,0.5s,baz=146,slow=8.8,SNR=4.8						
WRA	**Warramunga Arr**	**42.16**	**192**	P		P	04 13 50.3	-0.5
	0.7nm,0.6s,baz=16,slow=8.7,SNR=7.7						
ASAR	**Alice Springs**	**45.87**	**192**	P		P	04 14 19.5	-0.6
	0.1nm,0.3s,baz=19,slow=8.8,SNR=4.3						
ZALV	**Zalesovo Beam**	**54.21**	**322**	P		P	04 15 24.6	+2.7
	0.3nm,0.5s,baz=105,slow=9.1,SNR=2.4						
ZALV				PcP		PcP	04 16 21.6	-0.7
	0.5nm,0.4s,baz=126,slow=3.2,SNR=3.5						
MKAR	**Makanchi Array**	**54.67**	**313**	PcP		PcP	04 16 23.6	-0.6
	0.1nm,0.5s,baz=169,slow=1.5,SNR=2.3						
ILAR	**Eielson Array**	**62.17**	**27**	P		P	04 16 15.7	-0.9
	0.3nm,0.6s,baz=248,slow=6.0,SNR=4.8						
BVAR	**Borovoye Array**	**62.66**	**320**	P		P	04 16 20.4	+0.4
	0.4nm,0.3s,baz=107,slow=8.1,SNR=4.4						
YKA	**Yellowknife Ar**	**76.59**	**28**	P		P	04 17 44.3	-0.1
	0.6nm,0.6s,baz=292,slow=5.9,SNR=16						
ARCES	**ARCESS Array B**	**78.97**	**341**	P		P	04 17 57.2	-0.2
	3.9nm,1.0s,baz=72,slow=8.6,SNR=3.7						
JOF	**Joensuu**	**80.34**	**334**	*ep*		P	04 18 03.9	-0.9
	0.8nm,0.5s						
FINES	**FINESS Array B**	**83.21**	**334**	P		P	04 18 18.5	-1.2
	0.6nm,0.5s,baz=58,slow=5.4,SNR=13						
NVAR	**Mina Array Bea**	**83.29**	**51**	P		P	04 18 21.3	+0.3
	0.7nm,0.7s,baz=271,slow=6.5,SNR=5.3						
TORD	**Torodi Ar. Bea**	**128.71**	**309**	PKP		PKPdf	04 24 59.4	-0.3
	0.2nm,0.5s,baz=8.3,slow=1.3,SNR=3.0						
PLCA	**Paso Flores**	**145.78**	**132**	PKPbc		PKPbc	04 25 31.3	0.0
	1.5nm,0.6s,baz=196,slow=3.0,SNR=5.9						
LPAZ	**La Paz**	**150.06**	**85**	PKPbc		PKPbc	04 25 43.9	0.0
	0.9nm,0.6s,baz=14,slow=4.2,SNR=8.9						
LPAZ				PKPab		PKPab	04 25 51.2	+0.3
	0.7nm,0.5s,baz=341,slow=3.1,SNR=6.1						

CSEM ***12*** *04:16:03.9±0.2, 38.55N×32.42E, h15km, MD2.8, Error ellipse: s-maj=4.8km s-min=3.9km az=54.0*

ISK ***12*** *04:16:03.9, 38.54N×32.41E, h19km, MD2.6*

ISCJB ***12*** *04:16:04.5±0.6, 38.53N±0.05×32.39E±0.06, h20km±7km, Error ellipse: s-maj=9.2km s-min=6.2km az=138.7*

DDA ***12*** *04:16:04.0, 38.38N×31.87E, h5km, MD2.8*

ISC 12 04:16:04.0±1.0, 38.54N±0.03×32.41E±0.03, h15km±8km, n25, σ0.32/29, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDHN	**Kadinhani**	**0.23**	**266**	*i* P		**Pg**	**04 16 08.9**	**-0.3**
KDHN				*i* S		**Sg**	**04 16 13.0**	**+0.3**
KDHN	**Kadinhani**	**0.23**	**266**	*i* P		**Pg**	**04 16 08.9**	**-0.3**
KDHN				*i* S		**Sg**	**04 16 13.0**	**+0.3**
LADK	**Ladik-KONYA**	**0.34**	**185**	*e*PG		**Pb**	**04 16 11.7**	**-0.2**
LADK				*e*SG		**Sb**	**04 16 17.3**	**+0.2**
LADK	**Ladik-KONYA**	**0.34**	**185**	*e*Pg		**Pb**	**04 16 11.7**	**-0.2**
LADK				*e*Sg		**Sb**	**04 16 17.3**	**+0.2**
KIZT	**Kizilcal**	**0.54**	**310**	*e*PG		**Pb**	**04 16 15.0**	**-0.2**
KIZT				*e*SG		**Sb**	**04 16 23.0**	**+0.2**
KIZT	**Kizilcal**	**0.54**	**310**	*e*Pg		**Pb**	**04 16 15.0**	**-0.2**
KIZT				*e*Sg		**Sb**	**04 16 23.0**	**+0.2**
KONT	**Konya--Tatoy**	**0.59**	**183**	*e*PG		**Pb**	**04 16 16.3**	**+0.1**
KONT	**Konya--Tatoy**	**0.59**	**183**	*e*Pg		**Pb**	**04 16 16.3**	**+0.1**
SULT	**Sultanhani-AKS**	**0.94**	**111**	*e*PG		**Pg**	**04 16 22.5**	**+0.3**
SULT	**Sultanhani-AKS**	**0.94**	**111**	*e*Pg		**Pg**	**04 16 22.5**	**+0.3**
AFSR	**Afʿar-Bala (A**	**1.05**	**30**	*e*PG		**Pb**	**04 16 23.9**	**+0.1**
AFSR	**Afʿar-Bala (A**	**1.05**	**30**	*e*Pg		**Pb**	**04 16 24.0**	**+0.1**
SVRH	**Sivrihisar-ESK**	**1.14**	**323**	*e*PN		**Pg**	**04 16 25.9**	**-0.2**
SVRH	**Sivrihisar-ESK**	**1.14**	**323**	*e*Pn		**Pg**	**04 16 25.9**	**-0.2**
BBAL	**Bala**	**1.15**	**29**	*e*P		Pg	04 16 34.8	+8.5
BBAL				*i* S		Sg	04 16 54.4	+13
BOLV	**Bolvadin**	**1.15**	**279**	*i* P		Pn	04 16 19.9	-5.9
BOLV				*i* S		Sb	04 16 31.0	-10
SHUT	**Suhut-Afyon**	**1.45**	**271**	*e*PN		**Pn

IDC 12 04:45:44.2±1.2, 22°25S×177°81W, h0km, **mb4.0**/4, **mb1 4.3**/4, **mb1mx3.9**/18, **mbtmp4.0**/4, **1D**, Error ellipse: s-maj=70.4km s-min=28.1km az=155.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.22**	**246**	P	P	04 52 56.2	-1.3
	1.2nm,0.6s,baz=86,slow=11,SNR=3.9						
WRA	**Warramunga Arr**	**44.56**	**264**	P	P	04 53 58.9	+0.6
	1.7nm,0.4s,baz=102,slow=8.0,SNR=3.9						
NVAR	**Mina Array Bea**	**82.17**	**43**	P	P	04 58 08.1	+0.7
	0.8nm,0.8s,baz=218,slow=6.8,SNR=4.5						
SYO	**Syowa Base**	**85.06**	**193**	*e*P	P	04 58 12.0	-9.5
VNA3	**Neumayer Olymp**	**86.39**	**176**	*e*P	P	04 58 30.2	+2.1
VNA2	**Neumayer--Watz**	**86.83**	**177**	*e*P	P	04 58 32.4	+2.1
	baz=192,slow=3.6						
TXAR	**Lajitas Array**	**87.85**	**57**	P	P	04 58 34.7	-1.3
	0.5nm,0.9s,baz=195,slow=9.3,SNR=3.6						
TORD	**Torodi Ar. Bea**	**170.93**	**177**	PKPab	PKPab	05 07 14.0	+0.4
	0.7nm,0.7s,baz=164,slow=4.5,SNR=4.8						

IDC ***12*** *04:46:27.4±1.8, 5°.04N×127°.30E, h57km±16km, mb4.2/25, mb1 4.3/27, mb1mx4.2/32, mbtmp4.2/27, MS3.2/7, Ms1 3.2/7, ms1mx2.7/50, Error ellipse: s-maj=18.2km s-min=10.2km az=82.0*

ISCJB ***12*** *04:46:28.8±0.5, 5°.06N±0°.02×127°.28E±0°.04, h81km±4km, mb4.5/57, Error ellipse: s-maj=6.6km s-min=3.6km az=162.1*

NEIC ***12*** *04:46:29.7±0.9, 5°.04N×127°.28E, h77km±8km, mb4.7/24, Error ellipse: s-maj=8.3km s-min=4.3km az=74.0*

BJI ***12*** *04:46:30.1, 5°.13N×127°.14E, h81km, mB4.9/14, mb4.6/25, Ms4.4/8, Ms7 4.1/9*

AUST ***12*** *04:46:31.9, 5°.00N×127°.51E, h100km*

DJA ***12*** *04:46:33.3±0.5, 5°N±3°×12°7E±°, h61km±10km, M4.8/15, mB5.3/10, mb4.9/15, MLv5.1/8, Mw(mB)4.7/10*

ISC 12 04:46:30.7±0.4, **5°.06N**±0°.04×**127°.24E**±0°.06, **h82**km±2km, **n165**, σ1§**57**/216, **mb4.6**/57, **2C-1D**, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**2.12**	**332**	*e*P	**Pn**	**04 47 02.4**	**-1.8**
MATI				*e*S	Sn	04 47 12.4	-17
SGSI	**Sangihe**	**2.19**	**231**	S	**Sn**	**04 47 31.2**	**-0.2**
DAV	**Davao City (W)**	**2.59**	**320**	*e*Pn	**Pn**	**04 47 10.1**	**-0.5**
DAV				*e*Sn	**Sn**	**04 47 47.1**	**+5.9**
DAV	**Davao City (W)**	**2.59**	**320**	P	**Pn**	**04 47 10.7**	**+0.1**
DAV	**Davao City (W)**	**2.59**	**320**	P	**Pn**	**04 47 07.7**	**-2.9**
	33nm,0.3s,baz=64,slow=6.1,SNR=3.4						
DAV				S	**Sn**	**04 47 44.9**	**+3.7**
	152nm,0.3s,baz=283,slow=20,SNR=14						
DAV				LR	LR	04 47 58.6	
	comp=Z,225nm,21.8s,baz=106,slow=34						
DMPH	**Davao City--Mi**	**2.65**	**319**	*e*P	**Pn**	**04 47 10.3**	**-1.0**
DMPH				*e*S	**Sn**	**04 47 37.9**	**-4.7**
BUKP	**Musuan**	**3.54**	**322**	*e*P	**Pn**	**04 47 21.9**	**-1.5**
CTBH	**Cotabato--PC H**	**3.67**	**306**	P	**Pn**	**04 47 25.3**	**+0.1**
BUP	**Butuan**	**4.20**	**338**	*e*P	Pn	04 47 35.7	+3.2
CGP	**Cagayan de Oro**	**4.22**	**323**	*e*P	Pn	04 47 27.8	-4.8
CGP				*e*S	**Sn**	**04 48 22.9**	**+2.2**
TNTI	**Ternate**	**4.26**	**178**	P	**Pn**	**04 47 34.2**	**+1.0**
TNTI				S	**Sn**	**04 48 25.0**	**+3.2**
MNI	**Manado**	**4.32**	**214**	P	**Pn**	**04 47 33.3**	**-0.7**
MNI				S	**Sn**	**04 48 22.2**	**-1.0**
PAGZ	**Pagadian**	**4.73**	**306**	*e*P	**Pn**	**04 47 40.4**	**+0.8**
KMSI	**Cibinong**	**5.52**	**216**	P	**Pn**	**04 47 50.5**	**+0.1**
	693nm,0.8s,6μm2.2nm						
LBMI	**Labuha**	**5.67**	**177**	P	**Pn**	**04 47 53.5**	**+1.1**
	184nm,0.7s,4μm1.1nm						
LBMI				S	**Sn**	**04 49 00.6**	**+4.5**
	184nm,0.7s,4μm1.1nm						
MRSI	**Marisa**	**6.98**	**229**	P	**Pn**	**04 48 10.1**	**-0.2**
	254nm,0.8s,3μm0.9nm						
SWI	**Sorong**	**7.12**	**146**	P	**Pn**	**04 48 14.3**	**+2.1**
	47nm,0.6s,1μm0.3nm						
SWI	**Sorong**	**7.12**	**146**	P	**Pn**	**04 48 13.2**	**+0.9**
	baz=7.0,SNR=13						
SWI				S	**Sn**	**04 49 31.6**	**-0.1**
	baz=7.0,SNR=4.0						
LUWI	**Luwuk**	**7.53**	**217**	P	**Pn**	**04 48 20.4**	**+2.6**
	295nm,0.6s,3μm1.2nm						
PALU	**Palau**	**7.54**	**72**	P	**Pn**	**04 48 15.6**	**-2.3**
	baz=7.3,SNR=6.8						
PALU				S	Sn	04 49 32.1	-10
	baz=7.3,SNR=4.7						
NLAI	**Namlea**	**8.24**	**181**	P	**Pn**	**04 48 28.7**	**+1.1**
	84nm,0.8s,1μm						
NLAI				S	**Sn**	**04 49 58.7**	**-0.5**
	84nm,0.8s,1μm						
MSAI	**Masohi**	**8.52**	**169**	P	Pn	04 48 34.9	+3.6
	14nm,0.9s,1μm						
AAI	**Ambon**	**8.74**	**174**	P	Pn	04 48 39.6	+5.2
	68nm,1.1s						
FAKI	**Fak Fak**	**9.37**	**148**	P	Pn	04 48 47.0	+4.0
	34nm,1.1s						
KDI	**Kendari**	**10.08**	**207**	P	**Pn**	**04 48 51.6**	**-1.0**
	41nm,0.6s,806nm						
TTSI	**Tana Toraja**	**10.95**	**223**	P	**Pn**	**04 49 03.9**	**-0.5**
	29nm,0.8s,1μm						
KKM	**Kota Kinabalu**	**11.02**	**276**	*e*Pn	**Pn**	**04 49 05.8**	**+0.2**
SPSI	**Sidrap Palu**	**11.67**	**220**	P	**Pn**	**04 49 13.4**	**-0.8**
	31nm,0.8s						
KAPI	**Kappang**	**12.49**	**217**	*e*Pn	**Pn**	**04 49 23.8**	**-1.6**
KAPI	**Kappang**	**12.49**	**217**	P	Pn	04 49 22.2	-3.3
	1.1nm,0.3s,baz=26,slow=8.7,SNR=9.6						
KAPI				LR	LR	04 55 08.9	
	comp=Z,91nm,18.6s,baz=217,slow=42						
MMRI	**Maumere**	**14.49**	**200**	P	P	04 49 59.8	+3.6
BBKI	**Banjar Baru**	**15.01**	**236**	P	**Pn**	**04 49 59.7**	**+1.3**
	105nm,1.2s						
KSM	**Kuching**	**17.28**	**259**	*e*Pn	**Pn**	**04 50 26.9**	**+0.1**
	72nm,0.8s						
KSM	**Kuching**	**17.28**	**259**	P	**P**	**04 50 27.4**	**+0.3**
	110nm,0.8s,820nm						
KSM	**Kuching**	**17.28**	**259**	P	**P**	**04 50 27.5**	**+0.4**
	baz=18,SNR=28						
MTN	**Manton Dam**	**18.20**	**168**	P	**Pn**	**04 50 37.7**	**-0.3**
	baz=18,SNR=8.0						
KDU	**Kakadu**	**18.38**	**164**	P	**P**	**04 50 38.7**	**-0.5**
	baz=18,SNR=8.0						
YULB	**Yu-li**	**19.11**	**343**	*e*P	**P**	**04 50 46.2**	**-0.9**
	7.1nm,0.8s						
TPUB	**Ta-pu**	**19.23**	**341**	*e*P	**P**	**04 50 48.7**	**+0.2**
	49nm,1.4s						
QIZ	**Qiongzhong**	**21.93**	**311**	P	**P**	**04 51 13.0**	**-4.6**
QIZ				sP	**sP**	**04 51 40.4**	**-3.9**
QIZ				pmax	pmax		
	comp=Z,17nm,1.9s						
FITZ	**Fitzroy Crossi**	**23.07**	**184**	*e*P	**P**	**04 51 29.1**	**-0.4**
	comp=Z,41nm,1.3s						
FITZ	**Fitzroy Crossi**	**23.07**	**184**	P	**P**	**04 51 28.5**	**-1.0**
	comp=Z,4.3nm,0.4s,baz=22,slow=9.5,SNR=32						
FITZ	**Fitzroy Crossi**	**23.07**	**184**	P	**P**	**04 51 29.4**	**0.0**
	baz=23,SNR=15						
COEN	**Coen**	**24.64**	**140**	*e*P	**P**	**04 51 42.8**	**-1.0**
WRAB	**Tennant Creek**	**25.80**	**164**	*e*P	**P**	**04 51 54.1**	**-0.2**
	comp=Z,23nm,0.5s						
WRA	**Warramunga Arr**	**25.81**	**165**	P	**P**	**04 51 52.5**	**-1.9**
WRA	**Warramunga Arr**	**25.81**	**165**	P	**P**	**04 51 52.5**	**-1.9**
	comp=Z,8.4nm,0.4s,baz=341,slow=10,SNR=52						
IPM	**Ipoh**	**26.13**	**270**	*e*P	**P**	**04 51 56.5**	**-0.9**
	comp=Z,8.3nm,0.8s						
MBWA	**Marble Bar**	**27.08**	**196**	*e*P	**P**	**04 52 05.4**	**-0.4**
	comp=Z,11nm,0.9s						
NJ2	**Nanjing**	**27.98**	**345**	*e*P	**P**	**04 52 15.2**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s						
JNU	**Nakatsue**	**28.12**	**6**	LR	LR	05 03 04.2	
	comp=Z,41nm,18.6s,baz=50,slow=35						
QIS	**Mount Isa**	**28.20**	**155**	P	**P**	**04 52 15.2**	**-0.7**
	baz=28,SNR=6.3						
PSI	**Prapat**	**28.34**	**267**	P	**P**	**04 52 15.4**	**-1.9**
PSI	**Prapat**	**28.34**	**267**	P	**P**	**04 52 15.4**	**-1.9**
	comp=Z,5.4nm,0.8s,baz=135,slow=5.7,SNR=3.4						
GYA	**Guiyang**	**28.97**	**319**	P	**P**	**04 52 25.0**	**+2.2**
GYA				pP	**pP**	**04 52 43.2**	**+1.5**
GYA				sP	**sP**	**04 52 53.8**	**+2.5**
GYA				PP	**PnPn**	**04 53 22.0**	**+3.3**
GYA				PcP	**PcP**	**04 55 31.9**	**+2.0**
GYA				S	**S**	**04 57 10.5**	**+2.3**
GYA				sS	**sS**	**04 57 41.0**	**+0.2**
GYA				SS	**SnSn**	**04 58 43.4**	**+3.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=N,480nm,16.1s						
GYA				LR	LR		
	comp=E,320nm,17.2s						
GYA				LR	LR		
	comp=Z,450nm,16.3s						
AS31	**Alice Springs**	**29.28**	**167**	*e*P	**P**	**04 52 24.5**	**-1.0**
ASAR	**Alice Springs**	**29.28**	**167**	P	**P**	**04 52 24.4**	**-1.0**
ASAR	**Alice Springs**	**29.28**	**167**	P	**P**	**04 52 24.4**	**-1.0**
	comp=Z,1.9nm,0.4s,baz=350,slow=7.0,SNR=57						
CMAR	**Chiang Mai Arr**	**30.67**	**298**	P	**P**	**04 52 36.9**	**-1.0**
CMAR				ScP	**ScP**	**04 59 13.3**	**+3.4**
CMAR	**Chiang Mai Arr**	**30.67**	**298**	P	**P**	**04 52 36.9**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=115,slow=8.2,SNR=6.3						
CMAR				ScP	**ScP**	**04 59 13.3**	**+3.4**
	comp=Z,0.5nm,0.6s,baz=169,slow=1.8,SNR=5.3						
CMAR				LR	LR	05 05 34.5	
	comp=Z,28nm,18.4s,baz=120,slow=37						
KMI	**Kunming**	**30.83**	**313**	P	**P**	**04 52 41.8**	**+2.4**
KMI				pP	**pP**	**04 53 00.6**	**+2.2**
KMI				sP	**sP**	**04 53 10.4**	**+2.5**
KMI				pmax	pmax		
	comp=Z,11nm,1.1s						
KMI				LR	LR		
	comp=Z,87nm,16.8s						
CTA	**Charters Tower**	**31.21**	**144**	LR	LR	05 05 01.2	
	comp=Z,88nm,20.7s,baz=47,slow=36						
KSAR	**Wonju Array Be**	**32.24**	**1**	P	**P**	**04 52 52.0**	**+0.7**
KSRS	**Korea Array**	**32.25**	**1**	P	**P**	**04 52 52.0**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=176,slow=9.7,SNR=4.1						
MEEK	**Meekatharra**	**32.60**	**194**	P	**P**	**04 52 55.2**	**+0.6**
	baz=33,SNR=8.7						
MJAR	**Matsushiro Arr**	**32.91**	**16**	P	**P**	**04 52 55.7**	**-1.5**
MJAR	**Matsushiro Arr**	**32.91**	**16**	P	**P**	**04 52 55.7**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=178,slow=8.0,SNR=2.9						
MJAR				LR	LR	05 03 57.8	
	comp=Z,52nm,19.8s,baz=210,slow=32						
XAN	**Xi'an**	**33.48**	**332**	P	**P**	**04 53 02.4**	**+0.1**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,21nm,5.8s						
CD2	**Chengdu**	**33.90**	**322**	P	**P**	**04 53 06.6**	**+0.6**
CD2				sP	**sP**	**04 53 35.3**	**+0.8**
CD2				PP	**PnPn**	**04 54 22.6**	**+1.1**
CD2				PcP	**PcP**	**04 55 43.1**	**+0.1**
CD2				S	**S**	**04 58 24.9**	**+0.1**
CD2				sS	**sS**	**04 58 57.7**	**+0.1**
CD2				PcS	**PcS**	**04 59 28.2**	**-1.0**
CD2				SS	**SnSn**	**05 00 37.0**	**-1.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.4s						
FORT	**Forrest**	**35.64**	**179**	*e*P	**P**	**04 53 21.1**	**+0.2**
	comp=Z,21nm,0.6s						
FORT	**Forrest**	**35.64**	**179**	P	**P**	**04 53 20.9**	**0.0**
	baz=36,SNR=22						
BJI	**Beijing**	**36.23**	**346**	P	**P**	**04 53 27.5**	**+1.7**
BJI				pmax	pmax		
	comp=Z,37nm,0.6s						
BJI				pmax	pmax		
	comp=Z,63nm,4.1s						
KLBR	**Kellerberrin**	**37.55**	**193**	P	**P**	**04 53 37.9**	**+0.7**
	baz=38,SNR=8.6						
LZH	**Lanzhou**	**37.64**	**328**	*e*P	**P**	**04 53 39.0**	**+1.0**
LZH				pP	**pP**	**04 53 58.1**	**+0.8**
LZH				sP	**sP**	**04 54 07.5**	**+0.7**
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC	**Hu-ho-hao-te**	**38.31**	**341**	*e*P	**P**	**04 53 44.0**	**+0.4**
HHC				sP	**sP**	**04 54 11.6**	**-0.7**
HHC				PP	**PnPn**	**04 55 17.4**	**+2.1**
HHC				PcP	**PcP**	**04 55 53.9**	**-2.1**
HHC				S	**S**	**04 59 33.7**	**+1.6**
HHC				ScP	**ScP**	**04 59 36.1**	**-0.7**
HHC				PcS	**PcS**	**04 59 44.1**	**-1.1**
HHC				SS	**SS**	**05 02 18.3**	**-5.7**
HHC				ScS	**ScS**	**05 03 45.6**	**-1.3**
HHC				pmax	pmax		
	comp=Z,32nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,6.0s						
HHC				LR	LR		
	comp=N,170nm,13.1s						
HHC				LR	LR		
	comp=E,290nm,13.5s						
HHC				LR	LR		
	comp=Z,150nm,12.5s						
BBOO	**Buckleboo**	**38.58**	**168**	*e*P	**P**	**04 53 45.1**	**-0.7**
	comp=Z,190nm,0.5s						
BBOO	**Buckleboo**	**38.58**	**168**	P	**P**	**04 53 46.6**	**+0.8**
	baz=39,SNR=17						
CN2	**Changchun**	**38.62**	**358**	*e*P	**P**	**04 53 47.6**	**+1.7**
NWAO	**Narrogin (SRO)**	**38.95**	**193**	P	**P**	**04 53 49.7**	**+0.8**
NWAO	**Narrogin (SRO)**	**38.95**	**193**	P	**P**	**04 53 49.7**	**+0.8**
	comp=Z,14nm,0.7s,baz=357,slow=9.4,SNR=7.4						
STKA	**Stephens Creek**	**39.19**	**161**	*e*P	**P**	**04 53 50.0**	**-0.9**
	comp=Z,4.9nm,0.6s						
STKA	**Stephens Creek**	**39.19**	**161**	P	**P**	**04 53 49.8**	**-1.1**
	comp=Z,21nm,0.6s,baz=338,slow=8.0,SNR=37						
STKA	**Stephens Creek**	**39.19**	**161**	P	**P**	**04 53 50.1**	**-0.9**
	baz=39,SNR=34						
USRK	**Ussuriysk Arra**	**39.21**	**5**	P	**P**	**04 53 50.1**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=213,slow=8.6,SNR=3.0						
MDJ	**Mudanjiang**	**39.45**	**3**	P	**P**	**04 53 52.0**	**-0.9**
MDJ				ScP	**ScP**	**04 59 42.3**	**+1.4**
MDJ				S	**S**	**04 59 53.3**	**+4.5**
MDJ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,100nm,6.9s						
CMSA	**Cobar Meteorol**	**40.42**	**155**	P	**P**	**04 54 02.7**	**+1.6**
	baz=40,SNR=7.8						
ASAJ	**Asahikawa**	**41.18**	**17**	P	**P**	**04 54 05.7**	**-1.4**
ASAJ	**Asahikawa**	**41.18**	**17**	P	**P**	**04 54 05.7**	**-1.4**
	comp=Z,4.9nm,0.9s,baz=262,slow=13,SNR=4.4						
ASAJ				LR	LR	05 08 16.9	
	comp=Z,50nm,20.9s,baz=121,slow=32						
ARMA	**Armidale**	**42.30**	**148**	*e*P	**P**	**04 54 15.3**	**-1.3**
	comp=Z,19nm,1.1s						
ARMA	**Armidale**	**42.30**	**148**	P	**P**	**04 54 18.7**	**+2.1**
	baz=42,SNR=3.8						
TAPN	**Taplejung**	**43.66**	**305**	*e*P	**P**	**04 54 27.3**	**-0.7**
	comp=Z,24nm,0.6s						
ODAN	**Odare**	**43.74**	**304**	*e*P	**P**	**04 54 27.6**	**-0.9**
	comp=Z,39nm,0.7s						
ARPS	**Mount Arapiles**	**43.79**	**163**	P	**P**	**04 54 28.5**	**+0.1**
	baz=44,SNR=5.4						
YNG	**Young**	**43.95**	**155**	P	**P**	**04 54 29.6**	**-0.2**
	baz=44,SNR=11						
RAMN	**Ramite**	**44.42**	**304**	*e*P	**P**	**04 54 33.5**	**-0.5**
	comp=Z,34nm,0.7s						
GUN	**Gumba**	**45.38**	**305**	*e*P	**P**	**04 54 40.9**	**-0.8**
	comp=Z,60nm,0.7s						
PKI	**Pulchoki**	**45.64**	**304**	*e*P	**P**	**04 54 42.4**	**-1.3**
	comp=Z,12nm,0.6s						
TOO	**Toolangi**	**45.69**	**160**	P	**P**	**04 54 45.8**	**+2.2**
	baz=46,SNR=3.8						
KKN	**Kakani**	**45.82**	**304**	*e*P	**P**	**04 54 43.9**	**-1.1**
	comp=Z,9.6nm,0.5s						
DMN	**Daman**	**45.90**	**304**	*e*P	**P**	**04 54 44.6**	**-1.1**
	comp=Z,24nm,0.9s						
ULN	**Ulaanbaatar**	**46.03**	**341**	*e*P	**P**	**04 54 47.0**	**+0.8**
	comp=Z,6.3nm,1.0s						
SONM	**Songino Array**	**46.22**	**341**	P	**P**	**04 54 48.4**	**+0.7**
SONM				PcP	**PcP**	**04 56 21.6**	**-0.5**
SONM	**Songino Array**	**46.22**	**341**	P	**P**	**04 54 48.4**	**+0.7**
	comp=Z,2.9nm,0.7s,baz=164,slow=8.5,SNR=8.7						
SONM				PcP	**PcP**	**04 56 21.6**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=180,slow=3.0,SNR=3.5						
KOLN	**Koldanda**	**47.20**	**304**	*e*P	**P**	**04 54 55.2**	**-0.6**
	comp=Z,37nm,0.5s						
DANN	**Dangsing**	**47.28**	**304**	*e*P	**P**	**04 54 55.6**	**-0.9**
	comp=Z,53nm,0.7s						
PYUN	**Piuthan**	**47.83**	**304**	*e*P	**P**	**04 55 00.0**	**-0.7**
	comp=Z,43nm,0.8s						
TLY	**Talaya**	**50.44**	**341**	*e*P	**P**	**04 55 22.3**	**+2.3**
WMQ	**Urumqi**	**51.94**	**324**	P	**P**	**04 55 32.0**	**+0.6**
WMQ				pP	**pP**	**04 55 51.0**	**-0.7**
WMQ				sP	**sP**	**04 56 00.0**	**-0.9**
WMQ				PP	**PP**	**04 57 32.0**	**+1.8**
WMQ				ScP	**ScP**	**05 00 32.0**	**-0.8**
WMQ				S	**S**	**05 02 48.0**	**-0.5**
WMQ				sS	**sS**	**05 03 20.0**	**-3.1**
WMQ				ScS	**ScS**	**05 05 12.0**	**-1.9**
WMQ				SS	**SS**	**05 06 24.0**	**-2.5**
WMQ				pmax	pmax		
	comp=Z,14nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,46nm,5.0s						
WMQ				LR	LR		
	comp=N,130nm,18.0s						
WMQ				LR	LR		
	comp=E,130nm,18.0s						
WMQ				LR	LR		
	comp=Z,130nm,18.0s						
PETK	**Petropavlovsk-**	**54.01**	**22**	P	**P**	**04 55 46.7**	**+0.3**
PETK	**Petropavlovsk-**	**54.01**	**22**	P	**P**	**04 55 46.7**	**+0.3**
	comp=Z,5.5nm,0.9s,baz=177,slow=2.8,SNR=4.4						
MK31	**Makanchi Array**	**56.77**	**325**	*e*P	**P**	**04 56 06.2**	**-0.1**
MKAR	**Makanchi Array**	**56.77**	**325**	*e*P	**P**	**04 56 06.5**	**+0.1**
MKAR				pP	pP	04 56 21.2	-5.6
MKAR				ScP	**ScP**	**05 00 55.1**	**+1.3**
MKAR	**Makanchi Array**	**56.77**	**325**	P	**P**	**04 56 06.3**	**0.0**
	comp=Z,7.3nm,0.4s,baz=117,slow=7.7,SNR=254						
MKAR				pP	pP	04 56 21.2	-5.6
	comp=Z,1.7nm,0.5s,baz=120,slow=8.7,SNR=3.4						
MKAR				ScP	**ScP**	**05 00 55.1**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=116,slow=4.7,SNR=3.0						
KSH	**Kashi**	**57.48**	**314**	P	**P**	**04 56 14.0**	**+2.4**
KSH				pP	**pP**	**04 56 33.7**	**+1.5**
KSH				sP	**sP**	**04 56 42.0**	**+0.7**
KSH				PcP	**PcP**	**04 57 05.0**	**+0.5**
KSH				PP	**PP**	**04 58 24.0**	**+4.0**
KSH				ScP	**ScP**	**05 00 57.3**	**+0.1**
KSH				PcS	**PcS**	**05 01 05.1**	**-0.7**
KSH				S	**S**	**05 04 05.2**	**+2.2**
KSH				sS	**sS**	**05 04 39.3**	**+1.2**
KSH				ScS	**ScS**	**05 05 52.0**	**-1.8**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KSH				LR	LR		
	comp=Z,340nm,5.7s						
TKM2	**Tokmak 2**	**59.10**	**318**	*e*P	**P**	**04 56 22.4**	**-0.6**
	comp=Z,2.9nm,0.6s						
ZAA0	**Zalesovo Array**	**59.65**	**332**	*e*P	**P**	**04 56 25.7**	**-0.5**
ZALV	**Zalesovo Beam**	**59.65**	**332**	P	**P**	**04 56 26.1**	**-0.1**
ZALV	**Zalesovo Beam**	**59.65**	**332**	P	**P**	**04 56 26.1**	**-0.1**
	comp=Z,7.6nm,0.4s,baz=123,slow=6.7,SNR=52						
AAK	**Ala-Archa**	**59.73**	**317**	*e*P	**P**	**04 56 26.2**	**-1.0**
	comp=Z,5.8nm,2.4s						
AAK	**Ala-Archa**	**59.73**	**317**	P	**P**	**04 56 27.6**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=152,slow=10,SNR=8.1						
EKS2	**Erkin-Say**	**60.23**	**317**	*e*P	**P**	**04 56 30.9**	**+0.3**
	comp=Z,4.7nm,0.7s						
KURK	**Kurchatov**	**60.91**	**327**	*e*P	**P**	**04 56 34.7**	**-0.2**
	comp=Z,20nm,0.6s						
KKAR	**Karatay Array**	**62.62**	**316**	*e*P	**P**	**04 56 46.1**	**-0.5**
	comp=Z,2.6nm,0.7s						
BVAR	**Borovoye Array**	**66.50**	**327**	P	**P**	**04 57 11.7**	**0.0**
BVAR	**Borovoye Array**	**66.50**	**327**	P	**P**	**04 57 11.7**	**0.0**
	comp=Z,12nm,0.6s,baz=128,slow=8.8,SNR=56						
BRVK	**Borovoye**	**66.57**	**327**	*e*P	**P**	**04 57 12.2**	**+0.1**
	comp=Z,18nm,0.7s						
ABKAR	**Akbulak array**	**71.45**	**320**	*e*P	**P**	**04 57 42.2**	**-0.2**
ARU	**Arti**	**74.09**	**327**	*e*P	**P**	**04 57 56.9**	**-1.0**
	comp=Z,16nm,0.6s						
KDAK	**Kodiak Island**	**80.50**	**32**	P	**P**	**04 58 33.3**	**-0.4**
KDAK	**Kodiak Island**	**80.50**	**32**	P	**P**	**04 58 33.3**	**-0.4**
	comp=Z,2.5nm,0.4s,baz=270,slow=3.0,SNR=7.7						
GNI	**Garni**	**81.03**	**310**	*e*P	**P**	**04 58 36.8**	**-0.4**
	comp=Z,8.8nm,1.0s						
KBZ	**Khabaz**	**82.44**	**313**	P	**P**	**04 58 45.5**	**+1.3**
KBZ	**Khabaz**	**82.44**	**313**	P	**P**	**04 58 45.5**	**+1.3**
	comp=Z,1.0nm,0.5s,baz=100,slow=11,SNR=4.6						
MCK	**McKinley**	**82.75**	**26**	*e*P	**P**	**04 58 44.4**	**-1.1**
	comp=Z,9.1nm,1.2s						
ILAR	**Eielson Array**	**83.69**	**25**	P	**P**	**04 58 48.5**	**-1.7**
ILAR	**Eielson Array**	**83.69**	**25**	P	**P**	**04 58 48.5**	**-1.7**
	comp=Z,0.8nm,0.6s,baz=243,slow=4.9,SNR=11						
MALT	**Malatya**	**85.97**	**308**	*e*P	**P**	**04 59 03.3**	**+0.9**
	comp=Z,5.1nm,0.8s						
JOF	**Joensuu**	**88.24**	**333**	*e*p	**P**	**04 59 11.9**	**-0.7**
	comp=Z,2.0nm,0.5s						
ARCES	**ARCESS Array B**	**89.39**	**340**	P	**P**	**04 59 17.2**	**-0.8**
ARCES	**ARCESS Array B**	**89.39**	**340**	P	**P**	**04 59 17.2**	**-0.8**
	comp=Z,3.6nm,0.8s,baz=85,slow=5.8,SNR=19						
BR131	**Keskin Array S**	**89.57**	**310**	*e*P	**P**	**04 59 18.9**	**-0.7**
	comp=Z,1.5nm,0.7s						
BRTR	**Keskin Array B**	**89.57**	**310**	P	**P**	**04 59 18.9**	**-0.7**
BRTR	**Keskin Array B**	**89.57**	**310**	P	**P**	**04 59 18.9**	**-0.7**
	comp=Z,2.3nm,0.8s,baz=111,slow=5.1,SNR=8.1						
KMBO	**Kilima Mbogo**	**90.09**	**269**	*e*P	**P**	**04 59 22.7**	**0.0**
	comp=Z,2.7nm,0.9s						
CSS	**Prodhromos**	**90.33**

3.8nm,0.3s,baz=84,slow=16,SNR=23
NFK Norfolk Island 16.73 226 P P 04 53 58.7 +2.5
baz=17,SNR=5.4
RAR Rarotonga 17.84 104 eP P 04 54 07.4 +1.0
62nm,0.9s
RAR Rarotonga 17.84 104 P P 04 54 07.2 +0.8
1.6nm,0.3s,baz=253,slow=8.2,SNR=11
OUZ Omahuta 18.67 201 eP P 04 54 16.6 +2.9
122nm,0.8s
WCZ Waipu Caves 19.09 198 PN P 04 54 20.6 +3.1
KUZ Kuaotunu 19.48 194 PN P 04 54 22.5 +1.4
OTAZ Otara 19.87 196 PN P 04 54 27.1 +2.5
URZ Urewera 20.66 190 eP P 04 54 30.1 -1.6
80nm,0.9s
URZ S S 04 57 39.1 -6.4
URZ Urewera 20.66 190 P P 04 54 29.3 -2.5
38nm,0.4s,baz=350,slow=3.4,SNR=35
URZ S S 04 57 39.1 -6.4
6.9nm,0.8s,baz=45,slow=20,SNR=2.7
BKZ Black Stump Fm 21.65 191 PN P 04 54 38.9 -1.8
HNR Honiara 22.66 289 P P 04 54 51.4 +1.4
HNR Honiara 22.66 289 P P 04 54 51.3 +1.4
87nm,0.6s,baz=304,slow=1.4,SNR=4.8
SNZO South Karori 24.07 193 eP P 04 55 01.2 -0.8
65nm,0.6s
QRZ Quartz Range 24.15 197 PN P 04 55 03.2 +0.4
KHZ Kahutara 25.39 194 eP P 04 55 12.8 -0.8
29nm,0.6s
KHZ Kahutara 25.39 194 PN P 04 55 12.4 -1.3
LTZ Lake Taylor 26.04 196 PN P 04 55 18.2 -1.3
OXZ Oxford 26.61 196 PN P 04 55 23.1 -1.3
RPZ Rata Peaks 27.24 197 eP P 04 55 29.0 -0.9
21nm,1.0s
RPZ Rata Peaks 27.24 197 P P 04 55 29.4 -0.5
11nm,0.5s,baz=235,slow=11,SNR=8.0
PAE Paea 27.41 94 eP P 04 55 32.1 +0.3
12nm,0.8s
PAE Paea 27.41 94 eP P 04 55 32.1 +0.3
12nm,0.8s
PPT2 Papeete2 27.43 94 eP P 04 55 32.6 +0.6
69nm,0.9s
PPT Papeete 27.43 94 P P 04 55 32.8 +0.8
PPT Papeete 27.43 94 P P 04 55 32.8 +0.8
51nm,0.6s,baz=350,slow=2.6,SNR=13
FOZ Fox Glacier 27.50 199 PN P 04 55 30.6 -1.5
TBI Tubuai 27.57 106 eP P 04 55 35.0 +1.9
60nm,0.7s
TBI Tubuai 27.57 106 eP P 04 55 35.0 +1.9
60nm,0.7s
TIAR Tiarei 27.65 94 eP P 04 55 34.3 +0.4
77nm,0.8s
TIAR Tiarei 27.65 94 eP P 04 55 34.3 +0.4
77nm,0.8s
TVO Taravao 27.72 94 eP P 04 55 35.0 +0.5
64nm,0.8s
TVO Taravao 27.72 94 eP P 04 55 35.0 +0.5
64nm,0.8s
JCZ Jackson Bay 28.25 200 PN P 04 55 38.5 -0.3
MEH Mehetia 28.84 95 eP P 04 55 44.5 +0.3
85nm,0.9s
MEH Mehetia 28.84 95 eP P 04 55 44.5 +0.3
85nm,0.9s
PMOR Pomariorio Ree 29.36 89 eP P 04 55 49.2 +0.5
159nm,1.2s
PMOR Pomariorio Ree 29.36 89 eP P 04 55 49.2 +0.5
159nm,1.2s
VAH Vaihoa 29.58 89 eP P 04 55 50.7 +0.1
133nm,1.4s
VAH Vaihoa 29.58 89 eP P 04 55 50.7 +0.1
133nm,1.4s
ARMA Armidale 29.97 240 eP P 04 55 55.2 +1.2
27nm,1.0s
ARMA Armidale 29.97 240 P P 04 55 55.1 +1.2
baz=30,SNR=18
MGCD Mangrove Creek 31.32 235 P P 04 56 06.6 +1.3
baz=31,SNR=18
CNB Canberra Magne 33.45 232 P P 04 56 24.5 +1.2
baz=34,SNR=72
CTA Charters Tower 33.47 261 P P 04 56 23.0 -0.7
CTA Charters Tower 33.47 261 P P 04 56 23.0 -0.7
31nm,0.7s,baz=91,slow=9.8,SNR=4.5
CTAO Charters Tower 33.47 261 eP P 04 56 23.5 -0.2
28nm,0.8s
CAN Canberra 33.73 233 eP P 04 56 25.8 +0.2
65nm,1.3s
YNG Young 33.82 235 P P 04 56 27.5 +1.1
baz=34,SNR=5.0
MILA Mila 34.31 230 P P 04 56 31.5 +1.0
baz=34,SNR=14
PMG Port Moresby 34.48 280 eP P 04 56 32.9 +0.7
162nm,0.9s
PMG Port Moresby 34.48 280 P P 04 56 32.3 +0.1
189nm,0.9s,1µm
PMG Port Moresby 34.48 280 P P 04 56 32.6 +0.5
142nm,0.8s,baz=79,slow=6.1,SNR=29
CMSA Cobar Meteorol 35.18 240 P P 04 56 38.1 +0.4
baz=35,SNR=35
QLP Quilpie 35.56 249 P P 04 56 41.5 +0.5
baz=36,SNR=12
COEN Coen 37.13 270 eP P 04 56 54.1 +0.1
COEN Coen 37.13 270 P P 04 56 54.5 +0.5
baz=37,SNR=30
TOO Toolangi 37.19 231 P P 04 56 55.0 +0.7
baz=37,SNR=30
MOO Moorlands 38.11 223 P P 04 57 02.6 +1.0
baz=38,SNR=5.3
STKA Stephens Creek 38.66 241 eP P 04 57 07.1 +0.9
21nm,1.3s
STKA Stephens Creek 38.66 241 P P 04 57 06.6 +0.5
22nm,0.4s,baz=88,slow=9.4,SNR=58
STKA Stephens Creek 38.66 241 P P 04 57 07.0 +0.9
baz=39,SNR=13
ARPS Mount Arapiles 39.67 234 P P 04 57 14.8 +0.6
baz=40,SNR=8.9
RKT Rikitea 40.88 105 eP P 04 57 24.6 +0.7
189nm,1.4s
RKT Rikitea 40.88 105 eP P 04 57 24.6 +0.7
189nm,1.4s
JAY Jayapura 42.93 286 P P 04 57 40.7 +0.5
baz=43,SNR=9.9
BBOO Buckleboo 43.43 241 eP P 04 57 44.1 +0.2
1µm,1.0s
BBOO Buckleboo 43.43 241 P P 04 57 44.1 +0.2
baz=43,SNR=95
BBOO S S 05 03 30.3 -0.2
baz=43,SNR=5.6
WRAB Tennant Creek 44.65 260 eP P 04 57 52.8 -0.6
29nm,0.6s
WRA Warramunga Arr 44.66 260 P P 04 57 52.5 -1.1
WRA PcP PcP 04 59 22.9 -0.2
WRA S S 05 03 44.0 -4.1
WRA Warramunga Arr 44.66 260 P P 04 57 52.5 -1.1
17nm,0.4s,baz=93,slow=7.1,SNR=150
WRA PcP PcP 04 59 22.9 -0.2
7.2nm,0.8s,baz=88,slow=4.2,SNR=7.4
WRA S S 05 03 44.0 -4.1
4.0nm,0.9s,baz=90,slow=13,SNR=9.0
AS31 Alice Springs 44.82 254 eP P 04 57 54.6 -0.1
ASAR Alice Springs 44.82 254 P P 04 57 54.5 -0.2
ASAR PcP PcP 04 59 23.7 0.0
ASAR ScP ScP 05 02 23.6 +3.0
ASAR S S 05 03 48.2 -2.1
ASAR Alice Springs 44.82 254 P P 04 57 54.5 -0.2
113nm,0.6s,baz=88,slow=8.1,SNR=668
ASAR PcP PcP 04 59 23.7 0.0
7.3nm,0.5s,baz=103,slow=4.0,SNR=8.1
ASAR ScP ScP 05 02 23.6 +3.0
1.5nm,0.7s,baz=92,slow=4.4,SNR=4.2
ASAR S S 05 03 48.2 -2.1
9.5nm,0.9s,baz=89,slow=15,SNR=25
KDU Kakadu 47.58 269 P P 04 58 15.1 -0.5
baz=48,SNR=20
KDU S S 05 04 27.2 -1.6
baz=48,SNR=5.7
MTN Manton Dam 48.83 268 P P 04 58 24.1 -0.7
baz=49,SNR=17
MTN S S 05 04 43.2 -2.6
baz=49,SNR=7.1
TLE Tual 49.23 278 P P 04 58 28.8 +0.9
baz=49,SNR=3.1
FORT Forrest 50.03 245 eP P 04 58 32.5 -1.0
64nm,0.6s
FORT Forrest 50.03 245 P P 04 58 32.9 -0.6
baz=50,SNR=66
SWI Sorong 52.27 283 P P 04 58 50.5 +0.7
baz=52,SNR=4.2
FITZ Fitzroy Crossi 53.05 261 eP P 04 58 55.0 -0.4
12nm,1.0s
FITZ Fitzroy Crossi 53.05 261 P P 04 58 55.2 -0.2
4.2nm,0.3s,baz=91,slow=7.6,SNR=73
FITZ Fitzroy Crossi 53.05 261 P P 04 58 55.3 -0.1
baz=53,SNR=11
AAI Ambon 54.15 279 P P 04 59 04.9 +1.8
baz=54,SNR=3.0
KMBL Kambalda 55.34 244 P P 04 59 10.5 -0.8
baz=55,SNR=8.2
MBWA Marble Bar 58.10 256 eP P 04 59 29.7 -0.5
84nm,1.5s
MEEK Meekatharra 58.46 249 P P 04 59 31.9 -0.7
baz=58,SNR=13
KLBR Kellerberrin 58.85 244 P P 04 59 34.8 -0.4
baz=59,SNR=26
NWAO Narrogin (SRO) 59.24 242 P P 04 59 37.5 -0.1
NWAO Narrogin (SRO) 59.24 242 P P 04 59 37.5 -0.1
13nm,0.7s,baz=106,slow=8.9,SNR=9.6
RKGY Rocky Gully 59.40 240 P P 04 59 39.1 +0.4
baz=59,SNR=4.7
BLDU Ballidu 59.81 245 P P 04 59 40.9 -0.6
baz=60,SNR=19
VNDA Vanda 60.45 185 eP P 04 59 46.8 +2.0
32nm,1.5s
VNDA Vanda 60.45 185 P P 04 59 46.9 +2.0
6.6nm,0.6s,baz=357,slow=7.2,SNR=22
MORW Morawa 60.51 246 P P 04 59 45.6 -0.6
baz=60,SNR=5.2
KAPI Kappang 61.72 274 eP P 04 59 52.6 -1.7
25nm,1.2s
KAPI Kappang 61.72 274 P P 04 59 53.0 -1.3
4.4nm,0.3s,baz=168,slow=20,SNR=4.2
GIRL Giralia 62.92 253 P P 05 00 03.0 +1.0
baz=63,SNR=4.8
MJAR Matsushiro Arr 67.92 323 P P 05 00 31.8 -0.9
MJAR pP pP 05 02 29.2 -2.1
MJAR Matsushiro Arr 67.92 323 P P 05 00 31.8 -0.9
7.3nm,0.7s,baz=168,slow=6.2,SNR=24
MJAR pP pP 05 02 29.2 -2.1
0.4nm,0.5s,baz=175,slow=9.4,SNR=3.6
MAJO Matsushiro 67.92 323 eP P 05 00 32.1 -0.6
15nm,0.8s
MAT Matsushiro 67.92 323 P P 05 00 32.5 -0.3
KKM Kota Kinabalu 68.77 284 eP P 05 00 37.9 -0.5
20nm,0.8s
UGM Wanagama 69.67 268 P P 05 00 43.6 -0.2
baz=70,SNR=4.9
JNU Nakatsue 70.15 316 P P 05 00 45.7 -0.5
JNU Nakatsue 70.15 316 P P 05 00 45.7 -0.5
4.9nm,0.8s,baz=98,slow=8.7,SNR=4.0
ASAJ Asahikawa 71.29 331 P P 05 00 53.4 +0.8
ASAJ Asahikawa 71.29 331 P P 05 00 53.4 +0.8
4.1nm,0.5s,baz=206,slow=14,SNR=7.7
NACB Ninganchiao 71.94 304 eP P 05 00 56.2 -0.6
26nm,1.0s
QSPA South Pole Qui 72.15 180 eP P 05 00 58.8 +1.3
49nm,0.8s
TPUB Ta-pu 72.28 302 eP P 05 00 57.5 -1.3
24nm,0.8s
KSM Kuching 72.71 277 eP P 05 01 02.0 +0.4
54nm,1.0s
KSM Kuching 72.71 277 P P 05 01 01.9 +0.4
60nm,1.0s
KSM Kuching 72.71 277 P P 05 01 02.1 +0.6
baz=73,SNR=17
PETK Petopavlovsk- 73.68 345 P P 05 01 06.8 +0.7
PETK Petropavlovsk- 73.68 345 P P 05 01 06.8 +0.7
5.6nm,0.8s,baz=129,slow=11,SNR=4.0
KSRS Korea Array 74.72 318 P P 05 01 12.8 +0.6
2.0nm,0.8s,baz=129,slow=6.6,SNR=9.8
KSAR Wonju Array Be 74.73 318 P P 05 01 12.8 +0.5
USRK Ussuriysk Arra 76.62 326 P P 05 01 23.4 +0.8
2.7nm,0.8s,baz=119,slow=3.6,SNR=7.0
MONP Monument Peak 77.79 49 ⇑P P 05 01 30.1 +0.5
baz=78
ISA Isabella 77.79 46 ⇑P P 05 01 30.5 +1.2
baz=78
CMB Columbia Colle 77.82 43 eP P 05 01 30.0 +0.6
4.8nm,0.9s
NJ2 Nanjing 77.96 309 eP P 05 01 31.1 +0.9
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
MDJ Mudanjiang 78.20 325 P P 05 01 32.0 +0.8
MDJ S S 05 10 38.0 -0.5
MDJ pmax pmax
comp=Z,16nm,1.2s
MDJ pmax pmax
comp=Z,87nm,6.8s
KDAK Kodiak Island 78.39 14 P P 05 01 31.5 -0.3
KDAK Kodiak Island 78.39 14 P P 05 01 31.5 -0.3
comp=Z,9.2nm,1.0s,baz=252,slow=9.6,SNR=4.0
YBH Yreka Blue Hor 78.50 39 P P 05 01 34.1 +1.1
YBH Yreka Blue Hor 78.50 39 P P 05 01 34.1 +1.1
comp=Z,5.2nm,0.8s,baz=241,slow=0.5,SNR=14
MTUM Tungsten Hills 78.64 45 eP P 05 01 35.3 +1.3
GRAC Grapevine Rang 79.26 45 ⇓P P 05 01 38.4 +1.3
baz=80
NVAR Mina Array Bea 79.40 44 P P 05 01 38.9 +0.9
NVAR pP pP 05 03 39.0 -2.8
NVAR Mina Array Bea 79.40 44 P P 05 01 38.9 +0.9
comp=Z,3.5nm,0.7s,baz=224,slow=8.8,SNR=28
NVAR pP pP 05 03 39.0 -2.8
comp=Z,0.2nm,0.6s,baz=242,slow=1.9,SNR=1.7
113A Mohawk Valley, 79.67 51 ⇑P P 05 01 40.7 +1.5
baz=80
214A Organ Pipe Nat 79.99 52 ⇑P P 05 01 42.6 +1.6
baz=80
CN2 Changchun 80.03 322 eP P 05 01 41.5 +0.6
CN2 epP pP 05 03 49.0 +4.1
CN2 eS S 05 10 58.1 +0.6
CN2 pmax pmax
comp=Z,20nm,0.9s
MOD Modoc 80.06 40 eP P 05 01 42.1 +0.8
comp=Z,9.4nm,0.7s
WHN Wuhan 80.62 306 P P 05 01 45.6 +1.4
R11A Troy Canyon, C 81.17 45 ⇑P P 05 01 48.0 +0.8
baz=81
TUC Tucson 81.68 52 eP P 05 01 51.8 +2.0
comp=Z,1.0nm,1.0s
X16A Lo Mia Camp, P 82.16 50 ⇓P P 05 01 53.9 +1.7
baz=82
CCUT Cedar City 82.29 47 eP P 05 01 54.5 +1.6
319A Douglas 82.40 54 ⇑P P 05 01 55.6 +2.1
baz=83
IPM Ipoh 82.45 277 eP P 05 01 54.3 +0.3
comp=Z,26nm,0.9s
IPM Ipoh 82.45 277 P P 05 01 54.3 +0.3
comp=Z,32nm,1.3s
U15A North Rim 82.50 48 ⇓P P 05 01 55.8 +1.8
baz=83
ELK Elko 82.64 43 eP P 05 01 55.3 +0.7
comp=Z,3.8nm,0.9s
SML Sawmill 82.96 14 eP P 05 01 54.3 -1.2
320A Kipp Ranch, An 82.96 54 ⇓P P 05 01 58.0 +1.7
baz=83
BMO Blue Mountains 83.52 39 eP P 05 01 59.3 +0.6
MFID Camas Ranch 83.65 41 eP P 05 02 00.4 +1.0
MFID Camas Ranch 83.65 41 ⇑P P 05 02 00.7 +1.3
baz=84
BJI Beijing 83.80 315 P P 05 02 00.4 +0.4
BJI pmax pmax
comp=Z,17nm,1.3s
MAW Mawson 83.87 200 P P 05 02 00.9 +1.0
MAW Mawson 83.87 200 P P 05 02 00.9 +1.0
comp=Z,18nm,0.7s,baz=117,slow=6.7,SNR=35
MAW Mawson 83.87 200 P P 05 02 01.0 +1.0
baz=84,SNR=28
PSI Prapat 83.91 275 P P 05 02 00.6 -0.8
PSI Prapat 83.91 275 P P 05 02 00.3 -1.1
comp=Z,30nm,1.0s
PSI Prapat 83.91 275 P P 05 02 00.6 -0.8
comp=Z,22nm,0.8s,baz=165,slow=5.4,SNR=12
PSI Prapat 83.91 275 P P 05 02 01.0 -0.4
baz=84,SNR=9.5
CHBT CHBT 83.94 285 P P 05 02 02.2 +0.9
comp=Z,16nm,1.3s
TRF Thorofare Moun 84.00 12 eP P 05 01 58.4 -2.4
comp=Z,13nm,0.8s
I12A Atlanta 84.28 41 ⇑P P 05 02 03.8 +1.1
baz=84
MCK McKinley 84.53 13 eP P 05 02 01.8 -1.4
comp=Z,4.8nm,0.6s
HLID Hailey 84.61 41 eP P 05 02 05.5 +1.3
comp=Z,4.2nm,0.8s
HLID Hailey 84.61 41 P P 05 02 05.6 +1.3
baz=85,SNR=7.2
J13A Cove Ranch, Pi 84.67 41 P P 05 02 05.6 +1.1
baz=85,SNR=7.6
H12A Diamond D Ranc 84.84 40 P P 05 02 05.8 +0.5
baz=85,SNR=7.5
SRU San Rafael 84.99 46 eP P 05 02 07.5 +1.3
comp=Z,127nm,0.8s
SRU San Rafael 84.99 46 ⇑P P 05 02 07.2 +1.0
baz=85
J14A Carey 85.05 42 ⇓P P 05 02 07.4 +1.0
baz=85
GYA Guiyang 85.06 300 P P 05 02 07.4 +0.7
GYA pP pP 05 04 13.0 +0.3
GYA sP sP 05 05 11.2 -0.7
GYA PP PP 05 05 38.4 +3.2
GYA SKS SKSac 05 11 35.0 -1.1
GYA S ScS 05 11 52.1 -3.0
GYA pmax pmax
comp=Z,10.0nm,1.0s
H13A Challis 85.22 40 ⇑P P 05 02 08.2 +1.1
baz=85
F12A Elk City 85.23 39 P P 05 02 07.5 +0.4
baz=86,SNR=11
I14A Mackay 85.39 41 P P 05 02 09.6 +1.6
baz=86,SNR=7.4
HWUT Hardware Ranch 85.47 44 eP P 05 02 09.2 +0.8
NEW Newport 85.49 36 P P 05 02 08.1 0.0
NEW Newport 85.49 36 P P 05 02 08.1 0.0
comp=Z,0.4nm,0.3s,baz=249,slow=7.9,SNR=5.5
G13A Cobalt 85.50 40 ⇓P P 05 02 09.2 +0.8
baz=86
MNTX Cormudas Mount 85.55 55 ⇓P P 05 02 10.1 +1.2
baz=86
V21A Milan 85.57 50 ⇓P P 05 02 09.9 +0.8
baz=86
N17A Moffit Pass 85.64 45 ⇑P P 05 02 10.3 +1.0
baz=86
C11A Tepee Creek (N 85.75 37 ⇓P P 05 02 10.1 +0.7
baz=86
COLA College 85.76 13 eP P 05 02 07.5 -1.4
comp=Z,1.7nm,0.4s
COLA epP pP 05 04 15.2 -0.1
J15A Blackfoot 85.78 42 P P 05 02 11.3 +1.5
baz=86,SNR=11
H14A Leadore 85.79 40 P P 05 02 11.0 +1.1
baz=86,SNR=5.2
F13A Darby 85.80 39 P P 05 02 10.1 +0.3
baz=86,SNR=5.1
U21A Nageezi 85.82 50 ⇓P P 05 02 11.6 +1.3
baz=86
ILAR Eielson Array 85.88 13 P P 05 02 08.2 -1.4
ILAR pP pP 05 04 15.4 -0.5
ILAR Eielson Array 85.88 13 P P 05 02 08.2 -1.4
comp=Z,1.9nm,0.4s,baz=221,slow=5.2,SNR=53
ILAR pP pP 05 04 15.4 -0.5
comp=Z,4.7nm,1.1s,baz=232,slow=5.6,SNR=14
TXAR Lajitas Array 85.97 58 P P 05 02 12.9 +1.9
TXAR Lajitas Array 85.97 58 P P 05 02 12.9 +1.9
comp=Z,4.2nm,0.7s,baz=218,slow=5.8,SNR=28
G14A Jackson 86.05 40 P P 05 02 12.0 +0.9
baz=86,SNR=6.6
ANMO Albuquerque 86.07 52 eP P 05 02 11.9 +0.5
T21A Navajo Lake 86.15 49 ⇓P P 05 02 12.9 +1.1
baz=86
MCMT McKenzie Canyo 86.22 40 eP P 05 02 11.7 -0.3
comp=Z,2.1nm,0.8s
MCMT epP pP 05 04 19.7 +1.2
J16A Bone 86.24 42 ⇓P P 05 02 13.5 +1.5
baz=86
627A Terlingua Ranc 86.24 58 ⇑P P 05 02 13.3 +1.1
baz=86
H15A Lima 86.24 41 P P 05 02 13.2 +1.2
baz=86,SNR=7.4
S21A Coal Bank Pass 86.26 49 ⇑P P 05 02 13.2 +0.8
baz=86
XAN Xi'an 86.28 307 P P 05 02 13.3 +1.1
XAN pmax pmax
comp=Z,7.0nm,1.0s
XAN pmax pmax
comp=Z,18nm,5.2s
P19A Cripple Cowboy 86.30 46 ⇓P P 05 02 13.5 +1.1
baz=86
527A Woodward Ranch 86.33 57 ⇑P P 05 02 13.9 +1.2
baz=86
M18A Lyman 86.38 44 ⇑P P 05 02 13.5 +0.7
baz=87
U22A Llaves 86.38 50 ⇓P P 05 02 14.0 +1.1
baz=87
Y24A Capitan 86.42 53 ⇓P P 05 02 14.3 +1.2
baz=87
BILL Bilibino 86.43 354 eP P 05 02 11.8 -0.3
comp=Z,5.2nm,0.9s
RRI2 Red Ridge 86.46 42 eP P 05 02 14.1 +0.9
comp=Z,7.7nm,0.8s
GDL2 Guadalupe Moun 86.55 55 eP P 05 02 14.9 +1.3
comp=Z,1.2nm,0.5s
BSMT Bassoo Peak 86.60 37 eP P 05 02 13.8 +0.1
I16A Newdale 86.61 42 P P 05 02 15.2 +1.5
baz=87,SNR=9.1
G15A Dillon 86.61 40 P P 05 02 14.6 +0.9
baz=87,SNR=7.8
DLMT Dillon 86.64 40 eP P 05 02 14.5 +0.7
226B Tecolote Peak, 86.65 55 ⇑P P 05 02 15.5 +1.4
baz=87
427A Hayter Ranch, 86.77 56 ⇑P P 05 02 15.9 +1.2
baz=87
J17A Brown Place, J 86.86 43 ⇓P P 05 02 16.1 +1.1
baz=87
SNOW Snow King Moun 86.88 42 eP P 05 02 16.0 +0.9
comp=Z,5.1nm,0.8s
F15A Butte 86.94 40 ⇓P P 05 02 16.1 +0.8
baz=87
K18A Toltan Ranch, 86.95 43 P P 05 02 16.8 +1.3
baz=87,SNR=5.6
IMW Indian Meadow 86.97 42 eP P 05 02 16.6 +1.1
comp=Z,6.2nm,0.8s
IMW epP pP 05 04 21.6 -0.8
S22A 4UR Ranch, Cre 86.98 49 ⇓P P 05 02 17.2 +1.4
baz=87
528A Cox Ranch, San 86.99 57 ⇑P P 05 02 17.0 +1.2
baz=87
MOOW Moose Ponds 87.02 42 eP P 05 02 16.7 +1.0
comp=Z,2.2nm,1.0s
M19A Rock Springs 87.02 45 ⇓P P 05 02 16.5 +0.7
baz=87
LOHW Long Hollow 87.04 42 eP P 05 02 16.6 +0.7
comp=Z,2.3nm,0.7s
LOHW epP pP 05 04 23.2 +0.5
H16A Russell Place, 87.15 41 P P 05 02 17.9 +1.5
baz=87,SNR=9.5
L19A Farson 87.16 44 P P 05 02 17.5 +1.1
baz=87,SNR=7.1
I17A Pilgrim Ck. 87.21 42 ⇓P P 05 02 18.1 +1.5
baz=87
J18A Kendall Valley 87.23 43 P P 05 02 17.6 +0.8
baz=87,SNR=21
HHC Hu-ho-hao-te 87.29 314 eP P 05 02 17.7 +0.8
HHC sP sP 05 05 30.1 +7.3
HHC PP PP 05 05 56.0 +3.4
HHC SKS SKSac 05 11 48.2 -0.7
HHC S S 05 12 06.9 -1.7
HHC sS sS 05 16 03.4 +8.6
HHC SS SS 05 18 15.5 +3.7
HHC pmax pmax
comp=Z,34nm,0.7s
HHC pmax pmax
comp=Z,140nm,6.6s
BW06 Boulder Array 87.33 43 P P 05 02 17.4 +0.2
baz=88,SNR=5.0
PDAR Pinedale Array 87.33 43 P P 05 02 17.6 +0.3
PDAR pP pP 05 04 24.8 +0.6
PDAR Pinedale Array 87.33 43 P P 05 02 17.6 +0.3
comp=Z,2.9nm,0.6s,baz=218,slow=3.3,SNR=29
PDAR pP pP 05 04 24.8 +0.6
comp=Z,0.2nm,0.5s,baz=128,slow=28,SNR=3.5
COLD Coldfoot 87.40 11 eP P 05 02 16.0 -0.7
comp=Z,3.6nm,0.9s
COLD epP pP 05 04 24.7 +1.0
F16A Kennard Place, 87.44 40 ⇑P P 05 02 18.4 +0.9
baz=88
LKWY Lake 87.62 42 eP P 05 02 11.6 -7.0
M20A Sweetwater, Wa 87.67 45 ⇑P P 05 02 19.9 +1.1
baz=88
B14A Marquette Ranc 87.73 37 ⇑P P 05 02 19.0 +0.2
baz=88
V25A Rancho No Teng 87.81 51 ⇓P P 05 02 19.9 +0.3
baz=88
K19A Absolon Red Bu 87.82 44 P P 05 02 19.9 +0.4
baz=88,SNR=5.2

KMI **Kunming** 87.85 297 P P 05 02 21.6 +1.5
KMI pmax pmax
comp=Z,11nm,1.2s
429A **Davenport Ranc** 87.88 57 P P 05 02 21.1 +1.2
baz=88,SNR=9.4
O22A **Kremmling** 88.21 47 ⇓P P 05 02 21.7 +0.2
baz=88
M21A **Separation Pea** 88.27 45 ⇑P P 05 02 21.7 0.0
baz=88
I19A **Meeteetse** 88.27 42 ⇑P P 05 02 22.4 +0.8
baz=88
MSTX **Muleshoe** 88.47 54 ⇑P P 05 02 23.0 +0.4
baz=89
G18A **Lazy EL Ranch,** 88.50 41 ⇑P P 05 02 24.0 +1.4
baz=89
631A **Perdido Creek** 88.50 59 P P 05 02 24.3 +1.6
baz=89,SNR=8.5
N22A **Wattenberg Ran** 88.55 46 ⇓P P 05 02 24.0 +1.0
baz=89
J20A **Shoshoni** 88.56 43 P P 05 02 23.9 +1.1
baz=89,SNR=12
H19A **Powell** 88.57 42 ⇓P P 05 02 23.8 +1.0
baz=89
F18A **Big Timber** 88.67 41 ⇑P P 05 02 24.2 +1.0
baz=89
K21A **Alcova** 88.79 44 ⇑P P 05 02 24.4 +0.3
baz=89
I20A **Worland** 88.79 43 ⇓P P 05 02 24.5 +0.7
baz=89
531A **Rocksprings** 88.80 58 P P 05 02 25.7 +1.6
baz=89,SNR=7.3
Y28A **McKinney Farm,** 88.85 54 ⇑P P 05 02 24.6 +0.3
baz=89
E18A **Harlowton** 88.86 40 ⇓P P 05 02 25.1 +1.0
baz=89
CM31 **Chiang Mai Arr** 88.91 290 *e*P P 05 02 25.8 +1.0
comp=Z,3.5nm,0.8s
CMAR **Chiang Mai Arr** 88.91 290 P P 05 02 25.9 +1.1
CMAR **Chiang Mai Arr** 88.91 290 P P 05 02 25.9 +1.1
comp=Z,6.1nm,0.9s,baz=110,slow=2.9,SNR=28
J21A **Lysite** 88.97 44 P P 05 02 25.9 +1.1
baz=89,SNR=7.5
A16A **West Butte Ran** 88.99 37 ⇑P P 05 02 25.4 +0.8
baz=89
CHTO **Chiang Mai** 89.02 290 *e*P P 05 02 25.9 +0.5
comp=Z,10nm,1.1s
CHTO **Chiang Mai** 89.02 290 P P 05 02 26.1 +0.8
comp=Z,9.3nm,1.8s
SYO **Syowa Base** 89.17 193⇑*e*P P 05 02 23.6 -1.4
SYO **Syowa Base** 89.17 193⇓*e*PcP PcP 05 02 26.6 +0.7
Y29A **Porterfield Fa** 89.27 54 ⇑P P 05 02 26.7 +0.4
baz=90
I21A **Big Trails, Te** 89.28 43 ⇓P P 05 02 27.1 +0.9
baz=90
331A **San Angelo** 89.31 57 ⇓P P 05 02 26.7 +0.2
baz=90
M23A **Laramie** 89.33 46 ⇑P P 05 02 27.1 +0.6
baz=90
X29A **Tulia** 89.47 54 ⇓P P 05 02 27.5 +0.3
baz=90
E19A **Rath Farm, Rou** 89.50 40 ⇓P P 05 02 27.8 +0.8
baz=90
A17A **Triple J Farms** 89.50 38 ⇓P P 05 02 27.7 +0.7
baz=90
L23A **Garrett** 89.61 45 P P 05 02 28.8 +1.0
baz=90,SNR=5.1
231A **Bronte** 89.62 56 P P 05 02 28.4 +0.5
baz=90,SNR=5.2
432A **Menard** 89.66 57 P P 05 02 28.9 +0.8
baz=90,SNR=8.7
332A **Millersview** 89.88 57 P P 05 02 30.2 +1.1
baz=90,SNR=9.7
C19A **Slack Wire Ran** 89.92 39 ⇑P P 05 02 30.3 +1.4
baz=90
232A **Coleman** 90.14 57 ⇓P P 05 02 30.9 +0.6
baz=90
D20A **Manuel Ranch,** 90.18 40 ⇑P P 05 02 31.4 +1.3
baz=90
C20A **Veseth Ranch,** 90.54 40 ⇑P P 05 02 32.7 +0.9
baz=91
SNAA **Sanae** 90.60 179 *e*P P 05 02 31.8 +0.1
SNAA **Sanae** 90.60 179 *e*P P 05 02 32.0 +0.3
VNA3 **Neumayer Olymp** 90.74 176 *e*P P 05 02 33.3 +1.0
D21A **La Casta Ranch** 90.87 40 ⇓P P 05 02 34.3 +0.9
baz=91
LZH **Lanzhou** 90.91 308 *e*P P 05 02 34.5 +0.6
LZH pP pP 05 04 43.0 +1.3
LZH pmax pmax
comp=Z,20nm,1.1s
VNA2 **Neumayer--Watz** 91.18 177 *e*P P 05 02 35.3 +1.0
baz=191,slow=3.5
PLCA **Paso Flores** 91.31 134 P P 05 02 37.6 +1.9
PLCA **Paso Flores** 91.31 134 P P 05 02 37.6 +1.9
comp=Z,2.6nm,1.0s,baz=302,slow=4.3,SNR=3.5
VNA1 **Neumayer--Stat** 91.41 177 *e*P P 05 02 36.9 +1.6
D23A **Lindsay** 92.03 41 ⇓P P 05 02 39.8 +1.1
baz=92
C23A **Lambert** 92.30 40 ⇑P P 05 02 41.2 +1.4
baz=92
D24A **Glendive** 92.55 41 ⇑P P 05 02 42.1 +1.0
baz=93
ULN **Ulaanbaatar** 93.17 319 *e*P P 05 02 43.5 -0.5
comp=Z,1.8nm,0.6s
ULN **Ulaanbaatar** 93.17 319 P P 05 02 43.5 -0.5
DGMT **Dagmar** 93.17 40 *e*P P 05 02 44.8 +1.0
DGMT **Dagmar** 93.17 40 ⇑P P 05 02 44.9 +1.0
baz=93
SONM **Songino Array** 93.56 319 P P 05 02 45.1 -0.7
SONM **Songino Array** 93.56 319 P P 05 02 45.1 -0.7
comp=Z,0.7nm,0.7s,baz=120,slow=5.7,SNR=4.2
YKA **Yellowknife Ar** 94.32 25 P P 05 02 47.5 -1.1
YKA pP pP 05 04 56.1 -0.6
YKA PKKPbc **PKKPdf** 05 19 43.9 -3.0
YKA **Yellowknife Ar** 94.32 25 P P 05 02 47.5 -1.1
comp=Z,1.4nm,0.8s,baz=245,slow=4.4,SNR=20
YKA pP pP 05 04 56.1 -0.6
comp=Z,1.1nm,1.2s,baz=234,slow=4.8,SNR=4.0
YKA PKKPbc **PKKPdf** 05 19 43.9 -3.0
comp=Z,0.2nm,0.4s,baz=40,slow=2.1,SNR=15
RES **Resolute Bay** 105.42 16 *e*PKP **PKiKP** 05 07 47.0 -0.6
ZALV **Zalesovo Beam** 108.25 322 PKiKP **PKiKP** 05 07 52.3 -1.2
ZALV **Zalesovo Beam** 108.25 322 PKiKP **PKiKP** 05 07 52.3 -1.2
comp=Z,1.0nm,0.5s,baz=264,slow=0.9,SNR=8.4
MK31 **Makanchi Array** 109.15 314 *e*PKP **PKiKP** 05 07 54.1 -1.3
MKAR **Makanchi Array** 109.15 314 PKiKP **PKiKP** 05 07 54.3 -1.1
MKAR PKKPbc **PKKPbc** 05 19 04.3 -0.5
MKAR **Makanchi Array** 109.15 314 PKiKP **PKiKP** 05 07 54.3 -1.1
comp=Z,1.6nm,0.5s,baz=186,slow=0.4,SNR=21
MKAR PKKPbc **PKKPbc** 05 19 04.3 -0.5
comp=Z,0.5nm,0.7s,baz=278,slow=3.6,SNR=5.7
KURK **Kurchatov** 111.84 318 *e*PKP **PKiKP** 05 07 58.7 -1.6
KSH **Kashi** 113.10 306 *e*PKP **PKiKP** 05 08 01.9 -1.4
KSH PP PP 05 09 10.0 +5.4
KSH sPKP 05 11 18.1
KSH PKS **PKSdf** 05 11 37.9 -2.2
KSH SKS **SKSdf** 05 14 17.8 -2.5
KSH SS **SS** 05 24 09.9 +4.2
KSH AMB AMB
comp=Z,120nm,3.9s
TKM2 **Tokmak 2** 113.60 310 *e*PKP **PKiKP** 05 08 03.1 -1.2
AAK **Ala-Archa** 114.40 309 *e*PKP PKPdf 05 08 05.0 -0.8
AAK PKKPab **PKKPab** 05 18 55.9 +1.3
AAK **Ala-Archa** 114.40 309 PKP PKPdf 05 08 05.0 -0.7
comp=Z,0.4nm,0.4s,baz=191,slow=6.8,SNR=4.3
AAK PKKPab **PKKPab** 05 18 55.9 +1.3
comp=Z,0.5nm,0.4s,baz=294,slow=3.9,SNR=5.5
EKS2 **Erkin-Say** 114.93 309 *e*PKPdf PKPdf 05 08 06.3 -0.4
SCHQ **Schefferville** 116.84 37 PKKPbc PKKPbc 05 18 37.0 -2.5
SCHQ **Schefferville** 116.84 37 PKKPbc PKKPbc 05 18 37.0 -2.5
comp=Z,2.3nm,1.1s,baz=196,slow=5.9,SNR=3.6
BVAR **Borovoye Array** 116.86 321 PKP **PKPdf** 05 08 09.1 -0.8
BVAR **Borovoye Array** 116.86 321 PKP **PKPdf** 05 08 09.1 -0.8
comp=Z,2.9nm,0.4s,baz=78,slow=2.1,SNR=19
BRVK **Borovoye** 116.92 321 *e*PKPdf **PKPdf** 05 08 08.7 -1.3
KKAR **Karatay Array** 117.33 310 *e*PKPdf **PKPdf** 05 08 10.2 -0.9
KBL **Kabul** 118.31 300 *e*PKPdf **PKPdf** 05 08 13.2 -0.4
ABKAR **Akbulak array** 123.95 318 *e*PKPdf **PKPdf** 05 08 23.0 -0.7
AKTO **Aktyubinsk** 124.88 320 PKP **PKPdf** 05 08 24.8 -0.6
AKTO **Aktyubinsk** 124.88 320 PKP **PKPdf** 05 08 24.8 -0.6
comp=Z,2.2nm,0.6s,baz=27,slow=1.2,SNR=16
ARCES **ARCESS Array B** 126.31 350 PKP **PKPdf** 05 08 26.9 -0.8
ARCES **ARCESS Array B** 126.31 350 PKP **PKPdf** 05 08 26.9 -0.8
comp=Z,2.0nm,0.5s,baz=14,slow=1.8,SNR=13
SUR **Sutherland** 126.73 200 *e*PKPdf **PKPdf** 05 08 30.5 +0.7
BOSA **Boshof** 128.42 207 PKP **PKPdf** 05 08 33.6 +0.5
BOSA *e*PKPdf **PKiKP** 05 08 33.8 0.0
BOSA **Boshof** 128.42 207 PKP **PKPdf** 05 08 33.6 +0.5
comp=Z,5.5nm,0.9s,baz=131,slow=3.3,SNR=5.7
JOF **Joensuu** 130.56 343 *ep* **SKPab** 05 11 07.0 +1.1
comp=Z,1.2nm,0.5s
LBTB **Lobatse** 131.37 209 *e*PKPdf **PKPdf** 05 08 39.5 +0.8
KAF **Kangasniemi** 132.57 345 *ep* **SKPab** 05 11 13.3 -1.3
comp=Z,1.8nm,0.8s
FINES **FINESS Array B** 133.19 344 PKPpre PKPpre 05 08 34.2
FINES SKPbc **SKPab** 05 11 16.1 -1.2
FINES **FINESS Array B** 133.19 344 PKhKP PKPpre 05 08 34.2
comp=Z,1.1nm,0.5s,baz=64,slow=4.4,SNR=6.4
FINES SKPbc **SKPab** 05 11 16.1 -1.2
comp=Z,3.5nm,0.8s,baz=48,slow=2.8,SNR=8.4
NB2 **NORSAR Subarra** 136.37 353 PKPdf PKPpre 05 08 36.0
comp=Z,0.4nm,0.4s,baz=27,slow=1.8
NOA **NORSAR Array B** 136.37 353 PKP **PKPdf** 05 08 47.8 +1.0
NOA SKPab **SKPab** 05 11 32.9 +1.6
NOA **NORSAR Array B** 136.37 353 PKP **PKPdf** 05 08 47.8 +1.0
comp=Z,1.2nm,0.8s,baz=18,slow=4.2,SNR=5.5
NOA SKPab **SKPab** 05 11 32.9 +1.6
comp=Z,1.2nm,0.8s,baz=13,slow=3.1,SNR=4.3
GNI **Garni** 136.80 310 *e*PKPdf **PKPdf** 05 08 49.2 +0.8
KBZ **Khabaz** 136.82 316 PKP **PKPdf** 05 08 48.6 +0.5
KBZ **Khabaz** 136.82 316 PKP **PKPdf** 05 08 48.6 +0.5
comp=Z,1.0nm,0.6s,baz=170,slow=7.5,SNR=3.9
LSZ **Lusaka** 137.90 220 *e*PKPdf **PKPdf** 05 08 51.5 +0.4
TSUM **Tsumeb** 139.93 204 *e*PKPpre PKPpre 05 08 50.4
TSUM *e*PKPdf **PKPdf** 05 08 55.0 +0.2
KMBO **Kilima Mbogo** 140.16 245 *e*PKPdf **PKPdf** 05 08 55.8 +0.3
KMBO PKP **PKPdf** 05 08 56.2 +0.8
KMBO **Kilima Mbogo** 140.16 245 PKP **PKPdf** 05 08 56.2 +0.8
comp=Z,1.7nm,0.5s,baz=27,slow=23,SNR=4.1
AKASG **Malin Array Be** 140.57 332 PKPpre PKPpre 05 08 47.7
AKASG PKP **PKiKP** 05 08 56.8 -0.8
AKASG **Malin Array Be** 140.57 332 PKhKP PKPpre 05 08 47.7
comp=Z,1.0nm,0.4s,baz=45,slow=4.2,SNR=7.5
AKASG PKP **PKiKP** 05 08 56.8 -0.8
comp=Z,1.8nm,0.5s,baz=45,slow=2.8,SNR=5.8
KIEV **Kiev** 140.58 332 *e*PKPdf **PKPdf** 05 08 55.7 +0.9
MALT **Malatya** 142.03 310 *e*PKPdf **PKPdf** 05 08 55.0 -3.0
BEL **Belsk** 142.91 340 *e*PKP **PKPdf** 05 08 57.2 -1.7
BSEG **Bad Segeberg** 143.41 351 *e*PKPbc PKPbc 05 08 58.3 -0.1
LHO **Holmfirth** 144.33 4 *e*P PKPbc 05 09 00.5 -0.8
LHO **Holmfirth** 144.33 4 P PKPbc 05 09 00.5 -0.8
YRC **Rhoscolyn** 144.40 6 *e*P **PKPdf** 05 09 00.4 -1.0
YRC **Rhoscolyn** 144.40 6 P **PKPdf** 05 09 00.4 -1.0
WPM1 **Penmaenmawr** 144.46 6 *e*P **PKPdf** 05 09 01.0 -0.5
WPM1 **Penmaenmawr** 144.46 6 P **PKPdf** 05 09 01.0 -0.5
TLCR 144.58 326⇑*i*P PKPbc 05 09 02.4 +0.1
BUR08 **Bucovina Ar. S** 144.61 332 *e*PKPdf PKPbc 05 09 02.7 +0.2
OJC **Ojcow** 144.62 340 *e*PKP PKPbc 05 09 02.2 -0.1
BURAR **Bucovina Array** 144.62 332⇑*i*P **PKPab** 05 09 02.9 -0.3
KBI1 **Birley Grange** 144.64 3 *e*P **PKPdf** 05 09 01.0 -0.8
KBI1 **Birley Grange** 144.64 3 P **PKPdf** 05 09 01.0 -0.8
TESR 144.77 330⇓*i*P PKPbc 05 09 02.9 0.0
BR131 **Keskin Array S** 144.80 315 *e*PKPdf **PKPdf** 05 09 03.0 +0.2
BRTR **Keskin Array B** 144.80 315 PKP **PKPdf** 05 09 02.6 -0.2
BRTR **Keskin Array B** 144.80 315 PKP **PKPdf** 05 09 02.6 -0.2
comp=Z,14nm,0.8s,baz=137,slow=3.3,SNR=47
KOLS **Kolonicke sedl** 144.81 336 *e*PKP PKPbc 05 09 03.3 +0.4
NRDL **Niedersach Rie** 144.84 351 *e*PKPbc PKPbc 05 09 03.0 +0.2
FOEL **Foel Wylfa** 144.88 5 *e*P **PKPdf** 05 09 02.5 +0.2
FOEL **Foel Wylfa** 144.88 5 P **PKPdf** 05 09 02.5 +0.2
CFR **Carcaliu** 144.95 327⇑*i*P PKPbc 05 09 03.4 0.0
KSP **Ksiaz** 145.11 344 *e*PKP **PKPbc** 05 09 04.0 +0.3
NIE **Niedzica** 145.12 339 *e*PKP **PKPbc** 05 09 04.4 +0.5
CRVS **Cervenica-Dubn** 145.14 337 *e*PKP **PKPdf** 05 09 02.9 0.0
ASF **Jabal al Asfar** 145.20 301 PKPbc **PKPbc** 05 09 04.8 +0.1
ASF **Jabal al Asfar** 145.20 301 PKPbc **PKPbc** 05 09 04.8 +0.1
comp=Z,7.8nm,0.9s,baz=43,slow=1.6,SNR=10
HLM1 **Long Mynd** 145.28 5 *e*P **PKPdf** 05 09 03.1 +0.1
HLM1 **Long Mynd** 145.28 5 P **PKPdf** 05 09 03.1 +0.1
ANTO **Ankara** 145.29 316 *e*PKPbc **PKPdf** 05 09 04.1 +0.6
IBBN **Ibbenburen** 145.33 353 *e*PKPbc **PKPbc** 05 09 04.6 +0.3
CLZ **Clausthal** 145.44 350 *e*PKPbc **PKPbc** 05 09 05.2 +0.5
CLL **Collm** 145.46 347 *e*PKPbc **PKPbc** 05 09 05.0 +0.3
CLL **Collm** 145.46 347⇓*i*PKPbc **PKPbc** 05 09 04.6 -0.1
comp=Z,28nm,1.0s
CLL *e*PKPab **PKiKP** 05 09 08.0 +0.4
OKC **Ostrava-Krasne** 145.48 341 *e*PKP **PKPbc** 05 09 04.9 +0.1
UPC **Upice** 145.49 344 *e*PKP **PKPbc** 05 09 05.2 +0.3
DPC **Dobruska-Polom** 145.55 343 *e*PKP **PKPbc** 05 09 05.5 +0.4
BRG **Berggiesshubel** 145.67 346 *e*PKP **PKPdf** 05 09 03.9 +0.2
comp=Z,3.6nm,1.0s
BRG *i* 05 09 05.3
comp=Z,23nm,1.2s
BRG *e*pPKP **pPKPdf** 05 11 19.7 -0.8
comp=Z,1.3nm,0.8s
BRG **Berggiesshubel** 145.67 346 *e*PKPbc **PKPbc** 05 09 05.7 +0.4
KRLC **Kraliky** 145.67 343 *e*PKP **PKPbc** 05 09 05.6 +0.1
MORC **Moravsky Berou** 145.72 342 *e*PKPbc **PKPdf** 05 09 04.1 +0.2
MORC **Moravsky Berou** 145.72 342⇑*i*P **PKPbc** 05 09 05.9 +0.3
WTSB **Winterswijk** 145.77 354 *e*PKhKP PKPpre 05 09 05.2
comp=Z,33nm,1.0s
MCH1 **Michaelchurch** 145.78 5 *e*P **PKPdf** 05 09 04.0 +0.2
MCH1 **Michaelchurch** 145.78 5 P **PKPdf** 05 09 04.0 +0.2
NEUB **Neuenburg** 145.80 349 *e*PKPbc **PKPbc** 05 09 05.7 0.0
MLR **Muntele Rosu** 145.84 329 PKPbc **PKPbc** 05 09 05.9 -0.3
MLR **Muntele Rosu** 145.84 329⇓*i*P **PKPbc** 05 09 06.5 +0.3
MLR **Muntele Rosu** 145.84 329 PKPbc **PKPbc** 05 09 05.9 -0.3
comp=Z,2.4nm,0.8s,baz=56,slow=5.2,SNR=9.2
PVCC **Panska Ves** 145.84 345⇑*e*PKP **PKPbc** 05 09 06.3 +0.5
PVCC *e*PKPAB **PKiKP** 05 09 09.3 +0.9
SSW **Stow on the Wo** 145.90 4 *e*P **PKPbc** 05 09 05.5 -0.4
SSW **Stow on the Wo** 145.90 4 P **PKPbc** 05 09 05.5 -0.4
MMAI **Mount Meron Ar** 146.16 303 PKPbc **PKPbc** 05 09 07.8 +0.4
MMAI **Mount Meron Ar** 146.16 303 PKPbc **PKPbc** 05 09 07.8 +0.4
comp=Z,17nm,0.6s,baz=60,slow=5.1,SNR=21
SKP1 **Kophill** 146.20 3 *e*P **PKPbc** 05 09 05.9 -0.9
SKP1 **Kophill** 146.20 3 P **PKPbc** 05 09 05.9 -0.9
BUG **Bochum--Univer** 146.24 354 *e*PKPbc **PKPbc** 05 09 06.8 -0.1
DRGR 146.35 334⇑*i*P **PKPbc** 05 09 07.6 +0.1
PRU **Pruhonice** 146.35 345⇑*e*PKP **PKPbc** 05 09 07.3 0.0
PRU *e*PKPAB **PKPab** 05 09 09.9 +0.1
VRAC **Vranov** 146.41 342⇑*i*P **PKPbc** 05 09 08.3 +0.8
TANN **Tannenbergstha** 146.42 347 *e*PKPbc **PKPbc** 05 09 07.9 +0.4
VYHS **Vyhne** 146.42 339 *e*PKP **PKPbc** 05 09 07.8 +0.3
UBBA **Unterbreizbach** 146.49 350 *e*PKPbc **PKPbc** 05 09 07.4 -0.1
PSZ **Piszkesteto** 146.54 338 *e*PKPbc **PKPbc** 05 09 07.6 -0.4
PSZ **Piszkesteto** 146.54 338⇑*i*P **PKPbc** 05 09 08.1 +0.1
PSZ **Piszkesteto** 146.54 338⇓*i*e **PKPbc** 05 09 08.1 +0.1
ARR **Arges** 146.57 330⇑*i*P **PKPbc** 05 09 09.0 +0.9
WOL **Wolverton** 146.59 3 *e*P **PKPbc** 05 09 07.0 -0.8
WOL **Wolverton** 146.59 3 P **PKPbc** 05 09 07.0 -0.8
NKC **Novy Kostel** 146.60 347⇑*e*PKP **PKPbc** 05 09 08.2 +0.2
NKC *e*PKPAB **PKPab** 05 09 10.6 -0.2
TREC **Trest** 146.74 343 *e*PKP **PKPbc** 05 09 08.4 0.0
SMOL **Smolenice** 146.87 341 *e*PKP **PKPbc** 05 09 09.7 +1.0
HGN **Heimansgroeve** 147.03 355 *e*PKhKP **PKPbc** 05 09 08.9 -0.2
comp=Z,13nm,0.9s
ROTZ **Rotzenmuhle** 147.09 347 *e*PKPbc **PKPbc** 05 09 10.0 +0.7
CSS **Prodhromos** 147.10 307 *e*PKPbc **PKPbc** 05 09 09.1 -0.7
MEM **Membach** 147.18 355 PKPbc **PKPbc** 05 09 09.4 -0.1
BUD **Budapest** 147.22 338⇓*i*e **PKPbc** 05 09 09.7 0.0
TNS **Taunus Mts** 147.29 352 *e*PKPbc **PKPbc** 05 09 10.3 +0.4
KHC **Kasperske Hory** 147.38 345 *e*PKPdf **PKPdf** 05 09 06.5 -0.2
KHC *e*PKPbc **PKPbc** 05 09 09.9 -0.2
KHC **Kasperske Hory** 147.38 345 *e*PKPDF **PKPdf** 05 09 06.7 0.0
KHC ⇑*e*PKP **PKPbc** 05 09 10.3 +0.2
KHC *e*PKPAB **PKPab** 05 09 14.6 +0.6
SNF **Seneffe** 147.40 357 PKPbc **PKPbc** 05 09 10.0 0.0
GZR **Gura Zlata** 147.41 332⇓*i*P **PKPbc** 05 09 10.0 -0.3
EIL **Elat** 147.44 297 PKPbc **PKPbc** 05 09 11.0 +0.2
EIL **Elat** 147.44 297 PKPbc **PKPbc** 05 09 11.0 +0.2
comp=Z,12nm,1.0s,baz=140,slow=0.9,SNR=8.9
WET **Wettzell** 147.53 346 *e*PKPbc **PKPbc** 05 09 10.4 -0.1
GEC2 **GERESS Array S** 147.61 345 *e*PKPbc **PKPbc** 05 09 11.1 +0.3
GERES **GERESS Array B** 147.61 345 PKPbc **PKPbc** 05 09 10.5 -0.2
GERES **GERESS Array B** 147.61 345 PKPbc **PKPbc** 05 09 10.5 -0.2
comp=Z,10nm,0.6s,baz=29,slow=3.0,SNR=65
BZS **Buzias** 147.74 333⇑*i*P **PKPdf** 05 09 07.1 -0.2
DOU **Dourbes** 147.79 356 PKPbc **PKPbc** 05 09 11.0 -0.1
CONA **Conrad Observa** 147.87 342 *i* PKiKP **PKPbc** 05 09 11.7 +0.2
comp=Z,10nm,0.6s,SNR=17
CONA **Conrad Observa** 147.87 342 P **PKPdf** 05 09 07.5 -0.1
comp=Z,1.3nm,1.0s
CONA **Conrad Observa** 147.87 342 *i* P **PKPbc** 05 09 11.7 +0.2
SOP **Sopron** 147.87 341⇓*e* **PKPbc** 05 09 11.7 +0.4
WLF **Walferdange** 148.11 354 PKPbc **PKPbc** 05 09 12.4 +0.5
WLF **Walferdange** 148.11 354 *e*PKPbc **PKPbc** 05 09 12.8 +1.0
WLF **Walferdange** 148.11 354 *e*PKPbc **PKPbc** 05 09 12.3 +0.5
PKSM **Moragy** 148.44 337⇑*i*P **PKPbc** 05 09 12.5 -0.3
PKSM **Moragy** 148.44 337⇓*e* **PKPbc** 05 09 12.3 -0.5
STU **Stuttgart** 148.60 350 *e*PKPbc **PKPbc** 05 09 13.6 +0.5
STU **Stuttgart** 148.60 350 *e*PKPdf **PKPdf** 05 09 08.6 0.0
STU *e*PKPbc **PKPbc** 05 09 13.1 0.0
STU *e*PKPab **PKPab** 05 09 18.4 -0.6
FUR **Furstenfeldbru** 148.80 347 *e*PKPbc **PKPbc** 05 09 14.1 +0.4
RJOB **Jochberg** 148.87 345 *e*PKPbc **PKPbc** 05 09 14.0 +0.1
BEHE **Becsehely** 148.87 340⇓*e* **PKPbc** 05 09 12.4 -1.4
BFO **Black Forest** 149.16 351 *e*PKPbc **PKPbc** 05 09 14.8 +0.3
BFO **Black Forest** 149.16 351 *e*PKPbc **PKPbc** 05 09 14.3 -0.2
BFO *e*PKPab **PKPab** 05 09 20.5 -0.9
SOKA **Soboth** 149.24 342⇑*i*PKPdf **PKPdf** 05 09 09.2 -0.6
comp=Z,3.3nm,1.3s
SOKA ⇓*i*PKPbc **PKPbc** 05 09 14.2 -0.6
comp=Z,16nm,1.3s
SOKA **Soboth** 149.24 342⇓*i*P **PKPbc** 05 09 14.2 -0.6
VTS **Vitosha** 149.30 328⇓*i*P **PKPbc** 05 09 15.3 +0.1
KBA **Koelnbreinsper** 149.34 344 *i* PKPbc **PKPbc** 05 09 14.4 -0.8
comp=Z,7.8nm,0.5s,SNR=5.3
KBA **Koelnbreinsper** 149.34 344 *i* P **PKPbc** 05 09 14.4 -0.8
WATA **Walderalm** 149.53 347⇑*i*PKPdf **PKPdf** 05 09 09.9 -0.4
comp=Z,1.1nm,0.6s
WATA ⇓*i*PKPbc **PKPbc** 05 09 15.2 -0.4
comp=Z,6.8nm,0.5s,SNR=13
WATA **Walderalm** 149.53 347⇓*i*P **PKPbc** 05 09 15.2 -0.4
RETA **Reutte** 149.56 348⇑*i*PKPdf **PKPdf** 05 09 10.0 -0.3
comp=Z,3.7nm,1.4s
RETA ⇓*i*PKPbc **PKPbc** 05 09 15.2 -0.4
comp=Z,4.3nm,0.5s
RETA **Reutte** 149.56 348⇑*i*P **PKPdf** 05 09 10.0 -0.3
RETA ⇓*i*P **PKPbc** 05 09 15.2 -0.4
WTTA **Wattenberg** 149.58 346⇑*i*PKPdf **PKPdf** 05 09 09.8 -0.6
comp=Z,4.9nm,1.6s
WTTA *i* PKiKP **PKPbc** 05 09 15.5 -0.3
comp=Z,19nm,0.6s,SNR=32
WTTA **Wattenberg** 149.58 346⇑*i*P **PKPdf** 05 09 09.8 -0.6
WTTA *i* P **PKPbc** 05 09 15.5 -0.3
MYKA **Terra Mystica** 149.68 343⇑*i*PKPdf **PKPdf** 05 09 09.9 -0.6
comp=Z,3.2nm,1.0s
MYKA ⇓*i*PKPbc **PKPbc** 05 09 15.0 -0.8
comp=Z,8.5nm,0.5s
MYKA **Terra Mystica** 149.68 343⇑*i*P **PKPdf** 05 09 09.9 -0.6
MYKA ⇓*i*P **PKPbc** 05 09 15.1 -0.8
ABTA **Abfaltersbach** 149.86 345⇑*i*PKPdf **PKPdf** 05 09 10.0 -0.8
comp=Z,6.5nm,0.9s,SNR=18
ABTA ⇓*i*PKPbc **PKPbc** 05 09 15.7 -0.6
comp=Z,18nm,0.6s
ABTA **Abfaltersbach** 149.86 345⇑*i*P **PKPdf** 05 09 10.0 -0.8
ABTA ⇓*i*P **PKPbc** 05 09 15.7 -0.6
DAVA **Damuels** 149.92 349⇑*i*PKPdf **PKPdf** 05 09 10.9 0.0
comp=Z,5.7nm,1.1s
DAVA *i* PKiKP **PKPbc** 05 09 16.6 +0.1
comp=Z,23nm,1.2s,SNR=7.9
DAVA **Damuels** 149.92 349 *i* P **PKPbc** 05 09 16.6 +0.1
FETA **Feichten** 150.01 347⇑*i*PKPdf **PKPdf** 05 09 11.2 +0.2
comp=Z,8.0nm,1.2s
FETA ⇑*i*PKiKP **PKPbc** 05 09 17.0 +0.2
comp=Z,14nm,1.0s
FETA **Feichten** 150.01 347⇑*i*P **PKPdf** 05 09 11.2 +0.2
FETA ⇑*i*P **PKPbc** 05 09 17.0 +0.2
TRI **Trieste** 150.49 343 *e*PKPbc **PKPbc** 05 09 16.9 -0.7
TUE **Stuetta** 150.80 349 *e*PKPdf **PKPdf** 05 09 12.2 -0.2
TUE *e*PKPbc **PKPbc** 05 09 18.6 -0.1
TUE *e*PKPab **PKPab** 05 09 27.6 -1.0
TIP **Timpagrande** 155.04 331 *e*PKPdf **PKPdf** 05 09 17.8 -0.7
ESDC **Sonseca Array** 157.77 11 PKPab **PKPab** 05 09 57.5 -0.9
ESDC **Sonseca Array** 157.77 11 PKPab **PKPab** 05 09 57.5 -0.9
comp=Z,1.0nm,0.7s,baz=339,slow=2.9,SNR=5.9
DBIC **Dimbokro** 167.17 150 PKP **PKPdf** 05 09 31.3 -0.4
DBIC *e*PKPab **PKPab** 05 10 40.7 +0.4
DBIC **Dimbokro** 167.17 150 PKP **PKPdf** 05 09 31.3 -0.4
comp=Z,1.9nm,0.7s,baz=236,slow=2.7,SNR=3.0
TAM **Tamanrasset** 173.91 324 *e*PKPdf **PKPdf** 05 09 35.8 +0.6
TOA0 **Torodi Ar. Sit** 175.27 181 *e*PKPdf **PKPdf** 05 09 34.5 -1.2
TOA0 *e*PKPab **PKPab** 05 11 16.1 +0.1
TORD **Torodi Ar. Bea** 175.27 181 PKP **PKPdf** 05 09 34.7 -0.9
TORD PKPab **PKPab** 05 11 16.2 +0.2
TORD PP **PP** 05 15 08.0 +0.4
TORD **Torodi Ar. Bea** 175.27 181 PKP **PKPdf** 05 09 34.7 -0.9
comp=Z,4.0nm,1.1s,baz=325,slow=1.8,SNR=15
TORD PKPab **PKPab** 05 11 16.2 +0.2
comp=Z,1.4nm,0.8s,baz=195,slow=4.1,SNR=15
TORD PP **PP** 05 15 08.0 +0.4
comp=Z,1.1nm,0.8s,baz=179,slow=5.0,SNR=5.6
FINES **FINESS Array B** 83.02 334 P P 05 15 01.8 -0.8
1.1nm,0.7s,baz=74,slow=5.3,SNR=6.7
NVAR **Mina Array Bea** 83.05 51 P P 05 15 03.6 -0.1
0.2nm,0.6s,baz=321,slow=7.1,SNR=2.7

IDC 12 05:03:13.2±23.0, 21°.87N×143°.17E, h322km±207km, mb3.0/7, mb1 3.2/7, mb1mx2.9/27, mbtmp3.0/7, Error ellipse: s-maj=150.5km s-min=31.6km az=179.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.28**	**350**	S	S	05 05 40.9	+0.5
	3.6nm,0.3s,baz=288,slow=20,SNR=2.3						
MKAR	**Makanchi Array**	**54.57**	**313**	P	P	05 12 09.0	+0.1
	0.3nm,0.9s,baz=76,slow=6.1,SNR=2.6						
ILAR	**Eielson Array**	**61.89**	**27**	P	P	05 12 58.4	-0.5
	0.3nm,0.9s,baz=248,slow=6.5,SNR=4.2						
BVAR	**Borovoye Array**	**62.53**	**319**	P	P	05 13 03.1	-0.2
	0.9nm,0.3s,baz=98,slow=8.4,SNR=7.7						
YKA	**Yellowknife Ar**	**76.31**	**28**	P	P	05 14 27.1	+0.3
	0.2nm,0.6s,baz=292,slow=6.0,SNR=9.4						
ARCES	**ARCESS Array B**	**78.75**	**341**	P	P	05 14 40.6	+0.5
	2.4nm,0.9s,baz=66,slow=9.0,SNR=3.8						
FINES	**FINESS Array B**	**83.02**	**334**	P	P	05 15 01.8	-0.8
	1.1nm,0.7s,baz=74,slow=5.3,SNR=6.7						
NVAR	**Mina Array Bea**	**83.05**	**51**	P	P	05 15 03.6	-0.1
	0.2nm,0.6s,baz=321,slow=7.1,SNR=2.7						

*ISK **12** 05:08:11.0, 37°.28N×28°.18E, h3km, MD2.6*
*ISCJB **12** 05:08:12.2±0.6, 37°.25N±0°.04×28°.18E±0°.05, h0km, Error ellipse: s-maj=8.1km s-min=3.4km az=41.3*
*CSEM **12** 05:08:12.4±0.2, 37°.24N×28°.18E, h1km, MD2.6, Error ellipse: s-maj=5.5km s-min=2.8km az=36.0*
*DDA **12** 05:08:12.2, 37°.24N×28°.17E, h7km, MD2.7*
ISC 12 05:08:12.2±1.0, 37°.22N±0°.03×28°.17E±0°.03, h0km, n18, σ0s79/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.13**	**133**	*e*PG	**Pg**	05 08 15.1	+0.4
YER				*e*SG	**Sg**	05 08 18.3	+2.0
YER	**Yerkesik**	**0.13**	**133**	*e*Pg	**Pg**	05 08 15.1	+0.4
YER				*e*Sg	**Sg**	05 08

TATV	**Tatvan**	**0.41**	**185**	*i* P	**Pg**	05 15 08.2	-0.7
TATV				*i* S	**Sg**	05 15 14.3	-0.4
TATV	**Tatvan**	**0.41**	**185**	*i* P	**Pg**	05 15 08.2	-0.7
TATV				*i* S	**Sg**	05 15 14.3	-0.4
TUTA	**Tutak**	**0.62**	**39**	*i* P	**Pg**	05 15 12.3	-0.5
TUTA				*i* S	**Sb**	05 15 21.3	-0.4
TUTA	**Tutak**	**0.62**	**39**	*i* P	**Pg**	05 15 12.3	-0.5
TUTA				*i* S	**Sb**	05 15 21.3	-0.4
VRTB	**Varto-Mus**	**0.71**	**290**	*e*PG	**Pg**	05 15 14.2	-0.2
VRTB				*e*SG	**Sb**	05 15 24.1	-0.1
VRTB	**Varto-Mus**	**0.71**	**290**	*e*Pg	**Pg**	05 15 14.2	-0.2
VRTB				*e*Sg	**Sb**	05 15 24.1	-0.1
GEVA	**Gevas**	**0.84**	**136**	*i* P	**Pg**	05 15 16.7	-0.2
GEVA	**Gevas**	**0.84**	**136**	*i* P	**Pg**	05 15 16.7	-0.2
BTMT	**Batman**	**0.97**	**222**	*e*PG	**Pn**	05 15 21.0	+1.4
BTMT	**Batman**	**0.97**	**222**	*e*Pg	**Pn**	05 15 21.0	+1.4
HOMI	**Horasan**	**1.17**	**344**	*i* P	**Pn**	05 15 22.1	-0.3
HOMI				*i* S	**Sg**	05 15 39.0	+0.6
ERZM	**Erzurum**	**1.23**	**324**	*i* P	**Pn**	05 15 23.2	-0.1
ERZM				*i* S	**Sb**	05 15 38.8	-0.4
ERZM	**Erzurum**	**1.23**	**324**	*i* P	**Pn**	05 15 23.2	-0.1
ERZM				*i* S	**Sb**	05 15 38.8	-0.4
EZM	**Erzurum**	**1.23**	**324**	*e*PN	**Pg**	05 15 24.2	-0.1
CLDR	**Caldiran**	**1.27**	**79**	*e*PN	**Pb**	05 15 24.5	+0.3
CLDR	**Caldiran**	**1.27**	**79**	*e*Pn	**Pb**	05 15 24.5	+0.3
BNGB	**Bing¯‖ı**	**1.28**	**274**	*e*PN	**Pn**	05 15 24.1	+0.3
BNGB				*e*SN	**Sn**	05 15 41.0	+0.4
BEST	**Besiri**	**1.31**	**219**	*i* P	**Pb**	05 15 25.2	+0.3
BEST				*i* S	**Sg**	05 15 44.6	+1.6
BINT	**Bingol**	**1.42**	**269**	*e*Pn	**Pn**	05 15 24.1	-1.7
BINT				*e*Sn	**Sn**	05 15 41.0	-3.3
CUKT	**Cukurca**	**1.96**	**148**	*e*PN	**Pn**	05 15 33.9	+0.7
CUKT	**Cukurca**	**1.96**	**148**	*e*Pn	**Pb**	05 15 33.9	+0.7
DDEM	**Demirkent**	**2.02**	**348**	*i* P	**Pb**	05 15 37.9	+1.0
DAGI	**Agillar**	**2.18**	**352**	*i* P	**Pb**	05 15 40.7	+1.1
BAYT	**Ayd¯–ntepe-Bay**	**2.23**	**312**	*e*PN	**Pn**	05 15 37.9	+0.9
BAYT	**Ayd¯–ntepe-Bay**	**2.23**	**312**	*e*Pn	**Pn**	05 15 37.9	+0.9

IDC 12 05:15:05.8±1.4, 33°64′N×82°33′E, h0km, mb3.4/6, mb1 3.6/7, mb1mx3.4/29, mbtmp3.4/7, ML2.7/1, Error ellipse: s-maj=38.9km s-min=26.8km az=58.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**13.14**	**360**	P	Pn	05 18 12.9	-0.8
	0.0nm,0.3s,baz=185,slow=13,SNR=5.2						
ZALV	**Zalesovo Beam**	**20.38**	**4**	P	Pn	05 19 44.9	-1.0
	0.3nm,0.3s,baz=235,slow=5.1,SNR=2.3						
BVAR	**Borovoye Array**	**21.18**	**340**	P	P	05 19 57.4	+4.7
	0.3nm,0.5s,baz=148,slow=8.5,SNR=2.6						
CMAR	**Chiang Mai Arr**	**21.20**	**131**	P	P	05 19 54.1	+1.0
	0.4nm,0.3s,baz=311,slow=10,SNR=5.0						
AKTO	**Aktyubinsk**	**24.48**	**321**	P	P	05 20 27.5	+0.9
	0.4nm,0.3s,baz=180,slow=7.1,SNR=3.5						
FINES	**FINESS Array B**	**45.07**	**326**	P	P	05 23 23.6	+0.3
	1.0nm,0.8s,baz=96,slow=13,SNR=3.2						
TORD	**Torodi Ar. Bea**	**75.12**	**276**	P	P	05 26 49.8	-0.4
	0.3nm,0.5s,baz=47,slow=4.9,SNR=7.4						
YKA	**Yellowknife Ar**	**83.23**	**8**	P	P	05 27 32.3	-1.4
	0.1nm,0.4s,baz=339,slow=5.4,SNR=6.7						

*IDC **12** 05:16:26.6±7.0, 50°.83N×179°.92W, h78km±45km, mb2.9/3, mb1 3.3/4, mb1mx3.0/29, mbtmp3.0/4, ML3.3/1, MS2.6/1, Ms1 2.6/1, ms1mx2.5/9, Error ellipse: s-maj=133.6km s-min=26.9km az=2.0*

*NEIC **12** 05:16:26.8, 51°.30N×179°.83W, h9km, ML3.5(AEIC), After AEIC.*

ISC 12 05:16:26.6±1.6, 51°.0N±0°.2×179°.60W±0°.05, h43km, n18, σ2s02/19, mb3.2/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GALAA	**Gareloi Lava P**	**0.89**	**36**	P	**Pn**	**05 16 41.9**	**-0.8**
GAEA	**Gareloi East**	**0.91**	**36**	P	**Pn**	**05 16 42.1**	**-0.9**
GANE	**Gareloi Northe**	**0.93**	**33**	P	**Pn**	**05 16 41.9**	**-1.4**
TASE	**Tanaga Southea**	**1.26**	**50**	P	**Pn**	**05 16 48.2**	**+0.4**
TASE				S	**Sn**	**05 17 06.5**	**+2.9**
TANO	**Tanaga North**	**1.27**	**46**	P	**Pn**	**05 16 48.2**	**+0.3**
TAFP	**Tanaga Falls P**	**1.33**	**49**	P	**Pn**	**05 16 48.4**	**-0.3**
TAFP				S	**Sn**	**05 17 08.7**	**+3.5**
KIRH	**Kanaga Island**	**1.79**	**60**	P	**Pn**	**05 16 56.0**	**+1.0**
GSCK	**Great Sitkin C**	**2.36**	**64**	P	**Pn**	**05 17 03.6**	**+0.8**
GSMY	**Great Sitkin M**	**2.43**	**64**	P	**Pn**	**05 17 05.1**	**+1.3**
KOKL	**Mount Kliuchef**	**3.60**	**67**	P	**Pn**	**05 17 21.7**	**+1.8**
KOFP	**Korovin Flat P**	**3.64**	**68**	P	Pn	05 17 22.9	+2.4
FX1	**Attu Island--F**	**4.84**	**295**	*e*Pn	**Pn**	**05 17 38.0**	**+1.2**
FX1				*e*Sn	**Sn**	**05 18 34.5**	**+3.0**
FX1	**Attu Island--F**	**4.84**	**295**	P	**Pn**	**05 17 35.7**	**-1.1**
	4.2nm,0.3s,baz=321,slow=18,SNR=17						
FX1				S	**Sn**	**05 18 35.0**	**+3.5**
	2.8nm,0.3s,baz=306,slow=19,SNR=3.3						
KDAK	**Kodiak Island**	**17.03**	**56**	P	**Pn**	**05 20 18.8**	**-2.5**
	0.3nm,0.3s,baz=268,slow=11,SNR=6.6						
DLBC	**Dease Lake**	**28.96**	**56**	LR	LR	05 32 42.6	
	comp=Z,13nm,20.3s,baz=354,slow=33						
YKA	**Yellowknife Ar**	**35.83**	**46**	P	**P**	**05 23 20.4**	**-1.1**
	0.1nm,0.8s,baz=283,slow=7.2,SNR=4.7						
PDAR	**Pinedale Array**	**46.89**	**71**	P	**P**	**05 24 51.2**	**-1.5**
	0.7nm,0.9s,baz=319,slow=3.6,SNR=2.4						
MKAR	**Makanchi Array**	**59.84**	**308**	P	P	05 26 23.5	-3.9
	0.1nm,0.5s,baz=46,slow=6.2,SNR=2.5						

*BJI **12** 05:19:54.2, 1°.90N×122°.28E, h33km, mB5.1/44, mb5.2/61, Ms4.7/61, Ms7 4.5/58*

*MOS **12** 05:19:54.9±0.9, 2°.05N×122°.13E, h33km, mb5.4/40, MS4.5/7, Error ellipse: s-maj=11.0km s-min=5.5km az=114.7*

*ISCJB **12** 05:19:55.7±0.3, 2°.02N±0°.02×122°.19E±0°.02, h38km±3km, mb5.1/137, MS4.5/46, Error ellipse: s-maj=3.1km s-min=2.7km az=163.6*

*GCMT **12** 05:19:57.5±0.2, 2°.14N×122°.14E, h30km, MW5.2, Moment Tensor Solution. s65,c98; s92,c165; Moment tensor: Scale 10^{16}Nm; M_{rr}4.64±.18; $M_{\theta\theta}$-6.47±.13; $M_{\phi\phi}$1.84±.15; $M_{r\theta}$5.14±.20; $M_{\theta\phi}$1.29±.11; $M_{\phi r}$-4.95±.27; Best double couple: $M_0$9.30000×10^{16} NP1:ϕ=250.00000°, δ29.00000°, λ37.00000°. NP2:ϕ=126.00000°, δ73.00000°, λ114.00000°. Principal axes: T 9.1700, Plg56.0000°, Azm66.0000°; N 0.2200, Plg22.0000°, Azm299.0000°; P -9.3700, Plg25.0000°, Azm198.0000°; Data Used: II IU IC G CN.*

*TEH **12** 05:19:58.0, 1°.95N×122°.15E, h39km, ML5.3*

*IDC **12** 05:19:59.5±0.6, 1°.98N×122°.09E, h56km±4km, mb4.7/38, mb1 4.7/39, mb1mx4.7/41, mbtmp4.7/39, MS4.5/23, Ms1 4.5/23, ms1mx4.3/33, Error ellipse: s-maj=12.2km s-min=8.0km az=73.0*

*NEIC **12** 05:19:59.2±0.2, 1°.98N×122°.12E, mb5.3/46, Error ellipse: s-maj=5.5km s-min=3.9km az=78.0*

*DJA **12** 05:19:59.4±0.2, 2°N±2°×12°2E±°, h42km±3km, M5.3/78, mb5.3/78, mB5.7/57, MLv5.6/18, Mw(mB)5.2/57, Mwp5.8/2*

*AUST **12** 05:20:02.0±0.2, 1°.84N×122°.00E, h85km, Error ellipse: s-maj=0.7km s-min=0.6km az=245.0*

ISC 12 05:19:57.5±0.2, 1°.98N±0°.02×122°.16E±0°.03, h40km±2km, h40km:pP-P, n628, σ1s51/774, mb5.1/136, MS4.5/46, 97C-92D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**1.50**	**188**	P	**Pn**	**05 20 21.1**	**-0.9**
MRSI				S	**Sn**	**05 20 41.0**	**+0.6**
KMSI	**Cibinong**	**2.29**	**127**	P	**Pn**	**05 20 33.9**	**+1.1**
KMSI				S	**Sn**	**05 21 01.0**	**+1.2**
MNI	**Manado**	**2.73**	**101**	P	**Pn**	**05 20 38.7**	**-0.2**
MNI				S	**Sn**	**05 21 10.0**	**-0.7**
APSI	**Ampana**	**2.91**	**190**	P	**Pn**	**05 20 41.9**	**+0.6**
APSI				S	**Sn**	**05 21 20.7**	**+5.6**
LUWI	**Luwuk**	**3.06**	**168**	P	**Pn**	**05 20 43.5**	**+0.1**
LUWI				S	**Sn**	**05 21 20.3**	**+1.6**
PCI	**Palu**	**3.69**	**219**	P	**Pn**	**05 20 53.2**	**+1.2**
MYLDM	**Lahad Datu**	**4.85**	**311**	P	**Pn**	**05 21 08.4**	**+0.4**
MYLDM	**Lahad Datu**	**4.85**	**311**	P	**Pn**	**05 21 09.6**	**+1.7**
TSM	**Tawau**	**4.86**	**298**	P	**Pn**	**05 21 05.9**	**-2.3**
ZMPH	**Zamboanga City**	**4.95**	**359‖**	*i*P	**Pn**	**05 21 08.6**	**-0.7**
ZMPH				*i* S	**Sn**	**05 22 00.6**	**-4.8**
TNTI	**Ternate**	**5.34**	**103**	P	**Pn**	**05 21 14.6**	**-0.1**
	427nm,0.9s,6µm2.5nm						
TNTI				S	**Sn**	**05 22 15.6**	**+0.6**
	427nm,0.9s,6µm2.5nm						

SMKI	**Samarinda**	**5.50**	**244**	P	**Pn**	**05 21 18.3**	**+1.3**
	392nm,0.5s,15µm5.3nm						
TTSI	**Tana Toraja**	**5.51**	**205**	P	Pn	05 21 15.9	-1.2
	705nm,0.9s,12µm9µm4.4nm						
TTSI				S	**Sn**	**05 22 23.1**	**+3.9**
	705nm,0.9s,12µm9µm4.4nm						
CTBH	**Cotabato--PC H**	**5.61**	**22‖**	*i*P	**Pn**	**05 21 17.7**	**-0.8**
IPIL	**Ipil**	**5.79**	**4‖**	*e*P	**Pn**	**05 21 20.7**	**-0.2**
KDI	**Kendari**	**5.91**	**176**	P	**Pn**	**05 21 22.9**	**+0.3**
	444nm,1.1s,5µm1.5nm						
KDI				S	**Sn**	**05 22 31.3**	**+2.2**
	444nm,1.1s,5µm1.5nm						
LBMI	**Labuha**	**5.94**	**116**	P	**Pn**	**05 21 22.7**	**-0.3**
	472nm,0.9s,7µm2.4nm						
LBMI				S	**Sn**	**05 22 30.3**	**+0.5**
	472nm,0.9s,7µm2.4nm						
PAGZ	**Pagadian**	**5.96**	**12**	*e*P	**Pn**	**05 21 21.9**	**-1.4**
DAV	**Davao City (W)**	**6.10**	**34**	P	**Pn**	**05 21 26.9**	**+1.6**
DAV				*e*Sn	**Sn**	**05 22 35.4**	**+1.6**
DAV				S		05 22 37.3	
DAV	**Davao City (W)**	**6.10**	**34**	Pn	**Pn**	**05 21 27.8**	**+2.6**
	SNR=31						
DAV	**Davao City (W)**	**6.10**	**34**	P	**Pn**	**05 21 26.3**	**+1.1**
	834nm,1.0s,47µm15nm						
DAV	**Davao City (W)**	**6.10**	**34**	P	**Pn**	**05 21 26.8**	**+1.6**
	44nm,0.3s,baz=231,slow=2.2,SNR=28						
DAV				S	**Sn**	**05 22 37.3**	**+3.5**
	214nm,0.3s,baz=85,slow=23,SNR=13						
DAV				LR	LR	05 23 49.9	
	comp=Z,10µm,20.1s,baz=191,slow=38						
SPSI	**Sidrap Palu**	**6.37**	**202**	P	**Pn**	**05 21 29.7**	**+0.9**
	417nm,1.0s,5µm1.4nm						
MATI	**Mati**	**6.41**	**39**	*e*P	**Pn**	**05 21 30.4**	**+1.0**
BUKP	**Musuan**	**6.54**	**26**	*e*P	**Pn**	**05 21 31.2**	**0.0**
CGP	**Cagayan de Oro**	**6.91**	**21‖**	*e*P	Pn	05 21 40.4	+4.0
CGP				*e*S	**Sn**	**05 22 51.4**	**-2.4**
NLAI	**Namlea**	**7.16**	**136**	P	**Pn**	**05 21 39.5**	**-0.2**
	254nm,0.8s,9µm2.7nm						
NLAI				S	**Sn**	**05 23 01.2**	**+1.4**
	254nm,0.8s,9µm2.7nm						
KKM	**Kota Kinabalu**	**7.18**	**304**	*e*Pn	**Pn**	**05 21 40.1**	**0.0**
KKM				*e*Sn	**Sn**	**05 22 55.7**	**-4.7**
KKM	**Kota Kinabalu**	**7.18**	**304**	P	**Pn**	**05 21 40.3**	**+0.2**
KKM	**Kota Kinabalu**	**7.18**	**304**	P	**Pn**	**05 21 40.7**	**+0.6**
	310nm,0.8s,3µm1.1nm						
KKM	**Kota Kinabalu**	**7.18**	**304**	P	**Pn**	**05 21 40.3**	**+0.2**
	baz=7.1,SNR=61						
KDM	**Kudat**	**7.23**	**313**	P	**Pn**	**05 21 40.5**	**-0.2**
KAPI	**Kappang**	**7.35**	**199**	*e*Pn	**Pn**	**05 21 40.9**	**-1.4**
KAPI				S	**Sn**	**05 23 02.6**	**-1.9**
KAPI	**Kappang**	**7.35**	**199**	Pn	**Pn**	**05 21 41.3**	**-1.0**
	SNR=20						
KAPI	**Kappang**	**7.35**	**199**	Pn	**Pn**	**05 21 41.5**	**-0.8**
	1µm,0.6s,SNR=26						
KAPI	**Kappang**	**7.35**	**199**	P	**Pn**	**05 21 41.0**	**-1.4**
	182nm,1.1s,2µm0.7nm						
KAPI	**Kappang**	**7.35**	**199**	P	**Pn**	**05 21 40.5**	**-1.8**
	9.6nm,0.3s,baz=14,slow=7.5,SNR=24						
KAPI				S	**Sn**	**05 23 02.6**	**-1.9**
	baz=162,slow=20,SNR=2.4						
KAPI				LR	LR	05 25 07.8	
	comp=Z,7µm,19.3s,baz=3.1,slow=42						
SNPH	**Sibulan**	**7.40**	**8**	*i* P	Pn	05 21 31.9	-11
BBSI	**Bau Bau**	**7.42**	**177**	P	**Pn**	**05 21 44.7**	**+1.3**
	441nm,1.0s,5µm1.7nm						
BKSI	**Bulukumba**	**7.53**	**196**	P	**Pn**	**05 21 44.5**	**-0.3**
	157nm,0.8s,1µm0.5nm						
KBKI	**Kotabaru**	**7.96**	**229**	P	**Pn**	**05 21 50.4**	**-0.3**
	123nm,0.8s						
AAI	**Ambon**	**8.25**	**133**	P	Pn	05 21 59.7	+5.0
MSAI	**Masohi**	**8.59**	**128**	P	**Pn**	**05 21 59.1**	**-0.2**
	87nm,0.9s,1µm						
BBKI	**Banjar Baru**	**9.09**	**234**	P	**Pn**	**05 22 07.9**	**+1.6**
	143nm,1.1s,3µm						
BTM	**Bintulu**	**9.15**	**278**	P	**Pn**	**05 22 06.9**	**-0.1**
PLKI	**Palangkaraya**	**9.21**	**243**	P	**Pn**	**05 22 09.7**	**+1.8**
	271nm,0.4s						
SWI	**Sorong**	**9.53**	**107**	P	**Pn**	**05 22 14.7**	**+2.5**
	97nm,0.8s,1µm						
SWI	**Sorong**	**9.53**	**107**	P	Pn	05 22 15.9	+3.7
	baz=9.7,SNR=5.7						
SBUM	**Sibu**	**9.94**	**273**	P	**Pn**	**05 22 18.9**	**+0.9**
SBUM	**Sibu**	**9.94**	**273**	P	**Pn**	**05 22 18.4**	**+0.4**
	227nm,1.1s,2µm						
MMRI	**Maumere**	**10.54**	**180**	P	**Pn**	**05 22 26.5**	**+0.4**
	132nm,1.5s,2µm						
STKI	**Sintang**	**10.85**	**260**	P	**Pn**	**05 22 32.5**	**+2.2**
	92nm,0.8s,13µm						
KSM	**Kuching**	**11.86**	**268**	*e*Pn	**Pn**	**05 22 44.7**	**+0.6**
KSM	**Kuching**	**11.86**	**268**	P	**Pn**	**05 22 44.7**	**+0.6**
KSM	**Kuching**	**11.86**	**268**	P	**Pn**	**05 22 45.0**	**+0.8**
	47nm,1.3s,752nm						
KSM	**Kuching**	**11.86**	**268**	P	**Pn**	**05 22 44.8**	**+0.6**
	baz=12,SNR=11						
SRBI	**Singaraja**	**12.16**	**215**	P	**Pn**	**05 22 49.6**	**+1.3**
	59nm,1.6s,1µm						
KHKI	**Kahang-Kahang**	**12.17**	**212**	P	**Pn**	**05 22 50.4**	**+2.0**
	62nm,1.6s,1µm						
NBBI	**Negara**	**12.73**	**216**	P	**Pn**	**05 22 57.3**	**+1.2**
	166nm,0.9s,2µm						
PALU	**Palau**	**13.38**	**66**	P	**P**	**05 23 14.6**	**+0.9**
	baz=14,SNR=3.9						
GMJI	**Gumukmas**	**13.39**	**220**	P	P	05 23 18.6	+4.8
KRKI	**Karangkates**	**13.97**	**224**	P	**P**	**05 23 21.7**	**+1.5**
SJI	**Sawahan**	**14.16**	**227**	P	**P**	**05 23 20.4**	**-2.1**
	58nm,1.1s						
BAKI	**Biak**	**14.29**	**103**	P	Pn	**05 23 20.3**	**+2.9**
	200nm,1.1s,2µm						
PWJI	**Pagerwojo**	**14.33**	**226**	P	**Pn**	**05 23 19.6**	**+1.7**
	69nm,1.3s,1µm						
SMRI	**Semarang**	**14.74**	**232**	P	**Pn**	**05 23 25.7**	**+2.3**
	470nm,1.3s,7µm						
PCJI	**Pacitan**	**14.90**	**227**	P	**P**	**05 23 30.1**	**-0.5**
	186nm,1.1s						
UGM	**Wanagama**	**15.21**	**230**	*e*Pn	**Pn**	**05 23 31.7**	**+2.1**
	245nm,1.2s						
UGM	**Wanagama**	**15.21**	**230**	P	**P**	**05 23 38.3**	**+4.3**
UGM	**Wanagama**	**15.21**	**230**	P	**P**	**05 23 33.3**	**-0.7**
	baz=15,SNR=4.1						
TPI	**Tanjungpandan**	**15.24**	**252**	P	**Pn**	**05 23 31.1**	**+1.0**
	18nm,1.5s,683nm						
YOGI	**Yogyakarta**	**15.32**	**230**	P	**P**	**05 23 36.4**	**+1.1**
	1µm,1.1s,13µm						
BJII	**Banjamegara**	**15.49**	**233**	P	**Pn**	**05 23 34.9**	**+1.6**
	752nm,1.6s,11µm						
TGJI	**Tegal**	**15.70**	**236**	P	**P**	**05 23 39.0**	**-0.5**
	493nm,1.3s,7µm						
CLJI	**Cilicap**	**16.27**	**234**	P	**P**	**05 23 44.6**	**-1.2**
	424nm,1.4s,6µm						
PPBI	**Pangkal Pinang**	**16.54**	**256**	P	**Pn**	**05 23 46.5**	**-0.2**
	44nm,1.2s						
LEM	**Lembang**	**16.95**	**239**	P	**P**	**05 23 56.0**	**+2.5**
	289nm,1.7s,5µm						
LEM	**Lembang**	**16.95**	**239**	P	**P**	**05 23 57.5**	**+4.0**
	baz=17,SNR=3.7						
CISI	**Cisompet, Garu**	**17.16**	**236**	P	**P**	**05 23 56.1**	**+0.3**
	1µm,1.1s,11µm						
MTN	**Manton Dam**	**17.21**	**149**	P	**Pn**	**05 23 55.5**	**+0.5**
	baz=17,SNR=81						
CBJI	**Citeko**	**17.41**	**241**	P	**P**	**05 24 02.9**	**+4.4**
	2µm,1.2s,22µm						
DBJI	**Dramaga**	**17.56**	**241**	P	**P**	**05 24 02.8**	**+2.6**
	679nm,1.4s,8µm						
CNJI	**Cibinong**	**17.61**	**238**	P	**P**	**05 24 02.4**	**+1.8**
	593nm,1.5s,10µm						
KDU	**Kakadu**	**17.80**	**145**	P	**Pn**	**05 24 02.3**	**-0.1**
	baz=18,SNR=38						
SBJI	**Serang**	**17.91**	**243**	P	**P**	**05 24 07.8**	**+3.8**
	300nm,1.2s,8µm						
SKJI	**Sukabumi**	**17.95**	**240**	P	**P**	**05 24 07.3**	**+2.9**
	610nm,1.7s,11µm						
MYKOM	**Kota Tinggi**	**18.30**	**270**	P	**P**	**05 24 06.5**	**-1.8**
MYKOM	**Kota Tinggi**	**18.30**	**270**	P	Pn	05 24 15.7	+7.2
CGJI	**Cibinong**	**18.52**	**242**	P	**Pn**	**05 24 12.3**	**+1.1**
	254nm,1.6s,6µm						
KGM	**Kluang**	**18.83**	**270**	P	**P**	**05 24 12.2**	**-2.0**
JAY	**Jayapura**	**19.07**	**103**	P	**Pn**	**05 24 21.7**	**+3.8**
JAY	**Jayapura**	**19.07**	**103**	P	**Pn**	**05 24 18.9**	**+1.1**
	baz=19,SNR=8.5						
KASI	**Kota Agung**	**19.15**	**247**	P	**Pn**	**05 24 20.1**	**+1.3**
	170nm,1.1s,2µm						
KTGM	**Kuala Trenggan**	**19.27**	**280**	P	**P**	**05 24 17.3**	**-1.7**
LWLI	**Liwa**	**19.37**	**249**	P	**Pn**	**05 24 23.1**	**+1.5**
	329nm,1.4s,4µm						
MNAI	**Manna**	**20.20**	**252**	P	Pn	05 24 38.5	+7.3
FITZ	**Fitzroy Crossi**	**20.24**	**170**	*e*P	**P**	**05 24 28.9**	**-0.6**
	399nm,1.1s						

FITZ				*e*S	**S**	**05 28 10.3**	**-4.2**
FITZ	**Fitzroy Crossi**	**20.24**	**170**	P	**P**	**05 24 28.8**	**-0.6**
	179nm,0.6s,baz=360,slow=9.2,SNR=988						
FITZ				S	**S**	**05 28 10.3**	**-4.2**
	12nm,0.9s,baz=219,slow=14,SNR=6.6						
FITZ	**Fitzroy Crossi**	**20.24**	**170**	P	**P**	**05 24 28.8**	**-0.6**
	baz=20,SNR=616						
FITZ				S	**S**	**05 28 10.6**	**-4.0**
	baz=20,SNR=7.4						
KSI	**Kapahiang**	**20.34**	**254**	P	Pn	05 24 32.9	-0.1
	242nm,0.8s,6µm						
FRIM	**Kepong**	**20.55**	**274**	P	**P**	**05 24 29.8**	**-3.1**
TWG	**Pinlang**	**20.75**	**357**	*e*P	**P**	**05 24 35.7**	**+0.7**
	193nm,0.7s						
QIZ	**Qiongzhong**	**20.80**	**325**	P	**P**	**05 24 36.2**	**+0.6**
QIZ				sP	**sP**	**05 24 48.6**	**-2.0**
QIZ				S	**S**	**05 28 28.2**	**+2.5**
QIZ				sS	**sS**	**05 28 41.0**	**-0.8**
QIZ				pmax	pmax		
	comp=Z,72nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,130nm,4.0s						
QIZ				LR	LR		
	comp=N,690nm,14.6s						
QIZ				LR	LR		
	comp=Z,1µm,18.3s						
BKNI	**Bangkinang**	**21.18**	**266**	P	P	05 24 48.5	+8.8
IPM	**Ipoh**	**21.25**	**277**	*e*P	**P**	**05 24 41.6**	**+1.1**
	comp=Z,91nm,1.3s						
IPM	**Ipoh**	**21.25**	**277**	P	**P**	**05 24 38.5**	**-2.0**
IPM	**Ipoh**	**21.25**	**277**	P	**P**	**05 24 43.4**	**+2.9**
	comp=Z,36nm,2.0s,comp=Z,927nm						
TPUB	**Ta-pu**	**21.25**	**356**	*e*P	**P**	**05 24 39.8**	**-0.6**
	comp=Z,148nm,0.7s						
TPUB				*e*S	**S**	**05 28 32.7**	**-1.8**
YULB	**Yu-li**	**21.31**	**358**	*e*P	**P**	**05 24 40.2**	**-0.8**
	comp=Z,70nm,0.9s						
KULM	**Kulim**	**21.72**	**279**	*e*P	**P**	**05 24 45.5**	**0.0**
	comp=Z,18nm,0.8s						
KULM				*e*		05 28 45.0	
KULM	**Kulim**	**21.72**	**279**	P	**P**	**05 24 43.8**	**-1.7**
KULM	**Kulim**	**21.72**	**279**	P	**P**	**05 24 47.8**	**+2.3**
	comp=Z,26nm,2.0s,comp=Z,606nm						
SSLB	**Suanglung**	**21.72**	**357**	*e*P	**P**	**05 24 45.0**	**-0.3**
	comp=Z,80nm,0.9s						
PPI	**Padang Panjang**	**21.89**	**264**	P	**P**	**05 24 49.3**	**+1.9**
	comp=Z,808nm,1.0s,comp=Z,28µm						
CHBT	**CHBT**	**22.37**	**300**	P	**P**	**05 24 52.7**	**+0.3**
	comp=Z,150nm,1.1s,comp=Z,3µm						
YHNB	**Yeheng**	**22.57**	**358**	*e*P	**P**	**05 24 53.1**	**-1.5**
	comp=Z,126nm,1.3s						
MNSI	**Mandailing Nat**	**22.60**	**267**	P	**P**	**05 24 56.6**	**+1.6**
	comp=Z,286nm,0.7s,comp=Z,2µmcomp=Z,89µm						
TATO	**Taipei**	**22.88**	**358**	*e*P	**P**	**05 24 57.5**	**-0.2**
	comp=Z,128nm,1.1s						
QZH	**Quanzhou**	**23.09**	**352**	P	P	05 24 55.0	-4.9
QZH				S	**S**	**05 29 08.0**	**-0.3**
QZH				pmax	pmax		
	comp=Z,120nm,0.8s						
QZH				pmax	pmax		
	comp=Z,760nm,3.6s						
QZH				LR	LR		
	comp=N,2µm,16.4s						
QZH				LR	LR		
	comp=E,1µm,14.7s						
QZH				LR	LR		
	comp=Z,2µm,18.7s						
MBWA	**Marble Bar**	**23.11**	**186**	*e*P	**P**	**05 24 57.8**	**-2.4**
	comp=Z,94nm,1.2s						
MBWA	**Marble Bar**	**23.11**	**186**	P	**P**	**05 24 58.1**	**-2.0**
	SNR=8.2						
PSI	**Prapat**	**23.23**	**272**	P	**P**	**05 25 01.0**	**-0.6**
PSI	**Prapat**	**23.23**	**272**	P	**P**	**05 25 02.0**	**+0.4**
	comp=Z,68nm,1.6s,comp=Z,1µm						
PSI	**Prapat**	**23.23**	**272**	P	**P**	**05 25 01.0**	**-0.6**
	comp=Z,28nm,0.9s,baz=98,slow=4.2,SNR=17						
PSI				LR	LR	05 34

GYA LR LR
comp=Z,1μm,19.6s
MEEK Meekatharra 28.65 187 P P 05 25 49.5 -1.1
baz=29,SNR=40
MEEK S S 05 30 20.8 -16
baz=29,SNR=3.2
SSE Sheshan 28.98 358 P P 05 25 52.3 -1.1
SSE S S **05 30 41.9 +0.1**
SSE pmax pmax
comp=Z,11nm,0.4s
SSE pmax pmax
comp=Z,230nm,7.1s
SSE LR LR
comp=N,770nm,19.1s
SSE LR LR
comp=E,510nm,19.1s
SSE LR LR
comp=Z,1μm,17.7s
WHN Wuhan 29.36 346 ⇓P P 05 25 58.6 +1.8
WHN sP **sP 05 26 12.7 +0.1**
WHN S S **05 30 51.2 +3.4**
WHN pmax pmax
comp=Z,78nm,1.2s
WHN LR LR
comp=N,2μm,14.6s
WHN LR LR
comp=E,820nm,18.3s
WHN LR LR
comp=Z,3μm,19.1s
KMI Kunming 29.67 322 P P 05 26 01.8 +1.8
KMI pP **pP 05 26 11.4 +0.5**
KMI sP **sP 05 26 14.9 -0.8**
KMI PP **PnPn 05 26 58.4 +2.2**
KMI S S **05 30 54.0 +0.6**
KMI sS **sS 05 31 10.5 -1.1**
KMI SS **SnSn 05 32 30.8 +6.0**
KMI pmax pmax
comp=Z,29nm,1.0s
KMI pmax pmax
comp=Z,210nm,6.5s
KMI LR LR
comp=N,230nm,21.4s
KMI LR LR
comp=E,330nm,22.6s
KMI LR LR
comp=Z,560nm,21.4s
NJ2 Nanjing 30.08 354 eP P 05 26 04.8 +1.6
NJ2 pP **pP 05 26 13.0 -1.1**
NJ2 sP **sP 05 26 17.1 -1.8**
NJ2 S S 05 31 05.0 +5.9
NJ2 sS **sS 05 31 18.0 +0.6**
NJ2 pmax pmax
comp=Z,50nm,0.8s
NJ2 pmax pmax
comp=Z,260nm,10.4s
NJ2 LR LR
comp=N,880nm,20.6s
NJ2 LR LR
comp=E,600nm,17.4s
NJ2 LR LR
comp=Z,1μm,20.4s
MORW Morawa 31.42 190 P P 05 26 14.1 -1.0
baz=31,SNR=16
MORW S S 05 31 39.4 +19
baz=31,SNR=3.9
CBIJ Chichi jima 31.50 36 P P 05 26 15.9 +0.1
CBIJ Chichi jima 31.50 36 P P 05 26 15.9 +0.1
comp=Z,272nm,0.7s,baz=233,slow=4.4,SNR=14
JNU Nakatsue 32.05 14 eP P 05 26 20.3 -0.2
JNU Nakatsue 32.05 14 P P 05 26 19.9 -0.6
comp=Z,22nm,1.0s,baz=169,slow=4.1,SNR=9.6
JNU LR LR 05 39 48.8
comp=Z,400nm,19.4s,baz=174,slow=37
CTA Charters Tower 32.24 134 P P 05 26 23.6 +1.2
CTA PcP **PcP 05 29 12.1 +1.7**
CTA Charters Tower 32.24 134 P P 05 26 23.6 +1.2
comp=Z,14nm,0.8s,baz=309,slow=9.2,SNR=8.9
CTA PcP **PcP 05 29 12.1 +1.7**
comp=Z,8.0nm,0.9s,baz=301,slow=5.9,SNR=3.1
CTAO Charters Tower 32.24 134 eP P 05 26 27.2 +4.8
CTAO pmax pmax
comp=Z,17nm,0.9s
CTAO Charters Tower 32.24 134 eP P 05 26 27.2 +4.8
comp=Z,17nm,0.9s
BLDU Ballidu 32.82 189 P P 05 26 25.9 -1.4
baz=33,SNR=42
FORT Forrest 33.05 171 eP P 05 26 28.6 -0.7
comp=Z,63nm,0.7s
FORT epP **pP 05 26 37.1 -3.3**
FORT ePP **PP 05 27 43.5 -1.2**
FORT Forrest 33.05 171 P P 05 26 28.9 -0.4
baz=33,SNR=12
KMBL Kambalda 33.16 180 P P 05 26 29.3 -1.0
baz=33,SNR=14
CD2 Chengdu 33.64 331 P P 05 26 35.7 +1.2
CD2 pP **pP 05 26 45.4 -0.2**
CD2 sP **sP 05 26 49.3 -1.1**
CD2 PP **PP 05 27 49.3 -1.9**
CD2 PcP **PcP 05 29 14.5 +0.4**
CD2 S S **05 31 56.4 +1.6**
CD2 sS **sS 05 32 12.4 -0.8**
CD2 PcS **PcS 05 32 59.3 -0.8**
CD2 SS **SnSn 05 34 03.3 +2.5**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,210nm,5.8s
CD2 LR LR
comp=N,740nm,19.6s
CD2 LR LR
comp=E,570nm,18.2s
CD2 LR LR
comp=Z,510nm,18.1s
KLBR Kellerberrin 33.64 187 P P 05 26 33.3 -1.2
baz=34,SNR=10
XAN Xi'an 34.22 340 P P 05 26 39.3 -0.2
XAN pP **pP 05 26 48.5 -2.1**
XAN sP **sP 05 26 53.0 -2.3**
XAN PP **PnPn 05 27 52.0 -2.5**
XAN S S **05 31 58.5 -5.2**
XAN pmax pmax
comp=Z,31nm,5.3s
XAN LR LR
comp=N,440nm,19.3s
XAN LR LR
comp=E,200nm,19.3s
XAN LR LR
comp=Z,200nm,21.1s
NWAO Narrogin (SRO) 35.02 187 P P 05 26 45.5 -0.9
NWAO Narrogin (SRO) 35.02 187 P P 05 26 45.5 -0.9
comp=Z,26nm,0.7s,baz=21,slow=9.6,SNR=18
JHJ Hachijo jima 2 35.12 26 LR LR 05 39 07.2
comp=Z,1μm,20.8s,baz=235,slow=33
QLP Quilpie 35.50 145 P P 05 26 52.1 +1.5
baz=36,SNR=8.6
KSAR Wonju Array Be 35.69 8 P P 05 26 53.3 +1.2
KSAR PcP **PcP 05 29 19.9 +0.1**
KSRS Korea Array 35.70 8 P P 05 26 53.3 +1.1
comp=Z,16nm,0.9s,baz=186,slow=9.9,SNR=77
KSRS PcP **PcP 05 29 19.9 +0.1**
comp=Z,2.4nm,0.8s,baz=176,slow=3.5,SNR=5.1
KSRS LR LR 05 40 58.7
comp=Z,936nm,20.6s,baz=187,slow=35
RKGY Rocky Gully 36.72 187 P P 05 27 01.6 +0.8
baz=37,SNR=5.2
DL2 Dalian 36.76 359 P P 05 27 01.9 +0.7
DL2 S S **05 32 44.7 +2.3**
DL2 pmax pmax
comp=Z,30nm,0.9s
DL2 pmax pmax
comp=Z,140nm,6.6s
DL2 LR LR
comp=N,280nm,20.2s
DL2 LR LR
comp=E,250nm,16.5s
DL2 LR LR
comp=Z,370nm,27.0s
BBOO Buckleboo 37.01 160 eP P 05 27 03.4 0.0
comp=Z,900nm,0.9s
BBOO ePP **PP 05 28 26.6 -1.8**
BBOO Buckleboo 37.01 160 P P 05 27 03.4 0.0
baz=37,SNR=34
MAJO Matsushiro 37.46 21 eP P 05 27 05.3 -2.0
MAJO pmax pmax
comp=Z,69nm,1.5s
MAJO Matsushiro 37.46 21 eP P 05 27 05.3 -2.0
comp=Z,69nm,1.5s
MAT Matsushiro 37.46 21 P P 05 27 05.8 -1.4
MAT S S **05 32 54.6 +1.4**
MJAR Matsushiro Arr 37.46 21 P P 05 27 05.8 -1.4
MJAR Matsushiro Arr 37.46 21 P P 05 27 05.8 -1.4
comp=Z,18nm,0.9s,baz=200,slow=9.8,SNR=58
MJAR LR LR 05 40 32.3
comp=Z,898nm,22.0s,baz=210,slow=33
LZH Lanzhou 37.95 336 eP P 05 27 11.0 -0.5
LZH pP **pP 05 27 21.0 -1.7**
LZH sP **sP 05 27 25.5 -1.9**
LZH eS **ScP 05 33 09.0 -2.6**
LZH SS **SnSn 05 35 40.3 -4.8**
LZH pmax pmax
comp=Z,16nm,1.1s
LZH pmax pmax
comp=Z,150nm,6.6s
LZH LR LR
comp=N,880nm,15.6s
LZH LR LR
comp=E,500nm,14.6s
LZH LR LR
comp=Z,890nm,16.2s
BJI Beijing 38.28 353 P P 05 27 14.2 +0.2
BJI PP **PP 05 28 42.1 -0.1**
BJI S S **05 33 04.9 -0.5**
BJI pmax pmax
comp=Z,19nm,1.3s
BJI pmax pmax
comp=Z,180nm,3.9s
BJI LR LR
comp=N,610nm,21.3s
BJI LR LR
comp=E,480nm,18.9s
BJI LR LR
comp=Z,620nm,24.9s
STKA Stephens Creek 38.39 153 P P 05 27 15.4 +0.3
STKA PP **PP 05 28 41.6 -1.9**
STKA eP **PnPn 05 28 42.4 -3.2**
STKA eScP **ScP 05 33 12.0 -1.2**
STKA Stephens Creek 38.39 153 P P 05 27 15.4 +0.3
comp=Z,20nm,0.6s,baz=324,slow=8.3,SNR=91
STKA PP **PP 05 28 41.6 -1.9**
comp=Z,34nm,1.0s,baz=324,slow=10,SNR=4.9
STKA LR LR 05 46 10.4
comp=Z,387nm,18.1s,baz=325,slow=41
STKA Stephens Creek 38.39 153 P P 05 27 15.7 +0.6
baz=38,SNR=102
SNY Shenyang 39.70 2 ⇓P P 05 27 25.9 0.0
SNY S S **05 33 26.1 -0.6**
SNY pmax pmax
comp=Z,57nm,1.0s
SNY pmax pmax
comp=Z,420nm,3.5s
SNY LR LR
comp=N,690nm,18.0s
SNY LR LR
comp=E,740nm,18.6s
SNY LR LR
comp=Z,870nm,18.8s
HHC Hu-ho-hao-te 39.87 347 eP P 05 27 27.8 +0.3
HHC sP **sP 05 27 42.0 -1.4**
HHC PP **PnPn 05 29 05.0 +1.8**
HHC PcP **PcP 05 29 33.3 +0.5**
HHC ScP **ScP 05 33 18.6 -0.2**
HHC PcS **PcS 05 33 22.6 -0.4**
HHC S S **05 33 31.2 +1.6**
HHC SS **SS 05 36 22.4 -4.8**
HHC ScS **ScS 05 37 30.6 -1.2**
HHC pmax pmax
comp=Z,62nm,0.6s
HHC pmax pmax
comp=Z,440nm,6.2s
HHC LR LR
comp=N,2μm,15.1s
HHC LR LR
comp=E,630nm,14.3s
HHC LR LR
comp=Z,2μm,14.4s
CMSA Cobar Meteorol 40.13 148 P P 05 27 31.4 +1.8
baz=40,SNR=20
ODAN Odare 41.52 310 eP P 05 27 41.9 +0.4
comp=Z,55nm,1.0s
TAPN Taplejung 41.52 311 eP P 05 27 41.9 +0.3
comp=Z,59nm,1.1s
CN2 Changchun 41.75 4 eP P 05 27 41.8 -1.0
CN2 epP **pP 05 27 51.7 -2.4**
CN2 eS **S 05 33 53.9 -3.4**
CN2 SS **SS 05 37 01.9 -2.4**
CN2 pmax pmax
comp=Z,10.0nm,1.3s
CN2 LR LR
comp=N,300nm,18.0s
CN2 LR LR
comp=E,400nm,18.0s
CN2 LR LR
comp=Z,500nm,22.0s
VLA Vladivostok 41.88 11 ⇓iP P 05 27 42.1 -1.8
VLA e 05 29 37.4
VLA S S **05 33 57.8 -1.4**
VLA pmax pmax
comp=Z,35nm,1.3s
RAMN Ramite 42.17 309 eP P 05 27 47.5 +0.7
comp=Z,60nm,1.0s
GTA Gaotai 42.46 334 eP P 05 27 50.2 +1.3
GTA pP **pP 05 27 59.4 -0.7**
GTA sP **sP 05 28 04.0 -0.9**
GTA PcP **PcP 05 29 41.9 +0.6**
GTA S S **05 34 13.2 +5.0**
GTA sS **sS 05 34 29.3 +2.4**
GTA SS **SS 05 37 17.3 -1.4**
GTA pmax pmax
comp=Z,12nm,1.1s
GTA pmax pmax
comp=Z,200nm,6.2s
GTA LR LR
comp=N,330nm,20.0s
GTA LR LR
comp=E,400nm,16.6s
GTA LR LR
comp=Z,540nm,15.7s
ARPS Mount Arapiles 42.67 156 P P 05 27 51.5 +1.0
baz=43,SNR=33
ARMA Armidale 42.74 141 eP P 05 27 51.9 +0.6
comp=Z,20nm,0.8s
ARMA Armidale 42.74 141 P P 05 27 53.3 +2.0
baz=43,SNR=9.9
USRK Ussurisyk Arra 42.94 10 P P 05 27 52.7 +0.2
comp=Z,16nm,0.8s,baz=198,slow=8.1,SNR=39
USRK LR LR 05 44 53.7
comp=Z,422nm,19.7s,baz=171,slow=35
MDJ Mudanjiang 42.97 8 P P 05 27 53.0 +0.3
MDJ pP **pP 05 28 02.2 -1.8**
MDJ S S **05 34 15.2 -0.1**
MDJ pmax pmax
comp=Z,65nm,1.5s
MDJ pmax pmax
comp=Z,180nm,9.1s
MDJ LR LR
comp=N,480nm,29.6s
MDJ LR LR
comp=E,140nm,33.9s
MDJ LR LR
comp=Z,660nm,22.6s
GUN Gumba 43.20 310 eP P 05 27 55.9 +0.6
comp=Z,82nm,0.9s
PKI Pulchoki 43.40 309 eP P 05 27 56.8 -0.1
KKN Kakani 43.60 310 eP P 05 27 58.7 +0.3
DMN Daman 43.65 309 eP P 05 27 59.0 +0.2
comp=Z,78nm,1.1s
YNG Young 43.70 148 P P 05 28 00.8 +1.9
baz=44,SNR=9.2
ERM Erimo 44.10 23 eP P 05 28 01.6 -0.3
ERM pmax pmax
comp=Z,21nm,0.3s
ERM Erimo 44.10 23 eP P 05 28 01.6 -0.3
comp=Z,21nm,0.3s
ERM Erimo 44.10 23 P P 05 28 02.6 +0.8
comp=Z,148nm,0.9s,SNR=14
MGCD Mangrove Creek 44.40 145 P P 05 28 07.1 +2.7
baz=44,SNR=5.5
CAN Canberra 44.80 148 eP P 05 28 08.8 +1.1
CAN pmax pmax
comp=Z,43nm,0.8s
CAN Canberra 44.80 148 eP P 05 28 08.8 +1.1
comp=Z,43nm,0.8s
TOO Toolangi 44.90 154 P P 05 28 10.3 +1.9
baz=45,SNR=4.4
KOLN Koldanda 44.90 309 eP P 05 28 09.0 +0.2
comp=Z,95nm,0.7s
CNB Canberra Magne 44.99 148 P P 05 28 10.8 +1.6
baz=45,SNR=7.7
DANN Dangsing 45.05 309 eP P 05 28 10.1 0.0
comp=Z,118nm,0.7s
HYB Hyderabad 45.49 293 i P P 05 28 12.0 -1.4
PYUN Piuthan 45.53 309 eP P 05 28 14.2 +0.4
comp=Z,223nm,0.8s
ASAJ Asahikawa 45.71 21 eP P 05 28 13.8 -0.9
comp=Z,20nm,0.8s
YUK Yuzh-Kuril'sk 46.86 23 c iP P 05 28 14.0 -10
YUK i S S 05 35 03.9 -7.7
YUK pmax pmax
comp=N,494nm,1.4s
YUK pmax pmax
comp=E,537nm,1.4s
YUK pmax pmax
comp=Z,484nm,1.4s
YUK pmax pmax
comp=Z,1μm,1.5s
ULN Ulaanbaatar 47.55 346 eP P 05 28 29.5 +0.3
comp=Z,31nm,1.0s
ULN Ulaanbaatar 47.55 346 P P 05 28 30.1 +0.9
SNR=11
ULN Ulaanbaatar 47.55 346 P P 05 28 29.7 +0.5
comp=Z,22nm,1.1s,comp=Z,463nm
SONM Songino Array 47.68 346 P P 05 28 30.4 +0.3
SONM pP **pP 05 28 45.3 +3.7**
SONM PcP **PcP 05 29 57.9 -1.3**
SONM Songino Array 47.68 346 P P 05 28 30.4 +0.3
comp=Z,8.2nm,0.7s,baz=167,slow=8.9,SNR=32
SONM pP **pP 05 28 45.3 +3.7**
comp=Z,10nm,0.7s,baz=162,slow=9.0,SNR=9.3
SONM PcP **PcP 05 29 57.9 -1.3**
comp=Z,3.3nm,0.7s,baz=165,slow=3.9,SNR=3.8
SONM LR LR 05 49 26.0
comp=Z,1μm,20.9s,baz=56,slow=37
KLR Kul'dur 47.79 8 eP P 05 28 27.4 -3.5
KLR e 05 28 43.1
KLR pmax pmax
comp=N,35nm,1.8s
KLR pmax pmax
comp=Z,70nm,1.8s
POO Poona 50.10 293 eP P 05 28 47.0 -2.1
DDI Dehra Dun 50.38 309 ex P 05 28 50.0 -1.1
ZAK Zakamensk 50.82 344 eP P 05 28 54.2 0.0
ZAK e 05 29 09.2
ZAK e 05 30 09.4
ZAK pmax pmax
comp=Z,7.0nm,1.3s
ZAK pmax pmax
comp=Z,12nm,1.3s
WMQ Urumqi 51.68 329 P P 05 29 01.0 +0.3
WMQ pP **pP 05 29 11.0 -1.2**
WMQ sP **sP 05 29 15.0 -1.8**
WMQ PcP **PcP 05 30 11.0 -2.8**
WMQ PP **PP 05 31 01.0 +2.4**
WMQ ScP **ScP 05 34 03.0 -4.6**
WMQ S S **05 36 25.0 +5.6**
WMQ ScS **ScS 05 38 45.0 -2.9**
WMQ pmax pmax
comp=Z,340nm,1.0s
WMQ pmax pmax
comp=Z,960nm,5.0s
WMQ LR LR
comp=N,340nm,17.0s
WMQ LR LR
comp=E,500nm,18.0s
WMQ LR LR
comp=Z,440nm,18.0s
TLY Talaya 51.92 345 eP P 05 29 02.1 -0.1
TLY i 05 29 17.7
TLY e 05 30 57.5
TLY eSS SS 05 39 52.4 -7.3
TLY eSSS SSS 05 41 42.2
TLY pmax pmax
comp=Z,32nm,2.2s
TLY MLR MLR
comp=Z,549nm,20.0s
TLY Talaya 51.92 345 eP P 05 29 03.4 +1.2
comp=Z,16nm,0.7s
TLY epP **pP 05 29 13.7 0.0**
TLY esP **sP 05 29 18.7 +0.4**
TLY Talaya 51.92 345 P P 05 29 03.7 +1.5
SNR=16
TLY Talaya 51.92 345 P P 05 29 03.1 +0.9
comp=Z,84nm,1.1s,SNR=6.4
IRK Irkutsk 52.28 346 eP P 05 29 05.4 +0.5
IRK pmax pmax
comp=Z,48nm,1.4s
MOY Mondy 52.61 344 eP P 05 29 08.3 +0.8
MOY pmax pmax
comp=Z,55nm,2.4s
CLNS Chul'man 54.74 2 eP P 05 29 22.3 -0.6
CLNS pmax pmax
comp=Z,15nm,0.7s
CLNS pmax pmax
comp=N,14nm,0.9s
CLNS MLR MLR
comp=Z,189nm,20.0s
CLNS MLR MLR
comp=N,167nm,16.0s
KSH Kashi 56.16 318 ⇓iP P 05 29 34.6 +1.1
KSH pP **pP 05 29 45.5 +0.3**
KSH sP **sP 05 29 48.6 -1.2**
KSH PcP **PcP 05 30 31.5 +0.4**
KSH PP **PP 05 31 42.6 +3.6**
KSH ScP **ScP 05 34 27.4 0.0**
KSH PcS **PcS 05 34 30.8 -0.9**
KSH S S **05 37 21.7 +1.4**
KSH sS **sS 05 37 40.6 +1.1**
KSH ScS **ScS 05 39 18.0 -1.9**
KSH SS **SS 05 41 11.6 +4.3**
KSH pmax pmax
comp=Z,31nm,0.7s
KSH LR LR
comp=N,380nm,6.3s
KSH LR LR
comp=E,240nm,4.7s
KSH LR LR
comp=Z,280nm,5.9s
MK31 Makanchi Array 56.50 328 ceP P 05 29 36.3 +0.6
MK31 pmax pmax
comp=Z,23nm,0.5s
MK31 Makanchi Array 56.50 328 eP P 05 29 36.4 +0.7
MK31 ePcP **PcP 05 30 31.6 -0.6**
MKAR Makanchi Array 56.50 328 P P 05 29 36.3 +0.6
MKAR *PP **pP 05 29 51.3 +4.0**
MKAR 05 30 31.7
MKAR Makanchi Array 56.50 328 P P 05 29 36.3 +0.6
MKAR pP **pP 05 29 51.3 +4.0**
MKAR PcP **PcP 05 30 31.7 -0.4**
MKAR ⇑e 05 59 43.5
MKAR Makanchi Array 56.50 328 P P 05 29 36.3 +0.6
comp=Z,20nm,0.5s,baz=127,slow=8.6,SNR=296
MKAR pP **pP 05 29 51.3 +4.0**
comp=Z,8.1nm,0.6s,baz=128,slow=7.9,SNR=7.1
MKAR PcP **PcP 05 30 31.7 -0.4**
comp=Z,14nm,0.8s,baz=120,slow=4.9,SNR=8.4
MKAR LR LR 05 54 13.0
comp=Z,362nm,21.2s,baz=114,slow=36
MKAR PKP2bc 05 59 43.5
comp=Z,0.4nm,0.9s,baz=338,slow=1.6,SNR=3.6
ULHL Ulahol 57.37 321 P P 05 29 43.2 +1.0
SNR=13
TKM2 Tokmak 2 58.13 321 i P P 05 29 48.5 +1.0
TKM2 Tokmak 2 58.13 321 eP P 05 29 48.5 +1.0
comp=Z,34nm,0.8s
TKM2 Tokmak 2 58.13 321 P P 05 29 48.5 +1.0
SNR=62
KBK Karagaybulak 58.41 321 P P 05 29 50.8 +1.4
SNR=27
UCH Uchtor 58.47 320 P P 05 29 52.0 +1.9
SNR=5.5
AAK Ala-Archa 58.68 320 ⇑iP P 05 29 52.4 +1.0
AAK pmax pmax
comp=Z,171nm,1.9s
AAK Ala-Archa 58.68 320 eP P 05 29 52.3 +1.0
comp=Z,31nm,0.9s
AAK ePcP **PcP 05 30 41.4 +0.4**
AAK Ala-Archa 58.68 320 P P 05 29 52.8 +1.5
SNR=20

AAK **Ala-Archa** 58.68 320 P P 05 29 52.0 +0.7
comp=Z,216nm,0.8s,SNR=20
AAK **Ala-Archa** 58.68 320 P P 05 29 52.7 +1.4
comp=Z,22nm,0.8s,baz=120,slow=5.3,SNR=78
CHMS **Chumysh** 58.70 321 P P 05 29 52.4 +1.1
SNR=10.0
FRU **Bishkek** 58.70 321 eP P 05 29 50.0 -1.3
FRU pmax pmax
comp=Z,40nm,1.4s
PETK **Petropavlovsk-** 58.83 24 P P 05 29 52.7 +0.8
PETK *PP pP 05 30 08.0 +4.4
PETK **Petropavlovsk-** 58.83 24 P P 05 29 52.7 +0.8
PETK pP pP 05 30 08.0 +4.4
PETK **Petropavlovsk-** 58.83 24 P P 05 29 52.7 +0.8
comp=Z,19nm,0.8s,baz=205,slow=4.9,SNR=12
PETK pP pP 05 30 08.0 +4.4
comp=Z,8.3nm,0.9s,baz=187,slow=3.8,SNR=3.0
PETK LR LR 05 53 54.1
comp=Z,280nm,18.3s,baz=226,slow=35
AML **Almayashu** 58.95 319 P P 05 29 54.6 +1.1
SNR=56
USP **Ospenovka** 59.00 321 P P 05 29 54.2 +0.8
SNR=26
KBL **Kabul** 59.04 310 eP P 05 29 54.3 +0.3
KBL pmax pmax
comp=Z,53nm,1.2s
KBL **Kabul** 59.04 310 eP P 05 29 54.3 +0.3
comp=Z,53nm,1.2s
KBL **Kabul** 59.04 310 P P 05 29 54.5 +0.5
baz=59,SNR=4.2
EKS2 **Erkin-Say** 59.16 320 eP P 05 29 54.3 -0.3
EKS2 pmax pmax
comp=Z,37nm,0.9s
EKS2 **Erkin-Say** 59.16 320 eP P 05 29 54.3 -0.3
comp=Z,37nm,0.9s
EKS2 **Erkin-Say** 59.16 320 P P 05 29 55.6 +1.0
SNR=37
YAK **Yakutsk** 60.18 4 eP P 05 30 00.9 -0.1
YAK pmax pmax
comp=Z,94nm,1.0s
YAK pmax pmax
comp=E,8.0nm,1.5s
YAK pmax pmax
comp=N,21nm,0.9s
YAK **Yakutsk** 60.18 4 eP P 05 30 01.1 +0.1
comp=N,97nm,0.8s
YAK epP pP 05 30 10.4 -2.3
YAK esP sP 05 30 16.7 -0.7
ZAA0 **Zalesovo Array** 60.18 336 eP P 05 30 00.7 -0.5
ZALV **Zalesovo Beam** 60.18 336 P P 05 30 00.8 -0.4
ZALV *PP pP 05 30 16.2 +3.3
ZALV **Zalesovo Beam** 60.18 336 P P 05 30 00.8 -0.4
ZALV pP pP 05 30 16.2 +3.3
ZALV ⇑e 05 59 35.1
ZALV **Zalesovo Beam** 60.18 336 P P 05 30 00.8 -0.4
comp=N,26nm,0.8s,baz=122,slow=6.9,SNR=129
ZALV pP pP 05 30 16.2 +3.3
comp=N,8.2nm,0.5s,baz=126,slow=6.1,SNR=8.9
ZALV LR LR 05 55 28.1
comp=N,245nm,21.5s,baz=247,slow=35
ZALV PKP2bc 05 59 35.1
comp=N,0.3nm,0.3s,baz=270,slow=2.5,SNR=4.4
KURK **Kurchatov** 60.86 330c iP P 05 30 05.7 -0.2
KURK pmax pmax
comp=Z,120nm,1.0s
KURK **Kurchatov** 60.86 330 eP P 05 30 06.3 +0.4
comp=Z,90nm,0.8s
KURK **Kurchatov** 60.86 330 P P 05 30 06.6 +0.7
SNR=27
KURK **Kurchatov** 60.86 330 P P 05 30 06.4 +0.5
comp=Z,759nm,0.6s,SNR=81
NVS **Novosibirsk** 61.47 336⇑iP P 05 30 08.6 -1.3
NVS e 05 30 55.5
NVS eS S 05 38 25.8 -2.5
NVS pmax pmax
comp=N,35nm,1.4s
NVS pmax pmax
comp=E,41nm,1.4s
NVS pmax pmax
comp=Z,73nm,1.4s
NVS smax smax
comp=N,24nm,2.0s
NVS smax smax
comp=E,27nm,2.0s
KK31 **Karatay Array** 61.48 319ceP P 05 30 10.8 +0.5
KK31 pmax pmax
comp=Z,15nm,0.6s
KKAR **Karatay Array** 61.48 319 eP P 05 30 10.7 +0.4
KKAR e 05 30 52.3
KKAR pmax pmax
comp=Z,24nm,0.8s
KKAR **Karatay Array** 61.48 319 eP P 05 30 10.7 +0.4
comp=Z,24nm,0.8s
KKAR ePcP PcP 05 30 52.3 +0.3
RPZ **Rata Peaks** 63.07 142 P P 05 30 22.3 +1.4
RPZ **Rata Peaks** 63.07 142 P P 05 30 22.3 +1.4
comp=Z,20nm,0.8s,baz=9.6,slow=2.5,SNR=12
SNZO **South Karori** 64.19 138 eP P 05 30 33.1 +4.8
comp=Z,13nm,0.7s
URZ **Urewera** 64.49 134 eP P 05 30 31.0 +0.7
comp=Z,9.3nm,0.9s
SEY **Seymchan** 64.82 15ceP P 05 30 32.0 0.0
IDAH **Dahanechah** 65.79 305 eP P 05 30 39.6 +0.3
FX1 **Attu Island--F** 65.90 31 P P 05 30 40.0 +0.8
FX1 **Attu Island--F** 65.90 31 P P 05 30 40.0 +0.8
comp=Z,8.6nm,0.5s,baz=194,slow=4.2,SNR=5.9
BVA0 **Borovoye Array** 66.37 329 iP P 05 30 42.0 -0.2
BVA0 pmax pmax
comp=Z,8.0nm,1.9s
BVAR **Borovoye Array** 66.37 329 P P 05 30 42.3 0.0
BVAR *PP pP 05 30 58.1 +4.0
BVAR **Borovoye Array** 66.37 329 P P 05 30 42.3 0.0
BVAR pP pP 05 30 58.1 +4.0
BVAR **Borovoye Array** 66.37 329 P P 05 30 42.3 0.0
comp=Z,12nm,0.7s,baz=138,slow=9.2,SNR=69
BVAR pP pP 05 30 58.1 +4.0
comp=Z,11nm,0.8s,baz=134,slow=8.4,SNR=10
BRVK **Borovoye** 66.44 329c iP P 05 30 42.4 -0.2
BRVK pmax pmax
comp=Z,62nm,1.8s
BRVK **Borovoye** 66.44 329 eP P 05 30 42.7 0.0
comp=Z,41nm,1.1s
BRVK **Borovoye** 66.44 329 P P 05 30 43.2 +0.5
SNR=20
BRVK **Borovoye** 66.44 329 P P 05 30 42.5 -0.2
comp=Z,192nm,1.3s,SNR=17
IMYA **Miami** 66.53 309 eP P 05 30 44.0 +0.2
MSEY **Mahe Island** 66.95 264 eP P 05 30 46.9 +0.2
comp=Z,24nm,1.1s
ISRO **Mashad** 67.01 309 eP P 05 30 47.9 +1.1
IMOG **Moghan** 67.06 309 eP P 05 30 48.1 +0.7
IPAY **Payeh** 67.42 309 eP P 05 30 50.1 +0.6
IKRD **Kardeh** 67.88 309 eP P 05 30 48.2 -4.3
ISFR **Sfrayin** 68.34 309 eP P 05 30 55.9 +0.5
ABKT **Ailbek** 68.48 310 P P 05 30 56.5 +0.6
comp=N,159nm,0.9s,SNR=6.3
TIXI **Tiksi** 69.70 2c iP P 05 31 01.8 -1.0
TIXI pmax pmax
comp=Z,99nm,1.3s
TIXI MLR MLR
comp=Z,1μm,21.0s
TIXI **Tiksi** 69.70 2 eP P 05 31 01.7 -1.1
comp=Z,128nm,1.3s
AB31 **Akbulak array** 70.67 322ceP P 05 31 09.0 -0.1
AB31 pmax pmax
comp=Z,22nm,0.7s
ABKAR **Akbulak array** 70.67 322 eP P 05 31 09.4 +0.3
comp=Z,43nm,1.1s
ISHM **Shahmirzad** 71.77 307 eP P 05 31 16.7 +0.2
AKTO **Aktyubinsk** 72.24 323 iP P 05 31 18.5 -0.1
AKTO pmax pmax
comp=Z,7.0nm,0.8s
AKTO **Aktyubinsk** 72.24 323 P P 05 31 18.7 +0.1
AKTO **Aktyubinsk** 72.24 323 P P 05 31 18.7 +0.1
AKTO **Aktyubinsk** 72.24 323 P P 05 31 18.7 +0.1
comp=Z,30nm,0.8s,baz=106,slow=7.0,SNR=135
BILL **Bilibino** 72.44 16⇑iP P 05 31 18.7 -0.8
BILL e*PP pP 05 31 27.3 -4.1
BILL e 05 31 35.4
BILL e 05 33 58.9
BILL eSS SS 05 45 21.3 +1.9
BILL pmax pmax
comp=Z,14nm,1.3s
BILL MLR MLR
comp=Z,100nm,19.0s
BILL **Bilibino** 72.44 16 eP P 05 31 18.5 -0.9
comp=Z,40nm,1.6s
SVE **Sverdlovsk** 73.11 330deP P 05 31 23.5 -0.1
SVE pmax pmax
comp=Z,86nm,1.2s
ARU **Arti** 74.02 329c iP P 05 31 28.3 -0.7
ARU e 05 31 43.1
ARU 05 34 11.7
ARU S S 05 40 59.8 +1.3
ARU pmax pmax
comp=Z,77nm,1.7s
ARU **Arti** 74.02 329 eP P 05 31 28.3 -0.7
comp=Z,66nm,1.2s
ARU **Arti** 74.02 329 P P 05 31 28.7 -0.3
comp=Z,260nm,0.7s,SNR=10
RDF **Al-Radifah** 75.58 299 eP P 05 31 37.9 -0.7
RDF AMb AMB 05 31 39.6
comp=Z,40nm,1.1s
MIB **Mutribah** 75.86 300 eP P 05 31 39.1 -1.1
MIB AMb AMB 05 31 40.5
comp=Z,79nm,0.8s
NAY **Al-Naaiem** 75.88 300 eP P 05 31 39.1 -1.3
NAY AMb AMB 05 31 40.5
comp=Z,18nm,1.1s
SOKR **Solikamsk** 76.03 332c iP P 05 31 39.5 -0.9
SOKR pmax pmax
comp=Z,20nm,1.4s
OPO **Ambohidratompo** 76.41 250 P P 05 31 42.9 -0.8
OPO **Ambohidratompo** 76.41 250 P P 05 31 42.9 -0.8
comp=Z,0.6nm,0.3s,baz=67,slow=22,SNR=3.7
GAMB **Gambell** 77.86 25 eP P 05 31 51.1 +0.4
comp=Z,28nm,1.3s
BHD **Baghdad** 78.70 303 ex P 05 31 54.0 -2.0
BHD ex x 05 41 45.0
DGRG **David-gareji** 78.80 312 P P 05 31 57.7 +1.2
ATD **Arta Tunnel** 79.14 281 P P 05 31 59.0 +0.1
ATD **Arta Tunnel** 79.14 281 P P 05 31 59.0 +0.1
comp=Z,4.9nm,0.3s,baz=293,slow=23,SNR=4.1
TBLG **Delisi** 79.30 312 eP P 05 31 58.9 -0.3
TBLG **Delisi** 79.30 312 P P 05 31 59.0 -0.3
TNA **Tin City** 79.98 23 eP P 05 32 03.3 +1.0
comp=Z,4.9nm,1.0s
ZEI **Tsey** 80.05 313 eP P 05 32 03.8 +0.3
ZEI pmax pmax
comp=Z,18nm,1.1s
AKH **Akhalkalaki** 80.20 312 P P 05 32 05.0 +0.7
ONI **Oni** 80.35 313 P P 05 32 04.8 -0.2
MAW **Mawson** 80.56 200 P P 05 32 06.5 +1.2
MAW **Mawson** 80.56 200 P P 05 32 06.5 +1.2
comp=Z,4.8nm,0.9s,baz=68,slow=11,SNR=3.3
MAW LR LR 06 03 52.9
comp=Z,319nm,20.1s,baz=63,slow=33
KBZ **Khabaz** 80.88 314 P P 05 32 07.4 -0.2
KBZ **Khabaz** 80.88 314 P P 05 32 07.3 -0.2
KBZ **Khabaz** 80.88 314 P P 05 32 07.3 -0.2
comp=Z,5.6nm,1.0s,baz=124,slow=4.1,SNR=9.8
KIV **Kislovodsk** 81.05 314 eP P 05 32 08.4 -0.3
KIV eS S 05 42 15.1 -0.4
KIV eSS SS 05 47 35.6 +5.0
KIV pmax pmax
comp=Z,11nm,1.1s
VNDA **Vanda** 82.31 172 P P 05 32 14.5 0.0
VNDA **Vanda** 82.31 172 P P 05 32 14.5 0.0
comp=Z,4.1nm,0.7s,baz=319,slow=6.4,SNR=14
VRHR **Novokhopersk** 82.52 321 eP P 05 32 15.0 -1.1
VRHR pmax pmax
comp=N,9.0nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRHR pmax pmax
comp=Z,10.0nm,0.8s
SOC **Sochi** 83.17 313 eP P 05 32 17.7 -1.9
SOC eS S 05 42 35.3 -1.6
SOC eSSS SSS 05 51 26.8
SOC pmax pmax
comp=Z,21nm,0.9s
MALT **Malatya** 83.86 308 eP P 05 32 23.0 -0.5
MALT pmax pmax
comp=Z,4.0nm,1.1s
MALT **Malatya** 83.86 308 eP P 05 32 22.9 -0.5
comp=Z,4.2nm,1.1s
VORD **Divnogorie** 83.97 321 eP P 05 32 22.4 -1.2
VORD e*SP sP 05 32 38.0 -2.3
VORD pmax pmax
comp=Z,10.0nm,0.8s
VORD pmax pmax
comp=N,3.0nm,0.4s
VORD pmax pmax
comp=E,10.0nm,0.8s
VSR **Storozhevoye** 84.07 321 eP P 05 32 23.0 -1.1
VSR e*SP sP 05 32 38.9 -1.9
VSR pmax pmax
comp=Z,10.0nm,0.9s
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,10.0nm,0.9s
ANN **Anapa** 84.87 315 eP P 05 32 16.4 -12
ANN pmax pmax
comp=Z,57nm,1.4s
KMBO **Kilima Mbogo** 84.95 269 P P 05 32 29.8 +0.1
KMBO **Kilima Mbogo** 84.95 269 P P 05 32 29.8 +0.1
comp=Z,3.6nm,0.8s,baz=48,slow=23,SNR=3.4
KMBO LR LR 06 05 55.2
comp=Z,236nm,20.3s,baz=276,slow=32
MOS **Moscow** 85.29 326 eP P 05 32 28.3 -1.8
MOS e 05 32 44.4
MOS pmax pmax
comp=Z,53nm,0.9s
TMCR **Tamitsa** 85.67 334 eP P 05 32 29.2 -2.6
TMCR pmax pmax
comp=Z,22nm,1.1s
KDAK **Kodiak Island** 85.80 32 P P 05 32 32.6 0.0
KDAK **Kodiak Island** 85.80 32 P P 05 32 32.6 0.0
comp=Z,8.2nm,0.8s,baz=310,slow=12,SNR=5.5
OBN **Obninsk** 85.86 325c iP P 05 32 31.9 -1.1
OBN eSS SS 05 48 47.2 +6.3
OBN pmax pmax
comp=Z,58nm,1.4s
OBN MLR MLR
comp=Z,200nm,21.0s
OBN **Obninsk** 85.86 325 eP P 05 32 31.8 -1.1
comp=Z,9.5nm,0.6s
TRF **Thorofare Moun** 87.15 27 eP P 05 32 38.0 -1.4
comp=Z,25nm,1.4s
COLD **Coldfoot** 87.27 23 eP P 05 32 40.2 +0.5
comp=Z,6.4nm,0.9s
COLD ePP PP 05 36 00.6 -3.3
BRTR **Keskin Array B** 87.61 309 P P 05 32 40.2 -1.9
BRTR **Keskin Array B** 87.61 309 P P 05 32 40.2 -1.9
comp=Z,2.9nm,1.0s,baz=97,slow=5.0,SNR=7.2
BRTR LR LR 06 19 38.9
comp=Z,67nm,18.3s,baz=170,slow=41
APA **Apatity** 87.71 337⇓iP P 05 32 41.0 -0.8
APA MLR MLR
comp=Z,400nm,15.0s
MCK **McKinley** 87.76 26 eP P 05 32 41.2 -0.9
MCK pmax pmax
comp=Z,31nm,1.1s
MCK **McKinley** 87.76 26 eP P 05 32 41.1 -0.9
comp=Z,31nm,1.1s
CSS **Prodhromos** 87.92 305 eP P 05 32 43.0 -0.5
comp=Z,14nm,0.9s
SML **Sawmill** 88.04 28 eP P 05 32 43.3 -0.2
SML pmax pmax
comp=Z,1.0nm,0.7s
SML **Sawmill** 88.04 28 eP P 05 32 43.3 -0.2
comp=Z,1.3nm,0.7s
ILAR **Eielson Array** 88.64 25 P P 05 32 44.5 -1.7
ILAR PP PP 05 36 06.6 -8.3
ILAR **Eielson Array** 88.64 25 P P 05 32 44.5 -1.7
comp=Z,1.7nm,0.6s,baz=250,slow=4.8,SNR=30
ILAR PP PP 05 36 06.6 -8.3
comp=Z,0.7nm,1.2s,baz=247,slow=10,SNR=4.0
ILAR LR LR 06 08 30.7
comp=Z,145nm,20.8s,baz=283,slow=33
JOF **Joensuu** 88.64 333 eP P 05 32 44.6 -1.7
JOF pmax pmax
comp=Z,6.0nm,0.5s
JOF **Joensuu** 88.64 333 ep P 05 32 44.6 -1.7
comp=Z,5.7nm,0.5s
PPT2 **Papeete2** 88.93 108 eS S 05 43 35.5 +1.1
comp=Z,121nm,25.5s
PPT2 eLR LR 06 01 09.3
comp=Z,204nm,26.2s
TBI **Tubuai** 89.28 113 eS S 05 43 34.5 -2.8
comp=Z,281nm,26.2s
TBI eLR LR 06 01 11.3
comp=Z,239nm,34.5s
KEV **Kevo** 89.95 340 eP P 05 32 50.4 -1.9
KEV pmax pmax
comp=Z,6.0nm,0.7s
KEV **Kevo** 89.95 340 ep P 05 32 50.4 -1.9
comp=Z,6.4nm,0.7s
MENT **Mentasta** 90.14 27 eP P 05 32 53.6 +0.3
AKASG **Malin Array Be** 90.35 321 P P 05 32 52.6 -1.9
AKASG **Malin Array Be** 90.35 321 P P 05 32 52.6 -1.9
AKASG **Malin Array Be** 90.35 321 P P 05 32 52.6 -1.9
comp=Z,4.0nm,0.8s,baz=74,slow=4.7,SNR=9.6
ARCES **ARCESS Array B** 90.50 340 P P 05 32 53.4 -1.5
ARCES **ARCESS Array B** 90.50 340 P P 05 32 53.4 -1.5
comp=Z,6.7nm,0.7s,baz=92,slow=6.6,SNR=14
ARCES LR LR 06 17 21.3
comp=Z,291nm,19.6s,baz=306,slow=38
KAF **Kangasniemi** 91.02 332 eP P 05 32 52.3 -5.1
KAF pmax pmax
comp=Z,5.0nm,0.6s
KAF **Kangasniemi** 91.02 332 ep P 05 32 52.3 -5.1
comp=Z,5.2nm,0.6s
FINES **FINESS Array B** 91.20 331 P P 05 32 56.8 -1.5
FINES **FINESS Array B** 91.20 331 P P 05 32 56.8 -1.5
comp=Z,4.1nm,0.6s,baz=67,slow=4.8,SNR=25
FINES LR LR 06 16 19.5
comp=Z,210nm,21.9s,baz=150,slow=37
QSPA **South Pole Qui** 91.89 180 eP P 05 33 02.1 +0.6
comp=Z,18nm,1.1s
MLR **Muntele Rosu** 92.97 316 P P 05 33 04.9 -2.1
MLR **Muntele Rosu** 92.97 316 P P 05 33 04.9 -2.1
comp=Z,1.1nm,1.0s,baz=176,slow=11,SNR=4.8
BUR08 **Bucovina Ar. S** 93.25 318 eP P 05 33 07.7 -0.5
INK **Inuvik** 93.45 21 P P 05 33 07.7 -0.8
INK **Inuvik** 93.45 21 P P 05 33 07.7 -0.8
comp=Z,7.6nm,1.0s,baz=284,slow=5.1,SNR=23
LSZ **Lusaka** 94.35 255 eP P 05 33 13.0 -0.9
comp=Z,21nm,1.6s
KOLS **Kolonicke sedl** 95.02 319 eP P 05 33 15.4 -0.8
UZH **Uzhgorod** 95.05 319d iP P 05 33 16.4 +0.1
UZH e 05 33 31.2
CRVS **Cervenica-Dubn** 95.55 319 eP P 05 33 17.7 -0.9
OJC **Ojcow** 96.39 321 eP P 05 33 21.9 -0.5
BOSA **Boshof** 97.00 242 LR LR 06 13 09.2
comp=Z,324nm,19.4s,baz=165,slow=33
DLBC **Dease Lake** 97.57 30 P Pdif 05 33 28.2 +0.5
DLBC **Dease Lake** 97.57 30 P Pdif 05 33 28.2 +0.5
comp=Z,5.6nm,1.0s,baz=282,slow=8.2,SNR=7.2
NB2 **NORSAR Subarra** 98.28 333 P P 05 33 28.4 -2.3
comp=Z,1.2nm,0.7s,baz=73,slow=4.6
NOA **NORSAR Array B** 98.28 333 P P 05 33 28.7 -2.0
NOA **NORSAR Array B** 98.28 333 P P 05 33 28.7 -2.0
comp=Z,4.1nm,1.0s,baz=75,slow=4.6,SNR=8.9
NOA LR LR 06 23 30.3
comp=Z,254nm,20.5s,baz=65,slow=39
CLL **Collm** 100.33 323 iP Pdif 05 33 39.0 -1.0
CLL eS Sdif 05 45 10.0 -3.0
CLL pmax pmax
comp=Z,30nm,2.3s
CLL MLR MLR
comp=Z,200nm,19.4s
CLL **Collm** 100.33 323 i Pdif Pdif 05 33 39.0 -1.0
comp=Z,30nm,2.3s
CLL ePP PP 05 37 40.0 -6.2
CLL eSdif Sdif 05 45 10.0 -3.0
CLL ePS PS 05 46 54.0 +7.0
CLL eSS SS 05 52 09.0 +1.0
CLL eSSS SSS 05 56 03.0
CLL Lm MLR 06 25 00.0
comp=N,100nm,20.9s
CLL Lm MLR 06 25 00.0
comp=E,100nm,20.0s
CLL Lm MLR 06 25 00.0
comp=Z,200nm,19.4s
GERES **GERESS Array B** 100.56 320 P Pdif 05 33 40.0 -1.2
GERES **GERESS Array B** 100.56 320 P Pdif 05 33 40.0 -1.2
comp=Z,0.4nm,0.6s,baz=94,slow=1.7,SNR=5.9
YKA **Yellowknife Ar** 102.94 23 P Pdif 05 33 50.7 -0.7
YKA PP PP 05 37 59.9 -5.6
YKA PKiKP PKiKP 05 38 11.2 -0.1
YKA **Yellowknife Ar** 102.94 23 P Pdif 05 33 50.7 -0.7
comp=Z,0.5nm,0.9s,baz=298,slow=4.7,SNR=8.0
YKA PP PP 05 37 59.9 -5.6
comp=Z,0.5nm,1.0s,baz=304,slow=7.2,SNR=3.7
YKA PKiKP PKiKP 05 38 11.2 -0.1
comp=Z,0.3nm,0.9s,baz=257,slow=1.6,SNR=3.9
MFID **Camas Ranch** 111.26 42 ⇓P PKiKP 05 38 28.2 +0.7
baz=111
NVAR **Mina Array Bea** 111.45 47 Pdif Pdif 05 34 30.6 +0.5
NVAR PKiKP PKiKP 05 38 28.9 +0.7
NVAR PP PP 05 39 15.1 +6.1
NVAR **Mina Array Bea** 111.45 47 Pdiff Pdif 05 34 30.6 +0.5
comp=Z,0.2nm,0.5s,baz=224,slow=5.0,SNR=2.9
NVAR PKKP PKiKP 05 38 28.9 +0.7
comp=Z,1.1nm,0.7s,baz=242,slow=2.6,SNR=6.5
NVAR PP PP 05 39 15.1 +6.1
comp=Z,0.7nm,0.9s,baz=260,slow=8.1,SNR=4.0
A17A **Triple J Farms** 111.84 34 ⇓P PKiKP 05 38 28.3 -0.1
baz=112
HLID **Hailey** 112.13 41 ⇑P PKiKP 05 38 30.0 +0.7
baz=112
I13A **Wildhorse Cree** 112.17 40 ⇑P PKiKP 05 38 30.2 +0.7
baz=112
J13A **Cove Ranch, Pi** 112.36 41 ⇑P PKiKP 05 38 30.6 +0.9
baz=112
C17A **Wharram Farm,** 112.48 36 ⇑P PKiKP 05 38 29.7 -0.1
baz=112
J14A **Carey** 112.82 41 ⇑P PKiKP 05 38 30.6 -0.1
baz=113
EGMT **Eagleton** 112.86 35 ⇓P PKiKP 05 38 30.8 +0.4
baz=113
BOZ **Bozeman (W)** 112.94 38 ⇓P PKiKP 05 38 31.3 +0.6
baz=113
A19A **Klindworth Far** 112.95 34 ⇓P PKiKP 05 38 30.5 0.0
baz=113
BFSC **Mount Baldy Ra** 113.40 51 ⇑P PKiKP 05 38 31.7 -0.2
baz=113
C19A **Slack Wire Ran** 113.42 35 ⇑P PKiKP 05 38 31.9 +0.4
baz=113
R11A **Troy Canyon, C** 113.47 46 ⇑P PKiKP 05 38 32.4 +0.3
baz=113
E18A **Harlowton** 113.52 36 ⇓P PKiKP 05 38 31.6 -0.2
baz=113
B20A **Solberg Farm,** 113.62 34 ⇑P PKiKP 05 38 31.8 0.0
baz=114
F18A **Big Timber** 113.97 37 ⇓P PKiKP 05 38 32.9 +0.3
baz=114
A22A **Carney Farms,** 114.46 33 ⇓P PKPdf 05 38 33.7 +0.3
baz=114
DUG **Dugway** 114.67 44 ⇑P PKPdf 05 38 34.0 -0.2
baz=115
GMRC **Granite Mounta** 114.75 50 ⇑P PKPdf 05 38 35.1 +0.5
baz=115
C22A **Vida** 115.19 34 ⇓P PKPdf 05 38 35.0 +0.2
baz=115
B23A **Brockton** 115.27 33 ⇑P PKPdf 05 38 35.4 +0.4
baz=115
D22A **Cohagen** 115.37 34 ⇓P PKPdf 05 38 35.4 +0.2
baz=115
K18A **Toltan Ranch,** 115.40 40 ⇓P PKPdf 05 38 36.0 +0.4
baz=115
C23A **Lambert** 115.55 33 ⇓P PKPdf 05 38 35.8 +0.3
baz=115
PDAR **Pinedale Array** 115.64 40 PKP PKPdf 05 38 36.0 -0.1
PDAR PKKPbc PKKPbc 05 49 08.8 -1.3
PDAR **Pinedale Array** 115.64 40 PKP PKPdf 05 38 36.0 -0.1
comp=Z,0.9nm,1.0s,baz=5.7,slow=1.5,SNR=5.3
PDAR PKKPbc PKKPbc 05 49 08.8 -1.3
comp=Z,0.4nm,0.7s,baz=129,slow=4.2,SNR=3.6
N17A **Moffit Pass** 115.68 42 ⇑P PKPdf 05 38 36.5 +0.1
baz=116
DGMT **Dagmar** 115.69 32 ⇓P PKPdf 05 38 36.4 +0.6
baz=116
E22A **Miles City** 115.90 35 ⇓P PKPdf 05 38 36.8 +0.6
baz=116
D23A **Lindsay** 115.90 34 ⇑P PKPdf 05 38 36.4 +0.1
baz=116
I20A **Worland** 115.95 38 ⇓P PKPdf 05 38 36.9 +0.3
baz=116
W13A **Hualapai Mount** 115.98 49 ⇓P PKPdf 05 38 37.3 +0.3
baz=116
K19A **Absolon Red Bu** 116.07 40 ⇑P PKPdf 05 38 36.6 -0.3
baz=116
C24A **Savage** 116.12 33 ⇑P PKPdf 05 38 37.4 +0.7
baz=116

E23A	Ismay	116.23	35	⇓P		PKPdf	05 38 37.1	+0.2	
	baz=116								
Q16A	Castle Valley	116.37	44	⇓P		PKPdf	05 38 38.2	+0.6	
	baz=116								
D24A	Glendive	116.42	34	⇑P		PKPdf	05 38 38.0	+0.8	
	baz=116								
I21A	Big Trails, Te	116.53	38	⇓P		PKPdf	05 38 37.6	-0.1	
	baz=116								
U15A	North Rim	116.64	47	⇓P		PKPdf	05 38 39.0	+0.7	
	baz=117								
J21A	Lysite	116.68	38	⇓P		PKPdf	05 38 38.0	0.0	
	baz=117								
SRU	San Rafael	116.73	44	⇑P		PKPdf	05 38 38.7	+0.4	
	baz=117								
O19A	Miners Draw (B	117.13	42	⇓P		PKPdf	05 38 38.9	-0.1	
	baz=117								
K21A	Alcova	117.18	39	⇑P		PKPdf	05 38 39.1	0.0	
	baz=117								
N20A	Spence Gulch,	117.44	41	⇓P		PKPdf	05 38 39.7	0.0	
	baz=117								
L21A	Rawlins	117.45	40	⇓P		PKPdf	05 38 39.8	+0.2	
	baz=117								
M21A	Separation Pea	117.64	40	⇓P		PKPdf	05 38 39.9	-0.2	
	baz=118								
H24A	Dirks Ranch, A	117.66	36	⇓P		PKPdf	05 38 39.9	+0.1	
	baz=118								
Q19A	Hogan Spring (	117.68	43	⇓P		PKPdf	05 38 40.1	+0.1	
	baz=118								
S18A	Hurst Farm, Bl	117.75	45	⇓P		PKPdf	05 38 40.7	+0.4	
	baz=118								
O20A	White River Ci	117.80	42	⇓P		PKPdf	05 38 40.5	+0.2	
	baz=118								
N21A	Black Mountain	117.97	41	⇑P		PKPdf	05 38 40.8	+0.1	
	baz=118								
214A	Organ Pipe Nat	118.01	52	⇑P		PKPdf	05 38 41.1	+0.3	
	baz=118								
X16A	Lo Mia Camp, P	118.10	49	⇓P		PKPdf	05 38 40.4	-0.7	
	baz=118								
M22A	Cedar Creek Ra	118.24	40	⇑P		PKPdf	05 38 40.9	-0.3	
	baz=118								
Q20A	Ridgley Place,	118.34	43	⇓P		PKPdf	05 38 41.8	+0.4	
	baz=118								
ULM	Lac du Bonnet	118.63	27	PKP		PKPdf	05 38 39.8	-1.5	
ULM	Lac du Bonnet	118.63	27	PKP		PKPdf	05 38 39.8	-1.5	
	comp=Z,0.7nm,0.4s,baz=312,slow=7.3,SNR=3.5								
N22A	Wattenberg Ran	118.64	40	⇓P		PKPdf	05 38 42.5	+0.5	
	baz=119								
R20A	Redvale	118.65	44	⇑P		PKPdf	05 38 42.6	+0.5	
	baz=119								
S20A	Disappointment	118.83	44	⇑P		PKPdf	05 38 43.0	+0.6	
	baz=119								
MVCO	Mesa Verde	119.03	45	⇓P		PKPdf	05 38 42.8	-0.1	
	baz=119								
P22A	Eagle	119.06	42	⇓P		PKPdf	05 38 43.1	+0.3	
	baz=119								
TORD	Torodi Ar. Bea	119.07	286	PKP		PKPdf	05 38 41.7	-1.5	
TORD				PP		PP	05 39 57.4	-5.9	
TORD				PKKPab		PKKPab	05 49 00.6	+1.2	
TORD	Torodi Ar. Bea	119.07	286	PKP		PKPdf	05 38 41.7	-1.5	
	comp=Z,2.3nm,0.8s,baz=53,slow=2.2,SNR=14								
TORD				PP		PP	05 39 57.4	-5.9	
	comp=Z,1.7nm,1.0s,baz=53,slow=6.2,SNR=5.4								
TORD				PKKPab		PKKPab	05 49 00.6	+1.2	
	comp=Z,2.3nm,1.0s,baz=288,slow=3.2,SNR=7.8								
O23A	Lake Granby, G	119.30	41	⇑P		PKPdf	05 38 43.9	+0.6	
	baz=119								
S21A	Coal Bank Pass	119.31	44	⇑P		PKPdf	05 38 44.1	+0.7	
	baz=119								
Q22A	Crested Butte,	119.33	43	⇓P		PKPdf	05 38 44.1	+0.6	
	baz=119								
V20A	Brimhall	119.70	46	⇓P		PKPdf	05 38 44.4	+0.3	
	baz=120								
ISCO	Idaho Springs	119.71	41	⇓P		PKPdf	05 38 44.0	-0.1	
	baz=120								
P23A	Jefferson	119.78	42	⇑P		PKPdf	05 38 44.6	+0.3	
	baz=120								
T21A	Navajo Lake	119.81	45	⇑P		PKPdf	05 38 45.3	+1.0	
	baz=120								
S22A	4UR Ranch, Cre	119.93	44	⇑P		PKPdf	05 38 45.6	+0.9	
	baz=120								
U21A	Nageezi	119.99	45	⇑P		PKPdf	05 38 45.8	+1.1	
	baz=120								
Q23A	Hartsel	120.03	42	⇓P		PKPdf	05 38 45.6	+0.8	
	baz=120								
T22A	Edith	120.24	44	⇓P		PKPdf	05 38 46.0	+0.9	
	baz=120								
R23A	Moffat	120.40	43	⇓P		PKPdf	05 38 46.2	+0.7	
	baz=120								
U22A	Llaves	120.58	45	⇓P		PKPdf	05 38 46.5	+0.7	
	baz=120								
Y20A	Horse Springs,	120.61	48	⇑P		PKPdf	05 38 47.1	+1.1	
	baz=121								
V22A	San Miguel Ran	120.77	46	⇑P		PKPdf	05 38 47.3	+1.1	
	baz=121								
Z20A	Nine Sixteen R	120.80	49	⇓P		PKPdf	05 38 46.9	+0.7	
	baz=121								
X21A	Alamocita Cree	120.81	47	⇓P		PKPdf	05 38 46.6	+0.3	
	baz=121								
319A	Douglas	121.00	51	⇑P		PKPdf	05 38 47.5	+0.9	
	baz=121								
120A	U Bar Ranch, L	121.01	50	⇓P		PKPdf	05 38 47.7	+1.0	
	baz=121								
U23A	El Rito	121.07	45	⇓P		PKPdf	05 38 47.0	+0.2	
	baz=121								
Q25A	Bedland, Calha	121.08	41	⇓P		PKPdf	05 38 46.4	-0.2	
	baz=121								
Y21A	Point of Rocks	121.09	48	⇑P		PKPdf	05 38 48.2	+1.3	
	baz=121								
S24A	Houchin Ranch,	121.10	43	⇑P		PKPdf	05 38 47.7	+0.8	
	baz=121								
P26A	Davis Ranch, A	121.31	40	⇓P		PKPdf	05 38 47.2	+0.2	
	baz=121								
V23A	Ortiz Mt. (NFS	121.36	45	⇓P		PKPdf	05 38 48.1	+0.8	
	baz=121								
220A	Playas Peak, P	121.37	50	⇑P		PKPdf	05 38 47.7	+0.4	
	baz=121								
Z21A	St. Cloud Mine	121.41	49	⇓P		PKPdf	05 38 47.3	-0.1	
	baz=121								
ANMO	Albuquerque	121.55	46	PKP		PKPdf	05 38 48.3	+0.6	
ANMO	Albuquerque	121.55	46	PKP		PKPdf	05 38 48.3	+0.6	
	comp=Z,3.1nm,1.0s,baz=208,slow=3.6,SNR=9.3								
320A	Kipp Ranch, An	121.61	51	⇑P		PKPdf	05 38 48.0	+0.2	
	baz=122								
S25A	Robets Cordova	121.61	43	⇑P		PKPdf	05 38 47.8	+0.1	
	baz=122								
Y22A	Socorro	121.65	48	⇓P		PKPdf	05 38 48.3	+0.4	
	baz=122								
121A	Cookes Peak, D	121.67	49	⇓P		PKPdf	05 38 48.5	+0.5	
	baz=122								
BNM	Barren Site	121.80	47	ePKPdf		PKPdf	05 38 48.5	+0.2	
T25A	Trinidad	121.90	43	⇑P		PKPdf	05 38 48.4	+0.1	
	baz=122								
R26A	Arlington	121.94	41	⇓P		PKPdf	05 38 48.5	+0.3	
	baz=122								
V24A	Rampart Ranch,	122.02	45	⇓P		PKPdf	05 38 49.0	+0.4	
	baz=122								
W24A	Lazy 6 Ranch,	122.18	46	⇓P		PKPdf	05 38 49.2	+0.3	
	baz=122								
122A	Conniff Cattle	122.18	49	⇑P		PKPdf	05 38 49.5	+0.6	
	baz=122								
S26A	Kim	122.28	42	⇓P		PKPdf	05 38 49.1	+0.1	
	baz=122								
U25A	Circle Dot Ran	122.28	44	⇓P		PKPdf	05 38 49.3	+0.2	
	baz=122								
Y23A	Lovelace Mesa,	122.32	47	⇓P		PKPdf	05 38 49.6	+0.4	
	baz=122								
R27A	Eads	122.37	41	⇑P		PKPdf	05 38 48.8	-0.3	
	baz=122								
V25A	Rancho No Teng	122.42	45	⇑P		PKPdf	05 38 49.2	-0.1	
	baz=122								
T26A	Comanche Natio	122.44	43	⇑P		PKPdf	05 38 49.4	0.0	
	baz=122								
U26A	Atchley Ranch,	122.75	44	⇑P		PKPdf	05 38 50.3	+0.3	
	baz=123								
Y24A	Capitan	122.78	47	⇓P		PKPdf	05 38 50.0	0.0	
	baz=123								
W25A	X Bar L Ranch,	122.85	45	⇓P		PKPdf	05 38 50.0	-0.1	
	baz=123								
SCHQ	Schefferville	122.90	6	PKP		PKPdf	05 38 48.3	-1.1	
SCHQ	Schefferville	122.90	6	PKP		PKPdf	05 38 48.3	-1.1	
	comp=Z,1.6nm,0.4s,baz=109,slow=2.7,SNR=9.5								
V26A	Tequesquite Ra	123.03	44	⇑P		PKPdf	05 38 50.4	0.0	
	baz=123								
T27A	Campo	123.09	42	⇓P		PKPdf	05 38 50.4	-0.1	
	baz=123								
Z24A	Sheeppen Canyo	123.11	47	⇑P		PKPdf	05 38 51.0	+0.3	
	baz=123								
Y25A	Mesa, Roswell	123.32	47	⇑P		PKPdf	05 38 51.1	0.0	
	baz=123								
124A	Stringfield Ra	123.34	48	⇓P		PKPdf	05 38 50.7	-0.5	
	baz=123								
W26A	Owens Ranch, T	123.40	45	⇓P		PKPdf	05 38 51.4	+0.3	
	baz=123								
BGNE	Belgrade	123.42	36	⇑P		PKPdf	05 38 50.6	-0.2	
	baz=123								
T28A	Walsh	123.46	42	⇓P		PKPdf	05 38 51.1	-0.1	
	baz=123								
Z25A	Roswell	123.61	47	⇑P		PKPdf	05 38 51.7	+0.1	
	baz=124								
X26A	CR and CF Fran	123.64	45	⇑P		PKPdf	05 38 51.7	0.0	
	baz=124								
SPMN	St. Paul	123.68	29	⇓P		PKPdf	05 38 51.2	0.0	
	baz=124								
MNTX	Cornudas Mount	123.86	49	⇑P		PKPdf	05 38 52.1	+0.1	
	baz=124								
324A	Moseley Ranch,	123.90	50	⇓P		PKPdf	05 38 52.1	-0.1	
	baz=124								
W27A	Bowe Ranch, En	123.91	45	⇓P		PKPdf	05 38 51.6	-0.5	
	baz=124								
Y26A	Elida	123.95	46	⇑P		PKPdf	05 38 51.9	-0.3	
	baz=124								
125A	Gardner Draw,	123.95	48	⇓P		PKPdf	05 38 52.1	-0.2	
	baz=124								
V28A	Channing	124.13	43	⇑P		PKPdf	05 38 52.8	+0.3	
	baz=124								
325A	Bean Ranch, Si	124.32	49	⇑P		PKPdf	05 38 53.2	+0.1	
	baz=124								
126A	Clayton Basin,	124.43	48	⇑P		PKPdf	05 38 53.3	+0.2	
	baz=124								
425A	Indio Mountain	124.58	50	⇓P		PKPdf	05 38 53.4	-0.1	
	baz=124								
226B	Tecolote Peak,	124.60	48	⇓P		PKPdf	05 38 53.0	-0.5	
	baz=124								
MSTX	Muleshoe	124.68	46	⇓P		PKPdf	05 38 53.1	-0.5	
	baz=125								
Z27A	Tatum	124.69	46	⇑P		PKPdf	05 38 53.1	-0.5	
	baz=125								
U30A	WK&E Inc. Balk	124.77	42	⇑P		PKPdf	05 38 54.1	+0.5	
	baz=125								
127A	Arkansas Junct	124.90	47	⇓P		PKPdf	05 38 54.2	+0.1	
	baz=125								
326A	Caldwell Ranch	125.10	49	⇑P		PKPdf	05 38 54.5	0.0	
	baz=125								
Y29A	Porterfield Fa	125.52	45	⇑P		PKPdf	05 38 55.2	+0.1	
	baz=125								
128A	Castleberry Fa	125.57	47	⇑P		PKPdf	05 38 55.1	-0.2	
	baz=126								
526A	Mary Lane Ranc	125.60	50	⇑P		PKPdf	05 38 55.5	0.0	
	baz=126								
427A	Hayter Ranch,	125.75	49	⇓P		PKPdf	05 38 55.6	-0.1	
	baz=126								
X30A	Coker Ranch, T	125.76	44	⇑P		PKPdf	05 38 55.6	0.0	
	baz=126								
KSU1	Kansas State U	125.79	37	ePKPdf		PKPdf	05 38 54.3	-1.1	
626A	Big Bend Ranch	125.80	51	⇓P		PKPdf	05 38 56.0	+0.2	
	baz=126								
Z29A	Hungry Hill Ra	125.81	46	⇑P		PKPdf	05 38 55.8	0.0	
	baz=126								
527A	Woodward Ranch	125.93	50	⇑P		PKPdf	05 38 56.2	0.0	
	baz=126								
328A	Wristen Ranch,	125.94	48	⇑P		PKPdf	05 38 56.1	0.0	
	baz=126								
129A	Stewart Farms,	126.01	46	⇑P		PKPdf	05 38 56.1	-0.1	
	baz=126								
Y30A	Stafford Cattl	126.05	45	⇑P		PKPdf	05 38 56.6	+0.4	
	baz=126								
TXAR	Lajitas Array	126.26	51	PKP		PKPdf	05 38 57.1	+0.4	
TXAR	Lajitas Array	126.26	51	PKP		PKPdf	05 38 57.1	+0.4	
	comp=Z,1.5nm,0.8s,baz=245,slow=0.9,SNR=14								
X31A	McDonald Ranch	126.28	43	⇑P		PKPdf	05 38 56.8	+0.2	
	baz=126								
428A	Kincaid Ranch,	126.36	49	⇑P		PKPdf	05 38 57.4	+0.5	
	baz=126								
627A	Terlingua Ranc	126.42	51	⇑P		PKPdf	05 38 57.5	+0.5	
	baz=126								
DBIC	Dimbokro	126.42	280	PKP		PKPdf	05 38 56.1	-1.2	
DBIC	Dimbokro	126.42	280	PKP		PKPdf	05 38 56.1	-1.2	
	comp=Z,4.3nm,0.9s,baz=138,slow=4.8,SNR=6.4								
Y31A	Rekieta Farm,	126.45	44	⇑P		PKPdf	05 38 57.0	+0.1	
	baz=126								
628A	Black Gap, Mar	126.79	50	⇑P		PKPdf	05 38 58.1	+0.4	
	baz=127								
Z31A	Sharp Cattle R	126.88	45	⇓P		PKPdf	05 38 58.0	+0.3	
	baz=127								
230A	Sterling City	126.94	47	⇓P		PKPdf	05 38 57.4	-0.5	
	baz=127								
529A	Stev Forest Ra	127.00	49	⇓P		PKPdf	05 38 58.2	+0.1	
	baz=127								
429A	Davenport Ranc	127.00	49	⇑P		PKPdf	05 38 58.3	+0.2	
	baz=127								
430A	Baggett Ranch,	127.41	48	⇓P		PKPdf	05 38 58.7	-0.1	
	baz=127								
ABTX	Abilene, Hawle	127.61	45	⇓P		PKPdf	05 38 59.2	+0.1	
	baz=128								
530A	J-C Ranch, Com	127.65	49	⇑P		PKPdf	05 38 60.0	+0.6	
	baz=128								
431A	Sonora	127.93	48	⇑P		PKPdf	05 38 59.5	-0.3	
	baz=128								
232A	Coleman	128.00	46	⇓P		PKPdf	05 38 59.2	-0.7	
	baz=128								
332A	Millersview	128.20	47	⇓P		PKPdf	05 38 59.8	-0.5	
	baz=128								
531A	Rocksprings	128.24	48	⇑P		PKPdf	05 39 00.6	+0.2	
	baz=128								
631A	Perdido Creek	128.59	49	⇓P		PKPdf	05 39 00.9	-0.2	
	baz=128								
JCT	Junction City	128.63	48	ePKIKP		PKPdf	05 39 01.2	0.0	
JCT	Junction City	128.63	48	ePKPdf		PKPdf	05 39 01.2	0.0	
JCT	Junction City	128.63	48	⇓P		PKPdf	05 39 00.7	-0.4	
	baz=129								
532A	Rocksprings	128.73	48	⇑P		PKPdf	05 39 01.5	+0.1	
	baz=129								
632A	Uvalde	129.14	49	⇓P		PKPdf	05 39 02.4	+0.3	
	baz=129								
732A	Laxson Ranch,	129.39	50	⇓P		PKPdf	05 39 03.7	+1.1	
	baz=129								
SADO	Sadowa	129.73	20	PKP		PKPdf	05 39 02.6	-0.1	
SADO	Sadowa	129.73	20	PKP		PKPdf	05 39 02.6	-0.1	
	comp=Z,3.7nm,0.8s,baz=333,slow=4.5,SNR=3.0								
WVT	Waverly	132.90	34	ePKIKP		PKPdf	05 39 07.0	-2.0	
WVT	Waverly	132.90	34	ePKPdf		PKPdf	05 39 07.0	-2.0	
TKL	Tuckaleechee C	135.40	30	PKP		PKPdf	05 39 14.5	+0.7	
TKL	Tuckaleechee C	135.40	30	PKP		PKPdf	05 39 14.5	+0.7	
	comp=Z,4.9nm,0.8s,baz=199,slow=1.9,SNR=6.0								
CMIG	Matias Romero	138.84	61	PKP		PKPdf	05 39 20.2	-0.3	
CMIG	Matias Romero	138.84	61	PKP		PKPdf	05 39 20.2	-0.3	
	comp=Z,2.1nm,0.5s,baz=341,slow=3.4,SNR=5.9								
TEIG	Tepich	142.88	52	PKP		PKPdf	05 39 24.9	-2.9	
TEIG	Tepich	142.88	52	PKP		PKPdf	05 39 24.8	-2.9	
	comp=Z,8.9nm,0.9s,baz=297,slow=10,SNR=6.0								
TGUH	Tenucigalpa,Un	146.76	60	ePKPdf		PKPdf	05 39 34.8	+0.2	
CFAA	Coronel Fontan	148.94	163	PKPbc		PKPbc	05 39 40.2	-1.6	
CFAA	Coronel Fontan	148.94	163	PKPbc		PKPbc	05 39 40.2	-1.6	
	baz=174,slow=4.2								
JTS	JuntasAbangare	150.39	65	PKPbc		PKPbc	05 39 46.1	+0.3	
JTS				PKPab		PKPab	05 39 53.1	+0.8	
JTS	JuntasAbangare	150.39	65	PKPbc		PKPbc	05 39 46.1	+0.3	
	comp=Z,4.5nm,0.6s,baz=0.0,slow=1.0,SNR=3.1								
JTS				PKPab		PKPab	05 39 53.1	+0.8	
	comp=Z,10nm,0.9s,baz=327,slow=9.5,SNR=3.9								
LCO	Las Campanas	150.45	157	ePKPbc		PKPbc	05 39 46.9	+0.9	
CPUP	Villa Florida	155.78	181	PKP		PKPdf	05 39 49.2	+1.2	
CPUP				PKPab		PKPab	05 40 13.1	-1.3	
CPUP	Villa Florida	155.78	181	PKP		PKPdf	05 39 49.2	+1.2	
	comp=Z,0.8nm,0.7s,baz=179,slow=7.4,SNR=2.5								
CPUP				PKPab		PKPab	05 40 13.1	-1.3	
	comp=Z,4.1nm,1.0s,baz=150,slow=4.2,SNR=4.9								
ATAH	Atahualpa	158.88	105	PKP		PKPdf	05 39 53.5	+0.7	
ATAH				PKPab		PKPab	05 40 29.4	+0.4	
ATAH	Atahualpa	158.88	105	PKP		PKPdf	05 39 53.5	+0.7	
	comp=Z,2.4nm,0.6s,baz=278,slow=11,SNR=4.9								
ATAH				PKPab		PKPab	05 40 29.4	+0.4	
	comp=Z,10nm,1.0s,baz=216,slow=17,SNR=6.3								
OTAV	Otavalo	159.28	84	ePKPdf		PKPdf	05 39 53.8	+0.5	
ROSC	El Rosal	162.18	68	ePKPdf		PKPdf	05 39 56.6	+0.3	
ROSC	El Rosal	162.18	68	PKP		PKPdf	05 39 56.7	+0.3	
	comp=Z,3.9nm,0.5s,baz=335,slow=3.0,SNR=7.8								
LPAZ	La Paz	162.54	145	PKP		PKPdf	05 39 57.4	+0.5	
LPAZ	La Paz	162.54	145	PKP		PKPdf	05 39 57.4	+0.5	
	comp=Z,3.2nm,1.0s,baz=336,slow=2.8,SNR=8.8								
BDFB	Brasilia	163.32	215	PKPab		PKPab	05 40 47.5	-0.1	
BDFB	Brasilia	163.32	215	PKPab		PKPab	05 40 47.5	-0.1	
	comp=Z,2.3nm,0.9s,baz=148,slow=2.7,SNR=3.8								
SIV	San Ignacio	165.71	167	PKP		PKPdf	05 39 59.4	+0.3	
SIV				PKPab		PKPab	05 40 58.1	+0.2	
	comp=Z,1.7nm,0.8s,baz=106,slow=1.0,SNR=7.2								
SIV				PKPab		PKPab	05 40 58.1	+0.2	
	comp=Z,1.7nm,0.8s,baz=267,slow=4.6,SNR=4.0								

IDC 12 05:30:14.2±6.5, 23°.41S×69°.75E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/26, mbtmpg3.6/4, MS3.9/2, Ms1 3.9/2, ms1mx3.2/28, Error ellipse: s-maj=222.5km s-min=37.7km az=46.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	52.26	95	P	P	05 39 27.9	+0.2
	1.2nm,0.8s,baz=238,slow=9.5,SNR=3.6						
ASAR	Alice Springs	58.34	104	P	P	05 40 11.4	-0.1
	0.4nm,0.9s,baz=256,slow=5.8,SNR=3.8						
WRA	Warramunga Arr	59.68	100	P	P	05 40 20.4	-0.5
	1.6nm,1.1s,baz=256,slow=6.7,SNR=4.6						
AKTO	Aktyubinsk	74.25	352	LR	LR	06 10 28.1	
	comp=Z,248nm,19.9s,baz=156,slow=32						
ZALV	Zalesovo Beam	78.13	9	P	P	05 42 14.8	0.0
	0.3nm,0.5s,baz=197,slow=4.5,SNR=2.1						
MLR	Muntele Rosu	79.31	330	LR	LR	06 13 09.7	
	comp=Z,19nm,21.2s,baz=67,slow=32						
YKA	Yellowknife Ar	140.82	3	PKP	PKPdf	05 49 45.8	+0.4
	0.2nm,0.7s,baz=17,slow=1.5,SNR=5.4						

ISCJB 12 05:51:33.0±1.1, 44°.24N±0°.05×129°.1W±0°.1, h10km, mb3.1/2, Error ellipse: s-maj=11.9km s-min=6.3km az=153.2

IDC 12 05:51:33.9±2.4, 44°.21N×129°.06W, h0km, mb3.0/3, mb1 3.6/7, mb1mx3.4/31, mbtmp3.2/7, ML3.6/3, MS3.2/1, Ms1 3.2/1, ms1mx2.3/9, Error ellipse: s-maj=42.5km s-min=19.5km az=53.0

NEIC 12 05:51:34.6±1.4, 44°.26N×129°.19W, h10km, mb3.6/1, Error ellipse: s-maj=17.0km s-min=8.7km az=76.0

ISC 12 05:51:36.3±1.5, 44°.29N±0°.08×129°.0W±0°.1, h10km, n48, σ1§44/49, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	3.70	111	Pn	Pn	05 52 28.3	-5.3
COR	Corvallis	4.12	84	ePn	Pn	05 52 37.8	-1.5
COR				eSn	Sn	05 53 28.4	+0.9
BROR	Big Rock Looko	4.73	88	P	Pn	05 52 46.4	-1.3
HUMO	Hull Mountain	4.74	109	ePn	Pn	05 52 44.1	-3.7
HUMO				eSn	Sn	05 53 40.4	-2.4
NLWA	Neilton Lookou	4.76	48	ePn	Pn	05 52 46.1	-2.1
RVW	Rose Valley	4.82	65	P	Pn	05 52 47.8	-1.1
OBC	Olympics--Boni	5.09	41	P	Pn	05 52 51.5	-1.2
FL2	Flat Top 2	5.10	66	P	Pn	05 52 51.9	-0.9
OSD	Olympics--Snow	5.13	45	P	Pn	05 52 52.0	-1.3
KHMM	Horse Mountain	5.20	129	Pn	Pn	05 52 52.0	-2.2
YBH	Yreka Blue Hor	5.30	117	Pn	Pn	05 52 56.1	+0.6
YBH				Sn	Sn	05 53 55.1	-1.6
YBH	Yreka Blue Hor	5.30	117	Pn	Pn	05 52 56.2	+0.6
	0.2nm,0.3s,baz=298,slow=14,SNR=7.3						
YBH				Sn	Sn	05 53 55.1	-1.6
	0.2nm,0.3s,baz=80,slow=18,SNR=3.6						
HDW	Hoodsport	5.36	49	P	Pn	05 52 55.2	-1.1
ASR	Mount Adams--S	5.58	68	P	Pn	05 52 58.8	-0.6
BLN	Blyn Mountain	5.62	46	P	Pn	05 52 59.2	-0.8
LON	Longmire	5.65	62	ePn	Pn	05 52 59.7	-0.6
PGC	Sidney	5.83	40	ePn	Pn	05 53 00.2	-2.0
VIPM	Ingram Point	6.04	85	P	Pn	05 53 04.7	-1.1
JCW	Jim Creek	6.29	49	P	Pn	05 53 08.5	-0.6
TBM	Table Mountain	6.58	61	P	Pn	05 53 12.4	-0.7
RPW	Rockport	6.67	49	P	Pn	05 53 13.5	-0.8
MBW	Mount Baker	6.67	45	P	Pn	05 53 14.4	0.0
A05A	Maple Falls	6.72	43	P	Pn	05 53 14.5	-0.4
VDB	Vedder Mountai	6.73	43	P	Pn	05 53 14.1	-1.0
HOPS	Hopland	6.92	138	ePn	Pn	05 53 14.5	-3.3
NEW	Newport	9.16	60	Pn	Pn	05 53 49.3	+0.8
NEW	Newport	9.16	60	Pn	Pn	05 53 49.3	+0.8
	0.2nm,0.3s,baz=232,slow=8.8,SNR=6.0						
NEW		

KPT				*i* S		**Sb**	06 18 07.4	+0.5	
SMAR	**Somma**		**2.08 246**	P		**Pn**	06 17 38.3	-0.1	
SMAR				*i* S		**Sn**	06 18 03.2	-1.3	
CIRR	**Tsirk**		**2.09 341**	P		**Pg**	06 17 43.1	-0.2	
KRER	**Koryakskii**		**2.10 247**	P		**Pn**	06 17 37.9	-0.6	
KRER				*i* S		**Sn**	06 18 02.9	-1.8	
UGLR	**Uglovaya**		**2.10 244**	P		**Pn**	06 17 38.4	-0.1	
UGLR				*i* S		**Sn**	06 18 03.9	-0.8	
KBTR	**Krutoberegovo**		**2.12 13**	P		**Pb**	06 17 40.3	-1.3	
KBTR				*i* S		**Sb**	06 18 07.4	-0.5	
AVH	**Avacha**		**2.12 246**	*e*P		**Pn**	06 17 38.8	+0.1	
AVH				*i* S		**Sn**	06 18 04.2	-0.9	
KOK	**Koryaka**		**2.16 248**	P		**Pn**	06 17 39.4	0.0	
KOK				*i* S		**Sn**	06 18 05.2	-1.0	
KRSR	**Krestovskiy**		**2.22 339**	P		**Pb**	06 17 43.2	-0.3	
KRSR				*i* S		**Sb**	06 18 11.9	+0.8	
KOZ	**Kozyrevsk**		**2.26 329**	P		**Pb**	06 17 42.7	-1.4	
KOZ				*i* S		**Sb**	06 18 11.4	-0.7	
PET	**Petropavlovsk**		**2.28 242**	*e*PN		**Pb**	06 17 42.9	-1.5	
PET				*e*S		**Sn**	06 18 09.4	+0.5	
PET	comp=N,226nm,0.7s			smax	smax				
PET	comp=E,208nm,0.5s			smax	smax				
PET	**Petropavlovsk**		**2.28 242**	P		**Pn**	06 17 40.6	-0.2	
PET				*i* S		**Sn**	06 18 07.7	-1.2	
KLY	**Klyuchi**		**2.29 341**	*e*P		**Pb**	06 17 43.6	-1.0	
KLY				*i* S		**Sb**	06 18 13.2	+0.2	
GNL	**Ganaly**		**2.43 261**	*e*P		**Pb**	06 17 44.2	-2.8	
GNL				*e*S		**Sn**	06 18 12.9	+0.1	
SMKR	**Semkarok**		**2.45 353**	*e*P		**Pb**	06 17 46.7	-0.7	
SMKR				*i* S		**Sb**	06 18 17.8	+0.1	
BDR	**Baidarnaya**		**2.46 350**	P		**Pg**	06 17 47.9	-2.4	
BDR				*i* S		**Sg**	06 18 20.5	-1.7	
SRDR	**Sredinnyy**		**2.52 330**	*e*P		**Pb**	06 17 46.7	-1.9	
SRDR				*e*S		**Sb**	06 18 18.0	-1.8	
SRKR	**Sorokina**		**2.55 350**	P		**Pb**	06 17 49.4	+0.3	
SRKR				*i* S		**Sg**	06 18 22.6	-2.5	
ESO	**Esso**		**2.59 315**	P		**Pb**	06 17 48.0	-1.7	
ESO				*i* S		**Sb**	06 18 20.5	-1.1	
RUS	**Russkaya**		**2.70 232**	P		**Pn**	06 17 47.4	+0.8	
RUS				*i* S		**Sn**	06 18 20.0	+0.7	
PETK	**Petropavlovsk-**		**2.75 249**	PN		**Pn**	06 17 48.4	+1.0	
PETK							06 18 23.7		
PETK	comp=Z,3.0nm,0.3s			pmax	pmax				
PETK	comp=N,7.0nm,0.3s			smax	smax				
PETK	**Petropavlovsk-**		**2.75 249**	Pn		**Pn**	06 17 48.4	+1.0	
	comp=N,2.9nm,0.3s,baz=80,slow=16,SNR=39								
PETK	comp=N,6.5nm,0.3s,baz=84,slow=26,SNR=10.0			Sn		**Sb**	06 18 23.7	-2.5	
MTVR	**Mutnovka**		**2.82 235**	P		Pb	06 17 50.1	-3.6	
MTVR				*i* S		**Sn**	06 18 24.6	+2.0	
GRL	**Gorelyy**		**2.83 237**	P		**Pn**	06 17 50.0	+1.4	
APC	**Apacha**		**3.12 249**	P		**Pn**	06 17 54.3	+1.8	
APC				*i* S		**Sn**	06 18 30.9	+1.1	
FX1	**Attu Island--F**		**6.79 96**	Pn		**Pn**	06 18 43.5	+0.6	
	comp=N,3.1nm,0.3s,baz=247,slow=14,SNR=7.5								
FX1				Sn		**Sn**	06 19 55.5	-4.8	
	comp=N,2.3nm,0.3s,baz=196,slow=18,SNR=3.4								
BILL	**Bilibino**		**14.08 7**	*e*P		Pn	06 20 09.9	-13	
BILL				pmax	pmax				
	comp=Z,2.0nm,1.0s								
ASAJ	**Asahikawa**		**16.12 239**	Pn		**Pn**	06 20 50.1	+0.3	
	comp=Z,0.2nm,0.3s,baz=17,slow=17,SNR=2.4								
ASAJ				Sn		**S**	06 24 07.6	+5.7	
	comp=Z,0.2nm,0.3s,baz=37,slow=20,SNR=4.1								
MJAR	**Matsushiro Arr**		**24.08 233**	P		**P**	06 22 20.4	+1.8	
	comp=Z,1.8nm,0.8s,baz=15,slow=11,SNR=6.4								
ILAR	**Eielson Array**		**27.27 47**	P		**P**	06 22 48.1	+0.8	
	comp=Z,0.7nm,0.9s,baz=258,slow=7.6,SNR=7.8								
YKA	**Yellowknife Ar**		**41.62 44**	P		**P**	06 24 51.6	+0.7	
	comp=Z,0.2nm,0.7s,baz=297,slow=8.0,SNR=3.7								
MKAR	**Makanchi Array**		**48.70 296**	P		**P**	06 25 46.7	-0.7	
MKAR	**Makanchi Array**		**48.70 296**	P		**P**	06 25 46.7	-0.7	
	comp=Z,0.2nm,0.6s,baz=60,slow=8.5,SNR=3.3								
NVAR	**Mina Array Bea**		**54.34 72**	P		P	06 26 32.2	+2.2	
	comp=Z,1.0nm,0.7s,baz=300,slow=7.7,SNR=8.2								
PDAR	**Pinedale Array**		**56.03 63**	P		**P**	06 26 43.6	+1.4	
	comp=Z,0.7nm,0.9s,baz=318,slow=4.2,SNR=5.0								
TXAR	**Lajitas Array**		**69.20 69**	P		**P**	06 28 11.1	+1.0	
	comp=Z,0.7nm,0.8s,baz=299,slow=4.8,SNR=7.3								
WRA	**Warramunga Arr**		**77.52 207**	P		**P**	06 28 58.6	-0.3	
	comp=Z,0.4nm,0.8s,baz=24,slow=6.2,SNR=3.7								
ASAR	**Alice Springs**		**81.19 206**	P		**P**	06 29 19.9	+1.0	
	comp=Z,0.5nm,0.8s,baz=9.2,slow=7.5,SNR=3.9								

MOS **12** *06:33:32.4±1.0,51.80N×179.02E, h33km, mb4.6/44, Error ellipse: s-maj=10.0km s-min=8.0km az=56.0*
ISCJB **12** *06:33:38.9±0.4,51.82N±0.05×179.08E±0.03, h95km±3km, mb4.5/88, Error ellipse: s-maj=8.0km s-min=2.8km az=1.3*
IDC **12** *06:33:40.0±0.4,51.87N×179.04E, h89km±3km, mb3.9/29, mb1 4.1/32, mb1mx4.0/41, mbtmp4.0/32, MS3.2/10, Ms1 3.3/10, ms1mx2.9/48, Error ellipse: s-maj=13.1km s-min=6.2km az=172.0*
NEIC **12** *06:33:39.7±0.2,51.77N×179.06E, mb4.6/47, Error ellipse: s-maj=6.0km s-min=2.6km az=179.0*
BJI **12** *06:33:42.9,52.39N×178.04E, h88km, mB5.0/19, mb4.8/34, Ms4.7/10, Ms7 4.2/10*

ISC 12 06:33:39.6±0.3,51.75N±0.07×179.01E±0.03, h89km±2km, h89km:pP-P, n396, σ1§08/501, mb4.5/89, 54C-66D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GANE	**Gareloi Northe**	**1.37**	**86**	P	**Pn**	**06 34 03.3**	**-0.4**
GALAA	**Gareloi Lava P**	**1.38**	**89**	P	**Pn**	**06 34 03.3**	**-0.4**
GAEA	**Gareloi East**	**1.39**	**88**	P	**Pn**	**06 34 03.4**	**-0.5**
TANO	**Tanaga North**	**1.79**	**83**	P	**Pn**	**06 34 09.1**	**+0.2**
TASE	**Tanaga Southea**	**1.83**	**86**	P	**Pn**	**06 34 09.1**	**-0.5**
TAFP	**Tanaga Falls P**	**1.87**	**84**	P	**Pn**	**06 34 09.3**	**-0.7**
TAFP				S	**Sn**	**06 34 32.0**	**-1.2**
KIKV	**Kanaga Island**	**2.37**	**85**	P	**Pn**	**06 34 16.2**	**-0.4**
KIRH	**Kanaga Island**	**2.42**	**85**	P	**Pn**	**06 34 16.8**	**-0.5**
GSCK	**Great Sitkin C**	**3.00**	**83**	P	**Pn**	**06 34 25.1**	**+0.1**
GSTD	**Great Sitkin T**	**3.02**	**82**	P	**Pn**	**06 34 24.6**	**-0.7**
GSTD				S	**Sn**	**06 34 60.0**	**-0.6**
SMY	**Shemya**	**3.18**	**290**	P	**Pn**	**06 34 26.4**	**-1.0**
SMY				S	**Sn**	**06 35 03.2**	**-1.1**
SMY	**Shemya**	**3.18**	**290**	P	**Pn**	**06 34 26.4**	**-1.0**
SMY				S	**Sn**	**06 35 03.1**	**-1.1**
FX1	**Attu Island--F**	**3.77**	**290**	P	**Pn**	**06 34 34.4**	**-0.9**
FX1				S	**Sn**	**06 35 17.9**	**-0.6**
FX1	**Attu Island--F**	**3.77**	**290**	P	**Pn**	**06 34 34.4**	**-0.9**
	14nm,0.3s,baz=166,slow=12,SNR=40						
FX1				S	**Sn**	**06 35 17.9**	**-0.6**
	46nm,0.3s,baz=264,slow=23,SNR=6.5						
KOWE	**Korovin West**	**4.20**	**79**	P	**Pn**	**06 34 41.8**	**+0.5**
KOKL	**Mount Kliuchef**	**4.23**	**80**	P	**Pn**	**06 34 42.3**	**+0.6**
KOFP	**Korovin Flat P**	**4.29**	**80**	P	**Pn**	**06 34 43.1**	**+0.7**
OKSP	**Okmok Steeple**	**7.89**	**74**	P	**Pn**	**06 35 32.4**	**+0.9**
SPIA	**Saint Paul Isl**	**8.29**	**45**	P	**Pn**	**06 35 35.4**	**-1.4**
SPIA				*e*Sn	**Sn**	**06 37 09.8**	**+1.2**
MSW	**Makushin Switc**	**8.87**	**70**	P	**Pn**	**06 35 45.1**	**+0.3**
MTBL	**Makushin Table**	**8.94**	**70**	P	**Pn**	**06 35 46.1**	**+0.4**
AKUT	**Akutan**	**9.49**	**69**	*e*Pn	**Pn**	**06 35 55.3**	**+2.1**
AKUT				*e*Sn	Sn	06 37 29.8	-8.2
GAMB	**Gambell**	**13.02**	**19**	*e*Pn	**Pn**	**06 36 42.4**	**+1.7**
PETK	**Petropavlovsk-**	**13.07**	**284**	P	**Pn**	**06 36 42.0**	**+0.4**
PETK				S	**Sn**	**06 39 00.4**	**-4.7**
PETK	**Petropavlovsk-**	**13.07**	**284**	P	**Pn**	**06 36 42.0**	**+0.4**
PETK				S	**Sn**	**06 39 00.4**	**-4.7**
PETK	**Petropavlovsk-**	**13.07**	**284**	P	**Pn**	**06 36 42.0**	**+0.4**
	0.1nm,0.3s,baz=93,slow=15,SNR=3.4						
PETK	0.4nm,0.3s,baz=72,slow=39,SNR=3.8			S	**Sn**	**06 39 00.4**	**-4.7**
TNA	**Tin City** 5.4nm,1.0s	**15.37**	**21**	*e*P	**P**	**06 37 16.4**	**+2.6**
KDAK	**Kodiak Island**	**17.38**	**59**	P	**Pn**	**06 37 34.9**	**-1.1**
KDAK	**Kodiak Island** 2.5nm,0.3s,baz=259,slow=7.5,SNR=58	**17.38**	**59**	P	**Pn**	**06 37 34.9**	**-1.1**
BILL	**Bilibino**	**17.48**	**344**	*e*P	**Pn**	**06 37 37.5**	**+0.3**
BILL	comp=Z,12nm,1.0s			pmax	pmax		
BILL	comp=Z,100nm,18.0s			MLR	MLR		
BILL	**Bilibino** comp=Z,14nm,1.0s	**17.48**	**344**	*e*Pn	**Pn**	**06 37 38.8**	**+1.7**
SEY	**Seymchan**	**18.06**	**319**	*e*P	**P**	**06 37 43.0**	**-0.5**
SPU	**Mount Spurr**	**18.41**	**48**	*e*Pn	**Pn**	**06 37 49.5**	**+0.9**
PMR	**Palmer**	**19.88**	**48**	*e*P	**P**	**06 38 04.2**	**+0.9**
PMR	**Palmer**	**19.88**	**48**	*e*P	**P**	**06 38 04.2**	**+0.9**
TRF	**Thorofare Moun** comp=Z,17nm,0.9s	**19.96**	**42**	*e*P	**P**	**06 38 04.5**	**+0.1**
SML	**Sawmill**	**20.30**	**48**	*e*P	**P**	**06 38 07.7**	**-0.3**
SML	comp=Z,6.0nm,0.6s			pmax	pmax		
SML	**Sawmill** comp=Z,5.8nm,0.6s	**20.30**	**48**	*e*P	**P**	**06 38 07.7**	**-0.3**
MCK	**McKinley**	**20.62**	**42**	*e*P	**P**	**06 38 12.5**	**+1.1**
MCK	comp=Z,13nm,0.8s			pmax	pmax		
MCK	**McKinley** comp=Z,13nm,0.8s	**20.62**	**42**	*e*P	**P**	**06 38 12.5**	**+1.1**
DIV	**Divide** comp=Z,20nm,0.6s	**21.36**	**50**	*e*P	**P**	**06 38 20.5**	**+1.2**
COLA	**College**	**21.48**	**40**	*e*P	**P**	**06 38 20.8**	**+0.3**
COLA	comp=Z,15nm,0.9s			pmax	pmax		
COLA	**College** comp=Z,15nm,0.9s	**21.48**	**40**	*e*P	**P**	**06 38 20.8**	**+0.3**
COLD	**Coldfoot** comp=Z,56nm,2.4s	**21.66**	**33**	*e*P	**P**	**06 38 22.8**	**+0.4**
ILAR	**Eielson Array**	**21.83**	**40**	P	**P**	**06 38 22.9**	**-1.3**
ILAR				ScP	**ScP**	**06 45 47.3**	**-1.9**
ILAR	**Eielson Array** comp=Z,2.0nm,0.7s,baz=244,slow=9.9,SNR=30	**21.83**	**40**	P	**P**	**06 38 22.9**	**-1.3**
ILAR	comp=Z,0.7nm,0.7s,baz=276,slow=3.3,SNR=7.4			ScP	**ScP**	**06 45 47.3**	**-1.9**
ILAR	comp=Z,74nm,21.7s,baz=199,slow=38			LR	LR	06 47 28.6	
PAX	**Paxson**	**21.89**	**45**	*e*P	**P**	**06 38 24.5**	**-0.4**
PAX	comp=Z,43nm,1.5s			pmax	pmax		
PAX	**Paxson** comp=Z,43nm,1.5s	**21.89**	**45**	*e*P	**P**	**06 38 24.5**	**-0.4**
BMRM	**Bremner River** comp=Z,30nm,0.8s	**21.89**	**51**	*e*P	**P**	**06 38 25.4**	**+0.4**
MENT	**Mentasta**	**22.66**	**46**	*e*P	**P**	**06 38 32.8**	**-0.3**
DOT	**Dot Lake** comp=Z,30nm,0.7s	**22.67**	**44**	*e*P	**P**	**06 38 32.3**	**-0.9**
YSS	**Yuzh-Sakhalins**	**23.93**	**273**	↓*e*P	**P**	**06 38 48.0**	**+2.9**
YSS	comp=Z,30nm,0.9s			pmax	pmax		
YSS	comp=Z,30nm,0.4s			pmax	pmax		
YSS	**Yuzh-Sakhalins** comp=Z,24nm,0.7s	**23.93**	**273**	*e*P	**P**	**06 38 46.5**	**+1.4**
PNL	**Peninsula** comp=Z,13nm,0.6s	**24.37**	**55**	*e*P	**P**	**06 38 47.9**	**-1.1**
ASAJ	**Asahikawa** comp=Z,21nm,0.8s	**25.35**	**267**	*e*P	**P**	**06 38 59.4**	**+1.4**
ASAJ	**Asahikawa** comp=Z,21nm,0.8s,baz=72,slow=6.9,SNR=13	**25.35**	**267**	P	**P**	**06 38 59.5**	**+1.4**
ASAJ	comp=Z,22nm,21.9s,baz=170,slow=33			LR	LR	06 47 26.7	
ERM	**Erimo**	**26.13**	**262**	*e*P	**P**	**06 39 04.3**	**-0.7**
ERM	comp=Z,14nm,1.1s			pmax	pmax		
INK	**Inuvik**	**27.95**	**36**	P	**P**	**06 39 20.6**	**-0.5**
INK	**Inuvik** comp=Z,1.0nm,0.4s,baz=262,slow=9.1,SNR=20	**27.95**	**36**	P	**P**	**06 39 20.6**	**-0.5**
INK	comp=Z,74nm,18.3s,baz=62,slow=38			LR	LR	06 51 23.7	
DLBC	**Dease Lake**	**29.29**	**57**	P	**P**	**06 39 33.5**	**+0.3**
DLBC	**Dease Lake** comp=Z,1.9nm,0.7s,baz=286,slow=6.1,SNR=5.6	**29.29**	**57**	P	**P**	**06 39 33.5**	**+0.3**
KLR	**Kul'dur**	**29.77**	**284**	↑*i*P	**P**	**06 39 35.0**	**-2.4**
USRK	**Ussuriysk Arra** comp=Z,4.3nm,0.8s,baz=58,slow=7.8,SNR=11	**31.89**	**275**	P	**P**	**06 39 56.5**	**+0.4**
USRK	comp=Z,1.7nm,0.8s,baz=52,slow=8.9,SNR=2.8			pP	**pP**	**06 40 15.8**	**-0.7**
MJAR	**Matsushiro Arr**	**32.51**	**258**	P	**P**	**06 40 02.8**	**+1.1**
MJAR				pP	**pP**	**06 40 22.1**	**0.0**
MJAR	**Matsushiro Arr** comp=Z,3.4nm,0.6s,baz=48,slow=6.8,SNR=18	**32.51**	**258**	P	**P**	**06 40 02.8**	**+1.1**
MJAR	comp=Z,1.8nm,0.8s,baz=60,slow=6.6,SNR=4.2			pP	**pP**	**06 40 22.1**	**0.0**
MJAR	comp=Z,32nm,19.7s,baz=325,slow=33			LR	LR	06 51 28.4	
MAJO	**Matsushiro**	**32.51**	**258**	*e*P	**P**	**06 40 03.4**	**+1.7**
MAJO	comp=Z,16nm,1.1s			pmax	pmax		
MAJO	**Matsushiro** comp=Z,16nm,1.1s	**32.51**	**258**	*e*P	**P**	**06 40 03.4**	**+1.7**
MAT	**Matsushiro**	**32.51**	**258**	P	**P**	**06 40 03.0**	**+1.4**
MDJ	**Mudanjiang**	**33.17**	**277**	P	**P**	**06 40 07.7**	**+0.4**
MDJ				pP	**pP**	**06 40 26.3**	**-1.4**
MDJ				PcP	**PcP**	**06 42 48.8**	**+0.8**
MDJ				S	**S**	**06 45 23.0**	**+2.9**
MDJ	comp=Z,7.0nm,0.9s			pmax	pmax		
MDJ	comp=Z,81nm,4.4s			pmax	pmax		
YKA	**Yellowknife Ar**	**35.97**	**46**	P	**P**	**06 40 30.8**	**-0.4**
YKA				pP	**pP**	**06 40 51.6**	**-0.2**
YKA				sP	**sP**	**06 41 01.9**	**-0.3**
YKA				ScP	**ScP**	**06 46 31.7**	**-1.9**
YKA	**Yellowknife Ar** comp=Z,0.9nm,0.5s,baz=283,slow=7.9,SNR=40	**35.97**	**46**	P	**P**	**06 40 30.8**	**-0.4**
YKA	comp=Z,2.0nm,0.7s,baz=282,slow=8.3,SNR=10			pP	**pP**	**06 40 51.6**	**-0.2**
YKA	comp=Z,1.3nm,0.7s,baz=283,slow=8.2,SNR=3.9			sP	**sP**	**06 41 01.8**	**-0.3**
YKA	comp=Z,0.8nm,0.8s,baz=294,slow=3.3,SNR=14			ScP	**ScP**	**06 46 31.7**	**-1.9**
KSRS	**Korea Array** comp=Z,4.5nm,0.8s,baz=60,slow=8.2,SNR=24	**38.27**	**269**	P	**P**	**06 40 52.7**	**+1.8**
KSRS	comp=Z,0.7nm,0.5s,baz=55,slow=9.1,SNR=1.8			pP	**pP**	**06 41 12.5**	**+0.7**
KSRS	comp=Z,33nm,20.6s,baz=160,slow=32			LR	LR	06 54 11.8	
KSAR	**Wonju Array Be**	**38.31**	**269**	P	**P**	**06 40 52.7**	**+1.5**
KSAR				pP	**pP**	**06 41 12.5**	**+0.4**
JNU	**Nakatsue**	**39.27**	**261**	P	**P**	**06 41 01.0**	**+1.6**
JNU	**Nakatsue** comp=Z,11nm,0.9s,baz=59,slow=5.9,SNR=8.4	**39.27**	**261**	P	**P**	**06 41 01.0**	**+1.6**
JNU	comp=Z,38nm,18.5s,baz=66,slow=36			LR	LR	06 57 13.6	
RES	**Resolute Bay**	**39.97**	**24**	P	**P**	**06 41 04.8**	**+0.2**
RES	**Resolute Bay** comp=Z,0.3nm,0.5s,baz=297,slow=9.0,SNR=4.6	**39.97**	**24**	P	**P**	**06 41 04.8**	**+0.2**
NEW	**Newport**	**40.03**	**69**	*e*P	**P**	**06 41 05.1**	**-0.5**
NEW				pP	**pP**	**06 41 27.4**	**+0.9**
NEW	**Newport** baz=40	**40.03**	**69**	↑P	**P**	**06 41 04.8**	**-0.7**
NEW	**Newport** comp=Z,2.2nm,0.6s,baz=304,slow=7.9,SNR=8.5	**40.03**	**69**	P	**P**	**06 41 04.6**	**-1.0**
NEW	comp=Z,2.9nm,0.6s,baz=297,slow=9.2,SNR=5.0			pP	**pP**	**06 41 27.4**	**+0.9**
NEW	comp=Z,44nm,18.7s,baz=278,slow=34			LR	LR	06 56 27.0	
KHMM	**Horse Mountain** comp=Z,9.8nm,0.8s	**40.04**	**82**	*e*P	**P**	**06 41 07.7**	**+1.8**
KHMM				*e*pP	**pP**	**06 41 28.4**	**+1.6**
YBH	**Yreka Blue Hor**	**40.17**	**81**	P	**P**	**06 41 07.5**	**+0.6**
YBH				pP	**pP**	**06 41 28.6**	**+0.8**
YBH	**Yreka Blue Hor** comp=Z,6.2nm,0.8s,baz=276,slow=3.6,SNR=23	**40.17**	**81**	P	**P**	**06 41 07.5**	**+0.6**
YBH	comp=Z,4.6nm,0.9s,baz=289,slow=6.9,SNR=4.6			pP	**pP**	**06 41 28.6**	**+0.8**
WDC	**Whiskeytown Da**	**40.95**	**82**	*e*P	**P**	**06 41 14.2**	**+1.1**
WDC	comp=Z,7.0nm,0.9s			pmax	pmax		
WDC	**Whiskeytown Da** comp=Z,7.0nm,0.9s	**40.95**	**82**	*e*P	**P**	**06 41 14.2**	**+1.1**
BSMT	**Bassoo Peak**	**41.59**	**68**	*e*P	**P**	**06 41 18.1**	**-0.4**
BMO	**Blue Mountains**	**41.70**	**73**	*e*P	**P**	**06 41 18.7**	**-0.7**
BMO	**Blue Mountains**	**41.70**	**73**	*e*P	**P**	**06 41 18.7**	**-0.7**
BMO				*e*pP	**pP**	**06 41 40.9**	**+0.4**
A14A	**Double T Ranch** baz=42,SNR=6.2	**41.80**	**66**	P	**P**	**06 41 19.5**	**-0.7**
C14A	**Swan Lake** baz=42	**42.23**	**68**	↓P	**P**	**06 41 22.8**	**-0.9**
F12A	**Elk City** baz=42	**42.42**	**71**	↓P	**P**	**06 41 24.5**	**-0.8**
MSO	**Missoula** comp=Z,2.0nm,0.8s	**42.61**	**69**	*e*P	**P**	**06 41 26.0**	**-0.8**
MSO	**Missoula** baz=42,SNR=6.3	**42.61**	**69**	↓P	**P**	**06 41 25.4**	**-1.4**
B15A	**Bradely Ranch,** baz=42,SNR=7.4	**42.62**	**66**	↑P	**P**	**06 41 25.5**	**-1.3**
SLMT	**Seeley Lake**	**42.65**	**68**	*e*P	**P**	**06 41 26.3**	**-0.9**
D14A	**Greenough** baz=42,SNR=7.3	**42.73**	**68**	↓P	**P**	**06 41 26.8**	**-1.0**
A16A	**West Butte Ran** baz=43	**42.84**	**65**	↑P	**P**	**06 41 27.1**	**-1.5**
C15A	**Salmond Ranch,** baz=43,SNR=16	**42.88**	**67**	↓P	**P**	**06 41 28.3**	**-0.7**
CHMT	**Chamberlain Mo**	**42.97**	**69**	*e*P	**P**	**06 41 28.6**	**-1.2**
E14A	**Clinton** baz=43,SNR=7.2	**43.10**	**69**	P	**P**	**06 41 29.9**	**-0.8**
A17A	**Triple J Farms** baz=43,SNR=5.8	**43.35**	**65**	↑P	**P**	**06 41 31.4**	**-1.3**
C16A	**Fuhringer Ranc** baz=43,SNR=7.7	**43.36**	**67**	P	**P**	**06 41 31.8**	**-1.0**
WCN	**Washoe City**	**43.42**	**82**	*e*P	**P**	**06 41 34.3**	**+0.8**
WCN	comp=Z,10.0nm,0.9s			pmax	pmax		
WCN	**Washoe City** comp=Z,10nm,0.9s	**43.42**	**82**	*e*P	**P**	**06 41 34.3**	**+0.8**
E15A	**Deer Lodge** baz=43,SNR=6.2	**43.59**	**69**	P	**P**	**06 41 33.6**	**-1.0**
B17A	**L&G Farms, Che** baz=43	**43.64**	**66**	↓P	**P**	**06 41 34.0**	**-0.9**
G14A	**Jackson** baz=44,SNR=6.3	**43.76**	**71**	P	**P**	**06 41 35.2**	**-1.0**
CMB	**Columbia Colle**	**43.81**	**84**	*e*P	**P**	**06 41 37.2**	**+0.7**
CMB	comp=Z,6.0nm,0.9s			pmax	pmax		
CMB	**Columbia Colle** comp=Z,6.4nm,0.9s	**43.81**	**84**	*e*P	**P**	**06 41 37.2**	**+0.7**
D16A	**Dana Ranch, Ca** baz=44	**43.89**	**68**	↑P	**P**	**06 41 36.1**	**-1.0**
BJI	**Beijing**	**43.96**	**280**	P	**P**	**06 41 38.9**	**+1.4**
BJI	comp=Z,12nm,0.9s			pmax	pmax		
F15A	**Butte** baz=44	**43.99**	**69**	↓P	**P**	**06 41 37.0**	**-1.1**
C17A	**Wharram Farm,** baz=44,SNR=7.0	**44.01**	**66**	P	**P**	**06 41 36.7**	**-1.3**
I13A	**Wildhorse Cree** baz=44,SNR=9.1	**44.12**	**73**	↑P	**P**	**06 41 38.4**	**-0.7**
HLID	**Hailey** comp=Z,7.6nm,1.2s	**44.15**	**73**	*e*P	**P**	**06 41 39.2**	**0.0**
HLID				*e*ScP	**ScP**	**06 47 06.1**	**-0.1**
HLID	**Hailey** baz=44,SNR=9.0	**44.15**	**73**	↓P	**P**	**06 41 38.4**	**-0.8**
B18A	**Beardsley Farm** baz=44,SNR=5.4	**44.16**	**65**	P	**P**	**06 41 38.2**	**-0.9**
H14A	**Leadore** baz=44,SNR=11	**44.17**	**71**	P	**P**	**06 41 38.7**	**-0.7**
BMN	**Battle Mountai**	**44.29**	**79**	*e*P	**P**	**06 41 40.6**	**+0.2**
BMN	comp=Z,8.0nm,0.7s			pmax	pmax		
BMN	**Battle Mountai** comp=Z,8.4nm,0.7s	**44.29**	**79**	*e*P	**P**	**06 41 40.6**	**+0.2**
D17A	**Six Diamond Ra** baz=44	**44.31**	**67**	↓P	**P**	**06 41 39.4**	**-1.1**
MCMT	**McKenzie Canyo**	**44.35**	**71**	*e*P	**P**	**06 41 39.8**	**-1.1**
EGMT	**Eagleton** comp=Z,125nm,2.8s	**44.37**	**65**	*e*P	**P**	**06 41 39.6**	**-1.2**
EGMT	**Eagleton** baz=44	**44.37**	**65**	↓P	**P**	**06 41 39.8**	**-1.0**
G15A	**Dillon** baz=44	**44.37**	**70**	↓P	**P**	**06 41 39.9**	**-1.2**
J13A	**Cove Ranch, Pi** baz=44,SNR=12	**44.38**	**73**	↓P	**P**	**06 41 40.5**	**-0.6**
A19A	**Klindworth Far** baz=44	**44.45**	**64**	↓P	**P**	**06 41 40.2**	**-1.2**
I14A	**Mackay** baz=44,SNR=7.6	**44.51**	**72**	↑P	**P**	**06 41 41.5**	**-0.6**
F16A	**Kennard Place,** baz=44,SNR=6.2	**44.53**	**69**	↑P	**P**	**06 41 41.4**	**-0.8**
B19A	**Brinkman Farms** baz=44	**44.59**	**64**	↓P	**P**	**06 41 41.5**	**-1.0**
E17A	**Martinsdale** baz=44,SNR=6.4	**44.60**	**68**	P	**P**	**06 41 42.5**	**-0.3**
BOZ	**Bozeman (W)** comp=Z,7.0nm,0.6s	**44.60**	**69**	*e*P	**P**	**06 41 42.1**	**-0.7**
BOZ	comp=Z,7.0nm,0.6s			pmax	pmax		
BOZ	**Bozeman (W)** comp=Z,7.1nm,0.6s	**44.60**	**69**	*e*P	**P**	**06 41 42.1**	**-0.7**
BOZ	**Bozeman (W)** baz=44,SNR=18	**44.60**	**69**	P	**P**	**06 41 42.2**	**-0.6**
TLY	**Talaya**	**44.71**	**301**	*e*P	**P**	**06 41 42.6**	**-0.8**
TLY	comp=Z,4.0nm,0.7s			pmax	pmax		
TLY	**Talaya** comp=Z,4.8nm,0.7s	**44.71**	**301**	*e*P	**P**	**06 41 44.3**	**+0.9**
G16A	**Moss Hill, Enn** baz=44,SNR=13	**44.74**	**70**	P	**P**	**06 41 42.6**	**-1.3**
D18A	**Linhart Farms,** baz=45	**44.80**	**66**	↓P	**P**	**06 41 43.2**	**-1.0**
NVAR	**Mina Array Bea**	**44.85**	**82**	P	**P**	**06 41 45.6**	**+0.7**
NVAR				pP	**pP**	**06 42 06.8**	**+0.5**
NVAR				sP	**sP**	**06 42 15.6**	**-0.8**
NVAR				PcP	**PcP**	**06 43 25.3**	**+0.1**
NVAR				ScP	**ScP**	**06 47 09.0**	**-0.2**
NVAR	**Mina Array Bea** comp=Z,10nm,0.8s,baz=291,slow=7.6,SNR=75	**44.85**	**82**	P	**P**	**06 41 45.6**	**+0.7**
NVAR	comp=Z,3.4nm,0.8s,baz=293,slow=7.7,SNR=4.3			pP	**pP**	**06 42 06.8**	**+0.5**
NVAR	comp=Z,2.2nm,0.7s,baz=280,slow=9.9,SNR=2.7

RLMT **Red Lodge** 46.27 68 ⇑P P 06 41 54.8 -1.2
baz=46,SNR=7.3
HHC **Hu-ho-hao-te** 46.27 284 eP P 06 41 56.3 +0.3
HHC sP sP 06 42 31.0 +3.5
HHC PcP PcP 06 43 31.0 +1.0
HHC PP PP 06 43 47.2 +1.4
HHC ScP ScP 06 47 13.7 -1.2
HHC PcS PcS 06 47 23.8 -0.9
HHC S S 06 48 34.6 -1.5
HHC ScS ScS 06 51 38.3 -3.9
HHC pmax pmax
comp=Z,28nm,0.6s
HHC pmax pmax
comp=Z,190nm,6.3s
HHC LR LR
comp=N,170nm,16.5s
HHC LR LR
comp=E,310nm,16.6s
HHC LR LR
comp=Z,150nm,16.1s
H18A **Shoshone NF, C** 46.30 69 ⇓P P 06 41 55.4 -0.9
baz=46,SNR=5.2
GRAC **Grapevine Rang** 46.33 83 ⇓P P 06 41 57.2 +0.8
baz=46,SNR=5.0
LOHW **Long Hollow** 46.37 71 eP P 06 41 56.6 -0.3
comp=Z,300nm,2.5s
ISA **Isabella** 46.51 85 eP P 06 41 57.6 -0.2
ISA pmax pmax
comp=Z,5.0nm,0.9s
ISA **Isabella** 46.51 85 eP P 06 41 57.6 -0.2
comp=Z,5.4nm,0.9s
R11A **Troy Canyon, C** 46.57 80 P P 06 41 58.8 +0.4
baz=46,SNR=18
H19A **Powell** 46.70 69 P P 06 41 59.1 -0.2
baz=46,SNR=7.6
B23A **Brockton** 46.79 62 ⇓P P 06 41 58.8 -1.0
baz=47
G20A **Bridger** 46.82 68 P P 06 41 59.5 -0.8
baz=47,SNR=7.3
MPMC **Manual Prospec** 46.86 84 P P 06 42 01.4 +0.7
baz=47,SNR=6.2
D22A **Cohagen** 46.87 64 P P 06 42 00.1 -0.4
baz=47,SNR=5.6
FURC **Furnace Creek,** 46.98 83 P P 06 42 02.3 +0.9
baz=47,SNR=9.7
HWUT **Hardware Ranch** 47.00 74 eP P 06 42 01.2 -0.6
comp=Z,56nm,2.7s
OSI **Osito Adit** 47.03 86 eP P 06 42 02.5 +0.6
comp=Z,17nm,0.8s
C23A **Lambert** 47.05 63 ⇓P P 06 42 00.3 -1.6
baz=47
I19A **Meeteetse** 47.06 70 ⇑P P 06 42 01.5 -0.7
baz=47
A24A **Westby** 47.07 61 P P 06 42 01.1 -0.9
baz=47,SNR=6.6
DUG **Dugway** 47.11 76 P P 06 42 03.0 +0.4
baz=47,SNR=7.0
LRMC **Laurel Mountai** 47.11 84 ⇑P P 06 42 01.5 -1.1
baz=47
K18A **Toltan Ranch,** 47.28 72 ⇓P P 06 42 04.0 +0.1
baz=47
E22A **Miles City** 47.41 65 ⇓P P 06 42 03.9 -0.8
baz=47
NJ2 **Nanjing** 47.44 270 eP P 06 42 06.1 +1.1
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
J19A **Crowheart** 47.49 70 ⇑P P 06 42 05.1 -0.4
baz=47
BW06 **Boulder Array** 47.49 71 eP P 06 42 04.7 -0.9
BW06 epP pP 06 42 27.5 +0.4
BW06 **Boulder Array** 47.49 71 P P 06 42 04.9 -0.7
baz=47,SNR=8.2
PDAR **Pinedale Array** 47.49 71 P P 06 42 04.9 -0.7
PDAR pP pP 06 42 27.6 +0.5
PDAR ScP ScP 06 47 18.9 -1.2
PDAR **Pinedale Array** 47.49 71 P P 06 42 04.9 -0.7
comp=Z,4.3nm,0.6s,baz=302,slow=3.6,SNR=40
PDAR pP pP 06 42 27.6 +0.5
comp=Z,6.4nm,0.7s,baz=302,slow=3.8,SNR=14
PDAR ScP ScP 06 47 18.9 -1.2
comp=Z,1.2nm,0.9s,baz=318,slow=2.0,SNR=6.3
I20A **Worland** 47.62 69 ⇓P P 06 42 06.0 -0.4
baz=47
JLU **Jordanelle** 47.68 75 eP P 06 42 07.1 0.0
comp=Z,3.0nm,0.8s
SHOC **Shoshone** 47.71 83 P P 06 42 07.9 +0.8
baz=48,SNR=8.7
L18A **Fontenelle, Gr** 47.72 72 P P 06 42 07.0 -0.3
baz=48,SNR=5.6
GSC **Goldstone** 47.77 84 eP P 06 42 08.1 +0.4
GSC pmax pmax
comp=Z,15nm,0.8s
GSC **Goldstone** 47.77 84 eP P 06 42 08.1 +0.4
comp=Z,15nm,0.8s
GSC epP pP 06 42 28.8 -0.4
GSC **Goldstone** 47.77 84 P P 06 42 08.3 +0.6
baz=48,SNR=11
H21A **Big Horn, Sher** 47.84 68 ⇓P P 06 42 06.6 -1.6
baz=48
K19A **Absolon Red Bu** 47.87 71 P P 06 42 07.2 -1.3
baz=48,SNR=10
RRX **Edison Barstow** 47.93 84 ⇑P P 06 42 06.2 -2.6
baz=48
M18A **Lyman** 48.00 73 P P 06 42 09.1 -0.4
baz=48,SNR=5.2
L19A **Farson** 48.01 72 ⇑P P 06 42 08.8 -0.8
baz=48
I21A **Big Trails, Te** 48.19 69 ⇓P P 06 42 09.2 -1.7
baz=48
ARUT **Antelope Range** 48.24 79 eP P 06 42 11.3 -0.1
ARUT **Antelope Range** 48.24 79 eP P 06 42 11.3 -0.1
MSU **Marysvale** 48.55 77 eP P 06 42 14.0 +0.2
MSU **Marysvale** 48.55 77 eP P 06 42 14.0 +0.2
I22A **9 Mile Ranch,** 48.60 68 ⇓P P 06 42 13.3 -0.7
baz=48
MURC **Murrieta** 48.65 86 ⇓P P 06 42 14.2 -0.2
baz=48
L20A **Wamsutter** 48.67 71 ⇑P P 06 42 13.6 -1.1
baz=48
P17A **Butcher Ranch,** 48.81 75 ⇑P P 06 42 16.0 +0.3
baz=49,SNR=5.6
GMRC **Granite Mounta** 48.82 84 ⇓P P 06 42 16.3 +0.5
baz=49,SNR=12
N19A **John Jarvie Ra** 48.86 73 ⇑P P 06 42 15.3 -0.8
baz=49
M20A **Sweetwater, Wa** 49.08 72 ⇓P P 06 42 16.1 -1.7
baz=49
BELC **Belle Mtn. Jos** 49.13 85 P P 06 42 18.2 0.0
baz=49,SNR=5.8
SRU **San Rafael** 49.17 76 eP P 06 42 18.7 +0.2
SRU pmax pmax
comp=Z,200nm,0.6s
SRU **San Rafael** 49.17 76 eP P 06 42 18.7 +0.2
comp=Z,200nm,0.6s
SRU **San Rafael** 49.17 76 P P 06 42 18.8 +0.3
baz=49,SNR=11
O19A **Miners Draw (B** 49.26 74 P P 06 42 19.0 -0.1
baz=49,SNR=15
L21A **Rawlins** 49.26 71 ⇑P P 06 42 17.9 -1.4
baz=49
IRM **Iron Mountain** 49.55 84 ⇓P P 06 42 21.7 +0.5
baz=49
BAR **Barrett** 49.60 86 eP P 06 42 21.7 +0.1
comp=Z,14nm,0.8s
BC3 **Big Chuckawall** 49.70 85 ⇑P P 06 42 20.6 -1.9
baz=50
W13A **Hualapai Mount** 49.71 82 P P 06 42 22.9 +0.2
baz=50,SNR=8.7
P19A **Cripple Cowboy** 49.76 74 P P 06 42 23.0 0.0
baz=50,SNR=9.8
U15A **North Rim** 49.81 80 P P 06 42 24.3 +0.8
baz=50,SNR=20
SPITS **Spitsbergen Ar** 49.90 355 P P 06 42 23.2 -0.1
SPITS **Spitsbergen Ar** 49.90 355 P P 06 42 23.2 -0.1
comp=Z,1.9nm,0.5s,baz=72,slow=8.8,SNR=11
N21A **Black Mountain** 49.92 72 ⇑P P 06 42 22.7 -1.6
baz=50
Q19A **Hogan Spring (** 50.02 75 P P 06 42 24.5 -0.4
baz=50,SNR=8.8
PDMCI **Parker Dam,Lak** 50.08 83 ⇓P P 06 42 25.6 +0.5
baz=50,SNR=7.9
L23A **Garrett** 50.15 70 P P 06 42 25.1 -0.9
baz=50,SNR=6.7
Y12C **Blythe** 50.21 84 ⇓P P 06 42 26.0 -0.1
baz=50,SNR=5.4
O21A **Pagoda** 50.30 73 ⇑P P 06 42 25.6 -1.5
baz=50

S18A **Hurst Farm, Bl** 50.39 77 P P 06 42 27.8 -0.1
baz=50,SNR=9.0
GLA **Glamis** 50.49 85 eP P 06 42 28.7 +0.3
GLA pmax pmax
comp=Z,15nm,0.6s
GLA **Glamis** 50.49 85 eP P 06 42 28.7 +0.3
comp=Z,15nm,0.6s
GLA **Glamis** 50.49 85 P P 06 42 29.0 +0.6
baz=50,SNR=5.5
N22A **Wattenberg Ran** 50.53 71 ⇓P P 06 42 28.6 -0.3
baz=50
Q20A **Ridgley Place,** 50.60 74 ⇓P P 06 42 28.1 -1.2
baz=50
O23A **Lake Granby, G** 51.22 72 ⇓P P 06 42 33.7 -0.3
baz=51,SNR=6.2
SMCO **Snowmass** 51.25 73 eP P 06 42 34.1 -0.4
comp=Z,65nm,3.0s
WHN **Wuhan** 51.27 272 P P 06 42 35.0 +0.8
S20A **Disappointment** 51.29 76 ⇑P P 06 42 34.4 -0.2
baz=51
Q22A **Crested Butte,** 51.49 74 ⇑P P 06 42 35.8 -0.3
baz=51
X16A **Lo Mia Camp, P** 51.66 81 P P 06 42 38.2 +0.9
baz=52,SNR=9.5
S22A **4UR Ranch, Cre** 52.27 75 ⇑P P 06 42 41.9 +0.1
baz=52
O25A **Wiggins** 52.34 71 ⇓P P 06 42 42.9 +0.7
baz=52
214A **Organ Pipe Nat** 52.48 84 ⇑P P 06 42 43.4 +0.2
baz=52
X18A **Snowflake** 52.50 80 ⇓P P 06 42 43.7 +0.1
baz=52
V20A **Brimhall** 52.56 78 ⇑P P 06 42 43.6 -0.4
baz=52
R23A **Moffat** 52.57 74 ⇓P P 06 42 44.5 +0.3
baz=52
U21A **Nageezi** 52.63 76 ⇑P P 06 42 44.9 +0.3
baz=52,SNR=6.4
T22A **Edith** 52.70 75 ⇓P P 06 42 43.7 -1.4
baz=52
ZALV **Zalesovo Beam** 52.78 312 P P 06 42 44.9 -0.1
ZALV 06 43 54.2
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV **Zalesovo Beam** 52.78 312 P P 06 42 44.9 -0.1
ZALV PcP PcP 06 43 54.2 +0.9
ZALV **Zalesovo Beam** 52.78 312 P P 06 42 44.9 -0.1
comp=Z,1.0nm,0.5s,baz=46,slow=8.7,SNR=7.5
ZALV PcP PcP 06 43 54.2 +0.9
comp=Z,1.4nm,0.6s,baz=58,slow=3.7,SNR=6.7
X20A **Quemado** 53.38 79 ⇑P P 06 42 50.1 +0.1
baz=53,SNR=6.4
FRB **Frobisher Bay** 53.41 31 P P 06 42 48.8 -0.8
FRB pP pP 06 43 11.2 -0.3
FRB **Frobisher Bay** 53.41 31 P P 06 42 48.8 -0.8
comp=Z,2.0nm,0.6s,baz=318,slow=6.9,SNR=8.3
FRB pP pP 06 43 11.2 -0.3
comp=Z,1.4nm,0.7s,baz=314,slow=9.7,SNR=3.3
TUC **Tucson** 53.49 82 eP P 06 42 50.7 0.0
TUC pmax pmax
comp=Z,7.0nm,0.9s
TUC **Tucson** 53.49 82 eP P 06 42 50.7 0.0
comp=Z,6.9nm,0.9s
R25A **Fountain Ranch** 53.52 73 ⇓P P 06 42 50.3 -0.6
baz=53,SNR=5.6
U23A **El Rito** 53.58 76 P P 06 42 52.3 +0.8
baz=53,SNR=6.9
S25A **Robets Cordova** 53.75 73 ⇓P P 06 42 53.2 +0.5
baz=54
T24A **Torres, Weston** 53.77 74 ⇓P P 06 42 52.4 -0.5
baz=54
X21A **Alamocita Cree** 53.88 78 P P 06 42 54.7 +1.0
baz=54,SNR=6.5
Y20A **Horse Springs,** 53.88 79 ⇑P P 06 42 54.9 +1.2
baz=54
R26A **Arlington** 53.91 72 ⇑P P 06 42 53.6 -0.2
baz=54,SNR=5.7
LZH **Lanzhou** 53.97 284 eP P 06 42 54.5 +0.3
LZH pP pP 06 43 16.2 0.0
LZH sP sP 06 43 27.0 +0.9
LZH pmax pmax
comp=Z,18nm,1.0s
V23A **Ortiz Mt. (NFS** 53.98 76 ⇓P P 06 42 55.2 +0.8
baz=54
T25A **Trinidad** 54.11 74 ⇓P P 06 42 56.0 +0.6
baz=54
GTA **Gaotai** 54.16 290 P P 06 42 56.7 +1.2
GTA pP pP 06 43 16.7 -0.8
GTA sP sP 06 43 24.9 -2.6
GTA pmax pmax
comp=Z,17nm,0.6s
Y21A **Point of Rocks** 54.24 79 ⇑P P 06 42 57.5 +1.1
baz=54
Z20A **Nine Sixteen R** 54.29 80 P P 06 42 57.5 +0.9
baz=54,SNR=7.5
LAZ **Ladron** 54.30 78 eP P 06 42 56.6 -0.1
comp=Z,1.5nm,0.7s
R27A **Eads** 54.31 72 ⇑P P 06 42 56.3 -0.3
baz=54
ANMO **Albuquerque** 54.35 77 P P 06 42 56.9 -0.1
ANMO **Albuquerque** 54.35 77 P P 06 42 56.9 -0.1
comp=Z,1.1nm,0.8s,baz=296,slow=9.7,SNR=6.5
S26A **Kim** 54.35 73 ⇓P P 06 42 56.7 -0.3
baz=54
U25A **Circle Dot Ran** 54.60 74 ⇓P P 06 42 58.6 -0.3
baz=54
120A **U Bar Ranch, L** 54.65 81 P P 06 43 00.2 +1.0
baz=54,SNR=6.6
X23A **Hourglass Bar** 54.76 77 P P 06 43 00.8 +0.7
baz=55,SNR=5.2
U26A **Atchley Ranch,** 55.01 74 ⇑P P 06 43 01.7 -0.1
baz=55
U26A ⇑P P 06 43 01.8 -0.1
baz=55
319A **Douglas** 55.06 82 P P 06 43 03.0 +0.9
baz=55,SNR=9.5
220A **Playas Peak, P** 55.16 81 P P 06 43 03.5 +0.6
baz=55,SNR=12
121A **Cookes Peak, D** 55.18 80 ⇓P P 06 43 03.5 +0.4
baz=55
Z22A **Elephant Butte** 55.19 79 ⇑P P 06 43 03.3 +0.2
baz=55
Y23A **Lovelace Mesa,** 55.28 78 ⇓P P 06 43 04.7 +0.9
baz=55,SNR=8.2
V26A **Tequesquite Ra** 55.38 74 ⇑P P 06 43 04.3 -0.1
baz=55
T28A **Walsh** 55.49 72 ⇑P P 06 43 04.9 -0.3
baz=55
320A **Kipp Ranch, An** 55.55 82 ⇓P P 06 43 06.6 +0.9
baz=55
Y24A **Capitan** 55.66 77 P P 06 43 07.0 +0.4
baz=56,SNR=14
Y25A **Mesa, Roswell** 56.11 77 ⇓P P 06 43 09.3 -0.3
baz=56
125A **Gardner Draw,** 57.00 78 ⇓P P 06 43 15.8 -0.2
baz=57
Y27A **Causey** 57.06 76 ⇓P P 06 43 16.4 0.0
baz=57,SNR=7.0
MNTX **Cornudas Mount** 57.23 79 eP P 06 43 18.0 +0.6
comp=Z,4.4nm,0.9s
MNTX epP pP 06 43 38.8 -0.8
MNTX **Cornudas Mount** 57.23 79 P P 06 43 18.0 +0.6
baz=57,SNR=8.9
CD2 **Chengdu** 57.56 280 P P 06 43 20.1 +0.2
CD2 pP pP 06 43 40.4 -1.6
CD2 sP sP 06 43 49.7 -2.2
CD2 PcP PcP 06 44 12.9 +0.6
CD2 PcS PcS 06 48 12.6 -1.1
CD2 S S 06 51 08.8 -2.0
CD2 sS sS 06 51 43.9 -4.7
CD2 SS SS 06 55 00.8 -0.8
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,140nm,5.2s
226B **Tecolote Peak,** 57.70 78 ⇓P P 06 43 21.7 +0.8
baz=58
325A **Bean Ranch, Si** 57.71 79 ⇓P P 06 43 21.4 +0.4
baz=58,SNR=5.9
KURK **Kurchatov** 57.77 312 c iP P 06 43 21.2 +0.3
KURK pmax pmax
comp=Z,11nm,1.3s
KURK **Kurchatov** 57.77 312 eP P 06 43 21.5 +0.5
WMQ **Urumqi** 57.99 301 P P 06 43 24.0 +1.3
WMQ pP pP 06 43 48.0 +3.1
WMQ sP sP 06 43 59.0 +4.2
WMQ PcP PcP 06 44 15.0 +1.2
WMQ PP PP 06 45 35.0 +3.4
WMQ ScP ScP 06 48 04.0 -1.5
WMQ S S 06 51 16.0 0.0
WMQ ScS ScS 06 53 00.0 -3.6
WMQ pmax pmax
comp=Z,15nm,1.0s
WMQ pmax pmax
comp=Z,43nm,5.0s
WMQ LR LR
comp=N,150nm,18.0s
WMQ LR LR
comp=E,170nm,18.0s
WMQ LR LR
comp=Z,67nm,18.0s
425A **Indio Mountain** 58.11 80 ⇑P P 06 43 24.4 +0.7
baz=58
128A **Castleberry Fa** 58.34 76 ⇓P P 06 43 25.3 0.0
baz=58
326A **Caldwell Ranch** 58.35 78 P P 06 43 25.8 +0.4
baz=58,SNR=6.9
Y30A **Stafford Cattl** 58.43 74 ⇓P P 06 43 24.6 -1.3
baz=58
MK31 **Makanchi Array** 58.73 307 ceP P 06 43 27.2 -0.5
MK31 pmax pmax
comp=Z,1.0nm,0.3s
MK31 **Makanchi Array** 58.73 307 eP P 06 43 27.4 -0.3
MKAR **Makanchi Array** 58.73 307 P P 06 43 27.6 -0.1
MKAR 06 44 16.9
MKAR pmax pmax
comp=Z,5.0nm,0.6s
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR MLR MLR
comp=Z,24nm,20.1s
MKAR **Makanchi Array** 58.73 307 eP P 06 43 27.6 -0.1
MKAR pP pP 06 43 48.8 -1.1
MKAR PcP PcP 06 44 16.9 +0.3
MKAR **Makanchi Array** 58.73 307 P P 06 43 27.6 -0.1
comp=Z,4.5nm,0.6s,baz=51,slow=6.2,SNR=63
MKAR pP pP 06 43 48.8 -1.1
comp=Z,1.4nm,0.6s,baz=48,slow=8.4,SNR=4.3
MKAR PcP PcP 06 44 16.9 +0.3
comp=Z,0.6nm,0.5s,baz=56,slow=6.7,SNR=2.0
MKAR LR LR 07 09 13.1
comp=Z,24nm,20.1s,baz=179,slow=36
426A **McDonald Obser** 58.77 79 ⇓P P 06 43 28.0 -0.5
baz=59
GYA **Guiyang** 58.93 274 eP P 06 43 31.0 +1.5
GYA pmax pmax
comp=Z,10.0nm,1.0s
328A **Wristen Ranch,** 59.01 78 P P 06 43 30.1 +0.1
baz=59,SNR=6.9
526A **Mary Lane Ranc** 59.16 80 P P 06 43 31.5 +0.4
baz=59,SNR=5.7
527A **Woodward Ranch** 59.40 79 ⇑P P 06 43 31.7 -1.1
baz=59
626A **Big Bend Ranch** 59.50 80 P P 06 43 33.5 +0.2
baz=59,SNR=9.6
428A **Kincaid Ranch,** 59.55 78 P P 06 43 34.4 +0.7
baz=59,SNR=6.6
230A **Sterling City** 59.69 76 P P 06 43 34.5 -0.1
baz=60,SNR=8.9
BVA0 **Borovoye Array** 59.72 318 i P P 06 43 35.0 +0.6
BVA0 pmax pmax
comp=Z,2.0nm,0.6s
BRVK **Borovoye** 59.73 319 di P P 06 43 35.3 +0.8
BRVK pmax pmax
comp=Z,9.0nm,0.6s
BRVK **Borovoye** 59.73 319 eP P 06 43 35.4 +0.8
comp=Z,14nm,0.6s
TXAR **Lajitas Array** 59.94 80 P P 06 43 36.4 0.0
TXAR pP pP 06 43 58.0 -0.6
TXAR ScP ScP 06 48 13.6 -0.8
TXAR **Lajitas Array** 59.94 80 P P 06 43 36.4 0.0
comp=Z,3.8nm,0.7s,baz=299,slow=4.7,SNR=49
TXAR pP pP 06 43 58.0 -0.6
comp=Z,1.6nm,0.6s,baz=298,slow=4.9,SNR=6.8
TXAR ScP ScP 06 48 13.6 -0.8
comp=Z,0.7nm,0.9s,baz=316,slow=3.5,SNR=4.9
330A **Mertzon** 59.99 76 ⇑P P 06 43 35.4 -1.3
baz=60
627A **Terlingua Ranc** 60.02 80 ⇑P P 06 43 37.2 +0.2
baz=60
429A **Davenport Ranc** 60.10 78 ⇑P P 06 43 36.8 -0.7
baz=60
529A **Stev Forest Ra** 60.26 78 ⇓P P 06 43 38.0 -0.6
baz=60
628A **Black Gap, Mar** 60.31 79 P P 06 43 39.0 +0.2
baz=60,SNR=6.8
430A **Baggett Ranch,** 60.39 77 P P 06 43 39.3 -0.1
baz=60,SNR=5.8
530A **J-C Ranch, Com** 60.78 78 ⇑P P 06 43 42.0 -0.1
baz=61,SNR=9.3
431A **Sonora** 60.84 77 ⇓P P 06 43 42.2 -0.3
baz=61
631A **Perdido Creek** 61.77 78 ⇑P P 06 43 46.9 -1.8
baz=62
MIAR **Mount Ida** 62.27 69 eP P 06 43 50.6 -1.4
MIAR **Mount Ida** 62.27 69 eP P 06 43 50.6 -1.4
KMI **Kunming** 62.33 276 P P 06 43 57.5 +4.8
KMI pmax pmax
comp=Z,8.0nm,1.1s
KMI LR LR
comp=Z,34nm,31.4s
732A **Laxson Ranch,** 62.62 78 P P 06 43 54.8 +0.4
baz=62,SNR=5.7
FINES **FINESS Array B** 65.11 346 P P 06 44 09.4 -0.8
FINES pP pP 06 44 33.0 +0.2
FINES **FINESS Array B** 65.11 346 P P 06 44 09.4 -0.8
comp=Z,0.7nm,0.6s,baz=7.8,slow=11,SNR=4.8
FINES pP pP 06 44 33.0 +0.2
comp=Z,2.1nm,0.8s,baz=12,slow=7.1,SNR=3.0
FINES LR LR 07 19 43.8
comp=Z,24nm,18.5s,baz=136,slow=42
AAK **Ala-Archa** 65.57 308 eP P 06 44 14.6 +0.9
AAK pmax pmax
comp=Z,4.0nm,0.6s
AAK **Ala-Archa** 65.57 308 eP P 06 44 14.6 +0.9
comp=Z,3.6nm,0.6s
AAK epP pP 06 44 36.0 -0.3
EKS2 **Erkin-Say** 65.90 309 eP P 06 44 17.0 +1.3
EKS2 **Erkin-Say** 65.90 309 eP P 06 44 17.0 +1.3
EKS2 epP pP 06 44 39.0 +0.6
AB31 **Akbulak array** 66.81 321 ceP P 06 44 22.3 +1.0
AB31 pmax pmax
comp=Z,1.0nm,0.3s
ABKAR **Akbulak array** 66.81 321 eP P 06 44 22.2 +0.9
KK31 **Karatay Array** 67.12 311 ceP P 06 44 23.8 +0.4
KK31 pmax pmax
comp=Z,7.0nm,0.6s
KKAR **Karatay Array** 67.12 311 eP P 06 44 24.1 +0.7
KKAR e*PP pP 06 44 45.6 -0.5
KKAR **Karatay Array** 67.12 311 eP P 06 44 24.1 +0.7
KKAR epP pP 06 44 45.6 -0.5
NB2 **NORSAR Subarra** 67.14 354 P P 06 44 22.9 -0.3
comp=Z,1.0nm,0.7s,baz=8.7,slow=6.5
NOA **NORSAR Array B** 67.14 354 P P 06 44 22.9 -0.3
NOA pP pP 06 44 46.1 +0.2
NOA **NORSAR Array B** 67.14 354 P P 06 44 22.9 -0.3
comp=Z,1.2nm,0.7s,baz=9.7,slow=6.4,SNR=8.1
NOA pP pP 06 44 46.1 +0.2
comp=Z,0.7nm,0.7s,baz=9.3,slow=6.6,SNR=3.2
KSH **Kashi** 67.18 305 eP P 06 44 28.0 +4.1
KSH pP PcP 06 44 53.1 +1.8
KSH PcP pP 06 44 55.2 +8.6
KSH sP sP 06 45 04.1 +7.7
KSH PP PP 06 47 00.2 +7.7
KSH ScP 06 48 48.2
KSH PcS 06 48 58.1
KSH S S 06 53 15.3 +4.0
KSH ScS SKKSac 06 54 13.1 +0.1
KSH pmax pmax
comp=Z,5.0nm,0.5s
KSH LR LR
comp=N,85nm,4.8s
KSH LR LR
comp=E,64nm,3.8s
KSH LR LR
comp=Z,320nm,6.5s
JSC **Jenkinsville** 69.38 61 eP P 06 44 36.8 -0.8
JSC **Jenkinsville** 69.38 61 eP P 06 44 36.8 -0.8
CMAR **Chiang Mai Arr** 69.62 274 P P 06 44 39.9 +0.6

CMAR			pP	PcP	06 45 01.4	-0.3
CMAR	**Chiang Mai Arr**	**69.62 274**	P	**P**	**06 44 39.9**	**+0.6**
	comp=Z,3.2nm,0.8s,baz=26,slow=6.9,SNR=17					
CMAR			pP	PcP	06 45 01.4	-0.3
	comp=Z,1.9nm,0.8s,baz=26,slow=7.3,SNR=4.5					
CMAR			LR	LR	07 15 28.5	
	comp=Z,23nm,18.1s,baz=205,slow=36					
TAPN	**Taplejung**	**69.80 289**	*eP*	**P**	**06 44 41.8**	**+1.2**
	comp=Z,46nm,0.8s					
ODAN	**Odare**	**70.35 289**	*eP*	**P**	**06 44 44.8**	**+0.9**
	comp=Z,20nm,0.7s					
GUN	**Gumba**	**70.45 290**	*eP*	**P**	**06 44 45.9**	**+1.2**
	comp=Z,94nm,0.7s					
RAMN	**Ramite**	**70.75 289**	*eP*	**P**	**06 44 47.4**	**+1.0**
	comp=Z,53nm,0.6s					
KKN	**Kakani**	**70.89 291**	*eP*	**P**	**06 44 48.3**	**+1.1**
	comp=Z,45nm,0.6s					
PKI	**Pulchoki**	**70.98 290**	*eP*	**P**	**06 44 48.9**	**+1.0**
	comp=Z,36nm,0.6s					
PKIN	**Phulchoki**	**70.98 290**	*eP*	**P**	**06 44 49.1**	**+1.3**
	comp=Z,20nm,0.6s					
DMN	**Daman**	**71.13 291**	*eP*	**P**	**06 44 49.9**	**+1.2**
	comp=Z,34nm,0.8s					
DANN	**Dangsing**	**71.35 292**	*eP*	**P**	**06 44 51.1**	**+1.1**
	comp=Z,71nm,0.9s					
KOLN	**Koldanda**	**71.88 292**	*eP*	**P**	**06 44 54.0**	**+0.9**
	comp=Z,18nm,0.6s					
PYUN	**Piuthan**	**71.98 292**	*eP*	**P**	**06 44 54.7**	**+1.0**
	comp=Z,53nm,0.9s					
AKASG	**Malin Array Be**	**74.76 341**	P	**P**	**06 45 08.8**	**-0.6**
AKASG			pmax	pmax		
	comp=Z,1.0nm,0.5s					
AKASG	**Malin Array Be**	**74.76 341**	P	**P**	**06 45 08.8**	**-0.6**
AKASG	**Malin Array Be**	**74.76 341**	P	**P**	**06 45 08.8**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=22,slow=6.8,SNR=4.3					
CRVS	**Cervenica-Dubn**	**77.91 345**	*eP*	**P**	**06 45 26.0**	**-1.3**
BUR08	**Bucovina Ar. S**	**78.47 342**	*eP*	**P**	**06 45 30.9**	**+0.4**
VYHS	**Vyhne**	**78.71 347**	*e*PCP	**PcP**	**06 45 37.2**	**-3.1**
WRA	**Warramunga Arr**	**81.35 222**	P	**P**	**06 45 46.1**	**-0.1**
WRA			pP	**pP**	**06 46 09.8**	**+0.2**
WRA	**Warramunga Arr**	**81.35 222**	P	**P**	**06 45 46.1**	**-0.1**
	comp=Z,2.6nm,0.8s,baz=37,slow=6.1,SNR=16					
WRA			pP	**pP**	**06 46 09.8**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=12,slow=5.9,SNR=2.2					
BRTR	**Keskin Array B**	**84.03 334**	P	**P**	**06 45 59.7**	**-0.4**
BRTR	**Keskin Array B**	**84.03 334**	P	**P**	**06 45 59.7**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=342,slow=7.6,SNR=2.8					
ASAR	**Alice Springs**	**84.86 221**	P	**P**	**06 46 05.0**	**+0.8**
ASAR			pP	**pP**	**06 46 28.6**	**+0.8**
ASAR	**Alice Springs**	**84.86 221**	P	**P**	**06 46 05.0**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=21,slow=5.6,SNR=18					
ASAR			pP	**pP**	**06 46 28.6**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=26,slow=5.8,SNR=2.7					
STKA	**Stephens Creek**	**89.52 211**	P	**P**	**06 46 27.9**	**+1.5**
STKA	**Stephens Creek**	**89.52 211**	P	**P**	**06 46 27.9**	**+1.5**
	comp=Z,2.2nm,0.6s,baz=324,slow=7.9,SNR=6.7					
TORD	**Torodi Ar. Bea**	**115.33 357**	PKP	**PKPdf**	**06 52 09.7**	**-1.2**
TORD	**Torodi Ar. Bea**	**115.33 357**	PKP	**PKPdf**	**06 52 09.7**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=354,slow=3.4,SNR=4.5					
CPUP	**Villa Florida**	**130.90 81**	SKPbc	**SKPbc**	**06 55 55.0**	**-1.3**
CPUP	**Villa Florida**	**130.90 81**	SKPbc	**SKPbc**	**06 55 55.0**	**-1.3**
	comp=Z,6.3nm,0.8s,baz=296,slow=4.1,SNR=2.9					
BOSA	**Boshof**	**149.70 310**	PKPbc	**PKPbc**	**06 53 19.3**	**+0.5**
BOSA	**Boshof**	**149.70 310**	PKPbc	**PKPbc**	**06 53 19.3**	**+0.5**
	comp=Z,3.3nm,0.6s,baz=50,slow=2.3,SNR=11					

IDC ***12*** *06:47:26.8±0.9,26°.23N×91°.67E,h0km,mb3.4/6, mb1 3.6/6,mb1mx3.4/28,mbtmp3.4/6,Error ellipse: s-maj=68.5km s-min=20.1km az=51.0*

ISCJB ***12*** *06:47:30.9±0.7,26°.11N±0°.08×91°.51E±0°.07,h42km, mb3.5/6,Error ellipse: s-maj=12.3km s-min=8.1km az=33.7*

ISC 12 06:47:32.4±0.8,26°.0N±0°.1×91°.47E±0°.08,h42km,n10, σ1.8s5/11,mb3.6/6,Northeastern India

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**0.58**	**140**	*eP*	**Pn**	**06 47 44.4**	**-0.2**
SHL				*eS*	**Sn**	**06 47 51.8**	**-1.3**
SHL				AML	AML	06 47 55.8	
	comp=E,4μm,0.2s						
SHL				AML	AML	06 47 57.0	
	comp=N,3μm,0.1s						
IMP	**Imphal**	**2.55**	**118**	*eP*	**Pn**	**06 48 12.0**	**+0.7**
IMP				*ex*	Sn	06 48 51.0	+10
BOK	**Bokaro**	**5.53**	**248**	*eS*	**Sn**	**06 49 57.0**	**+2.4**
BOK				*eS*		06 49 58.4	
BOK				AML	AML	06 50 34.1	
	comp=E,20nm,0.4s						
BOK				AML	AML	06 50 36.1	
	comp=N,28nm,0.6s						
BHPL	**Bhopal**	**13.07**	**261**	*eS*	**Sn**	**06 52 55.8**	**-3.8**
MKAR	**Makanchi Array**	**21.98**	**343**	P	**P**	**06 52 21.5**	**-1.2**
	comp=N,1.2nm,0.6s,baz=152,slow=10,SNR=16						
HFS	**Hagfors**	**61.77**	**326**	P	**P**	**06 57 45.9**	**-0.5**
	comp=N,0.4nm,0.4s,baz=99,slow=8.9,SNR=8.1						
WRA	**Warramunga Arr**	**61.80**	**133**	P	**P**	**06 57 47.5**	**+0.3**
	comp=N,0.6nm,0.9s,baz=326,slow=7.0,SNR=4.1						
GERES	**GERESS Array B**	**63.03**	**314**	P	**P**	**06 57 55.7**	**+0.4**
	comp=N,0.3nm,0.5s,baz=60,slow=5.8,SNR=4.4						
ASAR	**Alice Springs**	**64.23**	**137**	P	**P**	**06 58 04.3**	**+1.0**
	comp=N,0.1nm,0.3s,baz=328,slow=6.9,SNR=3.4						
TORD	**Torodi Ar. Bea**	**84.14**	**282**	P	**P**	**07 00 01.0**	**+1.3**
	comp=N,0.1nm,0.5s,baz=53,slow=5.6,SNR=2.5						

IDC 12 06:56:27.6±2.1,3°.47N×128°.34E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.3/23,mbtmp3.3/3,MS2.9/1,Ms1 2.9/1, ms1mx2.4/16,Error ellipse: s-maj=142.9km s-min=25.0km az=68.0,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**12.02**	**226**	LR	LR	07 03 23.8	
	comp=Z,54nm,20.2s,baz=150,slow=35						
WRA	**Warramunga Arr**	**24.00**	**166**	P	P	07 01 44.2	0.0
	0.4nm,0.5s,baz=346,slow=10,SNR=4.6						
ASAR	**Alice Springs**	**27.51**	**169**	P	P	07 02 16.0	0.0
	0.1nm,0.4s,baz=356,slow=8.7,SNR=3.1						
MKAR	**Makanchi Array**	**58.69**	**325**	P	P	07 06 27.0	0.0
	0.4nm,0.4s,baz=120,slow=8.0,SNR=7.7						

IDC ***12*** *06:59:58.3±1.5,56°.52N×152°.24W,h0km,mb3.7/9, mb1 3.7/11,mb1mx3.6/29,mbtmp3.6/11,ML2.8/2,Error ellipse: s-maj=34.4km s-min=22.4km az=45.0*

ISCJB ***12*** *07:00:02.7±1.1,56°.63N±0°.07×151°.91W±0°.08,h42km±9km, mb3.7/9,Error ellipse: s-maj=11.4km s-min=7.6km az=174.9*

NEIC ***12*** *07:00:03.9,56°.57N×152°.11W,h27km,ML3.0(AEIC),After AEIC.*

ISC 12 07:00:03.9±3.4,56°.6N±0°.1×152°.09W±0°.06,h35km±16km, n43,σ0.72/49,mb3.9/9,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**0.92**	**315**	P	**Pn**	**07 00 19.2**	**-1.1**
KDAK	**Kodiak Island**	**1.23**	**347**	P	**Pn**	**07 00 24.1**	**-0.4**
KDAK				S	**Sn**	**07 00 39.4**	**-0.6**
KDAK	**Kodiak Island**	**1.23**	**347**	Pn	**Pn**	**07 00 23.3**	**-1.3**
	7.4nm,0.3s,baz=160,slow=12,SNR=92						
KDAK				Sn	**Sn**	**07 00 40.7**	**+0.7**
	20nm,0.3s,baz=196,slow=19,SNR=18						
KABR	**Katmai Barrier**	**2.20**	**316**	P	**Pn**	**07 00 37.6**	**-0.4**
KAWH	**Katmai**	**2.32**	**322**	P	**Pn**	**07 00 39.7**	**0.0**
KAKN	**Katmai Knife C**	**2.35**	**318**	P	**Pn**	**07 00 40.0**	**-0.1**
KAKN				S	**Sn**	**07 01 08.2**	**+0.4**
KCE	**Katmai Mt Cerb**	**2.36**	**316**	P	**Pn**	**07 00 40.3**	**+0.2**
FOSS	**Fourpeaked Sta**	**2.38**	**339**	P	**Pn**	**07 00 41.2**	**+0.8**
MCNL	**McNeil River**	**2.87**	**336**	P	**Pn**	**07 00 48.2**	**+1.1**
AUP	**Augustine Pinn**	**2.87**	**346**	P	**Pn**	**07 00 48.1**	**+0.9**
OPT	**Oil Point**	**3.13**	**349**	P	**Pn**	**07 00 52.2**	**+1.4**
BRLK	**Bradley Lake**	**3.25**	**11**	P	**Pn**	**07 00 52.2**	**-0.1**
BRLK				S	**Sn**	**07 01 30.1**	**+0.3**
SEW	**Seward**	**3.79**	**20**	P	**Pn**	**07 00 59.0**	**-0.8**
SEW				S	**Sn**	**07 01 43.5**	**+0.5**
NCT	**North Crescent**	**4.01**	**354**	P	**Pn**	**07 01 03.7**	**+0.9**
SPU	**Mount Spurr**	**4.61**	**0**	P	**Pn**	**07 01 10.6**	**-0.4**
STLK	**Strandline Lak**	**4.93**	**1**	P	**Pn**	**07 01 16.3**	**+0.8**
EYAK	**Cordova Ski Ar**	**5.17**	**37**	P	**Pn**	**07 01 19.0**	**+0.3**
VLZ	**Valdez**	**5.45**	**31**	P	**Pn**	**07 01 22.4**	**0.0**
GOAT	**Goat Mountain**	**5.55**	**41**	P	**Pn**	**07 01 24.6**	**+0.6**
SML	**Sawmill**	**5.58**	**19**	P	**Pn**	**07 01 24.1**	**-0.3**
BMRM	**Bremner River**	**5.87**	**38**	P	**Pn**	**07 01 28.1**	**-0.2**
KIAG	**Kiagna River**	**6.67**	**45**	P	**Pn**	**07 01 38.8**	**-0.6**
DHY	**Denali Highway**	**6.93**	**18**	P	**Pn**	**07 01 42.5**	**-0.4**
TRF	**Thorofare Moun**	**6.95**	**7**	P	**Pn**	**07 01 42.9**	**-0.3**
RND	**Reindeer**	**7.03**	**12**	P	**Pn**	**07 01 44.3**	**+0.1**
MCK	**McKinley**	**7.34**	**11**	P	**Pn**	**07 01 48.3**	**-0.2**
PNL	**Peninsula**	**7.39**	**60**	P	**Pn**	**07 01 48.1**	**-1.1**
CCB	**Clear Creek Bu**	**8.35**	**13**	P	**Pn**	**07 02 01.6**	**-0.7**
COLA	**College**	**8.57**	**12**	P	**Pn**	**07 02 03.7**	**-1.5**
IL1	**Eielson Array**	**8.60**	**15**	P	**Pn**	**07 02 05.0**	**-0.7**
ILAR	**Eielson Array**	**8.60**	**15**	Pn	**Pn**	**07 02 05.6**	**-0.1**
	0.9nm,0.3s,baz=202,slow=14,SNR=24						
ILAR				Sn	**Sn**	**07 03 40.5**	**-0.7**
	0.1nm,0.3s,baz=206,slow=24,SNR=3.1						
IM3	**Indian Mountai**	**9.46**	**356**	P	**Pn**	**07 02 15.6**	**-1.9**
INK	**Inuvik**	**14.47**	**28**	Pn	**Pn**	**07 03 26.9**	**+1.1**
	0.0nm,0.3s,baz=235,slow=7.0,SNR=2.3						
YKA	**Yellowknife Ar**	**19.67**	**57**	P	**P**	**07 04 29.2**	**-0.3**
	0.1nm,0.3s,baz=271,slow=11,SNR=11						
NVAR	**Mina Array Bea**	**28.74**	**115**	P	**P**	**07 05 58.6**	**+0.5**
	0.1nm,0.4s,baz=308,slow=9.1,SNR=4.4						
SCHQ	**Schefferville**	**45.09**	**54**	P	**P**	**07 08 16.4**	**+0.2**
	2.2nm,0.9s,baz=284,slow=8.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**60.44**	**325**	P	**P**	**07 10 09.4**	**0.0**
	0.7nm,0.6s,baz=19,slow=6.6,SNR=3.5						
NOA	**NORSAR Array B**	**61.98**	**9**	P	**P**	**07 10 20.0**	**+0.2**
	0.6nm,0.7s,baz=350,slow=6.4,SNR=4.0						
FINES	**FINESS Array B**	**62.30**	**1**	P	**P**	**07 10 22.0**	**+0.2**
	1.0nm,0.7s,baz=344,slow=7.8,SNR=6.7						
HFS	**Hagfors**	**63.08**	**8**	P	**P**	**07 10 27.3**	**+0.2**
	0.7nm,0.7s,baz=20,slow=4.6,SNR=8.4						
EKA	**Eskdalemuir Ar**	**65.61**	**19**	P	**P**	**07 10 44.3**	**+0.5**
	0.1nm,0.3s,baz=317,slow=5.8,SNR=4.0						
MKAR	**Makanchi Array**	**67.43**	**323**	P	**P**	**07 10 55.1**	**-0.4**
	0.2nm,0.6s,baz=27,slow=6.8,SNR=3.4						
AKASG	**Malin Array Be**	**73.07**	**359**	P	**P**	**07 11 29.2**	**-0.7**
	0.7nm,0.5s,baz=359,slow=6.1,SNR=4.1						

ISCJB ***12*** *07:02:49.2±0.4,0°.83N±0°.06×99°.64E±0°.07,h152km±4km, mb3.6/11,Error ellipse: s-maj=13.3km s-min=5.6km az=138.9*

IDC ***12*** *07:02:50.0±1.8,0°.81N×99°.76E,h143km±12km,mb3.4/11, mb1 3.4/13,mb1mx3.3/28,mbtmp3.4/13,Error ellipse: s-maj=40.4km s-min=15.3km az=53.0*

DJA ***12*** *07:02:50.2±0.6,1°.1N±5°×10°.0E±°,h144km±7km,M4.5/10, mb4.9/3,mB5.2/1,MLv4.3/10,Mw(mB)4.6/1*

ISC 12 07:02:50.1±0.8,0°.82N±0°.06×99°.61E±0°.07,h147km±7km, n23,σ1.21/33,mb3.8/11,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNSI	**Mandailing Nat**	**0.04**	**223**	P	**Pn**	**07 03 09.8**	**0.0**
PPI	**Padang Panjang**	**1.50**	**148**	P	**Pn**	**07 03 19.5**	**+0.1**
PPI				S	**Sn**	**07 03 42.9**	**+1.1**
BKNI	**Bangkinang**	**1.52**	**109**	P	**Pn**	**07 03 19.7**	**+0.1**
BKNI				S	**Sn**	**07 03 41.6**	**-0.5**
PSI	**Prapat**	**2.08**	**341**	P	**Pn**	**07 03 25.5**	**-0.6**
PSI	**Prapat**	**2.08**	**341**	P	**Pn**	**07 03 25.7**	**-0.4**
	20nm,0.3s,baz=149,slow=12,SNR=76						
PSI				S	**Sn**	**07 03 53.0**	**-0.8**
	1.8nm,0.3s,baz=120,slow=20,SNR=6.4						
GSI	**Gunungsitoli**	**2.08**	**283**	P	**Pn**	**07 03 27.1**	**+1.1**
GSI				S	**Sn**	**07 03 53.8**	**+0.2**
TSI	**Tuntungan**	**2.86**	**339**	P	**Pn**	**07 03 36.6**	**+1.1**
TSI				S	Sn	07 03 36.7	-34
RGRI	**Rengat**	**2.97**	**113**	P	**Pn**	**07 03 38.1**	**+1.2**
MBSI	**MBSI**	**5.28**	**150**	P	**Pn**	**07 04 06.1**	**-1.1**
	485nm,1.2s,2.4nm						
MNAI	**Manna**	**6.14**	**147**	P	**Pn**	**07 04 18.2**	**-0.5**
	248nm,2.6s,1.5nm						
MNAI				S	**Sn**	**07 05 26.5**	**-1.5**
	248nm,2.6s,1.5nm						
BSI	**Banda Aceh**	**6.33**	**317**	P	**Pn**	**07 04 20.9**	**-0.3**
BSI				S	**Sn**	**07 05 27.7**	**-4.8**
CMAR	**Chiang Mai Arr**	**17.54**	**358**	P	**P**	**07 06 45.2**	**+0.6**
	0.1nm,0.3s,baz=172,slow=14,SNR=3.1						
WRA	**Warramunga Arr**	**39.81**	**123**	P	**P**	**07 10 08.1**	**-1.1**
	0.2nm,0.4s,baz=304,slow=9.0,SNR=4.4						
WRA				PcP	**PcP**	**07 12 12.3**	**-0.3**
	0.4nm,0.9s,baz=314,slow=2.4,SNR=5.9						
ASAR	**Alice Springs**	**41.27**	**128**	P	**P**	**07 10 20.1**	**-1.1**
	0.1nm,0.3s,baz=305,slow=6.5,SNR=3.2						
ASAR				PcP	**PcP**	**07 12 17.6**	**+0.3**
	0.1nm,0.3s,baz=310,slow=2.6,SNR=6.3						
KSRS	**Korea Array**	**44.84**	**32**	P	**P**	**07 10 48.5**	**-1.1**
	0.4nm,0.4s,baz=218,slow=7.7,SNR=3.4						
SONM	**Songino Array**	**47.20**	**6**	P	**P**	**07 11 08.6**	**+0.5**
	0.9nm,0.4s,baz=189,slow=9.7,SNR=3.2						
SONM				PcP	**PcP**	**07 12 37.3**	**+0.1**
	1.1nm,0.4s,baz=175,slow=3.9,SNR=2.8						
MKAR	**Makanchi Array**	**48.22**	**344**	P	**P**	**07 11 16.7**	**+0.9**
	0.6nm,0.3s,baz=155,slow=8.4,SNR=27						
MKAR				PcP	**PcP**	**07 12 41.4**	**+0.6**
	0.2nm,0.6s,baz=154,slow=4.1,SNR=2.2						
ZALV	**Zalesovo Beam**	**54.34**	**349**	P	**P**	**07 12 01.8**	**+0.5**
	3.0nm,0.4s,baz=167,slow=6.6,SNR=14						
AKTO	**Aktyubinsk**	**60.71**	**331**	P	**P**	**07 12 46.0**	**0.0**
	0.5nm,0.3s,baz=143,slow=5.1,SNR=3.2						
BRTR	**Keskin Array B**	**71.15**	**312**	P	**P**	**07 13 53.8**	**+0.7**
	0.5nm,0.4s,baz=149,slow=6.7,SNR=3.6						
FINES	**FINESS Array B**	**81.45**	**332**	P	**P**	**07 14 51.3**	**+0.8**
	0.8nm,0.5s,baz=103,slow=6.9,SNR=8.3						
ARCES	**ARCESS Array B**	**83.70**	**340**	P	**P**	**07 15 02.8**	**+0.7**
	2.2nm,0.8s,baz=90,slow=5.3,SNR=8.0						
HFS	**Hagfors**	**87.25**	**330**	P	**P**	**07 15 21.0**	**+1.1**
	0.7nm,0.5s,baz=87,slow=6.2,SNR=7.9						

ISCJB ***12*** *07:06:07.7±0.7,31°.34N±0°.05×103°.94E±0°.08,h14km, mb3.5/5,Error ellipse: s-maj=10.5km s-min=5.8km az=21.2*

IDC ***12*** *07:06:07.4±1.1,31°.61N×104°.47E,h0km,mb3.6/5, mb1 3.8/6,mb1mx3.5/28,mbtmp3.6/6,ML3.8/1,Error ellipse: s-maj=56.7km s-min=21.1km az=64.0*

BJI ***12*** *07:06:09.0,31°.32N×103°.99E,h22km,ML3.6/13*

ISC 12 07:06:08.8±0.8,31°.24N±0°.05×104°.14E±0°.06,h14km,n11, σ2.33/16,mb3.6/5,1C,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.46**	**225**	i*P*g	**Pg**	**07 06 17.0**	**-1.0**
CD2				Sg	**Sg**	**07 06 23.8**	**-0.4**
CD2				smax	smax		
	comp=N,5μm,0.4s						
CD2				smax	smax		
	comp=E,8μm,0.4s						
LZH	**Lanzhou**	**4.84**	**357**	Pg	Pg	07 07 46.9	+5.4
LZH				Sg	**Sb**	**07 08 32.7**	**+1.1**
LZH				smax	smax		
	comp=N,60nm,1.0s						
LZH				smax	smax		
	comp=E,44nm,0.8s						
LZH				LR	LR		
	comp=N,240nm,5.9s						
LZH				LR	LR		
	comp=E,330nm,6.1s						
LZH				LR	LR		
	comp=Z,190nm,5.2s						
XAN	**Xi'an**	**4.91**	**54**	Pn	**Pn**	**07 07 24.0**	**+1.8**
XAN				Pg	**Pg**	**07 07 41.3**	**-1.5**
XAN				Sn	**Sn**	**07 08 22.4**	**+3.6**
XAN				Sg	**Sg**	**07 08 44.4**	**-1.9**
XAN				smax	smax		
	comp=N,47nm,0.7s						
XAN				smax	smax		
	comp=E,28nm,0.8s						
GYA	**Guiyang**	**5.25**	**154**	Pn	Pn	07 07 32.5	+5.5
GYA				Sn	**Sn**	**07 08 32.7**	**+5.2**
GYA				Sg	**Sg**	**07 08 55.2**	**-2.3**
GYA				smax	smax		
	comp=N,50nm,0.8s						
GYA				smax	smax		
	comp=E,70nm,0.9s						
WHN	**Wuhan**	**8.80**	**92**	*eP*	**Pn**	**07 08 13.5**	**-2.1**
CMAR	**Chiang Mai Arr**	**13.57**	**201**	Pn	**P**	**07 09 28.8**	**-1.2**
	comp=E,0.2nm,0.3s,baz=4.0,slow=9.2,SNR=12						
MKAR	**Makanchi Array**	**22.90**	**319**	P	**P**	**07 11 11.1**	**-1.0**
	comp=E,0.6nm,0.8s,baz=120,slow=12,SNR=3.6						
ZALV	**Zalesovo Beam**	**26.61**	**334**	P	**P**	**07 11 45.6**	**-1.0**
	comp=E,0.6nm,0.4s,baz=145,slow=10,SNR=5.7						
WRA	**Warramunga Arr**	**58.57**	**146**	P	**P**	**07 16 06.8**	**+1.6**
	comp=E,2.5nm,0.4s,baz=339,slow=8.0,SNR=34						
ASAR	**Alice Springs**	**61.59**	**149**	P	**P**	**07 16 27.6**	**+1.6**
	comp=E,0.2nm,0.4s,baz=345,slow=6.7,SNR=3.2						
YKA	**Yellowknife Ar**	**81.55**	**17**	P	**P**	**07 18 24.9**	**-0.8**
	comp=E,0.1nm,0.6s,baz=328,slow=5.3,SNR=3.9						

KRSC 12 07:06:36.7±1.3,48°.77N×155°.95E,h10km±10km,ML4.2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.92**	**3**	*eP*	**Pn**	**07 07 09.2**	**-0.2**
SKR				*eS*	Sn	07 07 33.0	-0.5
MTVR	**Mutnovka**	**3.98**	**20**	*eP*	**Pn**	**07 07 39.2**	**+1.3**
MTVR				*eS*	Sn	07 08 24.3	-0.5
RUS	**Russkaya**	**4.01**	**23**	*eP*	**Pn**	**07 07 39.3**	**+1.1**
RUS				*eS*	Sn	07 08 24.5	-0.7
GRL	**Gorelyy**	**4.02**	**19**	P	**Pn**	**07 07 40.8**	**+2.3**
APC	**Apacha**	**4.23**	**10**	P	**Pn**	**07 07 43.3**	**+2.2**
PET	**Petropavlovsk**	**4.59**	**21**	S	Sn	**07 08 39.2**	**-0.2**
UGLR	**Uglovaya**	**4.80**	**21**	P	**Pn**	**07 07 52.0**	**+2.8**
SMAR	**Somma**	**4.84**	**21**	P	**Pn**	**07 07 52.1**	**+2.2**
SDLR	**Sedlovina**	**4.88**	**21**	P	**Pn**	**07 07 52.0**	**+1.8**
SPN	**Mys Shipunski**	**5.04**	**29**	S	Sn	**07 08 49.5**	**-1.0**
GNL	**Ganaly**	**5.09**	**13**	*eP*	**Pn**	**07 07 55.3**	**+2.2**
KMNR	**Kamenistaya**	**7.47**	**19**	P	**Pn**	**07 08 28.8**	**+3.0**

ISCJB ***12*** *07:09:46.9±0.9,1°.02N±0°.08×127°.10E±0°.04,h110km±6km, mb3.4/3,Error ellipse: s-maj=13.0km s-min=6.7km az=16.9*

DJA ***12*** *07:09:50.0±1.0,1°.1N±6°×12°.7E±°,h69km±10km,M3.9/6, mb4.0/1,MLv3.8/6*

IDC ***12*** *07:09:52.2±10.0,0°.89N×126°.89E,h144km±99km,mb3.1/3, mb1 3.2/5,mb1mx3.1/23,mbtmp3.1/5,Error ellipse: s-maj=76.9km s-min=19.9km az=54.0*

ISC 12 07:09:47.8±1.2,1°.03N±0°.09×127°.11E±0°.07,h101km±9km, n13,σ0.84/20,mb3.4/3,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.36**	**135**	P	**Pn**	**07 10 03.3**	**+0.4**
TNTI				S	**Sn**	**07 10 13.3**	**-0.8**
LBMI	**Labuha**	**1.70**	**167**	P	**Pn**	**07 10 17.1**	**+0.5**
LBMI				S	**Sn**	**07 10 40.4**	**+1.9**
MNI	**Manado**	**2.31**	**280**	P	**Pn**	**07 10 24.9**	**+0.4**
MNI				S	**Sn**	**07 10 52.8**	**+0.2**
KMSI	**Cibinong**	**3.17**	**262**	P	**Pn**	**07 10 35.6**	**-0.2**
KMSI				S	**Sn**	**07 11 12.8**	**-0.1**
NLAI	**Namlea**	**4.24**	**180**	P	**Pn**	**07 10 50.2**	**-0.1**
LUWI	**Luwuk**	**4.80**	**245**	P	**Pn**	**07 10 58.0**	**+0.1**
LUWI				S	**Sn**	**07 11 52.4**	**0.0**
MRSI	**Marisa**	**5.20**	**264**	P	**Pn**	**07 11 03.9**	**+0.6**
MRSI				S	**Sn**	**07 12 03.0**	**+0.9**
APSI	**Ampana**	**5.79**	**251**	S	**Sn**	**07 12 17.7**	**+1.2**
KAPI	**Kappang**	**9.49**	**231**	P	**Pn**	**07 12 01.6**	**0.0**
	1.0nm,0.3s,baz=73,slow=20,SNR=5.9						
KAPI				S	**Sn**	**07 13 44.6**	**-2.0**
	0.8nm,0.3s,baz=198,slow=20,SNR=4.5						
FITZ	**Fitzroy Crossi**	**19.06**	**184**	P	**P**	**07 14 02.4**	**+0.1**
	0.1nm,0.3s,baz=9.5,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	**22.01**	**162**	P	**P**	**07 14 33.8**	**-0.3**
	1.3nm,0.7s,baz=342,slow=11,SNR=18						
ASAR	**Alice Springs**	**25.42**	**165**	P	**P**	**07 15 06.1**	**-0.1**
	0.3nm,0.3s,baz=354,slow=7.6,SNR=7.5						
MKAR	**Makanchi Array**	**59.99**	**326**	P	**P**	**07 19 43.6**	**-0.2**
	0.4nm,0.5s,baz=120,slow=7.6,SNR=9.5						

CSEM ***12*** *07:11:43.5±0.1,42°.26N×13°.47E,h15km,ML2.6/12,Error ellipse: s-maj=2.3km s-min=1.8km az=67.0*

ROM 12 07:11:43.5±0.1,42°.26N×13°.48E,h10km,Md2.5/20, Ml2.1/17,Error ellipse: s-maj=1.1km s-min=0.9km az=69.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.08**	**84**	Pg	Pg	07 11 46.3	+0.4
FAGN				Sg	Sg	07 11 48.0	+0.4
	4μm,0.3s						
FAGN	**Fagnano**	**0.08**	**84**	Pg	Pg	07 11 46.3	+0.4
FAGN				Sg	Sg	07 11 48.0	+0.4
	4μm,0.3s				

MNS	**Montasola** 45nm,0.4s	**0.60**	**282**	Pg	Pg	07 11 55.4	+0.1
MNS	**Montasola** 45nm,0.4s	**0.60**	**282**	Pg	Pg	07 11 55.4	+0.1
GIUL	**Giuliano Di Ro** 577nm,2.0s	**0.72**	**193**	Pg	Pg	07 11 57.2	-0.2
GIUL	**Giuliano Di Ro** 577nm,2.0s	**0.72**	**193**	Pg	Pg	07 11 57.2	-0.2
FDMO	**Fiordimonte** 23nm,0.2s	**0.83**	**340**	Pg	Pg	07 11 58.9	-0.7
FDMO	**Fiordimonte** 23nm,0.2s	**0.83**	**340**	Pg	Pg	07 11 58.9	-0.7
CESI	**CESI - Serrava** 12nm,0.7s	**0.86**	**331**	Pg	Pg	07 11 59.7	-0.5
CESI	**CESI - Serrava** 12nm,0.7s	**0.86**	**331**	Pg	Pg	07 11 59.7	-0.5

ATH ***12*** *07:15:04.2, 36°.65N×21°.95E, h5km±2km, MD3.4/22*
CSEM ***12*** *07:15:05.1±0.5, 36°.66N×22°.00E, h2km, MD3.4, Error ellipse: s-maj=11.0km s-min=5.0km az=45.0*

THE 12 07:14:59.7, 36°.32N×21°.64E, h0km±3km, ML2.9/6, Error ellipse: s-maj=4.2km s-min=1.9km az=214.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.58**	**8**	P	Pg	07 15 10.3	-0.5
PYL				S	Sg	07 15 19.2	+0.8
PYL	**PYLOS**	**0.58**	**8**	*e*PG	Pg	07 15 10.1	-0.7
PYL				*e*SG	Sg	07 15 14.5	-3.9
PYL	**PYLOS**	**0.58**	**8**	S	Sg	07 15 19.2	+0.8
PYL	**PYLOS**	**0.58**	**8**	P	Pg	07 15 10.3	-0.5
PYL				*e*Sg	Sg	07 15 14.5	-3.9
DYR	**Agios Nikonas**	**0.71**	**51**	P	Pg	07 15 12.4	-1.0
DYR				S	Sg	07 15 23.8	+1.2
DYR	**Agios Nikonas**	**0.71**	**51**	*e*PB	Pg	07 15 11.0	-2.4
DYR				*e*SB	Sg	07 15 16.0	-6.6
DYR	**Agios Nikonas**	**0.71**	**51**	*e*Pb	Pg	07 15 11.0	-2.4
DYR	**Agios Nikonas**	**0.71**	**51**	P	Pg	07 15 12.4	-1.0
DYR				*e*Sb	Sg	07 15 16.0	-6.6
ITM	**Ithomi**	**0.89**	**15**	P	Pg	07 15 15.3	-1.5
ITM				S	Sg	07 15 28.5	+0.2
ITM	**Ithomi**	**0.89**	**15**	*e*PB	Pg	07 15 15.1	-1.7
ITM				*e*SB	Sg	07 15 22.2	-6.1
ITM	**Ithomi**	**0.89**	**15**	*e*Pb	Pg	07 15 15.1	-1.7
ITM				*e*Sb	Sg	07 15 22.2	-6.1
VLI	**Veliai**	**1.11**	**69**	P	Pg	07 15 20.4	-0.7
VLI	**Veliai**	**1.11**	**69**	*e*PB	Pg	07 15 19.7	-1.4
VLI				*e*SB	Sg	07 15 31.0	-4.6
VLI	**Veliai**	**1.11**	**69**	*e*Pb	Pg	07 15 19.7	-1.4
VLI	**Veliai**	**1.11**	**69**	P	Pg	07 15 20.4	-0.7
VLI				*e*Sb	Sg	07 15 31.0	-4.6
KYTH	**Kithira**	**1.13**	**92**	P	Pg	07 15 21.2	-0.2
KYTH	**Kithira**	**1.13**	**92**	*e*PG	Pb	07 15 22.0	-0.1
KYTH	**Kithira**	**1.13**	**92**	P	Pg	07 15 21.2	-0.2
KYTH	**Kithira**	**1.13**	**92**	*e*Pg	Pb	07 15 22.0	-0.1
VLX	**Vlachokerasia**	**1.20**	**29**	P	Pg	07 15 20.7	-2.2
VLX				S	Sb	07 15 39.5	-0.2
VLX	**Vlachokerasia**	**1.20**	**29**	*e*PB	Pg	07 15 20.2	-2.7
VLX				*e*SB	Sg	07 15 30.7	-7.9
VLX	**Vlachokerasia**	**1.20**	**29**	*e*Pb	Pg	07 15 20.2	-2.7
VLX	**Vlachokerasia**	**1.20**	**29**	P	Pg	07 15 20.7	-2.2
VLX				*e*Sb	Sg	07 15 30.7	-7.9
AMT	**Artemida-Makis**	**1.21**	**2**	P	Pg	07 15 21.3	-1.7
AMT				S	Sn	07 15 40.5	-0.6
AMT	**Artemida-Makis**	**1.21**	**2**	*e*PG	Pg	07 15 21.2	-1.8
AMT	**Artemida-Makis**	**1.21**	**2**	P	Pg	07 15 21.3	-1.7
GUR	**Goura**	**1.71**	**19**	P	Pn	07 15 30.0	-0.9
GUR				S	Sb	07 15 54.5	+0.3
GUR	**Goura**	**1.71**	**19**	*e*PG	Pn	07 15 28.8	-2.1
GUR	**Goura**	**1.71**	**19**	*e*Pg	Pn	07 15 28.8	-2.1
GUR	**Goura**	**1.71**	**19**	P	Pn	07 15 30.0	-0.9
RLS	**Riolos of Patr**	**1.74**	**355**	*e*PB	Pb	07 15 32.2	-0.3
RLS	**Riolos of Patr**	**1.74**	**355**	*e*Pb	Pb	07 15 32.2	-0.3
DID	**Didima**	**1.74**	**47**	P	Pn	07 15 30.5	-0.8
DID				S	Sb	07 15 55.0	-0.1
DID	**Didima**	**1.74**	**47**	*e*PB	Pn	07 15 29.9	-1.4
DID	**Didima**	**1.74**	**47**	*e*Pb	Pn	07 15 29.9	-1.4
DID	**Didima**	**1.74**	**47**	P	Pn	07 15 30.5	-0.8
LAKA	**Lakka**	**1.93**	**8**	P	Pn	07 15 34.6	+0.7
LAKA				S	Sb	07 15 59.9	-0.7
LAKA	**Lakka**	**1.93**	**8**	*e*PB	Pn	07 15 34.4	+0.5
LAKA	**Lakka**	**1.93**	**8**	P	Pn	07 15 34.6	+0.7
LAKA				S	Sb	07 15 59.9	-0.7
LTK	**Loutraki**	**2.00**	**32**	P	Pn	07 15 35.1	+0.3
LTK				S	Sn	07 16 01.1	+0.5
LTK	**Loutraki**	**2.00**	**32**	*e*PB	Pn	07 15 35.0	+0.2
LTK	**Loutraki**	**2.00**	**32**	*e*Pb	Pn	07 15 35.0	+0.2
VLS	**Valsamata**	**2.03**	**336**	*e*PN	Pg	07 15 40.3	+1.5
KARN	**Karanos**	**2.06**	**116**	*e*PN	Pg	07 15 41.7	+2.4
KARN	**Karanos**	**2.06**	**116**	*e*Pn	Pg	07 15 41.7	+2.4
TRIZ	**Trizonia**	**2.07**	**9**	*e*PN	Pn	07 15 36.4	+0.7
TRIZ	**Trizonia**	**2.07**	**9**	*e*Pn	Pn	07 15 36.4	+0.7
KALE	**Kalithea**	**2.10**	**11**	*e*PN	Pn	07 15 37.2	+0.9
KALE	**Kalithea**	**2.10**	**11**	*e*Pn	Pn	07 15 37.2	+0.9
EFP	**Efpalio**	**2.11**	**6**	P	Pn	07 15 36.4	+0.1
EFP				S	Sn	07 16 04.0	+0.7
EFP	**Efpalio**	**2.11**	**6**	*e*PG	Pn	07 15 37.2	+0.9
EFP	**Efpalio**	**2.11**	**6**	P	Pn	07 15 36.4	+0.1
EFP	**Efpalio**	**2.11**	**6**	*e*Pg	Pn	07 15 37.2	+0.9
EFP				S	Sn	07 16 04.0	+0.7
DSF	**Desfina**	**2.20**	**18**	P	Pn	07 15 37.0	-0.6
DSF	**Desfina**	**2.20**	**18**	P	Pn	07 15 37.0	-0.6
VAM	**Vamos**	**2.27**	**113**	*e*PG	Pg	07 15 45.0	+1.8
VAM	**Vamos**	**2.27**	**113**	*e*Pg	Pg	07 15 45.0	+1.8
LKR	**Lokris**	**2.56**	**24**	*e*PN	Pn	07 15 43.6	+1.1
LKR	**Lokris**	**2.56**	**24**	*e*Pn	Pn	07 15 43.6	+1.1
LKD2	**Lefkada island**	**2.58**	**343**	*e*PN	Pb	07 15 46.2	-0.8
LKD2	**Lefkada island**	**2.58**	**343**	*e*Pn	Pb	07 15 46.2	-0.8
EVR	**Evrytania**	**2.59**	**3**	*e*PN	Pb	07 15 45.3	-1.9
EVR	**Evrytania**	**2.59**	**3**	*e*Pn	Pb	07 15 45.3	-1.9
AGG	**Agios Georgios**	**2.75**	**11**	*e*PN	Pn	07 15 46.8	+1.7
AGG	**Agios Georgios**	**2.75**	**11**	*e*Pn	Pn	07 15 46.8	+1.7
IDI	**Anoyia**	**2.83**	**110**	*e*PN	Pb	07 15 52.4	+1.1
THL	**Klokotos Trika**	**3.25**	**5**	*e*PN	Pn	07 15 54.8	+2.9
LAST	**Lasithi**	**3.33**	**109**	*e*PB	Pb	07 15 58.5	-1.2

KRSC 12 07:26:44.4±0.8, 54°.06N×161°.85E, h11km±10km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.50**	**352**	*e*P	Pb	07 26 54.8	-0.4
MKZ				*e*S	Sb	07 27 02.0	-0.5
TUMR	**Tumrok**	**1.57**	**322**	P	Pb	07 27 13.1	-0.6
TUMR				S	Sb	07 27 34.3	+0.6
SDLR	**Sedlovina**	**1.93**	**247**	P	Pn	07 27 18.2	+0.9
SDLR				*e*S	Sn	07 27 42.8	+1.1
KMNR	**Kamenistaya**	**1.94**	**332**	P	Pn	07 27 18.3	+0.9
KMNR				*e*S	Sb	07 27 43.2	-1.0
SMAR	**Somma**	**1.98**	**247**	P	Pn	07 27 18.2	0.0
UGLR	**Uglovaya**	**1.99**	**246**	P	Pn	07 27 18.5	+0.3
UGLR				S	Sn	07 27 42.9	-0.3
KRER	**Koryakskii**	**1.99**	**249**	P	Pn	07 27 18.5	+0.2
KRER				S	Sn	07 27 43.2	-0.2
BZGR	**Bezymyannyi-Gr**	**2.00**	**341**	*e*P	Pn	07 27 18.8	+0.6
BZGR				*e*S	Sn	07 27 44.2	+0.9
AVH	**Avacha**	**2.02**	**248**	P	Pn	07 27 18.9	+0.5
AVH				*e*S	Sn	07 27 44.6	+0.9
BZMR	**Bezymyannaya**	**2.04**	**338**	P	Pn	07 27 19.9	+1.1
BZMR				S	Sn	07 27 45.5	+1.1
ZLN	**Zelenaya**	**2.05**	**343**	*e*P	Pn	07 27 19.6	+0.6
ZLN				*e*S	Sn	07 27 45.1	+0.5
BZWR	**Bezymyannyi-We**	**2.06**	**338**	P	Pn	07 27 19.6	+0.4
BZWR				S	Sn	07 27 45.2	+0.2
KOK	**Koryaka**	**2.06**	**249**	P	Pn	07 27 19.1	0.0
KPT	**Kopyto**	**2.13**	**335**	P	Pn	07 27 21.4	+1.4
KPT				S	Sb	07 27 48.4	-1.2
LGNR	**Loginova**	**2.13**	**342**	S	Sb	07 27 49.2	-1.0
PET	**Petropavlovsk**	**2.17**	**243**	S	Sb	07 27 50.9	+0.3
KBTR	**Krutoberegovo**	**2.22**	**14**	P	Pn	07 27 20.7	-0.5
KBTR				S	Sn	07 27 46.9	-1.7
KRSR	**Krestovskiy**	**2.28**	**342**	P	Pn	07 27 23.2	+1.0
KRSR				S	Sn	07 27 51.1	+0.7
KOZ	**Kozyrevsk**	**2.30**	**331**	P	Pn	07 27 23.4	+1.1
KOZ				S	Sn	07 27 52.2	+1.6
GNL	**Ganaly**	**2.34**	**263**	P	Pn	07 27 24.2	+1.2
GNL				*e*S	Sn	07 27 53.2	+1.4
KLY	**Klyuchi**	**2.36**	**344**	P	Pn	07 27 23.5	+0.5
KLY				S	Sn	07 27 52.4	+0.4
SRDR	**Sredinnyy**	**2.57**	**332**	P	Pn	07 27 27.2	+1.1
SRDR				S	Sn	07 27 58.5	+1.1
RUS	**Russkaya**	**2.58**	**232**	S	Sn	07 27 59.8	+2.3
ESO	**Esso**	**2.60**	**317**	*e*P	Pn	07 27 27.9	+1.4
ESO				*e*S	Sn	07 28 00.0	+1.9
MTVR	**Mutnovka**	**2.71**	**236**	P	Pn	07 27 30.5	+2.4
MTVR				S	Sb	07 28 04.1	-2.3
APC	**Apacha**	**3.02**	**250**	S	Sb	07 28 12.1	-3.0

KRSC 12 08:29:03.6±1.0, 54°.53N×163°.14E, h11km±10km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.82**	**272**	*e*P	Pb	08 29 20.0	+0.1
MKZ				*e*S	Sb	08 29 31.8	+0.9
KBTR	**Krutoberegovo**	**1.69**	**354**	P	Pn	08 29 31.6	-1.5
BKI	**Bering**	**1.77**	**66**	S	Sn	08 29 54.2	-2.4
TUMR	**Tumrok**	**1.89**	**295**	P	Pn	08 29 36.5	+0.6
TUMR				S	Sn	08 30 00.6	+0.8
BZGR	**Bezymyannyi-Gr**	**1.99**	**316**	P	Pn	08 29 37.9	+0.6
BZGR				S	Sn	08 30 03.0	+0.7
ZLN	**Zelenaya**	**2.00**	**319**	P	Pn	08 29 38.1	+0.6
ZLN				S	Sn	08 30 02.9	+0.3
BZMR	**Bezymyannaya**	**2.07**	**314**	P	Pn	08 29 39.6	+1.1
BZMR				S	Sb	08 30 05.9	-1.3
KMNR	**Kamenistaya**	**2.07**	**308**	*e*P	Pn	08 29 39.5	+1.1
KMNR				S	Sn	08 30 05.7	+1.4
BZWR	**Bezymyannyi-We**	**2.09**	**315**	P	Pn	08 29 38.8	+0.1
BZWR				S	Sn	08 30 04.5	-0.4
KPT	**Kopyto**	**2.21**	**312**	P	Pn	08 29 41.2	+0.9
KPT				S	Sn	08 30 09.1	+1.5
KRSR	**Krestovskiy**	**2.24**	**320**	P	Pn	08 29 41.9	+1.1
KRSR				S	Sn	08 30 10.1	+1.6
SMKR	**Semkarok**	**2.27**	**336**	P	Pn	08 29 42.1	+1.0
SMKR				S	Sn	08 30 10.3	+1.2
KLY	**Klyuchi**	**2.28**	**323**	S	Sn	08 30 09.9	+0.7
BDR	**Baidarnaya**	**2.32**	**333**	P	Pn	08 29 42.1	+0.3
BDR				S	Sn	08 30 10.3	-0.1
SPN	**Mys Shipunski**	**2.34**	**233**	S	Sn	08 30 09.7	-1.0
SRKR	**Sorokina**	**2.41**	**333**	P	Pn	08 29 44.2	+1.2
SRKR				S	Sn	08 30 13.9	+1.4
KOZ	**Kozyrevsk**	**2.42**	**311**	S	Sb	08 30 16.0	-0.9
SRDR	**Sredinnyy**	**2.65**	**314**	P	Pn	08 29 47.9	+1.6
SRDR				S	Sn	08 30 20.3	+1.8
SDLR	**Sedlovina**	**2.81**	**245**	P	Pn	08 29 49.6	+1.0
SDLR				S	Sn	08 30 23.5	+0.9
SMAR	**Somma**	**2.86**	**245**	*e*P	Pn	08 29 50.0	+0.5
KRER	**Koryakskii**	**2.87**	**246**	P	Pn	08 29 50.1	+0.5
UGLR	**Uglovaya**	**2.88**	**244**	P	Pn	08 29 50.0	+0.5
AVH	**Avacha**	**2.90**	**246**	P	Pn	08 29 51.1	+1.4
AVH				S	Sn	08 30 26.1	+1.5
ESO	**Esso**	**2.90**	**301**	P	Pn	08 29 50.6	+0.9
GNL	**Ganaly**	**3.17**	**257**	*i* P	Pn	08 29 55.3	+1.7
MTVR	**Mutnovka**	**3.60**	**237**	P	Pn	08 30 00.6	+1.1
MTVR				S	Sn	08 30 42.3	+0.2

ISCJB ***12*** *08:35:36.3±0.9, 33°.8N±0°.1×136°.8E±0°.1, h397km±4km, mb3.3/5, Error ellipse: s-maj=20.3km s-min=11.7km az=146.8*
IDC ***12*** *08:35:36.4±4.3, 33°.75N×136°.95E, h395km±14km, mb3.1/5, mb1 3.1/8, mb1mx2.8/29, mbtmp3.0/8, Error ellipse: s-maj=90.6km s-min=30.0km az=158.0*
JMA ***12*** *08:35:36.7±0.2, 33°.79N×136°.78E, h393km±2km, M2.8*
ISC 12 08:35:37.1±1.3, 33°.8N±0°.1×136°.8E±0°.1, h390km±7km, n22, σ0s71/28, mb3.4/5, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO2	**TONANKAI O.B.S**	**0.20**	**120**	P	**Pn**	**08 36 25.7**	**+0.7**
JIE	**Ise**	**0.56**	**350**	P	**Pn**	**08 36 26.3**	**+0.5**
JIE				S	**S**	**08 37 05.2**	**0.0**
JKN2	**Miekihoku**	**0.61**	**312**	P	**Pn**	**08 36 26.1**	**+0.2**
TK02	**Tokai 2**	**0.79**	**81**	P	**Pn**	**08 36 26.8**	**+0.7**
JWZ	**Kozaga**	**0.97**	**252**	P	**Pn**	**08 36 26.5**	**-0.5**
JWY	**Kouya**	**1.09**	**291**	P	**Pn**	**08 36 27.8**	**+0.3**
JWY				S	**S**	**08 37 07.4**	**-0.8**
JWT	**Wachi**	**1.86**	**321**	P	**Pn**	**08 36 31.6**	**+0.4**
JWT				S	**S**	**08 37 14.3**	**-0.6**
JGM	**Miyama**	**1.86**	**357**	P	**Pn**	**08 36 31.9**	**+0.7**
JGM				*e*S	**S**	**08 37 15.0**	**0.0**
JAI	**Aioi**	**1.97**	**269**	P	**Pn**	**08 36 32.0**	**+0.1**
JOD2	**Odawara 2**	**2.35**	**52**	P	**Pn**	**08 36 34.5**	**+0.1**
JMN	**Monobe**	**2.45**	**268**	P	**Pn**	**08 36 35.5**	**+0.3**
JKG	**Kaga**	**2.47**	**351**	P	**Pn**	**08 36 35.8**	**+0.6**
JRY	**Ryogami san**	**2.77**	**38**	P	**Pn**	**08 36 38.1**	**+0.5**
JRY				S	**S**	**08 37 26.5**	**0.0**
MJAR	**Matsushiro Arr** 1.4nm,0.3s,baz=198,slow=9.9,SNR=30	**2.93**	**22**	P	**Pn**	**08 36 38.9**	**+0.1**
MAT	**Matsushiro**	**2.93**	**22**	P	**Pn**	**08 36 39.1**	**+0.2**
MAT				S	**S**	**08 37 28.1**	**-0.8**
JNU	**Nakatsue** 1.7nm,0.3s,baz=86,slow=9.1,SNR=23	**5.02**	**264**	P	**Pn**	**08 36 59.3**	**+0.5**
KSRS	**Korea Array** 0.2nm,0.3s,baz=113,slow=12,SNR=6.5	**8.09**	**299**	P	**P**	**08 37 34.0**	**+0.5**
SONM	**Songino Array** 0.3nm,0.5s,baz=56,slow=44,SNR=4.0	**26.73**	**311**	P	**P**	**08 40 44.3**	**+1.6**
ZALV	**Zalesovo Beam** 0.6nm,0.3s,baz=93,slow=9.1,SNR=3.3	**41.42**	**315**	P	**P**	**08 42 44.9**	**-2.0**
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=88,slow=9.2,SNR=7.2	**42.73**	**304**	P	**P**	**08 42 57.6**	**0.0**
ARCES	**ARCESS Array B** 3.9nm,1.0s,baz=63,slow=8.2,SNR=4.9	**65.65**	**339**	P	**P**	**08 45 39.9**	**-0.4**
FINES	**FINESS Array B** 0.6nm,0.5s,baz=57,slow=7.0,SNR=6.8	**69.86**	**331**	P	**P**	**08 46 06.4**	**0.0**

KRSC 12 08:50:36.9±1.1, 51°.17N×157°.30E, h80km±80km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.89**	**237**	*i* P	Pn	08 50 56.7	+2.1
SKR				*i* S	Sn	08 51 11.3	+3.4
MIPR	**Malaya Ipel'ka**	**1.16**	**343**	*e*P	Pn	08 50 59.7	+1.8
MIPR				*e*S	Sn	08 51 16.2	+2.6
MTVR	**Mutnovka**	**1.43**	**22**	*i* P	Pn	08 51 04.2	+2.8
MTVR				*i* S	Sn	08 51 24.2	+4.3
GRL	**Gorelyy**	**1.47**	**19**	P	Pn	08 51 04.1	+2.2
GRL				*e*S	Sn	08 51 24.0	+3.2
RUS	**Russkaya**	**1.47**	**30**	*e*P	Pn	08 51 04.4	+2.6
RUS				*e*S	Sn	08 51 24.4	+3.8
APC	**Apacha**	**1.76**	**357**	*i* P	Pn	08 51 06.7	+1.1
PET	**Petropavlovsk**	**2.04**	**24**	S	Sn	08 51 35.8	+2.0
UGLR	**Uglovaya**	**2.25**	**24**	P	Pn	08 51 15.4	+3.2
AVH	**Avacha**	**2.28**	**22**	P	Pn	08 51 14.9	+2.3
SDLR	**Sedlovina**	**2.33**	**24**	P	Pn	08 51 15.7	+2.4
SDLR				S	Sn	08 51 44.4	+3.3
SPN	**Mys Shipunski**	**2.56**	**40**	*e*P	Pn	08 51 18.4	+2.2
SPN				*e*S	Sn	08 51 48.9	+2.5
GNL	**Ganaly**	**2.56**	**9**	*e*P	Pn	08 51 18.3	+1.9
MKZ	**Mys Kozlova**	**4.33**	**37**	P	Pn	08 51 41.1	+1.0
KMNR	**Kamenistaya**	**4.92**	**20**	P	Pn	08 51 50.9	+2.5

IDC 12 08:51:49.1±1.0, 19°.78N×144°.11E, h0km, mb3.5/6, mb1 3.8/6, mb1mx3.5/25, mbtmp3.5/6, MS3.3/1, Ms1 3.3/1, ms1mx2.4/21, Error ellipse: s-maj=45.5km s-min=23.0km az=97.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.5nm,0.4s,baz=17,slow=8.8,SNR=14	**40.62**	**194**	P	P	08 59 30.9	-0.1
ASAR	**Alice Springs** 0.3nm,0.7s,baz=22,slow=8.3,SNR=6.9	**44.32**	**193**	P	P	09 00 00.9	-0.1
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=92,slow=5.4,SNR=2.1	**56.63**	**314**	P	P	09 01 33.0	-1.0
MKAR	comp=Z,26nm,18.1s,baz=156,slow=37			LR	LR	09 26 55.0	
YKA	**Yellowknife Ar** 0.1nm,0.5s,baz=289,slow=5.4,SNR=4.8	**77.74**	**28**	P	P	09 03 48.4	+0.7
NVAR	**Mina Array Bea** 0.3nm,0.6s,baz=270,slow=6.3,SNR=3.6	**83.65**	**52**	P	P	09 04 18.9	-1.3
FINES	**FINESS Array B** 1.2nm,0.9s,baz=53,slow=5.8,SNR=5.1	**85.27**	**335**	P	P	09 04 29.0	+1.4

IDC 12 09:00:30.1±3.7, 8°.48S×159°.15E, h98km±48km, mb3.3/5, mb1 3.5/5, mb1mx3.3/18, mbtmp3.3/5, Error ellipse: s-maj=67.5km s-min=24.8km az=140.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara** 61nm,0.3s,baz=344,slow=19,SNR=35	**1.23**	**140**	P	Pn	09 00 53.3	+0.4
HNR	170nm,0.3s,baz=105,slow=23,SNR=20			S	Sn	09 01 10.1	-0.1
WRA	**Warramunga Arr** 1.2nm,0.7s,baz=67,slow=9.0,SNR=13	**26.57**	**242**	P	P	09 05 59.6	+0.3
ASAR	**Alice Springs** 0.4nm,0.8s,baz=63,slow=10.0,SNR=4.4	**28.50**	**235**	P	P	09 06 15.9	-0.5
SONM	**Songino Array** 0.5nm,0.7s,baz=123,slow=5.3,SNR=3.0	**72.84**	**326**	P	P	09 11 49.4	+1.0
ILAR	**Eielson Array** 0.4nm,0.7s,baz=246,slow=4.8,SNR=8.8	**83.28**	**20**	P	P	09 12 45.6	0.0
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=97,slow=5.9,SNR=3.6	**87.25**	**318**	P	P	09 13 04.7	-1.1

IDC 12 09:01:39.8±3.4, 7°.97N×74°.89W, h67km±31km, mb3.4/3, mb1 3.6/5, mb1mx3.3/24, mbtmp3.5/5, ML2.5/2, Error ellipse: s-maj=44.7km s-min=22.9km az=59.0, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal** 4.2nm,0.3s,baz=296,slow=2.4,SNR=19	**3.14**	**170**	P	Pn	09 02 27.6	+0.1
ROSC	11nm,0.3s,baz=279,slow=23,SNR=4.8			S	Sn	09 03 14.7	+11
JTS	**JuntasAbangare** 0.2nm,0.3s,baz=122,slow=19,SNR=2.3	**10.20**	**284**	P	Pn	09 04 03.6	0.0
LPAZ	**La Paz** 0.9nm,0.4s,baz=352,slow=7.2,SNR=3.9	**25.01**	**164**	P	P	09 06 58.1	-0.4
YKA	**Yellowknife Ar** 0.5nm,0.5s,baz=134,slow=6.9,SNR=40	**61.59**	**340**	P	P	09 11 49.9	-0.1
TORD	**Torodi Ar. Bea** 0.1nm,0.4s,baz=273,slow=5.8,SNR=3.0	**75.23**	**79**	P	P	09 13 16.3	+0.2
ASAR	**Alice Springs** 0.5nm,0.9s,baz=122,slow=3.3,SNR=3.7	**148.30**	**237**	PKPbc	PKPbc	09 21 18.7	-0.7
WRA	**Warramunga Arr** 0.3nm,0.6s,baz=103,slow=2.7,SNR=3.4	**149.30**	**244**	PKPbc	PKPbc	09 21 21.8	-0.2

KRSC 12 09:14:58.7±0.3, 50°.66N×159°.51E, h42km±42km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.88**	**341**	P	Pn	09 15 30.4	+2.1
RUS				*i* S	Sn	09 15 53.5	+2.7
MTVR	**Mutnovka**	**2.00**	**336**	P	Pn	09 15 32.5	+2.3
MTVR				*i* S	Sn	09 15 57.5	+3.3
GRL	**Gorelyy**	**2.10**	**335**	P	Pn	09 15 34.3	+2.8
GRL				*i* S	Sn	09 16 00.5	+4.1
SKR	**Severo-Kuril's**	**2.16**	**272**	*i* P	Pn	09 15 32.9	+0.8
SKR				*i* S	Sn	09 15 57.1	-0.5
MIPR	**Malaya Ipel'ka**	**2.36**	**314**	P	Pn	09 15 37.9	+2.9
MIPR				*i* S	Sn	09 16 06.0	+3.3
PET	**Petropavlovsk**	**2.43**	**348**	P	Pn	09 15 38.2	+2.4
PET				*i* S	Sn	09 16 07.2	+3.0
SPN	**Mys Shipunski**	**2.46**	**7**	P	Pn	09 15 38.7	+2.4
SPN				*i* S	Sn	09 16 07.7	+2.6
UGLR	**Uglovaya**	**2.59**	**351**	P	Pn	09 15 40.5	+2.3
SDLR	**Sedlovina**	**2.65**	**352**	P	Pn	09 15 41.1	+2.0
AVH	**Avacha**	**2.65**	**350**	P	Pn	09 15 41.9	+2.9
AVH				*i* S	Sn	09 16 13.8	+3.8
KRER	**Koryakskii**	**2.69**	**350**	P	Pn	09 15 42.3	+2.6
KOK	**Koryaka**	**2.69**	**349**	P	Pn	09 15 42.4	+2.8
APC	**Apacha**	**2.70**	**328**	P	Pn	09 15 42.7	+3.2
APC				*i* S	Sn	09 16 16.0	+5.1
GNL	**Ganaly**	**3.19**	**343**	P	Pn	09 15 49.4	+2.9
GNL				*i* S	Sn	09 16 27.2	+3.9
MKZ	**Mys Kozlova**	**4.13**	**18**	P	Pn	09 16 00.7	+1.5
MKZ				*i* S	Sn	09 16 45.9	-0.2
KMNR	**Kamenistaya**	**5.12**	**5**	P	Pn	09 16 17.3	+4.3
KBTR	**Krutoberegovo**	**5.90**	**18**	P	Pn	09 16 25.8	+2.4

IDC ***12*** *09:26:41.5±1.7, 17°.84S×178°.40W, h480km±21km, mb3.3/9, mb1 3.6/11, mb1mx3.3/22, mbtmp3.3/11, Error ellipse: s-maj=71.2km s-min=11.1km az=152.0*
ISCJB ***12*** *09:26:48.4±0.9, 18°.0S±0°.3×178°.6W±0°.3, h579km, mb3.8/8, Error ellipse: s-maj=54.4km s-min=11.5km az=146.8*
AUST ***12*** *09:26:55.4±

Poway and Spring Valley, California.
*ECX **12** 09:41:29.1±0.8, 32°.19N×115°.70W, h5km, MD4.3, ML4.4, MW4.1*
*IDC **12** 09:41:29.1±2.5, 32°.19N×115°.47W, h0km, mb3.5/3, mb1 3.7/7, mb1mx3.6/28, mbtmp3.4/7, ML3.4/4, MS3.3/9, Ms1 3.4/9, ms1mx3.1/26, Error ellipse: s-maj=42.9km s-min=11.8km az=37.0*
ISC 12 09:41:28.7±0.9, 32°.13N±0°.02×115°.71W±0°.02, h16km±5km, n90, σ1♀73/106, mb3.4/3, MS3.1/6, 20C-14D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RDX	**Rancho Dawling**	**0.29**	**225**	*i* P	**Pg**	**09 41 34.1**	**-0.9**
RDX				*i* S	**Sg**	**09 41 37.9**	**-1.4**
RDX	**Rancho Dawling**	**0.29**	**225**	⇑*i* P	**Pg**	**09 41 34.1**	**-0.9**
RDX				*i* S	**Sg**	**09 41 37.9**	**-1.4**
CPBX	**Cerro Prieto**	**0.44**	**50**	⇑*e*P	**Pg**	**09 41 36.3**	**-1.4**
CPBX	comp=N,79μm,0.8s			⇓*e*		09 41 48.6	
SGL	**Mount Signal**	**0.52**	**358**	*i* P	**Pg**	**09 41 38.2**	**-0.8**
SGL	**Mount Signal**	**0.52**	**358**	⇑*i*P	**Pg**	**09 41 38.2**	**-0.8**
YUH	**Yuha Desert**	**0.55**	**340**	*i* P	**Pg**	**09 41 38.5**	**-1.1**
YUH	**Yuha Desert**	**0.55**	**340**	⇑*i*P	**Pg**	**09 41 38.5**	**-1.1**
ERPC	**Ernies Place**	**0.61**	**3**	*i* P	**Pg**	**09 41 40.4**	**-0.4**
DVTC	**Desert V Tower**	**0.62**	**328**	*i* P	**Pg**	**09 41 40.0**	**-1.0**
DVTC	**Desert V Tower** baz=0.7	**0.62**	**328**	⇓P	**Pg**	**09 41 40.0**	**-1.0**
DVTC	baz=0.7			⇓S	**Sg**	**09 41 48.0**	**-1.3**
WESC	**Westside Schoo**	**0.62**	**358**	*i* P	**Pg**	**09 41 40.5**	**-0.5**
CRR	**Carrizo Plain**	**0.78**	**344**	*i* P	**Pg**	**09 41 43.1**	**-0.9**
CRR	**Carrizo Plain**	**0.78**	**344**	⇑*i*P	**Pg**	**09 41 43.1**	**-0.9**
SWSC	**Sam W. Stewart**	**0.81**	**355**	*i* P	**Pg**	**09 41 43.5**	**-1.1**
SWSC	**Sam W. Stewart** baz=0.9	**0.81**	**355**	⇑P	**Pg**	**09 41 43.4**	**-1.1**
CBX	**Cerro Bola**	**0.83**	**283**	⇑*e*P	**Pg**	**09 41 43.9**	**-1.0**
CBX				*e*S	**Sg**	**09 41 55.3**	**-0.6**
CCX	**Cicese**	**0.85**	**252**	*i* P	**Pg**	**09 41 44.5**	**-0.8**
EMSC	**East Mesa**	**0.86**	**45**	*i* P	**Pg**	**09 41 44.2**	**-1.2**
COA	**Coachella**	**0.88**	**34**	*i* P	**Pg**	**09 41 44.4**	**-1.4**
COA	**Coachella**	**0.88**	**34**	⇓*i*P	**Pg**	**09 41 44.4**	**-1.4**
CBKC	**Canebrake**	**0.89**	**329**	*i* P	**Pg**	**09 41 45.2**	**-0.9**
ECNX	**Esteban Cantu**	**0.90**	**238**	⇑*i*P	**Pb**	**09 41 45.1**	**-0.8**
ECNX				⇑*i*P	**Pg**	**09 41 44.5**	**-1.6**
ECNX				*e*S	**Sg**	**09 41 57.0**	**-0.9**
PBX	**Punta Banda**	**0.95**	**246**	*i* P	**Pg**	**09 41 46.0**	**-1.1**
PBX				*e*S	**Sg**	**09 41 58.6**	**-1.0**
PBX	**Punta Banda**	**0.95**	**246**	⇑*i*P	**Pg**	**09 41 46.0**	**-1.1**
PBX				*e*S	**Sg**	**09 41 58.6**	**-1.0**
MONP	**Monument Peak** baz=1.0	**0.97**	**322**	⇓P	**Pg**	**09 41 46.2**	**-1.3**
MONP	baz=1.0			⇑S	**Sg**	**09 41 59.0**	**-1.3**
BAR	**Barrett**	**0.98**	**304**	*e*Pn	**Pb**	**09 41 46.2**	**-1.2**
BAR				*e*Sn	**Sg**	**09 41 58.7**	**-2.0**
BAR	**Barrett**	**0.98**	**304**	⇑*i*P	**Pb**	**09 41 46.2**	**-1.2**
CLIC	**Calipatria**	**1.02**	**9**	*i* P	**Pb**	**09 41 46.2**	**-1.4**
SPX	**San Pedro Mart**	**1.10**	**169**	*e*P	**Pb**	**09 41 48.7**	**-1.0**
SPX				*e*S	**Sb**	**09 42 04.0**	**0.0**
GLA	**Glamis**	**1.18**	**39**	*e*Pn	**Pn**	**09 41 48.8**	**-1.9**
GLA				*e*Sn	**Sb**	**09 42 04.2**	**-1.6**
GLA	**Glamis** baz=1.3	**1.18**	**39**	⇓P	**Pn**	**09 41 48.6**	**-2.1**
GLA	baz=1.3			⇓S	**Sb**	**09 42 03.1**	**-2.8**
109C	**Camp Elliot, M** baz=1.4	**1.40**	**303**	⇓P	**Pn**	**09 41 53.1**	**-0.6**
109C	baz=1.4			⇑S	**Sn**	**09 42 11.2**	**-0.6**
BC3	**Big Chuckawall** baz=1.6	**1.53**	**8**	⇑P	**Pn**	**09 41 54.1**	**-1.5**
PFO	**Pinyon Flat Ob**	**1.60**	**337**	*e*Pn	**Pn**	**09 41 55.0**	**-1.6**
113A	**Mohawk Valley,** baz=1.8	**1.76**	**68**	⇓P	**Pn**	**09 41 57.0**	**-1.5**
BELC	**Belle Mtn. Jos** baz=1.9	**1.88**	**353**	⇓P	**Pn**	**09 41 59.2**	**-1.1**
Y12C	**Blythe** baz=2.0	**1.90**	**31**	⇑P	**Pn**	**09 41 59.0**	**-1.4**
MURC	**Murrieta** baz=1.9	**1.93**	**320**	⇑Pb	**Pn**	**09 42 02.3**	**+1.3**
CIS	**Catalina Islan** baz=2.6	**2.60**	**300**	⇑P	**Pn**	**09 42 09.8**	**-0.5**
Z14A	**Wintersburg** baz=2.7	**2.63**	**61**	⇑P	**Pn**	**09 42 09.4**	**-1.1**
BFSC	**Mount Baldy Ra** baz=2.7	**2.66**	**323**	⇑Pb	**Pb**	**09 42 14.7**	**-1.4**
BFSC	baz=2.7			⇑Sb	**Sb**	**09 42 49.2**	**+0.5**
MWC	**Mount Wilson**	**2.87**	**317**	*e*Pn	**Pb**	**09 42 18.1**	**-1.6**
MWC				*e*Sg	**Sb**	**09 42 57.3**	**+2.6**
PASC	**Pasadena Art C**	**2.91**	**315**	*e*Pn	**Pn**	**09 42 16.9**	**+2.6**
PASC				*e*Sg	**Sb**	**09 42 58.1**	**+2.5**
LDFC	**Landfair**	**2.98**	**9**	*e*Pn	**Pn**	**09 42 16.5**	**+1.0**
DECC	**Green Verdugo** baz=3.1	**3.05**	**315**	⇓Pb	**Pb**	**09 42 21.2**	**-1.5**
DECC	baz=3.1			⇓Sb	**Sb**	**09 43 01.2**	**+1.5**
GSC	**Goldstone**	**3.29**	**344**	*e*Pn	**Pn**	**09 42 19.6**	**-0.1**
GSC				*e*Pg	**Pg**	**09 42 29.5**	**-2.3**
EDW2	**Edwards Air Fo** baz=3.4	**3.34**	**326**	⇓Pb	**Pb**	**09 42 27.5**	**-0.1**
OSI	**Osito Adit**	**3.54**	**315**	*e*Pn	**Pn**	**09 42 25.3**	**+2.3**
OSI				*e*Sn	**Sn**	**09 43 08.1**	**+3.5**
OSI	**Osito Adit** baz=3.5	**3.54**	**315**	⇓Pb	**Pb**	**09 42 30.1**	**-0.8**
TUC	**Tucson**	**4.17**	**86**	*e*Pn	**Pn**	**09 42 30.1**	**-1.8**
TUC				*e*Sg	**Sg**	**09 43 46.5**	**+3.7**
ISA	**Isabella**	**4.21**	**328**	*e*Pn	**Pn**	**09 42 32.8**	**+0.5**
ISA				*e*Sg	**Sg**	**09 43 39.8**	**-4.0**
WUAZ	**Wupatki**	**4.94**	**46**	*e*Pn	**Pn**	**09 42 44.4**	**+2.0**
CCUT	**Cedar City**	**5.74**	**19**	*e*Pn	**Pn**	**09 42 54.9**	**+1.4**
ARUT	**Antelope Range** comp=N,17nm,0.6s	**5.94**	**18**	*e*Pn	**Pn**	**09 42 58.3**	**+2.1**
SAO	**San Andreas Ge**	**6.62**	**316**	*e*Pn	**Pn**	**09 43 07.1**	**+1.8**
NVAR	**Mina Array Bea**	**6.63**	**342**	Pn	**Pn**	**09 43 08.5**	**+2.8**
NVAR	**Mina Array Bea** comp=N,0.1nm,0.3s,baz=168,slow=16,SNR=6.5	**6.63**	**342**	Pn	**Pn**	**09 43 08.5**	**+2.8**
MVU	**Marysvale** comp=N,14nm,0.6s	**6.97**	**23**	*e*Pn	**Pn**	**09 43 12.5**	**+2.2**
MSU	**Marysvale**	**6.99**	**23**	*e*Pn	Pn	09 43 15.8	+5.2
CMB	**Columbia Colle**	**7.03**	**328**	*e*Pn	Pn	09 43 15.1	+4.1
LAZ	**Ladron** comp=N,4.4nm,0.9s	**7.52**	**70**	*e*Pn	**Pn**	**09 43 19.9**	**+1.9**
LENM	**Lemitar**	**7.60**	**72**	*e*Pn	**Pn**	**09 43 20.4**	**+1.4**
MVCO	**Mesa Verde** comp=N,15nm,0.6s	**7.80**	**48**	*e*Pn	**Pn**	**09 43 24.5**	**+2.7**
BNM	**Barren Site** comp=N,2.6nm,0.3s	**7.88**	**73**	*e*Pn	**Pn**	**09 43 24.6**	**+1.8**
BNM				*e*Sg		09 45 42.9	
SRU	**San Rafael**	**8.14**	**30**	*e*Pn	Pn	09 43 30.1	+3.7
ANMO	**Albuquerque**	**8.21**	**68**	Pn	**Pn**	**09 43 27.4**	**0.0**
ANMO	**Albuquerque** comp=N,0.1nm,0.3s,baz=261,slow=13,SNR=3.3	**8.21**	**68**	Pn	**Pn**	**09 43 27.4**	**0.0**
GDL2	**Guadalupe Moun** comp=N,4.4nm,0.6s	**9.62**	**87**	*e*Pn	**Pn**	**09 43 48.2**	**+1.6**
SMCO	**Snowmass**	**9.99**	**43**	*e*Pn	Pn	09 43 56.2	+4.2
TXAR	**Lajitas Array**	**10.73**	**102**	Pn	**Pn**	**09 44 02.9**	**+1.1**
TXAR				Sn	**Sn**	**09 46 00.2**	**-1.5**
TXAR				Lg	Lg	09 47 10.0	
TXAR	**Lajitas Array** comp=N,0.4nm,0.3s,baz=282,slow=13,SNR=28	**10.73**	**102**	Pn	**Pn**	**09 44 02.9**	**+1.1**
TXAR	comp=N,0.1nm,0.3s,baz=286,slow=26,SNR=2.7			Sn	**Sn**	**09 46 00.2**	**-1.5**
TXAR	comp=N,0.1nm,0.3s,baz=265,slow=34,SNR=3.7			Lg	Lg	09 47 10.0	
TXAR	comp=N,264nm,19.2s,baz=90,slow=40			LR	LR	09 48 25.9	
YBH	**Yreka Blue Hor** comp=N,165nm,18.2s,baz=337,slow=41	**11.09**	**332**	LR	LR	09 49 09.7	
PDAR	**Pinedale Array**	**11.68**	**23**	Pn	Pn	09 44 18.8	+3.9
PDAR	**Pinedale Array** comp=N,0.1nm,0.3s,baz=198,slow=13,SNR=4.9	**11.68**	**23**	Pn	Pn	09 44 18.8	+3.9
MSO	**Missoula** comp=N,3.2nm,1.3s	**14.74**	**5**	*e*Pn	**Pn**	**09 44 58.0**	**+1.4**
NEW	**Newport** comp=N,107nm,20.6s,baz=229,slow=39	**16.15**	**357**	LR	LR	09 51 51.6	
ULM	**Lac du Bonnet**	**23.33**	**33**	P	**P**	**09 46 38.0**	**+1.8**
ULM	**Lac du Bonnet** comp=N,4.3nm,0.8s,baz=218,slow=8.4,SNR=5.6	**23.33**	**33**	P	**P**	**09 46 38.0**	**+1.8**
CMIG	**Matias Romero** comp=N,56nm,21.9s,baz=194,slow=39	**24.07**	**124**	LR	LR	09 56 58.9	
TKL	**Tuckaleechee C** comp=N,49nm,21.8s,baz=103,slow=35	**26.68**	**74**	LR	LR	09 56 44.9	
TEIG	**Tepich** comp=N,52nm,21.9s,baz=253,slow=39	**27.24**	**109**	LR	LR	09 59 14.2	
YKA	**Yellowknife Ar**	**30.38**	**1**	P	**P**	**09 47 41.9**	**+2.1**
YKA	**Yellowknife Ar** comp=N,0.2nm,0.7s,baz=182,slow=8.9,SNR=5.6	**30.38**	**1**	P	**P**	**09 47 41.8**	**+2.1**
ILAR	**Eielson Array**	**37.88**	**339**	P	**P**	**09 48 47.6**	**+3.0**
ILAR	**Eielson Array** comp=N,0.5nm,0.7s,baz=149,slow=7.9,SNR=14	**37.88**	**339**	P	**P**	**09 48 47.6**	**+3.0**
PPT	**Papeete**	**59.12**	**218**	LR	LR	10 09 59.6	
NOA	**NORSAR Array B** comp=N,16nm,19.3s,baz=0.0,slow=34	**77.62**	**23**	LR	LR	10 26 05.0	
ESDC	**Sonseca Array** comp=N,41nm,18.2s,baz=105,slow=32	**84.61**	**46**	LR	LR	10 27 04.4	
HHC	**Hu-ho-hao-te**	**95.27**	**326**	*e*P	**P**	**09 54 50.5**	**-1.6**
HHC				PcP	**PcP**	**09 54 51.3**	**-1.1**
HHC				PP	**PP**	**09 58 41.5**	**+0.1**
HHC				SKS	**SKSac**	**10 05 25.7**	**-1.9**
HHC				S	**S**	**10 06 03.0**	**-4.3**
HHC				ScS	**ScS**	**10 06 04.1**	**-4.1**
HHC				SS	**SS**	**10 12 32.1**	**-0.4**
HHC	comp=Z,51nm,0.7s			pmax	pmax		
HHC	comp=Z,190nm,7.0s			pmax	pmax		
HHC	comp=N,120nm,16.9s			LR	LR		
HHC	comp=E,100nm,17.1s			LR	LR		
HHC	comp=Z,97nm,17.0s			LR	LR		
WMQ	**Urumqi**	**101.44**	**343**	*e*P	**Pdif**	**09 55 20.2**	**+0.5**
WMQ	comp=Z,14nm,1.0s			pmax	pmax		

*CSEM **12** 09:48:21.6, 42°.28N×13°.48E, h10km, After ROM*
ROM 12 09:48:21.6±0.1, 42°.28N×13°.48E, h10km, Ml2.4/20, Error ellipse: s-maj=0.7km s-min=0.6km az=41.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano** 13μm,0.4s	**0.08**	**102**	Pg	Pg	09 48 24.5	+0.4
FAGN				Sg	Sg	09 48 26.0	+0.1
FAGN	**Fagnano** 13μm,0.4s	**0.08**	**102**	Pg	Pg	09 48 24.5	+0.4
FAGN				Sg	Sg	09 48 26.0	+0.1
AQU	**L'Aquila** 2μm,0.4s	**0.09**	**321**	Pg	Pg	09 48 24.8	+0.6
AQU				Sg	Sg	09 48 26.5	+0.4
AQU	**L'Aquila** 2μm,0.4s	**0.09**	**321**	Pg	Pg	09 48 24.8	+0.6
AQU				Sg	Sg	09 48 26.5	+0.4
CAMP	**Campotosto** 228nm,0.5s	**0.26**	**348**	Pg	Pg	09 48 27.4	+0.3
CAMP				Sg	Sg	09 48 31.6	+0.8
CAMP	**Campotosto** 228nm,0.5s	**0.26**	**348**	Pg	Pg	09 48 27.4	+0.3
CAMP				Sg	Sg	09 48 31.6	+0.8
PTQR	**Pietraquaria** 86nm,0.2s	**0.27**	**193**	Pg	Pg	09 48 27.7	+0.5
PTQR				Sg	Sg	09 48 32.0	+1.1
PTQR	**Pietraquaria** 86nm,0.2s	**0.27**	**193**	Pg	Pg	09 48 27.7	+0.5
PTQR				Sg	Sg	09 48 32.0	+1.1
FIAM	**Fiamignano** 806nm,0.2s	**0.27**	**267**	Pg	Pg	09 48 27.9	+0.7
FIAM				Sg	Sg	09 48 32.1	+1.1
FIAM	**Fiamignano** 806nm,0.2s	**0.27**	**267**	Pg	Pg	09 48 27.9	+0.7
FIAM				Sg	Sg	09 48 32.1	+1.1
VCEL	**Villa Celiera** 945nm,0.6s	**0.29**	**67**	Pg	Pg	09 48 28.1	+0.4
VCEL				Sg	Sb	09 48 32.9	-1.2
VCEL	**Villa Celiera** 945nm,0.6s	**0.29**	**67**	Pg	Pg	09 48 28.1	+0.4
VCEL				Sg	Sb	09 48 32.9	-1.2
TERO	**Teramo** 282nm,0.5s	**0.35**	**15**	Pg	Pg	09 48 28.8	+0.1
TERO				Sg	Sg	09 48 34.5	+1.0
TERO	**Teramo** 282nm,0.5s	**0.35**	**15**	Pg	Pg	09 48 28.8	+0.1
TERO				Sg	Sg	09 48 34.5	+1.0
INTR	**Introdacqua** 484nm,0.3s	**0.42**	**130**	Pg	Pg	09 48 30.2	+0.3
INTR				Sg	Sg	09 48 36.4	+0.8
INTR	**Introdacqua** 484nm,0.3s	**0.42**	**130**	Pg	Pg	09 48 30.2	+0.3
INTR				Sg	Sg	09 48 36.4	+0.8
VVLD	**Villa Vallelon** 161nm,0.2s	**0.42**	**165**	Pg	Pg	09 48 30.3	+0.2
VVLD	**Villa Vallelon** 161nm,0.2s	**0.42**	**165**	Pg	Pg	09 48 30.3	+0.2
LNSS	**Leonessa** 348nm,0.6s	**0.46**	**315**	Pg	Pg	09 48 31.0	+0.3
LNSS	**Leonessa** 348nm,0.6s	**0.46**	**315**	Pg	Pg	09 48 31.0	+0.3
CERT	**Cerreto** 322nm,0.6s	**0.50**	**228**	Pg	Pg	09 48 31.5	+0.1
CERT	**Cerreto** 322nm,0.6s	**0.50**	**228**	Pg	Pg	09 48 31.5	+0.1
GUAR	**Guarcino** 168nm,0.4s	**0.50**	**194**	Pg	Pg	09 48 31.6	+0.1
GUAR	**Guarcino** 168nm,0.4s	**0.50**	**194**	Pg	Pg	09 48 31.6	+0.1
LPEL	**Lama dei Pelig** 343nm,0.5s	**0.57**	**114**	Pg	Pg	09 48 32.7	-0.2
LPEL				Sg	Sb	09 48 41.5	-0.6
LPEL	**Lama dei Pelig** 343nm,0.5s	**0.57**	**114**	Pg	Pg	09 48 32.7	-0.2
LPEL				Sg	Sb	09 48 41.5	-0.6
POFI	**Posta Fibreno** 66nm,0.6s	**0.59**	**163**	Pg	Pg	09 48 33.3	+0.1
POFI	**Posta Fibreno** 66nm,0.8s	**0.59**	**163**	Pg	Pg	09 48 33.3	+0.1
MNS	**Montasola** 140nm,0.9s	**0.60**	**280**	Pg	Pg	09 48 33.3	-0.1
MNS	**Montasola** 140nm,0.9s	**0.60**	**280**	Pg	Pg	09 48 33.3	-0.1
MTCE	**Montecelio** 86nm,0.7s	**0.61**	**245**	Pg	Pg	09 48 33.4	0.0
MTCE	**Montecelio** 86nm,0.7s	**0.61**	**245**	Pg	Pg	09 48 33.4	0.0
NRCA	**Norcia** 30nm,0.2s	**0.61**	**334**	Pg	Pg	09 48 33.7	0.0
NRCA	**Norcia** 30nm,0.2s	**0.61**	**334**	Pg	Pg	09 48 33.7	0.0
SDI	**San Donato** 107nm,0.3s	**0.62**	**157**	Pg	Pg	09 48 33.9	+0.1
SDI	**San Donato** 107nm,0.3s	**0.62**	**157**	Pg	Pg	09 48 33.9	+0.1
CAFR	**Castel Frentan** 244nm,0.3s	**0.65**	**95**	Pg	Pb	09 48 34.7	-0.3
CAFR	**Castel Frentan** 244nm,0.3s	**0.65**	**95**	Pg	Pb	09 48 34.7	-0.3
GIUL	**Giuliano Di Ro** 53nm,0.6s	**0.74**	**193**	Pg	Pg	09 48 36.3	+0.3
GIUL	**Giuliano Di Ro** 53nm,0.6s	**0.74**	**193**	Pg	Pg	09 48 36.3	+0.3
CERA	**Filignano** 78nm,0.3s	**0.79**	**149**	Pg	Pg	09 48 36.4	-0.6
CERA	**Filignano** 78nm,0.3s	**0.79**	**149**	Pg	Pg	09 48 36.4	-0.6
FDMO	**Fiordimonte** 218nm,0.2s	**0.81**	**339**	Pg	Pg	09 48 37.2	-0.1
FDMO	**Fiordimonte** 218nm,0.2s	**0.81**	**339**	Pg	Pg	09 48 37.2	-0.1
CESI	**CESI - Serrava** 65nm,0.3s	**0.84**	**330**	Pg	Pg	09 48 37.5	-0.4
CESI	**CESI - Serrava** 65nm,0.3s	**0.84**	**330**	Pg	Pg	09 48 37.5	-0.4
ASSB	**Assisi San Ben** 258nm,0.3s	**0.97**	**322**	Pg	Pg	09 48 40.1	-0.3
ASSB	**Assisi San Ben** 258nm,0.3s	**0.97**	**322**	Pg	Pg	09 48 40.1	-0.3

*BEO **12** 09:48:59.5±0.8, 42°.38N×13°.22E, h0km, ML3.5/8*
*ISCJB **12** 09:48:59.2±0.2, 42°.37N±0°.01×13°.39E±0°.02, h9km±1km, mb3.2/4, Error ellipse: s-maj=2.7km s-min=2.1km az=42.4*
*ROM **12** 09:48:59.1±0.1, 42°.35N×13°.39E, h10km, Ml3.5/6, Error ellipse: s-maj=1.0km s-min=0.8km az=64.0*
*CSEM **12** 09:48:59.8±0.1, 42°.35N×13°.36E, h2km, ML3.3/5, Error ellipse: s-maj=2.6km s-min=2.0km az=47.0*
*IDC **12** 09:49:00.3±1.0, 42°.47N×13°.48E, h0km, mb3.2/5, mb1 3.5/10, mb1mx3.4/31, mbtmp3.3/10, ML3.3/5, Error ellipse: s-maj=19.0km s-min=13.1km az=96.0*
*LDG **12** 09:49:02.4±0.9, 42°.45N×13°.34E, h2km, Ml3.3/5, Error ellipse: s-maj=20.5km s-min=10.3km az=104.0*
ISC 12 09:49:00.3±0.7, 42°.36N±0°.01×13°.38E±0°.02, h7km±4km, n153, σ1♀22/217, mb3.3/4, 12C-4D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.02**	**116**	⇓*i*Pg	**Pg**	**09 49 01.2**	**-0.4**
AQU				Sg	**Sg**	**09 49 02.1**	**-0.5**
AQU	**L'Aquila**	**0.02**	**116**	⇓*i*Pg	**Pg**	**09 49 01.2**	**-0.4**
AQU				Sg	**Sg**	**09 49 02.1**	**-0.5**
CAMP	**Campotosto**	**0.17**	**8**	Pg	**Pg**	**09 49 03.7**	**-0.2**
CAMP				Sg	**Sg**	**09 49 06.8**	**+0.5**
CAMP	**Campotosto**	**0.17**	**8**	Pg	**Pg**	**09 49 03.7**	**-0.2**
CAMP				Sg	**Sg**	**09 49 06.8**	**+0.5**
FAGN	**Fagnano**	**0.18**	**122**	Pg	**Pg**	**09 49 03.7**	**-0.3**
FAGN	9μm,0.4s			Sg	**Sg**	**09 49 06.7**	**+0.2**
FAGN	**Fagnano** 9μm,0.4s	**0.18**	**122**	Pg	**Pg**	**09 49 03.7**	**-0.3**
FAGN				Sg	**Sg**	**09 49 06.7**	**+0.2**
FIAM	**Fiamignano**	**0.21**	**244**	Pg	**Pg**	**09 49 04.5**	**-0.1**
FIAM				Sg	**Sg**	**09 49 08.2**	**+0.7**
FIAM	**Fiamignano**	**0.21**	**244**	Pg	**Pg**	**09 49 04.5**	**-0.1**
FIAM				Sg	**Sg**	**09 49 08.2**	**+0.7**
TERO	**Teramo**	**0.31**	**33**	Pg	**Pg**	**09 49 05.6**	**-0.8**
TERO				Sg	**Sg**	**09 49 10.3**	**-0.2**
TERO	**Teramo**	**0.31**	**33**	Pg	**Pg**	**09 49 05.6**	**-0.8**
TERO				Sg	**Sg**	**09 49 10.3**	**-0.2**
PTQR	**Pietraquaria**	**0.34**	**177**	Pg	**Pg**	**09 49 06.2**	**-0.8**
PTQR				Sg	**Sg**	**09 49 11.3**	**-0.2**
PTQR	**Pietraquaria**	**0.34**	**177**	Pg	**Pg**	**09 49 06.2**	**-0.8**
PTQR				Sg	**Sg**	**09 49 11.3**	**-0.2**
LNSS	**Leonessa**	**0.34**	**314**	Pg	**Pg**	**09 49 06.8**	**-0.3**
LNSS				Sg	**Sg**	**09 49 12.5**	**+0.8**
LNSS	**Leonessa**	**0.34**	**314**	Pg	**Pg**	**09 49 06.8**	**-0.3**
LNSS				Sg	**Sg**	**09 49 12.5**	**+0.8**
VCEL	**Villa Celiera**	**0.35**	**85**	Pg	**Pg**	**09 49 06.4**	**-0.7**
VCEL				Sg	**Sg**	**09 49 12.0**	**+0.3**
VCEL	**Villa Celiera**	**0.35**	**85**	Pg	**Pg**	**09 49 06.4**	**-0.7**
VCEL				Sg	**Sg**	**09 49 12.0**	**+0.3**
CERT	**Cerreto**	**0.51**	**215**	Pg	**Pg**	**09 49 09.2**	**-0.9**
CERT				Sg	**Sg**	**09 49 16.5**	**-0.2**
CERT	**Cerreto**	**0.51**	**215**	Pg	**Pg**	**09 49 09.2**	**-0.9**
CERT				Sg	**Sg**	**09 49 16.5**	**-0.2**
NRCA	**Norcia**	**0.51**	**338**	Pg	**Pg**	**09 49 09.3**	**-0.8**
NRCA	**Norcia**	**0.51**	**338**	Pg	**Pg**	**09 49 09.3**	**-0.8**
MNS	**Montasola**	**0.52**	**273**	Pg	**Pg**	**09 49 09.5**	**-0.8**
MNS	**Montasola**	**0.52**	**273**	Pg	**Pg**	**09 49 09.5**	**-0.8**
VVLD	**Villa Vallelon**	**0.53**	**159**	Pg	**Pg**	**09 49 09.3**	**-1.2**
VVLD	**Villa Vallelon**	**0.53**	**159**	Pg	**Pg**	**09 49 09.3**	**-1.2**
INTR	**Introdacqua**	**0.53**	**132**	Pg	**Pg**	**09 49 09.7**	**-0.8**
INTR				Sg	**Sg**	**09 49 17.4**	**0.0**
INTR	**Introdacqua**	**0.53**	**132**	Pg	**Pg**	**09 49 09.7**	**-0.8**
INTR				Sg	**Sg**	**09 49 17.4**	**0.0**
GUAR	**Guarcino**	**0.57**	**185**	Pg	**Pg**	**09 49 10.2**	**-1.1**
GUAR				Sg	**Sg**	**09 49 19.2**	**+0.4**
GUAR	**Guarcino**	**0.57**	**185**	Pg	**Pg**	**09 49 10.2**	**-1.1**
GUAR				Sg	**Sg**	**09 49 19.2**	**+0.4**
MTCE	**Montecelio**	**0.58**	**234**	Pg	**Pg**	**09 49 10.6**	**-0.9**
MTCE	**Montecelio**	**0.58**	**234**	Pg	**Pg**	**09 49 10.6**	**-0.9**
TRTR	**Tortoreto Alta**	**0.60**	**42**	Pg	**Pg**	**09 49 11.9**	**+0.1**
TRTR	**Tortoreto Alta**	**0.60**	**42**	Pg	**Pg**	**09 49 11.9**	**+0.1**
OFFI	**Offida**	**0.61**	**22**	Pg	**Pg**	**09 49 12.4**	**+0.2**
OFFI	**Offida**	**0.61**	**22**	Pg	**Pg**	**09 49 12.4**	**+0.2**
CESX	**Cesi**	**0.64**	**293**	Pg	**Pg**	**09 49 11.8**	**-0.8**
CESX	**Cesi**	**0.64**	**293**	Pg	**Pg**	**09 49 11.8**	**-0.8**
LPEL	**Lama dei Pelig**	**0.68**	**118**	Pg	**Pg**	**09 49 11.8**	**-1.6**
LPEL				Sg	**Sg**	**09 49 22.4**	**+0.2**
LPEL	**Lama dei Pelig**	**0.68**	**118**	Pg	**Pg**	**09 49 11.8**	**-1.6**
LPEL				Sg	**Sg**	**09 49 22.4**	**+0.2**
POFI	**Posta Fibreno**	**0.69**	**159**	Pg	**Pg**	**09 49 12.3**	**-1.3**
POFI	**Posta Fibreno**	**0.69**	**159**	Pg	**Pg**	**09 49 12.3**	**-1.3**
FDMO	**Fiordimonte**	**0.70**	**343**	Pg	**Pg**	**09 49 12.8**	**-1.1**
FDMO				Sg	**Sg**	**09 49 23.6**	**+0.5**
FDMO	**Fiordimonte**	**0.70**	**343**	Pg	**Pg**	**09 49 12.8**	**-1.1**
FDMO				Sg	**Sg**	**09 49 23.6**	**+0.5**
CESI	**CESI - Serrava**	**0.73**	**332**	Pg	**Pg**	**09 49 13.2**	**-1.2**
CESI				Sg	**Sb**	**09 49 25.1**	**-0.6**
CESI	**CESI - Serrava**	**0.73**	**332**	Pg	**Pg**	**09 49 13.2**	**-1.2**
CESI				Sg	**Sb**	**09 49 25.1**	**-0.6**
SDI	**San Donato**	**0.73**	**153**	Pg	**Pg**	**09 49 12.8**	**-1.5**
SDI	**San Donato**	**0.73**	**153**	Pg	**Pg**	**09 49 12.8**	**-1.5**
CAFR	**Castel Frentan**	**0.73**	**100**	Pg	**Pg**	**09 49 13.5**	**-0.9**
CAFR	**Castel Frentan**	**0.73**	**100**	Pg	**Pg**	**09 49 13.5**	**-0.9**
GIUL	**Giuliano Di Ro**	**0.81**	**186**	Pg	**Pg**	**09 49 14.1**	**-1.8**
GIUL	**Giuliano Di Ro**	**0.81**	**186**	Pg	**Pg**	**09 49 14.1**	**-1.8**
ASSB	**Assisi San Ben**	**0.86**	**322**	Pg	**Pg**	**09 49 15.8**	**-1.0**
ASSB	**Assisi San Ben**	**0.86**	**322**	Pg	**Pg**	**09 49 15.8**	**-1.0**
RNI2	**Rionero Sannit**	**0.88**	**138**	Pg	**Pg**	**09 49 16.2**	**-1.0**
RNI2	**Rionero Sann

VOY	**Vojsko**	**3.69**	**6**	*e*Pn		**Pn**	**09 49 57.5**	**-0.3**
VOY				*e*Sn		**Sn**	**09 50 41.8**	**+0.2**
PDG	**Podgorica**	**4.36**	**87**	*e*Pn		**Pn**	**09 50 07.8**	**+0.9**
PDG				*e*Sn		**Sn**	**09 50 58.9**	**+1.0**
PDG	**Podgorica**	**4.36**	**87**	*e*Pn		**Pn**	**09 50 07.8**	**+0.9**
PDG				*e*Sn		**Sn**	**09 50 58.9**	**+1.0**
ABTA	**Abfaltersbach**	**4.43**	**352**	⇑*i*Pn		**Pn**	**09 50 08.3**	**+0.4**
	SNR=9.0							
ABTA	**Abfaltersbach**	**4.43**	**352**	Pn		**Pn**	**09 50 08.4**	**+0.4**
	SNR=9.0							
SBF	**Sospel**	**4.60**	**291**	*e*Pn		**Pn**	**09 50 10.7**	**+0.3**
SBF				*e*Sn		**Sn**	**09 51 00.4**	**-3.7**
	comp=Z,8.0nm,0.4s							
SBF	**Sospel**	**4.60**	**291**	*e*Pn		**Pn**	**09 50 10.7**	**+0.3**
SBF				*e*Sn		**Sn**	**09 51 00.4**	**-3.7**
	comp=Z,4.0nm,0.4s							
FETA	**Feichten**	**5.02**	**339**	⇑*i*Pn		**Pn**	**09 50 18.0**	**+1.7**
	SNR=14							
FETA	**Feichten**	**5.02**	**339**	Pn		**Pn**	**09 50 18.0**	**+1.7**
	SNR=14							
WTTA	**Wattenberg**	**5.05**	**346**	⇑*i*Pn		**Pn**	**09 50 18.2**	**+1.5**
WTTA	**Wattenberg**	**5.05**	**346**	Pn		**Pn**	**09 50 18.2**	**+1.5**
DAVOX	**Davos/Dischmat**	**5.07**	**332**	Pn		**Pn**	**09 50 18.4**	**+1.4**
	comp=Z,1.1nm,0.3s,baz=156,slow=19,SNR=18							
DAVOX				Sn		**Sn**	**09 51 17.6**	**+1.7**
	comp=Z,1.2nm,0.3s,baz=142,slow=19,SNR=3.6							
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn		**Pn**	**09 50 17.0**	**+0.1**
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn		**Pn**	**09 50 17.0**	**+0.1**
IVAS	**Ivanjica**	**5.12**	**74**	⇑*i*Pn		**Pn**	**09 50 18.3**	**+0.8**
IVAS	**Ivanjica**	**5.12**	**74**	⇑*i*Pn		**Pn**	**09 50 18.3**	**+0.8**
WATA	**Walderalm**	**5.13**	**346**	⇑*i*Pn		**Pn**	**09 50 19.5**	**+1.7**
	SNR=11							
WATA	**Walderalm**	**5.13**	**346**	Pn		**Pn**	**09 50 19.5**	**+1.7**
	SNR=11							
DIVS	**Divibare**	**5.14**	**68**	*e*Pn		**Pn**	**09 50 17.9**	**+0.2**
DIVS				*e*Sn		**Sn**	**09 51 16.9**	**-0.4**
DIVS	**Divibare**	**5.14**	**68**	*e*Pn		**Pn**	**09 50 17.9**	**+0.2**
DIVS				*e*Sn		**Sn**	**09 51 16.9**	**-0.4**
LMR	**La Mourre**	**5.14**	**283**	*e*Pn		**Pn**	**09 50 17.6**	**-0.1**
LMR	**La Mourre**	**5.14**	**283**	*e*Pn		**Pn**	**09 50 17.6**	**-0.1**
MOTA	**Moosalm**	**5.24**	**343**	⇑*i*Pn		**Pn**	**09 50 21.1**	**+1.9**
	SNR=11							
MOTA	**Moosalm**	**5.24**	**343**	Pn		**Pn**	**09 50 21.1**	**+1.9**
	SNR=11							
MBDF	**Montbardon**	**5.35**	**298**	*e*P		**Pn**	**09 50 22.8**	**+2.1**
MBDF	**Montbardon**	**5.35**	**298**	*e*P		**Pn**	**09 50 22.8**	**+2.1**
PKSM	**Moragy**	**5.39**	**43**	*e*Pn		**Pn**	**09 50 21.2**	**0.0**
PKSM	**Moragy**	**5.39**	**43**	*e*Pn		**Pn**	**09 50 21.2**	**0.0**
TRUS	**Trudelj**	**5.46**	**68**	*e*Pn		**Pn**	**09 50 22.1**	**0.0**
TRUS	**Trudelj**	**5.46**	**68**	*e*Pn		**Pn**	**09 50 22.1**	**0.0**
MOA	**Molln**	**5.52**	**6**	⇓*i*Pn		**Pn**	**09 50 24.5**	**+1.5**
	SNR=12							
MOA	**Molln**	**5.52**	**6**	Pn		**Pn**	**09 50 24.5**	**+1.5**
	SNR=12							
GRUS	**Gruza**	**5.58**	**72**	*e*Pn		**Pn**	**09 50 24.1**	**+0.3**
GRUS				*e*Sn		**Sn**	**09 51 29.1**	**+0.9**
GRUS	**Gruza**	**5.58**	**72**	*e*Pn		**Pn**	**09 50 24.1**	**+0.3**
GRUS				*e*Sn		**Sn**	**09 51 29.1**	**+0.9**
LPG	**La Plagne**	**5.72**	**305**	*e*P		**Pn**	**09 50 28.7**	**+2.8**
LPL	**La Plagne**	**5.74**	**306**	*e*P		**Pn**	**09 50 28.8**	**+2.7**
SELS	**Selova**	**5.76**	**79**	*e*Pn		**Pn**	**09 50 27.0**	**+0.7**
SELS				*e*Sn		**Sn**	**09 51 32.9**	**+0.2**
SELS	**Selova**	**5.76**	**79**	*e*Pn		**Pn**	**09 50 27.0**	**+0.7**
SELS				*e*Sn		**Sn**	**09 51 32.9**	**+0.2**
CONA	**Conrad Observa**	**5.84**	**17**	⇓*i*Pn		**Pn**	**09 50 27.6**	**+0.3**
	SNR=9.3							
CONA	**Conrad Observa**	**5.84**	**17**	Pn		**Pn**	**09 50 27.6**	**+0.3**
	SNR=9.3							
SMRF	**Simiane la Rot**	**5.93**	**288**	*e*P		**Pn**	**09 50 30.2**	**+1.6**
SMRF	**Simiane la Rot**	**5.93**	**288**	*e*P		**Pn**	**09 50 30.2**	**+1.6**
BARS	**Barje**	**6.25**	**83**	⇑*i*Pn		**Pn**	**09 50 33.1**	**+0.2**
BARS				*e*Sn		**Sn**	**09 51 44.1**	**-0.5**
BARS	**Barje**	**6.25**	**83**	⇑*i*Pn		**Pn**	**09 50 33.1**	**+0.2**
BARS				*e*Sn		**Sn**	**09 51 44.1**	**-0.5**
GERES	**GERESS Array B**	**6.49**	**2**	Pn		**Pn**	**09 50 36.5**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=169,slow=13,SNR=16							
GERES				Sn		**Sn**	**09 51 48.9**	**-1.7**
	comp=Z,1.5nm,0.3s,baz=182,slow=24,SNR=6.2							
KHC	**Kasperske Hory**	**6.77**	**1**	*e*PN		**Pn**	**09 50 40.1**	**0.0**
KHC				*e*SN		**Sn**	**09 51 54.8**	**-2.7**
ZAPS	**Zavoj**	**6.87**	**79**	⇑*i*Pn		**Pn**	**09 50 42.6**	**+1.1**
ZAPS				*e*Sn		**Sn**	**09 51 59.7**	**-0.2**
HINF	**Hinteralfeld**	**7.14**	**322**	*e*Pn		**Pn**	**09 50 44.6**	**-0.6**
HINF				*e*Sn		**Sn**	**09 52 01.0**	**-5.6**
	comp=Z,6.2nm,0.5s							
HINF	**Hinteralfeld**	**7.14**	**322**	*e*Pn		**Pn**	**09 50 44.6**	**-0.6**
VTS	**Vitosha**	**7.27**	**85**	⇑*i*Pn		**Pn**	**09 50 48.5**	**+1.3**
VTS				*e*Sn		**Sn**	**09 52 09.7**	**-0.4**
VTS	**Vitosha**	**7.27**	**85**	⇑*i*Pn		**Pn**	**09 50 48.5**	**+1.3**
VTS				*e*Sn		**Sn**	**09 52 09.7**	**-0.4**
VRAC	**Vranov**	**7.30**	**17**	Pn		**Pn**	**09 50 47.8**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=208,slow=15,SNR=2.1							
KEST	**Kesra**	**7.33**	**207**	Pn		Pn	09 50 51.9	+4.0
	comp=Z,0.6nm,0.3s,baz=326,slow=2.9,SNR=6.4							
CDF	**Champ du Feu**	**7.42**	**327**	*e*Pn		**Pn**	**09 50 48.3**	**-0.7**
CDF				*e*Sn		**Sn**	**09 52 08.0**	**-5.4**
	comp=Z,4.3nm,0.4s							
CDF	**Champ du Feu**	**7.42**	**327**	*e*Pn		**Pn**	**09 50 48.3**	**-0.7**
HAU	**Haudompre**	**7.51**	**321**	*e*Pn		**Pn**	**09 50 49.6**	**-0.7**
HAU				*e*Sn		Sn	09 52 08.6	-7.1
	comp=Z,13nm,0.6s							
HAU	**Haudompre**	**7.51**	**321**	*e*Pn		**Pn**	**09 50 49.6**	**-0.7**
MLR	**Muntele Rosu**	**9.59**	**67**	Pn		**Pn**	**09 51 19.4**	**+0.4**
	comp=Z,0.0nm,0.3s,baz=254,slow=7.4,SNR=2.3							
FINES	**FINESS Array B**	**20.58**	**17**	P		**P**	**09 53 39.4**	**-0.2**
	comp=Z,2.5nm,0.8s,baz=197,slow=8.7,SNR=3.5							
TORD	**Torodi Ar. Bea**	**30.82**	**203**	P		**P**	**09 55 19.4**	**+2.4**
	comp=Z,0.7nm,1.2s,baz=13,slow=10,SNR=2.9							
MKAR	**Makanchi Array**	**47.86**	**60**	P		**P**	**09 57 38.4**	**-0.4**
	comp=Z,0.2nm,0.8s,baz=298,slow=6.1,SNR=3.5							
YKA	**Yellowknife Ar**	**67.49**	**337**	P		**P**	**09 59 56.0**	**-0.5**
	comp=Z,0.1nm,0.6s,baz=43,slow=5.6,SNR=5.1							
ILAR	**Eielson Array**	**72.08**	**351**	P		**P**	**10 00 24.6**	**-0.2**
	comp=Z,0.2nm,0.9s,baz=9.8,slow=5.9,SNR=3.4							

*IDC **12** 09:54:49.5±1.3, 7.°51S×124.°17E, h0km, mb3.6/3, mb1 4.0/6, mb1mx3.8/21, mbtmp3.8/6, ML4.0/3, Error ellipse: s-maj=67.0km s-min=22.5km az=71.0*
*ISCJB **12** 09:55:03.7±0.9, 8.°45S±0.°08×124.°10E±0.°05, h96km, mb3.5/3, Error ellipse: s-maj=12.0km s-min=6.6km az=18.9*
*AUST **12** 09:55:06.6, 8.°50S×124.°01E, h100km*

ISC 12 09:55:06.3±0.9, 8.°51S±0.°07×124.°03E±0.°06, h96km, n18, σ2 35/21, mb3.6/3, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**3.86**	**252**	S	**Sn**	**09 56 49.5**	**+1.6**
	baz=3.8,SNR=5.9						
MTN	**Manton Dam**	**8.20**	**122**	P	**Pn**	**09 57 05.2**	**+2.6**
	baz=8.2,SNR=206						
MTN				S	**Sn**	**09 58 33.8**	**+0.1**
	baz=8.2,SNR=7.0						
PCI	**Palu**	**8.63**	**331**	S	**Sn**	**09 58 45.4**	**+1.3**
	baz=8.7,SNR=9.4						
KDU	**Kakadu**	**9.28**	**117**	P	**Pn**	**09 57 18.8**	**+1.5**
	baz=9.3,SNR=73						
FITZ	**Fitzroy Crossi**	**9.66**	**171**	Pn	**Pn**	**09 57 23.7**	**+1.3**
	0.6nm,0.3s,baz=350,slow=11,SNR=31						
FITZ				Sn	**Sn**	**09 59 10.3**	**+1.1**
	6.3nm,0.3s,baz=270,slow=20,SNR=17						
FITZ	**Fitzroy Crossi**	**9.66**	**171**	P	**Pn**	**09 57 24.3**	**+1.8**
	baz=9.7,SNR=8.3						
FITZ				S	**Sn**	**09 59 10.3**	**+1.1**
	baz=9.7,SNR=6.1						
UGM	**Wanagama**	**13.38**	**272**	P	**Pn**	**09 58 11.5**	**-0.9**
	baz=13,SNR=3.9						
WRA	**Warramunga Arr**	**15.12**	**140**	Pn	**Pn**	**09 58 34.6**	**-0.3**
	0.9nm,0.3s,baz=320,slow=12,SNR=46						
WRA				Sn	**Sn**	**10 01 16.9**	**-5.0**
	0.7nm,0.3s,baz=319,slow=25,SNR=5.8						
ASAR	**Alice Springs**	**17.80**	**149**	P	**P**	**09 59 07.2**	**-0.1**
	0.4nm,0.3s,baz=327,slow=12,SNR=28						
ASAR				S	**Sn**	**10 02 24.1**	**-2.2**
	0.3nm,0.3s,baz=319,slow=21,SNR=7.8						
MEEK	**Meekatharra**	**18.75**	**195**	P	**P**	**09 59 16.8**	**-1.0**
	baz=19,SNR=34						
MEEK				S	**S**	**10 02 46.3**	**+0.2**
	baz=19,SNR=4.1						
QIS	**Mount Isa**	**19.23**	**130**	P	**P**	**09 59 22.9**	**-0.2**
	baz=19,SNR=16						
COEN	**Coen**	**19.54**	**108**	P	**P**	**09 59 24.4**	**-2.0**
	baz=20,SNR=11						
MORW	**Morawa**	**21.79**	**199**	P	**P**	**09 59 47.7**	**-2.8**
	baz=22,SNR=3.6						
MORW				S	Sn	10 03 58.3	-3.5
	baz=22,SNR=3.4						
CMSA	**Cobar Meteorol**	**30.52**	**142**	P	**P**	**10 01 08.8**	**-1.8**
	baz=31,SNR=7.5						
LHI	**Lord Howe Isla**	**39.81**	**130**	S	**S**	**10 08 33.3**	**+5.6**
	baz=40,SNR=4.6						
MJAR	**Matsushiro Arr**	**46.75**	**16**	P	P	10 03 13.7	-12
	0.5nm,0.4s,baz=198,slow=9.6,SNR=5.0						
SONM	**Songino Array**	**58.23**	**346**	P	P	10 04 37.8	-13
	0.4nm,0.6s,baz=152,slow=7.5,SNR=2.8						
MKAR	**Makanchi Array**	**66.40**	**330**	P	P	10 05 35.6	-9.5
	0.2nm,0.4s,baz=134,slow=7.8,SNR=7.4						

CASC 12 10:00:11.1±4.5, 8.°34N×82.°97W, h7km±15km, MD3.6, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**0.37**	**328**	*e*P	Pg	10 00 18.6	+0.2
ACR				*e*S	Sg	10 00 24.1	+0.7
BRU2	**Volcan**	**0.53**	**31**	*e*P	Pb	10 00 22.5	-0.6
BRU2				*e*S	Sb	10 00 30.6	-0.4
TBS2		**0.55**	**34**	*e*P	Pb	10 00 22.9	-0.4
TBS2				*e*S	Sb	10 00 33.2	+1.6
BRU	**Baru**	**0.62**	**41**	*e*P	Pb	10 00 24.4	-0.5
BRU				*e*S	Sb	10 00 33.6	-0.5
QCR	**Quepos**	**1.60**	**313**	*e*P	Pn	10 00 40.1	+0.2
QCR				*e*S	Sg	10 01 02.7	+0.1
CGA2	**Cerro Gallo 2**	**2.23**	**319**	*e*P	Pb	10 00 50.8	-1.1
CGA2				*e*S	Sb	10 01 20.1	+0.2

IDC 12 10:07:56.5±4.3, 3.°34S×150.°27E, h0km, mb3.3/4, mb1 3.5/5, mb1mx3.4/19, mbtmp3.4/5, ML2.9/1, Error ellipse: s-maj=142.9km s-min=22.4km az=103.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.78**	**207**	Pn	Pn	10 09 37.5	+0.2
	1.5nm,0.3s,baz=51,slow=14,SNR=3.1						
WRA	**Warramunga Arr**	**22.67**	**222**	P	P	10 12 57.9	-1.9
	0.5nm,0.6s,baz=50,slow=10,SNR=8.1						
ASAR	**Alice Springs**	**25.67**	**217**	P	P	10 13 30.1	+1.7
	0.4nm,0.7s,baz=54,slow=9.3,SNR=4.0						
MJAR	**Matsushiro Arr**	**41.24**	**345**	P	P	10 15 43.2	-0.2
	0.3nm,0.5s,baz=157,slow=6.6,SNR=2.5						
MKAR	**Makanchi Array**	**77.58**	**319**	P	P	10 19 54.3	-0.3
	0.1nm,0.5s,baz=98,slow=6.0,SNR=2.7						

IDC 12 10:11:12.4±4.4, 3.°55S×150.°86E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/18, mbtmp3.4/3, Error ellipse: s-maj=134.5km s-min=32.7km az=104.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.92**	**223**	P	P	10 16 16.6	-1.7
	0.8nm,0.7s,baz=52,slow=10,SNR=7.7						
ASAR	**Alice Springs**	**25.86**	**218**	P	P	10 16 47.9	+1.9
	0.3nm,0.5s,baz=61,slow=8.6,SNR=6.2						
MKAR	**Makanchi Array**	**78.12**	**319**	P	P	10 23 13.2	-0.3
	0.2nm,0.6s,baz=94,slow=7.1,SNR=2.7						

IDC 12 10:12:56.0±6.5, 18.°89N×145.°37E, h240km±65km, mb3.0/7, mb1 3.3/8, mb1mx3.1/25, mbtmp3.0/8, Error ellipse: s-maj=36.5km s-min=14.8km az=98.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**18.68**	**342**	P	P	10 16 56.3	-0.3
	0.1nm,0.3s,baz=160,slow=11,SNR=3.0						
WRA	**Warramunga Arr**	**40.08**	**196**	P	P	10 20 08.3	-0.1
	0.5nm,0.5s,baz=21,slow=8.9,SNR=9.2						
ASAR	**Alice Springs**	**43.75**	**195**	P	P	10 20 37.7	-0.3
	0.3nm,0.7s,baz=17,slow=6.9,SNR=3.3						
MKAR	**Makanchi Array**	**58.11**	**314**	P	P	10 22 25.4	+0.9
	0.3nm,0.6s,baz=96,slow=7.2,SNR=4.3						
ILAR	**Eielson Array**	**63.62**	**26**	P	P	10 23 00.3	-0.8
	0.5nm,0.7s,baz=255,slow=5.4,SNR=7.2						
YKA	**Yellowknife Ar**	**77.97**	**28**	P	P	10 24 27.7	+0.4
	0.4nm,0.5s,baz=289,slow=5.3,SNR=14						
NVAR	**Mina Array Bea**	**83.27**	**52**	P	P	10 24 57.3	+1.0
	0.8nm,0.6s,baz=270,slow=5.4,SNR=6.8						
FINES	**FINESS Array B**	**86.59**	**335**	P	P	10 25 10.6	-1.3
	1.0nm,0.8s,baz=51,slow=4.4,SNR=8.5						

IDC 12 10:29:08.2±2.2, 5.°29N×125.°97E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/23, mbtmp3.3/3, Error ellipse: s-maj=194.3km s-min=25.2km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.39**	**162**	P	P	10 34 46.6	+0.1
	0.1nm,0.3s,baz=341,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**29.80**	**165**	P	P	10 35 17.0	0.0
	0.1nm,0.4s,baz=343,slow=7.2,SNR=2.7						
MKAR	**Makanchi Array**	**55.85**	**325**	P	P	10 38 47.4	-0.1
	0.3nm,0.4s,baz=120,slow=8.5,SNR=10.0						

*MAN **12** 10:30:52, 5.°91N×126.°45E, h147km, mb5.2, ML4.1, MS4.3*
*AUST **12** 10:30:54.4, 6.°00N×126.°51E, h100km*
*ISCJB **12** 10:30:54.2±0.3, 6.°02N±0.°02×126.°40E±0.°04, h124km±3km, mb4.2/27, Error ellipse: s-maj=6.3km s-min=3.2km az=172.1*
*DJA **12** 10:30:56.8±0.5, 6.°N±3.°×12.°6E±.°, h109km±8km, M5.0/16, mB5.3/12, mb5.0/16, MLv5.3/7, Mw(mB)4.8/12*
*IDC **12** 10:30:56.5±0.7, 6.°00N×126.°05E, h134km±6km, mb3.8/19, mb1 4.0/20, mb1mx3.9/30, mbtmp3.9/20, MS3.1/4, Ms1 3.1/4, ms1mx2.6/42, Error ellipse: s-maj=25.0km s-min=8.9km az=87.0*
*NEIC **12** 10:30:57.7±1.6, 5.°99N×125.°94E, h146km±16km, mb4.3/15, Error ellipse: s-maj=17.4km s-min=5.3km az=84.0*

ISC 12 10:30:55.0±0.7, 6.°01N±0.°04×126.°39E±0.°05, h118km±6km, n112, σ1 9 41/122, mb4.2/27, 4C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.94**	**352**	*e*P	**Pn**	**10 31 17.1**	**+0.8**
MATI				*e*S	**Sn**	**10 31 27.7**	**-4.6**
DAV	**Davao City (W)**	**1.32**	**322**	P	**Pn**	**10 31 21.0**	**+0.7**
DAV	**Davao City (W)**	**1.32**	**322**	P	**Pn**	**10 31 21.3**	**+1.0**
	665nm,0.3s,baz=223,slow=1.8,SNR=58						
DAV				S	**Sn**	**10 31 40.4**	**+0.9**
	724nm,0.3s,baz=270,slow=20,SNR=13						
DMPH	**Davao City--Mi**	**1.38**	**320**	⇑*i*P	**Pn**	**10 31 21.6**	**+0.7**
DMPH				*i* S	**Sn**	**10 31 45.9**	**+5.3**
GSPH	**General Santos**	**1.44**	**273**	⇑*e*P	**Pn**	**10 31 19.8**	**-1.9**
GSPH				*e*S	**Sn**	**10 31 39.9**	**-2.1**
KCP	**Kidapawan**	**1.63**	**307**	⇑*i*P	**Pn**	**10 31 23.9**	**0.0**
KCP				*i* S	**Sn**	**10 31 44.8**	**-1.1**
BUKP	**Musuan**	**2.28**	**325**	*e*P	**Pn**	**10 31 32.5**	**+0.6**
CTBH	**Cotabato--PC H**	**2.45**	**299**	⇑*e*P	**Pn**	**10 31 33.0**	**-1.0**
CGP	**Cagayan de Oro**	**2.95**	**325**	⇓*i*P	**Pn**	**10 31 41.0**	**+0.3**
CGP				*i* S	**Sn**	**10 32 17.9**	**+2.0**
BUTP	**Butuan**	**3.04**	**345**	*e*P	**Pn**	**10 31 43.2**	**+1.5**
PAGZ	**Pagadian**	**3.50**	**302**	*e*P	**Pn**	**10 31 47.5**	**-0.4**
IPIL	**Ipil**	**4.18**	**295**	*e*P	**Pn**	**10 31 58.1**	**+1.1**
MSLP	**Maasin**	**4.37**	**340**	*e*P	**Pn**	**10 31 58.9**	**-0.6**
TBP	**Tagbilaran**	**4.43**	**326**	*e*P	**Pn**	**10 32 00.2**	**-0.1**
SNPH	**Sibulan**	**4.55**	**317**	⇓*i*P	Pn	10 31 50.5	-12
MNI	**Manado**	**4.80**	**199**	P	**Pn**	**10 32 05.6**	**+0.4**
MNI				S	**Sn**	**10 33 02.5**	**+2.6**
LLP	**Lapu-Lapu**	**4.91**	**331**	*e*P	**Pn**	**10 32 06.5**	**-0.1**
LLP				*e*S	**Sn**	**10 33 03.4**	**+1.0**
TNTI	**Ternate**	**5.30**	**169**	P	**Pn**	**10 32 12.3**	**+0.3**
	1μm,0.7s,18μm4.6nm						
TNTI				S	**Sn**	**10 33 13.2**	**+1.3**
	1μm,0.7s,18μm4.6nm						
OCLP	**Ormoc**	**5.31**	**341**	*e*P	**Pn**	**10 32 12.5**	**+0.4**
KMSI	**Cibinong**	**5.91**	**204**	P	**Pn**	**10 32 21.6**	**+1.3**
	680nm,0.8s,5μm1.8nm						
KMSI				S	**Sn**	**10 33 29.5**	**+2.7**
	680nm,0.8s,5μm1.8nm						
GUIM	**Jordan**	**5.93**	**321**	*e*P	**Pn**	**10 32 21.3**	**+0.8**
RCP	**Roxas**	**6.58**	**327**	⇓*e*P	**Pn**	**10 32 30.4**	**+1.1**
LBMI	**Labuha**	**6.70**	**170**	P	**Pn**	**10 32 31.3**	**+0.4**
	289nm,0.6s,3μm1.2nm						
LBMI				S	**Sn**	**10 33 44.9**	**-1.0**
	289nm,0.6s,3μm1.2nm						
MRSI	**Marisa**	**7.07**	**219**	P	**Pn**	**10 32 36.8**	**+0.9**
	157nm,0.6s,3μm1.2nm						
MRSI				S	**Sn**	**10 33 50.9**	**-4.0**
	157nm,0.6s,3μm1.2nm						
LUWI	**Luwuk**	**7.88**	**207**	P	Pn	10 32 50.7	+3.7
	233nm,0.9s,3μm1.1nm						
LUWI				S	**Sn**	**10 34 15.6**	**+0.9**
	233nm,0.9s,3μm1.1nm						
MYLDM	**Lahad Datu**	**7.90**	**264**	P	**Pn**	**10 32 49.9**	**+2.7**
	63nm,1.3s						
PALU	**Palau**	**8.14**	**80**	P	**Pn**	**10 32 51.2**	**+0.9**
	baz=8.0,SNR=6.1						
PALU				S	**Sn**	**10 34 19.9**	**-0.8**
	baz=8.0,SNR=5.8						
SWI	**Sorong**	**8.38**	**144**	P	**Pn**	**10 32 54.6**	**+0.9**
	60nm,0.6s,1μm						
SWI				S	**Sn**	**10 34 26.0**	**-0.7**
	60nm,0.6s,1μm						
SWI	**Sorong**	**8.38**	**144**	P	**Pn**	**10 32 56.2**	**+2.5**
	baz=8.3,SNR=5.2						
SWI				S	**Sn**	**10 34 25.9**	**-0.8**
	baz=8.3,SNR=6.9						
NLAI	**Namlea**	**9.22**	**176**	P	**Pn**	**10 33 03.3**	**-1.7**
	434nm,0.5s,17μm						
PCI	**Palu**	**9.49**	**224**	P	**Pn**	**10 33 10.5**	**+1.8**
	49nm,1.1s,3μm						
AAI	**Ambon**	**9.80**	**169**	P	**Pn**	**10 33 13.8**	**+0.9**
	117nm,0.7s,3μm						
AAI	**Ambon**	**9.80**	**169**	P	**Pn**	**10 33 12.6**	**-0.3**
	baz=9.8,SNR=5.1						
KKM	**Kota Kinabalu**	**10.12**	**271**	*e*Pn	**Pn**	**10 33 20.1**	**+2.8**
KDI	**Kendari**	**10.60**	**201**	P	**Pn**	**10 33 21.5**	**-2.1**
	45nm,0.9s,766nm						
TTSI	**Tana Toraja**	**11.14**	**216**	P	**Pn**	**10 33 31.9**	**+1.0**
	133nm,1.1s,1μm						
SPSI	**Sidrap Palu**	**11.91**	**214**	P	**Pn**	**10 33 40.5**	**-0.7**
	26nm,0.8s						
KAPI	**Kappang**	**12.80**	**211**	*e*Pn	**Pn**	**10 33 51.0**	**-1.8**
	31nm,0.9s						
KAPI	**Kappang**	**12.80**	**211**	P	**Pn**	**10 33 51.6**	**-1.3**
	40nm,0.9s						
KAPI	**Kappang**	**12.80**	**211**	P	**Pn**	**10 33 51.4**	**-1.5**
	1.4nm,0.3s,baz=43,slow=8.2,SNR=15						
BKSI	**Bulukumba**	**12.88**	**209**	P	**Pn**	**10 33 52.8**	**-1.1**
	19nm,1.2s						
TWG	**Pinlang**	**17.48**	**343**	*e*P	**P**	**10 34 51.1**	**+0.2**
	38nm,0.5s						
YULB	**Yu-li**	**17.96**	**345**	*e*P	**P**	**10 34 54.6**	**-1.6**
	5.1nm,0.6s						
SSLB	**Suanglung**	**18.43**	**344**	*e*P	**P**	**10 35 01.9**	**+0.5**
	18nm,1.0s						
YHNB	**Yeheng**	**19.17**	**346**	*e*P	**P**	**10 35 09.9**	**+0.4**
	14nm,0.6s						
MTN	**Manton Dam**	**19.32**	**166**	P	**Pn**	**10 35 12.3**	**-1.0**
	baz=19,SNR=27						
KDU	**Kakadu**	**19.54**	**162**	P	**Pn**	**10 35 14.8**	**-1.1**
	baz=20,SNR=14						
FITZ	**Fitzroy Crossi**	**23.97**	**182**	*e*P	**P**	**10 35 58.8**	**+0.1**
	4.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**23.97**	**182**	P	**P**	**10 35 58.7**	**+0.1**
	6.9nm,0.8s,baz=10,slow=11,SNR=22						
FITZ	**Fitzroy Crossi**	**23.97**	**182**	P	**P**	**10 35 59.0**	**+0.3**
	baz=24,SNR=14						
COEN	**Coen**	**25.91**	**140**	P	**P**	**10 36 19.0**	**+2.7**
	baz=26,SNR=5.1						
WRAB	**Tennant Creek**	**26.95**	**163**	*e*P	**P**	**10 36 26.6**	**+1.1**
	6.0nm,0.5s						
WRA	**Warramunga Arr**	**26.95**	**163**	P	**P**	**10 36 25.6**	**0.0**
WRA	**Warramunga Arr**	**26.95**	**163**	P	**P**	**10 36 25.6**	**0.0**

YKA	Yellowknife Ar	97.57	24	P	P	10 44 15.0	-0.8
	0.2nm,0.6s,baz=301,slow=4.4,SNR=9.4						
TXAR	Lajitas Array	120.45	51	PKP	PKPdf	10 49 33.7	+0.2
TXAR	Lajitas Array	120.45	51	PKP	PKPdf	10 49 33.7	+0.2
	0.3nm,0.8s,baz=302,slow=1.7,SNR=3.5						
TORD	Torodi Ar. Bea	121.87	289	PKP	PKPdf	10 49 35.1	-1.3
TORD	Torodi Ar. Bea	121.87	289	PKP	PKPdf	10 49 35.1	-1.3
	0.4nm,0.8s,baz=60,slow=1.8,SNR=5.8						
JTS	JuntasAbangare	144.83	63	*e*PKPdf	PKPdf	10 50 19.1	-0.2

IDC 12 10:39:00.8±2.0, 1°.77N×126°.36E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/21, mbtmp3.6/3, Error ellipse: s-maj=170.6km s-min=24.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.96	160	P	P	10 44 07.1	0.0
	0.7nm,0.3s,baz=338,slow=11,SNR=42						
ASAR	Alice Springs	26.33	164	P	P	10 44 38.6	-0.1
	0.7nm,0.5s,baz=355,slow=8.0,SNR=10						
MKAR	Makanchi Array	58.95	326	P	P	10 49 02.1	-0.1
	0.3nm,0.4s,baz=121,slow=7.9,SNR=8.3						

WEL 12 10:45:54.8±0.2, 40°.17S×173°.77E, h161km±2km, ML3.8/14, 13C-24D, Error ellipse: s-maj=1.5km s-min=0.7km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUWZ	D'Urville Isla	0.64	170	⇑PN	Pn	10 46 18.3	+0.2
DUWZ				SN	Sn	10 46 35.2	-1.0
NRZ	Ngariki Road	0.84	9	⇑PN	Pn	10 46 19.5	0.0
DFE	Dawson Falls	0.88	17	PN	Pn	10 46 19.7	-0.1
NWEZ	Newall Road	0.90	5	⇓PN	Pn	10 46 19.9	0.0
NWEZ				SN	Sn	10 46 38.8	-0.3
NEZ	North Egmont	0.93	16	PN	Pn	10 46 19.9	-0.3
PKE	Pukeiti	0.99	10	PN	Pn	10 46 20.5	-0.1
PKE				SN	Sn	10 46 39.8	-0.6
RAEZ	Rainy Point	1.00	29	PN	Pn	10 46 20.5	-0.2
WAZ	Wanganui	1.02	66	⇓PN	Pn	10 46 21.4	+0.6
WAZ				SN	Sn	10 46 41.2	+0.4
DREZ	Durham Road	1.03	19	PN	Pn	10 46 20.8	-0.2
DREZ				SN	Sn	10 46 40.3	-0.7
NNZ	Nelson	1.09	196	PN	Pn	10 46 21.2	-0.1
NNZ				SN	Sn	10 46 40.1	-1.7
KIW	Kapiti Island	1.11	129	⇑PN	Pn	10 46 21.6	+0.1
TCW	Tory Channel	1.11	160	⇑PN	Pn	10 46 21.8	+0.4
TCW				SN	Sn	10 46 40.3	-1.8
QRZ	Quartz Range	1.15	235	PN	Pn	10 46 21.3	-0.6
MHEZ	Mangahewa	1.17	22	⇑PN	Pn	10 46 22.1	0.0
OGWZ	Otaki Gorge	1.25	122	PN	Pn	10 46 23.0	+0.3
TUWZ	Tuamarina	1.27	174	⇑PN	Pn	10 46 22.9	0.0
VRZ	Vera Road	1.29	36	⇓PN	Pn	10 46 22.7	-0.5
SNZO	South Karori	1.34	148	PN	Pn	10 46 23.7	+0.2
SNZO				SN	Sn	10 46 44.1	-1.7
WEL	Wellington	1.35	146	⇑PN	Pn	10 46 23.9	+0.2
CAW	Cannon Point	1.36	134	PN	Pn	10 46 24.0	+0.2
MRZ	Mangatainoka R	1.47	110	PN	Pn	10 46 24.9	0.0
BHW	Baring Head	1.49	146	⇑PN	Pn	10 46 25.1	0.0
BHW				SN	Sn	10 46 46.1	-2.4
PKVZ	Pokaka	1.50	55	⇓PN	Pn	10 46 25.0	-0.3
HOWZ	Holdsworth Sta	1.52	119	PN	Pn	10 46 25.5	+0.1
MTVZ	Mangateitei	1.53	60	⇓PN	Pn	10 46 25.2	-0.4
BSWZ	Blackbirch Sta	1.54	177	PN	Pn	10 46 25.9	+0.3
POWZ	Post Office Ro	1.54	99	PN	Pn	10 46 25.6	0.0
TRVZ	Turoa	1.62	58	⇓PN	Pn	10 46 26.2	-0.6
WNVZ	Wahianoa	1.64	60	⇓PN	Pn	10 46 26.5	-0.4
MTW	Mount Morrison	1.65	127	⇑PN	Pn	10 46 26.8	+0.1
MTW				SN	Sn	10 46 49.2	-2.1
DRZ	Dome Shelter	1.65	58	PN	Pn	10 46 26.8	-0.3
FWVZ	Far West T-bar	1.65	57	PN	Pn	10 46 26.4	-0.6
MSWZ	Moikau Station	1.68	138	⇑PN	Pn	10 46 27.0	0.0
WPVZ	Whakapapa	1.68	55	⇓PN	Pn	10 46 26.6	-0.6
TSZ	Takapari Road	1.68	87	⇓PN	Pn	10 46 26.9	-0.2
TWVZ	Taurewa	1.69	50	⇓PN	Pn	10 46 26.6	-0.8
MOVZ	Moawhango	1.71	64	⇓PN	Pn	10 46 26.7	-0.8
TUVZ	Tukino	1.71	59	⇓PN	Pn	10 46 27.3	-0.3
THZ	Tophouse	1.72	202	⇑PN	Pn	10 46 27.1	-0.4
TIWZ	Tintock	1.72	111	PN	Pn	10 46 27.6	+0.1
NGZ	Ngauruhoe	1.73	55	PN	Pn	10 46 27.1	-0.6
PAWZ	Paruwai Farm	1.75	134	⇑PN	Pn	10 46 27.8	0.0
WTVZ	West Tongariro	1.76	54	PN	Pn	10 46 27.4	-0.7
OTVZ	Oturere	1.77	56	⇓PN	Pn	10 46 27.9	-0.5
PLWZ	Palliser	1.79	142	PN	Pn	10 46 28.2	-0.1
KRVZ	Karewarewa	1.80	54	⇓PN	Pn	10 46 27.8	-0.7
DVHZ	Dannevirke	1.84	95	⇓PN	Pn	10 46 28.5	-0.3
HIZ	Hauiti	1.86	27	PN	Pn	10 46 28.2	-0.9
TMWZ	Te Maipa	1.87	121	PN	Pn	10 46 29.2	+0.1
PNHZ	Pukenui	1.88	83	PN	Pn	10 46 29.1	-0.2
BHHZ	Black Hill Sta	1.89	70	⇓PN	Pn	10 46 28.5	-1.0
TRWZ	Traveller	1.91	131	PN	Pn	10 46 29.5	0.0
KATZ	Kakaramea	1.91	52	PN	Pn	10 46 29.2	-0.6
BFZ	Birch Farm	1.96	106	PN	Pn	10 46 30.0	-0.1
RITZ	Rihia Road	2.01	54	PN	Pn	10 46 30.5	-0.2
RATZ	Rangitukua	2.02	51	⇓PN	Pn	10 46 30.8	-0.1
WPHZ	Waipukurau	2.05	88	⇓PN	Pn	10 46 31.0	-0.2
WATZ	Wairara	2.11	47	PN	Pn	10 46 31.6	-0.3
DSZ	Denniston Nort	2.17	223	⇑PN	Pn	10 46 31.8	-0.7
PRHZ	Porangahau	2.20	93	⇓PN	Pn	10 46 32.7	-0.1
KHZ	Kahutara	2.25	184	⇓PN	Pn	10 46 33.2	-0.2
WHTZ	Whakaora	2.26	49	PN	Pn	10 46 33.6	-0.1
BKZ	Black Stump Fm	2.33	65	⇓PN	Pn	10 46 33.3	-1.2
PXZ	Pawanui	2.38	88	⇓PN	Pn	10 46 34.5	-0.4
KAHZ	Kahuranaki	2.42	82	PN	Pn	10 46 35.1	-0.4
NMHZ	Naumai	2.58	66	PN	Pn	10 46 37.2	-0.3
CKHZ	Cape Kidnapper	2.59	80	PN	Pn	10 46 37.3	-0.2
TOZ	Tahuroa Road	2.79	30	PN	Pn	10 46 38.7	-1.2
LTZ	Lake Taylor	2.84	203	PN	Pn	10 46 39.4	-1.2
URZ	Urewera	3.22	55	PN	Pn	10 46 43.0	-2.3
KNZ	Kokohu	3.23	70	PN	Pn	10 46 44.0	-1.4
MKAZ	Moumakai	3.23	20	PN	Pn	10 46 45.2	-0.4
MHGZ	Mahia Peninsul	3.35	74	PN	Pn	10 46 45.9	-1.1
PRGZ	Paritu Road	3.42	70	PN	Pn	10 46 46.3	-1.5
MWZ	Matawai	3.45	59	PN	Pn	10 46 46.3	-1.9
MQZ	McQueen's Vall	3.63	193	PN	Pn	10 46 48.2	-2.2
PUZ	Puketiti	4.07	60	⇓PN	Pn	10 46 53.7	-2.6
RPZ	Rata Peaks	4.08	209	PN	Pn	10 46 55.6	-0.7
MXZ	Matakaoa Point	4.39	55	PN	Pn	10 46 58.2	-2.2
FOZ	Fox Glacier	4.56	221	PN	Pn	10 47 00.1	-2.4
ODZ	Otahua Downs	5.39	204	PN	Pn	10 47 12.4	-1.0
JCZ	Jackson Bay	5.39	222	PN	Pn	10 47 10.5	-3.2

*ISK **12** 11:10:16.9, 38°.97N×41°.18E, h9km, MD3.0*
*ISCJB **12** 11:10:17.3±0.7, 39°.01N±0°.03×41°.19E±0°.04, h3km±6km, Error ellipse: s-maj=5.2km s-min=4.6km az=24.5*
*CSEM **12** 11:10:17.8±0.2, 38°.98N×41°.24E, h12km, MD3.0, Error ellipse: s-maj=6.1km s-min=5.2km az=124.0*
*DDA **12** 11:10:18.6, 38°.92N×40°.99E, h8km, MD2.9*
ISC 12 11:10:17.7±1.1, 39°.00N±0°.03×41°.20E±0°.03, h11km±10km, n32, σ0°.65/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRTB	Varto-Mus	0.26	51	*e*PG	Pg	11 10 23.6	+0.5
VRTB	Varto-Mus	0.26	51	*e*Pg	Pg	11 10 23.7	+0.5
BNGB	Bingˆ¶	0.40	269	*e*PG	Pg	11 10 24.6	-1.2
BNGB				*e*SG	Sg	11 10 31.2	+0.1
BTMT	Batman	0.84	164	*e*PG	Pg	11 10 33.7	-0.2
BTMT				*e*SG	Sb	11 10 46.2	+0.7
BTMT	Batman	0.84	164	*e*Pg	Pg	11 10 33.7	-0.2
BTMT				*e*Sg	Sb	11 10 46.3	+0.7
ERZM	Erzurum	0.92	8	*i* P	Pg	11 10 34.6	-0.9
EZM	Erzurum	0.92	8	*e*PG	Pg	11 10 35.2	-0.3
EZM	Erzurum	0.92	8	*e*Pg	Pg	11 10 35.2	-0.3
BEST	Besiri	1.11	177	*i* P	Pb	11 10 38.5	-0.4
BEST				*i* S	Sn	11 10 55.2	+0.6
KOPT	Kop Dagi	1.15	332	*e*P	Pn	11 10 40.7	+0.6
KOPT	Kop Dagi	1.15	332	*e*P	Pn	11 10 40.7	+0.6
HOMI	Horasan	1.18	27	*e*P	Pg	11 10 44.1	+3.6
ERZN	Erzincan	1.29	298	*e*PN	Pn	11 10 41.3	-0.5
TUTA	Tutak	1.32	72	*e*P	Pn	11 10 40.6	-1.8
TUTA				*i* S	Sb	11 10 59.8	+0.1
TUTA	Tutak	1.32	72	*e*P	Pn	11 10 40.6	-1.8
TUTA				*i* S	Sb	11 10 59.8	+0.1
DIYA	Diyarbakir	1.36	219	*e*P	Pn	11 10 42.4	-0.5
DIYA				*i* S	Sg	11 11 01.9	+0.2
SVRC	Sivrice-ELAZID	1.60	248	*e*PN	Pn	11 10 46.0	-0.2
SVRC	Sivrice-ELAZID	1.60	248	*e*Pn	Pn	11 10 46.0	-0.2
BAYT	Ayd¯-ntepe-Bay	1.61	330	*e*PN	Pn	11 10 47.2	+0.8
BAYT	Ayd¯-ntepe-Bay	1.61	330	*e*Pn	Pn	11 10 47.2	+0.8
MARD	Mardin	1.71	191	*i* P	Pn	11 10 48.2	+0.6
MARD				*i* S	Sb	11 11 11.6	+0.7
KELT	Kelkit	1.89	308	*i* P	Pb	11 10 52.1	-0.3
KELT	Kelkit	1.89	308	*i* P	Pb	11 10 52.1	-0.3
ILIC	ilic-Erzincan	2.09	283	*e*PN	Pn	11 10 53.1	+0.2
ILIC	ilic-Erzincan	2.09	283	*e*Pn	Pn	11 10 53.1	+0.2
CLDR	Caldiran	2.12	85	*e*PN	Pn	11 10 53.6	+0.2
CLDR	Caldiran	2.12	85	*e*Pn	Pn	11 10 53.6	+0.2
MALT	Malatya	2.27	253	*e*PN	Pn	11 10 55.7	+0.3
MALT	Malatya	2.27	253	*e*Pn	Pn	11 10 55.7	+0.3
URFA	Urfa	2.43	231	*e*PN	Pn	11 10 57.3	-0.2
URFA	Urfa	2.43	231	*e*Pn	Pn	11 10 57.3	-0.2

NNC 12 11:12:40.3±12.0, 36°.45N×70°.15E, h0km, mb3.9, mpv3.4, 3C-2D, Error ellipse: s-maj=104.9km s-min=85.9km az=160.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.65	2	⇑Pn	Pn	11 14 20.6	+1.4
	1.5nm,0.5s,baz=183,slow=12,SNR=23						
KK31				⇑Sn	Sn	11 15 38.3	+2.5
	1.0nm,0.3s,baz=189,slow=25						
TKM2	Tokmak 2	7.70	31	⇓Pn	Pn	11 14 33.7	-0.3
	0.9nm,0.4s						
TKM2				⇑Sn	Sn	11 16 00.4	-1.8
	0.4nm,0.5s						
AB31	Akbulak array	14.80	333	⇓P	Pn	11 16 09.5	-1.3
	1.5nm,0.5s,baz=160,slow=12,SNR=21						

*KRSC **12** 11:15:48.1±0.8, 54°.33N×163°.06E, h10km±10km, ML4.0*
*MOS **12** 11:15:49.5±1.3, 54°.41N×163°.06E, h21km, mb4.2/1, Error ellipse: s-maj=36.8km s-min=19.2km az=110.8*
ISC 12 11:15:47.6±2.0, 54°.37N±0°.04×163°.11E±0°.06, h7km±11km, n34, σ1°.15/56, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	Mys Kozlova	0.83	284	PN	Pg	11 16 03.4	-0.1
MKZ				S	Sg	11 16 14.3	+0.1
MKZ	Mys Kozlova	0.83	284	P	Pg	11 16 03.4	-0.1
MKZ				S	Sg	11 16 14.3	+0.1
KBTR	Krutoberegovo	1.85	355	PN	Pn	11 16 19.4	-0.4
KBTR	Krutoberegovo	1.85	355	P	Pn	11 16 19.4	-0.4
BKI	Bering	1.86	62	S	Sn	11 16 44.3	+0.8
TUMR	Tumrok	1.94	299	P	Pn	11 16 21.5	+0.4
BZGR	Bezymyannyi-Gr	2.10	320	P	Pn	11 16 24.1	+0.8
BZGR				S	Sb	11 16 50.6	-1.7
ZLN	Zelenaya	2.12	322	P	Pn	11 16 24.7	+1.2
ZLN				S	Sb	11 16 51.6	-1.3
KMNR	Kamenistaya	2.16	311	P	Pn	11 16 25.3	+1.2
KMNR				S	Sb	11 16 52.8	-1.3
BZMR	Bezymyannaya	2.17	317	P	Pn	11 16 25.5	+1.2
BZWR	Bezymyannyi-We	2.19	318	P	Pn	11 16 25.6	+1.0
LGNR	Loginova	2.21	322	P	Pn	11 16 26.3	+1.4
LGNR				S	Sb	11 16 54.5	-1.2
CIRR	Tsirk	2.21	323	P	Pn	11 16 26.4	+1.5
SPN	Mys Shipunski	2.23	237	S	Sn	11 16 50.9	-1.8
KIRR	Kirishev	2.25	316	P	Pn	11 16 27.2	+1.9
KIRR				S	Sb	11 16 55.4	-1.2
KPT	Kopyto	2.31	315	P	Pn	11 16 26.9	+0.8
KRSR	Krestovskiy	2.36	323	P	Pn	11 16 27.7	+0.9
KRSR				S	Sn	11 16 56.9	+0.9
KLY	Klyuchi	2.40	325	PN	Pn	11 16 28.1	+0.8
KLY				S	Sn	11 16 57.3	+0.3
KLY	Klyuchi	2.40	325	P	Pn	11 16 28.1	+0.8
KLY				S	Sn	11 16 57.3	+0.3
KOZR	Kozyr	2.51	314	PN	Pn	11 16 30.4	+1.6
KOZR				S	Sb	11 17 02.0	-2.0
KOZ	Kozyrevsk	2.51	314	P	Pn	11 16 30.4	+1.5
KOZ				S	Sb	11 17 02.0	-2.1
SDLR	Sedlovina	2.73	248	P	Pn	11 16 32.8	+0.9
SDLR				S	Sn	11 17 05.0	-0.2
SRDR	Sredinnyy	2.75	317	P	Pn	11 16 33.8	+1.3
SMAR	Somma	2.78	248	P	Pn	11 16 33.8	+1.1
SMAR				S	Sn	11 17 06.3	-0.3
KRER	Koryakskii	2.79	249	P	Pn	11 16 33.4	+0.5
KRER				S	Sn	11 17 07.1	+0.2
UGLR	Uglovaya	2.79	247	P	Pn	11 16 33.7	+0.9
UGLR				S	Sn	11 17 06.6	-0.2
AVH	Avacha	2.82	249	P	Pn	11 16 34.0	+0.9
AVH				S	Sn	11 17 07.4	+0.1
PET	Petropavlovsk	2.97	245	*e*PN	Pn	11 16 37.4	+2.3
PET				*e*S	Sn	11 17 10.5	-0.4
PET				smax	smax		
	comp=N,80nm,0.9s						
ESO	Esso	2.97	303	PN	Pn	11 16 36.4	+1.2
ESO				S	Sn	11 17 12.3	+1.2
ESO	Esso	2.97	303	P	Pn	11 16 36.4	+1.2
ESO				S	Sn	11 17 12.3	+1.2
GNL	Ganaly	3.12	260	P	Pn	11 16 38.7	+1.4
GNL				S	Sn	11 17 15.6	+0.8
RUS	Russkaya	3.36	237	S	Sn	11 17 19.0	-1.6
MTVR	Mutnovka	3.50	239	P	Pn	11 16 43.9	+1.4
MTVR				S	Sn	11 17 23.8	-0.4
APC	Apacha	3.82	250	S	Sn	11 17 32.7	+0.7

*ISCJB **12** 11:22:16.7±0.6, 19°.86S±0°.05×68°.64W±0°.09, h120km±10km, mb4.2/3, Error ellipse: s-maj=14.8km s-min=8.0km az=166.0*
*GUC **12** 11:22:19.3±0.5, 19°.94S×68°.89W, h120km, ML3.9*
*IDC **12** 11:22:20.7±2.4, 19°.88S×68°.45W, h140km±20km, mb3.8/4, mb1 3.7/8, mb1mx3.5/21, mbtmp3.7/8, Error ellipse: s-maj=27.9km s-min=22.9km az=75.0*
ISC 12 11:22:17.9±0.8, 19°.91S±0°.06×68°.7W±0°.1, h124km±12km, n13, σ1°.16/17, mb4.3/3, C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	Plate Boundary	1.34	212	⇑*i*P	Pn	11 22 44.4	+0.4
PB01				*i* S	Sn	11 23 03.6	-0.1
PB01				AML	AML	11 23 04.8	
	comp=E,5μm,0.3s						
PSGC	Pisagua	1.36	283	⇑*i*P	Pn	11 22 44.0	-0.2
PSGC				*i* S	Sn	11 23 02.8	-1.3
PSGC				AML	AML	11 23 03.9	
	comp=N,986nm,0.5s						
PB09	Plate Boundary	1.94	195	*e*P	Pn	11 22 52.0	+1.0
PB09				*i* S	Sn	11 23 17.1	+0.7
PB09				AML	AML	11 23 18.0	
	comp=N,2μm,0.2s						
ARCH	Arica	2.05	313	*e*P	Pn	11 22 52.8	+0.5
ARCH				*i* S	Sn	11 23 18.4	-0.2
ARCH				AML	AML	11 23 19.8	
	comp=E,1μm,0.1s						
PB07	Plate Boundary	2.11	211	⇑*i*P	Pn	11 22 53.0	-0.2
PB07				*i* S	Sn	11 23 18.9	-1.3
PB07				AML	AML	11 23 23.2	
	comp=E,715nm,0.3s						
LPAZ	La Paz	3.65	9	P	Pn	11 23 16.2	+2.7
	comp=E,4.8nm,0.3s,baz=173,slow=19,SNR=103						
SIV	San Ignacio	8.25	63	P	Pn	11 24 13.3	-1.6
	comp=E,6.2nm,0.3s,baz=262,slow=13,SNR=87						
CPUP	Villa Florida	12.27	123	P	Pn	11 25 08.4	-0.1
	comp=E,0.5nm,0.3s,baz=280,slow=11,SNR=8.4						
BDFB	Brasilia	20.16	81	P	P	11 26 42.5	-0.4
	comp=E,0.5nm,0.3s,baz=256,slow=12,SNR=7.5						
PLCA	Paso Flores	20.82	184	P	Pn	11 26 51.6	-1.7
	comp=E,2.1nm,0.9s,baz=11,slow=9.1,SNR=3.6						
DBIC	Dimbokro	68.12	74	P	P	11 33 04.5	-0.5
	comp=E,8.6nm,0.6s,baz=216,slow=5.7,SNR=17						
TORD	Torodi Ar. Bea	76.66	71	P	P	11 33 55.0	-0.6
	comp=E,2.4nm,0.4s,baz=254,slow=5.3,SNR=86						
YKA	Yellowknife Ar	89.75	341	P	P	11 35 02.8	+1.1
	comp=E,0.2nm,0.5s,baz=133,slow=4.6,SNR=14						

*SZGRF **12** 11:22:31.4, 18°.11S×179°.98W, h33km, Fiji Islands region*
*ISCJB **12** 11:23:30.3±0.1, 18°.09S±0°.05×178°.52W±0°.04, h579km, mb4.3/85, Error ellipse: s-maj=7.4km s-min=3.2km az=144.8*
*IDC **12** 11:23:31.4±1.1, 18°.15S×178°.41W, h589km±13km, mb3.7/25, mb1 3.9/27, mb1mx3.8/32, mbtmp3.7/27, Error ellipse: s-maj=14.3km s-min=7.9km az=141.0*
*AUST **12** 11:23:31.8±0.0, 18°.06S×178°.06W, h613km, Error ellipse: s-maj=1.7km s-min=1.4km az=267.0*
*NEIC **12** 11:23:32.7±0.5, 18°.18S×178°.43W, h602km±6km, mb4.4/61, Error ellipse: s-maj=10.1km s-min=5.0km az=144.0*
ISC 12 11:23:30.7±0.4, 18°.12S±0°.08×178°.42W±0°.07, h579km, n488, σ0°.91/491, mb4.3/85, 104C-105D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.38	276	*e*Pn	P	11 24 56.0	+5.3
AFI	Afiamalu	7.64	58	*e*Pn	P	11 25 27.1	+1.1
AFI	Afiamalu	7.64	58	P	P	11 25 26.3	+0.3
	16nm,0.3s,baz=297,slow=3.4,SNR=20						
AFI				S	S	11 27 01.5	+1.0
	4.3nm,0.3s,baz=66,slow=20,SNR=5.5						
DZM	Mont Dzumac	14.75	252	P	P	11 26 38.5	+1.3
	1.4nm,0.3s,baz=101,slow=17,SNR=14						
OUZ	Omahuta	18.45	201	*e*P	P	11 27 15.3	+4.1
	70nm,1.0s						
URZ	Urewera	20.44	190	*e*P	P	11 27 27.8	-1.4
	24nm,1.0s						
URZ	Urewera	20.44	190	P	P	11 27 27.7	-1.5
	7.2nm,0.3s,baz=340,slow=2.9,SNR=28						
URZ				S	S	11 30 37.1	-4.8
	3.8nm,0.7s,baz=216,slow=19,SNR=6.3						
QRZ	Quartz Range	23.93	197	PN	P	11 28 02.1	+1.8
NNZ	Nelson	24.07	195	PN	P	11 28 01.5	0.0
THZ	Tophouse	24.70	196	PN	P	11 28 08.0	+0.7
KHZ	Kahutara	25.17	194	*e*P	P	11 28 10.7	-0.5
	10nm,0.4s						
KHZ	Kahutara	25.17	194	PN	P	11 28 10.6	-0.6
LTZ	Lake Taylor	25.82	196	PN	P	11 28 16.4	-0.6
RPZ	Rata Peaks	27.02	197	*e*P	P	11 28 26.8	-0.8
	7.1nm,0.5s						
RPZ	Rata Peaks	27.02	197	P	P	11 28 27.1	-0.5
	4.1nm,0.3s,baz=48,slow=3.8,SNR=6.3						
FOZ	Fox Glacier	27.28	199	PN	P	11 28 29.1	-0.7
JCZ	Jackson Bay	28.03	200	PN	P	11 28 36.6	+0.1
ODZ	Otahua Downs	28.36	196	*e*P	P	11 28 39.2	0.0
	24nm,1.3s						
EIDS	Eidsvold	29.18	250	*e*P	P	11 28 47.3	+0.7
	10nm,0.7s						
EIDS	Eidsvold	29.18	250	P	P	11 28 47.5	+0.9
	baz=30,SNR=7.0						
ARMA	Armidale	29.82	240	*e*P	P	11 28 53.9	+1.7
	19nm,0.9s						
ARMA	Armidale	29.82	240	P	P	11 28 54.3	+2.1
	baz=30,SNR=10.0						
WHZ	Wether Hill Ro	29.92	199	*e*P	P	11 28 53.7	+1.1
RMQ	Roma	31.42	249	P	P	11 29 07.5	+1.8
	baz=32,SNR=5.9						
CNB	Canberra Magne	33.29	233	P	P	11 29 23.6	+2.0
	baz=34,SNR=48						
CTAO	Charters Tower	33.40	261	*e*P	P	11 29 23.2	+0.6
	21nm,0.8s						
YNG	Young	33.66	235	P	P	11 29 26.8	+2.1
	baz=34,SNR=5.9						
MILA	Mila	34.14	230	P	P	11 29 30.4	+1.8
	baz=34,SNR=8.0						
PMG	Port Moresby	34.48	280	*e*P	P	11 29 33.5	+1.8
	31nm,0.9s						
CMSA	Cobar Meteorol	35.03	241	P	P	11 29 37.5	+1.4
	baz=35,SNR=18						
QLP	Quilpie	35.45	249	P	P	11 29 40.7	+1.0
	baz=36,SNR=32						
TOO	Toolangi	37.03	231	P	P	11 29 54.1	+1.7
	baz=37,SNR=14						
COEN	Coen	37.10	271	*e*P	P	11 29 54.6	+1.3
	166nm,0.7s						
COEN	Coen	37.10	271	P	P	11 29 54.8	+1.5
	baz=37,SNR=7.0						
STKA	Stephens Creek	38.52	241	*e*P	P	11 30 06.4	+1.7
	7.1nm,1.0s						
STKA	Stephens Creek	38.52	241	P	P	11 30 06.0	+1.4
	24nm,0.8s,baz=76,slow=8.8,SNR=46						
STKA	Stephens Creek	38.52	241	P	P	11 30 06.4	+1.7
	baz=39,SNR=26						
ARPS	Mount Arapiles	39.52	234	P	P	11 30 14.1	+1.5
	baz=40,SNR=6.9						
QIS	Mount Isa	39.60	259	P	P	11 30 13.9	+0.4
	baz=40,SNR=4.9						
BBOO	Buckleboo	43.29	241	*e*P	P	11 30 43.0	+0.6
	188nm,0.3s						
BBOO	Buckleboo	43.29	241	P	P	11 30 43.5	+1.0
	baz=44,SNR=44						
WRAB	Tennant Creek	44.57	260	*e*P	P	11 30 52.3	-0.2
	12nm,1.0s						
WRA	Warramunga Arr	44.58	260	P	P	11 30 52.5	-0.1
	6.5nm,0.7s,baz=96,slow=7.

baz=79,SNR=8.1
GSC Goldstone 78.93 47 eP P 11 34 36.2 +0.9
1.8nm,0.7s
HEC Hector,Ludlow 79.02 48 ⇓P P 11 34 36.6 +0.8
baz=79
BC3 Big Chuckawall 79.05 49 ⇑P P 11 34 37.0 +1.0
baz=79
HUMO Hull Mountain 79.08 38 eP P 11 34 36.6 +0.8
14nm,1.1s
WCN Washoe City 79.12 42 eP P 11 34 36.9 +0.6
11nm,1.1s
GLA Glamis 79.20 50 ⇑P P 11 34 38.0 +1.2
baz=79
GRAC Grapevine Rang 79.44 45 P P 11 34 39.1 +1.2
baz=80,SNR=8.3
GMRC Granite Mounta 79.47 48 ⇑P P 11 34 38.9 +0.7
baz=80
FURC Furnace Creek, 79.51 46 ⇑P P 11 34 38.7 +0.6
baz=80
NVAR Mina Array Bea 79.59 44 P P 11 34 39.2 +0.3
4.9nm,0.8s,baz=225,slow=8.7,SNR=33
TUQ Turquoise Moun 79.62 47 P P 11 34 40.2 +1.2
baz=80,SNR=5.6
NV11 Mina Array Sit 79.69 44 eP P 11 34 39.6 +0.3
Y12C Blythe 79.77 49 ⇑P P 11 34 40.9 +1.3
baz=80
113A Mohawk Valley, 79.84 51 ⇑P P 11 34 41.2 +1.3
baz=80
LDFC Landfair 80.01 48 eP P 11 34 42.5 +1.5
24nm,1.0s
214A Organ Pipe Nat 80.15 52 ⇑P P 11 34 43.3 +1.5
baz=80
MOD Modoc 80.25 40 eP P 11 34 42.9 +0.7
19nm,1.0s
PDMCI Parker Dam,Lak 80.31 49 ⇑P P 11 34 43.8 +1.4
baz=80
W13A Hualapai Mount 80.89 49 ⇓P P 11 34 46.7 +1.0
baz=81
R11A Troy Canyon, C 81.35 45 ⇑P P 11 34 48.6 +0.6
baz=82
BMN Battle Mountai 81.37 43 eP P 11 34 48.7 +0.7
14nm,1.0s
GAMB Gambell 81.80 3 eP P 11 34 49.6 +0.3
19nm,1.3s
SPU Mount Spurr 81.81 13 eP P 11 34 48.3 -1.2
TUC Tucson 81.84 52 eP P 11 34 51.6 +1.2
2.6nm,1.1s
X16A Lo Mia Camp, P 82.33 50 ⇓P P 11 34 54.3 +1.3
baz=82,SNR=15
ARUT Antelope Range 82.53 46 eP P 11 34 54.8 +0.9
319A Douglas 82.56 54 ⇓P P 11 34 56.0 +1.8
baz=83,SNR=7.3
U15A North Rim 82.67 48 P P 11 34 56.0 +1.3
baz=83,SNR=18
PMR Palmer 82.81 14 eP P 11 34 53.4 -1.1
5.6nm,0.6s
ELK Elko 82.82 43 eP P 11 34 56.0 +0.6
320A Kipp Ranch, An 83.12 54 P P 11 34 59.0 +2.0
baz=83,SNR=17
HAWA Hanford 83.28 37 eP P 11 34 57.8 +0.6
16nm,1.4s
BMRM Bremner River 83.37 16 eP P 11 34 56.8 -0.6
32nm,1.2s
220A Playas Peak, P 83.37 54 ⇑P P 11 34 59.8 +1.6
baz=84,SNR=6.3
X18A Snowflake 83.47 51 ⇓P P 11 34 59.8 +1.1
baz=84
BMO Blue Mountains 83.72 39 eP P 11 34 59.2 -0.4
3.0nm,0.9s
MSU Marysvale 83.75 46 eP P 11 35 01.6 +1.6
8.5nm,1.3s
TNA Tin City 83.81 4 eP P 11 34 59.7 +0.4
7.9nm,1.1s
MFID Camas Ranch 83.84 41 eP P 11 35 00.4 +0.1
11nm,1.3s
MFID Camas Ranch 83.84 41 P P 11 35 00.9 +0.6
baz=84,SNR=8.6
Z20A Nine Sixteen R 83.85 52 ⇓P P 11 35 01.9 +1.3
baz=84
DUG Dugway 84.14 45 ⇓P P 11 35 02.3 +0.5
baz=84
121A Cookes Peak, D 84.21 53 ⇑P P 11 35 03.7 +1.3
baz=84,SNR=5.7
TRF Thorofare Moun 84.22 12 eP P 11 34 59.8 -1.9
16nm,0.7s
Y20A Horse Springs, 84.36 52 ⇓P P 11 35 03.8 +0.6
baz=84
I12A Atlanta 84.47 41 ⇑P P 11 35 04.4 +1.0
baz=85
222A Williams Famil 84.55 54 ⇓P P 11 35 04.9 +0.9
baz=85
X20A Quemado 84.55 51 ⇓P P 11 35 04.9 +0.8
baz=85
Z21A St. Cloud Mine 84.63 53 ⇓P P 11 35 05.1 +0.6
baz=85,SNR=6.4
MCK McKinley 84.75 13 eP P 11 35 03.2 -0.9
14nm,1.0s
L14A Malta 84.77 43 ⇑P P 11 35 05.7 +0.8
baz=85
HLID Hailey 84.80 41 eP P 11 35 05.9 +0.9
5.6nm,0.8s
HLID Hailey 84.80 41 P P 11 35 05.9 +0.9
baz=85,SNR=11
W20A Ramah 84.81 51 ⇑P P 11 35 06.3 +1.0
baz=85
J13A Cove Ranch, Pi 84.86 41 ⇓P P 11 35 06.3 +1.0
baz=85,SNR=12
Y21A Point of Rocks 84.93 52 ⇓P P 11 35 06.7 +0.8
baz=85,SNR=6.7
H12A Diamond D Ranc 85.03 40 ⇑P P 11 35 06.7 +0.6
baz=85,SNR=17
G12A Big Creek, Yel 85.05 39 ⇓P P 11 35 06.7 +0.5
baz=85,SNR=14
K14A Jones Ranch, D 85.07 42 ⇑P P 11 35 07.1 +0.8
baz=85
Z22A Elephant Butte 85.14 53 ⇓P P 11 35 07.6 +0.7
baz=85,SNR=5.9
I13A Wildhorse Cree 85.16 41 ⇑P P 11 35 07.5 +0.7
baz=85
SRU San Rafael 85.17 46 ⇑P P 11 35 07.1 +0.2
baz=85
J14A Carey 85.24 42 P P 11 35 08.4 +1.3
baz=86,SNR=9.4
L15A Malad City 85.31 43 ⇓P P 11 35 07.9 +0.4
baz=86
U20A Newcomb 85.34 49 ⇓P P 11 35 08.0 +0.2
baz=86
H13A Challis 85.41 40 P P 11 35 08.6 +0.6
baz=86,SNR=6.2
F12A Elk City 85.42 39 ⇑P P 11 35 08.4 +0.5
baz=86
Y22A Socorro 85.43 52 ⇑P P 11 35 09.2 +0.9
baz=86,SNR=5.3
324A Moseley Ranch, 85.53 55 P P 11 35 09.7 +0.9
baz=86,SNR=6.0
K15A Arbon 85.55 42 ⇓P P 11 35 09.1 +0.5
baz=86
I14A Mackay 85.58 41 P P 11 35 10.2 +1.3
baz=86,SNR=13
425A Indio Mountain 85.65 56 ⇓P P 11 35 10.3 +0.9
baz=86,SNR=6.5
NEW Newport 85.69 36 eP P 11 35 08.3 -0.7
1.9nm,0.8s
NEW Newport 85.69 36 P P 11 35 08.0 -1.0
1.7nm,0.5s,baz=228,slow=5.2,SNR=6.6
G13A Cobalt 85.69 40 ⇑P P 11 35 09.0 -0.2
baz=86,SNR=5.1
Z23A Rita Site, Whi 85.70 53 ⇑P P 11 35 10.5 +0.9
baz=86
MNTX Cornudas Mount 85.71 55 eP P 11 35 10.0 +0.6
12nm,1.6s
MNTX Cornudas Mount 85.71 55 ⇓P P 11 35 10.5 +1.1
baz=86
224A Cornudas Mount 85.75 54 ⇑P P 11 35 09.5 -0.3
baz=86
DOT Dot Lake 85.77 15 eP P 11 35 08.3 -0.7
4.9nm,1.0s
N17A Moffit Pass 85.82 45 ⇓P P 11 35 10.8 +0.7
baz=86
626A Big Bend Ranch 85.83 57 P P 11 35 11.7 +1.5
baz=86,SNR=17
325A Bean Ranch, Si 85.90 55 ⇓P P 11 35 11.6 +1.1
baz=86
L16A Fish Haven 85.94 43 ⇓P P 11 35 11.0 +0.4
baz=86
C11A Tepee Creek (N 85.95 37 ⇓P P 11 35 10.7 +0.4
baz=86
J15A Blackfoot 85.96 42 ⇑P P 11 35 11.4 +0.8
baz=86,SNR=16
Q19A Hogan Spring (85.97 47 ⇓P P 11 35 11.2 +0.5
baz=86
H14A Leadore 85.98 40 P P 11 35 11.5 +0.8
baz=86,SNR=7.1
COLA College 85.98 13 eP P 11 35 08.9 -0.9
12nm,0.9s
U21A Nageezi 85.99 50 ⇑P P 11 35 11.3 +0.3
baz=86,SNR=11
F13A Darby 85.99 39 P P 11 35 10.7 +0.1
baz=86,SNR=9.3
DLBC Dease Lake 86.03 23 P P 11 35 09.6 -0.8
3.7nm,1.0s,baz=253,slow=2.7,SNR=4.5
526A Mary Lane Ranc 86.07 57 P P 11 35 13.0 +1.7
baz=86,SNR=8.1
ILAR Eielson Array 86.10 13 P P 11 35 09.2 -1.3
2.8nm,0.4s,baz=221,slow=5.0,SNR=120
S20A Disappointment 86.10 48 ⇑P P 11 35 12.2 +0.7
baz=86
TXAR Lajitas Array 86.12 58 P P 11 35 13.0 +1.4
8.4nm,0.8s,baz=218,slow=5.7,SNR=83
I15A Monteview 86.22 41 P P 11 35 12.9 +1.2
baz=86,SNR=6.9
K16A Soda Springs 86.23 43 P P 11 35 12.7 +0.8
baz=86,SNR=5.5
ANMO Albuquerque 86.24 52 eP P 11 35 12.1 0.0
5.5nm,1.0s
G14A Jackson 86.24 40 ⇓P P 11 35 12.4 +0.5
baz=86,SNR=8.4
225A Deer Hill, Car 86.31 55 ⇑P P 11 35 13.6 +1.1
baz=86
C12B Naegeli Ranch, 86.32 37 ⇓P P 11 35 12.6 +0.5
baz=87
L17A Cokeville 86.34 44 ⇓P P 11 35 12.6 +0.2
baz=87
426A McDonald Obser 86.36 56 ⇓P P 11 35 13.9 +1.1
baz=86
XAN Xi'an 86.38 307 P P 11 35 13.5 +0.9
XAN pmax pmax
XAN comp=Z,3.0nm,1.3s pmax pmax
comp=Z,9.0nm,6.1s
627A Terlingua Ranc 86.39 58 P P 11 35 14.4 +1.6
baz=86,SNR=16
Z24A Sheppen Canyo 86.39 53 ⇑P P 11 35 13.4 +0.5
baz=87
MCMT McKenzie Canyo 86.41 40 eP P 11 35 13.4 +0.6
J16A Bone 86.42 42 P P 11 35 13.9 +1.1
baz=87,SNR=20
H15A Lima 86.43 41 P P 11 35 13.7 +0.9
baz=87,SNR=8.3
S21A Coal Bank Pass 86.43 49 ⇑P P 11 35 13.6 +0.5
baz=87
P19A Cripple Cowboy 86.47 46 ⇓P P 11 35 13.6 +0.4
baz=87
U22A Llaves 86.55 50 ⇑P P 11 35 14.2 +0.6
baz=87
Y24A Capitan 86.58 53 P P 11 35 14.8 +1.0
baz=87,SNR=11
F14A Wisdom 86.58 39 ⇑P P 11 35 13.9 +0.4
baz=87
N18A Larsen Ranch, 86.61 45 ⇑P P 11 35 14.5 +0.7
baz=87
K17A Gardner Place, 86.62 43 P P 11 35 14.8 +1.0
baz=87,SNR=6.2
Q20A Ridgley Place, 86.65 47 P P 11 35 14.6 +0.7
baz=87,SNR=5.1
RRI2 Red Ridge 86.65 42 eP P 11 35 14.7 +0.8
comp=Z,17nm,0.9s
326A Caldwell Ranch 86.65 56 ⇓P P 11 35 14.9 +0.9
baz=87
125A Gardner Draw, 86.66 54 ⇑P P 11 35 14.9 +0.8
baz=87
B12A Libby 86.66 36 ⇑P P 11 35 14.2 +0.6
baz=87
O19A Miners Draw (B 86.68 46 ⇑P P 11 35 14.4 +0.4
baz=87
GDL2 Guadalupe Moun 86.70 55 eP P 11 35 15.1 +0.8
comp=Z,8.1nm,1.0s
V23A Ortiz Mt. (NFS 86.78 51 ⇓P P 11 35 15.7 +1.1
baz=87
BSMT Bassoo Peak 86.79 37 eP P 11 35 14.4 0.0
I16A Newdale 86.79 42 ⇓P P 11 35 16.0 +1.5
baz=87,SNR=15
G15A Dillon 86.80 40 ⇓P P 11 35 15.6 +1.0
baz=87
226B Tecolote Peak, 86.81 55 P P 11 35 15.8 +1.1
baz=87,SNR=6.0
E14A Clinton 86.81 39 P P 11 35 14.7 +0.1
baz=87,SNR=8.2
P20A De Beque 86.82 47 P P 11 35 15.6 +0.8
baz=87,SNR=5.2
DLMT Dillon 86.83 40 eP P 11 35 15.2 +0.6
comp=Z,8.0nm,1.0s
A12A Yaak River Ran 86.87 36 ⇑P P 11 35 15.0 +0.4
baz=87
N19A John Jarvie Ra 86.91 45 ⇑P P 11 35 15.1 -0.1
baz=87
R21A Cimarron 86.91 48 P P 11 35 16.4 +1.1
baz=87,SNR=6.0
427A Hayter Ranch, 86.92 56 P P 11 35 16.7 +1.4
baz=87,SNR=10
TPAW Teton Pass 86.95 42 eP P 11 35 15.6 +0.2
comp=Z,11nm,1.2s
U23A El Rito 87.02 50 ⇓P P 11 35 16.5 +0.7
baz=87
J17A Brown Place, J 87.04 43 ⇓P P 11 35 16.6 +0.8
baz=87
SNOW Snow King Moun 87.06 42 eP P 11 35 16.1 +0.2
comp=Z,10nm,0.9s
Q21A Lamborn Mesa, 87.10 48 ⇓P P 11 35 16.8 +0.7
baz=87
F15A Butte 87.13 40 ⇑P P 11 35 16.3 +0.2
baz=87
W24A Lazy 6 Ranch, 87.13 52 ⇓P P 11 35 16.8 +0.5
baz=87
K18A Toltan Ranch, 87.14 43 ⇑P P 11 35 17.2 +1.0
baz=87,SNR=14
Y25A Mesa, Roswell 87.14 53 ⇑P P 11 35 16.8 +0.5
baz=87
528A Cox Ranch, San 87.14 57 P P 11 35 18.0 +1.6
baz=87,SNR=8.0
LRM Limekiln Ridge 87.14 40 eP P 11 35 16.6 +0.4
comp=Z,23nm,0.9s
126A Clayton Basin, 87.15 54 ⇓P P 11 35 16.7 +0.4
baz=87
IMW Indian Meadow 87.15 42 eP P 11 35 17.1 +0.8
comp=Z,11nm,0.9s
S22A 4UR Ranch, Cre 87.16 49 P P 11 35 17.6 +1.1
baz=87,SNR=5.3
M19A Rock Springs 87.20 45 ⇓P P 11 35 16.9 +0.4
baz=87
MOOW Moose Ponds 87.21 42 eP P 11 35 16.8 +0.3
comp=Z,8.2nm,1.4s
O20A White River Ci 87.21 46 ⇑P P 11 35 16.7 +0.1
baz=87
CHMT Chamberlain Mo 87.21 39 eP P 11 35 16.4 0.0
G16A Mack Hill, Enn 87.25 40 ⇓P P 11 35 17.1 +0.5
baz=88,SNR=6.1
QLMT Earthquake Lak 87.29 41 eP P 11 35 18.0 +1.1
comp=Z,0.3nm,0.4s
L19A Farson 87.34 44 P P 11 35 17.8 +0.6
baz=88,SNR=11
H16A Russell Place, 87.34 41 P P 11 35 18.5 +1.4
baz=88,SNR=18
I17A Pilgrim Ck. 87.39 42 P P 11 35 18.9 +1.6
baz=88,SNR=8.2
HHC Hu-ho-hao-te 87.41 314 eP P 11 35 17.9 +0.5
HHC S S 11 45 07.1 -3.2
HHC pmax pmax
comp=Z,24nm,0.7s
HHC pmax pmax
comp=Z,190nm,6.5s
R22A Saguache, Gunn 87.42 48 ⇑P P 11 35 18.3 +0.5
baz=88
J18A Kendall Valley 87.42 43 P P 11 35 18.1 +0.6
baz=88,SNR=25
Z26A Caprock 87.43 54 P P 11 35 18.1 +0.5
baz=88,SNR=7.0
V24A Rampart Ranch, 87.44 51 ⇑P P 11 35 17.8 -0.1
baz=88
P21A Newcastle 87.49 47 ⇓P P 11 35 18.6 +0.7
baz=88
YMR Madison River 87.50 41 eP P 11 35 19.0 +1.1
comp=Z,27nm,1.5s
N20A Spence Gulch, 87.50 46 ⇓P P 11 35 18.5 +0.5
baz=88
BW06 Boulder Array 87.51 43 eP P 11 35 17.7 -0.3
comp=Z,6.4nm,1.1s
BW06 Boulder Array 87.51 43 P P 11 35 18.0 +0.1
baz=88,SNR=8.4
PDAR Pinedale Array 87.51 43 P P 11 35 17.9 -0.1
comp=Z,4.1nm,0.8s,baz=214,slow=2.9,SNR=31
BOZ Bozeman (W) 87.56 40 eP P 11 35 18.6 +0.5
comp=Z,11nm,1.4s
BOZ Bozeman (W) 87.56 40 P P 11 35 18.9 +0.9
baz=88,SNR=7.9
Q22A Crested Butte, 87.58 48 P P 11 35 19.4 +0.9
baz=88,SNR=5.4
529A Stev Forest Ra 87.58 57 ⇓P P 11 35 18.9 +0.5
baz=88
328A Wristen Ranch, 87.60 56 P P 11 35 19.4 +0.9
baz=88,SNR=5.5
H17A Grant Village 87.62 42 P P 11 35 20.7 +2.2
baz=88,SNR=9.3
COLD Coldfoot 87.62 11 eP P 11 35 17.5 -0.1
comp=Z,7.1nm,1.0s
F16A Kennard Place, 87.63 40 P P 11 35 19.1 +0.7
baz=88,SNR=5.8
SMCO Snowmass 87.67 48 eP P 11 35 19.2 +0.2
comp=Z,7.6nm,1.5s
127A Arkansas Junct 87.67 55 ⇑P P 11 35 19.5 +0.7
baz=88
D15A Lincoln 87.71 39 P P 11 35 19.2 +0.5
baz=88,SNR=5.3
O21A Pagoda 87.77 46 ⇑P P 11 35 19.6 +0.3
baz=88
I18A Diamond G Ranc 87.78 43 ⇑P P 11 35 19.7 +0.5
baz=88
Y26A Elida 87.81 53 ⇓P P 11 35 19.5 0.0
baz=88
LKWY Lake 87.81 42 eP P 11 35 20.8 +1.4
comp=Z,7.4nm,1.0s
W25A X Bar L Ranch, 87.84 52 ⇓P P 11 35 19.6 0.0
baz=88
M20A Sweetwater, Wa 87.85 45 ⇓P P 11 35 19.9 +0.4
baz=88
B14A Marquette Ranc 87.93 37 P P 11 35 19.5 -0.2
baz=88,SNR=11
G17A Pierce Place, 87.95 41 ⇑P P 11 35 20.8 +0.9
baz=88
E16A East Helena 87.96 39 ⇓P P 11 35 20.7 +0.9
baz=88
L20A Wamsutter 87.97 45 P P 11 35 20.9 +0.8
baz=88,SNR=11
V25A Rancho No Teng 87.98 51 ⇑P P 11 35 20.5 +0.2
baz=88
N21A Black Mountain 87.98 46 ⇑P P 11 35 21.1 +0.9
baz=88,SNR=6.6
P22A Eagle 88.00 47 ⇓P P 11 35 20.8 +0.5
baz=88
K19A Absolon Red Bu 88.01 44 P P 11 35 20.1 -0.1
baz=88,SNR=7.2
C15A Salmond Ranch, 88.02 38 P P 11 35 20.2 +0.1
baz=88,SNR=5.1
Z27A Tatum 88.03 54 ⇓P P 11 35 20.6 +0.1
baz=88
429A Davenport Ranc 88.03 57 P P 11 35 21.3 +0.8
baz=88,SNR=18
228A UT Block 9, Go 88.05 55 ⇓P P 11 35 21.4 +0.9
baz=88
R23A Moffat 88.06 49 ⇑P P 11 35 20.8 +0.1
baz=88
J19A Crowheart 88.07 43 P P 11 35 21.1 +0.6
baz=88,SNR=9.1
A14A Double T Ranch 88.15 37 P P 11 35 20.8 +0.1
baz=88,SNR=8.0
K20A Yellowstone Ra 88.26 44 P P 11 35 21.4 0.0
baz=88,SNR=9.6
D16A Dana Ranch, Ca 88.28 39 ⇓P P 11 35 22.1 +0.8
baz=88
F17A Fitzpatrick Pl 88.28 40 ⇑P P 11 35 22.1 +0.7
baz=88
329A Wagon Wheel Ra 88.29 56 ⇑P P 11 35 21.6 -0.1
baz=88
Y27A Causey 88.30 54 P P 11 35 22.1 +0.4
baz=88,SNR=5.8
530A J-C Ranch, Com 88.30 58 ⇑P P 11 35 21.9 +0.2
baz=88
128A Castleberry Fa 88.33 55 ⇓P P 11 35 22.0 +0.2
baz=88
U25A Circle Dot Ran 88.36 51 ⇑P P 11 35 22.1 +0.1
baz=88
O22A Kremmling 88.39 47 ⇓P P 11 35 22.7 +0.5
baz=89
M21A Separation Pea 88.45 45 P P 11 35 22.6 +0.2
baz=89,SNR=6.7
I19A Meeteetse 88.46 42 P P 11 35 23.1 +0.8
baz=89,SNR=5.4
C16A Fuhringer Ranc 88.54 38 ⇓P P 11 35 22.6 +0.2
baz=89
A15A Johnson Ranch, 88.55 37 ⇓P P 11 35 22.4 0.0
baz=89,SNR=6.2
R24A Sanders Place, 88.59 49 ⇓P P 11 35 23.3 +0.2
baz=89
L21A Rawlins 88.61 45 ⇑P P 11 35 23.3 +0.2
baz=89
229A Bryant Ranch, 88.61 56 ⇓P P 11 35 22.9 -0.2
baz=89
430A Baggett Ranch, 88.62 57 ⇓P P 11 35 22.8 -0.4
baz=89
MSTX Muleshoe 88.63 54 P P 11 35 23.6 +0.3
baz=89,SNR=5.2
X27A F and S Farms, 88.64 53 ⇓P P 11 35 23.9 +0.5
baz=89
631A Perdido Creek 88.64 59 P P 11 35 24.2 +0.9
baz=89,SNR=12
Z28A Tucker Farm, M 88.66 54 ⇑P P 11 35 23.5 +0.1
baz=89
G18A Lazy EL Ranch, 88.69 41 ⇑P P 11 35 24.3 +1.0
baz=89
N22A Wattenberg Ran 88.72 46 P P 11 35 24.9 +1.2
baz=89,SNR=6.2
J20A Shoshoni 88.74 43 P P 11 35 24.4 +0.8
baz=89,SNR=9.7
H19A Powell 88.75 42 P P 11 35 24.8 +1.2
baz=89,SNR=6.8
RLMT Red Lodge 88.78 41 eP P 11 35 24.3 +0.5
comp=Z,4.2nm,0.9s
RLMT Red Lodge 88.78 41 ⇓P P 11 35 24.6 +0.8
baz=89,SNR=5.5
129A Stewart Farms, 88.81 55 P P 11 35 25.0 +0.9
baz=89,SNR=5.1
O23A Lake Granby, G 88.84 47 ⇑P P 11 35 24.9 +0.5
baz=89
D17A Six Diamond Ra 88.86 39 ⇑P P 11 35 24.7 +0.7
baz=89,SNR=6.3
F18A Big Timber 88.86 41 ⇑P P 11 35 24.9 +0.8
baz=89
M22A Cedar Creek Ra 88.89 46 ⇑P P 11 35 25.0 +0.6
baz=89
ISCO Idaho Springs 88.89 47 ⇑P P 11 35 25.2 +0.6
baz=89
732A Laxson Ranch, 88.89 59 ⇑P P 11 35 25.1 +0.7
baz=89
330A Mertzon 88.90 57 ⇓P P 11 35 24.7 +0.2
baz=89
531A Rocksprings 88.94 58 ⇓P P 11 35 25.6 +0.9
baz=89,SNR=5.8
CMAR Chiang Mai Arr 88.95 290 P P 11 35 26.5 +1.6
comp=Z,3.4nm,1.0s,baz=104,slow=2.8,SNR=15
K21A Alcova 88.97 44 ⇓P P 11 35 25.1 +0.3
baz=89,SNR=5.8
I20A Worland 88.98 43 ⇑P P 11 35 25.2 +0.6
baz=89
Y28A McKinney Farm, 89.01 54 ⇓P P 11 35 25.3 +0.3
baz=89
C17A Wharram Farm, 89.04 39 ⇓P P 11 35 25.0 +0.2
baz=89,SNR=6.7
N23A Red Feather La 89.11 46 P P 11 35 26.6 +1.0
baz=89,SNR=6.4
J21A Lysite 89.16 44 ⇑P P 11 35 26.2 +0.7
baz=89,SNR=8.9
A16A West Butte Ran 89.18 37 ⇑P P 11 35 25.9 +0.4
baz=89
L22A Ellis Ranch, M 89.26 45 ⇑P P 11 35 26.8 +0.6
baz=90
T26A Comanche Natio 89.27 50 ⇓P P 11 35 26.7 +0.5
baz=90
X28A Dimmitt 89.28 53 ⇑P P 11 35 26.4 +0.2
baz=90
H20A Greybull 89.30 42 P P 11 35 26.4 +0.3
baz=90,SNR=5.2
F19A Roth Farm, Mol 89.32 41 ⇑P P 11 35 26.8 +0.7
baz=90
B17A L&G Farms, Che 89.33 38 ⇑P P 11 35 26.4 +0.3
baz=90

D18A	Linhart Farms, baz=90	89.41	39	⇑P	P	11 35 27.3	+0.8	
Y29A	Porterfield Fa baz=90,SNR=5.5	89.43	54	P	P	11 35 27.4	+0.5	
331A	San Angelo baz=90,SNR=5.3	89.46	57	P	P	11 35 27.4	+0.4	
I21A	Big Trails, Te baz=90,SNR=7.5	89.46	43	⇓P	P	11 35 27.2	+0.2	
K22A	Casper baz=90	89.47	45	⇑P	P	11 35 27.7	+0.8	
G20A	Bridger baz=90	89.49	42	⇓P	P	11 35 27.6	+0.6	
M23A	Laramie baz=90	89.51	46	⇓P	P	11 35 28.0	+0.7	
PHWY	Pilot Hill comp=Z,2.2nm,1.0s	89.62	46	eP	P	11 35 28.2	+0.3	
Z30A	Sanderson Ranc baz=90	89.64	55	⇑P	P	11 35 27.9	0.0	
JCT	Junction City comp=Z,2.3nm,0.6s	89.66	58	eP	P	11 35 28.1	+0.1	
JCT	Junction City baz=90	89.66	58	⇑P	P	11 35 28.4	+0.4	
E19A	Rath Farm, Rou baz=90	89.69	40	⇑P	P	11 35 28.7	+0.9	
A17A	Triple J Farms baz=90	89.70	38	⇓P	P	11 35 28.3	+0.5	
231A	Bronte baz=90,SNR=9.6	89.78	56	P	P	11 35 28.6	+0.1	
F20A	Billings baz=90	89.79	41	⇓P	P	11 35 28.8	+0.5	
L23A	Garrett baz=90,SNR=7.9	89.79	45	⇓P	P	11 35 29.1	+0.5	
432A	Menard baz=90,SNR=11	89.81	57	P	P	11 35 29.1	+0.4	
AMTX	Amarillo baz=90	89.81	53	⇓P	P	11 35 29.1	+0.4	
N24A	Carr baz=90	89.82	47	⇓P	P	11 35 29.8	+1.1	
EGMT	Eagleton baz=90	89.82	39	⇓P	P	11 35 28.8	+0.4	
W29A	Amraillo baz=90	89.92	53	⇑P	P	11 35 29.2	0.0	
D19A	Cripps Ranch, baz=90	89.95	40	⇑P	P	11 35 29.7	+0.7	
B18A	Beardsley Farm baz=90,SNR=5.3	89.98	38	P	P	11 35 29.6	+0.5	
131A	Roby baz=90,SNR=7.8	89.99	56	P	P	11 35 29.9	+0.4	
Q26A	Hugo baz=90	90.01	49	⇑P	P	11 35 29.9	+0.3	
I22A	9 Mile Ranch, baz=90	90.02	43	⇓P	P	11 35 30.0	+0.5	
332A	Millersview baz=90,SNR=12	90.03	57	P	P	11 35 30.1	+0.5	
Y30A	Stafford Cattl baz=90	90.03	54	⇓P	P	11 35 29.9	+0.2	
C19A	Slack Wire Ran baz=90	90.11	39	⇑P	P	11 35 30.6	+0.9	
K23A	Bowen Ranch, D baz=90	90.11	45	⇓P	P	11 35 30.3	+0.3	
E20A	Meyer Farm, Mu baz=90	90.12	41	⇓P	P	11 35 30.6	+0.8	
M24A	Cheyenne baz=90	90.12	46	⇓P	P	11 35 30.6	+0.5	
A18A	Metzger Ranch, baz=90	90.19	38	⇑P	P	11 35 30.3	+0.3	
SNAA	Sanae comp=Z,0.5nm,0.9s,baz=201,slow=14,SNR=5.0	90.38	179	P	P	11 35 31.1	+0.5	
Z31A	Sharp Cattle R baz=91	90.42	55	⇑P	P	11 35 31.8	+0.4	
VNA3	Neumayer Olymp	90.53	176	eP	P	11 35 32.0	+0.8	
ABTX	Abilene, Hawle baz=91,SNR=5.2	90.56	56	P	P	11 35 32.5	+0.4	
Y31A	Rekieta Farm, baz=91	90.56	54	⇓P	P	11 35 32.3	+0.3	
C20A	Veseth Ranch, baz=91	90.73	40	⇓P	P	11 35 33.4	+0.8	
A19A	Klindworth Far baz=91	90.83	38	⇑P	P	11 35 33.4	+0.4	
Z32A	Haskell baz=91,SNR=7.4	90.93	55	P	P	11 35 34.6	+0.8	
VNA2	Neumayer−Watz baz=190,slow=4.5	90.97	177	eP	P	11 35 34.3	+1.1	
L25A	Engebretsen Ra baz=91,SNR=5.8	90.99	46	P	P	11 35 35.3	+1.3	
B20A	Solberg Farm, baz=91	91.04	39	⇓P	P	11 35 34.6	+0.7	
D21A	La Casta Ranch baz=91	91.06	40	⇓P	P	11 35 34.9	+0.7	
Y32A	R-V Farms, Ver baz=91,SNR=5.0	91.21	55	P	P	11 35 35.6	+0.6	
W31A	Holland Ranch, baz=91	91.25	53	⇓P	P	11 35 35.7	+0.4	
A20A	Cobblestone Ra baz=92	91.30	38	⇓P	P	11 35 35.5	+0.3	
V31A	Spring Creek L baz=92	91.53	53	⇑P	P	11 35 37.2	+0.7	
D22A	Cohagen baz=92	91.60	41	⇓P	P	11 35 37.4	+0.8	
H24A	Dirks Ranch, A baz=92	91.64	43	⇓P	P	11 35 37.0	+0.1	
RSSD	Black Hills comp=Z,2.3nm,0.9s	91.73	44	eP	P	11 35 37.2	-0.3	
K26A	Motz Farm, Whi baz=92	91.74	45	⇑P	P	11 35 38.0	+0.6	
A21A	Bergtoll Ranch baz=92	91.94	39	⇓P	P	11 35 38.5	+0.4	
INK	Inuvik comp=Z,4.6nm,0.9s,baz=195,slow=5.2,SNR=21	92.09	15	P	P	11 35 37.0	-1.3	
T31A	Randall Ranch, baz=92	92.14	52	⇓P	P	11 35 39.9	+0.6	
F24A	Ekalaka baz=92	92.15	42	⇓P	P	11 35 39.7	+0.5	
D23A	Lindsay baz=92	92.22	41	⇓P	P	11 35 40.6	+1.1	
C23A	Lambert baz=93	92.49	40	⇓P	P	11 35 41.6	+1.0	
D24A	Glendive baz=93	92.74	41	⇓P	P	11 35 42.8	+1.0	
C24A	Savage baz=93	92.85	41	⇑P	P	11 35 43.4	+1.1	
DGMT	Dagmar baz=94	93.36	40	⇑P	P	11 35 45.5	+0.8	
SONM	Songino Array comp=Z,0.3nm,0.4s,baz=106,slow=3.1,SNR=3.8	93.70	319	P	P	11 35 44.9	-1.4	
YKA	Yellowknife Ar comp=Z,0.4nm,0.5s,baz=238,slow=4.7,SNR=15	94.53	25	P	P	11 35 48.3	-1.2	
YKA				PKKP	PKKPdf	11 52 43.1	-3.5	
MKAR	Makanchi Array comp=Z,0.5nm,0.4s,baz=97,slow=0.9,SNR=9.6	109.28	314	PKiKP	PKiKP	11 40 53.1	-2.5	
BVAR	Borovoye Array comp=Z,1.0nm,0.5s,baz=88,slow=3.3,SNR=7.0	117.00	321	PKP	PKPdf	11 41 08.9	-1.3	
SPITS	Spitsbergen Ar comp=Z,3.1nm,0.8s,baz=89,slow=6.8,SNR=4.2	119.48	357	PKP	PKPdf	11 41 12.9	-1.5	
ABKAR	Akbulak array	124.08	318	ePKPdf	PKPdf	11 41 23.0	-0.9	
AKTO	Aktyubinsk comp=Z,0.5nm,0.3s,baz=148,slow=4.8,SNR=5.8	125.02	319	PKP	PKPdf	11 41 24.8	-0.9	
KEV	Kevo comp=Z,0.5nm,0.3s	126.07	349	ep	PKPdf	11 41 25.8	-1.3	
ARCES	ARCESS Array B comp=Z,1.9nm,0.5s,baz=48,slow=1.3,SNR=28	126.52	350	PKP	PKPdf	11 41 27.2	-0.8	
JOF	Joensuu comp=Z,2.0nm,0.4s	130.76	343	ep	PKPdf	11 41 34.5	-1.7	
KAF	Kangasniemi comp=Z,1.3nm,0.6s	132.77	344	ep	PKPdf	11 41 38.8	-1.2	
FINES	FINESS Array B comp=Z,0.9nm,0.4s,baz=114,slow=2.4,SNR=10	133.39	344	PKP	PKPdf	11 41 39.6	-1.6	
NOA	NORSAR Array B comp=Z,0.8nm,1.0s,baz=13,slow=4.0,SNR=3.4	136.59	353	PKP	PKPdf	11 41 48.2	+1.0	
HFS	Hagfors comp=Z,0.7nm,0.3s,baz=74,slow=4.2,SNR=12	137.14	351	PKhKP	PKPpre	11 41 37.7		
AKASG	Malin Array Be comp=Z,2.1nm,0.4s,baz=40,slow=4.2,SNR=16	140.74	332	PKhKP	PKPpre	11 41 47.9		
EKA	Eskdalemuir Ar comp=Z,0.6nm,0.4s,baz=342,slow=2.3,SNR=7.8	142.68	4	PKhKP	PKPpre	11 41 54.0		
BEL	Belsk	143.10	340	ePKP	PKPbc	11 41 57.9	+0.4	
BSEG	Bad Segeberg	143.62	351	ePKPbc	PKPab	11 41 57.8	-1.2	
KWP	Kalwaria Pacla	144.26	336	ePKPdf	PKPbc	11 42 00.5	-0.7	
KWP	Kalwaria Pacla	144.26	336	ePKP	PKPbc	11 42 01.0	-0.2	
BURAR	Bucovina Array	144.80	332	⇑iP	PKPab	11 42 04.0	+0.1	
OJC	Ojcow	144.81	340	ePKPdf	PKPdf	11 42 02.5	+0.3	
OJC	Ojcow	144.81	340	ePKP	PKPbc	11 42 02.6	-0.2	
BRTR	Keskin Array B comp=Z,3.7nm,0.4s,baz=93,slow=3.0,SNR=19	144.92	315	PKP	PKPdf	11 42 03.4	+0.4	
TESR		144.94	329	⇓iP	PKPbc	11 42 03.2	-0.1	
KOLS	Kolonicke sedl	144.99	336	ePKP	PKPbc	11 42 03.3	-0.2	
NRDL	Niedersach Rie	145.05	351	ePKPbc	PKPdf	11 42 02.4	-0.1	
KSP	Ksiaz	145.31	344	ePKP	PKPbc	11 42 04.4	+0.1	
NIE	Niedzica	145.31	338	ePKP	PKPbc	11 42 04.7	+0.3	
CRVS	Cervenica-Dubn	145.33	337	ePKP	PKPdf	11 42 03.4	+0.2	
VRI	Vrincioaia	145.35	329	⇑iP	PKPbc	11 42 04.3	-0.3	
IBBN	Ibbenburen	145.54	353	ePKPbc	PKPbc	11 42 04.9	0.0	
CLZ	Clausthal	145.64	350	ePKPbc	PKPdf	11 42 03.9	+0.2	
CLL	Collm	145.67	347	ePKPbc	PKPbc	11 42 04.7	-0.6	
CLL	Collm comp=Z,30nm,0.9s	145.67	347	⇑iPKPbc	PKPbc	11 42 05.0	-0.3	
OKC	Ostrava-Krasne	145.67	341	iPKP	PKPbc	11 42 05.0	-0.3	
OKC				ex	x	11 42 07.3		
UPC	Upice	145.69	344	iPKP	PKPbc	11 42 05.5	+0.1	
DPC	Dobruska-Polom	145.75	343	ePKPdf	PKPdf	11 42 04.7	+0.8	
DPC	Dobruska-Polom	145.75	343	⇑iPKP	PKPbc	11 42 05.8	+0.2	
DPC				ePKPAB	PKiKP	11 42 08.5	+0.2	
BRG	Berggiesshubel comp=Z,19nm,1.1s	145.87	346	iPKP	PKPbc	11 42 05.6	-0.3	
BRG	Berggiesshubel	145.87	346	ePKPbc	PKPdf	11 42 04.4	+0.4	
MORC	Moravsky Berou	145.91	341	ePKPbc	PKPbc	11 42 05.6	-0.5	
MORC	Moravsky Berou	145.91	341	⇑iP	PKPbc	11 42 06.6	+0.5	
MLR	Muntele Rosu	146.01	329	⇑iP	PKPbc	11 42 06.3	-0.3	
MLR	Muntele Rosu comp=Z,1.0nm,0.4s,baz=76,slow=4.2,SNR=8.2	146.01	329	PKPbc	PKPbc	11 42 06.2	-0.5	
NEUB	Neuenburg	146.01	349	ePKPbc	PKPbc	11 42 06.4	+0.2	
PVCC	Panska Ves	146.04	345	iPKP	PKPbc	11 42 06.6	+0.2	
MMAI	Mount Meron Ar comp=Z,4.3nm,0.4s,baz=72,slow=5.8,SNR=12	146.25	303	PKPbc	PKPbc	11 42 07.9	+0.3	
DRGR		146.53	333	⇓iP	PKPbc	11 42 08.0	+0.1	
PRU	Pruhonice	146.55	345	⇑iPKP	PKPbc	11 42 07.6	-0.2	
PRU				ePKPAB	PKPab	11 42 10.5	0.0	
MOX	Moxa	146.58	348	ePKPbc	PKPdf	11 42 05.5	+0.3	
VRAC	Vranov	146.61	342	⇑iP	PKPbc	11 42 08.5	+0.5	
VRAC	Vranov comp=Z,1.8nm,0.5s,baz=30,slow=3.7,SNR=8.3	146.61	342	PKPbc	PKPbc	11 42 07.8	-0.2	
VYHS	Vyhne	146.61	339	ePKP	PKPbc	11 42 08.0	0.0	
TANN	Tannenbergstha	146.63	347	ePKPbc	PKPdf	11 42 06.2	+0.8	
UBBA	Unterbreizbach	146.69	350	ePKPbc	PKPbc	11 42 07.6	-0.4	
PSZ	Piszkesteto	146.73	337	ePKPbc	PKPbc	11 42 08.0	-0.5	
PSZ	Piszkesteto	146.73	337	⇑iP	PKPbc	11 42 08.9	+0.5	
PSZ	Piszkesteto	146.73	337	⇓e	PKPbc	11 42 08.6	+0.2	
ARR	Arges	146.74	330	⇑iP	PKPbc	11 42 09.7	+1.2	
NKC	Novy Kostel	146.80	347	iPKP	PKPbc	11 42 08.4	-0.1	
SMOL	Smolenice	147.06	340	ePKP	PKPbc	11 42 09.7	+0.5	
MEM	Membach	147.40	355	PKPbc	PKPbc	11 42 09.7	-0.3	
BUD	Budapest	147.41	338	⇓e	PKPbc	11 42 10.4	+0.3	
TNS	Taunus Mts	147.50	352	ePKPbc	PKPbc	11 42 10.4	0.0	
GRF	Grafenberg Arr	147.56	348	ePKPbc	PKPbc	11 42 10.7	+0.2	
KHC	Kasperske Hory	147.58	345	ePKPbc	PKPbc	11 42 10.4	-0.2	
KHC	Kasperske Hory	147.58	345	iPKPDF	PKPdf	11 42 06.8	-0.2	
KHC				⇑ePKP	PKPbc	11 42 10.5	-0.1	
KHC				ePKPAB	PKPab	11 42 14.9	+0.1	
SNF	Seneffe	147.62	357	PKPbc	PKPbc	11 42 10.4	-0.1	
WET	Wettzell	147.73	346	ePKPbc	PKPbc	11 42 10.4	-0.6	
GEC2	GERESS Array S	147.81	345	ePKPbc	PKPbc	11 42 10.8	-0.5	
GEC2	GERESS Array S	147.81	345	ePKPbc	PKPbc	11 42 10.7	-0.5	
GERES	GERESS Array B comp=Z,4.4nm,0.6s,baz=24,slow=3.3,SNR=63	147.81	345	PKPbc	PKPbc	11 42 11.0	-0.2	
DOU	Dourbes	148.01	356	PKPbc	PKPbc	11 42 11.3	-0.3	
CONA	Conrad Observa comp=Z,27nm,1.3s,SNR=17	148.06	342	iPKiKP	PKPbc	11 42 11.9	0.0	
SOP	Sopron	148.07	341	⇓e	PKPbc	11 42 12.3	+0.5	
WLF	Walferdange	148.32	354	PKPbc	PKPbc	11 42 12.9	+0.6	
WLF	Walferdange	148.32	354	ePKPbc	PKPbc	11 42 12.5	+0.1	
WLF	Walferdange	148.32	354	ePKPbc	PKPbc	11 42 12.5	+0.1	
PKSM	Moragy	148.63	337	⇑iP	PKPbc	11 42 13.2	0.0	
PKSM	Moragy	148.63	337	⇓e	PKPbc	11 42 13.0	-0.2	
STU	Stuttgart	148.81	350	ePKPbc	PKPbc	11 42 13.8	+0.2	
BEHE	Becsehely	149.06	339	⇓e	PKPdf	11 42 11.6	+2.2	
RJOB	Jochberg	149.07	345	ePKPbc	PKPbc	11 42 13.3	-1.1	
BFO	Black Forest	149.37	351	ePKPbc	PKPbc	11 42 14.5	-0.5	
BFO	Black Forest	149.37	351	ePKPbc	PKPbc	11 42 14.5	-0.5	
GROS	Grobnik	149.49	341	iPKPbc	PKPbc	11 42 14.2	-1.2	
KBA	Kobnbreinsper comp=Z,4.8nm,0.6s,SNR=5.6	149.54	344	⇓iPKPbc	PKPbc	11 42 14.4	-1.2	
WTTA	Wattenberg comp=Z,16nm,0.6s	149.78	346	⇑iPKPbc	PKPbc	11 42 15.5	-0.7	
ABTA	Abfaltersbach comp=Z,16nm,0.7s,SNR=11	150.06	345	⇑iPKPbc	PKPbc	11 42 15.4	-1.3	
FETA	Feichten comp=Z,20nm,1.1s	150.21	347	⇑iPKPbc	PKPbc	11 42 16.7	-0.5	
BOJS	Bojanci	150.42	340	iPKPdf	PKPdf	11 42 10.8	-0.8	
BOJS				iPKPbc	PKPbc	11 42 17.3	-0.2	
DAVOX	Davos/Dischmat comp=Z,10nm,0.6s,baz=315,slow=4.3,SNR=24	150.61	348	PKPbc	PKPbc	11 42 17.9	-0.3	
TRI	Trieste	150.69	342	ePKPbc	PKPbc	11 42 17.5	-0.6	
TUE	Stuetta	151.01	349	ePKPbc	PKPbc	11 42 18.9	-0.2	
ESDC	Sonseca Array comp=Z,0.2nm,0.4s,baz=334,slow=4.4,SNR=5.6	157.99	11	PKPab	PKPab	11 42 58.5	-0.7	
TORD	Torodi Ar. Bea comp=Z,0.8nm,0.7s,baz=152,slow=0.5,SNR=6.1	175.05	181	PKP	PKPdf	11 42 33.6	-2.0	

*IDC **12** 11:28:33.7±4.3,29.68N×142.74E,h0km,mb3.5/5, mb1 3.6/7,mb1mx3.4/26,mbtmp3.5/7,ML3.5/2,Error ellipse: s-maj=163.1km s-min=21.0km az=71.0*
*JMA **12** 11:28:41.4±0.4,30.33N×143.19E,h63km,M3.6*
ISC 12 11:28:37.0±1.4,29.96N±0.10×143.1E±0.2,h30km,n17, σ1°§43/25,mb3.9/5,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	5.03	339	P	Pn	11 29 51.0	+1.2
BSO1				eS	Sn	11 30 45.1	-1.5
BSO2	Boso 2	5.19	338	eS	Sn	11 30 50.3	-0.6
BSO4	Boso 4	5.55	336	eS	Sn	11 30 58.3	-1.8
JOD2	Odawara 2	6.29	328	P	Pn	11 30 09.4	+1.6
JOD2				eS	Sn	11 31 17.0	-1.7
JHU	Hanno	6.71	332	P	Pn	11 30 14.8	+1.3
JHU				eS	Sn	11 31 28.0	-0.9
JHO	Hitachi	6.97	343	P	Pn	11 30 19.0	+1.9
JHO				eS	Sn	11 31 33.6	-1.8
JRY	Ryogami san	7.01	331	P	Pn	11 30 19.0	+1.4
JRY				eS	Sn	11 31 35.1	-1.2
JAG	Ashikaga	7.15	335	P	Pn	11 30 20.8	+1.3
JAG				eS	Sn	11 31 37.5	-2.2
MJAR	Matsushiro Arr 0.9nm,0.3s,baz=158,slow=12,SNR=14	7.75	329	Pn	Pn	11 30 28.7	+0.9
MJAR				Sn	Sn	11 31 54.1	-0.5
MAT	Matsushiro 0.3nm,0.3s,baz=232,slow=28,SNR=4.0	7.75	329	P	Pn	11 30 29.1	+1.3
MAT				eS	Sn	11 31 53.9	-0.7
JMK	Ichinoseki	9.11	351	eS	Sn	11 32 26.0	-1.9
KSRS	Korea Array 0.1nm,0.3s,baz=111,slow=12,SNR=3.8	14.69	305	Pn	Pn	11 32 02.1	-0.5
SONM	Songino Array 0.3nm,0.6s,baz=111,slow=7.9,SNR=3.5	33.31	313	P	P	11 35 13.1	+1.0
MKAR	Makanchi Array 0.5nm,0.4s,baz=90,slow=9.6,SNR=4.2	49.34	308	P	P	11 37 23.1	-0.4
WRA	Warramunga Arr 0.6nm,0.5s,baz=10,slow=8.1,SNR=6.6	50.33	191	P	P	11 37 30.1	-1.0
ASAR	Alice Springs 0.1nm,0.5s,baz=12,slow=7.5,SNR=3.1	54.05	190	P	P	11 37 57.2	-1.5
BVAR	Borovoye Array 0.7nm,0.5s,baz=100,slow=6.8,SNR=5.8	56.53	316	P	P	11 38 17.6	+1.2

*ISCJB **12** 11:29:06.1±0.5,24.83N±0.03×122.50E±0.02,h7km±4km, Error ellipse: s-maj=5.7km s-min=2.6km az=7.8*
*JMA **12** 11:29:07.5±0.1,25.01N×122.79E,h0km,M3.0*
*TAP **12** 11:29:07.8,24.77N×122.32E,h6km,ML3.4,D*
ISC 12 11:29:05.3±1.2,24.83N±0.04×122.52E±0.02,h5km±10km, n37,σ0°85/68,2C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao baz=308	0.51	290	⇓iP	Pb	11 29 16.3	-0.4
TWB1				S	Sg	11 29 22.0	+0.2
YOJ	Yonaguni jima baz=308	0.58	129	P	Pb	11 29 19.2	+1.2
YOJ				eS	Sb	11 29 27.3	+0.7
TWC	Suao baz=248	0.65	250	⇑iP	Pg	11 29 17.5	-0.3
TWC				eS	Sg	11 29 26.4	+0.3
ILA	Ilan baz=268	0.70	265	eP	Pb	11 29 19.8	-0.2
ILA				eS	Sg	11 29 28.5	+0.6
NWF	Wu-fen Shan baz=301	0.71	290	iP	Pb	11 29 20.5	+0.3
NWF				eS	Sg	11 29 28.6	+0.4
TWE	Neicheng baz=264	0.78	262	⇑iP	Pg	11 29 20.2	-0.1
TWE				eS	Sg	11 29 30.5	+0.1
ENA	Nanau baz=236	0.81	240	eP	Pg	11 29 20.9	-0.1
ENA				eS	Sg	11 29 31.2	-0.3
ENTT	Nioudou baz=258	0.88	258	P	Pg	11 29 21.9	-0.4
ENTT				eS	Sg	11 29 34.0	+0.2
TWY	Chenhua baz=307	0.94	298	P	Pb	11 29 24.1	0.0
TWY				S	Sb	11 29 36.5	-0.4
TWS1	Kuangyinshan baz=291	1.03	285	eP	Pb	11 29 25.7	0.0
TWS1				eS	Sb	11 29 39.0	-0.5
NSK	Sanguang baz=263	1.06	262	P	Pg	11 29 25.4	-0.4
NSK				eS	Sg	11 29 38.7	-0.9
NNS	Nan Shan baz=248	1.11	250	eP	Pg	11 29 26.3	-0.4
NNS				eS	Sg	11 29 40.6	-0.5
TWD	Chiawan baz=223	1.12	228	eP	Pg	11 29 26.6	-0.3
TWD				eS	Sg	11 29 41.7	+0.2
IRIF	Iriomote-Funau	1.21	114	P	Pn	11 29 28.5	-0.4
IRIF				eS	Sb	11 29 43.3	-1.4
WHF	Hehuan Shan baz=236	1.33	239	iP	Pn	11 29 30.2	-0.8
WHF				eS	Sb	11 29 47.2	-1.3
TWT	Tachien baz=243	1.35	245	eP	Pn	11 29 31.2	+0.3
TWT				eS	Sb	11 29 49.0	+0.2
NSTT	Nanjuang baz=263	1.39	262	eP	Pg	11 29 32.4	+0.4
NSTT				eS	Sb	11 29 48.4	-1.4
HATJ	Hateruma jima	1.41	123	P	Pn	11 29 32.7	+1.1
HATJ				eS	Sn	11 29 50.2	-0.3
ESL	Shilin baz=220	1.42	224	eP	Pn	11 29 32.4	+0.7
ESL				eS	Sn	11 29 51.3	+0.6
JKRS	Kuro-shima	1.48	113	P	Pn	11 29 32.9	+0.2
JKRS				eS	Sn	11 29 51.8	-0.6
JIJ	Ishigaki jima	1.55	107	P	Pn	11 29 34.1	+0.5
JIJ				eS	Sn	11 29 52.9	-1.2
NSY	Sanyi baz=255	1.65	256	eP	Pg	11 29 38.2	+1.2
TWQ1	Liyutan baz=253	1.66	253	eP	Pg	11 29 37.5	+0.4
EHY	Hungye baz=215	1.71	220	eP	Pn	11 29 35.3	-0.5
EHY				eS	Sn	11 29 58.6	+0.6
SMLT	Sun Moon Lake baz=235	1.75	238	eP	Pb	11 29 38.4	+0.4
TYC	Yuchr baz=236	1.77	239	eP	Pb	11 29 38.8	+0.5
TYC				eS	Sb	11 30 00.6	-0.2
TWF1	Yuli baz=213	1.85	217	eP	Pb	11 29 39.5	-0.1
TWF1				eS	Sn	11 30 02.1	+0.7
CHKT	Chengkung baz=207	2.02	212	eP	Pn	11 29 40.0	0.0
CHKT				eS	Sn	11 30 03.6	-2.0
CHN5	Tsauling baz=232	2.08	234	eP	Pb	11 29 43.4	-0.2
ELDTW	Lidau baz=216	2.13	220	eP	Pn	11 29 42.9	+1.2
ELDTW				eS	Sn	11 30 08.8	+0.1
CHN4	Tsaushan baz=228	2.29	230	eP	Pb	11 29 46.2	-1.0
CHN4				eS	Sn	11 30 13.7	+1.3
WTP	Ta-pu baz=225	2.35	228	eP	Pb	11 29 47.6	-0.6
WTP				eS	Sn	11 30 15.1	+1.2
TWG	Pinlang baz=210	2.40	214	eP	Pn	11 29 47.1	+1.8
TWG				eS	Sn	11 30 14.4	-0.7
TWK	Hsinying baz=227	2.42	230	eP	Pb	11 29 49.3	-0.2
CHN1	Nanshi baz=226	2.45	228	eP	Pb	11 29 49.2	-0.7
CHN1				eS	Sn	11 30 18.1	+1.9
SSD	Sandimen baz=217	2.70	220	eP	Pn	11 29 51.8	+2.4
SSD				eS	Sn	11 30 21.5	-1.0
EAST	Anshuo baz=209	2.88	212	eP	Pb	11 29 55.6	-1.6

*CSEM **12** 11:40:06.3,42.53N×13.39E,h10km,MD1.6/3,After ROM*
ROM 12 11:40:06.3±0.2,42.53N×13.39E,h10km±1km,Md1.6/3, Ml1.3/2,Error ellipse: s-maj=4.0km s-min=1.4km az=156.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	Campotosto	0.02	55	Pg	Pg	11 40 08.6	+0.3
CAMP	45nm,0.3s			Sg	Sg	11 40 09.8	+0.2
CAMP	Campotosto	0.02	55	Pg	Pg	11 40 08.6	+0.3
CAMP	45nm,0.3s			Sg	Sg	11 40 09.8	+0.2
TERO	Teramo	0.18	58	Pg	Pg	11 40 11.0	+0.7
TERO	33nm,0.3s			Sg	Sg	11 40 14.1	+1.0
TERO	Teramo	0.18	58	Pg	Pg	11 40 11.0	+0.7
TERO	33nm,0.3s			Sg	Sg	11 40 14.1	+1.0
LNSS	Leonessa	0.27	287	Pg	Pg	11 40 12.6	+0.7
LNSS				Sg	Sg	11 40 16.8	+1.1
LNSS	Leonessa	0.27	287	Pg	Pg	11 40 12.6	+0.7
LNSS				Sg	Sg	11 40 16.8	+1.1
NRCA	Norcia	0.37	327	Pg	Pg	11 40 14.2	+0.4
NRCA	43nm,0.1s			Sg	Sb	11 40 20.2	-0.8
NRCA	Norcia	0.37	327	Pg	Pg	11 40 14.2	+0.4
NRCA	43nm,0.1s			Sg	Sb	11 40 20.2	-0.8

MAN 12 11:52:58,11.83N×121.66E,h43km,mb4.0,ML2.8,MS2.5, 1C,Panay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OTRP	Odiongan	0.64	34	eP	Pn	11 53 12.1	+1.3
OTRP				eS	Sn	11 53 22.6	+2.7
RCP	Roxas	1.10	104	⇑eP	Pn	11 53 17.7	+0.8
RCP				eS	Sn	11 53 32.4	+1.4
CUYO	Cuyo Island	1.15	213	eP	Pn	11 53 18.6	+0.9
GUIM	Jordan	1.50	142	eP	Pn	11 53 23.0	+0.5

*CSEM **12** 11:53:44.1,35.13N×23.45E,h52km±8km,MD3.0/5,Crete*
ATH 12 11:53:44.1,35.13N×23.45E,h52km±8km,MD3.0/5,Crete

| Code | Station Name | Δ° | AZ° | Phase | ID |

IDI	Anoyia	1.19	82	eP	Pn	11 54 05.9 +1.4
IDI	Anoyia	1.19	82	eP	Pn	11 54 05.9 +1.4
KYTH	Kithira	1.20	344	eP	Pn	11 54 05.8 +1.2
KYTH	Kithira	1.20	344	eP	Pn	11 54 05.8 +1.2
VLI	Veliai	1.64	345	eP	Pn	11 54 11.8 +1.3
VLI	Veliai	1.64	345	eP	Pn	11 54 11.8 +1.3
DID	Didima	2.38	356	eP	Pn	11 54 21.7 +1.0
DID	Didima	2.38	356	eP	Pn	11 54 21.7 +1.0
APE	Apeiranthos	2.57	40	eP	Pn	11 54 23.7 +0.4
APE	Apeiranthos	2.57	40	eP	Pn	11 54 23.7 +0.4
KARP	Karpathos	3.06	81	eP	Pn	11 54 32.2 +2.1
KARP	Karpathos	3.06	81	eP	Pn	11 54 32.2 +2.1

IDC ***12*** *12:05:12.4±2.2,6.67S×131.05E,h0km,mb4.2/1, mb1 4.2/4,mb1mx3.7/19,mbtmp4.1/4,ML4.1/3,Error ellipse: s-maj=103.2km s-min=27.5km az=79.0*

ISCJB ***12*** *12:05:22.8±1.9,7.05S±0.1×131.18E±0.10,h62km,mb4.1/1, Error ellipse: s-maj=16.8km s-min=13.8km az=165.5*

AUST ***12*** *12:05:37.3±1.1,7.90S×131.07E,h175km,Error ellipse: s-maj=1.9km s-min=1.0km az=27.0*

ISC 12 12:05:20.0±1.2,6.89S±0.09×131.1E±0.1,h62km,n12, σ2ş65/13,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDU	**Kakadu**	**5.91**	**167**	P	Pn	12 06 49.6	+4.7
	baz=5.0,SNR=59						
KDU				S	**Sn**	**12 07 54.9**	**+3.5**
	baz=5.0,SNR=7.5						
MTN	**Manton Dam**	**5.92**	**180**	P	Pn	12 06 49.4	+4.3
	baz=4.9,SNR=68						
MTN				S	**Sn**	**12 07 53.7**	**+2.1**
	baz=4.9,SNR=12						
WSI	**Waingapu**	**11.07**	**255**	P	Pn	12 08 06.8	+11
	baz=11,SNR=3.2						
FITZ	**Fitzroy Crossi**	**12.37**	**205**	Pn	Pn	12 08 11.1	-2.2
	1.1nm,0.3s,baz=29,slow=11,SNR=72						
FITZ	**Fitzroy Crossi**	**12.37**	**205**	P	**Pn**	**12 08 12.6**	**-0.7**
	baz=12,SNR=12						
WRA	**Warramunga Arr**	**13.34**	**167**	Pn	**Pn**	**12 08 26.5**	**-0.1**
	0.7nm,0.3s,baz=352,slow=13,SNR=34						
WRA				Sn	**Sn**	**12 10 50.0**	**-3.4**
	2.0nm,0.3s,baz=338,slow=22,SNR=10						
COEN	**Coen**	**13.76**	**122**	P	**P**	**12 08 37.9**	**-0.9**
	baz=13,SNR=15						
COEN				S	**Sn**	**12 11 04.7**	**+1.1**
	baz=13,SNR=5.7						
QIS	**Mount Isa**	**15.87**	**150**	P	**P**	**12 09 03.7**	**+1.4**
	baz=15,SNR=5.1						
ASAR	**Alice Springs**	**16.89**	**171**	Pn	**P**	**12 09 14.6**	**+1.0**
	0.7nm,0.3s,baz=352,slow=13,SNR=37						
ASAR				Sn	**Sn**	**12 12 13.7**	**-5.8**
	0.4nm,0.3s,baz=351,slow=27,SNR=6.9						
MEEK	**Meekatharra**	**22.97**	**210**	P	**P**	**12 10 21.1**	**+1.6**
	baz=22,SNR=3.2						
MKAR	**Makanchi Array**	**68.76**	**326**	P	**P**	**12 16 17.0**	**-0.5**
	1.1nm,0.4s,baz=120,slow=8.2,SNR=17						
TORD	**Torodi Ar. Bea**	**129.89**	**281**	PKP	**PKPdf**	**12 24 23.9**	**+0.3**
	0.2nm,0.5s,baz=104,slow=1.4,SNR=2.7						

NIED ***12*** *12:13:00,42.30N×143.10E,h53km,Mw3.8 Best double couple: M0 4.76000×10^14 NP1:φs33.00000°,δ63.00000°, λ83.00000°. NP2:φs228.00000°,δ28.00000°,λ103.00000°.*

ISCJB ***12*** *12:13:14.8±0.5,42.23N±0.05×143.06E±0.06,h70km±3km, mb3.7/13,Error ellipse: s-maj=8.4km s-min=6.0km az=147.3*

MOS ***12*** *12:13:15.3±1.3,42.29N×143.00E,h74km,mb4.1/10,Error ellipse: s-maj=17.6km s-min=11.7km az=86.2*

JMA ***12*** *12:13:16.8±0.1,42.31N×143.06E,h51km±1km,M3.7 Broadband fault plane solution: P waves. NP1: φs188.00000°,δ86.00000°,λ-87.00000°. NP2: φs331.00000°,δ5.00000°,λ-127.00000°. Principal axes: T Plg41.0000°, Azm275.0000°; N Plg3.0000°, Azm8.0000°; P Plg49.0000°, Azm101.0000°;*

JMA Felt I J1.

IDC ***12*** *12:13:17.5±2.0,42.23N×143.03E,h77km±14km,mb3.4/11, mb1 3.5/13,mb1mx3.3/28,mbtmp3.4/13 Error ellipse: s-maj=22.2km s-min=13.7km az=104.0*

ISC 12 12:13:16.0±0.8,42.25N±0.06×143.07E±0.05,h61km±6km, n35,σ1ş15/44,mb3.9/13,4C-4D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.24**	**278**	⇓P	**Pn**	**12 13 25.3**	**-0.4**
JNBK				*e*S	**Sn**	**12 13 32.2**	**-0.5**
JEM	**Erimo**	**0.24**	**164**	⇑P	**Pn**	**12 13 26.3**	**+0.6**
JEM				*e*S	**Sn**	**12 13 33.3**	**+0.6**
JCH	**Churui**	**0.43**	**31**	⇑P	**Pn**	**12 13 26.8**	**-0.5**
JCH				*e*S	**Sn**	**12 13 34.7**	**-0.7**
JBT2	**Biratori 2**	**0.74**	**316**	⇓P	**Pn**	**12 13 30.6**	**-0.2**
JBT2				*e*S	**Sn**	**12 13 41.5**	**-0.2**
JOB	**Onbets**	**0.87**	**41**	⇑P	**Pn**	**12 13 33.0**	**+0.7**
JOB				*e*S	**Sn**	**12 13 45.4**	**+1.1**
JFR	**Furan**	**0.98**	**339**	P	**Pn**	**12 13 32.6**	**-1.2**
JAR	**Ashorobuto**	**1.17**	**26**	⇑P	**Pn**	**12 13 35.9**	**-0.4**
JAR				*e*S	**Sn**	**12 13 50.4**	**-1.0**
JEW	**Eniwo**	**1.33**	**297**	⇓P	**Pn**	**12 13 39.0**	**+0.5**
JEW				*e*S	**Sn**	**12 13 56.4**	**+1.1**
JAB	**Ashibetsu**	**1.40**	**334**	P	**Pn**	**12 13 40.0**	**+0.6**
JAK	**Akkeshi**	**1.42**	**58**	P	**Pn**	**12 13 39.5**	**0.0**
ASAJ	**Asahikawa**	**1.90**	**350**	P	**Pn**	**12 13 46.8**	**+0.7**
	41nm,0.3s,baz=203,slow=12,SNR=372						
ASAJ				S	**Sn**	**12 14 12.1**	**+3.1**
	22nm,0.3s,baz=18,slow=20,SNR=8.5						
YUK	**Yuzh-Kuril'sk**	**2.71**	**48**	*d i* PN	**Pn**	**12 13 58.3**	**+1.2**
YUK				*i* S	**Sn**	**12 14 30.2**	**+1.4**
YUK				pmax	pmax		
	comp=N,24nm,0.2s						
YUK				pmax	pmax		
	comp=E,21nm,0.2s						
YUK				pmax	pmax		
	comp=Z,68nm,0.2s						
YUK				smax	smax		
	comp=E,99nm,0.3s						
YUK				smax	smax		
	comp=N,174nm,0.6s						
MJAR	**Matsushiro Arr**	**6.83**	**215**	P	**Pn**	**12 14 54.5**	**+1.0**
	comp=N,0.4nm,0.3s,baz=31,slow=12,SNR=7.1						
KSRS	**Korea Array**	**12.58**	**253**	P	**Pn**	**12 16 13.9**	**+1.8**
	comp=N,0.2nm,0.3s,baz=72,slow=13,SNR=4.3						
SONM	**Songino Array**	**26.33**	**295**	P	**P**	**12 18 46.1**	**-0.1**
	comp=N,0.9nm,0.7s,baz=86,slow=10,SNR=6.8						
ZALV	**Zalesovo Beam**	**39.53**	**308**	P	**P**	**12 20 40.6**	**0.0**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**39.53**	**308**	P	**P**	**12 20 40.6**	**0.0**
	comp=Z,1.2nm,0.5s,baz=88,slow=7.3,SNR=10						
MKAR	**Makanchi Array**	**42.63**	**298**	P	**P**	**12 21 06.1**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**42.63**	**298**	P	**P**	**12 21 06.1**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=84,slow=8.8,SNR=10						
ILAR	**Eielson Array**	**44.45**	**35**	P	**P**	**12 21 20.9**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=267,slow=7.2,SNR=6.2						
BVAR	**Borovoye Array**	**48.14**	**309**	P	**P**	**12 21 49.4**	**-0.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**48.14**	**309**	P	**P**	**12 21 49.4**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=81,slow=10.0,SNR=5.4						
AKTO	**Aktyubinsk**	**56.23**	**310**	P	**P**	**12 22 49.2**	**-0.5**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO	**Aktyubinsk**	**56.23**	**310**	P	**P**	**12 22 49.2**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=80,slow=6.5,SNR=3.4						
YKA	**Yellowknife Ar**	**58.69**	**32**	P	**P**	**12 23 07.1**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=303,slow=6.8,SNR=3.3						
KEV	**Kevo**	**59.04**	**339**	*e*P	**P**	**12 23 08.1**	**-1.0**
KEV	**Kevo**	**59.04**	**339**	*e*p	**P**	**12 23 08.1**	**-1.0**
	comp=Z,0.3nm,0.3s						
ARCES	**ARCESS Array B**	**59.59**	**339**	P	**P**	**12 23 12.2**	**-0.7**
	comp=Z,2.3nm,0.8s,baz=21,slow=7.7,SNR=3.1						
JOF	**Joensuu**	**61.99**	**331**	*e*P	**P**	**12 23 28.0**	**-1.3**
JOF	**Joensuu**	**61.99**	**331**	*e*p	**P**	**12 23 28.0**	**-1.3**
	comp=Z,0.4nm,0.3s						
WRA	**Warramunga Arr**	**62.40**	**189**	P	**P**	**12 23 32.1**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=5.0,slow=7.3,SNR=3.2						
KAF	**Kangasniemi**	**64.28**	**332**	*e*P	**P**	**12 23 41.4**	**-3.0**
KAF	**Kangasniemi**	**64.28**	**332**	*e*p	**P**	**12 23 41.4**	**-3.0**
FINES	**FINESS Array B**	**64.82**	**332**	P	**P**	**12 23 47.4**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=50,slow=7.5,SNR=27						
NOA	**NORSAR Array B**	**69.88**	**337**	P	**P**	**12 24 18.9**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=34,slow=6.5,SNR=3.4						

IDC 12 12:23:07.7±1.4,4.56N×82.37W,h0km,mb3.6/6, mb1 3.8/6,mb1mx3.7/23,mbtmp3.6/6,MS3.1/2,Ms1 3.2/2, ms1mx2.8/29,Error ellipse: s-maj=74.7km s-min=22.2km az=48.0,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	**JuntasAbangare**	**6.25**	**336**	P	Pn	12 24 38.2	-3.1
	14nm,0.3s,baz=100,slow=20,SNR=91						
JTS				Sn	Sn	12 25 50.0	-3.5
	0.9nm,0.3s,baz=0.0,slow=20,SNR=2.4						
ROSC	**El Rosal**	**8.02**	**88**	LR	LR	12 28 25.0	
	comp=Z,80nm,18.6s,baz=14,slow=40						
LPAZ	**La Paz**	**25.05**	**146**	P	P	12 28 34.2	-0.5
	1.2nm,0.9s,baz=324,slow=7.4,SNR=4.3						
LPAZ				LR	LR	12 37 51.8	
	comp=Z,62nm,20.7s,baz=149,slow=35						
TXAR	**Lajitas Array**	**31.85**	**323**	P	P	12 29 34.1	-0.7
	0.2nm,0.7s,baz=134,slow=9.2,SNR=2.9						
ANMO	**Albuquerque**	**37.57**	**327**	P	P	12 30 24.4	+0.1
	2.2nm,0.9s,baz=160,slow=8.8,SNR=8.9						
NVAR	**Mina Array Bea**	**46.94**	**321**	P	P	12 31 41.7	+1.0
	0.4nm,0.8s,baz=134,slow=7.7,SNR=3.2						
YKA	**Yellowknife Ar**	**62.52**	**344**	P	P	12 33 32.1	-0.9
	0.5nm,0.8s,baz=140,slow=6.4,SNR=14						
TORD	**Torodi Ar. Bea**	**83.21**	**77**	P	P	12 35 37.4	+0.6
	0.4nm,1.0s,baz=272,slow=5.0,SNR=2.2						
ASAR	**Alice Springs**	**140.21**	**238**	PKhKP	PKPpre	12 42 19.0	
	0.4nm,1.1s,baz=113,slow=2.4,SNR=3.1						
WRA	**Warramunga Arr**	**141.13**	**244**	PKhKP	PKPpre	12 42 33.6	
	0.1nm,0.3s,baz=107,slow=2.6,SNR=4.6						

IDC ***12*** *12:23:17.1±1.3,39.34N×73.78E,h0km,mb3.5/5, mb1 3.6/8,mb1mx3.4/30,mbtmp3.5/8,ML3.3/3,Error ellipse: s-maj=33.8km s-min=17.8km az=99.0*

NNC ***12*** *12:23:22.5±3.4,39.60N×73.74E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=30.0km s-min=17.4km az=11.0*

ISC 12 12:23:21.1±1.2,39.49N±0.09×74.1E±0.1,h28km,n12, σ1ş85/13,mb3.5/5,7C-1D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**3.16**	**5**	Pn	**Pb**	**12 24 13.5**	**-3.1**
	3.1nm,0.3s,baz=190,slow=13,SNR=32						
AAK				Sn	**Sb**	**12 24 56.7**	**+2.0**
	6.8nm,0.3s,baz=320,slow=17,SNR=12						
TKM2	**Tokmak 2**	**3.62**	**18**	⇑Pn	Pb	12 24 20.4	-4.0
	7.0nm,0.6s						
TKM2				⇓Lg	Lg	12 25 15.2	
	17nm,0.6s						
KK31	**Karatay Array**	**4.51**	**324**	Pn	**Pn**	**12 24 28.4**	**+0.9**
	1.2nm,0.3s,baz=130,slow=12,SNR=27						
KK31				⇑Pg	**Pb**	**12 24 39.1**	**-0.4**
	1.4nm,0.3s,baz=140,slow=16,SNR=16						
KK31				⇑Sn	**Sn**	**12 25 21.2**	**+2.1**
	3.2nm,0.4s,baz=140,slow=25,SNR=4.5						
KK31				⇑Lg	Lg	12 25 35.3	
	9.9nm,0.5s,baz=142,slow=28,SNR=7.7						
MK31	**Makanchi Array**	**9.44**	**37**	⇑Pn	Pn	12 25 31.6	-3.6
	0.5nm,0.2s,baz=189,slow=16,SNR=25						
MK31				⇑Sn	Px	12 25 59.2	
	0.1nm,0.2s,baz=184,slow=26,SNR=10						
BVAR	**Borovoye Array**	**13.78**	**351**	Pn	**Pn**	**12 26 33.6**	**-0.8**
	0.2nm,0.3s,baz=164,slow=13,SNR=6.1						
AB31	**Yebulak array**	**14.03**	**319**	⇑P	**Pn**	**12 26 35.3**	**-2.7**
	0.4nm,0.5s,baz=127,slow=13,SNR=6.0						
ZALV	**Zalesovo Beam**	**16.20**	**23**	Pn	**P**	**12 27 09.6**	**+0.1**
	0.1nm,0.3s,baz=211,slow=11,SNR=4.7						
FINES	**FINESS Array B**	**36.47**	**323**	P	**P**	**12 30 23.7**	**+0.5**
	0.6nm,0.9s,baz=108,slow=8.9,SNR=4.1						
ARCES	**ARCESS Array B**	**39.38**	**335**	P	**P**	**12 30 47.9**	**+0.1**
	4.5nm,1.1s,baz=104,slow=10,SNR=4.0						
TORD	**Torodi Ar. Bea**	**68.21**	**269**	P	**P**	**12 34 17.7**	**-1.6**
	0.2nm,0.5s,baz=61,slow=5.0,SNR=4.5						
YKA	**Yellowknife Ar**	**78.13**	**4**	P	**P**	**12 35 18.1**	**+1.0**
	0.1nm,0.7s,baz=343,slow=5.8,SNR=3.5						
WRA	**Warramunga Arr**	**81.57**	**124**	P	**P**	**12 35 38.1**	**+1.8**
	0.4nm,0.8s,baz=314,slow=3.8,SNR=4.7						

ISCJB ***12*** *12:25:13.7±0.6,36.95N±0.03×28.21E±0.03,h3km±5km, Error ellipse: s-maj=4.8km s-min=3.9km az=42.1*

ISK ***12*** *12:25:13.8,36.98N×28.21E,h14km,MD2.9*

DDA ***12*** *12:25:13.9,36.97N×28.18E,h7km,MD2.9*

CSEM ***12*** *12:25:13.9±0.2,36.97N×28.22E,h2km,MD2.9,Error ellipse: s-maj=4.9km s-min=3.7km az=36.0*

ATH ***12*** *12:25:14.4,36.98N×28.13E,h16km±5km,MD3.3/6*

ISC 12 12:25:14.0±1.1,36.97N±0.02×28.26E±0.02,h3km±10km, n47,σ1ş01/62,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.17**	**6**	PG	**Pg**	**12 25 18.3**	**+1.0**
YER				*e*SG	**Sg**	**12 25 21.1**	**+1.6**
YER	**Yerkesik**	**0.17**	**6**	*i* Pg	**Pg**	**12 25 18.3**	**+1.0**
YER				*e*Sg	**Sg**	**12 25 21.1**	**+1.6**
TURN	**Turunc**	**0.29**	**109**	*i* P	**Pg**	**12 25 18.2**	**-1.4**
TURN				*i* S	**Sg**	**12 25 21.4**	**-2.0**
TURN	**Turunc**	**0.29**	**109**	*i* P	**Pg**	**12 25 18.2**	**-1.4**
TURN				*i* S	**Sg**	**12 25 21.4**	**-2.0**
DALT	**Dalyan (Mudla)**	**0.36**	**123**	PG	**Pg**	**12 25 22.1**	**+1.1**
DALT				*e*SG	**Sb**	**12 25 28.6**	**-0.6**
DALT	**Dalyan (Mudla)**	**0.36**	**123**	*i* Pg	**Pg**	**12 25 22.1**	**+1.1**
DALT				*e*Sg	**Sb**	**12 25 28.6**	**-0.6**
MLSB	**Milas**	**0.51**	**310**	*e*PG	**Pg**	**12 25 23.6**	**-0.1**
MLSB				*e*SG	**Sg**	**12 25 30.9**	**+0.6**
MLSB	**Milas**	**0.51**	**310**	*e*Pg	**Pg**	**12 25 23.6**	**-0.1**
MLSB				*e*Sg	**Sg**	**12 25 30.9**	**+0.6**
FETY	**Fethiye**	**0.74**	**117**	*e*PG	**Pb**	**12 25 29.2**	**-0.4**
FETY	**Fethiye**	**0.74**	**117**	*e*Pg	**Pb**	**12 25 29.2**	**-0.3**
AYDN	**Tasoluk**	**0.75**	**336**	*i* P	**Pg**	**12 25 28.7**	**+0.2**
AYDN				*i* S	**Sg**	**12 25 38.6**	**+0.3**
AYDN	**Tasoluk**	**0.75**	**336**	*i* P	**Pg**	**12 25 28.7**	**+0.2**
AYDN				*i* S	**Sg**	**12 25 38.6**	**+0.3**
ARG	**Arkhangelos**	**0.76**	**188**	*e*PN	**Pg**	**12 25 28.8**	**+0.2**
ARG	**Arkhangelos**	**0.76**	**188**	*e*Pn	**Pg**	**12 25 28.8**	**+0.2**
BODT	**Bodrum**	**0.77**	**277**	*e*PG	**Pg**	**12 25 28.3**	**-0.4**
BODT	**Bodrum**	**0.77**	**277**	*e*Pg	**Pg**	**12 25 28.3**	**-0.4**
DNZL	**Cakiroluk**	**0.95**	**41**	*i* P	**Pb**	**12 25 33.2**	**-0.1**
DNZL				*i* S	**Sn**	**12 25 47.8**	**-0.8**
DNZL	**Cakiroluk**	**0.95**	**41**	*i* P	**Pb**	**12 25 33.2**	**-0.1**
DNZL				*i* S	**Sn**	**12 25 47.8**	**-0.8**
DENT	**Denizli**	**1.00**	**38**	*e*PG	**Pb**	**12 25 33.6**	**-0.3**
DENT	**Denizli**	**1.00**	**38**	*e*Pg	**Pb**	**12 25 33.6**	**-0.3**
GLHS	**Glhisar (BURDU**	**1.01**	**79**	*e*PG	**Pb**	**12 25 34.4**	**+0.2**
GLHS	**Glhisar (BURDU**	**1.01**	**79**	*e*Pg	**Pb**	**12 25 34.4**	**+0.2**
GOLH	**Golhisar**	**1.07**	**75**	*i* P	Pn	12 25 39.0	+2.9
GOLH				*i* S	**Sn**	**12 25 55.7**	**+4.2**
GOLH	**Golhisar**	**1.07**	**75**	*i* P	Pn	12 25 39.0	+2.9
GCAM	**G?zelcaml?**	**1.10**	**312**	*i* P	**Pg**	**12 25 34.6**	**-0.4**
GCAM				*i* S	**Sb**	**12 25 49.3**	**-1.0**
GCAM	**G?zelcaml?**	**1.10**	**312**	*i* P	**Pg**	**12 25 34.6**	**-0.4**
GCAM				*i* S	**Sb**	**12 25 49.3**	**-1.0**
ELL	**Elmali**	**1.34**	**99**	*e*PN	**Pn**	**12 25 39.3**	**-0.4**
ELL	**Elmali**	**1.34**	**99**	*e*Pn	**Pn**	**12 25 39.3**	**-0.4**
KSL	**Kastellorizon**	**1.34**	**127**	*e*PN	**Pg**	**12 25 41.4**	**+1.6**
KULA	**Kula-Manisa**	**1.57**	**11**	*e*PN	**Pn**	**12 25 41.9**	**-1.0**
KULA	**Kula-Manisa**	**1.57**	**11**	*e*Pn	**Pn**	**12 25 41.9**	**-1.0**
IZM	**Izmir**	**1.63**	**331**	*e*PN	**Pn**	**12 25 42.6**	**-1.1**
IZM	**Izmir**	**1.63**	**331**	*e*Pn	**Pn**	**12 25 42.6**	**-1.1**
KARP	**Karpathos**	**1.67**	**212**	*e*PN	**Pn**	**12 25 43.9**	**-0.3**
KARP				*e*SN	**Sb**	**12 26 06.3**	**-0.7**
KHL	**Karahalli**	**1.68**	**36**	*e*PN	**Pn**	**12 25 43.7**	**-0.7**
KHL	**Karahalli**	**1.68**	**36**	*e*Pn	**Pn**	**12 25 43.7**	**-0.7**
KHAL	**Karahalli**	**1.71**	**35**	*i* P	**Pg**	**12 25 46.9**	**+0.2**
KHAL				*i* S	**Sb**	**12 26 08.4**	**+0.4**
BLCB	**Balcova**	**1.71**	**326**	*e*PN	**Pn**	**12 25 43.7**	**-1.0**
BLCB	**Balcova**	**1.71**	**326**	*e*Pn	**Pn**	**12 25 43.7**	**-1.0**
BCK	**Bucak**	**1.92**	**75**	*e*Pn	**Pn**	**12 25 47.7**	**0.0**
BCK	**Bucak**	**1.92**	**75**	*e*Pn	**Pn**	**12 25 47.7**	**0.0**
CHOS	**Chios island**	**2.25**	**310**	*e*PN	**Pn**	**12 25 52.0**	**-0.2**
CHOS	**Chios island**	**2.25**	**310**	*e*Pn	**Pn**	**12 25 52.0**	**-0.2**
ZKR	**Zakros**	**2.48**	**222**	*e*PN	**Pn**	**12 25 56.2**	**+0.9**
ZKR	**Zakros**	**2.48**	**222**	*e*Pn	**Pn**	**12 25 56.3**	**+0.9**
LAST	**Lasithi**	**2.89**	**232**	*e*PB	**Pn**	**12 26 01.6**	**+0.7**
LAST	**Lasithi**	**2.89**	**232**	*e*Pb	**Pn**	**12 26 01.6**	**+0.7**

ISCJB ***12*** *12:37:10.0±2.2,56.16S±0.07×27.2W±0.1,h93km±20km, mb4.8/32,Error ellipse: s-maj=12.4km s-min=8.8km az=40.6*

BJI ***12*** *12:37:12.4,56.20S×27.10W,h119km,mB5.0/6*

IDC ***12*** *12:37:13.8±2.2,56.19S×27.17W,h112km±19km,mb4.6/21, mb1 4.6/23,mb1mx4.5/28,mbtmp4.6/23,Error ellipse: s-maj=12.6km s-min=10.2km az=56.0*

NEIC ***12*** *12:37:14.6±1.4,56.20S×27.19W,h122km±12km,mb4.9/23, Error ellipse: s-maj=6.9km s-min=5.3km az=222.0*

ISC 12 12:37:14.4±1.0,56.24S±0.07×27.34W±0.07,h119km±7km, n153,σ1ş05/196,mb4.8/32,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**16.65**	**158**	*e*P	**Pn**	**12 40 57.3**	**-3.0**
VNA1	**Neumayer--Stat**	**16.65**	**158**	*e*ScP	**ScP**	**12 49 05.8**	**+0.3**
VNA1	**Neumayer--Stat**	**16.65**	**158**	*e*SKiKP	SKiKP	12 56 40.4	-14
VNA3	**Neumayer Olymp**	**16.84**	**160**	*e*P	**Pn**	**12 41 02.0**	**-0.7**
VNA3	**Neumayer Olymp**	**16.84**	**160**	*e*South	P	12 41 11.7	+8.9
VNA3	**Neumayer Olymp**	**16.84**	**160**	*e*ScP	**ScP**	**12 49 06.9**	**+0.9**
VNA3	**Neumayer Olymp**	**16.84**	**160**	*e*SKiKP	SKiKP	12 56 37.5	-17
VNA2	**Neumayer--Watz**	**17.05**	**158**	*e*P	**Pn**	**12 41 05.2**	**0.0**
VNA2	**Neumayer--Watz**	**17.05**	**158**	*e*South	P	12 41 12.0	+6.9
VNA2	**Neumayer--Watz**	**17.05**	**158**	*e*pP	pP	12 41 26.1	-0.3
VNA2	**Neumayer--Watz**	**17.05**	**158**	*e*PcP	**PcP**	**12 45 44.3**	**+1.5**
VNA2	**Neumayer--Watz**	**17.05**	**158**	*e*ScP	**ScP**	**12 49 07.6**	**+1.2**
VNA2	**Neumayer--Watz**	**17.05**	**158**	*e*SKiKP	SKiKP	12 56 43.1	-11
EFI	**East Falkland**	**18.56**	**271**	*e*P	**P**	**12 41 22.2**	**+0.5**
	114nm,1.0s						
SNAA	**Sanae**	**18.61**	**156**	*e*P	**P**	**12 41 21.3**	**-0.9**
SNAA	**Sanae**	**18.61**	**156**	*e*PcP	**PcP**	**12 45 46.2**	**+0.7**
SNAA	**Sanae**	**18.61**	**156**	*e*ScP	**ScP**	**12 49 10.6**	**+0.9**
SNAA	**Sanae**	**18.61**	**156**	*e*P	**P**	**12 41 21.0**	**-1.2**
	77nm,1.3s						
SNAA	**Sanae**	**18.61**	**156**	P	**P**	**12 41 21.5**	**-0.6**
	1.4nm,0.3s,baz=305,slow=9.9,SNR=160						
PMSA	**Palmer Station**	**19.71**	**229**	*e*P	**Pn**	**12 41 37.0**	**+0.2**
	91nm,0.6s						
PMSA	**Palmer Station**	**19.71**	**229**	P	**Pn**	**12 41 36.7**	**0.0**
	11nm,0.3s,baz=53,slow=7.3,SNR=33						
USHA	**Ushuaia**	**23.06**	**256**	P	**P**	**12 42 09.2**	**0.0**
USHA	**Ushuaia**	**23.06**	**256**	P	**P**	**12 42 09.2**	**0.0**
	10nm,0.6s,baz=71,slow=10.0,SNR=8.0						
TRQA	**Tornquist**	**29.32**	**294**	*e*P	**P**	**12 43 05.2**	**-0.4**
	1.5nm,0.6s						
TRQA				*e*PcP	**PcP**	**12 46 09.1**	**0.0**
TRQA				*e*ScP	**ScP**	**12 49 40.5**	**+1.1**
PLCA	**Paso Flores**	**31.95**	**281**	P	**P**	**12 43 27.8**	**-1.1**
PLCA				PcP	**PcP**	**12 46 15.9**	**-0.1**
PLCA	**Paso Flores**	**31.95**	**281**	P	**P**	**12 43 27.8**	**-1.1**
	0.6nm,0.4s,baz=137,slow=5.7,SNR=4.0						
PLCA				PcP	**PcP**	**12 46 15.9**	**-0.1**
	3.2nm,0.7s,baz=103,slow=4.9,SNR=9.5						
QSPA	**South Pole Qui**	**34.01**	**180**	*e*P	**P**	**12 43 47.1**	**+0.5**
	38nm,0.7s						
QSPA				PcP	**PcP**	**12 46 21.1**	**-0.3**
QSPA				ScP	**ScP**	**12 49 56.2**	**+1.2**
QSPA	**South Pole Qui**	**34.01**	**180**	P	**P**	**12 43 47.3**	**+0.8**
	40nm,0.6s,baz=200,slow=3.6,SNR=340						
QSPA				PcP	**PcP**	**12 46 21.1**	**-0.3**
	8.5nm,0.5s,baz=217,slow=1.2,SNR=6.2						
QSPA				ScP	**ScP**	**12 49 56.2**	**+1.2**
	22nm,1.4s,baz=228,slow=0.5,SNR=8.3						
CPUP	**Villa Florida**	**36.87**	**312**	P	**P**	**12 44 10.8**	**-0.3**
CPUP				PcP	**PcP**

AS31	**Alice Springs**	**98.84**	**163**	*e*P	Pdif	12 50 42.4	+1.5
WRA	**Warramunga Arr**	**102.55**	**162**	P	**Pdif**	**12 50 57.0**	**-0.5**
WRA				PP	**PP**	**12 55 10.5**	**-0.3**
WRA				PKKPbc	**PKKPbc**	**13 06 55.5**	**+1.2**
WRA	**Warramunga Arr**	**102.55**	**162**	P	**Pdif**	**12 50 57.0**	**-0.5**
	0.7nm,0.5s,baz=195,slow=4.3,SNR=11						
WRA				PP	**PP**	**12 55 10.5**	**-0.3**
	0.8nm,0.8s,baz=186,slow=6.6,SNR=5.0						
WRA				PKKPbc	**PKKPbc**	**13 06 55.5**	**+1.2**
	0.3nm,0.3s,baz=354,slow=2.9,SNR=21						
WRAB	**Tennant Creek**	**102.56**	**162**	*e*Pdif	**Pdif**	**12 50 59.3**	**+1.8**
TXAR	**Lajitas Array**	**106.81**	**298**	PKiKP	**PKiKP**	**12 55 25.4**	**0.0**
TXAR	**Lajitas Array**	**106.81**	**298**	PKiKP	**PKiKP**	**12 55 25.4**	**0.0**
	0.2nm,0.5s,baz=160,slow=2.9,SNR=3.8						
MSU	**Marysvale**	**118.36**	**297**	*e*PKPdf	**PKPdf**	**12 55 48.1**	**+0.8**
PDAR	**Pinedale Array**	**120.37**	**302**	PKP	**PKPdf**	**12 55 50.2**	**-0.9**
PDAR	**Pinedale Array**	**120.37**	**302**	PKP	**PKPdf**	**12 55 50.2**	**-0.9**
	0.8nm,0.4s,baz=110,slow=2.4,SNR=4.9						
HWUT	**Hardware Ranch**	**120.44**	**300**	*e*PKPdf	**PKPdf**	**12 55 50.7**	**-0.5**
NOA	**NORSAR Array B**	**120.81**	**21**	PKP	**PKPdf**	**12 55 50.6**	**-0.4**
NOA				PKKPbc	**PKKPbc**	**13 05 54.7**	**-0.6**
NOA	**NORSAR Array B**	**120.81**	**21**	PKP	**PKPdf**	**12 55 50.6**	**-0.4**
	0.6nm,0.8s,baz=209,slow=2.0,SNR=3.4						
NOA				PKKPbc	**PKKPbc**	**13 05 54.7**	**-0.6**
	0.5nm,0.6s,baz=26,slow=4.2,SNR=3.6						
NVAR	**Mina Array Bea**	**121.39**	**293**	PKP	**PKPdf**	**12 55 54.1**	**+1.0**
NVAR	**Mina Array Bea**	**121.39**	**293**	PKP	**PKPdf**	**12 55 54.1**	**+1.0**
	2.1nm,0.6s,baz=134,slow=2.6,SNR=23						
LOHW	**Long Hollow**	**121.51**	**302**	*e*PKPdf	**PKPdf**	**12 55 52.7**	**-0.5**
TPAW	**Teton Pass**	**121.58**	**302**	*e*PKPdf	**PKPdf**	**12 55 53.6**	**+0.2**
IMW	**Indian Meadow**	**121.89**	**302**	*e*PKPdf	**PKPdf**	**12 55 54.7**	**+0.7**
FRB	**Frobisher Bay**	**123.80**	**339**	PKP	**PKPdf**	**12 55 56.1**	**-0.5**
FRB	**Frobisher Bay**	**123.80**	**339**	PKP	**PKPdf**	**12 55 56.1**	**-0.5**
	3.0nm,0.7s,baz=144,slow=4.7,SNR=14						
HRY	**Holter Researc**	**124.41**	**304**	*e*PKPdf	**PKPdf**	**12 55 58.6**	**+0.1**
FINES	**FINESS Array B**	**124.59**	**28**	PKP	**PKPdf**	**12 55 57.6**	**-0.5**
FINES	**FINESS Array B**	**124.59**	**28**	PKP	**PKPdf**	**12 55 57.6**	**-0.5**
	2.7nm,0.4s,baz=191,slow=1.4,SNR=56						
FIA1	**FINESS Array S**	**124.59**	**28**	*e*PKPdf	**PKPdf**	**12 55 57.4**	**-0.7**
CMAR	**Chiang Mai Arr**	**125.08**	**111**	PKP	**PKPdf**	**12 55 59.9**	**-0.6**
CMAR	**Chiang Mai Arr**	**125.08**	**111**	PKP	**PKPdf**	**12 55 59.9**	**-0.6**
	0.6nm,0.7s,baz=236,slow=4.2,SNR=3.5						
KAF	**Kangasniemi**	**125.21**	**28**	*e*p	**PKPdf**	**12 55 58.0**	**-1.3**
	2.6nm,0.5s						
MSO	**Missoula**	**125.48**	**303**	*e*PKPdf	**PKPdf**	**12 56 00.8**	**+0.2**
BMO	**Blue Mountains**	**125.66**	**299**	*e*PKPdf	**PKPdf**	**12 56 01.1**	**+0.1**
SWMT	**Swartz Lake**	**126.00**	**303**	*e*PKPdf	**PKPdf**	**12 56 01.1**	**-0.4**
YBH	**Yreka Blue Hor**	**126.11**	**293**	PKP	**PKPdf**	**12 56 01.5**	**-0.4**
YBH	**Yreka Blue Hor**	**126.11**	**293**	PKP	**PKPdf**	**12 56 01.5**	**-0.4**
	1.9nm,0.7s,baz=47,slow=3.7,SNR=8.5						
JTMT	**Jette**	**126.31**	**303**	*e*PKPdf	**PKPdf**	**12 56 02.2**	**0.0**
JOF	**Joensuu**	**127.20**	**29**	*e*p	**PKPdf**	**12 56 02.0**	**-1.1**
	2.3nm,0.6s						
ABKAR	**Akbulak array**	**127.55**	**56**	*e*PKPdf	**PKPdf**	**12 56 04.4**	**+0.1**
KSH	**Kashi**	**128.70**	**75**	*e*PKP	**PKPdf**	**12 56 08.9**	**+1.9**
KSH				sPKP		12 56 47.1	
KSH				PP	**PP**	**12 58 18.0**	**+2.7**
KSH				PKS	**PKSdf**	**12 59 44.0**	**+0.5**
KSH				LR	LR		
	comp=N,7.0nm,0.7s						
KSH				LR	LR		
	comp=E,5.0nm,0.5s						
ARCES	**ARCESS Array B**	**131.15**	**22**	PKP	**PKPdf**	**12 56 10.7**	**+0.2**
ARCES	**ARCESS Array B**	**131.15**	**22**	PKP	**PKPdf**	**12 56 10.7**	**+0.2**
	comp=E,2.6nm,0.6s,baz=193,slow=3.7,SNR=15						
KMI	**Kunming**	**132.54**	**110**	PKP	**PKPdf**	**12 56 10.2**	**-4.6**
GYA	**Guiyang**	**135.67**	**113**	*e*Pdif	**Pdif**	**12 53 23.0**	**-1.5**
GYA				PKP	**PKPdf**	**12 56 20.8**	**+0.3**
GYA				sPKP		12 57 04.2	
GYA				PP	**PP**	**12 59 02.8**	**+3.0**
GYA				PKS	**PKSdf**	**12 59 54.9**	**-2.1**
GYA				SKKS		13 05 40.3	
GYA				SS	**SS**	**13 16 47.5**	**-0.3**
GYA				AMB	AMB		
	comp=Z,90nm,7.9s						
GYA				LR	LR		
	comp=N,110nm,22.0s						
GYA				LR	LR		
	comp=E,70nm,23.2s						
GYA				LR	LR		
	comp=Z,90nm,25.6s						
YKA	**Yellowknife Ar**	**136.25**	**318**	PKPpre	PKPpre	12 56 06.6	
YKA				PKP	**PKPdf**	**12 56 20.0**	**-0.2**
YKA				SKPbc	**SKPbc**	**12 59 39.8**	**-1.3**
YKA	**Yellowknife Ar**	**136.25**	**318**	PKhKP	PKPpre	12 56 06.6	
	comp=Z,0.1nm,0.3s,baz=124,slow=3.1,SNR=8.9						
YKA				PKP	**PKPdf**	**12 56 20.0**	**-0.2**
	comp=Z,2.7nm,0.5s,baz=136,slow=2.1,SNR=44						
YKA				SKPbc	**SKPbc**	**12 59 39.8**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=132,slow=4.3,SNR=9.2						
YKW3	**Yellowknife Ar**	**136.30**	**318**	*e*PKPdf	**PKPdf**	**12 56 19.5**	**-0.8**
MKAR	**Makanchi Array**	**137.03**	**72**	PKP	**PKPdf**	**12 56 20.5**	**-1.7**
MKAR				SKPbc	**SKPbc**	**12 59 42.7**	**-1.4**
MKAR	**Makanchi Array**	**137.03**	**72**	PKP	**PKPdf**	**12 56 20.5**	**-1.7**
	comp=Z,0.3nm,0.6s,baz=122,slow=2.9,SNR=3.9						
MKAR				SKPbc	**SKPbc**	**12 59 42.7**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=223,slow=1.7,SNR=6.5						
CD2	**Chengdu**	**137.69**	**106**	PKP	**PKPdf**	**12 56 24.0**	**0.0**
CD2				sPKP		12 57 09.5	
CD2				PP	**PP**	**12 59 16.2**	**+3.9**
CD2				PKS	**PKSdf**	**12 59 58.7**	**-1.6**
CD2				SKS	**SKSdf**	**13 03 20.6**	**-2.9**
CD2				SKKS	**SKKSac**	**13 05 53.0**	**-1.8**
CD2				SS	**SS**	**13 17 12.5**	**+0.7**
CD2				AMB	AMB		
	comp=Z,140nm,5.6s						
WMQ	**Urumqi**	**138.02**	**79**	PKP	**PKPdf**	**12 56 24.4**	**+0.1**
DLBC	**Dease Lake**	**140.36**	**306**	PKPpre	PKPpre	12 56 20.8	
DLBC	**Dease Lake**	**140.36**	**306**	PKhKP	PKPpre	12 56 20.8	
	comp=Z,1.8nm,0.9s,baz=46,slow=4.3,SNR=2.6						
ZALV	**Zalesovo Beam**	**142.53**	**64**	PKPpre	PKPpre	12 56 27.1	
ZALV				PKP	**PKPdf**	**12 56 32.5**	**+0.6**
ZALV				SKPbc	**SKPbc**	**12 59 57.0**	**-1.6**
ZALV	**Zalesovo Beam**	**142.53**	**64**	PKhKP	PKPpre	12 56 27.1	
	comp=Z,0.5nm,0.3s,baz=242,slow=2.9,SNR=4.3						
ZALV				PKP	**PKPdf**	**12 56 32.5**	**+0.6**
	comp=Z,2.9nm,0.4s,baz=232,slow=3.4,SNR=15						
ZALV				SKPbc	**SKPbc**	**12 59 57.0**	**-1.6**
	comp=Z,0.8nm,0.8s,baz=243,slow=1.6,SNR=3.8						
BMRM	**Bremner River**	**148.10**	**305**	*e*PKPbc	**PKPbc**	**12 56 44.9**	**+0.2**
MENT	**Mentasta**	**148.34**	**309**	*e*PKPbc	**PKPbc**	**12 56 45.1**	**-0.2**
DIV	**Divide**	**148.69**	**305**	*e*PKPbc	**PKPbc**	**12 56 46.9**	**+0.6**
DOT	**Dot Lake**	**148.70**	**310**	*e*PKPbc	**PKPbc**	**12 56 46.6**	**+0.4**
PAX	**Paxson**	**149.12**	**308**	*e*PKPbc	**PKPbc**	**12 56 47.1**	**-0.2**
PAX				*e*PKPab	**PKPab**	**12 56 52.3**	**+0.1**
HHC	**Hu-ho-hao-te**	**149.29**	**102**	*e*PKPbc	**PKPdf**	**12 56 45.4**	**+1.4**
HHC				sPKP		12 57 22.5	
HHC				PKS	**PKSdf**	**13 00 19.2**	**+0.3**
HHC				PP	**PP**	**13 00 24.8**	**+2.8**
HHC				SKS	**SKSdf**	**13 03 41.5**	**+0.6**
HHC				SKKS	**SKKSac**	**13 07 03.9**	**+2.9**
HHC				AMB	AMB		
	comp=Z,120nm,9.3s						
SML	**Sawmill**	**150.07**	**305**	*e*PKPbc	**PKPbc**	**12 56 49.7**	**+0.1**
SEW	**Seward**	**150.08**	**302**	*e*PKPbc	**PKPbc**	**12 56 49.2**	**-0.3**
ILAR	**Eielson Array**	**150.18**	**311**	PKP	**PKPdf**	**12 56 42.7**	**-1.8**
ILAR				PKPbc	**PKPbc**	**12 56 49.5**	**-0.2**
ILAR	**Eielson Array**	**150.18**	**311**	PKP	**PKPdf**	**12 56 42.7**	**-1.8**
	comp=Z,0.6nm,0.9s,baz=186,slow=0.3,SNR=8.6						
ILAR				PKPbc	**PKPbc**	**12 56 49.5**	**-0.2**
	comp=Z,27nm,0.9s,baz=126,slow=0.9,SNR=130						
PMR	**Palmer**	**150.38**	**305**	*e*PKPbc	**PKPbc**	**12 56 50.0**	**-0.2**
COLA	**College**	**150.60**	**311**	*e*PKPbc	**PKPbc**	**12 56 50.0**	**-0.7**
COLA				*e*PKPab	**PKPab**	**12 56 58.6**	**+0.6**
SONM	**Songino Array**	**150.82**	**87**	PKPbc	**PKPbc**	**12 56 51.5**	**-0.5**
SONM	**Songino Array**	**150.82**	**87**	PKPbc	**PKPbc**	**12 56 51.5**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=221,slow=3.7,SNR=18						
MCK	**McKinley**	**150.82**	**309**	*e*PKPbc	**PKPbc**	**12 56 51.2**	**-0.1**
KDAK	**Kodiak Island**	**150.83**	**296**	*e*PKPbc	**PKPbc**	**12 56 51.4**	**0.0**
BJI	**Beijing**	**151.19**	**109**	PKPbc	**PKPdf**	**12 56 47.0**	**+0.2**
TRF	**Thorofare Moun**	**151.35**	**308**	*e*PKPbc	**PKPbc**	**12 56 52.0**	**-0.7**
TRF				*e*PKPab	**PKPab**	**12 57 00.9**	**-0.6**
COLD	**Coldfoot**	**151.90**	**316**	*e*PKPbc	**PKPbc**	**12 56 54.2**	**+0.6**
JNU	**Nakatsue**	**152.41**	**138**	PKPbc	**PKPbc**	**12 56 54.9**	**-1.1**
JNU	**Nakatsue**	**152.41**	**138**	PKPbc	**PKPbc**	**12 56 54.9**	**-1.1**
	comp=Z,2.9nm,0.7s,baz=270,slow=1.0,SNR=2.9						
KSAR	**Wonju Array Be**	**154.92**	**128**	PKPbc	**PKPbc**	**12 57 02.3**	**+1.2**
KSRS	**Korea Array**	**154.95**	**128**	PKPbc	**PKPbc**	**12 57 02.3**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=221,slow=1.1,SNR=4.5						
MJAR	**Matsushiro Arr**	**158.01**	**148**	PKPab	**PKPab**	**12 57 30.4**	**+0.1**
MJAR	**Matsushiro Arr**	**158.01**	**148**	PKPab	**PKPab**	**12 57 30.4**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=188,slow=5.3,SNR=5.4						
MDJ	**Mudanjiang**	**161.36**	**119**	PKP	**PKPdf**	**12 57 00.9**	**+1.0**
MDJ				PP	**PP**	**13 01 29.6**	**+0.7**
MDJ				AMB	AMB		
	comp=Z,65nm,7.4s						
PETK	**Petropavlovsk-**	**175.71**	**225**	PKP	**PKPdf**	**12 57 08.3**	**-0.8**
PETK				PKPab	**PKPab**	**12 58 48.2**	**+0.2**
PETK	**Petropavlovsk-**	**175.71**	**225**	PKP	**PKPdf**	**12 57 08.3**	**-0.8**
	comp=Z,3.1nm,0.8s,baz=270,slow=0.4,SNR=4.0						
PETK				PKPab	**PKPab**	**12 58 48.2**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=121,slow=7.1,SNR=5.0						

*ISCJB **12** 12:40:37.6±0.8, 60°.4S±0°.1×28°.0W±0°.3, h10km, mb4.2/8, MS4.0/7, Error ellipse: s-maj=23.5km s-min=13.8km az=138.6*
*IDC **12** 12:40:37.2±1.0, 60°.51S×28°.21W, h0km, mb4.2/7, mb1 4.3/8, mb1mx4.1/17, mbtmp4.2/8, ML4.0/1, MS3.8/9, Ms1 3.8/9, ms1mx3.6/26, Error ellipse: s-maj=37.3km s-min=22.8km az=29.0*
*NEIC **12** 12:40:42.8±2.7, 60°.54S×28°.12W, h38km±25km, mb4.4/4, Error ellipse: s-maj=21.7km s-min=14.1km az=218.0*
ISC 12 12:40:38.8±0.7, 60°.6S±0°.1×28°.2W±0°.2, h10km, n36, σ0°.77/28, mb4.3/8, MS3.9/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**13.03**	**153**	*e*Sn		**Pn**	**12 43 43.3**	**-0.4**
VNA2	**Neumayer--Watz**	**13.36**	**150**	*e*Sn		**Pn**	**12 43 47.0**	**-1.1**
SNAA	**Sanae**	**14.97**	**148**	*e*Sn		**Pn**	**12 44 11.1**	**+0.9**
SNAA	**Sanae**	**14.97**	**148**	*e*P		**Pn**	**12 44 11.1**	**+0.8**
	4.2nm,0.4s							
SNAA	**Sanae**	**14.97**	**148**	Pn		**Pn**	**12 44 11.1**	**+0.8**
	0.6nm,0.3s,baz=320,slow=16,SNR=7.4							
SNAA				LR		LR	12 48 32.9	
	comp=Z,65nm,21.7s,baz=51,slow=32							
PMSA	**Palmer Station**	**16.84**	**240**	LR		LR	12 49 57.4	
	comp=Z,321nm,19.3s,baz=100,slow=33							
USHA	**Ushuaia**	**21.99**	**267**	LR		LR	12 51 56.7	
	comp=Z,387nm,20.4s,baz=29,slow=31							
PLCA	**Paso Flores**	**32.60**	**288**	LR		LR	12 58 40.6	
	comp=Z,146nm,20.6s,baz=170,slow=33							
CPUP	**Villa Florida**	**39.58**	**317**	P		**P**	**12 48 09.4**	**-0.5**
CPUP	**Villa Florida**	**39.58**	**317**	P		**P**	**12 48 09.4**	**-0.5**
	3.0nm,0.8s,baz=142,slow=8.9,SNR=3.7							
SUR	**Sutherland**	**42.46**	**71**	LR		LR	13 02 23.9	
	comp=Z,95nm,18.9s,baz=247,slow=31							
BDFB	**Brasilia**	**47.10**	**333**	P		**P**	**12 49 11.5**	**+0.6**
BDFB	**Brasilia**	**47.10**	**333**	P		**P**	**12 49 11.5**	**+0.6**
	2.3nm,0.6s,baz=98,slow=5.9,SNR=4.9							
BOSA	**Boshof**	**47.70**	**73**	*e*P		**P**	**12 49 15.6**	**+0.1**
	2.9nm,0.6s							
BOSA	**Boshof**	**47.70**	**73**	P		**P**	**12 49 15.9**	**+0.4**
	2.7nm,0.6s,baz=218,slow=9.1,SNR=8.6							
LBTB	**Lobatse**	**50.91**	**71**	*e*P		**P**	**12 49 40.8**	**+0.8**
	4.1nm,0.8s							
LBTB	**Lobatse**	**50.91**	**71**	P		**P**	**12 49 40.2**	**+0.1**
	2.9nm,0.6s,baz=223,slow=8.2,SNR=5.0							
LPAZ	**La Paz**	**52.70**	**309**	*e*P		**P**	**12 49 55.7**	**+1.7**
	2.7nm,0.8s							
LPAZ	**La Paz**	**52.70**	**309**	P		**P**	**12 49 53.9**	**-0.1**
	1.6nm,0.6s,baz=157,slow=8.0,SNR=4.0							
LSZ	**Lusaka**	**60.54**	**67**	*e*P		**P**	**12 50 49.5**	**+0.2**
	2.5nm,0.6s							
KMBO	**Kilima Mbogo**	**77.15**	**69**	LR		LR	13 22 59.7	
	comp=Z,115nm,20.7s,baz=95,slow=33							
TOA0	**Torodi Ar. Sit**	**77.24**	**30**	*e*P		**P**	**12 52 32.0**	**-0.8**
TORD	**Torodi Ar. Bea**	**77.24**	**30**	P		**P**	**12 52 31.9**	**-0.9**
TORD	**Torodi Ar. Bea**	**77.24**	**30**	P		**P**	**12 52 31.9**	**-0.9**
	0.8nm,0.4s,baz=197,slow=6.1,SNR=14							
PPT	**Papeete**	**89.13**	**235**	LR		LR	13 25 06.0	
	comp=Z,154nm,21.1s,baz=148,slow=30							
ATD	**Arta Tunnel**	**90.87**	**68**	LR		LR	13 31 16.3	
	comp=Z,42nm,19.5s,baz=275,slow=33							
ASAR	**Alice Springs**	**94.82**	**164**	P		**P**	**12 54 01.3**	**+0.6**
ASAR	**Alice Springs**	**94.82**	**164**	P		**P**	**12 54 01.3**	**+0.6**
	0.6nm,0.9s,baz=192,slow=4.3,SNR=4.2							
MDT	**Midelt**	**95.02**	**20**	LR		LR	13 33 42.5	
	comp=Z,73nm,18.4s,baz=341,slow=34							
ZAA0	**Zalesovo Array**	**144.62**	**70**	*e*PKPdf		**PKPdf**	**13 00 14.3**	**+0.1**
ZALV	**Zalesovo Beam**	**144.62**	**70**	PKP		**PKPab**	**13 00 12.4**	**-0.4**
ZALV	**Zalesovo Beam**	**144.62**	**70**	PKP		**PKPab**	**13 00 12.4**	**-0.4**
	1.1nm,0.6s,baz=232,slow=4.1,SNR=4.8							
SONM	**Songino Array**	**151.17**	**95**	PKPbc		**PKPbc**	**13 00 31.4**	**+0.2**
SONM	**Songino Array**	**151.17**	**95**	PKPbc		**PKPbc**	**13 00 31.4**	**+0.2**
	0.7nm,0.5s,baz=217,slow=3.4,SNR=7.1							
ILAR	**Eielson Array**	**152.53**	**305**	PKPbc		**PKPbc**	**13 00 32.4**	**-1.3**
ILAR	**Eielson Array**	**152.53**	**305**	PKPbc		**PKPbc**	**13 00 32.4**	**-1.3**
	0.3nm,0.8s,baz=123,slow=3.3,SNR=4.8							

*IDC **12** 12:43:19.8±1.0, 1°.44N×122°.43E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/24, mbtmp3.6/7, ML3.6/1, MS3.3/7, Ms1 3.3/7, ms1mx2.7/36, Error ellipse: s-maj=63.1km s-min=18.1km az=73.0*
*DJA **12** 12:43:20.9±1.4, 2°N±5°×12°2E±°, h30km±16km, M4.3/8, mb4.3/4, mB5.0/1, MLv4.3/8, Mw(mB)4.4/1*
*ISCJB **12** 12:43:23.3±0.6, 1°.54N±0°.05×122°.28E±0°.06, h33km, mb3.5/6, MS3.4/6, Error ellipse: s-maj=9.3km s-min=6.8km az=38.0*
ISC 12 12:43:25.1±0.8, 1°.44N±0°.08×122°.27E±0°.07, h35km, n22, σ1°.84/17, mb3.6/6, MS3.2/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.01**	**199**	P		**Pn**	**12 43 41.4**	**-1.4**
MRSI				S		**Sn**	**12 43 57.4**	**+1.6**
KMSI	**Cibinong**	**1.91**	**117**	P		Pn	12 44 00.5	+5.4
KMSI				S		Sn	12 44 29.0	+11
APSI	**Ampana**	**2.42**	**195**	S		Sn	12 44 38.7	+8.2
LUWI	**Luwuk**	**2.51**	**169**	P		**Pn**	**12 44 06.0**	**+2.6**
LUWI				S		Sn	12 44 45.2	+12
MNI	**Manado**	**2.57**	**90**	P		**Pn**	**12 44 04.9**	**+0.7**
MNI				S		**Sn**	**12 44 33.5**	**-0.7**
TTSI	**Tana Toraja**	**5.08**	**209**	P		**Pn**	**12 44 41.3**	**+2.5**
	43nm,1.1s,2µm0.2nm							
TTSI				S		**Sn**	**12 45 32.8**	**-3.5**
	43nm,1.1s,2µm0.2nm							
KDI	**Kendari**	**5.37**	**176**	P		**Pn**	**12 44 42.9**	**+0.1**
	29nm,1.0s,0.1nm							
LBMI	**Labuha**	**5.62**	**111**	P		**Pn**	**12 44 47.8**	**+1.6**
	34nm,1.1s,0.3nm							
SPSI	**Sidrap Palu**	**5.92**	**205**	P		**Pn**	**12 44 53.3**	**+3.0**
KAPI	**Kappang**	**6.89**	**201**	LR		LR	12 47 47.2	
	comp=Z,90nm,21.8s,baz=344,slow=38							
FITZ	**Fitzroy Crossi**	**19.70**	**170**	P		**P**	**12 47 50.3**	**-1.2**
	0.1nm,0.3s,baz=9.2,slow=9.8,SNR=7.1							
PSI	**Prapat**	**23.37**	**274**	LR		LR	12 58 10.0	
	comp=Z,82nm,18.6s,baz=36,slow=38							
WRA	**Warramunga Arr**	**24.32**	**151**	P		**P**	**12 48 38.5**	**-1.1**
	1.7nm,0.9s,baz=332,slow=10,SNR=6.4							
ASAR	**Alice Springs**	**27.40**	**156**	P		**P**	**12 49 07.1**	**-0.4**
	0.4nm,0.9s,baz=331,slow=7.5,SNR=4.2							
KSRS	**Korea Array**	**36.22**	**8**	LR		LR	13 05 31.2	
	comp=Z,20nm,19.0s,baz=200,slow=37							
MJAR	**Matsushiro Arr**	**37.91**	**21**	P		**P**	**12 50 38.1**	**-1.1**
	1.0nm,0.9s,baz=192,slow=9.9,SNR=4.8							
MJAR				LR		LR	13 04 11.6	
	comp=Z,32nm,20.5s,baz=140,slow=33							
ASAJ	**Asahikawa**	**46.17**	**20**	LR		LR	13 09 44.6	
	comp=Z,24nm,18.4s,baz=315,slow=34							
SONM	**Songino Array**	**48.22**	**346**	P		**P**	**12 52 03.3**	**+0.9**
	1.3nm,0.8s,baz=160,slow=8.3,SNR=11							
MKAR	**Makanchi Array**	**57.02**	**328**	P		**P**	**12 53 07.9**	**+0.4**
	0.3nm,0.6s,baz=126,slow=7.3,SNR=4.6							
ZALV	**Zalesovo Beam**	**60.71**	**336**	P		**P**	**12 53 32.6**	**-0.3**
	0.2nm,0.3s,baz=145,slow=5.3,SNR=3.8							
ASF	**Jabal al Asfar**	**85.32**	**302**	LR		LR	13 36 36.7	
	comp=Z,43nm,18.6s,baz=62,slow=37							
MMAI	**Mount Meron Ar**	**86.59**	**303**	LR		LR	13 35 12.3	
	comp=Z,39nm,19.1s,baz=290,slow=36							

IDC 12 12:51:58.8±1.2, 12°.68N×83°.73W, h0km, mb3.3/4, mb1 3.7/5, mb1mx3.5/24, mbtmp3.4/5, ML4.4/1, Error ellipse: s-maj=46.5km s-min=22.5km az=69.0, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**2.66**	**207**	Pn		Pn	12 52 43.5	+0.6
	65nm,0.3s,baz=341,slow=15,SNR=304							
JTS				Sn		Sn	12 53 03.7	-12
	313nm,0.3s,baz=302,slow=22,SNR=72							

TXAR	**Lajitas Array**	**24.86**	**315**	P		P	12 57 22.5	-0.7
	0.5nm,0.7s,baz=138,slow=9.6,SNR=5.0							
SIV	**San Ignacio**	**36.24**	**141**	P		P	12 59 03.6	-0.3
	0.7nm,0.5s,baz=306,slow=8.8,SNR=4.8							
YKA	**Yellowknife Ar**	**54.41**	**343**	P		P	13 01 29.1	+1.8
	0.1nm,0.3s,baz=138,slow=7.3,SNR=3.6							
ILAR	**Eielson Array**	**67.30**	**336**	P		P	13 02 54.5	-0.7
	0.1nm,0.5s,baz=108,slow=5.2,SNR=3.7							

*THE **12** 13:07:58.3, 38°.25N×22°.12E, h0km±3km, ML1.6/6, Error ellipse: s-maj=3.2km s-min=0.9km az=184.0*
*ISCJB **12** 13:07:59.0±0.5, 38°.28N±0°.02×22°.12E±0°.04, h1km±7km, Error ellipse: s-maj=4.7km s-min=3.5km az=169.3*
*CSEM **12** 13:07:59.6±0.1, 38°.33N×22°.15E, h0km±1km, ML1.6/6, Error ellipse: s-maj=3.5km s-min=2.8km az=49.0*
*ATH **12** 13:08:00.0, 38°.34N×22°.13E, h7km±3km, MD2.6/6*
ISC 12 13:07:59.0±0.9, 38°.31N±0°.02×22°.14E±0°.02, h6km±6km, n31, σ0°.84/49, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.07**	**319**	P		**Pg**	**13 08 00.4**	**-0.4**
TRIZ				S		**Sg**	**13 08 02.9**	**+0.9**
TRIZ	**Trizonia**	**0.07**	**319**	P		**Pg**	**13 08 00.4**	**-0.4**
TRIZ				S		**Sg**	**13 08 02.9**	**+0.9**
KALE	**Kalithea**	**0.08**	**3**	P		**Pg**	**13 08 00.9**	**-0.1**
KALE				S		**Sg**	**13 08 02.8**	**+0.5**
KALE	**Kalithea**	**0.08**	**3**	P		**Pg**	**13 08 00.9**	**-0.1**
KALE				S		**Sg**	**13 08 02.8**	**+0.5**
LAKA	**Lakka**	**0.14**	**241**	P		**Pg**	**13 08 00.6**	**-1.3**
LAKA				S		**Sg**	**13 08 02.0**	**-1.9**
PSA1	**Psathopyrgos**	**0.20**	**275**	*e*PG		**Pg**	**13 08 03.9**	**+0.9**
EFP	**Efpalio**	**0.21**	**303**	P		**Pg**	**13 08 02.8**	**-0.5**
EFP				S		**Sg**	**13 08 07.2**	**+1.1**
EFP	**Efpalio**	**0.21**	**303**	*e*PG		**Pg**	**13 08 04.0**	**+0.7**
EFP				*e*SG		**Sg**	**13 08 07.2**	**+1.1**
EFP	**Efpalio**	**0.21**	**303**	P		**Pg**	**13 08 02.8**	**-0.5**
EFP	**Efpalio**	**0.21**	**303**	*e*Pg		**Pg**	**13 08 04.0**	**+0.7**
EFP				S		**Sg**	**13 08 07.2**	**+1.1**
DSF	**Desfina**	**0.33**	**72**	P		**Pg**	**13 08 05.0**	**-0.4**
DSF				S		**Sg**	**13 08 10.2**	**+0.5**
DSF	**Desfina**	**0.33**	**72**	P		**Pg**	**13 08 05.0**	**-0.4**
DSF				S		**Sg**	**13 08 10.2**	**+0.5**
GUR	**Goura**	**0.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.23**	**177**	P	P	13 46 01.7	+0.4
	1.0nm,0.4s,baz=9.0,slow=8.6,SNR=14						
FITZ				S	Sn	13 50 13.6	+8.8
	0.9nm,0.8s,baz=90,slow=20,SNR=1.9						
WRA	**Warramunga Arr**	**25.01**	**157**	P	P	13 46 39.9	+0.4
	0.3nm,0.4s,baz=336,slow=9.9,SNR=8.1						
ASAR	**Alice Springs**	**28.29**	**161**	P	P	13 47 08.4	-0.6
	0.2nm,0.4s,baz=332,slow=7.3,SNR=13						
STKA	**Stephens Creek**	**38.55**	**156**	P	P	13 48 37.9	-0.3
	1.0nm,0.5s,baz=343,slow=9.1,SNR=5.0						
MKAR	**Makanchi Array**	**56.66**	**327**	P	P	13 50 58.8	0.0
	0.5nm,0.3s,baz=121,slow=8.4,SNR=12						

MAN 12 13:55:49,11°.66N×121°.74E,h1km,mb4.3,ML3.2,MS3.0, 1D,Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTRP	**Odiongan**	**0.75**	**22**	*eP*	Pg	13 56 03.3	-0.1
RCP	**Roxas**	**0.99**	**96**	⇓*eP*	Pg	13 56 08.3	+0.3
SJMP	**San Jose**	**1.00**	**323**	*eP*	Pn	13 56 10.2	0.0
CUYO	**Cuyo Island**	**1.07**	**221**	*eP*	Pg	13 56 09.9	+0.3
GUIM	**Jordan**	**1.32**	**141**	*eP*	Pg	13 56 14.0	-0.4

IDC 12 14:06:28.4±1.8,16°.83S×168°.47E,h0km,mb4.0/4, mb1 4.2/5,mb1mx3.8/20,mbtmp3.9/5,ML3.3/1,Error ellipse: s-maj=62.1km s-min=28.3km az=136.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.56**	**200**	Pn	Pn	14 07 53.6	+1.0
	0.9nm,0.3s,baz=44,slow=20,SNR=12						
WRA	**Warramunga Arr**	**32.50**	**259**	P	P	14 13 01.8	+0.6
	0.3nm,0.3s,baz=96,slow=8.2,SNR=17						
ASAR	**Alice Springs**	**33.08**	**252**	P	P	14 13 05.2	-1.0
	4.0nm,0.4s,baz=81,slow=8.8,SNR=182						
ILAR	**Eielson Array**	**88.16**	**18**	P	P	14 19 20.7	-0.2
	0.4nm,0.9s,baz=236,slow=5.4,SNR=4.1						
YKA	**Yellowknife Ar**	**98.87**	**27**	P	P	14 20 10.0	-0.1
	0.1nm,0.5s,baz=253,slow=4.2,SNR=3.0						

IDC 12 14:24:07.9±0.9,0°.75N×121°.92E,h0km,mb3.7/6, mb1 3.8/7,mb1mx3.6/23,mbtmp3.7/7,ML3.8/1,Error ellipse: s-maj=129.8km s-min=16.3km az=66.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.09**	**169**	P	P	14 28 32.5	+0.2
	0.2nm,0.3s,baz=8.7,slow=12,SNR=11						
WRA	**Warramunga Arr**	**23.90**	**150**	P	P	14 29 23.3	-0.3
	3.7nm,0.6s,baz=326,slow=10,SNR=84						
ASAR	**Alice Springs**	**26.92**	**155**	P	P	14 29 51.1	+0.1
	0.4nm,0.6s,baz=341,slow=14,SNR=15						
STKA	**Stephens Creek**	**37.42**	**152**	P	P	14 31 22.9	0.0
	1.0nm,0.8s,baz=321,slow=13,SNR=3.9						
SONM	**Songino Array**	**48.80**	**346**	P	P	14 32 55.4	+0.4
	0.8nm,0.8s,baz=166,slow=9.0,SNR=6.4						
MKAR	**Makanchi Array**	**57.42**	**329**	P	P	14 33 58.5	+0.1
	0.5nm,0.4s,baz=128,slow=8.7,SNR=14						
ZALV	**Zalesovo Beam**	**61.19**	**336**	P	P	14 34 23.6	-0.8
	0.5nm,0.4s,baz=134,slow=8.3,SNR=5.0						

*IDC **12** 14:46:16.6±1.4,73°.54N×7°.47E,h0km,mb3.1/2,mb1 3.5/4, mb1mx3.2/28,mbtmp3.3/4,ML2.7/2,MS2.5/1,Ms1 2.5/1, ms1mx2.3/13,Error ellipse: s-maj=39.6km s-min=15.7km az=34.0*
*CSEM **12** 14:46:22.9±0.9,73°.50N×8°.70E,h10km,ML2.9,Error ellipse: s-maj=32.6km s-min=8.8km az=63.0*
*HEL **12** 14:46:23.4±0.6,73°.06N×7°.65E,h10km,ML2.9, ML2.8(NAO)*
*NAO **12** 14:46:25.2±7.2,73°.51N×8°.89E,h14km±89km,ML2.8*
*BER **12** 14:46:26.8±5.8,73°.73N×9°.65E,h0km±162km, ML2.8(NAO)*
ISC 12 14:46:19.9±1.5,73°.27N±0°.09×7°.8E±0°.1,h11km,n30, σ1s60/38,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPA0	**Spitsbergen Ar**	**5.36**	**19**	Pn	**Pn**	**14 47 39.0**	**-0.7**
	baz=177,slow=16						
SPA0	**Spitsbergen Ar**	**5.36**	**19**	Pn	**Pn**	**14 47 39.0**	**-0.7**
	baz=177,slow=16						
SPA0	**Spitsbergen Ar**	**5.36**	**19**	*e*	**Pn**	**14 47 39.0**	**-0.7**
SPA0	**Spitsbergen Ar**	**5.36**	**19**	Pn	**Pn**	**14 47 39.0**	**-0.7**
	baz=177,slow=15,SNR=50						
KBS	**Kingsbay**	**5.77**	**8**	Pn	**Pn**	**14 47 44.3**	**-1.0**
KBS	**Kingsbay**	**5.77**	**8**	Pn	**Pn**	**14 47 44.3**	**-1.0**
KBS	**Kingsbay**	**5.77**	**8**	*e*	**Pn**	**14 47 44.3**	**-1.0**
KBS	**Kingsbay**	**5.77**	**8**	Pn	**Pn**	**14 47 44.3**	**-1.0**
	SNR=50						
KIF	**Kilpisjarvi**	**6.00**	**129**	*eP*	**Pn**	**14 47 50.2**	**+1.8**
KIF				MPN		14 47 52.9	
	comp=Z,2.7nm,0.3s						
KIF				*eS*	**Sn**	**14 48 55.7**	**-1.3**
KIF	**Kilpisjarvi**	**6.00**	**129**	P	**Pn**	**14 47 50.2**	**+1.8**
ARA0	**ARCESS Array S**	**6.77**	**115**	Pn	**Pn**	**14 48 01.3**	**+2.3**
	baz=322,slow=12						
ARA0				Sn	**Sn**	**14 49 14.5**	**-1.5**
ARA0	**ARCESS Array S**	**6.77**	**115**	Pn	**Pn**	**14 48 01.3**	**+2.3**
	baz=322,slow=12						
ARA0				Sn	**Sn**	**14 49 14.5**	**-1.5**
ARA0	**ARCESS Array S**	**6.77**	**115**	*eP*	**Pn**	**14 48 01.7**	**+2.6**
ARA0				*eS*	**Sn**	**14 49 15.1**	**-1.0**
ARA0	**ARCESS Array S**	**6.77**	**115**	Pn	**Pn**	**14 48 01.3**	**+2.3**
	baz=322,slow=12,SNR=50						
ARA0	**ARCESS Array S**	**6.77**	**115**	P	**Pn**	**14 48 01.6**	**+2.6**
ARA0				Sn	**Sn**	**14 49 14.5**	**-1.5**
	SNR=50						
ARA0				S	**Sn**	**14 49 15.0**	**-1.0**
ARCES	**ARCESS Array B**	**6.77**	**115**	Pn	**Pn**	**14 48 00.6**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=321,slow=12,SNR=20						
ARCES				Sn	**Sn**	**14 49 15.0**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=316,slow=21,SNR=3.2						
ARCES				LR	LR	14 50 47.0	
	comp=Z,40nm,19.9s,baz=47,slow=39						
KEV	**Kevo**	**7.03**	**111**	*eP*	**Pn**	**14 48 04.4**	**+1.8**
KEV				MPN		14 48 09.8	
	comp=Z,1.2nm,0.3s						
KEV				*eS*	**Sn**	**14 49 21.8**	**-0.6**
KEV	**Kevo**	**7.03**	**111**	P	**Pn**	**14 48 04.3**	**+1.8**
KEV				S	**Sn**	**14 49 21.7**	**-0.6**
LANU	**Lannavaara**	**7.03**	**131**	*eP*	**Pn**	**14 48 04.0**	**+1.3**
LANU				*eS*	**Sn**	**14 49 19.1**	**-3.2**
LANU	**Lannavaara**	**7.03**	**131**	P	**Pn**	**14 48 03.9**	**+1.3**
HEF	**Hetta**	**7.12**	**125**	*eP*	Pn	14 48 08.0	+4.1
HEF				MPN		14 48 11.6	
	comp=Z,0.3nm,0.2s						
HEF				*eS*	**Sn**	**14 49 23.2**	**-1.5**
HEF	**Hetta**	**7.12**	**125**	P	Pn	14 48 08.0	+4.1
HEF				S	**Sn**	**14 49 23.2**	**-1.5**
VRF	**Varrio**	**9.10**	**117**	MPN		14 48 36.2	
	comp=Z,0.5nm,0.2s						
APA0	**Apatity Array**	**10.10**	**112**	Pn	**Pn**	**14 48 46.0**	**+1.4**
	baz=329,slow=12						
APA0	**Apatity Array**	**10.10**	**112**	Pn	**Pn**	**14 48 46.0**	**+1.4**
	baz=329,slow=12						
APA0	**Apatity Array**	**10.10**	**112**	*eP*	**Pn**	**14 48 46.0**	**+1.4**
APA0	**Apatity Array**	**10.10**	**112**	P	**Pn**	**14 48 46.0**	**+1.4**
FINES	**FINESS Array B**	**13.70**	**140**	Pn	**Pn**	**14 49 33.9**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=340,slow=12,SNR=3.4						
GERES	**GERESS Array B**	**24.65**	**171**	P	**P**	**14 51 41.5**	**+1.3**
	comp=Z,0.7nm,0.9s,baz=14,slow=8.2,SNR=3.4						
YKA	**Yellowknife Ar**	**39.13**	**322**	P	P	14 53 42.0	-4.7
	comp=Z,0.1nm,0.6s,baz=16,slow=9.0,SNR=2.7						

*CSEM **12** 14:47:57.9,42°.31N×13°.48E,h10km,MD2.4/5,After ROM*
ROM 12 14:47:57.9±0.1,42°.31N×13°.48E,h10km,Md2.4/5,Ml1.6/2, Error ellipse: s-maj=1.5km s-min=1.3km az=41.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**311**	Pg	Pg	14 48 00.5	+0.3
AQU				Sg	Sg	14 48 02.4	+0.6
	589nm,0.2s						
FAGN	**Fagnano**	**0.09**	**116**	Pg	Pg	14 48 00.8	+0.4
FAGN				Sg	Sg	14 48 02.6	+0.4
FAGN	**Fagnano**	**0.09**	**116**	Pg	Pg	14 48 00.8	+0.4
FAGN				Sg	Sg	14 48 02.6	+0.4
FIAM	**Fiamignano**	**0.27**	**262**	Pg	Pg	14 48 04.0	+0.5
FIAM				Sg	Sg	14 48 08.5	+1.3
	108nm,0.8s						
FIAM	**Fiamignano**	**0.27**	**262**	Pg	Pg	14 48 04.0	+0.5
FIAM				Sg	Sg	14 48 08.5	+1.3
	108nm,0.8s						
VCEL	**Villa Celiera**	**0.28**	**72**	Pg	Pg	14 48 03.8	0.0
VCEL				Sg	Sb	14 48 09.8	-0.5
VCEL	**Villa Celiera**	**0.28**	**72**	Pg	Pg	14 48 03.8	0.0
VCEL				Sg	Sb	14 48 09.8	-0.5
PTQR	**Pietraquaria**	**0.29**	**191**	Pg	Pg	14 48 04.3	+0.5
PTQR				Sg	Sb	14 48 09.4	-1.0
	13nm,0.4s						
PTQR	**Pietraquaria**	**0.29**	**191**	Pg	Pg	14 48 04.3	+0.5
PTQR				Sg	Sb	14 48 09.4	-1.0
	13nm,0.4s						
TERO	**Teramo**	**0.33**	**17**	Pg	Pg	14 48 05.0	+0.4
TERO				Sg	Sg	14 48 10.2	+1.1
	77nm,0.3s						
TERO	**Teramo**	**0.33**	**17**	Pg	Pg	14 48 05.0	+0.4
TERO				Sg	Sg	14 48 10.2	+1.1
	77nm,0.3s						
INTR	**Introdacqua**	**0.43**	**133**	Pg	Pg	14 48 07.0	+0.5
INTR				Sg	Sb	14 48 14.0	-0.5
INTR	**Introdacqua**	**0.43**	**133**	Pg	Pg	14 48 07.0	+0.5
INTR				Sg	Sb	14 48 14.0	-0.5
NRCA	**Norcia**	**0.59**	**333**	Pg	Pb	14 48 10.4	-0.1
NRCA				Sg	Sb	14 48 19.2	+0.1
	10.0nm,0.1s						
NRCA	**Norcia**	**0.59**	**333**	Pg	Pb	14 48 10.4	-0.1
NRCA				Sg	Sb	14 48 19.2	+0.1
	10.0nm,0.1s						

*CSEM **12** 14:49:34.7±0.2,45°.42N×24°.30E,h5km,MD3.3/5,Error ellipse: s-maj=4.3km s-min=3.9km az=174.0*
BUC 12 14:49:34.3±0.9,45°.42N×24°.30E,h8km±7km,MD3.3/5, 22C-18D,Error ellipse: s-maj=7.1km s-min=5.5km az=28.0,Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARR	**Arges**	**0.24**	**103**	S	Sg	14 49 42.0	-0.7
ARR	**Arges**	**0.24**	**103**	*i* S	Sg	14 49 42.0	-0.7
ARR	**Arges**	**0.24**	**103**	*i* S	Sg	14 49 42.0	-0.7
LOT	**Lotru**	**0.37**	**274**	⇑*i* P	Pb	14 49 42.7	-0.6
LOT				S	Sb	14 49 48.2	-1.2
LOT	**Lotru**	**0.37**	**274**	⇑*i* P	Pb	14 49 42.7	-0.6
LOT				*i* S	Sb	14 49 48.2	-1.2
LOT	**Lotru**	**0.37**	**274**	⇑*i* P	Pb	14 49 42.7	-0.6
LOT				*i* S	Sb	14 49 48.2	-1.2
MDB	**Medias**	**0.72**	**5**	⇓*i* P	Pb	14 49 49.1	-0.1
MDB	**Medias**	**0.72**	**5**	⇓*i* P	Pb	14 49 49.1	-0.1
MDB				*i* S	Sb	14 49 58.9	-0.3
MDB	**Medias**	**0.72**	**5**	⇓*i* P	Pb	14 49 49.1	-0.1
MDB				*i* S	Sb	14 49 58.9	-0.3
HUMR	**Humele**	**1.02**	**151**	⇑*i* P	Pn	14 49 55.0	+0.1
HUMR	**Humele**	**1.02**	**151**	⇑*i* P	Pn	14 49 55.0	+0.1
HUMR				*i* S	Sb	14 50 08.1	+0.3
HUMR	**Humele**	**1.02**	**151**	⇑*i* P	Pn	14 49 55.0	+0.1
HUMR				*i* S	Sb	14 50 08.1	+0.3
GZR	**Gura Zlata**	**1.07**	**269**	⇓*i* P	Pb	14 49 55.1	-0.1
GZR	**Gura Zlata**	**1.07**	**269**	⇓*i* P	Pb	14 49 55.1	-0.1
GZR				*i* S	Sb	14 50 09.6	+0.2
GZR	**Gura Zlata**	**1.07**	**269**	⇓*i* P	Pb	14 49 55.1	-0.1
GZR				*i* S	Sb	14 50 09.6	+0.2
DEV	**Deva**	**1.08**	**296**	⇓*i* P	Pb	14 49 55.2	0.0
DEV	**Deva**	**1.08**	**296**	⇓*i* P	Pb	14 49 55.2	0.0
DEV				*i* S	Sb	14 50 09.9	+0.4
DEV	**Deva**	**1.08**	**296**	⇓*i* P	Pb	14 49 55.2	0.0
DEV				*i* S	Sb	14 50 09.9	+0.4
MLR	**Muntele Rosu**	**1.16**	**86**	⇓*i* P	Pn	14 49 57.1	0.0
MLR	**Muntele Rosu**	**1.16**	**86**	⇓*i* P	Pn	14 49 57.1	0.0
MLR				*i* S	Sn	14 50 13.9	+0.6
MLR	**Muntele Rosu**	**1.16**	**86**	⇓*i* P	Pn	14 49 57.1	0.0
MLR				*i* S	Sn	14 50 13.9	+0.6
ISR	**Istrita**	**1.62**	**100**	S	Sn	14 50 24.6	+0.3
ISR	**Istrita**	**1.62**	**100**	*i* S	Sn	14 50 24.6	+0.3
ISR	**Istrita**	**1.62**	**100**	*i* S	Sn	14 50 24.6	+0.3
DRGR		**1.76**	**322**	⇓*i* P	Pn	14 50 05.3	+0.1
DRGR		**1.76**	**322**	⇓*i* P	Pn	14 50 05.3	+0.1
DRGR				*i* S	Sb	14 50 29.5	+0.3
DRGR		**1.76**	**322**	⇓*i* P	Pn	14 50 05.3	+0.1
DRGR				*i* S	Sb	14 50 29.5	+0.3
VRI	**Vrincioaia**	**1.76**	**75**	⇓*i* P	Pb	14 50 06.3	-0.6
VRI	**Vrincioaia**	**1.76**	**75**	⇓*i* P	Pb	14 50 06.3	-0.6
VRI	**Vrincioaia**	**1.76**	**75**	⇓*i* P	Pb	14 50 06.3	-0.6
BZS	**Buzias**	**1.89**	**277**	⇑*i* P	Pn	14 50 06.9	0.0
BZS	**Buzias**	**1.89**	**277**	⇑*i* P	Pn	14 50 06.9	0.0
BZS	**Buzias**	**1.89**	**277**	⇑*i* P	Pn	14 50 06.9	0.0
BZS				*i* S	Sb	14 50 33.0	+0.1
BZS	**Buzias**	**1.89**	**277**	⇑*i* P	Pn	14 50 06.9	0.0
BZS				*i* S	Sb	14 50 33.0	+0.1
TESR		**1.97**	**56**	⇑*i* P	Pn	14 50 08.7	+0.7
TESR		**1.97**	**56**	⇑*i* P	Pn	14 50 08.7	+0.7
TESR		**1.97**	**56**	⇑*i* P	Pn	14 50 08.7	+0.7
BURAR	**Bucovina Array**	**2.28**	**16**	⇑*i* P	Pn	14 50 12.8	+0.4
BURAR	**Bucovina Array**	**2.28**	**16**	⇑*i* P	Pn	14 50 12.8	+0.4
BURAR				*i* S	Sb	14 50 42.7	-1.7
BURAR	**Bucovina Array**	**2.28**	**16**	⇑*i* P	Pn	14 50 12.8	+0.4
BURAR				*i* S	Sb	14 50 42.7	-1.7
BOLS	**Boljevac**	**2.31**	**227**	*e*Pn	Pn	14 50 10.7	-2.0
BMR	**Baia Mare**	**2.32**	**347**	⇑*i* P	Pn	14 50 13.5	+0.7
BMR	**Baia Mare**	**2.32**	**347**	⇑*i* P	Pn	14 50 13.5	+0.7
BMR				*i* S	Sb	14 50 43.4	-1.7
BMR	**Baia Mare**	**2.32**	**347**	⇑*i* P	Pn	14 50 13.5	+0.7
BMR				*i* S	Sb	14 50 43.4	-1.7
VTS	**Vitosha**	**2.94**	**196**	⇑*i* P	Pn	14 50 21.6	+0.1
VTS	**Vitosha**	**2.94**	**196**	⇑*i* P	Pn	14 50 21.6	+0.1
VTS				*i* S	Sn	14 50 56.7	-0.4
VTS	**Vitosha**	**2.94**	**196**	*e*Pn	Pn	14 50 21.3	-0.2
VTS	**Vitosha**	**2.94**	**196**	⇑*i* P	Pn	14 50 21.6	+0.1
VTS				*i* S	Sn	14 50 56.7	-0.4
GRUS	**Gruza**	**2.98**	**240**	*e*Pn	Pn	14 50 24.0	+2.1
BARS	**Barje**	**3.16**	**215**	*e*Pn	Pn	14 50 26.5	+2.1
DIVS	**Divibare**	**3.34**	**248**	*e*Pn	Pn	14 50 24.0	-2.9
IVAS	**Ivanjica**	**3.49**	**240**	*e*Pn	Pn	14 50 30.2	+1.2

MEX 12 14:53:05.7±0.8,18°.21N×98°.86W,h34km±18km,MD3.5, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAIG	**Yautepec**	**0.68**	**343**	*eP*	Pn	14 53 16.6	-2.6
YAIG				*i* S	Sn	14 53 25.8	-3.0
MEIG	**Mezcala**	**0.77**	**249**	*eP*	Pn	14 53 18.2	-2.2
MEIG				*i* S	Sn	14 53 29.2	-1.7
PPM	**Popocatepetl**	**0.88**	**15**	*eP*	Pn	14 53 20.0	-2.5
PPM				*i* S	Sn	14 53 31.9	-2.7
CHVM	**Chichinautzin**	**0.92**	**343**	*eP*	Pn	14 53 20.4	-2.4
CHVM				*i* S	Sn	14 53 32.5	-2.7
MZVM		**1.04**	**340**	*i* P	Pn	14 53 22.5	-1.4
MZVM				*i* S	Sn	14 53 35.3	-1.9
SZVM	**Salazar**	**1.21**	**336**	*eP*	Pn	14 53 25.1	-1.8
SZVM				*eS*	Sn	14 53 39.5	-3.1
PBIG	**Penon de los B**	**1.25**	**350**	*i* P	Pn	14 53 24.6	-2.2
PBIG				*i* S	Sn	14 53 39.9	-2.4
IIO	**Organos**	**1.38**	**5**	*eP*	Pn	14 53 27.8	-1.3
IIO				*i* S	Sn	14 53 44.2	-2.4
PTVM	**Pico Tres Padr**	**1.40**	**350**	*eP*	Pn	14 53 27.3	-2.0
PTVM				*i* S	Sn	14 53 44.4	-2.4
ARIG	**Puente Sto Nin**	**1.41**	**273**	*eP*	Pn	14 53 27.1	-2.0
ARIG				*eS*	Sn	14 53 43.3	-3.4
TPIG	**Tehuac#an**	**1.44**	**81**	*eP*	Pn	14 53 27.7	-2.0
TPIG				*eS*	Sn	14 53 45.1	-2.5
VTVM	**Tizayuca**	**1.56**	**3**	*i* P	Pn	14 53 29.5	-2.0
VTVM				*i* S	Sn	14 53 47.6	-3.2
CAIG	**El Cayaco**	**1.77**	**230**	*eP*	Pn	14 53 31.6	-2.4
CAIG				*eS*	Sn	14 53 52.8	-2.5

IDC 12 15:04:23.4±2.5,8°.74N×82°.64W,h0km,mb3.7/6,

mb1 4.1/7,mb1mx3.8/22,mbtmp3.8/7,ML4.0/1,MS2.9/1, Ms1 2.9/1,ms1mx2.2/43,Error ellipse: s-maj=88.8km s-min=28.3km az=30.0,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**2.76**	**304**	Pn	Pn	15 05 08.0	-0.9
	25nm,0.3s,baz=99,slow=22,SNR=92						
JTS				Sn	Sn	15 05 41.3	-1.8
	12nm,0.3s,baz=182,slow=10,SNR=3.8						
ATAH	**Atahualpa**	**16.33**	**165**	LR	LR	15 13 11.2	
	comp=Z,50nm,22.0s,baz=171,slow=32						
PDAR	**Pinedale Array**	**41.31**	**330**	P	P	15 12 11.2	+0.1
	0.5nm,1.0s,baz=145,slow=9.9,SNR=2.7						
ULM	**Lac du Bonnet**	**42.82**	**348**	P	P	15 12 22.2	-0.8
	4.2nm,0.6s,baz=160,slow=5.3,SNR=7.7						
NVAR	**Mina Array Bea**	**43.60**	**318**	P	P	15 12 30.4	+0.5
	0.3nm,0.7s,baz=122,slow=8.6,SNR=3.6						
YKA	**Yellowknife Ar**	**58.46**	**343**	P	P	15 14 21.0	0.0
	1.5nm,0.8s,baz=138,slow=7.1,SNR=28						
ILAR	**Eielson Array**	**71.31**	**336**	P	P	15 15 45.0	+0.4
	0.8nm,0.7s,baz=112,slow=4.5,SNR=15						
TORD	**Torodi Ar. Bea**	**82.57**	**78**	P	P	15 16 49.3	+0.2
	0.4nm,0.7s,baz=280,slow=5.3,SNR=3.8						
CMAR	**Chiang Mai Arr**	**152.93**	**357**	PKPbc	PKPbc	15 24 23.0	-0.8
	0.2nm,0.3s,baz=336,slow=2.0,SNR=3.4						

DDA 12 15:07:15.3,38°.35N×36°.94E,h7km,MD2.7,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINB	**Pinarbasi**	**0.54**	**308**	*i* P	Pg	15 07 25.7	-0.3
PINB				*i* S	Sg	15 07 33.8	+0.5
AKCD	**Akcadag**	**0.78**	**93**	*i* P	Pn	15 07 33.8	+0.9
AKCD				*i* S	Sg	15 07 37.0	-3.7
GZT	**Gaziantep**	**1.11**	**153**	*i* P	Pb	15 07 37.0	+0.1
GZT				*i* S	Sb	15 07 51.6	-0.2
ELZG	**Elazig**	**1.61**	**84**	*i* P	Pn	15 07 44.9	+0.5
ELZG				*i* S	Sn	15 07 56.2	-9.4

IDC 12 15:30:27.9±2.0,49°.16N×151°.66E,h278km±20km,mb2.8/8, mb1 3.1/10,mb1mx2.9/28,mbtmp2.8/10,Error ellipse: s-maj=26.9km s-min=12.3km az=133.0,Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**5.48**	**42**	P	Pn	15 31 49.9	-0.4
	0.2nm,0.3s,baz=219,slow=11,SNR=15						
ASAJ	**Asahikawa**	**8.02**	**234**	P	Pn	15 32 22.1	+0.5
	0.4nm,0.3s,baz=79,slow=11,SNR=5.7						
ILAR	**Eielson Array**	**35.31**	**41**	P	P	15 36 56.0	-0.6
	0.3nm,0.9s,baz=286,slow=6.5,SNR=3.3						
INK	**Inuvik**	**40.16**	**34**	P	P	15 37 37.2	+0.4
	0.3nm,0.3s,baz=292,slow=6.0,SNR=8.2						
MKAR	**Makanchi Array**	**45.01**	**295**	P	P	15 38 15.8	-0.1
	0.5nm,0.7s,baz=69,slow=7.8,SNR=5.8						
MKAR				PcP	PcP	15 39 51.1	-0.6
	0.2nm,0.5s,baz=63,slow=4.0,SNR=6.0						
YKA	**Yellowknife Ar**	**49.59**	**37**	P	P	15 38 50.6	-0.2
	0.2nm,0.3s,baz=300,slow=7.0,SNR=4.6						
NVAR	**Mina Array Bea**	**62.18**	**63**	P	P	15 40 20.6	+0.3
	0.2nm,0.5s,baz=301,slow=9.4,SNR=3.4						
PDAR	**Pinedale Array**	**64.11**	**54**	P	P	15 40 32.8	-0.1
	0.3nm,0.5s,baz=354,slow=4.0,SNR=4.0						
WRA	**Warramunga Arr**	**70.50**	**197**	P	P	15 41 12.0	-0.6
	0.3nm,0.7s,baz=18,slow=4.5,SNR=3.2						
ASAR	**Alice Springs**	**74.21**	**197**	P	P	15 41 34.8	+0.4
	0.2nm,0.5s,baz=11,slow=5.6,SNR=12						

IDC 12 15:57:07.1±1.2,2°.90S×142°.38E,h0km,mb3.6/6, mb1 3.8/7,mb1mx3.6/19,mbtmp3.7/7,ML3.8/1,Error ellipse: s-maj=50.8km s-min=19.9km az=99.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.67**	**204**	P	P	16 01 27.0	0.0
	0.3nm,0.3s,baz=11,slow=12,SNR=20						
ASAR	**Alice Springs**	**22.22**	**201**	P	P	16 02 04.8	-0.6
	0.7nm,0.6s,baz=30,slow=10,SNR=15						
FITZ	**Fitzroy Crossi**	**22.31**	**226**	P	P	16 02 05.8	-0.6
	2.7nm,0.9s,baz=48,slow=12,SNR=3.7						
STKA	**Stephens Creek**	**28.84**	**181**	P	P	16 03 07.7	+0.4
	0.9nm,0.8s,baz=3.8,slow=15,SNR=2.5						
MKAR	**Makanchi Array**	**72.20**	**321**	P	P	16 08 34.4	+0.4
	0.7nm,0.9s,baz=99,slow=7.7,SNR=7.4						
ZALV	**Zalesovo Beam**	**73.97**	**329**	P	P	16 08 44.0	-0.3
	0.3nm,0.3s,baz=131,slow=6.1,SNR=4.3						
ILAR	**Eielson Array**	**84.50**	**24**	P	P	16 09 41.3	-0.4
	0.4nm,0.6s,baz=262,slow=4.5,SNR=10						
DBIC	**Dimbokro**	**147.15**	**278**	PKPbc	PKPbc	16 16 53.5	+0.1
	1.4nm,0.7s

DUWZ	**D'Urville Isla**	**2.80**	**212**	PN	Pn	16 06 40.2	-2.2
PAWZ	**Paruwai Farm**	**2.95**	**187**	PN	Pn	16 06 41.8	-2.5
TRWZ	**Traveller**	**2.95**	**183**	PN	Pn	16 06 41.9	-2.4
WEL	**Wellington**	**2.96**	**197**	PN	Pn	16 06 42.1	-2.3
SNZO	**South Karori**	**3.00**	**197**	PN	Pn	16 06 42.4	-2.4
MSWZ	**Moikau Station**	**3.00**	**189**	PN	Pn	16 06 42.4	-2.6
TCW	**Tory Channel**	**3.03**	**204**	PN	Pn	16 06 42.8	-2.4
BHW	**Baring Head**	**3.06**	**195**	PN	Pn	16 06 43.0	-2.6
PLWZ	**Palliser**	**3.15**	**189**	PN	Pn	16 06 44.2	-2.7
TUWZ	**Tuamarina**	**3.33**	**206**	PN	Pn	16 06 46.4	-2.7
NNZ	**Nelson**	**3.37**	**214**	PN	Pn	16 06 46.9	-2.7
QRZ	**Quartz Range**	**3.52**	**227**	PN	Pn	16 06 48.5	-3.0
BSWZ	**Blackbird Sta**	**3.61**	**205**	PN	Pn	16 06 49.9	-2.8
THZ	**Tophouse**	**4.02**	**214**	PN	Pn	16 06 55.0	-3.3
KHZ	**Kahutara**	**4.35**	**204**	PN	Pn	16 06 59.0	-3.3
DSZ	**Denniston Nort**	**4.55**	**222**	PN	Pn	16 07 01.2	-3.9
LTZ	**Lake Taylor**	**5.13**	**211**	PN	Pn	16 07 08.3	-4.5
MQZ	**McQueen's Vall**	**5.79**	**204**	⇑PN	Pn	16 07 16.4	-5.1
ODZ	**Otahua Downs**	**7.67**	**209**	⇑PN	Pn	16 07 42.0	-4.5

IDC 12 16:13:18.9±0.9,**23°25N**×**44°95W**,**h0**km,**mb4.0**/7,
mb1 4.1/7,**mb1mx3.7**/26,**mbtmp3.9**/7,**MS3.6**/8,**Ms1 3.6**/8,
ms1mx3.1/45,**Error ellipse: s-maj=34.8km**
s-min=21.3km az=31.0,**Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**20.47**	**259**	LR	LR	16 24 08.4	
	comp=Z,109nm,19.7s,baz=98,slow=32						
BBTS	**Babate**	**28.16**	**103**	LR	LR	16 28 33.6	
	comp=Z,103nm,18.3s,baz=268,slow=32						
DBIC	**Dimbokro**	**41.91**	**107**	P	P	16 21 11.6	+0.1
	2.5nm,0.9s,baz=315,slow=7.1,SNR=2.6						
DBIC				LR	LR	16 34 50.5	
	comp=Z,75nm,20.9s,baz=346,slow=31						
TORD	**Torodi Ar. Bea**	**45.27**	**94**	P	P	16 21 37.9	-0.8
	1.3nm,0.8s,baz=297,slow=8.0,SNR=8.4						
TORD				LR	LR	16 38 10.2	
	comp=Z,114nm,19.5s,baz=300,slow=33						
LPAZ	**La Paz**	**45.37**	**212**	P	P	16 21 40.0	0.0
	1.3nm,0.9s,baz=13,slow=7.3,SNR=4.2						
ULM	**Lac du Bonnet**	**47.69**	**318**	LR	LR	16 38 51.5	
	comp=Z,97nm,19.5s,baz=287,slow=32						
NOA	**NORSAR Array B**	**53.69**	**30**	LR	LR	16 40 53.1	
	comp=Z,30nm,18.7s,baz=0.0,slow=31						
VRAC	**Vranov**	**54.30**	**45**	LR	LR	16 41 12.3	
	comp=Z,19nm,21.2s,baz=179,slow=31						
PDAR	**Pinedale Array**	**56.22**	**307**	P	P	16 23 00.9	-0.4
	1.3nm,0.9s,baz=99,slow=7.7,SNR=7.8						
PDAR				LR	LR	16 45 49.5	
	comp=Z,87nm,21.1s,baz=355,slow=35						
YKA	**Yellowknife Ar**	**60.26**	**330**	P	P	16 23 28.3	-0.4
	0.9nm,0.9s,baz=98,slow=7.4,SNR=16						
ILAR	**Eielson Array**	**74.15**	**334**	P	P	16 24 57.2	+0.3
	2.4nm,0.8s,baz=71,slow=4.6,SNR=34						
ZALV	**Zalesovo Beam**	**91.79**	**27**	P	P	16 26 29.5	+0.9
	0.4nm,0.5s,baz=273,slow=5.5,SNR=4.6						

IDC 12 16:13:46.6±2.5,**6°80N**×**124°90E**,**h0**km,**mb3.4**/3,
mb1 3.7/3,**mb1mx3.3**/24,**mbtmp3.4**/3,**Error ellipse:**
s-maj=223.3km s-min=27.3km az=64.0,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.15**	**161**	P	P	16 19 41.0	+0.2
	0.3nm,0.3s,baz=341,slow=9.1,SNR=8.2						
ASAR	**Alice Springs**	**31.53**	**164**	P	P	16 20 10.5	-0.3
	0.3nm,0.5s,baz=341,slow=7.2,SNR=15						
MKAR	**Makanchi Array**	**54.02**	**325**	P	P	16 23 12.7	0.0
	0.1nm,0.5s,baz=133,slow=7.6,SNR=4.4						

CSEM ***12*** *16:21:10.4,42°.27N×13°.49E,h11*km*,MD2.1/9,After ROM*
ROM 12 16:21:10.4±0.1,**42°27N**×**13°49E**,**h11**km,**Md2.1**/9,**Ml1.6**/7,
Error ellipse: s-maj=1.2km s-min=1.0km az=58.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.07**	**92**	Pg	Pg	16 21 13.2	+0.4
FAGN				Sg	Sg	16 21 14.8	+0.2
	1µm,0.3s						
FAGN	**Fagnano**	**0.07**	**92**	Pg	Pg	16 21 13.2	+0.4
FAGN				Sg	Sg	16 21 14.8	+0.2
	1µm,0.3s						
AQU	**L'Aquila**	**0.10**	**324**	Pg	Pg	16 21 13.8	+0.5
AQU				Sg	Sg	16 21 16.0	+0.7
	200nm,0.2s						
AQU	**L'Aquila**	**0.10**	**324**	Pg	Pg	16 21 13.8	+0.5
AQU				Sg	Sg	16 21 16.0	+0.7
	200nm,0.2s						
PTQR	**Pietraquaria**	**0.26**	**194**	Pg	Pg	16 21 16.4	+0.6
PTQR				Sg	Sb	16 21 20.6	-1.1
	19nm,0.2s						
PTQR	**Pietraquaria**	**0.26**	**194**	Pg	Pg	16 21 16.4	+0.6
PTQR				Sg	Sb	16 21 20.6	-1.1
	19nm,0.2s						
CAMP	**Campotosto**	**0.27**	**348**	Pg	Pb	16 21 17.0	-0.6
CAMP				Sg	Sb	16 21 21.3	-1.1
	12nm,0.7s						
CAMP	**Campotosto**	**0.27**	**348**	Pg	Pb	16 21 17.0	-0.6
CAMP				Sg	Sb	16 21 21.3	-1.1
	12nm,0.7s						
FIAM	**Fiamignano**	**0.27**	**270**	Pg	Pg	16 21 16.6	+0.5
FIAM				Sg	Sg	16 21 20.9	+0.9
	109nm,0.9s						
FIAM	**Fiamignano**	**0.27**	**270**	Pg	Pg	16 21 16.6	+0.5
FIAM				Sg	Sg	16 21 20.9	+0.9
	109nm,0.9s						
VCEL	**Villa Celiera**	**0.29**	**64**	Pg	Pb	16 21 17.6	-0.3
VCEL				Sg	Sg	16 21 21.6	+1.0
	121nm,0.5s						
VCEL	**Villa Celiera**	**0.29**	**64**	Pg	Pb	16 21 17.6	-0.3
VCEL				Sg	Sg	16 21 21.6	+1.0
	121nm,0.5s						
TERO	**Teramo**	**0.36**	**14**	Pg	Pg	16 21 17.9	+0.1
TERO				Sg	Sg	16 21 23.3	+0.6
	49nm,0.2s						
TERO	**Teramo**	**0.36**	**14**	Pg	Pg	16 21 17.9	+0.1
TERO				Sg	Sg	16 21 23.3	+0.6
	49nm,0.2s						
INTR	**Introdacqua**	**0.40**	**129**	Pg	Pg	16 21 19.1	+0.6
INTR				Sg	Sb	16 21 25.2	-0.8
	56nm,0.3s						
INTR	**Introdacqua**	**0.40**	**129**	Pg	Pg	16 21 19.1	+0.6
INTR				Sg	Sb	16 21 25.2	-0.8
	56nm,0.3s						
SDI	**San Donato**	**0.61**	**157**	Pg	Pg	16 21 21.6	-0.7
	11nm,0.2s						
SDI	**San Donato**	**0.61**	**157**	Pg	Pg	16 21 21.6	-0.7
	11nm,0.2s						

IDC 12 16:21:28.2±48.0,**17°52S**×**176°74W**,**h0**km,**mb3.9**/3,
mb1 4.1/3,**mb1mx3.6**/19,**mbtmp3.9**/3,**Error ellipse:**
s-maj=885.9km s-min=161.9km az=79.0,**Fiji Islands**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.21**	**241**	P	P	16 29 06.8	+0.1
	0.7nm,0.8s,baz=96,slow=10,SNR=4.2						
WRA	**Warramunga Arr**	**46.27**	**259**	P	P	16 29 55.6	-0.2
	0.8nm,0.3s,baz=96,slow=7.6,SNR=42						
ASAR	**Alice Springs**	**46.43**	**254**	P	P	16 29 56.9	-0.2
	1.3nm,0.5s,baz=89,slow=8.1,SNR=63						

BJI ***12*** *16:24:33.0,14°.96S×75°.96W,h46*km*,mB5.2/7,Ms5.1/6,*
Ms7 4.9/7
ISCJB ***12*** *16:24:39.3±0.8,14°.29S±0°.06×75°.35W±0°.06,h80*km±7km*,*
mb4.5/45,Error ellipse: s-maj=13.0km s-min=4.8km
az=43.8
IDC ***12*** *16:24:39.4±0.7,14°.28S×75°.27W,h65*km±5km*,mb4.1/11,*
mb1 4.3/14,mb1mx4.2/21,mbtmp4.1/14,MS3.7/13,
Ms1 3.7/13,ms1mx3.5/28,Error ellipse: s-maj=26.1km
s-min=10.1km az=55.0
NEIC ***12*** *16:24:40.1±0.7,14°.25S×75°.29W,h73*km±6km*,mb4.8/34,*
Error ellipse: s-maj=11.2km s-min=4.9km az=52.0
NEIC Felt [III] at Ica and Palpa; [II] at Ayacucho, Nazca and
Pisco. Also felt at Chincha Alta, Lima and Nuevo Imperial.

ISC 12 16:24:38.9±0.5,**14°48S**±0°.07×**75°51W**±0°.07,**h68**km±4km,
h68km:**pP-P,n372,**σ1**27/394,mb4.7/45,41C-47D,Near**
coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.79**	**332**	*e*Pn	**Pn**	**16 25 19.8**	**-1.6**
NNA				S	**Sn**	**16 25 54.5**	**+0.5**
NNA	**Nana**	**2.79**	**332**	P	**Pn**	**16 25 21.2**	**-0.2**
	106nm,0.3s,baz=171,slow=13,SNR=121						
NNA				S	**Sn**	**16 25 54.5**	**+0.5**
	206nm,0.3s,baz=229,slow=22,SNR=6.0						
ARE	**Arequipa**	**4.35**	**118**	*e*P	**Pn**	**16 25 43.0**	**+0.2**
ARE				*e*S	**Sn**	**16 26 33.0**	**+0.6**
LPAZ	**La Paz**	**7.34**	**105**	*e*P	**Pn**	**16 26 26.9**	**+2.8**
LPAZ				S	**Sn**	**16 27 48.7**	**+2.4**
LPAZ	**La Paz**	**7.34**	**105**	P	**Pn**	**16 26 26.6**	**+2.5**
	2.9nm,0.3s,baz=289,slow=9.5,SNR=47						
LPAZ				S	**Sn**	**16 27 48.7**	**+2.4**
	0.8nm,0.3s,baz=339,slow=4.4,SNR=3.6						
LPAZ				LR	LR	16 28 42.7	
	comp=Z,67nm,21.9s,baz=100,slow=34						
ATAH	**Atahualpa**	**7.83**	**338**	P	**Pn**	**16 26 33.4**	**+2.9**
ATAH				S	Sn	16 28 11.8	+14
ATAH	**Atahualpa**	**7.83**	**338**	P	**Pn**	**16 26 33.4**	**+2.9**
	2.5nm,0.3s,baz=180,slow=12,SNR=13						
ATAH				S	Sn	16 28 11.8	+14
	11nm,0.3s,baz=315,slow=23,SNR=8.1						
LVC	**Limon Verde**	**10.23**	**143**	*e*Pn	**Pn**	**16 27 03.2**	**0.0**
SAML	**Samuel**	**13.26**	**67**	*e*P	Pn	16 27 40.1	-4.2
	19nm,0.3s						
SIV	**San Ignacio**	**14.02**	**98**	P	**Pn**	**16 27 51.5**	**-2.9**
SIV				S	**Sn**	**16 30 28.7**	**+0.2**
SIV	**San Ignacio**	**14.02**	**98**	P	**Pn**	**16 27 51.5**	**-2.9**
	0.3nm,0.3s,baz=283,slow=15,SNR=15						
SIV				S	**Sn**	**16 30 28.7**	**+0.2**
	0.1nm,0.3s,baz=240,slow=18,SNR=3.6						
SIV				LR	LR	16 33 52.8	
	comp=Z,676nm,20.6s,slow=40						
OTAV	**Otavalo**	**14.91**	**348**	*e*P	**Pn**	**16 28 06.8**	**+0.5**
	19nm,0.8s						
OTAV				*e*S	Sn	16 30 56.5	+5.7
CFAA	**Coronel Fontan**	**18.30**	**160**	P	**Pn**	**16 28 50.4**	**+2.2**
CFAA	**Coronel Fontan**	**18.30**	**160**	P	**Pn**	**16 28 50.4**	**+2.2**
	0.1nm,0.3s,baz=327,slow=12,SNR=11						
CFAA				LR	LR	16 35 12.3	
	comp=Z,8.7nm,19.3s,baz=295,slow=34						
ROSC	**El Rosal**	**19.24**	**4**	*e*P	**Pn**	**16 29 01.5**	**+1.6**
ROSC	**El Rosal**	**19.24**	**4**	P	**P**	**16 28 58.1**	**-0.2**
	1.1nm,0.3s,baz=272,slow=22,SNR=3.3						
CPUP	**Villa Florida**	**20.69**	**128**	P	**P**	**16 29 14.5**	**+0.9**
CPUP	**Villa Florida**	**20.69**	**128**	P	**P**	**16 29 14.5**	**+0.9**
	3.9nm,0.8s,baz=291,slow=12,SNR=11						
SDV	**Santo Domingo**	**23.71**	**12**	*e*P	**P**	**16 29 43.9**	**-1.1**
	0.5nm,0.9s						
PLCA	**Paso Flores**	**26.52**	**172**	*e*P	P	16 30 03.8	-6.4
	6.9nm,0.8s						
PLCA	**Paso Flores**	**26.52**	**172**	LR	LR	16 39 15.1	
	comp=Z,94nm,18.5s,baz=175,slow=33						
BDFB	**Brasilia**	**26.57**	**96**	LR	LR	16 41 26.9	
	comp=Z,288nm,21.1s,baz=1.1,slow=38						
CELP	**Cerrillos**	**33.52**	**16**	*e*P	**P**	**16 31 10.8**	**-1.4**
SJG	**San Juan**	**33.67**	**16**	LR	LR	16 46 04.2	
	comp=Z,58nm,21.4s,baz=121,slow=38						
CMIG	**Matias Romero**	**36.74**	**328**	LR	LR	16 43 47.4	
	comp=Z,130nm,20.4s,baz=5.0,slow=31						
LRAL	**Lakeview Retre**	**48.50**	**347**	*e*P	**P**	**16 33 13.6**	**-1.4**
	11nm,0.9s						
732A	**Laxson Ranch,**	**49.03**	**331**	⇑P	**P**	**16 33 19.5**	**+0.3**
	baz=49,SNR=8.8						
632A	**Uvalde**	**49.61**	**332**	P	**P**	**16 33 24.1**	**+0.6**
	baz=50,SNR=11						
KMSC	**Kings Mountain**	**49.65**	**354**	P	**P**	**16 33 23.1**	**-0.6**
	baz=50,SNR=5.6						
631A	**Perdido Creek**	**49.89**	**331**	⇓P	**P**	**16 33 26.0**	**+0.3**
	baz=50						
532A	**Rocksprings**	**50.19**	**332**	P	**P**	**16 33 28.7**	**+0.7**
	baz=50,SNR=7.7						
SWET	**Sewanee**	**50.40**	**349**	*e*P	**P**	**16 33 27.6**	**-1.8**
	19nm,0.7s						
JCT	**Junction City**	**50.44**	**333**	*e*P	**P**	**16 33 30.5**	**+0.6**
	4.3nm,0.7s						
JCT	**Junction City**	**50.44**	**333**	⇑P	**P**	**16 33 31.0**	**+1.1**
	baz=51						
531A	**Rocksprings**	**50.51**	**332**	P	**P**	**16 33 31.1**	**+0.6**
	baz=51,SNR=7.6						
WHTX	**Lake Whitney**	**50.77**	**336**	⇑P	**P**	**16 33 32.6**	**+0.4**
	baz=51,SNR=6.6						
530A	**J-C Ranch, Com**	**50.87**	**331**	P	**P**	**16 33 33.6**	**+0.5**
	baz=51,SNR=8.9						
431A	**Sonora**	**50.98**	**332**	P	**P**	**16 33 34.4**	**+0.5**
	baz=51,SNR=8.9						
628A	**Black Gap, Mar**	**51.07**	**329**	P	**P**	**16 33 35.9**	**+1.2**
	baz=51,SNR=11						
332A	**Millersview**	**51.19**	**333**	⇓P	**P**	**16 33 35.9**	**+0.4**
	baz=51,SNR=9.2						
529A	**Stev Forest Ra**	**51.27**	**330**	P	**P**	**16 33 36.5**	**+0.4**
	baz=51,SNR=20						
627A	**Terlingua Ranc**	**51.30**	**328**	⇑P	**P**	**16 33 37.3**	**+0.8**
	baz=51						
TZTN	**Tazewell**	**51.31**	**352**	*e*P	**P**	**16 33 34.5**	**-1.7**
	7.7nm,0.6s						
TXAR	**Lajitas Array**	**51.34**	**328**	P	**P**	**16 33 37.2**	**+0.5**
TXAR	**Lajitas Array**	**51.34**	**328**	P	**P**	**16 33 37.2**	**+0.5**
	9.8nm,0.7s,baz=150,slow=8.7,SNR=44						
430A	**Bagett Ranch,**	**51.36**	**331**	P	**P**	**16 33 37.0**	**+0.2**
	baz=52,SNR=10						
331A	**San Angelo**	**51.43**	**333**	P	**P**	**16 33 37.2**	**0.0**
	baz=52,SNR=10						
429A	**Davenport Ranc**	**51.53**	**331**	P	**P**	**16 33 38.8**	**+0.7**
	baz=52,SNR=8.8						
232A	**Coleman**	**51.58**	**334**	P	**P**	**16 33 38.6**	**+0.2**
	baz=52,SNR=14						
MIAR	**Mount Ida**	**51.69**	**341**	*e*P	**P**	**16 33 38.5**	**-0.5**
	7.6nm,0.7s						
626A	**Big Bend Ranch**	**51.76**	**328**	P	**P**	**16 33 40.9**	**+1.0**
	baz=52,SNR=68						
428A	**Kincaid Ranch,**	**51.99**	**330**	P	**P**	**16 33 42.1**	**+0.6**
	baz=52,SNR=5.4						
526A	**Mary Lane Ranc**	**52.15**	**328**	P	**P**	**16 33 43.8**	**+1.0**
	baz=52,SNR=8.5						
ABTX	**Abilene, Hawle**	**52.22**	**334**	P	**P**	**16 33 43.4**	**+0.3**
	baz=52,SNR=9.8						
329A	**Wagon Wheel Ra**	**52.29**	**331**	P	**P**	**16 33 44.1**	**+0.4**
	baz=52,SNR=7.1						
427A	**Hayter Ranch,**	**52.44**	**330**	P	**P**	**16 33 45.2**	**+0.3**
	baz=53,SNR=6.4						
131A	**Roby**	**52.58**	**333**	⇑P	**P**	**16 33 46.2**	**+0.4**
	baz=53						
328A	**Wristen Ranch,**	**52.59**	**330**	P	**P**	**16 33 46.3**	**+0.4**
	baz=53,SNR=13						
229A	**Bryant Ranch,**	**52.61**	**332**	⇓P	**P**	**16 33 46.1**	**0.0**
	baz=53						
Z32A	**Haskell**	**52.74**	**335**	⇓P	**P**	**16 33 46.9**	**0.0**
	baz=53						
130A	**Snyder**	**52.76**	**333**	⇓P	**P**	**16 33 47.6**	**+0.4**
	baz=53						
Z31A	**Sharp Cattle R**	**53.02**	**334**	P	**P**	**16 33 49.3**	**+0.2**
	baz=53,SNR=17						
228A	**UT Block 9, Go**	**53.10**	**331**	⇓P	**P**	**16 33 49.9**	**+0.1**
	baz=53,SNR=5.8						
326A	**Caldwell Ranch**	**53.11**	**329**	P	**P**	**16 33 50.1**	**+0.3**
	baz=53,SNR=7.0						
425A	**Indio Mountain**	**53.19**	**328**	P	**P**	**16 33 50.6**	**+0.2**
	baz=53,SNR=20						
Y32A	**R-V Farms, Ver**	**53.33**	**335**	⇓P	**P**	**16 33 51.6**	**+0.4**
	baz=54,SNR=5.9						
WCI	**Wyandotte Cave**	**53.39**	**349**	*e*P	**P**	**16 33 49.9**	**-1.8**
	22nm,0.8s						
Z30A	**Sanderson Ranc**	**53.42**	**333**	⇑P	**P**	**16 33 52.1**	**+0.1**
	baz=54,SNR=26						
128A	**Castleberry Fa**	**53.47**	**332**	P	**P**	**16 33 52.4**	**0.0**
	baz=54,SNR=7.9						
Y31A	**Rekieta Farm,**	**53.63**	**334**	P	**P**	**16 33 53.8**	**+0.3**
	baz=54,SNR=14						
325A	**Bean Ranch, Si**	**53.65**	**329**	P	**P**	**16 33 54.4**	**+0.5**
	baz=54,SNR=5.3						
Z29A	**Hungry Hill Ra**	**53.65**	**333**	P	**P**	**16 33 53.6**	**-0.1**
	baz=54,SNR=5.4						
TUL1	**Tulsa**	**53.66**	**340**	P	**P**	**16 33 53.6**	**0.0**
	baz=54,SNR=11						
226B	**Tecolote Peak,**	**53.82**	**330**	P	**P**	**16 33 55.8**	**+0.8**
	baz=54,SNR=13						
127A	**Arkansas Junct**	**53.92**	**331**	⇓P	**P**	**16 33 56.2**	**+0.5**
	baz=54						
X31A	**McDonald Ranch**	**54.09**	**335**	P	**P**	**16 33 57.0**	**+0.2**
	baz=54,SNR=11						
Y29A	**Porterfield Fa**	**54.15**	**333**	⇑P	**P**	**16 33 57.3**	**0.0**
	baz=54,SNR=8.6						
225A	**Deer Hill, Car**	**54.17**	**329**	P	**P**	**16 33 58.2**	**+0.6**
	baz=54,SNR=6.3						
126A	**Clayton Basin,**	**54.21**	**330**	P	**P**	**16 33 58.4**	**+0.5**
	baz=54,SNR=10						
X30A	**Coker Ranch, T**	**54.30**	**334**	P	**P**	**16 33 58.4**	**0.0**
	baz=54,SNR=5.9						
Z27A	**Tatum**	**54.38**	**331**	P	**P**	**16 33 59.2**	**+0.1**
	baz=54,SNR=8.8						
125A	**Gardner Draw,**	**54.53**	**330**	⇑P	**P**	**16 34 00.3**	**+0.1**
	baz=55,SNR=6.4						
X29A	**Tulia**	**54.66**	**333**	P	**P**	**16 34 00.9**	**-0.2**
	baz=55,SNR=8.3						
Z26A	**Caprock**	**54.71**	**331**	P	**P**	**16 34 01.9**	**+0.5**
	baz=55,SNR=6.6						
Y27A	**Causey**	**54.84**	**332**	P	**P**	**16 34 02.4**	**0.0**
	baz=55,SNR=7.0						
ACSO	**Alum Creek Sta**	**54.87**	**353**	*e*P	**P**	**16 34 00.3**	**-2.0**
	9.9nm,0.8s						
124A	**Stringfield Ra**	**54.96**	**329**	P	**P**	**16 34 04.1**	**+0.7**
	baz=55,SNR=7.8						
V31A	**Spring Creek L**	**55.03**	**336**	⇑P	**P**	**16 34 04.1**	**+0.4**
	baz=55,SNR=5.9						
Z25A	**Roswell**	**55.07**	**330**	P	**P**	**16 34 04.0**	**-0.1**
	baz=55,SNR=9.1						
Z24A	**Sheeppen Canyo**	**55.42**	**330**	P	**P**	**16 34 07.0**	**+0.2**
	baz=56,SNR=14						
320A	**Kipp Ranch, An**	**55.50**	**326**	⇓P	**P**	**16 34 08.3**	**+1.1**
	baz=56						
SFIN	**Scholer Farm**	**55.62**	**349**	P	**P**	**16 34 05.6**	**-2.1**
	baz=56,SNR=5.2						
X26A	**CR and CF Fran**	**55.69**	**332**	⇓P	**P**	**16 34 08.7**	**+0.2**
	baz=56						
122A	**Conniff Cattle**	**55.74**	**328**	⇓P	**P**	**16 34 10.1**	**+1.1**
	baz=56,SNR=5.3						
Z23A	**Rita Site, Whi**	**55.80**	**329**	⇑P	**P**	**16 34 10.0**	**+0.7**
	baz=56,SNR=5.6						
220A	**Playas Peak, P**	**55.93**	**326**	P	**P**	**16 34 11.1**	**+0.8**
	baz=56,SNR=14						
319A	**Douglas**	**55.94**	**325**	P	**P**	**16 34 11.5**	**+1.1**
	baz=56,SNR=13						
V28A	**Channing**	**55.99**	**334**	P	**P**	**16 34 10.8**	**+0.2**
	baz=56,SNR=5.9						
121A	**Cooks Peak, D**	**56.02**	**327**	P	**P**	**16 34 12.1**	**+1.1**
	baz=56,SNR=9.7						
T31A	**Randall Ranch,**	**56.12**	**337**	P	**P**	**16 34 11.6**	**+0.1**
	baz=56,SNR=8.0						
W25A	**X Bar L Ranch,**	**56.54**	**332**	P	**P**	**16 34 14.6**	**0.0**
	baz=57,SNR=6.2						
Z21A	**St. Cloud Mine**	**56.57**	**328**	⇓P	**P**	**16 34 15.9**	**+1.0**
	baz=57						
RKT	**Rikitea**	**56.63**	**252**	*e*T	T	17 34 54.0	
	3.1nm,0.2s						
Y22A	**Socorro**	**56.70**	**329**	⇑P	**P**	**16 34 16.6**	**+0.7**
	baz=57						
V26A	**Tequesquite Ra**	**56.71**	**333**	⇑P	**P**	**16 34 15.7**	**0.0**
	baz=57,SNR=7.2						
KSU1	**Kansas State U**	**56.83**	**340**	*e*P	**P**	**16 34 15.2**	**-1.2**
	16nm,0.8s						
Z20A	**Nine Sixteen R**	**56.90**	**327**	P	**P**	**16 34 18.4**	**+1.2**
	baz=57,SNR=12						
Y21A	**Point of Rocks**	**57.12**	**328**	⇓P	**P**	**16 34 20.0**	**+1.2**
	baz=57,SNR=5.3						
LAZ	**Ladron**	**57.16**	**329**	*e*P	**P**	**16 34 19.6**	**+0.5**
	5.4nm,1.0s						
U26A	**Atchley Ranch,**	**57.19**	**333**	⇑P	**P**	**16 34 19.1**	**-0.1**
	baz=57,SNR=6.3						
ANMO	**Albuquerque**	**57.26**	**330**	*e*P	**P**	**16 34 19.8**	**+0.1**
	3.4nm,0.9s						
T27A	**Campo**	**57.31**	**334**	P	**P**	**16 34 20.0**	**0.0**
	baz=57,SNR=8.2						
TUC	**Tucson**	**57.48**	**325**	*e*P	**P**	**16 34 20.2**	**-1.0**
	1.6nm,0.8s						
U25A	**Circle Dot Ran**	**57.49**	**332**	P	**P**	**16 34 21.6**	**+0.2**
	baz=58,SNR=6.5						
X21A	**Alamocita Cree**	**57.52**	**328**	⇑P	**P**	**16 34 22.6**	**+0.9**
	baz=58						
V23A	**Ortiz Mt. (NFS**	**57.77**	**331**	⇑P	**P**	**16 34 24.1**	**+0.7**
	baz=58						
T26A	**Comanche Natio**	**57.78**	**334**	⇑P	**P**	**16 34 23.6**	**+0.2**
	baz=58,SNR=6.5						
U24A	**Moreno Valley**	**57.89**	**332**	⇓P	**P**	**16 34 25.0**	**+0.7**
	baz=58						
X20A	**Quemado**	**57.96**	**328**	⇑P	**P**	**16 34 25.6**	**+0.9**
	baz=58						
S26A	**Kim**	**58.10**	**334**	P	**P**	**16 34 26.0**	**+0.4**
	baz=58,SNR=14						
T25A	**Trinidad**	**58.11**	**333**	P	**P**	**16 34 26.4**	**+0.7**
	baz=58,SNR=5.4						
U23A	**El Rito**	**58.25**	**331**	P	**P**	**16 34 27.7**	**+1.0**
	baz=58,SNR=5.1						
V22A	**San Miguel Ran**	**58.26**	**330**	P	**P**	**16 34 27.6**	**+0.9**
	baz=58,SNR=9.0						
214A	**Organ Pipe Nat**	**58.39**	**323**	P	**P**	**16 34 28.6**	**+1.1**
	baz=58,SNR=10						
W20A	**Ramah**	**58.42**	**328**	P	**P**	**16 34 28.9**	**+1.0**
	baz=59,SNR=8.7						
U22A	**Llaves**	**58.60**	**331**	P	**P**	**16 34 30.1**	**+1.0**
	baz=59,SNR=5.3						
R26A	**Arlington**	**58.67**	**

IRM	Iron Mountain	61.33	323	P	P	16 34 48.9	+1.2
	baz=62,SNR=17						
U15A	North Rim	61.39	327	P	P	16 34 49.7	+1.4
	baz=62,SNR=8.8						
N24A	Carr	61.39	335	⇑P	P	16 34 49.4	+1.3
	baz=62						
P21A	Newcastle	61.42	332	⇓P	P	16 34 49.4	+0.9
	baz=62,SNR=7.2						
O22A	Kremmling	61.54	333	P	P	16 34 49.6	+0.2
	baz=62,SNR=5.3						
BELC	Belle Mtn. Jos	61.72	322	⇓P	P	16 34 51.5	+1.0
	baz=62						
GMRC	Granite Mounta	62.07	323	P	P	16 34 54.1	+1.3
	baz=62,SNR=6.5						
MURC	Murrieta	62.17	321	⇓P	P	16 34 53.8	+0.5
	baz=62						
P19A	Cripple Cowboy	62.21	331	P	P	16 34 54.5	+0.8
	baz=62,SNR=6.8						
O20A	White River Ci	62.27	332	P	P	16 34 54.5	+0.4
	baz=62,SNR=8.2						
N21A	Black Mountain	62.46	333	P	P	16 34 56.6	+1.2
	baz=63,SNR=9.0						
HEC	Hector,Ludlow	62.50	323	⇑P	P	16 34 56.9	+1.4
	baz=63						
K25A	Mack Ranch, Ha	62.50	337	⇓P	P	16 34 56.7	+1.2
	baz=63						
SRU	San Rafael	62.54	330	⇓P	P	16 34 56.6	+0.7
	baz=63						
TUQ	Turquoise Moun	62.69	323	P	P	16 34 58.2	+1.4
	baz=63,SNR=6.1						
Q16A	Castle Valley	62.71	329	P	P	16 34 58.0	+1.0
	baz=63,SNR=5.2						
CCUT	Cedar City	62.80	327	eP	P	16 34 59.0	+1.3
	10nm,0.8s						
CCUT				ePcP	PcP	16 35 35.8	+0.2
L23A	Garrett	62.81	335	P	P	16 34 58.0	+0.3
	baz=63,SNR=5.2						
P18A	Preston Nutter	62.81	330	P	P	16 34 58.8	+1.0
	baz=63,SNR=5.8						
N20A	Spence Gulch,	62.85	333	P	P	16 34 58.5	+0.5
	baz=63,SNR=6.6						
BFSC	Mount Baldy Ra	62.88	321	P	P	16 34 59.7	+1.6
	baz=63,SNR=6.8						
MSU	Marysvale	62.90	328	eP	P	16 34 59.0	+0.6
	10nm,0.9s						
ARUT	Antelope Range	63.02	327	eP	P	16 35 00.3	+1.2
	24nm,0.8s						
L22A	Ellis Ranch, M	63.04	335	⇑P	P	16 35 00.7	+1.5
	baz=63						
M21A	Separation Pea	63.08	334	P	P	16 34 59.9	+0.4
	baz=63,SNR=11						
GSC	Goldstone	63.10	323	P	P	16 35 01.2	+1.6
	baz=63,SNR=6.2						
M20A	Sweetwater, Wa	63.35	333	P	P	16 35 01.9	+0.6
	baz=64,SNR=7.8						
L21A	Rawlins	63.38	334	P	P	16 35 01.5	0.0
	baz=64,SNR=10						
EDW2	Edwards Air Fo	63.52	322	⇑P	P	16 35 03.2	+0.9
	baz=64						
K22A	Casper	63.59	335	P	P	16 35 03.2	+0.5
	baz=64,SNR=5.0						
RSSD	Black Hills	63.86	337	eP	P	16 35 04.5	-0.1
K21A	Alcova	63.88	334	P	P	16 35 05.3	+0.6
	baz=64,SNR=10						
FURC	Furnace Creek,	63.95	324	⇑P	P	16 35 06.6	+1.6
	baz=64						
MPMC	Manual Prospec	64.03	323	P	P	16 35 06.6	+0.7
	baz=64,SNR=9.4						
N17A	Moffit Pass	64.12	331	P	P	16 35 07.5	+1.1
	baz=64,SNR=12						
JLU	Jordanelle	64.14	330	eP	P	16 35 06.5	0.0
	31nm,1.4s						
ARVC	Arvin	64.19	321	⇑P	P	16 35 07.8	+1.2
	baz=64						
ISA	Isabella	64.34	322	⇑P	P	16 35 08.8	+1.1
	baz=64,SNR=7.0						
L19A	Farson	64.36	333	P	P	16 35 08.5	+0.7
	baz=64,SNR=6.7						
K20A	Yellowstone Ra	64.36	334	P	P	16 35 08.0	+0.2
	baz=64,SNR=6.3						
M17A	Scullys Gap (B	64.45	331	⇓P	P	16 35 08.5	0.0
	baz=65,SNR=7.8						
DUG	Dugway	64.50	329	eP	P	16 35 09.5	+0.7
	18nm,0.8s						
DUG	Dugway	64.50	329	P	P	16 35 09.8	+1.1
	baz=65,SNR=22						
L18A	Fontenelle, Gr	64.52	332	P	P	16 35 09.2	+0.3
	baz=65,SNR=9.2						
J21A	Lysite	64.55	335	P	P	16 35 09.3	+0.3
	baz=65,SNR=5.6						
R11A	Troy Canyon, C	64.58	326	P	P	16 35 10.8	+1.4
	baz=65,SNR=19						
I22A	9 Mile Ranch,	64.61	336	P	P	16 35 09.6	+0.3
	baz=65,SNR=5.4						
K19A	Absolon Red Bu	64.71	333	P	P	16 35 10.1	0.0
	baz=65,SNR=6.1						
VES	Vestal, Richgr	64.83	322	⇓P	P	16 35 11.8	+1.0
	baz=65						
I21A	Big Trails, Te	64.87	335	P	P	16 35 10.9	-0.2
	baz=65,SNR=11						
PDAR	Pinedale Array	64.98	333	P	P	16 35 11.7	-0.2
PDAR	Pinedale Array	64.98	333	P	P	16 35 11.7	-0.2
	2.7nm,1.0s,baz=142,slow=7.5,SNR=13						
HWUT	Hardware Ranch	64.98	331	eP	P	16 35 11.7	-0.2
	15nm,1.1s						
L17A	Cokeville	65.04	332	P	P	16 35 12.2	-0.1
	baz=65,SNR=6.6						
K18A	Toltan Ranch,	65.09	333	⇓P	P	16 35 13.4	+0.8
	baz=65,SNR=6.2						
J19A	Crowheart	65.16	334	P	P	16 35 13.3	+0.3
	baz=65,SNR=5.7						
I20A	Worland	65.32	335	P	P	16 35 14.3	+0.3
	baz=66,SNR=6.1						
F24A	Ekalaka	65.48	338	⇓P	P	16 35 15.1	+0.2
	baz=66						
J18A	Kendall Valley	65.54	333	⇓P	P	16 35 15.5	0.0
	baz=66,SNR=9.3						
K17A	Gardner Place,	65.57	332	⇓P	P	16 35 15.9	+0.2
	baz=66						
MDND	Maddock	65.67	342	P	P	16 35 16.6	+0.6
	baz=66,SNR=5.5						
L15A	Malad City	65.67	331	P	P	16 35 16.5	+0.1
	baz=66,SNR=8.8						
HVU	Hansel Valley	65.69	330	eP	P	16 35 16.4	0.0
	12nm,1.0s						
I19A	Meeteetse	65.76	334	⇓P	P	16 35 17.2	+0.4
	baz=66						
I18A	Diamond G Ranc	65.84	333	P	P	16 35 17.6	+0.2
	baz=66,SNR=10.0						
K16A	Soda Springs	65.94	332	P	P	16 35 19.1	+1.0
	baz=66,SNR=7.1						
J17A	Brown Place, J	65.96	333	⇑P	P	16 35 18.9	+0.7
	baz=66						
NV11	Mina Array Sit	66.06	324	eP	P	16 35 19.4	+0.5
LOHW	Long Hollow	66.11	333	eP	P	16 35 18.1	-1.1
	1.9nm,0.6s						
ELK	Elko	66.14	328	eP	P	16 35 20.3	+0.8
	4.5nm,1.0s						
NVAR	Mina Array Bea	66.14	324	P	P	16 35 20.4	+1.0
NVAR	Mina Array Bea	66.14	324	P	P	16 35 20.4	+1.0
	3.8nm,0.7s,baz=148,slow=7.1,SNR=43						
RRI2	Red Ridge	66.22	332	eP	P	16 35 20.2	+0.2
	21nm,1.0s						
RRI2				ePcP	PcP	16 35 47.1	-2.5
J16A	Bone	66.30	332	P	P	16 35 20.8	+0.4
	baz=66,SNR=7.2						
I17A	Pilgrim Ck.	66.34	333	P	P	16 35 21.2	+0.5
	baz=66,SNR=6.7						
K14A	Jones Ranch, D	66.47	330	P	P	16 35 21.9	+0.5
	baz=67,SNR=5.6						
IMW	Indian Meadow	66.49	333	eP	P	16 35 21.4	-0.2
	12nm,1.3s						
H18A	Shoshone NF, C	66.56	334	P	P	16 35 22.0	0.0
	baz=67,SNR=8.5						
I16A	Newdale	66.71	332	P	P	16 35 23.9	+0.9
	baz=67,SNR=6.6						
RLMT	Red Lodge	66.75	335	eP	P	16 35 23.2	-0.1
RLMT	Red Lodge	66.75	335	P	P	16 35 23.5	+0.3
	baz=67,SNR=7.6						
J15A	Blackfoot	66.77	332	⇓P	P	16 35 24.4	+1.1
	baz=67						
ULM	Lac du Bonnet	66.89	346	P	P	16 35 23.1	-0.6
ULM	Lac du Bonnet	66.89	346	P	P	16 35 23.1	-0.6
	5.2nm,0.8s,baz=161,slow=5.8,SNR=6.8						
G18A	Lazy EL Ranch,	67.03	335	P	P	16 35 25.2	+0.3
	baz=67,SNR=17						
CMB	Columbia Colle	67.07	323	eP	P	16 35 25.9	+0.7
	3.2nm,1.0s						
F19A	Roth Farm, Mol	67.21	335	P	P	16 35 26.2	+0.2
	baz=67,SNR=9.5						
J14A	Carey	67.22	331	P	P	16 35 27.3	+1.1
	baz=67,SNR=10						
D22A	Cohagen	67.22	338	P	P	16 35 27.1	+1.1
	baz=67,SNR=8.8						
H16A	Russell Place,	67.26	333	P	P	16 35 27.5	+1.0
	baz=67,SNR=12						
I15A	Monteview	67.26	332	⇓P	P	16 35 27.7	+1.3
	baz=67						
E20A	Meyer Farm, Mu	67.42	336	P	P	16 35 27.8	+0.5
	baz=68,SNR=7.3						
WCN	Washoe City	67.56	324	eP	P	16 35 29.6	+1.1
	12nm,1.4s						
J13A	Cove Ranch, Pi	67.59	330	P	P	16 35 29.6	+1.1
	baz=68,SNR=6.0						
E19A	Rath Farm, Rou	67.65	336	⇓P	P	16 35 29.1	+0.4
	baz=68,SNR=14						
I14A	Mackay	67.65	331	P	P	16 35 30.1	+1.2
	baz=68,SNR=12						
H15A	Lima	67.81	332	⇓P	P	16 35 31.0	+1.0
	baz=68						
HLID	Hailey	67.83	330	eP	P	16 35 30.7	+0.7
	4.6nm,0.6s						
HLID	Hailey	67.83	330	P	P	16 35 31.1	+1.0
	baz=68,SNR=14						
D20A	Manuel Ranch,	67.91	337	P	P	16 35 31.0	+0.7
	baz=68,SNR=5.3						
G16A	Moss Hill, Enn	67.92	333	⇓P	P	16 35 31.4	+0.9
	baz=68						
I13A	Wildhorse Cree	67.95	331	P	P	16 35 31.9	+1.1
	baz=68,SNR=16						
F17A	Fitzpatrick Pl	67.96	334	⇓P	P	16 35 31.6	+0.9
	baz=68						
A24A	Westby	67.99	340	⇑P	P	16 35 31.9	+1.2
	baz=68						
MCMT	McKenzie Canyo	68.07	332	eP	P	16 35 32.1	+0.5
	2.5nm,0.8s						
H14A	Leadore	68.14	332	P	P	16 35 32.9	+0.9
	baz=68,SNR=11						
G15A	Dillon	68.17	333	⇑P	P	16 35 33.2	+1.1
	baz=68						
BOZ	Bozeman (W)	68.17	334	P	P	16 35 32.6	+0.5
	baz=68,SNR=6.1						
E18A	Harlowton	68.19	335	P	P	16 35 32.6	+0.4
	baz=68,SNR=7.4						
I12A	Atlanta	68.35	330	⇓P	P	16 35 34.6	+1.3
	baz=68						
MFID	Camas Ranch	68.40	330	eP	P	16 35 34.0	+0.4
	17nm,0.9s						
MFID	Camas Ranch	68.40	330	P	P	16 35 34.7	+1.1
	baz=68,SNR=20						
E17A	Martinsdale	68.49	335	P	P	16 35 34.8	+0.7
	baz=69,SNR=5.1						
H13A	Challis	68.51	331	P	P	16 35 35.4	+1.1
	baz=69,SNR=9.9						
A22A	Carney Farms,	68.69	339	P	P	16 35 36.1	+0.9
	baz=69,SNR=6.9						
VNA3	Neumayer Olymp	68.70	162	eP	P	16 35 36.6	+1.7
VNA3	Neumayer Olymp	68.70	162	ePcP	PcP	16 35 56.6	-2.7
H12A	Diamond D Ranc	68.78	331	P	P	16 35 36.9	+0.9
	baz=69,SNR=9.0						
G13A	Cobalt	68.90	332	P	P	16 35 37.5	+0.8
	baz=69,SNR=13						
D17A	Six Diamond Ra	68.97	335	P	P	16 35 37.8	+0.7
	baz=69,SNR=7.8						
VNA2	Neumayer--Watz	69.31	161	eP	P	16 35 40.3	+1.6
	baz=284,slow=6.5						
VNA2	Neumayer--Watz	69.31	161	ePcP	PcP	16 35 57.4	-4.5
	baz=284,slow=6.5						
A20A	Cobblestone Ra	69.31	338	⇓P	P	16 35 40.0	+1.0
	baz=69						
B19A	Brinkman Farms	69.34	337	⇑P	P	16 35 39.9	+0.7
	baz=70						
C17A	Wharram Farm,	69.39	335	⇓P	P	16 35 40.3	+0.8
	baz=70						
SCHQ	Schefferville	69.43	5	P	P	16 35 39.0	-0.5
SCHQ	Schefferville	69.43	5	P	P	16 35 39.0	-0.5
	5.7nm,0.9s,baz=209,slow=3.8,SNR=5.5						
SCHQ				LR	LR	17 08 07.9	
	comp=Z,52nm,20.5s,baz=23,slow=38						
F13A	Darby	69.48	332	P	P	16 35 41.3	+1.1
	baz=70,SNR=8.9						
E14A	Clinton	69.58	333	P	P	16 35 42.0	+1.2
	baz=70,SNR=6.7						
MOD	Modoc	69.64	326	eP	P	16 35 41.8	+0.4
	19nm,1.1s						
D15A	Lincoln	69.65	334	⇓P	P	16 35 42.1	+0.9
	baz=70						
A19A	Klindworth Far	69.66	337	P	P	16 35 41.9	+0.7
	baz=70,SNR=5.3						
F12A	Elk City	69.87	332	⇑P	P	16 35 43.4	+0.7
	baz=70,SNR=6.6						
TBI	Tubuai	69.88	250	eLR	LR	16 57 09.2	
	92nm,29.2s						
TBI				eT	T	17 51 40.2	
	5.4nm,0.3s						
E13A	Victor	69.91	333	P	P	16 35 44.1	+1.3
	baz=70,SNR=8.3						
C16A	Fuhringer Ranc	69.92	335	⇓P	P	16 35 43.7	+0.9
	baz=70						
MSO	Missoula	70.10	333	P	P	16 35 45.3	+1.3
	baz=70,SNR=5.4						
D14A	Greenough	70.10	333	⇑P	P	16 35 44.9	+0.9
	baz=70						
BMO	Blue Mountains	70.18	330	eP	P	16 35 44.3	-0.2
	3.2nm,0.7s						
C15A	Salmond Ranch,	70.26	334	P	P	16 35 46.4	+1.4
	baz=70,SNR=10						
D13A	Huson	70.53	333	⇓P	P	16 35 47.5	+0.9
	baz=71						
C14A	Swan Lake	70.74	334	⇑P	P	16 35 49.2	+1.4
	baz=71						
PPT2	Papeete2	70.84	256	eLR	LR	16 57 27.4	
	69nm,31.5s						
D12A	Red Ives Fores	70.89	332	P	P	16 35 49.6	+0.8
	baz=71,SNR=6.6						
SNAA	Sanae	70.92	161	eP	P	16 35 50.0	+1.4
SNAA	Sanae	70.92	161	ePcP	PcP	16 36 07.2	-1.5
C13A	Hot Springs	71.03	333	P	P	16 35 50.9	+1.3
	baz=71,SNR=10						
BSMT	Bassoo Peak	71.25	333	eP	P	16 35 52.0	+1.0
	6.0nm,1.0s						
C12B	Naegeli Ranch,	71.44	333	⇓P	P	16 35 53.3	+1.2
	baz=72						
B13A	Whitefish	71.51	334	⇑P	P	16 35 53.3	+0.8
	baz=72						
C11A	Tepee Creek (N	71.89	332	P	P	16 35 56.0	+1.2
	baz=72,SNR=14						
A13A	Flathead Natio	71.92	334	⇑P	P	16 35 55.9	+1.0
	baz=72						
B12A	Libby	72.07	333	⇓P	P	16 35 57.2	+1.4
	baz=72						
A12A	Yaak River Ran	72.45	334	P	P	16 35 59.5	+1.4
	baz=73,SNR=7.4						
NEW	Newport	72.60	332	⇑P	P	16 35 59.9	+1.0
	baz=73						
DBIC	Dimbokro	73.14	78	LR	LR	17 06 10.3	
	comp=Z,114nm,19.6s,baz=310,slow=34						
TOA0	Torodi Ar. Sit	81.21	74	eP	P	16 36 47.3	-0.8
TORD	Torodi Ar. Bea	81.21	74	P	P	16 36 47.7	-0.3
TORD	Torodi Ar. Bea	81.21	74	P	P	16 36 47.7	-0.3
	7.4nm,0.9s,baz=260,slow=5.1,SNR=25						
TORD				LR	LR	17 10 10.3	
	comp=Z,78nm,20.1s,baz=215,slow=34						
MDT	Midelt	82.36	53	LR	LR	17 11 44.0	
	comp=Z,73nm,18.1s,baz=9.0,slow=34						
YKA	Yellowknife Ar	82.59	343	P	P	16 36 53.5	-0.7
YKA	Yellowknife Ar	82.59	343	P	P	16 36 53.5	-0.7
	2.2nm,0.8s,baz=137,slow=5.3,SNR=39						
VNDA	Vanda	82.60	191	P	P	16 36 56.6	+2.4
VNDA	Vanda	82.60	191	P	P	16 36 56.6	+2.4
	1.6nm,0.7s,baz=110,slow=5.2,SNR=4.7						
ESDC	Sonseca Array	85.49	47	P	P	16 37 08.3	-1.3
ESDC	Sonseca Array	85.49	47	P	P	16 37 08.3	-1.3
	0.2nm,0.3s,baz=262,slow=5.2,SNR=4.6						
ESDC				LR	LR	17 12 12.7	
	comp=Z,52nm,20.8s,baz=270,slow=34						
KEST	Kesra	94.23	54	LR	LR	17 21 36.9	
	comp=Z,32nm,21.1s,baz=325,slow=36						
ILAR	Eielson Array	95.27	336	P	P	16 37 54.2	-0.7
ILAR				PP	PP	16 41 41.0	-5.0
ILAR	Eielson Array	95.27	336	P	P	16 37 54.2	-0.7
	0.5nm,0.7s,baz=166,slow=4.1,SNR=12						
ILAR				PP	PP	16 41 41.0	-5.0
	0.7nm,0.8s,baz=107,slow=6.1,SNR=8.1						
GERES	GERESS Array B	100.23	42	LR	LR	17 22 32.5	
	comp=Z,39nm,18.7s,baz=265,slow=35						
STKA	Stephens Creek	121.78	217	PKP	PKPdf	16 43 26.6	+0.8
STKA	Stephens Creek	121.78	217	PKP	PKPdf	16 43 26.6	+0.8
	1.2nm,0.7s,baz=139,slow=4.5,SNR=5.7						
PETK	Petropavlovsk-	123.22	325	PKP	PKPdf	16 43 28.6	+0.8
PETK	Petropavlovsk-	123.22	325	PKP	PKPdf	16 43 28.6	+0.8
	3.0nm,1.0s,baz=90,slow=3.0,SNR=4.1						
AKTO	Aktyubinsk	128.14	36	PKP	PKPdf	16 43 38.0	+0.7
AKTO	Aktyubinsk	128.14	36	PKP	PKPdf	16 43 38.0	+0.7
	1.6nm,0.8s,baz=304,slow=4.4,SNR=5.6						
ABKAR	Akbulak array	129.79	37	ePKPdf	PKPdf	16 43 41.0	+0.6
ASAR	Alice Springs	132.42	218	PKP	PKPdf	16 43 46.9	+0.5
ASAR				pPKP	pPKPdf	16 44 06.5	+0.5
ASAR	Alice Springs	132.42	218	PKP	PKPdf	16 43 46.9	+0.5
	1.4nm,0.6s,baz=133,slow=2.2,SNR=12						
ASAR				pPKP	pPKPdf	16 44 06.5	+0.5
	0.5nm,0.5s,baz=126,slow=1.8,SNR=2.2						
BVAR	Borovoye Array	133.04	28	PKP	PKPdf	16 43 47.8	+1.3
BVAR	Borovoye Array	133.04	28	PKP	PKPdf	16 43 47.8	+1.3
	0.3nm,0.4s,baz=258,slow=7.2,SNR=3.5						
WRA	Warramunga Arr	134.92	221	PKP	PKPdf	16 43 51.7	+0.6
WRA				pPKP	pPKPdf	16 44 10.0	-0.7
WRA	Warramunga Arr	134.92	221	PKP	PKPdf	16 43 51.7	+0.6
	4.4nm,0.8s,baz=140,slow=1.6,SNR=18						
WRA				pPKP	pPKPdf	16 44 10.0	-0.7
	1.6nm,0.7s,baz=144,slow=1.5,SNR=3.9						
ZAA0	Zalesovo Array	137.69	17	ePKPdf	PKPdf	16 43 54.7	-0.5
ZALV	Zalesovo Beam	137.69	17	PKP	PKPdf	16 43 55.8	+0.6
ZALV				pPKP	pPKPdf	16 44 13.4	-1.3
ZALV	Zalesovo Beam	137.69	17	PKP	PKPdf	16 43 55.8	+0.6
	4.8nm,0.8s,baz=302,slow=2.8,SNR=20						
ZALV				pPKP	pPKPdf	16 44 13.4	-1.3
	2.7nm,0.9s,baz=294,slow=1.6,SNR=4.4						
KURK	Kurchatov	138.23	25	PKP	PKPdf	16 43 57.3	+1.1
KURK				pPKP	pPKPdf	16 44 15.9	+0.1
KURBB	Kurchatov Arra	138.27	25	PKP	PKPdf	16 43 57.3	+1.0
	1.8nm,0.9s,baz=313,slow=2.4,SNR=16						
KURBB				pPKP	pPKPdf	16 44 15.9	0.0
	1.0nm,0.8s,baz=316,slow=2.6,SNR=4.6						
AAK	Ala-Archa	141.88	37	PKP	PKPdf	16 44 04.7	+1.3
AAK	Ala-Archa	141.88	37	PKP	PKPdf	16 44 04.7	+1.3
	0.7nm,0.6s,baz=149,slow=5.9,SNR=3.9						
USRK	Ussuriysk Arra	142.23	327	PKhKP	PKPpre	16 43 59.3	
	1.1nm,0.7s,baz=83,slow=4.3,SNR=4.6						
MJAR	Matsushiro Arr	142.76	312	PKPpre	PKPpre	16 43 57.4	
MJAR	Matsushiro Arr	142.76	312	PKhKP	PKPpre	16 43 57.4	
	1.5nm,0.7s,baz=101,slow=1.0,SNR=9.0						
MKAR	Makanchi Array	142.81	25	PKPpre	PKPpre	16 44 01.7	
MKAR	Makanchi Array	142.81	25	PKhKP	PKPpre	16 44 01.7	
	0.6nm,0.7s,baz=316,slow=4.0,SNR=6.4						
MDJ	Mudanjiang	143.16	330	PKP	PKPbc	16 44 02.2	-0.2
MDJ				PP	PP	16 47 16.3	+0.7
MDJ				AMB	AMB		
	comp=Z,100nm,6.4s						
MDJ				LR	LR		
	comp=N,46nm,22.3s						
MDJ				LR	LR		
	comp=E,42nm,25.2s						
MDJ				LR	LR		
	comp=Z,24nm,18.7s						
KSH	Kashi	144.67	40	PKPbc	PKPdf	16 44 08.5	+0.2
KSH				pPKP	PKiKP	16 44 19.2	+7.1
KSH				PP	PP	16 47 29.1	+3.9
KSH				PKS	PKSdf	16 47 42.2	-1.8
KSH				SKKS		16 54 13.1	
KSH				SS	SS	17 06 11.1	+3.3
KSH				LR	LR		
	comp=N,150nm,4.1s						
KSH				LR	LR		
	comp=E,130nm,6.5s						
KSH				LR	LR		
	comp=Z,230nm,5.9s						
ULN	Ulaanbaatar	146.64	357	ePKPbc	PKPdf	16 44 12.4	+1.0
SONM	Songino Array	146.70	358	PKPbc	PKPbc	16 44 13.5	+0.3
SONM	Songino Array	146.70	358	PKPbc	PKPbc	16 44 13.5	+0.3
	comp=Z,4.2nm,0.6s,baz=328,slow=1.8,SNR=42						
WMQ	Urumqi	147.42	23	PKPbc	PKPdf	16 44 11.3	-1.5
KSRS	Korea Array	149.06	322	PKP	PKPdf	16 44 15.5	-0.1
	comp=Z,3.6nm,0.6s,baz=73,slow=2.0,SNR=25						
KSRS				PKPbc	PKiKP	16 44 20.6	-0.3
	comp=Z,6.4nm,0.9s,baz=30,slow=1.4,SNR=27						
KSRS				pPKPbc	pPKPbc	16 44 38.2	-1.0
	comp=Z,2.6nm,1.0s,baz=30,slow=1.5,SNR=3.3						
KSRS				sPKPbc	sPKPbc	16 44 49.6	+3.2
	comp=Z,1.6nm,0.8s,baz=16,slow=1.6,SNR=5.2						
KSAR	Wonju Array Be	149.09	322	PKP	PKPdf	16 44 15.5	-0.1
KSAR				PKPbc	PKPbc	16 44 20.6	+0.8
KSAR				pPKPbc	pPKPbc	16 44 38.2	-1.1
KSAR				sPKPbc	sPKPbc	16 44 49.6	+3.1
HHC	Hu-ho-hao-te	153.01	348	ePKPbc	PKPdf	16 44 20.5	-1.2
HHC				PKS	PKSdf	16 47 53.6	-2.6
HHC				PP	PP	16 48 17.0	+4.3
HHC				SKS	SKSdf	16 51 21.7	-1.4
HHC				SKKS	SKKSac	16 55 01.0	+2.9
HHC				SS	SS	17 07 45.2	+5.6
HHC				AMB	AMB		
	comp=Z,170nm,9.6s						
HHC				LR	LR		
	comp=N,190nm,20.8s						
HHC				LR	LR		
	comp=E,280nm,20.4s						
HHC				LR	LR		
	comp=Z,160nm,20.7s						
GTA	Gaotai	154.82	9	ePKP	PKPdf	16 44 25.4	+1.1
GTA				pPKP	pPKPdf	16 44 39.7	-4.3
NJ2	Nanjing	158.13	326	ePKP	PKPdf	16 44 26.1	-2.5
LZH	Lanzhou	158.47	1	ePKP	PKPdf	16 44 29.5	+0.3
LZH				pPKP	pPKPdf	16 44 41.0	-7.9
LZH				sPKP		16 44 45.8	
GYA	Guiyang	167.91	351	PKP	PKPdf	16 44 35.0	-3.4
GYA				pPKP	pPKPdf	16 44 48.5	-10
GYA				sPKP		16 44 55.2	
GYA				PKPab	PKPab	16 45 44.8	-0.7
GYA				PKS	PKSdf	16 48 06.8	-4.4
GYA				PP	PP	16 49 35.2	+2.3
GYA				SKKS		16 56 17.0	
GYA				SS	SS	17 10 18.9	+3.1
GYA				AMB	AMB		
	comp=Z,90n

PTQR	**Pietraquaria**	**0.37**	**177**	Pg	Pg	16 30 52.2 +0.4
PTQR				Sg	Sg	16 30 57.5 +0.7
PTQR	**Pietraquaria**	**0.37**	**177**	Pg	Pg	16 30 52.2 +0.4
PTQR				Sg	Sg	16 30 57.5 +0.7
CERT	**Cerreto**	**0.53**	**214**	Pg	Pg	16 30 55.2 +0.4
	145nm,0.5s					
CERT	**Cerreto**	**0.53**	**214**	Pg	Pg	16 30 55.2 +0.4
	145nm,0.5s					
INTR	**Introdacqua**	**0.55**	**134**	Pg	Pg	16 30 55.5 +0.4
	71nm,0.6s					
INTR	**Introdacqua**	**0.55**	**134**	Pg	Pg	16 30 55.5 +0.4
	71nm,0.6s					
LPEL	**Lama dei Pelig**	**0.69**	**120**	Pg	Pg	16 30 57.9 +0.1
LPEL				Sg	Sb	16 31 07.9 -0.5
	41nm,0.3s					
LPEL	**Lama dei Pelig**	**0.69**	**120**	Pg	Pg	16 30 57.9 +0.1
LPEL				Sg	Sb	16 31 07.9 -0.5
	41nm,0.3s					

SKO 12 16:31:02.6, 41°.29N × 22°.73E, h15km, M0.5, ML0.7,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.12**	**285**	*i* Pg	Pg	16 31 06.2	+0.1
VAY				*i* Sg	Sg	16 31 08.5	0.0
VAY				*e*Lg	Lg	16 31 08.5	
	comp=E,26nm,0.2s						
VAY				*e*Lg	Lg	16 31 08.7	
	comp=N,46nm,0.2s						

*BJI **12** 16:31:38.6, 44°.10N × 34°.10E, h20km, mB5.0/5, mb4.5/7, Ms4.6/2, Ms7 4.5/2*
*IDC **12** 16:31:39.2 ± 0.6, 44°.16N × 34°.25E, h0km, mb3.9/18, mb1 3.9/23, mb1mx3.8/35, mbtmp3.8/23, ML3.7/5, MS3.0/6, Ms1 3.0/6, ms1mx2.6/53, Error ellipse: s-maj=13.0km s-min=7.7km az=16.0*
*MOS **12** 16:31:39.3 ± 1.2, 44°.16N × 34°.17E, h14km, mb4.2/15, Error ellipse: s-maj=5.7km s-min=4.9km az=99.8*
MOS Felt (III) at Yalta, (II-III) at Simeiz.
*ISCJB **12** 16:31:40.7 ± 0.4, 44°.10N ± 0°.01 × 34°.08E ± 0°.02, h31km ± 3km, mb4.0/25, MS3.3/3, Error ellipse: s-maj=2.3km s-min=2.0km az=5.6*
*NEIC **12** 16:31:41.9 ± 0.8, 44°.16N × 34°.23E, h20km ± 6km, mb4.2/8, Error ellipse: s-maj=5.3km s-min=3.9km az=182.0*
NEIC Felt [III] at Simeiz and Yalta.
*CSEM **12** 16:31:42.1 ± 0.3, 44°.14N × 34°.14E, h23km ± 2km, mb4.0/15, Ms2.6, Error ellipse: s-maj=3.2km s-min=2.7km az=9.0*
*ATH **12** 16:32:53.5, 41°.33N × 27°.69E, h93km ± 2km*
ISC 12 16:31:41.2 ± 0.7, 44°.09N ± 0°.03 × 34°.13E ± 0°.03, h20km ± 3km, n415, σ1$41/457, mb4.0/24, MS3.0/3, 22C-30D, Crimea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YAL	**Yalta**	**0.40**	**3**	⇓*iP*	**Pb**	**16 31 50.0**	**+0.3**
YAL				*i*		16 31 57.1	
YAL	**Yalta**	**0.40**	**3**	⇓*iP*	**Pb**	**16 31 50.0**	**+0.3**
YAL	**Yalta**	**0.40**	**3**	⇓*iP*	**Pb**	**16 31 50.0**	**+0.3**
YAL				*i* S	**Sn**	**16 31 57.1**	**-1.8**
SEV	**Sevastopol'**	**0.56**	**324**	⇓*iP*	**Pb**	**16 31 51.7**	**-0.7**
SEV				*i*		16 32 00.3	
SEV	**Sevastopol'**	**0.56**	**324**	*i* P	**Pb**	**16 31 51.7**	**-0.7**
SEV				*i* S	**Sb**	**16 32 00.3**	**+0.4**
ALU	**Alushta**	**0.62**	**18**	⇓*iP*	**Pb**	**16 31 52.8**	**-0.6**
ALU				*i*		16 32 02.0	
ALU	**Alushta**	**0.62**	**18**	⇓*iP*	**Pb**	**16 31 52.8**	**-0.6**
ALU	**Alushta**	**0.62**	**18**	⇓*iP*	**Pb**	**16 31 52.8**	**-0.6**
ALU				*i* S	**Sb**	**16 32 02.0**	**+0.2**
SIM	**Simferopol'**	**0.86**	**360**	*c iP*	**Pb**	**16 31 57.7**	**+0.2**
SIM				*e*		16 32 10.6	
SIM				pmax	pmax		
	comp=Z,1μm,0.6s						
SIM	**Simferopol'**	**0.86**	**360**	⇑*iP*	**Pb**	**16 31 57.7**	**+0.2**
SIM	**Simferopol'**	**0.86**	**360**	*i* P	**Pb**	**16 31 57.7**	**+0.2**
	comp=Z,1μm,0.6s						
SIM				*e*S	**Sn**	**16 32 10.6**	**+0.3**
SUDU	**Sudak**	**1.02**	**38**	⇓*iP*	**Pb**	**16 31 59.4**	**-0.8**
SUDU				*e*		16 32 13.8	
SUDU	**Sudak**	**1.02**	**38**	⇓*iP*	**Pb**	**16 31 59.4**	**-0.8**
SUDU	**Sudak**	**1.02**	**38**	⇓*iP*	**Pb**	**16 31 59.4**	**-0.8**
SUDU				*e*S	**Sn**	**16 32 13.8**	**-0.3**
FEO	**Feodosiya**	**1.30**	**44**	*eP*	**Pn**	**16 32 04.4**	**+0.2**
FEO				*e*		16 32 22.0	
FEO	**Feodosiya**	**1.30**	**44**	*eP*	**Pn**	**16 32 04.4**	**+0.2**
FEO	**Feodosiya**	**1.30**	**44**	*eP*	**Pn**	**16 32 04.4**	**+0.2**
FEO				*e*S	**Sb**	**16 32 22.0**	**+0.8**
KERU	**Kerch**	**2.06**	**53**	⇓*iP*	**Pb**	**16 32 16.7**	**-1.3**
KERU	**Kerch**	**2.06**	**53**	*i* P	**Pb**	**16 32 16.7**	**-1.3**
BZK	**Bozkurt**	**2.13**	**182**	*eP*	**Pn**	**16 32 17.5**	**+1.8**
ANN	**Anapa**	**2.47**	**72**	*c iP*	Pn	16 32 16.9	-3.5
ANN				*e*		16 32 47.2	
ANN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ANN				pmax	pmax		
	comp=N,2.0nm,0.2s						
ANN				pmax	pmax		
	comp=E,6.0nm,0.8s						
ANN				pmax	pmax		
	comp=Z,46nm,0.4s						
ANN				smax	smax		
	comp=N,136nm,0.6s						
ANN				smax	smax		
	comp=E,82nm,0.6s						
ANN				pmax	pmax		
	comp=N,122nm,0.7s						
ANN				pmax	pmax		
	comp=E,151nm,0.7s						
ANN				pmax	pmax		
	comp=Z,201nm,0.7s						
ANN	**Anapa**	**2.47**	**72**	⇑*iP*	Pn	16 32 16.9	-3.5
ANN	**Anapa**	**2.47**	**72**	*i* P	Pn	16 32 16.9	-3.5
	comp=Z,46nm,0.4s						
ANN				*e*S	**Sn**	**16 32 47.2**	**-2.8**
DIKM	**Dikmen**	**2.58**	**161**	*eP*	**Pn**	**16 32 21.9**	**0.0**
BALT	**Daday**	**2.61**	**192**	*i* P	**Pn**	**16 32 22.9**	**+0.4**
BALT				*i* S	**Sn**	**16 32 48.6**	**-5.1**
BALT	**Daday**	**2.61**	**192**	*i* P	**Pn**	**16 32 22.9**	**+0.4**
BYBT	**Boyabat**	**2.66**	**170**	*eP*	**Pn**	**16 32 23.4**	**+0.4**
SAFT	**Safranbolu**	**3.04**	**201**	*eP*	**Pn**	**16 32 28.6**	**+0.3**
ILGA	**Ilgaz**	**3.05**	**186**	*i* P	**Pn**	**16 32 30.5**	**+1.9**
ILGA				*i* S	**Sn**	**16 33 04.6**	**0.0**
ILGA	**Ilgaz**	**3.05**	**186**	*i* P	**Pn**	**16 32 30.5**	**+1.9**
ILGA				*i* S	**Sn**	**16 33 04.6**	**0.0**
TOS	**Tosya**	**3.05**	**181**	*eP*	**Pn**	**16 32 29.2**	**+0.7**
HAVZ	**Havza**	**3.23**	**158**	*i* P	**Pn**	**16 32 32.2**	**+1.3**
HAVZ				*i* S	**Sn**	**16 33 08.2**	**-0.7**
HAVZ	**Havza**	**3.23**	**158**	*i* P	**Pn**	**16 32 32.2**	**+1.3**
HAVZ				*i* S	**Sn**	**16 33 08.2**	**-0.7**
KVT	**Kavak**	**3.33**	**154**	*eP*	**Pn**	**16 32 32.3**	**+0.1**
KDZE	**Karadeniz Ereo**	**3.41**	**216**	*eP*	**Pn**	**16 32 33.6**	**+0.3**
CTKT	**Corum**	**3.50**	**172**	*i* P	**Pn**	**16 32 35.5**	**+0.8**
CTKT	**Corum**	**3.50**	**172**	*i* P	**Pn**	**16 32 35.5**	**+0.8**
CANT	**Cankiri**	**3.50**	**186**	*eP*	**Pn**	**16 32 35.5**	**+0.9**
ELDT	**Eldivan**	**3.63**	**188**	*i* P	**Pn**	**16 32 37.9**	**+1.3**
ELDT	**Eldivan**	**3.63**	**188**	*i* P	**Pn**	**16 32 37.9**	**+1.3**
ERBA	**Erbaa**	**3.92**	**149**	*i* P	**Pn**	**16 32 39.6**	**-0.8**
ERBA				*i* S	**Sn**	**16 33 22.6**	**-3.3**
ERBA	**Erbaa**	**3.92**	**149**	*i* P	**Pn**	**16 32 39.6**	**-0.8**
ERBA				*i* S	**Sn**	**16 33 22.6**	**-3.3**
CORM	**Corum**	**3.93**	**174**	*eP*	**Pn**	**16 32 41.2**	**+0.6**
TLCR		**3.95**	**288**	⇑*iP*	**Pn**	**16 32 41.3**	**+0.7**
TLCR				*i* S	**Sn**	**16 33 25.5**	**-0.8**
TLCR		**3.95**	**288**	⇑*iP*	**Pn**	**16 32 41.3**	**+0.7**
TLCR		**3.95**	**288**	⇑*iP*	**Pn**	**16 32 41.3**	**+0.7**
TLCR				*i* S	**Sn**	**16 33 25.5**	**-0.8**
EFOR	**EFORIE**	**3.96**	**272**	⇑*iP*	**Pn**	**16 32 41.2**	**+0.4**
EFOR	**EFORIE**	**3.96**	**272**	*i* S	**Sn**	**16 33 24.3**	**-2.3**
EFOR	**EFORIE**	**3.96**	**272**	*i* S	**Sn**	**16 33 24.3**	**-2.3**
MANR	**Mangalia**	**4.01**	**268**	⇓*iP*	**Pn**	**16 32 41.8**	**+0.3**
MANR	**Mangalia**	**4.01**	**268**	*i* S	**Sn**	**16 33 26.2**	**-1.7**
MANR	**Mangalia**	**4.01**	**268**	*i* S	**Sn**	**16 33 26.2**	**-1.7**
HENT	**Hendek**	**4.04**	**217**	*i* P	**Pn**	**16 32 43.2**	**+1.2**
HENT				*i* S	Sn	16 33 19.7	-9.2
HENT	**Hendek**	**4.04**	**217**	*i* P	**Pn**	**16 32 43.2**	**+1.2**
SOC	**Sochi**	**4.08**	**95**	*eP*	**Pn**	**16 32 43.8**	**+1.3**
SOC				*e*S	**Sb**	**16 33 41.3**	**+0.1**
SOC				pmax	pmax		
	comp=Z,31nm,0.6s						
SOC				pmax	pmax		
	comp=N,10.0nm,0.6s						
SOC				pmax	pmax		
	comp=E,39nm,0.7s						
SOC	**Sochi**	**4.08**	**95**	*eP*	**Pn**	**16 32 43.8**	**+1.3**
	comp=E,10.0nm,0.6s						
TIRR	**Tirgusor**	**4.12**	**277**	⇓*iP*	**Pn**	**16 32 43.0**	**0.0**
TIRR				*i* S	**Sn**	**16 33 28.6**	**-2.0**
TIRR	**Tirgusor**	**4.12**	**277**	*eP*	**Pn**	**16 32 42.9**	**-0.2**
TIRR	**Tirgusor**	**4.12**	**277**	⇓*iP*	**Pn**	**16 32 43.0**	**0.0**
TIRR	**Tirgusor**	**4.12**	**277**	*i* P	**Pn**	**16 32 43.0**	**0.0**
TIRR				*i* S	**Sn**	**16 33 28.6**	**-2.0**
TOKT	**Tokat**	**4.17**	**154**	*eP*	**Pn**	**16 32 44.4**	**+0.6**
MDUB	**Mudurnu**	**4.22**	**212**	*eP*	**Pn**	**16 32 45.1**	**+0.6**
PSN	**Preselentsi**	**4.31**	**267**	*i* P	**Pn**	**16 32 46.4**	**+0.7**
PSN	**Preselentsi**	**4.31**	**267**	*i* P	**Pn**	**16 32 46.4**	**+0.7**
ANTO	**Ankara**	**4.33**	**194**	*eP*	**Pn**	**16 32 47.3**	**+1.2**
ANTO	**Ankara**	**4.33**	**194**	*eP*	**Pn**	**16 32 47.3**	**+1.2**
BR131	**Keskin Array S**	**4.38**	**185**	*eP*	**Pn**	**16 32 47.9**	**+1.1**
BR131	**Keskin Array S**	**4.38**	**185**	*eP*	**Pn**	**16 32 47.8**	**+1.1**
BRTR	**Keskin Array B**	**4.38**	**185**	Pn	**Pn**	**16 32 48.0**	**+1.3**
BRTR				S	**Sn**	**16 33 42.2**	**+5.0**
BRTR	**Keskin Array B**	**4.38**	**185**	Pn	**Pn**	**16 32 48.0**	**+1.3**
	comp=E,1.0nm,0.3s,baz=86,slow=15,SNR=29						
BRTR				Sn	**Sn**	**16 33 42.2**	**+5.0**
	comp=E,1.7nm,0.3s,baz=4.3,slow=24,SNR=4.2						
BRTR	**Keskin Array B**	**4.38**	**185**	Pn	**Pn**	**16 32 48.0**	**+1.3**
BRTR				S	**Sn**	**16 33 42.2**	**+5.0**
	comp=E,2.0nm,0.3s						
CVD	**Cernavoda**	**4.39**	**275**	⇓*iP*	**Pn**	**16 32 47.6**	**+0.9**
CVD				*i* S	**Sn**	**16 33 36.2**	**-1.0**
CVD	**Cernavoda**	**4.39**	**275**	⇓*iP*	**Pn**	**16 32 47.6**	**+0.9**
CVD	**Cernavoda**	**4.39**	**275**	*i* P	**Pn**	**16 32 47.6**	**+0.9**
CVD				*i* S	**Sn**	**16 33 36.2**	**-1.0**
RSDY	**Resadiye-TOKAT**	**4.39**	**146**	*eP*	**Pn**	**16 32 46.8**	**0.0**
CFR	**Carcaliu**	**4.41**	**286**	⇓*iP*	**Pn**	**16 32 47.3**	**+0.3**
CFR				*i* S	**Sn**	**16 33 36.4**	**-1.4**
CFR	**Carcaliu**	**4.41**	**286**	⇓*iP*	**Pn**	**16 32 47.3**	**+0.3**
CFR	**Carcaliu**	**4.41**	**286**	*i* P	**Pn**	**16 32 47.3**	**+0.3**
CFR				*i* S	**Sn**	**16 33 36.4**	**-1.4**
SILT	**Sile**	**4.42**	**230**	*eP*	**Pn**	**16 32 47.0**	**-0.1**
SPNC	**Sapanca-Adapaz**	**4.42**	**221**	*eP*	**Pn**	**16 32 47.7**	**+0.5**
GULT	**Gulveren**	**4.53**	**217**	*eP*	**Pn**	**16 32 49.4**	**+0.6**
YOZ	**Yozgat**	**4.54**	**168**	*eP*	**Pn**	**16 32 49.9**	**+0.9**
HRT	**Hereke**	**4.64**	**227**	*eP*	**Pn**	**16 32 50.3**	**0.0**
ESPY	**Espiye-Giresun**	**4.65**	**131**	*eP*	**Pn**	**16 32 49.6**	**-0.7**
KIS	**Kishinev**	**4.73**	**310**	*eP*	**Pb**	**16 33 01.0**	**-2.4**
KIS				*e*S	**Sn**	**16 33 48.0**	**+2.4**
KIS				smax	smax		
	comp=N,500nm,1.0s						
KIS				smax	smax		
	comp=E,400nm,1.0s						
KIS				smax	smax		
	comp=N,500nm,1.0s						
KIS				smax	smax		
	comp=E,400nm,1.0s						
KIS	**Kishinev**	**4.73**	**310**	*eP*	**Pb**	**16 33 01.0**	**-2.4**
KIS				*e*S	**Sn**	**16 33 48.0**	**+2.4**
	comp=E,400nm,1.0s						
GPA	**Golpazari**	**4.74**	**218**	*eP*	**Pn**	**16 32 52.5**	**+0.9**
ISK	**Istanbul-Kandi**	**4.81**	**233**	*eP*	**Pn**	**16 32 52.5**	**0.0**
AMRR	**Amara**	**4.90**	**278**	⇑*iP*	**Pn**	**16 32 54.8**	**+1.1**
AMRR				*i* S	**Sn**	**16 33 49.8**	**0.0**
AMRR	**Amara**	**4.90**	**278**	⇑*iP*	**Pn**	**16 32 54.8**	**+1.1**
AMRR	**Amara**	**4.90**	**278**	P	**Pn**	**16 32 54.8**	**+1.1**
AMRR				S	**Sn**	**16 33 49.8**	**0.0**
BGKT	**Bogazkoy**	**4.90**	**235**	*eP*	**Pn**	**16 32 53.5**	**-0.2**
BUY	**Buyukada**	**4.92**	**231**	*i* P	**Pn**	**16 32 54.9**	**+0.9**
BUY				*i* S	**Sn**	**16 33 46.8**	**-3.5**
BUY	**Buyukada**	**4.92**	**231**	*i* P	**Pn**	**16 32 54.9**	**+0.9**
BUY				*i* S	**Sn**	**16 33 46.8**	**-3.5**
PRD	**Provadia**	**4.96**	**262**	*i* P	**Pn**	**16 32 54.8**	**+0.2**
PRD	**Provadia**	**4.96**	**262**	*i* P	**Pn**	**16 32 54.8**	**+0.2**
YLV	**Yalova**	**4.98**	**227**	*eP*	**Pn**	**16 32 55.6**	**+0.6**
BORA	**Eskisehir**	**5.02**	**214**	*i* P	**Pn**	**16 32 56.8**	**+1.3**
BORA				*i* S	**Sn**	**16 33 49.4**	**-3.5**
BORA	**Eskisehir**	**5.02**	**214**	*i* P	**Pn**	**16 32 56.8**	**+1.3**
BORA				*i* S	**Sn**	**16 33 49.4**	**-3.5**
CAVI	**Cavuskoy**	**5.02**	**221**	*eP*	**Pn**	**16 32 56.5**	**+1.0**
CTYL	**Yal??k??y-??at**	**5.03**	**241**	*eP*	**Pn**	**16 32 55.1**	**-0.4**
CTKS	**Kestanelik-??a**	**5.03**	**237**	*eP*	**Pn**	**16 32 55.3**	**-0.2**
SVRH	**Sivrihisar-ESK**	**5.03**	**204**	*eP*	**Pn**	**16 32 56.8**	**+1.1**
GHRR		**5.15**	**295**	⇑*iP*	**Pn**	**16 32 58.7**	**+1.5**
GHRR		**5.15**	**295**	⇑*iP*	**Pn**	**16 32 58.7**	**+1.5**
GHRR				S	**Sn**	**16 33 55.0**	**-1.0**
GEMT	**Gemlik**	**5.17**	**227**	*eP*	**Pn**	**16 32 58.1**	**+0.6**
SLVT	**Silivri**	**5.21**	**239**	*eP*	**Pn**	**16 32 59.2**	**+1.1**
ARMT	**Armutlu**	**5.25**	**230**	*eP*	**Pn**	**16 32 59.4**	**+0.7**
GUMT	**Gumushane**	**5.38**	**131**	*eP*	**Pn**	**16 32 59.9**	**-0.6**
MDNY	**Mudanya-Bursa**	**5.38**	**228**	*eP*	**Pn**	**16 33 00.9**	**+0.6**
BNN	**Bunyan**	**5.39**	**166**	*eP*	**Pn**	**16 33 02.2**	**+1.6**
KIZT	**Kizilcal**	**5.47**	**199**	*eP*	**Pn**	**16 33 03.3**	**+1.6**
DOMR	**Dombai**	**5.50**	**96**	*i* P	**Pn**	**16 33 02.0**	**-0.1**
DOMR				*i* S	**Sn**	**16 34 05.6**	**+0.8**
DOMR	**Dombai**	**5.50**	**96**	*i* P	**Pn**	**16 33 02.0**	**-0.1**
DOMR				*i* S	**Sn**	**16 34 05.6**	**+0.8**
ISR	**Istrita**	**5.51**	**283**	⇓*iP*	**Pn**	**16 33 04.2**	**+2.0**
ISR	**Istrita**	**5.51**	**283**	⇓*iP*	**Pn**	**16 33 04.2**	**+2.0**
VRI	**Vrincioaia**	**5.54**	**291**	⇓*iP*	**Pn**	**16 33 04.4**	**+1.8**
VRI				S	**Sn**	**16 34 06.0**	**+0.3**
VRI	**Vrincioaia**	**5.54**	**291**	⇓*iP*	**Pn**	**16 33 04.4**	**+1.8**
VRI	**Vrincioaia**	**5.54**	**291**	P	**Pn**	**16 33 04.4**	**+1.8**
VRI				S	**Sn**	**16 34 06.0**	**+0.3**
CRLT	**Corlu**	**5.56**	**240**	*eP*	**Pn**	**16 33 02.9**	**0.0**
PLOR	**Plostina**	**5.59**	**291**	⇑*iP*	**Pn**	**16 33 04.7**	**+1.4**
PLOR				S	**Sn**	**16 34 05.5**	**-1.4**
PLOR	**Plostina**	**5.59**	**291**	⇑*iP*	**Pn**	**16 33 04.7**	**+1.4**
PLOR	**Plostina**	**5.59**	**291**	P	**Pn**	**16 33 04.7**	**+1.4**
PLOR				S	**Sn**	**16 34 05.5**	**-1.4**
ORLT	**Orhaneli**	**5.61**	**226**	*eP*	**Pn**	**16 33 04.0**	**+0.4**
SULR		**5.67**	**279**	⇑*iP*	**Pn**	**16 33 02.8**	**-1.5**
ILIC	**ilic-Erzincan**	**5.70**	**143**	*eP*	**Pn**	**16 33 05.3**	**+0.4**
TKR	**Tekirdag**	**5.77**	**240**	*eP*	**Pn**	**16 33 05.5**	**-0.2**
BAYT	**Ayd¨–ntepe-Bay**	**5.79**	**128**	*eP*	**Pn**	**16 33 05.7**	**-0.5**
TVSB	**Tavsanli**	**5.80**	**219**	*eP*	**Pn**	**16 33 07.3**	**+1.0**
TESR		**5.80**	**297**	⇓*iP*	**Pn**	**16 33 07.5**	**+1.3**
TESR		**5.80**	**297**	S	**Sn**	**16 34 12.7**	**+0.6**
BUC1	**Bucharest**	**5.83**	**275**	⇓*iP*	**Pn**	**16 33 07.4**	**+0.9**
BUC1				S	**Sn**	**16 34 11.9**	**-0.8**
BUC1	**Bucharest**	**5.83**	**275**	⇓*iP*	**Pn**	**16 33 07.4**	**+0.9**
BUC1	**Bucharest**	**5.83**	**275**	P	**Pn**	**16 33 07.4**	**+0.9**
BUC1				S	**Sn**	**16 34 11.9**	**-0.8**
EDRB	**Edirne**	**5.86**	**250**	*eP*	**Pn**	**16 33 06.2**	**-0.8**
ALT	**Altintas**	**5.86**	**212**	*eP*	**Pn**	**16 33 08.2**	**+1.1**
BNT	**Bandirma**	**5.93**	**233**	*eP*	**Pn**	**16 33 08.3**	**+0.4**
CIOR	**Ciorogarla**	**5.93**	**276**	⇓*iP*	**Pn**	**16 33 08.0**	**+0.1**
SARI	**SarD1z-Kayseri**	**5.93**	**162**	*eP*	**Pn**	**16 33 09.4**	**+1.2**
EDC	**Edincik**	**5.97**	**233**	*eP*	**Pn**	**16 33 08.8**	**+0.3**
MLR	**Muntele Rosu**	**5.99**	**286**	Pn	**Pn**	**16 33 10.6**	**+1.7**
MLR				Sn	**Sn**	**16 34 20.0**	**+3.1**
MLR	**Muntele Rosu**	**5.99**	**286**	⇑*iP*	**Pn**	**16 33 10.5**	**+1.7**
MLR	**Muntele Rosu**	**5.99**	**286**	Pn	**Pn**	**16 33 10.6**	**+1.7**
	comp=E,1.5nm,0.3s,baz=63,slow=1.8,SNR=75						
MLR				Sn	**Sn**	**16 34 20.0**	**+3.1**
	comp=E,1.0nm,0.3s,baz=306,slow=16,SNR=5.1						
MLR	**Muntele Rosu**	**5.99**	**286**	P	**Pn**	**16 33 10.5**	**+1.7**
MLR				S	**Sn**	**16 34 16.2**	**-0.7**
SZH	**Strazhica**	**6.00**	**265**	*i* P	**Pn**	**16 33 08.3**	**-0.6**
DARE	**Darende-Malaty**	**6.06**	**154**	*eP*	**Pn**	**16 33 10.7**	**+0.8**
BCA	**Borcka**	**6.12**	**113**	*eP*	**Pn**	**16 33 08.8**	**-1.8**
ERZN	**Erzincan**	**6.14**	**135**	*eP*	**Pn**	**16 33 10.7**	**-0.2**
DURS	**Dursunbey**	**6.16**	**225**	*i* P	**Pn**	**16 33 11.6**	**+0.5**
DURS				*i* S	Sn	16 34 15.7	-5.3
DURS	**Dursunbey**	**6.16**	**225**	*i* P	**Pn**	**16 33 11.6**	**+0.5**
RKY	**Sarkoy-Tekirda**	**6.17**	**239**	*eP*	**Pn**	**16 33 10.9**	**-0.3**
KIV	**Kislovodsk**	**6.17**	**88**	*eP*	**Pn**	**16 33 10.6**	**-0.8**
KIV				*e*S	**Sn**	**16 34 18.3**	**-3.1**
KIV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,10.0nm,1.0s						
KIV	**Kislovodsk**	**6.17**	**88**	*eP*	**Pn**	**16 33 12.0**	**+0.6**
	comp=Z,22nm,0.6s						
KIV	**Kislovodsk**	**6.17**	**88**	*eP*	**Pn**	**16 33 12.0**	**+0.6**
	comp=Z,22nm,0.6s						
GONE	**Gonen-Balikesi**	**6.27**	**232**	*eP*	**Pn**	**16 33 12.7**	**+0.2**
KRBG	**Karabiga-Canak**	**6.27**	**236**	*eP*	**Pn**	**16 33 12.4**	**-0.1**
KBZ	**Khabaz**	**6.35**	**90**	P	**Pn**	**16 33 13.9**	**+0.3**
KBZ						16 34 22.8	
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KBZ				smax	smax		
	comp=N,1.0nm,0.3s						
KBZ	**Khabaz**	**6.35**	**90**	Pn	**Pn**	**16 33 13.9**	**+0.3**
KBZ				Sn	**Sn**	**16 34 22.8**	**-2.7**
KBZ	**Khabaz**	**6.35**	**90**	Pn	**Pn**	**16 33 13.9**	**+0.3**
	comp=N,0.5nm,0.3s,baz=262,slow=9.0,SNR=12						
KBZ				Sn	**Sn**	**16 34 22.8**	**-2.7**
	comp=N,0.6nm,0.3s,baz=294,slow=12,SNR=3.6						
KBZ	**Khabaz**	**6.35**	**90**	P	**Pn**	**16 33 13.9**	**+0.3**
	comp=N,1.0nm,0.3s						
PVL	**Pavlikeni**	**6.44**	**265**	*i* P	**Pn**	**16 33 16.8**	**+1.9**
BALB	**Balikesir**	**6.44**	**228**	*eP*	**Pn**	**16 33 15.1**	**+0.1**
ARTV	**Artvin**	**6.45**	**114**	*i* P	**Pn**	**16 33 14.5**	**-0.7**
ARTV	**Artvin**	**6.45**	**114**	*i* P	**Pn**	**16 33 14.5**	**-0.7**
DAGI	**Agillar**	**6.49**	**115**	*i* P	**Pn**	**16 33 15.5**	**-0.2**
HUMR	**Humele**	**6.58**	**277**	⇑*iP*	**Pn**	**16 33 17.3**	**+0.5**
LPK	**Lapseki**	**6.61**	**238**	*eP*	**Pn**	**16 33 17.0**	**-0.2**
MALT	**Malatya**	**6.62**	**149**	P	**Pn**	**16 33 17.5**	**0.0**
MALT	**Malatya**	**6.62**	**149**	P	**Pn**	**16 33 17.5**	**0.0**
KHL	**Karahalli**	**6.72**	**213**	*eP*	**Pn**	**16 33 19.8**	**+0.9**
GELI	**Tayfur-Gelibol**	**6.77**	**240**	*eP*	**Pn**	**16 33 19.0**	**-0.5**
ALN	**Alexandroupoli**	**6.77**	**245**	*eP*	**Pn**	**16 33 18.1**	**-1.3**
ALN				*e*S	**Pb**	**16 33 35.8**	**-2.4**
ALN	**Alexandroupoli**	**6.77**	**245**	*eP*	**Pn**	**16 33 18.1**	**-1.3**
ALN				*e*S	**Pb**	**16 33 35.8**	**-2.4**
ENEZ	**Enez**	**6.78**	**243**	*eP*	**Pn**	**16 33 19.0**	**-0.7**
EZM	**Erzurum**	**6.82**	**125**	*eP*	**Pn**	**16 33 19.4**	**-1.0**
KDZ	**Kurdzhali**	**6.85**	**252**	*i* P	**Pn**	**16 33 20.9**	**+0.4**
KDZ	**Kurdzhali**	**6.85**	**252**	*i* P	**Pn**	**16 33 20.9**	**+0.4**
ARR	**Arges**	**6.88**	**284**	⇑*iP*	**Pn**	**16 33 21.6**	**+0.6**
KMRS	**Kahramanmaras**	**6.91**	**161**	*eP*	**Pn**	**16 33 22.4**	**+1.0**
KULA	**Kula-Manisa**	**6.92**	**218**	*eP*	**Pn**	**16 33 22.2**	**+0.6**
ONI	**Oni**	**6.96**	**99**	P	**Pn**	**16 33 22.5**	**+0.3**
ONI	**Oni**	**6.96**	**99**	P	**Pn**	**16 33 22.5**	**+0.3**
RDO	**Rodhopi**	**6.98**	**248**	*eP*	**Pn**	**16 33 22.0**	**-0.4**
RDO	**Rodhopi**	**6.98**	**248**	*eP*	**Pn**	**16 33 22.0**	**-0.4**
AKHS	**Akhisar**	**7.04**	**224**	*i* P	**Pn**	**16 33 23.6**	**+0.4**
AKHS	**Akhisar**	**7.04**	**224**	*i* P	**Pn**	**16 33 23.6**	**+0.4**
AKS	**Akhisar**	**7.04**	**224**	*eP*	**Pn**	**16 33 23.4**	**+0.3**
BURAR	**Bucovina Array**	**7.15**	**303**	⇑*iP*	**Pn**	**16 33 26.2**	**+1.5**
BURAR	**Bucovina Array**	**7.15**	**303**	S	**Sn**	**16 34 45.8**	**+0.4**
BUR08	**Bucovina Ar. S**	**7.17**	**303**	*eP*	**Pn**	**16 33 25.5**	**+0.4**
BUR08	**Bucovina Ar. S**	**7.17**	**303**	*eP*	**Pn**	**16 33 25.5**	**+0.4**
EZN	**Ez

PSZ	**Piszkesteto**	**10.61**	**296**	*e*P		**Pn**	**16 34 15.2 +3.0**
NIE	**Niedzica**	**10.87**	**304**	*e*P		**Pn**	**16 34 16.8 +1.2**
NIE	**Niedzica**	**10.87**	**304**	*e*P		**Pn**	**16 34 16.8 +1.2**
OBN	**Obninsk**	**11.15**	**7**	*e*P		**Pn**	**16 34 18.0 -1.4**
OBN				*e*S		**Sn**	**16 36 18.1 -5.2**
OBN	comp=Z,20nm,1.2s			pmax	pmax		
OBN	comp=Z,100nm,16.0s			MLR	MLR		
OBN	**Obninsk**	**11.15**	**7**	*e*P		**Pn**	**16 34 18.0 -1.4**
MICGM	comp=Z,20nm,1.2s **Minsk**	**11.18**	**341**	*e*		Pn	16 34 08.0 -12
MNK	**Minsk**	**11.19**	**341**	*e*P		Pn	16 34 08.0 -12
VYHS	**Vyhne**	**11.46**	**298**	*e*PN		Pn	16 34 28.0 +4.4
OJC	**Ojcow**	**11.51**	**307**	*e*P		**Pn**	**16 34 24.8 +0.4**
OJC				*e*S		Sn	16 36 25.2 -7.1
OJC	**Ojcow**	**11.51**	**307**	*e*P		**Pn**	**16 34 24.8 +0.4**
NACGM	**Naroch**	**11.82**	**339**	*e*P		Pn	16 34 24.0 -4.5
SUW	**Suwalki**	**12.24**	**328**	P		**Pn**	**16 34 34.3 0.0**
SUW	comp=Z,23nm,0.5s **Suwalki**	**12.24**	**328**	P		**Pn**	**16 34 34.3 0.0**
IIGN	comp=Z,23nm,0.5s **Ignalina**	**12.37**	**338**	*e*P		**Pn**	**16 34 34.5 -1.5**
ISAL	**Salakas**	**12.59**	**339**	*e*P		**Pn**	**16 34 36.9 -2.1**
DPC	**Dobruska-Polom**	**13.61**	**304**	*e*P		Pn	16 34 56.2 +3.1
DPC	**Dobruska-Polom**	**13.61**	**304**	*e*P		Pn	16 34 56.2 +3.1
DPC	**Dobruska-Polom**	**13.61**	**304**	Pn		Pn	16 34 56.2 +3.1
EIL	**Elat**	**14.41**	**177**	LR		LR	16 41 52.3
GERES	comp=Z,40nm,20.3s,baz=20,slow=42 **GERESS Array B**	**14.84**	**296**	Pn		**Pn**	**16 35 11.7 +1.7**
GERES	**GERESS Array B**	**14.84**	**296**	Pn		**Pn**	**16 35 11.7 +1.7**
GERES	comp=Z,0.1nm,0.3s,baz=133,slow=12,SNR=2.7 **GERESS Array B**	**14.84**	**296**	Pn		**Pn**	**16 35 11.6 +1.7**
DAVOX	**Davos/Dischmat**	**17.21**	**288**	P		**P**	**16 35 44.3 +2.3**
DAVOX	**Davos/Dischmat**	**17.21**	**288**	P		**P**	**16 35 44.3 +2.3**
DAVOX	comp=Z,0.1nm,0.3s,baz=123,slow=13,SNR=4.7			LR		LR	16 43 18.4
DAVOX	comp=Z,54nm,21.5s,baz=251,slow=40 **Davos/Dischmat**	**17.21**	**288**	P		**P**	**16 35 44.3 +2.3**
AKTO	comp=Z,54nm,21.5s **Aktyubinsk**	**17.37**	**60**	P		**Pn**	**16 35 38.7 -3.7**
AKTO				pmax	pmax		
AKTO	comp=Z,1.0nm,0.3s **Aktyubinsk**	**17.37**	**60**	P		**Pn**	**16 35 38.7 -3.7**
AKTO				S		Sn	16 38 38.4 -17
AKTO	**Aktyubinsk**	**17.37**	**60**	P		**Pn**	**16 35 38.7 -3.7**
AKTO	comp=Z,0.7nm,0.3s,baz=266,slow=11,SNR=14			S		Sn	16 38 38.4 -17
FINES	comp=Z,0.4nm,0.3s,baz=171,slow=19,SNR=5.6 **FINESS Array B**	**18.03**	**347**	P		**Pn**	**16 35 46.2 -4.1**
FINES				S		Sn	16 38 59.3 -11
FINES	**FINESS Array B**	**18.03**	**347**	P		**Pn**	**16 35 46.3 -4.1**
FINES	comp=Z,0.3nm,0.3s,baz=148,slow=12,SNR=14			S		Sn	16 38 59.3 -11
ABKAR	comp=Z,0.4nm,0.3s,baz=158,slow=22,SNR=4.1 **Akbulak array**	**18.41**	**65**	*e*P		**P**	**16 35 51.7 -3.4**
KAF	comp=Z,5.3nm,0.6s **Kangasniemi**	**18.63**	**348**	*e*P		**P**	**16 35 56.1 -1.2**
KAF				pmax	pmax		
KAF	comp=Z,6.0nm,0.7s **Kangasniemi**	**18.63**	**348**	*e*p		**P**	**16 35 56.1 -1.2**
KAF	comp=Z,5.5nm,0.7s **Kangasniemi**	**18.63**	**348**	*e*P		**P**	**16 35 56.1 -1.2**
JOF	comp=Z,6.0nm,0.7s **Joensuu**	**18.93**	**356**	*e*P		**P**	**16 35 56.6 -4.1**
JOF				pmax	pmax		
JOF	comp=Z,2.0nm,0.6s **Joensuu**	**18.93**	**356**	*e*p		**P**	**16 35 56.6 -4.1**
SBF	comp=Z,1.9nm,0.6s **Sospel**	**19.19**	**279**	*e*P		**Pn**	**16 36 05.8 +1.2**
SBF	**Sospel**	**19.19**	**279**	*e*P		**Pn**	**16 36 05.8 +1.2**
SBF	**Sospel**	**19.19**	**279**	*e*P		**Pn**	**16 36 05.8 +1.2**
LPG	**La Plagne**	**19.45**	**284**	*e*P		**Pn**	**16 36 08.5 +0.5**
LPG	comp=Z,10nm,0.8s **La Plagne**	**19.45**	**284**	*e*P		**Pn**	**16 36 08.5 +0.5**
LPG	comp=Z,10nm,0.8s **La Plagne**	**19.45**	**284**	*e*P		**Pn**	**16 36 08.5 +0.5**
LPL	comp=Z,5.1nm,0.8s **La Plagne**	**19.46**	**284**	*e*P		**Pn**	**16 36 08.3 +0.2**
LPL	**La Plagne**	**19.46**	**284**	*e*P		**Pn**	**16 36 08.3 +0.2**
LPL	**La Plagne**	**19.46**	**284**	*e*P		**Pn**	**16 36 08.3 +0.2**
MBDF	**Montbardon**	**19.52**	**281**	*e*P		**Pn**	**16 36 09.7 +0.9**
MBDF	comp=Z,30nm,1.1s **Montbardon**	**19.52**	**281**	*e*P		**Pn**	**16 36 09.7 +0.9**
MBDF	comp=Z,30nm,1.1s **Montbardon**	**19.52**	**281**	*e*P		**Pn**	**16 36 09.7 +0.9**
ARU	comp=Z,15nm,1.1s **Arti**	**19.78**	**43***c*	*i*P		**P**	**16 36 08.3 -1.7**
ARU				S		**S**	**16 39 48.8 -3.1**
ARU	comp=Z,7.0nm,0.7s			pmax	pmax		
ARU	**Arti**	**19.78**	**43**	*e*P		**P**	**16 36 08.2 -1.9**
ARU	comp=Z,9.5nm,0.8s **Arti**	**19.78**	**43**	*i* P		**P**	**16 36 08.3 -1.7**
FRF	comp=Z,7.0nm,0.7s **La Foret Royal**	**19.80**	**278**	*e*P		**Pn**	**16 36 12.4 +0.5**
FRF	**La Foret Royal**	**19.80**	**278**	*e*P		**Pn**	**16 36 12.4 +0.5**
FRF	**La Foret Royal**	**19.80**	**278**	*e*P		**Pn**	**16 36 12.4 +0.5**
CABF	**La Chapelle**	**19.82**	**287**	*e*P		**Pn**	**16 36 12.0 -0.3**
CABF	comp=Z,16nm,1.0s **La Chapelle**	**19.82**	**287**	*e*P		**Pn**	**16 36 12.0 -0.3**
CABF	comp=Z,16nm,1.0s **La Chapelle**	**19.82**	**287**	*e*P		**Pn**	**16 36 12.0 -0.3**
HFS	comp=Z,7.8nm,1.0s **Hagfors**	**20.24**	**330**	P		**P**	**16 36 14.2 -0.8**
HFS	**Hagfors**	**20.24**	**330**	P		**P**	**16 36 14.2 -0.8**
HFS	comp=Z,2.7nm,0.6s,baz=138,slow=14,SNR=11 **Hagfors**	**20.24**	**330**	P		**P**	**16 36 14.2 -0.8**
SVE	comp=Z,3.0nm,0.6s **Sverdlovsk**	**20.98**	**43**⇑	*e*P		**P**	**16 36 22.5 -0.5**
SVE				pmax	pmax		
SVE	comp=Z,22nm,1.1s **Sverdlovsk**	**20.98**	**43**	*e*P		**P**	**16 36 22.5 -0.5**
LOR	comp=Z,22nm,1.1s **Lormes**	**21.32**	**289**	*e*P		**P**	**16 36 27.3 +0.5**
LOR				*e*R			
LOR	comp=Z,61nm,17.8s **Lormes**	**21.32**	**289**	*e*P		**P**	**16 36 27.3 +0.5**
LOR	**Lormes**	**21.32**	**289**	*e*P		**P**	**16 36 27.3 +0.5**
SMF	**Signal de Mont**	**21.37**	**288**	*e*P		**P**	**16 36 28.5 +1.2**
SMF	**Signal de Mont**	**21.37**	**288**	*e*P		**P**	**16 36 28.5 +1.2**
SMF	**Signal de Mont**	**21.37**	**288**	*e*P		**P**	**16 36 28.5 +1.2**
SSF	**Saint Saulge**	**21.57**	**289**	*e*P		**P**	**16 36 30.1 +0.7**
SSF	**Saint Saulge**	**21.57**	**289**	*e*P		**P**	**16 36 30.1 +0.7**
SSF	**Saint Saulge**	**21.57**	**289**	*e*P		**P**	**16 36 30.1 +0.7**
AVF	**Avril sur Loir**	**21.69**	**288**	*e*P		**P**	**16 36 31.6 +0.9**
AVF	**Avril sur Loir**	**21.69**	**288**	*e*P		**P**	**16 36 31.6 +0.9**
AVF	**Avril sur Loir**	**21.69**	**288**	*e*P		**P**	**16 36 31.6 +0.9**
NB2	**NORSAR Subarra**	**21.76**	**329**	P		**P**	**16 36 32.2 +0.8**
NB2	comp=Z,2.3nm,1.0s,baz=131,slow=11 **NORSAR Subarra**	**21.76**	**329**	P		**P**	**16 36 32.2 +0.8**
NOA	comp=Z,2.3nm,1.0s,baz=131,slow=11,SNR=5.4 **NORSAR Array B**	**21.76**	**329**	P		**P**	**16 36 31.1 -0.3**
NOA	**NORSAR Array B**	**21.76**	**329**	P		**P**	**16 36 31.1 -0.3**
NOA	comp=Z,1.0nm,0.8s,baz=131,slow=10,SNR=3.6 **NORSAR Array B**	**21.76**	**329**	P		**P**	**16 36 31.1 -0.3**
BGF	comp=Z,1.0nm,0.8s **Bois d'Agland**	**22.06**	**287**	*e*P		**P**	**16 36 35.6 +0.9**
BGF	**Bois d'Agland**	**22.06**	**287**	*e*P		**P**	**16 36 35.6 +0.9**
BGF	**Bois d'Agland**	**22.06**	**287**	*e*P		**P**	**16 36 35.6 +0.9**
LDF	**La Druitiere**	**23.94**	**293**	*e*P		**P**	**16 36 52.3 -1.6**
LDF	**La Druitiere**	**23.94**	**293**	*e*P		**P**	**16 36 52.3 -1.6**
LDF	**La Druitiere**	**23.94**	**293**	*e*P		**P**	**16 36 52.3 -1.6**
MFF	**Saint Martin d**	**24.11**	**288**	*e*P		**P**	**16 36 55.1 -0.4**
MFF	**Saint Martin d**	**24.11**	**288**	*e*P		**P**	**16 36 55.1 -0.4**
MFF	**Saint Martin d**	**24.11**	**288**	*e*P		**P**	**16 36 55.1 -0.4**
BRVK	**Borovoye**	**25.31**	**56**	*e*P		**P**	**16 37 06.4 +0.1**
BRVK	comp=Z,5.0nm,1.0s			pmax	pmax		
BRVK	**Borovoye**	**25.31**	**56**	*e*P		**P**	**16 37 06.9 +0.6**
BRVK	comp=Z,3.5nm,0.6s **Borovoye**	**25.31**	**56**	*e*P		**P**	**16 37 06.9 +0.6**
BVAR	comp=Z,3.5nm,0.6s **Borovoye Array**	**25.37**	**56**	P		**P**	**16 37 07.2 +0.3**
BVAR				pmax	pmax		
BVAR	comp=Z,2.0nm,0.5s **Borovoye Array**	**25.37**	**56**	P		**P**	**16 37 07.2 +0.3**
BVAR	**Borovoye Array**	**25.37**	**56**	P		**P**	**16 37 07.2 +0.3**
BVAR	comp=Z,2.0nm,0.5s,baz=260,slow=9.3,SNR=13 **Borovoye Array**	**25.37**	**56**	P		**P**	**16 37 07.2 +0.3**
ARCES	comp=Z,2.0nm,0.5s **ARCESS Array B**	**25.89**	**353**	P		**P**	**16 37 11.6 +0.2**
ARCES	**ARCESS Array B**	**25.89**	**353**	P		**P**	**16 37 11.6 +0.2**
ARCES	comp=Z,2.6nm,0.5s,baz=159,slow=10,SNR=33			LR		LR	16 46 26.4
	comp=Z,36nm,18.6s,baz=36,slow=34						
ARCES	**ARCESS Array B**	**25.89**	**353**	P		**P**	**16 37 11.6 +0.2**
ARE0	comp=Z,36nm,18.6s **ARCESS Array S**	**25.89**	**353**	*e*P		**P**	**16 37 11.6 +0.2**
ARE0	**ARCESS Array S**	**25.89**	**353**	*e*P		**P**	**16 37 11.6 +0.2**
KEV	**Kevo**	**25.99**	**354**	*e*P		P	16 37 24.3 +12
KEV	**Kevo**	**25.99**	**354**	*e*p		P	16 37 24.3 +12
KKAR	comp=Z,0.4nm,0.4s **Karatay Array**	**26.24**	**79**	*e*P		**P**	**16 37 15.6 +0.7**
KKAR	comp=Z,2.8nm,0.6s **Karatay Array**	**26.24**	**79**	*e*P		**P**	**16 37 15.6 +0.7**
EKA	comp=Z,2.8nm,0.6s **Eskdalemuir Ar**	**26.28**	**309**	P		**P**	**16 37 15.2 +0.1**
EKA	**Eskdalemuir Ar**	**26.28**	**309**	P		**P**	**16 37 15.2 +0.1**
EKA	comp=Z,0.7nm,0.9s,baz=90,slow=11,SNR=3.9 **Eskdalemuir Ar**	**26.28**	**309**	P		**P**	**16 37 15.2 +0.1**
AAK	comp=Z,1.0nm,0.9s **Ala-Archa**	**29.18**	**79**⇑	*i*P		**P**	**16 37 42.0 +0.6**
AAK				pmax	pmax		
AAK	comp=Z,5.0nm,1.0s **Ala-Archa**	**29.18**	**79**	P		**P**	**16 37 42.4 +1.0**
AAK	**Ala-Archa**	**29.18**	**79**	P		**P**	**16 37 42.4 +1.0**
MKAR	comp=Z,1.7nm,0.8s,baz=230,slow=6.5,SNR=8.0 **Makanchi Array**	**33.49**	**68**	P		**P**	**16 38 19.6 +0.5**
MKAR				pmax	pmax		
MKAR	comp=Z,3.0nm,0.5s **Makanchi Array**	**33.49**	**68**	P		**P**	**16 38 19.6 +0.5**
MKAR	**Makanchi Array**	**33.49**	**68**	P		**P**	**16 38 19.6 +0.5**
MKAR	comp=Z,2.5nm,0.5s,baz=274,slow=8.5,SNR=62 **Makanchi Array**	**33.49**	**68**	P		**P**	**16 38 19.6 +0.5**
ZAA0	comp=Z,3.0nm,0.5s **Zalesovo Array**	**33.99**	**55**	*e*P		**P**	**16 38 23.3 -0.1**
ZAA0	**Zalesovo Array**	**33.99**	**55**	*e*P		**P**	**16 38 23.3 -0.1**
ZALV	**Zalesovo Beam**	**33.99**	**55**	P		**P**	**16 38 23.4 0.0**
ZALV	comp=Z,1.0nm,0.5s			pmax	pmax		
ZALV	**Zalesovo Beam**	**33.99**	**55**	P		**P**	**16 38 23.4 0.0**
ZALV	**Zalesovo Beam**	**33.99**	**55**	P		**P**	**16 38 23.4 0.0**
ZALV	comp=Z,1.1nm,0.5s,baz=264,slow=9.0,SNR=7.0 **Zalesovo Beam**	**33.99**	**55**	P		**P**	**16 38 23.4 0.0**
SPITS	comp=Z,1.0nm,0.5s **Spitsbergen Ar**	**34.92**	**354**	P		**P**	**16 38 31.8 +0.7**
SPITS	**Spitsbergen Ar**	**34.92**	**354**	P		**P**	**16 38 31.8 +0.7**
SPITS	comp=Z,6.4nm,0.9s,baz=181,slow=13,SNR=4.5 **Spitsbergen Ar**	**34.92**	**354**	P		**P**	**16 38 31.8 +0.7**
TOA0	comp=Z,6.0nm,0.9s **Torodi Ar. Sit**	**41.48**	**232**	*e*P		**P**	**16 39 29.0 +2.0**
TOA0	**Torodi Ar. Sit**	**41.48**	**232**	*e*P		**P**	**16 39 29.0 +2.0**
TORD	**Torodi Ar. Bea**	**41.48**	**232**	P		**P**	**16 39 29.1 +2.1**
TORD	**Torodi Ar. Bea**	**41.48**	**232**	P		**P**	**16 39 29.1 +2.1**
TORD	comp=Z,0.6nm,0.4s,baz=34,slow=8.7,SNR=9.6 **Torodi Ar. Bea**	**41.48**	**232**	P		**P**	**16 39 29.1 +2.1**
SONM	**Songino Array**	**48.68**	**59**	P		**P**	**16 40 24.8 +0.7**
SONM	**Songino Array**	**48.68**	**59**	P		**P**	**16 40 24.8 +0.7**
SONM	comp=Z,0.5nm,0.6s,baz=293,slow=8.5,SNR=6.4 **Songino Array**	**48.68**	**59**	P		**P**	**16 40 24.8 +0.7**
DBIC	comp=Z,1.0nm,0.6s **Dimbokro**	**50.48**	**234**	P		**P**	**16 40 40.5 +2.7**
DBIC	**Dimbokro**	**50.48**	**234**	P		**P**	**16 40 40.5 +2.7**
DBIC	comp=Z,0.6nm,0.5s,baz=356,slow=9.9,SNR=2.5 **Dimbokro**	**50.48**	**234**	P		**P**	**16 40 40.5 +2.7**
LZH	**Lanzhou**	**52.49**	**73**	*e*P		**P**	**16 40 54.5 +1.5**
LZH				pP		**pP**	**16 40 59.5 +0.3**
LZH				sP		**sP**	**16 41 01.0 -0.6**
LZH	comp=Z,14nm,1.0s			pmax	pmax		
YAK	**Yakutsk**	**54.65**	**35**	*i* P		**P**	**16 41 08.0 -0.2**
YAK	**Yakutsk**	**54.65**	**35**	*i* P		**P**	**16 41 08.0 -0.2**
HHC	**Hu-ho-hao-te**	**55.20**	**64**	*e*P		**P**	**16 41 11.3 -1.4**
HHC				S		S	16 48 48.8 -6.3
HHC	comp=Z,29nm,0.6s			pmax	pmax		
HHC	comp=Z,170nm,6.5s			pmax	pmax		
CMAR	**Chiang Mai Arr**	**59.39**	**94**	P		**P**	**16 41 42.4 0.0**
CMAR	**Chiang Mai Arr**	**59.39**	**94**	P		**P**	**16 41 42.4 0.0**
CMAR	comp=Z,0.5nm,0.6s,baz=305,slow=8.2,SNR=7.8 **Chiang Mai Arr**	**59.39**	**94**	P		**P**	**16 41 42.4 0.0**
BILL	comp=Z,1.0nm,0.6s **Bilibino**	**62.58**	**18**	*e*P		**P**	**16 42 04.4 +1.1**
BILL				*e**PP		**pP**	**16 42 09.5 -0.1**
BILL	comp=Z,1.0nm,1.1s			pmax	pmax		
BILL	**Bilibino**	**62.58**	**18**	*e*P		**P**	**16 42 04.4 +1.1**
SEY	comp=Z,1.0nm,1.1s **Seymchan**	**62.58**	**27**	*e*P		**P**	**16 42 03.4 0.0**
SEY	**Seymchan**	**62.58**	**27**	*e*P		**P**	**16 42 03.4 0.0**
KSAR	**Wonju Array Be**	**67.53**	**59**	P		**P**	**16 42 36.4 +0.4**
KSAR	**Wonju Array Be**	**67.53**	**59**	P		**P**	**16 42 36.4 +0.4**
KSRS	**Korea Array**	**67.55**	**59**	P		**P**	**16 42 36.4 +0.3**
YKA	comp=Z,3.9nm,0.7s,baz=310,slow=5.4,SNR=32 **Yellowknife Ar**	**70.84**	**345**	P		**P**	**16 42 56.8 +0.7**
YKA	**Yellowknife Ar**	**70.84**	**345**	P		**P**	**16 42 56.8 +0.7**
YKA	comp=Z,0.9nm,0.7s,baz=20,slow=6.1,SNR=17 **Yellowknife Ar**	**70.84**	**345**	P		**P**	**16 42 56.8 +0.7**
ILAR	**Eielson Array**	**71.48**	**0**	P		**P**	**16 43 01.1 +1.2**
ILAR	**Eielson Array**	**71.48**	**0**	P		**P**	**16 43 01.1 +1.2**
ILAR	comp=Z,0.2nm,0.5s,baz=335,slow=5.5,SNR=4.7 **Eielson Array**	**71.48**	**0**	P		**P**	**16 43 01.1 +1.2**
FX1	**Attu Island--F**	**77.19**	**24**	LR		LR	17 24 17.1
PDAR	comp=Z,52nm,18.1s,baz=146,slow=41 **Pinedale Array**	**87.62**	**334**	P		**P**	**16 44 29.2 +0.8**
PDAR	**Pinedale Array**	**87.62**	**334**	P		**P**	**16 44 29.2 +0.8**
PDAR	comp=Z,0.4nm,0.9s,baz=72,slow=2.9,SNR=2.8 **Pinedale Array**	**87.62**	**334**	P		**P**	**16 44 29.2 +0.8**

IDC 12 16:35:37.1±10.0, 20°.43S×178°.33W, h604km±125km, mb3.0/6, mb1 3.3/6, mb1mx3.0/18, mbtmp3.0/6, Error ellipse: s-maj=74.0km s-min=40.2km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ASAR	**Alice Springs**	**44.24**	**257**	P		P	16 42 54.5	0.0
	1.3nm,0.5s,baz=91,slow=7.8,SNR=32							
WRA	**Warramunga Arr**	**44.31**	**262**	P		P	16 42 54.8	-0.3
	0.7nm,0.3s,baz=97,slow=7.5,SNR=7.1							
PETK	**Petropavlovsk-**	**76.12**	**345**	P		P	16 46 24.2	+0.4
	1.2nm,0.8s,baz=136,slow=7.5,SNR=5.8							
NVAR	**Mina Array Bea**	**81.18**	**44**	P		P	16 46 51.6	+0.3
	0.3nm,0.7s,baz=217,slow=8.7,SNR=4.9							
ILAR	**Eielson Array**	**88.31**	**13**	P		P	16 47 24.1	-0.9
	0.3nm,0.4s,baz=217,slow=5.5,SNR=11							
PDAR	**Pinedale Array**	**89.12**	**43**	P		P	16 47 29.5	0.0
	0.3nm,0.6s,baz=228,slow=3.5,SNR=2.9							
BVAR	**Borovoye Array**	**118.83**	**320**	PKP		PKPdf	16 53 17.5	0.0
	0.5nm,0.5s,baz=48,slow=2.1,SNR=4.0							

*CSEM **12** 16:35:54.2±0.1, 42°.51N×13°.36E, h2km, ML3.4/14, Error ellipse: s-maj=2.4km s-min=1.8km az=64.0*
*LDG **12** 16:35:54.0±1.2, 42°.43N×13°.55E, h2km, Ml3.1/4, Error ellipse: s-maj=26.9km s-min=13.0km az=108.0*
ROM 12 16:35:53.8±0.1, 42°.51N×13°.37E, h9km, Ml3.1/25, 14C-1D, Error ellipse: s-maj=1.1km s-min=0.8km az=61.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CAMP	**Campotosto**	**0.04**	**48**⇑	*i*Pg		Pg	16 35 56.1	+0.4
CAMP				Sg		Sg	16 35 57.1	0.0
	9μm,0.5s							
CAMP	**Campotosto**	**0.04**	**48**⇑	*i*Pg		Pg	16 35 56.1	+0.4
CAMP				Sg		Sg	16 35 57.1	0.0
	9μm,0.5s							
AQU	**L'Aquila**	**0.16**	**171**⇑	*i*Pg		Pg	16 35 58.3	+1.0
AQU				Sg		Sg	16 36 00.7	+1.1
	8μm,0.4s							
AQU	**L'Aquila**	**0.16**	**171**⇑	*i*Pg		Pg	16 35 58.3	+1.0
AQU				Sg		Sg	16 36 00.7	+1.1
	8μm,0.4s							
TERO	**Teramo**	**0.21**	**57**⇑	*i*Pg		Pg	16 35 58.6	+0.5
TERO				Sg		Sg	16 36 01.7	+0.6
	4μm,0.4s							
TERO	**Teramo**	**0.21**	**57**⇑	*i*Pg		Pg	16 35 58.6	+0.5
TERO				Sg		Sg	16 36 01.7	+0.6
	4μm,0.4s							
LNSS	**Leonessa**	**0.26**	**291**⇑	*i*Pg		Pg	16 36 00.0	+0.8
LNSS				Sg		Sg	16 36 04.1	+1.2
	6μm,0.7s							
LNSS	**Leonessa**	**0.26**	**291**⇑	*i*Pg		Pg	16 36 00.0	+0.8
LNSS				Sg		Sg	16 36 04.1	+1.2
	6μm,0.7s							
FAGN	**Fagnano**	**0.29**	**147**	Pg		Pg	16 36 00.4	+0.7
FAGN				Sg		Sb	16 36 05.3	-1.0
	6μm,0.4s							
FAGN	**Fagnano**	**0.29**	**147**	Pg		Pg	16 36 00.4	+0.7
FAGN				Sg		Sb	16 36 05.3	-1.0
	6μm,0.4s							
FIAM	**Fiamignano**	**0.31**	**218**⇑	*i*Pg		Pg	16 36 00.8	+0.8
FIAM				Sg		Sg	16 36 05.3	+1.1
	3μm,0.8s							
FIAM	**Fiamignano**	**0.31**	**218**⇑	*i*Pg		Pg	16 36 00.8	+0.8
FIAM				Sg		Sg	16 36 05.3	+1.1
	3μm,0.8s							
VCEL	**Villa Celiera**	**0.37**	**108**	Pg		Pg	16 36 01.6	+0.4
VCEL				Sg		Sb	16 36 07.5	-1.2
	2μm,0.6s							
VCEL	**Villa Celiera**	**0.37**	**108**	Pg		Pg	16 36 01.6	+0.4
VCEL				Sg		Sb	16 36 07.5	-1.2
	2μm,0.6s							
NRCA	**Norcia**	**0.37**	**330**	Pg		Pg	16 36 01.7	+0.4
NRCA				Sg		Sg	16 36 07.5	+1.1
	2μm,0.1s							
NRCA	**Norcia**	**0.37**	**330**	Pg		Pg	16 36 01.7	+0.4
NRCA				Sg		Sg	16 36 07.5	+1.1
	2μm,0.1s							
OFFI	**Offida**	**0.48**	**29**	Pg		Pb	16 36 04.4	-0.2
	4μm,0.5s							
OFFI	**Offida**	**0.48**	**29**	Pg		Pb	16 36 04.4	-0.2
	4μm,0.5s							
PTQR	**Pietraquaria**	**0.49**	**177**	Pg		Pg	16 36 03.6	+0.2
PTQR				Sg		Sb	16 36 12.6	+0.5
	112nm,0.2s							
PTQR	**Pietraquaria**	**0.49**	**177**	Pg		Pg	16 36 03.6	+0.2
PTQR				Sg		Sb	16 36 12.6	+0.5
	112nm,0.2s							
TRTR	**Tortoreto Alta**	**0.50**	**53**⇑	*i*Pg		Pb	16 36 05.1	+0.3
	2μm,0.4s							
TRTR	**Tortoreto Alta**	**0.50**	**53**⇑	*i*Pg		Pb	16 36 05.1	+0.3
	2μm,0.4s							
MNS	**Montasola**	**0.53**	**256**	Pg		Pg	16 36 04.3	+0.2
MNS				Sg		Sb	16 36 12.3	-0.7
	962nm,0.6s							
MNS	**Montasola**	**0.53**	**256**	Pg		Pg	16 36 04.3	+0.2
MNS				Sg		Sb	16 36 12.3	-0.7
	962nm,0.6s							
FDMO	**Fiordimonte**	**0.57**	**339**	Pg		Pg	16 36 04.9	0.0
FDMO				Sg		Sb	16 36 13.6	-0.6
	489nm,0.4s							
FDMO	**Fiordimonte**	**0.57**	**339**	Pg		Pg	16 36 04.9	0.0
FDMO				Sg		Sb	16 36 13.6	-0.6
	489nm,0.4s							
CESI	**CESI - Serrava**	**0.60**	**325**	Pg		Pg	16 36 05.7	+0.1
CESI				Sg		Sg	16 36 14.3	+0.7
CESI	**CESI - Serrava**	**0.60**	**325**	Pg		Pg	16 36 05.7	+0.1
CESI				Sg		Sg	16 36 14.3	+0.7
CERT	**Cerreto**	**0.63**	**207**	Pg		Pg	16 36 06.1	0.0
	1μm,0.3s							
CERT	**Cerreto**	**0.63**	**207**	Pg		Pg	16 36 06.1	0.0
	1μm,0.3s							
INTR	**Introdacqua**	**0.64**	**141**⇑	*i*Pg		Pg	16 36 06.3	+0.1
INTR				Sg		Sb	16 36 16.2	-0.1
	987nm,0.8s							
INTR	**Introdacqua**	**0.64**	**141**⇑	*i*Pg		Pg	16 36 06.3	+0.1
INTR				Sg		Sb	16 36 16.2	-0.1
	987nm,0.8s							
VVLD	**Villa Vallelon**	**0.67**	**164**	Pg		Pg	16 36 06.6	-0.2
	655nm,0.6s							
VVLD	**Villa Vallelon**	**0.67**	**164**	Pg		Pg	16 36 06.6	-0.2
	655nm,0.6s							
MTCE	**Montecelio**	**0.67**	**224**	Pg		Pg	16 36 06.8	-0.1
MTCE	**Montecelio**	**0.67**	**224**	Pg		Pg	16 36 06.8	-0.1
GUAR	**Guarcino**	**0.72**	**183**	Pg		Pg	16 36 08.1	+0.4
	515nm,0.3s							
GUAR	**Guarcino**	**0.72**	**183**	Pg		Pg	16 36 08.1	+0.4
	515nm,0.3s							
ASSB	**Assisi San Ben**	**0.75**	**316**	Pg		Pg	16 36 08.2	-0.1
	558nm,0.4s							
ASSB	**Assisi San Ben**	**0.75**	**316**	Pg		Pg	16 36 08.2

	SNR=14								
SBF	**Sospel**	**4.54**	**289**	*e*Pn	Pn	16 37 04.3	+1.4		
SBF	**Sospel**	**4.54**	**289**	*e*Pn	Pn	16 37 04.3	+1.4		
FRF	**La Foret Royal**	**5.04**	**284**	*e*Pn	Pn	16 37 10.5	+0.9		
FRF	**La Foret Royal**	**5.04**	**284**	*e*Pn	Pn	16 37 10.5	+0.9		
LMR	**La Mourre**	**5.11**	**282**	*e*Pn	Pn	16 37 11.2	+0.7		
LMR	**La Mourre**	**5.11**	**282**	*e*Pn	Pn	16 37 11.2	+0.7		
MBDF	**Montbardon**	**5.28**	**297**	*e*Pn	Pn	16 37 15.9	+2.8		
MBDF	**Montbardon**	**5.28**	**297**	*e*Pn	Pn	16 37 15.9	+2.8		
LPG	**La Plagne**	**5.63**	**304**	*e*P	Pn	16 37 22.3	+4.2		
LPL	**La Plagne**	**5.65**	**304**	*e*P	Pn	16 37 22.5	+4.2		
SMRF	**Simiane la Rot**	**5.88**	**287**	*e*P	Pn	16 37 23.8	+2.6		
SMRF	**Simiane la Rot**	**5.88**	**287**	*e*P	Pn	16 37 23.8	+2.6		
HINF	**Hinteralfeld**	**7.03**	**321**	*e*Pn	Pn	16 37 38.4	+1.5		
HINF				*e*Sn	Sn	16 38 54.8	-2.1		
	comp=Z,5.4nm,0.4s								
HINF	**Hinteralfeld**	**7.03**	**321**	*e*Pn	Pn	16 37 38.4	+1.5		
CDF	**Champ du Feu**	**7.29**	**326**	*e*Pn	Pn	16 37 41.3	+0.7		
CDF				*e*Sn	Sn	16 39 01.9	-1.7		
	comp=Z,2.2nm,0.3s								
CDF	**Champ du Feu**	**7.29**	**326**	*e*Pn	Pn	16 37 41.3	+0.7		
HAU	**Haudompre**	**7.40**	**320**	*e*Pn	Pn	16 37 43.7	+1.7		
HAU				*e*Sn	Sn	16 39 02.5	-3.5		
	comp=Z,7.2nm,0.4s								
HAU	**Haudompre**	**7.40**	**320**	*e*Pn	Pn	16 37 43.7	+1.7		

IDC ***12*** *16:39:04.4±8.6, 7°.08S×129°.27E, h74km±83km, mb3.2/2, mb1 3.6/5, mb1mx3.3/19, mbtmp3.4/5, ML3.9/3, MS3.0/1, Ms1 3.0/1, ms1mx2.2/10, Error ellipse: s-maj=94.7km s-min=34.2km az=52.0*

ISCJB ***12*** *16:39:07.4±0.7, 7°.32S±0°.05×128°.96E±0°.08, h131km, mb3.2/2, Error ellipse: s-maj=10.6km s-min=6.4km az=4.5*

AUST ***12*** *16:39:08.0, 7°.48S×129°.04E, h200km*

ISC 12 16:39:07.8±0.8, 7°.37S±0°.06×128°.89E±0°.07, h131km, n12, σ3$35/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.72**	**349**	P		Pn	16 40 10.1	+6.2
	baz=3.9,SNR=6.2							
TLE	**Tual**	**4.19**	**66**	P		**Pn**	**16 40 12.0**	**+1.9**
	baz=4.1,SNR=17							
TLE				S		**Sn**	**16 40 55.6**	**-2.8**
	baz=4.1,SNR=3.2							
MTN	**Manton Dam**	**5.87**	**158**	P		Pn	16 40 35.6	+2.9
	baz=5.7,SNR=39							
MTN				S		**Sn**	**16 41 37.1**	**-1.7**
	baz=5.7,SNR=9.1							
KDU	**Kakadu**	**6.36**	**147**	P		Pn	16 40 41.1	+2.0
	baz=6.2,SNR=36							
KDU				S		**Sn**	**16 41 47.0**	**-3.5**
	baz=6.2,SNR=11							
SWI	**Sorong**	**6.88**	**20**	S		**Sn**	**16 42 00.9**	**-2.2**
	baz=7.0,SNR=3.5							
PCI	**Palu**	**11.08**	**305**	P		**Pn**	**16 41 42.0**	**-0.5**
	baz=11,SNR=7.3							
PCI				S		**Sn**	**16 43 39.8**	**-5.0**
	baz=11,SNR=6.5							
FITZ	**Fitzroy Crossi**	**11.13**	**196**	P		Pn	16 41 45.5	+2.2
	0.5nm,0.3s,baz=23,slow=13,SNR=19							
FITZ				S		**Sn**	**16 43 43.6**	**-2.5**
	0.7nm,0.3s,baz=82,slow=18,SNR=5.8							
FITZ	**Fitzroy Crossi**	**11.13**	**196**	P		**Pn**	**16 41 45.3**	**+2.0**
	baz=11,SNR=13							
WRA	**Warramunga Arr**	**13.57**	**158**	P		**Pn**	**16 42 14.0**	**-1.1**
	0.6nm,0.3s,baz=339,slow=12,SNR=24							
WRA				S		Sn	16 44 37.4	-7.7
	1.0nm,0.3s,baz=335,slow=23,SNR=10							
ASAR	**Alice Springs**	**16.91**	**164**	P		**Pn**	**16 42 59.4**	**+2.7**
	0.5nm,0.3s,baz=341,slow=9.7,SNR=49							
ASAR				S		**Sn**	**16 45 59.9**	**-5.4**
	0.2nm,0.3s,baz=349,slow=26,SNR=6.5							
ASAR				LR		LR	16 50 26.3	
	comp=Z,41nm,18.0s,baz=181,slow=40							
STKA	**Stephens Creek**	**27.11**	**156**	P		**P**	**16 44 41.8**	**+3.3**
	0.3nm,0.4s,baz=336,slow=9.1,SNR=4.0							
MKAR	**Makanchi Array**	**67.93**	**327**	P		**P**	**16 49 55.1**	**+2.6**
	0.1nm,0.3s,baz=121,slow=7.8,SNR=4.7							

ISCJB ***12*** *16:51:37.9±0.2, 45°.70N±0°.02×26°.60E±0°.03, h142km±2km, mb3.5/12, Error ellipse: s-maj=3.6km s-min=2.9km az=146.4*

IDC ***12*** *16:51:38.8±0.4, 45°.90N×26°.24E, h133km±3km, mb3.3/11, mb1 3.3/15, mb1mx3.2/29, mbtmp3.2/15, Error ellipse: s-maj=18.4km s-min=8.8km az=131.0*

MOS ***12*** *16:51:38.0±0.5, 45°.72N×26°.57E, h143km, mb3.9/4, Error ellipse: s-maj=10.1km s-min=7.7km az=79.7*

BUC ***12*** *16:51:38.6±0.9, 45°.70N×26°.59E, h144km±8km, MD4.5/2, Error ellipse: s-maj=7.4km s-min=6.1km az=323.0*

CSEM ***12*** *16:51:38.7±0.1, 45°.70N×26°.57E, h138km±1km, mb4.0/4, Error ellipse: s-maj=3.2km s-min=2.6km az=151.0*

SOF ***12*** *16:51:39.5, 45°.63N×26°.53E, h133km, MD3.3*

BEO ***12*** *16:51:42.0±1.1, 45°.59N×25°.88E, h0km, ML3.2/3*

ISC 12 16:51:38.9±0.6, 45°.72N±0°.02×26°.57E±0°.02, h145km±4km, n233, σ1$33/316, mb3.5/12, 75C-40D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.14**	**24**	⇑P		**Pn**	**16 51 58.2**	**-0.3**
PLOR				S		**Sn**	**16 52 12.4**	**-1.2**
PLOR	**Plostina**	**0.14**	**24**	⇑*i*P		**Pn**	**16 51 58.2**	**-0.3**
PLOR	**Plostina**	**0.14**	**24**	⇑*i*P		**Pn**	**16 51 58.2**	**-0.3**
PLOR				*i* S		**Sn**	**16 52 12.4**	**-1.2**
PLOR	**Plostina**	**0.14**	**24**	⇑*i*P		**Pn**	**16 51 58.2**	**-0.3**
PLOR				*i* S		**Sn**	**16 52 12.4**	**-1.2**
VRI	**Vrincioaia**	**0.19**	**37**	⇑P		**Pn**	**16 51 58.4**	**-0.2**
VRI				S		**Sn**	**16 52 12.3**	**-1.3**
VRI	**Vrincioaia**	**0.19**	**37**	⇑*i*P		**Pn**	**16 51 58.4**	**-0.2**
VRI	**Vrincioaia**	**0.19**	**37**	⇑*i*P		**Pn**	**16 51 58.4**	**-0.2**
VRI				*i* S		**Sn**	**16 52 12.3**	**-1.3**
VRI	**Vrincioaia**	**0.19**	**37**	⇑*i*P		**Pn**	**16 51 58.4**	**-0.2**
VRI				*i* S		**Sn**	**16 52 12.3**	**-1.3**
GRER		**0.45**	**140**	*i* S		**Sn**	**16 52 13.2**	**-1.8**
GRER		**0.45**	**140**	*i* S		**Sn**	**16 52 13.2**	**-1.8**
GRER		**0.45**	**140**	*i* S		**Sn**	**16 52 13.2**	**-1.8**
PETR		**0.47**	**89**	⇑*i*P		**Pn**	**16 51 59.7**	**+0.2**
PETR		**0.47**	**89**	⇑*i*P		**Pn**	**16 51 59.7**	**+0.2**
PETR				*i* S		**Sn**	**16 52 15.1**	**0.0**
PETR		**0.47**	**89**	⇑*i*P		**Pn**	**16 51 59.7**	**+0.2**
PETR				*i* S		**Sn**	**16 52 15.1**	**0.0**
MLR	**Muntele Rosu**	**0.49**	**243**	⇑*i*P		**Pn**	**16 51 59.7**	**-0.1**
MLR	**Muntele Rosu**	**0.49**	**243**	⇑*i*P		**Pn**	**16 51 59.7**	**-0.1**
MLR				*i* S		**Sn**	**16 52 14.5**	**-1.2**
MLR	**Muntele Rosu**	**0.49**	**243**	P		**Pn**	**16 51 59.6**	**-0.1**
	28nm,0.3s,baz=129,slow=3.8,SNR=1437							
MLR				S		**Sn**	**16 52 14.0**	**-1.7**
	27nm,0.3s,baz=240,slow=20,SNR=58							
MLR	**Muntele Rosu**	**0.49**	**243**	⇑*i*P		**Pn**	**16 51 59.7**	**-0.1**
MLR				*i* S		**Sn**	**16 52 14.5**	**-1.2**
ISR	**Istrita**	**0.60**	**182**	⇓P		**Pn**	**16 52 00.4**	**+0.1**
ISR				S		**Sn**	**16 52 14.0**	**-2.6**
ISR	**Istrita**	**0.60**	**182**	⇓*i*P		**Pn**	**16 52 00.4**	**+0.1**
ISR	**Istrita**	**0.60**	**182**	⇓*i*P		**Pn**	**16 52 00.4**	**+0.1**
ISR	**Istrita**	**0.60**	**182**	⇓*i*P		**Pn**	**16 52 00.4**	**+0.1**
ISR				S		**Sn**	**16 52 14.0**	**-2.6**
GHRR		**0.68**	**60**	⇑*i*P		**Pn**	**16 52 00.8**	**+0.1**
GHRR		**0.68**	**60**	⇑*i*P		**Pn**	**16 52 00.8**	**+0.1**
GHRR				*i* S		**Sn**	**16 52 17.2**	**-0.2**
GHRR		**0.68**	**60**	⇑*i*P		**Pn**	**16 52 00.8**	**+0.1**
GHRR				*i* S		**Sn**	**16 52 17.2**	**-0.2**
SECR		**0.77**	**207**	⇑*i*P		**Pn**	**16 52 01.6**	**+0.2**
SECR		**0.77**	**207**	⇑*i*P		**Pn**	**16 52 01.6**	**+0.2**
SECR				*i* S		**Sn**	**16 52 18.7**	**+0.2**
SECR		**0.77**	**207**	⇑*i*P		**Pn**	**16 52 01.6**	**+0.2**
SECR				*i* S		**Sn**	**16 52 18.7**	**+0.2**
TESR		**0.80**	**4**	⇑*i*P		**Pn**	**16 52 01.0**	**-0.5**
TESR		**0.80**	**4**	⇑*i*P		**Pn**	**16 52 01.0**	**-0.5**
TESR				*i* S		**Sn**	**16 52 17.3**	**-1.6**
TESR		**0.80**	**4**	⇑*i*P		**Pn**	**16 52 01.0**	**-0.5**
TESR				*i* S		**Sn**	**16 52 17.3**	**-1.6**
DOPR	**Dopca**	**0.86**	**287**	⇓*i*P		**Pn**	**16 52 02.0**	**0.0**
DOPR	**Dopca**	**0.86**	**287**	⇓*i*P		**Pn**	**16 52 02.0**	**0.0**
DOPR				*i* S		**Sn**	**16 52 19.2**	**-0.5**
DOPR	**Dopca**	**0.86**	**287**	⇓*i*P		**Pn**	**16 52 02.0**	**0.0**
DOPR				*i* S		**Sn**	**16 52 19.2**	**-0.5**
PGOR	**Pogoanele**	**0.86**	**160**	⇑*i*P		**Pn**	**16 52 02.0**	**-0.1**
PGOR	**Pogoanele**	**0.86**	**160**	⇑*i*P		**Pn**	**16 52 02.0**	**-0.1**
PGOR				*i* S		**Sn**	**16 52 18.1**	**-1.6**
PGOR	**Pogoanele**	**0.86**	**160**	⇑*i*P		**Pn**	**16 52 02.0**	**-0.1**
PGOR				*i* S		**Sn**	**16 52 18.1**	**-1.6**
CFR	**Carcaliu**	**1.23**	**116**	⇓P		**Pn**	**16 52 04.7**	**-0.6**
CFR				S		**Sn**	**16 52 24.1**	**-1.3**
CFR	**Carcaliu**	**1.23**	**116**	⇓*i*P		**Pn**	**16 52 04.7**	**-0.6**
CFR	**Carcaliu**	**1.23**	**116**	⇓*i*P		**Pn**	**16 52 04.7**	**-0.6**
CFR				*i* S		**Sn**	**16 52 24.1**	**-1.3**
CFR	**Carcaliu**	**1.23**	**116**	⇓*i*P		**Pn**	**16 52 04.7**	**-0.6**
CFR				*i* S		**Sn**	**16 52 24.1**	**-1.3**
AMRR	**Amara**	**1.23**	**154**	⇓P		**Pn**	**16 52 04.6**	**-0.8**
AMRR				S		**Sn**	**16 52 24.6**	**-0.9**
AMRR	**Amara**	**1.23**	**154**	⇑*i*P		**Pn**	**16 52 04.5**	**-0.8**
AMRR	**Amara**	**1.23**	**154**	⇑*i*P		**Pn**	**16 52 04.5**	**-0.8**
AMRR				*i* S		**Sn**	**16 52 24.6**	**-0.9**
AMRR	**Amara**	**1.23**	**154**	P		**Pn**	**16 52 04.6**	**-0.8**
AMRR				*i* S		**Sn**	**16 52 24.6**	**-0.9**
INCR	**INCERC-Sediu C**	**1.31**	**193**	⇓*i*P		**Pn**	**16 52 05.9**	**-0.2**
INCR	**INCERC-Sediu C**	**1.31**	**193**	⇓*i*P		**Pn**	**16 52 05.9**	**-0.2**
INCR				*i* S		**Sn**	**16 52 25.9**	**-0.9**
INCR	**INCERC-Sediu C**	**1.31**	**193**	⇓*i*P		**Pn**	**16 52 05.9**	**-0.2**
INCR				*i* S		**Sn**	**16 52 25.9**	**-0.9**
BUC	**Bucharest**	**1.35**	**194**	⇓P		**Pn**	**16 52 06.3**	**-0.2**
BUC				S		**Sn**	**16 52 26.8**	**-0.7**
BUC	**Bucharest**	**1.35**	**194**	⇓*i*P		**Pn**	**16 52 06.3**	**-0.2**
BUC	**Bucharest**	**1.35**	**194**	⇓*i*P		**Pn**	**16 52 06.3**	**-0.2**
BUC				*i* S		**Sn**	**16 52 26.8**	**-0.7**
CIOR	**Ciorogarla**	**1.36**	**201**	⇓*i*P		**Pn**	**16 52 06.4**	**-0.2**
CIOR	**Ciorogarla**	**1.36**	**201**	⇓*i*P		**Pn**	**16 52 06.4**	**-0.2**
CIOR				*i* S		**Sn**	**16 52 26.8**	**-1.0**
CIOR	**Ciorogarla**	**1.36**	**201**	⇓*i*P		**Pn**	**16 52 06.4**	**-0.2**
CIOR				*i* S		**Sn**	**16 52 26.8**	**-1.0**
LEOM	**Leova**	**1.39**	**57**	⇑P		**Pn**	**16 52 07.0**	**+0.1**
LEOM				S		**Sn**	**16 52 27.4**	**-0.9**
LEOM	**Leova**	**1.39**	**57**	⇑*i*P		**Pn**	**16 52 07.0**	**+0.1**
LEOM	**Leova**	**1.39**	**57**	⇑*i*P		**Pn**	**16 52 07.0**	**+0.1**
LEOM				*i* S		**Sn**	**16 52 27.4**	**-0.9**
LEOM	**Leova**	**1.39**	**57**	⇑*i*P		**Pn**	**16 52 07.0**	**+0.1**
LEOM				*i* S		**Sn**	**16 52 27.4**	**-0.9**
ARR	**Arges**	**1.40**	**256**	⇑*i*P		**Pn**	**16 52 07.2**	**+0.1**
ARR	**Arges**	**1.40**	**256**	⇑*i*P		**Pn**	**16 52 07.2**	**+0.1**
ARR	**Arges**	**1.40**	**256**	⇑*i*P		**Pn**	**16 52 07.2**	**+0.1**
BUC1	**Bucharest**	**1.42**	**196**	⇑P		**Pn**	**16 52 07.1**	**-0.2**
BUC1				S		**Sn**	**16 52 28.0**	**-0.9**
BUC1	**Bucharest**	**1.42**	**196**	⇓*i*P		**Pn**	**16 52 07.1**	**-0.2**
BUC1	**Bucharest**	**1.42**	**196**	⇓*i*P		**Pn**	**16 52 07.1**	**-0.2**
BUC1				*i* S		**Sn**	**16 52 28.0**	**-0.9**
BUC1	**Bucharest**	**1.42**	**196**	⇓*i*P		**Pn**	**16 52 07.1**	**-0.2**
BUC1				*i* S		**Sn**	**16 52 28.0**	**-0.9**
MDB	**Medias**	**1.58**	**286**	⇓P		**Pn**	**16 52 09.6**	**+0.7**
MDB	**Medias**	**1.58**	**286**	⇓*i*P		**Pn**	**16 52 09.6**	**+0.7**
MDB	**Medias**	**1.58**	**286**	⇓*i*P		**Pn**	**16 52 09.6**	**+0.7**
MDB	**Medias**	**1.58**	**286**	⇓*i*P		**Pn**	**16 52 09.6**	**+0.7**
IAS	**Iasi**	**1.63**	**25**	⇑P		**Pn**	**16 52 09.3**	**-0.1**
IAS				S		**Sn**	**16 52 31.4**	**-1.4**
IAS	**Iasi**	**1.63**	**25**	⇑*i*P		**Pn**	**16 52 09.3**	**-0.1**
IAS	**Iasi**	**1.63**	**25**	⇑*i*P		**Pn**	**16 52 09.3**	**-0.1**
IAS				*i* S		**Sn**	**16 52 31.4**	**-1.4**
IAS	**Iasi**	**1.63**	**25**	⇑*i*P		**Pn**	**16 52 09.3**	**-0.1**
IAS				*i* S		**Sn**	**16 52 31.4**	**-1.4**
HUMR	**Humele**	**1.64**	**224**	⇑*i*P		**Pn**	**16 52 09.1**	**-0.5**
HUMR	**Humele**	**1.64**	**224**	⇑*i*P		**Pn**	**16 52 09.1**	**-0.5**
HUMR				*i* S		**Sn**	**16 52 31.6**	**-1.4**
HUMR	**Humele**	**1.64**	**224**	⇑*i*P		**Pn**	**16 52 09.1**	**-0.5**
HUMR				*i* S		**Sn**	**16 52 31.6**	**-1.4**
TLCR		**1.67**	**108**	⇑P		**Pn**	**16 52 09.5**	**-0.4**
TLCR				S		**Sn**	**16 52 32.8**	**-0.8**
TLCR		**1.67**	**108**	⇑*i*P		**Pn**	**16 52 09.5**	**-0.4**
TLCR		**1.67**	**108**	⇑*i*P		**Pn**	**16 52 09.5**	**-0.4**
TLCR				*i* S		**Sn**	**16 52 32.8**	**-0.8**
TLCR		**1.67**	**108**	⇑*i*P		**Pn**	**16 52 09.5**	**-0.4**
TLCR				*i* S		**Sn**	**16 52 32.8**	**-0.8**
CVD	**Cernavoda**	**1.75**	**143**	⇑P		**Pn**	**16 52 10.4**	**-0.4**
CVD				S		**Sn**	**16 52 32.7**	**-2.5**
CVD	**Cernavoda**	**1.75**	**143**	⇑*i*P		**Pn**	**16 52 10.4**	**-0.4**
CVD	**Cernavoda**	**1.75**	**143**	⇑*i*P		**Pn**	**16 52 10.4**	**-0.4**
CVD				*i* S		**Sn**	**16 52 32.7**	**-2.5**
CVD	**Cernavoda**	**1.75**	**143**	⇑*i*P		**Pn**	**16 52 10.4**	**-0.4**
CVD				*i* S		**Sn**	**16 52 32.7**	**-2.5**
TIRR	**Tirgusor**	**1.82**	**133**	P		**Pn**	**16 52 11.2**	**-0.4**
TIRR	**Tirgusor**	**1.82**	**133**	⇑*i*P		**Pn**	**16 52 11.1**	**-0.5**
TIRR	**Tirgusor**	**1.82**	**133**	⇑*i*P		**Pn**	**16 52 11.1**	**-0.5**
TIRR				*i* S		**Sn**	**16 52 34.1**	**-2.5**
TIRR	**Tirgusor**	**1.82**	**133**	⇑*i*P		**Pn**	**16 52 11.1**	**-0.5**
TIRR				*i* S		**Sn**	**16 52 34.1**	**-2.5**
KIS	**Kishinev**	**2.02**	**50**	α*i*P		**Pn**	**16 52 12.5**	**-1.3**
KIS				*i* S		**Sn**	**16 52 38.0**	**-2.8**
KIS				pmax	pmax			
	comp=Z,600nm,0.5s							
KIS				pmax	pmax			
	comp=Z,500nm,0.5s							
KIS				smax	smax			
	comp=N,5μm,0.5s							
KIS				smax	smax			
	comp=E,4μm,0.5s							
KIS				smax	smax			
	comp=N,6μm,0.5s							
KIS				smax	smax			
	comp=E,4μm,0.5s							
KIS	**Kishinev**	**2.02**	**50**	⇑*i*P		**Pn**	**16 52 12.5**	**-1.3**
	comp=E,600nm,0.5s							
KIS				*i* S		**Sn**	**16 52 38.0**	**-2.8**
	comp=E,5μm,0.5s							
KIS	**Kishinev**	**2.02**	**50**	⇑*i*P		**Pn**	**16 52 13.8**	**0.0**
KIS	**Kishinev**	**2.02**	**50**	⇑*i*P		**Pn**	**16 52 13.8**	**0.0**
KIS				*i* S		**Sn**	**16 52 39.0**	**-1.8**
KIS	**Kishinev**	**2.02**	**50**	⇑*i*P		**Pn**	**16 52 13.8**	**0.0**
KIS				*i* S		**Sn**	**16 52 39.0**	**-1.8**
BURAR	**Bucovina Array**	**2.11**	**334**	⇓*i*P		**Pn**	**16 52 16.2**	**+1.1**
BURAR	**Bucovina Array**	**2.11**	**334**	⇓*i*P		**Pn**	**16 52 16.2**	**+1.1**
BURAR	**Bucovina Array**	**2.11**	**334**	⇓*i*P		**Pn**	**16 52 16.2**	**+1.1**
EFOR	**EFORIE**	**2.20**	**137**	⇓*i*P		**Pn**	**16 52 16.0**	**-0.1**
EFOR	**EFORIE**	**2.20**	**137**	⇓*i*P		**Pn**	**16 52 16.0**	**-0.1**
EFOR				*i* S		**Sn**	**16 52 42.9**	**-1.7**
EFOR	**EFORIE**	**2.20**	**137**	⇓*i*P		**Pn**	**16 52 16.0**	**-0.1**
EFOR				*i* S		**Sn**	**16 52 42.9**	**-1.7**
ZIMR		**2.23**	**203**	P		**Pn**	**16 52 16.2**	**-0.3**
ZIMR		**2.23**	**203**	⇓*i*P		**Pn**	**16 52 16.0**	**-0.5**
ZIMR		**2.23**	**203**	⇓*i*P		**Pn**	**16 52 16.0**	**-0.5**
ZIMR				*i* S		**Sn**	**16 52 43.3**	**-2.0**
PSN	**Preselentsi**	**2.34**	**150**	*i* Pg		**Pn**	**16 52 18.1**	**+0.3**
PSN	**Preselentsi**	**2.34**	**150**	*i* Pg		**Pn**	**16 52 18.1**	**+0.3**
MANR	**Mangalia**	**2.39**	**142**	⇑*i*P		**Pn**	**16 52 18.1**	**-0.2**
MANR	**Mangalia**	**2.39**	**142**	⇑*i*P		**Pn**	**16 52 18.1**	**-0.2**
MANR				*i* S		**Sn**	**16 52 45.7**	**-3.0**
MANR	**Mangalia**	**2.39**	**142**	⇑*i*P		**Pn**	**16 52 18.1**	**-0.2**
MANR				*i* S		**Sn**	**16 52 45.7**	**-3.0**
SZH	**Strazhica**	**2.49**	**191**	*i* P		**Pn**	**16 52 19.1**	**-0.6**
SZH	**Strazhica**	**2.49**	**191**	*i* P		**Pn**	**16 52 19.1**	**-0.6**
PRD	**Provadia**	**2.59**	**166**	*i* P		**Pn**	**16 52 21.2**	**+0.4**
PRD	**Provadia**	**2.59**	**166**	*i* P		**Pn**	**16 52 21.2**	**+0.4**
PVL	**Pavlikeni**	**2.65**	**200**	*i* P		**Pn**	**16 52 22.8**	**+1.1**
PVL	**Pavlikeni**	**2.65**	**200**	*i* P		**Pn**	**16 52 22.8**	**+1.1**
GZR	**Gura Zlata**	**2.68**	**264**	⇑P		**Pn**	**16 52 22.8**	**+0.7**
GZR	**Gura Zlata**	**2.68**	**264**	⇑*i*P		**Pn**	**16 52 22.8**	**+0.7**
GZR	**Gura Zlata**	**2.68**	**264**	⇑*i*P		**Pn**	**16 52 22.8**	**+0.7**
GZR	**Gura Zlata**	**2.68**	**264**	⇑*i*P		**Pn**	**16 52 22.8**	**+0.7**
DRGR		**2.88**	**293**	⇑P		**Pn**	**16 52 24.5**	**-0.1**
DRGR		**2.88**	**293**	⇑*i*P		**Pn**	**16 52 24.5**	**-0.1**
DRGR		**2.88**	**293**	⇑*i*P		**Pn**	**16 52 24.5**	**-0.1**
DRGR		**2.88**	**293**	⇑*i*P		**Pn**	**16 52 24.5**	**-0.1**
RMGR	**Halanga-Turnu**	**2.94**	**250**	⇑P		**Pn**	**16 52 24.8**	**-0.4**
RMGR	**Halanga-Turnu**	**2.94**	**250**	⇑*i*P		**Pn**	**16 52 24.8**	**-0.4**
RMGR	**Halanga-Turnu**	**2.94**	**250**	⇑*i*P		**Pn**	**16 52 24.8**	**-0.4**
MPEP	**Malo Peshtene**	**3.11**	**222**	*i* P		**Pn**	**16 52 27.1**	**-0.3**
JMB	**Yambol**	**3.25**	**180**	P		**Pn**	**16 52 29.2**	**-0.1**
JMB	**Yambol**	**3.25**	**180**	*i* P		**Pn**	**16 52 29.1**	**-0.2**
JMB	**Yambol**	**3.25**	**180**	*i* P		**Pn**	**16 52 29.1**	**-0.2**
BZS	**Buzias**	**3.47**	**270**	*e*Pn		**Pn**	**16 52 31.5**	**-0.6**
BZS	**Buzias**	**3.47**	**270**	*e*Pn		**Pn**	**16 52 31.5**	**-0.6**
PGB	**Panagyurishte**	**3.61**	**209**	*i* P		**Pn**	**16 52 34.2**	**+0.3**
PGB	**Panagyurishte**	**3.61**	**209**	*i* P		**Pn**	**16 52 34.2**	**+0.3**
ZAPS	**Zavoj**	**3.73**	**230**	*e*Pn		**Pn**	**16 52 34.9**	**-0.6**
ZAPS				*e*Sn		**Sn**	**16 53 14.5**	**-4.8**
ZAPS	**Zavoj**	**3.73**	**230**	*e*Pn		**Pn**	**16 52 34.9**	**-0.6**
ZAPS				*e*Sn		**Sn**	**16 53 14.5**	**-4.8**
BOLS	**Boljevac**	**3.79**	**242**	*e*Pn		**Pn**	**16 52 33.7**	**-2.5**
BOLS	**Boljevac**	**3.79**	**242**	*e*Pn		**Pn**	**16 52 33.7**	**-2.5**
PLD	**Plovdiv**	**3.86**	**201**	P		**Pn**	**16 52 36.5**	**-0.6**
PLD	**Plovdiv**	**3.86**	**201**	P		**Pn**	**16 52 36.5**	**-0.6**
VTS	**Vitosha**	**3.95**	**219**	P		**Pn**	**16 52 38.2**	**-0.3**
VTS				S		**Sn**	**16 53 21.9**	**-2.8**
VTS	**Vitosha**	**3.95**	**219**	⇓P		**Pn**	**16 52 38.1**	**-0.5**
VTS	**Vitosha**	**3.95**	**219**	⇓*i*P		**Pn**	**16 52 37.9**	**-0.6**
VTS	**Vitosha**	**3.95**	**219**	⇓*i*P		**Pn**	**16 52 37.9**	**-0.6**
VTS	**Vitosha**	**3.95**	**219**	*e*Pn		**Pn**	**16 52 38.0**	**-0.5**
VTS	**Vitosha**	**3.95**	**219**	*i* P		**Pn**	**16 52 37.9**	**-0.6**
VTS	**Vitosha**	**3.95**	**219**	*e*Pn		**Pn**	**16 52 38.0**	**-0.5**
VTS				S		**Sn**	**16 53 21.9**	**-2.8**
RZN	**Rozhen**	**4.25**	**199**	*i* P		**Pn**	**16 52 42.1**	**-0.3**
RZN	**Rozhen**	**4.25**	**199**	*i* P		**Pn**	**16 52 42.1**	**-0.3**
KOLS	**Kolonicke sedl**	**4.34**	**319**	*e*P		**Pn**	**16 52 44.7**	**+1.3**
KOLS	**Kolonicke sedl**	**4.34**	**319**	*e*P		**Pn**	**16 52 44.7**	**+1.3**
BARS	**Barje**	**4.48**	**231**	*e*Pn		**Pn**	**16 52 44.9**	**-0.4**
BARS				*e*Sn		**Sn**	**16 53 31.9**	**-5.0**
BARS	**Barje**	**4.48**	**231**	*e*Pn		**Pn**	**16 52 44.9**	**-0.4**
BARS				*e*Sn		**Sn**	**16 53 31.9**	**-5.0**
GRUS	**Gruza**	**4.55**	**248**	*e*Pn		**Pn**	**16 52 45.5**	**-0.7**
GRUS	**Gruza**	**4.55**	**248**	*e*Pn		**Pn**	**16 52 45.5**	**-0.7**
TRUS	**Trudelj**	**4.62**	**253**	*e*Pn		**Pn**	**16 52 45.6**	**-1.5**
TRUS	**Trudelj**	**4.62**	**253**	*e*Pn		**Pn**	**16 52 45.6**	**-1.5**
SELS	**Selova**	**4.63**	**239**	*e*Pn		**Pn**	**16 52 46.1**	**-1.2**
SELS	**Selova**	**4.63**	**239**	*e*Pn		**Pn**	**16 52 46.1**	**-1.2**
CRVS	**Cervenica-Dubn**	**4.71**	**314**	*e*P		**Pn**	**16 52 48.9**	**+0.6**
CRVS	**Cervenica-Dubn**	**4.71**	**314**	*e*P		**P

*ISK **12** 17:06:01.3, 37.66N×28.02E, h2km, MD3.3*
*DDA **12** 17:06:01.6, 37.71N×28.05E, h11km, MD2.8*
*CSEM **12** 17:06:02.3±0.1, 37.67N×28.04E, h2km, MD2.8, Error ellipse: s-maj=3.0km s-min=2.9km az=173.0*

ISC 12 17:06:02.5±0.9, **37.68N**±0.02×**28.05E**±0.02, **h8**km±9km, **n69**, σ0**99**/87, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYDN	**Tasoluk**	**0.13**	**262**	*i* P	**Pg**	**17 06 05.3**	**-0.1**
AYDN				*i* S	**Sg**	**17 06 07.5**	**+0.1**
AYDN	**Tasoluk**	**0.13**	**262**	*i* P	**Pg**	**17 06 05.3**	**-0.1**
AYDN				*i* S	**Sg**	**17 06 07.5**	**+0.1**
MLSB	**Milas**	**0.44**	**209**	*e*Pg	**Pg**	**17 06 11.2**	**+0.2**
MLSB				*e*SG	**Sg**	**17 06 17.1**	**+0.3**
MLSB	**Milas**	**0.44**	**209**	*e*Pg	**Pg**	**17 06 11.2**	**+0.2**
MLSB				*e*Sg	**Sg**	**17 06 17.1**	**+0.3**
YER	**Yerkesik**	**0.58**	**161**	*e*PG	**Pb**	**17 06 13.7**	**-1.1**
YER	**Yerkesik**	**0.58**	**161**	*e*Pg	**Pb**	**17 06 13.7**	**-1.1**
GCAM	**G?zelcaml?**	**0.64**	**272**	*i* P	**Pg**	**17 06 14.1**	**-0.8**
GCAM				*i* S	**Sg**	**17 06 22.5**	**-0.8**
GCAM	**G?zelcaml?**	**0.64**	**272**	*i* P	**Pg**	**17 06 14.1**	**-0.8**
GCAM				*i* S	**Sg**	**17 06 22.5**	**-0.8**
DENT	**Denizli**	**0.79**	**84**	*e*PG	**Pg**	**17 06 17.3**	**-0.3**
DENT	**Denizli**	**0.79**	**84**	*e*Pg	**Pg**	**17 06 17.3**	**-0.3**
DNZL	**Cakiroluk**	**0.79**	**89**	*i* P	**Pg**	**17 06 17.4**	**-0.4**
DNZL				*i* S	**Sg**	**17 06 27.7**	**-0.4**
DNZL	**Cakiroluk**	**0.79**	**89**	*i* P	**Pg**	**17 06 17.4**	**-0.4**
DNZL				*i* S	**Sg**	**17 06 27.7**	**-0.4**
BODT	**Bodrum**	**0.85**	**224**	*e*PG	**Pg**	**17 06 17.9**	**-0.9**
BODT				*e*SG	**Sg**	**17 06 29.9**	**+0.1**
BODT	**Bodrum**	**0.85**	**224**	*e*Pg	**Pg**	**17 06 17.9**	**-0.9**
BODT				*e*Sg	**Sg**	**17 06 29.9**	**+0.1**
IZM	**Izmir**	**0.95**	**319**	*e*PG	**Pg**	**17 06 19.9**	**-0.8**
IZM	**Izmir**	**0.95**	**319**	*e*Pg	**Pg**	**17 06 19.9**	**-0.8**
KULA	**Kula-Manisa**	**0.96**	**30**	*e*PG	**Pg**	**17 06 21.3**	**+0.3**
KULA	**Kula-Manisa**	**0.96**	**30**	*e*Pg	**Pg**	**17 06 21.3**	**+0.3**
DALT	**Dalyan (Mudla)**	**1.02**	**152**	*e*PG	**Pg**	**17 06 21.4**	**-0.7**
DALT				*e*SG	**Sb**	**17 06 36.2**	**+0.1**
DALT	**Dalyan (Mudla)**	**1.02**	**152**	*e*Pg	**Pg**	**17 06 21.4**	**-0.7**
DALT				*e*Sg	**Sb**	**17 06 36.2**	**+0.1**
BLCB	**Balcova**	**1.06**	**312**	*e*PG	**Pg**	**17 06 22.2**	**-0.6**
BLCB	**Balcova**	**1.06**	**312**	*e*Pg	**Pg**	**17 06 22.2**	**-0.6**
AKHS	**Akhisar**	**1.21**	**351**	*i* P	**Pg**	**17 06 24.1**	**-1.6**
AKHS				*i* S	**Sg**	**17 06 39.4**	**-2.0**
AKHS	**Akhisar**	**1.21**	**351**	*i* P	**Pg**	**17 06 24.1**	**-1.6**
AKS	**Akhisar**	**1.21**	**351**	*e*PN	**Pg**	**17 06 24.9**	**-0.8**
AKS	**Akhisar**	**1.21**	**351**	*e*Pn	**Pg**	**17 06 24.9**	**-0.8**
GLHS	**Glhisar (BURDU**	**1.27**	**114**	*e*PN	**Pg**	**17 06 26.5**	**-0.3**
GLHS	**Glhisar (BURDU**	**1.27**	**114**	*e*Pn	**Pg**	**17 06 26.5**	**-0.3**
GOLH	**Golhisar**	**1.28**	**110**	*i* P	**Pg**	**17 06 26.2**	**-0.9**
GOLH				*i* S	Sn	17 06 52.2	+7.9
GOLH	**Golhisar**	**1.28**	**110**	*i* P	**Pg**	**17 06 26.2**	**-0.9**
FETY	**Fethiye**	**1.33**	**141**	*e*PN	**Pg**	**17 06 27.3**	**-0.7**
FETY	**Fethiye**	**1.33**	**141**	*e*Pn	**Pg**	**17 06 27.3**	**-0.7**
KHL	**Karahalli**	**1.33**	**61**	*e*PN	**Pb**	**17 06 28.1**	**+0.4**
KHL	**Karahalli**	**1.33**	**61**	*e*Pn	**Pb**	**17 06 28.2**	**+0.4**
KHAL	**Karahalli**	**1.33**	**58**	*i* P	**Pg**	**17 06 26.3**	**-1.8**
KHAL				*i* S	**Sg**	**17 06 45.3**	**-0.1**
KHAL	**Karahalli**	**1.33**	**58**	*i* P	**Pg**	**17 06 26.3**	**-1.8**
KHAL				*i* S	**Sg**	**17 06 45.3**	**-0.1**
ELL	**Elmali**	**1.75**	**121**	*e*PN	**Pn**	**17 06 33.6**	**+0.3**
ELL	**Elmali**	**1.75**	**121**	*e*Pn	**Pn**	**17 06 33.6**	**+0.3**
GDZ	**Gediz**	**1.80**	**38**	*i* P	**Pn**	**17 06 34.4**	**+0.4**
GDZ				*i* S	**Sg**	**17 07 00.5**	**0.0**
GDZ	**Gediz**	**1.80**	**38**	*i* P	**Pn**	**17 06 34.4**	**+0.4**
GDZ				*i* S	**Sg**	**17 07 00.5**	**0.0**
DURS	**Dursunbey**	**1.95**	**10**	*e*P	**Pn**	**17 06 34.4**	**-1.5**
DURS				*e*S	**Sg**	**17 07 05.7**	**+0.6**
BALB	**Balikesir**	**1.96**	**356**	*e*PN	**Pn**	**17 06 37.3**	**+1.2**
BALB	**Balikesir**	**1.96**	**356**	*e*Pn	**Pn**	**17 06 37.3**	**+1.2**
ISP	**Isparta**	**1.97**	**85**	*e*PN	**Pn**	**17 06 37.7**	**+1.4**
ISP	**Isparta**	**1.97**	**85**	*e*Pn	**Pn**	**17 06 37.7**	**+1.4**
DST	**Dursunbey**	**1.97**	**13**	*e*PN	**Pn**	**17 06 37.3**	**+1.0**
DST	**Dursunbey**	**1.97**	**13**	*e*Pn	**Pn**	**17 06 37.3**	**+1.0**
BCK	**Bucak**	**2.03**	**95**	*e*PN	**Pn**	**17 06 38.1**	**+1.1**
BCK	**Bucak**	**2.03**	**95**	*e*Pn	**Pn**	**17 06 38.2**	**+1.1**
TVSB	**Tavsanli**	**2.09**	**32**	*e*PN	**Pn**	**17 06 39.0**	**+1.1**
TVSB	**Tavsanli**	**2.09**	**32**	*e*Pn	**Pn**	**17 06 39.0**	**+1.1**
APE	**Apeiranthos**	**2.09**	**254**	*e*PN	**Pn**	**17 06 38.8**	**+0.9**
APE	**Apeiranthos**	**2.09**	**254**	*e*Pn	**Pn**	**17 06 38.8**	**+0.9**
ALT	**Altintas**	**2.13**	**49**	*e*PN	**Pn**	**17 06 39.5**	**+1.1**
ALT	**Altintas**	**2.13**	**49**	*e*Pn	**Pn**	**17 06 39.5**	**+1.1**
SHUT	**Suhut-Afyon**	**2.16**	**65**	*e*PN	**Pn**	**17 06 39.8**	**+0.9**
SHUT	**Suhut-Afyon**	**2.16**	**65**	*e*Pn	**Pn**	**17 06 39.8**	**+0.9**
GONE	**Gonen-Balikesi**	**2.38**	**353**	*e*PN	**Pn**	**17 06 42.9**	**+1.1**
GONE	**Gonen-Balikesi**	**2.38**	**353**	*e*Pn	**Pn**	**17 06 42.9**	**+1.1**
EZN	**Ezine**	**2.53**	**328**	*e*PN	**Pn**	**17 06 45.1**	**+1.2**
EZN	**Ezine**	**2.53**	**328**	*e*Pn	**Pn**	**17 06 45.1**	**+1.2**
CAVI	**Cavuskoy**	**2.88**	**29**	*e*PN	**Pn**	**17 06 50.1**	**+1.3**
CAVI	**Cavuskoy**	**2.88**	**29**	*e*Pn	**Pn**	**17 06 50.1**	**+1.3**
ARMT	**Armutlu**	**2.95**	**12**	*e*PN	**Pn**	**17 06 51.7**	**+2.0**
ARMT	**Armutlu**	**2.95**	**12**	*e*Pn	**Pn**	**17 06 51.7**	**+2.0**
GELI	**Tayfur-Gelibol**	**2.98**	**336**	*e*PN	**Pn**	**17 06 51.2**	**+1.2**
GELI	**Tayfur-Gelibol**	**2.98**	**336**	*e*Pn	**Pn**	**17 06 51.2**	**+1.2**
GULT	**Gulveren**	**3.35**	**34**	*e*PN	**Pn**	**17 06 57.3**	**+2.0**
GULT	**Gulveren**	**3.35**	**34**	*e*Pn	**Pn**	**17 06 57.3**	**+2.0**

*NIED **12** 17:15:00, 29.80N×138.80E, h520km, Mw4.5 Best double couple: M0 6.46000×10^15 NP1:φ122.00000°, δ85.00000°, λ50.00000°. NP2:φ26.00000°, δ40.00000°, λ172.00000°.*
*JMA **12** 17:15:10.7±0.3, 29.76N×138.84E, h501km±5km, M3.7*
*MOS **12** 17:15:11.0±0.9, 29.66N×138.27E, h473km, mb4.2/35, Error ellipse: s-maj=12.6km s-min=6.7km az=100.4*
*ISCJB **12** 17:15:11.1±0.3, 29.67N±0.03×138.53E±0.05, h478km±3km, mb4.1/54, Error ellipse: s-maj=6.6km s-min=5.1km az=160.6*
*IDC **12** 17:15:12.1±0.7, 29.67N×138.34E, h468km±7km, mb3.6/31, mb1 3.7/37, mb1mx3.7/40, mbtmp3.6/37, Error ellipse: s-maj=9.5km s-min=6.7km az=103.0*
*BJI **12** 17:15:13.9, 29.70N×138.28E, h508km, mB4.8/14, mb4.8/22*

ISC 12 17:15:12.0±0.5, **29.66N**±0.05×**138.52E**±0.05, **h472**km±4km, **n116**, σ1**9**21/149, **mb4.1**/54, **10C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**3.57**	**18**	P	**P**	**17 16 25.4**	**+0.4**
JHJ	**Hachijo jima 2**	**3.61**	**17**	P	**P**	**17 16 26.0**	**+0.7**
	46nm,0.3s,baz=228,slow=11,SNR=25						
JHJ				S	**S**	**17 17 24.4**	**-0.6**
	12nm,0.3s,baz=102,slow=14,SNR=3.4						
JHJ2	**Mitsune**	**3.61**	**18**	P	**P**	**17 16 26.8**	**+1.5**
JHJ2				*e*S	**S**	**17 17 24.5**	**-0.5**
CBIJ	**Chichi jima**	**4.12**	**127**	P	**P**	**17 16 29.0**	**-0.7**
CBIJ				S	**S**	**17 17 30.7**	**-2.2**
CBIJ	**Chichi jima**	**4.12**	**127**	P	**P**	**17 16 29.1**	**-0.7**
	baz=294,slow=19						
JHHJ	**Haha-jima-NKT**	**4.43**	**132**	P	**P**	**17 16 31.9**	**-0.5**
JHHJ				*e*S	**S**	**17 17 36.2**	**-1.5**
JWZ	**Kozaga**	**4.54**	**329**	P	**P**	**17 16 34.8**	**+1.7**
JWZ				*e*S	**S**	**17 17 40.0**	**+0.6**
JKN2	**Miekihoku**	**4.94**	**338**	*e*S	**S**	**17 17 45.6**	**-0.5**
JIE	**Ise**	**4.96**	**342**	P	**P**	**17 16 37.6**	**+0.6**
HMMJ	**Hamamatsu 2**	**5.22**	**353**	P	**P**	**17 16 40.8**	**+1.4**
HMMJ				*e*S	**S**	**17 17 51.0**	**+0.1**
BSO3	**Boso 3**	**5.39**	**18**	P	**P**	**17 16 40.9**	**+0.1**
BSO3				S	**S**	**17 17 51.2**	**-2.3**
BSO1	**Boso 1**	**5.39**	**22**	P	**P**	**17 16 42.9**	**+2.4**
BSO1				*e*S	**S**	**17 17 51.9**	**-1.1**
BSO4	**Boso 4**	**5.53**	**16**	P	**P**	**17 16 42.2**	**-0.1**
BSO4				S	**S**	**17 17 54.6**	**-1.6**
JOD2	**Odawara 2**	**5.60**	**5**	P	**P**	**17 16 43.3**	**+0.1**
JOD2				*e*S	**S**	**17 17 55.8**	**-1.9**
JAO	**Obara**	**5.69**	**350**	P	**P**	**17 16 45.3**	**+1.3**
JAO				*e*S	**S**	**17 17 59.1**	**-0.2**
JNY	**Yasuok**	**5.71**	**355**	P	**P**	**17 16 45.7**	**+1.5**
JNY				S	**S**	**17 17 59.1**	**-0.5**
JTO	**Tosashimizu**	**5.84**	**305**	P	**P**	**17 16 47.2**	**+1.7**
JHU	**Hanno**	**6.20**	**6**	P	**P**	**17 16 47.1**	**-2.0**
JHU				S	S	17 18 01.6	-7.0
JRY	**Ryogami san**	**6.34**	**3**	P	**P**	**17 16 49.1**	**-1.4**
JRY				*e*S	**S**	**17 18 08.1**	**-3.1**
JYT	**Yasato**	**6.70**	**12**	P	**P**	**17 16 52.2**	**-1.8**
JYT				*e*S	S	17 18 09.9	-7.7
JAG	**Ashikaga**	**6.79**	**6**	P	**P**	**17 16 53.6**	**-1.3**
JAG				*e*S	S	17 18 11.1	-8.3
MJAR	**Matsushiro Arr**	**6.86**	**358**	P	**P**	**17 16 55.3**	**-0.5**
	1.2nm,0.3s,baz=175,slow=11,SNR=30						
MAT	**Matsushiro**	**6.87**	**358**	P	**P**	**17 16 55.5**	**-0.3**
MAT				S	**S**	**17 18 18.0**	**-2.9**
MAT	**Matsushiro**	**6.87**	**358**	P	**P**	**17 16 55.8**	**0.0**
MAT				*e*S	**S**	**17 18 17.1**	**-3.8**
JHS	**Saijyo**	**7.01**	**321**	P	**P**	**17 16 58.7**	**+1.4**
JHS				*e*S	**S**	**17 18 23.7**	**0.0**
JHO	**Hitachi**	**7.14**	**13**	P	**P**	**17 16 59.1**	**+0.5**
JHO				*e*S	**S**	**17 18 22.2**	**-3.8**
JNU	**Nakatsue**	**7.38**	**300**	P	**P**	**17 17 02.8**	**+1.6**
	1.9nm,0.3s,baz=98,slow=5.1,SNR=29						
KSRS	**Korea Array**	**11.76**	**314**	P	**P**	**17 17 48.0**	**+0.1**
	0.4nm,0.3s,baz=127,slow=10,SNR=14						
ERM	**Erimo**	**12.88**	**16**	*e*P	**P**	**17 18 01.3**	**+1.4**
ASAJ	**Asahikawa**	**14.79**	**12**	P	**P**	**17 18 22.0**	**+1.8**
	3.0nm,0.3s,baz=233,slow=13,SNR=30						
USRK	**Ussuriysk Arra**	**15.41**	**342**	P	**P**	**17 18 26.9**	**+0.2**
	1.6nm,0.3s,baz=166,slow=10,SNR=58						
CN2	**Changchun**	**17.54**	**327**	*e*P	**P**	**17 18 48.3**	**-0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KLR	**Kul'dur**	**20.21**	**347**	*e*P	**P**	**17 19 11.2**	**-2.6**
WHN	**Wuhan**	**20.92**	**278**	⇑*i*P	**P**	**17 19 20.5**	**0.0**
TGY	**Tagaytay City**	**22.44**	**230**	P	**P**	**17 19 34.0**	**-0.5**
	comp=Z,84nm,0.5s,baz=65,slow=2.6,SNR=6.1						
HHC	**Hu-ho-hao-te**	**24.58**	**304**	*e*P	**P**	**17 19 54.5**	**+1.1**
HHC				S	**S**	**17 23 38.4**	**-1.8**
HHC				pmax	pmax		
	comp=Z,26nm,0.5s						
HHC				pmax	pmax		
	comp=Z,260nm,5.9s						
XAN	**Xi'an**	**25.47**	**288**	P	**P**	**17 20 00.6**	**-0.7**
XAN				pmax	pmax		
	comp=Z,17nm,0.6s						
XAN				pmax	pmax		
	comp=Z,27nm,6.5s						
PETK	**Petropavlovsk-**	**27.32**	**26**	P	**P**	**17 20 19.1**	**+1.8**
PETK						17 23 21.0	
PETK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PETK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PETK	**Petropavlovsk-**	**27.32**	**26**	P	**P**	**17 20 19.1**	**+1.8**
	comp=Z,2.6nm,0.6s,baz=183,slow=8.0,SNR=16						
PETK				PcP	**PcP**	**17 23 21.0**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=274,slow=5.6,SNR=2.9						
LZH	**Lanzhou**	**29.71**	**292**	*e*P	**P**	**17 20 38.4**	**-0.2**
LZH				pmax	pmax		
	comp=Z,34nm,1.0s						
LZH				pmax	pmax		
	comp=Z,100nm,6.0s						
SONM	**Songino Array**	**30.63**	**315**	P	**P**	**17 20 46.1**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=117,slow=6.8,SNR=24						
SONM				PcP	**PcP**	**17 23 31.5**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=125,slow=2.7,SNR=5.0						
SONM				ScP	**ScP**	**17 26 26.9**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=122,slow=3.1,SNR=6.2						
KMI	**Kunming**	**32.00**	**271**	P	**P**	**17 20 58.3**	**-0.3**
KMI				pmax	pmax		
	comp=Z,15nm,1.0s						
YAK	**Yakutsk**	**32.89**	**352**	*e*P	**P**	**17 21 04.3**	**-1.1**
YAK				pmax	pmax		
	comp=E,3.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,22nm,1.2s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
GTA	**Gaotai**	**33.12**	**298**	*e*P	**P**	**17 21 07.5**	**-0.3**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ZAK	**Zakamensk**	**33.55**	**318**	*e*P	**P**	**17 21 10.8**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
FX1	**Attu Island--F**	**34.35**	**38**	P	**P**	**17 21 19.6**	**+1.7**
	comp=Z,7.4nm,0.5s,baz=243,slow=11,SNR=3.7						
SEY	**Seymchan**	**34.47**	**11**	⇑*i*P	**P**	**17 21 20.3**	**+1.6**
CMAR	**Chiang Mai Arr**	**37.65**	**262**	P	**P**	**17 21 45.6**	**-0.2**
	comp=Z,8.0nm,0.6s,baz=67,slow=5.2,SNR=106						
CMAR				ScP	**ScP**	**17 26 54.6**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=22,slow=4.6,SNR=4.5						
BILL	**Bilibino**	**41.76**	**15**	*c i*P	**P**	**17 22 19.2**	**+0.9**
BILL				*e*		17 24 03.5	
BILL				pmax	pmax		
	comp=Z,24nm,1.1s						
TIXI	**Tiksi**	**42.37**	**355**	⇑*i*P	**P**	**17 22 21.7**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TAPN	**Taplejung**	**44.42**	**280**	*e*P	**P**	**17 22 39.7**	**-0.5**
	comp=Z,13nm,0.4s						
ODAN	**Odare**	**44.82**	**279**	*e*P	**P**	**17 22 42.9**	**-0.3**
	comp=Z,55nm,0.7s						
ZALV	**Zalesovo Beam**	**45.43**	**318**	P	**P**	**17 22 46.4**	**-0.8**
ZALV						17 24 15.7	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV				pmax	pmax		
	comp=N,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**45.43**	**318**	P	**P**	**17 22 46.4**	**-0.8**
	comp=N,0.9nm,0.3s,baz=96,slow=6.7,SNR=13						
ZALV				PcP	**pP**	**17 24 15.7**	**-0.8**
	comp=N,1.0nm,0.5s,baz=97,slow=3.5,SNR=5.2						
ZALV				ScP	**ScP**	**17 27 22.5**	**-1.4**
	comp=N,0.8nm,0.7s,baz=116,slow=3.4,SNR=5.6						
RAMN	**Ramite**	**45.48**	**280**	*e*P	**P**	**17 22 48.0**	**-0.3**
	comp=N,57nm,0.7s						
GUN	**Gumba**	**45.84**	**281**	*e*P	**P**	**17 22 51.3**	**+0.2**
	comp=N,86nm,0.7s						
PSI	**Prapat**	**46.07**	**242**	P	**P**	**17 22 52.6**	**-0.1**
	comp=N,13nm,0.8s,baz=13,slow=4.5,SNR=15						
PKI	**Pulchoki**	**46.33**	**281**	*e*P	**P**	**17 22 54.4**	**-0.5**
	comp=N,31nm,1.0s						
MK31	**Makanchi Array**	**46.35**	**308**	*ce*P	**P**	**17 22 53.8**	**-0.6**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**46.35**	**308**	P	**P**	**17 22 53.8**	**-0.6**
MKAR						17 24 19.9	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR				pmax	pmax		
	comp=N,1.0nm,0.8s						
MKAR	**Manchi Array**	**46.35**	**308**	P	**P**	**17 22 53.8**	**-0.6**
	comp=N,0.5nm,0.3s,baz=86,slow=11,SNR=21						
MKAR				PcP	**PcP**	**17 24 19.9**	**-0.2**
	comp=N,0.3nm,0.3s,baz=72,slow=5.3,SNR=7.5						
MKAR				ScP	**ScP**	**17 27 26.3**	**-1.7**
	comp=N,1.1nm,0.8s,baz=83,slow=3.7,SNR=7.5						
KKN	**Kakani**	**46.38**	**281**	*e*P	**P**	**17 22 54.9**	**-0.2**
	comp=N,55nm,0.9s						
DMN	**Daman**	**46.58**	**281**	*e*P	**P**	**17 22 56.4**	**-0.3**
	comp=N,23nm,0.7s						
DANN	**Dangsing**	**47.52**	**283**	*e*P	**P**	**17 23 04.0**	**+0.1**
	comp=N,46nm,0.6s						
KOLN	**Koldanda**	**47.82**	**282**	*e*P	**P**	**17 23 05.9**	**-0.1**
	comp=N,42nm,0.7s						
PYUN	**Piuthan**	**48.24**	**283**	*e*P	**P**	**17 23 09.3**	**+0.1**
	comp=N,83nm,0.6s						
KURK	**Kurchatov**	**48.88**	**313**	*c i*P	**P**	**17 23 12.3**	**-1.0**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
FITZ	**Fitzroy Crossi**	**49.09**	**196**	P	**P**	**17 23 15.7**	**+0.5**
	comp=Z,6.0nm,0.7s,baz=18,slow=7.4,SNR=12						
WRA	**Warramunga Arr**	**49.48**	**185**	P	**P**	**17 23 17.7**	**-0.4**
	comp=Z,5.9nm,0.7s,baz=6.8,slow=8.5,SNR=23						
WRA				pP	**pP**	**17 24 49.1**	**-0.6**
	comp=Z,4.5nm,0.9s,baz=2.4,slow=8.4,SNR=11						
WRA				ScP	**ScP**	**17 27 41.8**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=0.5,slow=4.9,SNR=4.6						
AAK	**Ala-Archa**	**52.15**	**303**	P	**P**	**17 23 37.1**	**-0.5**
AAK	**Ala-Archa**	**52.15**	**303**	P	**P**	**17 23 37.1**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=166,slow=8.3,SNR=3.4						
ASAR	**Alice Springs**	**53.21**	**185**	P	**P**	**17 23 45.4**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=15,slow=11,SNR=34						
ASAR				ScP	**ScP**	**17 27 57.7**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=360,slow=4.6,SNR=7.6						
BVA0	**Borovoye Array**	**53.97**	**316**	*i* P	**P**	**17 23 49.5**	**-0.8**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVAR	**Borovoye Array**	**53.97**	**316**	P	**P**	**17 23 49.8**	**-0.5**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BVAR	**Borovoye Array**	**53.97**	**316**	P	**P**	**17 23 49.8**	**-0.5**
	comp=Z,3.3nm,0.4s,baz=94,slow=8.2,SNR=37						
BRVK	**Borovoye**	**54.03**	**316**	*c i*P	**P**	**17 23 50.2**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KDAK	**Kodiak Island**	**54.29**	**38**	P	**P**	**17 23 53.5**	**+1.0**
	comp=Z,16nm,1.0s,baz=297,slow=4.5,SNR=15						
ILAR	**Eielson Array**	**57.05**	**29**	P	**P**	**17 24 11.7**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=253,slow=5.6,SNR=56						
SVE	**Sverdlovsk**	**59.22**	**321**	*e*P	**P**	**17 24 25.9**	**-0.6**
SVE				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ARU	**Arti**	**60.41**	**321**	*c i*P	**P**	**17 24 33.6**	**-0.8**
ARU						17 26 51.6	
ARU				S	**S**	**17 32 10.5**	**-1.6**
ARU				SS	**SS**	**17 36 20.0**	**+0.5**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AB31	**Akbulak array**	**60.99**	**313**	*ce*P	**P**	**17 24 37.6**	**-0.8**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.5s						
STKA	**Stephens Creek**	**61.27**	**177**	P	**P**	**17 24 40.8**	**+0.4**
	comp=Z,1.8nm,0.5s,baz=345,slow=7.8,SNR=16						
INK	**Inuvik**	**62.06**	**25**	P	**P**	**17 24 46.0**	**+0.9**
	comp=Z,2.0nm,0.3s,baz=275,slow=5.6,SNR=32						
NWAO	**Narrogin (SRO)**	**65.44**	**200**	P	**P**	**17 25 07.0**	**-0.2**
	comp=Z,11nm,0.7s,baz=13,slow=6.2,SNR=7.5						
KBS	**Kingsbay**	**67.49**	**350**	*e*P	**P**	**17 25 20.3**	**+0.9**
KEV	**Kevo**	**69.48**	**340**	*e*P	**P**	**17 25 31.1**	**-0.5**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KEV	**Kevo**	**69.48**	**340**	*e*p	**P**	**17 25 31.1**	**-0.5**
	comp=Z,1.7nm,0.3s						
ARCES	**ARCESS Array B**	**70.05**	**340**	P	**P**	**17 25 35.1**	**+0.1**
	comp=Z,4.1nm,0.4s,baz=59,slow=8.7,SNR=84						
RES	**Resolute Bay**	**70.32**	**13**	P	**P**	**17 25 37.6**	**+1.2**
	comp=Z,2.6nm,0.6s,baz=318,slow=6.8,SNR=31						
JOF	**Joensuu**	**71.34**	**333**	*e*P	**P**	**17 25 41.8**	**-0.9**
JOF				pmax	pmax		
	comp=Z,6.0nm,0.4s						
JOF	**Joensuu**	**71.34**	**333**	*e*p	**P**	**17 25 41.8**	**-0.9**
	comp=Z,6.1nm,0.4s						
YKA	**Yellowknife Ar**	**71.41**	**28**	P	**P**	**17 25 43.3**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=300,slow=6.0,SNR=43						
OBN	**Obninsk**	**72.57**	**324**	*e*P	**P**	**17 25 49.8**	**-0.3**
OBN				*e**PP	**pP**	**17 27 31.6**	**+0.6**
OBN				*e**SP	**sP**	**17 28 22.1**	**+1.4**
OBN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
VSR	**Storozhevoye**	**72.91**	**320**	*e*P	**P**	**17 25 51.3**	**-0.8**
VSR				pmax	pmax		
	comp=N,4.0nm,0.9s						
VSR				pmax	pmax		
	comp=E,3.0nm,0.9s						
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KAF	**Kangasniemi**	**73.75**	**333**	*e*P	**P**	**17 25 55.2**	**-1.5**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KAF	**Kangasniemi**	**73.75**	**333**	*e*p	**P**	**17 25 55.2**	**-1.5**
	comp=Z,2.9nm,0.4s						
KBZ	**Khabaz**	**73.89**	**311**	P	**P**	**17 25 58.3**	**+0.4**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	**Khabaz**	**73.89**	**311**	P	**P**	**17 25 58.2**	**+0.4**
	comp=Z,2.6nm,0.7s,baz=78,slow=3.7,SNR=10.0						
KIV	**Kislovodsk**	**73.93**	**312**	*e*P	**P**	**17 25 55.8**	**-2.5**
KIV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FINES	**FINESS Array B**	**74.20**	**333**	P	**P**	**17 25 58.8**	**-0.5**
	comp=Z,3.4nm,0

	comp=Z,0.5nm,0.7s,baz=226,slow=9.4,SNR=4.8								
ILAR	**Eielson Array**	**92.33**	**17**	P	P		17 38 45.3	-2.5
	comp=Z,0.2nm,0.6s,baz=239,slow=5.1,SNR=5.4								
ARCES	**ARCESS Array B**	**127.43**	**345**	PKP	**PKPdf**		17 44 41.4	-0.8
	comp=Z,1.5nm,0.7s,baz=102,slow=3.0,SNR=7.5								
FINES	**FINESS Array B**	**132.91**	**337**	PKP	**PKPdf**		17 44 51.9	-0.8
	comp=Z,1.0nm,0.9s,baz=355,slow=5.9,SNR=4.2								
BRG	**Berggiesshubel**	**145.15**	**333**	*e*P	**PKPbc**		17 45 14.8	-0.1
	comp=Z,5.2nm,0.6s								
BRG	**Berggiesshubel**	**145.15**	**333**	*e*PKPbc	**PKPbc**		17 45 15.0	+0.1
CLL	**Collm**	**145.21**	**334**	*e*PKPbc	**PKPbc**		17 45 15.0	-0.1
CLL	**Collm**	**145.21**	**334**	*i* PKP	**PKPbc**		17 45 14.6	-0.5
	comp=Z,6.0nm,0.6s								
NRDL	**Niedersach Rie**	**145.36**	**338**	*e*PKPbc	**PKPbc**		17 45 15.4	0.0
CLZ	**Clausthal**	**145.80**	**337**	*e*PKPbc	**PKPdf**		17 45 17.1	+0.6
EKA	**Eskdalemuir Ar**	**145.87**	**353**	PKPbc	**PKPdf**		17 45 16.0	-0.4
	comp=Z,4.9nm,0.7s,baz=359,slow=2.5,SNR=24								
TANN	**Tannenbergstha**	**146.11**	**334**	*e*PKPbc	**PKPdf**		17 45 18.0	+0.9
MOX	**Moxa**	**146.28**	**345**	*e*PKPbc	**PKPdf**		17 45 18.4	+1.1
IBBN	**Ibbenbueren**	**146.30**	**340**	*e*PKPbc	**PKPdf**		17 45 18.4	+1.2
KHC	**Kasperske Hory**	**146.59**	**331**	*e*P	**PKPdf**		17 45 19.5	+1.6
ROTZ	**Rotzenmuhle**	**146.71**	**333**	*e*PKPbc	**PKPdf**		17 45 19.7	+1.6
GEC2	**GERESS Array S**	**146.74**	**331**	*e*PKPbc	**PKPdf**		17 45 19.9	+1.6
GERES	**GERESS Array B**	**146.74**	**331**	PKPbc	**PKPdf**		17 45 19.7	+1.4
	comp=Z,1.7nm,0.6s,baz=31,slow=3.1,SNR=15								
WET	**Wettzell**	**146.89**	**332**	*e*PKPbc	**PKPdf**		17 45 20.6	+2.2
RJOB	**Jochberg**	**147.96**	**330**	*e*PKPbc	**PKPbc**		17 45 23.7	+0.3
MEM	**Membach**	**148.32**	**340**	P	**PKPdf**		17 45 23.5	+2.8
STU	**Stuttgart**	**148.72**	**335**	*e*PKPbc	**PKPdf**		17 45 24.0	+2.6
WLF	**Walferdange**	**149.09**	**339**	P	**PKPbc**		17 45 25.7	-0.4
WLF	**Walferdange**	**149.09**	**339**	*e*PKPbc	**PKPbc**		17 45 25.9	-0.2
DOU	**Dourbes**	**149.21**	**341**	P	**PKPbc**		17 45 26.2	-0.2
BFO	**Black Forest**	**149.42**	**335**	*e*PKPbc	**PKPbc**		17 45 26.6	-0.4
DAVOX	**Davos/Dischmat**	**150.00**	**332**	PKPbc	**PKPbc**		17 45 28.7	0.0
	comp=Z,6.4nm,0.8s,baz=43,slow=4.5,SNR=14								

DDA ***12*** *17:34:23.7,37°.71N×28°.03E,h9km,MD2.1*
ISK ***12*** *17:34:23.8,37°.66N×28°.02E,h6km,MD2.5*
CSEM ***12*** *17:34:24.2±0.2,37°.66N×28°.04E,h0km±4km,MD2.1,Error ellipse: s-maj=4.5km s-min=4.2km az=16.0*
THE ***12*** *17:34:30.4,37°.51N×28°.09E,h26km±13km,ML3.5/1,Error ellipse: s-maj=13.9km s-min=1.9km az=252.0*

ISC 12 17:34:24.2±0.8,37°.66N±0°.02×28°.03E±0°.02,h11km±6km, n44,σ0§63/60,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
AYDN	**Tasoluk**	**0.12**	**270**	*i* P		**Pg**	**17 34 27.3**	**+0.1**
AYDN				*i* S		**Sg**	**17 34 29.0**	**-0.5**
AYDN	**Tasoluk**	**0.12**	**270**	*i* P		**Pg**	**17 34 27.3**	**+0.1**
AYDN				*i* S		**Sg**	**17 34 29.0**	**-0.5**
MLSB	**Milas**	**0.41**	**209**	*e*PG		**Pg**	**17 34 31.7**	**-0.7**
MLSB				*e*SG		**Sg**	**17 34 38.4**	**+0.5**
MLSB	**Milas**	**0.41**	**209**	*e*Pg		**Pg**	**17 34 31.7**	**-0.7**
MLSB				*e*Sg		**Sg**	**17 34 38.4**	**+0.5**
YER	**Yerkesik**	**0.56**	**159**	*e*PG		**Pg**	**17 34 35.5**	**+0.3**
YER				*e*SG		**Sb**	**17 34 43.5**	**-0.6**
YER	**Yerkesik**	**0.56**	**159**	*e*Pg		**Pg**	**17 34 35.5**	**+0.3**
YER				*e*Sg		**Sb**	**17 34 43.5**	**-0.6**
GCAM	**G?zelcaml?**	**0.63**	**274**	*i* P		**Pg**	**17 34 35.9**	**-0.5**
GCAM				*i* S		**Sg**	**17 34 44.3**	**-0.5**
GCAM	**G?zelcaml?**	**0.63**	**274**	*i* P		**Pg**	**17 34 35.9**	**-0.5**
GCAM				*i* S		**Sg**	**17 34 44.3**	**-0.5**
DENT	**Denizli**	**0.80**	**83**	PG		**Pg**	**17 34 39.1**	**-0.6**
DENT	**Denizli**	**0.80**	**83**	*i* Pg		**Pg**	**17 34 39.1**	**-0.6**
DNZL	**Cakiroluk**	**0.81**	**88**	*i* P		**Pg**	**17 34 39.2**	**-0.7**
DNZL				*i* S		**Sg**	**17 34 49.4**	**-1.1**
DNZL	**Cakiroluk**	**0.81**	**88**	*i* P		**Pg**	**17 34 39.2**	**-0.7**
DNZL				*i* S		**Sg**	**17 34 49.4**	**-1.1**
BODT	**Bodrum**	**0.83**	**224**	*e*PG		**Pg**	**17 34 39.3**	**-0.9**
BODT	**Bodrum**	**0.83**	**224**	*e*Pg		**Pg**	**17 34 39.3**	**-0.9**
IZM	**Izmir**	**0.95**	**321**	*e*PG		**Pg**	**17 34 42.6**	**+0.1**
IZM	**Izmir**	**0.95**	**321**	*e*Pg		**Pg**	**17 34 42.6**	**+0.1**
KULA	**Kula-Manisa**	**0.99**	**30**	*e*PG		**Pg**	**17 34 43.5**	**+0.2**
KULA	**Kula-Manisa**	**0.99**	**30**	*e*Pg		**Pg**	**17 34 43.5**	**+0.2**
DALT	**Dalyan (Mudla)**	**1.01**	**151**	*e*PG		**Pg**	**17 34 43.5**	**-0.2**
DALT	**Dalyan (Mudla)**	**1.01**	**151**	*e*Pg		**Pg**	**17 34 43.5**	**-0.2**
BLCB	**Balcova**	**1.06**	**313**	*e*PG		**Pb**	**17 34 45.2**	**+0.6**
BLCB	**Balcova**	**1.06**	**313**	*e*Pg		**Pb**	**17 34 45.2**	**+0.6**
AKS	**Akhisar**	**1.23**	**352**	*e*PN		**Pb**	**17 34 47.3**	**-0.1**
AKS	**Akhisar**	**1.23**	**352**	*e*Pn		**Pb**	**17 34 47.3**	**-0.1**
GLHS	**Gihisar (BURDU**	**1.27**	**113**	*e*PN		**Pg**	**17 34 49.4**	**+0.7**
GLHS	**Gihisar (BURDU**	**1.27**	**113**	*e*Pn		**Pg**	**17 34 49.4**	**+0.7**
FETY	**Fethiye**	**1.33**	**140**	*e*PN		**Pg**	**17 34 49.6**	**-0.1**
FETY	**Fethiye**	**1.33**	**140**	*e*Pn		**Pg**	**17 34 49.6**	**-0.1**
KHL	**Karahalli**	**1.35**	**60**	*e*PN		**Pb**	**17 34 49.8**	**+0.2**
KHL	**Karahalli**	**1.35**	**60**	*e*Pn		**Pb**	**17 34 49.8**	**+0.2**
ARG	**Arkhangelos**	**1.44**	**177**	P		**Pn**	**17 34 50.7**	**+0.5**
ARG				S		**Sn**	**17 35 08.1**	**-1.0**
ARG	**Arkhangelos**	**1.44**	**177**	P		**Pn**	**17 34 50.7**	**+0.5**
ARG				S		**Sn**	**17 35 08.1**	**-1.0**
ISP	**Isparta**	**1.98**	**85**	P		**Pb**	**17 35 00.6**	**+0.2**
ISP				S		**Sb**	**17 35 25.1**	**0.0**
ISP	**Isparta**	**1.98**	**85**	P		**Pb**	**17 35 00.6**	**+0.2**
ISP				S		**Sb**	**17 35 25.1**	**0.0**
APE	**Apeiranthos**	**2.07**	**254**	P		**Pb**	**17 35 02.8**	**+0.9**
APE	**Apeiranthos**	**2.07**	**254**	P		**Pb**	**17 35 02.8**	**+0.9**
PRK	**Paraskevi**	**2.10**	**320**	P		**Pg**	**17 35 04.6**	**+0.2**
PRK				S		**Sg**	**17 35 30.8**	**-0.9**
PRK	**Paraskevi**	**2.10**	**320**	P		**Pg**	**17 35 04.6**	**+0.2**
PRK				S		**Sg**	**17 35 30.8**	**-0.9**
SIGR	**SIGRI**	**2.30**	**313**	P		**Pg**	**17 35 08.1**	**-0.3**
SIGR	**SIGRI**	**2.30**	**313**	P		**Pg**	**17 35 08.1**	**-0.3**
THR3	**Thira Island,**	**2.44**	**240**	P		**Pb**	**17 35 08.6**	**+0.5**
THR3	**Thira Island,**	**2.44**	**240**	P		**Pb**	**17 35 08.6**	**+0.5**
CSS	**Prodhromos**	**5.06**	**121**	P		**Pn**	**17 35 41.4**	**+1.4**
CSS	**Prodhromos**	**5.06**	**121**	P		**Pn**	**17 35 41.4**	**+1.4**

ISCJB ***12*** *17:34:55.8±0.4,37°.72N×0°.02×28°.05E±0°.02,h4km±3km, mb3.4/9,Error ellipse: s-maj=3.2km s-min=2.6km az=35.8*
NEIC ***12*** *17:34:56.3,37°.64N×27°.97E,h24km,ML3.9(ISK), ML3.9(THE),After ISK.*
NEIC Felt at Aydin.
DDA ***12*** *17:34:56.1,37°.70N×28°.06E,h7km,MD3.0*
CSEM ***12*** *17:34:56.7±0.1,37°.73N×28°.07E,h2km,MD3.0,Error ellipse: s-maj=2.6km s-min=2.3km az=28.0*
ISK ***12*** *17:34:56.4,37°.64N×27°.98E,h24km,ML4.0*
THE ***12*** *17:34:57.9,37°.76N×28°.06E,h0km±1km,ML4.0/2,Error ellipse: s-maj=1.6km s-min=1.0km az=51.0*
IDC ***12*** *17:35:01.3±3.1,37°.44N×28°.22E,h40km±34km,mb3.4/9, mb1 3.6/12,mb1mx3.4/29,mbtmp3.5/12,ML3.8/3,MS2.5/1, Ms1 2.5/1,ms1mx2.1/28,Error ellipse: s-maj=21.5km s-min=16.9km az=178.0*

ISC 12 17:34:56.7±0.8,37°.66N±0°.02×28°.05E±0°.02,h8km±6km, n225,σ1§21/246,mb3.4/9,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
AYDN	**Tasoluk**	**0.14**	**270**	*i* P		**Pg**	**17 35 00.2**	**+0.6**
AYDN				*i* S		**Sg**	**17 35 02.2**	**+0.5**
AYDN	**Tasoluk**	**0.14**	**270**	*i* P		**Pg**	**17 35 00.2**	**+0.6**
AYDN				*i* S		**Sg**	**17 35 02.2**	**+0.5**
MLSB	**Milas**	**0.43**	**211**	*e*PG		**Pb**	**17 35 05.9**	**-0.6**
MLSB				*e*SG		**Sb**	**17 35 11.8**	**-1.3**
MLSB	**Milas**	**0.43**	**211**	Pg		**Pg**	**17 35 05.0**	**0.0**
MLSB	**Milas**	**0.43**	**211**	*e*Pg		**Pb**	**17 35 05.9**	**-0.6**
YER	**Yerkesik**	**0.56**	**161**	*e*PG		**Pb**	**17 35 08.2**	**-0.6**
YER				*e*SG		**Sb**	**17 35 16.3**	**-0.7**
YER	**Yerkesik**	**0.56**	**161**	Pg		**Pb**	**17 35 08.2**	**-0.6**
YER				Sg		**Sb**	**17 35 16.2**	**-0.7**
GCAM	**G?zelcaml?**	**0.65**	**274**	*i* P		**Pg**	**17 35 08.7**	**-0.7**
GCAM				*i* S		**Sg**	**17 35 17.3**	**-0.4**
GCAM	**G?zelcaml?**	**0.65**	**274**	*i* P		**Pg**	**17 35 08.7**	**-0.5**
GCAM				*i* S		**Sg**	**17 35 17.3**	**-0.4**
DNZL	**Cakiroluk**	**0.79**	**88**	*i* P		**Pb**	**17 35 12.0**	**-0.8**
DNZL				*i* S		**Sg**	**17 35 22.2**	**0.0**
DNZL	**Cakiroluk**	**0.79**	**88**	*i* P		**Pb**	**17 35 12.0**	**-0.8**
DNZL				*i* S		**Sg**	**17 35 22.2**	**0.0**
BODT	**Bodrum**	**0.84**	**225**	*e*PG		**Pb**	**17 35 12.6**	**-1.0**
BODT	**Bodrum**	**0.84**	**225**	Pg		**Pb**	**17 35 12.6**	**-1.0**
BODT	**Bodrum**	**0.84**	**225**	*e*Pg		**Pb**	**17 35 12.6**	**-1.0**
TURN	**Turunc**	**0.90**	**151**	*i* P		**Pb**	**17 35 13.9**	**-0.7**
TURN				*i* S		**Sn**	**17 35 27.5**	**-1.4**
TURN	**Turunc**	**0.90**	**151**	*i* P		**Pb**	**17 35 13.9**	**-0.7**
TURN				*i* S		**Sn**	**17 35 27.5**	**-1.4**
IZM	**Izmir**	**0.96**	**320**	*e*PG		**Pg**	**17 35 14.6**	**-0.6**
IZM	**Izmir**	**0.96**	**320**	Pg		**Pg**	**17 35 14.6**	**-0.6**
IZM	**Izmir**	**0.96**	**320**	*e*Pg		**Pg**	**17 35 14.6**	**-0.6**
KULA	**Kula-Manisa**	**0.98**	**29**	*e*PG		**Pn**	**17 35 15.8**	**-1.1**
KULA	**Kula-Manisa**	**0.98**	**29**	Pg		**Pn**	**17 35 15.8**	**-1.1**
KULA	**Kula-Manisa**	**0.98**	**29**	*e*Pg		**Pn**	**17 35 15.8**	**-1.1**
DALT	**Dalyan (Mudla)**	**1.01**	**152**	*e*PG		**Pb**	**17 35 15.5**	**-0.9**
DALT	**Dalyan (Mudla)**	**1.01**	**152**	Pg		**Pb**	**17 35 15.5**	**-0.9**
BLCB	**Balcova**	**1.08**	**313**	*e*PG		**Pb**	**17 35 16.0**	**-1.6**
BLCB	**Balcova**	**1.08**	**313**	Pg		**Pb**	**17 35 16.0**	**-1.6**
BLCB	**Balcova**	**1.08**	**313**	*e*Pg		**Pb**	**17 35 16.0**	**-1.6**
AKS	**Akhisar**	**1.23**	**351**	*e*PN		**Pn**	**17 35 18.9**	**-1.4**
AKS	**Akhisar**	**1.23**	**351**	Pn		**Pn**	**17 35 18.9**	**-1.4**
AKS	**Akhisar**	**1.23**	**351**	*e*Pn		**Pn**	**17 35 18.9**	**-1.4**
GLHS	**Gihisar (BURDU**	**1.26**	**113**	*e*PN		**Pb**	**17 35 19.8**	**-0.9**
GLHS	**Gihisar (BURDU**	**1.26**	**113**	Pn		**Pb**	**17 35 19.8**	**-0.9**
FETY	**Fethiye**	**1.31**	**141**	*e*PN		**Pn**	**17 35 20.1**	**-1.4**
FETY	**Fethiye**	**1.31**	**141**	Pn		**Pn**	**17 35 20.1**	**-1.4**
KHL	**Karahalli**	**1.34**	**60**	*e*PN		**Pb**	**17 35 21.2**	**-0.9**
KHL	**Karahalli**	**1.34**	**60**	Pn		**Pb**	**17 35 21.2**	**-0.9**
KHL	**Karahalli**	**1.34**	**60**	*e*Pn		**Pb**	**17 35 21.2**	**-0.9**
KHAL	**Karahalli**	**1.34**	**58**	*i* P		**Pn**	**17 35 21.0**	**-0.9**
KHAL				*i* S		**Sn**	**17 35 38.8**	**-1.2**
KHAL	**Karahalli**	**1.34**	**58**	*i* P		**Pn**	**17 35 21.0**	**-0.9**
KHAL				*i* S		**Sn**	**17 35 38.8**	**-1.2**
ARG	**Arkhangelos**	**1.44**	**178**	P		**Pg**	**17 35 24.9**	**+0.5**
ARG				S		**Sg**	**17 35 46.0**	**+2.9**
ARG	**Arkhangelos**	**1.44**	**178**	P		**Pg**	**17 35 24.4**	**0.0**
ARG				S		**Sg**	**17 35 46.0**	**+2.9**
ARG	**Arkhangelos**	**1.44**	**178**	P		**Pg**	**17 35 24.9**	**+0.5**
ARG				S		**Sg**	**17 35 46.0**	**+2.9**
CHOS	**Chios island**	**1.73**	**295**	P		**Pg**	**17 35 29.2**	**-0.8**
CHOS				S		**Sb**	**17 35 50.8**	**-0.1**
CHOS	**Chios island**	**1.73**	**295**	P		**Pg**	**17 35 29.2**	**-0.8**
CHOS				S		**Sg**	**17 35 55.3**	**+2.8**
CHOS	**Chios island**	**1.73**	**295**	P		**Pg**	**17 35 29.2**	**-0.8**
CHOS				S		**Sb**	**17 35 50.8**	**-0.1**
ELL	**Elmali**	**1.74**	**121**	*e*PN		**Pn**	**17 35 26.1**	**-1.3**
ELL	**Elmali**	**1.74**	**121**	Pn		**Pn**	**17 35 26.1**	**-1.3**
ELL	**Elmali**	**1.74**	**121**	*e*Pn		**Pn**	**17 35 26.1**	**-1.3**
ISP	**Isparta**	**1.97**	**85**	*e*PN		**Pb**	**17 35 30.8**	**-2.0**
ISP	**Isparta**	**1.97**	**85**	P		**Pn**	**17 35 30.6**	**+0.1**
ISP				S		**Sb**	**17 35 57.6**	**+0.1**
ISP	**Isparta**	**1.97**	**85**	*e*Pn		**Pn**	**17 35 29.6**	**-0.9**
ISP				*e*Pg		**Pg**	**17 35 33.6**	**-0.8**
ISP	**Isparta**	**1.97**	**85**	*e*Pn		**Pb**	**17 35 30.8**	**-2.0**
ISP	**Isparta**	**1.97**	**85**	*e*Pg		**Pg**	**17 35 33.6**	**-0.8**
ISP				S		**Sb**	**17 35 57.6**	**+0.1**
BALB	**Balikesir**	**1.98**	**356**	*e*PN		**Pn**	**17 35 29.4**	**-1.2**
BALB	**Balikesir**	**1.98**	**356**	Pn		**Pn**	**17 35 29.4**	**-1.2**
BALB	**Balikesir**	**1.98**	**356**	*e*Pn		**Pn**	**17 35 29.4**	**-1.2**
DST	**Dursunbey**	**1.99**	**13**	*e*PN		**Pn**	**17 35 29.4**	**-1.4**
DST	**Dursunbey**	**1.99**	**13**	Pn		**Pn**	**17 35 29.4**	**-1.4**
DST	**Dursunbey**	**1.99**	**13**	*e*Pn		**Pn**	**17 35 29.4**	**-1.4**
BCK	**Bucak**	**2.03**	**95**	*e*PN		**Pn**	**17 35 30.6**	**-0.6**
BCK	**Bucak**	**2.03**	**95**	Pn		**Pn**	**17 35 30.6**	**-0.6**
APE	**Apeiranthos**	**2.09**	**254**	*e*PN		**Pn**	**17 35 29.8**	**-2.3**
APE	**Apeiranthos**	**2.09**	**254**	Pn		**Pn**	**17 35 29.8**	**-2.3**
APE	**Apeiranthos**	**2.09**	**254**	*e*Pn		**Pn**	**17 35 29.8**	**-2.3**
TVSB	**Tavsanli**	**2.10**	**31**	*e*PN		**Pn**	**17 35 31.9**	**-0.4**
TVSB	**Tavsanli**	**2.10**	**31**	*e*Pn		**Pn**	**17 35 31.9**	**-0.4**
PRK	**Paraskevi**	**2.11**	**319**	P		**Pn**	**17 35 31.8**	**-0.5**
PRK				S		**Sn**	**17 35 59.0**	**+0.2**
PRK	**Paraskevi**	**2.11**	**319**	P		**Pg**	**17 35 37.2**	**+0.1**
PRK				S		**Sg**	**17 36 05.7**	**+1.2**
PRK	**Paraskevi**	**2.11**	**319**	P		**Pn**	**17 35 31.8**	**-0.5**
PRK				S		**Sn**	**17 35 59.0**	**+0.2**
ALT	**Altintas**	**2.13**	**49**	*e*PN		**Pn**	**17 35 32.7**	**-0.1**
ALT	**Altintas**	**2.13**	**49**	Pn		**Pn**	**17 35 32.7**	**-0.1**
ALT	**Altintas**	**2.13**	**49**	*e*Pn		**Pn**	**17 35 32.7**	**-0.1**
SHUT	**Suhut-Afyon**	**2.16**	**65**	*e*PN		**Pn**	**17 35 32.7**	**-0.5**
SHUT	**Suhut-Afyon**	**2.16**	**65**	*e*Pn		**Pn**	**17 35 32.7**	**-0.5**
ANTB	**Antalya**	**2.21**	**109**	*e*PN		**Pn**	**17 35 33.7**	**0.0**
SIGR	**SIGRI**	**2.32**	**313**	P		**Pn**	**17 35 35.4**	**+0.2**
SIGR	**SIGRI**	**2.32**	**313**	P		**Pn**	**17 35 35.4**	**+0.2**
GONE	**Gonen-Balikesi**	**2.40**	**353**	*e*PN		**Pn**	**17 35 35.3**	**-1.0**
GONE	**Gonen-Balikesi**	**2.40**	**353**	*e*Pn		**Pn**	**17 35 35.3**	**-1.0**
THR3	**Thira Island,**	**2.46**	**240**	P		**Pb**	**17 35 39.0**	**-2.2**
THR3	**Thira Island,**	**2.46**	**240**	P		**Pb**	**17 35 39.0**	**-2.2**
EZN	**Ezine**	**2.55**	**329**	*e*PN		**Pn**	**17 35 36.9**	**-1.4**
EZN	**Ezine**	**2.55**	**329**	*e*Pn		**Pn**	**17 35 36.9**	**-1.4**
BNT	**Bandirma**	**2.69**	**358**	*e*PN		**Pn**	**17 35 39.7**	**-0.7**
BNT	**Bandirma**	**2.69**	**358**	*e*Pn		**Pn**	**17 35 39.7**	**-0.7**
MDNY	**Mudanya-Bursa**	**2.78**	**13**	*e*PN		**Pn**	**17 35 41.2**	**-0.3**
MDNY	**Mudanya-Bursa**	**2.78**	**13**	*e*Pn		**Pn**	**17 35 41.2**	**-0.3**
KRBG	**Karabiga-Canak**	**2.79**	**348**	*e*PN		**Pn**	**17 35 40.6**	**-1.1**
KRBG	**Karabiga-Canak**	**2.79**	**348**	*e*Pn		**Pn**	**17 35 40.6**	**-1.1**
ESKT	**Eskisehir**	**2.87**	**49**	*e*PN		**Pn**	**17 35 43.2**	**+0.3**
ESKT	**Eskisehir**	**2.87**	**49**	*e*Pn		**Pn**	**17 35 43.2**	**+0.3**
LPK	**Lapseki**	**2.89**	**340**	*e*PN		**Pn**	**17 35 41.7**	**-1.3**
LPK	**Lapseki**	**2.89**	**340**	*e*Pn		**Pn**	**17 35 41.7**	**-1.3**
CAVI	**Cavuskoy**	**2.90**	**28**	*e*PN		**Pn**	**17 35 43.0**	**-0.2**
CAVI	**Cavuskoy**	**2.90**	**28**	*e*Pn		**Pn**	**17 35 43.0**	**-0.2**
GEMT	**Gemlik**	**2.91**	**17**	*e*PN		**Pn**	**17 35 43.2**	**-0.1**
GEMT	**Gemlik**	**2.91**	**17**	*e*Pn		**Pn**	**17 35 43.2**	**-0.1**
ZKR	**Zakros**	**2.94**	**211**	P		**Pb**	**17 35 45.9**	**-3.5**
ZKR	**Zakros**	**2.94**	**211**	P		**Pb**	**17 35 45.9**	**-3.5**
ARMT	**Armutlu**	**2.97**	**12**	*e*PN		**Pn**	**17 35 44.0**	**-0.2**
ARMT	**Armutlu**	**2.97**	**12**	*e*Pn		**Pn**	**17 35 44.0**	**-0.2**
GELI	**Tayfur-Gelibol**	**3.00**	**336**	*e*PN		**Pn**	**17 35 43.5**	**-1.0**
GELI	**Tayfur-Gelibol**	**3.00**	**336**	*e*Pn		**Pn**	**17 35 43.5**	**-1.0**
YLV	**Yalova**	**3.08**	**19**	*e*PN		**Pn**	**17 35 45.9**	**+0.2**
YLV	**Yalova**	**3.08**	**19**	*e*Pn		**Pn**	**17 35 45.9**	**+0.2**
NPS	**Neapolis**	**3.10**	**220**	P		**Pb**	**17 35 48.4**	**-3.7**
NPS	**Neapolis**	**3.10**	**220**	P		**Pb**	**17 35 48.4**	**-3.7**
RKY	**Sarkoy-Tekirda**	**3.10**	**348**	*e*PN		**Pn**	**17 35 45.3**	**-0.7**
RKY	**Sarkoy-Tekirda**	**3.10**	**348**	*e*Pn		**Pn**	**17 35 45.3**	**-0.7**
LIA	**Limnos Island**	**3.16**	**316**	P		**Pn**	**17 35 46.5**	**-0.3**
LIA	**Limnos Island**	**3.16**	**316**	P		**Pn**	**17 35 46.5**	**-0.3**
LAST	**Lasithi**	**3.25**	**221**	P		**Pb**	**17 35 51.1**	**-3.5**
LAST	**Lasithi**	**3.25**	**221**	P		**Pb**	**17 35 51.1**	**-3.5**
KIZT	**Kizilcal**	**3.25**	**67**	*e*PN		**Pn**	**17 35 48.5**	**+0.4**
KIZT	**Kizilcal**	**3.25**	**67**	*e*Pn		**Pn**	**17 35 48.5**	**+0.4**
SVRH	**Sivrihisar-ESK**	**3.25**	**56**	*e*PN		**Pn**	**17 35 48.5**	**+0.4**
SVRH	**Sivrihisar-ESK**	**3.25**	**56**	*e*Pn		**Pn**	**17 35 48.5**	**+0.4**
GULT	**Gulveren**	**3.37**	**34**	*e*PN		**Pn**	**17 35 50.3**	**+0.6**
GULT	**Gulveren**	**3.37**	**34**	*e*Pn		**Pn**	**17 35 50.3**	**+0.6**
HRT	**Hereke**	**3.40**	**21**	*e*PN		**Pn**	**17 35 50.3**	**+0.2**
HRT	**Hereke**	**3.40**	**21**	*e*Pn		**Pn**	**17 35 50.3**	**+0.2**
ENEZ	**Enez**	**3.41**	**335**	*e*PN		**Pn**	**17 35 49.5**	**-0.6**
ENEZ	**Enez**	**3.41**	**335**	*e*Pn		**Pn**	**17 35 49.5**	**-0.6**
LADK	**Ladik-KONYA**	**3.45**	**80**	*e*PN		**Pn**	**17 35 51.3**	**+0.4**
LADK	**Ladik-KONYA**	**3.45**	**80**	*e*Pn		**Pn**	**17 35 51.3**	**+0.4**
CRLT	**Corlu**	**3.47**	**356**	*e*PN		**Pn**	**17 35 51.0**	**0.0**
CRLT	**Corlu**	**3.47**	**356**	*e*Pn		**Pn**	**17 35 51.1**	**0.0**
ISK	**Istanbul-Kandi**	**3.49**	**13**	*e*PN		**Pn**	**17 35 51.5**	**+0.3**
ISK	**Istanbul-Kandi**	**3.49**	**13**	*e*Pn		**Pn**	**17 35 51.5**	**+0.3**
ISK	**Istanbul-Kandi**	**3.49**	**13**	Pn		**Pn**	**17 35 51.5**	**+0.3**
BGKT	**Bogazkoy**	**3.56**	**9**	*e*PN		**Pn**	**17 35 52.3**	**+0.1**
BGKT	**Bogazkoy**	**3.56**	**9**	*e*Pn		**Pn**	**17 35 52.3**	**+0.1**
SLVT	**Silivri**	**3.57**	**2**	*e*PN		**Pn**	**17 35 52.6**	**+0.2**
SLVT	**Silivri**	**3.57**	**2**	*e*Pn		**Pn**	**17 35 52.6**	**+0.2**
ALN	**Alexandroupoli**	**3.59**	**335**	P		**Pn**	**17 35 52.0**	**-0.6**
ALN	**Alexandroupoli**	**3.59**	**335**	P		**Pn**	**17 35 52.0**	**-0.6**
CTKS	**Kestanelik-??a**	**3.59**	**6**	*e*PN		**Pn**	**17 35 52.8**	**+0.2**
CTKS	**Kestanelik-??a**	**3.59**	**6**	*e*Pn		**Pn**	**17 35 52.8**	**+0.2**
SILT	**Sile**	**3.70**	**19**	*e*PN		**Pn**	**17 35 54.3**	**+0.1**
SILT	**Sile**	**3.70**	**19**	*e*Pn		**Pn**	**17 35 54.3**	**+0.1**
MDUB	**Mudurnu**	**3.72**	**40**	*e*PN		**Pn**	**17 35 55.3**	**+0.7**
MDUB	**Mudurnu**	**3.72**	**40**	*e*Pn		**Pn**	**17 35 55.3**	**+0.7**
OUR	**Ouranopolis**	**4.14**	**311**	P		**Pn**	**17 36 00.4**	**+0.1**
OUR	**Ouranopolis**	**4.14**	**311**	P		**Pn**	**17 36 00.4**	**+0.1**
EDRB	**Edirne**	**4.30**	**347**	*e*PN		**Pn**	**17 36 02.1**	**-0.3**
EDRB	**Edirne**	**4.30**	**347**	*e*Pn		**Pn**	**17 36 02.1**	**-0.3**
ANTO	**Ankara**	**4.31**	**58**	*e*PN		**Pn**	**17 36 03.2**	**+0.5**
ANTO	**Ankara**	**4.31**	**58**	*e*Pn		**Pn**	**17 36 03.2**	**+0.5**
KAVA	**Kavala**	**4.31**	**322**	P		**Pn**	**17 36 02.4**	**-0.2**
KAVA	**Kavala**	**4.31**	**322**	P		**Pn**	**17 36 02.4**	**-0.2**
BR131	**Keskin Array S**	**4.83**	**63**	*e*Pn		**Pn**	**17 36 10.2**	**+0.3**
BR131	**Keskin Array S**	**4.83**	**63**	*e*Pn		**Pn**	**17 36 10.2**	**+0.3**
BRTR	**Keskin Array B**	**4.83**	**63**	P		**Pn**	**17 36 10.4**	**+0.5**
BRTR	**Keskin Array B**	**4.83**	**63**	P		**Pn**	**17 36 10.4**	**+0.5**
	2.5nm,0.3s,baz=240,slow=15,SNR=39							
BRTR	**Keskin Array B**	**4.83**	**63**	P		**Pn**	**17 36 10.4**	**+0.5**
SRS	**Serrai**	**4.88**	**316**	P		**Pn**	**17 36 10.4**	**-0.1**
SRS	**Serrai**	**4.88**	**316**	P		**Pn**	**17 36 10.4**	**-0.1

*NEIC **12** 18:01:36.7±0.9, 43°.65N×105°.32W, h0km, ML2.7, Error ellipse: s-maj=15.6km s-min=9.8km az=168.0, Suspected Mining explosion.*
NEIC 75 km [45 miles] SSE of Gillette.
ISC 12 18:01:36.9±0.8, 43°.62N±0°.03×105°.30W±0°.03, h0km, n58, σ0s93/59, 18C-26D, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
J23A	**Dilts Ranch, B**	**0.28**	**220**	⇓P	**Pb**	**18 01 44.4**	**-0.6**
	baz=0.3,SNR=678						
I23A	**Meade Ranch, G**	**0.36**	**341**	⇓P	**Pg**	**18 01 44.4**	**+0.6**
	baz=0.3,SNR=79						
I24A	**Kuemmerle Ranc**	**0.54**	**64**	⇑P	**Pg**	**18 01 48.2**	**+0.9**
	baz=0.5,SNR=256						
J24A	**Dixon Ranch, L**	**0.55**	**122**	⇓P	**Pb**	**18 01 49.0**	**-0.5**
	baz=0.6,SNR=94						
I22A	**9 Mile Ranch,**	**0.90**	**288**	⇓P	**Pg**	**18 01 54.3**	**+0.2**
	baz=0.9,SNR=119						
H23A	**Clabaugh Cattl**	**0.94**	**356**	⇓P	**Pg**	**18 01 54.3**	**-0.6**
	baz=0.9,SNR=19						
K24A	**Anderson Ranch**	**0.96**	**158**	⇓P	**Pn**	**18 01 56.9**	**-0.9**
	baz=1.0,SNR=102						
RSSD	**Black Hills**	**1.04**	**61**	*e*Pg	**Pg**	**18 01 56.7**	**-0.1**
H22A	**Clearmont**	**1.23**	**322**	⇑P	**Pg**	**18 02 00.0**	**-0.5**
	baz=1.2						
H24A	**Dirks Ranch, A**	**1.25**	**25**	⇓P	**Pg**	**18 01 59.8**	**-1.0**
	baz=1.2,SNR=386						
K22A	**Casper**	**1.32**	**223**	⇑Pb	**Pb**	**18 02 02.4**	**-0.2**
	baz=1.3						
I21A	**Big Trails, Te**	**1.46**	**278**	⇓Pb	**Pn**	**18 02 03.3**	**-1.3**
	baz=1.4						
L23A	**Garrett**	**1.53**	**191**	⇓Pb	**Pg**	**18 02 06.4**	**+0.2**
	baz=1.6						
J21A	**Lysite**	**1.59**	**261**	⇑Pb	**Pn**	**18 02 06.2**	**-0.2**
	baz=1.6,SNR=60						
L24A	**Wheatland**	**1.60**	**170**	⇑Pb	**Pg**	**18 02 07.8**	**+0.3**
	baz=1.6,SNR=13						
H21A	**Big Horn, Sher**	**1.61**	**309**	⇓Pb	**Pn**	**18 02 06.5**	**-0.2**
	baz=1.6,SNR=98						
K21A	**Alcova**	**1.74**	**236**	⇓Pb	**Pb**	**18 02 09.4**	**-0.3**
	baz=1.7,SNR=123						
G22A	**Birney**	**1.75**	**336**	⇓Pb	**Pn**	**18 02 08.9**	**+0.3**
	baz=1.7,SNR=15						
L25A	**Engebretsen Ra**	**1.76**	**146**	⇑Pb	**Pg**	**18 02 10.9**	**+0.2**
	baz=1.8,SNR=6,6						
L22A	**Ellis Ranch, M**	**1.79**	**208**	⇑Pb	**Pb**	**18 02 10.8**	**+0.1**
	baz=1.8,SNR=54						
G24A	**Alzada**	**1.82**	**20**	⇓Pb	**Pn**	**18 02 10.1**	**+0.6**
	baz=1.8,SNR=16						
J20A	**Shoshoni**	**2.04**	**263**	⇓Pb	**Pb**	**18 02 15.2**	**+0.2**
	baz=2.0,SNR=75						
I20A	**Worland**	**2.08**	**280**	⇑Pb	**Pn**	**18 02 14.2**	**+1.2**
	baz=2.0,SNR=282						
G21A	**Lodge Grass**	**2.11**	**320**	⇓Pb	**Pn**	**18 02 14.0**	**+0.5**
	baz=2.1,SNR=35						
H20A	**Greybull**	**2.13**	**295**	⇓Pb	**Pn**	**18 02 14.3**	**+0.4**
	baz=2.1,SNR=43						
M23A	**Laramie**	**2.17**	**188**	⇑Pb	**Pb**	**18 02 17.5**	**+0.3**
	baz=2.2,SNR=31						
L21A	**Rawlins**	**2.25**	**223**	⇑Pb	**Pb**	**18 02 17.6**	**-0.9**
	baz=2.3,SNR=21						
L21A				⇑Sb	**Sb**	**18 02 47.9**	**+0.9**
	baz=2.3						
F22A	**Rosebud**	**2.26**	**343**	⇓Pb	**Pn**	**18 02 16.8**	**+1.2**
	baz=2.2,SNR=46						
L26A	**Underwood Farm**	**2.27**	**133**	⇓Pb	**Pb**	**18 02 18.8**	**0.0**
	baz=2.3						
F24A	**Ekalaka**	**2.31**	**15**	⇓Pb	**Pn**	**18 02 17.3**	**+1.1**
	baz=2.3						
PHWY	**Pilot Hill**	**2.32**	**183**	*e*Pn	**Pn**	**18 02 16.9**	**+0.3**
M25A	**Palm-Egli Farm**	**2.37**	**157**	⇑Pb	**Pb**	**18 02 20.0**	**-0.6**
	baz=2.4,SNR=14						
M22A	**Cedar Creek Ra**	**2.41**	**204**	⇑Pb	**Pb**	**18 02 21.0**	**-0.4**
	baz=2.4,SNR=112						
K20A	**Yellowstone Ra**	**2.42**	**248**	⇓Pb	**Pb**	**18 02 21.0**	**-0.5**
	baz=2.4						
M21A	**Separation Pea**	**2.52**	**218**	⇑Pb	**Pb**	**18 02 22.4**	**-0.8**
	baz=2.5,SNR=67						
G20A	**Bridger**	**2.63**	**308**	⇓P	**Pn**	**18 02 20.5**	**-0.2**
	baz=2.6,SNR=106						
I19A	**Meeteetse**	**2.71**	**280**	⇓P	**Pn**	**18 02 23.3**	**+1.5**
	baz=2.7						
K19A	**Absolon Red Bu**	**2.71**	**254**	⇓Pb	**Pb**	**18 02 25.7**	**-0.7**
	baz=2.7						
J19A	**Crowheart**	**2.76**	**264**	⇑Pb	**Pb**	**18 02 26.8**	**-0.3**
	baz=2.7,SNR=163						
N23A	**Red Feather La**	**2.77**	**190**	⇓P	**Pb**	**18 02 25.2**	**-2.1**
	baz=2.8,SNR=19						
H19A	**Powell**	**2.85**	**293**	⇓P	**Pn**	**18 02 24.9**	**+1.1**
	baz=2.8,SNR=46						
N22A	**Wattenberg Ran**	**2.94**	**197**	⇓Pb	**Pb**	**18 02 30.9**	**+0.6**
	baz=3.0						
RLMT	**Red Lodge**	**3.22**	**299**	*e*Pn	**Pn**	**18 02 28.1**	**-0.8**
RLMT	**Red Lodge**	**3.22**	**299**	⇑P	**Pn**	**18 02 29.6**	**+0.8**
	baz=3.2,SNR=36						
PDAR	**Pinedale Array**	**3.23**	**256**	Pn	**Pn**	**18 02 30.3**	**+1.3**
	3.1nm,0.3s,baz=78,slow=16,SNR=77						
PDAR				Lg	Lg	18 03 14.8	
	16nm,0.3s,baz=80,slow=31,SNR=19						
F19A	**Roth Farm, Mol**	**3.42**	**312**	⇑P	**Pn**	**18 02 32.1**	**+0.5**
	baz=3.4,SNR=40						
G18A	**Lazy EL Ranch,**	**3.49**	**301**	⇑P	**Pn**	**18 02 33.3**	**+0.7**
	baz=3.5,SNR=56						
LOHW	**Long Hollow**	**3.85**	**272**	*e*Pn	**Pn**	**18 02 36.6**	**-1.0**
MOOW	**Moose Ponds**	**3.95**	**274**	*e*Pn	**Pn**	**18 02 40.3**	**+1.4**
SNOW	**Snow King Moun**	**3.97**	**270**	*e*Pn	**Pn**	**18 02 40.4**	**+1.1**
IMW	**Indian Meadow**	**4.09**	**276**	*e*Pn	**Pn**	**18 02 38.5**	**-2.4**
TPAW	**Teton Pass**	**4.11**	**270**	*e*Pn	**Pn**	**18 02 42.0**	**+0.9**
YMR	**Madison River**	**4.21**	**286**	*e*Pn	**Pn**	**18 02 40.6**	**-1.9**
AHID	**Auburn Hatcher**	**4.33**	**261**	*e*Pn	**Pn**	**18 02 43.9**	**-0.2**
HWUT	**Hardware Ranch**	**5.04**	**249**	*e*Pn	**Pn**	**18 02 52.2**	**-1.7**
	4.0nm,0.3s						
DUG	**Dugway**	**6.57**	**241**	*e*Pn	**Pn**	**18 03 14.1**	**-0.7**
	1.2nm,0.3s						
ULM	**Lac du Bonnet**	**9.24**	**41**	Pn	**Pn**	**18 03 49.7**	**-1.6**
	2.0nm,0.3s,baz=235,slow=12,SNR=9.1						
YKA	**Yellowknife Ar**	**19.68**	**347**	P	**Pn**	**18 06 09.2**	**+0.7**
	0.1nm,0.3s,baz=153,slow=9.7,SNR=5.5						

*ROM **12** 18:05:16.8±0.1, 42°.38N×13°.39E, h9km, Ml3.3/29, Error ellipse: s-maj=1.1km s-min=0.8km az=57.0*
*ISCJB **12** 18:05:16.9±0.2, 42°.39N±0°.02×13°.39E±0°.02, h10km±2km, mb3.2/2, Error ellipse: s-maj=2.9km s-min=2.3km az=41.3*
*PRU **12** 18:05:17.8, 42°.40N×13°.40E, h0km*
*LDG **12** 18:05:17.4±0.2, 42°.35N×13°.45E, h2km, Ml3.1/5, Error ellipse: s-maj=5.6km s-min=3.8km az=57.0*
*CSEM **12** 18:05:17.4±0.1, 42°.38N×13°.37E, h2km, ML3.8/11, Error ellipse: s-maj=2.7km s-min=2.2km az=50.0*
*IDC **12** 18:05:18.8±1.9, 42°.63N×13°.72E, h0km, mb3.1/2, mb1 3.3/5, mb1mx3.1/27, mbtmp3.2/5, ML3.1/3, Error ellipse: s-maj=35.0km s-min=18.9km az=85.0*
*BEO **12** 18:05:18.5±1.1, 42°.23N×13°.42E, h0km, ML3.4/3*
ISC 12 18:05:17.7±0.7, 42°.40N±0°.02×13°.40E±0°.02, h8km±4km, n144, σ1s36/185, 6C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**174**	⇑*i*Pg	**Pg**	**18 05 18.7**	**-0.7**
AQU				Sg	**Sg**	**18 05 19.9**	**-0.7**
	13μm,0.3s						
AQU	**L'Aquila**	**0.04**	**174**	⇑*i*Pg	**Pg**	**18 05 18.7**	**-0.7**
AQU				Sg	**Sg**	**18 05 19.9**	**-0.7**
	13μm,0.3s						
CAMP	**Campotosto**	**0.14**	**4**	⇑*i*Pg	**Pg**	**18 05 20.7**	**-0.1**
CAMP				Sg	**Sg**	**18 05 23.4**	**+0.4**
CAMP	**Campotosto**	**0.14**	**4**	⇑*i*Pg	**Pg**	**18 05 20.7**	**-0.1**
CAMP				Sg	**Sg**	**18 05 23.4**	**+0.4**
FAGN	**Fagnano**	**0.19**	**133**	Pg	**Pg**	**18 05 21.8**	**+0.1**
FAGN				Sg	**Sg**	**18 05 25.2**	**+0.9**
	14μm,0.4s						
FAGN	**Fagnano**	**0.19**	**133**	Pg	**Pg**	**18 05 21.8**	**+0.1**
FAGN				Sg	**Sg**	**18 05 25.2**	**+0.9**
	14μm,0.4s						
FIAM	**Fiamignano**	**0.24**	**238**	Pg	**Pg**	**18 05 22.4**	**-0.2**
FIAM				Sg	**Sg**	**18 05 26.5**	**+0.6**
	8μm,0.5s						
FIAM	**Fiamignano**	**0.24**	**238**	Pg	**Pg**	**18 05 22.4**	**-0.2**
FIAM				Sg	**Sg**	**18 05 26.5**	**+0.6**
	8μm,0.5s						
TERO	**Teramo**	**0.27**	**34**	Pg	**Pg**	**18 05 22.8**	**-0.4**
TERO				Sg	**Sg**	**18 05 27.3**	**+0.4**
	8μm,0.3s						
TERO	**Teramo**	**0.27**	**34**	Pg	**Pg**	**18 05 22.8**	**-0.4**
TERO				Sg	**Sg**	**18 05 27.3**	**+0.4**
	8μm,0.3s						
VCEL	**Villa Celiera**	**0.33**	**90**	Pg	**Pg**	**18 05 24.0**	**-0.3**
VCEL				Sg	**Sb**	**18 05 30.0**	**-1.5**
	10μm,0.8s						
VCEL	**Villa Celiera**	**0.33**	**90**	Pg	**Pg**	**18 05 24.0**	**-0.3**
VCEL				Sg	**Sb**	**18 05 30.0**	**-1.5**
	10μm,0.8s						
LNSS	**Leonessa**	**0.33**	**308**	Pg	**Pg**	**18 05 24.1**	**-0.3**
LNSS				Sg	**Sg**	**18 05 30.1**	**+1.3**
	6μm,0.3s						
LNSS	**Leonessa**	**0.33**	**308**	Pg	**Pg**	**18 05 24.1**	**-0.3**
LNSS				Sg	**Sg**	**18 05 30.1**	**+1.3**
	6μm,0.3s						
PTQR	**Pietraquaria**	**0.38**	**179**	Pg	**Pg**	**18 05 24.5**	**-0.6**
PTQR				Sg	**Sg**	**18 05 30.3**	**+0.3**
PTQR	**Pietraquaria**	**0.38**	**179**	Pg	**Pg**	**18 05 24.5**	**-0.6**
PTQR				Sg	**Sg**	**18 05 30.3**	**+0.3**
NRCA	**Norcia**	**0.48**	**335**	Pg	**Pg**	**18 05 26.6**	**-0.5**
NRCA				Sg	**Sg**	**18 05 34.2**	**+0.7**
	2μm,0.2s						
NRCA	**Norcia**	**0.48**	**335**	Pg	**Pg**	**18 05 26.6**	**-0.5**
NRCA				Sg	**Sg**	**18 05 34.2**	**+0.7**
	2μm,0.2s						
MNS	**Montasola**	**0.53**	**269**	Pg	**Pg**	**18 05 27.3**	**-0.7**
	2μm,0.8s						
MNS	**Montasola**	**0.53**	**269**	Pg	**Pg**	**18 05 27.3**	**-0.7**
	2μm,0.8s						
INTR	**Introdacqua**	**0.54**	**135**	Pg	**Pg**	**18 05 27.3**	**-0.9**
INTR				Sg	**Sb**	**18 05 36.1**	**-1.4**
	4μm,0.9s						
INTR	**Introdacqua**	**0.54**	**135**	Pg	**Pg**	**18 05 27.3**	**-0.9**
INTR				Sg	**Sb**	**18 05 36.1**	**-1.4**
	4μm,0.9s						
CERT	**Cerreto**	**0.54**	**215**	Pg	**Pg**	**18 05 27.5**	**-0.7**
	3μm,0.4s						
CERT	**Cerreto**	**0.54**	**215**	Pg	**Pg**	**18 05 27.5**	**-0.7**
	3μm,0.4s						
VVLD	**Villa Vallelon**	**0.55**	**162**	Pg	**Pg**	**18 05 27.3**	**-1.1**
	1μm,0.6s						
VVLD	**Villa Vallelon**	**0.55**	**162**	Pg	**Pg**	**18 05 27.3**	**-1.1**
	1μm,0.6s						
TRTR	**Tortoreto Alta**	**0.56**	**43**	Pg	**Pb**	**18 05 29.3**	**-0.6**
	6μm,0.5s						
TRTR	**Tortoreto Alta**	**0.56**	**43**	Pg	**Pb**	**18 05 29.3**	**-0.6**
	6μm,0.5s						
OFFI	**Offida**	**0.58**	**22**	Pg	**Pb**	**18 05 29.5**	**-0.7**
	10μm,0.5s						
OFFI	**Offida**	**0.58**	**22**	Pg	**Pb**	**18 05 29.5**	**-0.7**
	10μm,0.5s						
GUAR	**Guarcino**	**0.60**	**186**	Pg	**Pg**	**18 05 28.4**	**-1.0**
	767nm,0.6s						
GUAR	**Guarcino**	**0.60**	**186**	Pg	**Pg**	**18 05 28.4**	**-1.0**
	767nm,0.6s						
MTCE	**Montecelio**	**0.61**	**233**	Pg	**Pg**	**18 05 28.6**	**-1.0**
	822nm,0.6s						
MTCE	**Montecelio**	**0.61**	**233**	Pg	**Pg**	**18 05 28.6**	**-1.0**
	822nm,0.6s						
CESX	**Cesi**	**0.64**	**290**	Pg	**Pg**	**18 05 29.1**	**-1.0**
	787nm,0.5s						
CESX	**Cesi**	**0.64**	**290**	Pg	**Pg**	**18 05 29.1**	**-1.0**
	787nm,0.5s						
FDMO	**Fiordimonte**	**0.68**	**341**	Pg	**Pg**	**18 05 29.8**	**-1.0**
FDMO				Sg	**Sg**	**18 05 40.2**	**+0.5**
	1μm,0.3s						
FDMO	**Fiordimonte**	**0.68**	**341**	Pg	**Pg**	**18 05 29.8**	**-1.0**
FDMO				Sg	**Sg**	**18 05 40.2**	**+0.5**
	1μm,0.3s						
LPEL	**Lama dei Pelig**	**0.68**	**121**	Pg	**Pg**	**18 05 29.9**	**-1.0**
LPEL				Sg	**Sb**	**18 05 40.3**	**-1.2**
	901nm,0.6s						
LPEL	**Lama dei Pelig**	**0.68**	**121**	Pg	**Pg**	**18 05 29.9**	**-1.0**
LPEL				Sg	**Sb**	**18 05 40.3**	**-1.2**
	901nm,0.6s						
CESI	**CESI - Serrava**	**0.71**	**329**	Pg	**Pg**	**18 05 30.5**	**-0.9**
CESI				Sg	**Sg**	**18 05 41.8**	**+1.2**
CESI	**CESI - Serrava**	**0.71**	**329**	Pg	**Pg**	**18 05 30.5**	**-0.9**
CESI				Sg	**Sg**	**18 05 41.8**	**+1.2**
POFI	**Posta Fibreno**	**0.72**	**161**	Pg	**Pg**	**18 05 30.5**	**-1.1**
POFI	**Posta Fibreno**	**0.72**	**161**	Pg	**Pg**	**18 05 30.5**	**-1.1**
CAFR	**Castel Frentan**	**0.72**	**103**	Pg	**Pg**	**18 05 31.5**	**-0.2**
	1μm,0.5s						
CAFR	**Castel Frentan**	**0.72**	**103**	Pg	**Pg**	**18 05 31.5**	**-0.2**
	1μm,0.5s						
SDI	**San Donato**	**0.75**	**156**	Pg	**Pg**	**18 05 30.9**	**-1.3**
	260nm,0.3s						
SDI	**San Donato**	**0.75**	**156**	Pg	**Pg**	**18 05 30.9**	**-1.3**
	260nm,0.3s						
GUMA	**Gualdo di Mace**	**0.78**	**31**	Pg	**Pg**	**18 05 30.3**	**-2.4**
	2μm,0.4s						
GUMA	**Gualdo di Mace**	**0.78**	**31**	Pg	**Pg**	**18 05 30.3**	**-2.4**
	2μm,0.4s						
RMP	**Rome, Mte Porz**	**0.78**	**222**	Pg	**Pg**	**18 05 32.8**	**+0.1**
RMP	**Rome, Mte Porz**	**0.78**	**222**	Pg	**Pg**	**18 05 32.8**	**+0.1**
ASSB	**Assisi San Ben**	**0.84**	**320**	Pg	**Pg**	**18 05 33.0**	**-1.0**
	591nm,0.3s						
ASSB	**Assisi San Ben**	**0.84**	**320**	Pg	**Pg**	**18 05 33.0**	**-1.0**
	591nm,0.3s						
GIUL	**Giuliano Di Ro**	**0.84**	**187**	Pg	**Pg**	**18 05 33.3**	**-0.7**
	483nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.84**	**187**	Pg	**Pg**	**18 05 33.3**	**-0.7**
	483nm,0.6s						
SNTG	**Esanatoglia**	**0.92**	**339**	Pg	**Pg**	**18 05 34.3**	**-1.2**
	340nm,0.4s						
SNTG	**Esanatoglia**	**0.92**	**339**	Pg	**Pg**	**18 05 34.3**	**-1.2**
	340nm,0.4s						
CERA	**Filignano**	**0.92**	**150**	Pg	**Pg**	**18 05 33.9**	**-1.6**
	1μm,1.1s						
CERA	**Filignano**	**0.92**	**150**	Pg	**Pg**	**18 05 33.9**	**-1.6**
	1μm,1.1s						
CING	**Cingoli**	**0.99**	**351**	Pg	**Pg**	**18 05 35.5**	**-1.3**
	568nm,0.5s						
CING	**Cingoli**	**0.99**	**351**	Pg	**Pg**	**18 05 35.5**	**-1.3**
	568nm,0.5s						
MIDA	**Miranda**	**0.99**	**139**	Pg	**Pg**	**18 05 34.8**	**-1.9**
	451nm,0.6s						
MIDA	**Miranda**	**0.99**	**139**	Pg	**Pg**	**18 05 34.8**	**-1.9**
	451nm,0.6s						
MURB	**Monte Urbino**	**1.08**	**324**	Pg	**Pg**	**18 05 37.3**	**-1.1**
	1μm,0.3s						
MURB	**Monte Urbino**	**1.08**	**324**	Pg	**Pg**	**18 05 37.3**	**-1.1**
	1μm,0.3s						
MGAB	**Montegabbione**	**1.08**	**299**	Pg	**Pg**	**18 05 37.6**	**-0.8**
MGAB	**Montegabbione**	**1.08**	**299**	Pg	**Pg**	**18 05 37.6**	**-0.8**
TOLF	**Tolfa**	**1.09**	**253**	Pg	**Pg**	**18 05 37.3**	**-1.3**
TOLF	**Tolfa**	**1.09**	**253**	Pg	**Pg**	**18 05 37.3**	**-1.3**
ARVD	**Arcevia**	**1.15**	**343**	Pg	**Pg**	**18 05 38.5**	**-1.3**
	379nm,0.5s						
ARVD	**Arcevia**	**1.15**	**343**	Pg	**Pg**	**18 05 38.5**	**-1.3**
	379nm,0.5s						
AOI	**Ancona**	**1.16**	**7**	Pn	**Pg**	**18 05 39.3**	**-0.8**
	581nm,0.5s						
AOI	**Ancona**	**1.16**	**7**	Pn	**Pg**	**18 05 39.3**	**-0.8**
	581nm,0.5s						
SACS	**San Casciano d**	**1.19**	**293**	Pn	**Pg**	**18 05 39.7**	**-0.8**
	333nm,0.7s						
PIEI	**Pieia**	**1.30**	**331**	Pn	**Pn**	**18 05 41.1**	**-1.2**
	287nm,0.7s						
PIEI	**Pieia**	**1.30**	**331**	Pn	**Pn**	**18 05 41.1**	**-1.2**
	287nm,0.7s						
MAON	**Monte Argentar**	**1.68**	**272**	Pn	**Pn**	**18 05 47.3**	**-0.1**
MAON	**Monte Argentar**	**1.68**	**272**	Pn	**Pn**	**18 05 47.3**	**-0.1**
CDT	**Castel del Mon**	**2.52**	**120**	*e*Sn	**Sb**	**18 06 33.6**	**-0.9**
MAIM	**Mastiano**	**2.61**	**306**	P	**Pn**	**18 05 59.8**	**-0.5**
PGF	**Pioggiola**	**3.26**	**274**	*e*Pn	**Pn**	**18 06 09.9**	**+0.7**
PGF				*e*Sn	**Sn**	**18 06 50.1**	**+1.9**
	56nm,1.0s						
PGF	**Pioggiola**	**3.26**	**274**	*e*Pn	**Pn**	**18 06 09.9**	**+0.7**
PGF				*e*Sn	**Sn**	**18 06 50.1**	**+1.9**
	28nm,1.0s						
BOJS	**Bojanci**	**3.38**	**23**	*i* Pn	**Pn**	**18 06 11.9**	**+1.1**
BOJS				*i* Sn	**Sb**	**18 06 58.2**	**-1.0**
BOJS	**Bojanci**	**3.38**	**23**	*i* Pn	**Pn**	**18 06 11.9**	**+1.1**
JAVS	**Javornik**	**3.53**	**8**	*i* Pn	**Pn**	**18 06 13.0**	**0.0**
JAVS				*i* Sn	**Sn**	**18 06 56.6**	**+1.7**
JAVS	**Javornik**	**3.53**	**8**	*i* Pn	**Pn**	**18 06 13.0**	**0.0**
JAVS				*i* Sn	**Sn**	**18 06 56.6**	**+1.7**
VOY	**Vojsko**	**3.65**	**5**	*e*Pn	**Pn**	**18 06 16.8**	**+2.1**
VOY				*e*		18 06 25.8	
VOY				*e*		18 06 42.2	
VOY	**Vojsko**	**3.65**	**5**	Pn	**Pn**	**18 06 16.8**	**+2.1**
VOY				*e*Sn	**Sn**	**18 06 54.6**	**-3.4**
PDG	**Podgorica**	**4.34**	**88**	*e*Pn	**Pn**	**18 06 25.1**	**+1.1**
PDG				*e*Sn	**Sn**	**18 07 16.3**	**+1.6**
PDG	**Podgorica**	**4.34**	**88**	*e*Pn	**Pn**	**18 06 25.1**	**+1.1**
PDG				*e*Sn	**Sn**	**18 07 16.3**	**+1.6**
ABTA	**Abfaltersbach**	**4.40**	**352**	⇑*i*Pn	**Pn**	**18 06 25.1**	**+0.2**
	SNR=15						
ABTA	**Abfaltersbach**	**4.40**	**352**	Pn	**Pn**	**18 06 25.1**	**+0.2**
	SNR=15						
SBF	**Sospel**	**4.60**	**291**	*e*Pn	**Pn**	**18 06 28.4**	**+0.7**
SBF	**Sospel**	**4.60**	**291**	*e*Pn	**Pn**	**18 06 28.4**	**+0.7**
WTTA	**Wattenberg**	**5.03**	**346**	⇑*i*Pn	**Pn**	**18 06 35.0**	**+1.4**
	SNR=9.8						
WTTA	**Wattenberg**	**5.03**	**346**	Pn	**Pn**	**18 06 35.0**	**+1.4**
	SNR=9.8						
DAVOX	**Davos/Dischmat**	**5.05**	**331**	Pn	**Pn**	**18 06 35.7**	**+1.8**
	1.2nm,0.3s,baz=157,slow=18,SNR=13						
DAVOX				Sn	**Sn**	**18 07 34.8**	**+2.2**
	0.4nm,0.3s,baz=202,slow=19,SNR=2.4						
FRF	**La Foret Royal**	**5.09**	**285**	*e*Pn	**Pn**	**18 06 34.6**	**+0.3**
FRF	**La Foret Royal**	**5.09**	**285**	*e*Pn	**Pn**	**18 06 34.6**	**+0.3**
IVAS	**Ivanjica**	**5.09**	**74**	*e*Pn	**Pn**	**18 06 35.5**	**+1.0**
IVAS				*e*Sn	**Sn**	**18 07 34.0**	**+0.5**
IVAS	**Ivanjica**	**5.09**	**74**	*e*Pn	**Pn**	**18 06 35.5**	**+1.0**
IVAS				*e*Sn	**Sn**	**18 07 34.0**	**+0.5**
DIVS	**Divibare**	**5.11**	**68**	*e*Pn	**Pn**	**18 06 37.0**	**+2.3**
DIVS				*e*Sn	**Sn**	**18 07 34.8**	**+0.9**
DIVS	**Divibare**	**5.11**	**68**	*e*Pn	**Pn**	**18 06 37.0**	**+2.3**
DIVS				*e*Sn	**Sn**	**18 07 34.8**	**+0.9**
LMR	**La Mourre**	**5.15**	**283**	*e*Pn	**Pn**	**18 06 35.2**	**+0.1**
LMR	**La Mourre**	**5.15**	**283**	*e*Pn	**Pn**	**18 06 35.2**	**+0.1**
MBDF	**Montbardon**	**5.35**	**298**	*e*P	**Pn**	**18 06 40.5**	**+2.5**
MBDF	**Montbardon**	**5.35**	**298**	*e*P	**Pn**	**18 06 40.5**	**+2.5**
GRUS	**Gruza**	**5.56**	**72**	*e*Pn	**Pn**	**18 06 43.1**	**+2.3**
GRUS	**Gruza**	**5.56**	**72**	*e*Pn	**Pn**	**18 06 43.1**	**+2.3**
LPG	**La Plagne**	**5.71**	**305**	*e*P	Pn	18 06 46.4	+3.3
LPG				*e*Sn	**Sn**	**18 07 45.5**	**-3.5**
	12nm,1.0s						
LPL	**La Plagne**	**5.73**	**305**	*e*P	Pn	18 06 46.6	+3.3
LPL				*e*Sn	**Sn**	**18 07 44.6**	**-4.8**
	1.0nm,0.3s						
SMRF	**Simiane la Rot**	**5.93**	**288**	*e*P	**Pn**	**18 06 47.9**	**+2.0**
SMRF	**Simiane la Rot**	**5.93**	**288**	*e*P	**Pn**	**18 06 47.9**	**+2.0**
ORIF	**Oris-en-Rattie**	**6.01**	**297**	*e*P	Pn	18 06 50.9	+3.9
BARS	**Barje**	**6.23**	**83**	*e*Pn	**Pn**	**18 06 50.6**	**+0.6**
BARS				*e*Sn	**Sn**	**18 08 00.2**	**-1.1**
BARS	**Barje**	**6.23**	**83**	*e*Pn	**Pn**	**18 06 50.6**	**+0.6**
GERES	**GERESS Array B**	**6.45**	**2**	Pn	**Pn**	**18 06 52.3**	**-0.8**
	0.3nm,0.3s,baz=175,slow=13,SNR=8.9						
GERES				Sn	**Sn**	**18 08 02.7**	**-4.3**
	0.4nm,0.3s,baz=181,slow=22,SNR=3.9						
CABF	**La Chapelle**	**6.71**	**311**	*e*Pn	**Pn**	**18 06 58.0**	**+1.3**
CABF	**La Chapelle**	**6.71**	**311**	*e*Pn	**Pn**	**18 06 58.0**	**+1.3**
KHC	**Kasperske Hory**	**6.74**	**1**	*e*PN	**Pn**	**18 06 57.1**	**+0.1**
KHC				x		18 08 11.1	
KHC	**Kasperske Hory**	**6.74**	**1**	Pn	**Pn**	**18 06 57.1**	**+0.1**
BZS	**Buzias**	**6.74**	**59**	*e*Pn	**Pn**	**18 06 58.9**	**+1.9**
BZS	**Buzias**	**6.74**	**59**	*e*Pn	**Pn**	**18 06 58.9**	**+1.9**
HINF	**Hinteralfeld**	**7.12**	**322**	*e*Pn	**Pn**	**18 07 02.5**	**+0.2**
HINF				*e*Sn	**Sn**	**18 08 19.0**	**-4.5**
	3.7nm,0.4s						
HINF	**Hinteralfeld**	**7.12**	**322**	*e*Pn	**Pn**	**18 07 02.5**	**+0.2**
VYHS	**Vyhne**	**7.20**	**30**	*e*PN	**Pn**	**18 07 06.3**	**+3.1**
VYHS				*e*SN	**Sn**	**18 08 21.9**	**-3.3**
VYHS	**Vyhne**	**7.20**	**30**	*e*Pn	**Pn**	**18 07 06.3**	**+3.1**
VTS	**Vitosha**	**7.26**	**85**	*e*Pn	**Pn**	**18 07 04.5**	**+0.3**
VTS	**Vitosha**	**7.26**

YKA	**Yellowknife Ar**	**78.00**	**342**	P	P	18 30 49.9	-0.3
	0.2nm,0.5s,baz=137,slow=5.4,SNR=7.4						
YKA				pP	pP	18 31 10.5	-9.2
	0.1nm,0.5s,baz=133,slow=6.0,SNR=3.0						
TORD	**Torodi Ar. Bea**	**79.38**	**75**	P	P	18 30 58.9	+0.1
	0.5nm,0.7s,baz=281,slow=4.1,SNR=4.2						
ASAR	**Alice Springs**	**136.60**	**220**	PKP	PKPdf	18 38 14.9	+0.5
	0.6nm,1.1s,baz=110,slow=1.9,SNR=3.4						
ASAR				pPKP	pPKPdf	18 38 46.4	+0.4
	0.2nm,0.6s,baz=125,slow=1.8,SNR=1.8						
WRA	**Warramunga Arr**	**138.90**	**225**	PKP	PKPdf	18 38 18.0	-0.7
	0.3nm,0.7s,baz=122,slow=2.0,SNR=4.2						
WRA				pPKP	pPKPdf	18 38 48.2	-2.1
	0.2nm,0.5s,baz=127,slow=1.9,SNR=1.3						
KSRS	**Korea Array**	**145.31**	**327**	PKPbc	PKPbc	18 38 29.2	-0.2
	0.6nm,0.6s,baz=48,slow=3.4,SNR=4.5						

IDC 12 18:23:03.2±54.0, 16°56'S×177°15'W, h0 km, mb3.7/3, mb1 3.9/3, mb1mx3.5/19, mbtmp3.7/3, Error ellipse: s-maj=994.9km s-min=164.7km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.33**	**240**	P	P	18 30 43.2	+0.5
	0.6nm,0.5s,baz=72,slow=9.6,SNR=5.6						
WRA	**Warramunga Arr**	**46.07**	**258**	P	P	18 31 28.7	-0.6
	0.2nm,0.6s,baz=96,slow=7.5,SNR=7.0						
ASAR	**Alice Springs**	**46.32**	**253**	P	P	18 31 31.0	-0.3
	1.8nm,0.6s,baz=89,slow=7.8,SNR=68						

IDC 12 18:30:15.3±11.0, 16°41'S×172°01'W, h0 km, mb3.6/3, mb1 3.7/4, mb1mx3.5/22, mbtmp3.6/4, ML1.1/1, Error ellipse: s-maj=306.7km s-min=31.8km az=117.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.49**	**5**	Pn	Pn	18 30 57.2	-0.1
	2.2nm,0.3s,baz=180,slow=4.0,SNR=3.0						
AFI				Sn	Sn	18 31 22.1	-6.4
	34nm,0.3s,baz=53,slow=23,SNR=11						
STKA	**Stephens Creek**	**44.71**	**241**	P	P	18 38 31.3	+0.9
	0.9nm,0.9s,baz=94,slow=15,SNR=3.6						
WRA	**Warramunga Arr**	**50.92**	**257**	P	P	18 39 18.4	-0.5
	0.3nm,0.5s,baz=96,slow=8.2,SNR=7.9						
ASAR	**Alice Springs**	**51.08**	**253**	P	P	18 39 19.6	-0.4
	0.9nm,0.6s,baz=92,slow=8.1,SNR=27						

*ISCJB **12** 18:42:08.2±0.6, 23°.37N±0°.07×70°.24E±0°.04, h15 km, mb3.0/3, Error ellipse: s-maj=9.7km s-min=5.3km az=167.7*
*NDI **12** 18:42:10.9±1.6, 23°.38N×70°.09E, h15 km, ML3.5*
*IDC **12** 18:42:12.4±6.0, 23°.69N×70°.18E, h0 km, mb3.2/3, mb1 3.4/4, mb1mx3.1/28, mbtmp3.3/4, Error ellipse: s-maj=182.7km s-min=33.9km az=82.0*
ISC 12 18:42:09.9±0.8, 23°.31N±0°.06×70°.17E±0°.05, h15 km, n27, σ1°50/27, mb3.1/3, 1D, Southern India

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BHJ	**Bhuj**	**0.48**	**263**	*eP*	**Pg**	**18 42 19.8**	**+0.4**
BHJ				*eS*	**Sg**	**18 42 25.5**	**-0.4**
BHV	**Bhavnagar**	**2.39**	**130**	*eP*	**Pb**	**18 42 51.5**	**-1.2**
BHV				*ex*	**Sg**	**18 43 29.0**	**+2.1**
AJM	**Ajmer**	**5.14**	**51**	*eP*	**Pn**	**18 43 27.4**	**+1.0**
AJM				*eS*	**Sn**	**18 44 25.0**	**-0.5**
AJM				AML	AML	18 44 52.2	
	comp=E,184nm,0.5s						
AJM				AML	AML	18 44 52.3	
	comp=N,157nm,0.3s						
BHPL	**Bhopal**	**6.67**	**89**	*eP*	**Pn**	**18 43 48.5**	**+1.1**
BHPL				*eS*	**Sn**	**18 45 00.6**	**-2.6**
BHPL				AML	AML	18 46 27.5	
	comp=N,21nm,0.6s						
BHPL				AML	AML	18 46 28.8	
	comp=E,18nm,0.8s						
KAD	**Karad**	**7.06**	**147**	*eS*	**Sn**	**18 45 10.6**	**-2.2**
LATR	**Latur**	**7.70**	**128**	*eP*	**Pn**	**18 44 03.1**	**+1.5**
JBP	**Jabalpur**	**9.02**	**89**	*ix*	x	18 44 49.0	
JBP				*ex*	x	18 46 51.0	
THW	**Thamme Wali**	**9.55**	**8**	P	**Pn**	**18 44 26.7**	**-0.2**
HYB	**Hyderabad**	**9.80**	**125**	*ex*	x	18 46 28.6	
SMLA	**Simla**	**9.96**	**37**	*eP*	**Pn**	**18 44 31.3**	**-1.2**
SMLA				*ex*	x	18 46 27.8	
THN	**Thein Dam**	**10.32**	**27**	*ex*	Pn	18 44 43.0	+5.5
THN				*ex*	x	18 47 06.0	
CEP	**Cherat**	**10.58**	**8**	P	**Pn**	**18 44 40.2**	**-1.0**
CHCP	**Chirah Chowk**	**10.66**	**14**	P	**Pn**	**18 44 42.1**	**0.0**
PYUN	**Piuthan**	**12.50**	**65**	*eP*	**Pn**	**18 45 07.1**	**-0.4**
	comp=E,8.8nm,0.4s						
KOLN	**Koldanda**	**12.91**	**67**	*eP*	**Pn**	**18 45 11.5**	**-1.6**
	comp=E,4.9nm,0.3s						
DANN	**Dangsing**	**13.22**	**65**	*eP*	**Pn**	**18 45 17.6**	**+0.2**
	comp=E,12nm,0.8s						
DMN	**Daman**	**14.15**	**69**	*eP*	**Pn**	**18 45 28.0**	**-2.1**
	comp=E,6.1nm,0.4s						
KKN	**Kakani**	**14.34**	**69**	*eP*	**Pn**	**18 45 30.6**	**-2.1**
	comp=E,6.9nm,0.4s						
PKI	**Pulchoki**	**14.40**	**70**	*eP*	**Pn**	**18 45 31.6**	**-2.0**
	comp=E,3.6nm,0.2s						
GUN	**Gumba**	**14.89**	**69**	*eP*	**Pn**	**18 45 38.3**	**-2.0**
	comp=E,7.3nm,0.5s						
RAMN	**Ramite**	**15.31**	**73**	*eP*	**Pn**	**18 45 44.3**	**-1.5**
	comp=E,15nm,0.6s						
ODAN	**Odare**	**15.99**	**74**	*eP*	**Pn**	**18 45 54.9**	**+0.3**
	comp=E,7.7nm,0.5s						
TAPN	**Taplejung**	**16.36**	**72**	*eP*	**Pn**	**18 45 59.0**	**-0.3**
	comp=E,10.0nm,1.0s						
AAK	**Ala-Archa**	**19.60**	**10**	P	**Pn**	**18 46 39.3**	**+0.2**
	comp=E,0.2nm,0.3s,baz=179,slow=7.7,SNR=9.1						
MKAR	**Makanchi Array**	**25.38**	**20**	P	**P**	**18 47 37.0**	**+0.5**
	comp=E,0.2nm,0.6s,baz=203,slow=9.5,SNR=4.5						
SONM	**Songino Array**	**37.77**	**41**	P	**P**	**18 49 28.1**	**+2.6**
	comp=E,0.2nm,0.6s,baz=242,slow=7.1,SNR=3.6						
ASAR	**Alice Springs**	**77.53**	**123**	P	P	18 54 11.6	+6.1
	comp=E,0.2nm,0.7s,baz=312,slow=5.4,SNR=5.8						

*AUST **12** 18:45:55.0, 1°.99S×131°.00E, h60 km*
*IDC **12** 18:46:36.8±2.6, 5°.93S×133°.52E, h0 km, mb3.2/1, mb1 3.4/4, mb1mx3.2/18, mbtmp3.2/4, ML3.0/3, Error ellipse: s-maj=92.9km s-min=27.9km az=87.0*
*ISCJB **12** 18:46:39.5±1.5, 6°.00S±0°.08×133°.6E±0°.2, h33 km, mb3.1/1, Error ellipse: s-maj=22.1km s-min=10.7km az=168.6*
ISC 12 18:46:41.7±1.8, 5°.9S±0°.1×133°.5E±0°.2, h33 km, n7, σ2°23/7, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLE	**Tual**	**0.77**	**291**	P	**Pn**	**18 46 55.2**	**-1.0**
	baz=4.0,SNR=8.1						
KDU	**Kakadu**	**6.80**	**188**	P	Pn	18 48 23.2	+4.1
	baz=11,SNR=5.3						
MTN	**Manton Dam**	**7.25**	**198**	P	**Pn**	**18 48 28.5**	**+3.1**
	baz=11,SNR=4.5						
WRA	**Warramunga Arr**	**13.97**	**177**	Pn	Pn	18 49 54.1	-3.3
	0.0nm,0.3s,baz=357,slow=13,SNR=3.8						
WRA				Sn	**Sn**	**18 52 28.6**	**-2.8**
	0.0nm,0.3s,baz=354,slow=25,SNR=3.1						
FITZ	**Fitzroy Crossi**	**14.32**	**212**	Pn	**Pn**	**18 50 01.3**	**-0.8**
	0.2nm,0.3s,baz=34,slow=12,SNR=7.4						
FITZ				Sn	**Sn**	**18 52 40.5**	**+0.7**
	0.3nm,0.3s,baz=178,slow=14,SNR=9.9						
ASAR	**Alice Springs**	**17.65**	**179**	P	**P**	**18 50 45.8**	**-0.2**
	0.1nm,0.3s,baz=8.5,slow=11,SNR=11						
MKAR	**Makanchi Array**	**69.26**	**325**	P	**P**	**18 57 46.0**	**+0.5**
	0.1nm,0.4s,baz=106,slow=5.0,SNR=3.0						

*IDC **12** 18:49:14.4±3.1, 42°.52N×105°.03W, h0 km, mb2.6/1, mb1 3.3/3, mb1mx3.1/29, mbtmp3.1/3, ML2.9/2, Error ellipse: s-maj=49.4km s-min=10.1km az=161.0*
*NEIC **12** 18:49:22.4±0.6, 43°.72N×105°.37W, h0 km, ML3.0, Error ellipse: s-maj=9.5km s-min=6.6km az=30.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] S of Gillette.
*ISCJB **12** 18:49:23.6±0.4, 43°.53N±0°.03×105°.33W±0°.05, h0 km, Error ellipse: s-maj=5.5km s-min=4.2km az=6.4*
ISC 12 18:49:21.8±0.8, 43°.46N±0°.03×105°.21W±0°.03, h0 km, n37, σ1°46/35, 10C-11D, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
J23A	**Dilts Ranch, B**	**0.25**	**258**	*i*P	Pg	18 49 29.7	+3.0
	baz=0.3						
I23A	**Meade Ranch, G**	**0.53**	**340**	↑S	**Sg**	**18 49 41.2**	**+2.2**
	baz=0.2						
I24A	**Kuemmerle Ranc**	**0.58**	**46**	↑P	**Pb**	**18 49 36.1**	**+1.1**
	baz=0.6,SNR=38						
K24A	**Anderson Ranch**	**0.79**	**158**	*i*P	**Pn**	**18 49 40.3**	**-0.2**
	baz=1.1						
I22A	**9 Mile Ranch,**	**1.02**	**296**	*i*P	**Pb**	**18 49 42.9**	**+0.5**
	baz=0.8						
RSSD	**Black Hills**	**1.08**	**52**	Pg	**Pg**	**18 49 41.9**	**-0.6**
K22A	**Casper**	**1.26**	**230**	↑Pb	**Pn**	**18 49 47.8**	**+1.0**
	baz=1.4						
H24A	**Dirks Ranch, A**	**1.37**	**20**	↑Pb	**Pb**	**18 49 49.3**	**+0.8**
	baz=1.2						
L23A	**Garrett**	**1.39**	**195**	*i*Pb	**Pb**	**18 49 50.9**	**+2.1**
	baz=1.6						
I21A	**Big Trails, Te**	**1.55**	**284**	*i*Pb	**Pb**	**18 49 51.6**	**0.0**
	baz=1.4						
J21A	**Lysite**	**1.63**	**267**	*i*Pb	**Pg**	**18 49 53.3**	**+0.2**
	baz=1.6,SNR=19						
L22A	**Ellis Ranch, M**	**1.69**	**213**	↑Pb	**Pg**	**18 49 55.8**	**+1.6**
	baz=1.9						
K21A	**Alcova**	**1.71**	**242**	↑Pb	**Pg**	**18 49 55.5**	**+0.9**
	baz=1.8						
G23A	**Biddle**	**1.75**	**356**	*i*Pb	**Pg**	**18 49 55.8**	**+0.5**
	baz=1.5,SNR=52						
G22A	**Birney**	**1.92**	**337**	*i*Pb	**Pb**	**18 49 58.2**	**+0.4**
	baz=1.6						
G24A	**Alzada**	**1.95**	**17**	*i*Pb	**Pg**	**18 49 59.6**	**+0.3**
	baz=1.7						
PHWY	**Pilot Hill**	**2.16**	**185**	*e*Pn	**Pg**	**18 50 03.3**	**0.0**
I20A	**Worland**	**2.17**	**284**	↑Pb	**Pb**	**18 50 02.1**	**0.0**
	baz=2.0						
L21A	**Rawlins**	**2.18**	**228**	↑Pb	**Pg**	**18 50 04.0**	**+0.3**
	baz=2.3						
M25A	**Palm-Egli Farm**	**2.20**	**157**	*i*Pb	**Pg**	**18 50 05.2**	**+1.2**
	baz=2.5						
M22A	**Cedar Creek Ra**	**2.30**	**207**	↑Pb	**Pg**	**18 50 06.2**	**+0.4**
	baz=2.5						
K20A	**Yellowstone Ra**	**2.43**	**252**	*i*Pb	**Pb**	**18 50 07.4**	**+0.9**
	baz=2.4						
M21A	**Separation Pea**	**2.44**	**221**	↑Pb	**Pg**	**18 50 08.0**	**-0.6**
	baz=2.6						
PDAR	**Pinedale Array**	**3.26**	**259**	Pn	Pn	18 50 10.0	-4.4
	0.2nm,0.3s,baz=87,slow=18,SNR=4.6						
PDAR				Pg	**Pb**	**18 50 18.6**	**-2.0**
	2.2nm,0.3s,baz=102,slow=7.5,SNR=32						
PDAR				Lg	Lg	18 50 59.5	
	2.0nm,0.3s,baz=92,slow=27,SNR=5.4						
RLMT	**Red Lodge**	**3.35**	**301**	*e*Pn	**Pn**	**18 50 12.8**	**-2.9**
OGNE	**Ogallala**	**3.45**	**136**	*e*Pn	**Pb**	**18 50 22.0**	**-1.8**
ISCO	**Idaho Springs**	**3.67**	**185**	*e*Pn	**Pb**	**18 50 24.7**	**-3.0**
LKWY	**Lake**	**3.90**	**288**	*e*Pn	**Pn**	**18 50 21.7**	**-1.6**
MOOW	**Moose Ponds**	**4.03**	**276**	*e*Pn	**Pn**	**18 50 24.4**	**-0.6**
SNOW	**Snow King Moun**	**4.04**	**272**	*e*Pn	**Pn**	**18 50 24.7**	**-0.4**
IMW	**Indian Meadow**	**4.18**	**278**	*e*Pn	**Pn**	**18 50 24.2**	**-2.9**
SMCO	**Snowmass**	**4.48**	**198**	*e*Pn	**Pn**	**18 50 33.1**	**+1.7**
BOZ	**Bozeman (W)**	**5.08**	**298**	*e*Pn	**Pn**	**18 50 36.9**	**-2.4**
HRY	**Holter Researc**	**5.70**	**307**	*e*Pn	Pn	18 50 44.7	-3.2
	7.8nm,0.4s						
YBMT	**Yellow Bay**	**7.57**	**309**	Pn	**Pn**	**18 51 15.2**	**+1.6**
	2.4nm,0.4s						
ULM	**Lac du Bonnet**	**9.32**	**40**	Pn	**Pn**	**18 51 36.9**	**-0.6**
	1.2nm,0.3s,baz=225,slow=13,SNR=5.9						
ULM				Lg	Lg	18 54 19.7	
	0.6nm,0.3s,baz=137,slow=19,SNR=3.6						
YKA	**Yellowknife Ar**	**19.85**	**347**	P	**Pn**	**18 53 56.2**	**+0.7**
	0.1nm,0.5s,baz=158,slow=11,SNR=7.5						

*IDC **12** 19:49:02.5±0.9, 21°.63S×169°.84E, h0 km, mb3.8/11, mb1 4.0/12, mb1mx3.9/19, mbtmp3.8/12, ML3.2/1, MS3.4/4, Ms1 3.4/4, ms1mx3.1/26, Error ellipse: s-maj=31.2km s-min=21.0km az=140.0*
*ISCJB **12** 19:49:04.6±0.6, 21°.65S±0°.1×169°.71E±0°.06, h21 km, mb3.8/11, MS3.4/3, Error ellipse: s-maj=17.3km s-min=7.1km az=166.1*
*NOU **12** 19:49:07.2±1.2, 22°.33S×169°.85E, h10 km, MD3.1, ML3.8*
ISC 12 19:49:06.1±0.7, 21°.6S±0°.2×169°.73E±0°.09, h21 km, n25, σ1°12/26, mb3.8/11, MS3.4/3, 1D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAYA	**Yate Dam**	**2.70**	**258**	*e*S	**Sn**	**19 50 18.2**	**-2.1**
DZM	**Mont Dzumac**	**3.09**	**261**	*e*P	**Pn**	**19 49 53.5**	**-0.3**
DZM				*e*S	**Sn**	**19 50 28.0**	**-2.1**
DZM				AMP		19 50 33.8	
	comp=Z,763nm,1.7s						
DZM	**Mont Dzumac**	**3.09**	**261**	Pn	**Pn**	**19 49 53.9**	**+0.1**
	comp=Z,2.5nm,0.3s,baz=78,slow=17,SNR=52						
DZM				Sn	**Sn**	**19 50 28.4**	**-1.7**
	comp=Z,14nm,0.3s,baz=67,slow=19,SNR=6.7						
NOUC	**Port Laguerre**	**3.22**	**261**	*e*P	**Pn**	**19 49 57.6**	**+2.2**
NOUC				*e*S	**Sn**	**19 50 34.9**	**+1.7**
NOUC				AMP		19 50 40.9	
	comp=Z,40nm,9.4s						
URZ	**Urewera**	**17.76**	**161**	LR	LR	19 59 01.8	
	comp=Z,96nm,19.9s,baz=74,slow=34						
RPZ	**Rata Peaks**	**22.06**	**177**	LR	LR	20 00 25.3	
	comp=Z,129nm,20.4s,baz=230,slow=31						
STKA	**Stephens Creek**	**27.05**	**242**	P	**P**	**19 54 47.8**	**+0.7**
	comp=Z,1.8nm,0.8s,baz=43,slow=5.3,SNR=4.3						
ASAR	**Alice Springs**	**33.08**	**260**	P	**P**	**19 55 40.6**	**0.0**
	comp=Z,0.6nm,0.7s,baz=83,slow=9.0,SNR=10						
ASAR				LR	LR	20 07 05.4	
	comp=Z,82nm,18.1s,baz=159,slow=33						
WRA	**Warramunga Arr**	**33.09**	**266**	P	**P**	**19 55 40.3**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=95,slow=8.2,SNR=2.6						
WRA				LR	LR	20 07 11.1	
	comp=Z,71nm,21.0s,baz=50,slow=33						
MJAR	**Matsushiro Arr**	**65.06**	**332**	P	**P**	**19 59 44.5**	**-0.5**
	comp=Z,2.6nm,1.2s,baz=170,slow=7.5,SNR=4.7						
QSPA	**South Pole Qui**	**68.45**	**180**	P	**P**	**20 00 06.4**	**+0.1**
	comp=Z,2.8nm,1.1s,baz=54,slow=6.7,SNR=4.5						
KSRS	**Korea Array**	**70.72**	**326**	P	**P**	**20 00 21.6**	**+1.0**
	comp=Z,2.0nm,0.5s,baz=141,slow=6.0,SNR=4.7						
PETK	**Petropavlovsk-**	**75.14**	**353**	P	**P**	**20 00 47.2**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=114,slow=7.0,SNR=3.6						
CMAR	**Chiang Mai Arr**	**79.90**	**294**	P	**P**	**20 01 15.3**	**+1.5**
	comp=Z,0.3nm,0.4s,baz=134,slow=3.8,SNR=4.9						
SNAA	**Sanae**	**86.81**	**182**	*e*P	**P**	**20 01 48.3**	**-0.3**
VNA3	**Neumayer Olymp**	**87.39**	**180**	*e*P	**P**	**20 01 51.2**	**-0.1**
VNA2	**Neumayer--Watz**	**87.68**	**181**	*e*P	**P**	**20 01 53.0**	**+0.2**
	baz=179,slow=4.5						
SONM	**Songino Array**	**89.39**	**323**	P	**P**	**20 02 01.2**	**0.0**
	comp=Z,0.5nm,0.9s,baz=146,slow=3.7,SNR=4.7						
NVAR	**Mina Array Bea**	**90.03**	**48**	P	**P**	**20 02 04.1**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=225,slow=9.3,SNR=5.1						
ILAR	**Eielson Array**	**92.36**	**17**	P	**P**	**20 02 12.5**	**-1.9**
	comp=Z,0.2nm,0.6s,baz=239,slow=5.1,SNR=5.5						
ARCES	**ARCESS Array B**	**127.48**	**345**	PKP	**PKPdf**	**20 08 08.1**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=16,slow=1.7,SNR=8.2						
FINES	**FINESS Array B**	**132.95**	**337**	PKP	**PKPdf**	**20 08 19.5**	**+0.2**
	comp=Z,2.1nm,1.1s,baz=352,slow=7.0,SNR=3.7						
BRG	**Berggiesshubel**	**145.20**	**333**	*e*P	**PKPbc**	**20 08 41.6**	**+0.1**
	comp=Z,4.3nm,0.7s						
CLL	**Collm**	**145.26**	**334**	*i*PKP	**PKPbc**	**20 08 41.8**	**+0.1**
	comp=Z,5.0nm,0.7s						
GERES	**GERESS Array B**	**146.79**	**331**	PKPbc	**PKPbc**	**20 08 46.4**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=41,slow=3.0,SNR=17						

*IDC **12** 19:57:43.8±1.2, 18°.99N×65°.27W, h0 km, mb3.5/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/33, Error ellipse: s-maj=45.4km s-min=27.2km az=51.0*
*ISCJB **12** 19:57:45.5±1.0, 19°.26N±0°.04×64°.69W±0°.03, h25 km±7 km, mb3.7/4, MS3.3/1, Error ellipse: s-maj=7.5km s-min=4.1km az=3.9*
*NEIC **12** 19:57:48.0, 19°.17N×64°.65W, h13 km, MD2.9(RSPR), After RSPR.*
*RSPR **12** 19:57:48.0, 19°.17N×64°.65W, h13 km±3 km, MD3.9/18*
ISC 12 19:57:46.7±0.8, 19°.17N±0°.07×64°.72W±0°.03, h20 km±6 km, n76, σ0°86/97, mb3.7/4, 27C-23D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBVI	**Tortola**	**0.76**	**173**	↑*i*P	**Pb**	**19 58 01.2**	**-0.1**
TBVI	**Tortola**	**0.76**	**173**	*i*Pu	**Pb**	**19 58 01.2**	**-0.1**
TBVI	**Tortola**	**0.76**	**173**	↑*i*P	**Pb**	**19 58 01.2**	**-0.1**
STVI	**Saint Thomas**	**0.85**	**195**	*e*S	**Sb**	**19 58 13.8**	**+0.1**
STVI	**Saint Thomas**	**0.85**	**195**	↓*e*P	**Pb**	**19 58 02.6**	**-0.2**
STVI	**Saint Thomas**	**0.85**	**195**	↓*e*P	**Pb**	**19 58 02.6**	**-0.2**
STVI				*e*S	**Sb**	**19 58 13.8**	**+0.1**
STVI	**Saint Thomas**	**0.85**	**195**	↓*e*P	**Pb**	**19 58 02.6**	**-0.2**
STVI				*e*S	**Sb**	**19 58 13.8**	**+0.1**
MTP	**Monte Pirata**	**1.33**	**217**	*e*S	**Sb**	**19 58 27.6**	**0.0**
MTP	**Monte Pirata**	**1.33**	**217**	↓*e*P	**Pn**	**19 58 09.9**	**-0.2**
MTP	**Monte Pirata**	**1.33**	**217**	↓*e*P	**Pn**	**19 58 09.9**	**-0.2**
MTP				*e*S	**Sb**	**19 58 27.6**	**0.0**
MTP	**Monte Pirata**	**1.33**	**217**	↓*e*P	**Pn**	**19 58 09.9**	**-0.2**
MTP				*e*S	**Sb**	**19 58 27.6**	**0.0**
CBYP	**Canovanas**	**1.40**	**230**	↓*e*P	**Pn**	**19 58 10.8**	**-0.5**
CBYP	**Canovanas**	**1.40**	**230**	↓*e*P	**Pn**	**19 58 10.8**	**-0.5**
CBYP	**Canovanas**	**1.40**	**230**	↓*e*P	**Pn**	**19 58 10.8**	**-0.5**
CDVI	**St. Croix**	**1.42**	**182**	*e*Pn	**Pb**	**19 58 12.3**	**-0.1**
CDVI				*e*Sn	**Sb**	**19 58 30.9**	**+0.9**
HUMP	**Col San Antoni**	**1.48**	**226**	↓*e*P	**Pn**	**19 58 12.1**	**-0.2**
HUMP	**Col San Antoni**	**1.48**	**226**	*e*S	**Sn**	**19 58 30.6**	**-0.5**
HUMP	**Col San Antoni**	**1.48**	**226**	↓*e*P	**Pn**	**19 58 12.1**	**-0.2**
HUMP				*e*S	**Sn**	**19 58 30.6**	**-0.5**
HUMP	**Col San Antoni**	**1.48**	**226**	↓*e*P	**Pn**	**19 58 12.8**	**+0.5**
HUMP				*e*S	**Sn**	**19 58 30.6**	**-0.5**
CPD	**Cerro la Pandu**	**1.60**	**225**	↓*e*P	**Pn**	**19 58 13.9**	**0.0**
CPD	**Cerro la Pandu**	**1.60**	**225**	↓*e*P	**Pn**	**19 58 13.9**	**0.0**
CPD	**Cerro la Pandu**	**1.60**	**225**	↓*e*P	**Pn**	**19 58 13.9**	**0.0**
SJG	**San Juan**	**1.72**	**232**	↓*e*P	**Pn**	**19 58 15.2**	**-0.3**
SJG	**San Juan**	**1.72**	**232**	↓*e*P	**Pn**	**19 58 15.2**	**-0.3**
SJG				*e*S	**Sn**	**19 58 36.7**	**-0.2

comp=Z,70nm,18.1s,baz=183,slow=34
BVAR Borovoye Array 95.15 351 LR LR 20 59 16.5
comp=Z,42nm,18.0s,baz=275,slow=34
ZALV Zalesovo Beam 95.24 360 LR LR 20 59 29.0
comp=Z,33nm,21.1s,baz=21,slow=34
INK Inuvik 146.40 25 PKPbc **PKPab 20 25 11.7 +0.8**
0.8nm,0.8s,baz=8.5,slow=3.6,SNR=3.7
RES Resolute Bay 146.89 360 PKPbc **PKPab 20 25 12.4 -0.3**
1.4nm,0.9s,baz=33,slow=5.6,SNR=4.2

*IDC **12** 20:34:06.9±1.1, 18°.42N×120°.99E, h39km±8km, mb3.6/12, mb1 3.7/13, mb1mx3.5/27, mbtmp3.6/13, ML3.4/1, Error ellipse: s-maj=28.0km s-min=14.7km az=66.0*
*ISCJB **12** 20:34:07.2±0.4, 18°.62N±0°.03×120°.67E±0°.05, h41km, mb4.0/12, Error ellipse: s-maj=7.6km s-min=4.1km az=159.6*
*MAN **12** 20:34:08, 18°.46N×120°.70E, h21km, mb5.3, ML4.2, MS4.4*
MAN INTENSITY II - PASUQUIN ILOCOS NORTE; LAOAG CITY.

ISC 12 20:34:08.8±0.6, 18°.62N±0°.06×120°.63E±0°.06, h41km, n35, σ1§71/41, mb3.9/12, 6D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
PIP	**Pasuquin**	**0.29**	**181**	⇓*i*P		**Pn**	**20 34 14.6**	**-2.4**
PIP				*e*S		**Sn**	**20 34 19.8**	**-3.0**
SIPP	**Brgy, Tapao**	**0.71**	**193**	⇓*i*P		**Pn**	**20 34 20.3**	**-2.1**
SIPP				*e*S		**Sn**	**20 34 32.5**	**+0.4**
ABRA	**Dolores**	**0.97**	**175**	*e*P		**Pn**	**20 34 23.4**	**-2.5**
ABRA				*e*S		**Sn**	**20 34 36.0**	**-2.4**
SGCP	**Mt. Cagua**	**1.40**	**105**	*e*P		**Pn**	**20 34 30.5**	**-1.3**
CVP	**Callao Caves**	**1.46**	**129**	⇓*i*P		**Pn**	**20 34 30.9**	**-1.7**
CVP				*i* S		**Sn**	**20 34 48.8**	**-1.7**
CAUP	**Cauayan**	**2.02**	**145**	*e*P		**Pn**	**20 34 40.6**	**+0.3**
BCPH	**Baguio City Da**	**2.23**	**181**	⇓*i*P		**Pn**	**20 34 41.8**	**-1.5**
BCPH				*e*S		**Sn**	**20 35 13.0**	**+3.3**
PALP	**Palanan**	**2.31**	**132**	⇓*i*P		**Pn**	**20 34 44.3**	**0.0**
PALP				*e*S		**Sn**	**20 35 14.0**	**+2.5**
BOLP	**Bolinao**	**2.33**	**197**	*e*P		**Pn**	**20 34 44.1**	**-0.5**
SCZP	**Santa Cruz**	**2.91**	**194**	*e*P		**Pn**	**20 34 51.2**	**-1.4**
BALP	**Baler**	**3.00**	**162**	*e*P		**Pn**	**20 34 54.7**	**+0.8**
PCPH	**Palayan**	**3.07**	**172**	⇓*e*P		**Pn**	**20 34 55.1**	**+0.3**
PCPH				*e*S		**Sn**	**20 35 29.0**	**-1.3**
TGY	**Tagaytay City**	**4.50**	**176**	Pn		Pn	20 35 17.3	+2.8
	19nm,0.3s,baz=152,slow=14,SNR=3.7							
TGY				Sn		**Sn**	**20 36 10.9**	**+5.2**
	baz=238,slow=15,SNR=2.4							
LUBP	**Lubang**	**4.87**	**184**	*e*P		Pn	20 35 23.3	+3.7
KSRS	**Korea Array**	**19.82**	**17**	P		**P**	**20 38 35.3**	**-0.6**
	0.1nm,0.3s,baz=202,slow=12,SNR=6.1							
CMAR	**Chiang Mai Arr**	**20.56**	**273**	P		Pn	20 38 46.8	+0.1
	1.3nm,0.6s,baz=90,slow=8.9,SNR=14							
SONM	**Songino Array**	**31.37**	**341**	P		**P**	**20 40 27.3**	**+1.6**
	0.5nm,0.6s,baz=153,slow=9.4,SNR=6.1							
SONM				pP		**pP**	**20 40 38.1**	**+1.2**
	0.2nm,0.5s,baz=159,slow=4.5,SNR=2.5							
ODAN	**Odare**	**31.66**	**291**	*e*P		**P**	**20 40 29.3**	**+0.7**
	9.6nm,0.6s							
RAMN	**Ramite**	**32.37**	**291**	*e*P		**P**	**20 40 35.3**	**+0.4**
	16nm,0.7s							
GUN	**Gumba**	**33.14**	**293**	*e*P		**P**	**20 40 42.8**	**+1.1**
	19nm,0.8s							
KKN	**Kakani**	**33.65**	**292**	*e*P		**P**	**20 40 46.7**	**+0.7**
	9.8nm,0.9s							
DANN	**Dangsing**	**35.05**	**293**	*e*P		**P**	**20 40 59.1**	**+0.8**
	20nm,1.2s							
KOLN	**Koldanda**	**35.12**	**292**	*e*P		**P**	**20 40 58.9**	**+0.1**
	9.5nm,0.9s							
PYUN	**Piuthan**	**35.70**	**292**	*e*P		**P**	**20 41 04.1**	**+0.4**
	14nm,0.9s							
WRA	**Warramunga Arr**	**40.62**	**160**	P		P	20 41 39.7	-5.1
	700nm,1.0s,baz=342,slow=9.2,SNR=6.1							
MKAR	**Makanchi Array**	**42.13**	**321**	P		**P**	**20 41 58.5**	**+1.4**
	1.7nm,0.7s,baz=111,slow=9.3,SNR=19							
MKAR				pP		**pP**	**20 42 09.3**	**+0.8**
	0.6nm,0.7s,baz=118,slow=8.8,SNR=4.2							
MKAR				PcP		**PcP**	**20 43 50.0**	**-1.0**
	0.5nm,0.7s,baz=102,slow=4.4,SNR=4.0							
ASAR	**Alice Springs**	**43.98**	**162**	P		P	20 42 08.4	-3.8
	0.3nm,0.5s,baz=347,slow=7.6,SNR=9.1							
ZALV	**Zalesovo Beam**	**44.72**	**331**	P		**P**	**20 42 18.5**	**+0.7**
	0.5nm,0.5s,baz=119,slow=9.2,SNR=4.7							
KURBB	**Kurchatov Arra**	**46.14**	**324**	P		**P**	**20 42 30.2**	**+1.1**
	4.9nm,0.7s,baz=124,slow=7.8,SNR=65							
KURBB				pP		**pP**	**20 42 40.9**	**+0.2**
	0.8nm,0.6s,baz=121,slow=8.3,SNR=3.8							
BVAR	**Borovoye Array**	**51.74**	**324**	P		**P**	**20 43 12.8**	**+0.8**
	1.0nm,0.6s,baz=114,slow=8.2,SNR=9.1							
STKA	**Stephens Creek**	**54.09**	**158**	P		P	20 43 25.9	-3.6
	1.5nm,0.9s,baz=309,slow=9.6,SNR=2.8							
AKTO	**Aktyubinsk**	**58.47**	**318**	P		**P**	**20 44 00.8**	**+0.2**
	0.4nm,0.4s,baz=314,slow=4.2,SNR=4.0							
ILAR	**Eielson Array**	**74.39**	**26**	P		**P**	**20 45 39.8**	**-2.4**
	0.2nm,0.6s,baz=275,slow=4.6,SNR=5.1							
FINES	**FINESS Array B**	**75.98**	**330**	P		**P**	**20 45 50.7**	**-0.6**
	1.5nm,0.9s,baz=88,slow=14,SNR=4.5							
YKA	**Yellowknife Ar**	**88.28**	**22**	P		**P**	**20 46 54.9**	**-0.8**
	0.6nm,0.7s,baz=312,slow=4.4,SNR=14							

*ATH **12** 20:54:58.5, 36°.99N×22°.24E, h13km±1km, MD3.5/22, ML3.0*
*CSEM **12** 20:54:59.0±0.2, 36°.99N×22°.22E, h2km, ML3.0/8, Error ellipse: s-maj=3.5km s-min=3.1km az=42.0*
*THE **12** 20:54:59.4, 36°.95N×22°.25E, h0km±2km, ML3.0/8, Error ellipse: s-maj=2.2km s-min=0.8km az=194.0*

ISC 12 20:54:58.3±0.9, 36°.98N±0°.02×22°.23E±0°.02, h11km±7km, n104, σ1§10/146, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
DYR	**Agios Nikonas**	**0.23**	**159**	P		**Pg**	**20 55 02.9**	**-0.3**
DYR				S		**Sg**	**20 55 06.8**	**+0.2**
DYR	**Agios Nikonas**	**0.23**	**159**	*e*PG		**Pg**	**20 55 03.0**	**-0.3**
DYR				*e*SG		**Sg**	**20 55 07.5**	**+1.0**
DYR	**Agios Nikonas**	**0.23**	**159**	*e*Pg		**Pg**	**20 55 03.0**	**-0.3**
DYR				S		**Sg**	**20 55 06.7**	**+0.2**
DYR				*e*Sg		**Sg**	**20 55 07.5**	**+1.0**
ITM	**Ithomi**	**0.31**	**309**	P		**Pg**	**20 55 05.0**	**+0.3**
ITM				S		**Sb**	**20 55 11.7**	**+0.6**
ITM	**Ithomi**	**0.31**	**309**	*e*PG		**Pg**	**20 55 04.3**	**-0.4**
ITM				*e*SB		**Sg**	**20 55 09.5**	**+0.6**
ITM	**Ithomi**	**0.31**	**309**	*e*Pg		**Pg**	**20 55 04.3**	**-0.4**
ITM				S		**Sg**	**20 55 08.9**	**0.0**
ITM				*e*Sb		**Sg**	**20 55 09.5**	**+0.6**
PYL	**PYLOS**	**0.40**	**258**	P		**Pb**	**20 55 06.9**	**-0.5**
PYL				S		**Sb**	**20 55 15.1**	**+1.6**
PYL	**PYLOS**	**0.40**	**258**	*e*PG		**Pg**	**20 55 05.8**	**-0.5**
PYL				*e*SG		**Sb**	**20 55 13.3**	**-0.2**
PYL	**PYLOS**	**0.40**	**258**	P		**Pg**	**20 55 05.3**	**-1.0**
PYL	**PYLOS**	**0.40**	**258**	*e*Pg		**Pg**	**20 55 05.8**	**-0.5**
PYL				S		**Sb**	**20 55 13.0**	**-0.5**
PYL				*e*Sg		**Sb**	**20 55 13.3**	**-0.2**
VLX	**Vlachokerasia**	**0.41**	**17**	P		**Pb**	**20 55 06.9**	**-0.7**
VLX				S		**Sb**	**20 55 13.9**	**0.0**
VLX	**Vlachokerasia**	**0.41**	**17**	*e*PB		**Pb**	**20 55 06.6**	**-1.0**
VLX				*e*SB		**Sb**	**20 55 12.4**	**-1.5**
VLX	**Vlachokerasia**	**0.41**	**17**	*e*Pb		**Pb**	**20 55 06.9**	**-0.7**
VLX	**Vlachokerasia**	**0.41**	**17**	P		**Pb**	**20 55 06.9**	**-0.7**
VLX				*e*Sb		**Sb**	**20 55 12.4**	**-1.5**
VLX				S		**Sg**	**20 55 13.3**	**+1.4**
VLI	**Veliai**	**0.62**	**115**	P		**Pb**	**20 55 11.0**	**-0.3**
VLI				S		**Sb**	**20 55 19.5**	**-0.5**
VLI	**Veliai**	**0.62**	**115**	*e*PB		**Pb**	**20 55 10.8**	**-0.5**
VLI				*e*SB		**Sb**	**20 55 19.6**	**-0.5**
VLI	**Veliai**	**0.62**	**115**	P		**Pb**	**20 55 11.0**	**-0.3**
VLI				S		**Sb**	**20 55 19.5**	**-0.5**
AMT	**Artemida-Makis**	**0.69**	**323**	P		**Pb**	**20 55 12.4**	**0.0**
AMT				S		**Sn**	**20 55 23.7**	**-1.1**
AMT	**Artemida-Makis**	**0.69**	**323**	*e*PG		**Pg**	**20 55 11.4**	**-0.3**
AMT				*e*SG		**Sb**	**20 55 22.2**	**+0.3**
AMT	**Artemida-Makis**	**0.69**	**323**	*e*Pg		**Pg**	**20 55 11.4**	**-0.3**
AMT				S		**Sb**	**20 55 21.4**	**-0.6**
AMT				*e*Sg		**Sb**	**20 55 22.3**	**+0.3**
DIDY	**Didyma**	**0.93**	**57**	P		**Pn**	**20 55 16.7**	**-0.7**
DIDY	**Didyma**	**0.93**	**57**	P		**Pn**	**20 55 16.7**	**-0.7**
KYTH	**Kithira**	**0.95**	**137**	P		**Pn**	**20 55 17.4**	**-0.3**
KYTH	**Kithira**	**0.95**	**137**	*e*PN		**Pn**	**20 55 17.4**	**-0.3**
KYTH	**Kithira**	**0.95**	**137**	P		**Pn**	**20 55 17.4**	**-0.3**
GUR	**Goura**	**0.96**	**5**	P		**Pn**	**20 55 17.0**	**-0.8**
GUR	**Goura**	**0.96**	**5**	*e*PG		**Pb**	**20 55 16.1**	**-0.9**
GUR	**Goura**	**0.96**	**5**	*e*Pg		**Pb**	**20 55 16.1**	**-0.9**
GUR	**Goura**	**0.96**	**5**	P		**Pn**	**20 55 17.0**	**-0.8**
DID	**Didima**	**0.96**	**57**	P		**Pn**	**20 55 17.1**	**-0.7**
DID				S		**Sn**	**20 55 32.5**	**+1.0**
DID	**Didima**	**0.96**	**57**	*e*PN		**Pn**	**20 55 17.0**	**-0.7**
DID				*e*SB		**Sn**	**20 55 29.9**	**-1.6**
DID	**Didima**	**0.96**	**57**	P		**Pn**	**20 55 17.1**	**-0.7**
DID				*e*Sb		**Sn**	**20 55 29.9**	**-1.6**
DID				S		**Sb**	**20 55 31.6**	**+1.9**
LTK	**Loutraki**	**1.20**	**29**	P		**Pg**	**20 55 21.3**	**-0.1**
LTK				S		**Sn**	**20 55 40.2**	**+3.0**
LTK	**Loutraki**	**1.20**	**29**	*e*PB		**Pg**	**20 55 21.2**	**-0.1**
LTK	**Loutraki**	**1.20**	**29**	P		**Pg**	**20 55 21.3**	**-0.1**
LTK				S		**Sn**	**20 55 38.2**	**+1.0**
RLS	**Riolos of Patr**	**1.23**	**331**	P		**Pg**	**20 55 21.6**	**-0.5**
RLS				S		**Sg**	**20 55 41.7**	**+3.6**
RLS	**Riolos of Patr**	**1.23**	**331**	*e*PG		**Pg**	**20 55 21.4**	**-0.3**
RLS	**Riolos of Patr**	**1.23**	**331**	P		**Pg**	**20 55 21.6**	**-0.5**
NAIG	**Nisos Aigina**	**1.27**	**52**	*e*PB		**Pg**	**20 55 22.7**	**0.0**
NAIG	**Nisos Aigina**	**1.27**	**52**	*e*Pb		**Pg**	**20 55 22.7**	**0.0**
LAKA	**Lakka**	**1.27**	**351**	P		**Pn**	**20 55 21.5**	**-0.6**
LAKA	**Lakka**	**1.27**	**351**	*e*PN		**Pn**	**20 55 21.3**	**-0.8**
LAKA				*e*SB		**Sg**	**20 55 39.4**	**0.0**
LAKA	**Lakka**	**1.27**	**351**	P		**Pn**	**20 55 21.5**	**-0.6**
LAKA				*e*Sb		**Sg**	**20 55 39.4**	**0.0**
TRIZ	**Trizonia**	**1.39**	**355**	P		**Pg**	**20 55 24.7**	**-0.3**
TRIZ	**Trizonia**	**1.39**	**355**	*e*PB		**Pg**	**20 55 24.5**	**-0.5**
TRIZ	**Trizonia**	**1.39**	**355**	P		**Pg**	**20 55 24.7**	**-0.3**
KALE	**Kalithea**	**1.41**	**357**	P		**Pg**	**20 55 27.3**	**+1.9**
KALE				S		**Sg**	**20 55 46.0**	**+2.2**
KALE	**Kalithea**	**1.41**	**357**	*e*PG		**Pg**	**20 55 24.7**	**-0.7**
KALE	**Kalithea**	**1.41**	**357**	*e*Pg		**Pg**	**20 55 24.7**	**-0.7**
KALE	**Kalithea**	**1.41**	**357**	P		**Pg**	**20 55 27.3**	**+1.9**
KALE				S		**Sg**	**20 55 46.0**	**+2.2**
DSF	**Desfina**	**1.45**	**9**	P		**Pg**	**20 55 26.7**	**+0.5**
DSF				S		**Sg**	**20 55 47.4**	**+2.4**
DSF	**Desfina**	**1.45**	**9**	P		**Pg**	**20 55 26.3**	**+0.1**
DSF				S		**Sg**	**20 55 47.4**	**+2.4**
EFP	**Efpalio**	**1.47**	**350**	P		**Pg**	**20 55 25.7**	**-0.8**
EFP				S		**Sg**	**20 55 48.2**	**+2.6**
EFP	**Efpalio**	**1.47**	**350**	*e*PG		**Pg**	**20 55 25.6**	**-0.9**
EFP	**Efpalio**	**1.47**	**350**	P		**Pg**	**20 55 25.7**	**-0.8**
ATH	**Athens Observa**	**1.54**	**50**	*e*PG		**Pg**	**20 55 27.0**	**-1.0**
ATH	**Athens Observa**	**1.54**	**50**	*e*Pg		**Pg**	**20 55 27.0**	**-1.0**
ATHU	**Athens Univers**	**1.58**	**51**	P		**Pg**	**20 55 28.3**	**-0.4**
ATHU	**Athens Univers**	**1.58**	**51**	P		**Pg**	**20 55 28.3**	**-0.4**
KFL	**Anninata**	**1.61**	**315**	P		**Pg**	**20 55 29.0**	**-0.2**
KFL	**Anninata**	**1.61**	**315**	P		**Pg**	**20 55 29.0**	**-0.2**
PTL	**Penteli**	**1.68**	**50**	P		**Pg**	**20 55 29.9**	**-0.7**
PTL				S		**Sg**	**20 55 53.1**	**+0.7**
PTL	**Penteli**	**1.68**	**50**	*e*PB		**Pb**	**20 55 29.3**	**0.0**
PTL	**Penteli**	**1.68**	**50**	*e*Pb		**Pb**	**20 55 29.3**	**0.0**
PTL	**Penteli**	**1.68**	**50**	P		**Pg**	**20 55 29.9**	**-0.7**
PTL				S		**Sg**	**20 55 53.1**	**+0.7**
VLS	**Valsamata**	**1.77**	**313**	P		**Pb**	**20 55 30.7**	**-0.1**
VLS	**Valsamata**	**1.77**	**313**	*e*PN		**Pb**	**20 55 30.1**	**-0.7**
VLS	**Valsamata**	**1.77**	**313**	*e*Pn		**Pb**	**20 55 30.1**	**-0.7**
VLS	**Valsamata**	**1.77**	**313**	P		**Pb**	**20 55 30.7**	**-0.1**
LKR	**Lokris**	**1.77**	**20**	P		**Pb**	**20 55 30.5**	**-0.4**
LKR	**Lokris**	**1.77**	**20**	*e*PN		**Pb**	**20 55 30.9**	**0.0**
LKR	**Lokris**	**1.77**	**20**	P		**Pb**	**20 55 30.5**	**-0.4**
LKR	**Lokris**	**1.77**	**20**	*e*Pn		**Pb**	**20 55 30.9**	**0.0**
AXAR	**Agios Charalam**	**1.81**	**11**	P		**Pg**	**20 55 32.6**	**-0.6**
AXAR				S		**Sg**	**20 55 57.2**	**+0.5**
AXAR	**Agios Charalam**	**1.81**	**11**	P		**Pg**	**20 55 32.6**	**-0.6**
AXAR				S		**Sg**	**20 55 57.2**	**+0.5**
ATAL	**Atalanti**	**1.82**	**20**	P		**Pb**	**20 55 31.8**	**+0.1**
ATAL	**Atalanti**	**1.82**	**20**	P		**Pb**	**20 55 31.8**	**+0.1**
EVR	**Evrytania**	**1.96**	**350**	P		**Pb**	**20 55 34.6**	**+0.5**
EVR				S		**Sg**	**20 56 01.2**	**-0.2**
EVR	**Evrytania**	**1.96**	**350**	P		**Pb**	**20 55 34.6**	**+0.5**
MRMA	**Marmari**	**2.02**	**57**	P		**Pb**	**20 55 34.2**	**-0.8**
MRMA	**Marmari**	**2.02**	**57**	P		**Pb**	**20 55 34.2**	**-0.8**
MAKR	**Makrakomi, Fth**	**2.03**	**358**	P		**Pb**	**20 55 34.3**	**-1.0**
MAKR	**Makrakomi, Fth**	**2.03**	**358**	P		**Pb**	**20 55 34.3**	**-1.0**
AGG	**Agios Georgios**	**2.04**	**2**	P		**Pb**	**20 55 35.6**	**+0.2**
AGG	**Agios Georgios**	**2.04**	**2**	*e*PG		**Pb**	**20 55 35.4**	**0.0**
AGG	**Agios Georgios**	**2.04**	**2**	P		**Pb**	**20 55 35.6**	**+0.2**
KARN	**Karanos**	**2.08**	**139**	P		**Pb**	**20 55 36.5**	**+0.3**
KARN	**Karanos**	**2.08**	**139**	P		**Pb**	**20 55 36.5**	**+0.3**
VAM	**Vamos**	**2.24**	**134**	*e*PN		**Pb**	**20 55 38.1**	**-0.7**
VAM	**Vamos**	**2.24**	**134**	*e*Pn		**Pb**	**20 55 38.1**	**-0.7**
SKIA	**Skiathos**	**2.39**	**24**	P		**Pb**	**20 55 39.5**	**-1.9**
SKIA	**Skiathos**	**2.39**	**24**	P		**Pb**	**20 55 39.5**	**-1.9**
XOR	**Xorichti**	**2.50**	**17**	P		**Pb**	**20 55 41.5**	**-1.8**
XOR	**Xorichti**	**2.50**	**17**	P		**Pb**	**20 55 41.5**	**-1.8**
AOS	**Alonnisos**	**2.54**	**30**	P		**Pb**	**20 55 41.3**	**-2.7**
AOS	**Alonnisos**	**2.54**	**30**	*e*PB		**Pb**	**20 55 41.1**	**-2.9**
AOS	**Alonnisos**	**2.54**	**30**	P		**Pb**	**20 55 41.3**	**-2.7**
THL	**Klokotos Trika**	**2.59**	**356**	P		**Pb**	**20 55 43.1**	**-1.6**
THL	**Klokotos Trika**	**2.59**	**356**	*e*PN		**Pb**	**20 55 42.8**	**-1.9**
THL	**Klokotos Trika**	**2.59**	**356**	*e*Pn		**Pb**	**20 55 42.8**	**-1.9**
THL	**Klokotos Trika**	**2.59**	**356**	P		**Pb**	**20 55 43.1**	**-1.6**
APE	**Apeiranthos**	**2.64**	**87**	*e*PB		**Pn**	**20 55 41.9**	**+1.0**
CHOS	**Chios island**	**3.34**	**64**	*e*PN		**Pn**	**20 55 52.9**	**+2.3**
CHOS	**Chios island**	**3.34**	**64**	*e*Pn		**Pn**	**20 55 52.9**	**+2.3**

IDC 12 21:13:50.4±0.9, 3°.72N×126°.52E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/23, mbtmp3.7/7, MS3.1/1, Ms1 3.1/1, ms1mx2.4/42, Error ellipse: s-maj=53.8km s-min=15.4km az=71.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
FITZ	**Fitzroy Crossi**	**21.70**	**182**	P		P	21 18 43.2	+0.1
	1.3nm,0.5s,baz=13,slow=12,SNR=15							
WRA	**Warramunga Arr**	**24.74**	**162**	P		P	21 19 12.8	-1.0
	1.1nm,0.3s,baz=340,slow=11,SNR=35							
ASAR	**Alice Springs**	**28.16**	**166**	P		P	21 19 45.0	+0.4
	0.5nm,0.3s,baz=345,slow=12,SNR=21							
CMAR	**Chiang Mai Arr**	**30.70**	**301**	P		P	21 20 07.7	+0.5
	0.4nm,0.7s,baz=125,slow=7.8,SNR=4.5							
KSRS	**Korea Array**	**33.59**	**2**	P		P	21 20 32.9	+0.5
	0.6nm,0.4s,baz=184,slow=10,SNR=4.8							
MJAR	**Matsushiro Arr**	**34.39**	**17**	LR		LR	21 34 33.2	
	comp=Z,27nm,19.2s,baz=205,slow=36							
STKA	**Stephens Creek**	**38.20**	**159**	P		P	21 21 12.2	+0.3
	0.9nm,0.4s,baz=341,slow=9.5,SNR=16							
SONM	**Songino Array**	**47.24**	**342**	P		P	21 22 24.6	-0.8
	0.4nm,0.6s,baz=154,slow=7.6,SNR=3.7							
MKAR	**Makanchi Array**	**57.44**	**325**	P		P	21 23 40.7	-0.4
	0.4nm,0.5s,baz=121,slow=8.0,SNR=8.6							

*ISCJB **12** 21:15:33.7±0.8, 38°.52N±0°.04×26°.92E±0°.05, h0km±10km, Error ellipse: s-maj=8.2km s-min=6.0km az=145.4*
*CSEM **12** 21:15:33.9±0.2, 38°.52N×26°.91E, h2km, MD2.7, Error ellipse: s-maj=5.3km s-min=3.8km az=104.0*
*DDA **12** 21:15:33.6, 38°.49N×26°.91E, h7km, MD2.7*
*ISK **12** 21:15:34.5, 38°.51N×27°.02E, h4km, MD2.9*

ISC 12 21:15:34.0±1.1, 38°.52N±0°.03×26°.90E±0°.04, h8km±11km, n20, σ0§35/26, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
BLCB	**Balcova**	**0.17**	**141**	*e*PG		**Pg**	**21 15 37.7**	**+0.1**
BLCB				*e*SG		**Sg**	**21 15 40.3**	**+0.3**
BLCB	**Balcova**	**0.17**	**141**	*e*Pg		**Pg**	**21 15 37.7**	**+0.1**
BLCB				*e*Sg		**Sg**	**21 15 40.3**	**+0.3**
URLA	**Izmir**	**0.29**	**237**	*i* P		**Pg**	**21 15 39.3**	**-0.4**
URLA				*i* S		**Sg**	**21 15 43.9**	**+0.3**
URLA	**Izmir**	**0.29**	**237**	*i* P		**Pg**	**21 15 39.3**	**-0.4**
IZM	**Izmir**	**0.31**	**113**	*e*PG		**Pg**	**21 15 39.5**	**-0.6**
IZM	**Izmir**	**0.31**	**113**	*e*Pg		**Pg**	**21 15 39.5**	**-0.6**
AKS	**Akhisar**	**0.80**	**63**	*e*PG		**Pg**	**21 15 49.0**	**-0.4**
AKS				*e*SG		**Sg**	**21 15 59.7**	**-0.1**
AKS	**Akhisar**	**0.80**	**63**	*e*Pg		**Pg**	**21 15 49.0**	**-0.4**
AKS				*e*Sg		**Sg**	**21 15 59.7**	**-0.1**
GCAM	**G?zelcaml?**	**0.86**	**162**	*i* P		**Pg**	**21 15 50.3**	**-0.2**
GCAM				*i* S		**Sg**	**21 16 01.5**	**-0.1**
GCAM	**G?zelcaml?**	**0.86**	**162**	*i* P		**Pg**	**21 15 50.3**	**-0.2**
BALB	**Balikesir**	**1.35**	**34**	*e*PN		**Pg**	**21 16 00.1**	**+0.1**
BALB	**Balikesir**	**1.35**	**34**	*e*Pn		**Pg**	**21 16 00.1**	**+0.1**
KULA	**Kula-Manisa**	**1.38**	**90**	*e*PN		**Pn**	**21 15 59.5**	**-0.2**
KULA	**Kula-Manisa**	**1.38**	**90**	*e*Pn		**Pn**	**21 15 59.5**	**-0.2**
MLSB	**Milas**	**1.40**	**150**	*e*PN		**Pb**	**21 16 00.6**	**+0.1**
MLSB	**Milas**	**1.40**	**150**	*e*Pn		**Pb**	**21 16 00.6**	**+0.1**
GONE	**Gonen-Balikesi**	**1.64**	**21**	*e*PN		**Pb**	**21 16 04.5**	**-0.1**
GONE	**Gonen-Balikesi**	**1.64**	**21**	*e*Pn		**Pb**	**21 16 04.5**	**-0.1**
TVSB	**Tavsanli**	**2.20**	**64**	*e*PN		**Pn**	**21 16 11.6**	**+0.6**
TVSB	**Tavsanli**	**2.20**	**64**	*e*Pn		**Pn**	**21 16 11.6**	**+0.6**

IDC 12 21:30:22.9±1.9, 10°.53S×73°.97W, h133km±20km, mb3.5/5, mb1 3.6/9, mb1mx3.4/22, mbtmp3.5/9, Error ellipse: s-maj=32.9km s-min=16.9km az=31.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
NNA	**Nana**	**3.17**	**242**	P		Pn	21 31 11.4	-0.6
	114nm,0.3s,baz=75,slow=8.5,SNR=128							
NNA				S		Sn	21 31 47.7	-2.2
	64nm,0.3s,baz=174,slow=21,SNR=14							
ATAH	**Atahualpa**	**5.52**	**307**	P		Pn	21 31 42.9	-0.7
	4.2nm,0.3s,baz=113,slow=8.8,SNR=16							
ATAH				S		Sn	21 32 45.2	-1.3
	6.4nm,0.3s,baz=184,slow=2.3,SNR=3.7							
LPAZ	**La Paz**	**8.06**	**136**	P		Pn	21 32 19.8	+1.6
	0.2nm,0.3s,baz=331,slow=8.5,SNR=6.1							
LPAZ				S		Sn	21 34 05.9	+18
	0.3nm,0.3s,baz=160,slow=19,SNR=1.5							
SIV	**San Ignacio**	**13.68**	**115**	P		Pn	21 33 31.2	-0.4
	0.3nm,0.3s,baz=315,slow=12,SNR=9.5							
SIV				S		Sn	21 36 00.0	-2.8
	0.3nm,0.3s,baz=255,slow=20,SNR=2.9							
BDFB	**Brasilia**	**25.78**	**104**	pP		pP	21 36 10.8	+0.7
	1.3nm,0.5s,baz=275,slow=16,SNR=2.3							
NVAR	**Mina Array Bea**	**63.89**	**322**	P		P	21 40 42.3	+0.4
	0.5nm,0.8s,baz=151,slow=5.8,SNR=3.3							
SCHQ	**Schefferville**	**65.39**	**5**	P		P	21 40 51.3	+0.3
	1.6nm,0.8s,baz=157,slow=7.7,SNR=3.3							
DBIC	**Dimbokro**	**70.89**	**79**	P		P	21 41 25.8	-0.4
	0.9nm,0.7s,baz=240,slow=9.4,SNR=4.0							
TORD	**Torodi Ar. Bea**	**78.69**	**74**	P		P	21 42 10.6	-0.4
	0.5nm,0.4s,baz=245,slow=3.9,SNR=20							
TORD				pP		pP	21 42 43.6	-0.8
	1.1nm,0.8s,baz=270,slow=4.4,SNR=5.6							
YKA	**Yellowknife Ar**	**79.30**	**342**	P		P	21 42 13.1	-0.2
	0.9nm,0.8s,baz=137,slow=6.2,SNR=17							
YKA				pP		pP	21 42 46.8	+0.1
	0.2nm,0.5s,baz=139,slow=6.2,SNR=2.8							
STKA	**Stephens Creek**	**125.82**	**218**	PKP		PKPdf	21 49 08.2	-1.4
	0.9nm,0.7s,baz=39,slow=6.1,SNR=3.1			

0.3nm,0.8s,baz=331,slow=7.6,SNR=3.6
YKA Yellowknife Ar 38.09 321 P **P 21 56 53.2 -1.2**
0.0nm,0.3s,baz=12,slow=9.7,SNR=4.1
ILAR Eielson Array 39.71 344 P **P 21 57 09.1 +1.0**
0.9nm,0.8s,baz=358,slow=6.9,SNR=14
MKAR Makanchi Array 41.10 90 P P 21 57 23.6 +3.9
1.0nm,1.0s,baz=348,slow=6.2,SNR=3.6
MKAR LR LR 22 16 13.9
comp=Z,32nm,20.1s,baz=329,slow=39
TORD Torodi Ar. Bea 61.89 188 P **P 21 59 54.7 -0.8**
1.5nm,1.2s,baz=348,slow=4.0,SNR=3.6

UPP ***12*** *22:07:52.0, 67.°18N×20.°61E, h0km, ML1.1, Mining explosion.*
CSEM ***12*** *22:07:52.1±0.4, 67.°18N×20.°67E, h2km, ML0.9, Error ellipse: s-maj=8.7km s-min=6.2km az=42.0, Mining explosion.*
HEL 12 22:07:52.8±0.1, 67.°18N×20.°62E, h0km, ML0.9, ML1.1(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MASU	**Masugnsbyn**	**0.60**	**62**	*i* P		Pg	22 08 03.6	-0.8
MASU	**Masugnsbyn**	**0.60**	**62**	P		Pg	22 08 03.6	-0.8
KUA	**Kurravaara**	**0.78**	**352**	*i* P		Pg	22 08 06.7	-1.2
KUA	**Kurravaara**	**0.78**	**352**	P		Pg	22 08 06.7	-1.1
SALU	**Saltoluokta**	**0.84**	**285**	*i* P		Pg	22 08 08.1	-1.0
SALU	**Saltoluokta**	**0.84**	**285**	P		Pg	22 08 08.0	-1.0
ERTU	**Ertsjaerv**	**0.89**	**135**	*i* P		Pg	22 08 08.3	-1.5
ERTU	**Ertsjaerv**	**0.89**	**135**	P		Pg	22 08 08.3	-1.5
NIKU	**Nikkaluokta**	**0.92**	**319**	*e*P		Pg	22 08 09.2	-1.2
NIKU	**Nikkaluokta**	**0.92**	**319**	P		Pg	22 08 09.2	-1.2
PAJU	**Pajala**	**0.99**	**98**	*e*P		Pg	22 08 10.4	-1.4
PAJU	**Pajala**	**0.99**	**98**	P		Pg	22 08 10.4	-1.4
LANU	**Lannavaara**	**1.02**	**30**	*e*P		Pg	22 08 09.9	-2.4
LANU	**Lannavaara**	**1.02**	**30**	P		Pg	22 08 10.9	-1.5
HEF	**Hetta**	**1.69**	**42**	*e*PN		Pn	22 08 23.2	-0.4
HEF				MSG		Sn	22 08 46.4	+0.5
	comp=Z,0.8nm,0.2s							
HEF				*e*SN		Sn	22 08 46.4	+0.5
HEF	**Hetta**	**1.69**	**42**	Pn		Pn	22 08 23.2	-0.4
HEF				Sn		Sb	22 08 46.3	-0.3
KALU	**Kalix**	**1.72**	**139**	*e*P		Pn	22 08 23.6	-0.4
KALU	**Kalix**	**1.72**	**139**	P		Pn	22 08 23.5	-0.5
SJUU	**Sjulsmark**	**1.73**	**166**	*e*P		Pn	22 08 23.2	-0.8
SJUU	**Sjulsmark**	**1.73**	**166**	P		Pn	22 08 23.2	-0.8
KIF	**Kilpisjarvi**	**1.83**	**2**	*e*PN		Pn	22 08 26.0	+0.6
KIF				MSG		Sg	22 08 52.0	+0.5
	comp=Z,0.3nm,0.1s							
KIF				*e*SG		Sg	22 08 52.0	+0.5
KIF	**Kilpisjarvi**	**1.83**	**2**	Pn		Pn	22 08 26.0	+0.5
KIF				Sg		Sg	22 08 52.0	+0.4
RNF	**Rovaniemi**	**2.21**	**103**	*e*P		Pn	22 08 31.5	+0.9
RNF				*e*SG		Sb	22 09 01.2	-0.1
RNF				MSG			22 09 01.2	
	comp=Z,0.7nm,0.1s							
RNF	**Rovaniemi**	**2.21**	**103**	P		Pn	22 08 31.5	+0.9
RNF				Sg		Sb	22 09 01.2	-0.1
SGF	**Sodankyl**	**2.31**	**81**	*e*PG		Pb	22 08 33.6	-1.6
SGF				MSG		Sg	22 09 04.2	-2.7
	comp=Z,0.6nm,0.1s							
SGF				*e*SG		Sg	22 09 04.2	-2.7
SGF	**Sodankyl**	**2.31**	**81**	Pg		Pn	22 08 33.6	+1.6
SGF				Sg		Sb	22 09 04.2	0.0
ARA0	**ARCESS Array S**	**2.98**	**35**	*e*P		Pn	22 08 40.9	-0.4
ARA0				*e*SG		Sb	22 09 24.0	+0.4
ARA0				MSG			22 09 24.0	
	comp=Z,0.2nm,0.2s							
ARA0	**ARCESS Array S**	**2.98**	**35**	P		Pn	22 08 40.9	-0.4

CSEM ***12*** *22:08:45.3±0.2, 67.°18N×20.°71E, h2km, ML0.9, Error ellipse: s-maj=3.6km s-min=2.8km az=71.0, Mining explosion.*
UPP ***12*** *22:08:45.7, 67.°18N×20.°67E, h2km, ML0.9, Mining explosion.*
HEL 12 22:08:46.3±0.1, 67.°18N×20.°66E, h0km, ML1.2, ML0.9(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MASU	**Masugnsbyn**	**0.59**	**61**	*i* P		Pg	22 08 56.9	-0.8
MASU				*i* S		Sg	22 09 04.2	-1.1
MASU	**Masugnsbyn**	**0.59**	**61**	P		Pg	22 08 56.8	-0.8
MASU				S		Sg	22 09 04.1	-1.2
KUA	**Kurravaara**	**0.79**	**351**	*i* P		Pg	22 09 00.2	-1.2
KUA				*i* S		Sg	22 09 11.4	-0.3
KUA	**Kurravaara**	**0.79**	**351**	P		Pg	22 09 00.2	-1.3
KUA				S		Sg	22 09 11.4	-0.3
SALU	**Saltoluokta**	**0.86**	**285**	*i* P		Pg	22 09 01.8	-1.0
SALU	**Saltoluokta**	**0.86**	**285**	P		Pg	22 09 01.8	-1.1
ERTU	**Ertsjaerv**	**0.87**	**135**	*i* P		Pg	22 09 01.7	-1.3
ERTU	**Ertsjaerv**	**0.87**	**135**	P		Pg	22 09 01.6	-1.4
NIKU	**Nikkaluokta**	**0.93**	**319**	*e*P		Pg	22 09 03.3	-0.9
NIKU	**Nikkaluokta**	**0.93**	**319**	P		Pg	22 09 03.2	-1.0
PAJU	**Pajala**	**0.97**	**98**	*e*P		Pg	22 09 03.5	-1.4
PAJU	**Pajala**	**0.97**	**98**	P		Pg	22 09 03.5	-1.5
LANU	**Lannavaara**	**1.01**	**30**	*e*S		Sg	22 09 17.7	-1.2
LANU	**Lannavaara**	**1.01**	**30**	P		Pg	22 09 04.3	-1.4
LANU				S		Sg	22 09 17.6	-1.3
HARU	**Harads**	**1.03**	**173**	*e*P		Pg	22 09 04.7	-1.3
HARU	**Harads**	**1.03**	**173**	P		Pg	22 09 04.6	-1.4
HEF	**Hetta**	**1.68**	**41**	*e*PN		Pn	22 09 16.6	-0.3
	baz=220							
HEF				*e*S		Sn	22 09 37.6	-1.6
HEF				MSG			22 09 37.6	
	comp=Z,1.3nm,0.4s							
HEF	**Hetta**	**1.68**	**41**	Pn		Pn	22 09 16.6	-0.3
HEF				S		Sn	22 09 37.6	-1.6
	comp=Z,1.3nm,0.4s							
KALU	**Kalix**	**1.71**	**140**	*e*P		Pn	22 09 16.9	-0.4
KALU	**Kalix**	**1.71**	**140**	P		Pn	22 09 16.8	-0.5
SJUU	**Sjulsmark**	**1.72**	**167**	*e*P		Pn	22 09 16.9	-0.6
SJUU	**Sjulsmark**	**1.72**	**167**	P		Pn	22 09 16.8	-0.6
KIF	**Kilpisjarvi**	**1.83**	**2**	*e*PG		Pb	22 09 19.9	-0.8
KIF				MSG		Sg	22 09 45.4	+0.2
	comp=Z,1.9nm,0.2s							
KIF				*e*SG		Sg	22 09 45.4	+0.2
KIF	**Kilpisjarvi**	**1.83**	**2**	Pg		Pn	22 09 19.8	+0.8
KIF				Sg		Sg	22 09 45.3	+0.1
LILU	**Lilltraesk**	**1.93**	**190**	*e*P		Pn	22 09 19.9	-0.4
LILU	**Lilltraesk**	**1.93**	**190**	P		Pn	22 09 19.9	-0.4
RNF	**Rovaniemi**	**2.19**	**103**	*e*PB		Pn	22 09 24.7	+0.8
	baz=289							
RNF				*e*SG		Sb	22 09 53.8	-0.5
RNF				MSG			22 09 53.8	
	comp=Z,0.6nm,0.2s							
RNF	**Rovaniemi**	**2.19**	**103**	Pb		Pn	22 09 24.7	+0.8
RNF				Sg		Sb	22 09 53.7	-0.6
	comp=Z,0.6nm,0.2s							
SGF	**Sodankyl**	**2.29**	**81**	*e*SG		Sb	22 09 57.1	-0.1
SGF				MSG			22 09 57.1	
	comp=Z,0.5nm,0.1s							
SGF	**Sodankyl**	**2.29**	**81**	Sg		Sb	22 09 57.1	-0.1
	comp=Z,0.5nm,0.1s							

ISCJB ***12*** *22:20:37.6±0.5, 37.°57N±0.°04×35.°65E±0.°03, h4km±6km, Error ellipse: s-maj=6.3km s-min=4.0km az=0.3*
CSEM ***12*** *22:20:37.9±0.2, 37.°56N×35.°66E, h2km, MD3.1, Error ellipse: s-maj=5.3km s-min=4.3km az=7.0*
ISK ***12*** *22:20:37.4, 37.°56N×35.°65E, h8km, MD3.1*
DDA ***12*** *22:20:38.2, 37.°52N×35.°69E, h7km, MD3.1*
ISC 12 22:20:38.3±0.9, 37.°53N±0.°03×35.°68E±0.°02, h13km±6km, n34, σ0°94/48, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KOZT	**Kozan**	**0.13**	**111**	*e*PG		**Pg**	**22 20 41.8**	**+0.1**
KOZT				*e*SG		**Sg**	**22 20 43.9**	**-0.2**
KOZT	**Kozan**	**0.13**	**111**	*e*Pg		**Pg**	**22 20 41.8**	**+0.1**
KOZT				*e*Sg		**Sg**	**22 20 43.9**	**-0.2**
CEYT	**Ceyhan**	**0.52**	**174**	*e*PG		**Pg**	**22 20 48.5**	**0.0**
CEYT				*e*SG		**Sb**	**22 20 56.7**	**0.0**
CEYT	**Ceyhan**	**0.52**	**174**	*e*Pg		**Pg**	**22 20 48.5**	**0.0**
CEYT				*e*Sg		**Sb**	**22 20 56.7**	**0.0**
ANDN	**Andirin**	**0.54**	**84**	*i* P		**Pg**	**22 20 47.9**	**-1.0**
ANDN				*i* S		**Sg**	**22 20 56.4**	**+0.4**
ANDN	**Andirin**	**0.54**	**84**	*i* P		**Pg**	**22 20 47.9**	**-1.0**
ANDN				*i* S		**Sg**	**22 20 56.4**	**+0.4**
GULE	**Gulek**	**0.76**	**252**	*i* P		**Pg**	**22 20 52.5**	**-0.5**
GULE				*i* S		**Sb**	**22 21 04.0**	**+0.3**
GULE	**Gulek**	**0.76**	**252**	*i* P		**Pg**	**22 20 52.5**	**-0.5**
GULE				*i* S		**Sb**	**22 21 04.0**	**+0.3**
AYKD	**Aykdinkavak**	**0.91**	**97**	*i* P		**Pg**	**22 20 54.2**	**-1.6**
AYKD				*i* S		**Sg**	**22 21 07.3**	**-0.5**
KMRS	**Kahramanmaras**	**0.97**	**91**	*e*PG		**Pb**	**22 20 56.2**	**-0.9**
KMRS				*e*SG		**Sn**	**22 21 11.0**	**-0.5**
KMRS	**Kahramanmaras**	**0.97**	**91**	*e*Pg		**Pb**	**22 20 56.2**	**-0.9**
KMRS				*e*Sg		**Sn**	**22 21 11.0**	**-0.5**
KRTS	**Karatas**	**0.98**	**194**	*e*PG		**Pg**	**22 20 57.0**	**-0.2**
KRTS	**Karatas**	**0.98**	**194**	*e*Pg		**Pg**	**22 20 57.0**	**-0.2**
NIG	**Nigde**	**1.02**	**305**	*e*PG		**Pb**	**22 20 56.8**	**-1.3**
NIG	**Nigde**	**1.02**	**305**	*e*Pg		**Pb**	**22 20 56.8**	**-1.3**
SARI	**SarD1z-Kayseri**	**1.06**	**34**	*e*PG		**Pb**	**22 20 58.1**	**-0.5**
MERS	**Mersin**	**1.13**	**235**	*e*PN		**Pb**	**22 20 59.4**	**-0.4**
MERS	**Mersin**	**1.13**	**235**	*e*Pn		**Pb**	**22 20 59.4**	**-0.4**
GAZ	**Gaziantep**	**1.27**	**106**	*e*PN		**Pg**	**22 21 02.7**	**-0.2**
GAZ	**Gaziantep**	**1.27**	**106**	*e*Pn		**Pg**	**22 21 02.7**	**-0.2**
PINB	**Pinarbasi**	**1.28**	**26**	*i* P		**Pn**	**22 21 01.8**	**-0.4**
PINB				*i* S		**Sg**	**22 21 22.5**	**+2.7**
PINB	**Pinarbasi**	**1.28**	**26**	*i* P		**Pn**	**22 21 01.8**	**-0.4**
PINB				*i* S		**Sg**	**22 21 22.5**	**+2.7**
BNN	**Bunyan**	**1.33**	**6**	*e*PN		**Pn**	**22 21 02.0**	**-0.7**
BNN	**Bunyan**	**1.33**	**6**	*e*Pn		**Pn**	**22 21 02.1**	**-0.7**
GZT	**Gaziantep**	**1.51**	**96**	*i* P		**Pb**	**22 21 05.9**	**-0.4**
GZT				*i* S		**Sg**	**22 21 28.1**	**+1.1**
DARE	**Darende-Malaty**	**1.77**	**53**	*e*PN		**Pn**	**22 21 09.2**	**+0.4**
MALT	**Malatya**	**2.31**	**69**	*e*PN		**Pn**	**22 21 17.7**	**+1.5**
MALT	**Malatya**	**2.31**	**69**	*e*Pn		**Pn**	**22 21 17.7**	**+1.5**
KAMT	**Kaman**	**2.40**	**321**	*e*PN		**Pn**	**22 21 17.8**	**+0.4**
KAMT	**Kaman**	**2.40**	**321**	*e*Pn		**Pn**	**22 21 17.8**	**+0.4**
AFSR	**Afˇar-Bala (A**	**2.80**	**314**	*e*PN		**Pn**	**22 21 23.6**	**+0.7**
AFSR	**Afˇar-Bala (A**	**2.80**	**314**	*e*Pn		**Pn**	**22 21 23.6**	**+0.7**
ILIC	**ilic-Erzincan**	**2.97**	**49**	*e*PN		**Pn**	**22 21 26.8**	**+1.5**
ILIC	**ilic-Erzincan**	**2.97**	**49**	*e*Pn		**Pn**	**22 21 26.8**	**+1.5**

IDC ***12*** *22:21:56.1±1.8, 42.°43N×13.°49E, h0km, mb3.4/2, mb1 3.4/4, mb1mx3.1/27, mbtmp3.2/4, ML3.0/2, Error ellipse: s-maj=54.2km s-min=15.7km az=97.0*
ISCJB ***12*** *22:21:57.3±0.3, 42.°34N±0.°02×13.°45E±0.°03, h21km±2km, mb3.2/1, Error ellipse: s-maj=3.8km s-min=3.4km az=153.9*
ROM ***12*** *22:21:57.2±0.1, 42.°34N×13.°44E, h18km±1km, Ml2.9/24, Error ellipse: s-maj=1.0km s-min=0.8km az=78.0*
CSEM ***12*** *22:21:57.6±0.1, 42.°34N×13.°43E, h10km, ML3.1/12, Error ellipse: s-maj=3.0km s-min=2.6km az=63.0*
LDG ***12*** *22:21:59.8±1.0, 42.°44N×13.°30E, h2km, Ml2.6/5, Error ellipse: s-maj=21.3km s-min=12.1km az=106.0*
ISC 12 22:21:58.0±0.7, 42.°35N±0.°02×13.°44E±0.°02, h18km±4km, n87, σ1°33/117, 9C-4D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AQU	**L'Aquila**	**0.03**	**278**	⇓ *i* Pg		**Pg**	**22 22 00.5**	**-0.7**
AQU				Sg		**Sg**	**22 22 02.9**	**-0.4**
	6μm,0.7s							
AQU	**L'Aquila**	**0.03**	**278**	⇓ *i* Pg		**Pg**	**22 22 00.5**	**-0.7**
AQU				Sg		**Sg**	**22 22 02.9**	**-0.4**
	6μm,0.7s							
FAGN	**Fagnano**	**0.14**	**128**	⇓ *i* Pg		**Pg**	**22 22 01.4**	**-0.6**
FAGN				Sg		**Sb**	**22 22 04.7**	**+0.3**
	6μm,0.4s							
FAGN	**Fagnano**	**0.14**	**128**	⇓ *i* Pg		**Pg**	**22 22 01.4**	**-0.6**
FAGN				Sg		**Sb**	**22 22 04.7**	**+0.3**
	6μm,0.4s							
CAMP	**Campotosto**	**0.19**	**353**	⇑ *i* Pg		**Pg**	**22 22 02.3**	**-0.5**
CAMP				Sg		**Sg**	**22 22 06.0**	**-0.1**
	589nm,0.5s							
CAMP	**Campotosto**	**0.19**	**353**	⇑ *i* Pg		**Pg**	**22 22 02.3**	**-0.5**
CAMP				Sg		**Sg**	**22 22 06.0**	**-0.1**
	589nm,0.5s							
FIAM	**Fiamignano**	**0.25**	**251**	⇑ *i* Pg		**Pg**	**22 22 03.1**	**-0.6**
FIAM				Sg		**Sg**	**22 22 07.4**	**-0.3**
	1μm,0.6s							
FIAM	**Fiamignano**	**0.25**	**251**	⇑ *i* Pg		**Pg**	**22 22 03.1**	**-0.6**
FIAM				Sg		**Sg**	**22 22 07.4**	**-0.3**
	1μm,0.6s							
TERO	**Teramo**	**0.30**	**24**	⇑ *i* Pg		**Pg**	**22 22 03.7**	**-0.8**
TERO				Sg		**Sg**	**22 22 08.7**	**-0.3**
	2μm,0.5s							
TERO	**Teramo**	**0.30**	**24**	⇑ *i* Pg		**Pg**	**22 22 03.7**	**-0.8**
TERO				Sg		**Sg**	**22 22 08.7**	**-0.3**
	2μm,0.5s							
VCEL	**Villa Celiera**	**0.30**	**81**	Pg		**Pg**	**22 22 04.1**	**-0.5**
VCEL				Sg		**Sb**	**22 22 09.5**	**-0.1**
	4μm,0.6s							
VCEL	**Villa Celiera**	**0.30**	**81**	Pg		**Pg**	**22 22 04.1**	**-0.5**
VCEL				Sg		**Sb**	**22 22 09.5**	**-0.1**
	4μm,0.6s							
PTQR	**Pietraquaria**	**0.33**	**185**	⇑ *i* Pg		**Pg**	**22 22 04.3**	**-0.7**
PTQR				Sg		**Sg**	**22 22 09.5**	**-0.3**
	107nm,0.3s							
PTQR	**Pietraquaria**	**0.33**	**185**	⇑ *i* Pg		**Pg**	**22 22 04.3**	**-0.7**
PTQR				Sg		**Sg**	**22 22 09.5**	**-0.3**
	107nm,0.3s							
LNSS	**Leonessa**	**0.39**	**311**	Pg		**Pg**	**22 22 05.2**	**-0.9**
LNSS	**Leonessa**	**0.39**	**311**	Pg		**Pg**	**22 22 05.2**	**-0.9**
INTR	**Introdacqua**	**0.48**	**134**	Pg		**Pg**	**22 22 06.4**	**-1.3**
	450nm,0.5s							
INTR	**Introdacqua**	**0.48**	**134**	Pg		**Pg**	**22 22 06.4**	**-1.3**
	450nm,0.5s							
VVLD	**Villa Vallelon**	**0.50**	**164**	Pg		**Pg**	**22 22 06.8**	**-1.2**
	621nm,0.6s							
VVLD	**Villa Vallelon**	**0.50**	**164**	Pg		**Pg**	**22 22 06.8**	**-1.2**
	621nm,0.6s							
CERT	**Cerreto**	**0.53**	**220**	Pg		**Pg**	**22 22 07.5**	**-1.0**
	1μm,0.6s							
CERT	**Cerreto**	**0.53**	**220**	Pg		**Pg**	**22 22 07.5**	**-1.0**
	1μm,0.6s							
NRCA	**Norcia**	**0.54**	**334**	Pg		**Pg**	**22 22 07.7**	**-1.1**
NRCA				Sg		**Sg**	**22 22 15.9**	**-0.2**
	868nm,0.2s							
NRCA	**Norcia**	**0.54**	**334**	Pg		**Pg**	**22 22 07.7**	**-1.1**
NRCA				Sg		**Sg**	**22 22 15.9**	**-0.2**
	868nm,0.2s							
GUAR	**Guarcino**	**0.56**	**190**	Pg		**Pg**	**22 22 08.1**	**-1.1**
	489nm,0.8s							
GUAR	**Guarcino**	**0.56**	**190**	Pg		**Pg**	**22 22 08.1**	**-1.1**
	489nm,0.8s							
MNS	**Montasola**	**0.56**	**274**	Pg		**Pg**	**22 22 08.5**	**-0.7**
	644nm,0.6s							
MNS	**Montasola**	**0.56**	**274**	Pg		**Pg**	**22 22 08.5**	**-0.7**
	644nm,0.6s							
TRTR	**Tortoreto Alta**	**0.58**	**37**	Pg		**Pb**	**22 22 09.3**	**-0.2**
TRTR	**Tortoreto Alta**	**0.58**	**37**	Pg		**Pb**	**22 22 09.3**	**-0.2**
MTCE	**Montecelio**	**0.61**	**238**	Pg		**Pg**	**22 22 09.1**	**-1.0**
	577nm,0.7s							
MTCE	**Montecelio**	**0.61**	**238**	Pg		**Pg**	**22 22 09.1**	**-1.0**
	577nm,0.7s							
OFFI	**Offida**	**0.61**	**17**	Pg		**Pg**	**22 22 09.7**	**-0.4**
	307nm,0.6s							
OFFI	**Offida**	**0.61**	**17**	Pg		**Pg**	**22 22 09.7**	**-0.4**
	307nm,0.6s							
LPEL	**Lama dei Pelig**	**0.63**	**118**	Pg		**Pg**	**22 22 08.8**	**-1.6**
LPEL				Sg		**Sb**	**22 22 18.3**	**-0.7**
	334nm,0.3s							
LPEL	**Lama dei Pelig**	**0.63**	**118**	Pg		**Pg**	**22 22 08.8**	**-1.6**
LPEL				Sg		**Sb**	**22 22 18.3**	**-0.7**
	334nm,0.3s							
CESX	**Cesi**	**0.69**	**293**	Pg		**Pg**	**22 22 10.8**	**-0.7**
	514nm,0.5s							
CESX	**Cesi**	**0.69**	**293**	Pg		**Pg**	**22 22 10.8**	**-0.7**
	514nm,0.5s							
FDMO	**Fiordimonte**	**0.73**	**339**	Pg		**Pg**	**22 22 10.9**	**-1.5**
FDMO				Sg		**Sg**	**22 22 22.1**	**0.0**
	206nm,0.3s							
FDMO	**Fiordimonte**	**0.73**	**339**	Pg		**Pg**	**22 22 10.9**	**-1.5**
FDMO				Sg		**Sg**	**22 22 22.1**	**0.0**
	206nm,0.3s							
CESI	**CESI - Serrava**	**0.76**	**329**	Pg		**Pg**	**22 22 11.6**	**-1.3**
CESI				Sg		**Sb**	**22 22 23.2**	**+0.3**
	164nm,0.7s							
CESI	**CESI - Serrava**	**0.76**	**329**	Pg		**Pg**	**22 22 11.6**	**-1.3**
CESI				Sg		**Sb**	**22 22 23.2**	**+0.3**
	164nm,0.7s							
RMP	**Rome, Mte Porz**	**0.77**	**226**	Pg		**Pg**	**22 22 11.7**	**-1.3**
	771nm,0.9s							
RMP	**Rome, Mte Porz**	**0.77**	**226**	Pg		**Pg**	**22 22 11.7**	**-1.3**
	771nm,0.9s							
GIUL	**Giuliano Di Ro**	**0.80**	**190**	Pg		**Pb**	**22 22 12.3**	**-1.1**
	225nm,0.6s							
GIUL	**Giuliano Di Ro**	**0.80**	**190**	Pg		**Pb**	**22 22 12.3**	**-1.1**
	225nm,0.6s							
ASSB	**Assisi San Ben**	**0.90**	**321**	Pg		**Pb**	**22 22 14.1**	**-1.0**
	277nm,0.4s							
ASSB	**Assisi San Ben**	**0.90**	**321**	Pg		**Pb**	**22 22 14.1**	**-1.0**
	277nm,0.4s							
TOLF	**Tolfa**	**1.11**	**256**	Pg		**Pb**	**22 22 18.4**	**-0.2**
	147nm,0.7s							
TOLF	**Tolfa**	**1.11**	**256**	Pg		**Pb**	**22 22 18.4**	**-0.2**
	147nm,0.7s							
MURB	**Monte Urbino**	**1.13**	**324**	Pg		**Pg**	**22 22 18.9**	**-0.2**
	494nm,0.3s							
MURB	**Monte Urbino**	**1.13**	**324**	Pg		**Pg**	**22 22 18.9**	**-0.2**
	494nm,0.3s							
ARVD	**Arcevia**	**1.20**	**343**	Pg		**Pg**	**22 22 19.7**	**-0.3**
	285nm,0.8s							
ARVD	**Arcevia**	**1.20**	**343**	Pg		**Pg**	**22 22 19.7**	**-0.3**
	285nm,0.8s							
AOI	**Ancona**	**1.21**	**6**	Pg		**Pn**	**22 22 20.1**	**+0.1**
	209nm,0.7s							
AOI	**Ancona**	**1.21**	**6**	Pg		**Pn**	**22 22 20.1**	**+0.1**
	209nm,0.7s							
PGF	**Pioggiola**	**3.29**	**275**	*e*Pn		**Pn**	**22 22 49.4**	**+0.7**
PGF				*e*Sn		**Sn**	**22 23 29.6**	**+2.1**
	2.8nm,0.4s							
PGF	**Pioggiola**	**3.29**	**275**	*e*Pn		**Pn**	**22 22 49.4**	**+0.7**
PGF				*e*Sn		**Sn**	**22 23 29.6**	**+2.1**
	1.4nm,0.4s							
ABTA	**Abfaltersbach**	**4.45**	**352**	⇑ *i*Pn		**Pn**	**22 23 05.8**	**+1.2**
ABTA	**Abfaltersbach**	**4.45**	**352**	Pn		**Pn**	**22 23 05.8**	**+1.2**
SBF	**Sospel**	**4.65**	**291**	*e*Pn		**Pn**	**22 23 07.8**	**+0.4**
SBF				*e*Sn		**Sn**	**22 23 57.9**	**-3.0**
	2.1nm,0.3s							
SBF	**Sospel**	**4.65**	**291**	*e*Pn		**Pn**	**22 23 07.8**	**+0.4**
SBF				*e*Sn		**Sn**	**22 23 57.9**	**-3.0**
	1.0nm,0.3s							
IVAS	**Ivanjica**	**5.08**	**74**	*e*Pn		**Pn**	**22 23 14.8**	**+1.6**
DAVOX	**Davos/Dischmat**	**5.11**	**331**	Pn		**Pn**	**22 23 15.4**	**+1.7**
	0.5nm,0.3s,baz=162,slow=19,SNR=8.6							
DAVOX				Sn		**Sn**	**22 24 14.8**	**+2.5**
	0.1nm,0.3s,baz=150,slow=20,SNR=2.2							
FRF	**La Foret Royal**	**5.13**	**286**	*e*Pn		**Pn**	**22 23 14.1**	**+0.2**
FRF	**La Foret Royal**	**5.13**	**286**	*e*Pn		**Pn**	**22 23 14.1**	**+0.2**
LMR	**La Mourre**	**5.19**	**283**	*e*Pn		**Pn**	**22 23 14.7**	**0.0**
LMR	**La Mourre**	**5.19**	**283**	*e*Pn		**Pn**	**22 23 14.7**	**0.0**
MBDF	**Montbardon**	**5.40**	**298**	*e*Pn		**Pn**	**22 23 19.9**	**+2.2**
MBDF	**Montbardon**	**5.40**	**298**	*e*Pn		**Pn**	**22 23 19.9**	**+2.2**
GRUS	**Gruza**	**5.54**	**71**	*e*Pn		**Pn**	**22 23 20.7**	**+1.1**
LPG	**La Plagne**	**5.76**	**305**	*e*P		**Pn**	**22 23 25.8**	**+2.9**
LPG	**La Plagne**	**5.76**	**305**	*e*P		**Pn**	**22 23 25.8**	**+2.9**
LPL	**La Plagne**	**5.79**	**305**	*e*P		**Pn**	**22 23 25.9**	**+2.8**
LPL				*e*Sn		**Sn**	**22 24 24.1**	**-5.0**
	0.8nm,0.3s							
LPL	**La Plagne**	**5.79**	**305**	*e*P		**Pn**	**22 23 25.9**	**+2.8**
SMRF	**Simiane la Rot**	**5.98**	**288**	*e*P		**Pn**	**22 23 27.4**	**+1.8**
SMRF	**Simiane la Rot**	**5.98**	**288**	*e*P		**Pn**	**22 23 27.4**	**+1.8**
GERES	**GERESS Array B**	**6.50**	**2**	Pn		**Pn**	**22 23 33.0**	**+0.2**
	0.2nm,0.3s,baz=174,slow=13,SNR=7.2							
GERES				Sn		**Sn**	**22 24 43.8**	**-2.7**
	0.7nm,0.3s,baz=182,slow=22,SNR=18							
HINF	**Hinteralfeld**	**7.18**	**322**	*e*Pn		**Pn**	**22 23 41.9**	**-0.2**
HINF	**Hinteralfeld**	**7.18**	**322**	*e*Pn		**Pn**	**22 23 41.9**	**-0.2**
VTS	**Vitosha**	**7.23**	**85**	*e*Pn		**Pn**	**22 23 44.4**	**+1.5**
CDF	**Champ du Feu**	**7.45**	**327**	*e*Pn		**Pn**	**22 23 45.6**	**-0.3**
CDF				*e*Sn		**Sn**	**22 25 05.3**	**-4.6**
	0

0.4nm,0.3s,baz=193,slow=4.1,SNR=7.9
AAK Sn **Sn** **23 19 43.7 +1.1**
0.4nm,0.3s,baz=265,slow=5.9,SNR=3.7
AAK Lg Lg 23 20 40.8
0.2nm,0.3s,baz=315,slow=20,SNR=3.8
AB31 Akbulak array 8.85 344 ⇓P **Pn** **23 18 16.6 +0.6**
0.1nm,0.2s,baz=153,slow=14,SNR=4.2
TKM2 Tokmak 2 9.21 73 ⇑Lg Lg 23 21 04.8
9.6nm,0.8s
AKTO Aktyubinsk 10.40 340 ⇑P **Pn** **23 18 38.2 +0.9**
0.1nm,0.4s
AKTO Aktyubinsk 10.40 340 ⇑ Pn Pn **23 18 36.9 -0.4**
0.5nm,0.3s,baz=157,slow=9.7,SNR=9.6
AKTO Sn **Sn** **23 20 33.0 +0.6**
0.2nm,0.3s,baz=210,slow=20,SNR=2.6
AKTO Lg Lg 23 21 44.7
0.2nm,0.3s,baz=110,slow=18,SNR=2.5
BVA0 Borovoye Array 13.08 18 ⇑P Pn 23 19 17.0 +3.2
0.2nm,0.4s,baz=217,slow=11,SNR=7.0
BVAR Borovoye Array 13.08 18 Pn **Pn** **23 19 14.4 +0.6**
0.3nm,0.3s,baz=206,slow=15,SNR=6.4
BVAR Sn **Sn** **23 21 36.6 -1.3**
0.1nm,0.3s,baz=199,slow=26,SNR=2.7
BVAR Lg Lg 23 23 13.3
baz=208,slow=28,SNR=3.0
MKAR Makanchi Array 14.76 60 Pn **Pn** **23 19 35.2 -1.6**
0.1nm,0.3s,baz=250,slow=14,SNR=8.5
MKAR Lg Lg 23 24 05.2
0.0nm,0.3s,baz=258,slow=32,SNR=3.8
KBZ Khabaz 15.60 288 Pn Pn 23 19 39.3 -8.5
0.0nm,0.3s,baz=89,slow=13,SNR=2.5
KBZ Sn Sn 23 22 23.4 -16
0.0nm,0.3s,baz=38,slow=19,SNR=2.2
ZALV Zalesovo Beam 19.39 40 P **Pn** **23 20 34.5 -0.2**
0.2nm,0.3s,baz=241,slow=12,SNR=10
FINES FINESS Array B 30.67 325 P **P** **23 22 21.1 -0.5**
0.7nm,0.6s,baz=126,slow=9.4,SNR=9.4
NOA NORSAR Array B 37.43 321 P **P** **23 23 19.8 -0.4**
0.3nm,0.7s,baz=100,slow=8.1,SNR=2.4
YKA Yellowknife Ar 77.05 359 P **P** **23 27 59.9 +0.2**
0.2nm,0.7s,baz=0.7,slow=6.1,SNR=3.9

CSEM ***12*** *23:31:54.8±0.2, 37.12N×27.83E, h13km±1km, MD2.6, Error ellipse: s-maj=5.5km s-min=3.4km az=1.0*
DDA ***12*** *23:31:54.0, 37.12N×27.84E, h7km, MD2.5*
ISK ***12*** *23:31:54.0, 37.09N×27.85E, h15km, MD2.6*
ISC 12 23:31:53.7±1.2, 37.07N±0.04×27.83E±0.03, h13km±11km, n17,σ1§04/29, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MLSB	**Milas**	**0.23**	**349**	*e*PG		**Pb**	**23 31 59.3**	**-0.4**
MLSB				*e*SG		**Sb**	**23 32 02.9**	**-0.7**
MLSB	**Milas**	**0.23**	**349**	*e*Pg		**Pb**	**23 31 59.3**	**-0.4**
MLSB				*e*Sg		**Sb**	**23 32 02.9**	**-0.7**
YER	**Yerkesik**	**0.36**	**80**	*e*PG		**Pb**	**23 32 01.9**	**-0.1**
YER				*e*SG		**Sg**	**23 32 06.8**	**+0.8**
YER	**Yerkesik**	**0.36**	**80**	*e*Pg		**Pb**	**23 32 01.9**	**-0.1**
YER				*e*Sg		**Sg**	**23 32 06.8**	**+0.8**
BODT	**Bodrum**	**0.42**	**269**	*e*PG		**Pb**	**23 32 03.1**	**+0.2**
BODT				*e*SG		**Sb**	**23 32 09.8**	**+0.7**
BODT	**Bodrum**	**0.42**	**269**	*e*Pg		**Pb**	**23 32 03.1**	**+0.2**
BODT				*e*Sg		**Sb**	**23 32 09.8**	**+0.7**
AYDN	**Tasoluk**	**0.59**	**4**	*i* P		**Pb**	**23 32 05.6**	**-0.2**
AYDN				*i* S		**Sg**	**23 32 12.7**	**-0.3**
AYDN	**Tasoluk**	**0.59**	**4**	*i* P		**Pb**	**23 32 05.6**	**-0.2**
AYDN				*i* S		**Sg**	**23 32 12.7**	**-0.3**
TURN	**Turunc**	**0.65**	**108**	*i* P		Pg	23 32 03.4	-2.9
TURN				*i* S		**Sg**	**23 32 10.4**	**-4.4**
GCAM	**G?zelcaml?**	**0.79**	**323**	*i* P		**Pg**	**23 32 08.4**	**-0.5**
GCAM				*i* S		**Sg**	**23 32 19.3**	**+0.1**
GCAM	**G?zelcaml?**	**0.79**	**323**	*i* P		**Pg**	**23 32 08.4**	**-0.5**
GCAM				*i* S		**Sg**	**23 32 19.3**	**+0.1**
DNZL	**Cakiroluk**	**1.15**	**57**	*i* P		**Pg**	**23 32 16.9**	**+1.1**
DNZL				*i* S		**Sg**	**23 32 30.7**	**0.0**
DNZL	**Cakiroluk**	**1.15**	**57**	*i* P		**Pg**	**23 32 16.9**	**+1.1**
DNZL				*i* S		**Sg**	**23 32 30.7**	**0.0**
BLCB	**Balcova**	**1.45**	**335**	*e*PN		**Pb**	**23 32 20.3**	**-0.2**
BLCB	**Balcova**	**1.45**	**335**	*e*Pn		**Pb**	**23 32 20.3**	**-0.2**
KULA	**Kula-Manisa**	**1.58**	**24**	*e*PN		**Pn**	**23 32 21.8**	**+0.4**
KULA	**Kula-Manisa**	**1.58**	**24**	*e*Pn		**Pn**	**23 32 21.8**	**+0.4**

IDC ***12*** *23:35:19.1±1.0, 40.15N×77.86E, h0km, mb3.7/10, mb1 3.9/15, mb1mx3.7/31, mbtmp3.7/15, ML3.4/4, MS3.0/7, Ms1 3.1/7, ms1mx2.7/44, Error ellipse: s-maj=21.0km s-min=16.9km az=16.0*
ISCJB ***12*** *23:35:21.6±0.3, 40.13N±0.03×78.07E±0.06, h28km, mb3.7/12, MS3.1/4, Error ellipse: s-maj=7.7km s-min=3.8km az=151.9*
BJI ***12*** *23:35:21.7, 40.26N×77.91E, h10km, mb4.4/3, ML3.8/8, Ms3.6/2, Ms7 3.5/1*
MOS ***12*** *23:35:22.6±1.4, 40.14N×78.01E, h33km, mb4.1/7, Error ellipse: s-maj=11.3km s-min=5.5km az=111.4*
NNC ***12*** *23:35:24.6±2.1, 40.43N×77.75E, h0km, mb3.6, mpv3.5, Error ellipse: s-maj=18.2km s-min=16.1km az=166.0*
ISC 12 23:35:23.2±0.5, 40.29N±0.04×78.17E±0.06, h28km, n71, σ1§55/69, mb3.8/12, MS3.0/4, 9C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KSH	**Kashi**	**1.86**	**246**	⇑*i* Pn		**Pb**	**23 35 57.8**	**+1.2**
KSH				Sn		Sb	23 36 26.5	+7.0
KSH				smax		smax		
	comp=N,1μm,0.6s							
KSH				smax		smax		
	comp=E,1μm,0.8s							
ULHL	**Ulahol**	**2.43**	**324**	*i* PN		**Pn**	**23 36 03.1**	**+1.8**
ULHL	**Ulahol**	**2.43**	**324**	P		**Pn**	**23 36 03.1**	**+1.8**
	SNR=158							
KZA	**Kyzart**	**2.83**	**310**	*i* PN		**Pn**	**23 36 07.5**	**+0.5**
KZA	**Kyzart**	**2.83**	**310**	P		**Pn**	**23 36 07.5**	**+0.5**
	SNR=163							
KNDC	**Almaty**	**3.06**	**343**	⇓Pn		Pn	23 36 13.1	+3.4
KNDC				⇑Lg		Lg	23 36 55.5	
AAA	**Alma-Ata**	**3.11**	**343**	*e*PN		**Pb**	**23 36 16.2**	**-1.7**
AAA				*e*S		**Sb**	**23 36 56.1**	**+0.7**
AAA				pmax		pmax		
	comp=Z,389nm,0.5s							
AAA				smax		smax		
	comp=E,2μm,0.7s							
TKM2	**Tokmak 2**	**3.26**	**325**	⇑Pn		**Pn**	**23 36 14.4**	**+1.8**
	comp=E,61nm,0.6s							
TKM2				⇓Lg		Lg	23 36 58.3	
	comp=E,405nm,0.8s							
TKM2	**Tokmak 2**	**3.26**	**325**	*i* PN		**Pn**	**23 36 14.2**	**+1.6**
TKM2	**Tokmak 2**	**3.26**	**325**	P		**Pn**	**23 36 14.2**	**+1.6**
	SNR=41							
UCH	**Uchtor**	**3.37**	**306**	*i* PN		**Pn**	**23 36 14.9**	**+0.6**
UCH	**Uchtor**	**3.37**	**306**	P		**Pn**	**23 36 14.9**	**+0.6**
	SNR=25							
KBK	**Karagaybulak**	**3.38**	**315**	*i* PN		**Pn**	**23 36 16.1**	**+1.8**
KBK	**Karagaybulak**	**3.38**	**315**	P		**Pn**	**23 36 16.1**	**+1.8**
	SNR=48							
AAK	**Ala-Archa**	**3.62**	**311**	PN		**Pn**	**23 36 19.0**	**+1.5**
AAK							23 37 07.7	
AAK				pmax		pmax		
	comp=Z,4.0nm,0.3s							
AAK				pmax		pmax		
	comp=Z,13nm,0.3s							
AAK	**Ala-Archa**	**3.62**	**311**	P		**Pn**	**23 36 19.1**	**+1.6**
	SNR=13							
AAK	**Ala-Archa**	**3.62**	**311**	Pn		**Pn**	**23 36 19.0**	**+1.5**
	comp=Z,4.3nm,0.3s,baz=124,slow=8.5,SNR=57							
AAK				Pg		**Pb**	**23 36 24.0**	**-2.6**
	comp=Z,13nm,0.3s,baz=138,slow=14,SNR=88							
AAK				Lg		Lg	23 37 07.7	
	comp=Z,34nm,0.3s,baz=214,slow=13,SNR=26							
FRU	**Bishkek**	**3.68**	**315**	*e*PN		**Pn**	**23 36 20.0**	**+1.7**
FRU				*e*S		**Sn**	**23 37 05.0**	**+4.3**
FRU				*i*			23 37 11.0	
FRU				pmax		pmax		
	comp=Z,200nm,1.8s							
FRU				pmax		pmax		
	comp=E,700nm,1.8s							
CHMS	**Chumysh**	**3.72**	**318**	*i* PN		**Pn**	**23 36 20.6**	**+1.7**
CHMS	**Chumysh**	**3.72**	**318**	P		**Pn**	**23 36 20.6**	**+1.7**
	SNR=6.0							
AML	**Almayashu**	**3.84**	**300**	*i* PN		**Pn**	**23 36 21.0**	**+0.2**
AML	**Almayashu**	**3.84**	**300**	P		**Pn**	**23 36 21.0**	**+0.2**
	SNR=46							
USP	**Ospenovka**	**4.04**	**318**	P		**Pb**	**23 36 31.2**	**-2.5**
	SNR=59							
EKS2	**Erkin-Say**	**4.06**	**307**	*i* PN		**Pn**	**23 36 24.8**	**+1.2**
EKS2	**Erkin-Say**	**4.06**	**307**	P		**Pn**	**23 36 24.8**	**+1.2**
	SNR=36							
KK31	**Karatay Array**	**6.38**	**299**	Pn		**Pn**	**23 36 55.1**	**-0.2**
	comp=E,0.4nm,0.3s,baz=122,slow=12,SNR=17							
KK31				⇑Pg		**Pb**	**23 37 14.3**	**+0.8**
	comp=E,4.8nm,0.6s,baz=125,slow=16,SNR=18							
KK31				⇓Lg		Lg	23 38 34.0	
	comp=E,26nm,0.7s,baz=104,slow=28,SNR=10.0							
KK31	**Karatay Array**	**6.38**	**299**	*i* PN		**Pn**	**23 36 55.1**	**-0.2**
KK31				pmax		pmax		
	comp=Z,1.0nm,0.3s							
MK31	**Makanchi Array**	**7.15**	**23**	⇓Pn		Pn	23 37 10.5	+4.5
	comp=Z,1.0nm,0.5s,baz=201,slow=12,SNR=27							
MK31				⇓Lg		Lg	23 39 12.7	
	comp=Z,19nm,0.8s,baz=203,slow=27,SNR=3.8							
MK31	**Makanchi Array**	**7.15**	**23**	*i* P		Pn	23 37 09.9	+4.0
MK31				pmax		pmax		
	comp=Z,1.0nm,0.2s							
MKAR	**Makanchi Array**	**7.15**	**23**	P		Pn	23 37 09.7	+3.8
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
MKAR				MLR		MLR		
	comp=Z,44nm,19.4s							
MKAR	**Makanchi Array**	**7.15**	**23**	Pn		Pn	23 37 09.7	+3.8
	comp=Z,0.3nm,0.3s,baz=198,slow=14,SNR=22							
MKAR				Pg		**Pb**	**23 37 24.9**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=201,slow=16,SNR=9.3							
MKAR				Lg		Lg	23 39 09.6	
	comp=Z,0.6nm,0.3s,baz=203,slow=31,SNR=4.1							
MKAR				LR		LR	23 39 55.6	
	comp=Z,44nm,19.4s,baz=160,slow=38							
WMQ	**Urumqi**	**7.91**	**60**	P		Pn	23 37 26.6	+10
WMQ				smax		smax		
	comp=N,68nm,1.1s							
WMQ				smax		smax		
	comp=E,51nm,1.0s							
DDI	**Dehra Dun**	**9.95**	**181**	*e*P		**Pn**	**23 37 43.0**	**-1.3**
DDI				*e*S		**Sn**	**23 39 36.0**	**+0.9**
KUR17	**Kurchatov Arra**	**10.34**	**1**	⇓Pn		**Pn**	**23 37 48.8**	**-0.8**
	comp=E,0.1nm,0.6s							
KUR17				⇑Lg		Lg	23 40 45.1	
	comp=E,3.8nm,1.4s							
KURK	**Kurchatov**	**10.43**	**2**	⇓Pn		**Pn**	**23 37 53.1**	**+2.4**
	comp=E,5.1nm,1.0s							
KURK				⇓Lg		Lg	23 40 53.4	
	comp=E,57nm,1.0s							
KURK	**Kurchatov**	**10.43**	**2**	*e*P		**Pn**	**23 37 53.0**	**+2.3**
DANN	**Dangsing**	**12.77**	**157**	*e*P		**Pn**	**23 38 21.7**	**-1.5**
	comp=E,6.1nm,0.4s							
PYUN	**Piuthan**	**12.80**	**160**	*e*P		**Pn**	**23 38 22.1**	**-1.4**
	comp=E,20nm,0.5s							
KOLN	**Koldanda**	**13.27**	**159**	*e*P		**Pn**	**23 38 28.4**	**-1.6**
	comp=E,6.3nm,0.5s							
BVA0	**Borovoye Array**	**13.80**	**340**	⇑P		**Pn**	**23 38 35.8**	**-1.0**
	comp=E,0.3nm,0.8s,baz=160,slow=15,SNR=9.5							
BVAR	**Borovoye Array**	**13.80**	**340**	*e*P		**Pn**	**23 38 35.4**	**-1.4**
BVAR				MLR		MLR		
	comp=Z,73nm,20.3s							
BVAR	**Borovoye Array**	**13.80**	**340**	Pn		**Pn**	**23 38 35.4**	**-1.4**
	baz=158,slow=14,SNR=7.7							
BVAR				Lg		Lg	23 42 30.8	
	comp=Z,0.2nm,0.3s,baz=157,slow=30,SNR=8.6							
BVAR				LR		LR	23 43 52.8	
	comp=Z,73nm,20.3s,baz=358,slow=37							
BRVK	**Borovoye**	**13.86**	**340**	*e*P		**Pn**	**23 38 39.8**	**+2.2**
GUN	**Gumba**	**13.90**	**150**	*e*P		**Pn**	**23 38 38.1**	**-0.5**
	comp=Z,17nm,0.6s							
ZALV	**Zalesovo Beam**	**14.38**	**16**	P		**Pn**	**23 38 46.1**	**+1.4**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.3s							
ZALV				MLR		MLR		
	comp=Z,78nm,18.4s							
ZALV	**Zalesovo Beam**	**14.38**	**16**	Pn		**Pn**	**23 38 46.1**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=201,slow=12,SNR=4.9							
ZALV				Lg		Lg	23 42 54.2	
	comp=Z,0.2nm,0.3s,baz=204,slow=28,SNR=2.5							
ZALV				LR		LR	23 44 41.8	
	comp=Z,78nm,18.4s,baz=265,slow=39							
NVS	**Novosibirsk**	**14.94**	**11**	*e*P		**Pn**	**23 38 55.0**	**+2.7**
NVS				*e*			23 41 42.4	
RAMN	**Ramite**	**15.04**	**150**	*e*P		**Pn**	**23 38 52.8**	**-1.2**
	comp=Z,49nm,0.9s							
TAPN	**Taplejung**	**15.13**	**146**	*e*P		**Pn**	**23 38 55.0**	**-0.3**
	comp=Z,13nm,1.0s							
ODAN	**Odare**	**15.43**	**147**	*e*P		**Pn**	**23 38 58.6**	**-0.5**
	comp=Z,13nm,0.8s							
AB31	**Akbulak array**	**15.71**	**311**	⇑P		**Pn**	**23 39 02.0**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=114,slow=12,SNR=5.3							
AKTO	**Aktyubinsk**	**17.36**	**312**	⇑P		**Pn**	**23 39 22.1**	**-1.3**
	comp=Z,0.3nm,0.8s							
AKTO	**Aktyubinsk**	**17.36**	**312**	P		**Pn**	**23 39 21.2**	**-2.2**
AKTO	**Aktyubinsk**	**17.36**	**312**	P		**Pn**	**23 39 21.1**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=132,slow=19,SNR=5.7							
AKTO				Lg		Lg	23 44 25.6	
	comp=Z,0.1nm,0.3s,baz=198,slow=20,SNR=2.3							
ZAK	**Zakamensk**	**20.24**	**52**	*e*P		Pn	23 40 00.8	+2.6
ZAK				pmax		pmax		
	comp=Z,2.0nm,1.6s							
ARU	**Arti**	**20.63**	**328**	*c* *i*P		**P**	**23 39 59.4**	**-0.7**
ARU							23 40 16.5	
ARU				S		**S**	**23 43 48.6**	**-0.5**
ARU				SS		**SnSn**	**23 44 08.4**	**-0.5**
ARU				pmax		pmax		
	comp=Z,5.0nm,1.6s							
SONM	**Songino Array**	**21.55**	**60**	P		**P**	**23 40 13.3**	**+3.0**
	comp=Z,1.0nm,0.7s,baz=262,slow=9.3,SNR=7.5							
OBN	**Obninsk**	**31.15**	**312**	*e*P		P	23 41 51.7	+12
OBN				pmax		pmax		
	comp=Z,3.0nm,0.8s							
BRTR	**Keskin Array B**	**33.84**	**284**	P		**P**	**23 42 01.5**	**-1.8**
	comp=Z,1.1nm,0.7s,baz=98,slow=8.5,SNR=6.0							
FINES	**FINESS Array B**	**37.75**	**322**	P		**P**	**23 42 35.9**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=101,slow=8.0,SNR=8.0							
UZH	**Uzhgorod**	**39.95**	**301**	*e*P		**P**	**23 42 54.8**	**0.0**
UZH				*e*			23 43 06.2	
ARCES	**ARCESS Array B**	**39.99**	**334**	P		**P**	**23 42 54.3**	**-0.7**
	comp=Z,3.0nm,0.7s,baz=111,slow=9.5,SNR=10							
TIXI	**Tiksi**	**40.14**	**22**	*e*P		**P**	**23 42 57.5**	**+1.4**
TIXI				pmax		pmax		
	comp=Z,1.0nm,1.3s							
HFS	**Hagfors**	**43.73**	**319**	LR		LR	00 02 21.9	
	comp=Z,10nm,18.9s,baz=254,slow=37							
NOA	**NORSAR Array B**	**44.89**	**321**	P		**P**	**23 43 34.8**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=88,slow=7.9,SNR=3.0							
NOA				LR		LR	00 01 50.5	
	comp=Z,7.2nm,20.1s,baz=90,slow=36							
GERES	**GERESS Array B**	**45.46**	**303**	P		**P**	**23 43 39.6**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=79,slow=7.2,SNR=4.4							
GERES				LR		LR	00 06 36.3	
	comp=Z,30nm,21.9s,baz=306,slow=41							
ASAJ	**Asahikawa**	**46.79**	**63**	LR		LR	00 04 02.2	
	comp=Z,140nm,19.8s,baz=42,slow=37							
ILAR	**Eielson Array**	**69.48**	**19**	P		**P**	**23 46 28.9**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=312,slow=4.4,SNR=6.2							
TORD	**Torodi Ar. Bea**	**71.35**	**272**	P		**P**	**23 46 39.1**	**-1.6**
	comp=Z,7.7nm,0.8s,baz=48,slow=5.2,SNR=26							
YKA	**Yellowknife Ar**	**77.04**	**6**	P		**P**	**23 47 14.0**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=344,slow=5.6,SNR=21							
ASAR	**Alice Springs**	**82.08**	**130**	P		**P**	**23 47 43.2**	**+2.2**
	comp=Z,0.4nm,0.6s,baz=322,slow=5.5,SNR=2.5							

IDC ***12*** *23:38:08.8±1.2, 4.56S×102.06E, h0km, mb4.2/12, mb1 4.2/12, mb1mx4.0/24, mbtmp4.2/12, MS3.3/1, Ms1 3.3/1, ms1mx2.5/26, Error ellipse: s-maj=42.8km s-min=16.0km az=51.0*
ISCJB ***12*** *23:38:12.0±0.5, 4.58S±0.06×101.97E±0.05, h37km, mb4.2/17, Error ellipse: s-maj=9.1km s-min=7.0km az=29.1*
NEIC ***12*** *23:38:13.8±0.6, 4.56S×102.08E, h35km, mb4.1/6, Error ellipse: s-maj=23.8km s-min=7.5km az=55.0*
DJA ***12*** *23:38:19.3±1.1, 4.4S±21×10.3E±2.8, h61km±16km, M4.3/5, MLv4.3/5*
ISC 12 23:38:14.3±0.7, 4.58S±0.07×102.11E±0.08, h37km, n41, σ1§11/43, mb4.2/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MNAI	**Manna**	**0.87**	**76**	P		**Pn**	**23 38 31.6**	**+1.6**
MNAI				S		**Sn**	**23 38 42.8**	**+1.3**
KSI	**Kapahiang**	**1.04**	**28**	P		**Pn**	**23 38 33.8**	**+1.4**
KSI				S		**Sn**	**23 38 44.1**	**-1.6**
LWLI	**Liwa**	**1.99**	**103**	P		**Pn**	**23 38 47.5**	**+2.0**
KRJI	**Kerinci**	**2.55**	**345**	P		**Pn**	**23 38 56.1**	**+2.8**
KASI	**Kota Agung**	**2.56**	**112**	P		**Pn**	**23 38 55.0**	**+1.8**
KASI				S		**Sn**	**23 39 20.7**	**-2.4**
PSI	**Prapat**	**7.99**	**336**	LR		LR	23 43 38.2	
	comp=Z,195nm,18.6s,baz=171,slow=42							
CMAR	**Chiang Mai Arr**	**23.10**	**352**	P		**P**	**23 43 16.0**	**-1.1**
CMAR	**Chiang Mai Arr**	**23.10**	**352**	P		**P**	**23 43 16.0**	**-1.1**
	2.0nm,0.6s,baz=184,slow=8.3,SNR=16							
CHTO	**Chiang Mai**	**23.45**	**352**	*e*P		**P**	**23 43 20.0**	**-0.5**
	1.4nm,0.6s							
FITZ	**Fitzroy Crossi**	**26.65**	**122**	*e*P		**P**	**23 43 49.1**	**-0.7**
	1.5nm,0.6s							
FITZ	**Fitzroy Crossi**	**26.65**	**122**	P		**P**	**23 43 49.6**	**-0.2**
	1.6nm,0.7s,baz=302,slow=9.5,SNR=3.4							
NWAO	**Narrogin (SRO)**	**31.55**	**155**	P		**P**	**23 44 33.5**	**+0.3**
WRA	**Warramunga Arr**	**34.90**	**119**	P		**P**	**23 45 02.5**	**-0.1**
WRA	**Warramunga Arr**	**34.90**	**119**	P		**P**	**23 45 02.5**	**-0.1**
	0.7nm,0.4s,baz=301,slow=9.1,SNR=6.0							
WRAB	**Tennant Creek**	**34.90**	**119**	*e*P		**P**	**23 45 02.3**	**-0.4**
	1.7nm,0.4s							
ASAR	**Alice Springs**	**36.05**	**125**	P		**P**	**23 45 12.8**	**+0.3**
ASAR	**Alice Springs**	**36.05**	**125**	P		**P**	**23 45 12.8**	**+0.3**
	0.5nm,0.5s,baz=294,slow=8.2,SNR=8.4							
KSAR	**Wonju Array Be**	**48.20**	**28**	P		**P**	**23 46 50.9**	**-0.4**
KSRS	**Korea Array**	**48.23**	**28**	P		**P**	**23 46 50.9**	**-0.6**
	0.9nm,0.5s,baz=206,slow=6.6,SNR=5.4							
SONM	**Songino Array**	**52.33**	**4**	P		**P**	**23 47 23.3**	**+0.8**
SONM	**Songino Array**	**52.33**	**4**	P		**P**	**23 47 23.3**	**+0.8**
	3.0nm,0.5s,baz=185,slow=9.2,SNR=23							
ULN	**Ulaanbaatar**	**52.40**	**4**	*e*P		**P**	**23 47 23.1**	**0.0**
	0.9nm,0.5s							
AAK	**Ala-Archa**	**53.25**	**335**	P		**P**	**23 47 26.4**	**-3.1**
EKS2	**Erkin-Say**	**53.58**	**334**	*e*P		**P**	**23 47 31.3**	**-0.5**
	3.3nm,0.8s							
MK31	**Makanchi Array**	**54.07**	**343**	*e*P		**P**	**23 47 35.5**	**+0.3**
MKAR	**Makanchi Array**	**54.07**	**343**	P		**P**	**23 47 35.0**	**-0.3**
MKAR	**Makanchi Array**	**54.07**	**343**	P		**P**	**23 47 35.0**	**-0.3**
	5.9nm,0.7s,baz=152,slow=9.1,SNR=49							
USRK	**Ussuriysk Arra**	**55.49**	**26**	P		**P**	**23 47 44.9**	**-0.6**
	2.3nm,0.5s,baz=214,slow=6.5,SNR=7.1							
KURK	**Kurchatov**	**58.67**	**343**	*e*P		**P**	**23 48 07.4**	**-0.5**
ZAA0	**Zalesovo Array**	**60.09**	**348**	*e*P		**P**	**23 48 17.2**	**-0.4**
ZALV	**Zalesovo Beam**	**60.09**	**348**	P		**P**	**23 48 17.4**	**-0.2**
ZALV	**Zalesovo Beam**	**60.09**	**348**	P		**P**	**23 48 17.4**	**-0.2**
	5.3nm,0.4s,baz=164,slow=5.4,SNR=32							
BVAR	**Borovoye Array**	**63.32**	**339**	P		**P**	**23 48 38.7**	**-0.7**
BVAR	**Borovoye Array**	**63.32**	**339**	P		**P**	**23 48 38.7**	**-0.7**
	2.2nm,0.4s,baz=140,slow=9.2,SNR=27							
ABKAR	**Akbulak array**	**64.90**	**331**	*e*P		**P**	**23 48 49.6**	**-0.2**
	3.2nm,0.6s							
ABKAR				*e*			23 49 01.8	
BRTR	**Keskin Array B**	**76.61**	**312**	P		**P**	**23 50 01.6**	**+0.1**
BRTR	**Keskin Array B**	**76.61**	**312**	P		**P**	**23 50 01.6**	**+0.1**
	1.3nm,0.7s,baz=130,slow=4.9,SNR=7.9							
FINES	**FINESS Array B**	**87.36**	**332**	P		**P**	**23 50 56.7**	**-0.5**
FINES	**FINESS Array B**	**87.36**	**332**	P		**P**	**23 50 56.7**	**-0.5**
	1.4nm,0.9s,baz=111,slow=4.7,SNR=4.2							
TXAR	**Lajitas Array**	**145.33**	**42**	PKPbc		**PKPab**	**23 57 50.0**	**+0.9**
TXAR	**Lajitas Array**	**145.33**	**42**	PKPbc		**PKPab**	**23 57 50.0**	**+0.9**
	2.5nm,0.7s,baz=306,slow=0.7,SNR=13							

IDC 12 23:39:13.8±15.0, 17.75S×178.55W, h554km±143km, mb3.4/5, mb1 3.5/5, mb1mx3.1/21, mbtmp3.4/5, Error ellipse: s-maj=110.4km s-min=72.0km az=100.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CTA	**Charters Tower**	**33.34**	**260**	P		P	23 45 06.3	-0.4
	2.4nm,0.7s,baz=81,slow=13,SNR=2.7							
STKA	**Stephens Creek**	**38.59**	**241**	P		P	23 45 49.9	0.0
	3.6nm,0.5s,baz=87,slow=9.5,SNR=24							
WRA	**Warramunga Arr**	**44.53**	**259**	P		P	23 46 36.4	-0.6
	1.7nm,0.5s,baz=95,slow=7.1,SNR=17							
WRA				PcP		PcP	23 48 07.5	-0.6
	0.4nm,0.4s,baz=92,slow=3.9,SNR=4.2							
ASAR	**Alice Springs**	**44.70**	**254**	P		P	23 46 38.3	0.0
	14nm,0.6s,baz=88,slow=8.4,SNR=125							
ASAR				PcP		PcP	23 48 08.0	-0.8
	0.3nm,0.4s,baz=100,slow=4.3,SNR=3.8							
FITZ	**Fitzroy Crossi**	**52.92**	**260**	P		P	23 47 39.3	+0.2
	1.2nm,0.7s,baz=114,slow=6.3,SNR=5.2							
MMAI	**Mount Meron Ar**	**145.94**	**

SNJE	San Jose	1.02	290	⇑	*i*	P	Pn	00 33 48.9	+0.1
SBLS	San Blas	1.03	289	⇑	*i*	P	Pn	00 33 48.9	+0.1
RTR	El Retiro	1.07	291	⇑	*i*	P	Pn	00 33 49.4	+0.3
TGUH	Tegucigalpa,Un	1.42	67		*e*	Pn	Pn	00 33 51.9	+0.2
TGUH					*e*	Sn	Sn	00 34 15.1	-1.2
TGUH	Tegucigalpa,Un	1.42	67	⇓	*i*	P	Pn	00 33 51.9	+0.2
MRL	Marmol	1.86	326		*e*	P	Pn	00 33 58.0	+1.7
MRL					*e*	S	Sn	00 34 16.0	-8.5
IXG	Ixpaco	1.90	291		*e*	P	Pn	00 33 57.3	+0.7
IXG					*e*	S	Sn	00 34 15.1	-10
NBG	Las Nubes	1.99	303		*e*	P	Pn	00 33 59.4	+1.7
NBG					*e*	S	Sn	00 34 18.1	-8.9
PCG	Pacaya	2.12	295		*e*	P	Pn	00 34 00.8	+1.7
CNGN	Cerro Negro	2.12	118		*e*	P	Pn	00 33 58.8	-0.2
FUG	Fuego 3	2.35	294		*e*	P	Pn	00 34 02.5	+1.0
FUG					*e*	S	Sn	00 34 23.1	-11
FG6		2.43	296		*e*	P	Pn	00 34 02.9	+0.3
JAT	Jato	3.04	286		*e*	P	Pn	00 34 10.8	+1.4
GBS2	Las Lilas	4.08	130		*i*	P	Pn	00 34 23.9	+1.5
GBS3	Finca Las Im˜¡	4.12	131		*i*	P	Pn	00 34 24.3	+1.5
GB1A	Borinquen Arri	4.13	130		*i*	P	Pn	00 34 24.2	+1.1
LAPC	Finca la Perla	4.14	131		*i*	P	Pn	00 34 24.6	+1.5
LAPC					*i*	S	Sn	00 35 13.4	+0.8
NY14	Universidad de	4.15	133		*i*	P	Pn	00 34 25.2	+2.0
PTEN	Parque Tenorio	4.51	128		*i*	P	Pn	00 34 28.6	+0.7
JTS	JuntasAbangare	4.81	131		*e*	Pn	Pn	00 34 32.5	+0.8
JTS					*e*	Sn	Sn	00 35 26.4	-1.6
JTS	JuntasAbangare	4.81	131		P		Pn	00 34 33.2	+1.6
	comp=Z,86nm,0.3s,baz=313,slow=13,SNR=154								
JTS					S		Sn	00 35 26.2	-1.8
	comp=Z,157nm,0.3s,baz=327,slow=22,SNR=30								
CGA2	Cerro Gallo 2	5.35	130		*e*	P	Pn	00 34 41.1	+2.4
CGA2					*e*	S	Sn	00 35 40.3	-0.4
LAJ	Bijagual	5.71	129		*e*	P	Pn	00 34 43.0	-0.5
LAJ					*e*	S	Sn	00 35 38.1	-11
SJS	Escuela Geolog	5.71	128		*e*	P	Pn	00 34 50.2	+6.7
QCR	Quepos	5.96	132		*e*	P	Pn	00 34 49.1	+2.5
QCR					*e*	S	Sn	00 35 56.2	+1.2
TEIG	Tepich	6.69	3		*e*	Pn	Pn	00 34 55.8	-0.2
TEIG	Tepich	6.69	3		P		Pn	00 34 56.8	+0.8
	comp=Z,3.2nm,0.3s,baz=172,slow=14,SNR=16								
CMIG	Matias Romero	7.01	301		P		Pn	00 35 00.4	+0.1
CMIG					S		Sn	00 36 12.2	-7.6
CMIG	Matias Romero	7.01	301		P		Pn	00 35 00.4	+0.1
	comp=Z,3.8nm,0.3s,baz=112,slow=11,SNR=23								
CMIG					S		Sn	00 36 12.2	-7.6
	comp=Z,1.3nm,0.3s,baz=27,slow=9.8,SNR=7.3								
ACR	Cerro Adams	7.21	132		*e*	P	Pn	00 35 04.5	+1.6
ACR					*e*	S	Sn	00 36 24.0	-0.4
MTDJ	Mount Denham	11.65	65		*e*	Pn	P	00 36 06.4	-0.3
GTBY	Guantanamo Bay	14.42	62		*e*	P	P	00 36 38.2	+0.9
ROSC	El Rosal	16.51	120		*e*	Pn	Pn	00 37 01.6	0.0
SDDR	Presa de Saban	17.50	70		*e*	Pn	Pn	00 37 13.8	+0.9
	comp=Z,43nm,1.8s								
SDV	Santo Domingo	18.23	103		*e*	Pn	P	00 37 20.1	+0.6
	comp=Z,11nm,0.8s								
TIGA	Tifton	18.43	14	⇓	P		P	00 37 21.8	+0.4
	baz=18,SNR=6.1								
732A	Laxson Ranch,	18.46	327	⇓	P		P	00 37 21.8	+0.2
	baz=19,SNR=7.5								
GRTK	Grand Turk	18.47	62		*e*	Pn	Pn	00 37 23.2	-1.0
	comp=Z,55nm,0.9s								
VBMS	Vicksburg	18.70	355		*e*	Pn	P	00 37 25.4	+1.1
	comp=Z,88nm,0.6s								
632A	Uvalde	18.99	329	⇓	P		P	00 37 27.4	0.0
	baz=19,SNR=5.6								
631A	Perdido Creek	19.32	327	⇓	P		P	00 37 31.0	+0.1
	baz=20								
LRAL	Lakeview Retre	19.49	4		*e*	P	P	00 37 34.1	+1.3
	comp=Z,17nm,0.9s								
532A	Rocksprings	19.55	330	⇓	P		P	00 37 33.9	+0.4
	baz=20,SNR=8.7								
JCT	Junction City	19.79	330	⇑	P		P	00 37 36.3	+0.3
	baz=20								
531A	Rocksprings	19.90	328	⇓	P		P	00 37 38.1	+0.8
	baz=20								
WHTX	Lake Whitney	20.10	338	⇑	P		P	00 37 39.7	+0.4
	baz=20								
432A	Menard	20.12	331	⇑	P		P	00 37 39.8	+0.3
	baz=20,SNR=5.6								
530A	J-C Ranch, Com	20.30	327	⇑	P		P	00 37 41.9	+0.3
	baz=20								
431A	Sonora	20.35	329	⇑	P		P	00 37 43.6	+1.5
	baz=20,SNR=8.6								
GOGA	Godfrey	20.36	12		*e*	P	P	00 37 42.6	+0.6
	comp=Z,28nm,0.6s								
332A	Millersview	20.52	332	⇑	P		P	00 37 44.8	+1.0
	baz=21,SNR=8.5								
628A	Black Gap, Mar	20.68	323	⇓	P		P	00 37 45.8	+0.3
	baz=21								
430A	Baggett Ranch,	20.76	328	⇓	P		P	00 37 46.6	+0.3
	baz=21								
529A	Stev Forest Ra	20.77	325	⇑	P		P	00 37 46.8	+0.3
	baz=21								
331A	San Angelo	20.78	330	⇓	P		P	00 37 46.2	-0.3
	baz=21,SNR=6.2								
232A	Coleman	20.90	333	⇑	P		P	00 37 48.2	+0.3
	baz=21,SNR=7.7								
627A	Terlingua Ranc	20.95	322	⇑	P		P	00 37 49.1	+0.6
	baz=21,SNR=7.7								
NHSC	New Hope	20.97	20		*e*	P	P	00 37 50.9	+2.3
	comp=Z,40nm,0.8s								
429A	Davenport Ranc	20.98	326	⇓	P		P	00 37 48.6	-0.1
	baz=21,SNR=7.1								
TXAR	Lajitas Array	21.04	321		P		P	00 37 50.6	+1.2
TXAR	Lajitas Array	21.04	321		P		P	00 37 50.7	+1.2
	comp=Z,6.5nm,0.5s,baz=141,slow=10,SNR=60								
528A	Cox Ranch, San	21.12	324	⇓	P		P	00 37 50.4	+0.1
	baz=21								
CRPR	Cabo Rojo, PR	21.17	75		*e*	P	P	00 37 47.8	-3.1
	comp=Z,67nm,1.3s								
330A	Mertzon	21.22	329	⇓	P		P	00 37 50.0	-1.4
	baz=21,SNR=7.1								
MIAR	Mount Ida	21.42	349		*e*	P	P	00 37 53.6	+0.3
	comp=Z,15nm,0.8s								
UALR	University of	21.44	352		*e*	P	P	00 37 53.4	0.0
	comp=Z,18nm,1.0s								
626A	Big Bend Ranch	21.48	320	⇓	P		P	00 37 54.0	-0.1
	baz=22,SNR=7.8								
428A	Kincaid Ranch,	21.49	325	⇓	P		P	00 37 54.6	+0.5
	baz=22								
ABTX	Abilene, Hawle	21.53	334	⇓	P		P	00 37 54.7	+0.2
	baz=22								
230A	Sterling City	21.58	330	⇑	P		P	00 37 55.3	+0.1
	baz=22								
527A	Woodward Ranch	21.59	322	⇑	P		P	00 37 55.3	0.0
	baz=22								
329A	Wagon Wheel Ra	21.70	328	⇑	P		P	00 37 56.5	+0.1
	baz=22,SNR=8.6								
JSC	Jenkinsville	21.73	17		*e*	P	P	00 37 56.7	+0.2
SWET	Sewanee	21.75	6		*e*	P	P	00 37 56.5	-0.2
	comp=Z,66nm,1.9s								
526A	Mary Lane Ranc	21.81	322	⇓	P		P	00 37 57.5	0.0
	baz=22								
131A	Roby	21.90	333	⇓	P		P	00 37 59.2	+0.9
	baz=22								
229A	Bryant Ranch,	21.99	329	⇑	P		P	00 37 57.8	-1.4
	baz=22,SNR=5.3								
Z32A	Haskell	22.05	335	⇓	P		P	00 37 59.1	-0.7
	baz=22								
328A	Wristen Ranch,	22.06	326	⇑	P		P	00 37 59.3	-0.6
	baz=22,SNR=16								
130A	Snyder	22.10	331	⇓	P		P	00 37 59.5	-0.7
	baz=22								
CPCT	Cooper Cave	22.16	9		*e*	P	P	00 38 01.0	+0.3
426A	McDonald Obser	22.21	323	⇓	P		P	00 38 01.3	-0.2
	baz=22								
Z31A	Sharp Cattle R	22.34	334	⇑	P		P	00 38 02.2	-0.3
	baz=22								
TKL	Tuckaleechee C	22.48	10		*e*	P	P	00 38 04.0	+0.2
TKL	Tuckaleechee C	22.48	10		P		P	00 38 03.9	+0.2
	comp=Z,28nm,0.8s,baz=186,slow=12,SNR=36								
228A	UT Block 9, Go	22.51	328	⇑	P		P	00 38 03.9	-0.2
	baz=23								
KMSC	Kings Mountain	22.52	16	⇑	P		P	00 38 03.8	-0.3
	baz=23,SNR=11								
129A	Stewart Farms,	22.56	330	⇓	P		P	00 38 04.3	-0.2
	baz=23								
Y32A	R-V Farms, Ver	22.65	336	⇑	P		P	00 38 05.0	-0.2
	baz=23								
326A	Caldwell Ranch	22.66	324	⇓	P		P	00 38 05.5	0.0
	baz=23,SNR=9.3								
Z30A	Sanderson Ranc	22.75	332	⇓	P		P	00 38 06.1	-0.2
	baz=23,SNR=7.6								
227A	Bennet, Jal	22.80	326	⇑	P		P	00 38 07.0	+0.2
	baz=23								
128A	Castleberry Fa	22.86	329	⇓	P		P	00 38 07.1	-0.2
	baz=23,SNR=7.6								
425A	Indio Mountain	22.87	321	⇑	P		P	00 38 07.7	+0.2
	baz=23								
Y31A	Rekieta Farm,	22.94	335	⇓	P		P	00 38 08.2	+0.3
	baz=23								
Z29A	Hungry Hill Ra	23.00	331	⇓	P		P	00 38 08.2	-0.3
	baz=23,SNR=21								
WMOK	Wichita Mounta	23.05	338		*e*	P	P	00 38 09.0	+0.2
	comp=Z,10nm,1.0s								
PARMO	Parma	23.08	358		*e*	P	P	00 38 10.4	+1.4
Y30A	Stafford Cattl	23.14	333	⇑	P		P	00 38 10.2	+0.4
	baz=23,SNR=7.2								
TUL1	Tulsa	23.22	345	⇓	P		P	00 38 10.2	-0.2
	baz=23,SNR=5.3								
226B	Tecolote Peak,	23.33	325	⇓	P		P	00 38 11.4	-0.2
	baz=24,SNR=7.9								
Z28A	Tucker Farm, M	23.34	330	⇑	P		P	00 38 11.5	-0.1
	baz=24,SNR=5.8								
127A	Arkansas Junct	23.35	327	⇑	P		P	00 38 12.0	+0.2
	baz=24,SNR=6.5								
TZTN	Tazewell	23.38	10		*e*	P	P	00 38 11.7	-0.2
	comp=Z,5.0nm,0.5s								
X31A	McDonald Ranch	23.41	336	⇓	P		P	00 38 12.8	+0.7
	baz=24,SNR=5.8								
Y29A	Porterfield Fa	23.48	332	⇑	P		P	00 38 13.0	+0.1
	baz=24,SNR=8.7								
X30A	Coker Ranch, T	23.62	334	⇓	P		P	00 38 15.1	+1.0
	baz=24,SNR=6.3								
324A	Moseley Ranch,	23.63	322	⇓	P		P	00 38 14.8	+0.4
	baz=24,SNR=6.6								
126A	Clayton Basin,	23.68	326	⇑	P		P	00 38 15.4	+0.6
	baz=24								
225A	Deer Hill, Car	23.73	324	⇑	P		P	00 38 16.3	+1.0
	baz=24								
MNTX	Cornudas Mount	23.76	322		*e*	P	P	00 38 15.6	+0.3
	comp=Z,3.0nm,0.8s								
MNTX	Cornudas Mount	23.76	322	⇓	P		P	00 38 16.0	+0.7
	baz=24,SNR=6.1								
Z27A	Tatum	23.78	328	⇓	P		P	00 38 15.5	-0.2
	baz=24,SNR=11								
Y28A	McKinney Farm,	23.78	331	⇓	P		P	00 38 16.0	+0.3
	baz=24								
W31A	Holland Ranch,	23.88	337	⇓	P		P	00 38 16.8	+0.3
	baz=24								
X29A	Tulia	23.98	333	⇓	P		P	00 38 17.8	+0.3
	baz=24								
125A	Gardner Draw,	24.04	325	⇓	P		P	00 38 18.4	+0.3
	baz=24,SNR=13								
MSTX	Muleshoe	24.09	330	⇓	P		P	00 38 18.0	-0.4
	baz=24,SNR=7.7								
224A	Cornudas Mount	24.11	323	⇓	P		P	00 38 19.1	+0.4
	baz=24,SNR=7.4								
SIUC	Southern Illin	24.11	359		*e*	P	P	00 38 18.5	0.0
	comp=Z,22nm,0.8s								
Z26A	Caprock	24.14	327	⇓	P		P	00 38 18.3	-0.7
	baz=24,SNR=5.1								
Y27A	Causey	24.21	329	⇓	P		P	00 38 19.2	-0.3
	baz=24,SNR=13								
X28A	Dimmitt	24.26	332	⇑	P		P	00 38 20.5	+0.5
	baz=24								
AMTX	Amarillo	24.34	333	⇓	P		P	00 38 21.4	+0.7
	baz=24								
V31A	Spng Creek L	24.36	337	⇓	P		P	00 38 21.9	+1.0
	baz=24								
USIN	University of	24.37	2		*e*	P	P	00 38 20.5	-0.3
	comp=Z,17nm,0.6s								
124A	Stringfield Ra	24.52	324	⇑	P		P	00 38 23.1	+0.5
	baz=25,SNR=5.0								
Z25A	Roswell	24.54	326	⇓	P		P	00 38 23.5	+0.9
	baz=25								
Y26A	Elida	24.57	328	⇑	P		P	00 38 23.5	+0.7
	baz=25								
WCI	Wyandotte Cave	24.70	4		*e*	P	P	00 38 22.7	-1.2
	comp=Z,22nm,0.8s								
X27A	F and S Farms,	24.79	331	⇑	P		P	00 38 25.5	+0.7
	baz=25								
Z24A	Sheeppen Canyo	24.94	325	⇓	P		P	00 38 27.9	+1.6
	baz=25,SNR=6.6								
Y25A	Mesa, Roswell	25.02	327	⇓	P		P	00 38 28.4	+1.4
	baz=25,SNR=9.3								
X26A	CR and CF Fran	25.06	329	⇑	P		P	00 38 28.1	+0.8
	baz=25								
W27A	Bowe Ranch, En	25.11	331	⇓	P		P	00 38 29.3	+1.6
	baz=25,SNR=14								
V28A	Channing	25.31	333	⇑	P		P	00 38 29.9	+0.5
	baz=25								
U30A	WK&E Inc. Balk	25.34	337	⇓	P		P	00 38 30.7	+1.0
	baz=26								
Z23A	Rita Site, Whi	25.38	324	⇓	P		P	00 38 32.6	+2.4
	baz=26								
Y24A	Capitan	25.42	326	⇓	P		P	00 38 32.1	+1.5
	baz=26,SNR=7.7								
Y23A	Lovelace Mesa,	25.77	325	⇑	P		P	00 38 35.1	+1.3
	baz=26,SNR=6.1								
121A	Cookes Peak, D	25.80	320	⇑	P		P	00 38 35.6	+1.6
	baz=26								
W25A	X Bar L Ranch,	25.91	329	⇑	P		P	00 38 36.0	+1.0
	baz=26,SNR=8.3								
V26A	Tequesquite Ra	26.05	331	⇓	P		P	00 38 37.1	+0.9
	baz=26,SNR=8.6								
Z21A	St. Cloud Mine	26.26	322	⇑	P		P	00 38 39.4	+1.2
	baz=26								
Y22A	Socorro	26.29	324	⇑	P		P	00 38 40.0	+1.6
	baz=26								
W24A	Lazy 6 Ranch,	26.39	328	⇓	P		P	00 38 40.5	+1.2
	baz=26,SNR=5.2								
V25A	Rancho No Teng	26.48	330	⇓	P		P	00 38 41.4	+1.2
	baz=27,SNR=11								
U26A	Atchey Ranch,	26.52	332	⇓	P		P	00 38 40.8	+0.4
	baz=27								
Z20A	Nine Sixteen R	26.69	320	⇑	P		P	00 38 43.6	+1.6
	baz=27								
V24A	Rampart Ranch,	26.72	329	⇓	P		P	00 38 43.7	+1.4
	baz=27								
W23A	Werner Place,	26.74	327	⇓	P		P	00 38 43.9	+1.4
	baz=27,SNR=5.9								
ANMO	Albuquerque	26.75	326		P		P	00 38 44.7	+2.2
ANMO	Albuquerque	26.75	326		P		P	00 38 44.7	+2.2
	comp=Z,1.2nm,0.6s,baz=133,slow=3.3,SNR=6.5								
Y21A	Point of Rocks	26.75	323	⇑	P		P	00 38 44.4	+1.8
	baz=27								
U25A	Circle Dot Ran	26.84	331	⇑	P		P	00 38 44.5	+1.2
	baz=27								
ACSO	Alum Creek Sta	27.08	10		*e*	P	P	00 38 45.0	-0.1
	comp=Z,15nm,0.8s								
X21A	Alamocita Cree	27.13	323	⇑	P		P	00 38 47.0	+1.0
	baz=27								
V23A	Ortiz Mt. (NFS	27.20	328	⇓	P		P	00 38 47.6	+0.9
	baz=27								
S26A	Kim	27.42	334	⇑	P		P	00 38 49.2	+0.8
	baz=28								
T25A	Trinidad	27.44	332	⇑	P		P	00 38 49.8	+1.1
	baz=28								
U23A	El Rito	27.66	328	⇑	P		P	00 38 52.2	+1.6
	baz=28,SNR=11								
V22A	San Miguel Ran	27.71	327	⇑	P		P	00 38 52.3	+1.2
	baz=28								
SDMD	Soldier's Deli	27.81	20		*e*	P	P	00 38 52.2	+0.5
	comp=Z,15nm,0.7s								
S25A	Robets Cordova	27.88	332	⇑	P		P	00 38 53.4	+0.9
	baz=28								
R25A	Fountain Ranch	28.21	333	⇑	P		P	00 38 56.5	+1.1
	baz=28								
S24A	Houchin Ranch,	28.22	331	⇓	P		P	00 38 56.5	+0.9
	baz=28								
R23A	Moffat	28.95	331	⇑	P		P	00 39 03.1	+1.0
	baz=29								
S22A	4UR Ranch, Cre	29.08	329	⇓	P		P	00 39 03.4	+0.1
	baz=29,SNR=5.6								
X16A	Lo Mia Camp, P	29.33	319	⇓	P		P	00 39 06.3	+0.8
	baz=30								
R22A	Saguache, Gunn	29.42	330	⇑	P		P	00 39 07.4	+1.1
	baz=30								
S21A	Coal Bank Pass	29.50	328	⇓	P		P	00 39 08.0	+1.0
	baz=30								
Q23A	Hartsel	29.52	332	⇑	P		P	00 39 08.5	+1.2
	baz=30								
P23A	Jefferson	29.91	333	⇑	P		P	00 39 11.6	+0.9
	baz=30								
Q22A	Crested Butte,	29.99	331	⇓	P		P	00 39 12.1	+0.7
	baz=30								
ISCO	Idaho Springs	30.16	333	⇑	P		P	00 39 13.3	+0.5
	baz=30								
R20A	Redvale	30.20	328	⇓	P		P	00 39 14.0	+0.9
	baz=30								
SMCO	Snowmass	30.27	331		*e*	P	P	00 39 15.6	+1.6
	comp=Z,3.3nm,0.8s								
O23A	Lake Granby, G	30.63	333	⇑	P		P	00 39 17.9	+1.0
	baz=31								
S18A	Hurst Farm, Bl	30.70	326	⇑	P		P	00 39 18.3	+0.7
	baz=31								
P21A	Newcastle	30.77	331	⇓	P		P	00 39 19.2	+1.0
	baz=31								
L27A	T5 Ranch, Ells	30.85	340	⇑	P		P	00 39 19.4	+0.7
	baz=31								
O22A	Kremmling	30.87	333	⇑	P		P	00 39 19.5	+0.5
	baz=31								
ECSD	EROS Data Cent	30.89	349		*e*	P	P	00 39 17.8	-1.1
	comp=Z,9.9nm,1.4s								
N23A	Red Feather La	31.20	334	⇑	P		P	00 39 23.0	+1.0
	baz=31								
Q19A	Hogan Spring (	31.23	328	⇑	P		P	00 39 22.8	+0.8
	baz=31								
N22A	Wattenberg Ran	31.35	333	⇓	P		P	00 39 24.1	+0.9
	baz=32								
P19A	Cripple Cowboy	31.60	329	⇑	P		P	00 39 26.2	+0.8
	baz=32								
O20A	White River Ci	31.63	331	⇑	P		P	00 39 27.0	+1.4
	baz=32,SNR=8.1								
IRM	Iron Mountain	31.64	315	⇑	P		P	00 39 26.3	+0.7
	baz=32								
N21A	Black Mountain	31.79	332	⇓	P		P	00 39 28.2	+1.1
	baz=32								
SPMN	St. Paul	31.81	354	⇓	P		P	00 39 26.4	-0.5
	baz=32,SNR=14								
L23A	Garrett	32.12	336	⇓	P		P	00 39 30.6	+0.7
	baz=32								
N20A	Spence Gulch,	32.19	331	⇑	P		P	00 39 31.3	+0.8
	baz=32,SNR=6.5								
Q16A	Castle Valley	32.22	326	⇑	P		P	00 39 32.0	+1.3
	baz=32								
P17A	Butcher Ranch,	32.39	327	⇓	P		P	00 39 32.8	+0.5
	baz=32								
M21A	Separation Pea	32.40	333	⇑	P		P	00 39 33.6	+1.2
	baz=32								
COWI	Conover	32.49	359		*e*	P	P	00 39 31.2	-1.5
	comp=Z,16nm,0.9s								
TMUT	Trail Mountain	32.51	326		*e*	P	P	00 39 29.5	-4.0
	comp=Z,23nm,1.2s								
L21A	Rawlins	32.69	334	⇑	P		P	00 39 35.4	+0.5
	baz=33,SNR=5.3								
K22A	Casper	32.91	335	⇓	P		P	00 39 37.0	+0.3
	baz=33								
L20A	Wamsutter	33.16	333	⇓	P		P	00 39 39.2	+0.3
	baz=33								
I24A	Kuemmerle Ranc	33.22	339	⇓	P		P	00 39 40.2	+0.9
	baz=33								
N17A	Moffit Pass	33.52	329	⇓	P		P	00 39 42.5	+0.4
	baz=34								
K20A	Yellowstone Ra	33.68	333	⇓	P		P	00 39 44.0	+0.7
	baz=34								
L19A	Farson	33.69	332	⇓	P		P	00 39 44.3	+0.8
	baz=34								
SAML	Samuel	33.70	130		*e*	P	P	00 39 41.8	-1.8
	comp=Z,6.4nm,0.9s								
SAML					*e*	PcP	PcP	00 42 18.4	-0.7
M17A	Scullys Gap (B	33.83	330	⇑	P		P	00 39 45.5	+0.7
	baz=34,SNR=5.2								
J21A	Lysite	33.86	335	⇑	P		P	00 39 46.2	+1.3
	baz=34,SNR=6.0								
L18A	Fontenelle, Gr	33.87	331	⇓	P		P	00 39 45.5	+0.4
	baz=34								
I22A	9 Mile Ranch,	33.93	337	⇓	P		P	00 39 45.9	+0.4
	baz=34								
H24A	Dirks Ranch, A	33.97	340	⇑	P		P	00 39 46.4	+0.7
	baz=34,SNR=5.7								
K19A	Absolon Red Bu	34.03	333	⇑	P		P	00 39 46.7	+0.3
	baz=34								
J20A	Shoshoni	34.13	334	⇑	P		P	00 39 48.3	+1.1
	baz=34								
I21A	Big Trails, Te	34.18	336	⇓	P		P	00 39 48.3	+0.6
	baz=34								
BW06	Boulder Array	34.31	332		*e*	P	P	00 39 49.5	+0.7
	comp=Z,57nm,2.8s								
BW06	Boulder Array	34.31	332	⇓	P		P	00 39 49.1	+0.2
	baz=34								
PDAR	Pinedale Array	34.31	332		P		P	00 39 49.2	+0.4
PDAR	Pinedale Array	34.31	332		P		P	00 39 49.2	+0.4
	comp=Z,1.5nm,0.7s,baz=128,slow=10,SNR=15								
HWUT	Hardware Ranch	34.38	329		*e*	P	P	00 39 50.7	+1.2
	comp=Z,6.3nm,0.8s								
HWUT					*e*	PcP	PcP	00 42 21.8	+0.9
L17A	Cokeville	34.41	330	⇓	P		P	00 39 50.3	+0.6
	baz=34,SNR=5.3								

NVAR	**Mina Array Bea**	**36.16**	**319**	P		**P**	**00 40 05.4 +0.7**
	comp=Z,0.7nm,0.7s,baz=125,slow=7.1,SNR=6.2						
NVAR				ScP		**ScP**	**00 45 54.4 -0.6**
	comp=Z,0.5nm,0.6s,baz=114,slow=4.5,SNR=5.2						
F20A	**Billings**	**36.18**	**337**	⇑P		**P**	**00 40 05.5 +0.9**
	baz=36						
D23A	**Lindsay**	**36.32**	**341**	⇓P		**P**	**00 40 06.6 +0.8**
	baz=36						
G18A	**Lazy EL Ranch,**	**36.34**	**335**	⇓P		**P**	**00 40 06.5 +0.4**
	baz=36,SNR=8.8						
C24A	**Savage**	**36.40**	**342**	⇓P		**P**	**00 40 06.7 +0.3**
	baz=36						
F19A	**Roth Farm, Mol**	**36.53**	**336**	⇑P		**P**	**00 40 07.7 +0.1**
	baz=37,SNR=5.2						
H16A	**Russell Place,**	**36.58**	**333**	⇑P		**P**	**00 40 09.3 +1.1**
	baz=37,SNR=8.2						
D22A	**Cohagen**	**36.62**	**340**	⇓P		**P**	**00 40 08.8 +0.6**
	baz=37						
J14A	**Carey**	**36.62**	**329**	⇑P		**P**	**00 40 09.7 +1.2**
	baz=37						
E20A	**Meyer Farm, Mu**	**36.76**	**337**	⇓P		**P**	**00 40 10.0 +0.5**
	baz=37,SNR=5.1						
G17A	**Pierce Place,**	**36.85**	**334**	⇑P		**P**	**00 40 12.5 +2.1**
	baz=37,SNR=6.1						
C23A	**Lambert**	**36.87**	**341**	⇑P		**P**	**00 40 10.9 +0.6**
	baz=37						
F18A	**Big Timber**	**36.88**	**335**	⇓P		**P**	**00 40 11.1 +0.5**
	baz=37,SNR=6.4						
E19A	**Rath Farm, Rou**	**36.97**	**337**	⇓P		**P**	**00 40 12.1 +0.8**
	baz=37						
J13A	**Cove Ranch, Pi**	**37.01**	**329**	⇑P		**P**	**00 40 12.3 +0.6**
	baz=37						
I14A	**Mackay**	**37.03**	**330**	⇑P		**P**	**00 40 12.9 +0.9**
	baz=37,SNR=7.4						
C22A	**Vida**	**37.04**	**341**	⇑P		**P**	**00 40 12.8 +0.9**
	baz=37						
ULM	**Lac du Bonnet**	**37.11**	**352**	P		**P**	**00 40 11.1 -1.2**
ULM	**Lac du Bonnet**	**37.11**	**352**	P		**P**	**00 40 11.1 -1.2**
	comp=Z,12nm,0.6s,baz=169,slow=9.1,SNR=17						
H15A	**Lima**	**37.16**	**331**	⇑P		**P**	**00 40 14.7 +1.7**
	baz=37,SNR=11						
DGMT	**Dagmar**	**37.17**	**343**	*e*P		**P**	**00 40 13.6 +0.7**
	comp=Z,26nm,0.6s						
DGMT	**Dagmar**	**37.17**	**343**	⇓P		**P**	**00 40 13.3 +0.5**
	baz=37,SNR=10						
G16A	**Moss Hill, Enn**	**37.24**	**333**	⇓P		**P**	**00 40 15.1 +1.4**
	baz=37,SNR=5.6						
HLID	**Hailey**	**37.25**	**328**	*e*P		**P**	**00 40 15.1 +1.3**
	comp=Z,31nm,2.6s						
HLID	**Hailey**	**37.25**	**328**	⇓P		**P**	**00 40 14.5 +0.7**
	baz=37						
D20A	**Manuel Ranch,**	**37.26**	**338**	⇓P		**P**	**00 40 14.7 +1.0**
	baz=37,SNR=6.9						
F17A	**Fitzpatrick Pl**	**37.28**	**334**	⇑P		**P**	**00 40 15.0 +1.0**
	baz=37,SNR=6.0						
I13A	**Wildhorse Cree**	**37.35**	**329**	⇑P		**P**	**00 40 15.7 +1.0**
	baz=38						
B23A	**Brockton**	**37.40**	**342**	⇑P		**P**	**00 40 16.0 +1.2**
	baz=38						
MCMT	**McKenzie Canyo**	**37.41**	**331**	*e*P		**P**	**00 40 16.0 +0.8**
	comp=Z,6.4nm,0.8s						
BOZ	**Bozeman (W)**	**37.49**	**333**	*e*P		**P**	**00 40 16.7 +1.0**
	comp=Z,4.1nm,0.7s						
BOZ	**Bozeman (W)**	**37.49**	**333**	⇑P		**P**	**00 40 16.5 +0.8**
	baz=38,SNR=7.2						
H14A	**Leadore**	**37.50**	**331**	⇓P		**P**	**00 40 17.6 +1.7**
	baz=38,SNR=7.3						
G15A	**Dillon**	**37.50**	**332**	⇑P		**P**	**00 40 17.4 +1.5**
	baz=38,SNR=11						
E18A	**Harlowton**	**37.50**	**336**	⇑P		**P**	**00 40 16.8 +0.9**
	baz=38						
A24A	**Westby**	**37.53**	**343**	⇑P		**P**	**00 40 16.4 +0.6**
	baz=38,SNR=5.3						
F16A	**Kennard Place,**	**37.59**	**333**	⇓P		**P**	**00 40 17.8 +1.2**
	baz=38,SNR=5.8						
D19A	**Cripps Ranch,**	**37.59**	**337**	⇓P		**P**	**00 40 17.6 +1.1**
	baz=38						
DLMT	**Dillon**	**37.70**	**332**	*e*P		**P**	**00 40 19.3 +1.8**
C20A	**Veseth Ranch,**	**37.74**	**339**	⇓P		**P**	**00 40 18.7 +1.0**
	baz=38						
I12A	**Atlanta**	**37.78**	**328**	⇓P		**P**	**00 40 19.2 +0.9**
	baz=38						
E17A	**Martinsdale**	**37.80**	**335**	⇑P		**P**	**00 40 19.4 +1.0**
	baz=38						
MFID	**Camas Ranch**	**37.88**	**327**	⇑P		**P**	**00 40 20.0 +1.0**
	baz=38						
H13A	**Challis**	**37.89**	**330**	⇑P		**P**	**00 40 20.5 +1.4**
	baz=38,SNR=8.3						
LRM	**Limekiln Ridge**	**37.99**	**333**	*e*P		**P**	**00 40 21.2 +1.2**
G14A	**Jackson**	**38.01**	**331**	⇑P		**P**	**00 40 21.2 +1.0**
	baz=38						
F15A	**Butte**	**38.02**	**333**	⇓P		**P**	**00 40 20.8 +0.6**
	baz=38,SNR=8.7						
C19A	**Slack Wire Ran**	**38.13**	**338**	⇓P		**P**	**00 40 21.9 +0.9**
	baz=38,SNR=5.8						
A22A	**Carney Farms,**	**38.15**	**342**	⇑P		**P**	**00 40 21.9 +0.8**
	baz=38						
H12A	**Diamond D Ranc**	**38.18**	**329**	⇓P		**P**	**00 40 23.1 +1.6**
	baz=38,SNR=5.1						
E16A	**East Helena**	**38.20**	**334**	⇑P		**P**	**00 40 22.6 +0.9**
	baz=38,SNR=7.3						
G13A	**Cobalt**	**38.27**	**330**	⇑P		**P**	**00 40 23.2 +1.0**
	baz=38						
D17A	**Six Diamond Ra**	**38.29**	**336**	⇑P		**P**	**00 40 23.1 +0.7**
	baz=38,SNR=9.0						
E15A	**Deer Lodge**	**38.54**	**333**	⇓P		**P**	**00 40 25.2 +0.8**
	baz=39,SNR=8.0						
D16A	**Dana Ranch, Ca**	**38.54**	**335**	⇑P		**P**	**00 40 25.1 +0.5**
	baz=39						
EGMT	**Eagleton**	**38.64**	**337**	⇓P		**P**	**00 40 25.6 +0.4**
	baz=39						
B19A	**Brinkman Farms**	**38.70**	**338**	⇓P		**P**	**00 40 26.6 +0.9**
	baz=39						
A20A	**Cobblestone Ra**	**38.70**	**340**	⇓P		**P**	**00 40 26.6 +0.9**
	baz=39						
C17A	**Wharram Farm,**	**38.71**	**336**	⇑P		**P**	**00 40 26.3 +0.5**
	baz=39,SNR=5.3						
G12A	**Big Creek, Yel**	**38.82**	**330**	⇓P		**P**	**00 40 27.3 +0.3**
	baz=39						
F13A	**Darby**	**38.83**	**331**	⇓P		**P**	**00 40 27.4 +0.5**
	baz=39,SNR=7.5						
E14A	**Clinton**	**38.91**	**332**	⇑P		**P**	**00 40 28.5 +0.8**
	baz=39						
D15A	**Lincoln**	**38.96**	**334**	⇑P		**P**	**00 40 28.8 +0.7**
	baz=39,SNR=8.8						
A19A	**Klindworth Far**	**39.03**	**339**	⇓P		**P**	**00 40 28.8 +0.4**
	baz=39						
C16A	**Fuhringer Ranc**	**39.24**	**335**	⇑P		**P**	**00 40 30.6 +0.3**
	baz=39						
F12A	**Elk City**	**39.24**	**330**	⇑P		**P**	**00 40 30.7 +0.4**
	baz=39,SNR=11						
E13A	**Victor**	**39.24**	**332**	⇓P		**P**	**00 40 30.7 +0.4**
	baz=39,SNR=7.0						
B17A	**L&G Farms, Che**	**39.26**	**337**	⇑P		**P**	**00 40 30.2 -0.1**
	baz=39						
D14A	**Greenough**	**39.42**	**333**	⇓P		**P**	**00 40 31.9 +0.1**
	baz=40						
MSO	**Missoula**	**39.42**	**332**	*e*P		**P**	**00 40 32.7 +0.9**
MSO	**Missoula**	**39.42**	**332**	⇑P		**P**	**00 40 32.5 +0.7**
	baz=40,SNR=5.5						
C15A	**Salmond Ranch,**	**39.57**	**335**	⇑P		**P**	**00 40 34.1 +1.0**
	baz=40,SNR=6.5						
A17A	**Triple J Farms**	**39.75**	**337**	⇓P		**P**	**00 40 34.7 +0.2**
	baz=40,SNR=5.3						
D13A	**Huson**	**39.86**	**332**	⇓P		**P**	**00 40 36.1 +0.8**
	baz=40						
B15A	**Bradely Ranch,**	**39.98**	**335**	⇓P		**P**	**00 40 37.0 +0.7**
	baz=40						
SIV	**San Ignacio**	**40.01**	**136**	P		**P**	**00 40 36.7 -0.2**
SIV				PcP		**PcP**	**00 42 38.8 +0.5**
SIV	**San Ignacio**	**40.01**	**136**	P		**P**	**00 40 36.7 -0.2**
	comp=Z,6.3nm,0.7s,baz=317,slow=8.0,SNR=31						
SIV				PcP		**PcP**	**00 42 38.8 +0.5**
	comp=Z,2.7nm,0.6s,baz=321,slow=3.5,SNR=9.1						
A16A	**West Butte Ran**	**40.10**	**336**	⇑P		**P**	**00 40 38.0 +0.7**
	baz=40						
D12A	**Red Ives Fores**	**40.23**	**332**	⇑P		**P**	**00 40 38.9 +0.4**
	baz=40						
C13A	**Hot Springs**	**40.35**	**333**	⇓P		**P**	**00 40 40.5 +1.2**
	baz=40						
B13A	**Whitefish**	**40.83**	**334**	⇓P		**P**	**00 40 44.0 +0.7**
	baz=41						
A14A	**Double T Ranch**	**40.85**	**335**	⇓P		**P**	**00 40 44.1 +0.6**
	baz=41,SNR=10						
C11A	**Tepee Creek (N**	**41.23**	**332**	⇑P		**P**	**00 40 47.3 +0.8**
	baz=41						
A13A	**Flathead Natio**	**41.23**	**334**	⇓P		**P**	**00 40 47.4 +0.8**
	baz=41						
FFC	**Flin Flon**	**42.43**	**349**	*e*P		**P**	**00 40 56.0 -0.1**
SCHQ	**Schefferville**	**44.61**	**18**	P		**P**	**00 41 12.2 -1.3**
SCHQ	**Schefferville**	**44.61**	**18**	P		**P**	**00 41 12.2 -1.3**
	comp=Z,11nm,0.7s,baz=224,slow=5.4,SNR=27						
CPUP	**Villa Florida**	**49.95**	**142**	P		**P**	**00 41 54.0 -0.9**
CPUP	**Villa Florida**	**49.95**	**142**	P		**P**	**00 41 54.0 -0.9**
	comp=Z,1.1nm,0.6s,baz=304,slow=15,SNR=3.7						
YKA	**Yellowknife Ar**	**52.30**	**345**	P		**P**	**00 42 11.6 -0.4**
YKA	**Yellowknife Ar**	**52.30**	**345**	P		**P**	**00 42 11.6 -0.4**
	comp=Z,4.4nm,0.7s,baz=138,slow=7.8,SNR=96						
YKW3	**Yellowknife Ar**	**52.36**	**345**	*e*P		**P**	**00 42 11.7 -0.7**
ILAR	**Eielson Array**	**64.60**	**336**	P		**P**	**00 43 36.5 -0.6**
ILAR	**Eielson Array**	**64.60**	**336**	P		**P**	**00 43 36.5 -0.6**
	comp=Z,1.3nm,0.6s,baz=162,slow=4.8,SNR=26						
ESDC	**Sonseca Array**	**77.44**	**52**	P		**P**	**00 44 54.6 -0.3**
ESDC	**Sonseca Array**	**77.44**	**52**	P		**P**	**00 44 54.6 -0.3**
	comp=Z,0.6nm,0.5s,baz=280,slow=5.3,SNR=8.4						
ARCES	**ARCESS Array B**	**85.56**	**19**	P		**P**	**00 45 37.2 +0.5**
ARCES	**ARCESS Array B**	**85.56**	**19**	P		**P**	**00 45 37.2 +0.5**
	comp=Z,5.2nm,1.0s,baz=285,slow=5.6,SNR=5.5						
TORD	**Torodi Ar. Bea**	**87.29**	**77**	P		P	00 45 43.0 -3.2
TORD	**Torodi Ar. Bea**	**87.29**	**77**	P		P	00 45 43.0 -3.2
	comp=Z,0.3nm,0.5s,baz=287,slow=6.3,SNR=8.0						
FINES	**FINESS Array B**	**89.52**	**26**	P		**P**	**00 45 55.1 -0.7**
FINES	**FINESS Array B**	**89.52**	**26**	P		**P**	**00 45 55.1 -0.7**
	comp=Z,2.7nm,1.0s,baz=298,slow=4.1,SNR=3.6						
CN2	**Changchun**	**115.04**	**333**	*e*PKP		**PKPdf**	**00 51 42.5 +3.5**
MKAR	**Makanchi Array**	**119.42**	**7**	PKP		**PKPdf**	**00 51 45.0 -2.4**
MKAR	**Makanchi Array**	**119.42**	**7**	PKP		**PKPdf**	**00 51 45.0 -2.4**
	comp=Z,0.2nm,0.3s,baz=353,slow=2.6,SNR=7.8						
HHC	**Hu-ho-hao-te**	**122.77**	**342**	*e*PKP		**PKPdf**	**00 51 51.3 -2.8**
HHC				PP		**PP**	**00 53 34.0 +0.7**
HHC				PKS		**PKSdf**	**00 55 25.9 -5.0**
HHC				SKS		**SKSdf**	**00 58 45.9 -2.7**
HHC				SKKS		**SKKSac**	**01 00 08.4 -6.4**
HHC				AMB		AMB	
	comp=Z,96nm,5.0s						
WMQ	**Urumqi**	**122.85**	**3**	PKP		**PKPdf**	**00 51 53.5 -0.6**
KSH	**Kashi**	**125.33**	**15**	*e*PKP		**PKPdf**	**00 52 03.3 +4.2**
KSH				sPKP			00 53 03.0
KSH				PP		PP	00 53 58.3 +8.0
KSH				PKS		**PKSdf**	**00 55 38.1 +2.3**
KSH				SKKS			01 00 33.6
KSH				SS		**SS**	**01 10 39.5 +7.1**
KSH				LR		LR	
	comp=N,85nm,3.4s						
KSH				LR		LR	
	comp=E,110nm,3.9s						
KSH				LR		LR	
	comp=Z,390nm,5.5s						
LZH	**Lanzhou**	**129.28**	**347**	*e*PKP		**PKPdf**	**00 52 08.0 +1.2**
LZH				sPKP			00 53 10.2
STKA	**Stephens Creek**	**130.66**	**240**	PKP		**PKPdf**	**00 52 10.0 +0.8**
STKA	**Stephens Creek**	**130.66**	**240**	PKP		**PKPdf**	**00 52 10.0 +0.8**
	comp=Z,1.0nm,0.7s,baz=100,slow=1.9,SNR=4.7						
GYA	**Guiyang**	**137.58**	**339**	*e*Pdif		**Pdif**	**00 49 30.0 -1.6**
GYA				PKP		**PKPdf**	**00 52 22.6 +0.1**
GYA				sPKP			00 53 30.4
GYA				PP		**PP**	**00 55 13.7 +4.5**
GYA				AMB		AMB	
	comp=Z,90nm,8.0s						
WRA	**Warramunga Arr**	**138.45**	**255**	PKP		**PKPdf**	**00 52 25.1 +1.0**
WRA	**Warramunga Arr**	**138.45**	**255**	PKP		**PKPdf**	**00 52 25.1 +1.0**
	comp=Z,2.9nm,0.6s,baz=87,slow=1.9,SNR=19						
ASAR	**Alice Springs**	**138.59**	**250**	PKPpre		PKPpre	00 52 15.9
ASAR				PKP		**PKPdf**	**00 52 25.5 +1.2**
ASAR	**Alice Springs**	**138.59**	**250**	PKhKP		PKPpre	00 52 15.9
	comp=Z,0.2nm,0.4s,baz=103,slow=3.0,SNR=5.1						
ASAR				PKP		**PKPdf**	**00 52 25.5 +1.2**
	comp=Z,1.7nm,0.7s,baz=88,slow=1.6,SNR=18						
CMAR	**Chiang Mai Arr**	**147.37**	**347**	PKPbc		**PKPdf**	**00 52 40.3 +0.5**
CMAR	**Chiang Mai Arr**	**147.37**	**347**	PKPbc		**PKPdf**	**00 52 40.3 +0.5**
	comp=Z,0.2nm,0.4s,baz=345,slow=2.8,SNR=4.8						

NIED ***13*** *00:50:00, 46.˚70N× 153.˚00E, h8km, Mw4.1 Best double couple: M₀1.50000×10¹⁵ NP1:φ₀246.00000°, δ74.00000°, λ99.00000°. NP2:φ₀35.00000°, δ18.00000°, λ60.00000°.*
JMA ***13*** *00:50:13.0±0.7, 46.˚74N× 152.˚95E, h30km, M4.4*
ISCJB ***13*** *00:50:14.3±0.5, 46.˚11N±0.˚08× 152.˚91E±0.˚09, h31km, mb3.9/26, MS3.3/1, Error ellipse: s-maj=14.3km s-min=3.9km az=145.2*
MOS ***13*** *00:50:14.6±1.1, 46.˚22N× 153.˚06E, h32km, mb4.2/17, Error ellipse: s-maj=13.8km s-min=9.7km az=71.0*
IDC ***13*** *00:50:17.4±3.2, 46.˚18N× 153.˚10E, h39km±28km, mb3.7/21, mb1 3.9/25, mb1mx3.8/33, mbtmp3.7/25, ML3.3/4, MS3.1/2, Ms1 3.1/2, ms1mx2.5/46, Error ellipse: s-maj=18.2km s-min=13.1km az=142.0*

ISC 13 00:50:15.8±0.7, 46.˚1N±0.˚1× 152.˚98E±0.˚08, h31km, n67, σ1°58/67, mb3.9/26, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**5.05**	**23**	*e*PN	Pn	00 51 23.0	-6.3
YUK	**Yuzh-Kuril'sk**	**5.45**	**250**	*e*PN	**Pn**	**00 51 37.4**	**+2.7**
YUK				pmax	pmax		
	comp=E,52nm,0.3s						
YUK				pmax	pmax		
	comp=N,58nm,0.8s						
YUK				pmax	pmax		
	comp=Z,46nm,0.6s						
NEM2	**Nemuro 2**	**5.83**	**245**	P	**Pn**	**00 51 39.7**	**-0.3**
NEM2				*e*S	**Sn**	**00 52 44.8**	**-1.0**
JRA	**Rausu**	**5.97**	**252**	P	**Pn**	**00 51 44.2**	**+2.3**
JRA				*e*S	**Sn**	**00 52 54.0**	**+4.8**
JNK	**Nakash**	**6.38**	**250**	*e*S	**Sn**	**00 53 02.2**	**+2.8**
JAK	**Akkeshi**	**6.68**	**245**	P	**Pn**	**00 51 51.9**	**+0.3**
JAK				*e*S	**Sn**	**00 53 05.3**	**-1.3**
JTKR	**Abashiri--Toko**	**6.77**	**255**	P	**Pn**	**00 51 55.4**	**+2.5**
YSS	**Yuzh-Sakhalins**	**7.11**	**281**	*e*PN	Pb	00 52 13.0	-5.4
JMP	**Maruseppu**	**7.12**	**256**	P	**Pn**	**00 51 59.9**	**+2.1**
JAR	**Ashorobuto**	**7.13**	**250**	P	**Pn**	**00 51 59.7**	**+1.8**
JAR				*e*S	**Sn**	**00 53 19.0**	**+1.2**
JOB	**Onbets**	**7.27**	**247**	*e*S	**Sn**	**00 53 21.3**	**0.0**
JKK2	**Kamakawa 2**	**7.59**	**257**	P	Pn	00 52 07.1	+3.0
ASAJ	**Asahikawa**	**7.61**	**259**	Pn	Pn	00 52 07.6	+3.2
	comp=Z,0.6nm,0.3s,baz=73,slow=14,SNR=3.2						
ASAJ				LR	LR	00 54 40.4	
	comp=Z,60nm,19.3s,baz=346,slow=34						
PETK	**Petropavlovsk-**	**7.66**	**22**	PN	**Pn**	**00 52 03.6**	**-1.6**
PETK	**Petropavlovsk-**	**7.66**	**22**	Pn	**Pn**	**00 52 03.5**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=181,slow=14,SNR=7.1						
JCH	**Churui**	**7.72**	**247**	P	**Pn**	**00 52 06.7**	**+0.8**
JCH				*e*S	**Sn**	**00 53 30.7**	**-1.5**
JEM	**Erimo**	**8.16**	**244**	*e*S	**Sn**	**00 53 42.2**	**-0.9**
ERM	**Erimo**	**8.16**	**244**	*e*PN	**Pn**	**00 52 13.7**	**+1.7**
JNBK	**Urakawa-nobuka**	**8.28**	**246**	P	**Pn**	**00 52 14.1**	**+0.5**
JNBK				*e*S	**Sn**	**00 53 43.2**	**-2.8**
JBT2	**Biratori 2**	**8.29**	**250**	P	**Pn**	**00 52 14.9**	**+1.2**
JNB	**Noboribetsu**	**9.30**	**251**	*e*S	**Sn**	**00 54 10.1**	**-0.9**
JKB	**Kayabe**	**9.58**	**248**	P	**Pn**	**00 52 31.5**	**+0.1**
JYM2	**Yakumo 2**	**9.90**	**251**	P	**Pn**	**00 52 36.8**	**+1.0**
JANG	**Nango**	**10.13**	**240**	P	**Pn**	**00 52 36.3**	**-2.7**
JANG				*e*S	Sn	00 54 23.9	-7.5
JTM	**Tenmabayashi**	**10.15**	**243**	P	**Pn**	**00 52 39.2**	**-0.1**
JTM				*e*S	Sn	00 54 25.5	-6.5
JOSM	**Okushiri--Mats**	**10.51**	**252**	P	**Pn**	**00 52 44.7**	**+0.6**
MJAR	**Matsushiro Arr**	**14.61**	**234**	Pn	**Pn**	**00 53 42.2**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=42,slow=9.3,SNR=3.0						
KLR	**Kul'dur**	**14.64**	**290**	*e*P	**P**	**00 53 45.7**	**-0.8**
USRK	**Ussuriysk Arra**	**14.92**	**270**	Pn	**P**	**00 53 47.5**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=77,slow=12,SNR=6.0						
KSRS	**Korea Array**	**20.52**	**254**	P	Pn	00 54 54.4	+0.8
	comp=Z,1.0nm,0.5s,baz=64,slow=11,SNR=5.1						
TIXI	**Tiksi**	**28.08**	**344**	*e*P	**P**	**00 56 04.7**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**30.25**	**275**	*e*P	**P**	**00 56 24.3**	**+0.5**
HHC				S	**S**	**01 01 15.7**	**-5.8**
HHC				pmax	pmax		
	comp=Z,29nm,0.5s						
HHC				pmax	pmax		
	comp=Z,130nm,5.6s						
SONM	**Songino Array**	**31.47**	**290**	P	P	00 56 37.2	+2.7
	comp=Z,0.4nm,0.4s,baz=68,slow=8.4,SNR=3.9						
ILAR	**Eielson Array**	**37.12**	**38**	P	**P**	**00 57 22.5**	**-0.6**
	comp=Z,1.7nm,1.2s,baz=272,slow=8.6,SNR=7.3						
INK	**Inuvik**	**42.26**	**32**	P	**P**	**00 58 05.9**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=311,slow=6.2,SNR=8.2						
ZALV	**Zalesovo Beam**	**42.93**	**306**	LR	LR	01 17 28.9	
	comp=Z,41nm,19.2s,baz=74,slow=38						
MKAR	**Makanchi Array**	**47.17**	**298**	P	**P**	**00 58 45.0**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**47.17**	**298**	P	**P**	**00 58 45.0**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=70,slow=8.6,SNR=12						
KURK	**Kurchatov**	**47.66**	**304**	*e*P	**P**	**00 58 48.2**	**-0.6**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BRVK	**Borovoye**	**51.25**	**310**	*e*P	**P**	**00 59 15.1**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
YKA	**Yellowknife Ar**	**51.51**	**36**	P	**P**	**00 59 17.6**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=295,slow=7.1,SNR=7.4						
CMAR	**Chiang Mai Arr**	**52.13**	**257**	P	**P**	**00 59 24.5**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=32,slow=7.9,SNR=5.1						
ARCES	**ARCESS Array B**	**58.45**	**341**	P	**P**	**01 00 07.9**	**-0.1**
	comp=Z,4.9nm,0.9s,baz=30,slow=9.3,SNR=4.2						
JOF	**Joensuu**	**61.89**	**334**	*e*P	**P**	**01 00 30.7**	**-0.9**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JOF	**Joensuu**	**61.89**	**334**	*e*p	**P**	**01 00 30.7**	**-0.9**
	comp=Z,0.8nm,0.5s						
NVAR	**Mina Array Bea**	**62.82**	**62**	P	**P**	**01 00 39.0**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=282,slow=8.2,SNR=5.8						
KAF	**Kangasniemi**	**64.00**	**335**	*e*P	**P**	**01 00 44.4**	**-1.3**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KAF	**Kangasniemi**	**64.00**	**335**	*e*p	**P**	**01 00 44.4**	**-1.3**
	comp=Z,1.5nm,0.7s						
FINES	**FINESS Array B**	**64.60**	**335**	P	**P**	**01 00 49.0**	**-0.7**
	comp=Z,1.7nm,0.5s,baz=34,slow=7.3,SNR=27						
PDAR	**Pinedale Array**	**65.21**	**54**	P	**P**	**01 00 54.1**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=291,slow=1.3,SNR=4.8						
WRA	**Warramunga Arr**	**67.86**	**199**	P	**P**	**01 01 11.4**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=18,slow=6.7,SNR=3.7						
NB2	**NORSAR Subarra**	**68.82**	**341**	P	**P**	**01 01 16.5**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**68.82**	**341**	P	**P**	**01 01 16.6**	**0.0**
	comp=Z,0.5nm,0.5s,baz=256,slow=6.2,SNR=6.8						
HFS	**Hagfors**	**69.05**	**340**	P	**P**	**01 01 17.7**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=57,slow=5.5,SNR=16						
KBZ	**Khabaz**	**71.25**	**314**	P	**P**	**01 01 33.5**	**+1.7**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KBZ	**Khabaz**	**71.25**	**314**	P	**P**	**01 01 33.5**	**+1.7**
	comp=Z,1.9nm,0.7s,baz=112,slow=3.0,SNR=6.5						
ASAR	**Alice Springs**	**71.55**	**198**	P	**P**	**01 01 35.1**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=14,slow=6.2,SNR=11						
AKASG	**Malin Array Be**	**72.05**	**326**	P	**P**	**01 01 36.4**	**0.0**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	**Malin Array Be**	**72.05**	**326**	P	**P**	**01 01 36.4**	**0.0**
	comp=Z,2.1nm,0.4s,baz=34,slow=6.2,SNR=8.7						
KOLS	**Kolonicke sedl**	**76.08**	**329**	*e*P	**P**	**01 02 01.0**	**+0.9**
EKA	**Eskdalemuir Ar**	**76.96**	**346**	P	**P**	**01 02 06.4**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=20,slow=5.1,SNR=6.5						
VYHS	**Vyhne**	**77.66**	**331**	*e*P	**P**	**01 02 07.7**	**-1.2**
TXAR	**Lajitas Array**	**77.90**	**60**	P	**P**	**01 02 10.4**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=256,slow=3.6,SNR=10						
GERES	**GERESS Array B**	**79.01**	**334**	P	**P**	**01 02 17.1**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=15,slow=5.5,SNR=3.9						
MMAI	**Mount Meron Ar**	**83.18**	**311**	P	**P**	**01 02 40.4**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=53,slow=3.2,SNR=4.4						
TORD	**Torodi Ar. Bea**	**115.61**	**329**	PKP	**PKPdf**	**01 08 54.8**	**-0.3**
	comp=Z,0.3nm,1.0s,baz=28,slow=3.6,SNR=2.6						
PLCA	**Paso Flores**	**148.23**	**96**	PKPbc	**P

	2µm,0.5s						
FIAM	**Fiamignano**	**0.26**	**259**	Pg	Pg	01 00 51.1	+0.7
FIAM				Sg	Sb	01 00 55.5	-1.1
	2µm,0.5s						
VCEL	**Villa Celiera**	**0.30**	**75**	Pg	Pg	01 00 51.6	+0.4
VCEL				Sg	Sg	01 00 56.5	+1.2
	3µm,0.4s						
VCEL	**Villa Celiera**	**0.30**	**75**	Pg	Pg	01 00 51.6	+0.4
VCEL				Sg	Sg	01 00 56.5	+1.2
	3µm,0.4s						
PTQR	**Pietraquaria**	**0.30**	**188**	Pg	Pg	01 00 51.7	+0.5
PTQR				Sg	Sb	01 00 56.6	-1.2
PTQR	**Pietraquaria**	**0.30**	**188**	Pg	Pg	01 00 51.7	+0.5
PTQR				Sg	Sb	01 00 56.6	-1.2
TERO	**Teramo**	**0.32**	**20**	Pg	Pg	01 00 51.8	+0.1
TERO				Sg	Sg	01 00 56.7	+0.6
	2µm,0.3s						
TERO	**Teramo**	**0.32**	**20**	Pg	Pg	01 00 51.8	+0.1
TERO				Sg	Sg	01 00 56.7	+0.6
	2µm,0.3s						
LNSS	**Leonessa**	**0.42**	**313**	Pg	Pg	01 00 53.8	+0.3
LNSS				Sg	Sb	01 01 01.1	-0.3
	1µm,0.8s						
LNSS	**Leonessa**	**0.42**	**313**	Pg	Pg	01 00 53.8	+0.3
LNSS				Sg	Sb	01 01 01.1	-0.3
	1µm,0.8s						
INTR	**Introdacqua**	**0.45**	**132**	Pg	Pg	01 00 54.4	+0.3
INTR				Sg	Sb	01 01 01.4	-0.9
	2µm,0.7s						
INTR	**Introdacqua**	**0.45**	**132**	Pg	Pg	01 00 54.4	+0.3
INTR				Sg	Sb	01 01 01.4	-0.9
	2µm,0.7s						
VVLD	**Villa Vallelon**	**0.46**	**164**	Pg	Pg	01 00 54.3	0.0
VVLD				Sg	Sb	01 01 01.6	-1.0
	717nm,0.4s						
VVLD	**Villa Vallelon**	**0.46**	**164**	Pg	Pg	01 00 54.3	0.0
VVLD				Sg	Sb	01 01 01.6	-1.0
	717nm,0.4s						
CERT	**Cerreto**	**0.51**	**224**	Pg	Pg	01 00 55.2	+0.1
	954nm,0.5s						
CERT	**Cerreto**	**0.51**	**224**	Pg	Pg	01 00 55.2	+0.1
	954nm,0.5s						
GUAR	**Guarcino**	**0.53**	**192**	Pg	Pg	01 00 55.6	0.0
	511nm,0.3s						
GUAR	**Guarcino**	**0.53**	**192**	Pg	Pg	01 00 55.6	0.0
	511nm,0.3s						
NRCA	**Norcia**	**0.57**	**334**	Pg	Pg	01 00 56.3	-0.1
NRCA				Sg	Sb	01 01 05.2	-0.6
	413nm,0.1s						
NRCA	**Norcia**	**0.57**	**334**	Pg	Pg	01 00 56.3	-0.1
NRCA				Sg	Sb	01 01 05.2	-0.6
	413nm,0.1s						
MNS	**Montasola**	**0.58**	**277**	Pg	Pg	01 00 56.3	-0.1
	191nm,0.3s						
MNS	**Montasola**	**0.58**	**277**	Pg	Pg	01 00 56.3	-0.1
	191nm,0.3s						
TRTR	**Tortoreto Alta**	**0.60**	**35**	Pg	Pb	01 00 58.1	+0.4
TRTR	**Tortoreto Alta**	**0.60**	**35**	Pg	Pb	01 00 58.1	+0.4
LPEL	**Lama dei Pelig**	**0.60**	**116**	Pg	Pg	01 00 56.8	-0.1
LPEL				Sg	Sb	01 01 06.2	-0.4
	654nm,0.5s						
LPEL	**Lama dei Pelig**	**0.60**	**116**	Pg	Pg	01 00 56.8	-0.1
LPEL				Sg	Sb	01 01 06.2	-0.4
	654nm,0.5s						
MTCE	**Montecelio**	**0.61**	**241**	Pg	Pg	01 00 57.0	+0.1
	214nm,0.4s						
MTCE	**Montecelio**	**0.61**	**241**	Pg	Pg	01 00 57.0	+0.1
	214nm,0.4s						
POFI	**Posta Fibreno**	**0.63**	**162**	Pg	Pg	01 00 57.0	-0.4
	220nm,0.7s						
POFI	**Posta Fibreno**	**0.63**	**162**	Pg	Pg	01 00 57.0	-0.4
	220nm,0.7s						
OFFI	**Offida**	**0.64**	**15**	Pg	Pb	01 00 58.4	0.0
	1µm,0.6s						
OFFI	**Offida**	**0.64**	**15**	Pg	Pb	01 00 58.4	0.0
	1µm,0.6s						
SDI	**San Donato**	**0.66**	**156**	Pg	Pg	01 00 58.0	0.0
	236nm,0.2s						
SDI	**San Donato**	**0.66**	**156**	Pg	Pg	01 00 58.0	0.0
	236nm,0.2s						
CAFR	**Castel Frentan**	**0.67**	**97**	Pg	Pb	01 00 58.5	-0.4
	507nm,0.5s						
CAFR	**Castel Frentan**	**0.67**	**97**	Pg	Pb	01 00 58.5	-0.4
	507nm,0.5s						
CESX	**Cesi**	**0.71**	**295**	Pg	Pb	01 01 00.0	+0.4
	179nm,0.4s						
CESX	**Cesi**	**0.71**	**295**	Pg	Pb	01 01 00.0	+0.4
	179nm,0.4s						
RMP	**Rome, Mte Porz**	**0.76**	**228**	Pg	Pg	01 00 59.9	+0.2
	332nm,0.6s						
RMP	**Rome, Mte Porz**	**0.76**	**228**	Pg	Pg	01 00 59.9	+0.2
	332nm,0.6s						
FDMO	**Fiordimonte**	**0.77**	**339**	Pg	Pg	01 00 59.6	-0.4
	159nm,0.2s						
FDMO	**Fiordimonte**	**0.77**	**339**	Pg	Pg	01 00 59.6	-0.4
	159nm,0.2s						
GIUL	**Giuliano Di Ro**	**0.77**	**191**	Pg	Pg	01 00 59.6	-0.5
	228nm,0.8s						
GIUL	**Giuliano Di Ro**	**0.77**	**191**	Pg	Pg	01 00 59.6	-0.5
	228nm,0.8s						
RDP	**Rocca di Papa**	**0.78**	**225**	Pg	Pb	01 01 01.1	+0.1
	481nm,0.4s						
RDP	**Rocca di Papa**	**0.78**	**225**	Pg	Pb	01 01 01.1	+0.1
	481nm,0.4s						
CESI	**CESI - Serrava**	**0.80**	**330**	Pg	Pg	01 01 00.3	-0.3
	64nm,0.7s						
CESI	**CESI - Serrava**	**0.80**	**330**	Pg	Pg	01 01 00.3	-0.3
	64nm,0.7s						
RNI2	**Rionero Sannit**	**0.81**	**140**	Pg	Pb	01 01 01.1	-0.3
	380nm,0.6s						
RNI2	**Rionero Sannit**	**0.81**	**140**	Pg	Pb	01 01 01.1	-0.3
	380nm,0.6s						
GUMA	**Gualdo di Mace**	**0.82**	**25**	Pg	Pg	01 01 00.0	-1.1
	339nm,0.3s						
GUMA	**Gualdo di Mace**	**0.82**	**25**	Pg	Pg	01 01 00.0	-1.1
	339nm,0.3s						
CERA	**Filignano**	**0.83**	**150**	Pg	Pg	01 01 00.8	-0.5
	334nm,0.8s						
CERA	**Filignano**	**0.83**	**150**	Pg	Pg	01 01 00.8	-0.5
	334nm,0.8s						
MIDA	**Miranda**	**0.90**	**138**	Pg	Pg	01 01 01.9	-0.7
	157nm,0.3s						
MIDA	**Miranda**	**0.90**	**138**	Pg	Pg	01 01 01.9	-0.7
	157nm,0.3s						
ASSB	**Assisi San Ben**	**0.93**	**321**	Pg	Pg	01 01 02.8	-0.4
	126nm,0.4s						
ASSB	**Assisi San Ben**	**0.93**	**321**	Pg	Pg	01 01 02.8	-0.4
	126nm,0.4s						
SNTG	**Esanatoglia**	**1.01**	**338**	Pg	Pg	01 01 04.0	-0.6
	37nm,0.3s						
SNTG	**Esanatoglia**	**1.01**	**338**	Pg	Pg	01 01 04.0	-0.6
	37nm,0.3s						
CING	**Cingoli**	**1.07**	**350**	Pg	Pg	01 01 05.1	-0.8
	105nm,0.7s						
CING	**Cingoli**	**1.07**	**350**	Pg	Pg	01 01 05.1	-0.8
	105nm,0.7s						
SGG	**Gregorio Mates**	**1.16**	**143**	Pg	Pb	01 01 07.3	-0.1
SGG	**Gregorio Mates**	**1.16**	**143**	Pg	Pb	01 01 07.3	-0.1
ARVD	**Arcevia**	**1.24**	**342**	Pg	Pn	01 01 08.0	-0.6
	63nm,0.5s						
ARVD	**Arcevia**	**1.24**	**342**	Pg	Pn	01 01 08.0	-0.6
	63nm,0.5s						
PIEI	**Pieia**	**1.39**	**331**	Pn	Pb	01 01 11.4	+0.1
	40nm,0.5s						
PIEI	**Pieia**	**1.39**	**331**	Pn	Pb	01 01 11.4	+0.1
	40nm,0.5s						

*ISCJB **13** 01:01:44.4±0.2, 42°.24N±0°.02×13°.51E±0°.03, h14km±2km, Error ellipse: s-maj=3.3km s-min=2.8km az=162.6*
*ROM **13** 01:01:44.4±0.1, 42°.24N×13°.50E, h9km, Ml3.1/11, Error ellipse: s-maj=0.9km s-min=0.8km az=83.0*
*CSEM **13** 01:01:44.8±0.1, 42°.24N×13°.50E, h10km, ML3.5/9, Error ellipse: s-maj=3.0km s-min=2.5km az=59.0*
*LDG **13** 01:01:48.6±0.8, 42°.44N×13°.33E, h2km, Ml2.8/7, Error ellipse: s-maj=16.7km s-min=10.2km az=98.0*

ISC 13 01:01:44.7±0.8, 42°.26N±0°.02×13°.50E±0°.02, h13km±4km, n96,σ1§39/128, 7C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.06**	**83**	⇑*i*Pg	**Pg**		**01 01 47.0**	**-0.4**
FAGN				Sg	**Sg**		**01 01 48.5**	**-0.8**
	17µm,0.4s							
FAGN	**Fagnano**	**0.06**	**83**	⇑*i*Pg	**Pg**		**01 01 47.0**	**-0.4**
FAGN				Sg	**Sg**		**01 01 48.5**	**-0.8**
	17µm,0.4s							
AQU	**L'Aquila**	**0.12**	**322**	Pg	**Pg**		**01 01 48.2**	**+0.2**
AQU				Sg	**Sg**		**01 01 50.4**	**0.0**
	9µm,0.2s							
AQU	**L'Aquila**	**0.12**	**322**	Pg	**Pg**		**01 01 48.2**	**+0.2**
AQU				Sg	**Sg**		**01 01 50.4**	**0.0**
	9µm,0.2s							
PTQR	**Pietraquaria**	**0.25**	**198**	⇑*i*Pg	**Pg**		**01 01 50.1**	**+0.1**
PTQR				Sg	**Sg**		**01 01 52.9**	**-0.7**
PTQR	**Pietraquaria**	**0.25**	**198**	⇑*i*Pg	**Pg**		**01 01 50.1**	**+0.1**
PTQR				Sg	**Sg**		**01 01 52.9**	**-0.7**
FIAM	**Fiamignano**	**0.28**	**272**	⇑*e*Pg	**Pg**		**01 01 50.9**	**+0.2**
FIAM				Sg	**Sg**		**01 01 55.5**	**+0.8**
	2µm,0.5s							
FIAM	**Fiamignano**	**0.28**	**272**	⇑*e*Pg	**Pg**		**01 01 50.9**	**+0.2**
FIAM				Sg	**Sg**		**01 01 55.5**	**+0.8**
	2µm,0.5s							
CAMP	**Campotosto**	**0.29**	**346**	Pg	**Pg**		**01 01 51.1**	**+0.4**
CAMP				Sg	**Sb**		**01 01 55.7**	**-0.8**
CAMP	**Campotosto**	**0.29**	**346**	Pg	**Pg**		**01 01 51.1**	**+0.4**
CAMP				Sg	**Sb**		**01 01 55.7**	**-0.8**
VCEL	**Villa Celiera**	**0.29**	**61**	Pg	**Pg**		**01 01 51.0**	**+0.3**
VCEL				Sg	**Sg**		**01 01 55.8**	**+1.0**
	3µm,0.4s							
VCEL	**Villa Celiera**	**0.29**	**61**	Pg	**Pg**		**01 01 51.0**	**+0.3**
VCEL				Sg	**Sg**		**01 01 55.8**	**+1.0**
	3µm,0.4s							
TERO	**Teramo**	**0.37**	**12**	Pg	**Pg**		**01 01 52.3**	**+0.1**
TERO				Sg	**Sb**		**01 01 58.8**	**-0.1**
	2µm,0.3s							
TERO	**Teramo**	**0.37**	**12**	Pg	**Pg**		**01 01 52.3**	**+0.1**
TERO				Sg	**Sb**		**01 01 58.8**	**-0.1**
	2µm,0.3s							
INTR	**Introdacqua**	**0.39**	**129**	Pg	**Pg**		**01 01 52.5**	**0.0**
INTR				Sg	**Sg**		**01 01 58.4**	**+0.6**
	2µm,0.7s							
INTR	**Introdacqua**	**0.39**	**129**	Pg	**Pg**		**01 01 52.5**	**0.0**
INTR				Sg	**Sg**		**01 01 58.4**	**+0.6**
	2µm,0.7s							
VVLD	**Villa Vallelon**	**0.40**	**167**	Pg	**Pg**		**01 01 52.5**	**-0.1**
VVLD				Sg	**Sg**		**01 01 58.2**	**+0.2**
VVLD	**Villa Vallelon**	**0.40**	**167**	Pg	**Pg**		**01 01 52.5**	**-0.1**
VVLD				Sg	**Sg**		**01 01 58.2**	**+0.2**
GUAR	**Guarcino**	**0.48**	**197**	Pg	**Pg**		**01 01 54.0**	**-0.2**
GUAR				Sg	**Sg**		**01 02 01.8**	**+1.1**
GUAR	**Guarcino**	**0.48**	**197**	Pg	**Pg**		**01 01 54.0**	**-0.2**
GUAR				Sg	**Sg**		**01 02 01.8**	**+1.1**
LNSS	**Leonessa**	**0.48**	**315**	Pg	**Pg**		**01 01 54.5**	**+0.2**
	1µm,0.8s							
LNSS	**Leonessa**	**0.48**	**315**	Pg	**Pg**		**01 01 54.5**	**+0.2**
	1µm,0.8s							
CERT	**Cerreto**	**0.49**	**232**	Pg	**Pg**		**01 01 54.3**	**-0.1**
CERT				Sg	**Sg**		**01 02 01.5**	**+0.5**
	954nm,0.5s							
CERT	**Cerreto**	**0.49**	**232**	Pg	**Pg**		**01 01 54.3**	**-0.1**
CERT				Sg	**Sg**		**01 02 01.5**	**+0.5**
	954nm,0.5s							
LPEL	**Lama dei Pelig**	**0.55**	**112**	Pg	**Pg**		**01 01 55.2**	**-0.3**
LPEL				Sg	**Sg**		**01 02 03.3**	**+0.5**
	654nm,0.5s							
LPEL	**Lama dei Pelig**	**0.55**	**112**	Pg	**Pg**		**01 01 55.2**	**-0.3**
LPEL				Sg	**Sg**		**01 02 03.3**	**+0.5**
	654nm,0.5s							
POFI	**Posta Fibreno**	**0.56**	**164**	Pg	**Pg**		**01 01 55.4**	**-0.3**
POFI	**Posta Fibreno**	**0.56**	**164**	Pg	**Pg**		**01 01 55.4**	**-0.3**
SDI	**San Donato**	**0.59**	**157**	Pg	**Pg**		**01 01 56.1**	**-0.2**
SDI	**San Donato**	**0.59**	**157**	Pg	**Pg**		**01 01 56.1**	**-0.2**
MTCE	**Montecelio**	**0.61**	**248**	Pg	**Pg**		**01 01 56.2**	**-0.4**
MTCE	**Montecelio**	**0.61**	**248**	Pg	**Pg**		**01 01 56.2**	**-0.4**
MNS	**Montasola**	**0.62**	**282**	Pg	**Pg**		**01 01 56.4**	**-0.4**
MNS	**Montasola**	**0.62**	**282**	Pg	**Pg**		**01 01 56.4**	**-0.4**
TRTR	**Tortoreto Alta**	**0.63**	**29**	Pg	**Pn**		**01 01 58.6**	**-0.6**
TRTR	**Tortoreto Alta**	**0.63**	**29**	Pg	**Pn**		**01 01 58.6**	**-0.6**
CAFR	**Castel Frentan**	**0.63**	**93**	Pg	**Pg**		**01 01 57.4**	**+0.5**
	507nm,0.5s							
CAFR	**Castel Frentan**	**0.63**	**93**	Pg	**Pg**		**01 01 57.4**	**+0.5**
	507nm,0.5s							
NRCA	**Norcia**	**0.64**	**334**	Pg	**Pg**		**01 01 56.9**	**-0.3**
NRCA				Sg	**Sb**		**01 02 07.0**	**+0.3**
	413nm,0.1s							
NRCA	**Norcia**	**0.64**	**334**	Pg	**Pg**		**01 01 56.9**	**-0.3**
NRCA				Sg	**Sb**		**01 02 07.0**	**+0.3**
	413nm,0.1s							
OFFI	**Offida**	**0.69**	**11**	Pg	**Pb**		**01 01 58.9**	**+0.4**
	1µm,0.6s							
OFFI	**Offida**	**0.69**	**11**	Pg	**Pb**		**01 01 58.9**	**+0.4**
	1µm,0.6s							
GIUL	**Giuliano Di Ro**	**0.72**	**195**	Pg	**Pg**		**01 01 58.1**	**-0.6**
GIUL	**Giuliano Di Ro**	**0.72**	**195**	Pg	**Pg**		**01 01 58.1**	**-0.6**
RMP	**Rome, Mte Porz**	**0.74**	**233**	Pg	**Pg**		**01 01 58.5**	**-0.6**
RMP	**Rome, Mte Porz**	**0.74**	**233**	Pg	**Pg**		**01 01 58.5**	**-0.6**
CERA	**Filignano**	**0.76**	**150**	Pg	**Pg**		**01 01 58.8**	**-0.7**
CERA	**Filignano**	**0.76**	**150**	Pg	**Pg**		**01 01 58.8**	**-0.7**
CESX	**Cesi**	**0.77**	**298**	Pg	**Pb**		**01 02 00.0**	**+0.2**
CESX	**Cesi**	**0.77**	**298**	Pg	**Pb**		**01 02 00.0**	**+0.2**
MIDA	**Miranda**	**0.83**	**137**	Pg	**Pg**		**01 01 59.9**	**-0.9**
MIDA	**Miranda**	**0.83**	**137**	Pg	**Pg**		**01 01 59.9**	**-0.9**
FDMO	**Fiordimonte**	**0.84**	**339**	Pn	**Pg**		**01 02 00.5**	**-0.4**
FDMO	**Fiordimonte**	**0.84**	**339**	Pn	**Pg**		**01 02 00.5**	**-0.4**
CESI	**CESI - Serrava**	**0.87**	**330**	Pn	**Pg**		**01 02 01.4**	**-0.1**
CESI	**CESI - Serrava**	**0.87**	**330**	Pn	**Pg**		**01 02 01.4**	**-0.1**
ASSB	**Assisi San Ben**	**1.00**	**322**	Pn	**Pb**		**01 02 04.0**	**+0.1**
ASSB	**Assisi San Ben**	**1.00**	**322**	Pn	**Pb**		**01 02 04.0**	**+0.1**
VAGA	**Valle Agricola**	**1.00**	**147**	Pn	**Pb**		**01 02 04.0**	**+0.1**
VAGA	**Valle Agricola**	**1.00**	**147**	Pn	**Pb**		**01 02 04.0**	**+0.1**
SNTG	**Esanatoglia**	**1.08**	**338**	Pn	**Pg**		**01 02 05.4**	**-0.1**
SNTG	**Esanatoglia**	**1.08**	**338**	Pn	**Pg**		**01 02 05.4**	**-0.1**
CING	**Cingoli**	**1.14**	**349**	Pn	**Pb**		**01 02 06.2**	**0.0**
CING	**Cingoli**	**1.14**	**349**	Pn	**Pb**		**01 02 06.2**	**0.0**
MGAB	**Montegabbione**	**1.22**	**303**	Pn	**Pg**		**01 02 08.3**	**+0.2**
MGAB	**Montegabbione**	**1.22**	**303**	Pn	**Pg**		**01 02 08.3**	**+0.2**
ARVD	**Arcevia**	**1.31**	**342**	Pn	**Pb**		**01 02 09.1**	**+0.1**
ARVD	**Arcevia**	**1.31**	**342**	Pn	**Pb**		**01 02 09.1**	**+0.1**
MAIM	**Mastiano**	**2.76**	**308**	P	**Pn**		**01 02 30.4**	**+1.9**
PGF	**Pioggiola**	**3.35**	**276**	*e*Pn	**Pn**		**01 02 38.5**	**+1.8**
PGF				*e*Sn	**Sn**		**01 03 18.6**	**+2.3**
	1.8nm,0.3s							
PGF	**Pioggiola**	**3.35**	**276**	*e*Pn	**Pn**		**01 02 38.5**	**+1.8**
PGF				*e*Sn	**Sn**		**01 03 18.6**	**+2.3**
	0.9nm,0.3s							
SBF	**Sospel**	**4.72**	**292**	*e*Pn	**Pn**		**01 02 56.9**	**+1.3**
SBF				*e*Sn	**Sn**		**01 03 46.9**	**-3.4**
	4.0nm,0.3s							
SBF	**Sospel**	**4.72**	**292**	*e*Pn	**Pn**		**01 02 56.9**	**+1.3**
SBF				*e*Sn	**Sn**		**01 03 46.9**	**-3.4**
	2.0nm,0.3s							
IVAS	**Ivanjica**	**5.06**	**73**	*e*Pn	**Pn**		**01 03 02.0**	**+1.8**
DIVS	**Divibare**	**5.09**	**67**	*e*Pn	**Pn**		**01 03 03.2**	**+2.6**
FETA	**Feichten**	**5.16**	**338**	⇑*i*Pn	Pn		01 03 05.2	+3.6
FETA	**Feichten**	**5.16**	**338**	Pn	Pn		01 03 05.2	+3.6
FRF	**La Foret Royal**	**5.20**	**287**	*e*Pn	**Pn**		**01 03 03.1**	**+1.0**
FRF	**La Foret Royal**	**5.20**	**287**	*e*Pn	**Pn**		**01 03 03.1**	**+1.0**
LMR	**La Mourre**	**5.26**	**284**	*e*Pn	**Pn**		**01 03 03.7**	**+0.9**
LMR	**La Mourre**	**5.26**	**284**	*e*Pn	**Pn**		**01 03 03.7**	**+0.9**
MBDF	**Montbardon**	**5.48**	**299**	*e*P	**Pn**		**01 03 09.0**	**+2.9**
MBDF	**Montbardon**	**5.48**	**299**	*e*P	**Pn**		**01 03 09.0**	**+2.9**
LPG	**La Plagne**	**5.86**	**306**	*e*P	Pn		01 03 14.9	+3.6
LPG				*e*Sn	**Sn**		**01 04 13.9**	**-4.5**
	0.5nm,0.3s							
LPL	**La Plagne**	**5.88**	**306**	*e*P	Pn		01 03 15.0	+3.4
LPL				*e*Sn	**Sn**		**01 04 13.1**	**-5.7**
	0.9nm,0.4s							
SMRF	**Simiane la Rot**	**6.05**	**289**	*e*P	**Pn**		**01 03 16.4**	**+2.6**
SMRF	**Simiane la Rot**	**6.05**	**289**	*e*P	**Pn**		**01 03 16.4**	**+2.6**
KHC	**Kasperske Hory**	**6.87**	**0**	*e*PN	**Pn**		**01 03 24.0**	**-1.1**
KHC				*e*SN	**Sn**		**01 04 44.0**	**+0.9**
VYHS	**Vyhne**	**7.28**	**29**	*e*PN	**Pn**		**01 03 32.3**	**+1.7**
VYHS				*e*SN	**Sn**		**01 04 51.7**	**-1.3**
VYHS	**Vyhne**	**7.28**	**29**	*e*Pn	**Pn**		**01 03 32.3**	**+1.7**
HINF	**Hinteralfeld**	**7.28**	**322**	*e*Pn	**Pn**		**01 03 31.0**	**+0.3**
HINF				*e*Sn	**Sn**		**01 04 47.4**	**-5.8**
	3.0nm,0.5s							
HINF	**Hinteralfeld**	**7.28**	**322**	*e*Pn	**Pn**		**01 03 31.0**	**+0.3**
CDF	**Champ du Feu**	**7.55**	**327**	*e*Pn	**Pn**		**01 03 34.6**	**+0.1**
CDF				*e*Sn	**Sn**		**01 04 54.4**	**-5.5**
	6.9nm,0.8s							
CDF	**Champ du Feu**	**7.55**	**327**	*e*Pn	**Pn**		**01 03 34.6**	**+0.1**
HAU	**Haudompre**	**7.65**	**321**	*e*Pn	**Pn**		**01 03 36.3**	**+0.5**
HAU				*e*Sn	Sn		01 04 55.0	-7.3
	4.8nm,0.5s							
HAU	**Haudompre**	**7.65**	**321**	*e*Pn	**Pn**		**01 03 36.3**	**+0.5**

*ISCJB **13** 01:06:21.6±0.5, 62°.15N±0°.04×124°.06W±0°.07, h5km, mb3.1/3, Error ellipse: s-maj=6.9km s-min=4.2km az=154.5*
*PGC **13** 01:06:24.6±0.0, 62°.10N×124°.10W, h5km, ML3.8/7, 153km west of Fort Simpson, Nt Northwest Territories, Canada*
*IDC **13** 01:06:28.1±1.6, 62°.07N×124°.11W, h29km±15km, mb3.1/3, mb1 3.6/8, mb1mx3.3/33, mbtmp3.4/8, ML3.5/5, Error ellipse: s-maj=12.6km s-min=7.6km az=165.0*

ISC 13 01:06:22.4±0.7, 62°.16N±0°.05×124°.23W±0°.04, h5km, n19, σ1§98/33, mb3.3/3, 9D, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
FNBB	**Fort Nelson**	**3.34**	**169**	⇑Pn	**Pn**		**01 07 15.2**	**0.0**
FNBB				⇑Sn	**Sn**		**01 07 54.8**	**-0.4**
GALN	**Gameti Lake**	**3.70**	**55**	⇓Pn	**Pn**		**01 07 21.7**	**+1.6**
GALN				⇑Sn	**Sn**		**01 08 03.9**	**-0.1**
CTLN	**Castor Lake**	**4.34**	**55**	⇑Pn	**Pn**		**01 07 30.5**	**+1.4**
CTLN				⇑Sn	**Sn**		**01 08 19.6**	**-0.4**
CTLN				⇓Sg	**Sg**		**01 08 39.2**	**-2.6**
YKW3	**Yellowknife Ar**	**4.50**	**81**	⇑Pn	**Pn**		**01 07 31.7**	**+0.6**
YKW3				⇓Sn	**Sn**		**01 08 21.8**	**-1.8**
YKW3				⇓Sg	**Sg**		**01 08 42.6**	**-3.9**
YKA	**Yellowknife Ar**	**4.50**	**82**	Pn	**Pn**		**01 07 32.3**	**+1.2**
	0.7nm,0.3s,baz=270,slow=13,SNR=47							
YKA				Pg	**Pg**		**01 07 48.7**	**+0.2**
	8.0nm,0.3s,baz=267,slow=17,SNR=80							
YKA				Sn	**Sn**		**01 08 22.9**	**-0.8**
	3.1nm,0.3s,baz=268,slow=22,SNR=4.1							
YKA				Lg	Lg		01 08 44.6	
	11nm,0.3s,baz=269,slow=32,SNR=9.1							
ILKN	**Indian Lake**	**4.61**	**59**	⇓Pn	**Pn**		**01 07 33.9**	**+1.3**
ILKN				⇑Sn	**Sn**		**01 08 25.2**	**-1.2**
DLBC	**Dease Lake**	**4.72**	**220**	Pn	**Pn**		**01 07 35.6**	**+1.3**
DLBC				⇑Sn	**Sn**		**01 08 28.1**	**-1.3**
DLBC	**Dease Lake**	**4.72**	**220**	Pn	**Pn**		**01 07 36.0**	**+1.7**
	1.2nm,0.3s,baz=35,slow=9.5,SNR=20							
DLBC				Sn	**Sn**		**01 08 28.7**	**-0.7**
	2.8nm,0.3s,baz=201,slow=21,SNR=7.4							
DLBC				Lg	Lg		01 08 48.7	
	3.5nm,0.3s,baz=303,slow=27,SNR=6.6							
WHY	**Whitehorse**	**5.34**	**258**	⇑Pn	**Pn**		**01 07 44.5**	**+1.8**
WHY				⇑Sn	**Sn**		**01 08 42.9**	**-1.6**
WHY				⇓Sg	**Sg**		**01 09 10.0**	**-3.6**
HYT	**Haines Junctio**	**6.50**	**264**	⇓Pn	**Pn**		**01 08 00.8**	**+2.1**
JERN	**Jeri Cho Mine,**	**6.79**	**50**	⇓Pn	**Pn**		**01 08 02.6**	**+0.1**
JERN				⇑Sn	**Sn**		**01 09 15.9**	**-4.3**
DAWY	**Dawson**	**7.13**	**292**	⇓Pn	**Pn**		**01 08 09.7**	**+2.4**
INK	**Inuvik**	**7.29**	**332**	⇑Pn	**Pn**		**01 08 11.6**	**+2.2**
INK				⇑Sn	**Sn**		**01 09 29.9**	**-2.4**
INK	**Inuvik**	**7.29**	**332**	Pn	**Pn**		**01 08 11.6**	**+2.2**
	2.0nm,0.3s,baz=146,slow=9.3,SNR=85							
INK				Sn	**Sn**		**01 09 32.2**	**-0.1**
	1.4nm,0.3s,baz=180,slow=20,SNR=4.0							
ILAR	**Eielson Array**	**10.45**	**294**	Pn	Pn		01 08 55.6	+3.0
	0.1nm,0.3s,baz=99,slow=11,SNR=18							
ILAR				Lg	Lg		01 12 04.0	
	0.1nm,0.3s,baz=95,slow=30,SNR=6.3							
RES	**Resolute Bay**	**16.26**	**28**	Pn	**P**		**01 10 15.7**	**+1.5**
	1.1nm,0.3s,baz=230,slow=9.3,SNR=21							
RES				Sn	Sn		01 13 02.2	-9.2
	0.5nm,0.3s,baz=225,slow=20,SNR=7.8							
RES				Lg	Lg		01 14 57.0	
	0.2nm,0.3s,baz=246,slow=18,SNR=4.0							
PDAR	**P

TAPN	**Taplejung**	**46.40**	**320**	*eP*	**P**	**01 16 34.9**	**+0.4**
	13nm,0.6s						
RAMN	**Ramite**	**46.84**	**318**	*eP*	**P**	**01 16 38.5**	**+0.6**
	14nm,0.5s						
JIRN	**Jiri**	**47.59**	**319**	*eP*	**P**	**01 16 43.5**	**-0.3**
GUN	**Gumba**	**47.96**	**319**	*eP*	**P**	**01 16 46.6**	**0.0**
	14nm,0.7s						
PKI	**Pulchoki**	**48.04**	**318**	*eP*	**P**	**01 16 46.8**	**-0.4**
	11nm,0.4s						
PKIN	**Phulchoki**	**48.06**	**318**	*eP*	**P**	**01 16 47.1**	**-0.1**
	6.8nm,0.4s						
KKN	**Kakani**	**48.27**	**318**	*eP*	**P**	**01 16 47.9**	**-0.9**
KOLN	**Koldanda**	**49.38**	**317**	*eP*	**P**	**01 16 56.8**	**-0.4**
	7.4nm,0.3s						
DANN	**Dangsing**	**49.65**	**318**	*eP*	**P**	**01 16 59.1**	**-0.2**
	37nm,0.5s						
PYUN	**Piuthan**	**50.01**	**317**	*eP*	**P**	**01 17 01.7**	**-0.2**
	22nm,0.5s						
USRK	**Ussuriysk Arra**	**52.87**	**11**	P	**P**	**01 17 22.2**	**-0.1**
	2.2nm,0.7s,baz=200,slow=7.3,SNR=6.7						
SONM	**Songino Array**	**56.44**	**350**	P	**P**	**01 17 48.6**	**+0.7**
	1.7nm,0.5s,baz=167,slow=9.0,SNR=19						
MKAR	**Makanchi Array**	**63.46**	**332**	P	**P**	**01 18 35.6**	**+0.4**
	5.5nm,0.7s,baz=140,slow=7.6,SNR=73						
ZALV	**Zalesovo Beam**	**67.94**	**339**	P	**P**	**01 19 03.1**	**-0.5**
	2.7nm,0.4s,baz=141,slow=3.8,SNR=18						
TORD	**Torodi Ar. Bea**	**118.61**	**281**	PKP	**PKPdf**	**01 26 50.1**	**-0.1**
	0.6nm,0.6s,baz=46,slow=1.8,SNR=15						
CPUP	**Villa Florida**	**146.06**	**185**	PKPbc	**PKPab**	**01 27 44.0**	**+0.5**
	0.5nm,0.4s,baz=135,slow=4.3,SNR=2.9						

ISK 13 01:22:02.3, 37°.11N×28°.32E, h23km, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.04**	**313**	*e*PG	Pb	01 22 06.5	+0.1
YER				*e*SG	Sb	01 22 09.7	+0.4
TURN	**Turunc**	**0.32**	**136**	*i* P	Pb	01 22 07.2	-2.3
TURN				*i* S	Sb	01 22 11.0	-3.4
MLSB	**Milas**	**0.47**	**294**	*e*PG	Pb	01 22 12.7	+0.6
MLSB				*e*SG	Sb	01 22 20.0	+1.2
BODT	**Bodrum**	**0.81**	**267**	*e*PG	Pn	01 22 18.6	+0.3

*CSEM **13** 01:33:20.1, 39°.15N×36°.19E, h5km, MD3.2, After ISK*
ISK 13 01:33:20.1, 39°.15N×36°.19E, h5km, MD3.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNN	**Bunyan**	**0.40**	**223**	*e*PG	Pg	01 33 28.2	+0.2
BNN				*e*SG	Sg	01 33 34.6	+1.2
BNN	**Bunyan**	**0.40**	**223**	*e*Pg	Pg	01 33 28.2	+0.2
BNN				*e*Sg	Sg	01 33 34.6	+1.2
SARI	**SarD1z-Kayseri**	**0.76**	**166**	*e*PG	Pg	01 33 35.3	+0.3
SARI				*e*SG	Sb	01 33 46.2	-0.6
SARI	**SarD1z-Kayseri**	**0.76**	**166**	*e*Pg	Pg	01 33 35.3	+0.4
SARI				*e*Sg	Sb	01 33 46.3	-0.6
YOZ	**Yozgat**	**0.84**	**306**	*e*PG	Pg	01 33 36.5	+0.1
YOZ	**Yozgat**	**0.84**	**306**	*e*Pg	Pg	01 33 36.5	+0.1
DARE	**Darende-Malaty**	**1.16**	**119**	*e*PN	Pn	01 33 43.1	-0.1
DARE				*e*SN	Sb	01 33 58.8	+0.5
DARE	**Darende-Malaty**	**1.16**	**119**	*e*Pn	Pn	01 33 43.1	-0.1
DARE				*e*Sn	Sb	01 33 58.8	+0.5
RSDY	**Resadiye-TOKAT**	**1.53**	**35**	*e*PN	Pb	01 33 49.0	0.0
RSDY	**Resadiye-TOKAT**	**1.53**	**35**	*e*Pn	Pb	01 33 49.0	0.0
CORM	**Corum**	**1.59**	**311**	*e*PN	Pn	01 33 49.4	+0.3
CORM	**Corum**	**1.59**	**311**	*e*Pn	Pn	01 33 49.4	+0.3
KOZT	**Kozan**	**1.69**	**190**	*e*PN	Pb	01 33 51.1	-0.6
KOZT	**Kozan**	**1.69**	**190**	*e*Pn	Pb	01 33 51.1	-0.6
KMRS	**Kahramanmaras**	**1.73**	**161**	*e*PN	Pb	01 33 51.8	-0.6
KMRS	**Kahramanmaras**	**1.73**	**161**	*e*Pn	Pb	01 33 51.8	-0.6
ILIC	**ilic-Erzincan**	**1.87**	**80**	*e*PN	Pn	01 33 53.8	+0.9
ILIC	**ilic-Erzincan**	**1.87**	**80**	*e*Pn	Pn	01 33 53.8	+0.9
KAMT	**Kaman**	**1.94**	**277**	*e*PN	Pn	01 33 54.6	+0.8
KAMT	**Kaman**	**1.94**	**277**	*e*Pn	Pn	01 33 54.6	+0.8
MALT	**Malatya**	**1.94**	**115**	*e*PN	Pb	01 33 55.5	-0.5
MALT	**Malatya**	**1.94**	**115**	*e*Pn	Pb	01 33 55.5	-0.5
SULT	**Sultanhani-AKS**	**2.30**	**247**	*e*PN	Pn	01 33 59.3	+0.5
SULT	**Sultanhani-AKS**	**2.30**	**247**	*e*Pn	Pn	01 33 59.3	+0.5
AFSR	**Af˙ar-Bala (A**	**2.44**	**278**	*e*PN	Pn	01 34 01.8	+1.1
AFSR	**Af˙ar-Bala (A**	**2.44**	**278**	*e*Pn	Pn	01 34 01.8	+1.1

*NIED **13** 01:34:00, 36°.10N×139°.80E, h50km, Mw3.9 Best double couple: M₀6.70000×10¹⁴ NP1:φs49.00000°, δ71.00000°, λ70.00000°. NP2:φs277.00000°, δ27.00000°, λ135.00000°.*
*ISCJB **13** 01:34:01.8±0.3, 36°.07N±0.03×139°.88E±0.05, h58km±3km, mb3.7/22, MS3.3/1, Error ellipse: s-maj=6.3km s-min=4.6km az=170.9*
*JMA **13** 01:34:02.7±0.1, 36°.08N×139°.85E, h47km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs41.00000°, δ74.00000°, λ83.00000°. NP2:φs244.00000°, δ17.00000°, λ113.00000°. Principal axes: T Plg60.0000°, Azm301.0000°; N Plg6.0000°, Azm42.0000°; P Plg29.0000°, Azm136.0000°;*
JMA Felt II J1.
*IDC **13** 01:34:03.3±1.5, 36°.02N×139°.74E, h58km±15km, mb3.5/22, mb1 3.6/24, mb1mx3.6/33, mbtmp3.5/24, MS2.9/2, Ms1 2.9/2, ms1mx2.4/30 Error ellipse: s-maj=17.1km s-min=10.4km az=71.0*

ISC 13 01:34:02.7±0.8, 36°.08N±0.03×139°.85E±0.04, h51km±6km, n39, σ0°85/49, mb3.7/22, 2C-6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.31**	**61**	⇑P	**Pn**	**01 34 11.6**	**-0.4**
JYT				S	**Sn**	**01 34 17.8**	**-0.8**
TOK	**Tokyo**	**0.40**	**191**	⇑P	**Pn**	**01 34 13.5**	**+0.8**
TOK				S	**Sn**	**01 34 21.5**	**+1.6**
JAG	**Ashikaga**	**0.47**	**317**	⇓P	**Pn**	**01 34 13.6**	**-0.1**
JAG				S	**Sn**	**01 34 21.2**	**-0.4**
JHU	**Hanno**	**0.52**	**244**	P	**Pn**	**01 34 13.7**	**-0.4**
JHU				S	**Sn**	**01 34 21.9**	**-0.5**
JRY	**Ryogami san**	**0.77**	**266**	⇓P	**Pn**	**01 34 17.2**	**-0.2**
JRY				S	**Sn**	**01 34 27.4**	**-0.8**
JKT	**Katashina**	**0.84**	**325**	⇓P	**Pn**	**01 34 18.2**	**-0.2**
JKT				S	**Sn**	**01 34 29.6**	**-0.3**
JOD2	**Odawara 2**	**1.02**	**218**	⇓P	**Pn**	**01 34 20.9**	**+0.2**
JOD2				S	**Sn**	**01 34 34.4**	**+0.3**
JYN	**Shimob**	**1.21**	**242**	P	**Pn**	**01 34 24.3**	**+1.0**
JYN				*e*S	**Sn**	**01 34 41.1**	**+2.4**
JFY	**Yanaizu**	**1.33**	**355**	*e*S	**Sn**	**01 34 42.9**	**+1.4**
JHK	**Hiroka**	**1.35**	**330**	⇓P	**Pn**	**01 34 25.4**	**+0.3**
JHK				*e*S	**Sn**	**01 34 44.1**	**+2.2**
BSO3	**Boso 3**	**1.38**	**157**	⇓P	**Pn**	**01 34 24.9**	**-0.4**
BSO3				S	**Sn**	**01 34 43.6**	**+1.3**
MJAR	**Matsushiro Arr**	**1.41**	**290**	P	**Pn**	**01 34 26.3**	**+0.3**
	50nm,0.3s,baz=108,slow=8.1,SNR=355						
MAT	**Matsushiro**	**1.41**	**290**	P	**Pn**	**01 34 25.7**	**-0.2**
MAT				S	**Sn**	**01 34 43.3**	**-0.1**
JHJ	**Hachijo jima 2**	**2.95**	**181**	P	**Pn**	**01 34 46.7**	**-0.3**
	131nm,0.3s,baz=360,slow=9.6,SNR=68						
JHJ				S	**Sn**	**01 35 20.3**	**-1.0**
	105nm,0.3s,baz=0.0,slow=20,SNR=6.3						
ASAJ	**Asahikawa**	**8.30**	**14**	P	**Pn**	**01 36 01.2**	**+0.9**
	0.8nm,0.3s,baz=193,slow=13,SNR=2.9						
KSRS	**Korea Array**	**9.67**	**282**	P	Pn	01 36 22.8	+3.7
	0.3nm,0.3s,baz=94,slow=14,SNR=4.3						
KSRS				LR	LR	01 39 57.9	
	comp=Z,32nm,20.5s,baz=90,slow=37						
USRK	**Ussuriysk Arra**	**10.09**	**326**	P	Pn	01 36 28.9	+4.1
	0.1nm,0.3s,baz=134,slow=11,SNR=4.7						
SONM	**Songino Array**	**27.30**	**306**	P	**P**	**01 39 42.9**	**+0.4**
	0.2nm,0.4s,baz=104,slow=8.8,SNR=3.5						
ZALV	**Zalesovo Beam**	**41.64**	**313**	P	**P**	**01 41 45.3**	**-0.4**
	3.1nm,0.6s,baz=94,slow=6.7,SNR=16						
MKAR	**Makanchi Array**	**43.57**	**303**	P	**P**	**01 42 01.1**	**-0.5**
	1.0nm,0.6s,baz=88,slow=9.8,SNR=16						
AAK	**Ala-Archa**	**49.84**	**299**	P	**P**	**01 42 49.9**	**-0.9**
	0.8nm,0.4s,baz=103,slow=4.6,SNR=4.9						
BVAR	**Borovoye Array**	**50.29**	**313**	P	**P**	**01 42 53.2**	**-0.7**
	0.7nm,0.5s,baz=91,slow=7.7,SNR=6.7						
ILAR	**Eielson Array**	**50.97**	**32**	P	**P**	**01 42 59.6**	**+0.8**
	0.2nm,0.5s,baz=274,slow=6.0,SNR=3.4						
INK	**Inuvik**	**55.81**	**27**	P	**P**	**01 43 35.2**	**+1.1**
	0.7nm,0.8s,baz=259,slow=5.2,SNR=2.1						
WRA	**Warramunga Arr**	**55.96**	**186**	P	**P**	**01 43 36.5**	**+0.7**
	1.3nm,0.6s,baz=2.9,slow=7.5,SNR=7.5						
AKTO	**Aktyubinsk**	**58.38**	**312**	P	**P**	**01 43 52.4**	**-0.2**
	1.2nm,0.7s,baz=73,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**59.69**	**186**	P	**P**	**01 44 01.7**	**-0.2**
	0.2nm,0.5s,baz=19,slow=12,SNR=4.2						
ARCES	**ARCESS Array B**	**64.44**	**339**	P	**P**	**01 44 33.1**	**-0.2**
	2.3nm,0.8s,baz=51,slow=7.2,SNR=2.6						
YKA	**Yellowknife Ar**	**65.26**	**30**	P	**P**	**01 44 38.8**	**+0.1**
	0.3nm,0.8s,baz=300,slow=6.3,SNR=5.9						
FINES	**FINESS Array B**	**69.07**	**332**	P	**P**	**01 45 02.2**	**-0.6**
	1.2nm,0.6s,baz=48,slow=5.7,SNR=8.0						
FINES				LR	LR	02 19 39.7	
	comp=Z,19nm,20.6s,baz=107,slow=40						
KBZ	**Khabaz**	**70.56**	**310**	P	**P**	**01 45 12.7**	**+0.4**
	1.0nm,0.9s,baz=45,slow=5.7,SNR=3.0						
AKASG	**Malin Array Be**	**74.28**	**322**	P	**P**	**01 45 33.5**	**-0.8**
	0.5nm,0.4s,baz=46,slow=6.8,SNR=3.9						
HFS	**Hagfors**	**74.43**	**335**	P	**P**	**01 45 35.2**	**+0.1**
	2.4nm,0.9s,baz=46,slow=4.2,SNR=4.0						
NOA	**NORSAR Array B**	**74.57**	**337**	P	**P**	**01 45 35.4**	**-0.5**
	0.7nm,0.9s,baz=49,slow=5.4,SNR=3.3						
NVAR	**Mina Array Bea**	**76.57**	**52**	P	**P**	**01 45 49.2**	**+1.2**
	0.4nm,0.7s,baz=294,slow=6.8,SNR=2.9						
BRTR	**Keskin Array B**	**78.54**	**311**	P	**P**	**01 45 58.7**	**-0.1**
	0.9nm,1.0s,baz=33,slow=5.5,SNR=3.0						
GERES	**GERESS Array B**	**82.85**	**327**	P	**P**	**01 46 20.3**	**-1.4**
	0.1nm,0.4s,baz=46,slow=7.0,SNR=3.1						
EKA	**Eskdalemuir Ar**	**83.60**	**340**	P	**P**	**01 46 24.9**	**-0.3**
	0.2nm,0.5s,baz=50,slow=4.7,SNR=3.1						
TXAR	**Lajitas Array**	**91.70**	**51**	P	**P**	**01 47 05.6**	**+0.6**
	0.2nm,0.6s,baz=331,slow=4.5,SNR=3.6						

*ISK **13** 01:53:41.9, 39°.13N×36°.23E, h3km, MD3.0*
*ISCJB **13** 01:53:42.5±0.9, 39°.15N±0°.04×36°.25E±0°.05, h3km±8km, Error ellipse: s-maj=7.5km s-min=4.8km az=43.7*
*CSEM **13** 01:53:42.8±0.2, 39°.17N×36°.21E, h2km, MD3.0, Error ellipse: s-maj=6.4km s-min=4.8km az=56.0*
*DDA **13** 01:53:42.5, 39°.14N×36°.17E, h7km, MD2.7*

ISC 13 01:53:42.0±1.4, 39°.18N±0°.04×36°.30E±0°.03, h3km±12km, n27, σ0°76/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNN	**Bunyan**	**0.48**	**227**	*e*PG	**Pg**	**01 53 50.5**	**-0.8**
BNN				*e*SG	**Sg**	**01 53 56.9**	**-0.6**
BNN	**Bunyan**	**0.48**	**227**	*e*Pg	**Pg**	**01 53 50.5**	**-0.8**
BNN				*e*Sg	**Sg**	**01 53 56.9**	**-0.6**
PINB	**Pinarbasi**	**0.51**	**170**	*i* P	**Pg**	**01 53 52.3**	**+0.4**
PINB				*i* S	**Sg**	**01 53 60.0**	**+1.5**
PINB	**Pinarbasi**	**0.51**	**170**	*i* P	**Pg**	**01 53 52.3**	**+0.4**
PINB				*i* S	**Sg**	**01 54 00.0**	**+1.5**
SARI	**SarD1z-Kayseri**	**0.59**	**148**	*e*PG	**Pn**	**01 53 56.9**	**-0.7**
SARI				*e*SG	**Sn**	**01 54 07.8**	**-0.1**
SARI	**SarD1z-Kayseri**	**0.59**	**148**	*e*Pg	**Pn**	**01 53 56.9**	**-0.7**
YOZ	**Yozgat**	**0.88**	**302**	*e*PG	**Pg**	**01 53 59.5**	**+0.5**
YOZ	**Yozgat**	**0.88**	**302**	*e*Pg	**Pg**	**01 53 59.5**	**+0.5**
TOKA	**Tokat**	**1.15**	**7**	*i* P	**Pb**	**01 54 03.9**	**-0.7**
TOKA				*i* S	**Sn**	**01 54 22.7**	**+1.3**
TOKA	**Tokat**	**1.15**	**7**	*i* P	**Pb**	**01 54 03.9**	**-0.7**
TOKA				*i* S	**Sn**	**01 54 22.7**	**+1.3**
DARE	**Darende-Malaty**	**1.20**	**101**	*e*PN	**Pn**	**01 54 04.0**	**-1.8**
DARE				*e*SN	**Sb**	**01 54 20.5**	**-1.0**
CDAG	**Cicekdag**	**1.55**	**287**	*i* P	**Pb**	**01 54 10.2**	**-0.5**
CDAG				*i* S	**Sb**	**01 54 31.4**	**-0.3**
CDAG	**Cicekdag**	**1.55**	**287**	*i* P	**Pn**	**01 54 10.2**	**-0.5**
CDAG				*i* S	**Sb**	**01 54 31.4**	**-0.3**
CORM	**Corum**	**1.62**	**308**	*e*PN	**Pb**	**01 54 12.2**	**-0.5**
CORM	**Corum**	**1.62**	**308**	*e*Pn	**Pb**	**01 54 12.3**	**-0.5**
KOZT	**Kozan**	**1.74**	**192**	*e*PN	**Pn**	**01 54 13.3**	**+0.1**
KOZT	**Kozan**	**1.74**	**192**	*e*Pn	**Pn**	**01 54 13.3**	**+0.1**
KMRS	**Kahramanmaras**	**1.74**	**164**	*e*PN	**Pn**	**01 54 13.6**	**+0.4**
KMRS	**Kahramanmaras**	**1.74**	**164**	*e*Pn	**Pn**	**01 54 13.6**	**+0.4**
ILIC	**ilic-Erzincan**	**1.78**	**81**	*e*PN	**Pb**	**01 54 15.6**	**+0.1**
ILIC	**ilic-Erzincan**	**1.78**	**81**	*e*Pn	**Pb**	**01 54 15.6**	**+0.1**
MALT	**Malatya**	**1.88**	**117**	*e*PN	**Pb**	**01 54 16.8**	**-0.3**
MALT	**Malatya**	**1.88**	**117**	*e*Pn	**Pb**	**01 54 16.8**	**-0.3**
KAMT	**Kaman**	**2.01**	**276**	*e*PN	**Pn**	**01 54 17.2**	**+0.2**
KAMT	**Kaman**	**2.01**	**276**	*e*Pn	**Pn**	**01 54 17.2**	**+0.2**
AFSR	**Af˙ar-Bala (A**	**2.52**	**277**	*e*PN	**Pn**	**01 54 24.5**	**+0.6**
AFSR	**Af˙ar-Bala (A**	**2.52**	**277**	*e*Pn	**Pn**	**01 54 24.5**	**+0.6**

*IDC **13** 01:57:36.6±1.9, 14°.05N×90°.82W, h0km, mb3.6/6, mb1 4.0/8, mb1mx3.7/25, mbtmp3.6/8, ML3.9/2, MS2.8/2, Ms1 2.8/2, ms1mx2.5/30, Error ellipse: s-maj=51.6km s-min=30.4km az=22.0*
*ISCJB **13** 01:57:46.0±0.9, 14°.00N±0°.09×91°.66W±0°.06, h86km±7km, mb3.6/6, Error ellipse: s-maj=15.6km s-min=6.3km az=26.3*
*CASC **13** 01:57:48.2±2.7, 13°.95N×91°.54W, h29km±11km, MD3.6, ML3.9*

ISC 13 01:57:47.5±1.3, 14°.1N±0°.1×91°.60W±0°.06, h76km±9km, n24, σ1°31/33, mb3.8/6, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.25**	**351**	*e*P	**Pn**	**01 57 58.4**	**-0.7**
FUG	**Fuego 3**	**0.82**	**63**	*e*P	**Pn**	**01 58 03.2**	**-1.2**
FG6		**0.85**	**55**	*e*P	**Pn**	**01 58 04.1**	**-0.8**
FG6				*e*S	**Sn**	**01 58 20.2**	**+2.5**
PCG	**Pacaya**	**1.01**	**71**	*e*P	**Pn**	**01 58 06.2**	**-0.5**
PCG				*e*S	**Sn**	**01 58 22.1**	**+1.1**
GCG	**Guatemala City**	**1.15**	**63**	*e*P	**Pn**	**01 58 07.4**	**-1.0**
GCG				*e*S	**Sn**	**01 58 24.5**	**+0.4**
NBG	**Las Nubes**	**1.32**	**67**	*e*P	**Pn**	**01 58 10.9**	**+0.4**
NBG				*e*S	**Sn**	**01 58 30.3**	**+2.4**
RBDL	**Robledal**	**1.85**	**88**	*e*P	**Pn**	**01 58 16.7**	**-0.8**
RTR	**El Retiro**	**1.90**	**95**	*e*P	**Pn**	**01 58 19.0**	**+0.8**
SBLS	**San Blas**	**1.93**	**97**	*e*P	**Pn**	**01 58 18.9**	**+0.3**
SBLS				*e*S	**Sn**	**01 58 42.0**	**-0.3**
SNJE	**San Jose**	**1.94**	**96**	*i* P	**Pn**	**01 58 19.1**	**+0.4**
MRL	**Marmol**	**2.09**	**62**	*e*P	**Pn**	**01 58 20.7**	**0.0**
MRL				*e*S	**Sn**	**01 58 49.2**	**+3.1**
BOQS	**Boqueron**	**2.27**	**98**	*e*P	**Pn**	**01 58 24.0**	**+0.8**
BOQS				*e*S	**Sn**	**01 58 50.3**	**-0.2**
SNET	**Serv Nac Est T**	**2.33**	**99**	*e*P	**Pn**	**01 58 24.9**	**+1.0**
SNET				*e*S	**Sn**	**01 58 51.5**	**-0.1**
SNET				AML	AML	01 59 02.0	
	comp=Z,1μm,0.4s						
LFRS	**El Faro**	**2.50**	**100**	*e*P	**Pn**	**01 58 27.1**	**+0.9**
LFRS				*e*S	**Sn**	**01 58 56.3**	**+0.5**
CMIG	**Matias Romero**	**4.37**	**314**	Pn	**Pn**	**01 58 52.5**	**+1.0**
	comp=Z,5.2nm,0.3s,baz=138,slow=12,SNR=29						
CMIG				Sn	**Sn**	**01 59 42.0**	**+0.9**
	comp=Z,2.3nm,0.3s,baz=104,slow=18,SNR=5.6						
TXAR	**Lajitas Array**	**18.86**	**326**	P	**Pn**	**02 02 04.1**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=149,slow=11,SNR=8.7						
TKL	**Tuckaleechee C**	**22.62**	**17**	P	**P**	**02 02 39.0**	**-3.2**
	comp=Z,2.8nm,0.7s,baz=198,slow=9.7,SNR=6.7						
TKL				LR	LR	02 12 02.0	
	comp=Z,54nm,20.8s,baz=270,slow=39						
SJG	**San Juan**	**24.77**	**77**	LR	LR	02 11 46.2	
	comp=Z,12nm,18.9s,baz=92,slow=35						
NVAR	**Mina Array Bea**	**33.87**	**321**	P	P	02 04 26.4	+3.2
	comp=Z,2.1nm,0.8s,baz=134,slow=8.9,SNR=16						
NVAR				PcP	**PcP**	**02 07 02.5**	**+2.0**
	comp=Z,0.8nm,0.7s,baz=139,slow=3.1,SNR=6.2						
YKA	**Yellowknife Ar**	**51.05**	**347**	P	**P**	**02 06 40.9**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=148,slow=7.9,SNR=12						
YKA				PcP	**PcP**	**02 07 56.3**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=150,slow=3.9,SNR=13						
INK	**Inuvik**	**60.48**	**343**	P	**P**	**02 07 48.5**	**-0.7**
	comp=Z,1.1nm,1.0s,baz=126,slow=6.8,SNR=5.1						
ILAR	**Eielson Array**	**62.93**	**337**	P	**P**	**02 08 05.8**	**+0.1**
	comp=Z,0.7nm,0.9s,baz=171,slow=4.8,SNR=9.4						
ESDC	**Sonseca Array**	**79.37**	**52**	P	P	02 09 41.5	-4.0
	comp=Z,0.2nm,0.5s,baz=274,slow=4.8,SNR=2.5						
CMAR	**Chiang Mai Arr**	**146.05**	**342**	PKPbc	**PKPab**	**02 17 20.1**	**-0.3**
	comp=Z,3.7nm,0.7s,baz=331,slow=3.4,SNR=17						

WEL 13 01:59:04.2±0.5, 37°.44S×178°.33E, h46km±4km, ML3.5/4, 4C-2D, Error ellipse: s-maj=3.1km s-min=3.0km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.12**	**190**	⇑PN	Pn	01 59 11.5	-0.3
MXZ				SN	Sn	01 59 16.4	-0.6
PUZ	**Puketiti**	**0.64**	**185**	⇓PN	Pn	01 59 16.9	-0.1
PUZ				SN	Sn	01 59 26.4	+0.1
CNGZ	**Carnagh Statio**	**1.05**	**185**	PN	Pn	01 59 22.7	+0.1
CNGZ				SN	Sn	01 59 35.8	-0.2
MWZ	**Matawai**	**1.10**	**215**	⇓PN	Pn	01 59 23.5	+0.2
MWZ				SN	Sn	01 59 37.8	+0.4
URZ	**Urewera**	**1.27**	**229**	PN	Pn	01 59 25.1	-0.4
URZ				SN	Sn	01 59 40.8	-0.6
EDRZ	**Edgecumbe**	**1.43**	**242**	PN	Pn	01 59 27.8	0.0
EDRZ				SN	Sn	01 59 43.8	-1.7
OPRZ	**Ohinepanea**	**1.47**	**253**	PN	Pn	01 59 28.2	0.0
OPRZ				SN	Sn	01 59 45.5	-0.8
PRGZ	**Paritu Road**	**1.52**	**193**	PN	Pn	01 59 28.2	-0.9
PRGZ				SN	Sn	01 59 47.1	-0.7
TARZ	**Mount Tarawera**	**1.65**	**241**	PN	Pn	01 59 31.3	+0.4
KNZ	**Kokohu**	**1.66**	**198**	PN	Pn	01 59 29.7	-1.2
MHGZ	**Mahia Peninsul**	**1.74**	**191**	PN	Pn	01 59 31.4	-0.7
NMHZ	**Naumai**	**2.05**	**215**	⇑PN	Pn	01 59 36.8	+0.5
KUZ	**Kuaotunu**	**2.20**	**288**	⇑PN	Pn	01 59 38.9	+0.7
BKZ	**Black Stump Fm**	**2.25**	**219**	PN	Pn	01 59 38.9	-0.2
MCHZ	**McNeill Hill**	**2.38**	**212**	PN	Pn	01 59 40.5	-0.3
KAHZ	**Kahuranaki**	**2.61**	**205**	PN	Pn	01 59 42.6	-1.4
BHHZ	**Black Hill Sta**	**2.71**	**220**	PN	Pn	01 59 45.1	-0.3
PXZ	**Pawanui**	**2.83**	**204**	⇑PN	Pn	01 59 45.0	-1.9

MAN 13 02:08:41, 15°.12N×121°.73E, h35km, mb4.0, ML2.8, MS2.5, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.64**	**347**	*e*P	Pn	02 08 54.5	+0.9
BALP				*e*S	Sn	02 09 01.2	-1.3
GQP	**Guinayangan**	**1.39**	**150**	⇓*e*P	Pn	02 09 04.5	+0.6
GQP				*e*S	Pn	02 09 04.5	+0.6
CAUP	**Cauayan**	**1.82**	**3**	*e*P	Pn	02 09 09.8	-0.1
CAUP				*e*S	Sn	02 09 21.1	-11

MEX 13 02:10:06.6±1.0, 18°.85N×104°.46W, h10km, MD3.5, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R15V		**0.55**	**54**	*i* P	Pg	02 10 15.4	-2.0
R15V				*i* S	Sg	02 10 23.9	-0.8
CJM	**Chamela**	**0.85**	**319**	*e*P	Pg	02 10 20.1	-3.0
CJM				*i* S	Sg	02 10 32.1	-2.0
EZ5V		**1.02**	**52**	*e*P	Pg	02 10 24.0	-2.7
EZ5V				*i* S	Sg	02 10 36.8	-3.4
MMIG	**Aquila**	**1.19**	**118**	*i* P	Pb	02 10 25.8	-3.5
MMIG				*i* S	Sb	02 10 40.6	-4.2
ANIG	**Ahuacatlan**	**2.19**	**358**	*i* P	Pn	02 10 40.2	-3.1
ANIG				*i* S	Sn	02 11 06.8	-3.8

WEL 13 02:13:24.4±0.3, 41°.47S×172°.88E, h122km±2km, ML3.9/11, 6C-9D, Error ellipse: s-maj=2.0km s-min=1.8km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	**Tophouse**	**0.30**	**176**	⇑PN	Pn	02 13 41.7	+0.1
THZ				SN	Sn	02 13 53.8	-0.8
NNZ	**Nelson**	**0.45**	**57**	PN	Pn	02 13 42.4	+0.2
NNZ				SN	Sn	02 13 55.3	-0.3
QRZ	**Quartz Range**	**0.69**	**338**	PN	Pn	02 13 44.4	+0.5
QRZ				SN	Sn	02 13 57.7	-0.8
BSWZ	**Blackbirch Sta**	**0.79**	**109**	PN	Pn	02 13 44.8	+0.2
BSWZ				SN	Sn	02 14 00.3	+0.4
TUWZ	**Tuamarina**	**0.80**	**88**	PN	Pn	02 13 45.0	+0.3
TUWZ				SN	Sn	02 13 59.4	-0.7
DSZ	**Denni

AUST 13 02:23:21.1, 6°50S×126°02E, h35km, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**6.74**	**83**	P	Pn	02 24 54.1	-3.5
TLE	**Tual** baz=6.7,SNR=12	**6.74**	**83**	P	Pn	02 24 53.6	-4.0
MTN	**Manton Dam** baz=8.1,SNR=19	**8.07**	**142**	P	Pn	02 25 20.0	+4.0
MTN	baz=8.1,SNR=16			S	Sn	02 26 22.8	-23
PCI	**Palu** baz=8.3,SNR=4.7	**8.30**	**312**	P	Pn	02 25 22.1	+3.1
KDU	**Kakadu** baz=8.9,SNR=8.3	**8.85**	**134**	P	Pn	02 25 25.1	-1.5
QIS	**Mount Isa** baz=19,SNR=6.2	**19.21**	**138**	P	P	02 27 38.7	-3.5
ARPS	**Mount Arapiles** baz=34,SNR=9.0	**33.42**	**157**	P	P	02 30 02.1	+5.5

*IDC **13** 02:31:33.4±1.0, 43.34S×171.65E, h0km, mb4.2/4, mb1 4.3/5, mb1mx4.1/16, mbtmp4.2/5, ML3.6/1, MS2.6/1, Ms1 2.6/1, ms1mx2.5/22, Error ellipse: s-maj=30.3km s-min=8.6km az=134.0*
*ISCJB **13** 02:31:34.4±0.3, 43.48S±0.03×171.61E±0.03, h15km, mb4.2/4, Error ellipse: s-maj=5.0km s-min=2.5km az=142.0*
*WEL **13** 02:31:35.2±0.1, 43.49S×171.60E, h5km, ML4.3/32, Error ellipse: s-maj=0.8km s-min=0.8km az=90.0*
WEL Felt from West Coast to Canterbury, maximum reported intensity MM 5.
*NEIC **13** 02:31:36.3, 43.56S×171.63E, h12km, ML4.3(WEL), After WEL.*
NEIC Felt [IV] at Christchurch and Papanui. Also felt in central Canterbury.

ISC 13 02:31:35.1±0.5, 43.50S±0.03×171.61E±0.03, h15km, n64, σ1§12/83, mb4.3/4, 4C-2D, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**0.46**	**242**	PG	Pb	02 31 45.0	+0.1
RPZ				SG	Sb	02 31 51.3	-0.2
RPZ	**Rata Peaks**	**0.46**	**242**	*e*Pg	Pb	02 31 45.0	+0.1
RPZ				*e*S	Sb	02 31 51.4	-0.2
RPZ				Lg	Lg	02 31 51.7	
RPZ	**Rata Peaks** 855nm,0.3s,baz=75,slow=2.7,SNR=2528	**0.46**	**242**	Pg	Pb	02 31 44.9	+0.1
RPZ	1µm,0.3s,baz=30,slow=22,SNR=147			Lg	Lg	02 31 51.7	
CRLZ	**Canterbury Las**	**0.74**	**96**	⇓P*	Pb	02 31 49.9	+0.2
CRLZ				S*	Sb	02 32 00.4	+0.9
WVZ	**Waitaha Valley**	**0.77**	**303**	⇑P*	Pg	02 31 50.1	+0.1
WVZ				S*	Sg	02 32 00.0	0.0
MQZ	**McQueen's Vall**	**0.79**	**106**	P*	Pg	02 31 50.6	+0.1
MQZ				S*	Sn	02 32 02.3	+0.8
LTZ	**Lake Taylor**	**0.86**	**34**	P*	Pg	02 31 52.0	+0.1
LTZ				S*	Sg	02 32 03.7	+0.4
LBZ	**Lake Benmore**	**1.36**	**229**	⇑PN	Pn	02 31 59.8	+0.2
LBZ				S*	Sb	02 32 17.7	+0.2
FOZ	**Fox Glacier**	**1.40**	**267**	P*	Pn	02 32 00.1	0.0
ODZ	**Otahua Downs**	**1.69**	**204**	PN	Pn	02 32 04.1	-0.1
ODZ				SN	Sn	02 32 25.2	-0.4
ODZ	**Otahua Downs**	**1.69**	**204**	*e*Pn	Pn	02 32 04.0	-0.2
ODZ				*e*S	Sg	02 32 29.4	-0.3
DSZ	**Denniston Nort**	**1.76**	**5**	PN	Pn	02 32 05.0	-0.1
KHZ	**Kahutara**	**1.78**	**53**	⇑PN	Pn	02 32 04.8	-0.5
KHZ	**Kahutara**	**1.78**	**53**	*e*Pn	Pn	02 32 04.8	-0.5
KHZ				*e*S	Sn	02 32 26.6	-1.1
THZ	**Tophouse**	**1.98**	**29**	⇑PN	Pn	02 32 08.2	+0.1
JCZ	**Jackson Bay**	**2.14**	**253**	⇓PN	Pn	02 32 10.8	+0.3
WKZ	**Wanaka**	**2.29**	**234**	PN	Pn	02 32 12.2	-0.2
EAZ	**Earnscleugh**	**2.39**	**223**	PN	Pn	02 32 13.1	-0.7
BSWZ	**Blackbirch Sta**	**2.44**	**44**	PN	Pn	02 32 14.6	+0.1
NNZ	**Nelson**	**2.63**	**31**	PN	Pn	02 32 17.5	+0.5
TUWZ	**Tuamarina**	**2.69**	**41**	PN	Pn	02 32 18.5	+0.6
QRZ	**Quartz Range**	**2.76**	**15**	PN	Pn	02 32 18.6	-0.1
TUZ	**Tuapeka**	**2.83**	**209**	PN	Pn	02 32 20.2	+0.4
TUZ				SN	Sn	02 32 52.0	-1.6
MSZ	**Milford Sound**	**2.90**	**245**	PN	Pn	02 32 20.2	-0.5
TCW	**Tory Channel**	**3.02**	**42**	PN	Pn	02 32 23.2	+0.8
MLZ	**Mavora Lakes**	**3.08**	**232**	PN	Pn	02 32 23.4	+0.2
SNZO	**South Karori**	**3.17**	**47**	*e*Pn	Pb	02 32 30.3	-0.8
SNZO				*e*S	Sn	02 32 59.0	-2.9
CAW	**Cannon Point**	**3.50**	**48**	PN	Pn	02 32 28.3	-0.7
SYZ	**Scrubby Hill**	**3.51**	**209**	PN	Pn	02 32 29.0	0.0
WHZ	**Wether Hill Ro**	**3.54**	**226**	PN	Pn	02 32 28.3	-1.2
KIW	**Kapiti Island**	**3.60**	**44**	PN	Pn	02 32 30.1	-0.3
OGWZ	**Otaki Gorge**	**3.77**	**46**	PN	Pn	02 32 31.1	-1.5
HOWZ	**Holdsworth Sta**	**3.90**	**49**	PN	Pn	02 32 33.6	-0.8
MRZ	**Mangatainoka R**	**4.09**	**48**	PN	Pn	02 32 35.5	-1.6
APZ	**The Paps**	**4.20**	**216**	PN	Pn	02 32 38.9	+0.2
PKE	**Pukeiti**	**4.66**	**23**	PN	Pn	02 32 45.9	+1.0
VRZ	**Vera Road**	**4.97**	**30**	PN	Pn	02 32 49.7	+0.5
WNVZ	**Wahianoa**	**5.13**	**37**	PN	Pn	02 32 52.2	+0.6
HIZ	**Hauiti**	**5.55**	**27**	PN	Pn	02 32 57.6	+0.4
URZ	**Urewera**	**6.69**	**40**	Pn	Pn	02 33 13.1	+0.3
URZ				Pg	Pb	02 33 33.6	+2.5
URZ				Sn	Sn	02 34 24.9	-3.8
URZ	**Urewera** 1.2nm,0.3s,baz=295,slow=5.3,SNR=3.9	**6.69**	**40**	Pn	Pn	02 33 13.1	+0.3
URZ	1.4nm,0.3s,baz=218,slow=14,SNR=5.4			Pg	Pb	02 33 33.6	+2.5
URZ	3.6nm,0.3s,baz=73,slow=19,SNR=8.8			Sn	Sn	02 34 24.9	-3.8
URZ	comp=Z,58nm,21.8s,baz=341,slow=34			LR	LR	02 35 17.7	
OUZ	**Omahuta** 7.0nm,0.5s	**8.41**	**11**	*e*Pn	Pn	02 33 37.9	+1.5
OUZ				*e*S	Sn	02 35 07.0	-4.0
STKA	**Stephens Creek**	**26.29**	**286**	P	P	02 37 11.3	+1.3
STKA	**Stephens Creek** 2.3nm,0.9s,baz=128,slow=17,SNR=4.6	**26.29**	**286**	P	P	02 37 11.3	+1.3
ASAR	**Alice Springs**	**36.71**	**290**	P	P	02 38 41.5	-0.2
ASAR	**Alice Springs** 3.1nm,0.5s,baz=128,slow=7.7,SNR=77	**36.71**	**290**	P	P	02 38 41.5	-0.2
WRA	**Warramunga Arr**	**38.98**	**295**	P	P	02 39 01.4	+0.5
WRA	**Warramunga Arr** 4.4nm,0.6s,baz=133,slow=7.7,SNR=33	**38.98**	**295**	P	P	02 39 01.4	+0.5
FITZ	**Fitzroy Crossi**	**46.14**	**288**	P	P	02 39 59.2	+0.2
FITZ	**Fitzroy Crossi** 1.6nm,0.6s,baz=177,slow=10,SNR=6.6	**46.14**	**288**	P	P	02 39 59.2	+0.2
MKAR	**Makanchi Array**	**119.50**	**308**	PKP	PKPdf	02 50 21.9	-1.6
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=132,slow=2.1,SNR=2.9	**119.50**	**308**	PKP	PKPdf	02 50 21.9	-1.6
YKA	**Yellowknife Ar**	**120.87**	**31**	PKP	PKPdf	02 50 26.2	+0.6
YKA	**Yellowknife Ar** 0.1nm,0.7s,baz=261,slow=2.4,SNR=3.6	**120.87**	**31**	PKP	PKPdf	02 50 26.2	+0.6
MMAI	**Mount Meron Ar**	**144.42**	**268**	PKP	PKPdf	02 51 11.3	+0.7
MMAI	**Mount Meron Ar** 2.4nm,0.5s,baz=96,slow=2.5,SNR=6.7	**144.42**	**268**	PKP	PKPdf	02 51 11.3	+0.7
TORD	**Torodi Ar. Bea**	**148.53**	**199**	PKPbc	PKPbc	02 51 22.4	+0.8
TORD	**Torodi Ar. Bea** 0.4nm,0.4s,baz=185,slow=1.8,SNR=30	**148.53**	**199**	PKPbc	PKPbc	02 51 22.4	+0.8
BRTR	**Keskin Array B**	**148.59**	**278**	PKPbc	PKPbc	02 51 21.8	+0.5
BRTR	**Keskin Array B** 1.1nm,0.8s,baz=130,slow=3.9,SNR=5.5	**148.59**	**278**	PKPbc	PKPbc	02 51 21.8	+0.5
ARCES	**ARCESS Array B**	**148.71**	**338**	PKPbc	PKPbc	02 51 20.7	+0.2
ARCES	**ARCESS Array B** 3.2nm,0.7s,baz=8.5,slow=2.5,SNR=6.8	**148.71**	**338**	PKPbc	PKPbc	02 51 20.7	+0.2
FINES	**FINESS Array B**	**152.85**	**323**	PKPbc	PKPbc	02 51 30.4	0.0
FINES				PKPab	PKPab	02 51 41.0	-0.5
FINES	**FINESS Array B** 5.4nm,1.1s,baz=53,slow=7.4,SNR=6.9	**152.85**	**323**	PKPbc	PKPbc	02 51 30.4	0.0
FINES	1.0nm,0.7s,baz=47,slow=3.6,SNR=4.6			PKPab	PKPab	02 51 41.0	-0.5

*ISCJB **13** 03:12:48.9±1.1, 44.30N±0.05×129.0W±0.1, h15km, mb2.9/2, MS2.9/1, Error ellipse: s-maj=12.1km s-min=7.1km az=166.2*
*IDC **13** 03:12:49.3±2.7, 44.38N×128.79W, h0km, mb2.9/2, mb1 3.5/7, mb1mx3.4/31, mbtmp3.2/7, ML3.3/4, MS3.1/4, Ms1 3.1/4, ms1mx2.8/13, Error ellipse: s-maj=57.0km s-min=18.4km az=51.0*
*NEIC **13** 03:12:49.7±1.7, 44.27N×129.02W, h10km, mb3.7/1, Error ellipse: s-maj=22.3km s-min=11.0km az=63.0*

ISC 13 03:12:50.0±1.4, 44.17N±0.07×129.0W±0.1, h15km, n33, σ1§83/33, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.64**	**109**	*e*Pn	Pn	03 13 41.5	-4.4
KEBM				*e*S	Sn	03 14 23.2	-5.4
HUMO	**Hull Mountain**	**4.68**	**107**	*e*Pn	Pn	03 13 57.9	-2.2
HUMO				*e*S	Sn	03 14 51.0	-3.2
BROR	**Big Rock Looko**	**4.72**	**87**	P	Pn	03 13 59.8	-0.7
NLWA	**Neilton Lookou**	**4.83**	**46**	*e*Pn	Pn	03 14 00.8	-1.3
NLWA				*e*S	Sn	03 14 57.8	0.0
OSR	**Olympics--Salm**	**4.86**	**45**	P	Pn	03 14 01.4	-1.1
IRO	**Indian Ridge**	**4.87**	**90**	P	Pn	03 14 02.5	-0.3
FRIS	**Frissel Point**	**4.97**	**87**	P	Pn	03 14 03.9	-0.3
YBH	**Yreka Blue Hor** 6.7nm,1.1s	**5.23**	**116**	*e*Pn	Pn	03 14 05.8	-1.8
YBH				Sn	Sn	03 15 08.9	+1.2
YBH	**Yreka Blue Hor** 0.2nm,0.3s,baz=304,slow=10,SNR=9.7	**5.23**	**116**	Pn	Pn	03 14 10.4	+2.7
YBH	0.1nm,0.3s,baz=37,slow=20,SNR=2.2			Sn	Sn	03 15 08.9	+1.2
YBH	comp=Z,265nm,21.2s,baz=197,slow=38			LR	LR	03 16 03.4	
VFP	**Flag Point**	**5.50**	**75**	P	Pn	03 14 11.7	+0.3
LON	**Longmire** 11nm,1.0s	**5.69**	**60**	*e*Pn	Pn	03 14 13.6	-0.3
LON				*e*S	Sn	03 15 21.7	+2.8
PGC	**Sidney**	**5.90**	**39**	*e*Pn	Pn	03 14 15.1	-1.7
PGC				*e*S	Sn	03 15 21.8	-2.3
VDB	**Vedder Mountai**	**6.80**	**42**	P	Pn	03 14 28.3	-0.8
BBB	**Bella Bella** comp=Z,114nm,19.8s,baz=67,slow=36	**8.04**	**4**	LR	LR	03 17 30.2	
BMO	**Blue Mountains**	**8.40**	**81**	*e*Pn	Pn	03 14 51.0	-0.1
NVAR	**Mina Array Bea**	**9.89**	**122**	Pn	Pn	03 15 13.3	+1.6
NVAR	**Mina Array Bea** 0.0nm,0.3s,baz=306,slow=14,SNR=2.9	**9.89**	**122**	Pn	Pn	03 15 13.3	+1.6
HLID	**Hailey** 6.1nm,1.0s	**10.56**	**88**	*e*Pn	Pn	03 15 23.6	+2.7
TPAW	**Teton Pass** 3.8nm,1.0s	**13.06**	**87**	*e*Pn	Pn	03 15 57.0	+1.9
ARUT	**Antelope Range** 3.5nm,0.6s	**13.37**	**113**	*e*Pn	Pn	03 16 01.9	+2.6
PDAR	**Pinedale Array**	**14.20**	**89**	Pn	Pn	03 16 12.8	+2.1
PDAR	**Pinedale Array** 0.0nm,0.3s,baz=281,slow=15,SNR=3.4	**14.20**	**89**	Pn	Pn	03 16 12.8	+2.1
DLBC	**Dease Lake** comp=Z,74nm,20.1s,baz=151,slow=32	**14.30**	**358**	LR	LR	03 20 22.4	
ANMO	**Albuquerque**	**19.63**	**110**	P	Pn	03 17 20.5	+1.0
ANMO	**Albuquerque** 0.0nm,0.3s,baz=306,slow=13,SNR=6.4	**19.63**	**110**	P	Pn	03 17 20.5	+1.0
YKA	**Yellowknife Ar**	**20.18**	**20**	P	P	03 17 23.7	0.0
YKA	**Yellowknife Ar** 0.0nm,0.3s,baz=205,slow=11,SNR=17	**20.18**	**20**	P	P	03 17 23.7	0.0
FFC	**Flin Flon** 3.5nm,0.9s	**20.38**	**49**	*e*P	Pn	03 17 26.9	-1.0
ILAR	**Eielson Array**	**22.94**	**340**	P	P	03 17 52.4	-0.9
ILAR	**Eielson Array** 0.6nm,1.0s,baz=160,slow=5.5,SNR=4.6	**22.94**	**340**	P	P	03 17 52.4	-0.9
INK	**Inuvik** comp=Z,35nm,18.9s,baz=350,slow=38	**24.31**	**356**	LR	LR	03 28 01.8	
TXAR	**Lajitas Array**	**25.00**	**118**	P	P	03 18 14.2	+0.9
TXAR	**Lajitas Array** 0.1nm,0.4s,baz=335,slow=4.0,SNR=3.0	**25.00**	**118**	P	P	03 18 14.2	+0.9

IDC 13 03:13:29.3±68.0, 19.82S×176.60W, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.7/19, mbtmp4.0/3, Error ellipse: s-maj=1259.0km s-min=179.8km az=83.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek** 0.7nm,0.4s,baz=82,slow=11,SNR=4.4	**39.27**	**244**	P	P	03 20 59.9	0.0
ASAR	**Alice Springs** 1.9nm,0.5s,baz=97,slow=8.0,SNR=39	**45.95**	**256**	P	P	03 21 54.1	-0.3
WRA	**Warramunga Arr** 0.6nm,0.2s,baz=96,slow=7.3,SNR=20	**46.00**	**261**	P	P	03 21 54.8	0.0

IDC 13 03:28:46.2±3.9, 5.14S×151.47E, h0km, mb3.1/2, mb1 3.4/2, mb1mx3.2/17, mbtmp3.2/2, Error ellipse: s-maj=173.1km s-min=46.7km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=51,slow=9.8,SNR=5.7	**22.24**	**227**	P	P	03 33 44.6	-0.2
ASAR	**Alice Springs** 0.5nm,0.7s,baz=55,slow=9.1,SNR=8.2	**25.02**	**221**	P	P	03 34 12.2	+0.1
TORD	**Torodi Ar. Bea** 0.3nm,0.5s,baz=82,slow=2.2,SNR=15	**149.15**	**287**	PKPbc	PKPbc	03 48 37.2	-0.5

PRE 13 03:30:30.2±0.9, 21.22S×33.34E, h5km, ML3.7, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.28**	**249**	*e*P	Pn	03 31 23.9	+1.5
MSNA				*e*S	Sn	03 32 02.2	+0.3
MSNA	comp=Z,85nm,0.4s			AML	AML	03 32 15.9	
BLWY	**Bulawayo**	**4.56**	**283**	*i* P	Pn	03 31 41.0	+0.9
BLWY	baz=162,slow=5.3			*i*		03 31 41.1	
BLWY				*i* S	Sb	03 32 49.2	+2.8
POGA	**Pongola**	**6.32**	**194**	*e*P	Pn	03 32 04.0	-0.1
POGA				*e*S	Sn	03 33 12.6	-4.2
POGA	comp=Z,14nm,0.7s			AML	AML	03 33 56.5	
SLR	**Silverton**	**6.46**	**225**	*e*P	Pn	03 32 07.6	+1.4
SLR				*e*S	Sn	03 33 17.5	-3.0
SLR	comp=Z,26nm,0.7s			AML	AML	03 34 05.4	
LSZ	**Lusaka**	**7.68**	**320**	*e*P	Pn	03 32 24.1	+1.2
LSZ				*e*S	Sn	03 33 46.1	-4.3
PRYS	**Parys**	**7.88**	**223**	*e*P	Pn	03 32 27.1	+1.4
PRYS				*e*S	Sn	03 33 51.4	-4.1
PRYS	comp=Z,8.4nm,0.9s			AML	AML	03 34 45.3	
LBTB	**Lobatse**	**8.06**	**241**	*e*P	Pn	03 32 28.9	+0.7
LBTB				*e*S	Sn	03 33 56.2	-3.8
LBTB	comp=Z,11nm,0.6s			AML	AML	03 34 57.9	

*IDC **13** 03:34:18.8±4.9, 44.01N×129.81W, h0km, mb3.3/4, mb1 3.6/7, mb1mx3.4/31, mbtmp3.3/7, ML3.3/3, MS3.0/5, Ms1 3.0/5, ms1mx2.8/19, Error ellipse: s-maj=78.6km s-min=28.2km az=66.0*
*NEIC **13** 03:34:23.3±2.6, 44.26N×129.25W, h10km, ML3.4, Error ellipse: s-maj=32.4km s-min=12.2km az=77.0*

ISC 13 03:34:25.2±2.0, 44.18N±0.09×129.0W±0.2, h13km, n35, σ1§61/30, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.61**	**110**	*e*Pn	Pn	03 35 17.3	-3.6
KEBM				*e*S	Sn	03 35 59.4	-4.0
COR	**Corvallis**	**4.07**	**82**	*e*Pn	Pn	03 35 27.1	-0.1
COR				*e*S	Sn	03 36 15.9	+1.2
HUMO	**Hull Mountain**	**4.65**	**108**	*e*Pn	Pn	03 35 33.4	-1.7
HUMO				*e*S	Sn	03 36 28.4	-0.5
BROR	**Big Rock Looko**	**4.67**	**87**	P	Pn	03 35 35.9	+0.4
NLWA	**Neilton Lookou**	**4.79**	**46**	*e*Pn	Pn	03 35 35.9	-1.2
NLWA				*e*S	Sn	03 36 29.7	-2.8
OSR	**Olympics--Salm**	**4.82**	**45**	P	Pn	03 35 37.1	-0.4
IRO	**Indian Ridge**	**4.83**	**90**	P	Pn	03 35 38.3	+0.6
FRIS	**Frissel Point**	**4.93**	**87**	P	Pn	03 35 39.5	+0.4
YBH	**Yreka Blue Hor**	**5.20**	**116**	Pn	Pn	03 35 46.0	+3.3
YBH	**Yreka Blue Hor** 0.2nm,0.3s,baz=300,slow=12,SNR=8.0	**5.20**	**116**	Pn	Pn	03 35 46.0	+3.3
YBH	comp=Z,194nm,21.3s,baz=216,slow=37			LR	LR	03 37 49.3	
HDW	**Hoodsport**	**5.38**	**48**	P	Pn	03 35 45.1	-0.1
VFP	**Flag Point**	**5.45**	**75**	P	Pn	03 35 47.2	+0.9
LON	**Longmire**	**5.64**	**60**	*e*Pn	Pn	03 35 49.3	+0.5
PGC	**Sidney**	**5.87**	**38**	*e*Pn	Pn	03 35 51.3	-0.5
MBW	**Mount Baker**	**6.70**	**44**	P	Pn	03 36 04.2	+0.8
HAWA	**Hanford**	**7.00**	**68**	Pn	Pn	03 36 11.4	+3.9
BMO	**Blue Mountains**	**8.35**	**81**	Pn	Pn	03 36 26.4	+0.4
NVAR	**Mina Array Bea**	**9.86**	**122**	Pn	Pn	03 36 48.9	+2.0
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=299,slow=12,SNR=3.3	**9.86**	**122**	Pn	Pn	03 36 48.9	+2.0
HLID	**Hailey** 4.8nm,1.0s	**10.52**	**88**	*e*Pn	Pn	03 37 00.1	+4.2
IMW	**Indian Meadow** 2.7nm,1.1s	**12.97**	**85**	*e*P	Pn	03 37 33.1	+3.6
PDAR	**Pinedale Array**	**14.16**	**89**	Pn	P	03 37 52.9	-0.3
PDAR	**Pinedale Array** 0.0nm,0.3s,baz=270,slow=9.9,SNR=4.1	**14.16**	**89**	Pn	P	03 37 52.9	-0.3
DLBC	**Dease Lake** comp=Z,77nm,19.1s,baz=173,slow=38	**14.29**	**358**	LR	LR	03 43 20.2	
MVCO	**Mesa Verde** 16nm,1.4s	**16.98**	**107**	*e*Pn	P	03 38 24.4	-0.1
ANMO	**Albuquerque**	**19.60**	**110**	P	Pn	03 38 54.7	+0.1
ANMO	**Albuquerque** 1.0nm,0.8s,baz=312,slow=6.4,SNR=4.8	**19.60**	**110**	P	Pn	03 38 54.7	+0.1
ANMO	comp=Z,92nm,21.2s,baz=93,slow=38			LR	LR	03 47 00.6	
YKA	**Yellowknife Ar**	**20.16**	**20**	P	P	03 38 57.4	-1.6
YKA	**Yellowknife Ar** 1.9nm,0.9s,baz=209,slow=11,SNR=19	**20.16**	**20**	P	P	03 38 57.4	-1.6
ULM	**Lac du Bonnet**	**23.14**	**63**	P	P	03 39 34.5	+3.5
ULM	**Lac du Bonnet** 1.3nm,0.5s,baz=170,slow=2.9,SNR=3.5	**23.14**	**63**	P	P	03 39 34.5	+3.5
INK	**Inuvik** comp=Z,58nm,18.4s,baz=169,slow=38	**24.30**	**356**	LR	LR	03 49 36.4	
TXAR	**Lajitas Array**	**24.97**	**118**	P	P	03 39 48.2	-0.4
TXAR	**Lajitas Array** 0.2nm,0.7s,baz=315,slow=10,SNR=2.6	**24.97**	**118**	P	P	03 39 48.2	-0.4
LPIG	**La Paz** comp=Z,5.6nm,18.6s,baz=86,slow=33	**25.18**	**137**	LR	LR	03 48 29.5	

*AUST **13** 03:36:23.5±1.2, 5.12N×127.27E, h40km, Error ellipse: s-maj=1.4km s-min=1.1km az=232.0*
*ISCJB **13** 03:36:25.2±0.3, 5.17N±0.03×127.25E±0.05, h76km, mb4.4/33, Error ellipse: s-maj=7.9km s-min=3.7km az=155.2*
*MAN **13** 03:36:26, 5.27N×127.00E, h3km, mb4.8, ML3.7, MS3.7*
*IDC **13** 03:36:26.7±1.9, 5.13N×127.17E, h75km±16km, mb4.1/20, mb1 4.2/22, mb1mx4.1/31, mbtmp4.1/22, MS3.3/3, Ms1 3.3/3, ms1mx2.5/42, Error ellipse: s-maj=26.7km s-min=11.0km az=74.0*
*BJI **13** 03:36:28.0, 5.10N×127.20E, h100km, mB4.8/3, mb4.7/4*
*NEIC **13** 03:36:28.1±1.0, 5.14N×127.21E, h88km±8km, mb4.6/11, Error ellipse: s-maj=11.0km s-min=4.7km az=71.0*
*DJA **13** 03:36:30.0±1.0, 5.1°N±8.1°×12.7°E±.1°, h134km±28km, M4.8/4, mb4.7/3, mB4.9/2, MLv4.9/4, Mw(mB)4.2/2*

ISC 13 03:36:26.9±0.4, 5.19N±0.05×127.32E±0.08, h76km, n106, σ1§13/109, mb4.5/33, 3C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**2.04**	**329**	*e*P	Pn	03 36 59.4	+0.1
MATI				*e*S	Sn	03 37 23.4	-0.5
GSPH	**General Santos**	**2.52**	**291**	⇑*e*P	Pn	03 37 01.6	-4.2
DAV	**Davao City (W)**	**2.55**	**317**	*e*Pn	Pn	03 37 06.6	+0.6
DAV				*e*S	Sn	03 37 42.8	+6.7
DAV	**Davao City (W)**	**2.55**	**317**	P	Pn	03 37 11.4	+5.3
DAV	**Davao City (W)** 42nm,0.3s,baz=184,slow=11,SNR=6.7	**2.55**	**317**	P	Pn	03 37 06.6	+0.6
DAV	161nm,0.3s,baz=248,slow=23,SNR=13			S	Sn	03 37 40.4	+4.3
BUKP	**Musuan**	**3.49**	**320**	*e*P	Pn	03 37 19.0	+0.1
CTBH	**Cotabato--PC H**	**3.66**	**304**	⇑P	Pn	03 37 21.1	-0.1
CGP	**Cagayan de Oro**	**4.16**	**321**	*e*P	Pn	03 37 37.1	+9.1
CGP				*e*S	Sn	03 38 17.5	+2.0
TNTI	**Ternate**	**4.39**	**179**	P	Pn	03 37 31.8	+0.7
MNI	**Manado**	**4.46**	**214**	P	Pn	03 37 31.9	-0.3
PAGZ	**Pagadian**	**4.72**	**304**	*e*P	Pn	03 37 36.0	+0.4
MRSI	**Marisa** 132nm,0.6s,2µm0.5nm	**7.12**	**229**	P	Pn	03 38 06.3	-2.1
PALU	**Palu** baz=7.5,SNR=7.6	**7.43**	**73**	P	Pn	03 38 11.4	-1.3
LUWI	**Luwuk**	**7.67**	**216**	P	Pn	03 38 17.6	+1.6
NLAI	**Namlea** 33nm,0.8s,1µm	**8.37**	**181**	P	Pn	03 38 24.4	-1.2
FAKI	**Fak Fak**	**9.44**	**148**	P	Pn	03 38 41.4	+1.2
KAPI	**Kappang**	**12.64**	**217**	*e*Pn	Pn	03 39 23.6	-0.2
KAPI	**Kappang** 0.5nm,0.3s,baz=7.6,slow=15,SNR=2.6	**12.64**	**217**	P	Pn	03 39 22.7	-1.1
KSM	**Kuching** 32nm,0.8s	**17.37**	**258**	*e*Pn	P	03 40 24.1	-0.7
KSM	**Kuching** baz=17,SNR=6.8	**17.37**	**258**	P	P	03 40 24.6	-0.2
MTN	**Manton Dam** baz=18,SNR=4.2	**18.31**	**168**	P	P	03 40 34.6	-0.5
KDU	**Kakadu** baz=18,SNR=4.2	**18.48**	**164**	P	P	03 40 37.1	+0.2
KDU	baz=18,SNR=3.4			S	Sn	03 44 29.3	+25
GUMO	**Guam** comp=Z,36nm,18.7s,baz=132,slow=37	**19.21**	**63**	LR	LR	03 48 25.3	
FITZ	**Fitzroy Crossi** 26nm,1.4s	**23.20**	**184**	*e*P	P	03 41 26.6	-0.8
FITZ	**Fitzroy Crossi** 5.1nm,0.6s,baz=23,slow=7.0,SNR=17	**23.20**	**184**	P	P	03 41 26.3	-1.1
FITZ	**Fitzroy Crossi** baz=23,SNR=14	**23.20**	**184**	P	P	03 41 26.6	-0.8
COEN	**Coen** baz=25,SNR=9.3	**24.69**	**141**	P	P	03 41 42.0	+1.0
WRAB	**Tennant Creek** 24nm,0.5s	**25.90**	**165**	*e*P	P	03 41 52.0	0.0
WRA	**Warramunga Arr**	**25.91**	**165**	P	P	03 41 52.2	+0.1
WRA				ScP	ScP	03 48 53.9	+1.5
WRA	**Warramunga Arr** 12nm,0.6s,baz=338,slow=10,SNR=140	**25.91**	**165**	P	P	03 41 52.2	+0.1
WRA	0.3nm,0.5s,baz=343,slow=2.9,SNR=7.8			ScP	ScP	03 48 53.9	+1.5
NJ2	**Nanjing**	**27.88**	**344**	*e*P	P	03 42 07.5	-2.1
NJ2	comp=Z,10.0nm,0.5s			pmax	pmax		
QIS	**Mount Isa** baz=28,SNR=8.

PKI	Pulchoki	45.63	304	*eP*		P		03 44 38.2	-2.2
	comp=Z,4.1nm,0.3s								
PKIN	Phulchoki	45.64	304	*eP*		P		03 44 38.7	-1.7
	comp=Z,3.4nm,0.3s								
KKN	Kakani	45.81	304	*eP*		P		03 44 40.1	-1.6
	comp=Z,6.9nm,0.3s								
DMN	Daman	45.89	304	*eP*		P		03 44 40.3	-2.1
SONM	Songino Array	46.12	341	P		P		03 44 44.6	+0.9
SONM	Songino Array	46.12	341	P		P		03 44 44.6	+0.9
	comp=Z,1.1nm,0.6s,baz=160,slow=10,SNR=5.1								
KOLN	Koldanda	47.20	303	*eP*		P		03 44 51.8	-0.8
	comp=Z,28nm,0.5s								
DANN	Dangsing	47.27	304	*eP*		P		03 44 52.1	-1.1
	comp=Z,32nm,0.5s								
PYUN	Piuthan	47.82	304	*eP*		P		03 44 56.6	-0.8
	comp=Z,18nm,0.6s								
PETK	Petropavlovsk-	53.87	22	P		P		03 45 43.9	+1.8
PETK	Petropavlovsk-	53.87	22	P		P		03 45 43.9	+1.8
	comp=Z,3.9nm,0.8s,baz=224,slow=8.1,SNR=3.1								
MKAR	Makanchi Array	56.71	324	P		P		03 46 01.9	-0.8
MKAR	Makanchi Array	56.71	324	P		P		03 46 01.9	-0.8
	comp=Z,0.5nm,0.3s,baz=116,slow=7.3,SNR=4.1								
ZAA0	Zalesovo Array	59.57	332	*eP*		P		03 46 21.9	-0.6
ZALV	Zalesovo Beam	59.57	332	P		P		03 46 22.0	-0.5
ZALV	Zalesovo Beam	59.57	332	P		P		03 46 22.0	-0.5
	comp=Z,2.1nm,0.4s,baz=114,slow=7.2,SNR=13								
EKS2	Erkin-Say	60.18	317	*eP*		P		03 46 28.0	+0.9
	comp=Z,34nm,2.8s								
KURK	Kurchatov	60.84	327	*eP*		P		03 46 30.9	-0.3
	comp=Z,10nm,0.6s								
KURBB	Kurchatov Arra	60.84	327	P		P		03 46 30.9	-0.4
	comp=Z,8.0nm,0.6s,baz=127,slow=6.4,SNR=88								
KKAR	Karatay Array	62.58	316	*eP*		P		03 46 42.8	-0.4
	comp=Z,1.6nm,0.8s								
BVAR	Borovoye Array	66.43	326	P		P		03 47 07.7	-0.4
BVAR	Borovoye Array	66.43	326	P		P		03 47 07.7	-0.4
	comp=Z,6.1nm,0.6s,baz=130,slow=9.0,SNR=35								
BRVK	Borovoye	66.50	326	*eP*		P		03 47 08.5	0.0
	comp=Z,9.8nm,0.9s								
ABKAR	Akbulak array	71.40	320	*eP*		P		03 47 38.6	-0.4
	comp=Z,3.9nm,0.6s								
AKTO	Aktyubinsk	72.89	321	P		P		03 47 48.1	+0.2
AKTO	Aktyubinsk	72.89	321	P		P		03 47 48.1	+0.2
	comp=Z,5.8nm,0.6s,baz=97,slow=9.4,SNR=28								
KDAK	Kodiak Island	80.35	32	P		P		03 48 30.5	+0.8
KDAK	Kodiak Island	80.35	32	P		P		03 48 30.5	+0.8
	comp=Z,3.8nm,0.6s,baz=289,slow=5.2,SNR=5.2								
KDAK					LR	LR		04 18 16.4	
	comp=Z,59nm,21.6s,baz=348,slow=31								
KBZ	Khabaz	82.41	313	P		P		03 48 40.5	-0.4
KBZ	Khabaz	82.41	313	P		P		03 48 40.5	-0.4
	comp=Z,1.0nm,0.6s,baz=90,slow=6.1,SNR=3.1								
ILAR	Eielson Array	83.55	25	P		P		03 48 46.0	-0.4
ILAR	Eielson Array	83.55	25	P		P		03 48 46.0	-0.4
	comp=Z,0.5nm,0.6s,baz=239,slow=5.1,SNR=13								
MALT	Malatya	85.95	308	*eP*		P		03 49 00.0	+0.9
	comp=Z,2.1nm,0.6s								
JOF	Joensuu	88.16	333	*ep*		P		03 49 08.0	-1.1
	comp=Z,1.4nm,0.5s								
ARCES	ARCESS Array B	89.29	340	P		P		03 49 13.6	-0.8
ARCES	ARCESS Array B	89.29	340	P		P		03 49 13.6	-0.8
	comp=Z,1.7nm,0.7s,baz=87,slow=6.3,SNR=13								
BRTR	Keskin Array B	89.55	310	P		P		03 49 15.8	-0.6
BRTR	Keskin Array B	89.55	310	P		P		03 49 15.8	-0.6
	comp=Z,0.8nm,0.7s,baz=101,slow=3.4,SNR=5.3								
KAF	Kangasniemi	90.58	333	*ep*		P		03 49 19.5	-1.0
	comp=Z,1.6nm,0.6s								
FINES	FINESS Array B	90.83	332	P		P		03 49 20.5	-1.2
FINES	FINESS Array B	90.83	332	P		P		03 49 20.5	-1.2
	comp=Z,1.5nm,0.6s,baz=65,slow=4.6,SNR=13								
AKASG	Malin Array Be	91.14	321	P		P		03 49 22.0	-1.4
AKASG	Malin Array Be	91.14	321	P		P		03 49 22.0	-1.4
	comp=Z,1.0nm,0.4s,baz=68,slow=5.1,SNR=5.1								
CRVS	Cervenica-Dubn	96.43	320	*eP*		P		03 49 49.6	+1.8
HFS	Hagfors	97.01	332	P		P		03 49 49.3	-0.8
HFS	Hagfors	97.01	332	P		P		03 49 49.3	-0.8
	comp=Z,0.6nm,0.4s,baz=118,slow=4.1,SNR=12								
YKA	Yellowknife Ar	97.94	24	P		P		03 49 54.3	+0.1
YKA	Yellowknife Ar	97.94	24	P		P		03 49 54.3	+0.1
	comp=Z,0.1nm,0.6s,baz=300,slow=4.2,SNR=4.1								
TORD	Torodi Ar. Bea	123.01	289	PKP		PKPdf		03 55 15.0	-0.6
TORD	Torodi Ar. Bea	123.01	289	PKP		PKPdf		03 55 15.0	-0.6
	comp=Z,0.4nm,0.4s,baz=46,slow=1.2,SNR=16								

*IDC **13** 03:43:18.8±7.2,6°.73N×75°.98W,h103km±79km,mb2.8/1, mb1 3.2/2,mb1mx2.9/22,mbtmp3.0/2,ML2.2/1,Error ellipse: s-maj=143.1km s-min=40.1km az=75.0*
*FUNV **13** 03:43:24.9,7°.07N×72°.74W,h134km,MW2.9*
IDC 13 03:43:22.3±2.0,7°.1N±0°.1×72°.7W±0°.1,h150km,n16,
σ1s25/17,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		ISC	Time h m s	Res ISC
CAPV	Capacho	0.87	29	*eP*			Pn	03 43 47.1	+0.8
CAPV				*eS*			Sn	03 44 02.7	-2.0
VIGV	El Vigia	2.20	38	*eP*			Pn	03 44 01.7	+1.8
VIGV				*eS*			Sn	03 44 28.4	-0.4
SOCV	Socops	2.21	58	*eP*			Pn	03 44 01.7	+1.8
SOCV				*eS*			Sn	03 44 27.4	-1.4
ROSC	El Rosal	2.73	215	P			Pn	03 43 58.6	-8.2
	9.4nm,0.3s,baz=58,slow=2.1,SNR=54								
ROSC				S			Sn	03 44 29.4	-12
	15nm,0.3s,baz=57,slow=23,SNR=15								
ELOV	Elorza	3.23	92	*eP*			Pn	03 44 13.5	+0.9
QARV	Quebrada Arrib	3.79	35	*eP*			Pn	03 44 21.3	+1.4
SANV	Sanarito	3.97	53	*eP*			Pn	03 44 23.6	+1.3
CURV	Curarigua	3.99	43	*eP*			Pn	03 44 24.1	+1.5
TEPV	Terepaima	4.52	51	*eP*			Pn	03 44 30.4	+0.9
SIQV	Siquisique	4.56	39	*eP*			Pn	03 44 30.2	+0.2
BAUV	El Baul	5.00	68	*eP*			Pn	03 44 35.7	-0.1
MAPV	Macapo	5.03	57	*eP*			Pn	03 44 37.2	+1.0
MONV	Montecano	5.54	29	*eP*			Pn	03 44 43.0	0.0
TURV	Turiamo	5.88	55	*eP*			Pn	03 44 47.8	+0.4
YKA	Yellowknife Ar	63.13	340	P			P	03 53 30.3	-3.5
	0.1nm,0.5s,baz=136,slow=6.9,SNR=5.5								
WRA	Warramunga Arr	150.80	241	PKPbc			PKPdf	04 02 51.9	-0.4
	0.9nm,1.2s,baz=105,slow=3.1,SNR=2.7								

*NIED **13** 03:44:00,43°.30N×147°.30E,h56km,Mw3.5 Best double couple: M0 2.32000×10^14 NP1:φ±19.00000°,δ80.00000°, λ53.00000°. NP2:φ±275.00000°,δ38.00000°,λ163.00000°.*
*ISCJB **13** 03:44:46.6±1.2,43°.25N±0°.08×147°.29E±0°.10,h64km±9km, mb3.8/10,Error ellipse: s-maj=14.1km s-min=10.4km az=145.1*
*JMA **13** 03:44:46.4±0.2,43°.30N×147°.31E,h37km,M4.1*
*IDC **13** 03:44:48.2±4.9,44°.68N×146°.96E,h0km,mb3.9/10, mb1 3.9/11,mb1mx3.7/27,mbtmp3.9/11,ML3.3/1,Error ellipse: s-maj=115.9km s-min=24.8km az=160.0*
*MOS **13** 03:44:50.4±1.4,44°.62N×147°.01E,h31km,mb4.3/7,Error ellipse: s-maj=20.5km s-min=18.6km az=117.7*
ISC 13 03:44:46.3±2.9,43°.25N±0°.09×147°.4E±0°.2,h46km±23km,
n31,σ1s9/42,mb3.8/10,1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.22	276	P			Pn	03 45 06.5	-0.3
NEM2				*eS*			Sn	03 45 21.5	-0.7
YUK	Yuzh-Kuril'sk	1.37	306	*d* iPN			Pn	03 45 08.2	-0.7
YUK				*i* S			Sn	03 45 24.7	-1.1
YUK				pmax		pmax			
	comp=N,118nm,0.1s								
YUK				pmax		pmax			
	comp=E,192nm,0.1s								
YUK				pmax		pmax			
	comp=Z,372nm,0.1s								
YUK				smax		smax			
	comp=N,1μm,0.3s								
YUK				smax		smax			
	comp=E,611nm,0.3s								
JRA	Rausu	1.80	293	P			Pn	03 45 14.6	-0.1
JRA				*eS*			Sn	03 45 35.8	-0.5
JNK	Nakash	1.99	281	P			Pn	03 45 17.1	-0.3
JNK				*eS*			Sn	03 45 40.0	-1.0
JAK	Akkeshi	2.00	264	P			Pn	03 45 17.7	+0.2
JAK				*eS*			Sn	03 45 40.4	-0.9
JOB	Onbets	2.64	264	P			Pn	03 45 26.9	+0.6
JOB				*eS*			Sn	03 45 56.5	-0.6
JTKR	Abashiri--Toko	2.64	287	P			Pn	03 45 27.3	+1.0
JTKR				*eS*			Sn	03 45 57.8	+0.7
JAR	Ashorobuto	2.66	272	P			Pn	03 45 27.3	+0.8
JAR				*eS*			Sn	03 45 57.9	+0.4

JMP	Maruseppu	3.03	286	P			Pn	03 45 32.9	+1.1
JCH	Churui	3.04	259	P			Pn	03 45 32.3	+0.5
JCH				*eS*			Sn	03 46 05.2	-1.6
JEM	Erimo	3.37	250	P			Pn	03 45 38.4	+2.1
JKK2	Kamakawa 2	3.44	282	P			Pn	03 45 38.9	+1.5
JNBK	Urakawa-nobuka	3.56	256	P			Pn	03 45 39.7	+0.8
JNBK				*eS*			Sn	03 46 17.9	-1.8
ASAJ	Asahikawa	3.59	286	Pn			Pn	03 45 41.2	+1.8
	comp=E,2.5nm,0.3s,baz=260,slow=2.7,SNR=16								
ASAJ				Sn			Sn	03 46 24.1	+3.5
	baz=244,slow=28,SNR=2.5								
JBT2	Biratori 2	3.73	264	P			Pn	03 45 41.9	+0.7
JSE	Soyaes	3.87	298	P			Pn	03 45 44.0	+0.8
SONM	Songino Array	28.84	294	P			P	03 50 40.4	+0.2
	comp=E,1.4nm,0.8s,baz=89,slow=8.2,SNR=8.6								
ZALV	Zalesovo Beam	41.45	308	P			P	03 52 28.8	+0.7
ZALV	Zalesovo Beam	41.45	308	P			P	03 52 28.8	+0.7
	comp=E,0.2nm,0.3s,baz=101,slow=7.8,SNR=2.6								
ILAR	Eielson Array	41.78	36	P			P	03 52 31.8	+1.1
	comp=E,0.2nm,0.7s,baz=272,slow=8.8,SNR=3.4								
MKAR	Makanchi Array	44.98	298	P			P	03 52 56.7	-0.1
MKAR				pmax		pmax			
	comp=Z,1.0nm,0.8s								
MKAR	Makanchi Array	44.98	298	P			P	03 52 56.7	-0.1
	comp=Z,1.1nm,0.8s,baz=79,slow=8.0,SNR=9.2								
KURK	Kurchatov	45.97	304	P			P	03 53 04.9	+0.5
KURBB	Kurchatov Arra	46.05	304	P			P	03 53 04.9	-0.2
	comp=Z,0.4nm,0.4s,baz=68,slow=8.7,SNR=4.6								
ARCES	ARCESS Array B	59.78	340	P			P	03 54 45.7	-0.3
	comp=Z,3.8nm,1.0s,baz=41,slow=8.4,SNR=4.4								
FINES	FINESS Array B	65.41	333	P			P	03 55 22.9	-0.7
	comp=Z,1.2nm,0.6s,baz=46,slow=9.3,SNR=11								
NB2	NORSAR Subarra	70.14	339	P			P	03 55 52.5	-1.0
	comp=Z,0.7nm,0.5s,baz=31,slow=6.5								
NOA	NORSAR Array B	70.14	339	P			P	03 55 52.8	-0.7
	comp=Z,1.0nm,0.6s,baz=32,slow=6.2,SNR=9.1								
HFS	Hagfors	70.22	337	P			P	03 55 53.0	-0.9
	comp=Z,1.5nm,0.3s,baz=33,slow=6.3,SNR=27								
AKASG	Malin Array Be	72.09	324	P			P	03 56 04.6	-0.8
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.4s								
AKASG	Malin Array Be	72.09	324	P			P	03 56 04.6	-0.8
	comp=Z,0.5nm,0.4s,baz=39,slow=5.9,SNR=4.0								

*NNC **13** 03:58:29.8±2.0,42°.41N×79°.86E,h0km,mb4.2,mpv3.8, Error ellipse: s-maj=20.7km s-min=6.3km az=157.0*
ISC 13 03:58:29.1±2.6,42°.6N±0°.2×79°.9E±0°.1,h10km,n16,
σ1s58/13,5C-6D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID		ISC	Time h m s	Res ISC
KNDC	Almaty	2.27	288	⇑*iP*			Pn	03 59 08.3	+1.6
	154nm,0.7s								
KNDC				⇓*i*Sn			Sb	03 59 38.5	+0.3
	326nm,0.7s								
ULHL	Ulahol	2.73	265	P			Pn	03 59 13.3	+0.1
	SNR=316								
TKM2	Tokmak 2	3.20	278	⇑Pn			Pn	03 59 20.8	+1.2
	17nm,0.5s								
TKM2				⇓Sn			Sb	04 00 02.3	-3.0
	88nm,0.5s								
TKM2	Tokmak 2	3.20	278	P			Pn	03 59 20.9	+1.3
	SNR=52								
KZA	Kyzart	3.49	264	P			Pn	03 59 24.9	+1.1
	SNR=33								
KBK	Karagaybulak	3.67	273	P			Pn	03 59 27.1	+1.1
	SNR=17								
CHMS	Chumysh	3.83	279	P			Pb	03 59 32.8	-3.8
	SNR=7.0								
AAK	Ala-Archa	4.00	273	P			Pn	03 59 31.7	+1.1
	SNR=8.0								
USP	Ospenovka	4.04	282	P			Pn	03 59 32.2	+1.2
	SNR=6.9								
EKS2	Erkin-Say	4.53	274	P			Pb	03 59 49.6	+0.9
	SNR=27								
MK31	Makanchi Array	4.57	21	Pn			Pn	03 59 45.9	+7.6
	0.6nm,0.2s,baz=198,slow=12,SNR=217								
MK31				⇓Sn			Sb	04 00 42.9	-1.6
	6.2nm,0.6s,baz=204,slow=24,SNR=4.2								
MK31				⇑Lg			Lg	04 01 02.6	
	14nm,0.7s,baz=201,slow=25,SNR=5.4								
AML	Almayashu	4.63	267	P			Pb	03 59 49.2	-1.4
	SNR=8.7								
KK31	Karatay Array	6.93	278	⇓Pg			Pb	04 00 32.8	+3.1
	9.2nm,0.9s,baz=95,slow=15,SNR=21								
KK31				⇑Lg			Lg	04 02 02.6	
	8.1nm,0.6s,baz=92,slow=26,SNR=6.0								
KUR16	Kurchatov Arra	8.14	354	⇓Lg			Lg	04 02 52.9	
	1.3nm,0.8s								
KURK	Kurchatov	8.22	354	⇑Lg			Lg	04 02 53.8	
	28nm,0.9s								
VOSK	Vostochnaya	11.82	333	⇓Lg			Lg	04 04 47.7	
	16nm,1.4s								

IDC 13 04:09:07.0±0.9,8°.04S×122°.13E,h0km,mb3.7/6,
mb1 3.9/10,mb1mx3.8/24,mbtmp3.8/10,ML3.6/4,
MS3.3/3,Ms1 3.3/3,ms1mx2.5/35,Error ellipse:
s-maj=95.7km s-min=15.9km az=58.0,Flores region

Code	Station Name	Δ°	AZ°	Phase	ID		ISC	Time h m s	Res ISC
KAPI	Kappang	3.82	322	Pn			Pn	04 10 06.1	-1.0
	3.7nm,0.3s,baz=186,slow=14,SNR=5.3								
KAPI				LR			LR	04 11 39.4	
	comp=Z,299nm,20.0s,baz=165,slow=40								
FITZ	Fitzroy Crossi	10.57	162	Pn			Pn	04 11 38.6	-1.2
	0.3nm,0.3s,baz=1.7,slow=9.4,SNR=15								
FITZ				Sn			Sn	04 13 30.0	-9.0
	0.2nm,0.3s,baz=1.7,slow=12,SNR=3.1								
WRA	Warramunga Arr	16.73	136	Pn			Pn	04 13 00.7	-2.2
	0.2nm,0.3s,baz=307,slow=15,SNR=9.5								
WRA				Sn			Sn	04 15 59.3	-10
	0.2nm,0.3s,baz=301,slow=23,SNR=6.7								
WRA				LR			LR	04 20 29.7	
	comp=Z,98nm,20.7s,baz=270,slow=41								
ASAR	Alice Springs	19.20	145	P			P	04 13 32.9	+0.2
	0.4nm,0.3s,baz=329,slow=15,SNR=24								
ASAR				S			Sn	04 16 58.3	-11
	0.1nm,0.3s,baz=312,slow=22,SNR=11								
CTA	Charters Tower	26.24	120	LR			LR	04 24 38.9	
	comp=Z,91nm,18.6s,baz=230,slow=36								
STKA	Stephens Creek	29.84	145	P			P	04 15 17.2	+1.1
	0.3nm,0.4s,baz=312,slow=6.0,SNR=2.4								
CMAR	Chiang Mai Arr	34.88	319	P			P	04 16 01.9	+1.4
	0.6nm,0.6s,baz=134,slow=5.2,SNR=3.9								
SONM	Songino Array	57.35	347	P			P	04 18 58.4	+1.4
	1.2nm,1.0s,baz=157,slow=8.0,SNR=5.7								
MKAR	Makanchi Array	65.07	331	P			P	04 19 49.6	+0.3
	0.9nm,0.5s,baz=139,slow=7.4,SNR=11								
ZALV	Zalesovo Beam	69.30	337	P			P	04 20 14.8	-1.2
	0.4nm,0.4s,baz=134,slow=5.1,SNR=2.1								
KURBB	Kurchatov Arra	69.53	332	P			P	04 20 16.1	-1.3
	0.4nm,0.6s,baz=139,slow=5.7,SNR=3.5								

*ISCJB **13** 04:10:37.7±0.6,31°.25S±0°.03×71°.54W±0°.08,h84km±5km, mb3.9/2,Error ellipse: s-maj=11.9km s-min=4.4km az=4.2*
*IDC **13** 04:10:38.6±1.4,31°.24S×71°.56W,h77km±7km,mb3.8/2, mb1 3.8/7,mb1mx3.5/19,mbtmp3.7/7,MS2.8/1,Ms1 3.0/1, ms1mx2.5/22,Error ellipse: s-maj=27.9km s-min=14.5km az=18.0*
*GUC **13** 04:10:38.6±1.0,31°.25S×71°.44W,h76km±5km,ML4.0*
ISC 13 04:10:38.2±0.9,31°.24S±0°.04×71°.59W±0°.09,h77km±5km,
n27,σ0s66/40,6C-8D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		ISC	Time h m s	Res ISC
CMCH	Combarbala	0.51	82	⇑*iP*			Pn	04 10 51.7	-0.1
CMCH				*i* S			Sn	04 11 01.0	-0.8
CMCH				AML		AML		04 11 01.4	
	comp=E,14μm,0.2s								
CHNG	Los Chungos	0.64	173	⇑*iP*			Pn	04 10 53.6	+0.6
CHNG				*i* S			Sn	04 11 04.3	+0.4
TLL	Tololo Astrono	1.27	32	⇓*iP*			Pn	04 11 01.2	+0.5
TLL				*i* S			Sn	04 11 17.5	+0.1
TLL				AML		AML		04 11 19.0	
	comp=N,4μm,0.4s								
JACH	Jahuel	1.67	150	⇑*iP*			Pn	04 11 06.0	+0.3
IHA	Instituto Hidr	1.78	181	⇓*iP*			Pn	04 11 07.4	+0.4
ROCH	El Roble	1.79	164	⇓*iP*			Pn	04 11 07.7	+0.2
ROCH				*i* S			Sn	04 11 28.8	-0.8
PEL	Peldehue	2.04	158	⇑*iP*			Pn	04 11 11.1	+0.5
PEL				*i* S			Sn	04 11 35.0	-0.4
PEL				AML		AML		04 11 37.9	

	comp=N,2μm,0.3s								
CLCH	Cerro Calan	2.33	158	⇓*iP*			Pn	04 11 14.9	+0.4
CLCH				*i* S			Sn	04 11 42.0	-0.1
CLCH				AML		AML		04 11 48.9	
	comp=E,1μm,0.5s								
STL	Santa Lucia	2.33	160	*eP*			Pn	04 11 14.7	+0.2
SAN	Santiago	2.34	161	*eP*			Pn	04 11 15.2	+0.6
SAN				*eS*			Sn	04 11 42.0	-0.4
SAN				AML		AML		04 11 46.5	
	comp=N,679nm,0.1s								
LCO	Las Campanas	2.35	19	⇓*iP*			Pn	04 11 15.5	+0.5
LCO				AML		AML		04 11 44.4	
	comp=N,771nm,0.3s								
ANTU	Antumapu	2.46	161	*eP*			Pn	04 11 16.5	+0.3
ANTU				*eS*			Sn	04 11 44.0	-1.3
ANTU				AML		AML		04 11 47.0	
	comp=E,935nm,0.3s								
TACH	Talagante	2.47	167	⇓*iP*			Pn	04 11 16.7	+0.4
SJCH	San Jose de Ma	2.61	157	*eP*			Pn	04 11 18.1	-0.2
SJCH				*eS*			Sn	04 11 47.6	-1.5
SJCH				AML		AML		04 11 51.2	
	comp=N,783nm,0.3s								
VACH	Vallenar	2.75	15	⇑*iP*			Pn	04 11 11.8	-8.4
VACH				*eS*			Sn	04 11 43.3	-9.2
CHCH	Chadas Angostu	2.80	164	⇑*iP*			Pn	04 11 21.4	+0.6
LMEL	Las Melosas	2.85	156	⇓*iP*			Pn	04 11 22.6	+1.0
LMEL				*i* S			Sn	04 11 55.3	+0.3
LMEL				AML		AML		04 11 57.7	
	comp=N,1μm,0.4s								
CFAA	Coronel Fontan	2.89	98	P			Pn	04 11 22.7	+0.7
	comp=N,2.3nm,0.3s,baz=268,slow=11,SNR=200								
CFAA				S			Sn	04 11 56.1	+0.4
	comp=N,3.9nm,0.3s,baz=263,slow=21,SNR=12								
CACH	El Canelo	2.99	164	⇓*iP*			Pn	04 11 24.3	+0.9
CPCH	Copiapo	4.02	16	*eP*			Pn	04 11 36.4	-1.0
PLCA	Paso Flores	9.51	175	P			Pn	04 12 52.4	+0.1
	comp=N,0.4nm,0.3s,baz=335,slow=11,SNR=7.3								
CPUP	Villa Florida	13.43	72	P			Pn	04 13 44.5	-0.9
	comp=N,0.1nm,0.3s,baz=270,slow=20,SNR=2.2								
LPAZ	La Paz	15.22	13	P			Pn	04 14 10.2	+0.8
	comp=N,0.5nm,0.3s,baz=185,slow=7.6,SNR=32								
LPAZ				LR		LR		04 19 48.5	
	comp=N,38nm,19.6s,baz=33,slow=36								
SIV	San Ignacio	17.96	35	P			P	04 14 42.3	-0.2
	comp=N,0.5nm,0.3s,baz=218,slow=10,SNR=12								
SIV				sP			sP	04 15 07.0	-0.4
	comp=N,0.1nm,0.3s,baz=230,slow=12,SNR=4.8								
DBIC	Dimbokro	73.94	72	P			P	04 22 05.6	0.0
	comp=N,4.2nm,1.1s,baz=180,slow=6.1,SNR=2.8								
TORD	Torodi Ar. Bea	82.91	70	P			P	04 22 54.7	-0.2
	comp=N,0.5nm,0.4s,baz=247,slow=3.9,SNR=12								
TORD				pP			pP	04 23 15.3	-0.3
	comp=N,0.3nm,0.7s,baz=226,slow=5.8,SNR=2.1								
TORD				sP			sP	04 23 24.6	+0.8
	comp=N,0.6nm,0.9s,baz=269,slow=4.9,SNR=2.8								
ZALV	Zalesovo Beam	151.67	30	PKPbc			PKPbc	04 30 24.2	+1.0
	comp=N,1.3nm,0.4s,baz=291,slow=2.9,SNR=8.0								

IDC 13 04:15:11.7±2.0,45°.44N×151°.68E,h0km,mb3.8/9,
mb1 3.9/11,mb1mx3.6/29,mbtmp3.7/11,ML3.7/1,
MS2.9/1,Ms1 2.9/1,ms1mx2.2/42,Error ellipse:
s-maj=59.1km s-min=22.6km az=169.0,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		ISC	Time h m s	Res ISC
ASAJ	Asahikawa	6.60	262	LR			LR	04 20 01.9	
	comp=Z,99nm,18.1s,baz=33,slow=44								
USRK	Ussuriysk Arra	14.03	272	Pn			Pn	04 18 30.6	-1.0
	0.0nm,0.3s,baz=72,slow=19,SNR=2.4								
KSRS	Korea Array	19.47	254	P			Pn	04 19 41.0	0.0
	0.2nm,0.3s,baz=58,slow=12,SNR=3.7								
MKAR	Makanchi Array	46.66	298	P			P	04 23 41.6	-0.2
	0.4nm,0.9s,baz=57,slow=7.6,SNR=3.4								
KURBB	Kurchatov Arra	47.35	304	P			P	04 23 46.6	-0.5
	0.3

GRL				*i* S		Sn	04 30 27.5	+0.4	
MIPR	**Malaya Ipel'ka**	**1.57**	**323**	*e*P		Pn	04 30 08.6	+0.6	
MIPR				*i* S		Sb	04 30 28.9	-0.2	
PET	**Petropavlovsk**	**2.01**	**6**	*e*P		Pn	04 30 14.4	+0.4	
PET				*i* S		Sn	04 30 38.6	+0.1	
APC	**Apacha**	**2.02**	**340**	*e*P		Pn	04 30 14.9	+0.8	
UGLR	**Uglovaya**	**2.21**	**8**	*e*P		Pn	04 30 18.0	+1.1	
UGLR				*i* S		Sn	04 30 44.3	+0.6	
AVH	**Avacha**	**2.26**	**7**	P		Pb	04 30 19.6	-1.7	
AVH				*i* S		Sb	04 30 47.4	-1.5	
SMAR	**Somma**	**2.26**	**8**	*e*P		Pn	04 30 19.2	+1.5	
SMAR				*i* S		Sn	04 30 47.0	+1.8	
KOK	**Koryaka**	**2.28**	**5**	P		Pb	04 30 19.8	-1.9	
KOK				*i* S		Sb	04 30 48.0	-1.5	
SDLR	**Sedlovina**	**2.28**	**9**	*e*P		Pn	04 30 18.4	+0.5	
KRER	**Koryakskii**	**2.29**	**7**	*e*P		Pn	04 30 19.9	+1.7	
KRER				*i* S		Sn	04 30 47.7	+1.6	
SPN	**Mys Shipunski**	**2.33**	**27**	*e*P		Pn	04 30 19.7	+1.3	
SPN				*i* S		Sn	04 30 48.1	+1.6	
GNL	**Ganaly**	**2.68**	**356**	P		Pn	04 30 24.6	+1.3	
GNL				*i* S		Sn	04 30 55.8	+0.5	
MKZ	**Mys Kozlova**	**4.10**	**29**	*e*P		Pn	04 30 43.2	+0.5	
MKZ				*i* S		Sn	04 31 27.9	-2.2	

IDC 13 04:31:19.9±1.9, 9°.06S×120°.94E, h0km, mb3.4/1, mb1 3.5/4, mb1mx3.3/20, mbtmp3.3/4, ML3.0/3, Error ellipse: s-maj=170.3km s-min=26.0km az=56.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.09**	**154**	Pn	Pn	04 33 44.6	-1.5
	0.1nm,0.3s,baz=193,slow=22,SNR=10						
WRA	**Warramunga Arr**	**16.88**	**131**	Pn	Pn	04 35 17.1	-0.7
	0.1nm,0.3s,baz=306,slow=14,SNR=5.3						
WRA				Sn	Sn	04 38 14.8	-11
	0.0nm,0.3s,baz=305,slow=24,SNR=2.8						
ASAR	**Alice Springs**	**19.10**	**141**	P	Pn	04 35 45.9	+0.6
	0.0nm,0.3s,baz=322,slow=10,SNR=2.7						
MKAR	**Makanchi Array**	**65.39**	**332**	P	P	04 42 04.3	-0.1
	0.2nm,0.4s,baz=132,slow=7.3,SNR=5.1						

IDC 13 04:37:59.7±6.9, 19°.27S×64°.72W, h353km±27km, mb3.1/3, mb1 3.3/4, mb1mx3.0/17, mbtmp3.1/4, Error ellipse: s-maj=182.1km s-min=28.6km az=19.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.39**	**312**	P	Pn	04 39 13.7	-0.2
	3.0nm,0.3s,baz=135,slow=8.4,SNR=119						
LPAZ				S	S	04 40 13.9	+0.3
	baz=315,slow=20,SNR=2.3						
TORD	**Torodi Ar. Bea**	**72.90**	**69**	P	P	04 48 51.6	0.0
	1.7nm,0.4s,baz=254,slow=5.6,SNR=72						
PDAR	**Pinedale Array**	**74.25**	**327**	P	P	04 48 59.2	0.0
	0.3nm,0.7s,baz=126,slow=9.1,SNR=3.8						
YKA	**Yellowknife Ar**	**90.45**	**339**	P	P	04 50 21.3	-0.1
	0.1nm,0.4s,baz=126,slow=4.7,SNR=6.5						

MOS 13 04:44:39.9±1.2, 48°.82N×158°.53E, h41km, mb4.3/1, Error ellipse: s-maj=99.9km s-min=27.4km az=93.4
KRSC 13 04:44:39.9±1.4, 48°.82N×158°.53E, h41km±41km, ML4.2
ISC 13 04:44:41.1±4.1, 48°.7N±0°.2×158°.41E±0°.10, h35km, n15, σ1s20/26, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.46**	**324**	*e*PN	Pn	04 45 12.0	-6.7
SKR				pmax	pmax		
	comp=Z,150nm,0.5s						
SKR	**Severo-Kuril's**	**2.46**	**324**	*e*P	**Pn**	**04 45 18.1**	**-0.6**
SKR				*e*S	**Sn**	**04 45 45.8**	**-1.7**
PAU	**Pauzhetka**	**2.93**	**340**	PN	**Pn**	**04 45 25.5**	**+0.4**
PAU				*S*	**Sn**	**04 45 59.0**	**-0.1**
PAU	**Pauzhetka**	**2.93**	**340**	*e*P	**Pn**	**04 45 25.5**	**+0.4**
PAU				*e*S	**Sn**	**04 45 59.0**	**-0.1**
RUS	**Russkaya**	**3.71**	**1**	PN	**Pn**	**04 45 36.4**	**+0.5**
RUS				S	**Sn**	**04 46 16.9**	**-1.4**
RUS	**Russkaya**	**3.71**	**1**	*e*P	**Pn**	**04 45 36.4**	**+0.5**
RUS				*e*S	**Sn**	**04 46 16.9**	**-1.4**
MTVR	**Mutnovka**	**3.76**	**358**	*e*P	**Pn**	**04 45 37.6**	**+0.8**
MTVR				*e*S	**Sn**	**04 46 19.2**	**-0.7**
GRL	**Gorelyy**	**3.84**	**357**	*e*P	**Pn**	**04 45 39.2**	**+1.5**
GRL				*e*S	**Sn**	**04 46 22.1**	**+0.5**
SPN	**Mys Shipunski**	**4.50**	**13**	PN	**Pn**	**04 45 46.8**	**+0.2**
SPN				S	**Sn**	**04 46 35.8**	**-1.8**
SPN	**Mys Shipunski**	**4.50**	**13**	*e*P	**Pn**	**04 45 46.8**	**+0.2**
SPN				*e*S	**Sn**	**04 46 35.8**	**-1.8**
SDLR	**Sedlovina**	**4.57**	**4**	*e*P	**Pn**	**04 45 48.8**	**+1.0**
SDLR				*e*S	**Sn**	**04 46 38.9**	**-0.7**
GNL	**Ganaly**	**4.98**	**357**	*e*P	**Pn**	**04 45 55.7**	**+2.2**
GNL				*e*S	**Sn**	**04 46 51.7**	**+1.8**
KII	**Karymskiy**	**5.36**	**7**	S	**Sn**	**04 46 59.5**	**+0.5**
MKZ	**Mys Kozlova**	**6.19**	**18**	PN	**Pn**	**04 46 10.6**	**+0.7**
MKZ	**Mys Kozlova**	**6.19**	**18**	*e*P	**Pn**	**04 46 10.6**	**+0.7**
MKZ				*e*S	**Sn**	**04 47 17.5**	**-1.9**

IDC 13 05:23:44.4±1.1, 34°.12N×138°.93E, h230km±12km, mb3.0/6, mb1 3.1/8, mb1mx2.9/28, mbtmp3.0/8, Error ellipse: s-maj=48.6km s-min=13.5km az=67.0
ISCJB 13 05:23:46.4±0.6, 34°.35N±0°.05×138°.63E±0°.07, h236km±3km, mb3.2/6, Error ellipse: s-maj=8.8km s-min=8.4km az=178.9
JMA 13 05:23:46.9±0.3, 34°.33N×138°.66E, h233km±3km, M3.1
ISC 13 05:23:47.4±1.0, 34°.36N±0°.06×138°.61E±0°.07, h233km±7km, n22, σ0s73/31, mb3.2/6, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIZS	**Izushimoda**	**0.42**	**32**	P	**Pn**	**05 24 17.9**	**-0.2**
TK03	**Tokai 3**	**0.57**	**250**	S	**S**	**05 24 42.3**	**-0.3**
TK04	**Tokai 4**	**0.61**	**273**	P	**Pn**	**05 24 18.7**	**+0.1**
TK04				S	**S**	**05 24 43.6**	**+0.7**
TK02	**Tokai 2**	**0.82**	**240**	P	**Pn**	**05 24 20.2**	**+0.8**
TK02				S	**S**	**05 24 44.5**	**+0.2**
JOD2	**Odawara 2**	**0.98**	**23**	P	**Pn**	**05 24 20.6**	**+0.1**
JOD2				*e*S	**S**	**05 24 46.0**	**-0.5**
JIE	**Ise**	**1.57**	**272**	P	**Pn**	**05 24 24.1**	**-0.6**
JIE				S	**S**	**05 24 52.4**	**-1.4**
JHJ	**Hachijo jima 2**	**1.58**	**141**	P	Pn	05 24 20.5	-4.3
	24nm,0.3s,baz=286,slow=22,SNR=6.2						
JHJ				S	**S**	**05 24 54.1**	**+0.2**
	8.4nm,0.3s,baz=240,slow=20,SNR=2.4						
JHJ2	**Mitsune**	**1.60**	**141**	P	**Pn**	**05 24 24.3**	**-0.7**
JRY	**Ryogami san**	**1.67**	**8**	P	**Pn**	**05 24 26.5**	**+1.0**
JRY				S	**S**	**05 24 56.2**	**+0.7**
TTO1	**TONANKAI O.B.S**	**1.69**	**245**	P	**Pn**	**05 24 24.9**	**-0.4**
BSO1	**Boso 1**	**1.98**	**81**	P	**Pn**	**05 24 26.9**	**-0.7**
BSO1				S	**S**	**05 24 59.4**	**+0.3**
JGM	**Miyama**	**2.05**	**311**	P	**Pn**	**05 24 28.7**	**-0.2**
JGM				S	**S**	**05 25 01.6**	**+0.1**
JAG	**Ashikaga**	**2.17**	**18**	P	**Pn**	**05 24 30.0**	**-0.1**
JAG				S	**S**	**05 25 02.3**	**-1.4**
MJAR	**Matsushiro Arr**	**2.20**	**352**	P	**Pn**	**05 24 30.2**	**-0.2**
	1.0nm,0.3s,baz=174,slow=13,SNR=7.3						
MJAR				S	**S**	**05 25 05.0**	**+0.8**
	0.5nm,0.3s,baz=219,slow=32,SNR=4.4						
MAT	**Matsushiro**	**2.20**	**352**	P	**Pn**	**05 24 29.8**	**-0.6**
MAT				S	**S**	**05 25 02.8**	**-1.4**
KSRS	**Korea Array**	**9.20**	**293**	P	**Pn**	**05 25 56.9**	**+0.9**
	0.2nm,0.3s,baz=99,slow=12,SNR=5.1						
SONM	**Songino Array**	**27.54**	**309**	P	**P**	**05 29 13.7**	**+1.0**
	0.3nm,0.7s,baz=116,slow=9.8,SNR=3.0						
ZALV	**Zalesovo Beam**	**42.10**	**315**	P	**P**	**05 31 16.8**	**+0.3**
	0.5nm,0.4s,baz=99,slow=8.9,SNR=3.4						
MKAR	**Makanchi Array**	**43.66**	**304**	P	**P**	**05 31 29.6**	**+0.4**
	0.3nm,0.4s,baz=85,slow=8.9,SNR=7.1						
KURBB	**Kurchatov Arra**	**45.90**	**310**	P	**P**	**05 31 46.4**	**-0.3**
	0.5nm,0.4s,baz=90,slow=7.1,SNR=12						
WRA	**Warramunga Arr**	**54.15**	**185**	P	P	05 32 43.4	-5.4
	0.4nm,1.1s,baz=360,slow=7.5,SNR=6.0						
FINES	**FINESS Array B**	**70.10**	**332**	P	**P**	**05 34 33.4**	**-0.6**
	1.5nm,0.9s,baz=108,slow=6.2,SNR=4.1						

BJI 13 05:30:37.6, 17°.59S×177°.87W, h538km, mB4.9/25, mb4.8/41
SZGRF 13 05:30:40.1, 18°.74S×179°.85W, h33km, Fiji Islands region
ISCJB 13 05:30:41.8±0.4, 17°.87S±0°.04×178°.71W±0°.03, h563km±5km, mb4.8/157, Error ellipse: s-maj=7.2km s-min=3.2km az=159.0
IDC 13 05:30:41.1±0.6, 17°.86S×178°.64W, h548km±6km, mb4.3/32, mb1 4.4/35, mb1mx4.4/37, mbtmp4.4/35, Error ellipse: s-maj=10.2km s-min=7.5km az=149.0
NEIC 13 05:30:42.7±0.5, 17°.84S×178°.73W, h565km±5km, mb4.9/110, Error ellipse: s-maj=6.1km s-min=3.4km az=149.0
AUST 13 05:30:43.4±0.0, 17°.89S×178°.54W, h576km, Error ellipse: s-maj=1.3km s-min=1.2km az=264.0
BGS 13 05:30:43.5±3.5, 17°.84S×178°.73W, h565km, mb4.9(NEIC)
GCMT 13 05:30:43.9±0.3, 17°.79S×178°.56W, h563km±2km, MW5.2, Moment Tensor Solution. s68,c87; Moment tensor: Scale 10^16Nm; Mrr8.52±.29; Mθθ-0.99±.60; Mϕϕ-7.54±.50; Mrθ4.62±.57; Mθϕ0.48±.48; Mϕr0.33±.56; Best double couple: M=9.00000×10^16 NP1:ϕ=17.00000°, δ49.00000°, λ120.00000°. NP2:ϕ=155.00000°, δ49.00000°, λ60.00000°. Principal axes: T 10.4000, Plg68.0000°, Azm356.0000°; N -2.8000, Plg22.0000°, Azm176.0000°; P -7.6000, Plg0.0000°, Azm266.0000°; Data Used: II IU IC G CN.
DJA 13 05:30:44.2±5.2, 18°.S±15°×17°.9W±2°.2, h550km±48km, M4.9/13, mB5.2/1, mb4.9/13, Mw(mB)4.6/1
ISC 13 05:30:41.4±0.3, 17°.84S±0°.05×178°.62W±0°.04, h550km±2km, h551km; pP-P, n1040, σ0s98/1190, mb4.9/157, 274C-231D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.18**	**271**	*i*P	**P**	**05 31 59.6**	**+2.0**
MSVF				*e*S	**S**	**05 33 02.4**	**+2.6**
AFI	**Afiamalu**	**7.65**	**60**	*e*P	**P**	**05 32 33.4**	**-2.5**
AFI				S	**S**	**05 34 12.1**	**+2.5**
AFI				*e*S	S	05 34 13.2	+3.6
AFI	**Afiamalu**	**7.65**	**60**	P	**P**	**05 32 34.1**	**-1.8**
	45nm,0.3s,baz=346,slow=3.6,SNR=31						
AFI				S	**S**	**05 34 12.1**	**+2.5**
	11nm,0.3s,baz=60,slow=17,SNR=4.3						
NIUE	**Niue**	**8.34**	**100**	P	**P**	**05 32 42.9**	**+0.5**
	baz=8.3,SNR=20						
NIUE				S	**S**	**05 34 23.1**	**+1.3**
	baz=8.3,SNR=6.4						
DZM	**Mont Dzumac**	**14.66**	**251**	*e*P	**P**	**05 33 45.9**	**-1.6**
	332nm,1.4s						
DZM	**Mont Dzumac**	**14.66**	**251**	*e*P	**P**	**05 33 46.3**	**-1.2**
DZM	**Mont Dzumac**	**14.66**	**251**	P	**P**	**05 33 46.5**	**-1.0**
DZM	**Mont Dzumac**	**14.66**	**251**	P	**P**	**05 33 46.5**	**-1.0**
	2.5nm,0.3s,baz=74,slow=16,SNR=19						
NOUC	**Port Laguerre**	**14.80**	**251**	*e*P	**P**	**05 33 49.1**	**+0.3**
RAR	**Rarotonga**	**18.07**	**104**	*e*P	**P**	**05 34 21.0**	**+1.0**
	1µm,2.2s						
RAR	**Rarotonga**	**18.07**	**104**	P	**P**	**05 34 20.1**	**+0.1**
	3.3nm,0.3s,baz=270,slow=6.8,SNR=13						
OUZ	**Omahuta**	**18.64**	**200**	*e*P	**P**	**05 34 27.5**	**+2.5**
	124nm,1.0s						
URZ	**Urewera**	**20.68**	**190**	*e*P	**P**	**05 34 41.7**	**-1.7**
	34nm,0.8s						
URZ				S	**S**	**05 38 03.4**	**+4.1**
URZ	**Urewera**	**20.68**	**190**	P	**P**	**05 34 41.7**	**-1.7**
	17nm,0.4s,baz=4.5,slow=5.3,SNR=30						
URZ				S	**S**	**05 38 03.4**	**+4.1**
	22nm,1.0s,baz=97,slow=19,SNR=5.6						
KHZ	**Kahutara**	**25.39**	**194**	*e*P	**P**	**05 35 24.5**	**-0.9**
	28nm,0.9s						
RPZ	**Rata Peaks**	**27.23**	**197**	P	**P**	**05 35 40.8**	**-0.8**
RPZ	**Rata Peaks**	**27.23**	**197**	P	**P**	**05 35 40.8**	**-0.8**
	9.4nm,0.7s,baz=261,slow=9.3,SNR=6.0						
PAE	**Paea**	**27.64**	**94**	*e*P	**P**	**05 35 46.2**	**+0.7**
	9.9nm,1.0s						
PPT2	**Papeete2**	**27.65**	**94**	*e*P	**P**	**05 35 46.6**	**+0.9**
	112nm,1.3s						
PPT	**Papeete**	**27.65**	**94**	P	**P**	**05 35 44.9**	**-0.7**
PPT	**Papeete**	**27.65**	**94**	P	**P**	**05 35 44.9**	**-0.7**
	57nm,0.7s,baz=74,slow=7.5,SNR=11						
TBI	**Tubuai**	**27.81**	**106**	*e*P	**P**	**05 35 47.1**	**+0.2**
	166nm,1.1s						
TIAR	**Tiarei**	**27.87**	**94**	*e*P	**P**	**05 35 48.4**	**+0.8**
	43nm,0.7s						
TVO	**Taravao**	**27.95**	**94**	*e*P	**P**	**05 35 49.0**	**+0.8**
	80nm,0.8s						
MEH	**Mehetia**	**29.06**	**95**	*e*P	**P**	**05 35 58.5**	**+0.6**
	143nm,1.2s						
EIDS	**Eidsvold**	**29.11**	**250**	*e*P	**P**	**05 35 58.2**	**+0.1**
	52nm,0.9s						
EIDS	**Eidsvold**	**29.11**	**250**	P	**P**	**05 35 57.9**	**-0.3**
	baz=29,SNR=8.7						
PMOR	**Pomariorio Ree**	**29.59**	**89**	*e*P	**P**	**05 36 03.2**	**+0.8**
	218nm,1.4s						
ARMA	**Armidale**	**29.80**	**240**	*e*P	**P**	**05 36 05.1**	**+0.8**
	48nm,0.8s						
ARMA	**Armidale**	**29.80**	**240**	P	**P**	**05 36 04.9**	**+0.6**
	baz=30,SNR=46						
MGCD	**Mangrove Creek**	**31.17**	**235**	P	**P**	**05 36 16.9**	**+1.1**
	baz=31,SNR=22						
RMQ	**Roma**	**31.34**	**248**	P	**P**	**05 36 17.9**	**+0.5**
	baz=31,SNR=28						
CTA	**Charters Tower**	**33.26**	**260**	P	**P**	**05 36 33.3**	**-0.5**
CTA				PcP	**PcP**	**05 39 00.2**	**+0.2**
CTA	**Charters Tower**	**33.26**	**260**	P	**P**	**05 36 33.3**	**-0.5**
	46nm,0.9s,baz=92,slow=11,SNR=27						
CTA				PcP	**PcP**	**05 39 00.2**	**+0.2**
	12nm,0.9s,baz=27,slow=4.5,SNR=4.7						
CTAO	**Charters Tower**	**33.26**	**260**	*e*P	**P**	**05 36 34.0**	**+0.2**
	63nm,1.0s						
CNB	**Canberra Magne**	**33.31**	**232**	P	**P**	**05 36 34.9**	**+0.8**
	baz=33,SNR=42						
CAN	**Canberra**	**33.59**	**232**	*e*P	**P**	**05 36 37.0**	**+0.6**
	56nm,1.1s						
YNG	**Young**	**33.67**	**234**	P	**P**	**05 36 38.0**	**+0.9**
	baz=34,SNR=8.6						
MILA	**Mila**	**34.18**	**229**	P	**P**	**05 36 42.0**	**+0.7**
	baz=34,SNR=20						
PMG	**Port Moresby**	**34.25**	**280**	*e*P	**P**	**05 36 42.6**	**+0.5**
	73nm,1.1s						
PMG	**Port Moresby**	**34.25**	**280**	P	**P**	**05 36 43.3**	**+1.1**
	67nm,1.0s						
PMG	**Port Moresby**	**34.25**	**280**	P	**P**	**05 36 42.7**	**+0.5**
	46nm,0.9s,baz=91,slow=6.9,SNR=11						
CMSA	**Cobar Meteorol**	**35.01**	**240**	P	**P**	**05 36 48.4**	**+0.1**
	baz=35,SNR=70						
CMSA				S	**S**	**05 41 40.1**	**-1.6**
	baz=35,SNR=5.4						
QLP	**Quilpie**	**35.37**	**249**	P	**P**	**05 36 51.1**	**-0.2**
	baz=35,SNR=28						
COEN	**Coen**	**36.91**	**270**	*e*P	**P**	**05 37 03.8**	**-0.4**
	286nm,0.9s						
COEN	**Coen**	**36.91**	**270**	P	**P**	**05 37 04.2**	**0.0**
	baz=37,SNR=22						
TOO	**Toolangi**	**37.06**	**231**	P	**P**	**05 37 05.9**	**+0.7**
	baz=37,SNR=41						
TOO				S	**S**	**05 42 12.5**	**+0.4**
	baz=37,SNR=12						
MOO	**Moorlands**	**38.01**	**223**	P	**P**	**05 37 13.6**	**+0.9**
	baz=38,SNR=4.2						
STKA	**Stephens Creek**	**38.49**	**241**	*e*P	**P**	**05 37 16.9**	**+0.1**
	28nm,1.2s						
STKA				PcP	**PcP**	**05 39 15.9**	**+0.3**
STKA				ScP	**ScP**	**05 42 13.3**	**+1.7**
STKA	**Stephens Creek**	**38.49**	**241**	P	**P**	**05 37 17.3**	**+0.5**
	45nm,0.7s,baz=89,slow=8.9,SNR=120						
STKA				PcP	**PcP**	**05 39 15.9**	**+0.3**
	6.5nm,0.8s,baz=150,slow=1.8,SNR=3.6						
STKA				ScP	**ScP**	**05 42 13.3**	**+1.7**
	5.4nm,1.0s,baz=347,slow=5.6,SNR=3.8						
STKA	**Stephens Creek**	**38.49**	**241**	P	**P**	**05 37 17.4**	**+0.5**
	baz=38,SNR=114						
STKA				S	**S**	**05 42 33.0**	**-0.4**
	baz=38,SNR=6.2						
QIS	**Mount Isa**	**39.47**	**259**	P	**P**	**05 37 24.5**	**-0.5**
	baz=40,SNR=4.8						
ARPS	**Mount Arapiles**	**39.53**	**233**	P	**P**	**05 37 25.8**	**+0.6**
	baz=40,SNR=17						
MMPI	**Merauke**	**40.92**	**278**	P	**P**	**05 37 38.9**	**+2.4**
	baz=41,SNR=3.2						
JAY	**Jayapura**	**42.70**	**286**	P	**P**	**05 37 51.1**	**+0.5**
	baz=43,SNR=8.7						
BBOO	**Buckleboo**	**43.27**	**241**	*e*P	**P**	**05 37 54.7**	**-0.1**
	1µm,0.7s						
BBOO	**Buckleboo**	**43.27**	**241**	P	**P**	**05 37 54.6**	**-0.1**
	baz=43,SNR=270						
BBOO				S	**S**	**05 43 41.5**	**-0.9**
	baz=43,SNR=4.8						

WRAB	**Tennant Creek**	**44.44**	**260**	*e*P	**P**	**05 38 03.4**	**-0.7**
	62nm,1.3s						
WRA	**Warramunga Arr**	**44.45**	**259**	P	**P**	**05 38 02.8**	**-1.4**
WRA				PcP	**PcP**	**05 39 35.8**	**0.0**
WRA				ScP	**ScP**	**05 42 37.1**	**+1.4**
WRA				S	**S**	**05 43 53.9**	**-5.7**
WRA	**Warramunga Arr**	**44.45**	**259**	P	**P**	**05 38 02.8**	**-1.4**
	16nm,0.5s,baz=97,slow=7.2,SNR=281						
WRA				PcP	**PcP**	**05 39 35.8**	**0.0**
	7.7nm,0.7s,baz=88,slow=3.7,SNR=12						
WRA				ScP	**ScP**	**05 42 37.1**	**+1.4**
	5.2nm,1.2s,baz=92,slow=4.3,SNR=6.5						
WRA				S	**S**	**05 43 53.9**	**-5.7**
	2.1nm,0.7s,baz=94,slow=13,SNR=7.9						
AS31	**Alice Springs**	**44.62**	**254**	*e*P	**P**	**05 38 04.8**	**-0.6**
ASAR	**Alice Springs**	**44.62**	**254**	P	**P**	**05 38 04.8**	**-0.6**
ASAR				PcP	**PcP**	**05 39 36.1**	**-0.2**
ASAR				ScP	**ScP**	**05 42 37.4**	**+1.0**
ASAR				S	**S**	**05 43 57.9**	**-4.1**
ASAR	**Alice Springs**	**44.62**	**254**	P	**P**	**05 38 04.8**	**-0.6**
	156nm,0.7s,baz=89,slow=8.1,SNR=1717						
ASAR				PcP	**PcP**	**05 39 36.1**	**-0.2**
	6.8nm,0.6s,baz=101,slow=3.8,SNR=8.3						
ASAR				ScP	**ScP**	**05 42 37.4**	**+1.0**
	3.4nm,0.9s,baz=115,slow=4.3,SNR=6.1						
ASAR				S	**S**	**05 43 57.9**	**-4.1**
	11nm,1.0s,baz=87,slow=16,SNR=36						
KDU	**Kakadu**	**47.36**	**269**	P	**P**	**05 38 25.6**	**-0.7**
	baz=47,SNR=18						
GUMO	**Guam**	**47.68**	**309**	P	**P**	**05 38 28.9**	**+0.3**
GUMO	**Guam**	**47.68**	**309**	P	**P**	**05 38 28.9**	**+0.3**
	134nm,0.7s,baz=181,slow=9.8,SNR=6.2						
MTN	**Manton Dam**	**48.60**	**268**	P	**P**	**05 38 34.5**	**-1.0**
	baz=49,SNR=13						
MTN				S	**S**	**05 44 54.1**	**-3.2**
	baz=49,SNR=6.0						
TLE	**Tual**	**49.00**	**278**	P	**P**	**05 38 39.1**	**+0.6**
	baz=49,SNR=3.4						
FORT	**Forrest**	**49.86**	**245**	*e*P	**P**	**05 38 43.8**	**-0.8**
	89nm,0.6s						
FORT	**Forrest**	**49.86**	**245**	P	**P**	**05 38 43.8**	**-0.8**
	baz=50,SNR=82						
FORT				S	**S**	**05 45 13.8**	**-0.2**
	baz=50,SNR=5.8						
SWI	**Sorong**	**52.04**	**283**	P	**P**	**05 39 00.8**	**+0.1**
	baz=52,SNR=4.0						
FITZ	**Fitzroy Crossi**	**52.84**	**261**	*e*P	**P**	**05 39 06.2**	**-0.2**
	28nm,1.3s						
FITZ				S	**S**	**05 45 56.0**	**+1.6**
FITZ	**Fitzroy Crossi**	**52.84**	**261**	S	**S**	**05 45 56.0**	**+1.6**
	1.3nm,0.7s,baz=288,slow=19,SNR=4.1						
FITZ	**Fitzroy Crossi**	**52.84**	**261**	P	**P**	**05 39 06.2**	**-0.2**
	baz=53,SNR=15						
FITZ				S	**S**	**05 45 54.2**	**-0.2**
	baz=53,SNR=6.2						
MEEK	**Meekatharra**	**58.27**	**249**	P	**P**	**05 39 42.9**	**-1.0**
	baz=58,SNR=18						
KLBR	**Kellerberrin**	**58.68**	**244**	P	**P**	**05 39 45.8**	**-0.9**
	baz=59,SNR=22						
BLDU	**Ballidu**	**59.63**	**245**	P	**P**	**05 39 52.2**	**-0.8**
	baz=60,SNR=8.4						
MORW	**Morawa**	**60.33**	**246**	P	**P**	**05 39 56.8**	**-0.8**
	baz=60,SNR=5.7						
KAPI	**Kappang**	**61.49**	**274**	P	**P**	**05 40 04.3**	**-1.2**
KAPI	**Kappang**	**61.49**	**274**	P	**P**	**05 40 04.3**	**-1.2**
	8.0nm,0.5s,baz=184,slow=11,SNR=5.8						
GIRL	**Giralia**	**62.72**	**253**	P	**P**	**05 40 13.9**	**+0.6**
	baz=63,SNR=9.1						
JHJ	**Hachijo jima 2**	**64.40**	**322**	P	**P**	**05 40 23.2**	**-0.5**
	111nm,0.6s,baz=5.2,slow=11,SNR=3.8						
MYLDM	**Lahad Datu**	**66.10**	**284**	P	P	05 40 38.3	+3.5
	37nm,1.4s						
MJAR	**Matsushiro Arr**	**67.74**	**323**	P	**P**	**05 40 43.3**	**-1.2**
MJAR				PcP	**PcP**	**05 41 06.1**	**-0.3**
MJAR	**Matsushiro Arr**	**67.74**	**323**	P	**P**	**05 40 43.3**	**-1.2**
	19nm,0.6s,baz=166,slow=6.5,SNR=63						
MJAR				PcP	**PcP**	**05 41 06.1**	**-0.3**
	4.2nm,0.7s,baz=156,slow=4.1,SNR=4.3						
MAJO	**Matsushiro**	**67.74**	**323**	*e*P	**P**	**05 40 44.0**	**-0.4**
	27nm,0.8s						
MAT	**Matsushiro**	**67.74**	**323**	P	**P**	**05 40 43.4**	**-1.1**
UGM	**Wanagama**	**69.45**	**268**	P	**P**	**05 40 54.8**	**-0.6**
	baz=70,SNR=6.9						
JNU	**Nakatsue**	**69.96**	**316**	P	**P**	**05 40 57.5**	**-0.4**
JNU	**Nakatsue**	**69.96**	**316**	P	**P**	**05 40 57.5**	**-0.4**
	12nm,0.9s,baz=47,slow=5.5,SNR=6.5						
FX1	**Attu Island--F**	**70.79**	**355**	P	**P**	**05 41 00.6**	**-1.7**
FX1				*e*P	**P**	**05 41 01.3**	**-1.0**
FX1	**Attu Island--F**	**70.79**	**355**	P	**P**	**05 41 00.6**	**-1.7**
	39nm,0.8s,baz=157,slow=3.9,SNR=9.0						
ASAJ	**Asahikawa**	**71.13**	**332**	*e*P	**P**	**05 41 05.8**	**+1.4**
	74nm,1.9s						
ASAJ	**Asahikawa**	**71.13**	**332**	P	**P**	**05 41

baz=78,SNR=31
ISA Isabella 77.91 46 eP P 05 41 43.8 +0.8
comp=Z,62nm,1.1s
ISA Isabella 77.91 46 ⇑P P 05 41 43.8 +0.8
baz=78,SNR=33
MONP Monument Peak 77.92 50 ⇓P P 05 41 44.2 +0.9
baz=78,SNR=26
CMB Columbia Colle 77.93 43 eP P 05 41 43.5 +0.5
comp=Z,56nm,1.2s
MDJ Mudanjiang 78.02 325 P P 05 41 43.8 +0.6
MDJ pmax pmax
comp=Z,55nm,1.0s
MDJ pmax pmax
comp=Z,96nm,4.1s
WDC Whiskeytown Da 78.02 40 eP P 05 41 44.1 +0.7
comp=Z,68nm,1.4s
DVTC Desert V Tower 78.04 50 ⇑P P 05 41 44.6 +0.9
baz=78,SNR=11
PFO Pinyon Flat Ob 78.26 49 eP P 05 41 45.6 +0.6
comp=Z,26nm,1.4s
BBRC Big Bear Solar 78.26 48 ⇑P P 05 41 45.6 +0.6
baz=78
LRMC Laurel Mountai 78.36 47 ⇓P P 05 41 46.0 +0.6
baz=79,SNR=10
KDAK Kodiak Island 78.39 14 eP P 05 41 44.8 0.0
comp=Z,92nm,1.3s
KDAK Kodiak Island 78.39 14 P P 05 41 44.4 -0.4
comp=Z,31nm,0.9s,baz=184,slow=6.3,SNR=16
SWSC Sam W. Stewart 78.40 50 ⇓P P 05 41 46.3 +0.8
baz=79,SNR=17
RRX Edison Barstow 78.53 48 ⇓P P 05 41 46.9 +0.7
baz=79
CWC Cottonwood Cre 78.60 46 ⇑P P 05 41 47.4 +0.7
baz=79,SNR=11
YBH Yreka Blue Hor 78.60 39 eP P 05 41 47.6 +1.0
comp=Z,49nm,1.4s
YBH Yreka Blue Hor 78.60 39 P P 05 41 47.5 +1.0
comp=Z,22nm,0.9s,baz=201,slow=1.4,SNR=28
MLAC Mammoth Lakes 78.73 44 ⇓P P 05 41 48.4 +1.0
baz=79,SNR=18
BELC Belle Mtn. Jos 78.79 49 ⇑P P 05 41 48.7 +1.0
baz=79,SNR=19
MPMC Manual Prospec 78.80 46 ⇑P P 05 41 48.6 +0.7
baz=79,SNR=29
TIN Tinemaha 78.83 45 ⇓P P 05 41 48.7 +0.8
baz=79,SNR=9.2
GSC Goldstone 78.88 47 eP P 05 41 48.7 +0.5
comp=Z,55nm,1.5s
GSC Goldstone 78.88 47 ⇑P P 05 41 48.7 +0.5
baz=79,SNR=12
HUMO Hull Mountain 78.97 38 eP P 05 41 49.8 +1.4
comp=Z,36nm,1.1s
HEC Hector,Ludlow 78.97 48 ⇓P P 05 41 49.1 +0.4
baz=79,SNR=13
BC3 Big Chuckwall 79.01 49 ⇑P P 05 41 49.8 +0.9
baz=79,SNR=14
WCN Washoe City 79.04 43 eP P 05 41 50.0 +0.9
comp=Z,37nm,1.0s
GLA Glamis 79.16 50 eP P 05 41 50.9 +1.3
comp=Z,73nm,1.4s
GLA Glamis 79.16 50 ⇑P P 05 41 50.9 +1.3
baz=79,SNR=17
GRAC Grapevine Rang 79.38 46 ⇑P P 05 41 51.8 +1.1
baz=80,SNR=14
GMRC Granite Mounta 79.42 48 ⇓P P 05 41 51.8 +0.7
baz=80,SNR=11
FURC Furnace Creek, 79.45 46 ⇑P P 05 41 51.7 +0.7
baz=80,SNR=12
IRM Iron Mountain 79.48 49 ⇓P P 05 41 52.3 +1.1
baz=80,SNR=24
NVAR Mina Array Bea 79.51 44 P P 05 41 52.2 +0.6
NVAR pP pP 05 43 50.1 +1.4
NVAR Mina Array Bea 79.51 44 P P 05 41 52.2 +0.6
comp=Z,25nm,0.9s,baz=227,slow=8.4,SNR=117
NVAR pP pP 05 43 50.1 +1.4
comp=Z,3.7nm,1.1s,baz=236,slow=8.3,SNR=5.3
SHOC Shoshone 79.56 47 ⇑P P 05 41 52.2 +0.6
baz=80
TUQ Turquoise Moun 79.57 48 ⇓P P 05 41 52.4 +0.6
baz=80,SNR=27
NV11 Mina Array Sit 79.61 44 eP P 05 41 52.7 +0.6
Y12C Blythe 79.73 50 ⇑P P 05 41 53.6 +1.0
baz=80,SNR=11
113A Mohawk Valley, 79.80 51 ⇓P P 05 41 53.9 +1.0
baz=80,SNR=30
SNY Shenyang 79.81 320 ⇑P P 05 41 53.0 +0.3
SNY pmax pmax
comp=Z,16nm,2.1s
CN2 Changchun 79.85 322 ⇑P P 05 41 53.5 +0.6
CN2 epP pP 05 43 52.0 +1.8
CN2 pmax pmax
comp=Z,50nm,1.2s
CN2 pmax pmax
comp=Z,400nm,3.0s
LDFC Landfair 79.96 48 eP P 05 41 55.5 +1.6
comp=Z,130nm,1.1s
214A Organ Pipe Nat 80.13 52 ⇓P P 05 41 56.0 +1.3
baz=80,SNR=24
NEE2 Needles Airpor 80.16 49 ⇓P P 05 41 55.6 +0.8
baz=80
MOD Modoc 80.16 40 eP P 05 41 55.5 +0.6
comp=Z,80nm,1.1s
BROR Big Rock Looko 80.26 37 P P 05 41 55.7 +0.7
PDMCI Parker Dam,Lak 80.27 49 ⇓P P 05 41 56.4 +1.0
baz=80,SNR=13
WHN Wuhan 80.41 306 P P 05 41 56.9 +0.8
Z14A Wintersburg 80.69 51 ⇓P P 05 41 58.8 +1.2
baz=81,SNR=9.0
W13A Hualapai Mount 80.85 49 ⇑P P 05 41 59.5 +0.8
baz=81,SNR=20
SEW Seward 81.19 14 eP P 05 41 59.0 -0.4
comp=Z,34nm,1.0s
R11A Troy Canyon, 81.29 45 ⇓P P 05 42 01.3 +0.5
baz=82,SNR=26
BMN Battle Mountai 81.29 43 eP P 05 42 01.4 +0.6
comp=Z,81nm,1.3s
VLL Laurance Lake 81.41 37 P P 05 42 01.6 +0.5
VFP Flag Point 81.45 37 P P 05 42 02.1 +0.7
GAMB Gambell 81.53 3 eP P 05 42 01.4 +0.2
TDL Tradedollar La 81.64 36 P P 05 42 03.0 +0.7
TUC Tucson 81.82 52 eP P 05 42 05.0 +1.5
comp=Z,15nm,1.3s
LON Longmire 82.10 36 eP P 05 42 04.8 +0.3
comp=Z,22nm,1.4s
WPW White Pass 82.21 36 P P 05 42 05.4 +0.2
IPM Ipoh 82.22 277 eP P 05 42 06.1 +0.3
comp=Z,53nm,1.1s
X16A Lo Mia Camp, P 82.29 50 ⇓P P 05 42 07.3 +1.3
baz=82
CCUT Cedar City 82.41 47 eP P 05 42 07.3 +0.7
comp=Z,45nm,1.2s
ARUT Antelope Range 82.47 46 eP P 05 42 07.6 +0.8
comp=Z,55nm,1.3s
319A Douglas 82.55 54 ⇓P P 05 42 08.9 +1.7
baz=83,SNR=36
PMR Palmer 82.58 14 eP P 05 42 05.8 -0.8
comp=Z,77nm,1.3s
U15A North Rim 82.62 48 ⇑P P 05 42 09.0 +1.2
baz=83,SNR=102
ELK Elko 82.74 43 eP P 05 42 08.5 +0.3
TWW Teanaway 82.85 36 P P 05 42 09.5 +1.1
WUAZ Wupatki 82.85 49 eP P 05 42 09.8 +1.0
comp=Z,66nm,1.1s
WUAZ Wupatki 82.85 49 ⇑P P 05 42 09.8 +1.0
baz=83,SNR=24
SML Sawmill 82.96 14 eP P 05 42 07.6 -0.9
comp=Z,13nm,1.5s
DIV Divide 82.99 15 eP P 05 42 08.4 -0.3
comp=Z,83nm,1.3s
320A Kipp Ranch, An 83.11 54 ⇑P P 05 42 12.1 +1.9
baz=83,SNR=34
BMRM Bremner River 83.15 16 eP P 05 42 08.9 -0.6
comp=Z,67nm,1.2s
HAWA Hanford 83.17 37 eP P 05 42 10.5 +0.6
comp=Z,97nm,1.4s
220A Playas Peak, P 83.35 54 ⇓P P 05 42 12.8 +1.5
baz=84,SNR=21
ETW Entiat 83.42 35 P P 05 42 11.5 +0.2
X18A Snowflake 83.44 51 ⇑P P 05 42 12.8 +1.0
baz=84,SNR=14
WRAK Wrangell Islan 83.53 24 eP P 05 42 12.1 +0.7
comp=Z,67nm,1.3s
TNA Tin City 83.54 4 eP P 05 42 12.2 +0.9
comp=Z,61nm,1.2s
120A U Bar Ranch, L 83.55 53 ⇑P P 05 42 13.5 +1.2
baz=84,SNR=7.7
PNL Peninsula 83.56 19 eP P 05 42 11.3 -0.3
comp=Z,75nm,1.3s

BJI Beijing 83.60 315 P P 05 42 12.5 +0.4
BJI pP pP 05 44 10.1 -0.7
BJI S S 05 51 51.3 +2.4
BJI sS sS 05 55 20.3 -0.2
BJI SS SS 05 57 35.3 +3.1
BJI pmax pmax
comp=Z,40nm,1.3s
BJI pmax pmax
comp=Z,130nm,6.6s
BMO Blue Mountains 83.62 39 eP P 05 42 12.4 +0.1
comp=Z,41nm,1.4s
MVU Marysvale 83.67 46 eP P 05 42 13.9 +1.0
comp=Z,41nm,1.3s
WTV Waterville 83.68 35 P P 05 42 12.5 0.0
PSI Prapat 83.68 275 P P 05 42 12.9 -0.5
baz=84,SNR=7.6
MSU Marysvale 83.69 46 eP P 05 42 14.2 +1.2
comp=Z,49nm,1.3s
MFID Camas Ranch 83.75 41 eP P 05 42 13.5 +0.4
comp=Z,63nm,1.2s
MFID Camas Ranch 83.75 41 ⇓P P 05 42 13.4 +0.4
baz=84,SNR=47
Z20A Nine Sixteen R 83.83 53 ⇑P P 05 42 14.9 +1.3
baz=84,SNR=17
MAW Mawson 83.86 200 P P 05 42 13.5 +0.5
MAW Mawson 83.86 200 P P 05 42 13.5 +0.5
comp=Z,12nm,0.7s,baz=136,slow=7.0,SNR=18
MAW Mawson 83.86 200 P P 05 42 13.3 +0.4
baz=84,SNR=14
W18A Petrified Fore 83.86 50 ⇓P P 05 42 14.6 +0.8
baz=84,SNR=6.4
221A Mesquite Ranch 83.97 54 ⇑P P 05 42 15.8 +1.4
baz=84,SNR=6.5
TRF Thorofare Moun 83.99 12 eP P 05 42 11.9 -1.9
comp=Z,42nm,0.8s
DUG Dugway 84.07 45 eP P 05 42 14.9 +0.2
comp=Z,24nm,1.4s
DUG Dugway 84.07 45 ⇓P P 05 42 15.1 +0.4
baz=84,SNR=10
121A Cookes Peak, D 84.19 53 ⇑P P 05 42 16.6 +1.1
baz=84,SNR=14
OD2 Odessa Site #2 84.20 36 P P 05 42 15.2 +0.2
Y20A Horse Springs, 84.33 52 ⇑P P 05 42 17.7 +1.4
baz=85,SNR=41
I12A Atlanta 84.38 41 ⇑P P 05 42 16.9 +0.7
baz=85,SNR=51
X20A Quemado 84.52 51 ⇑P P 05 42 18.3 +1.2
baz=85,SNR=20
MCK McKinley 84.52 13 eP P 05 42 15.0 -1.2
comp=Z,61nm,1.1s
222A Williams Famil 84.53 54 ⇑P P 05 42 18.3 +1.2
baz=85
Q16A Castle Valley 84.58 46 ⇑P P 05 42 18.4 +1.1
baz=85,SNR=18
Z21A St. Cloud Mine 84.61 53 ⇑P P 05 42 19.0 +1.4
baz=85,SNR=23
PAX Paxson 84.64 15 eP P 05 42 15.9 -0.9
comp=Z,24nm,1.1s
L14A Malta 84.69 43 ⇓P P 05 42 18.4 +0.7
baz=85,SNR=14
SKAG Skagway 84.71 21 eP P 05 42 17.7 +0.6
comp=Z,78nm,1.5s
HLID Hailey 84.71 41 P P 05 42 18.6 +0.8
HLID Hailey 84.71 41 ⇑P P 05 42 18.6 +0.8
baz=85,SNR=43
TMUT Trail Mountain 84.73 46 eP P 05 42 19.3 +1.1
comp=Z,17nm,0.9s
W20A Ramah 84.77 51 ⇓P P 05 42 19.4 +1.0
baz=85,SNR=26
J13A Cove Ranch, Pi 84.78 41 ⇑P P 05 42 19.0 +0.9
baz=85,SNR=67
MPU Maple Canyon 84.78 45 eP P 05 42 18.5 +0.3
comp=Z,4.9nm,0.9s
GYA Guiyang 84.83 300 P P 05 42 19.0 +0.3
GYA pP pP 05 44 18.3 +0.5
GYA sP sP 05 45 13.0 -0.6
GYA PP PP 05 45 47.8 +2.2
GYA SKS SKSac 05 51 49.5 -1.6
GYA S S 05 52 01.4 -0.4
GYA sS sS 05 55 32.0 -2.1
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,5.2s
S18A Hurst Farm, Bl 84.83 48 ⇓P P 05 42 19.0 +0.4
baz=85,SNR=7.4
122A Conniff Cattle 84.86 53 ⇓P P 05 42 19.9 +1.2
baz=85
HVU Hansel Valley 84.87 43 eP P 05 42 19.0 +0.4
comp=Z,55nm,1.5s
Y21A Point of Rocks 84.91 52 ⇑P P 05 42 20.3 +1.3
baz=85,SNR=38
H12A Diamond D Ranc 84.94 40 ⇑P P 05 42 19.2 +0.3
baz=85,SNR=56
G12A Big Creek, Yel 84.95 39 ⇑P P 05 42 19.4 +0.4
baz=85
K14A Jones Ranch, D 84.98 42 ⇓P P 05 42 19.8 +0.7
baz=85,SNR=28
X21A Alamocita Cree 85.01 52 ⇓P P 05 42 20.3 +0.7
baz=85,SNR=15
223A Chaparral, Ant 85.01 54 ⇑P P 05 42 20.6 +1.1
baz=85,SNR=5.8
MENT Mentasta 85.04 15 eP P 05 42 18.4 -0.3
I13A Wildhorse Cree 85.07 41 ⇑P P 05 42 20.3 +0.7
baz=85,SNR=15
V20A Brimhall 85.09 50 ⇓P P 05 42 20.4 +0.5
baz=85,SNR=6.5
SRU San Rafael 85.11 46 eP P 05 42 20.3 +0.5
comp=Z,766nm,1.0s
SRU San Rafael 85.11 46 ⇓P P 05 42 20.4 +0.5
baz=85,SNR=18
Z22A Elephant Butte 85.12 53 ⇓P P 05 42 20.9 +0.9
baz=85,SNR=15
P17A Butcher Ranch, 85.13 46 ⇑P P 05 42 20.6 +0.7
baz=85,SNR=11
J14A Carey 85.15 42 ⇓P P 05 42 21.1 +1.2
baz=85
JLU Jordanelle 85.18 45 eP P 05 42 20.5 +0.3
comp=Z,56nm,1.9s
DAU Daniels Canyon 85.22 45 eP P 05 42 21.5 +1.0
comp=Z,58nm,1.9s
L15A Malad City 85.23 43 ⇑P P 05 42 20.6 +0.3
baz=86,SNR=17
U20A Newcomb 85.30 50 ⇓P P 05 42 21.2 +0.4
baz=86
H13A Challis 85.32 40 ⇓P P 05 42 21.3 +0.6
baz=86,SNR=25
F12A Elk City 85.32 39 ⇑P P 05 42 20.7 +0.1
baz=86,SNR=94
W21A San Fidel 85.40 51 ⇓P P 05 42 22.1 +0.8
baz=86
Y22A Socorro 85.41 52 ⇓P P 05 42 22.2 +0.8
baz=86,SNR=12
K15A Arbon 85.47 43 ⇓P P 05 42 21.9 +0.4
baz=86,SNR=9.3
LAZ Ladron 85.47 52 eP P 05 42 23.1 +1.3
comp=Z,10nm,1.5s
I14A Mackay 85.50 41 ⇓P P 05 42 22.6 +1.0
baz=86,SNR=57
Y22D IRIS PASSCAL I 85.50 52 ⇓P P 05 42 22.8 +1.0
baz=86
324A Moseley Ranch, 85.52 55 ⇑P P 05 42 22.7 +0.8
baz=86,SNR=27
DOT Dot Lake 85.55 15 eP P 05 42 20.5 -0.7
comp=Z,34nm,1.1s
NEW Newport 85.57 36 P P 05 42 21.5 -0.2
NEW Newport 85.57 36 ⇑P P 05 42 21.4 -0.2
baz=86,SNR=14
NEW Newport 85.57 36 P P 05 42 21.5 -0.2
comp=Z,14nm,1.0s,baz=237,slow=3.6,SNR=21
HWUT Hardware Ranch 85.58 44 eP P 05 42 21.9 -0.1
comp=Z,8.9nm,1.0s
G13A Cobalt 85.60 40 ⇑P P 05 42 22.3 +0.3
baz=86,SNR=22
X22A Bernardo 85.61 52 ⇑P P 05 42 23.2 +0.9
baz=86
425A Indio Mountain 85.64 56 ⇓P P 05 42 23.8 +1.3
baz=86,SNR=35
Z23A Rita Site, Whi 85.68 53 ⇑P P 05 42 23.5 +0.9
baz=86,SNR=6.5
MVCO Mesa Verde 85.69 49 eP P 05 42 23.2 +0.4
comp=Z,7.0nm,1.1s
MVCO Mesa Verde 85.69 49 ⇑P P 05 42 23.1 +0.4
baz=86
MNTX Cornudas Mount 85.70 55 eP P 05 42 23.6 +0.9
comp=Z,20nm,1.1s
MNTX Cornudas Mount 85.70 55 ⇓P P 05 42 23.7 +1.1
baz=86,SNR=29
V21A Milan 85.70 50 ⇑P P 05 42 23.2 +0.4
baz=86
224A Cornudas Mount 85.74 55 ⇑P P 05 42 24.2 +1.2
baz=86,SNR=30
BNM Barren Site 85.75 52 eP P 05 42 23.9 +0.8
comp=Z,19nm,1.3s
COLA College 85.75 13 eP P 05 42 20.9 -1.1
comp=Z,65nm,1.3s
N17A Moffit Pass 85.75 45 ⇓P P 05 42 23.6 +0.5
baz=86,SNR=7.1
626A Big Bend Ranch 85.84 57 ⇓P P 05 42 25.0 +1.5
baz=86,SNR=36
DLBC Dease Lake 85.85 23 eP P 05 42 23.4 +0.6
L16A Fish Haven 85.86 44 ⇑P P 05 42 23.6 +0.2
baz=86,SNR=26
ILAR Eielson Array 85.87 13 P P 05 42 21.3 -1.3
ILAR pP pP 05 44 22.6 +0.4
ILAR Eielson Array 85.87 13 P P 05 42 21.3 -1.3
comp=Z,0.5nm,0.4s,baz=319,slow=33,SNR=4.5
ILAR pP pP 05 44 22.6 +0.4
comp=Z,1.2nm,1.1s,baz=238,slow=5.0,SNR=3.1
J15A Blackfoot 85.88 42 ⇑P P 05 42 24.7 +1.3
baz=86,SNR=45
325A Bean Ranch, Si 85.89 55 ⇑P P 05 42 24.5 +0.7
baz=86,SNR=26
H14A Leadore 85.89 41 ⇑P P 05 42 24.2 +0.7
baz=86,SNR=36
F13A Darby 85.89 39 ⇑P P 05 42 23.4 +0.1
baz=86,SNR=37
Q19A Hogan Spring (85.92 47 ⇓P P 05 42 24.0 +0.4
baz=86,SNR=13
D12A Red Ives Fores 85.94 38 ⇑P P 05 42 23.4 -0.1
baz=86
U21A Nageezi 85.95 50 ⇑P P 05 42 24.6 +0.6
baz=86,SNR=47
W22A Albuquerque 85.96 51 ⇑P P 05 42 24.9 +0.9
baz=86
124A Stringfield Ra 86.05 54 ⇑P P 05 42 25.3 +0.8
baz=86,SNR=13
S20A Disappointment 86.06 48 ⇑P P 05 42 25.0 +0.5
baz=86,SNR=14
XAN Xi'an 86.06 307 P P 05 42 25.1 +0.7
XAN pmax pmax
comp=Z,18nm,1.2s
XAN pmax pmax
comp=Z,28nm,7.0s
526A Mary Lane Ranc 86.07 57 ⇑P P 05 42 25.8 +1.2
baz=86,SNR=27
Y23A Lovelace Mesa, 86.09 53 ⇓P P 05 42 25.2 +0.5
baz=86,SNR=16
M17A Scullys Gap (B 86.11 44 ⇓P P 05 42 24.6 0.0
baz=86,SNR=17
TXAR Lajitas Array 86.13 58 P P 05 42 26.4 +1.5
TXAR pP pP 05 44 24.8 +0.4
TXAR Lajitas Array 86.13 58 P P 05 42 26.4 +1.5
comp=Z,26nm,0.9s,baz=227,slow=5.0,SNR=200
TXAR pP pP 05 44 24.8 +0.4
comp=Z,0.3nm,0.8s,baz=340,slow=5.0,SNR=1.5
I15A Monteview 86.14 41 ⇑P P 05 42 25.7 +1.1
baz=86,SNR=13
G14A Jackson 86.15 40 ⇓P P 05 42 25.2 +0.5
baz=86,SNR=16
K16A Soda Springs 86.15 43 ⇑P P 05 42 25.6 +0.9
baz=86,SNR=34
R20A Redvale 86.20 48 ⇓P P 05 42 25.5 +0.4
baz=86,SNR=6.2
ANMO Albuquerque 86.21 52 eP P 05 42 25.6 +0.4
comp=Z,25nm,1.2s
ANMO Albuquerque 86.21 52 P P 05 42 25.6 +0.4
comp=Z,18nm,1.1s,baz=227,slow=5.5,SNR=34
C12B Naegeli Ranch, 86.21 37 ⇓P P 05 42 24.9 +0.2
baz=86,SNR=14
X23A Hourglass Bar 86.26 52 ⇑P P 05 42 25.6 +0.1
baz=86
L17A Cokeville 86.27 44 ⇑P P 05 42 25.1 -0.2
baz=86,SNR=10
V22A San Miguel Ran 86.28 51 ⇑P P 05 42 25.9 +0.3
baz=86,SNR=6.8
T21A Navajo Lake 86.28 49 ⇓P P 05 42 26.0 +0.4
baz=86,SNR=7.7
225A Deer Hill, Car 86.30 55 ⇑P P 05 42 26.6 +0.9
baz=86,SNR=14
E13A Victor 86.31 39 ⇑P P 05 42 25.0 -0.3
baz=87,SNR=14
MCMT McKenzie Canyo 86.32 41 P P 05 42 26.3 +0.7
H15A Lima 86.34 41 ⇑P P 05 42 26.5 +0.9
baz=87,SNR=31
J16A Bone 86.34 42 ⇓P P 05 42 26.6 +0.9
baz=87,SNR=63
BILL Bilibino 86.35 354 eP P 05 42 24.4 -0.5
comp=Z,33nm,1.1s
426A McDonald Obser 86.36 56 ⇓P P 05 42 27.1 +1.1
baz=87,SNR=22
Z24A Sheeppen Canyo 86.37 53 ⇑P P 05 42 26.6 +0.6
baz=87,SNR=10
S21A Coal Bank Pass 86.39 49 ⇓P P 05 42 26.8 +0.6
baz=87,SNR=24
627A Terlingua Ranc 86.40 58 ⇓P P 05 42 27.7 +1.6
baz=87,SNR=62
P19A Cripple Cowboy 86.42 47 ⇑P P 05 42 26.5 +0.4
baz=87,SNR=10
AHID Auburn Hatcher 86.43 43 eP P 05 42 27.0 +0.9
comp=Z,39nm,1.3s
527A Woodward Ranch 86.48 57 ⇑P P 05 42 27.4 +0.8
baz=87
D13A Huson 86.48 38 ⇓P P 05 42 25.5 -0.5
baz=87,SNR=14
F14A Wisdom 86.49 40 ⇓P P 05 42 26.3 +0.1
baz=87,SNR=11
M18A Lyman 86.49 45 ⇑P P 05 42 26.8 +0.3
baz=87,SNR=29
U22A Llaves 86.52 50 ⇓P P 05 42 27.1 +0.4
baz=87,SNR=6.3
W23A Werner Place, 86.53 52 ⇑P P 05 42 27.2 +0.4
baz=87,SNR=11
K17A Gardner Place, 86.54 43 ⇑P P 05 42 27.2 +0.6
baz=87,SNR=22
B12A Libby 86.55 36 ⇓P P 05 42 26.6 +0.3
baz=87,SNR=13
N18A Larsen Ranch, 86.55 45 ⇓P P 05 42 26.8 +0.1
baz=87,SNR=16
Y24A Capitan 86.56 53 ⇑P P 05 42 27.5 +0.6
baz=87,SNR=39
RRI2 Red Ridge 86.57 42 eP P 05 42 27.6 +0.7
comp=Z,74nm,1.1s
Q20A Ridgley Place, 86.59 47 ⇓P P 05 42 27.3 +0.4
baz=87,SNR=11
O19A Miners Draw (B 86.62 46 ⇑P P 05 42 27.3 +0.3
baz=87,SNR=8.5
125A Gardner Draw, 86.65 54 ⇓P P 05 42 28.0 +0.8
baz=87,SNR=8.4
326A Caldwell Ranch 86.65 56 ⇑P P 05 42 27.8 +0.6
baz=87,SNR=12
MSO Missoula 86.66 38 eP P 05 42 26.2 -0.7
comp=Z,5.6nm,1.0s
MSO Missoula 86.66 38 ⇓P P 05 42 26.6 -0.4
baz=87,SNR=8.0
BSMT Bassoo Peak 86.68 37 P P 05 42 26.9 -0.2
BSMT eP PcP 05 42 27.3 -1.4
G15A Dillon 86.71 40 ⇑P P 05 42 27.9 +0.6
baz=87,SNR=45
I16A Newdale 86.71 42 ⇑P P 05 42 28.6 +1.2
baz=87,SNR=49
C13A Hot Springs 86.72 37 ⇓P P 05 42 26.7 -0.4
baz=87,SNR=11
DLMT Dillon 86.73 40 eP P 05 42 28.2 +0.8
comp=Z,35nm,1.1s
L18A Fontenelle, Gr 86.74 44 ⇓P P 05 42 27.7 +0.1
baz=87
V23A Ortiz Mt. (NFS 86.75 51 ⇓P P 05 42 28.8 +1.0
baz=87,SNR=14
T22A Edith 86.75 50 ⇑P P 05 42 28.1 +0.3
baz=87,SNR=7.0
A12A Yaak River Ran 86.76 36 ⇑P P 05 42 27.7 +0.4
baz=87,SNR=14
P20A De Beque 86.77 47 ⇑P P 05 42 28.2 +0.4
baz=87,SNR=11
DCID1 Drake Creek 86.77 42 eP P 05 42 28.4 +0.8
comp=Z,23nm,1.0s
226B Tecolote Peak, 86.80 55 ⇓P P 05 42 28.7 +0.8
baz=87,SNR=28
628A Black Gap, Mar 86.81 58 ⇑P P 05 42 29.4 +1.4
baz=87,SNR=51
X24A Lazy VL Ranch, 86.82 52 ⇓P P 05 42 28.1 0.0
baz=87
Z25A Roswell 86.85 54 ⇑P P 05 42 29.0 +0.8
baz=87

R21A	Cimarron baz=87,SNR=21	86.86	48	⇑P		P	05 42 29.0	+0.7
TPAW	Teton Pass comp=Z,114nm,1.7s	86.87	42	*e*P		P	05 42 28.7	+0.4
TPAW				*e*pP		pP	05 44 32.5	+4.3
REDW	Red Top Meadow comp=Z,0.8nm,1.3s	86.87	43	*e*P		P	05 42 29.4	+1.2
JTMT	Jette comp=Z,2.8nm,0.7s	86.92	38	*e*P		P	05 42 27.8	-0.4
427A	Hayter Ranch, baz=87,SNR=38	86.92	56	⇓P		P	05 42 29.8	+1.2
J17A	Brown Place, J baz=87,SNR=48	86.97	43	⇓P		P	05 42 29.5	+0.9
SWMT	Swartz Lake comp=Z,3.8nm,1.0s	86.97	38	*e*P		P	05 42 27.8	-0.6
SWMT				*e*pP		pP	05 44 26.5	-1.8
U23A	El Rito baz=87,SNR=21	86.98	50	⇓P		P	05 42 29.5	+0.6
SNOW	Snow King Moun comp=Z,59nm,1.1s	86.98	42	*e*P		P	05 42 29.4	+0.7
F15A	Butte baz=87,SNR=16	87.03	40	⇑P		P	05 42 29.1	+0.2
D14A	Greenough baz=87,SNR=21	87.04	38	⇓P		P	05 42 28.2	-0.6
Q21A	Lamborn Mesa, baz=87	87.05	48	⇓P		P	05 42 29.8	+0.7
LRM	Limekiln Ridge comp=Z,171nm,1.1s	87.05	40	*e*P		P	05 42 29.6	+0.6
327A	Balmorhea Ranc baz=87	87.05	56	⇓P		P	05 42 29.7	+0.6
K18A	Toltan Ranch, baz=87,SNR=56	87.06	43	⇑P		P	05 42 29.8	+0.7
IMW	Indian Meadow comp=Z,69nm,1.2s	87.07	42	*e*P		P	05 42 30.0	+0.8
HHC	Hu-ho-hao-te	87.09	315	*e*P		P	05 42 29.5	+0.4
HHC				pP		pP	05 44 26.8	-2.3
HHC				sP		sP	05 45 21.3	-3.3
HHC				PP		PP	05 46 05.8	+2.6
HHC				SKS		SKSac	05 52 05.5	+1.3
HHC				S		S	05 52 23.3	+0.7
HHC				sS		sS	05 55 54.5	-1.8
HHC				SS		SS	05 58 27.9	+4.8
HHC	comp=Z,60nm,1.1s			pmax		pmax		
HHC	comp=Z,220nm,4.8s			pmax		pmax		
W24A	Lazy 6 Ranch, baz=87,SNR=17	87.10	52	⇓P		P	05 42 29.5	+0.1
CHMT	Chamberlain Mo comp=Z,16nm,1.1s	87.11	39	*e*P		P	05 42 29.1	-0.1
S22A	4UR Ranch, Cre baz=87,SNR=28	87.11	49	⇓P		P	05 42 30.3	+0.8
MOOW	Moose Ponds comp=Z,23nm,1.2s	87.12	42	*e*P		P	05 42 29.8	+0.4
Y25A	Mesa, Roswell baz=87,SNR=20	87.12	53	⇑P		P	05 42 29.8	+0.4
SLMT	Seeley Lake comp=Z,21nm,1.4s	87.13	38	*e*P		P	05 42 28.5	-0.7
M19A	Rock Springs baz=87,SNR=14	87.14	45	⇑P		P	05 42 29.7	+0.2
126A	Clayton Basin, baz=87,SNR=6.6	87.14	55	⇑P		P	05 42 29.9	+0.4
B13A	Whitefish baz=87,SNR=16	87.14	37	⇑P		P	05 42 28.9	-0.2
YBMT	Yellow Bay comp=Z,7.1nm,1.1s	87.14	38	*e*P		P	05 42 28.9	-0.3
528A	Cox Ranch, San baz=87,SNR=27	87.15	57	⇑P		P	05 42 30.9	+1.3
O20A	White River Ci baz=87,SNR=12	87.15	46	⇑P		P	05 42 30.0	+0.5
LOHW	Long Hollow comp=Z,28nm,1.2s	87.15	42	*e*P		P	05 42 29.9	+0.4
G16A	Moss Hill, Enn baz=87,SNR=25	87.16	41	⇓P		P	05 42 29.8	+0.4
QLMT	Earthquake Lak comp=Z,8.7nm,1.3s	87.20	41	*e*P		P	05 42 30.9	+1.2
QLMT				*e*PP		PP	05 46 03.1	-1.0
E15A	Deer Lodge baz=88,SNR=14	87.23	39	⇓P		P	05 42 29.7	0.0
C14A	Swan Lake baz=88	87.24	38	⇑P		P	05 42 29.1	-0.5
H16A	Russell Place, baz=88,SNR=63	87.25	41	⇑P		P	05 42 31.3	+1.4
L19A	Farson baz=88,SNR=40	87.27	44	⇑P		P	05 42 30.5	+0.5
I17A	Pilgrim Ck. baz=88,SNR=32	87.31	42	⇑P		P	05 42 31.3	+1.1
J18A	Kendall Valley baz=88,SNR=104	87.34	43	⇓P		P	05 42 31.0	+0.6
R22A	Saguache, Gunn baz=88,SNR=16	87.37	49	⇓P		P	05 42 31.6	+0.9
COLD	Coldfoot comp=Z,26nm,1.1s	87.39	11	*e*P		P	05 42 29.6	-0.1
T23A	Casias Ranch, baz=88,SNR=5.0	87.39	50	⇑P		P	05 42 31.3	+0.5
X25A	Clemmons Ranch baz=88,SNR=6.4	87.39	53	⇑P		P	05 42 30.7	0.0
YFT	Old Faithful comp=Z,61nm,1.3s	87.40	42	*e*P		P	05 42 32.9	+2.3
Z26A	Caprock baz=88,SNR=19	87.41	54	⇓P		P	05 42 31.3	+0.4
V24A	Rampart Ranch, baz=88,SNR=9.1	87.42	51	⇓P		P	05 42 31.5	+0.6
YMR	Madison River comp=Z,108nm,1.5s	87.42	41	*e*P		P	05 42 32.0	+1.3
P21A	Newcastle baz=88,SNR=8.9	87.43	47	⇓P		P	05 42 31.5	+0.6
BW06	Boulder Array baz=88,SNR=33	87.44	44	⇓P		P	05 42 31.0	+0.1
PDAR	Pinedale Array	87.44	44	P		P	05 42 30.9	0.0
PDAR				pP		pP	05 44 32.2	+1.2
PDAR				PP		PP	05 46 03.5	-2.6
PDAR	Pinedale Array comp=Z,16nm,0.9s,baz=220,slow=3.7,SNR=77	87.44	44	P		P	05 42 30.9	0.0
PDAR	comp=Z,0.8nm,0.9s,baz=230,slow=4.1,SNR=2.9			pP		pP	05 44 32.2	+1.2
PDAR	comp=Z,3.0nm,1.2s,baz=240,slow=5.0,SNR=6.3			PP		PP	05 46 03.5	-2.6
N20A	Spence Gulch, baz=88,SNR=18	87.44	46	⇑P		P	05 42 31.5	+0.5
428A	Kincaid Ranch, baz=88,SNR=9.2	87.45	57	⇑P		P	05 42 32.1	+1.1
A13A	Flathead Natio baz=88	87.45	36	⇑P		P	05 42 30.7	+0.1
227A	Bennet, Jal baz=88	87.46	55	⇓P		P	05 42 31.5	+0.5
BOZ	Bozeman (W) comp=Z,38nm,1.4s	87.47	40	*e*P		P	05 42 31.1	+0.3
BOZ	Bozeman (W) baz=88,SNR=27	87.47	40	⇓P		P	05 42 31.3	+0.5
Q22A	Crested Butte, baz=88,SNR=18	87.53	48	⇑P		P	05 42 32.1	+0.6
H17A	Grant Village baz=88,SNR=29	87.53	42	⇑P		P	05 42 32.9	+1.6
F16A	Kennard Place, baz=88,SNR=8.3	87.54	40	⇑P		P	05 42 31.7	+0.6
529A	Stev Forest Ra baz=88,SNR=29	87.59	57	⇑P		P	05 42 32.4	+0.8
328A	Wristen Ranch, baz=88,SNR=14	87.60	56	⇑P		P	05 42 32.3	+0.6
D15A	Lincoln baz=88,SNR=31	87.61	39	⇓P		P	05 42 31.5	+0.1
SMCO	Snowmass comp=Z,19nm,1.1s	87.62	48	*e*P		P	05 42 32.5	+0.5
KMI	Kunming	87.63	297	P		P	05 42 32.8	+0.7
KMI				pP		pP	05 44 33.1	+0.8
KMI				sP		sP	05 45 28.1	+0.3
KMI				PP		PP	05 46 11.1	+3.2
KMI				S		S	05 52 26.4	-2.1
KMI				SS		SS	05 58 33.8	+2.2
KMI	comp=Z,26nm,1.1s			pmax		pmax		
KMI	comp=Z,120nm,4.7s			pmax		pmax		
127A	Arkansas Junct baz=88,SNR=12	87.66	55	⇑P		P	05 42 32.3	+0.3
U24A	Moreno Valley baz=88	87.69	51	⇓P		P	05 42 33.0	+0.7
S23A	Nye Farm, Mont baz=88	87.69	49	⇓P		P	05 42 32.7	+0.5
I18A	Diamond G Ranc baz=88,SNR=16	87.70	43	⇓P		P	05 42 32.5	+0.5
LKWY	Lake comp=Z,50nm,1.3s	87.72	42	*e*P		P	05 42 34.1	+1.9
M20A	Sweetwater, Wa baz=88,SNR=9.7	87.78	45	⇑P		P	05 42 33.1	+0.6
Y26A	Elida	87.79	53	⇑P		P	05 42 32.6	+0.1
B14A	Marquette Ranc baz=88,SNR=20	87.82	37	⇑P		P	05 42 32.1	-0.3
W25A	X Bar L Ranch, baz=88,SNR=15	87.82	52	⇑P		P	05 42 32.8	+0.1
HRY	Holter Researc comp=Z,37nm,1.4s	87.86	39	*e*P		P	05 42 33.4	+0.8
G17A	Pierce Place, baz=88,SNR=9.9	87.86	41	⇑P		P	05 42 33.7	+1.0
E16A	East Helena baz=88,SNR=22	87.86	39	⇓P		P	05 42 32.9	+0.2
L20A	Wamsutter baz=88,SNR=20	87.91	45	⇓P		P	05 42 33.9	+0.8
C15A	Salmond Ranch, baz=88,SNR=23	87.91	38	⇓P		P	05 42 32.7	-0.1
N21A	Black Mountain baz=88,SNR=31	87.92	46	⇑P		P	05 42 33.8	+0.7
K19A	Absolon Red Bu baz=88,SNR=30	87.93	44	⇓P		P	05 42 32.9	-0.2
P22A	Eagle baz=88,SNR=9.7	87.95	47	⇑P		P	05 42 33.8	+0.4
V25A	Rancho No Teng baz=88,SNR=13	87.95	51	⇓P		P	05 42 33.6	+0.2
J19A	Crowheart baz=88,SNR=30	88.00	43	⇓P		P	05 42 33.5	+0.1
R23A	Moffat baz=88,SNR=10	88.02	49	⇓P		P	05 42 34.3	+0.5
Z27A	Tatum baz=88,SNR=12	88.02	54	⇓P		P	05 42 33.5	-0.1
A14A	Double T Ranch baz=88,SNR=13	88.04	37	⇓P		P	05 42 33.4	+0.1
429A	Davenport Ranc baz=88,SNR=71	88.04	57	⇓P		P	05 42 34.5	+0.8
X26A	CR and CF Fran baz=88,SNR=5.3	88.04	53	⇑P		P	05 42 33.7	-0.1
228A	UT Block 9, Go baz=88,SNR=6.2	88.05	55	⇑P		P	05 42 34.5	+0.7
T24A	Torres, Weston baz=88,SNR=7.7	88.12	50	⇓P		P	05 42 34.8	+0.5
D16A	Dana Ranch, Ca baz=88,SNR=21	88.18	39	⇑P		P	05 42 34.5	+0.4
F17A	Fitzpatrick Pl baz=88,SNR=16	88.19	40	⇑P		P	05 42 35.1	+0.9
K20A	Yellowstone Ra baz=88,SNR=34	88.19	44	⇑P		P	05 42 34.4	+0.1
B15A	Bradely Ranch, baz=88	88.20	38	⇑P		P	05 42 33.6	-0.6
S24A	Houchin Ranch, baz=88,SNR=9.3	88.24	50	⇑P		P	05 42 35.5	+0.7
H18A	Shoshone NF, C baz=88,SNR=8.3	88.24	42	⇑P		P	05 42 35.2	+0.6
Y27A	Causey baz=88,SNR=19	88.28	54	⇓P		P	05 42 35.0	+0.1
W26A	Owens Ranch, T baz=88	88.29	52	⇓P		P	05 42 34.8	-0.1
329A	Wagon Wheel Ra baz=88,SNR=19	88.29	56	⇓P		P	05 42 35.5	+0.6
530A	J-C Ranch, Com baz=88,SNR=23	88.31	58	⇑P		P	05 42 35.9	+0.9
Q23A	Hartsel baz=88	88.31	48	⇑P		P	05 42 35.5	+0.4
128A	Castleberry Fa baz=88,SNR=14	88.32	55	⇑P		P	05 42 35.6	+0.6
U25A	Circle Dot Ran baz=89,SNR=8.3	88.33	51	⇓P		P	05 42 35.2	+0.1
E17A	Martinsdale baz=89,SNR=7.5	88.33	40	⇓P		P	05 42 35.3	+0.4
O22A	Kremmling baz=89,SNR=28	88.33	47	⇓P		P	05 42 35.6	+0.4
I19A	Meeteetse baz=89,SNR=20	88.38	43	⇑P		P	05 42 35.8	+0.5
M21A	Separation Pea baz=89,SNR=24	88.39	45	⇓P		P	05 42 35.4	+0.1
A15A	Johnson Ranch, baz=89,SNR=22	88.43	37	⇓P		P	05 42 35.0	-0.2
C16A	Fuhringer Ranc baz=89,SNR=27	88.43	38	⇓P		P	05 42 35.0	-0.3
P23A	Jefferson baz=89,SNR=7.5	88.50	48	⇓P		P	05 42 37.1	+1.1
L21A	Rawlins baz=89,SNR=15	88.54	45	⇓P		P	05 42 36.1	+0.1
V26A	Tequesquite Ra baz=89,SNR=7.1	88.55	52	⇓P		P	05 42 36.0	-0.1
R24A	Sanders Place, baz=89,SNR=6.9	88.55	49	⇓P		P	05 42 36.7	+0.6
G18A	Lazy EL Ranch, baz=89,SNR=14	88.60	41	⇓P		P	05 42 36.9	+0.8
229A	Bryant Ranch, baz=89,SNR=6.9	88.61	56	⇓P		P	05 42 36.8	+0.4
MSTX	Muleshoe baz=89,SNR=19	88.61	54	⇑P		P	05 42 36.5	+0.1
T25A	Trinidad baz=89	88.62	50	⇓P		P	05 42 36.5	0.0
X27A	F and S Farms, baz=89,SNR=7.4	88.62	53	⇑P		P	05 42 36.7	+0.3
430A	Baggett Ranch, baz=89,SNR=17	88.62	57	⇑P		P	05 42 37.1	+0.6
Z28A	Tucker Farm, M baz=89,SNR=6.4	88.65	54	⇓P		P	05 42 36.6	+0.1
631A	Perdido Creek baz=89,SNR=76	88.66	59	⇑P		P	05 42 37.5	+1.0
N22A	Wattenberg Ran baz=89,SNR=40	88.67	46	⇓P		P	05 42 37.5	+0.8
J20A	Shoshoni baz=89,SNR=50	88.67	43	⇓P		P	05 42 37.1	+0.6
H19A	Powell baz=89,SNR=24	88.67	42	⇑P		P	05 42 37.2	+0.8
CM31	Chiang Mai Arr comp=Z,12nm,0.9s	88.68	290	*e*P		P	05 42 38.2	+1.3
CMAR	Chiang Mai Arr	88.68	290	P		P	05 42 38.0	+1.1
CMAR				PKKPbc		PKKPbc	06 00 14.8	+0.8
CMAR	Chiang Mai Arr comp=Z,12nm,0.9s,baz=108,slow=2.9,SNR=65	88.68	290	P		P	05 42 38.0	+1.1
CMAR	comp=Z,0.5nm,0.5s,baz=287,slow=4.4,SNR=5.2			PKKPbc		PKKPbc	06 00 14.8	+0.8
RLMT	Red Lodge comp=Z,37nm,1.3s	88.70	42	*e*P		P	05 42 37.5	+0.8
RLMT	Red Lodge baz=89,SNR=24	88.70	42	⇑P		P	05 42 37.4	+0.8
B16A	M & M Farms, S baz=89,SNR=10	88.75	38	⇓P		P	05 42 36.2	-0.5
D17A	Six Diamond Ra baz=89,SNR=30	88.76	39	⇓P		P	05 42 37.4	+0.6
F18A	Big Timber baz=89,SNR=21	88.77	41	⇑P		P	05 42 37.6	+0.8
CHTO	Chiang Mai comp=Z,15nm,1.0s	88.79	290	*e*P		P	05 42 37.8	+0.3
129A	Stewart Farms, baz=89,SNR=19	88.81	55	⇓P		P	05 42 37.6	+0.3
S25A	Robets Cordova baz=89,SNR=6.9	88.81	50	⇑P		P	05 42 37.5	+0.2
W27A	Bowe Ranch, En baz=89,SNR=9.1	88.81	53	⇓P		P	05 42 37.1	-0.2
U26A	Atchley Ranch, baz=89,SNR=7.7	88.82	51	⇑P		P	05 42 37.4	0.0
Q24A	Divide baz=89,SNR=8.5	88.82	48	⇑P		P	05 42 38.1	+0.6
M22A	Cedar Creek Ra baz=89,SNR=16	88.82	46	⇓P		P	05 42 37.7	+0.3
ISCO	Idaho Springs comp=Z,29nm,1.7s	88.83	47	*e*P		P	05 42 38.5	+0.9
ISCO	Idaho Springs baz=89,SNR=8.2	88.83	47	⇓P		P	05 42 38.1	+0.6
CD2	Chengdu	88.87	303	P		P	05 42 38.4	+0.8
CD2				pP		pP	05 44 38.9	+0.8
CD2				sP		sP	05 45 32.8	-0.6
CD2				PP		PP	05 46 20.5	+3.1
CD2				SKS		SKSac	05 52 15.3	+0.3
CD2				S		S	05 52 39.0	-0.3
CD2				sS		sS	05 56 12.1	-2.1
CD2				SS		SS	05 58 52.1	+3.2
CD2	comp=Z,20nm,0.5s			pmax		pmax		
CD2	comp=Z,110nm,4.7s			pmax		pmax		
330A	Mertzon baz=89,SNR=7.4	88.90	57	⇑P		P	05 42 37.8	0.0
I20A	Worland baz=89,SNR=26	88.90	43	⇓P		P	05 42 38.0	+0.5
K21A	Alcova baz=89,SNR=26	88.91	44	⇓P		P	05 42 37.9	+0.2
732A	Laxson Ranch, baz=89,SNR=22	88.91	59	⇓P		P	05 42 38.5	+0.8
C17A	Wharram Farm, baz=89,SNR=35	88.94	39	⇓P		P	05 42 37.6	+0.1
531A	Rocksprings baz=89,SNR=29	88.95	58	⇓P		P	05 42 38.7	+0.7
E18A	Harlowton	88.95	40	⇓P		P	05 42 38.6	+0.9
Y28A	McKinney Farm, baz=89	88.99	54	⇓P		P	05 42 38.2	0.0
N23A	Red Feather La baz=89,SNR=25	89.06	46	⇑P		P	05 42 39.1	+0.6
A16A	West Butte Ran baz=89,SNR=32	89.07	37	⇑P		P	05 42 38.2	0.0
J21A	Lysite baz=89,SNR=59	89.08	44	⇓P		P	05 42 39.0	+0.6
431A	Sonora baz=89,SNR=8.1	89.09	57	⇑P		P	05 42 38.9	+0.2
R25A	Fountain Ranch baz=89	89.11	49	⇑P		P	05 42 38.8	+0.1
230A	Sterling City baz=89	89.13	56	⇑P		P	05 42 39.0	+0.2
Z29A	Hungry Hill Ra baz=89,SNR=9.0	89.17	55	⇑P		P	05 42 38.8	-0.1
L22A	Ellis Ranch, M baz=89,SNR=21	89.20	45	⇓P		P	05 42 39.8	+0.8
P24A	Kohler Place, baz=89	89.21	48	⇓P		P	05 42 39.7	+0.5
H20A	Greybull baz=90,SNR=11	89.22	42	⇑P		P	05 42 39.0	0.0
B17A	L&G Farms, Che baz=90,SNR=13	89.23	38	⇑P		P	05 42 38.8	0.0
F19A	Roth Farm, Mol baz=90,SNR=17	89.23	41	⇓P		P	05 42 39.3	+0.3
T26A	Comanche Natio baz=90	89.23	51	⇑P		P	05 42 39.1	-0.2
X28A	Dimmitt baz=90,SNR=6.6	89.26	53	⇑P		P	05 42 39.4	0.0
D18A	Linhart Farms, baz=90,SNR=16	89.31	39	⇓P		P	05 42 40.1	+0.8
632A	Uvalde baz=90,SNR=35	89.33	59	⇓P		P	05 42 40.9	+1.2
O24A	Longmont baz=90,SNR=7.9	89.34	47	⇓P		P	05 42 40.2	+0.5
I21A	Big Trails, Te baz=90,SNR=33	89.39	43	⇑P		P	05 42 39.8	0.0
K22A	Casper baz=90,SNR=12	89.40	45	⇓P		P	05 42 40.2	+0.3
G20A	Bridger baz=90,SNR=5.1	89.41	42	⇑P		P	05 42 40.0	+0.1
Y29A	Porterfield Fa baz=90,SNR=22	89.42	54	⇑P		P	05 42 40.3	+0.2
Q25A	Bedland, Calha baz=90,SNR=5.4	89.44	49	⇑P		P	05 42 40.4	+0.1
M23A	Laramie baz=90,SNR=6.0	89.45	46	⇓P		P	05 42 40.7	+0.5
532A	Rocksprings baz=90,SNR=20	89.46	58	⇑P		P	05 42 41.0	+0.7
331A	San Angelo baz=90,SNR=23	89.46	57	⇑P		P	05 42 40.5	+0.2
S26A	Kim baz=90,SNR=9.4	89.50	50	⇑P		P	05 42 40.2	-0.2
130A	Snyder baz=90	89.50	56	⇑P		P	05 42 40.6	+0.2
W28A	Vega baz=90	89.53	53	⇓P		P	05 42 40.4	-0.2
PHWY	Pilot Hill comp=Z,24nm,1.2s	89.56	46	*e*P		P	05 42 41.0	+0.2
A17A	Triple J Farms baz=90,SNR=24	89.59	38	⇓P		P	05 42 40.8	+0.3
E19A	Rath Farm, Rou baz=90,SNR=18	89.60	40	⇓P		P	05 42 41.2	+0.5
X29A	Tulia baz=90,SNR=7.3	89.61	54	⇑P		P	05 42 41.1	+0.1
Z30A	Sanderson Ranc baz=90,SNR=6.2	89.63	55	⇑P		P	05 42 40.9	-0.2
JCT	Junction City comp=Z,13nm,0.9s	89.67	58	*e*P		P	05 42 41.9	+0.6
JCT	Junction City baz=90,SNR=13	89.67	58	⇑P		P	05 42 41.3	+0.1
F20A	Billings baz=90,SNR=7.0	89.70	41	⇓P		P	05 42 41.6	+0.4
V28A	Channing baz=90	89.70	52	⇑P		P	05 42 41.5	0.0
EGMT	Eagleton comp=Z,29nm,1.4s	89.72	39	*e*P		P	05 42 41.6	+0.4
EGMT	Eagleton baz=90,SNR=8.0	89.72	39	⇑P		P	05 42 41.3	+0.1
L23A	Garrett baz=90,SNR=31	89.73	45	⇑P		P	05 42 41.8	+0.3
P25A	Willow Gulch B baz=90,SNR=25	89.74	48	⇑P		P	05 42 42.0	+0.4
N24A	Carr baz=90,SNR=22	89.76	47	⇑P		P	05 42 42.5	+0.8
231A	Bronte baz=90,SNR=26	89.78	56	⇑P		P	05 42 41.7	0.0
R26A	Arlington baz=90,SNR=16	89.78	50	⇓P		P	05 42 41.7	0.0
AMTX	Amarillo comp=Z,42nm,1.4s	89.79	53	*e*P		P	05 42 42.3	+0.5
AMTX	Amarillo baz=90	89.79	53	⇑P		P	05 42 41.9	+0.1
432A	Menard baz=90,SNR=48	89.81	58	⇓P		P	05 42 42.2	+0.3
T27A	Campo baz=90,SNR=8.4	89.83	51	⇑P		P	05 42 42.0	-0.1
D19A	Cripps Ranch, baz=90,SNR=28	89.86	40	⇑P		P	05 42 42.5	+0.7
B18A	Beardsley Farm baz=90,SNR=19	89.88	38	⇑P		P	05 42 42.1	+0.2
H21A	Big Horn, Sher baz=90,SNR=9.3	89.90	43	⇑P		P	05 42 42.5	+0.3
W29A	Amraillo baz=90,SNR=8.5	89.91	53	⇑P		P	05 42 42.4	0.0
I22A	9 Mile Ranch, baz=90,SNR=19	89.95	43	⇓P		P	05 42 42.8	+0.4
Q26A	Hugo baz=90	89.97	49	⇓P		P	05 42 42.7	+0.1
131A	Roby baz=90,SNR=9.4	89.98	56	⇑P		P	05 42 42.7	0.0
O25A	Wiggins baz=90	90.01	48	⇓P		P	05 42 43.0	+0.2
C19A	Slack Wire Ran baz=90,SNR=27	90.01	39	⇓P		P	05 42 43.2	+0.6
Y30A	Stafford Catti baz=90,SNR=6.2	90.02	54	⇓P		P	05 42 43.0	+0.1
E20A	Meyer Farm, Mu baz=90,SNR=11	90.03	41	⇓P		P	05 42 43.2	+0.6
332A	Millersview baz=90,SNR=58	90.03	57	⇑P		P	05 42 43.3	+0.4
K23A	Bowen Ranch, D baz=90,SNR=7.8	90.04	45	⇑P		P	05 42 42.9	0.0
G21A	Lodge Grass baz=90	90.05	42	⇓P		P	05 42 43.2	+0.4
M24A	Cheyenne baz=90,SNR=14	90.06	46	⇓P		P	05 42 43.7	+0.6
A18A	Metzger Ranch, baz=90,SNR=31	90.08	38	⇓P		P	05 42 42.9	+0.1
L24A	Wheatland baz=90	90.22	46	⇓P		P	05 42 44.5	+0.8
R27A	Eads baz=90,SNR=8.4	90.24	50	⇑P		P	05 42 43.9	0.0
X30A	Coker Ranch, T baz=90	90.25	54	⇓P		P	05 42 43.8	-0.1
D20A	Manuel Ranch, baz=90,SNR=23	90.28	40	⇑P		P	05 42 44.6	+0.8
V29A	Stinnett baz=90	90.28	52	⇓P		P	05 42 44.0	0.0
232A	Coleman baz=90,SNR=10	90.29	57	⇓P		P	05 42 44.5	+0.4
T28A	Walsh baz=90,SNR=10	90.30	51	⇑P		P	05 42 44.0	-0.1
N25A	Grover baz=90	90.31	47	⇓P		P	05 42 44.3	+0.1
P26A	Davis Ranch, A baz=91	90.34	48	⇑P		P	05 42 44.7	+0.4
F21A	Absaloka Mine, baz=91	90.36	42	⇓P		P	05 42 45.0	+0.8
J23A	Dilts Ranch, B baz=91	90.36	44	⇓P		P	05 42 44.5	+0.2
B19A	Brinkman Farms baz=91,SNR=30	90.40	39	⇓P		P	05 42 44.8	+0.5
Z31A	Sharp Cattle R baz=91,SNR=12	90.41	55	⇑P		P	05 42 44.8	+0.2
Y31A	Rekieta Farm, baz=91,SNR=10	90.55	54	⇓P		P	05 42 45.4	+0.1
ABTX	Abilene, Hawle baz=91,SNR=15	90.55	56	⇓P		P	05 42 45.7	+0.4
K24A	Anderson Ranch baz=91	90.58	45	⇑P		P	05 42 45.6	+0.2
M25A	Palm-Egli Farm baz=91,SNR=17	90.58	46	⇓P		P	05 42 46.0	+0.6
O26A	Horse Wrangler baz=91	90.63	48	⇑P		P	05 42 46.0	+0.4
G22A	Birney baz=91,SNR=6.7	90.63	42	⇓P		P	05 42 45.7	+0.2

C20A **Veseth Ranch,** 90.63 40 ⇑P P 05 42 46.1 +0.7
baz=91,SNR=56
KSCO **Kaye Shedlock'** 90.64 49 ⇓P P 05 42 46.2 +0.4
baz=91,SNR=5.2
SNAA **Sanae** 90.67 179 *eP* P 05 42 44.8 -0.4
SNAA **Sanae** 90.67 179 *eP* P 05 42 44.9 -0.4
comp=Z,20nm,1.3s
LZH **Lanzhou** 90.69 308 *eP* P 05 42 47.0 +0.9
LZH pP **pP** 05 44 46.5 -0.4
LZH sP **sP** 05 45 40.1 -2.0
LZH *e*SKS **SKSac** 05 52 25.0 -0.4
LZH S **S** 05 52 56.3 +0.5
LZH sS sS 05 56 26.1 -5.7
LZH pmax pmax
comp=Z,31nm,1.1s
LZH pmax pmax
comp=Z,150nm,7.8s
E21A **Keefer Ranch,** 90.70 41 ⇓P P 05 42 46.5 +0.9
baz=91,SNR=5.2
A19A **Klindworth Far** 90.73 38 ⇓P P 05 42 45.9 +0.1
baz=91,SNR=16
VNA3 **Neumayer Olymp** 90.82 176 *eP* P 05 42 46.1 +0.3
V30A **Spur Ranch, Mi** 90.87 53 ⇓P P 05 42 47.4 +0.6
baz=91
F22A **Rosebud** 90.89 42 ⇑P P 05 42 47.1 +0.5
baz=91
N26A **Koester Ranch,** 90.92 47 ⇑P P 05 42 47.2 +0.3
baz=91
J24A **Dixon Ranch, L** 90.92 45 ⇑P P 05 42 47.2 +0.3
baz=91
Z32A **Haskell** 90.92 55 ⇓P P 05 42 47.5 +0.5
baz=91,SNR=28
L25A **Engebretsen Ra** 90.92 46 ⇓P P 05 42 48.0 +1.0
baz=91,SNR=20
H23A **Clabaugh Cattl** 90.94 43 ⇓P P 05 42 46.7 -0.2
baz=91
B20A **Solberg Farm,** 90.94 39 ⇓P P 05 42 47.2 +0.4
baz=91
D21A **La Casta Ranch** 90.97 40 ⇑P P 05 42 47.7 +0.7
baz=91,SNR=23
X31A **McDonald Ranch** 91.00 54 ⇑P P 05 42 47.3 0.0
baz=91,SNR=5.0
I24A **Kuemmerle Ranc** 91.16 44 ⇓P P 05 42 47.7 -0.3
baz=91
K25A **Mack Ranch, Ha** 91.17 45 ⇑P P 05 42 48.9 +0.8
baz=91
U30A **WK&E Inc. Balk** 91.18 52 ⇓P P 05 42 48.0 -0.1
baz=91
A20A **Cobblestone Ra** 91.19 39 ⇑P P 05 42 48.1 +0.2
baz=91,SNR=28
Y32A **R-V Farms, Ver** 91.20 55 ⇑P P 05 42 48.4 +0.2
baz=91,SNR=18
G23A **Biddle** 91.20 43 ⇓P P 05 42 48.4 +0.3
baz=91
M26A **McRoberts Ranc** 91.22 47 ⇓P P 05 42 48.7 +0.4
baz=92,SNR=7.2
W31A **Holland Ranch,** 91.23 53 ⇓P P 05 42 48.7 +0.3
baz=91,SNR=14
C21A **Desert Coulee** 91.23 40 ⇓P P 05 42 48.5 +0.3
baz=92,SNR=14
VNA2 **Neumayer--Watz** 91.25 177 *eP* P 05 42 48.0 +0.2
baz=158,slow=3.3
E22A **Miles City** 91.36 41 ⇓P P 05 42 49.1 +0.4
baz=92,SNR=13
N27A **Anderson Farm,** 91.39 47 ⇑P P 05 42 49.4 +0.3
baz=92,SNR=5.2
VNA1 **Neumayer--Stat** 91.48 177 *eP* P 05 42 49.6 +0.8
L26A **Underwood Farm** 91.49 46 ⇑P P 05 42 50.3 +0.8
baz=92
D22A **Cohagen** 91.51 41 ⇑P P 05 42 50.0 +0.6
baz=92,SNR=18
V31A **Spring Creek L** 91.52 53 ⇑P P 05 42 50.6 +0.9
baz=92,SNR=13
PLCA **Paso Flores** 91.52 134 P P 05 42 50.0 +0.3
PLCA **Paso Flores** 91.52 134 P P 05 42 50.0 +0.3
comp=Z,1.0nm,0.8s,baz=228,slow=7.5,SNR=3.3
B21A **Ellsworth Farm** 91.54 39 ⇑P P 05 42 50.1 +0.6
baz=92
H24A **Dirks Ranch, A** 91.56 43 ⇑P P 05 42 49.7 -0.1
baz=92,SNR=29
RSSD **Black Hills** 91.66 44 *eP* P 05 42 50.1 -0.3
comp=Z,16nm,1.0s
K26A **Motz Farm, Whi** 91.67 46 ⇓P P 05 42 50.7 +0.4
baz=92,SNR=14
U31A **Nine Bar Ranch** 91.72 52 ⇓P P 05 42 51.0 +0.3
baz=92
M27A **Reverse DX Ran** 91.77 47 ⇓P P 05 42 51.2 +0.4
baz=92
E23A **Ismay** 91.79 41 ⇑P P 05 42 51.4 +0.7
baz=92
OGNE **Ogallala** 91.80 47 ⇓P P 05 42 51.0 0.0
baz=92
A21A **Bergtoll Ranch** 91.84 39 ⇓P P 05 42 51.2 +0.4
baz=92
INK **Inuvik** 91.88 15 P P 05 42 49.6 -0.9
INK **Inuvik** 91.88 15 P P 05 42 49.6 -0.9
comp=Z,19nm,1.0s,baz=217,slow=4.6,SNR=50
G24A **Alzada** 91.89 43 ⇓P P 05 42 51.1 -0.1
baz=92,SNR=5.8
C22A **Vida** 91.94 40 ⇑P P 05 42 51.6 +0.2
baz=92,SNR=10
F24A **Ekalaka** 92.07 42 ⇑P P 05 42 52.2 +0.1
baz=92,SNR=13
WHTX **Lake Whitney** 92.07 57 ⇑P P 05 42 52.6 +0.3
baz=92
B22A **Reddig Ranch S** 92.10 40 ⇑P P 05 42 52.6 +0.5
baz=92,SNR=6.6
T31A **Randall Ranch,** 92.11 52 ⇑P P 05 42 52.5 +0.1
baz=92,SNR=9.0
D23A **Lindsay** 92.13 41 ⇑P P 05 42 53.0 +0.7
baz=92,SNR=16
K27A **Flueckinger Fa** 92.32 46 ⇑P P 05 42 53.7 +0.4
baz=92,SNR=10
C23A **Lambert** 92.40 40 ⇓P P 05 42 54.1 +0.6
baz=93,SNR=11
A22A **Carney Farms,** 92.44 39 ⇑P P 05 42 53.9 +0.2
baz=93
E24A **Baker** 92.44 42 ⇑P P 05 42 54.2 +0.5
baz=93
D24A **Glendive** 92.65 41 ⇓P P 05 42 55.4 +0.7
baz=93,SNR=19
C24A **Savage** 92.76 41 ⇓P P 05 42 56.1 +1.0
baz=93
B23A **Brockton** 92.78 40 ⇓P P 05 42 55.9 +0.7
baz=93
ULN **Ulaanbaatar** 92.98 320 *eP* P 05 42 56.2 -0.1
comp=Z,20nm,1.4s
A23A **Redstone** 93.05 39 ⇓P P 05 42 56.9 +0.5
baz=93
DGMT **Dagmar** 93.27 40 ⇓P P 05 42 58.0 +0.6
baz=94
SONM **Songino Array** 93.37 319 P P 05 42 57.1 -0.9
SONM **Songino Array** 93.37 319 P P 05 42 57.1 -0.9
comp=Z,2.5nm,0.8s,baz=121,slow=3.3,SNR=20
A24A **Westby** 93.57 40 ⇓P P 05 42 59.1 +0.4
baz=94
YKA **Yellowknife Ar** 94.36 25 P P 05 43 01.1 -0.9
YKA pP **pP** 05 45 04.6 +1.5
YKA PP **PP** 05 46 56.6 -2.4
YKA PKKPbc **PKKPdf** 05 59 58.1 -2.3
YKA P'P' 06 08 12.1
YKA **Yellowknife Ar** 94.36 25 P P 05 43 01.1 -0.9
comp=Z,8.1nm,0.9s,baz=244,slow=4.4,SNR=82
YKA pP **pP** 05 45 04.6 +1.5
comp=Z,0.4nm,1.0s,baz=238,slow=3.8,SNR=2.6
YKA PP **PP** 05 46 56.6 -2.4
comp=Z,0.9nm,1.0s,baz=240,slow=7.7,SNR=6.4
YKA PKKPbc **PKKPdf** 05 59 58.1 -2.3
comp=Z,0.1nm,0.6s,baz=42,slow=2.2,SNR=5.4
YKA PKPPKP **P'P'df** 06 08 12.0 +3.0
comp=Z,0.3nm,0.9s,baz=58,slow=2.0,SNR=4.0
YKW3 **Yellowknife Ar** 94.39 25 *eP* P 05 43 01.7 -0.4
comp=Z,0.2nm,1.1s
TUL1 **Tulsa** 94.66 54 ⇑P P 05 43 04.3 +0.2
baz=95
BGNE **Belgrade** 94.70 48 ⇑P P 05 43 04.8 +0.7
baz=95
GTA **Gaotai** 94.84 310 *eP* P 05 43 05.3 +0.4
GTA pmax pmax
comp=Z,9.0nm,0.9s
ECSD **EROS Data Cent** 96.53 46 *eP* P 05 43 12.2 -0.1
comp=Z,4.5nm,0.9s
ZALV **Zalesovo Beam** 108.06 322 PKiKP **PKiKP** 05 48 05.3 -1.3
ZALV **Zalesovo Beam** 108.06 322 PKiKP **PKiKP** 05 48 05.3 -1.3
comp=Z,2.2nm,0.6s,baz=183,slow=1.0,SNR=15
MK31 **Makanchi Array** 108.95 314 *e*PKPdf **PKiKP** 05 48 07.2 -1.3
MKAR **Makanchi Array** 108.95 314 Pdif **Pdif** 05 44 07.0 -0.5
MKAR PKiKP **PKiKP** 05 48 07.2 -1.4
MKAR PKKPbc **PKKPbc** 05 59 18.1 -0.7
MKAR **Makanchi Array** 108.95 314 Pdiff **Pdif** 05 44 07.0 -0.5
comp=Z,0.3nm,0.7s,baz=96,slow=4.3,SNR=3.0
MKAR PKiKP **PKiKP** 05 48 07.2 -1.4
comp=Z,2.4nm,0.6s,baz=203,slow=0.3,SNR=30
MKAR PKKPbc **PKKPbc** 05 59 18.1 -0.7
comp=Z,0.9nm,0.8s,baz=260,slow=3.7,SNR=6.0
KURK **Kurchatov** 111.65 318 PKiKP **PKiKP** 05 48 12.2 -1.2
KURK PP **PP** 05 49 05.2 -1.1
KURBB **Kurchatov Arra** 111.70 318 PKiKP **PKiKP** 05 48 12.2 -1.3
comp=Z,3.8nm,0.7s,baz=96,slow=1.8,SNR=57
KURBB PP **PP** 05 49 05.2 -1.5
comp=Z,0.4nm,0.4s,baz=94,slow=6.6,SNR=5.1
KSH **Kashi** 112.88 306 PKP **PKiKP** 05 48 16.1 -0.3
KSH PP PP 05 49 20.9 +5.3
KSH sPKP 05 51 14.8
KSH PKS **PKSdf** 05 51 50.9 -2.3
KSH SKS **SKSdf** 05 54 36.5 -0.2
KSH SKKS **SKKSac** 05 55 16.8 -3.2
KSH SS **SS** 06 04 22.8 +5.1
TKM2 **Tokmak 2** 113.39 310 *e*PKPdf **PKiKP** 05 48 16.1 -1.3
AAK **Ala-Archa** 114.19 309 PKP PKPdf 05 48 17.5 -1.4
AAK **Ala-Archa** 114.19 309 PKP PKPdf 05 48 17.5 -1.4
comp=Z,1.6nm,0.5s,baz=208,slow=2.7,SNR=5.8
BVAR **Borovoye Array** 116.67 321 PKP **PKPdf** 05 48 22.0 -1.1
BVAR **Borovoye Array** 116.67 321 PKP **PKPdf** 05 48 22.0 -1.1
comp=Z,3.9nm,0.4s,baz=90,slow=1.5,SNR=35
KKAR **Karatay Array** 117.12 310 *e*PKPdf **PKPdf** 05 48 23.3 -1.0
DAG **Danmarks Havn** 120.16 5 *i* P **PKPdf** 05 48 27.2 -1.9
comp=Z,3.1nm,1.0s
SFJD **Kangerlussuaq** 120.70 21 *i* P **PKPdf** 05 48 28.9 -1.5
comp=Z,4.5nm,0.8s
ARU **Arti** 122.69 326 *e*PKPdf **PKPdf** 05 48 33.9 -0.7
AKTO **Aktyubinsk** 124.69 319 PKP **PKPdf** 05 48 38.1 -0.4
AKTO **Aktyubinsk** 124.69 319 PKP **PKPdf** 05 48 38.1 -0.4
comp=Z,7.9nm,0.9s,baz=61,slow=2.2,SNR=23
SCO **Scoresbysund** 125.50 9 *i* P **PKPdf** 05 48 39.4 -0.1
comp=Z,6.7nm,0.9s
KEV **Kevo** 125.76 349 *e*pkp **PKPdf** 05 48 37.8 -2.2
ARCES **ARCESS Array B** 126.22 350 PKP **PKPdf** 05 48 40.2 -0.7
ARCES **ARCESS Array B** 126.22 350 PKP **PKPdf** 05 48 40.2 -0.7
comp=Z,20nm,0.9s,baz=56,slow=1.0,SNR=22
JOF **Joensuu** 130.44 343 *e*pkp **PKPdf** 05 48 48.3 -0.8
KAF **Kangasniemi** 132.45 344 *e*pkp **PKPdf** 05 48 50.8 -2.1
FINES **FINESS Array B** 133.07 344 PKPpre PKPpre 05 48 45.2
FINES PKP **PKPdf** 05 48 53.8 -0.3
FINES SKPbc **SKPbc** 05 51 31.7 +0.9
FINES **FINESS Array B** 133.07 344 PKhKP PKPpre 05 48 45.2
comp=Z,0.9nm,0.6s,baz=48,slow=2.8,SNR=4.4
FINES PKP **PKPdf** 05 48 53.8 -0.3
comp=Z,1.7nm,0.6s,baz=39,slow=2.4,SNR=3.7
FINES SKPbc **SKPbc** 05 51 31.7 +0.9
comp=Z,7.6nm,1.0s,baz=36,slow=7.6,SNR=7.0
NB2 **NORSAR Subarra** 136.29 353 PKP PKPpre 05 48 48.0
comp=Z,17nm,2.0s,baz=17,slow=2.6
NOA **NORSAR Array B** 136.29 353 PKPpre PKPpre 05 48 51.2
NOA PKP **PKPdf** 05 48 59.7 -0.5
NOA SKPbc **SKPbc** 05 51 43.0 +2.0
NOA **NORSAR Array B** 136.29 353 PKhKP PKPpre 05 48 51.2
comp=Z,1.4nm,0.8s,baz=22,slow=3.9,SNR=5.1
NOA PKP **PKPdf** 05 48 59.7 -0.5
comp=Z,2.3nm,0.7s,baz=13,slow=4.1,SNR=9.5
NOA SKPbc **SKPbc** 05 51 43.0 +2.0
comp=Z,2.7nm,1.1s,baz=6.3,slow=4.0,SNR=3.9
KBZ **Khabaz** 136.62 316 PKP **PKPdf** 05 49 02.2 +0.9
KBZ **Khabaz** 136.62 316 PKP **PKPdf** 05 49 02.2 +0.9
comp=Z,2.9nm,0.9s,baz=152,slow=2.7,SNR=7.2
LSZ **Lusaka** 137.80 220 *e*PKPdf **PKPdf** 05 49 05.2 +0.7
NACGM **Naroch** 138.21 338 *e* PKPdf 05 48 54.0 -10
SUW **Suwalki** 140.16 340 *e*PKP **PKPdf** 05 49 03.6 -3.8
AKASG **Malin Array Be** 140.41 332 PKPpre PKPpre 05 49 00.6
AKASG PKP **PKPdf** 05 49 07.2 -0.8
AKASG **Malin Array Be** 140.41 332 PKhKP PKPpre 05 49 00.6
comp=Z,2.2nm,0.4s,baz=43,slow=4.2,SNR=14
AKASG PKP **PKPdf** 05 49 07.2 -0.8
comp=Z,3.6nm,0.6s,baz=32,slow=2.5,SNR=9.9
AK02 **Malin Array Si** 140.45 332 *e*PKPdf PKPpre 05 49 00.6
MUD **Monsted U'grnd** 141.01 353 *i* P PKPdf 05 49 02.9 -5.9
comp=Z,6.4nm,0.9s
BSD **Bornholm Skovb** 141.38 348 *i* P PKPdf 05 49 03.7 -5.9
comp=Z,12nm,0.9s
LLD **Lille Linde** 141.67 350 *i* P PKPdf 05 49 03.8 -6.3
MALT **Malatya** 141.82 310 *e*PKPdf **PKPdf** 05 49 08.0 -3.1
MALT **Malatya** 141.82 310 ⇓*i*P **PKPdf** 05 49 08.2 -2.9
BEL **Belsk** 142.77 340 *e*PKP **PKPdf** 05 49 10.3 -1.8
KIS **Kishinev** 143.19 328 *e*PKP PKPab 05 49 09.0 -2.0
BSEG **Bad Segeberg** 143.32 351 *e*PKPbc PKPab 05 49 10.7 -0.5
HLG **Helgoland** 143.38 354 *e*PKPbc PKPbc 05 49 11.6 -0.1
LEOM **Leova** 143.84 328 ⇓*i*P PKPab 05 49 13.6 +0.2
KWP **Kalwaria Pacla** 143.93 336 *e*PKPdf PKPbc 05 49 13.0 -0.6
KWP **Kalwaria Pacla** 143.93 336 ⇓*i*P PKPbc 05 49 13.4 -0.2
KWP **Kalwaria Pacla** 143.93 336 *e*PKP PKPbc 05 49 13.4 -0.2
RUE **Ruedersdorf** 144.09 347 *e*PKPbc PKPbc 05 49 13.4 -0.5
RUE **Ruedersdorf** 144.09 347 *e*PKPdf PKPbc 05 49 13.6 -0.3
WME **Myndd Eilian** 144.24 6 *eP* PKPbc 05 49 13.0 -1.3
WME **Myndd Eilian** 144.24 6 P PKPbc 05 49 13.0 -1.3
LHO **Holmfirth** 144.28 3 *eP* PKPbc 05 49 13.4 -1.1
LHO **Holmfirth** 144.28 3 P PKPbc 05 49 13.4 -1.1
WLF1 **Llynfaes** 144.34 6 *eP* PKPbc 05 49 13.6 -1.1
WLF1 **Llynfaes** 144.34 6 P PKPbc 05 49 13.6 -1.1
YRC **Rhoscolyn** 144.36 6 *eP* PKPbc 05 49 13.7 -1.0
YRC **Rhoscolyn** 144.36 6 P PKPbc 05 49 13.7 -1.0
TLCR 144.41 326 ⇑*i*P PKPbc 05 49 14.9 -0.3
WPM1 **Penmaenmawr** 144.42 5 *eP* PKPbc 05 49 13.8 -1.2
WPM1 **Penmaenmawr** 144.42 5 P PKPbc 05 49 13.8 -1.2
BUR08 **Bucovina Ar. S** 144.45 332 *e*PKPbc PKPbc 05 49 15.5 +0.1
BURAR **Bucovina Array** 144.46 332 ⇓*i*P **PKPab** 05 49 16.0 +0.1
OJC **Ojcow** 144.48 340 *e*PKP **PKPdf** 05 49 14.8 -0.4
YLL **Llanberis** 144.51 6 *eP* **PKPdf** 05 49 14.5 -0.6
YLL **Llanberis** 144.51 6 P **PKPdf** 05 49 14.5 -0.6
KBI1 **Birley Grange** 144.59 3 *eP* **PKPdf** 05 49 14.2 -1.1
KBI1 **Birley Grange** 144.59 3 P **PKPdf** 05 49 14.2 -1.1
BR131 **Keskin Array S** 144.60 315 *e*PKPdf **PKPdf** 05 49 15.1 -0.8
BRTR **Keskin Array B** 144.60 315 PKP **PKPdf** 05 49 15.6 -0.3
BRTR **Keskin Array B** 144.60 315 PKP **PKPdf** 05 49 15.6 -0.3
comp=Z,34nm,0.9s,baz=126,slow=1.7,SNR=102
TESR 144.60 329 ⇓*i*P **PKPdf** 05 49 15.6 +0.1
YRE **Yr Eifl** 144.64 6 *eP* **PKPdf** 05 49 14.7 -0.7
YRE **Yr Eifl** 144.64 6 P **PKPdf** 05 49 14.7 -0.7
KOLS **Kolonicke sedl** 144.66 336 *e*PKP PKPbc 05 49 16.0 +0.1
CFR **Carcaliu** 144.77 327 ⇓*i*P PKPbc 05 49 16.1 -0.2
FOEL **Foel Wylfa** 144.84 5 *eP* **PKPdf** 05 49 15.8 0.0
FOEL **Foel Wylfa** 144.84 5 P **PKPdf** 05 49 15.8 0.0
NIE **Niedzica** 144.99 338 *e*PKP PKPbc 05 49 17.2 +0.3
KSP **Ksiaz** 144.99 343 *e*PKP PKPbc 05 49 17.1 +0.3
CRVS **Cervenica-Dubn** 145.00 337 *e*PKP **PKPdf** 05 49 16.2 0.0
VRI **Vrincioaia** 145.02 329 ⇑*i*P **PKPbc** 05 49 17.3 +0.2
PLOR **Plostina** 145.07 329 ⇓*i*P **PKPbc** 05 49 16.9 -0.4
ANTO **Ankara** 145.09 315 ⇓*i*P **PKPab** 05 49 18.1 -0.5
TIRR **Tirgusor** 145.10 325 ⇑*i*P **PKPbc** 05 49 17.3 0.0
TRPA **Tarpa** 145.21 335 ⇓*i*P **PKPbc** 05 49 17.3 -0.2
TRPA **Tarpa** 145.21 335 ⇑*i*P **PKPbc** 05 49 17.4 -0.1
HLM1 **Long Mynd** 145.24 5 *eP* **PKPdf** 05 49 16.2 -0.2
HLM1 **Long Mynd** 145.24 5 P **PKPdf** 05 49 16.2 -0.2
IBBN **Ibbenburen** 145.25 353 *e*PKPbc **PKPbc** 05 49 17.4 -0.1
OKC **Ostrava-Krasne** 145.35 341 *e*PKP **PKPbc** 05 49 17.9 0.0
CLL **Collm** 145.36 347 *e*PKPdf **PKPdf** 05 49 16.0 -0.6
CLL ⇑*i*P**KPbc** **PKPbc** 05 49 17.7 -0.1
comp=Z,97nm,1.0s
CLL *e*PKiKP **PKiKP** 05 49 21.0 +0.1
CLL *ep*PKPdf **pPKPdf** 05 51 24.0 -1.7
CLL *ep*PKiKP **pPKiKP** 05 51 29.0 -0.4
CLL *e*PP PP 05 52 34.0 -8.6
UPC **Upice** 145.37 344 *e*PKP **PKPdf** 05 49 16.7 0.0
UPC *ex* x 05 49 18.2
UPC *ep*PKP **pPKPdf** 05 51 31.4 +5.6
DPC **Dobruska-Polom** 145.43 343 *e*PKP **PKPdf** 05 49 16.9 0.0
DPC *ex* x 05 49 18.6
DPC *ep*PKP **pPKPdf** 05 51 28.0 +2.1
KRLC **Kraliky** 145.55 342 *e*PKP **PKPdf** 05 49 17.3 +0.2
BRG **Berggiesshubel** 145.56 346 *e*PKP **PKPdf** 05 49 17.2 +0.2
comp=Z,13nm,1.1s
BRG *i* 05 49 18.6
comp=Z,76nm,1.1s
BRG *ep*PKP **pPKPdf** 05 51 27.5 +1.5
comp=Z,13nm,1.2s
BRG **Berggiesshubel** 145.56 346 *e*PKPbc **PKPbc** 05 49 18.3 -0.1
MORC **Moravsky Berou** 145.59 341 *e*PKPbc **PKPdf** 05 49 16.7 -0.5
MORC **Moravsky Berou** 145.59 341 ⇓*i*P **PKPdf** 05 49 17.3 +0.1
ISR **Istrita** 145.64 328 ⇑*i*P **PKPbc** 05 49 19.0 +0.1
FBE **Freiberg** 145.64 347 *e*PKPbc **PKPbc** 05 49 18.7 0.0
MLR **Muntele Rosu** 145.67 329 ⇓*i*P **PKPbc** 05 49 18.5 -0.6
WTSB **Winterswijk** 145.68 354 *e*PKP **PKPdf** 05 49 16.7 -0.4
comp=Z,163nm,1.3s
NEUB **Neuenburg** 145.70 348 *e*PKPdf **PKPdf** 05 49 17.0 -0.2
NEUB *e*PKPbc **PKPbc** 05 49 18.6 -0.2
LIKS **Likavka** 145.72 339 *e*PKP **PKPab** 05 49 19.9 -0.7
PVCC **Panska Ves** 145.72 345 *e*PKP **PKPdf** 05 49 17.6 +0.3
PVCC *ex* x 05 49 19.2
PVCC *ep*PKP **pPKPdf** 05 51 29.8 +3.4
MCH1 **Michaelchurch** 145.74 5 *eP* **PKPbc** 05 49 18.2 -0.7
MCH1 **Michaelchurch** 145.74 5 P **PKPbc** 05 49 18.2 -0.7
SSW **Stow on the Wo** 145.85 4 *eP* **PKPbc** 05 49 19.1 -0.1
SSW **Stow on the Wo** 145.85 4 P **PKPbc** 05 49 19.1 -0.1
SECR 145.94 328 ⇑*i*P **PKPbc** 05 49 20.2 +0.5
VOIR 146.15 330 ⇑*i*P **PKPbc** 05 49 20.2 -0.2
SKP1 **Kophill** 146.15 2 *eP* **PKPdf** 05 49 18.5 +0.5
SKP1 **Kophill** 146.15 2 P **PKPdf** 05 49 18.5 +0.5
BUG **Bochum--Univer** 146.15 353 *e*PKPdf **PKPdf** 05 49 17.5 -0.5
BUG *e*PKPbc **PKPbc** 05 49 20.1 0.0
DRGR 146.19 333 ⇑*i*P **PKPbc** 05 49 20.3 -0.2
PRU **Pruhonice** 146.23 345 *e*PKP **PKPdf** 05 49 17.4 -0.8
PRU *ex* x 05 49 20.5
MOX **Moxa** 146.27 348 *e*PKPdf **PKPdf** 05 49 17.7 -0.5
MOX *e*PKPbc **PKPbc** 05 49 20.5 0.0
VYHS **Vyhne** 146.29 339 *e*PKP **PKPbc** 05 49 20.6 0.0
VRAC **Vranov** 146.29 342 ⇑*i*P **PKPbc** 05 49 20.6 0.0
PLN **Plauen** 146.31 348 *e*PKPdf **PKPdf** 05 49 17.9 -0.4
PLN *e*PKPbc **PKPbc** 05 49 20.5 -0.1
TANN **Tannenbergstha** 146.31 347 *e*PKPdf **PKPdf** 05 49 18.0 -0.4
TANN *e*PKPbc **PKPbc** 05 49 21.0 +0.3
WERD **Werda** 146.31 347 *e*PKPdf **PKPdf** 05 49 18.1 -0.3
WERD *e*PKPbc **PKPbc** 05 49 20.6 0.0
PHNC **Paralimni** 146.34 307 P **PKPdf** 05 49 17.7 -1.1
comp=Z,0.8nm,0.8s
UBBA **Unterbreizbach** 146.39 350 *e*PKPdf **PKPdf** 05 49 17.8 -0.5
UBBA *e*PKPbc **PKPbc** 05 49 20.3 -0.3
GUNZ **Gunzen** 146.39 347 *e*PKPbc **PKPbc** 05 49 20.6 -0.3
PSZ **Piszkesteto** 146.40 337 *e*PKPbc **PKPbc** 05 49 20.6 -0.4
PSZ **Piszkesteto** 146.40 337 ⇑*i*P **PKPbc** 05 49 20.8 -0.2
PSZ **Piszkesteto** 146.40 337 ⇑*e* **PKPbc** 05 49 20.9 -0.1
ARR **Arges** 146.40 330 ⇓*i*P **PKPbc** 05 49 22.1 +1.0
WERN **Wernitzgruen** 146.45 347 *e*PKPbc **PKPbc** 05 49 21.1 +0.1
WERN *e*PKPab **PKPab** 05 49 23.6 +0.1
NKC **Novy Kostel** 146.49 347 *e*PKP **PKPdf** 05 49 18.9 +0.3
NKC *ex* x 05 49 21.1
WOL **Wolverton** 146.54 3 *eP* **PKPbc** 05 49 20.4 -0.7
WOL **Wolverton** 146.54 3 P **PKPbc** 05 49 20.4 -0.7
HEX **Exmoor** 146.59 6 *eP* **PKPbc** 05 49 20.4 -0.9
HEX **Exmoor** 146.59 6 P **PKPbc** 05 49 20.4 -0.9
TREC **Trest** 146.62 343 *e*PKP **PKPbc** 05 49 21.4 -0.1
SMOL **Smolenice** 146.74 340 *e*PKP **PKPbc** 05 49 22.5 +0.7
ELSH **Elham, Standar** 146.77 0 *eP* **PKPbc** 05 49 21.1 -0.6
ELSH **Elham, Standar** 146.77 0 P **PKPbc** 05 49 21.1 -0.6
HUMR **Humele** 146.84 328 ⇑*i*P **PKPbc** 05 49 21.7 -0.5
CSS **Prodhromos** 146.88 307 P **PKPbc** 05 49 21.3 -1.4
comp=Z,0.4nm,0.4s
CSS **Prodhromos** 146.88 307 *e*PKPdf **PKPdf** 05 49 19.6 -0.2
CSS *e*PKPbc **PKPbc** 05 49 22.2 -0.5
CSS *e*PKPab **PKPab** 05 49 25.6 -0.2
MAMC **Mammari** 146.89 308 P **PKPbc** 05 49 22.5 -0.1
BEBN **Eben Emael** 146.94 355 PKPbc **PKPbc** 05 49 22.1 -0.1
HGN **Heimansgroeve** 146.96 355 *e*PKP **PKPdf** 05 49 18.0 -1.4
comp=Z,67nm,1.2s
ROTZ **Rotzenmuhle** 146.98 347 *e*PKPbc **PKPbc** 05 49 22.7 +0.3
UCC **Uccle** 147.03 357 PKPbc **PKPbc** 05 49 23.0 +0.6
BUD **Budapest** 147.08 338 ⇓*e* **PKPbc** 05 49 23.1 +0.4
MEM **Membach** 147.10 355 PKP **PKPdf** 05 49 19.7 +0.1
MEM PKPbc **PKPbc** 05 49 22.6 -0.1
TNS **Taunus Mts** 147.20 352 *e*PKPbc **PKPbc** 05 49 23.0 -0.1
TNS *e*PKPab **PKPab** 05 49 26.1 -0.5
GZR **Gura Zlata** 147.25 332 ⇑*i*P **PKPbc** 05 49 22.9 -0.4
GRF **Grafenberg Arr** 147.25 348 *e*PKPbc **PKPbc** 05 49 23.4 +0.2
PKSN **Nyarlorinc** 147.26 336 ⇓*e* **PKPbc** 05 49 23.7 +0.5
PKSN ⇓*e* 05 50 37.7
KHC **Kasperske Hory** 147.26 345 *e*PKPdf **PKPdf** 05 49 19.8 -0.2
KHC *e*PKPbc **PKPbc** 05 49 23.4 +0.2
KHC *e*PKPab **PKPab** 05 49 27.1 +0.3
KHC **Kasperske Hory** 147.26 345 *e*PKP **PKPdf** 05 49 20.0 0.0
KHC *i x* x 05 49 23.4
KHC *ex* x 05 49 27.0
SNF **Seneffe** 147.33 357 PKP **PKPdf** 05 49 19.5 -0.4
SNF PKPbc **PKPbc** 05 49 23.2 0.0
BCLA **Clavier** 147.35 355 PKP **PKPdf** 05 49 19.4 -0.6
BCLA PKPbc **PKPbc** 05 49 22.9 -0.5
ALFC **Alevga** 147.36 308 P **PKPbc** 05 49 22.8 -1.1
comp=Z,1.2nm,0.6s
PKSG 147.39 338 ⇓*e* **PKPbc** 05 49 23.6 +0.1
PKS7 **Kunszentmiklos** 147.40 337 ⇓*e* **PKPbc** 05 49 23.7 +0.1
WET **Wettzell** 147.42 346 *e*PKPdf **PKPdf** 05 49 20.0 -0.2
WET *e*PKPbc **PKPbc** 05 49 23.6 0.0
WET *e*PKPab **PKPab** 05 49 26.9 -0.5
GEC2 **GERESS Array S** 147.50 345 *e*PKPbc **PKPbc** 05 49 23.8 -0.1
GEC2 *e*PKPab **PKPab** 05 49 27.7 -0.2
GERES **GERESS Array B** 147.50 345 PKP **PKPdf** 05 49 20.1 -0.3
GERES PKPbc **PKPbc** 05 49 23.8 -0.1
GERES **GERESS Array B** 147.50 345 PKP **PKPdf** 05 49 20.1 -0.3
comp=Z,23nm,0.7s,baz=10,slow=1.1,SNR=112
GERES PKPbc **PKPbc** 05 49 23.8 -0.1
comp=Z,22nm,0.7s,baz=29,slow=3.0,SNR=89
BZS **Buzias** 147.59 333 ⇑*i*P **PKPbc** 05 49 23.5 -0.6
AKMC **Akamas** 147.61 308 P **PKPbc** 05 49 23.0 -1.6
PKS6 **Bocsa** 147.62 336 ⇓*e* **PKPbc** 05 49 24.4 +0.2
PKST **T''s** 147.62 339 ⇓*e* **PKPbc** 05 49 23.8 -0.4
ISP **Isparta** 147.65 314 *e*PKPbc **PKPbc** 05 49 23.5 -1.2
ISP **Isparta** 147.65 314 ⇑*i*P **PKPbc** 05 49 23.5 -1.2
PPCY **Paphos** 147.66 308 P **PKPbc** 05 49 23.8 -0.8
GIVF **Givet** 147.70 356 *e*PKIKP **PKPdf** 05 49 20.4 -0.2
comp=Z,39nm,1.4s
GIVF **Givet** 147.70 356 *e*PKPdf **PKPdf** 05 49 20.4 -0.2
DOU **Dourbes** 147.72 356 PKPbc **PKPbc** 05 49 24.3 0.0
CONA **Conrad Observa** 147.74 342 ⇑*i*PKiKP **PKPbc** 05 49 24.8 +0.2
comp=Z,115nm,1.5s,SNR=34
CONA **Conrad Observa** 147.74 342 ⇑*i*P **PKPbc** 05 49 24.8 +0.2
SOP **Sopron** 147.74 341 ⇑*e* **PKPbc** 05 49 24.6 +0.2
TOD **Tromm** 147.75 351 PKP **PKPdf** 05 49 20.8 0.0
BAIF **Baives** 147.78 357 *e*PKIKP **PKPdf** 05 49 20.5 -0.2
BAIF **Baives** 147.78 357 *e*PKPdf **PKPdf** 05 49 20.5 -0.2
PKS2 **Kecel** 147.85 337 ⇓*e* **PKPbc** 05 49 24.9 +0.2
RUP **Ruppelstein** 147.89 353 PKP **PKPdf** 05 49 21.5 +0.5
WLF **Walferdange** 148.02 354 PKP **PKPdf** 05 49 21.7 +0.6
WLF PKPbc **PKPbc** 05 49 25.7 +0.6
WLF **Walferdange** 148.02 354 *e*PKPdf **PKPdf** 05 49 21.8 +0.6
WLF *e*PKPbc **PKPbc** 05 49 25.7 +0.6
WLF *e*PKPab **PKPab** 05 49 30.1 +0.3
PKS9 **Tamasi** 148.11 338 ⇓*e* **PKPbc** 05 49 25.3 -0.1
MOA **Molln** 148.27 343 ⇑*i*PKPbc **PKPbc** 05 49 24.6 -1.2
comp=Z,50nm,1.2s,SNR=17
MOA **Molln** 148.27 343 ⇑*i*P **PKPbc** 05 49 24.6 -1.2
PKSM **Moragy** 148.30 337 ⇓*i*P **PKPdf** 05 49 21.2 -0.5
PKSM **Moragy** 148.30 337 ⇑*e* **PKPbc** 05 49 25.4 -0.5
MPEP **Malo Peshtene** 148.31 328 *i* P **PKPbc** 05 49 26.1 +0.1
ARSA **Arzberg** 148.45 341 ⇑*i*PKPbc **PKPbc** 05 49 25.7 -0.6
comp=Z,31nm,1.2s,SNR=14
ARSA **Arzberg** 148.45 341 ⇑*i*P **PKPbc** 05 49 25.7 -0.6
STU **Stuttgart** 148.50 350 *e*PKPdf **PKPdf** 05 49 22.0 0.0
STU *e*PKPbc **PKPbc** 05 49 26.4 0.0
STU *e*PKPab **PKPab** 05 49 30.9 -0.9
STU **Stuttgart** 148.50 350 *e*PKPdf **PKPdf** 05 49 22.1 +0.2
STU *e*PKPbc **PKPbc** 05 49 26.3 0.0
STU *e*PKPab **PKPab** 05 49 31.4 -0.5
LANF **Langenberg** 148.51 352 PKP **PKPdf** 05 49 22.4 +0.4
LANF **Langenberg** 148.

	comp=Z,30nm,1.0s							
FLN	**La Foliniere**	**149.12**	**2**	*e*PKPdf	**PKPdf**	**05 49 22.7**	**-0.2**
PERS	**Pernice**	**149.12**	**341**	*i* PKPdf	**PKPdf**	**05 49 22.0**	**-1.1**
PERS				*i* PKPbc	**PKPbc**	**05 49 27.2**	**-0.8**
VTS	**Vitosha**	**149.13**	**328** ⇓	*i*P	**PKPbc**	**05 49 28.0**	**-0.3**
VTS	**Vitosha**	**149.13**	**328**	*i* P	**PKPbc**	**05 49 28.0**	**-0.3**
CDF	**Champ du Feu**	**149.13**	**352**	*e*PKIKP	**PKPdf**	**05 49 22.6**	**-0.5**
	comp=Z,10.0nm,1.0s							
CDF	**Champ du Feu**	**149.13**	**352**	*e*PKPdf	**PKPdf**	**05 49 22.6**	**-0.5**
PAGF	**Fort de Pagny**	**149.16**	**354**	*e*PKIKP	**PKPdf**	**05 49 23.2**	**+0.2**
	comp=Z,8.7nm,1.1s							
PAGF	**Fort de Pagny**	**149.16**	**354**	*e*PKPdf	**PKPdf**	**05 49 23.2**	**+0.2**
SPAK	**Spaichingen-Ko**	**149.22**	**350**	PKP	**PKPdf**	**05 49 23.0**	**-0.2**
KBA	**Koelnbreinsper**	**149.22**	**344**	*i* PKPbc	**PKPbc**	**05 49 27.5**	**-0.9**
	comp=Z,26nm,0.8s,SNR=11							
KBA	**Koelnbreinsper**	**149.22**	**344**	*i* P	**PKPbc**	**05 49 27.5**	**-0.9**
MEZF	**Maizieres J'vi**	**149.27**	**355**	*e*PKIKP	**PKPdf**	**05 49 23.3**	**+0.1**
	comp=Z,21nm,0.9s							
MEZF	**Maizieres J'vi**	**149.27**	**355**	*e*PKPdf	**PKPdf**	**05 49 23.3**	**+0.1**
LDF	**La Druitiere**	**149.30**	**2**	*e*PKIKP	**PKPdf**	**05 49 22.8**	**-0.4**
	comp=Z,19nm,1.0s							
LDF	**La Druitiere**	**149.30**	**2**	*e*PKPdf	**PKPdf**	**05 49 22.8**	**-0.4**
ECH	**Echery**	**149.34**	**352**	*e*PKPdf	**PKPdf**	**05 49 22.9**	**-0.4**
ECH				*e*PKPbc	**PKPbc**	**05 49 28.0**	**-0.5**
ECH				*e*PKPab	**PKPab**	**05 49 34.7**	**-0.7**
WATA	**Walderalm**	**149.41**	**346** ⇑	*i*PKPdf	**PKPdf**	**05 49 23.0**	**-0.6**
	comp=Z,10nm,1.2s,SNR=13							
WATA				⇑*i*PKPbc	**PKPbc**	**05 49 28.3**	**-0.5**
	comp=Z,40nm,1.0s							
WATA	**Walderalm**	**149.41**	**346** ⇑	*i*P	**PKPdf**	**05 49 23.0**	**-0.6**
WATA				⇑*i*P	**PKPbc**	**05 49 28.3**	**-0.5**
RETA	**Reutte**	**149.45**	**347** ⇑	*i*PKPdf	**PKPdf**	**05 49 23.6**	**0.0**
	comp=Z,8.3nm,1.5s							
RETA				⇓*i*PKPbc	**PKPbc**	**05 49 28.3**	**-0.5**
	comp=Z,47nm,1.5s							
RETA				⇓*i*PKPab	**PKPab**	**05 49 35.9**	**0.0**
	comp=Z,34nm,1.1s							
RETA	**Reutte**	**149.45**	**347** ⇑	*i*P	**PKPdf**	**05 49 23.6**	**0.0**
RETA				⇓*i*P	**PKPbc**	**05 49 28.3**	**-0.5**
THEF	**They Montfort**	**149.46**	**354**	PKP	**PKPdf**	**05 49 23.9**	**+0.4**
THEF	**They Montfort**	**149.46**	**354**	PKP	**PKPdf**	**05 49 23.9**	**+0.4**
WTTA	**Wattenberg**	**149.47**	**346** ⇑	*i*PKPdf	**PKPdf**	**05 49 23.0**	**-0.8**
	comp=Z,18nm,1.3s,SNR=60							
WTTA				⇑*i*PKiKP	**PKPbc**	**05 49 28.7**	**-0.2**
	comp=Z,111nm,1.3s							
WTTA	**Wattenberg**	**149.47**	**346** ⇑	*i*P	**PKPdf**	**05 49 23.0**	**-0.8**
GRR	**Gorron**	**149.48**	**3**	*e*PKIKP	**PKPdf**	**05 49 23.3**	**-0.2**
	comp=Z,10nm,0.9s							
GRR	**Gorron**	**149.48**	**3**	*e*PKPdf	**PKPdf**	**05 49 23.3**	**-0.2**
MOTA	**Moosalm**	**149.51**	**347** ⇑	*i*PKPdf	**PKPdf**	**05 49 23.1**	**-0.7**
	comp=Z,16nm,1.3s,SNR=37							
MOTA				⇑*i*PKPbc	**PKPbc**	**05 49 28.5**	**-0.6**
	comp=Z,64nm,1.1s							
MOTA				⇓*i*PKPab	**PKPab**	**05 49 35.9**	**-0.3**
	comp=Z,23nm,0.9s							
MOTA	**Moosalm**	**149.51**	**347** ⇑	*i*P	**PKPdf**	**05 49 23.1**	**-0.7**
MOTA				⇑*i*P	**PKPbc**	**05 49 28.5**	**-0.6**
MYKA	**Terra Mystica**	**149.56**	**343** ⇑	*i*PKPbc	**PKPbc**	**05 49 28.0**	**-1.0**
	comp=Z,43nm,1.0s							
MYKA	**Terra Mystica**	**149.56**	**343** ⇑	*i*P	**PKPbc**	**05 49 28.0**	**-1.0**
FELD	**Feldberg im Sc**	**149.56**	**351**	PKP	**PKPdf**	**05 49 23.4**	**-0.5**
MMB	**Musomiste**	**149.57**	**326**	*i* P	**PKPbc**	**05 49 28.8**	**-0.4**
SFTF	**Sexfontaines**	**149.57**	**355**	*e*PKIKP	**PKPdf**	**05 49 23.7**	**0.0**
	comp=Z,41nm,1.2s							
SFTF	**Sexfontaines**	**149.57**	**355**	*e*PKPdf	**PKPdf**	**05 49 23.7**	**0.0**
HAU	**Haudompre**	**149.64**	**353**	*e*PKIKP	**PKPdf**	**05 49 23.5**	**-0.3**
	comp=Z,29nm,1.2s							
HAU	**Haudompre**	**149.64**	**353**	*e*PKPdf	**PKPdf**	**05 49 23.5**	**-0.3**
MOF	**Molkenrain**	**149.70**	**352**	PKP	**PKPdf**	**05 49 23.9**	**-0.1**
MOF	**Molkenrain**	**149.70**	**352**	PKP	**PKPdf**	**05 49 23.9**	**-0.1**
KKB	**Krupnik**	**149.71**	**327**	*i* P	**PKPbc**	**05 49 29.2**	**-0.3**
ABTA	**Abfaltersbach**	**149.74**	**345** ⇑	*i*PKPdf	**PKPdf**	**05 49 22.7**	**-1.4**
	comp=Z,17nm,1.0s,SNR=13							
ABTA				⇑*i*PKPbc	**PKPbc**	**05 49 28.7**	**-0.8**
	comp=Z,98nm,1.1s							
ABTA	**Abfaltersbach**	**149.74**	**345** ⇑	*i*P	**PKPdf**	**05 49 22.7**	**-1.4**
ABTA				⇑*i*P	**PKPbc**	**05 49 28.7**	**-0.8**
HINF	**Hinteralfeld**	**149.77**	**353**	*e*PKIKP	**PKPdf**	**05 49 23.6**	**-0.5**
	comp=Z,16nm,1.1s							
HINF	**Hinteralfeld**	**149.77**	**353**	*e*PKPdf	**PKPdf**	**05 49 23.6**	**-0.5**
QUIF	**Quistinic**	**149.78**	**6**	*e*PKIKP	**PKPdf**	**05 49 23.6**	**-0.4**
	comp=Z,30nm,1.1s							
QUIF	**Quistinic**	**149.78**	**6**	*e*PKPdf	**PKPdf**	**05 49 23.6**	**-0.4**
DAVA	**Damuels**	**149.81**	**348**	*i* PKiKP	**PKPbc**	**05 49 29.6**	**-0.1**
	comp=Z,83nm,1.1s,SNR=19							
LJU	**Ljubljana**	**149.83**	**342**	*e*PKPdf	**PKPdf**	**05 49 23.7**	**-0.5**
LJU				*i* PKPbc	**PKPbc**	**05 49 29.3**	**-0.3**
LJU				*e*		05 51 42.1	
FETA	**Feichten**	**149.90**	**347**	*i* PKPdf	**PKPdf**	**05 49 23.9**	**-0.5**
	comp=Z,19nm,1.1s,SNR=24							
FETA				⇑*i*PKiKP	**PKPbc**	**05 49 30.0**	**0.0**
	comp=Z,73nm,1.1s							
FETA	**Feichten**	**149.90**	**347**	*i* P	**PKPdf**	**05 49 23.9**	**-0.5**
BBS	**Basel-Blauen**	**150.03**	**352**	PKP	**PKPdf**	**05 49 24.5**	**0.0**
VOY	**Vojsko**	**150.03**	**342**	*e*PKPdf	**PKPdf**	**05 49 24.5**	**-0.1**
VOY				*i* PKPbc	**PKPbc**	**05 49 29.2**	**-1.0**
VOY				*e*PKPab	**PKPab**	**05 49 36.3**	**-2.1**
BOJS	**Bojanci**	**150.09**	**340**	*e*PKPdf	**PKPdf**	**05 49 24.1**	**-0.5**
BOJS				*i* PKPbc	**PKPbc**	**05 49 30.2**	**0.0**
CEY	**Cerknica**	**150.14**	**341**	*i* PKPbc	**PKPbc**	**05 49 30.0**	**-0.4**
CEY				*e*PKPab	**PKPab**	**05 49 37.8**	**-1.0**
LOMF	**Lomont**	**150.23**	**353**	PKP	**PKPdf**	**05 49 24.7**	**-0.2**
LOMF	**Lomont**	**150.23**	**353**	PKP	**PKPdf**	**05 49 24.7**	**-0.2**
TRI	**Trieste**	**150.36**	**342**	*e*PKPdf	**PKPdf**	**05 49 25.1**	**+0.1**
TRI				*e*PKPbc	**PKPbc**	**05 49 30.2**	**-0.7**
TRI				*e*PKPab	**PKPab**	**05 49 38.7**	**-1.0**
PLE	**Pljevlja**	**150.37**	**333** ⇑	*i*PKPbc	**PKPbc**	**05 49 30.1**	**-1.0**
VAY	**Valandovo**	**150.37**	**327**	*i* PKP	**PKPbc**	**05 49 28.6**	**-2.4**
SKO	**Skopje**	**150.47**	**329**	*i* PKP	**PKPbc**	**05 49 31.4**	**+0.1**
IVA	**Berane**	**150.51**	**332** ⇑	*i*PKP	**PKPbc**	**05 49 30.8**	**-0.6**
LOR	**Lormes**	**150.58**	**357**	*e*PKIKP	**PKPdf**	**05 49 25.3**	**0.0**
	comp=Z,34nm,1.3s							
LOR	**Lormes**	**150.58**	**357**	*e*PKPdf	**PKPdf**	**05 49 25.3**	**0.0**
HYF	**Humbligny**	**150.64**	**358**	*e*PKIKP	**PKPdf**	**05 49 25.7**	**+0.3**
HYF	**Humbligny**	**150.64**	**358**	*e*PKPdf	**PKPdf**	**05 49 25.7**	**+0.3**
UPM	**Unac-Piva**	**150.68**	**333** ⇑	*i*PKP	**PKPbc**	**05 49 30.7**	**-1.2**
PVY	**Plav**	**150.70**	**331** ⇑	*i*PKP	**PKPbc**	**05 49 30.5**	**-1.4**
SSF	**Saint Saulge**	**150.81**	**357**	*e*PKIKP	**PKPdf**	**05 49 25.6**	**0.0**
	comp=Z,24nm,1.2s							
SSF	**Saint Saulge**	**150.81**	**357**	*e*PKPdf	**PKPdf**	**05 49 25.6**	**0.0**
NKY	**Niksic**	**150.96**	**333** ⇑	*i*PKP	**PKPbc**	**05 49 30.7**	**-1.8**
CABF	**La Chapelle**	**151.05**	**353**	*e*PKIKP	**PKPdf**	**05 49 26.6**	**+0.5**
CABF	**La Chapelle**	**151.05**	**353**	*e*PKPdf	**PKPdf**	**05 49 26.6**	**+0.5**
BRY	**Bratogost**	**151.08**	**333** ⇑	*i*PKP	**PKPbc**	**05 49 30.9**	**-1.9**
AVF	**Avril sur Loir**	**151.09**	**357**	*e*PKIKP	**PKPdf**	**05 49 25.8**	**-0.2**
AVF	**Avril sur Loir**	**151.09**	**357**	*e*PKPdf	**PKPdf**	**05 49 25.8**	**-0.2**
TTG	**Podgorica**	**151.15**	**332**	*e*PKP	**PKPbc**	**05 49 30.9**	**-1.8**
SMF	**Signal de Mont**	**151.21**	**356**	*e*PKIKP	**PKPdf**	**05 49 26.1**	**-0.2**
	comp=Z,19nm,1.3s							
SMF	**Signal de Mont**	**151.21**	**356**	*e*PKPdf	**PKPdf**	**05 49 26.1**	**-0.2**
OG01	**Vacheresse**	**151.25**	**352**	PKP	**PKPdf**	**05 49 27.8**	**+1.4**
MFF	**Saint Martin d**	**151.29**	**2**	*e*PKIKP	**PKPdf**	**05 49 26.1**	**-0.3**
	comp=Z,36nm,1.0s							
MFF	**Saint Martin d**	**151.29**	**2**	*e*PKPdf	**PKPdf**	**05 49 26.1**	**-0.3**
BGF	**Bois d'Agland**	**151.34**	**358**	*e*PKIKP	**PKPdf**	**05 49 26.4**	**-0.1**
BGF	**Bois d'Agland**	**151.34**	**358**	*e*PKPdf	**PKPdf**	**05 49 26.4**	**-0.1**
APE	**Apeiranthos**	**151.40**	**317**	⇓*i*P	**PKPbc**	**05 49 31.5**	**-2.1**
BUM	**Brajici-Budva**	**151.41**	**332** ⇑	*i*PKP	**PKPbc**	**05 49 30.5**	**-3.0**
STON	**Ston**	**151.46**	**334**	P	**PKPbc**	**05 49 32.1**	**-1.3**
HCY	**Herceg Novi**	**151.47**	**333** ⇑	*i*PKP	**PKPbc**	**05 49 31.0**	**-2.5**
ULC	**Ulcinj**	**151.52**	**331** ⇑	*i*PKP	**PKPbc**	**05 49 30.8**	**-2.9**
TCF	**Toulx Ste Croi**	**151.63**	**359**	*e*PKIKP	**PKPdf**	**05 49 26.8**	**-0.1**
	comp=Z,22nm,1.2s							
TCF	**Toulx Ste Croi**	**151.63**	**359**	*e*PKPdf	**PKPdf**	**05 49 26.8**	**-0.1**
OG35	**Corcelles**	**151.66**	**354**	PKP	**PKPdf**	**05 49 28.2**	**+1.2**
AGO	**Saint Agoulin**	**151.83**	**357**	PKP	**PKPdf**	**05 49 26.6**	**-0.6**
AGO	**Saint Agoulin**	**151.83**	**357**	PKP	**PKPdf**	**05 49 26.6**	**-0.6**
LPL	**La Plagne**	**152.05**	**352**	*e*PKIKP	**PKPdf**	**05 49 28.1**	**+0.3**
LPL	**La Plagne**	**152.05**	**352**	*e*PKPdf	**PKPdf**	**05 49 28.1**	**+0.3**
LPG	**La Plagne**	**152.06**	**352**	*e*PKIKP	**PKPdf**	**05 49 28.3**	**+0.4**
LPG	**La Plagne**	**152.06**	**352**	*e*PKPdf	**PKPdf**	**05 49 28.3**	**+0.4**
PYM	**Petit Puy Mans**	**152.14**	**358**	PKP	**PKPdf**	**05 49 27.8**	**0.0**
PYM	**Petit Puy Mans**	**152.14**	**358**	PKP	**PKPdf**	**05 49 27.8**	**0.0**
BNI	**Bardonecchia**	**152.51**	**352**	*e*PKPdf	**PKPdf**	**05 49 28.9**	**+0.4**
BNI				*e*PKPbc	**PKPbc**	**05 49 35.9**	**0.0**
BNI				*e*PKPab	**PKPab**	**05 49 49.3**	**+0.4**
SSB	**Saint Sauveur**	**152.52**	**355**	*e*PKPdf	**PKPdf**	**05 49 27.7**	**-0.6**
SSB				*e*PKPbc	**PKiKP**	**05 49 36.1**	**+0.2**
SSB				*e*PKPab	**PKPab**	**05 49 48.6**	**-0.2**
RJF	**Les Rejaudoux**	**152.62**	**360**	*e*PKIKP	**PKPdf**	**05 49 28.2**	**-0.2**
	comp=Z,25nm,1.1s							
RJF	**Les Rejaudoux**	**152.62**	**360**	*e*PKPdf	**PKPdf**	**05 49 28.2**	**-0.2**
LBL	**Lubilhac**	**152.65**	**357**	PKP	**PKPdf**	**05 49 28.9**	**+0.4**
LBL	**Lubilhac**	**152.65**	**357**	PKP	**PKPdf**	**05 49 28.9**	**+0.4**
ORIF	**Oris-en-Rattie**	**152.74**	**353**	*e*PKIKP	**PKPdf**	**05 49 28.8**	**+0.1**
	comp=Z,32nm,1.3s							
ORIF	**Oris-en-Rattie**	**152.74**	**353**	*e*PKPdf	**PKPdf**	**05 49 28.8**	**+0.1**
MBDF	**Montbardon**	**152.82**	**352**	*e*PKIKP	**PKPdf**	**05 49 28.8**	**-0.1**
	comp=Z,44nm,1.4s							
MBDF	**Montbardon**	**152.82**	**352**	*e*PKPdf	**PKPdf**	**05 49 28.8**	**-0.1**
VIVF	**Saint-Julien-l**	**152.93**	**355**	*e*PKIKP	**PKPdf**	**05 49 29.0**	**+0.1**
VIVF	**Saint-Julien-l**	**152.93**	**355**	*e*PKPdf	**PKPdf**	**05 49 29.0**	**+0.1**
LFF	**La Frestale**	**152.98**	**1**	*e*PKIKP	**PKPdf**	**05 49 28.8**	**-0.1**
LFF	**La Frestale**	**152.98**	**1**	*e*PKPdf	**PKPdf**	**05 49 28.8**	**-0.1**
CAF	**Calviac**	**152.99**	**359**	*e*PKIKP	**PKPdf**	**05 49 29.0**	**0.0**
	comp=Z,43nm,1.6s							
CAF	**Calviac**	**152.99**	**359**	*e*PKPdf	**PKPdf**	**05 49 29.0**	**0.0**
SMRF	**Simiane la Rot**	**153.71**	**353**	*e*PKIKP	**PKPdf**	**05 49 29.6**	**-0.4**
SMRF	**Simiane la Rot**	**153.71**	**353**	*e*PKPdf	**PKPdf**	**05 49 29.6**	**-0.4**
LASF	**Ste Croix**	**153.76**	**356**	*e*PKIKP	**PKPdf**	**05 49 29.7**	**-0.4**
LASF	**Ste Croix**	**153.76**	**356**	*e*PKPdf	**PKPdf**	**05 49 29.7**	**-0.4**
FRF	**La Foret Royal**	**153.98**	**351**	*e*PKIKP	**PKPdf**	**05 49 29.9**	**-0.5**
FRF	**La Foret Royal**	**153.98**	**351**	*e*PKPdf	**PKPdf**	**05 49 29.9**	**-0.5**
PGF	**Pioggiola**	**154.53**	**347**	*e*PKIKP	**PKPdf**	**05 49 30.7**	**-0.6**
	comp=Z,117nm,1.4s							
PGF	**Pioggiola**	**154.53**	**347**	*e*PKPdf	**PKPdf**	**05 49 30.7**	**-0.6**
MTLF	**Montolieu**	**154.57**	**359**	*e*PKIKP	**PKPdf**	**05 49 31.1**	**-0.1**
MTLF	**Montolieu**	**154.57**	**359**	*e*PKPdf	**PKPdf**	**05 49 31.1**	**-0.1**
PCAB	**Cabril**	**154.88**	**17**	*e*PKPdf	**PKPdf**	**05 49 32.4**	**+0.7**
PCAB	**Cabril**	**154.88**	**17**	*e*PKPab	**PKPab**	**05 49 58.9**	**-0.1**
PBRG	**Braganca**	**155.12**	**15**	*e*PKPab	**PKPab**	**05 50 00.7**	**+0.6**
POLO	**Lamas de Olo**	**155.26**	**17**	*e*PKPab	**PKPab**	**05 50 00.5**	**-0.2**
PVRL	**Vila Real**	**155.37**	**17**	*e*PKPab	**PKPab**	**05 50 01.2**	**0.0**
MVO	**Moncorvo**	**155.66**	**16**	*e*PKPdf	**PKPdf**	**05 49 33.2**	**+0.4**
MVO	**Moncorvo**	**155.66**	**16**	*e*PKPab	**PKPab**	**05 50 02.7**	**+0.3**
PVIS	**Viseu**	**155.84**	**17**	*e*PKPab	**PKPab**	**05 50 03.1**	**-0.1**
MTE	**Manteigas**	**156.24**	**17**	*e*PKPdf	**PKPdf**	**05 49 34.1**	**+0.5**
MTE	**Manteigas**	**156.24**	**17**	*e*PKPab	**PKPab**	**05 50 04.9**	**0.0**
PTOM	**Tomar**	**156.70**	**19**	*e*PKPab	**PKPab**	**05 50 06.3**	**-0.6**
PMRV	**Marv??o**	**157.18**	**18**	*e*PKPdf	**PKPdf**	**05 49 34.9**	**+0.2**
PMRV	**Marv??o**	**157.18**	**18**	*e*PKPab	**PKPab**	**05 50 08.9**	**-0.1**
PMTG	**Montargil**	**157.25**	**20**	*e*PKPab	**PKPab**	**05 50 08.7**	**-0.6**
PESTR	**Estremoz**	**157.64**	**19**	*e*PKPab	**PKPab**	**05 50 10.6**	**-0.4**
ESDC	**Sonseca Array**	**157.76**	**11**	PKPab	**PKPab**	**05 50 10.7**	**-0.8**
ESDC	**Sonseca Array**	**157.76**	**11**	PKPab	**PKPab**	**05 50 10.7**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=338,slow=3.9,SNR=8.8							
EVOP	**Sao Brissos**	**157.78**	**20**	*e*PKPdf	**PKPdf**	**05 49 34.7**	**-0.7**
EVO	**Evora**	**157.81**	**20**	*e*PKIKP	**PKPdf**	**05 49 34.7**	**-0.8**
	comp=Z,15nm,1.1s							
EVO	**Evora**	**157.81**	**20**	*e*PKPab	**PKPab**	**05 50 11.6**	**-0.1**
PNCL	**Nicolau / Gran**	**158.02**	**21**	*e*PKPdf	**PKPdf**	**05 49 36.3**	**+0.6**
PNCL	**Nicolau / Gran**	**158.02**	**21**	*e*PKPab	**PKPab**	**05 50 12.2**	**-0.4**
LIC	**Lamto**	**166.86**	**151**	*e*PKIKP	**PKPdf**	**05 49 43.8**	**-1.3**
	comp=Z,24nm,1.0s							
LIC	**Lamto**	**166.86**	**151**	*e*PKPdf	**PKPdf**	**05 49 43.8**	**-1.3**
DBIC	**Dimbokro**	**167.34**	**150**	PKP	**PKPdf**	**05 49 44.2**	**-1.2**
DBIC	**Dimbokro**	**167.34**	**150**	PKP	**PKPdf**	**05 49 44.2**	**-1.2**
	comp=Z,8.8nm,1.1s,baz=253,slow=2.8,SNR=4.9							
TAM	**Tamanrasset**	**173.73**	**322**	*e*PKPdf	**PKPdf**	**05 49 49.7**	**+1.0**
TORD	**Torodi Ar. Bea**	**175.32**	**184**	PKP	**PKPdf**	**05 49 48.4**	**-0.9**
TORD				PKPab	**PKPab**	**05 51 29.1**	**-0.3**
TORD	**Torodi Ar. Bea**	**175.32**	**184**	PKP	**PKPdf**	**05 49 48.4**	**-0.9**
	comp=Z,7.7nm,1.1s,baz=324,slow=1.2,SNR=24							
TORD				PKPab	**PKPab**	**05 51 29.1**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=190,slow=2.1,SNR=7.2							

CSEM ***13*** *05:33:01.7, 42°.36N×13°.42E, h17km, After ROM*
ROM 13 05:33:01.7±0.1, 42°.36N×13°.42E, h17km±1km, MI2.0/3, Error ellipse: s-maj=1.5km s-min=1.1km az=97.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.02**	**248**	Pg	Pg	05 33 04.9	+0.1
AQU				Sg	Sg	05 33 07.2	+0.3
	184nm,0.4s						
AQU	**L'Aquila**	**0.02**	**248**	Pg	Pg	05 33 04.9	+0.1
AQU				Sg	Sg	05 33 07.2	+0.3
	184nm,0.4s						
FAGN	**Fagnano**	**0.15**	**128**	Pg	Pg	05 33 05.8	-0.2
FAGN				Sg	Sb	05 33 09.4	+0.2
	242nm,0.5s						
FAGN	**Fagnano**	**0.15**	**128**	Pg	Pg	05 33 05.8	-0.2
FAGN				Sg	Sb	05 33 09.4	+0.2
	242nm,0.5s						
TERO	**Teramo**	**0.29**	**27**	Pg	Pg	05 33 08.0	-0.2
TERO				Sg	Sg	05 33 12.9	+0.3
	85nm,1.0s						
TERO	**Teramo**	**0.29**	**27**	Pg	Pg	05 33 08.0	-0.2
TERO				Sg	Sg	05 33 12.9	+0.3
	85nm,1.0s						
VCEL	**Villa Celiera**	**0.31**	**83**	Pg	Pb	05 33 08.9	-0.1
VCEL				Sg	Sb	05 33 14.0	+0.1
VCEL	**Villa Celiera**	**0.31**	**83**	Pg	Pb	05 33 08.9	-0.1
VCEL				Sg	Sb	05 33 14.0	+0.1
PTQR	**Pietraquaria**	**0.34**	**183**	Pg	Pg	05 33 09.1	+0.1
PTQR				Sg	Sb	05 33 14.3	-0.3
PTQR	**Pietraquaria**	**0.34**	**183**	Pg	Pg	05 33 09.1	+0.1
PTQR				Sg	Sb	05 33 14.3	-0.3
NRCA	**Norcia**	**0.53**	**334**	Pg	Pg	05 33 12.0	-0.3
NRCA				Sg	Sb	05 33 20.2	+0.2
	218nm,0.2s						
NRCA	**Norcia**	**0.53**	**334**	Pg	Pg	05 33 12.0	-0.3
NRCA				Sg	Sb	05 33 20.2	+0.2
	218nm,0.2s						

IDC 13 05:40:55.4±3.2, 5°.10S×151°.88E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.5/20, mbtmp3.8/4, ML2.3/1, Error ellipse: s-maj=119.0km s-min=42.3km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.34**	**227**	Pn	Pn	05 42 30.4	+0.1
	0.4nm,0.3s,baz=311,slow=20,SNR=2.5						
PMG				Sn	Sn	05 43 37.6	-5.9
	1.5nm,0.3s,baz=166,slow=4.2,SNR=4.5						
WRA	**Warramunga Arr**	**22.57**	**228**	P	P	05 45 57.3	-0.2
	1.4nm,0.6s,baz=52,slow=9.9,SNR=9.0						
ASAR	**Alice Springs**	**25.32**	**221**	P	P	05 46 23.8	-0.3
	0.4nm,0.4s,baz=54,slow=8.6,SNR=4.1						
FITZ	**Fitzroy Crossi**	**29.72**	**241**	P	P	05 46 55.0	+0.3
	1.9nm,0.6s,baz=51,slow=14,SNR=9.1						
TORD	**Torodi Ar. Bea**	**149.53**	**287**	PKPbc	PKPbc	06 00 47.3	-0.5
	0.3nm,0.6s,baz=76,slow=1.9,SNR=2.8						

MOS ***13*** *05:52:51.1±2.4, 48°.93N×156°.96E, h5km, mb4.2/1, Error ellipse: s-maj=75.2km s-min=14.4km az=84.5*
KRSC ***13*** *05:52:51.1±1.1, 48°.93N×156°.96E, h5km±14km, ML4.1*
ISC 13 05:52:53.4±4.3, 48°.8N±0°.2×156°.8E±0°.1, h34km, n18, σ1§00/29, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.96**	**348**	*e*PN	Pn	05 53 18.6	-5.6
SKR				*e*S	**Sn**	**05 53 46.0**	**-1.7**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax	smax		
	comp=N,150nm,0.5s						
SKR				smax	smax		
	comp=E,220nm,0.5s						
SKR	**Severo-Kuril's**	**1.96**	**348**	*e*P	**Pn**	**05 53 23.9**	**-0.3**
SKR				*e*S	**Sn**	**05 53 47.6**	**-0.1**
PAU	**Pauzhetka**	**2.71**	**1**	PN	**Pn**	**05 53 34.8**	**+0.4**
PAU				S	**Sn**	**05 54 06.4**	**+0.4**
PAU	**Pauzhetka**	**2.71**	**1**	*e*P	**Pn**	**05 53 34.8**	**+0.4**
PAU				*i* S	**Sn**	**05 54 06.4**	**+0.4**
MTVR	**Mutnovka**	**3.84**	**13**	*e*P	**Pn**	**05 53 50.7**	**+0.6**
MTVR				*i* S	**Sn**	**05 54 34.4**	**+0.4**
RUS	**Russkaya**	**3.84**	**16**	PN	**Pn**	**05 53 50.2**	**+0.2**
RUS				S	**Sn**	**05 54 33.6**	**-0.4**
RUS	**Russkaya**	**3.84**	**16**	*e*P	**Pn**	**05 53 50.2**	**+0.2**
RUS				*i* S	**Sn**	**05 54 33.6**	**-0.4**
GRL	**Gorelyy**	**3.89**	**12**	*e*P	**Pn**	**05 53 49.0**	**-1.8**
PET	**Petropavlovsk**	**4.43**	**15**	PN	**Pn**	**05 53 58.7**	**+0.6**
PET				S	**Sn**	**05 54 49.1**	**+0.6**
PET	**Petropavlovsk**	**4.43**	**15**	*e*P	**Pn**	**05 53 58.7**	**+0.6**
PET				*i* S	**Sn**	**05 54 49.1**	**+0.6**
UGLR	**Uglovaya**	**4.64**	**16**	*e*P	**Pn**	**05 54 02.4**	**+1.3**
UGLR				*i* S	**Sn**	**05 54 55.0**	**+1.2**
SMAR	**Somma**	**4.69**	**15**	*e*P	**Pn**	**05 54 03.5**	**+1.6**
SDLR	**Sedlovina**	**4.72**	**16**	P	**Pn**	**05 54 03.5**	**+1.3**
KRER	**Koryakskii**	**4.72**	**15**	*e*P	**Pn**	**05 54 03.5**	**+1.2**
SPN	**Mys Shipunski**	**4.81**	**24**	PN	**Pn**	**05 54 04.0**	**+0.7**
SPN	**Mys Shipunski**	**4.81**	**24**	*e*P	**Pn**	**05 54 04.0**	**+0.7**
SPN				*i* S	**Sn**	**05 54 56.5**	**-1.3**
MKZ	**Mys Kozlova**	**6.58**	**26**	PN	**Pn**	**05 54 27.2**	**-0.3**
MKZ	**Mys Kozlova**	**6.58**	**26**	*e*P	**Pn**	**05 54 27.2**	**-0.3**
MKZ				*i* S	**Sn**	**05 55 38.9**	**-2.3**

IDC 13 06:22:50.8±4.1, 56°.02S×126°.89W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/15, mbtmp3.8/3, MS3.8/2, Ms1 3.8/2, ms1mx3.2/26, Error ellipse: s-maj=122.3km s-min=45.0km az=60.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKT	**Rikitea**	**33.40**	**346**	*e*T	T	07 03 11.0	
	1.8nm,0.3s						
QSPA	**South Pole

BKSI	**Bulukumba**	**19.59**	**263**	P		**Pn**	**06 50 26.8 -0.1**
	54nm,1.1s,733nm						
TTSI	**Tana Toraja**	**19.80**	**270**	P		**Pn**	**06 50 30.0 +0.6**
	183nm,1.2s,2µm						
SPSI	**Sidrap Palu**	**19.86**	**267**	P		**Pn**	**06 50 29.8 -0.3**
	50nm,1.5s						
KAPI	**Kappang**	**19.93**	**264**	*e*P		**P**	**06 50 29.7 +1.3**
	69nm,1.4s						
KAPI	**Kappang**	**19.93**	**264**	P		**Pn**	**06 50 30.2 -0.7**
	38nm,1.2s						
KAPI	**Kappang**	**19.93**	**264**	P		**P**	**06 50 28.7 +0.2**
	18nm,0.8s,baz=88,slow=6.8,SNR=7.1						
FITZ	**Fitzroy Crossi**	**20.18**	**222**	*e*P		**P**	**06 50 32.1 +1.0**
	33nm,0.8s						
FITZ				S		**S**	**06 54 08.3 -4.4**
FITZ				*e*S		Sn	06 54 09.8 -11
FITZ	**Fitzroy Crossi**	**20.18**	**222**	P		**P**	**06 50 31.9 +0.8**
	27nm,0.9s,baz=47,slow=11,SNR=30						
FITZ				S		**S**	**06 54 08.3 -4.4**
	49nm,0.8s,baz=76,slow=19,SNR=10						
FITZ				LR		LR	06 59 09.9
	comp=Z,658nm,18.4s,baz=31,slow=39						
FITZ	**Fitzroy Crossi**	**20.18**	**222**	P		**P**	**06 50 31.7 +0.6**
	baz=20,SNR=31						
FITZ				S		**S**	**06 54 08.4 -4.3**
	baz=20,SNR=11						
AS31	**Alice Springs**	**21.07**	**195**	*e*P		**P**	**06 50 41.3 +0.6**
AS31				*e*S		**S**	**06 54 30.9 +0.6**
ASAR	**Alice Springs**	**21.07**	**195**	P		**P**	**06 50 41.3 +0.6**
ASAR				S		**S**	**06 54 26.2 -4.1**
ASAR	**Alice Springs**	**21.07**	**195**	P		**P**	**06 50 41.3 +0.6**
	9.8nm,0.7s,baz=27,slow=10,SNR=118						
ASAR				S		**S**	**06 54 26.2 -4.1**
	3.2nm,1.0s,baz=10.0,slow=27,SNR=2.6						
ASAR				LR		LR	06 59 37.1
	comp=Z,403nm,19.3s,baz=7.4,slow=38						
MYLDM	**Lahad Datu**	**22.72**	**291**	P		**P**	**06 51 00.4 +2.2**
	59nm,1.6s						
QLP	**Quilpie**	**23.64**	**170**	P		**P**	**06 51 10.4 +3.6**
	baz=24,SNR=5.7						
KHKI	**Kahang-Kahang**	**24.45**	**257**	P		**P**	**06 51 14.1 -0.1**
	37nm,1.4s						
EIDS	**Eidsvold**	**24.62**	**155**	*e*P		**P**	**06 51 18.2 +2.6**
EIDS	**Eidsvold**	**24.62**	**155**	P		**P**	**06 51 17.9 +2.3**
	baz=25,SNR=13						
RMQ	**Roma**	**24.73**	**160**	P		**P**	**06 51 20.6 +3.9**
	baz=25,SNR=4.4						
KKM	**Kota Kinabalu**	**25.15**	**291**	*e*P		**P**	**06 51 22.5 +1.8**
KMMI	**Kalianget**	**25.86**	**261**	P		**P**	**06 51 29.0 +2.0**
	87nm,1.1s,3µm						
MBWA	**Marble Bar**	**26.34**	**226**	*e*P		**P**	**06 51 33.0 +1.8**
	25nm,0.9s						
STKA	**Stephens Creek**	**28.57**	**177**	*e*P		**P**	**06 51 53.2 +2.1**
STKA	**Stephens Creek**	**28.57**	**177**	P		**P**	**06 51 52.9 +1.9**
	4.8nm,0.9s,baz=22,slow=6.0,SNR=7.2						
STKA				LR		LR	07 05 43.1
	comp=Z,317nm,18.5s,baz=4.2,slow=41						
STKA	**Stephens Creek**	**28.57**	**177**	P		**P**	**06 51 53.2 +2.1**
	baz=29,SNR=5.2						
CMSA	**Cobar Meteorol**	**28.74**	**169**	P		**P**	**06 51 55.4 +2.8**
	baz=29,SNR=8.8						
FORT	**Forrest**	**29.52**	**201**	*e*P		**P**	**06 52 02.1 +2.6**
	15nm,0.8s						
BBOO	**Buckleboo**	**29.63**	**186**	*e*P		**P**	**06 52 02.3 +1.8**
	640nm,1.6s						
BBOO	**Buckleboo**	**29.63**	**186**	P		**P**	**06 52 01.6 +1.1**
	baz=30,SNR=6.6						
MEEK	**Meekatharra**	**30.80**	**219**	P		**P**	**06 52 12.6 +1.7**
	baz=31,SNR=3.7						
GIRL	**Giralia**	**31.30**	**230**	P		P	06 52 18.9 +3.6
	baz=32,SNR=3.5						
YNG	**Young**	**31.98**	**166**	P		P	06 52 24.3 +3.1
	baz=32,SNR=7.5						
DZM	**Mont Dzumac**	**32.05**	**128**	*e*LR		LR	07 00 59.9
	346nm,28.1s						
ARPS	**Mount Arapiles**	**33.45**	**177**	P		**P**	**06 52 36.8 +2.9**
	baz=34,SNR=8.3						
MORW	**Morawa**	**34.12**	**219**	P		**P**	**06 52 41.9 +2.0**
	baz=34,SNR=4.4						
TOO	**Toolangi**	**34.61**	**172**	P		P	06 52 47.5 +3.5
	baz=35,SNR=6.2						
JHJ	**Hachijo jima 2**	**36.14**	**0**	LR		LR	07 04 26.6
	comp=Z,140nm,21.7s,baz=311,slow=31						
NWAO	**Narrogin (SRO)**	**36.25**	**213**	LR		LR	07 09 06.0
	comp=Z,238nm,18.7s,baz=24,slow=38						
QIZ	**Qiongzhong**	**36.73**	**308**	P		P	06 53 09.3 +7.0
QIZ				S		S	06 58 31.4 -8.1
QIZ				pmax		pmax	
	comp=Z,120nm,4.4s						
QIZ				LR		LR	
	comp=Z,110nm,13.0s						
JNU	**Nakatsue**	**37.09**	**348**	P		**P**	**06 53 02.6 -2.6**
JNU	**Nakatsue**	**37.09**	**348**	P		**P**	**06 53 02.6 -2.6**
	comp=Z,9.0nm,0.8s,baz=141,slow=5.7,SNR=7.6						
JNU				LR		LR	07 05 22.2
	comp=Z,87nm,21.6s,baz=196,slow=31						
MJAR	**Matsushiro Arr**	**39.58**	**358**	P		**P**	**06 53 22.9 -3.2**
MJAR	**Matsushiro Arr**	**39.58**	**358**	P		**P**	**06 53 22.9 -3.2**
	comp=Z,0.9nm,0.3s,baz=183,slow=7.8,SNR=5.1						
MJAR				LR		LR	07 07 34.8
	comp=Z,27nm,20.0s,baz=200,slow=33						
NJ2	**Nanjing**	**40.26**	**332**	*e*P		**P**	**06 53 30.3 -1.4**
NJ2				pmax		pmax	
	comp=Z,20nm,1.0s						
PSI	**Prapat**	**41.15**	**278**	P		**P**	**06 53 38.9 -0.7**
PSI	**Prapat**	**41.15**	**278**	P		**P**	**06 53 38.9 -0.7**
	comp=Z,18nm,1.0s,baz=122,slow=4.8,SNR=19						
PSI	**Prapat**	**41.15**	**278**	P		**P**	**06 53 39.0 -0.5**
	baz=41,SNR=12						
KSAR	**Wonju Array Be**	**41.91**	**346**	P		**P**	**06 53 43.5 -1.7**
KSRS	**Korea Array**	**41.91**	**346**	P		**P**	**06 53 43.5 -1.7**
	comp=Z,3.3nm,0.6s,baz=157,slow=8.8,SNR=12						
KSRS				LR		LR	07 10 58.5
	comp=Z,38nm,18.8s,baz=180,slow=36						
GYA	**Guiyang**	**43.44**	**315**	P		P	06 54 04.3 +6.3
GYA				pP		pP	06 54 20.8 +1.0
GYA				sP		sP	06 54 27.3 -3.0
GYA				PP		**PcP**	**06 55 47.8 +3.0**
GYA				ScP		ScP	06 59 35.6 +7.5
GYA				sS		sS	07 00 55.0 -2.3
GYA				SS		**SS**	**07 03 35.6 -1.9**
GYA				pmax		pmax	
	comp=Z,10.0nm,0.8s						
GYA				pmax		pmax	
	comp=Z,90nm,4.9s						
GYA				LR		LR	
	comp=N,310nm,18.8s						
GYA				LR		LR	
	comp=E,290nm,19.0s						
GYA				LR		LR	
	comp=Z,410nm,18.5s						
CMAR	**Chiang Mai Arr**	**45.50**	**300**	P		**P**	**06 54 13.8 -0.5**
CMAR	**Chiang Mai Arr**	**45.50**	**300**	P		**P**	**06 54 13.8 -0.5**
	comp=Z,2.1nm,0.7s,baz=123,slow=6.3,SNR=22						
KMI	**Kunming**	**45.56**	**310**	P		P	06 54 20.9 +5.9
KMI				pP		pP	06 54 35.0 -2.0
KMI				sP		sP	06 54 40.3 -7.1
KMI				PP		PP	06 56 08.9 +5.4
KMI				S		S	07 00 58.8 +8.0
KMI				pmax		pmax	
	comp=Z,8.0nm,0.5s						
KMI				pmax		pmax	
	comp=Z,97nm,6.1s						
KMI				LR		LR	
	comp=N,62nm,21.1s						
KMI				LR		LR	
	comp=E,100nm,22.0s						
KMI				LR		LR	
	comp=Z,130nm,22.0s						
ASAJ	**Asahikawa**	**47.20**	**3**	P		**P**	**06 54 26.0 -1.1**
ASAJ	**Asahikawa**	**47.20**	**3**	P		**P**	**06 54 26.0 -1.1**
	comp=Z,9.6nm,0.7s,baz=238,slow=12,SNR=7.2						
ASAJ				LR		LR	07 12 01.4
	comp=Z,78nm,21.6s,baz=252,slow=33						
USRK	**Ussuriysk Arra**	**47.70**	**353**	P		**P**	**06 54 31.2 +0.2**
	comp=Z,3.1nm,0.5s,baz=182,slow=7.9,SNR=12						
BJI	**Beijing**	**48.14**	**336**	P		P	06 54 40.1 +5.6
CD2	**Chengdu**	**48.19**	**317**	P		**P**	**06 54 34.8 -0.4**
CD2				pP		**pP**	**06 54 58.8 +1.5**
CD2				PcP		**PcP**	**06 56 00.8 -0.4**
CD2				PP		**PP**	**06 56 28.3 -0.1**
CD2				PcS		**PcS**	**06 59 55.4 -1.8**
CD2				S		**S**	**07 01 25.0 -2.7**
CD2				sS		**sS**	**07 02 06.9 +1.2**
CD2				SS		SS	07 04 50.8 -7.5
CD2				pmax		pmax	
	comp=Z,10.0nm,0.5s						
CD2				pmax		pmax	
	comp=Z,120nm,5.4s						
MDJ	**Mudanjiang**	**48.47**	**350**	P		P	06 54 44.3 +7.3
MDJ				pmax		pmax	
	comp=Z,3.0nm,0.7s						
MDJ				pmax		pmax	
	comp=Z,100nm,6.0s						
CN2	**Changchun**	**48.52**	**346**	*e*P		P	06 54 47.0 +10
HHC	**Hu-ho-hao-te**	**50.81**	**333**	*e*P		P	06 55 02.3 +7.3
HHC				pP		pP	06 55 17.3 -0.1
HHC				sP		sP	06 55 24.6 -3.1
HHC				PP		PP	06 56 59.8 +7.7
HHC				S		S	07 02 13.5 +9.4
HHC				sS		sS	07 02 40.9 -1.5
HHC				pmax		pmax	
	comp=Z,39nm,0.6s						
HHC				pmax		pmax	
	comp=Z,190nm,4.0s						
LZH	**Lanzhou**	**51.45**	**323**	*e*P		P	06 55 09.0 +9.1
LZH				pP		pP	06 55 26.0 +3.6
LZH				sP		sP	06 55 33.3 +0.6
LZH				pmax		pmax	
	comp=Z,14nm,1.0s						
PETK	**Petropavlovsk-**	**58.14**	**13**	P		**P**	**06 55 47.2 -0.5**
PETK	**Petropavlovsk-**	**58.14**	**13**	P		**P**	**06 55 47.2 -0.5**
	comp=Z,5.0nm,0.9s,baz=178,slow=7.2,SNR=3.2						
PETK				LR		LR	07 17 31.0
	comp=Z,40nm,20.0s,baz=346,slow=33						
SONM	**Songino Array**	**58.58**	**334**	P		**P**	**06 55 51.2 +0.2**
SONM	**Songino Array**	**58.58**	**334**	P		**P**	**06 55 51.2 +0.2**
	comp=Z,0.9nm,0.4s,baz=139,slow=8.4,SNR=5.5						
SONM				LR		LR	07 19 01.2
	comp=Z,57nm,20.3s,baz=103,slow=34						
WMQ	**Urumqi**	**65.99**	**321**	P		P	06 56 46.3 +5.8
WMQ				pmax		pmax	
	comp=Z,14nm,1.0s						
PPT	**Papeete**	**70.71**	**107**	LR		LR	07 22 38.1
	comp=Z,149nm,19.6s,baz=166,slow=31						
PPT2	**Papeete2**	**70.71**	**107**	*e*LR		LR	07 18 57.4
	comp=Z,90nm,24.2s						
MKAR	**Makanchi Array**	**70.76**	**322**	P		**P**	**06 57 09.5 -0.7**
MKAR				pP		**pP**	**06 57 32.4 -1.4**
MKAR	**Makanchi Array**	**70.76**	**322**	P		**P**	**06 57 09.5 -0.7**
	comp=Z,3.9nm,0.8s,baz=95,slow=7.9,SNR=15						
MKAR				pP		**pP**	**06 57 32.4 -1.4**
	comp=Z,2.7nm,0.7s,baz=124,slow=7.4,SNR=4.5						
TBI	**Tubuai**	**71.19**	**113**	*e*LR		LR	07 19 10.4
	comp=Z,113nm,35.2s						
KSH	**Kashi**	**72.11**	**313**	⇑*i*P		**P**	**06 57 19.6 +1.0**
KSH				PcP		**PcP**	**06 57 36.6 +0.1**
KSH				PP		**PP**	**07 00 02.6 +2.5**
KSH				S		**S**	**07 06 36.6 +2.8**
KSH				SKS		**SKSac**	**07 07 13.9 -1.0**
KSH				ScS		**ScS**	**07 07 16.6 -0.3**
KSH				SS		**SS**	**07 11 18.6 +5.6**
KSH				pmax		pmax	
	comp=Z,3.0nm,0.5s						
KSH				pmax		pmax	
	comp=Z,120nm,4.5s						
KSH				LR		LR	
	comp=N,98nm,4.6s						
KSH				LR		LR	
	comp=E,85nm,5.6s						
KSH				LR		LR	
	comp=Z,310nm,4.7s						
ZALV	**Zalesovo Beam**	**72.85**	**330**	P		**P**	**06 57 20.4 -2.0**
ZALV				pP		**pP**	**06 57 44.4 -1.8**
ZALV	**Zalesovo Beam**	**72.85**	**330**	P		**P**	**06 57 20.4 -2.0**
	comp=Z,1.2nm,0.6s,baz=101,slow=7.7,SNR=5.6						
ZALV				pP		**pP**	**06 57 44.4 -1.8**
	comp=Z,1.8nm,0.5s,baz=107,slow=6.9,SNR=4.8						
TKM2	**Tokmak 2**	**73.56**	**316**	*e*P		**P**	**06 57 26.8 -0.4**
	comp=Z,3.1nm,0.6s						
AAK	**Ala-Archa**	**74.22**	**316**	P		**P**	**06 57 30.9 -0.1**
AAK	**Ala-Archa**	**74.22**	**316**	P		**P**	**06 57 30.9 -0.1**
	comp=Z,0.5nm,0.3s,baz=162,slow=9.6,SNR=2.7						
KURK	**Kurchatov**	**74.67**	**325**	*e*P		**P**	**06 57 32.0 -1.1**
	comp=Z,1.2nm,0.6s						
VNDA	**Vanda**	**75.19**	**175**	LR		LR	07 28 13.0
	comp=Z,129nm,18.8s,baz=129,slow=34						
SML	**Sawmill**	**84.42**	**27**	*e*P		**P**	**06 58 25.3 -0.6**
	comp=Z,1.7nm,0.9s						
COLA	**College**	**85.54**	**24**	*e*P		**P**	**06 58 31.1 -0.2**
	comp=Z,2.8nm,0.9s						
ABKAR	**Akbulak array**	**85.71**	**320**	*e*P		**P**	**06 58 31.6 -1.0**
	comp=Z,0.9nm,0.6s						
ILAR	**Eielson Array**	**85.91**	**24**	P		**P**	**06 58 30.9 -2.2**
ILAR	**Eielson Array**	**85.91**	**24**	P		**P**	**06 58 30.9 -2.2**
	comp=Z,2.1nm,0.4s,baz=262,slow=4.3,SNR=51						
ILAR				LR		LR	07 35 52.0
	comp=Z,47nm,18.1s,baz=312,slow=35						
QSPA	**South Pole Qui**	**86.73**	**180**	*e*P		**P**	**06 58 38.8 +1.4**
	comp=Z,7.4nm,1.0s						
EGAK	**Eagle**	**88.29**	**25**	*e*P		**P**	**06 58 45.2 +0.5**
	comp=Z,2.4nm,0.8s						
YKA	**Yellowknife Ar**	**100.09**	**27**	P		**Pdif**	**06 59 37.8 -0.9**
YKA	**Yellowknife Ar**	**100.09**	**27**	P		**Pdif**	**06 59 37.8 -0.9**
	comp=Z,0.1nm,0.6s,baz=285,slow=5.1,SNR=4.8						
MSO	**Missoula**	**103.54**	**43**	*e*Pdif		**Pdif**	**06 59 53.3 -1.3**
TORD	**Torodi Ar. Bea**	**137.30**	**286**	PKP		**PKPdf**	**07 05 17.5 0.0**
TORD	**Torodi Ar. Bea**	**137.30**	**286**	PKP		**PKPdf**	**07 05 17.5 0.0**
	comp=Z,0.3nm,0.7s,baz=101,slow=2.2,SNR=2.8						
DBIC	**Dimbokro**	**144.48**	**277**	PKP		**PKPab**	**07 05 29.0 -0.1**
DBIC	**Dimbokro**	**144.48**	**277**	PKP		**PKPab**	**07 05 29.0 -0.1**
	comp=Z,3.8nm,0.6s,baz=54,slow=5.0,SNR=9.6						
LPAZ	**La Paz**	**146.39**	**126**	PKPbc		**PKPbc**	**07 05 35.3 -0.5**
LPAZ				pPKPbc		pPKPbc	07 05 58.3 -2.8
LPAZ	**La Paz**	**146.39**	**126**	PKPbc		**PKPbc**	**07 05 35.3 -0.5**
	comp=Z,1.6nm,0.8s,baz=166,slow=2.0,SNR=4.4						
LPAZ				pPKPbc		pPKPbc	07 05 58.3 -2.8
	comp=Z,5.9nm,0.9s,baz=215,slow=2.0,SNR=8.6						

IDC ***13*** *07:01:13.7±8.2,37.18N×71.47E,h97km±56km,mb3.2/2, mb1 3.3/6,mb1mx3.0/28,mbtmp3.1/6,Error ellipse: s-maj=75.3km s-min=54.4km az=151.0*
NNC ***13*** *07:01:16.8±3.4,37.90N×71.04E,h0km,mb3.6,mpv3.4, Error ellipse: s-maj=27.6km s-min=26.0km az=55.0*
ISC 13 07:01:10.5±2.0,37.1N±0.2×71.3E±0.1,h68km,n9,
σ1§42/12,1C-4D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.04**	**355**	⇓Pn		**Pn**	**07 02 38.9 +1.7**
	1.2nm,0.3s,baz=183,slow=13,SNR=38						
KK31				⇓Sn		**Sn**	**07 03 43.3 -1.6**
	4.0nm,0.4s,baz=192,slow=25,SNR=8.4						
AAK	**Ala-Archa**	**6.06**	**23**	P		**Pn**	**07 02 39.4 +1.7**
	3.0nm,0.3s,baz=180,slow=7.7,SNR=38						
AAK				S		**Sn**	**07 03 46.3 +0.6**
	1.0nm,0.3s,baz=324,slow=23,SNR=8.2						
TKM2	**Tokmak 2**	**6.70**	**28**	⇓Pn		**Pn**	**07 02 48.2 +1.8**
	3.1nm,0.5s						
TKM2				⇑Sn		**Sn**	**07 03 59.9 -1.4**
	5.2nm,0.9s						
MKAR	**Makanchi Array**	**12.68**	**37**	P		**Pn**	**07 04 07.4 -0.5**
	0.1nm,0.3s,baz=225,slow=15,SNR=6.3						
KURBB	**Kurchatov Arra**	**14.49**	**19**	P		**Pn**	**07 04 33.6 +1.7**
	0.0nm,0.3s,baz=206,slow=11,SNR=4.8						
AB31	**Akbulak array**	**14.69**	**329**	Pn		**Pn**	**07 04 33.8 -0.6**
	0.2nm,0.5s,baz=287,slow=29,SNR=5.7						
AB31				⇓Sn		Sn	07 07 04.1 -12
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**19.29**	**25**	P		**P**	**07 05 28.6 -1.0**
	0.4nm,0.3s,baz=225,slow=10,SNR=7.7						
NOA	**NORSAR Array B**	**44.05**	**323**	P		**P**	**07 09 11.3 0.0**
	0.8nm,0.8s,baz=93,slow=7.9,SNR=3.3						
YKA	**Yellowknife Ar**	**80.65**	**3**	P		**P**	**07 13 15.2 -0.3**
	0.2nm,0.4s,baz=352,slow=5.5,SNR=7.6						

CSEM ***13*** *07:08:30.3±0.1,42.26N×13.48E,h10km,ML3.5/7,Error ellipse: s-maj=2.1km s-min=1.6km az=69.0*
ROM 13 07:08:30.0±0.1,42.26N×13.48E,h9km,MI3.0/21,Error ellipse: s-maj=0.9km s-min=0.7km az=60.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.07**	**87**	Pg	Pg	07 08 32.7	+0.4
FAGN				Sg	Sg	07 08 34.1	+0.1
	43µm,0.3s						
FAGN	**Fagnano**	**0.07**	**87**	Pg	Pg	07 08 32.7	+0.4
FAGN				Sg	Sg	07 08 34.1	+0.1
	43µm,0.3s						
AQU	**L'Aquila**	**0.11**	**327**	Pg	Pg	07 08 33.3	+0.5
AQU				Sg	Sg	07 08 35.3	+0.5
	10µm,0.8s						
AQU	**L'Aquila**	**0.11**	**327**	Pg	Pg	07 08 33.3	+0.5
AQU				Sg	Sg	07 08 35.3	+0.5
	10µm,0.8s						
PTQR	**Pietraquaria**	**0.25**	**194**	Pg	Pg	07 08 35.9	+0.7
PTQR				Sg	Sg	07 08 39.9	+1.3
PTQR	**Pietraquaria**	**0.25**	**194**	Pg	Pg	07 08 35.9	+0.7
PTQR				Sg	Sg	07 08 39.9	+1.3
FIAM	**Fiamignano**	**0.27**	**271**	Pg	Pg	07 08 36.3	+0.7
FIAM				Sg	Sg	07 08 40.7	+1.3
	4µm,0.9s						
FIAM	**Fiamignano**	**0.27**	**271**	Pg	Pg	07 08 36.3	+0.7
FIAM				Sg	Sg	07 08 40.7	+1.3
	4µm,0.9s						
CAMP	**Campotosto**	**0.28**	**349**	Pg	Pg	07 08 36.2	+0.4
CAMP				Sg	Sg	07 08 40.8	+1.1
CAMP	**Campotosto**	**0.28**	**349**	Pg	Pg	07 08 36.2	+0.4
CAMP				Sg	Sg	07 08 40.8	+1.1
VCEL	**Villa Celiera**	**0.30**	**63**	Pg	Pg	07 08 36.7	+0.6
VCEL				Sg	Sg	07 08 41.5	+1.3
	4µm,0.4s						
VCEL	**Villa Celiera**	**0.30**	**63**	Pg	Pg	07 08 36.7	+0.6
VCEL				Sg	Sg	07 08 41.5	+1.3
	4µm,0.4s						
TERO	**Teramo**	**0.37**	**14**	Pg	Pg	07 08 37.6	+0.2
TERO				Sg	Sg	07 08 43.1	+0.6
TERO	**Teramo**	**0.37**	**14**	Pg	Pg	07 08 37.6	+0.2
TERO				Sg	Sg	07 08 43.1	+0.6
INTR	**Introdacqua**	**0.40**	**128**	Pg	Pg	07 08 38.4	+0.4
INTR				Sg	Sb	07 08 45.2	-0.5
	2µm,0.3s						
INTR	**Introdacqua**	**0.40**	**128**	Pg	Pg	07 08 38.4	+0.4
INTR				Sg	Sb	07 08 45.2	-0.5
	2µm,0.3s						
VVLD	**Villa Vallelon**	**0.40**	**165**	Pg	Pg	07 08 38.6	+0.5
VVLD				Sg	Sb	07 08 44.8	-1.0
	2µm,1.1s						
VVLD	**Villa Vallelon**	**0.40**	**165**	Pg	Pg	07 08 38.6	+0.5
VVLD				Sg	Sb	07 08 44.8	-1.0
	2µm,1.1s						
LNSS	**Leonessa**	**0.47**	**316**	Pg	Pg	07 08 39.8	+0.4
	1µm,0.7s						
LNSS	**Leonessa**	**0.47**	**316**	Pg	Pg	07 08 39.8	+0.4
	1µm,0.7s						
GUAR	**Guarcino**	**0.48**	**195**	Pg	Pg	07 08 40.0	+0.5
	657nm,0.4s						
GUAR	**Guarcino**	**0.48**	**195**	Pg	Pg	07 08 40.0	+0.5
	657nm,0.4s						
CERT	**Cerreto**	**0.49**	**230**	Pg	Pg	07 08 40.0	+0.4
	2µm,0.7s						
CERT	**Cerreto**	**0.49**	**230**	Pg	Pg	07 08 40.0	+0.4
	2µm,0.7s						
LPEL	**Lama dei Pelig**	**0.56**	**112**	Pg	Pg	07 08 41.4	+0.4
LPEL				Sg	Sb	07 08 49.6	-0.7
	1µm,0.9s						
LPEL	**Lama dei Pelig**	**0.56**	**112**	Pg	Pg	07 08 41.4	+0.4
LPEL				Sg	Sb	07 08 49.6	-0.7
	1µm,0.9s						
POFI	**Posta Fibreno**	**0.57**	**163**	Pg	Pg	07 08 41.1	-0.1
	380nm,0.6s						
POFI	**Posta Fibreno**	**0.57**	**163**	Pg	Pg	07 08 41.1	-0.1
	380nm,0.6s						
MTCE	**Montecelio**	**0.60**	**247**	Pg	Pg	07 08 41.9	+0.2
	465nm,0.6s						
MTCE	**Montecelio**	**0.60**	**247**	Pg	Pg	07 08 41.9	+0.2
	465nm,0.6s						
SDI	**San Donato**	**0.60**	**156**	Pg	Pg	07 08 41.9	+0.1
SDI	**San Donato**	**0.60**	**156**	Pg	Pg	07 08 41.9	+0.1
MNS	**Montasola**	**0.61**	**282**	Pg	Pg	07 08 41.9	0.0
	372nm,0.4s						
MNS	**Montasola**	**0.61**	**282**	Pg	Pg	07 08 41.9	0.0
	372nm,0.4s						
TRTR	**Tortoreto Alta**	**0.63**	**30**	Pg	Pb	07 08 43.8	+0.6
TRTR	**Tortoreto Alta**	**0.63**	**30**	Pg	Pb	07 08 43.8	+0.6
NRCA	**Norcia**	**0.63**	**335**	Pg	Pg	07 08 42.3	-0.1
NRCA	**Norcia**	**0.63**	**335**	Pg	Pg	07 08 42.3	-0.1
OFFI	**Offida**	**0.69**	**12**	Pg	Pb	07 08 44.5	+0.3
	2µm,0.8s						
OFFI	**Offida**	**0.69**	**12**	Pg	Pb	07 08 44.5	+0.3
	2µm,0.8s						
GIUL	**Giuliano Di Ro**	**0.72**	**194**	Pg	Pg	07 08 44.0	0.0
	410nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.72**	**194**	Pg	Pg	07 08 44.0	0.0
	410nm,0.6s						
RMP	**Rome, Mte Porz**	**0.74**	**232**	Pg	Pg	07 08 44.4	+0.2
	594nm,0.4s						
RMP	**Rome, Mte Porz**	**0.74**	**232**	Pg	Pg	07 08 44.4	+0.2
	594nm,0.4s						
RNI2	**Rionero Sannit**	**0.75**	**138**	Pg	Pb	07 08 45.1	-0.2
RNI2	**Rionero Sannit**	**0.75**	**138**	Pg	Pb	07 08 45.1	-0.2
CESX	**Cesi**	**0.75**	**298**	Pg	Pg	07 08 44.8	+0.2
	322nm,0.5s						
CESX	**Cesi**	**0.75**	**298**	Pg	Pg	07 08 44.8	+0.2
	322nm,0.5s						
CERA	**Filignano**	**0.78**	**149**	Pg	Pg	07 08 44.6	-0.5
	684nm,0.7s						
CERA	**Filignano**	**0.78**	**149**	Pg	Pg	07 08 44.6	-0.5
	684nm,0.7s						
FDMO	**Fiordimonte**	**0.83**	**339**	Pg	Pg	07 08 45.5	-0.5
	225nm,0.5s						
FDMO	**Fiordimonte**	**0.83**	**339**	Pg	Pg	07 08 45.5	-0.5
	225nm,0.5s						
MIDA	**Miranda**	**0.84**	**137**	Pg	Pg	07 08 45.9

KAPI				LR	LR	07 24 33.6		
	comp=Z,103nm,19.4s,baz=99,slow=37							
KDU	**Kakadu**	**10.16**	**164**	P	**Pn**	**07 20 48.9**	**+0.8**	
	baz=10,SNR=33							
KDU				S	**Sn**	**07 22 39.9**	**-1.3**	
	baz=10,SNR=4.0							
FITZ	**Fitzroy Crossi**	**15.65**	**194**	Pn	**Pn**	**07 22 01.7**	**-1.0**	
	0.7nm,0.3s,baz=12,slow=7.8,SNR=17							
FITZ				LR	LR	07 28 37.4		
	comp=Z,92nm,21.8s,baz=357,slow=40							
FITZ	**Fitzroy Crossi**	**15.65**	**194**	P	**Pn**	**07 22 02.5**	**-0.2**	
	baz=16,SNR=10							
COEN	**Coen**	**17.33**	**130**	P	**P**	**07 22 29.0**	**+3.8**	
	baz=17,SNR=9.3							
WRA	**Warramunga Arr**	**17.59**	**165**	P	**Pn**	**07 22 25.8**	**-1.4**	
	0.8nm,0.3s,baz=347,slow=13,SNR=46							
WRA				S	Sn	07 25 34.6	-7.8	
	0.3nm,0.3s,baz=328,slow=25,SNR=4.8							
QIS	**Mount Isa**	**20.09**	**152**	P	Pn	07 22 57.7	+0.1	
	baz=20,SNR=11							
ASAR	**Alice Springs**	**21.09**	**169**	P	**P**	**07 23 07.0**	**+0.6**	
	11nm,0.5s,baz=349,slow=11,SNR=265							
ASAR				S	**S**	**07 26 56.9**	**-3.0**	
	2.6nm,0.8s,baz=350,slow=21,SNR=11							
ASAR				LR	LR	07 31 40.6		
	comp=Z,107nm,19.4s,baz=242,slow=38							
STKA	**Stephens Creek**	**30.98**	**160**	P	**P**	**07 24 39.4**	**+0.4**	
	0.8nm,0.5s,baz=340,slow=9.3,SNR=7.8							
STKA	**Stephens Creek**	**30.98**	**160**	P	**P**	**07 24 40.2**	**+1.1**	
	baz=31,SNR=3.9							
PSI	**Prapat**	**31.22**	**280**	P	**P**	**07 24 40.0**	**-1.6**	
	3.7nm,0.7s,baz=113,slow=8.8,SNR=5.5							
PSI	**Prapat**	**31.22**	**280**	P	**P**	**07 24 41.0**	**-0.6**	
	baz=31,SNR=3.0							
CMAR	**Chiang Mai Arr**	**36.91**	**306**	P	**P**	**07 25 29.9**	**-0.8**	
	0.6nm,0.3s,baz=135,slow=7.6,SNR=4.3							
USRK	**Ussuriysk Arra**	**46.90**	**2**	P	**P**	**07 26 53.2**	**+1.3**	
	0.8nm,0.5s,baz=163,slow=8.6,SNR=3.7							
SONM	**Songino Array**	**54.43**	**341**	P	**P**	**07 27 49.4**	**+0.5**	
	1.0nm,1.1s,baz=165,slow=6.2,SNR=4.2							
MKAR	**Makanchi Array**	**64.60**	**326**	P	**P**	**07 28 59.1**	**+0.1**	
	1.6nm,0.7s,baz=125,slow=7.7,SNR=17							
AAK	**Ala-Archa**	**67.19**	**319**	LR	LR	08 00 33.5		
	comp=Z,32nm,20.1s,baz=16,slow=38							
ZALV	**Zalesovo Beam**	**67.74**	**333**	P	**P**	**07 29 18.7**	**-0.2**	
	1.3nm,0.7s,baz=113,slow=6.2,SNR=9.0							
ILAR	**Eielson Array**	**89.78**	**25**	P	**P**	**07 31 19.4**	**-0.3**	
	0.3nm,0.8s,baz=242,slow=4.8,SNR=5.6							
TORD	**Torodi Ar. Bea**	**127.55**	**284**	PKP	**PKPdf**	**07 37 28.4**	**+0.8**	
	0.6nm,1.0s,baz=59,slow=3.9,SNR=2.4							
CPUP	**Villa Florida**	**150.21**	**167**	PKPbc	**PKPbc**	**07 38 15.1**	**+1.9**	
	0.8nm,0.6s,baz=235,slow=4.2,SNR=3.8							

CSEM ***13*** *07:29:50.5, 42°.45N×13°.43E, h9km, MD1.9/10, After ROM*
ROM 13 07:29:50.5±0.1, 42°.45N×13°.43E, h9km, Md1.9/10, Ml2.0/4, Error ellipse: s-maj=1.4km s-min=1.0km az=83.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.09**	**349**	Pg	Pg	07 29 53.4	+0.4
CAMP				Sg	Sg	07 29 55.2	+0.4
	42nm,0.5s						
CAMP	**Campotosto**	**0.09**	**349**	Pg	Pg	07 29 53.4	+0.4
CAMP				Sg	Sg	07 29 55.2	+0.4
	42nm,0.5s						
AQU	**L'Aquila**	**0.10**	**193**	Pg	Pg	07 29 53.8	+0.7
AQU				Sg	Sg	07 29 55.9	+0.9
	373nm,0.3s						
AQU	**L'Aquila**	**0.10**	**193**	Pg	Pg	07 29 53.8	+0.7
AQU				Sg	Sg	07 29 55.9	+0.9
	373nm,0.3s						
TERO	**Teramo**	**0.21**	**37**	Pg	Pg	07 29 55.4	+0.4
TERO				Sg	Sg	07 29 58.7	+0.7
	179nm,0.1s						
TERO	**Teramo**	**0.21**	**37**	Pg	Pg	07 29 55.4	+0.4
TERO				Sg	Sg	07 29 58.7	+0.7
	179nm,0.1s						
FAGN	**Fagnano**	**0.22**	**149**	Pg	Pg	07 29 55.7	+0.6
FAGN				Sg	Sg	07 29 59.5	+1.3
FAGN	**Fagnano**	**0.22**	**149**	Pg	Pg	07 29 55.7	+0.6
FAGN				Sg	Sg	07 29 59.5	+1.3
FIAM	**Fiamignano**	**0.30**	**232**	Pg	Pg	07 29 57.0	+0.4
FIAM				Sg	Sg	07 30 01.9	+1.2
FIAM	**Fiamignano**	**0.30**	**232**	Pg	Pg	07 29 57.0	+0.4
FIAM				Sg	Sg	07 30 01.9	+1.2
VCEL	**Villa Celiera**	**0.31**	**101**	Pg	Pg	07 29 57.3	+0.5
VCEL				Sg	Sb	07 30 02.9	-0.7
VCEL	**Villa Celiera**	**0.31**	**101**	Pg	Pg	07 29 57.3	+0.5
VCEL				Sg	Sb	07 30 02.9	-0.7
LNSS	**Leonessa**	**0.33**	**298**	Pg	Pg	07 29 57.7	+0.5
LNSS				Sg	Sb	07 30 03.1	-1.0
	131nm,0.3s						
LNSS	**Leonessa**	**0.33**	**298**	Pg	Pg	07 29 57.7	+0.5
LNSS				Sg	Sb	07 30 03.1	-1.0
	131nm,0.3s						
PTQR	**Pietraquaria**	**0.43**	**183**	Pg	Pg	07 29 59.3	+0.2
PTQR				Sg	Sb	07 30 06.4	-0.6
	3.0nm,0.4s						
PTQR	**Pietraquaria**	**0.43**	**183**	Pg	Pg	07 29 59.3	+0.2
PTQR				Sg	Sb	07 30 06.4	-0.6
	3.0nm,0.4s						
NRCA	**Norcia**	**0.45**	**329**	Pg	Pg	07 29 59.7	+0.3
NRCA				Sg	Sg	07 30 06.4	+1.0
	135nm,0.1s						
NRCA	**Norcia**	**0.45**	**329**	Pg	Pg	07 29 59.7	+0.3
NRCA				Sg	Sg	07 30 06.4	+1.0
	135nm,0.1s						
OFFI	**Offida**	**0.52**	**21**	Pg	Pb	07 30 02.0	+0.2
OFFI	**Offida**	**0.52**	**21**	Pg	Pb	07 30 02.0	+0.2
CESI	**CESI - Serrava**	**0.68**	**325**	Pg	Pg	07 30 03.8	+0.1
CESI				Sg	Sb	07 30 13.8	-0.3
CESI	**CESI - Serrava**	**0.68**	**325**	Pg	Pg	07 30 03.8	+0.1
CESI				Sg	Sb	07 30 13.8	-0.3

CSEM ***13*** *07:30:30.9, 42°.38N×13°.36E, h11km, MD2.1/4, After ROM*
ROM 13 07:30:30.9±0.1, 42°.38N×13°.36E, h11km, Md2.1/4, Ml1.9/6, Error ellipse: s-maj=1.0km s-min=0.8km az=84.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**125**	Pg	Pg	07 30 33.4	+0.4
AQU				Sg	Sg	07 30 34.7	+0.2
	3µm,0.2s						
AQU	**L'Aquila**	**0.04**	**125**	Pg	Pg	07 30 33.4	+0.4
AQU				Sg	Sg	07 30 34.7	+0.2
	3µm,0.2s						
CAMP	**Campotosto**	**0.16**	**14**	Pg	Pg	07 30 35.4	+0.7
CAMP				Sg	Sg	07 30 38.2	+0.8
	49nm,0.4s						
CAMP	**Campotosto**	**0.16**	**14**	Pg	Pg	07 30 35.4	+0.7
CAMP				Sg	Sg	07 30 38.2	+0.8
	49nm,0.4s						
FAGN	**Fagnano**	**0.20**	**123**	Pg	Pb	07 30 36.1	-0.7
FAGN				Sg	Sg	07 30 39.6	+1.3
	391nm,0.3s						
FAGN	**Fagnano**	**0.20**	**123**	Pg	Pb	07 30 36.1	-0.7
FAGN				Sg	Sg	07 30 39.6	+1.3
	391nm,0.3s						
FIAM	**Fiamignano**	**0.21**	**238**	Pg	Pg	07 30 36.1	+0.7
FIAM				Sg	Sg	07 30 39.6	+1.1
	164nm,0.4s						
FIAM	**Fiamignano**	**0.21**	**238**	Pg	Pg	07 30 36.1	+0.7
FIAM				Sg	Sg	07 30 39.6	+1.1
	164nm,0.4s						
TERO	**Teramo**	**0.31**	**37**	Pg	Pg	07 30 37.5	+0.3
TERO				Sg	Sg	07 30 42.1	+0.7
	288nm,0.1s						
TERO	**Teramo**	**0.31**	**37**	Pg	Pg	07 30 37.5	+0.3
TERO				Sg	Sg	07 30 42.1	+0.7
	288nm,0.1s						
LNSS	**Leonessa**	**0.32**	**314**	Pg	Pg	07 30 38.2	+0.6
LNSS				Sg	Sg	07 30 42.7	+0.6
	126nm,0.4s						
LNSS	**Leonessa**	**0.32**	**314**	Pg	Pg	07 30 38.2	+0.6
LNSS				Sg	Sg	07 30 42.7	+0.6
	126nm,0.4s						
PTQR	**Pietraquaria**	**0.36**	**175**	Pg	Pg	07 30 38.5	+0.3
PTQR				Sg	Sg	07 30 43.9	+0.9
	19nm,0.2s						
PTQR	**Pietraquaria**	**0.36**	**175**	Pg	Pg	07 30 38.5	+0.3
PTQR				Sg	Sg	07 30 43.9	+0.9
	19nm,0.2s						

VCEL	**Villa Celiera**	**0.36**	**87**	Pg	Pb	07 30 39.1	-0.4	
VCEL	**Villa Celiera**	**0.36**	**87**	Pg	Pb	07 30 39.1	-0.4	
NRCA	**Norcia**	**0.49**	**339**	Pg	Pg	07 30 40.8	+0.2	
NRCA				Sg	Sb	07 30 48.2	-0.8	
	109nm,0.1s							
NRCA	**Norcia**	**0.49**	**339**	Pg	Pg	07 30 40.8	+0.2	
NRCA				Sg	Sb	07 30 48.2	-0.8	
	109nm,0.1s							
CERT	**Cerreto**	**0.51**	**213**	Pg	Pg	07 30 41.1	+0.1	
CERT				Sg	Sb	07 30 48.7	-0.8	
CERT	**Cerreto**	**0.51**	**213**	Pg	Pg	07 30 41.1	+0.1	
CERT				Sg	Sb	07 30 48.7	-0.8	

MEX 13 07:30:58.9±0.8, 18°.16N×103°.45W, h5km, MD3.7, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.17**	**38**	*i* P	Pg	07 31 01.4	-0.8
MMIG				*i* S	Sg	07 31 04.1	-0.3
R15V		**1.13**	**334**	*e*P	Pg	07 31 17.1	-3.6
R15V				*i* S	Sg	07 31 32.8	-2.6
EZ5V		**1.32**	**354**	*e*P	Pn	07 31 20.3	-4.1
EZ5V				*i* S	Sg	07 31 38.3	-3.8
ZIIG	**Zihuatanejo**	**1.97**	**106**	*i* P	Pn	07 31 29.0	-3.9
ZIIG				*i* S	Sn	07 31 54.2	-3.9
CJM	**Chamela**	**2.01**	**312**	*i* P	Pn	07 31 30.1	-3.5
CJM				*i* S	Sn	07 31 54.7	-4.4
MOIG	**Morelia**	**2.62**	**54**	*i* P	Pn	07 31 39.6	-2.6
MOIG				*i* S	Sn	07 32 11.3	-3.4
ARIG	**Puente Sto Nin**	**2.95**	**87**	*i* P	Pn	07 31 43.2	-3.3
ARIG				*i* S	Sn	07 32 19.2	-3.2
MEIG	**Mezcala**	**3.65**	**93**	*i* S	Sn	07 32 37.0	-2.9
ZAIG	**Zacatecas**	**4.66**	**10**	*e*P	Pn	07 32 07.0	-3.4
ZAIG				*i* S	Sn	07 33 01.6	-3.6

MEX 13 07:35:24.7±0.4, 18°.16N×103°.45W, h3km±3km, MD3.7, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.16**	**40**	*e*P	Pg	07 35 27.4	-0.5
MMIG				*i* S	Sg	07 35 30.0	0.0
R15V		**1.12**	**333**	*e*P	Pg	07 35 43.6	-2.7
R15V				*i* S	Sg	07 35 57.9	-3.0
EZ5V		**1.32**	**354**	*e*P	Pg	07 35 46.3	-4.0
EZ5V				*i* S	Sg	07 36 03.6	-4.1
ZIIG	**Zihuatanejo**	**1.97**	**106**	*e*P	Pn	07 35 56.3	-2.8
ZIIG				*e*S	Sn	07 36 19.6	-4.7
CJM	**Chamela**	**2.01**	**312**	*i* P	Pn	07 35 55.4	-4.1
CJM				*i* S	Sn	07 36 20.2	-5.0
ARIG	**Puente Sto Nin**	**2.96**	**87**	*e*P	Pn	07 36 09.8	-2.8
ARIG				*e*S	Sn	07 36 44.5	-4.2
YAIG	**Yautepec**	**4.22**	**80**	*e*P	Pn	07 36 27.1	-3.1
YAIG				*e*S	Sn	07 37 15.9	-4.3
ZAIG	**Zacatecas**	**4.66**	**10**	*e*P	Pn	07 36 33.6	-2.7
ZAIG				*i* S	Sn	07 37 28.1	-3.2

IDC ***13*** *07:39:01.8±11.0, 5°.86S×154°.16E, h183km±68km, mb3.7/4, mb1 3.8/5, mb1mx3.3/19, mbtmp3.6/5, MS3.2/1, Ms1 3.2/1, ms1mx2.6/21, Error ellipse: s-maj=112.3km s-min=33.2km az=76.0*
AUST ***13*** *07:39:26.1±16.0, 6°.66S×153°.57E, h382km±1km, Error ellipse: s-maj=5.6km s-min=1.9km az=42.0*
ISC 13 07:39:04.4±2.9, 5°.9S±0°.2×154°.0E±0°.3, h200km, n17, σ0s56/11, mb4.1/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.61**	**243**	P	**Pn**	**07 40 52.4**	**-0.2**
	1.1nm,0.3s,baz=47,slow=4.9,SNR=3.3						
COEN	**Coen**	**13.31**	**232**	P	P	07 42 12.2	+3.6
	baz=13,SNR=5.9						
QIS	**Mount Isa**	**20.17**	**222**	P	Pn	07 43 27.3	-1.1
	baz=19,SNR=11						
RMQ	**Roma**	**21.05**	**193**	P	**P**	**07 43 33.5**	**+0.5**
	baz=20,SNR=5.5						
KDU	**Kakadu**	**22.27**	**251**	P	**P**	**07 43 45.9**	**+0.6**
	baz=22,SNR=3.8						
QLP	**Quilpie**	**22.56**	**203**	P	**P**	**07 43 47.7**	**-0.1**
	baz=22,SNR=16						
WRA	**Warramunga Arr**	**23.65**	**232**	P	**P**	**07 43 58.9**	**+1.1**
	6.0nm,0.5s,baz=57,slow=10,SNR=89						
ASAR	**Alice Springs**	**26.18**	**226**	P	**P**	**07 44 20.9**	**+0.3**
	1.8nm,0.3s,baz=56,slow=9.2,SNR=89						
STKA	**Stephens Creek**	**28.31**	**203**	P	**P**	**07 44 38.9**	**-0.6**
	2.1nm,0.8s,baz=38,slow=13,SNR=5.8						
FITZ	**Fitzroy Crossi**	**30.21**	**244**	P	**P**	**07 44 56.4**	**+0.1**
	baz=30,SNR=3.8						
PCI	**Palu**	**34.45**	**277**	P	P	07 45 36.5	+3.1
	baz=34,SNR=5.4						
PCI				S	S	07 50 32.2	-15
	baz=34,SNR=3.2						
MEEK	**Meekatharra**	**39.50**	**235**	P	**P**	**07 46 16.1**	**+0.3**
	baz=39,SNR=9.7						
KLBR	**Kellerberrin**	**42.43**	**228**	P	**P**	**07 46 39.1**	**-0.5**
	baz=42,SNR=5.6						
MCQ	**Macquarie Isla**	**48.60**	**176**	S	S	07 53 37.0	-37
	baz=48,SNR=3.2						
KSRS	**Korea Array**	**49.53**	**333**	LR	LR	08 06 13.7	
	comp=Z,23nm,19.5s,baz=207,slow=33						
GSI	**Gunungsitoli**	**56.79**	**275**	P	P	07 48 29.6	+1.2
	baz=56,SNR=4.7						
CMAR	**Chiang Mai Arr**	**59.43**	**295**	P	**P**	**07 48 46.5**	**0.0**
	0.3nm,0.3s,baz=116,slow=5.0,SNR=4.2						

IDC 13 08:24:09.4±1.8, 3°.59N×127°.12E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/24, mbtmp3.5/5, Error ellipse: s-maj=107.4km s-min=23.9km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.60**	**184**	P	P	08 29 01.3	+0.2
	0.7nm,0.4s,baz=12,slow=9.8,SNR=4.9						
WRA	**Warramunga Arr**	**24.44**	**163**	P	P	08 29 29.4	-0.7
	0.7nm,0.3s,baz=343,slow=9.9,SNR=21						
ASAR	**Alice Springs**	**27.89**	**167**	P	P	08 30 01.0	-0.2
	0.3nm,0.8s,baz=357,slow=7.3,SNR=5.4						
STKA	**Stephens Creek**	**37.86**	**160**	P	P	08 31 28.9	+0.7
	0.5nm,0.6s,baz=322,slow=12,SNR=2.4						
MKAR	**Makanchi Array**	**57.89**	**325**	P	P	08 34 03.1	-0.2
	0.4nm,0.6s,baz=117,slow=7.6,SNR=5.5						

ISCJB ***13*** *08:41:08.2±0.2, 42°.26N±0°.02×13°.50E±0°.02, h9km±2km, Error ellipse: s-maj=3.2km s-min=2.6km az=145.9*
CSEM ***13*** *08:41:08.6±0.1, 42°.26N×13°.51E, h2km, ML3.6/8, Error ellipse: s-maj=2.4km s-min=1.8km az=55.0*
ROM ***13*** *08:41:08.2±0.1, 42°.27N×13°.50E, h10km, Ml3.0/31, Error ellipse: s-maj=1.0km s-min=0.8km az=47.0*
LDG ***13*** *08:41:13.9±1.6, 42°.46N×13°.28E, h2km, Ml2.8/3, Error ellipse: s-maj=36.2km s-min=12.9km az=108.0*
ISC 13 08:41:09.2±0.8, 42°.27N±0°.02×13°.51E±0°.02, h7km±5km, n103, σ0s97/131, 4C-5D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.06**	**93**	Pg	**Pg**	**08 41 10.6**	**-0.3**
FAGN				Sg	**Sg**	**08 41 12.0**	**-0.1**
FAGN	**Fagnano**	**0.06**	**93**	Pg	**Pg**	**08 41 10.6**	**-0.3**
FAGN				Sg	**Sg**	**08 41 12.0**	**-0.1**
AQU	**L'Aquila**	**0.12**	**317**	*i* Pg	**Pg**	**08 41 11.6**	**-0.2**
AQU				Sg	**Sg**	**08 41 13.6**	**0.0**
	10µm,0.3s						
AQU	**L'Aquila**	**0.12**	**317**	*i* Pg	**Pg**	**08 41 11.6**	**-0.2**
AQU				Sg	**Sg**	**08 41 13.6**	**0.0**
	10µm,0.3s						
PTQR	**Pietraquaria**	**0.26**	**198**	*i* Pg	**Pg**	**08 41 14.1**	**-0.2**
PTQR				Sg	**Sg**	**08 41 18.4**	**+0.6**
PTQR	**Pietraquaria**	**0.26**	**198**	*i* Pg	**Pg**	**08 41 14.1**	**-0.2**
PTQR				Sg	**Sg**	**08 41 18.4**	**+0.6**
VCEL	**Villa Celiera**	**0.28**	**63**	Pg	**Pg**	**08 41 14.5**	**-0.2**
VCEL				Sg	**Sg**	**08 41 19.1**	**+0.7**
	7µm,0.5s						
VCEL	**Villa Celiera**	**0.28**	**63**	Pg	**Pg**	**08 41 14.5**	**-0.2**
VCEL				Sg	**Sg**	**08 41 19.1**	**+0.7**
	7µm,0.5s						
CAMP	**Campotosto**	**0.28**	**345**	Pg	**Pg**	**08 41 14.3**	**-0.4**
CAMP				Sg	**Sg**	**08 41 18.6**	**+0.2**
	2µm,0.5s						

CAMP	**Campotosto**	**0.28**	**345**	Pg	**Pg**	**08 41 14.3**	**-0.4**	
CAMP				Sg	**Sg**	**08 41 18.6**	**+0.2**	
	2µm,0.5s							
FIAM	**Fiamignano**	**0.29**	**270**	*i* Pg	**Pg**	**08 41 14.6**	**-0.3**	
FIAM				Sg	**Sg**	**08 41 19.2**	**+0.4**	
	3µm,0.7s							
FIAM	**Fiamignano**	**0.29**	**270**	*i* Pg	**Pg**	**08 41 14.6**	**-0.3**	
FIAM				Sg	**Sg**	**08 41 19.2**	**+0.4**	
	3µm,0.7s							
TERO	**Teramo**	**0.36**	**11**	Pg	**Pg**	**08 41 15.5**	**-0.8**	
TERO				Sg	**Sg**	**08 41 21.2**	**+0.2**	
TERO	**Teramo**	**0.36**	**11**	Pg	**Pg**	**08 41 15.5**	**-0.8**	
TERO				Sg	**Sg**	**08 41 21.2**	**+0.2**	
INTR	**Introdacqua**	**0.39**	**131**	*i* Pg	**Pg**	**08 41 16.4**	**-0.4**	
INTR				Sg	**Sg**	**08 41 22.6**	**+0.6**	
	3µm,0.6s							
INTR	**Introdacqua**	**0.39**	**131**	*i* Pg	**Pg**	**08 41 16.4**	**-0.4**	
INTR				Sg	**Sg**	**08 41 22.6**	**+0.6**	
	3µm,0.6s							
VVLD	**Villa Vallelon**	**0.41**	**168**	Pg	**Pg**	**08 41 16.7**	**-0.4**	
VVLD				Sg	**Sg**	**08 41 22.7**	**+0.3**	
	2µm,0.4s							
VVLD	**Villa Vallelon**	**0.41**	**168**	Pg	**Pg**	**08 41 16.7**	**-0.4**	
VVLD				Sg	**Sg**	**08 41 22.7**	**+0.3**	
	2µm,0.4s							
LNSS	**Leonessa**	**0.48**	**314**	Pg	**Pg**	**08 41 17.8**	**-0.7**	
	2µm,0.4s							
LNSS	**Leonessa**	**0.48**	**314**	Pg	**Pg**	**08 41 17.8**	**-0.7**	
	2µm,0.4s							
GUAR	**Guarcino**	**0.50**	**197**	Pg	**Pg**	**08 41 18.1**	**-0.7**	
	950nm,0.3s							
GUAR	**Guarcino**	**0.50**	**197**	Pg	**Pg**	**08 41 18.1**	**-0.7**	
	950nm,0.3s							
CERT	**Cerreto**	**0.51**	**231**	Pg	**Pg**	**08 41 18.1**	**-0.9**	
	3µm,0.7s							
CERT	**Cerreto**	**0.51**	**231**	Pg	**Pg**	**08 41 18.1**	**-0.9**	
	3µm,0.7s							
LPEL	**Lama dei Pelig**	**0.55**	**114**	Pg	**Pg**	**08 41 19.0**	**-0.8**	
LPEL				Sg	**Sg**	**08 41 27.2**	**+0.3**	
	2µm,0.5s							
LPEL	**Lama dei Pelig**	**0.55**	**114**	Pg	**Pg**	**08 41 19.0**	**-0.8**	
LPEL				Sg	**Sg**	**08 41 27.2**	**+0.3**	
	2µm,0.5s							
POFI	**Posta Fibreno**	**0.57**	**165**	Pg	**Pg**	**08 41 19.4**	**-0.8**	
	470nm,0.7s							
POFI	**Posta Fibreno**	**0.57**	**165**	Pg	**Pg**	**08 41 19.4**	**-0.8**	
	470nm,0.7s							
SDI	**San Donato**	**0.60**	**158**	Pg	**Pg**	**08 41 20.7**	**-0.1**	
SDI	**San Donato**	**0.60**	**158**	Pg	**Pg**	**08 41 20.7**	**-0.1**	
TRTR	**Tortoreto Alta**	**0.62**	**29**	Pg	**Pg**	**08 41 21.7**	**+0.6**	
TRTR	**Tortoreto Alta**	**0.62**	**29**	Pg	**Pg**	**08 41 21.7**	**+0.6**	
MTCE	**Montecelio**	**0.62**	**247**	Pg	**Pg**	**08 41 20.1**	**-1.1**	
	532nm,0.7s							
MTCE	**Montecelio**	**0.62**	**247**	Pg	**Pg**	**08 41 20.1**	**-1.1**	
	532nm,0.7s							
CAFR	**Castel Frentan**	**0.62**	**94**	Pg	**Pg**	**08 41 21.0**	**-0.2**	
CAFR	**Castel Frentan**	**0.62**	**94**	Pg	**Pg**	**08 41 21.0**	**-0.2**	
MNS	**Montasola**	**0.62**	**281**	Pg	**Pg**	**08 41 20.2**	**-1.0**	
	503nm,0.4s							
MNS	**Montasola**	**0.62**	**281**	Pg	**Pg**	**08 41 20.2**	**-1.0**	
	503nm,0.4s							
NRCA	**Norcia**	**0.64**	**333**	Pg	**Pg**	**08 41 20.4**	**-1.1**	
NRCA				Sg	**Sg**	**08 41 29.7**	**-0.1**	
	556nm,0.4s							
NRCA	**Norcia**	**0.64**	**333**	Pg	**Pg**	**08 41 20.4**	**-1.1**	
NRCA				Sg	**Sg**	**08 41 29.7**	**-0.1**	
	556nm,0.4s							
OFFI	**Offida**	**0.68**	**11**	Pg	**Pg**	**08 41 22.3**	**0.0**	
	3µm,0.7s							
OFFI	**Offida**	**0.68**	**11**	Pg	**Pg**	**08 41 22.3**	**0.0**	
	3µm,0.7s							
GIUL	**Giuliano Di Ro**	**0.73**	**195**	Pg	**Pg**	**08 41 22.2**	**-1.1**	
	798nm,0.9s							
GIUL	**Giuliano Di Ro**	**0.73**	**195**	Pg	**Pg**	**08 41 22.2**	**-1.1**	
	798nm,0.9s							
RNI2	**Rionero Sannit**	**0.74**	**139**	Pg	**Pg**	**08 41 22.7**	**-0.8**	
	1µm,1.0s							
RNI2	**Rionero Sannit**	**0.74**	**139**	Pg	**Pg**	**08 41 22.7**	**-0.8**	
	1µm,1.0s							
RMP	**Rome, Mte Porz**	**0.76**	**233**	Pg	**Pg**	**08 41 22.5**	**-1.2**	
	857nm,0.6s							
RMP	**Rome, Mte Porz**	**0.76**	**233**	Pg	**Pg**	**08 41 22.5**	**-1.2**	
	857nm,0.6s							
CESX	**Cesi**	**0.77**	**297**	Pg	**Pg**	**08 41 23.2**	**-0.8**	
	414nm,0.6s							
CESX	**Cesi**	**0.77**	**297**	Pg	**Pg**	**08 41 23.2**	**-0.8**	
	414nm,0.6s							
CERA	**Filignano**	**0.77**	**150**	Pg	**Pg**	**08 41 22.6**	**-1.4**	
	1µm,0.8s							
CERA	**Filignano**	**0.77**	**150**	Pg	**Pg**	**08 41 22.6**	**-1.4**	
	1µm,0.8s							
FDMO	**Fiordimonte**	**0.83**	**338**	Pg	**Pg**	**08 41 23.7**	**-1.4**	
	316nm,0.5s							
FDMO	**Fiordimonte**	**0.83**	**338**	Pg	**Pg**	**08 41 23.7**	**-1.4**	
	316nm,0.5s							
MIDA	**Miranda**	**0.84**	**138**	Pg	**Pg**	**08 41 23.8**	**-1.5**	
	415nm,0.4s							
MIDA	**Miranda**	**0.84**	**138**	Pg	**Pg**	**08 41 23.8**	**-1.5**	

KHC				*e*SN	**Sn**	**08 44 10.0**	**+1.4**
HINF	**Hinteralfeld**	**7.28**	**322**	*e*Pn	**Pn**	**08 42 55.6**	**-0.3**
HINF	**Hinteralfeld**	**7.28**	**322**	*e*Pn	**Pn**	**08 42 55.6**	**-0.3**
CDF	**Champ du Feu**	**7.55**	**327**	*e*Pn	**Pn**	**08 42 59.3**	**-0.4**
CDF	2.7nm,0.6s			*e*Sn	Sn	08 44 19.0	-6.5
CDF	**Champ du Feu**	**7.55**	**327**	*e*Pn	**Pn**	**08 42 59.3**	**-0.4**
HAU	**Haudompre**	**7.65**	**321**	*e*Pn	**Pn**	**08 43 00.8**	**-0.2**
HAU	2.0nm,0.3s			*e*Sn	Sn	08 44 19.7	-8.2
HAU	**Haudompre**	**7.65**	**321**	*e*Pn	**Pn**	**08 43 00.8**	**-0.2**

IDC 13 08:47:42.6±6.0, 0°74'N×121°90'E, h85km±61km, mb3.5/6, mb1 3.6/8, mb1mx3.4/25, mbtmp3.4/8, ML3.7/2, Error ellipse: s-maj=54.1km s-min=16.9km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
KAPI	**Kappang**	**6.11**	**201**	P Pn	08 49 08.5	-1.9
	0.7nm,0.3s,baz=16,slow=19,SNR=2.9					
KAPI				S Sn	08 50 21.2	+2.4
	0.6nm,0.3s,baz=176,slow=20,SNR=4.8					
FITZ	**Fitzroy Crossi**	**19.08**	**169**	P P	08 51 58.7	+0.1
	0.3nm,0.3s,baz=0.0,slow=10,SNR=9.1					
WRA	**Warramunga Arr**	**23.90**	**150**	P P	08 52 48.2	-0.6
	4.3nm,0.5s,baz=326,slow=10,SNR=81					
ASAR	**Alice Springs**	**26.92**	**155**	P P	08 53 15.9	-0.2
	0.7nm,0.5s,baz=343,slow=14,SNR=20					
STKA	**Stephens Creek**	**37.42**	**152**	P P	08 54 47.8	+0.2
	0.6nm,0.3s,baz=315,slow=7.8,SNR=8.3					
USRK	**Ussuriysk Arra**	**44.19**	**10**	P P	08 55 44.2	+1.1
	0.9nm,0.6s,baz=220,slow=5.3,SNR=4.5					
MKAR	**Makanchi Array**	**57.41**	**329**	P P	08 57 22.4	-0.1
	0.2nm,0.4s,baz=128,slow=9.3,SNR=3.9					
ZALV	**Zalesovo Beam**	**61.19**	**336**	P P	08 57 47.7	-0.6
	0.4nm,0.4s,baz=148,slow=4.4,SNR=3.3					

IDC 13 09:08:02.0±2.2, 1°37'N×127°12'E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/21, mbtmp3.3/3, Error ellipse: s-maj=178.8km s-min=25.9km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.33**	**162**	P P	09 13 00.8	-0.8
	0.6nm,0.6s,baz=340,slow=11,SNR=14					
ASAR	**Alice Springs**	**25.74**	**166**	P P	09 13 35.0	+0.5
	0.4nm,0.3s,baz=346,slow=12,SNR=17					
MKAR	**Makanchi Array**	**59.71**	**326**	P P	09 18 08.5	-0.1
	0.2nm,0.4s,baz=116,slow=8.0,SNR=4.8					

*IDC **13** 09:30:35.7±0.6, 9°.89N×125°.11E, h0km, mb4.0/17, mb1 4.1/17, mb1mx4.0/26, mbtmp4.0/17, MS3.5/9, Ms1 3.5/9, ms1mx3.1/40, Error ellipse: s-maj=27.7km s-min=14.2km az=75.0*

*MAN **13** 09:30:39, 9°.89N×125°.08E, h8km, mb4.8, ML3.7, MS3.7*

*ISCJB **13** 09:30:40.7±0.5, 9°.89N±0°.03×125°.11E±0°.05, h47km±5km, mb4.0/22, MS3.5/8, Error ellipse: s-maj=8.0km s-min=5.4km az=173.6*

*NEIC **13** 09:30:48.4±1.1, 9°.87N×125°.14E, h10km±11km, mb4.3/5, Error ellipse: s-maj=13.5km s-min=7.0km az=68.0*

NEIC Felt on Limasawa Island.

ISC 13 09:30:40.3±1.1, 9°.91N±0°.03×125°.08E±0°.05, h29km±8km, n67, σ1s04/69, mb4.0/22, MS3.4/8, 3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
MSLP	**Maasin**	**0.31**	**316**	*e*P **Pb**	**09 30 45.8**	**-2.1**
MSLP				*e*S **Sn**	**09 30 54.8**	**+0.2**
BUTP	**Butuan**	**1.07**	**150**	*e*P **Pn**	**09 30 59.0**	**-0.5**
LLP	**Lapu-Lapu**	**1.17**	**291**	↑*e*P **Pn**	**09 31 00.0**	**-0.7**
LLP				*e*S **Sb**	**09 31 18.3**	**+1.6**
TBP	**Tagbilaran**	**1.22**	**260**	*e*P **Pn**	**09 31 01.6**	**+0.2**
TBP				*e*S **Sb**	**09 31 19.4**	**+1.3**
OCLP	**Ormoc**	**1.23**	**338**	*e*P **Pn**	**09 31 02.3**	**+0.7**
PLP	**Palo**	**1.25**	**356**	↓*e*P **Pn**	**09 31 01.8**	**-0.1**
PLP				*e*S **Sb**	**09 31 20.7**	**+1.5**
CGP	**Cagayan de Oro**	**1.49**	**195**	↑*i*P **Pn**	**09 31 04.2**	**-1.0**
CGP				*i* S **Sb**	**09 31 26.5**	**+0.6**
SNPH	**Sibulan**	**1.90**	**253**	↓*e*P Pn	09 30 59.2	-12
SNPH				*e*S **Sn**	**09 31 32.5**	**-1.4**
BUKP	**Musuan**	**2.02**	**180**	*e*P **Pn**	**09 31 13.0**	**+0.6**
GUIM	**Jordan**	**2.55**	**286**	*e*P **Pn**	**09 31 20.7**	**+0.9**
CNP	**Catarman**	**2.62**	**351**	*e*P **Pn**	**09 31 22.5**	**+1.8**
PAGZ	**Pagadian**	**2.64**	**219**	*e*P **Pn**	**09 31 21.9**	**+0.8**
CTBH	**Cotabato--PC H**	**2.79**	**197**	↑*i*P **Pn**	**09 31 25.8**	**+2.7**
RCP	**Roxas**	**2.82**	**306**	↓*e*P **Pn**	**09 31 24.6**	**+1.1**
DAV	**Davao City (W)**	**2.86**	**170**	Pn **Pb**	**09 31 31.8**	**+1.0**
KALP	**Kalibo**	**3.22**	**350**	*e*P Pb	09 31 52.1	+15
OTRP	**Odiongan**	**3.87**	**309**	*e*P **Pn**	**09 31 39.7**	**+1.8**
GUMO	**Guam**	**19.72**	**77**	LR LR	09 41 36.3	
	comp=Z,68nm,19.2s,baz=285,slow=34					
CMAR	**Chiang Mai Arr**	**26.70**	**291**	P **P**	**09 36 18.8**	**+1.4**
CMAR	**Chiang Mai Arr**	**26.70**	**291**	P **P**	**09 36 18.8**	**+1.4**
	0.5nm,0.3s,baz=104,slow=7.8,SNR=4.6					
PSI	**Prapat**	**26.92**	**257**	LR LR	09 49 21.8	
	comp=Z,82nm,18.0s,baz=1.8,slow=42					
KSAR	**Wonju Array Be**	**27.53**	**5**	P **P**	**09 36 26.1**	**+1.6**
KSRS	**Korea Array**	**27.55**	**5**	P **P**	**09 36 26.1**	**+1.5**
	1.0nm,0.8s,baz=183,slow=9.4,SNR=4.4					
MJAR	**Matsushiro Arr**	**29.07**	**22**	LR LR	09 46 49.6	
	comp=Z,87nm,18.1s,baz=215,slow=34					
WRAB	**Tennant Creek**	**31.03**	**163**	*e*P **P**	**09 36 57.0**	**+1.2**
WRA	**Warramunga Arr**	**31.03**	**163**	P **P**	**09 36 54.8**	**-1.0**
WRA				PcP **PcP**	**09 39 51.2**	**-0.2**
WRA	**Warramunga Arr**	**31.03**	**163**	P **P**	**09 36 54.8**	**-1.0**
	0.7nm,0.8s,baz=344,slow=9.6,SNR=6.5					
WRA				PcP **PcP**	**09 39 51.2**	**-0.2**
	0.5nm,0.6s,baz=338,slow=2.7,SNR=7.7					
AS31	**Alice Springs**	**34.47**	**166**	*e*P **P**	**09 37 26.1**	**+0.2**
ASAR	**Alice Springs**	**34.47**	**166**	P **P**	**09 37 25.6**	**-0.3**
ASAR				PcP **PcP**	**09 40 00.7**	**-0.2**
ASAR	**Alice Springs**	**34.47**	**166**	P **P**	**09 37 25.6**	**-0.3**
	1.2nm,0.8s,baz=339,slow=6.9,SNR=20					
ASAR				PcP **PcP**	**09 40 00.7**	**-0.2**
	0.8nm,0.6s,baz=346,slow=2.9,SNR=12					
USRK	**Ussuriysk Arra**	**34.69**	**9**	P **P**	**09 37 27.8**	**+0.3**
	1.4nm,0.8s,baz=221,slow=7.5,SNR=5.5					
ASAJ	**Asahikawa**	**37.31**	**21**	P **P**	**09 37 51.3**	**+1.3**
ASAJ	**Asahikawa**	**37.31**	**21**	P **P**	**09 37 51.3**	**+1.3**
	5.3nm,0.7s,baz=42,slow=33,SNR=4.7					
SONM	**Songino Array**	**40.96**	**341**	P **P**	**09 38 20.0**	**-0.6**
SONM	**Songino Array**	**40.96**	**341**	P **P**	**09 38 20.0**	**-0.6**
	0.4nm,0.6s,baz=154,slow=10,SNR=4.5					
SONM				LR LR	09 57 11.3	
	comp=Z,58nm,19.8s,baz=55,slow=39					
STKA	**Stephens Creek**	**44.45**	**160**	P **P**	**09 38 49.2**	**+0.2**
STKA	**Stephens Creek**	**44.45**	**160**	P **P**	**09 38 49.2**	**+0.2**
	2.8nm,0.8s,baz=336,slow=9.1,SNR=8.5					
STKA				LR LR	09 58 14.8	
	comp=Z,108nm,20.9s,baz=205,slow=37					
PETK	**Petropavlovsk-**	**50.46**	**25**	LR LR	10 01 56.6	
	comp=Z,30nm,19.2s,baz=279,slow=37					
MK31	**Makanchi Array**	**51.61**	**323**	*e*P **P**	**09 39 45.1**	**+0.9**
MKAR	**Makanchi Array**	**51.61**	**323**	P **P**	**09 39 44.6**	**+0.4**
MKAR	**Makanchi Array**	**51.61**	**323**	P **P**	**09 39 44.6**	**+0.4**
	1.4nm,0.7s,baz=122,slow=7.4,SNR=13					
ZALV	**Zalesovo Beam**	**54.39**	**332**	P **P**	**09 40 04.0**	**-0.5**
ZALV	**Zalesovo Beam**	**54.39**	**332**	P **P**	**09 40 04.0**	**-0.5**
	0.5nm,0.5s,baz=134,slow=4.3,SNR=3.6					
ZALV				LR LR	10 03 29.2	
	comp=Z,34nm,21.4s,baz=199,slow=36					
EKS2	**Erkin-Say**	**55.26**	**316**	*e*P **P**	**09 40 12.7**	**+1.4**
	5.5nm,0.3s					
KURK	**Kurchatov**	**55.71**	**326**	*e*P **P**	**09 40 14.0**	**-0.1**
	2.1nm,0.7s					
KKAR	**Karatay Array**	**57.67**	**315**	*e*P **P**	**09 40 28.7**	**+0.4**
	1.0nm,0.5s					
ABKAR	**Akbulak array**	**66.39**	**320**	*e*P **P**	**09 41 26.5**	**-0.2**
	1.0nm,0.8s					
AFI	**Afiamalu**	**66.96**	**110**	LR LR	10 05 15.4	
	comp=Z,52nm,19.6s,baz=101,slow=31					
KBZ	**Khabaz**	**77.59**	**313**	P **P**	**09 42 34.0**	**0.0**
KBZ	**Khabaz**	**77.59**	**313**	P **P**	**09 42 34.0**	**0.0**
	0.8nm,0.3s,baz=157,slow=2.9,SNR=5.1					
MCK	**McKinley**	**79.41**	**27**	*e*P **P**	**09 42 43.1**	**-0.5**
	16nm,1.5s					
ILAR	**Eielson Array**	**80.28**	**26**	P **P**	**09 42 46.8**	**-1.5**
ILAR	**Eielson Array**	**80.28**	**26**	P **P**	**09 42 46.8**	**-1.5**
	0.6nm,0.7s,baz=240,slow=4.7,SNR=12					
BMRM	**Bremner River**	**81.57**	**30**	*e*P **P**	**09 42 53.8**	**-1.6**
BRTR	**Keskin Array B**	**84.85**	**309**	P **P**	**09 43 12.6**	**-0.2**
BRTR	**Keskin Array B**	**84.85**	**309**	P **P**	**09 43 12.6**	**-0.2**
	0.6nm,0.6s,baz=353,slow=8.7,SNR=3.6					
INK	**Inuvik**	**85.05**	**21**	P **P**	**09 43 12.9**	**-0.1**
INK	**Inuvik**	**85.05**	**21**	P **P**	**09 43 12.9**	**-0.1**
	1.6nm,0.7s,baz=281,slow=8.4,SNR=8.4					
FINES	**FINESS Array B**	**85.65**	**332**	P **P**	**09 43 16.3**	**+0.2**
FINES	**FINESS Array B**	**85.65**	**332**	P **P**	**09 43 16.3**	**+0.2**
	1.0nm,0.7s,baz=58,slow=4.7,SNR=3.9					
AKASG	**Malin Array Be**	**86.10**	**321**	P **P**	**09 43 17.4**	**-1.2**
AKASG	**Malin Array Be**	**86.10**	**321**	P **P**	**09 43 17.4**	**-1.2**
	0.8nm,0.5s,baz=70,slow=4.9,SNR=5.5					
NOA	**NORSAR Array B**	**92.56**	**334**	LR LR	10 28 18.7	
	comp=Z,33nm,19.5s,baz=270,slow=37					
YKA	**Yellowknife Ar**	**94.56**	**24**	P **P**	**09 43 57.3**	**-0.8**
YKA	**Yellowknife Ar**	**94.56**	**24**	P **P**	**09 43 57.3**	**-0.8**
	0.5nm,0.8s,baz=299,slow=4.5,SNR=9.8					
TORD	**Torodi Ar. Bea**	**119.31**	**291**	PKP **PKPdf**	**09 49 26.4**	**-1.6**
TORD	**Torodi Ar. Bea**	**119.31**	**291**	PKP **PKPdf**	**09 49 26.4**	**-1.6**
	0.7nm,1.0s,baz=33,slow=1.6,SNR=3.6					

IDC 13 09:39:11.7±1.6, 55°31N×166°56E, h0km, mb3.2/3, mb1 3.6/5, mb1mx3.3/29, mbtmp3.3/5, ML3.0/2, MS3.0/1, Ms1 3.0/1, ms1mx2.3/24, Error ellipse: s-maj=33.7km s-min=17.9km az=36.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
FX1	**Attu Island--F**	**4.58**	**119**	P Pn	09 40 20.5	-1.7
	1.5nm,0.3s,baz=105,slow=23,SNR=20					
FX1				S Sn	09 41 11.0	-5.1
	4.3nm,0.3s,baz=195,slow=21,SNR=11					
PETK	**Petropavlovsk-**	**5.65**	**251**	Pn Pn	09 40 36.0	-0.8
	1.8nm,0.3s,baz=81,slow=16,SNR=13					
ASAJ	**Asahikawa**	**19.01**	**244**	LR LR	09 51 01.0	
	comp=Z,42nm,19.7s,baz=180,slow=37					
ILAR	**Eielson Array**	**24.53**	**49**	P P	09 44 31.4	-1.1
	0.2nm,0.8s,baz=259,slow=8.0,SNR=5.8					
NVAR	**Mina Array Bea**	**51.46**	**76**	P P	09 48 19.3	+0.5
	0.2nm,0.5s,baz=313,slow=9.7,SNR=2.2					
TXAR	**Lajitas Array**	**66.31**	**72**	P P	09 50 01.9	0.0
	0.2nm,0.7s,baz=305,slow=3.2,SNR=3.3					

*ISCJB **13** 09:43:13.4±0.5, 59°.35N±0°.02×26°.85E±0°.07, h0km, Error ellipse: s-maj=4.9km s-min=3.5km az=13.5*

*HEL **13** 09:43:13.4±0.5, 59°.26N×27°.26E, h0km, ML1.9, ML1.9(UPP), Explosion*

*NAO **13** 09:43:14.8±1.9, 59°.32N×27°.00E, ML2.4*

*BER **13** 09:43:14.5±3.7, 59°.30N×27°.09E, h0km, ML2.4(NAO), Suspected explosion*

*CSEM **13** 09:43:14.7±0.2, 59°.34N×26°.93E, h2km, ML2.3, Error ellipse: s-maj=5.9km s-min=4.0km az=93.0, Mining explosion.*

*IDC **13** 09:43:17.4±2.0, 59°.47N×26°.90E, h0km, mb1 3.3/4, mb1mx3.0/28, mbtmp3.2/4, ML2.6/4, Error ellipse: s-maj=17.8km s-min=9.7km az=131.0*

*UPP **13** 09:43:23.6, 59°.65N×25°.96E, h0km, ML1.9, Suspected Mining explosion.*

ISC 13 09:43:12.3±0.6, 59°40N±0°.02×27°04E±0°.02, h0km, n80, σ1s88/103, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
VJF	**Virojoki**	**1.17**	**13**	PG **Pg**	**09 43 36.7**	**+2.0**
VJF				MSG **Sn**	**09 43 54.4**	**+1.9**
	comp=Z,6.4nm,0.2s					
VJF				SG **Sn**	**09 43 54.4**	**+1.9**
VJF				RG Rg	09 43 58.9	
VJF	**Virojoki**	**1.17**	**13**	PG **Pg**	**09 43 36.7**	**+2.0**
VJF				SG **Sn**	**09 43 54.4**	**+1.9**
VJF				MSG	09 43 54.4	
	comp=Z,6.4nm,0.2s					
VJF				RG Rg	09 43 58.9	
VJF	**Virojoki**	**1.17**	**13**	Pg **Pg**	**09 43 36.7**	**+2.0**
	comp=Z,6.4nm,0.2s,SNR=90					
VJF				Sg **Sn**	**09 43 54.4**	**+1.9**
	SNR=90					
PVF	**Pernaja**	**1.29**	**333**	PG **Pb**	**09 43 39.4**	**+2.0**
PVF				MSG **Sn**	**09 43 58.0**	**+2.5**
	comp=Z,4.2nm,0.2s					
PVF				SG **Sn**	**09 43 58.0**	**+2.5**
PVF	**Pernaja**	**1.29**	**333**	PG **Pb**	**09 43 39.4**	**+2.0**
PVF				SG **Sn**	**09 43 58.0**	**+2.5**
PVF				MSG	09 43 58.0	
	comp=Z,4.2nm,0.2s					
PVF	**Pernaja**	**1.29**	**333**	Pg **Pb**	**09 43 39.4**	**+2.0**
	comp=Z,4.2nm,0.2s,SNR=90					
PVF				Sg **Sn**	**09 43 58.0**	**+2.5**
	SNR=90					
MEF	**Metsahovi**	**1.57**	**303**	PG **Pg**	**09 43 44.1**	**+1.8**
MEF				MSG **Sg**	**09 44 06.1**	**+3.5**
	comp=Z,5.1nm,0.2s					
MEF				SG **Sg**	**09 44 06.1**	**+3.5**
MEF	**Metsahovi**	**1.57**	**303**	PG **Pg**	**09 43 44.1**	**+1.8**
MEF				SG **Sg**	**09 44 06.1**	**+3.5**
MEF				MSG	09 44 06.1	
	comp=Z,5.1nm,0.2s					
MEF	**Metsahovi**	**1.57**	**303**	Pg **Pg**	**09 43 44.1**	**+1.8**
	comp=Z,5.1nm,0.2s,SNR=90					
MEF				Sg **Sg**	**09 44 06.1**	**+3.5**
	SNR=90					
MTSE	**Matsula**	**1.80**	**249**	PN **Pb**	**09 43 45.5**	**-0.7**
MTSE				SG **Sg**	**09 44 09.7**	**-0.5**
MTSE	**Matsula**	**1.80**	**249**	PN **Pb**	**09 43 45.5**	**-0.7**
MTSE				SG **Sg**	**09 44 09.7**	**-0.5**
MTSE	**Matsula**	**1.80**	**249**	Pn **Pb**	**09 43 45.5**	**-0.7**
	SNR=33					
MTSE				Sg **Sg**	**09 44 09.7**	**-0.5**
	SNR=90					
FIA0	**FINESS Array S**	**2.10**	**347**	Pn **Pb**	**09 43 51.8**	**+0.5**
	baz=160,slow=16					
FIA0				Lg Lg	09 44 23.7	
	baz=163,slow=37					
FIA0				Rg Rg	09 44 35.2	
	baz=167,slow=37					
FIA0	**FINESS Array S**	**2.10**	**347**	Pn **Pb**	**09 43 51.8**	**+0.5**
	baz=160,slow=16					
FIA0				Lg Lg	09 44 23.7	
	baz=163,slow=37					
FIA0				Rg Rg	09 44 35.2	
	baz=167,slow=37					
FIA0	**FINESS Array S**	**2.10**	**347**	PN **Pb**	**09 43 52.2**	**+1.0**
	baz=162					
FIA0				SG **Sg**	**09 44 23.1**	**+3.3**
FIA0				MSG	09 44 23.1	
	comp=Z,13nm,0.6s					
FIA0				RG Rg	09 44 35.0	
FIA0	**FINESS Array S**	**2.10**	**347**	PN **Pb**	**09 43 52.2**	**+1.0**
	baz=162					
FIA0				SG **Sg**	**09 44 23.1**	**+3.3**
FIA0				MSG	09 44 23.1	
	comp=Z,13nm,0.6s					
FIA0				RG Rg	09 44 35.0	
FIA0	**FINESS Array S**	**2.10**	**347**	Pn **Pb**	**09 43 52.2**	**+1.0**
	baz=162,SNR=33					
FIA0				Sg **Sg**	**09 44 23.1**	**+3.3**
	comp=Z,13nm,0.6s,SNR=90					
FIA0				Lg Lg	09 44 23.7	
	baz=163,slow=29,SNR=5.4					
FINES	**FINESS Array B**	**2.10**	**347**	Pn **Pb**	**09 43 52.3**	**+1.0**
	comp=Z,2.4nm,0.3s,baz=161,slow=14,SNR=72					
FINES				Pg **Pg**	**09 43 53.9**	**+1.3**
	comp=Z,2.4nm,0.3s,baz=166,slow=17,SNR=70					
FINES				Lg Lg	09 44 21.0	
	comp=Z,4.5nm,0.3s,baz=160,slow=24,SNR=30					
FINES				Rg Rg	09 44 34.7	
	comp=Z,87nm,1.0s,baz=161,slow=24,SNR=17					
KAF	**Kangasniemi**	**2.74**	**353**	PN **Pb**	**09 44 01.5**	**-0.7**
KAF	**Kangasniemi**	**2.74**	**353**	PN **Pb**	**09 44 01.5**	**-0.7**
KAF	**Kangasniemi**	**2.74**	**353**	Pn **Pb**	**09 44 01.5**	**-0.7**
	SNR=33					
KEF	**Keuruu**	**2.97**	**340**	PN **Pb**	**09 44 05.4**	**-0.7**
KEF				SG **Sg**	**09 44 48.9**	**+1.2**
KEF				MSG	09 44 48.9	
	comp=Z,5.2nm,0.4s					
KEF	**Keuruu**	**2.97**	**340**	PN **Pb**	**09 44 05.4**	**-0.7**
KEF				SG **Sg**	**09 44 48.9**	**+1.2**
KEF				MSG	09 44 48.9	
	comp=Z,5.2nm,0.4s					
KEF	**Keuruu**	**2.97**	**340**	Pn **Pb**	**09 44 05.4**	**-0.7**
	SNR=33					
KEF				Sg **Sg**	**09 44 48.9**	**+1.2**
RAF	**Rauma**	**3.10**	**304**	PN **Pb**	**09 44 06.9**	**-1.3**
RAF				SG **Sg**	**09 44 52.5**	**+0.9**
RAF				MSG	09 44 52.5	
	comp=Z,3.4nm,0.4s					
RAF	**Rauma**	**3.10**	**304**	Pn **Pb**	**09 44 06.9**	**-1.3**
RAF				Sg **Sg**	**09 44 52.5**	**+0.9**
	comp=Z,3.4nm,0.4s,SNR=90					
SUF	**Sumiainen**	**3.36**	**353**	PN Pn	09 44 09.9	+4.0
SUF				SG **Sg**	**09 44 59.9**	**-0.1**
SUF				MSG	09 44 59.9	
	comp=Z,4.2nm,0.4s					
SUF	**Sumiainen**	**3.36**	**353**	PN Pn	09 44 09.9	+4.0
SUF				SG **Sg**	**09 44 59.9**	**-0.1**
SUF				MSG	09 44 59.9	
	comp=Z,4.2nm,0.4s					
SUF	**Sumiainen**	**3.36**	**353**	Pn Pn	09 44 09.9	+4.0
	SNR=33					
SUF				Sg **Sg**	**09 44 59.9**	**-0.1**
AAL	**Aland**	**3.65**	**285**	SG **Sg**	**09 45 09.3**	**0.0**
AAL	**Aland**	**3.65**	**285**	SG **Sg**	**09 45 09.3**	**0.0**
AAL	**Aland**	**3.65**	**285**	Sg **Sg**	**09 45 09.3**	**0.0**
	SNR=90					
IZAR	**Zarasai**	**3.69**	**187**	*e*P **Pn**	**09 44 12.1**	**+1.6**
IZAR				*e*SmP	09 44 19.5	
IZAR				*e*S **Sn**	**09 44 53.8**	**-0.8**
IZAR				AML AML	09 45 20.6	
	comp=Z,9.7nm,0.6s					
IZAR	**Zarasai**	**3.69**	**187**	*e*P **Pn**	**09 44 12.1**	**+1.6**
	SNR=31					
IZAR				*e*S **Sn**	**09 44 53.8**	**-0.8**
	comp=Z,9.7nm,0.6s,SNR=31					
ISAL	**Salakas**	**3.87**	**188**	*e*P **Pn**	**09 44 14.8**	**+1.7**
ISAL				*e*SmP	09 44 22.6	
ISAL				*e*S **Sn**	**09 44 57.1**	**-2.1**
ISAL				AML AML	09 45 26.1	
	comp=Z,3.7nm,0.4s					
ISAL	**Salakas**	**3.87**	**188**	*e*P **Pn**	**09 44 14.8**	**+1.7**
	SNR=31					
ISAL				*e*S **Sn**	**09 44 57.1**	**-2.1**
	comp=Z,3.7nm,0.4s,SNR=31					
IIGN	**Ignalina**	**4.09**	**187**	*e*P **Pn**	**09 44 17.7**	**+1.7**
IIGN				*e*SmP	09 44 27.3	
IIGN				*e*S **Sn**	**09 45 02.7**	**-1.8**
IIGN				AML AML	09 45 26.1	
	comp=Z,11nm,0.7s					
IIGN	**Ignalina**	**4.09**	**187**	*e*P **Pn**	**09 44 17.7**	**+1.7**
	SNR=31					
IIGN				*e*S **Sn**	**09 45 02.7**	**-1.8**
	comp=Z,11nm,0.7s,SNR=31					
JOF	**Joensuu**	**4.09**	**29**	PN Pn	09 44 20.0	+4.0
	baz=201					
JOF	**Joensuu**	**4.09**	**29**	PN Pn	09 44 20.0	+4.0
	baz=201					
JOF	**Joensuu**	**4.09**	**29**	Pn Pn	09 44 20.0	+4.0
	baz=201,SNR=33					
NRTU	**Norrtaelje**	**4.29**	**277**	P **Pn**	**09 44 20.9**	**+2.1**
NRTU	**Norrtaelje**	**4.29**	**277**	P **Pn**	**09 44 20.8**	**+2.1**
GRAU	**Graesoe**	**4.39**	**286**	P **Pn**	**09 44 22.0**	**+1.9**
GRAU				S **Sn**	**09 45 12.5**	**+0.6**
GRAU	**Graesoe**	**4.39**	**286**	P **Pn**	**09 44 22.0**	**+1.9**
GRAU				S **Sn**	**09 45 12.4**	**+0.6**
NACGM	**Naroch**	**4.52**	**182**	*e* **Sb**	**09 45 28.0**	**+0.7**
NYNU	**Nynaeshamn**	**4.66**	**269**	P Pb	09 44 29.5	-5.4
NYNU	**Nynaeshamn**	**4.66**	**269**	P Pb	09 44 29.5	-5.4
FLYU	**Flymyra**	**4.69**	**283**	P **Pn**	**09 44 26.5**	**+2.2**
FLYU	**Flymyra**	**4.69**	**283**	P **Pn**	**09 44 26.4**	**+2.2**
GOTU	**Gotland**	**4.76**	**252**	P Pn	09 44 30.5	+5.3
GOTU	**Gotland**	**4.76**	**252**	P Pn	09 44 30.5	+5.3
BACU	**Backbrunna**	**5.06**	**279**	P **Pn**	**09 44 31.6**	**+2.3**
BACU	**Backbrunna**	**5.06**	**279**	P **Pn**	**09 44 31.6**	**+2.3**
OSTU	**Oestervaala**	**5.07**	**284**	P **Pn**	**09 44 31.8**	**+2.3**
OSTU	**Oestervaala**	**5.07**	**284**	P **Pn**	**09 44 31.7**	**+2.3**
ARNU	**Arnoeviken**	**5.29**	**300**	P Pn	09 44 35.7	+3.2
ARNU	**Arnoeviken**	**5.29**	**300**	P Pn	09 44 35.7	+3.2
UMAU	**Umeaa**	**5.42**	**329**	P Pn	09 44 38.5	+4.3
BURU	**Burvik**	**5.84**	**335**	P **Pn**	**09 44 43.0**	**+3.0**
SOLU	**Sollefteaa**	**6.08**	**313**	P Pn	09 44 47.6	+4.2
SVAU	**Svanoeiden**	**6.20**	**329**	P Pn	09 44 48.6	+3.6
SJUU	**Sjulsmark**	**6.62**	**340**	P Pn	09 44 55.2	+4.5
KALU	**Kalix**	**6.70**	**347**	P Pn	09 44 55.7	+3.9
HFS	**Hagfors**	**6.78**	**282**	Pn **Pn**	**09 44 53.7**	**+0.7**
	baz=110,slow=10					
HFS				Sn **Sn**	**09 46 08.2**	**-2.5**
	baz=98,slow=28					
HFS				Lg Lg	09 46 45.1	
	baz=70,slow=37					
HFS	**Hagfors**	**6.78**	**282**	Pn **Pn**	**09 44 53.7**	**+0.7**
	baz=110,slow=10					
HFS				Sn **Sn**	**09 46 08.2**	**-2.5**
	baz=98,slow=28					
HFS				Lg Lg	09 46 45.1	
	baz=70,slow=37					
HFS	**Hagfors**	**6.78**	**282**	Pn **Pn**	**09 44 55.1**	**+2.1**
	comp=Z,1.0nm,0.3s,baz=94,slow=16,SNR=4.5					
HFS				Sn **Sn**	**09 46 09.1**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=103

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.17**	**341**	Pn	Pn	09 54 08.0	-0.4
	baz=202,slow=18						
CBIJ				Sn	Sn	09 54 55.0	-2.8
CBIJ				LR	LR	09 55 07.4	
	comp=Z,544nm,21.5s,baz=173,slow=30						
KSRS	**Korea Array**	**19.68**	**320**	P	Pn	09 57 35.7	+0.1
	0.2nm,0.3s,baz=131,slow=12,SNR=6.3						
SONM	**Songino Array**	**38.55**	**319**	P	P	10 00 27.3	-0.7
	0.7nm,0.7s,baz=128,slow=6.8,SNR=6.4						
WRA	**Warramunga Arr**	**43.80**	**193**	P	P	10 01 11.4	+0.2
	0.3nm,0.3s,baz=16,slow=9.0,SNR=52						
ASAR	**Alice Springs**	**47.50**	**192**	P	P	10 01 40.1	-0.4
	0.2nm,0.3s,baz=10,slow=7.6,SNR=5.1						
ZALV	**Zalesovo Beam**	**53.39**	**321**	P	P	10 02 24.4	-0.4
	0.9nm,0.6s,baz=100,slow=4.5,SNR=4.4						
MKAR	**Makanchi Array**	**54.09**	**312**	P	P	10 02 30.6	+0.5
	1.4nm,0.6s,baz=88,slow=9.0,SNR=18						
STKA	**Stephens Creek**	**54.75**	**182**	P	P	10 02 34.4	-0.6
	0.9nm,0.5s,baz=308,slow=12,SNR=4.1						
BVAR	**Borovoye Array**	**61.90**	**319**	P	P	10 03 24.8	+0.1
	2.5nm,0.7s,baz=87,slow=9.1,SNR=12						
INK	**Inuvik**	**66.05**	**24**	P	P	10 03 52.1	+0.4
	0.3nm,0.4s,baz=322,slow=9.5,SNR=3.9						
YKA	**Yellowknife Ar**	**74.95**	**28**	P	P	10 04 46.1	-0.1
	0.2nm,0.6s,baz=291,slow=6.0,SNR=4.6						
FINES	**FINESS Array B**	**98.33**	**103**	P	P	10 05 24.7	-0.9
	0.4nm,0.3s,baz=39,slow=5.1,SNR=6.7						
PLCA	**Paso Flores**	**146.32**	**130**	PKPbc	PKPbc	10 12 46.5	0.0
	1.6nm,0.9s,baz=232,slow=16,SNR=3.8						

CSEM ***13*** *10:28:10.8, 33.76N×36.63E, h15km, ML2.2, After NSSC*

NSSC 13 10:28:10.5±4.1, 33.76N×36.65E, h5km±52km, MD1.7, ML2.2, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QASN	**Qassioun**	**0.39**	**234**	*e*P	Pg	10 28 16.3	-1.8
QASN	**Qassioun**	**0.39**	**234**	*e*P	Pg	10 28 16.3	-1.8
	SNR=104						
TOTH	**TOTAH**	**0.44**	**205**	*i* P	Pb	10 28 20.7	-0.1
TOTH				*i* S	Sb	10 28 27.9	+0.1
TOTH				AML	AML	10 28 37.1	
	comp=E,184nm,0.5s						
TOTH				AML	AML	10 28 41.6	
	comp=N,212nm,0.8s						
TOTH	**TOTAH**	**0.44**	**205**	*e*P	Pb	10 28 20.8	-0.1
TOTH				AML	AML	10 28 47.0	
	comp=Z,148nm,0.6s						
TOTH	**TOTAH**	**0.44**	**205**	*e*P	Pb	10 28 20.8	0.0
	SNR=101						
ROOS	**tl_alroos**	**0.67**	**52**	*e*P	Pb	10 28 25.3	+0.5
ROOS	**tl_alroos**	**0.67**	**52**	*e*P	Pb	10 28 25.3	+0.5
	SNR=66						
BRBR	**Barbar**	**0.68**	**239**	*e*P	Pb	10 28 25.9	+0.8
BRBR				*e*S	Sn	10 28 37.4	-0.9
BRBR				AML	AML	10 28 50.4	
	comp=N,45nm,0.6s						
BRBR				AML	AML	10 28 52.0	
	comp=E,101nm,0.5s						
BRBR	**Barbar**	**0.68**	**239**	*e*P	Pn	10 28 26.1	-1.0
RCY	**Rachaya**	**0.73**	**249**	*e*P	Pn	10 28 27.8	+0.2
HWQ	**Hawqa**	**0.78**	**312**	*e*P	Pn	10 28 30.2	+1.8
ZALF	**Zalf**	**1.01**	**145**	*e*P	Pg	10 28 28.3	-1.7
ZALF				*e*S	Sg	10 28 40.3	-2.9
ZALF				AML	AML	10 28 51.3	
	comp=N,882nm,0.6s						
ZALF				AML	AML	10 28 58.9	
	comp=E,94nm,0.6s						
ZALF	**Zalf**	**1.01**	**145**	*e*P	Pg	10 28 28.8	-1.2
ZALF				AML	AML	10 28 50.6	
	comp=Z,72nm,0.6s						
ZALF	**Zalf**	**1.01**	**145**	*e*P	Pg	10 28 28.8	-1.2
	SNR=66						
SALA	**Sala**	**1.05**	**176**	*e*P	Pg	10 28 29.2	-1.7
SALA				*e*S	Sg	10 28 43.5	-1.2
SALA				AML	AML	10 28 52.0	
	comp=N,731nm,0.4s						
SALA	**Sala**	**1.05**	**176**	*e*P	Pg	10 28 30.3	-0.6
SALA				AML	AML	10 28 51.8	
	comp=Z,99nm,0.5s						
SALA	**Sala**	**1.05**	**176**	*e*P	Pg	10 28 30.3	-0.6
	SNR=66						
BIDA	**Albida**	**1.28**	**348**	*i* P	Pn	10 28 33.4	-1.8
BIDA	**Albida**	**1.28**	**348**	*i* P	Pn	10 28 33.4	-1.8
	SNR=66						

IDC 13 10:30:26.4±2.3, 3.38N×127.34E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.1/23, mbtmp3.1/3, Error ellipse: s-maj=187.9km s-min=24.1km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.18**	**164**	P	P	10 35 43.2	-1.5
	0.4nm,0.8s,baz=343,slow=9.8,SNR=4.9						
ASAR	**Alice Springs**	**27.64**	**167**	P	P	10 36 17.0	+1.0
	0.1nm,0.3s,baz=345,slow=12,SNR=2.9						
MKAR	**Makanchi Array**	**58.19**	**325**	P	P	10 40 22.5	+0.1
	0.2nm,0.4s,baz=126,slow=7.3,SNR=2.3						

IDC 13 10:36:38.7±2.2, 5.05N×126.78E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/23, mbtmp3.3/3, MS3.2/2, Ms1 3.2/2, ms1mx2.4/24, Error ellipse: s-maj=159.9km s-min=27.7km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.92**	**164**	P	P	10 42 12.4	-0.4
	0.6nm,0.3s,baz=343,slow=10,SNR=21						
ASAR	**Alice Springs**	**29.38**	**167**	P	P	10 42 44.3	+0.5
	0.3nm,1.0s,baz=347,slow=7.8,SNR=3.1						
KSRS	**Korea Array**	**32.27**	**2**	LR	LR	10 55 34.9	
	comp=Z,146nm,18.4s,baz=235,slow=35						
STKA	**Stephens Creek**	**39.34**	**160**	LR	LR	11 01 51.2	
	comp=Z,76nm,18.7s,baz=26,slow=38						
MKAR	**Makanchi Array**	**56.51**	**325**	P	P	10 46 22.7	-0.1
	0.4nm,0.6s,baz=129,slow=8.5,SNR=3.8						

IDC 13 10:43:40.5±2.9, 4.13S×152.57E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.5/20, mbtmp3.7/4, ML2.6/1, Error ellipse: s-maj=118.1km s-min=36.0km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.51**	**225**	Pn	Pn	10 45 32.8	+1.4
	0.5nm,0.3s,baz=162,slow=13,SNR=2.5						
PMG				Sn	Sn	10 46 58.5	+1.2
	2.8nm,0.3s,baz=85,slow=10,SNR=7.2						
WRA	**Warramunga Arr**	**23.72**	**227**	P	P	10 48 54.5	-0.1
	0.6nm,0.3s,baz=51,slow=9.6,SNR=20						
ASAR	**Alice Springs**	**26.49**	**221**	P	P	10 49 19.4	-0.5
	0.3nm,0.6s,baz=57,slow=9.9,SNR=4.7						
FITZ	**Fitzroy Crossi**	**29.79**	**240**	P	P	10 49 49.6	+0.3
	0.7nm,0.3s,baz=58,slow=10.0,SNR=11						
TORD	**Torodi Ar. Bea**	**149.88**	**289**	PKPbc	PKPbc	11 03 33.2	-0.7
	0.3nm,0.8s,baz=80,slow=2.7,SNR=3.9						

IDC 13 10:54:45.9±2.2, 5.96S×130.13E, h0km, mb3.5/1, mb1 3.4/4, mb1mx3.3/19, mbtmp3.3/4, ML3.3/3, Error ellipse: s-maj=92.3km s-min=28.7km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.84**	**200**	Pn	Pn	10 57 51.3	+1.5
	0.1nm,0.3s,baz=218,slow=23,SNR=7.5						
FITZ				Sn	Sn	10 59 58.0	-16
	0.2nm,0.3s,baz=202,slow=22,SNR=7.0						
WRA	**Warramunga Arr**	**14.49**	**164**	Pn	Pn	10 58 12.1	-0.3
	0.2nm,0.3s,baz=346,slow=12,SNR=14						
WRA				Sn	Sn	11 00 39.8	-14
	0.2nm,0.3s,baz=357,slow=23,SNR=6.6						
ASAR	**Alice Springs**	**17.98**	**169**	P	Pn	10 58 56.5	-0.9
	0.1nm,0.3s,baz=341,slow=9.0,SNR=5.5						
MKAR	**Makanchi Array**	**67.44**	**327**	P	P	11 05 43.5	0.0
	0.3nm,0.5s,baz=132,slow=8.0,SNR=5.7						

IDC ***13*** *10:56:19.8±1.1, 50.90N×175.21E, h0km, mb3.7/11, mb1 4.1/14, mb1mx3.9/32, mbtmp3.8/14, ML4.1/3, MS2.8/2, Ms1 2.9/2, ms1mx2.1/55, Error ellipse: s-maj=25.4km s-min=12.7km az=24.0*

ISCJB ***13*** *10:56:22.5±2.0, 50.98N±0.10×175.17E±0.07, h28km±15km, mb3.8/15, MS3.0/1, Error ellipse: s-maj=16.6km s-min=6.8km az=7.2*

NEIC ***13*** *10:56:24.5, 51.06N×175.13E, h10km, mb4.0/4, ML4.0(AEIC), After AEIC.*

ISC 13 10:56:24.2±3.8, 51.0N±0.1×175.21E±0.05, h27km±27km, n47, σ1s00/54, mb3.9/15, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**2.26**	**327**	Pn	Pn	10 56 59.1	-0.6
FX1				Sn	Sn	10 57 26.6	-0.2
FX1	**Attu Island--F**	**2.26**	**327**	Pn	Pn	10 56 59.1	-0.6
	95nm,0.3s,baz=260,slow=6.1,SNR=764						
FX1				Sn	Sn	10 57 26.6	-0.2
	177nm,0.3s,baz=237,slow=20,SNR=12						
LSSA	**Little Sitkin**	**2.27**	**64**	P	Pn	10 57 00.3	+0.3
LSNW	**Little Sitkin**	**2.28**	**64**	P	Pn	10 57 00.3	+0.3
LSNW				S	Sn	10 57 27.3	0.0
LSSE	**Little Sitkin**	**2.30**	**65**	P	Pn	10 57 00.8	+0.5
AMKA	**Amchitka**	**2.60**	**80**	P	Pn	10 57 03.1	-1.3
AMKA				S	Sn	10 57 31.2	-3.9
CESW	**Semis' Southwe**	**2.87**	**70**	P	Pn	10 57 08.7	+0.6
CEAP	**Semis' Anvil P**	**2.91**	**68**	P	Pn	10 57 09.4	+0.8
CERB	**Semis' Cerberu**	**2.92**	**70**	P	Pn	10 57 09.4	+0.7
CERB				S	Sn	10 57 42.8	-0.1
CERA	**Semis' Rag'd T**	**2.94**	**70**	P	Pn	10 57 09.5	+0.4
KOKL	**Mount Kliuchef**	**6.72**	**75**	P	Pn	10 58 01.1	+0.1
KOFP	**Korovin Flat P**	**6.78**	**75**	P	Pn	10 58 01.3	-0.5
PETK	**Petropavlovsk-**	**10.98**	**288**	Pn	Pn	10 59 00.0	+0.6
PETK				Sn	Sn	11 00 52.5	-8.7
PETK	**Petropavlovsk-**	**10.98**	**288**	Pn	Pn	10 59 00.0	+0.6
	1.9nm,0.3s,baz=90,slow=16,SNR=43						
PETK				Sn	Sn	11 00 52.5	-8.7
	1.9nm,0.3s,baz=101,slow=30,SNR=6.1						
PETK				LR	LR	11 02 54.8	
	comp=Z,21nm,20.4s,baz=47,slow=36						
UNV	**Unalaska Valle**	**11.52**	**69**	*e*Pn	Pn	10 59 07.3	+0.6
KDAK	**Kodiak Island**	**19.80**	**57**	P	P	11 00 50.4	-1.8
KDAK	**Kodiak Island**	**19.80**	**57**	P	P	11 00 50.4	-1.8
	1.7nm,0.3s,baz=282,slow=7.8,SNR=24						
TRF	**Thorofare Moun**	**22.11**	**43**	*e*P	P	11 01 16.2	-1.2
	4.1nm,0.8s						
SML	**Sawmill**	**22.56**	**47**	*e*P	P	11 01 21.7	-0.3
	3.9nm,0.9s						
ILAR	**Eielson Array**	**23.94**	**40**	P	P	11 01 34.2	-1.4
ILAR	**Eielson Array**	**23.94**	**40**	P	P	11 01 34.2	-1.4
	1.1nm,0.4s,baz=256,slow=6.2,SNR=59						
ILAR				LR	LR	11 11 35.1	
	comp=Z,52nm,19.2s,baz=96,slow=38						
PAX	**Paxson**	**24.10**	**45**	*e*P	P	11 01 36.4	-0.9
	3.5nm,0.7s						
BMRM	**Bremner River**	**24.20**	**50**	*e*P	P	11 01 37.9	-0.3
MENT	**Mentasta**	**24.89**	**46**	*e*P	P	11 01 44.9	+0.5
EGAK	**Eagle**	**26.32**	**42**	*e*P	P	11 01 57.0	-0.3
	13nm,0.7s						
PNL	**Peninsula**	**26.74**	**53**	*e*P	P	11 02 02.4	+1.3
INK	**Inuvik**	**29.94**	**36**	P	P	11 02 29.6	+0.1
INK	**Inuvik**	**29.94**	**36**	P	P	11 02 29.6	+0.1
	1.0nm,0.6s,baz=276,slow=8.3,SNR=18						
YKA	**Yellowknife Ar**	**38.19**	**45**	P	P	11 03 42.0	+1.0
YKA	**Yellowknife Ar**	**38.19**	**45**	P	P	11 03 41.9	+1.0
	1.0nm,0.4s,baz=285,slow=7.3,SNR=43						
SONM	**Songino Array**	**43.39**	**294**	P	P	11 04 24.8	+0.6
SONM				PcP	PcP	11 06 11.3	-1.0
SONM	**Songino Array**	**43.39**	**294**	P	P	11 04 24.8	+0.6
	0.3nm,0.6s,baz=54,slow=8.3,SNR=3.8						
SONM				PcP	PcP	11 06 11.3	-1.0
	0.3nm,0.6s,baz=116,slow=3.4,SNR=4.2						
NVAR	**Mina Array Bea**	**47.33**	**78**	P	P	11 04 57.1	+1.5
NVAR	**Mina Array Bea**	**47.33**	**78**	P	P	11 04 57.1	+1.5
	1.3nm,0.6s,baz=288,slow=7.3,SNR=5.6						
PDAR	**Pinedale Array**	**49.98**	**68**	P	P	11 05 16.1	+0.1
PDAR	**Pinedale Array**	**49.98**	**68**	P	P	11 05 16.1	+0.1
	0.9nm,0.7s,baz=298,slow=4.1,SNR=7.6						
MKAR	**Makanchi Array**	**57.24**	**305**	P	P	11 06 07.5	-1.4
MKAR	**Makanchi Array**	**57.24**	**305**	P	P	11 06 07.5	-1.4
	0.5nm,0.7s,baz=50,slow=8.1,SNR=6.6						
TXAR	**Lajitas Array**	**62.42**	**77**	P	P	11 06 45.6	+0.8
TXAR	**Lajitas Array**	**62.42**	**77**	P	P	11 06 45.6	+0.8
	0.5nm,0.5s,baz=297,slow=4.6,SNR=6.5						
NB2	**NORSAR Subarra**	**67.57**	**352**	P	P	11 07 17.6	-0.1
	comp=Z,0.9nm,0.6s,baz=11,slow=6.5						
NOA	**NORSAR Array B**	**67.57**	**352**	P	P	11 07 17.8	+0.1
NOA	**NORSAR Array B**	**67.57**	**352**	P	P	11 07 17.8	+0.1
	comp=Z,0.9nm,0.6s,baz=12,slow=6.3,SNR=5.7						
AKASG	**Malin Array Be**	**74.62**	**338**	P	P	11 08 00.2	-0.2
AKASG	**Malin Array Be**	**74.62**	**338**	P	P	11 08 00.2	-0.2
	comp=Z,0.4nm,0.3s,baz=17,slow=5.5,SNR=3.8						
GERES	**GERESS Array B**	**79.27**	**348**	P	P	11 08 27.1	+0.2
GERES	**GERESS Array B**	**79.27**	**348**	P	P	11 08 27.1	+0.2
	comp=Z,0.4nm,0.6s,baz=35,slow=5.3,SNR=3.9						

MAN 13 11:14:13, 11.14N×124.66E, h4km, mb4.7, ML3.6, MS3.5, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.10**	**208**	*e*P	Pg	11 14 16.6	+1.6
PLP	**Palo**	**0.32**	**85**	*e*P	Pn	11 14 20.4	-0.8
MSLP	**Maasin**	**1.02**	**169**	*e*P	Pn	11 14 34.3	+0.2
MSLP				*e*S	Sn	11 14 49.6	+0.7
LLP	**Lapu-Lapu**	**1.06**	**220**	*e*P	Pg	11 14 33.2	-0.2
LLP				*e*S	Sn	11 14 49.5	-0.5
CNP	**Catarman**	**1.36**	**0**	*e*P	Pb	11 14 39.1	0.0
CNP				*e*S	Sn	11 14 57.9	+0.5
TBP	**Tagbilaran**	**1.64**	**209**	*e*P	Pg	11 14 44.2	-0.3
TBP				*e*S	Sg	11 15 05.8	+0.1
RCP	**Roxas**	**1.92**	**283**	*e*P	Pb	11 14 48.1	-0.5
GUIM	**Jordan**	**2.10**	**256**	*e*P	Pn	11 14 49.8	+0.9
BUKP	**Musuan**	**3.27**	**173**	*e*P	Pn	11 15 07.7	+2.6

ISK ***13*** *11:30:19.3, 37.67N×38.73E, h5km, MD3.1*

DDA ***13*** *11:30:19.4, 37.67N×38.74E, h12km, MD3.1*

ISCJB ***13*** *11:30:20.3±0.5, 37.65N±0.02×38.75E±0.02, h7km±4km, Error ellipse: s-maj=3.4km s-min=3.0km az=135.7*

CSEM ***13*** *11:30:20.3±0.2, 37.67N×38.78E, h5km, MD3.1, Error ellipse: s-maj=3.7km s-min=3.4km az=105.0*

NSSC ***13*** *11:30:23.4±0.9, 37.41N×38.91E, h1km±4km, MD1.4, ML2.8*

ISC 13 11:30:20.0±0.9, 37.67N±0.02×38.77E±0.02, h14km±7km, n58, σ0s84/90, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.23**	**169**	*e*PG	Pg	11 30 24.9	-0.2
URFA				*e*SG	Sg	11 30 29.4	+0.9
URFA	**Urfa**	**0.23**	**169**	*e*Pg	Pg	11 30 24.9	-0.2
URFA				*e*Sg	Sg	11 30 29.5	+0.9
ATAB	**Bozova**	**0.42**	**242**	*i* P	Pg	11 30 28.2	-0.3
ATAB				*i* S	Sg	11 30 32.9	-1.3
ATAB	**Bozova**	**0.42**	**242**	*i* P	Pg	11 30 28.2	-0.3
ATAB				*i* S	Sg	11 30 32.9	-1.3
MALT	**Malatya**	**0.69**	**337**	*e*PG	Pg	11 30 33.5	-0.1
MALT	**Malatya**	**0.69**	**337**	*e*Pg	Pg	11 30 33.5	-0.1
MYA	**Malataya**	**0.71**	**338**	*e*PG	Pg	11 30 34.0	+0.2
MYA				*e*SG	Sb	11 30 44.4	+0.5
MYA	**Malataya**	**0.71**	**338**	*e*Pg	Pg	11 30 34.0	+0.2
MYA				*e*Sg	Sb	11 30 44.4	+0.5
SVRC	**Sivrice-ELAZID**	**0.82**	**31**	*e*PG	Pn	11 30 37.1	-0.3
SVRC				*e*SG	Sn	11 30 49.5	0.0
SVRC	**Sivrice-ELAZID**	**0.82**	**31**	*e*Pg	Pn	11 30 37.2	-0.3
SVRC				*e*Sg	Sn	11 30 49.5	0.0
ELZG	**Elazig**	**0.84**	**12**	*i* P	Pg	11 30 36.4	0.0
ELZG				*i* S	Sb	11 30 48.2	+0.4
ELZG	**Elazig**	**0.84**	**12**	*i* P	Pg	11 30 36.4	0.0
ELZG				*i* S	Sb	11 30 48.2	+0.4
AKCD	**Akcadag**	**0.91**	**313**	*i* P	Pg	11 30 37.3	-0.4
AKCD				*i* S	Sg	11 30 49.1	-0.6
AKCD	**Akcadag**	**0.91**	**313**	*i* P	Pg	11 30 37.3	-0.4
AKCD				*i* S	Sg	11 30 49.1	-0.6
GZT	**Gaziantep**	**1.01**	**252**	*i* P	Pb	11 30 38.9	-0.4
GZT				*i* S	Sb	11 30 52.6	+0.1
DIYA	**Diyarbakir**	**1.10**	**76**	*i* P	Pg	11 30 41.5	+0.2
DIYA				*i* S	Sb	11 30 55.5	+0.3
DIYA	**Diyarbakir**	**1.10**	**76**	*i* P	Pg	11 30 41.5	+0.2
DIYA				*i* S	Sb	11 30 55.5	+0.3
DIY	**Diyarbakir**	**1.18**	**79**	*e*PN	Pg	11 30 43.5	+0.8
DIY	**Diyarbakir**	**1.18**	**79**	*e*Pn	Pg	11 30 43.5	+0.8
GAZ	**Gaziantep**	**1.33**	**249**	*e*PN	Pg	11 30 45.7	0.0
GAZ	**Gaziantep**	**1.33**	**249**	*e*Pn	Pg	11 30 45.7	0.0
DARE	**Darende-Malaty**	**1.35**	**312**	*e*PN	Pb	11 30 45.7	+0.4
DARE	**Darende-Malaty**	**1.35**	**312**	*e*Pn	Pb	11 30 45.7	+0.4
KMRS	**Kahramanmaras**	**1.49**	**264**	*e*PN	Pb	11 30 48.0	+0.5
KMRS	**Kahramanmaras**	**1.49**	**264**	*e*Pn	Pb	11 30 48.0	+0.5
KBSD	**Kabsdagh**	**1.57**	**115**	*e*P	Pb	11 30 48.6	-0.2
KBSD				*e*S	Sn	11 31 07.5	-0.1
KBSD				AML	AML	11 31 13.3	
	comp=Z,102nm,0.3s						
KBSD	**Kabsdagh**	**1.57**	**115**	*e*P	Pb	11 30 48.6	-0.2
	SNR=57						
AYKD	**Aykdinkavak**	**1.58**	**261**	*i* P	Pn	11 30 46.6	-1.1
AYKD				*e*S	Sn	11 31 05.7	-2.2
SLMH	**Al Salmeh**	**1.60**	**205**	*e*P	Pb	11 30 49.2	-0.2
SLMH				*e*S	Sn	11 31 09.0	+0.5
SLMH				AML	AML	11 31 10.7	
	comp=Z,225nm,0.5s						
KEMA	**Kemaliye**	**1.61**	**352**	*i* P	Pn	11 30 48.5	+0.3
KEMA				*i* S	Sg	11 31 11.1	-0.7
KEMA	**Kemaliye**	**1.61**	**352**	*i* P	Pn	11 30 48.5	+0.3
KEMA				*i* S	Sg	11 31 11.1	-0.7
KUZU	**Kuzuini**	**1.62**	**237**	*i* P	Pb	11 30 50.5	+0.8
KUZU				*e*S	Sn	11 31 09.6	+0.6
KUZU	**Kuzuini**	**1.62**	**237**	*i* P	Pb	11 30 50.5	+0.8
KUZU				*e*S	Sn	11 31 09.6	+0.6
MARD	**Mardin**	**1.64**	**102**	*i* P	Pb	11 30 50.2	+0.1
MARD				*i* S	Sb	11 31 11.4	+0.7
MNKR	**ALMNKUR**	**1.77**	**167**	*e*P	Pb	11 30 51.5	-0.8
MNKR				*e*S	Sn	11 31 10.9	-1.8
MNKR				AML	AML	11 31 21.2	
	comp=Z,495nm,0.2s						
MNKR	**ALMNKUR**	**1.77**	**167**	*e*P	Pb	11 30 51.5	-0.8
	SNR=57						
MNKR				*e*S	Sn	11 31 10.9	-1.8
	comp=Z,495nm,0.2s,SNR=49						
ILIC	**ilic-Erzincan**	**1.78**	**355**	*e*PN	Pb	11 30 52.4	-0.2
ILIC	**ilic-Erzincan**	**1.78**	**355**	*e*Pn	Pb	11 30 52.4	-0.2
ANDN	**Andirin**	**1.92**	**268**	*i* P	Pb	11 30 54.9	-0.1
ANDN				*i* S	Sb	11 31 20.5	+1.6
ANDN	**Andirin**	**1.92**	**268**	*i* P	Pb	11 30 54.9	-0.1
ANDN				*i* S	Sb	11 31 20.5	+1.6
SARI	**SarD1z-Kayseri**	**1.99**	**292**	*e*PN	Pb	11 30 55.4	-0.8
SARI	**SarD1z-Kayseri**	**1.99**	**292**	*e*Pn	Pb	11 30 55.4	-0.8
BEST	**Besiri**	**2.00**	**83**	*i* P	Pb	11 30 56.5	+0.3
BEST				*i* S	Sg	11 31 23.4	-0.8
BNGB	**Bing¯¶l**	**2.00**	**48**	*e*PN	Pb	11 30 56.2	0.0
JHLN	**Al Jahlan**	**2.01**	**188**	*e*P	Pb	11 30 55.5	-0.9
JHLN				*e*S	Sn	11 31 18.9	+0.2
JHLN				AML	AML	11 31 32.0	
	comp=Z,55nm,0.6s						
JHLN	**Al Jahlan**	**2.01**	**188**	*e*P	Pb	11 30 55.5	-0.9
	SNR=45						
ERZN	**Erzincan**	**2.05**	**21**	*e*PN	Pb	11 30 57.4	+0.2
EZC	**Erzincan**	**2.13**	**12**	*e*Pn	Pb	11 30 57.4	-1.1
BTMT	**Batman**	**2.21**	**76**	*e*PN	Pn	11 30 56.7	+0.2
BTMT	**Batman**	**2.21**	**76**	*e*Pn	Pn	11 30 56.7	+0.2
COBT	**Iskenderun**	**2.31**	**241**	*i* P	Pb	11 31 03.0	+1.4
COBT				*i* S	Sb	11 31 31.3	+1.1
COBT	**Iskenderun**	**2.31**	**241**	*i* P	Pb	11 31 03.0	+1.4
COBT				*i* S	Sb	11 31 31.3	+1.1
KOZT	**Kozan**	**2.34**	**266**	*e*PN	Pb	11 31 00.4	-1.6
KOZT	**Kozan**	**2.34**	**266**	*e*Pn	Pb	11 31 00.4	-1.6
MZRK	**Al-Mazaregh**	**2.38**	**140**	*e*P	Pn	11 30 59.3	+0.6
MZRK				*e*S	Sn	11 31 25.9	-1.8
MZRK				AML	AML	11 31 35.6	
	comp=Z,52nm,0.5s						
MZRK	**Al-Mazaregh**	**2.38**	**140**	*e*P	Pn	11 30 59.3	+0.6
	SNR=45						
BNN	**Bunyan**	**2.58**	**298**	*e*PN	Pn	11 31 03.5	+1.9
BNN	**Bunyan**	**2.58**	**298**	*e*Pn	Pn	11 31 03.5	+1.9

IDC 13 11:33:49.5±57.0, 21.49S×177.85W, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.6/18, mbtmp3.9/3, Error ellipse: s-maj=1037.0km s-min=154.6km az=84.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.50**	**245**	P	P	11 41 04.8	-0.4
	1.2nm,0.5s,baz=93,slow=11,SNR=8.8						
ASAR	**Alice Springs**	**44.44**	**258**	P	P	11 42 02.8	+0.2
	1.1nm,0.8s,baz=93,slow=7.4,SNR=18						
WRA	**Warramunga Arr**	**44.61**	**263**	P	P	11 42 03.7	-0.3
	1.0nm,0.7s,baz=100,slow=8.4,SNR=9.7						

ISCJB ***13*** *11:39:56.5±0.3, 39.53N±0.02×16.32E±0.04, h13km, mb3.6/6, MS3.2/1, Error ellipse: s-maj=4.3km s-min=2.8km

	814nm,0.6s								
PLAC	**Placanica**	**1.08**	**176**	Pg	**Pb**	**11**	**40**	**18.6**	**-0.5**
	814nm,0.6s								
CMPR	**Campora**	**1.12**	**315**	Pg	**Pb**	**11**	**40**	**18.3**	**-1.5**
	421nm,0.6s								
CMPR	**Campora**	**1.12**	**315**	Pg	**Pb**	**11**	**40**	**18.3**	**-1.5**
	421nm,0.6s								
MATE	**Matera**	**1.15**	**14**	Pg	**Pb**	**11**	**40**	**18.5**	**-1.7**
	451nm,0.7s								
MATE	**Matera**	**1.15**	**14**	Pg	**Pb**	**11**	**40**	**18.5**	**-1.7**
	451nm,0.7s								
CDRU	**Civita di Ruta**	**1.25**	**321**	Pg	**Pn**	**11**	**40**	**20.6**	**-1.1**
	318nm,0.8s								
CDRU	**Civita di Ruta**	**1.25**	**321**	Pg	**Pn**	**11**	**40**	**20.6**	**-1.1**
	318nm,0.8s								
ACER	**Acerenza**	**1.29**	**346**	Pg	**Pn**	**11**	**40**	**21.1**	**-1.2**
	1um,0.6s								
ACER	**Acerenza**	**1.29**	**346**	Pg	**Pn**	**11**	**40**	**21.1**	**-1.2**
	1um,0.6s								
MSCL	**Scilla**	**1.37**	**199**	Pg	**Pn**	**11**	**40**	**22.1**	**-1.2**
MSCL	**Scilla**	**1.37**	**199**	Pg	**Pn**	**11**	**40**	**22.1**	**-1.2**
NOCI	**Noci**	**1.37**	**23**	Pg	**Pn**	**11**	**40**	**22.7**	**-0.6**
	495nm,0.8s								
NOCI	**Noci**	**1.37**	**23**	Pg	**Pn**	**11**	**40**	**22.7**	**-0.6**
	495nm,0.8s								
AMUR	**Altamura**	**1.39**	**8**	Pg	**Pn**	**11**	**40**	**23.6**	**0.0**
AMUR	**Altamura**	**1.39**	**8**	Pg	**Pn**	**11**	**40**	**23.6**	**0.0**
MRLC	**Muro Lucano**	**1.39**	**332**	Pg	**Pg**	**11**	**40**	**25.4**	**+0.2**
	428nm,0.8s								
MRLC	**Muro Lucano**	**1.39**	**332**	Pg	**Pg**	**11**	**40**	**25.4**	**+0.2**
	428nm,0.8s								
MSRU	**Castanea**	**1.42**	**207**	Pg	**Pn**	**11**	**40**	**22.5**	**-1.5**
	838nm,0.5s								
MSRU	**Castanea**	**1.42**	**207**	Pg	**Pn**	**11**	**40**	**22.5**	**-1.5**
	838nm,0.5s								
PALZ	**Palazzo San Ge**	**1.44**	**348**	Pg	**Pb**	**11**	**40**	**25.3**	**+0.1**
PALZ	**Palazzo San Ge**	**1.44**	**348**	Pg	**Pb**	**11**	**40**	**25.3**	**+0.1**
SOI	**Samo**	**1.47**	**189**	Pg	**Pn**	**11**	**40**	**24.2**	**-0.5**
	284nm,0.6s								
SOI	**Samo**	**1.47**	**189**	Pg	**Pn**	**11**	**40**	**24.2**	**-0.5**
	284nm,0.6s								
MRVN	**Minervino Murg**	**1.53**	**356**	Pg	**Pn**	**11**	**40**	**25.8**	**+0.2**
	195nm,0.7s								
MRVN	**Minervino Murg**	**1.53**	**356**	Pg	**Pn**	**11**	**40**	**25.8**	**+0.2**
	195nm,0.7s								
MPAZ	**Palizzi**	**1.60**	**190**	Pg	**Pn**	**11**	**40**	**26.1**	**-0.3**
MPAZ	**Palizzi**	**1.60**	**190**	Pg	**Pn**	**11**	**40**	**26.1**	**-0.3**
MTTG	**Motta San Giov**	**1.61**	**199**	Pg	**Pn**	**11**	**40**	**25.5**	**-1.1**
MTTG	**Motta San Giov**	**1.61**	**199**	Pg	**Pn**	**11**	**40**	**25.5**	**-1.1**
MMME	**Mongiuffi-Meli**	**1.81**	**208**	Pg	**Pn**	**11**	**40**	**28.2**	**-1.2**
	302nm,0.5s								
MMME	**Mongiuffi-Meli**	**1.81**	**208**	Pg	**Pn**	**11**	**40**	**28.2**	**-1.2**
	302nm,0.5s								
PDG	**Podgorica**	**3.64**	**36**	*e*Pn	**Pn**	**11**	**40**	**54.5**	**0.0**
IVAS	**Ivanjica**	**4.95**	**34**	*e*Pn	**Pn**	**11**	**41**	**12.0**	**-0.5**
ITM	**Ithomi**	**4.98**	**116**	*e*PB	**Pn**	**11**	**41**	**13.9**	**+1.0**
ITM	**Ithomi**	**4.98**	**116**	*e*Pb	**Pn**	**11**	**41**	**13.9**	**+1.0**
PYL	**PYLOS**	**5.00**	**120**	*e*PB	**Pn**	**11**	**41**	**12.9**	**-0.3**
PYL	**PYLOS**	**5.00**	**120**	*e*Pb	**Pn**	**11**	**41**	**12.9**	**-0.3**
SELS	**Selova**	**5.15**	**43**	*e*Pn	**Pn**	**11**	**41**	**15.9**	**+0.7**
BARS	**Barje**	**5.27**	**50**	*e*Pn	**Pn**	**11**	**41**	**19.5**	**+2.6**
DIVS	**Divibare**	**5.32**	**30**	*e*Pn	**Pn**	**11**	**41**	**17.8**	**+0.2**
GRUS	**Gruza**	**5.45**	**36**	*e*Pn	**Pn**	**11**	**41**	**19.5**	**+0.2**
DYR	**Agios Nikonas**	**5.47**	**118**	*e*PN	**Pn**	**11**	**41**	**18.9**	**-0.8**
DYR	**Agios Nikonas**	**5.47**	**118**	*e*Pn	**Pn**	**11**	**41**	**18.9**	**-0.8**
TRUS	**Trudelj**	**5.58**	**32**	*e*Pn	**Pn**	**11**	**41**	**20.8**	**-0.4**
VLI	**Veliai**	**5.91**	**116**	*e*PN	**Pn**	**11**	**41**	**26.8**	**+1.2**
VLI	**Veliai**	**5.91**	**116**	*e*Pn	**Pn**	**11**	**41**	**26.8**	**+1.2**
ZAPS	**Zavoj**	**6.03**	**50**	*e*Pn	**Pn**	**11**	**41**	**29.4**	**+2.1**
ZAPS				*e*Sn	Sn	11	42	24.9	-11
KYTH	**Kithira**	**6.21**	**119**	*e*PN	**Pn**	**11**	**41**	**30.6**	**+0.8**
KYTH	**Kithira**	**6.21**	**119**	*e*Pn	**Pn**	**11**	**41**	**30.6**	**+0.8**
DAVOX	**Davos/Dischmat**	**8.65**	**329**	Pn	**Pn**	**11**	**42**	**04.4**	**+1.1**
	0.1nm,0.3s,baz=156,slow=19,SNR=2.6								
GERES	**GERESS Array B**	**9.50**	**349**	Pn	**Pn**	**11**	**42**	**16.1**	**+1.1**
	0.1nm,0.3s,baz=150,slow=14,SNR=4.2								
GERES				Sn	Sn	11	43	54.2	-7.5
	0.1nm,0.3s,baz=159,slow=23,SNR=2.2								
HFS	**Hagfors**	**20.69**	**356**	P	**P**	**11**	**44**	**38.7**	**+0.7**
	1.6nm,0.7s,baz=122,slow=11,SNR=5.5								
NOA	**NORSAR Array B**	**21.77**	**353**	P	**P**	**11**	**44**	**51.4**	**+1.7**
	0.7nm,0.8s,baz=170,slow=11,SNR=2.8								
FINES	**FINESS Array B**	**22.75**	**12**	P	**P**	**11**	**45**	**00.9**	**+0.9**
	3.9nm,1.1s,baz=190,slow=7.9,SNR=4.5								
TORD	**Torodi Ar. Bea**	**29.29**	**210**	P	**P**	**11**	**46**	**02.1**	**+1.6**
	0.4nm,0.6s,baz=24,slow=9.6,SNR=5.2								
TORD				LR	LR	11	58	09.6	
	comp=Z,58nm,20.9s,baz=260,slow=37								
ZALV	**Zalesovo Beam**	**47.23**	**49**	P	**P**	**11**	**48**	**30.4**	**-0.4**
	0.4nm,0.3s,baz=283,slow=7.2,SNR=5.0								
MKAR	**Makanchi Array**	**47.38**	**59**	P	**P**	**11**	**48**	**32.5**	**+0.4**
	1.1nm,1.0s,baz=272,slow=7.2,SNR=5.1								
SONM	**Songino Array**	**62.10**	**50**	P	**P**	**11**	**50**	**19.7**	**+0.8**
	0.3nm,0.6s,baz=299,slow=6.5,SNR=2.7								

TAP ***13*** *12:21:28.5, 25°.21N×122°.91E, h192km, ML4.0, C*
ISCJB ***13*** *12:21:29.4±0.8, 25°.16N±0°.06×122°.79E±0°.03, h188km±6km, Error ellipse: s-maj=10.2km s-min=4.1km az=168.9*
JMA ***13*** *12:21:30.0±0.3, 25°.32N×122°.78E, h177km, M3.1*

ISC 13 12:21:28.1±1.9, 25°.23N±0°.08×122°.78E±0°.04, h198km±12km, n33, σ0.84/64, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
TWB1	**Santiao Chiao**	**0.76**	**253**	P	**Pn**	**12**	**21**	**56.9**	**+0.7**
	baz=263								
TWB1				*e*S	**Sn**	**12**	**22**	**17.6**	**-0.1**
	baz=263								
YOJ	**Yonaguni jima**	**0.80**	**165**	P	**Pn**	**12**	**21**	**56.6**	**+0.2**
NWF	**Wu-fen Shan**	**0.92**	**260**	P	**Pn**	**12**	**21**	**58.1**	**+0.8**
	baz=264								
NWF				S	**Sn**	**12**	**22**	**19.8**	**+0.1**
	baz=264								
TWC	**Suao**	**1.05**	**234**	*e*P	**Pn**	**12**	**21**	**58.3**	**+0.2**
	baz=231								
TWC				*e*S	**Sn**	**12**	**22**	**19.9**	**-1.2**
	baz=231								
TWE	**Neicheng**	**1.14**	**243**	*e*P	**Pn**	**12**	**21**	**58.2**	**-0.4**
	baz=246								
TWE				*e*S	**Sn**	**12**	**22**	**22.1**	**-0.1**
	baz=246								
IRIF	**Iriomote-Funau**	**1.24**	**136**	P	**Pn**	**12**	**21**	**59.8**	**+0.4**
IRIF				S	**Sn**	**12**	**22**	**23.8**	**+0.1**
ENA	**Nanau**	**1.24**	**230**	*e*P	**Pn**	**12**	**22**	**00.0**	**+0.5**
	baz=230								
ENA				*e*S	**Sn**	**12**	**22**	**23.1**	**-0.5**
	baz=230								
ENTT	**Nioudou**	**1.25**	**242**	*e*P	**Pn**	**12**	**21**	**60.0**	**+0.4**
	baz=245								
ENTT				*e*S	**Sn**	**12**	**22**	**23.7**	**-0.1**
	baz=245								
NSK	**Sanguang**	**1.41**	**247**	*e*P	**Pn**	**12**	**22**	**01.4**	**+0.5**
	baz=249								
NSK				*e*S	**Sn**	**12**	**22**	**25.0**	**-1.3**
	baz=249								
JKRS	**Kuro-shima**	**1.49**	**131**	P	**Pn**	**12**	**22**	**02.5**	**+0.9**
JKRS				*e*S	**Sn**	**12**	**22**	**27.2**	**-0.2**
HATJ	**Hateruma jima**	**1.50**	**141**	P	**Pn**	**12**	**22**	**02.5**	**+0.9**
HATJ				S	**Sn**	**12**	**22**	**27.6**	**+0.1**
NNS	**Nan Shan**	**1.51**	**239**	*e*P	**Pn**	**12**	**22**	**02.8**	**+1.0**
	baz=248								
NNS				*e*S	**Sn**	**12**	**22**	**27.7**	**-0.2**
	baz=248								
JIJ	**Ishigaki jima**	**1.51**	**125**	P	**Pn**	**12**	**22**	**02.1**	**+0.4**
JIJ				S	**Sn**	**12**	**22**	**26.6**	**-1.1**
TWD	**Chiawan**	**1.58**	**224**	P	**Pn**	**12**	**22**	**02.6**	**+0.2**
	baz=225								
TWD				S	**Sn**	**12**	**22**	**27.9**	**-1.0**
	baz=225								
NSTT	**Nanjuang**	**1.73**	**250**	*e*P	**Pn**	**12**	**22**	**04.3**	**+0.6**
	baz=246								
NSTT				*e*S	**Sn**	**12**	**22**	**30.2**	**-1.1**
	baz=246								
WHF	**Hehuan Shan**	**1.76**	**232**	*e*S	**Sn**	**12**	**22**	**31.9**	**-0.8**
	baz=229								
TWT	**Tachien**	**1.76**	**237**	*e*P	**Pn**	**12**	**22**	**05.4**	**+1.1**
	baz=239								
TWT				*e*S	**Sn**	**12**	**22**	**32.3**	**+0.1**
	baz=239								
JTJ	**Tarama**	**1.84**	**108**	P	**Pn**	**12**	**22**	**05.7**	**+0.9**
JTJ				*e*S	**Sn**	**12**	**22**	**33.1**	**-0.2**
ESL	**Shilin**	**1.88**	**221**	*e*P	**Pn**	**12**	**22**	**05.0**	**-0.2**
	baz=230								
ESL				*e*S	**Sn**	**12**	**22**	**31.8**	**-2.2**
	baz=230								
TWQ1	**Liyutan**	**2.03**	**245**	*e*P	**Pn**	**12**	**22**	**07.2**	**+0.4**
	baz=246								
TWQ1				*e*S	**Sn**	**12**	**22**	**35.8**	**-1.0**
	baz=246								
EHY	**Hungye**	**2.18**	**218**	*e*P	**Pn**	**12**	**22**	**08.4**	**0.0**
	baz=220								
EHY				*e*S	**Sn**	**12**	**22**	**38.4**	**-1.3**
	baz=220								
SMLT	**Sun Moon Lake**	**2.18**	**232**	*e*P	**Pn**	**12**	**22**	**09.2**	**+0.7**
	baz=239								
SMLT				*e*S	**Sn**	**12**	**22**	**40.1**	**+0.2**
	baz=239								
TYC	**Yuchr**	**2.20**	**233**	P	**Pn**	**12**	**22**	**09.4**	**+0.9**
	baz=235								
TYC				S	**Sn**	**12**	**22**	**40.0**	**0.0**
	baz=235								
TWF1	**Yuli**	**2.31**	**216**	*e*P	**Pn**	**12**	**22**	**10.0**	**+0.1**
	baz=224								
TWF1				*e*S	**Sn**	**12**	**22**	**41.2**	**-1.1**
	baz=224								
JOGS	**Gusukube**	**2.43**	**101**	P	**Pn**	**12**	**22**	**12.6**	**+1.6**
JOGS				*e*S	**Sn**	**12**	**22**	**44.4**	**0.0**
CHKT	**Chengkung**	**2.49**	**212**	*e*P	**Pn**	**12**	**22**	**10.9**	**-0.9**
	baz=207								
CHKT				*e*S	**Sn**	**12**	**22**	**45.3**	**-0.5**
	baz=207								
ALS	**Alishan**	**2.49**	**227**	*e*P	**Pn**	**12**	**22**	**13.1**	**+0.9**
	baz=224								
ALS				*e*S	**Sn**	**12**	**22**	**46.2**	**-0.1**
	baz=224								
CHN5	**Tsauling**	**2.52**	**230**	*e*P	**Pn**	**12**	**22**	**13.3**	**+1.1**
	baz=232								
CHN5				S	**Sn**	**12**	**22**	**46.4**	**-0.1**
	baz=232								
ELDTW	**Lidau**	**2.60**	**219**	*e*P	**Pn**	**12**	**22**	**13.7**	**+0.5**
	baz=220								
ELDTW				*e*S	**Sn**	**12**	**22**	**47.2**	**-1.0**
	baz=220								
CHN4	**Tsaushan**	**2.74**	**227**	*e*P	**Pn**	**12**	**22**	**15.5**	**+0.9**
	baz=236								
CHN4				*e*S	**Sn**	**12**	**22**	**50.8**	**-0.2**
	baz=236								
WTP	**Ta-pu**	**2.80**	**225**	*e*P	**Pn**	**12**	**22**	**16.8**	**+1.4**
	baz=235								
WTP				*e*S	**Sn**	**12**	**22**	**51.6**	**-0.7**
	baz=235								
CHN1	**Nanshi**	**2.90**	**226**	*e*P	**Pn**	**12**	**22**	**17.3**	**+0.8**
	baz=234								
CHN1				*e*S	**Sn**	**12**	**22**	**54.0**	**-0.3**
	baz=234								
JKE	**Kume jima 2**	**3.77**	**72**	P	**Pn**	**12**	**22**	**27.0**	**+0.1**
JKE				*e*S	**Sn**	**12**	**23**	**10.5**	**-2.5**

IDC 13 12:30:12.8±1.5, 1°.69N×99°.68E, h171km±16km, mb3.2/5, mb1 3.3/5, mb1mx3.1/25, mbtmp3.2/5, Error ellipse: s-maj=124.9km s-min=16.3km az=58.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
PSI	**Prapat**	**1.34**	**326**	P	Pn	12	30	41.8	-0.8
	3.5nm,0.3s,baz=347,slow=15,SNR=15								
PSI				S	Sn	12	31	04.3	-1.4
	0.8nm,0.3s,baz=190,slow=11,SNR=9.0								
WRA	**Warramunga Arr**	**40.22**	**124**	P	P	12	37	32.6	-0.4
	1.2nm,0.4s,baz=304,slow=9.0,SNR=36								
ASAR	**Alice Springs**	**41.75**	**129**	P	P	12	37	45.6	+0.1
	0.1nm,0.4s,baz=302,slow=7.8,SNR=6.2								
SONM	**Songino Array**	**46.33**	**6**	P	P	12	38	22.2	+0.5
	0.4nm,0.5s,baz=188,slow=8.7,SNR=3.4								
MKAR	**Makanchi Array**	**47.42**	**344**	P	P	12	38	29.8	-0.1
	0.3nm,0.3s,baz=155,slow=8.3,SNR=6.4								
ZALV	**Zalesovo Beam**	**53.51**	**349**	P	P	12	39	14.9	-0.5
	0.6nm,0.4s,baz=162,slow=5.5,SNR=4.7								

NEIC ***13*** *12:49:01.0, 19°.37N×65°.06W, h18km, MD3.2(RSPR), After RSPR.*

RSPR 13 12:49:01.0, 19°.37N×65°.06W, h18km±14km, MD3.2/7, 18C-11D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
STVI	**Saint Thomas**	**1.01**	**174**	*e*P	Pb	12	49	17.1	-2.9
STVI	**Saint Thomas**	**1.01**	**174**	*e*P	Pb	12	49	17.2	-2.8
STVI				*e*S	Sb	12	49	30.2	-2.9
STVI	**Saint Thomas**	**1.01**	**174**	*e*P	Pb	12	49	17.1	-2.9
STVI				*e*S	Sb	12	49	30.2	-2.9
STVI	**Saint Thomas**	**1.01**	**174**	*e*P	Pb	12	49	17.1	-2.9
STVI	**Saint Thomas**	**1.01**	**174**	*e*P	Pb	12	49	17.2	-2.8
STVI				*e*S	Sb	12	49	30.2	-2.9
STVI				*e*S	Sg	12	49	30.9	-3.2
TBVI	**Tortola**	**1.03**	**156**	*e*P	Pb	12	49	18.5	-1.9
TBVI	**Tortola**	**1.03**	**156**	*e*P	Pb	12	49	18.5	-1.9
TBVI	**Tortola**	**1.03**	**156**	*e*P	Pb	12	49	18.5	-1.9
CBYP	**Canovanas**	**1.32**	**215**	*e*P	Pn	12	49	21.8	-2.9
CBYP	**Canovanas**	**1.32**	**215**	*e*S	Sn	12	49	38.5	-3.5
CBYP	**Canovanas**	**1.32**	**215**	*e*P	Pn	12	49	21.8	-2.9
CBYP				*e*S	Sn	12	49	38.5	-3.5
CBYP	**Canovanas**	**1.32**	**215**	*e*P	Pn	12	49	21.8	-2.9
CBYP				*e*S	Sn	12	49	38.5	-3.5
MTP	**Monte Pirata**	**1.34**	**200**	*e*P	Pn	12	49	21.9	-3.0
MTP	**Monte Pirata**	**1.34**	**200**	*e*S	Sn	12	49	39.1	-3.3
MTP	**Monte Pirata**	**1.34**	**200**	*e*P	Pn	12	49	21.9	-3.0
MTP				*e*S	Sn	12	49	39.1	-3.3
MTP	**Monte Pirata**	**1.34**	**200**	*e*P	Pn	12	49	21.9	-3.0
MTP				*e*S	Sn	12	49	39.6	-2.7
HUMP	**Col San Antoni**	**1.43**	**212**	*e*S	Sn	12	49	40.4	-4.0
HUMP	**Col San Antoni**	**1.43**	**212**	*e*S	Sn	12	49	40.4	-4.0
CPD	**Cerro la Pandu**	**1.55**	**212**	*e*P	Pn	12	49	24.4	-3.4
CPD	**Cerro la Pandu**	**1.55**	**212**	*e*S	Sn	12	49	44.3	-3.1
CPD	**Cerro la Pandu**	**1.55**	**212**	*e*P	Pn	12	49	24.4	-3.4
CPD				*e*S	Sn	12	49	44.3	-3.1
CPD	**Cerro la Pandu**	**1.55**	**212**	*e*P	Pn	12	49	24.4	-3.4
CPD				*e*S	Sn	12	49	44.3	-3.1
CDVI	**St. Croix**	**1.63**	**170**	*e*P	Pn	12	49	28.8	0.0
CDVI	**St. Croix**	**1.63**	**170**	*e*P	Pn	12	49	28.8	0.0
CDVI	**St. Croix**	**1.63**	**170**	*e*P	Pn	12	49	28.8	0.0
AOPR	**Arecibo Observ**	**1.90**	**238**	*e*P	Pn	12	49	30.0	-2.5
AOPR	**Arecibo Observ**	**1.90**	**238**	*e*S	Sn	12	49	51.8	-4.2
AOPR	**Arecibo Observ**	**1.90**	**238**	*e*P	Pn	12	49	30.0	-2.5
AOPR				*e*S	Sn	12	49	51.8	-4.2
AOPR	**Arecibo Observ**	**1.90**	**238**	*e*P	Pn	12	49	30.0	-2.5
AOPR				*e*S	Sn	12	49	51.8	-4.2
CELP	**Cerrillos**	**1.93**	**228**	*e*P	Pn	12	49	30.4	-2.5
CELP				*e*S	Sn	12	49	53.5	-3.2
CELP	**Cerrillos**	**1.93**	**228**	*e*P	Pn	12	49	30.4	-2.5
CELP				*e*S	Sn	12	49	53.5	-3.2
CELP	**Cerrillos**	**1.93**	**228**	*e*P	Pn	12	49	30.4	-2.5
CELP				*e*S	Sn	12	49	53.5	-3.2
CRPR	**Cabo Rojo, PR**	**2.37**	**235**	*e*P	Pn	12	49	37.2	-1.7
CRPR	**Cabo Rojo, PR**	**2.37**	**235**	*e*P	Pn	12	49	37.2	-1.7
CRPR	**Cabo Rojo, PR**	**2.37**	**235**	*e*P	Pn	12	49	37.2	-1.7

ISCJB ***13*** *13:04:30.4±1.0, 35°.45N±0°.05×27°.23E±0°.04, h2km±6km, Error ellipse: s-maj=8.2km s-min=4.3km az=159.6*
ISK ***13*** *13:04:31.6, 35°.58N×27°.07E, h8km, MD3.0*
ATH ***13*** *13:04:31.1, 35°.49N×27°.14E, h5km, MD3.5/8*
CSEM ***13*** *13:04:32.4±0.3, 35°.54N×27°.23E, h2km, MD3.5, Error ellipse: s-maj=9.8km s-min=3.9km az=165.0*
DDA ***13*** *13:04:44.6, 36°.11N×28°.01E, h30km, MD3.1*

ISC 13 13:04:31.1±1.4, 35°.48N±0°.05×27°.21E±0°.03, h2km±9km, n49, σ1.19/66, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
KARP	**Karpathos**	**0.08**	**331**	*e*PG	**Pg**	**13**	**04**	**32.5**	**-0.2**
KARP				*e*SG	**Sg**	**13**	**04**	**33.8**	**0.0**
KARP	**Karpathos**	**0.08**	**331**	*e*Pg	**Pg**	**13**	**04**	**32.5**	**-0.2**
KARP				*e*Sg	**Sg**	**13**	**04**	**33.8**	**0.0**
ARG	**Arkhangelos**	**1.05**	**45**	*e*PB	**Pg**	**13**	**04**	**51.6**	**+0.4**
ARG				*e*SB	**Sn**	**13**	**05**	**06.7**	**-1.3**
ARG	**Arkhangelos**	**1.05**	**45**	*e*Pb	**Pg**	**13**	**04**	**51.6**	**+0.4**
ARG				*e*Sb	**Sn**	**13**	**05**	**06.7**	**-1.3**
DAT	**Datca**	**1.28**	**13**	*e*PN	**Pg**	**13**	**04**	**55.5**	**-0.2**
DAT				*e*SN	**Sb**	**13**	**05**	**12.4**	**-0.6**
DAT	**Datca**	**1.28**	**13**	*e*Pn	**Pg**	**13**	**04**	**55.5**	**-0.2**
DAT				*e*Sn	**Sb**	**13**	**05**	**12.4**	**-0.6**
NPS	**Neapolis**	**1.32**	**261**	*e*PG	**Pn**	**13**	**04**	**54.8**	**-1.8**
NPS				*e*SB	**Sg**	**13**	**05**	**11.9**	**-1.7**
XRY	**Khrisi**	**1.38**	**245**	*e*PB	**Pn**	**13**	**04**	**56.1**	**-1.2**
BODT	**Bodrum**	**1.58**	**3**	*e*PN	**Pn**	**13**	**04**	**59.4**	**-0.7**
BODT	**Bodrum**	**1.58**	**3**	*e*Pn	**Pn**	**13**	**04**	**59.4**	**-0.7**
TURN	**Turunc**	**1.79**	**39**	*i* P	Pn	13	04	59.0	-4.0
TURN				*i* S	Sn	13	05	19.0	-7.3
TURN	**Turunc**	**1.79**	**39**	*i* P	Pn	13	04	59.0	-4.0
YER	**Yerkesik**	**1.87**	**27**	*e*PN	**Pn**	**13**	**05**	**04.5**	**+0.4**
YER				*e*SN	**Sn**	**13**	**05**	**28.2**	**-0.1**
YER	**Yerkesik**	**1.87**	**27**	*e*Pn	**Pn**	**13**	**05**	**04.5**	**+0.4**
YER				*e*Sn	**Sn**	**13**	**05**	**28.2**	**-0.1**
MLSB	**Milas**	**1.87**	**14**	*e*PN	**Pn**	**13**	**05**	**03.9**	**-0.2**
MLSB	**Milas**	**1.87**	**14**	*e*Pn	**Pn**	**13**	**05**	**03.9**	**-0.2**
APE	**Apeiranthos**	**2.09**	**320**	*e*PN	**Pn**	**13**	**05**	**05.6**	**-1.6**
APE				*e*SN	**Sn**	**13**	**05**	**30.5**	**-3.2**
APE	**Apeiranthos**	**2.09**	**320**	*e*PN	**Pn**	**13**	**05**	**08.1**	**+1.0**
APE				*e*SN	**Sb**	**13**	**05**	**35.9**	**-0.2**
APE	**Apeiranthos**	**2.09**	**320**	*e*Pn	**Pn**	**13**	**05**	**08.1**	**+1.0**
APE				*e*Sn	**Sb**	**13**	**05**	**35.9**	**-0.2**
AYDN	**Tasoluk**	**2.25**	**14**	*e*P	**Pb**	**13**	**05**	**12.7**	**+0.3**
AYDN	**Tasoluk**	**2.25**	**14**	*e*P	**Pb**	**13**	**05**	**12.7**	**+0.3**
VAM	**Vamos**	**2.46**	**269**	*e*PN	**Pn**	**13**	**05**	**13.6**	**+1.4**
VAM				*e*SN	**Sn**	**13**	**05**	**44.4**	**+1.6**
VAM	**Vamos**	**2.46**	**269**	*e*Pn	**Pn**	**13**	**05**	**13.6**	**+1.4**
VAM				*e*Sn	**Sn**	**13**	**05**	**44.4**	**+1.6**
GLHS	**Glhisar (BURDU**	**2.50**	**47**	*e*PN	**Pn**	**13**	**05**	**13.7**	**+0.9**
GLHS	**Glhisar (BURDU**	**2.50**	**47**	*e*Pn	**Pn**	**13**	**05**	**13.7**	**+0.9**
ELL	**Elmali**	**2.53**	**59**	*e*PN	**Pn**	**13**	**05**	**14.5**	**+1.3**
ELL	**Elmali**	**2.53**	**59**	*e*Pn	**Pn**	**13**	**05**	**14.5**	**+1.3**
GOLH	**Golhisar**	**2.59**	**47**	*i* P	Pn	13	05	14.8	+0.7
GOLH				*i* S	**Sb**	**13**	**05**	**51.3**	**+0.8**
GOLH	**Golhisar**	**2.59**	**47**	*i* P	Pn	13	05	14.8	+0.7
DNZL	**Cakiroluk**	**2.66**	**33**	*i* P	Pn	13	05	15.3	+0.2
DNZL				*i* S	**Sn**	**13**	**05**	**47.3**	**-0.7**
DNZL	**Cakiroluk**	**2.66**	**33**	*i* P	Pn	13	05	15.3	+0.2
DNZL				*i* S	**Sn**	**13**	**05**	**47.3**	**-0.7**
DENT	**Denizli**	**2.71**	**32**	*e*PN	**Pn**	**13**	**05**	**17.1**	**+1.5**
DENT	**Denizli**	**2.71**	**32**	*e*Pn	**Pn**	**13**	**05**	**17.1**	**+1.5**
KORT	**Korkueli**	**2.96**	**58**	*e*P	**Pn**	**13**	**05**	**21.6**	**+2.4**
KORT	**Korkueli**	**2.96**	**58**	*e*P	**Pn**	**13**	**05**	**21.6**	**+2.4**
KHAL	**Karahalli**	**3.42**	**32**	*i* P	Pn	13	05	25.8	+0.3
KHAL	**Karahalli**	**3.42**	**32**	*i* P	Pn	13	05	25.8	+0.3
KYTH	**Kithira**	**3.48**	**285**	*e*PN	**Pn**	**13**	**05**	**27.4**	**+1.1**
KYTH	**Kithira**	**3.48**	**285**	*e*Pn	**Pn**	**13**	**05**	**27.4**	**+1.1**
DID	**Didima**

ellipse: s-maj=1.1km s-min=0.8km az=66.0
*IDC **13** 13:36:05.3±1.2, 42°.56N×13°.29E, h0km, mb3.6/6, mb1 3.7/9, mb1mx3.6/29, mbtmp3.5/9, ML3.4/3, Error ellipse: s-maj=22.2km s-min=15.0km az=86.0*
*PRU **13** 13:36:06.1, 42°.51N×13°.40E, h0km*
*LDG **13** 13:36:07.7±1.0, 42°.46N×13°.36E, h2km, Ml3.3/6, Error ellipse: s-maj=21.3km s-min=11.3km az=98.0*

ISC 13 13:36:06.1±0.7, **42°.46N**±0°.02×**13°.43E**±0°.02, **h8**km±4km, **n190**, σ1**§31**/244, **mb3.8**/5, **14C-14D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.08**	**350**	Pg	**Pg**		**13 36 08.1**	**-0.3**
CAMP				Sg	**Sg**		**13 36 09.9**	**-0.1**
CAMP	**Campotosto**	**0.08**	**350**	Pg	**Pg**		**13 36 08.1**	**-0.3**
CAMP				Sg	**Sg**		**13 36 09.9**	**-0.1**
AQU	**L'Aquila**	**0.10**	**191**	Pg	**Pg**		**13 36 08.1**	**-0.6**
AQU				Sg	**Sg**		**13 36 10.1**	**-0.3**
AQU	**L'Aquila**	**0.10**	**191**	Pg	**Pg**		**13 36 08.1**	**-0.6**
AQU				Sg	**Sg**		**13 36 10.1**	**-0.3**
TERO	**Teramo**	**0.21**	**38**	↑*i*Pg	**Pg**		**13 36 09.8**	**-0.7**
TERO				Sg	**Sg**		**13 36 13.1**	**-0.3**
TERO	**Teramo**	**0.21**	**38**	↑*i*Pg	**Pg**		**13 36 09.8**	**-0.7**
TERO				Sg	**Sg**		**13 36 13.1**	**-0.3**
FAGN	**Fagnano**	**0.22**	**149**	Pg	**Pg**		**13 36 10.0**	**-0.7**
FAGN				Sg	**Sg**		**13 36 12.9**	**-0.8**
FAGN	**Fagnano**	**0.22**	**149**	Pg	**Pg**		**13 36 10.0**	**-0.7**
FAGN				Sg	**Sg**		**13 36 12.9**	**-0.8**
FIAM	**Fiamignano**	**0.30**	**231**	↑*i*Pg	**Pg**		**13 36 11.5**	**-0.6**
FIAM				Sg	**Sg**		**13 36 16.3**	**+0.2**
FIAM	**Fiamignano**	**0.30**	**231**	↑*i*Pg	**Pg**		**13 36 11.5**	**-0.6**
FIAM				Sg	**Sg**		**13 36 16.3**	**+0.2**
VCEL	**Villa Celiera**	**0.31**	**101**	Pg	**Pg**		**13 36 11.6**	**-0.8**
VCEL				Sg	**Sg**		**13 36 16.6**	**+0.1**
VCEL	**Villa Celiera**	**0.31**	**101**	Pg	**Pg**		**13 36 11.6**	**-0.8**
VCEL				Sg	**Sg**		**13 36 16.6**	**+0.1**
LNSS	**Leonessa**	**0.32**	**297**	Pg	**Pg**		**13 36 12.3**	**-0.3**
LNSS				Sg	**Sg**		**13 36 17.9**	**+1.1**
LNSS	**Leonessa**	**0.32**	**297**	Pg	**Pg**		**13 36 12.3**	**-0.3**
LNSS				Sg	**Sg**		**13 36 17.9**	**+1.1**
PTQR	**Pietraquaria**	**0.43**	**183**	Pg	**Pg**		**13 36 13.6**	**-1.0**
PTQR				Sg	**Sg**		**13 36 21.1**	**+0.7**
PTQR	**Pietraquaria**	**0.43**	**183**	Pg	**Pg**		**13 36 13.6**	**-1.0**
PTQR				Sg	**Sg**		**13 36 21.1**	**+0.7**
NRCA	**Norcia**	**0.44**	**328**	Pg	**Pg**		**13 36 14.2**	**-0.6**
NRCA				Sg	**Sg**		**13 36 21.3**	**+0.7**
NRCA	**Norcia**	**0.44**	**328**	Pg	**Pg**		**13 36 14.2**	**-0.6**
NRCA				Sg	**Sg**		**13 36 21.3**	**+0.7**
GAVE	**Gavelli**	**0.46**	**301**	Pg	**Pg**		**13 36 14.9**	**-0.2**
GAVE	**Gavelli**	**0.46**	**301**	Pg	**Pg**		**13 36 14.9**	**-0.2**
TRTR	**Tortoreto Alta** 25μm,0.6s	**0.50**	**45**	Pg	**Pg**		**13 36 16.2**	**+0.3**
TRTR	**Tortoreto Alta** 25μm,0.6s	**0.50**	**45**	Pg	**Pg**		**13 36 16.2**	**+0.3**
MNS	**Montasola**	**0.56**	**263**	Pg	**Pg**		**13 36 16.0**	**-1.0**
MNS	**Montasola**	**0.56**	**263**	Pg	**Pg**		**13 36 16.0**	**-1.0**
INTR	**Introdacqua**	**0.57**	**141**	Pg	**Pg**		**13 36 15.9**	**-1.2**
INTR				Sg	**Sg**		**13 36 24.3**	**-0.3**
INTR	**Introdacqua**	**0.57**	**141**	Pg	**Pg**		**13 36 15.9**	**-1.2**
INTR				Sg	**Sg**		**13 36 24.3**	**-0.3**
VVLD	**Villa Vallelon**	**0.60**	**166**	Pg	**Pg**		**13 36 16.7**	**-1.1**
VVLD	**Villa Vallelon**	**0.60**	**166**	Pg	**Pg**		**13 36 16.7**	**-1.1**
CESX	**Cesi**	**0.65**	**284**	Pg	**Pg**		**13 36 17.6**	**-1.0**
CESX	**Cesi**	**0.65**	**284**	Pg	**Pg**		**13 36 17.6**	**-1.0**
GUAR	**Guarcino**	**0.67**	**187**	Pg	**Pg**		**13 36 18.9**	**-0.1**
GUAR	**Guarcino**	**0.67**	**187**	Pg	**Pg**		**13 36 18.9**	**-0.1**
CESI	**CESI - Serrava**	**0.67**	**325**	Pg	**Pg**		**13 36 18.2**	**-0.9**
CESI	**CESI - Serrava**	**0.67**	**325**	Pg	**Pg**		**13 36 18.2**	**-0.9**
LPEL	**Lama dei Pelig**	**0.69**	**126**	Pg	**Pg**		**13 36 17.7**	**-1.8**
LPEL				Sg	**Sg**		**13 36 27.8**	**-0.8**
LPEL	**Lama dei Pelig**	**0.69**	**126**	Pg	**Pg**		**13 36 17.7**	**-1.8**
LPEL				Sg	**Sg**		**13 36 27.8**	**-0.8**
CAFR	**Castel Frentan** 4μm,0.7s	**0.72**	**108**	Pg	**Pg**		**13 36 18.9**	**-1.1**
CAFR	**Castel Frentan** 4μm,0.7s	**0.72**	**108**	Pg	**Pg**		**13 36 18.9**	**-1.1**
POFI	**Posta Fibreno**	**0.77**	**164**	Pg	**Pg**		**13 36 19.4**	**-1.5**
POFI	**Posta Fibreno**	**0.77**	**164**	Pg	**Pg**		**13 36 19.4**	**-1.5**
SDI	**San Donato**	**0.80**	**159**	Pg	**Pg**		**13 36 20.7**	**-0.8**
SDI	**San Donato**	**0.80**	**159**	Pg	**Pg**		**13 36 20.7**	**-0.8**
ASSB	**Assisi San Ben**	**0.81**	**316**	Pg	**Pg**		**13 36 20.9**	**-0.9**
ASSB	**Assisi San Ben**	**0.81**	**316**	Pg	**Pg**		**13 36 20.9**	**-0.9**
RMP	**Rome, Mte Porz** 3μm,0.5s	**0.84**	**220**	Pg	**Pg**		**13 36 21.8**	**-0.5**
RMP	**Rome, Mte Porz** 3μm,0.5s	**0.84**	**220**	Pg	**Pg**		**13 36 21.8**	**-0.5**
SNTG	**Esanatoglia**	**0.88**	**336**	Pg	**Pg**		**13 36 21.8**	**-1.2**
SNTG	**Esanatoglia**	**0.88**	**336**	Pg	**Pg**		**13 36 21.8**	**-1.2**
CING	**Cingoli**	**0.93**	**350**	Pg	**Pg**		**13 36 23.0**	**-1.1**
CING	**Cingoli**	**0.93**	**350**	Pg	**Pg**		**13 36 23.0**	**-1.1**
MIDA	**Miranda** 1μm,0.9s	**1.02**	**143**	Pg	**Pg**		**13 36 23.8**	**-1.9**
MIDA	**Miranda** 1μm,0.9s	**1.02**	**143**	Pg	**Pg**		**13 36 23.8**	**-1.9**
FRES	**Fresagrandinar** 3μm,1.9s	**1.04**	**117**	Pg	**Pg**		**13 36 24.3**	**-1.8**
FRES	**Fresagrandinar** 3μm,1.9s	**1.04**	**117**	Pg	**Pg**		**13 36 24.3**	**-1.8**
MURB	**Monte Urbino** 3μm,0.5s	**1.04**	**321**	Pg	**Pg**		**13 36 25.3**	**-0.9**
MURB	**Monte Urbino** 3μm,0.5s	**1.04**	**321**	Pg	**Pg**		**13 36 25.3**	**-0.9**
MGAB	**Montegabbione** 2μm,0.4s	**1.07**	**296**	Pg	**Pg**		**13 36 25.7**	**-1.0**
MGAB	**Montegabbione** 2μm,0.4s	**1.07**	**296**	Pg	**Pg**		**13 36 25.7**	**-1.0**
AOI	**Ancona** 2μm,1.0s	**1.10**	**7**	Pg	**Pg**		**13 36 26.4**	**-0.9**
AOI	**Ancona** 2μm,1.0s	**1.10**	**7**	Pg	**Pg**		**13 36 26.4**	**-0.9**
ARVD	**Arcevia** 767nm,0.6s	**1.10**	**341**	Pg	**Pg**		**13 36 25.8**	**-1.5**
ARVD	**Arcevia** 767nm,0.6s	**1.10**	**341**	Pg	**Pg**		**13 36 25.8**	**-1.5**
TOLF	**Tolfa** 2μm,0.6s	**1.13**	**250**	Pg	**Pg**		**13 36 26.9**	**-0.9**
TOLF	**Tolfa** 2μm,0.6s	**1.13**	**250**	Pg	**Pg**		**13 36 26.9**	**-0.9**
SACS	**San Casciano d** 436nm,0.7s	**1.19**	**290**	Pg	**Pb**		**13 36 28.1**	**-0.8**
PIEI	**Pieia** 592nm,0.8s	**1.26**	**329**	Pg	**Pn**		**13 36 29.1**	**-1.0**
PIEI	**Pieia** 592nm,0.8s	**1.26**	**329**	Pg	**Pn**		**13 36 29.1**	**-1.0**
FSSB	**Fossombrone** 2μm,0.4s	**1.32**	**339**	Pg	**Pn**		**13 36 30.1**	**-0.8**
FSSB	**Fossombrone** 2μm,0.4s	**1.32**	**339**	Pg	**Pn**		**13 36 30.1**	**-0.8**
BADI	**Badiali** 1μm,1.0s	**1.36**	**321**	Pn	**Pn**		**13 36 31.1**	**-0.4**
BADI	**Badiali** 1μm,1.0s	**1.36**	**321**	Pn	**Pn**		**13 36 31.1**	**-0.4**
CAFI	**Castiglion Fio** 743nm,0.7s	**1.38**	**310**	Pn	**Pn**		**13 36 31.5**	**-0.2**
CAFI	**Castiglion Fio** 743nm,0.7s	**1.38**	**310**	Pn	**Pn**		**13 36 31.5**	**-0.2**
PARC	**Parchiule** 752nm,0.8s	**1.48**	**324**	Pn	**Pn**		**13 36 33.2**	**+0.2**
PARC	**Parchiule** 752nm,0.8s	**1.48**	**324**	Pn	**Pn**		**13 36 33.2**	**+0.2**
ARCI	**Arcidosso**	**1.49**	**286**	Pn	**Pn**		**13 36 33.5**	**+0.2**
ARCI	**Arcidosso**	**1.49**	**286**	Pn	**Pn**		**13 36 33.5**	**+0.2**
PESA	**Pesaro** 1μm,0.7s	**1.54**	**344**	Pn	**Pb**		**13 36 35.0**	**0.0**
PESA	**Pesaro** 1μm,0.7s	**1.54**	**344**	Pn	**Pb**		**13 36 35.0**	**0.0**
MAON	**Monte Argentar**	**1.70**	**270**	Pn	**Pn**		**13 36 35.6**	**-0.5**
MAON	**Monte Argentar**	**1.70**	**270**	Pn	**Pn**		**13 36 35.6**	**-0.5**
CSNT	**Castellina Chi**	**1.87**	**304**	Pn	**Pn**		**13 36 38.9**	**+0.5**
CSNT	**Castellina Chi**	**1.87**	**304**	Pn	**Pn**		**13 36 38.9**	**+0.5**
CASP	**Castiglione de**	**1.92**	**281**	Pn	**Pn**		**13 36 38.7**	**-0.4**
CASP	**Castiglione de**	**1.92**	**281**	Pn	**Pn**		**13 36 38.7**	**-0.4**
MS1	**Monte Sant'Ang**	**2.02**	**111**	*e*Pn	**Pb**		**13 36 43.5**	**+0.5**
NVLJ	**Novalja**	**2.35**	**26**	*e*Pn	**Pn**		**13 36 45.3**	**+0.2**
NVLJ				Sn	**Sn**		**13 37 14.2**	**+0.2**
NVLJ	**Novalja**	**2.35**	**26**	*e*Pn	**Pn**		**13 36 45.2**	**+0.2**
NVLJ				Sn	**Sn**		**13 37 14.2**	**+0.2**
CDT	**Castel del Mon**	**2.53**	**122**	*e*Pn	**Pn**		**13 36 48.8**	**+1.3**
MAIM	**Mastiano**	**2.59**	**305**	P	**Pn**		**13 36 48.6**	**+0.2**
BAI	**Bari**	**2.91**	**116**	*e*Pn	**Pn**		**13 36 53.8**	**+1.1**
BAI				*e*Sn	**Sb**		**13 37 31.4**	**-2.6**
STON	**Ston**	**3.18**	**81**	*e*Pn	**Pn**		**13 36 56.5**	**+0.2**
STON				Sn	**Sn**		**13 37 34.6**	**+0.3**
STON	**Ston**	**3.18**	**81**	*e*Pn	**Pn**		**13 36 56.5**	**+0.2**
STON				Sn	**Sn**		**13 37 34.6**	**+0.3**
GBRS	**Gornja Briga**	**3.23**	**18**	*e*Pn	**Pn**		**13 36 57.7**	**+0.6**
GBRS	53nm,0.6s			*e*Sn	**Sn**		**13 37 35.7**	**-0.1**
PGF	**Pioggiola**	**3.28**	**273**	*e*Pn	**Pn**		**13 36 57.6**	**-0.2**
PGF	8.4nm,0.5s			*e*Sn	**Sn**		**13 37 37.7**	**+0.7**
PGF	**Pioggiola**	**3.28**	**273**	*e*Pn	**Pn**		**13 36 57.6**	**-0.2**
PGF	4.2nm,0.5s			*e*Sn	**Sn**		**13 37 37.7**	**+0.7**
BOJS	**Bojanci**	**3.32**	**23**	*e*Pn	**Pn**		**13 36 59.4**	**+1.0**
BOJS				*e*Sn	**Sn**		**13 37 38.1**	**+0.3**
BOJS	**Bojanci**	**3.32**	**23**	*e*Pn	**Pn**		**13 36 59.8**	**+1.5**
BOJS	**Bojanci**	**3.32**	**23**	*e*Pn	**Pn**		**13 36 59.8**	**+1.5**
BOJS				*e*Sn	**Sn**		**13 37 38.2**	**+0.3**
JAVS	**Javornik**	**3.47**	**7**	*e*Pn	**Pn**		**13 37 00.4**	**0.0**
JAVS				*e*Sn	**Sn**		**13 37 40.3**	**-1.4**
JAVS	**Javornik**	**3.47**	**7**	*e*Pn	**Pn**		**13 37 00.4**	**0.0**
JAVS				*e*Sn	**Sn**		**13 37 40.3**	**-1.4**
BLY	**Banja Luka**	**3.56**	**49**	*e*Pn	Pn		13 37 04.9	+3.3
BLY	**Banja Luka**	**3.56**	**49**	*e*Pn	Pn		13 37 04.9	+3.3
VOY	**Vojsko**	**3.59**	**5**	*e*Pn	Pn		13 36 58.4	-3.7
VOY				*e*			13 37 19.3	
VOY	**Vojsko**	**3.59**	**5**	*e*Pn	Pn		13 36 58.4	-3.7
VOY				*e*Sn	**Sn**		**13 37 44.5**	**-0.2**
HCY	**Herceg Novi**	**3.75**	**88**	↓*i*Pn	**Pn**		**13 37 04.5**	**+0.3**
HCY				*e*Sn	**Sn**		**13 37 49.4**	**+0.9**
HCY	**Herceg Novi**	**3.75**	**88**	↓*i*Pn	**Pn**		**13 37 04.5**	**+0.3**
HCY				*e*Sn	**Sn**		**13 37 49.4**	**+0.9**
BRY	**Bratogost**	**3.79**	**82**	↓*i*Pn	**Pn**		**13 37 05.4**	**+0.4**
BRY				*e*Sn	**Sn**		**13 37 51.8**	**+2.0**
BRY	**Bratogost**	**3.79**	**82**	↓*i*Pn	**Pn**		**13 37 05.4**	**+0.4**
BRY				*e*Sn	**Sn**		**13 37 51.8**	**+2.0**
BUM	**Brajici-Budva**	**4.05**	**90**	↓*i*Pn	**Pn**		**13 37 09.4**	**+0.9**
BUM				*e*Sn	**Sn**		**13 37 57.3**	**+1.2**
BUM	**Brajici-Budva**	**4.05**	**90**	↓*i*Pn	**Pn**		**13 37 09.4**	**+0.9**
BUM				*e*Sn	**Sn**		**13 37 57.3**	**+1.2**
UPM	**Unac-Piva**	**4.10**	**78**	↑*i*Pn	**Pn**		**13 37 09.6**	**+0.4**
UPM				*e*Sn	**Sn**		**13 37 58.8**	**+1.4**
UPM	**Unac-Piva**	**4.10**	**78**	↑*i*Pn	**Pn**		**13 37 09.6**	**+0.4**
UPM				*e*Sn	**Sn**		**13 37 58.8**	**+1.4**
PCP	**Piancastagn**	**4.12**	**302**	P	**Pn**		**13 37 08.1**	**-1.3**
NKY	**Niksic**	**4.12**	**83**	↓*i*Pn	**Pn**		**13 37 10.1**	**+0.7**
NKY				*e*Sn	**Sn**		**13 37 59.0**	**+1.1**
NKY	**Niksic**	**4.12**	**83**	↓*i*Pn	**Pn**		**13 37 10.1**	**+0.7**
NKY				*e*Sn	**Sn**		**13 37 59.0**	**+1.1**
PDG	**Podgorica**	**4.31**	**88**	*e*Pn	**Pn**		**13 37 11.6**	**-0.3**
PDG	**Podgorica**	**4.31**	**88**	↑*i*Pn	**Pn**		**13 37 12.1**	**+0.2**
PDG				*e*Sn	**Sn**		**13 38 03.4**	**+1.0**
TTG	**Podgorica**	**4.31**	**88**	↑*i*Pn	**Pn**		**13 37 12.1**	**+0.2**
TTG				*e*Sn	**Sn**		**13 38 03.4**	**+1.0**
ABTA	**Abfaltersbach** SNR=22	**4.34**	**352**	↓*i*Pn	**Pn**		**13 37 12.7**	**+0.3**
ABTA	**Abfaltersbach** SNR=22	**4.34**	**352**	Pn	**Pn**		**13 37 12.7**	**+0.3**
ULC	**Ulcinj**	**4.35**	**95**	↓*i*Pn	**Pn**		**13 37 12.5**	**0.0**
ULC				*e*Sn	**Sn**		**13 38 04.1**	**+0.8**
ULC	**Ulcinj**	**4.35**	**95**	↓*i*Pn	**Pn**		**13 37 12.5**	**0.0**
ULC				*e*Sn	**Sn**		**13 38 04.1**	**+0.8**
PLE	**Pljevlja**	**4.46**	**77**	↓*i*Pn	**Pn**		**13 37 14.3**	**+0.1**
PLE				*e*Sn	**Sn**		**13 38 07.5**	**+1.1**
PLE	**Pljevlja**	**4.46**	**77**	↓*i*Pn	**Pn**		**13 37 14.3**	**+0.1**
PLE				*e*Sn	**Sn**		**13 38 07.5**	**+1.1**
SBF	**Sospel**	**4.60**	**290**	*e*Pn	**Pn**		**13 37 16.0**	**0.0**
SBF	**Sospel**	**4.60**	**290**	*e*Pn	**Pn**		**13 37 16.0**	**0.0**
BEY	**Berane**	**4.79**	**83**	↑*i*Pn	**Pn**		**13 37 20.0**	**+1.5**
BEY				*e*Sn	**Sn**		**13 38 14.9**	**+0.7**
IVA	**Berane**	**4.79**	**83**	↑*i*Pn	**Pn**		**13 37 20.0**	**+1.5**
IVA				*e*Sn	**Sn**		**13 38 14.9**	**+0.7**
PVY	**Plav**	**4.83**	**86**	↓*i*Pn	**Pn**		**13 37 20.6**	**+1.4**
PVY				*e*Sn	**Sn**		**13 38 16.4**	**+1.1**
FETA	**Feichten** SNR=7.4	**4.95**	**338**	↑*i*Pn	**Pn**		**13 37 21.8**	**+0.9**
FETA	**Feichten** SNR=7.4	**4.95**	**338**	Pn	**Pn**		**13 37 21.8**	**+0.9**
DAVOX	**Davos/Dischmat** 2.9nm,0.3s,baz=166,slow=8.3,SNR=20	**5.01**	**331**	Pn	**Pn**		**13 37 22.6**	**+0.9**
DAVOX	1.3nm,0.3s,baz=336,slow=19,SNR=5.2			Sn	**Sn**		**13 38 23.8**	**+3.9**
ARSA	**Arzberg**	**5.02**	**17**	*e*Pn	**Pn**		**13 37 21.9**	**+0.2**
ARSA	**Arzberg**	**5.02**	**17**	*e*Pn	**Pn**		**13 37 21.9**	**+0.2**
WATA	**Walderalm** SNR=12	**5.05**	**346**	↑*i*Pn	**Pn**		**13 37 23.5**	**+1.2**
WATA	**Walderalm** SNR=12	**5.05**	**346**	Pn	**Pn**		**13 37 23.5**	**+1.2**
IVAS	**Ivanjica**	**5.05**	**75**	*e*Pn	**Pn**		**13 37 22.7**	**+0.5**
IVAS	**Ivanjica**	**5.05**	**75**	*e*Pn	**Pn**		**13 37 22.7**	**+0.5**
DIVS	**Divibare**	**5.07**	**69**	*e*Pn	**Pn**		**13 37 24.1**	**+1.7**
DIVS	**Divibare**	**5.07**	**69**	*e*Pn	**Pn**		**13 37 24.1**	**+1.7**
FRF	**La Foret Royal**	**5.09**	**285**	*e*Pn	**Pn**		**13 37 22.2**	**-0.5**
FRF	**La Foret Royal**	**5.09**	**285**	*e*Pn	**Pn**		**13 37 22.2**	**-0.5**
LMR	**La Mourre**	**5.16**	**282**	*e*Pn	**Pn**		**13 37 22.8**	**-0.8**
LMR	**La Mourre**	**5.16**	**282**	*e*Pn	**Pn**		**13 37 22.8**	**-0.8**
MOTA	**Moosalm** SNR=7.5	**5.16**	**342**	↑*i*Pn	**Pn**		**13 37 25.0**	**+1.2**
MOTA	**Moosalm** SNR=7.5	**5.16**	**342**	Pn	**Pn**		**13 37 25.0**	**+1.2**
PKSM	**Moragy**	**5.30**	**43**	*e*Pn	**Pn**		**13 37 28.1**	**+2.6**
PKSM	**Moragy**	**5.30**	**43**	*e*Pn	**Pn**		**13 37 28.1**	**+2.6**
MBDF	**Montbardon**	**5.34**	**297**	*e*P	**Pn**		**13 37 28.1**	**+1.9**
MBDF	**Montbardon**	**5.34**	**297**	*e*P	**Pn**		**13 37 28.1**	**+1.9**
TRUS	**Trudelj**	**5.39**	**69**	*e*Pn	**Pn**		**13 37 27.8**	**+1.1**
TRUS	**Trudelj**	**5.39**	**69**	*e*Pn	**Pn**		**13 37 27.8**	**+1.1**
GRUS	**Gruza**	**5.52**	**73**	*e*Pn	**Pn**		**13 37 28.8**	**+0.3**
GRUS	**Gruza**	**5.52**	**73**	*e*Pn	**Pn**		**13 37 28.8**	**+0.3**
LPG	**La Plagne**	**5.70**	**305**	*e*P	**Pn**		**13 37 33.9**	**+2.7**
LPG	1.6nm,0.2s			*e*Sn	**Sn**		**13 38 33.1**	**-3.8**
SELS	**Selova**	**5.71**	**80**	*e*Pn	**Pn**		**13 37 30.8**	**-0.3**
SELS	**Selova**	**5.71**	**80**	*e*Pn	**Pn**		**13 37 30.8**	**-0.3**
LPL	**La Plagne**	**5.72**	**305**	*e*P	**Pn**		**13 37 34.1**	**+2.6**
LPL	2.4nm,0.2s			*e*Sn	**Sn**		**13 38 32.2**	**-5.1**
CONA	**Conrad Observa** SNR=7.5	**5.74**	**17**	↑*i*Pn	**Pn**		**13 37 31.7**	**+0.1**
CONA	**Conrad Observa** SNR=7.5	**5.74**	**17**	Pn	**Pn**		**13 37 31.7**	**+0.1**
SMRF	**Simiane la Rot**	**5.94**	**287**	*e*P	**Pn**		**13 37 35.5**	**+1.2**
SMRF	**Simiane la Rot**	**5.94**	**287**	*e*P	**Pn**		**13 37 35.5**	**+1.2**
SKO	**Skopje**	**5.97**	**92**	*e*Pn	**Pn**		**13 37 35.6**	**+0.9**
SKO	**Skopje**	**5.97**	**92**	*e*Pn	**Pn**		**13 37 36.1**	**+1.4**
BARS	**Barje**	**6.20**	**84**	*e*Pn	**Pn**		**13 37 38.4**	**+0.5**
GERES	**GERESS Array B** 0.7nm,0.3s,baz=175,slow=14,SNR=21	**6.39**	**2**	Pn	**Pn**		**13 37 39.7**	**-0.9**
GERES	1.7nm,0.3s,baz=175,slow=25,SNR=8.6			Sn	**Sn**		**13 38 51.3**	**-2.4**
KHC	**Kasperske Hory**	**6.68**	**1**	*e*PN	**Pn**		**13 37 43.4**	**-1.1**
KHC				*e*SN	**Sn**		**13 38 57.1**	**-3.6**
KHC	**Kasperske Hory**	**6.68**	**1**	Pn	**Pn**		**13 37 43.4**	**-1.1**
ZAPS	**Zavoj**	**6.81**	**80**	*e*Pn	**Pn**		**13 37 46.3**	**-0.1**
VAY	**Valandovo**	**6.92**	**96**	*e*Pn	Pn		13 37 43.4	-4.3
HINF	**Hinteralfeld**	**7.09**	**321**	*e*Pn	**Pn**		**13 37 49.8**	**-0.4**
HINF	18nm,0.6s			*e*Sn	**Sn**		**13 39 06.5**	**-4.5**
HINF	**Hinteralfeld**	**7.09**	**321**	*e*Pn	**Pn**		**13 37 49.8**	**-0.4**
CDF	**Champ du Feu**	**7.36**	**326**	*e*Pn	**Pn**		**13 37 53.6**	**-0.3**
CDF	9.7nm,0.7s			*e*Sn	**Sn**		**13 39 13.4**	**-4.2**
CDF	**Champ du Feu**	**7.36**	**326**	*e*Pn	**Pn**		**13 37 53.6**	**-0.3**
KEST	**Kesra** 0.5nm,0.3s,baz=263,slow=4.5,SNR=8.9	**7.43**	**207**	Pn	Pn		13 37 58.5	+3.7
HAU	**Haudompre**	**7.46**	**320**	*e*Pn	**Pn**		**13 37 55.4**	**+0.1**
HAU	22nm,0.7s			*e*Sn	**Sn**		**13 39 14.1**	**-6.0**
HAU	**Haudompre**	**7.46**	**320**	*e*Pn	**Pn**		**13 37 55.4**	**+0.1**
PRU	**Pruhonice**	**7.57**	**5**	*e*SN	**Sn**		**13 39 18.0**	**-4.7**
NKC	**Novy Kostel**	**7.81**	**355**	*e*SN	**Sn**		**13 39 23.2**	**-5.3**
BRG	**Berggiesshubel**	**8.43**	**2**	*e*(PN)	Pn		13 37 50.0	-18
BRG				*e*(SN)	Sn		13 39 35.7	-8.0
BRG				*e*			13 40 03.1	
CLL	**Collm**	**8.86**	**358**	*e*Sn	Sn		13 39 48.0	-6.3
CLL				*e*Sg	Sg		13 40 59.0	+8.7
MLR	**Muntele Rosu** 0.0nm,0.3s,baz=123,slow=19,SNR=3.5	**9.52**	**67**	Pn	**Pn**		**13 38 25.4**	**+1.8**
NOA	**NORSAR Array B** 0.1nm,0.3s,baz=176,slow=11,SNR=3.9	**18.66**	**357**	P	**P**		**13 40 23.9**	**-0.3**
FINES	**FINESS Array B** 1.3nm,0.6s,baz=196,slow=9.5,SNR=5.4	**20.48**	**18**	P	**P**		**13 40 44.0**	**0.0**
KBZ	**Khabaz** 3.5nm,0.9s,baz=276,slow=9.2,SNR=7.8	**21.51**	**77**	P	**P**		**13 40 57.8**	**+2.5**
TORD	**Torodi Ar. Bea** 1.1nm,0.8s,baz=14,slow=8.5,SNR=6.9	**30.93**	**203**	P	**P**		**13 42 23.8**	**+0.4**
ZALV	**Zalesovo Beam** 0.3nm,0.4s,baz=287,slow=9.9,SNR=3.0	**46.99**	**50**	P	**P**		**13 44 37.5**	**+0.1**
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=286,slow=5.8,SNR=4.9	**47.77**	**60**	P	**P**		**13 44 44.1**	**+0.4**
YKA	**Yellowknife Ar** 0.2nm,0.5s,baz=38,slow=5.7,SNR=5.5	**67.42**	**337**	P	**P**		**13 47 02.0**	**+0.4**

*BJI **13** 13:36:39.2, 7°.39S×125°.39E, h538km, mB5.3/38, mb5.4/66*
*AUST **13** 13:36:45.8±0.1, 6°.84S×125°.02E, h544km, Error ellipse: s-maj=0.6km s-min=0.6km az=40.0*
*MOS **13** 13:36:45.8±0.8, 6°.75S×125°.15E, h556km, mb5.3/38, Error ellipse: s-maj=10.7km s-min=5.6km az=118.4*
*TEH **13** 13:36:46.0, 6°.84S×125°.07E, h547km, ML5.4*
*ISCJB **13** 13:36:46.2±0.2, 6°.86S±0°.02×125°.07E±0°.02, h564km±2km, mb5.2/131, Error ellipse: s-maj=3.5km s-min=2.6km az=144.3*
*NEIC **13** 13:36:46.3±0.4, 6°.82S×125°.09E, h554km±4km, mb5.2/46, Error ellipse: s-maj=5.8km s-min=3.5km az=60.0*
*IDC **13** 13:36:46.9±0.6, 6°.81S×125°.11E, h555km±6km, mb4.6/40, mb1 4.7/45, mb1mx4.6/47, mbtmp4.7/45, Error ellipse: s-maj=8.8km s-min=5.0km az=65.0*
*DJA **13** 13:36:46.7±0.1, 7°.S±2°×12°.5E±°, h552km±2km, M5.1/87, mb5.4/87, mB5.6/61, MLv5.8/15, Mw(mB)5.1/61, Mwp5.4/4*
*GCMT **13** 13:36:49.2±0.3, 6°.80S×125°.17E, h555km±2km, MW5.6, Moment Tensor Solution. ≤74, c107; Moment tensor: Scale 10^17^Nm; Mrr=1.11±.05; Mθθ=1.28±.07; Mφφ2.39±.07; Mrθ=1.35±.08; Mrφ=0.31±.07; Mθφ=1.58±.09; Best double couple: M0 3.00000×10^17^ NP1:φ138.00000°, δ40.00000°, λ-158.00000°. NP2:φ31.00000°, δ76.00000°, λ-53.00000°. Principal axes: T 3.0100, Plg22.0000°, Azm93.0000°; N -0.1200, Plg36.0000°, Azm200.0000°; P -2.8900, Plg46.0000°, Azm339.0000°; Data Used: II IU IC G CN.*

ISC 13 13:36:46.1±0.2, **6°.85S**±0°.03×**125°.07E**±0°.03, **h549**km±2km, **h550**km:**pP-P**, **n938**, σ1**§29**/1132, **mb5.3**/129, **137C-128D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BBSI	**Bau Bau**	**2.83**	**298**		P	**P**	**13 38 02.6**	**+2.5**
MMRI	**Maumere**	**3.32**	**238**		P	**P**	**13 38 03.5**	**+0.4**
KDI	**Kendari**	**3.77**	**320**		P	**P**	**13 38 08.1**	**+1.8**
AAI	**Ambon**	**4.42**	**45**		P	**P**	**13 38 11.8**	**+0.6**
AAI	**Ambon** baz=4.5,SNR=35	**4.42**	**45**		P	**

SNR=11
DAV Davao City (W) 13.84 2 P **P** **13 39 44.4 +0.7**
9.1nm,0.3s,baz=84,slow=17,SNR=9.0
DAV S **S** **13 42 10.4 +0.5**
24nm,0.3s,baz=47,slow=19,SNR=2.3
PCJI Pacitan 13.84 264 P **P** **13 39 41.2 -2.5**
206nm,1.1s
PBKI Pangkalan Bun 13.97 287 P **P** **13 39 46.0 +0.9**
398nm,1.1s,4µm
CTBH Cotabato--PC H 14.00 357⇑*i*P **P** **13 39 47.1 +1.8**
UGM Wanagama 14.47 265 P **P** **13 39 49.4 -0.8**
172nm,1.4s
UGM Wanagama 14.47 265 P **P** **13 39 49.1 -1.1**
baz=14,SNR=16
UGM S **S** **13 42 23.5 +1.5**
baz=14,SNR=8.1
SMRI Semarang 14.53 268 P **P** **13 39 53.9 +3.1**
105nm,1.1s
BUKP Musuan 14.63 360 *e*P **P** **13 39 53.5 +1.6**
YOGI Yogyakarta 14.69 265 P **P** **13 39 52.4 -0.1**
567nm,1.3s
PAGZ Pagadian 14.70 353 *e*P **P** **13 39 53.1 +0.6**
MBWA Marble Bar 15.13 199 *e*P **P** **13 39 56.1 -0.9**
155nm,0.7s
MBWA *e*S **S** **13 42 33.8 -0.2**
MBWA Marble Bar 15.13 199 P **P** **13 39 57.1 +0.2**
SNR=10
STKI Sintang 15.21 296 P **P** **13 39 58.3 +0.5**
84nm,0.9s,5µm
BJII Banjamegara 15.25 267 P **P** **13 39 57.5 -0.9**
193nm,1.3s,3µm
MMPI Merauke 15.26 97 P **P** **13 39 58.7 +0.4**
2µm,0.8s,36µm
MMPI Merauke 15.26 97 P **P** **13 39 60.0 +1.7**
baz=15,SNR=6.5
MMPI S **S** **13 42 39.1 +2.8**
baz=15,SNR=5.7
BTM Bintulu 15.59 309 P **P** **13 40 02.0 +0.4**
BUTP Butuan 15.72 2 *e*P **P** **13 40 05.1 +2.1**
WRAB Tennant Creek 15.82 146 *e*P **P** **13 40 02.6 -1.3**
WRAB *e*S **S** **13 42 44.8 -0.9**
WRAB pmax pmax
comp=Z,188nm,0.5s
WRAB Tennant Creek 15.82 146 *e*P **P** **13 40 02.6 -1.3**
comp=Z,188nm,0.5s
WRAB *e*S **S** **13 42 44.8 -0.9**
WRAB Tennant Creek 15.82 146 P **P** **13 40 02.0 -1.9**
comp=Z,2µm,0.6s
WRA Warramunga Arr 15.82 146 P **P** **13 40 02.7 -1.3**
WRA S **S** **13 42 44.9 -0.9**
WRA ScP **ScP** **13 47 07.9 -0.6**
WRA P4KP 14 22 57.1
WRA Warramunga Arr 15.82 146 P **P** **13 40 02.7 -1.3**
comp=Z,33nm,0.3s,baz=325,slow=10,SNR=468
WRA S **S** **13 42 44.9 -0.9**
comp=Z,12nm,0.3s,baz=322,slow=18,SNR=25
WRA ScP **ScP** **13 47 07.9 -0.6**
baz=315,slow=2.1,SNR=4.6
WRA P4KP 14 22 57.1
comp=Z,0.0nm,0.3s,baz=336,slow=4.3,SNR=6.3
TGJI Tegal 15.84 269 P **P** **13 40 02.8 -1.4**
comp=Z,293nm,1.2s,comp=Z,3µm
CLJI Cilicap 15.95 266 P **P** **13 40 01.6 -3.7**
comp=Z,311nm,1.0s,comp=Z,2µm
JAY Jayapura 16.16 75 P **P** **13 40 08.2 +0.8**
comp=Z,476nm,0.9s,comp=Z,7µm
JAY Jayapura 16.16 75 P **P** **13 40 07.3 -0.1**
baz=16,SNR=21
SNPH Sibulan 16.19 353 *e*P P 13 39 56.1 -11
TBP Tagbilaran 16.48 356 *e*P **P** **13 40 11.5 +1.3**
MSLP Maasin 16.87 359 *e*P **P** **13 40 15.2 +1.4**
PALU Palau 16.93 34 P **P** **13 40 15.3 +1.0**
baz=17,SNR=14
LLP Lapu-Lapu 17.09 356 *e*P **P** **13 40 15.8 +0.1**
CISI Cisompet, Garu 17.14 267 P **P** **13 40 14.6 -1.7**
comp=Z,510nm,1.0s,comp=Z,5µm
BATP Bataraza 17.15 335 *e*P **P** **13 40 17.6 +1.3**
GUIM Jordan 17.54 352 *e*P **P** **13 40 19.7 -0.1**
TPI Tanjungpandan 17.82 282 P **P** **13 40 23.8 +1.3**
comp=Z,104nm,1.5s,comp=Z,937nm
CUYO Cuyo Island 18.04 347 *e*P **P** **13 40 25.1 +0.7**
CBJI Citeko 18.11 270 P **P** **13 40 24.2 -0.9**
comp=Z,547nm,0.9s
DBJI Dramaga 18.20 270 P **P** **13 40 26.7 +0.7**
comp=Z,92nm,0.7s
SKJI Sukabumi 18.38 268 P **P** **13 40 29.6 +2.0**
comp=Z,344nm,0.8s
RCP Roxas 18.44 353⇑*e*P **P** **13 40 28.3 +0.2**
AS31 Alice Springs 18.75 154 *e*P **P** **13 40 31.1 +0.2**
ASAR Alice Springs 18.75 154 P **P** **13 40 31.1 +0.2**
ASAR S **S** **13 43 33.9 +0.2**
ASAR ScP **ScP** **13 47 12.8 -1.7**
ASAR ScS **ScS** **13 50 52.2 -4.5**
ASAR *e* 14 14 43.0
ASAR P4KP 14 23 10.8
ASAR Alice Springs 18.75 154 P **P** **13 40 31.1 +0.2**
comp=Z,97nm,0.3s,baz=334,slow=8.5,SNR=1093
ASAR S **S** **13 43 33.9 +0.2**
comp=Z,5.8nm,0.3s,baz=336,slow=19,SNR=9.3
ASAR ScP **ScP** **13 47 12.8 -1.7**
comp=Z,2.9nm,0.3s,baz=344,slow=2.1,SNR=11
ASAR ScS **ScS** **13 50 52.2 -4.5**
comp=Z,0.2nm,0.3s,baz=319,slow=2.6,SNR=5.7
ASAR P3KPbc 14 14 43.0
comp=Z,0.0nm,0.3s,baz=144,slow=4.1,SNR=11
ASAR P4KP 14 23 10.8
comp=Z,0.0nm,0.3s,baz=328,slow=4.2,SNR=6.4
ENPP El Nido 18.80 343 *e*P **P** **13 40 33.1 +1.7**
GIRL Giralia 18.86 213 P **P** **13 40 33.9 +2.0**
baz=19,SNR=11
COEN Coen 19.14 113 *e*P **P** **13 40 33.7 -0.9**
comp=Z,2µm,0.6s
COEN Coen 19.14 113 P **P** **13 40 33.9 -0.7**
baz=19,SNR=508
COEN S S 13 43 53.4 +13
baz=19,SNR=4.2
CNP Catarman 19.24 359 *e*P **P** **13 40 36.1 +0.7**
OTRP Odiongan 19.33 351 *e*P **P** **13 40 37.0 +0.9**
PPBI Pangkal Pinang 19.44 283 P **P** **13 40 39.2 +1.9**
comp=Z,100nm,1.1s
XMI Christmas Isla 19.49 258 P **P** **13 40 38.3 +0.6**
baz=19,SNR=5.0
XMI S S 13 44 10.3 +24
baz=19,SNR=3.2
XMIS Christmas Isla 19.53 258 P **P** **13 40 39.1 +1.0**
baz=20,SNR=4.0
SJMP San Jose 19.58 348 *e*P **P** **13 40 39.5 +1.0**
QIS Mount Isa 19.60 135 P **P** **13 40 38.1 -0.5**
baz=20,SNR=249
AUQP San Andres 20.18 353 *e*P **P** **13 40 46.5 +2.5**
KASI Kota Agung 20.50 273 P **P** **13 40 46.9 0.0**
comp=Z,121nm,1.0s
MEEK Meekatharra 20.62 197 P **P** **13 40 48.4 +0.6**
baz=21,SNR=60
LWLI Liwa 20.98 274 P P 13 41 02.2 +11
LUBP Lubang 21.00 347 *e*P **P** **13 40 51.8 +0.4**
TGY Tagaytay City 21.22 349 P **P** **13 40 53.9 +0.6**
TGY ScP **ScP** **13 47 20.7 +0.1**
TGY Tagaytay City 21.22 349 P **P** **13 40 53.9 +0.6**
comp=Z,116nm,0.3s,baz=180,slow=8.1,SNR=16
TGY ScP **ScP** **13 47 20.7 +0.1**
comp=Z,60nm,0.3s,baz=131,slow=4.3,SNR=5.3
PMG Port Moresby 22.01 98 *e*P **P** **13 41 00.5 0.0**
comp=Z,321nm,1.1s
PMG ScP **ScP** **13 47 22.2 -0.4**
PMG *e*ScP ScP 13 47 22.6 0.0
PMG Port Moresby 22.01 98 P **P** **13 41 00.9 +0.4**
comp=Z,281nm,1.2s,comp=Z,3µm
PMG Port Moresby 22.01 98 P **P** **13 41 01.2 +0.7**
comp=Z,187nm,1.0s,baz=293,slow=5.2,SNR=42
PMG ScP **ScP** **13 47 22.2 -0.4**
comp=Z,34nm,0.9s,baz=286,slow=5.0,SNR=9.0
BALP Baler 22.71 351 *e*P **P** **13 41 06.6 0.0**
BOLP Bolinao 23.64 348 *e*P **P** **13 41 13.9 -1.0**
MORW Morawa 23.69 200 P **P** **13 41 15.5 +0.2**
baz=24,SNR=15
CAUP Cauayan 23.86 352 *e*P **P** **13 41 16.7 -0.2**
FORT Forrest 23.97 174 *e*P **P** **13 41 17.8 +0.1**
comp=Z,160nm,0.6s
FORT Forrest 23.97 174 P **P** **13 41 17.6 -0.1**
baz=24,SNR=119
FORT S **S** **13 44 56.4 +0.3**
baz=24,SNR=6.7
CTA Charters Tower 24.40 125 P **P** **13 41 21.6 -0.1**
CTA ScP **ScP** **13 47 29.2 +0.2**
CTA Charters Tower 24.40 125 P **P** **13 41 21.6 -0.1**
comp=Z,166nm,0.8s,baz=303,slow=10,SNR=100
CTA ScP **ScP** **13 47 29.2 +0.2**
comp=Z,75nm,0.8s,baz=327,slow=4.1,SNR=14
CTAO Charters Tower 24.40 125 *e*P **P** **13 41 21.4 -0.3**
CTAO pmax pmax
comp=Z,180nm,0.8s
CTAO Charters Tower 24.40 125 *e*P **P** **13 41 21.4 -0.3**
comp=Z,180nm,0.8s
KMBL Kambalda 24.57 187 P **P** **13 41 23.3 +0.2**
baz=25,SNR=30
KMBL S **S** **13 45 04.7 -1.0**
baz=25,SNR=4.6
BLDU Ballidu 24.91 197 P **P** **13 41 26.8 +0.7**
baz=25,SNR=32
KLBR Kellerberrin 25.55 195 P **P** **13 41 32.2 +0.6**
baz=26,SNR=10.0
IPM Ipoh 26.51 294 P **P** **13 41 41.7 +1.3**
MNSI Mandailing Nat 26.55 286 P **P** **13 41 41.0 +0.3**
comp=Z,59nm,0.9s,comp=Z,5µm
QLP Quilpie 26.79 139 P **P** **13 41 43.2 +0.5**
baz=27,SNR=516
NWAO Narrogin (SRO) 26.95 195 P **P** **13 41 44.6 +0.6**
NWAO ScP **ScP** **13 47 35.3 -0.9**
NWAO Narrogin (SRO) 26.95 195 P **P** **13 41 44.6 +0.6**
comp=Z,12nm,0.5s,baz=18,slow=7.9,SNR=19
NWAO ScP **ScP** **13 47 35.3 -0.9**
comp=Z,44nm,1.0s,baz=336,slow=3.8,SNR=6.7
KULM Kulim 27.20 296 P **P** **13 41 46.7 +0.3**
BBOO Buckleboo 27.78 160 *e*P **P** **13 41 50.9 -0.4**
comp=Z,2µm,0.6s
BBOO Buckleboo 27.78 160 P **P** **13 41 51.0 -0.3**
baz=28,SNR=227
BBOO S **S** **13 46 01.8 +6.0**
baz=28,SNR=5.2
PSI Prapat 27.81 289 P **P** **13 41 52.4 +0.4**
PSI S **S** **13 45 53.6 -3.3**
PSI ScP **ScP** **13 47 38.1 -1.3**
PSI Prapat 27.81 289 P **P** **13 41 51.9 0.0**
comp=Z,136nm,1.2s,comp=Z,2µm
PSI Prapat 27.81 289 P **P** **13 41 52.4 +0.4**
comp=Z,81nm,1.0s,baz=125,slow=7.5,SNR=66
PSI S **S** **13 45 53.6 -3.3**
comp=Z,4.5nm,0.7s,baz=342,slow=20,SNR=8.8
PSI ScP **ScP** **13 47 38.1 -1.3**
comp=Z,16nm,1.0s,baz=217,slow=3.5,SNR=5.9
PSI Prapat 27.81 289 P **P** **13 41 52.0 0.0**
baz=28,SNR=57
PSI S **S** **13 45 52.0 -5.0**
baz=28,SNR=3.4
TSI Tuntungan 28.39 290 P **P** **13 41 58.6 +1.8**
comp=Z,108nm,1.5s,comp=Z,2µm
RKGY Rocky Gully 28.62 194 P **P** **13 42 00.5 +1.9**
baz=29,SNR=11
STKA Stephens Creek 29.29 150 *e*P **P** **13 42 04.3 -0.1**
comp=Z,88nm,0.8s
STKA pP **pP** **13 43 32.5 -2.1**
STKA S **S** **13 46 19.2 0.0**
STKA ScP **ScP** **13 47 42.1 -1.5**
STKA Stephens Creek 29.29 150 P **P** **13 42 04.6 +0.2**
comp=Z,283nm,0.5s,baz=323,slow=9.5,SNR=417
STKA S **S** **13 46 19.2 0.0**
comp=Z,41nm,1.0s,baz=112,slow=18,SNR=3.6
STKA ScP **ScP** **13 47 42.1 -1.5**
comp=Z,26nm,0.8s,baz=310,slow=3.4,SNR=4.3
STKA Stephens Creek 29.29 150 P **P** **13 42 04.6 +0.2**
baz=29,SNR=251
STKA S **S** **13 46 17.9 -1.3**
baz=29,SNR=4.9
UBPT Khong Chiam 29.34 319 P **P** **13 42 05.4 +0.4**
comp=Z,106nm,1.3s
QIZ Qiongzhong 29.78 330 P **P** **13 42 08.4 -0.4**
QIZ sP **sP** **13 44 42.5 -0.7**
QIZ S **S** **13 46 23.1 -3.9**
QIZ pmax pmax
comp=Z,81nm,1.4s
QIZ pmax pmax
comp=Z,290nm,5.6s
RMQ Roma 29.83 134 P **P** **13 42 09.2 +0.1**
baz=30,SNR=79
CHBT CHBT 29.84 311 P **P** **13 42 09.8 +0.5**
comp=Z,184nm,1.1s,comp=Z,2µm
EIDS Eidsvold 30.93 129 *e*P **P** **13 42 17.3 -1.3**
comp=Z,27nm,0.6s
EIDS *e*ScP **ScP** **13 47 48.2 -1.0**
EIDS Eidsvold 30.93 129 P **P** **13 42 19.0 +0.4**
baz=31,SNR=14
CMSA Cobar Meteorol 31.22 145 P **P** **13 42 21.5 +0.5**
baz=31,SNR=299
TATO Taipei 31.83 354 *e*P **P** **13 42 24.7 -1.5**
comp=Z,76nm,0.9s
BSI Banda Aceh 32.15 292 P **P** **13 42 28.8 -0.4**
comp=Z,77nm,1.1s
QZH Quanzhou 32.23 349⇓*i*P **P** **13 42 30.4 +0.8**
QZH pP **pP** **13 44 03.5 +2.1**
QZH sP **sP** **13 45 04.3 -0.6**
QZH S **S** **13 47 04.1 -0.3**
QZH sS **sS** **13 50 00.3 +5.2**
QZH SS SS 13 50 04.0 -11
QZH pmax pmax
comp=Z,190nm,1.0s
QZH pmax pmax
comp=Z,880nm,2.8s
ARPS Mount Arapiles 33.48 155 P **P** **13 42 40.7 +0.6**
baz=34,SNR=294
JOW Kunigami 33.63 5 *e*P **P** **13 42 42.0 +0.5**
comp=Z,46nm,0.9s
ARMA Armidale 34.21 137 *e*P **P** **13 42 47.7 +1.1**
comp=Z,141nm,0.8s
ARMA ScP **ScP** **13 48 01.4 +0.7**
ARMA Armidale 34.21 137 P **P** **13 42 47.9 +1.4**
baz=34,SNR=171
HNR Honiara 34.61 97 *e*P **P** **13 42 50.1 +0.2**
comp=Z,778nm,0.9s
YNG Young 34.78 145 P **P** **13 42 52.0 +0.9**
baz=35,SNR=430
MGCD Mangrove Creek 35.65 141 P **P** **13 43 00.2 +1.9**
baz=36,SNR=47
TOO Toolangi 35.77 152 P **P** **13 43 00.6 +1.3**
baz=36,SNR=74
CAN Canberra 35.86 146 *e*P **P** **13 43 01.4 +1.3**
CAN *e* 13 48 05.4
CAN pmax pmax
comp=Z,267nm,0.6s
CAN Canberra 35.86 146 *e*P **P** **13 43 01.4 +1.3**
comp=Z,268nm,0.6s
CAN *e*ScP **ScP** **13 48 05.4 -1.2**
CM31 Chiang Mai Arr 36.01 315 *e*P **P** **13 43 02.1 +0.6**
comp=Z,37nm,0.8s
CM31 *e*PcP **PcP** **13 45 13.7 +0.9**
CM31 *e*ScP **ScP** **13 48 09.0 +1.6**
CMAR Chiang Mai Arr 36.01 315 P **P** **13 43 01.8 +0.3**
CMAR PcP **PcP** **13 45 13.9 +1.0**
CMAR ScP **ScP** **13 48 07.6 +0.3**
CMAR Chiang Mai Arr 36.01 315 P **P** **13 43 01.8 +0.3**
comp=Z,39nm,0.8s,baz=145,slow=6.6,SNR=182
CMAR PcP **PcP** **13 45 13.9 +1.0**
comp=Z,22nm,0.9s,baz=162,slow=2.7,SNR=16
CMAR ScP **ScP** **13 48 07.6 +0.3**
comp=Z,17nm,0.8s,baz=162,slow=3.1,SNR=22
CNB Canberra Magne 36.06 145 P **P** **13 43 02.8 +1.0**
baz=36,SNR=188
CMMT Chiang Mai 36.25 315 P **P** **13 43 04.3 +0.9**
comp=Z,117nm,1.2s,comp=Z,1µm
CHTO Chiang Mai 36.25 315 *e*P **P** **13 43 03.8 +0.3**
CHTO *e* 13 45 14.4
CHTO *e* 13 48 09.4
CHTO pmax pmax
comp=Z,99nm,1.0s
CHTO Chiang Mai 36.25 315 *e*P **P** **13 43 03.8 +0.3**
comp=Z,99nm,1.0s
CHTO *e*PcP **PcP** **13 45 14.4 +0.8**
CHTO *e*ScP **ScP** **13 48 09.4 +1.2**
CHTO Chiang Mai 36.25 315 P **P** **13 43 04.2 +0.8**
SNR=53
CHTO Chiang Mai 36.25 315 P **P** **13 43 03.8 +0.3**
comp=Z,130nm,1.2s,comp=Z,1µm
MILA Mila 37.22 147 P **P** **13 43 12.1 +0.8**
baz=37,SNR=36
CBIJ Chichi jima 37.60 25 P **P** **13 43 13.9 -0.5**
CBIJ S **S** **13 48 21.2 -3.8**
CBIJ Chichi jima 37.60 25 P **P** **13 43 13.9 -0.5**
comp=Z,226nm,0.9s,baz=273,slow=3.1
CBIJ S **S** **13 48 21.2 -3.8**
comp=Z,293nm,1.2s,baz=121,slow=19,SNR=7.0
GYA Guiyang 37.62 332⇓*i*P **P** **13 43 14.8 +0.1**
GYA pP **pP** **13 44 53.0 +3.4**
GYA PP **PP** **13 45 01.4 +3.0**
GYA PcP **PcP** **13 45 20.3 +2.4**
GYA sP **sP** **13 45 54.8 +2.5**
GYA ScP **ScP** **13 48 15.0 +1.6**
GYA S **S** **13 48 29.4 +3.7**
GYA ScS **ScS** **13 52 24.6 +0.4**
GYA pmax pmax
comp=Z,140nm,1.0s
GYA pmax pmax
comp=Z,180nm,4.8s
SSE Sheshan 37.91 355 P **P** **13 43 16.8 -0.1**
SSE PP **PP** **13 45 01.8 +0.3**
SSE sP **sP** **13 45 53.9 -0.6**
SSE S **S** **13 48 31.4 +1.9**
SSE pmax pmax
comp=Z,170nm,1.0s
SSE pmax pmax
comp=Z,280nm,3.7s
KMI Kunming 38.51 326 P **P** **13 43 23.5 +1.4**
KMI PP **PP** **13 45 11.5 +3.4**
KMI sP **sP** **13 46 00.8 +0.8**
KMI S **S** **13 48 39.5 +0.6**
KMI sS **sS** **13 51 36.0 +1.9**
KMI SS **SS** **13 51 53.8 -5.9**
KMI pmax pmax
comp=Z,160nm,1.1s
KMI pmax pmax
comp=Z,530nm,7.3s
WHN Wuhan 38.58 345 P **P** **13 43 22.3 +0.1**
WHN sP **sP** **13 45 56.8 -3.4**
WHN S **S** **13 48 41.1 +1.8**
WHN pmax pmax
comp=Z,670nm,1.0s
WHN pmax pmax
comp=Z,1µm,7.6s
NJ2 Nanjing 39.14 352 *e*P **P** **13 43 27.3 +0.6**
NJ2 pP **pP** **13 45 03.8 +1.2**
NJ2 PP **PP** **13 45 13.3 -0.8**
NJ2 sP **sP** **13 46 03.5 -1.5**
NJ2 S **S** **13 48 45.5 -2.0**
NJ2 pmax pmax
comp=Z,330nm,1.0s
NJ2 pmax pmax
comp=Z,830nm,5.4s
LHI Lord Howe Isla 40.12 132 P **P** **13 43 35.5 +0.9**
baz=40,SNR=18
JNU Nakatsue 40.13 8 *e*P **P** **13 43 34.4 -0.5**
comp=Z,42nm,1.0s
JNU ScP **ScP** **13 48 21.2 -1.7**
JNU Nakatsue 40.13 8 P **P** **13 43 34.4 -0.5**
comp=Z,84nm,1.0s,baz=161,slow=3.8,SNR=25
JNU ScP **ScP** **13 48 21.2 -1.7**
comp=Z,15nm,1.0s,baz=119,slow=5.2,SNR=3.8
MOO Moorlands 40.48 155 P **P** **13 43 40.5 +3.0**
baz=41,SNR=11
TAU Tasmania Unive 40.92 155 P **P** **13 43 43.2 +2.3**
comp=Z,553nm,0.8s,SNR=10
NOUC Port Laguerre 42.53 115 *e*P **P** **13 43 52.2 -1.8**
DZM Mont Dzumac 42.65 115 *e*P **P** **13 43 54.6 -0.4**
comp=Z,239nm,1.0s
DZM Mont Dzumac 42.65 115 *e*P **P** **13 43 54.3 -0.7**
DZM Mont Dzumac 42.65 115 P **P** **13 43 55.6 +0.5**
DZM Mont Dzumac 42.65 115 P **P** **13 43 55.6 +0.5**
comp=Z,93nm,0.8s,baz=287,slow=12,SNR=31
NORM Noumea 42.73 115 *e*P **P** **13 43 55.6 +0.1**
CD2 Chengdu 42.74 333⇑P **P** **13 43 56.0 +0.6**
CD2 pP **PcP** **13 45 35.3 +0.8**
CD2 PP **PP** **13 45 48.4 +1.0**
CD2 sP **sP** **13 46 35.4 +0.1**
CD2 S **S** **13 49 41.9 +2.2**
CD2 sS **sS** **13 52 39.1 +0.5**
CD2 ScS **ScS** **13 52 53.8 -1.2**
CD2 SS **SS** **13 53 06.3 -1.8**
CD2 pmax pmax
comp=Z,490nm,0.8s
CD2 pmax pmax
comp=Z,350nm,6.3s
XAN Xi'an 43.45 340 P **P** **13 44 00.1 -0.8**
XAN pmax pmax
comp=Z,97nm,0.9s
XAN pmax pmax
comp=Z,92nm,5.3s
TIA Tai'an 43.48 351 P P 13 44 08.0 +6.9
TIA pmax pmax
comp=Z,100nm,0.9s
IMP Imphal 43.69 317 *e*P **P** **13 44 00.0 -3.0**
INCN Inchon 44.13 2 *e*P **P** **13 44 06.3 +0.3**
comp=Z,126nm,1.1s
INCN Inchon 44.13 2 P **P** **13 44 06.8 +0.7**
SNR=11
KSAR Wonju Array Be 44.14 3 P **P** **13 44 06.5 +0.3**
KSAR PcP **PcP** **13 45 39.7 +0.7**
KSAR ScP **ScP** **13 48 38.2 -0.7**
KSRS Korea Array 44.15 3 P **P** **13 44 06.5 +0.2**
comp=Z,69nm,0.9s,baz=180,slow=8.9,SNR=152
KSRS PcP **PcP** **13 45 39.7 +0.6**
comp=Z,17nm,1.0s,baz=191,slow=3.3,SNR=12
KSRS ScP **ScP** **13 48 38.2 -0.8**
comp=Z,14nm,1.1s,baz=187,slow=4.2,SNR=18
MJAR Matsushiro Arr 44.89 15 P **P** **13 44 11.2 -0.8**
MJAR PcP **PcP** **13 45 42.1 +0.4**
MJAR PP **PP** **13 46 06.0 -0.9**
MJAR ScP **ScP** **13 48 40.7 -1.3**
MJAR Matsushiro Arr 44.89 15 P **P** **13 44 11.2 -0.8**
comp=Z,54nm,0.9s,baz=194,slow=8.8,SNR=98
MJAR PcP **PcP** **13 45 42.1 +0.4**
comp=Z,7.1nm,0.9s,baz=192,slow=4.6,SNR=5.5
MJAR PP **PP** **13 46 06.0 -0.9**
comp=Z,9.0nm,1.1s,baz=194,slow=9.6,SNR=4.8
MJAR ScP **ScP** **13 48 40.7 -1.3**
comp=Z,16nm,1.1s,baz=198,slow=6.0,SNR=14
MAJO Matsushiro 44.89 15 *e*P **P** **13 44 10.8 -1.2**
MAJO pmax pmax
comp=Z,72nm,0.9s
MAJO Matsushiro 44.89 15 *e*P **P** **13 44 10.8 -1.2**
comp=Z,72nm,0.9s
MAT Matsushiro 44.89 15 P **P** **13 44 11.0 -1.0**
MAT S S 13 50 02.8 -7.2
AGT Agartala 44.98 314 *ex* x 13 44 20.0
SHL Shillong 45.60 316 *i* P **P** **13 44 16.0 -1.8**
SHL *ex* x 13 49 38.0
NFK Norfolk Island 46.01 124 P **P** **13 44 23.6 +2.9**
baz=46,SNR=4.4
LZH Lanzhou 47.14 336 P **P** **13 44 29.9 +0.6**
LZH pP **pP** **13 46 10.0 -0.3**
LZH sP **sP** **13 47 09.5 -1.6**
LZH ScP **ScP** **13 48 53.5 +1.8**
LZH S **S** **13 50 41.1 -0.6**
LZH sS **sS** **13 53 43.0 -1.6**
LZH pmax pmax
comp=Z,440nm,1.0s
LZH pmax pmax
comp=Z,1µm,4.0s
BJI Beijing 47.38 351 P **P** **13 44 28.8 -1.9**
BJI PcP **PcP** **13 45 51.1 +0.6**
BJI pP **pP** **13 46 13.8 +1.9**
BJI PP **PP** **13 46 29.0 -0.3**
BJI sP **sP** **13 47 12.4 -0.2**
BJI ScP **ScP** **13 48 53.1 +0.8**
BJI ScS **ScS** **13 53 21.1 -3.6**
BJI sS **sS** **13 53 49.8 +2.3**
BJI SS **SS** **13 54 27.1 +5.3**
BJI pmax pmax
comp=Z,130nm,1.0s
BJI pmax pmax
comp=Z,500nm,9.8s
HHC Hu-ho-hao-te 49.06 346 *e*P **P** **13 44 43.9 +0.5**
HHC pP **pP** **13 46 24.5 -1.2**
HHC PP **PP** **13 46 46.1 +1.4**
HHC sP **sP** **13 47 24.0 -2.1**
HHC S **S** **13 51 09.0 +1.1**
HHC sS **sS** **13 54 10.5 -2.0**
HHC SS **SS** **13 54 50.1 +1.4**
HHC pmax pmax
comp=Z,160nm,0.8s
HHC pmax pmax
comp=Z,730nm,4.8s
BTO Baotou 49.21 345 *e*P P 13 44 38.0 -6.5
ODAN Odare 49.55 314 *e*P **P** **13 44 47.6 +0.1**
comp=Z,370nm,0.7s
TAPN Taplejung 49.62 315 *e*P **P** **13 44 48.2 +0.2**
RAMN Ramite 50.17 314 *e*P **P** **13 44 52.6 +0.6**
comp=Z,1µm,0.8s
CN2 Changchun 50.42 0 *e*P **P** **13 44 53.8 +0.6**

CN2 PcP **PcP** **13 46 03.1 +1.5**
CN2 *ep*P **pP** **13 46 36.9 +0.7**
CN2 *e*S **S** **13 51 27.8 +1.9**
CN2 ScS **ScS** **13 53 43.8 -1.6**
CN2 pmax pmax
comp=Z,40nm,1.2s
CN2 pmax pmax
comp=Z,300nm,3.0s
USRK Ussuriysk Arra 51.20 6 P **P** **13 44 58.6 -0.2**
comp=Z,61nm,0.8s,baz=189,slow=6.5,SNR=69
USRK ScP **ScP** **13 49 07.5 -1.1**
comp=Z,20nm,1.0s,baz=214,slow=2.5,SNR=12
GUN Gumba 51.26 314 *e*P **P** **13 45 00.2 +0.2**
comp=Z,648nm,0.9s
ERM Erimo 51.36 17 *e*P **P** **13 45 01.4 +1.4**
ERM pmax pmax
comp=Z,47nm,1.1s
MDJ Mudanjiang 51.39 4 P **P** **13 45 00.5 +0.3**
MDJ pP **pP** **13 46 42.0 -1.8**
MDJ PP **PP** **13 47 02.8 -2.5**
MDJ sP **sP** **13 47 40.5 -3.3**
MDJ PcS **PcS** **13 50 03.1 -0.9**
MDJ S **S** **13 51 38.3 -0.7**
MDJ ScS **ScS** **13 53 49.9 -2.3**
MDJ sS **sS** **13 54 43.5 -2.2**
MDJ SS **SKiKP** **13 55 27.4 +1.6**
MDJ pmax pmax
comp=Z,260nm,1.0s
MDJ pmax pmax
comp=Z,360nm,4.0s
PKI Pulchoki 51.39 314 *e*P **P** **13 45 00.8 -0.2**
comp=Z,321nm,0.7s
PKIN Phulchoki 51.41 314 *e*P **P** **13 45 01.0 0.0**
comp=Z,79nm,0.5s
KKN Kakani 51.61 314 *e*P **P** **13 45 02.1 -0.3**
comp=Z,296nm,0.8s
GTA Gaotai 51.63 335 P **P** **13 45 02.3 +0.1**
GTA PcP **PcP** **13 46 08.9 +2.4**
GTA pP **pP** **13 46 45.8 -0.2**
GTA sP **sP** **13 47 43.6 -2.3**
GTA S **S** **13 51 42.8 +0.2**
GTA sS **sS** **13 54 47.4 -2.1**
GTA SS **SS** **13 55 30.6 +1.4**
GTA pmax pmax
comp=Z,160nm,1.1s
GTA pmax pmax
comp=Z,690nm,5.0s
DMN Daman 51.63 313 *e*P **P** **13 45 02.7 +0.1**
comp=Z,614nm,1.0s
HYB Hyderabad 51.90 298 *i* P **P** **13 45 03.5 -0.9**
OUZ Omahuta 52.66 130 *e*P **P** **13 45 10.7 +1.1**
comp=Z,39nm,0.7s
MSVF Nonsavu 52.72 107 *e*P **P** **13 45 11.4 +1.0**
MSVF pmax pmax
comp=Z,183nm,0.8s
MSVF Nonsavu 52.72 107 *e*P **P** **13 45 11.4 +1.0**
comp=Z,183nm,0.8s
MSVF Nonsavu 52.72 107 P **P** **13 45 12.0 +1.6**
comp=Z,2μm,0.7s,SNR=9.0
KOLN Koldanda 52.82 313 *e*P **P** **13 45 11.3 +0.2**
comp=Z,682nm,0.8s
DANN Dangsing 53.03 313 *e*P **P** **13 45 12.6 -0.1**
comp=Z,603nm,0.9s
ASAJ Asahikawa 53.15 16 *e*P **P** **13 45 12.9 +0.1**
comp=Z,29nm,0.9s
ASAJ Asahikawa 53.15 16 P **P** **13 45 12.9 +0.1**
comp=Z,62nm,1.0s,baz=228,slow=8.0,SNR=20
JCZ Jackson Bay 53.15 142 PN **P** **13 45 14.2 +1.1**
PYUN Piuthan 53.45 313 *e*P **P** **13 45 15.7 +0.1**
comp=Z,2μm,1.0s
QRZ Quartz Range 54.08 136 PN **P** **13 45 20.7 +1.1**
RPZ Rata Peaks 54.41 140 *e*P **P** **13 45 22.2 +0.3**
comp=Z,471nm,0.8s
RPZ Rata Peaks 54.41 140 PN **P** **13 45 21.9 0.0**
RPZ Rata Peaks 54.41 140 P **P** **13 45 22.5 +0.7**
comp=Z,487nm,0.7s,baz=270,slow=4.5,SNR=168
THZ Tophouse 54.74 137 PN **P** **13 45 24.2 -0.1**
ODZ Otahua Downs 54.81 142 *e*P **P** **13 45 25.4 +0.8**
comp=Z,26nm,0.6s
NNZ Nelson 54.83 136 PN **P** **13 45 25.2 +0.4**
KHZ Kahutara 55.45 138 *e*P **P** **13 45 28.6 -0.4**
comp=Z,156nm,0.7s
KHZ Kahutara 55.45 138 PN **P** **13 45 28.8 -0.3**
KAD Karad 55.71 296 *e*P **P** **13 45 30.9 -0.5**
SNZO South Karori 55.78 136 *e*P **P** **13 45 31.8 +0.4**
comp=Z,312nm,1.4s
YSS Yuzh-Sakhalins 55.82 15 *e*P **P** **13 45 33.0 +1.5**
YSS pmax pmax
comp=Z,50nm,1.0s
KLR Kul'dur 56.15 5 *e*P **P** **13 45 31.0 -2.7**
KLR *e*S **S** **13 52 38.0 -3.4**
KLR *e* 13 54 17.0
KLR pmax pmax
comp=Z,88nm,1.6s
TSZ Takapari Road 56.17 134 PN **P** **13 45 34.8 +0.6**
LGTI Lohaghat 56.20 312 *ex* x 13 45 40.5
URZ Urewera 56.36 132 *e*P **P** **13 45 34.3 -1.2**
comp=Z,109nm,0.6s
URZ Urewera 56.36 132 PN **P** **13 45 34.4 -1.1**
URZ Urewera 56.36 132 P **P** **13 45 34.8 -0.7**
comp=Z,98nm,0.6s,baz=293,slow=3.7,SNR=96
DVHZ Dannevirke 56.41 134 PN **P** **13 45 34.9 -0.9**
POO Poona 56.45 297 *e*P P 13 45 33.0 -3.5
ANWZ Angora Road 56.69 134 PN **P** **13 45 37.4 -0.2**
MWZ Matawai 56.70 132 PN **P** **13 45 37.5 -0.4**
ULN Ulaanbaatar 56.76 346 *e*P **P** **13 45 38.1 0.0**
comp=Z,141nm,1.1s
ULN Ulaanbaatar 56.76 346 P **P** **13 45 38.0 -0.1**
SNR=57
ULN Ulaanbaatar 56.76 346 P **P** **13 45 38.3 +0.2**
comp=Z,136nm,1.1s,comp=Z,1μm
SONM Songino Array 56.89 345 P **P** **13 45 39.1 +0.1**
SONM PcP **PcP** **13 46 26.8 +0.1**
SONM ScP **ScP** **13 49 33.3 -0.5**
SONM P'P' 14 15 07.2
SONM Songino Array 56.89 345 P **P** **13 45 39.1 +0.1**
comp=Z,60nm,0.9s,baz=158,slow=8.6,SNR=206
SONM PcP **PcP** **13 46 26.8 +0.1**
comp=Z,11nm,0.8s,baz=157,slow=3.3,SNR=4.4
SONM ScP **ScP** **13 49 33.3 -0.5**
comp=Z,9.4nm,0.9s,baz=158,slow=4.6,SNR=7.6
SONM PKPPKP P'P'df 14 15 07.2 -13
comp=Z,1.7nm,1.0s,baz=309,slow=2.5,SNR=9.7
MXZ Matakaoa Point 57.03 131 PN **P** **13 45 39.9 -0.1**
NDI New Delhi 58.07 310 *e*P P 13 45 43.0 -4.3
NDI *ex* x 13 53 00.0
DDI Dehra Dun 58.28 312 *e*P **P** **13 45 47.5 -1.2**
AJM Ajmer 59.04 306 *e*P **P** **13 45 53.0 -0.9**
SMLA Simla 59.35 312 *i* P **P** **13 45 55.3 -0.5**
SMLA *e*P **P** **13 45 55.3 -0.5**
SMLA AMb AMB 13 46 01.3
comp=Z,142nm,0.6s
SMLA *i* S **S** **13 53 20.7 -2.0**
SMLA *e*S S 13 53 22.0 -0.7
SDNR Sundarnagar 59.68 313 *e*P **P** **13 45 58.0 -0.1**
ZAK Zakamensk 60.05 344 *e*P **P** **13 46 00.0 -0.2**
ZAK *e* 13 46 38.2
ZAK pmax pmax
comp=Z,90nm,1.1s
DRV Dumont d'Urvil 60.60 173 S SKSac 13 54 44.0 -15
DRV L L 14 00 00.0
DRV R 14 07 00.0
WMQ Urumqi 60.70 330 P **P** **13 46 05.0 +0.4**
WMQ PcP **PcP** **13 46 43.0 +1.0**
WMQ pP **pP** **13 47 53.0 -0.4**
WMQ PP **PP** **13 48 30.0 +2.4**
WMQ sP **sP** **13 48 50.0 -1.8**
WMQ ScP **ScP** **13 49 51.0 +0.3**
WMQ S **S** **13 53 40.0 +0.7**
WMQ ScS SKKSac 13 54 59.0 -1.6
WMQ sS **sS** **13 56 50.0 -3.9**
WMQ pmax pmax
comp=Z,150nm,1.0s
WMQ pmax pmax
comp=Z,620nm,5.0s
TLY Talaya 61.13 345 *e*P **P** **13 46 05.9 -1.3**
TLY pmax pmax
comp=Z,41nm,1.0s
TLY Talaya 61.13 345 P **P** **13 46 07.1 -0.1**
comp=Z,226nm,1.1s,SNR=11
IRK Irkutsk 61.49 346 *e*P **P** **13 46 09.6 +0.1**
IRK pmax pmax
comp=Z,112nm,1.5s
MOY Mondy 61.84 343 *e*P **P** **13 46 13.3 +1.3**
MOY pmax pmax
comp=Z,143nm,3.1s
AFI Afiamalu 62.37 102 P **P** **13 46 15.9 -0.2**
AFI Afiamalu 62.37 102 P **P** **13 46 15.9 -0.2**
comp=Z,43nm,0.8s,baz=250,slow=6.7,SNR=5.8
CLNS Chul'man 63.47 360 *e*P **P** **13 46 23.5 +1.3**
CLNS pmax pmax
comp=Z,35nm,1.0s
CLNS pmax pmax
comp=N,23nm,1.0s
CLNS pmax pmax
comp=E,11nm,1.0s
KSH Kashi 64.67 320⇓ *i* P **P** **13 46 30.8 +0.4**
KSH PcP **PcP** **13 46 58.8 +0.2**
KSH pP **pP** **13 48 21.4 +0.3**
KSH *e*PP **PP** **13 49 03.3 +1.0**
KSH sP **sP** **13 49 16.6 -2.4**
KSH ScP 13 50 09.8
KSH PcS 13 51 01.6
KSH S **S** **13 54 29.9 +1.9**
KSH ScS **SKSac** **13 55 29.6 -1.5**
KSH sS **sS** **13 57 42.5 -3.3**
KSH SS **SS** **13 58 55.8 +2.8**
KSH pmax pmax
comp=Z,13nm,0.6s
KSH pmax pmax
comp=Z,860nm,2.7s
MK31 Makanchi Array 65.50 329 *i* P **P** **13 46 35.3 -0.1**
MK31 pmax pmax
comp=Z,212nm,1.0s
MK31 Makanchi Array 65.50 329 *e*P **P** **13 46 35.2 -0.1**
MKAR Makanchi Array 65.50 329 P **P** **13 46 35.4 0.0**
MKAR S **S** **13 54 36.7 -0.8**
MKAR Makanchi Array 65.50 329 P **P** **13 46 35.4 0.0**
MKAR S **S** **13 54 36.7 -0.8**
MKAR Makanchi Array 65.50 329 P **P** **13 46 35.4 0.0**
comp=Z,148nm,1.0s,baz=125,slow=7.0,SNR=231
MKAR S **S** **13 54 36.7 -0.8**
comp=Z,1.9nm,1.0s,baz=121,slow=15,SNR=5.9
PEA0B Petropavlovsk- 65.82 21 *e*P **P** **13 46 37.6 +0.5**
PETK Petropavlovsk- 65.82 21 P **P** **13 46 37.6 +0.4**
PETK 13 47 02.6
PETK Petropavlovsk- 65.82 21 P **P** **13 46 37.5 +0.4**
PETK PcP **PcP** **13 47 02.5 -0.3**
PETK PP PP 13 49 05.3 -6.4
PETK Petropavlovsk- 65.82 21 P **P** **13 46 37.5 +0.4**
comp=Z,60nm,0.9s,baz=200,slow=5.0,SNR=76
PETK PcP **PcP** **13 47 02.5 -0.3**
comp=Z,4.9nm,0.5s,baz=214,slow=4.4,SNR=6.3
PETK PP PP 13 49 05.3 -6.4
comp=Z,6.3nm,0.8s,baz=185,slow=8.2,SNR=4.1
ULHL Ulahol 66.05 322 P **P** **13 46 40.1 +1.0**
SNR=6.8
PET Petropavlovsk 66.09 21 *e*P **P** **13 46 40.5 +1.7**
PET *e**SP **sP** **13 49 31.8 +3.9**
PET *e*S **S** **13 54 46.5 +2.5**
PET *e*SS **SS** **13 59 11.2 -2.8**
PET *e*SSS SSS 14 02 29.4
PET pmax pmax
comp=Z,98nm,1.0s
PET pmax pmax
comp=Z,100nm,12.7s
KZA Kyzart 66.56 322 P **P** **13 46 43.2 +0.7**
SNR=42
TKM2 Tokmak 2 66.83 323 *i* P **P** **13 46 44.0 +0.1**
TKM2 Tokmak 2 66.83 323 *e*P **P** **13 46 43.6 -0.3**
comp=Z,56nm,1.1s
TKM2 Tokmak 2 66.83 323 P **P** **13 46 44.0 +0.1**
SNR=50
KBL Kabul 66.97 312 *e*P **P** **13 46 44.9 -0.1**
KBL pmax pmax
comp=Z,113nm,0.8s
KBL Kabul 66.97 312 *e*P **P** **13 46 44.9 -0.1**
comp=Z,113nm,0.8s
KBL Kabul 66.97 312 P **P** **13 46 45.2 +0.2**
baz=67,SNR=22
KBK Karagaybulak 67.07 322 P **P** **13 46 46.6 +1.2**
SNR=34
UCH Uchtor 67.10 321 P **P** **13 46 48.2 +2.3**
SNR=5.8
AAK Ala-Archa 67.33 322 *e*P **P** **13 46 47.3 +0.3**
AAK 13 47 11.6
AAK pmax pmax
comp=Z,63nm,0.9s
AAK Ala-Archa 67.33 322 *e*P **P** **13 46 47.3 +0.3**
comp=Z,64nm,0.9s
AAK PcP **PcP** **13 47 11.6 +1.9**
AAK Ala-Archa 67.33 322 P **P** **13 46 47.9 +0.9**
SNR=29
AAK Ala-Archa 67.33 322 P **P** **13 46 47.5 +0.6**
SNR=62
AAK Ala-Archa 67.33 322 P **P** **13 46 47.0 0.0**
comp=Z,383nm,0.7s,SNR=48
AAK Ala-Archa 67.33 322 P **P** **13 46 47.5 +0.6**
comp=Z,42nm,0.8s,baz=126,slow=5.6,SNR=103
AAK PcP **PcP** **13 47 11.6 +1.9**
comp=Z,7.4nm,0.7s,baz=171,slow=4.2,SNR=3.9
FRU Bishkek 67.37 322 *e*P **P** **13 46 48.5 +1.5**
FRU pmax pmax
comp=Z,110nm,2.0s
CHMS Chumysh 67.38 322 P **P** **13 46 48.7 +1.7**
SNR=8.1
AML Almayashu 67.55 321 P **P** **13 46 49.1 +0.5**
SNR=64
USP Ospenovka 67.68 322 P **P** **13 46 49.1 +0.2**
SNR=64
EKS2 Erkin-Say 67.79 322 *e*P **P** **13 46 50.2 +0.5**
EKS2 pmax pmax
comp=Z,88nm,1.2s
EKS2 Erkin-Say 67.79 322 *e*P **P** **13 46 50.2 +0.5**
comp=Z,88nm,1.2s
EKS2 Erkin-Say 67.79 322 P **P** **13 46 50.3 +0.6**
SNR=34
YAK Yakutsk 68.77 2 *d* iP **P** **13 46 54.5 -0.5**
YAK *e* 13 47 15.0
YAK *e*PPP PPP 13 51 18.3
YAK *i* S **S** **13 55 12.9 -2.0**
YAK *e* 13 55 59.2
YAK *e*SS **SS** **13 59 49.7 -4.9**
YAK *e*SSS SSS 14 03 07.3
YAK pmax pmax
comp=Z,242nm,0.9s
YAK pmax pmax
comp=N,111nm,1.2s
YAK pmax pmax
comp=E,11nm,1.2s
YAK pmax pmax
comp=Z,50nm,1.9s
YAK pmax pmax
comp=N,48nm,2.0s
YAK pmax pmax
comp=E,13nm,1.5s
YAK smax smax
comp=E,230nm,1.8s
YAK smax smax
comp=N,108nm,1.7s
MSEY Mahe Island 69.23 268 *e*P **P** **13 47 00.1 +1.2**
comp=N,33nm,1.3s
ZAA0 Zalesovo Array 69.37 336 *e*P **P** **13 46 57.7 -1.1**
ZALV Zalesovo Beam 69.37 336 P **P** **13 46 57.9 -0.9**
ZALV S **S** **13 55 18.8 -3.3**
ZALV Zalesovo Beam 69.37 336 P **P** **13 46 57.9 -0.9**
ZALV PP PP 13 49 34.5 -7.5
ZALV S **S** **13 55 18.8 -3.3**
ZALV ⇑*e* 14 15 00.5
ZALV Zalesovo Beam 69.37 336 P **P** **13 46 57.9 -0.9**
comp=N,58nm,0.5s,baz=143,slow=5.7,SNR=203
ZALV PP PP 13 49 34.5 -7.5
comp=N,12nm,1.0s,baz=123,slow=4.1,SNR=3.8
ZALV S **S** **13 55 18.8 -3.3**
comp=N,2.0nm,0.8s,baz=134,slow=12,SNR=6.3
ZALV PKP2bc 14 15 00.5
comp=N,0.3nm,0.3s,baz=288,slow=1.4,SNR=4.7
KURBB Kurchatov Arra 69.90 331 P **P** **13 47 01.9 -0.2**
comp=N,77nm,0.8s,baz=137,slow=5.1,SNR=189
KURBB S **S** **13 55 29.1 +0.7**
comp=N,0.3nm,0.4s,baz=143,slow=11,SNR=5.1
KURK Kurchatov 69.91 331 *d* iP **P** **13 47 01.9 -0.2**
KURK pmax pmax
comp=Z,255nm,1.4s
KURK Kurchatov 69.91 331 *e*P **P** **13 47 01.9 -0.2**
comp=Z,240nm,1.0s
KURK S **S** **13 55 29.1 +0.6**
KURK Kurchatov 69.91 331 P **P** **13 47 02.4 +0.3**
SNR=73
KURK Kurchatov 69.91 331 P **P** **13 47 02.3 +0.2**
comp=Z,1μm,0.9s,SNR=21
KK31 Karatay Array 70.06 321 *i* P **P** **13 47 03.2 0.0**
KK31 pmax pmax
comp=Z,2.0nm,0.3s
KKAR Karatay Array 70.06 321 *e*P **P** **13 47 03.3 +0.1**
KKAR pmax pmax
comp=Z,39nm,1.2s
KKAR Karatay Array 70.06 321 *e*P **P** **13 47 03.3 +0.1**
comp=Z,39nm,1.2s
NVS Novosibirsk 70.66 336⇑ *i*P **P** **13 47 06.0 -0.4**
NVS *i* S **S** **13 55 32.7 -4.0**
NVS pmax pmax
comp=N,83nm,1.2s
NVS pmax pmax
comp=E,88nm,1.2s
NVS pmax pmax
comp=Z,226nm,1.2s
NVS smax smax
comp=N,31nm,2.0s
NVS smax smax
comp=E,40nm,1.9s
WBK Wadi Bani Khal 70.95 297 P **P** **13 47 10.2 +1.3**
SNR=6.4
JMDO Jabal Madar 71.66 296 P **P** **13 47 13.8 +0.8**
SNR=8.0
SMDO Samad 71.89 297 P **P** **13 47 15.9 +1.4**
SNR=9.1
FX1 Attu Island--F 72.08 28 *e*P **P** **13 47 15.3 +0.5**
FX1 Attu Island--F 72.08 28 P **P** **13 47 15.3 +0.5**
comp=E,65nm,0.9s,baz=233,slow=6.4,SNR=8.5
BSY Bisya 72.56 296 P **P** **13 47 18.6 +0.4**
SNR=9.8
SEY Seymchan 72.65 13 *c* iP **P** **13 47 18.5 +0.7**
HOQ Hoqain 72.68 297 P **P** **13 47 20.1 +1.2**
SNR=6.7
VNDA Vanda 73.22 172 P **P** **13 47 21.9 +1.0**
VNDA Vanda 73.22 172 P **P** **13 47 21.9 +1.0**
comp=E,7.0nm,0.5s,baz=314,slow=8.1,SNR=15
IDAH Dahanechah 73.31 307 *e*P **P** **13 47 22.3 -0.4**
ARQ Araqi 73.32 297 P **P** **13 47 23.2 +0.6**
SNR=11
IKOO Kooshah 73.89 306 *e*P **P** **13 47 26.0 0.0**
HATD Hatta, Dubai 74.05 298 P **P** **13 47 26.5 -0.2**
SNR=6.7
ASHO Ashiyiah 74.08 298 P **P** **13 47 27.8 +0.9**
SNR=6.2
BANOM Banah 74.20 299 P **P** **13 47 29.2 +1.6**
SNR=6.7
ITEG Tejag 74.25 307 *e*P **P** **13 47 28.4 +0.5**
IMYA Miami 74.38 311 *e*P **P** **13 47 28.5 0.0**
NAZ Nazwa, Dubai 74.51 298 P **P** **13 47 30.4 +1.1**
SNR=6.2
ISRO Mashad 74.84 310 *e*P **P** **13 47 30.8 -0.3**
IMOG Moghan 74.87 310 *e*P **P** **13 47 31.4 -0.1**
VOSK Vostochnaya 74.92 329 P **P** **13 47 30.4 -0.6**
VOSK pmax pmax
comp=Z,137nm,0.8s
IPAY Payeh 75.25 310 *e*P **P** **13 47 33.7 +0.2**
BVA0 Borovoye Array 75.39 329 *i* P **P** **13 47 33.2 -0.4**
BVA0 pmax pmax
comp=Z,54nm,1.4s
BVAR Borovoye Array 75.39 329 P **P** **13 47 33.4 -0.2**
BVAR Borovoye Array 75.39 329 P **P** **13 47 33.4 -0.2**
BVAR Borovoye Array 75.39 329 P **P** **13 47 33.4 -0.2**
comp=Z,97nm,0.9s,baz=106,slow=5.4,SNR=203
BRVK Borovoye 75.46 329 *d* iP **P** **13 47 33.7 -0.2**
BRVK pmax pmax
comp=Z,175nm,1.0s
BRVK Borovoye 75.46 329 *e*P **P** **13 47 33.8 -0.1**
comp=Z,208nm,1.1s
BRVK Borovoye 75.46 329 P **P** **13 47 34.2 +0.3**
SNR=71
BRVK Borovoye 75.46 329 P **P** **13 47 34.6 +0.7**
comp=Z,970nm,1.0s,SNR=40
IAKL Akhelmad 75.49 310 *e*P **P** **13 47 34.1 -0.8**
IKRD Kardeh 75.73 311 *e*P P 13 47 32.8 -3.3
ISFR Sfrayin 76.21 311 *e*P **P** **13 47 39.3 +0.5**
OPO Ambohidratompo 76.40 253 P **P** **13 47 40.7 +0.6**
OPO Ambohidratompo 76.40 253 P **P** **13 47 40.7 +0.6**
comp=Z,11nm,0.7s,baz=98,slow=7.1,SNR=17
IBAF Bafgh 76.41 305 *e*P **P** **13 47 39.2 -0.7**
ABKT Ailbek 76.42 312 P **P** **13 47 40.2 +0.5**
comp=Z,712nm,0.9s,SNR=24
ISHV Shirvan 76.59 311 *e*P **P** **13 47 41.7 +0.8**
IMEH Mehriz 77.14 304 *e*P **P** **13 47 42.6 -1.4**
ICHK Chekchek 77.55 305 *e*P **P** **13 47 45.1 -1.1**
ISRV Sarvestan 77.85 302 *e*P **P** **13 47 47.2 -0.8**
IANJ Anjilo 78.85 308 *e*P **P** **13 47 52.7 -0.4**
AB31 Akbulak array 79.39 323 *i* P **P** **13 47 54.6 -0.7**
AB31 pmax pmax
comp=Z,40nm,0.7s
ABKAR Akbulak array 79.39 323 *e*P **P** **13 47 54.6 -0.7**
comp=Z,24nm,0.7s
IZEF Zefreh 79.41 305 *e*P **P** **13 47 55.2 -1.0**
IAS Lasjerd 79.58 308 *e*P **P** **13 47 57.0 0.0**
IKLH Kolahrood 80.13 305 *e*P **P** **13 48 00.2 +0.3**
IPIR Pirpir 80.53 305 *e*P **P** **13 48 01.9 -0.2**
AKTO Aktyubinsk 81.00 323 P **P** **13 48 03.5 -0.2**
AKTO S **S** **13 57 26.0 -1.8**
AKTO Aktyubinsk 81.00 323 P **P** **13 48 03.5 -0.2**
AKTO S **S** **13 57 26.0 -1.8**
AKTO Aktyubinsk 81.00 323 P **P** **13 48 03.5 -0.2**
comp=Z,49nm,0.7s,baz=108,slow=8.4,SNR=109
AKTO S **S** **13 57 26.0 -1.8**
comp=Z,1.4nm,1.0s,baz=17,slow=19,SNR=10.0
SVE Sverdlovsk 82.15 330⇑ *e*P **P** **13 48 08.7 -0.7**
SVE *e* 13 51 05.3
SVE *e*S **S** **13 57 35.0 -4.0**
SVE pmax pmax
comp=Z,119nm,1.2s
UMR Umm Al-Rimmam 82.46 301 *e*P **P** **13 48 11.8 +0.1**
NAY Al-Naaiem 82.80 301 *e*P **P** **13 48 12.7 -0.6**
NAY AMb AMB 13 48 15.3
comp=Z,101nm,1.0s
MIB Mutribah 82.83 301 *e*P **P** **13 48 13.1 -0.4**
MIB AMb AMB 13 48 15.7
comp=Z,202nm,1.1s
ARU Arti 83.03 329 *d* iP **P** **13 48 13.6 -0.3**
ARU 13 51 33.4
ARU S S 13 57 41.4 -6.3
ARU pmax pmax
comp=Z,181nm,1.7s
ARU Arti 83.03 329 P **P** **13 48 13.5 -0.3**
comp=Z,437nm,1.3s,SNR=24
QSPA South Pole Qui 83.13 180 *e*P **P** **13 48 14.2 -0.2**
comp=Z,29nm,1.2s
QSPA S S 13 57 41.0 -7.7
QSPA South Pole Qui 83.13 180 P **P** **13 48 14.7 +0.3**
comp=Z,14nm,0.9s,baz=310,slow=1.9,SNR=59
QSPA S S 13 57 41.0 -7.7
comp=Z,2.8nm,0.8s,baz=307,slow=20,SNR=13
TBI Tubuai 83.17 113 *e*S **S** **13 57 49.2 -1.4**
comp=Z,210nm,27.2s
PPT2 Papeete2 83.55 107 *e*S **S** **13 57 52.2 -2.4**
comp=Z,275nm,25.8s
IKOM Komasi 83.62 305 *e*P **P** **13 48 16.9 -0.7**
ILIN Lien 84.23 306 *e*P **P** **13 48 19.1 -1.5**
ISRB Sarab 84.31 309 *e*P **P** **13 48 20.6 -0.3**
GAMB Gambell 84.69 23 *e*P **P** **13 48 21.8 -0.1**
comp=Z,14nm,0.8s
SOKR Solikamsk 85.12 332 *d* iP **P** **13 48 24.6 +0.6**
SOKR pmax pmax
comp=Z,110nm,1.1s
BHD Baghdad 86.00 304 *ex* P **P** **13 48 29.0 +0.1**
BHD *ex* x 13 50 35.3
BHD *ex* x 13 51 01.7
BHD *i* x x 13 57 59.5
BHD *i* x x 13 58 14.0
BHD *ex* x 14 01 17.8
IMRD Marand 86.02 310 *e*P **P** **13 48 29.1 0.0**
TNA Tin City 86.92 23 *e*P **P** **13 48 33.2 +0.7**
comp=Z,13nm,1.1s
KMBO Kilima Mbogo 87.70 269 *e*P **P** **13 48 37.6 0.0**
comp=Z,19nm,1.2s
KMBO Kilima Mbogo 87.70 269 P **P** **13 48 39.2 +1.5**
SNR=6.1
KMBO Kilima Mbogo 87.70 269 P **P** **13 48 38.1 +0.5**
comp=Z,11nm,1.0s,baz=57,slow=7.3,SNR=16
ZEI Tsey 88.17 313 *e*P **P** **13 48 38.0 -1.2**
ZEI pmax pmax
comp=Z,56nm,1.3s
KBZ Khabaz 89.06 314 P **P** **13 48 43.8 +0.8**
KBZ Khabaz 89.06 314 P **P** **13 48 43.8 +0.8**
KBZ Khabaz 89.06 314 P **P** **13 48 43.8 +0.8**

comp=Z,15nm,0.9s,baz=111,slow=3.6,SNR=33
KIV Kislovodsk 89.25 314 *e*P **P** **13 48 44.4 +0.4**
KIV pmax pmax
comp=Z,21nm,1.1s
VRHR Novokhopersk 91.18 321 *e*P **P** **13 48 52.5 -0.1**
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=Z,70nm,0.9s
VRHR pmax pmax
comp=E,9.0nm,0.4s
MALT Malatya 91.57 308 P **P** **13 48 55.0 +0.1**
MALT pmax pmax
comp=Z,21nm,1.1s
MALT Malatya 91.57 308 P **P** **13 48 55.0 +0.1**
comp=Z,20nm,1.1s
KDAK Kodiak Island 91.67 32 P **P** **13 48 54.0 -0.8**
KDAK Kodiak Island 91.67 32 P **P** **13 48 54.0 -0.8**
comp=Z,11nm,1.0s,baz=245,slow=7.9,SNR=4.5
ASF Jabal al Asfar 92.06 302 P **P** **13 48 58.5 +1.2**
ASF Jabal al Asfar 92.06 302 P **P** **13 48 58.5 +1.2**
comp=Z,7.8nm,0.9s,baz=307,slow=1.2,SNR=12
VORD Divnogorie 92.61 321 *e*P **P** **13 48 58.1 -1.1**
VORD *e* 13 52 51.3
VORD pmax pmax
comp=N,40nm,0.9s
VORD pmax pmax
comp=E,10.0nm,0.9s
VORD pmax pmax
comp=Z,40nm,0.9s
VORD pmax pmax
comp=N,30nm,1.1s
VORD pmax pmax
comp=Z,10.0nm,1.1s
VORD pmax pmax
comp=E,10.0nm,0.5s
VSR Storozhevoye 92.72 321 *e*P **P** **13 48 59.0 -0.7**
VSR *e* 13 52 53.0
VSR *e* 13 58 39.1
VSR pmax pmax
comp=Z,40nm,0.9s
VSR pmax pmax
comp=N,8.0nm,0.4s
VSR pmax pmax
comp=E,30nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,1.3s
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,20nm,1.3s
ANN Anapa 93.10 315 *e*P **P** **13 49 00.4 -1.2**
ANN *e**PP **pP** **13 51 03.8 +1.4**
ANN *e* 13 58 41.2
ANN *e*SSS SSS 14 09 42.2
ANN pmax pmax
comp=Z,42nm,1.2s
MMAI Mount Meron Ar 93.41 303 P **P** **13 49 04.3 +0.9**
MMAI Mount Meron Ar 93.41 303 P **P** **13 49 04.3 +0.9**
comp=Z,7.2nm,0.7s,baz=120,slow=8.7,SNR=10
EIL Elat 93.45 299 P **P** **13 49 04.8 +1.3**
EIL Elat 93.45 299 P **P** **13 49 04.8 +1.3**
comp=Z,4.0nm,0.8s,baz=149,slow=2.8,SNR=4.3
COLD Coldfoot 94.22 23 *e*P **P** **13 49 05.8 -0.4**
comp=Z,15nm,1.0s
MCK McKinley 94.31 26 *e*P **P** **13 49 04.7 -2.1**
MCK pmax pmax
comp=Z,14nm,1.1s
MCK McKinley 94.31 26 *e*P **P** **13 49 04.7 -2.1**
comp=Z,14nm,1.1s
SML Sawmill 94.37 28 *e*P **P** **13 49 05.9 -1.2**
SML pmax pmax
comp=Z,5.0nm,0.8s
SML Sawmill 94.37 28 *e*P **P** **13 49 05.9 -1.2**
comp=Z,4.6nm,0.8s
SNAA Sanae 94.62 195 *e*P **P** **13 49 08.9 +0.8**
SNAA Sanae 94.62 195 *e*SKS **SKSac** **13 58 51.4 +0.9**
SNAA Sanae 94.62 195 *e*P pP 13 51 12.9 +3.8
OBN Obninsk 94.71 325 ⇓*i*P **P** **13 49 08.2 -0.4**
OBN *e* 13 53 11.5
OBN *i* S **SKSac** **13 58 52.2 +1.1**
OBN *e*SS **SS** **14 06 17.9 +2.8**
OBN pmax pmax
comp=Z,39nm,1.1s
TMCR Tamitsa 94.82 334 *e*P P 13 49 05.3 -3.6
TMCR pmax pmax
comp=Z,48nm,1.3s
COLA College 94.91 25 *e*P **P** **13 49 08.2 -1.1**
COLA pmax pmax
comp=Z,3.0nm,0.8s
COLA College 94.91 25 *e*P **P** **13 49 08.2 -1.1**
comp=Z,2.7nm,0.8s
BOSA Boshof 95.30 240 P **P** **13 49 11.8 -0.4**
BOSA Boshof 95.30 240 P **P** **13 49 11.8 -0.4**
comp=Z,5.2nm,0.7s,baz=116,slow=5.7,SNR=12
ILAR Eielson Array 95.31 25 P **P** **13 49 09.1 -2.1**
ILAR PP PP 13 52 59.4 -12
ILAR PKKP **PKKPdf** **14 06 00.9 -2.4**
ILAR Eielson Array 95.31 25 P **P** **13 49 09.1 -2.1**
comp=Z,3.7nm,0.9s,baz=262,slow=4.5,SNR=32
ILAR PP PP 13 52 59.4 -12
comp=Z,0.7nm,0.9s,baz=289,slow=5.7,SNR=4.6
ILAR PKKP **PKKPdf** **14 06 00.9 -2.4**
comp=Z,0.3nm,0.7s,baz=41,slow=2.5,SNR=6.4
BR131 Keskin Array S 95.43 309 *e*P **P** **13 49 10.8 -1.7**
comp=Z,0.6nm,0.4s
BRTR Keskin Array B 95.43 309 P **P** **13 49 11.0 -1.5**
BRTR PP **PP** **13 53 10.4 -2.3**
BRTR Keskin Array B 95.43 309 P **P** **13 49 11.0 -1.5**
comp=Z,12nm,0.9s,baz=122,slow=4.9,SNR=35
BRTR PP **PP** **13 53 10.4 -2.3**
comp=Z,5.4nm,1.0s,baz=119,slow=7.2,SNR=7.0
PAX Paxson 95.80 27 *e*P **P** **13 49 12.3 -1.3**
PAX pmax pmax
comp=Z,4.0nm,0.9s
PAX Paxson 95.80 27 *e*P **P** **13 49 12.3 -1.3**
comp=Z,3.9nm,0.9s
VNA2 Neumayer--Watz 96.23 194 *e*P **P** **13 49 16.6 +1.3**
VNA2 Neumayer--Watz 96.23 194 *e*SKS **SKSac** **13 58 58.5 -0.2**
VNA2 Neumayer--Watz 96.23 194 *e*P pP 13 51 24.0 +7.6
baz=117,slow=3.1
RKT Rikitea 96.42 114 *e*S **S** **13 59 46.4 -4.2**
comp=Z,864nm,39.2s
DOT Dot Lake 96.47 27 *e*P **P** **13 49 15.2 -1.3**
comp=Z,6.2nm,0.8s
VNA3 Neumayer Olymp 96.55 193 *e*P **P** **13 49 18.6 +1.9**
VNA3 Neumayer Olymp 96.55 193 *e*P pP 13 51 25.5 +7.6
MENT Mentasta 96.60 27 *e*P **P** **13 49 16.6 -0.5**
AKASG Malin Array Be 98.96 320 P Pdif 13 49 27.0 -0.8
AKASG 13 53 44.6
AKASG Malin Array Be 98.96 320 P Pdif 13 49 27.0 -0.8
AKASG PP PP 13 53 44.6 +5.8
AKASG Malin Array Be 98.96 320 P Pdif 13 49 27.0 -0.8
comp=Z,7.2nm,0.7s,baz=83,slow=4.0,SNR=19
AKASG PP PP 13 53 44.6 +5.8
comp=Z,1.3nm,0.5s,baz=81,slow=6.4,SNR=8.8
ARCES ARCESS Array B 99.73 339 P **Pdif** **13 49 29.9 -0.9**
ARCES ARCESS Array B 99.73 339 P **Pdif** **13 49 29.9 -0.9**
comp=Z,7.0nm,0.8s,baz=79,slow=4.7,SNR=14
FINES FINESS Array B 100.28 331 P **Pdif** **13 49 31.6 -1.8**
FINES PKiKP **PKiKP** **13 53 56.6 -0.4**
FINES FINESS Array B 100.28 331 P **Pdif** **13 49 31.7 -1.8**
comp=Z,1.0nm,0.7s,baz=90,slow=7.4,SNR=6.8
FINES PKiKP **PKiKP** **13 53 56.6 -0.4**
comp=Z,3.9nm,0.9s,baz=83,slow=4.5,SNR=6.3
SPITS Spitsbergen Ar 100.46 349 P **Pdif** **13 49 32.6 -1.4**
SPITS Spitsbergen Ar 100.46 349 P **Pdif** **13 49 32.6 -1.4**
comp=Z,9.7nm,0.8s,baz=134,slow=8.4,SNR=7.5
INK Inuvik 100.55 22 P **Pdif** **13 49 33.3 -1.2**
INK PP PP **13 53 52.9 +2.8**
INK PKiKP **PKiKP** **13 53 57.6 +0.3**
INK Inuvik 100.55 22 P **Pdif** **13 49 33.3 -1.2**
comp=Z,1.9nm,0.9s,baz=290,slow=3.0,SNR=8.4
INK PP **PP** **13 53 52.9 +2.8**
comp=Z,1.6nm,1.0s,baz=278,slow=10,SNR=3.3
INK PKiKP **PKiKP** **13 53 57.6 +0.3**
comp=Z,1.5nm,0.7s,baz=257,slow=3.0,SNR=6.2
VRI Vrincioaia 100.69 315 ⇑*i*P **PP** **13 53 47.3 -4.6**
PLOR Plostina 100.74 315 ⇑*i*P **PP** **13 53 50.4 -1.9**
MLR Muntele Rosu 101.25 315 ⇑*i*P **PP** **13 53 51.3 -4.9**
VTS Vitosha 103.34 312 ⇑*i*P PP 13 54 04.3 -7.4
DRGR 103.42 316 ⇑*i*P **PP** **13 54 07.8 -4.3**
TRPA Tarpa 103.44 318 ⇓*i*P **PP** **13 54 13.4 +1.4**
KOLS Kolonicke sedl 103.54 319 PDIF **Pdif** **13 49 50.7 +2.4**
KOLS *e*PP **PP** **13 54 14.2 +1.4**

CRVS Cervenica-Dubn 104.08 319 PDIF **Pdif** **13 49 51.6 +0.9**
CRVS *e*PP **PP** **13 54 20.0 +3.2**
VYHS Vyhne 105.85 318 PDIF **Pdif** **13 49 59.3 +0.7**
VYHS *e*PP **PP** **13 54 33.7 +4.0**
OKC Ostrava-Krasne 106.11 320 *e*PP PP 13 54 32.1 +0.6
OKC *ex* x 13 54 37.4
HFS Hagfors 106.48 331 Pdif **Pdif** **13 49 59.5 -1.6**
HFS PP **PP** **13 54 36.9 +3.1**
HFS Hagfors 106.48 331 Pdiff **Pdif** **13 49 59.5 -1.6**
comp=Z,0.8nm,0.6s,baz=116,slow=9.8,SNR=4.7
HFS PP **PP** **13 54 36.9 +3.1**
comp=Z,6.4nm,1.1s,baz=75,slow=6.3,SNR=4.1
MORC Moravsky Berou 106.51 320 ⇓*i*P **PP** **13 54 30.1 -4.3**
DPC Dobruska-Polom 107.19 321 *e*PP PP 13 54 38.8 -0.5
VRAC Vranov 107.19 319 ⇓*i*P PP 13 54 32.9 -6.4
UPC Upice 107.35 321 *e*PP PP 13 54 38.7 -1.7
UPC *ex* x 13 54 47.1
NB2 NORSAR Subarra 107.40 332 PKPdf **PKiKP** **13 54 09.0 -1.2**
comp=Z,2.8nm,1.0s,baz=68,slow=1.9
NOA NORSAR Array B 107.40 332 Pdif **Pdif** **13 50 03.2 -2.0**
NOA PKiKP **PKiKP** **13 54 09.5 -0.7**
NOA PP **PP** **13 54 45.5 +5.1**
NOA NORSAR Array B 107.40 332 Pdiff **Pdif** **13 50 03.2 -2.0**
comp=Z,1.1nm,0.8s,baz=74,slow=4.4,SNR=4.6
NOA PKiKP **PKiKP** **13 54 09.5 -0.7**
comp=Z,1.7nm,0.8s,baz=270,slow=3.1,SNR=7.8
NOA PP **PP** **13 54 45.5 +5.1**
comp=Z,1.2nm,0.8s,baz=79,slow=7.1,SNR=4.2
TREC Trest 107.91 320 *e*PP PP 13 54 40.3 -4.2
TREC *ex* x 13 54 48.7
PRU Pruhonice 108.38 320 *e*PP PP 13 54 45.5 -2.3
PRU *ex* x 13 54 52.5
RES Resolute Bay 108.45 10 Pdif **Pdif** **13 50 10.6 +1.1**
RES PKiKP **PKiKP** **13 54 10.4 -1.3**
RES PP **PP** **13 54 49.1 +1.6**
RES SKP 13 56 54.8
RES Resolute Bay 108.45 10 Pdiff **Pdif** **13 50 10.6 +1.1**
comp=Z,2.6nm,0.8s,baz=310,slow=5.8,SNR=14
RES PKiKP **PKiKP** **13 54 10.4 -1.3**
comp=Z,1.1nm,0.7s,baz=183,slow=2.1,SNR=5.0
RES PP **PP** **13 54 49.1 +1.6**
comp=Z,5.5nm,1.1s,baz=322,slow=7.2,SNR=6.6
RES SKP 13 56 54.8
comp=Z,2.3nm,0.8s,baz=298,slow=3.7,SNR=6.0
BRG Berggiesshubel 108.57 321 *e*PKP **PKiKP** **13 54 13.5 +0.9**
comp=Z,4.3nm,0.9s
BRG *e*PP **PP** **13 54 53.5 +4.4**
comp=Z,31nm,1.6s
BRG *e* 13 57 19.4
comp=Z,62nm,2.5s
CLL Collm 109.05 322 *e*PKiKP **PKiKP** **13 54 14.0 +0.5**
comp=Z,2.0nm,0.8s
CLL *e*PP **PP** **13 54 54.0 +1.5**
CLL *es*PP 13 57 37.0
CLL *es*SS 14 12 54.0
CLL *es*SKKSacr 14 15 42.0
CLL *e* 14 20 42.0
GERES GERESS Array B 109.15 319 Pdif **Pdif** **13 50 13.6 +0.3**
GERES PKiKP **PKiKP** **13 54 12.8 -1.1**
GERES PP **PP** **13 54 53.3 -0.1**
GERES GERESS Array B 109.15 319 Pdiff **Pdif** **13 50 13.6 +0.3**
comp=Z,0.2nm,0.6s,baz=45,slow=3.5,SNR=3.4
GERES PKiKP **PKiKP** **13 54 12.8 -1.1**
comp=Z,1.1nm,0.6s,baz=72,slow=1.2,SNR=8.5
GERES PP **PP** **13 54 53.3 -0.1**
comp=Z,4.5nm,1.1s,baz=66,slow=3.3,SNR=3.4
KHC Kasperske Hory 109.17 320 *e*PP PP 13 54 49.6 -3.9
KHC *ex* x 13 55 08.9
YKA Yellowknife Ar 109.74 25 PKiKP **PKiKP** **13 54 13.0 -1.4**
YKA PP **PP** **13 54 56.3 -0.6**
YKA SKP 13 56 57.2
YKA PKKPbc **PKKPbc** **13 54 17.9 -4.2**
YKA SKKPbc SKKPbc 14 08 09.2 -4.9
YKA Yellowknife Ar 109.74 25 PKiKP **PKiKP** **13 54 13.0 -1.4**
comp=Z,1.5nm,0.6s,baz=303,slow=1.7,SNR=19
YKA PP **PP** **13 54 56.3 -0.6**
comp=Z,0.1nm,0.4s,baz=297,slow=6.9,SNR=6.0
YKA SKP 13 56 57.2
comp=Z,2.1nm,0.8s,baz=301,slow=2.0,SNR=13
YKA PKKPbc **PKKPbc** **14 05 17.9 -4.2**
comp=Z,0.2nm,0.5s,baz=111,slow=3.2,SNR=5.3
YKA SKKPbc SKKPbc 14 08 09.2 -4.9
comp=Z,0.5nm,0.8s,baz=110,slow=2.7,SNR=5.3
CDF Champ du Feu 113.38 320 *e*PKIKP **PKiKP** **13 54 21.9 -0.1**
CDF Champ du Feu 113.38 320 *e*PKIKP **PKiKP** **13 54 21.9 -0.1**
CDF Champ du Feu 113.38 320 *e*PKPdf **PKiKP** **13 54 21.9 -0.1**
NEW Newport 113.43 40 ⇓PKiKP **PKiKP** **13 54 22.7 +0.7**
baz=113
PGF Pioggiola 113.72 314 *e*PKIKP **PKiKP** **13 54 22.5 -0.3**
comp=Z,73nm,1.4s
PGF Pioggiola 113.72 314 *e*PKIKP **PKiKP** **13 54 22.5 -0.3**
PGF Pioggiola 113.72 314 *e*PKPdf **PKiKP** **13 54 22.5 -0.3**
HINF Hinteralfeld 113.83 320 *e*PKIKP **PKiKP** **13 54 21.7 -1.1**
comp=Z,14nm,1.0s
HINF Hinteralfeld 113.83 320 *e*PKIKP **PKiKP** **13 54 21.7 -1.1**
HINF Hinteralfeld 113.83 320 *e*PKPdf **PKiKP** **13 54 21.7 -1.1**
HAU Haudompre 114.10 320 *e*PKIKP PKPdf 13 54 22.6 -0.7
comp=Z,8.2nm,0.7s
HAU *e*R
comp=Z,86nm,19.5s
HAU Haudompre 114.10 320 *e*PKIKP PKPdf 13 54 22.6 -0.7
HAU Haudompre 114.10 320 *e*PKPdf PKPdf 13 54 22.6 -0.7
C11A Tepee Creek (N 114.11 40 ⇑PKiKP **PKiKP** **13 54 23.9 +0.5**
baz=114
GIVF Givet 114.38 322 *e*PKIKP PKPdf 13 54 23.5 -0.2
comp=Z,16nm,0.9s
GIVF Givet 114.38 322 *e*PKIKP PKPdf 13 54 23.5 -0.2
GIVF Givet 114.38 322 *e*PKPdf PKPdf 13 54 23.5 -0.2
SBF Sospel 114.52 315 *e*PKIKP PKPdf 13 54 23.7 -0.6
SBF Sospel 114.52 315 *e*PKIKP PKPdf 13 54 23.7 -0.6
SBF Sospel 114.52 315 *e*PKPdf PKPdf 13 54 23.7 -0.6
LPG La Plagne 114.55 317 *e*PKIKP PKPdf 13 54 24.1 -0.5
LPG La Plagne 114.55 317 *e*PKIKP PKPdf 13 54 24.1 -0.5
LPG La Plagne 114.55 317 *e*PKPdf PKPdf 13 54 24.1 -0.5
LPL La Plagne 114.56 317 *e*PKIKP PKPdf 13 54 23.2 -1.3
comp=Z,12nm,0.8s
LPL La Plagne 114.56 317 *e*PKIKP PKPdf 13 54 23.2 -1.3
LPL La Plagne 114.56 317 *e*PKPdf PKPdf 13 54 23.2 -1.3
CABF La Chapelle 114.68 318 *e*PKIKP PKPdf 13 54 23.6 -0.9
CABF La Chapelle 114.68 318 *e*PKIKP PKPdf 13 54 23.6 -0.9
CABF La Chapelle 114.68 318 *e*PKPdf PKPdf 13 54 23.6 -0.9
MBDF Montbardon 114.75 316 *e*PKIKP PKPdf 13 54 24.4 -0.4
comp=Z,9.0nm,0.8s
MBDF Montbardon 114.75 316 *e*PKIKP PKPdf 13 54 24.4 -0.4
MBDF Montbardon 114.75 316 *e*PKPdf PKPdf 13 54 24.4 -0.4
BAIF Baives 114.77 322 *e*PKIKP PKPdf 13 54 24.3 -0.1
comp=Z,11nm,0.8s
BAIF Baives 114.77 322 *e*PKIKP PKPdf 13 54 24.3 -0.1
BAIF Baives 114.77 322 *e*PKPdf PKPdf 13 54 24.3 -0.1
KEST Kesra 114.81 306 PP PP 13 55 31.9 -1.8
KEST Kesra 114.81 306 PP PP 13 55 31.9 -1.8
comp=Z,14nm,1.0s,baz=312,slow=2.1,SNR=11
SFTF Sexfontaines 114.87 320 *e*PKIKP PKPdf 13 54 23.5 -1.2
SFTF Sexfontaines 114.87 320 *e*PKPdf PKPdf 13 54 23.5 -1.2
A13A Flathead Natio 114.93 39 ⇑PKiKP **PKiKP** **13 54 25.3 +0.4**
baz=115
NVAR Mina Array Bea 115.01 51 PKP **PKPdf** **13 54 25.7 +0.1**
NVAR SKP 13 57 10.1
NVAR Mina Array Bea 115.01 51 PKP **PKPdf** **13 54 25.7 +0.1**
comp=Z,0.7nm,0.6s,baz=262,slow=3.1,SNR=7.3
NVAR SKP 13 57 10.1
comp=Z,1.4nm,0.8s,baz=289,slow=2.8,SNR=5.2
B13A Whitefish 115.08 39 ⇑PKiKP **PKiKP** **13 54 25.8 +0.5**
baz=115
FRF La Foret Royal 115.15 315 *e*PKIKP **PKPdf** **13 54 24.8 -0.6**
comp=Z,24nm,1.0s
FRF La Foret Royal 115.15 315 *e*PKIKP **PKPdf** **13 54 24.8 -0.6**
FRF La Foret Royal 115.15 315 *e*PKPdf **PKPdf** **13 54 24.8 -0.6**
LMR La Mourre 115.31 315 *e*PKIKP **PKPdf** **13 54 25.1 -0.6**
LMR La Mourre 115.31 315 *e*PKIKP **PKPdf** **13 54 25.1 -0.6**
LMR La Mourre 115.31 315 *e*PKPdf **PKPdf** **13 54 25.1 -0.6**
ORIF Oris-en-Rattie 115.31 317 *e*PKIKP **PKPdf** **13 54 25.2 -0.6**
comp=Z,13nm,0.9s
ORIF *e*R
comp=Z,133nm,22.8s
ORIF Oris-en-Rattie 115.31 317 *e*PKIKP **PKPdf** **13 54 25.2 -0.6**
ORIF Oris-en-Rattie 115.31 317 *e*PKPdf **PKPdf** **13 54 25.2 -0.6**
ISA Isabella 115.40 54 ⇑PKiKP **PKPdf** **13 54 26.1 -0.2**
baz=115
SMRF Simiane la Rot 115.78 316 *e*PKIKP **PKPdf** **13 54 26.5 -0.2**
comp=Z,15nm,0.9s
SMRF Simiane la Rot 115.78 316 *e*PKPdf **PKPdf** **13 54 26.5 -0.2**
E13A Victor 115.89 41 ⇑PKiKP **PKiKP** **13 54 27.3 +0.4**
baz=116

MSO Missoula 115.92 41 ⇑PKiKP **PKiKP** **13 54 27.4 +0.4**
baz=116
LOR Lormes 115.93 320 *e*PKIKP **PKPdf** **13 54 25.4 -1.4**
comp=Z,11nm,0.9s
LOR *e*R
comp=Z,88nm,18.8s
LOR Lormes 115.93 320 *e*PKPdf **PKPdf** **13 54 25.4 -1.4**
EDW2 Edwards Air Fo 115.93 55 ⇑PKiKP **PKPdf** **13 54 27.2 -0.1**
baz=116
A15A Johnson Ranch, 115.96 38 ⇓PKiKP **PKiKP** **13 54 27.2 +0.2**
baz=116
F13A Darby 115.99 42 ⇓PKiKP **PKPdf** **13 54 26.9 -0.2**
baz=116
H12A Diamond D Ranc 116.01 44 ⇓PKiKP **PKPdf** **13 54 27.1 -0.2**
baz=116
GRAC Grapevine Rang 116.03 52 ⇑PKiKP **PKPdf** **13 54 27.3 -0.1**
baz=116
LRMC Laurel Mountai 116.06 54 ⇑PKiKP **PKPdf** **13 54 27.6 0.0**
baz=116
D14A Greenough 116.12 41 ⇑PKiKP **PKPdf** **13 54 27.3 -0.1**
baz=116
SMF Signal de Mont 116.14 319 *e*PKIKP **PKPdf** **13 54 26.6 -0.6**
comp=Z,27nm,1.4s
SMF Signal de Mont 116.14 319 *e*PKIKP **PKPdf** **13 54 26.6 -0.6**
SMF Signal de Mont 116.14 319 *e*PKPdf **PKPdf** **13 54 26.6 -0.6**
VIVF Saint-Julien-l 116.15 317 *e*PKIKP **PKPdf** **13 54 26.7 -0.6**
comp=Z,10nm,0.9s
VIVF Saint-Julien-l 116.15 317 *e*PKIKP **PKPdf** **13 54 26.7 -0.6**
VIVF Saint-Julien-l 116.15 317 *e*PKPdf **PKPdf** **13 54 26.7 -0.6**
SSF Saint Saulge 116.22 320 *e*PKIKP **PKPdf** **13 54 26.9 -0.5**
comp=Z,20nm,1.0s
SSF Saint Saulge 116.22 320 *e*PKIKP **PKPdf** **13 54 26.9 -0.5**
SSF Saint Saulge 116.22 320 *e*PKPdf **PKPdf** **13 54 26.9 -0.5**
B15A Bradely Ranch, 116.30 39 ⇑PKiKP **PKPdf** **13 54 27.6 0.0**
baz=116
AVF Avril sur Loir 116.41 319 *e*PKIKP **PKPdf** **13 54 26.9 -0.8**
comp=Z,15nm,1.0s
AVF Avril sur Loir 116.41 319 *e*PKIKP **PKPdf** **13 54 26.9 -0.8**
AVF Avril sur Loir 116.41 319 *e*PKPdf **PKPdf** **13 54 26.9 -0.8**
H13A Challis 116.42 43 ⇓PKiKP **PKiKP** **13 54 28.7 +0.6**
baz=116
C15A Salmond Ranch, 116.46 40 ⇑PKiKP **PKiKP** **13 54 28.0 0.0**
baz=116
HLID Hailey 116.61 44 *e*PKPdf **PKPdf** **13 54 28.9 +0.4**
HLID Hailey 116.61 44 ⇑PKiKP **PKiKP** **13 54 29.1 +0.7**
baz=116
F14A Wisdom 116.62 42 ⇓PKiKP **PKiKP** **13 54 28.6 +0.1**
baz=117
EKA Eskdalemuir Ar 116.64 330 PKP **PKPdf** **13 54 27.4 -0.4**
EKA PP **PP** **13 55 49.5 +4.2**
EKA Eskdalemuir Ar 116.64 330 PKP **PKPdf** **13 54 27.4 -0.4**
comp=Z,3.3nm,0.8s,baz=50,slow=1.4,SNR=8.2
EKA PP **PP** **13 55 49.5 +4.2**
comp=Z,3.6nm,0.9s,baz=60,slow=8,9,SNR=4.8
I13A Wildhorse Cree 116.71 44 ⇑PKiKP **PKiKP** **13 54 29.1 +0.4**
baz=117
D15A Lincoln 116.77 40 ⇓PKiKP **PKiKP** **13 54 28.9 +0.2**
baz=117
BGF Bois d'Agland 116.82 319 *e*PKIKP **PKPdf** **13 54 28.3 -0.2**
comp=Z,33nm,0.8s
BGF Bois d'Agland 116.82 319 *e*PKIKP **PKPdf** **13 54 28.3 -0.2**
BGF Bois d'Agland 116.82 319 *e*PKPdf **PKPdf** **13 54 28.3 -0.2**
J13A Cove Ranch, Pi 116.82 45 ⇑PKiKP **PKiKP** **13 54 29.1 +0.2**
baz=117
LASF Ste Croix 116.94 316 *e*PKIKP **PKPdf** **13 54 28.4 -0.5**
comp=Z,9.2nm,0.8s
LASF Ste Croix 116.94 316 *e*PKPdf **PKPdf** **13 54 28.4 -0.5**
C16A Fuhringer Ranc 116.99 39 ⇓PKiKP **PKiKP** **13 54 29.2 +0.2**
baz=117
R11A Troy Canyon, C 117.12 50 ⇑PKiKP **PKiKP** **13 54 30.0 +0.4**
baz=117
I14A Mackay 117.16 44 ⇑PKiKP **PKiKP** **13 54 30.0 +0.4**
baz=117
F15A Butte 117.19 42 ⇑PKiKP **PKiKP** **13 54 29.8 +0.2**
baz=117
A17A Triple J Farms 117.22 38 ⇑PKiKP **PKiKP** **13 54 29.4 0.0**
baz=117
J14A Carey 117.30 45 ⇓PKiKP **PKPdf** **13 54 29.8 0.0**
baz=117
TCF Toulx Ste Croi 117.32 319 *e*PKIKP **PKPdf** **13 54 28.0 -1.5**
comp=Z,22nm,1.1s
TCF Toulx Ste Croi 117.32 319 *e*PKIKP **PKPdf** **13 54 28.0 -1.5**
TCF Toulx Ste Croi 117.32 319 *e*PKPdf **PKPdf** **13 54 28.0 -1.5**
B17A L&G Farms, Che 117.40 39 ⇑PKiKP **PKPdf** **13 54 29.5 -0.2**
baz=117
G15A Dillon 117.42 42 ⇑PKiKP **PKiKP** **13 54 30.2 +0.2**
baz=117
MONP Monument Peak 117.57 57 ⇓PKiKP **PKPdf** **13 54 30.2 -0.5**
baz=118
C17A Wharram Farm, 117.67 39 ⇓PKiKP **PKPdf** **13 54 30.0 -0.3**
baz=118
BELC Belle Mtn. Jos 117.71 55 ⇓PKiKP **PKPdf** **13 54 30.8 0.0**
baz=118
F16A Kennard Place, 117.78 41 ⇑PKiKP **PKiKP** **13 54 31.0 +0.4**
baz=118
GMRC Granite Mounta 117.83 54 ⇑PKiKP **PKiKP** **13 54 31.1 0.0**
baz=118
CAF Calviac 117.88 318 *e*PKIKP **PKPdf** **13 54 30.6 -0.1**
comp=Z,19nm,0.9s
CAF Calviac 117.88 318 *e*PKIKP **PKPdf** **13 54 30.6 -0.1**
CAF Calviac 117.88 318 *e*PKPdf **PKPdf** **13 54 30.6 -0.1**
D17A Six Diamond Ra 117.90 40 ⇑PKiKP **PKPdf** **13 54 30.7 -0.1**
baz=118
LDF La Druitiere 117.94 322 *e*PKIKP **PKPdf** **13 54 29.9 -0.7**
LDF La Druitiere 117.94 322 *e*PKIKP **PKPdf** **13 54 29.9 -0.7**
LDF La Druitiere 117.94 322 *e*PKPdf **PKPdf** **13 54 29.9 -0.7**
B18A Beardsley Farm 117.99 38 ⇑PKiKP **PKiKP** **13 54 31.4 +0.5**
baz=118
E17A Martinsdale 118.04 40 ⇑PKiKP **PKiKP** **13 54 31.6 +0.5**
baz=118
FLN La Foliniere 118.09 322 *e*PKIKP **PKPdf** **13 54 30.2 -0.7**
comp=Z,16nm,1.0s
FLN *e*R
comp=Z,96nm,19.0s
FLN La Foliniere 118.09 322 *e*PKIKP **PKPdf** **13 54 30.2 -0.7**
FLN La Foliniere 118.09 322 *e*PKPdf **PKPdf** **13 54 30.2 -0.7**
RJF Les Rejaudoux 118.12 318 *e*PKIKP **PKPdf** **13 54 30.6 -0.5**
RJF *e*R
comp=Z,94nm,20.2s
RJF Les Rejaudoux 118.12 318 *e*PKIKP **PKPdf** **13 54 30.6 -0.5**
RJF Les Rejaudoux 118.12 318 *e*PKPdf **PKPdf** **13 54 30.6 -0.5**
EGMT Eagleton 118.15 38 *e*PKPdf **PKPdf** **13 54 30.4 -0.7**
EGMT Eagleton 118.15 38 ⇓PKiKP **PKiKP** **13 54 31.3 0.0**
baz=118
K15A Arbon 118.19 45 ⇑PKiKP **PKiKP** **13 54 31.9 +0.4**
baz=118
BC3 Big Chuckawall 118.22 55 ⇓PKiKP **PKiKP** **13 54 31.9 +0.1**
baz=118
MTLF Montolieu 118.30 316 *e*PKIKP **PKPdf** **13 54 30.9 -0.6**
comp=Z,14nm,0.9s
MTLF Montolieu 118.30 316 *e*PKIKP **PKPdf** **13 54 30.9 -0.6**
MTLF Montolieu 118.30 316 *e*PKPdf **PKPdf** **13 54 30.9 -0.6**
IRM Iron Mountain 118.37 55 ⇓PKiKP **PKiKP** **13 54 32.1 +0.1**
baz=118
F17A Fitzpatrick Pl 118.37 41 ⇓PKiKP **PKiKP** **13 54 32.0 +0.2**
baz=118
A19A Klindworth Far 118.40 37 ⇓PKiKP **PKiKP** **13 54 32.0 +0.3**
baz=118
GRR Gorron 118.47 322 *e*PKIKP **PKPdf** **13 54 31.1 -0.5**
GRR Gorron 118.47 322 *e*PKIKP **PKPdf** **13 54 31.1 -0.5**
GRR Gorron 118.47 322 *e*PKPdf **PKPdf** **13 54 31.1 -0.5**
L15A Malad City 118.50 46 ⇓PKiKP **PKiKP** **13 54 32.4 +0.2**
baz=118
E18A Harlowton 118.61 40 ⇑PKiKP **PKiKP** **13 54 32.7 +0.5**
baz=118
J16A Bone 118.64 44 ⇑PKiKP **PKiKP** **13 54 32.6 +0.1**
baz=119
C19A Slack Wire Ran 118.70 39 ⇑PKiKP **PKiKP** **13 54 32.4 +0.1**
baz=119
DUG Dugway 118.72 48 ⇑PKiKP **PKiKP** **13 54 32.7 +0.1**
baz=119
MFF Saint Martin d 118.73 320 *e*PKIKP **PKPdf** **13 54 31.6 -0.6**
comp=Z,21nm,0.9s
MFF Saint Martin d 118.73 320 *e*PKIKP **PKPdf** **13 54 31.6 -0.6**
MFF Saint Martin d 118.73 320 *e*PKPdf **PKPdf** **13 54 31.6 -0.6**
LFF La Frestale 118.76 318 *e*PKIKP **PKPdf** **13 54 32.3 0.0**
comp=Z,19nm,0.8s
LFF La Frestale 118.76 318 *e*PKIKP **PKPdf** **13 54 32.3 0.0**
LFF La Frestale 118.76 318 *e*PKPdf **PKPdf** **13 54 32.3 0.0**
GLA Glamis 118.85 56 ⇑PKiKP **PKiKP** **13 54 33.4 +0.4**
baz=119
A20A Cobblestone Ra 118.92 37 ⇑PKiKP **PKiKP** **13 54 32.7 +0.1**
baz=119
F18A Big Timber 118.99 41 ⇑PKiKP **PKiKP** **13 54 33.6 +0.6**
baz=119
SNOW Snow King Moun 119.16 44 *e*PKPdf **PKPdf** **13 54 34.5 +1.0**

L16A	Fish Haven	119.17	45	⇓PKiK	PKiKP	13 54 33.9	+0.4		
	baz=119								
W13A	Hualapai Mount	119.19	54	⇓PKiK	PKiKP	13 54 34.0	+0.2		
	baz=119								
HWUT	Hardware Ranch	119.20	46	*e*PKPdf	PKPdf	13 54 32.6	-0.9		
LOHW	Long Hollow	119.22	43	*e*PKPdf	PKPdf	13 54 33.6	+0.1		
J17A	Brown Place, J	119.23	44	⇑PKiK	PKiKP	13 54 34.3	+0.6		
	baz=119								
FFC	Flin Flon	119.27	29	*i* PKiKP	PKPdf	13 54 34.5	+1.5		
FFC	Flin Flon	119.27	29	*e*PKPdf	PKPdf	13 54 32.3	-0.7		
FFC				*e*SKPdf	SKPdf	13 57 16.1	-0.5		
C20A	Veseth Ranch,	119.36	38	⇑PKiK	PKiKP	13 54 33.9	+0.4		
	baz=119								
E19A	Rath Farm, Rou	119.37	40	⇓PKiK	PKiKP	13 54 33.7	+0.1		
	baz=119								
F19A	Roth Farm, Mol	119.50	41	⇑PKiK	PKiKP	13 54 34.3	+0.3		
	baz=119								
D20A	Manuel Ranch,	119.53	39	⇑PKiK	PKiKP	13 54 34.0	+0.1		
	baz=120								
L17A	Cokeville	119.53	45	⇓PKiK	PKiKP	13 54 34.4	+0.1		
	baz=120								
SGMF	Saint Gilles	119.56	323	*e*PKiKP	PKPdf	13 54 33.6	-0.1		
	comp=Z,61nm,1.3s								
SGMF	Saint Gilles	119.56	323	*e*PKiKP	PKPdf	13 54 33.6	-0.1		
SGMF	Saint Gilles	119.56	323	*e*PKPdf	PKPdf	13 54 33.6	-0.1		
B21A	Ellsworth Farm	119.65	37	⇓PKiK	PKiKP	13 54 34.6	+0.5		
	baz=120								
MSU	Marysvale	119.66	49	PKiKP	PKPdf	13 54 33.3	-1.3		
MSU	Marysvale	119.66	49	PKPdf	PKPdf	13 54 33.3	-1.3		
EPF	Esparros	119.70	316	*e*PKiKP	PKPdf	13 54 33.9	-0.3		
	comp=Z,10nm,0.9s								
EPF	Esparros	119.70	316	*e*PKiKP	PKPdf	13 54 33.9	-0.3		
EPF	Esparros	119.70	316	*e*PKPdf	PKPdf	13 54 33.9	-0.3		
TAM	Tamanrasset	119.84	292	*e*PKiKP	PKPdf	13 54 36.9	+1.7		
TAM	Tamanrasset	119.84	292	*e*PKPdf	PKPdf	13 54 36.9	+1.7		
SFJD	Kangerlussuaq	119.88	358	PKP	PKPdf	13 54 32.8	-1.0		
SFJD	Kangerlussuaq	119.88	358	PKP	PKPdf	13 54 32.8	-1.0		
	comp=Z,4.8nm,0.8s,baz=333,slow=4.5,SNR=4.0								
M17A	Scullys Gap (B	119.88	46	⇑PKiK	PKPdf	13 54 34.8	-0.1		
	baz=120								
H19A	Powell	119.93	42	⇑PKiK	PKiKP	13 54 34.9	0.0		
	baz=120								
N17A	Moffit Pass	119.93	46	⇓PKiK	PKiKP	13 54 35.3	+0.1		
	baz=120								
K18A	Toltan Ranch,	119.94	44	⇓PKiK	PKiKP	13 54 35.4	+0.3		
	baz=120								
ROSF	Rostrenen	119.95	323	*e*PKiKP	PKPdf	13 54 33.7	-0.8		
ROSF	Rostrenen	119.95	323	*e*PKiKP	PKPdf	13 54 33.7	-0.8		
ROSF	Rostrenen	119.95	323	*e*PKPdf	PKPdf	13 54 33.7	-0.8		
F20A	Billings	120.04	40	⇑PKiK	PKiKP	13 54 35.3	+0.3		
	baz=120								
QUIF	Quistinic	120.07	322	*e*PKiKP	PKPdf	13 54 33.5	-1.2		
	comp=Z,14nm,0.8s								
QUIF	Quistinic	120.07	322	*e*PKiKP	PKPdf	13 54 33.5	-1.2		
QUIF	Quistinic	120.07	322	*e*PKPdf	PKPdf	13 54 33.5	-1.2		
U15A	North Rim	120.13	52	⇑PKiK	PKiKP	13 54 36.1	+0.4		
	baz=120								
TMUT	Trail Mountain	120.16	48	*e*PKPdf	PKPdf	13 54 35.7	+0.1		
L18A	Fontenelle, Gr	120.18	45	⇑PKiK	PKiKP	13 54 35.7	+0.2		
	baz=120								
G20A	Bridger	120.22	41	⇑PKiK	PKiKP	13 54 35.4	0.0		
	baz=120								
BW06	Boulder Array	120.23	44	⇓PKiK	PKPdf	13 54 35.4	-0.2		
	baz=120								
PDAR	Pinedale Array	120.23	44	PKP	PKPdf	13 54 35.5	-0.1		
PDAR				PKKPbc	PKKPab	14 04 47.2	-0.7		
PDAR	Pinedale Array	120.23	44	PKP	PKPdf	13 54 35.5	-0.1		
	comp=Z,2.1nm,0.7s,baz=153,slow=0.8,SNR=16								
PDAR				PKKPbc	PKKPab	14 04 47.2	-0.7		
	comp=Z,1.2nm,0.7s,baz=116,slow=6.3,SNR=10.0								
D21A	La Casta Ranch	120.25	39	⇑PKiK	PKPdf	13 54 35.3	0.0		
	baz=120								
Q16A	Castle Valley	120.30	49	⇑PKiK	PKPdf	13 54 35.4	-0.3		
	baz=120								
ETSF	Etsaut	120.36	316	*e*PKiKP	PKPdf	13 54 34.9	-0.7		
	comp=Z,17nm,1.1s								
ETSF	Etsaut	120.36	316	*e*PKiKP	PKPdf	13 54 34.9	-0.7		
ETSF	Etsaut	120.36	316	*e*PKPdf	PKPdf	13 54 34.9	-0.7		
J19A	Crowheart	120.40	43	⇑PKiK	PKiKP	13 54 36.1	+0.2		
	baz=120								
P17A	Butcher Ranch,	120.46	48	⇓PKiK	PKPdf	13 54 35.9	-0.1		
	baz=120								
L19A	Farson	120.60	45	⇓PKiK	PKiKP	13 54 36.4	0.0		
	baz=120								
H20A	Greybull	120.65	42	⇑PKiK	PKiKP	13 54 36.6	+0.4		
	baz=121								
A23A	Redstone	120.68	36	⇑PKiK	PKiKP	13 54 36.8	+0.7		
	baz=121								
K19A	Absolon Red Bu	120.70	44	⇓PKiK	PKiKP	13 54 36.6	+0.1		
	baz=121								
D22A	Cohagen	120.72	38	⇑PKiK	PKiKP	13 54 36.7	+0.5		
	baz=121								
SRU	San Rafael	120.73	48	⇑PKiK	PKiKP	13 54 36.8	+0.1		
	baz=121								
SJPF	Ste Jean	120.74	317	*e*PKiKP	PKPdf	13 54 36.4	+0.2		
	comp=Z,11nm,0.8s								
SJPF	Ste Jean	120.74	317	*e*PKiKP	PKPdf	13 54 36.4	+0.2		
SJPF	Ste Jean	120.74	317	*e*PKPdf	PKPdf	13 54 36.4	+0.2		
N18A	Larsen Ranch,	120.75	46	⇑PKiK	PKPdf	13 54 36.5	-0.1		
	baz=121								
I20A	Worland	120.77	42	⇑PKiK	PKiKP	13 54 36.8	+0.3		
	baz=121								
B23A	Brockton	120.84	36	⇑PKiK	PKiKP	13 54 36.8	+0.4		
	baz=121								
J20A	Shoshoni	121.02	43	⇓PKiK	PKiKP	13 54 37.3	+0.3		
	baz=121								
C23A	Lambert	121.03	37	⇑PKiK	PKiKP	13 54 37.3	+0.5		
	baz=121								
WUAZ	Wupatki	121.08	53	⇑PKiK	PKiKP	13 54 37.9	+0.5		
	baz=121								
K20A	Yellowstone Ra	121.10	44	⇓PKiK	PKiKP	13 54 37.4	+0.1		
	baz=121								
E22A	Miles City	121.17	39	⇑PKiK	PKiKP	13 54 37.2	+0.1		
	baz=121								
A24A	Westby	121.20	36	⇑PKiK	PKiKP	13 54 37.5	+0.4		
	baz=121								
D23A	Lindsay	121.30	38	⇑PKiK	PKiKP	13 54 38.1	+0.7		
	baz=121								
X16A	Lo Mia Camp, P	121.30	54	⇑PKiK	PKiKP	13 54 38.4	+0.4		
	baz=121								
DGMT	Dagmar	121.31	36	⇑PKiK	PKiKP	13 54 37.7	+0.4		
	baz=121								
L20A	Wamsutter	121.34	44	⇓PKiK	PKiKP	13 54 38.0	+0.2		
	baz=121								
O19A	Miners Draw (B	121.37	47	⇓PKiK	PKiKP	13 54 38.0	+0.1		
	baz=121								
I21A	Big Trails, Te	121.38	42	⇓PKiK	PKPdf	13 54 37.5	-0.1		
	baz=121								
G22A	Birney	121.47	40	⇑PKiK	PKiKP	13 54 38.4	+0.6		
	baz=121								
S18A	Hurst Farm, Bl	121.55	50	⇓PKiK	PKiKP	13 54 38.9	+0.5		
	baz=122								
C24A	Savage	121.61	37	⇓PKiK	PKiKP	13 54 39.0	+1.0		
	baz=122								
M20A	Sweetwater, Wa	121.63	45	⇑PKiK	PKiKP	13 54 39.2	+0.7		
	baz=122								
P19A	Cripple Cowboy	121.70	47	⇑PKiK	PKiKP	13 54 39.3	+0.7		
	baz=122								
Q19A	Hogan Spring (	121.71	48	⇓PKiK	PKiKP	13 54 39.1	+0.6		
	baz=122								
K21A	Alcova	121.86	43	⇓PKiK	PKPdf	13 54 38.5	-0.2		
	baz=122								
I22A	9 Mile Ranch,	121.88	42	⇓PKiK	PKiKP	13 54 39.2	+0.5		
	baz=122								
L21A	Rawlins	122.03	44	⇑PKiK	PKiKP	13 54 39.5	+0.3		
	baz=122								
O20A	White River Ci	122.06	47	⇓PKiK	PKiKP	13 54 39.7	+0.4		
	baz=122								
E24A	Baker	122.13	38	⇑PKiK	PKiKP	13 54 39.2	+0.1		
	baz=122								
M21A	Separation Pea	122.17	45	⇑PKiK	PKiKP	13 54 39.5	0.0		
	baz=122								
P20A	De Beque	122.17	47	⇓PKiK	PKiKP	13 54 39.8	+0.3		
	baz=122								
K22A	Casper	122.35	43	⇓PKiK	PKiKP	13 54 40.3	+0.6		
	baz=122								
N21A	Black Mountain	122.36	46	⇑PKiK	PKiKP	13 54 40.1	+0.2		
	baz=122								
F24A	Ekalaka	122.37	39	⇓PKiK	PKiKP	13 54 39.9	+0.3		
	baz=122								
Q20A	Ridgley Place,	122.42	48	⇓PKiK	PKiKP	13 54 40.2	+0.2		
	baz=122								
X18A	Snowflake	122.47	53	⇑PKiK	PKiKP	13 54 40.6	+0.3		
	baz=122								
O21A	Pagoda	122.59	46	⇑PKiK	PKiKP	13 54 40.6	+0.1		
	baz=122								
G24A	Alzada	122.62	40	⇓PKiK	PKiKP	13 54 40.6	+0.5		
	baz=122								
S20A	Disappointment	122.74	49	⇓PKiK	PKPdf	13 54 40.6	+0.1		
	baz=123								
M22A	Cedar Creek Ra	122.78	45	⇑PKiK	PKiKP	13 54 41.1	+0.4		
	baz=123								
H24A	Dirks Ranch, A	122.78	40	⇑PKiK	PKiKP	13 54 40.5	+0.1		
	baz=123								
MVCO	Mesa Verde	122.83	50	*e*PKPdf	PKPdf	13 54 40.4	-0.3		
MVCO	Mesa Verde	122.83	50	⇓PKiK	PKiKP	13 54 41.4	+0.4		
	baz=123								
P21A	Newcastle	122.85	47	⇓PKiK	PKiKP	13 54 41.5	+0.6		
	baz=123								
Q21A	Lamborn Mesa,	122.99	48	⇓PKiK	PKiKP	13 54 41.9	+0.7		
	baz=123								
N22A	Wattenberg Ran	123.10	45	⇓PKiK	PKiKP	13 54 42.1	+0.7		
	baz=123								
R21A	Cimarron	123.17	48	⇑PKiK	PKiKP	13 54 42.4	+0.8		
	baz=123								
S21A	Coal Bank Pass	123.22	49	⇓PKiK	PKiKP	13 54 42.2	+0.4		
	baz=123								
O22A	Kremmling	123.27	46	⇑PKiK	PKiKP	13 54 42.1	+0.2		
	baz=123								
V20A	Brimhall	123.28	51	⇑PKiK	PKiKP	13 54 41.9	+0.1		
	baz=123								
J24A	Dixon Ranch, L	123.32	42	⇓PKiK	PKiKP	13 54 41.5	-0.1		
	baz=123								
P22A	Eagle	123.32	47	⇑PKiK	PKiKP	13 54 42.1	+0.2		
	baz=123								
W20A	Ramah	123.45	52	⇑PKiK	PKPdf	13 54 42.0	0.0		
	baz=123								
Q22A	Crested Butte,	123.47	48	⇓PKiK	PKiKP	13 54 43.0	+0.8		
	baz=123								
X20A	Quemado	123.62	53	⇑PKiK	PKiKP	13 54 43.1	+0.5		
	baz=124								
U21A	Nageezi	123.71	50	⇓PKiK	PKiKP	13 54 43.3	+0.6		
	baz=124								
R22A	Saguache, Gunn	123.80	48	⇑PKiK	PKiKP	13 54 43.2	+0.3		
	baz=124								
319A	Douglas	123.80	57	⇑PKiK	PKiKP	13 54 43.6	+0.7		
	baz=124								
Y20A	Horse Springs,	123.89	54	⇓PKiK	PKiKP	13 54 43.6	+0.5		
	baz=124								
S22A	4UR Ranch, Cre	123.91	49	⇓PKiK	PKiKP	13 54 43.4	+0.3		
	baz=124								
ESDC	Sonseca Array	123.92	314	PKP	PKPdf	13 54 42.9	+0.4		
ESDC	Sonseca Array	123.92	314	PKP	PKPdf	13 54 42.9	+0.4		
	comp=Z,2.3nm,0.7s,baz=23,slow=2.5,SNR=11								
V21A	Milan	123.92	51	⇓PKiK	PKiKP	13 54 43.8	+0.7		
	baz=124								
Z20A	Nine Sixteen R	123.93	55	⇓PKiK	PKiKP	13 54 44.0	+0.8		
	baz=124								
TOA0	Torodi Ar. Sit	123.98	281	*e*PKPdf	PKPdf	13 54 42.4	-0.7		
TORD	Torodi Ar. Bea	123.98	281	PKP	PKPdf	13 54 42.6	-0.5		
TORD				PP	PP	13 56 34.3	-2.0		
TORD				SKPbc	SKiKP	13 57 03.2	-24		
TORD				PKKPbc	PKKPbc	14 04 31.4	+0.2		
TORD	Torodi Ar. Bea	123.98	281	PKP	PKPdf	13 54 42.6	-0.5		
	comp=Z,16nm,0.7s,baz=76,slow=1.7,SNR=68								
TORD				PP	PP	13 56 34.3	-2.0		
	comp=Z,2.5nm,1.0s,baz=78,slow=6.1,SNR=3.9								
TORD				SKPbc	SKiKP	13 57 03.2	-24		
	comp=Z,4.3nm,0.8s,baz=77,slow=2.3,SNR=7.0								
TORD				PKKPbc	PKKPbc	14 04 31.4	+0.2		
	comp=Z,0.4nm,0.4s,baz=285,slow=5.2,SNR=7.0								
120A	U Bar Ranch, L	124.05	55	⇑PKiK	PKiKP	13 54 44.3	+0.9		
	baz=124								
ISCO	Idaho Springs	124.07	46	⇑PKiK	PKiKP	13 54 44.2	+0.8		
	baz=124								
T22A	Edith	124.10	50	⇓PKiK	PKiKP	13 54 44.0	+0.5		
	baz=124								
X21A	Alamocita Cree	124.21	53	⇓PKiK	PKiKP	13 54 44.6	+0.8		
	baz=124								
Q23A	Hartsel	124.24	47	⇑PKiK	PKiKP	13 54 44.5	+0.7		
	baz=124								
MDND	Maddock	124.28	35	⇑PKiK	PKiKP	13 54 43.7	+0.5		
	baz=124								
220A	Playas Peak, P	124.30	56	⇑PKiK	PKiKP	13 54 44.2	+0.3		
	baz=124								
Y21A	Point of Rocks	124.42	53	⇑PKiK	PKiKP	13 54 44.4	+0.2		
	baz=124								
320A	Kipp Ranch, An	124.44	57	⇑PKiK	PKiKP	13 54 45.0	+0.8		
	baz=124								
V22A	San Miguel Ran	124.45	51	⇓PKiK	PKiKP	13 54 44.8	+0.6		
	baz=124								
R23A	Moffat	124.50	48	⇓PKiK	PKiKP	13 54 45.0	+0.7		
	baz=124								
K26A	Motz Farm, Whi	124.57	42	⇓PKiK	PKiKP	13 54 44.4	+0.4		
	baz=124								
Q24A	Divide	124.72	47	⇓PKiK	PKiKP	13 54 44.7	0.0		
	baz=125								
LAZ	Ladron	124.73	53	*e*PKPdf	PKPdf	13 54 45.3	+0.9		
T23A	Casias Ranch,	124.74	49	⇑PKiK	PKiKP	13 54 45.3	+0.5		
	baz=125								
X22A	Bernardo	124.80	53	⇑PKiK	PKiKP	13 54 45.4	+0.5		
	baz=125								
U23A	El Rito	124.86	50	⇓PKiK	PKiKP	13 54 45.3	+0.3		
	baz=125								
ULM	Lac du Bonnet	124.91	31	PKP	PKPdf	13 54 43.1	-0.8		
ULM				SKPbc	SKiKP	13 57 08.4	-20		
ULM	Lac du Bonnet	124.91	31	PKP	PKPdf	13 54 43.1	-0.8		
	comp=Z,6.0nm,0.6s,baz=311,slow=2.8,SNR=9.5								
ULM				SKPbc	SKiKP	13 57 08.4	-20		
	comp=Z,1.5nm,0.4s,baz=288,slow=4.4,SNR=3.7								
R24A	Sanders Place,	125.02	48	⇓PKiK	PKiKP	13 54 45.5	+0.3		
	baz=125								
V23A	Ortiz Mt. (NFS	125.06	51	⇑PKiK	PKiKP	13 54 45.7	+0.3		
	baz=125								
Z22A	Elephant Butte	125.20	54	⇓PKiK	PKiKP	13 54 45.8	+0.2		
	baz=125								
P25A	Willow Gulch B	125.21	46	⇓PKiK	PKiKP	13 54 45.6	+0.1		
	baz=125								
W23A	Werner Place,	125.27	51	⇓PKiK	PKiKP	13 54 46.1	+0.2		
	baz=125								
Q25A	Bedland, Calha	125.39	47	⇑PKiK	PKiKP	13 54 46.6	+0.6		
	baz=125								
X23A	Hourglass Bar	125.42	52	⇓PKiK	PKiKP	13 54 46.6	+0.5		
	baz=125								
T24A	Torres, Weston	125.47	49	⇑PKiK	PKiKP	13 54 46.6	+0.4		
	baz=125								
R25A	Fountain Ranch	125.65	47	⇑PKiK	PKiKP	13 54 46.9	+0.5		
	baz=126								
S25A	Roberts Cordova	125.72	48	⇓PKiK	PKiKP	13 54 47.1	+0.4		
	baz=126								
Y23A	Lovelace Mesa,	125.73	53	⇓PKiK	PKiKP	13 54 47.1	+0.3		
	baz=126								
V24A	Rampart Ranch,	125.77	51	⇓PKiK	PKiKP	13 54 47.2	+0.4		
	baz=126								
P26A	Davis Ranch, A	125.78	45	⇑PKiK	PKiKP	13 54 47.2	+0.5		
	baz=126								
Z23A	Rita Site, Whi	125.79	54	⇓PKiK	PKiKP	13 54 47.3	+0.5		
	baz=126								
N27A	Anderson Farm,	125.82	44	⇓PKiK	PKiKP	13 54 47.4	+0.8		
	baz=126								
W24A	Lazy 6 Ranch,	125.83	51	⇑PKiK	PKiKP	13 54 47.1	+0.2		
	baz=126								
POLO	Lamas de Olo	125.90	317	*e*PKPdf	PKPdf	13 54 48.5	+2.2		
Q26A	Hugo	125.91	46	⇓PKiK	PKiKP	13 54 47.4	+0.5		
	baz=126								
PCAB	Cabril	125.91	318	*e*PKPdf	PKPdf	13 54 48.6	+2.4		
T25A	Trinidad	125.93	49	⇓PKiK	PKiKP	13 54 46.9	-0.2		
	baz=126								
PGAV	Figueira, Arco	125.96	318	*e*PKPdf	PKPdf	13 54 48.0	+1.6		
OGNE	Ogallala	126.11	43	⇓PKiK	PKiKP	13 54 47.2	0.0		
	baz=126								
MTE	Manteigas	126.15	316	*e*PKPdf	PKPdf	13 54 48.1	+1.4		
U25A	Circle Dot Ran	126.19	49	⇓PKiK	PKiKP	13 54 47.4	-0.2		
	baz=126								
R26A	Arlington	126.20	47	⇑PKiK	PKiKP	13 54 47.8	+0.3		
	baz=126								
Y24A	Capitan	126.22	53	⇓PKiK	PKiKP	13 54 47.8	+0.1		
	baz=126								
V25A	Rancho No Teng	126.23	50	⇓PKiK	PKiKP	13 54 47.9	+0.2		
	baz=126								
PCBR	Castelo Branco	126.34	315	*e*PKPdf	PKPdf	13 54 48.4	+1.4		
S26A	Kim	126.44	48	⇓PKiK	PKiKP	13 54 48.3	+0.3		
	baz=126								
PMRV	Marv??o	126.45	315	*e*PKPdf	PKPdf	13 54 48.2	+0.9		
T26A	Comanche Natio	126.52	48	⇓PKiK	PKiKP	13 54 48.4	+0.2		
	baz=126								
W25A	X Bar L Ranch,	126.56	51	⇓PKiK	PKiKP	13 54 48.6	+0.3		
	baz=126								
124A	Stringfield Ra	126.58	54	⇑PKiK	PKiKP	13 54 48.6	+0.1		
	baz=126								
U26A	Atchley Ranch,	126.69	49	⇑PKiK	PKiKP	13 54 48.6	0.0		
	baz=127								
224A	Cornudas Mount	126.71	55	⇓PKiK	PKiKP	13 54 48.8	0.0		
	baz=127								
PBAR	Barrancos	126.71	313	*e*PKPdf	PKPdf	13 54 49.9	+2.1		
	baz=122								
MDT	Midelt	126.72	306	PKP	PKPdf	13 54 49.3	+1.2		
MDT	Midelt	126.72	306	PKP	PKPdf	13 54 49.3	+1.2		
	comp=Z,7.8nm,1.0s,baz=89,slow=2.8,SNR=4.3								
Y25A	Mesa, Roswell	126.81	52	⇓PKiK	PKiKP	13 54 49.0	+0.2		
	baz=127								
PESTR	Estremoz	126.83	314	*e*PKPdf	PKPdf	13 54 49.0	+1.0		
V26A	Tequesquite Ra	126.88	50	⇑PKiK	PKiKP	13 54 49.0	+0.1		
	baz=127								
324A	Moseley Ranch,	126.92	56	⇓PKiK	PKiKP	13 54 49.2	+0.1		
	baz=127								
MNTX	Cornudas Mount	126.93	55	⇓PKiK	PKiKP	13 54 49.2	+0.3		
	baz=127								
W26A	Owens Ranch, T	127.14	51	⇓PKiK	PKiKP	13 54 49.7	+0.3		
	baz=127								
125A	Gardner Draw,	127.23	54	⇑PKiK	PKiKP	13 54 50.0	+0.3		
	baz=127								
EVO	Evora	127.26	314	*e*PKiKP	PKPdf	13 54 49.4	+0.6		
	comp=Z,39nm,1.3s								
EVO				*e*R					
	comp=Z,86nm,19.5s								
225A	Deer Hill, Car	127.27	55	⇑PKiK	PKiKP	13 54 50.0	+0.1		
	baz=127								
X26A	CR and CF Fran	127.29	51	⇑PKiK	PKiKP	13 54 50.0	+0.2		
	baz=127								
EVOP	Sao Brissos	127.34	314	*e*PKiKP	PKPdf	13 54 49.4	+0.5		
EVOP	Sao Brissos	127.34	314	*e*PKPdf	PKPdf	13 54 49.4	+0.5		
325A	Bean Ranch, Si	127.36	56	⇓PKiK	PKiKP	13 54 49.9	-0.2		
	baz=127								
PVAQ	Vaqueiros	127.50	313	*e*PKPdf	PKPdf	13 54 51.2	+1.9		
425A	Indio Mountain	127.51	56	⇓PKiK	PKiKP	13 54 50.2	-0.1		
	baz=128								
Z26A	Caprock	127.58	53	⇑PKiK	PKiKP	13 54 50.5	+0.1		
	baz=128								
PCVE	Castro Verde	127.65	313	*e*PKPdf	PKPdf	13 54 51.7	+2.1		
W27A	Bowe Ranch, En	127.69	51	⇓PKiK	PKiKP	13 54 50.7	+0.2		
	baz=128								
PBDV	Barranco-do-Ve	127.72	312	*e*PKPdf	PKPdf	13 54 52.7	+2.9		
226B	Tecolote Peak,	127.81	54	⇓PKiK	PKiKP	13 54 50.6	-0.3		
	baz=128								
PNCL	Nicolau / Gran	127.81	314	*e*PKPdf	PKPdf	13 54 52.4	+2.6		
Z27A	Tatum	128.17	53	⇓PKiK	PKiKP	13 54 51.7	+0.1		
	baz=128								
PTEO	Sao Teotonio	128.18	313	*e*PKPdf	PKPdf	13 54 52.3	+1.7		
326A	Caldwell Ranch	128.19	55	⇓PKiK	PKiKP	13 54 51.4	-0.2		
	baz=128								
MORF	Marmelete	128.22	313	*e*PKPdf	PKPdf	13 54 53.1	+2.3		
MSTX	Muleshoe	128.30	52	⇓PKiK	PKiKP	13 54 51.7	-0.1		
	baz=128								
426A	McDonald Obser	128.34	56	⇑PKiK	PKPdf	13 54 51.7	+0.3		
	baz=128								
526A	Mary Lane Ranc	128.46	57	⇑PKiK	PKiKP	13 54 52.3	0.0		
	baz=128								
BGNE	Belgrade	128.49	41	⇑PKiK	PKPdf	13 54 51.4	+0.2		
	baz=128								
626A	Big Bend Ranch	128.56	58	⇓PKiK	PKiKP	13 54 52.4	0.0		
	baz=128								
W29A	Amraillo	128.75	50	⇓PKiK	PKiKP	13 54 52.9	+0.3		
	baz=129								
427A	Hayter Ranch,	128.80	56	⇓PKiK	PKiKP	13 54 52.9	+0.1		
	baz=129								
AMTX	Amarillo	128.81	50	⇑PKiK	PKiKP	13 54 52.9	+0.2		
	baz=129								
U30A	WK&E Inc. Balk	128.94	48	⇑PKiK

TKL	**Tuckaleechee C**	**140.99**	**39**	PKPpre	PKPpre	13 55 08.5		
TKL				SKPbc	**SKPbc**	**13 57 58.5**	**-1.4**	
TKL	**Tuckaleechee C**	**140.99**	**39**	PKhKP	PKPpre	13 55 08.5		
	comp=Z,1.9nm,0.5s,baz=243,slow=2.3,SNR=2.8							
TKL				SKPbc	**SKPbc**	**13 57 58.5**	**-1.4**	
	comp=Z,27nm,1.0s,baz=166,slow=2.0,SNR=12							
BBTS	**Babate**	**141.54**	**285**	PKPpre	PKPpre	13 55 12.5		
BBTS	**Babate**	**141.54**	**285**	PKhKP	PKPpre	13 55 12.5		
	comp=Z,29nm,0.8s,baz=103,slow=2.1,SNR=4.9							
JSC	**Jenkinsville**	**143.45**	**38**	*e*PKIKP	PKPab	13 55 17.1	-0.1	
JSC	**Jenkinsville**	**143.45**	**38**	*e*PKPdf	PKPab	13 55 17.1	-0.1	
CNNC	**Cliffs of the**	**144.73**	**34**	*e*PKP	**PKPdf**	**13 55 21.2**	**+0.1**	
TEIG	**Tepich**	**145.05**	**64**	PKP	**PKPbc**	**13 55 23.0**	**+0.2**	
TEIG	**Tepich**	**145.05**	**64**	PKP	**PKPbc**	**13 55 23.0**	**+0.2**	
	comp=Z,6.8nm,0.5s,baz=326,slow=2.7,SNR=3.8							
CPUP	**Villa Florida**	**146.93**	**176**	PKPbc	**PKPbc**	**13 55 28.1**	**+0.2**	
CPUP				pPKPbc	pPKPbc	13 57 31.1	-3.4	
CPUP	**Villa Florida**	**146.93**	**176**	PKPbc	**PKPbc**	**13 55 28.1**	**+0.2**	
	comp=Z,5.4nm,0.6s,baz=121,slow=2.6,SNR=17							
CPUP				pPKPbc	pPKPbc	13 57 31.1	-3.4	
	comp=Z,2.3nm,0.8s,baz=180,slow=2.0,SNR=2.5							
LVC	**Limon Verde**	**147.68**	**155**	*e*PKPbc	**PKPbc**	**13 55 31.9**	**+1.6**	
JTS	**JuntasAbangare**	**150.12**	**81**	*e*PKPbc	**PKPbc**	**13 55 36.6**	**+0.4**	
JTS				pPKPbc	**pPKPbc**	**13 57 43.9**	**+0.1**	
JTS	**JuntasAbangare**	**150.12**	**81**	PKPbc	**PKPbc**	**13 55 36.7**	**+0.4**	
	comp=Z,8.1nm,0.7s,baz=269,slow=5.9,SNR=6.8							
JTS				pPKPbc	**pPKPbc**	**13 57 43.9**	**+0.1**	
	comp=Z,4.9nm,0.9s,baz=288,slow=4.0,SNR=2.4							
NNA	**Nana**	**151.27**	**131**	PKPbc	**PKPbc**	**13 55 39.9**	**+1.0**	
NNA				pPKPab	**pPKPab**	**13 57 53.7**	**+1.7**	
NNA	**Nana**	**151.27**	**131**	PKPbc	**PKPbc**	**13 55 39.9**	**+1.0**	
	comp=Z,6.0nm,0.5s,baz=270,slow=4.0,SNR=5.9							
NNA				pPKPab	**pPKPab**	**13 57 53.7**	**+1.7**	
	comp=Z,26nm,0.9s,baz=233,slow=4.4,SNR=7.6							
ATAH	**Atahualpa**	**152.78**	**120**	PKPbc	**PKPbc**	**13 55 45.1**	**+2.4**	
ATAH				PKPab	**PKPab**	**13 55 59.1**	**+2.9**	
ATAH				pPKPab	**pPKPab**	**13 57 57.9**	**-0.8**	
ATAH	**Atahualpa**	**152.78**	**120**	PKPbc	**PKPbc**	**13 55 45.1**	**+2.4**	
	comp=Z,4.3nm,0.6s,baz=93,slow=9.7,SNR=4.3							
ATAH				PKPab	**PKPab**	**13 55 59.1**	**+2.9**	
	comp=Z,13nm,0.8s,baz=250,slow=1.9,SNR=6.5							
ATAH				pPKPab	**pPKPab**	**13 57 57.9**	**-0.8**	
	comp=Z,2.3nm,0.5s,baz=288,slow=3.2,SNR=5.1							
LPAZ	**La Paz**	**153.56**	**150**	PKPbc	**PKPbc**	**13 55 45.6**	**+1.1**	
LPAZ				*e*PKPab	**PKPab**	**13 56 00.9**	**+1.4**	
LPAZ				pPKPab	**pPKPab**	**13 57 59.6**	**-2.3**	
LPAZ	**La Paz**	**153.56**	**150**	PKPbc	**PKPbc**	**13 55 45.6**	**+1.1**	
	comp=Z,1.4nm,0.4s,baz=194,slow=3.3,SNR=7.8							
LPAZ				PKPab	**PKPab**	**13 56 01.0**	**+1.4**	
	comp=Z,14nm,0.8s,baz=182,slow=4.9,SNR=29							
LPAZ				pPKPab	**pPKPab**	**13 57 59.6**	**-2.3**	
	comp=Z,13nm,1.0s,baz=187,slow=4.0,SNR=9.7							
SIV	**San Ignacio**	**156.50**	**165**	PKPab	**PKPab**	**13 56 11.5**	**0.0**	
SIV				pPKPab	**pPKPab**	**13 58 08.6**	**-5.0**	
SIV	**San Ignacio**	**156.50**	**165**	PKPab	**PKPab**	**13 56 11.5**	**0.0**	
	comp=Z,7.5nm,0.6s,baz=216,slow=4.9,SNR=28							
SIV				pPKPab	**pPKPab**	**13 58 08.6**	**-5.0**	
	comp=Z,2.6nm,0.7s,baz=211,slow=4.4,SNR=4.8							
RCBR	**Riachuelo**	**157.22**	**237**	PKP	**PKPdf**	**13 55 42.1**	**+1.6**	
RCBR				PKPab	**PKPab**	**13 56 16.6**	**+1.7**	
RCBR	**Riachuelo**	**157.22**	**237**	PKP	**PKPdf**	**13 55 42.1**	**+1.6**	
	comp=Z,13nm,1.1s,baz=270,slow=3.0,SNR=2.9							
RCBR				PKPab	**PKPab**	**13 56 16.6**	**+1.7**	
	comp=Z,9.6nm,0.9s,baz=194,slow=4.2,SNR=4.4							
SAML	**Samuel**	**162.28**	**152**	*e*PKPab	**PKPab**	**13 56 36.2**	**-0.5**	
SJG	**San Juan**	**164.35**	**43**	PKPab	**PKPab**	**13 56 45.8**	**-0.1**	
SJG	**San Juan**	**164.35**	**43**	PKPab	**PKPab**	**13 56 45.7**	**-0.1**	
	comp=Z,11nm,0.3s,baz=334,slow=15,SNR=3.0							

*ISK **13** 13:42:30.8, 40.01N×28.02E, h12km, MD2.4*
*CSEM **13** 13:42:31.5±0.1, 40.04N×28.01E, h12km, MD2.4, Error ellipse: s-maj=2.1km s-min=1.6km az=45.0*
*DDA **13** 13:42:31.8, 40.02N×28.00E, h16km, MD2.6*
*ISCJB **13** 13:42:32.1±0.5, 40.02N±0.03×27.98E±0.05, h17km±10km, Error ellipse: s-maj=7.3km s-min=4.5km az=140.4*

ISC 13 13:42:31.5±0.9, 40.03N±0.03×28.02E±0.03, h14km±8km, n26, σ0.24/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GONE	**Gonen-Balikesi**	**0.25**	**274**	*e*PG	**Pg**	**13 42 36.7**	**-0.3**
GONE				*e*SG	**Sg**	**13 42 41.1**	**+0.4**
GONE	**Gonen-Balikesi**	**0.25**	**274**	*e*Pg	**Pg**	**13 42 36.7**	**-0.3**
GONE				*e*Sg	**Sg**	**13 42 41.1**	**+0.4**
BALB	**Balikesir**	**0.40**	**195**	*e*PG	**Pg**	**13 42 39.3**	**-0.3**
BALB				*e*SG	**Sg**	**13 42 44.8**	**-0.2**
BALB	**Balikesir**	**0.40**	**195**	*e*Pg	**Pg**	**13 42 39.3**	**-0.3**
BALB				*e*Sg	**Sg**	**13 42 44.8**	**-0.2**
BALY	**Balya**	**0.42**	**227**	*i* P	**Pg**	**13 42 40.1**	**+0.2**
BALY				*i* S	**Sg**	**13 42 46.0**	**+0.4**
BALY	**Balya**	**0.42**	**227**	*i* P	**Pg**	**13 42 40.1**	**+0.2**
BALY				*i* S	**Sg**	**13 42 46.0**	**+0.4**
DURS	**Dursunbey**	**0.55**	**140**	*i* P	**Pb**	**13 42 42.9**	**-0.2**
DURS				*i* S	**Sb**	**13 42 50.9**	**+0.1**
DURS	**Dursunbey**	**0.55**	**140**	*i* P	**Pb**	**13 42 42.9**	**-0.2**
DURS				*i* S	**Sb**	**13 42 50.9**	**+0.1**
ARMT	**Armutlu**	**0.84**	**50**	*e*PG	**Pg**	**13 42 47.7**	**-0.1**
ARMT	**Armutlu**	**0.84**	**50**	*e*Pg	**Pg**	**13 42 47.7**	**-0.1**
RKY	**Sarkoy-Tekirda**	**0.92**	**316**	*e*PG	**Pb**	**13 42 48.8**	**-0.5**
RKY	**Sarkoy-Tekirda**	**0.92**	**316**	*e*Pg	**Pb**	**13 42 48.8**	**-0.5**
SART	**Tekirdag**	**0.92**	**316**	*i* P	**Pb**	**13 42 49.1**	**-0.1**
SART				*i* S	**Sb**	**13 43 01.4**	**+0.1**
SART	**Tekirdag**	**0.92**	**316**	*i* P	**Pb**	**13 42 49.1**	**-0.1**
SART				*i* S	**Sb**	**13 43 01.4**	**+0.1**
MFT	**Murefte**	**0.94**	**324**	*e*PG	**Pb**	**13 42 49.7**	**0.0**
MFT	**Murefte**	**0.94**	**324**	*e*Pg	**Pb**	**13 42 49.7**	**0.0**
DEMI	**Demirci**	**1.12**	**151**	*i* P	**Pg**	**13 42 53.5**	**+0.3**
DEMI				*i* S	**Sn**	**13 43 08.2**	**0.0**
DEMI	**Demirci**	**1.12**	**151**	*i* P	**Pg**	**13 42 53.5**	**+0.3**
DEMI				*i* S	**Sn**	**13 43 08.2**	**0.0**
YLV	**Yalova**	**1.17**	**62**	*e*PN	**Pg**	**13 42 54.2**	**+0.2**
YLV	**Yalova**	**1.17**	**62**	*e*Pn	**Pg**	**13 42 54.2**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.24**	**288**	*e*PN	**Pb**	**13 42 54.6**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.24**	**288**	*e*Pn	**Pb**	**13 42 54.6**	**-0.1**
TVSB	**Tavsanli**	**1.26**	**117**	*e*PN	**Pn**	**13 42 54.6**	**-0.1**
TVSB	**Tavsanli**	**1.26**	**117**	*e*Pn	**Pn**	**13 42 54.6**	**-0.1**
EZN	**Ezine**	**1.32**	**262**	*e*PN	**Pn**	**13 42 55.4**	**0.0**
EZN	**Ezine**	**1.32**	**262**	*e*Pn	**Pn**	**13 42 55.4**	**0.0**

IDC 13 13:53:03.6±55.0, 15.96S×176.72W, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/19, mbtmp3.6/3, Error ellipse: s-maj=1034.0km s-min=163.6km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.99**	**240**	P	P	14 00 48.9	+0.3
	1.1nm,0.8s,baz=69,slow=8.6,SNR=7.8						
WRA	**Warramunga Arr**	**46.60**	**258**	P	P	14 01 33.3	-0.6
	0.4nm,0.8s,baz=96,slow=7.4,SNR=4.6						
ASAR	**Alice Springs**	**46.89**	**252**	P	P	14 01 36.0	-0.1
	0.7nm,0.5s,baz=86,slow=8.3,SNR=13						

*NEIC **13** 14:08:44.6, 19.42N×64.94W, h44km±19km, MD3.2(RSPR), After RSPR.*

RSPR 13 14:08:44.6, 19.42N×64.94W, h44km±19km, MD3.2/7, 15C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBVI	**Tortola**	**1.04**	**163**	*e*P	Pn	14 09 03.7	+0.9
TBVI	**Tortola**	**1.04**	**163**	*e*P	Pn	14 09 03.7	+0.9
TBVI	**Tortola**	**1.04**	**163**	*e*P	Pn	14 09 03.7	+0.9
STVI	**Saint Thomas**	**1.06**	**181**	*e*P	Pn	14 09 02.5	-0.5
STVI	**Saint Thomas**	**1.06**	**181**	*e*S	Sn	14 09 15.1	-1.5
STVI	**Saint Thomas**	**1.06**	**181**	*e*P	Pn	14 09 02.5	-0.5
STVI				*e*S	Sn	14 09 15.1	-1.5
STVI	**Saint Thomas**	**1.06**	**181**	*e*P	Pn	14 09 02.5	-0.5
STVI				*e*S	Sn	14 09 15.1	-1.5
CBYP	**Canovanas**	**1.43**	**217**	*e*P	Pn	14 09 07.3	-0.9
CBYP	**Canovanas**	**1.43**	**217**	*e*S	Sn	14 09 25.1	-0.8
CBYP	**Canovanas**	**1.43**	**217**	*e*P	Pn	14 09 07.3	-0.9
CBYP				*e*S	Sn	14 09 25.1	-0.8
CBYP	**Canovanas**	**1.43**	**217**	*e*P	Pn	14 09 07.3	-0.9
CBYP				*e*S	Sn	14 09 25.1	-0.8
MTP	**Monte Pirata**	**1.44**	**204**	*e*P	Pn	14 09 07.3	-0.9
MTP	**Monte Pirata**	**1.44**	**204**	*e*S	Sn	14 09 24.7	-1.2
MTP	**Monte Pirata**	**1.44**	**204**	*e*P	Pn	14 09 07.3	-0.9
MTP				*e*S	Sn	14 09 24.7	-1.2
MTP	**Monte Pirata**	**1.44**	**204**	*e*P	Pn	14 09 07.3	-0.9
MTP				*e*S	Sn	14 09 24.7	-1.2
HUMP	**Col San Antoni**	**1.53**	**214**	*e*P	Pn	14 09 08.1	-1.5
HUMP	**Col San Antoni**	**1.53**	**214**	*e*S	Sn	14 09 27.1	-1.1
HUMP	**Col San Antoni**	**1.53**	**214**	*e*P	Pn	14 09 08.1	-1.5
HUMP				*e*S	Sn	14 09 27.1	-1.1
HUMP	**Col San Antoni**	**1.53**	**214**	*e*P	Pn	14 09 08.6	-0.9
HUMP				*e*S	Sn	14 09 27.1	-1.1
CPD	**Cerro la Pandu**	**1.65**	**214**	*e*P	Pn	14 09 09.8	-1.5
CPD	**Cerro la Pandu**	**1.65**	**214**	*e*S	Sn	14 09 30.4	-0.9
CPD	**Cerro la Pandu**	**1.65**	**214**	*e*P	Pn	14 09 09.8	-1.5
CPD				*e*S	Sn	14 09 30.4	-0.9
CPD	**Cerro la Pandu**	**1.65**	**214**	*e*P	Pn	14 09 09.8	-1.5
CPD				*e*S	Sn	14 09 30.4	-0.9
AOPR	**Arecibo Observ**	**2.02**	**238**	*e*S	Sn	14 09 39.0	-1.4
AOPR	**Arecibo Observ**	**2.02**	**238**	*e*S	Sn	14 09 39.0	-1.4
CELP	**Cerrillos**	**2.05**	**230**	*e*P	Pn	14 09 15.8	-0.8
CELP	**Cerrillos**	**2.05**	**230**	*e*P	Pn	14 09 15.8	-0.8
CELP	**Cerrillos**	**2.05**	**230**	*e*P	Pn	14 09 15.8	-0.8
OBIP	**Obispado Ponce**	**2.09**	**229**	*e*Pn	Pn	14 09 16.0	-1.1
CRPR	**Cabo Rojo, PR**	**2.49**	**236**	*e*Pn	Pn	14 09 22.6	-0.1

IDC 13 14:14:38.3±4.4, 4.61S×139.26E, h0km, mb3.4/1, mb1 3.3/3, mb1mx3.2/16, mbtmp3.2/3, ML2.9/2, Error ellipse: s-maj=164.5km s-min=35.1km az=87.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.98**	**197**	P	Pn	14 18 26.2	+1.5
	0.0nm,0.3s,baz=20,slow=12,SNR=4.5						
WRA				S	Sn	14 21 19.3	-3.5
	0.0nm,0.3s,baz=29,slow=24,SNR=2.6						
ASAR	**Alice Springs**	**19.64**	**195**	P	P	14 19 08.2	-0.7
	0.0nm,0.3s,baz=23,slow=11,SNR=5.9						
MKAR	**Makanchi Array**	**71.62**	**323**	P	P	14 26 01.9	+0.1
	0.2nm,0.8s,baz=116,slow=6.6,SNR=3.5						

KRSC 13 14:20:39.7±0.7, 51.78N×161.15E, h19km±18km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**1.49**	**333**	*e*P	Pn	14 21 05.7	+0.3
SPN				*e*S	Sn	14 21 24.2	-0.1
RUS	**Russkaya**	**1.75**	**293**	*e*P	Pn	14 21 09.4	+0.4
RUS				*e*S	Sn	14 21 31.1	+0.3
MTVR	**Mutnovka**	**1.96**	**292**	*e*P	Pn	14 21 12.7	+0.6
MTVR				*e*S	Sn	14 21 36.6	+0.3
PET	**Petropavlovsk**	**1.97**	**310**	*e*P	Pn	14 21 12.6	+0.6
PET				*e*S	Sn	14 21 36.9	+0.7
UGLR	**Uglovaya**	**2.02**	**316**	*e*P	Pb	14 21 14.9	-1.0
SDLR	**Sedlovina**	**2.04**	**318**	*e*P	Pn	14 21 14.7	+1.5
SDLR				*e*S	Sb	14 21 40.8	-0.6
GRL	**Gorelyy**	**2.05**	**293**	P	Pb	14 21 15.6	-0.8
SMAR	**Somma**	**2.06**	**317**	P	Pb	14 21 16.2	-0.7
AVH	**Avacha**	**2.09**	**316**	*e*P	Pb	14 21 15.8	-1.4
KRER	**Koryakskii**	**2.12**	**317**	*e*P	Pb	14 21 16.7	-1.0
KRER				*e*S	Sb	14 21 44.0	+0.2
KOK	**Koryaka**	**2.16**	**316**	*e*P	Pn	14 21 16.1	+1.4
APC	**Apacha**	**2.70**	**297**	*e*S	Sb	14 21 58.0	-2.2
GNL	**Ganaly**	**2.73**	**316**	*e*P	Pn	14 21 25.4	+2.7
GNL				*e*S	Sb	14 21 59.4	-2.0
MIPR	**Malaya Ipel'ka**	**2.76**	**282**	P	Pn	14 21 24.2	+1.3
MKZ	**Mys Kozlova**	**2.80**	**7**	*e*P	Pn	14 21 24.2	+0.8
MKZ				*e*S	Sn	14 21 56.9	+0.2
SKR	**Severo-Kuril's**	**3.35**	**253**	*e*P	Pn	14 21 32.1	+1.2
KMNR	**Kamenistaya**	**4.02**	**353**	P	Pn	14 21 43.5	+3.2
KOZ	**Kozyrevsk**	**4.35**	**351**	P	Pn	14 21 47.9	+3.1
KBTR	**Krutoberegovo**	**4.54**	**12**	P	Pn	14 21 48.7	+1.3
SRDR	**Sredinnyy**	**4.62**	**350**	*e*P	Pn	14 21 51.1	+2.5

*IDC **13** 14:26:39.0±9.3, 26.81N×127.02E, h109km±59km, mb3.3/6, mb1 3.4/7, mb1mx3.2/27, mbtmp3.3/7, Error ellipse: s-maj=81.8km s-min=28.7km az=173.0*
*ISCJB **13** 14:26:39.3±0.4, 27.09N±0.08×127.08E±0.07, h114km±7km, mb3.4/6, Error ellipse: s-maj=15.9km s-min=4.3km az=140.0*
*JMA **13** 14:26:41.2±0.3, 27.13N×127.08E, h102km±3km, M3.6*

ISC 13 14:26:40.6±0.8, 26.99N±0.07×127.14E±0.07, h121km±7km, n25, σ1.50/38, mb3.5/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGN	**Aguni-jima**	**0.41**	**168**	P	**Pn**	**14 26 57.7**	**-0.4**
JAGN				S	**Sn**	**14 27 10.0**	**-1.3**
JKE	**Kume jima 2**	**0.73**	**206**	P	**Pn**	**14 27 00.2**	**-0.1**
JKE				S	**Sn**	**14 27 13.9**	**-1.2**
JIH	**Iheya**	**0.74**	**86**	P	**Pn**	**14 27 00.1**	**-0.2**
JIH				S	**Sn**	**14 27 13.6**	**-1.6**
JJT2	**Tamagusuku 2**	**1.00**	**147**	P	**Pn**	**14 27 03.8**	**+1.1**
JJT2				*e*S	**Sn**	**14 27 20.3**	**+0.8**
JOW	**Kunigami**	**1.02**	**98**	P	**Pn**	**14 27 02.9**	**0.0**
JOW				S	**Sn**	**14 27 18.5**	**-1.3**
JTK	**Tokunoshima**	**1.79**	**63**	P	**Pn**	**14 27 11.0**	**-0.5**
JTK				*e*S	**Sn**	**14 27 33.7**	**-1.5**
JAMN	**Amaminishikomi**	**2.19**	**55**	P	**Pn**	**14 27 15.7**	**-0.8**
JAMN				*e*S	**Sn**	**14 27 41.1**	**-2.9**
JAM	**Amami Oshima**	**2.60**	**56**	P	**Pn**	**14 27 21.1**	**-0.6**
JAM				*e*S	**Sn**	**14 27 51.3**	**-2.0**
JOGS	**Gusukube**	**2.71**	**216**	P	**Pn**	**14 27 23.8**	**+0.6**
JOGS				*e*S	**Sn**	**14 27 57.9**	**+2.0**
JMJ	**Miyako jima 2**	**2.73**	**218**	P	**Pn**	**14 27 23.8**	**+0.4**
JZK	**Kikaishima**	**2.84**	**62**	P	**Pn**	**14 27 24.8**	**+0.1**
JZK				*e*S	**Sn**	**14 27 58.3**	**-0.5**
JTJ	**Tarama**	**3.21**	**224**	P	**Pn**	**14 27 29.4**	**-0.3**
JIJ	**Ishigaki jima**	**3.76**	**227**	P	**Pn**	**14 27 36.2**	**-0.8**
JIJ				*e*S	**Sn**	**14 28 18.4**	**-2.2**
JMZ	**Minamidaito 2**	**3.84**	**107**	P	**Pn**	**14 27 37.4**	**-0.5**
JMZ				*e*S	**Sn**	**14 28 18.0**	**-4.4**
JKRS	**Kuro-shima**	**3.94**	**227**	P	**Pn**	**14 27 38.6**	**-0.7**
IRIF	**Iriomote-Funau**	**4.06**	**230**	P	**Pn**	**14 27 40.2**	**-0.7**
HATJ	**Hateruma jima**	**4.20**	**227**	P	**Pn**	**14 27 42.2**	**-0.6**
YOJ	**Yonaguni jima**	**4.50**	**237**	P	**Pn**	**14 27 46.9**	**+0.1**
JNU	**Nakatsue**	**6.92**	**27**	P	**Pn**	**14 28 20.4**	**+0.9**
	0.9nm,0.3s,baz=208,slow=9.4,SNR=19						
JNU				S	**Sn**	**14 29 40.8**	**+4.1**
	0.1nm,0.3s,baz=183,slow=17,SNR=2.7						
SONM	**Songino Array**	**26.39**	**328**	P	**P**	**14 32 05.9**	**+0.1**
	1.5nm,0.6s,baz=140,slow=11,SNR=15						
MKAR	**Makanchi Array**	**40.31**	**311**	P	**P**	**14 34 06.0**	**0.0**
	0.3nm,0.5s,baz=90,slow=9.7,SNR=9.9						
ZALV	**Zalesovo Beam**	**41.06**	**323**	P	**P**	**14 34 11.9**	**0.0**
	0.4nm,0.4s,baz=116,slow=9.8,SNR=3.2						
INK	**Inuvik**	**68.58**	**23**	P	**P**	**14 37 30.9**	**+1.1**
	0.5nm,0.7s,baz=316,slow=6.5,SNR=4.3						
FINES	**FINESS Array B**	**71.73**	**330**	P	**P**	**14 37 49.2**	**0.0**
	0.7nm,0.8s,baz=52,slow=5.6,SNR=4.0						
YKA	**Yellowknife Ar**	**78.25**	**25**	P	**P**	**14 38 27.6**	**+0.9**
	0.1nm,0.4s,baz=307,slow=6.0,SNR=4.5						

IDC 13 14:39:27.0±1.7, 4.42N×127.23E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/24, mbtmp3.6/5, Error ellipse: s-maj=164.3km s-min=20.4km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.20**	**164**	P	P	14 44 55.3	+0.8
	0.4nm,0.4s,baz=344,slow=10,SNR=9.5						
ASAR	**Alice Springs**	**28.66**	**167**	P	P	14 45 24.6	-1.1
	0.1nm,0.3s,baz=353,slow=8.5,SNR=3.6						
MKAR	**Makanchi Array**	**57.28**	**325**	P	P	14 49 17.4	+0.8
	0.4nm,0.3s,baz=114,slow=7.3,SNR=16						
ZALV	**Zalesovo Beam**	**60.21**	**333**	P	P	14 49 35.4	-1.4
	0.3nm,0.4s,baz=124,slow=7.4,SNR=3.4						
KURBB	**Kurchatov Arra**	**61.44**	**327**	P	P	14 49 45.2	0.0
	2.0nm,0.6s,baz=126,slow=6.3,SNR=10						

IDC 13 14:42:18.9±3.1, 6.70S×149.79E, h0km, mb3.4/2, mb1 3.8/4, mb1mx3.5/19, mbtmp3.6/4, ML3.4/2, Error ellipse: s-maj=103.6km s-min=36.2km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.74**	**224**	Pn	Pn	14 43 19.6	+1.6
	3.0nm,0.3s,baz=43,slow=9.8,SNR=16						
PMG				Sn	Sn	14 44 02.7	-0.2
	10.0nm,0.3s,baz=221,slow=19,SNR=11						
WRA	**Warramunga Arr**	**19.96**	**227**	P	P	14 46 52.6	-0.2
	0.4nm,0.3s,baz=52,slow=11,SNR=31						
ASAR	**Alice Springs**	**22.75**	**220**	P	P	14 47 21.4	-1.5
	0.5nm,0.8s,baz=54,slow=9.1,SNR=7.1						
FITZ	**Fitzroy Crossi**	**26.13**	**242**	P	P	14 47 55.5	+0.5
	1.1nm,0.5s,baz=59,slow=9.4,SNR=10						
TORD	**Torodi Ar. Bea**	**147.95**	**284**	PKPbc	PKPbc	15 02 06.8	-0.5
	0.6nm,0.9s,baz=61,slow=3.8,SNR=3.0						

IDC 13 14:49:13.0±1.3, 28.17N×84.48E, h0km, mb3.7/8, mb1 3.8/10, mb1mx3.6/29, mbtmp3.7/10, ML3.3/2, Error ellipse: s-maj=64.9km s-min=18.9km az=60.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NDI	**New Delhi**	**6.42**	**276**	*e*P	Pg	14 51 22.0	+6.0
CMAR	**Chiang Mai Arr**	**16.42**	**123**	Pn	P	14 53 08.0	+0.2
	0.1nm,0.3s,baz=306,slow=12,SNR=4.5						
AAK	**Ala-Archa**	**16.55**	**333**	Pn	Pn	14 53 05.4	-1.2
	0.0nm,0.3s,baz=85,slow=11,SNR=2.9						
MKAR	**Makanchi Array**	**18.67**	**355**	P	Pn	14 53 33.0	+0.2
	0.2nm,0.3s,baz=179,slow=12,SNR=12						
KURBB	**Kurchatov Arra**	**22.87**	**350**	P	P	14 54 18.1	+0.2
	0.3nm,0.3s,baz=175,slow=9.7,SNR=5.5						
ZALV	**Zalesovo Beam**	**25.75**	**0**	P	P	14 54 45.4	+0.3
	1.1nm,0.5s,baz=180,slow=8.8,SNR=7.3						
FINES	**FINESS Array B**	**50.64**	**328**	P	P	14 58 13.5	-0.1
	1.4nm,0.8s,baz=96,slow=7.7,SNR=9.9						
ARCES	**ARCESS Array B**	**53.15**	**338**	P	P	14 58 32.3	+0.1
	3.7nm,0.9s,baz=100,slow=8.6,SNR=4.9						
NOA	**NORSAR Array B**	**57.72**	**327**	P	P	14 59 04.9	-0.5
	0.9nm,0.9s,baz=90,slow=7.5,SNR=3.3						
WRA	**Warramunga Arr**	**67.90**	**129**	P	P	15 00 13.7	0.0
	0.4nm,0.6s,baz=323,slow=6.4,SNR=8.3						
ASAR	**Alice Springs**	**70.18**	**132**	P	P	15 00 28.3	+0.4
	0.2nm,0.6s,baz=327,slow=6.6,SNR=3.7						
ILAR	**Eielson Array**	**79.16**	**20**	P	P	15 01 18.4	-0.9
	0.3nm,0.8s,baz=306,slow=5.0,SNR=4.1						

IDC 13 14:53:20.3±2.1, 4.31S×151.04E, h0km, mb3.3/5, mb1 3.5/5, mb1mx3.4/19, mbtmp3.3/5, MS3.6/1, Ms1 3.6/1, ms1mx2.6/20, Error ellipse: s-maj=79.0km s-min=28.0km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.50**	**225**	P	P	14 58 21.8	+0.1
	0.3nm,0.6s,baz=48,slow=10,SNR=3.3						
ASAR	**Alice Springs**	**25.38**	**219**	P	P	14 58 49.2	-0.3
	0.4nm,0.9s,baz=53,slow=8.7,SNR=3.7						
URZ	**Urewera**	**41.31**	**148**	LR	LR	15 15 44.3	
	comp=Z,81nm,18.7s,baz=293,slow=32						
MKAR	**Makanchi Array**	**78.81**	**319**	P	P	15 05 25.5	+0.3
	0.2nm,0.7s,baz=100,slow=7.5,SNR=3.2						
KURBB	**Kurchatov Arra**	**82.33**	**322**	P	P	15 05 44.3

	baz=259							
ALS	**Alishan**	**0.17**	**106**	*e*P	Pb	15 06 04.9	+0.3	
	baz=105							
CHY	**Chiayi**	**0.19**	**252**	*e*P	Pb	15 06 04.5	-0.1	
	baz=251							
CHY				*e*S	Sb	15 06 08.4	+0.3	
	baz=251							
CHN4	**Tsaushan**	**0.21**	**188**	*e*P	Pb	15 06 04.6	-0.2	
	baz=188							
CHN4				*e*S	Sb	15 06 08.6	+0.1	
	baz=188							
WTP	**Ta-pu**	**0.31**	**182**	*e*P	Pb	15 06 06.8	+0.1	
	baz=180							
WTP				*e*S	Sb	15 06 12.0	+0.4	
	baz=180							

IDC ***13*** *15:06:03.2±1.5,21.89N×121.83E,h0km,mb3.3/6, mb1 3.5/6,mb1mx3.3/25,mbtmp3.3/6,Error ellipse: s-maj=57.8km s-min=21.4km az=60.0*

ISCJB ***13*** *15:06:05.7±0.9,21.85N±0.04×121.49E±0.02,h11km±7km, mb3.2/6,Error ellipse: s-maj=6.2km s-min=3.7km az=175.9*

TAP ***13*** *15:06:07.4,21.89N×121.40E,h27km,ML3.5,C*

JMA ***13*** *15:06:07.0±0.6,21.50N×121.93E,h134km,M2.8*

ISC 13 15:06:06.8±1.4,**21.89N**±0.04×**121.44E**±0.03,**h15**km±8km, **n51**,σ1$10/83,**mb3.2**/6,**1C-1D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.50**	**271**	*i* P		**Pb**	**15 06 18.3**	**+1.0**
	baz=272							
TSEB				*i* S		**Sn**	**15 06 26.5**	**-1.3**
	baz=272							
TWK1	**Hengchun**	**0.59**	**275**	⇑*i*P		**Pg**	**15 06 18.7**	**+0.2**
	baz=285							
TWK1				S		**Sb**	**15 06 26.9**	**-0.2**
	baz=285							
HEN	**Hengchun**	**0.66**	**280**	P		**Pb**	**15 06 20.1**	**+0.1**
	baz=288							
HEN				*e*S		**Sg**	**15 06 27.7**	**-0.9**
	baz=288							
TAW	**Tawu**	**0.69**	**313**	*e*P		**Pg**	**15 06 19.9**	**-0.3**
	baz=315							
TAW				*e*S		**Sg**	**15 06 29.4**	**0.0**
	baz=315							
EAST	**Anshuo**	**0.74**	**312**	*i* P		**Pg**	**15 06 20.7**	**-0.5**
	baz=322							
EAST				S		**Sg**	**15 06 30.3**	**-0.7**
	baz=322							
ECL	**Taimali**	**0.83**	**327**	*e*P		**Pb**	**15 06 21.9**	**-1.1**
	baz=330							
ECL				*e*S		**Sb**	**15 06 33.3**	**-0.7**
	baz=330							
SCZT	**Fangliau**	**0.90**	**302**	⇓*i*P		**Pb**	**15 06 23.7**	**-0.4**
	baz=314							
SCZT				*e*S		**Sb**	**15 06 35.1**	**-0.8**
	baz=314							
TTN	**Taitung**	**0.90**	**342**	*e*P		**Pb**	**15 06 23.8**	**-0.3**
	baz=345							
TTN				*e*S		**Sg**	**15 06 37.1**	**+1.0**
	baz=345							
TWG	**Pinlang**	**0.99**	**340**	P		**Pb**	**15 06 24.3**	**-1.3**
	baz=342							
TWG				*e*S		**Sb**	**15 06 37.6**	**-0.8**
	baz=342							
TWP	**Hsiaoliuchiu**	**1.10**	**295**	*e*P		**Pg**	**15 06 28.7**	**+0.7**
	baz=310							
CHKT	**Chengkung**	**1.20**	**357**	*e*P		**Pn**	**15 06 27.8**	**-1.2**
	baz=5.0							
CHKT				*e*S		**Sb**	**15 06 43.9**	**-0.7**
	baz=5.0							
SGLT	**Jiouru**	**1.21**	**313**	*e*P		**Pn**	**15 06 29.1**	**0.0**
	baz=327							
TWM1	**Shoushan**	**1.32**	**315**	*e*P		**Pb**	**15 06 31.9**	**+0.6**
	baz=316							
ELDTW	**Lidau**	**1.35**	**343**	*e*P		**Pn**	**15 06 29.4**	**-1.8**
	baz=345							
ELDTW				*e*S		**Sn**	**15 06 48.0**	**-0.8**
	baz=345							
TWF1	**Yuli**	**1.46**	**355**	*e*P		**Pn**	**15 06 31.5**	**-1.1**
	baz=344							
TWF1				*e*S		**Sn**	**15 06 51.4**	**0.0**
	baz=344							
CHN1	**Nanshi**	**1.54**	**327**	*e*P		**Pb**	**15 06 34.9**	**-0.1**
	baz=328							
CHN1				*e*S		**Sb**	**15 06 54.7**	**+0.4**
	baz=328							
CHN3	**Shinhua**	**1.54**	**320**	*e*P		**Pb**	**15 06 35.2**	**+0.2**
	baz=321							
CHN3				*e*S		**Sg**	**15 06 57.6**	**+1.0**
	baz=321							
WTP	**Ta-pu**	**1.55**	**331**	*e*P		**Pn**	**15 06 34.8**	**+0.9**
	baz=332							
WTP				*e*S		**Sb**	**15 06 55.1**	**+0.4**
	baz=332							
EHY	**Hungye**	**1.61**	**356**	*e*P		**Pn**	**15 06 33.7**	**-1.0**
	baz=346							
TWK	**Hsinying**	**1.63**	**327**	*e*P		**Pn**	**15 06 35.0**	**+0.1**
	baz=329							
TWK				*e*S		**Sb**	**15 06 57.9**	**+1.0**
	baz=329							
CHN4	**Tsaushan**	**1.65**	**332**	*e*P		**Pn**	**15 06 36.3**	**+1.1**
	baz=333							
CHN4				*e*S		**Sb**	**15 06 58.8**	**+1.3**
	baz=333							
ALS	**Alishan**	**1.71**	**340**	*e*P		**Pn**	**15 06 36.7**	**+0.4**
	baz=341							
ALS				*e*S		**Sn**	**15 06 58.2**	**+0.1**
	baz=341							
SCLT	**Jiali**	**1.72**	**318**	*e*P		**Pn**	**15 06 36.1**	**-0.1**
	baz=319							
SCLT				*e*S		**Sb**	**15 06 59.8**	**+0.3**
	baz=319							
CHN5	**Tsauling**	**1.84**	**338**	*e*P		**Pn**	**15 06 38.7**	**+0.9**
	baz=339							
CHN5				*e*S		**Sb**	**15 07 02.9**	**-0.1**
	baz=339							
CHN8	**Yiju**	**1.84**	**322**	*e*P		**Pn**	**15 06 38.6**	**+0.8**
	baz=323							
CHY	**Chiayi**	**1.85**	**330**	*e*P		**Pn**	**15 06 38.8**	**+0.8**
	baz=331							
CHN2	**Minshiung**	**1.86**	**332**	*e*P		**Pn**	**15 06 39.2**	**+1.2**
	baz=333							
ESL	**Shilin**	**1.91**	**360**	*e*P		**Pn**	**15 06 38.5**	**-0.3**
	baz=351							
SMLT	**Sun Moon Lake**	**2.04**	**346**	*e*P		**Pn**	**15 06 42.2**	**+1.5**
	baz=347							
SMLT				*e*S		**Sn**	**15 07 06.4**	**+0.4**
	baz=347							
WSF	**Szhu**	**2.07**	**327**	*e*P		**Pn**	**15 06 41.0**	**+0.1**
	baz=328							
WSF				*e*S		**Sn**	**15 07 07.5**	**+1.0**
	baz=328							
TYC	**Yuchr**	**2.08**	**345**	*e*P		**Pn**	**15 06 42.2**	**+1.1**
	baz=346							
TYC				*e*S		**Sb**	**15 07 09.1**	**-0.6**
	baz=346							
WHF	**Hehuan Shan**	**2.25**	**356**	*e*P		**Pn**	**15 06 43.8**	**0.0**
	baz=7.0							
TWT	**Tachien**	**2.36**	**354**	*e*P		**Pn**	**15 06 45.9**	**+0.7**
	baz=4.0							
PNG	**Penghu**	**2.41**	**314**	*e*P		**Pn**	**15 06 44.9**	**-0.8**
	baz=303							
PNG				*e*S		**Sn**	**15 07 13.1**	**-1.8**
	baz=303							
TWQ1	**Liyutan**	**2.52**	**346**	*e*P		**Pn**	**15 06 48.2**	**+1.1**
	baz=347							
TWQ1				*e*S		**Sb**	**15 07 21.4**	**-1.2**
	baz=347							
NNS	**Nan Shan**	**2.54**	**359**	*e*P		**Pb**	**15 06 50.7**	**-1.4**
	baz=6.0							
ENA	**Nanau**	**2.54**	**6**	*e*P		**Pn**	**15 06 48.0**	**+0.6**
	baz=7.0							
ENTT	**Nioudou**	**2.74**	**2**	*e*P		**Pn**	**15 06 50.9**	**+0.7**
	baz=3.0							
NSK	**Sanguang**	**2.77**	**358**	*e*P		**Pn**	**15 06 52.3**	**+1.6**
	baz=9.0							
NSK				*e*S		**Sn**	**15 07 25.3**	**+1.4**
	baz=9.0							
YOJ	**Yonaguni jima**	**2.94**	**29**	P		**Pn**	**15 06 55.7**	**+2.8**
YOJ				*e*S		**Sb**	**15 07 32.9**	**-1.6**
HATJ	**Hateruma jima**	**3.06**	**45**	P		**Pn**	**15 06 55.3**	**+0.7**
HATJ				*e*S		**Sn**	**15 07 32.9**	**+1.9**
IRIF	**Iriomote-Funau**	**3.22**	**40**	P		**Pn**	**15 06 58.4**	**+1.7**
IRIF				*e*S		**Sn**	**15 07 37.5**	**+2.7**
JKRS	**Kuro-shima**	**3.32**	**45**	P		**Pn**	**15 06 58.5**	**+0.3**
JKRS				*e*S		**Sn**	**15 07 38.8**	**+1.4**
JIJ	**Ishigaki jima**	**3.50**	**45**	P		**Pn**	**15 07 00.3**	**-0.3**
JIJ				*e*S		**Sn**	**15 07 41.4**	**-0.3**
JTJ	**Tarama**	**4.06**	**47**	P		**Pn**	**15 07 08.6**	**+0.3**
JTJ				*e*S		**Sn**	**15 07 54.4**	**-1.1**
CMAR	**Chiang Mai Arr**	**21.39**	**265**	P		**P**	**15 10 56.6**	**+2.6**
	0.3nm,0.4s,baz=56,slow=8.8,SNR=4.4							
MKAR	**Makanchi Array**	**40.16**	**318**	P		**P**	**15 13 43.6**	**+1.3**
	0.5nm,0.9s,baz=120,slow=8.5,SNR=3.9							
ZALV	**Zalesovo Beam**	**42.30**	**328**	P		**P**	**15 14 00.2**	**+0.5**
	0.5nm,0.4s,baz=120,slow=8.5,SNR=3.6							
WRA	**Warramunga Arr**	**43.45**	**162**	P		**P**	**15 14 06.5**	**-2.8**
	0.4nm,0.7s,baz=344,slow=9.1,SNR=2.8							
KURBB	**Kurchatov Arra**	**44.02**	**321**	P		**P**	**15 14 13.4**	**-0.2**
	0.3nm,0.7s,baz=113,slow=8.1,SNR=4.8							
ASAR	**Alice Springs**	**46.88**	**164**	P		**P**	**15 14 35.0**	**-1.6**
	0.1nm,0.4s,baz=343,slow=7.4,SNR=7.2							

SKHL ***13*** *15:10:28.4±1.3,53.08N×134.23E,h12km±4km,mb6.0, Ms4.4*

IDC ***13*** *15:10:29.8±0.5,53.03N×134.45E,h0km,mb4.0/20, mb1 4.3/22,mb1mx4.2/30,mbtmp4.1/22,ML3.7/2,MS3.4/13, Ms1 3.4/13,ms1mx3.1/51,Error ellipse: s-maj=15.2km s-min=14.2km az=96.0*

MOS ***13*** *15:10:30.7±1.5,53.14N×134.36E,h11km,mb4.5/17,Error ellipse: s-maj=11.0km s-min=6.5km az=105.6*

BJI ***13*** *15:10:33.7,53.00N×134.60E,h20km,mB4.5/7,mb4.4/13, Ms4.3/11,Ms7 4.1/10*

NERS ***13*** *15:10:37.7,53.37N×134.83E,h33km,MSH4.2*

JMA ***13*** *15:11:41.7±0.4,43.37N×144.01E,h22km±3km*

ISC 13 15:10:31.8±0.7,**53.07N**±0.03×**134.35E**±0.02,**h9**km±4km, **n130**,σ1$**78**/133,**mb4.3**/31,**MS3.8**/12,**3C-7D**, **Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EKMR	**Ekimchan**	**0.84**	**270**	⇓*i*Pg		Pg	15 10 41.6	-6.4
EKMR				AMB		AMB	15 10 43.4	
	630nm,0.4s							
EKMR				*e*Sg		Sg	15 10 52.2	-6.7
GRNR	**Gornyy**	**2.64**	**150**	*e*Pn		**Pn**	**15 11 14.7**	**+0.1**
GRNR				pPn		**Pb**	**15 11 19.5**	**+0.2**
GRNR				*i* Pg		**Pg**	**15 11 21.6**	**-0.8**
GRNR				*e*Sg		**Sg**	**15 11 56.9**	**+0.3**
BMKR	**Bomnak**	**3.65**	**299**	⇑*e*Pn		Pn	15 11 23.1	-5.3
BMKR				pPn		pPn	15 11 25.4	-5.0
BMKR				*e*Pg		Pb	15 11 31.9	-4.5
BMKR				AMB		AMB	15 11 35.7	
	81nm,0.5s							
BMKR				AMB		AMB	15 11 35.7	
	185nm,0.5s							
BMKR				AMB		AMB	15 11 35.7	
	220nm,0.5s							
BMKR				*e*Sn		Sn	15 12 04.8	-6.7
BMKR				*e*Sg		**Sb**	**15 12 18.5**	**-2.2**
BMKR				A		A	15 12 23.4	
	646nm,0.5s							
NKL	**Nikolayevsk**	**3.82**	**86**	⇓*i*Pn		Pn	15 11 27.5	-3.2
NKL				sPn		sPn	15 11 31.0	-3.0
NKL				*i* Pg		**Pb**	**15 11 38.0**	**-1.3**
NKL				AMB		AMB	15 11 39.5	
	260nm,0.7s							
NKL				AMB		AMB	15 11 39.5	
	360nm,0.7s							
NKL				AMB		AMB	15 11 39.5	
	620nm,0.7s							
NKL				*e*Sg		**Sb**	**15 12 27.7**	**+2.1**
NKL				A		A	15 12 31.5	
	970nm,0.4s							
NKL				AMS		AMS	15 13 00.0	
	2μm,8.0s							
KLR	**Kul'dur**	**4.18**	**204**	*e*P		Pn	15 11 32.2	-3.6
KLR				*e*			15 12 21.5	
KLR				MLR		MLR		
	comp=E,3μm,9.0s							
KLR				MLR		MLR		
	comp=Z,5μm,9.0s							
KLR	**Kul'dur**	**4.18**	**204**	*e*Pn		Pn	15 11 32.2	-3.6
KLR				*e*rx		rx	15 11 46.0	
KLR				*e*Sn		**Sn**	**15 12 21.5**	**-3.2**
KLR				AMS		AMS	15 13 04.5	
	comp=Z,3μm,9.0s							
ZEA	**Zeya**	**4.30**	**282**	*e*Pn		Pn	15 11 32.7	-4.6
ZEA				sPn		sPn	15 11 40.0	-0.6
ZEA				*e*Pg		**Pb**	**15 11 45.0**	**-2.5**
ZEA				AMB		AMB	15 11 47.0	
	comp=Z,200nm,1.0s							
ZEA				AMB		AMB	15 11 47.0	
	comp=Z,300nm,1.0s							
ZEA				AMB		AMB	15 11 47.7	
	comp=Z,110nm,0.8s							
ZEA				AMB		AMB	15 11 47.7	
	comp=Z,170nm,0.8s							
ZEA				AMB		AMB	15 11 47.7	
	comp=Z,240nm,0.8s							
ZEA				*e*Sn		Sn	15 12 19.6	-8.0
ZEA				*e*Sg		**Sb**	**15 12 40.1**	**+0.7**
ZEA				A		A	15 12 41.9	
	comp=Z,650nm,1.0s							
ZEA				A		A	15 12 42.0	
	comp=Z,1μm,1.5s							
ZEA				AMS		AMS	15 13 30.0	
	comp=Z,2μm,6.0s							
ZEA				AMS		AMS	15 13 30.0	
	comp=Z,1μm,8.0s							
KROS	**Kirovskiy**	**4.58**	**290**	*e*Pn		Pn	15 11 36.0	-5.3
KROS				⇑*i*Pg		Pb	15 11 49.2	-3.1
KROS				AMB		AMB	15 11 53.9	
	comp=Z,43nm,0.5s							
KROS				AMB		AMB	15 11 53.9	
	comp=Z,190nm,0.5s							
KROS				AMB		AMB	15 11 53.9	
	comp=Z,180nm,0.5s							
KROS				sPg		sPg	15 11 56.2	
KROS				*e*Sg		**Sb**	**15 12 48.9**	**+1.2**
KROS				A		A	15 12 56.5	
	comp=Z,170nm,0.5s							
KROS				A		A	15 12 56.5	
	comp=Z,470nm,0.5s							
KROS				A		A	15 12 56.5	
	comp=Z,520nm,0.5s							
KHBR	**Khabarovsk**	**4.63**	**174**	*e*Pn		**Pn**	**15 11 40.8**	**-1.1**
KHBR				*e*rx		rx	15 11 58.4	
KHBR				*e*Sg		**Sg**	**15 12 55.5**	**-4.8**
OKH	**Okha**	**5.17**	**81**	*e*P		**Pg**	**15 12 08.9**	**-1.9**
OKH	**Okha**	**5.17**	**81**	*e*rx		rx	15 11 55.0	
OKH				*e*Pg		Pb	15 12 07.0	+4.7
OKH				AMB		AMB	15 12 08.9	
	comp=Z,250nm,0.8s							
OKH				*e*Sg		**Sg**	**15 13 15.5**	**-2.2**
OKH				A		A	15 13 19.5	
	comp=Z,1μm,0.8s							
OKH				A		A	15 13 19.5	
	comp=Z,2μm,0.8s							
OKH				AMS		AMS	15 14 07.0	
	comp=Z,1μm,9.0s							
OKH				AMS		AMS	15 14 07.0	
	comp=Z,2μm,9.0s							
TYV	**Tymovskoe**	**5.59**	**110**	*e*Pn		**Pn**	**15 11 57.8**	**+2.7**
TYV				*e*rx		rx	15 12 17.0	
TYV				*e*Sg		**Sg**	**15 13 26.0**	**-5.2**
TYV				A		A	15 13 31.1	
	comp=Z,276nm,0.8s							
TYV				AMS		AMS	15 14 54.0	
	comp=Z,1μm,7.0s							
TYV				AMS		AMS	15 14 54.0	
	comp=Z,1μm,7.0s							
TYV				AMS		AMS	15 14 54.0	
	comp=Z,1μm,6.0s							
UGL	**Uglegorsk**	**6.30**	**126**	*e*P		**Pn**	**15 12 05.0**	**+0.2**
UGL				*e*S		**Sn**	**15 13 15.0**	**-1.8**
UGL				pmax		pmax		
	comp=Z,78nm,1.0s							
UGL				smax		smax		
	comp=N,207nm,0.6s							
UGL				smax		smax		
	comp=E,215nm,0.6s							
UGL	**Uglegorsk**	**6.30**	**126**	*e*Pn		**Pn**	**15 12 05.0**	**+0.2**
UGL				*e*Pg		Pg	15 12 27.5	-4.8
UGL				AMB		AMB	15 12 34.1	
	comp=E,93nm,0.7s							
UGL				*e*Sn		**Sn**	**15 13 15.0**	**-1.8**
UGL				*e*Sg		**Sg**	**15 13 50.0**	**-3.8**
UGL				A		A	15 13 52.5	
	comp=E,398nm,0.6s							
UGL				A		A	15 13 52.5	
	comp=E,716nm,0.6s							
UGL				AMS		AMS	15 15 16.0	
	comp=E,1μm,10.0s							
CLNS	**Chul'man**	**6.62**	**308**	*e*P		**Pn**	**15 12 08.6**	**-0.7**
CLNS				*e*S		Sn	15 13 33.4	+8.6
CLNS				pmax		pmax		
	comp=N,2.0nm,0.4s							
CLNS				pmax		pmax		
	comp=Z,11nm,0.4s							
CLNS				pmax		pmax		
	comp=E,2.0nm,0.4s							
CLNS				smax		smax		
	comp=Z,39nm,0.6s							
CLNS				smax		smax		
	comp=N,117nm,0.6s							
CLNS				smax		smax		
	comp=E,31nm,0.6s							
CLNS	**Chul'man**	**6.62**	**308**	*e*Pn		**Pn**	**15 12 08.6**	**-0.7**
OKHT	**Okhotsk**	**8.01**	**35**	*e*Sg		Sg	15 14 39.8	-8.7
OHTR	**Okhotsk**	**8.04**	**35**	*e*P		**Pn**	**15 12 28.2**	**-0.5**
OHTR				*e*Sg		Sb	15 14 35.4	+8.5
OHTR				Sgmax			15 15 05.7	
	comp=E,1μm,0.8s							
OHTR				Sgmax			15 15 05.7	
	comp=E,500nm,0.7s							
YSS	**Yuzh-Sakhalins**	**8.17**	**135**	*e*P		**Pn**	**15 12 32.0**	**+1.5**
YSS				*e*S		**Sn**	**15 14 07.0**	**+4.1**
YSS				MLR		MLR		
	comp=Z,400nm,11.0s							
YSS				MLR		MLR		
	comp=N,500nm,14.0s							
YSS				MLR		MLR		
	comp=E,500nm,15.0s							
YSS	**Yuzh-Sakhalins**	**8.17**	**135**	*e*Pn		**Pn**	**15 12 32.0**	**+1.5**
YSS				*e*Sn		**Sn**	**15 14 03.0**	**+0.1**
YSS				*e*Sg		Sg	15 14 43.2	-11
YSS				A		A	15 14 47.0	
	comp=E,65nm,0.9s							
YSS				AMS		AMS	15 16 02.0	
	comp=E,400nm,11.0s							
YSS				AMS		AMS	15 16 02.0	
	comp=E,500nm,14.0s							
TEY	**Ternei**	**8.18**	**169**	*e*rx		rx	15 12 38.0	
TEY				*e*Sg		Sg	15 14 45.0	-9.1
TEY				A		A	15 14 53.0	
	comp=E,42nm,0.7s							
TEY				A		A	15 14 53.0	
	comp=E,31nm,0.7s							
TEY				A		A	15 14 53.0	
	comp=E,81nm,0.7s							
TEY				AMS		AMS	15 15 44.0	
	comp=E,1μm,8.0s							
TEY				AMS		AMS	15 15 44.0	
	comp=E,2μm,8.0s							
TUP	**Tupik**	**8.64**	**285**	*e*Pn		**Pn**	**15 12 35.2**	**-1.7**
TUP				*e*Pg		Pg	15 13 05.8	-11
TUP				AMB		AMB	15 13 06.7	
	comp=E,21nm,0.7s							
TUP				*e*Sg		Sg	15 15 01.1	-7.6
TUP				A		A	15 15 13.0	
	comp=E,1μm,1.6s							
USRK	**Ussuriysk Arra**	**9.02**	**191**	Pn		**Pn**	**15 12 44.2**	**+2.2**
	comp=E,0.1nm,0.3s,baz=1.3,slow=17,SNR=5.2							
USRK				Lg		Lg	15 15 13.2	
	comp=E,3.1nm,0.3s,baz=327,slow=28,SNR=4.5							
USRK				LR		LR	15 16 16.7	
	comp=E,272nm,18.3s,baz=199,slow=39							
MDJ	**Mudanjiang**	**9.02**	**202**	P		Pn	15 12 45.9	+3.7
MDJ				pmax		pmax		
	comp=Z,12nm,0.8s							
MDJ				pmax		pmax		
	comp=Z,100nm,4.3s							
MDJ				LR		LR		
	comp=N,360nm,17.7s							
MDJ				LR		LR		
	comp=E,1μm,17.6s							
MDJ				LR		LR		
	comp=Z,310nm,14.5s							
YAK	**Yakutsk**	**9.32**	**346**	*e*P		**Pn**	**15 12 44.0**	**-2.2**
YAK				pmax		pmax		
	comp=Z,3.0nm,0.6s							
YAK				pmax		pmax		
	comp=N,17nm,0.6s							
YAK				pmax		pmax		
	comp=E,7.0nm,0.6s							
YAK				MLR		MLR		
	comp=Z,408nm,8.9s							
YAK	**Yakutsk**	**9.32**	**346**	*e*P		**Pn**	**15 12 44.0**	**-2.2**
VLA	**Vladivostok**	**10.09**	**190**	⇓*e*P		Pn	15 13 01.2	+4.4
VLA				S		Sn	15 14 56.4	+6.3
VLA	**Vladivostok**	**10.09**	**190**	⇓*e*P		Pn	15 13 01.2	+4.4
ASAJ	**Asahikawa**	**10.49**	**145**	Pn		Pn	15 13 05.2	+2.9
	comp=Z,0.6nm,0.3s,baz=342,slow=21,SNR=7.0							
ASAJ				LR		LR	15 17 35.7	
	comp=Z,151nm,20.4s,baz=356,slow=41							
JKA	**Kamikawa-asahi**	**10.49**	**145**	*e*P		Pn	15 13 05.2	+2.9
OCHR	**Omchak**	**11.26**	**35**	⇑*i*P		Pn	15 13 23.6	+11
OCHR				Pmax			15 13 24.4	
	comp=Z,30nm,0.5s							
OCHR				*e*			15 16 32.5	
MGD	**Magadan 1**	**11.40**	**46**	*e*P		**Pn**	**15 13 14.3**	**-0.3**
MGD				Pmax			15 13 17.9	
	comp=Z,20nm,0.6s							
MGD				*e*S		**Sn**	**15 15 19.9**	**-2.1**
SUUS	**Susuman**	**12.16**	**31**	*e*P		**Pn**	**15 13 26.2**	**+1.2**
SUUS				*e*			15 13 35.4	
SUUS				Pmax			15 13 37.9	
	comp=Z,10.0nm,0.3s							
SUUS				*e*S		Sn	15 16 35.2	+55
SNGR	**Sinegor'e**	**12.43**	**37**	*e*P		**Pn**	**15 13 30.9**	**+2.2**
SNGR				Pmax			15 13 31.9	
	comp=Z,20nm,0.7s							
SNGR				*e*			15 17 13.5	
TLAR	**Talaya**	**12.67**	**43**	*e*P		**Pn**	**15 13 33.5**	**+1.5**
TLAR				Pmax			15 13 35.3	
	comp=Z,20nm,1.0s							
TLAR				*e*			15 17 20.7	
SNY	**Shenyang**	**13.38**	**217**	⇓P		P	15 13 57.8	+6.4
SNY				S		S	15 17 10.6	+36
SNY				pmax		pmax		
	comp=Z,16nm,1.4s							
SNY				pmax		pmax		
	comp=Z,160nm,5.1s							
SNY				LR		LR		
	comp=N,320nm,6.5s							
SNY				LR		LR		
	comp=E,510nm,7.3s							
SNY				LR		LR		
	comp=Z,200nm,4.7s							
SEY	**Seymchan**	**13.69**	**37**	*e*P		**Pn**	**15 13 48.0**	**+2.1**
SEY	**Seymchan**	**13.69**	**37**	*e*P		**Pn**	**15 13 47.6**	**+1.7**
SEY				Pmax			15 13 49.1	
	comp=Z,10.0nm,0.6s							
SEY				*e*S		**Sn**	**15 16 21.7**	**+3.8**
SEY				*e*			15 17 20.1	
SEY				*e*			15 17 41.6	
SEY				LRmax			15 20 31.6	
	comp=Z,800nm,9.0s							
SEY	**Seymchan**	**13.69**	**37**	*e*P		**Pn**	**15 13 48.0**	**+2.1**
PETK	**Petropavlovsk-**	**14.02**	**81**	P		**Pn**	**15 13 52.7**	**+2.2**
PETK				pmax		pmax		
	comp=Z,3.0nm,0.3s							
PETK				MLR		MLR		
	comp=Z,41nm,20.1s							
PETK	**Petropavlovsk-**	**14.02**	**81**	Pn		**Pn**	**15 13 52.7**	**+2.2**
	comp=Z,2.6nm,0.3s,baz=258,slow=11,SNR=46							
PETK				LR		LR	15 19 35.4	
	comp=Z,40nm,20.1s,baz=102,slow=39							
PET	**Petropavlovsk**	**14.61**	**80**	*e*P		**Pn**	**15 14 01.1**	**+2.7**
PET				pmax		pmax		
	comp=Z,68nm,0.5s							
PET				MLR		MLR		
	comp=Z,300nm,12.0s							
PET	**Petropavlovsk**	**14.61**	**80**	*e*P		**Pn**	**15 14 01.1**	**+2.7**
PET				AMS		AMS	15 21 03.7	
	comp=

MAT	**Matsushiro**	**16.75**	**169**	P	**Pn**	**15**	**14**	**25.7 -0.9**
MJAR	**Matsushiro Arr**	**16.75**	**169**	*e*P	**Pn**	**15**	**14**	**26.9 +0.3**
MJAR	**Matsushiro Arr**	**16.75**	**169**	Pn	**Pn**	**15**	**14**	**26.9 +0.3**
	comp=Z,0.5nm,0.3s,baz=350,slow=11,SNR=19							
MJA0	**Matsu Arr-Jizo**	**16.76**	**169**	*e*P	**Pn**	**15**	**14**	**26.8 +0.1**
MJA0				pmax	pmax			
	comp=Z,1.0nm,0.3s							
BJI	**Beijing**	**17.99**	**231**	P	**P**	**15**	**14**	**45.6 +3.2**
BJI				pmax	pmax			
	comp=Z,16nm,0.6s							
BJI				LR	LR			
	comp=N,400nm,7.6s							
BJI				LR	LR			
	comp=E,350nm,9.5s							
SONM	**Songino Array**	**18.49**	**265**	P	**Pn**	**15**	**14**	**48.7 +0.5**
	comp=E,0.1nm,0.3s,baz=70,slow=9.9,SNR=5.9							
SONM				Lg	Lg	15	20	10.6
	comp=E,0.3nm,0.3s,baz=68,slow=28,SNR=5.1							
TLY	**Talaya**	**18.73**	**278**	*e*P	**Pn**			
TLY				pmax	pmax			
	comp=Z,3.0nm,0.9s							
ZAK	**Zakamensk**	**19.35**	**275**	*e*P	**P**	**15**	**14**	**57.1 -0.4**
ZAK				pmax	pmax			
	comp=Z,2.0nm,1.4s							
HHC	**Hu-ho-hao-te**	**19.68**	**241**	*e*P	Pn	15	15	08.3 +5.8
HHC				PP	PnPn	15	15	27.1 +11
HHC				S	**Sn**	**15**	**18**	**44.5 +1.0**
HHC				sS	sS	15	18	52.3 +5.3
HHC				SS	SnSn	15	19	12.8 +15
HHC				PcP	PcP	15	19	25.8 +5.9
HHC				ScS	**ScS**	**15**	**26**	**40.4 +2.3**
HHC				pmax	pmax			
	comp=Z,52nm,0.6s							
HHC				pmax	pmax			
	comp=Z,280nm,5.0s							
HHC				LR	LR			
	comp=N,530nm,8.1s							
HHC				LR	LR			
	comp=E,720nm,8.3s							
HHC				LR	LR			
	comp=Z,820nm,8.3s							
MOY	**Mondy**	**20.31**	**279**	*e*P	Pn	15	15	16.2 +6.2
BILL	**Bilibino**	**21.33**	**33**	*e*P	**P**	**15**	**15**	**19.3 +0.6**
BILL	**Bilibino**	**21.33**	**33**	*e*P	**P**	**15**	**15**	**18.9 +0.2**
BILL				Pmax		15	15	20.1
	comp=Z,10.0nm,1.2s							
BILL				*e*		15	21	42.3
BILL	**Bilibino**	**21.33**	**33**	*e*P	**P**	**15**	**15**	**19.3 +0.6**
CBIJ	**Chichi jima**	**26.60**	**164**	LR	LR	15	24	36.8
	comp=Z,2µm,21.8s,baz=3.8,slow=32							
GTA	**Gaotai**	**27.21**	**254**	*e*P	P	15	16	20.8 +4.9
GTA				pP	pP	15	16	24.3 +5.8
GTA				sP	sP	15	16	27.4 +7.8
GTA				S	**S**	**15**	**20**	**50.8 -4.1**
GTA				pmax	pmax			
	comp=Z,3.0nm,0.6s							
GTA				pmax	pmax			
	comp=Z,56nm,5.7s							
GTA				LR	LR			
	comp=N,550nm,13.3s							
GTA				LR	LR			
	comp=E,480nm,13.3s							
GTA				LR	LR			
	comp=Z,190nm,8.1s							
ZALV	**Zalesovo Beam**	**28.99**	**292**	P	**P**	**15**	**16**	**31.5 +0.1**
ZALV						15	19	38.2
ZALV				MLR	MLR			
	comp=Z,63nm,21.7s							
ZALV	**Zalesovo Beam**	**28.99**	**292**	P	**P**	**15**	**16**	**31.5 +0.1**
	comp=Z,0.4nm,0.3s,baz=73,slow=9.5,SNR=2.9							
ZALV				PcP	**PcP**	**15**	**19**	**38.2 -1.5**
	comp=Z,0.9nm,0.6s,baz=129,slow=2.0,SNR=2.9							
ZALV				LR	LR	15	27	46.1
	comp=Z,62nm,21.7s,baz=66,slow=36							
NVS	**Novosibirsk**	**29.59**	**294**	*e*P	**P**	**15**	**16**	**38.5 +1.8**
NVS				pmax	pmax			
	comp=Z,5.0nm,0.8s							
NVS				pmax	pmax			
	comp=N,2.0nm,0.7s							
NVS				pmax	pmax			
	comp=E,2.0nm,0.5s							
MKAR	**Makanchi Array**	**33.45**	**281**	P	**P**	**15**	**17**	**10.9 0.0**
MKAR				pmax	pmax			
	comp=Z,8.0nm,0.7s							
MKAR				MLR	MLR			
	comp=Z,44nm,19.6s							
MKAR	**Makanchi Array**	**33.45**	**281**	P	**P**	**15**	**17**	**10.8 0.0**
	comp=Z,7.6nm,0.7s,baz=54,slow=7.3,SNR=17							
MKAR				LR	LR	15	30	06.9
	comp=Z,44nm,19.6s,baz=55,slow=35							
KURK	**Kurchatov**	**33.74**	**289**	*d* / P	**P**	**15**	**17**	**13.4 +0.1**
KURK	**Kurchatov**	**33.74**	**289**	*e*P	**P**	**15**	**17**	**13.4 +0.1**
KURBB	**Kurchatov Arra**	**33.83**	**289**	PcP	**PcP**	**15**	**19**	**51.5 -1.3**
	comp=Z,0.2nm,0.4s,baz=63,slow=3.1,SNR=4.3							
BVAR	**Borovoye Array**	**37.29**	**296**	P	**P**	**15**	**17**	**43.6 -0.2**
BVAR				pmax	pmax			
	comp=Z,3.0nm,0.8s							
BVAR	**Borovoye Array**	**37.29**	**296**	P	**P**	**15**	**17**	**43.6 -0.2**
	comp=Z,3.4nm,0.8s,baz=64,slow=8.1,SNR=15							
BRVK	**Borovoye**	**37.33**	**296**	*e*P	**P**	**15**	**17**	**46.9 +2.7**
ILAR	**Eielson Array**	**39.57**	**41**	*e*P	**P**	**15**	**18**	**01.9 -0.9**
ILAR	**Eielson Array**	**39.57**	**41**	P	**P**	**15**	**18**	**01.9 -0.9**
	comp=Z,3.8nm,0.9s,baz=288,slow=7.9,SNR=48							
ILAR				LR	LR	15	38	51.1
	comp=Z,63nm,18.7s,baz=93,slow=43							
AAK	**Ala-Archa**	**40.38**	**280**	P	**P**	**15**	**18**	**09.7 -0.3**
AAK				pmax	pmax			
	comp=Z,2.0nm,1.0s							
AAK	**Ala-Archa**	**40.38**	**280**	*e*P	**P**	**15**	**18**	**09.7 -0.3**
AAK	**Ala-Archa**	**40.38**	**280**	P	**P**	**15**	**18**	**09.7 -0.3**
	comp=Z,2.2nm,1.0s,baz=94,slow=8.4,SNR=2.3							
SVE	**Sverdlovsk**	**40.61**	**306**	*e*P	**P**	**15**	**18**	**14.4 +2.9**
SVE				pmax	pmax			
	comp=Z,7.0nm,0.8s							
TAPN	**Taplejung**	**42.87**	**252**	*e*P	**P**	**15**	**18**	**30.9 +0.2**
	comp=Z,20nm,0.9s							
INK	**Inuvik**	**42.95**	**33**	*e*P	**P**	**15**	**18**	**29.7 -0.8**
INK	**Inuvik**	**42.95**	**33**	P	**P**	**15**	**18**	**29.7 -0.8**
	comp=Z,1.8nm,0.9s,baz=310,slow=5.7,SNR=7.1							
ODAN	**Odare**	**43.42**	**252**	*e*P	**P**	**15**	**18**	**35.6 +0.5**
	comp=Z,26nm,0.6s							
GUN	**Gumba**	**43.50**	**254**	*e*P	**P**	**15**	**18**	**35.9 +0.1**
	comp=Z,10nm,0.4s							
RAMN	**Ramite**	**43.81**	**253**	*e*P	**P**	**15**	**18**	**39.2 +1.0**
	comp=Z,17nm,0.9s							
KKN	**Kakani**	**43.94**	**255**	*e*P	**P**	**15**	**18**	**39.2 0.0**
	comp=Z,6.6nm,0.6s							
PKIN	**Phulchoki**	**44.03**	**254**	*e*P	**P**	**15**	**18**	**40.9 +0.9**
	comp=Z,5.3nm,0.7s							
CMAR	**Chiang Mai Arr**	**44.13**	**232**	P	**P**	**15**	**18**	**39.5 -1.0**
	comp=Z,1.4nm,1.0s,baz=30,slow=7.8,SNR=6.2							
DMN	**Daman**	**44.18**	**255**	*e*P	**P**	**15**	**18**	**40.7 -0.5**
	comp=Z,5.8nm,0.6s							
DANN	**Dangsing**	**44.41**	**257**	*e*P	**P**	**15**	**18**	**43.7 +0.6**
	comp=Z,29nm,0.7s							
KOLN	**Koldanda**	**44.94**	**256**	*e*P	**P**	**15**	**18**	**47.6 +0.4**
	comp=Z,6.4nm,0.8s							
PYUN	**Piuthan**	**45.05**	**257**	*e*P	**P**	**15**	**18**	**48.6 +0.5**
	comp=Z,48nm,0.9s							
AKTO	**Aktyubinsk**	**45.23**	**299**	P	**P**	**15**	**18**	**50.2 +1.2**
AKTO	**Aktyubinsk**	**45.23**	**299**	P	**P**	**15**	**18**	**50.2 +1.2**
	comp=Z,0.4nm,0.3s,baz=45,slow=11,SNR=3.1							
JOF	**Joensuu**	**49.70**	**324**	*e*P	**P**			
JOF				pmax	pmax			
	comp=Z,4.0nm,0.7s							
JOF	**Joensuu**	**49.70**	**324**	*e*p	**P**	**15**	**19**	**22.1 -1.5**
	comp=Z,4.4nm,0.7s							
KAF	**Kangasniemi**	**51.98**	**325**	*e*P	**P**	**15**	**19**	**40.6 -0.1**
KAF				pmax	pmax			
	comp=Z,5.0nm,0.8s							
KAF	**Kangasniemi**	**51.98**	**325**	*e*p	**P**	**15**	**19**	**40.6 -0.1**
	comp=Z,5.4nm,0.8s							
FINES	**FINESS Array B**	**52.52**	**325**	P	**P**	**15**	**19**	**43.3 -1.5**
	comp=Z,10nm,0.8s,baz=48,slow=8.4,SNR=22							
FINES				PcP	**PcP**	**15**	**20**	**55.7 +0.7**
	comp=Z,1.0nm,0.5s,baz=67,slow=5.2,SNR=4.0							
FINES				LR	LR	15	44	04.5
	comp=Z,48nm,18.1s,baz=75,slow=38							
YKA	**Yellowknife Ar**	**52.72**	**33**	*e*P	**P**	**15**	**19**	**45.5 -0.8**
YKA	**Yellowknife Ar**	**52.72**	**33**	P	**P**	**15**	**19**	**45.5 -0.8**
	comp=Z,0.7nm,0.9s,baz=309,slow=7.0,SNR=11							
VSR	**Storozhevoye**	**54.15**	**309**	*e*P	**P**	**15**	**19**	**58.4 +1.5**
VSR				pmax	pmax			
	comp=N,3.0nm,0.4s							
VSR				pmax	pmax			
	comp=E,4.0nm,0.4s							
VSR				pmax	pmax			
	comp=Z,6.0nm,0.4s							
VORD	**Divnogorie**	**54.25**	**309**	*e*P	**P**	**15**	**19**	**58.6 +0.9**
VORD				pmax	pmax			
	comp=N,4.0nm,0.5s							
VORD				pmax	pmax			
	comp=E,7.0nm,0.5s							
VORD				pmax	pmax			
	comp=Z,6.0nm,0.5s							
MAK	**Makhachkala**	**55.53**	**297**	*e*P	**P**	**15**	**20**	**07.0 0.0**
MAK				*e*S	**S**	**15**	**27**	**54.8 +2.5**
MAK				pmax	pmax			
	comp=Z,19nm,0.4s							
MAK				MLR	MLR			
	comp=Z,101nm,7.0s							
KIV	**Kislovodsk**	**57.39**	**301**	*e*P	**P**	**15**	**20**	**20.2 -0.2**
KIV				pmax	pmax			
	comp=Z,23nm,1.1s							
KIV				MLR	MLR			
	comp=Z,109nm,18.0s							
KIV	**Kislovodsk**	**57.39**	**301**	*e*P	**P**	**15**	**20**	**20.2 -0.2**
KBZ	**Khabaz**	**57.44**	**301**	P	**P**	**15**	**20**	**21.0 +0.4**
KBZ				pmax	pmax			
	comp=Z,2.0nm,0.8s							
KBZ				MLR	MLR			
	comp=Z,88nm,21.5s							
KBZ	**Khabaz**	**57.44**	**301**	P	**P**	**15**	**20**	**20.9 +0.4**
	comp=Z,1.7nm,0.8s,baz=38,slow=6.8,SNR=3.7							
KBZ				LR	LR	15	45	23.7
	comp=Z,88nm,21.5s,baz=34,slow=36							
NB2	**NORSAR Subarra**	**57.58**	**331**	P	**P**	**15**	**20**	**19.8 -1.6**
	comp=Z,3.6nm,0.7s,baz=36,slow=6.9							
NOA	**NORSAR Array B**	**57.58**	**331**	P	**P**	**15**	**20**	**19.8 -1.6**
	comp=Z,2.6nm,0.6s,baz=37,slow=6.8,SNR=16							
NOA				LR	LR	15	47	34.7
	comp=Z,21nm,20.1s,baz=300,slow=39							
ZEI	**Tsey**	**57.58**	**299**	*e*P	**P**	**15**	**20**	**23.6 +1.7**
ZEI				pmax	pmax			
	comp=Z,3.0nm,0.9s							
AKASG	**Malin Array Be**	**58.98**	**314**	P	**P**	**15**	**20**	**30.8 -0.5**
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.5s							
AKASG	**Malin Array Be**	**58.98**	**314**	P	**P**	**15**	**20**	**30.8 -0.5**
	comp=Z,2.1nm,0.5s,baz=40,slow=8.1,SNR=8.6							
OJC	**Ojcow**	**63.25**	**319**	*e*P	**P**	**15**	**21**	**01.9 +1.6**
KOLS	**Kolonicke sedl**	**63.26**	**317**	*e*P	**P**	**15**	**21**	**02.2 +1.8**
NIE	**Niedzica**	**63.67**	**318**	*e*P	**P**	**15**	**21**	**05.9 +2.8**
CLL	**Collm**	**64.92**	**324**	*e*P	**P**	**15**	**21**	**13.0 +1.8**
CLL				*e*		15	21	19.0
CLL	**Collm**	**64.92**	**324**	*e*P	**P**	**15**	**21**	**13.0 +1.8**
CLL				*e*(sP)	**sP**	**15**	**21**	**19.0 +4.0**
VYHS	**Vyhne**	**65.00**	**319**	*e*P	**P**	**15**	**21**	**14.2 +2.4**
BRTR	**Keskin Array B**	**65.09**	**303**	P	**P**	**15**	**21**	**15.1 +2.3**
	comp=Z,2.7nm,0.6s,baz=61,slow=4.4,SNR=9.0							
GERES	**GERESS Array B**	**66.70**	**322**	P	**P**	**15**	**21**	**24.3 +1.5**
	comp=Z,0.7nm,0.6s,baz=49,slow=4.4,SNR=5.3							
GERES				LR	LR	15	51	12.5
	comp=Z,63nm,19.2s,baz=268,slow=37							
ULM	**Lac du Bonnet**	**68.68**	**32**	LR	LR	15	53	42.2
	comp=Z,70nm,21.4s,baz=10,slow=38							
NVAR	**Mina Array Bea**	**69.37**	**53**	P	**P**	**15**	**21**	**39.2 -0.8**
	comp=Z,0.2nm,0.5s,baz=304,slow=5.1,SNR=2.4							
DAVOX	**Davos/Dischmat**	**69.84**	**323**	LR	LR	15	54	46.8
	comp=Z,50nm,20.2s,baz=238,slow=38							
PDAR	**Pinedale Array**	**69.87**	**45**	P	**P**	**15**	**21**	**42.6 -0.4**
	comp=Z,0.4nm,0.6s,baz=352,slow=4.6,SNR=3.5							
FITZ	**Fitzroy Crossi**	**71.28**	**189**	P	**P**	**15**	**21**	**50.3 -1.1**
	comp=Z,1.7nm,0.8s,baz=344,slow=7.3,SNR=7.5							
WRA	**Warramunga Arr**	**72.71**	**180**	P	**P**	**15**	**21**	**58.6 -1.3**
	comp=Z,2.3nm,0.6s,baz=356,slow=6.6,SNR=55							
ASAR	**Alice Springs**	**76.42**	**180**	P	**P**	**15**	**22**	**20.7 -0.7**
	comp=Z,3.1nm,0.7s,baz=348,slow=3.8,SNR=5.5							
QSPA	**South Pole Qui**	**142.82**	**180**	PKhKP	PKPpre	15	29	58.9
	comp=Z,1.5nm,0.6s,baz=306,slow=0.5,SNR=14							
CPUP	**Villa Florida**	**151.90**	**23**	PKPbc	**PKPbc**	**15**	**30**	**27.1 +0.3**
	comp=Z,1.5nm,0.7s,baz=326,slow=3.9,SNR=3.9							
VNA2	**Neumayer--Watz**	**155.35**	**209**	*e*PKPdf	**PKPdf**	**15**	**30**	**20.2 -3.8**
VNA2	**Neumayer--Watz**	**155.35**	**209**	*e*PKPab	**PKPab**	**15**	**30**	**46.8 -2.7**

IDC 13 15:14:23.1±1.5, 20°45S×67°21W, h194km±17km, mb3.3/4, mb1 3.6/8, mb1mx3.4/22, mbtmp3.4/8, Error ellipse: s-maj=24.1km s-min=15.7km az=71.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.23**	**348**	P	P	Pn	15 15 29.5	+1.1
	3.4nm,0.3s,baz=168,slow=8.5,SNR=63							
LPAZ				S		Sn	15 16 19.0	-0.6
	1.1nm,0.3s,baz=36,slow=19,SNR=9.2							
SIV	**San Ignacio**	**7.33**	**54**	P	P	Pn	15 16 07.8	+0.1
	2.7nm,0.3s,baz=253,slow=12,SNR=83							
CPUP	**Villa Florida**	**10.80**	**125**	P	P	Pn	15 16 52.1	-0.6
	0.7nm,0.3s,baz=279,slow=14,SNR=7.9							
CFAA	**Coronel Fontan**	**11.15**	**185**	S		Sn	15 18 48.4	-13
	0.2nm,0.3s,baz=275,slow=21,SNR=6.4							
NNA	**Nana**	**12.50**	**311**	P	P	Pn	15 17 14.7	+0.1
	2.2nm,0.3s,baz=189,slow=5.2,SNR=6.0							
PLCA	**Paso Flores**	**20.42**	**187**	P	P		15 18 45.5	+0.2
	3.6nm,0.8s,baz=5.3,slow=11,SNR=7.6							
QSPA	**South Pole Qui**	**69.74**	**180**	P	P		15 25 11.8	-0.1
	1.6nm,1.1s,baz=226,slow=6.1,SNR=8.6							
TORD	**Torodi Ar. Bea**	**75.51**	**70**	P	P		15 25 46.8	+0.3
	0.4nm,0.7s,baz=258,slow=5.2,SNR=4.3							
YKA	**Yellowknife Ar**	**90.74**	**340**	P	P		15 27 03.2	-0.2
	0.4nm,0.5s,baz=132,slow=4.5,SNR=11							

IDC 13 15:25:14.2±1.2, 5°02N×125°46E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/24, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=68.1km s-min=18.4km az=76.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.04**	**3**	Pn	Pn		15 25 49.5	-0.4
	41nm,0.3s,baz=68,slow=11,SNR=4.4							
DAV				Sn		Sb	15 26 18.4	+0.1
	21nm,0.3s,baz=299,slow=19,SNR=3.0							
WRA	**Warramunga Arr**	**26.30**	**161**	P	P		15 30 51.6	-0.2
	0.7nm,0.6s,baz=340,slow=11,SNR=6.5							
ASAR	**Alice Springs**	**29.68**	**164**	P	P		15 31 22.4	+0.4
	0.2nm,0.6s,baz=344,slow=7.5,SNR=3.6							
MKAR	**Makanchi Array**	**55.78**	**325**	P	P		15 34 53.2	0.0
	0.9nm,0.6s,baz=122,slow=7.5,SNR=14							
ZALV	**Zalesovo Beam**	**58.88**	**333**	P	P		15 35 14.5	-0.3
	0.3nm,0.3s,baz=101,slow=7.5,SNR=3.2							

*CSEM **13** 15:48:33.2,37.13N×24.16W, h5km, ML3.5, After PDA*
PDA 13 15:48:33.2±0.7, 37.13N×24.16W, h5km, MD3.2, ML3.5, Error ellipse: s-maj=4.8km s-min=3.3km az=82.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**0.74**	**260**	*i* P	Pg		15 48 45.3	-2.1
PSMN				*e*S	Sg		15 48 54.7	-2.4
PSMN				A	A		15 48 56.3	
	668nm,0.2s							
PSMA	**Santa Maria**	**0.79**	**260**	*i* P	Pg		15 48 45.8	-2.6
PSMA				*e*S	Sg		15 48 55.8	-2.9
PSMA				A	A		15 48 57.6	
	432nm,0.1s							
CMLA	**Cha da Macela**	**1.26**	**300**	*e*P	Pg		15 48 52.5	-4.9
CMLA				*e*S	Sg		15 49 07.2	-6.5
CMLA				A	A		15 49 11.4	
	564nm,0.3s							
CMLA	**Cha da Macela**	**1.26**	**300**	*e*P	Pg		15 48 52.5	-4.9
CMLA				*e*S	Sg		15 49 07.2	-6.5
PDA	**Ponta Delgada**	**1.35**	**297**	*e*S	Sb		15 49 09.1	-7.4
PDA				A	A		15 49 10.9	
	239nm,0.2s							
PDA	**Ponta Delgada**	**1.35**	**297**	*e*S	Sb		15 49 09.1	-7.4
PSET	**Sete Cidades**	**1.42**	**299**	*e*P	Pn		15 48 54.7	-5.1
PSET				*e*S	Sb		15 49 11.1	-7.7
PSET				A	A		15 49 12.0	
	262nm,0.3s							
PSET	**Sete Cidades**	**1.42**	**299**	*e*P	Pn		15 48 54.7	-5.1
PSET				*e*S	Sb		15 49 11.1	-7.7
PMAN	**Manadas**	**3.45**	**297**	*e*P	Pn		15 49 23.4	-4.2
PMAN				*e*S	Sn		15 50 00.5	-8.4
ROSA	**Rosais**	**3.60**	**297**	*e*P	Pn		15 49 25.4	-4.2
ROSA				*e*S	Sn		15 50 04.1	-8.4
ROSA				A	A		15 50 08.0	
	26nm,0.2s							
ROSA	**Rosais**	**3.60**	**297**	*e*P	Pn		15 49 25.4	-4.2
ROSA				*e*S	Sn		15 50 04.1	-8.4
PICO	**Pico**	**3.65**	**293**	*e*P	Pn		15 49 26.1	-4.3
PICO	**Pico**	**3.65**	**293**	*e*P	Pn		15 49 26.1	-4.3
PCAN	**Candelaria**	**3.68**	**292**	*e*P	Pn		15 49 26.3	-4.5
PCAN	**Candelaria**	**3.68**	**292**	*e*P	Pn		15 49 26.3	-4.5
CALA	**Caldeira**	**3.88**	**293**	*e*P	Pn		15 49 29.1	-4.5
CALA				*e*S	Sn		15 50 11.0	-8.6
CALA	**Caldeira**	**3.88**	**293**	*e*P	Pn		15 49 29.1	-4.5
CALA				*e*S	Sn		15 50 11.0	-8.6

*IDC **13** 15:53:55.8±0.7, 13.24N×50.47E, h0km, mb3.9/22, mb1 4.0/23, mb1mx4.0/33, mbtmp3.9/23, ML4.2/2, MS3.6/17, Ms1 3.6/17, ms1mx3.4/36, Error ellipse: s-maj=17.9km s-min=14.9km az=171.0*
*BJI **13** 15:53:56.6, 13.10N×50.30E, h10km, mb4.4/7*
*ISCJB **13** 15:53:57.2±0.4, 13.29N±0.07×50.33E±0.03, h21km, mb4.0/25, MS3.5/15, Error ellipse: s-maj=10.2km s-min=4.3km az=0.2*
*CSEM **13** 15:54:00.8±0.6, 13.26N×50.29E, h40km, ML3.8, Error ellipse: s-maj=17.0km s-min=10.6km az=167.0*
*DHMR **13** 15:54:00.8±1.4, 13.37N×49.91E, h3km±96km, ML3.8*
ISC 13 15:53:59.8±0.6, 13.33N±0.09×50.34E±0.06, h21km, n56, σ1°47/58, mb4.0/25, MS3.4/15, 3C, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**1.70**	**312**	*i* P	P	**Pn**	**15 54 25.8**	**-2.4**
MUKL				*i* S	S	**Sn**	**15 54 46.7**	**-2.5**
MUKL				AML	AML		15 54 47.8	
	comp=N,1µm,0.2s							
BDHA	**Al Bayda'**	**4.68**	**278**	⇑*i* P	P	**Pn**	**15 55 09.5**	**+0.1**
BDHA				*i* S	S	**Sn**	**15 56 01.7**	**-1.6**
BDHA				AML	AML		15 56 04.9	
	comp=N,310nm,0.6s							
BDHA	**Al Bayda'**	**4.68**	**278**	⇑*i* P	P	**Pn**	**15 55 09.5**	**+0.1**
BDHA				*i* S	S	**Sn**	**15 56 01.7**	**-1.6**
	comp=N,155nm,0.6s							
LBOS		**4.97**	**277**	⇑*i* P	P	**Pn**	**15 55 13.6**	**+0.1**
LBOS				*i* S	S	**Sn**	**15 56 09.9**	**-0.7**
DHBB	**Dhamar BB**	**5.90**	**283**	*i* S	S	**Sn**	**15 56 31.8**	**-1.7**
DHBB	**Dhamar BB**	**5.90**	**283**	*i* S	S	**Sn**	**15 56 31.8**	**-1.7**
TRBA	**At Turbah**	**6.06**	**270**	*i* P	P	**Pn**	**15 55 27.3**	**-1.1**
TRBA				AML	AML		15 55 33.0	
	comp=E,74nm,0.4s							
TRBA	**At Turbah**	**6.06**	**270**	*i* P	P	**Pn**	**15 55 27.3**	**-1.1**
	comp=E,37nm,0.4s							
ATD	**Arta Tunnel**	**7.53**	**257**	Pn	**Pn**	**15**	**55 50.2**	**+1.7**
	comp=E,25nm,0.3s,baz=245,slow=9.7,SNR=24							
ATD				LR	LR	15	58 06.5	
	comp=E,716nm,18.7s,baz=337,slow=33							
KMBO	**Kilima Mbogo**	**19.36**	**223**	P	**P**	**15**	**58 23.8**	**-0.7**
	comp=E,0.1nm,0.3s,baz=42,slow=19,SNR=3.6							
KMBO				LR	LR	16	05 45.6	
	comp=E,189nm,18.5s,baz=80,slow=37							
BHD	**Baghdad**	**20.58**	**346**	*ex*	P		15 58 30.0	-7.3
BHD				*ex*	x		16 02 01.7	
EIL	**Elat**	**21.62**	**321**	P	**P**	**15**	**58 52.4**	**+3.8**
	comp=E,5.6nm,1.0s,baz=264,slow=3.0,SNR=4.8							
EIL				LR	LR	16	07 07.7	
	comp=E,232nm,19.3s,baz=268,slow=36							
ASF	**Jabal al Asfar**	**22.43**	**329**	P	**P**	**15**	**59 01.0**	**+3.6**
	comp=E,1.0nm,0.4s							
ASF				LR	LR	16	08 12.5	
	comp=E,112nm,20.2s,baz=183,slow=38							
MMAI	**Mount Meron Ar**	**23.87**	**328**	P	**P**	**15**	**59 12.3**	**+0.4**
	comp=E,0.2nm,0.2s,baz=114,slow=16,SNR=2.7							
MMAI				LR	LR	16	08 07.8	
	comp=E,57nm,19.1s,baz=180,slow=36							
GNI	**Garni**	**27.16**	**351**	LR	LR	16	12 24.9	
	comp=E,241nm,19.0s,baz=343,slow=41							
BRTR	**Keskin Array B**	**30.13**	**334**	P	**P**	**16**	**00 09.7**	**+1.5**
	comp=E,0.7nm,0.7s,baz=342,slow=20,SNR=3.4							
BRTR				LR	LR	16	12 35.6	
	comp=E,67nm,19.2s,baz=126,slow=37							
KBZ	**Khabaz**	**30.96**	**349**	P	**P**	**16**	**00 16.9**	**+1.6**
	comp=E,1.2nm,0.8s,baz=117,slow=9.0,SNR=3.1							
KBZ				LR	LR	16	15 12.5	
	comp=E,189nm,18.7s,baz=166,slow=41							
PYUN	**Piuthan**	**33.76**	**59**	*e*P	**P**	**16**	**00 40.1**	**-0.3**
	comp=E,33nm,1.0s							
KOLN	**Koldanda**	**34.17**	**60**	*e*P	**P**	**16**	**00 43.4**	**-0.6**
	comp=E,14nm,0.8s							
DANN	**Dangsing**	**34.48**	**59**	*e*P	**P**	**16**	**00 46.0**	**-0.8**
	comp=E,28nm,0.9s							
DMN	**Daman**	**35.39**	**61**	*e*P	**P**	**16**	**00 53.7**	**-0.9**
	comp=E,18nm,0.9s			

comp=Z,0.7nm,0.5s,baz=106,slow=7.5,SNR=6.8

HHC	**Hu-ho-hao-te**	**59.69**	**50**	*e*P		**P**	**16 04 05.8**	**+2.8**
HHC				S		**S**	**16 12 15.1**	**+2.3**
HHC				pmax	pmax			
	comp=Z,23nm,0.7s							
MJAR	**Matsushiro Arr**	**80.51**	**55**	P		**P**	**16 06 10.8**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=260,slow=4.7,SNR=3.3							
WRA	**Warramunga Arr**	**88.97**	**111**	P		**P**	**16 06 52.0**	**-1.5**
	comp=Z,4.2nm,0.8s,baz=299,slow=3.7,SNR=30							
ASAR	**Alice Springs**	**89.51**	**114**	P		**P**	**16 06 54.6**	**-1.5**
	comp=Z,3.0nm,0.9s,baz=292,slow=4.9,SNR=28							
STKA	**Stephens Creek**	**97.97**	**121**	LR		LR	16 46 57.9	
	comp=Z,109nm,19.5s,baz=205,slow=32							
NVAR	**Mina Array Bea**	**127.42**	**349**	PKP		**PKPdf**	**16 13 04.5**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=11,slow=1.5,SNR=7.3							

IDC 13 16:07:00.9±6.1, 15°73'S×173°67'W, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.5/21, mbtmp3.5/3, ML1.1/1, Error ellipse: s-maj=332.3km s-min=28.8km az=145.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.58**	**46**	Pn		16 07 42.6	-1.5
	2.2nm,0.3s,baz=252,slow=6.4,SNR=5.6						
AFI				Sn		16 08 11.0	-5.2
	13nm,0.3s,baz=23,slow=22,SNR=6.8						
WRA	**Warramunga Arr**	**49.51**	**257**	P			
	0.9nm,1.1s,baz=93,slow=7.1,SNR=5.2			P	P	16 15 53.4	-0.3
ASAR	**Alice Springs**	**49.76**	**252**	P			
	0.6nm,0.6s,baz=89,slow=7.9,SNR=17			P	P	16 15 54.9	-0.7
BRTR	**Keskin Array B**	**146.25**	**320**	PKPbc			
	0.7nm,0.7s,baz=50,slow=2.3,SNR=3.0				PKPab	16 26 45.2	+0.6

IDC 13 16:16:25.2±27.0, 18°85'S×174°20'W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/21, mbtmp3.9/4, Error ellipse: s-maj=504.1km s-min=161.4km az=75.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**37.25**	**261**	P			
	1.9nm,0.5s,baz=93,slow=15,SNR=3.1				P	16 23 39.5	+0.6
STKA	**Stephens Creek**	**41.73**	**243**	P			
	0.4nm,0.6s,baz=101,slow=14,SNR=2.9				P	16 24 15.8	-0.4
ASAR	**Alice Springs**	**48.40**	**255**	P			
	1.3nm,0.8s,baz=92,slow=8.0,SNR=22				P	16 25 09.2	-0.2
WRA	**Warramunga Arr**	**48.40**	**260**	P			
	0.5nm,0.3s,baz=96,slow=7.5,SNR=44				P	16 25 09.2	-0.3

IDC 13 16:52:34.5±0.8, 4°.28N×125°.68E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.9/24, mbtmp4.0/9, MS3.3/3, Ms1 3.3/3, ms1mx2.7/36, Error ellipse: s-maj=34.2km s-min=14.1km az=77.0

MAN 13 16:52:40, 4°.35N×125°.27E, h18km, mb5.0, ML3.9, MS4.0

ISCJB 13 16:52:41.6±0.6, 4°.22N±0°.04×125°.71E±0°.09, h76km±7km, mb4.1/11, Error ellipse: s-maj=15.1km s-min=5.0km az=166.8

NEIC 13 16:52:42.2±1.4, 4°.21N×125°.57E, h62km±14km, mb4.5/2, Error ellipse: s-maj=16.1km s-min=8.6km az=83.0

DJA 13 16:52:48.3±0.5, 4°.4N±4°×12°.6E±°, h85km±9km, M4.6/4, mb4.7/4, MLv4.6/4

ISC 13 16:52:42.9±1.0, 4°.20N±0°.04×125°.60E±0°.08, h68km±11km, n50, σ1°61/43, mb4.1/11, 3C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.98**	**341**	*e*P			
GSPH				*e*S		**16 53 10.3**	**-4.1**
MATI	**Mati**	**2.80**	**13**	*e*P		**16 53 33.2**	**-5.2**
MNI	**Manado**	**2.84**	**196**	P		**16 53 24.3**	**-1.2**
MNI				S		16 53 33.7	+7.6
DAV	**Davao City (W)**	**2.85**	**359**	Pn		16 54 11.3	+12
DAV				Sn		**16 53 25.8**	**-0.4**
DAV	**Davao City (W)**	**2.85**	**359**	P		**16 54 02.1**	**+2.8**
DAV	**Davao City (W)**	**2.85**	**359**	Pn		16 53 32.3	+6.2
	33nm,0.3s,baz=196,slow=18,SNR=2.5					**16 53 25.7**	**-0.4**
DAV				Sn		**16 54 02.1**	**+2.8**
	25nm,0.3s,baz=330,slow=23,SNR=6.0						
DAV				LR	LR	16 54 49.7	
	comp=Z,511nm,18.6s,baz=60,slow=49						
DMPH	**Davao City--Mi**	**2.86**	**358**	*e*P		**16 53 27.0**	**+0.7**
DMPH				*e*S		16 53 53.2	-6.5
CTBH	**Cotabato--PC H**	**3.29**	**336**	*e*P		**16 53 29.6**	**-2.5**
BUKP	**Musuan**	**3.69**	**352**	*e*P		**16 53 37.1**	**-0.6**
TNTI	**Ternate**	**3.83**	**153**	P		16 53 43.8	+4.2
TNTI				S		**16 54 23.5**	**+0.1**
KMSI	**Cibinong**	**3.95**	**204**	P		16 53 47.4	+6.3
PAGZ	**Pagadian**	**4.24**	**329**	*e*P		16 53 41.3	-3.8
CGP	**Cagayan de Oro**	**4.32**	**348**	*e*P		16 53 50.4	+4.2
CGP				*e*S		**16 54 38.0**	**+2.6**
IPIL	**Ipil**	**4.67**	**320**	*e*P		16 53 46.9	-4.0
LBMI	**Labuha**	**5.17**	**158**	P		**16 53 56.3**	**-1.5**
LBMI				S		**16 54 57.1**	**+1.0**
LUWI	**Luwuk**	**5.93**	**209**	P		**16 54 10.9**	**+2.7**
LUWI				S		**16 55 15.2**	**+0.4**
AAI	**Ambon**	**8.25**	**162**	P		**16 54 39.0**	**-1.0**
	27nm,0.5s						
KKM	**Kota Kinabalu**	**9.53**	**281**	*e*P		**16 54 55.5**	**-2.1**
BBSI	**Bau Bau**	**10.09**	**198**	P		16 55 10.9	+5.8
	24nm,1.0s						
KAPI	**Kappang**	**10.86**	**213**	LR		LR	17 00 04.9	
	comp=Z,149nm,18.9s,baz=267,slow=41							
TGJI	**Tegal**	**19.79**	**236**	P		pP	16 57 25.1	+3.0
FITZ	**Fitzroy Crossi**	**22.16**	**180**	*e*P		**P**	**16 57 32.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**22.16**	**180**	P		**P**	**16 57 32.2**	**-1.3**
	13nm,0.7s,baz=12,slow=9.5,SNR=15							
WRAB	**Tennant Creek**	**25.48**	**161**	*e*P		**P**	**16 58 04.6**	**-0.4**
	56nm,0.8s							
WRA	**Warramunga Arr**	**25.48**	**161**	P		**P**	**16 58 04.9**	**-0.1**
WRA	**Warramunga Arr**	**25.48**	**161**	P		**P**	**16 58 04.9**	**-0.1**
	47nm,0.8s,baz=340,slow=10,SNR=101							
MBWA	**Marble Bar**	**25.85**	**193**	*e*P		**P**	**16 58 07.9**	**-0.5**
GSI	**Gunungsitoli**	**28.14**	**265**	P		pP	16 58 45.3	+0.1
ASAR	**Alice Springs**	**28.86**	**164**	P		**P**	**16 58 35.7**	**+0.4**
ASAR	**Alice Springs**	**28.86**	**164**	P		**P**	**16 58 35.7**	**+0.4**
	2.2nm,0.8s,baz=348,slow=12,SNR=7.8							
CMAR	**Chiang Mai Arr**	**29.67**	**301**	P		**P**	**16 58 44.0**	**+1.5**
CMAR	**Chiang Mai Arr**	**29.67**	**301**	P		**P**	**16 58 44.0**	**+1.5**
	0.7nm,0.8s,baz=114,slow=7.3,SNR=7.0							
KSAR	**Wonju Array Be**	**33.15**	**3**	P		**P**	**16 59 13.0**	**+0.1**
KSRS	**Korea Array**	**33.16**	**3**	P		**P**	**16 59 13.0**	**0.0**
	0.9nm,0.8s,baz=181,slow=10.0,SNR=4.1							
MJAR	**Matsushiro Arr**	**34.21**	**18**	P		**P**	**16 59 21.7**	**-0.4**
MJAR	**Matsushiro Arr**	**34.21**	**18**	P		**P**	**16 59 21.7**	**-0.4**
	2.2nm,0.8s,baz=197,slow=9.3,SNR=10							
MJAR				LR		LR	17 12 10.3	
	comp=Z,62nm,20.8s,baz=200,slow=34							
STKA	**Stephens Creek**	**38.97**	**158**	*e*P		**P**	**17 00 03.6**	**+0.9**
	1.3nm,0.8s							
STKA	**Stephens Creek**	**38.97**	**158**	P		**P**	**17 00 03.7**	**+0.9**
	6.2nm,0.7s,baz=331,slow=8.8,SNR=14							
TAPN	**Taplejung**	**42.84**	**307**	*e*P		P	17 00 38.9	+3.9
	9.6nm,1.0s							
ODAN	**Odare**	**42.88**	**306**	*e*P		P	17 00 42.2	+6.9
	11nm,0.7s							
GUN	**Gumba**	**44.54**	**306**	*e*P		**P**	**17 00 49.3**	**+0.6**
	11nm,0.8s							
DMN	**Daman**	**45.04**	**305**	*e*P		**P**	**17 00 54.5**	**+1.9**
KOLN	**Koldanda**	**46.33**	**305**	*e*P		**P**	**17 01 03.2**	**+0.5**
	12nm,0.7s							
DANN	**Dangsing**	**46.43**	**306**	*e*P		**P**	**17 01 01.4**	**-2.2**
	18nm,0.8s							
PETK	**Petropavlovsk-**	**55.43**	**23**	P		**P**	**17 02 08.9**	**-1.5**
PETK	**Petropavlovsk-**	**55.43**	**23**	P		**P**	**17 02 08.9**	**-1.5**
	5.2nm,0.8s,baz=184,slow=5.7,SNR=5.9							
MKAR	**Makanchi Array**	**56.53**	**326**	P		**P**	**17 02 17.1**	**-1.3**
MKAR	**Makanchi Array**	**56.53**	**326**	P		**P**	**17 02 17.1**	**-1.3**
	0.3nm,0.6s,baz=136,slow=7.0,SNR=3.4							
KURBB	**Kurchatov Arra**	**60.74**	**328**	P		**P**	**17 02 47.0**	**-0.5**
	0.6nm,0.6s,baz=121,slow=6.4,SNR=9.1							
KURK	**Kurchatov**	**60.74**	**328**	*e*P		**P**	**17 02 46.9**	**-0.6**

IDC 13 16:58:46.9±0.5, 35°.61N×140°.68E, h0km, mb4.1/24, mb1 4.3/28, mb1mx4.2/36, mbtmp4.2/28, ML3.5/3, MS3.2/8, Ms1 3.3/8, ms1mx3.0/41, Error ellipse: s-maj=15.8km s-min=12.2km az=96.0

MOS 13 16:58:50.1±0.9, 35°.62N×140°.87E, h39km, mb4.6/28, Error ellipse: s-maj=11.2km s-min=6.8km az=124.5

NEIC 13 16:58:51.6±1.8, 35°.59N×140°.77E, h32km±12km, mb4.5/7, MW4.4(NIED), Error ellipse: s-maj=7.5km s-min=6.5km az=88.0

NEIC Recorded [2 JMA] in Chiba and [1 JMA] in Ibaraki and Kanagawa.

ISCJB 13 16:58:52.3±0.4, 35°.63N±0°.03×140°.74E±0°.05, h52km±2km, mb4.3/57, MS3.3/6, Error ellipse: s-maj=6.4km s-min=5.0km az=2.8

JMA 13 16:58:53.0±0.1, 35°.66N×140°.71E, h46km±1km, M4.2 Broadband fault plane solution: P waves. NP1: φs7.00000°, δ69.00000°, λ78.00000°. NP2: φs218.00000°, δ24.00000°, λ119.00000°. Principal axes: T Plg64.0000°, Azm257.0000°; N Plg11.0000°, Azm11.0000°; P Plg23.0000°, Azm106.0000°;

JMA Felt II J1.

BJI 13 16:58:55.4, 35°.82N×140°.31E, h62km, mB4.7/9, mb4.6/20, Ms4.4/4, Ms7 4.3/5

NIED 13 16:59:00, 35°.70N×140°.80E, h53km, Mw4.4 Best double couple: M0 4.90000×10^15 NP1: φs2.00000°, δ78.00000°, λ82.00000°. NP2: φs217.00000°, δ15.00000°, λ124.00000°.

ISC 13 16:58:53.5±0.7, 35°66N±0°.04×140°73E±0°.04, h46km±6km, n150, σ1°23/158, mb4.3/57, MS3.4/6, 7C-10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.11**	**66**	⇑P		**16 59 00.5**	**-0.3**
CHOJ				S		**16 59 05.8**	**-0.2**
JCN	**Nagara**	**0.49**	**241**	⇓P		**16 59 04.4**	**0.0**
JCN				S		**16 59 13.2**	**+1.1**
JYT	**Yasato**	**0.72**	**323**	⇓P		**16 59 06.6**	**-0.7**
JYT				S		**16 59 17.4**	**+0.1**
BSO4	**Boso 4**	**0.74**	**206**	⇓P		**16 59 07.1**	**-0.4**
BSO3	**Boso 3**	**0.87**	**192**	P		**16 59 08.9**	**-0.2**
BSO2	**Boso 2**	**0.90**	**179**	S		**16 59 22.2**	**+0.9**
JHO	**Hitachi**	**0.96**	**352**	⇓P		**16 59 10.4**	**-0.2**
BSO1	**Boso 1**	**1.02**	**169**	P		**16 59 10.7**	**-0.2**
JAG	**Ashikaga**	**1.29**	**307**	⇓P		**16 59 14.2**	**-0.8**
JOD2	**Odawara 2**	**1.40**	**254**	⇓P		**16 59 15.9**	**-0.6**
JIM2	**Oshima 3**	**1.42**	**229**	P		**16 59 15.1**	**-1.7**
JIM2				S		**16 59 33.7**	**-0.6**
MJAR	**Matsushiro Arr**	**2.23**	**294**	Pn		**16 59 27.1**	**-0.8**
MJAR	**Matsushiro Arr**	**2.23**	**294**	Pn		**16 59 27.1**	**-0.8**
	47nm,0.3s,baz=90,slow=13,SNR=377						
MJAR				LR		LR	17 00 05.3	
	comp=Z,310nm,20.8s,baz=90,slow=36							
MAJO	**Matsushiro**	**2.23**	**294**	*e*P		**P**	**16 59 29.0**	**+1.1**
MAJO	**Matsushiro**	**2.23**	**294**	*e*P		**P**	**16 59 29.0**	**+1.1**
MAT	**Matsushiro**	**2.23**	**294**	P		**P**	**16 59 28.8**	**+0.9**
MAT				S		**16 59 57.6**	**+3.4**
JHJ	**Hachijo jima 2**	**2.65**	**197**	Pn		**P**	**16 59 31.2**	**-2.5**
	79nm,0.3s,baz=333,slow=2.3,SNR=57							
JHJ				Sn		**17 00 01.4**	**-3.1**
	77nm,0.3s,baz=45,slow=19,SNR=5.2							
ERM	**Erimo**	**6.62**	**16**	*e*P		**P**	**17 00 27.2**	**-1.0**
ERM	**Erimo**	**6.62**	**16**	*e*P		**P**	**17 00 27.2**	**-1.0**
JNU	**Nakatsue**	**8.53**	**256**	P		**P**	**17 00 51.9**	**-2.5**
JNU	**Nakatsue**	**8.53**	**256**	Pn		**P**	**17 00 52.6**	**-1.8**
	0.1nm,0.3s,baz=86,slow=13,SNR=3.1							
ASAJ	**Asahikawa**	**8.57**	**9**	*e*P		**P**	**17 00 53.1**	**-1.7**
ASAJ				Sn		**Sn**	**17 02 27.0**	**-3.1**
ASAJ	**Asahikawa**	**8.57**	**9**	Pn		**P**	**17 00 53.3**	**-1.5**
	1.6nm,0.3s,baz=251,slow=9.4,SNR=17							
ASAJ				Sn		**Sn**	**17 02 27.0**	**-3.1**
	1.4nm,0.3s,baz=239,slow=19,SNR=4.1							
CBIJ	**Chichi jima**	**8.62**	**171**	Pn		Pn	17 00 51.9	-3.8
CBIJ				Sn		Sn	17 02 20.8	-11
CBIJ	**Chichi jima**	**8.62**	**171**	Pn		Pn	17 00 51.9	-3.8
	baz=322,slow=18							
CBIJ				Sn		Sn	17 02 20.8	-11
	baz=52,slow=19							
YUK	**Yuzh-Kuril'sk**	**9.25**	**24**	*c* *i*P		**Pn**	**17 01 03.2**	**-0.9**
YUK				*i* S		Sn	17 02 40.6	-6.1
YUK				pmax	pmax			
	comp=Z,31nm,0.9s							
YUK				pmax	pmax			
	comp=E,19nm,0.9s							
YUK				pmax	pmax			
	comp=N,16nm,0.9s							
KSRS	**Korea Array**	**10.46**	**284**	Pn		**Pn**	**17 01 22.6**	**+1.9**
	comp=N,0.4nm,0.3s,baz=100,slow=14,SNR=16							
KSRS				LR		LR	17 05 26.8	
	comp=N,252nm,19.9s,baz=167,slow=38							
KSAR	**Wonju Array Be**	**10.49**	**284**	Pn		**Pn**	**17 01 22.6**	**+1.5**
USRK	**Ussuriysk Arra**	**10.85**	**325**	Pn		**Pn**	**17 01 27.1**	**+1.2**
	comp=N,0.1nm,0.3s,baz=132,slow=13,SNR=4.6							
USRK				LR		LR	17 05 30.4	
	comp=N,182nm,18.3s,baz=18,slow=37							
SNY	**Shenyang**	**14.73**	**300**	⇓P		**P**	**17 02 24.3**	**+0.4**
SNY				pP		Px	17 02 32.3	
SNY				S		**S**	**17 05 20.3**	**+2.8**
SNY				pmax	pmax			
	comp=Z,9.0nm,0.8s							
SNY				pmax	pmax			
	comp=Z,200nm,3.9s							
SNY				LR	LR			
	comp=N,220nm,3.9s							
SNY				LR	LR			
	comp=E,81nm,2.7s							
SNY				LR	LR			
	comp=Z,120nm,5.4s							
NJ2	**Nanjing**	**18.52**	**265**	*e*P		**Pn**	**17 03 08.8**	**+2.3**
NJ2				pP		**pP**	**17 03 20.5**	**+3.8**
NJ2				sP		sP	17 03 28.8	+6.3
NJ2				S		**Sn**	**17 06 27.0**	**-5.6**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
NJ2				LR	LR			
	comp=N,100nm,17.9s							
NJ2				LR	LR			
	comp=E,120nm,18.8s							
NJ2				LR	LR			
	comp=Z,110nm,13.9s							
PETK	**Petropavlovsk-**	**21.15**	**29**	LR		LR	17 12 02.8	
	comp=Z,23nm,19.6s,baz=47,slow=38							
HHC	**Hu-ho-hao-te**	**23.43**	**292**	*e*P		**P**	**17 03 54.8**	**-3.8**
HHC				S		S	17 07 57.1	-12
HHC				pmax	pmax			
	comp=Z,26nm,0.5s							
HHC				pmax	pmax			
	comp=Z,170nm,5.5s							
XAN	**Xi'an**	**26.10**	**276**	P		**P**	**17 04 22.0**	**-1.0**
XAN				pmax	pmax			
	comp=Z,3.0nm,0.6s							
XAN				pmax	pmax			
	comp=Z,27nm,5.0s							
YAK	**Yakutsk**	**27.30**	**349**	*e*P		**P**	**17 04 37.5**	**+4.1**
YAK				pmax	pmax			
	comp=Z,11nm,1.1s							
YAK				pmax	pmax			
	comp=N,5.0nm,1.3s							
ULN	**Ulaanbaatar**	**27.70**	**307**	*e*P		**P**	**17 04 36.8**	**-0.6**
	comp=N,2.5nm,0.7s							
SONM	**Songino Array**	**28.13**	**306**	P		**P**	**17 04 41.1**	**-0.1**
SONM	**Songino Array**	**28.13**	**306**	P		**P**	**17 04 41.1**	**-0.1**
	comp=N,3.3nm,0.5s,baz=105,slow=9.3,SNR=5.5							
LZH	**Lanzhou**	**29.78**	**282**	*e*P		**P**	**17 04 55.8**	**-0.2**
LZH				pmax	pmax			
	comp=Z,16nm,1.3s							
ZAK	**Zakamensk**	**30.71**	**310**	*e*P		**P**	**17 05 02.4**	**-1.6**
ZAK				pmax	pmax			
	comp=Z,1.0nm,0.8s							
GTA	**Gaotai**	**32.47**	**289**	*e*P		**P**	**17 05 19.8**	**+0.2**
GTA				pmax	pmax			
	comp=Z,4.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**40.63**	**256**	P		**P**	**17 06 27.6**	**-1.5**
CMAR	**Chiang Mai Arr**	**40.63**	**256**	P		**P**	**17 06 27.6**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=42,slow=7.1,SNR=6.8							
CMAR				LR		LR	17 25 06.8	
	comp=Z,70nm,18.5s,baz=252,slow=39							
WMQ	**Urumqi**	**40.99**	**298**	P		**P**	**17 06 33.4**	**+1.5**
WMQ				pmax	pmax			
	comp=Z,14nm,1.0s							
ZAA0	**Zalesovo Array**	**42.45**	**314**	*e*P		**P**	**17 06 43.5**	**0.0**
ZALV	**Zalesovo Beam**	**42.45**	**314**	P		**P**	**17 06 43.7**	**+0.1**
ZALV				pmax	pmax			
	comp=Z,4.0nm,0.7s							
ZALV				MLR	MLR			
	comp=Z,31nm,19.2s							
ZALV	**Zalesovo Beam**	**42.45**	**314**	P		**P**	**17 06 43.7**	**+0.1**
ZALV	**Zalesovo Beam**	**42.45**	**314**	P		**P**	**17 06 43.7**	**+0.1**
	comp=Z,4.4nm,0.7s,baz=87,slow=7.0,SNR=24							
ZALV				LR		LR	17 25 16.1	
	comp=Z,31nm,19.2s,baz=96,slow=37							

NVS	**Novosibirsk**	**43.41**	**315**	*i* P		**P**	**17 06 50.5**	**-0.8**
MK31	**Makanchi Array**	**44.40**	**303**	*c* *e*P		**P**	**17 06 59.3**	**-0.2**
MK31				pmax	pmax			
	comp=Z,3.0nm,0.5s							
MK31	**Makanchi Array**	**44.40**	**303**	*e*P		**P**	**17 06 58.9**	**-0.6**
MKAR	**Makanchi Array**	**44.40**	**303**	P		**P**	**17 06 59.4**	**0.0**
MKAR				pmax	pmax			
	comp=Z,4.0nm,0.7s							
MKAR	**Makanchi Array**	**44.40**	**303**	P		**P**	**17 06 59.4**	**0.0**
MKAR	**Makanchi Array**	**44.40**	**303**	P		**P**	**17 06 59.4**	**0.0**
	comp=Z,3.9nm,0.7s,baz=89,slow=7.2,SNR=39							
TAPN	**Taplejung**	**45.50**	**275**	*e*P		**P**	**17 07 09.1**	**+0.3**
	comp=Z,5.7nm,0.4s							
ODAN	**Odare**	**45.96**	**275**	*e*P		**P**	**17 07 11.5**	**-0.9**
	comp=Z,8.3nm,0.5s							
KURK	**Kurchatov**	**46.36**	**309**	*c* *i*P		**P**	**17 07 14.6**	**-0.3**
KURK				pmax	pmax			
	comp=Z,14nm,1.0s							
KURK	**Kurchatov**	**46.36**	**309**	*e*P		**P**	**17 07 14.4**	**-0.5**
	comp=Z,13nm,0.8s							
KURBB	**Kurchatov Arra**	**46.43**	**309**	P		**P**	**17 07 15.2**	**-0.2**
	comp=Z,3.7nm,0.5s,baz=84,slow=8.3,SNR=58							
RAMN	**Ramite**	**46.56**	**275**	*e*P		**P**	**17 07 16.4**	**-0.7**
	comp=Z,25nm,0.9s							
GUN	**Gumba**	**46.76**	**277**	*e*P		**P**	**17 07 19.8**	**+1.1**
	comp=Z,13nm,0.8s							
PKI	**Pulchoki**	**47.27**	**276**	*e*P		**P**	**17 07 22.6**	**-0.2**
	comp=Z,15nm,0.8s							
PKIN	**Phulchoki**	**47.28**	**276**	*e*P		**P**	**17 07 22.6**	**-0.1**
	comp=Z,5.2nm,0.7s							
KKN	**Kakani**	**47.29**	**277**	*e*P		**P**	**17 07 23.0**	**+0.3**
DMN	**Daman**	**47.50**	**277**	*e*P		**P**	**17 07 23.8**	**-0.7**
	comp=Z,5.4nm,0.6s							
DANN	**Dangsing**	**48.29**	**278**	*e*P		**P**	**17 07 30.6**	**0.0**
	comp=Z,35nm,0.6s							
KOLN	**Koldanda**	**48.66**	**278**	*e*P		**P**	**17 07 33.0**	**-0.3**
	comp=Z,9.9nm,0.7s							
PYUN	**Piuthan**	**49.01**	**278**	*e*P		**P**	**17 07 35.6**	**-0.4**
	comp=Z,62nm,0.9s							
TKM2	**Tokmak 2**	**49.81**	**299**	*e*P		**P**	**17 07 42.5**	**+0.6**
TKM2				pmax	pmax			
	comp=Z,6.0nm,0.5s							
TKM2	**Tokmak 2**	**49.81**	**299**	*e*P		**P**	**17 07 42.5**	**+0.6**
	comp=Z,5.8nm,0.5s							
AAK	**Ala-Archa**	**50.67**	**299**	*e*P		**P**	**17 07 48.6**	**+0.2**
AAK	**Ala-Archa**	**50.67**	**299**	*e*P		**P**	**17 07 48.6**	**+0.2**
AAK	**Ala-Archa**	**50.67**	**299**	P		**P**	**17 07 47.8**	**-0.6**
	comp=Z,2.3nm,0.6s,baz=128,slow=7.8,SNR=9.9							
ILAR	**Eielson Array**	**50.95**	**32**	P		**P**	**17 07 51.0**	**+1.1**
ILAR	**Eielson Array**	**50.95**	**32**	P		**P**	**17 07 51.0**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=263,slow=5.8,SNR=11							
BVA0	**Borovoye Array**	**51.10**	**313**	*i* P		**P**	**17 07 52.1**	**+0.9**
BRVK	**Borovoye**	**51.16**	**313**	*d* *i*P		**P**	**17 07 52.1**	**+0.4**
BRVK				pmax	pmax			
	comp=Z,3.0nm,0.6s							
BRVK	**Borovoye**	**51.16**	**313**	*e*P		**P**	**17 07 51.2**	**-0.4**
	comp=Z,3.3nm,0.8s							
KK31	**Karatay Array**	**53.35**	**301**	*c* *e*P		**P**	**17 08 07.9**	**-0.2**
KK31				pmax	pmax			
	comp=Z,1.0nm,0.3s							
KKAR	**Karatay Array**	**53.35**	**301**	*e*P		**P**	**17 08 08.4**	**+0.3**
KKAR				pmax	pmax			
	comp=Z,2.0nm,0.6s							
KKAR	**Karatay Array**	**53.35**	**301**	*e*P		**P**	**17 08 08.4**	**+0.3**
	comp=Z,2.3nm,0.6s							
FITZ	**Fitzroy Crossi**	**55.35**	**198**	P		**P**	**17 08 22.9**	**+0.2**
FITZ	**Fitzroy Crossi**	**55.35**	**198**	P		**P**	**17 08 22.9**	**+0.2**
	comp=Z,3.1nm,0.5s,baz=20,slow=7.5,SNR=22							
WRAB	**Tennant Creek**	**55.62**	**187**	*e*P		**P**	**17 08 24.0**	**-0.7**
WRAB				pmax	pmax			
	comp=Z,5.0nm,0.8s							
WRAB	**Tennant Creek**	**55.62**	**187**	*e*P		**P**	**17 08 24.0**	**-0.7**
	comp=Z,4.7nm,0.8s							
WRA	**Warramunga Arr**	**55.63**	**187**	P		**P**	**17 08 23.6**	**-1.2**
WRA	**Warramunga Arr**	**55.63**	**187**	P		**P**	**17 08 23.6**	**-1.2**
	comp=Z,2.2nm,0.5s,baz=1.6,slow=7.7,SNR=50							
SVE	**Sverdlovsk**	**55.82**	**319**	⇓*e*P		**P**	**17 08 26.2**	**+0.4**
SVE				pmax	pmax			
	comp=Z,8.0nm,0.9s							
INK	**Inuvik**	**55.86**	**27**	P		**P**	**17 08 25.9**	**0.0**
INK	**Inuvik**	**55.86**	**27**	P		**P**	**17 08 25.9**	**0.0**
	comp=Z,0.6nm,0.6s,baz=193,slow=2.5,SNR=4.5							
ARU	**Arti**	**57.03**	**319**	*c* *i*P		**P**	**17 08 34.4**	**0.0**
ARU							17 10 39.6	
ARU				S		**S**	**17 16 22.5**	**-2.9**
ARU				pmax	pmax			
	comp=Z,8.0nm,0.7s							
AB31	**Akbulak array**	**58.41**	**311**	*c* *e*P		**P**	**17 08 43.6**	**-0.6**
AB31				pmax	pmax			
	comp=Z,2.0nm,0.3s							
ABKAR	**Akbulak array**	**58.41**	**311**	*e*P		**

CLL	**Collm**	**82.01**	**330**	*eP*	**P**	**17 11 08.0**	**-0.5**
CLL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CLL	**Collm**	**82.01**	**330**	*eP*	**P**	**17 11 08.0**	**-0.5**
	comp=Z,3.0nm,0.8s						
MMAI	**Mount Meron Ar**	**82.31**	**305**	P	**P**	**17 11 10.6**	**+0.2**
MMAI	**Mount Meron Ar**	**82.31**	**305**	P	**P**	**17 11 10.6**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=15,slow=6.0,SNR=2.9						
GERES	**GERESS Array B**	**83.59**	**328**	P	**P**	**17 11 16.4**	**-0.5**
GERES	**GERESS Array B**	**83.59**	**328**	P	**P**	**17 11 16.4**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=30,slow=6.1,SNR=3.6						
EIL	**Elat**	**84.66**	**303**	P	**P**	**17 11 22.3**	**-0.2**
EIL	**Elat**	**84.66**	**303**	P	**P**	**17 11 22.3**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=16,slow=3.7,SNR=4.3						
CDF	**Champ du Feu**	**86.58**	**331**	*eP*	**P**	**17 11 31.8**	**0.0**
	comp=Z,7.0nm,0.9s						
PAGF	**Fort de Pagny**	**87.07**	**332**	*eP*	**P**	**17 11 34.5**	**+0.4**
	comp=Z,1.9nm,0.6s						
CABF	**La Chapelle**	**88.52**	**331**	*eP*	**P**	**17 11 40.4**	**-0.8**
LPG	**La Plagne**	**89.15**	**330**	*eP*	**P**	**17 11 44.5**	**+0.1**
	comp=Z,2.0nm,0.5s						
LDF	**La Druitiere**	**89.16**	**335**	*eP*	**P**	**17 11 44.4**	**+0.4**
AVF	**Avril sur Loir**	**89.43**	**332**	*eP*	**P**	**17 11 45.3**	**0.0**
	comp=Z,3.3nm,0.5s						
ORIF	**Oris-en-Rattie**	**89.98**	**330**	*eP*	**P**	**17 11 48.0**	**-0.1**
	comp=Z,5.3nm,0.8s						
LPIG	**La Paz**	**90.35**	**60**	LR	LR	17 51 28.7	
	comp=Z,4.4nm,18.1s,baz=326,slow=35						
VIVF	**Saint-Julien-l**	**90.52**	**330**	*eP*	**P**	**17 11 50.5**	**0.0**
	comp=Z,7.6nm,0.9s						
MFF	**Saint Martin d**	**90.88**	**334**	*eP*	**P**	**17 11 50.4**	**-1.6**
TXAR	**Lajitas Array**	**91.40**	**52**	P	**P**	**17 11 56.0**	**+1.0**
TXAR	**Lajitas Array**	**91.40**	**52**	P	**P**	**17 11 56.0**	**+1.0**
	comp=Z,0.4nm,0.9s,baz=264,slow=0.9,SNR=3.6						
CAF	**Calviac**	**91.49**	**332**	*eP*	**P**	**17 11 55.3**	**+0.3**
LASF	**Ste Croix**	**91.50**	**330**	*eP*	**P**	**17 11 54.9**	**-0.1**
	comp=Z,28nm,1.3s						
LPAZ	**La Paz**	**147.85**	**61**	PKPbc	**PKPbc**	**17 18 35.9**	**+1.2**
LPAZ	**La Paz**	**147.85**	**61**	PKPbc	**PKPbc**	**17 18 35.9**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=11,slow=4.6,SNR=5.3						

IDC ***13*** *17:00:26.1±1.1, 13°.30N×50°.57E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.8/26, mbtmp3.9/9, ML4.1/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/37, Error ellipse: s-maj=31.4km s-min=23.0km az=4.0*
ISCJB ***13*** *17:00:27.5±0.7, 13°.4N±0°.1×50°.47E±0°.05, h21km, mb3.9/8, MS2.9/1, Error ellipse: s-maj=15.8km s-min=7.4km az=7.5*
DHMR ***13*** *17:00:28.0±2.0, 13°.46N×50°.21E, h1km±327km, ML2.9*
ISC 13 17:00:29.6±0.9, 13°.5N±0°.1×50°.48E±0°.08, h21km, n15, σ1§13/16, mb4.0/8, 3C, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**1.69**	**304**	*eP*		**Pn**		**17 00 56.7**	**-1.2**
MUKL				*i*	S	**Sn**		**17 01 17.8**	**-1.1**
MUKL				AML	AML			17 01 38.9	
	comp=N,157nm,0.6s								
BDHA	**Al Bayda'**	**4.79**	**276**	*i*	P	**Pn**		**17 01 40.2**	**-0.6**
BDHA				*e*				17 01 40.4	
	baz=112,slow=16								
BDHA				*i*	S	Pb		17 01 45.5	-7.5
BDHA				AML	AML			17 01 46.6	
	comp=E,138nm,0.3s								
BDHA	**Al Bayda'**	**4.79**	**276**	↑*eP*		**Pn**		**17 01 40.1**	**-0.7**
BDHA				*e*				17 01 40.4	
	baz=110,slow=16								
BDHA				AML	AML			17 01 46.6	
	comp=E,138nm,0.3s								
BDHA				*i*	S	**Sn**		**17 02 37.0**	**+1.0**
LBOS		**5.10**	**275**	↑*iP*		**Pn**		**17 01 44.2**	**-0.9**
LBOS				*i*	S	Pb		17 01 48.8	-9.5
LBOS		**5.10**	**275**	↑*eP*		**Pn**		**17 01 44.1**	**-0.9**
ATD	**Arta Tunnel**	**7.71**	**256**	Pn		**Pn**		**17 02 20.6**	**-0.1**
	comp=E,3.0nm,0.3s,baz=76,slow=4.2,SNR=5.5								
GNI	**Garni**	**27.00**	**350**	LR		LR		17 18 20.1	
	comp=E,36nm,20.9s,baz=119,slow=39								
MKAR	**Makanchi Array**	**42.55**	**32**	P		**P**		**17 08 25.4**	**+1.6**
	comp=E,0.5nm,0.5s,baz=221,slow=8.4,SNR=5.8								
CMAR	**Chiang Mai Arr**	**46.74**	**77**	P		**P**		**17 08 56.5**	**-1.1**
	comp=E,0.3nm,0.3s,baz=272,slow=8.3,SNR=4.0								
TORD	**Torodi Ar. Bea**	**47.41**	**276**	P		**P**		**17 09 03.0**	**+0.1**
	comp=E,0.5nm,0.8s,baz=90,slow=7.1,SNR=4.0								
ZALV	**Zalesovo Beam**	**48.54**	**26**	P		**P**		**17 09 10.7**	**-0.3**
	comp=E,0.9nm,0.4s,baz=247,slow=5.8,SNR=4.0								
FINES	**FINESS Array B**	**51.00**	**345**	P		**P**		**17 09 31.8**	**+2.1**
	comp=E,1.2nm,0.6s,baz=145,slow=9.9,SNR=5.8								
NOA	**NORSAR Array B**	**55.29**	**338**	P		**P**		**17 10 02.4**	**+1.0**
	comp=E,1.1nm,0.9s,baz=125,slow=7.4,SNR=3.4								
WRA	**Warramunga Arr**	**88.91**	**111**	P		**P**		**17 13 22.5**	**-0.6**
	comp=E,1.5nm,0.9s,baz=298,slow=3.5,SNR=7.3								
ASAR	**Alice Springs**	**89.46**	**114**	P		**P**		**17 13 25.0**	**-0.6**
	comp=E,0.8nm,0.9s,baz=291,slow=5.3,SNR=6.8								

LJU 13 17:09:28.3, 45°.99N×15°.33E, h0km, ML0.0, 2C Artificial, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LEGS	**Legarje**	**0.04**	**196**	↑*iPg*		Pg		17 09 28.9	-0.1
LEGS				*i*	Sg	Sg		17 09 29.6	0.0
CRES	**Cresnjev**	**0.18**	**152**	↑*iPg*		Pg		17 09 31.8	-0.1
CRES				*i*	Sg	Sg		17 09 34.6	+0.4
CRES									
	comp=Z,2.0nm,0.1s								
PDKS	**Podkum**	**0.24**	**288**	*i*	Pg	Pg		17 09 33.3	+0.2
PDKS				*i*	Sg	Sg		17 09 36.6	+0.2
PDKS									
	comp=Z,3.0nm,0.2s								

IDC ***13*** *17:14:52.2±2.4, 6°.72S×129°.59E, h0km, mb3.2/1, mb1 3.7/4, mb1mx3.4/20, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=90.2km s-min=29.9km az=76.0*
ISCJB ***13*** *17:15:09.5±1.8, 7°.99S±0°.09×129°.6E±0°.2, h33km, mb3.2/1, Error ellipse: s-maj=26.4km s-min=11.9km az=11.2*
AUST ***13*** *17:15:12.9±0.0, 8°.92S×131°.22E, h154km, Error ellipse: s-maj=2.1km s-min=1.0km az=260.0*
ISC 13 17:15:11.7±2.0, 8°.0S±0°.1×129°.7E±0°.2, h35km, n5, σ0§35/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**3.84**	**53**	P		**Pn**		**17 16 08.3**	**0.0**
	baz=3.6,SNR=6.0								
FITZ	**Fitzroy Crossi**	**10.81**	**201**	Pn		**Pn**		**17 17 44.0**	**-0.1**
	0.3nm,0.3s,baz=16,slow=15,SNR=8.4								
WRA	**Warramunga Arr**	**12.75**	**160**	Pn		**Pn**		**17 18 10.9**	**+0.3**
	0.3nm,0.3s,baz=344,slow=12,SNR=11								
WRA						Sn		**17 20 30.9**	**-0.4**
	0.8nm,0.3s,baz=338,slow=22,SNR=11								
ASAR	**Alice Springs**	**16.14**	**166**	P		**Pn**		**17 18 56.2**	**+0.1**
	0.2nm,0.3s,baz=346,slow=9.4,SNR=16								
ASAR					S	**Sn**		**17 21 54.4**	**+0.3**
	0.2nm,0.3s,baz=343,slow=25,SNR=6.7								
MKAR	**Makanchi Array**	**68.84**	**327**	P		P		17 25 51.9	-21
	0.2nm,0.6s,baz=132,slow=8.0,SNR=3.1								

WEL 13 17:15:24.9±0.7, 47°.26S×165°.80E, h5km, ML4.2/10, 2C-4D, Error ellipse: s-maj=6.2km s-min=3.5km az=90.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**1.25**	**29**	↓*P**		Pg		17 15 47.5	-1.4
PYZ				*S**		Sb		17 16 05.6	+0.2
APZ	**The Paps**	**1.56**	**75**	↓PN		Pn		17 15 52.6	-0.8
APZ					SN	Sn		17 16 12.0	-1.9
DCZ	**Deep Cove**	**2.01**	**28**	PN		Pn		17 15 58.5	-1.0
DCZ					SN	Sn		17 16 24.0	-1.0
WHZ	**Wether Hill Ro**	**2.02**	**48**	↑PN		Pn		17 15 58.8	-0.8
WHZ					SN	Sn		17 16 23.4	-1.8
SYZ	**Scrubby Hill**	**2.40**	**74**	PN		Pn		17 16 04.6	-0.2
SYZ					SN	Sn		17 16 34.0	-0.6
MLZ	**Mavora Lakes**	**2.52**	**42**	↓PN		Pn		17 16 06.2	-0.4
MLZ					SN	Sn		17 16 36.6	-1.2
TUZ	**Tuapeka**	**2.95**	**65**	PN		Pn		17 16 12.3	-0.1
TUZ					SN	Sn		17 16 45.9	-2.2
MSZ	**Milford Sound**	**2.98**	**31**	PN		Pn		17 16 14.0	+1.2
EAZ	**Earnscleugh**	**3.17**	**52**	↓PN		Pn		17 16 14.9	-0.6
WKZ	**Wanaka**	**3.31**	**44**	PN		Pn		17 16 17.9	+0.5
JCZ	**Jackson Bay**	**3.80**	**34**	PN		Pn		17 16 24.7	+0.5
ODZ	**Otahua Downs**	**4.03**	**58**	↑PN		Pn		17 16 25.4	-1.9
LBZ	**Lake Benmore**	**4.20**	**48**	PN		Pn		17 16 27.4	-2.2
FOZ	**Fox Glacier**	**4.60**	**38**	PN		Pn		17 16 36.6	+1.6
RPZ	**Rata Peaks**	**5.12**	**48**	PN		Pn		17 16 38.9	-3.4
WVZ	**Waitaha Valley**	**5.45**	**42**	PN		Pn		17 16 46.1	-0.6

WEL 13 17:18:46.6±0.4, 45°.65S×166°.70E, h12km, ML3.7/8, 2C-1D, Error ellipse: s-maj=4.6km s-min=1.9km az=90.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.36**	**62**	*P**		Pg		17 18 54.2	+0.4
DCZ				*S**		Sg		17 18 59.3	+0.6
PYZ	**Puysegur Point**	**0.52**	**181**	↑*P**		Pg		17 18 56.8	0.0
PYZ				*S**		Sg		17 19 02.9	-0.8
MLZ	**Mavora Lakes**	**1.08**	**74**	*P**		Pb		17 19 05.9	-1.4
MLZ				*S**		Sb		17 19 19.9	-1.5
MSZ	**Milford Sound**	**1.31**	**42**	PN		Pn		17 19 09.8	-0.9
MSZ					SN	Sb		17 19 26.2	-1.7
APZ	**The Paps**	**1.48**	**143**	↑PN		Pn		17 19 12.5	-0.7
APZ					SN	Sn		17 19 30.4	-2.1
EAZ	**Earnscleugh**	**1.89**	**78**	↓PN		Pb		17 19 20.1	-0.8
SYZ	**Scrubby Hill**	**1.92**	**118**	PN		Pn		17 19 19.3	+0.3
TUZ	**Tuapeka**	**2.08**	**100**	PN		Pn		17 19 22.6	+1.4
TUZ					SN	Sn		17 19 48.0	+1.1
JCZ	**Jackson Bay**	**2.15**	**44**	PN		Pn		17 19 23.7	+1.3
LBZ	**Lake Benmore**	**2.78**	**64**	PN		Pn		17 19 32.0	+1.2
RPZ	**Rata Peaks**	**3.66**	**60**	PN		Pn		17 19 43.4	+0.4

ISCJB ***13*** *17:28:07.0±0.2, 41°.70N±0°.01×110°.66W±0°.02, h0km, Error ellipse: s-maj=2.0km s-min=1.7km az=165.6*
NEIC ***13*** *17:28:07.4±0.5, 41°.72N×110°.69W, h0km, ML2.2, Error ellipse: s-maj=9.7km s-min=3.8km az=104.0, Suspected Mining explosion.*
NEIC 55 km [35 miles] NNE of Evanston.
IDC ***13*** *17:28:09.1±1.6, 41°.94N×110°.60W, h0km, mb2.5/1, mb1 3.2/2, mb1mx3.1/28, mbtmp2.8/2, ML2.6/1, Error ellipse: s-maj=42.0km s-min=11.5km az=141.0*
ISC 13 17:28:07.1±0.7, 41°.72N±0°.02×110°.66W±0°.02, h0km, n72, σ0§89/96, 36C-33D, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
M17A	**Scullys Gap (B**	**0.24**	**181**	↑P		**Pg**		**17 28 12.0**	**+0.2**
	baz=0.2,SNR=269								
M17A				↑S		**Sg**		**17 28 13.8**	**-1.2**
	baz=0.2								
L17A	**Cokeville**	**0.41**	**338**	↑P		**Pg**		**17 28 15.7**	**+0.7**
	baz=0.4,SNR=16								
L18A	**Fontenelle, Gr**	**0.51**	**66**	↑P		**Pg**		**17 28 17.1**	**+0.2**
	baz=0.5,SNR=7.8								
L18A				↑S		**Sg**		**17 28 23.9**	**+0.3**
	baz=0.5								
M18A	**Lyman**	**0.53**	**123**	↑P		**Pg**		**17 28 17.2**	**-0.1**
	baz=0.5,SNR=8.4								
L16A	**Fish Haven**	**0.65**	**298**	↑P		**Pg**		**17 28 19.9**	**+0.4**
	baz=0.6,SNR=18								
L16A				↑S		**Sg**		**17 28 28.6**	**+0.7**
	baz=0.6								
HWUT	**Hardware Ranch**	**0.69**	**261**	*eP*		**Pg**		**17 28 20.2**	**0.0**
N17A	**Moffit Pass**	**0.79**	**189**	↓P		**Pg**		**17 28 21.8**	**-0.3**
	baz=0.8,SNR=13								
N17A				↑Sb		**Sg**		**17 28 34.5**	**+2.2**
	baz=0.8								
K18A	**Toltan Ranch,**	**1.03**	**26**	↓P		**Pg**		**17 28 27.0**	**+0.1**
	baz=1.0,SNR=16								
K18A				↓Sb		**Sb**		**17 28 42.4**	**+0.3**
	baz=1.0								
L19A	**Farson**	**1.05**	**68**	↑P		**Pg**		**17 28 27.1**	**-0.1**
	baz=1.1,SNR=7.6								
K17A	**Gardner Place,**	**1.05**	**350**	↓P		**Pg**		**17 28 27.5**	**+0.3**
	baz=1.0								
N18A	**Larsen Ranch,**	**1.05**	**135**	↓P		**Pg**		**17 28 26.5**	**-0.7**
	baz=1.1,SNR=21								
AHID	**Auburn Hatcher**	**1.10**	**343**	*eP*		**Pg**		**17 28 27.8**	**-0.4**
M19A	**Rock Springs**	**1.15**	**100**	↓S		**Sg**		**17 28 44.3**	**+0.2**
	baz=1.2								
JLU	**Jordanelle**	**1.26**	**208**	*eP*		**Pg**		**17 28 30.0**	**-1.3**
K16A	**Soda Springs**	**1.31**	**329**	↓P		**Pg**		**17 28 31.8**	**-0.4**
	baz=1.3								
K16A				↑S		**Sb**		**17 28 50.3**	**+0.2**
	baz=1.3								
CTU	**Camp Tracy**	**1.31**	**219**	*eP*		**Pg**		**17 28 32.8**	**+0.5**
L15A	**Malad City**	**1.32**	**283**	↑P		**Pg**		**17 28 31.8**	**-0.5**
	baz=1.3,SNR=20								
L15A				↓S		**Sg**		**17 28 50.1**	**+0.6**
	baz=1.3								
BW06	**Boulder Array**	**1.33**	**38**	↑P		**Pg**		**17 28 32.0**	**-0.6**
	baz=1.3,SNR=44								
BW06				↓S		**Sb**		**17 28 50.6**	**-0.2**
	baz=1.3								
BW06				↓S		**Sb**		**17 28 50.6**	**-0.2**
	baz=1.3								
PDAR	**Pinedale Array**	**1.33**	**38**	Pg		**Pg**		**17 28 32.1**	**-0.5**
PDAR				Lg		Lg		17 28 50.9	
PDAR	**Pinedale Array**	**1.33**	**38**	Pg		**Pg**		**17 28 32.1**	**-0.5**
	4.5nm,0.3s,baz=214,slow=16,SNR=111								
PDAR					Lg	Lg		17 28 50.9	
	4.7nm,0.3s,baz=205,slow=29,SNR=21								
DAU	**Daniels Canyon**	**1.38**	**199**	*eP*		**Pn**		**17 28 32.4**	**-1.6**
J18A	**Kendall Valley**	**1.57**	**17**	↑Pb		**Pn**		**17 28 36.5**	**+0.1**
	baz=1.6,SNR=40								
J18A				↓S		**Sn**		**17 28 56.6**	**-1.0**
	baz=1.6								
HVU	**Hansel Valley**	**1.58**	**273**	*eP*		**Pn**		**17 28 36.4**	**-0.1**
J17A	**Brown Place, J**	**1.64**	**359**	↓Pb		**Pn**		**17 28 37.8**	**+0.3**
	baz=1.6,SNR=7.4								
K15A	**Arbon**	**1.69**	**305**	↑Pb		**Pn**		**17 28 38.6**	**+0.6**
	baz=1.7								
K15A				↓Sb		**Sg**		**17 29 02.4**	**+1.0**
	baz=1.7								
RRI2	**Red Ridge**	**1.70**	**344**	*eP*		**Pn**		**17 28 38.7**	**+0.4**
J16A	**Bone**	**1.71**	**336**	↓Pb		**Pn**		**17 28 38.9**	**+0.6**
	baz=1.7								
J16A				↑Sb		**Sg**		**17 29 03.0**	**+1.1**
	baz=1.7								
K19A	**Absolon Red Bu**	**1.74**	**50**	↑Pb		**Pn**		**17 28 38.9**	**+0.1**
	baz=1.8,SNR=30								
K19A				↑Sb		**Sb**		**17 29 02.5**	**-0.1**
	baz=1.8								
SNOW	**Snow King Moun**	**1.74**	**358**	*eP*		**Pb**		**17 28 40.0**	**-0.2**
L20A	**Wamsutter**	**1.76**	**80**	↓Pb		**Pn**		**17 28 39.2**	**+0.1**
	baz=1.8								
TPAW	**Teton Pass**	**1.78**	**353**	*eP*		**Pn**		**17 28 39.7**	**+0.3**
O19A	**Miners Draw (B**	**1.84**	**140**	↓Pb		**Pn**		**17 28 40.1**	**0.0**
	baz=1.8								
O19A				↓Sb		**Sn**		**17 29 04.8**	**+0.8**
	baz=1.8								
MPU	**Maple Canyon**	**1.85**	**204**	*eP*		**Pn**		**17 28 40.1**	**-0.3**
M20A	**Sweetwater, Wa**	**1.87**	**96**	↓Pb		**Pn**		**17 28 40.8**	**+0.1**
	baz=1.9								
M20A				↓Sg		**Sg**		**17 29 08.3**	**+1.0**
	baz=1.9								
LOHW	**Long Hollow**	**1.89**	**1**	*eP*		**Pn**		**17 28 40.7**	**-0.3**
DCID1	**Drake Creek**	**1.91**	**349**	*eP*		**Pb**		**17 28 43.0**	**0.0**
J19A	**Crowheart**	**1.95**	**37**	↑Pb		**Pb**		**17 28 42.7**	**-0.9**
	baz=2.0								
J19A				↑Sb		**Sg**		**17 29 09.5**	**-0.3**
	baz=2.0								
K20A	**Yellowstone Ra**	**1.96**	**61**	↓P		**Pn**		**17 28 41.5**	**-0.3**
	baz=2.0,SNR=17								
K20A				↓Sb		**Sg**		**17 29 09.6**	**-0.6**
	baz=2.0								
N20A	**Spence Gulch,**	**2.01**	**115**	↑Pb		**Pn**		**17 28 43.0**	**+0.4**
	baz=2.0								
N20A				↑Sb		**Sb**		**17 29 11.3**	**+0.8**
	baz=2.0								
MOOW	**Moose Ponds**	**2.03**	**358**	*eP*		**Pn**		**17 28 42.4**	**-0.4**
K14A	**Jones Ranch, D**	**2.04**	**295**	↑Pb		**Pn**		**17 28 44.1**	**+1.2**
	baz=2.0								
K14A				↑Sb		**Sb**		**17 29 12.1**	**+0.9**
	baz=2.0								
I18A	**Diamond G Ranc**	**2.08**	**17**	↑Pb		**Pb**		**17 28 45.0**	**-0.9**
	baz=2.1								
I18A				↑Sb		**Sg**		**17 29 13.4**	**-0.4**
	baz=2.1								
P18A	**Preston Nutter**	**2.11**	**171**	↓Pb		**Pn**		**17 28 45.0**	**+1.0**
	baz=2.1								
J15A	**Blackfoot**	**2.13**	**323**	↑Sg		**Sg**		**17 29 18.1**	**+2.6**
	baz=2.1								
IMW	**Indian Meadow**	**2.19**	**355**	*eP*		**Pn**		**17 28 44.8**	**-0.2**
I17A	**Pilgrim Ck.**	**2.20**	**2**	↑Pb		**Pb**		**17 28 47.6**	**-0.3**
	baz=2.2								
DUG	**Dugway**	**2.23**	**228**	*eP*		**Pn**		**17 28 45.5**	**0.0**
P17A	**Butcher Ranch,**	**2.24**	**182**	↓Pb		**Pn**		**17 28 46.7**	**+1.1**
	baz=2.2								
P17A				↓Sb		**Sb**		**17 29 17.5**	**+0.5**
	baz=2.2								
O20A	**White River Ci**	**2.42**	**130**	↓Pb		**Pn**		**17 28 49.6**	**+1.4**
	baz=2.4								
O20A				↑Sb		**Sb**		**17 29 21.6**	**-0.5**
	baz=2.4								
P19A	**Cripple Cowboy**	**2.44**	**148**	↓Pb		**Pn**		**17 28 49.6**	**+1.2**
	baz=2.5								
P19A				↓Sb		**Sb**		**17 29 22.5**	**-0.3**
	baz=2.5								
TMUT	**Trail Mountain**	**2.46**	**190**	*eP*		**Pn**		**17 28 50.0**	**+1.3**
L21A	**Rawlins**	**2.47**	**83**	↓Sb		**Sb**		**17 29 24.1**	**+0.5**
	baz=2.5								
M21A	**Separation Pea**	**2.48**	**91**	↑Pb		**Pn**		**17 28 50.9**	**+1.9**
	baz=2.5								
M21A				↓Sb		**Sb**		**17 29 24.1**	**+0.4**
	baz=2.5								
J20A	**Shoshoni**	**2.51**	**49**	↑Pb		**Pb**		**17 28 51.6**	**-1.6**
	baz=2.5								
J20A				↓Sb		**Sb**		**17 29 25.7**	**+1.1**
	baz=2.5								
N21A	**Black Mountain**	**2.56**	**111**	↓Sb		**Sb**		**17 29 26.3**	**+0.2**
	baz=2.6								
SRU	**San Rafael**	**2.61**	**178**	*eP*		**Pn**		**17 28 52.5**	**+1.8**
SRU	**San Rafael**	**2.61**	**178**	↓Pb		**Pb**		**17 28 53.5**	**-1.3**
	baz=2.6								
SRU				↑Sb		**Sb**		**17 29 28.1**	**+0.6**
	baz=2.6								
I19A	**Meeteetse**	**2.62**	**27**	↑Sb		**Sb**		**17 29 29.1**	**+1.2**
	baz=2.6								
Q16A	**Castle Valley**	**2.82**	**188**	↑Sb		**Sb**		**17 29 34.1**	**+0.3**
	baz=2.8								
O21A	**Pagoda**	**2.85**	**121**	↑Sb		**Sb**		**17 29 35.0**	**+0.6**
	baz=2.9								
I20A	**Worland**	**2.91**	**39**	↑Sb		**Sb**		**17 29 37.7**	**+1.6**
	baz=2.9								
Q19A	**Hogan Spring (**	**2.96**	**158**	↓Sb		**Sb**		**17 29 37.4**	**-0.2**
	baz=3.0								
HLID	**Hailey**	**3.33**	**305**	*eP*		**Pb**		**17 29 04.8**	**-2.2**
MSU	**Marysvale**	**3.41**	**200**	*eP*		**Pn**		**17 29 02.0**	**+0.3**
MVU	**Marysvale**	**3.42**	**201**	*eP*		**Pn**		**17 29 02.3**	**+0.4**
MCMT	**McKenzie Canyo**	**3.49**	**334**	*eP*		**Pb**		**17 29 07.2**	**-2.7**
SMCO	**Snowmass**	**3.79**	**131**	*eP*		**Pb**		**17 29 14.0**	**-1.1**
ISCO	**Idaho Springs**	**4.29**	**115**	*eP*		**Pb**		**17 29 24.7**	**+1.2**
NVAR	**Mina Array Bea**	**6.72**	**243**	Pn		Pn		17 29 52.3	+5.1
NVAR	**Mina Array Bea**	**6.72**	**243**	Pn		Pn		17 29 52.3	+5.1
	0.1nm,0.3s,baz=62,slow=13,SNR=5.9								
YKA	**Yellowknife Ar**	**20.94**	**355**	P		**P**		**17 32 50.9**	**-0.2**
YKA	**Yellowknife Ar**	**20.94**	**355**	P		**P**		**17 32 50.9**	**-0.2**
	0.2nm,0.8s,baz=172,slow=10.0,SNR=3.5								

IDC 13 17:42:47.2±13.0, 14°.98S×165°.40E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.6/20, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=238.4km s-min=36.1km az=53.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.12**	**172**	Pn		Pn		17 44 32.8	0.0
	0.9nm,0.3s,baz=320,slow=13,SNR=11								
DZM						Sn	Sn	17 45 54.6	0.0
	0.3nm,0.3s,baz=17,slow=19,SNR=2.2								
STKA	**Stephens Creek**	**27.47**	**228**	P		P		17 48 35.7	+0.5
	0.0nm,0.8s,baz=49,slow=3.3,SNR=4.4								
WRA	**Warramunga Arr**	**30.01**	**256**	P		P		17 48 57.5	-0.5
	0.1nm,0.3s,baz=83,slow=7.7,SNR=6.8								
ASAR	**Alice Springs**	**30.90**	**249**	P		P		17 49 05.9	+0.1
	0.2nm,0.3s,baz=76,slow=9.2,SNR=19								

KRSC 13 17:44:01.0±0.5, 52°.10N×159°.26E, h29km±28km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.57**	**306**	P		Pb		17 44 12.6	+0.1
RUS

YOJ eS Sn 17 49 29.2 -0.7
JMZ Minamidaito 2 3.87 90 P Pn 17 48 44.3 -2.5
JMZ eS Sn 17 49 26.0 -5.0
JNU Nakatsue 7.98 25 P Pn 17 49 45.3 +2.2
0.4nm,0.3s,baz=162,slow=13,SNR=4.3
JNU LR LR 17 52 36.2
comp=Z,63nm,21.6s,baz=200,slow=36
KSRS Korea Array 11.55 4 P Pn 17 50 34.2 +2.3
0.1nm,0.3s,baz=185,slow=12,SNR=5.6
KSRS LR LR 17 54 44.6
comp=Z,79nm,20.8s,baz=167,slow=36
MJAR Matsushiro Arr 14.33 40 P Pn 17 51 10.7 +1.2
0.1nm,0.3s,baz=220,slow=11,SNR=3.2
MJAR LR LR 17 55 50.6
comp=Z,49nm,21.2s,baz=20,slow=33
GUMO Guam 20.83 123 LR LR 17 59 52.3
comp=Z,26nm,21.4s,baz=196,slow=34
ASAJ Asahikawa 22.18 31 LR LR 18 02 39.2
comp=Z,30nm,19.8s,baz=123,slow=40
CMAR Chiang Mai Arr 26.91 260 P P 17 53 26.5 +0.9
0.3nm,0.3s,baz=49,slow=8.7,SNR=4.2
TAPN Taplejung 34.99 281 eP P 17 54 36.6 -0.5
ODAN Odare 35.34 281 eP P 17 54 38.4 -1.6
15nm,1.0s
KKN Kakani 37.08 282 eP P 17 54 54.8 0.0
DANN Dangsing 38.35 284 eP P 17 55 05.9 +0.3
PYUN Piuthan 39.05 283 eP P 17 55 11.6 +0.2
10nm,0.7s
MKAR Makanchi Array 40.89 312 P P 17 55 24.7 -1.5
1.7nm,0.4s,baz=99,slow=10,SNR=72
ZALV Zalesovo Beam 41.81 324 P P 17 55 32.5 -1.0
1.9nm,0.4s,baz=114,slow=9.2,SNR=13
WRA Warramunga Arr 46.13 170 P P 17 56 09.3 +0.8
0.7nm,0.9s,baz=353,slow=8.5,SNR=5.7
WRA pP pP 17 56 24.4 +0.7
0.9nm,0.7s,baz=353,slow=8.8,SNR=5.2
ASAR Alice Springs 49.73 172 P P 17 56 37.5 +1.1
0.2nm,0.6s,baz=354,slow=8.2,SNR=4.2
ASAR pP pP 17 56 53.0 +1.3
0.5nm,0.9s,baz=356,slow=6.8,SNR=4.9
ILAR Eielson Array 65.28 28 P P 17 58 25.0 -0.2
0.3nm,0.6s,baz=288,slow=8.1,SNR=6.0
JOF Joensuu 69.76 331 eP P 17 58 52.7 -0.8
2.0nm,0.7s
ARCES ARCESS Array B 69.88 338 P P 17 58 53.5 -0.6
3.4nm,0.9s,baz=62,slow=7.3,SNR=8.6
FINES FINESS Array B 72.57 330 P P 17 59 10.1 -0.4
1.3nm,0.4s,baz=64,slow=5.5,SNR=2.9
AKASG Malin Array Be 75.02 319 P P 17 59 24.6 -0.4
1.4nm,0.5s,baz=61,slow=7.0,SNR=3.7
NB2 NORSAR Subarra 79.09 333 P P 17 59 47.3 -0.4
comp=Z,0.5nm,0.5s,baz=56,slow=5.9
NOA NORSAR Array B 79.09 333 P P 17 59 47.3 -0.4
comp=Z,1.3nm,0.8s,baz=53,slow=5.4,SNR=5.6
YKA Yellowknife Ar 79.31 25 P P 17 59 49.4 +0.6
comp=Z,0.7nm,0.6s,baz=298,slow=5.4,SNR=16
YKA pP pP 18 00 07.0 +1.9
comp=Z,0.4nm,0.6s,baz=299,slow=5.6,SNR=4.1
GERES GERESS Array B 84.75 322 P P 18 00 17.5 -0.3
comp=Z,0.2nm,0.5s,baz=54,slow=2.5,SNR=3.5

*DDA **13** 17:48:41.0,39°.03N×42°.13E,h10km,MD3.2*
*ISK **13** 17:48:42.8,39°.10N×41°.90E,h7km,MD2.9*
*CSEM **13** 17:48:43.4±0.3,39°.11N×41°.90E,h2km,MD2.9,Error ellipse: s-maj=8.8km s-min=6.9km az=9.0*
ISC 13 17:48:43.1±1.3,39°.09N±0°.03×41°.92E±0°.04,h6km±11km, n32,σ0s91/38,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRTB	**Varto-Mus**	**0.36**	**281**	*e*PG	**Pg**	**17 48 49.7**	**-0.5**
VRTB	**Varto-Mus**	**0.36**	**281**	*e*Pg	**Pg**	**17 48 49.7**	**-0.5**
TUTA	**Tutak**	**0.76**	**66**	*e*P	Pg	17 48 53.8	-4.0
TUTA				*i* S	**Sg**	**17 49 08.3**	**+0.5**
ERZM	**Erzurum**	**0.92**	**333**	*i* P	**Pg**	**17 49 00.2**	**-0.5**
ERZM				*i* S	**Sn**	**17 49 16.8**	**+0.3**
ERZM	**Erzurum**	**0.92**	**333**	*i* P	**Pg**	**17 49 00.2**	**-0.5**
ERZM				*i* S	**Sn**	**17 49 16.8**	**+0.3**
EZM	**Erzurum**	**0.92**	**332**	*e*PG	**Pg**	**17 49 00.6**	**-0.1**
EZM				*e*SG	**Sb**	**17 49 13.9**	**-0.3**
HOMI	**Horasan**	**0.95**	**360**	*i* P	**Pg**	**17 48 60.0**	**-1.4**
HOMI				*i* S	**Sn**	**17 49 17.7**	**+0.4**
BTMT	**Batman**	**0.96**	**201**	*e*PN	**Pn**	**17 49 04.2**	**+1.1**
BTMT	**Batman**	**0.96**	**201**	*e*Pn	**Pn**	**17 49 04.2**	**+1.1**
BNGB	**Bing ¶‖**	**0.97**	**265**	*e*PG	**Pg**	**17 49 01.8**	**+0.2**
BNGB				*e*SG	**Sb**	**17 49 15.2**	**-0.2**
BEST	**Besiri**	**1.30**	**203**	*i* P	**Pn**	**17 49 07.4**	**-0.5**
BEST				*i* S	**Sb**	**17 49 24.3**	**-0.7**
CLDR	**Caldiran**	**1.56**	**87**	*e*PN	**Pn**	**17 49 11.5**	**-0.1**
CLDR	**Caldiran**	**1.56**	**87**	*e*Pn	**Pn**	**17 49 11.5**	**-0.1**
ERZN	**Erzincan**	**1.77**	**287**	*e*PN	**Pn**	**17 49 14.4**	**0.0**
DDEM	**Demirkent**	**1.81**	**356**	*i* P	**Pb**	**17 49 15.7**	**-0.9**
DDEM				*i* S	**Sg**	**17 49 44.1**	**+3.0**
DDEM	**Demirkent**	**1.81**	**356**	*i* P	**Pb**	**17 49 15.7**	**-0.9**
BAYT	**Ayd¨–ntepe-Bay**	**1.89**	**314**	*e*PN	**Pn**	**17 49 16.3**	**+0.2**
BAYT	**Ayd¨–ntepe-Bay**	**1.89**	**314**	*e*Pn	**Pn**	**17 49 16.3**	**+0.2**
DBAD	**Bademkaya**	**1.93**	**355**	*i* P	**Pb**	**17 49 18.2**	**-0.6**
DBAD	**Bademkaya**	**1.93**	**355**	*i* P	**Pb**	**17 49 18.2**	**-0.6**
DAGI	**Agillar**	**1.99**	**360**	*e*P	**Pn**	**17 49 16.5**	**-0.9**
MARD	**Mardin**	**1.99**	**207**	*e*P	**Pb**	**17 49 19.4**	**-0.3**
MARD				*i* S	**Sb**	**17 49 43.9**	**-0.9**
ARTV	**Artvin**	**2.09**	**0**	*e*P	Pn	17 49 14.4	-4.5
ARTV	**Artvin**	**2.09**	**0**	*e*P	Pn	17 49 14.4	-4.5
KELT	**Kelkit**	**2.31**	**298**	*i* P	**Pb**	**17 49 24.2**	**-1.1**
KELT				*i* S	Sg	17 50 05.3	+8.0
KELT	**Kelkit**	**2.31**	**298**	*i* P	**Pb**	**17 49 24.2**	**-1.1**
BCA	**Borcka**	**2.36**	**355**	*e*PN	**Pn**	**17 49 23.3**	**+0.8**
BCA	**Borcka**	**2.36**	**355**	*e*Pn	**Pn**	**17 49 23.3**	**+0.8**
GNI	**Garni**	**2.43**	**63**	*e*PN	**Pn**	**17 49 24.8**	**+1.3**
GNI	**Garni**	**2.43**	**63**	*e*Pn	**Pn**	**17 49 24.8**	**+1.3**
ILIC	**ilic-Erzincan**	**2.62**	**279**	*e*PN	**Pn**	**17 49 26.7**	**+0.6**
ILIC	**ilic-Erzincan**	**2.62**	**279**	*e*Pn	**Pn**	**17 49 26.7**	**+0.6**

*IDC **13** 18:02:55.4±0.9, 15°.76N×61°.36W, h0km, mb3.7/6, mb1 4.1/7, mb1mx3.8/25, mbtmp3.7/7, ML5.9/1, MS3.3/2, Ms1 3.3/2, ms1mx2.7/47, Error ellipse: s-maj=21.3km s-min=14.1km az=106.0*
*TRN **13** 18:02:56.5, 15°.74N×61°.44W, h15km, MD3.7, M3.5(FDF)*
TRN Felt III Guadeloupe.
*NEIC **13** 18:02:57.6, 15°.72N×61°.38W, h20km, MD3.7(TRN), MD3.6(FDF), After TRN.*
NEIC Felt in the Portsmouth area.
*ISCJB **13** 18:02:58.1±0.3, 15°.76N±0°.03×61°.48W±0°.06, h27km±3km, mb3.8/8, MS3.3/1, Error ellipse: s-maj=11.1km s-min=3.0km az=158.3*
ISC 13 18:02:58.3±0.9, 15°.69N±0°.03×61°.47W±0°.05, h19km±2km, n66,σ0s86/74, mb4.1/8, 6C-6D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBG	**Guadaloupe-3**	**0.23**	**315**	‖ *i*P	**Pb**	**18 03 02.3**	**-1.2**
MGG	**Marie-Galante**	**0.27**	**34**	⇑ *i*P	**Pb**	**18 03 03.9**	**-0.7**
PHG	**Guadaloupe-2**	**0.36**	**333**	⇑ *i*P	**Pg**	**18 03 05.2**	**-0.9**
HMG	**Houelmont**	**0.36**	**323**	*e*P	**Pg**	**18 03 04.9**	**-1.1**
DOG	**Dongo Capester**	**0.37**	**338**	⇑ *e*P	**Pg**	**18 03 05.2**	**-0.9**
MDN	**Morne-Daniel**	**0.38**	**168**	‖ *i*P	**Pn**	**18 03 08.1**	**-0.7**
MDN	**Morne-Daniel**	**0.38**	**168**	‖ *i*P	**Pn**	**18 03 08.1**	**-0.7**
MDN				*i* S	**Sn**	**18 03 14.5**	**-1.0**
SCG	**Saint Claude**	**0.39**	**330**	*e*P	**Pg**	**18 03 05.6**	**-1.0**
DLPL	**La Plaine**	**0.42**	**148**	*e*P	**Pg**	**18 03 06.8**	**-0.1**
DLPL				*e*S	**Sb**	**18 03 14.2**	**+1.0**
BCG	**Bois Riant Cap**	**0.42**	**340**	⇑ *i*P	**Pg**	**18 03 06.0**	**-1.0**
DBCT	**Belle View Cho**	**0.43**	**163**	*e*P	**Pn**	**18 03 09.2**	**-0.3**
DBCT	**Belle View Cho**	**0.43**	**163**	*e*P	**Pn**	**18 03 09.2**	**-0.3**
DPMT	**Pointe Michel**	**0.43**	**168**	*e*P	**Pn**	**18 03 09.3**	**-0.2**
DPMT	**Pointe Michel**	**0.43**	**168**	*e*P	**Pn**	**18 03 09.3**	**-0.2**
DFBT	**Forest Bistro**	**0.46**	**166**	*e*P	**Pn**	**18 03 09.5**	**-0.4**
DFBT	**Forest Bistro**	**0.46**	**166**	*e*P	**Pn**	**18 03 09.5**	**-0.4**
DFBT				*i* S	**Sn**	**18 03 16.9**	**-0.7**
DSTT	**Stowe**	**0.47**	**159**	*e*P	**Pn**	**18 03 09.9**	**-0.2**
DSTT				*e*S	**Sn**	**18 03 16.8**	**-1.0**
DSTT	**Stowe**	**0.47**	**159**	*e*P	**Pn**	**18 03 09.9**	**-0.2**
DSTT				*e*S	**Sn**	**18 03 16.8**	**-1.0**
DSHT	**Scott's Head**	**0.48**	**168**	*e*P	**Pn**	**18 03 10.0**	**-0.2**
DSHT	**Scott's Head**	**0.48**	**168**	*e*P	**Pn**	**18 03 10.0**	**-0.2**
LZG	**Guadaloupe-1**	**0.54**	**327**	⇑ *e*P	**Pb**	**18 03 07.9**	**-1.2**
SFG	**Saint Francois**	**0.62**	**25**	*e*P	**Pb**	**18 03 09.5**	**-1.0**
SEG	**Port Louis**	**0.71**	**358**	⇑ *i*P	**Pb**	**18 03 10.8**	**-1.2**
FDF	**Fort de France**	**1.00**	**162**	*e*P	**Pb**	**18 03 15.9**	**-1.1**
FDF	**Fort de France**	**1.00**	**162**	‖ *e*P	**Pb**	**18 03 16.0**	**-1.1**
FDF	**Fort de France**	**1.00**	**162**	‖ *e*P	**Pb**	**18 03 16.1**	**-0.9**
FDF				⇓ *e*S	**Sg**	**18 03 31.5**	**+0.5**
BIM	**Bigot**	**1.23**	**161**	*e*P	**Pn**	**18 03 19.9**	**-0.6**
BIM	**Bigot**	**1.23**	**161**	*e*P	**Pn**	**18 03 20.0**	**-0.6**
MVM	**Montagne Vaucl**	**1.26**	**154**	*e*P	**Pn**	**18 03 20.7**	**-0.2**
BPA	**Boggy Peak**	**1.40**	**345**	*e*P	**Pb**	**18 03 23.9**	**0.0**
BPA				*e*S	**Sb**	**18 03 42.1**	**+0.8**
BPA	**Boggy Peak**	**1.40**	**345**	*e*P	**Pb**	**18 03 23.9**	**0.0**
BPA				*e*S	**Sb**	**18 03 42.1**	**+0.8**
SLW	**Petit Monier**	**1.74**	**163**	*e*P	**Pn**	**18 03 27.2**	**-0.3**
SLW	**Petit Monier**	**1.74**	**163**	*e*P	**Pn**	**18 03 27.6**	**0.0**
SLW				*e*S	**Sn**	**18 03 49.4**	**+0.2**
ANWB	**Willy Bob**	**1.99**	**351**	*e*P	Pn	18 03 27.6	-3.4
MCLT	**Moule a Chique**	**2.03**	**165**	*e*P	**Pn**	**18 03 32.2**	**+0.7**
MCLT				*e*S	**Sb**	**18 03 58.9**	**-0.7**
MCLT	**Moule a Chique**	**2.03**	**165**	*e*P	**Pn**	**18 03 32.2**	**+0.7**
MCLT				*e*S	**Sb**	**18 03 58.9**	**-0.7**
SKI	**Saint Kitts**	**2.04**	**324**	*e*P	**Pn**	**18 03 32.6**	**+1.0**
SKI				*e*S	**Sb**	**18 03 59.0**	**-0.8**
SKI	**Saint Kitts**	**2.04**	**324**	*e*P	**Pn**	**18 03 31.0**	**-0.6**
SKI				*e*S	**Sn**	**18 03 57.2**	**+0.7**
SVB	**Belmont**	**2.41**	**175**	*e*P	**Pn**	**18 03 38.8**	**+2.0**
SVB				*e*S	**Sn**	**18 04 07.3**	**+1.4**
SVB	**Belmont**	**2.41**	**175**	*e*P	**Pn**	**18 03 38.8**	**+2.0**
SVB				*e*S	**Sn**	**18 04 07.3**	**+1.4**
GRGR	**Grenville**	**3.54**	**183**	*e*P	**Pn**	**18 03 52.2**	**-0.1**
TOSP	**Speyside**	**4.46**	**168**	*e*P	**Pn**	**18 04 07.2**	**+2.2**
MTP	**Monte Pirata**	**4.58**	**302**	*e*P	**Pn**	**18 04 07.2**	**+0.6**
CBYP	**Canovanas**	**4.92**	**302**	*e*P	**Pn**	**18 04 10.9**	**-0.3**
SJG	**San Juan**	**5.08**	**299**	Pn	**Pn**	**18 04 14.2**	**+0.7**
SJG	**San Juan**	**5.08**	**299**	Pn	**Pn**	**18 04 14.2**	**+0.7**
	9.6nm,0.3s,baz=21,slow=11,SNR=5.4						
CELP	**Cerrillos**	**5.43**	**297**	*e*P	**Pn**	**18 04 19.4**	**+1.1**
LRS	**Lares**	**5.75**	**297**	P	**Pn**	**18 04 22.1**	**-0.7**
ROSC	**El Rosal**	**16.60**	**231**	LR	LR	18 13 08.1	
	comp=Z,92nm,18.8s,baz=5.5,slow=37						
SIV	**San Ignacio**	**31.48**	**179**	P	**P**	**18 09 19.7**	**+0.6**
SIV	**San Ignacio**	**31.48**	**179**	P	**P**	**18 09 19.7**	**+0.6**
	3.2nm,1.0s,baz=25,slow=9.4,SNR=8.0						
TXAR	**Lajitas Array**	**41.05**	**297**	P	**P**	**18 10 40.6**	**-0.3**
TXAR	**Lajitas Array**	**41.05**	**297**	P	**P**	**18 10 40.6**	**-0.3**
	0.1nm,0.4s,baz=106,slow=6.7,SNR=2.3						
TXAR				LR	LR	18 29 06.4	
	comp=Z,45nm,20.9s,baz=180,slow=38						
PDAR	**Pinedale Array**	**49.03**	**313**	P	**P**	**18 11 45.6**	**+1.3**
PDAR	**Pinedale Array**	**49.03**	**313**	P	**P**	**18 11 45.6**	**+1.3**
	1.6nm,0.8s,baz=107,slow=5.1,SNR=11						
NVAR	**Mina Array Bea**	**54.53**	**306**	P	**P**	**18 12 25.5**	**0.0**
NVAR	**Mina Array Bea**	**54.53**	**306**	P	**P**	**18 12 25.5**	**0.0**
	0.4nm,0.7s,baz=134,slow=3.9,SNR=2.4						
YKA	**Yellowknife Ar**	**59.58**	**334**	P	**P**	**18 13 00.5**	**0.0**
YKA	**Yellowknife Ar**	**59.58**	**334**	P	**P**	**18 13 00.5**	**0.0**
	1.2nm,0.7s,baz=110,slow=7.5,SNR=6.9						
NB2	**NORSAR Subarra**	**68.02**	**30**	P	P	18 14 00.5	+4.2
	comp=Z,1.5nm,0.7s,baz=262,slow=6.5						
NOA	**NORSAR Array B**	**68.02**	**30**	P	P	18 14 00.5	+4.2
NOA	**NORSAR Array B**	**68.02**	**30**	P	P	18 14 00.5	+4.2
	comp=Z,1.2nm,0.7s,baz=262,slow=6.3,SNR=9.2						
ILAR	**Eielson Array**	**73.99**	**334**	P	**P**	**18 14 32.5**	**+0.1**
ILAR	**Eielson Array**	**73.99**	**334**	P	**P**	**18 14 32.5**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=91,slow=3.6,SNR=4.4						
FINES	**FINESS Array B**	**75.20**	**30**	P	P	18 14 43.5	+4.0
FINES	**FINESS Array B**	**75.20**	**30**	P	P	18 14 43.5	+4.0
	comp=Z,1.7nm,0.6s,baz=279,slow=3.4,SNR=12						

SKHL 13 18:17:13.8±1.0, 53°.12N×134°.26E, h8km±1km, mb3.6/6, 1C, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKMR	**Ekimchan**	**0.79**	**267**	⇑ *i*Pg	Pg	18 17 27.6	-1.5
EKMR				AMB	AMB	18 17 28.2	
	23nm,0.4s						
EKMR				AMB	AMB	18 17 28.2	
	28nm,0.4s						
EKMR				AMB	AMB	18 17 28.2	
	36nm,0.4s						
EKMR				pPg	Pb	18 17 29.9	0.0
EKMR				sPg	Sg	18 17 33.0	-6.4
EKMR				*e*Sg	Sb	18 17 38.0	-2.8
EKMR				A	A	18 17 40.5	
	470nm,0.5s						
EKMR				A	A	18 17 40.5	
	480nm,0.5s						
EKMR				A	A	18 17 40.5	
	230nm,0.5s						
GRNR	**Gornyy**	**2.71**	**150**	*e*Pg	Pg	18 18 07.0	+1.3
GRNR				AMB	AMB	18 18 09.2	
	28nm,0.7s						
GRNR				pPg	Pb	18 18 09.5	+7.0
GRNR				sPg	sPg	18 18 10.4	
GRNR				*e*Sg	Sg	18 18 41.5	+0.7
GRNR				A	A	18 18 44.0	
	112nm,0.8s						
BMKR	**Bomnak**	**3.58**	**299**	*e*Pn	Pn	18 18 08.4	-1.2
BMKR				*e*Pg	Pb	18 18 17.5	+0.2
BMKR				AMB	AMB	18 18 19.9	
	10.0nm,0.4s						
BMKR				*e*Sn	Sn	18 18 52.0	0.0
BMKR				*e*Sg	Sg	18 19 05.0	-3.7
BMKR				A	A	18 19 13.3	
	40nm,0.4s						
NKL	**Nikolayevsk**	**3.87**	**87**	*e*Pg	Pb	18 18 23.0	+0.8
NKL				AMB	AMB	18 18 25.0	
	10.0nm,0.9s						
NKL				*e*Sg	Sb	18 19 13.0	+3.9
NKL				A	A	18 19 17.0	
	50nm,0.8s						
NKL				A	A	18 19 17.0	
	30nm,0.8s						
KLR	**Kul'dur**	**4.20**	**203**	*e*rx	rx	18 18 56.3	
KLR				*e*Sg	Sg	18 19 24.0	-4.8
ZEA	**Zeya**	**4.24**	**281**	*e*Pg	Pb	18 18 31.0	+2.5
ZEA				AMB	AMB	18 18 33.4	
	10.0nm,0.5s						
ZEA				*e*Sg	Sg	18 19 26.5	-3.4
ZEA				A	A	18 19 30.7	
	50nm,0.6s						
ZEA				A	A	18 19 30.7	
	20nm,0.6s						
ZEA				A	A	18 19 30.7	
	24nm,0.6s						
KROS	**Kirovskiy**	**4.52**	**290**	*e*Pn	Pn	18 18 21.6	-0.9
KROS				*e*Pg	Pb	18 18 35.1	+1.7
KROS				AMB	AMB	18 18 37.0	
	2.0nm,0.6s						
KROS				AMB	AMB	18 18 37.0	
	3.0nm,0.6s						
KROS				AMB	AMB	18 18 37.0	
	4.0nm,0.6s						
KROS				*e*Sg	Sg	18 19 34.5	-4.4
KROS				A	A	18 19 39.9	
	14nm,0.5s						
KROS				A	A	18 19 39.9	
	11nm,0.5s						
KROS				A	A	18 19 39.9	
	12nm,0.5s						
KHBR	**Khabarovsk**	**4.68**	**173**	*e*Sg	Sg	18 19 42.9	-1.1
TYV	**Tymovskoe**	**5.66**	**110**	*e*Sg	Sg	18 20 13.0	-2.4
TYV				A	A	18 20 20.5	
	7.0nm,0.9s						

IDC 13 18:21:10.9±1.9, 0°.07N×16°.71W, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.8/28, mbtmp4.0/8, ML4.4/1, MS3.6/16, Ms1 3.6/16, ms1mx3.4/44, Error ellipse: s-maj=77.4km s-min=25.3km az=149.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**13.52**	**61**	Pn	Pn	18 24 23.9	-0.3
	1.9nm,0.3s,baz=234,slow=13,SNR=30						
DBIC				Sn	Sn	18 26 45.2	-10
	0.8nm,0.3s,baz=151,slow=6.0,SNR=4.1						
DBIC				LR	LR	18 28 40.2	
	comp=Z,305nm,20.4s,baz=216,slow=33						
BBTS	**Babate**	**14.50**	**1**	LR	LR	18 29 36.3	
	comp=Z,248nm,18.7s,baz=270,slow=35						
RCBR	**Riachuelo**	**20.04**	**253**	P	Pn	18 25 48.4	+0.9
	1.6nm,0.4s,baz=76,slow=17,SNR=7.4						
RCBR				LR	LR	18 30 58.4	
	comp=Z,178nm,21.4s,baz=71,slow=29						
TORD	**Torodi Ar. Bea**	**22.40**	**54**	P	P	18 26 11.2	0.0
	11nm,0.8s,baz=241,slow=9.6,SNR=38						
TORD				LR	LR	18 34 00.7	
	comp=Z,188nm,20.5s,baz=195,slow=34						
MDT	**Midelt**	**34.52**	**18**	LR	LR	18 41 53.9	
	comp=Z,136nm,18.2s,baz=183,slow=36						
BDFB	**Brasilia**	**34.63**	**242**	LR	LR	18 39 44.0	
	comp=Z,129nm,20.5s,baz=174,slow=32						
KEST	**Kesra**	**42.98**	**32**	LR	LR	18 48 12.4	
	comp=Z,61nm,19.4s,baz=226,slow=38						
SIV	**San Ignacio**	**46.59**	**248**	P	P	18 29 41.8	+0.7
	1.1nm,0.9s,baz=90,slow=13,SNR=3.6						
CPUP	**Villa Florida**	**47.10**	**233**	LR	LR	18 48 43.9	
	comp=Z,129nm,19.3s,baz=222,slow=35						
SJG	**San Juan**	**51.78**	**293**	LR	LR	18 47 40.5	
	comp=Z,29nm,18.9s,baz=99,slow=31						
LPAZ	**La Paz**	**53.24**	**250**	LR	LR	18 51 01.9	
	comp=Z,59nm,21.2s,baz=86,slow=34						
KMBO	**Kilima Mbogo**	**53.97**	**91**	LR	LR	18 53 12.4	
	comp=Z,47nm,19.0s,baz=96,slow=36						
GERES	**GERESS Array B**	**55.21**	**24**	P	P	18 30 46.2	+0.5
	0.5nm,0.6s,baz=214,slow=6.8,SNR=6.7						
GERES				LR	LR	18 54 43.4	
	comp=Z,56nm,21.5s,baz=96,slow=36						
BRTR	**Keskin Array B**	**60.47**	**43**	P	P	18 31 23.0	0.0
	2.2nm,1.0s,baz=248,slow=4.9,SNR=6.7						
BRTR				LR	LR	19 00 32.2	
	comp=Z,33nm,18.8s,baz=16,slow=39						
NOA	**NORSAR Array B**	**64.47**	**15**	P	P	18 31 49.1	0.0
	1.0nm,0.9s,baz=214,slow=6.3,SNR=3.0						
NOA				LR	LR	18 59 17.0	
	comp=Z,34nm,21.1s,baz=270,slow=36						
SCHQ	**Schefferville**	**68.17**	**331**	LR	LR	18 58 40.1	
	comp=Z,54nm,18.1s,baz=81,slow=33						
FINES	**FINESS Array B**	**69.29**	**20**	P	P	18 32 20.0	+0.2
	3.1nm,1.1s,baz=200,slow=3.9,SNR=4.9						
ANMO	**Albuquerque**	**89.76**	**305**	LR	LR	19 10 41.6	
	comp=Z,75nm,19.6s,baz=158,slow=33						
YKA	**Yellowknife Ar**	**93.60**	**333**	P	P	18 34 27.1	-1.8
	0.2nm,0.8s,baz=84,slow=5.7,SNR=3.5						
ASAR	**Alice Springs**	**143.06**	**132**	PKP	PKPbc	18 40 45.1	+0.5
	0.5nm,0.8s,baz=219,slow=2.4,SNR=2.8						

WEL 13 18:30:36.1±0.3, 38°.69S×178°.58E, h33km, ML3.6/6, 2C-2D, Error ellipse: s-maj=3.0km s-min=1.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRGZ	**Paritu Road**	**0.59**	**247**	‖ PN	Pb	18 30 47.3	-1.0
PRGZ				SN	Sn	18 30 57.0	+0.2
PUZ	**Puketiti**	**0.67**	**338**	PN	Pn	18 30 48.9	-0.4
PUZ				SN	Sn	18 30 58.7	+0.1
MHGZ	**Mahia Peninsul**	**0.70**	**228**	‖ PN	Pn	18 30 49.2	-0.5
MHGZ				SN	Sn	18 30 59.1	-0.3
KNZ	**Kokohu**	**0.78**	**245**	⇑ PN	Pn	18 30 49.8	-1.0
MWZ	**Matawai**	**0.90**	**293**	⇑ PN	Pn	18 30 51.5	-1.0
MWZ				SN	Sn	18 31 02.9	-1.4
MXZ	**Matakaoa Point**	**1.15**	**349**	PN	Pb	18 30 57.0	-0.4
RAHZ	**Arahi**	**1.19**	**259**	PN	Pn	18 30 55.7	-0.8
URZ	**Urewera**	**1.23**	**290**	PN	Pn	18 30 56.8	-0.2
URZ				SN	Sn	18 31 11.8	-0.6
NMHZ	**Naumai**	**1.44**	**253**	PN	Pn	18 30 59.3	-0.7
CKHZ	**Cape Kidnapper**	**1.51**	**230**	PN	Pn	18 31 00.0	-0.9
MCHZ	**McNeill Hill**	**1.65**	**242**	PN	Pn	18 31 02.6	-0.1
BKZ	**Black Stump Fm**	**1.69**	**253**	PN	Pn	18 31 02.7	-0.7
KAHZ	**Kahuranaki**	**1.72**	**230**	PN	Pn	18 31 03.1	-0.8
PXZ	**Pawanui**	**1.89**	**224**	PN	Pn	18 31 04.6	-1.4
BHHZ	**Black Hill Sta**	**2.11**	**247**	PN	Pn	18 31 08.2	-1.0
PNHZ	**Pukenui**	**2.21**	**236**	PN	Pn	18 31 09.6	-1.0
MOVZ	**Moawhango**	**2.31**	**251**	PN	Pn	18 31 11.6	-0.4
NGZ	**Ngauruhoe**	**2.37**	**257**	PN	Pn	18 31 12.5	-0.4
WNVZ	**Wahianoa**	**2.41**	**254**	PN	Pn	18 31 12.9	-0.5
FWVZ	**Far West T-bar**	**2.42**	**256**	PN	Pn	18 31 13.1	-0.6
TSZ	**Takapari Road**	**2.44**	**235**	PN	Pn	18 31 11.9	-1.9
DVHZ	**Dannevirke**	**2.46**	**228**	PN	Pn	18 31 12.3	-1.6
MTVZ	**Mangateitei**	**2.52**	**253**	PN	Pn	18 31 14.7	-0.1
BFZ	**Birch Farm**	**2.68**	**221**	PN	Pn	18 31 14.9	-2.0
TIWZ	**Tintock**	**2.94**	**224**	PN	Pn	18 31 18.4	-2.1
WAZ	**Wanganui**	**2.98**	**248**	PN	Pn	18 31 21.3	+0.1
VRZ	**Vera Road**	**3.01**	**261**	PN	Pn	18 31 21.2	-0.3
MRZ	**Mangatainoka R**	**3.04**	**229**	PN	Pn	18 31 19.5	-2.4
TMWZ	**Te Maipa**	**3.18**	**220**	PN	Pn	18 31 20.7	-3.1
HOWZ	**Holdsworth Sta**	**3.23**	**226**	PN	Pn	18 31 21.8	-2.7
MTW	**Mount Morrison**	**3.42**	**223**	PN	Pn	18 31 23.9

PTEO				S		Sn	18 47 25.7	+0.3	
	31nm,0.3s								
PTEO	**Sao Teotonio**	**1.64**	**65**	P		Pn	18 47 06.6	+2.1	
PTEO				S		Sn	18 47 25.7	+0.3	
	31nm,0.3s								
PNCL	**Nicolau / Gran**	**2.06**	**53**	*e*Pn		Pn	18 47 12.4	+2.2	
PNCL				*e*Sn		Sn	18 47 35.9	+0.2	
PNCL				A		A	18 47 39.0		
	63nm,0.4s								
PNCL	**Nicolau / Gran**	**2.06**	**53**	*e*Pn		Pn	18 47 12.4	+2.2	
PNCL				*e*Sn		Sn	18 47 35.9	+0.2	
	63nm,0.4s								
MESJ	**Messejana**	**2.12**	**62**	*e*P		Pn	18 47 13.2	+2.0	
MESJ				*e*S		Sn	18 47 36.9	-0.5	
MESJ				AML		AML	18 47 39.8		
	comp=E,44nm,0.1s								
MESJ	**Messejana**	**2.12**	**62**	*e*P		Pn	18 47 13.2	+2.0	
MESJ				*e*S		Sn	18 47 36.9	-0.5	
MESJ	**Messejana**	**2.12**	**62**	P		Pn	18 47 13.2	+2.0	
MESJ				S		Sn	18 47 36.9	-0.5	
MESJ	**Messejana**	**2.12**	**62**	*e*P		Pn	18 47 13.2	+2.0	
MESJ				*e*S		Sn	18 47 36.9	-0.5	
PBDV	**Barranco-do-Ve**	**2.16**	**79**	*e*Pn		Pn	18 47 13.8	+2.0	
PBDV				*e*Sn		Sn	18 47 38.1	-0.4	
PBDV				A		A	18 47 42.5		
	comp=E,21nm,0.3s								
PBDV	**Barranco-do-Ve**	**2.16**	**79**	P		Pn	18 47 13.8	+2.0	
PBDV				S		Sn	18 47 38.1	-0.4	
	comp=E,21nm,0.3s								
PBDV	**Barranco-do-Ve**	**2.16**	**79**	P		Pn	18 47 13.8	+2.0	
PBDV				S		Sn	18 47 38.1	-0.4	
	comp=E,21nm,0.3s								
LIS	**Lisbon**	**2.17**	**32**	*e*S		Sn	18 47 38.6	+0.2	
LIS				AML		AML	18 47 39.7		
	comp=N,62nm,0.1s								
LIS	**Lisbon**	**2.17**	**32**	S		Sn	18 47 38.6	+0.2	
LIS	**Lisbon**	**2.17**	**32**	*e*S		Sn	18 47 38.6	+0.2	
PCVE	**Castro Verde**	**2.18**	**69**	*i* Pn		Pn	18 47 14.0	+2.1	
PCVE				*e*Sn		Sn	18 47 38.4	-0.3	
PCVE				A		A	18 47 39.7		
	comp=N,34nm,0.4s								
PCVE	**Castro Verde**	**2.18**	**69**	⇑P		Pn	18 47 14.0	+2.1	
PCVE				S		Sn	18 47 38.4	-0.3	
	comp=N,34nm,0.4s								
PCVE	**Castro Verde**	**2.18**	**69**	P		Pn	18 47 14.0	+2.1	
PCVE				S		Sn	18 47 38.4	-0.3	
	comp=N,34nm,0.4s								
PMAFR	**Mafra**	**2.32**	**26**	*i* Pn		Pn	18 47 16.1	+2.2	
PMAFR				*e*Sn		Sn	18 47 42.8	+0.5	
PMAFR				A		A	18 47 44.2		
	comp=N,50nm,0.2s								
PVAQ	**Vaqueiros**	**2.36**	**76**	*i* Pn		Pn	18 47 16.5	+2.1	
PVAQ				*e*Sn		Sn	18 47 42.9	-0.4	
PVAQ				A		A	18 47 45.0		
	comp=N,31nm,0.2s								
PVAQ	**Vaqueiros**	**2.36**	**76**	⇑P		Pn	18 47 16.5	+2.1	
PVAQ				S		Sn	18 47 42.9	-0.4	
	comp=N,31nm,0.2s								
PVAQ	**Vaqueiros**	**2.36**	**76**	P		Pn	18 47 16.5	+2.1	
PVAQ				S		Sn	18 47 42.9	-0.4	
	comp=N,31nm,0.2s								
PBEJ	**Beja**	**2.46**	**61**	*e*Pn		Pn	18 47 17.7	+1.9	
PBEJ				*e*Sn		Sn	18 47 45.1	-0.6	
PBEJ				A		A	18 47 48.0		
	comp=N,20nm,0.3s								
PBEJ	**Beja**	**2.46**	**61**	P		Pn	18 47 17.7	+1.9	
PBEJ				S		Sn	18 47 45.1	-0.6	
	comp=N,9.9nm,0.3s								
PBEJ	**Beja**	**2.46**	**61**	P		Pn	18 47 17.7	+1.9	
PBEJ				S		Sn	18 47 45.1	-0.6	
	comp=N,9.9nm,0.3s								
EVOP	**Sao Brissos**	**2.56**	**49**	*e*Pg		Pn	18 47 19.3	+2.1	
EVOP				*e*Sg		Sn	18 47 47.1	-1.1	
	comp=N,24nm,0.2s								
EGRO	**El Granado**	**2.57**	**74**	⇑P		Pn	18 47 19.2	+1.9	
	comp=N,1.1nm,0.1s,SNR=18								
EGRO				S		Sn	18 47 47.8	-0.7	
	comp=N,4.2nm,0.1s,SNR=7.5								
EGRO	**El Granado**	**2.57**	**74**	P		Pn	18 47 19.2	+1.9	
	comp=N,1.1nm,0.1s,SNR=18								
EGRO				S		Sn	18 47 47.8	-0.7	
	comp=N,4.2nm,0.1s,SNR=7.5								
EVO	**Evora**	**2.63**	**50**	*e*Pn		Pn	18 47 14.2	-4.0	
EVO	**Evora**	**2.63**	**50**	*e*Pg		Pn	18 47 19.3	+1.1	
EVO				*e*Sg		Sn	18 47 47.1	-2.9	
	comp=N,49nm,0.2s								
ALMR	**Almeirim**	**2.78**	**34**	*e*P		Pn	18 47 22.3	+2.1	
ALMR				*e*S		Sn	18 47 53.6	0.0	
ALMR				AML		AML	18 47 57.4		
	comp=E,79nm,0.2s								
ALMR	**Almeirim**	**2.78**	**34**	*e*P		Pn	18 47 22.3	+2.1	
ALMR				*e*S		Sn	18 47 53.6	0.0	
ALMR	**Almeirim**	**2.78**	**34**	P		Pn	18 47 22.3	+2.1	
ALMR				S		Sn	18 47 53.6	0.0	
ALMR	**Almeirim**	**2.78**	**34**	*e*P		Pn	18 47 22.3	+2.1	
ALMR				*e*S		Sn	18 47 53.6	0.0	
PMTG	**Montargil**	**2.88**	**40**	*e*Pn		Pn	18 47 23.8	+2.2	
PMTG				*e*Sn		Sn	18 47 55.8	-0.3	
PMTG				A		A	18 47 57.3		
	comp=E,20nm,0.1s								
PMTG	**Montargil**	**2.88**	**40**	*e*Pn		Pn	18 47 23.8	+2.2	
PMTG				*e*Sn		Sn	18 47 55.8	-0.3	
	comp=E,20nm,0.1s								
PESTR	**Estremoz**	**3.10**	**49**	*e*Pn		Pn	18 47 26.9	+2.3	
PESTR				*e*Sn		Sn	18 48 01.3	-0.2	
PESTR				A		A	18 48 03.7		
	comp=E,14nm,0.2s								
PESTR	**Estremoz**	**3.10**	**49**	P		Pn	18 47 26.9	+2.3	
PESTR				S		Sn	18 48 01.3	-0.2	
	comp=E,14nm,0.2s								
PESTR	**Estremoz**	**3.10**	**49**	P		Pn	18 47 26.9	+2.3	
PESTR				S		Sn	18 48 01.3	-0.2	
	comp=E,14nm,0.2s								
PBAR	**Barrancos**	**3.11**	**64**	*e*Pn		Pn	18 47 26.7	+1.9	
PBAR				*e*Sn		Sn	18 48 00.9	-0.9	
PBAR				A		A	18 48 02.5		
	comp=E,17nm,0.3s								
PBAR	**Barrancos**	**3.11**	**64**	P		Pn	18 47 26.7	+1.9	
PBAR				S		Sn	18 48 00.9	-0.9	
	comp=E,17nm,0.3s								
PBAR	**Barrancos**	**3.11**	**64**	P		Pn	18 47 26.7	+1.9	
PBAR				S		Sn	18 48 00.9	-0.9	
	comp=E,17nm,0.3s								
PTOM	**Tomar**	**3.23**	**32**	*e*Pn		Pn	18 47 29.1	+2.7	
PTOM				*e*Sn		Sn	18 48 04.7	-0.1	
PTOM				A		A	18 48 06.2		
	comp=E,31nm,0.2s								
PTOM	**Tomar**	**3.23**	**32**	P		Pn	18 47 29.1	+2.7	
PTOM				S		Sn	18 48 04.7	-0.1	
	comp=E,15nm,0.2s								
PTOM	**Tomar**	**3.23**	**32**	P		Pn	18 47 29.1	+2.7	
PTOM				S		Sn	18 48 04.7	-0.1	
	comp=E,15nm,0.2s								
EMIN	**Mina Concepcio**	**3.25**	**73**	⇑P		Pn	18 47 28.3	+1.6	
	comp=E,1.2nm,0.1s,SNR=18								
EMIN				S		Sn	18 48 03.7	-1.6	
	comp=E,1.3nm,0.1s,SNR=8.6								
EMIN	**Mina Concepcio**	**3.25**	**73**	P		Pn	18 47 28.3	+1.6	
	comp=E,1.2nm,0.1s,SNR=18								
EMIN				S		Sn	18 48 03.7	-1.6	
	comp=E,1.3nm,0.1s,SNR=8.6								
PMRV	**Marv??o**	**3.59**	**44**	*e*Pn		Pn	18 47 33.2	+1.9	
PMRV				*e*Sn		Sn	18 48 12.3	-1.3	
PMRV				A		A	18 48 16.0		
	comp=E,21nm,0.2s								
PMRV	**Marv??o**	**3.59**	**44**	P		Pn	18 47 33.2	+1.9	
PMRV				S		Sn	18 48 12.3	-1.3	
	comp=E,21nm,0.2s								
PMRV	**Marv??o**	**3.59**	**44**	P		Pn	18 47 33.2	+1.9	
PMRV				S		Sn	18 48 12.3	-1.3	
	comp=E,21nm,0.2s								
ESPR	**Espera**	**3.80**	**89**	⇑P		Pn	18 47 35.9	+1.7	
	comp=E,21nm,0.1s,SNR=18								
ESPR				S		Sn	18 48 17.9	-0.9	
	comp=E,1.9nm,0.1s,SNR=7.9								
ESPR	**Espera**	**3.80**	**89**	P		Pn	18 47 35.9	+1.7	
	comp=E,21nm,0.1s,SNR=18								
ESPR				S		Sn	18 48 17.9	-0.9	
	comp=E,1.9nm,0.1s,SNR=7.9								
PCBR	**Castelo Branco**	**3.84**	**39**	*e*Pn		Pn	18 47 36.9	+2.1	
PCBR				*e*Sn		Sn	18 48 19.0	-0.8	
PCBR				A		A	18 48 22.8		
	comp=E,7.0nm,0.1s								
PCBR	**Castelo Branco**	**3.84**	**39**	P		Pn	18 47 36.9	+2.1	
PCBR				S		Sn	18 48 19.0	-0.8	
	comp=E,3.5nm,0.1s								
PCBR	**Castelo Branco**	**3.84**	**39**	P		Pn	18 47 36.9	+2.1	
PCBR				S		Sn	18 48 19.0	-0.8	
	comp=E,3.5nm,0.1s								
MTE	**Manteigas**	**4.25**	**33**	*e*Pn		Pn	18 47 42.6	+2.1	
MTE				*e*Sn		Sn	18 48 28.9	-1.1	
MTE				A		A	18 48 31.5		
	comp=E,14nm,0.1s								
MTE	**Manteigas**	**4.25**	**33**	P		Pn	18 47 42.6	+2.1	
MTE				S		Sn	18 48 28.9	-1.1	
	comp=E,7.1nm,0.1s								
MTE	**Manteigas**	**4.25**	**33**	P		Pn	18 47 42.6	+2.1	
MTE				S		Sn	18 48 28.9	-1.1	
	comp=E,7.1nm,0.1s								
PVIS	**Viseu**	**4.38**	**28**	*e*Pn		Pn	18 47 44.1	+1.9	
PVIS				*e*Sn		Sn	18 48 31.6	-1.5	
PVIS				A		A	18 48 35.2		
	comp=E,20nm,0.1s								
PVIS	**Viseu**	**4.38**	**28**	P		Pn	18 47 44.1	+1.9	
PVIS				S		Sn	18 48 31.6	-1.5	
	comp=E,10nm,0.1s								
PVIS	**Viseu**	**4.38**	**28**	P		Pn	18 47 44.1	+1.9	
PVIS				S		Sn	18 48 31.6	-1.5	
	comp=E,10nm,0.1s								
EMIJ	**Mijas**	**4.69**	**92**	P		Pn	18 47 47.2	+0.7	
	comp=E,1.3nm,0.2s,SNR=7.8								
EMIJ				S		Sn	18 48 40.2	-0.6	
	comp=E,0.8nm,0.2s								
EMIJ	**Mijas**	**4.69**	**92**	P		Pn	18 47 47.2	+0.7	
	comp=E,1.3nm,0.2s,SNR=7.8								
EMIJ				S		Sn	18 48 40.2	-0.6	
	comp=E,0.8nm,0.2s								
EPLA	**Plasencia**	**4.76**	**47**	P		Pn	18 47 49.2	+1.7	
	comp=E,0.7nm,0.1s,SNR=7.9								
EPLA				S		Sn	18 48 41.3	-1.3	
	comp=E,2.3nm,0.1s,SNR=6.6								
EPLA	**Plasencia**	**4.76**	**47**	P		Pn	18 47 49.2	+1.7	
	comp=E,0.7nm,0.1s,SNR=7.9								
EPLA				S		Sn	18 48 41.3	-1.3	
	comp=E,2.3nm,0.1s,SNR=6.6								
PVRL	**Vila Real**	**4.93**	**26**	*e*Sn		Sn	18 48 45.6	-1.1	
PVRL				A		A	18 48 46.2		
	comp=E,16nm,0.1s								
PVRL	**Vila Real**	**4.93**	**26**	S		Sn	18 48 45.6	-1.1	
	comp=E,8.1nm,0.1s								
PVRL	**Vila Real**	**4.93**	**26**	S		Sn	18 48 45.6	-1.1	
	comp=E,8.1nm,0.1s								
EADA	**Adamuz**	**4.96**	**73**	P		Pn	18 47 51.5	+1.3	
	comp=E,2.3nm,0.1s,SNR=64								
EADA				S		Sn	18 48 45.8	-1.5	
	comp=E,2.5nm,0.1s,SNR=11								
EADA	**Adamuz**	**4.96**	**73**	P		Pn	18 47 51.5	+1.3	
	comp=E,2.3nm,0.1s,SNR=64								
EADA				S		Sn	18 48 45.8	-1.5	
	comp=E,2.5nm,0.1s,SNR=11								
POLO	**Lamas de Olo**	**4.99**	**25**	*e*Pn		Pn	18 47 52.8	+2.1	
POLO				*e*Sn		Sn	18 48 46.0	-2.3	
POLO				A		A	18 48 48.7		
	comp=E,3.8nm,0.3s								
POLO	**Lamas de Olo**	**4.99**	**25**	*e*Pn		Pn	18 47 52.8	+2.1	
POLO				*e*Sn		Sn	18 48 46.0	-2.3	
	comp=E,3.8nm,0.3s								
ELUQ	**Luque**	**5.10**	**80**	P		Pn	18 47 53.8	+1.7	
	comp=E,0.7nm,0.2s,SNR=7.9								
ELUQ				S		Sn	18 48 49.1	-1.8	
	comp=E,1.6nm,0.1s,SNR=7.9								
ELUQ	**Luque**	**5.10**	**80**	P		Pn	18 47 53.8	+1.7	
	comp=E,0.7nm,0.2s,SNR=7.9								
ELUQ				S		Sn	18 48 49.1	-1.8	
	comp=E,1.6nm,0.1s,SNR=7.9								
MVO	**Moncorvo**	**5.10**	**32**	*e*Pn		Pn	18 47 53.9	+1.7	
MVO				*e*Sn		Sn	18 48 48.6	-2.4	
MVO				A		A	18 48 52.7		
	comp=E,8.3nm,0.2s								
MVO	**Moncorvo**	**5.10**	**32**	*e*Pn		Pn	18 47 53.9	+1.7	
MVO				*e*Sn		Sn	18 48 48.6	-2.4	
	comp=E,8.3nm,0.2s								
ELOJ	**Sierra Loja**	**5.17**	**85**	P		Pn	18 47 53.4	+0.3	
	comp=E,0.2nm,0.1s,SNR=7.9								
ELOJ				S		Sn	18 48 49.9	-2.7	
	comp=E,0.6nm,0.2s,SNR=7.9								
ELOJ	**Sierra Loja**	**5.17**	**85**	P		Pn	18 47 53.4	+0.3	
	comp=E,0.2nm,0.1s,SNR=7.9								
ELOJ				S		Sn	18 48 49.9	-2.7	
	comp=E,0.6nm,0.2s,SNR=7.9								
PCAB	**Cabril**	**5.22**	**22**	*e*Pn		Pn	18 47 55.8	+2.0	
PCAB				*e*Sn		Sn	18 48 52.0	-1.9	
PCAB				A		A	18 48 53.5		
	comp=E,6.9nm,0.5s								
PCAB	**Cabril**	**5.22**	**22**	P		Pn	18 47 55.8	+2.0	
PCAB				S		Sn	18 48 52.0	-1.9	
	comp=E,3.5nm,0.5s								
PCAB	**Cabril**	**5.22**	**22**	P		Pn	18 47 55.8	+2.0	
PCAB				S		Sn	18 48 52.0	-1.9	
	comp=E,3.5nm,0.5s								
ELOB	**Lobios**	**5.36**	**21**	P		Pn	18 47 57.3	+1.6	
	comp=E,0.4nm,0.1s,SNR=7.9								
ELOB				S		Sn	18 48 54.2	-3.1	
	comp=E,1.6nm,0.1s,SNR=7.9								
ELOB	**Lobios**	**5.36**	**21**	P		Pn	18 47 57.3	+1.6	
	comp=E,0.4nm,0.1s,SNR=7.9								
ELOB				S		Sn	18 48 54.2	-3.1	
	comp=E,1.6nm,0.1s,SNR=7.9								
PGAV	**Gavieira, Arco**	**5.39**	**19**	*e*Pn		Pn	18 47 58.1	+1.9	
PGAV				*e*Sn		Sn	18 48 55.9	-2.2	
PGAV				A		A	18 49 00.5		
	comp=E,7.0nm,0.5s								
PGAV	**Gavieira, Arco**	**5.39**	**19**	*e*Pn		Pn	18 47 58.1	+1.9	
PGAV				*e*Sn		Sn	18 48 55.9	-2.2	
	comp=E,7.0nm,0.5s								
ERON	**Agron**	**5.44**	**86**	P		Pn	18 47 58.4	+1.5	
	comp=E,0.2nm,0.1s,SNR=7.9								
ERON				S		Sn	18 48 56.4	-3.1	
	comp=E,0.1nm,0.1s,SNR=7.9								
ERON	**Agron**	**5.44**	**86**	P		Pn	18 47 58.4	+1.5	
	comp=E,0.2nm,0.1s,SNR=7.9								
ERON				S		Sn	18 48 56.4	-3.1	
	comp=E,0.1nm,0.1s,SNR=7.9								
EZAM	**Zamans**	**5.47**	**15**	P		Pn	18 47 58.1	+0.9	
	comp=E,2.9nm,0.1s,SNR=7.9								
EZAM				S		Sn	18 48 56.2	-3.6	
	comp=E,2.2nm,0.1s,SNR=7.9								
EZAM	**Zamans**	**5.47**	**15**	P		Pn	18 47 58.1	+0.9	
	comp=E,2.9nm,0.1s,SNR=7.9								
EZAM				S		Sn	18 48 56.2	-3.6	
	comp=E,2.2nm,0.1s,SNR=7.9								
ECOG	**Cogollos-Vega**	**5.64**	**84**	P		Pn	18 48 01.5	+1.9	
	comp=E,1.8nm,0.1s,SNR=4.0								
ECOG	**Cogollos-Vega**	**5.64**	**84**	P		Pn	18 48 01.5	+1.9	
	comp=E,1.8nm,0.1s,SNR=4.0								
EGUA	**Guajares**	**5.64**	**88**	P		Pn	18 48 01.5	+2.0	
	comp=E,4.0nm,0.2s,SNR=7.9								
EGUA				S		Sn	18 49 02.9	-1.3	
	comp=E,0.8nm,0.1s,SNR=7.9								
EGUA	**Guajares**	**5.64**	**88**	P		Pn	18 48 01.5	+2.0	
	comp=E,4.0nm,0.2s,SNR=7.9								
EGUA				S		Sn	18 49 02.9	-1.3	
	comp=E,0.8nm,0.1s,SNR=7.9								
EQUE	**Quentar**	**5.74**	**85**	P		Pn	18 48 03.1	+2.2	
	comp=E,0.5nm,0.1s,SNR=7.9								
EQUE				S		Sn	18 49 05.3	-1.3	
	comp=E,0.7nm,0.1s,SNR=7.9								
EQUE	**Quentar**	**5.74**	**85**	P		Pn	18 48 03.1	+2.2	
	comp=E,0.5nm,0.1s,SNR=7.9								
EQUE				S		Sn	18 49 05.3	-1.3	
	comp=E,0.7nm,0.1s,SNR=7.9								
PBRG	**Braganca**	**5.76**	**30**	*e*Sn		Sn	18 49 04.5	-2.6	
PBRG				A		A	18 49 07.6		
	comp=E,5.9nm,0.1s								
PBRG	**Braganca**	**5.76**	**30**	S		Sn	18 49 04.5	-2.6	
	comp=E,3.0nm,0.1s								
PBRG	**Braganca**	**5.76**	**30**	S		Sn	18 49 04.5	-2.6	
	comp=E,3.0nm,0.1s								
ECAL	**Calabor**	**5.87**	**29**	P		Pn	18 48 04.0	+1.2	
	comp=E,0.3nm,0.1s,SNR=7.9								
ECAL				S		Sn	18 49 06.5	-3.5	
	comp=E,0.4nm,0.1s,SNR=5.4								
ECAL	**Calabor**	**5.87**	**29**	P		Pn	18 48 04.0	+1.2	
	comp=E,0.3nm,0.1s,SNR=7.9								
ECAL				S		Sn	18 49 06.5	-3.5	
	comp=E,0.4nm,0.1s,SNR=5.4								
ESDC	**Sonseca Array**	**5.92**	**60**	P		Pn	18 48 04.6	+1.2	
	comp=E,1.5nm,0.2s,baz=242,slow=13,SNR=40								
ESDC				S		Sn	18 49 09.0	-2.1	
	comp=E,3.0nm,0.3s,baz=245,slow=23,SNR=21								
ESDC	**Sonseca Array**	**5.92**	**60**	P		Pn	18 48 04.6	+1.2	
	comp=E,1.5nm,0.2s,slow=13,SNR=40								
ESDC				S		Sn	18 49 09.0	-2.1	
	comp=E,3.0nm,0.3s,baz=245,slow=23,SNR=21								
EQES	**Quesada**	**6.07**	**79**	P		Pn	18 48 06.5	+1.0	
	comp=E,0.5nm,0.1s,SNR=7.9								
EQES				S		Sn	18 49 11.1	-3.8	
	comp=E,1.4nm,0.2s,SNR=7.9								
EQES	**Quesada**	**6.07**	**79**	P		Pn	18 48 06.5	+1.0	
	comp=E,0.5nm,0.1s,SNR=7.9								
EQES				S		Sn	18 49 11.1	-3.8	
	comp=E,1.4nm,0.2s,SNR=7.9								
EBER	**Berja**	**6.18**	**88**	P		Pn	18 48 09.2	+2.1	
	comp=E,0.3nm,0.1s,SNR=6.1								
EBER				S		Sn	18 49 13.8	-3.9	
	comp=E,0.1nm,0.2s								
EBER	**Berja**	**6.18**	**88**	P		Pn	18 48 09.2	+2.1	
	comp=E,0.3nm,0.1s,SNR=6.1								
EBER				S		Sn	18 49 13.8	-3.9	
	comp=E,0.1nm,0.2s								
EMAZ	**Mazaricos**	**6.19**	**11**	⇑P		Pn	18 48 08.4	+1.3	
	comp=E,3.6nm,0.1s,SNR=18								
EMAZ				S		Sn	18 49 12.9	-4.9	
	comp=E,1.1nm,0.1s,SNR=5.0								
EMAZ	**Mazaricos**	**6.19**	**11**	P		Pn	18 48 08.4	+1.3	
	comp=E,3.6nm,0.1s,SNR=18								
STS	**Santiago**	**6.20**	**14**	P		Pn	18 48 08.7	+1.4	
	comp=E,1.7nm,0.1s,SNR=7.9								
STS				S		Sn	18 49 15.3	-2.7	
	comp=E,1.0nm,0.1s,SNR=7.9								
STS	**Santiago**	**6.20**	**14**	P		Pn	18 48 08.7	+1.4	
	comp=E,1.7nm,0.1s,SNR=7.9								
STS				S		Sn	18 49 15.3	-2.7	
	comp=E,1.0nm,0.1s,SNR=7.9								
GUD	**Guadarrama**	**6.28**	**51**	P		Pn	18 48 09.8	+1.3	
	comp=E,0.5nm,0.2s,SNR=7.9								
GUD				S		Sn	18 49 18.3	-1.9	
	comp=E,0.9nm,0.2s,SNR=42								
GUD	**Guadarrama**	**6.28**	**51**	P		Pn	18 48 09.8	+1.3	
	comp=E,0.5nm,0.2s,SNR=7.9								
GUD				S		Sn	18 49 18.3	-1.9	
	comp=E,0.9nm,0.2s,SNR=42								
EHUE	**Huescar**	**6.45**	**79**	P		Pn	18 48 12.2	+1.5	
	comp=E,0.3nm,0.1s,SNR=7.9								
EHUE				S		Sn	18 49 21.2	-2.9	
	comp=E,0.5nm,0.1s,SNR=7.9								
EHUE	**Huescar**	**6.45**	**79**	P		Pn	18 48 12.2	+1.5	
	comp=E,0.3nm,0.1s,SNR=7.9								
EHUE				S		Sn	18 49 21.2	-2.9	
	comp=E,0.5nm,0.1s,SNR=7.9								
EVIA	**Vianos**	**6.65**	**72**	P		Pn	18 48 14.7	+1.2	
	comp=E,1.0nm,0.1s,SNR=6.3								
EVIA				S		Sn	18 49 24.2	-5.0	
	comp=E,0.6nm,0.1s								
EVIA	**Vianos**	**6.65**	**72**	P		Pn	18 48 14.7	+1.2	
	comp=E,1.0nm,0.1s,SNR=6.3								
EVIA				S		Sn	18 49 24.2	-5.0	
	comp=E,0.6nm,0.1s								
EPON	**Pontenova**	**6.96**	**21**	⇑P		Pn	18 48 19.6	+1.9	
	comp=E,1.4nm,0.1s,SNR=18								
EPON				S		Sn	18 49 31.7	-5.0	
	comp=E,0.5nm,0.2s								
EPON	**Pontenova**	**6.96**	**21**	P		Pn	18 48 19.6	+1.9	
	comp=E,1.4nm,0.1s,SNR=18								
ETOB	**Tobarra**	**7.38**	**73**	P		Pn	18 48 24.6	+1.1	
	comp=E,1.2nm,0.2s,SNR=11								
ETOB				S		Sn	18 49 43.3	-3.9	
	comp=E,0.1nm,0.1s,SNR=6.9								
ETOB	**Tobarra**	**7.38**	**73**	P		Pn	18 48 24.6	+1.1	
	comp=E,1.2nm,0.2s,SNR=11								
ETOB				S		Sn	18 49 43.3	-3.9	
	comp=E,0.1nm,0.1s,SNR=6.9								
EARI	**Arriondas**	**7.63**	**31**	P		Pn	18 48 28.1	+1.2	
	comp=E,0.0nm,0.1s,SNR=7.9								
EARI				S		Sn	18 49 49.9	-3.2	
	comp=E,0.2nm,0.2s,SNR=7.9								
EARI	**Arriondas**	**7.63**	**31**	P		Pn	18 48 28.1	+1.2	
	SNR=7.9								
EARI				S		Sn	18 49 49.9	-3.2	
	comp=E,0.2nm,0.2s,SNR=7.9								
ETOR	**Torete**	**7.74**	**57**	P		Pn	18 48 30.2	+1.8	
	comp=E,5.9nm,0.2s,SNR=13								
ETOR				S		Sn	18 49 51.5	-4.5	
	comp=E,1.9nm,0.1s,SNR=7.9								
ETOR	**Torete**	**7.74**

baz=1.8
J20A Shoshoni 2.05 264 ⇓Pb **Pb** **19 05 37.6 -0.4**
baz=2.2
J20A ⇓S **Sn** **19 06 01.2 -0.8**
baz=2.2
I20A Worland 2.09 281 ⇑Pb **Pn** **19 05 37.5 +1.3**
baz=2.2,SNR=56
I20A ⇓Sb **Sb** **19 06 05.7 +0.6**
baz=2.2
G21A Lodge Grass 2.14 321 ⇓Pb **Pn** **19 05 37.8 +1.0**
baz=2.2,SNR=18
G21A ⇑Sb **Sb** **19 06 07.5 +0.9**
baz=2.2
M23A Laramie 2.14 189 ⇓Pb **Pb** **19 05 38.9 -0.7**
baz=2.2,SNR=19
M24A Cheyenne 2.15 171 ⇓Pb **Pb** **19 05 39.2 -0.4**
baz=2.1,SNR=36
M24A ⇓Sb **Sg** **19 06 08.7 -0.1**
baz=2.1
H20A Greybull 2.15 296 ⇓Pb **Pn** **19 05 38.5 +1.4**
baz=2.2
H20A ⇓Sb **Sb** **19 06 07.4 +0.4**
baz=2.2
L21A Rawlins 2.23 224 ⇓Pb **Pb** **19 05 39.9 -1.2**
baz=2.3,SNR=14
L21A ⇓Sb **Sb** **19 06 10.4 +1.1**
baz=2.3
L26A Underwood Farm 2.25 133 ⇓Pb **Pb** **19 05 40.4 -0.9**
baz=2.2,SNR=12
PHWY Pilot Hill 2.29 183 *e*P **Pn** **19 05 40.0 +0.9**
F22A Rosebud 2.30 343 ⇑Pb **Pn** **19 05 40.9 +1.9**
baz=2.3,SNR=18
F22A ⇑Sb **Sb** **19 06 12.2 +1.1**
baz=2.3
F24A Ekalaka 2.34 15 ⇓Pb **Pb** **19 05 41.9 -1.0**
baz=2.3
M25A Palm-Egli Farm 2.34 157 ⇑Pb **Pb** **19 05 41.9 -0.9**
baz=2.3,SNR=8.4
M25A ⇓Sb **Sg** **19 06 13.5 -1.3**
baz=2.3
M22A Cedar Creek Ra 2.39 204 ⇑Pb **Pb** **19 05 42.6 -1.1**
baz=2.4,SNR=59
K27A Flueckinger Fa 2.40 111 ⇓Pb **Pb** **19 05 43.3 -0.7**
baz=2.3,SNR=33
K27A ⇓Sb **Sg** **19 06 15.6 -1.3**
baz=2.3
M21A Separation Pea 2.50 218 ⇓Pb **Pb** **19 05 44.4 -1.3**
baz=2.6
M21A ⇓Sb **Sb** **19 06 18.5 +1.3**
baz=2.6
I19A Meeteetse 2.72 281 ⇑P **Pn** **19 05 45.9 +1.0**
baz=2.8
N23A Red Feather La 2.73 190 ⇑P **Pn** **19 05 46.5 +1.3**
baz=2.8
J19A Crowheart 2.76 265 ⇑P **Pn** **19 05 46.3 +0.8**
baz=2.9
N24A Carr 2.77 174 ⇑P **Pn** **19 05 46.3 +0.7**
baz=2.8,SNR=12
H19A Powell 2.87 293 ⇓P **Pn** **19 05 47.4 +0.4**
baz=3.0,SNR=21
E22A Miles City 2.89 351 ⇑P **Pn** **19 05 47.2 +0.1**
baz=2.9
E24A Baker 3.05 13 ⇓P **Pn** **19 05 50.7 +1.4**
baz=3.0,SNR=20
N26A Koester Ranch, 3.15 150 ⇑P **Pn** **19 05 53.1 +2.2**
baz=3.1
PDAR Pinedale Array 3.23 257 Pn **Pn** **19 05 52.6 +0.6**
PDAR Lg Lg 19 06 37.6
PDAR Pinedale Array 3.23 257 Pn **Pn** **19 05 52.6 +0.6**
2.9nm,0.3s,baz=75,slow=16,SNR=30
PDAR Lg Lg 19 06 37.6
2.2nm,0.3s,baz=78,slow=15,SNR=4.5
BW06 Boulder Array 3.23 257 *e*P **Pn** **19 05 52.7 +0.8**
BW06 Boulder Array 3.23 257 ⇓P **Pn** **19 05 52.8 +0.8**
baz=3.3,SNR=21
RLMT Red Lodge 3.24 300 *e*P **Pn** **19 05 52.8 +0.7**
RLMT Red Lodge 3.24 300 ⇓P **Pn** **19 05 52.9 +0.7**
baz=3.3,SNR=18
N21A Black Mountain 3.28 211 ⇑P **Pn** **19 05 54.3 +1.7**
baz=3.3
H18A Shoshone NF, C 3.33 291 ⇓P **Pn** **19 05 54.4 +1.0**
baz=3.4
F19A Roth Farm, Mol 3.45 312 ⇑P **Pn** **19 05 55.7 +0.7**
baz=3.5,SNR=19
J18A Kendall Valley 3.47 265 ⇓P **Pn** **19 05 56.6 +1.4**
baz=3.6
G18A Lazy EL Ranch, 3.52 301 ⇓P **Pn** **19 05 56.7 +0.9**
baz=3.6,SNR=25
OGNE Ogallala 3.58 136 *e*P **Pn** **19 05 58.1 +1.5**
ISCO Idaho Springs 3.79 184 *e*P **Pn** **19 06 00.0 +0.3**
LKWY Lake 3.81 287 *e*P Pn 19 06 03.7 +3.7
GCMT Greycliff 3.82 307 *e*P **Pn** **19 06 00.2 +0.1**
LOHW Long Hollow 3.86 272 *e*P Pn 19 06 04.8 +4.1
MOOW Moose Ponds 3.96 274 *e*P **Pn** **19 06 04.0 +2.0**
SNOW Snow King Moun 3.98 230 *e*P **Pb** **19 06 08.3 -2.6**
YFT Old Faithful 4.09 284 *e*P Pn 19 06 07.2 +3.3
IMW Indian Meadow 4.11 276 *e*P Pn 19 06 07.5 +3.4
TPAW Teton Pass 4.12 271 *e*P **Pn** **19 06 03.4 -0.8**
RRI2 Red Ridge 4.40 269 *e*P **Pn** **19 06 10.3 +2.3**
SMCO Snowmass 4.58 197 *e*P **Pn** **19 06 11.6 +0.9**
DGMT Dagmar 4.94 8 *e*P **Pn** **19 06 17.3 +2.0**
DAU Daniels Canyon 5.46 237 P Pn 19 06 27.3 +4.6
4.6nm,0.5s
JLU Jordanelle 5.47 239 *e*P **Pn** **19 06 23.0 +0.2**
6.0nm,0.7s
LRM Limekiln Ridge 5.57 296 *e*P **Pn** **19 06 24.7 +0.5**
29nm,0.7s
MCMT McKenzie Canyo 5.58 285 *e*P Pb 19 06 31.9 -6.2
1.4nm,0.4s
SRU San Rafael 5.96 223 *e*P **Pn** **19 06 30.4 +1.0**
192nm,0.4s
HLID Hailey 6.63 273 P **Pn** **19 06 39.6 +1.0**
MSU Marysvale 7.26 228 *e*P **Pn** **19 06 49.7 +2.3**
2.3nm,0.5s
ULM Lac du Bonnet 9.26 41 Pn **Pn** **19 07 13.0 -1.5**
ULM Lg Lg 19 09 48.3
ULM Lac du Bonnet 9.26 41 Pn **Pn** **19 07 13.0 -1.5**
0.8nm,0.3s,baz=229,slow=11,SNR=4.3
ULM Lg Lg 19 09 48.3
0.7nm,0.3s,baz=125,slow=16,SNR=3.5
YKA Yellowknife Ar 19.71 347 P **P** **19 09 30.2 -0.3**
YKA Yellowknife Ar 19.71 347 P **P** **19 09 30.2 -0.3**
0.1nm,0.3s,baz=155,slow=11,SNR=4.8

*ISCJB **13** 19:09:49.2±0.2, 42°.36N±0'.01×13°.33E±0'.02, h10km±1km, mb3.7/5, Error ellipse: s-maj=2.5km s-min=1.8km az=29.5*
*CSEM **13** 19:09:49.7±0.1, 42°.35N×13°.32E, h2km, ML4.3/12, Error ellipse: s-maj=2.3km s-min=1.8km az=27.0*
*LDG **13** 19:09:49.5±0.1, 42°.37N×13°.38E, h2km, Ml3.5/7, Error ellipse: s-maj=3.9km s-min=2.6km az=50.0*
*IDC **13** 19:09:49.4±1.0, 42°.54N×13°.14E, h0km, mb3.6/6, mb1 3.7/14, mb1mx3.6/33, mbtmp3.5/14, ML3.5/8, MS2.8/1, Ms1 2.8/1, ms1mx2.0/52, Error ellipse: s-maj=16.8km s-min=12.1km az=93.0*
*ROM **13** 19:09:49.4±0.1, 42°.35N×13°.35E, h10km, Ml3.8/35, Error ellipse: s-maj=0.9km s-min=0.8km az=75.0*
*PDG **13** 19:09:50.3±0.7, 42°.37N×13°.34E, h7km, ML3.7/9, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*BEO **13** 19:09:51.4±0.9, 42°.38N×13°.38E, h0km, ML4.0/7*
*PRU **13** 19:09:51.0, 42°.42N×13°.48E, h0km*

ISC 13 19:09:50.6±0.7, 42°.38N±0'.02×13°.33E±0'.02, h10km±4km, n287, σ1§51/358, mb3.9/5, 33C-22D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**		**0.06 113**	⇓*i*Pg		**Pg**	**Pg**	**19 09 51.9**	**-0.9**
AQU				Sg		**Sg**	**Sg**	**19 09 53.2**	**-1.1**
AQU	**L'Aquila**		**0.06 113**	⇓*i*Pg		**Pg**	**Pg**	**19 09 51.9**	**-0.9**
AQU				Sg		**Sg**	**Sg**	**19 09 53.2**	**-1.1**
CAMP	**Campotosto**		**0.17 21**	⇑*i*Pg		**Pg**	**Pg**	**19 09 53.9**	**-0.5**
CAMP				Sg		**Sg**	**Sg**	**19 09 56.9**	**-0.1**
21μm,0.5s									
CAMP	**Campotosto**		**0.17 21**	⇑*i*Pg		**Pg**	**Pg**	**19 09 53.9**	**-0.5**
CAMP				Sg		**Sg**	**Sg**	**19 09 56.9**	**-0.1**
21μm,0.5s									
FIAM	**Fiamignano**		**0.19 235**	⇑*i*Pg		**Pg**	**Pg**	**19 09 54.4**	**-0.3**
FIAM				Sg		**Sg**	**Sg**	**19 09 57.7**	**+0.2**
29μm,0.6s									
FIAM	**Fiamignano**		**0.19 235**	⇑*i*Pg		**Pg**	**Pg**	**19 09 54.4**	**-0.3**
FIAM				Sg		**Sg**	**Sg**	**19 09 57.7**	**+0.2**
29μm,0.6s									
FAGN	**Fagnano**		**0.22 120**	⇑*e*Pg		**Pg**	**Pg**	**19 09 54.2**	**-1.0**
FAGN				Sg		**Sg**	**Sg**	**19 09 57.8**	**-0.5**
53μm,0.4s									
FAGN	**Fagnano**		**0.22 120**	⇑*e*Pg		**Pg**	**Pg**	**19 09 54.2**	**-1.0**
FAGN				Sg		**Sg**	**Sg**	**19 09 57.8**	**-0.5**
53μm,0.4s									
LNSS	**Leonessa**		**0.31 317**	⇑*e*Pg		**Pg**	**Pg**	**19 09 56.6**	**-0.3**
LNSS				Sg		**Sg**	**Sb**	**19 10 02.1**	**-1.5**
8μm,0.4s									
LNSS	**Leonessa**		**0.31 317**	⇑*e*Pg		**Pg**	**Pg**	**19 09 56.6**	**-0.3**
LNSS				Sg		**Sg**	**Sb**	**19 10 02.1**	**-1.5**
8μm,0.4s									
TERO	**Teramo**		**0.32 40**	⇑*i*Pg		**Pg**	**Pg**	**19 09 56.0**	**-1.0**
TERO				Sg		**Sg**	**Sg**	**19 10 01.8**	**+0.5**
24μm,0.7s									
TERO	**Teramo**		**0.32 40**	⇑*i*Pg		**Pg**	**Pg**	**19 09 56.0**	**-1.0**
TERO				Sg		**Sg**	**Sg**	**19 10 01.8**	**+0.5**
24μm,0.7s									
PTQR	**Pietraquaria**		**0.36 171**	⇓*i*Pg		**Pg**	**Pg**	**19 09 56.6**	**-1.2**
PTQR	**Pietraquaria**		**0.36 171**	⇓*i*Pg		**Pg**	**Pg**	**19 09 56.6**	**-1.2**
VCEL	**Villa Celiera**		**0.38 87**	Pg		**Pg**	**Pg**	**19 09 57.0**	**-1.2**
VCEL				Sg		**Sg**	**Sg**	**19 10 03.6**	**+0.4**
32μm,0.7s									
VCEL	**Villa Celiera**		**0.38 87**	Pg		**Pg**	**Pg**	**19 09 57.0**	**-1.2**
VCEL				Sg		**Sg**	**Sg**	**19 10 03.6**	**+0.4**
32μm,0.7s									
MNS	**Montasola**		**0.48 271**	Pg		**Pg**	**Pg**	**19 09 59.2**	**-0.8**
3μm,0.5s									
MNS	**Montasola**		**0.48 271**	Pg		**Pg**	**Pg**	**19 09 59.2**	**-0.8**
3μm,0.5s									
NRCA	**Norcia**		**0.48 341**	Pg		**Pg**	**Pg**	**19 09 59.3**	**-0.8**
NRCA				Sg		**Sg**	**Sb**	**19 10 07.2**	**-1.3**
4μm,0.1s									
NRCA	**Norcia**		**0.48 341**	Pg		**Pg**	**Pg**	**19 09 59.3**	**-0.8**
NRCA				Sg		**Sg**	**Sb**	**19 10 07.2**	**-1.3**
4μm,0.1s									
CERT	**Cerreto**		**0.50 211**	Pg		**Pg**	**Pg**	**19 09 59.2**	**-1.2**
CERT				Sg		**Sg**	**Sg**	**19 10 06.3**	**-0.6**
12μm,0.4s									
CERT	**Cerreto**		**0.50 211**	Pg		**Pg**	**Pg**	**19 09 59.2**	**-1.2**
CERT				Sg		**Sg**	**Sg**	**19 10 06.3**	**-0.6**
12μm,0.4s									
VVLD	**Villa Vallelon**		**0.55 157**	Pg		**Pg**	**Pg**	**19 09 59.6**	**-1.7**
4μm,0.5s									
VVLD	**Villa Vallelon**		**0.55 157**	Pg		**Pg**	**Pg**	**19 09 59.6**	**-1.7**
4μm,0.5s									
MTCE	**Montecelio**		**0.56 231**	Pg		**Pg**	**Pg**	**19 10 00.5**	**-1.0**
MTCE	**Montecelio**		**0.56 231**	Pg		**Pg**	**Pg**	**19 10 00.5**	**-1.0**
INTR	**Introdacqua**		**0.56 130**	Pg		**Pg**	**Pg**	**19 10 00.0**	**-1.6**
INTR				Sg		**Sg**	**Sg**	**19 10 08.3**	**-0.7**
4μm,0.3s									
INTR	**Introdacqua**		**0.56 130**	Pg		**Pg**	**Pg**	**19 10 00.0**	**-1.6**
INTR				Sg		**Sg**	**Sg**	**19 10 08.3**	**-0.7**
4μm,0.3s									
GUAR	**Guarcino**		**0.58 181**	Pg		**Pg**	**Pg**	**19 10 00.4**	**-1.5**
GUAR	**Guarcino**		**0.58 181**	Pg		**Pg**	**Pg**	**19 10 00.4**	**-1.5**
CESX	**Cesi**		**0.60 293**	Pg		**Pg**	**Pg**	**19 10 01.3**	**-1.0**
2μm,0.3s									
CESX	**Cesi**		**0.60 293**	Pg		**Pg**	**Pg**	**19 10 01.3**	**-1.0**
2μm,0.3s									
TRTR	**Tortoreto Alta**		**0.61 45**	Pg		**Pg**	**Pg**	**19 10 02.2**	**-0.3**
25μm,0.8s									
TRTR	**Tortoreto Alta**		**0.61 45**	Pg		**Pg**	**Pg**	**19 10 02.2**	**-0.3**
25μm,0.8s									
OFFI	**Offida**		**0.62 25**	Pg		**Pg**	**Pg**	**19 10 02.4**	**-0.2**
21μm,0.8s									
OFFI	**Offida**		**0.62 25**	Pg		**Pg**	**Pg**	**19 10 02.4**	**-0.2**
21μm,0.8s									
FDMO	**Fiordimonte**		**0.68 345**	Pg		**Pg**	**Pg**	**19 10 02.8**	**-1.0**
FDMO				Sg		**Sg**	**Sb**	**19 10 14.3**	**+0.1**
2μm,0.3s									
FDMO	**Fiordimonte**		**0.68 345**	Pg		**Pg**	**Pg**	**19 10 02.8**	**-1.0**
FDMO				Sg		**Sg**	**Sb**	**19 10 14.3**	**+0.1**
2μm,0.3s									
CESI	**CESI - Serrava**		**0.70 334**	Pg		**Pg**	**Pg**	**19 10 03.2**	**-1.0**
CESI				Sg		**Sg**	**Sb**	**19 10 14.7**	**-0.1**
CESI	**CESI - Serrava**		**0.70 334**	Pg		**Pg**	**Pg**	**19 10 03.2**	**-1.0**
CESI				Sg		**Sg**	**Sb**	**19 10 14.7**	**-0.1**
LPEL	**Lama dei Pelig**		**0.72 117**	Pg		**Pg**	**Pg**	**19 10 02.5**	**-2.0**
LPEL				Sg		**Sg**	**Sg**	**19 10 13.5**	**-0.3**
4μm,0.8s									
LPEL	**Lama dei Pelig**		**0.72 117**	Pg		**Pg**	**Pg**	**19 10 02.5**	**-2.0**
LPEL				Sg		**Sg**	**Sg**	**19 10 13.5**	**-0.3**
4μm,0.8s									
POFI	**Posta Fibreno**		**0.72 156**	Pg		**Pg**	**Pg**	**19 10 03.3**	**-1.2**
POFI	**Posta Fibreno**		**0.72 156**	Pg		**Pg**	**Pg**	**19 10 03.3**	**-1.2**
RMP	**Rome, Mte Porz**		**0.73 220**	Pg		**Pg**	**Pg**	**19 10 03.2**	**-1.6**
5μm,0.6s									
RMP	**Rome, Mte Porz**		**0.73 220**	Pg		**Pg**	**Pg**	**19 10 03.2**	**-1.6**
5μm,0.6s									
SDI	**San Donato**		**0.76 152**	Pg		**Pg**	**Pg**	**19 10 03.1**	**-2.2**
SDI	**San Donato**		**0.76 152**	Pg		**Pg**	**Pg**	**19 10 03.1**	**-2.2**
RDP	**Rocca di Papa**		**0.77 217**	Pg		**Pg**	**Pg**	**19 10 03.9**	**-1.5**
7μm,0.4s									
RDP	**Rocca di Papa**		**0.77 217**	Pg		**Pg**	**Pg**	**19 10 03.9**	**-1.5**
7μm,0.4s									
CAFR	**Castel Frentan**		**0.77 101**	Pg		**Pg**	**Pg**	**19 10 04.0**	**-1.5**
5μm,0.6s									
CAFR	**Castel Frentan**		**0.77 101**	Pg		**Pg**	**Pg**	**19 10 04.0**	**-1.5**
5μm,0.6s									
GUMA	**Gualdo di Mace**		**0.82 33**	Pg		**Pg**	Pg	19 10 03.1	-3.3
7μm,0.3s									
GIUL	**Giuliano Di Ro**		**0.82 184**	Pg		**Pg**	**Pg**	**19 10 05.0**	**-1.4**
3μm,0.8s									
GIUL	**Giuliano Di Ro**		**0.82 184**	Pg		**Pg**	**Pg**	**19 10 05.0**	**-1.4**
3μm,0.8s									
ASSB	**Assisi San Ben**		**0.83 324**	Pg		**Pg**	**Pg**	**19 10 05.6**	**-1.0**
2μm,0.7s									
ASSB	**Assisi San Ben**		**0.83 324**	Pg		**Pg**	**Pg**	**19 10 05.6**	**-1.0**
2μm,0.7s									
RNI2	**Rionero Sannit**		**0.91 137**	Pg		**Pg**	**Pg**	**19 10 06.2**	**-2.0**
RNI2	**Rionero Sannit**		**0.91 137**	Pg		**Pg**	**Pg**	**19 10 06.2**	**-2.0**
SNTG	**Esanatoglia**		**0.92 342**	Pg		**Pg**	**Pg**	**19 10 07.0**	**-1.4**
SNTG	**Esanatoglia**		**0.92 342**	Pg		**Pg**	**Pg**	**19 10 07.0**	**-1.4**
CERA	**Filignano**		**0.93 146**	Pg		**Pg**	**Pg**	**19 10 06.0**	**-2.6**
2μm,0.6s									
CERA	**Filignano**		**0.93 146**	Pg		**Pg**	**Pg**	**19 10 06.0**	**-2.6**
2μm,0.6s									
CING	**Cingoli**		**1.00 354**	Pg		**Pg**	**Pg**	**19 10 08.3**	**-1.6**
2μm,0.8s									
CING	**Cingoli**		**1.00 354**	Pg		**Pg**	**Pg**	**19 10 08.3**	**-1.6**
2μm,0.8s									
MIDA	**Miranda**		**1.01 136**	Pg		**Pg**	**Pg**	**19 10 07.3**	**-2.7**
MIDA	**Miranda**		**1.01 136**	Pg		**Pg**	**Pg**	**19 10 07.3**	**-2.7**
MGAB	**Montegabbione**		**1.04 301**	Pg		**Pg**	**Pg**	**19 10 09.5**	**-1.2**
2μm,0.5s									
MGAB	**Montegabbione**		**1.04 301**	Pg		**Pg**	**Pg**	**19 10 09.5**	**-1.2**
2μm,0.5s									
MURB	**Monte Urbino**		**1.06 327**	Pg		**Pg**	**Pg**	**19 10 09.9**	**-1.2**
MURB	**Monte Urbino**		**1.06 327**	Pg		**Pg**	**Pg**	**19 10 09.9**	**-1.2**
FRES	**Fresagrandinar**		**1.08 112**	Pg		**Pg**	**Pg**	**19 10 09.1**	**-2.2**
2μm,1.0s									
FRES	**Fresagrandinar**		**1.08 112**	Pg		**Pg**	**Pg**	**19 10 09.1**	**-2.2**
2μm,1.0s									
TRIV	**Trivento**		**1.10 123**	Pg		**Pg**	**Pg**	**19 10 10.0**	**-1.7**
1μm,0.7s									
TRIV	**Trivento**		**1.10 123**	Pg		**Pg**	**Pg**	**19 10 10.0**	**-1.7**
1μm,0.7s									
LATE	**Laterza**		**1.15 282**	Pn		**Pb**	**Pb**	**19 10 12.2**	**-0.5**
3μm,1.0s									
LATE	**Laterza**		**1.15 282**	Pn		**Pb**	**Pb**	**19 10 12.2**	**-0.5**
3μm,1.0s									
ARVD	**Arcevia**		**1.16 346**	Pn		**Pg**	**Pg**	**19 10 11.0**	**-1.8**
2μm,0.8s									
ARVD	**Arcevia**		**1.16 346**	Pn		**Pg**	**Pg**	**19 10 11.0**	**-1.8**
2μm,0.8s									
VAGA	**Valle Agricola**		**1.18 145**	Pn		**Pg**	**Pg**	**19 10 11.2**	**-2.0**
VAGA	**Valle Agricola**		**1.18 145**	Pn		**Pg**	**Pg**	**19 10 11.2**	**-2.0**
AOI	**Ancona**		**1.19 10**	Pn		**Pg**	**Pg**	**19 10 11.9**	**-1.6**
2μm,0.9s									
AOI	**Ancona**		**1.19 10**	Pn		**Pg**	**Pg**	**19 10 11.9**	**-1.6**
2μm,0.9s									
PIEI	**Pieia**		**1.30 334**	Pn		**Pg**	**Pg**	**19 10 14.0**	**-1.5**
679nm,0.5s									
PIEI	**Pieia**		**1.30 334**	Pn		**Pg**	**Pg**	**19 10 14.0**	**-1.5**
679nm,0.5s									
FSSB	**Fossombrone**		**1.38 343**	Pn		**Pg**	**Pg**	**19 10 15.3**	**-1.7**
2μm,0.4s									
FSSB	**Fossombrone**		**1.38 343**	Pn		**Pg**	**Pg**	**19 10 15.3**	**-1.7**
2μm,0.4s									
CAFI	**Castiglion Fio**		**1.38 314**	Pn		**Pg**	**Pg**	**19 10 16.1**	**-1.0**
CAFI	**Castiglion Fio**		**1.38 314**	Pn		**Pg**	**Pg**	**19 10 16.1**	**-1.0**
BADI	**Badiali**		**1.38 325**	Pn		**Pg**	**Pg**	**19 10 15.7**	**-1.5**
1μm,0.9s									
BADI	**Badiali**		**1.38 325**	Pn		**Pg**	**Pg**	**19 10 15.7**	**-1.5**
1μm,0.9s									
ARCI	**Arcidosso**		**1.45 290**	Pn		**Pn**	**Pn**	**19 10 17.1**	**+0.1**
ARCI	**Arcidosso**		**1.45 290**	Pn		**Pn**	**Pn**	**19 10 17.1**	**+0.1**

PARC Parchiule 1.50 328 Pn **Pn** **19 10 17.9 +0.2**
865nm,0.9s
PARC Parchiule 1.50 328 Pn **Pn** **19 10 17.9 +0.2**
865nm,0.9s
CRE Caprese Michel 1.60 321 Pn **Pn** **19 10 19.4 +0.3**
CRE Caprese Michel 1.60 321 Pn **Pn** **19 10 19.4 +0.3**
PESA Pesaro 1.60 347 Pn **Pn** **19 10 19.8 +0.8**
971nm,0.6s
PESA Pesaro 1.60 347 Pn **Pn** **19 10 19.8 +0.8**
971nm,0.6s
MAON Monte Argentar 1.63 273 Pn **Pn** **19 10 19.0 -0.4**
MAON Monte Argentar 1.63 273 Pn **Pn** **19 10 19.0 -0.4**
CASP Castiglione de 1.86 284 Pn **Pn** **19 10 22.1 -0.6**
CASP Castiglione de 1.86 284 Pn **Pn** **19 10 22.1 -0.6**
NVLJ Novalja 2.46 27 *e*Pn **Pn** **19 10 30.2 -0.6**
NVLJ Sn **Sn** **19 11 01.3 +0.5**
NVLJ Novalja 2.46 27 *e*Pn **Pn** **19 10 30.2 -0.6**
NVLJ Sn **Sn** **19 11 01.3 +0.5**
MAIM Mastiano 2.58 307 P **Pn** **19 10 33.7 +1.2**
PGF Pioggiola 3.21 275 *e*Pn **Pn** **19 10 41.6 +0.4**
PGF *e*Sn **Sn** **19 11 21.7 +2.2**
41nm,0.7s
PGF Pioggiola 3.21 275 *e*Pn **Pn** **19 10 41.6 +0.4**
PGF *e*Sn **Sn** **19 11 21.7 +2.2**
21nm,0.7s
STON Ston 3.26 80 *e*Pn **Pn** **19 10 41.8 0.0**
STON Sn **Sn** **19 11 20.4 -0.3**
STON Ston 3.26 80 *e*Pn **Pn** **19 10 41.8 0.0**
STON Sn **Sn** **19 11 20.4 -0.3**
GBRS Gornja Briga 3.33 18 Pn **Pn** **19 10 43.0 +0.2**
GBRS *e*Sn **Sn** **19 11 23.9 +1.4**
46nm,0.6s
BOJS Bojanci 3.42 23 *e*Pn **Pn** **19 10 45.0 +1.0**
BOJS Bojanci 3.42 23 *e*Pn **Pn** **19 10 45.0 +1.0**
JAVS Javornik 3.56 8 *e*Pn **Pn** **19 10 45.8 -0.2**
JAVS Javornik 3.56 8 *e*Pn **Pn** **19 10 45.8 -0.2**
BLY Banja Luka 3.67 48 *e*Pn **Pn** **19 10 50.1 +2.6**
BLY Banja Luka 3.67 48 *e*Pn **Pn** **19 10 50.1 +2.6**
VOY Vojsko 3.68 6 *e*Pn **Pn** **19 10 47.2 -0.4**
VOY *e* 19 10 59.6
VOY *e*Sn **Sn** **19 11 33.5 +2.4**
VOY Vojsko 3.68 6 *e*Pn **Pn** **19 10 47.2 -0.4**
VOY *e*Sn **Sn** **19 11 33.5 +2.4**
HCY Herceg Novi 3.83 87 ⇑*i*Pn **Pn** **19 10 50.2 +0.6**
HCY *e*Sn **Sn** **19 11 37.1 +2.5**
HCY Herceg Novi 3.83 87 ⇑*i*Pn **Pn** **19 10 50.2 +0.6**
HCY *e*Sn **Sn** **19 11 37.1 +2.5**
BRY Bratogost 3.88 80 ⇑*i*Pn **Pn** **19 10 51.0 +0.5**
BRY *e*Sn **Sn** **19 11 38.5 +2.3**
BRY Bratogost 3.88 80 ⇑*i*Pn **Pn** **19 10 51.0 +0.5**
BRY *e*Sn **Sn** **19 11 38.5 +2.3**
BUM Brajici-Budva 4.13 89 ⇓*i*Pn **Pn** **19 10 55.0 +1.2**
BUM *e*Sn **Sn** **19 11 44.3 +2.2**
BUM Brajici-Budva 4.13 89 ⇓*i*Pn **Pn** **19 10 55.0 +1.2**
BUM *e*Sn **Sn** **19 11 44.3 +2.2**
UPM Unac-Piva 4.19 77 *e*Pn **Pn** **19 10 56.0 +1.3**
UPM *e*Sn **Sn** **19 11 45.5 +1.7**
UPM Unac-Piva 4.19 77 *e*Pn **Pn** **19 10 56.0 +1.3**
UPM *e*Sn **Sn** **19 11 45.5 +1.7**
NKY Niksic 4.21 82 ⇓*i*Pn **Pn** **19 10 56.6 +1.7**
NKY *e*Sn **Sn** **19 11 46.5 +2.4**
NKY Niksic 4.21 82 ⇓*i*Pn **Pn** **19 10 56.6 +1.7**
NKY *e*Sn **Sn** **19 11 46.5 +2.4**
OBKA Obir 4.22 12 ⇑*i*Pn **Pn** **19 10 55.1 0.0**
SNR=8.0
OBKA Obir 4.22 12 Pn **Pn** **19 10 55.1 0.0**
SNR=8.0
PDG Podgorica 4.39 87 *e*Pn **Pn** **19 10 58.1 +0.8**
PDG *e*Sn **Sn** **19 11 48.8 +0.3**
PDG Podgorica 4.39 87 *e*Pn **Pn** **19 10 58.1 +0.8**
PDG *e*Sn **Sn** **19 11 48.8 +0.3**
TTG Podgorica 4.39 87 ⇑*i*Pn **Pn** **19 10 58.6 +1.2**
TTG *e*Sn **Sn** **19 11 51.6 +3.0**
ABTA Abfaltersbach 4.41 353 ⇓*i*Pn **Pn** **19 10 58.1 +0.4**
SNR=23
ABTA Abfaltersbach 4.41 353 Pn **Pn** **19 10 58.1 +0.4**
SNR=23
ULC Ulcinj 4.42 93 ⇑*i*Pn **Pn** **19 10 58.8 +1.1**
ULC *e*Sn **Sn** **19 11 51.5 +2.3**
ULC Ulcinj 4.42 93 ⇑*i*Pn **Pn** **19 10 58.8 +1.1**
ULC *e*Sn **Sn** **19 11 51.5 +2.3**
PLE Pljevlja 4.56 76 *e*Pn **Pn** **19 11 01.4 +1.6**
PLE *e*Sn **Sn** **19 11 55.1 +2.3**
PLE Pljevlja 4.56 76 *e*Pn **Pn** **19 11 01.4 +1.6**
PLE *e*Sn **Sn** **19 11 55.1 +2.3**
SBF Sospel 4.56 291 *e*Pn **Pn** **19 11 00.0 +0.2**
SBF Sospel 4.56 291 *e*Pn **Pn** **19 11 00.0 +0.2**
KBA Koelnbreinsper 4.70 0 ⇑*i*Pn **Pn** **19 11 02.3 +0.5**
SNR=10
KBA Koelnbreinsper 4.70 0 Pn **Pn** **19 11 02.3 +0.5**
SNR=10
BEY Berane 4.87 82 *e*Pn **Pn** **19 11 06.2 +2.2**
BEY *e*Sn **Sn** **19 12 02.8 +2.3**
IVA Berane 4.87 82 *e*Pn **Pn** **19 11 06.2 +2.1**
IVA *e*Sn **Sn** **19 12 02.8 +2.2**
PVY Plav 4.91 85 ⇓*i*Pn **Pn** **19 11 06.3 +2.0**
PVY *e*Sn **Sn** **19 12 04.0 +2.5**
FETA Feichten 5.00 339 ⇓*i*Pn **Pn** **19 11 07.7 +1.8**
SNR=11
FETA Feichten 5.00 339 Pn **Pn** **19 11 07.7 +1.8**
SNR=11
WTTA Wattenberg 5.03 347 ⇑*i*Pn **Pn** **19 11 08.1 +1.8**
SNR=13
WTTA Wattenberg 5.03 347 Pn **Pn** **19 11 08.1 +1.8**
SNR=13
FRF La Foret Royal 5.04 286 *e*Pn **Pn** **19 11 06.2 -0.1**
FRF La Foret Royal 5.04 286 *e*Pn **Pn** **19 11 06

BARS				*e*Sn	**Sn**	**19 12 32.8**	**-2.3**
BARS	**Barje**	**6.28**	**83**	*e*Pn	**Pn**	**19 11 24.0**	**+0.7**
JAN	**Janina**	**6.30**	**113**	*e*P	**Pn**	**19 11 25.5**	**+1.8**
GEC2	**GERESS Array S**	**6.47**	**2**	*e*Pn	**Pn**	**19 11 25.4**	**-0.7**
GEC2				*e*Sn	**Sn**	**19 12 38.8**	**-1.2**
GERES	**GERESS Array B**	**6.47**	**2**	Pn	**Pn**	**19 11 25.2**	**-0.9**
	0.5nm,0.3s,baz=182,slow=12,SNR=19						
GERES				Sn	**Sn**	**19 12 36.2**	**-3.8**
	2.2nm,0.3s,baz=184,slow=28,SNR=9.7						
BOLS	**Boljevac**	**6.48**	**74**	*e*Pn	**Pn**	**19 11 25.6**	**-0.4**
BOLS	**Boljevac**	**6.48**	**74**	*e*Pn	**Pn**	**19 11 25.6**	**-0.4**
KZN	**Kozani**	**6.68**	**105**	*e*P	**Pn**	**19 11 30.5**	**+1.6**
CABF	**La Chapelle**	**6.69**	**312**	*e*Pn	**Pn**	**19 11 29.5**	**+0.5**
CABF	**La Chapelle**	**6.69**	**312**	*e*Pn	**Pn**	**19 11 29.5**	**+0.5**
VIVF	**Saint-Julien-l**	**6.75**	**294**	*e*Pn	**Pn**	**19 11 31.4**	**+1.6**
VIVF	**Saint-Julien-l**	**6.75**	**294**	*e*Pn	**Pn**	**19 11 31.4**	**+1.6**
KHC	**Kasperske Hory**	**6.76**	**1**	*e*PN	**Pn**	**19 11 29.6**	**-0.3**
KHC				*e*SN	**Sn**	**19 12 43.7**	**-3.2**
KHC	**Kasperske Hory**	**6.76**	**1**	Pn	**Pn**	**19 11 29.6**	**-0.3**
WET	**Wettzell**	**6.78**	**357**	*e*Pn	**Pn**	**19 11 30.3**	**+0.2**
WET				*e*Sn	**Sn**	**19 12 43.3**	**-4.0**
BZS	**Buzias**	**6.80**	**59**	⇓*i*P	**Pn**	**19 11 29.6**	**-0.8**
BZS	**Buzias**	**6.80**	**59**	⇓*i*P	**Pn**	**19 11 29.6**	**-0.8**
ZAPS	**Zavoj**	**6.90**	**79**	*e*Pn	**Pn**	**19 11 32.5**	**+0.6**
ZAPS				*e*Sn	**Sn**	**19 12 48.9**	**-1.6**
BFO	**Black Forest**	**6.92**	**331**	*e*Pn	**Pn**	**19 11 32.7**	**+0.7**
VLS	**Valsamata**	**6.96**	**125**	*e*P	**Pn**	**19 11 33.7**	**+1.1**
VAY	**Valandovo**	**6.98**	**96**	*e*Pn	**Pn**	**19 11 31.9**	**-1.0**
VAY	**Valandovo**	**6.98**	**96**	*e*Pn	**Pn**	**19 11 32.4**	**-0.5**
HINF	**Hinteralfeld**	**7.11**	**322**	*e*Pn	**Pn**	**19 11 34.1**	**-0.6**
HINF				*e*Sn	**Sn**	**19 12 50.5**	**-5.1**
	8.9nm,0.4s						
HINF	**Hinteralfeld**	**7.11**	**322**	*e*Pn	**Pn**	**19 11 34.1**	**-0.6**
LASF	**Ste Croix**	**7.12**	**287**	*e*Pn	**Pn**	**19 11 34.8**	**-0.1**
LASF	**Ste Croix**	**7.12**	**287**	*e*Pn	**Pn**	**19 11 34.8**	**-0.1**
THL	**Klokotos Trika**	**7.15**	**110**	*e*P	**Pn**	**19 11 36.5**	**+1.3**
VYHS	**Vyhne**	**7.24**	**30**	*e*PN	**Pn**	**19 11 38.1**	**+1.6**
VYHS				*e*SN	Sn	19 12 53.6	-5.1
VYHS	**Vyhne**	**7.24**	**30**	*e*Pn	**Pn**	**19 11 38.1**	**+1.6**
LIT	**Litokhoron**	**7.27**	**105**	*e*P	**Pn**	**19 11 37.0**	**+0.1**
VRAC	**Vranov**	**7.30**	**17**	Pn	**Pn**	**19 11 36.6**	**-0.7**
	0.3nm,0.3s,baz=193,slow=16,SNR=3.1						
VRAC				LR	LR	19 14 49.6	
	comp=Z,77nm,20.5s,baz=31,slow=42						
VRAC	**Vranov**	**7.30**	**17**	*e*Pn	**Pn**	**19 11 36.9**	**-0.4**
VTS	**Vitosha**	**7.31**	**85**	⇓*i*P	**Pn**	**19 11 38.4**	**+0.8**
VTS	**Vitosha**	**7.31**	**85**	*e*Pn	**Pn**	**19 11 38.4**	**+0.8**
VTS				*e*Sn	**Sn**	**19 12 57.4**	**-3.2**
VTS	**Vitosha**	**7.31**	**85**	⇓*i*P	**Pn**	**19 11 38.4**	**+0.8**
EVR	**Evrytania**	**7.32**	**115**	*e*P	**Pn**	**19 11 40.3**	**+2.7**
KEST	**Kesra**	**7.32**	**206**	Pn	**Pn**	**19 11 39.9**	**+2.2**
	1.3nm,0.3s,baz=17,slow=19,SNR=37						
CDF	**Champ du Feu**	**7.38**	**327**	*e*Pn	**Pn**	**19 11 37.8**	**-0.7**
CDF				*e*Sn	**Sn**	**19 12 57.4**	**-5.0**
	21nm,0.7s						
CDF	**Champ du Feu**	**7.38**	**327**	*e*Pn	**Pn**	**19 11 37.8**	**-0.7**
HAU	**Haudompre**	**7.48**	**321**	*e*Pn	**Pn**	**19 11 39.3**	**-0.5**
HAU				*e*Sn	Sn	19 12 58.1	-6.6
	10nm,0.3s						
HAU	**Haudompre**	**7.48**	**321**	*e*Pn	**Pn**	**19 11 39.3**	**-0.5**
AGG	**Agios Georgios**	**7.62**	**113**	*e*P	**Pn**	**19 11 43.9**	**+2.2**
EFP	**Efpalio**	**7.64**	**118**	*e*P	**Pn**	**19 11 44.5**	**+2.5**
PRU	**Pruhonice**	**7.66**	**6**	*e*SN	**Sn**	**19 13 05.7**	**-3.3**
PLG	**Polygyros**	**7.87**	**101**	*e*P	**Pn**	**19 11 44.6**	**-0.5**
NKC	**Novy Kostel**	**7.88**	**356**	*e*SN	**Sn**	**19 13 10.2**	**-4.3**
NVR	**Nevrokopi**	**7.93**	**94**	*e*P	**Pn**	**19 11 46.9**	**+0.9**
MORC	**Moravsky Berou**	**7.96**	**20**	*e*Pn	**Pn**	**19 11 48.7**	**+2.3**
GUNZ	**Gunzen**	**8.02**	**355**	*e*Pn	**Pn**	**19 11 49.1**	**+1.9**
DRGR		**8.02**	**53**	⇓*i*P	**Pn**	**19 11 48.1**	**+0.9**
DRGR		**8.02**	**53**	⇓*i*P	**Pn**	**19 11 48.1**	**+0.9**
TANN	**Tannenbergstha**	**8.06**	**356**	*e*Pn	**Pn**	**19 11 49.6**	**+1.8**
WERD	**Werda**	**8.10**	**355**	*e*Pn	**Pn**	**19 11 49.6**	**+1.3**
LOT	**Lotru**	**8.14**	**64**	⇑*i*P	**Pn**	**19 11 48.7**	**-0.2**
LOT	**Lotru**	**8.14**	**64**	⇑*i*P	**Pn**	**19 11 48.7**	**-0.2**
PAGF	**Fort de Pagny**	**8.16**	**322**	*e*Pn	**Pn**	**19 11 49.0**	**-0.2**
PAGF	**Fort de Pagny**	**8.16**	**322**	*e*Pn	**Pn**	**19 11 49.0**	**-0.2**
GUR	**Goura**	**8.20**	**120**	*e*P	**Pn**	**19 11 52.4**	**+2.6**
MTLF	**Montolieu**	**8.22**	**280**	*e*Pn	**Pn**	**19 11 49.5**	**-0.4**
MTLF	**Montolieu**	**8.22**	**280**	*e*Pn	**Pn**	**19 11 49.5**	**-0.4**
SFTF	**Sexfontaines**	**8.25**	**318**	*e*Pn	**Pn**	**19 11 49.9**	**-0.4**
SFTF	**Sexfontaines**	**8.25**	**318**	*e*Pn	**Pn**	**19 11 49.9**	**-0.4**
LKR	**Lokris**	**8.25**	**114**	*e*P	**Pn**	**19 11 52.0**	**+1.6**
LOR	**Lormes**	**8.32**	**309**	*e*Pn	**Pn**	**19 11 50.8**	**-0.5**
LOR				*e*Sn	**Sn**	**19 13 20.2**	**-5.0**
	4.1nm,0.6s						
LOR	**Lormes**	**8.32**	**309**	*e*Pn	**Pn**	**19 11 50.8**	**-0.5**
MOX	**Moxa**	**8.35**	**352**	*e*Pn	**Pn**	**19 11 51.3**	**-0.4**
MOX				*e*Sn	**Sn**	**19 13 21.5**	**-4.6**
MEZF	**Maizieres J'vi**	**8.44**	**319**	*e*Pn	**Pn**	**19 11 52.8**	**-0.2**
MEZF	**Maizieres J'vi**	**8.44**	**319**	*e*Pn	**Pn**	**19 11 52.8**	**-0.2**
BRG	**Berggiesshubel**	**8.51**	**3**	*e*(PN)	**Pn**	**19 11 54.5**	**+0.6**
BRG				*e*(SN)	Sn	19 13 24.8	-5.1
BRG				*e*		19 14 35.7	
CAF	**Calviac**	**8.55**	**291**	*e*P	**Pn**	**19 11 55.8**	**+1.2**
CAF	**Calviac**	**8.55**	**291**	*e*P	**Pn**	**19 11 55.8**	**+1.2**
LTK	**Loutraki**	**8.56**	**117**	*e*P	**Pn**	**19 11 53.7**	**-0.9**
CRVS	**Cervenica-Dubn**	**8.66**	**38**	*e*PN	**Pn**	**19 11 57.4**	**+1.5**
CRVS	**Cervenica-Dubn**	**8.66**	**38**	*e*Pn	**Pn**	**19 11 57.4**	**+1.5**
ARR	**Arges**	**8.70**	**66**	⇑*i*P	**Pn**	**19 11 55.5**	**-1.0**
ARR	**Arges**	**8.70**	**66**	⇑*i*P	**Pn**	**19 11 55.5**	**-1.0**
CLL	**Collm**	**8.94**	**359**	*e*Pn	Pn	19 11 57.0	-2.7
CLL				*e*Sn	Sn	19 13 25.0	-15
CLL				*e*Sb	Sg	19 14 08.0	-29
CLL				*e*Sg	Sg	19 14 40.0	+2.7
	comp=E,200nm,20.4s						
RJF	**Les Rejaudoux**	**9.02**	**293**	*e*P	**Pn**	**19 12 03.1**	**+2.1**
DID	**Didima**	**9.03**	**119**	*e*P	**Pn**	**19 12 00.3**	**-0.8**
NAIG	**Nisos Aigina**	**9.05**	**117**	*e*P	Pn	19 11 52.7	-8.6
MLR	**Muntele Rosu**	**9.62**	**67**	⇓*i*P	**Pn**	**19 12 11.2**	**+2.0**
MLR	**Muntele Rosu**	**9.62**	**67**	Pn	**Pn**	**19 12 10.8**	**+1.6**
	comp=E,0.1nm,0.3s,baz=192,slow=5.7,SNR=10						
MLR	**Muntele Rosu**	**9.62**	**67**	⇓*i*P	**Pn**	**19 12 11.2**	**+2.0**
ALN	**Alexandroupoli**	**9.64**	**95**	*e*P	Pn	19 12 06.7	-2.6
BURAR	**Bucovina Array**	**9.91**	**54**	⇓*i*P	**Pn**	**19 12 11.8**	**-1.4**
BURAR	**Bucovina Array**	**9.91**	**54**	⇓*i*P	**Pn**	**19 12 11.8**	**-1.4**
PLOR	**Plostina**	**10.19**	**66**	⇑*i*P	**Pn**	**19 12 17.4**	**+0.5**
PLOR	**Plostina**	**10.19**	**66**	⇑*i*P	**Pn**	**19 12 17.4**	**+0.5**
VRI	**Vrincioaia**	**10.25**	**66**	⇑*i*P	**Pn**	**19 12 16.3**	**-1.4**
VRI	**Vrincioaia**	**10.25**	**66**	⇑*i*P	**Pn**	**19 12 16.3**	**-1.4**
ESDC	**Sonseca Array**	**13.33**	**264**	Pn	**Pn**	**19 12 58.8**	**-1.2**
	comp=E,0.2nm,0.3s,baz=73,slow=14,SNR=2.7						
BRTR	**Keskin Array B**	**15.55**	**93**	Pn	**Pn**	**19 13 30.8**	**+0.8**
	comp=E,0.1nm,0.3s,baz=297,slow=9.5,SNR=2.6						
NB2	**NORSAR Subarra**	**18.73**	**357**	P	**P**	**19 14 10.0**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=172,slow=12						
NB2	**NORSAR Subarra**	**18.73**	**357**	P	**P**	**19 14 10.0**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=172,slow=12,SNR=4.1						
NOA	**NORSAR Array B**	**18.73**	**357**	P	**P**	**19 14 06.4**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=175,slow=11,SNR=2.4						
MMAI	**Mount Meron Ar**	**19.77**	**111**	P	**Pn**	**19 14 23.4**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=321,slow=11,SNR=2.2						
FINES	**FINESS Array B**	**20.58**	**18**	P	**P**	**19 14 28.9**	**-0.5**
	comp=Z,2.2nm,0.7s,baz=186,slow=11,SNR=9.9						
KBZ	**Khabaz**	**21.60**	**76**	P	**P**	**19 14 43.3**	**+2.7**
	comp=Z,4.7nm,0.9s,baz=307,slow=7.6,SNR=13						
TORD	**Torodi Ar. Bea**	**30.82**	**203**	P	**P**	**19 16 07.3**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=20,slow=8.3,SNR=11						
ZALV	**Zalesovo Beam**	**47.10**	**50**	P	**P**	**19 18 22.8**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=264,slow=7.1,SNR=4.1						
MKAR	**Makanchi Array**	**47.88**	**60**	P	**P**	**19 18 29.1**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=276,slow=7.4,SNR=14						
YKA	**Yellowknife Ar**	**67.46**	**337**	P	**P**	**19 20 44.8**	**-1.4**
	comp=Z,0.2nm,0.6s,baz=39,slow=5.4,SNR=4.4						

ISCJB ***13*** *19:11:39.9±0.3,23.13N±0.02×121.48E±0.02,h20km±3km, Error ellipse: s-maj=3.3km s-min=2.5km az=31.5*
TAP ***13*** *19:11:40.5,23.17N×121.35E,h16km,ML3.4,C*
JMA ***13*** *19:11:41.0±0.3,23.11N×121.50E,h85km,M2.6*

ISC 13 19:11:40.0±1.0,23.14N±0.02×121.44E±0.02,h18km±3km, n57,σ0s87/106,8C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHKT	**Chengkung**	**0.08**	**239**	⇓*i*P		**Pg**	**19 11 44.1**	**+0.6**
	baz=151							
CHKT				*i* S		**Sg**	**19 11 46.6**	**+0.8**
	baz=151							
TWF1	**Yuli**	**0.25**	**328**	⇑*i*P		**Pg**	**19 11 45.7**	**0.0**
	baz=338							
TWF1				*i* S		**Sg**	**19 11 49.6**	**0.0**
	baz=338							
EHY	**Hungye**	**0.38**	**343**	⇑*i*P		**Pg**	**19 11 47.9**	**-0.1**
	baz=346							
EHY				*i* S		**Sg**	**19 11 53.6**	**+0.3**
	baz=346							
ELDTW	**Lidau**	**0.39**	**277**	⇑*i*P		**Pg**	**19 11 47.1**	**-1.1**
	baz=274							
ELDTW				*e*S		**Sg**	**19 11 51.6**	**-2.2**
	baz=274							
TWG	**Pinlang**	**0.47**	**227**	*e*P		**Pg**	**19 11 49.0**	**-0.5**
	baz=227							
TWG				*e*S		**Sg**	**19 11 55.1**	**-0.7**
	baz=227							
TTN	**Taitung**	**0.47**	**215**	*i* P		**Pb**	**19 11 50.4**	**+0.7**
	baz=204							
TTN				*e*S		**Sb**	**19 11 57.5**	**+1.1**
	baz=204							
ESL	**Shilin**	**0.67**	**359**	*e*P		**Pg**	**19 11 52.3**	**-0.9**
	baz=356							
ESL				*e*S		**Sg**	**19 12 02.7**	**+0.5**
	baz=356							
ALS	**Alishan**	**0.69**	**302**	⇑*i*P		**Pg**	**19 11 53.0**	**-0.7**
	baz=304							
ALS				S		**Sg**	**19 12 02.2**	**-0.7**
	baz=304							
ECL	**Taimali**	**0.70**	**220**	*e*P		**Pg**	**19 11 52.1**	**-1.7**
	baz=215							
WTP	**Ta-pu**	**0.77**	**278**	⇑*i*P		**Pg**	**19 11 54.4**	**-0.7**
	baz=275							
WTP				S		**Sg**	**19 12 04.6**	**-0.7**
	baz=275							
CHN4	**Tsaushan**	**0.81**	**285**	⇑*i*P		**Pg**	**19 11 55.3**	**-0.5**
	baz=290							
CHN4				*e*S		**Sg**	**19 12 05.5**	**-1.0**
	baz=290							
CHN5	**Tsauling**	**0.83**	**303**	⇑*i*P		**Pg**	**19 11 56.0**	**-0.4**
	baz=304							
CHN5				*e*S		**Sg**	**19 12 07.0**	**-0.4**
	baz=304							
CHN1	**Nanshi**	**0.84**	**273**	⇑*i*P		**Pg**	**19 11 56.0**	**-0.5**
	baz=266							
CHN1				*e*S		**Sb**	**19 12 07.1**	**0.0**
	baz=266							
HWA	**Hwalien**	**0.85**	**10**	*e*P		**Pb**	**19 11 57.2**	**+1.0**
	baz=1.0							
HWA				*e*S		**Sb**	**19 12 08.7**	**+1.5**
	baz=1.0							
TWK	**Hsinying**	**0.89**	**278**	*i* P		**Pg**	**19 11 56.4**	**-0.8**
	baz=276							
TWK				*e*S		**Sg**	**19 12 08.2**	**-0.8**
	baz=276							
SMLT	**Sun Moon Lake**	**0.89**	**326**	P		**Pg**	**19 11 56.5**	**-0.9**
	baz=335							
SMLT				S		**Sg**	**19 12 09.1**	**-0.1**
	baz=335							
TYC	**Yuchr**	**0.93**	**325**	P		**Pg**	**19 11 57.3**	**-0.8**
	baz=340							
TYC				*e*S		**Sg**	**19 12 10.4**	**0.0**
	baz=340							
EAST	**Anshuo**	**0.93**	**216**	*e*P		**Pg**	**19 11 56.0**	**-2.2**
	baz=211							
EAST				*e*S		**Sg**	**19 12 08.8**	**-1.6**
	baz=211							
TWD	**Chiawan**	**0.95**	**9**	*e*P		**Pb**	**19 11 58.0**	**+0.1**
	baz=1.0							
TWD				*e*S		**Sb**	**19 12 11.6**	**+1.5**
	baz=1.0							
CHN2	**Minshiung**	**0.97**	**294**	*e*P		**Pb**	**19 11 58.5**	**+0.2**
	baz=292							
CHN2				*e*S		**Sb**	**19 12 11.9**	**+1.2**
	baz=292							
WGK	**Gukeng**	**0.97**	**304**	*e*P		**Pb**	**19 11 58.4**	**+0.1**
	baz=304							
WGK				*e*S		**Sg**	**19 12 10.4**	**-1.3**
	baz=304							
TWM1	**Shoushan**	**0.99**	**252**	*e*P		**Pn**	**19 11 59.5**	**+0.5**
	baz=247							
TWM1				*e*S		**Sn**	**19 12 14.3**	**+1.7**
	baz=247							
CHN3	**Shinhua**	**0.99**	**267**	*e*P		**Pn**	**19 11 59.4**	**+0.4**
	baz=272							
CHN3				*e*S		**Sn**	**19 12 13.9**	**+1.3**
	baz=272							
CHY	**Chiayi**	**1.00**	**291**	P		**Pb**	**19 11 59.0**	**+0.2**
	baz=289							
CHY				*e*S		**Sg**	**19 12 11.9**	**-0.6**
	baz=289							
WNT	**Mingjian**	**1.01**	**317**	*e*P		**Pb**	**19 11 59.2**	**+0.2**
	baz=318							
WNT				*e*S		**Sg**	**19 12 12.9**	**0.0**
	baz=318							
WHF	**Hehuan Shan**	**1.01**	**351**	*e*P		**Pb**	**19 11 58.5**	**-0.8**
	baz=355							
WHF				*e*S		**Sg**	**19 12 12.3**	**-0.1**
	baz=355							
SCZT	**Fangliau**	**1.08**	**225**	*e*P		**Pb**	**19 11 59.3**	**-0.8**
	baz=216							
SCZT				*e*S		**Sn**	**19 12 15.3**	**+0.7**
	baz=216							
TAI1	**Yung-k'ang**	**1.12**	**265**	*e*P		**Pg**	**19 12 01.7**	**0.0**
	baz=273							
TAI1				*e*S		**Sn**	**19 12 17.7**	**+2.0**
	baz=273							
TWT	**Tachien**	**1.13**	**348**	*e*P		**Pb**	**19 12 01.4**	**+0.2**
	baz=349							
TWT				*e*S		**Sb**	**19 12 14.2**	**-1.5**
	baz=349							
SCLT	**Jiali**	**1.15**	**272**	*e*P		**Pg**	**19 12 01.9**	**-0.3**
	baz=269							
SCLT				*e*S		**Sn**	**19 12 17.9**	**+1.5**
	baz=269							
CHN8	**Yiju**	**1.15**	**281**	*e*P		**Pb**	**19 12 01.0**	**-0.4**
	baz=278							
CHN8				*e*S		**Sn**	**19 12 17.0**	**+0.6**
	baz=278							
TCU	**Taichung**	**1.22**	**325**	*e*P		**Pb**	**19 12 03.1**	**+0.5**
	baz=325							
TCU				*e*S		**Sb**	**19 12 16.6**	**-1.4**
	baz=325							
WSF	**Szhu**	**1.22**	**294**	*e*P		**Pn**	**19 12 02.3**	**+0.1**
	baz=292							
WSF				S		**Sb**	**19 12 18.5**	**+0.4**
	baz=292							
TWP	**Hsiaoliuchiu**	**1.27**	**232**	*e*P		**Pg**	**19 12 05.7**	**+1.1**
	baz=216							
WTCT	**Ta-ch'eng**	**1.28**	**304**	*e*P		**Pn**	**19 12 03.7**	**+0.6**
	baz=303							
WTCT				S		**Sb**	**19 12 20.2**	**+0.4**
	baz=303							
NNS	**Nan Shan**	**1.29**	**357**	*e*P		**Pn**	**19 12 03.2**	**-0.1**
	baz=13							
NNS				*e*S		**Sb**	**19 12 20.9**	**+0.6**
	baz=13							
HEN	**Hengchun**	**1.30**	**210**	*e*P		**Pb**	**19 12 03.9**	**-0.1**
	baz=202							
ENA	**Nanau**	**1.31**	**12**	*e*P		**Pn**	**19 12 03.6**	**+0.1**
	baz=2.0							
ENA				*e*S		**Sb**	**19 12 20.7**	**+0.1**
	baz=2.0							
TWK1	**Hengchun**	**1.33**	**206**	*e*P		**Pb**	**19 12 04.1**	**-0.3**
	baz=198							
TSEB	**Hengchuen, Pin**	**1.33**	**202**	*e*P		**Pg**	**19 12 06.4**	**+0.7**
	baz=196							
TWQ1	**Liyutan**	**1.35**	**333**	*e*P		**Pn**	**19 12 04.6**	**+0.6**
	baz=333							
TWQ1				*e*S		**Sg**	**19 12 23.6**	**-0.1**
	baz=333							
NSY	**Sanyi**	**1.41**	**334**	*e*P		**Pn**	**19 12 05.7**	**+0.9**
	baz=334							
NSY				*e*S		**Sn**	**19 12 24.2**	**+1.2**
	baz=334							
ENTT	**Nioudou**	**1.50**	**4**	*e*P		**Pn**	**19 12 05.7**	**-0.3**
	baz=6.0							
ENTT				*e*S		**Sn**	**19 12 24.9**	**-0.3**
	baz=6.0							
TWC	**Suao**	**1.51**	**14**	*e*P		**Pn**	**19 12 06.9**	**+0.8**
	baz=3.0							
TWC				*e*S		**Sb**	**19 12 27.6**	**+1.2**
	baz=3.0							
NSK	**Sanguang**	**1.53**	**357**	*e*P		**Pn**	**19 12 07.1**	**+0.6**
	baz=13							
NSK				*e*S		**Sn**	**19 12 26.2**	**+0.1**
	baz=13							
NSTT	**Nanjuang**	**1.54**	**345**	*e*P		**Pn**	**19 12 07.0**	**+0.4**
	baz=357							
NSTT				*e*S		**Sn**	**19 12 26.7**	**+0.6**
	baz=357							
TWE	**Neicheng**	**1.59**	**7**	*e*P		**Pn**	**19 12 08.0**	**+0.7**
	baz=9.0							
TWE				*e*S		**Sn**	**19 12 24.9**	**-2.3**
	baz=9.0							
PNG	**Penghu**	**1.78**	**284**	*e*P		**Pn**	**19 12 09.9**	**0.0**
	baz=281							
PNG				*e*S		**Sn**	**19 12 31.1**	**-1.0**
	baz=281							
TWB1	**Santiao Chiao**	**1.93**	**15**	*e*P		**Pn**	**19 12 13.3**	**+1.4**
	baz=359							
NWF	**Wu-fen Shan**	**1.95**	**9**	*e*P		**Pn**	**19 12 12.1**	**-0.1**
	baz=2.0							
YOJ	**Yonaguni jima**	**1.95**	**47**	P		**Pn**	**19 12 12.6**	**+0.4**
YOJ				*e*S		**Sn**	**19 12 36.8**	**+0.6**
HATJ	**Hateruma jima**	**2.35**	**67**	P		**Pn**	**19 12 17.8**	**0.0**
HATJ				*e*S		**Sn**	**19 12 45.6**	**-0.6**
IRIF	**Iriomote-Funau**	**2.41**	**60**	P		**Pn**	**19 12 18.9**	**+0.3**
IRIF				*e*S		**Sn**	**19 12 47.6**	**0.0**
JKRS	**Kuro-shima**	**2.60**	**65**	P		**Pn**	**19 12 21.6**	**+0.5**
JKRS				*e*S		**Sn**	**19 12 51.4**	**-0.8**
JJJ	**Ishigaki jima**	**2.76**	**63**	P		**Pn**	**19 12 23.3**	**0.0**
JJJ				*e*S		**Sn**	**19 12 54.9**	**-1.3**
JTJ	**Tarama**	**3.34**	**63**	P		**Pn**	**19 12 31.4**	**+0.1**
JTJ				*e*S		**Sn**	**19 13 10.2**	**-0.3**
JOGS	**Gusukube**	**3.97**	**65**	P		**Pn**	**19 12 40.7**	**+0.7**

WEL 13 19:16:49.6±0.3,38.70S×178.54E,h28km±1km,ML3.5/8, 3C-2D,Error ellipse: s-maj=3.2km s-min=1.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CNGZ	**Carnagh Statio**	**0.34**	**309**	⇑P*		**Pb**	**19 16 57.2**	**-0.3**
CNGZ				S*		Sb	19 17 03.6	+0.8
PRGZ	**Paritu Road**	**0.56**	**246**	⇓P*		**Pb**	**19 17 00.9**	**-0.2**
PRGZ				S*		Sn	19 17 09.9	-0.3
PUZ	**Puketiti**	**0.66**	**340**	P*		**Pb**	**19 17 02.6**	**-0.2**
PUZ				S*		Sn	19 17 12.6	-0.1
MHGZ	**Mahia Peninsul**	**0.67**	**227**	⇓P*		**Pb**	**19 17 02.8**	**0.0**
KNZ	**Kokohu**	**0.75**	**244**	PN		**Pb**	**19 17 03.1**	**-1.0**
KNZ				SN		Sn	19 17 14.5	-0.3
MWZ	**Matawai**	**0.87**	**294**	⇑PN		**Pn**	**19 17 05.1**	**-1.0**
MWZ				SN		Sb	19 17 16.6	-1.1
MXZ	**Matakaoa Point**	**1.15**	**351**	PN		**Pn**	**19 17 10.2**	**+0.3**
RAHZ	**Arahi**	**1.16**	**259**	⇑PN		**Pn**	**19 17 09.4**	**-0.6**
URZ	**Urewera**	**1.21**	**291**	PN		**Pn**	**19 17 10.4**	**-0.2**
NMHZ	**Naumai**	**1.41**	**253**	PN		**Pn**	**19 17 13.1**	**-0.4**
CKHZ	**Cape Kidnapper**	**1.49**	**229**	PN		**Pn**	**19 17 13.7**	**-0.9**
MCHZ	**McNeill Hill**	**1.62**	**242**	PN		**Pn**	**19 17 16.1**	**-0.2**
BKZ	**Black Stump Fm**	**1.67**	**253**	PN		**Pn**	**19 17 13.6**	**-3.4**
KAHZ	**Kahuranaki**	**1.69**	**229**	PN		**Pn**	**19 17 16.9**	**-0.6**
PXZ	**Pawanui**	**1.86**	**224**	PN		**Pn**	**19 17 18.2**	**-1.4**
BHHZ	**Black Hill Sta**	**2.08**	**247**	PN		**Pn**	**19 17 22.1**	**-0.7**
WPHZ	**Waipukurau**	**2.12**	**229**	PN		**Pn**	**19 17 22.4**	**-0.9**
PRHZ	**Porangahau**	**2.15**	**223**	PN		**Pn**	**19 17 22.0**	**-1.7**
PNHZ	**Pukenui**	**2.19**	**236**	PN		**Pn**	**19 17 22.9**	**-1.2**
MOVZ	**Moawhango**	**2.28**	**251**	PN		**Pn**	**19 17 25.6**	**0.0**
OTVZ	**Oturere**	**2.29**	**257**	PN		**Pn**	**19 17 25.5**	**-0.2**
KRVZ	**Karewarewa**	**2.30**	**259**	PN		**Pn**	**19 17 25.7**	**-0.1**
WNVZ	**Wahianoa**	**2.38**	**254**	PN		**Pn**	**19 17 26.6**	**-0.3**
FWVZ	**Far West T-bar**	**2.40**	**256**	PN		**Pn**	**19 17 26.8**	**-0.5**
TRVZ	**Turoa**	**2.41**	**255**	PN		**Pn**	**19 17 26.7**	**-0.8**
TSZ	**Takapari Road**

VVLD	Villa Vallelon	0.54	156	Pg		Pg	19 18 07.7	-1.2	
VVLD	Villa Vallelon	0.54	156	Pg		Pg	19 18 07.7	-1.2	
INTR	Introdacqua	0.55	130	Pg		Pg	19 18 08.1	-1.0	
	2µm,0.5s								
INTR	Introdacqua	0.55	130	Pg		Pg	19 18 08.1	-1.0	
	2µm,0.5s								
MTCE	Montecelio	0.56	232	Pg		Pg	19 18 08.4	-0.8	
MTCE	Montecelio	0.56	232	Pg		Pg	19 18 08.4	-0.8	
GUAR	Guarcino	0.57	182	Pg		Pg	19 18 08.5	-1.0	
GUAR	Guarcino	0.57	182	Pg		Pg	19 18 08.5	-1.0	
CESX	Cesi	0.61	294	Pg		Pg	19 18 09.3	-0.8	
	2µm,0.5s								
CESX	Cesi	0.61	294	Pg		Pg	19 18 09.3	-0.8	
	2µm,0.5s								
TRTR	Tortoreto Alta	0.61	44	Pg		Pg	19 18 10.5	+0.2	
	12µm,0.8s								
TRTR	Tortoreto Alta	0.61	44	Pg		Pg	19 18 10.5	+0.2	
	12µm,0.8s								
OFFI	Offida	0.62	25	Pg		Pg	19 18 10.4	0.0	
	13µm,0.6s								
OFFI	Offida	0.62	25	Pg		Pg	19 18 10.4	0.0	
	13µm,0.6s								
FDMO	Fiordimonte	0.69	345	Pg		Pg	19 18 10.8	-0.9	
FDMO				Sg		Sg	19 18 21.3	+0.5	
	1µm,0.3s								
FDMO	Fiordimonte	0.69	345	Pg		Pg	19 18 10.8	-0.9	
FDMO				Sg		Sg	19 18 21.3	+0.5	
	1µm,0.3s								
LPEL	Lama dei Pelig	0.71	117	Pg		Pg	19 18 10.8	-1.2	
LPEL				Sg		Sg	19 18 21.6	+0.3	
	1µm,0.8s								
LPEL	Lama dei Pelig	0.71	117	Pg		Pg	19 18 10.8	-1.2	
LPEL				Sg		Sg	19 18 21.6	+0.3	
	1µm,0.8s								
POFI	Posta Fibreno	0.71	156	Pg		Pg	19 18 11.3	-0.7	
POFI	Posta Fibreno	0.71	156	Pg		Pg	19 18 11.3	-0.7	
CESI	CESI - Serrava	0.71	334	Pg		Pg	19 18 11.5	-0.6	
CESI				Sg		Sb	19 18 22.7	0.0	
	623nm,0.4s								
CESI	CESI - Serrava	0.71	334	Pg		Pg	19 18 11.5	-0.6	
CESI				Sg		Sb	19 18 22.7	0.0	
	623nm,0.4s								
RMP	Rome, Mte Porz	0.73	220	Pg		Pg	19 18 11.5	-0.9	
	2µm,0.8s								
RMP	Rome, Mte Porz	0.73	220	Pg		Pg	19 18 11.5	-0.9	
	2µm,0.8s								
SDI	San Donato	0.75	151	Pg		Pg	19 18 11.3	-1.5	
	188nm,0.3s								
SDI	San Donato	0.75	151	Pg		Pg	19 18 11.3	-1.5	
	188nm,0.3s								
RDP	Rocca di Papa	0.76	217	Pg		Pg	19 18 12.7	-0.3	
	3µm,0.9s								
RDP	Rocca di Papa	0.76	217	Pg		Pg	19 18 12.7	-0.3	
	3µm,0.9s								
CAFR	Castel Frentan	0.77	100	Pg		Pg	19 18 12.4	-0.7	
CAFR	Castel Frentan	0.77	100	Pg		Pg	19 18 12.4	-0.7	
GIUL	Giuliano Di Ro	0.81	184	Pg		Pg	19 18 12.8	-1.2	
GIUL	Giuliano Di Ro	0.81	184	Pg		Pg	19 18 12.8	-1.2	
ASSB	Assisi San Ben	0.84	324	Pg		Pg	19 18 13.5	-1.0	
	2µm,0.6s								
ASSB	Assisi San Ben	0.84	324	Pg		Pg	19 18 13.5	-1.0	
	2µm,0.6s								
CERA	Filignano	0.92	146	Pg		Pg	19 18 14.6	-1.5	
	949nm,0.8s								
CERA	Filignano	0.92	146	Pg		Pg	19 18 14.6	-1.5	
	949nm,0.8s								
SNTG	Esanatoglia	0.93	342	Pg		Pg	19 18 15.1	-1.2	
	339nm,0.3s								
SNTG	Esanatoglia	0.93	342	Pg		Pg	19 18 15.1	-1.2	
	339nm,0.3s								
MIDA	Miranda	1.00	136	Pg		Pg	19 18 15.4	-2.1	
MIDA	Miranda	1.00	136	Pg		Pg	19 18 15.4	-2.1	
CING	Cingoli	1.01	354	Pg		Pg	19 18 16.6	-1.2	
	1µm,0.6s								
CING	Cingoli	1.01	354	Pg		Pg	19 18 16.6	-1.2	
	1µm,0.6s								
MGAB	Montegabbione	1.05	302	Pg		Pg	19 18 17.6	-1.0	
	1µm,0.6s								
MGAB	Montegabbione	1.05	302	Pg		Pg	19 18 17.6	-1.0	
	1µm,0.6s								
MURB	Monte Urbino	1.07	327	Pg		Pb	19 18 18.1	-0.9	
	2µm,0.3s								
MURB	Monte Urbino	1.07	327	Pg		Pg	19 18 18.1	-0.9	
	2µm,0.3s								
SACS	San Casciano d	1.16	295	Pg		Pb	19 18 20.0	-0.4	
	915nm,1.0s								
ARVD	Arcevia	1.17	346	Pg		Pb	19 18 19.6	-0.9	
	1µm,1.0s								
ARVD	Arcevia	1.17	346	Pg		Pb	19 18 19.6	-0.9	
	1µm,1.0s								
AOI	Ancona	1.20	9	Pg		Pn	19 18 20.0	-1.1	
	2µm,1.1s								
AOI	Ancona	1.20	9	Pg		Pn	19 18 20.0	-1.1	
	2µm,1.1s								
PIEI	Pieia	1.31	334	Pn		Pn	19 18 21.9	-0.7	
	465nm,0.6s								
PIEI	Pieia	1.31	334	Pn		Pn	19 18 21.9	-0.7	
	465nm,0.6s								
FSSB	Fossombrone	1.39	343	Pn		Pn	19 18 23.4	-0.3	
	2µm,0.4s								
FSSB	Fossombrone	1.39	343	Pn		Pn	19 18 23.4	-0.3	
	2µm,0.4s								
CAFI	Castiglion Fio	1.39	314	Pn		Pb	19 18 24.1	-0.3	
	540nm,0.9s								
CAFI	Castiglion Fio	1.39	314	Pn		Pb	19 18 24.1	-0.3	
	540nm,0.9s								
BADI	Badiali	1.39	325	Pn		Pn	19 18 24.0	+0.2	
BADI	Badiali	1.39	325	Pn		Pn	19 18 24.0	+0.2	
PARC	Parchiule	1.51	328	Pn		Pn	19 18 25.8	+0.4	
	589nm,0.7s								
PARC	Parchiule	1.51	328	Pn		Pn	19 18 25.8	+0.4	
	589nm,0.7s								
MAON	Monte Argentar	1.63	273	Pn		Pn	19 18 27.1	+0.1	
	255nm,0.8s								
MAON	Monte Argentar	1.63	273	Pn		Pn	19 18 27.1	+0.1	
	255nm,0.8s								
NVLJ	Novalja	2.46	27	*e*Pn		Pn	19 18 38.4	-0.1	
NVLJ				Sn		Sn	19 19 09.6	+1.0	
NVLJ	Novalja	2.46	27	*e*Pn		Pn	19 18 38.3	-0.1	
NVLJ				Sn		Sn	19 19 09.6	+1.0	
MAIM	Mastiano	2.59	308	P		Pn	19 18 40.1	-0.1	
PGF	Pioggiola	3.21	275	*e*Pn		Pn	19 18 49.4	+0.6	
PGF				*e*Sn		Sn	19 19 29.6	+2.4	
	8.3nm,0.5s								
PGF	Pioggiola	3.21	275	*e*Pn		Pn	19 18 49.4	+0.6	
PGF				*e*Sn		Sn	19 19 29.6	+2.4	
	4.2nm,0.5s								
STON	Ston	3.26	80	*e*Pn		Pn	19 18 50.0	+0.5	
STON				Sn		Sn	19 19 27.9	-0.4	
STON	Ston	3.26	80	*e*Pn		Pn	19 18 49.9	+0.5	
STON				Sn		Sn	19 19 27.8	-0.4	
GBRS	Gornja Briga	3.34	18	*e*Pn		Pn	19 18 52.9	+2.4	
GBRS				*e*Sn		Sn	19 19 29.3	-0.9	
BOJS	Bojanci	3.43	23	*e*Pn		Pn	19 18 53.0	+1.3	
BOJS	Bojanci	3.43	23	*e*Pn		Pn	19 18 53.0	+1.3	
JAVS	Javornik	3.56	8	*e*Pn		Pn	19 18 53.6	0.0	
JAVS	Javornik	3.56	8	*e*Pn		Pn	19 18 53.7	0.0	
BLY	Banja Luka	3.67	48	*e*Pn		Pn	19 18 57.7	+2.6	
BLY	Banja Luka	3.67	48	*e*Pn		Pn	19 18 57.7	+2.6	
VOY	Vojsko	3.69	6	*e*Pn		Pb	19 19 00.8	-2.7	
PDG	Podgorica	4.39	87	*e*Pn		Pn	19 19 06.7	+1.8	
PDG				*e*Sn		Sn	19 19 57.0	+1.0	
PDG	Podgorica	4.39	87	*e*Pn		Pn	19 19 06.7	+1.8	
PDG				*e*Sn		Sn	19 19 57.0	+1.0	
ABTA	Abfaltersbach	4.42	353	⇑*i*Pn		Pn	19 19 06.3	+0.9	
	SNR=40								
ABTA	Abfaltersbach	4.42	353	Pn		Pn	19 19 06.3	+0.9	
	SNR=40								
SBF	Sospel	4.57	291	*e*Pn		Pn	19 19 07.9	+0.4	
SBF	Sospel	4.57	291	*e*Pn		Pn	19 19 07.9	+0.4	
WTTA	Wattenberg	5.04	347	⇑*i*Pn		Pn	19 19 16.3	+2.2	
	SNR=8.9								
WTTA	Wattenberg	5.04	347	Pn		Pn	19 19 16.3	+2.2	
	SNR=8.9								
FRF	La Foret Royal	5.05	286	*e*Pn		Pn	19 19 14.1	+0.1	
FRF	La Foret Royal	5.05	286	*e*Pn		Pn	19 19 14.1	+0.1	
DAVOX	Davos/Dischmat	5.05	332	Pn		Pn	19 19 16.6	+2.3	
	1.1nm,0.3s,baz=153,slow=17,SNR=24								
DAVOX				Sn		Sn	19 20 15.1	+2.4	
	1.0nm,0.3s,baz=115,slow=12,SNR=4.1								
LMR	La Mourre	5.11	283	*e*Pn		Pn	19 19 14.7	-0.1	
LMR	La Mourre	5.11	283	*e*Pn		Pn	19 19 14.7	-0.1	
WATA	Walderalm	5.12	346	⇓*i*Pn		Pn	19 19 16.8	+1.7	
	SNR=8.9								
WATA	Walderalm	5.12	346	Pn		Pn	19 19 16.8	+1.7	
	SNR=8.9								
DIVS	Divibare	5.16	68	*e*Pn		Pn	19 19 17.2	+1.6	
DIVS	Divibare	5.16	68	*e*Pn		Pn	19 19 17.2	+1.6	
MOTA	Moosalm	5.22	343	⇑*i*Pn		Pn	19 19 18.6	+2.1	
	SNR=7.8								
MOTA	Moosalm	5.22	343	Pn		Pn	19 19 18.6	+2.1	
	SNR=7.8								
MBDF	Montbardon	5.32	299	*e*P		Pn	19 19 19.9	+2.0	
MBDF	Montbardon	5.32	299	*e*P		Pn	19 19 19.9	+2.0	
PKSM	Moragy	5.41	43	⇑*i*P		Pn	19 19 22.7	+3.8	
PKSM	Moragy	5.41	43	*e*Pn		Pn	19 19 20.1	+1.2	
PKSM	Moragy	5.41	43	*e*Pn		Pn	19 19 20.1	+1.2	
GRUS	Gruza	5.61	72	*e*Pn		Pn	19 19 22.7	+1.0	
GRUS	Gruza	5.61	72	*e*Pn		Pn	19 19 22.7	+1.0	
LPG	La Plagne	5.69	306	*e*P		Pn	19 19 25.9	+2.8	
LPL	La Plagne	5.71	306	*e*P		Pn	19 19 25.9	+2.6	
LPL				*e*Sn		Sn	19 20 24.0	-4.9	
	5.5nm,0.7s								
LPL	La Plagne	5.71	306	*e*P		Pn	19 19 25.9	+2.6	
SMRF	Simiane la Rot	5.90	288	*e*P		Pn	19 19 27.2	+1.5	
SMRF	Simiane la Rot	5.90	288	*e*P		Pn	19 19 27.2	+1.5	
BARS	Barje	6.28	83	*e*Pn		Pn	19 19 32.3	+1.4	
BARS				*e*Sn		Sn	19 20 41.7	-0.9	
BARS	Barje	6.28	83	*e*Pn		Pn	19 19 32.3	+1.4	
BARS				*e*Sn		Sn	19 20 41.7	-0.9	
GERES	GERESS Array B	6.48	2	Pn		Pn	19 19 33.7	-0.1	
	0.3nm,0.3s,baz=184,slow=13,SNR=12								
GERES				Sn		Sn	19 20 47.2	-0.6	
	1.2nm,0.3s,baz=182,slow=28,SNR=11								
KHC	Kasperske Hory	6.77	1	*e*PN		Pn	19 19 38.1	+0.5	
KHC				*e*SN		Sn	19 20 51.6	-3.1	
KHC	Kasperske Hory	6.77	1	Pn		Pn	19 19 38.1	+0.5	
ZAPS	Zavoj	6.90	79	*e*Pn		Pn	19 19 41.5	+2.1	
ZAPS				*e*Sn		Sn	19 20 54.7	-3.3	
TREC	Trest	7.09	12	*e*PN		Pn	19 19 41.7	-0.3	
TREC	Trest	7.09	12	Pn		Pn	19 19 41.7	-0.3	
HINF	Hinteralfeld	7.12	322	*e*Pn		Pn	19 19 41.9	-0.6	
HINF				*e*Sn		Sn	19 20 58.4	-5.0	
	7.0nm,0.5s								
HINF	Hinteralfeld	7.12	322	*e*Pn		Pn	19 19 41.9	-0.6	
VTS	Vitosha	7.30	85	⇓*i*P		Pn	19 19 46.9	+1.8	
VTS	Vitosha	7.30	85	*e*Pn		Pn	19 19 46.5	+1.4	
VTS	Vitosha	7.30	85	*e*Pn		Pn	19 19 46.5	+1.4	
VTS	Vitosha	7.30	85	⇓*i*P		Pn	19 19 46.9	+1.8	
KEST	Kesra	7.32	206	Pn		Pn	19 19 48.7	+3.5	
	0.2nm,0.3s,baz=90,slow=20,SNR=5.0								
CDF	Champ du Feu	7.39	327	*e*Pn		Pn	19 19 45.5	-0.8	
CDF				*e*Sn		Sn	19 21 05.4	-4.8	
	4.4nm,0.4s								
CDF	Champ du Feu	7.39	327	*e*Pn		Pn	19 19 45.5	-0.8	
HAU	Haudompre	7.49	321	*e*Pn		Pn	19 19 47.2	-0.3	
HAU				*e*Sn		Sn	19 21 06.0	-6.4	
	14nm,0.7s								
HAU	Haudompre	7.49	321	*e*Pn		Pn	19 19 47.2	-0.3	
PRU	Pruhonice	7.67	6	*e*SN		Sn	19 21 13.0	-3.8	
NKC	Novy Kostel	7.89	356	*e*SN		Sn	19 21 20.3	-2.0	
BRG	Berggiesshubel	8.52	3	*e*(SN)		Sn	19 21 37.1	-0.6	
BRG				*e*(SG)		Sg	19 22 44.4	+13	
MLR	Muntele Rosu	9.62	67	⇓*i*P		Pn	19 20 23.1	+6.3	
MLR	Muntele Rosu	9.62	67	Pn		Pn	19 20 17.5	+0.7	
	0.0nm,0.3s,baz=225,slow=19,SNR=2.0								
KWP	Kalwaria Pacla	9.76	39	⇑*i*P		Pn	19 20 24.5	+5.9	
FINES	FINESS Array B	20.59	18	P		Pn	19 22 38.6	-0.7	
	0.9nm,0.7s,baz=182,slow=9.7,SNR=4.1								
KBZ	Khabaz	21.60	76	P		P	19 22 53.7	+5.6	
	1.9nm,0.9s,baz=324,slow=7.8,SNR=5.7								
TORD	Torodi Ar. Bea	30.82	203	P		P	19 24 15.8	+1.5	
	0.7nm,1.0s,baz=17,slow=9.3,SNR=2.9								
ZALV	Zalesovo Beam	47.10	50	P		P	19 26 31.1	+1.0	
	0.2nm,0.3s,baz=270,slow=7.2,SNR=2.7								
MKAR	Makanchi Array	47.88	60	P		P	19 26 35.9	-0.4	
	0.3nm,0.7s,baz=283,slow=6.1,SNR=4.2								

IDC ***13*** *19:41:17.7±1.4, 19°.34N×108°.87W, h0km, mb3.8/5, mb1 4.2/7, mb1mx3.9/23, mbtmp3.8/7, ML3.5/2, MS3.4/6, Ms1 3.4/6, ms1mx3.2/30, Error ellipse: s-maj=34.3km s-min=24.9km az=126.0*

ISCJB ***13*** *19:41:18.6±2.0, 19°.2N±0°.2×108°.8W±0°.2, h26km, mb3.9/4, MS3.5/4, Error ellipse: s-maj=37.2km s-min=17.1km az=34.2*

ISC 13 19:41:21.4±1.4, 19°.3N±0°.2×108°.8W±0°.2, h26km, n17, σ1§26/10, mb3.7/4, MS3.3/4, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	11.01	24	Pn		Pn	Pn	19 43 58.7	+1.3
	0.1nm,0.3s,baz=200,slow=15,SNR=16								
CMIG	Matias Romero	13.36	97	Pn		Pn	Pn	19 44 29.0	-0.4
	0.1nm,0.3s,baz=234,slow=19,SNR=1.9								
CMIG				LR		LR		19 49 40.5	
	comp=Z,110nm,19.7s,baz=189,slow=37								
TEIG	Tepich	19.29	84	LR		LR		19 53 54.7	
	comp=Z,82nm,21.8s,baz=226,slow=39								
NVAR	Mina Array Bea	20.80	338	P		P		19 46 00.5	-0.4
	2.9nm,0.8s,baz=168,slow=11,SNR=18								
PDAR	Pinedale Array	23.41	358	P		P		19 46 28.6	+0.1
	0.8nm,0.7s,baz=162,slow=8.8,SNR=9.7								
JTS	JuntasAbangare	24.66	108	LR		LR		19 56 10.6	
	comp=Z,69nm,18.2s,baz=263,slow=36								
TKL	Tuckaleechee C	27.39	48	LR		LR		19 59 05.7	
	comp=Z,65nm,20.6s,baz=193,slow=39								
YKA	Yellowknife Ar	43.35	356	P		P		19 49 19.8	-1.4
	0.8nm,0.8s,baz=172,slow=8.0,SNR=19								
YKA				PcP		PcP		19 51 09.0	-0.4
	0.1nm,0.4s,baz=166,slow=4.8,SNR=3.0								
RKT	Rikitea	49.32	212	*e*T		T		20 43 03.0	
	4.5nm,0.3s								
ILAR	Eielson Array	52.04	340	P		P		19 50 28.6	0.0
	1.0nm,0.6s,baz=144,slow=7.1,SNR=17								
PPT2	Papeete2	54.34	230	*e*LR		LR		20 06 24.8	
	100nm,26.2s								
TBI	Tubuai	58.09	225	*e*LR		LR		20 08 07.8	
	75nm,26.2s								
ARCES	ARCESS Array B	85.66	15	P		P		19 53 57.0	-0.5
	5.8nm,1.0s,baz=342,slow=2.1,SNR=4.4								
ARCES				LR		LR		20 33 01.0	
	comp=Z,71nm,20.2s,baz=42,slow=36								
NOA	NORSAR Array B	86.71	25	LR		LR		20 32 11.1	
	comp=Z,17nm,19.6s,baz=255,slow=35								
DZM	Mont Dzumac	92.49	248	*e*LR		LR		20 24 03.9	
	106nm,27.4s								
WRA	Warramunga Arr	120.90	258	PKP		PKPdf		20 00 12.7	+0.5
	0.2nm,0.5s,baz=77,slow=2.4,SNR=4.7								
ASAR	Alice Springs	121.94	254	PKP		PKPdf		20 00 16.7	+2.5
	0.3nm,0.8s,baz=60,slow=2.1,SNR=3.3								

IDC 13 20:00:26.0±3.4, 2°.02S×139°.11E, h0km, mb3.2/3, mb1 3.6/4, mb1mx3.4/19, mbtmp3.4/4, ML3.7/1, Error ellipse: s-maj=114.8km s-min=26.3km az=90.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.41	194	P		Pn		20 04 42.6	-0.3
	0.3nm,0.3s,baz=15,slow=12,SNR=8.8								
FITZ	Fitzroy Crossi	20.74	219	P		P		20 05 09.3	+0.9
	0.4nm,0.4s,baz=54,slow=14,SNR=5.2								
ASAR	Alice Springs	22.10	193	P		P		20 05 23.0	-0.1
	1.0nm,0.6s,baz=23,slow=10,SNR=16								
MKAR	Makanchi Array	69.49	322	P		P		20 11 36.2	-0.3
	0.1nm,0.5s,baz=116,slow=6.6,SNR=2.5								

BJI ***13*** *20:37:09.8, 25°.99N×99°.79E, h10km, mB4.8/21, mb4.6/32, ML4.4/12, Ms4.6/33, Ms7 4.4/26*

IDC ***13*** *20:37:09.2±0.5, 25°.95N×99°.95E, h0km, mb4.3/28, mb1 4.4/29, mb1mx4.3/34, mbtmp4.3/29, ML4.7/1, MS3.8/11, Ms1 3.8/11, ms1mx3.5/44, Error ellipse: s-maj=14.7km s-min=10.9km az=58.0*

ISCJB ***13*** *20:37:11.6±1.1, 25°.95N±0°.03×99°.80E±0°.03, h25km±8km, mb4.6/85, MS3.9/15, Error ellipse: s-maj=4.8km s-min=4.1km az=167.0*

MOS ***13*** *20:37:12.3±0.9, 25°.91N×99°.93E, h33km, mb5.0/47, Error ellipse: s-maj=9.2km s-min=4.4km az=118.8*

NEIC ***13*** *20:37:15.0±0.8, 25°.97N×99°.94E, h42km±7km, mb4.9/38, Error ellipse: s-maj=6.3km s-min=4.7km az=58.0*

DJA ***13*** *20:37:19.9±1.1, 26°.N±6°×10°.0E±1°.0, h92km±13km, M5.1/6, mB5.0/1, mb4.5/6, MLv5.5/1, Mw(mB)4.3/1*

ISC 13 20:37:14.6±0.6, 25°.99N±0°.04×99°.78E±0°.04, h31km±4km,

n348, σ1§40/373, mb4.7/85, MS3.8/15, 11C-6D, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KMI	Kunming	2.81	107	⇓Pn		Pn		20 37 58.8	+1.1
KMI				Pg		Pb		20 38 02.9	-1.4
KMI				Sg		Sb		20 38 41.3	+2.9
KMI				smax		smax			
	comp=N,3µm,1.0s								
KMI				smax		smax			
	comp=E,3µm,1.0s								
IMP	Imphal	5.42	259	*e*P		Pn		20 38 33.0	-0.4
IMP				*ex*		x		20 39 48.0	
GYA	Guiyang	6.21	84	Pn		Pn		20 38 45.9	+1.6
GYA				Sn		Sn		20 39 58.5	+4.3
GYA				smax		smax			
	comp=N,180nm,0.8s								
GYA				smax		smax			
	comp=E,140nm,0.9s								
GYA				LR		LR			
	comp=N,2µm,6.5s								
GYA				LR		LR			
	comp=E,3µm,8.2s								
GYA				LR		LR			
	comp=Z,3µm,9.6s								
SHL	Shillong	7.13	268	*i*P		Pn		20 38 59.0	+2.0
SHL				*i*x		x		20 41 55.0	
CHTO	Chiang Mai	7.18	186	*e*P		Pn		20 38 57.7	+0.2
CHTO				pmax		pmax			
	comp=Z,103nm,0.8s								
CHTO	Chiang Mai	7.18	186	*e*P		Pn		20 38 57.7	+0.2
	comp=Z,103nm,0.8s								
CHTO	Chiang Mai	7.18	186	P		Pn		20 38 57.9	+0.3
	comp=Z,81nm,0.8s,comp=Z,1µmcomp=Z,1.3nm								
CMMT	Chiang Mai	7.18	186	P		Pn		20 38 58.3	+0.7
CM31	Chiang Mai Arr	7.53	186	*e*P		Pn		20 39 02.7	+0.3
	comp=Z,138nm,0.6s								
CMAR	Chiang Mai Arr	7.53	186	Pn		Pn		20 39 01.4	-0.9
CMAR				Pg		Pb		20 39 30.9	+6.4
CMAR				Sn		Sn		20 40 29.1	+2.3
CMAR				Lg		Lg		20 41 10.6	
CMAR	Chiang Mai Arr	7.53	186	Pn		Pn		20 39 01.4	-0.9
	comp=Z,2.8nm,0.3s,baz=2.8,slow=14,SNR=71								
CMAR				Pg		Pb		20 39 30.9	+6.4
	comp=Z,3.5nm,0.3s,baz=357,slow=19,SNR=35								
CMAR				Sn		Sn		20 40 29.1	+2.3
	baz=3.0,slow=21,SNR=1.9								
CMAR				Lg		Lg		20 41 10.6	
	comp=Z,5.8nm,0.3s,baz=276,slow=17,SNR=13								
CMAR				LR		LR		20 42 21.4	
	comp=Z,642nm,18.4s,baz=166,slow=42								
LSA	Lhasa	8.48	298	P		Pn		20 39 16.0	+0.1
LSA				pP		pP		20 39 26.1	
LSA				pmax		pmax			
	comp=Z,20nm,0.8s								
LSA				pmax		pmax			
	comp=Z,110nm,5.0s								
LSA				LR		LR			
	comp=N,300nm,10.0s								
LSA				LR		LR			
	comp=E,490nm,10.0s								
LSA				LR		LR			
	comp=Z,600nm,10.0s								
LZH	Lanzhou	10.65	18	⇑P		Pn		20 39 47.9	+2.6
LZH				pP				20 39 51.3	
LZH				sP				20 39 53.0	
LZH				*e*S		Sn		20 40 48.0	+4.4
LZH				sS				20 41 53.5	
LZH				SS		SnSn		20 42 02.1	+6.2
LZH				pmax		pmax			
	comp=Z,100nm,1.4s								
LZH				pmax		pmax			
	comp=Z,500nm,6.8s								
LZH				LR		LR			
	comp=N,2µm,7.2s								
LZH				LR		LR			
	comp=E,1µm,9.7s								
LZH				LR		LR			
	comp=Z,2µm,10.4s								
TAPN	Taplejung	10.88	280	*e*P		Pn		20 39 46.2	-2.3
	comp=Z,183nm,0.6s								
ODAN	Odare	11.14	277	*e*P		Pn		20 39 50.0	-2.0
	comp=Z,218nm,0.8s								
RAMN	Ramite	11.84	278	*e*P		Pn		20 39 59.4	-2.3
	comp=Z,145nm,0.7s								
UBPT	Khong Chiam	11.91	152	P		Pn		20 40 04.1	+1.7
GUN	Gumba	12.54	282	*e*P		Pn		20 40 09.0	-2.4
	comp=Z,59nm,0.4s								
GZH	Guangzhou	12.68	100	P		Pn		20 40 14.3	+1.4
GZH				S		Sn		20 42 35.1	+2.0
GZH				LR		LR			
	comp=N,520nm,5.3s								
GZH				LR

HHC LR LR
comp=Z,1µm,7.8s
TIA Tai'an 17.99 51 P **Pn** **20 41 21.6 -0.8**
TIA pmax pmax
comp=Z,60nm,1.0s
JBP Jabalpur 18.22 265 ⇓*i* P **P** **20 41 26.1 +0.9**
JBP *ex* x 20 45 03.1
BJI Beijing 19.59 40 P **P** **20 41 40.8 +0.6**
BJI pmax pmax
comp=Z,56nm,1.0s
BJI pmax pmax
comp=Z,370nm,4.7s
BJI LR LR
comp=N,670nm,12.5s
BJI LR LR
comp=E,730nm,10.1s
BJI LR LR
comp=Z,300nm,14.0s
DDI Dehra Dun 19.63 288 *e*P **P** **20 41 40.0 -0.8**
DDI *ex* x 20 45 09.0
WMQ Urumqi 20.33 334 P **P** **20 41 49.3 +1.0**
WMQ pmax pmax
comp=Z,14nm,1.0s
SMLA Simla 20.50 290 *e*P **P** **20 41 49.1 -1.0**
BHPL Bhopal 20.50 267 *e*P **P** **20 41 49.7 -0.6**
DHRM DHARAMSHALA 21.42 292 *e*P **P** **20 42 00.9 +0.6**
DHRM AMB AMB 20 42 03.3
comp=Z,62nm,0.9s
IPM Ipoh 21.42 177 *e*P **P** **20 42 04.5 +4.3**
comp=Z,6.9nm,0.8s
IPM Ipoh 21.42 177 P **P** **20 41 56.9 -3.3**
comp=Z,11nm,1.1s
HYB Hyderabad 21.46 251 *e*P **P** **20 42 02.0 +1.4**
TSI Tuntungan 22.39 183 P **P** **20 42 07.8 -2.7**
SONM Songino Array 22.43 12 P **P** **20 42 10.5 -0.4**
SONM Songino Array 22.43 12 P **P** **20 42 10.5 -0.4**
comp=Z,6.0nm,0.7s,baz=200,slow=10,SNR=13
ULN Ulaanbaatar 22.58 13 P **P** **20 42 12.7 +0.1**
comp=Z,16nm,1.2s
PSI Prapat 23.07 182 P **P** **20 42 15.8 -2.0**
PSI Prapat 23.07 182 P **P** **20 42 15.8 -2.0**
comp=Z,14nm,1.4s
PSI Prapat 23.07 182 P **P** **20 42 15.8 -2.0**
comp=Z,4.5nm,0.6s,baz=343,slow=12,SNR=7.4
PSI LR LR 20 50 52.0
comp=Z,178nm,18.9s,baz=157,slow=36
ZAK Zakamensk 24.51 5 *e*P **P** **20 42 31.0 -0.3**
ZAK pmax pmax
comp=Z,5.0nm,1.3s
MK31 Makanchi Array 24.98 331 *e*P **P** **20 42 36.0 +0.5**
MK31 Makanchi Array 24.98 331 *e*P **P** **20 42 36.0 +0.5**
MKAR Makanchi Array 24.98 331 P **P** **20 42 36.2 +0.7**
MKAR 20 46 09.2
MKAR pmax pmax
comp=Z,13nm,0.8s
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR pmax pmax
comp=N,1.0nm,1.0s
MKAR Makanchi Array 24.98 331 P **P** **20 42 36.2 +0.7**
MKAR PcP **PcP** **20 46 09.2 -0.9**
MKAR ScP **ScP** **20 49 47.5 +0.6**
MKAR Makanchi Array 24.98 331 P **P** **20 42 36.2 +0.7**
comp=N,13nm,0.8s,baz=141,slow=10,SNR=145
MKAR PcP **PcP** **20 46 09.2 -0.9**
comp=N,1.2nm,0.8s,baz=117,slow=5.0,SNR=5.9
MKAR ScP **ScP** **20 49 47.5 +0.6**
comp=N,0.9nm,1.0s,baz=146,slow=5.1,SNR=4.7
POO Poona 25.09 258 *e*P **P** **20 42 35.0 -1.7**
POO *e*P pP 20 42 38.8 -6.7
SNY Shenyang 25.18 45 ⇓P **P** **20 42 35.8 -1.5**
SNY S **S** **20 46 56.5 -4.0**
SNY pmax pmax
comp=Z,21nm,2.5s
SNY pmax pmax
comp=Z,240nm,3.5s
SNY LR LR
comp=N,710nm,13.4s
SNY LR LR
comp=E,550nm,13.5s
SNY LR LR
comp=Z,480nm,11.4s
ULHL Ulahol 25.23 316 *e*P **P** **20 42 39.4 +1.4**
ULHL Ulahol 25.23 316 P **P** **20 42 39.4 +1.4**
SNR=12
MOY Mondy 25.66 2 *e*P **P** **20 42 42.8 +1.1**
TLY Talaya 25.83 6 *e*P **P** **20 42 44.8 +1.7**
TKM2 Tokmak 2 26.00 317 *i*P **P** **20 42 45.2 +0.2**
TKM2 Tokmak 2 26.00 317 *e*P **P** **20 42 44.9 0.0**
comp=Z,23nm,0.6s
TKM2 Tokmak 2 26.00 317 P **P** **20 42 45.2 +0.2**
SNR=6.1
KBK Karagaybulak 26.26 316 *i*P **P** **20 42 49.2 +1.9**
KBK Karagaybulak 26.26 316 P **P** **20 42 49.2 +1.9**
SNR=12
GOA Goa 26.37 252 *e*P **P** **20 42 49.4 +1.1**
KSAR Wonju Array Be 26.40 57 P **P** **20 42 47.5 -0.9**
KSRS Korea Array 26.43 57 P **P** **20 42 47.5 -1.2**
comp=Z,4.5nm,0.8s,baz=242,slow=9.8,SNR=3.9
KSRS LR LR 20 53 01.5
comp=Z,151nm,21.4s,baz=76,slow=36
AAK Ala-Archa 26.53 315 *e*P **P** **20 42 51.4 +1.6**
AAK pmax pmax
comp=Z,27nm,1.3s
AAK Ala-Archa 26.53 315 *e*P **P** **20 42 49.8 0.0**
comp=Z,16nm,1.1s
AAK Ala-Archa 26.53 315 P **P** **20 42 49.9 +0.2**
comp=Z,5.1nm,0.8s,baz=114,slow=5.8,SNR=24
AAK LR LR 20 54 17.9
comp=Z,138nm,18.4s,baz=288,slow=39
AML Almayashu 26.80 314 *i*P **P** **20 42 54.2 +1.7**
AML Almayashu 26.80 314 P **P** **20 42 54.2 +1.7**
SNR=12
USP Ospenovka 26.86 316 *i*P **P** **20 42 53.6 +1.0**
USP Ospenovka 26.86 316 P **P** **20 42 53.6 +1.0**
SNR=7.7
EKS2 Erkin-Say 27.01 315 *e*P **P** **20 42 55.4 +1.4**
EKS2 pmax pmax
comp=Z,11nm,1.0s
EKS2 Erkin-Say 27.01 315 *e*P **P** **20 42 55.4 +1.4**
comp=Z,11nm,1.0s
EKS2 Erkin-Say 27.01 315 P **P** **20 42 55.3 +1.3**
SNR=10
KBL Kabul 27.80 295 *e*P **P** **20 43 02.8 +1.5**
KBL pmax pmax
comp=Z,16nm,1.0s
KBL Kabul 27.80 295 *e*P **P** **20 43 02.8 +1.5**
comp=Z,16nm,1.0s
JNU Nakatsue 27.91 68 *e*P **P** **20 42 58.8 -3.3**
JNU Nakatsue 27.91 68 LR LR 20 54 10.4
comp=Z,182nm,19.2s,baz=60,slow=37
KURBB Kurchatov Arra 29.51 332 P **P** **20 43 16.3 +0.3**
comp=Z,2.8nm,0.7s,baz=141,slow=10,SNR=32
KURBB PcP **PcP** **20 46 19.9 -0.9**
comp=Z,1.6nm,0.9s,baz=138,slow=1.6,SNR=7.3
KURK Kurchatov 29.54 332 *e*P **P** **20 43 16.6 +0.3**
KURK 20 46 19.9
KURK pmax pmax
comp=Z,4.0nm,0.7s
KURK Kurchatov 29.54 332 *e*P **P** **20 43 16.6 +0.3**
comp=Z,3.8nm,0.7s
KURK PcP **PcP** **20 46 19.9 -1.0**
ZAA0 Zalesovo Array 30.06 342 *e*P **P** **20 43 19.9 -0.9**
ZALV Zalesovo Beam 30.06 342 P **P** **20 43 21.0 +0.1**
ZALV pmax pmax
comp=Z,6.0nm,0.7s
ZALV MLR MLR
comp=Z,53nm,20.5s
ZALV Zalesovo Beam 30.06 342 P **P** **20 43 21.0 +0.1**
ZALV Zalesovo Beam 30.06 342 P **P** **20 43 21.0 +0.1**
comp=Z,5.7nm,0.7s,baz=154,slow=9.0,SNR=26
ZALV LR LR 20 56 00.7
comp=Z,53nm,20.5s,baz=229,slow=38
VLA Vladivostok 31.25 49 *e*P **P** **20 43 29.9 -1.5**
VLA S **S** **20 48 33.2 -2.7**
VLA pmax pmax
comp=Z,18nm,1.0s
NVS Novosibirsk 31.29 342 *e*P P 20 43 24.8 -6.9
USRK Ussuriysk Arra 31.75 47 P **P** **20 43 34.3 -1.5**
comp=Z,2.7nm,0.6s,baz=254,slow=7.2,SNR=9.0
USRK LR LR 20 58 11.1
comp=Z,253nm,21.4s,baz=56,slow=40
PCI Palu 33.02 141 P P 20 43 59.8 +13
MJAR Matsushiro Arr 34.30 63 P **P** **20 43 55.4 -2.9**
MJAR Matsushiro Arr 34.30 63 P **P** **20 43 55.4 -2.9**
comp=Z,1.7nm,0.7s,baz=268,slow=10,SNR=7.8

MJAR LR LR 20 59 18.9
comp=Z,202nm,18.9s,baz=280,slow=39
BVAR Borovoye Array 34.81 329 P **P** **20 44 02.6 0.0**
BVAR 20 46 33.5
BVAR pmax pmax
comp=Z,5.0nm,0.7s
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR Borovoye Array 34.81 329 P **P** **20 44 02.6 0.0**
BVAR PcP **PcP** **20 46 33.5 -1.8**
BVAR Borovoye Array 34.81 329 P **P** **20 44 02.6 0.0**
comp=Z,4.6nm,0.7s,baz=127,slow=10,SNR=32
BVAR PcP **PcP** **20 46 33.5 -1.8**
comp=Z,1.3nm,0.7s,baz=142,slow=5.4,SNR=4.5
BRVK Borovoye 34.89 329 *e*P **P** **20 44 03.9 +0.8**
BRVK pmax pmax
comp=Z,16nm,1.3s
BRVK Borovoye 34.89 329 *e*P **P** **20 44 03.5 +0.4**
comp=Z,10nm,0.9s
CBIJ Chichi jima 37.83 79 LR LR 20 59 19.6
comp=Z,2µm,21.6s,baz=358,slow=35
ABKAR Akbulak array 38.55 318 *e*P **P** **20 44 34.5 +0.2**
comp=Z,5.1nm,0.7s
ASAJ Asahikawa 38.94 51 P **P** **20 44 35.9 -1.9**
ASAJ Asahikawa 38.94 51 P **P** **20 44 35.9 -1.9**
comp=Z,8.4nm,0.9s,baz=220,slow=14,SNR=3.1
AKTO Aktyubinsk 40.15 319 P **P** **20 44 48.5 +0.8**
AKTO pmax pmax
comp=Z,3.0nm,0.7s
AKTO MLR MLR
comp=Z,126nm,18.5s
AKTO Aktyubinsk 40.15 319 P **P** **20 44 48.5 +0.8**
AKTO Aktyubinsk 40.15 319 P **P** **20 44 48.5 +0.8**
comp=Z,2.9nm,0.7s,baz=115,slow=9.4,SNR=6.5
AKTO LR LR 21 03 15.8
comp=Z,126nm,18.5s,baz=287,slow=39
YAK Yakutsk 41.23 21 *e*P **P** **20 44 54.8 -1.6**
YAK pmax pmax
comp=Z,16nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.1s
YAK pmax pmax
comp=N,9.0nm,1.2s
YAK MLR MLR
comp=Z,172nm,13.0s
YAK MLR MLR
comp=N,109nm,14.0s
SVE Sverdlovsk 41.60 328 ⇓*i*P **P** **20 45 00.7 +1.1**
SVE pmax pmax
comp=Z,18nm,0.9s
ARU Arti 42.40 327 *d i*P **P** **20 45 06.3 +0.2**
ARU 20 46 40.8
ARU S **S** **20 51 27.4 +2.0**
ARU SS **SS** **20 54 37.4 +2.6**
ARU pmax pmax
comp=Z,13nm,1.0s
GNI Garni 47.53 302 *e*P **P** **20 45 47.2 -0.1**
comp=Z,10nm,1.0s
GNI Garni 47.53 302 P **P** **20 45 48.4 +1.1**
comp=Z,2.7nm,0.8s,baz=101,slow=5.2,SNR=5.4
ZEI Tsey 48.19 305 *e*P **P** **20 45 52.4 -0.1**
ZEI pmax pmax
comp=Z,11nm,1.5s
TIXI Tiksi 48.51 12 *e*P **P** **20 45 53.7 -0.5**
TIXI pmax pmax
comp=Z,31nm,2.5s
TIXI Tiksi 48.51 12 *e*P **P** **20 45 53.3 -1.0**
comp=Z,10nm,1.0s
KBZ Khabaz 48.95 306 P **P** **20 45 59.7 +1.7**
KBZ pmax pmax
comp=Z,1.0nm,0.7s
KBZ Khabaz 48.95 306 P **P** **20 45 59.7 +1.7**
KBZ Khabaz 48.95 306 P **P** **20 45 59.7 +1.7**
comp=Z,1.0nm,0.7s,baz=88,slow=9.8,SNR=3.5
KIV Kislovodsk 49.11 307 *e*P **P** **20 45 59.9 +0.5**
KIV pmax pmax
comp=Z,14nm,1.1s
KIV MLR MLR
comp=Z,68nm,16.0s
VRHR Novokhopersk 50.38 316 *e*P **P** **20 46 08.5 -0.3**
VRHR pmax pmax
comp=N,7.0nm,0.4s
VRHR pmax pmax
comp=E,5.0nm,0.4s
VRHR pmax pmax
comp=Z,7.0nm,0.4s
PETK Petropavlovsk- **50.52 41** LR LR 21 07 22.8
comp=Z,102nm,21.8s,baz=80,slow=36
MBWA Marble Bar 50.71 156 *e*P **P** **20 46 10.3 -1.3**
VSR Storozhevoye 51.93 316 *e*P **P** **20 46 20.1 -0.4**
VSR pmax pmax
comp=Z,7.0nm,0.8s
VSR pmax pmax
comp=N,1.0nm,0.4s
VSR pmax pmax
comp=E,7.0nm,0.8s
OBN Obninsk 53.86 321 ⇑*i*P **P** **20 46 37.6 +3.0**
OBN *e* 20 48 33.4
OBN *e*S **S** **20 54 06.2 -1.3**
OBN pmax pmax
comp=Z,7.0nm,1.2s
OBN MLR MLR
comp=Z,100nm,22.0s
BRTR Keskin Array B 56.07 302 P **P** **20 46 51.0 -0.1**
BRTR Keskin Array B 56.07 302 P **P** **20 46 51.0 -0.1**
comp=Z,1.3nm,0.8s,baz=131,slow=6.7,SNR=6.3
WRAB Tennant Creek 56.66 140 *e*P **P** **20 46 54.6 -0.6**
WRAB pmax pmax
comp=Z,31nm,1.1s
WRAB Tennant Creek 56.66 140 *e*P **P** **20 46 54.6 -0.6**
comp=Z,31nm,1.1s
WRA Warramunga Arr 56.66 140 P **P** **20 46 53.7 -1.6**
WRA Warramunga Arr 56.66 140 P **P** **20 46 53.7 -1.6**
comp=Z,13nm,0.7s,baz=329,slow=7.7,SNR=14
BILL Bilibino 57.40 24 *i*P **P** **20 46 59.3 -0.5**
JOF Joensuu 57.41 330 *e*P **P** **20 46 58.7 -1.3**
JOF pmax pmax
comp=Z,2.0nm,0.8s
JOF Joensuu 57.41 330 *ep* **P** **20 46 58.7 -1.3**
comp=Z,2.2nm,0.8s
AKASG Malin Array Be 58.20 315 P **P** **20 47 05.0 -0.7**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
AKASG Malin Array Be 58.20 315 P **P** **20 47 05.0 -0.7**
AKASG Malin Array Be 58.20 315 P **P** **20 47 05.0 -0.7**
comp=Z,4.9nm,0.6s,baz=77,slow=6.4,SNR=11
AK01 Malin Array Si 58.21 315 *e*P **P** **20 47 04.8 -1.0**
KIEV Kiev 58.22 315 *e*P **P** **20 47 04.4 -1.4**
KIEV pmax pmax
comp=Z,5.0nm,0.6s
KIEV Kiev 58.22 315 *e*P **P** **20 47 04.4 -1.4**
comp=Z,4.8nm,0.6s
AK02 Malin Array Si 58.22 315 *e*P **P** **20 47 03.7 -2.1**
ASAR Alice Springs 59.39 143 P **P** **20 47 13.8 -0.5**
ASAR Alice Springs 59.39 143 P **P** **20 47 13.8 -0.5**
comp=Z,3.8nm,0.8s,baz=327,slow=6.8,SNR=18
FINES FINESS Array B 59.77 328 P **P** **20 47 16.5 +0.1**
FINES FINESS Array B 59.77 328 P **P** **20 47 16.5 +0.1**
comp=Z,2.3nm,0.7s,baz=76,slow=8.0,SNR=7.7
KEV Kevo 59.91 337 *e*P **P** **20 47 17.0 -0.3**
KEV pmax pmax
comp=Z,1.0nm,0.4s
KEV Kevo 59.91 337 *ep* **P** **20 47 17.0 -0.3**
comp=Z,0.7nm,0.4s
VRI Vrincioaia 60.32 310 ⇑*i*P **P** **20 47 21.3 +0.7**
PLOR Plostina 60.38 310 ⇑*i*P **P** **20 47 21.9 +0.9**
ARCES ARCESS Array B 60.41 337 P **P** **20 47 21.6 +0.8**
ARCES ARCESS Array B 60.41 337 P **P** **20 47 21.6 +0.8**
comp=Z,10nm,1.1s,baz=102,slow=8.4,SNR=4.1
MLR Muntele Rosu 60.92 309 ⇓*i*P **P** **20 47 25.5 +0.7**
BURAR Bucovina Array 61.12 312 ⇑*i*P **P** **20 47 26.0 0.0**
BUR08 Bucovina Ar. S 61.12 312 *e*P **P** **20 47 25.7 -0.4**
ARR Arges 61.85 309 ⇑*i*P **P** **20 47 31.0 0.0**
KWP Kalwaria Pacla 62.48 314 *e*P **P** **20 47 35.0 -0.1**
KWP pmax pmax
comp=Z,19nm,0.7s
KWP Kalwaria Pacla 62.48 314 *e*P **P** **20 47 35.0 -0.1**
comp=Z,19nm,0.7s
KWP Kalwaria Pacla 62.48 314 ⇑*i*P **P** **20 47 35.6 +0.5**
KWP Kalwaria Pacla 62.48 314 *e*P **P** **20 47 35.4 +0.3**
KOLS Kolonicke sedl 62.87 314 *e*P **P** **20 47 37.5 -0.2**
KOLS *ep*P **pP** **20 47 49.9 +2.7**
DRGR 62.93 311 ⇑*i*P **P** **20 47 38.6 +0.4**
VTS Vitosha 63.37 307 ⇑*i*P **P** **20 47 40.6 -0.7**
CRVS Cervenica-Dubn 63.40 314 *e*P **P** **20 47 40.8 -0.4**

BZS Buzias 63.89 310 ⇑*i*P **P** **20 47 44.4 -0.1**
VYHS Vyhne 65.19 314 *e*P **P** **20 47 53.0 +0.1**
OKC Ostrava-Krasne 65.36 315 *e*P **P** **20 47 54.9 +0.9**
OKC *e* 20 48 03.8
OKC Ostrava-Krasne 65.36 315 *e*P **P** **20 47 54.9 +0.9**
OKC *ep*P **pP** **20 48 03.8 +0.3**
MORC Moravsky Berou 65.75 315 *e*P **P** **20 47 56.9 +0.3**
MORC pmax pmax
comp=Z,2.0nm,0.9s
MORC Moravsky Berou 65.75 315 *e*P **P** **20 47 56.9 +0.3**
comp=Z,2.2nm,0.9s
PKSM Moragy 65.80 311 ⇑*i*P **P** **20 47 56.8 -0.1**
KRLC Kraliky 66.17 316 *e*P **P** **20 47 58.9 -0.4**
KSP Ksiaz 66.31 317 *e*P P 20 47 56.3 -3.8
DPC Dobruska-Polom 66.40 316 *e*P **P** **20 48 01.1 +0.4**
DPC Dobruska-Polom 66.40 316 *e*P **P** **20 48 01.1 +0.4**
UPC Upice 66.56 316 *e*P **P** **20 48 00.2 -1.5**
UPC Upice 66.56 316 *e*P **P** **20 48 00.2 -1.5**
NB2 NORSAR Subarra 66.94 328 P **P** **20 48 02.5 -1.5**
comp=Z,1.6nm,0.6s,baz=79,slow=6.9
NOA NORSAR Array B 66.94 328 P **P** **20 48 02.8 -1.2**
NOA NORSAR Array B 66.94 328 P **P** **20 48 02.8 -1.2**
comp=Z,1.2nm,0.7s,baz=78,slow=6.4,SNR=7.6
PRU Pruhonice 67.60 316 *e*P **P** **20 48 09.2 +0.9**
PRU *e* 20 48 14.9
PRU Pruhonice 67.60 316 *e*P **P** **20 48 09.2 +0.9**
PRU *ex* x 20 48 14.9
OPO Ambohidratompo 67.62 235 P **P** **20 48 09.3 +0.3**
OPO Ambohidratompo 67.62 235 P **P** **20 48 09.3 +0.3**
comp=Z,6.1nm,0.8s,baz=28,slow=6.9,SNR=9.8
BRG Berggiesshubel 67.75 317 *e*P **P** **20 48 09.3 +0.1**
comp=Z,3.3nm,0.9s
BRG Berggiesshubel 67.75 317 *e*P **P** **20 48 09.3 +0.1**
BRG pmax pmax
comp=Z,3.0nm,0.9s
CLL Collm 68.22 318 *e*P **P** **20 48 11.0 -1.2**
CLL *e* 20 48 24.0
CLL Collm 68.22 318 *e*P **P** **20 48 11.0 -1.2**
CLL *ep*P **pP** **20 48 24.0 +2.3**
GERES GERESS Array B 68.42 315 P **P** **20 48 13.4 -0.2**
GERES GERESS Array B 68.42 315 P **P** **20 48 13.4 -0.2**
comp=Z,1.2nm,0.5s,baz=65,slow=5.9,SNR=15
KHC Kasperske Hory 68.42 315 *e*P **P** **20 48 13.6 +0.1**
KHC *e* 20 48 23.2
KHC Kasperske Hory 68.42 315 *e*P **P** **20 48 13.6 +0.1**
KHC *ep*P **pP** **20 48 23.2 +0.1**
STKA Stephens Creek 70.02 143 P **P** **20 48 22.4 -1.1**
STKA Stephens Creek 70.02 143 P **P** **20 48 22.4 -1.1**
comp=Z,3.9nm,0.9s,baz=290,slow=7.2,SNR=8.6
DAG Danmarks Havn 71.01 348 *i*P **P** **20 48 29.4 +0.5**
DAG Danmarks Havn 71.01 348 *i*P **P** **20 48 29.4 +0.5**
BFO Black Forest 71.98 315 *e*P **P** **20 48 35.0 -0.3**
BFO Black Forest 71.98 315 *e*P **P** **20 48 35.0 -0.3**
CDF Champ du Feu 72.61 316 *e*P **P** **20 48 38.4 -0.8**
comp=Z,15nm,1.2s
CDF Champ du Feu 72.61 316 *e*P **P** **20 48 38.4 -0.8**
CDF pmax pmax
comp=Z,15nm,1.2s
CDF Champ du Feu 72.61 316 *e*P **P** **20 48 38.4 -0.8**
comp=Z,15nm,1.2s
WLF Walferdange 72.89 317 *e*P **P** **20 48 41.1 +0.4**
WLF pmax pmax
comp=Z,7.0nm,0.8s
WLF Walferdange 72.89 317 *e*P **P** **20 48 41.0 +0.4**
comp=Z,6.6nm,0.8s
HINF Hinteralfeld 73.08 315 *e*P **P** **20 48 41.0 -0.9**
HINF Hinteralfeld 73.08 315 *e*P **P** **20 48 41.0 -0.9**
HINF Hinteralfeld 73.08 315 *e*P **P** **20 48 41.0 -0.9**
HAU Haudompre 73.34 316 *e*P **P** **20 48 42.8 -0.6**
HAU Haudompre 73.34 316 *e*P **P** **20 48 42.8 -0.6**
HAU Haudompre 73.34 316 *e*P **P** **20 48 42.8 -0.6**
PGF Pioggiola 73.47 310 *e*P **P** **20 48 44.2 -0.2**
comp=Z,17nm,0.8s
PGF Pioggiola 73.47 310 *e*P **P** **20 48 44.2 -0.2**
PGF pmax pmax
comp=Z,17nm,0.8s
PGF Pioggiola 73.47 310 *e*P **P** **20 48 44.2 -0.2**
comp=Z,17nm,0.8s
PAGF Fort de Pagny 73.53 316 *e*P **P** **20 48 44.3 -0.2**
comp=Z,9.0nm,1.3s
PAGF Fort de Pagny 73.53 316 *e*P **P** **20 48 44.3 -0.2**
comp=Z,9.0nm,1.3s
GIVF Givet 73.54 318 *e*P **P** **20 48 44.2 -0.3**
GIVF Givet 73.54 318 *e*P **P** **20 48 44.2 -0.3**
GIVF Givet 73.54 318 *e*P **P** **20 48 44.2 -0.3**
BAIF Baives 73.92 318 *e*P **P** **20 48 46.7 -0.1**
comp=Z,26nm,1.3s
BAIF Baives 73.92 318 *e*P **P** **20 48 46.7 -0.1**
BAIF pmax pmax
comp=Z,26nm,1.3s
BAIF Baives 73.92 318 *e*P **P** **20 48 46.7 -0.1**
comp=Z,26nm,1.3s
LPG La Plagne 73.96 313 *e*P **P** **20 48 47.2 -0.2**
comp=Z,16nm,0.8s
LPG La Plagne 73.96 313 *e*P **P** **20 48 47.2 -0.2**
LPG pmax pmax
comp=Z,16nm,0.8s
LPG La Plagne 73.96 313 *e*P **P** **20 48 47.2 -0.2**
comp=Z,16nm,0.8s
LPL La Plagne 73.96 313 *e*P **P** **20 48 47.2 -0.2**
comp=Z,15nm,0.7s
LPL La Plagne 73.96 313 *e*P **P** **20 48 47.2 -0.2**
LPL pmax pmax
comp=Z,15nm,0.7s
LPL La Plagne 73.96 313 *e*P **P** **20 48 47.2 -0.2**
comp=Z,15nm,0.7s
MEZF Maizieres J'vi 73.97 316 *e*P **P** **20 48 46.8 -0.3**
MEZF Maizieres J'vi 73.97 316 *e*P **P** **20 48 46.8 -0.3**
CABF La Chapelle 73.99 314 *e*P **P** **20 48 46.7 -0.7**
CABF La Chapelle 73.99 314 *e*P **P** **20 48 46.7 -0.7**
CABF La Chapelle 73.99 314 *e*P **P** **20 48 46.7 -0.7**
SBF Sospel 74.08 311 *e*P **P** **20 48 47.1 -0.8**
comp=Z,15nm,0.9s
SBF Sospel 74.08 311 *e*P **P** **20 48 47.1 -0.8**
SBF pmax pmax
comp=Z,15nm,0.9s
SBF Sospel 74.08 311 *e*P **P** **20 48 47.1 -0.8**
comp=Z,15nm,0.9s
SFTF Sexfontaines 74.09 316 *e*P **P** **20 48 47.2 -0.6**
SFTF Sexfontaines 74.09 316 *e*P **P** **20 48 47.2 -0.6**
BNI Bardonecchia 74.16 313 *e*P **P** **20 48 47.8 -0.6**
BNI pmax pmax
comp=Z,10.0nm,1.1s
BNI Bardonecchia 74.16 313 *e*P **P** **20 48 47.8 -0.6**
comp=Z,9.8nm,1.1s
MBDF Montbardon 74.22 312 *e*P **P** **20 48 48.0 -0.8**
MBDF Montbardon 74.22 312 *e*P **P** **20 48 48.0 -0.8**
MBDF Montbardon 74.22 312 *e*P **P** **20 48 48.0 -0.8**
FRF La Foret Royal 74.72 311 *e*P **P** **20 48 50.9 -0.6**
FRF La Foret Royal 74.72 311 *e*P **P** **20 48 50.9 -0.6**
FRF La Foret Royal 74.72 311 *e*P **P** **20 48 50.9 -0.6**
ORIF Oris-en-Rattie 74.74 313 *e*P **P** **20 48 50.9 -0.8**
ORIF Oris-en-Rattie 74.74 313 *e*P **P** **20 48 50.9 -0.8**
ORIF Oris-en-Rattie 74.74 313 *e*P **P** **20 48 50.9 -0.8**
LMR La Mourre 74.90 311 *e*P **P** **20 48 51.9 -0.6**
LMR La Mourre 74.90 311 *e*P **P** **20 48 51.9 -0.6**
LMR La Mourre 74.90 311 *e*P **P** **20 48 51.9 -0.6**
LOR Lormes 75.17 316 *e*P **P** **20 48 53.2 -0.9**
comp=Z,13nm,1.1s
LOR Lormes 75.17 316 *e*P **P** **20 48 53.2 -0.9**
comp=Z,13nm,1.0s
SMF Signal de Mont 75.42 315 *e*P **P** **20 48 54.8 -0.7**
comp=Z,22nm,1.2s
SMF Signal de Mont 75.42 315 *e*P **P** **20 48 54.8 -0.7**
SMF pmax pmax
comp=Z,22nm,1.2s
SMF Signal de Mont 75.42 315 *e*P **P** **20 48 54.8 -0.7**
comp=Z,22nm,1.2s
SSF Saint Saulge 75.47 315 *e*P **P** **20 48 55.2 -0.6**
comp=Z,17nm,1.0s
SSF Saint Saulge 75.47 315 *e*P **P** **20 48 55.2 -0.6**
SSF pmax pmax
comp=Z,17nm,1.0s
SSF Saint Saulge 75.47 315 *e*P **P** **20 48 55.2 -0.6**
comp=Z,17nm,1.0s
VIVF Saint-Julien-l 75.56 313 *e*P **P** **20 48 55.7 -0.7**
comp=Z,15nm,0.9s
VIVF Saint-Julien-l 75.56 313 *e*P **P** **20 48 55.7 -0.7**
VIVF pmax pmax
comp=Z,15nm,0.9s
VIVF Saint-Julien-l 75.56 313 *e*P **P** **20 48 55.7 -0.7**
comp=Z,15nm,0.9s
AVF Avril sur Loir 75.67 315 *e*P **P** **20 48 56.2 -0.8**
comp=Z,16nm,1.0s

AVF	**Avril sur Loir**	75.67	315	*e*P		**P**		**20**	**48**	**56.2**	**-0.8**
AVF				pmax		pmax					
	comp=Z,16nm,1.0s										
AVF	**Avril sur Loir**	**75.67**	**315**	*e*P		**P**		**20**	**48**	**56.2**	**-0.8**
	comp=Z,16nm,1.0s										
ILAR	**Eielson Array**	**76.06**	**24**	P		**P**		**20**	**48**	**56.9**	**-2.0**
ILAR	**Eielson Array**	**76.06**	**24**	P		**P**		**20**	**48**	**56.9**	**-2.0**
	comp=Z,1.2nm,1.0s,baz=293,slow=5.0,SNR=8.4										
BGF	**Bois d'Agland**	**76.09**	**315**	*e*P		**P**		**20**	**48**	**58.6**	**-0.7**
BGF	**Bois d'Agland**	**76.09**	**315**	*e*P		**P**		**20**	**48**	**58.6**	**-0.7**
BGF	**Bois d'Agland**	**76.09**	**315**	*e*P		**P**		**20**	**48**	**58.6**	**-0.7**
LASF	**Ste Croix**	**76.40**	**312**	*e*P		**P**		**20**	**49**	**01.0**	**-0.2**
	comp=Z,58nm,1.4s										
LASF	**Ste Croix**	**76.40**	**312**	*e*P		**P**		**20**	**49**	**01.0**	**-0.2**
	comp=Z,58nm,1.4s										
TCF	**Toulx Ste Croi**	**76.60**	**315**	*e*P		**P**		**20**	**49**	**01.6**	**-0.7**
TCF	**Toulx Ste Croi**	**76.60**	**315**	*e*P		**P**		**20**	**49**	**01.6**	**-0.7**
TCF	**Toulx Ste Croi**	**76.60**	**315**	*e*P		**P**		**20**	**49**	**01.6**	**-0.7**
LDF	**La Druitiere**	**77.11**	**318**	*e*P		**P**		**20**	**49**	**04.3**	**-0.7**
LDF	**La Druitiere**	**77.11**	**318**	*e*P		**P**		**20**	**49**	**04.3**	**-0.7**
LDF	**La Druitiere**	**77.11**	**318**	*e*P		**P**		**20**	**49**	**04.3**	**-0.7**
CAF	**Calviac**	**77.24**	**314**	*e*P		**P**		**20**	**49**	**05.9**	**0.0**
	comp=Z,24nm,1.2s										
CAF	**Calviac**	**77.24**	**314**	*e*P		**P**		**20**	**49**	**05.9**	**0.0**
CAF				pmax		pmax					
	comp=Z,24nm,1.2s										
CAF	**Calviac**	**77.24**	**314**	*e*P		**P**		**20**	**49**	**05.9**	**0.0**
	comp=Z,24nm,1.2s										
FLN	**La Foliniere**	**77.25**	**318**	*e*P		**P**		**20**	**49**	**05.4**	**-0.4**
FLN	**La Foliniere**	**77.25**	**318**	*e*P		**P**		**20**	**49**	**05.4**	**-0.4**
FLN	**La Foliniere**	**77.25**	**318**	*e*P		**P**		**20**	**49**	**05.4**	**-0.4**
RJF	**Les Rejaudoux**	**77.44**	**314**	*e*P		**P**		**20**	**49**	**07.1**	**+0.1**
	comp=Z,42nm,1.4s										
RJF	**Les Rejaudoux**	**77.44**	**314**	*e*P		**P**		**20**	**49**	**07.1**	**+0.1**
RJF				pmax		pmax					
	comp=Z,42nm,1.4s										
RJF	**Les Rejaudoux**	**77.44**	**314**	*e*P		**P**		**20**	**49**	**07.1**	**+0.1**
	comp=Z,42nm,1.4s										
GRR	**Gorron**	**77.64**	**318**	*e*P		**P**		**20**	**49**	**07.5**	**-0.5**
GRR	**Gorron**	**77.64**	**318**	*e*P		**P**		**20**	**49**	**07.5**	**-0.5**
GRR	**Gorron**	**77.64**	**318**	*e*P		**P**		**20**	**49**	**07.5**	**-0.5**
SUMG	**Summit**	**77.69**	**348**	*e*P		**P**		**20**	**49**	**07.4**	**-1.0**
SUMG				pmax		pmax					
	comp=Z,5.0nm,0.9s										
SUMG	**Summit**	**77.69**	**348**	*e*P		**P**		**20**	**49**	**07.4**	**-1.0**
	comp=Z,4.6nm,0.9s										
SUMG	**Summit**	**77.69**	**348**	*i* P		**P**		**20**	**49**	**06.8**	**-1.5**
MTLF	**Montolieu**	**77.78**	**312**	*e*P		**P**		**20**	**49**	**08.5**	**-0.4**
	comp=Z,23nm,1.2s										
MTLF	**Montolieu**	**77.78**	**312**	*e*P		**P**		**20**	**49**	**08.5**	**-0.4**
MTLF				pmax		pmax					
	comp=Z,23nm,1.2s										
MTLF	**Montolieu**	**77.78**	**312**	*e*P		**P**		**20**	**49**	**08.5**	**-0.4**
	comp=Z,23nm,1.2s										
MFF	**Saint Martin d**	**77.95**	**316**	*e*P		**P**		**20**	**49**	**09.4**	**-0.4**
MFF	**Saint Martin d**	**77.95**	**316**	*e*P		**P**		**20**	**49**	**09.4**	**-0.4**
MFF	**Saint Martin d**	**77.95**	**316**	*e*P		**P**		**20**	**49**	**09.4**	**-0.4**
LFF	**La Frestale**	**78.09**	**314**	*e*P		**P**		**20**	**49**	**09.4**	**-1.2**
	comp=Z,24nm,1.0s										
LFF	**La Frestale**	**78.09**	**314**	*e*P		**P**		**20**	**49**	**09.4**	**-1.2**
LFF				pmax		pmax					
	comp=Z,24nm,1.0s										
LFF	**La Frestale**	**78.09**	**314**	*e*P		**P**		**20**	**49**	**09.4**	**-1.2**
	comp=Z,24nm,1.0s										
SGMF	**Saint Gilles**	**78.72**	**318**	*e*P		**P**		**20**	**49**	**12.8**	**-1.2**
SGMF	**Saint Gilles**	**78.72**	**318**	*e*P		**P**		**20**	**49**	**12.8**	**-1.2**
SGMF	**Saint Gilles**	**78.72**	**318**	*e*P		**P**		**20**	**49**	**12.8**	**-1.2**
ROSF	**Rostrenen**	**79.11**	**319**	*e*P		**P**		**20**	**49**	**15.2**	**-0.9**
ROSF	**Rostrenen**	**79.11**	**319**	*e*P		**P**		**20**	**49**	**15.2**	**-0.9**
ROSF	**Rostrenen**	**79.11**	**319**	*e*P		**P**		**20**	**49**	**15.2**	**-0.9**
EPF	**Esparros**	**79.16**	**313**	*e*P		**P**		**20**	**49**	**15.5**	**-1.1**
EPF	**Esparros**	**79.16**	**313**	*e*P		**P**		**20**	**49**	**15.5**	**-1.1**
EPF	**Esparros**	**79.16**	**313**	*e*P		**P**		**20**	**49**	**15.5**	**-1.1**
QUIF	**Quistinic**	**79.23**	**318**	*e*P		**P**		**20**	**49**	**15.9**	**-0.9**
QUIF	**Quistinic**	**79.23**	**318**	*e*P		**P**		**20**	**49**	**15.9**	**-0.9**
QUIF	**Quistinic**	**79.23**	**318**	*e*P		**P**		**20**	**49**	**15.9**	**-0.9**
ETSF	**Etsaut**	**79.81**	**313**	*e*P		**P**		**20**	**49**	**20.2**	**0.0**
	comp=Z,11nm,0.7s										
ETSF	**Etsaut**	**79.81**	**313**	*e*P		**P**		**20**	**49**	**20.2**	**0.0**
ETSF				pmax		pmax					
	comp=Z,11nm,0.7s										
ETSF	**Etsaut**	**79.81**	**313**	*e*P		**P**		**20**	**49**	**20.2**	**0.0**
	comp=Z,11nm,0.7s										
SJPF	**Ste Jean**	**80.16**	**313**	*e*P		**P**		**20**	**49**	**22.3**	**+0.3**
	comp=Z,10nm,0.8s										
SJPF	**Ste Jean**	**80.16**	**313**	*e*P		**P**		**20**	**49**	**22.3**	**+0.3**
SJPF				pmax		pmax					
	comp=Z,11nm,0.8s										
SJPF	**Ste Jean**	**80.16**	**313**	*e*P		**P**		**20**	**49**	**22.3**	**+0.3**
	comp=Z,10nm,0.8s										
LSZ	**Lusaka**	**80.78**	**248**	*e*P		**P**		**20**	**49**	**27.5**	**+1.7**
	comp=Z,7.3nm,0.8s										
ESDC	**Sonseca Array**	**83.56**	**311**	P		**P**		**20**	**49**	**40.2**	**+0.1**
ESDC	**Sonseca Array**	**83.56**	**311**	P		**P**		**20**	**49**	**40.2**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=41,slow=5.0,SNR=9.8										
TAM	**Tamanrasset**	**83.90**	**292**	*e*P		**P**		**20**	**49**	**42.3**	**+0.1**
TAM	**Tamanrasset**	**83.90**	**292**	*e*P		**P**		**20**	**49**	**42.2**	**+0.1**
SFJD	**Kangerlussuaq**	**84.66**	**349**	LR		LR		21	31	59.7	
	comp=Z,84nm,19.3s,baz=348,slow=39										
MVO	**Moncorvo**	**84.88**	**313**	*e*P		**P**		**20**	**49**	**46.8**	**+0.1**
	comp=Z,29nm,1.4s										
PCAB	**Cabril**	**85.25**	**314**	*e*P		**P**		**20**	**49**	**49.5**	**+1.0**
PVRL	**Vila Real**	**85.27**	**314**	*e*P		**P**		**20**	**49**	**50.8**	**+2.2**
MTE	**Manteigas**	**85.60**	**313**	*e*P		**P**		**20**	**49**	**51.1**	**+0.8**
PVIS	**Viseu**	**85.67**	**313**	*e*P		**P**		**20**	**49**	**51.2**	**+0.5**
PCBR	**Castelo Branco**	**85.84**	**313**	*e*P		**P**		**20**	**49**	**51.9**	**+0.5**
	comp=Z,22nm,1.4s										
PMRV	**Marv??o**	**85.99**	**312**	*e*P		**P**		**20**	**49**	**52.5**	**+0.3**
	comp=Z,20nm,1.5s										
PTOM	**Tomar**	**86.57**	**313**	*e*P		**P**		**20**	**49**	**55.7**	**+0.7**
PMTG	**Montargil**	**86.73**	**312**	*e*P		**P**		**20**	**49**	**56.0**	**+0.2**
EVO	**Evora**	**86.87**	**312**	*e*P		**P**		**20**	**49**	**55.1**	**-1.4**
	comp=Z,12nm,0.8s										
EVOP	**Sao Brissos**	**86.94**	**312**	*e*P		**P**		**20**	**49**	**55.1**	**-1.8**
EVOP				pmax		pmax					
	comp=Z,12nm,0.8s										
EVOP	**Sao Brissos**	**86.94**	**312**	*e*P		**P**		**20**	**49**	**55.1**	**-1.8**
	comp=Z,12nm,0.8s										
PBEJ	**Beja**	**87.03**	**311**	*e*P		**P**		**20**	**49**	**57.8**	**+0.5**
	comp=Z,19nm,1.6s										
PVAQ	**Vaqueiros**	**87.24**	**311**	*e*P		**P**		**20**	**49**	**59.0**	**+0.6**
YKA	**Yellowknife Ar**	**87.65**	**15**	P		**P**		**20**	**49**	**58.8**	**-1.0**
YKA	**Yellowknife Ar**	**87.65**	**15**	P		**P**		**20**	**49**	**58.8**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=324,slow=4.5,SNR=10										
TORD	**Torodi Ar. Bea**	**91.42**	**285**	P		**P**		**20**	**50**	**17.7**	**-0.7**
TORD	**Torodi Ar. Bea**	**91.42**	**285**	P		**P**		**20**	**50**	**17.7**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=70,slow=5.2,SNR=5.1										
VNA2	**Neumayer--Watz**	**119.93**	**201**	*e*PKP		**PKPdf**		**20**	**56**	**03.1**	**+1.9**
ROSC	**El Rosal**	**148.81**	**349**	PKPbc		**PKPbc**		**20**	**57**	**00.5**	**+0.1**
ROSC	**El Rosal**	**148.81**	**349**	PKPbc		**PKPbc**		**20**	**57**	**00.5**	**+0.1**
	comp=Z,13nm,0.7s,baz=84,slow=23,SNR=6.0										
LPAZ	**La Paz**	**165.16**	**308**	PKP		**PKPdf**		**20**	**57**	**16.4**	**-1.0**
LPAZ	**La Paz**	**165.16**	**308**	PKP		**PKPdf**		**20**	**57**	**16.4**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=57,slow=5.0,SNR=5.4										

ISK ***13*** *20:37:33.6, 37.27N×36.97E, h5km, MD2.3*
DDA ***13*** *20:37:33.7, 37.21N×36.89E, h6km, MD2.8, ML2.9*
ISCJB ***13*** *20:37:34.0±0.5, 37.20N±0.03×36.90E±0.04, h1km±6km, Error ellipse: s-maj=4.7km s-min=4.2km az=3.7*
CSEM ***13*** *20:37:34.2±0.1, 37.20N×36.91E, h2km, ML2.9, Error ellipse: s-maj=3.3km s-min=3.0km az=132.0*

ISC 13 20:37:34.1±1.0, 37°21N±0.02×36°90E±0.02, h6km±12km, n25, σ0s43/39, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
AYKD	**Aykdinkavak**	**0.22**	**341**	*i* P		**Pg**	**20**	**37**	**38.3**	**-0.2**
AYKD				*i* S		**Sg**	**20**	**37**	**42.2**	**+0.7**
GAZ	**Gaziantep**	**0.25**	**98**	*e*PG		**Pg**	**20**	**37**	**38.5**	**-0.6**
GAZ				*e*SG		**Sg**	**20**	**37**	**43.1**	**+0.6**
GAZ	**Gaziantep**	**0.25**	**98**	*e*Pg		**Pg**	**20**	**37**	**38.5**	**-0.6**
GAZ				*e*Sg		**Sg**	**20**	**37**	**43.1**	**+0.6**
KMRS	**Kahramanmaras**	**0.30**	**0**	*e*PG		**Pg**	**20**	**37**	**39.7**	**-0.3**
KMRS				*e*SG		**Sg**	**20**	**37**	**44.1**	**+0.1**
KMRS	**Kahramanmaras**	**0.30**	**0**	*e*Pg		**Pg**	**20**	**37**	**39.7**	**-0.3**
KMRS				*e*Sg		**Sg**	**20**	**37**	**44.1**	**+0.1**
KUZU	**Kuzuini**	**0.46**	**162**	*i* P		**Pg**	**20**	**37**	**42.7**	**-0.2**
KUZU				*i* S		**Sg**	**20**	**37**	**49.3**	**+0.4**
KUZU	**Kuzuini**	**0.46**	**162**	*i* P		**Pg**	**20**	**37**	**42.7**	**-0.2**
KUZU				*i* S		**Sg**	**20**	**37**	**49.3**	**+0.4**
GZT	**Gaziantep**	**0.55**	**74**	*i* P		**Pg**	**20**	**37**	**44.5**	**-0.3**
GZT				*i* S		**Sg**	**20**	**37**	**52.7**	**+0.7**
ANDN	**Andirin**	**0.58**	**310**	*i* P		**Pg**	**20**	**37**	**45.2**	**0.0**
ANDN	**Andirin**	**0.58**	**310**	*i* P		**Pg**	**20**	**37**	**45.2**	**0.0**
COBT	**Iskenderun**	**0.86**	**217**	*e*P		**Pg**	**20**	**37**	**50.6**	**0.0**
COBT	**Iskenderun**	**0.86**	**217**	*e*P		**Pg**	**20**	**37**	**50.6**	**0.0**
KOZT	**Kozan**	**0.90**	**288**	*e*PG		**Pn**	**20**	**37**	**52.8**	**-0.4**
KOZT	**Kozan**	**0.90**	**288**	*e*Pg		**Pn**	**20**	**37**	**52.8**	**-0.4**
ATAB	**Bozova**	**1.14**	**76**	*i* P		**Pb**	**20**	**37**	**56.1**	**-0.2**
ATAB				*i* S		**Sg**	**20**	**38**	**11.0**	**+0.1**
ATAB	**Bozova**	**1.14**	**76**	*i* P		**Pb**	**20**	**37**	**56.1**	**-0.2**
ATAB				*i* S		**Sg**	**20**	**38**	**11.0**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.26**	**343**	*e*PN		**Pb**	**20**	**37**	**58.0**	**-0.3**
SARI	**SarD1z-Kayseri**	**1.26**	**343**	*e*Pn		**Pb**	**20**	**37**	**58.0**	**-0.3**
YAYL	**Yayladag**	**1.33**	**209**	*i* P		**Pb**	**20**	**37**	**59.4**	**-0.2**
YAYL				*i* S		**Sg**	**20**	**38**	**17.6**	**+0.7**
YAYL	**Yayladag**	**1.33**	**209**	*i* P		**Pb**	**20**	**37**	**59.4**	**-0.2**
YAYL				*i* S		**Sg**	**20**	**38**	**17.6**	**+0.7**
AKCD	**Akcadag**	**1.36**	**36**	*i* P		**Pg**	**20**	**38**	**00.5**	**+0.3**
AKCD				*i* S		**Sg**	**20**	**38**	**18.6**	**+0.8**
AKCD	**Akcadag**	**1.36**	**36**	*i* P		**Pg**	**20**	**38**	**00.5**	**+0.3**
AKCD				*i* S		**Sg**	**20**	**38**	**18.6**	**+0.8**
URFA	**Urfa**	**1.55**	**81**	*e*PN		**Pn**	**20**	**38**	**02.4**	**+0.1**
URFA	**Urfa**	**1.55**	**81**	*e*Pn		**Pn**	**20**	**38**	**02.4**	**+0.1**
MALT	**Malatya**	**1.64**	**47**	*e*PN		**Pn**	**20**	**38**	**03.6**	**+0.1**

IDC 13 21:09:27.2±1.5, 3°65N×126°28E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/25, mbtmp3.5/5, Error ellipse: s-maj=116.8km s-min=17.9km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
FITZ	**Fitzroy Crossi**	**21.62**	**182**	P		P	21	14	20.3	+1.2
	2.4nm,0.8s,baz=0.9,slow=11,SNR=6.8									
WRA	**Warramunga Arr**	**24.74**	**162**	P		P	21	14	49.9	-0.7
	2.4nm,0.5s,baz=338,slow=10,SNR=34									
ASAR	**Alice Springs**	**28.14**	**165**	P		P	21	15	21.4	0.0
	0.2nm,0.4s,baz=346,slow=7.3,SNR=7.5									
MKAR	**Makanchi Array**	**57.37**	**325**	P		P	21	19	17.6	+0.1
	0.2nm,0.4s,baz=118,slow=7.7,SNR=7.1									
KURBB	**Kurchatov Arra**	**61.57**	**328**	P		P	21	19	45.7	-0.6
	0.1nm,0.3s,baz=127,slow=7.0,SNR=5.9									
BVAR	**Borovoye Array**	**67.15**	**327**	P		P	21	20	23.2	+0.4
	0.3nm,0.5s,baz=107,slow=7.7,SNR=3.6									

CASC ***13*** *21:09:29.8±2.1, 13.29N×91.30W, h24km±12km, MD3.9, ML4.2, mb4.3(NEIC)*
ISCJB ***13*** *21:09:31.3±0.8, 13.33N±0.05×91.25W±0.04, h36km±7km, mb4.3/23, MS3.1/3, Error ellipse: s-maj=9.9km s-min=4.5km az=33.0*
IDC ***13*** *21:09:35.1±2.0, 13.73N×90.91W, h53km±17km, mb3.9/9, mb1 4.2/12, mb1mx3.9/27, mbtmp4.0/12, ML4.1/3, MS3.7/2, Ms1 3.7/2, ms1mx3.0/33, Error ellipse: s-maj=28.6km s-min=10.8km az=43.0*
NEIC ***13*** *21:09:36.7±1.4, 13.64N×90.97W, h71km±12km, mb4.3/17, Error ellipse: s-maj=18.9km s-min=8.2km az=225.0*

ISC 13 21:09:34.6±1.3, 13°47N±0.07×91°17W±0.05, h54km±11km, n232, σ1s32/246, mb4.3/23, MS3.6/3, 84C-71D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
JAT	**Jato**	**0.96**	**332**	⇓*e*P		**Pn**	**21**	**09**	**49.9**	**-2.0**
IXG	**Ixpaco**	**0.99**	**45**	*e*P		**Pn**	**21**	**09**	**50.3**	**-2.2**
IXG				*e*S		**Sn**	**21**	**10**	**08.8**	**+3.2**
FUG	**Fuego 3**	**1.03**	**18**	⇓*e*P		**Pn**	**21**	**09**	**51.0**	**-2.0**
PCG	**Pacaya**	**1.07**	**31**	*e*P		**Pn**	**21**	**09**	**51.8**	**-1.9**
PCG				⇓*e*S		**Sn**	**21**	**10**	**10.2**	**+2.4**
FG6		**1.12**	**151**	*e*P		**Pn**	**21**	**09**	**52.5**	**-1.9**
FG6				*e*S		**Sn**	**21**	**10**	**11.6**	**+2.6**
NBG	**Las Nubes**	**1.37**	**36**	*e*P		**Pn**	**21**	**09**	**57.0**	**-0.7**
NBG				⇓*e*S		**Sn**	**21**	**10**	**18.7**	**+3.7**
RTR	**El Retiro**	**1.55**	**74**	*e*P		**Pn**	**21**	**09**	**58.0**	**-2.0**
RTR				*e*S		**Sn**	**21**	**10**	**20.3**	**+1.3**
SBLS	**San Blas**	**1.55**	**76**	*e*P		**Pn**	**21**	**09**	**57.7**	**-2.4**
SNJE	**San Jose**	**1.58**	**75**	*e*P		**Pn**	**21**	**09**	**58.2**	**-2.2**
RBDL	**Robledal**	**1.58**	**66**	*e*P		**Pn**	**21**	**09**	**58.6**	**-1.8**
BOQS	**Boqueron**	**1.86**	**82**	*e*P		**Pn**	**21**	**10**	**02.5**	**-1.8**
SNET	**Serv Nac Est T**	**1.90**	**83**	*e*S		**Sn**	**21**	**10**	**28.2**	**+0.6**
SNET				AML		AML	21	10	32.9	
	comp=Z,3μm,0.5s									
SNET				*i*			21	10	33.0	
MTO2	**Montecristo 2**	**1.99**	**62**	*e*P		**Pn**	**21**	**10**	**04.8**	**-1.3**
MTO2				*e*S		**Sn**	**21**	**10**	**31.9**	**+2.0**
LFU	**La Fuente**	**2.02**	**82**	*e*P		**Pn**	**21**	**10**	**05.2**	**-1.1**
LBRS	**Las Brisas**	**2.09**	**82**	*e*P		**Pn**	**21**	**10**	**06.1**	**-1.1**
MRL	**Marmol**	**2.14**	**42**	*e*P		**Pn**	**21**	**10**	**08.5**	**+0.4**
MRL				*e*S		**Sn**	**21**	**10**	**37.8**	**+4.1**
SNVI	**San Vicente**	**2.28**	**86**	*e*P		**Pn**	**21**	**10**	**08.8**	**-1.1**
VSM	**San Miguel**	**2.82**	**90**	*e*P		**Pn**	**21**	**10**	**16.9**	**-0.5**
CAHU	**Cacacuatique**	**2.90**	**84**	*e*P		**Pn**	**21**	**10**	**17.0**	**-1.4**
CNCH	**Conchagua**	**3.26**	**93**	*e*P		**Pn**	**21**	**10**	**21.9**	**-1.4**
TGUH	**Tegucigalpa,Un**	**3.84**	**81**	*e*Pn		**Pn**	**21**	**10**	**31.9**	**+0.8**
TGUH				*e*Sn		**Sn**	**21**	**11**	**15.5**	**+0.5**
CMIG	**Matias Romero**	**5.08**	**316**	P		**Pn**	**21**	**10**	**45.8**	**-1.5**
CMIG				S		**Sn**	**21**	**11**	**45.8**	**+0.1**
CMIG	**Matias Romero**	**5.08**	**316**	P		**Pn**	**21**	**10**	**46.8**	**-1.5**
	comp=Z,4.8nm,0.3s,baz=116,slow=9.6,SNR=26									
CMIG				S		**Sn**	**21**	**11**	**45.8**	**+0.1**
	comp=Z,8.8nm,0.3s,baz=94,slow=23,SNR=6.9									
JTS	**JuntasAbangare**	**6.86**	**117**	*e*Pn		**Pn**	**21**	**11**	**14.7**	**+2.0**
JTS				*e*Sn		**Sn**	**21**	**12**	**31.0**	**+1.6**
JTS	**JuntasAbangare**	**6.86**	**117**	P		**Pn**	**21**	**11**	**12.7**	**0.0**
	comp=Z,1.2nm,0.3s,baz=311,slow=18,SNR=9.0									
JTS				S		**Sn**	**21**	**12**	**30.0**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=214,slow=21,SNR=2.1									
TEIG	**Tepich**	**7.27**	**22**	P		**Pn**	**21**	**11**	**17.4**	**-0.8**
TEIG				S		**Sn**	**21**	**12**	**37.8**	**-1.7**
TEIG	**Tepich**	**7.27**	**22**	P		**Pn**	**21**	**11**	**17.4**	**-0.8**
	comp=Z,47nm,0.3s,baz=191,slow=23,SNR=124									
TEIG				S		**Sn**	**21**	**12**	**37.8**	**-1.7**
	baz=26,slow=23,SNR=1.8									
732A	**Laxson Ranch,**	**17.25**	**333**	⇑P		**Pn**	**21**	**13**	**32.7**	**+0.9**
	baz=17									
632A	**Uvalde**	**17.85**	**335**	⇑P		**Pn**	**21**	**13**	**39.4**	**+0.3**
	baz=18									
631A	**Perdido Creek**	**18.11**	**333**	⇓P		**P**	**21**	**13**	**42.3**	**+0.2**
	baz=18									
532A	**Rocksprings**	**18.44**	**335**	⇓P		**Pn**	**21**	**13**	**48.0**	**+1.6**
	baz=18,SNR=5.9									
JCT	**Junction City**	**18.71**	**336**	*e*P		**P**	**21**	**13**	**49.5**	**+0.8**
	comp=Z,6.0nm,0.7s									
JCT				*e*S		**Sn**	**21**	**17**	**17.3**	**-1.0**
531A	**Rocksprings**	**18.74**	**334**	⇑P		**P**	**21**	**13**	**50.0**	**+0.9**
	baz=19									
432A	**Menard**	**19.06**	**337**	⇑P		**P**	**21**	**13**	**53.0**	**+0.4**
	baz=19									
530A	**J-C Ranch, Com**	**19.08**	**332**	⇑P		**Pn**	**21**	**13**	**54.6**	**+0.6**
	baz=19,SNR=5.9									
431A	**Sonora**	**19.22**	**335**	⇑P		**P**	**21**	**13**	**55.3**	**+1.0**
	baz=19,SNR=7.3									
628A	**Black Gap, Mar**	**19.29**	**328**	⇓P		**P**	**21**	**13**	**56.4**	**+1.3**
	baz=19,SNR=12									
529A	**Stev Forest Ra**	**19.47**	**330**	⇑P		**P**	**21**	**13**	**58.1**	**+1.0**
	baz=20,SNR=9.9									
332A	**Millersview**	**19.50**	**338**	⇑P		**P**	**21**	**13**	**58.2**	**+0.9**
	baz=20									
627A	**Terlingua Ranc**	**19.53**	**326**	⇑P		**Pn**	**21**	**13**	**59.5**	**+0.1**
	baz=20,SNR=17									
430A	**Baggett Ranch,**	**19.58**	**333**	⇑P		**P**	**21**	**13**	**58.9**	**+0.7**
	baz=20									
TXAR	**Lajitas Array**	**19.59**	**326**	P		**P**	**21**	**13**	**59.8**	**+1.4**
TXAR	**Lajitas Array**	**19.59**	**326**	P		**P**	**21**	**13**	**59.8**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=154,slow=12,SNR=61									
331A	**San Angelo**	**19.69**	**336**	⇓P		**P**	**21**	**14**	**00.0**	**+0.5**
	baz=20,SNR=10.0									
429A	**Davenport Ranc**	**19.73**	**332**	⇑P		**P**	**21**	**14**	**01.3**	**+1.3**
	baz=20,SNR=9.6									
528A	**Cox Ranch, San**	**19.78**	**329**	⇓P		**P**	**21**	**14**	**01.4**	**+0.8**
	baz=20									
LRAL	**Lakeview Retre**	**19.85**	**10**	*e*Pn		**Pn**	**21**	**14**	**05.8**	**+2.7**
	comp=Z,18nm,0.9s									
232A	**Coleman**	**19.92**	**338**	⇓P		**P**	**21**	**14**	**01.7**	**-0.2**
	baz=20,SNR=8.2									
626A	**Big Bend Ranch**	**20.01**	**325**	⇑P		**P**	**21**	**14**	**04.3**	**+1.2**
	baz=20,SNR=29									
330A	**Mertzon**	**20.09**	**334**	⇑P		**P**	**21**	**14**	**03.9**	**+0.1**
	baz=20,SNR=14									
428A	**Kincaid Ranch,**	**20.19**	**330**	⇓P		**P**	**21**	**14**	**05.3**	**+0.3**
	baz=20									
231A	**Bronte**	**20.21**	**337**	⇓P		**P**	**21**	**14**	**04.8**	**-0.3**
	baz=20									
526A	**Mary Lane Ranc**	**20.38**	**326**	⇓P		**P**	**21**	**14**	**08.3**	**+1.2**
	baz=20,SNR=12									
230A	**Sterling City**	**20.48**	**335**	⇑P		**P**	**21**	**14**	**08.1**	**0.0**
	baz=20									
329A	**Wagon Wheel Ra**	**20.50**	**333**	⇓P		**P**	**21**	**14**	**08.4**	**+0.1**
	baz=20,SNR=6.1									
ABTX	**Abilene, Hawle**	**20.58**	**339**	⇓P		**P**	**21**	**14**	**09.1**	**-0.1**
	baz=21,SNR=7.3									
427A	**Haytar Ranch,**	**20.65**	**329**	⇓P		**P**	**21**	**14**	**10.5**	**+0.6**
	baz=21,SNR=5.1									
SDV	**Santo Domingo**	**20.65**	**101**	*e*P		**P**	**21**	**14**	**09.5**	**-0.7**
	comp=Z,4.9nm,0.6s									
328A	**Wristen Ranch,**	**20.80**	**331**	⇑P		**P**	**21**	**14**	**12.1**	**+0.6**
	baz=21,SNR=26									
426A	**McDonald Obser**	**20.82**	**327**	⇑P		**P**	**21**	**14**	**12.8**	**+0.8**
	baz=21,SNR=12									
229A	**Bryant Ranch,**	**20.84**	**334**	⇓P		**P**	**21**	**14**	**11.6**	**-0.4**
	baz=21									
131A	**Roby**	**20.89**	**338**	⇓P		**P**	**21**	**14**	**12.4**	**0.0**
	baz=21					

baz=26,SNR=6.0
W23A Werner Place, 25.48 331 ⇑P **P** **21 14 59.5 +1.5**
baz=26
V24A Rampart Ranch, 25.54 333 ⇑P **P** **21 15 00.0 +1.4**
baz=26
Y20A Horse Springs, 25.66 325 ⇓P **P** **21 15 02.2 +2.5**
baz=26,SNR=17
X21A Alamocita Cree 25.75 327 ⇓P **P** **21 15 02.2 +1.7**
baz=26,SNR=16
TUC Tucson 25.96 320 *eP* **P** **21 15 03.4 +1.1**
W21A San Fidel 26.19 328 ⇑P **P** **21 15 05.8 +1.3**
baz=26
X20A Quemado 26.20 326 ⇓P **P** **21 15 06.3 +1.7**
baz=26
S26A Kim 26.44 338 ⇑P **P** **21 15 06.5 0.0**
baz=26
V22A San Miguel Ran 26.46 330 ⇑P **P** **21 15 07.7 +0.9**
baz=26
T24A Torres, Weston 26.58 335 ⇑P **P** **21 15 09.2 +1.1**
baz=27
W20A Ramah 26.64 327 ⇓P **P** **21 15 10.4 +1.8**
baz=27,SNR=5.4
214A Organ Pipe Nat 27.05 316 ⇑P **P** **21 15 15.0 +2.9**
baz=27
V20A Brimhall 27.14 328 ⇓P **P** **21 15 14.7 +1.7**
baz=27
U20A Newcomb 27.62 329 ⇓P **P** **21 15 18.5 +1.3**
baz=28
X16A Lo Mia Camp, P 27.79 322 ⇑P **P** **21 15 21.2 +2.4**
baz=28
113A Mohawk Valley, 28.19 317 ⇑P **P** **21 15 24.8 +2.7**
baz=28
MVCO Mesa Verde 28.26 330 *eP* **P** **21 15 24.7 +1.7**
comp=Z,4.7nm,0.8s
MVCO Mesa Verde 28.26 330 ⇑P **P** **21 15 23.9 +0.9**
baz=28
WUAZ Wupatki 28.52 324 *eP* **P** **21 15 26.3 +1.0**
comp=Z,6.7nm,0.8s
WUAZ Wupatki 28.52 324 ⇑P **P** **21 15 26.8 +1.6**
baz=29
S20A Disappointment 28.69 331 ⇓P **P** **21 15 27.4 +0.6**
baz=29
S18A Hurst Farm, BI 29.38 329 ⇑P **P** **21 15 33.9 +0.9**
baz=29
U15A North Rim 29.69 324 ⇑P **P** **21 15 37.7 +1.9**
baz=30,SNR=6.4
BC3 Big Chuckawall 29.85 316 ⇑P **P** **21 15 38.8 +1.7**
baz=30
GMRC Granite Mounta 30.66 318 ⇑P **P** **21 15 46.1 +1.8**
baz=31
P18A Preston Nutter 31.01 331 ⇑P **P** **21 15 48.4 +1.0**
baz=31
CCUT Cedar City 31.09 324 *eP* **P** **21 15 51.2 +3.1**
comp=Z,5.8nm,0.9s
N20A Spence Gulch, 31.09 334 ⇑P **P** **21 15 49.4 +1.3**
baz=31
MSU Marysvale 31.13 327 *eP* **P** **21 15 47.0 -1.5**
HEC Hector,Ludlow 31.13 317 ⇑P **P** **21 15 51.4 +3.1**
baz=31
MPMC Manual Prospec 32.63 318 ⇑P **P** **21 16 03.6 +2.0**
baz=33
DUG Dugway 32.71 328 ⇓P **P** **21 16 03.0 +0.9**
baz=33
SADO Sadowa 32.84 16 LR LR 21 30 03.1
comp=Z,135nm,19.1s,baz=270,slow=38
R11A Troy Canyon, C 32.91 323 ⇑P **P** **21 16 06.5 +2.5**
baz=33,SNR=5.8
PDAR Pinedale Array 33.24 335 P **P** **21 16 07.5 +0.7**
PDAR PcP **PcP** **21 18 48.0 -0.4**
PDAR Pinedale Array 33.24 335 P **P** **21 16 07.5 +0.7**
comp=Z,0.5nm,0.7s,baz=148,slow=8.6,SNR=3.3
PDAR PcP **PcP** **21 18 48.0 -0.4**
comp=Z,0.5nm,0.6s,baz=163,slow=4.5,SNR=3.8
I20A Worland 33.68 338 ⇑P **P** **21 16 11.2 +0.7**
baz=34
L15A Malad City 33.88 331 ⇑P **P** **21 16 13.1 +0.8**
baz=34
I19A Meeteetse 34.08 337 ⇓P **P** **21 16 15.3 +1.2**
baz=34
ELK Elko 34.38 327 *eP* **P** **21 16 18.4 +1.6**
comp=Z,2.8nm,0.8s
TPAW Teton Pass 34.41 334 *eP* **P** **21 16 18.4 +1.3**
G21A Lodge Grass 34.46 340 ⇑P **P** **21 16 18.2 +0.9**
baz=34
K15A Arbon 34.47 332 ⇑P **P** **21 16 18.4 +0.9**
baz=34
NVAR Mina Array Bea 34.59 321 P **P** **21 16 20.2 +1.5**
NVAR PcP **PcP** **21 18 53.6 +1.3**
NVAR Mina Array Bea 34.59 321 P **P** **21 16 20.2 +1.5**
comp=Z,4.9nm,0.7s,baz=132,slow=8.2,SNR=41
NVAR PcP **PcP** **21 18 53.6 +1.3**
comp=Z,2.1nm,0.7s,baz=130,slow=3.8,SNR=10
NVAR LR LR 21 33 14.4
comp=Z,107nm,20.9s,baz=324,slow=41
K14A Jones Ranch, D 34.67 331 ⇑P **P** **21 16 20.4 +1.3**
baz=35
G20A Bridger 34.81 339 ⇓P **P** **21 16 20.9 +0.6**
baz=35
H18A Shoshone NF, C 34.88 337 ⇓P **P** **21 16 22.0 +1.0**
baz=35
SAML Samuel 35.61 127 *eP* **P** **21 16 25.4 -2.0**
comp=Z,4.1nm,0.7s
I14A Mackay 35.86 332 ⇑P **P** **21 16 31.0 +1.5**
baz=36
HLID Hailey 36.03 331 *eP* **P** **21 16 31.8 +0.9**
comp=Z,56nm,2.8s
HLID Hailey 36.03 331 ⇓P **P** **21 16 32.2 +1.3**
baz=36
H15A Lima 36.05 334 ⇑P **P** **21 16 32.1 +1.1**
baz=36
I13A Wildhorse Cree 36.16 331 ⇓P **P** **21 16 33.1 +1.1**
baz=36
F17A Fitzpatrick Pl 36.29 337 ⇓P **P** **21 16 33.8 +0.8**
baz=36
MCMT McKenzie Canyo 36.30 334 *eP* **P** **21 16 33.8 +0.5**
comp=Z,3.8nm,0.8s
G15A Dillon 36.42 334 ⇑P **P** **21 16 35.7 +1.5**
baz=36
I12A Atlanta 36.55 330 ⇑P **P** **21 16 36.5 +1.2**
baz=37
MFID Camas Ranch 36.61 329 ⇑P **P** **21 16 37.0 +1.2**
baz=37
H13A Challis 36.72 332 ⇑P **P** **21 16 37.7 +1.0**
baz=37,SNR=6.0
ULM Lac du Bonnet 36.88 355 P P 21 16 35.0 -2.8
ULM Lac du Bonnet 36.88 355 P P 21 16 35.0 -2.8
comp=Z,1.4nm,0.4s,baz=174,slow=7.7,SNR=2.8
F15A Butte 36.97 335 ⇑P **P** **21 16 39.3 +0.4**
baz=37
H12A Diamond D Ranc 36.98 331 ⇑P **P** **21 16 39.8 +0.8**
baz=37,SNR=5.8
E16A East Helena 37.20 336 ⇓P **P** **21 16 41.4 +0.6**
baz=37
D17A Six Diamond Ra 37.35 338 ⇑P **P** **21 16 42.2 +0.2**
baz=37
E15A Deer Lodge 37.50 335 ⇑P **P** **21 16 44.1 +0.8**
baz=38
G12A Big Creek, Yel 37.64 332 ⇓P **P** **21 16 45.1 +0.5**
baz=38
F13A Darby 37.70 333 ⇓P **P** **21 16 45.9 +0.9**
baz=38
F12A Elk City 38.09 332 ⇓P **P** **21 16 48.6 +0.3**
baz=38,SNR=8.1
D13A Huson 38.78 334 ⇑P **P** **21 16 54.5 +0.5**
baz=39
B13A Whitefish 39.80 336 ⇓P **P** **21 17 03.6 +1.1**
baz=40
SIV San Ignacio 41.74 134 P **P** **21 17 17.8 -1.0**
SIV San Ignacio 41.74 134 P **P** **21 17 17.8 -1.0**
comp=Z,2.9nm,0.7s,baz=317,slow=8.9,SNR=14
FFC Flin Flon 42.03 351 *eP* **P** **21 17 18.9 -1.7**
SCHQ Schefferville 45.45 20 P P 21 17 45.1 -3.0
SCHQ Schefferville 45.45 20 P P 21 17 45.1 -3.0
comp=Z,9.0nm,0.7s,baz=220,slow=7.0,SNR=17
YKA Yellowknife Ar 51.73 346 P **P** **21 18 34.5 -1.7**
YKA PcP **PcP** **21 19 47.9 -1.0**
YKA Yellowknife Ar 51.73 346 P **P** **21 18 34.4 -1.7**
comp=Z,0.7nm,0.4s,baz=148,slow=7.7,SNR=32
YKA PcP **PcP** **21 19 47.9 -1.0**
comp=Z,0.3nm,0.6s,baz=146,slow=4.0,SNR=5.7
RES Resolute Bay 61.24 359 *eP* P 21 19 40.9 -2.8
comp=Z,3.2nm,0.6s
ILAR Eielson Array 63.64 337 P **P** **21 19 59.1 -0.7**
ILAR Eielson Array 63.64 337 P **P** **21 19 59.1 -0.7**
comp=Z,1.7nm,0.8s,baz=143,slow=4.1,SNR=21
TRF Thorofare Moun 64.46 335 *eP* **P** **21 20 04.1 -1.3**
comp=Z,3.2nm,0.7s
MKAR Makanchi Array 119.73 5 PKP **PKPdf** **21 28 18.4 -0.5**

MKAR Makanchi Array 119.73 5 PKP **PKPdf** **21 28 18.4 -0.5**
comp=Z,0.4nm,0.7s,baz=275,slow=2.3,SNR=4.3
STKA Stephens Creek 128.49 240 PKP **PKPdf** **21 28 36.4 +0.4**
STKA Stephens Creek 128.49 240 PKP **PKPdf** **21 28 36.4 +0.4**
comp=Z,1.2nm,0.8s,baz=90,slow=4.0,SNR=3.0
WRA Warramunga Arr 136.04 255 PKP **PKPdf** **21 28 52.0 +1.4**
WRA Warramunga Arr 136.04 255 PKP **PKPdf** **21 28 52.0 +1.4**
comp=Z,11nm,0.7s,baz=86,slow=2.5,SNR=4.0
ASAR Alice Springs 136.24 250 PKP **PKPdf** **21 28 51.9 +1.0**
ASAR Alice Springs 136.24 250 PKP **PKPdf** **21 28 51.9 +1.0**
comp=Z,0.3nm,0.7s,baz=345,slow=3.0,SNR=4.5
CMAR Chiang Mai Arr 146.75 342 PKPbc **PKPbc** **21 29 11.8 +0.4**
CMAR Chiang Mai Arr 146.75 342 PKPbc **PKPbc** **21 29 11.8 +0.4**
comp=Z,6.0nm,0.7s,baz=342,slow=3.3,SNR=31

*STR **13** 21:14:13.2±4.0, 41°.92N×14°.53E, h10km, Ml4.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BJI **13** 21:14:22.9, 42°.74N×12°.96E, h12km, mB5.3/36, mb4.9/42, Ms5.1/38, Ms7 4.8/38*
*CRAAG **13** 21:14:23.9, 42°.55N×13°.42E, Ml4.9*
*ISCJB **13** 21:14:23.8±0.2, 42°.573N±0°.010×13°.395E±0°.010, h1km±1km, mb4.8/110, MS4.5/45, Error ellipse: s-maj=1.7km s-min=1.2km az=15.8*
*LDG **13** 21:14:24.5±0.2, 42°.54N×13°.36E, h2km, Ml4.9/13, Error ellipse: s-maj=5.4km s-min=3.4km az=3.0*
*ROM **13** 21:14:24.4±0.1, 42°.50N×13°.38E, h9km, Ml5.0/7, Error ellipse: s-maj=1.0km s-min=0.8km az=46.0*
*PRU **13** 21:14:24.9, 42°.54N×13°.21E, h0km, Ml4.9*
*NEIC **13** 21:14:24.0, 42°.50N×13°.36E, h8km, mb4.9/43, ML4.9(PDG), ML4.9(LDG), ML4.9(STR), MW5.1(ROM), After ROM.*
NEIC Felt [V] at Amatrice, Anagni, Castiglione Messer Raimondo, Colledara, L'Aquila, Magliano de' Marsi, Montegiorgio and Todi; [IV] at Ascoli Piceno, Bellante, Campli, Cheti, Citta Sant' Angelo, Fabriano, Fermo, Folignano, Foligno, Giulianova, Grottammare, Macerata, Montesilvano, Montorio al Vomano, Narni, Norcia, Perugia, Pratola Peligna, Rieti, Rome, Roseto degli Abruzzi, San Benedetto del Tronto, Spoleto, Teramo, Terni, Tolentino, Vasto and Viterbo; [III] at Alba Adriatica, Ancona, Avezzano, Castelfidardo, Cepaggati, Francavilla al Mare, Guidonia Montecelio, Jesi, Martinsicuro, Monteprandone, Monterotondo, Pescara, Sant' Egidio alla Vibrata and Sulmona. Felt throughout central Italy and from southern Veneto to Basilicata.
*PDG **13** 21:14:24.6±0.6, 42°.55N×13°.37E, h6km±1km, MD4.8/4, ML4.7/9, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
*IDC **13** 21:14:24.4±0.4, 42°.56N×13°.36E, h0km, mb4.5/33, mb1 4.6/45, mb1mx4.6/50, mbtmp4.5/45, ML4.3/9, MS4.3/29, Ms1 4.3/29, ms1mx4.2/37, Error ellipse: s-maj=9.2km s-min=8.2km az=159.0*
*BEO **13** 21:14:25.0±0.6, 42°.75N×13°.01E, h14km±11km, ML5.1/7*
*CSEM **13** 21:14:25.1±0.1, 42°.53N×13°.35E, h2km, mb4.9/32, Ms5.0, Mw5.1, Error ellipse: s-maj=1.8km s-min=1.4km az=15.0*
*MOS **13** 21:14:25.3±1.0, 42°.61N×13°.35E, h16km, mb5.1/58, MS4.3/34, Error ellipse: s-maj=3.5km s-min=2.5km az=104.7*
*SFS **13** 21:14:26.0, 42°.59N×13°.40E, h5km, ML5.0*
*GCMT **13** 21:14:29.7±0.2, 42°.52N×13°.21E, h12km, MW5.0, Moment Tensor Solution. s41,c58; s89,c151; Moment tensor: Scale 10^16 Nm; Mrr-4.08±.08; Mθθ 1.55±.08; Mφφ 2.52±.08; Mrθ-1.61±.27; Mrφ-1.98±.06; Mθφ 0.43±.26; Best double couple: M=4.40000×10^16 NP1:ϕ=334.00000°, δ=37.00000°, λ=-70.00000°. NP2:ϕ=129.00000°, δ=55.00000°, λ=-105.00000°. Principal axes: T 4.2990, Plg9.0000°, Azm230.0000°; N 0.2100, Plg12.0000°, Azm138.0000°; P -4.5100, Plg75.0000°, Azm357.0000°; Data Used: ll lU lC G CN.*

ISC 13 21:14:26.6±0.3, 42°.51N±0°.01×13°.37E±0°.01, h13km±1km, n1394, σ1°.47/1649, mb4.9/110, MS4.5/45, 190C-170D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.04**	**45**	Pg	**Pg**	**21 14 26.8**	**-2.4**
CAMP				Sg	**Sg**	**21 14 28.1**	**-3.0**
	653μm,1.7s						
CAMP	**Campotosto**	**0.04**	**45**	Pg	**Pg**	**21 14 26.8**	**-2.4**
CAMP				Sg	**Sg**	**21 14 28.1**	**-3.0**
	653μm,1.7s						
AQU	**L'Aquila**	**0.15**	**170**	⇑*i*P	**Pg**	**21 14 28.6**	**-1.8**
AQU				S	**Sg**	**21 14 31.8**	**-1.2**
AQU	**L'Aquila**	**0.15**	**170**	⇑*e*Pg	**Pg**	**21 14 28.7**	**-1.6**
AQU				Sg	**Sg**	**21 14 31.5**	**-1.5**
AQU	**L'Aquila**	**0.15**	**170**	⇑*e*Pg	**Pg**	**21 14 28.7**	**-1.6**
AQU				Sg	**Sg**	**21 14 31.5**	**-1.5**
AQU				S	**Sg**	**21 14 31.8**	**-1.2**
TERO	**Teramo**	**0.21**	**56**	P	**Pg**	**21 14 29.3**	**-2.0**
TERO				S	**Sg**	**21 14 32.6**	**-1.9**
TERO	**Teramo**	**0.21**	**56**	Pg	**Pg**	**21 14 29.2**	**-2.0**
TERO				Sg	**Sg**	**21 14 32.5**	**-2.0**
TERO	**Teramo**	**0.21**	**56**	P	**Pg**	**21 14 29.3**	**-2.0**
TERO				S	**Sg**	**21 14 32.6**	**-1.9**
LNSS	**Leonessa**	**0.26**	**292**	Pg	**Pg**	**21 14 30.6**	**-1.5**
LNSS				Sg	**Sg**	**21 14 35.4**	**-0.5**
LNSS	**Leonessa**	**0.26**	**292**	Pg	**Pg**	**21 14 30.6**	**-1.5**
FAGN	**Fagnano**	**0.29**	**146**	Pg	**Pg**	**21 14 30.8**	**-1.8**
FAGN				Sg	**Sg**	**21 14 35.6**	**-1.0**
FAGN	**Fagnano**	**0.29**	**146**	Pg	**Pg**	**21 14 30.8**	**-1.8**
FAGN				Sg	**Sg**	**21 14 35.6**	**-1.0**
FIAM	**Fiamignano**	**0.30**	**218**	P	**Pg**	**21 14 31.2**	**-1.6**
FIAM				S	**Sg**	**21 14 37.1**	**+0.1**
FIAM	**Fiamignano**	**0.30**	**218**	⇑*i*Pg	**Pg**	**21 14 31.2**	**-1.6**
FIAM				Sg	**Sg**	**21 14 36.5**	**-0.5**
FIAM	**Fiamignano**	**0.30**	**218**	⇑*i*Pg	**Pg**	**21 14 31.2**	**-1.6**
FIAM				Sg	**Sg**	**21 14 36.5**	**-0.5**
FIAM				S	**Sg**	**21 14 37.1**	**+0.1**
VCEL	**Villa Celiera**	**0.37**	**107**	Pg	**Pg**	**21 14 32.2**	**-1.8**
VCEL				Sg	**Sg**	**21 14 38.2**	**-0.9**
	273μm,0.8s						
VCEL	**Villa Celiera**	**0.37**	**107**	Pg	**Pg**	**21 14 32.2**	**-1.8**
VCEL				Sg	**Sg**	**21 14 38.2**	**-0.9**
	273μm,0.8s						
NRCA	**Norcia**	**0.38**	**331**	P	**Pg**	**21 14 32.4**	**-1.8**
NRCA	**Norcia**	**0.38**	**331**	⇑*i*Pg	**Pg**	**21 14 32.4**	**-1.8**
NRCA	**Norcia**	**0.38**	**331**	⇑*i*Pg	**Pg**	**21 14 32.4**	**-1.8**
GAVE	**Gavelli**	**0.40**	**298**	Pg	**Pg**	**21 14 33.3**	**-1.2**
GAVE	**Gavelli**	**0.40**	**298**	Pg	**Pg**	**21 14 33.3**	**-1.2**
PTQR	**Pietraquaria**	**0.48**	**177**	P	**Pg**	**21 14 34.0**	**-2.1**
PTQR	**Pietraquaria**	**0.48**	**177**	⇑*i*Pg	**Pg**	**21 14 34.0**	**-2.1**
PTQR	**Pietraquaria**	**0.48**	**177**	⇑*i*Pg	**Pg**	**21 14 34.0**	**-2.1**
OFFI	**Offida**	**0.49**	**29**	P	**Pg**	**21 14 35.1**	**-1.1**
OFFI				S	**Sb**	**21 14 44.6**	**+0.4**
OFFI	**Offida**	**0.49**	**29**	Pg	**Pg**	**21 14 35.0**	**-1.3**
OFFI	**Offida**	**0.49**	**29**	Pg	**Pg**	**21 14 35.0**	**-1.3**
OFFI				S	**Sb**	**21 14 44.6**	**+0.4**
TRTR	**Tortoreto Alta**	**0.51**	**53**	Pg	**Pg**	**21 14 35.8**	**-0.7**
TRTR	**Tortoreto Alta**	**0.51**	**53**	Pg	**Pg**	**21 14 35.8**	**-0.7**
MNS	**Montasola**	**0.52**	**257**	P	**Pg**	**21 14 34.8**	**-2.0**
MNS				S	**Sg**	**21 14 43.2**	**-0.6**
MNS	**Montasola**	**0.52**	**257**	P	**Pg**	**21 14 34.8**	**-2.0**
MNS				S	**Sg**	**21 14 43.2**	**-0.6**
MNS	**Montasola**	**0.52**	**257**	Pg	**Pg**	**21 14 34.8**	**-2.0**
MNS				Sg	**Sg**	**21 14 43.1**	**-0.7**
	102μm,0.6s						
MNS	**Montasola**	**0.52**	**257**	Pg	**Pg**	**21 14 34.8**	**-2.0**
MNS				Sg	**Sg**	**21 14 43.1**	**-0.7**
	102μm,0.6s						
FDMO	**Fiordimonte**	**0.57**	**339**	P	**Pg**	**21 14 35.9**	**-1.9**
FDMO				S	**Sg**	**21 14 44.6**	**-0.7**
FDMO	**Fiordimonte**	**0.57**	**339**	Pg	**Pg**	**21 14 35.8**	**-1.9**
FDMO				Sg	**Sg**	**21 14 44.7**	**-0.7**
FDMO	**Fiordimonte**	**0.57**	**339**	Pg	**Pg**	**21 14 35.8**	**-1.9**
FDMO				S	**Sg**	**21 14 44.6**	**-0.7**
CESX	**Cesi**	**0.59**	**281**	P	**Pg**	**21 14 35.9**	**-2.2**
CESX				S	**Sg**	**21 14 45.6**	**-0.3**
CESX	**Cesi**	**0.59**	**281**	Pg	**Pg**	**21 14 36.0**	**-2.2**
CESX				Sg	**Sg**	**21 14 45.5**	**-0.5**
CESX	**Cesi**	**0.59**	**281**	P	**Pg**	**21 14 35.9**	**-2.2**
CESX				Sg	**Sg**	**21 14 45.5**	**-0.5**
CESI	**CESI - Serrava**	**0.60**	**326**	P	**Pg**	**21 14 36.5**	**-1.9**
CESI	**CESI - Serrava**	**0.60**	**326**	Pg	**Pg**	**21 14 36.4**	**-2.0**
CESI				Sg	**Sg**	**21 14 46.0**	**-0.5**
CESI	**CESI - Serrava**	**0.60**	**326**	Pg	**Pg**	**21 14 36.4**	**-2.0**
CESI				Sg	**Sg**	**21 14 46.0**	**-0.5**
CERT	**Cerreto**	**0.62**	**207**	Pg	**Pg**	**21 14 36.6**	**-2.2**
CERT	**Cerreto**	**0.62**	**207**	Pg	**Pg**	**21 14 36.6**	**-2.2**
INTR	**Introdacqua**	**0.63**	**141**	Pg	**Pg**	**21 14 36.8**	**-2.2**
INTR				Sg	**Sg**	**21 14 46.2**	**-1.2**
	72μm,0.8s						
INTR	**Introdacqua**	**0.63**	**141**	Pg	**Pg**	**21 14 36.8**	**-2.2**
INTR				Sg	**Sg**	**21 14 46.2**	**-1.2**
	72μm,0.8s						
VVLD	**Villa Vallelon**	**0.66**	**163**	Pg	**Pg**	**21 14 37.0**	**-2.5**
VVLD	**Villa Vallelon**	**0.66**	**163**	Pg	**Pg**	**21 14 37.0**	**-2.5**
GUAR	**Guarcino**	**0.71**	**183**	Pg	**Pg**	**21 14 37.9**	**-2.5**
	49μm,0.8s						
GUAR	**Guarcino**	**0.71**	**183**	Pg	**Pg**	**21 14 37.9**	**-2.5**
	49μm,0.8s						
ASSB	**Assisi San Ben**	**0.75**	**316**	Pg	**Pg**	**21 14 38.9**	**-2.2**
ASSB				Sg	**Sg**	**21 14 50.8**	**-0.2**
ASSB	**Assisi San Ben**	**0.75**	**316**	Pg	**Pg**	**21 14 38.9**	**-2.2**
LPEL	**Lama dei Pelig**	**0.76**	**127**	Pg	**Pg**	**21 14 38.8**	**-2.5**
LPEL				Sg	**Sg**	**21 14 50.3**	**-1.0**
LPEL	**Lama dei Pelig**	**0.76**	**127**	Pg	**Pg**	**21 14 38.8**	**-2.5**
LPEL				Sg	**Sg**	**21 14 50.3**	**-1.0**
RMP	**Rome, Mte Porz**	**0.85**	**216**	Pg	**Pg**	**21 14 40.6**	**-2.4**
	52μm,1.0s						
RMP	**Rome, Mte Porz**	**0.85**	**216**	Pg	**Pg**	**21 14 40.6**	**-2.4**
	52μm,1.0s						
SDI	**San Donato**	**0.86**	**157**	Pg	**Pg**	**21 14 40.3**	**-2.9**
SDI	**San Donato**	**0.86**	**157**	Pg	**Pg**	**21 14 40.3**	**-2.9**
RDP	**Rocca di Papa**	**0.89**	**213**	Pg	**Pg**	**21 14 41.4**	**-2.4**
	83μm,0.7s						
RDP	**Rocca di Papa**	**0.89**	**213**	Pg	**Pg**	**21 14 41.4**	**-2.4**
	83μm,0.7s						
MA9	**Marino**	**0.90**	**216**	Pg	**Pg**	**21 14 41.6**	**-2.4**
	62μm,0.6s						
MA9	**Marino**	**0.90**	**216**	Pg	**Pg**	**21 14 41.6**	**-2.4**
	62μm,0.6s						
GIUL	**Giuliano Di Ro**	**0.95**	**185**	Pg	**Pb**	**21 14 42.1**	**-2.8**
GIUL	**Giuliano Di Ro**	**0.95**	**185**	Pg	**Pb**	**21 14 42.1**	**-2.8**
MGAB	**Montegabbione**	**1.01**	**294**	Pg	**Pb**	**21 14 43.7**	**-2.2**
MGAB	**Montegabbione**	**1.01**	**294**	Pg	**Pb**	**21 14 43.7**	**-2.2**
TRIV	**Trivento**	**1.15**	**130**	Pg	**Pb**	**21 14 46.0**	**-2.3**
TRIV	**Trivento**	**1.15**	**130**	Pg	**Pb**	**21 14 46.0**	**-2.3**
NVLJ	**Novalja**	**2.33**	**27**	*i* Pn	**Pn**	**21 15 04.0**	**-0.5**
NVLJ				Sn	**Sn**	**21 15 34.0**	**+1.0**
NVLJ	**Novalja**	**2.33**	**27**	*i* Pn	**Pn**	**21 15 04.0**	**-0.5**
NVLJ				Sn	**Sn**	**21 15 34.0**	**+1.0**
MAIM	**Mastiano**	**2.53**	**305**	P	**Pn**	**21 15 07.7**	**+0.4**
CRDM	**Cardoso**	**2.60**	**307**	P	**Pn**	**21 15 07.4**	**-0.9**
VLC	**Villacollemand**	**2.73**	**308**	*e*Pn	**Pn**	**21 15 09.2**	**-0.9**
VLC	**Villacollemand**	**2.73**	**308**	*e*Pn	**Pn**	**21 15 09.2**	**-0.9**
KNDS	**Knezji Dol**	**3.11**	**13**	*e*Pn	**Pn**	**21 15 14.9**	**-0.5**
KNDS				*e*Sn	**Sn**	**21 15 53.0**	**+0.6**
KNDS							
	comp=Z,9μm,1.9s						
KNDS	**Knezji Dol**	**3.11**	**13**	*e*Pn	**Pn**	**21 15 14.9**	**-0.5**
KNDS				*e*Sn	**Sn**	**21 15 53.0**	**+0.6**
	comp=Z,9μm,1.9s						
CUC	**Castrocucco**	**3.12**	**143**	*e*Pn	**Pn**	**21 15 17.9**	**+2.5**
CUC	**Castrocucco**	**3.12**	**143**	*e*P	**Pn**	**21 15 17.5**	**+2.1**
CUC	**Castrocucco**	**3.12**	**143**	*e*Pn	**Pn**	**21 15 17.9**	**+2.5**
GBRS	**Gornja Briga**	**3.20**	**18**	*e*Pn	**Pn**	**21 15 16.2**	**-0.4**
GBRS				*e*Sn	**Sn**	**21 15 53.8**	**-0.8**
STON	**Ston**	**3.22**	**82**	*e*Pn	**Pn**	**21 15 16.6**	**-0.2**
STON				Sn	**Sn**	**21 15 55.7**	**+0.9**
STON	**Ston**	**3.22**	**82**	*e*Pn	**Pn**	**21 15 16.5**	**-0.2**
STON				Sn	**Sn**	**21 15 55.7**	**+0.9**
TRI	**Trieste**	**3.22**	**5**	*e*P	**Pn**	**21 15 15.4**	**-1.3**
TRI	**Trieste**	**3.22**	**5**	*e*Pn	**Pn**	**21 15 15.4**	**-1.3**
TRI	**Trieste**	**3.22**	**5**	*e*P	**Pn**	**21 15 15.4**	**-1.3**
PGF	**Pioggiola**	**3.23**	**272**	*e*Pn	**Pn**	**21 15 16.5**	**-0.5**
PGF				*e*Sn	**Sn**	**21 15 56.4**	**+1.0**
	comp=Z,189nm,0.4s						
PGF	**Pioggiola**	**3.23**	**272**	*e*P	**Pn**	**21 15 16.5**	**-0.5**
PGF				*e*		21 15 56.4	
PGF	**Pioggiola**	**3.23**	**272**	*e*Pn	**Pn**	**21 15 16.5**	**-0.5**
PGF				*e*Sn	**Sn**	**21 15 56.4**	**+1.0**
PGF	**Pioggiola**	**3.23**	**272**	*e*Pn	**Pn**	**21 15 16.5**	**-0.5**
PGF				*e*Sn	**Sn**	**21 15 56.4**	**+1.0**
	comp=Z,95nm,0.4s						
BOJS	**Bojanci**	**3.29**	**24**	*e*Pn	**Pn**	**21 15 17.6**	**-0.2**
BOJS				*e*Sn	**Sb**	**21 16 04.2**	**-0.6**
BOJS							
	comp=Z,5μm,1.6s						
BOJS	**Bojanci**	**3.29**	**24**	*e*Pn	**Pn**	**21 15 17.6**	**-0.2**
JAVS	**Javornik**	**3.42**	**8**	*e*Pn	**Pn**	**21 15 18.7**	**-1.0**
JAVS	**Javornik**	**3.42**	**8**	*e*Pn	**Pn**	**21 15 18.7**	**-1.0**
VOY	**Vojsko**	**3.55**	**6**	*e*Pn	**Pn**	**21 15 19.0**	**-2.4**
VOY				*e*		21 15 20.0	
VOY				*e*Sn	**Sn**	**21 16 01.2**	**-2.0**
VOY	**Vojsko**	**3.55**	**6**	*e*Pn	**Pn**	**21 15 19.0**	**-2.4**
VOY				*e*Sn	**Sn**	**21 16 01.2**	**-2.0**
LJU	**Ljubljana**	**3.63**	**13**	*e*Pn	**Pn**	**21 15 21.6**	**-0.9**
SISC	**Sisak**	**3.67**	**35**	*e*Pn	**Pn**	**21 15 22.9**	**-0.2**
SISC				Sn	**Sn**	**21 16 06.5**	**+0.3**
SISC	**Sisak**	**3.67**	**35**	*e*Pn	**Pn**	**21 15 22.8**	**-0.2**
SISC				Sn	**Sn**	**21 16 06.5**	**+0.3**
HCY	**Herceg Novi**	**3.79**	**89**	⇑*i*Pn	**Pn**	**21 15 24.5**	**-0.2**
HCY				*e*Sn	**Sn**	**21 16 10.6**	**+1.5**
HCY	**Herceg Novi**	**3.79**	**89**	⇑P	**Pn**	**21 15 24.8**	**+0.1**
HCY				S	**Sn**	**21 16 10.7**	**+1.5**
HCY	**Herceg Novi**	**3.79**	**89**	⇑P	**Pn**	**21 15 24.8**	**+0.1**
HCY				S	**Sn**	**21 16 10.7**	**+1.5**
HCY	**Herceg Novi**	**3.79**	**89**	⇑*i*Pn	**Pn**	**21 15 24.5**	**-0.2**
HCY	**Herceg Novi**	**3.79**	**89**	P	**Pn**	**21 15 24.8**	**+0.1**
HCY				*e*Sn	**Sn**	**21 16 10.6**	**+1.5**
BRY	**Bratogost**	**3.83**	**82**	⇓*i*Pn	**Pn**	**21 15 25.5**	**+0.2**
BRY				*e*Sn	**Sn**	**21 16 12.1**	**+1.8**
BRY	**Bratogost**	**3.83**	**82**	⇓P	**Pn**	**21 15 25.6**	**+0.2**
BRY				S	**Sn**	**21 16 11.9**	**+1.6**
BRY	**Bratogost**	**3.83**	**82**	⇓P	**Pn**	**21 15 25.6**	**+0.2**
BRY				S	**Sn**	**21 16 11.9**	**+1.6**
BRY	**Bratogost**	**3.83**	**82**	⇓*i*Pn	**Pn**	**21 15 25.5**	**+0.2**
BRY				S	**Sn**	**21 16 11.9**	**+1.6**
OBKA	**Obir**	**4.09**	**12**	⇑*i*Pn	**Pn**	**21 15 28.0**	**-0.9**
	SNR=46						
OBKA				⇑*i*Sn	**Sn**	**21 16 17.5**	**+0.8**
OBKA	**Obir**	**4.09**	**12**	⇑*i*Pn	**Pn**	**21 15 28.0**	**-0.9**
OBKA				*i* Sn	**Sn**	**21 16 17.5**	**+0.8**
OBKA	**Obir**	**4.09**	**12**	⇑*i*Pn	**Pn**	**21 15 28.0**	**-0.9**
OBKA				*i* Sn	**Sn**	**21 16 17.5**	**+0.8**
BUM	**Brajici-

SOKA *i* Sn **Sn** **21 16 22.6 -0.1**
PDG Podgorica 4.36 89 ⇑*i* Pn **Pn** **21 15 33.0 +0.6**
PDG *e* Sn **Sn** **21 16 24.0 +1.0**
TTG Podgorica 4.36 89 ⇑*i* Pn **Pn** **21 15 33.0 +0.6**
TTG *e* Sn **Sn** **21 16 24.0 +1.0**
TTG Podgorica 4.36 89 ⇓P **Pn** **21 15 32.6 +0.2**
TTG S **Sn** **21 16 24.4 +1.4**
TTG Podgorica 4.36 89 ⇓P **Pn** **21 15 32.6 +0.2**
TTG S **Sn** **21 16 24.4 +1.4**
TTG Podgorica 4.36 89 P **Pn** **21 15 32.6 +0.2**
TTG S **Sn** **21 16 24.4 +1.4**
ULC Ulcinj 4.40 95 ⇓*i* Pn **Pn** **21 15 33.3 +0.3**
ULC *e* Sn **Sn** **21 16 24.8 +0.7**
ULC Ulcinj 4.40 95 ⇓P **Pn** **21 15 33.3 +0.3**
ULC S **Sn** **21 15 25.5 +1.4**
ULC Ulcinj 4.40 95 ⇓P **Pn** **21 15 33.3 +0.3**
ULC S **Sn** **21 16 25.5 +1.4**
ULC Ulcinj 4.40 95 ⇓*i* Pn **Pn** **21 15 33.3 +0.3**
ULC *e* Sn **Sn** **21 16 24.8 +0.7**
ULC S Sb 21 16 25.5 -11
SAOF Saorge 4.50 291 P **Pn** **21 15 34.4 0.0**
SAOF Saorge 4.50 291 P **Pn** **21 15 34.4 0.0**
SAOF Saorge 4.50 291 P **Pn** **21 15 34.4 0.0**
SAOF Saorge 4.50 291 P **Pn** **21 15 34.4 0.0**
PLE Pljevlja 4.50 77 ⇑*i* Pn **Pn** **21 15 35.4 +0.9**
PLE *e* Sn **Sn** **21 16 28.1 +1.4**
PLE Pljevlja 4.50 77 *e*P **Pn** **21 15 35.3 +0.8**
PLE S **Sn** **21 16 27.5 +0.7**
PLE Pljevlja 4.50 77 *e*P **Pn** **21 15 35.3 +0.8**
PLE S **Sn** **21 16 27.5 +0.7**
PLE Pljevlja 4.50 77 *e*P **Pn** **21 15 35.3 +0.8**
PLE S **Sn** **21 16 27.5 +0.7**
PLE *e* Sn Sb 21 16 28.1 -12
SBF Sospel 4.54 289 *e*Pn **Pn** **21 15 34.8 -0.3**
SBF Sospel 4.54 289 *e*P **Pn** **21 15 34.8 -0.3**
SBF Sospel 4.54 289 *e*Pn **Pn** **21 15 34.8 -0.3**
SBF Sospel 4.54 289 *e*Pn **Pn** **21 15 34.8 -0.3**
REVF Revere 4.56 288 P **Pn** **21 15 35.5 +0.2**
REVF Revere 4.56 288 P **Pn** **21 15 35.5 +0.2**
REVF Revere 4.56 288 P **Pn** **21 15 35.5 +0.2**
REVF Revere 4.56 288 P **Pn** **21 15 35.5 +0.2**
KBA Koelnbreinsper 4.57 360 *i* P **Pn** **21 15 35.2 -0.4**
KBA *i* 21 16 30.2
KBA Koelnbreinsper 4.57 360 *i* Pn **Pn** **21 15 35.2 -0.4**
SNR=154
KBA ⇑*i* Sn **Sn** **21 16 30.2 +1.6**
KBA Koelnbreinsper 4.57 360 *i* Pn **Pn** **21 15 35.2 -0.4**
KBA *i* Sn **Sn** **21 16 30.2 +1.6**
KBA Koelnbreinsper 4.57 360 *i* P **Pn** **21 15 35.2 -0.4**
KBA *i* S **Sn** **21 16 30.2 +1.6**
AUTN L'Aution 4.59 291 P **Pn** **21 15 36.4 +0.6**
AUTN L'Aution 4.59 291 P **Pn** **21 15 36.4 +0.6**
AUTN L'Aution 4.59 291 P **Pn** **21 15 36.4 +0.6**
AUTN L'Aution 4.59 291 P **Pn** **21 15 36.4 +0.6**
BEHE Becsehely 4.66 30 *es*Pb sPb 21 15 51.9 -0.4
CEL Celeste 4.66 155 *e*Pn **Pn** **21 15 37.8 +1.2**
CEL Celeste 4.66 155 *e*P **Pn** **21 15 38.6 +2.0**
CEL Celeste 4.66 155 *e*Pn **Pn** **21 15 37.8 +1.2**
FUORN Ofenpass-Fuorn 4.67 333 *e*Pn **Pn** **21 15 38.0 +0.9**
FUORN *e*Sn **Sn** **21 16 30.4 -0.8**
FUORN Ofenpass-Fuorn 4.67 333 *e*Pn **Pn** **21 15 38.0 +0.9**
FUORN *e*Sn **Sn** **21 16 30.4 -0.8**
TOUF Mont Tournerai 4.72 291 P **Pn** **21 15 37.9 +0.3**
TOUF Mont Tournerai 4.72 291 P **Pn** **21 15 37.9 +0.3**
TOUF Mont Tournerai 4.72 291 P **Pn** **21 15 37.9 +0.3**
TOUF Mont Tournerai 4.72 291 P **Pn** **21 15 37.9 +0.3**
MVIF Mont Vial 4.75 289 P **Pn** **21 15 38.3 +0.3**
MVIF Mont Vial 4.75 289 P **Pn** **21 15 38.3 +0.3**
MVIF Mont Vial 4.75 289 P **Pn** **21 15 38.3 +0.3**
MVIF Mont Vial 4.75 289 P **Pn** **21 15 38.3 +0.3**
BEY Berane 4.83 83 ⇓*i* Pn **Pn** **21 15 40.1 +1.1**
BEY *e*Sn **Sn** **21 16 35.5 +0.8**
IVA Berane 4.83 83 ⇓*i* Pn **Pn** **21 15 40.1 +1.1**
IVA *e*Sn **Sn** **21 16 35.5 +0.8**
PUK Puka 4.87 93 *e*PG **Pn** **21 15 40.8 +1.3**
PVY Plav 4.87 87 ⇑*i* Pn **Pn** **21 15 41.0 +1.4**
PVY *e*Sn **Sn** **21 16 37.6 +1.7**
PVY Plav 4.87 87 ⇑*i* Pn **Pn** **21 15 41.0 +1.4**
PVY *e*Sn **Sn** **21 16 37.6 +1.7**
FETA Feichten 4.89 338 *i* Pn **Pn** **21 15 40.1 +0.2**
SNR=233
FETA ⇓*i* Sn **Sn** **21 16 39.2 +2.7**
FETA Feichten 4.89 338 *i* Pn **Pn** **21 15 40.1 +0.2**
FETA *i* Sn **Sn** **21 16 39.2 +2.7**
FETA Feichten 4.89 338 *i* Pn **Pn** **21 15 40.1 +0.2**
FETA Sn **Sn** **21 16 39.2 +2.7**
TUE Stuetta 4.90 325 *e*Pn **Pn** **21 15 40.0 -0.1**
TUE Stuetta 4.90 325 *e*Pn **Pn** **21 15 40.0 -0.1**
CALN Calern 4.90 287 P **Pn** **21 15 40.0 -0.1**
CALN Calern 4.90 287 P **Pn** **21 15 40.0 -0.1**
CALN Calern 4.90 287 P **Pn** **21 15 40.0 -0.1**
CALN Calern 4.90 287 P **Pn** **21 15 40.0 -0.1**
SJES Sjenica 4.91 79 *e*Pn **Pn** **21 15 41.8 +1.6**
SJES *e*Sn **Sn** **21 16 37.7 +0.8**
WTTA Wattenberg 4.92 346 *i* P **Pn** **21 15 40.5 +0.2**
WTTA *i* 21 16 38.7
WTTA Wattenberg 4.92 346 *i* Pn **Pn** **21 15 40.5 +0.2**
SNR=283
WTTA ⇑*i* Sn **Sn** **21 16 38.7 +1.6**
WTTA Wattenberg 4.92 346 *i* Pn **Pn** **21 15 40.5 +0.2**
WTTA *i* Sn **Sn** **21 16 38.7 +1.6**
WTTA Wattenberg 4.92 346 *i* P **Pn** **21 15 40.5 +0.2**
WTTA *i* S **Sn** **21 16 38.7 +1.6**
DAVOX Davos/Dischmat 4.95 331 Pn **Pn** **21 15 40.8 +0.1**
DAVOX Sn **Sn** **21 16 37.8 0.0**
DAVOX Davos/Dischmat 4.95 331 Pn **Pn** **21 15 40.8 +0.1**
comp=Z,23nm,0.3s,baz=156,slow=18,SNR=255
DAVOX Sn **Sn** **21 16 37.8 0.0**
comp=Z,27nm,0.3s,baz=141,slow=21,SNR=3.5
DAVOX Davos/Dischmat 4.95 331 P **Pn** **21 15 40.8 +0.1**
comp=Z,23nm,0.3s
DAVOX S **Sn** **21 16 37.8 0.0**
comp=Z,27nm,0.3s
BCI Bajram Curri 4.96 89 *e*PG **Pn** **21 15 42.1 +1.3**
TIR Tirane 4.98 101 *e*PG **Pn** **21 15 41.3 +0.2**
TIR Tirane 4.98 101 P **Pn** **21 15 41.3 +0.2**
TIR Tirane 4.98 101 *e*P **Pn** **21 15 41.3 +0.2**
TIR Tirane 4.98 101 P **Pn** **21 15 41.3 +0.2**
ARSA Arzberg 4.99 17 ⇓*i* Pn **Pn** **21 15 40.0 -1.1**
SNR=49
ARSA Arzberg 4.99 17 ⇓*i* Pn **Pn** **21 15 40.0 -1.1**
ARSA Arzberg 4.99 17 ⇓*i* Pn **Pn** **21 15 40.0 -1.1**
WATA Walderalm 5.00 346 ⇑*i* P **Pn** **21 15 41.7 +0.4**
WATA Walderalm 5.00 346 ⇑*i* Pn **Pn** **21 15 41.7 +0.4**
SNR=196
WATA Walderalm 5.00 346 ⇑*i* Pn **Pn** **21 15 41.7 +0.4**
WATA Walderalm 5.00 346 *i* P **Pn** **21 15 41.7 +0.4**
FRF La Foret Royal 5.04 284 *e*Pn **Pn** **21 15 41.1 -0.7**
FRF La Foret Royal 5.04 284 *e*P **Pn** **21 15 41.1 -0.7**
FRF La Foret Royal 5.04 284 *e*Pn **Pn** **21 15 41.1 -0.7**
FRF La Foret Royal 5.04 284 *e*Pn **Pn** **21 15 41.1 -0.7**
IVAS Ivanjica 5.09 76 *e*Pn **Pn** **21 15 43.4 +0.9**
IVAS *e*Sn **Sn** **21 16 41.7 +0.5**
IVAS Ivanjica 5.09 76 *e*Pn **Pn** **21 15 43.4 +0.9**
IVAS *e*Sn **Sn** **21 16 41.7 +0.5**
DIVS Divibare 5.09 70 P **Pn** **21 15 42.9 +0.4**
DIVS Divibare 5.09 70 *e*Pn **Pn** **21 15 43.0 +0.4**
DIVS *e*Sn **Sn** **21 16 40.9 -0.4**
DIVS Divibare 5.09 70 *e*Pn **Pn** **21 15 43.0 +0.4**
DIVS *e*Sn **Sn** **21 16 40.9 -0.4**
MOTA Moosalm 5.10 342 ⇓P **Pn** **21 15 43.3 +0.5**
MOTA Moosalm 5.10 342 ⇓*i* Pn **Pn** **21 15 43.3 +0.5**
SNR=563
MOTA Moosalm 5.10 342 ⇓*i* Pn **Pn** **21 15 43.3 +0.5**
MOTA Moosalm 5.10 342 *i* P **Pn** **21 15 43.3 +0.5**
LMR La Mourre 5.10 282 *e*Pn **Pn** **21 15 41.7 -1.0**
LMR La Mourre 5.10 282 *e*P **Pn** **21 15 41.7 -1.0**
LMR La Mourre 5.10 282 *e*Pn **Pn** **21 15 41.7 -1.0**
LMR La Mourre 5.10 282 *e*Pn **Pn** **21 15 41.7 -1.0**
SURF Saint Ours 5.16 295 P **Pn** **21 15 44.5 +0.8**
SURF Saint Ours 5.16 295 P **Pn** **21 15 44.5 +0.8**
SURF Saint Ours 5.16 295 P **Pn** **21 15 44.5 +0.8**
RJOB Jochberg 5.25 356 *e*Pn **Pn** **21 15 44.6 -0.1**
RJOB *e*Sn **Sn** **21 16 48.6 +3.5**
MBDF Montbardon 5.28 297 *e*P **Pn** **21 15 46.4 +1.2**
MBDF Montbardon 5.28 297 *e*P **Pn** **21 15 46.4 +1.2**
MBDF Montbardon 5.28 297 *e*P **Pn** **21 15 46.4 +1.2**
MBDF Montbardon 5.28 297 *e*P **Pn** **21 15 46.4 +1.2**
PKSM Moragy 5.29 44 *ep*Pn Pn 21 15 50.1 +4.8
RETA Reutte 5.31 341 *i* Pn **Pn** **21 15 46.5 +0.9**
SNR=57
RETA ⇑*i* Sn **Sn** **21 16 47.3 +0.6**
RETA Reutte 5.31 341 *i* Pn **Pn** **21 15 46.5 +0.9**
RETA *i* Sn **Sn** **21 16 47.3 +0.6**
RETA Reutte 5.31 341 *i* Pn **Pn** **21 15 46.5 +0.9**
RETA *i* Sn **Sn** **21 16 47.3 +0.6**
PHP Peshkopia 5.33 96 *e*PG **Pn** **21 15 47.1 +1.2**
PHP Peshkopia 5.33 96 P **Pn** **21 15 47.0 +1.2**
PHP Peshkopia 5.33 96 P **Pn** **21 15 47.0 +1.2**
FGSL Fruska Gora 5.36 58 *e*Pn **Pn** **21 15 45.5 -0.8**
FRGS Fruska Gora 5.36 58 *e*Pn **Pn** **21 15 45.5 -0.8**
OBER Oberstdorf 5.37 337 *e*Pn **Pn** **21 15 47.4 +1.0**
OBER *e*Sn **Sn** **21 16 50.1 +2.1**
MOA Molln 5.38 6 *i* Pn **Pn** **21 15 46.2 -0.4**
SNR=249
MOA ⇑*i* Sn **Sn** **21 16 48.4 0.0**
MOA Molln 5.38 6 *i* Pn **Pn** **21 15 46.2 -0.4**
MOA *i* Sn **Sn** **21 16 48.4 0.0**
MOA Molln 5.38 6 *i* Pn **Pn** **21 15 46.2 -0.4**
MOA *i* Sn **Sn** **21 16 48.4 0.0**
PKS9 Tamasi 5.38 39 ⇓*e*Pn **Pn** **21 15 45.7 -0.8**
PKS9 Tamasi 5.38 39 ⇓*e*P **Pn** **21 15 45.7 -0.8**
DAVA Damuels 5.38 334 *i* Pn **Pn** **21 15 47.7 +1.0**
SNR=253
DAVA ⇑*i* Sn **Sn** **21 16 51.1 +2.5**
DAVA Damuels 5.38 334 *i* Pn **Pn** **21 15 47.7 +1.0**
DAVA *i* Sn **Sn** **21 16 51.1 +2.5**
DAVA Damuels 5.38 334 *i* Pn **Pn** **21 15 47.7 +1.0**
DAVA Sn **Sn** **21 16 51.1 +2.5**
TRUS Trudelj 5.41 69 *e*Pn **Pn** **21 15 46.1 -0.8**
TRUS *e*Sn **Sn** **21 16 49.1 0.0**
TRUS Trudelj 5.41 69 *e*Pn **Pn** **21 15 46.1 -0.8**
TRUS *e*Sn **Sn** **21 16 49.1 0.0**
BNI Bardonecchia 5.47 300 *e*P **Pn** **21 15 48.8 +0.9**
BNI *e* 21 16 51.9
BNI Bardonecchia 5.47 300 *e*Pn **Pn** **21 15 48.8 +0.9**
BNI *e*Sn **Sn** **21 16 51.9 +1.2**
BNI Bardonecchia 5.47 300 *e*P **Pn** **21 15 48.8 +0.9**
BNI *e*S **Sn** **21 16 51.9 +1.2**
GRUS Gruza 5.55 73 *e*Pn **Pn** **21 15 49.5 +0.7**
GRUS *e*Sn **Sn** **21 16 52.8 +0.4**
GRUS Gruza 5.55 73 *e*Pn **Pn** **21 15 49.5 +0.7**
GRUS *e*Sn **Sn** **21 16 52.8 +0.4**
KEK Kerkira 5.60 118 P **Pn** **21 15 50.6 +1.1**
KEK Kerkira 5.60 118 *e*P **Pn** **21 15 50.3 +0.8**
LPG La Plagne 5.63 304 *e*P **Pn** **21 15 52.8 +2.6**
LPG *e*Sn **Sn** **21 16 51.9 -3.0**
comp=Z,353nm,0.8s
LPG La Plagne 5.63 304 *e*P **Pn** **21 15 52.8 +2.6**
LPG *e* 21 16 51.9
LPG La Plagne 5.63 304 *e*P **Pn** **21 15 52.8 +2.6**
LPG *e*Sn **Sn** **21 16 51.9 -3.0**
SOP Sopron 5.65 22 ⇓*e*Pn **Pn** **21 15 49.4 -0.8**
SOP Sopron 5.65 22 ⇓*e*P **Pn** **21 15 49.4 -0.8**
LPL La Plagne 5.65 304 *e*P **Pn** **21 15 53.0 +2.6**
LPL *e*Sn **Sn** **21 16 51.0 -4.3**
comp=Z,393nm,0.9s
LPL La Plagne 5.65 304 *e*P **Pn** **21 15 53.0 +2.6**
LPL *e* 21 16 51.0
LPL La Plagne 5.65 304 *e*P **Pn** **21 15 53.0 +2.6**
LPL *e*Sn **Sn** **21 16 51.0 -4.3**
CONA Conrad Observa 5.70 17 ⇑*i* Pn **Pn** **21 15 50.0 -1.0**
SNR=139
CONA Conrad Observa 5.70 17 ⇑*i* Pn **Pn** **21 15 50.0 -1.0**
CONA Conrad Observa 5.70 17 ⇑*i* Pn **Pn** **21 15 50.0 -1.0**
SELS Selova 5.74 80 *e*Pn **Pn** **21 15 52.3 +0.8**
SELS Selova 5.74 80 *e*Pn **Pn** **21 15 52.3 +0.8**
PKS2 Kecel 5.78 44 *ep*Pn **Pn** **21 15 51.7 -0.2**
PKS2 Kecel 5.78 44 *e*P **Pn** **21 15 51.7 -0.2**
PKST T˜s 5.79 33 ⇓*ep*Pn **Pn** **21 15 51.6 -0.6**
PKST T˜s 5.79 33 ⇓*e*P **Pn** **21 15 51.6 -0.6**
SENIN Lac Senin/Sane 5.81 314 *e*Pn **Pn** **21 15 52.8 +0.2**
SENIN *e*Sn **Sn** **21 17 01.6 +2.4**
SENIN Lac Senin/Sane 5.81 314 *e*Pn **Pn** **21 15 52.8 +0.2**
SMRF Simiane la Rot 5.88 287 *e*P **Pn** **21 15 54.3 +0.9**
SMRF Simiane la Rot 5.88 287 *e*P **Pn** **21 15 54.3 +0.9**
SMRF Simiane la Rot 5.88 287 *e*P **Pn** **21 15 54.3 +0.9**
GDM Grand'Maison 5.89 300 P **Pn** **21 15 56.7 +3.0**
GDM Grand'Maison 5.89 300 P **Pn** **21 15 56.7 +3.0**
ORIF Oris-en-Rattie 5.94 297 *e*P **Pn** **21 15 56.8 +2.6**
ORIF Oris-en-Rattie 5.94 297 *e*P **Pn** **21 15 56.8 +2.6**
ORIF Oris-en-Rattie 5.94 297 *e*P **Pn** **21 15 56.8 +2.6**
SVIS Svilajnac 5.98 70 *e*Pn **Pn** **21 15 54.4 -0.4**
SVIS *e*Sn **Sn** **21 17 03.0 -0.1**
SKO Skopje 6.02 92 P **Pn** **21 15 56.6 +1.4**
SKO Skopje 6.02 92 *i* Pn **Pn** **21 15 56.7 +1.4**
PKS6 Bocsa 6.03 45 *ep*Pn **Pn** **21 15 56.8 +1.4**
PKS6 Bocsa 6.03 45 *e*P **Pn** **21 15 56.8 +1.4**
IGT Igoumenitsa 6.05 117 P **Pn** **21 15 56.6 +0.9**
PKSG 6.05 34 ⇓*ep*Pn **Pn** **21 15 56.5 +0.9**
PKSG 6.05 34 ⇓*e*P **Pn** **21 15 56.5 +0.9**
BIA Bitola 6.13 101 P **Pn** **21 15 57.4 +0.5**
BIA Bitola 6.13 101 *i* Pn **Pn** **21 15 57.2 +0.3**
BIA *i* Sn **Sn** **21 17 05.0 -1.9**
PKS7 Kunszentmiklos 6.13 40 ⇓*ep*Pn **Pn** **21 15 57.6 +0.8**
PKS7 Kunszentmiklos 6.13 40 ⇓*e*P **Pn** **21 15 57.6 +0.8**
NEST Nestorio 6.14 107 P **Pn** **21 15 58.7 +1.7**
GRN Grenoble 6.15 299 P **Pn** **21 15 59.6 +2.4**
GRN Grenoble 6.15 299 P **Pn** **21 15 59.6 +2.4**
GRN Grenoble 6.15 299 P **Pn** **21 15 59.6 +2.4**
BARS Barje 6.24 84 *e*Pn **Pn** **21 15 58.9 +0.6**
BARS *e*Sn **Sn** **21 17 10.2 +0.8**
FNA Florina 6.24 103 P **Pn** **21 15 59.5 +1.1**
FNA Florina 6.24 103 *e*P **Pn** **21 15 58.9 +0.5**
JAN Janina 6.33 114 P **Pn** **21 16 01.2 +1.7**
JAN Janina 6.33 114 *e*P **Pn** **21 16 01.3 +1.7**
GEC2 GERESS Array S 6.35 2 *e*P **Pn** **21 15 58.4 -1.4**
GEC2 GERESS Array S 6.35 2 *e*Pn **Pn** **21 15 58.4 -1.4**
GEC2 GERESS Array S 6.35 2 *e*Pn **Pn** **21 15 58.3 -1.5**
GEC2 GERESS Array S 6.35 2 *e*P **Pn** **21 15 58.4 -1.4**
GERES GERESS Array B 6.35 2 Pn **Pn** **21 15 58.3 -1.5**
GERES Sn **Sn** **21 17 11.4 -0.7**
GERES GERESS Array B 6.35 2 Pn **Pn** **21 15 58.3 -1.5**
comp=Z,4.6nm,0.3s,baz=180,slow=12,SNR=148
GERES Sn **Sn** **21 17 11.4 -0.7**
comp=Z,27nm,0.3s,baz=188,slow=25,SNR=6.7
GERES LR LR 21 17 54.9
comp=Z,618nm,21.6s,baz=181,slow=34
GERES GERESS Array B 6.35 2 P **Pn** **21 15 58.3 -1.5**
comp=Z,5.0nm,0.3s
GERES S **Sn** **21 17 11.4 -0.7**
comp=Z,618nm,21.6s
PKSN Nyarlorinc 6.38 44 ⇓*ep*Pn **Pn** **21 16 02.7 +2.5**
BUD Budapest 6.39 37 *e*Pn **Pn** **21 15 59.5 -0.9**
BUD Budapest 6.39 37 *e*P **Pn** **21 15 59.5 -0.9**
BOLS Boljevac 6.42 75 *e*Pn **Pn** **21 16 00.2 -0.5**
BOLS *e*Sn **Sn** **21 17 13.5 -0.3**
BOLS Boljevac 6.42 75 *e*Pn **Pn** **21 16 00.2 -0.5**
BOLS *e*Sn **Sn** **21 17 13.5 -0.3**
SPAK Spaichingen-Ko 6.46 332 P **Pn** **21 16 01.2 -0.2**
SPAK Spaichingen-Ko 6.46 332 P **Pn** **21 16 01.2 -0.2**
BBS Basel-Blauen 6.47 322 P **Pn** **21 16 01.4 -0.1**
BBS Basel-Blauen 6.47 322 P **Pn** **21 16 01.4 -0.1**
BBS Basel-Blauen 6.47 322 P **Pn** **21 16 01.4 -0.1**
MEV Metsovon 6.53 112 P **Pn** **21 16 04.6 +2.2**
FELD Feldberg im Sc 6.57 327 P **Pn** **21 16 02.5 -0.5**
FELD Feldberg im Sc 6.57 327 P **Pn** **21 16 02.5 -0.5**
OG35 Corcelles 6.62 305 P **Pn** **21 16 03.5 -0.1**
CABF La Chapelle 6.62 311 *e*Pn **Pn** **21 16 03.5 -0.1**
CABF La Chapelle 6.62 311 *e*P **Pn** **21 16 03.5 -0.1**
CABF La Chapelle 6.62 311 *e*Pn **Pn** **21 16 03.5 -0.1**
CABF La Chapelle 6.62 311 *e*Pn **Pn** **21 16 03.5 -0.1**
KHC Kasperske Hory 6.63 1 *e*P **Pn** **21 16 02.0 -1.7**
KHC *e* 21 17 15.2
KHC MLR MLR
comp=Z,3μm,9.4s
KHC Kasperske Hory 6.63 1 *e*Pn **Pn** **21 16 02.0 -1.7**
KHC *e*Sn **Sn** **21 17 13.2 -5.9**
KHC Kasperske Hory 6.63 1 *e*PN **Pn** **21 16 02.0 -1.7**
KHC *ex* x 21 16 19.0
KHC *e*SN **Sn** **21 17 15.2 -3.9**
KHC AMS AMS 21 18 50.0
comp=Z,3μm,9.4s
KHC Kasperske Hory 6.63 1 Pn **Pn** **21 16 02.0 -1.7**
WET Wettzell 6.65 357 *e*P **Pn** **21 16 02.2 -1.7**
WET *e* 21 17 15.6
WET Wettzell 6.65 357 *e*Pn **Pn** **21 16 02.2 -1.7**
WET *e*Sn **Sn** **21 17 15.6 -3.9**
WET Wettzell 6.65 357 *e*P **Pn** **21 16 02.2 -1.7**
SMOL Smolenice 6.65 24 *e*PN **Pn** **21 16 02.5 -1.4**
SMOL *e*SN **Sn** **21 17 19.7 +0.1**
SMOL Smolenice 6.65 24 *e*Pn **Pn** **21 16 02.5 -1.4**
SMOL *e*Sn **Sn** **21 17 19.7 +0.1**
LKD2 Lefkada island 6.67 121 P **Pn** **21 16 05.9 +1.6**
KZN Kozani 6.69 106 P **Pn** **21 16 06.4 +1.8**
KZN Kozani 6.69 106 *e*P **Pn** **21 16 05.8 +1.2**
BZS Buzias 6.71 60 ⇓*i* P **Pn** **21 16 05.1 +0.4**
LOMF Lomont 6.71 318 P **Pn** **21 16 05.1 +0.3**
LOMF Lomont 6.71 318 P **Pn** **21 16 05.1 +0.3**
LOMF Lomont 6.71 318 P **Pn** **21 16 05.1 +0.3**
LOMF Lomont 6.71 318 P **Pn** **21 16 05.1 +0.3**
VIVF Saint-Julien-l 6.73 293 *e*Pn **Pn** **21 16 06.1 +1.1**
VIVF Saint-Julien-l 6.73 293 *e*P **Pn** **21 16 06.1 +1.1**
VIVF Saint-Julien-l 6.73 293 *e*Pn **Pn** **21 16 06.1 +1.1**
VIVF Saint-Julien-l 6.73 293 *e*Pn **Pn** **21 16 06.1 +1.1**
BFO Black Forest 6.82 330 *e*P **Pn** **21 16 05.3 -0.9**
BFO *e* 21 17 21.9
BFO Black Forest 6.82 330 *e*Pn **Pn** **21 16 05.3 -0.9**
BFO *e*Sn **Sn** **21 17 21.9 -1.8**
BFO Black Forest 6.82 330 *e*Pn **Pn** **21 16 04.8 -1.4**
BFO Black Forest 6.82 330 *e*Pn **Pn** **21 16 04.8 -1.4**
BFO Black Forest 6.82 330 *e*P **Pn** **21 16 05.3 -0.9**
BFO *e*S **Sn** **21 17 21.9 -1.8**
ZAPS Zavoj 6.85 80 *e*Pn **Pn** **21 16 07.7 +1.0**
ZAPS Zavoj 6.85 80 *e*Pn **Pn** **21 16 07.7 +1.0**
STU Stuttgart 6.92 336 *e*P **Pn** **21 16 06.8 -0.8**
STU Stuttgart 6.92 336 *e*Pn **Pn** **21 16 06.8 -0.8**
STU Stuttgart 6.92 336 *e*P **Pn** **21 16 06.8 -0.8**
MOF Molkenrain 6.92 323 P **Pn** **21 16 07.2 -0.6**
MOF Molkenrain 6.92 323 P **Pn** **21 16 07.2 -0.6**
MOF Molkenrain 6.92 323 P **Pn** **21 16 07.2 -0.6**
MOF Molkenrain 6.92 323 P **Pn** **21 16 07.2 -0.6**
GRG Griva 6.93 100 P **Pn** **21 16 08.1 +0.2**
TREC Trest 6.95 12 *e*P **Pn** **21 16 06.9 -1.2**
TREC MLR MLR
comp=Z,6μm,11.6s
TREC Trest 6.95 12 *e*PN **Pn** **21 16 06.9 -1.2**
TREC AMS AMS 21 19 00.0
comp=Z,6μm,11.6s
TREC Trest 6.95 12 Pn **Pn** **21 16 06.9 -1.2**
SSB Saint Sauveur 6.95 297 *e*P **Pn** **21 16 08.9 +0.8**
SSB *e* 21 17 26.9
SSB pmax pmax
comp=Z,106nm,1.0s
SSB Saint Sauveur 6.95 297 *e*Pn **Pn** **21 16 08.9 +0.8**
comp=Z,106nm,1.0s
SSB *e*Sn **Sn** **21 17 26.9 -0.2**
SSB Saint Sauveur 6.95 297 P **Pn** **21 16 08.9 +0.8**
SSB Saint Sauveur 6.95 297 P **Pn** **21 16 08.9 +0.8**
SSB *e*S **Sn** **21 17 26.9 -0.2**
LIBD Limburg 6.95 326 P **Pn** **21 16 07.6 -0.5**
LIBD Limburg 6.95 326 P **Pn** **21 16 07.6 -0.5**
LIBD Limburg 6.95 326 P **Pn** **21 16 07.6 -0.5**
VAY Valandovo 6.97 97 *i* Pn **Pn** **21 16 08.3 0.0**
VLS Valsamata 7.01 126 P **Pn** **21 16 10.4 +1.5**
VLS Valsamata 7.01 126 *e*P **Pn** **21 16 09.3 +0.4**
HINF Hinteralfeld 7.03 321 *e*Pn **Pn** **21 16 08.4 -0.7**
HINF *e*Sn **Sn** **21 17 25.5 -3.4**
comp=Z,439nm,0.7s
HINF Hinteralfeld 7.03 321 *e*P **Pn** **21 16 08.4 -0.7**
HINF *e* 21 17 25.5
HINF Hinteralfeld 7.03 321 *e*Pn **Pn** **21 16 08.4 -0.7**
HINF *e*Sn **Sn** **21 17 25.5 -3.4**
HINF Hinteralfeld 7.03 321 *e*Pn **Pn** **21 16 08.4 -0.7**
PSZ Piszkesteto 7.11 38 *e*P **Pn** **21 16 09.5 -0.8**
PSZ Piszkesteto 7.11 38 *e*Pn **Pn** **21 16 09.5 -0.8**
PSZ Piszkesteto 7.11 38 ⇓*i* P **Pn** **21 16 11.3 +1.0**
PSZ Piszkesteto 7.11 38 *e*Pn **Pn** **21 16 09.6 -0.8**
PSZ Piszkesteto 7.11 38 *e*P **Pn** **21 16 09.5 -0.8**
LASF Ste Croix 7.12 286 *e*Pn **Pn** **21 16 09.8 -0.5**
LASF Ste Croix 7.12 286 *e*Pn **Pn** **21 16 09.8 -0.5**
LASF Ste Croix 7.12 286 *e*Pn **Pn** **21 16 09.8 -0.5**
VYHS Vyhne 7.12 31 *e*PN **Pn** **21 16 10.2 -0.1**
VYHS *e*SN **Sn** **21 17 25.2 -5.8**
VYHS *e*SG **Sg** **21 18 20.0 +5.2**
VYHS Vyhne 7.12 31 *e*Pn **Pn** **21 16 10.3 -0.1**
VRAC Vranov 7.17 17 Pn **Pn** **21 16 10.0 -1.0**
VRAC Sn **Sn** **21 17 37.2 +4.9**
VRAC Vranov 7.17 17 Pn **Pn** **21 16 10.0 -1.0**
comp=Z,2.0nm,0.3s,baz=207,slow=13,SNR=21
VRAC Sn **Sn** **21 17 37.2 +4.9**
comp=Z,4.2nm,0.3s,baz=271,slow=21,SNR=5.5
VRAC Vranov 7.17 17 P **Pn** **21 16 10.0 -1.0**
comp=Z,2.0nm,0.3s
ECH Echery 7.19 325 *e*P **Pn** **21 16 10.0 -1.4**
ECH *e* 21 17 30.3
ECH pmax pmax
comp=Z,263nm,1.0s
ECH Echery 7.19 325 *e*Pn **Pn** **21 16 10.0 -1.4**
comp=Z,263nm,1.0s
ECH *e*Sn **Sn** **21 17 30.3 -2.6**
ECH Echery 7.19 325 P **Pn** **21 16 10.2 -1.2**
ECH Echery 7.19 325 P **Pn** **21 16 10.2 -1.2**
ECH *e*S **Sn** **21 17 30.3 -2.6**
KNT Kendrikon 7.24 97 P **Pn** **21 16 13.2 +1.1**
LIT Litokhoron 7.28 106 P **Pn** **21 16 12.6 0.0**
LIT Litokhoron 7.28 106 *e*P **Pn** **21 16 12.7 +0.2**
LIT Litokhoron 7.28 106 *e*P **Pn** **21 16 12.8 +0.2**
CDF Champ du Feu 7.29 326 *e*Pn **Pn** **21 16 11.9 -0.9**
CDF *e*Sn **Sn** **21 17 32.5 -3.0**
comp=Z,914nm,1.0s
CDF Champ du Feu 7.29 326 *e*P **Pn** **21 16 11.9 -0.9**
CDF *e* 21 17 32.5
CDF Champ du Feu 7.29 326 *e*Pn **Pn** **21 16 11.9 -0.9**
CDF *e*Sn **Sn** **21 17 32.5 -3.0**
CDF Champ du Feu 7.29 326 *e*Pn **Pn** **21 16 11.9 -0.9**
ROTZ Rotzenmuhle 7.31 354 *e*Pn **Pn** **21 16 11.7 -1.3**
ROTZ *e*Sn **Sn** **21 17 30.1 -5.6**
MAHO Mahon 7.34 252 *i* P **Pn** **21 16 14.7 +1.3**
GRA1 Grafenberg Arr 7.34 349 *e*P **Pn** **21 16 11.9 -1.5**
GRF Grafenberg Arr 7.34 349 *e*P **Pn** **21 16 11.9 -1.5**
GRF Grafenberg Arr 7.34 349 *e*Pn **Pn** **21 16 11.9 -1.5**
GRFO Grafenberg 7.34 349 *e*P **Pn** **21 16 11.2 -2.2**
GRFO *e* 21 17 32.9
GRFO Grafenberg 7.34 349 *e*Pn **Pn** **21 16 11.2 -2.2**
GRFO *e*Sn **Sn** **21 17 32.9 -3.6**
GRFO Grafenberg 7.34 349 *e*P **Pn** **21 16 11.2 -2.2**
HAU Haudompre 7.40 320 *e*Pn **Pn** **21 16 13.3 -0.9**
HAU *e*Sn **Sn** **21 17 33.1 -4.9**
comp=Z,576nm,0.7s
HAU Haudompre 7.40 320 *e*P **Pn** **21 16 13.3 -0.9**
HAU *e* 21 17 33.1
HAU Haudompre 7.40 320 *e*Pn **Pn** **21 16 13.3 -0.9**
HAU *e*Sn **Sn** **21 17 33.1 -4.9**
HAU Haudompre 7.40 320 *e*Pn **Pn** **21 16 13.3 -0.9**
KEST Kesra 7.45 206 Pn **Pn** 21 16 19.1 +4.1
KEST Sn **Sn** **21 17 38.3 -1.1**
KEST Kesra 7.45 206 Pn **Pn** 21 16 18.9 +3.9
comp=Z,3.5nm,0.3s,baz=328,slow=11,SNR=79
KEST Sn **Sn** **21 17 38.3 -1.1**
baz=270,slow=

THEF	They Montfort	7.73	320		P		Pn	21 16 17.4	-1.3
KTD	Kalmit	7.75	333		P		Pn	21 16 21.1	+2.1
KTD	Kalmit	7.75	333		P		Pn	21 16 21.1	+2.1
SJAF	Saint Jean de	7.75	273		P		Pn	21 16 17.6	-1.4
SJAF	Saint Jean de	7.75	273		P		Pn	21 16 17.6	-1.4
SJAF	Saint Jean de	7.75	273		P		Pn	21 16 17.6	-1.4
NKC	Novy Kostel	7.76	356	*e*	SN		Sn	21 17 41.8	-5.0
NKC					AMS		AMS	21 19 30.0	
	comp=Z,3μm,12.3s								
SRS	Serrai	7.76	97		P		Pn	21 16 19.2	0.0
TOD	Tromm	7.78	338		P		Pn	21 16 18.2	-1.2
TOD	Tromm	7.78	338		P		Pn	21 16 18.2	-1.2
TOD	Tromm	7.78	338		P		Pn	21 16 18.2	-1.2
LBL	Lubilhac	7.80	294		P		Pn	21 16 21.0	+1.2
LBL	Lubilhac	7.80	294		P		Pn	21 16 21.0	+1.2
LBL	Lubilhac	7.80	294		P		Pn	21 16 21.0	+1.2
LBL	Lubilhac	7.80	294		P		Pn	21 16 21.0	+1.2
WERN	Wernitzgruen	7.81	355	*e*	Pn		Pn	21 16 18.3	-1.6
TRIZ	Trizonia	7.82	119		P		Pn	21 16 18.7	-1.3
MORC	Moravsky Berou	7.83	20	*e*	P		Pn	21 16 19.6	-0.5
MORC				*e*				21 17 44.9	
MORC	Moravsky Berou	7.83	20	*e*	Pn		Pn	21 16 19.6	-0.5
MORC				*e*	Sn		Sn	21 17 44.9	-3.6
MORC	Moravsky Berou	7.83	20	*e*	P		Pn	21 16 19.6	-0.5
LAKA	Lakka	7.83	120		P		Pn	21 16 21.6	+1.4
KALE	Kalithea	7.85	119		P		Pn	21 16 19.0	-1.5
PLG	Polygyros	7.87	102		P		Pn	21 16 20.7	0.0
PLG	Polygyros	7.87	102	*e*	P		Pn	21 16 21.5	+0.8
GUNZ	Gunzen	7.89	355	*e*	Pn		Pn	21 16 19.8	-1.2
NVR	Nevrokopi	7.91	95		P		Pn	21 16 22.1	+0.8
DRGR		7.92	54	⇑	*i* P		Pn	21 16 23.2	+1.8
KRLC	Kraliky	7.93	16	*e*	PN		Pn	21 16 20.7	-0.8
KRLC	Kraliky	7.93	16		Pn		Pn	21 16 20.7	-0.8
TANN	Tannenbergstha	7.94	356	*e*	Pn		Pn	21 16 19.5	-2.1
SMF	Signal de Mont	7.96	305	*e*	Pn		Pn	21 16 21.2	-0.7
SMF				*e*	Sn		Sn	21 17 46.6	-5.2
	comp=Z,234nm,0.7s								
SMF	Signal de Mont	7.96	305	*e*	P		Pn	21 16 21.2	-0.7
SMF				*e*				21 17 46.6	
SMF	Signal de Mont	7.96	305	*e*	Pn		Pn	21 16 21.2	-0.7
SMF				*e*	Sn		Sn	21 17 46.6	-5.2
SMF	Signal de Mont	7.96	305	*e*	Pn		Pn	21 16 21.2	-0.7
CKFL	Kef-Lekhel	7.97	222		P		Pn	21 16 25.0	+2.8
WERD	Werda	7.98	355	*e*	Pn		Pn	21 16 20.8	-1.4
FILF	Fillols	7.98	274		P		Pn	21 16 22.3	0.0
FILF	Fillols	7.98	274		P		Pn	21 16 22.3	0.0
FILF	Fillols	7.98	274		P		Pn	21 16 22.3	0.0
LRDF	Laroque-de-Fa	7.99	277		P		Pn	21 16 21.8	-0.5
LRDF	Laroque-de-Fa	7.99	277		P		Pn	21 16 21.8	-0.5
LRDF	Laroque-de-Fa	7.99	277		P		Pn	21 16 21.8	-0.5
AXAR	Agios Charalam	7.99	115		P		Pn	21 16 24.4	+2.0
PLN	Plauen	8.03	354	*e*	Pn		Pn	21 16 20.9	-1.9
OKC	Ostrava-Krasne	8.05	23	*e*	P		Pn	21 16 22.8	-0.3
OKC	Ostrava-Krasne	8.05	23	*e*	PN		Pn	21 16 22.8	-0.3
OKC	Ostrava-Krasne	8.05	23		Pn		Pn	21 16 22.8	-0.3
LOT	Lotru	8.06	65	⇓	*i* P		Pn	21 16 25.0	+1.6
PVCC	Panska Ves	8.07	5		AMS		AMS	21 19 40.0	
	comp=Z,3μm,14.8s								
XOR	Xorichti	8.07	110		P		Pn	21 16 23.7	+0.2
PAGF	Fort de Pagny	8.08	321	*e*	Pn		Pn	21 16 22.7	-0.9
PAGF	Fort de Pagny	8.08	321	*e*	Pn		Pn	21 16 22.7	-0.9
PAGF	Fort de Pagny	8.08	321	*e*	Pn		Pn	21 16 22.7	-0.9
DSF	Desfina	8.09	117		P		Pn	21 16 25.4	+1.6
DPC	Dobruska-Polom	8.11	14	*e*	P		Pn	21 16 22.2	-1.8
DPC					MLR		MLR		
	comp=Z,4μm,13.3s								
DPC	Dobruska-Polom	8.11	14	*e*	Pn		Pn	21 16 22.2	-1.8
DPC	Dobruska-Polom	8.11	14	*e*	PN		Pn	21 16 22.2	-1.8
DPC					AMS		AMS	21 19 40.0	
	comp=Z,4μm,13.3s								
DPC	Dobruska-Polom	8.11	14		Pn		Pn	21 16 22.2	-1.8
NEO	Neokhori	8.12	110	*e*	P		Pn	21 16 24.0	-0.1
PYM	Petit Puy Mans	8.13	297		P		Pn	21 16 26.0	+1.7
PYM	Petit Puy Mans	8.13	297		P		Pn	21 16 26.0	+1.7
PYM	Petit Puy Mans	8.13	297		P		Pn	21 16 26.0	+1.7
PYM	Petit Puy Mans	8.13	297		P		Pn	21 16 26.0	+1.7
AGO	Saint Agoulin	8.15	299		P		Pn	21 16 24.2	-0.4
AGO	Saint Agoulin	8.15	299		P		Pn	21 16 24.2	-0.4
AGO	Saint Agoulin	8.15	299		P		Pn	21 16 24.2	-0.4
SFTF	Sexfontaines	8.18	317	*e*	Pn		Pn	21 16 23.7	-1.1
SFTF				*e*	Sn		Sn	21 17 51.4	-5.6
	comp=Z,566nm,1.1s								
SFTF	Sexfontaines	8.18	317	*e*	Pn		Pn	21 16 23.7	-1.1
SFTF				*e*	Sn		Sn	21 17 51.4	-5.6
SFTF	Sexfontaines	8.18	317	*e*	Pn		Pn	21 16 23.7	-1.1
PAIG	Paliouri	8.19	105		P		Pn	21 16 22.3	-2.7
CASM	Ain Smara	8.20	223		P		Pn	21 16 27.4	+2.2
CASM	Ain Smara	8.20	223		P		Pn	21 16 27.4	+2.2
MTLF	Montolieu	8.23	280	*e*	Pn		Pn	21 16 24.4	-1.2
MTLF	Montolieu	8.23	280	*e*	P		Pn	21 16 24.4	-1.2
MTLF	Montolieu	8.23	280	*e*	Pn		Pn	21 16 24.4	-1.2
MTLF	Montolieu	8.23	280	*e*	Pn		Pn	21 16 24.4	-1.2
MOX	Moxa	8.23	352	*e*	P		Pn	21 16 23.1	-2.5
MOX	Moxa	8.23	352	*e*	Pn		Pn	21 16 23.1	-2.5
MOX	Moxa	8.23	352	*e*	P		Pn	21 16 23.1	-2.5
GUR	Goura	8.24	121		P		Pn	21 16 28.2	+2.3
GUR	Goura	8.24	121	*e*	P		Pn	21 16 27.5	+1.6
LOR	Lormes	8.26	308	*e*	Pn		Pn	21 16 24.9	-1.1
LOR				*e*	Sn		Sn	21 17 55.2	-3.9
	comp=Z,119nm,0.8s								
LOR	Lormes	8.26	308	*e*	Pn		Pn	21 16 24.9	-1.1
LOR				*e*	Sn		Sn	21 17 55.2	-3.9
LOR	Lormes	8.26	308	*e*	Pn		Pn	21 16 24.9	-1.1
OUR	Ouranopolis	8.27	102		P		Pn	21 16 27.3	+1.2
ATAL	Atalanti	8.27	114		P		Pn	21 16 27.8	+1.6
LKR	Lokris	8.28	114		P		Pn	21 16 28.0	+1.7
FRNF	Fournols	8.31	294		P		Pn	21 16 28.2	+1.5
FRNF	Fournols	8.31	294		P		Pn	21 16 28.2	+1.5
FRNF	Fournols	8.31	294		P		Pn	21 16 28.2	+1.5
AVF	Avril sur Loir	8.32	304	*e*	Pn		Pn	21 16 26.4	-0.5
AVF	Avril sur Loir	8.32	304	*e*	P		Pn	21 16 26.4	-0.5
AVF	Avril sur Loir	8.32	304	*e*	Pn		Pn	21 16 26.4	-0.5
AVF	Avril sur Loir	8.32	304	*e*	Pn		Pn	21 16 26.4	-0.5
SSF	Saint Saulge	8.36	306	*e*	Pn		Pn	21 16 27.0	-0.4
SSF	Saint Saulge	8.36	306	*e*	P		Pn	21 16 27.0	-0.4
SSF	Saint Saulge	8.36	306	*e*	Pn		Pn	21 16 27.0	-0.4
SSF	Saint Saulge	8.36	306	*e*	Pn		Pn	21 16 27.0	-0.4
MEZF	Maizieres J'vi	8.37	319	*e*	Pn		Pn	21 16 26.7	-0.8
MEZF				*e*	Sn		Sn	21 17 58.0	-3.7
	comp=Z,302nm,1.0s								
MEZF	Maizieres J'vi	8.37	319	*e*	Pn		Pn	21 16 26.7	-0.8
MEZF				*e*	Sn		Sn	21 17 58.0	-3.7
MEZF	Maizieres J'vi	8.37	319	*e*	Pn		Pn	21 16 26.7	-0.8
BRG	Berggiesshubel	8.38	3	*e*	PN		Pn	21 16 25.0	-2.6
BRG	Berggiesshubel	8.38	3	*e*	P		Pn	21 16 25.0	-2.6
BRG	Berggiesshubel	8.38	3	*e*	Pn		Pn	21 16 25.0	-2.6
BRG	Berggiesshubel	8.38	3	*e*	P		Pn	21 16 25.0	-2.6
ABH	Alteburg	8.41	333		P		Pn	21 16 28.0	0.0
ABH	Alteburg	8.41	333		P		Pn	21 16 28.0	0.0
PLD	Plovdiv	8.41	89		P		Pn	21 16 29.1	+1.0
FBE	Freiberg	8.42	360	*e*	Pn		Pn	21 16 28.3	+0.1
FBE				*e*	Sn		Sn	21 17 57.2	-5.8
RUP	Ruppelstein	8.42	331		P		Pn	21 16 28.6	+0.3
RUP	Ruppelstein	8.42	331		P		Pn	21 16 28.6	+0.3
RUP	Ruppelstein	8.42	331		P		Pn	21 16 28.6	+0.3
NIE	Niedzica	8.44	33	*e*	P		Pn	21 16 30.8	+2.3
NIE				*e*	Sn		Sn	21 18 08.7	+5.2
ITM	Ithomi	8.46	126	*e*	P		Pn	21 16 31.3	+2.5
KAVA	Kavala	8.47	97		P		Pn	21 16 29.5	+0.6
VERF	Verneugheol	8.47	296		P		Pn	21 16 31.9	+2.9
VERF	Verneugheol	8.47	296		P		Pn	21 16 31.9	+2.9
BGF	Bois d'Agland	8.54	302	*e*	Pn		Pn	21 16 29.3	-0.5
BGF				*e*	Sn		Sn	21 18 01.1	-4.8
	comp=Z,104nm,0.7s								
BGF	Bois d'Agland	8.54	302	*e*	P		Pn	21 16 29.3	-0.5
BGF				*e*				21 18 01.1	
BGF	Bois d'Agland	8.54	302	*e*	Pn		Pn	21 16 29.3	-0.5
BGF				*e*	Sn		Sn	21 18 01.1	-4.8
BGF	Bois d'Agland	8.54	302	*e*	Pn		Pn	21 16 29.3	-0.5
CAF	Calviac	8.54	290	*e*	P		Pn	21 16 30.8	+1.0
CAF	Calviac	8.54	290	*e*	P		Pn	21 16 30.8	+1.0
CAF	Calviac	8.54	290	*e*	P		Pn	21 16 30.8	+1.0
CAF	Calviac	8.54	290	*e*	P		Pn	21 16 30.8	+1.0
CRVS	Cervenica-Dubn	8.54	39	*e*	PN		Pn	21 16 31.8	+1.9
CRVS				*e*				21 17 19.1	
CRVS				*e*				21 19 06.3	
CRVS	Cervenica-Dubn	8.54	39	*e*	Pn		Pn	21 16 31.8	+1.9
TRPA	Tarpa	8.56	46	⇓	*i* P		Pn	21 16 31.6	+1.4
TRPA	Tarpa	8.56	46	⇓	*e* pPn		Pn	21 16 32.7	+2.5
TRPA	Tarpa	8.56	46	⇓	*i* P		Pn	21 16 31.6	+1.4
KSP	Ksiaz	8.58	13	*e*	Pn		Pn	21 16 29.6	-0.8
KSP				*e*	Sn		Sn	21 18 24.8	+18
KSP	Ksiaz	8.58	13	*e*	P		Pn	21 16 28.8	-1.6
KSP				*e*	Sn		Sn	21 18 05.7	-1.2
LTK	Loutraki	8.60	118		P		Pn	21 16 31.4	+0.8
LTK	Loutraki	8.60	118	*e*	P		Pn	21 16 30.9	+0.3
VLX	Vlachokerasia	8.61	124	*e*	P		Pn	21 16 36.0	+5.0
ARR	Arges	8.62	67	⇑	*i* P		Pn	21 16 32.4	+1.4
UBBA	Unterbreizbach	8.63	346	*e*	Pn		Pn	21 16 29.9	-1.1
MRKA	Markates	8.65	113		P		Pn	21 16 31.7	+0.3
HUMR	Humele	8.68	73	⇓	*i* P		Pn	21 16 32.6	+0.8
WLF	Walferdange	8.74	328		PN		Pn	21 16 32.3	-0.3
WLF					SN		Sn	21 18 05.9	-4.9
	comp=Z,72nm,0.0s								
WLF	Walferdange	8.74	328	*e*	P		Pn	21 16 31.9	-0.6
WLF				*e*				21 18 10.3	
WLF					pmax		pmax		
	comp=Z,104nm,0.8s								
WLF	Walferdange	8.74	328	*e*	Pn		Pn	21 16 32.7	+0.2
WLF	Walferdange	8.74	328	*e*	Pn		Pn	21 16 31.9	-0.6
	comp=Z,104nm,0.8s								
WLF				*e*	Sn		Sn	21 18 10.2	-0.5
WLF	Walferdange	8.74	328	*e*	P		Pn	21 16 31.9	-0.6
	comp=Z,104nm,0.8s								
WLF				*e*	S		Sn	21 18 10.3	-0.5
UZH	Uzhgorod	8.76	43	*e*	P		Pn	21 16 35.0	+2.2
UZH				*e*	S		Sn	21 18 14.0	+2.7
UZH					MLR		MLR		
	comp=N,2μm,8.0s								
UZH					MLR		MLR		
	comp=E,5μm,8.0s								
UZH					MLR		MLR		
	comp=Z,3μm,8.0s								
UZH	Uzhgorod	8.76	43	*e*	P		Pn	21 16 35.0	+2.2
UZH				*e*	S		Sn	21 18 14.0	+2.7
NEUB	Neuenburg	8.78	353	*e*	Pn		Pn	21 16 31.7	-1.3
NEUB				*e*	Sn		Sn	21 18 10.0	-1.7
CLL	Collm	8.81	359	*e*	P		Pn	21 16 32.0	-1.5
CLL	Collm	8.81	359	*e*	Pn		Pn	21 16 31.2	-2.3
CLL	Collm	8.81	359	*e*	Pn		Pn	21 16 32.0	-1.5
CLL				*e*	Sn		Sn	21 18 01.0	-12
CLL				*e*	Sg		Sg	21 19 16.0	+7.0
	comp=E,6μm,21.0s								
CLL					L		L	21 19 42.0	
	comp=Z,2μm,18.2s								
CLL					Lmax			21 21 00.0	
CLL	Collm	8.81	359	*e*	P		Pn	21 16 32.0	-1.5
SET	Setif	8.81	227		P		Pn	21 16 41.0	+7.3
BMR	Baia Mare	8.83	51	⇑	*i* P		Pn	21 16 36.5	+2.7
TCF	Toulx Ste Croi	8.84	299	*e*	Pn		Pn	21 16 34.1	+0.2
TCF	Toulx Ste Croi	8.84	299	*e*	P		Pn	21 16 34.1	+0.2
TCF	Toulx Ste Croi	8.84	299	*e*	Pn		Pn	21 16 34.1	+0.2
TCF	Toulx Ste Croi	8.84	299	*e*	Pn		Pn	21 16 34.1	+0.2
ZIMR		8.86	78	⇓	*i* P		Pn	21 16 35.1	+0.9
OJC	Ojcow	8.90	28	*e*	P		Pn	21 16 36.0	+1.2
OJC	Ojcow	8.90	28	*e*	Pn		Pn	21 16 36.0	+1.2
OJC	Ojcow	8.90	28	*e*	P		Pn	21 16 36.6	+1.8
OJC				*e*	Sn		Sn	21 18 12.9	-2.0
OJC	Ojcow	8.90	28	*e*	P		Pn	21 16 36.0	+1.2
OJC				*e*	S		Sn	21 18 12.9	-2.0
KOLS	Kolonicke sedl	8.95	41	*e*	PN		Pn	21 16 38.7	+3.3
KOLS				*e*				21 17 41.7	
KOLS				*e*				21 19 20.2	
RJF	Les Rejaudoux	9.00	292	*e*	P		Pn	21 16 38.1	+1.9
RJF	Les Rejaudoux	9.00	292	*e*	P		Pn	21 16 38.1	+1.9
RJF	Les Rejaudoux	9.00	292	*e*	P		Pn	21 16 38.1	+1.9
RJF	Les Rejaudoux	9.00	292	*e*	P		Pn	21 16 38.1	+1.9
MLS	Moulis	9.04	277		P		Pn	21 16 36.7	-0.1
MLS	Moulis	9.04	277		P		Pn	21 16 36.7	-0.1
MLS	Moulis	9.04	277		P		Pn	21 16 36.7	-0.1
DID	Didima	9.07	120		P		Pn	21 16 39.5	+2.3
DID	Didima	9.07	120	*e*	P		Pn	21 16 38.6	+1.4
DIDY	Didyma	9.07	120		P		Pn	21 16 42.6	+5.4
ATH	Athens Observa	9.12	116		P		Pn	21 16 36.6	-1.2
RDO	Rodhopi	9.19	94	*e*	P		Pn	21 16 39.8	+1.1
DOPR	Dopca	9.30	64	⇓	*i* P		Pn	21 16 42.7	+2.4
VLI	Veliai	9.37	125		P		Pn	21 16 46.2	+4.9
VLI	Veliai	9.37	125	*e*	P		Pn	21 16 45.0	+3.7
LFF	La Frestale	9.46	289	*e*	P		Pn	21 16 43.3	+0.8
LFF	La Frestale	9.46	289	*e*	P		Pn	21 16 43.3	+0.8
LFF	La Frestale	9.46	289	*e*	P		Pn	21 16 43.3	+0.8
LFF	La Frestale	9.46	289	*e*	P		Pn	21 16 43.3	+0.8
SECR		9.53	70	⇑	*i* P		Pn	21 16 45.5	+2.0
MLR	Muntele Rosu	9.54	68		Pn		Pn	21 16 46.1	+2.4
MLR					Sn		Sn	21 18 27.0	-3.8
MLR	Muntele Rosu	9.54	68	⇓	*i* P		Pn	21 16 46.1	+2.4
MLR	Muntele Rosu	9.54	68		Pn		Pn	21 16 46.1	+2.4
	comp=Z,0.4nm,0.3s,baz=214,slow=5.7,SNR=30								
MLR					Sn		Sn	21 18 27.0	-3.8
	baz=2.9,slow=23,SNR=1.2								
MLR	Muntele Rosu	9.54	68		P		Pn	21 16 46.1	+2.4
MEM	Membach	9.56	331		PN		Pn	21 16 44.1	+0.3
MEM					SN		Sn	21 18 22.7	-8.2
	comp=E,39nm,0.0s								
CLZ	Clausthal	9.56	349	*e*	P		Pn	21 16 43.6	-0.2
CLZ	Clausthal	9.56	349	*e*	Pn		Pn	21 16 43.6	-0.2
CLZ	Clausthal	9.56	349	*e*	P		Pn	21 16 43.6	-0.2
EPF	Esparros	9.60	278	*e*	Pn		Pn	21 16 42.5	-1.9
EPF	Esparros	9.60	278	*e*	P		Pn	21 16 42.5	-1.9
EPF	Esparros	9.60	278	*e*	Pn		Pn	21 16 42.5	-1.9
EPF	Esparros	9.60	278	*e*	Pn		Pn	21 16 42.5	-1.9
SULR		9.60	73	⇓	*i* P		Pn	21 16 44.6	+0.2
ALN	Alexandroupoli	9.62	95		P		Pn	21 16 45.6	+0.9
ALN	Alexandroupoli	9.62	95	*e*	P		Pn	21 16 45.5	+0.9
ALN	Alexandroupoli	9.62	95	*e*	P		Pn	21 16 47.0	+2.3
GIVF	Givet	9.62	325	*e*	Pn		Pn	21 16 44.1	-0.5
GIVF				*e*	Sn		Sn	21 18 26.8	-5.7
	comp=E,415nm,1.2s								
GIVF	Givet	9.62	325	*e*	P		Pn	21 16 44.1	-0.5
GIVF				*e*				21 18 26.8	
GIVF	Givet	9.62	325	*e*	Pn		Pn	21 16 44.1	-0.5
GIVF				*e*	Sn		Sn	21 18 26.8	-5.7
GIVF	Givet	9.62	325	*e*	Pn		Pn	21 16 44.1	-0.5
KWP	Kalwaria Pacla	9.63	39	*e*	P		Pn	21 16 47.7	+2.8
KWP				*e*				21 18 30.4	
KWP					pmax		pmax		
	comp=Z,90nm,0.9s								
KWP	Kalwaria Pacla	9.63	39	*e*	Pn		Pn	21 16 47.6	+2.8
	comp=Z,90nm,0.9s								
KWP				*e*	Sn		Sn	21 18 30.4	-2.5
KWP	Kalwaria Pacla	9.63	39	⇓	*i* P		Pn	21 16 47.6	+2.8
KWP	Kalwaria Pacla	9.63	39	*e*	Pn		Pn	21 16 49.4	+4.6
KWP				*e*	Sg			21 20 12.9	
BCLA	Clavier	9.67	328		PN		Pn	21 16 46.1	+0.8
BCLA					SN		Sn	21 18 28.2	-5.6
	comp=N,30nm,0.0s								
HGN	Heimansgroeve	9.71	331	*e*	P		Pn	21 16 46.2	+0.4
HGN				*e*	S		Sn	21 18 30.9	-3.8
HGN				*e*	L			21 20 53.0	
	comp=N,2μm,16.0s								
HGN	Heimansgroeve	9.71	331	*e*	P		Pn	21 16 46.2	+0.4
DOU	Dourbes	9.71	324		PN		Pn	21 16 45.5	-0.4
DOU					SN		Sn	21 18 29.6	-5.1
	comp=E,42nm,0.0s								
KYTH	Kithira	9.72	127	*e*	P		Pn	21 16 49.8	+3.7
JMB	Yambol	9.77	86		P		Pn	21 16 47.6	+0.9
BURAR	Bucovina Array	9.81	55	⇑	*i* P		Pn	21 16 49.3	+1.9
BUR08	Bucovina Ar. S	9.82	54	*e*	Pn		Pn	21 16 49.0	+1.6
BUR08				*e*	Sn		Sn	21 18 39.1	+1.5
BUR08	Bucovina Ar. S	9.82	54	*e*	Pn		Pn	21 16 49.1	+1.5
BUR08				*e*	Sn		Sn	21 18 39.1	+1.5
BAIF	Baives	9.86	323	*e*	Pn		Pn	21 16 48.1	+0.2
BAIF				*e*	Sn		Sn	21 18 33.0	-5.3
	comp=E,262nm,1.3s								
BAIF	Baives	9.86	323	*e*	P		Pn	21 16 48.1	+0.2
BAIF				*e*				21 18 33.0	
BAIF	Baives	9.86	323	*e*	Pn		Pn	21 16 48.1	+0.2
BAIF				*e*	Sn		Sn	21 18 33.0	-5.3
BAIF	Baives	9.86	323	*e*	Pn		Pn	21 16 48.1	+0.2
BUG	Bochum--Univer	9.86	337	*e*	P		Pn	21 16 48.2	+0.3
BUG	Bochum--Univer	9.86	337	*e*	Pn		Pn	21 16 48.2	+0.3
BUG	Bochum--Univer	9.86	337	*e*	P		Pn	21 16 48.2	+0.3
ISR	Istrita	9.88	70	⇑	*i* P		Pn	21 16 49.8	+1.6
PLOR	Plostina	10.11	66	⇓	*i* P		Pn	21 16 52.8	+1.4
SNF	Seneffe	10.16	325		PN		Pn	21 16 51.3	-0.6
VRI	Vrincioaia	10.17	66	⇑	*i* P		Pn	21 16 53.7	+1.5
NRDL	Niedersach Rie	10.23	349	*e*	Pn		Pn	21 16 53.0	+0.1
ETSF	Etsaut	10.26	277	*e*	Pn		Pn	21 16 53.8	+0.3
ETSF	Etsaut	10.26	277	*e*	P		Pn	21 16 53.8	+0.3
ETSF	Etsaut	10.26	277	*e*	Pn		Pn	21 16 53.8	+0.3
ETSF	Etsaut	10.26	277	*e*	Pn		Pn	21 16 53.8	+0.3
TESR		10.30	63	⇓	*i* P		Pn	21 16 56.1	+2.2
PRK	Paraskevi	10.30	104	*e*	P		Pn	21 16 53.0	-1.0
GHAR	Gharyan	10.37	181	*i*	P		Pn	21 16 57.9	+2.9
	SNR=22								
LVV	L'vov	10.40	42	*e*	P		Pn	21 16 58.4	+3.2
LVV				*e*	S		Sn	21 19 00.6	+9.1
LVV					MLR		MLR		
	comp=N,2μm,10.0s								
LVV					MLR		MLR		
	comp=E,2μm,10.0s								
LVV					MLR		MLR		
	comp=Z,2μm,10.0s								
WTSB	Winterswijk	10.46	337	*e*	P		Pn	21 16 56.9	+0.8
WTSB				*e*	S		Sn	21 18 39.6	-13
WTSB				*e*	L		L	21 21 39.3	
	comp=Z,1μm,20.2s								
WTSB	Winterswijk	10.46	337	*e*	P		Pn	21 16 56.9	+0.8
MFF	Saint Martin d	10.48	298	*e*	P		Pn	21 16 58.1	+1.7
MFF	Saint Martin d	10.48	298	*e*	P		Pn	21 16 58.1	+1.7
MFF	Saint Martin d	10.48	298	*e*	P		Pn	21 16 58.1	+1.7
MFF	Saint Martin d	10.48	298	*e*	P		Pn	21 16 58.1	+1.7
BEL	Belsk	10.61	26	*e*	Pn		Pn	21 17 03.0	+4.8
BEL				*e*	S		Sn	21 18 52.6	-4.1
SJPF	Ste Jean	10.74	278	*e*	Pn		Pn	21 16 59.1	-0.9
SJPF	Ste Jean	10.74	278	*e*	P		Pn	21 16 59.1	-0.9
SJPF	Ste Jean	10.74	278	*e*	Pn		Pn	21 16 59.1	-0.9
SJPF	Ste Jean	10.74	278	*e*	Pn		Pn	21 16 59.1	-0.9
KARN	Karanos	10.85	127		P		Pn	21 17 05.1	+3.6
CFR	Carcaliu	11.00	71	⇑	*i* P		Pn	21 17 04.9	+1.4
VAM	Vamos	11.01	126	*e*	P		Pn	21 17 03.0	-0.7
GKP	Gorka Klasztor	11.08	12	*e*	Pn		Pn	21 17 06.5	+2.0
GKP	Gorka Klasztor	11.08	12	*e*	Pn		Pn	21 17 06.6	+2.0
LDF	La Druitiere	11.24	307	*e*	Pn		Pn	21 17 06.1	-0.7
LDF	La Druitiere	11.24	307	*e*	P		Pn	21 17 06.1	-0.7
LDF	La Druitiere	11.24	307

comp=Z,8.1nm,0.8s
BRTR Keskin Array B 15.53 93 Pn **Pn 21 18 05.6 +0.3**
BRTR Keskin Array B 15.53 93 Pn **Pn 21 18 05.6 +0.3**
comp=Z,0.1nm,0.3s,baz=286,slow=9.3,SNR=9.0
BRTR LR LR 21 24 59.3
comp=Z,1μm,18.8s,baz=286,slow=41
BRTR Keskin Array B 15.53 93 Pn **Pn 21 18 05.6 +0.3**
IZAR Zarasai 15.67 28 *e*P **Pn 21 18 05.3 -1.6**
IZAR AMB AMB 21 18 07.9
comp=Z,16nm,1.3s
PVRL Vila Real 15.75 273 *e*P P 21 18 18.5 +6.5
comp=Z,44nm,1.5s
POLO Lamas de Olo 15.79 273 *e*P **P 21 18 14.3 +1.8**
comp=Z,21nm,1.6s
POLO Lamas de Olo 15.79 273 *e*P **P 21 18 14.3 +1.8**
comp=Z,21nm,1.6s
MTE Manteigas 15.82 269 *e*P **P 21 18 14.7 +1.9**
comp=Z,59nm,1.4s
MTE Manteigas 15.82 269 *e*Pn **Pn 21 18 09.1 +0.1**
comp=Z,30nm,1.1s
MTE Manteigas 15.82 269 *e*Pn **Pn 21 18 09.1 +0.1**
comp=Z,30nm,1.1s
MTE Manteigas 15.82 269 *e*P **P 21 18 14.7 +1.9**
comp=Z,53nm,1.4s
PCBR Castelo Branco 15.92 267 *e*P **P 21 18 13.0 -0.8**
comp=Z,26nm,1.4s
PCBR Castelo Branco 15.92 267 *e*P **P 21 18 13.0 -0.8**
comp=Z,26nm,1.4s
GAZI Gazipasa 15.92 107 *i*P **P 21 18 12.9 -1.0**
PMRV Marv??o 15.97 266 *e*P **Pn 21 18 11.7 +0.8**
comp=Z,35nm,1.4s
PGAV Gavieira, Arco 16.03 275 *e*P **P 21 18 18.1 +2.9**
comp=Z,70nm,1.4s
PBAR Barrancos 16.14 261 *e*P **Pn 21 18 11.6 -1.5**
comp=Z,76nm,2.0s
CTKT Corum 16.14 89 *i*P **P 21 18 19.9 +3.4**
PESTR Estremoz 16.30 264 *e*P **Pn 21 18 15.4 +0.3**
comp=Z,33nm,1.9s
LUMB Murzuk 16.37 176 *i*P Pn 21 18 09.1 -6.9
SNR=35
PTOM Tomar 16.67 267 *e*P **P 21 18 26.5 +4.4**
comp=Z,69nm,1.7s
PMTG Montargil 16.70 265 *e*P **P 21 18 24.5 +2.0**
comp=Z,62nm,1.6s
PMTG Montargil 16.70 265 *e*P **P 21 18 24.5 +2.0**
comp=Z,62nm,1.6s
HAVZ Havza 16.73 87 *i*P **P 21 18 24.9 +2.1**
EKA Eskdalemuir Ar 16.76 326 Pn **Pn 21 18 20.1 -0.6**
EKA Sn **Sn 21 21 19.5 -7.0**
EKA Eskdalemuir Ar 16.76 326 Pn **Pn 21 18 20.1 -0.6**
baz=130,slow=15,SNR=17
EKA Sn **Sn 21 21 19.5 -7.0**
baz=136,slow=26,SNR=6.0
EKA Eskdalemuir Ar 16.76 326 Pn **Pn 21 18 20.1 -0.6**
ESK Eskdalemuir 16.76 326 *e*P **Pn 21 18 20.8 -0.1**
ESK pmax pmax
comp=Z,26nm,1.1s
ESK Eskdalemuir 16.76 326 *e*Pn **Pn 21 18 20.8 -0.1**
comp=Z,26nm,1.1s
ESK Eskdalemuir 16.76 326 *e*P **Pn 21 18 20.8 -0.1**
comp=Z,26nm,1.1s
PVAQ Vaqueiros 16.94 260 *e*P P 21 18 30.5 +5.4
comp=Z,68nm,1.8s
PCVE Castro Verde 17.08 261 *e*P **P 21 18 29.5 +2.8**
comp=Z,39nm,1.6s
DLF Lyons Farm 17.10 316 *e*P **P 21 18 28.0 +1.2**
MDT Midelt 17.18 242 P **Pn 21 18 26.1 -0.3**
MDT Midelt 17.18 242 P **Pn 21 18 26.1 -0.3**
comp=Z,0.1nm,0.3s,baz=60,slow=13,SNR=9.2
MDT LR LR 21 24 18.4
comp=Z,462nm,18.3s,baz=30,slow=34
MDT Midelt 17.18 242 P **Pn 21 18 26.1 -0.3**
GULE Gulek 17.22 100 *i*P **P 21 18 31.2 +2.7**
CSS Prodhromos 17.28 109 *e*Pn **Pn 21 18 27.2 -0.3**
comp=Z,51nm,1.2s
CSS Prodhromos 17.28 109 *e*Pn **Pn 21 18 27.2 -0.3**
comp=Z,51nm,1.2s
KONO Kongsberg 17.32 354 *e*P **Pn 21 18 27.9 0.0**
KONO pmax pmax
comp=Z,85nm,1.5s
KONO Kongsberg 17.32 354 *e*Pn **Pn 21 18 27.9 0.0**
comp=Z,85nm,1.5s
KONO Kongsberg 17.32 354 *e*P **Pn 21 18 27.9 0.0**
comp=Z,85nm,1.5s
TOKA Tokat 17.46 89 *i*P **P 21 18 33.6 +2.6**
LIS Lisbon 17.50 265 *e*P **Pn 21 18 29.8 -0.4**
LIS AMb AMB 21 18 41.1
comp=Z,72nm,0.9s
LIS *e*S **Sn 21 21 46.3 +1.6**
LIS Lisbon 17.50 265 *e*P **Pn 21 18 29.8 -0.4**
comp=Z,72nm,0.9s
LIS *e*S **Sn 21 21 46.3 +1.6**
LIS Lisbon 17.50 265 *e*P **Pn 21 18 29.7 -0.4**
LIS *e*S **Sn 21 21 46.3 +1.6**
LIS Lisbon 17.50 265 *e*P **Pn 21 18 29.8 -0.4**
comp=Z,72nm,0.9s
ANN Anapa 17.55 74 *e*P **Pn 21 18 27.3 -3.5**
ANN *e*S Sn 21 21 34.8 -11
ANN pmax pmax
comp=Z,88nm,1.6s
ANN MLR MLR
comp=Z,670nm,10.0s
ERBA Erbaa 17.58 88 *i*P **P 21 18 33.5 +1.3**
HFS Hagfors 17.66 1 P **Pn 21 18 30.1 -1.9**
HFS Hagfors 17.66 1 P **Pn 21 18 30.1 -1.9**
comp=Z,0.4nm,0.3s,baz=186,slow=12,SNR=14
HFS LR LR 21 25 56.9
comp=Z,894nm,19.5s,baz=182,slow=39
MORF Marmelete 17.66 260 *e*P **Pn 21 18 32.0 -0.2**
MORF *e*S **Sn 21 21 51.5 +2.8**
MORF Marmelete 17.66 260 *e*P **Pn 21 18 32.0 -0.2**
PINB Pinarbasi 17.90 95 *i*P **P 21 18 38.3 +2.3**
NAO01 NORSAR Array S 18.43 356 *e*Pn **P 21 18 40.7 -0.7**
comp=Z,11nm,0.7s
NAO01 NORSAR Array S 18.43 356 *e*Pn **P 21 18 40.7 -0.7**
comp=Z,11nm,0.7s
NB2 NORSAR Subarra 18.61 357 P **P 21 18 41.9 -1.5**
comp=Z,19nm,0.9s,baz=173,slow=12
NB2 NORSAR Subarra 18.61 357 P **P 21 18 41.9 -1.5**
comp=Z,19nm,0.9s,baz=173,slow=12,SNR=6.6
NOA NORSAR Array B 18.61 357 P **P 21 18 42.0 -1.5**
NOA NORSAR Array B 18.61 357 P **P 21 18 42.0 -1.5**
comp=Z,0.5nm,0.3s,baz=172,slow=12,SNR=28
NOA LR LR 21 26 02.2
comp=Z,737nm,21.7s,baz=175,slow=38
NOA NORSAR Array B 18.61 357 P **P 21 18 42.0 -1.5**
comp=Z,737nm,21.7s
COBT Iskenderun 18.62 101 *i*P **Pn 21 18 46.5 +2.4**
YAYL Yayladag 18.73 103 *i*P **Pn 21 18 46.5 +1.1**
SUSE Susehri 18.77 89 *i*P **Pn 21 18 47.9 +1.9**
KUZU Kuzuini 19.11 100 *i*P **P 21 18 49.3 +0.2**
AKCD Akcadag 19.15 94 *i*P **Pn 21 18 50.1 -0.4**
GZT Gaziantep 19.23 97 *i*P **Pn 21 18 52.3 +0.8**
KEMA Kemaliye 19.25 91 *i*P **P 21 18 50.8 +0.1**
SOC Sochi 19.27 78 *c*i*P **P 21 18 51.2 +0.5**
SOC *e* 21 22 25.6
SOC pmax pmax
comp=Z,21nm,0.9s
SOC MLR MLR
comp=Z,669nm,18.0s
SOC MLR MLR
comp=N,405nm,18.0s
SOC MLR MLR
comp=E,214nm,17.0s
SOC Sochi 19.27 78 *i*P **P 21 18 51.2 +0.5**
comp=E,21nm,0.9s
MALT Malatya 19.51 94 *e*P **Pn 21 18 55.1 +0.2**
MALT pmax pmax
comp=Z,57nm,1.1s
MALT Malatya 19.51 94 *e*P **Pn 21 18 55.1 +0.2**
comp=Z,58nm,1.1s
MALT Malatya 19.51 94⇑ *i*P **Pn 21 18 55.0 +0.2**
MALT Malatya 19.51 94 *e*P **P 21 18 49.0 -4.6**
MALT Malatya 19.51 94 *e*P **Pn 21 18 55.1 +0.2**
comp=Z,58nm,1.1s
KELT Kelkit 19.56 88 *i*P **Pn 21 18 56.2 +0.6**
VSR Storozhevoye 19.59 55 *e*P **P 21 18 53.8 -0.4**
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,9.0nm,0.6s
VSR pmax pmax
comp=Z,20nm,0.6s
VSR MLR MLR
comp=Z,3μm,22.0s
VSR MLR MLR
comp=N,670nm,11.0s
VSR MLR MLR
comp=E,2μm,22.0s
VSR Storozhevoye 19.59 55 *e*P **P 21 18 53.8 -0.4**
comp=E,670nm,11.0s
VORD Divnogorie 19.60 55 *e*P **P 21 18 54.1 -0.2**
VORD pmax pmax
comp=Z,30nm,1.1s
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,80nm,1.1s
VORD MLR MLR
comp=Z,2μm,17.0s
VORD MLR MLR
comp=N,800nm,15.0s
VORD MLR MLR
comp=E,1μm,17.0s
VORD Divnogorie 19.60 55 *e*P **P 21 18 54.1 -0.2**
comp=E,800nm,15.0s
OBN Obninsk 19.70 42 *d*i*P **P 21 18 54.4 -0.9**
OBN *i*S **S 21 22 33.9 -3.1**
OBN pmax pmax
comp=Z,168nm,2.5s
OBN MLR MLR
comp=Z,2μm,21.0s
OBN Obninsk 19.70 42 *i*P **P 21 18 54.4 -0.9**
comp=Z,168nm,2.5s
ATAB Bozova 19.72 96 *i*P **Pn 21 18 57.1 -0.2**
MACK Trabzon 19.75 86 *i*P **Pn 21 18 58.3 +0.7**
VOR Voronezh 19.77 53 P **P 21 18 56.0 -0.1**
VOR pmax pmax
comp=Z,350nm,2.0s
VOR Voronezh 19.77 53 P **P 21 18 56.0 -0.1**
comp=Z,350nm,2.0s
MMAI Mount Meron Ar 19.79 111 P **P 21 18 56.2 -0.3**
MMAI Mount Meron Ar 19.79 111 P **P 21 18 56.2 -0.3**
comp=Z,1.1nm,0.3s,baz=328,slow=9.0,SNR=22
MMAI Mount Meron Ar 19.79 111 P **P 21 18 56.2 -0.3**
ELZG Elazig 19.86 93 *i*P **Pn 21 18 58.7 -0.3**
KSDI Kefar Szold 19.86 111 *e*P **P 21 18 55.9 -1.4**
PUL Pulkovo 20.19 25 *e*P **P 21 18 59.6 -1.0**
PUL pmax pmax
comp=Z,86nm,1.3s
PUL Pulkovo 20.19 25 *e*P **P 21 18 59.6 -1.0**
comp=Z,86nm,1.3s
FINES FINESS Array B 20.45 18 P **P 21 19 02.6 -0.8**
FINES PcP **PcP 21 23 14.5 -0.5**
FINES FINESS Array B 20.45 18 P **P 21 19 02.6 -0.8**
comp=Z,103nm,1.0s,baz=193,slow=7.8,SNR=84
FINES PcP **PcP 21 23 14.5 -0.5**
comp=Z,0.8nm,0.6s,baz=144,slow=3.5,SNR=3.3
FINES LR LR 21 27 40.2
comp=Z,1μm,18.8s,baz=211,slow=39
FINES FINESS Array B 20.45 18 P **P 21 19 02.7 -0.8**
comp=Z,103nm,1.0s
FIA1 FINESS Array S 20.45 18 *e*P **P 21 19 02.1 -1.4**
FIA1 FINESS Array S 20.45 18 *e*P **P 21 19 02.1 -1.4**
KOPT Kop Dagi 20.52 88 *i*P **P 21 19 05.1 +0.4**
MOS Moscow 20.53 41 *e*P **P 21 19 03.4 -1.0**
MOS pmax pmax
comp=Z,84nm,1.3s
MOS MLR MLR
comp=N,500nm,11.0s
MOS MLR MLR
comp=Z,2μm,11.0s
MOS MLR MLR
comp=E,2μm,10.0s
MOS Moscow 20.53 41 *e*P **P 21 19 03.4 -1.0**
comp=E,2μm,11.0s
TAM Tamanrasset 20.72 201 *e*P Pn 21 19 09.3 +0.1
TAM pmax pmax
comp=Z,417nm,2.3s
TAM Tamanrasset 20.72 201 *e*P Pn 21 19 09.3 +0.1
comp=Z,417nm,2.3s
TAM Tamanrasset 20.72 201 *e*P Pn 21 19 09.3 +0.1
comp=Z,417nm,2.3s
DBOC Borcka 21.05 84 *i*P **P 21 19 10.9 +0.7**
VRHR Novokhopersk 21.06 56 *e*P **P 21 19 10.1 -0.1**
VRHR *e*S **S 21 22 57.4 -6.8**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,20nm,0.8s
VRHR pmax pmax
comp=Z,50nm,0.8s
VRHR smax smax
comp=N,50nm,1.8s
VRHR smax smax
comp=E,150nm,1.8s
VRHR smax smax
comp=Z,30nm,1.8s
VRHR MLR MLR
comp=N,800nm,14.0s
VRHR MLR MLR
comp=E,1μm,14.0s
VRHR MLR MLR
comp=Z,1μm,14.0s
VRHR Novokhopersk 21.06 56 *e*P **P 21 19 10.1 -0.1**
KAF Kangasniemi 21.09 17 *e*P **P 21 19 08.0 -2.4**
KAF pmax pmax
comp=Z,38nm,0.9s
KAF Kangasniemi 21.09 17 *ep* **P 21 19 08.0 -2.4**
comp=Z,38nm,0.9s
KAF Kangasniemi 21.09 17 *e*P **P 21 19 08.0 -2.4**
comp=Z,38nm,0.9s
DDEM Demirkent 21.22 85 *e*P **P 21 19 11.6 -0.5**
ARTV Artvin 21.28 84 *i*P **P 21 19 13.5 +0.6**
DAGI Agillar 21.30 84 *i*P **P 21 19 14.3 +1.4**
ASF Jabal al Asfar 21.30 111 P **P 21 19 12.9 -0.1**
ASF Jabal al Asfar 21.30 111 P **P 21 19 12.9 -0.1**
comp=Z,3.1nm,0.6s,baz=150,slow=2.9,SNR=16
ASF LR LR 21 28 50.6
comp=Z,384nm,19.9s,baz=356,slow=41
KIV Kislovodsk 21.37 76 *e*P **P 21 19 14.1 +0.5**
KIV *e*S **S 21 23 10.0 -0.5**
KIV pmax pmax
comp=Z,98nm,1.1s
KIV MLR MLR
comp=Z,534nm,15.0s
KIV Kislovodsk 21.37 76 *e*P **P 21 19 14.1 +0.5**
comp=Z,98nm,1.1s
KIV *e*S **S 21 23 10.0 -0.5**
comp=Z,534nm,15.0s
KBZ Khabaz 21.55 77 P **P 21 19 15.6 +0.2**
KBZ pmax pmax
comp=Z,56nm,0.9s
KBZ Khabaz 21.55 77 P **P 21 19 15.6 +0.2**
KBZ Khabaz 21.55 77 P **P 21 19 15.6 +0.2**
comp=Z,56nm,0.9s,baz=298,slow=8.1,SNR=59
KBZ Khabaz 21.55 77 P **P 21 19 15.6 +0.2**
comp=Z,56nm,0.9s
HOMI Horasan 21.55 87 *i*P **P 21 19 14.4 -1.4**
EIL Elat 21.57 119 P **P 21 19 16.4 +0.6**
EIL Elat 21.57 119 P **P 21 19 16.4 +0.6**
comp=Z,8.0nm,0.8s,baz=306,slow=7.6,SNR=12
EIL LR LR 21 30 50.0
comp=Z,239nm,18.6s,baz=96,slow=46
EIL Elat 21.57 119 P **P 21 19 16.4 +0.6**
MARD Mardin 21.61 95 *i*P **P 21 19 15.2 -1.2**
ONI Oni 22.12 80 P **P 21 19 22.0 +0.3**
ONI S **S 21 23 28.5 +3.4**
ONI Oni 22.12 80 P **P 21 19 22.0 +0.3**
TATV Tatvan 22.28 91 *i*P **P 21 19 24.2 +0.5**
AKH Akhalkalaki 22.38 83 P **P 21 19 28.1 +3.4**
AKH S **S 21 23 35.6 +5.3**
TUTA Tutak 22.40 88 *i*P **P 21 19 26.1 +1.1**
ZEI Tsey 22.41 79 *e*P **P 21 19 26.3 +1.3**
ZEI *e*SSS SSS 21 24 25.4
ZEI pmax pmax
comp=Z,68nm,1.8s
ZEI MLR MLR
comp=Z,1μm,15.0s
ZEI Tsey 22.41 79 *e*P **P 21 19 26.3 +1.3**
comp=Z,1μm,15.0s
GOR Gori 22.71 81 P **P 21 19 28.4 +0.4**
GOR Gori 22.71 81 P **P 21 19 28.4 +0.4**
SIRN S¨-rnak 22.75 93 *i*P **P 21 19 31.9 +3.4**
JOF Joensuu 23.00 21 *e*P **P 21 19 29.5 -1.2**
JOF pmax pmax
comp=Z,17nm,0.7s
JOF Joensuu 23.00 21 *ep* **P 21 19 29.5 -1.2**
comp=Z,17nm,0.7s
JOF Joensuu 23.00 21 *e*P **P 21 19 29.5 -1.2**
comp=Z,17nm,0.7s
TBLG Delisi 23.22 81 *e*P **P 21 19 35.3 +2.0**
TBLG Delisi 23.22 81 P **P 21 19 35.3 +2.0**
GNI Garni 23.61 85 *e*P **P 21 19 37.9 +0.6**
GNI Garni 23.61 85 P **P 21 19 38.6 +1.3**
SNR=12
GNI Garni 23.61 85 P **P 21 19 36.8 -0.5**
comp=Z,21nm,0.9s,baz=299,slow=1.8,SNR=18
GNI Garni 23.61 85 *e*P **P 21 19 37.9 +0.6**
HAKT HAKKARI 23.68 92 *i*P **P 21 19 38.6 +0.5**
DGRG David-gareji 23.75 82 P **P 21 19 40.7 +2.2**
DGRG S Sn 21 24 05.1 -10
MAK Makhachkala 24.98 77 *e*P **P 21 19 50.6 +0.8**
MAK *e*PPP PPP 21 20 28.6
MAK *e* 21 23 19.4
MAK *e*S **S 21 24 15.2 +2.1**
MAK *e*SSS SSS 21 25 15.5
MAK pmax pmax
comp=Z,136nm,1.2s
MAK MLR MLR
comp=Z,2μm,17.0s
MAK Makhachkala 24.98 77 *e*P **P 21 19 50.6 +0.8**
comp=Z,136nm,1.2s
TMCR Tamitsa 25.90 25 *e*P **P 21 19 58.5 +0.7**
TMCR pmax pmax
comp=Z,39nm,0.3s
TMCR Tamitsa 25.90 25 *e*P **P 21 19 58.5 +0.7**
comp=Z,39nm,0.3s
BHD Baghdad 26.04 100 *i*x **P 21 20 00.6 +1.2**
BHD *i*x **S 21 24 33.6 +3.7**
APA Apatity 27.35 17⇓ *i*P **P 21 20 13.0 +2.1**
APA *e*S **S 21 24 50.0 0.0**
APA pmax pmax
comp=Z,43nm,1.4s
APA MLR MLR
comp=Z,3μm,13.0s
APA Apatity 27.35 17 *i*P **P 21 20 13.0 +2.1**
comp=Z,43nm,1.4s
ARCES ARCESS Array B 27.82 9 P **P 21 20 14.7 -0.4**
ARCES PcP **PcP 21 23 29.9 -0.9**
ARCES ARCESS Array B 27.82 9 P **P 21 20 14.7 -0.4**
comp=Z,4.5nm,0.8s,baz=204,slow=2.7,SNR=8.5
ARCES PcP **PcP 21 23 29.9 -0.9**
comp=Z,4.1nm,0.8s,baz=186,slow=3.7,SNR=6.4
ARCES LR LR 21 30 21.3
comp=Z,494nm,21.6s,baz=201,slow=34
ARCES ARCESS Array B 27.82 9 P **P 21 20 14.7 -0.4**
comp=Z,5.0nm,0.8s
TOA0 Torodi Ar. Sit 30.95 203 *e*P **P 21 20 44.5 +1.2**
TOA0 Torodi Ar. Sit 30.95 203 *e*P **P 21 20 44.5 +1.2**
TORD Torodi Ar. Bea 30.95 203 P **P 21 20 43.4 0.0**
TORD Torodi Ar. Bea 30.95 203 P **P 21 20 43.4 0.0**
comp=Z,11nm,0.9s,baz=14,slow=8.3,SNR=47
TORD Torodi Ar. Bea 30.95 203 P **P 21 20 43.4 0.0**
AKTK Aktyubinsk 31.36 60 P **P 21 20 46.0 -0.7**
comp=Z,4.0nm,0.7s
AKTO Aktyubinsk 31.36 60 P **P 21 20 46.0 -0.6**
AKTO pmax pmax
comp=Z,4.0nm,0.7s
AKTO Aktyubinsk 31.36 60 P **P 21 20 46.0 -0.6**
AKTO Aktyubinsk 31.36 60 P **P 21 20 46.0 -0.6**
comp=Z,3.7nm,0.7s,baz=260,slow=7.4,SNR=12
AKTO Aktyubinsk 31.36 60 P **P 21 20 46.0 -0.6**
SOKR Solikamsk 31.48 42⇑ *i*P **P 21 20 47.4 -0.2**
SOKR S **S 21 25 57.7 +2.7**
SOKR pmax pmax
comp=Z,40nm,2.7s
SOKR MLR MLR
comp=Z,1μm,19.0s
SOKR Solikamsk 31.48 42 *i*P **P 21 20 47.4 -0.2**
comp=Z,40nm,2.7s
ARU Arti 31.87 48 *d*i*P **P 21 20 50.4 -0.7**
ARU 21 21 53.8
ARU 21 23 40.1
ARU S **S 21 26 02.5 +1.2**
ARU SS **SnSn 21 27 48.0 -1.1**
ARU pmax pmax
comp=Z,63nm,0.8s
ARU MLR MLR
comp=Z,1μm,17.0s
ARU Arti 31.87 48 *i*P **P 21 20 50.4 -0.7**
comp=Z,63nm,0.8s
AB31 Akbulak array 32.69 62 *ce*P **P 21 20 57.3 -1.1**
AB31 pmax pmax
comp=Z,3.0nm,0.6s
AB31 Akbulak array 32.69 62 *e*P **P 21 20 57.3 -1.1**
comp=Z,3.0nm,0.6s
ABKAR Akbulak array 32.69 62 *e*P **P 21 20 57.8 -0.6**
ABKAR Akbulak array 32.69 62 *e*P **P 21 20 57.8 -0.6**
SVE Sverdlovsk 33.05 48 *c*i*P **P 21 01.5 +0.1**
SVE *e*S **S 21 26 22.7 +3.1**
SVE pmax pmax
comp=Z,74nm,1.2s
SVE MLR MLR
comp=Z,987nm,12.0s
SVE Sverdlovsk 33.05 48 *i*P **P 21 21 01.5 +0.1**
comp=Z,74nm,1.2s
SCO Scoresbysund 33.20 339⇓ *i*P **P 21 21 03.7 +1.2**
SCO pmax pmax
comp=Z,7.0nm,1.0s
SCO Scoresbysund 33.20 339⇓ *i*P **P 21 21 03.7 +1.2**
comp=Z,6.5nm,1.0s
SCO Scoresbysund 33.20 339 *i*P **P 21 21 03.7 +1.2**
comp=Z,7.0nm,1.0s
SPITS Spitsbergen Ar 35.81 1 P **P 21 21 25.1 +0.1**
SPITS Spitsbergen Ar 35.81 1 P **P 21 21 25.1 +0.1**
comp=Z,20nm,1.1s,baz=157,slow=9.1,SNR=4.6
SPITS Spitsbergen Ar 35.81 1 P **P 21 21 25.2 +0.1**
comp=Z,20nm,1.1s
KBS Kingsbay 36.54 360 *ce*P **P 21 21 29.7 -1.6**
KBS pmax pmax
comp=Z,31nm,1.3s
KBS Kingsbay 36.54 360 *e*P **P 21 21 32.7 +1.4**
comp=Z,53nm,1.5s
KBS Kingsbay 36.54 360 *e*P **P 21 21 32.7 +1.4**
comp=Z,53nm,1.5s
DAG Danmarks Havn 36.92 348⇓ *i*P **P 21 21 34.7 +0.1**
DAG pmax pmax
comp=Z,7.0nm,1.0s
DAG Danmarks Havn 36.92 348⇓ *i*P **P 21 21 34.7 +0.1**
comp=Z,6.7nm,1.0s
BRVK Borovoye 38.71 54 *d*i*P **P 21 21 50.4 +0.5**
BRVK pmax pmax
comp=Z,63nm,1.7s
BRVK Borovoye 38.71 54 *e*P **P 21 21 50.5 +0.6**
comp=Z,27nm,0.9s
BRVK Borovoye 38.71 54 P **P 21 21 50.9 +0.9**
SNR=17
BRVK Borovoye 38.71 54 *i*P **P 21 21 50.4 +0.5**
comp=Z,63nm,1.7s
BANOM Banah 38.72 101 P **P 21 21 50.3 -0.1**
SNR=7.2
BVAR Borovoye Array 38.77 54 P **P 21 21 51.0 +0.5**
BVAR pmax pmax
comp=Z,9.0nm,0.8s
BVAR Borovoye Array 38.77 54 P **P 21 21 51.0 +0.5**
BVAR Borovoye Array 38.77 54 P **P 21 21 51.0 +0.5**
comp=Z,9.1nm,0.8s,baz=265,slow=7.4,SNR=38
BVAR Borovoye Array 38.77 54 P **P 21 21 51.0 +0.5**
comp=Z,9.0nm,0.8s
SUMG Summit 38.77 338 *i*P **P 21 21 50.2 -0.5**
SUMG pmax pmax
comp=Z,7.0nm,1.1s
SUMG Summit 38.77 338 *e*P **P 21 21 51.0 +0.3**
comp=Z,17nm,1.2s
SUMG Summit 38.77 338 *i*P **P 21 21 50.2 -0.5**
comp=Z,7.4nm,1.1s
SUMG Summit 38.77 338 *e*P **P 21 21 51.0 +0.3**
comp=Z,17nm,1.2s
ASUD Al Ashush, Dub 38.80 104 P **P 21 21 51.7 +0.7**
NAZ Nazwa, Dubai 38.81 103 P **P 21 21 52.1 +1.0**
SNR=5.5
NAZ Nazwa, Dubai 38.81 103 P **P 21 21 51.2 0.0**
FAQ Al Faqa, Dubai 38.91 103 P **P 21 21 51.9 -0.1**
DBIC Dimbokro 39.16 209 P **P 21 21 54.4 +0.3**
DBIC Dimbokro 39.16 209 P **P 21 21 54.4 +0.3**
comp=Z,9.9nm,1.0s,baz=357,slow=8.3,SNR=6.6
DBIC LR LR 21 37 15.0
comp=Z,496nm,21.3s,baz=360,slow=35
DBIC Dimbokro 39.16 209 P **P 21 21 54.3 +0.3**
HATD Hatta, Dubai 39.25 103 P **P 21 21 54.6 -0.2**
SNR=8.3
HATD Hatta, Dubai 39.25 103 P **P 21 21 54.6 -0.2**
ASHO Ashiyiah 39.28 103 P **P 21 21 55.2 +0.1**
SNR=10

ASHO Ashiyiah 39.28 103 P **P** 21 21 55.2 +0.1
SNR=10
ARQ Araqi 40.45 104 P **P** 21 22 05.4 +0.6
SNR=8.8
ARQ Araqi 40.45 104 P **P** 21 22 05.4 +0.6
SNR=8.8
HOQ Hoqain 40.86 103 P **P** 21 22 08.8 +0.6
SNR=9.2
HOQ Hoqain 40.86 103 P **P** 21 22 08.8 +0.6
SNR=9.2
KK31 Karatay Array 41.22 69*ce*P **P** 21 22 11.6 +0.6
KK31 pmax pmax
comp=Z,33nm,1.1s
KK31 Karatay Array 41.22 69 *e*P **P** 21 22 11.6 +0.6
comp=Z,33nm,1.1s
KKAR Karatay Array 41.22 69 *e*P **P** 21 22 11.8 +0.8
KKAR pmax pmax
comp=Z,15nm,0.7s
KKAR Karatay Array 41.22 69 *e*P **P** 21 22 11.8 +0.8
comp=Z,16nm,0.7s
KKAR Karatay Array 41.22 69 *e*P **P** 21 22 11.8 +0.8
comp=Z,16nm,0.7s
SFJD Kangerlussuaq 41.72 328 *e*P **P** 21 22 13.0 -1.7
comp=Z,44nm,1.3s
SFJD Kangerlussuaq 41.72 328 *i* P **P** 21 22 14.4 -0.3
comp=Z,14nm,0.9s
SFJD Kangerlussuaq 41.72 328 P **P** 21 22 14.9 +0.2
comp=Z,22nm,1.0s,baz=94,slow=9.6,SNR=11
SFJD Kangerlussuaq 41.72 328 P **P** 21 22 14.9 +0.2
comp=Z,23nm,1.0s
SMDO Samad 41.72 103 P **P** 21 22 15.5 +0.2
SNR=12
SMDO Samad 41.72 103 P **P** 21 22 15.5 +0.2
SNR=12
JMDO Jabal Madar 42.19 104 P **P** 21 22 19.4 +0.3
SNR=6.5
JMDO Jabal Madar 42.19 104 P **P** 21 22 19.4 +0.3
SNR=6.5
KBL Kabul 43.60 81 *e*P **P** 21 22 30.7 0.0
KBL Kabul 43.60 81 *e*P **P** 21 22 30.7 0.0
KBL Kabul 43.60 81 *e*P **P** 21 22 30.7 0.0
EKS2 Erkin-Say 43.62 68 *e*P **P** 21 22 30.7 0.0
EKS2 pmax pmax
comp=Z,28nm,0.8s
EKS2 Erkin-Say 43.62 68 *e*P **P** 21 22 30.7 0.0
comp=Z,28nm,0.8s
EKS2 Erkin-Say 43.62 68 *e*P **P** 21 22 30.7 0.0
comp=Z,28nm,0.8s
AML Almayashu 43.76 69 P **P** 21 22 31.3 -0.8
AAK Ala-Archa 44.13 68*d i*P **P** 21 22 35.7 +0.9
AAK pmax pmax
comp=Z,80nm,1.7s
AAK Ala-Archa 44.13 68 *e*P **P** 21 22 35.5 +0.7
comp=Z,34nm,1.4s
AAK *e*PP **PP** 21 24 16.7 -0.7
AAK Ala-Archa 44.13 68 P **P** 21 22 36.0 +1.2
SNR=16
AAK Ala-Archa 44.13 68 *e*P **P** 21 22 35.5 +0.7
comp=Z,34nm,1.4s
FRU Bishkek 44.14 68 *e*P **P** 21 22 35.5 +0.8
FRU pmax pmax
comp=Z,70nm,2.1s
FRU Bishkek 44.14 68 *e*P **P** 21 22 35.5 +0.8
comp=Z,70nm,2.1s
KURBB Kurchatov Arra 44.21 56 P **P** 21 22 34.3 -0.8
comp=Z,0.9nm,0.7s,baz=301,slow=7.8,SNR=24
KURBB PP **PP** 21 24 17.3 -0.7
comp=Z,2.6nm,1.0s,baz=289,slow=11,SNR=4.4
KURK Kurchatov 44.24 56*d i*P **P** 21 22 35.0 -0.3
KURK pmax pmax
comp=Z,32nm,1.7s
KURK Kurchatov 44.24 56 *e*P **P** 21 22 34.7 -0.6
KURK PP **PP** 21 24 17.2 -1.0
KURK *e*PcP **PcP** 21 24 22.8 +3.2
KURK Kurchatov 44.24 56 P **P** 21 22 35.4 +0.1
SNR=12
KURK Kurchatov 44.24 56 P **P** 21 22 35.4 +0.1
SNR=12
TKM2 Tokmak 2 44.78 67 *e*P **P** 21 22 40.6 +0.5
TKM2 pmax pmax
comp=Z,23nm,1.7s
TKM2 Tokmak 2 44.78 67 *e*P **P** 21 22 40.5 +0.5
comp=Z,23nm,1.7s
TKM2 Tokmak 2 44.78 67 *e*P **P** 21 22 40.5 +0.5
comp=Z,23nm,1.7s
NVS Novosibirsk 45.87 49 *i* P **P** 21 22 48.2 0.0
NVS pmax pmax
comp=Z,120nm,2.0s
NVS pmax pmax
comp=N,5.0nm,1.4s
NVS pmax pmax
comp=E,20nm,1.4s
NVS Novosibirsk 45.87 49 *i* P **P** 21 22 48.2 0.0
comp=E,120nm,2.0s
KSH Kashi 46.38 72⇓*i*P **P** 21 22 52.8 +0.1
KSH PcP **PcP** 21 24 29.8 +2.3
KSH PP **PP** 21 24 40.5 -1.0
KSH ScP **ScP** 21 28 22.8 +2.3
KSH S **S** 21 29 37.9 -2.0
KSH ScS **ScS** 21 32 47.8 +0.1
KSH SS SS 21 32 54.8 -11
KSH pmax pmax
comp=Z,32nm,1.2s
KSH LR LR
comp=N,340nm,6.6s
KSH LR LR
comp=E,330nm,5.4s
KSH LR LR
comp=Z,300nm,6.2s
ZAA0 Zalesovo Array 47.00 50 *e*P **P** 21 22 57.0 -0.1
ZAA0 *e*PP **PP** 21 24 47.0 -0.4
ZAA0 Zalesovo Array 47.00 50 *e*P **P** 21 22 57.0 -0.1
ZALV Zalesovo Beam 47.00 50 P **P** 21 22 56.6 -0.5
ZALV 21 24 47.1
ZALV pmax pmax
comp=Z,6.0nm,0.7s
ZALV pmax pmax
comp=Z,5.0nm,0.9s
ZALV MLR MLR
comp=Z,1μm,18.3s
ZALV Zalesovo Beam 47.00 50 P **P** 21 22 56.5 -0.5
ZALV PP **PP** 21 24 47.1 -0.3
ZALV Zalesovo Beam 47.00 50 P **P** 21 22 56.5 -0.5
comp=Z,5.6nm,0.7s,baz=283,slow=8.5,SNR=36
ZALV PP **PP** 21 24 47.1 -0.3
comp=Z,5.0nm,0.9s,baz=286,slow=11,SNR=4.0
ZALV LR LR 21 44 42.0
comp=Z,1μm,18.3s,baz=262,slow=39
ZALV Zalesovo Beam 47.00 50 P **P** 21 22 56.6 -0.5
comp=Z,6.0nm,0.7s
MK31 Makanchi Array 47.79 60*ce*P **P** 21 23 02.6 -0.8
MK31 pmax pmax
comp=Z,9.0nm,0.7s
MK31 Makanchi Array 47.79 60 *e*P **P** 21 23 03.2 -0.2
MK31 *e*PP **PP** 21 24 55.1 +0.1
MK31 Makanchi Array 47.79 60 *e*P **P** 21 23 03.2 -0.2
MKAR Makanchi Array 47.79 60 P **P** 21 23 03.3 -0.1
MKAR pmax pmax
comp=Z,7.0nm,0.6s
MKAR Makanchi Array 47.79 60 P **P** 21 23 03.3 -0.1
MKAR Makanchi Array 47.79 60 P **P** 21 23 03.3 -0.1
comp=Z,6.9nm,0.6s,baz=286,slow=6.6,SNR=110
MKAR Makanchi Array 47.79 60 P **P** 21 23 03.3 -0.1
comp=Z,7.0nm,0.6s
KMBO Kilima Mbogo 48.48 147 LR LR 21 45 44.2
comp=Z,186nm,19.4s,baz=271,slow=39
KRAR Krasnoyarsk 50.76 45 *e*P **P** 21 23 26.7 +0.8
KRAR pmax pmax
comp=Z,14nm,1.7s
SCHQ Schefferville 51.55 313 P **P** 21 23 31.4 -0.5
SCHQ Schefferville 51.55 313 P **P** 21 23 31.4 -0.5
comp=Z,3.5nm,0.7s,baz=31,slow=2.9,SNR=6.2
WMQ Urumqi 52.48 61 P **P** 21 23 40.0 +0.9
WMQ PcP **PcP** 21 24 52.0 +2.5
WMQ PP **PP** 21 25 39.5 +1.8
WMQ ScP **ScP** 21 28 48.0 +1.7
WMQ S **S** 21 31 05.0 -0.1
WMQ ScS **ScS** 21 33 28.0 -0.6
WMQ SS **SS** 21 34 40.0 -2.6
WMQ pmax pmax
comp=Z,16nm,1.0s
WMQ pmax pmax
comp=Z,170nm,5.0s
WMQ LR LR
comp=N,910nm,16.0s
WMQ LR LR
comp=E,840nm,16.0s
WMQ LR LR
comp=Z,920nm,16.0s
MOY Mondy 56.92 48 *e*P **P** 21 24 13.1 +1.9
PYUN Piuthan 57.12 80 *e*P **P** 21 24 13.0 -0.1
comp=Z,235nm,1.3s
TIXI Tiksi 57.47 20*ce*P **P** 21 24 14.8 +0.1
TIXI pmax pmax
comp=Z,40nm,1.7s
TIXI MLR MLR
comp=Z,362nm,18.0s
TIXI Tiksi 57.47 20 *e*P **P** 21 24 14.6 0.0
comp=Z,62nm,1.6s
TIXI *e*PP **PP** 21 26 22.2 +0.5
DANN Dangsing 57.54 80 *e*P **P** 21 24 15.8 -0.4
comp=Z,42nm,0.7s
KOLN Koldanda 57.75 80 *e*P **P** 21 24 16.9 -0.6
comp=Z,54nm,1.2s
TLY Talaya 58.36 47 *e*P **P** 21 24 20.4 -0.8
TLY pmax pmax
comp=Z,12nm,1.0s
IRK Irkutsk 58.42 46 *e*P **P** 21 24 20.8 -0.8
IRK pmax pmax
comp=Z,55nm,2.0s
ZAK Zakamensk 58.81 48 *e*P **P** 21 24 24.7 +0.2
ZAK pmax pmax
comp=Z,6.0nm,1.8s
DMN Daman 58.94 80 *e*P **P** 21 24 25.5 -0.4
KKN Kakani 58.96 79 *e*P **P** 21 24 25.3 -0.7
comp=Z,22nm,1.0s
LSZ Lusaka 59.09 163 *e*P **P** 21 24 27.8 +1.0
comp=Z,6.8nm,1.0s
PKIN Phulchoki 59.17 80 *e*P **P** 21 24 26.9 -0.6
comp=Z,15nm,0.9s
PKI Pulchoki 59.18 80 *e*P **P** 21 24 26.9 -0.8
GUN Gumba 59.33 79 *e*P **P** 21 24 28.3 -0.4
comp=Z,57nm,0.8s
RAMN Ramite 60.40 79 *e*P **P** 21 24 35.1 -0.9
comp=Z,52nm,0.7s
TAPN Taplejung 60.98 78 *e*P **P** 21 24 39.4 -0.6
comp=Z,194nm,1.6s
ODAN Odare 61.03 79 *e*P **P** 21 24 39.4 -0.9
comp=Z,92nm,1.4s
SONM Songino Array 61.89 50 P **P** 21 24 45.5 -0.2
SONM Songino Array 61.89 50 P **P** 21 24 45.5 -0.2
comp=Z,6.5nm,0.7s,baz=289,slow=8.7,SNR=14
SONM LR LR 21 53 34.0
comp=Z,961nm,19.1s,baz=75,slow=38
LSA Lhasa 62.10 74 P **P** 21 24 48.3 +0.6
LSA pmax pmax
comp=Z,20nm,0.6s
ULN Ulaanbaatar 62.25 49 *e*P **P** 21 24 48.3 +0.2
comp=Z,32nm,1.6s
ULN Ulaanbaatar 62.25 49 P **P** 21 24 49.5 +1.4
SNR=9.6
ULN Ulaanbaatar 62.25 49 P **P** 21 24 49.1 +1.0
comp=Z,13nm,1.9s,comp=Z,2μm
GTA Gaotai 62.54 61 *e*P **P** 21 24 50.8 +0.7
GTA pP **pP** 21 24 54.9 +0.5
GTA sP **sP** 21 24 58.3 +2.3
GTA S **S** 21 33 16.3 -1.1
GTA sS **sS** 21 33 23.6 -0.8
GTA SS **SS** 21 37 24.4 +3.4
GTA pmax pmax
comp=Z,6.0nm,1.4s
GTA pmax pmax
comp=Z,170nm,4.7s
GTA LR LR
comp=N,200nm,17.8s
GTA LR LR
comp=E,430nm,19.2s
GTA LR LR
comp=Z,680nm,18.5s
SADO Sadowa 63.29 307 P **P** 21 24 55.0 +0.1
SADO Sadowa 63.29 307 P **P** 21 24 55.0 +0.1
comp=Z,4.0nm,0.8s,baz=114,slow=8.4,SNR=2.6
YAK Yakutsk 63.95 28 *e*P **P** 21 24 58.4 -0.5
YAK pmax pmax
comp=Z,26nm,0.9s
YAK pmax pmax
comp=N,16nm,1.3s
YAK pmax pmax
comp=E,17nm,1.5s
YAK MLR MLR
comp=Z,253nm,18.0s
YAK MLR MLR
comp=E,175nm,18.0s
YAK MLR MLR
comp=N,161nm,18.0s
CLNS Chul'man 65.59 34 *e*P **P** 21 25 10.0 +0.2
CLNS pmax pmax
comp=Z,13nm,1.5s
CLNS pmax pmax
comp=N,10.0nm,1.4s
CLNS pmax pmax
comp=E,5.0nm,1.4s
LZH Lanzhou 67.06 62 ⇑P **P** 21 25 20.8 +1.1
LZH pP **pP** 21 25 24.0 0.0
LZH sP **sP** 21 25 25.1 -0.4
LZH pmax pmax
comp=Z,25nm,1.1s
LZH pmax pmax
comp=Z,200nm,4.3s
LZH LR LR
comp=N,410nm,13.0s
LZH LR LR
comp=E,320nm,13.4s
LZH LR LR
comp=Z,440nm,17.4s
YKW3 Yellowknife Ar 67.31 337 *e*P **P** 21 25 20.5 -0.1
comp=Z,0.6nm,1.4s
YKA Yellowknife Ar 67.36 337 P **P** 21 25 20.3 -0.6
YKA Yellowknife Ar 67.36 337 P **P** 21 25 20.3 -0.6
comp=Z,7.2nm,0.9s,baz=39,slow=5.7,SNR=89
BILL Bilibino 67.91 11 *e*P **P** 21 25 23.5 -0.8
BILL pmax pmax
comp=Z,37nm,1.4s
BILL Bilibino 67.91 11 *e*P **P** 21 25 23.5 -0.8
comp=Z,37nm,1.4s
LBTB Lobatse 68.12 168 *e*P **P** 21 25 27.2 +1.0
comp=Z,9.1nm,0.8s
FFC Flin Flon 68.61 326*ce*P **P** 21 25 29.5 +0.6
FFC Flin Flon 68.61 326 *e*P **P** 21 25 29.4 +0.5
comp=Z,17nm,1.0s
ULM Lac du Bonnet 68.92 319 P **P** 21 25 30.2 -0.7
ULM Lac du Bonnet 68.92 319 P **P** 21 25 30.2 -0.7
comp=Z,6.5nm,0.8s,baz=52,slow=4.8,SNR=7.3
ULM LR LR 21 57 09.0
comp=Z,184nm,19.4s,baz=350,slow=37
HHC Hu-ho-hao-te 68.98 54 *e*P **P** 21 25 30.4 -1.2
HHC pP **pP** 21 25 34.3 -1.6
HHC sP **sP** 21 25 37.6 +0.1
HHC PP **PP** 21 28 05.0 +1.4
HHC S **S** 21 34 30.3 -5.7
HHC pmax pmax
comp=Z,29nm,0.7s
HHC pmax pmax
comp=Z,390nm,4.5s
HHC LR LR
comp=N,510nm,15.7s
HHC LR LR
comp=E,680nm,15.1s
HHC LR LR
comp=Z,400nm,15.5s
SEY Seymchan 69.92 19*c i*P **P** 21 25 38.3 +1.4
CD2 Chengdu 70.14 66 P **P** 21 25 39.8 +1.0
CD2 pP **pP** 21 25 44.4 +1.3
CD2 sP **sP** 21 25 46.8 +2.1
CD2 PcP **PcP** 21 26 02.4 +1.6
CD2 PP **PP** 21 28 16.0 +2.3
CD2 S **S** 21 34 48.4 -1.4
CD2 SKS **SKSac** 21 35 37.0 -3.0
CD2 SS **SS** 21 39 18.3 -0.8
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,250nm,5.3s
CD2 LR LR
comp=N,320nm,16.6s
CD2 LR LR
comp=E,410nm,15.7s
CD2 LR LR
comp=Z,410nm,13.5s
KMSC Kings Mountain 70.36 300 ⇑P **P** 21 25 40.6 +0.5
baz=70
SPMN St. Paul 70.69 314 ⇓P **P** 21 25 42.0 +0.1
baz=70
XAN Xi'an 71.60 61 P **P** 21 25 47.6 -0.1
XAN pmax pmax
comp=Z,6.0nm,1.5s
XAN pmax pmax
comp=Z,35nm,6.2s
ILAR Eielson Array 71.94 351 P **P** 21 25 48.8 -0.4
ILAR Eielson Array 71.94 351 P **P** 21 25 48.8 -0.4
comp=Z,3.4nm,0.9s,baz=7.9,slow=5.9,SNR=31
BJI Beijing 72.21 52 P **P** 21 25 51.0 -0.1
BJI PP **PP** 21 28 30.3 -0.8
BJI S **S** 21 35 14.3 +0.9
BJI SS **SS** 21 39 50.4 +0.2
BJI pmax pmax
comp=Z,15nm,1.5s
BJI pmax pmax
comp=Z,220nm,5.4s
BJI LR LR
comp=N,400nm,15.9s
BJI LR LR
comp=E,470nm,16.7s
BJI LR LR
comp=Z,310nm,19.4s
TNA Tin City 72.27 1 *e*P **P** 21 25 51.8 +0.8
comp=Z,14nm,1.2s
TNA *e*PcP **PcP** 21 26 09.3 +0.2
MDND Maddock 72.35 319 ⇑P **P** 21 25 52.1 +0.2
baz=72
DOT Dot Lake 72.68 350 *e*P **P** 21 25 53.8 +0.2
comp=Z,24nm,1.4s
KMI Kunming 73.05 71 P **P** 21 25 56.3 -0.4
KMI pP **pP** 21 26 05.8 +4.8
KMI sP sP 21 26 09.5 +6.9
KMI PP **PP** 21 28 41.1 +2.1
KMI S **S** 21 35 23.8 -0.1
KMI SS **SS** 21 40 04.3 +0.1
KMI pmax pmax
comp=Z,10.0nm,1.3s
KMI pmax pmax
comp=Z,160nm,5.5s
KMI LR LR
comp=N,220nm,19.9s
KMI LR LR
comp=E,240nm,20.5s
KMI LR LR
comp=Z,290nm,23.7s
MCK McKinley 73.18 352 *e*P **P** 21 25 56.1 -0.4
MCK pmax pmax
comp=Z,31nm,1.2s
MCK McKinley 73.18 352 *e*P **P** 21 25 56.1 -0.4
comp=Z,31nm,1.2s
SDDR Presa de Saban 73.57 281 *e*P **P** 21 26 00.3 +0.8
comp=Z,39nm,1.1s
TRF Thorofare Moun 73.59 352 *e*P **P** 21 25 59.3 +0.1
comp=Z,21nm,1.5s
A24A Westby 73.63 322 ⇓P **P** 21 26 00.2 +0.7
baz=73
ECSD EROS Data Cent 73.70 315 *e*P **P** 21 25 59.2 -0.8
comp=Z,9.4nm,0.9s
DGMT Dagmar 74.05 322 *e*P **P** 21 26 02.8 +0.8
comp=Z,25nm,1.0s
DGMT Dagmar 74.05 322 ⇓P **P** 21 26 03.1 +1.2
baz=74
CHTO Chiang Mai 74.35 79 *e*P **P** 21 26 03.3 -0.8
CHTO pmax pmax
comp=Z,44nm,1.6s
CHTO Chiang Mai 74.35 79 *e*P **P** 21 26 03.3 -0.8
comp=Z,44nm,1.6s
CHTO Chiang Mai 74.35 79 P **P** 21 26 03.9 -0.2
SNR=11
CHTO Chiang Mai 74.35 79 P **P** 21 26 03.4 -0.7
comp=Z,18nm,1.6s,comp=Z,339nm
CMMT Chiang Mai 74.35 79 P **P** 21 26 03.9 -0.2
comp=Z,16nm,1.4s,comp=Z,368nm
B23A Brockton 74.42 323 ⇓P **P** 21 26 04.8 +0.7
baz=74
A22A Carney Farms, 74.44 323 ⇑P **P** 21 26 05.0 +0.8
baz=74
CMAR Chiang Mai Arr 74.58 79 P **P** 21 26 04.8 -0.6
CMAR Chiang Mai Arr 74.58 79 P **P** 21 26 04.8 -0.6
comp=Z,4.8nm,0.8s,baz=306,slow=7.1,SNR=34
CMAR LR LR 22 06 12.1
comp=Z,162nm,19.5s,baz=292,slow=42
C24A Savage 74.85 322 ⇑P **P** 21 26 07.6 +1.0
baz=75
GYA Guiyang 74.92 68 P **P** 21 26 08.0 +0.5
GYA PcP **PcP** 21 26 23.4 +2.0
GYA PP **PP** 21 28 56.9 +2.1
GYA S **S** 21 35 43.3 -1.4
GYA SKS **SKSac** 21 36 12.8 -3.5
GYA SS **SS** 21 40 33.0 +0.6
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,5.2s
GYA LR LR
comp=N,610nm,19.8s
GYA LR LR
comp=E,590nm,20.0s
GYA LR LR
comp=Z,710nm,19.5s
B22A Reddig Ranch S 74.99 323 ⇑P **P** 21 26 08.2 +0.7
baz=75
SML Sawmill 74.99 351 *e*P **P** 21 26 07.6 +0.4
SML pmax pmax
comp=Z,6.0nm,1.0s
SML Sawmill 74.99 351 *e*P **P** 21 26 07.6 +0.4
comp=Z,6.0nm,1.0s
C23A Lambert 74.99 322 ⇓P **P** 21 26 08.0 +0.5
baz=75
D24A Glendive 75.11 321 ⇑P **P** 21 26 09.3 +1.2
baz=75
BMRM Bremner River 75.33 349 *e*P **P** 21 26 09.1 -0.1
comp=Z,35nm,1.3s
A20A Cobblestone Ra 75.40 324 ⇓P **P** 21 26 10.3 +0.5
baz=75
D23A Lindsay 75.47 322 ⇓P **P** 21 26 10.7 +0.4
baz=75
A19A Klindworth Far 75.71 325 ⇓P **P** 21 26 12.9 +1.3
baz=75
B20A Solberg Farm, 75.77 324 ⇓P **P** 21 26 12.8 +0.9
baz=76,SNR=5.2
C21A Desert Coulee 75.83 323 ⇓P **P** 21 26 12.9 +0.7
baz=76,SNR=9.6
RC01 Rabbit Creek A 75.85 352 *e*P **P** 21 26 12.0 0.0
comp=Z,6.0nm,0.4s
D22A Cohagen 75.93 322 ⇓P **P** 21 26 13.5 +0.7
baz=76
F24A Ekalaka 76.10 320 ⇑P **P** 21 26 14.6 +0.7
baz=76
BGNE Belgrade 76.14 314 ⇑P **P** 21 26 13.3 -0.8
baz=76
B19A Brinkman Farms 76.16 325 ⇑P **P** 21 26 14.6 +0.5
baz=76
A18A Metzger Ranch, 76.19 325 ⇑P **P** 21 26 15.0 +0.7
baz=76,SNR=8.0
MDJ Mudanjiang 76.24 41 P **P** 21 26 14.3 -0.3
MDJ PP **PP** 21 29 04.9 -0.3
MDJ S **S** 21 35 54.9 -3.6
MDJ ScS **SKKSac** 21 36 26.6 +0.8
MDJ SS **SS** 21 40 50.1 -1.1
MDJ pmax pmax
comp=Z,9.0nm,1.1s
MDJ pmax pmax
comp=Z,96nm,3.4s
MDJ LR LR
comp=N,670nm,17.5s
MDJ LR LR
comp=E,590nm,16.9s
MDJ LR LR
comp=Z,1μm,20.6s
C20A Veseth Ranch, 76.32 324 ⇓P **P** 21 26 15.6 +0.5
baz=76,SNR=21
D21A La Casta Ranch 76.36 323 ⇑P **P** 21 26 16.1 +0.8
baz=76,SNR=10
G24A Alzada 76.47 320 ⇑P **P** 21 26 15.5 -0.5
baz=76
A17A Triple J Farms 76.52 326 ⇑P **P** 21 26 16.7 +0.4
baz=76
B18A Beardsley Farm 76.56 325 ⇓P **P** 21 26 17.1 +0.6
baz=76,SNR=6.1
C19A Slack Wire Ran 76.76 324 ⇑P **P** 21 26 18.2 +0.6
baz=76,SNR=13
EGMT Eagleton 76.84 325 *e*P **P** 21 26 18.9 +0.9
comp=Z,61nm,1.4s
EGMT Eagleton 76.84 325 ⇑P **P** 21 26 18.9 +0.9
baz=76,SNR=14

D20A **Manuel Ranch,** 76.85 323 ⇑P P 21 26 18.9 +0.8
baz=76,SNR=13
KSU1 **Kansas State U** 76.92 311 eP P 21 26 18.2 -0.3
comp=Z,21nm,0.8s
H24A **Dirks Ranch, A** 76.96 320 ⇑P P 21 26 18.5 -0.3
baz=77
G23A **Biddle** 77.02 321 ⇓P P 21 26 19.7 +0.5
baz=77
B17A **L&G Farms, Che** 77.07 325 ⇓P P 21 26 19.2 -0.1
baz=77
D19A **Cripps Ranch,** 77.12 324 ⇑P P 21 26 19.6 0.0
baz=77
A15A **Johnson Ranch,** 77.33 327 ⇑P P 21 26 21.0 +0.1
baz=77,SNR=6.1
G22A **Birney** 77.43 321 ⇑P P 21 26 22.2 +0.7
baz=77
D18A **Linhart Farms,** 77.50 324 ⇓P P 21 26 22.6 +0.9
baz=77
C17A **Wharram Farm,** 77.57 325 ⇑P P 21 26 22.6 +0.5
baz=77,SNR=15
A14A **Double T Ranch** 77.61 327 ⇓P P 21 26 22.5 +0.1
baz=77,SNR=13
E19A **Rath Farms, Rou** 77.62 323 ⇓P P 21 26 22.8 +0.4
baz=77,SNR=6.7
USRK **Ussuriysk Arra** 77.71 40 P P 21 26 23.0 +0.2
comp=Z,6.8nm,0.9s,baz=302,slow=3.2,SNR=14
WALA **Waterton Lakes** 77.74 328 eP P 21 26 22.4 -0.8
comp=Z,0.6nm,1.1s
B15A **Bradely Ranch,** 77.78 326 ⇑P P 21 26 23.2 -0.2
baz=78,SNR=5.9
G21A **Lodge Grass** 77.85 322 ⇑P P 21 26 24.1 +0.3
baz=78
C16A **Fuhringer Ranc** 77.85 326 ⇓P P 21 26 23.7 -0.1
baz=78
D17A **Six Diamond Ra** 77.91 325 ⇑P P 21 26 24.7 +0.5
baz=78,SNR=8.5
E18A **Harlowton** 78.03 324 ⇑P P 21 26 25.7 +0.8
baz=78
B14A **Marquette Ranc** 78.04 327 ⇑P P 21 26 24.5 -0.3
baz=78
F19A **Roth Farm, Mol** 78.16 323 ⇑P P 21 26 26.1 +0.6
baz=78,SNR=7.9
H21A **Big Horn, Sher** 78.23 321 ⇓P P 21 26 26.6 +0.7
baz=78
G20A **Bridger** 78.31 322 ⇑P P 21 26 26.6 +0.2
baz=78,SNR=6.2
D16A **Dana Ranch, Ca** 78.38 325 ⇓P P 21 26 26.9 +0.2
baz=78
F18A **Big Timber** 78.46 323 ⇑P P 21 26 28.0 +0.8
baz=78,SNR=7.2
B13A **Whitefish** 78.50 327 ⇓P P 21 26 28.2 +0.8
baz=78
A12A **Yaak River Ran** 78.52 328 ⇓P P 21 26 27.4 +0.1
baz=78,SNR=6.7
I22A **9 Mile Ranch,** 78.52 320 ⇓P P 21 26 28.3 +0.7
baz=78
E17A **Martinsdale** 78.53 324 ⇑P P 21 26 28.0 +0.4
baz=78,SNR=5.5
C14A **Swan Lake** 78.70 327 ⇑P P 21 26 28.2 -0.2
baz=78,SNR=10
D15A **Lincoln** 78.77 326 ⇓P P 21 26 29.2 +0.3
baz=78
H20A **Greybull** 78.78 321 ⇓P P 21 26 29.2 +0.2
baz=78
E16A **East Helena** 78.82 325 ⇓P P 21 26 29.6 +0.4
baz=78
G18A **Lazy EL Ranch,** 78.85 323 ⇑P P 21 26 29.6 +0.2
baz=78
RLMT **Red Lodge** 78.87 323 ⇑P P 21 26 30.2 +0.6
baz=79,SNR=6.0
F17A **Fitzpatrick Pl** 78.87 324 ⇓P P 21 26 29.9 +0.4
baz=79
I21A **Big Trails, Te** 78.96 321 ⇑P P 21 26 30.5 +0.4
baz=79
BSMT **Bassoo Peak** 79.05 327 eP P 21 26 30.0 -0.5
comp=Z,18nm,1.5s
H19A **Powell** 79.09 322 ⇓P P 21 26 31.5 +0.9
baz=79
C13A **Hot Springs** 79.11 327 ⇑P P 21 26 31.2 +0.6
baz=79,SNR=15
D14A **Greenough** 79.15 326 ⇓P P 21 26 31.1 +0.2
baz=79
NJ2 **Nanjing** 79.17 56 eP P 21 26 30.4 -0.7
NJ2 pP **pP** 21 26 34.3 -1.2
NJ2 sP **sP** 21 26 37.3 +0.2
NJ2 PP **PP** 21 29 30.9 +0.8
NJ2 S **S** 21 36 27.0 -3.6
NJ2 pmax pmax
comp=Z,20nm,1.0s
NJ2 pmax pmax
comp=Z,280nm,4.2s
NJ2 LR LR
comp=N,190nm,27.3s
NJ2 LR LR
comp=E,240nm,27.4s
NJ2 LR LR
comp=Z,120nm,19.8s
M25A **Palm-Egli Farm** 79.18 317 ⇓P P 21 26 32.4 +1.2
baz=79
E15A **Deer Lodge** 79.31 325 ⇓P P 21 26 31.9 0.0
baz=79,SNR=12
F16A **Kennard Place,** 79.39 324 ⇓P P 21 26 33.3 +1.1
baz=79
H18A **Shoshone NF, C** 79.39 323 ⇑P P 21 26 33.8 +1.4
baz=79
C12B **Naegeli Ranch,** 79.44 328 ⇑P P 21 26 32.9 +0.5
baz=79,SNR=5.5
BOZ **Bozeman (W)** 79.50 324 eP P 21 26 33.7 +0.8
BOZ pmax pmax
comp=Z,8.0nm,0.9s
BOZ **Bozeman (W)** 79.50 324 eP P 21 26 33.7 +0.8
comp=Z,8.0nm,0.9s
BOZ **Bozeman (W)** 79.50 324 ⇓P P 21 26 33.6 +0.7
baz=79,SNR=11
D13A **Huson** 79.53 327 ⇓P P 21 26 33.5 +0.6
baz=79,SNR=23
MSO **Missoula** 79.53 326 eP P 21 26 32.6 -0.5
comp=Z,8.2nm,1.2s
MSO **Missoula** 79.53 326 ⇑P P 21 26 32.9 -0.1
baz=79,SNR=7.1
I19A **Meeteetse** 79.58 322 ⇓P P 21 26 34.7 +1.2
baz=79
NEW **Newport** 79.63 329 ⇑P P 21 26 34.5 +1.1
baz=79
NEW **Newport** 79.63 329 LR LR 22 02 31.0
comp=Z,152nm,20.6s,baz=302,slow=36
F15A **Butte** 79.72 325 ⇓P P 21 26 34.5 +0.3
baz=79,SNR=7.8
G16A **Moss Hill, Enn** 79.90 324 ⇓P P 21 26 36.2 +1.0
baz=80,SNR=11
PETK **Petropavlovsk-** 79.93 21 P P 21 26 34.7 -0.2
PETK pmax pmax
comp=Z,12nm,1.0s
PETK **Petropavlovsk-** 79.93 21 P P 21 26 34.7 -0.2
PETK **Petropavlovsk-** 79.93 21 P P 21 26 34.7 -0.2
comp=Z,12nm,1.0s,baz=31,slow=3.5,SNR=5.2
E13A **Victor** 79.94 326 ⇑P P 21 26 36.1 +0.8
baz=80
H17A **Grant Village** 80.02 323 ⇓P P 21 26 37.2 +1.3
baz=80,SNR=7.4
T31A **Randall Ranch,** 80.05 312 ⇑P P 21 26 36.9 +1.1
baz=80
N24A **Carr** 80.05 317 ⇑P P 21 26 37.6 +1.6
baz=80
H16A **Russell Place,** 80.07 323 ⇑P P 21 26 37.0 +0.8
baz=80,SNR=9.1
F14A **Wisdom** 80.11 325 ⇓P P 21 26 37.6 +1.4
baz=80
P26A **Davis Ranch, A** 80.21 316 ⇑P P 21 26 38.1 +1.2
baz=80
KSCO **Kaye Shedlock'** 80.24 315 ⇓P P 21 26 38.5 +1.5
baz=80
G15A **Dillon** 80.25 324 ⇑P P 21 26 37.4 +0.3
baz=80
YSS **Yuzh-Sakhalins** 80.27 32 ⇓eP P 21 26 38.0 +1.2
YSS e 21 26 42.9
YSS pmax pmax
comp=Z,90nm,1.0s
I17A **Pilgrim Ck.** 80.39 323 ⇓P P 21 26 39.5 +1.6
baz=80
N23A **Red Feather La** 80.53 318 ⇓P P 21 26 39.3 +0.6
baz=80
F13A **Darby** 80.53 326 ⇓P P 21 26 38.9 +0.4
baz=80,SNR=16
MOOW **Moose Ponds** 80.60 323 eP P 21 26 39.0 0.0
comp=Z,6.4nm,1.2s
KSAR **Wonju Array Be** 80.60 47 P P 21 26 38.8 0.0
KSRS **Korea Array** 80.61 47 P P 21 26 38.8 -0.1
comp=Z,7.4nm,1.0s,baz=320,slow=5.5,SNR=10
KSRS LR LR 22 07 08.5
comp=Z,238nm,19.2s,baz=325,slow=39
P25A **Willow Gulch B** 80.67 316 ⇓P P 21 26 40.4 +1.0
baz=80
J18A **Kendall Valley** 80.69 322 ⇓P P 21 26 40.0 +0.5
baz=80,SNR=11
BDFB **Brasilia** 80.74 239 P P 21 26 40.4 +0.5
BDFB **Brasilia** 80.74 239 P P 21 26 40.4 +0.5
comp=Z,5.9nm,0.9s,baz=115,slow=5.6,SNR=3.9
BDFB LR LR 22 01 23.7
comp=Z,158nm,20.3s,baz=181,slow=35
H15A **Lima** 80.75 324 ⇑P P 21 26 40.4 +0.6
baz=80,SNR=6.8
Q26A **Hugo** 80.77 315 ⇑P P 21 26 40.9 +1.0
baz=80
BW06 **Boulder Array** 80.82 321 ⇑P P 21 26 41.2 +1.0
baz=80
PDAR **Pinedale Array** 80.82 321 P P 21 26 40.0 -0.2
PDAR **Pinedale Array** 80.82 321 P P 21 26 40.0 -0.2
comp=Z,1.1nm,0.6s,baz=59,slow=5.7,SNR=8.2
PDAR LR LR 22 00 58.7
comp=Z,157nm,19.9s,baz=147,slow=35
I16A **Newdale** 80.83 323 ⇓P P 21 26 41.8 +1.6
baz=80
L20A **Wamsutter** 80.84 320 ⇑P P 21 26 41.6 +1.2
baz=80
N22A **Wattenberg Ran** 80.85 318 ⇑P P 21 26 41.7 +1.2
baz=81
R27A **Eads** 80.86 314 ⇑P P 21 26 41.5 +1.1
baz=81
J17A **Brown Place, J** 80.89 322 ⇑P P 21 26 42.6 +2.0
baz=81
TPAW **Teton Pass** 80.89 322 eP P 21 26 41.5 +0.8
comp=Z,7.4nm,1.2s
F12A **Elk City** 80.94 326 ⇓P P 21 26 40.7 0.0
baz=81,SNR=7.3
O23A **Lake Granby, G** 81.03 317 ⇓P P 21 26 42.9 +1.4
baz=81
G13A **Cobalt** 81.05 325 ⇑P P 21 26 41.9 +0.6
baz=81
K18A **Toltan Ranch,** 81.15 321 ⇑P P 21 26 41.7 -0.3
baz=81
M20A **Sweetwater, Wa** 81.17 320 ⇑P P 21 26 42.5 +0.4
baz=81
ISCO **Idaho Springs** 81.19 317 eP P 21 26 42.3 0.0
ISCO pmax pmax
comp=Z,5.0nm,0.9s
ISCO **Idaho Springs** 81.19 317 eP P 21 26 42.3 0.0
comp=Z,5.3nm,0.9s
ISCO **Idaho Springs** 81.19 317 ⇑P P 21 26 42.6 +0.3
baz=81,SNR=7.5
R26A **Arlington** 81.20 315 ⇑P P 21 26 43.2 +1.1
baz=81
T28A **Walsh** 81.36 313 ⇓P P 21 26 43.9 +0.9
baz=81
J16A **Bone** 81.36 323 ⇓P P 21 26 44.0 +1.0
baz=81
O22A **Kremmling** 81.38 318 ⇓P P 21 26 43.6 +0.2
baz=81,SNR=6.1
N21A **Black Mountain** 81.40 319 ⇑P P 21 26 44.0 +0.6
baz=81
G12A **Big Creek, Yel** 81.47 326 ⇑P P 21 26 43.7 +0.1
baz=81,SNR=18
H13A **Challis** 81.48 325 ⇑P P 21 26 44.6 +1.0
baz=81
W31A **Holland Ranch,** 81.58 310 ⇑P P 21 26 44.6 +0.5
baz=81
Q24A **Divide** 81.58 316 ⇓P P 21 26 44.4 -0.1
baz=81
P23A **Jefferson** 81.62 317 ⇑P P 21 26 45.4 +0.7
baz=81,SNR=5.2
I14A **Mackay** 81.65 324 ⇓P P 21 26 45.4 +0.9
baz=81,SNR=13
K16A **Soda Springs** 81.70 322 ⇑P P 21 26 44.8 0.0
baz=81
N20A **Spence Gulch,** 81.71 319 ⇑P P 21 26 45.6 +0.7
baz=81,SNR=9.4
S26A **Kim** 81.71 314 ⇓P P 21 26 45.8 +0.9
baz=81
T27A **Campo** 81.73 313 ⇑P P 21 26 45.9 +0.9
baz=82
H12A **Diamond D Ranc** 81.75 325 ⇑P P 21 26 45.3 +0.2
baz=81,SNR=9.2
P22A **Eagle** 81.92 318 ⇑P P 21 26 46.7 +0.7
baz=82
I13A **Wildhorse Cree** 81.95 325 ⇑P P 21 26 47.2 +1.1
baz=82,SNR=17
X31A **McDonald Ranch** 82.00 310 ⇑P P 21 26 46.8 +0.4
baz=82
T26A **Comanche Natio** 82.11 314 ⇑P P 21 26 47.9 +0.8
baz=82
R24A **Sanders Place,** 82.11 316 ⇑P P 21 26 47.9 +0.8
baz=82
S25A **Robets Cordova** 82.19 315 ⇓P P 21 26 48.2 +0.7
baz=82,SNR=8.5
K15A **Arbon** 82.24 323 ⇑P P 21 26 48.0 +0.4
baz=82
N18A **Larsen Ranch,** 82.27 320 ⇑P P 21 26 47.9 0.0
baz=82
L16A **Fish Haven** 82.28 322 ⇑P P 21 26 48.9 +1.0
baz=82
HLID **Hailey** 82.36 325 ⇓P P 21 26 48.6 +0.4
baz=82
I12A **Atlanta** 82.48 325 ⇑P P 21 26 49.4 +0.5
baz=82
BMO **Blue Mountains** 82.51 327 eP P 21 26 48.7 -0.2
BMO pmax pmax
comp=Z,30nm,1.2s
BMO **Blue Mountains** 82.51 327 eP P 21 26 48.7 -0.2
comp=Z,30nm,1.2s
R23A **Moffat** 82.51 316 ⇓P P 21 26 49.7 +0.4
baz=82
O19A **Miners Draw (B** 82.54 319 ⇓P P 21 26 49.7 +0.5
baz=82
Q22A **Crested Butte,** 82.55 317 ⇑P P 21 26 50.0 +0.5
baz=82,SNR=9.1
T25A **Trinidad** 82.57 315 ⇓P P 21 26 49.9 +0.3
baz=82
S24A **Houtin Ranch,** 82.61 315 ⇑P P 21 26 50.2 +0.3
baz=82
X30A **Coker Ranch, T** 82.64 311 ⇓P P 21 26 51.0 +1.3
baz=82
Y31A **Rekieta Farm,** 82.65 310 ⇓P P 21 26 50.0 +0.3
baz=82
HWUT **Hardware Ranch** 82.66 322 eP P 21 26 50.3 +0.4
comp=Z,11nm,1.1s
Z32A **Haskell** 82.67 309 ⇑P P 21 26 50.6 +0.8
baz=82
L15A **Malad City** 82.72 322 ⇓P P 21 26 50.1 -0.1
baz=82
U26A **Atchley Ranch,** 82.77 314 ⇑P P 21 26 51.2 +0.6
baz=82,SNR=6.4
N17A **Moffit Pass** 82.84 321 ⇑P P 21 26 50.9 -0.1
baz=82
M16A **Huntsville** 82.92 322 ⇓P P 21 26 51.4 +0.2
baz=83
T24A **Torres, Weston** 82.96 315 ⇑P P 21 26 52.2 +0.6
baz=83,SNR=7.3
R22A **Saguache, Gunn** 82.96 317 ⇑P P 21 26 52.2 +0.5
baz=83,SNR=6.9
P19A **Cripple Cowboy** 82.98 319 ⇓P P 21 26 51.4 -0.2
baz=83
Z31A **Sharp Cattle R** 83.05 309 ⇑P P 21 26 51.7 -0.1
baz=83
MFID **Camas Ranch** 83.08 325 ⇑P P 21 26 52.8 +0.8
baz=83
U25A **Circle Dot Ran** 83.12 314 ⇓P P 21 26 53.0 +0.6
baz=83
Q20A **Ridgley Place,** 83.17 318 ⇓P P 21 26 52.9 +0.3
baz=83
V26A **Tequesquite Ra** 83.24 313 ⇑P P 21 26 53.6 +0.7
baz=83
R21A **Cimarron** 83.25 317 ⇑P P 21 26 53.4 +0.3
baz=83,SNR=5.8
S22A **4UR Ranch, Cre** 83.36 316 ⇑P P 21 26 53.7 0.0
baz=83
W27A **Bowe Ranch, En** 83.40 312 ⇑P P 21 26 53.8 +0.1
baz=83
P18A **Preston Nutter** 83.60 320 ⇓P P 21 26 54.5 -0.5
baz=83
Z30A **Sanderson Ranc** 83.63 310 ⇓P P 21 26 55.3 +0.5
baz=83
Q19A **Hogan Spring (** 83.65 319 ⇑P P 21 26 54.9 -0.1
baz=83
V25A **Rancho No Teng** 83.66 314 ⇓P P 21 26 55.1 0.0
baz=83
W26A **Owens Ranch, T** 83.76 313 ⇑P P 21 26 56.5 +0.9
baz=84
YUK **Yuzh-Kuril'sk** 83.92 32 i P P 21 26 48.7 -7.3
YUK S S 21 37 10.2 -9.0
YUK pmax pmax
comp=Z,127nm,6.6s
YUK MLR MLR
comp=Z,564nm,21.0s
S21A **Coal Bank Pass** 83.92 317 ⇑P P 21 26 56.9 +0.3
baz=84,SNR=8.6
T22A **Edith** 83.96 316 ⇑P P 21 26 57.3 +0.5
baz=84,SNR=9.4
W25A **X Bar L Ranch,** 84.04 313 ⇑P P 21 26 57.5 +0.5
baz=84
S20A **Disappointment** 84.08 317 ⇓P P 21 26 57.5 +0.2
baz=84
V24A **Rampart Ranch,** 84.09 314 ⇓P P 21 26 57.3 -0.1
baz=84
SRU **San Rafael** 84.14 320 eP P 21 26 57.5 0.0
SRU pmax pmax
comp=Z,328nm,0.9s
SRU **San Rafael** 84.14 320 eP P 21 26 57.5 0.0
comp=Z,328nm,0.9s
SRU **San Rafael** 84.14 320 ⇓P P 21 26 57.4 -0.2
baz=84
X26A **CR and CF Fran** 84.19 312 ⇑P P 21 26 59.1 +1.3
baz=84
332A **Millersview** 84.22 308 ⇓P P 21 26 58.9 +1.0
baz=84
DUG **Dugway** 84.35 322 ⇑P P 21 26 58.8 +0.3
baz=84
U22A **Llaves** 84.42 316 ⇑P P 21 26 59.8 +0.7
baz=84,SNR=13
W24A **Lazy 6 Ranch,** 84.55 314 ⇑P P 21 27 00.3 +0.6
baz=84
Q16A **Castle Valley** 84.60 320 ⇓P P 21 26 59.9 0.0
baz=84
MVCO **Mesa Verde** 84.62 317 ⇓P P 21 27 00.6 +0.5
baz=84
Y26A **Elida** 84.67 312 ⇑P P 21 27 00.8 +0.5
baz=84
V22A **San Miguel Ran** 84.81 315 ⇑P P 21 27 01.1 +0.1
baz=84
PSI **Prapat** 84.84 91 P P 21 27 00.4 -0.9
PSI **Prapat** 84.84 91 P P 21 27 01.7 +0.4
PSI **Prapat** 84.84 91 P P 21 27 00.4 -0.9
comp=Z,5.1nm,0.5s,baz=299,slow=5.3,SNR=7.3
128A **Castleberry Fa** 84.89 310 ⇑P P 21 27 01.5 +0.2
baz=85
W23A **Werner Place,** 84.98 314 ⇑P P 21 27 02.3 +0.4
baz=85
229A **Bryant Ranch,** 84.99 309 ⇓P P 21 27 02.5 +0.6
baz=85
S18A **Hurst Farm, Bl** 85.00 318 ⇑P P 21 27 02.4 +0.4
baz=85
330A **Mertzon** 85.04 309 ⇑P P 21 27 02.6 +0.5
baz=85
ROSC **El Rosal** 85.05 272 LR LR 21 59 56.8
comp=Z,231nm,21.3s,baz=270,slow=32
X24A **Lazy VL Ranch,** 85.06 313 ⇓P P 21 27 02.7 +0.4
baz=85
Y25A **Mesa, Roswell** 85.14 313 ⇑P P 21 27 03.1 +0.5
baz=85
532A **Rocksprings** 85.23 307 ⇓P P 21 27 03.2 +0.1
baz=85
Z26A **Caprock** 85.24 312 ⇓P P 21 27 03.4 +0.3
baz=85,SNR=13
431A **Sonora** 85.24 308 ⇓P P 21 27 04.2 +1.2
baz=85
ANMO **Albuquerque** 85.31 314 P P 21 27 03.5 0.0
ANMO **Albuquerque** 85.31 314 P P 21 27 03.5 0.0
comp=Z,1.7nm,0.9s,baz=67,slow=5.6,SNR=3.3
ANMO LR LR 22 03 12.3
comp=Z,245nm,19.4s,baz=46,slow=34
228A **UT Block 9, Go** 85.32 310 ⇓P P 21 27 04.1 +0.6
baz=85
329A **Wagon Wheel Ra** 85.44 309 ⇓P P 21 27 04.6 +0.5
baz=85
X23A **Hourglass Bar** 85.45 314 ⇓P P 21 27 05.2 +1.0
baz=85
430A **Baggett Ranch,** 85.53 308 ⇑P P 21 27 05.7 +1.1
baz=85
Y24A **Capitan** 85.54 313 ⇓P P 21 27 05.8 +1.0
baz=85
531A **Rocksprings** 85.58 307 ⇓P P 21 27 06.0 +1.2
baz=85
632A **Uvalde** 85.62 307 ⇓P P 21 27 06.0 +1.0
baz=85
Z25A **Roswell** 85.64 312 ⇑P P 21 27 05.9 +0.8
baz=85
V20A **Brimhall** 85.70 316 ⇓P P 21 27 05.6 +0.1
baz=85
126A **Clayton Basin,** 85.73 311 ⇓P P 21 27 06.3 +0.8
baz=86
Y23A **Lovelace Mesa,** 85.87 313 ⇑P P 21 27 07.4 +1.0
baz=86
X22A **Bernardo** 85.94 314 ⇑P P 21 27 07.5 +0.8
baz=86
Z24A **Sheeppen Canyo** 85.95 313 ⇓P P 21 27 07.8 +1.1
baz=86
328A **Wristen Ranch,** 86.00 310 ⇓P P 21 27 07.1 +0.3
baz=86
429A **Davenport Ranc** 86.03 309 ⇑P P 21 27 07.3 +0.3
baz=86
530A **J-C Ranch, Com** 86.06 308 ⇑P P 21 27 07.5 +0.4
baz=86,SNR=6.1
125A **Gardner Draw,** 86.07 312 ⇑P P 21 27 07.4 +0.1
baz=86
631A **Perdido Creek** 86.15 307 ⇑P P 21 27 08.1 +0.6
baz=86,SNR=5.2
226B **Tecolote Peak,** 86.24 311 ⇓P P 21 27 08.9 +0.8
baz=86
X21A **Alamocita Cree** 86.39 315 ⇓P P 21 27 09.5 +0.5
baz=86
428A **Kincaid Ranch,** 86.41 309 ⇑P P 21 27 10.0 +1.1
baz=86
Z23A **Rita Site, Whi** 86.48 313 ⇑P P 21 27 10.6 +1.4
baz=86
124A **Stringfield Ra** 86.48 312 ⇑P P 21 27 09.9 +0.5
baz=86
529A **Stev Forest Ra** 86.59 308 ⇓P P 21 27 10.7 +0.9
baz=86
MJAR **Matsushiro Arr** 86.63 41 P P 21 27 09.1 -0.7
MJAR **Matsushiro Arr** 86.63 41 P P 21 27 09.1 -0.7
comp=Z,3.5nm,1.0s,baz=302,slow=6.0,SNR=12
MJAR LR LR 22 09 42.8
comp=Z,552nm,18.3s,baz=335,slow=38
Y21A **Point of Rocks** 86.67 315 ⇑P P 21 27 10.9 +0.5
baz=86
427A **Hayter Ranch,** 86.73 310 ⇓P P 21 27 10.7 +0.2
baz=86
Z22A **Elephant Butte** 86.87 314 ⇑P P 21 27 11.7 +0.4
baz=87,SNR=5.3
528A **Cox Ranch, San** 86.89 309 ⇑P P 21 27 12.4 +1.1
baz=87
224A **Cornudas Mount** 86.99 312 ⇓P P 21 27 12.6 +0.7
baz=87
R11A **Troy Canyon, C** 87.11 322 ⇑P P 21 27 12.6 +0.2
baz=87
U15A **North Rim** 87.11 319 ⇓P P 21 27 12.7 +0.2
baz=87
426A **McDonald Obser** 87.22 310 ⇓P P 21 27 14.4 +1.3
baz=87
YBH **Yreka Blue Hor** 87.26 329 LR LR 22 04 54.6
comp=Z,157nm,20.1s,baz=121,slow=35
324A **Moseley Ranch,** 87.45 311 ⇑P P 21 27 15.0 +1.0
baz=87
526A **Mary Lane Ranc** 87.71 310 ⇓P P 21 27 16.1 +0.8
baz=88
627A **Terlingua Ranc** 87.77 309 ⇑P P 21 27 16.0 +0.5
baz=88
Z20A **Nine Sixteen R** 87.85 315 ⇑P P 21 27 17.0 +1.1
baz=88
TXAR **Lajitas Array** 88.02 309 P P 21 27 16.8 +0.1
TXAR **Lajitas Array** 88.02 309 P P 21 27 16.8 +0.1
comp=Z,0.7nm,0.6s,baz=64,slow=3.2,SNR=6.8
TXAR LR LR 22 07 40.1
comp=Z,94nm,21.2s,baz=260,slow=36
626A **Big Bend Ranch** 88.12 309 ⇓P P 21 27 18.1 +0.9
baz=88
NVAR **Mina Array Bea** 88.25 324 P P 21 27 19.3 +1.5
NVAR **Mina Array Bea** 88.25 324 P P 21 27 19.3 +1.5
comp=Z,0.2nm,0.3s,baz=54,slow=4.6,SNR=3.2
NVAR LR LR 22 06 52.8
comp=Z,173nm,19.2s,baz=297,slow=36
X16A **Lo Mia Camp, P** 88.29 317 ⇓P P 21 27 19.3 +1.2
baz=88
W13A **Hualapai Mount** 88.95 319 ⇑P P 21 27 21.7 +0.5
baz=89

320A	**Kipp Ranch, An**	**89.19**	**313**	⇑P		**P**	**21 27 23.0**	**+0.7**
	baz=89							
SIV	**San Ignacio**	**89.63**	**248**	P		**P**	**21 27 24.4**	**+0.2**
SIV	**San Ignacio**	**89.63**	**248**	P		**P**	**21 27 24.4**	**+0.2**
	comp=Z,3.3nm,1.0s,baz=99,slow=4.1,SNR=6.1							
BC3	**Big Chuckawall**	**90.88**	**319**	⇓P		**P**	**21 27 31.1**	**+1.0**
	baz=91							
CMIG	**Matias Romero**	**91.42**	**295**	LR		LR	22 02 52.3	
	comp=Z,196nm,21.4s,baz=6.4,slow=32							
CPUP	**Villa Florida**	**94.45**	**238**	LR		LR	22 07 57.1	
	comp=Z,137nm,18.0s,baz=24,slow=34							
LPIG	**La Paz**	**95.81**	**310**	LR		LR	22 09 28.2	
	comp=Z,12nm,21.9s,baz=34,slow=34							
WRA	**Warramunga Arr**	**125.89**	**85**	PKP		**PKPdf**	**21 33 27.1**	**-1.3**
WRA	**Warramunga Arr**	**125.89**	**85**	PKP		**PKPdf**	**21 33 27.1**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=313,slow=1.8,SNR=8.9							
ASAR	**Alice Springs**	**127.82**	**89**	PKP		**PKPdf**	**21 33 30.6**	**-1.4**
ASAR	**Alice Springs**	**127.82**	**89**	PKP		**PKPdf**	**21 33 30.6**	**-1.4**
	comp=Z,1.0nm,0.9s,baz=320,slow=1.0,SNR=7.4							
DZM	**Mont Dzumac**	**149.66**	**56**	eLR		LR	22 23 08.4	
	comp=Z,158nm,22.6s							
PPT2	**Papeete2**	**151.22**	**324**	eLR		LR	22 23 50.9	
	comp=Z,88nm,27.2s							
TBI	**Tubuai**	**156.15**	**318**	eLR		LR	22 26 08.8	
	comp=Z,98nm,25.0s							

*ISCJB **13** 21:16:14.3±1.4, 13°.12N±0°.05×91°.38W±0°.04, h10km±11km, mb4.1/5, MS3.4/1, Error ellipse: s-maj=8.6km s-min=6.4km az=21.1*
*CASC **13** 21:16:16.0±3.0, 13°.16N×91°.38W, h20km±21km, MD3.8, ML4.0*
*IDC **13** 21:16:27.3±3.4, 13°.75N×90°.78W, h87km±29km, mb3.8/5, mb1 4.1/8, mb1mx3.7/26, mbtmp3.9/8, MS3.4/2, Ms1 3.4/2, ms1mx2.8/30, Error ellipse: s-maj=46.3km s-min=17.0km az=52.0*

ISC 13 21:16:18.6±3.3, 13°.19N±0°.08×91°.34W±0°.05, h23km±22km, n34, σ1♀48/37, mb4.0/5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**1.16**	**345**	*eP*	**Pn**	**21 16 38.1**	**-1.3**
IXG	**Ixpaco**	**1.30**	**41**	*eP*	Pn	21 16 38.8	-2.8
IXG				*eS*	**Sb**	**21 16 60.0**	**+1.1**
FUG	**Fuego 3**	**1.34**	**21**	*eP*	Pn	21 16 39.2	-2.8
PCG	**Pacaya**	**1.39**	**30**	*eP*	Pn	21 16 39.4	-3.4
PCG				*eS*	**Sn**	**21 17 01.9**	**+1.3**
FG6		**1.43**	**18**	*eP*	Pn	21 16 40.5	-2.9
FG6				*eS*	**Sn**	**21 17 01.8**	**0.0**
NBG	**Las Nubes**	**1.69**	**34**	*eP*	**Pn**	**21 16 45.3**	**-1.7**
NBG				*eS*	**Sn**	**21 17 09.6**	**+1.6**
SBLS	**San Blas**	**1.79**	**69**	*eP*	**Pn**	**21 16 46.0**	**-2.2**
RTR	**El Retiro**	**1.79**	**67**	*eP*	**Pn**	**21 16 46.3**	**-1.9**
RTR				*eS*	**Sn**	**21 17 07.5**	**-2.8**
SNJE	**San Jose**	**1.81**	**68**	*eP*	**Pn**	**21 16 46.4**	**-2.2**
RBDL	**Robledal**	**1.85**	**60**	*eP*	**Pn**	**21 16 46.9**	**-2.1**
BOQS	**Boqueron**	**2.07**	**75**	*eP*	**Pn**	**21 16 50.7**	**-1.5**
BOQS				*eS*	**Sn**	**21 17 17.4**	**0.0**
SNET	**Serv Nac Est T**	**2.11**	**76**	*eP*	**Pn**	**21 16 50.6**	**-1.9**
SNET				*i*		21 17 22.9	
SNET				AML	AML	21 17 23.0	
	comp=Z,2μm,0.6s						
LFU	**La Fuente**	**2.23**	**75**	*eP*	**Pn**	**21 16 53.4**	**-0.8**
LFU				*eS*	**Sn**	**21 17 20.6**	**-0.5**
MTO2	**Montecristo 2**	**2.27**	**58**	*eP*	**Pn**	**21 16 53.1**	**-1.7**
LBRS	**Las Brisas**	**2.30**	**76**	*eP*	**Pn**	**21 16 54.2**	**-0.9**
LBRS				*eS*	**Sn**	**21 17 21.5**	**-1.2**
MRL	**Marmol**	**2.46**	**40**	*eP*	**Pn**	**21 16 56.9**	**-0.5**
MRL				*eS*	**Sn**	**21 17 28.9**	**+2.1**
SNVI	**San Vicente**	**2.47**	**80**	*eP*	**Pn**	**21 16 57.1**	**-0.4**
VSM	**San Miguel**	**2.99**	**85**	*eP*	**Pn**	**21 17 05.2**	**+0.4**
BLLM	**Bellamira**	**3.03**	**85**	*eP*	**Pn**	**21 17 04.4**	**-0.8**
CAHU	**Cacacuatique**	**3.09**	**79**	*eP*	**Pn**	**21 17 05.5**	**-0.7**
CNCH	**Conchagua**	**3.41**	**88**	*eP*	**Pn**	**21 17 10.1**	**-0.4**
CMIG	**Matias Romero**	**5.18**	**319**	P	**Pn**	**21 17 34.0**	**-0.6**
	comp=Z,4.7nm,0.3s,baz=124,slow=9.9,SNR=18						
CMIG				S	**Sn**	**21 18 31.7**	**-2.0**
	comp=Z,9.6nm,0.3s,baz=77,slow=20,SNR=6.1						
JTS	**JuntasAbangare**	**6.88**	**114**	P	Pn	21 18 02.7	+4.5
	comp=Z,1.0nm,0.3s,baz=322,slow=16,SNR=5.6						
JTS				S	Sn	21 19 25.4	+10
	comp=Z,0.8nm,0.3s,baz=331,slow=16,SNR=1.6						
JTS				LR	LR	21 20 39.7	
	comp=Z,237nm,19.1s,baz=88,slow=38						
TEIG	**Tepich**	**7.59**	**22**	P	**Pn**	**21 18 07.0**	**-0.8**
	comp=Z,35nm,0.3s,baz=200,slow=5.4,SNR=51						
TXAR	**Lajitas Array**	**19.73**	**326**	P	**P**	**21 20 48.0**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=155,slow=13,SNR=43						
ATAH	**Atahualpa**	**23.94**	**147**	LR	LR	21 29 28.1	
	comp=Z,128nm,18.9s,baz=230,slow=32						
ANMO	**Albuquerque**	**25.62**	**330**	P	**P**	**21 21 46.8**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=150,slow=12,SNR=4.1						
NVAR	**Mina Array Bea**	**34.70**	**321**	P	P	21 23 08.4	+1.4
	comp=Z,3.5nm,0.7s,baz=133,slow=8.1,SNR=19						
NVAR				PcP	**PcP**	**21 25 42.3**	**+1.6**
	comp=Z,1.3nm,0.7s,baz=134,slow=3.4,SNR=7.8						
SIV	**San Ignacio**	**41.67**	**133**	P	**P**	**21 24 06.7**	**+1.0**
	comp=Z,1.9nm,0.8s,baz=319,slow=8.6,SNR=7.9						
SCHQ	**Schefferville**	**45.76**	**20**	P	P	21 24 33.8	-4.3
	comp=Z,4.6nm,0.6s,baz=323,slow=11,SNR=5.2						
ILAR	**Eielson Array**	**63.84**	**337**	P	**P**	**21 26 47.1**	**-1.8**
	comp=Z,0.9nm,0.7s,baz=163,slow=6.0,SNR=8.0						
MKAR	**Makanchi Array**	**120.02**	**5**	PKP	**PKPdf**	**21 35 06.4**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=350,slow=1.5,SNR=3.8						
ASAR	**Alice Springs**	**136.00**	**250**	PKP	**PKPdf**	**21 35 40.7**	**+2.1**
	comp=Z,0.2nm,0.9s,baz=256,slow=38,SNR=4.1						
CMAR	**Chiang Mai Arr**	**146.96**	**342**	PKPbc	**PKPbc**	**21 36 00.2**	**0.0**
	comp=Z,3.9nm,0.7s,baz=340,slow=3.7,SNR=24						

*IDC **13** 21:17:18.4±0.8, 52°.80S×79°.83W, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.9/20, mbtmp3.9/9, ML2.9/1, MS3.5/2, Ms1 3.5/2, ms1mx2.9/24, Error ellipse: s-maj=29.9km s-min=18.6km az=90.0*
*NEIC **13** 21:17:19.5±0.5, 52°.86S×79°.78W, h10km, mb4.0/4, Error ellipse: s-maj=11.6km s-min=8.9km az=95.0*
*ISCJB **13** 21:17:22.8±0.8, 52°.75S±0°.07×79°.5W±0°.1, h33km, mb3.9/8, MS3.5/1, Error ellipse: s-maj=13.7km s-min=9.4km az=151.2*

ISC 13 21:17:23.6±0.7, 52°.78S±0°.09×79°.73W±0°.10, h35km, n38, σ1♀00/38, mb4.1/8, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USHA	**Ushuaia**	**7.00**	**112**	Pn	**Pn**	**21 19 01.8**	**-1.7**
USHA				Sn	**Sn**	**21 20 23.1**	**+1.4**
USHA	**Ushuaia**	**7.00**	**112**	Pn	**Pn**	**21 19 01.8**	**-1.7**
	0.2nm,0.3s,baz=353,slow=4.2,SNR=3.8						
USHA				Sn	**Sn**	**21 20 23.1**	**+1.4**
	0.6nm,0.3s,baz=133,slow=15,SNR=2.7						
EFI	**East Falkland**	**13.32**	**94**	Pn	**Pn**	**21 20 28.9**	**-1.2**
PLCA	**Paso Flores**	**13.58**	**31**	*e*Pn	**Pn**	**21 20 33.2**	**-0.5**
	6.7nm,1.3s						
PLCA	**Paso Flores**	**13.58**	**31**	LR	LR	21 24 59.4	
	comp=Z,140nm,18.1s,baz=180,slow=34						
TRQA	**Tornquist**	**19.21**	**47**	*e*P	**P**	**21 21 43.3**	**-1.2**
	1.9nm,0.9s						
CFAA	**Coronel Fontan**	**22.75**	**26**	P	**P**	**21 22 23.7**	**+1.0**
CFAA	**Coronel Fontan**	**22.75**	**26**	P	**P**	**21 22 23.7**	**+1.0**
	0.4nm,0.8s,baz=191,slow=11,SNR=5.6						
CPUP	**Villa Florida**	**31.30**	**41**	LR	LR	21 35 35.7	
	comp=Z,113nm,21.3s,baz=218,slow=35						
VNA3	**Neumayer Olymp**	**35.05**	**148**	*e*P	**P**	**21 24 13.2**	**+0.6**
VNA2	**Neumayer--Watz**	**35.83**	**148**	*e*P	**P**	**21 24 21.8**	**+2.6**
	baz=238,slow=10						
SNAA	**Sanae**	**37.14**	**149**	*e*P	**P**	**21 24 31.2**	**+0.7**
SNAA	**Sanae**	**37.14**	**149**	*e*P	**P**	**21 24 30.6**	**+0.1**
	2.2nm,0.8s						
SNAA	**Sanae**	**37.14**	**149**	P	**P**	**21 24 31.2**	**+0.7**
	0.6nm,0.8s,baz=235,slow=9.1,SNR=5.6						
QSPA	**South Pole Qui**	**37.45**	**180**	*e*P	**P**	**21 24 32.3**	**-1.1**
	2.7nm,0.9s						
QSPA	**South Pole Qui**	**37.45**	**180**	P	**P**	**21 24 34.1**	**+0.8**
	2.3nm,0.9s,baz=320,slow=9.4,SNR=5.6						
LPAZ	**La Paz**	**37.55**	**18**	*e*P	**P**	**21 24 35.4**	**+0.3**
	2.5nm,0.8s						
LPAZ	**La Paz**	**37.55**	**18**	P	**P**	**21 24 35.5**	**+0.5**
	2.4nm,0.8s,baz=162,slow=5.9,SNR=9.7						
SIV	**San Ignacio**	**39.56**	**29**	P	**P**	**21 24 51.3**	**0.0**
SIV	**San Ignacio**	**39.56**	**29**	P	**P**	**21 24 51.3**	**0.0**
	1.4nm,0.8s,baz=224,slow=7.3,SNR=3.7						
BDFB	**Brasilia**	**44.71**	**46**	P	**P**	**21 25 34.2**	**+0.8**
BDFB	**Brasilia**	**44.71**	**46**	P	**P**	**21 25 34.2**	**+0.8**
	1.8nm,0.5s,baz=162,slow=3.2,SNR=3.3						
TORD	**Torodi Ar. Bea**	**95.24**	**75**	P	**P**	**21 30 44.0**	**+0.4**
TORD	**Torodi Ar. Bea**	**95.24**	**75**	P	**P**	**21 30 44.0**	**+0.4**
	0.7nm,0.7s,baz=220,slow=3.4,SNR=5.5						
NVAR	**Mina Array Bea**	**96.82**	**330**	P	**P**	**21 30 51.5**	**+0.9**
NVAR	**Mina Array Bea**	**96.82**	**330**	P	**P**	**21 30 51.5**	**+0.9**
	0.6nm,0.8s,baz=196,slow=6.1,SNR=3.7						
YKA	**Yellowknife Ar**	**118.18**	**342**	PKP	**PKPdf**	**21 36 04.1**	**-1.3**
YKA	**Yellowknife Ar**	**118.18**	**342**	PKP	**PKPdf**	**21 36 04.1**	**-1.3**
	0.2nm,0.6s,baz=158,slow=2.1,SNR=6.8						
ILAR	**Eielson Array**	**128.07**	**330**	PKP	**PKPdf**	**21 36 23.6**	**-0.8**
ILAR	**Eielson Array**	**128.07**	**330**	PKP	**PKPdf**	**21 36 23.6**	**-0.8**
	0.7nm,0.7s,baz=177,slow=2.1,SNR=9.3						
GERES	**GERESS Array B**	**128.34**	**57**	PKP	**PKPdf**	**21 36 25.3**	**-0.3**
GERES	**GERESS Array B**	**128.34**	**57**	PKP	**PKPdf**	**21 36 25.3**	**-0.3**
	0.1nm,0.2s,baz=156,slow=3.6,SNR=3.6						
BRTR	**Keskin Array B**	**133.75**	**79**	PKP	**PKPdf**	**21 36 36.1**	**0.0**
BRTR	**Keskin Array B**	**133.75**	**79**	PKP	**PKPdf**	**21 36 36.1**	**0.0**
	0.7nm,0.7s,baz=202,slow=0.9,SNR=3.6						
CMAR	**Chiang Mai Arr**	**145.73**	**178**	PKPbc	**PKPdf**	**21 36 58.4**	**+0.1**
CMAR	**Chiang Mai Arr**	**145.73**	**178**	PKPbc	**PKPdf**	**21 36 58.4**	**+0.1**
	1.0nm,0.7s,baz=210,slow=3.3,SNR=7.2						
MKAR	**Makanchi Array**	**166.94**	**110**	PKPab	**PKPab**	**21 38 27.6**	**-0.9**
MKAR	**Makanchi Array**	**166.94**	**110**	PKPab	**PKPab**	**21 38 27.6**	**-0.9**
	0.5nm,0.7s,baz=199,slow=1.0,SNR=5.4						

JMA 13 21:21:25.6±0.3, 44°.27N×148°.28E, h0km, M4.2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**2.05**	**245**	P	Pn	21 22 02.1	+0.8
NEM2				*e*S	Sb	21 22 28.8	-0.8
JRA	**Rausu**	**2.30**	**263**	P	Pn	21 22 06.0	+1.3
JRA				*e*S	Sb	21 22 35.7	-1.2
JNK	**Nakash**	**2.66**	**256**	P	Pn	21 22 10.7	+1.0
JNK				*e*S	Sn	21 22 43.4	+0.7
JAK	**Akkeshi**	**2.90**	**245**	P	Pn	21 22 14.0	+1.1
JAK				*e*S	Sn	21 22 48.6	+0.2
JTKR	**Abashiri--Toko**	**3.16**	**266**	P	Pn	21 22 16.2	-0.4
JAR	**Ashorobuto**	**3.41**	**255**	P	Pn	21 22 21.5	+1.5
JAR				*e*S	Sn	21 23 03.7	+2.6
JCH	**Churui**	**3.94**	**247**	P	Sn	21 22 28.7	+1.3
JCH				*e*S	Sn	21 23 15.1	+0.8
JKK2	**Kamakawa 2**	**4.01**	**266**	P	Pn	21 22 28.5	+0.3
JNBK	**Urakawa-nobuka**	**4.50**	**246**	*e*S	Sn	21 23 30.0	+2.0
JKB	**Kayabe**	**5.82**	**248**	P	Pn	21 22 53.0	-0.1
JKB				*e*S	Sn	21 23 57.0	-3.4
JANG	**Nango**	**6.35**	**234**	P	Pn	21 23 00.1	-0.3
JANG				*e*S	Sn	21 24 07.8	-5.8

*NNC **13** 21:38:40.9±3.0, 41°.01N×84°.61E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=26.8km s-min=16.0km az=149.0*
*BJI **13** 21:38:48.4, 41°.22N×83°.93E, h6km, ML3.5/10*

ISC 13 21:38:43.6±4.8, 40°.9N±0°.2×84°.2E±0°.2, h10km, n5, σ3♀25/6, 8C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**3.95**	**40**	Pn	Pn	21 39 50.1	+5.8
WMQ				smax	smax		
	comp=N,48nm,0.6s						
WMQ				smax	smax		
	comp=E,54nm,0.6s						
MK31	**Makanchi Array**	**6.08**	**348**	Pn	**Pn**	**21 40 13.8**	**+0.4**
	baz=152,slow=14,SNR=6.9						
MK31				⇑Pg	**Pb**	**21 40 28.5**	**-1.0**
	comp=E,1.4nm,0.5s,baz=160,slow=16,SNR=6.4						
MK31				⇑Lg	Lg	21 41 48.7	
	comp=E,30nm,0.7s,baz=165,slow=26,SNR=6.1						
TKM2	**Tokmak 2**	**6.71**	**291**	⇓Pn	**Pn**	**21 40 25.3**	**+3.1**
	comp=E,2.4nm,0.6s						
TKM2				⇓Pg	**Pg**	**21 40 49.0**	**-2.9**
	comp=E,1.6nm,0.5s						
TKM2				⇑Sn	Sn	21 41 45.1	+6.3
	comp=E,5.0nm,0.6s						
TKM2				⇑Lg	Lg	21 42 23.3	
	comp=E,22nm,0.8s						
KUR15	**Kurchatov Arra**	**10.50**	**340**	⇑Sn	**Sn**	**21 43 12.1**	**+0.4**
	comp=E,0.1nm,0.8s						
KUR15				⇑Lg	Lg	21 44 11.2	
	comp=E,0.7nm,1.2s						
KURK	**Kurchatov**	**10.57**	**340**	⇑Sn	**Sn**	**21 43 17.0**	**+3.5**
	comp=E,5.9nm,1.2s						
KURK				⇑Lg	Lg	21 44 13.5	
	comp=E,13nm,0.9s						

MEX 13 21:49:43.8±0.3, 17°.95N×101°.50W, h35km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARIG	**Puente Sto Nin**	**1.15**	**73**	*i* P	Pn	21 50 01.6	-1.8
ARIG				*i* S	Sn	21 50 15.4	-2.5
CAIG	**El Cayaco**	**1.48**	**127**	*i* P	Pn	21 50 06.8	-1.1
CAIG				*e*S	Sn	21 50 23.4	-2.6
URUA	**Uruapan**	**1.56**	**340**	*i* P	Pn	21 50 07.8	-1.6
MMIG	**Aquila**	**1.79**	**281**	*i* P	Pn	21 50 09.9	-2.2
MMIG				*e*S	Sn	21 50 31.1	-2.5
EZ5V		**2.51**	**308**	*i* P	Pn	21 50 20.9	-1.5
EZ5V				*e*S	Sn	21 50 49.3	-2.8
R15V		**2.65**	**298**	*i* P	Pn	21 50 23.2	-0.9
R15V				*e*S	Sn	21 50 53.5	-1.7

IDC 13 21:56:22.2±13.0, 2°.60N×16°.34W, h0km, mb3.4/2, mb1 3.9/3, mb1mx3.4/27, mbtmp3.8/3, ML4.2/1, Error ellipse: s-maj=285.4km s-min=52.0km az=5.0, Off south coast of northwest Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**12.14**	**70**	Pn	Pn	21 59 16.3	-0.3
	1.5nm,0.3s,baz=236,slow=12,SNR=23						
DBIC				Sn	Sn	22 01 34.9	+2.0
	0.2nm,0.3s,baz=206,slow=13,SNR=2.0						
TORD	**Torodi Ar. Bea**	**20.70**	**59**	P	P	22 01 04.2	-0.1
	1.8nm,0.5s,baz=242,slow=10,SNR=30						
GERES	**GERESS Array B**	**52.77**	**25**	P	P	22 05 39.2	0.0
	0.2nm,0.6s,baz=216,slow=4.8,SNR=2.3						

IDC 13 22:06:09.1±3.4, 23°.45S×179°.99W, h528km±35km, mb3.6/7, mb1 3.7/7, mb1mx3.4/21, mbtmp3.6/7, Error ellipse: s-maj=33.5km s-min=21.6km az=29.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**31.48**	**270**	P	P	22 11 48.3	+0.6
	15nm,0.5s,baz=95,slow=11,SNR=32						
PMG	**Port Moresby**	**34.35**	**288**	P	P	22 12 12.2	+0.2
	4.3nm,0.5s,baz=140,slow=7.9,SNR=3.7						
STKA	**Stephens Creek**	**34.90**	**248**	P	P	22 12 16.6	+0.1
	2.4nm,0.7s,baz=80,slow=9.8,SNR=10						
ASAR	**Alice Springs**	**42.12**	**260**	P	P	22 13 14.8	-0.4
	4.7nm,0.8s,baz=96,slow=7.9,SNR=42						
ASAR				ScP	ScP	22 17 57.6	-0.2
	0.7nm,0.8s,baz=102,slow=3.9,SNR=5.2						
WRA	**Warramunga Arr**	**42.44**	**266**	P	P	22 13 16.9	-0.9
	5.1nm,0.4s,baz=94,slow=8.5,SNR=44						
QSPA	**South Pole Qui**	**66.63**	**180**	P	P	22 16 06.7	-0.2
	3.4nm,0.8s,baz=350,slow=6.1,SNR=19						
TXAR	**Lajitas Array**	**90.19**	**58**	P	P	22 18 13.7	+0.2
	0.6nm,0.7s,baz=250,slow=5.4,SNR=4.0						
FINES	**FINESS Array B**	**138.02**	**342**	SKPbc	SKPbc	22 27 15.4	-2.1
	1.9nm,1.1s,baz=31,slow=4.4,SNR=5.5						

MEX 13 22:34:16.5±0.4, 15°.80N×94°.72W, h58km±17km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.34**	**269**	*i* P	Pn	22 34 37.7	-1.3
HUIG				*i* S	Sn	22 34 53.6	-2.2
PANG	**Puerto Angel**	**1.69**	**266**	*i* P	Pn	22 34 42.2	-1.6
PANG				*i* S	Sn	22 35 02.2	-2.2
TGIG		**1.82**	**57**	*e*P	Pn	22 34 43.8	-1.7
TGIG				*i* S	Sn	22 35 06.5	-1.1
VHO	**Vista Hermosa**	**2.31**	**303**	*i* P	Pn	22 34 51.0	-1.4
VHO				*e*S	Sn	22 35 17.9	-2.0
PNIG	**Pinotepa**	**3.33**	**281**	*e*P	Pn	22 35 04.7	-1.5
PNIG				*i* S	Sn	22 35 43.0	-1.6
UTMO	**Huajuapan**	**3.58**	**305**	*i* P	Pn	22 35 08.8	-1.1
UTMO				*e*S	Sn	22 35 49.7	-1.3

IDC 13 22:42:01.2±1.9, 6°.62S×129°.47E, h0km, mb3.5/2, mb1 3.7/4, mb1mx3.5/20, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=144.3km s-min=29.9km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.06**	**161**	Pn	Pn	22 45 22.8	+0.9
	0.4nm,0.3s,baz=343,slow=13,SNR=10						
WRA				Sn	Sn	22 47 48.5	-10
	0.6nm,0.3s,baz=332,slow=24,SNR=7.6						
ASAR	**Alice Springs**	**17.48**	**166**	P	Pn	22 46 06.0	-0.6
	0.2nm,0.3s,baz=348,slow=13,SNR=5.6						
MKAR	**Makanchi Array**	**67.62**	**327**	P	P	22 53 00.5	+0.5
	0.1nm,0.3s,baz=124,slow=7.2,SNR=4.1						
KURBB	**Kurchatov Arra**	**71.91**	**329**	P	P	22 53 25.7	-0.6
	0.1nm,0.4s,baz=123,slow=4.8,SNR=4.6						

*IDC **13** 23:14:13.5±1.0, 3°.87S×99°.60E, h0km, mb4.1/16, mb1 4.2/16, mb1mx4.1/27, mbtmp4.1/16, MS3.2/3, Ms1 3.2/3, ms1mx2.5/34, Error ellipse: s-maj=33.3km s-min=17.5km az=45.0*
*ISCJB **13** 23:14:16.8±0.5, 3°.77S±0°.05×99°.79E±0°.06, h33km, mb4.2/22, MS3.1/2, Error ellipse: s-maj=10.2km s-min=5.1km az=138.6*
*NEIC **13** 23:14:18.8±0.4, 3°.83S×99°.67E, h35km, mb4.2/5, Error ellipse: s-maj=15.0km s-min=5.8km az=54.0*
*DJA **13** 23:14:22.3±0.9, 2°.5S×37°×10°.3E±4°.7, h253km±35km, M4.3/5, mb4.3/1, MLv4.2/5*

ISC 13 23:14:18.5±0.7, 3°.85S±0°.08×99°.71E±0°.09, h35km, n53, σ1♀05/55, mb4.2/22, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**2.47**	**45**	P	**Pn**	**23 14 59.4**	**+2.9**
MNAI	**Manna**	**3.28**	**99**	P	**Pn**	**23 15 05.7**	**-1.8**
MNAI				S	**Sn**	**23 15 46.2**	**+0.9**
PPI	**Padang Panjang**	**3.44**	**12**	P	**Pn**	**23 15 09.9**	**+0.2**
PPI				S	**Sn**	**23 15 47.2**	**-2.1**
LWLI	**Liwa**	**4.49**	**105**	P	**Pn**	**23 15 22.9**	**-1.3**
LWLI				S	**Sn**	**23 16 13.2**	**-2.1**
MNSI	**Mandailing Nat**	**4.62**	**358**	P	**Pn**	**23 15 23.5**	**-2.4**
MNSI				S	**Sn**	**23 16 14.9**	**-3.4**
KASI	**Kota Agung**	**5.05**	**109**	P	Pn	23 15 27.5	-4.4
KASI				S	Sn	23 16 21.0	-8.1
CGJI	**Cibinong**	**6.56**	**115**	P	**Pn**	**23 15 50.7**	**-1.9**
CGJI				S	Sn	23 16 58.2	-8.1
PSI	**Prapat**	**6.65**	**353**	LR	LR	23 18 41.0	
	comp=Z,139nm,19.7s,baz=162,slow=41						
CM31	**Chiang Mai Arr**	**22.18**	**358**	*e*P	**P**	**23 19 11.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**22.18**	**358**	P	**P**	**23 19 11.1**	**-0.7**
CMAR	**Chiang Mai Arr**	**22.18**	**358**	P	**P**	**23 19 11.1**	**-0.7**
	2.9nm,0.6s,baz=186,slow=10.0,SNR=6.1						
CMAR				LR		23 28 12.9	
	comp=Z,45nm,19.4s,baz=185,slow=38						
CHTO	**Chiang Mai**	**22.53**	**358**	*e*P	**P**	**23 19 15.7**	**+0.1**
	9.0nm,1.5s						
FITZ	**Fitzroy Crossi**	**29.07**	**121**	*e*P	**P**	**23 20 16.1**	**+0.2**
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**37.35**	**118**	P	**P**	**23 21 28.4**	**+0.3**
WRA	**Warramunga Arr**	**37.35**	**118**	P	**P**	**23 21 28.4**	**+0.3**
	0.9nm,0.7s,baz=295,slow=8.6,SNR=6.0						
WRAB	**Tennant Creek**	**37.35**	**118**	*e*P	**P**	**23 21 28.7**	**+0.6**
	2.9nm,0.8s						
ASAR	**Alice Springs**	**38.44**	**124**	P	**P**	**23 21 38.1**	**+0.9**
ASAR	**Alice Springs**	**38.44**	**124**	P	**P**	**23 21 38.1**	**+0.9**
	0.6nm,0.5s,baz=292,slow=8.4,SNR=8.8						
STKA	**Stephens Creek**	**48.16**	**130**	P	**P**	**23 22 56.2**	**+0.6**
KSAR	**Wonju Array Be**	**48.73**	**30**	P	**P**	**23 23 00.3**	**+0.6**
KSRS	**Korea Array**	**48.75**	**30**	P	**P**	**23 23 00.4**	**+0.4**
	3.5nm,1.0s,baz=229,slow=9.2,SNR=4.6						
KSRS				LR	LR	23 45 49.3	
	comp=Z,33nm,18.3s,baz=156,slow=39						
TKM2	**Tokmak 2**	**51.41**	**337**	*e*P	**P**	**23 23 20.3**	**0.0

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.08**	**95**	Pg	Pg	00 45 45.7	+0.5
CAMP				Sg	Sg	00 45 47.4	+0.4
	3µm,0.3s						
CAMP	**Campotosto**	**0.08**	**95**	Pg	Pg	00 45 45.7	+0.5
CAMP				Sg	Sg	00 45 47.4	+0.4
	3µm,0.3s						
AQU	**L'Aquila**	**0.20**	**159**	Pg	Pg	00 45 47.7	+0.7
AQU				Sg	Sg	00 45 50.8	+0.8
AQU	**L'Aquila**	**0.20**	**159**	Pg	Pg	00 45 47.7	+0.7
AQU				Sg	Sg	00 45 50.8	+0.8
LNSS	**Leonessa**	**0.21**	**287**	Pg	Pg	00 45 47.7	+0.5
LNSS				Sg	Sg	00 45 51.2	+0.9
	5µm,0.2s						
LNSS	**Leonessa**	**0.21**	**287**	Pg	Pg	00 45 47.7	+0.5
LNSS				Sg	Sg	00 45 51.2	+0.9
	5µm,0.2s						
TERO	**Teramo**	**0.23**	**70**	Pg	Pg	00 45 47.9	+0.3
TERO				Sg	Sg	00 45 51.6	+0.6
	1µm,0.5s						
TERO	**Teramo**	**0.23**	**70**	Pg	Pg	00 45 47.9	+0.3
TERO				Sg	Sg	00 45 51.6	+0.6
	1µm,0.5s						
FIAM	**Fiamignano**	**0.31**	**207**	Pg	Pg	00 45 49.3	+0.3
FIAM				Sg	Sg	00 45 54.1	+0.8
	397nm,0.5s						
FIAM	**Fiamignano**	**0.31**	**207**	Pg	Pg	00 45 49.3	+0.3
FIAM				Sg	Sg	00 45 54.1	+0.8
	397nm,0.5s						
NRCA	**Norcia**	**0.32**	**334**	Pg	Pg	00 45 49.6	+0.2
NRCA				Sg	Sg	00 45 54.6	+0.8
	956nm,0.1s						
NRCA	**Norcia**	**0.32**	**334**	Pg	Pg	00 45 49.6	+0.2
NRCA				Sg	Sg	00 45 54.6	+0.8
	956nm,0.1s						
VCEL	**Villa Celiera**	**0.42**	**110**	Pg	Pb	00 45 51.8	-0.6
VCEL				Sg	Sg	00 45 57.2	+0.3
	798nm,0.3s						
VCEL	**Villa Celiera**	**0.42**	**110**	Pg	Pb	00 45 51.8	-0.6
VCEL				Sg	Sg	00 45 57.2	+0.3
	798nm,0.3s						
OFFI	**Offida**	**0.48**	**35**	Pg	Pb	00 45 53.2	-0.1
	878nm,0.5s						
OFFI	**Offida**	**0.48**	**35**	Pg	Pb	00 45 53.2	-0.1
	878nm,0.5s						
MNS	**Montasola**	**0.49**	**251**	Pg	Pg	00 45 52.4	+0.1
MNS				Sg	Sb	00 45 59.9	-0.8
	385nm,0.5s						
MNS	**Montasola**	**0.49**	**251**	Pg	Pg	00 45 52.4	+0.1
MNS				Sg	Sb	00 45 59.9	-0.8
	385nm,0.5s						
FDMO	**Fiordimonte**	**0.52**	**342**	Pg	Pg	00 45 53.1	+0.2
FDMO				Sg	Sb	00 46 00.8	-0.8
	122nm,0.2s						
FDMO	**Fiordimonte**	**0.52**	**342**	Pg	Pg	00 45 53.1	+0.2
FDMO				Sg	Sb	00 46 00.8	-0.8
	122nm,0.2s						
CESX	**Cesi**	**0.54**	**277**	Pg	Pg	00 45 53.1	-0.2
CESX				Sg	Sg	00 46 01.2	+0.7
	142nm,0.2s						
CESX	**Cesi**	**0.54**	**277**	Pg	Pg	00 45 53.1	-0.2
CESX				Sg	Sg	00 46 01.2	+0.7
	142nm,0.2s						
CESI	**CESI - Serrava**	**0.55**	**327**	Pg	Pg	00 45 53.6	+0.1
CESI				Sg	Sb	00 46 01.8	-0.8
	44nm,0.3s						
CESI	**CESI - Serrava**	**0.55**	**327**	Pg	Pg	00 45 53.6	+0.1
CESI				Sg	Sb	00 46 01.8	-0.8
	44nm,0.3s						
CERT	**Cerreto**	**0.64**	**202**	Pg	Pg	00 45 54.8	-0.4
	340nm,0.4s						
CERT	**Cerreto**	**0.64**	**202**	Pg	Pg	00 45 54.8	-0.4
	340nm,0.4s						
MTCE	**Montecelio**	**0.67**	**219**	Pg	Pg	00 45 55.3	-0.4
	100nm,0.4s						
MTCE	**Montecelio**	**0.67**	**219**	Pg	Pg	00 45 55.3	-0.4
	100nm,0.4s						
ASSB	**Assisi San Ben**	**0.69**	**317**	Pg	Pg	00 45 56.2	0.0
ASSB	**Assisi San Ben**	**0.69**	**317**	Pg	Pg	00 45 56.2	0.0
INTR	**Introdacqua**	**0.69**	**140**	Pg	Pg	00 45 55.8	-0.4
INTR				Sg	Sb	00 46 06.1	-0.5
INTR	**Introdacqua**	**0.69**	**140**	Pg	Pg	00 45 55.8	-0.4
INTR				Sg	Sb	00 46 06.1	-0.5
VVLD	**Villa Vallelon**	**0.71**	**161**	Pg	Pb	00 45 57.4	+0.1
	195nm,0.6s						
VVLD	**Villa Vallelon**	**0.71**	**161**	Pg	Pb	00 45 57.4	+0.1
	195nm,0.6s						
GUAR	**Guarcino**	**0.75**	**180**	Pg	Pb	00 45 58.0	+0.1
	133nm,0.8s						
GUAR	**Guarcino**	**0.75**	**180**	Pg	Pb	00 45 58.0	+0.1
	133nm,0.8s						
LPEL	**Lama dei Pelig**	**0.82**	**127**	Pg	Pg	00 45 58.1	-0.5
LPEL				Sg	Sb	00 46 10.1	-0.1
	122nm,0.2s						
LPEL	**Lama dei Pelig**	**0.82**	**127**	Pg	Pg	00 45 58.1	-0.5
LPEL				Sg	Sb	00 46 10.1	-0.1
	122nm,0.2s						
CING	**Cingoli**	**0.84**	**354**	Pg	Pg	00 45 58.7	-0.3
CING	**Cingoli**	**0.84**	**354**	Pg	Pg	00 45 58.7	-0.3
RMP	**Rome, Mte Porz**	**0.86**	**212**	Pg	Pb	00 45 59.6	-0.1
	146nm,0.5s						
RMP	**Rome, Mte Porz**	**0.86**	**212**	Pg	Pb	00 45 59.6	-0.1
	146nm,0.5s						
MGAB	**Montegabbione**	**0.95**	**293**	Pg	Pg	00 46 01.1	-0.1
	137nm,0.5s						
MGAB	**Montegabbione**	**0.95**	**293**	Pg	Pg	00 46 01.1	-0.1
	137nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.98**	**182**	Pg	Pb	00 46 01.9	0.0
	80nm,1.1s						
GIUL	**Giuliano Di Ro**	**0.98**	**182**	Pg	Pb	00 46 01.9	0.0
	80nm,1.1s						
ARVD	**Arcevia**	**0.99**	**344**	Pg	Pg	00 46 01.6	-0.3
ARVD	**Arcevia**	**0.99**	**344**	Pg	Pg	00 46 01.6	-0.3
AOI	**Ancona**	**1.03**	**12**	Pg	Pg	00 46 02.5	-0.1
AOI	**Ancona**	**1.03**	**12**	Pg	Pg	00 46 02.5	-0.1
TOLF	**Tolfa**	**1.08**	**244**	Pg	Pb	00 46 02.8	-0.7
	52nm,0.5s						
TOLF	**Tolfa**	**1.08**	**244**	Pg	Pb	00 46 02.8	-0.7
	52nm,0.5s						
CAFI	**Castiglion Fio**	**1.26**	**309**	Pg	Pg	00 46 07.2	+0.2
CAFI	**Castiglion Fio**	**1.26**	**309**	Pg	Pg	00 46 07.2	+0.2

CSEM ***14*** *00:46:39.5,42°.54N×13°.30E,h11km,After ROM*
ROM 14 00:46:39.5±0.1,42°.54N×13°.30E,h11km±1km,MI2.4/6,
Error ellipse: s-maj=1.2km s-min=1.0km az=4.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.08**	**94**	Pg	Pg	00 46 42.6	+0.4
CAMP				Sg	Sg	00 46 44.3	+0.2
CAMP	**Campotosto**	**0.08**	**94**	Pg	Pg	00 46 42.6	+0.4
CAMP				Sg	Sg	00 46 44.3	+0.2
LNSS	**Leonessa**	**0.20**	**288**	Pg	Pg	00 46 44.5	+0.6
LNSS				Sg	Sg	00 46 47.8	+0.8
LNSS	**Leonessa**	**0.20**	**288**	Pg	Pg	00 46 44.5	+0.6
LNSS				Sg	Sg	00 46 47.8	+0.8
AQU	**L'Aquila**	**0.20**	**158**	Pg	Pg	00 46 44.6	+0.7
AQU				Sg	Sg	00 46 47.9	+1.0
AQU	**L'Aquila**	**0.20**	**158**	Pg	Pg	00 46 44.6	+0.7
AQU				Sg	Sg	00 46 47.9	+1.0
TERO	**Teramo**	**0.24**	**70**	Pg	Pg	00 46 44.9	+0.3
TERO				Sg	Sg	00 46 48.5	+0.5
TERO	**Teramo**	**0.24**	**70**	Pg	Pg	00 46 44.9	+0.3
TERO				Sg	Sg	00 46 48.5	+0.5
FIAM	**Fiamignano**	**0.30**	**206**	Pg	Pg	00 46 46.1	+0.3
FIAM				Sg	Sg	00 46 51.0	+1.0
FIAM	**Fiamignano**	**0.30**	**206**	Pg	Pg	00 46 46.1	+0.3
FIAM				Sg	Sg	00 46 51.0	+1.0
NRCA	**Norcia**	**0.32**	**335**	Pg	Pg	00 46 46.3	+0.2
NRCA				Sg	Sg	00 46 51.3	+0.8
	665nm,0.1s						
NRCA	**Norcia**	**0.32**	**335**	Pg	Pg	00 46 46.3	+0.2
NRCA				Sg	Sg	00 46 51.3	+0.8
	665nm,0.1s						
VCEL	**Villa Celiera**	**0.43**	**110**	Pg	Pb	00 46 48.8	-0.5
VCEL				Sg	Sg	00 46 54.8	+0.9
	825nm,0.4s						
VCEL	**Villa Celiera**	**0.43**	**110**	Pg	Pb	00 46 48.8	-0.5
VCEL				Sg	Sg	00 46 54.8	+0.9
	825nm,0.4s						
MNS	**Montasola**	**0.48**	**251**	Pg	Pg	00 46 49.2	+0.2
MNS				Sg	Sb	00 46 56.6	-0.6
	261nm,0.6s						
MNS	**Montasola**	**0.48**	**251**	Pg	Pg	00 46 49.2	+0.2
MNS				Sg	Sb	00 46 56.6	-0.6
	261nm,0.6s						
OFFI	**Offida**	**0.49**	**36**	Pg	Pb	00 46 50.0	-0.1
OFFI	**Offida**	**0.49**	**36**	Pg	Pb	00 46 50.0	-0.1
CESX	**Cesi**	**0.53**	**278**	Pg	Pg	00 46 49.8	-0.2
CESX				Sg	Sg	00 46 57.7	+0.6
	108nm,0.5s						
CESX	**Cesi**	**0.53**	**278**	Pg	Pg	00 46 49.8	-0.2
CESX				Sg	Sg	00 46 57.7	+0.6
	108nm,0.5s						
CESI	**CESI - Serrava**	**0.55**	**328**	Pg	Pb	00 46 51.0	-0.2
CESI				Sg	Sb	00 46 58.8	-0.4
	35nm,0.4s						
CESI	**CESI - Serrava**	**0.55**	**328**	Pg	Pb	00 46 51.0	-0.2
CESI				Sg	Sb	00 46 58.8	-0.4
	35nm,0.4s						
CERT	**Cerreto**	**0.64**	**202**	Pg	Pg	00 46 51.7	-0.3
CERT	**Cerreto**	**0.64**	**202**	Pg	Pg	00 46 51.7	-0.3
MTCE	**Montecelio**	**0.66**	**219**	Pg	Pg	00 46 52.1	-0.3
MTCE	**Montecelio**	**0.66**	**219**	Pg	Pg	00 46 52.1	-0.3
LPEL	**Lama dei Pelig**	**0.82**	**127**	Pg	Pg	00 46 54.6	-0.9
LPEL				Sg	Sb	00 47 06.9	-0.2
	117nm,0.2s						
LPEL	**Lama dei Pelig**	**0.82**	**127**	Pg	Pg	00 46 54.6	-0.9
LPEL				Sg	Sb	00 47 06.9	-0.2
	117nm,0.2s						

KRSC 14 01:39:36.5±0.0,51°.90N×159°.27E,h30km±19km,ML3.7,
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.71**	**319**	P	Pb	01 39 50.2	-0.2
RUS				*i* S	Sn	01 40 00.1	-0.2
MTVR	**Mutnovka**	**0.89**	**312**	*e*P	Pn	01 39 53.3	+0.2
MTVR				*i* S	Sb	01 40 05.6	+0.4
GRL	**Gorelyy**	**0.98**	**312**	P	Pb	01 39 55.2	0.0
GRL				*i* S	Sb	01 40 09.0	+1.1
PET	**Petropavlovsk**	**1.19**	**342**	*e*P	Pn	01 39 56.7	-0.3
PET				*i* S	Sn	01 40 11.9	-0.2
SPN	**Mys Shipunski**	**1.28**	**21**	*e*P	Pn	01 39 58.8	+0.4
SPN				*i* S	Sn	01 40 15.3	+0.7
UGLR	**Uglovaya**	**1.34**	**348**	P	Pn	01 39 59.5	+0.2
UGLR				*i* S	Sn	01 40 16.2	0.0
SMAR	**Somma**	**1.40**	**348**	P	Pb	01 40 01.7	-0.5
AVH	**Avacha**	**1.41**	**347**	P	Pb	01 40 01.2	-1.0
AVH				*i* S	Sb	01 40 19.4	-0.4
KRER	**Koryakskii**	**1.44**	**347**	*e*P	Pb	01 40 03.0	0.0
KRER				*i* S	Sb	01 40 21.9	+0.7
KOK	**Koryaka**	**1.45**	**345**	*e*P	Pb	01 40 02.5	-0.4
KOK				*i* S	Sb	01 40 20.9	-0.2
PAU	**Pauzhetka**	**1.59**	**255**	*e*P	Pn	01 40 02.6	0.0
PAU				*i* S	Sn	01 40 21.4	-0.7
MIPR	**Malaya Ipel'ka**	**1.59**	**285**	*e*P	Pn	01 40 03.9	+1.2
MIPR				*i* S	Sb	01 40 23.9	-1.2
APC	**Apacha**	**1.65**	**309**	*e*P	Pb	01 40 05.3	-0.9
APC				*i* S	Sb	01 40 24.0	0.0
GNL	**Ganaly**	**1.97**	**336**	P	Pn	01 40 09.2	+1.2
GNL				*i* S	Sn	01 40 33.9	+2.1
SKR	**Severo-Kuril's**	**2.33**	**240**	*e*P	Pn	01 40 12.7	+0.1
SKR				*i* S	Sn	01 40 39.4	-0.8
MKZ	**Mys Kozlova**	**3.04**	**28**	*e*P	Pn	01 40 23.1	+0.6
MKZ				*i* S	Sn	01 40 55.6	-2.3
KMNR	**Kamenistaya**	**3.91**	**8**	*e*P	Pn	01 40 38.3	+3.8

CSEM ***14*** *01:42:03.6,42°.52N×13°.34E,h10km,MD1.8/9,After ROM*
ROM 14 01:42:03.6±0.1,42°.52N×13°.34E,h10km,Md1.8/9,MI1.6/6,
Error ellipse: s-maj=1.3km s-min=1.0km az=13.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.05**	**69**	Pg	Pg	01 42 06.3	+0.5
CAMP				Sg	Sg	01 42 07.7	+0.4
	209nm,0.3s						
CAMP	**Campotosto**	**0.05**	**69**	Pg	Pg	01 42 06.3	+0.5
CAMP				Sg	Sg	01 42 07.7	+0.4
	209nm,0.3s						
AQU	**L'Aquila**	**0.17**	**165**	Pg	Pg	01 42 08.3	+1.0
AQU				Sg	Sg	01 42 10.8	+0.9
	91nm,0.3s						
AQU	**L'Aquila**	**0.17**	**165**	Pg	Pg	01 42 08.3	+1.0
AQU				Sg	Sg	01 42 10.8	+0.9
	91nm,0.3s						
TERO	**Teramo**	**0.22**	**61**	Pg	Pg	01 42 08.6	+0.4
TERO				Sg	Sg	01 42 12.1	+0.7
	72nm,0.2s						
TERO	**Teramo**	**0.22**	**61**	Pg	Pg	01 42 08.6	+0.4
TERO				Sg	Sg	01 42 12.1	+0.7
	72nm,0.2s						
LNSS	**Leonessa**	**0.24**	**291**	Pg	Pg	01 42 09.3	+0.6
LNSS				Sg	Sg	01 42 13.3	+1.2
	121nm,0.3s						
LNSS	**Leonessa**	**0.24**	**291**	Pg	Pg	01 42 09.3	+0.6
LNSS				Sg	Sg	01 42 13.3	+1.2
	121nm,0.3s						
NRCA	**Norcia**	**0.36**	**332**	Pg	Pg	01 42 11.3	+0.4
NRCA				Sg	Sb	01 42 17.0	-1.1
	154nm,0.1s						
NRCA	**Norcia**	**0.36**	**332**	Pg	Pg	01 42 11.3	+0.4
NRCA				Sg	Sb	01 42 17.0	-1.1
	154nm,0.1s						
VCEL	**Villa Celiera**	**0.39**	**108**	Pg	Pb	01 42 12.2	-0.6
VCEL				Sg	Sb	01 42 18.0	-1.0
VCEL	**Villa Celiera**	**0.39**	**108**	Pg	Pb	01 42 12.2	-0.6
VCEL				Sg	Sb	01 42 18.0	-1.0
MNS	**Montasola**	**0.51**	**255**	Pg	Pg	01 42 13.6	0.0
MNS				Sg	Sb	01 42 21.3	-1.0
	17nm,0.6s						
MNS	**Montasola**	**0.51**	**255**	Pg	Pg	01 42 13.6	0.0
MNS				Sg	Sb	01 42 21.3	-1.0
	17nm,0.6s						
FDMO	**Fiordimonte**	**0.55**	**340**	Pg	Pg	01 42 14.6	+0.2
FDMO				Sg	Sb	01 42 23.3	-0.3
FDMO	**Fiordimonte**	**0.55**	**340**	Pg	Pg	01 42 14.6	+0.2
FDMO				Sg	Sb	01 42 23.3	-0.3
CESI	**CESI - Serrava**	**0.58**	**327**	Pg	Pg	01 42 15.2	+0.1
CESI				Sg	Sb	01 42 24.3	-0.3
CESI	**CESI - Serrava**	**0.58**	**327**	Pg	Pg	01 42 15.2	+0.1
CESI				Sg	Sb	01 42 24.3	-0.3

CSEM ***14*** *01:42:40.2,42°.50N×13°.39E,h9km,MD1.9/10,After ROM*
ROM 14 01:42:40.2±0.1,42°.50N×13°.39E,h9km,Md1.9/10,MI1.9/4,
Error ellipse: s-maj=1.4km s-min=1.0km az=69.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.04**	**24**	Pg	Pg	01 42 42.7	+0.5
CAMP				Sg	Sg	01 42 43.8	+0.2
CAMP	**Campotosto**	**0.04**	**24**	Pg	Pg	01 42 42.7	+0.5
CAMP				Sg	Sg	01 42 43.8	+0.2
AQU	**L'Aquila**	**0.15**	**176**	Pg	Pg	01 42 44.2	+0.6
AQU				Sg	Sg	01 42 46.8	+0.9
	256nm,0.2s						
AQU	**L'Aquila**	**0.15**	**176**	Pg	Pg	01 42 44.2	+0.6
AQU				Sg	Sg	01 42 46.8	+0.9
	256nm,0.2s						
TERO	**Teramo**	**0.20**	**53**	Pg	Pg	01 42 45.0	+0.6
TERO				Sg	Sg	01 42 48.2	+0.9
	122nm,0.3s						
TERO	**Teramo**	**0.20**	**53**	Pg	Pg	01 42 45.0	+0.6
TERO				Sg	Sg	01 42 48.2	+0.9
	122nm,0.3s						
LNSS	**Leonessa**	**0.28**	**291**	Pg	Pg	01 42 46.4	+0.5
LNSS				Sg	Sb	01 42 51.3	-1.1
	106nm,0.1s						
LNSS	**Leonessa**	**0.28**	**291**	Pg	Pg	01 42 46.4	+0.5
LNSS				Sg	Sb	01 42 51.3	-1.1
	106nm,0.1s						
FAGN	**Fagnano**	**0.28**	**149**	Pg	Pg	01 42 46.3	+0.4
FAGN				Sg	Sg	01 42 50.9	+1.2
	245nm,0.3s						
FAGN	**Fagnano**	**0.28**	**149**	Pg	Pg	01 42 46.3	+0.4
FAGN				Sg	Sg	01 42 50.9	+1.2
	245nm,0.3s						
VCEL	**Villa Celiera**	**0.35**	**108**	Pg	Pb	01 42 48.4	-0.4
VCEL				Sg	Sb	01 42 53.7	-0.9
VCEL	**Villa Celiera**	**0.35**	**108**	Pg	Pb	01 42 48.4	-0.4
VCEL				Sg	Sb	01 42 53.7	-0.9
NRCA	**Norcia**	**0.39**	**329**	Pg	Pg	01 42 48.4	+0.4
NRCA				Sg	Sb	01 42 54.6	-1.0
NRCA	**Norcia**	**0.39**	**329**	Pg	Pg	01 42 48.4	+0.4
NRCA				Sg	Sb	01 42 54.6	-1.0
PTQR	**Pietraquaria**	**0.48**	**179**	Pg	Pb	01 42 50.4	-0.6
PTQR				Sg	Sb	01 42 58.3	+0.1
	6.0nm,0.6s						
PTQR	**Pietraquaria**	**0.48**	**179**	Pg	Pb	01 42 50.4	-0.6
PTQR				Sg	Sb	01 42 58.3	+0.1
	6.0nm,0.6s						
MNS	**Montasola**	**0.54**	**258**	Pg	Pg	01 42 50.8	+0.1
MNS				Sg	Sg	01 42 58.7	+0.9
MNS	**Montasola**	**0.54**	**258**	Pg	Pg	01 42 50.8	+0.1
MNS				Sg	Sg	01 42 58.7	+0.9
FDMO	**Fiordimonte**	**0.58**	**337**	Pg	Pg	01 42 51.6	+0.1
FDMO				Sg	Sb	01 43 00.5	-0.4
FDMO	**Fiordimonte**	**0.58**	**337**	Pg	Pg	01 42 51.6	+0.1
FDMO				Sg	Sb	01 43 00.5	-0.4
CESI	**CESI - Serrava**	**0.62**	**325**	Pg	Pg	01 42 52.4	+0.1
CESI				Sg	Sb	01 43 02.0	-0.1
CESI	**CESI - Serrava**	**0.62**	**325**	Pg	Pg	01 42 52.4	+0.1
CESI				Sg	Sb	01 43 02.0	-0.1

MAN 14 01:47:19,8°.99N×123°.05E,h20km,mb4.0,ML2.8,MS2.5,
Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**1.18**	**164**	*e*P	Pn	01 47 40.3	-0.1
PAGZ				*e*S	Sn	01 47 56.7	+0.7
IPIL	**Ipil**	**1.29**	**202**	*e*P	Pn	01 47 41.8	0.0
IPIL				*e*S	Sn	01 47 55.0	-3.5
GUIM	**Jordan**	**1.69**	**344**	*e*P	Pn	01 47 47.4	+0.1
GUIM				*e*S	Sb	01 48 11.7	+1.5

ISCJB ***14*** *01:48:34.2±0.3,0°.37S±0°.05×19°.70W±0°.07,h10km,*
mb4.5/69,MS3.8/10,Error ellipse: s-maj=10.1km
s-min=6.9km az=28.8
BJI ***14*** *01:48:34.0,0°.75S×19°.44W,h6km,mB5.5/2,mb5.0/1,*
Ms5.0/1,Ms7.4/9/2
IDC ***14*** *01:48:34.3±0.5,0°.35S×19°.68W,h0km,mb4.2/21,*
mb1 4.4/23,mb1mx4.2/34,mbtmp4.2/23,ML4.7/2,MS3.7/10,
Ms1 3.7/10,ms1mx3.2/42,Error ellipse: s-maj=16.6km
s-min=12.6km az=131.0
NEIC ***14*** *01:48:35.7±0.2,0°.43S×19°.73W,h10km,mb4.8/33,Error*
ellipse: s-maj=7.8km s-min=5.3km az=123.0
SZGRF ***14*** *01:48:37.7,0°.94S×18°.42W,h33km,mb4.5,Central*
Mid-Atlantic Ridge
ISC 14 01:48:35.7±0.4,0°.35S±0°.08×19°.71W±0°.08,h10km,n183,
σ1§10/182,mb4.6/69,MS3.8/10,7C,Central Mid-Atlantic
Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBTS	**Babate**	**15.24**	**12**	Pn	**Pn**	**01 52 10.0**	**-1.1**
BBTS				Sn	Sn	01 54 45.5	-15
BBTS	**Babate**	**15.24**	**12**	Pn	**Pn**	**01 52 10.0**	**-1.1**
	3.8nm,0.3s,baz=350,slow=7.1,SNR=25						
BBTS				Sn	Sn	01 54 45.5	-15
	1.6nm,0.3s,baz=302,slow=20,SNR=5.9						
BBTS				LR	LR	01 56 47.2	
	comp=Z,184nm,18.2s,baz=249,slow=32						
LIC	**Lamto**	**16.04**	**66**	*e*P	**P**	**01 52 25.1**	**0.0**
	25nm,0.9s						
LIC	**Lamto**	**16.04**	**66**	*e*P	**P**	**01 52 25.1**	**0.0**
	25nm,0.9s						
DBIC	**Dimbokro**	**16.38**	**65**	*e*Pn	**Pn**	**01 52 24.8**	**-1.1**
DBIC				Sn	Sn	01 55 13.1	-15
DBIC				*e*S	S	01 55 13.3	-27
DBIC	**Dimbokro**	**16.38**	**65**	Pn	**Pn**	**01 52 24.9**	**-1.1**
	2.9nm,0.3s,baz=243,slow=14,SNR=29						
DBIC				Sn	Sn	01 55 13.1	-15
	0.8nm,0.3s,baz=144,slow=10.0,SNR=9.0						
RCBR	**Riachuelo**	**17.05**	**251**	*e*Pn	**Pn**	**01 52 31.9**	**-2.6**
RCBR				S	Sn	01 55 26.8	-18
RCBR	**Riachuelo**	**17.05**	**251**	P	**Pn**	**01 52 32.1**	**-2.4**
	1.0nm,0.3s,baz=78,slow=13,SNR=11						
RCBR				S	Sn	01 55 26.8	-18
	0.3nm,0.3s,baz=138,slow=16,SNR=3.8						
TOA0	**Torodi Ar. Sit**	**25.10**	**57**	*e*P	**P**	**01 54 00.1**	**-0.8**
TORD	**Torodi Ar. Bea**	**25.10**	**57**	P	**P**	**01 54 00.5**	**-0.5**
TORD				S	S	01 58 39.8	+14
	5.5nm,0.7s,baz=237,slow=9.2,SNR=27						
TORD				S	S	01 58 39.8	+14
	0.6nm,0.6s,baz=237,slow=23,SNR=2.8						
BDFB	**Brasilia**	**31.80**	**240**	P	**P**	**01 55 00.9**	**0.0**
BDFB	**Brasilia**	**31.80**	**240**	P	**P**	**01 55 00.9**	**0.0**
	0.9nm,0.5s,baz=67,slow=7.7,SNR=2.2						
TAM	**Tamanrasset**	**33.65**	**45**	*e*P	**P**	**01 55 17.9**	**+0.8**
	7.2nm,1.0s						
TAM				*e*PcP	**PcP**	**01 57 58.5**	**+1.3**
EVOP	**Sao Brissos**	**40.13**	**14**	*e*P	**P**	**01 56 13.6**	**+1.8**
EVO	**Evora**	**40.16**	**14**	*e*P	**P**	**01 56 13.6**	**+1.5**
EVO				*e*R			
	111nm,18.0s						
TSUM	**Tsumeb**	**41.08**	**119**	*e*P	**P**	**01 56 20.6**	**+0.5**
	1.7nm,0.8s						
TSUM	**Tsumeb**	**41.08**	**119**	P	**P**	**01 56 20.9**	**+0.8**
	1.4nm,0.7s,baz=324,slow=12,SNR=5.6						
ESDC	**Sonseca Array**	**42.36**	**18**	P	**P**	**01 56 30.6**	**+0.4**
ESDC	**Sonseca Array**	**42.36**	**18**	P	**P**	**01 56 30.6**	**+0.4**
	1.2nm,0.7s,baz=202,slow=8.7,SNR=12						
SIV	**San Ignacio**	**43.66**	**247**	P	**P**	**01 56 41.6**	**+0.5**
SIV	**San Ignacio**	**43.66**	**247**	P	**P**	**01 56 41.6**	**+0.5**
	1.2nm,0.6s,baz=100,slow=9.3,SNR=9.7						
CPUP	**Villa Florida**	**44.48**	**231**	P	**P**	**01 56 47.9**	**+

5.0nm,1.0s,baz=284,slow=13,SNR=10
LPAZ La Paz 50.28 249 P P 01 57 33.2 -0.3
LPAZ La Paz 50.28 249 P P 01 57 33.2 -0.3
1.8nm,0.7s,baz=67,slow=4.9,SNR=9.3
TCF Toulx Ste Croi 50.28 20 eP P 01 57 33.5 +1.1
TCF Toulx Ste Croi 50.28 20 eP P 01 57 33.5 +1.1
ORIF Oris-en-Rattie 50.47 23 eP P 01 57 35.6 +1.7
40nm,1.6s
ORIF eR
91nm,19.5s
ORIF Orris-en-Rattie 50.47 23 eP P 01 57 35.6 +1.7
40nm,1.6s
MBDF Montbardon 50.67 24 eP P 01 57 37.1 +1.6
12nm,1.0s
MBDF Montbardon 50.67 24 eP P 01 57 37.1 +1.6
12nm,1.0s
AVF Avril sur Loir 51.11 20 eP P 01 57 39.8 +1.2
7.6nm,1.0s
AVF Avril sur Loir 51.11 20 eP P 01 57 39.8 +1.2
7.6nm,1.0s
GRR Gorron 51.22 16 eP P 01 57 40.3 +0.9
43nm,1.2s
GRR Gorron 51.22 16 eP P 01 57 40.3 +0.9
43nm,1.2s
LPG La Plagne 51.29 24 eP P 01 57 42.0 +1.6
9.4nm,0.9s
LPG La Plagne 51.29 24 eP P 01 57 42.0 +1.6
9.4nm,0.9s
LPL La Plagne 51.30 24 eP P 01 57 41.9 +1.6
9.3nm,1.0s
LPL La Plagne 51.30 24 eP P 01 57 41.9 +1.6
9.3nm,1.0s
BOSA Boshof 51.32 127 eP P 01 57 39.8 -0.9
6.9nm,0.8s
BOSA Boshof 51.32 127 P P 01 57 40.1 -0.5
7.4nm,0.8s,baz=292,slow=8.1,SNR=16
BOSA LR LR 02 14 30.1
comp=Z,92nm,18.8s,baz=340,slow=30
SSF Saint Saulge 51.40 20 eP P 01 57 42.0 +1.2
19nm,1.2s
SSF Saint Saulge 51.40 20 eP P 01 57 42.0 +1.2
19nm,1.2s
LDF La Druitiere 51.61 16 eP P 01 57 43.1 +0.8
LDF La Druitiere 51.61 16 eP P 01 57 43.1 +0.8
FLN La Foliniere 51.67 16 eP P 01 57 43.4 +0.7
FLN eR
124nm,21.0s
FLN La Foliniere 51.67 16 eP P 01 57 43.4 +0.7
LOR Lormes 51.70 20 eP P 01 57 44.0 +1.0
29nm,1.4s
LOR eR
114nm,17.0s
LOR Lormes 51.70 20 eP P 01 57 44.0 +1.0
29nm,1.4s
CABF La Chapelle 51.95 22 eP P 01 57 45.6 +0.6
CABF La Chapelle 51.95 22 eP P 01 57 45.6 +0.6
SFTF Sexfontaines 52.91 21 eP P 01 57 52.9 +0.9
SFTF Sexfontaines 52.91 21 eP P 01 57 52.9 +0.9
MEZF Maizieres J'vi 53.17 20 eP P 01 57 54.9 +1.0
7.4nm,0.5s
MEZF Maizieres J'vi 53.17 20 eP P 01 57 54.9 +1.0
7.4nm,0.5s
HAU Haudompre 53.22 22 eP P 01 57 54.9 +0.6
14nm,0.9s
HAU eR
40nm,21.0s
HAU Haudompre 53.22 22 eP P 01 57 54.9 +0.6
14nm,0.9s
PAGF Fort de Pagny 53.45 21 eP P 01 57 56.9 +0.9
PAGF Fort de Pagny 53.45 21 eP P 01 57 56.9 +0.9
CDF Champ du Feu 53.90 22 eP P 01 57 59.7 +0.3
6.4nm,0.9s
CDF Champ du Feu 53.90 22 eP P 01 57 59.7 +0.3
6.4nm,0.9s
DAVA Damuels 54.02 25⇑ iP P 01 58 00.5 +0.2
12nm,0.6s
DAVA Damuels 54.02 25⇑ iP P 01 58 00.6 +0.2
12nm,0.6s
FETA Feichten 54.16 25⇑ iP P 01 58 01.1 -0.3
5.7nm,0.8s
FETA Feichten 54.16 25⇑ iP P 01 58 01.1 -0.3
5.7nm,0.8s
BAIF Baives 54.23 19 eP P 01 58 02.0 +0.4
18nm,1.1s
BAIF Baives 54.23 19 eP P 01 58 02.0 +0.4
18nm,1.1s
BFO Black Forest 54.23 23 eP P 01 58 02.6 +0.9
comp=Z,3.0nm,0.8s
BFO Black Forest 54.23 23 eP P 01 58 02.1 +0.4
comp=Z,3.1nm,0.8s
GIVF Givet 54.47 19 eP P 01 58 04.6 +1.2
GIVF Givet 54.47 19 eP P 01 58 04.6 +1.2
WLF Walferdange 54.54 20 eP P 01 58 04.4 +0.5
comp=Z,11nm,1.3s
WTTA Wattenberg 54.74 26⇑ iP P 01 58 06.4 +0.7
WTTA Wattenberg 54.74 26⇑ iP P 01 58 06.4 +0.7
FUR Furstenfeldbru 55.29 25 eP P 01 58 10.1 +0.7
comp=Z,8.0nm,0.9s
RJOB Jochberg 55.61 26 eP P 01 58 11.6 -0.2
comp=Z,6.0nm,0.8s
TNS Taunus Mts 55.83 21 eP P 01 58 14.2 +0.9
comp=Z,3.0nm,0.7s
BUG Bochum--Univer 56.42 20 eP P 01 58 18.7 +1.3
comp=Z,4.0nm,0.8s
GRF Grafenberg Arr 56.46 24 eP P 01 58 18.0 +0.2
comp=Z,4.0nm,0.9s
WET Wettzell 56.72 25 eP P 01 58 20.2 +0.6
comp=Z,5.0nm,0.8s
GEC2 GERESS Array S 56.85 26 eP P 01 58 21.1 +0.5
comp=Z,3.0nm,0.8s
GEC2 GERESS Array S 56.85 26 eP P 01 58 21.1 +0.5
GERES GERESS Array B 56.85 26 P P 01 58 20.8 +0.1
GERES GERESS Array B 56.85 26 P P 01 58 20.8 +0.1
comp=Z,1.8nm,0.7s,baz=213,slow=6.4,SNR=22
ROTZ Rotzenmuhle 56.92 24 eP P 01 58 21.2 +0.2
comp=Z,2.0nm,1.0s
KMBO Kilima Mbogo 56.96 91 LR LR 02 19 32.4
comp=Z,42nm,20.2s,baz=106,slow=33
KHC Kasperske Hory 57.01 25 eP P 01 58 21.8 +0.1
IBBN Ibbenburen 57.31 20 eP P 01 58 25.0 +1.3
comp=Z,4.0nm,0.9s
MOX Moxa 57.37 23 eP P 01 58 25.2 +1.0
comp=Z,3.0nm,0.9s
NKC Novy Kostel 57.38 24 eP P 01 58 25.6 +1.3
TANN Tannenbergstha 57.53 24 eP P 01 58 26.1 +0.7
comp=Z,3.0nm,0.8s
NEUB Neuenburg 57.88 23 eP P 01 58 29.1 +1.4
comp=Z,5.0nm,0.7s
TREC Trest 57.97 26 eP P 01 58 28.5 +0.1
PRU Pruhonice 58.07 25 eP P 01 58 29.8 +0.7
NRDL Niedersach Rie 58.28 21 eP P 01 58 32.1 +1.6
comp=Z,3.0nm,1.0s
VRAC Vranov 58.47 27 LR LR 02 26 34.4
comp=Z,41nm,18.6s,baz=96,slow=39
BRG Berggiesshubel 58.48 24 eP P 01 58 32.2 +0.2
comp=Z,3.1nm,1.2s
BRG Berggiesshubel 58.48 24 eP P 01 58 32.5 +0.5
comp=Z,2.0nm,0.7s
PVCC Panska Ves 58.48 25 eP P 01 58 32.4 +0.4
VYHS Vyhne 58.95 29 eP P 01 58 35.7 +0.4
UPC Upice 59.09 26 eP P 01 58 36.7 +0.5
DPC Dobruska-Polom 59.11 26 eP P 01 58 37.0 +0.6
comp=Z,46nm,2.2s
DPC Dobruska-Polom 59.11 26 eP P 01 58 36.9 +0.5
KRLC Kraliky 59.11 27 eP P 01 58 37.2 +0.8
MORC Moravsky Berou 59.24 27 eP P 01 58 37.4 +0.1
comp=Z,4.0nm,0.9s
BSEG Bad Segeberg 59.53 20 eP P 01 58 40.2 +1.0
comp=Z,17nm,0.8s
OKC Ostrava-Krasne 59.56 27 eP P 01 58 40.2 +0.7
CRVS Cervenica-Dubn 60.52 30 eP P 01 58 46.5 +0.4
OJC Ojcow 60.59 28 eP P 01 58 47.4 +0.8
KOLS Kolonicke sedl 60.95 30 eP P 01 58 50.4 +1.4
BRTR Keskin Array B 62.84 44 P P 01 59 02.4 +0.2
BRTR Keskin Array B 62.84 44 P P 01 59 02.4 +0.2
comp=Z,2.8nm,1.0s,baz=246,slow=5.3,SNR=7.5
KIEV Kiev 65.59 32 eP P 01 59 19.2 -0.5
comp=Z,6.8nm,0.8s
AKASG Malin Array Be 65.60 32 P P 01 59 19.4 -0.4
AKASG Malin Array Be 65.60 32 P P 01 59 19.4 -0.4
comp=Z,3.6nm,0.8s,baz=235,slow=7.2,SNR=10
HFS Hagfors 65.63 18 LR LR 02 26 14.8
comp=Z,70nm,18.6s,baz=346,slow=34
NB2 NORSAR Subarra 65.66 16 P P 01 59 20.3 +0.3
comp=Z,1.1nm,0.7s,baz=209,slow=6.9
NOA NORSAR Array B 65.66 16 P P 01 59 20.3 +0.3
comp=Z,1.7nm,0.7s,baz=212,slow=6.6,SNR=9.7
NOA LR LR 02 29 35.7
comp=Z,22nm,18.5s,baz=180,slow=38
MALT Malatya 65.70 47 eP P 01 59 21.5 +0.6
comp=Z,8.0nm,1.0s
SCHQ Schefferville 67.12 333 LR LR 02 21 52.5
comp=Z,76nm,19.6s,baz=71,slow=30
AKH Akhalkalaki 70.42 45 P P 01 59 47.1 -3.5
FINES FINESS Array B 70.75 21 P P 01 59 52.3 +0.5
FINES FINESS Array B 70.75 21 P P 01 59 52.3 +0.5
comp=Z,4.2nm,0.8s,baz=236,slow=2.1,SNR=15
KBZ Khabaz 70.77 43 P P 01 59 53.2 +0.8
KBZ Khabaz 70.77 43 P P 01 59 53.2 +0.8
comp=Z,8.2nm,0.9s,baz=249,slow=5.9,SNR=19
ONI Oni 70.77 44 P P 01 59 52.4 -0.2
KAF Kangasniemi 71.26 21 ep P 01 59 54.8 -0.2
comp=Z,1.6nm,0.7s
TBLG Delisi 71.41 45 P P 01 59 58.9 +2.5
DGRG David-gareji 71.78 46 P P 02 00 00.1 +1.4
DGRG David-gareji 71.78 46 P P 02 00 00.1 +1.5
SNAA Sanae 72.03 174 P P 02 00 00.1 +0.5
SNAA Sanae 72.03 174 P P 02 00 00.1 +0.5
comp=Z,0.9nm,1.0s,baz=320,slow=12,SNR=5.1
JOF Joensuu 73.59 22 ep P 02 00 08.4 -0.5
comp=Z,3.7nm,0.7s
ARCES ARCESS Array B 75.99 15 P P 02 00 22.3 -0.4
ARCES ARCESS Array B 75.99 15 P P 02 00 22.3 -0.4
comp=Z,4.3nm,1.0s,baz=250,slow=2.5,SNR=5.5
ARCES LR LR 02 36 55.6
comp=Z,52nm,20.1s,baz=26,slow=38
ABKAR Akbulak array 83.50 40 eP P 02 01 04.1 +0.2
TXAR Lajitas Array 84.89 299 P P 02 01 12.2 +0.7
TXAR Lajitas Array 84.89 299 P P 02 01 12.2 +0.7
comp=Z,0.8nm,0.8s,baz=116,slow=6.2,SNR=13
TXAR LR LR 02 38 34.0
comp=Z,33nm,20.4s,baz=60,slow=35
QSPA South Pole Qui 89.72 180 P P 02 01 34.9 +0.8
QSPA South Pole Qui 89.72 180 P P 02 01 34.9 +0.8
comp=Z,2.4nm,0.7s,baz=198,slow=6.4,SNR=13
PDAR Pinedale Array 90.12 313 LR LR 02 35 33.3
comp=Z,47nm,21.0s,baz=244,slow=31
YKA Yellowknife Ar 92.58 332 P P 02 01 47.0 -0.2
YKA Yellowknife Ar 92.58 332 P P 02 01 47.0 -0.2
comp=Z,1.0nm,0.9s,baz=90,slow=5.0,SNR=12
AAK Ala-Archa 93.33 47 eP P 02 01 52.6 +1.1
comp=Z,7.6nm,1.6s
KSH Kashi 94.61 51⇑ iP P 02 01 57.4 0.0
KSH pP **pP 02 02 02.3 +1.6**
KSH sP **sP 02 02 04.1 +2.2**
KSH PP **PP 02 05 47.3 +1.9**
KSH SKS **SKSac 02 12 31.4 -1.9**
KSH S **S 02 13 06.4 -4.4**
KSH sS **sS 02 13 14.3 -2.1**
KSH SS **SS 02 19 32.4 -1.4**
KSH pmax pmax
comp=Z,6.0nm,1.0s
KSH pmax pmax
comp=Z,79nm,4.6s
KSH LR LR
comp=Z,280nm,6.4s
WMQ Urumqi 102.75 45 P Pdif 02 02 34.9 +1.2
LZH Lanzhou 116.82 49 ePKP PKPdf 02 07 19.3 -2.0
HHC Hu-ho-hao-te 120.29 41 ePKP PKPdf 02 07 23.1 -4.7
HHC PP **PP 02 08 51.8 -1.3**
HHC PKS PKSdf 02 10 58.0 -6.5
HHC LR LR
comp=N,130nm,20.2s
HHC LR LR
comp=E,130nm,20.4s
HHC LR LR
comp=Z,110nm,20.6s
CN2 Changchun 126.76 31 ePKP PKPdf 02 07 40.8 +0.9
STKA Stephens Creek 143.39 153 PKP PKPbc 02 08 09.1 +0.9
STKA Stephens Creek 143.39 153 PKP PKPbc 02 08 09.1 +0.9
comp=Z,1.3nm,0.7s,baz=299,slow=4.7,SNR=4.8
ASAR Alice Springs 144.98 135 PKP PKPbc 02 08 13.5 0.0
ASAR Alice Springs 144.98 135 PKP PKPbc 02 08 13.5 0.0
comp=Z,14nm,0.8s,baz=221,slow=2.9,SNR=115
AS31 Alice Springs 144.98 135 ePKPdf PKPab 02 08 12.9 -0.6

CSEM ***14*** *01:56:54.5±0.1, 40.35°N×28.24°E, h8km, MD3.2*
DDA ***14*** *01:56:54.2, 40.33°N×28.23°E, h14km, MD3.3*
ISK 14 01:56:54.0, 40.35°N×28.25°E, h8km, MD3.2, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KCTX	**Karacabey (Bur**	**0.12**	**134**	PG	Pg	01 56 57.5	+0.8
KCTX				SG	Sg	01 56 59.5	+1.0
KCTX	**Karacabey (Bur**	**0.12**	**134**	*i* Pg	Pg	01 56 57.5	+0.8
KCTX				*i* Sg	Sg	01 56 59.5	+1.0
BNT	**Bandirma**	**0.25**	**272**	PG	Pg	01 56 59.7	+0.7
BNT				SG	Sb	01 57 04.9	-0.5
BNT	**Bandirma**	**0.25**	**272**	*i* Pg	Pg	01 56 59.7	+0.7
BNT				*i* Sg	Sb	01 57 04.9	-0.5
MDNY	**Mudanya-Bursa**	**0.49**	**87**	*e*PG	Pb	01 57 04.4	-0.4
MDNY	**Mudanya-Bursa**	**0.49**	**87**	*e*Pg	Pb	01 57 04.4	-0.4
ARMT	**Armutlu**	**0.52**	**65**	*e*PG	Pg	01 57 04.3	+0.2
ARMT				*e*SG	Sb	01 57 12.3	-0.8
ARMT	**Armutlu**	**0.52**	**65**	*e*Pg	Pg	01 57 04.3	+0.2
ARMT				*e*Sg	Sb	01 57 12.3	-0.8
GONE	**Gonen-Balikesi**	**0.52**	**235**	*e*PG	Pg	01 57 04.3	+0.1
GONE	**Gonen-Balikesi**	**0.52**	**235**	*e*Pg	Pg	01 57 04.3	+0.1
ORLT	**Orhaneli**	**0.58**	**121**	*e*PG	Pg	01 57 05.5	+0.2
ORLT	**Orhaneli**	**0.58**	**121**	*e*Pg	Pg	01 57 05.5	+0.2
GEMT	**Gemlik**	**0.72**	**83**	*e*PG	Pb	01 57 08.6	-0.3
GEMT	**Gemlik**	**0.72**	**83**	*e*Pg	Pb	01 57 08.6	-0.3
KRBG	**Karabiga-Canak**	**0.73**	**274**	*e*PG	Pg	01 57 07.7	-0.3
KRBG	**Karabiga-Canak**	**0.73**	**274**	*e*Pg	Pg	01 57 07.7	-0.3
BALB	**Balikesir**	**0.76**	**202**	*e*PG	Pg	01 57 08.8	+0.2
BALB	**Balikesir**	**0.76**	**202**	*e*Pg	Pg	01 57 08.8	+0.2
DURS	**Dursunbey**	**0.77**	**167**	*i* P	Pg	01 57 09.2	+0.3
DURS				*i* S	Sg	01 57 19.5	+0.6
DURS	**Dursunbey**	**0.77**	**167**	*i* P	Pg	01 57 09.2	+0.3
DURS				*i* S	Sg	01 57 19.5	+0.6
BALY	**Balya**	**0.77**	**219**	*i* P	Pg	01 57 09.3	+0.3
BALY				*i* S	Sg	01 57 19.4	+0.2
BALY	**Balya**	**0.77**	**219**	*i* P	Pg	01 57 09.3	+0.3
BALY				*i* S	Sg	01 57 19.4	+0.3
DST	**Dursunbey**	**0.80**	**159**	*e*PG	Pg	01 57 09.6	+0.1
DST	**Dursunbey**	**0.80**	**159**	*e*Pg	Pg	01 57 09.6	+0.2
ELBA	**Catalca**	**0.81**	**10**	*e*P	Pb	01 57 10.3	-0.1
ELBA	**Catalca**	**0.81**	**10**	*e*P	Pb	01 57 10.3	-0.1
BUY	**Buyukada**	**0.83**	**52**	*i* P	Pb	01 57 10.8	+0.1
BUY				*i* S	Sb	01 57 22.4	+0.3
BUY	**Buyukada**	**0.83**	**52**	*i* P	Pb	01 57 10.8	+0.1
BUY				*i* S	Sb	01 57 22.4	+0.3
TKR	**Tekirdag**	**0.84**	**320**	*e*PG	Pb	01 57 11.0	+0.1
TKR	**Tekirdag**	**0.84**	**320**	*e*Pg	Pb	01 57 11.0	+0.1
MFT	**Murefte**	**0.86**	**301**	*e*PG	Pg	01 57 10.4	-0.2
MFT	**Murefte**	**0.86**	**301**	*e*Pg	Pg	01 57 10.4	-0.2
CRLT	**Corlu**	**0.87**	**334**	*e*PG	Pb	01 57 11.7	+0.3
CRLT	**Corlu**	**0.87**	**334**	*e*Pg	Pb	01 57 11.7	+0.3
SART	**Tekirdag**	**0.88**	**293**	*i* P	Pg	01 57 10.8	-0.3
SART				*i* S	Sb	01 57 23.3	-0.4
SART	**Tekirdag**	**0.88**	**293**	*i* P	Pg	01 57 10.8	-0.3
SART				*i* S	Sb	01 57 23.3	-0.4
RKY	**Sarkoy-Tekirda**	**0.88**	**293**	*e*PG	Pg	01 57 11.0	-0.1
RKY	**Sarkoy-Tekirda**	**0.88**	**293**	*e*Pg	Pg	01 57 11.0	-0.1
SLVT	**Silivri**	**0.88**	**358**	*e*PG	Pb	01 57 11.5	-0.1
SLVT	**Silivri**	**0.88**	**358**	*e*Pg	Pb	01 57 11.5	-0.1
YLV	**Yalova**	**0.89**	**75**	*e*PG	Pb	01 57 12.3	+0.5
YLV	**Yalova**	**0.89**	**75**	*e*Pg	Pb	01 57 12.3	+0.5
CTKS	**Kestanelik-??a**	**0.91**	**12**	*e*PG	Pb	01 57 11.8	-0.2
CTKS	**Kestanelik-??a**	**0.91**	**12**	*e*Pg	Pb	01 57 11.8	-0.2
BGKT	**Bogazkoy**	**0.92**	**25**	*e*PG	Pb	01 57 12.1	-0.2
BGKT	**Bogazkoy**	**0.92**	**25**	*e*Pg	Pb	01 57 12.1	-0.2
ISK	**Istanbul-Kandi**	**0.95**	**40**	*e*PG	Pg	01 57 12.3	+0.1
ISK	**Istanbul-Kandi**	**0.95**	**40**	*e*Pg	Pg	01 57 12.3	+0.1
CTYL	**Yal??k??y-??at**	**1.13**	**2**	*e*PN	Pn	01 57 16.2	+0.1
CTYL	**Yal??k??y-??at**	**1.13**	**2**	*e*Pn	Pn	01 57 16.2	+0.1
LPK	**Lapseki**	**1.14**	**272**	*e*PN	Pn	01 57 16.3	+0.1
LPK	**Lapseki**	**1.14**	**272**	*e*Pn	Pn	01 57 16.3	+0.1
HRT	**Hereke**	**1.18**	**66**	*e*PN	Pb	01 57 16.5	-0.2
HRT	**Hereke**	**1.18**	**66**	*e*Pn	Pb	01 57 16.5	-0.3
CAVI	**Cavuskoy**	**1.23**	**96**	*e*PN	Pn	01 57 17.1	-0.5
CAVI	**Cavuskoy**	**1.23**	**96**	*e*Pn	Pn	01 57 17.1	-0.4
TVSB	**Tavsanli**	**1.29**	**133**	*e*PN	Pn	01 57 18.4	-0.1
TVSB	**Tavsanli**	**1.29**	**133**	*e*Pn	Pn	01 57 18.4	-0.1
SILT	**Sile**	**1.33**	**52**	*e*PN	Pg	01 57 19.7	+0.2
SILT	**Sile**	**1.33**	**52**	*e*Pn	Pg	01 57 19.7	+0.1
DEMI	**Demirci**	**1.35**	**164**	*e*P	Pn	01 57 19.3	0.0
DEMI				*i* S	Sg	01 57 37.8	+0.1
DEMI	**Demirci**	**1.35**	**164**	*e*P	Pn	01 57 19.3	0.0
DEMI				*i* S	Sg	01 57 37.8	+0.1
GELI	**Tayfur-Gelibol**	**1.35**	**273**	*e*PN	Pg	01 57 20.0	0.0
GELI	**Tayfur-Gelibol**	**1.35**	**273**	*e*Pn	Pg	01 57 20.0	0.0
AKHS	**Akhisar**	**1.50**	**193**	*i* P	Pn	01 57 21.5	+0.2
AKHS				*i* S	Sg	01 57 43.3	+0.9
AKHS	**Akhisar**	**1.50**	**193**	*i* P	Pn	01 57 21.5	+0.2
AKHS				*i* S	Sg	01 57 43.3	+0.9
AKS	**Akhisar**	**1.50**	**193**	*e*PN	Pb	01 57 21.9	-0.3
AKS	**Akhisar**	**1.50**	**193**	*e*Pn	Pb	01 57 21.9	-0.3
EZN	**Ezine**	**1.56**	**251**	*e*PN	Pb	01 57 23.2	0.0
EZN	**Ezine**	**1.56**	**251**	*e*Pn	Pb	01 57 23.2	0.0
GPA	**Golpazari**	**1.58**	**91**	*e*PN	Pn	01 57 22.9	+0.6
GPA	**Golpazari**	**1.58**	**91**	*e*Pn	Pn	01 57 22.9	+0.6
AYVA	**Ayvalik**	**1.58**	**230**	*e*P	Pb	01 57 23.6	+0.1
AYVA				*i* S	Sg	01 57 46.1	+1.1
AYVA	**Ayvalik**	**1.58**	**230**	*e*P	Pb	01 57 23.6	+0.1
SPNC	**Sapanca-Adapaz**	**1.61**	**77**	*e*PN	Pn	01 57 23.2	+0.5
SPNC	**Sapanca-Adapaz**	**1.61**	**77**	*e*Pn	Pn	01 57 23.2	+0.5
ENEZ	**Enez**	**1.64**	**284**	*e*PN	Pb	01 57 24.2	-0.3
ENEZ	**Enez**	**1.64**	**284**	*e*Pn	Pb	01 57 24.2	-0.3
GULT	**Gulveren**	**1.73**	**86**	*e*PN	Pn	01 57 25.3	+0.7
GULT	**Gulveren**	**1.73**	**86**	*e*Pn	Pn	01 57 25.3	+0.7
BORA	**Eskisehir**	**1.75**	**105**	*e*P	Pn	01 57 25.0	+0.2
BORA				*i* S	Sg	01 57 52.4	+1.7
BORA	**Eskisehir**	**1.75**	**105**	*e*P	Pn	01 57 25.0	+0.1
BORA				*i* S	Sg	01 57 52.4	+1.7
BOZC	**Bozcaada**	**1.76**	**254**	*e*P	Pb	01 57 25.9	-0.6
BOZC				*i* S	Sg	01 57 49.9	-0.6
KULA	**Kula-Manisa**	**1.86**	**170**	*e*PN	Pn	01 57 26.9	+0.6
KULA	**Kula-Manisa**	**1.86**	**170**	*e*Pn	Pn	01 57 26.9	+0.6
EDRB	**Edirne**	**1.88**	**323**	*e*PN	Pb	01 57 28.0	-0.6
EDRB	**Edirne**	**1.88**	**323**	*e*Pn	Pb	01 57 28.0	-0.6
ALT	**Altintas**	**1.93**	**131**	*e*PN	Pn	01 57 28.2	+0.9
ALT	**Altintas**	**1.93**	**131**	*e*Pn	Pn	01 57 28.2	+0.9
HENT	**Hendek**	**2.08**	**76**	*i* P	Pn	01 57 19.2	-10
ESKT	**Eskisehir**	**2.17**	**112**	*e*PN	Pn	01 57 31.4	+0.9
ESKT	**Eskisehir**	**2.17**	**112**	*e*Pn	Pn	01 57 31.4	+0.9
BLCB	**Balcova**	**2.17**	**206**	*e*PN	Pn	01 57 31.4	+1.0
BLCB	**Balcova**	**2.17**	**206**	*e*Pn	Pn	01 57 31.4	+1.0
KHAL	**Karahalli**	**2.20**	**154**	*i* P	Pg	01 57 36.8	+0.5
KHAL				*i* S	Sg	01 58 04.4	-0.5
KHL	**Karahalli**	**2.25**	**154**	*e*PN	Pn	01 57 32.5	+0.8
KHL	**Karahalli**	**2.25**	**154**	*e*Pn	Pn	01 57 32.5	+0.8
MDUB	**Mudurnu**	**2.26**	**86**	*e*PN	Pn	01 57 33.0	+1.2
MDUB	**Mudurnu**	**2.26**	**86**	*e*Pn	Pn	01 57 33.0	+1.2
SHUT	**Suhut-Afyon**	**2.53**	**134**	*e*PN	Pn	01 57 36.7	+1.2
SHUT	**Suhut-Afyon**	**2.53**	**134**	*e*Pn	Pn	01 57 36.7	+1.2
SVRH	**Sivrihisar-ESK**	**2.68**	**109**	*e*PN	Pn	01 57 38.0	+0.5
SVRH	**Sivrihisar-ESK**	**2.68**	**109**	*e*Pn	Pn	01 57 38.1	+0.6
KIZT	**Kizilcal**	**3.17**	**116**	*e*PN	Pn	01 57 45.5	+1.2
KIZT	**Kizilcal**	**3.17**	**116**	*e*Pn	Pn	01 57 45.5	+1.2

IDC 14 02:28:23.0±1.2, 20.15°S×69.09°W, h117km±7km, mb3.6/5, mb1 3.8/8, mb1mx3.6/19, mbtmp3.6/8, Error ellipse: s-maj=34.1km s-min=18.4km az=20.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.95**	**14**	P	Pn	02 29 24.1	+1.5
	2.2nm,0.3s,baz=200,slow=6.3,SNR=61						
SIV	**San Ignacio**	**8.68**	**63**	P	Pn	02 30 24.7	-1.1
	4.3nm,0.3s,baz=261,slow=13,SNR=67						
SIV				S	Sn	02 31 58.7	-3.2
	0.1nm,0.3s,baz=210,slow=20,SNR=3.5						
CPUP	**Villa Florida**	**12.44**	**122**	P	Pn	02 31 16.7	+0.7
	0.8nm,0.3s,baz=279,slow=12,SNR=10						
BDFB	**Brasilia**	**20.55**	**81**	P	P	02 32 52.6	0.0
	3.8nm,0.4s,baz=252,slow=13,SNR=6.9						
PLCA	**Paso Flores**	**20.55**	**183**	P	Pn	02 32 56.6	+0.9
	1.6nm,0.9s,baz=353,slow=11,SNR=3.4						
TXAR	**Lajitas Array**	**59.43**	**325**	P	P	02 38 12.8	-0.8
	0.2nm,0.5s,baz=149,slow=6.7,SNR=8.2						
NVAR	**Mina Array Bea**	**74.33**	**322**	P	P	02 39 48.4	+0.4
	0.3nm,0.5s,baz=160,slow=5.5,SNR=2.7						
TORD	**Torodi Ar. Bea**	**77.07**	**71**	P	P	02 40 03.3	-0.6
	1.4nm,0.4s,baz=254,slow=5.3,SNR=54						
TORD				pP	pP	02 40 34.3	+0.8
	0.6nm,0.5s,baz=250,slow=5.7,SNR=2.4						
YKA	**Yellowknife Ar**	**89.86**	**341**	P	P	02 41 08.1	-0.1
	1.1nm,0.6s,baz=129,slow=4.7,SNR=33						
YKA				pP	pP	02 41 38.0	-0.5
	0.4nm,0.6s,baz=134,slow=4.9,SNR=4.8						
YKA				sP	sP	02 41 50.6	-0.3
	0.5nm,0.7s,baz=133,slow=4.5,SNR=4.0						
ASAR	**Alice Springs**	**131.02**	**208**	PKP	PKPdf	02 47 21.5	-0.1
	0.1nm,0.3s,baz=157,slow=2.6,SNR=3.8						
SONM	**Songino Array**	**152.14**	**7**	PKPbc	PKPbc	02 48 05.6	+0.8
	0.4nm,0.4s,baz=315,slow=0.6,SNR=2.9						

ISCJB ***14*** *02:29:19.6±0.2, 25.91°N±0.04°×99.77°E±0.03°, h10km, mb4.3/61, MS3.3/10, Error ellipse: s-maj=6.0km s-min=3.8km az=9.5*
BJI ***14*** *02:29:20.5, 25.96°N×99.73°E, h13km, mB4.4/1, mb4.4/11, ML4.2/12, Ms4.3/8, Ms7 3.8/7*
MOS ***14*** *02:29:23.1±0.7, 25.95°N×99.85°E, h33km, mb4.5/32, Error ellipse: s-maj=12.9km s-min=5.5km az=117.9*
IDC ***14*** *02:29:25.1±3.9, 26.00°N×99.95°E, h33km±30km, mb3.9/22, mb1 4.0/23, mb1mx3.9/33, mbtmp3.9/23, ML3.8/1, MS3.3/8, Ms1 3.3/8, ms1mx3.0/47, Error ellipse: s-maj=23.5km s-min=12.8km az=65.0*
NEIC ***14*** *02:29:25.5±0.6, 25.96°N×99.91°E, h40km±6km, mb4.7/28, Error ellipse: s-maj=6.8km s-min=5.0km az=66.0*
ISC 14 02:29:21.6±0.4, 25.94N±0.05×99.72E±0.04, h10km, n201, σ1°05/206, mb4.4/61, MS3.3/10, 13C-4D, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**2.85**	**106**	Pn	**Pn**	**02 30 07.0**	**-0.4**
KMI				Pg	**Pb**	**02 30 13.3**	**+0.6**
KMI				Sg	**Sb**	**02 30 50.5**	**+2.8**
KMI				smax	smax		
	comp=N,770nm,1.1s						
KMI				smax	smax		
	comp=E,830nm,1.0s						
KMI	**Kunming**	**2.85**	**106**	P	**Pn**	**02 30 07.0**	**-0.4**
KMI	**Kunming**	**2.85**	**106**	Pn	**Pn**	**02 30 07.0**	**-0.4**
KMI				Pg	**Pb**	**02 30 13.3**	**+0.6**
KMI				Sg	**Sb**	**02 30 50.5**	**+2.8**
IMP	**Imphal**	**5.36**	**259**	*e*P	**Pn**	**02 30 43.0**	**+1.3**
GYA	**Guiyang**	**6.26**	**84**	Pn	**

	comp=Z,1.0nm,0.6s								
XAN					pmax	pmax			
	comp=Z,44nm,4.7s								
XAN					LR	LR			
	comp=N,580nm,15.1s								
XAN					LR	LR			
	comp=E,220nm,15.1s								
XAN					LR	LR			
	comp=Z,130nm,12.5s								
RAMN	**Ramite**	**11.80**	**278**	*eP*	**Pn**		02 32 10.6	+0.4	
	comp=Z,39nm,0.7s								
GUN	**Gumba**	**12.50**	**282**	*eP*	**Pn**		02 32 19.8	-0.2	
	comp=Z,51nm,0.9s								
BOK	**Bokaro**	**12.74**	**263**	*eP*	Pn		02 32 28.6	+5.8	
PKI	**Pulchoki**	**12.89**	**280**	*eP*	**Pn**		02 32 24.4	-0.8	
	comp=Z,42nm,0.8s								
KKN	**Kakani**	**13.02**	**281**	*eP*	**Pn**		02 32 26.5	-0.4	
	comp=Z,40nm,0.7s								
DMN	**Daman**	**13.16**	**281**	*eP*	**Pn**		02 32 28.6	-0.3	
GTA	**Gaotai**	**13.44**	**0**	*eP*	**P**		02 32 43.5	+1.6	
GTA				pP	pP		02 32 47.9		
GTA				sP			02 32 50.8		
GTA				pmax	pmax				
	comp=Z,4.0nm,0.9s								
WHN	**Wuhan**	**13.69**	**67**	P	**Pn**		02 32 35.3	-0.5	
WHN				S	**Sn**		02 35 04.1	-3.9	
WHN				LR	LR				
	comp=Z,620nm,11.3s								
DANN	**Dangsing**	**14.41**	**283**	*eP*	**Pn**		02 32 43.9	-2.1	
	comp=Z,27nm,0.8s								
KOLN	**Koldanda**	**14.50**	**281**	*eP*	**Pn**		02 32 45.8	-1.4	
	comp=Z,20nm,0.9s								
PYUN	**Piuthan**	**15.06**	**282**	*eP*	**Pn**		02 32 52.9	-1.9	
	comp=Z,50nm,0.9s								
BJI	**Beijing**	**19.66**	**40**	P	**Pn**		02 33 51.9	-0.1	
BJI				pmax	pmax				
	comp=Z,16nm,1.2s								
BJI				LR	LR				
	comp=N,650nm,16.0s								
BJI				LR	LR				
	comp=E,530nm,16.9s								
BJI				LR	LR				
	comp=Z,86nm,14.2s								
BHPL	**Bhopal**	**20.45**	**267**	*eP*	**P**		02 34 00.4	+1.0	
SMLA	**Simla**	**20.46**	**290**	*eP*	**P**		02 33 59.9	+0.4	
DHRM	**DHARAMSHALA**	**21.39**	**293**	*eP*	**P**		02 34 09.7	0.0	
SONM	**Songino Array**	**22.48**	**12**	P	**P**		02 34 19.7	-1.4	
SONM				S	**S**		02 38 25.5	-2.4	
SONM	**Songino Array**	**22.48**	**12**	P	**P**		02 34 19.7	-1.4	
	comp=Z,3.2nm,0.8s,baz=196,slow=9.1,SNR=13								
SONM				S	**S**		02 38 25.5	-2.4	
	comp=Z,0.3nm,0.5s,baz=196,slow=25,SNR=2.5								
ULN	**Ulaanbaatar**	**22.64**	**13**	*eP*	**P**		02 34 21.5	-1.3	
	comp=Z,11nm,1.2s								
ZAK	**Zakamensk**	**24.56**	**5**	*eP*	**P**		02 34 39.8	-1.8	
ZAK				pmax	pmax				
	comp=Z,3.0nm,1.2s								
MK31	**Makanchi Array**	**25.00**	**331**	*ceP*	**P**		02 34 46.3	+0.8	
MK31				pmax	pmax				
	comp=Z,12nm,0.7s								
MK31	**Makanchi Array**	**25.00**	**331**	*eP*	**P**		02 34 46.4	+0.9	
MKAR	**Makanchi Array**	**25.00**	**331**	P	**P**		02 34 46.8	+1.2	
MKAR							02 38 20.8		
MKAR				pmax	pmax				
	comp=Z,9.0nm,0.7s								
MKAR	**Makanchi Array**	**25.00**	**331**	P	**P**		02 34 46.8	+1.2	
MKAR				PcP	**PcP**		02 38 20.8	+0.3	
MKAR	**Makanchi Array**	**25.00**	**331**	P	**P**		02 34 46.8	+1.2	
	comp=Z,9.4nm,0.7s,baz=140,slow=10,SNR=95								
MKAR				PcP	**PcP**		02 38 20.8	+0.3	
	comp=Z,0.4nm,0.5s,baz=134,slow=4.2,SNR=6.0								
POO	**Poona**	**25.02**	**258**	*eP*	**P**		02 34 46.6	+0.5	
POO				AMB	AMB		02 35 06.1		
	comp=Z,18nm,1.3s								
MOY	**Mondy**	**25.71**	**2**	*eP*	**P**		02 34 52.8	+0.7	
TKM2	**Tokmak 2**	**25.99**	**317**	*eP*	**P**		02 34 55.2	+0.3	
TKM2				pmax	pmax				
	comp=Z,5.0nm,1.1s								
TKM2	**Tokmak 2**	**25.99**	**317**	*eP*	**P**		02 34 55.2	+0.3	
	comp=Z,5.1nm,1.1s								
KSRS	**Korea Array**	**26.50**	**57**	LR	LR		02 44 42.6		
	comp=Z,22nm,18.7s,baz=146,slow=35								
AAK	**Ala-Archa**	**26.53**	**315**	P	**P**		02 35 02.1	+2.4	
AAK				pmax	pmax				
	comp=Z,3.0nm,0.5s								
AAK				MLR	MLR				
	comp=Z,46nm,21.6s								
AAK	**Ala-Archa**	**26.53**	**315**	*eP*	**P**		02 35 00.5	+0.9	
	comp=Z,4.7nm,0.9s								
AAK	**Ala-Archa**	**26.53**	**315**	P	**P**		02 35 02.1	+2.4	
	comp=Z,2.7nm,0.5s,baz=106,slow=6.1,SNR=8.4								
AAK				LR	LR		02 46 30.9		
	comp=Z,46nm,21.6s,baz=288,slow=38								
EKS2	**Erkin-Say**	**27.00**	**315**	*eP*	**P**		02 35 05.5	+1.6	
EKS2				pmax	pmax				
	comp=Z,6.0nm,0.9s								
EKS2	**Erkin-Say**	**27.00**	**315**	*eP*	**P**		02 35 05.5	+1.6	
	comp=Z,5.6nm,0.9s								
KBL	**Kabul**	**27.77**	**295**	*eP*	**P**		02 35 12.3	+1.4	
KBL				pmax	pmax				
	comp=Z,3.0nm,0.5s								
KBL	**Kabul**	**27.77**	**295**	*eP*	**P**		02 35 12.3	+1.4	
	comp=Z,3.5nm,0.5s								
JNU	**Nakatsue**	**27.97**	**68**	LR	LR		02 46 21.7		
	comp=Z,78nm,19.4s,baz=54,slow=37								
KURK	**Kurchatov**	**29.56**	**332**	*eP*	**P**		02 35 27.5	+1.1	
KURK				pmax	pmax				
	comp=Z,8.0nm,1.7s								
KURK	**Kurchatov**	**29.56**	**332**	*eP*	**P**		02 35 26.8	+0.4	
	comp=Z,3.5nm,0.8s								
ZALV	**Zalesovo Beam**	**30.09**	**342**	P	**P**		02 35 31.6	+0.5	
ZALV				pmax	pmax				
	comp=Z,2.0nm,0.7s								
ZALV	**Zalesovo Beam**	**30.09**	**342**	P	**P**		02 35 31.6	+0.5	
ZALV	**Zalesovo Beam**	**30.09**	**342**	P	**P**		02 35 31.6	+0.5	
	comp=Z,2.3nm,0.7s,baz=148,slow=10,SNR=9.5								
MJAR	**Matsushiro Arr**	**34.37**	**63**	LR	LR		02 51 19.8		
	comp=Z,81nm,18.8s,baz=270,slow=38								
BVA0	**Borovoye Array**	**34.83**	**329**	P	**P**		02 36 12.6	0.0	
BVA0				pmax	pmax				
	comp=Z,1.0nm,1.1s								
BVAR	**Borovoye Array**	**34.83**	**329**	P	**P**		02 36 14.0	+1.4	
BVAR				pmax	pmax				
	comp=Z,4.0nm,0.7s								
BVAR	**Borovoye Array**	**34.83**	**329**	P	**P**		02 36 13.9	+1.4	
BVAR	**Borovoye Array**	**34.83**	**329**	P	**P**		02 36 14.0	+1.4	
	comp=Z,3.7nm,0.7s,baz=128,slow=10,SNR=22								
BRVK	**Borovoye**	**34.90**	**329**	*dP*	**P**		02 36 14.2	+1.0	
BRVK				pmax	pmax				
	comp=Z,8.0nm,0.7s								
BRVK	**Borovoye**	**34.90**	**329**	*eP*	**P**		02 36 13.9	+0.7	
	comp=Z,7.1nm,0.8s								
AB31	**Akbulak array**	**38.55**	**318**	*ceP*	**P**		02 36 45.5	+1.2	
AB31				pmax	pmax				
	comp=Z,3.0nm,0.6s								
ABKAR	**Akbulak array**	**38.55**	**318**	*eP*	**P**		02 36 45.5	+1.2	
	comp=Z,3.4nm,0.7s								
ASAJ	**Asahikawa**	**39.01**	**51**	LR	LR		02 52 23.4		
	comp=Z,38nm,19.2s,baz=354,slow=36								
AKTO	**Aktyubinsk**	**40.15**	**319**	P	**P**		02 36 58.9	+1.2	
AKTO				pmax	pmax				
	comp=Z,1.0nm,0.8s								
AKTO	**Aktyubinsk**	**40.15**	**319**	P	**P**		02 36 58.9	+1.2	
AKTO	**Aktyubinsk**	**40.15**	**319**	P	**P**		02 36 58.9	+1.2	
	comp=Z,1.4nm,0.8s,baz=120,slow=9.5,SNR=8.2								
ARU	**Arti**	**42.41**	**327**	*dP*	**P**		02 37 17.7	+1.5	
ARU							02 38 54.4		
ARU				S	**S**		02 43 39.4	+1.9	
ARU				SS	**SS**		02 46 44.2	-2.2	
ARU				pmax	pmax				
	comp=Z,9.0nm,1.0s								
GNI	**Garni**	**47.51**	**302**	LR	LR		03 02 52.1		
	comp=Z,29nm,18.5s,baz=283,slow=42								
ZEI	**Tsey**	**48.18**	**305**	*eP*	**P**		02 38 02.2	-0.3	
ZEI				pmax	pmax				
	comp=Z,4.0nm,1.0s								
TIXI	**Tiksi**	**48.57**	**12**	*cP*	**P**		02 38 04.5	-0.2	
TIXI				pmax	pmax				
	comp=Z,3.0nm,1.0s								
TIXI				MLR	MLR				
	comp=Z,147nm,23.0s								
KBZ	**Khabaz**	**48.94**	**306**	LR	LR		03 00 20.2		
	comp=Z,56nm,21.4s,baz=188,slow=38								
KIV	**Kislovodsk**	**49.10**	**307**	*eP*	**P**		02 38 10.9	+1.5	
KIV				pmax	pmax				
	comp=Z,9.0nm,1.0s								
KIV				MLR	MLR				
	comp=Z,42nm,16.0s								
VSR	**Storozhevoye**	**51.93**	**316**	*eP*	**P**		02 38 30.8	+0.3	
VSR				pmax	pmax				
	comp=Z,5.0nm,0.9s								
VSR				pmax	pmax				
	comp=N,1.0nm,0.4s								
VSR				pmax	pmax				
	comp=E,3.0nm,0.9s								
OBN	**Obninsk**	**53.86**	**321**	*eP*	P		02 38 48.4	+3.7	
OBN				pmax	pmax				
	comp=Z,7.0nm,1.2s								
MMAI	**Mount Meron Ar**	**55.68**	**294**	LR	LR		03 08 37.8		
	comp=Z,21nm,20.2s,baz=145,slow=42								
BRTR	**Keskin Array B**	**56.05**	**302**	P	**P**		02 39 01.6	+0.6	
BRTR	**Keskin Array B**	**56.05**	**302**	P	**P**		02 39 01.6	+0.6	
	comp=Z,1.0nm,0.6s,baz=116,slow=9.1,SNR=6.2								
WRAB	**Tennant Creek**	**56.66**	**140**	*eP*	**P**		02 39 04.4	-0.9	
WRAB				pmax	pmax				
	comp=Z,10.0nm,1.1s								
WRAB	**Tennant Creek**	**56.66**	**140**	*eP*	**P**		02 39 04.4	-0.9	
	comp=Z,10nm,1.1s								
BILL	**Bilibino**	**57.46**	**24**	*eP*	**P**		02 39 09.8	-0.6	
BILL				*e*			02 40 03.9		
BILL				pmax	pmax				
	comp=Z,4.0nm,1.2s								
AKASG	**Malin Array Be**	**58.20**	**315**	P	**P**		02 39 15.6	-0.2	
AKASG				pmax	pmax				
	comp=Z,4.0nm,0.8s								
AKASG	**Malin Array Be**	**58.20**	**315**	P	**P**		02 39 15.6	-0.2	
AKASG	**Malin Array Be**	**58.20**	**315**	P	**P**		02 39 15.6	-0.2	
	comp=Z,3.6nm,0.8s,baz=79,slow=6.1,SNR=7.0								
AK02	**Malin Array Si**	**58.22**	**315**	*eP*	**P**		02 39 15.0	-0.9	
ASAR	**Alice Springs**	**59.38**	**143**	P	**P**		02 39 24.9	+0.5	
ASAR	**Alice Springs**	**59.38**	**143**	P	**P**		02 39 24.9	+0.5	
	comp=Z,2.7nm,1.1s,baz=328,slow=6.7,SNR=16								
CFR	**Carcaliu**	**59.42**	**309**	*iP*	**P**		02 39 24.4	0.0	
FINES	**FINESS Array B**	**59.78**	**328**	P	**P**		02 39 27.0	+0.4	
FINES	**FINESS Array B**	**59.78**	**328**	P	**P**		02 39 27.0	+0.4	
	comp=Z,1.1nm,0.8s,baz=97,slow=11,SNR=5.3								
TESR		**60.28**	**310**	*iP*	**P**		02 39 29.5	-0.9	
VRI	**Vrincioaia**	**60.31**	**310**	*iP*	**P**		02 39 31.8	+1.2	
PLOR	**Plostina**	**60.37**	**310**	*iP*	**P**		02 39 32.2	+1.2	
ARCES	**ARCESS Array B**	**60.44**	**337**	P	**P**		02 39 31.7	+0.7	
ARCES	**ARCESS Array B**	**60.44**	**337**	P	**P**		02 39 31.7	+0.7	
	comp=Z,1.9nm,0.9s,baz=89,slow=9.1,SNR=2.7								
MLR	**Muntele Rosu**	**60.91**	**309**	P	**P**		02 39 36.1	+1.3	
MLR	**Muntele Rosu**	**60.91**	**309**	*iP*	**P**		02 39 35.9	+1.1	
MLR	**Muntele Rosu**	**60.91**	**309**	P	**P**		02 39 36.1	+1.3	
	comp=Z,2.4nm,0.9s,baz=120,slow=9.3,SNR=13								
BURAR	**Bucovina Array**	**61.11**	**312**	*iP*	**P**		02 39 33.9	-2.2	
ARR	**Arges**	**61.84**	**309**	*iP*	**P**		02 39 42.2	+1.2	
KWP	**Kalwaria Pacla**	**62.48**	**314**	*eP*	**P**		02 39 45.8	+0.6	
KWP				pmax	pmax				
	comp=Z,16nm,1.2s								
KWP	**Kalwaria Pacla**	**62.48**	**314**	*eP*	**P**		02 39 45.8	+0.6	
	comp=Z,16nm,1.2s								
KWP	**Kalwaria Pacla**	**62.48**	**314**	*iP*	**P**		02 39 45.3	+0.1	
DRGR		**62.92**	**311**	*iP*	**P**		02 39 49.0	+0.7	
VTS	**Vitosha**	**63.35**	**307**	*iP*	**P**		02 39 51.7	+0.4	
SPITS	**Spitsbergen Ar**	**63.44**	**347**	P	**P**		02 39 51.1	0.0	
SPITS	**Spitsbergen Ar**	**63.44**	**347**	P	**P**		02 39 51.1	0.0	
	comp=Z,20nm,1.2s,baz=96,slow=13,SNR=6.9								
PKSM	**Morady**	**65.79**	**311**	*iP*	**P**		02 40 07.3	+0.3	
HFS	**Hagfors**	**65.93**	**327**	P	**P**		02 40 07.6	0.0	
HFS	**Hagfors**	**65.93**	**327**	P	**P**		02 40 07.6	0.0	
	comp=Z,0.9nm,0.5s,baz=90,slow=4.4,SNR=7.3								
NB2	**NORSAR Subarra**	**66.95**	**328**	P	**P**		02 40 13.2	-1.0	
	comp=Z,0.5nm,0.6s,baz=78,slow=6.5								
NOA	**NORSAR Array B**	**66.95**	**328**	P	**P**		02 40 13.6	-0.7	
NOA	**NORSAR Array B**	**66.95**	**328**	P	**P**		02 40 13.6	-0.7	
	comp=Z,0.8nm,0.8s,baz=78,slow=6.4,SNR=5.9								
GERES	**GERESS Array B**	**68.41**	**315**	P	**P**		02 40 24.4	+0.7	
GERES	**GERESS Array B**	**68.41**	**315**	P	**P**		02 40 24.4	+0.7	
	comp=Z,0.9nm,0.6s,baz=66,slow=5.1,SNR=12								
STKA	**Stephens Creek**	**70.02**	**143**	P	**P**		02 40 32.8	-0.8	
STKA	**Stephens Creek**	**70.02**	**143**	P	**P**		02 40 32.8	-0.8	
	comp=Z,2.8nm,1.0s,baz=330,slow=20,SNR=2.5								
CDF	**Champ du Feu**	**72.61**	**316**	*eP*	**P**		02 40 49.1	-0.2	
	comp=Z,4.7nm,0.9s								
CDF	**Champ du Feu**	**72.61**	**316**	*eP*	**P**		02 40 49.1	-0.2	
CDF				pmax	pmax				
	comp=Z,5.0nm,0.9s								
CDF	**Champ du Feu**	**72.61**	**316**	*eP*	**P**		02 40 49.1	-0.2	
	comp=Z,4.7nm,0.9s								
PAGF	**Fort de Pagny**	**73.53**	**316**	*eP*	**P**		02 40 54.9	+0.2	
	comp=Z,4.3nm,1.0s								
PAGF	**Fort de Pagny**	**73.53**	**316**	*eP*	**P**		02 40 54.9	+0.2	
	comp=Z,4.3nm,1.0s								
GIVF	**Givet**	**73.54**	**318**	*eP*	**P**		02 40 54.7	0.0	
GIVF	**Givet**	**73.54**	**318**	*eP*	**P**		02 40 54.7	0.0	
GIVF	**Givet**	**73.54**	**318**	*eP*	**P**		02 40 54.7	0.0	
BAIF	**Baives**	**73.92**	**318**	*eP*	**P**		02 40 57.2	+0.3	
	comp=Z,7.0nm,1.0s								
BAIF	**Baives**	**73.92**	**318**	*eP*	**P**		02 40 57.2	+0.3	
BAIF				pmax	pmax				
	comp=Z,7.0nm,1.0s								
BAIF	**Baives**	**73.92**	**318**	*eP*	**P**		02 40 57.2	+0.3	
	comp=Z,7.0nm,1.0s								
LPG	**La Plagne**	**73.95**	**313**	*eP*	**P**		02 40 57.8	+0.2	
	comp=Z,19nm,1.1s								
LPG	**La Plagne**	**73.95**	**313**	*eP*	**P**		02 40 57.8	+0.2	
LPG				pmax	pmax				
	comp=Z,19nm,1.1s								
LPG	**La Plagne**	**73.95**	**313**	*eP*	**P**		02 40 57.8	+0.2	
	comp=Z,19nm,1.1s								
LPL	**La Plagne**	**73.96**	**313**	*eP*	**P**		02 40 57.7	+0.2	
	comp=Z,14nm,0.8s								
LPL	**La Plagne**	**73.96**	**313**	*eP*	**P**		02 40 57.7	+0.2	
LPL				pmax	pmax				
	comp=Z,14nm,0.8s								
LPL	**La Plagne**	**73.96**	**313**	*eP*	**P**		02 40 57.7	+0.2	
	comp=Z,14nm,0.8s								
MEZF	**Maizieres J'vi**	**73.97**	**316**	*eP*	**P**		02 40 57.3	+0.1	
MEZF	**Maizieres J'vi**	**73.97**	**316**	*eP*	**P**		02 40 57.3	+0.1	
CABF	**La Chapelle**	**73.99**	**314**	*eP*	**P**		02 40 57.3	-0.2	
CABF	**La Chapelle**	**73.99**	**314**	*eP*	**P**		02 40 57.3	-0.2	
CABF	**La Chapelle**	**73.99**	**314**	*eP*	**P**		02 40 57.3	-0.2	
SBF	**Sospel**	**74.07**	**311**	*eP*	**P**		02 40 57.6	-0.4	
SBF	**Sospel**	**74.07**	**311**	*eP*	**P**		02 40 57.6	-0.4	
SBF	**Sospel**	**74.07**	**311**	*eP*	**P**		02 40 57.6	-0.4	
SFTF	**Sexfontaines**	**74.08**	**316**	*eP*	**P**		02 40 57.6	-0.3	
SFTF	**Sexfontaines**	**74.08**	**316**	*eP*	**P**		02 40 57.6	-0.3	
MBDF	**Montbardon**	**74.21**	**312**	*eP*	**P**		02 40 58.8	-0.1	
	comp=Z,5.5nm,0.8s								
MBDF	**Montbardon**	**74.21**	**312**	*eP*	**P**		02 40 58.8	-0.1	
MBDF				pmax	pmax				
	comp=Z,6.0nm,0.8s								
MBDF	**Montbardon**	**74.21**	**312**	*eP*	**P**		02 40 58.8	-0.1	
	comp=Z,5.5nm,0.8s								
FRF	**La Foret Royal**	**74.71**	**311**	*eP*	**P**		02 41 01.2	-0.5	
	comp=Z,14nm,1.0s								
FRF	**La Foret Royal**	**74.71**	**311**	*eP*	**P**		02 41 01.2	-0.5	
FRF				pmax	pmax				
	comp=Z,14nm,1.0s								
FRF	**La Foret Royal**	**74.71**	**311**	*eP*	**P**		02 41 01.2	-0.5	
	comp=Z,14nm,1.0s								
ORIF	**Oris-en-Rattie**	**74.73**	**313**	*eP*	**P**		02 41 01.5	-0.4	
	comp=Z,12nm,1.1s								
ORIF	**Oris-en-Rattie**	**74.73**	**313**	*eP*	**P**		02 41 01.5	-0.4	
ORIF				pmax	pmax				
	comp=Z,12nm,1.0s								
ORIF	**Oris-en-Rattie**	**74.73**	**313**	*eP*	**P**		02 41 01.5	-0.4	
	comp=Z,12nm,1.0s								
LMR	**La Mourre**	**74.89**	**311**	*eP*	**P**		02 41 02.4	-0.3	
	comp=Z,20nm,1.2s								
LMR	**La Mourre**	**74.89**	**311**	*eP*	**P**		02 41 02.4	-0.3	
LMR				pmax	pmax				
	comp=Z,20nm,1.2s								
LMR	**La Mourre**	**74.89**	**311**	*eP*	**P**		02 41 02.4	-0.3	
	comp=Z,20nm,1.2s								
SMF	**Signal de Mont**	**75.42**	**315**	*eP*	**P**		02 41 05.3	-0.4	
	comp=Z,17nm,1.1s								
SMF	**Signal de Mont**	**75.42**	**315**	*eP*	**P**		02 41 05.3	-0.4	
SMF				pmax	pmax				
	comp=Z,17nm,1.1s								
SMF	**Signal de Mont**	**75.42**	**315**	*eP*	**P**		02 41 05.3	-0.4	
	comp=Z,17nm,1.1s								
SSF	**Saint Saulge**	**75.47**	**315**	*eP*	**P**		02 41 05.7	-0.3	
	comp=Z,13nm,1.0s								
SSF	**Saint Saulge**	**75.47**	**315**	*eP*	**P**		02 41 05.7	-0.3	
SSF				pmax	pmax				
	comp=Z,13nm,1.0s								
SSF	**Saint Saulge**	**75.47**	**315**	*eP*	**P**		02 41 05.7	-0.3	
	comp=Z,13nm,1.0s								
VIVF	**Saint-Julien-l**	**75.55**	**313**	*eP*	**P**		02 41 06.5	0.0	
	comp=Z,6.3nm,0.9s								
VIVF	**Saint-Julien-l**	**75.55**	**313**	*eP*	**P**		02 41 06.5	0.0	
VIVF				pmax	pmax				
	comp=Z,6.0nm,0.9s								
VIVF	**Saint-Julien-l**	**75.55**	**313**	*eP*	**P**		02 41 06.5	0.0	
	comp=Z,6.3nm,0.9s								
AVF	**Avril sur Loir**	**75.67**	**315**	*eP*	**P**		02 41 06.8	-0.3	
	comp=Z,12nm,1.0s								
AVF	**Avril sur Loir**	**75.67**	**315**	*eP*	**P**		02 41 06.8	-0.3	
AVF				pmax	pmax				
	comp=Z,12nm,1.0s								
AVF	**Avril sur Loir**	**75.67**	**315**	*eP*	**P**		02 41 06.8	-0.3	
	comp=Z,12nm,1.0s								
EKA	**Eskdalemuir Ar**	**75.97**	**325**	P	**P**		02 41 09.0	+0.3	
EKA	**Eskdalemuir Ar**	**75.97**	**325**	P	**P**		02 41 09.0	+0.3	
	comp=Z,1.9nm,1.0s,baz=67,slow=6.4,SNR=4.2								
ILAR	**Eielson Array**	**76.12**	**24**	P	**P**		02 41 08.8	-0.6	
ILAR	**Eielson Array**	**76.12**	**24**	P	**P**		02 41 08.8	-0.6	
	comp=Z,0.6nm,1.0s,baz=258,slow=4.2,SNR=4.7								
LASF	**Ste Croix**	**76.39**	**312**	*eP*	**P**		02 41 11.5	+0.2	
	comp=Z,18nm,1.2s								
LASF	**Ste Croix**	**76.39**	**312**	*eP*	**P**		02 41 11.5	+0.2	
	comp=Z,18nm,1.2s								
TCF	**Toulx Ste Croi**	**76.59**	**315**	*eP*	**P**		02 41 12.5	+0.1	
	comp=Z,20nm,1.1s								
TCF	**Toulx Ste Croi**	**76.59**	**315**	*eP*	**P**		02 41 12.5	+0.1	
TCF				pmax	pmax				
	comp=Z,20nm,1.1s								
TCF	**Toulx Ste Croi**	**76.59**	**315**	*eP*	**P**		02 41 12.5	+0.1	
	comp=Z,20nm,1.1s								
CAF	**Calviac**	**77.23**	**314**	*eP*	**P**		02 41 16.4	+0.3	
	comp=Z,23nm,1.4s								
CAF	**Calviac**	**77.23**	**314**	*eP*	**P**		02 41 16.4	+0.3	
CAF				pmax	pmax				
	comp=Z,23nm,1.4s								
CAF	**Calviac**	**77.23**	**314**	*eP*	**P**		02 41 16.4	+0.3	
	comp=Z,23nm,1.4s								
RJF	**Les Rejaudoux**	**77.43**	**314**	*eP*	**P**		02 41 17.6	+0.4	
	comp=Z,24nm,1.1s								
RJF	**Les Rejaudoux**	**77.43**	**314**	*eP*	**P**		02 41 17.6	+0.4	
RJF				pmax	pmax				
	comp=Z,24nm,1.1s								
RJF	**Les Rejaudoux**	**77.43**	**314**	*eP*	**P**		02 41 17.6	+0.4	
	comp=Z,24nm,1.1s								
GRR	**Gorron**	**77.64**	**318**	*eP*	**P**		02 41 18.2	0.0	
GRR	**Gorron**	**77.64**	**318**	*eP*	**P**		02 41 18.2	0.0	
GRR	**Gorron**	**77.64**	**318**	*eP*	**P**		02 41 18.2	0.0	
ETSF	**Etsaut**	**79.80**	**313**	*eP*	**P**		02 41 30.7	+0.3	
	comp=Z,11nm,1.0s								
ETSF	**Etsaut**	**79.80**	**313**	*eP*	**P**		02 41 30.7	+0.3	
ETSF				pmax	pmax				
	comp=Z,11nm,1.0s								
ETSF	**Etsaut**	**79.80**	**313**	*eP*	**P**		02 41 30.7	+0.3	
	comp=Z,11nm,1.0s								
ESDC	**Sonseca Array**	**83.55**	**311**	P	**P**		02 41 50.7	+0.5	
ESDC	**Sonseca Array**	**83.55**	**311**	P	**P**		02 41 50.7	+0.5	
	comp=Z,0.5nm,0.5s,baz=37,slow=4.6,SNR=6.4								
YKA	**Yellowknife Ar**	**87.71**	**15**	P	**P**		02 42 09.2	-1.1	
YKA	**Yellowknife Ar**	**87.71**	**15**	P	**P**		02 42 09.1	-1.1	
	comp=Z,0.3nm,0.8s,baz=321,slow=4.9,SNR=6.0								
TORD	**Torodi Ar. Bea**	**91.38**	**285**	P	**P**		02 42 28.6	+0.1	
TORD	**Torodi Ar. Bea**	**91.38**	**285**	P	**P**		02 42 28.5	+0.1	
	comp=Z,0.3nm,0.6s,baz=79,slow=4.0,SNR=3.2								
SRU	**San Rafael**	**109.38**	**25**	*ePKPdf*	**PKiKP**		02 47

SKR pmax pmax
comp=E,5µm,3.0s
SKR pmax pmax
comp=Z,8µm,3.0s
SKR Severo-Kuril's 2.00 22 *e*P **Pn 03 04 58.7 +0.6**
SKR *e*S **Sn 03 05 22.6 +0.8**
SKR Severo-Kuril's 2.00 22⇑ *i*P Pn 03 04 52.6 -5.5
SKR ⇓ *i*P Pn 03 04 52.6 -5.5
SKR AMB AMB 03 04 55.7
comp=Z,1µm,0.6s
SKR AMB AMB 03 04 55.7
comp=Z,460nm,0.5s
SKR AMB AMB 03 04 55.7
comp=Z,480nm,0.5s
SKR AMB AMB 03 04 56.0
comp=Z,4µm,3.0s
SKR AMB AMB 03 04 56.0
comp=Z,5µm,3.0s
SKR AMB AMB 03 04 56.0
comp=Z,5µm,3.0s
SKR AMB AMB 03 04 56.0
comp=Z,5µm,3.0s
SKR AMB AMB 03 04 56.0
comp=Z,7µm,3.0s
SKR AMB AMB 03 04 56.0
comp=Z,8µm,3.0s
SKR sP sPn 03 05 07.0 -4.6
SKR *i* S Sn 03 05 15.5 -6.3
SKR A A 03 05 22.5
comp=Z,20µm,0.9s
SKR A A 03 05 22.5
comp=Z,13µm,0.9s
SKR A A 03 05 22.5
comp=Z,4µm,0.9s
SKR A A 03 05 26.0
comp=Z,18µm,2.0s
SKR A A 03 05 26.0
comp=Z,37µm,2.0s
SKR A A 03 05 26.0
comp=Z,12µm,2.0s
SKR A A 03 05 26.0
comp=Z,18µm,2.0s
SKR A A 03 05 26.0
comp=Z,37µm,2.0s
SKR A A 03 05 26.0
comp=Z,12µm,2.0s
SKR AMS AMS 03 05 50.0
comp=Z,22µm,10.0s
SKR AMS AMS 03 05 50.0
comp=Z,25µm,10.0s
SKR AMS AMS 03 05 50.0
comp=Z,27µm,12.0s
SKR AMS AMS 03 05 50.0
comp=Z,22µm,10.0s
SKR AMS AMS 03 05 50.0
comp=Z,26µm,10.0s
SKR AMS AMS 03 05 50.0
comp=Z,26µm,12.0s
PAU Pauzhetka 2.89 24 PN **Pn 03 05 11.0 +0.7**
PAU Pauzhetka 2.89 24 *e*P **Pn 03 05 11.0 +0.7**
MIPR Malaya Ipel'ka 3.63 18 *e*P **Pn 03 05 22.2 +1.7**
MIPR *i* S **Sn 03 06 04.9 +2.8**
MTVR Mutnovka 4.19 28 *e*P **Pn 03 05 30.2 +1.9**
MTVR *i* S **Sn 03 06 17.6 +1.6**
GRL Gorelyy 4.21 27 P **Pn 03 05 31.1 +2.5**
RUS Russkaya 4.25 31 PN **Pn 03 05 29.4 +0.4**
RUS Russkaya 4.25 31 P **Pn 03 05 29.4 +0.4**
RUS *i* S **Sn 03 06 16.4 -0.9**
APC Apacha 4.33 18 *e*P **Pn 03 05 32.0 +2.0**
PEA0B Petropavlovsk- 4.62 21 *e*Pn **Pn 03 05 36.2 +2.1**
PEA0B eS Sn 03 06 43.8 +17
PETK Petropavlovsk- 4.62 21 PN **Pn 03 05 37.0 +2.9**
PETK 03 06 31.5
PETK pmax pmax
comp=Z,25nm,0.3s
PETK smax smax
comp=N,8.0nm,0.3s
PETK MLR MLR
comp=Z,9µm,21.3s
PETK Petropavlovsk- 4.62 21 Pn **Pn 03 05 37.0 +2.9**
PETK Sn **Sn 03 06 31.5 +5.2**
PETK Petropavlovsk- 4.62 21 Pn **Pn 03 05 37.0 +2.9**
comp=Z,25nm,0.3s,baz=184,slow=12,SNR=208
PETK Sn **Sn 03 06 31.5 +5.2**
comp=Z,8.1nm,0.3s,baz=179,slow=14,SNR=4.1
PETK LR LR 03 07 40.6
comp=Z,9µm,21.3s,baz=201,slow=44
PET Petropavlovsk 4.80 28k *i*PN **Pn 03 05 38.2 +1.7**
PET pmax pmax
comp=Z,200nm,1.4s
PET pmax pmax
comp=Z,207nm,0.6s
PET pmax pmax
comp=Z,300nm,2.7s
PET MLR MLR
comp=Z,6µm,14.0s
PET MLR MLR
comp=Z,7µm,18.0s
PET Petropavlovsk 4.80 28 *e*P **Pn 03 05 38.0 +1.5**
PET *i* S **Sn 03 06 32.3 +1.5**
UGLR Uglovaya 5.01 28 P **Pn 03 05 41.9 +2.3**
KOK Koryaka 5.03 26 P **Pn 03 05 42.9 +3.1**
AVH Avacha 5.03 27 P **Pn 03 05 42.6 +2.8**
SMAR Somma 5.05 27 P **Pn 03 05 42.5 +2.3**
KRER Koryakskii 5.07 27 P **Pn 03 05 43.1 +2.6**
SDLR Sedlovina 5.09 28 P **Pn 03 05 42.1 +1.5**
GNL Ganaly 5.21 20 P **Pn 03 05 45.3 +3.0**
SPN Mys Shipunski 5.33 35 PN **Pn 03 05 44.4 +0.6**
SPN Mys Shipunski 5.33 35 *e*P **Pn 03 05 44.4 +0.6**
KII Karymskiy 5.91 27 *e*P **Pn 03 05 54.3 +2.4**
KUR Kuril'sk 6.04 236⇑ *i*PN Pn 03 05 57.3 +3.7
KUR *e*S **Sn 03 07 07.0 +5.6**
KUR pmax pmax
comp=Z,3µm,1.0s
KUR pmax pmax
comp=N,430nm,0.9s
KUR pmax pmax
comp=E,990nm,1.1s
KUR pmax pmax
comp=Z,8µm,1.0s
KUR smax smax
comp=N,38µm,2.0s
KUR smax smax
comp=E,32µm,2.0s
KUR smax smax
comp=N,8µm,0.9s
KUR smax smax
comp=E,9µm,1.0s
KUR MLR MLR
comp=E,9µm,14.0s
KUR MLR MLR
comp=Z,14µm,14.0s
KUR MLR MLR
comp=N,13µm,13.0s
KUR Kuril'sk 6.04 236⇑ *i*P Pn 03 05 57.3 +3.7
KUR ⇓ *i*P Pn 03 05 57.3 +3.7
KUR AMB AMB 03 05 59.0
comp=N,8µm,1.0s
KUR AMB AMB 03 05 59.0
comp=N,3µm,1.0s
KUR AMB AMB 03 05 59.0
comp=N,430nm,1.0s
KUR AMB AMB 03 05 59.0
comp=N,990nm,1.0s
KUR *e*S **Sn 03 07 07.0 +5.6**
KUR A A 03 07 17.8
comp=N,25µm,2.0s
KUR A A 03 07 17.8
comp=N,20µm,2.0s
KUR A A 03 07 17.8
comp=N,38µm,2.0s
KUR A A 03 07 17.8
comp=N,32µm,2.0s
KUR A A 03 07 25.5
comp=N,8µm,1.0s
KUR A A 03 07 25.5
comp=N,9µm,1.0s
KUR AMS AMS 03 08 20.0
comp=N,14µm,14.0s
KUR AMS AMS 03 08 20.0
comp=N,13µm,13.0s
KUR AMS AMS 03 08 20.0
comp=N,9µm,14.0s
MKZ Mys Kozlova 7.10 34 PN **Pn 03 06 07.4 -0.7**
MKZ Mys Kozlova 7.10 34 P **Pn 03 06 07.4 -0.7**
MKZ *i* S Sn 03 07 19.3 -8.2

TUMR Tumrok 7.20 24 *e*P **Pn 03 06 11.4 +1.8**
ESO Esso 7.46 16 PN **Pn 03 06 15.8 +2.7**
ESO Esso 7.46 16 *e*P **Pn 03 06 15.8 +2.7**
KMNR Kamenistaya 7.65 23 *e*P **Pn 03 06 17.8 +2.1**
KOZ Kozyrevsk 7.83 21 *e*P **Pn 03 06 21.0 +2.9**
KPT Kopyto 7.83 22 *e*P **Pn 03 06 19.3 +1.1**
KOZR Kozyr 7.84 21 PN **Pn 03 06 21.0 +2.7**
KIRR Kirishev 7.85 23 *e*P **Pn 03 06 21.1 +2.6**
BZMR Bezymyannaya 7.87 23 *e*P **Pn 03 06 21.0 +2.2**
BZWR Bezymyannyi-We 7.90 23 *e*P **Pn 03 06 21.1 +1.9**
YUK Yuzh-Kuril'sk 7.91 236c *i*PN **Pn 03 06 21.4 +2.2**
YUK *i* S **Sn 03 07 50.7 +3.4**
YUK pmax pmax
comp=N,348nm,0.5s
YUK pmax pmax
comp=E,299nm,0.5s
YUK pmax pmax
comp=Z,798nm,0.5s
YUK pmax pmax
comp=Z,2µm,2.8s
YUK smax smax
comp=N,2µm,2.7s
YUK smax smax
comp=E,3µm,2.7s
YUK smax smax
comp=N,4µm,17.0s
YUK smax smax
comp=Z,4µm,17.0s
YUK Yuzh-Kuril'sk 7.91 236⇑ *i*P **Pn 03 06 21.4 +2.2**
YUK AMB AMB 03 06 27.2
comp=Z,348nm,0.5s
YUK AMB AMB 03 06 27.2
comp=Z,299nm,0.5s
YUK AMB AMB 03 06 27.2
comp=Z,798nm,0.5s
YUK *i* sP 03 06 33.2
YUK *i* S **Sn 03 07 50.7 +3.4**
YUK A A 03 08 07.0
comp=Z,2µm,2.7s
YUK A A 03 08 07.0
comp=Z,3µm,2.7s
SRDR Sredinnyy 8.03 19 *e*P Pn 03 06 24.2 +3.3
CIRR Tsirk 8.10 24 *e*P **Pn 03 06 24.1 +2.2**
KRSR Krestovskiy 8.14 23 *e*P **Pn 03 06 24.2 +1.7**
TYV Tymovskoe 8.21 289 *e*P Pn 03 06 28.2 +4.9
TYV AMB AMB 03 06 32.0
comp=Z,2µm,2.0s
TYV AMB AMB 03 06 32.0
comp=Z,308nm,1.0s
TYV AMB AMB 03 06 32.0
comp=Z,462nm,1.0s
TYV AMB AMB 03 06 32.0
comp=Z,92nm,0.8s
TYV AMB AMB 03 06 32.0
comp=Z,2µm,4.0s
JRA Rausu 8.38 238 P **Pn 03 06 28.2 +2.5**
YSS Yuzh-Sakhalins 8.42 262⇓ *i*P Pn 03 06 31.5 +5.3
YSS AMB AMB 03 06 35.0
comp=Z,240nm,0.7s
YSS AMB AMB 03 06 35.0
comp=Z,150nm,0.7s
YSS AMB AMB 03 06 35.0
comp=Z,230nm,0.7s
YSS AMB AMB 03 06 36.0
comp=Z,1µm,4.0s
YSS AMB AMB 03 06 36.0
comp=Z,2µm,4.0s
YSS *e*pP 03 06 40.0
YSS sP 03 06 47.0
YSS *e*S **Sn 03 08 04.0 +4.1**
YSS A A 03 08 06.0
comp=Z,430nm,0.6s
YSS A A 03 08 06.0
comp=Z,470nm,0.9s
YSS *e*LQ LQ 03 08 36.0
YSS AMS AMS 03 10 42.0
comp=Z,1µm,12.0s
YSS AMS AMS 03 10 42.0
comp=Z,2µm,14.0s
YSS AMS AMS 03 10 42.0
comp=Z,2µm,14.0s
NEM2 Nemuro 2 8.42 233 P **Pn 03 06 24.6 -1.6**
NEM2 *e*S **Sn 03 07 55.4 -4.5**
UGL Uglegorsk 8.50 276 *e*PN Pn 03 06 33.0 +5.8
UGL *e* 03 08 15.0
UGL pmax pmax
comp=Z,1µm,1.0s
UGL pmax pmax
comp=N,550nm,1.5s
UGL pmax pmax
comp=Z,3µm,1.5s
UGL pmax pmax
comp=E,2µm,2.0s
UGL MLR MLR
comp=N,6µm,15.0s
UGL MLR MLR
comp=E,8µm,15.0s
UGL Uglegorsk 8.50 276 *e*P Pn 03 06 33.0 +5.8
UGL AMB AMB 03 06 36.0
comp=E,2µm,2.0s
UGL AMB AMB 03 06 36.0
comp=E,1µm,1.0s
UGL AMB AMB 03 06 36.0
comp=E,550nm,1.5s
UGL AMB AMB 03 06 36.0
comp=E,3µm,1.5s
UGL pP 03 06 44.0
UGL *i* S **Sn 03 08 06.5 +4.8**
UGL A A 03 08 08.0
comp=E,160nm,0.5s
UGL A A 03 08 08.0
comp=E,370nm,0.8s
UGL *e*L L 03 08 50.0
UGL AMS AMS 03 10 22.0
comp=E,6µm,15.0s
UGL AMS AMS 03 10 22.0
comp=E,8µm,15.0s
KBTR Krutoberegovo 8.80 30 PN **Pn 03 06 33.1 +1.8**
KBTR Krutoberegovo 8.80 30 P **Pn 03 06 33.1 +1.8**
JNK Nakash 8.83 237 P **Pn 03 06 33.7 +1.8**
OKH Okha 8.91 307 *e*PN Pn 03 06 38.2 +5.4
OKH *e*S **Sn 03 08 16.0 +4.3**
OKH pmax pmax
comp=Z,3µm,3.6s
OKH smax smax
comp=Z,7µm,19.0s
OKH Okha 8.91 307 *e*P Pn 03 06 38.2 +5.4
OKH *e*P 03 06 38.9
OKH AMB AMB 03 06 39.8
comp=Z,3µm,3.6s
OKH AMB AMB 03 06 41.9
comp=Z,900nm,1.2s
OKH *e*S **Sn 03 08 16.0 +4.3**
OKH A A 03 08 17.0
comp=Z,300nm,0.7s
OKH *e*L L 03 08 56.4
OKH AMS AMS 03 09 58.2
comp=Z,7µm,19.0s
OKH AMS AMS 03 09 58.2
comp=Z,10µm,20.0s
OKH AMS AMS 03 09 58.2
comp=Z,5µm,15.0s
JTKR Abashiri--Toko 9.05 242 P **Pn 03 06 37.8 +2.9**
JAK Akkeshi 9.23 235 P **Pn 03 06 36.6 -0.7**
JAK *e*S **Sn 03 08 15.7 -4.1**
BKI Bering 9.31 43 PN **Pn 03 06 37.5 -0.8**
BKI Bering 9.31 43 *e*P **Pn 03 06 37.5 -0.8**
BKI *i* S Sn 03 08 10.2 -11
JSE Soyaes 9.32 250 P Pn 03 06 44.1 +5.6
JMP Maruseppu 9.35 243 P Pn 03 06 42.4 +3.3
JAR Ashorobuto 9.55 239 P **Pn 03 06 43.7 +2.0**
JWK2 Keihoku 9.59 253 P Pn 03 06 46.8 +4.6
ASAJ Asahikawa 9.75 246 *e*Pn Pn 03 06 48.6 +4.2
ASAJ *e*S Sn 03 08 13.9 -19
ASAJ Asahikawa 9.75 246 P Pn 03 06 49.2 +4.8
ASAJ Asahikawa 9.75 246 Pn Pn 03 06 49.3 +4.8
comp=Z,71nm,0.3s,baz=74,slow=13,SNR=359
ASAJ LR LR 03 10 10.9
comp=Z,7µm,21.3s,baz=68,slow=36
JOB Onbets 9.77 237 P **Pn 03 06 45.6 +1.0**
JOB *e*S **Sn 03 08 29.3 -3.6**
JKK2 Kamakawa 2 9.79 244 P Pn 03 06 48.6 +3.5
JSS Shosan 10.05 249 P Pn 03 06 55.5 +7.0
JCH Churui 10.22 237 P **Pn 03 06 51.3 +0.5**
JCH *e*S Sn 03 08 36.3 -7.7

JFR Furan 10.30 241 P **Pn 03 06 54.3 +2.3**
JAB Ashibetsu 10.32 244 P Pn 03 06 56.0 +3.8
JHR Hokuryu 10.48 246 P Pn 03 06 59.1 +4.7
JBT2 Biratori 2 10.67 240 P **Pn 03 06 57.6 +0.5**
ERM Erimo 10.73 235 *e*PN **Pn 03 06 58.0 +0.1**
ERM *e*S **Sn 03 09 02.1 +5.5**
ERM pmax pmax
comp=Z,242nm,0.6s
ERM Erimo 10.73 235 *e*Pn **Pn 03 06 58.0 +0.1**
comp=Z,242nm,0.6s
ERM *e*S **Sn 03 09 02.0 +5.5**
ERM Erimo 10.73 235 Pn **Pn 03 06 58.6 +0.7**
comp=Z,1µm,0.5s,SNR=22
JEM Erimo 10.73 235 P **Pn 03 06 57.9 0.0**
JNBK Urakawa-nobuka 10.78 237 P **Pn 03 06 56.4 -2.1**
JEW Eniwo 11.16 243 P **Pn 03 07 05.8 +2.0**
JNB Noboribetsu 11.63 242 P **Pn 03 07 11.2 +1.0**
JKB Kayabe 12.00 240 P **Pn 03 07 13.2 -2.0**
JKB *e*S Sn 03 09 19.9 -7.7
FX1 Attu Island--F 12.19 64 *e*Pn **Pn 03 07 16.2 -1.5**
FX1 *e*S Sn 03 09 20.3 -12
FX1 Attu Island--F 12.19 64 Pn **Pn 03 07 16.7 -1.0**
comp=Z,13nm,0.3s,baz=312,slow=4.7,SNR=15
FX1 Sn Sn 03 09 20.8 -11
comp=Z,31nm,0.3s,baz=35,slow=17,SNR=8.9
FX1 LR LR 03 11 31.6
comp=Z,2µm,21.9s,baz=268,slow=35
JYM2 Yakumo 2 12.24 242 P **Pn 03 07 18.6 +0.1**
JSR Shiriuchi 12.58 240 P **Pn 03 07 22.1 -1.1**
JOSM Okushiri--Mats 12.79 244 P **Pn 03 07 25.2 -0.7**
TEY Ternei 13.11 260 *e*P P 03 07 36.0 -3.6
TEY AMB AMB 03 07 37.0
comp=Z,43nm,1.0s
TEY AMB AMB 03 07 37.0
comp=Z,43nm,1.0s
TEY *e*LQ LQ 03 10 06.0
TEY *e*LR LR 03 11 20.0
TEY AMS AMS 03 11 42.4
comp=Z,3µm,22.0s
TEY AMS AMS 03 11 42.4
comp=Z,1µm,20.0s
TEY AMS AMS 03 11 42.4
comp=Z,4µm,22.0s
HABR Khabarovsk 13.17 276 *c*PN **Pn 03 07 28.4 -2.8**
HABR pmax pmax
comp=N,13nm,0.6s
HABR pmax pmax
comp=E,143nm,1.3s
HABR pmax pmax
comp=Z,289nm,2.5s
HABR MLR MLR
comp=Z,6µm,18.0s
OFUJ Ofunato 13.65 229 *e*S Sn 03 09 57.4 -10
JRG Rokugo 13.94 233 P Pn 03 07 38.2 -3.5
JRG *e*S Sn 03 10 04.1 -11
JOG2 Oga 2 14.02 236 P **Pn 03 07 40.7 -2.1**
SEY Seymchan 14.21 355 *e*P **Pn 03 07 46.8 +1.7**
JIO Ouri 14.29 228 *e*S Sn 03 10 10.8 -13
JYA Atsumi 15.02 233 P Pn 03 07 52.1 -4.1
KLR Kul'dur 15.22 280 *e*P **Pn 03 08 00.0 +1.2**
KLR pmax pmax
comp=E,140nm,1.4s
KLR pmax pmax
comp=Z,140nm,1.4s
KLR MLR MLR
comp=Z,14µm,13.0s
JFY Yanaizu 15.92 230 P **Pn 03 08 05.0 -2.9**
USRK Ussuriysk Arra 16.45 262 Pn **Pn 03 08 15.6 +1.1**
comp=Z,4.5nm,0.3s,baz=64,slow=11,SNR=54
USRK LR LR 03 14 02.9
comp=Z,2µm,21.9s,baz=62,slow=36
VLA Vladivostok 17.00 259⇑ *i*P **Pn 03 08 21.1 -0.2**
VLA *i* S **Sn 03 11 27.7 -1.4**
VLA pmax pmax
comp=Z,161nm,1.2s
MAJO Matsushiro 17.35 231 *e*P **Pn 03 08 24.6 -1.2**
MAJO pmax pmax
comp=Z,202nm,0.8s
MAJO Matsushiro 17.35 231 *e*Pn **Pn 03 08 24.6 -1.2**
comp=Z,202nm,0.8s
MAT Matsushiro 17.35 231 P **Pn 03 08 23.4 -2.4**
MAT *e*S **Sn 03 11 32.2 -5.6**
MJAR Matsushiro Arr 17.35 231 P **Pn 03 08 23.3 -2.5**
MJAR Matsushiro Arr 17.35 231 P **Pn 03 08 23.3 -2.5**
comp=Z,1.4nm,0.3s,baz=26,slow=9.9,SNR=28
MDJ Mudanjiang 17.87 266 P **Pn 03 08 30.5 -1.6**
MDJ pP **pP 03 08 39.1 -3.4**
MDJ S **Sn 03 11 45.8 -4.4**
MDJ PcP **PcP 03 13 08.0 +1.3**
MDJ PcS **PcS 03 16 43.8 +0.7**
MDJ pmax pmax
comp=Z,88nm,1.1s
MDJ pmax pmax
comp=Z,750nm,9.3s
MDJ LR LR
comp=N,1µm,24.3s
MDJ LR LR
comp=E,1µm,30.4s
MDJ LR LR
comp=Z,2µm,23.1s
ZEA Zeya 17.95 296 *e*P **Pn 03 08 31.4 -1.7**
ZEA AMB AMB 03 08 33.5
comp=Z,56nm,1.4s
ZEA AMB AMB 03 08 33.5
comp=Z,64nm,1.4s
ZEA AMB AMB 03 08 36.0
comp=Z,1µm,5.0s
ZEA AMB AMB 03 08 36.0
comp=Z,600nm,5.0s
ZEA *e*S **S 03 11 56.0 -1.1**
ZEA A A 03 12 01.0
comp=Z,800nm,8.0s
ZEA A A 03 12 01.0
comp=Z,600nm,12.0s
YAK Yakutsk 19.33 323*ce*P **P 03 08 48.5 +0.2**
YAK *e*S **Sn 03 12 25.2 0.0**
YAK pmax pmax
comp=Z,335nm,1.1s
YAK pmax pmax
comp=N,118nm,1.2s
YAK pmax pmax
comp=E,223nm,1.3s
YAK pmax pmax
comp=Z,334nm,1.2s
YAK pmax pmax
comp=E,695nm,2.0s
YAK pmax pmax
comp=N,399nm,1.6s
YAK smax smax
comp=E,22nm,1.0s
YAK smax smax
comp=N,112nm,1.5s
YAK MLR MLR
comp=Z,3µm,22.0s
YAK MLR MLR
comp=N,2µm,21.0s
YAK MLR MLR
comp=E,1µm,23.0s
JHJ Hachijo jima 2 19.38 221 P **P 03 08 49.2 +0.1**
comp=E,6.2nm,0.3s,baz=72,slow=9.6,SNR=5.1
JHJ LR LR 03 17 15.8
comp=E,162nm,18.6s,baz=40,slow=40
CLNS Chul'man 19.72 305 *e*P **Pn 03 08 56.1 +1.7**
CLNS *e*S **S 03 12 28.9 -3.7**
CLNS pmax pmax
comp=Z,225nm,1.1s
CLNS pmax pmax
comp=E,164nm,1.2s
CLNS pmax pmax
comp=N,193nm,1.1s
CLNS smax smax
comp=E,640nm,12.5s
CLNS smax smax
comp=N,932nm,13.3s
CLNS MLR MLR
comp=Z,3µm,18.0s
CLNS MLR MLR
comp=N,1µm,16.0s
CLNS MLR MLR
comp=E,2µm,20.0s
BILL Bilibino 20.08 12 *i* P **P 03 08 55.6 -0.9**
BILL *i* 03 09 06.2
BILL *i* 03 09 12.0
BILL pmax pmax
comp=Z,109nm,1.0s

BILL MLR MLR
comp=Z,3μm,16.0s
CN2 Changchun 20.93 267 *e*P **P 03 09 03.8 -2.0**
CN2 *e*S **S 03 12 54.3 -2.3**
CN2 pmax pmax
comp=Z,60nm,0.8s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,2μm,20.0s
CN2 LR LR
comp=E,2μm,20.0s
CN2 LR LR
comp=Z,2μm,24.0s
KSRS Korea Array 22.65 250 P **P 03 09 24.9 +0.5**
comp=Z,127nm,0.8s,baz=48,slow=9.3,SNR=124
KSRS PcP **PcP 03 13 16.4 +0.8**
comp=Z,7.1nm,0.9s,baz=5.8,slow=0.8,SNR=5.2
KSRS LR LR 03 17 30.6
comp=Z,2μm,19.0s,baz=54,slow=35
KSAR Wonju Array Be 22.68 250 P **P 03 09 24.9 +0.2**
KSAR PcP **PcP 03 13 16.4 +0.7**
SNY Shenyang 23.03 264 ⇑P **P 03 09 28.3 0.0**
SNY S **S 03 13 37.8 +1.9**
SNY pmax pmax
comp=Z,31nm,1.4s
SNY pmax pmax
comp=Z,280nm,3.9s
SNY LR LR
comp=N,1μm,18.0s
SNY LR LR
comp=E,1μm,19.2s
SNY LR LR
comp=Z,1μm,19.8s
GAMB Gambell 23.41 38 *e*P **P 03 09 31.1 -0.6**
comp=Z,33nm,0.9s
INCN Inchon 23.44 252 *e*P **P 03 09 33.0 +0.7**
comp=Z,295nm,1.4s
INCN LR LR
comp=Z,2μm,20.0s
INCN Inchon 23.44 252 P **P 03 09 33.3 +1.0**
SNR=8.2
JNU Nakatsue 23.88 238 *e*P **P 03 09 36.5 0.0**
comp=Z,85nm,1.0s
JNU Nakatsue 23.88 238 P **P 03 09 37.2 +0.7**
comp=Z,172nm,1.0s,baz=48,slow=6.5,SNR=16
JNU LR LR 03 19 10.0
comp=Z,937nm,19.8s,baz=39,slow=37
TNA Tin City 25.61 36 *e*P **P 03 09 53.0 +1.2**
comp=Z,114nm,1.1s
DL2 Dalian 25.82 260 P **P 03 09 54.3 +0.3**
DL2 S **S 03 14 22.8 +2.2**
DL2 pmax pmax
comp=Z,50nm,0.8s
DL2 pmax pmax
comp=Z,200nm,7.3s
DL2 LR LR
comp=N,360nm,15.1s
DL2 LR LR
comp=E,710nm,19.6s
DL2 LR LR
comp=Z,810nm,29.0s
TIXI Tiksi 25.85 341*c i*P **P 03 09 52.7 -1.4**
TIXI pmax pmax
comp=Z,140nm,1.3s
TIXI MLR MLR
comp=Z,2μm,18.0s
BJI Beijing 28.79 267 P **P 03 10 20.0 -0.7**
BJI pmax pmax
comp=Z,27nm,1.1s
BJI pmax pmax
comp=Z,260nm,9.2s
BJI LR LR
comp=N,440nm,18.4s
BJI LR LR
comp=E,1μm,17.2s
BJI LR LR
comp=Z,1μm,26.1s
MIDW Midway 29.60 124 PFAKE 03 10 40.0 +12
MIDW LR LR
comp=Z,3μm,22.0s
SVW2 Sparrevohn 30.15 47 *e*P **P 03 10 32.9 +0.4**
JOW Kunigami 30.18 233 *e*P **P 03 10 32.5 -0.6**
comp=Z,56nm,0.9s
WAKE Wake Island 30.95 158 PFAKE 03 10 50.0 +10
WAKE LR LR
comp=Z,2μm,22.0s
SSE Sheshan 31.03 248 P **P 03 10 41.8 +1.2**
SSE S **S 03 15 42.8 +0.1**
SSE pmax pmax
comp=Z,63nm,0.9s
SSE pmax pmax
comp=Z,210nm,4.3s
SSE LR LR
comp=N,460nm,19.0s
SSE LR LR
comp=E,380nm,19.8s
SSE LR LR
comp=Z,970nm,27.2s
HHC Hu-ho-hao-te 31.43 272 *e*P **P 03 10 44.4 +0.2**
HHC pP **pP 03 10 53.6 -1.8**
HHC PP **PnPn 03 11 50.1 +2.2**
HHC S **S 03 15 49.1 0.0**
HHC SS **SnSn 03 17 36.8 +1.3**
HHC pmax pmax
comp=Z,120nm,1.1s
HHC pmax pmax
comp=Z,490nm,1.9s
HHC LR LR
comp=N,1μm,16.2s
HHC LR LR
comp=E,3μm,18.7s
HHC LR LR
comp=Z,4μm,19.7s
ULN Ulaanbaatar 31.44 287 PFAKE 03 11 00.0 +16
ULN LR LR
comp=Z,4μm,19.0s
ULN Ulaanbaatar 31.44 287 P **P 03 10 44.2 -0.1**
SNR=6.7
ULN Ulaanbaatar 31.44 287 P **P 03 10 42.6 -1.7**
comp=Z,15nm,1.1s
NJ2 Nanjing 31.82 252 *e*P **P 03 10 48.6 +1.1**
NJ2 pP **pP 03 10 57.4 -1.3**
NJ2 PcP **PcP 03 13 41.3 +3.6**
NJ2 S **S 03 15 57.0 +2.0**
NJ2 pmax pmax
comp=Z,100nm,1.2s
NJ2 pmax pmax
comp=Z,400nm,4.3s
NJ2 LR LR
comp=N,920nm,11.2s
NJ2 LR LR
comp=E,620nm,15.4s
NJ2 LR LR
comp=Z,3μm,16.0s
KDAK Kodiak Island 31.84 54 *e*P **P 03 10 46.5 -0.9**
comp=Z,29nm,0.9s
KDAK LR LR
comp=Z,2μm,22.0s
KDAK Kodiak Island 31.84 54 P **P 03 10 46.8 -0.6**
comp=Z,15nm,1.1s,baz=295,slow=5.2,SNR=4.8
SPU Mount Spurr 31.86 47 *e*P **P 03 10 48.1 +0.5**
IRK Irkutsk 31.86 296 *e*P P 03 10 44.5 -3.3
IRK *e* 03 13 37.3
IRK pmax pmax
comp=Z,39nm,0.7s
SONM Songino Array 31.87 287 P **P 03 10 47.9 -0.1**
SONM PcP **PcP 03 13 37.8 0.0**
SONM Songino Array 31.87 287 P **P 03 10 47.9 -0.1**
comp=Z,5.7nm,0.9s,baz=66,slow=8.9,SNR=17
SONM PcP **PcP 03 13 37.7 0.0**
comp=Z,15nm,0.8s,baz=101,slow=1.8,SNR=17
SONM LR LR 03 25 03.5
comp=Z,5μm,18.2s,baz=65,slow=39
TLY Talaya 32.38 295 *e*P **P 03 10 52.5 +0.2**
TLY *e* 03 11 01.9
TLY *e*S **S 03 16 04.0 +0.4**
TLY pmax pmax
comp=Z,43nm,1.4s
TLY MLR MLR
comp=Z,2μm,19.0s
TLY Talaya 32.38 295 P **P 03 10 52.8 +0.5**
comp=Z,189nm,0.7s,SNR=16
BTO Baotou 32.57 273 *e*P **P 03 10 52.9 -1.3**
TRF Thorofare Moun 32.66 43 *e*P **P 03 10 54.0 -0.7**
comp=Z,24nm,0.9s

COLD Coldfoot 32.91 36 *e*P **P 03 10 57.0 +0.3**
comp=Z,26nm,1.0s
ZAK Zakamensk 32.98 293 *e*P **P 03 10 57.3 -0.3**
ZAK *e* 03 13 40.8
ZAK pmax pmax
comp=Z,19nm,1.2s
PMR Palmer 33.24 46 *e*P **P 03 10 59.8 +0.1**
PMR pmax pmax
comp=Z,11nm,0.9s
PMR Palmer 33.24 46 *e*P **P 03 10 59.8 +0.1**
comp=Z,10nm,0.9s
MCK McKinley 33.26 42 *e*P **P 03 10 58.9 -1.0**
MCK pmax pmax
comp=Z,39nm,0.9s
MCK McKinley 33.26 42 *e*P **P 03 10 58.9 -1.0**
comp=Z,39nm,0.9s
SML Sawmill 33.61 46 *e*P **P**
SML pmax pmax
comp=Z,28nm,0.9s
SML Sawmill 33.61 46 *e*P **P 03 11 02.9 -0.1**
comp=Z,28nm,0.9s
COLA College 33.73 40 *e*P **P 03 11 04.5 +0.6**
COLA pmax pmax
comp=Z,88nm,1.0s
COLA MLR MLR
comp=Z,687nm,20.0s
COLA College 33.73 40 *e*P **P 03 11 04.5 +0.6**
comp=Z,88nm,1.0s
COLA LR LR
comp=Z,687nm,20.0s
MOY Mondy 33.97 296 *e*P **P 03 11 06.7 +0.4**
ILAR Eielson Array 34.15 40 P **P 03 11 07.0 -0.5**
ILAR Eielson Array 34.15 40 P **P 03 11 07.0 -0.5**
comp=Z,18nm,1.0s,baz=260,slow=8.5,SNR=94
ILAR LR LR 03 24 46.9
comp=Z,585nm,20.5s,baz=278,slow=36
PAX Paxson 34.85 44 *e*P **P 03 11 12.7 -1.1**
PAX *e* 03 13 46.0
PAX pmax pmax
comp=Z,20nm,0.9s
PAX Paxson 34.85 44 *e*P **P 03 11 12.7 -1.1**
comp=Z,20nm,0.9s
PAX *e*PcP **PcP 03 13 46.0 +0.2**
DIV Divide 34.90 47 *e*P **P 03 11 14.0 -0.2**
comp=Z,28nm,0.8s
TATO Taipei 35.38 240 PFAKE
TATO LR LR 03 11 30.0 +12
comp=Z,2μm,20.0s
DOT Dot Lake 35.43 42 *e*P **P 03 11 17.8 -0.9**
comp=Z,19nm,0.8s
DOT *e*PcP **PcP 03 13 48.6 +1.1**
BMRM Bremner River 35.48 47 *e*P **P 03 11 19.1 -0.1**
comp=Z,36nm,0.9s
BMRM *e*PcP **PcP 03 13 47.8 +0.1**
YHNB Yeheng 35.68 240 PFAKE
YHNB LR LR 03 11 30.0 +8.8
comp=Z,1μm,20.0s
WHN Wuhan 35.68 254 P **P 03 11 21.1 0.0**
WHN LR LR
comp=N,2μm,17.0s
WHN LR LR
comp=E,1μm,17.1s
WHN LR LR
comp=Z,2μm,21.4s
GUMO Guam 36.12 197 PFAKE
GUMO LR LR 03 11 40.0 +15
comp=Z,761nm,19.0s
SSLB Suanglung 36.60 239 *e*P **P 03 11 29.1 +0.1**
comp=Z,53nm,1.1s
YULB Yu-li 36.72 238 *e*P **P 03 11 29.3 -0.7**
comp=Z,33nm,1.0s
XAN Xi'an 36.96 264 P **P 03 11 31.8 -0.2**
XAN pP **pP 03 11 41.8 -1.6**
XAN PP **PnPn 03 13 02.3 +5.2**
XAN LR LR
comp=N,870nm,22.5s
XAN LR LR
comp=E,420nm,20.0s
XAN LR LR
comp=Z,380nm,22.5s
QZH Quanzhou 37.08 243 ⇑*i*P **P 03 11 35.4 +2.3**
QZH S **S 03 17 19.0 +2.8**
QZH pmax pmax
comp=Z,130nm,0.8s
QZH pmax pmax
comp=Z,870nm,5.1s
QZH LR LR
comp=N,4μm,18.2s
QZH LR LR
comp=E,2μm,16.8s
QZH LR LR
comp=Z,1μm,15.5s
TPUB Ta-pu 37.17 239 *e*P **P 03 11 34.5 +0.6**
comp=Z,70nm,1.0s
TWG Pinlang 37.30 238 *e*P **P 03 11 34.8 -0.1**
comp=Z,291nm,1.0s
KRAR Krasnoyarsk 37.37 305 *e*P **P 03 11 34.9 -0.3**
KRAR pmax pmax
comp=Z,23nm,1.0s
LZH Lanzhou 39.09 271 ⇑P **P 03 11 50.5 +0.3**
LZH pP **pP 03 11 59.8 -1.7**
LZH S **S 03 17 51.0 +4.1**
LZH sS **sS 03 18 10.1 +4.3**
LZH pmax pmax
comp=Z,61nm,1.0s
LZH pmax pmax
comp=Z,190nm,4.1s
LZH LR LR
comp=N,1μm,14.7s
LZH LR LR
comp=E,790nm,14.9s
LZH LR LR
comp=Z,1μm,15.7s
INK Inuvik 39.22 34 P **P 03 11 51.3 +0.7**
INK Inuvik 39.22 34 P **P 03 11 51.3 +0.7**
comp=Z,24nm,0.9s,baz=276,slow=7.0,SNR=59
GTA Gaotai 39.90 278 *e*P **P 03 11 57.3 +0.5**
GTA pP **pP 03 12 06.8 -1.4**
GTA PcP **PcP 03 14 02.8 +1.0**
GTA PcS **PcS 03 17 53.0 +0.9**
GTA S **S 03 17 59.3 +0.4**
GTA SS **SS 03 20 51.3 -4.9**
GTA pmax pmax
comp=Z,36nm,1.1s
GTA pmax pmax
comp=Z,160nm,6.4s
GTA LR LR
comp=N,1μm,16.4s
GTA LR LR
comp=E,2μm,16.6s
GTA LR LR
comp=Z,3μm,16.4s
SKAG Skagway 40.33 48 *e*P **P 03 12 01.3 +1.4**
comp=Z,28nm,1.0s
CD2 Chengdu 42.31 264 ⇑*e*P **P 03 12 16.8 +0.2**
CD2 pP **pP 03 12 26.8 -1.3**
CD2 PP **PP 03 13 57.9 +2.9**
CD2 PcP **PcP 03 14 11.5 +1.9**
CD2 PcS **PcS 03 18 02.0 +0.3**
CD2 S **S 03 18 34.1 -0.6**
CD2 SS SS 03 21 36.8 -7.2
CD2 pmax pmax
comp=Z,80nm,0.8s
CD2 pmax pmax
comp=Z,280nm,5.5s
CD2 LR LR
comp=N,880nm,17.6s
CD2 LR LR
comp=E,940nm,16.6s
CD2 LR LR
comp=Z,1μm,20.0s
ZAA0 Zalesovo Array 42.43 305 *e*P **P 03 12 15.9 -1.4**
ZALV Zalesovo Beam 42.43 305 P **P 03 12 16.0 -1.2**
ZALV 03 14 10.1
ZALV 03 22 19.7
ZALV pmax pmax
comp=Z,7.0nm,0.5s
ZALV MLR MLR
comp=Z,1μm,18.7s
ZALV Zalesovo Beam 42.43 305 P **P 03 12 15.9 -1.2**
ZALV PcP **PcP 03 14 10.1 +0.5**
ZALV ScS ScS 03 22 19.7 +4.8
ZALV Zalesovo Beam 42.43 305 P **P 03 12 15.9 -1.2**
comp=Z,6.7nm,0.5s,baz=60,slow=6.7,SNR=19
ZALV PcP **PcP 03 14 10.1 +0.5**
comp=Z,22nm,1.0s,baz=54,slow=2.6,SNR=18
ZALV ScS ScS 03 22 19.7 +4.8
comp=Z,1.7nm,0.9s,baz=79,slow=7.8,SNR=5.1
ZALV LR LR 03 31 11.7
comp=Z,1μm,18.7s,baz=71,slow=38
WRAK Wrangell Islan 42.84 51 PFAKE 03 12 30.0 +10
WRAK LR LR
comp=Z,918nm,22.0s
NVS Novosibirsk 42.94 306 *i*P **P 03 12 21.3 0.0**
JOHN Johnston Islan 43.10 125 PFAKE 03 12 40.0 +17
JOHN LR LR
comp=Z,8.0nm,21.0s
DLBC Dease Lake 43.26 48 *e*P **P 03 12 25.3 +1.4**
DLBC Dease Lake 43.26 48 P **P 03 12 24.2 +0.3**
comp=Z,19nm,0.9s,baz=286,slow=9.1,SNR=30
GYA Guiyang 43.39 257 ⇑*i*P **P 03 12 25.4 -0.1**
GYA pP **pP 03 12 35.6 -1.4**
GYA sP **sP 03 12 41.3 -0.5**
GYA S **S 03 18 48.8 -1.9**
GYA pmax pmax
comp=Z,180nm,1.0s
GYA pmax pmax
comp=Z,210nm,5.3s
GYA LR LR
comp=N,510nm,17.9s
GYA LR LR
comp=E,560nm,17.1s
GYA LR LR
comp=Z,560nm,16.1s
WMQ Urumqi 45.35 290 P **P 03 12 41.0 +0.1**
WMQ pP **pP 03 12 51.0 -1.5**
WMQ PP **PP 03 14 27.0 -0.3**
WMQ S **S 03 19 18.0 -0.8**
WMQ SS **ScS 03 22 32.0 -1.8**
WMQ pmax pmax
comp=Z,24nm,1.0s
WMQ pmax pmax
comp=Z,260nm,5.0s
WMQ LR LR
comp=N,2μm,15.0s
WMQ LR LR
comp=E,1μm,15.0s
WMQ LR LR
comp=Z,2μm,15.0s
QIZ Qiongzhong 46.82 247 P **P 03 12 52.6 0.0**
QIZ S **S 03 19 34.3 -5.8**
QIZ pmax pmax
comp=Z,39nm,1.4s
QIZ pmax pmax
comp=Z,250nm,7.8s
QIZ LR LR
comp=N,420nm,15.5s
QIZ LR LR
comp=Z,630nm,17.1s
KMI Kunming 46.86 259 ⇑P **P 03 12 53.5 +0.4**
KMI pP **pP 03 13 04.4 -0.3**
KMI PcP **PcP 03 14 27.9 +2.4**
KMI PP **PP 03 14 44.6 +1.0**
KMI S **S 03 19 41.6 +0.6**
KMI SS SS 03 23 00.4 -7.3
KMI pmax pmax
comp=Z,130nm,0.7s
KMI pmax pmax
comp=Z,470nm,3.2s
KMI LR LR
comp=N,510nm,16.4s
KMI LR LR
comp=E,460nm,18.2s
KMI LR LR
comp=Z,510nm,18.7s
MK31 Makanchi Array 47.11 296 *e*P **P 03 12 53.8 -0.8**
MK31 *e* 03 14 25.4
MK31 Makanchi Array 47.11 296 *e*P **P 03 12 53.8 -0.8**
MK31 *e*PcP **PcP 03 14 25.4 -0.5**
MKAR Makanchi Array 47.11 296 *e*P **P 03 12 54.0 -0.7**
MKAR 03 14 26.2
MKAR 03 22 45.6
MKAR Makanchi Array 47.11 296 *e*P **P 03 12 54.0 -0.7**
MKAR PcP **PcP 03 14 26.2 +0.3**
MKAR ScS ScS 03 22 45.6 +0.5
MKAR Makanchi Array 47.11 296 P **P 03 12 53.9 -0.7**
comp=Z,7.3nm,0.6s,baz=70,slow=8.4,SNR=76
MKAR PcP **PcP 03 14 26.2 +0.3**
comp=Z,8.8nm,0.9s,baz=61,slow=5.7,SNR=4.1
MKAR ScS ScS 03 22 45.6 +0.5
comp=Z,0.6nm,0.7s,baz=60,slow=7.7,SNR=4.1
MKAR LR LR 03 34 10.2
comp=Z,2μm,19.4s,baz=55,slow=38
KURK Kurchatov 47.27 303 *e*P **P 03 12 54.1 -1.6**
KURK *e* 03 14 26.5
KURK pmax pmax
comp=Z,25nm,0.9s
KURK Kurchatov 47.27 303 *e*P **P 03 12 54.1 -1.6**
comp=Z,25nm,0.9s
KURK *e*PcP **PcP 03 14 26.5 +0.2**
KURK *e*ScP **ScP 03 18 15.4 -1.3**
KURK Kurchatov 47.27 303 P **P 03 12 55.1 -0.6**
SNR=12
KURK Kurchatov 47.27 303 P **P 03 12 54.7 -1.0**
comp=Z,124nm,0.8s,SNR=20
KURBB Kurchatov Arra 47.36 303 LR LR 03 33 55.0
comp=Z,2μm,20.6s,baz=55,slow=38
ALE Alert 47.54 6 P **P 03 12 57.0 -0.5**
comp=Z,183nm,0.7s,SNR=23
DAV Davao City (W) 48.46 221 PFAKE 03 13 20.0 +15
DAV LR LR
comp=Z,420nm,20.0s
RES Resolute Bay 48.46 19 *e*P **P 03 13 04.8 +0.2**
comp=Z,46nm,1.0s
YKW3 Yellowknife Ar 48.47 38 *e*P **P 03 13 05.2 +0.3**
comp=Z,0.8nm,1.0s
YKW3 *e*PcP **PcP 03 14 31.9 +1.5**
YKA Yellowknife Ar 48.51 38 P **P 03 13 04.8 -0.4**
YKA PcP **PcP 03 14 30.3 -0.2**
YKA Yellowknife Ar 48.51 38 P **P 03 13 04.8 -0.4**
comp=Z,27nm,0.9s,baz=297,slow=7.6,SNR=182
YKA PcP **PcP 03 14 30.3 -0.2**
comp=Z,3.2nm,0.9s,baz=301,slow=3.8,SNR=3.8
TARA Tarawa 49.76 156 PFAKE 03 13 30.0 +15
TARA LR LR
comp=Z,1μm,19.0s
BVA0 Borovoye Array 50.51 309 P **P 03 13 18.7 -1.9**
BVA0 pmax pmax
comp=Z,2.0nm,0.7s
BVAR Borovoye Array 50.51 309 P **P 03 13 19.3 -1.2**
BVAR 03 14 38.1
BVAR pmax pmax
comp=Z,6.0nm,0.5s
BVAR MLR MLR
comp=Z,2μm,21.4s
BVAR Borovoye Array 50.51 309 P **P 03 13 19.3 -1.2**
BVAR PcP **PcP 03 14 38.1 +0.1**
BVAR Borovoye Array 50.51 309 P **P 03 13 19.3 -1.2**
comp=Z,5.6nm,0.5s,baz=53,slow=8.2,SNR=16
BVAR PcP **PcP 03 14 38.1 +0.1**
comp=Z,14nm,0.9s,baz=63,slow=3.6,SNR=10
BVAR LR LR 03 36 02.4
comp=Z,2μm,21.4s,baz=67,slow=38
BRVK Borovoye 50.55 309*ce*P **P 03 13 19.8 -1.0**
BRVK pmax pmax
comp=Z,12nm,0.8s
BRVK Borovoye 50.55 309 *e*P **P 03 13 19.8 -1.0**
comp=Z,18nm,1.0s
BRVK LR LR
comp=Z,2μm,22.0s
BRVK Borovoye 50.55 309 P **P 03 13 20.4 -0.5**
SNR=6.2
BRVK Borovoye 50.55 309 P **P 03 13 19.1 -1.7**
comp=Z,100nm,0.8s,SNR=9.4
KBS Kingsbay 50.62 351 *e*S **S 03 20 29.6 -2.7**
KBS Kingsbay 50.62 351 *e*P **P 03 13 21.3 +0.2**
KBS pmax pmax
comp=Z,15nm,0.7s
KBS Kingsbay 50.62 351 *e*P **P 03 13 19.2 -1.8**
comp=Z,17nm,0.9s
KBS LR LR
comp=Z,692nm,20.0s
SPITS Spitsbergen Ar 50.78 350 P **P 03 13 20.4 -1.8**
SPITS Spitsbergen Ar 50.78 350 P **P 03 13 20.4 -1.8**
comp=Z,33nm,1.1s,baz=88,slow=12,SNR=16
NLWA Neilton Lookou 51.71 59 PFAKE 03 13 40.0 +10
NLWA LR LR
comp=Z,963nm,22.0s
UBPT Khong Chiam 52.35 248 P **P 03 13 34.3 -0.5**
comp=Z,53nm,1.6s,comp=Z,10μm
KDM Kudat 52.71 230 P **P 03 13 37.6 +0.2**

SVE	**Sverdlovsk**	**53.16**	**317**	⇑	*e*	P	**P**	**03 13 39.8**	**-0.4**
SVE					*e*			03 14 47.4	
SVE					*e*			03 15 37.7	
SVE					*e*	PPP	PPP	03 16 44.8	
SVE					*e*	S	S	03 20 59.7	-7.9
SVE					*e*			03 24 44.3	
SVE						pmax	pmax		
	comp=Z,19nm,0.6s								
SVE						MLR	MLR		
	comp=Z,969nm,17.0s								
TKM2	**Tokmak 2**	**53.21**	**296**		*i*	P	**P**	**03 13 40.7**	**-0.4**
TKM2	**Tokmak 2**	**53.21**	**296**			PFAKE		03 13 50.0	+8.9
TKM2						LR	LR		
	comp=Z,1µm,21.0s								
TKM2	**Tokmak 2**	**53.21**	**296**			P	**P**	**03 13 40.7**	**-0.4**
	SNR=9.4								
ULHL	**Ulahol**	**53.22**	**295**			P	**P**	**03 13 41.1**	**-0.1**
	SNR=22								
USP	**Ospenovka**	**53.66**	**297**			P	**P**	**03 13 44.1**	**0.0**
	SNR=11								
CHMS	**Chumysh**	**53.67**	**296**			P	**PcP**	**03 14 50.9**	**+0.8**
	SNR=6.0								
SHL	**Shillong**	**53.68**	**268**	⇑	*ix*		**P**	**03 13 44.0**	**-0.7**
SHL					*ex*		x	03 21 18.0	
KBK	**Karagaybulak**	**53.75**	**296**			P	**P**	**03 13 45.5**	**+0.4**
	SNR=5.2								
KKM	**Kota Kinabalu**	**53.77**	**231**		*e*	P	**P**	**03 13 46.0**	**+0.7**
	comp=Z,17nm,0.8s								
KKM						LR	LR		
	comp=Z,157nm,20.0s								
KKM	**Kota Kinabalu**	**53.77**	**231**			P	**P**	**03 13 45.5**	**+0.2**
KKM	**Kota Kinabalu**	**53.77**	**231**			P	**P**	**03 13 47.3**	**+2.0**
	comp=Z,35nm,1.2s,comp=Z,594nm								
CMMT	**Chiang Mai**	**53.81**	**257**			P	**P**	**03 13 46.5**	**+1.0**
	comp=Z,253nm,1.0s,comp=Z,2µm								
CHTO	**Chiang Mai**	**53.81**	**257**		*e*	P	**P**	**03 13 46.5**	**+1.0**
CHTO						MLR	MLR		
	comp=Z,727nm,20.0s								
CHTO	**Chiang Mai**	**53.81**	**257**		*e*	P	**P**	**03 13 46.5**	**+1.0**
	comp=Z,232nm,1.0s								
CHTO						LR	LR		
	comp=Z,727nm,20.0s								
CHTO	**Chiang Mai**	**53.81**	**257**			P	**P**	**03 13 46.9**	**+1.4**
	SNR=66								
CHTO	**Chiang Mai**	**53.81**	**257**			P	**P**	**03 13 45.2**	**-0.3**
	comp=Z,283nm,1.0s,comp=Z,2µm								
FRU	**Bishkek**	**53.85**	**296**		*e*	P	**P**	**03 13 46.0**	**+0.5**
KZA	**Kyzart**	**53.92**	**295**			P	**P**	**03 13 46.9**	**+0.4**
	SNR=11								
AAK	**Ala-Archa**	**54.04**	**296**		*c i*	P	**P**	**03 13 46.1**	**-1.0**
AAK						pmax	pmax		
	comp=Z,24nm,1.0s								
AAK	**Ala-Archa**	**54.04**	**296**		*e*	P	**P**	**03 13 46.7**	**-0.4**
	comp=Z,6.5nm,1.2s								
AAK	**Ala-Archa**	**54.04**	**296**			P	**P**	**03 13 47.1**	**0.0**
	SNR=7.5								
AAK	**Ala-Archa**	**54.04**	**296**			P	**P**	**03 13 46.0**	**-1.0**
	comp=Z,55nm,0.7s,SNR=9.8								
AAK	**Ala-Archa**	**54.04**	**296**			LR	LR	03 38 09.3	
	comp=Z,2µm,20.9s,baz=28,slow=38								
CM31	**Chiang Mai Arr**	**54.08**	**256**		*e*	P	**P**	**03 13 48.0**	**+0.6**
	comp=Z,96nm,0.8s								
CMAR	**Chiang Mai Arr**	**54.08**	**256**			P	**P**	**03 13 48.7**	**+1.3**
CMAR	**Chiang Mai Arr**	**54.08**	**256**			P	**P**	**03 13 48.7**	**+1.3**
	comp=Z,88nm,0.8s,baz=32,slow=7.2,SNR=183								
CMAR						LR	LR	03 38 25.6	
	comp=Z,678nm,18.7s,baz=45,slow=38								
ARU	**Arti**	**54.32**	**317**		*c i*	P	**P**	**03 13 47.4**	**-1.3**
ARU								03 14 51.4	
ARU								03 15 46.0	
ARU						S	**S**	**03 21 23.7**	**+0.3**
ARU						SS	**SS**	**03 25 05.7**	**+0.6**
ARU						pmax	pmax		
	comp=Z,71nm,1.2s								
ARU						MLR	MLR		
	comp=Z,801nm,16.0s								
EKS2	**Erkin-Say**	**54.45**	**296**		*e*	P	**P**	**03 13 49.5**	**-0.5**
EKS2						pmax	pmax		
	comp=Z,24nm,1.4s								
EKS2						MLR	MLR		
	comp=Z,1µm,20.0s								
EKS2	**Erkin-Say**	**54.45**	**296**		*e*	P	**P**	**03 13 49.5**	**-0.5**
	comp=Z,24nm,1.4s								
EKS2						LR	LR		
	comp=Z,1µm,20.0s								
EKS2	**Erkin-Say**	**54.45**	**296**			P	**P**	**03 13 49.9**	**-0.1**
	SNR=11								
TSM	**Tawau**	**54.45**	**228**			P	**P**	**03 13 50.6**	**+0.5**
DAG	**Danmarks Havn**	**54.60**	**358**		*i*	P	**P**	**03 13 48.5**	**-2.0**
DAG					*i*			03 14 52.6	
DAG						pmax	pmax		
	comp=Z,10.0nm,1.0s								
DAG	**Danmarks Havn**	**54.60**	**358**		*i*	P	**P**	**03 13 48.5**	**-2.0**
	comp=Z,10.0nm,1.0s								
DAG					*i*			03 14 52.6	
HAWA	**Hanford**	**54.72**	**58**		*e*	P	**P**	**03 13 52.3**	**+0.6**
	comp=Z,19nm,1.3s								
HAWA						LR	LR		
	comp=Z,591nm,19.0s								
AML	**Almayashu**	**54.81**	**296**			P	**P**	**03 13 53.1**	**+0.1**
	SNR=9.3								
NEW	**Newport**	**54.93**	**55**		*e*	P	**P**	**03 13 53.0**	**-0.3**
	comp=Z,111nm,2.8s								
NEW						LR	LR		
	comp=Z,579nm,21.0s								
NEW	**Newport**	**54.93**	**55**		⇑	P	**P**	**03 13 53.2**	**-0.1**
	baz=55								
KSH	**Kashi**	**55.02**	**292**		⇓ *i*	P	P	03 13 57.8	+3.6
KSH						pP	pP	03 14 07.8	+1.8
KSH						PcP	**PcP**	**03 14 57.8**	**+2.4**
KSH						PP	PP	03 16 02.8	+5.5
KSH						PcS	**PcS**	**03 18 56.6**	**+1.2**
KSH						S	**S**	**03 21 36.8**	**+3.3**
KSH						ScS	**ScS**	**03 23 40.8**	**+0.9**
KSH						SS	**SS**	**03 25 20.8**	**+3.8**
KSH						pmax	pmax		
	comp=Z,89nm,1.8s								
KSH						LR	LR		
	comp=N,590nm,8.1s								
KSH						LR	LR		
	comp=E,230nm,4.8s								
KSH						LR	LR		
	comp=Z,530nm,7.4s								
TAPN	**Taplejung**	**55.23**	**273**		*e*	P	**P**	**03 13 56.5**	**+0.4**
	comp=Z,45nm,0.7s								
A12A	**Yaak River Ran**	**55.32**	**53**		⇑	P	**P**	**03 13 56.5**	**+0.4**
	baz=55								
LVZ	**Lovozero**	**55.35**	**337**		*ce*	P	**P**	**03 13 54.8**	**-1.2**
LVZ						pmax	pmax		
	comp=Z,39nm,1.3s								
B12A	**Libby**	**55.63**	**54**		⇓	P	**P**	**03 13 58.8**	**+0.4**
	baz=55								
C11A	**Tepee Creek (N**	**55.65**	**55**		⇓	P	**P**	**03 13 58.6**	**0.0**
	baz=56,SNR=7.2								
YBH	**Yreka Blue Hor**	**55.68**	**64**		*e*	P	**P**	**03 14 00.1**	**+1.2**
	comp=Z,145nm,2.0s								
ODAN	**Odare**	**55.77**	**273**		*e*	P	**P**	**03 14 00.8**	**+0.9**
	comp=Z,29nm,0.6s								
KEV	**Kevo**	**55.79**	**341**		*e*	P	P	03 13 55.8	-3.3
KEV						pmax	pmax		
	comp=Z,4.0nm,0.5s								
KEV	**Kevo**	**55.79**	**341**			PFAKE		03 14 10.0	+11
KEV						LR	LR		
	comp=Z,2µm,20.0s								
KEV	**Kevo**	**55.79**	**341**		*ep*		P	03 13 55.8	-3.3
	comp=Z,4.1nm,0.5s								
APA	**Apatity**	**55.91**	**337**		⇓ *i*	P	P	03 14 11.0	+11
APA					*e*			03 15 03.0	
APA						pmax	pmax		
	comp=Z,26nm,1.0s								
APA						MLR	MLR		
	comp=Z,2µm,18.0s								
A13A	**Flathead Natio**	**55.98**	**53**		⇑	P	**P**	**03 14 01.1**	**+0.2**
	baz=56,SNR=9.0								
GUN	**Gumba**	**56.06**	**275**		*e*	P	**P**	**03 14 02.2**	**+0.1**
	comp=Z,62nm,0.6s								
KK31	**Karatay Array**	**56.09**	**299**		*ce*	P	**P**	**03 14 00.2**	**-1.5**
KK31						pmax	pmax		
	comp=Z,2.0nm,0.5s								
KKAR	**Karatay Array**	**56.09**	**299**		*e*	P	**P**	**03 14 00.5**	**-1.3**
KKAR	**Karatay Array**	**56.09**	**299**		*e*	P	**P**	**03 14 00.5**	**-1.3**
C12B	**Naegeli Ranch,**	**56.15**	**54**		⇑	P	**P**	**03 14 02.1**	**-0.1**
	baz=56								
WALA	**Waterton Lakes**	**56.16**	**52**		*e*	P	**P**	**03 14 01.8**	**-0.5**
	comp=Z,0.3nm,0.6s								
CHBT	**CHBT**	**56.23**	**249**			P	**P**	**03 14 04.0**	**+1.1**
	comp=Z,80nm,1.2s,comp=Z,1µm								
RAMN	**Ramite**	**56.23**	**274**		*e*	P	**P**	**03 14 03.3**	**+0.1**
	comp=Z,255nm,0.9s								
ARCES	**ARCESS Array B**	**56.29**	**341**			P	**P**	**03 14 00.8**	**-1.9**
ARCES	**ARCESS Array B**	**56.29**	**341**			P	**P**	**03 14 00.8**	**-1.9**
	comp=Z,18nm,1.1s,baz=34,slow=5.0,SNR=15								
ARCES						LR	LR	03 41 31.8	
	comp=Z,2µm,21.8s,baz=32,slow=40								
BSMT	**Bassoo Peak**	**56.43**	**54**		*e*	P	**P**	**03 14 05.0**	**+0.7**
A14A	**Double T Ranch**	**56.47**	**52**		⇓	P	**P**	**03 14 04.3**	**-0.2**
	baz=56,SNR=7.1								
WDC	**Whiskeytown Da**	**56.49**	**65**		*e*	P	**P**	**03 14 05.7**	**+1.2**
WDC						pmax	pmax		
	comp=Z,18nm,1.1s								
WDC	**Whiskeytown Da**	**56.49**	**65**		*e*	P	**P**	**03 14 05.7**	**+1.2**
	comp=Z,18nm,1.1s								
KKN	**Kakani**	**56.54**	**275**		*e*	P	**P**	**03 14 05.6**	**+0.3**
	comp=Z,198nm,0.9s								
BLMT	**Blacktail Moun**	**56.56**	**54**		*e*	P	**P**	**03 14 05.9**	**+0.7**
PKI	**Pulchoki**	**56.60**	**275**		*e*	P	**P**	**03 14 05.9**	**0.0**
	comp=Z,63nm,0.6s								
PKIN	**Phulchoki**	**56.60**	**275**		*e*	P	**P**	**03 14 07.0**	**+1.1**
	comp=Z,60nm,0.8s								
D12A	**Red Ives Fores**	**56.62**	**55**		⇑	P	**P**	**03 14 05.4**	**-0.1**
	baz=56								
C13A	**Hot Springs**	**56.65**	**54**		⇓	P	**P**	**03 14 05.9**	**+0.2**
	baz=56								
JTMT	**Jette**	**56.77**	**54**		*e*	P	**P**	**03 14 06.5**	**-0.1**
DMN	**Daman**	**56.77**	**275**		*e*	P	**P**	**03 14 07.7**	**+0.6**
	comp=Z,240nm,0.8s								
A15A	**Johnson Ranch,**	**56.83**	**52**		⇓	P	**P**	**03 14 06.3**	**-0.7**
	baz=57,SNR=8.6								
BMO	**Blue Mountains**	**56.89**	**58**		*e*	P	**P**	**03 14 07.7**	**+0.2**
	comp=Z,20nm,1.1s								
BMO						LR	LR		
	comp=Z,498nm,21.0s								
B14A	**Marquette Ranc**	**56.92**	**53**		⇓	P	**P**	**03 14 07.7**	**0.0**
	baz=57,SNR=5.5								
MOD	**Modoc**	**56.99**	**62**		*e*	P	**P**	**03 14 09.0**	**+0.7**
	comp=Z,92nm,1.5s								
C14A	**Swan Lake**	**57.04**	**53**		⇓	P	**P**	**03 14 08.7**	**+0.2**
	baz=57								
SWMT	**Swartz Lake**	**57.06**	**54**		*e*	P	**P**	**03 14 09.7**	**+1.0**
TMCR	**Tamitsa**	**57.07**	**332**		*e*	P	**P**	**03 14 05.4**	**-2.9**
TMCR						pmax	pmax		
	comp=Z,91nm,1.4s								
D13A	**Huson**	**57.07**	**54**		⇓	P	**P**	**03 14 08.8**	**+0.1**
	baz=57								
DANN	**Dangsing**	**57.17**	**277**		*e*	P	**P**	**03 14 10.2**	**+0.3**
	comp=Z,158nm,0.8s								
KTK1	**Kautokeino**	**57.20**	**341**		*e*	P	P	03 13 57.4	-12
B15A	**Bradely Ranch,**	**57.33**	**52**		⇑	P	**P**	**03 14 10.3**	**-0.2**
	baz=57,SNR=7.6								
A16A	**West Butte Ran**	**57.43**	**51**		⇓	P	**P**	**03 14 10.8**	**-0.5**
	baz=57,SNR=11								
F12A	**Elk City**	**57.47**	**56**		⇓	P	**P**	**03 14 11.8**	**+0.2**
	baz=57,SNR=9.4								
SLMT	**Seley Lake**	**57.50**	**54**		*e*	P	**P**	**03 14 12.1**	**+0.2**
MSO	**Missoula**	**57.52**	**54**		*e*	P	**P**	**03 14 12.0**	**+0.2**
	comp=Z,10nm,1.1s								
MSO						LR	LR		
	comp=Z,279nm,20.0s								
MSO	**Missoula**	**57.52**	**54**		⇑	P	**P**	**03 14 12.1**	**+0.2**
	baz=57,SNR=8.1								
TRO	**Tromso**	**57.55**	**343**		*e*	P	**P**	**03 14 10.0**	**-1.5**
D14A	**Greenough**	**57.59**	**54**		⇓	P	**P**	**03 14 12.6**	**+0.1**
	baz=57,SNR=15								
E13A	**Vior**	**57.62**	**55**		⇓	P	**P**	**03 14 12.7**	**+0.1**
	baz=57								
C15A	**Salmond Ranch,**	**57.64**	**53**		⇑	P	**P**	**03 14 13.4**	**+0.6**
	baz=57,SNR=20								
KOLN	**Koldanda**	**57.66**	**276**		*e*	P	**P**	**03 14 13.3**	**+0.1**
	comp=Z,92nm,0.8s								
B16A	**M & M Farms, S**	**57.71**	**52**		⇑	P	**P**	**03 14 12.9**	**-0.3**
	baz=58								
G12A	**Big Creek, Yel**	**57.82**	**57**		⇑	P	**P**	**03 14 14.1**	**0.0**
	baz=58								
CHMT	**Chamberlain Mo**	**57.83**	**54**		*e*	P	**P**	**03 14 14.9**	**+0.7**
PYUN	**Piuthan**	**57.84**	**277**		*e*	P	**P**	**03 14 14.4**	**-0.1**
	comp=Z,378nm,1.1s								
A17A	**Triple J Farms**	**57.90**	**51**		⇑	P	**P**	**03 14 14.1**	**-0.4**
	baz=58,SNR=5.7								
OHCM	**Honcut**	**57.90**	**65**		*e*	P	**P**	**03 14 16.7**	**+2.2**
F13A	**Darby**	**57.95**	**56**		⇑	P	**P**	**03 14 15.1**	**+0.1**
	baz=58								
E14A	**Clinton**	**58.02**	**55**		⇑	P	**P**	**03 14 15.5**	**+0.1**
	baz=58,SNR=8.5								
AB31	**Akbulak array**	**58.05**	**310**		*ce*	P	**P**	**03 14 14.2**	**-1.2**
AB31						pmax	pmax		
	comp=Z,11nm,0.6s								
ABKAR	**Akbulak array**	**58.05**	**310**		*e*	P	**P**	**03 14 14.3**	**-1.1**
C16A	**Fuhringer Ranc**	**58.07**	**52**		⇓	P	**P**	**03 14 15.9**	**+0.1**
	baz=58,SNR=9.6								
D15A	**Lincoln**	**58.14**	**54**		⇓	P	**P**	**03 14 16.5**	**+0.1**
	baz=58,SNR=6.5								
HNR	**Honiara**	**58.18**	**174**			PFAKE		03 14 30.0	+13
HNR						LR	LR		
	comp=Z,660nm,21.0s								
BEKR	**Beckworth**	**58.24**	**64**		*e*	P	**P**	**03 14 17.4**	**+0.3**
	comp=Z,4.5nm,0.9s								
B17A	**L&G Farms, Che**	**58.26**	**52**		⇑	P	**P**	**03 14 16.9**	**-0.1**
	baz=58,SNR=12								
AKTO	**Aktyubinsk**	**58.27**	**312**			P	**P**	**03 14 16.1**	**-0.9**
AKTO						pmax	pmax		
	comp=Z,6.0nm,0.6s								
AKTO	**Aktyubinsk**	**58.27**	**312**			P	**P**	**03 14 16.1**	**-0.9**
AKTO	**Aktyubinsk**	**58.27**	**312**			P	**P**	**03 14 16.1**	**-0.9**
	comp=Z,5.6nm,0.6s,baz=57,slow=7.9,SNR=14								
FFC	**Flin Flon**	**58.34**	**42**		*ce*	P	**P**	**03 14 18.0**	**+0.6**
FFC	**Flin Flon**	**58.34**	**42**		*e*	P	**P**	**03 14 17.6**	**+0.2**
	comp=Z,30nm,1.0s								
FFC						LR	LR		
	comp=Z,463nm,21.0s								
FFC	**Flin Flon**	**58.34**	**42**			P	**P**	**03 14 17.2**	**-0.2**
	comp=Z,174nm,0.9s,SNR=17								
A18A	**Metzger Ranch,**	**58.35**	**51**		⇑	P	**P**	**03 14 17.2**	**-0.4**
	baz=58,SNR=7.4								
PMG	**Port Moresby**	**58.40**	**189**			PFAKE		03 14 30.0	+12
PMG						LR	LR		
	comp=Z,396nm,20.0s								
G13A	**Cobalt**	**58.45**	**56**		⇓	P	**P**	**03 14 18.5**	**0.0**
	baz=58,SNR=22								
H12A	**Diamond D Ranc**	**58.45**	**57**		⇓	P	**P**	**03 14 18.4**	**-0.1**
	baz=58								
F14A	**Wisdom**	**58.46**	**55**		⇑	P	**P**	**03 14 18.8**	**+0.2**
	baz=58								
E15A	**Deer Lodge**	**58.47**	**54**		⇑	P	**P**	**03 14 18.9**	**+0.3**
	baz=58,SNR=6.4								
SUMG	**Summit**	**58.53**	**5**	⇑	*i*	P	**P**	**03 14 18.9**	**0.0**
SUMG						pmax	pmax		
	comp=Z,96nm,1.0s								
SUMG	**Summit**	**58.53**	**5**		*e*	P	**P**	**03 14 18.8**	**0.0**
	comp=Z,124nm,0.9s								
SUMG	**Summit**	**58.53**	**5**	⇑	*i*	P	**P**	**03 14 18.9**	**0.0**
	comp=Z,96nm,1.0s								
MFID	**Camas Ranch**	**58.62**	**59**		*e*	P	**P**	**03 14 20.2**	**+0.5**
	comp=Z,10nm,1.0s								
MFID	**Camas Ranch**	**58.62**	**59**		⇑	P	**P**	**03 14 20.0**	**+0.3**
	baz=58,SNR=7.3								
D16A	**Dana Ranch, Ca**	**58.66**	**53**		⇑	P	**P**	**03 14 20.3**	**+0.3**
	baz=58,SNR=20								
C17A	**Wharram Farm,**	**58.70**	**52**		⇑	P	**P**	**03 14 20.0**	**-0.1**
	baz=58,SNR=23								
B18A	**Beardsley Farm**	**58.72**	**51**		⇓	P	**P**	**03 14 20.4**	**+0.2**
	baz=58,SNR=18								
HRY	**Holter Researc**	**58.72**	**54**		*e*	P	**P**	**03 14 21.5**	**+1.2**
H13A	**Challis**	**58.77**	**57**		⇑	P	**P**	**03 14 20.8**	**+0.1**
	baz=59,SNR=14								
I12A	**Atlanta**	**58.77**	**58**		⇓	P	**P**	**03 14 21.1**	**+0.4**
	baz=59,SNR=13								
G14A	**Jackson**	**58.77**	**56**		⇓	P	**P**	**03 14 20.6**	**-0.2**
	baz=59								
SBUM	**Sibu**	**58.89**	**232**			P	**P**	**03 14 22.0**	**+0.3**
A19A	**Klindworth Far**	**58.90**	**50**		⇑	P	**P**	**03 14 21.5**	**0.0**
	baz=59,SNR=12								
E16A	**East Helena**	**58.91**	**54**		⇓	P	**P**	**03 14 22.1**	**+0.5**
	baz=59,SNR=7.2								
F15A	**Butte**	**58.92**	**55**		⇑	P	**P**	**03 14 22.1**	**+0.3**
	baz=59,SNR=11								
LRM	**Limekiln Ridge**	**58.95**	**55**		*e*	P	**P**	**03 14 21.9**	**-0.2**
EGMT	**Eagleton**	**58.97**	**51**		*e*	P	**P**	**03 14 22.1**	**+0.1**
	comp=Z,24nm,1.0s								
EGMT						LR	LR		
	comp=Z,479nm,22.0s								
EGMT	**Eagleton**	**58.97**	**51**		⇑	P	**P**	**03 14 21.8**	**-0.1**
	baz=59,SNR=6.2								
D17A	**Six Diamond Ra**	**59.04**	**53**		⇓	P	**P**	**03 14 22.8**	**+0.2**
	baz=59,SNR=18								
B19A	**Brinkman Farms**	**59.11**	**50**		⇓	P	**P**	**03 14 23.1**	**+0.3**
	baz=59,SNR=21								
DLMT	**Dillon**	**59.17**	**55**		*e*	P	**P**	**03 14 23.5**	**0.0**
	comp=Z,7.9nm,0.8s								
H14A	**Leadore**	**59.23**	**56**		⇑	P	**P**	**03 14 24.2**	**+0.3**
	baz=59								
I13A	**Wildhorse Cree**	**59.26**	**57**		⇓	P	**P**	**03 14 24.6**	**+0.4**
	baz=59,SNR=26								
HLID	**Hailey**	**59.32**	**58**		*e*	P	**P**	**03 14 25.2**	**+0.6**
	comp=Z,18nm,1.0s								
HLID						LR	LR		
	comp=Z,373nm,22.0s								
HLID	**Hailey**	**59.32**	**58**		⇓	P	**P**	**03 14 25.0**	**+0.4**
	baz=59,SNR=18								
A20A	**Cobblestone Ra**	**59.35**	**50**		⇑	P	**P**	**03 14 24.8**	**+0.2**
	baz=59,SNR=20								
G15A	**Dillon**	**59.35**	**55**		⇑	P	**P**	**03 14 25.0**	**+0.2**
	baz=59,SNR=6.6								
MCMT	**McKenzie Canyo**	**59.37**	**56**		*e*	P	**P**	**03 14 24.9**	**-0.1**
	comp=Z,5.9nm,0.9s								
CMB	**Columbia Colle**	**59.39**	**66**		*e*	P	**P**	**03 14 25.3**	**+0.3**
CMB						pmax	pmax		
	comp=Z,17nm,1.3s								
CMB	**Columbia Colle**	**59.39**	**66**		*e*	P	**P**	**03 14 25.3**	**+0.3**
	comp=Z,17nm,1.3s								
E17A	**Martinsdale**	**59.39**	**53**		⇓	P	**P**	**03 14 25.9**	**+0.9**
	baz=59,SNR=20								
F16A	**Kennard Place,**	**59.42**	**54**		⇓	P	**P**	**03 14 25.7**	**+0.5**
	baz=59								
D18A	**Linhart Farms,**	**59.48**	**52**		⇓	P	**P**	**03 14 26.1**	**+0.6**
	baz=59								
BOZ	**Bozeman (W)**	**59.51**	**54**		*e*	P	**P**	**03 14 26.6**	**+0.8**
BOZ						pmax	pmax		
	comp=Z,17nm,0.9s								
BOZ						MLR	MLR		
	comp=Z,350nm,22.0s								
BOZ	**Bozeman (W)**	**59.51**	**54**		*e*	P	**P**	**03 14 26.6**	**+0.8**
	comp=Z,17nm,0.9s								
BOZ					*e*	ScP	**ScP**	**03 19 14.9**	**+4.7**
BOZ						LR	LR		
	comp=Z,350nm,22.0s								
BOZ	**Bozeman (W)**	**59.51**	**54**		⇓	P	**P**	**03 14 26.6**	**+0.8**
	baz=59,SNR=25								
C19A	**Slack Wire Ran**	**59.52**	**51**		⇓	P	**P**	**03 14 26.5**	**+0.8**
	baz=59,SNR=15								
J13A	**Cove Ranch, Pi**	**59.56**	**58**		⇑	P	**P**	**03 14 26.7**	**+0.5**
	baz=59,SNR=12								
B20A	**Solberg Farm,**	**59.59**	**50**		⇓	P	**P**	**03 14 26.3**	**+0.1**
	baz=59,SNR=16								
I14A	**Mackay**	**59.62**	**57**		⇓	P	**P**	**03 14 27.5**	**+0.8**
	baz=59,SNR=26								
H15A	**Lima**	**59.62**	**56**		⇓	P	**P**	**03 14 26.7**	**0.0**
	baz=59								
G16A	**Moss Hill, Enn**	**59.68**	**55**		⇑	P	**P**	**03 14 27.5**	**+0.5**
	baz=60,SNR=32								
BMN	**Battle Mountai**	**59.73**	**62**		*e*	P	**P**	**03 14 28.5**	**+1.1**
BMN					*e*	*PP	**pP**	**03 14 38.3**	**-1.0**
BMN						pmax	pmax		
	comp=Z,11nm,0.8s								
BMN						MLR	MLR		
	comp=Z,543nm,20.0s								
BMN	**Battle Mountai**	**59.73**	**62**		*e*	P	**P**	**03 14 28.5**	**+1.1**
	comp=Z,11nm,0.8s								
BMN					*ep*	P	**pP**	**03 14 38.3**	**-1.0**
BMN						LR	LR		
	comp=Z,543nm,20.0s								
A21A	**Bergtoll Ranch**	**59.78**	**49**		⇓	P	**P**	**03 14 27.9**	**+0.4**
	baz=60								
E18A	**Harlowton**	**59.83**	**53**		⇑	P	**P**	**03 14 28.7**	**+0.7**
	baz=60								
F17A	**Fitzpatrick Pl**	**59.86**	**54**		⇓	P	**P**	**03 14 29.0**	**+0.8**
	baz=60,SNR=12								
JMIC	**Jan Mayen**	**59.90**	**354**			P	**P**	**03 14 26.9**	**-1.0**
JMIC	**Jan Mayen**	**59.90**	**354**			P	**P**	**03 14 26.8**	**-1.0**
	comp=Z,24nm,0.8s,baz=308,slow=5.6,SNR=2.6								
D19A	**Cripps Ranch,**	**59.98**	**52**		⇓	P	**P**	**03 14 29.4**	**+0.5**
	baz=60,SNR=10.0								
JOF	**Joensuu**	**60.01**	**334**		*e*	P	**P**	**03 14 26.6**	**-2.2**
JOF						pmax	pmax		
	comp=Z,8.0nm,0.6s								
JOF	**Joensuu**	**60.01**	**334**		*ep*		**P**	**03 14 26.6**	**-2.2**
	comp=Z,8.4nm,0.6s								
C20A	**Veseth Ranch,**	**60.07**	**51**		⇓	P	**P**	**03 14 30.1**	**+0.6**
	baz=60,SNR=23								
B21A	**Ellsworth Farm**	**60.10**	**50**		⇑	P	**P**	**03 14 30.2**	**+0.5**
	baz=60								
**I15A

B23A Brockton 61.09 48 ⇑P P 03 14 36.8 +0.3
baz=61
RLMT Red Lodge 61.11 54 eP P 03 14 37.9 +1.0
comp=Z,28nm,1.2s
RLMT LR LR
comp=Z,425nm,20.0s
RLMT Red Lodge 61.11 54 ⇑P P 03 14 37.8 +1.0
baz=61,SNR=18
C22A Vida 61.12 50 ⇑P P 03 14 36.9 +0.2
baz=61,SNR=14
RRI2 Red Ridge 61.17 56 eP P 03 14 39.0 +1.7
comp=Z,19nm,0.8s
H18A Shoshone NF, C 61.19 54 ⇓P P 03 14 38.1 +0.7
baz=61,SNR=6.2
I17A Pilgrim Ck. 61.20 55 ⇓P P 03 14 39.0 +1.5
baz=61,SNR=7.5
NDI New Delhi 61.21 282 ex P 03 14 40.0 +2.5
MOOW Moose Ponds 61.22 56 eP P 03 14 38.7 +1.0
comp=Z,11nm,1.0s
F20A Billings 61.25 52 ⇑P P 03 14 38.3 +0.6
baz=61
A24A Westby 61.26 48 ⇑P P 03 14 37.9 +0.3
baz=61,SNR=12
TPAW Teton Pass 61.28 56 eP P 03 14 39.0 +0.9
comp=Z,23nm,1.0s
E21A Keefer Ranch, 61.32 51 ⇑P P 03 14 38.9 +0.8
baz=61
K16A Soda Springs 61.36 57 ⇓P P 03 14 39.9 +1.4
baz=61,SNR=14
D22A Cohagen 61.37 50 ⇓P P 03 14 39.0 +0.6
baz=61,SNR=17
LOHW Long Hollow 61.39 56 eP P 03 14 39.7 +0.9
comp=Z,18nm,1.0s
HVU Hansel Valley 61.40 58 eP P 03 14 40.3 +1.5
HVU pmax pmax
comp=Z,20nm,1.2s
HVU Hansel Valley 61.40 58 eP P 03 14 40.3 +1.5
comp=Z,20nm,1.2s
SNOW Snow King Moun 61.41 56 eP P 03 14 40.2 +1.2
comp=Z,26nm,1.1s
C23A Lambert 61.43 49 ⇑P P 03 14 39.5 +0.7
baz=61,SNR=6.5
L15A Malad City 61.47 58 ⇓P P 03 14 39.8 +0.5
baz=61
DGMT Dagmar 61.47 48 eP P 03 14 39.5 +0.5
DGMT LR LR
comp=Z,534nm,22.0s
DGMT Dagmar 61.47 48 ⇓P P 03 14 39.3 +0.3
baz=61,SNR=10
J17A Brown Place, J 61.50 56 ⇓P P 03 14 40.5 +1.0
baz=61,SNR=20
H19A Powell 61.56 54 ⇓P P 03 14 40.5 +0.7
baz=61,SNR=6.5
G20A Bridger 61.60 53 ⇑P P 03 14 40.2 +0.1
baz=61,SNR=11
VES Vestal, Richgr 61.61 67 ⇑P P 03 14 41.2 +1.2
baz=62
AHID Auburn Hatcher 61.68 57 PFAKE 03 14 50.0 +9.3
AHID LR LR
comp=Z,364nm,21.0s
I18A Diamond G Ranc 61.76 55 ⇑P P 03 14 42.4 +1.1
baz=62,SNR=12
F21A Absaloka Mine, 61.77 52 ⇑P P 03 14 41.6 +0.4
baz=62
K17A Gardner Place, 61.79 56 ⇓P P 03 14 42.1 +0.6
baz=62
KAPI Kappang 61.80 221 eP P 03 14 40.6 -0.9
comp=Z,35nm,1.0s
KAPI LR LR
comp=Z,361nm,20.0s
KAPI Kappang 61.80 221 P P 03 14 41.0 -0.5
SNR=6.2
KAPI Kappang 61.80 221 P P 03 14 40.0 -1.4
comp=Z,185nm,1.0s,SNR=8.9
KAPI Kappang 61.80 221 P P 03 14 41.5 +0.1
comp=Z,40nm,1.2s
D23A Lindsay 61.84 50 ⇑P P 03 14 42.2 +0.6
baz=62,SNR=6.2
GRAC Grapevine Rang 61.88 65 ⇓P P 03 14 42.6 +0.6
baz=62
E22A Miles City 61.96 51 ⇓P P 03 14 42.8 +0.4
baz=62,SNR=8.4
J18A Kendall Valley 61.97 56 ⇓P P 03 14 43.3 +0.6
baz=62,SNR=11
I19A Meeteetse 61.98 54 ⇓P P 03 14 43.5 +0.8
baz=62,SNR=7.4
L16A Fish Haven 61.99 57 ⇓P P 03 14 43.4 +0.6
baz=62
C24A Savage 62.00 49 ⇓P P 03 14 43.1 +0.6
baz=62,SNR=5.8
R11A Troy Canyon, C 62.05 63 ⇓P P 03 14 43.3 +0.1
baz=62,SNR=12
KAF Kangasniemi 62.07 335 eP P 03 14 40.0 -2.7
KAF pmax pmax
comp=Z,9.0nm,0.8s
KAF Kangasniemi 62.07 335 ep P 03 14 40.0 -2.7
comp=Z,8.5nm,0.8s
G21A Lodge Grass 62.13 52 ⇓P P 03 14 43.8 +0.2
baz=62
SBC Santa Barbara 62.15 69 ⇓P P 03 14 44.4 +0.7
baz=62
HWUT Hardware Ranch 62.19 58 eP P 03 14 44.7 +0.5
comp=Z,20nm,1.1s
HWUT LR LR
comp=Z,543nm,21.0s
H20A Greybull 62.21 53 ⇓P P 03 14 44.2 +0.1
baz=62
L17A Cokeville 62.25 57 ⇓P P 03 14 45.0 +0.5
baz=62,SNR=14
F22A Rosebud 62.25 51 ⇑P P 03 14 44.7 +0.4
baz=62
E23A Ismay 62.25 50 ⇓P P 03 14 45.0 +0.7
baz=62,SNR=11
D24A Glendive 62.33 49 ⇑P P 03 14 45.4 +0.6
baz=62,SNR=8.8
K18A Toltan Ranch, 62.34 56 ⇑P P 03 14 46.2 +1.0
baz=62,SNR=20
M16A Huntsville 62.35 58 ⇑P P 03 14 45.5 +0.3
baz=62
DUG Dugway 62.42 60 PFAKE 03 15 00.0 +14
DUG LR LR
comp=Z,745nm,19.0s
DUG Dugway 62.42 60 ⇑P P 03 14 46.2 +0.5
baz=62,SNR=17
MPMC Manual Prospec 62.43 66 ⇑P P 03 14 45.9 +0.1
baz=62
J19A Crowheart 62.46 55 ⇑P P 03 14 46.8 +0.8
baz=62,SNR=12
I20A Worland 62.50 54 ⇓P P 03 14 46.8 +0.7
baz=62,SNR=11
BW06 Boulder Array 62.52 56 eP P 03 14 46.9 +0.4
comp=Z,16nm,0.9s
BW06 LR LR
comp=Z,441nm,22.0s
BW06 Boulder Array 62.52 56 ⇑P P 03 14 46.5 +0.1
baz=62,SNR=30
PDAR Pinedale Array 62.52 56 P P 03 14 46.8 +0.3
PDAR Pinedale Array 62.52 56 P P 03 14 46.8 +0.3
comp=Z,17nm,0.9s,baz=306,slow=2.2,SNR=91
PDAR LR LR 03 42 39.3
comp=Z,234nm,21.4s,baz=337,slow=37
FURC Furnace Creek, 62.54 65 ⇑P P 03 14 46.8 +0.5
baz=62,SNR=8.6
G22A Birney 62.61 52 ⇓P P 03 14 47.1 +0.3
baz=62,SNR=5.4
H21A Big Horn, Sher 62.62 53 ⇓P P 03 14 47.3 +0.4
baz=62,SNR=13
FIA1 FINESS Array S 62.68 335 eP P 03 14 45.1 -1.7
FINES FINESS Array B 62.68 335 P P 03 14 45.2 -1.6
FINES FINESS Array B 62.68 335 P P 03 14 45.2 -1.6
comp=Z,14nm,0.7s,baz=37,slow=7.8,SNR=68
FINES LR LR 03 44 46.7
comp=Z,2μm,20.4s,baz=39,slow=39
E24A Baker 62.72 50 ⇑P P 03 14 47.9 +0.5
baz=62
M17A Scullys Gap (B 62.78 57 ⇑P P 03 14 48.2 +0.1
baz=63,SNR=5.9
L18A Fontenelle, Gr 62.83 57 ⇓P P 03 14 48.7 +0.3
baz=63,SNR=7.9
K19A Absolon Red Bu 62.87 55 ⇓P P 03 14 48.5 -0.2
baz=63,SNR=7.1
SFJD Kangerlussuaq 62.87 11 eP P 03 14 47.1 -0.8
comp=Z,21nm,0.7s
SFJD LR LR
comp=Z,705nm,20.0s
SFJD Kangerlussuaq 62.87 11 ⇑iP P 03 14 47.4 -0.5
comp=Z,23nm,0.7s
SFJD
comp=Z,530nm,18.0s
SFJD Kangerlussuaq 62.87 11 P P 03 14 47.5 -0.5
comp=Z,21nm,0.6s,baz=338,slow=6.3,SNR=18
EDW2 Edwards Air Fo 62.91 67 ⇑P P 03 14 49.7 +0.7
baz=63
JLU Jordanelle 62.93 59 eP P 03 14 49.7 +0.6
comp=Z,14nm,1.1s
J20A Shoshoni 62.93 54 ⇓P P 03 14 49.8 +0.9
baz=63,SNR=13
H22A Clearmont 63.00 52 ⇓P P 03 14 49.7 +0.2
baz=63
I21A Big Trails, Te 63.04 54 ⇑P P 03 14 50.1 +0.4
baz=63,SNR=20
N17A Moffit Pass 63.04 58 ⇑P P 03 14 50.3 +0.3
baz=63,SNR=12
L19A Farson 63.08 56 ⇑P P 03 14 50.3 +0.1
baz=63
G23A Biddle 63.09 51 ⇑P P 03 14 50.3 +0.3
baz=63,SNR=9.2
KULM Kulim 63.09 245 eP P 03 14 51.1 +0.9
comp=Z,75nm,1.1s
KULM Kulim 63.09 245 P P 03 14 51.4 +1.2
F24A Ekalaka 63.13 50 P P 03 14 50.6 +0.3
baz=63,SNR=12
M18A Lyman 63.14 57 ⇑P P 03 14 50.8 +0.2
baz=63
DAU Daniels Canyon 63.16 59 eP P 03 14 51.8 +1.0
DAU Daniels Canyon 63.16 59 eP P 03 14 51.8 +1.0
MPU Maple Canyon 63.22 59 eP P 03 14 51.5 +0.5
comp=Z,13nm,0.9s
K20A Yellowstone Ra 63.26 55 ⇑P P 03 14 50.9 -0.3
baz=63,SNR=12
SHOC Shoshone 63.27 65 ⇓P P 03 14 51.3 +0.2
baz=63
J21A Lysite 63.27 54 ⇑P P 03 14 51.5 +0.1
baz=63,SNR=12
GSC Goldstone 63.35 66 ⇓P P 03 14 51.5 -0.3
baz=63
COEN Coen 63.38 193 eP P 03 14 50.6 -1.3
comp=Z,99nm,0.9s
I22A 9 Mile Ranch, 63.41 53 ⇓P P 03 14 52.7 +0.5
baz=63,SNR=12
MOS Moscow 63.42 326 eP P
MOS i 03 15 03.5
MOS e 03 15 25.9
MOS pmax pmax
comp=Z,36nm,1.2s
G24A Alzada 63.50 51 ⇓P P 03 14 52.8 +0.1
baz=63
IPM Ipoh 63.51 244 ePn P 03 14 52.8 -0.2
comp=Z,53nm,1.1s
IPM Ipoh 63.51 244 P P 03 14 53.3 +0.3
M19A Rock Springs 63.59 57 ⇓P P 03 14 53.6 +0.1
baz=63
N18A Larsen Ranch, 63.67 57 ⇑P P 03 14 53.8 -0.1
baz=64,SNR=7.2
ARUT Antelope Range 63.68 62 eP P 03 14 54.4 +0.3
ARUT pmax pmax
comp=Z,21nm,1.2s
ARUT Antelope Range 63.68 62 eP P 03 14 54.4 +0.3
comp=Z,21nm,1.2s
L20A Wamsutter 63.70 56 ⇑P P 03 14 54.2 0.0
baz=64,SNR=9.3
TUQ Turquoise Moun 63.79 66 ⇑P P 03 14 54.7 -0.1
baz=64
H24A Dirks Ranch, A 63.84 51 ⇓P P 03 14 54.5 -0.4
baz=64,SNR=10
K21A Alcova 63.86 55 ⇑P P 03 14 55.2 0.0
baz=64,SNR=21
CCUT Cedar City 63.88 62 eP P 03 14 56.1 +0.6
comp=Z,9.2nm,0.9s
MVU Marysvale 63.91 61 eP P 03 14 56.3 +0.7
comp=Z,7.4nm,1.0s
MVU LR LR
comp=Z,704nm,21.0s
MSU Marysvale 63.92 61 eP P 03 14 56.6 +0.9
MSU Marysvale 63.92 61 eP P 03 14 56.6 +0.9
TMUT Trail Mountain 63.94 60 eP P 03 14 56.2 +0.2
comp=Z,16nm,1.0s
HEC Hector,Ludlow 63.96 66 ⇓P P 03 14 55.7 -0.1
baz=64,SNR=9.4
N19A John Jarvie Ra 64.00 57 ⇓P P 03 14 56.1 0.0
baz=64,SNR=8.6
MYKOM Kota Tinggi 64.03 240 P P 03 14 57.8 +1.4
P17A Butcher Ranch, 64.09 59 ⇓P P 03 14 57.1 +0.3
baz=64,SNR=6.9
MDND Maddock 64.13 46 ⇑P P 03 14 57.0 +0.3
baz=64,SNR=8.2
ULM Lac du Bonnet 64.13 42 eP P 03 14 56.5 -0.1
ULM Lac du Bonnet 64.13 42 P P 03 14 56.4 -0.2
comp=Z,12nm,0.8s,baz=312,slow=7.0,SNR=15
ULM LR LR 03 46 05.7
comp=Z,479nm,19.4s,baz=173,slow=39
M20A Sweetwater, Wa 64.14 56 ⇑P P 03 14 57.7 +0.6
baz=64,SNR=9.4
KGM Kluang 64.15 241 P P 03 14 57.3 +0.1
Q16A Castle Valley 64.22 60 ⇑P P 03 14 57.9 +0.3
baz=64,SNR=6.7
J23A Dilts Ranch, B 64.24 53 ⇑P P 03 14 57.6 0.0
baz=64
K22A Casper 64.24 54 ⇑P P 03 14 57.7 0.0
baz=64
L21A Rawlins 64.26 55 ⇓P P 03 14 57.8 0.0
baz=64,SNR=8.8
MURC Murrieta 64.26 68 ⇓P P 03 14 57.8 +0.1
baz=64
P18A Preston Nutter 64.26 59 ⇑P P 03 14 58.4 +0.4
baz=64
OBN Obninsk 64.29 326 ⇓iP P 03 14 56.2 -1.3
OBN i 03 15 11.3
OBN i 03 15 31.5
OBN eS S 03 23 39.2 +7.2
OBN pmax pmax
comp=Z,34nm,1.2s
OBN MLR MLR
comp=Z,900nm,20.0s
GMRC Granite Mounta 64.39 66 ⇑P P 03 14 59.1 +0.3
baz=64,SNR=7.6
I24A Kuemmerle Ranc 64.41 52 ⇑P P 03 14 57.5 -1.2
baz=64
O19A Miners Draw (B 64.44 57 ⇑P P 03 14 58.8 -0.1
baz=64,SNR=14
SRU San Rafael 64.46 59 eP P 03 14 59.7 +0.5
SRU San Rafael 64.46 59 eP P 03 14 59.7 +0.5
comp=Z,840nm,0.8s
SRU San Rafael 64.46 59 ⇓P P 03 14 59.6 +0.4
baz=64,SNR=26
M21A Separation Pea 64.51 55 ⇓P P 03 14 59.4 -0.1
baz=64,SNR=18
RSSD Black Hills 64.53 52 eP P 03 14 59.8 +0.2
RSSD pmax pmax
comp=Z,25nm,1.1s
RSSD Black Hills 64.53 52 eP P 03 14 59.8 +0.2
comp=Z,25nm,1.1s
N20A Spence Gulch, 64.55 57 ⇑P P 03 15 00.3 +0.5
baz=64,SNR=20
K23A Bowen Ranch, D 64.65 54 ⇑P P 03 14 59.9 -0.5
baz=64
PFO Pinyon Flat Ob 64.71 67 PFAKE 03 15 10.0 +9.2
PFO LR LR
comp=Z,582nm,21.0s
PFO Pinyon Flat Ob 64.71 67 ⇑P P 03 15 01.0 +0.2
baz=65
L22A Ellis Ranch, M 64.72 55 ⇓P P 03 15 01.4 +0.5
baz=64,SNR=7.8
BELC Belle Mtn. Jos 64.72 67 ⇑P P 03 15 00.4 -0.5
baz=65
J24A Dixon Ranch, L 64.76 53 ⇓P P 03 15 00.8 -0.2
baz=64
P19A Cripple Cowboy 64.97 58 ⇓P P 03 15 02.7 +0.1
baz=65,SNR=22
N21A Black Mountain 65.00 56 ⇑P P 03 15 02.9 +0.1
baz=65,SNR=8.4
O20A White River Ci 65.04 57 ⇑P P 03 15 03.0 0.0
baz=65,SNR=8.9
L23A Garrett 65.05 54 ⇑P P 03 15 02.7 -0.4
baz=65,SNR=5.5
M22A Cedar Creek Ra 65.06 55 ⇓P P 03 15 03.0 -0.1
baz=65,SNR=18
IRM Iron Mountain 65.12 66 ⇑P P 03 15 03.5 +0.1
baz=65,SNR=7.6
W13A Hualapai Mount 65.24 65 ⇑P P 03 15 04.2 -0.2
baz=65
U15A North Rim 65.27 62 ⇑P P 03 15 05.0 +0.3
baz=65,SNR=11
Q19A Hogan Spring (65.28 59 ⇑P P 03 15 04.4 -0.1
baz=65,SNR=28
BC3 Big Chuckawall 65.29 67 ⇑P P 03 15 04.4 -0.1
baz=65
VRHR Novokhopersk 65.32 320 eP P 03 15 02.0 -2.3
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,20nm,0.6s
VRHR pmax pmax
comp=E,2.0nm,0.3s
VRHR MLR MLR
comp=N,470nm,20.0s
VRHR MLR MLR
comp=E,320nm,20.0s
VRHR MLR MLR
comp=Z,860nm,20.0s
P20A De Beque 65.39 58 ⇓P P 03 15 04.9 -0.3
baz=65,SNR=6.0
O21A Pagoda 65.41 57 ⇓P P 03 15 05.7 +0.3
baz=65
M23A Laramie 65.49 55 ⇓P P 03 15 06.0 0.0
baz=65,SNR=5.5
L24A Wheatland 65.51 54 ⇓P P 03 15 06.1 +0.1
baz=65
N22A Wattenberg Ran 65.56 56 ⇑P P 03 15 07.1 +0.6
baz=65,SNR=12
PDMCI Parker Dam,Lak 65.64 65 ⇓P P 03 15 06.8 +0.1
baz=66
S18A Hurst Farm, Bl 65.74 60 ⇑P P 03 15 07.5 -0.1
baz=66,SNR=22
N23A Red Feather La 65.77 55 ⇑P P 03 15 08.3 +0.5
baz=66,SNR=12
Y12C Blythe 65.78 66 ⇑P P 03 15 07.8 +0.2
baz=66
Q20A Ridgley Place, 65.83 58 ⇓P P 03 15 08.1 0.0
baz=66,SNR=6.3
P21A Newcastle 65.90 57 ⇓P P 03 15 08.9 +0.3
baz=66,SNR=23
O22A Kremmling 65.95 56 ⇓P P 03 15 09.3 +0.3
baz=66,SNR=5.8
MOL Molde 65.96 344 eP P 03 15 08.6 +0.4
MOL AMB AMB 03 15 29.4
comp=Z,25nm,1.5s
M24A Cheyenne 65.97 54 ⇓P P 03 15 09.6 +0.7
baz=66,SNR=7.0
K26A Motz Farm, Whi 65.98 52 ⇑P P 03 15 08.7 -0.2
baz=66
GLA Glamis 66.08 67 eP P 03 15 10.1 +0.5
GLA pmax pmax
comp=Z,11nm,0.9s
GLA Glamis 66.08 67 eP P 03 15 10.1 +0.5
comp=Z,11nm,0.9s
GLA Glamis 66.08 67 ⇑P P 03 15 09.8 +0.2
baz=66
P22A Eagle 66.23 57 ⇓P P 03 15 11.2 +0.5
baz=66,SNR=12
VSR Storozhevoye 66.25 322 eP P 03 15 08.9 -1.4
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=Z,20nm,0.7s
VSR pmax pmax
comp=E,5.0nm,0.3s
VSR MLR MLR
comp=N,360nm,18.0s
VSR MLR MLR
comp=E,840nm,18.0s
VSR MLR MLR
comp=Z,700nm,18.0s
O23A Lake Granby, G 66.26 56 ⇑P P 03 15 12.1 +1.1
baz=66,SNR=17
R20A Redvale 66.31 59 ⇓P P 03 15 11.7 +0.5
baz=66
Q21A Lamborn Mesa, 66.31 58 ⇑P P 03 15 11.3 +0.1
baz=66,SNR=10
VORD Divnogorie 66.39 322 eP P 03 15 09.5 -1.7
VORD pmax pmax
comp=N,20nm,0.9s
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD pmax pmax
comp=E,5.0nm,0.4s
N24A Carr 66.39 55 ⇑P P 03 15 12.4 +0.8
baz=66
SMCO Snowmass 66.41 57 eP P 03 15 12.3 +0.3
comp=E,12nm,0.8s
M25A Palm-Egli Farm 66.41 54 ⇓P P 03 15 12.5 +0.7
baz=66
WUAZ Wupatki 66.44 63 eP P 03 15 12.8 +0.8
comp=E,10nm,1.0s
WUAZ LR LR
comp=Z,221nm,19.0s
WUAZ Wupatki 66.44 63 ⇓P P 03 15 12.4 +0.4
baz=66,SNR=7.5
K27A Flueckinger Fa 66.46 52 ⇑P P 03 15 11.7 -0.3
baz=66
S20A Disappointment 66.57 59 ⇓P P 03 15 13.0 0.0
baz=66,SNR=14
NB2 NORSAR Subarra 66.65 342 P P 03 15 11.5 -1.3
baz=25,slow=6.5
NB2 NORSAR Subarra 66.65 342 P P 03 15 11.5 -1.3
comp=Z,11nm,0.7s,baz=25,slow=6.5
NOA NORSAR Array B 66.65 342 P P 03 15 11.4 -1.3
NOA NORSAR Array B 66.65 342 P P 03 15 11.4 -1.3
comp=Z,8.6nm,0.6s,baz=25,slow=6.4,SNR=51
NOA LR LR 03 49 12.1
comp=Z,773nm,19.6s,baz=35,slow=40
R21A Cimarron 66.65 58 ⇑P P 03 15 14.1 +0.7
baz=66,SNR=22
Q22A Crested Butte, 66.66 57 ⇑P P 03 15 14.1 +0.5
baz=66,SNR=16
ISCO Idaho Springs 66.72 56 eP P 03 15 14.7 +0.8
ISCO pmax pmax
comp=Z,15nm,0.8s
ISCO MLR MLR
comp=Z,414nm,21.0s
ISCO Idaho Springs 66.72 56 eP P 03 15 14.7 +0.8
comp=Z,15nm,0.8s
ISCO LR LR
comp=Z,414nm,21.0s
ISCO Idaho Springs 66.72 56 ⇓P P 03 15 14.8 +0.8
baz=66,SNR=22
BORG Borgarnes 66.72 358 eP P 03 15 15.1 +2.0
comp=Z,139nm,1.0s
BORG Borgarnes 66.72 358 P P 03 15 14.4 +1.3
comp=Z,91nm,0.9s,baz=356,slow=3.3,SNR=13
O24A Longmont 66.79 55 ⇓P P 03 15 15.2 +1.0
baz=67
N25A Grover 66.83 54 ⇓P P 03 15 15.0 +0.6
baz=67
NC602 NORSAR Array S 66.86 341 eP P 03 15 13.3 -0.7
BRSD Miller 66.88 48 ⇓P P 03 15 13.8 -0.7
baz=67
NAO01 NORSAR Array S 66.89 342 eP P 03 15 12.5 -1.8
comp=Z,6.9nm,0.8s
P23A Jefferson 66.89 56 ⇓P P 03 15 16.0 +0.9
baz=67,SNR=6.8
113A Mohawk Valley, 66.92 66 ⇑P P 03 15 15.5 +0.7
baz=67,SNR=6.2
MVCO Mesa Verde 66.92 60 eP P 03 15 15.5 +0.3
MVCO LR LR
comp=Z,740nm,22.0s
MVCO Mesa Verde 66.92 60 ⇑P P 03 15 15.2 0.0
baz=67,SNR=9.0
HFS Hagfors 66.93 340 P P 03 15 13.1 -1.4
HFS Hagfors 66.93 340 P P 03 15 13.1 -1.4
comp=Z,16nm,0.7s,baz=43,slow=6.7,SNR=36
Z14A Wintersburg 67.00 65 ⇑P P 03 15 15.7 +0.3
baz=67
S21A Coal Bank Pass 67.01 59 ⇑P P 03 15 16.4 +0.6
baz=67,SNR=20
X16A Lo Mia Camp, P 67.17 64 ⇑P P 03 15 17.2 +0.5
baz=67,SNR=17
R22A Saguache, Gunn 67.19 58 ⇓P P 03 15 17.6 +0.6
baz=67,SNR=7.4
M27A Reverse DX Ran 67.22 53 ⇓P P 03 15 17.1 +0.2
baz=67
Q23A Hartsel 67.23 57 ⇓P P 03 15 17.5 +0.3
baz=67,SNR=6.6
N26A Koester Ranch, 67.28 54 ⇓P P 03 15 17.7 +0.5
baz=67,SNR=5.6
P24A Kohler Place, 67.31 56 ⇓P P 03 15 18.1 +0.6
baz=67
O25A Wiggins 67.31 55 ⇑P P 03 15 17.9 +0.5
baz=67
IZAR Zarasai 67.33 331 eP P 03 15 16.9 -0.2
IZAR AMB AMB 03 15 18.6
comp=Z,9.2nm,0.6s

S22A	**4UR Ranch, Cre**	**67.49**	**58**	⇓P		**P**		**03 15 19.5**	**+0.7**
	baz=67,SNR=22									
U20A	**Newcomb**	**67.50**	**60**	⇓P		**P**		**03 15 19.1**	**+0.3**
	baz=67									
ISAL	**Salakas**	**67.52**	**331**	*e*P		**P**		**03 15 18.1**	**-0.2**
ISAL					AMB	AMB		03 15 21.0		
	comp=Z,14nm,1.3s									
Q24A	**Divide**	**67.56**	**56**	⇑P		**P**		**03 15 19.4**	**+0.1**
	baz=67									
T21A	**Navajo Lake**	**67.63**	**59**	⇓P		**P**		**03 15 20.0**	**+0.4**
	baz=67									
O26A	**Horse Wrangler**	**67.65**	**54**	⇓P		**P**		**03 15 19.7**	**+0.1**
	baz=67									
N27A	**Anderson Farm,**	**67.66**	**53**	⇓P		**P**		**03 15 20.0**	**+0.4**
	baz=68,SNR=10									
IIGN	**Ignalina**	**67.67**	**331**	*e*P		**P**		**03 15 19.0**	**-0.2**
IIGN					AMB	AMB		03 15 21.0		
	comp=Z,18nm,0.6s									
W18A	**Petrified Fore**	**67.68**	**62**	⇓P		**P**		**03 15 20.5**	**+0.6**
	baz=68									
P25A	**Willow Gulch B**	**67.71**	**55**	⇓P		**P**		**03 15 20.6**	**+0.6**
	baz=68,SNR=10									
R23A	**Moffat**	**67.74**	**57**	⇓P		**P**		**03 15 20.9**	**+0.6**
	baz=68,SNR=11									
EYMN	**Ely**	**67.78**	**42**	*e*P		**P**		**03 15 19.7**	**-0.4**
	comp=Z,24nm,0.9s									
EYMN					LR	LR				
	comp=Z,713nm,20.0s									
OGNE	**Ogallala**	**67.83**	**53**	*e*P		**P**		**03 15 20.6**	**0.0**
	comp=Z,59nm,0.9s									
OGNE					LR	LR				
	comp=Z,436nm,21.0s									
OGNE	**Ogallala**	**67.83**	**53**	⇓P		**P**		**03 15 20.7**	**0.0**
	baz=68,SNR=6.0									
MICGM	**Minsk**	**67.83**	**330**	*e*		**P**		**03 15 18.0**	**-2.3**
MNK	**Minsk**	**67.85**	**330**	*e*P		**P**		**03 15 18.0**	**-2.4**
NACGM	**Naroch**	**67.86**	**331**	*e*		**P**		**03 15 18.0**	**-2.5**
V20A	**Brimhall**	**67.93**	**61**	⇑P		**P**		**03 15 21.5**	**0.0**
	baz=68									
U21A	**Nageezi**	**67.95**	**60**	⇓P		**P**		**03 15 22.0**	**+0.3**
	baz=68,SNR=6.1									
X18A	**Snowflake**	**67.97**	**63**	⇑P		**P**		**03 15 22.1**	**+0.4**
	baz=68,SNR=7.9									
T22A	**Edith**	**67.97**	**59**	⇑P		**P**		**03 15 22.5**	**+0.7**
	baz=68,SNR=10									
S23A	**Nye Farm, Mont**	**67.98**	**58**	⇑P		**P**		**03 15 22.7**	**+0.9**
	baz=68									
214A	**Organ Pipe Nat**	**68.06**	**66**	⇓P		**P**		**03 15 22.4**	**+0.2**
	baz=68									
Q25A	**Bedland, Calha**	**68.09**	**56**	⇓P		**P**		**03 15 22.7**	**+0.2**
	baz=68,SNR=9.7									
R24A	**Sanders Place,**	**68.11**	**57**	⇑P		**P**		**03 15 23.1**	**+0.5**
	baz=68,SNR=7.4									
P26A	**Davis Ranch, A**	**68.12**	**55**	⇑P		**P**		**03 15 22.8**	**+0.2**
	baz=68,SNR=10.0									
KONO	**Kongsberg**	**68.25**	**342**	*e*P		**P**		**03 15 22.4**	**-0.5**
KONO	**Kongsberg**	**68.25**	**342**	*e*P		**P**		**03 15 21.1**	**-1.7**
KONO					pmax	pmax				
	comp=Z,9.0nm,0.8s									
KONO					MLR	MLR				
	comp=Z,1μm,20.0s									
KONO	**Kongsberg**	**68.25**	**342**	*e*P		**P**		**03 15 21.1**	**-1.7**
	comp=Z,9.4nm,0.8s									
KONO					LR	LR				
	comp=Z,1μm,20.0s									
ASK	**Askoy**	**68.32**	**344**	*e*P		**P**		**03 15 20.8**	**-2.4**
ASK					AMB	AMB		03 15 46.0		
	comp=Z,68nm,2.1s									
RUND	**Rundenannen**	**68.35**	**344**	*e*P		**P**		**03 15 21.2**	**-2.3**
RUND					AMB	AMB		03 15 32.2		
	comp=Z,88nm,2.6s									
BER	**Bergen**	**68.39**	**344**	*e*P		**P**		**03 15 22.0**	**-1.7**
BER					AMB	AMB		03 15 29.6		
	comp=Z,48nm,1.8s									
W20A	**Ramah**	**68.39**	**61**	⇓P		**P**		**03 15 24.6**	**+0.1**
	baz=68,SNR=8.9									
V21A	**Milan**	**68.41**	**60**	⇑P		**P**		**03 15 24.5**	**0.0**
	baz=68									
T23A	**Casias Ranch,**	**68.44**	**58**	⇓P		**P**		**03 15 25.1**	**+0.3**
	baz=68									
U22A	**Llaves**	**68.45**	**59**	⇑P		**P**		**03 15 25.2**	**+0.4**
	baz=68,SNR=6.5									
S24A	**Houchin Ranch,**	**68.47**	**57**	⇓P		**P**		**03 15 25.5**	**+0.5**
	baz=68,SNR=6.2									
Q26A	**Hugo**	**68.48**	**55**	⇑P		**P**		**03 15 24.8**	**0.0**
	baz=68,SNR=11									
EGD	**Espegrend**	**68.51**	**344**	*e*P		**P**		**03 15 22.6**	**-1.8**
EGD					AMB	AMB		03 15 31.1		
	comp=Z,66nm,1.9s									
ECSD	**EROS Data Cent**	**68.55**	**48**	*e*P		**P**		**03 15 24.6**	**-0.4**
	comp=Z,27nm,1.1s									
ECSD					LR	LR				
	comp=Z,483nm,20.0s									
ODD1	**Odda**	**68.59**	**343**	*e*P		**P**		**03 15 22.4**	**-2.7**
R25A	**Fountain Ranch**	**68.62**	**56**	⇑P		**P**		**03 15 25.7**	**0.0**
	baz=68,SNR=7.2									
MAK	**Makhachkala**	**68.64**	**311**	*e*P		P		03 15 15.7	-10	
MAK					MLR	MLR				
	comp=Z,1μm,22.0s									
V22A	**San Miguel Ran**	**68.74**	**60**	⇓P		**P**		**03 15 26.7**	**+0.1**
	baz=69									
X20A	**Quemado**	**68.80**	**62**	⇑P		**P**		**03 15 27.7**	**+0.7**
	baz=69,SNR=16									
U23A	**El Rito**	**68.86**	**59**	⇓P		**P**		**03 15 27.9**	**+0.6**
	baz=69,SNR=40									
S25A	**Robets Cordova**	**68.89**	**57**	⇑P		**P**		**03 15 27.5**	**0.0**
	baz=69,SNR=5.2									
W21A	**San Fidel**	**68.89**	**61**	⇓P		**P**		**03 15 27.8**	**+0.3**
	baz=69									
KSCO	**Kaye Shedlock'**	**68.90**	**55**	⇑P		**P**		**03 15 27.4**	**-0.1**
	baz=69									
T24A	**Torres, Weston**	**68.96**	**58**	⇑P		**P**		**03 15 28.8**	**+0.8**
	baz=69,SNR=7.2									
R26A	**Arlington**	**68.97**	**56**	⇓P		**P**		**03 15 27.8**	**0.0**
	baz=69,SNR=14									
TUC	**Tucson**	**69.03**	**65**	*e*P		**P**		**03 15 28.3**	**0.0**
TUC					pmax	pmax				
	comp=Z,2.0nm,1.3s									
TUC					MLR	MLR				
	comp=Z,241nm,20.0s									
TUC	**Tucson**	**69.03**	**65**	*e*P		**P**		**03 15 28.3**	**0.0**
	comp=Z,1.9nm,1.3s									
TUC					LR	LR				
	comp=Z,241nm,20.0s									
CTAO	**Charters Tower**	**69.05**	**189**	*e*P		**P**		**03 15 27.2**	**-1.0**
CTAO					MLR	MLR				
	comp=Z,557nm,21.0s									
CTAO	**Charters Tower**	**69.05**	**189**	*e*P		**P**		**03 15 27.2**	**-1.0**
CTAO					LR	LR				
	comp=Z,557nm,21.0s									
AFI	**Afiamalu**	**69.07**	**145**	LR		LR		03 38 49.3		
	comp=Z,482nm,21.6s,baz=339,slow=30									
BLS5	**Blasjo**	**69.08**	**343**	*e*P		**P**		**03 15 27.4**	**-0.7**
SPMN	**St. Paul**	**69.24**	**44**	⇑P		**P**		**03 15 28.9**	**-0.4**
	baz=69,SNR=7.3									
T25A	**Trinidad**	**69.27**	**57**	⇓P		**P**		**03 15 30.0**	**+0.1**
	baz=69,SNR=9.6									
V23A	**Ortiz Mt. (NFS**	**69.28**	**59**	⇓P		**P**		**03 15 31.1**	**+1.2**
	baz=69,SNR=13									
X21A	**Alamocita Cree**	**69.28**	**61**	⇓P		**P**		**03 15 31.1**	**+1.1**
	baz=69,SNR=20									
U24A	**Moreno Valley**	**69.31**	**58**	⇑P		**P**		**03 15 31.1**	**+0.8**
	baz=69,SNR=9.0									
Y20A	**Horse Springs,**	**69.32**	**62**	⇓P		**P**		**03 15 31.1**	**+0.8**
	baz=69,SNR=12									
R27A	**Eads**	**69.33**	**55**	⇑P		**P**		**03 15 29.8**	**-0.3**
	baz=69									
W22A	**Albuquerque**	**69.37**	**60**	⇓P		**P**		**03 15 31.2**	**+0.7**
	baz=69									
MSVF	**Nonsavu**	**69.39**	**156**	PFAKE				03 15 40.0	+10	
MSVF					LR	LR				
	comp=Z,870nm,21.0s									
S26A	**Kim**	**69.44**	**56**	⇓P		**P**		**03 15 30.5**	**-0.4**
	baz=69									
BGNE	**Belgrade**	**69.50**	**50**	⇑P		**P**		**03 15 30.3**	**-0.6**
	baz=69									
Y21A	**Point of Rocks**	**69.66**	**61**	⇓P		**P**		**03 15 32.9**	**+0.5**
	baz=70,SNR=5.3									
LAZ	**Ladron**	**69.69**	**61**	*e*P		**P**		**03 15 33.4**	**+0.9**
	comp=Z,6.1nm,1.0s									
X22A	**Bernardo**	**69.69**	**61**	⇓P		**P**		**03 15 33.6**	**+1.1**
	baz=70,SNR=12									
ANMO	**Albuquerque**	**69.69**	**60**	*e*P		**P**		**03 15 32.5**	**0.0**
	comp=Z,6.6nm,0.8s									
ANMO					LR	LR				
	comp=Z,448nm,19.0s									
T26A	**Comanche Natio**	**69.70**	**57**	⇑P		**P**		**03 15 32.0**	**-0.4**
	baz=70,SNR=12									
S27A	**Las Animas**	**69.71**	**56**	⇑P		**P**		**03 15 32.0**	**-0.5**
	baz=70									
W23A	**Werner Place,**	**69.71**	**60**	⇓P		**P**		**03 15 33.2**	**+0.6**
	baz=70,SNR=6.4									
SUW	**Suwalki**	**69.75**	**332**	*e*P		**P**		**03 15 31.3**	**-0.9**
SUW					pmax	pmax				
	comp=Z,45nm,1.0s									
SUW	**Suwalki**	**69.75**	**332**	*e*P		**P**		**03 15 31.3**	**-0.9**
	comp=Z,45nm,1.0s									
SUW	**Suwalki**	**69.75**	**332**	*e*P		**P**		**03 15 30.5**	**-1.7**
Z20A	**Nine Sixteen R**	**69.76**	**63**	⇑P		**P**		**03 15 33.4**	**+0.5**
	baz=70,SNR=5.6									
U25A	**Circle Dot Ran**	**69.81**	**58**	⇓P		**P**		**03 15 33.1**	**0.0**
	baz=70,SNR=21									
V24A	**Rampart Ranch,**	**69.81**	**59**	⇑P		**P**		**03 15 34.0**	**+0.7**
	baz=70,SNR=13									
SNART	**Snartemo**	**69.94**	**343**	*e*P		**P**		**03 15 31.7**	**-1.7**
LENM	**Lemitar**	**69.95**	**61**	*e*P		**P**		**03 15 34.5**	**+0.4**
LPM	**Los Pinos Moun**	**70.05**	**61**	*e*P		**P**		**03 15 35.7**	**+1.0**
LPM					*e*pP	pP		03 15 41.8	-5.0	
V25A	**Rancho No Teng**	**70.09**	**58**	⇑P		**P**		**03 15 35.3**	**+0.3**
	baz=70,SNR=5.9									
W24A	**Lazy 6 Ranch,**	**70.10**	**59**	⇑P		**P**		**03 15 35.5**	**+0.5**
	baz=70,SNR=22									
X23A	**Hourglass Bar**	**70.11**	**60**	⇑P		**P**		**03 15 35.5**	**+0.4**
	baz=70									
Y22A	**Socorro**	**70.12**	**61**	⇓P		**P**		**03 15 35.6**	**+0.4**
	baz=70,SNR=6.5									
120A	**U Bar Ranch, L**	**70.14**	**63**	⇓P		**P**		**03 15 35.9**	**+0.6**
	baz=70,SNR=8.9									
Z21A	**St. Cloud Mine**	**70.16**	**62**	⇓P		**P**		**03 15 36.0**	**+0.6**
	baz=70,SNR=13									
BNM	**Barren Site**	**70.17**	**61**	*e*P		**P**		**03 15 35.5**	**0.0**
	comp=Z,13nm,1.4s									
U26A	**Atchley Ranch,**	**70.18**	**57**	⇓P		**P**		**03 15 35.4**	**0.0**
	baz=70									
COWI	**Conover**	**70.23**	**42**	*e*P		**P**		**03 15 34.5**	**-0.9**
	comp=Z,133nm,2.3s									
COWI					LR	LR				
	comp=Z,573nm,22.0s									
KIV	**Kislovodsk**	**70.23**	**315**	*e*P		**P**		**03 15 35.3**	**-0.2**
KIV				*e*S		**S**		**03 24 45.2**	**+1.1**
KIV					pmax	pmax				
	comp=Z,20nm,1.1s									
KIV					MLR	MLR				
	comp=Z,684nm,19.0s									
T27A	**Campo**	**70.26**	**56**	⇓P		**P**		**03 15 35.4**	**-0.4**
	baz=70									
KBZ	**Khabaz**	**70.30**	**314**	P		**P**		**03 15 36.0**	**+0.3**
KBZ					pmax	pmax				
	comp=Z,8.0nm,0.9s									
KBZ					MLR	MLR				
	comp=Z,1μm,22.0s									
KBZ	**Khabaz**	**70.30**	**314**	P		**P**		**03 15 36.0**	**+0.3**
KBZ	**Khabaz**	**70.30**	**314**	P		**P**		**03 15 36.0**	**+0.3**
	comp=Z,7.5nm,0.9s,baz=61,slow=3.9,SNR=17									
KBZ					LR	LR		03 49 35.8		
	comp=Z,1μm,21.9s,baz=30,slow=39									
AKASG	**Malin Array Be**	**70.50**	**327**	P		**P**		**03 15 35.3**	**-1.6**
AKASG					pmax	pmax				
	comp=Z,12nm,0.6s									
AKASG					MLR	MLR				
	comp=Z,1μm,20.5s									
AKASG	**Malin Array Be**	**70.50**	**327**	P		**P**		**03 15 35.3**	**-1.6**
AKASG	**Malin Array Be**	**70.50**	**327**	P		**P**		**03 15 35.3**	**-1.6**
	comp=Z,12nm,0.6s,baz=32,slow=6.2,SNR=25									
AKASG					LR	LR		03 49 23.8		
	comp=Z,1μm,20.5s,baz=35,slow=38									
KIEV	**Kiev**	**70.51**	**327**	*e*P		**P**		**03 15 36.0**	**-0.9**
KIEV					pmax	pmax				
	comp=Z,17nm,0.8s									
KIEV					MLR	MLR				
	comp=Z,1μm,20.0s									
KIEV	**Kiev**	**70.51**	**327**	*e*P		**P**		**03 15 36.0**	**-0.9**
	comp=Z,17nm,0.8s									
KIEV					LR	LR				
	comp=Z,1μm,20.0s									
AK01	**Malin Array Si**	**70.51**	**327**	*e*P		**P**		**03 15 35.9**	**-1.0**
AK02	**Malin Array Si**	**70.54**	**327**	*e*P		**P**		**03 15 36.3**	**-0.8**
X24A	**Lazy VL Ranch,**	**70.55**	**60**	⇓P		**P**		**03 15 38.4**	**+0.7**
	baz=70,SNR=28									
ZEI	**Tsey**	**70.55**	**313**	*e*P		**P**		**03 15 36.2**	**-1.4**
ZEI					pmax	pmax				
	comp=Z,16nm,1.3s									
T28A	**Walsh**	**70.55**	**56**	⇑P		**P**		**03 15 37.0**	**-0.6**
	baz=70									
V26A	**Tequesquite Ra**	**70.59**	**58**	⇓P		**P**		**03 15 38.1**	**+0.2**
	baz=70,SNR=9.8									
319A	**Douglas**	**70.60**	**64**	⇑P		**P**		**03 15 38.4**	**+0.4**
	baz=70,SNR=19									
Z22A	**Elephant Butte**	**70.61**	**62**	⇓P		**P**		**03 15 38.6**	**+0.5**
	baz=70,SNR=13									
W25A	**X Bar L Ranch,**	**70.63**	**59**	⇑P		**P**		**03 15 38.5**	**+0.4**
	baz=70,SNR=12									
121A	**Cookes Peak, D**	**70.65**	**63**	⇓P		**P**		**03 15 38.8**	**+0.4**
	baz=70,SNR=6.5									
Y23A	**Lovelace Mesa,**	**70.65**	**61**	⇑P		**P**		**03 15 38.7**	**+0.4**
	baz=70,SNR=21									
220A	**Playas Peak, P**	**70.67**	**64**	⇓P		**P**		**03 15 38.8**	**+0.3**
	baz=70,SNR=10									
DGRG	**David-gareji**	**70.83**	**311**	P		**P**		**03 15 39.1**	**0.0**
WRAB	**Tennant Creek**	**70.89**	**201**	*e*P		**P**		**03 15 38.7**	**-0.8**
WRAB					pmax	pmax				
	comp=Z,34nm,1.0s									
WRAB					MLR	MLR				
	comp=Z,655nm,20.0s									
WRAB	**Tennant Creek**	**70.89**	**201**	*e*P		**P**		**03 15 38.7**	**-0.8**
	comp=Z,344nm,1.0s									
WRAB					LR	LR				
	comp=Z,655nm,20.0s									
WRAB	**Tennant Creek**	**70.89**	**201**	P		**P**		**03 15 38.9**	**-0.6**
	comp=Z,186nm,1.0s,SNR=11									
SCHQ	**Schefferville**	**70.90**	**24**	*e*P		**P**		**03 15 39.3**	**0.0**
SCHQ	**Schefferville**	**70.90**	**24**	P		**P**		**03 15 39.4**	**+0.1**
	comp=Z,18nm,0.9s,baz=358,slow=7.2,SNR=14									
SCHQ					LR	LR		03 50 14.1		
	comp=Z,366nm,21.4s,baz=228,slow=39									
ONI	**Oni**	**70.90**	**313**	P		**P**		**03 15 38.4**	**-1.2**
TBLG	**Delisi**	**70.93**	**312**	*e*P		**P**		**03 15 39.0**	**-0.6**
TBLG	**Delisi**	**70.93**	**312**	P		**P**		**03 15 39.1**	**-0.6**
122A	**Conniff Cattle**	**70.99**	**62**	⇑P		**P**		**03 15 41.2**	**+0.8**
	baz=71,SNR=6.9									
Y24A	**Capitan**	**71.01**	**60**	⇓P		**P**		**03 15 41.0**	**+0.4**
	baz=71,SNR=27									
X25A	**Clemmons Ranch**	**71.02**	**59**	⇑P		**P**		**03 15 41.0**	**+0.4**
	baz=71,SNR=24									
221A	**Mesquite Ranch**	**71.03**	**63**	⇑P		**P**		**03 15 41.3**	**+0.7**
	baz=71,SNR=6.7									
Z23A	**Rita Site, Whi**	**71.03**	**61**	⇓P		**P**		**03 15 41.1**	**+0.5**
	baz=71									
GOR	**Gori**	**71.04**	**313**	P		**P**		**03 15 40.6**	**+0.2**
320A	**Kipp Ranch, An**	**71.07**	**64**	⇑P		**P**		**03 15 41.4**	**+0.5**
	baz=71									
W26A	**Owens Ranch, T**	**71.12**	**58**	⇑P		**P**		**03 15 41.5**	**+0.4**
	baz=71,SNR=8.4									
BSD	**Bornholm Skovb**	**71.14**	**337**	⇑*i*P		**P**		**03 15 40.4**	**-0.2**
BSD					pmax	pmax				
	comp=Z,13nm,0.7s									
BSD					MLR	MLR				
	comp=Z,960nm,20.0s									
BSD	**Bornholm Skovb**	**71.14**	**337**	⇑*i*P		**P**		**03 15 40.4**	**-0.2**
	comp=Z,13nm,0.7s									
BSD										
	comp=Z,950nm,20.0s									
MUD	**Monsted U'grnd**	**71.28**	**341**	*i* P		**P**		**03 15 41.8**	**+0.3**
MUD					pmax	pmax				
	comp=Z,8.0nm,0.8s									
MUD	**Monsted U'grnd**	**71.28**	**341**	*i* P		**P**		**03 15 41.8**	**+0.3**
	comp=Z,8.1nm,0.8s									
DZM	**Mont Dzumac**	**71.32**	**169**	*e*S		**S**		**03 25 00.6**	**+3.7**
	comp=Z,129nm,28.6s									
DZM					*e*LR	LR		03 37 35.5		
	comp=Z,1μm,24.9s									
DZM	**Mont Dzumac**	**71.32**	**169**	LR		LR		03 40 17.9		
	comp=Z,422nm,21.1s,baz=207,slow=30									
KZR	**Kazreti**	**71.35**	**312**	P		**P**		**03 15 41.2**	**-1.1**
Y25A	**Mesa, Roswell**	**71.44**	**60**	⇑P		**P**		**03 15 43.1**	**+0.1**
	baz=71,SNR=23									
123A	**Bell Site, Whi**	**71.47**	**62**	⇑P		**P**		**03 15 43.7**	**+0.4**
	baz=71									
X26A	**CR and CF Fran**	**71.48**	**59**	⇓P		**P**		**03 15 43.6**	**+0.3**
	baz=71									
Z24A	**Sheeppen Canyo**	**71.48**	**61**	⇓P		**P**		**03 15 43.7**	**+0.2**
	baz=71,SNR=17									
V28A	**Channing**	**71.49**	**57**	⇓P		**P**		**03 15 42.8**	**-0.5**
	baz=71									
W27A	**Bowe Ranch, En**	**71.53**	**58**	⇓P		**P**		**03 15 43.4**	**-0.1**
	baz=71									
SCIA	**State Center**	**71.57**	**47**	*e*P		**P**		**03 15 43.3**	**-0.3**
	comp=Z,84nm,1.3s									
SCIA					LR	LR				
	comp=Z,607nm,22.0s									
FITZ	**Fitzroy Crossi**	**71.57**	**209**	*e*P		**P**		**03 15 43.7**	**+0.1**
	comp=Z,32nm,0.9s									
LLD	**Lille Linde**	**71.61**	**339**	*i* P		**P**		**03 15 42.2**	**-1.3**
LLD					pmax	pmax				
	comp=Z,29nm,0.8s									
LLD	**Lille Linde**	**71.61**	**339**	*i* P		**P**		**03 15 42.2**	**-1.3**
	comp=Z,29nm,0.8s									
AKH	**Akhalkalaki**	**71.78**	**313**	P		P		03 15 38.4	-6.6	
U30A	**WK&E Inc. Balk**	**71.78**	**55**	⇓P		**P**		**03 15 44.2**	**-0.8**
	baz=72									
X27A	**F and S Farms,**	**71.81**	**58**	⇑P		**P**		**03 15 45.4**	**+0.2**
	baz=72,SNR=8.6									
W28A	**Vega**	**71.86**	**57**	⇑P		**P**		**03 15 45.5**	**-0.1**
	baz=72,SNR=6.7									
T31A	**Randall Ranch,**	**71.89**	**54**	⇑P		**P**		**03 15 44.7**	**-0.8**
	baz=72									
124A	**Stringfield Ra**	**71.89**	**61**	⇑P		**P**		**03 15 45.8**	**-0.1**
	baz=72,SNR=12									
SOC	**Sochi**	**71.89**	**316**	*e*P		**P**		**03 15 43.8**	**-1.6**
SOC				*e*				03 18 20.9		
SOC				*e*PPP		PPP		03 20 04.5		
SOC				*e*S		**S**		**03 25 01.7**	**-1.4**
SOC					pmax	pmax				
	comp=Z,18nm,0.8s									
SOC					MLR	MLR				
	comp=Z,616nm,18.0s									
Z25A	**Roswell**	**71.89**	**60**	⇑P		**P**		**03 15 45.9**	**+0.2**
	baz=72,SNR=7.3									
Y26A	**Elida**	**71.93**	**59**	⇑P		**P**		**03 15 45.9**	**-0.2**
	baz=72,SNR=6.7									
ANN	**Anapa**	**71.96**	**318**	*e*P		P		03 15 38.6	-7.2	
ANN					pmax	pmax				
	comp=Z,17nm,0.8s									
ANN					MLR	MLR				
	comp=N,741nm,20.0s									
ANN					MLR	MLR				
	comp=E,333nm,20.0s									
ANN					MLR	MLR				
	comp=Z,432nm,20.0s									
KSU1	**Kansas State U**	**72.00**	**51**	*e*P		**P**		**03 15 45.2**	**-1.0**
	comp=Z,15nm,0.8s									
KSU1					LR	LR				
	comp=Z,519nm,20.0s									
RGN	**Rugen**	**72.05**	**338**	*e*P		**P**		**03 15 47.2**	**+1.1**
	comp=Z,41nm,0.7s									
GNI	**Garni**	**72.12**	**311**	*e*P		**P**		**03 15 47.5**	**+0.4**
	comp=Z,46nm,1.3s									
GNI					LR	LR				
	comp=Z,952nm,22.0s									
GNI	**Garni**	**72.12**	**311**	P		**P**		**03 15 50.1**	**+3.0**
	SNR=8.7									
GNI	**Garni**	**72.12**	**311**	P		**P**		**03 15 48.0**	**+0.9**
	comp=Z,3.5nm,0.4s,baz=63,slow=2.3,SNR=11									
GKP	**Gorka Klasztor**	**72.15**	**335**	*e*P		**P**		**03 15 47.9**	**+1.1**
W29A	**Amraillo**	**72.27**	**57**	⇓P		**P**		**03 15 47.6**	**-0.3**
	baz=72									
224A	**Cornudas Mount**	**72.30**	**62**	⇑P		**P**		**03 15 48.3**	**+0.1**
	baz=72,SNR=12									
Z26A	**Caprock**	**72.32**	**60**	⇓P		**P**		**03 15 48.3**	**0.0**
	baz=72,SNR=36									
U31A	**Nine Bar Ranch**	**72.33**	**55**	⇑P		**P**		**03 15 47.9**	**-0.4**
	baz=72									
Y27A	**Causey**	**72.33**	**59**	⇑P		**P**		**03 15 48.3**	**-0.1**
	baz=72,SNR=19									
BEL	**Belsk**	**72.36**	**332**	*e*P		**P**		**03 15 48.6**	**+0.5**
125A	**Gardner Draw,**	**72.38**	**61**	⇑P		**P**		**03 15 48.6**	**-0.1**
	baz=72,SNR=16									
X28A	**Dimmitt**	**72.41**	**58**	⇓P		**P**		**03 15 48.8**	**-0.1**
	baz=72									
MCD	**Coleburn Disti**	**72.43**	**348**	*e*P		**P**		**03 15 48.0**	**-0.3**
MCD	**Coleburn Disti**	**72.43**	**348**	P		**P**		**03 15 48.0**	**-0.3**
AMTX	**Amarillo**	**72.43**	**57**	*e*P		**P**		**03 15 48.9**	**0.0**
	comp=Z,24nm,1.0s									
AMTX					LR	LR				
	comp=Z,552nm,22.0s									
AMTX	**Amarillo**	**72.43**	**57**	⇓P		**P**		**03 15 48.9**	**0.0**
	baz=72,SNR=9.5									
MSTX	**Muleshoe**	**72.49**	**58**

KIS MLR MLR
comp=Z,700nm,20.0s
KIS MLR MLR
comp=Z,600nm,20.0s
KIS Kishinev 73.71 325 *eP* **P 03 16 56.0 -0.2**
KIS *eS* SKiKP 03 25 04.0 -18
KIS Kishinev 73.71 325 *ePS* 03 25 42.0
KIS LRM MLR 03 49 58.0
comp=Z,600nm,20.0s
326A Caldwell Ranch 73.75 61 ⇑P **P 03 15 56.7 -0.1**
baz=74,SNR=16
Y31A Rekieta Farm, 73.90 57 ⇓P **P 03 15 57.1 -0.4**
baz=74
Z30A Sanderson Ranc 73.92 58 ⇑P **P 03 15 57.4 -0.3**
baz=74,SNR=42
EAB Aberfoyle 73.93 348 *eP* **P 03 15 56.7 -0.6**
EAB Aberfoyle 73.93 348 P **P 03 15 56.7 -0.6**
ESY Stoneypath 73.95 347 *eP* **P 03 15 57.2 -0.2**
ESY Stoneypath 73.95 347 P **P 03 15 57.2 -0.2**
228A UT Block 9, Go 73.96 60 ⇑P **P 03 15 57.9 -0.1**
baz=74,SNR=5.7
129A Stewart Farms, 73.99 59 ⇑P **P 03 15 57.8 -0.3**
baz=74,SNR=10.0
OJC Ojcow 74.08 332 *eP* **P 03 15 57.8 -0.5**
OJC pmax pmax
comp=Z,80nm,1.2s
OJC Ojcow 74.08 332 *eP* **P 03 15 57.8 -0.5**
comp=Z,80nm,1.2s
OJC Ojcow 74.08 332 *eP* **P 03 15 58.0 -0.3**
WMOK Wichita Mounta 74.13 55 *eP* **P 03 15 58.5 -0.4**
WMOK pmax pmax
comp=Z,14nm,0.9s
WMOK MLR MLR
comp=Z,362nm,22.0s
WMOK Wichita Mounta 74.13 55 *eP* **P 03 15 58.5 -0.4**
comp=Z,14nm,0.9s
WMOK LR LR
comp=Z,362nm,22.0s
EAU Auchinoon 74.14 348 *eP* **P 03 15 58.4 -0.2**
EAU Auchinoon 74.14 348 P **P 03 15 58.4 -0.2**
EBL Broad Law 74.15 347 *eP* **P 03 15 58.2 -0.4**
EBL Broad Law 74.15 347 P **P 03 15 58.2 -0.4**
426A McDonald Obser 74.20 62 ⇑P **P 03 15 59.0 -0.6**
baz=74,SNR=8.0
PGBU Glenifferbraes 74.32 348 *eP* **P 03 15 59.1 -0.4**
PGBU AMB AMB 03 16 00.8
comp=Z,190nm,1.1s
PGBU Glenifferbraes 74.32 348 P **P 03 15 59.1 -0.4**
PGBU AMB AMB 03 16 00.8
comp=Z,190nm,1.1s
Y32A R-V Farms, Ver 74.32 56 ⇓P **P 03 15 59.6 -0.3**
baz=74,SNR=13
328A Wristen Ranch, 74.38 60 ⇑P **P 03 16 00.3 -0.1**
baz=74,SNR=29
KOLS Kolonicke sedl 74.41 330 *eP* **P 03 16 00.4 +0.2**
KOLS pmax pmax
comp=Z,32nm,1.0s
KOLS Kolonicke sedl 74.41 330 *eP* **P 03 16 00.4 +0.2**
427A Hayter Ranch, 74.43 61 ⇓P **P 03 16 00.6 -0.1**
baz=74,SNR=8.5
Z31A Sharp Cattle R 74.44 57 ⇑P **P 03 16 00.3 -0.4**
baz=74,SNR=24
BUR08 Bucovina Ar. S 74.50 327 *eP* **P 03 16 00.7 -0.2**
229A Bryant Ranch, 74.51 59 ⇑P **P 03 16 01.2 0.0**
baz=74,SNR=9.7
BURAR Bucovina Array 74.52 327⇑*iP* **P 03 16 01.0 0.0**
130A Snyder 74.52 58 ⇑P **P 03 16 00.9 -0.3**
baz=74,SNR=6.8
KSP Ksiaz 74.58 334 *eP* **P 03 16 00.8 -0.4**
AS31 Alice Springs 74.59 200 *eP* **P 03 16 01.6 +0.2**
ASAR Alice Springs 74.59 200 P **P 03 16 01.6 +0.2**
ASAR Alice Springs 74.59 200 P **P 03 16 01.6 +0.2**
comp=Z,13nm,0.7s,baz=13,slow=5.6,SNR=132
ASAR LR LR 03 46 13.1
comp=Z,293nm,21.6s,baz=6.9,slow=34
EKA Eskdalemuir Ar 74.59 347 P **P 03 16 01.4 +0.2**
EKA Eskdalemuir Ar 74.59 347 P **P 03 16 01.4 +0.2**
comp=Z,20nm,0.6s,baz=22,slow=5.6,SNR=132
526A Mary Lane Ranc 74.61 62 ⇑P **P 03 16 02.0 +0.1**
baz=74,SNR=12
ESK Eskdalemuir 74.62 347 *eP* **P 03 16 00.6 -0.7**
ESK AMB AMB 03 16 02.2
comp=Z,48nm,1.0s
ESK Eskdalemuir 74.62 347 P **P 03 16 00.6 -0.7**
ESK AMB AMB 03 16 02.2
comp=Z,48nm,1.0s
ESK Eskdalemuir 74.62 347 *iP* **P 03 16 01.5 +0.2**
ESK Eskdalemuir 74.62 347 *eP* **P 03 16 00.4 -0.9**
comp=Z,39nm,0.8s
ESK Eskdalemuir 74.62 347 P **P 03 16 01.4 +0.2**
comp=Z,316nm,0.7s,SNR=13
HAKT HAKKARI 74.62 310 *iP* **P 03 16 02.2 +0.3**
NIE Niedzica 74.62 331 *eP* **P 03 16 02.0 +0.5**
UZH Uzhgorod 74.66 330 *eP* **P 03 16 01.7 +0.1**
UZH *e* 03 16 16.3
UZH *eS* **S 03 25 31.7 -2.6**
UZH *ePS* PnS 03 25 58.9 -13
UZH *eSS* SS 03 30 29.3 +8.5
UZH MLR MLR
comp=N,550nm,21.0s
UZH MLR MLR
comp=E,600nm,21.0s
UZH MLR MLR
comp=Z,300nm,21.0s
CRVS Cervenica-Dubn 74.70 330 *eP* **P 03 16 01.8 -0.1**
CRVS pmax pmax
comp=Z,26nm,1.3s
CRVS Cervenica-Dubn 74.70 330 *eP* **P 03 16 01.8 -0.1**
NRDL Niedersach Rie 74.72 339 *eP* **P 03 16 02.4 +0.6**
comp=Z,16nm,0.9s
ECK Cauldkaine Hil 74.74 347 *eP* **P 03 16 01.4 -0.6**
ECK Cauldkaine Hil 74.74 347 P **P 03 16 01.4 -0.6**
329A Wagon Wheel Ra 74.77 60 ⇑P **P 03 16 02.8 +0.1**
baz=75,SNR=18
131A Roby 74.79 58 ⇑P **P 03 16 02.6 -0.1**
baz=75,SNR=15
Z32A Haskell 74.82 57 ⇓P **P 03 16 02.5 -0.4**
baz=75,SNR=14
527A Woodward Ranch 74.83 62 ⇓P **P 03 16 03.0 -0.1**
baz=75
TUL1 Tulsa 74.84 53 ⇓P **P 03 16 02.6 -0.4**
baz=75,SNR=7.0
XAL Allendale 74.91 347 *eP* **P 03 16 02.9 -0.1**
XAL Allendale 74.91 347 P **P 03 16 02.9 -0.1**
OKC Ostrava-Krasne 74.93 333 *eP* **P 03 16 03.5 +0.3**
OKC MLR MLR
comp=Z,1μm,21.2s
OKC Ostrava-Krasne 74.93 333⇓*eP* **P 03 16 03.5 +0.3**
OKC AMS AMS 03 54 20.0
comp=Z,1μm,21.2s
428A Kincaid Ranch, 74.94 61 ⇓P **P 03 16 04.0 +0.3**
baz=75,SNR=16
TESR 74.94 326⇑*iP* **P 03 16 03.2 -0.1**
UPC Upice 74.96 334⇓*iP* **P 03 16 04.1 +0.7**
UPC *e* 03 16 10.3
UPC Upice 74.96 334⇓*iP* **P 03 16 04.1 +0.7**
UPC *ex* x 03 16 10.3
626A Big Bend Ranch 74.96 62 ⇑P **P 03 16 03.8 -0.1**
baz=75,SNR=18
230A Sterling City 74.97 59 ⇑P **P 03 16 03.5 -0.3**
baz=75,SNR=10
TRPA Tarpa 75.01 329⇑*iP* **P 03 16 04.2 +0.5**
TRPA Tarpa 75.01 329⇓*eP* **P 03 16 04.6 +0.9**
DPC Dobruska-Polom 75.01 334 *eP* **P 03 16 03.9 +0.2**
DPC MLR MLR
comp=Z,1μm,20.6s
DPC Dobruska-Polom 75.01 334 *eP* **P 03 16 03.5 -0.2**
comp=Z,97nm,1.3s
DPC Dobruska-Polom 75.01 334 *eP* **P 03 16 03.9 +0.2**
DPC AMS AMS 03 52 10.0
comp=Z,1μm,20.6s
CLL Collm 75.07 336 *iP* **P 03 16 03.0 -1.0**
CLL *eS* **S 03 25 36.0 -2.7**
CLL pmax pmax
comp=Z,51nm,1.0s
CLL MLR MLR
comp=Z,1μm,20.6s
CLL Collm 75.07 336 *eP* **P 03 16 04.2 +0.2**
comp=Z,24nm,0.8s
CLL Collm 75.07 336 *iP* **P 03 16 03.0 -1.0**
comp=Z,51nm,1.0s
CLL *ePP* PP 03 19 06.0 +14
CLL *eS* **S 03 25 36.0 -2.7**
CLL *eSS* SS 03 30 42.0 +15
CLL *e* 03 34 30.0

CLL Lm MLR 03 52 00.0
comp=Z,1μm,20.6s
KRLC Kraliky 75.12 334⇓*eP* **P 03 16 04.9 +0.5**
MORC Moravsky Berou 75.16 333 *eP* **P 03 16 04.5 -0.1**
MORC pmax pmax
comp=Z,59nm,1.0s
MORC Moravsky Berou 75.16 333 *eP* **P 03 16 04.5 -0.1**
comp=Z,59nm,1.0s
BRG Berggiesshubel 75.21 336 *iP* **P 03 16 04.6 -0.2**
comp=Z,39nm,1.5s
BRG
comp=N,1μm,22.2s
BRG
comp=E,210nm,16.7s
BRG
comp=Z,2μm,19.8s
BRG Berggiesshubel 75.21 336 *iP* **P 03 16 04.6 -0.2**
BRG pmax pmax
comp=Z,39nm,1.4s
BRG MLR MLR
comp=N,1μm,22.2s
BRG MLR MLR
comp=E,210nm,16.7s
BRG MLR MLR
comp=Z,2μm,19.8s
BRG Berggiesshubel 75.21 336 *eP* **P 03 16 05.1 +0.3**
comp=Z,13nm,1.0s
TLCR 75.22 324⇓*iP* **P 03 16 05.5 +0.6**
ABTX Abilene, Hawle 75.24 57 ⇑P **P 03 16 05.2 -0.2**
baz=75,SNR=10.0
CLZ Clausthal 75.25 338 *eP* **P 03 16 06.0 +0.9**
CLZ pmax pmax
comp=Z,34nm,0.9s
CLZ Clausthal 75.25 338 *eP* **P 03 16 06.0 +0.9**
comp=Z,34nm,0.9s
330A Mertzon 75.29 59 ⇑P **P 03 16 05.5 -0.2**
baz=75,SNR=10
528A Cox Ranch, San 75.29 61 ⇓P **P 03 16 06.0 +0.2**
baz=75,SNR=14
KESW Keswick, Cumbr 75.31 347 *eP* **P 03 16 05.2 -0.1**
KESW AMB AMB 03 16 06.5
comp=Z,146nm,1.3s
KESW Keswick, Cumbr 75.31 347 P **P 03 16 05.2 -0.1**
KESW AMB AMB 03 16 06.5
comp=Z,146nm,1.3s
LIKS Likavka 75.33 332 *eP* **P 03 16 06.9 +1.4**
LIKS pmax pmax
comp=Z,51nm,1.1s
LIKS Likavka 75.33 332 *eP* **P 03 16 06.9 +1.4**
PVCC Panska Ves 75.35 335 *eP* **P 03 16 06.3 +0.7**
PVCC MLR MLR
comp=Z,2μm,24.0s
PVCC Panska Ves 75.35 335⇓*eP* **P 03 16 06.3 +0.7**
PVCC AMS AMS 03 51 50.0
comp=Z,2μm,24.0s
231A Bronte 75.38 58 ⇓P **P 03 16 05.7 -0.4**
baz=75,SNR=6.9
TXAR Lajitas Array 75.40 62 P **P 03 16 06.4 +0.1**
TXAR Lajitas Array 75.40 62 P **P 03 16 06.4 +0.1**
comp=Z,14nm,0.7s,baz=299,slow=4.2,SNR=181
IBBN Ibbenburen 75.44 340 *eP* **P 03 16 06.6 +0.5**
comp=Z,34nm,0.9s
VRI Vrincioaia 75.45 325⇓*iP* **P 03 16 06.3 0.0**
429A Davenport Ranc 75.46 60 ⇓P **P 03 16 06.3 -0.4**
baz=75,SNR=8.5
627A Terlingua Ranc 75.47 62 ⇓P **P 03 16 06.8 0.0**
baz=75,SNR=14
NEUB Neuenburg 75.48 337 *eP* **P 03 16 06.6 +0.3**
comp=Z,16nm,0.8s
PLOR Plostina 75.49 325⇓*iP* **P 03 16 07.0 +0.4**
CFR Carcaliu 75.49 324⇓*iP* **P 03 16 06.2 -0.3**
AAM Ann Arbor 75.64 41 PFAKE 03 16 20.0 +13
AAM LR LR
comp=Z,536nm,20.0s
SFIN Scholer Farm 75.65 44 ⇑P **P 03 16 06.7 -0.8**
baz=75
529A Stev Forest Ra 75.65 61 ⇑P **P 03 16 07.8 0.0**
baz=76,SNR=14
HAVZ Havza 75.69 317 *iP* **P 03 16 08.7 +1.0**
430A Baggett Ranch, 75.72 60 ⇑P **P 03 16 07.9 -0.3**
baz=76,SNR=17
628A Black Gap, Mar 75.74 62 ⇑P **P 03 16 08.2 0.0**
baz=76,SNR=11
331A San Angelo 75.79 59 ⇓P **P 03 16 08.2 -0.4**
baz=76,SNR=18
232A Coleman 75.79 58 ⇓P **P 03 16 08.4 -0.2**
baz=76,SNR=18
PRU Pruhonice 75.84 335⇓*iP* **P 03 16 09.2 +0.8**
PRU *e* 03 16 14.6
PRU MLR MLR
comp=Z,2μm,20.8s
PRU Pruhonice 75.84 335⇓*iP* **P 03 16 09.2 +0.8**
PRU *ex* x 03 16 14.6
PRU AMS AMS 03 52 20.0
comp=Z,2μm,20.8s
VRAC Vranov 75.86 333 P **P 03 16 09.1 +0.5**
VRAC Vranov 75.86 333 P **P 03 16 09.1 +0.5**
comp=Z,48nm,1.1s,baz=31,slow=5.6,SNR=42
VYHS Vyhne 75.90 332 *eP* **P 03 16 09.5 +0.7**
VYHS pmax pmax
comp=Z,24nm,1.1s
VYHS Vyhne 75.90 332 *eP* **P 03 16 09.5 +0.7**
WTSB Winterswijk 75.97 340 *iP* **P 03 16 09.1 0.0**
comp=Z,66nm,0.9s
TIRR Tirgusor 75.99 324⇓*iP* **P 03 16 10.2 +0.9**
TANN Tannenbergstha 76.02 336 *eP* **P 03 16 10.1 +0.6**
comp=Z,5.0nm,0.8s
MOX Moxa 76.03 337 *eP* **P 03 16 10.0 +0.5**
MOX pmax pmax
comp=Z,16nm,0.9s
MOX Moxa 76.03 337 *eP* **P 03 16 10.0 +0.5**
comp=Z,16nm,0.9s
MLR Muntele Rosu 76.06 326 P **P 03 16 10.8 +0.8**
MLR Muntele Rosu 76.06 326⇑*iP* **P 03 16 10.4 +0.5**
MLR Muntele Rosu 76.06 326 P **P 03 16 10.7 +0.8**
comp=Z,4.2nm,0.6s,baz=342,slow=0.3,SNR=41
PSZ Piszkesteto 76.07 331 *eP* **P 03 16 10.6 +0.7**
PSZ pmax pmax
comp=Z,41nm,1.1s
PSZ MLR MLR
comp=Z,523nm,20.0s
PSZ Piszkesteto 76.07 331 *eP* **P 03 16 10.6 +0.7**
comp=Z,41nm,1.1s
PSZ LR LR
comp=Z,523nm,20.0s
PSZ Piszkesteto 76.07 331⇑*iP* **P 03 16 09.9 0.0**
PSZ Piszkesteto 76.07 331⇑*eP* **P 03 16 10.1 +0.2**
DRGR 76.11 328⇑*iP* **P 03 16 10.3 +0.2**
332A Millersview 76.12 58 ⇓P **P 03 16 10.1 -0.2**
baz=76,SNR=19
LHO Holmfirth 76.12 346 *eP* **P 03 16 09.6 -0.4**
LHO Holmfirth 76.12 346 P **P 03 16 09.6 -0.4**
530A J-C Ranch, Com 76.14 60 ⇑P **P 03 16 10.5 0.0**
baz=76,SNR=14
431A Sonora 76.16 59 ⇓P **P 03 16 10.2 -0.5**
baz=76,SNR=15
NKC Novy Kostel 76.19 336⇓*iP* **P 03 16 11.0 +0.5**
NKC *e* 03 16 15.9
NKC MLR MLR
comp=Z,1μm,18.0s
NKC Novy Kostel 76.19 336⇓*iP* **P 03 16 11.0 +0.5**
NKC *ex* x 03 16 15.9
NKC AMS AMS 03 52 50.0
comp=Z,1μm,18.0s
TREC Trest 76.20 334⇓*iP* **P 03 16 11.2 +0.7**
TREC MLR MLR
comp=Z,1μm,18.2s
TREC Trest 76.20 334⇓*iP* **P 03 16 11.2 +0.7**
TREC AMS AMS 03 53 10.0
comp=Z,1μm,18.2s
MARD Mardin 76.28 312 *iP* **P 03 16 12.0 +0.7**
UBBA Unterbreizbach 76.28 338 *eP* **P 03 16 11.1 +0.3**
comp=Z,10.0nm,0.9s
SMOL Smolenice 76.32 332 *eP* **P 03 16 12.4 +1.2**
SMOL Smolenice 76.32 332 *eP* **P 03 16 12.4 +1.2**
KBI1 Birley Grange 76.35 346 *eP* **P 03 16 11.0 -0.2**
KBI1 Birley Grange 76.35 346 P **P 03 16 11.0 -0.2**
BUG Bochum–Univer 76.36 340 *eP* **P 03 16 11.8 +0.5**
comp=Z,37nm,0.9s
MBWA Marble Bar 76.44 214 *eP* **P 03 16 11.7 -0.4**
comp=Z,45nm,1.3s
CTKT Corum 76.47 317 *iP* **P 03 16 13.5 +1.1**
432A Menard 76.47 59 ⇓P **P 03 16 12.0 -0.4**
baz=76,SNR=9.2
AEU East Anglia Un 76.48 344 *eP* **P 03 16 12.6 +0.6**
AEU East Anglia Un 76.48 344 P **P 03 16 12.6 +0.6**

531A Rocksprings 76.58 60 ⇑P **P 03 16 12.7 -0.3**
baz=76,SNR=16
MALT Malatya 76.63 314 *eP* **P 03 16 13.9 +0.6**
MALT pmax pmax
comp=Z,31nm,1.1s
MALT MLR MLR
comp=Z,321nm,20.0s
MALT Malatya 76.63 314 *eP* **P 03 16 13.9 +0.6**
comp=Z,31nm,1.1s
MALT LR LR
comp=Z,321nm,20.0s
WME Myndd Eilian 76.64 347 *eP* **P 03 16 12.7 -0.1**
WME Myndd Eilian 76.64 347 P **P 03 16 12.7 -0.1**
ARR Arges 76.65 326⇓*iP* **P 03 16 13.9 +0.7**
ROTZ Rotzenmuhle 76.68 336 *eP* **P 03 16 13.9 +0.7**
comp=Z,18nm,0.9s
WPM1 Penmaenmawr 76.72 347 *eP* **P 03 16 13.3 0.0**
WPM1 Penmaenmawr 76.72 347 P **P 03 16 13.3 0.0**
BUD Budapest 76.73 331⇑*eP* **P 03 16 13.6 +0.1**
SIUC Southern Illin 76.76 47 *eP* **P 03 16 13.9 +0.1**
comp=Z,21nm,0.8s
JCT Junction City 76.76 59 *eP* **P 03 16 13.8 -0.2**
JCT pmax pmax
comp=Z,23nm,1.0s
JCT MLR MLR
comp=Z,404nm,19.0s
JCT Junction City 76.76 59 *eP* **P 03 16 13.8 -0.2**
comp=Z,23nm,1.0s
JCT LR LR
comp=Z,404nm,19.0s
JCT Junction City 76.76 59 ⇓P **P 03 16 13.8 -0.2**
baz=77,SNR=9.4
YRC Rhoscolyn 76.82 348 *eP* **P 03 16 13.8 -0.1**
YRC Rhoscolyn 76.82 348 P **P 03 16 13.8 -0.1**
YLL Llanberis 76.87 347 *eP* **P 03 16 13.9 -0.2**
YLL Llanberis 76.87 347 P **P 03 16 13.9 -0.2**
AKCD Akcadag 76.89 314 *iP* **P 03 16 15.7 +0.9**
KHC Kasperske Hory 76.89 335⇓*iP* **P 03 16 15.3 +0.9**
KHC *e* 03 16 19.8
KHC MLR MLR
comp=Z,2μm,20.7s
KHC Kasperske Hory 76.89 335 *eP* **P 03 16 14.6 +0.2**
comp=Z,35nm,0.8s
KHC Kasperske Hory 76.89 335⇓*iP* **P 03 16 15.3 +0.9**
KHC *ex* x 03 16 19.8
KHC AMS AMS 03 53 00.0
comp=Z,2μm,20.7s
LOT Lotru 76.89 327⇑*iP* **P 03 16 14.9 +0.3**
MSNY Massena 76.91 34 *eP* **P 03 16 13.9 -0.6**
comp=Z,256nm,1.0s
WHTX Lake Whitney 76.93 56 ⇑P **P 03 16 14.7 -0.2**
baz=77,SNR=8.8
532A Rocksprings 76.97 59 ⇓P **P 03 16 14.8 -0.4**
baz=77,SNR=17
GRF Grafenberg Arr 77.01 337 *eP* **P 03 16 16.1 +1.0**
GRF pmax pmax
comp=Z,35nm,0.8s
GRF MLR MLR
comp=Z,900nm,20.6s
GRF Grafenberg Arr 77.01 337 *eP* **P 03 16 16.1 +1.0**
comp=Z,35nm,0.8s
GRF *eL* L 03 53 38.9
comp=Z,909nm,20.6s
PKSG 77.02 331⇓*eP* **P 03 16 16.1 +1.0**
DLF Lyons Farm 77.04 349⇑*iP* **P 03 16 15.1 0.0**
MIAR Mount Ida 77.05 52 PFAKE 03 16 30.0 +14
MIAR LR LR
comp=Z,618nm,22.0s
WET Wettzell 77.07 336 *eP* **P 03 16 16.3 +0.9**
WET pmax pmax
comp=Z,19nm,0.8s
WET Wettzell 77.07 336 *eP* **P 03 16 16.3 +0.9**
comp=Z,19nm,0.8s
PKS7 Kunszentmiklos 77.07 331⇓*eP* **P 03 16 16.4 +1.0**
GEC2 GERESS Array S 77.11 335 *eP* **P 03 16 16.2 +0.4**
GEC2 pmax pmax
comp=Z,9.0nm,0.8s
GEC2 GERESS Array S 77.11 335 *eP* **P 03 16 16.2 +0.4**
comp=Z,9.0nm,0.8s
GERES GERESS Array B 77.11 335 P **P 03 16 15.3 -0.5**
GERES GERESS Array B 77.11 335 P **P 03 16 15.3 -0.5**
comp=Z,6.9nm,0.6s,baz=32,slow=5.2,SNR=106
GERES LR LR 03 53 45.6
comp=Z,2μm,20.4s,baz=16,slow=38
631A Perdido Creek 77.13 60 ⇑P **P 03 16 15.9 -0.2**
baz=77,SNR=5.1
TNS Taunus Mts 77.22 339 *eP* **P 03 16 16.9 +0.6**
TNS pmax pmax
comp=Z,34nm,0.8s
TNS Taunus Mts 77.22 339 *eP* **P 03 16 16.9 +0.6**
comp=Z,34nm,0.8s
PKST T"s 77.25 332⇓*eP* **P 03 16 17.0 +0.6**
HGN Heimansgroeve 77.29 340 *iP* **P 03 16 16.2 -0.4**
comp=Z,108nm,1.1s
HGN *eS* S 03 26 10.9 +7.8
HGN *eSS* **SS 03 30 59.9 -0.5**
GZR Gura Zlata 77.29 328⇓*iP* **P 03 16 16.9 +0.1**
USIN University of 77.31 46 *eP* **P 03 16 17.2 +0.3**
comp=Z,38nm,0.9s
CONA Conrad Observa 77.31 333⇑*iP* **P 03 16 17.1 +0.2**
comp=Z,73nm,1.6s
CONA Conrad Observa 77.31 333⇑*iP* **P 03 16 17.1 +0.2**
comp=Z,73nm,1.6s
BEBN Eben Emael 77.32 341 P **P 03 16 16.5 -0.2**
comp=Z,32nm,1.2s
SOP Sopron 77.32 333⇑*eP* **P 03 16 17.5 +0.7**
LONY Lake Ozonia 77.33 34 *eP* **P 03 16 15.8 -1.2**
comp=Z,18nm,1.1s
LONY LR LR
comp=Z,417nm,22.0s
ERPA Erie 77.33 39 PFAKE 03 16 30.0 +13
ERPA LR LR
comp=Z,413nm,19.0s
PKS6 Bocsa 77.33 330⇓*eP* **P 03 16 17.3 +0.4**
ASHO Ashiyiah 77.37 293 P **P 03 16 18.0 +0.4**
SNR=6.6
MEM Membach 77.42 340 P **P 03 16 17.4 +0.1**
comp=Z,72nm,1.2s
CDAG Cicekdag 77.46 317 *iP* **P 03 16 18.0 +0.1**
BZS Buzias 77.50 328⇑*iP* **P 03 16 17.7 -0.2**
632A Uvalde 77.51 59 ⇑P **P 03 16 18.0 -0.2**
baz=77,SNR=14
FRNY Flat Rock 77.51 33 *eP* **P 03 16 16.5 -1.4**
comp=Z,20nm,1.1s
PKS2 Kecel 77.55 330⇓*eP* **P 03 16 18.5 +0.4**
BHD Baghdad 77.57 307 *iX* **P 03 16 17.0 -1.5**
BHD *iX* x 03 26 05.0
UCC Uccle 77.60 341 P **P 03 16 18.2 -0.1**
ACSO Alum Creek Sta 77.62 42 *eP* **P 03 16 18.6 0.0**
comp=Z,31nm,1.1s
ACSO LR LR
comp=Z,501nm,20.0s
SSW Stow on the Wo 77.65 346 *eP* **P 03 16 18.7 +0.2**
SSW Stow on the Wo 77.65 346 P **P 03 16 18.7 +0.2**
TOD Tromm 77.70 338⇑*eP* **P 03 16 18.9 -0.1**
TOD Tromm 77.70 338⇑*eP* **P 03 16 18.9 -0.1**
SKP1 Kophill 77.71 345 *eP* **P 03 16 18.3 -0.6**
SKP1 Kophill 77.71 345 P **P 03 16 18.3 -0.6**
BR131 Keskin Array S 77.71 318 *eP* **P 03 16 19.8 +0.5**
comp=Z,15nm,0.9s
BRTR Keskin Array B 77.71 318 P **P 03 16 19.1 -0.2**
BRTR Keskin Array B 77.71 318 P **P 03 16 19.1 -0.2**
comp=Z,21nm,0.9s,baz=53,slow=2.3,SNR=47
BRTR LR LR 03 55 46.7
comp=Z,294nm,19.9s,baz=197,slow=40
WCI Wyandotte Cave 77.74 45 *eP* **P 03 16 19.2 -0.2**
WCI pmax pmax
comp=Z,25nm,0.9s
WCI Wyandotte Cave 77.74 45 *eP* **P 03 16 19.2 -0.2**
comp=Z,25nm,0.9s
ABH Altenburg 77.75 339 *eP* **P 03 16 19.3 +0.1**
BCLA Clavier 77.75 341 P **P 03 16 18.9 -0.3**
comp=Z,52nm,1.2s
PKS9 Tamasi 77.76 331⇓*eP* **P 03 16 19.2 -0.1**
MCH1 Michaelchurch 77.80 346 *eP* **P 03 16 19.3 -0.1**
MCH1 AMB AMB 03 16 20.6
comp=Z,76nm,1.2s
MCH1 Michaelchurch 77.80 346 P **P 03 16 19.3 -0.1**
MCH1 AMB AMB 03 16 20.6
comp=Z,76nm,1.2s
JMDO Jabal Madar 77.82 290 P **P 03 16 20.7 +0.7**
SNR=6.4
MOA Molln 77.85 334⇑*iP* **P 03 16 19.8 -0.1**
comp=Z,20nm,0.8s
MOA Molln 77.85 334⇑*iP* **P 03 16 19.8 -0.1**

comp=Z,20nm,0.8s
SNF Seneffe 77.89 341 P P 03 16 20.1 +0.1
comp=Z,32nm,1.4s
ELSH Elham, Standar 77.91 343 eP P 03 16 19.5 -0.5
ELSH AMB AMB 03 16 21.6
comp=Z,228nm,1.0s
ELSH Elham, Standar 77.91 343 P P 03 16 19.5 -0.5
ELSH AMB AMB 03 16 21.6
comp=Z,228nm,1.0s
ANTO Ankara 77.97 318 eP P 03 16 21.1 +0.4
ANTO e 03 16 29.8
ANTO pmax pmax
comp=Z,28nm,1.0s
ANTO MLR MLR
comp=Z,315nm,21.0s
ANTO Ankara 77.97 318 eP P 03 16 21.1 +0.4
comp=Z,28nm,1.0s
ANTO e 03 16 29.8
ANTO LR LR
comp=Z,315nm,21.0s
ANTO Ankara 77.97 318⇑ iP P 03 16 21.1 +0.4
PKSM Moragy 77.98 331⇑ iP P 03 16 19.6 -0.9
PKSM Moragy 77.98 331⇑ eP P 03 16 19.8 -0.7
732A Laxson Ranch, 77.99 60⇑ P P 03 16 21.2 +0.3
baz=78,SNR=22
NCB Newcomb 78.02 34 eP P 03 16 20.5 -0.3
comp=Z,27nm,1.1s
NCB LR LR
comp=Z,506nm,20.0s
ARSA Arzberg 78.02 333⇑ iP P 03 16 21.0 +0.2
comp=Z,47nm,1.4s
ARSA Arzberg 78.02 333⇑ iP P 03 16 21.0 +0.2
comp=Z,47nm,1.4s
RUP Ruppelstein 78.03 339⇑ eP P 03 16 20.8 0.0
RUP Ruppelstein 78.03 339⇑ eP P 03 16 20.8 0.0
SWN1 Swindon 78.08 345 eP P 03 16 21.3 +0.3
SWN1 AMB AMB 03 16 22.5
comp=Z,413nm,1.2s
SWN1 Swindon 78.08 345 P P 03 16 21.3 +0.3
SWN1 AMB AMB 03 16 22.5
comp=Z,413nm,1.2s
BSY Bisya 78.10 291 P P 03 16 22.5 +0.9
SNR=7.4
GIVF Givet 78.16 341⇑ iP P 03 16 21.3 -0.1
comp=Z,141nm,1.2s
GIVF Givet 78.16 341⇑ iP P 03 16 21.3 -0.1
GIVF pmax pmax
comp=Z,141nm,1.2s
GIVF Givet 78.16 341⇑ iP P 03 16 21.3 -0.1
comp=Z,141nm,1.2s
WOL Wolverton 78.17 345 eP P 03 16 21.2 -0.2
WOL AMB AMB 03 16 22.0
comp=Z,155nm,0.8s
WOL Wolverton 78.17 345 P P 03 16 21.2 -0.2
WOL AMB AMB 03 16 22.0
comp=Z,155nm,0.8s
ANDN Andirin 78.21 315 i P P 03 16 23.4 +1.3
DOU Dourbes 78.21 341 P P 03 16 21.6 -0.2
comp=Z,32nm,1.4s
WLF Walferdange 78.27 340 P P 03 16 22.2 +0.1
comp=Z,31nm,1.6s
WLF Walferdange 78.27 340 eP P 03 16 22.6 +0.5
WLF pmax pmax
comp=Z,52nm,1.4s
WLF MLR MLR
comp=Z,1μm,20.0s
WLF Walferdange 78.27 340 eP P 03 16 22.8 +0.7
comp=Z,49nm,1.3s
WLF Walferdange 78.27 340 eP P 03 16 22.6 +0.5
comp=Z,52nm,1.4s
WLF LR LR
comp=Z,1μm,20.0s
BAIF Baives 78.33 341⇑ iP P 03 16 22.4 0.0
comp=Z,127nm,1.1s
BAIF Baives 78.33 341⇑ iP P 03 16 22.4 0.0
BAIF pmax pmax
comp=Z,127nm,1.1s
BAIF Baives 78.33 341⇑ iP P 03 16 22.4 0.0
comp=Z,127nm,1.1s
BEHE Becsehely 78.34 332⇑ eP P 03 16 22.8 +0.3
RJOB Jochberg 78.37 335 eP P 03 16 23.7 +0.9
comp=Z,16nm,0.8s
STU Stuttgart 78.38 338 eP P 03 16 22.7 0.0
STU pmax pmax
comp=Z,71nm,1.2s
STU Stuttgart 78.38 338 eP P 03 16 23.2 +0.5
comp=Z,44nm,1.1s
STU Stuttgart 78.38 338 eP P 03 16 22.7 0.0
comp=Z,71nm,1.2s
FUR Furstenfeldbru 78.40 336 eP P 03 16 23.7 +0.9
FUR pmax pmax
comp=Z,35nm,0.9s
FUR Furstenfeldbru 78.40 336 eP P 03 16 23.7 +0.9
comp=Z,35nm,0.9s
LANF Langenberg 78.53 339⇑ eP P 03 16 23.9 +0.4
LANF Langenberg 78.53 339⇑ eP P 03 16 23.9 +0.4
LANF Langenberg 78.53 339⇑ eP P 03 16 23.9 +0.4
UMR Umm Al-Rimmam 78.60 302 eP P 03 16 23.9 -0.3
UMR AMb AMB 03 16 26.2
comp=Z,97nm,1.2s
LBNH Lisbon 78.62 32 eP P 03 16 24.5 +0.4
LBNH MLR MLR
comp=Z,625nm,21.0s
LBNH Lisbon 78.62 32 eP P 03 16 24.5 +0.4
LBNH LR LR
comp=Z,625nm,21.0s
MIB Mutribah 78.62 302 eP P 03 16 23.9 -0.4
MIB AMb AMB 03 16 26.3
comp=Z,112nm,1.0s
SOKA Soboth 78.69 333⇑ iP P 03 16 24.5 -0.1
comp=Z,97nm,1.5s
SOKA Soboth 78.69 333⇑ iP P 03 16 24.4 -0.1
comp=Z,97nm,1.5s
WVT Waverly 78.69 47 eP P 03 16 24.2 -0.4
WVT pmax pmax
comp=Z,13nm,1.1s
WVT Waverly 78.69 47 eP P 03 16 24.2 -0.4
comp=Z,13nm,1.1s
PERS Pernice 78.70 333 i P P 03 16 24.6 0.0
MPEP Malo Peshtene 78.70 326 i P P 03 16 24.3 -0.3
ACCN Adirondack Com 78.73 34 eP P 03 16 24.6 -0.2
comp=Z,19nm,1.0s
VAL Valentia 78.81 351 eP P 03 16 25.8 +0.8
KBA Koelnbreinsper 78.82 334⇑ iP P 03 16 25.9 +0.5
KBA pmax pmax
comp=Z,169nm,1.2s
KBA Koelnbreinsper 78.82 334⇑ iP P 03 16 25.9 +0.5
comp=Z,169nm,1.2s
KBA Koelnbreinsper 78.82 334⇑ iP P 03 16 25.9 +0.5
comp=Z,169nm,1.2s
HEX Exmoor 78.83 347 eP P 03 16 25.1 0.0
HEX Exmoor 78.83 347 P P 03 16 25.1 0.0
BINY Binghamton 78.87 36 PFAKE 03 16 40.0 +14
BINY LR LR
comp=Z,538nm,21.0s
ARMA Armidale 78.95 183 eP P 03 16 25.9 -0.1
comp=Z,19nm,1.0s
BORA Eskisehir 78.97 320 i P P 03 16 26.4 +0.2
OBKA Obir 78.98 333⇓ iP P 03 16 26.2 0.0
comp=Z,24nm,0.7s
OBKA Obir 78.98 333⇓ iP P 03 16 26.2 0.0
comp=Z,24nm,0.7s
BFO Black Forest 79.00 338 eP P 03 16 26.6 +0.4
BFO pmax pmax
comp=Z,32nm,1.0s
BFO Black Forest 79.00 338 eP P 03 16 26.6 +0.4
comp=Z,32nm,1.0s
BFO Black Forest 79.00 338 eP P 03 16 26.1 -0.1
comp=Z,73nm,1.3s
BFO LR LR
comp=Z,1μm,22.0s
BFO Black Forest 79.00 338 P P 03 16 26.1 -0.1
comp=Z,251nm,1.0s,SNR=19
WATA Walderalm 79.08 336⇑ iP P 03 16 27.4 +0.6
WATA pmax pmax
comp=Z,102nm,1.3s
WATA Walderalm 79.08 336⇑ iP P 03 16 27.4 +0.6
comp=Z,102nm,1.3s
WATA Walderalm 79.08 336⇑ iP P 03 16 27.4 +0.6
comp=Z,102nm,1.3s
NAY Al-Naaiem 79.10 302 eP P 03 16 26.7 -0.3
NAY AMb AMB 03 16 28.8
comp=Z,71nm,1.1s
SEYT Eskypehyr 79.10 319 i P P 03 16 27.5 +0.6
SPAK Spaichingen-Ko 79.10 338⇑ eP P 03 16 27.2 +0.4
COBT Iskenderun 79.10 314 i P P 03 16 28.5 +1.4
WTTA Wattenberg 79.12 336⇓ iP P 03 16 27.4 +0.3
WTTA pmax pmax
comp=Z,172nm,1.3s
WTTA Wattenberg 79.12 336⇓ iP P 03 16 27.4 +0.3
comp=Z,172nm,1.3s
WTTA Wattenberg 79.12 336⇓ iP P 03 16 27.4 +0.3
comp=Z,172nm,1.3s
MYKA Terra Mystica 79.14 334⇑ iP P 03 16 26.6 -0.4
comp=Z,62nm,1.8s
MYKA Terra Mystica 79.14 334⇑ iP P 03 16 26.6 -0.4
comp=Z,62nm,1.8s
RETA Reutte 79.16 336⇓ iP P 03 16 27.3 +0.2
comp=Z,38nm,1.0s
RETA Reutte 79.16 336⇓ iP P 03 16 27.3 +0.2
comp=Z,38nm,1.0s
RDF Al-Radifah 79.17 302 eP P 03 16 27.5 +0.1
RDF AMb AMB 03 16 30.1
comp=Z,213nm,1.2s
GULE Gulek 79.18 315 i P P 03 16 28.5 +1.0
CDF Champ du Feu 79.18 339⇑ iP P 03 16 27.2 0.0
comp=Z,182nm,1.1s
CDF Champ du Feu 79.18 339⇑ iP P 03 16 27.2 0.0
CDF pmax pmax
comp=Z,182nm,1.1s
CDF Champ du Feu 79.18 339⇑ iP P 03 16 27.2 0.0
comp=Z,182nm,1.1s
MOTA Moosalm 79.20 336⇑ iP P 03 16 27.9 +0.5
MOTA pmax pmax
comp=Z,89nm,0.9s
MOTA Moosalm 79.20 336⇑ iP P 03 16 27.9 +0.5
comp=Z,89nm,0.9s
MOTA Moosalm 79.20 336⇑ iP P 03 16 27.9 +0.5
comp=Z,89nm,0.9s
OXF Oxford 79.20 49 PFAKE 03 16 40.0 +13
OXF LR LR
comp=Z,363nm,20.0s
PGB Panagyurishte 79.24 325 i P P 03 16 25.6 -2.0
LIBD Limburg 79.35 338 eP P 03 16 28.6 +0.6
LIBD Limburg 79.35 338 eP P 03 16 28.6 +0.6
ABTA Abfaltersbach 79.35 335⇑ iP P 03 16 27.7 -0.5
comp=Z,64nm,1.2s
ABTA Abfaltersbach 79.35 335⇑ iP P 03 16 27.7 -0.5
comp=Z,64nm,1.2s
KDHN Kadinhani 79.37 318 i P P 03 16 28.7 +0.2
DIVS Divibare 79.39 329 P P 03 16 21.8 -6.7
ECH Echery 79.39 339 eP P 03 16 28.4 +0.1
ECH pmax pmax
comp=Z,60nm,1.0s
ECH MLR MLR
comp=Z,896nm,21.0s
ECH Echery 79.39 339 eP P 03 16 28.4 +0.1
comp=Z,60nm,1.0s
ECH LR LR
comp=Z,896nm,21.0s
ECH Echery 79.39 339⇑ eP P 03 16 28.4 +0.1
PAGF Fort de Pagny 79.41 340⇑ iP P 03 16 28.8 +0.4
comp=Z,101nm,1.1s
PAGF Fort de Pagny 79.41 340⇑ iP P 03 16 28.8 +0.4
comp=Z,101nm,1.1s
PLD Plovdiv 79.42 325 i P P 03 16 26.7 -1.8
FELD Feldberg im Sc 79.50 338⇑ eP P 03 16 29.1 0.0
KDZ Kurdzhali 79.53 324 i P P 03 16 29.0 -0.2
VISS Visnje 79.53 333 i P P 03 16 28.4 -0.7
VTS Vitosha 79.56 326 P P 03 16 28.9 -0.5
VTS Vitosha 79.56 326⇑ iP P 03 16 29.0 -0.5
VTS Vitosha 79.56 326 i P P 03 16 29.0 -0.5
YAYL Yayladag 79.56 314 i P P 03 16 30.1 +0.6
DAVA Damuels 79.58 337⇑ iP P 03 16 29.6 +0.2
comp=Z,69nm,0.9s
DAVA Damuels 79.58 337⇑ iP P 03 16 29.6 +0.2
comp=Z,69nm,0.9s
FETA Feichten 79.59 336⇑ iP P 03 16 29.9 +0.3
comp=Z,71nm,1.3s
FETA Feichten 79.59 336⇑ iP P 03 16 29.9 +0.3
comp=Z,71nm,1.3s
MEZF Maizieres J'vi 79.61 340⇑ iP P 03 16 29.8 +0.4
comp=Z,238nm,1.1s
MEZF Maizieres J'vi 79.61 340⇑ iP P 03 16 29.8 +0.4
comp=Z,238nm,1.1s
THEF They Montfort 79.66 339⇑ eP P 03 16 29.9 +0.2
THEF They Montfort 79.66 339⇑ eP P 03 16 29.9 +0.2
THEF They Montfort 79.66 339⇑ eP P 03 16 29.9 +0.2
BOJS Bojanci 79.68 332 i P P 03 16 29.3 -0.6
JAVS Javornik 79.68 333 i P P 03 16 28.9 -1.1
MOF Molkenrain 79.74 339 eP P 03 16 30.1 -0.2
MOF Molkenrain 79.74 339 eP P 03 16 30.1 -0.2
MOF Molkenrain 79.74 339 eP P 03 16 30.1 -0.2
HAU Haudompre 79.78 339⇑ iP P 03 16 30.3 -0.1
comp=Z,137nm,1.1s
HAU eR
comp=Z,1μm,22.8s
HAU Haudompre 79.78 339⇑ iP P 03 16 30.3 -0.1
HAU pmax pmax
comp=Z,137nm,1.1s
HAU Haudompre 79.78 339⇑ iP P 03 16 30.3 -0.1
comp=Z,137nm,1.1s
HINF Hinteralfeld 79.84 339⇑ iP P 03 16 30.4 -0.4
comp=Z,86nm,1.1s
HINF Hinteralfeld 79.84 339⇑ iP P 03 16 30.4 -0.4
HINF pmax pmax
comp=Z,86nm,1.1s
HINF Hinteralfeld 79.84 339⇑ iP P 03 16 30.4 -0.4
comp=Z,86nm,1.1s
SFTF Sexfontaines 79.90 340⇑ iP P 03 16 31.1 +0.1
comp=Z,340nm,1.0s
SFTF Sexfontaines 79.90 340⇑ iP P 03 16 31.1 +0.1
comp=Z,340nm,1.0s
ALN Alexandroupoli 79.93 323 P P 03 16 30.4 -0.9
TRI Trieste 79.94 334 eP P 03 16 29.6 -1.6
TRI Trieste 79.94 334 eP P 03 16 29.6 -1.6
BBS Basel-Blauen 80.01 338⇑ eP P 03 16 31.9 +0.2
BBS Basel-Blauen 80.01 338⇑ eP P 03 16 31.9 +0.2
DURS Dursunbey 80.04 321 i P P 03 16 32.2 +0.1
DAVOX Davos/Dischmat 80.04 336 P P 03 16 32.6 +0.5
DAVOX Davos/Dischmat 80.04 336 P P 03 16 32.6 +0.5
comp=Z,42nm,0.8s,baz=10.0,slow=3.6,SNR=95
GDZ Gediz 80.05 320 i P P 03 16 32.3 +0.1
FUORN Ofenpass-Fuorn 80.09 336 eP P 03 16 33.1 +0.7
comp=Z,145nm,1.3s
MMB Musomiste 80.23 325 i P P 03 16 31.9 -1.1
KKB Krupnik 80.23 326 i P P 03 16 31.6 -1.4
BALY Balya 80.28 322 i P P 03 16 33.4 +0.1
PLE Pljevlja 80.28 329⇑ iP P 03 16 32.5 -0.8
LOMF Lomont 80.28 339⇑ eP P 03 16 33.4 +0.2
LOMF Lomont 80.28 339⇑ eP P 03 16 33.4 +0.2
LOMF Lomont 80.28 339⇑ eP P 03 16 33.4 +0.2
SWET Sewanee 80.34 47 eP P 03 16 32.8 -0.9
comp=Z,18nm,0.9s
JSA Saint Aubin 80.39 345 eP P 03 16 33.6 0.0
JSA AMB AMB 03 16 35.0
comp=Z,148nm,1.1s
JSA Saint Aubin 80.39 345 P P 03 16 33.6 0.0
JSA AMB AMB 03 16 35.0
comp=Z,148nm,1.1s
NVR Nevrokopi 80.39 325 P P 03 16 33.0 -0.8
DEMI Demirci 80.41 320 i P P 03 16 33.9 -0.1
KAVA Kavala 80.44 324 P P 03 16 33.3 -0.8
VBMS Vicksburg 80.45 51 PFAKE 03 16 50.0 +16
VBMS LR LR
comp=Z,450nm,19.0s
TUE Stuetta 80.47 337 eP P 03 16 34.8 +0.4
TUE LR LR
comp=Z,922nm,20.0s
FLN La Foliniere 80.50 344⇑ iP P 03 16 34.2 0.0
comp=Z,312nm,1.1s
FLN eR
comp=Z,979nm,21.5s
FLN La Foliniere 80.50 344⇑ iP P 03 16 34.2 0.0
FLN pmax pmax
comp=Z,312nm,1.1s
FLN La Foliniere 80.50 344⇑ iP P 03 16 34.2 0.0
comp=Z,312nm,1.1s
IVA Berane 80.51 328⇑ iP P 03 16 33.8 -0.7
UPM Unac-Piva 80.55 329⇑ iP P 03 16 34.2 -0.7
ERMK Ermenek 80.56 316 i P P 03 16 34.8 -0.2
RAR Rarotonga 80.56 138 LR LR 03 46 09.6
comp=Z,491nm,20.1s,baz=269,slow=31
LDF La Druitiere 80.59 344⇑ iP P 03 16 34.6 -0.1
comp=Z,163nm,1.0s
LDF La Druitiere 80.59 344⇑ iP P 03 16 34.6 -0.1
LDF pmax pmax
comp=Z,163nm,1.0s
LDF La Druitiere 80.59 344⇑ iP P 03 16 34.6 -0.1
comp=Z,163nm,1.0s
KHAL Karahalli 80.64 320 i P P 03 16 35.1 -0.2
ISP Isparta 80.65 319 PFAKE 03 16 50.0 +15
ISP LR LR
comp=Z,579nm,21.0s
SRS Serrai 80.69 325 P P 03 16 34.2 -1.2
PVY Plav 80.73 328⇑ iP P 03 16 35.1 -0.6
SKO Skopje 80.75 327 eP P 03 16 35.9 +0.2
CPCT Cooper Cave 80.82 45 eP P 03 16 36.2 0.0
NKY Niksic 80.87 329⇑ iP P 03 16 35.7 -0.8
VAY Valandovo 80.90 326 P P 03 16 36.0 -0.4
VAY Valandovo 80.90 326⇑ iP P 03 16 36.1 -0.4
KNT Kendrikon 80.91 325 P P 03 16 36.3 -0.3
AKHS Akhisar 80.92 321 i P P 03 16 36.7 0.0
GRR Gorron 80.92 344⇑ iP P 03 16 36.7 +0.2
comp=Z,411nm,1.0s
GRR Gorron 80.92 344⇑ iP P 03 16 36.7 +0.2
GRR Gorron 80.92 344⇑ iP P 03 16 36.7 +0.2
comp=Z,411nm,1.0s
BRY Bratogost 80.94 329⇑ iP P 03 16 36.0 -0.9
AYVA Ayvalik 81.02 322 i P P 03 16 36.7 -0.4
LOR Lormes 81.04 341⇑ iP P 03 16 37.2 0.0
comp=Z,247nm,1.1s
LOR eR
comp=Z,1μm,21.0s
LOR Lormes 81.04 341⇑ iP P 03 16 37.2 0.0
comp=Z,247nm,1.1s
SENIN Lac Senin/Sane 81.09 338 eP P 03 16 38.0 +0.3
TTG Podgorica 81.12 328 eP P 03 16 36.9 -0.7
LIA Limnos Island 81.12 323 eP P 03 16 37.0 -0.7
CABF La Chapelle 81.15 339⇑ iP P 03 16 38.2 +0.3
comp=Z,179nm,1.2s
CABF La Chapelle 81.15 339⇑ iP P 03 16 38.2 +0.3
CABF pmax pmax
comp=Z,179nm,1.2s
CABF La Chapelle 81.15 339⇑ iP P 03 16 38.2 +0.3
comp=Z,179nm,1.2s
STKA Stephens Creek 81.23 191 eP P 03 16 37.8 -0.3
STKA Stephens Creek 81.23 191 P P 03 16 37.8 -0.3
comp=Z,9.3nm,0.9s,baz=7.5,slow=5.1,SNR=16
STKA LR LR 03 50 57.2
comp=Z,434nm,21.3s,baz=19,slow=34
BLA Blacksburg 81.24 42 eP P 03 16 37.7 -0.7
BLA pmax pmax
comp=Z,25nm,1.1s
BLA MLR MLR
comp=Z,546nm,20.0s
BLA Blacksburg 81.24 42 eP P 03 16 37.7 -0.7
comp=Z,25nm,1.1s
BLA LR LR
comp=Z,546nm,20.0s
PRK Paraskevi 81.25 322 eP P 03 16 34.7 -3.7
OG01 Vacheresse 81.27 338⇑ eP P 03 16 38.9 +0.4
OG01 Vacheresse 81.27 338⇑ eP P 03 16 38.9 +0.4
HYF Humbligny 81.31 341⇑ iP P 03 16 39.0 +0.4
HYF Humbligny 81.31 341⇑ iP P 03 16 39.0 +0.4
SSF Saint Saulge 81.32 341⇑ iP P 03 16 38.7 +0.1
comp=Z,105nm,0.9s
SSF Saint Saulge 81.32 341⇑ iP P 03 16 38.7 +0.1
SSF pmax pmax
comp=Z,105nm,0.9s
SSF Saint Saulge 81.32 341⇑ iP P 03 16 38.7 +0.1
comp=Z,105nm,0.9s
SGMF Saint Gilles 81.35 345⇑ iP P 03 16 39.2 +0.4
comp=Z,220nm,0.9s
SGMF Saint Gilles 81.35 345⇑ iP P 03 16 39.2 +0.4
SGMF pmax pmax
comp=Z,220nm,0.9s
SGMF Saint Gilles 81.35 345⇑ iP P 03 16 39.2 +0.4
comp=Z,220nm,0.9s
BUM Brajici-Budva 81.36 329⇑ iP P 03 16 38.5 -0.5
PHP Peshkopia 81.36 327 P P 03 16 37.6 -1.4
PLG Polygyros 81.39 325 P P 03 16 38.4 -0.8
PLG Polygyros 81.39 325 eP P 03 16 36.4 -2.8
ROSF Rostrenen 81.39 346⇑ iP P 03 16 39.4 +0.4
comp=Z,356nm,1.1s
ROSF Rostrenen 81.39 346⇑ iP P 03 16 39.4 +0.4
ROSF Rostrenen 81.39 346⇑ iP P 03 16 39.4 +0.4
comp=Z,356nm,1.1s
DNZL Cakirozluk 81.40 319 i P P 03 16 39.6 +0.1
KORT Korkueli 81.41 318 i P P 03 16 39.2 -0.3
GOLH Golhisar 81.56 319 i P P 03 16 40.2 0.0
LRAL Lakeview Retre 81.58 49 PFAKE 03 16 50.0 +10
LRAL LR LR
comp=Z,365nm,20.0s
AVF Avril sur Loir 81.61 341⇑ iP P 03 16 40.4 +0.2
comp=Z,193nm,1.0s
AVF Avril sur Loir 81.61 341⇑ iP P 03 16 40.4 +0.2
AVF pmax pmax
comp=Z,193nm,1.0s
AVF Avril sur Loir 81.61 341⇑ iP P 03 16 40.4 +0.2
comp=Z,193nm,1.0s
BIA Bitola 81.62 326 i P P 03 16 39.3 -1.1
SMF Signal de Mont 81.64 340⇑ iP P 03 16 40.5 +0.1
comp=Z,293nm,1.1s
SMF Signal de Mont 81.64 340⇑ iP P 03 16 40.5 +0.1
SMF Signal de Mont 81.64 340⇑ iP P 03 16 40.5 +0.1
comp=Z,293nm,1.1s
PAIG Paliouri 81.69 324 P P 03 16 38.7 -2.0
CBN Corbin 81.71 39 eP P 03 16 40.2 -0.6
comp=Z,43nm,1.3s
CBN LR LR
comp=Z,408nm,20.0s
CSS Prodhromos 81.75 315 eP P 03 16 40.7 -0.4
comp=Z,51nm,0.8s
CSS LR LR
comp=Z,352nm,21.0s
QUIF Quistinic 81.78 345⇑ iP P 03 16 41.4 +0.4
comp=Z,140nm,1.1s
QUIF Quistinic 81.78 345⇑ iP P 03 16 41.4 +0.4
QUIF pmax pmax
comp=Z,140nm,1.1s
QUIF Quistinic 81.78 345⇑ iP P 03 16 41.4 +0.4
comp=Z,140nm,1.1s
FNA Florina 81.81 326 P P 03 16 39.4 -2.0
TIR Tirane 81.86 328 eP P 03 16 40.4 -1.2
TIR pmax pmax
comp=Z,109nm,1.0s
TIR MLR MLR
comp=Z,1μm,21.0s
TIR Tirane 81.86 328 eP P 03 16 40.4 -1.2
comp=Z,110nm,1.0s
TIR LR LR
comp=Z,1μm,21.0s
URLA Izmir 81.87 321 i P P 03 16 41.5 -0.2
AYDN Tasoluk 81.92 320 i P P 03 16 42.5 +0.4
BGF Bois d'Agland 81.94 341⇑ iP P 03 16 42.1 +0.2
comp=Z,100nm,1.1s
BGF Bois d'Agland 81.94 341⇑ iP P 03 16 42.1 +0.2
BGF pmax pmax
comp=Z,100nm,1.1s
BGF Bois d'Agland 81.94 341⇑ iP P 03 16 42.1 +0.2
comp=Z,100nm,1.1s
LPL La Plagne 82.02 338⇑ iP P 03 16 43.5 +0.8
comp=Z,184nm,0.8s
LPL La Plagne 82.02 338⇑ iP P 03 16 43.5 +0.8
LPL pmax pmax
comp=Z,184nm,0.8s
LPL La Plagne 82.02 338⇑ iP P 03 16 43.5 +0.8
comp=Z,184nm,0.8s
LPG La Plagne 82.03 338⇑ iP P 03 16 43.7 +0.9
comp=Z,190nm,0.8s
LPG La Plagne 82.03 338⇑ iP P 03 16 43.7 +0.9
LPG La Plagne 82.03 338⇑ iP P 03 16 43.7 +0.9
comp=Z,190nm,0.8s
KZN Kozani 82.08 326 P P 03 16 40.5 -2.4
GCAM G?zelcaml? 82.16 321 i P P 03 16 43.1 -0.1
NEST Nestorio 82.25 326 P P 03 16 42.0 -1.8
TURN Turunc 82.28 319 i P P 03 16 45.2 +1.3
VLC Villacollemand 82.32 335 eP P 03 16 44.3 +0.3
VLC LR LR
comp=Z,2μm,20.0s
TCF Toulx Ste Croi 82.33 341⇑ iP P 03 16 44.4 +0.4
comp=Z,162nm,1.1s
TCF Toulx Ste Croi 82.33 341⇑ iP P 03 16 44.4 +0.4
TCF pmax pmax
comp=Z,162nm,1.1s
TCF Toulx Ste Croi 82.33 341⇑ iP P 03 16 44.4 +0.4
comp=Z,162nm,1.1s
MMAI Mount Meron Ar 82.35 312 P P 03 16 44.8 +0.4
MMAI Mount Meron Ar 82.35 312 P P 03 16 44.8 +0.4
comp=Z,61nm,0.8s,baz=36,slow=7.2,SNR=77
AGO Saint Agoulin 82.36 341 eP P 03 16 44.9 +0.8
AGO Saint Agoulin 82.36 341 eP P 03 16 44.9 +0.8
AKAS Kas 82.38 318 i P P 03 16 40.8 -3.8
PPT Papeete 82.40 128 LR LR 03 44 47.9
comp=Z,589nm,20.4s,baz=353,slow=29

PPT2 Papeete2 82.42 128 eS S 03 27 01.2 +3.2
comp=Z,160nm,27.2s
PPT2 eLR LR 03 42 42.8
comp=Z,933nm,22.0s,baz=320
GDM Grand'Maison 82.47 338⇑ eP P 03 16 45.9 +1.0
GDM Grand'Maison 82.47 338⇑ eP P 03 16 45.9 +1.0
BNI Bardonecchia 82.47 338 eP P 03 16 45.7 +0.8
BNI pmax pmax
comp=Z,40nm,0.8s
BNI MLR MLR
comp=Z,598nm,20.0s
BNI Bardonecchia 82.47 338 eP P 03 16 45.7 +0.8
comp=Z,40nm,0.8s
BNI LR LR
comp=Z,598nm,20.0s
MFF Saint Martin d 82.51 343⇑ iP P 03 16 45.3 +0.4
comp=Z,204nm,1.3s
MFF Saint Martin d 82.51 343⇑ iP P 03 16 45.3 +0.4
MFF pmax pmax
comp=Z,204nm,1.3s
MFF Saint Martin d 82.51 343⇑ iP P 03 16 45.3 +0.4
comp=Z,204nm,1.3s
GRN Grenoble 82.52 339⇑ eP P 03 16 46.3 +1.2
GRN Grenoble 82.52 339⇑ eP P 03 16 46.3 +1.2
GRN Grenoble 82.52 339⇑ eP P 03 16 46.3 +1.2
KMSC Kings Mountain 82.55 43 ⇓ P 03 16 44.9 -0.4
baz=82
PYM Petit Puy Mans 82.67 341 eP P 03 16 46.3 +0.4
PYM Petit Puy Mans 82.67 341 eP P 03 16 46.3 +0.4
PYM Petit Puy Mans 82.67 341 eP P 03 16 46.3 +0.4
MBDF Montbardon 82.75 338⇑ iP P 03 16 46.7 +0.3
comp=Z,98nm,0.8s
MBDF Montbardon 82.75 338⇑ iP P 03 16 46.7 +0.3
MBDF pmax pmax
comp=Z,98nm,0.8s
MBDF Montbardon 82.75 338⇑ iP P 03 16 46.7 +0.3
comp=Z,98nm,0.8s
SSB Saint Sauveur 82.77 339 eP P 03 16 46.7 +0.3
SSB pmax pmax
comp=Z,90nm,1.0s
SSB MLR MLR
comp=Z,947nm,19.0s
SSB Saint Sauveur 82.77 339 eP P 03 16 46.6 +0.3
comp=Z,90nm,1.0s
SSB LR LR
comp=Z,947nm,19.0s
SSB Saint Sauveur 82.77 339⇑ eP P 03 16 47.0 +0.7
ORIF Oris-en-Rattie 82.79 338⇑ iP P 03 16 47.4 +0.9
comp=Z,224nm,1.2s
ORIF eR
comp=Z,606nm,22.8s
ORIF Oris-en-Rattie 82.79 338⇑ iP P 03 16 47.4 +0.9
ORIF pmax pmax
comp=Z,224nm,1.2s
ORIF Oris-en-Rattie 82.79 338⇑ iP P 03 16 47.4 +0.9
comp=Z,224nm,1.2s
FORT Forrest 82.83 203 eP P 03 16 46.4 -0.1
comp=Z,90nm,0.7s
SURF Saint Ours 82.97 338⇑ eP P 03 16 48.5 +0.9
SURF Saint Ours 82.97 338⇑ eP P 03 16 48.5 +0.9
BBOO Buckleboo 83.02 196 eP P 03 16 47.0 -0.4
comp=Z,324nm,0.9s
AQU L'Aquila 83.10 332 PFAKE 03 17 00.0 +12
AQU LR LR
comp=Z,1μm,21.0s
LBL Lubilhac 83.11 340 eP P 03 16 48.4 +0.3
LBL Lubilhac 83.11 340 eP P 03 16 48.4 +0.3
LBL Lubilhac 83.11 340 eP P 03 16 48.4 +0.3
FRNF Fournols 83.11 341 eP P 03 16 49.1 +1.0
FRNF Fournols 83.11 341 eP P 03 16 49.1 +1.0
VIVF Saint-Julien-l 83.14 339⇑ iP P 03 16 48.9 +0.6
comp=Z,249nm,1.2s
VIVF Saint-Julien-l 83.14 339⇑ iP P 03 16 48.9 +0.6
VIVF pmax pmax
comp=Z,249nm,1.2s
VIVF Saint-Julien-l 83.14 339⇑ iP P 03 16 48.9 +0.6
comp=Z,249nm,1.2s
SAOF Saorge 83.25 337⇑ eP P 03 16 48.8 0.0
SAOF Saorge 83.25 337⇑ eP P 03 16 48.8 0.0
SAOF Saorge 83.25 337⇑ eP P 03 16 48.8 0.0
AUTN L'Aution 83.27 337 eP P 03 16 49.6 +0.4
AUTN L'Aution 83.27 337 eP P 03 16 49.6 +0.4
AUTN L'Aution 83.27 337 eP P 03 16 49.6 +0.4
JSC Jenkinsville 83.30 44 eP P 03 16 49.5 +0.3
JSC Jenkinsville 83.30 44 eP P 03 16 49.5 +0.3
TOUF Mont Tournerai 83.30 337⇑ eP P 03 16 49.3 0.0
TOUF Mont Tournerai 83.30 337⇑ eP P 03 16 49.3 0.0
TOUF Mont Tournerai 83.30 337⇑ eP P 03 16 49.3 0.0
SBF Sospel 83.39 337⇑ iP P 03 16 49.5 -0.1
comp=Z,363nm,1.0s
SBF Sospel 83.39 337⇑ iP P 03 16 49.5 -0.1
SBF Sospel 83.39 337⇑ iP P 03 16 49.5 -0.1
comp=Z,363nm,1.0s
APE Apeiranthos 83.41 322⇑ iP P 03 16 48.4 -1.4
RJF Les Rejaudoux 83.42 341⇑ iP P 03 16 50.0 +0.4
comp=Z,230nm,1.2s
RJF eR
comp=Z,1μm,22.0s
RJF Les Rejaudoux 83.42 341⇑ iP P 03 16 50.0 +0.4
RJF pmax pmax
comp=Z,230nm,1.2s
RJF Les Rejaudoux 83.42 341⇑ iP P 03 16 50.0 +0.4
comp=Z,230nm,1.2s
MVIF Mont Vial 83.43 337 eP P 03 16 50.1 +0.2
MVIF Mont Vial 83.43 337 eP P 03 16 50.1 +0.2
MVIF Mont Vial 83.43 337 eP P 03 16 50.1 +0.2
REVF Revere 83.52 337⇑ eP P 03 16 50.4 +0.1
REVF Revere 83.52 337⇑ eP P 03 16 50.4 +0.1
REVF Revere 83.52 337⇑ eP P 03 16 50.4 +0.1
CALN Calern 83.63 337 eP P 03 16 51.3 +0.3
CALN Calern 83.63 337 eP P 03 16 51.3 +0.3
CALN Calern 83.63 337 eP P 03 16 51.3 +0.3
CAF Calviac 83.66 341⇑ iP P 03 16 51.7 +0.8
comp=Z,224nm,1.2s
CAF Calviac 83.66 341⇑ iP P 03 16 51.7 +0.8
CAF pmax pmax
comp=Z,224nm,1.2s
CAF Calviac 83.66 341⇑ iP P 03 16 51.7 +0.8
comp=Z,224nm,1.2s
SMRF Simiane la Rot 83.75 338⇑ iP P 03 16 52.4 +1.0
comp=Z,272nm,1.2s
SMRF Simiane la Rot 83.75 338⇑ iP P 03 16 52.4 +1.0
comp=Z,272nm,1.2s
LFF La Frestale 83.92 342 eP P 03 16 52.8 +0.6
comp=Z,258nm,1.2s
LFF La Frestale 83.92 342 eP P 03 16 52.8 +0.6
LFF pmax pmax
comp=Z,259nm,1.2s
LFF La Frestale 83.92 342 eP P 03 16 52.8 +0.6
comp=Z,258nm,1.2s
CAN Canberra 83.95 185 PFAKE 03 17 00.0 +7.8
CAN LR LR
comp=Z,609nm,21.0s
CNNC Cliffs of the 84.00 41 PFAKE 03 17 00.0 +7.3
CNNC LR LR
comp=Z,611nm,21.0s
KARP Karpathos 84.02 320 eP P 03 16 50.6 -2.3
LASF Ste Croix 84.07 340⇑ iP P 03 16 53.8 +0.8
comp=Z,150nm,1.3s
LASF Ste Croix 84.07 340⇑ iP P 03 16 53.8 +0.8
comp=Z,150nm,1.3s
LMR La Mourre 84.12 337⇑ iP P 03 16 53.5 +0.2
comp=Z,447nm,1.1s
LMR La Mourre 84.12 337⇑ iP P 03 16 53.5 +0.2
LMR La Mourre 84.12 337⇑ iP P 03 16 53.5 +0.2
comp=Z,447nm,1.1s
PGF Pioggiola 84.20 335⇑ iP P 03 16 53.6 -0.2
comp=Z,141nm,1.1s
PGF Pioggiola 84.20 335⇑ iP P 03 16 53.6 -0.2
PGF pmax pmax
comp=Z,141nm,1.1s
PGF Pioggiola 84.20 335⇑ iP P 03 16 53.6 -0.2
comp=Z,141nm,1.1s
CUC Castrocucco 84.46 330 eP P 03 16 53.8 -1.3
comp=Z,51nm,1.0s
CUC LR LR
comp=Z,968nm,20.0s
ABTO Aybut 84.56 290 P P 03 16 56.4 +0.4
SNR=6.1
NHSC New Hope 84.77 44 PFAKE 03 17 10.0 +13
NHSC LR LR
comp=Z,1μm,21.0s
TIP Timpagrande 84.87 329 eP P 03 16 56.9 -0.3
TIP LR LR
comp=Z,1μm,21.0s

NPS Neapolis 84.92 321 eP P 03 16 53.9 -3.6
LAST Lasithi 85.06 321 eP P 03 16 56.6 -1.7
MTLF Montolieu 85.14 340⇑ iP P 03 16 59.0 +0.6
comp=Z,79nm,1.3s
MTLF Montolieu 85.14 340⇑ iP P 03 16 59.0 +0.6
MTLF pmax pmax
comp=Z,79nm,1.3s
MTLF Montolieu 85.14 340⇑ iP P 03 16 59.0 +0.6
comp=Z,79nm,1.3s
IDI Anoyia 85.20 321 eP P 03 16 56.6 -2.3
comp=Z,50nm,0.9s
EIL Elat 85.30 311 eP P 03 16 59.4 0.0
SIVA Sivas 85.47 321 eP P 03 16 59.4 -0.7
KARN Karanos 85.50 322 eP P 03 16 59.6 -0.8
MLS Moulis 85.75 341 eP P 03 17 01.2 -0.2
MLS Moulis 85.75 341 eP P 03 17 01.2 -0.2
EPF Esparros 85.84 342 eP P 03 17 00.9 -1.0
comp=Z,19nm,0.8s
EPF Esparros 85.84 342 eP P 03 17 00.9 -1.0
EPF pmax pmax
comp=Z,19nm,0.8s
EPF Esparros 85.84 342 eP P 03 17 00.9 -1.0
comp=Z,19nm,0.8s
GVD Gavdhos 85.92 321 eP P 03 17 00.8 -1.6
comp=Z,203nm,1.0s
GVD Gavdhos 85.92 321 eP P 03 17 01.5 -0.9
CEL Celeste 85.99 329 PFAKE 03 17 10.0 +7.2
CEL LR LR
comp=Z,726nm,21.0s
VIEF Viey 86.04 342 eP P 03 17 04.0 +1.0
VIEF Viey 86.04 342 eP P 03 17 04.0 +1.0
RESF Ens 86.05 342 eP P 03 17 03.5 +0.4
RESF Ens 86.05 342 eP P 03 17 03.5 +0.4
ETSF Etsaut 86.15 342 eP P 03 17 03.3 -0.2
comp=Z,43nm,1.0s
ETSF Etsaut 86.15 342 eP P 03 17 03.3 -0.2
ETSF pmax pmax
comp=Z,43nm,1.0s
ETSF Etsaut 86.15 342 eP P 03 17 03.3 -0.2
comp=Z,43nm,1.0s
VSL Villasalto 86.92 334 PFAKE 03 17 20.0 +13
VSL LR LR
comp=Z,1μm,20.0s
TBI Tubuai 87.28 131 eS S 03 27 47.4 +1.6
comp=Z,159nm,26.8s
TBI eLR LR 03 44 47.1
comp=Z,1μm,24.8s,baz=329
NWAO Narrogin (SRO) 88.08 211 eP P 03 17 12.2 -0.4
PBRG Braganca 88.31 346 eP P 03 17 15.8 +1.8
POLO Lamas de Olo 88.89 347 eP P 03 17 16.1 -0.7
PVRL Vila Real 88.98 347 eP P 03 17 16.7 -0.4
comp=Z,45nm,1.3s
MVO Moncorvo 88.98 347 eP P 03 17 15.7 -1.5
comp=Z,31nm,2.0s
PVIS Viseu 89.55 347 eP P 03 17 19.3 -0.5
MTE Manteigas 89.81 347 eP P 03 17 20.3 -0.7
ESDC Sonseca Array 89.92 344 P P 03 17 20.6 -0.9
ESDC Sonseca Array 89.92 344 P P 03 17 20.6 -0.9
comp=Z,6.8nm,0.9s,baz=8.7,slow=4.5,SNR=32
ESDC LR LR 04 02 26.8
comp=Z,735nm,21.0s,baz=20,slow=39
ESLA Sonseca Array 89.92 344 eP P 03 17 20.7 -0.9
comp=Z,4.9nm,1.2s
PAB San Pablo 90.11 344 eP P 03 17 21.3 -1.2
PAB MLR MLR
comp=Z,1μm,20.0s
PAB San Pablo 90.11 344 eP P 03 17 21.3 -1.2
PAB LR LR
comp=Z,1μm,20.0s
PCBR Castelo Branco 90.35 347 eP P 03 17 22.0 -1.4
KEST Kesra 90.42 333 eP P 03 17 24.0 +0.1
KEST Kesra 90.42 333 P P 03 17 24.0 +0.1
comp=Z,8.9nm,1.1s,baz=196,slow=5.0,SNR=14
KEST LR LR 04 03 06.1
comp=Z,409nm,20.4s,baz=178,slow=39
TEIG Tepich 91.22 57 PFAKE 03 17 40.0 +12
TEIG LR LR
comp=Z,317nm,19.0s
PESTR Estremoz 91.32 346 eP P 03 17 26.8 -1.2
comp=Z,25nm,1.7s
SNZO South Karori 91.44 165 PFAKE 03 17 40.0 +12
SNZO LR LR
comp=Z,880nm,20.0s
PCVE Castro Verde 92.59 347 eP P 03 17 33.2 -0.7
CMLA Cha da Macela 93.78 0 PFAKE 03 17 50.0 +11
CMLA LR LR
comp=Z,867nm,21.0s
RTC Rabat Centre 95.97 345 PFAKE 03 18 00.0 +11
RTC LR LR
comp=Z,553nm,20.0s
TGUH Tegucigalpa,Un 96.75 60 PFAKE 03 18 00.0 +6.8
TGUH LR LR
comp=Z,267nm,19.0s
GTBY Guantanamo Bay 98.32 47 PFAKE 03 18 10.0 +10
GTBY LR LR
comp=Z,391nm,20.0s
MTDJ Mount Denham 98.57 50 PFAKE 03 18 10.0 +8.5
MTDJ LR LR
comp=Z,303nm,22.0s
MSEY Mahe Island 99.75 274 PFAKE 03 18 20.0 +13
MSEY LR LR
comp=Z,588nm,19.0s
SDDR Presa de Saban 100.93 44 PFAKE 03 18 20.0 +8.0
SDDR LR LR
comp=Z,316nm,21.0s
JTS JuntasAbangare 101.11 60 PFAKE 03 18 20.0 +7.2
JTS LR LR
comp=Z,297nm,21.0s
TAM Tamanrasset 103.65 331 PFAKE 03 18 40.0 +16
TAM LR LR
comp=Z,591nm,21.0s
SJG San Juan 103.97 40 PFAKE 03 18 40.0 +15
SJG LR LR
comp=Z,334nm,22.0s
BCIP Isla Barro Col 104.91 57 PFAKE 03 18 40.0 +10
BCIP LR LR
comp=Z,267nm,21.0s
ANWB Willy Bob 106.16 36 PFAKE 03 23 00.0
ANWB LR LR
comp=Z,328nm,21.0s
KMBO Kilima Mbogo 108.78 291 PFAKE 03 23 00.0
KMBO LR LR
comp=Z,566nm,20.0s
FDF Fort de France 109.07 37 PFAKE 03 23 00.0
FDF LR LR
comp=Z,262nm,21.0s
SDV Santo Domingo 109.98 49 PFAKE 03 23 10.0
SDV LR LR
comp=Z,1.0nm,19.0s
GRGR Grenville 111.22 39 PFAKE 03 23 10.0
GRGR LR LR
comp=Z,319nm,20.0s
MBAR Mbarara 112.30 297 PFAKE 03 23 10.0
MBAR LR LR
comp=Z,706nm,20.0s
OTAV Otavalo 113.00 61 PFAKE 03 23 10.0
OTAV LR LR
comp=Z,218nm,19.0s
TORD Torodi Ar. Bea 113.90 331 Pdif **Pdif 03 19 10.0 +0.3**
TORD PKiKP **PKiKP 03 23 00.6 -0.9**
TORD Torodi Ar. Bea 113.90 331 Pdiff **Pdif 03 19 10.0 +0.3**
comp=Z,0.6nm,1.0s,baz=14,slow=3.2,SNR=2.5
TORD PKiKP **PKiKP 03 23 00.6 -0.9**
comp=Z,3.7nm,1.0s,baz=3.2,slow=1.4,SNR=14
SACV Santiago Islan 116.47 358 PFAKE 03 23 20.0 +14
SACV LR LR
comp=Z,393nm,21.0s
DBIC Dimbokro 121.97 336 PKP **PKPdf 03 23 16.8 -0.2**
DBIC Dimbokro 121.97 336 PKP **PKPdf 03 23 16.8 -0.2**
comp=Z,8.4nm,0.8s,baz=2.1,slow=4.8,SNR=8.0
LIC Lamto 122.44 336 *e*PKIKP **PKPdf 03 23 17.2 -0.7**
comp=Z,30nm,1.0s
LIC *e*R
comp=Z,427nm,22.0s
LIC Lamto 122.44 336 *e*PKPdf **PKPdf 03 23 17.2 -0.7**
LSZ Lusaka 125.33 289 PFAKE 03 23 30.0 +6.5
LSZ LR LR
comp=Z,553nm,20.0s
VNDA Vanda 126.15 178 PKP **PKPdf 03 23 22.7 -0.3**
VNDA Vanda 126.15 178 PKP **PKPdf 03 23 22.7 -0.3**
comp=Z,1.7nm,0.8s,baz=310,slow=5.7,SNR=8.1
SAML Samuel 129.00 52 *e*PKPdf **PKPdf 03 23 29.9 -0.4**
SAML LR LR
comp=Z,422nm,20.0s
LPAZ La Paz 132.27 62 PKP **PKPdf 03 23 37.6 +0.4**

LPAZ La Paz 132.27 62 PKP **PKPdf 03 23 37.7 +0.4**
comp=Z,3.9nm,0.9s,baz=18,slow=4.8,SNR=10
LBTB Lobatse 134.10 282 *e*PKPdf **PKPdf 03 23 40.0 +0.2**
TSUM Tsumeb 134.82 296 *e*PKPdf **PKPdf 03 23 40.2 -1.2**
TSUM LR LR
comp=Z,510nm,19.0s
SIV San Ignacio 136.00 55 PKP **PKPdf 03 23 43.5 0.0**
SIV San Ignacio 136.00 55 PKP **PKPdf 03 23 43.6 0.0**
comp=Z,5.6nm,0.8s,baz=348,slow=0.9,SNR=19
BOSA Boshof 136.78 279 PKP **PKPdf 03 23 45.1 +0.4**
BOSA PP **PP 03 26 27.6 -0.6**
BOSA Boshof 136.78 279 PKP **PKPdf 03 23 45.1 +0.4**
comp=Z,4.3nm,0.7s,baz=79,slow=9.2,SNR=13
BOSA PP **PP** 03 26 27.6 -0.6
comp=Z,11nm,1.1s,baz=116,slow=5.7,SNR=4.8
QSPA South Pole Qui 138.57 180 PKPpre PKPpre 03 23 38.3
QSPA PKP **PKPdf 03 23 47.9 +1.1**
QSPA South Pole Qui 138.57 180 PKhKP PKPpre 03 23 38.3
comp=Z,2.1nm,0.7s,baz=294,slow=1.8,SNR=2.9
QSPA PKP **PKPdf 03 23 47.9 +1.1**
comp=Z,5.8nm,0.7s,baz=26,slow=3.2,SNR=8.0
LCO Las Campanas 140.05 77 PFAKE 03 24 00.0 +9.1
LCO LR LR
comp=Z,265nm,19.0s
BDFB Brasilia 141.92 38 PKPpre PKPpre 03 23 49.2
BDFB Brasilia 141.92 38 PKhKP PKPpre 03 23 49.2
comp=Z,4.9nm,0.9s,baz=168,slow=4.1,SNR=5.6
SUR Sutherland 142.14 278 PFAKE 03 24 10.0 +15
SUR LR LR
comp=Z,479nm,21.0s
SYO Syowa Base 143.34 213⇓ *e*X PKPab 03 23 48.7 -2.6
CPUP Villa Florida 146.34 60 PKPbc **PKPbc 03 24 02.8 -0.2**
CPUP Villa Florida 146.34 60 PKPbc **PKPbc 03 24 02.8 -0.2**
comp=Z,12nm,0.6s,baz=313,slow=2.2,SNR=17
PLCA Paso Flores 147.11 93 PKPbc **PKPbc 03 24 04.3 -0.6**
PLCA Paso Flores 147.11 93 PKPbc **PKPbc 03 24 04.3 -0.6**
comp=Z,12nm,1.0s,baz=291,slow=5.0,SNR=13
SPB Sao Paulo 149.22 43 *e*PKPdf **PKPdf 03 24 06.1 -0.5**
SPB *e*PKPbc **PKPbc 03 24 11.1 +0.3**
TRQA Tornquist 151.36 82 *e*PKPbc **PKPbc 03 24 15.0 -0.6**
TRQA LR LR
comp=Z,319nm,19.0s
MAIT Maitri 152.07 205 *e*P PKPdf 03 24 03.9 -5.6
USHA Ushuaia 152.87 119 PKPbc **PKPbc 03 24 18.4 0.0**
USHA Ushuaia 152.87 119 PKPbc **PKPbc 03 24 18.4 0.0**
comp=Z,7.3nm,0.8s,baz=0.0,slow=3.0,SNR=2.6
SNAA Sanae 154.91 196 *e*PKPbc **PKPbc 03 24 21.4 -1.0**
SNAA *e*PKPab **PKPab 03 24 37.2 -0.8**
SNAA Sanae 154.91 196 PKPbc **PKPbc 03 24 21.0 -1.4**
comp=Z,1.5nm,0.9s,baz=229,slow=1.7,SNR=12
SNAA PKPab **PKPab 03 24 37.7 -0.3**
comp=Z,7.3nm,0.9s,baz=133,slow=2.9,SNR=24

KRSC 14 03:10:45.8±0.9, 48°69N×155°94E, h20km±20km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.00**	**3**	P		P	Pn	03 11 18.5	+0.1
SKR				S		S	Sn	03 11 42.2	-0.6
PAU	**Pauzhetka**	**2.84**	**11**	P		P	Pn	03 11 32.0	+2.1
PAU				S		S	Sn	03 12 05.0	+1.5
MTVR	**Mutnovka**	**4.06**	**20**	P		P	Pn	03 11 49.4	+2.5
MTVR				S		S	Sn	03 12 36.6	+2.7
RUS	**Russkaya**	**4.09**	**23**	P		P	Pn	03 11 48.8	+1.7
RUS				S		S	Sn	03 12 35.4	+1.0
UGLR	**Uglovaya**	**4.88**	**21**	P		P	Pn	03 12 00.3	+2.2
UGLR				S		S	Sn	03 12 56.2	+2.1
SDLR	**Sedlovina**	**4.96**	**21**	P		P	Pn	03 12 01.6	+2.4
SPN	**Mys Shipunski**	**5.11**	**29**	S		S	Sn	03 13 01.8	+2.2
GNL	**Ganaly**	**5.17**	**13**	P		P	Pn	03 12 04.7	+2.6

GUC 14 03:19:34.9±0.9, 30°96S×69°51W, h154km±15km, MD3.6, ML3.7, 1C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	**1.37**	**305**	⇓	*i*	P	Pn	03 20 04.7	+0.9
TLL					*i*	S	Sn	03 20 26.8	+1.0
TLL						AML	AML	03 20 29.5	
comp=N,779nm,0.3s									
CHNG	**Los Chungos**	**1.93**	**241**	⇑	*i*	P	Pn	03 20 09.9	+0.4
CHNG					*i*	S	Sn	03 20 36.0	0.0
CHNG						AML	AML	03 20 39.8	
comp=E,296nm,0.3s									
LCO	**Las Campanas**	**2.20**	**332**		*i*	P	Pn	03 20 13.9	+0.9
LCO					*e*	S	Sn	03 20 42.6	+0.3
LCO						AML	AML	03 20 43.7	
comp=E,624nm,0.4s									
FCH	**Farellones**	**2.45**	**196**	⇓	*i*	P	Pn	03 20 21.5	+5.5
FCH					*i*	S	Sn	03 20 53.3	+5.6
FCH						AML	AML	03 20 57.0	
comp=E,358nm,0.3s									
CLCH	**Cerro Calan**	**2.58**	**200**	⇓	*i*	P	Pn	03 20 17.7	+0.5
CLCH					*i*	S	Sn	03 20 50.6	+0.6
CLCH						AML	AML	03 20 56.3	
comp=N,323nm,0.5s									
LMEL	**Las Melosas**	**2.94**	**191**		*e*	P	Pn	03 20 22.2	+0.4
LMEL					*i*	S	Sn	03 20 58.8	+0.6
LMEL						AML	AML	03 21 07.5	
comp=N,145nm,0.2s									

IDC 14 03:41:07.5±3.2, 46°30N×152°63E, h0km, mb3.5/6, mb1 3.8/7, mb1mx3.5/25, mbtmp3.6/7, ML3.8/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/28, Error ellipse: s-maj=89.2km s-min=24.3km az=177.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**7.42**	**257**			LR	LR	03 45 29.8	
comp=Z,108nm,18.5s,baz=126,slow=35									
FX1	**Attu Island--F**	**14.83**	**56**			Pn	Pn	03 44 38.9	+0.6
1.5nm,0.3s,baz=247,slow=15,SNR=2.6									
MKAR	**Makanchi Array**	**46.85**	**298**			P	P	03 49 40.8	+1.7
0.1nm,0.4s,baz=66,slow=8.1,SNR=2.8									
YKA	**Yellowknife Ar**	**51.49**	**36**	P		P	P	03 50 14.3	+0.1
0.1nm,0.7s,baz=294,slow=6.0,SNR=3.8									
FINES	**FINESS Array B**	**64.31**	**335**	P		P	P	03 51 43.3	-0.9
0.4nm,0.4s,baz=31,slow=5.7,SNR=4.8									
NOA	**NORSAR Array B**	**68.55**	**341**	P		P	P	03 52 11.7	+0.2
0.7nm,0.8s,baz=29,slow=6.6,SNR=3.3									
AKASG	**Malin Array Be**	**71.74**	**326**	P		P	P	03 52 30.2	-0.9
0.5nm,0.5s,baz=37,slow=5.8,SNR=3.3									
TXAR	**Lajitas Array**	**78.01**	**60**	P		P	P	03 53 07.6	-0.3
0.2nm,0.5s,baz=316,slow=5.0,SNR=3.0									

IDC 14 04:00:42.5±4.5, 46°26N×146°41E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.4/23, mbtmp3.5/4, MS3.3/1, Ms1 3.3/1, ms1mx2.4/33, Error ellipse: s-maj=112.4km s-min=52.6km az=8.0, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**39.80**	**38**	P		P	P	04 08 17.9	+0.9
0.5nm,0.7s,baz=269,slow=8.0,SNR=6.1									
KURBB	**Kurchatov Arra**	**43.81**	**302**	LR		LR		04 26 44.3	
comp=Z,34nm,19.5s,baz=135,slow=36									
YKA	**Yellowknife Ar**	**54.02**	**35**	P		P	P	04 10 06.7	-1.3
0.2nm,0.5s,baz=304,slow=7.3,SNR=5.9									
FINES	**FINESS Array B**	**62.40**	**332**	P		P	P	04 11 06.8	+0.1
0.9nm,0.8s,baz=57,slow=5.1,SNR=3.3									
TXAR	**Lajitas Array**	**81.69**	**56**	P		P	P	04 13 03.1	+0.1
0.3nm,0.5s,baz=291,slow=3.8,SNR=10.0									

KRSC 14 04:43:10.2±2.7, 48°67N×156°36E, h5km±5km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.02**	**356**			S	Sn	04 44 09.5	-1.0
PAU	**Pauzhetka**	**2.81**	**6**			S	Sn	04 44 32.3	+2.2
MTVR	**Mutnovka**	**3.99**	**16**	P		P	Pn	04 44 15.1	+2.9
MTVR				S		S	Sn	04 45 02.4	+3.0
RUS	**Russkaya**	**4.01**	**19**	P		P	Pn	04 44 15.0	+2.8
RUS				S		S	Sn	04 45 02.3	+2.8
UGLR	**Uglovaya**	**4.80**	**18**	P		P	Pn	04 44 27.2	+3.9
SDLR	**Sedlovina**	**4.88**	**18**	P		P	Pn	04 44 27.4	+3.0
SPN	**Mys Shipunski**	**5.00**	**26**	S		S	Sn	04 45 26.8	+2.8
GNL	**Ganaly**	**5.13**	**11**	P		P	Pn	04 44 31.2	+3.4
MKZ	**Mys Kozlova**	**6.78**	**28**	P		P	Pn	04 44 53.7	+3.5

KRSC 14 04:45:21.5±2.6, 48°.53N×156°.47E, h5km±5km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.17**	**354**	S	Sn	04 46 23.7	-1.7
PAU	**Pauzhetka**	**2.95**	**4**	S	Sn	04 46 44.4	-0.3
MTVR	**Mutnovka**	**4.11**	**15**	P	Pn	04 46 27.6	+2.5
MTVR				S	Sn	04 47 15.7	+2.1
RUS	**Russkaya**	**4.12**	**18**	P	Pn	04 46 27.3	+2.3
RUS				S	Sn	04 47 15.4	+1.9
UGLR	**Uglovaya**	**4.92**	**17**	P	Pn	04 46 39.6	+3.5
SDLR	**Sedlovina**	**4.99**	**17**	P	Pn	04 46 40.2	+3.0
SPN	**Mys Shipunski**	**5.10**	**25**	S	Sn	04 47 38.0	+0.3
GNL	**Ganaly**	**5.25**	**10**	P	Pn	04 46 44.4	+3.6
MKZ	**Mys Kozlova**	**6.87**	**27**	P	Pn	04 47 05.7	+3.0

KRSC 14 04:49:04.6±2.0, 48°.70N×156°.45E, h5km±5km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.00**	**354**	S	Sn	04 50 03.8	-0.5
PAU	**Pauzhetka**	**2.78**	**5**	P	Pb	04 49 52.4	-2.3
PAU				S	Sb	04 50 27.2	-1.9
MTVR	**Mutnovka**	**3.94**	**16**	P	Pn	04 50 09.2	+3.2
MTVR				S	Sn	04 50 56.3	+3.6
RUS	**Russkaya**	**3.96**	**19**	P	Pn	04 50 09.0	+3.0
RUS				S	Sn	04 50 55.5	+2.7
UGLR	**Uglovaya**	**4.76**	**17**	P	Pn	04 50 20.3	+3.2
SDLR	**Sedlovina**	**4.83**	**18**	P	Pn	04 50 21.1	+3.0
SPN	**Mys Shipunski**	**4.95**	**26**	S	Sn	04 51 21.3	+4.2
GNL	**Ganaly**	**5.09**	**10**	P	Pn	04 50 23.9	+2.3
MKZ	**Mys Kozlova**	**6.72**	**27**	P	Pn	04 50 47.3	+3.5

*IDC **14** 05:10:25.5±1.9, 26°.97N×55°.99E, h0km, mb3.8/15, mb1 4.0/17,mb1mx3.9/31,mbtmp3.9/17,ML3.8/1,MS2.6/1, Ms1 2.6/1,ms1mx2.2/42, Error ellipse: s-maj=40.6km s-min=18.8km az=162.0*
*NEIC **14** 05:10:26.3, 26°.86N×55°.91E, h7km, mb4.1/7, ML3.8(THR), MN3.8(TEH), After THR.*
*THR **14** 05:10:26.6±0.3, 26°.87N×55°.91E, h8km±5km, ML3.8*
*ISCJB **14** 05:10:29.0±0.3, 27°.21N±0°.03×55°.79E±0°.04, h14km, mb3.8/20, Error ellipse: s-maj=5.3km s-min=3.7km az=157.9*
*TEH **14** 05:10:29.8, 27°.16N×55°.78E, h24km, ML3.8*
*OMAN **14** 05:10:29.0±2.5, 27°.34N×55°.86E, h27km, Error ellipse: s-maj=28.9km s-min=19.7km az=33.0*
*CSEM **14** 05:10:30.4±0.2, 27°.17N×55°.83E, h15km, mb3.9/5, Error ellipse: s-maj=7.3km s-min=5.7km az=77.0*

ISC 14 05:10:29.5±0.5, 27°.12N±0°.03×55°.80E±0°.04, h14km, n124, σ1°45/127, mb3.8/20, 5C-10d, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.43**	**50**	*e*Pg	**Pg**	**05 10 38.0**	**-0.2**
BNDS				AML	AML	05 10 49.9	
	comp=E,8μm,0.3s						
BNDS	**Bandar-Abbas**	**0.43**	**50**	Pg	**Pg**	**05 10 37.0**	**-1.2**
BNDS	**Bandar-Abbas**	**0.43**	**50**	*e*Pg	**Pg**	**05 10 38.0**	**-0.2**
IBND	**Bandar-abas**	**0.73**	**64**	*e*Pg	**Pb**	**05 10 45.1**	**+1.0**
IBND				*e*Sg	**Sn**	**05 10 57.9**	**+1.4**
BANOM	**Banah**	**1.28**	**159**	P	**Pb**	**05 10 54.4**	**+1.0**
	SNR=704						
BANOM				ml		05 10 57.1	
	SNR=182						
BANOM				⇑S	**Sg**	**05 11 12.8**	**+2.0**
BANOM				ml		05 11 15.8	
	SNR=531						
BANOM	**Banah**	**1.28**	**159**	P	**Pb**	**05 10 54.4**	**+1.0**
	SNR=14						
BANOM				S	**Sg**	**05 11 12.2**	**+1.4**
NAZ	**Nazwa, Dubai**	**2.13**	**183**	P	**Pb**	**05 11 07.8**	**-0.1**
	SNR=9.6						
NAZ				ml		05 11 54.5	
	SNR=58						
NAZ	**Nazwa, Dubai**	**2.13**	**183**	P	**Pn**	**05 11 07.4**	**+2.7**
HATD	**Hatta, Dubai**	**2.31**	**172**	P	**Pn**	**05 11 09.2**	**+2.1**
FAQ	**Al Faqa, Dubai**	**2.38**	**185**	P	**Pn**	**05 11 10.6**	**+2.5**
ASHO	**Ashiyiah**	**2.44**	**174**	P	**Pn**	**05 11 11.4**	**+2.4**
	SNR=171						
ASHO				ml		05 11 22.5	
	SNR=105						
ASHO				ml		05 11 59.0	
	SNR=202						
ASHO	**Ashiyiah**	**2.44**	**174**	P	**Pn**	**05 11 11.4**	**+2.4**
	SNR=171						
ASUD	**Al Ashush, Dub**	**2.52**	**190**	P	Pn	05 11 13.3	+3.2
GHIR	**Ghir-Karzin**	**2.75**	**296**	*e*Pn	**Pn**	**05 11 15.8**	**+2.5**
GHIR				AML	AML	05 12 09.0	
	comp=N,220nm,0.7s						
GHIR	**Ghir-Karzin**	**2.75**	**296**	Pn	**Pn**	**05 11 15.0**	**+1.7**
GHIR	**Ghir-Karzin**	**2.75**	**296**	Pn	**Pn**	**05 11 15.0**	**+1.7**
KRBR	**Kerman**	**2.97**	**16**	*e*Pn	**Pn**	**05 11 19.3**	**+2.8**
KRBR				AML	AML	05 12 07.0	
	comp=N,278nm,0.7s						
KRBR	**Kerman**	**2.97**	**16**	Pn	**Pn**	**05 11 19.0**	**+2.5**
KRBR				S	**Sb**	**05 11 58.0**	**-0.7**
KRBR	**Kerman**	**2.97**	**16**	Pn	**Pn**	**05 11 19.0**	**+2.5**
ISRV	**Sarvestan**	**3.27**	**314**	Pn	**Pn**	**05 11 21.9**	**+1.4**
ISRV	**Sarvestan**	**3.27**	**314**	*e*Pn	**Pn**	**05 11 22.0**	**+1.4**
ISRV				*e*Sg	**Sg**	**05 12 17.4**	**+2.9**
ISRV				*e*		05 12 49.7	
	comp=Z,2μm,0.5s						
ISRV	**Sarvestan**	**3.27**	**314**	*e*Pn	**Pn**	**05 11 22.0**	**+1.4**
ISRV				*e*Sg	**Sg**	**05 12 17.4**	**+2.9**
HOQ	**Hoqain**	**3.78**	**158**	⇑P	**Pn**	**05 11 27.7**	**+0.3**
HOQ	**Hoqain**	**3.78**	**158**	P	**Pn**	**05 11 27.7**	**+0.3**
ARQ	**Araqi**	**3.83**	**170**	⇑P	**Pn**	**05 11 29.7**	**+1.6**
ARQ	**Araqi**	**3.83**	**170**	P	**Pn**	**05 11 29.7**	**+1.6**
IMEH	**Mehriz**	**4.38**	**347**	Pn	**Pn**	**05 11 38.4**	**+2.6**
IMEH	**Mehriz**	**4.38**	**347**	*e*Pn	**Pn**	**05 11 37.7**	**+1.9**
IMEH				*e*		05 11 41.6	
	comp=Z,799nm,0.2s						
IMEH	**Mehriz**	**4.38**	**347**	*e*Pn	**Pn**	**05 11 37.7**	**+1.9**
IBAF	**Bafgh**	**4.46**	**357**	Pn	**Pn**	**05 11 38.8**	**+1.9**
IBAF	**Bafgh**	**4.46**	**357**	*e*Pn	**Pn**	**05 11 38.7**	**+1.9**
IBAF				*e*		05 11 45.1	
	comp=Z,1μm,0.2s						
IBAF	**Bafgh**	**4.46**	**357**	⇑*e*Pn	**Pn**	**05 11 38.7**	**+1.9**
ZHSF	**Zahedan**	**5.04**	**59**	*e*Pn	**Pn**	**05 11 45.4**	**+0.6**
ZHSF	**Zahedan**	**5.04**	**59**	Pn	**Pn**	**05 11 45.0**	**+0.2**
ZHSF	**Zahedan**	**5.04**	**59**	Pn	**Pn**	**05 11 45.0**	**+0.2**
ICHK	**Chekchek**	**5.24**	**347**	Pn	**Pn**	**05 11 49.5**	**+1.8**
ICHK	**Chekchek**	**5.24**	**347**	*e*Pn	**Pn**	**05 11 49.5**	**+1.8**
ICHK				*e*		05 11 56.3	
	comp=Z,493nm,0.2s						
ICHK	**Chekchek**	**5.24**	**347**	*e*Pn	**Pn**	**05 11 49.5**	**+1.8**
WBK	**Wadi Bani Khal**	**5.34**	**147**	P	**Pn**	**05 11 49.9**	**+1.1**
	SNR=18						
WBK				ml		05 13 18.3	
	SNR=6.6						
WBK	**Wadi Bani Khal**	**5.34**	**147**	P	**Pn**	**05 11 49.9**	**+1.1**
	SNR=18						
IGAR	**Gharneh**	**6.19**	**329**	*e*		05 12 09.1	
	comp=Z,738nm,0.1s						
IGAR				*e*Pn	**Pn**	**05 12 02.7**	**+2.0**
ITEG	**Tejag**	**6.29**	**23**	*e*Pn	**Pn**	**05 12 04.0**	**+1.9**
ITEG				*e*		05 12 43.3	
	comp=Z,138nm,0.2s						
ITEG				*e*Sg	**Sg**	**05 13 53.5**	**+1.9**
ITEG	**Tejag**	**6.29**	**23**	*e*Pn	**Pn**	**05 12 04.0**	**+1.9**
ITEG				*e*Sg	**Sg**	**05 13 53.5**	**+1.9**
IZEF	**Zefreh**	**6.49**	**333**	*e*		05 12 11.2	
	comp=Z,185nm,0.1s						
IZEF				⇓*e*Pn	**Pn**	**05 12 05.9**	**+1.0**
IPIR	**Pirpir**	**6.99**	**324**	Pn	**Pn**	**05 12 13.4**	**+1.7**
IPIR	**Pirpir**	**6.99**	**324**	*e*Pn	**Pn**	**05 12 13.3**	**+1.6**
IPIR				*e*		05 12 19.3	
	comp=Z,539nm,0.2s						
IPIR	**Pirpir**	**6.99**	**324**	*e*Pn	**Pn**	**05 12 13.3**	**+1.6**
RDF	**Al-Radifah**	**7.51**	**286**	*e*P	**Pn**	**05 12 19.6**	**+1.0**
RDF				AML	AML	05 13 41.9	
	comp=Z,12nm,0.5s						
RDF	**Al-Radifah**	**7.51**	**286**	*e*P	**Pn**	**05 12 19.6**	**+1.0**
UMR	**Umm Al-Rimmam**	**7.52**	**291**	*e*P	**Pn**	**05 12 19.4**	**+0.6**
UMR	**Umm Al-Rimmam**	**7.52**	**291**	*e*P	**Pn**	**05 12 19.4**	**+0.6**
NAY	**Al-Naaiem**	**7.84**	**288**	*e*P	**Pn**	**05 12 23.8**	**+0.6**
NAY				AML	AML	05 13 50.8	
	comp=Z,12nm,0.5s						
NAY	**Al-Naaiem**	**7.84**	**288**	*e*P	**Pn**	**05 12 23.8**	**+0.6**
MIB	**Mutribah**	**7.91**	**292**	*e*P	**Pn**	**05 12 24.9**	**+0.9**
MIB				AML	AML	05 13 48.2	
	comp=Z,12nm,0.5s						
MIB	**Mutribah**	**7.91**	**292**	*e*P	**Pn**	**05 12 25.0**	**+0.9**
ABTO	**Aybut**	**9.99**	**194**	P	**Pn**	**05 12 53.7**	**+0.8**
	SNR=8.3						
GNI	**Garni**	**15.90**	**328**	*e*P	**P**	**05 14 19.1**	**+2.4**
	comp=Z,17nm,0.8s						
GNI	**Garni**	**15.90**	**328**	Pn	**P**	**05 14 19.4**	**+2.7**
	comp=Z,0.7nm,0.3s,baz=33,slow=10,SNR=4.4						
GNI				LR	LR	05 21 48.2	
	comp=Z,23nm,21.8s,baz=107,slow=42						
GNI	**Garni**	**15.90**	**328**	*e*P	**P**	**05 14 19.1**	**+2.4**
	comp=Z,17nm,0.8s						
ASF	**Jabal al Asfar**	**17.18**	**292**	P	**Pn**	**05 14 30.1**	**+0.8**
ASF	**Jabal al Asfar**	**17.18**	**292**	P	**Pn**	**05 14 30.1**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=154,slow=8.1,SNR=2.9						
KBZ	**Khabaz**	**19.58**	**331**	P	**Pn**	**05 14 59.2**	**+0.9**
KBZ	**Khabaz**	**19.58**	**331**	P	**Pn**	**05 14 59.2**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=166,slow=9.5,SNR=9.1						
KBZ	**Khabaz**	**19.58**	**331**	P	**Pn**	**05 14 59.2**	**+0.9**
KKAR	**Karatay Array**	**19.93**	**33**	*e*P	**P**	**05 14 58.4**	**-2.5**
	comp=Z,1.0nm,0.5s						
KKAR	**Karatay Array**	**19.93**	**33**	*e*P	**P**	**05 14 58.4**	**-2.5**
	comp=Z,1.0nm,0.5s						
EKS2	**Erkin-Say**	**21.33**	**39**	*e*P	**P**	**05 15 17.6**	**+1.4**
	comp=Z,3.0nm,0.6s						
EKS2	**Erkin-Say**	**21.33**	**39**	*e*P	**P**	**05 15 17.6**	**+1.4**
	comp=Z,3.0nm,0.6s						
AAK	**Ala-Archa**	**21.71**	**40**	*e*P	**P**	**05 15 20.9**	**+0.6**
	comp=Z,2.2nm,0.6s						
AAK	**Ala-Archa**	**21.71**	**40**	P	**P**	**05 15 19.6**	**-0.8**
	comp=Z,2.3nm,0.6s,baz=178,slow=7.6,SNR=5.6						
AAK	**Ala-Archa**	**21.71**	**40**	*e*P	**P**	**05 15 20.9**	**+0.6**
	comp=Z,2.2nm,0.6s						
BR131	**Keskin Array S**	**22.29**	**310**	*e*P	**P**	**05 15 29.6**	**+3.0**
	comp=Z,7.4nm,0.9s						
BRTR	**Keskin Array B**	**22.29**	**310**	P	**P**	**05 15 27.7**	**+1.2**
BRTR	**Keskin Array B**	**22.29**	**310**	P	**P**	**05 15 27.7**	**+1.2**
	comp=Z,6.5nm,0.9s,baz=133,slow=11,SNR=8.9						
BRTR	**Keskin Array B**	**22.29**	**310**	P	**P**	**05 15 27.7**	**+1.2**
ABKAR	**Akbulak array**	**22.33**	**7**	*e*P	**P**	**05 15 26.3**	**-0.4**
	comp=Z,2.1nm,0.6s						
ABKAR	**Akbulak array**	**22.33**	**7**	*e*P	**P**	**05 15 26.3**	**-0.4**
	comp=Z,2.1nm,0.6s						
AKTO	**Aktyubinsk**	**23.34**	**4**	P	**P**	**05 15 36.0**	**-1.3**
AKTO	**Aktyubinsk**	**23.34**	**4**	P	**P**	**05 15 36.0**	**-1.3**
	comp=Z,2.8nm,0.7s,baz=183,slow=12,SNR=5.6						
AKTO	**Aktyubinsk**	**23.34**	**4**	P	**P**	**05 15 36.0**	**-1.3**
BRVK	**Borovoye**	**28.06**	**19**	*e*P	**P**	**05 16 20.6**	**+0.2**
	comp=Z,2.6nm,0.4s						
BRVK	**Borovoye**	**28.06**	**19**	*e*P	**P**	**05 16 20.6**	**+0.2**
	comp=Z,2.6nm,0.4s						
BVAR	**Borovoye Array**	**28.07**	**19**	P	**P**	**05 16 20.2**	**-0.2**
BVAR	**Borovoye Array**	**28.07**	**19**	P	**P**	**05 16 20.2**	**-0.2**
	comp=Z,2.0nm,0.4s,baz=201,slow=7.9,SNR=14						
BVAR	**Borovoye Array**	**28.07**	**19**	P	**P**	**05 16 20.2**	**-0.2**
MKAR	**Makanchi Array**	**28.65**	**40**	P	**P**	**05 16 24.0**	**-1.7**
MKAR	**Makanchi Array**	**28.65**	**40**	P	**P**	**05 16 24.0**	**-1.7**
	comp=Z,0.4nm,0.5s,baz=224,slow=8.7,SNR=8.1						
MKAR	**Makanchi Array**	**28.65**	**40**	P	**P**	**05 16 24.0**	**-1.7**
AKASG	**Malin Array Be**	**31.03**	**327**	P	**P**	**05 16 46.4**	**-0.2**
AKASG	**Malin Array Be**	**31.03**	**327**	P	**P**	**05 16 46.4**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=138,slow=8.5,SNR=4.1						
AKASG	**Malin Array Be**	**31.03**	**327**	P	**P**	**05 16 46.4**	**-0.2**
ZALV	**Zalesovo Beam**	**34.26**	**31**	P	**P**	05 17 12.6	-2.3
ZALV	**Zalesovo Beam**	**34.26**	**31**	P	**P**	05 17 12.6	-2.3
	comp=Z,7.0nm,0.3s,baz=237,slow=8.4,SNR=4.6						
ZALV	**Zalesovo Beam**	**34.26**	**31**	P	**P**	05 17 12.6	-2.3
GERES	**GERESS Array B**	**38.98**	**315**	P	**P**	**05 17 54.8**	**-0.6**
GERES	**GERESS Array B**	**38.98**	**315**	P	**P**	**05 17 54.8**	**-0.6**
	comp=Z,0.4nm,0.2s,baz=93,slow=7.0,SNR=3.2						
GERES	**GERESS Array B**	**38.98**	**315**	P	**P**	**05 17 54.8**	**-0.6**
JOF	**Joensuu**	**39.24**	**343**	*ep*	**P**	**05 17 56.4**	**-0.8**
	comp=Z,0.9nm,0.3s						
FINES	**FINESS Array B**	**39.68**	**338**	P	**P**	**05 18 00.5**	**-0.4**
FINES	**FINESS Array B**	**39.68**	**338**	P	**P**	**05 18 00.5**	**-0.4**
	comp=Z,1.6nm,0.4s,baz=143,slow=9.5,SNR=19						
FINES	**FINESS Array B**	**39.68**	**338**	P	**P**	**05 18 00.5**	**-0.4**
NB2	**NORSAR Subarra**	**45.16**	**331**	P	**P**	**05 18 44.4**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=116,slow=7.9						
NB2	**NORSAR Subarra**	**45.16**	**331**	P	**P**	**05 18 44.4**	**-1.2**
	comp=Z,0.6nm,0.6s,SNR=6.3						
NOA	**NORSAR Array B**	**45.16**	**331**	P	**P**	**05 18 44.6**	**-0.9**
NOA	**NORSAR Array B**	**45.16**	**331**	P	**P**	**05 18 44.6**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=117,slow=8.0,SNR=5.5						
NOA	**NORSAR Array B**	**45.16**	**331**	P	**P**	**05 18 44.6**	**-0.9**
KEV	**Kevo**	**45.81**	**346**	*ep*	P	05 18 46.3	-4.2
	comp=Z,0.3nm,0.4s						
ARCES	**ARCESS Array B**	**45.96**	**346**	P	**P**	**05 18 51.4**	**-0.3**
ARCES	**ARCESS Array B**	**45.96**	**346**	P	**P**	**05 18 51.4**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=130,slow=7.8,SNR=7.9						
ARCES	**ARCESS Array B**	**45.96**	**346**	P	**P**	**05 18 51.4**	**-0.3**
ESDC	**Sonseca Array**	**50.60**	**300**	P	**P**	**05 19 27.9**	**-0.1**
ESDC	**Sonseca Array**	**50.60**	**300**	P	**P**	**05 19 27.9**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=81,slow=7.9,SNR=3.5						
ESDC	**Sonseca Array**	**50.60**	**300**	P	**P**	**05 19 27.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**52.30**	**266**	P	**P**	**05 19 40.7**	**-0.3**
TORD	**Torodi Ar. Bea**	**52.30**	**266**	P	**P**	**05 19 40.7**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=66,slow=7.4,SNR=12						
TORD	**Torodi Ar. Bea**	**52.30**	**266**	P	**P**	**05 19 40.7**	**-0.3**
ILAR	**Eielson Array**	**86.71**	**10**	P	**P**	**05 23 11.4**	**-1.3**
ILAR	**Eielson Array**	**86.71**	**10**	P	**P**	**05 23 11.4**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=317,slow=4.8,SNR=7.3						
ILAR	**Eielson Array**	**86.71**	**10**	P	**P**	**05 23 11.4**	**-1.3**
YKA	**Yellowknife Ar**	**90.36**	**356**	P	**P**	**05 23 29.0**	**-1.0**
YKA	**Yellowknife Ar**	**90.36**	**356**	P	**P**	**05 23 29.0**	**-1.0**
	comp=Z,0.1nm,0.7s,baz=0.1,slow=5.3,SNR=3.7						
YKA	**Yellowknife Ar**	**90.36**	**356**	P	**P**	**05 23 29.0**	**-1.0**

*IDC **14** 05:34:34.3±1.1, 39°.72N×20°.55E, h0km, mb3.8/10, mb1 3.9/13,mb1mx3.8/31,mbtmp3.8/13,ML3.2/3,MS3.0/2, Ms1 3.0/2,ms1mx2.1/42, Error ellipse: s-maj=18.8km s-min=17.7km az=154.0*
*TIR **14** 05:34:38.7, 39°.84N×20°.67E, h6km*
*PDG **14** 05:34:38.8±0.5, 39°.74N×20°.83E, h19km±1km, ML3.3/9, Error ellipse: s-maj=1.0km s-min=1.0km az=90.0*
*THE **14** 05:34:39.8, 39°.81N×20°.73E, h16km, ML3.6/5, Error ellipse: s-maj=1.5km s-min=0.8km az=288.0*
*ISCJB **14** 05:34:39.8±0.3, 39°.77N±0°.02×20°.79E±0°.03, h19km±3km, mb3.7/11,MS2.8/2, Error ellipse: s-maj=4.1km s-min=2.5km az=156.3*
*CSEM **14** 05:34:39.5±0.2, 39°.74N×20°.75E, h10km, ML3.6/5, Error ellipse: s-maj=5.2km s-min=2.8km az=68.0*
*ATH **14** 05:34:39.5, 39°.77N×20°.87E, h23km±1km, MD3.4/26, ML3.7*

ISC 14 05:34:38.8±0.6, 39°.77N±0°.02×20°.73E±0°.02, h16km±5km, n144, σ1°74/176, mb3.9/11, 24C-10D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.15**	**141**	P	**Pb**	**05 34 43.7**	**+0.5**
JAN				S	**Sb**	**05 34 47.8**	**+1.7**
JAN	**Janina**	**0.15**	**141**	P	**Pb**	**05 34 43.7**	**+0.5**
JAN				S	**Sb**	**05 34 47.8**	**+1.7**
MEV	**Metsovon**	**0.38**	**88**	P	**Pg**	**05 34 47.3**	**+0.6**
MEV	**Metsovon**	**0.38**	**88**	P	**Pg**	**05 34 47.3**	**+0.6**
IGT	**Igoumenitsa**	**0.39**	**232**	P	**Pb**	**05 34 47.4**	**+0.1**
IGT				S	**Sb**	**05 34 55.0**	**+1.9**
IGT	**Igoumenitsa**	**0.39**	**232**	P	**Pb**	**05 34 47.4**	**+0.1**
IGT				S	**Sb**	**05 34 55.0**	**+1.9**
NEST	**Nestorio**	**0.69**	**21**	P	**Pg**	**05 34 52.5**	**+0.2**
NEST				S	**Sg**	**05 35 02.2**	**+0.7**
NEST	**Nestorio**	**0.69**	**21**	P	**Pg**	**05 34 52.5**	**+0.2**
NEST				S	**Sg**	**05 35 02.2**	**+0.7**
KZN	**Kozani**	**0.96**	**56**	P	**Pb**	**05 34 56.6**	**-0.5**
KZN				S	**Sb**	**05 35 10.7**	**+1.1**
KZN	**Kozani**	**0.96**	**56**	*e*PN	**Pb**	**05 34 56.8**	**-0.3**
KZN				*e*SN	**Sg**	**05 35 09.2**	**-0.8**
KZN	**Kozani**	**0.96**	**56**	P	**Pb**	**05 34 56.6**	**-0.5**
KZN				*e*Sn	**Sg**	**05 35 09.3**	**-0.8**
KZN				S	**Sb**	**05 35 10.7**	**+1.1**
LKD2	**Lefkada island**	**0.98**	**183**	P	**Pb**	**05 34 57.9**	**+0.5**
LKD2				S	**Sn**	**05 35 13.3**	**+1.8**
LKD2	**Lefkada island**	**0.98**	**183**	*e*PN	**Pg**	**05 34 58.1**	**+0.3**
LKD2				*e*SN	**Sn**	**05 35 12.6**	**+1.1**
LKD2	**Lefkada island**	**0.98**	**183**	P	**Pb**	**05 34 57.9**	**+0.5**
LKD2				*e*Sn	**Sn**	**05 35 12.6**	**+1.1**
THL	**Klokotos Trika**	**1.01**	**101**	*e*PN	**Pb**	**05 34 56.6**	**-1.3**
THL				*e*SN	**Sb**	**05 35 09.4**	**-1.6**
THL	**Klokotos Trika**	**1.01**	**101**	*e*Pn	**Pb**	**05 34 56.6**	**-1.3**
THL				*e*Sn	**Sb**	**05 35 09.4**	**-1.6**
FNA	**Florina**	**1.12**	**26**	P	**Pb**	**05 34 59.8**	**-0.1**
FNA	**Florina**	**1.12**	**26**	P	**Pb**	**05 34 59.8**	**-0.1**
EVR	**Evrytania**	**1.19**	**135**	P	**Pn**	**05 35 00.5**	**-0.4**
EVR	**Evrytania**	**1.19**	**135**	*e*PN	**Pn**	**05 35 00.5**	**-0.4**
EVR				*e*SN	**Sb**	**05 35 16.8**	**+0.5**
EVR	**Evrytania**	**1.19**	**135**	P	**Pn**	**05 35 00.5**	**-0.4**
EVR				*e*Sn	**Sb**	**05 35 16.8**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.32**	**124**	P	**Pn**	**05 35 03.2**	**+0.6**
MAKR				S	**Sg**	**05 35 21.5**	**0.0**
MAKR	**Makrakomi, Fth**	**1.32**	**124**	P	**Pn**	**05 35 03.2**	**+0.6**
MAKR				S	**Sg**	**05 35 21.5**	**0.0**
BIA	**Bitola**	**1.33**	**20**	P	**Pn**	**05 35 03.1**	**+0.4**
BIA	**Bitola**	**1.33**	**20**	⇑*i*Pn	**Pn**	**05 35 03.0**	**+0.4**
BIA	**Bitola**	**1.33**	**20**	P	**Pn**	**05 35 03.1**	**+0.4**
AGG	**Agios Georgios**	**1.45**	**121**	P	**Pn**	**05 35 05.3**	**+1.0**
AGG				S	**Sg**	**05 35 25.0**	**-0.5**
AGG	**Agios Georgios**	**1.45**	**121**	*e*Pn	**Pn**	**05 35 05.4**	**+1.1**
AGG	**Agios Georgios**	**1.45**	**121**	P	**Pn**	**05 35 05.3**	**+1.0**
AGG				S	**Sg**	**05 35 25.0**	**-0.5**
EFP	**Efpalio**	**1.62**	**145**	*e*PB	**Pn**	**05 35 06.8**	**+0.1**
EFP	**Efpalio**	**1.62**	**145**	*e*Pb	**Pn**	**05 35 06.8**	**+0.1**
UPR	**University Cam**	**1.70**	**151**	*e*PN	**Pb**	**05 35 09.5**	**-0.1**
UPR	**University Cam**	**1.70**	**151**	*e*Pn	**Pb**	**05 35 09.5**	**-0.1**
PSA1	**Psathopyrgos**	**1.70**	**148**	*e*PN	**Pb**	**05 35 10.4**	**+0.8**
TIR	**Tirane**	**1.71**	**338**	*e*PN	**Pn**	**05 35 09.1**	**+1.2**
TIR	**Tirane**	**1.71**	**338**	*e*Pn	**Pn**	**05 35 09.1**	**+1.2**
TRIZ	**Trizonia**	**1.75**	**143**	*e*PN	**Pb**	**05 35 10.7**	**+0.2**
TRIZ	**Trizonia**	**1.75**	**143**	*e*Pn	**Pb**	**05 35 10.7**	**+0.2**
KALE	**Kalithea**	**1.76**	**141**	*e*PN	**Pb**	**05 35 10.4**	**-0.3**
KALE	**Kalithea**	**1.76**	**141**	*e*Pn	**Pb**	**05 35 10.4**	**-0.3**
RLS	**Riolos of Patr**	**1.80**	**161**	*e*PB	**Pn**	**05 35 10.2**	**+1.0**
RLS	**Riolos of Patr**	**1.80**	**161**	*e*Pb	**Pn**	**05 35 10.2**	**+1.0**
LAKA	**Lakka**	**1.81**	**147**	*e*PN	**Pn**	**05 35 10.9**	**+1.6**
LAKA	**Lakka**	**1.81**	**147**	*e*Pn	**Pn**	**05 35 10.9**	**+1.6**
PHP	**Peshkopia**	**1.92**	**353**	*e*PN	**Pb**	**05 35 13.4**	**-0.1**
PHP	**Peshkopia**	**1.92**	**353**	*e*Pn	**Pb**	**05 35 13.4**	**-0.1**
NEO	**Neokhori**	**1.98**	**103**	*e*PN	**Pn**	**05 35 12.8**	**+1.1**
NEO	**Neokhori**	**1.98**	**103**	*e*Pn	**Pn**	**05 35 12.8**	**+1.1**
LKR	**Lokris**	**2.09**	**122**	*e*PN	**Pn**	**05 35 15.1**	**+2.0**
LKR	**Lokris**	**2.09**	**122**	*e*Pn	**Pn**	**05 35 15.1**	**+2.0**
VAY	**Valandovo**	**2.09**	**42**	*i* Pn	**Pn**	**05 35 13.2**	**+0.1**
VAY	**Valandovo**	**2.09**	**42**	*i* Pn	**Pn**	**05 35 13.6**	**+0.5**
PLG	**Polygyros**	**2.17**	**73**	*e*PN	**Pn**	**05 35 13.4**	**-0.9**
PLG	**Polygyros**	**2.17**	**73**	*e*Pn	**Pn**	**05 35 13.4**	**-0.9**
GUR	**Goura**	**2.22**	**145**	*e*PB	**Pn**	**05 35 16.6**	**+1.5**
GUR	**Goura**	**2.22**	**145**	*e*Pb	**Pn**	**05 35 16.6**	**+1.5**
SKO	**Skopje**	**2.26**	**13**	*i* Pn	**Pb**	**05 35 18.6**	**-0.7**
SKO	**Skopje**	**2.26**	**13**	*i* Pn	**Pb**

KOLS	Kolonicke sedl	9.23	6	ePn	Pn	05 36 52.9	+1.8		
BRTR	Keskin Array B	9.94	86	Pn	Pn	05 37 02.7	+1.6		
	0.1nm,0.3s,baz=272,slow=14,SNR=2.6								
GERES	GERESS Array B	10.37	333	Pn	Pn	05 37 05.4	-1.5		
	0.1nm,0.3s,baz=151,slow=22,SNR=3.1								
HFS	Hagfors	20.86	350	P	P	05 39 17.4	-2.3		
	3.9nm,0.6s,baz=162,slow=11,SNR=14								
HFS				LR	LR	05 48 27.6			
	comp=Z,39nm,18.9s,baz=245,slow=40								
FINES	FINESS Array B	21.95	7	P	P	05 39 29.4	-2.0		
	3.9nm,0.9s,baz=176,slow=11,SNR=9.0								
NOA	NORSAR Array B	22.09	348	P	P	05 39 31.4	-1.6		
	5.0nm,0.7s,baz=165,slow=10,SNR=20								
NOA				LR	LR	05 49 14.8			
	comp=Z,30nm,18.5s,baz=180,slow=40								
EKA	Eskdalemuir Ar	22.25	322	P	P	05 39 33.4	-1.3		
	1.5nm,0.9s,baz=121,slow=11,SNR=4.7								
KAF	Kangasniemi	22.63	7	*ep*	P	05 39 40.3	+1.6		
	2.3nm,0.6s								
JOF	Joensuu	24.04	12	*ep*	P	05 39 50.0	-2.7		
	1.0nm,0.6s								
ARCES	ARCESS Array B	29.93	3	P	P	05 40 42.8	-2.9		
	1.1nm,0.6s,baz=186,slow=11,SNR=7.2								
TORD	Torodi Ar. Bea	31.38	218	P	P	05 40 57.6	-1.3		
	2.2nm,0.7s,baz=32,slow=7.9,SNR=15								
MKAR	Makanchi Array	44.34	60	P	P	05 42 45.9	-2.2		
	1.4nm,0.5s,baz=282,slow=7.0,SNR=19								
ZALV	Zalesovo Beam	44.52	49	P	P	05 42 46.9	-2.4		
	0.7nm,0.4s,baz=272,slow=7.6,SNR=3.6								
SONM	Songino Array	59.33	51	P	P	05 44 38.0	-1.9		
	0.7nm,0.9s,baz=309,slow=7.3,SNR=3.2								
YKA	Yellowknife Ar	71.95	340	P	P	05 45 57.7	-3.3		
	0.2nm,0.8s,baz=39,slow=5.6,SNR=5.0								

CSEM ***14*** *05:41:49.3, 42°.35N × 13°.50E, h8km, After ROM*
ROM 14 05:41:49.3 ± 0.5, 42°.35N × 13°.50E, h8km ± 7km, Ml1.5/3, Error ellipse: s-maj=13.8km s-min=2.3km az=38.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**275**	Pg	Pg	05 41 51.8	+0.3
AQU				Sg	Sg	05 41 53.4	+0.4
AQU	**L'Aquila**	**0.07**	**275**	Pg	Pg	05 41 51.8	+0.3
AQU				Sg	Sg	05 41 53.4	+0.4
FAGN	**Fagnano**	**0.10**	**144**	Pg	Pg	05 41 52.1	+0.3
FAGN				Sg	Sg	05 41 54.0	+0.4
	384nm,0.6s						
FAGN	**Fagnano**	**0.10**	**144**	Pg	Pg	05 41 52.1	+0.3
FAGN				Sg	Sg	05 41 54.0	+0.4
	384nm,0.6s						
VCEL	**Villa Celiera**	**0.25**	**79**	Pg	Pg	05 41 55.4	+0.8
VCEL				Sg	Sb	05 42 00.2	-0.8
	69nm,0.4s						
VCEL	**Villa Celiera**	**0.25**	**79**	Pg	Pg	05 41 55.4	+0.8
VCEL				Sg	Sb	05 42 00.2	-0.8
	69nm,0.4s						
TERO	**Teramo**	**0.28**	**15**	Pg	Pg	05 41 55.5	+0.4
TERO				Sg	Sb	05 42 00.9	-0.8
	35nm,0.5s						
TERO	**Teramo**	**0.28**	**15**	Pg	Pg	05 41 55.5	+0.4
TERO				Sg	Sb	05 42 00.9	-0.8
	35nm,0.5s						

CSEM ***14*** *05:42:18.0, 42°.39N × 13°.37E, h8km, After ROM*
ROM 14 05:42:18.0 ± 0.1, 42°.39N × 13°.37E, h8km ± 1km, Ml2.1/1, Error ellipse: s-maj=1.9km s-min=1.3km az=163.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**149**	Pg	Pg	05 42 20.3	+0.6
AQU				Sg	Sg	05 42 21.2	+0.3
AQU	**L'Aquila**	**0.04**	**149**	Pg	Pg	05 42 20.3	+0.6
AQU				Sg	Sg	05 42 21.2	+0.3
FAGN	**Fagnano**	**0.20**	**128**	Pg	Pg	05 42 22.3	+0.2
FAGN				Sg	Sg	05 42 25.9	+1.0
FAGN	**Fagnano**	**0.20**	**128**	Pg	Pg	05 42 22.3	+0.2
FAGN				Sg	Sg	05 42 25.9	+1.0
FIAM	**Fiamignano**	**0.23**	**238**	Pg	Pg	05 42 23.4	+0.7
FIAM				Sg	Sg	05 42 26.8	+0.9
FIAM	**Fiamignano**	**0.23**	**238**	Pg	Pg	05 42 23.4	+0.7
FIAM				Sg	Sg	05 42 26.8	+0.9
TERO	**Teramo**	**0.29**	**36**	Pg	Pg	05 42 24.7	+0.8
TERO				Sg	Sg	05 42 29.2	+1.4
TERO	**Teramo**	**0.29**	**36**	Pg	Pg	05 42 24.7	+0.8
TERO				Sg	Sg	05 42 29.2	+1.4
VCEL	**Villa Celiera**	**0.35**	**89**	Pg	Pb	05 42 26.0	-0.6
VCEL				Sg	Sb	05 42 31.5	-0.9
	193nm,0.5s						
VCEL	**Villa Celiera**	**0.35**	**89**	Pg	Pb	05 42 26.0	-0.6
VCEL				Sg	Sb	05 42 31.5	-0.9
	193nm,0.5s						

IDC ***14*** *06:14:14.5±0.6, 34°.40N × 23°.80E, h0km, mb4.5/25, mb1 4.5/34, mb1mx4.4/42, mbtmp4.4/34, ML4.2/9, MS3.6/4, Ms1 3.6/4, ms1mx3.0/43, Error ellipse: s-maj=14.8km s-min=11.2km az=173.0*
PRU ***14*** *06:14:14.2, 34°.21N × 23°.16E, h0km, M4.4*
ISCJB ***14*** *06:14:16.2±0.2, 34°.17N ± 0°.02 × 23°.84E ± 0°.02, h33km, mb4.4/77, MS4.0/7, Error ellipse: s-maj=3.3km s-min=1.9km az=34.8*
BJI ***14*** *06:14:16.3, 34°.28N × 23°.11E, h58km, mb4.8/15, Ms4.9/2, Ms7 4.6/2*
CSEM ***14*** *06:14:17.9±0.1, 34°.19N × 23°.80E, h30km, mb4.5/40, Ms3.1, Error ellipse: s-maj=4.8km s-min=2.5km az=41.0*
THE ***14*** *06:14:17.6, 34°.16N × 23°.70E, h7km ± 2km, ML3.8/1, Error ellipse: s-maj=4.6km s-min=1.8km az=205.0*
MOS ***14*** *06:14:18.1±1.0, 34°.41N × 23°.80E, h33km, mb4.7/57, Error ellipse: s-maj=5.7km s-min=3.1km az=105.3*
NEIC ***14*** *06:14:19.7, 34°.36N × 23°.73E, h54km, mb4.4/49, After ATH.*
ATH ***14*** *06:14:19.7, 34°.36N × 23°.73E, h55km ± 5km, MD3.7/18, ML4.0*
PDG ***14*** *06:14:22.0±0.4, 34°.96N × 23°.41E, h0km ± 11km, ML4.7/9, Error ellipse: s-maj=7.3km s-min=3.7km az=90.0*
TEH ***14*** *06:14:22.1, 34°.63N × 23°.96E, h80km, ML4.4*
HLW ***14*** *06:14:28.6, 33°.78N × 24°.87E, h33km ± 35km, Md4.1, Ml3.6*
BEO ***14*** *06:14:36.9, 35°.34N × 21°.70E, h0km*
ISC 14 06:14:19.3 ± 0.3, 34°.24N ± 0°.04 × 23°.84E ± 0°.03, h39km ± 2km, n707, σ1$48/700, mb4.5/77, MS3.5/7, 28C-21D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.63**	**19**	P	Pn	**06 14 32.2**	**+0.3**
GVD	**Gavdhos**	**0.63**	**19**	*e*Pg	Pn	**06 14 32.1**	**+0.2**
GVD	**Gavdhos**	**0.63**	**19**	*e*P	Pn	**06 14 32.2**	**+0.3**
GVD				*e*S	Sn	**06 14 41.9**	**+1.1**
GVD	**Gavdhos**	**0.63**	**19**	*e*P	Pn	**06 14 32.2**	**+0.3**
GVD				*e*S	Sn	**06 14 41.9**	**+1.1**
SIVA	**Sivas**	**1.11**	**46**	P	Pn	**06 14 39.9**	**+1.5**
SIVA	**Sivas**	**1.11**	**46**	*e*P	Pn	**06 14 40.0**	**+1.5**
SIVA	**Sivas**	**1.11**	**46**	P	Pn	**06 14 39.9**	**+1.5**
KARN	**Karanos**	**1.16**	**3**	P	Pn	**06 14 39.5**	**+0.4**
KARN				S	Sn	**06 14 58.4**	**+4.7**
KARN	**Karanos**	**1.16**	**3**	*e*P	Pn	**06 14 39.7**	**+0.6**
KARN				*e*S	Sn	**06 14 54.0**	**+0.3**
KARN	**Karanos**	**1.16**	**3**	P	Pn	**06 14 39.5**	**+0.4**
KARN				S	Sn	**06 14 58.4**	**+4.7**
VAM	**Vamos**	**1.20**	**14**	P	Pn	**06 14 40.4**	**+0.8**
VAM				S	Sn	**06 14 58.9**	**+4.2**
VAM	**Vamos**	**1.20**	**14**	*e*P	Pn	**06 14 40.4**	**+0.8**
VAM				*e*S	Sn	**06 14 55.1**	**+0.4**
VAM	**Vamos**	**1.20**	**14**	*e*P	Pn	**06 14 40.4**	**+0.8**
VAM				S	Sn	**06 14 58.9**	**+4.2**
IDI	**Anoyia**	**1.36**	**39**	P	Pn	**06 14 43.3**	**+1.4**
IDI	**Anoyia**	**1.36**	**39**	*e*Pn	Pn	**06 14 43.2**	**+1.4**
IDI	**Anoyia**	**1.36**	**39**	*e*P	Pn	**06 14 43.4**	**+1.6**
IDI	**Anoyia**	**1.36**	**39**	P	Pn	**06 14 43.3**	**+1.4**
LAST	**Lasithi**	**1.63**	**55**	P	Pn	**06 14 47.8**	**+2.2**
LAST	**Lasithi**	**1.63**	**55**	*e*P	Pn	**06 14 47.9**	**+2.3**
LAST	**Lasithi**	**1.63**	**55**	P	Pn	**06 14 47.8**	**+2.2**
XRY	**Khrisi**	**1.66**	**67**	*e*P	Pn	**06 14 47.8**	**+1.9**
XRY	**Khrisi**	**1.66**	**67**	*e*P	Pn	**06 14 47.8**	**+1.9**
NPS	**Neapolis**	**1.78**	**55**	P	Pn	**06 14 50.0**	**+2.4**
NPS	**Neapolis**	**1.78**	**55**	*e*P	Pn	**06 14 50.2**	**+2.6**
NPS	**Neapolis**	**1.78**	**55**	P	Pn	**06 14 50.0**	**+2.4**
KYTH	**Kithira**	**2.14**	**342**	P	Pn	**06 14 53.1**	**+0.6**
KYTH	**Kithira**	**2.14**	**342**	*e*P	Pn	**06 14 53.1**	**+0.6**
KYTH	**Kithira**	**2.14**	**342**	*e*P	Pn	**06 14 53.1**	**+0.6**
ZKR	**Zakros**	**2.15**	**65**	P	Pn	06 14 55.3	+2.7
ZKR	**Zakros**	**2.15**	**65**	*e*P	Pn	**06 14 55.1**	**+2.5**
ZKR	**Zakros**	**2.15**	**65**	P	Pn	06 14 55.3	+2.7
LTBQ	**Tobruq**	**2.18**	**178**	*i* P	Pn	**06 14 55.4**	**+2.3**
	76nm,1.0s,SNR=50						
LTBQ				*e*S	Sn	**06 15 19.6**	**+0.8**
	311nm,0.4s,SNR=50						
VLI	**Veliai**	**2.58**	**344**	P	Pn	**06 14 59.9**	**+1.3**
VLI				S	Sn	**06 15 32.6**	**+3.9**
VLI	**Veliai**	**2.58**	**344**	*e*P	Pn	**06 14 59.8**	**+1.2**
VLI	**Veliai**	**2.58**	**344**	P	Pn	**06 14 59.9**	**+1.3**
VLI				S	Sn	**06 15 32.6**	**+3.9**
KARP	**Karpathos**	**3.03**	**64**	*e*P	Pn	06 15 07.5	+2.8
APE	**Apeiranthos**	**3.14**	**26**	*e*P	Pn	**06 15 05.9**	**-0.4**
APE	**Apeiranthos**	**3.14**	**26**	*e*P	Pn	**06 15 05.9**	**-0.4**
PYL	**PYLOS**	**3.15**	**328**	*e*P	Pn	**06 15 06.8**	**+0.4**
PYL	**PYLOS**	**3.15**	**328**	*e*P	Pn	**06 15 06.8**	**+0.4**
DID	**Didima**	**3.29**	**352**	*e*P	Pn	**06 15 08.4**	**0.0**
DID	**Didima**	**3.29**	**352**	*e*P	Pn	**06 15 08.4**	**0.0**
ITM	**Ithomi**	**3.32**	**333**	*e*P	Pn	**06 15 09.8**	**+1.0**
ITM	**Ithomi**	**3.32**	**333**	*e*P	Pn	**06 15 09.8**	**+1.0**
VLX	**Vlachokerasia**	**3.34**	**340**	*e*P	Pn	**06 15 10.3**	**+1.2**
VLX	**Vlachokerasia**	**3.34**	**340**	*e*P	Pn	**06 15 10.3**	**+1.2**
NAIG	**Nisos Aigina**	**3.52**	**355**	*e*P	Pn	**06 15 11.2**	**-0.3**
NAIG	**Nisos Aigina**	**3.52**	**355**	*e*P	Pn	**06 15 11.3**	**-0.3**
AMT	**Artemida-Makis**	**3.71**	**333**	*e*P	Pn	**06 15 15.3**	**+1.1**
AMT	**Artemida-Makis**	**3.71**	**333**	*e*P	Pn	**06 15 15.3**	**+1.1**
ATH	**Athens Observa**	**3.73**	**359**	*e*P	Pn	**06 15 13.6**	**-0.7**
ATH	**Athens Observa**	**3.73**	**359**	*e*P	Pn	**06 15 13.6**	**-0.7**
PTL	**Penteli**	**3.80**	**0**	*e*P	Pn	**06 15 15.1**	**-0.3**
PTL	**Penteli**	**3.80**	**0**	*e*P	Pn	**06 15 15.1**	**-0.3**
LTK	**Loutraki**	**3.84**	**350**	*e*P	Pn	**06 15 15.7**	**-0.2**
LTK	**Loutraki**	**3.84**	**350**	*e*P	Pn	**06 15 15.7**	**-0.2**
GUR	**Goura**	**3.88**	**342**	*e*P	Pn	**06 15 17.2**	**+0.7**
GUR	**Goura**	**3.88**	**342**	*e*P	Pn	**06 15 17.3**	**+0.7**
BODT	**Bodrum**	**3.99**	**44**	*e*P	Pn	**06 15 18.5**	**+0.6**
ARG	**Arkhangelos**	**4.03**	**59**	*e*P	Pn	**06 15 20.0**	**+1.6**
ARG	**Arkhangelos**	**4.03**	**59**	*e*P	Pn	**06 15 20.0**	**+1.6**
HMAT	**Matruh**	**4.17**	**138**	P	Pn	**06 15 18.5**	**-1.9**
	baz=144						
HMAT				AMP		06 16 00.0	
	comp=E,120μm,0.2s,logA/T=5.8,baz=144						
HMAT	**Matruh**	**4.17**	**138**	P	Pn	**06 15 18.5**	**-1.9**
LAKA	**Lakka**	**4.26**	**340**	*e*P	Pn	**06 15 22.0**	**+0.2**
LAKA	**Lakka**	**4.26**	**340**	*e*P	Pn	**06 15 22.0**	**+0.2**
RLS	**Riolos of Patr**	**4.27**	**334**	*e*P	Pn	**06 15 23.1**	**+1.4**
RLS	**Riolos of Patr**	**4.27**	**334**	*e*P	Pn	**06 15 23.1**	**+1.4**
TRIZ	**Trizonia**	**4.36**	**341**	*e*P	Pn	**06 15 23.0**	**0.0**
TRIZ	**Trizonia**	**4.36**	**341**	*e*P	Pn	**06 15 23.0**	**0.0**
KALE	**Kalithea**	**4.36**	**342**	*e*P	Pn	**06 15 23.3**	**+0.2**
KALE	**Kalithea**	**4.36**	**342**	*e*P	Pn	**06 15 23.3**	**+0.2**
LKR	**Lokris**	**4.45**	**352**	*e*P	Pn	**06 15 23.8**	**-0.5**
LKR	**Lokris**	**4.45**	**352**	*e*P	Pn	**06 15 23.8**	**-0.5**
EFP	**Efpalio**	**4.46**	**340**	*e*P	Pn	**06 15 25.0**	**+0.6**
EFP	**Efpalio**	**4.46**	**340**	*e*P	Pn	**06 15 25.0**	**+0.6**
CHOS	**Chios island**	**4.51**	**23**	*e*P	Pn	**06 15 24.9**	**-0.2**
CHOS	**Chios island**	**4.51**	**23**	*e*P	Pn	**06 15 24.9**	**-0.2**
LJBD	**Adjabya**	**4.52**	**224**	*i* P	Pn	**06 15 23.8**	**-1.5**
	comp=E,119nm,1.9s,SNR=48						
YER	**Yerkesik**	**4.63**	**50**	*e*P	Pn	**06 15 28.5**	**+1.7**
DALT	**Dalyan (Mudla)**	**4.66**	**56**	*e*P	Pn	**06 15 29.3**	**+2.2**
VLS	**Valsamata**	**4.73**	**327**	*e*P	Pn	**06 15 27.5**	**-0.6**
VLS	**Valsamata**	**4.73**	**327**	*e*P	Pn	**06 15 27.5**	**-0.6**
BLCB	**Balcova**	**4.88**	**31**	*e*P	Pn	**06 15 29.3**	**-0.8**
AGG	**Agios Georgios**	**4.92**	**346**	*e*P	Pn	**06 15 31.2**	**+0.4**
AGG	**Agios Georgios**	**4.92**	**346**	*e*P	Pn	**06 15 31.2**	**+0.4**
EVR	**Evrytania**	**4.94**	**341**	*e*P	Pn	**06 15 32.1**	**+1.0**
EVR	**Evrytania**	**4.94**	**341**	*e*P	Pn	**06 15 32.1**	**+1.0**
KSL	**Kastellorizon**	**5.07**	**66**	*e*P	Pn	**06 15 33.6**	**+0.8**
KSL	**Kastellorizon**	**5.07**	**66**	*e*P	Pn	**06 15 33.6**	**+0.8**
NEO	**Neokhori**	**5.08**	**355**	*e*P	Pn	**06 15 33.4**	**+0.5**
NEO	**Neokhori**	**5.08**	**355**	*e*P	Pn	**06 15 33.4**	**+0.5**
SWA2		**5.17**	**164**	P	Pn	**06 15 34.7**	**+0.5**
	baz=173						
SWA2				AMP		06 16 00.0	
	comp=N,310μm,0.3s,logA/T=6.0,baz=173						
SWA2				S	Sn	06 16 26.1	-6.4
	baz=173						
SWA2		**5.17**	**164**	P	Pn	**06 15 34.7**	**+0.5**
LKD2	**Lefkada island**	**5.21**	**331**	*e*P	Pn	**06 15 35.6**	**+0.8**
LKD2	**Lefkada island**	**5.21**	**331**	*e*P	Pn	**06 15 35.6**	**+0.8**
GLHS	**Glhisar (BURDU**	**5.45**	**56**	*e*P	Pn	**06 15 38.6**	**+0.6**
THL	**Klokotos Trika**	**5.51**	**345**	*e*P	Pn	**06 15 38.7**	**-0.1**
THL	**Klokotos Trika**	**5.51**	**345**	*e*P	Pn	**06 15 38.7**	**-0.1**
LUJL	**Ujela**	**5.54**	**204**	*i* P	Pn	**06 15 39.0**	**-0.3**
	comp=N,514nm,0.2s,SNR=48						
ELL	**Elmali**	**5.55**	**61**	*e*P	Pn	**06 15 40.0**	**+0.5**
JAN	**Janina**	**5.91**	**337**	*e*P	Pn	**06 15 44.6**	**+0.2**
JAN	**Janina**	**5.91**	**337**	*e*P	Pn	**06 15 44.6**	**+0.2**
KHL	**Karahalli**	**6.14**	**47**	*e*P	Pn	**06 15 47.2**	**-0.3**
BCK	**Bucak**	**6.35**	**58**	*e*P	Pn	**06 15 50.6**	**+0.1**
SOH	**Sokhos**	**6.58**	**357**	*e*P	Pn	**06 15 53.4**	**-0.2**
SOH	**Sokhos**	**6.58**	**357**	*e*P	Pn	**06 15 53.4**	**-0.2**
TVSB	**Tavsanli**	**6.88**	**39**	*e*P	Pn	**06 15 57.0**	**-0.7**
ALT	**Altintas**	**6.96**	**45**	*e*P	Pn	**06 15 58.0**	**-0.8**
AKMC	**Akamas**	**7.04**	**81**	P	Pn	**06 15 57.7**	**-2.2**
BIA	**Bitola**	**7.05**	**344**	*i* Pn	Pn	**06 15 58.6**	**-1.4**
VAY	**Valandovo**	**7.14**	**352**	*i* Pn	Pn	**06 15 59.6**	**-1.6**
ALFC	**Alevga**	**7.27**	**80**	P	Pn	**06 16 01.2**	**-1.9**
	comp=N,1.5nm,0.3s						
MMB	**Musmiste**	**7.34**	**359**	*e*P	Pn	**06 16 01.9**	**-2.0**
HNAT	**Natroun**	**7.37**	**127**	P	Pn	**06 16 01.4**	**-2.9**
	baz=128						
HNAT	**Natroun**	**7.37**	**127**	P	Pn	**06 16 01.4**	**-2.9**
HMYD	**Mayadein**	**7.39**	**125**	P	Pn	**06 16 01.6**	**-3.0**
	baz=126						
HMYD	**Mayadein**	**7.39**	**125**	P	Pn	**06 16 01.6**	**-3.0**
RZN	**Rozhen**	**7.47**	**5**	*e*P	Pn	**06 16 04.8**	**-1.0**
TIP	**Timpagrande**	**7.52**	**313**	*e*Pn	Pn	**06 16 05.0**	**-1.5**
TIP				*e*Sn	Sn	06 17 19.1	-12
TIP	**Timpagrande**	**7.52**	**313**	*e*Pn	Pn	**06 16 05.0**	**-1.5**
CEL	**Celeste**	**7.57**	**304**	*e*Pn	Pn	**06 16 06.6**	**-0.5**
CEL	**Celeste**	**7.57**	**304**	*e*Pn	Pn	**06 16 06.6**	**-0.5**
KKB	**Krsmnik**	**7.64**	**356**	*e*P	Pn	**06 16 08.8**	**-1.2**
KONT	**Konya--Tatoy**	**7.83**	**59**	*e*P	Pn	**06 16 10.5**	**-0.1**
CSS	**Prodhromos**	**7.86**	**82**	P	Pn	**06 16 08.8**	**-2.3**
CSS	**Prodhromos**	**7.86**	**82**	*e*P	Pn	**06 16 10.8**	**-0.3**
CSS	**Prodhromos**	**7.86**	**82**	*e*Pn	Pn	**06 16 09.9**	**-1.2**
CSS				*e*Sn	Sn	**06 17 35.7**	**-3.1**
CSS	**Prodhromos**	**7.86**	**82**	Pn	Pn	**06 16 10.9**	**-0.2**
LADK	**Ladik-KONYA**	**7.94**	**58**	*e*P	Pn	**06 16 11.2**	**-1.1**
SKO	**Skopje**	**7.95**	**347**	*e*Pn	Pn	**06 16 10.3**	**-1.9**
KIZT	**Kizilcal**	**7.95**	**52**	*e*P	Pn	**06 16 11.9**	**-0.6**
HSAF	**As Saff**	**8.01**	**123**	P	Pn	06 16 10.0	-3.2
	baz=124						
HSAF	**As Saff**	**8.01**	**123**	P	Pn	06 16 10.0	-3.2
KOT	**Kottamia**	**8.03**	**120**	P	Pn	06 16 10.1	-3.3
	baz=121						
KOT				AMP		06 17 00.0	
	comp=N,60μm,0.4s,logA/T=5.2,baz=121						
LFK	**Lefkose**	**8.04**	**80**	*e*P	Pn	**06 16 13.7**	**0.0**
HFRF	**Wahat Farafira**	**8.05**	**150**	P	Pn	**06 16 13.1**	**-0.6**
	baz=154						
HFRF				AMP		06 18 00.0	
	comp=E,40μm,0.4s,logA/T=5.0,baz=154						
HFRF	**Wahat Farafira**	**8.05**	**150**	P	Pn	**06 16 13.1**	**-0.6**
GLL	**Jalalah**	**8.14**	**123**	P	Pn	06 16 11.8	-3.2
	baz=123						
HHAG	**Hagoal**	**8.21**	**119**	P	Pn	06 16 12.5	-3.4
	baz=119						
VTS	**Vitosha**	**8.35**	**357**	*i*P	Pn	**06 16 18.6**	**+0.6**
VTS	**Vitosha**	**8.35**	**357**	*e*Pn	Pn	**06 16 18.6**	**+0.6**
VTS	**Vitosha**	**8.35**	**357**	*e*P	Pn	**06 16 17.5**	**-0.5**
VTS	**Vitosha**	**8.35**	**357**	*i*P	Pn	**06 16 18.6**	**+0.6**
PHNC	**Paralimni**	**8.44**	**82**	P	Pn	**06 16 15.8**	**-3.2**
ULC	**Ulcinj**	**8.52**	**336**	*i*Pn	Pn	**06 16 17.1**	**-3.0**
ULC				*e*Sn	Sn	06 17 44.0	-11
ULC	**Ulcinj**	**8.52**	**336**	*i*Pn	Pn	**06 16 17.1**	**-3.0**
ULC				*e*Sn	Sn	06 17 44.0	-11
CUC	**Castrocucco**	**8.60**	**314**	*e*Pn	Pn	**06 16 20.8**	**-0.5**
CUC				*e*Sn	Sn	**06 17 51.9**	**-5.2**
CUC	**Castrocucco**	**8.60**	**314**	*e*Pn	Pn	**06 16 20.8**	**-0.5**
AMAG	**Maghara**	**8.69**	**112**	P	Pn	**06 16 19.7**	**-2.8**
	baz=111						
AMAG	**Maghara**	**8.69**	**112**	P	Pn	**06 16 19.7**	**-2.8**
BARS	**Barje**	**8.71**	**350**	*e*Pn	Pn	**06 16 20.9**	**-1.8**
PVY	**Plav**	**8.88**	**341**	*i*Pn	Pn	**06 16 22.2**	**-2.9**
PVY				*e*Sn	Sn	06 17 52.8	-11
PVY	**Plav**	**8.88**	**341**	*i*Pn	Pn	**06 16 22.2**	**-2.9**
PVY				*e*Sn	Sn	06 17 52.8	-11
PDG	**Podgorica**	**8.93**	**338**	*i*Pn	Pn	**06 16 23.2**	**-2.5**
PDG				*e*Sn	Sn	06 17 54.5	-11
TTG	**Podgorica**	**8.93**	**338**	*i*Pn	Pn	**06 16 23.2**	**-2.5**
TTG				*e*Sn	Sn	06 17 54.5	-11
BUM	**Brajici-Budva**	**8.94**	**336**	*i*Pn	Pn	06 16 22.8	-3.1
BUM				*e*Sn	Sn	06 17 54.9	-10
BUM	**Brajici-Budva**	**8.94**	**336**	*i*Pn	Pn	06 16 22.8	-3.1
BUM				*e*Sn	Sn	06 17 54.9	-10
ZAPS	**Zavoj**	**9.07**	**354**	*e*Pn	Pn	**06 16 28.7**	**+1.0**
MERS	**Mersin**	**9.09**	**70**	*e*P	Pn	**06 16 27.6**	**-0.4**
ANTO	**Ankara**	**9.10**	**49**	*i*P	Pn	**06 16 30.3**	**+2.2**
BEY	**Berane**	**9.15**	**341**	*i*Pn	Pn	**06 16 25.9**	**-3.0**
BEY				*e*Sn	Sn	06 18 00.2	-11
IVA	**Berane**	**9.15**	**341**	*i*Pn	Pn	**06 16 25.9**	**-3.0**
IVA				*e*Sn	Sn	06 18 00.2	-11
HCY	**Herceg Novi**	**9.20**	**334**	*i*Pn	Pn	06 16 26.4	-3.1
HCY				*e*Sn	Sn	06 18 01.0	-11
HCY	**Herceg Novi**	**9.20**	**334**	*i*Pn	Pn	06 16 26.4	-3.1
HCY				*e*Sn	Sn	06 18 01.0	-11
SELS	**Selova**	**9.21**	**347**	*e*Pn	Pn	**06 16 26.6**	**-3.0**
NKY	**Niksic**	**9.36**	**338**	*i*Pn	Pn	**06 16 29.2**	**-2.5**
NKY				*e*Sn	Sn	06 18 03.8	-12
NKY	**Niksic**	**9.36**	**338**	*i*Pn	Pn	**06 16 29.2**	**-2.5**
NKY				*e*Sn	Sn	06 18 03.8	-12
KZIT	**Kziot**	**9.51**	**108**	Pn	Pn	**06 16 32.8**	**-0.9**
BRTR	**Keskin Array B**	**9.56**	**52**	Pn	Pn	**06 16 34.6**	**+0.1**
BRTR				Sn	Sn	**06 18 19.2**	**-1.4**
BRTR	**Keskin Array B**	**9.56**	**52**	Pn	Pn	**06 16 34.6**	**+0.1**
	comp=E,0.5nm,0.3s,baz=229,slow=13,SNR=25						
BRTR				Sn	Sn	**06 18 19.2**	**-1.4**
	comp=E,0.1nm,0.3s,baz=134,slow=18,SNR=1.4						
BRTR	**Keskin Array B**	**9.56**	**52**	P	Pn	**06 16 34.6**	**+0.1**
	comp=E,1.0nm,0.3s						
BRTR				S	Sn	**06 18 19.2**	**-1.4**
BR131	**Keskin Array S**	**9.56**	**52**	*e*Pn	Pn	**06 16 35.2**	**+0.7**
	comp=E,5.3nm,0.8s						
BR131	**Keskin Array S**	**9.56**	**52**	*e*Pn	Pn	**06 16 35.2**	**+0.7**
	comp=E,5.3nm,0.8s						
BRY	**Bratogost**	**9.59**	**336**	*i*Pn	Pn	06 16 31.0	-3.9
BRY				*e*Sn	Sn	06 18 10.3	-11
BRY	**Bratogost**	**9.59**	**336**	*i*Pn	Pn	06 16 31.0	-3.9
BRY				*e*Sn	Sn	06 18 10.3	-11
SLTI	**Sal'it**	**9.59**	**99**	Pn	Pn	**06 16 34.0**	**-0.8**
HNKL	**Nakhl**	**9.62**	**114**	P	Pn	**06 16 33.1**	**-2.1**
	baz=113						
HNKL				AMP		06 18 00.0	
	comp=E,30μm,0.5s,logA/T=4.8,baz=113						
HNKL				S	Sn	06 18 06.8	-15
	baz=113						
HNKL	**Nakhl**	**9.62**	**114**	P	Pn	**06 16 33.1**	**-2.1**
RTMI	**Retamim**	**9.69**	**106**	Pn	Pn	**06 16 35.5**	**-0.6**
GRB	**Gharib**	**9.69**	**125**	P	Pn	**06

comp=Z,5.4nm,0.4s
SOKA Soboth 14.10 334 ⇑ *i*P Pn 06 17 32.4 -4.1
comp=Z,5.4nm,0.4s
PGF Pioggiola 14.28 310 *e*Pn **Pn** **06 17 37.9 -1.0**
VYHS Vyhne 14.72 347 *e*P **Pn** **06 17 44.8 0.0**
VYHS *e* 06 20 21.4
VYHS Vyhne 14.72 347 *e*PN **Pn** **06 17 44.8 0.0**
VYHS Vyhne 14.72 347 *e*SN **Sn** **06 20 21.4 -5.2**
VYHS Vyhne 14.72 347 *e*Pn **Pn** **06 17 44.8 0.0**
KOLS Kolonicke sedl 14.73 356 *e*P **Pn** **06 17 46.6 +1.8**
KOLS Kolonicke sedl 14.73 356 *e*PN **Pn** **06 17 46.6 +1.8**
KOLS Kolonicke sedl 14.73 356 *e*Pn **Pn** **06 17 46.6 +1.8**
CRVS Cervenica-Dubn 14.76 354 *e*P **Pn** **06 17 46.5 +1.3**
CRVS Cervenica-Dubn 14.76 354 *e*PN **Pn** **06 17 46.5 +1.3**
CRVS Cervenica-Dubn 14.76 354 *e*Pn **Pn** **06 17 46.5 +1.3**
NIE Niedzica 15.39 351 *e*P **P** **06 17 58.0 +0.3**
NIE Niedzica 15.39 351 *e*P **P** **06 17 58.0 +0.3**
NIE Niedzica 15.39 351 *e*P **P** **06 17 58.0 +0.3**
KWP Kalwaria Pacla 15.40 357 ⇑ *i*P **Pn** **06 17 54.3 +0.6**
SBF Sospel 15.93 312 *e*P **Pn** **06 17 59.2 -1.5**
comp=Z,24nm,0.8s
SBF Sospel 15.93 312 *e*Pn **Pn** **06 17 56.3 -4.4**
SBF Sospel 15.93 312 *e*P **Pn** **06 17 59.2 -1.5**
SBF pmax pmax
comp=Z,24nm,0.8s
SBF Sospel 15.93 312 *e*P **Pn** **06 17 59.2 -1.5**
comp=Z,24nm,0.8s
VRAC Vranov 15.98 343 Pn **Pn** **06 18 00.8 -0.4**
VRAC Vranov 15.98 343 Pn **Pn** **06 18 00.8 -0.4**
comp=Z,1.5nm,0.3s,baz=153,slow=10,SNR=14
VRAC Vranov 15.98 343 Pn **Pn** **06 18 00.8 -0.4**
OKC Ostrava-Krasne 16.14 347 *e*P **P** **06 18 06.3 +0.3**
OKC Ostrava-Krasne 16.14 347 *e*P **P** **06 18 06.3 +0.3**
OKC Ostrava-Krasne 16.14 347 *e*P **P** **06 18 06.3 +0.3**
MORC Moravsky Berou 16.20 345 *e*P **Pn** **06 18 04.4 +0.4**
MORC pmax pmax
comp=Z,17nm,0.9s
MORC Moravsky Berou 16.20 345 *e*P **Pn** **06 18 04.3 +0.4**
comp=Z,17nm,0.9s
MORC Moravsky Berou 16.20 345 *e*Pn **Pn** **06 18 04.4 +0.4**
MOTA Moosalm 16.23 328 ⇑ *i*P **Pn** **06 18 04.1 -0.4**
MOTA pmax pmax
comp=Z,7.0nm,0.6s
MOTA Moosalm 16.23 328 ⇑ *i*P **Pn** **06 18 04.1 -0.4**
comp=Z,7.0nm,0.6s
MOTA Moosalm 16.23 328 ⇑ *i*P **Pn** **06 18 04.1 -0.4**
comp=Z,7.0nm,0.6s
OJC Ojcow 16.24 351 *e*P **Pn** **06 18 05.0 +0.6**
OJC pmax pmax
comp=Z,9.0nm,0.9s
OJC Ojcow 16.24 351 *e*P **Pn** **06 18 05.0 +0.6**
comp=Z,8.6nm,0.9s
OJC Ojcow 16.24 351 *e*P **Pn** **06 18 05.1 +0.6**
OJC Ojcow 16.24 351 *e*P **Pn** **06 18 05.0 +0.6**
comp=Z,8.6nm,0.9s
LMR La Mourre 16.25 309 *e*P **Pn** **06 18 03.3 -1.4**
LMR La Mourre 16.25 309 *e*Pn **Pn** **06 18 03.1 -1.6**
LMR La Mourre 16.25 309 *e*P **Pn** **06 18 03.3 -1.4**
LMR La Mourre 16.25 309 *e*P **Pn** **06 18 03.3 -1.4**
TREC Trest 16.26 340 *e*P **Pn** **06 18 04.2 -0.6**
TREC MLR MLR
comp=Z,300nm,13.5s
TREC Trest 16.26 340 *e*P **Pn** **06 18 04.2 -0.6**
TREC *ex* x 06 18 07.3
TREC AMS AMS 06 26 00.0
comp=Z,300nm,13.5s
FRF La Foret Royal 16.27 310 *e*P **Pn** **06 18 03.8 -1.1**
comp=Z,22nm,0.9s
FRF La Foret Royal 16.27 310 *e*Pn **Pn** **06 18 02.5 -2.4**
FRF La Foret Royal 16.27 310 *e*P **Pn** **06 18 03.8 -1.1**
FRF pmax pmax
comp=Z,22nm,0.9s
FRF La Foret Royal 16.27 310 *e*P **Pn** **06 18 03.8 -1.1**
comp=Z,22nm,0.9s
DAVOX Davos/Dischmat 16.39 324 Pn **P** **06 18 07.9 -1.1**
DAVOX Sn Sn 06 20 58.5 -8.8
DAVOX Davos/Dischmat 16.39 324 Pn **P** **06 18 07.9 -1.1**
comp=Z,1.1nm,0.3s,baz=325,slow=19,SNR=6.5
DAVOX Sn Sn 06 20 58.5 -8.8
comp=Z,0.4nm,0.3s,baz=306,slow=18,SNR=3.2
DAVOX Davos/Dischmat 16.39 324 P **P** **06 18 07.9 -1.1**
comp=Z,1.0nm,0.3s
GEC2 GERESS Array S 16.42 336 *e*P **Pn** **06 18 04.6 -2.3**
GEC2 pmax pmax
comp=Z,4μm,0.8s
GEC2 GERESS Array S 16.42 336 *e*P **Pn** **06 18 04.9 -2.0**
comp=Z,13nm,0.8s
GEC2 GERESS Array S 16.42 336 *e*P **Pn** **06 18 04.6 -2.3**
comp=Z,4μm,0.8s
GERES GERESS Array B 16.42 336 Pn **Pn** **06 18 04.8 -2.0**
GERES GERESS Array B 16.42 336 Pn **Pn** **06 18 04.8 -2.0**
comp=Z,0.8nm,0.3s,baz=154,slow=13,SNR=18
TUE Stuetta 16.44 322 *e*P **Pn** **06 18 08.1 +0.9**
comp=Z,12nm,0.9s
TUE Stuetta 16.44 322 *e*P **Pn** **06 18 08.1 +0.9**
comp=Z,12nm,0.9s
KRLC Kraliky 16.65 344 *e*P **P** **06 18 12.1 +0.4**
KHC Kasperske Hory 16.71 336 *e*P **Pn** **06 18 08.6 -1.8**
KHC Kasperske Hory 16.71 336 *e*P **Pn** **06 18 08.5 -1.9**
comp=Z,19nm,0.9s
KHC Kasperske Hory 16.71 336 *e*P **Pn** **06 18 08.6 -1.8**
KHC *ex* x 06 18 13.7
FUR Furstenfeldbru 16.79 330 *e*P **Pn** **06 18 12.0 +0.6**
FUR pmax pmax
comp=Z,33nm,0.7s
FUR Furstenfeldbru 16.79 330 *e*P **Pn** **06 18 12.0 +0.6**
comp=Z,33nm,0.7s
FUR Furstenfeldbru 16.79 330 *e*P **Pn** **06 18 12.0 +0.6**
comp=Z,33nm,0.7s
MBDF Montbardon 16.80 314 *e*P **Pn** **06 18 09.9 -1.8**
comp=Z,31nm,1.1s
MBDF Montbardon 16.80 314 *e*P **Pn** **06 18 08.4 -3.3**
MBDF Montbardon 16.80 314 *e*P **Pn** **06 18 09.9 -1.8**
MBDF pmax pmax
comp=Z,31nm,1.1s
MBDF Montbardon 16.80 314 *e*P **Pn** **06 18 09.9 -1.8**
comp=Z,31nm,1.1s
AK02 Malin Array Si 16.87 12 *e*P **Pn** **06 18 09.4 -3.0**
AK01 Malin Array Si 16.90 12 *e*P **Pn** **06 18 09.3 -3.4**
KIEV Kiev 16.91 12 *e*P **Pn** **06 18 10.7 -2.1**
KIEV pmax pmax
comp=Z,10.0nm,0.7s
KIEV Kiev 16.91 12 *e*P **Pn** **06 18 10.7 -2.1**
comp=Z,9.5nm,0.7s
AKASG Malin Array Be 16.91 12 P **Pn** **06 18 09.4 -3.5**
AKASG pmax pmax
comp=Z,5.0nm,0.3s
AKASG Malin Array Be 16.91 12 Pn **Pn** **06 18 09.4 -3.5**
AKASG Malin Array Be 16.91 12 Pn **Pn** **06 18 09.4 -3.5**
comp=Z,4.9nm,0.3s,baz=204,slow=10,SNR=14
WET Wettzell 16.96 335 *e*P **Pn** **06 18 11.9 -1.7**
WET pmax pmax
comp=Z,7.0nm,0.8s
WET Wettzell 16.96 335 *e*P **Pn** **06 18 11.9 -1.7**
comp=Z,7.0nm,0.8s
DPC Dobruska-Polom 17.02 343 *e*P **Pn** **06 18 13.7 -0.5**
DPC pmax pmax
comp=Z,19nm,0.8s
DPC Dobruska-Polom 17.02 343 *e*Pn **Pn** **06 18 13.7 -0.5**
comp=Z,19nm,0.8s
DPC Dobruska-Polom 17.02 343 *e*P **P** **06 18 16.0 +0.3**
DPC AMS AMS 06 26 30.0
comp=Z,300nm,10.3s
DPC Dobruska-Polom 17.02 343 *e*P **Pn** **06 18 13.7 -0.5**
comp=Z,19nm,0.8s
AKH Akhalkalaki 17.08 59 P P 06 18 31.3 +15
SMRF Simiane la Rot 17.16 310 *e*P **Pn** **06 18 15.7 -0.3**
PRU Pruhonice 17.16 339 *e*P **Pn** **06 18 13.8 -2.2**
PRU MLR MLR
comp=Z,300nm,12.0s
PRU Pruhonice 17.16 339 *e*P **Pn** **06 18 13.8 -2.2**
PRU *ex* x 06 18 18.1
PRU AMS AMS 06 26 10.0
comp=Z,300nm,12.0s
LPG La Plagne 17.24 316 *e*P **Pn** **06 18 14.8 -2.5**
LPG La Plagne 17.24 316 *e*P **Pn** **06 18 14.2 -3.1**
LPG La Plagne 17.24 316 *e*P **Pn** **06 18 14.8 -2.5**
LPG La Plagne 17.24 316 *e*P **Pn** **06 18 14.8 -2.5**
UPC Upice 17.24 343 *e*P **Pn** **06 18 15.9 -1.0**
UPC Upice 17.24 343 *e*P **Pn** **06 18 15.9 -1.0**
UPC *ex* x 06 18 19.0
LPL La Plagne 17.26 316 *e*P **Pn** **06 18 15.3 -2.2**
LPL La Plagne 17.26 316 *e*P **Pn** **06 18 14.4 -3.1**
LPL La Plagne 17.26 316 *e*P **Pn** **06 18 15.3 -2.2**
LPL La Plagne 17.26 316 *e*P **Pn** **06 18 15.3 -2.2**
SENIN Lac Senin/Sane 17.44 319 *e*P **Pn** **06 18 20.0 +0.2**
comp=Z,6.5nm,0.5s
SENIN Lac Senin/Sane 17.44 319 *e*P **Pn** **06 18 20.0 +0.2**
comp=Z,6.5nm,0.5s
ONI Oni 17.46 56 P P 06 18 32.4 +12
KSP Ksiaz 17.48 344 *e*P **P** **06 18 21.3 +0.5**
KSP Ksiaz 17.48 344 ⇓ *e*P **P** **06 18 21.1 +0.3**
KIV Kislovodsk 17.52 51 *e*P **P** **06 18 22.3 +0.9**
KIV pmax pmax
comp=Z,11nm,0.8s
KIV MLR MLR
comp=Z,83nm,14.0s
KIV Kislovodsk 17.52 51 *e*P **P** **06 18 22.3 +0.9**
comp=Z,83nm,14.0s
KBZ Khabaz 17.55 52 P **Pn** **06 18 20.6 -0.3**
KBZ pmax pmax
comp=Z,1.0nm,0.3s
KBZ Khabaz 17.55 52 P **Pn** **06 18 20.6 -0.3**
KBZ Khabaz 17.55 52 P **Pn** **06 18 20.6 -0.3**
comp=Z,0.5nm,0.3s,baz=256,slow=9.0,SNR=17
KBZ Khabaz 17.55 52 P **Pn** **06 18 20.6 -0.3**
comp=Z,1.0nm,0.3s
PVCC Panska Ves 17.63 340 *e*P **Pn** **06 18 20.2 -1.6**
PVCC Panska Ves 17.63 340 *e*P **Pn** **06 18 20.2 -1.6**
BEL Belsk 17.73 354 *e*P **P** **06 18 24.4 +0.9**
BEL Belsk 17.73 354 *e*P **P** **06 18 24.4 +0.9**
ROTZ Rotzenmuhle 17.73 335 *e*P **Pn** **06 18 22.1 -0.9**
comp=Z,8.0nm,0.8s
KZR Kazreti 17.73 60 P P 06 18 31.6 +7.9
ZEI Tsey 17.83 56 *e*P **P** **06 18 25.2 +0.2**
ZEI pmax pmax
comp=Z,6.0nm,1.0s
ZEI Tsey 17.83 56 *e*P **P** **06 18 25.2 +0.2**
comp=Z,6.0nm,1.0s
NKC Novy Kostel 18.04 336 *e*P **Pn** **06 18 26.0 -0.8**
NKC Novy Kostel 18.04 336 *e*P **Pn** **06 18 26.0 -0.8**
NKC Novy Kostel 18.04 336 *e*P **Pn** **06 18 26.0 -0.8**
TBLG Delisi 18.07 59 *e*P **P** **06 18 30.4 +3.1**
TBLG Delisi 18.07 59 P **P** **06 18 30.4 +3.1**
BRG Berggiesshubel 18.12 340 *i* P **P** **06 18 28.9 +1.1**
comp=Z,4.9nm,1.2s
BRG Berggiesshubel 18.12 340 *i* P **P** **06 18 28.9 +1.1**
BRG pmax pmax
comp=Z,5.0nm,1.2s
BRG Berggiesshubel 18.12 340 *e*P **Pn** **06 18 27.8 0.0**
comp=Z,7.0nm,0.8s
BRG Berggiesshubel 18.12 340 *i* P **P** **06 18 28.9 +1.1**
comp=Z,5.0nm,1.2s
TANN Tannenbergstha 18.18 336 *e*P **Pn** **06 18 27.5 -1.2**
comp=Z,5.0nm,0.8s
BFO Black Forest 18.23 325 *e*P **Pn** **06 18 29.5 +0.4**
BFO pmax pmax
comp=Z,6.0nm,0.7s
BFO Black Forest 18.23 325 *e*P **Pn** **06 18 29.5 +0.4**
comp=Z,6.0nm,0.7s
BFO Black Forest 18.23 325 *e*P **Pn** **06 18 29.5 +0.4**
comp=Z,7.8nm,0.9s
BFO Black Forest 18.23 325 *e*P **Pn** **06 18 29.5 +0.4**
comp=Z,7.8nm,0.9s
CABF La Chapelle 18.26 318 *e*P **P** **06 18 27.6 -1.9**
comp=Z,9.9nm,0.7s
CABF La Chapelle 18.26 318 *e*P **P** **06 18 27.6 -1.9**
CABF pmax pmax
comp=Z,10.0nm,0.7s
CABF La Chapelle 18.26 318 *e*P **P** **06 18 27.6 -1.9**
comp=Z,9.9nm,0.7s
CABF La Chapelle 18.26 318 *e*P **P** **06 18 27.6 -1.9**
comp=Z,4.9nm,0.7s
LASF Ste Croix 18.30 308 *e*P **P** **06 18 29.0 -1.0**
LASF Ste Croix 18.30 308 *e*P **P** **06 18 29.0 -1.0**
LASF Ste Croix 18.30 308 *e*P **P** **06 18 29.0 -1.0**
DGRG David-gareji 18.44 61 P **Pn** **06 18 32.4 +0.6**
DGRG David-gareji 18.44 61 P **Pn** **06 18 32.4 +0.6**
HINF Hinteralfeld 18.60 322 *e*P **P** **06 18 32.5 -0.7**
comp=Z,6.1nm,0.5s
HINF Hinteralfeld 18.60 322 *e*Pn **P** **06 18 30.3 -2.9**
HINF Hinteralfeld 18.60 322 *e*P **P** **06 18 32.5 -0.7**
HINF pmax pmax
comp=Z,6.0nm,0.5s
HINF Hinteralfeld 18.60 322 *e*P **P** **06 18 32.5 -0.7**
comp=Z,6.1nm,0.5s
HINF Hinteralfeld 18.60 322 *e*P **P** **06 18 32.5 -0.7**
comp=Z,3.0nm,0.5s
MOX Moxa 18.67 335 *e*P **P** **06 18 33.6 -0.3**
MOX pmax pmax
comp=Z,6.0nm,0.8s
MOX Moxa 18.67 335 *e*P **P** **06 18 33.6 -0.3**
comp=Z,6.0nm,0.8s
MOX Moxa 18.67 335 *e*P **P** **06 18 33.6 -0.3**
comp=Z,6.0nm,0.8s
ECH Echery 18.71 323 *e*P **P** **06 18 34.7 +0.3**
ECH pmax pmax
comp=Z,5.0nm,0.8s
ECH Echery 18.71 323 *e*P **P** **06 18 34.7 +0.3**
comp=Z,4.6nm,0.8s
ECH Echery 18.71 323 *e*P **P** **06 18 34.7 +0.3**
comp=Z,4.6nm,0.8s
CLL Collm 18.79 339 ⇓ *i*P **P** **06 18 35.3 +0.2**
CLL pmax pmax
comp=Z,20nm,1.0s
CLL MLR MLR
comp=Z,200nm,20.8s
CLL Collm 18.79 339 *e*P **P** **06 18 35.3 +0.2**
comp=Z,14nm,0.9s
CLL Collm 18.79 339 *i* P **P** **06 18 35.3 +0.2**
comp=Z,200nm,20.8s
CDF Champ du Feu 18.79 324 *e*P **P** **06 18 35.0 -0.3**
comp=Z,4.6nm,0.3s
CDF Champ du Feu 18.79 324 *e*Pn **P** **06 18 34.0 -1.3**
CDF Champ du Feu 18.79 324 *e*P **P** **06 18 35.0 -0.3**
CDF pmax pmax
comp=Z,5.0nm,0.3s
CDF Champ du Feu 18.79 324 *e*P **P** **06 18 35.0 -0.3**
comp=Z,4.6nm,0.3s
CDF Champ du Feu 18.79 324 *e*P **P** **06 18 35.0 -0.3**
comp=Z,2.3nm,0.3s
HAU Haudompre 18.98 322 *e*P **Pn** **06 18 38.6 +0.3**
comp=Z,26nm,0.7s
HAU *eR*
comp=Z,118nm,19.8s
HAU Haudompre 18.98 322 *e*Pn **P** **06 18 35.6 -1.8**
HAU Haudompre 18.98 322 *e*P **Pn** **06 18 38.6 +0.3**
HAU pmax pmax
comp=Z,26nm,0.7s
HAU Haudompre 18.98 322 *e*P **Pn** **06 18 38.6 +0.3**
comp=Z,26nm,0.7s
HAU Haudompre 18.98 322 *e*P **Pn** **06 18 38.6 +0.3**
comp=Z,13nm,0.7s
IHRS Heris 19.13 71 *e*P **Pn** **06 18 39.9 -0.5**
IHRS Heris 19.13 71 *e*P **Pn** **06 18 39.9 -0.5**
UBBA Unterbreizbach 19.40 333 *e*P **Pn** **06 18 43.6 +0.5**
comp=Z,3.0nm,0.7s
SMF Signal de Mont 19.56 315 *e*P **Pn** **06 18 45.3 +0.1**
comp=Z,12nm,0.8s
SMF Signal de Mont 19.56 315 *e*P **Pn** **06 18 45.3 +0.1**
SMF pmax pmax
comp=Z,12nm,0.8s
SMF Signal de Mont 19.56 315 *e*P **Pn** **06 18 45.3 +0.1**
comp=Z,12nm,0.8s
SMF Signal de Mont 19.56 315 *e*P **Pn** **06 18 45.3 +0.1**
comp=Z,5.8nm,0.8s
IKOM Komasi 19.57 84 *e*P **Pn** **06 18 45.0 -0.6**
IKOM Komasi 19.57 84 *e*P **Pn** **06 18 45.0 -0.6**
GKP Gorka Klasztor 19.59 348 *e*P **P** **06 18 44.1 +0.2**
GKP Gorka Klasztor 19.59 348 *e*P **P** **06 18 44.1 +0.2**
PAGF Fort de Pagny 19.66 322 *e*P **P** **06 18 45.2 +0.5**
comp=Z,4.4nm,0.7s
PAGF Fort de Pagny 19.66 322 *e*P **P** **06 18 45.2 +0.5**
comp=Z,4.4nm,0.7s
PAGF Fort de Pagny 19.66 322 *e*P **P** **06 18 45.2 +0.5**
comp=Z,2.2nm,0.7s
SUW Suwalki 19.77 359 *e*P **P** **06 18 44.1 -1.8**
SUW pmax pmax
comp=Z,145nm,1.1s
SUW Suwalki 19.77 359 *e*P **P** **06 18 44.1 -1.8**
comp=Z,145nm,1.1s
SUW Suwalki 19.77 359 *e*P **P** **06 18 44.0 -1.8**
SUW Suwalki 19.77 359 *e*P **P** **06 18 44.1 -1.8**
comp=Z,145nm,1.1s
SFTF Sexfontaines 19.79 320 *e*P **Pn** **06 18 47.3 -0.6**
SFTF Sexfontaines 19.79 320 *e*P **Pn** **06 18 47.3 -0.6**
SFTF Sexfontaines 19.79 320 *e*P **Pn** **06 18 47.3 -0.6**
CAF Calviac 19.83 309 *e*P **P** **06 18 46.2 -0.5**
CAF Calviac 19.83 309 *e*P **P** **06 18 46.2 -0.5**
CAF Calviac 19.83 309 *e*P **P** **06 18 46.2 -0.5**
CAF Calviac 19.83 309 *e*P **P** **06 18 46.2 -0.5**
LOR Lormes 19.89 317 *e*P **P** **06 18 48.0 +0.7**
LOR *eR*
comp=Z,101nm,17.8s
LOR Lormes 19.89 317 *e*P **P** **06 18 48.0 +0.7**
LOR Lormes 19.89 317 *e*P **P** **06 18 48.0 +0.7**
AVF Avril sur Loir 19.92 315 *e*P **P** **06 18 48.0 +0.4**
comp=Z,5.2nm,0.6s
AVF Avril sur Loir 19.92 315 *e*P **P** **06 18 48.0 +0.4**
AVF pmax pmax
comp=Z,5.0nm,0.6s
AVF Avril sur Loir 19.92 315 *e*P **P** **06 18 48.0 +0.4**
comp=Z,5.2nm,0.6s
AVF Avril sur Loir 19.92 315 *e*P **P** **06 18 48.0 +0.4**
comp=Z,2.6nm,0.6s
MEZF Maizieres J'vi 19.97 321 *e*P **Pn** **06 18 49.4 -0.6**
comp=Z,44nm,0.6s
MEZF Maizieres J'vi 19.97 321 *e*P **Pn** **06 18 49.4 -0.6**
comp=Z,44nm,0.6s
MEZF Maizieres J'vi 19.97 321 *e*P **Pn** **06 18 49.4 -0.6**
comp=Z,22nm,0.6s
SSF Saint Saulge 19.98 316 *e*P **P** **06 18 48.7 +0.5**
comp=Z,13nm,0.9s
SSF Saint Saulge 19.98 316 *e*P **P** **06 18 48.7 +0.5**
SSF pmax pmax
comp=Z,13nm,0.9s
SSF Saint Saulge 19.98 316 *e*P **P** **06 18 48.7 +0.5**
comp=Z,13nm,0.9s
SSF Saint Saulge 19.98 316 *e*P **P** **06 18 48.7 +0.5**
comp=Z,6.5nm,0.9s
CLZ Clausthal 20.10 335 *e*P **P** **06 18 48.5 -1.0**
CLZ pmax pmax
comp=Z,6.0nm,0.7s
CLZ Clausthal 20.10 335 *e*P **P** **06 18 48.5 -1.0**
comp=Z,6.0nm,0.7s
CLZ Clausthal 20.10 335 *e*P **P** **06 18 48.5 -1.0**
comp=Z,6.0nm,0.7s
BGF Bois d'Agland 20.10 314 *e*P Pn 06 18 50.8 -0.8
comp=Z,17nm,0.8s
BGF Bois d'Agland 20.10 314 *e*P Pn 06 18 50.8 -0.8
BGF pmax pmax
comp=Z,17nm,0.8s
BGF Bois d'Agland 20.10 314 *e*P Pn 06 18 50.8 -0.8
comp=Z,17nm,0.8s
BGF Bois d'Agland 20.10 314 *e*P Pn 06 18 50.8 -0.8
comp=Z,8.5nm,0.8s
VORD Divnogorie 20.15 29 *e*P **P** **06 18 50.9 +0.9**
VORD pmax pmax
comp=N,20nm,0.4s
VORD pmax pmax
comp=E,20nm,0.4s
VORD pmax pmax
comp=Z,10.0nm,0.4s
VORD Divnogorie 20.15 29 *e*P **P** **06 18 50.9 +0.9**
WLF Walferdange 20.18 325 *e*P Pn 06 18 51.7 -0.8
comp=Z,14nm,0.9s
VSR Storozhevoye 20.29 29 *e*P **P** **06 18 51.4 -0.1**
VSR pmax pmax
comp=N,10.0nm,0.4s
VSR pmax pmax
comp=E,10.0nm,0.4s
VSR pmax pmax
comp=Z,10.0nm,0.4s
VSR Storozhevoye 20.29 29 *e*P **P** **06 18 51.4 -0.1**
RJF Les Rejaudoux 20.34 310 *e*P **P** **06 18 52.3 +0.1**
comp=Z,13nm,0.8s
RJF *eR*
comp=Z,134nm,19.0s
RJF Les Rejaudoux 20.34 310 *e*P **P** **06 18 52.3 +0.1**
RJF pmax pmax
comp=Z,13nm,0.8s
RJF Les Rejaudoux 20.34 310 *e*P **P** **06 18 52.3 +0.1**
comp=Z,13nm,0.8s
RJF Les Rejaudoux 20.34 310 *e*P **P** **06 18 52.3 +0.1**
comp=Z,6.6nm,0.8s
TCF Toulx Ste Croi 20.35 313 *e*P **P** **06 18 52.7 +0.4**
TCF Toulx Ste Croi 20.35 313 *e*P **P** **06 18 52.7 +0.4**
TCF Toulx Ste Croi 20.35 313 *e*P **P** **06 18 52.7 +0.4**
TCF Toulx Ste Croi 20.35 313 *e*P **P** **06 18 52.7 +0.4**
LFF La Frestale 20.69 308 *e*P **P** **06 18 56.1 +0.1**
LFF La Frestale 20.69 308 *e*P **P** **06 18 56.1 +0.1**
LFF La Frestale 20.69 308 *e*P **P** **06 18 56.1 +0.1**
LFF La Frestale 20.69 308 *e*P **P** **06 18 56.1 +0.1**
NRDL Niedersach Rie 20.73 336 *e*P Pn 06 19 00.0 +1.2
comp=Z,8.0nm,0.8s
NACGM Naroch 20.76 5 *e*P P 06 18 51.0 -5.6
ETSF Etsaut 20.89 302 *e*P **P** **06 18 58.3 +0.1**
comp=Z,8.6nm,0.6s
ETSF Etsaut 20.89 302 *e*P **P** **06 18 58.3 +0.1**
ETSF pmax pmax
comp=Z,9.0nm,0.6s
ETSF Etsaut 20.89 302 *e*P **P** **06 18 58.3 +0.1**
comp=Z,8.6nm,0.6s
ETSF Etsaut 20.89 302 *e*P **P** **06 18 58.3 +0.1**
comp=Z,4.3nm,0.6s
MEM Membach 20.91 327 P **P** **06 18 58.1 -0.2**
comp=Z,16nm,1.1s
HGN Heimansgroeve 21.05 327 *e*P **P** **06 19 00.7 +0.9**
comp=Z,19nm,1.2s
HGN *e*pP pP 06 19 03.7 -6.0
HGN Heimansgroeve 21.05 327 *e*P **P** **06 19 00.7 +0.9**
comp=Z,19nm,1.2s
GIVF Givet 21.11 324 *e*P **P** **06 19 00.3 -0.2**
comp=Z,60nm,0.8s
GIVF Givet 21.11 324 *e*P **P** **06 19 00.3 -0.2**
GIVF pmax pmax
comp=Z,60nm,0.8s
GIVF Givet 21.11 324 *e*P **P** **06 19 00.3 -0.2**
comp=Z,60nm,0.8s
GIVF Givet 21.11 324 *e*P **P** **06 19 00.3 -0.2**
comp=Z,30nm,0.8s
IIGN Ignalina 21.17 4 *e*P **P** **06 18 59.5 -1.6**
IIGN AMB AMB 06 19 05.3
comp=Z,12nm,1.0s
IIGN Ignalina 21.17 4 *e*P **P** **06 18 59.5 -1.6**
comp=Z,12nm,1.0s,SNR=34
DOU Dourbes 21.22 324 P **P** **06 19 01.6 0.0**
comp=Z,28nm,1.2s
VRHR Novokhopersk 21.23 32 *e*P **P** **06 19 02.8 +1.1**
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=Z,20nm,0.4s
VRHR pmax pmax
comp=E,4.0nm,0.2s
VRHR Novokhopersk 21.23 32 *e*P **P** **06 19 02.8 +1.1**
BAIF Baives 21.39 324 *e*P **P** **06 19 03.1 -0.3**
comp=E,29nm,0.5s
BAIF Baives 21.39 324 *e*P **P** **06 19 03.1 -0.3**
BAIF pmax pmax
comp=Z,29nm,0.5s
BAIF Baives 21.39 324 *e*P **P** **06 19 03.1 -0.3**
comp=Z,29nm,0.5s
BAIF Baives 21.39 324 *e*P **P** **06 19 03.1 -0.3**
comp=Z,14nm,0.5s
ISAL Salakas 21.39 4 *e*P **P** **06 19 01.8 -1.5**
ISAL AMB AMB 06 19 05.7
comp=Z,5.7nm,0.6s
ISAL Salakas 21.39 4 *e*P **P** **06 19 01.8 -1.5**
comp=Z,5.7nm,0.6s,SNR=34
SJPF Ste Jean 21.42 302 *e*P **P** **06 19 03.9 +0.1**
comp=Z,19nm,0.8s
SJPF Ste Jean 21.42 302 *e*P **P** **06 19 03.9 +0.1**
SJPF pmax pmax
comp=Z,19nm,0.8s
SJPF Ste Jean 21.42 302 *e*P **P** **06 19 03.9 +0.1**
comp=Z,19nm,0.8s
SJPF Ste Jean 21.42 302 *e*P **P** **06 19 03.9 +0.1**
comp=Z,9.4nm,0.8s
IRAZ Razeghan 21.43 79 *e*P **P** **06 19 06.2 +1.9**
WTSB Winterswijk 21.55 330 *e*P **P** **06 19 05.7 +0.6**
comp=Z,8.9nm,0.5s
WTSB *e*pP pP 06 19 07.9 -7.2
IZAR Zarasai 21.57 4 *e*P **P** **06 19 03.8 -1.5**
IZAR AMB AMB 06 19 06.1
comp=Z,8.8nm,1.0s
IZAR Zarasai 21.57 4 *e*P **P** **06 19 03.8 -1.5**
comp=Z,8.8nm,1.0s,SNR=34
SNF Seneffe 21.64 325 P **P** **06 19 06.2 +0.1**
BSEG Bad Segeberg 21.88 338 *e*P **P** **06 19 06.2 -2.4**
BSEG pmax pmax
comp=Z,21nm,0.8s
BSEG Bad Segeberg 21.88 338 *e*P **P** **06 19 06.2 -2.4**
comp=Z,21nm,0.8s
MFF Saint Martin d 21.95 311 *e*P **P** **06 19 07.6 -1.8**
comp=Z,14nm,0.6s

MFF	**Saint Martin d**	**21.95**	**311**	*e*P		**P**		**06 19 07.6**	**-1.8**
MFF				pmax		pmax			
	comp=Z,14nm,0.6s								
MFF	**Saint Martin d**	**21.95**	**311**	*e*P		**P**		**06 19 07.6**	**-1.8**
	comp=Z,14nm,0.6s								
IPIR	**Pirpir**	**22.60**	**86**	*e*P		**P**		**06 19 20.0**	**+3.1**
OBN	**Obninsk**	**22.68**	**19**	⇓*i*P		**P**		**06 19 16.6**	**-0.5**
OBN				*i*				06 19 24.6	
OBN				*i*				06 19 30.3	
OBN				pmax		pmax			
	comp=Z,36nm,0.9s								
OBN				MLR		MLR			
	comp=Z,100nm,17.0s								
ESDC	**Sonseca Array**	**22.82**	**292**	P		**P**		**06 19 19.9**	**+1.0**
ESDC	**Sonseca Array**	**22.82**	**292**	P		**P**		**06 19 19.9**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=81,slow=10,SNR=3.3								
LDF	**La Druitiere**	**22.86**	**316**	*e*P		**P**		**06 19 18.1**	**-1.1**
	comp=Z,26nm,0.6s								
LDF	**La Druitiere**	**22.86**	**316**	*e*P		**P**		**06 19 18.1**	**-1.1**
LDF				pmax		pmax			
	comp=Z,26nm,0.6s								
LDF	**La Druitiere**	**22.86**	**316**	*e*P		**P**		**06 19 18.1**	**-1.1**
	comp=Z,26nm,0.6s								
FLN	**La Foliniere**	**23.15**	**316**	*e*P		**P**		**06 19 21.3**	**-0.8**
	comp=Z,11nm,0.5s								
FLN				*e*R					
	comp=Z,88nm,19.2s								
FLN	**La Foliniere**	**23.15**	**316**	*e*P		**P**		**06 19 21.3**	**-0.8**
FLN				pmax		pmax			
	comp=Z,11nm,0.5s								
FLN	**La Foliniere**	**23.15**	**316**	*e*P		**P**		**06 19 21.3**	**-0.8**
	comp=Z,11nm,0.5s								
GRR	**Gorron**	**23.19**	**315**	*e*P		**P**		**06 19 21.6**	**-0.9**
	comp=Z,8.0nm,0.5s								
GRR	**Gorron**	**23.19**	**315**	*e*P		**P**		**06 19 21.6**	**-0.9**
GRR				pmax		pmax			
	comp=Z,8.0nm,0.5s								
GRR	**Gorron**	**23.19**	**315**	*e*P		**P**		**06 19 21.6**	**-0.9**
	comp=Z,8.0nm,0.5s								
MOS	**Moscow**	**23.52**	**20**	*e*P		**P**		**06 19 23.5**	**-2.1**
MOS				pmax		pmax			
	comp=Z,73nm,0.8s								
IGAR	**Gharneh**	**23.61**	**87**	*e*P		**P**		**06 19 28.5**	**+1.5**
MDT	**Midelt**	**23.73**	**275**	P		**P**		**06 19 28.5**	**+0.5**
MDT	**Midelt**	**23.73**	**275**	P		**P**		**06 19 28.5**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=58,slow=10,SNR=5.1								
IZEF	**Zefreh**	**23.75**	**85**	*e*P		**P**		**06 19 28.8**	**+0.5**
SGMF	**Saint Gilles**	**24.14**	**313**	*e*P		**P**		**06 19 30.8**	**-0.7**
	comp=Z,24nm,0.7s								
SGMF	**Saint Gilles**	**24.14**	**313**	*e*P		**P**		**06 19 30.8**	**-0.7**
SGMF				pmax		pmax			
	comp=Z,24nm,0.7s								
SGMF	**Saint Gilles**	**24.14**	**313**	*e*P		**P**		**06 19 30.8**	**-0.7**
	comp=Z,24nm,0.7s								
QUIF	**Quistinic**	**24.36**	**312**	*e*P		**P**		**06 19 33.1**	**-0.4**
	comp=Z,28nm,0.8s								
QUIF	**Quistinic**	**24.36**	**312**	*e*P		**P**		**06 19 33.1**	**-0.4**
QUIF				pmax		pmax			
	comp=Z,28nm,0.8s								
QUIF	**Quistinic**	**24.36**	**312**	*e*P		**P**		**06 19 33.1**	**-0.4**
	comp=Z,28nm,0.8s								
ROSF	**Rostrenen**	**24.61**	**313**	*e*P		**P**		**06 19 34.1**	**-1.6**
	comp=Z,13nm,0.7s								
ROSF	**Rostrenen**	**24.61**	**313**	*e*P		**P**		**06 19 34.1**	**-1.6**
ROSF				pmax		pmax			
	comp=Z,13nm,0.7s								
ROSF	**Rostrenen**	**24.61**	**313**	*e*P		**P**		**06 19 34.1**	**-1.6**
	comp=Z,13nm,0.7s								
PUL	**Pulkovo**	**25.89**	**8**	⇑*e*P		**P**		**06 19 46.3**	**-0.9**
EVO	**Evora**	**25.93**	**289**	*e*P		**P**		**06 19 47.7**	**-0.1**
	comp=Z,26nm,1.1s								
EVOP	**Sao Brissos**	**26.01**	**289**	*e*P		**P**		**06 19 47.7**	**-0.9**
EVOP				pmax		pmax			
	comp=Z,26nm,1.1s								
EVOP	**Sao Brissos**	**26.01**	**289**	*e*P		**P**		**06 19 47.7**	**-0.9**
	comp=Z,26nm,1.1s								
HFS	**Hagfors**	**26.74**	**349**	P		**P**		**06 19 53.8**	**-1.1**
HFS	**Hagfors**	**26.74**	**349**	P		**P**		**06 19 53.8**	**-1.1**
	comp=Z,10.0nm,0.5s,baz=156,slow=12,SNR=55								
FINES	**FINESS Array B**	**27.26**	**2**	P		**P**		**06 19 57.7**	**-1.8**
FINES	**FINESS Array B**	**27.26**	**2**	P		**P**		**06 19 57.7**	**-1.8**
	comp=Z,5nm,0.3s,baz=162,slow=11,SNR=31								
NAO01	**NORSAR Array S**	**27.91**	**346**	*e*P		**P**		**06 20 04.1**	**-1.3**
	comp=Z,2.7nm,0.4s								
KAF	**Kangasniemi**	**27.94**	**2**	*e*P		**P**		**06 20 03.0**	**-2.6**
KAF				pmax		pmax			
	comp=Z,4.0nm,0.4s								
KAF	**Kangasniemi**	**27.94**	**2**	*e*p		**P**		**06 20 03.0**	**-2.6**
	comp=Z,4.0nm,0.4s								
NB2	**NORSAR Subarra**	**28.03**	**347**	P		**P**		**06 20 05.3**	**-1.2**
	comp=Z,1.3nm,0.4s,baz=156,slow=9.3								
NB2	**NORSAR Subarra**	**28.03**	**347**	P		**P**		**06 20 05.3**	**-1.2**
	comp=Z,1.3nm,0.4s,SNR=5.2								
NOA	**NORSAR Array B**	**28.03**	**347**	P		**P**		**06 20 05.5**	**-1.0**
NOA	**NORSAR Array B**	**28.03**	**347**	P		**P**		**06 20 05.5**	**-1.0**
	comp=Z,3.1nm,0.5s,baz=152,slow=11,SNR=15								
EKA	**Eskdalemuir Ar**	**28.19**	**327**	P		**P**		**06 20 07.9**	**0.0**
EKA	**Eskdalemuir Ar**	**28.19**	**327**	P		**P**		**06 20 07.9**	**0.0**
	comp=Z,6.5nm,0.5s,baz=124,slow=8.5,SNR=47								
TORD	**Torodi Ar. Bea**	**29.07**	**229**	P		**P**		**06 20 16.8**	**+0.7**
TORD	**Torodi Ar. Bea**	**29.07**	**229**	P		**P**		**06 20 16.8**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=36,slow=8.4,SNR=9.7								
TORD				LR		LR		06 33 15.1	
	comp=Z,143nm,21.4s,baz=45,slow=39								
JOF	**Joensuu**	**29.08**	**7**	*e*P		**P**		**06 20 12.8**	**-3.0**
JOF				pmax		pmax			
	comp=Z,3.0nm,0.5s								
JOF	**Joensuu**	**29.08**	**7**	*e*p		**P**		**06 20 12.8**	**-3.0**
	comp=Z,3.1nm,0.5s								
AKTO	**Aktyubinsk**	**29.67**	**47**	P		**P**		**06 20 20.8**	**-0.4**
AKTO				pmax		pmax			
	comp=Z,5.0nm,0.4s								
AKTO	**Aktyubinsk**	**29.67**	**47**	P		**P**		**06 20 20.8**	**-0.4**
AKTO	**Aktyubinsk**	**29.67**	**47**	P		**P**		**06 20 20.8**	**-0.4**
	comp=Z,4.7nm,0.4s,baz=265,slow=8.4,SNR=15								
AB31	**Akbulak array**	**30.50**	**50**	*ce*P		**P**		**06 20 27.9**	**-0.6**
AB31				pmax		pmax			
	comp=Z,1.0nm,0.3s								
AB31	**Akbulak array**	**30.50**	**50**	*e*P		**P**		**06 20 27.9**	**-0.6**
	comp=Z,1.0nm,0.3s								
ARU	**Arti**	**32.44**	**36**	*d i*P		**P**		**06 20 44.7**	**-0.8**
ARU								06 21 49.2	
ARU				S		**S**		**06 26 00.1**	**+2.9**
ARU				SS		**SnSn**		**06 27 52.4**	**+0.1**
ARU				pmax		pmax			
	comp=Z,12nm,1.0s								
ARU	**Arti**	**32.44**	**36**	*i* P		**P**		**06 20 44.7**	**-0.8**
	comp=Z,12nm,1.0s								
ARU				S		**S**		**06 26 00.1**	**+2.9**
SOKR	**Solikamsk**	**33.28**	**30**	*c i*P		**P**		**06 20 52.8**	**0.0**
SOKR				pmax		pmax			
	comp=Z,30nm,1.1s								
SOKR	**Solikamsk**	**33.28**	**30**	*i* P		**P**		**06 20 52.8**	**0.0**
	comp=Z,30nm,1.1s								
SVE	**Sverdlovsk**	**33.64**	**36**	⇓*i*P		**P**		**06 20 56.4**	**+0.5**
SVE				pmax		pmax			
	comp=Z,37nm,0.9s								
SVE	**Sverdlovsk**	**33.64**	**36**	*i* P		**P**		**06 20 56.4**	**+0.5**
	comp=Z,37nm,0.9s								
ARCES	**ARCESS Array B**	**35.36**	**1**	P		**P**		**06 21 08.8**	**-1.8**
ARCES				PcP		**PcP**		**06 23 39.7**	**-0.3**
ARCES	**ARCESS Array B**	**35.36**	**1**	P		**P**		**06 21 08.8**	**-1.8**
	comp=Z,5.0nm,0.6s,baz=174,slow=9.4,SNR=44								
ARCES				PcP		**PcP**		**06 23 39.7**	**-0.3**
	comp=Z,2.3nm,0.9s,baz=151,slow=2.8,SNR=4.2								
ARCES	**ARCESS Array B**	**35.36**	**1**	P		**P**		**06 21 08.9**	**-1.8**
	comp=Z,5.0nm,0.6s								
ARCES	**ARCESS Array B**	**35.36**	**1**	PcP		**PcP**		**06 23 39.7**	**-0.3**
	comp=Z,2.0nm,0.9s								
KEV	**Kevo**	**35.61**	**2**	*e*P		**P**		**06 21 10.9**	**-1.9**
KEV				pmax		pmax			
	comp=Z,1.0nm,0.4s								
KEV	**Kevo**	**35.61**	**2**	*e*p		**P**		**06 21 10.9**	**-1.9**
	comp=Z,1.2nm,0.4s								
KEV	**Kevo**	**35.61**	**2**	*e*P		**P**		**06 21 10.9**	**-1.9**
	comp=Z,1.0nm,0.4s								
KK31	**Karatay Array**	**37.09**	**62**	*ce*P		**P**		**06 21 26.9**	**+1.1**
KK31				pmax		pmax			
	comp=Z,7.0nm,0.6s								
KK31	**Karatay Array**	**37.09**	**62**	*e*P		**P**		**06 21 26.9**	**+1.1**
	comp=Z,7.0nm,0.6s								
KKAR	**Karatay Array**	**37.09**	**62**	*e*P		**P**		**06 21 26.8**	**+1.0**
KKAR				pmax		pmax			
	comp=Z,5.0nm,0.6s								
KKAR	**Karatay Array**	**37.09**	**62**	*e*P		**P**		**06 21 26.8**	**+1.0**
	comp=Z,4.9nm,0.6s								
KKAR	**Karatay Array**	**37.09**	**62**	*e*P		**P**		**06 21 26.8**	**+1.0**
	comp=Z,4.9nm,0.6s								
KMBO	**Kilima Mbogo**	**37.37**	**158**	LR		LR		06 39 48.5	
	comp=Z,52nm,18.5s,baz=272,slow=41								
BRVK	**Borovoye**	**37.71**	**46**	*ce*P		**P**		**06 21 30.9**	**0.0**
BRVK				pmax		pmax			
	comp=Z,5.0nm,0.9s								
BRVK	**Borovoye**	**37.71**	**46**	*e*P		**P**		**06 21 31.3**	**+0.4**
	comp=Z,6.0nm,1.0s								
BRVK	**Borovoye**	**37.71**	**46**	*e*P		**P**		**06 21 30.9**	**0.0**
	comp=Z,5.0nm,0.9s								
BVA0	**Borovoye Array**	**37.77**	**46**	*i* P		**P**		**06 21 31.0**	**-0.4**
BVA0				pmax		pmax			
	comp=Z,1.0nm,1.2s								
BVA0	**Borovoye Array**	**37.77**	**46**	*i* P		**P**		**06 21 31.0**	**-0.4**
	comp=Z,1.0nm,1.2s								
BVAR	**Borovoye Array**	**37.77**	**46**	P		**P**		**06 21 31.5**	**+0.1**
BVAR				pmax		pmax			
	comp=Z,4.0nm,0.9s								
BVAR	**Borovoye Array**	**37.77**	**46**	P		**P**		**06 21 31.5**	**+0.1**
BVAR	**Borovoye Array**	**37.77**	**46**	P		**P**		**06 21 31.5**	**+0.1**
	comp=Z,3.5nm,0.9s,baz=257,slow=5.9,SNR=17								
BVAR	**Borovoye Array**	**37.77**	**46**	P		**P**		**06 21 31.5**	**+0.1**
	comp=Z,4.0nm,0.9s								
DBIC	**Dimbokro**	**38.14**	**231**	P		**P**		**06 21 35.9**	**+0.9**
DBIC	**Dimbokro**	**38.14**	**231**	P		**P**		**06 21 35.9**	**+0.9**
	comp=Z,1.6nm,0.5s,baz=358,slow=8.0,SNR=3.7								
DBIC				LR		LR		06 39 00.3	
	comp=Z,81nm,19.8s,baz=284,slow=39								
DBIC	**Dimbokro**	**38.14**	**231**	P		**P**		**06 21 35.8**	**+0.9**
LIC	**Lamto**	**38.59**	**230**	*e*P		P		06 21 35.8	-2.9
	comp=Z,9.8nm,0.7s								
LIC	**Lamto**	**38.59**	**230**	*e*P		P		06 21 35.8	-2.9
	comp=Z,9.8nm,0.7s								
LIC	**Lamto**	**38.59**	**230**	*e*P		P		06 21 35.8	-2.9
	comp=Z,4.9nm,0.7s								
EKS2	**Erkin-Say**	**39.51**	**63**	*e*P		**P**		**06 21 48.1**	**+1.8**
EKS2				pmax		pmax			
	comp=Z,9.0nm,0.9s								
EKS2	**Erkin-Say**	**39.51**	**63**	*e*P		**P**		**06 21 48.1**	**+1.8**
	comp=Z,9.4nm,0.9s								
EKS2	**Erkin-Say**	**39.51**	**63**	*e*P		**P**		**06 21 48.1**	**+1.8**
	comp=Z,9.4nm,0.9s								
AAK	**Ala-Archa**	**40.04**	**63**	*c i*P		**P**		**06 21 52.0**	**+1.2**
AAK				pmax		pmax			
	comp=Z,20nm,1.0s								
AAK	**Ala-Archa**	**40.04**	**63**	*e*P		**P**		**06 21 52.4**	**+1.5**
	comp=Z,1.7nm,0.9s								
AAK	**Ala-Archa**	**40.04**	**63**	P		**P**		**06 21 52.2**	**+1.4**
	comp=Z,5.8nm,0.7s,baz=237,slow=6.1,SNR=24								
AAK	**Ala-Archa**	**40.04**	**63**	*i* P		**P**		**06 21 52.0**	**+1.2**
	comp=Z,20nm,1.0s								
FRU	**Bishkek**	**40.12**	**62**	*e*P		**P**		**06 21 53.0**	**+1.8**
FRU	**Bishkek**	**40.12**	**62**	*e*P		**P**		**06 21 53.0**	**+1.8**
TKM2	**Tokmak 2**	**40.82**	**62**	*e*P		**P**		**06 21 58.4**	**+1.1**
TKM2				pmax		pmax			
	comp=Z,6.0nm,0.8s								
TKM2	**Tokmak 2**	**40.82**	**62**	*e*P		**P**		**06 21 58.4**	**+1.1**
	comp=Z,6.0nm,0.8s								
TKM2	**Tokmak 2**	**40.82**	**62**	*e*P		**P**		**06 21 58.4**	**+1.1**
	comp=Z,6.2nm,0.8s								
KURBB	**Kurchatov Arra**	**42.54**	**50**	P		**P**		**06 22 11.2**	**+0.2**
	comp=Z,6.8nm,0.4s,baz=272,slow=8.9,SNR=83								
KURBB				PP		**PP**		**06 23 46.0**	**-3.9**
	comp=Z,1.2nm,0.9s,baz=271,slow=11,SNR=4.1								
KURK	**Kurchatov**	**42.60**	**50**	*ce*P		**P**		**06 22 11.5**	**0.0**
KURK				pmax		pmax			
	comp=Z,7.0nm,0.8s								
KURK	**Kurchatov**	**42.60**	**50**	*e*P		**P**		**06 22 11.7**	**+0.2**
	comp=Z,7.9nm,0.9s								
KURK				PP		**PP**		**06 23 46.0**	**-4.5**
KURK	**Kurchatov**	**42.60**	**50**	*e*P		**P**		**06 22 11.5**	**0.0**
	comp=Z,7.0nm,0.8s								
SCO	**Scoresbysund**	**43.81**	**340**	*i* P		**P**		**06 22 22.2**	**+1.3**
SCO				pmax		pmax			
	comp=Z,6.0nm,0.9s								
SCO	**Scoresbysund**	**43.81**	**340**	*i* P		**P**		**06 22 22.2**	**+1.3**
	comp=Z,6.0nm,0.9s								
SCO	**Scoresbysund**	**43.81**	**340**	*i* P		**P**		**06 22 22.2**	**+1.3**
	comp=Z,6.0nm,0.9s								
SPITS	**Spitsbergen Ar**	**44.16**	**358**	P		**P**		**06 22 23.1**	**-0.6**
SPITS				PcP		**PcP**		**06 24 08.9**	**+1.0**
SPITS	**Spitsbergen Ar**	**44.16**	**358**	P		**P**		**06 22 23.1**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=151,slow=12,SNR=10								
SPITS				PcP		**PcP**		**06 24 08.9**	**+1.0**
	comp=Z,1.1nm,0.4s,baz=139,slow=7.7,SNR=5.4								
SPITS	**Spitsbergen Ar**	**44.16**	**358**	P		**P**		**06 22 23.1**	**-0.6**
	comp=Z,1.0nm,0.4s								
SPITS	**Spitsbergen Ar**	**44.16**	**358**	PcP		**PcP**		**06 24 08.9**	**+1.0**
MK31	**Makanchi Array**	**45.19**	**56**	*ce*P		**P**		**06 22 32.9**	**+0.6**
MK31				pmax		pmax			
	comp=Z,8.0nm,0.5s								
MK31	**Makanchi Array**	**45.19**	**56**	*e*P		**P**		**06 22 33.0**	**+0.6**
MK31	**Makanchi Array**	**45.19**	**56**	*e*P		**P**		**06 22 32.9**	**+0.6**
	comp=Z,8.0nm,0.5s								
MKAR	**Makanchi Array**	**45.19**	**56**	*e*P		**P**		**06 22 33.2**	**+0.9**
MKAR								06 24 12.8	
MKAR	**Makanchi Array**	**45.19**	**56**	*e*P		**P**		**06 22 33.2**	**+0.9**
MKAR				PcP		**PcP**		**06 24 12.8**	**+0.7**
MKAR	**Makanchi Array**	**45.19**	**56**	P		**P**		**06 22 33.1**	**+0.8**
	comp=Z,9.6nm,0.5s,baz=271,slow=7.8,SNR=156								
MKAR				PcP		**PcP**		**06 24 12.8**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=258,slow=5.3,SNR=1.8								
MKAR	**Makanchi Array**	**45.19**	**56**	*e*P		**P**		**06 22 33.2**	**+0.8**
MKAR	**Makanchi Array**	**45.19**	**56**	PcP		**PcP**		**06 24 12.8**	**+0.7**
ZAA0	**Zalesovo Array**	**46.42**	**46**	*e*P		**P**		**06 22 41.3**	**-0.6**
ZAA0	**Zalesovo Array**	**46.42**	**46**	*e*P		**P**		**06 22 41.3**	**-0.6**
ZALV	**Zalesovo Beam**	**46.42**	**46**	P		**P**		**06 22 41.4**	**-0.5**
ZALV								06 24 29.4	
ZALV				pmax		pmax			
	comp=Z,6.0nm,0.4s								
ZALV				pmax		pmax			
	comp=Z,1.0nm,0.4s								
ZALV	**Zalesovo Beam**	**46.42**	**46**	P		**P**		**06 22 41.4**	**-0.5**
ZALV				PP		**PP**		**06 24 29.4**	**-1.8**
ZALV	**Zalesovo Beam**	**46.42**	**46**	P		**P**		**06 22 41.4**	**-0.5**
	comp=Z,6.4nm,0.4s,baz=268,slow=9.6,SNR=33								
ZALV				PP		**PP**		**06 24 29.4**	**-1.8**
	comp=Z,0.8nm,0.4s,baz=280,slow=13,SNR=3.9								
ZALV	**Zalesovo Beam**	**46.42**	**46**	P		**P**		**06 22 41.4**	**-0.5**
	comp=Z,6.0nm,0.4s								
ZALV	**Zalesovo Beam**	**46.42**	**46**	PP		PP		06 24 29.4	-1.8
DAG	**Danmarks Havn**	**46.71**	**348**	*i* P		**P**		**06 22 43.7**	**-0.1**
DAG				pmax		pmax			
	comp=Z,2.0nm,0.8s								
DAG	**Danmarks Havn**	**46.71**	**348**	*i* P		**P**		**06 22 43.7**	**-0.1**
	comp=Z,2.6nm,0.8s								
SUMG	**Summit**	**49.45**	**339**	*e*P		**P**		**06 23 05.2**	**-0.3**
SUMG				pmax		pmax			
	comp=Z,15nm,1.3s								
SUMG	**Summit**	**49.45**	**339**	*e*P		**P**		**06 23 05.2**	**-0.3**
	comp=Z,15nm,1.3s								
SUMG	**Summit**	**49.45**	**339**	*i* P		**P**		**06 23 06.5**	**+1.0**
	comp=Z,5.5nm,0.8s								
SUMG	**Summit**	**49.45**	**339**	*e*P		**P**		**06 23 05.2**	**-0.3**
	comp=Z,15nm,1.3s								
PYUN	**Piuthan**	**50.38**	**80**	*e*P		**P**		**06 23 14.1**	**+1.1**
	comp=Z,38nm,0.6s								
DANN	**Dangsing**	**50.91**	**79**	*e*P		**P**		**06 23 18.5**	**+1.4**
	comp=Z,49nm,0.5s								
KOLN	**Koldanda**	**51.00**	**80**	*e*P		**P**		**06 23 18.3**	**+0.6**
	comp=Z,7.4nm,0.4s								
DMN	**Daman**	**52.29**	**80**	*e*P		**P**		**06 23 28.2**	**+0.8**
	comp=Z,12nm,0.3s								
KKN	**Kakani**	**52.36**	**79**	*e*P		**P**		**06 23 28.6**	**+0.7**
	comp=Z,21nm,0.7s								
PKIN	**Phulchoki**	**52.54**	**79**	*e*P		**P**		**06 23 29.9**	**+0.6**
	comp=Z,10.0nm,0.5s								
PKI	**Pulchoki**	**52.56**	**79**	*e*P		**P**		**06 23 30.0**	**+0.5**
	comp=Z,28nm,0.9s								
GUN	**Gumba**	**52.80**	**79**	*e*P		**P**		**06 23 32.0**	**+0.7**
	comp=Z,28nm,0.4s								
RAMN	**Ramite**	**53.77**	**80**	*e*P		**P**		**06 23 38.4**	**+0.1**
TAPN	**Taplejung**	**54.52**	**79**	*e*P		**P**		**06 23 44.3**	**+0.5**
	comp=Z,6.7nm,0.5s								
MOY	**Mondy**	**56.43**	**47**	*e*P		**P**		**06 23 58.5**	**+1.5**
MOY	**Mondy**	**56.43**	**47**	*e*P		**P**		**06 23 58.5**	**+1.5**
ZAK	**Zakamensk**	**58.17**	**48**	*e*P		**P**		**06 24 10.0**	**+0.8**
ZAK				pmax		pmax			
	comp=Z,4.0nm,1.0s								
ZAK	**Zakamensk**	**58.17**	**48**	*e*P		**P**		**06 24 10.0**	**+0.8**
	comp=Z,4.0nm,1.0s								
GTA	**Gaotai**	**59.36**	**61**	*e*P		**P**		**06 24 18.4**	**+0.7**
GTA				pmax		pmax			
	comp=Z,5.0nm,1.2s								
SONM	**Songino Array**	**60.91**	**50**	P		**P**		**06 24 29.1**	**+0.9**
	comp=Z,2.6nm,0.6s,baz=289,slow=7.0,SNR=21								
SONM	**Songino Array**	**60.91**	**50**	P		**P**		**06 24 29.1**	**+0.9**
	comp=Z,3.0nm,0.6s								
ULN	**Ulaanbaatar**	**61.31**	**50**	*e*P		**P**		**06 24 31.7**	**+0.7**
	comp=Z,7.5nm,1.0s								
ULN	**Ulaanbaatar**	**61.31**	**50**	*e*P		**P**		**06 24 31.7**	**+0.7**
	comp=Z,7.4nm,1.0s								
TIXI	**Tiksi**	**62.41**	**20**	⇓*e*P		**P**		**06 24 37.5**	**-0.2**
TIXI				pmax		pmax			
	comp=Z,4.0nm,0.9s								
TIXI				MLR		MLR			
	comp=Z,248nm,16.0s								
TIXI	**Tiksi**	**62.41**	**20**	*e*P		**P**		**06 24 37.5**	**-0.2**
	comp=Z,248nm,16.0s								
SCHQ	**Schefferville**	**63.18**	**320**	P		**P**		**06 24 43.2**	**0.0**
SCHQ	**Schefferville**	**63.18**	**320**	P		**P**		**06 24 43.2**	**0.0**
	comp=Z,4.6nm,0.5s,baz=63,slow=6.6,SNR=22								
SCHQ	**Schefferville**	**63.18**	**320**	P		**P**		**06 24 43.2**	**0.0**
LZH	**Lanzhou**	**63.58**	**63**	*e*P		**P**		**06 24 46.5**	**+0.2**
LZH				pmax		pmax			
	comp=Z,15nm,1.3s								
RES	**Resolute Bay**	**64.27**	**345**	*e*P		**P**		**06 24 50.2**	**+0.2**
	comp=Z,1.3nm,0.6s								
RES	**Resolute Bay**	**64.27**	**345**	*e*P		**P**		**06 24 50.2**	**+0.2**
	comp=Z,1.3nm,0.6s								
HHC	**Hu-ho-hao-te**	**67.05**	**55**	*e*P		**P**		**06 25 09.8**	**+1.1**
HHC				S		**S**		**06 34 01.5**	**+1.7**
HHC				pmax		pmax			
	comp=Z,33nm,0.7s								
CMAR	**Chiang Mai Arr**	**67.77**	**82**	P		**P**		**06 25 14.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**67.77**	**82**	P		**P**		**06 25 14.0**	**+0.6**
	comp=Z,2.6nm,1.0s,baz=298,slow=8.4,SNR=12								
CMAR	**Chiang Mai Arr**	**67.77**	**82**	P		**P**		**06 25 14.0**	**+0.6**
	comp=Z,3.0nm,1.0s								
BILL	**Bilibino**	**74.22**	**14**	*e*P		**P**		**06 25 51.9**	**+0.2**
BILL				pmax		pmax			
	comp=Z,4.0nm,1.2s								
BILL	**Bilibino**	**74.22**	**14**	*e*P		**P**		**06 25 51.9**	**+0.2**
	comp=Z,4.0nm,1.2s								
SEY	**Seymchan**	**74.82**	**22**	⇓*e*P		**P**		**06 25 55.5**	**+0.3**
SEY	**Seymchan**	**74.82**	**22**	*e*P		**P**		**06 25 55.5**	**+0.3**
KLR	**Kul'dur**	**75.17**	**40**	*e*P		**P**		**06 25 54.8**	**-2.7**
YKA	**Yellowknife Ar**	**77.98**	**342**	P		**P**		**06 26 13.3**	**+0.2**
YKA	**Yellowknife Ar**	**77.98**	**342**	P		**P**		**06 26 13.3**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=32,slow=5.1,SNR=25								
YKA	**Yellowknife Ar**	**77.98**	**342**	P		**P**		**06 26 13.4**	**+0.2**
USRK	**Ussuriysk Arra**	**78.26**	**44**	P		**P**		**06 26 15.4**	**+0.3**
	comp=Z,6.6nm,0.5s,baz=293,slow=4.4,SNR=21								
KSAR	**Wonju Array Be**	**79.69**	**52**	P		**P**		**06 26 23.8**	**+0.8**
KSAR	**Wonju Array Be**	**79.69**	**52**	P		**P**		**06 26 23.8**	**+0.8**
KSRS	**Korea Array**	**79.70**	**52**	P		**P**		**06 26 23.8**	**+0.8**
	comp=Z,5.5nm,0.6s,baz=306,slow=4.5,SNR=13								
KSRS	**Korea Array**	**79.70**	**52**	P		**P**		**06 26 23.8**	**+0.8**
	comp=Z,6.0nm,0.6s								
**F

LPEL	**Lama dei Pelig**	**0.59**	**116**	Pg	Pg	06 15 44.5 +0.2
LPEL				Sg	Sb	06 15 53.4 -0.5
	740nm,0.6s					
LPEL	**Lama dei Pelig**	**0.59**	**116**	Pg	Pg	06 15 44.5 +0.2
LPEL				Sg	Sb	06 15 53.4 -0.5
	740nm,0.6s					
NRCA	**Norcia**	**0.59**	**333**	Pg	Pg	06 15 44.4 +0.1
NRCA				Sg	Sb	06 15 53.6 -0.4
	395nm,0.1s					
NRCA	**Norcia**	**0.59**	**333**	Pg	Pg	06 15 44.4 +0.1
NRCA				Sg	Sb	06 15 53.6 -0.4
	395nm,0.1s					
MNS	**Montasola**	**0.59**	**278**	Pg	Pg	06 15 44.9 +0.5
	196nm,0.5s					
MNS	**Montasola**	**0.59**	**278**	Pg	Pg	06 15 44.9 +0.5
	196nm,0.5s					
MTCE	**Montecelio**	**0.61**	**243**	Pg	Pg	06 15 45.1 +0.3
	232nm,0.6s					
MTCE	**Montecelio**	**0.61**	**243**	Pg	Pg	06 15 45.1 +0.3
	232nm,0.6s					
POFI	**Posta Fibreno**	**0.62**	**163**	Pg	Pg	06 15 44.8 -0.1
	120nm,0.6s					
POFI	**Posta Fibreno**	**0.62**	**163**	Pg	Pg	06 15 44.8 -0.1
	120nm,0.6s					
OFFI	**Offida**	**0.65**	**14**	Pg	Pb	06 15 45.9 -0.4
	836nm,0.7s					
OFFI	**Offida**	**0.65**	**14**	Pg	Pb	06 15 45.9 -0.4
	836nm,0.7s					
SDI	**San Donato**	**0.65**	**157**	Pg	Pg	06 15 45.5 0.0
SDI				Sg	Sb	06 15 55.6 0.0
SDI	**San Donato**	**0.65**	**157**	Pg	Pg	06 15 45.5 0.0
SDI				Sg	Sb	06 15 55.6 0.0
CAFR	**Castel Frentan**	**0.65**	**97**	Pg	Pb	06 15 46.3 -0.1
CAFR	**Castel Frentan**	**0.65**	**97**	Pg	Pb	06 15 46.3 -0.1
GIUL	**Giuliano Di Ro**	**0.77**	**192**	Pg	Pg	06 15 47.8 +0.1
	125nm,0.7s					
GIUL	**Giuliano Di Ro**	**0.77**	**192**	Pg	Pg	06 15 47.8 +0.1
	125nm,0.7s					
FDMO	**Fiordimonte**	**0.78**	**339**	Pg	Pg	06 15 47.7 -0.2
FDMO				Sg	Sb	06 15 59.9 +0.5
	94nm,0.2s					
FDMO	**Fiordimonte**	**0.78**	**339**	Pg	Pg	06 15 47.7 -0.2
FDMO				Sg	Sb	06 15 59.9 +0.5
	94nm,0.2s					
CESI	**CESI - Serrava**	**0.81**	**329**	Pg	Pg	06 15 48.4 -0.2
	43nm,0.5s					
CESI	**CESI - Serrava**	**0.81**	**329**	Pg	Pg	06 15 48.4 -0.2
	43nm,0.5s					
CERA	**Filignano**	**0.82**	**150**	Pg	Pg	06 15 48.1 -0.6
	181nm,0.6s					
CERA	**Filignano**	**0.82**	**150**	Pg	Pg	06 15 48.1 -0.6
	181nm,0.6s					
MIDA	**Miranda**	**0.88**	**139**	Pg	Pg	06 15 49.5 -0.5
	117nm,0.4s					
MIDA	**Miranda**	**0.88**	**139**	Pg	Pg	06 15 49.5 -0.5
	117nm,0.4s					
ASSB	**Assisi San Ben**	**0.95**	**321**	Pg	Pg	06 15 50.9 -0.3
	89nm,0.4s					
ASSB	**Assisi San Ben**	**0.95**	**321**	Pg	Pg	06 15 50.9 -0.3
	89nm,0.4s					
CING	**Cingoli**	**1.09**	**349**	Pg	Pg	06 15 53.8 0.0
CING	**Cingoli**	**1.09**	**349**	Pg	Pg	06 15 53.8 0.0
MGAB	**Montegabbione**	**1.17**	**301**	Pg	Pb	06 15 53.6 -1.7
MGAB	**Montegabbione**	**1.17**	**301**	Pg	Pb	06 15 53.6 -1.7
PIEI	**Pieia**	**1.41**	**331**	Pg	Pn	06 15 58.8 +0.1
	43nm,0.8s					
PIEI	**Pieia**	**1.41**	**331**	Pg	Pn	06 15 58.8 +0.1
	43nm,0.8s					

DDA ***14*** *06:25:23.8, 36°.61N × 34°.78E, h7km, MD3.3*
NSSC ***14*** *06:25:24.7 ± 1.4, 36°.60N × 34°.78E, h0km ± 9km, MD1.5, ML3.1*
ISCJB ***14*** *06:25:25.1 ± 0.6, 36°.56N ± 0°.02 × 34°.74E ± 0°.02, h11km ± 4km, Error ellipse: s-maj=3.2km s-min=2.9km az=159.5*
CSEM ***14*** *06:25:25.7 ± 0.1, 36°.59N × 34°.76E, h10km, Mw3.5, Error ellipse: s-maj=2.4km s-min=2.2km az=85.0*
ISK ***14*** *06:25:25.1, 36°.65N × 34°.75E, h10km, MD3.3*
NIC ***14*** *06:25:28.0 ± 0.2, 36°.68N × 34°.80E, h30km, ML3.4, MW3.5*
ISC 14 06:25:25.0±1.1,**36°.60N**±0°.02×**34°.76E**±0°.02,**h6**km±10km, **n103,** σ**0.89**/144**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MERS	**Mersin**	**0.33**	**325**	*e*Pg	**Pg**	**06 25 30.8**	**-0.7**
MERS				*e*Sg	**Sg**	**06 25 36.0**	**+0.2**
MERS	**Mersin**	**0.33**	**325**	*e*Pg	**Pg**	**06 25 30.8**	**-0.7**
MERS				*e*Sg	**Sg**	**06 25 36.0**	**+0.2**
KRTS	**Karatas**	**0.50**	**93**	*e*PG	**Pb**	**06 25 35.8**	**-0.3**
KRTS	**Karatas**	**0.50**	**93**	*e*Pg	**Pb**	**06 25 35.8**	**-0.3**
GULE	**Gulek**	**0.69**	**1**	*i* P	**Pg**	**06 25 36.7**	**-1.5**
GULE				*i* S	**Sg**	**06 25 47.2**	**0.0**
GULE	**Gulek**	**0.69**	**1**	*i* P	**Pg**	**06 25 36.7**	**-1.5**
GULE				*i* S	**Sg**	**06 25 47.2**	**0.0**
CEYT	**Ceyhan**	**0.90**	**62**	*e*PG	**Pb**	**06 25 42.7**	**-0.2**
CEYT				*e*SG	**Sb**	**06 25 55.1**	**0.0**
CEYT	**Ceyhan**	**0.90**	**62**	*e*Pg	**Pb**	**06 25 42.7**	**-0.2**
CEYT				*e*Sg	**Sb**	**06 25 55.1**	**0.0**
EREN	**Erenkoy**	**1.17**	**204**	*e*PN	**Pn**	**06 25 48.9**	**+1.1**
EREN	**Erenkoy**	**1.17**	**204**	*e*Pn	**Pn**	**06 25 48.9**	**+1.1**
COBT	**Iskenderun**	**1.21**	**93**	*i* P	**Pb**	**06 25 46.8**	**-1.6**
COBT				*i* S	**Sn**	**06 26 05.7**	**+0.3**
COBT	**Iskenderun**	**1.21**	**93**	*i* P	**Pb**	**06 25 46.8**	**-1.6**
COBT				*i* S	**Sn**	**06 26 05.7**	**+0.3**
HTY	**Hatay**	**1.21**	**113**	*e*PN	**Pg**	**06 25 49.0**	**+0.8**
HTY	**Hatay**	**1.21**	**113**	*e*Pn	**Pg**	**06 25 49.0**	**+0.8**
YAYL	**Yayladag**	**1.23**	**117**	*i* P	**Pn**	**06 25 48.7**	**-0.1**
YAYL				*i* S	**Sn**	**06 26 06.3**	**+0.6**
YAYL	**Yayladag**	**1.23**	**117**	*i* P	**Pn**	**06 25 48.7**	**-0.1**
YAYL				*i* S	**Sn**	**06 26 06.3**	**+0.6**
KOZT	**Kozan**	**1.23**	**44**	*e*PN	**Pb**	**06 25 48.2**	**-0.4**
KOZT	**Kozan**	**1.23**	**44**	*e*Pn	**Pb**	**06 25 48.2**	**-0.4**
BTCH	**Batrach**	**1.48**	**112**	*i* P	**Pn**	**06 25 52.7**	**+0.4**
BTCH				*i* S	**Sn**	**06 26 12.0**	**0.0**
BTCH				AML	AML	06 26 15.9	
	comp=E,3μm,0.5s						
BTCH				AML	AML	06 26 16.5	
	comp=N,3μm,0.4s						
BTCH	**Batrach**	**1.48**	**112**	*i* P	**Pn**	**06 25 52.7**	**+0.4**
	SNR=51						
BTCH				*i* S	**Sn**	**06 26 12.0**	**0.0**
	comp=N,3μm,0.4s,SNR=62						
ERMK	**Ermenek**	**1.48**	**272**	*i* P	**Pn**	**06 25 52.5**	**+0.1**
ERMK				*i* S	**Sb**	**06 25 52.7**	**+0.4**
ERMK	**Ermenek**	**1.48**	**272**	*i* P	**Pn**	**06 25 52.5**	**+0.1**
ERMK				*i* S	**Sb**	**06 26 12.7**	**+0.4**
ANDN	**Andirin**	**1.60**	**52**	*i* P	**Pn**	**06 25 52.7**	**-1.3**
ANDN				*i* S	**Sg**	**06 26 16.8**	**+0.2**
ANDN	**Andirin**	**1.60**	**52**	*i* P	**Pn**	**06 25 52.7**	**-1.3**
ANDN				*i* S	**Sg**	**06 26 16.8**	**+0.2**
LFK	**Lefkose**	**1.65**	**217**	*e*PN	**Pn**	**06 25 55.1**	**+0.6**
LFK	**Lefkose**	**1.65**	**217**	*e*Pn	**Pn**	**06 25 55.1**	**+0.6**
PHNC	**Paralimni**	**1.69**	**201**	P	**Pn**	**06 25 54.6**	**-0.5**
	comp=N,11nm,0.6s						
PHNC				S	**Sn**	**06 26 15.8**	**-1.3**
PHNC	**Paralimni**	**1.69**	**201**	P	**Pn**	**06 25 54.6**	**-0.5**
	comp=N,11nm,0.6s						
PHNC				S	**Sn**	**06 26 15.8**	**-1.3**
WRDH	**Warideh**	**1.73**	**129**	*e*P	**Pn**	**06 25 55.8**	**+0.2**
WRDH				*e*S	**Sn**	**06 26 18.3**	**+0.3**
WRDH	**Warideh**	**1.73**	**129**	*e*P	**Pn**	**06 25 55.8**	**+0.2**
	SNR=51						
WRDH				*e*S	**Sn**	**06 26 18.3**	**+0.3**
	SNR=49						
AYKD	**Aykdinkavak**	**1.83**	**63**	*i* P	**Pn**	**06 25 56.7**	**-0.3**
AYKD				*i* S	**Sn**	**06 26 20.9**	**+0.3**
KUZU	**Kuzuini**	**1.87**	**84**	*i* P	**Pn**	**06 25 57.2**	**-0.4**
KUZU				*i* S	**Sn**	**06 26 20.9**	**-0.6**
KUZU	**Kuzuini**	**1.87**	**84**	*i* P	**Pn**	**06 25 57.2**	**-0.4**
KUZU				*i* S	**Sn**	**06 26 20.9**	**-0.6**
SULT	**Sultanhani-AKS**	**1.88**	**329**	*e*PN	**Pn**	**06 25 57.5**	**-0.2**
SULT	**Sultanhani-AKS**	**1.88**	**329**	*e*Pn	**Pn**	**06 25 57.5**	**-0.2**
MAMC	**Mammari**	**1.89**	**222**	P	**Pn**	**06 25 57.9**	**+0.1**
MAMC	**Mammari**	**1.89**	**222**	P	**Pn**	**06 25 57.9**	**+0.1**
AKIN	**Ak¨–nc¨–lar- K**	**1.90**	**214**	*e*PN	**Pn**	**06 25 59.0**	**+1.1**
AKIN	**Ak¨–nc¨–lar- K**	**1.90**	**214**	*e*Pn	**Pn**	**06 25 59.0**	**+1.1**
KMRS	**Kahramanmaras**	**1.94**	**61**	*e*PN	**Pn**	**06 25 58.8**	**+0.3**
KMRS	**Kahramanmaras**	**1.94**	**61**	*e*Pn	**Pn**	**06 25 58.8**	**+0.3**
AKDN	**Akdeniz- K¨–br**	**1.95**	**229**	*e*PN	**Pn**	**06 25 59.5**	**+1.0**
AKDN	**Akdeniz- K¨–br**	**1.95**	**229**	*e*Pn	**Pn**	**06 25 59.5**	**+1.0**
CSS	**Prodhromos**	**2.00**	**216**	P	**Pn**	**06 25 59.1**	**-0.2**
	comp=N,3.4nm,0.2s						
CSS				S	**Sn**	**06 26 23.4**	**-1.3**
CSS	**Prodhromos**	**2.00**	**216**	*e*PN	**Pn**	**06 25 60.0**	**+0.6**

CSS	**Prodhromos**	**2.00**	**216**	P	**Pn**	**06 25 59.1**	**-0.2**
	comp=N,3.4nm,0.2s						
CSS	**Prodhromos**	**2.00**	**216**	*e*Pn	**Pn**	**06 26 00.0**	**+0.6**
CSS				S	**Sn**	**06 26 23.4**	**-1.3**
GAZI	**Gazipasa**	**2.00**	**260**	*i* P	**Pn**	**06 25 59.5**	**+0.2**
GAZI				*i* S	**Sb**	**06 26 27.9**	**+1.0**
GAZI	**Gazipasa**	**2.00**	**260**	*i* P	**Pn**	**06 25 59.5**	**+0.2**
GAZI				*i* S	**Sb**	**06 26 27.9**	**+1.0**
BIDA	**Albida**	**2.03**	**141**	*e*P	**Pn**	**06 25 59.3**	**-0.4**
BIDA				*e*S	**Sn**	**06 26 24.2**	**-1.2**
BIDA	**Albida**	**2.03**	**141**	*e*P	**Pn**	**06 25 59.3**	**-0.4**
	SNR=51						
BIDA				*e*S	**Sn**	**06 26 24.2**	**-1.2**
	SNR=49						
GAZ	**Gaziantep**	**2.05**	**73**	*e*PN	**Pn**	**06 25 59.9**	**-0.1**
GAZ	**Gaziantep**	**2.05**	**73**	*e*Pn	**Pn**	**06 25 59.9**	**-0.1**
KFRA	**Kufra**	**2.16**	**129**	*e*P	**Pn**	**06 26 02.4**	**+0.9**
KFRA				*e*S	**Sn**	**06 26 27.8**	**-0.9**
KFRA				AML	AML	06 26 36.0	
	comp=E,926nm,0.7s						
KFRA				AML	AML	06 26 36.9	
	comp=N,416nm,0.5s						
ALFC	**Alevga**	**2.27**	**231**	P	**Pn**	**06 26 02.2**	**-0.8**
	comp=N,10nm,0.2s						
ALFC				S	**Sn**	**06 26 29.9**	**-1.3**
ALFC	**Alevga**	**2.27**	**231**	P	**Pn**	**06 26 02.2**	**-0.8**
	comp=N,10nm,0.2s						
ALFC				S	**Sn**	**06 26 29.9**	**-1.3**
KONT	**Konya--Tatoy**	**2.34**	**306**	*e*PN	**Pn**	**06 26 03.8**	**-0.2**
KONT	**Konya--Tatoy**	**2.34**	**306**	*e*Pn	**Pn**	**06 26 03.8**	**-0.2**
BNN	**Bunyan**	**2.41**	**21**	*e*PN	**Pn**	**06 26 05.1**	**0.0**
BNN	**Bunyan**	**2.41**	**21**	*e*Pn	**Pn**	**06 26 05.1**	**0.0**
HAWK	**Haweek**	**2.47**	**147**	*e*P	**Pn**	**06 26 06.5**	**+0.7**
HAWK				*e*S	**Sn**	**06 26 36.2**	**-0.2**
HAWK	**Haweek**	**2.47**	**147**	*e*P	**Pn**	**06 26 06.5**	**+0.7**
	SNR=51						
HAWK				*e*S	**Sn**	**06 26 36.2**	**-0.2**
	SNR=49						
LADK	**Ladik-KONYA**	**2.49**	**311**	*e*PN	**Pn**	**06 26 06.6**	**+0.5**
LADK	**Ladik-KONYA**	**2.49**	**311**	*e*Pn	**Pn**	**06 26 06.6**	**+0.5**
HWQ	**Hawqa**	**2.51**	**157**	*e*P	**Pn**	**06 26 07.2**	**+0.8**
HWQ	**Hawqa**	**2.51**	**157**	*e*P	**Pn**	**06 26 07.2**	**+0.8**
AKMC	**Akamas**	**2.52**	**232**	P	**Pn**	**06 26 06.3**	**-0.1**
AKMC	**Akamas**	**2.52**	**232**	P	**Pn**	**06 26 06.3**	**-0.1**
SARI	**SarD1z-Kayseri**	**2.59**	**36**	*e*PN	Pn	06 26 02.7	-4.8
PPCY	**Paphos**	**2.60**	**230**	P	**Pn**	**06 26 07.2**	**-0.3**
PPCY	**Paphos**	**2.60**	**230**	P	**Pn**	**06 26 07.2**	**-0.3**
KDHN	**Kadinhani**	**2.84**	**313**	*i* P	**Pn**	**06 26 12.1**	**+1.1**
KDHN				*i* S	**Sg**	**06 27 00.4**	**+4.1**
KDHN	**Kadinhani**	**2.84**	**313**	*i* P	**Pn**	**06 26 12.1**	**+1.1**
CDAG	**Cicekdag**	**3.04**	**354**	*i* P	**Pn**	**06 26 15.4**	**+1.7**
CDAG				*i* S	**Sb**	**06 26 56.1**	**-0.8**
CDAG	**Cicekdag**	**3.04**	**354**	*i* P	**Pn**	**06 26 15.4**	**+1.7**
YOZ	**Yozgat**	**3.07**	**8**	*e*PN	**Pn**	**06 26 14.8**	**+0.6**
YOZ	**Yozgat**	**3.07**	**8**	*e*Pn	**Pn**	**06 26 14.8**	**+0.6**
AFSR	**Af¨ar-Bala (A**	**3.14**	**335**	*e*PN	**Pn**	**06 26 15.7**	**+0.6**
AFSR	**Af¨ar-Bala (A**	**3.14**	**335**	*e*Pn	**Pn**	**06 26 15.7**	**+0.6**
RCY	**Rachaya**	**3.22**	**164**	*e*P	**Pn**	**06 26 16.6**	**+0.4**
RCY	**Rachaya**	**3.22**	**164**	*e*P	**Pn**	**06 26 16.6**	**+0.4**
KIZT	**Kizilcal**	**3.22**	**316**	*e*PN	**Pn**	**06 26 17.0**	**+0.8**
KIZT	**Kizilcal**	**3.22**	**316**	*e*Pn	**Pn**	**06 26 17.0**	**+0.8**
MALT	**Malatya**	**3.39**	**59**	*e*PN	**Pn**	**06 26 19.6**	**+1.1**
MALT	**Malatya**	**3.39**	**59**	*e*Pn	**Pn**	**06 26 19.6**	**+1.1**
BCK	**Bucak**	**3.44**	**286**	*e*PN	**Pn**	**06 26 20.5**	**+1.3**
BCK	**Bucak**	**3.44**	**286**	*e*Pn	**Pn**	**06 26 20.5**	**+1.3**
KSDI	**Kefar Szold**	**3.48**	**167**	Pn	**Pn**	**06 26 19.7**	**+0.1**
KSDI				Sn	**Sn**	**06 27 00.3**	**-0.8**
HNTI	**Hanita**	**3.52**	**174**	Pn	**Pn**	**06 26 20.4**	**+0.2**
HNTI				Sn	**Sn**	**06 27 01.1**	**-1.1**
MMA0	**Mount Meron ar**	**3.61**	**171**	Pn	**Pn**	**06 26 21.5**	**0.0**
MMA0				Sn	**Sn**	**06 27 03.4**	**-1.1**
ANTO	**Ankara**	**3.61**	**335**	*e*PN	**Pn**	**06 26 22.9**	**+1.3**
ANTO	**Ankara**	**3.61**	**335**	*e*Pn	**Pn**	**06 26 22.9**	**+1.3**
KSHT	**Keshet**	**3.71**	**166**	Pn	**Pn**	**06 26 23.7**	**+0.8**
MMLI	**Mount Malkishu**	**4.18**	**172**	Pn	**Pn**	**06 26 29.8**	**+0.4**
MMLI				Sn	**Sn**	**06 27 17.5**	**-1.1**
SLTI	**Sal'it**	**4.35**	**177**	Pn	**Pn**	**06 26 32.4**	**+0.8**
HMDT	**Nahal Hemdat**	**4.38**	**171**	Pn	**Pn**	**06 26 32.9**	**+0.9**
HMDT				Sn	**Sn**	**06 27 23.3**	**0.0**
YTIR	**Yattir**	**5.23**	**177**	Sn	**Sn**	**06 27 43.4**	**-1.0**
MZDA	**Masada**	**5.30**	**174**	Sn	**Sn**	**06 27 45.6**	**-0.3**
RTMI	**Retamim**	**5.53**	**181**	Sn	**Sn**	**06 27 49.9**	**-1.8**
KZIT	**Kziot**	**5.68**	**183**	Sn	**Sn**	**06 27 53.6**	**-1.9**
PRNI	**Paran**	**6.23**	**178**	Pn	**Pn**	**06 26 58.3**	**+0.8**
PRNI				Sn	**Sn**	**06 28 07.2**	**-1.9**
MBRI	**Mt Berech**	**6.79**	**179**	Pn	**Pn**	**06 27 06.3**	**+1.1**
EIL	**Elat**	**6.91**	**179**	Sn	**Sn**	**06 28 24.4**	**-1.3**

ISCJB ***14*** *07:02:12.5 ± 0.4, 7°.08N ± 0°.02 × 123°.75E ± 0°.03, h45km ± 4km, mb4.5/57, MS4.0/33, Error ellipse: s-maj=5.6km s-min=3.5km az=167.2*
MAN ***14*** *07:02:12, 7°.20N × 123°.67E, h28km, mb5.5, ML4.5, MS4.8*
MAN INTENSITY III - PARANG MAGUINDANAO.
IDC ***14*** *07:02:13.4 ± 0.6, 7°.08N × 123°.70E, h41km ± 5km, mb4.1/28, mb1 4.2/29, mb1mx4.1/33, mbtmp4.1/29, ML4.1/1, MS3.9/24, Ms1 3.9/24, ms1mx3.8/36, Error ellipse: s-maj=15.3km s-min=9.2km az=67.0*
NEIC ***14*** *07:02:15.4 ± 0.7, 7°.05N × 123°.73E, h59km ± 6km, mb4.9/15, Error ellipse: s-maj=8.6km s-min=5.5km az=68.0*
NEIC Felt [III PIVS] at Parang and Sultan Kudarat. Also felt at Cotabato.
GCMT ***14*** *07:02:16.6 ± 0.3, 7°.13N × 123°.69E, h37km ± 2km, MW5.0, Moment Tensor Solution. s17,c20; s61,c87; Moment tensor: Scale 10^16 Nm; Mrr 1.33±.27; Mθθ 2.01±.16; Mφφ -3.34±.19; Mrθ -2.13±.17; Mθφ 1.26±.10; Mφr -0.39±.16; Best double couple: M0 3.80000 × 10^16 NP1: φ205.00000°, δ63.00000°, λ151.00000°. NP2: φ309.00000°, δ65.00000°, λ30.00000°. Principal axes: T 4.0300, Plg39.0000°, Azm168.0000°; N -0.4100, Plg51.0000°, Azm346.0000°; P -3.6200, Plg1.0000°, Azm77.0000°; Data Used: II G IU IC CN.*
AUST ***14*** *07:02:17.8, 6°.50N × 124°.00E, h35km*
BJI ***14*** *07:02:19.6, 6°.57N × 123°.95E, h51km, mB5.0/23, mb4.6/32, Ms4.5/25, Ms7 4.2/23*
DJA ***14*** *07:02:21.8 ± 0.4, 7°.3 × 12°.4E ±, h64km ± 4km, M5.1/41, mB5.5/18, mb5.0/41, MLv5.6/6, Mw(mB)4.9/18*
ISC 14 07:02:13.9±0.3,**7°.13N**±0°.03×**123°.72E**±0°.04,**h39**km±3km, **h39**km**:pP-P, n184,** σ1**9**79/174**, mb4.5**/57,**MS3.9**/34,**3C-5D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.53**	**80**	⇓*i* P	**Pn**	**07 02 23.7**	**-1.4**
CTBH				*i* S	**Sn**	**07 02 31.7**	**-1.2**
PAGZ	**Pagadian**	**0.79**	**335**	*e*P	**Pn**	**07 02 26.4**	**-2.2**
PAGZ				*e*S	**Sn**	**07 02 37.5**	**-1.7**
IPIL	**Ipil**	**1.31**	**300**	⇓*i* P	**Pn**	**07 02 34.5**	**-1.2**
IPIL				*e*S	**Sn**	**07 02 49.8**	**-2.2**
BUKP	**Musuan**	**1.53**	**61**	*e*P	**Pn**	**07 02 39.4**	**+0.7**
GSPH	**General Santos**	**1.60**	**130**	⇓*e*P	Pn	07 02 43.2	+3.4
GSPH				*i* S	Sn	07 03 30.1	+31
DMPH	**Davao City--Mi**	**1.78**	**91**	⇑*i*P	**Pn**	**07 02 43.1**	**+1.0**
DMPH				*i* S	Sn	07 02 56.0	-7.5
DAV	**Davao City (W)**	**1.85**	**92**	*e*Pn	**Pn**	**07 02 45.5**	**+2.4**
DAV				S	**Sn**	**07 03 09.0**	**+3.7**
DAV	**Davao City (W)**	**1.85**	**92**	P	**Pn**	**07 02 44.7**	**+1.6**
DAV				S	Sn	07 03 15.5	+10
DAV	**Davao City (W)**	**1.85**	**92**	P	**Pn**	**07 02 44.6**	**+1.5**
	595nm,0.3s,baz=266,slow=1.5,SNR=81						
DAV				S	**Sn**	**07 03 09.0**	**+3.7**
	591nm,0.3s,baz=299,slow=22,SNR=9.8						
DAV				LR	LR	07 03 45.3	
	comp=Z,6μm,18.1s,baz=306,slow=49						
SNPH	**Sibulan**	**2.25**	**348**	⇓*e*P	Pn	07 02 35.9	-13
SNPH				*e*S	Sn	07 03 05.9	-9.4
MATI	**Mati**	**2.53**	**94**	*e*P	**Pn**	**07 02 52.5**	**+0.1**
LLP	**Lapu-Lapu**	**3.18**	**4**	*e*P	Pn	07 02 58.0	-3.4
LLP				*e*S	**Sn**	**07 03 39.9**	**+1.7**
SGSI	**Sangihe**	**3.86**	**152**	P	**Pn**	**07 03 12.2**	**+1.4**
PLP	**Palo**	**4.20**	**17**	⇓*e*P	**Pn**	**07 03 15.8**	**+0.3**
RCP	**Roxas**	**4.51**	**348**	⇓*e*P	**Pn**	**07 03 21.8**	**+2.1**
MNI	**Manado**	**5.75**	**169**	P	**Pn**	**07 03 37.1**	**+0.3**
	918nm,0.6s,14μm4.0nm						
MNI				S	**Sn**	**07 04 41.2**	**-0.5**
	918nm,0.6s,14μm4.0nm						
KMSI	**Cibinong**	**6.51**	**178**	P	**Pn**	**07 03 46.2**	**-1.0**
	1μm,0.9s,4.2nm						

MRSI	**Marisa**	**6.84**	**195**	P	**Pn**	**07 03 49.7**	**-2.0**
	222nm,0.5s,11μm4.1nm						
MRSI				S	Sn	07 04 59.9	-8.4
	222nm,0.5s,11μm4.1nm						
TNTI	**Ternate**	**7.29**	**150**	P	**Pn**	**07 03 57.5**	**-0.4**
	222nm,0.8s,3μm0.8nm						
KKM	**Kota Kinabalu**	**7.53**	**262**	P	**Pn**	**07 04 03.7**	**+2.4**
	baz=7.8,SNR=3.9						
LUWI	**Luwuk**	**8.17**	**187**	P	**Pn**	**07 04 11.9**	**+1.9**
	721nm,1.0s,7μm5.3nm						
LUWI				S	**Sn**	**07 05 40.9**	**-0.2**
	721nm,1.0s,7μm5.3nm						
LBMI	**Labuha**	**8.59**	**154**	P	**Pn**	**07 04 16.7**	**+1.0**
	120nm,0.7s,2μm						
PCI	**Palu**	**8.87**	**206**	S	Sn	07 05 33.0	-25
	baz=8.5,SNR=13						
TTSI	**Tana Toraja**	**10.83**	**201**	P	**Pn**	**07 04 46.1**	**-0.3**
	54nm,0.8s,733nm						
NLAI	**Namlea**	**10.84**	**162**	P	**Pn**	**07 04 46.0**	**-0.5**
	143nm,0.9s,1μm						
KDI	**Kendari**	**11.06**	**186**	P	**Pn**	**07 04 49.2**	**-0.5**
	70nm,0.8s						
MSAI	**Masohi**	**11.63**	**153**	P	**Pn**	**07 04 57.7**	**+0.3**
	18nm,0.7s,1μm						
AAI	**Ambon**	**11.63**	**157**	P	**Pn**	**07 04 56.8**	**-0.7**
	200nm,1.2s,3μm						
AAI	**Ambon**	**11.63**	**157**	P	**Pn**	**07 04 57.0**	**-0.5**
	baz=11,SNR=3.4						
SPSI	**Sidrap Palu**	**11.70**	**200**	P	**Pn**	**07 04 58.5**	**+0.1**
	25nm,1.2s						
KAPI	**Kappang**	**12.69**	**198**	*e*Pn	**Pn**	**07 05 11.7**	**-0.2**
KAPI	**Kappang**	**12.69**	**198**	P	**Pn**	**07 05 12.9**	**+1.0**
	30nm,1.2s						
KAPI	**Kappang**	**12.69**	**198**	P	**Pn**	**07 05 11.7**	**-0.2**
	1.1nm,0.3s,baz=112,slow=19,SNR=3.8						
KAPI				LR	LR	07 10 07.7	
	comp=Z,555nm,18.8s,baz=141,slow=38						
BKSI	**Bulukumba**	**12.88**	**196**	P	Pn	07 05 18.4	+4.0
	21nm,1.3s						
FAKI	**Fak Fak**	**13.12**	**139**	P	**Pn**	**07 05 16.8**	**-1.0**
	62nm,1.2s,582nm						
KSM	**Kuching**	**14.50**	**248**	*e*Pn	**Pn**	**07 05 37.2**	**+0.6**
KSM	**Kuching**	**14.50**	**248**	P	**Pn**	**07 05 39.5**	**+2.9**
	baz=15,SNR=4.6						
MMRI	**Maumere**	**15.73**	**185**	P	**P**	**07 05 55.1**	**-1.1**
	126nm,1.4s,2μm						
KMMI	**Kalianget**	**17.11**	**215**	P	**P**	**07 06 14.7**	**+3.1**
	100nm,1.2s						
SRBI	**Singaraja**	**17.33**	**209**	P	**P**	**07 06 17.0**	**+3.1**
	64nm,1.4s,1μm						
KHKI	**Kahang-Kahang**	**17.38**	**208**	P	P	07 06 19.6	+5.1
	36nm,1.3s						
BLJI	**Banyuglugur**	**17.89**	**215**	P	**P**	**07 06 23.1**	**+2.9**
	83nm,1.3s,3μm						
QIZ	**Qiongzhong**	**17.94**	**313**	P	P	07 06 35.0	+14
QIZ				pP	pP	07 06 40.6	+10
QIZ				sP	sP	07 06 53.5	+18
QIZ				sS	sS	07 10 14.9	+14
QIZ				pmax	pmax		
	comp=Z,11nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,170nm,2.8s						
QIZ				LR	LR		
	comp=N,410nm,19.8s						
QIZ				LR	LR		
	comp=Z,490nm,25.6s						
GMJI	**Gumukmas**	**18.41**	**214**	P	**Pn**	**07 06 27.7**	**+1.5**
	comp=Z,58n

comp=N,240nm,15.3s
KMI LR LR
comp=E,340nm,23.7s
KMI LR LR
comp=Z,310nm,22.9s
MBWA Marble Bar 28.38 188 *eP* **P 07 08 04.0 -0.6**
comp=Z,40nm,1.1s
COEN Coen 28.49 137 *eP* **P 07 08 03.8 -1.9**
comp=Z,65nm,0.8s
COEN Coen 28.49 137 P **P 07 08 04.1 -1.6**
baz=28,SNR=8.0
PMG Port Moresby 28.55 125 P **P 07 08 05.0 -1.2**
PMG Port Moresby 28.55 125 P **P 07 08 05.0 -1.2**
comp=Z,9.5nm,0.7s,baz=238,slow=3.4,SNR=5.1
WRAB Tennant Creek 28.85 159 *eP* **P 07 08 07.1 -1.8**
comp=Z,42nm,1.2s
XAN Xi'an 30.07 335 P P 07 08 29.9 +10
XAN pmax pmax
comp=Z,1.0nm,0.9s
XAN pmax pmax
comp=Z,19nm,5.5s
CD2 Chengdu 30.15 324 P P 07 08 34.5 +14
CD2 pP pP 07 08 48.3 +17
CD2 sP sP 07 08 54.8 +19
CD2 PP PP 07 09 38.0 +9.1
CD2 PcP PcP 07 11 29.4 +8.3
CD2 S S 07 13 34.3 +17
CD2 sS sS 07 13 57.8 +23
CD2 PcS PcS 07 15 12.4 +7.7
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,150nm,4.7s
CD2 LR LR
comp=N,360nm,13.3s
CD2 LR LR
comp=E,320nm,16.1s
CD2 LR LR
comp=Z,430nm,19.8s
KSAR Wonju Array Be 30.41 7 P **P 07 08 23.0 +0.5**
KSRS Korea Array 30.43 7 P **P 07 08 23.0 +0.4**
comp=Z,0.9nm,0.5s,baz=185,slow=9.8,SNR=3.2
KSRS LR LR 07 21 54.2
comp=Z,175nm,18.4s,baz=52,slow=39
QIS Mount Isa 31.64 151 P **P 07 08 32.5 -0.9**
baz=31,SNR=13
MJAR Matsushiro Arr 32.13 22 pP pP 07 08 51.9 +3.3
MJAR Matsushiro Arr 32.13 22 pP **pP 07 08 51.9 +3.3**
comp=Z,3.1nm,0.8s,baz=194,slow=10,SNR=4.0
MJAR LR LR 07 20 02.4
comp=Z,252nm,22.0s,baz=210,slow=33
AS31 Alice Springs 32.18 162 *eP* **P 07 08 37.0 -1.3**
ASAR Alice Springs 32.18 162 P **P 07 08 37.2 -1.0**
ASAR Alice Springs 32.18 162 P **P 07 08 37.2 -1.0**
comp=Z,7.9nm,0.7s,baz=332,slow=6.5,SNR=71
BJI Beijing 33.46 349 P P 07 09 01.3 +12
BJI pmax pmax
comp=Z,13nm,0.5s
BJI LR LR
comp=N,160nm,27.8s
BJI LR LR
comp=E,220nm,20.2s
BJI LR LR
comp=Z,210nm,29.1s
MEEK Meekatharra 33.93 188 P **P 07 08 52.7 -0.7**
baz=34,SNR=4.9
LZH Lanzhou 34.08 331 *eP* P 07 09 07.4 +12
LZH pP pP 07 09 21.1 +15
LZH sP sP 07 09 27.0 +16
LZH *eS* S 07 14 38.1 +20
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,100nm,4.0s
LZH LR LR
comp=N,320nm,13.6s
LZH LR LR
comp=E,310nm,13.3s
LZH LR LR
comp=Z,550nm,14.8s
CTA Charters Tower 34.97 141 P **P 07 09 01.8 -0.8**
CTA Charters Tower 34.97 141 P **P 07 09 01.8 -0.8**
comp=Z,8.9nm,0.8s,baz=321,slow=12,SNR=11
CTA LR LR 07 23 20.5
comp=Z,66nm,19.3s,baz=321,slow=36
CTAO Charters Tower 34.97 141 *eP* **P 07 09 01.9 -0.6**
comp=Z,12nm,0.8s
HHC Hu-ho-hao-te 35.29 344 *eP* P 07 09 17.6 +12
HHC pP pP 07 09 32.8 +17
HHC sP sP 07 09 39.9 +19
HHC PP PP 07 10 39.4 +14
HHC S S 07 14 52.6 +16
HHC sS **ScP 07 15 17.3 -0.8**
HHC SS **SS 07 17 18.0 +6.8**
HHC pmax pmax
comp=Z,24nm,0.9s
HHC pmax pmax
comp=Z,240nm,6.3s
HHC LR LR
comp=N,450nm,17.7s
HHC LR LR
comp=E,360nm,13.7s
HHC LR LR
comp=Z,380nm,17.7s
SHL Shillong 35.47 305 *iP* **P 07 09 07.0 -0.1**
CN2 Changchun 36.56 2 *eP* P 07 09 29.8 +14
CN2 pmax pmax
comp=Z,10.0nm,0.6s
MORW Morawa 36.74 191 P **P 07 09 16.9 -0.6**
baz=36,SNR=5.4
USRK Ussuriysk Arra 37.63 10 P **P 07 09 24.9 -0.1**
comp=Z,1.6nm,0.7s,baz=196,slow=10,SNR=4.7
MDJ Mudanjiang 37.70 7 P P 07 09 37.4 +12
MDJ pP pP 07 09 50.3 +14
MDJ sP sP 07 09 56.9 +16
MDJ PP PnPn 07 11 04.3 +11
MDJ PcP PcP 07 11 49.8 +7.6
MDJ S **ScP 07 15 28.5 +1.8**
MDJ ScP S 07 15 33.0 +20
MDJ PcS PcS 07 15 38.6 +7.9
MDJ ScS ScS 07 19 42.9 +7.6
MDJ pmax pmax
comp=Z,8.0nm,1.0s
MDJ pmax pmax
comp=Z,54nm,4.1s
MDJ LR LR
comp=N,210nm,38.7s
MDJ LR LR
comp=E,47nm,36.5s
FORT Forrest 37.92 174 *eP* **P 07 09 26.3 -1.2**
comp=E,44nm,0.8s
FORT Forrest 37.92 174 P **P 07 09 27.0 -0.5**
baz=38,SNR=23
KMBL Kambalda 38.31 183 P **P 07 09 30.4 -0.5**
baz=38,SNR=13
GTA Gaotai 38.67 330 *eP* P 07 09 37.8 +3.8
GTA pP pP 07 09 53.0 +7.9
GTA sP sP 07 09 59.8 +10
GTA S **S 07 15 28.8 +0.7**
GTA sS sS 07 15 53.9 +7.3
GTA SS **SnSn 07 18 12.6 -6.1**
GTA pmax pmax
comp=Z,4.0nm,1.1s
GTA pmax pmax
comp=Z,73nm,6.7s
GTA LR LR
comp=N,190nm,14.5s
GTA LR LR
comp=E,250nm,19.0s
GTA LR LR
comp=Z,250nm,15.2s
QLP Quilpie 38.97 150 P **P 07 09 35.5 -0.9**
baz=38,SNR=8.8
TAPN Taplejung 39.61 305 *eP* **P 07 09 42.9 +0.7**
comp=Z,25nm,1.0s
ODAN Odare 39.68 304 *eP* **P 07 09 45.1 +2.4**
NWAO Narrogin (SRO) 40.31 188 P **P 07 09 46.4 -1.1**
NWAO Narrogin (SRO) 40.31 188 P **P 07 09 46.4 -1.1**
comp=Z,25nm,1.0s,baz=12,slow=5.3,SNR=5.6
RAMN Ramite 40.37 304 *eP* **P 07 09 49.4 +1.0**
comp=Z,26nm,1.0s
ASAJ Asahikawa 40.38 21 P **P 07 09 48.4 +0.5**
ASAJ Asahikawa 40.38 21 P **P 07 09 48.4 +0.5**
comp=Z,2.4nm,0.3s,baz=256,slow=17,SNR=2.9
GUN Gumba 41.33 305 *eP* **P 07 09 56.3 -0.2**
comp=Z,33nm,0.8s

BBOO Buckleboo 41.42 164 *eP* **P 07 09 56.3 -0.4**
comp=Z,949nm,1.1s
BBOO Buckleboo 41.42 164 P **P 07 09 56.2 -0.4**
baz=41,SNR=15
DMN Daman 41.84 304 *eP* **P 07 10 01.2 +0.6**
EIDS Eidsvold 41.86 141 *eP* **P 07 09 58.7 -1.7**
comp=Z,21nm,0.8s
EIDS Eidsvold 41.86 141 P **P 07 09 58.9 -1.5**
baz=41,SNR=8.8
STKA Stephens Creek 42.38 157 *eP* **P 07 10 04.5 0.0**
comp=Z,6.2nm,0.9s
STKA Stephens Creek 42.38 157 P **P 07 10 04.3 -0.2**
comp=Z,22nm,0.7s,baz=331,slow=8.0,SNR=46
STKA LR LR 07 29 00.8
comp=Z,144nm,18.9s,baz=16,slow=38
STKA Stephens Creek 42.38 157 P **P 07 10 04.5 0.0**
baz=42,SNR=30
SONM Songino Array 43.17 343 P **P 07 10 10.7 -0.2**
SONM pP **pP 07 10 20.9 -1.2**
SONM PcP **PcP 07 11 58.8 -1.2**
SONM pPcP 07 12 11.0
SONM Songino Array 43.17 343 P **P 07 10 10.7 -0.2**
comp=Z,0.6nm,0.6s,baz=156,slow=11,SNR=5.2
SONM pP **pP 07 10 20.9 -1.2**
comp=Z,2.1nm,0.8s,baz=163,slow=8.4,SNR=9.9
SONM PcP **PcP 07 11 58.8 -1.2**
comp=Z,1.3nm,1.0s,baz=183,slow=2.9,SNR=2.8
SONM pPcP 07 12 11.0
comp=Z,1.7nm,0.8s,baz=192,slow=3.2,SNR=5.0
SONM LR LR 07 29 00.6
comp=Z,126nm,21.5s,baz=259,slow=37
DANN Dangsing 43.22 304 *eP* **P 07 10 11.2 -0.7**
comp=Z,36nm,1.0s
PYUN Piuthan 43.77 304 *eP* **P 07 10 15.8 -0.4**
comp=Z,62nm,1.1s
CMSA Cobar Meteorol 43.81 153 P **P 07 10 16.9 +0.8**
baz=43,SNR=19
ARMA Armidale 45.94 146 *eP* **P 07 10 33.3 +0.1**
comp=Z,22nm,0.9s
ARMA Armidale 45.94 146 P **P 07 10 33.8 +0.6**
baz=45,SNR=7.6
ARPS Mount Arapiles 46.85 160 P **P 07 10 40.4 +0.2**
baz=46,SNR=5.3
YNG Young 47.36 152 P **P 07 10 46.1 +1.9**
baz=47,SNR=6.1
WMQ Urumqi 48.24 325 P P 07 11 02.0 +11
WMQ pP pP 07 11 18.0 +16
WMQ sP sP 07 11 28.0 +18
WMQ PcP PcP 07 12 26.0 +8.3
WMQ ScP **ScP 07 16 14.0 +4.6**
WMQ S S 07 18 01.0 +13
WMQ sS sS 07 18 28.0 +21
WMQ ScS **ScS 07 20 46.0 +5.0**
WMQ SS SS 07 21 30.0 +12
WMQ pmax pmax
comp=Z,15nm,1.0s
WMQ pmax pmax
comp=Z,130nm,5.0s
WMQ LR LR
comp=N,280nm,14.0s
WMQ LR LR
comp=E,190nm,14.0s
WMQ LR LR
comp=Z,200nm,15.0s
CAN Canberra 48.48 152 *eP* **P 07 10 53.5 +0.6**
comp=Z,37nm,1.4s
MKAR Makanchi Array 53.07 325 P **P 07 11 27.4 0.0**
MKAR Makanchi Array 53.07 325 P **P 07 11 27.4 0.0**
comp=Z,0.9nm,0.6s,baz=134,slow=8.6,SNR=10.0
MKAR LR LR 07 35 14.9
comp=Z,183nm,19.9s,baz=237,slow=37
PETK Petropavlovsk- 53.53 25 P **P 07 11 30.9 +0.4**
PETK Petropavlovsk- 53.53 25 P **P 07 11 30.9 +0.4**
comp=Z,2.5nm,0.7s,baz=180,slow=7.1,SNR=2.7
PETK LR LR 07 31 16.6
comp=Z,138nm,21.7s,baz=234,slow=32
KSH Kashi 53.54 315 P P 07 11 42.6 +12
KSH pP pP 07 11 58.9 +16
KSH sP sP 07 12 05.5 +18
KSH PcP PcP 07 12 45.8 +8.4
KSH PP PP 07 13 46.9 +15
KSH ScP **ScP 07 16 37.8 +5.4**
KSH PcS PcS 07 16 43.8 +7.2
KSH S S 07 19 14.5 +13
KSH sS sS 07 19 41.6 +21
KSH ScS **ScS 07 21 22.9 +5.2**
KSH SS SKiKP 07 22 57.6 +14
KSH pmax pmax
comp=Z,4.0nm,0.3s
KSH pmax pmax
comp=Z,160nm,4.0s
KSH LR LR
comp=N,130nm,5.3s
KSH LR LR
comp=E,180nm,4.8s
KSH LR LR
comp=Z,350nm,4.9s
AAK Ala-Archa 55.84 318 LR LR 07 37 45.5
comp=Z,108nm,19.8s,baz=106,slow=38
ZALV Zalesovo Beam 56.23 333 P **P 07 11 51.1 +1.1**
ZALV Zalesovo Beam 56.23 333 P **P 07 11 51.1 +1.1**
comp=Z,0.6nm,0.4s,baz=117,slow=8.2,SNR=2.9
ZALV LR LR 07 36 34.1
comp=Z,91nm,21.9s,baz=75,slow=37
EKS2 Erkin-Say 56.34 317 *eP* **P 07 11 52.0 +0.8**
comp=Z,6.0nm,1.0s
KURBB Kurchatov Arra 57.28 328 P **P 07 11 57.0 -0.5**
comp=Z,1.2nm,0.7s,baz=128,slow=5.9,SNR=9.1
KURBB pP **pP 07 12 08.4 -0.7**
comp=Z,4.7nm,0.9s,baz=127,slow=6.0,SNR=18
KURK Kurchatov 57.28 328 *eP* **P 07 11 57.6 +0.1**
comp=Z,6.1nm,0.8s
KKAR Karatay Array 58.72 317 *eP* **P 07 12 10.1 +2.2**
comp=Z,2.3nm,0.6s
BVAR Borovoye Array 62.86 327 P **P 07 12 35.6 -0.1**
BVAR pP **pP 07 12 46.5 -1.0**
BVAR Borovoye Array 62.86 327 P **P 07 12 35.6 -0.1**
comp=Z,1.6nm,0.8s,baz=132,slow=8.8,SNR=6.2
BVAR pP **pP 07 12 46.5 -1.0**
comp=Z,5.1nm,0.9s,baz=134,slow=8.5,SNR=9.2
BVAR LR LR 07 40 58.4
comp=Z,80nm,19.9s,baz=253,slow=37
BRVK Borovoye 62.93 327 *eP* **P 07 12 38.6 +2.4**
comp=Z,12nm,1.0s
RPZ Rata Peaks 66.25 144 P **P 07 12 57.1 -1.0**
RPZ Rata Peaks 66.25 144 P **P 07 12 57.1 -1.0**
comp=Z,9.4nm,1.1s,baz=59,slow=5.9,SNR=3.3
AKTO Aktyubinsk 69.15 321 P **P 07 13 15.8 -0.5**
AKTO Aktyubinsk 69.15 321 P **P 07 13 15.8 -0.5**
comp=Z,0.5nm,0.3s,baz=118,slow=15,SNR=2.9
KBZ Khabaz 78.48 313 LR LR 07 55 13.2
comp=Z,47nm,19.6s,baz=186,slow=40
ILAR Eielson Array 83.35 26 P **P 07 14 34.5 -2.0**
ILAR Eielson Array 83.35 26 P **P 07 14 34.5 -2.0**
comp=Z,0.4nm,0.6s,baz=246,slow=4.9,SNR=14
ILAR LR LR 07 49 35.6
comp=Z,57nm,19.5s,baz=289,slow=34
BR131 Keskin Array S 85.56 309 *eP* **P 07 14 51.6 +3.1**
comp=Z,2.2nm,0.7s
BRTR Keskin Array B 85.56 309 P **P 07 14 46.8 -1.7**
BRTR Keskin Array B 85.56 309 P **P 07 14 46.8 -1.7**
comp=Z,1.7nm,0.9s,baz=28,slow=1.7,SNR=5.0
BRTR LR LR 07 59 16.2
comp=Z,40nm,18.4s,baz=263,slow=40
ARCES ARCESS Array B 86.24 340 P **P 07 14 50.6 -0.5**
ARCES ARCESS Array B 86.24 340 P **P 07 14 50.6 -0.5**
comp=Z,1.9nm,0.8s,baz=80,slow=6.6,SNR=2.8
ARCES LR LR 07 59 54.1
comp=Z,47nm,19.7s,baz=300,slow=40
KMBO Kilima Mbogo 86.63 268 P **P 07 14 54.3 -0.1**
KMBO Kilima Mbogo 86.63 268 P **P 07 14 54.3 -0.1**
comp=Z,1.4nm,0.9s,baz=240,slow=22,SNR=3.6
VNDA Vanda 87.16 172 P **P 07 14 53.9 -1.5**
VNDA Vanda 87.16 172 P **P 07 14 53.9 -1.5**
comp=Z,2.3nm,0.9s,baz=311,slow=5.3,SNR=8.2
VNDA LR LR 07 53 32.4
comp=Z,132nm,21.3s,baz=294,slow=35
AKASG Malin Array Be 87.38 321 P **P 07 14 55.4 -1.6**
AKASG Malin Array Be 87.38 321 P **P 07 14 55.4 -1.6**
comp=Z,1.3nm,0.5s,baz=67,slow=5.6,SNR=4.7
AKASG LR LR 07 56 46.8
comp=Z,44nm,20.9s,baz=245,slow=38
FINES FINESS Array B 87.44 332 P **P 07 14 56.4 -0.6**
FINES FINESS Array B 87.44 332 P **P 07 14 56.4 -0.6**
comp=Z,0.8nm,0.5s,baz=66,slow=4.6,SNR=6.8
PPT Papeete 89.00 108 LR LR 07 54 42.5
comp=Z,223nm,18.7s,baz=329,slow=35
CRVS Cervenica-Dubn 92.66 320 *eP* P 07 15 32.0 +10
NB2 NORSAR Subarra 94.43 333 P **P 07 15 27.5 -2.1**
comp=Z,0.9nm,0.7s,baz=67,slow=4.8
NOA NORSAR Array B 94.43 333 P **P 07 15 27.6 -2.1**
NOA NORSAR Array B 94.43 333 P **P 07 15 27.6 -2.1**
comp=Z,1.1nm,0.8s,baz=67,slow=4.7,SNR=5.1
NOA LR LR 08 00 56.7
comp=Z,83nm,19.0s,baz=85,slow=37
GERES GERESS Array B 97.58 321 LR LR 08 08 19.1
comp=Z,95nm,18.5s,baz=276,slow=41
YKA Yellowknife Ar 97.63 23 P **P 07 15 43.2 -0.9**
YKA Yellowknife Ar 97.63 23 P **P 07 15 43.2 -0.9**
comp=Z,0.2nm,0.7s,baz=300,slow=4.2,SNR=4.2
TORD Torodi Ar. Bea 119.00 289 PKP **PKPdf 07 20 56.3 -3.1**
TORD pPKP **pPKPdf 07 21 12.1 +0.1**
TORD Torodi Ar. Bea 119.00 289 PKP **PKPdf 07 20 56.3 -3.1**
comp=Z,0.3nm,0.8s,baz=74,slow=2.2,SNR=2.6
TORD pPKP **pPKPdf 07 21 12.1 +0.1**
comp=Z,0.4nm,0.6s,baz=14,slow=1.1,SNR=3.8
TXAR Lajitas Array 121.78 49 pPKP pPKPdf 07 21 17.5 +0.4
comp=Z,0.7nm,0.9s,baz=209,slow=2.3,SNR=4.7
PLCA Paso Flores 144.19 161 PKP PKPbc 07 21 44.8 +0.6
PLCA pPKP pPKPdf 07 21 59.6 +1.0
PLCA Paso Flores 144.19 161 PKP PKPbc 07 21 44.8 +0.6
comp=Z,1.6nm,0.8s,baz=214,slow=2.1,SNR=7.1
PLCA pPKP pPKPdf 07 21 59.6 +1.0
comp=Z,3.0nm,0.9s,baz=201,slow=8.2,SNR=3.6
JTS JuntasAbangare 146.62 59 *e*PKPbc **PKPbc 07 21 52.6 +0.2**
TRQA Tornquist 148.78 171 *e*PKPdf **PKPdf 07 21 54.1 +0.3**
LPAZ La Paz 165.26 129 PKPab **PKPab 07 23 10.2 -3.2**
LPAZ La Paz 165.26 129 PKPab **PKPab 07 23 10.2 -3.2**
comp=Z,1.2nm,0.8s,baz=149,slow=5.8,SNR=3.8

*CSEM **14** 07:03:44.6, 42.28N×13.50E, h10km, After ROM*
ROM 14 07:03:44.6±0.1, 42.28N×13.50E, h10km, MI2.4/3, Error ellipse: s-maj=0.8km s-min=0.5km az=58.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.06**	**106**	Pg	Pg	07 03 47.1	+0.2
FAGN				Sg	Sg	07 03 48.6	+0.1
FAGN	**Fagnano**	**0.06**	**106**	Pg	Pg	07 03 47.1	+0.2
FAGN				Sg	Sg	07 03 48.6	+0.1
AQU	**L'Aquila**	**0.10**	**314**	Pg	Pg	07 03 48.0	+0.7
AQU				Sg	Sg	07 03 50.1	+0.8
AQU	**L'Aquila**	**0.10**	**314**	Pg	Pg	07 03 48.0	+0.7
AQU				Sg	Sg	07 03 50.1	+0.8
CAMP	**Campotosto**	**0.26**	**345**	Pg	Pg	07 03 50.7	+0.6
CAMP				Sg	Sb	07 03 55.1	-1.2
CAMP	**Campotosto**	**0.26**	**345**	Pg	Pg	07 03 50.7	+0.6
CAMP				Sg	Sb	07 03 55.1	-1.2
PTQR	**Pietraquaria**	**0.27**	**196**	Pg	Pg	07 03 50.9	+0.6
PTQR				Sg	Sb	07 03 55.3	-1.2
PTQR	**Pietraquaria**	**0.27**	**196**	Pg	Pg	07 03 50.9	+0.6
PTQR				Sg	Sb	07 03 55.3	-1.2
VCEL	**Villa Celiera**	**0.28**	**66**	Pg	Pb	07 03 51.1	-0.7
VCEL				Sg	Sb	07 03 55.7	-1.0
VCEL	**Villa Celiera**	**0.28**	**66**	Pg	Pb	07 03 51.1	-0.7
VCEL				Sg	Sb	07 03 55.7	-1.0
FIAM	**Fiamignano**	**0.28**	**267**	Pg	Pg	07 03 51.2	+0.7
FIAM				Sg	Sb	07 03 55.8	-1.1
FIAM	**Fiamignano**	**0.28**	**267**	Pg	Pg	07 03 51.2	+0.7
FIAM				Sg	Sb	07 03 55.8	-1.1
TERO	**Teramo**	**0.35**	**13**	Pg	Pg	07 03 52.0	+0.4
TERO				Sg	Sb	07 03 57.6	-1.0
TERO	**Teramo**	**0.35**	**13**	Pg	Pg	07 03 52.0	+0.4
TERO				Sg	Sb	07 03 57.6	-1.0
INTR	**Introdacqua**	**0.41**	**132**	Pg	Pg	07 03 53.2	+0.5
INTR				Sg	Sb	07 03 59.4	-0.9
INTR	**Introdacqua**	**0.41**	**132**	Pg	Pg	07 03 53.2	+0.5
INTR				Sg	Sb	07 03 59.4	-0.9
VVLD	**Villa Vallelon**	**0.42**	**168**	Pg	Pg	07 03 53.2	+0.2
VVLD				Sg	Sg	07 03 59.7	+1.0
VVLD	**Villa Vallelon**	**0.42**	**168**	Pg	Pg	07 03 53.2	+0.2
VVLD				Sg	Sg	07 03 59.7	+1.0
LNSS	**Leonessa**	**0.47**	**313**	Pg	Pg	07 03 54.4	+0.5
LNSS	**Leonessa**	**0.47**	**313**	Pg	Pg	07 03 54.4	+0.5
GUAR	**Guarcino**	**0.51**	**196**	Pg	Pg	07 03 54.7	+0.1
GUAR	**Guarcino**	**0.51**	**196**	Pg	Pg	07 03 54.7	+0.1
CERT	**Cerreto**	**0.51**	**229**	Pg	Pg	07 03 54.8	+0.1
CERT	**Cerreto**	**0.51**	**229**	Pg	Pg	07 03 54.8	+0.1
LPEL	**Lama dei Pelig**	**0.56**	**115**	Pg	Pg	07 03 55.6	0.0
LPEL				Sg	Sb	07 04 04.2	-0.5
LPEL	**Lama dei Pelig**	**0.56**	**115**	Pg	Pg	07 03 55.6	0.0
LPEL				Sg	Sb	07 04 04.2	-0.5
POFI	**Posta Fibreno**	**0.59**	**164**	Pg	Pg	07 03 55.9	-0.2
POFI	170nm,0.4s			Sg	Sb	07 04 05.0	-0.6
POFI	**Posta Fibreno**	**0.59**	**164**	Pg	Pg	07 03 55.9	-0.2
POFI	170nm,0.4s			Sg	Sb	07 04 05.0	-0.6
NRCA	**Norcia**	**0.62**	**333**	Pg	Pg	07 03 56.9	+0.1
NRCA	151nm,0.3s			Sg	Sg	07 04 05.1	+0.1
NRCA	**Norcia**	**0.62**	**333**	Pg	Pg	07 03 56.9	+0.1
NRCA	151nm,0.3s			Sg	Sg	07 04 05.1	+0.1
SDI	**San Donato**	**0.62**	**158**	Pg	Pg	07 03 57.1	+0.4
SDI				Sg	Sb	07 04 06.3	-0.1
SDI	**San Donato**	**0.62**	**158**	Pg	Pg	07 03 57.1	+0.4
SDI				Sg	Sb	07 04 06.3	-0.1
GIUL	**Giuliano Di Ro**	**0.75**	**194**	Pg	Pg	07 03 59.1	0.0
	192nm,0.8s						
GIUL	**Giuliano Di Ro**	**0.75**	**194**	Pg	Pg	07 03 59.1	0.0
	192nm,0.8s						
MIDA	**Miranda**	**0.85**	**139**	Pg	Pg	07 04 00.6	-0.6
MIDA				Sg	Sg	07 04 12.3	-0.1
MIDA	**Miranda**	**0.85**	**139**	Pg	Pg	07 04 00.6	-0.6
MIDA				Sg	Sg	07 04 12.3	-0.1

*CSEM **14** 07:04:22.8, 42.27N×13.49E, h14km, MD2.7/11, After ROM*
ROM 14 07:04:22.8±0.1, 42.27N×13.49E, h14km±1km, Md2.7/11, MI2.8/4, Error ellipse: s-maj=0.8km s-min=0.7km az=58.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.07**	**89**	Pg	Pg	07 04 25.5	-0.2
FAGN				Sg	Sg	07 04 28.8	+1.1
FAGN	**Fagnano**	**0.07**	**89**	Pg	Pg	07 04 25.5	-0.2
FAGN				Sg	Sg	07 04 28.8	+1.1
AQU	**L'Aquila**	**0.11**	**324**	Pg	Pg	07 04 26.4	+0.2
AQU				Sg	Sg	07 04 28.5	0.0
AQU	**L'Aquila**	**0.11**	**324**	Pg	Pg	07 04 26.4	+0.2
AQU				Sg	Sg	07 04 28.5	0.0
PTQR	**Pietraquaria**	**0.25**	**195**	Pg	Pg	07 04 28.6	+0.3
PTQR				Sg	Sg	07 04 32.7	+0.6
PTQR	**Pietraquaria**	**0.25**	**195**	Pg	Pg	07 04 28.6	+0.3
PTQR				Sg	Sg	07 04 32.7	+0.6
CAMP	**Campotosto**	**0.28**	**348**	Pg	Pg	07 04 29.1	+0.2
CAMP				Sg	Sg	07 04 33.2	+0.2
CAMP	**Campotosto**	**0.28**	**348**	Pg	Pg	07 04 29.1	+0.2
CAMP				Sg	Sg	07 04 33.2	+0.2
FIAM	**Fiamignano**	**0.28**	**271**	Pg	Pg	07 04 29.2	+0.4
FIAM				Sg	Sb	07 04 33.7	-0.7
FIAM	**Fiamignano**	**0.28**	**271**	Pg	Pg	07 04 29.2	+0.4
FIAM				Sg	Sb	07 04 33.7	-0.7
VCEL	**Villa Celiera**	**0.29**	**63**	Pg	Pg	07 04 29.3	+0.2
VCEL				Sg	Sb	07 04 34.1	-0.7
VCEL	**Villa Celiera**	**0.29**	**63**	Pg	Pg	07 04 29.3	+0.2
VCEL				Sg	Sb	07 04 34.1	-0.7
TERO	**Teramo**	**0.37**	**13**	Pg	Pg	07 04 30.5	+0.1
TERO				Sg	Sg	07 04 35.0	+0.3
TERO	**Teramo**	**0.37**	**13**	Pg	Pg	07 04 30.5	+0.1
TERO				Sg	Sg	07 04 35.8	+0.3
INTR	**Introdacqua**	**0.40**	**129**	Pg	Pg	07 04 31.1	+0.1
INTR				Sg	Sg	07 04 37.1	+0.6
INTR	**Introdacqua**	**0.40**	**129**	Pg	Pg	07 04 31.1	+0.1
INTR				Sg	Sg	07 04 37.1	+0.6
VVLD	**Villa Vallelon**	**0.41**	**166**	Pg	Pg	07 04 31.1	0.0
VVLD				Sg	Sg	07 04 37.2	+0.5
VVLD	**Villa Vallelon**	**0.41**	**166**	Pg	Pg	07 04 31.1	0.0
VVLD				Sg	Sg	07 04 37.2	+0.5
LNSS	**Leonessa**	**0.47**	**316**	Pg	Pg	07 04 32.5	+0.1
LNSS				Sg	Sb	07 04 40.3	+0.2
LNSS	**Leonessa**	**0.47**	**316**	Pg	Pg	07 04 32.5	+0.1
LNSS				Sg	Sb	07 04 40.3	+0.2

GUAR	**Guarcino**	**0.49 196**	Pg	Pg	07 04 32.5	-0.1		
GUAR	**Guarcino**	**0.49 196**	Pg	Pg	07 04 32.5	-0.1		
CERT	**Cerreto**	**0.49 230**	Pg	Pg	07 04 32.7	+0.1		
CERT			Sg	Sg	07 04 39.9	+0.6		
CERT	**Cerreto**	**0.49 230**	Pg	Pg	07 04 32.7	+0.1		
CERT			Sg	Sg	07 04 39.9	+0.6		
LPEL	**Lama dei Pelig**	**0.56 113**	Pg	Pg	07 04 33.7	-0.2		
LPEL			Sg	Sb	07 04 42.1	-0.3		
LPEL	**Lama dei Pelig**	**0.56 113**	Pg	Pg	07 04 33.7	-0.2		
LPEL			Sg	Sb	07 04 42.1	-0.3		
POFI	**Posta Fibreno**	**0.57 163**	Pg	Pg	07 04 34.3	+0.1		
POFI	**Posta Fibreno**	**0.57 163**	Pg	Pg	07 04 34.3	+0.1		
SDI	**San Donato**	**0.60 157**	Pg	Pg	07 04 34.8	+0.1		
SDI			Sg	Sb	07 04 43.8	+0.1		
SDI	**San Donato**	**0.60 157**	Pg	Pg	07 04 34.8	+0.1		
SDI			Sg	Sb	07 04 43.8	+0.1		
MNS	**Montasola**	**0.61 282**	Pg	Pg	07 04 34.8	-0.1		
MNS	**Montasola**	**0.61 282**	Pg	Pg	07 04 34.8	-0.1		
NRCA	**Norcia**	**0.63 334**	Pg	Pg	07 04 35.1	-0.2		
NRCA	**Norcia**	**0.63 334**	Pg	Pg	07 04 35.1	-0.2		
GIUL	**Giuliano Di Ro**	**0.73 194**	Pg	Pg	07 04 37.0	0.0		
GIUL	**Giuliano Di Ro**	**0.73 194**	Pg	Pg	07 04 37.0	0.0		
FDMO	**Fiordimonte**	**0.83 339**	Pg	Pg	07 04 38.6	-0.3		
FDMO	**Fiordimonte**	**0.83 339**	Pg	Pg	07 04 38.6	-0.3		
CESI	**CESI - Serrava**	**0.86 330**	Pg	Pg	07 04 39.3	-0.2		
CESI			Sg	Sg	07 04 50.9	0.0		
CESI	**CESI - Serrava**	**0.86 330**	Pg	Pg	07 04 39.3	-0.2		
CESI			Sg	Sg	07 04 50.9	0.0		

IDC 14 07:11:05.8±1.0, 17°59S×173°71W, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.8/22, mbtmp3.8/7, ML1.7/1, MS3.5/2, Ms1 3.5/2, ms1mx2.9/30, Error ellipse: s-maj=51.8km s-min=20.1km az=135.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.11**	**27**	Pn	Pn	07 12 09.8	-0.2
	2.8nm,0.3s,baz=260,slow=22,SNR=4.2						
AFI				Sn	Sn	07 12 52.4	-6.5
	16nm,0.3s,baz=98,slow=22,SNR=6.5						
RAR	**Rarotonga**	**13.63**	**108**	LR	LR	07 18 03.3	
	comp=Z,238nm,20.1s,baz=90,slow=31						
DZM	**Mont Dzumac**	**19.20**	**253**	*e*LR	LR	07 19 50.2	
	175nm,24.3s						
URZ	**Urewera**	**22.11**	**200**	P	P	07 16 02.6	-0.1
	3.6nm,0.4s,baz=0.0,slow=10,SNR=7.5						
PPT2	**Papeete2**	**23.00**	**94**	*e*LR	LR	07 21 26.0	
	142nm,26.5s						
PPT	**Papeete**	**23.00**	**94**	LR	LR	07 22 25.9	
	comp=Z,88nm,20.9s,baz=208,slow=30						
TBI	**Tubuai**	**23.41**	**108**	*e*LR	LR	07 21 42.0	
	167nm,28.2s,baz=285						
ASAR	**Alice Springs**	**49.19**	**254**	P	P	07 19 54.9	-1.2
	2.7nm,0.6s,baz=89,slow=8.4,SNR=42						
FITZ	**Fitzroy Crossi**	**57.50**	**259**	P	P	07 20 58.7	+1.5
	0.4nm,0.4s,baz=109,slow=12,SNR=2.7						
NVAR	**Mina Array Bea**	**76.15**	**42**	P	P	07 22 57.2	+1.1
	0.3nm,0.7s,baz=230,slow=6.9,SNR=3.0						
PDAR	**Pinedale Array**	**84.09**	**42**	P	P	07 23 38.3	-0.6
	0.3nm,0.6s,baz=207,slow=3.7,SNR=3.7						
ILAR	**Eielson Array**	**84.64**	**11**	P	P	07 23 40.0	-0.9
	0.1nm,0.5s,baz=218,slow=5.7,SNR=4.5						
MKAR	**Makanchi Array**	**112.14**	**314**	PKiKP	PKiKP	07 29 42.8	-0.6
	0.3nm,0.6s,baz=90,slow=1.4,SNR=3.3						
BVAR	**Borovoye Array**	**119.42**	**321**	PKP	PKPdf	07 29 56.8	-0.3
	0.5nm,0.4s,baz=70,slow=4.7,SNR=4.1						

*ISCJB **14** 07:36:44.3±0.3, 42°.49N±0°.02×13°.37E±0°.03, h13km±3km, Error ellipse: s-maj=3.8km s-min=2.4km az=146.3*
*CSEM **14** 07:36:44.6±0.1, 42°.49N×13°.36E, h10km, ML3.5/10, Error ellipse: s-maj=2.5km s-min=1.6km az=63.0*
*ROM **14** 07:36:44.5±0.1, 42°.50N×13°.40E, h10km, Ml2.9/24, Error ellipse: s-maj=1.1km s-min=0.7km az=71.0*

ISC 14 07:36:45.2±0.9, 42°.49N±0°.02×13°.38E±0°.02, h8km±5km, n72, σ0s76/104, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.05**	**29**	Pg	**Pg**	**07 36 46.8**	**-0.3**
CAMP				Sg	**Sg**	**07 36 48.0**	**-0.4**
	37μm,1.3s						
CAMP	**Campotosto**	**0.05**	**29**	Pg	**Pg**	**07 36 46.8**	**-0.3**
CAMP				Sg	**Sg**	**07 36 48.0**	**-0.4**
	37μm,1.3s						
AQU	**L'Aquila**	**0.14**	**173**	Pg	**Pg**	**07 36 48.4**	**+0.1**
AQU				Sg	**Sg**	**07 36 51.1**	**+0.7**
AQU	**L'Aquila**	**0.14**	**173**	Pg	**Pg**	**07 36 48.4**	**+0.1**
AQU				Sg	**Sg**	**07 36 51.1**	**+0.7**
TERO	**Teramo**	**0.21**	**52**	Pg	**Pg**	**07 36 49.1**	**-0.4**
TERO				Sg	**Sg**	**07 36 52.2**	**-0.3**
	3μm,0.4s						
TERO	**Teramo**	**0.21**	**52**	Pg	**Pg**	**07 36 49.1**	**-0.4**
TERO				Sg	**Sg**	**07 36 52.2**	**-0.3**
	3μm,0.4s						
LNSS	**Leonessa**	**0.27**	**294**	Pg	**Pg**	**07 36 50.7**	**0.0**
LNSS				Sg	**Sg**	**07 36 55.2**	**+0.8**
LNSS	**Leonessa**	**0.27**	**294**	Pg	**Pg**	**07 36 50.7**	**0.0**
LNSS				Sg	**Sg**	**07 36 55.2**	**+0.8**
FAGN	**Fagnano**	**0.28**	**146**	Pg	**Pg**	**07 36 50.6**	**-0.1**
FAGN				Sg	**Sg**	**07 36 54.8**	**+0.4**
FAGN	**Fagnano**	**0.28**	**146**	Pg	**Pg**	**07 36 50.6**	**-0.1**
FAGN				Sg	**Sg**	**07 36 54.8**	**+0.4**
FIAM	**Fiamignano**	**0.30**	**221**	Pg	**Pg**	**07 36 51.1**	**-0.1**
FIAM	**Fiamignano**	**0.30**	**221**	Pg	**Pg**	**07 36 51.1**	**-0.1**
VCEL	**Villa Celiera**	**0.36**	**106**	Pg	**Pg**	**07 36 51.8**	**-0.5**
VCEL				Sg	**Sg**	**07 36 58.0**	**+1.0**
	2μm,0.4s						
VCEL	**Villa Celiera**	**0.36**	**106**	Pg	**Pg**	**07 36 51.8**	**-0.5**
VCEL				Sg	**Sg**	**07 36 58.0**	**+1.0**
	2μm,0.4s						
NRCA	**Norcia**	**0.39**	**330**	Pg	**Pg**	**07 36 52.6**	**-0.3**
NRCA				Sg	**Sg**	**07 36 58.6**	**+0.5**
	3μm,0.1s						
NRCA	**Norcia**	**0.39**	**330**	Pg	**Pg**	**07 36 52.6**	**-0.3**
NRCA				Sg	**Sg**	**07 36 58.6**	**+0.5**
	3μm,0.1s						
PTQR	**Pietraquaria**	**0.47**	**178**	Pg	**Pg**	**07 36 53.9**	**-0.5**
PTQR				Sg	**Sg**	**07 37 01.2**	**+0.6**
PTQR	**Pietraquaria**	**0.47**	**178**	Pg	**Pg**	**07 36 53.9**	**-0.5**
PTQR				Sg	**Sg**	**07 37 01.2**	**+0.6**
OFFI	**Offida**	**0.50**	**27**	Pg	**Pg**	**07 36 55.3**	**+0.4**
	6μm,0.6s						
OFFI	**Offida**	**0.50**	**27**	Pg	**Pg**	**07 36 55.3**	**+0.4**
	6μm,0.6s						
TRTR	**Tortoreto Alta**	**0.51**	**51**	Pg	**Pg**	**07 36 55.7**	**+0.7**
	2μm,0.4s						
TRTR	**Tortoreto Alta**	**0.51**	**51**	Pg	**Pg**	**07 36 55.7**	**+0.7**
	2μm,0.4s						
MNS	**Montasola**	**0.53**	**258**	Pg	**Pg**	**07 36 54.9**	**-0.5**
MNS				Sg	**Sg**	**07 37 03.2**	**+0.8**
	573nm,0.5s						
MNS	**Montasola**	**0.53**	**258**	Pg	**Pg**	**07 36 54.9**	**-0.5**
MNS				Sg	**Sg**	**07 37 03.2**	**+0.8**
	573nm,0.5s						
FDMO	**Fiordimonte**	**0.58**	**339**	Pg	**Pg**	**07 36 55.9**	**-0.6**
FDMO				Sg	**Sg**	**07 37 04.6**	**+0.4**
	552nm,0.2s						
FDMO	**Fiordimonte**	**0.58**	**339**	Pg	**Pg**	**07 36 55.9**	**-0.6**
FDMO				Sg	**Sg**	**07 37 04.6**	**+0.4**
	552nm,0.2s						
CESI	**CESI - Serrava**	**0.62**	**326**	Pg	**Pg**	**07 36 56.6**	**-0.6**
CESI				Sg	**Sg**	**07 37 06.0**	**+0.7**
	188nm,0.3s						
CESI	**CESI - Serrava**	**0.62**	**326**	Pg	**Pg**	**07 36 56.6**	**-0.6**
CESI				Sg	**Sg**	**07 37 06.0**	**+0.7**
	188nm,0.3s						
CERT	**Cerreto**	**0.62**	**208**	Pg	**Pg**	**07 36 56.4**	**-0.8**
	1μm,0.4s						
CERT	**Cerreto**	**0.62**	**208**	Pg	**Pg**	**07 36 56.4**	**-0.8**
	1μm,0.4s						
INTR	**Introdacqua**	**0.62**	**141**	Pg	**Pg**	**07 36 56.7**	**-0.5**
INTR				Sg	**Sg**	**07 37 05.5**	**+0.1**
	571nm,0.6s						
INTR	**Introdacqua**	**0.62**	**141**	Pg	**Pg**	**07 36 56.7**	**-0.5**
INTR				Sg	**Sg**	**07 37 05.5**	**+0.1**
	571nm,0.6s						
VVLD	**Villa Vallelon**	**0.65**	**164**	Pg	**Pg**	**07 36 57.2**	**-0.6**
	364nm,0.5s						
VVLD	**Villa Vallelon**	**0.65**	**164**	Pg	**Pg**	**07 36 57.2**	**-0.6**
	364nm,0.5s						
MTCE	**Montecelio**	**0.67**	**225**	Pg	**Pg**	**07 36 57.3**	**-0.8**
	439nm,1.2s						
MTCE	**Montecelio**	**0.67**	**225**	Pg	**Pg**	**07 36 57.3**	**-0.8**
	439nm,1.2s						
GUAR	**Guarcino**	**0.70**	**184**	Pg	**Pg**	**07 36 58.4**	**-0.3**
	236nm,0.4s						
GUAR	**Guarcino**	**0.70**	**184**	Pg	**Pg**	**07 36 58.4**	**-0.3**
	236nm,0.4s						
LPEL	**Lama dei Pelig**	**0.75**	**126**	Pg	**Pg**	**07 36 58.7**	**-0.9**
LPEL				Sg	**Sg**	**07 37 09.1**	**-0.2**
	276nm,0.5s						
LPEL	**Lama dei Pelig**	**0.75**	**126**	Pg	**Pg**	**07 36 58.7**	**-0.9**
LPEL				Sg	**Sg**	**07 37 09.1**	**-0.2**
	276nm,0.5s						
ASSB	**Assisi San Ben**	**0.76**	**316**	Pg	**Pg**	**07 36 59.1**	**-0.8**
ASSB				Sg	**Sg**	**07 37 10.9**	**+1.0**
	388nm,0.3s						
ASSB	**Assisi San Ben**	**0.76**	**316**	Pg	**Pg**	**07 36 59.1**	**-0.8**
ASSB				Sg	**Sg**	**07 37 10.9**	**+1.0**
	388nm,0.3s						
POFI	**Posta Fibreno**	**0.81**	**162**	Pg	**Pg**	**07 36 59.7**	**-1.2**
	170nm,0.8s						
POFI	**Posta Fibreno**	**0.81**	**162**	Pg	**Pg**	**07 36 59.7**	**-1.2**
	170nm,0.8s						
SNTG	**Esanatoglia**	**0.83**	**337**	Pg	**Pg**	**07 37 00.1**	**-1.0**
SNTG	**Esanatoglia**	**0.83**	**337**	Pg	**Pg**	**07 37 00.1**	**-1.0**
SDI	**San Donato**	**0.85**	**158**	Pg	**Pg**	**07 37 00.1**	**-1.4**
	86nm,0.2s						
SDI	**San Donato**	**0.85**	**158**	Pg	**Pg**	**07 37 00.1**	**-1.4**
	86nm,0.2s						
CING	**Cingoli**	**0.89**	**351**	Pg	**Pg**	**07 37 01.5**	**-0.9**
	432nm,0.3s						
CING	**Cingoli**	**0.89**	**351**	Pg	**Pg**	**07 37 01.5**	**-0.9**
	432nm,0.3s						
GIUL	**Giuliano Di Ro**	**0.94**	**186**	Pg	**Pg**	**07 37 02.8**	**-0.5**
	172nm,0.7s						
GIUL	**Giuliano Di Ro**	**0.94**	**186**	Pg	**Pg**	**07 37 02.8**	**-0.5**
	172nm,0.7s						
MURB	**Monte Urbino**	**0.99**	**321**	Pg	**Pg**	**07 37 03.5**	**-0.8**
	584nm,0.3s						
MURB	**Monte Urbino**	**0.99**	**321**	Pg	**Pg**	**07 37 03.5**	**-0.8**
	584nm,0.3s						
CERA	**Filignano**	**1.01**	**152**	Pg	**Pg**	**07 37 03.1**	**-1.6**
CERA	**Filignano**	**1.01**	**152**	Pg	**Pg**	**07 37 03.1**	**-1.6**
MGAB	**Montegabbione**	**1.02**	**295**	Pg	**Pg**	**07 37 04.4**	**-0.5**
	203nm,0.5s						
MGAB	**Montegabbione**	**1.02**	**295**	Pg	**Pg**	**07 37 04.4**	**-0.5**
	203nm,0.5s						
ARVD	**Arcevia**	**1.05**	**342**	Pg	**Pg**	**07 37 04.2**	**-1.3**
	194nm,0.8s						
ARVD	**Arcevia**	**1.05**	**342**	Pg	**Pg**	**07 37 04.2**	**-1.3**
	194nm,0.8s						
AOI	**Ancona**	**1.07**	**9**	Pg	**Pg**	**07 37 05.1**	**-0.7**
AOI	**Ancona**	**1.07**	**9**	Pg	**Pg**	**07 37 05.1**	**-0.7**
MIDA	**Miranda**	**1.07**	**142**	Pg	**Pg**	**07 37 04.4**	**-1.4**
	107nm,0.8s						
MIDA	**Miranda**	**1.07**	**142**	Pg	**Pg**	**07 37 04.4**	**-1.4**
	107nm,0.8s						
BADI	**Badiali**	**1.31**	**321**	Pg	**Pn**	**07 37 09.5**	**-0.4**
	121nm,0.6s						
BADI	**Badiali**	**1.31**	**321**	Pg	**Pn**	**07 37 09.5**	**-0.4**
	121nm,0.6s						
CAFI	**Castiglion Fio**	**1.33**	**309**	Pg	**Pn**	**07 37 09.7**	**-0.5**
	64nm,0.5s						
CAFI	**Castiglion Fio**	**1.33**	**309**	Pg	**Pn**	**07 37 09.7**	**-0.5**
	64nm,0.5s						
NVLJ	**Novalja**	**2.34**	**27**	*e*Pn	**Pn**	**07 37 23.4**	**-0.5**
NVLJ				Sn	**Sn**	**07 37 52.6**	**-0.2**
NVLJ	**Novalja**	**2.34**	**27**	*e*Pn	**Pn**	**07 37 23.4**	**-0.5**
NVLJ				Sn	**Sn**	**07 37 52.6**	**-0.2**
STON	**Ston**	**3.21**	**82**	*i* Pn	**Pn**	**07 37 37.4**	**+1.4**
STON				Sn	**Sn**	**07 38 15.2**	**+0.8**
STON	**Ston**	**3.21**	**82**	*i* Pn	**Pn**	**07 37 37.3**	**+1.4**
STON				Sn	**Sn**	**07 38 15.1**	**+0.8**

*ISCJB **14** 07:47:04.2±1.1, 2°.5N±0°.2×126°.3E±0°.3, h10km, mb3.8/5, Error ellipse: s-maj=51.1km s-min=12.6km az=154.0*
*IDC **14** 07:47:04.9±1.2, 2°.42N×125°.81E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/23, mbtmp3.8/6, Error ellipse: s-maj=110.7km s-min=18.0km az=70.0*

ISC 14 07:47:06.2±1.2, 2°.5N±0°.2×126°.2E±0°.4, h10km, n11, σ0s85/12, mb3.9/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.50**	**181**	P	**P**	**07 51 43.7**	**-0.9**
	1.0nm,0.7s,baz=14,slow=8.3,SNR=4.3						
ASAR	**Alice Springs**	**27.10**	**164**	P	**P**	**07 52 49.5**	**+0.1**
	0.6nm,0.5s,baz=342,slow=8.0,SNR=12						
STKA	**Stephens Creek**	**37.21**	**158**	P	**P**	**07 54 18.5**	**+0.6**
	2.1nm,0.8s,baz=0.0,slow=6.1,SNR=3.7						
GUN	**Gumba**	**46.00**	**307**	*e*P	**P**	**07 55 30.8**	**+0.4**
	6.0nm,0.6s						
DMN	**Daman**	**46.49**	**306**	*e*P	**P**	**07 55 36.2**	**+2.0**
	6.4nm,0.5s						
KOLN	**Koldanda**	**47.77**	**306**	*e*P	**P**	**07 55 44.4**	**+0.3**
	4.7nm,0.5s						
DANN	**Dangsing**	**47.88**	**307**	*e*P	**P**	**07 55 45.1**	**0.0**
	8.0nm,0.6s						
SONM	**Songino Array**	**48.27**	**342**	P	**P**	**07 55 47.4**	**-0.1**
	0.3nm,0.4s,baz=168,slow=7.4,SNR=3.0						
PYUN	**Piuthan**	**48.40**	**306**	*e*P	**P**	**07 55 49.4**	**+0.4**
	6.6nm,0.6s						
MKAR	**Makanchi Array**	**58.23**	**326**	P	**P**	**07 57 00.5**	**-0.4**
	0.9nm,0.5s,baz=121,slow=8.2,SNR=14						
MKAR				PcP	**PcP**	**07 57 52.5**	**+0.3**
	0.5nm,0.6s,baz=116,slow=4.1,SNR=5.5						
AKTO	**Aktyubinsk**	**74.26**	**322**	P	**P**	**07 58 42.8**	**-0.8**
	0.9nm,0.8s,baz=76,slow=4.2,SNR=3.1						

*NIED **14** 07:55:00, 30°.70N×142°.70E, h8km, Mw3.9 Best double couple: M0 8.85000×10^14 NP1:φ=213.00000°, δ64.00000°, λ=-62.00000°. NP2:φ=342.00000°, δ37.00000°, λ=-134.00000°.*
*IDC **14** 07:55:39.6±0.7, 30°.63N×142°.73E, h0km, mb3.9/18, mb1 4.1/23, mb1mx4.0/32, mbtmp4.0/23, ML3.8/3, MS2.9/4, Ms1 3.0/4, ms1mx2.6/33, Error ellipse: s-maj=18.6km s-min=15.7km az=69.0*
*ISCJB **14** 07:55:41.9±0.4, 30°.76N±0°.04×142°.56E±0°.08, h24km, mb4.1/24, MS3.1/1, Error ellipse: s-maj=10.9km s-min=4.3km az=155.0*
*JMA **14** 07:55:41.1±0.3, 30°.67N×142°.72E, h49km, M4.6*
*NEIC **14** 07:55:44.9±0.3, 30°.61N×142°.66E, h35km, mb4.6/6, MW3.9(NIED), Error ellipse: s-maj=10.4km s-min=6.0km az=77.0*

ISC 14 07:55:43.4±0.5, 30°.68N±0°.06×142°.63E±0°.09, h24km, n67, σ1s57/78, mb4.0/24, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.41**	**316**	P	**Pn**	**07 56 34.6**	**-0.5**
JHJ2				S	**Sn**	**07 57 13.1**	**-1.6**
JHJ	**Hachijo jima 2**	**3.43**	**316**	Pn	**Pn**	**07 56 33.6**	**-1.8**
	14nm,0.3s,baz=75,slow=20,SNR=8.8						
JHJ				Sn	**Sn**	**07 57 11.0**	**-4.3**
	60nm,0.3s,baz=73,slow=19,SNR=8.0						
JHJ				LR	LR	07 57 54.4	
	comp=Z,151nm,19.1s,baz=108,slow=38						
CBIJ	**Chichi jima**	**3.59**	**186**	Pn	**Pn**	**07 56 34.6**	**-3.0**
CBIJ				Sn	Sn	07 57 13.6	-5.6
CBIJ	**Chichi jima**	**3.59**	**186**	P	**Pn**	**07 56 35.6**	**-2.0**
CBIJ	**Chichi jima**	**3.59**	**186**	Pn	**Pn**	**07 56 34.6**	**-3.0**
	baz=294,slow=18						
CBIJ				Sn	Sn	07 57 13.6	-5.6
	baz=286,slow=20						
BSO1	**Boso 1**	**4.20**	**341**	S	**Sn**	**07 57 31.0**	**-2.6**
BSO3	**Boso 3**	**4.49**	**337**	P	**Pn**	**07 56 48.1**	**-1.5**
BSO3				S	**Sn**	**07 57 42.0**	**+1.1**
BSO4	**Boso 4**	**4.71**	**336**	P	**Pn**	**07 56 53.1**	**+0.2**
BSO4				*e*S	**Sn**	**07 57 45.4**	**-1.4**
JOD2	**Odawara 2**	**5.46**	**328**	P	**Pn**	**07 57 02.4**	**-0.9**
JOD2				*e*S	**Sn**	**07 58 01.8**	**-3.5**
JHO	**Hitachi**	**6.16**	**344**	P	**Pn**	**07 57 10.4**	**-2.5**
JHO				*e*S	**Sn**	**07 58 16.9**	**-5.8**
JRY	**Ryogami san**	**6.17**	**331**	P	**Pn**	**07 57 12.8**	**-0.3**
JRY				S	**Sn**	**07 58 21.1**	**-1.8**
JAG	**Ashikaga**	**6.32**	**336**	P	**Pn**	**07 57 14.4**	**-0.7**
JAG				S	**Sn**	**07 58 23.5**	**-2.9**
MJAR	**Matsushiro Arr**	**6.91**	**329**	Pn	**Pn**	**07 57 22.8**	**-0.5**
MJAR				Sn	**Sn**	**07 58 38.8**	**-2.4**
MJAR	**Matsushiro Arr**	**6.91**	**329**	Pn	**Pn**	**07 57 22.8**	**-0.5**
	3.1nm,0.3s,baz=152,slow=12,SNR=28						
MJAR				Sn	**Sn**	**07 58 38.8**	**-2.4**
	2.6nm,0.3s,baz=143,slow=31,SNR=8.0						
MAJO	**Matsushiro**	**6.92**	**329**	*e*Pn	**Pn**	**07 57 24.4**	**+1.1**
	16nm,0.6s						
MAT	**Matsushiro**	**6.92**	**329**	P	**Pn**	**07 57 23.1**	**-0.2**
MAT				S	**Sn**	**07 58 36.6**	**-4.6**
JNU	**Nakatsue**	**10.28**	**287**	LR	LR	08 02 00.2	
	comp=Z,52nm,19.8s,baz=65,slow=37						
ASAJ	**Asahikawa**	**13.42**	**360**	Pn	**Pn**	**07 58 52.6**	**+0.3**
ASAJ				Sn	Sn	08 01 11.5	-9.0
ASAJ	**Asahikawa**	**13.42**	**360**	Pn	**Pn**	**07 58 52.6**	**+0.3**
	0.6nm,0.3s,baz=210,slow=20,SNR=3.9						
ASAJ				Sn	Sn	08 01 11.5	-9.0
	0.4nm,0.3s,baz=255,slow=20,SNR=2.6						
KSRS	**Korea Array**	**13.93**	**303**	Pn	**Pn**	**07 59 00.8**	**+1.6**
	baz=116,slow=11,SNR=3.8						
KSRS				LR	LR	08 03 49.7	
	comp=Z,36nm,21.1s,baz=115,slow=35						
KSAR	**Wonju Array Be**	**13.95**	**303**	Pn	**Pn**	**07 59 00.8**	**+1.2**
SONM	**Songino Array**	**32.50**	**312**	P	**P**	**08 02 14.2**	**+1.9**
SONM	**Songino Array**	**32.50**	**312**	P	**P**	**08 02 14.2**	**+1.9**
	2.7nm,0.7s,baz=109,slow=6.7,SNR=16						
CMAR	**Chiang Mai Arr**	**41.31**	**263**	LR	LR	08 21 05.9	
	comp=Z,28nm,20.6s,baz=195,slow=37						
COEN	**Coen**	**44.38**	**179**	*e*P	**P**	**08 03 52.3**	**+0.2**
	32nm,0.7s						
ZALV	**Zalesovo Beam**	**47.10**	**317**	P	**P**	**08 04 13.4**	**+0.2**
ZALV				PcP	**PcP**	**08 05 44.5**	**-0.4**
ZALV	**Zalesovo Beam**	**47.10**	**317**	P	**P**	**08 04 13.4**	**+0.2**
	0.7nm,0.5s,baz=116,slow=9.8,SNR=2.7						
ZALV				PcP	**PcP**	**08 05 44.5**	**-0.4**
	1.0nm,0.5s,baz=138,slow=3.6,SNR=4.8						
MK31	**Makanchi Array**	**48.56**	**307**	*e*P	**P**	**08 04 25.4**	**+0.7**
MKAR	**Makanchi Array**	**48.56**	**307**	P	**P**	**08 04 25.6**	**+0.8**
MKAR	**Makanchi Array**	**48.56**	**307**	P	**P**	**08 04 25.6**	**+0.8**
	0.9nm,0.6s,baz=89,slow=10,SNR=13						
KURK	**Kurchatov**	**50.81**	**313**	*e*P	**P**	**08 04 42.5**	**+0.7**
	5.9nm,0.9s						
KURBB	**Kurchatov Arra**	**50.87**	**312**	P	**P**	**08 04 42.7**	**+0.5**
	2.9nm,0.8s,baz=88,slow=7.2,SNR=15						
WRAB	**Tennant Creek**	**50.94**	**190**	*e*P	**P**	**08 04 42.3**	**-0.8**
	5.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**51.18**	**201**	P	**P**	**08 04 44.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**51.18**	**201**	P	**P**	**08 04 44.9**	**+0.1**
	3.1nm,0.9s,baz=354,slow=8.1,SNR=5.0						
ILAR	**Eielson Array**	**54.41**	**30**	P	**P**	**08 05 08.2**	**0.0**
ILAR	**Eielson Array**	**54.41**	**30**	P	**P**	**08 05 08.2**	**0.0**
	0.3nm,0.5s,baz=274,slow=7.0,SNR=4.5						
AS31	**Alice Springs**	**54.68**	**190**	*e*P	**P**	**08 05 10.1**	**-0.5**
ASAR	**Alice Springs**	**54.68**	**190**	P	**P**	**08 05 10.2**	**-0.4**
ASAR	**Alice Springs**	**54.68**	**190**	P	**P**	**08 05 10.2**	**-0.4**
	2.6nm,0.5s,baz=5.4,slow=6.2,SNR=86						
BVAR	**Borovoye Array**	**55.72**	**316**	P	**P**	**08 05 18.2**	**+0.4**
BVAR	**Borovoye Array**	**55.72**	**316**	P	**P**	**08 05 18.2**	**+0.4**
	0.8nm,0.5s,baz=98,slow=9.2,SNR=5.7						
KKAR	**Karatay Array**	**57.36**	**304**	*e*P	**P**	**08 05 30.4**	**+0.7**
	1.1nm,0.6s						
INK	**Inuvik**	**59.63**	**25**	P	**P**	**08 05 45.4**	**+0.3**
INK	**Inuvik**	**59.63**	**25**	P	**P**	**08 05 45.4**	**+0.3**
	0.5nm,0.4s,baz=263,slow=7.2,SNR=5.7						
FORT	**Forrest**	**62.67**	**194**	*e*P	**P**	**08 06 05.8**	**-0.2**
	12nm,0.7s						
ABKAR	**Akbulak array**	**62.91**	**313**	*e*P	**P**	**08 06 07.8**	**+0.2**
	0.6nm,0.3s						
AKTO	**Aktyubinsk**	**63.77**	**315**	P	**P**	**08 06 14.2**	**+0.9**
AKTO	**Aktyubinsk**	**63.77**	**315**	P	**P**	**08 06 14.2**	**+0.9**
	1.0nm,0.7s,baz=83,slow=8.1,SNR=3.3						
YKA	**Yellowknife Ar**	**68.83**	**29**	P	**P**	**08 06 44.5**	**-1.0**
YKA	**Yellowknife Ar**	**68.83**	**29**	P	**P**	**08 06 44.4**	**-1.0**
	0.5nm,0.7s,baz=295,slow=6.3,SNR=13						
FINES	**FINESS Array B**	**74.92**	**334**	P	**P**	**08 07 22.1**	**0.0**
FINES	**FINESS Array B**	**74.92**	**334**	P	**P**	**08 07 22.1**	**0.0**
	0.6nm,0.5s,baz=60,slow=3.7,SNR=4.7						
KBZ	**Khabaz**	**75.87**	**313**	P	**P**	**08 07 28.9**	**+1.1**
KBZ	**Khabaz**	**75.87**	**313**	P	**P**	**08 07 28.9**	**+1.1**
	1.9nm,0.8s,baz=260,slow=8.6,SNR=5.

	comp=Z,3.1nm,0.4s							
PKI	**Pulchoki**	**35.96**	**299**	*e*P		**P**	**08 31 11.8**	**+0.1**
PKIN	**Phulchoki**	**35.97**	**299**	*e*P		**P**	**08 31 11.8**	**+0.1**
KKN	**Kakani**	**36.13**	**299**	*e*P		**P**	**08 31 13.1**	**+0.1**
ULN	**Ulaanbaatar**	**36.19**	**344**	*e*P		**P**	**08 31 13.8**	**+0.6**
	comp=Z,2.1nm,0.8s							
DMN	**Daman**	**36.23**	**298**	*e*P		**P**	**08 31 14.3**	**+0.4**
SONM	**Songino Array**	**36.34**	**343**	P		**P**	**08 31 14.9**	**+0.5**
SONM	**Songino Array**	**36.34**	**343**	P		**P**	**08 31 14.9**	**+0.5**
	comp=Z,3.0nm,0.8s,baz=160,slow=9.5,SNR=19							
KOLN	**Koldanda**	**37.56**	**298**	*e*P		**P**	**08 31 25.3**	**+0.3**
	comp=Z,24nm,0.8s							
DANN	**Dangsing**	**37.57**	**299**	*e*P		**P**	**08 31 25.4**	**+0.2**
	comp=Z,51nm,0.8s							
PYUN	**Piuthan**	**38.16**	**298**	*e*P		**P**	**08 31 30.4**	**+0.3**
	comp=Z,85nm,0.8s							
ASAR	**Alice Springs**	**39.03**	**161**	P		**P**	**08 31 34.7**	**-2.3**
ASAR				pP		**pP**	**08 32 15.7**	**-3.5**
ASAR				ScP		**ScP**	**08 37 14.8**	**+2.3**
ASAR	**Alice Springs**	**39.03**	**161**	P		**P**	**08 31 34.7**	**-2.3**
	comp=Z,1.0nm,0.4s,baz=338,slow=7.0,SNR=40							
ASAR				pP		**pP**	**08 32 15.7**	**-3.5**
	comp=Z,1.1nm,0.8s,baz=331,slow=8.0,SNR=2.5							
ASAR				ScP		**ScP**	**08 37 14.8**	**+2.3**
	comp=Z,0.5nm,0.7s,baz=332,slow=2.1,SNR=4.9							
MK31	**Makanchi Array**	**46.35**	**324**	*e*P		**P**	**08 32 36.4**	**+0.8**
MKAR	**Makanchi Array**	**46.35**	**324**	P		**P**	**08 32 36.5**	**+0.8**
MKAR				PcP		**PcP**	**08 34 08.0**	**+0.7**
MKAR	**Makanchi Array**	**46.35**	**324**	P		**P**	**08 32 36.5**	**+0.8**
	comp=Z,2.0nm,0.6s,baz=122,slow=9.0,SNR=30							
MKAR				PcP		**PcP**	**08 34 08.0**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=134,slow=4.2,SNR=3.7							
STKA	**Stephens Creek**	**49.25**	**157**	P		**P**	**08 32 57.1**	**-0.8**
STKA	**Stephens Creek**	**49.25**	**157**	P		**P**	**08 32 57.1**	**-0.8**
	comp=Z,1.1nm,0.4s,baz=333,slow=11,SNR=4.1							
ZALV	**Zalesovo Beam**	**49.37**	**333**	P		**P**	**08 32 58.7**	**+0.2**
ZALV	**Zalesovo Beam**	**49.37**	**333**	P		**P**	**08 32 58.7**	**+0.2**
	comp=Z,1.8nm,0.4s,baz=125,slow=5.5,SNR=8.4							
AAK	**Ala-Archa**	**49.39**	**315**	*e*P		**P**	**08 33 01.4**	**+2.3**
	comp=Z,2.2nm,0.8s							
EKS2	**Erkin-Say**	**49.89**	**315**	*e*P		**P**	**08 33 04.1**	**+1.2**
	comp=Z,3.4nm,0.7s							
KURK	**Kurchatov**	**50.51**	**326**	*e*P		**P**	**08 33 07.9**	**+0.7**
	comp=Z,13nm,0.8s							
KBL	**Kabul**	**51.22**	**304**	*e*P		**P**	**08 33 13.9**	**+0.8**
	comp=Z,7.8nm,0.8s							
KKAR	**Karatay Array**	**52.30**	**314**	*e*P		**P**	**08 33 21.2**	**+0.6**
	comp=Z,5.9nm,0.7s							
BRVK	**Borovoye**	**56.16**	**326**	*e*P		**P**	**08 33 48.9**	**+0.5**
	comp=Z,14nm,1.1s							
ABKAR	**Akbulak array**	**61.05**	**319**	*e*P		**P**	**08 34 22.4**	**+0.3**
	comp=Z,9.2nm,0.8s							
KBZ	**Khabaz**	**72.20**	**312**	P		**P**	**08 35 31.8**	**-0.9**
KBZ	**Khabaz**	**72.20**	**312**	P		**P**	**08 35 31.8**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=177,slow=1.8,SNR=6.1							
MALT	**Malatya**	**75.95**	**306**	*e*P		**P**	**08 35 56.5**	**+1.7**
	comp=Z,2.1nm,0.5s							
JOF	**Joensuu**	**77.95**	**332**	*e*p		**P**	**08 36 04.1**	**-1.1**
	comp=Z,5.9nm,0.4s							
MCK	**McKinley**	**78.10**	**27**	*e*P		**P**	**08 36 06.6**	**+0.5**
	comp=Z,5.2nm,0.6s							
PMR	**Palmer**	**78.25**	**29**	*e*P		**P**	**08 36 07.1**	**+0.2**
	comp=Z,2.5nm,0.5s							
KEV	**Kevo**	**78.83**	**339**	*e*p		**P**	**08 36 09.5**	**-0.4**
	comp=Z,4.2nm,0.6s							
ILAR	**Eielson Array**	**78.86**	**26**	P		**P**	**08 36 09.9**	**-0.3**
ILAR	**Eielson Array**	**78.86**	**26**	P		**P**	**08 36 09.9**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=269,slow=3.8,SNR=9.9							
ARCES	**ARCESS Array B**	**79.38**	**339**	P		**P**	**08 36 13.2**	**+0.3**
ARCES	**ARCESS Array B**	**79.38**	**339**	P		**P**	**08 36 13.2**	**+0.3**
	comp=Z,5.6nm,0.7s,baz=80,slow=7.6,SNR=22							
BRTR	**Keskin Array B**	**79.47**	**308**	P		**P**	**08 36 14.4**	**+0.2**
BRTR	**Keskin Array B**	**79.47**	**308**	P		**P**	**08 36 14.4**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=101,slow=4.0,SNR=9.4							
KAF	**Kangasniemi**	**80.36**	**332**	*e*p		**P**	**08 36 17.4**	**-0.9**
	comp=Z,2.9nm,0.5s							
FINES	**FINESS Array B**	**80.59**	**331**	P		**P**	**08 36 19.6**	**0.0**
FINES	**FINESS Array B**	**80.59**	**331**	P		**P**	**08 36 19.6**	**0.0**
	comp=Z,2.1nm,0.5s,baz=50,slow=5.9,SNR=19							
AKASG	**Malin Array Be**	**80.78**	**320**	P		**P**	**08 36 19.9**	**-0.8**
AKASG	**Malin Array Be**	**80.78**	**320**	P		**P**	**08 36 19.9**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=54,slow=7.5,SNR=5.0							
BUR08	**Bucovina Ar. S**	**83.98**	**317**	*e*P		**P**	**08 36 38.0**	**+0.4**
KMBO	**Kilima Mbogo**	**84.11**	**267**	*e*P		**P**	**08 36 40.5**	**+1.5**
	comp=Z,3.5nm,0.8s							
OJC	**Ojcow**	**86.75**	**321**	*e*P		**P**	**08 36 51.9**	**+0.8**
NB2	**NORSAR Subarra**	**87.57**	**333**	P		**P**	**08 36 53.7**	**-1.1**
	baz=69,slow=4.4							
NB2	**NORSAR Subarra**	**87.57**	**333**	P		**P**	**08 36 53.7**	**-1.1**
	comp=Z,4.8nm,1.0s,baz=69,slow=4.4							
NOA	**NORSAR Array B**	**87.57**	**333**	P		**P**	**08 36 54.0**	**-0.8**
NOA	**NORSAR Array B**	**87.57**	**333**	P		**P**	**08 36 54.0**	**-0.8**
	comp=Z,2.4nm,0.8s,baz=68,slow=4.7,SNR=11							
RES	**Resolute Bay**	**89.23**	**9**	*e*P		**P**	**08 37 02.5**	**+0.3**
	comp=Z,1.5nm,0.9s							
GERES	**GERESS Array B**	**90.95**	**321**	P		**P**	**08 37 11.4**	**+0.4**
GERES	**GERESS Array B**	**90.95**	**321**	P		**P**	**08 37 11.4**	**+0.4**
	comp=Z,0.4nm,0.2s,baz=49,slow=4.1,SNR=5.1							
YKA	**Yellowknife Ar**	**92.91**	**23**	P		**P**	**08 37 20.4**	**+0.9**
YKA	**Yellowknife Ar**	**92.91**	**23**	P		**P**	**08 37 20.4**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=306,slow=4.3,SNR=44							
TXAR	**Lajitas Array**	**119.48**	**45**	PKP		**PKPdf**	**08 42 56.3**	**+0.2**
TXAR	**Lajitas Array**	**119.48**	**45**	PKP		**PKPdf**	**08 42 56.3**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=244,slow=0.4,SNR=4.2							
JTS	**JuntasAbangare**	**145.12**	**49**	*e*PKPdf		**PKPab**	**08 43 44.0**	**-0.2**

*ROM **14** 09:08:06.9±0.1, 42.°25N×13.°47E, h10km±1km, Ml3.1/11, Error ellipse: s-maj=1.3km s-min=0.9km az=55.0*
*CSEM **14** 09:08:07.4±0.1, 42.°25N×13.°49E, h2km, ML3.5/9, Error ellipse: s-maj=3.2km s-min=2.0km az=53.0*
*LDG **14** 09:08:11.2±1.0, 42.°43N×13.°35E, h2km, Ml2.8/4, Error ellipse: s-maj=22.5km s-min=12.3km az=114.0*

ISC 14 09:08:07.7±0.8, 42.°25N±0.°02×13.°48E±0.°02, h10km±5km, n90, σ1$10/115, 18C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.08**	**81**	⇑*i*Pg	**Pg**	**09 08 09.8**	**-0.3**
FAGN				Sg	**Sg**	**09 08 11.3**	**-0.6**
	37μm,0.6s						
FAGN	**Fagnano**	**0.08**	**81**	⇑*i*Pg	**Pg**	**09 08 09.8**	**-0.3**
FAGN				Sg	**Sg**	**09 08 11.3**	**-0.6**
	37μm,0.6s						
AQU	**L'Aquila**	**0.12**	**330**	⇑*i*Pg	**Pg**	**09 08 10.6**	**0.0**
AQU				Sg	**Sg**	**09 08 12.5**	**-0.2**
	7μm,0.2s						
AQU	**L'Aquila**	**0.12**	**330**	⇑*i*Pg	**Pg**	**09 08 10.6**	**0.0**
AQU				Sg	**Sg**	**09 08 12.5**	**-0.2**
	7μm,0.2s						
PTQR	**Pietraquaria**	**0.24**	**195**	⇑*i*Pg	**Pg**	**09 08 12.6**	**-0.1**
PTQR				Sg	**Sg**	**09 08 16.7**	**+0.7**
PTQR	**Pietraquaria**	**0.24**	**195**	⇑*i*Pg	**Pg**	**09 08 12.6**	**-0.1**
PTQR				Sg	**Sg**	**09 08 16.7**	**+0.7**
FIAM	**Fiamignano**	**0.27**	**273**	⇑*i*Pg	**Pg**	**09 08 13.1**	**-0.1**
FIAM				Sg	**Sg**	**09 08 17.6**	**+0.6**
	3μm,0.8s						
FIAM	**Fiamignano**	**0.27**	**273**	⇑*i*Pg	**Pg**	**09 08 13.1**	**-0.1**
FIAM				Sg	**Sg**	**09 08 17.6**	**+0.6**
	3μm,0.8s						
CAMP	**Campotosto**	**0.29**	**349**	Pg	**Pg**	**09 08 13.1**	**-0.5**
CAMP				Sg	**Sg**	**09 08 17.5**	**0.0**
	2μm,0.7s						
CAMP	**Campotosto**	**0.29**	**349**	Pg	**Pg**	**09 08 13.1**	**-0.5**
CAMP				Sg	**Sg**	**09 08 17.5**	**0.0**
	2μm,0.7s						
VCEL	**Villa Celiera**	**0.30**	**62**	⇑*i*Pg	**Pg**	**09 08 13.7**	**-0.1**
VCEL				Sg	**Sg**	**09 08 19.6**	**+1.7**
	3μm,0.4s						
VCEL	**Villa Celiera**	**0.30**	**62**	⇑*i*Pg	**Pg**	**09 08 13.7**	**-0.1**
VCEL				Sg	**Sg**	**09 08 19.6**	**+1.7**
	3μm,0.4s						
TERO	**Teramo**	**0.38**	**14**	Pg	**Pg**	**09 08 14.6**	**-0.7**
TERO				Sg	**Sg**	**09 08 20.8**	**+0.5**
	3μm,0.7s						
TERO	**Teramo**	**0.38**	**14**	Pg	**Pg**	**09 08 14.6**	**-0.7**
TERO				Sg	**Sg**	**09 08 20.8**	**+0.5**
	3μm,0.7s						
INTR	**Introdacqua**	**0.40**	**127**	⇑*i*Pg	**Pg**	**09 08 15.2**	**-0.4**
INTR				Sg	**Sg**	**09 08 21.2**	**+0.4**
	2μm,0.4s						
INTR	**Introdacqua**	**0.40**	**127**	⇑*i*Pg	**Pg**	**09 08 15.2**	**-0.4**
INTR				Sg	**Sg**	**09 08 21.2**	**+0.4**
	2μm,0.4s						
VVLD	**Villa Vallelon**	**0.40**	**165**	⇑*i*Pg	**Pg**	**09 08 15.2**	**-0.4**
VVLD				Sg	**Sg**	**09 08 21.1**	**+0.3**
	1μm,0.6s						
VVLD	**Villa Vallelon**	**0.40**	**165**	⇑*i*Pg	**Pg**	**09 08 15.2**	**-0.4**
VVLD				Sg	**Sg**	**09 08 21.1**	**+0.3**
	1μm,0.6s						
GUAR	**Guarcino**	**0.48**	**195**	⇑*i*Pg	**Pg**	**09 08 16.6**	**-0.4**
	584nm,0.3s						
GUAR	**Guarcino**	**0.48**	**195**	⇑*i*Pg	**Pg**	**09 08 16.6**	**-0.4**
	584nm,0.3s						
LNSS	**Leonessa**	**0.48**	**317**	Pg	**Pg**	**09 08 16.2**	**-0.9**
	1μm,0.6s						
LNSS	**Leonessa**	**0.48**	**317**	Pg	**Pg**	**09 08 16.2**	**-0.9**
	1μm,0.6s						
CERT	**Cerreto**	**0.48**	**231**	⇑*i*Pg	**Pg**	**09 08 16.7**	**-0.4**
	1μm,0.4s						
CERT	**Cerreto**	**0.48**	**231**	⇑*i*Pg	**Pg**	**09 08 16.7**	**-0.4**
	1μm,0.4s						
LPEL	**Lama dei Pelig**	**0.56**	**111**	Pg	**Pg**	**09 08 17.9**	**-0.7**
LPEL				Sg	**Sg**	**09 08 26.5**	**+0.5**
	1μm,0.4s						
LPEL	**Lama dei Pelig**	**0.56**	**111**	Pg	**Pg**	**09 08 17.9**	**-0.7**
LPEL				Sg	**Sg**	**09 08 26.5**	**+0.5**
	1μm,0.4s						
POFI	**Posta Fibreno**	**0.56**	**162**	Pg	**Pg**	**09 08 17.7**	**-1.0**
POFI	**Posta Fibreno**	**0.56**	**162**	Pg	**Pg**	**09 08 17.7**	**-1.0**
MTCE	**Montecelio**	**0.60**	**247**	Pg	**Pg**	**09 08 18.6**	**-0.7**
MTCE	**Montecelio**	**0.60**	**247**	Pg	**Pg**	**09 08 18.6**	**-0.7**
SDI	**San Donato**	**0.60**	**156**	Pg	**Pg**	**09 08 18.4**	**-0.9**
SDI				Sg	**Sg**	**09 08 27.9**	**+0.7**
SDI	**San Donato**	**0.60**	**156**	Pg	**Pg**	**09 08 18.4**	**-0.9**
SDI				Sg	**Sg**	**09 08 27.9**	**+0.7**
MNS	**Montasola**	**0.61**	**283**	Pg	**Pg**	**09 08 18.7**	**-0.8**
MNS	**Montasola**	**0.61**	**283**	Pg	**Pg**	**09 08 18.7**	**-0.8**
NRCA	**Norcia**	**0.64**	**335**	Pg	**Pg**	**09 08 19.3**	**-0.8**
NRCA	**Norcia**	**0.64**	**335**	Pg	**Pg**	**09 08 19.3**	**-0.8**
CAFR	**Castel Frentan**	**0.64**	**92**	Pg	**Pg**	**09 08 20.1**	**-0.1**
CAFR	**Castel Frentan**	**0.64**	**92**	Pg	**Pg**	**09 08 20.1**	**-0.1**
OFFI	**Offida**	**0.70**	**12**	Pg	**Pg**	**09 08 21.8**	**+0.6**
OFFI	**Offida**	**0.70**	**12**	Pg	**Pg**	**09 08 21.8**	**+0.6**
GIUL	**Giuliano Di Ro**	**0.72**	**194**	Pg	**Pg**	**09 08 20.6**	**-0.9**
GIUL	**Giuliano Di Ro**	**0.72**	**194**	Pg	**Pg**	**09 08 20.6**	**-0.9**
RNI2	**Rionero Sannit**	**0.74**	**138**	Pg	**Pg**	**09 08 21.9**	**-0.2**
RNI2	**Rionero Sannit**	**0.74**	**138**	Pg	**Pg**	**09 08 21.9**	**-0.2**
CESX	**Cesi**	**0.76**	**298**	Pg	**Pg**	**09 08 22.4**	**+0.1**
CESX	**Cesi**	**0.76**	**298**	Pg	**Pg**	**09 08 22.4**	**+0.1**
CERA	**Filignano**	**0.77**	**148**	Pg	**Pg**	**09 08 21.5**	**-1.0**
CERA	**Filignano**	**0.77**	**148**	Pg	**Pg**	**09 08 21.5**	**-1.0**
FDMO	**Fiordimonte**	**0.83**	**340**	Pg	**Pg**	**09 08 22.6**	**-1.2**
FDMO	**Fiordimonte**	**0.83**	**340**	Pg	**Pg**	**09 08 22.6**	**-1.2**
MIDA	**Miranda**	**0.84**	**136**	Pg	**Pg**	**09 08 22.7**	**-1.2**
MIDA	**Miranda**	**0.84**	**136**	Pg	**Pg**	**09 08 22.7**	**-1.2**
CESI	**CESI - Serrava**	**0.86**	**331**	Pg	**Pg**	**09 08 23.7**	**-0.7**
CESI	**CESI - Serrava**	**0.86**	**331**	Pg	**Pg**	**09 08 23.7**	**-0.7**
ASSB	**Assisi San Ben**	**0.99**	**323**	Pg	**Pg**	**09 08 25.9**	**-1.0**
ASSB	**Assisi San Ben**	**0.99**	**323**	Pg	**Pg**	**09 08 25.9**	**-1.0**
VAGA	**Valle Agricola**	**1.01**	**146**	Pg	**Pg**	**09 08 25.9**	**-1.2**
VAGA	**Valle Agricola**	**1.01**	**146**	Pg	**Pg**	**09 08 25.9**	**-1.2**
SNTG	**Esanatoglia**	**1.08**	**338**	Pg	**Pg**	**09 08 26.8**	**-1.6**
SNTG	**Esanatoglia**	**1.08**	**338**	Pg	**Pg**	**09 08 26.8**	**-1.6**
BSSO	**Busso**	**1.09**	**130**	Pg	**Pb**	**09 08 27.8**	**-0.9**
BSSO	**Busso**	**1.09**	**130**	Pg	**Pb**	**09 08 27.8**	**-0.9**
SGG	**Gregorio Mates**	**1.10**	**142**	Pg	**Pb**	**09 08 28.5**	**-0.3**
SGG	**Gregorio Mates**	**1.10**	**142**	Pg	**Pb**	**09 08 28.5**	**-0.3**
CING	**Cingoli**	**1.14**	**349**	Pg	**Pb**	**09 08 29.2**	**-0.3**
CING	**Cingoli**	**1.14**	**349**	Pg	**Pb**	**09 08 29.2**	**-0.3**
PTRJ	**Pietraroja**	**1.19**	**138**	Pg	**Pb**	**09 08 28.7**	**-0.5**
PTRJ	**Pietraroja**	**1.19**	**138**	Pg	**Pb**	**09 08 29.8**	**-0.5**
PGF	**Pioggiola**	**3.33**	**277**	*e*Pn	**Pn**	**09 09 01.2**	**+1.3**
PGF				*e*Sn	**Sn**	**09 09 41.3**	**+1.7**
	5.0nm,0.5s						
PGF	**Pioggiola**	**3.33**	**277**	*e*Pn	**Pn**	**09 09 01.2**	**+1.3**
PGF				*e*Sn	**Sn**	**09 09 41.3**	**+1.7**
	2.5nm,0.5s						
SBF	**Sospel**	**4.71**	**292**	*e*Pn	**Pn**	**09 09 19.6**	**+0.7**
SBF	**Sospel**	**4.71**	**292**	*e*Pn	**Pn**	**09 09 19.6**	**+0.7**
FRF	**La Foret Royal**	**5.19**	**287**	*e*Pn	**Pn**	**09 09 25.9**	**+0.6**
FRF				*e*Sn	**Sn**	**09 10 20.8**	**-4.4**
	1.6nm,0.3s						
FRF	**La Foret Royal**	**5.19**	**287**	*e*Pn	**Pn**	**09 09 25.9**	**+0.6**
LMR	**La Mourre**	**5.24**	**284**	*e*Pn	**Pn**	**09 09 26.5**	**+0.4**
LMR	**La Mourre**	**5.24**	**284**	*e*Pn	**Pn**	**09 09 26.5**	**+0.4**
MBDF	**Montbardon**	**5.47**	**299**	*e*P	**Pn**	**09 09 31.7**	**+2.3**
MBDF	**Montbardon**	**5.47**	**299**	*e*P	**Pn**	**09 09 31.7**	**+2.3**
LPG	**La Plagne**	**5.84**	**306**	*e*P	**Pn**	**09 09 37.6**	**+3.0**
LPG				*e*Sn	Sn	09 10 36.6	-5.2
	1.1nm,0.1s						
LPG	**La Plagne**	**5.84**	**306**	*e*P	**Pn**	**09 09 37.6**	**+3.0**
LPL	**La Plagne**	**5.87**	**306**	*e*P	**Pn**	**09 09 37.9**	**+3.1**
LPL	**La Plagne**	**5.87**	**306**	*e*P	**Pn**	**09 09 37.9**	**+3.1**
SMRF	**Simiane la Rot**	**6.04**	**289**	*e*P	**Pn**	**09 09 39.0**	**+2.0**
SMRF	**Simiane la Rot**	**6.04**	**289**	*e*P	**Pn**	**09 09 39.0**	**+2.0**
HINF	**Hinteralfeld**	**7.28**	**322**	*e*Pn	**Pn**	**09 09 53.7**	**-0.3**
HINF	**Hinteralfeld**	**7.28**	**322**	*e*Pn	**Pn**	**09 09 53.7**	**-0.3**
CDF	**Champ du Feu**	**7.55**	**327**	*e*Pn	**Pn**	**09 09 57.3**	**-0.5**
CDF				*e*Sn	Sn	09 11 17.1	-6.3
	1.0nm,0.3s						
CDF	**Champ du Feu**	**7.55**	**327**	*e*Pn	**Pn**	**09 09 57.3**	**-0.5**
HAU	**Haudompre**	**7.65**	**321**	*e*Pn	**Pn**	**09 09 59.0**	**-0.1**
HAU	**Haudompre**	**7.65**	**321**	*e*Pn	**Pn**	**09 09 59.0**	**-0.1**

*ISCJB **14** 09:12:04.1±1.0, 59.°33N±0.°05×27.°07E±0.°10, h0km, Error ellipse: s-maj=8.6km s-min=5.2km az=40.4*
*CSEM **14** 09:12:05.6±0.5, 59.°35N×27.°08E, h2km, ML2.3, Error ellipse: s-maj=10.1km s-min=5.6km az=128.0, Mining explosion.*
*NAO **14** 09:12:05.3±2.3, 59.°34N×26.°97E, ML2.5*
*BER **14** 09:12:05.9±2.2, 59.°35N×27.°08E, h0km, ML2.5(NAO), Suspected explosion*
*HEL **14** 09:12:05.4±0.4, 59.°29N×27.°09E, h0km, ML2.3, Explosion*
*IDC **14** 09:12:08.2±2.5, 59.°50N×26.°87E, h0km, mb1 3.1/3, mb1mx2.9/27, mbtmp3.1/3, ML3.0/2, Error ellipse: s-maj=24.5km s-min=10.8km az=146.0*

ISC 14 09:12:06.5±1.5, 59.°36N±0.°05×26.°73E±0.°06, h0km, n38, σ1$71/50, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVF	**Pernaja**	**1.27**	**340**	*e*P	**Pg**	**09 12 30.1**	**-0.7**
PVF				*e*S	**Sg**	**09 12 48.1**	**+0.9**
PVF	**Pernaja**	**1.27**	**340**	P	**Pg**	**09 12 30.0**	**-0.7**
PVF				S	**Sg**	**09 12 48.0**	**+0.9**
MEF	**Metsahovi**	**1.46**	**307**	*e*P	**Pn**	**09 12 32.1**	**+0.6**
MEF				*e*S	**Sn**	**09 12 55.4**	**+1.6**
MEF	**Metsahovi**	**1.46**	**307**	P	**Pn**	**09 12 34.7**	**+0.6**
MEF				*e*S	**Sn**	**09 12 55.7**	**+1.8**
	59nm,0.7s,SNR=50						
MTSE	**Matsula**	**1.64**	**248**	*e*P	**Pn**	**09 12 37.1**	**+0.5**
MTSE				*e*S	**Sb**	**09 12 59.5**	**+0.7**
MTSE	**Matsula**	**1.64**	**248**	P	**Pn**	**09 12 37.1**	**+0.5**
MTSE				S	**Sb**	**09 12 59.5**	**+0.7**
FIA0	**FINESS Array S**	**2.11**	**351**	Pn	**Pn**	**09 12 42.5**	**-0.6**
	baz=160,slow=18						
FIA0				Lg	Lg	09 13 13.3	
	baz=162,slow=28						
FIA0				Rg	Rg	09 13 25.8	
	baz=167,slow=37						
FIA0	**FINESS Array S**	**2.11**	**351**	Pn	**Pn**	**09 12 42.5**	**-0.6**
	baz=160,slow=18						
FIA0				Lg	Lg	09 13 13.3	
	baz=162,slow=28						
FIA0				Rg	Rg	09 13 25.8	
	baz=167,slow=37						
FIA0	**FINESS Array S**	**2.11**	**351**	*e*P	**Pn**	**09 12 42.4**	**-0.6**
FIA0				*e*S	**Sb**	**09 13 12.8**	**+0.4**
FIA0	**FINESS Array S**	**2.11**	**351**	Pn	**Pn**	**09 12 42.5**	**-0.6**
	baz=160,slow=16,SNR=50						
FIA0				Lg	Lg	09 13 13.4	
	baz=162,slow=28,SNR=8.9						
FINES	**FINESS Array B**	**2.11**	**351**	Pn	**Pn**	**09 12 42.5**	**-0.6**
	1.6nm,0.3s,baz=164,slow=16,SNR=47						
FINES				Sn	**Sn**	**09 13 09.7**	**-0.3**
	6.3nm,0.3s,baz=164,slow=21,SNR=31						
FINES				Pg	Rg	09 13 24.3	
	7.1nm,0.4s,baz=166,slow=25,SNR=5.9						
KAF	**Kangasniemi**	**2.77**	**356**	*e*S	**Sn**	**09 13 26.4**	**+0.2**
KAF				MSG		09 13 35.4	
	comp=Z,9.2nm,0.3s						
KAF	**Kangasniemi**	**2.77**	**356**	S	**Sn**	**09 13 26.4**	**+0.2**
SLIT	**Slitere, Latvi**	**2.91**	**235**	*e*P	**Pn**	**09 12 55.6**	**+1.6**
	SNR=50						
KEF	**Keuruu**	**2.96**	**343**	*e*P	**Pn**	**09 12 55.9**	**+1.1**
KEF				*e*SG	**Sb**	**09 13 39.1**	**+2.4**
KEF				MSG		09 13 40.0	
	comp=Z,7.5nm,0.3s						
KEF	**Keuruu**	**2.96**	**343**	P	**Pn**	**09 12 55.8**	**+1.1**
RAF	**Rauma**	**2.99**	**306**	*e*P	**Pn**	**09 12 57.3**	**+2.2**
RAF				*e*S	**Sb**	**09 13 35.8**	**-1.8**
RAF	**Rauma**	**2.99**	**306**	P	**Pn**	**09 12 57.3**	**+2.2**
RAF				*e*S	**Sb**	**09 13 35.5**	**-2.0**
	comp=Z,14nm,0.3s,SNR=50						
SUF	**Sumiainen**	**3.38**	**355**	*e*P	**Pn**	**09 13 00.8**	**+0.3**
SUF				*e*S	**Sn**	**09 13 42.0**	**+0.7**
SUF	**Sumiainen**	**3.38**	**355**	P	**Pn**	**09 13 00.8**	**+0.3**
SUF				S	**Sn**	**09 13 42.0**	**+0.7**
AAL	**Aland**	**3.50**	**286**	*e*S	**Sn**	**09 13 46.6**	**+2.3**
AAL				MSG		09 14 05.1	
	comp=Z,1.0nm,1.0s						
AAL	**Aland**	**3.50**	**286**	S	**Sn**	**09 13 46.5**	**+2.3**
VAF	**Ylistaro**	**4.18**	**334**	*e*SG	**Sg**	**09 14 19.1**	**-1.6**
JOF	**Joensuu**	**4.20**	**30**	*e*P	**Pn**	**09 13 09.5**	**-2.2**
JOF				*e*S	**Sn**	**09 13 58.6**	**-2.9**
JOF	**Joensuu**	**4.20**	**30**	P	**Pn**	**09 13 09.5**	**-2.2**
JOF				S	**Sn**	**09 13 58.6**	**-2.9**
KJN	**Kajaani**	**4.76**	**5**	*e*SG	**Sb**	**09 14 32.6**	**+4.0**
KJN				MSG		09 14 33.9	
	comp=Z,5.0nm,0.3s						
HFS	**Hagfors**	**6.63**	**282**	Sn	**Sn**	**09 14 58.8**	**-2.6**
	baz=99,slow=28						
HFS				Lg	Lg	09 15 34.9	
	baz=89,slow=28						
HFS	**Hagfors**	**6.63**	**282**	Sn	**Sn**	**09 14 58.8**	**-2.6**
	baz=99,slow=28						
HFS				Lg	Lg	09 15 34.9	
	baz=89,slow=28						
HFS	**Hagfors**	**6.63**	**282**	Pn	**Pn**	**09 13 44.9**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=82,slow=12,SNR=2.7						
HFS				Sn	**Sn**	**09 14 59.7**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=96,slow=26,SNR=8.2						
HFS				Lg	Lg	09 15 34.3	
	comp=Z,0.7nm,0.3s,baz=97,slow=34,SNR=7.2						
HFS	**Hagfors**	**6.63**	**282**	Lg	Lg	09 15 34.9	
	baz=89,slow=25,SNR=4.9						
NB2	**NORSAR Subarra**	**7.91**	**289**	Pn	**Pn**	**09 14 04.0**	**+1.3**
NB2				Lg	Lg	09 16 15.1	
	baz=96,slow=37						
NB2	**NORSAR Subarra**	**7.91**	**289**	Pn	**Pn**	**09 14 04.0**	**+1.3**
NB2				Lg	Lg	09 16 15.1	
	baz=96,slow=37						
NB2	**NORSAR Subarra**	**7.91**	**289**	Pn	**Pn**	**09 14 04.0**	**+1.3**
	SNR=50			

BIDA				*e*S		**Sn**	**09 15 09.0**	**+0.1**
BIDA	**Albida**	**2.13**	**181**	*e*P		**Pn**	**09 14 42.8**	**+0.6**
	SNR=45							
BIDA				*e*S		**Sn**	**09 15 09.0**	**+0.1**
	SNR=40							
JHLN	**Al Jahlan**	**2.22**	**131**	*e*P		**Pn**	**09 14 43.0**	**-0.5**
JHLN				*e*S		**Sn**	**09 15 10.5**	**-0.6**
JHLN	**Al Jahlan**	**2.22**	**131**	*e*P		**Pn**	**09 14 43.0**	**-0.5**
	SNR=45							
JHLN				*e*S		**Sn**	**09 15 10.5**	**-0.6**
	SNR=40							
EREN	**Erenkoy**	**2.40**	**228**	*e*PN		**Pn**	**09 14 47.2**	**+1.3**
EREN	**Erenkoy**	**2.40**	**228**	*e*Pn		**Pn**	**09 14 47.2**	**+1.3**
SULT	**Sultanhani-AKS**	**2.50**	**296**	*e*PN		**Pn**	**09 14 48.1**	**+0.9**
SULT	**Sultanhani-AKS**	**2.50**	**296**	*e*Pn		**Pn**	**09 14 48.2**	**+0.9**
SVRC	**Sivrice-ELAZID**	**2.63**	**61**	*e*PN		**Pn**	**09 14 50.3**	**+1.1**
SVRC	**Sivrice-ELAZID**	**2.63**	**61**	*e*Pn		**Pn**	**09 14 50.3**	**+1.1**
KAMT	**Kaman**	**3.05**	**317**	*e*PN		**Pn**	**09 14 56.1**	**+1.2**
KAMT	**Kaman**	**3.05**	**317**	*e*Pn		**Pn**	**09 14 56.1**	**+1.2**

IDC 14 09:34:38.2±4.5, 7°00S×124°92E, h528km±60km, mb3.6/2, mb1 3.6/4, mb1mx3.0/21, mbtmp3.6/4, Error ellipse: s-maj=51.2km s-min=25.2km az=58.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.06**	**176**	P	P	09 37 07.4	+0.5
	1.7nm,0.3s,baz=8.5,slow=7.9,SNR=125						
FITZ				S	S	09 39 07.0	-2.2
	0.2nm,0.3s,baz=3.5,slow=19,SNR=4.8						
ASAR	**Alice Springs**	**18.68**	**153**	P	P	09 38 23.5	0.0
	2.8nm,0.3s,baz=330,slow=8.6,SNR=193						
NWAO	**Narrogin (SRO)**	**26.77**	**194**	P	P	09 39 35.8	+0.1
	1.7nm,0.3s,baz=45,slow=8.6,SNR=6.6						
STKA	**Stephens Creek**	**29.23**	**150**	P	P	09 39 57.2	-0.1
	4.1nm,0.3s,baz=325,slow=8.7,SNR=46						
MKAR	**Makanchi Array**	**65.56**	**329**	P	P	09 44 29.4	-0.1
	0.2nm,0.5s,baz=131,slow=8.1,SNR=3.4						

*ISCJB **14** 09:42:38.3±0.2, 42°.81N±0°.01×20°.36E±0°.02, h10km±2km, mb3.4/5, Error ellipse: s-maj=2.5km s-min=2.1km az=175.6*

*IDC **14** 09:42:38.3±1.1, 42°.67N×20°.23E, h0km, mb3.5/4, mb1 3.6/10, mb1mx3.5/29, mbtmp3.4/10, ML3.4/6, MS2.7/2, Ms1 2.7/2, ms1mx2.1/42, Error ellipse: s-maj=19.3km s-min=14.9km az=32.0*

*LDG **14** 09:42:38.3±0.1, 42°.84N×20°.40E, h2km, Ml3.5/5, Error ellipse: s-maj=4.6km s-min=2.8km az=30.0*

*PDG **14** 09:42:38.8±0.6, 42°.80N×20°.44E, h8km±1km, MD3.6/10, ML3.7/8, Error ellipse: s-maj=0.7km s-min=0.7km az=0.0*

*TIR **14** 09:42:38.0, 42°.75N×20°.35E, h6km, ML4.0*

*THE **14** 09:42:39.3, 42°.77N×20°.38E, h1km±3km, ML3.7/1, Error ellipse: s-maj=4.0km s-min=1.4km az=330.0*

*SKO **14** 09:42:39.2, 42°.87N×20°.35E, h5km, M2.9, ML3.3*

*BEO **14** 09:42:39.4±0.3, 42°.77N×20°.36E, h3km±2km, ML3.3/7*

*CSEM **14** 09:42:40.0±0.2, 42°.76N×20°.30E, h20km, ML3.7/8, Error ellipse: s-maj=3.8km s-min=3.4km az=71.0*

*ROM **14** 09:42:42.9±0.9, 42°.36N×20°.26E, h10km, Ml3.8/14, Error ellipse: s-maj=14.1km s-min=4.6km az=44.0*

ISC 14 09:42:39.0±1.0, 42.79N±0°.01×20.40E±0°.02, h7km±7km, n200, σ1°53/254, mb3.5/5, 16C-10D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEY	**Berane**	**0.38**	**282**	⇑*i* Pg	**Pg**	**09 42 46.4**	**0.0**
BEY				*e*Sg	**Sg**	**09 42 52.2**	**+0.8**
IVA	**Berane**	**0.38**	**282**	⇑*i* Pg	**Pg**	**09 42 46.4**	**0.0**
IVA				*e*Sg	**Sg**	**09 42 52.2**	**+0.8**
PVY	**Plav**	**0.38**	**239**	⇑*i* Pg	**Pg**	**09 42 45.9**	**-0.5**
PVY				*e*Sg	**Sg**	**09 42 51.7**	**+0.3**
BCI	**Bajram Curri**	**0.49**	**210**	*e*PG	**Pg**	**09 42 47.8**	**-0.7**
BCI				*i* SG	**Sg**	**09 42 54.4**	**-0.5**
BCI	**Bajram Curri**	**0.49**	**210**	*e*Pg	**Pg**	**09 42 47.8**	**-0.7**
BCI				*i* Sg	**Sg**	**09 42 54.4**	**-0.5**
SJES	**Sjenica**	**0.56**	**326**	*e*Pg	**Pg**	**09 42 49.1**	**-0.8**
SJES				*e*Sg	**Sg**	**09 42 57.4**	**+0.2**
SELS	**Selova**	**0.68**	**51**	*e*Pg	**Pg**	**09 42 52.0**	**0.0**
SELS				*e*Sg	**Sb**	**09 43 03.5**	**+0.8**
SELS	**Selova**	**0.68**	**51**	*e*Pg	**Pg**	**09 42 52.0**	**0.0**
SELS				*e*Sg	**Sb**	**09 43 03.5**	**+0.8**
IVAS	**Ivanjica**	**0.80**	**347**	*e*Pg	**Pg**	**09 42 54.4**	**0.0**
IVAS				*e*Sg	**Sg**	**09 43 05.7**	**+0.8**
IVAS	**Ivanjica**	**0.80**	**347**	*e*Pg	**Pg**	**09 42 54.4**	**0.0**
IVAS				*e*Sg	**Sg**	**09 43 05.7**	**+0.8**
PUK	**Puka**	**0.84**	**207**	*e*PG	**Pg**	**09 42 54.1**	**-1.0**
PUK				*i* SG	**Sg**	**09 43 06.1**	**+0.1**
PUK	**Puka**	**0.84**	**207**	*e*Pg	**Pg**	**09 42 54.1**	**-1.0**
PUK				*i* Sg	**Sg**	**09 43 06.1**	**+0.1**
PLE	**Pljevlja**	**0.91**	**306**	⇑*i* Pg	**Pg**	**09 42 56.1**	**-0.4**
PLE				*e*Sg	**Sb**	**09 43 10.6**	**+1.0**
PLE	**Pljevlja**	**0.91**	**306**	⇑*i* Pg	**Pg**	**09 42 56.1**	**-0.4**
PDG	**Podgorica**	**0.92**	**247**	*e*Pg	**Pg**	**09 42 55.6**	**-1.0**
PDG				*e*Sg	**Sg**	**09 43 07.4**	**-1.1**
PDG	**Podgorica**	**0.92**	**247**	Pg	**Pg**	**09 42 55.3**	**-1.3**
PDG				Sg	**Sg**	**09 43 07.5**	**-1.1**
PDG	**Podgorica**	**0.92**	**247**	*e*Pg	**Pg**	**09 42 55.6**	**-1.0**
PDG				*e*Sg	**Sg**	**09 43 07.4**	**-1.1**
TTG	**Podgorica**	**0.92**	**247**	⇓*i* Pg	**Pg**	**09 42 55.2**	**-1.3**
TTG				*e*Sg	**Sn**	**09 43 11.4**	**-0.3**
NKY	**Niksic**	**1.03**	**272**	⇓*i* Pg	**Pg**	**09 42 58.2**	**-0.6**
NKY				*e*Sg	**Sn**	**09 43 14.6**	**-0.1**
NKY	**Niksic**	**1.03**	**272**	⇓*i* Pg	**Pg**	**09 42 58.2**	**-0.6**
BARS	**Barje**	**1.04**	**88**	*e*Pg	**Pg**	**09 42 59.2**	**+0.2**
BARS	**Barje**	**1.04**	**88**	*e*Pg	**Pb**	**09 42 59.4**	**+0.1**
BARS				*e*Sg	**Sb**	**09 43 13.4**	**+0.2**
BARS	**Barje**	**1.04**	**88**	*e*Pg	**Pb**	**09 42 59.4**	**+0.1**
BARS				*e*Sg	**Sb**	**09 43 13.4**	**+0.2**
PHP	**Peshkopia**	**1.11**	**178**	*e*PG	**Pg**	**09 42 58.4**	**-1.8**
PHP				*i* SG	**Sg**	**09 43 14.7**	**+0.1**
PHP	**Peshkopia**	**1.11**	**178**	P	**Pg**	**09 42 59.1**	**-1.1**
PHP				S	**Sb**	**09 43 15.8**	**+0.7**
PHP	**Peshkopia**	**1.11**	**178**	*e*Pg	**Pg**	**09 42 58.4**	**-1.8**
PHP	**Peshkopia**	**1.11**	**178**	P	**Pg**	**09 42 59.1**	**-1.1**
PHP				*i* Sg	**Sg**	**09 43 14.7**	**+0.1**
PHP				S	**Sb**	**09 43 15.8**	**+0.7**
GRUS	**Gruza**	**1.12**	**12**	*e*Pg	**Pg**	**09 43 00.6**	**+0.2**
GRUS				*e*Sg	**Sn**	**09 43 16.2**	**-0.5**
GRUS	**Gruza**	**1.12**	**12**	*e*Pg	**Pg**	**09 43 00.6**	**+0.2**
GRUS				*e*Sg	**Sn**	**09 43 16.2**	**-0.5**
SKO	**Skopje**	**1.13**	**136**	P	**Pb**	**09 43 00.9**	**+0.2**
SKO				S	**Sn**	**09 43 18.3**	**+1.5**
SKO	**Skopje**	**1.13**	**136**	*i* Pg	**Pn**	**09 43 01.2**	**+0.1**
SKO				*i* Sg	**Sn**	**09 43 17.4**	**+0.6**
SKO				*e*Lg	Lg	09 43 19.8	
	comp=E,328nm,0.3s						
SKO				*e*Lg	Lg	09 43 21.8	
	comp=N,982nm,0.7s						
SKO	**Skopje**	**1.13**	**136**	*e*Pg	**Pg**	**09 43 00.0**	**-0.6**
SKO	**Skopje**	**1.13**	**136**	P	**Pb**	**09 43 00.9**	**+0.2**
SKO	**Skopje**	**1.13**	**136**	*i* Pg	**Pn**	**09 43 01.7**	**+0.6**
SKO				*i* Sg	**Sn**	**09 43 17.9**	**+1.1**
SKO				S	**Sn**	**09 43 18.3**	**+1.5**
SKO				*e*Lg	Lg	09 43 22.2	
	comp=N,982nm,0.7s						
UPM	**Unac-Piva**	**1.17**	**291**	⇓*i* Pg	**Pg**	**09 43 00.7**	**-0.7**
UPM				*e*Sg	**Sn**	**09 43 19.4**	**+1.2**
UPM	**Unac-Piva**	**1.17**	**291**	⇓*i* Pg	**Pg**	**09 43 00.7**	**-0.7**
ULC	**Ulcinj**	**1.19**	**226**	⇑*i* Pg	**Pg**	**09 43 01.0**	**-0.8**
ULC				*e*Sg	**Sn**	**09 43 20.0**	**+1.5**
ULC	**Ulcinj**	**1.19**	**226**	⇑*i* Pg	**Pg**	**09 43 01.0**	**-0.8**
BUM	**Brajici-Budva**	**1.22**	**247**	⇑*i* Pg	**Pb**	**09 43 01.7**	**-0.6**
BUM				*e*Sg	**Sn**	**09 43 20.8**	**+1.6**
BUM	**Brajici-Budva**	**1.22**	**247**	⇑*i* Pg	**Pb**	**09 43 01.7**	**-0.6**
DIVS	**Divibare**	**1.34**	**347**	P	**Pn**	**09 43 04.0**	**-0.1**
DIVS	**Divibare**	**1.34**	**347**	*e*Pg	**Pn**	**09 43 04.3**	**+0.2**
DIVS				*e*Sg	**Sg**	**09 43 22.3**	**+0.3**
DIVS	**Divibare**	**1.34**	**347**	P	**Pn**	**09 43 04.0**	**-0.1**
DIVS	**Divibare**	**1.34**	**347**	*e*Pg	**Pn**	**09 43 04.3**	**+0.2**
DIVS				*e*Sg	**Sg**	**09 43 22.3**	**+0.3**
BRY	**Bratogost**	**1.37**	**275**	⇑*i* Pg	**Pg**	**09 43 03.8**	**-0.8**
BRY				*e*Sg	**Sg**	**09 43 26.0**	**+2.9**
BRY	**Bratogost**	**1.37**	**275**	⇑*i* Pg	**Pg**	**09 43 03.8**	**-0.8**
TRUS	**Trudelj**	**1.43**	**0**	*e*Pg	**Pn**	**09 43 04.6**	**-0.7**
TRUS				*e*Sg	**Sg**	**09 43 26.2**	**+1.3**
TRUS	**Trudelj**	**1.43**	**0**	*e*Pg	**Pn**	**09 43 04.6**	**-0.7**
TRUS				*e*Sg	**Sg**	**09 43 26.2**	**+1.3**

HCY	**Herceg Novi**	**1.45**	**257**	⇓*i* Pg		**Pn**	**09 43 05.6**	**0.0**
HCY				*e*Sg		**Sg**	**09 43 28.7**	**+3.2**
HCY	**Herceg Novi**	**1.45**	**257**	⇓*i* Pg		**Pn**	**09 43 05.6**	**0.0**
TIR	**Tirane**	**1.50**	**196**	*e*PG		Pn	09 43 01.6	-4.6
TIR	**Tirane**	**1.50**	**196**	*e*P		**Pg**	**09 43 09.0**	**+1.3**
TIR	**Tirane**	**1.50**	**196**	Pg		Pn	09 43 01.9	-4.3
TIR	**Tirane**	**1.50**	**196**	*e*Pg		Pn	09 43 01.6	-4.6
BOLS	**Boljevac**	**1.54**	**47**	*e*Pg		**Pb**	**09 43 07.4**	**-0.3**
BOLS				*e*Sg		**Sg**	**09 43 28.6**	**+0.3**
BOLS	**Boljevac**	**1.54**	**47**	*e*Pg		**Pb**	**09 43 07.4**	**-0.3**
BOLS				*e*Sg		**Sg**	**09 43 28.6**	**+0.3**
ZAPS	**Zavoj**	**1.71**	**73**	*e*Pg		**Pb**	**09 43 10.2**	**-0.5**
ZAPS				*e*Sg		**Sg**	**09 43 35.0**	**+1.2**
ZAPS	**Zavoj**	**1.71**	**73**	*e*Pg		**Pb**	**09 43 10.2**	**-0.5**
ZAPS				*e*Sg		**Sg**	**09 43 35.0**	**+1.2**
TEKS	**Tekeris**	**1.87**	**341**	*e*Pn		**Pn**	**09 43 11.4**	**+0.1**
TEKS				*e*Sn		**Sb**	**09 43 37.0**	**+0.1**
TEKS	**Tekeris**	**1.87**	**341**	*e*Pn		**Pn**	**09 43 11.4**	**+0.1**
TEKS				*e*Sn		**Sb**	**09 43 37.0**	**+0.1**
BIA	**Bitola**	**1.90**	**158**	P		**Pn**	**09 43 12.6**	**+0.8**
BIA	**Bitola**	**1.90**	**158**	*i* Pn		**Pn**	**09 43 12.9**	**+1.0**
BIA				*i* Sn		**Sg**	**09 43 40.6**	**+0.6**
BIA	**Bitola**	**1.90**	**158**	P		**Pn**	**09 43 12.6**	**+0.8**
STON	**Ston**	**1.99**	**273**	*i* Pn		**Pb**	**09 43 15.0**	**-0.5**
STON				Sn		**Sg**	**09 43 42.7**	**-0.1**
STON	**Ston**	**1.99**	**273**	*i* Pn		**Pb**	**09 43 14.9**	**-0.5**
BEO	**Beograd**	**2.02**	**1**	*e*Pn		**Pb**	**09 43 15.0**	**-0.9**
BEO				*e*Sn		**Sb**	**09 43 41.4**	**+0.2**
BEO	**Beograd**	**2.02**	**1**	*e*Pn		**Pb**	**09 43 15.0**	**-0.9**
BEO				*e*Sn		**Sb**	**09 43 41.4**	**+0.2**
VTS	**Vitosha**	**2.08**	**95**	P		**Pn**	**09 43 15.3**	**+0.9**
VTS	**Vitosha**	**2.08**	**95**	*e*Pn		**Pn**	**09 43 15.1**	**+0.7**
VTS	**Vitosha**	**2.08**	**95**	*e*Pn		**Pn**	**09 43 15.5**	**+1.1**
VTS				*e*Sn		**Sn**	**09 43 41.9**	**+1.3**
VTS	**Vitosha**	**2.08**	**95**	*e*Pn		**Pn**	**09 43 15.1**	**+0.7**
VTS				*e*Sn		**Sn**	**09 43 41.9**	**+1.3**
FNA	**Florina**	**2.14**	**160**	P		**Pn**	**09 43 16.1**	**+1.0**
FNA				S		**Sn**	**09 43 43.0**	**+1.1**
FNA	**Florina**	**2.14**	**160**	*e*P		**Pn**	**09 43 15.6**	**+0.5**
FNA	**Florina**	**2.14**	**160**	P		**Pn**	**09 43 16.1**	**+1.0**
FNA				S		**Sn**	**09 43 43.0**	**+1.1**
VAY	**Valandovo**	**2.19**	**132**	*i* Pn		**Pn**	**09 43 15.5**	**-0.2**
VAY				*e*Sn		**Sg**	**09 43 50.0**	**+0.8**
VAY				*e*Lg		Lg	09 43 53.9	
	comp=E,113nm,0.6s							
VAY				*e*Lg		Lg	09 43 54.3	
	comp=N,114nm,0.5s							
VAY	**Valandovo**	**2.19**	**132**	*i* Pn		**Pn**	**09 43 15.9**	**+0.2**
VAY				*e*Lg		Lg	09 43 54.8	
	comp=N,114nm,0.5s							
FGSL	**Fruska Gora**	**2.40**	**350**	*e*Pn		**Pn**	**09 43 20.1**	**+1.4**
FRGS	**Fruska Gora**	**2.40**	**350**	*e*Pn		**Pn**	**09 43 20.1**	**+1.4**
KZN	**Kozani**	**2.69**	**157**	*e*P		**Pn**	**09 43 23.8**	**+1.1**
NVR	**Nevrokopi**	**2.95**	**118**	*e*P		**Pn**	**09 43 25.7**	**-0.6**
SOH	**Sokhos**	**2.96**	**131**	*e*P		**Pn**	**09 43 26.8**	**+0.4**
HORT	**Hortiatis**	**2.98**	**136**	*e*P		**Pn**	**09 43 27.0**	**+0.3**
PLG	**Polygyros**	**3.33**	**136**	*e*P		**Pn**	**09 43 31.2**	**-0.2**
THL	**Klokotos Trika**	**3.45**	**159**	*e*P		**Pn**	**09 43 34.1**	**+1.1**
MSAG	**Monte S. Angel**	**3.50**	**254**	Pg		Pn	**09 43 35.1**	**+1.2**
MSAG	**Monte S. Angel**	**3.50**	**254**	Pg		Pn	**09 43 35.1**	**+1.2**
KAVA	**Kavala**	**3.56**	**119**	*e*P		**Pn**	**09 43 34.6**	**+0.1**
XOR	**Xorichti**	**4.02**	**147**	*e*P		Pb	09 43 46.6	-3.5
AGG	**Agios Georgios**	**4.04**	**158**	*e*P		Pb	09 43 46.7	-3.8
SIRI	**Monte Sirino -**	**4.29**	**234**	Pg		**Pn**	**09 43 46.1**	**+1.4**
SIRI	**Monte Sirino -**	**4.29**	**234**	Pg		**Pn**	**09 43 46.1**	**+1.4**
MRB1	**Monte Rocchett**	**4.38**	**249**	Pg		**Pn**	**09 43 47.8**	**+2.0**
	comp=N,116nm,0.6s							
MRB1	**Monte Rocchett**	**4.38**	**249**	Pg		**Pn**	**09 43 47.8**	**+2.0**
	comp=N,116nm,0.6s							
NVLJ	**Novalja**	**4.38**	**296**	*i* Pn		**Pn**	**09 43 47.0**	**+1.2**
NVLJ				Sn		**Sn**	**09 44 39.7**	**+2.6**
NVLJ	**Novalja**	**4.38**	**296**	*i* Pn		**Pn**	**09 43 47.0**	**+1.2**
MCRV	**Calabrutti - M**	**4.40**	**245**	Pg		Pn	**09 43 46.5**	**+0.3**
MCRV	**Calabrutti - M**	**4.40**	**245**	Pg		Pn	**09 43 46.5**	**+0.3**
SGO	**Sicignano**	**4.42**	**241**	Pg		**Pn**	**09 43 46.9**	**+0.5**
	comp=N,277nm,0.2s							
SGO	**Sicignano**	**4.42**	**241**	Pg		**Pn**	**09 43 46.9**	**+0.5**
	comp=N,27nm,0.2s							
CSSN	**Cassano Irpino**	**4.46**	**246**	Pg		**Pn**	**09 43 48.7**	**+1.8**
	comp=N,22nm,0.3s							
CSSN	**Cassano Irpino**	**4.46**	**246**	Pg		**Pn**	**09 43 48.7**	**+1.8**
	comp=N,22nm,0.3s							
CDRU	**Civita di Ruta**	**4.46**	**241**	Pg		**Pn**	**09 43 47.6**	**+0.6**
	comp=N,39nm,0.3s							
CDRU	**Civita di Ruta**	**4.46**	**241**	Pg		**Pn**	**09 43 47.6**	**+0.6**
	comp=N,39nm,0.3s							
CMPR	**Campora**	**4.55**	**239**	Pg		Pn	**09 43 49.1**	**+0.8**
	comp=N,46nm,0.4s							
CMPR	**Campora**	**4.55**	**239**	Pg		Pn	**09 43 49.1**	**+0.8**
	comp=N,46nm,0.4s							
BOJS	**Bojanci**	**4.59**	**308**	*i* Pn		Pn	**09 43 50.3**	**+1.6**
BOJS	**Bojanci**	**4.59**	**308**	Pn		Pn	**09 43 50.3**	**+1.6**
PTRJ	**Pietraroja**	**4.60**	**254**	Pg		**Pn**	**09 43 50.6**	**+1.7**
	comp=N,197nm,0.6s							
PTRJ	**Pietraroja**	**4.60**	**254**	Pg		**Pn**	**09 43 50.6**	**+1.7**
	comp=N,197nm,0.6s							
BULG	**Bulgheria - Ca**	**4.65**	**236**	Pg		**Pn**	**09 43 51.2**	**+1.6**
	comp=N,81nm,0.4s							
BULG	**Bulgheria - Ca**	**4.65**	**236**	Pg		**Pn**	**09 43 51.2**	**+1.6**
	comp=N,81nm,0.4s							
LPEL	**Lama dei Pelig**	**4.66**	**263**	Pg		**Pn**	**09 43 51.8**	**+2.0**
	comp=N,85nm,0.8s							
LPEL	**Lama dei Pelig**	**4.66**	**263**	Pg		**Pn**	**09 43 51.8**	**+2.0**
	comp=N,85nm,0.8s							
SGG	**Gregorio Mates**	**4.70**	**255**	Pg		**Pn**	**09 43 51.8**	**+1.5**
	comp=N,84nm,0.5s							
SGG	**Gregorio Mates**	**4.70**	**255**	Pg		**Pn**	**09 43 51.8**	**+1.5**
	comp=N,84nm,0.5s							
MIDA	**Miranda**	**4.71**	**258**	Pg		Pn	**09 43 52.4**	**+2.0**
	comp=N,117nm,0.9s							
MIDA	**Miranda**	**4.71**	**258**	Pg		**Pn**	**09 43 52.4**	**+2.0**
	comp=N,117nm,0.9s							
PKST	**T^s**	**4.77**	**340**	*e*Pg		Pg	09 44 24.0	+14
PKST	**T^s**	**4.77**	**340**	*e*Pg		**Sn**	**09 44 42.3**	**-4.4**
PKST				*e*Sg		Sb	09 44 47.6	-13
VAGA	**Valle Agricola**	**4.79**	**255**	Pg		**Pn**	**09 43 53.7**	**+2.2**
	comp=N,129nm,0.5s							
VAGA	**Valle Agricola**	**4.79**	**255**	Pg		**Pn**	**09 43 53.7**	**+2.2**
	comp=N,129nm,0.5s							
PKSG			**4.81**	**344**	⇑*e*Pg	Pg	09 44 19.5	+8.4
PKSG					*e*Sg	Sn	09 44 20.8	-27
PKSG			**4.81**	**344**	⇑*e*Pg	Sn	09 44 37.0	-11
PKSG					*e*Sg	Sb	09 44 38.2	-23
MLR	**Muntele Rosu**	**4.82**	**54**	Pn		Pn	09 43 57.7	+5.8
	comp=N,0.2nm,0.3s,baz=175,slow=18,SNR=5.0							
MLR				Lg		Lg	09 45 15.6	
	comp=N,0.2nm,0.3s,baz=285,slow=19,SNR=2.7							
INTR	**Introdacqua**	**4.87**	**263**	Pg		**Pn**	**09 43 54.3**	**+1.6**
	comp=N,102nm,0.6s							
INTR	**Introdacqua**	**4.87**	**263**	Pg		**Pn**	**09 43 54.3**	**+1.6**
	comp=N,102nm,0.6s							
CERA	**Filignano**	**4.89**	**258**	Pg		**Pn**	**09 43 56.0**	**+3.1**
	comp=N,125nm,0.7s							
CERA	**Filignano**	**4.89**	**258**	Pg		**Pn**	**09 43 56.0**	**+3.1**
	comp=N,125nm,0.7s							
SDI	**San Donato**	**5.01**	**260**	Pg		**Pn**	**09 43 56.5**	**+2.0**
	comp=N,16nm,0.3s							
SDI	**San Donato**	**5.01**	**260**	Pg		**Pn**	**09 43 56.5**	**+2.0**
	comp=N,16nm,0.3s							
MSC	**Monte Massico**	**5.05**	**254**	Pg		**Pn**	**09 43 57.8**	**+2.8**
MSC	**Monte Massico**	**5.05**	**254**	Pg		**Pn**	**09 43 57.8**	**+2.8**
VVLD	**Villa Vallelon**	**5.11**	**262**	Pg		**Pn**	**09 43 58.5**	**+2.6**
	comp=N,96nm,0.8s							
VVLD	**Villa Vallelon**	**5.11**	**262**	Pg		**Pn**	**09 43 58.5**	**+2.6**
	comp=N,96nm,0.8s							
MODR	**Mondragone**	**5.13**	**253**	Pg		**Pn**	**09 43 58.6**	**+2.4**
MODR	**Mondragone**	**5.13**	**253**	Pg		**Pn**	**09 43 58.6**	**+2.4**
PTQR	**Pietraquaria**	**5.24**	**264**	Pg		**Pn**	**09 44 00.6**	**+2.9**
	comp=N,11nm,0.3s							
PTQR	**Pietraquaria**	**5.24**	**264**	Pg		**Pn**	**09 44 00.6**	**+2.9**
	comp=N,11nm,0.3s							
NRCA	**Norcia**	**5.36**	**273**	Pg		**Pn**	**09 44 00.7**	**+1.3**
	comp=N,16nm,0.6s							
NRCA	**Norcia**	**5.36**	**273**	Pg		**Pn**	**09 44 00.7**	**+1.3**
	comp=N,16nm,0.6s							
PERS	**Pernice**	**5.38**	**317**	*i* Pn		**Pn**	**09 44 00.2**	**+0.6**
PERS	**Pernice**	**5.38**	**317**	*i* Pn		**Pn**	**09 44 00.2**	**+0.6**
FIAM	**Fiamignano**	**5.41**	**267**	Pg		**Pn**	**09 44 02.3**	**+2.3**
	comp=N,76nm,1.0s							
FIAM	**Fiamignano**	**5.41**	**267**	Pg		**Pn**	**09 44 02.3**	**+2.3**
	comp=N,76nm,1.0s							
LNSS	**Leonessa**	**5.43**	**270**	Pg		**Pn**	**09 44 02.2**	**+1.9**
	comp=N,82nm,0.5s							
LNSS	**Leonessa**	**5.43**	**270**	Pg		**Pn**	**09 44 02.2**	**+1.9**
	comp=N,82nm,0.5s							
SOKA	**Soboth**	**5.45**	**317**	⇑*i* Pn		**Pn**	**09 44 01.2**	**+0.6**
SOKA	**Soboth**	**5.45**	**317**	Pn		**Pn**	**09 44 01.2**	**+0.6**
JAVS	**Javornik**	**5.50**	**306**	*i* Pn		**Pn**	**09 44 02.7**	**+1.4**
JAVS	**Javornik**	**5.50**	**306**	*i* Pn		**Pn**	**09 44 02.7**	**+1.4**
OBKA	**Obir**	**5.59**	**314**	*i* Pn		**Pn**	**09 44 03.7**	**+1.2**
	SNR=19							
OBKA	**Obir**	**5.59**	**314**	Pn		**Pn**	**09 44 03.7**	**+1.2**
	SNR=19							
ARSA	**Arzberg**	**5.64**	**324**	*i* Pn		**Pn**	**09 44 04.1**	**+0.9**
	SNR=32							
ARSA				⇑*i* Sn		**Sn**	**09 45 05.8**	**-2.4**
ARSA	**Arzberg**	**5.64**	**324**	Pn		**Pn**	**09 44 04.1**	**+0.9**
	SNR=32							
ARSA				Sn		**Sn**	**09 45 05.8**	**-2.4**
VOY	**Vojsko**	**5.67**	**307**	*e*Pn		**Pn**	**09 44 04.9**	**+1.2**
VOY				*e*(Sn)		**Sg**	**09 45 46.8**	**+5.7**
VOY	**Vojsko**	**5.67**	**307**	*e*Pn		**Pn**	**09 44 04.9**	**+1.2**
VYHS	**Vyhne**	**5.81**	**350**	*e*PN		**Pn**	**09 44 06.7**	**+1.3**
VYHS				*e*SN		**Sn**	**09 45 09.5**	**-2.7**
VYHS				*e*SG		**Sg**	**09 45 49.7**	**+4.4**
VYHS	**Vyhne**	**5.81**	**350**	*e*Pn		**Pn**	**09 44 06.7**	**+1.3**
VYHS				*e*Sn		**Sn**	**09 45 09.5**	**-2.7**
CRVS	**Cervenica-Dubn**	**6.16**	**7**	*e*PN		**Pn**	**09 44 10.7**	**+0.5**
CRVS				*e*SG		Sg	09 46 05.9	+9.4
CRVS	**Cervenica-Dubn**	**6.16**	**7**	*e*Pn		**Pn**	**09 44 10.7**	**+0.5**
MYKA	**Terra Mystica**	**6.16**	**311**	⇓*i* Pn		**Pn**	**09 44 10.8**	**+0.5**
MYKA	**Terra Mystica**	**6.16**	**311**	Pn		**Pn**	**09 44 10.8**	**+0.5**
KOLS	**Kolonicke sedl**	**6.28**	**11**	*e*PN		Pn	09 44 15.3	+3.4
KOLS				*e*SG		Sg	09 46 07.0	+6.6
MOA	**Molln**	**6.65**	**322**	⇓*i* Pn		**Pn**	**09 44 18.6**	**+1.5**
	SNR=6.7							
MOA				⇓*i* Sn		**Sn**	**09 45 30.9**	**-2.2**
MOA	**Molln**	**6.65**	**322**	Pn		**Pn**	**09 44 18.5**	**+1.5**
	SNR=6.7							
MOA				Sn		**Sn**	**09 45 30.9**	**-2.2**
VRAC	**Vranov**	**7.03**	**339**	Pn

PETK **Petropavlovsk-** 35.79 12 P P 10 24 27.7 +1.0
PETK ScP ScP 10 30 18.6 +0.4
PETK Petropavlovsk- 35.79 12 P P 10 24 27.7 +1.0
comp=Z,6.7nm,0.6s,baz=203,slow=11,SNR=7.6
PETK ScP ScP 10 30 18.5 +0.4
comp=Z,3.8nm,0.9s,baz=186,slow=2.9,SNR=3.5
HHC Hu-ho-hao-te 36.75 315 *e*P P 10 24 35.0 -0.1
HHC pP pP 10 25 14.4 -0.8
HHC sP sP 10 25 37.0 0.0
HHC PP PnPn 10 26 06.8 +1.2
HHC S S 10 30 02.3 -2.4
HHC pmax pmax
comp=Z,38nm,1.0s
HHC pmax pmax
comp=Z,250nm,4.8s
GYA Guiyang 36.82 290 *e*P P 10 24 36.0 0.0
GYA pP pP 10 25 17.5 +1.5
GYA sP sP 10 25 41.3 +3.5
GYA S S 10 30 05.9 -0.3
GYA ScP ScP 10 30 22.4 -0.3
GYA PcS PcS 10 30 41.8 -0.6
GYA ScS ScS 10 34 28.3 -2.2
GYA pmax pmax
comp=Z,10.0nm,0.8s
KSM Kuching 38.60 248 *e*P P 10 24 52.2 +1.3
comp=Z,10nm,0.8s
WRAB Tennant Creek 39.77 197 *e*P P 10 25 01.1 +0.7
comp=Z,17nm,0.4s
KHKI Kahang-Kahang 39.92 231 P P 10 25 03.9 +2.2
comp=Z,52nm,0.9s
PCJI Pacitan 43.16 235 P P 10 25 29.8 +1.7
comp=Z,49nm,1.5s
SONM Songino Array 43.30 322 P P 10 25 28.5 -0.5
SONM sP sP 10 26 24.7 -7.0
SONM Songino Array 43.30 322 P P 10 25 28.5 -0.5
comp=Z,1.2nm,0.5s,baz=138,slow=8.5,SNR=9.3
SONM sP sP 10 26 24.7 -7.0
comp=Z,0.9nm,0.5s,baz=139,slow=6.8,SNR=3.0
ASAR Alice Springs 43.45 196 P P 10 25 30.4 +0.1
ASAR PcP PcP 10 27 13.4 -1.6
ASAR ScP ScP 10 30 48.3 -0.1
ASAR Alice Springs 43.45 196 P P 10 25 30.4 +0.1
comp=Z,4.4nm,0.5s,baz=17,slow=7.4,SNR=65
ASAR PcP PcP 10 27 13.4 -1.6
comp=Z,1.8nm,0.7s,baz=29,slow=4.4,SNR=6.5
ASAR ScP ScP 10 30 48.3 -0.1
comp=Z,0.7nm,0.7s,baz=12,slow=4.0,SNR=4.7
CMAR Chiang Mai Arr 44.24 278 P P 10 25 38.0 +1.2
CMAR Chiang Mai Arr 44.24 278 P P 10 25 38.0 +1.2
comp=Z,1.7nm,0.7s,baz=66,slow=6.3,SNR=13
IPM Ipoh 45.79 258 *e*P P 10 25 49.0 0.0
comp=Z,5.4nm,0.5s
STKA Stephens Creek 50.23 185 P P 10 26 22.0 -0.6
STKA Stephens Creek 50.23 185 P P 10 26 22.0 -0.6
comp=Z,4.6nm,0.4s,baz=11,slow=6.1,SNR=17
BILL Bilibino 51.22 10 *e*P P 10 26 30.5 +0.9
comp=Z,4.4nm,0.6s
GAMB Gambell 53.65 22 *e*P P 10 26 48.3 +0.9
comp=Z,10nm,1.0s
WMQ Urumqi 54.44 311 *e*P P 10 26 55.0 +1.3
WMQ pP pP 10 27 38.0 +1.3
WMQ sP sP 10 27 59.0 +1.3
WMQ PP PP 10 29 01.0 +3.2
WMQ ScP ScP 10 31 35.0 0.0
WMQ S S 10 34 16.0 -1.5
WMQ sS sS 10 35 31.0 -1.5
WMQ ScS ScS 10 36 21.0 -2.6
WMQ SS SS 10 38 00.0 -2.5
WMQ pmax pmax
comp=Z,13nm,0.9s
WMQ pmax pmax
comp=Z,84nm,5.0s
SDPT Sand Point 54.64 34 *e*P P 10 26 55.3 +0.6
comp=Z,53nm,0.5s
TNA Tin City 56.01 21 *e*P P 10 27 06.1 +1.8
comp=Z,13nm,1.3s
ZALV Zalesovo Beam 58.18 323 P P 10 27 18.9 -0.9
ZALV Zalesovo Beam 58.18 323 P P 10 27 18.9 -0.9
comp=Z,2.4nm,0.5s,baz=110,slow=8.5,SNR=12
MK31 Makanchi Array 58.60 314 *e*P P 10 27 23.1 +0.2
MKAR Makanchi Array 58.60 314 P P 10 27 23.0 +0.1
MKAR PcP PcP 10 28 11.0 0.0
MKAR Makanchi Array 58.60 314 P P 10 27 23.0 +0.1
comp=Z,2.4nm,0.5s,baz=89,slow=8.3,SNR=37
MKAR PcP PcP 10 28 11.0 0.0
comp=Z,0.7nm,0.7s,baz=65,slow=4.6,SNR=3.8
KDAK Kodiak Island 59.53 33 P P 10 27 29.5 +0.5
KDAK Kodiak Island 59.53 33 P P 10 27 29.5 +0.5
comp=Z,10nm,0.5s,baz=297,slow=2.9,SNR=37
TRF Thorofare Moun 62.07 27 *e*P P 10 27 45.5 -0.7
comp=Z,16nm,1.0s
SML Sawmill 62.55 29 *e*P P 10 27 49.9 +0.5
comp=Z,11nm,0.9s
ILAR Eielson Array 63.83 26 P P 10 27 56.6 -1.0
ILAR Eielson Array 63.83 26 P P 10 27 56.6 -1.0
comp=Z,4.3nm,0.7s,baz=252,slow=4.9,SNR=33
DOT Dot Lake 64.83 28 *e*P P 10 28 04.5 +0.3
comp=Z,7.4nm,0.7s
EGAK Eagle 66.25 27 *e*P P 10 28 14.2 +1.0
comp=Z,4.8nm,1.0s
INK Inuvik 69.56 23 P P 10 28 33.8 0.0
INK Inuvik 69.56 23 P P 10 28 33.8 0.0
comp=Z,3.5nm,0.7s,baz=274,slow=6.2,SNR=32
DLBC Dease Lake 71.47 34 P P 10 28 46.4 +0.8
DLBC pP pP 10 29 30.1 -0.8
DLBC Dease Lake 71.47 34 P P 10 28 46.4 +0.8
comp=Z,3.4nm,0.6s,baz=247,slow=6.8,SNR=8.2
DLBC pP pP 10 29 30.1 -0.8
comp=Z,4.6nm,0.9s,baz=278,slow=2.9,SNR=3.7
YKA Yellowknife Ar 78.17 28 P P 10 29 23.4 -0.5
YKA pP pP 10 30 07.8 -2.1
YKA Yellowknife Ar 78.17 28 P P 10 29 23.4 -0.5
comp=Z,3.4nm,0.6s,baz=290,slow=5.3,SNR=91
YKA pP pP 10 30 07.8 -2.1
comp=Z,1.9nm,0.7s,baz=289,slow=5.6,SNR=4.6
YBH Yreka Blue Hor 79.09 50 P P 10 29 30.5 +1.1
YBH Yreka Blue Hor 79.09 50 P P 10 29 30.5 +1.1
comp=Z,3.4nm,0.8s,baz=21,slow=3.4,SNR=6.3
RES Resolute Bay 79.63 14 *e*P P 10 29 31.9 +0.3
comp=Z,1.2nm,0.6s
RES pP pP 10 30 16.3 -1.5
RES Resolute Bay 79.63 14 P P 10 29 31.8 +0.3
comp=Z,1.8nm,0.7s,baz=308,slow=4.9,SNR=13
RES pP pP 10 30 16.3 -1.5
comp=Z,1.4nm,0.8s,baz=1.2,slow=4.2,SNR=3.0
MOD Modoc 80.77 49 *e*P P 10 29 39.2 +0.6
comp=Z,4.4nm,0.6s
NEW Newport 81.07 42 P P 10 29 40.0 +0.2
NEW Newport 81.07 42 ⇑P P 10 29 39.9 +0.2
baz=81
NEW Newport 81.07 42 P P 10 29 40.0 +0.2
comp=Z,3.6nm,0.5s,baz=284,slow=5.0,SNR=15
BEKR Beckworth 81.31 51 *e*P P 10 29 42.1 +0.6
comp=Z,3.1nm,0.8s
A12A Yaak River Ran 81.79 41 ⇓P P 10 29 44.8 +1.2
baz=82
CMB Columbia Colle 81.82 53 *e*P P 10 29 44.8 +0.7
comp=Z,3.3nm,0.5s
B12A Libby 81.97 42 ⇓P P 10 29 45.9 +1.3
baz=82
BMO Blue Mountains 81.99 45 *e*P P 10 29 45.2 +0.4
comp=Z,1.9nm,0.7s
C12B Naegeli Ranch, 82.29 42 ⇑P P 10 29 47.4 +1.2
baz=82
A13A Flathead Natio 82.56 41 ⇑P P 10 29 49.1 +1.5
baz=82
D12A Red Ives Fores 82.58 43 ⇑P P 10 29 48.3 +0.5
baz=82
ARCES ARCESS Array B 82.69 342 P P 10 29 47.9 +0.1
ARCES ARCESS Array B 82.69 342 P P 10 29 47.9 +0.1
comp=Z,2.7nm,0.7s,baz=69,slow=6.9,SNR=6.8
C13A Hot Springs 82.88 42 ⇓P P 10 29 49.8 +0.5
baz=83
F12A Elk City 83.07 44 ⇓P P 10 29 51.3 +0.9
baz=83
D13A Huson 83.15 43 ⇓P P 10 29 50.7 0.0
baz=83
A14A Double T Ranch 83.16 41 ⇓P P 10 29 51.5 +0.7
baz=83
G12A Big Creek, Yel 83.23 45 ⇓P P 10 29 51.5 +0.2
baz=83
NVAR Mina Array Bea 83.27 52 P P 10 29 52.4 +0.7
NVAR pP pP 10 30 36.5 -1.8
NVAR Mina Array Bea 83.27 52 P P 10 29 52.4 +0.7
comp=Z,5.0nm,0.5s,baz=267,slow=6.1,SNR=48
NVAR pP pP 10 30 36.5 -1.8
comp=Z,1.8nm,0.7s,baz=269,slow=5.9,SNR=3.9
MFID Camas Ranch 83.46 47 ⇑P P 10 29 52.3 -0.1
baz=83,SNR=6.6
B14A Marquette Ranc 83.47 41 ⇑P P 10 29 53.4 +1.0
baz=83
E13A Victor 83.54 43 ⇓P P 10 29 53.1 +0.3
baz=83
MSO Missoula 83.57 43 ⇑P P 10 29 53.3 +0.4
baz=84
A15A Johnson Ranch, 83.58 41 ⇓P P 10 29 53.6 +0.7
baz=84
F13A Darby 83.67 44 ⇓P P 10 29 53.5 0.0
baz=84,SNR=5.8
H12A Diamond D Ranc 83.74 45 ⇓P P 10 29 54.3 +0.3
baz=84
D14A Greenough 83.76 42 ⇑P P 10 29 53.4 -0.5
baz=84
I12A Atlanta 83.81 46 ⇓P P 10 29 54.5 +0.2
baz=84,SNR=5.0
B15A Bradely Ranch, 83.93 41 ⇓P P 10 29 54.9 +0.2
baz=84,SNR=5.3
G13A Cobalt 83.97 45 ⇓P P 10 29 55.3 +0.2
baz=84,SNR=12
E14A Clinton 84.00 43 ⇓P P 10 29 55.4 +0.2
baz=84
C15A Salmond Ranch, 84.09 42 ⇑P P 10 29 55.8 +0.2
baz=84
H13A Challis 84.14 45 ⇑P P 10 29 56.5 +0.6
baz=84
HLID Hailey 84.38 46 ⇑P P 10 29 57.5 +0.3
baz=84
D15A Lincoln 84.41 42 ⇓P P 10 29 57.5 +0.3
baz=84
B16A M & M Farms, S 84.42 41 ⇑P P 10 29 57.7 +0.6
baz=84
G14A Jackson 84.44 44 ⇓P P 10 29 58.0 +0.5
baz=84
I13A Wildhorse Cree 84.46 46 ⇓P P 10 29 58.0 +0.4
baz=84
E15A Deer Lodge 84.55 43 ⇓P P 10 29 57.9 0.0
baz=84,SNR=7.7
J13A Cove Ranch, Pi 84.60 46 ⇓P P 10 29 58.6 +0.3
baz=84,SNR=5.9
C16A Fuhringer Ranc 84.62 41 ⇓P P 10 29 58.3 +0.1
baz=84,SNR=6.9
MPMC Manual Prospec 84.63 54 ⇓P P 10 29 59.1 +0.5
baz=85
H14A Leadore 84.72 45 ⇓P P 10 29 59.3 +0.4
baz=85,SNR=11
A17A Triple J Farms 84.84 40 ⇓P P 10 29 59.7 +0.4
baz=85
F15A Butte 84.86 43 ⇓P P 10 29 59.8 +0.3
baz=85,SNR=7.2
I14A Mackay 84.90 45 ⇓P P 10 30 00.7 +0.9
baz=85,SNR=5.2
MCMT McKenzie Canyo 84.99 44 *e*P P 10 30 00.9 +0.6
comp=Z,0.8nm,0.6s
B17A L&G Farms, Che 85.03 41 ⇑P P 10 30 00.7 +0.6
baz=85,SNR=15
D16A Dana Ranch, Ca 85.03 42 ⇓P P 10 30 00.5 +0.2
baz=85,SNR=5.5
J14A Carey 85.07 46 ⇑P P 10 30 01.5 +0.9
baz=85
G15A Dillon 85.10 44 ⇓P P 10 30 01.0 +0.3
baz=85,SNR=5.5
E16A East Helena 85.13 43 ⇓P P 10 30 01.2 +0.3
baz=85,SNR=7.9
H15A Lima 85.20 45 ⇑P P 10 30 01.8 +0.5
baz=85
C17A Wharram Farm, 85.30 41 ⇓P P 10 30 01.5 -0.1
baz=85,SNR=5.3
R11A Troy Canyon, C 85.31 51 ⇓P P 10 30 02.3 +0.4
baz=85
A18A Metzger Ranch, 85.37 40 ⇓P P 10 30 02.0 +0.2
baz=85,SNR=7.8
GSC Goldstone 85.41 54 ⇑P P 10 30 02.6 +0.3
baz=85
F16A Kennard Place, 85.44 43 ⇓P P 10 30 02.6 +0.2
baz=85,SNR=11
BOZ Bozeman (W) 85.49 43 ⇑P P 10 30 02.9 +0.3
baz=85,SNR=5.7
I15A Monteview 85.53 45 ⇑P P 10 30 04.0 +1.2
baz=85
D17A Six Diamond Ra 85.53 42 ⇑P P 10 30 02.7 -0.1
baz=85,SNR=6.5
G16A Moss Hill, Enn 85.53 44 ⇑P P 10 30 03.4 +0.5
baz=85,SNR=17
K14A Jones Ranch, D 85.58 47 ⇑P P 10 30 03.9 +0.8
baz=86,SNR=5.1
B18A Beasley Farm 85.62 40 ⇓P P 10 30 03.5 +0.4
baz=86,SNR=8.7
E17A Martinsdale 85.68 42 ⇑P P 10 30 04.4 +0.8
baz=86
EGMT Eagleton 85.78 41 ⇑P P 10 30 03.9 0.0
baz=86
J15A Blackfoot 85.78 46 ⇓P P 10 30 05.5 +1.4
baz=86,SNR=10
K15A Arbon 85.98 46 ⇓P P 10 30 06.1 +1.0
baz=86
F17A Fitzpatrick Pl 86.02 43 ⇑P P 10 30 05.8 +0.5
baz=86
A19A Klindworth Far 86.04 40 ⇓P P 10 30 05.7 +0.5
baz=86,SNR=7.5
H16A Russell Place, 86.09 44 ⇑P P 10 30 06.6 +0.9
baz=86
B19A Brinkman Farms 86.11 40 ⇑P P 10 30 06.0 +0.5
baz=86,SNR=9.5
G17A Pierce Place, 86.19 43 ⇓P P 10 30 07.0 +0.9
baz=86
E18A Harlowton 86.25 42 ⇑P P 10 30 06.9 +0.6
baz=86,SNR=5.4
L15A Malad City 86.33 47 ⇑P P 10 30 07.2 +0.4
baz=86
C19A Slack Wire Ran 86.33 41 ⇑P P 10 30 07.0 +0.4
baz=86
GMRC Granite Mounta 86.47 55 ⇑P P 10 30 08.2 +0.5
baz=86
BELC Bell Mtn. Jos 86.47 55 ⇑P P 10 30 07.6 -0.1
baz=86
A20A Cobblestone Ra 86.55 39 ⇑P P 10 30 08.0 +0.4
baz=86
K16A Soda Springs 86.57 46 ⇓P P 10 30 09.3 +1.3
baz=86
D19A Cripps Ranch, 86.66 41 ⇓P P 10 30 08.7 +0.5
baz=86
DUG Dugway 86.68 49 ⇑P P 10 30 09.2 +0.6
baz=87
I17A Pilgrim Ck. 86.84 45 ⇑P P 10 30 10.6 +1.3
baz=87
J17A Brown Place, J 86.96 45 ⇑P P 10 30 10.4 +0.4
baz=87
L16A Fish Haven 86.98 47 ⇓P P 10 30 10.6 +0.5
baz=87
C20A Veseth Ranch, 86.98 40 ⇓P P 10 30 10.4 +0.6
baz=87
E19A Rath Farm, Rou 87.00 42 ⇓P P 10 30 10.9 +1.0
baz=87
BC3 Big Chuckawall 87.01 56 ⇓P P 10 30 10.6 +0.3
baz=87
FINES FINESS Array B 87.07 335 P P 10 30 07.4 -2.3
FINES pP pP 10 30 57.7 +0.9
FINES FINESS Array B 87.07 335 P P 10 30 07.4 -2.3
comp=Z,1.7nm,0.4s,baz=61,slow=4.7,SNR=24
FINES pP pP 10 30 57.7 +0.9
comp=Z,1.6nm,0.6s,baz=63,slow=4.7,SNR=3.0
IRM Iron Mountain 87.08 55 ⇑P P 10 30 11.0 +0.6
baz=87
ARUT Antelope Range 87.10 51 *e*P P 10 30 11.4 +0.8
comp=Z,5.2nm,0.7s
A21A Bergtoll Ranch 87.11 39 ⇑P P 10 30 10.6 +0.3
baz=87
M16A Huntsville 87.11 47 ⇑P P 10 30 10.7 +0.1
baz=87
I18A Diamond G Ranc 87.43 45 ⇓P P 10 30 12.9 +0.7
baz=87
J18A Kendall Valley 87.48 45 ⇑P P 10 30 13.2 +0.7
baz=87
K18A Toltan Ranch, 87.69 46 ⇓P P 10 30 14.6 +1.1
baz=88
A22A Carney Farms, 87.71 39 ⇑P P 10 30 13.0 -0.1
baz=88
M17A Scullys Gap (B 87.72 47 ⇑P P 10 30 14.2 +0.6
baz=88
W13A Hualapai Mount 87.72 54 ⇑P P 10 30 14.3 +0.5
baz=88
G20A Bridger 87.87 43 ⇓P P 10 30 14.4 +0.2
baz=88
D21A La Casta Ranch 87.88 41 ⇓P P 10 30 14.1 +0.1
baz=88
BW06 Boulder Array 87.97 45 ⇓P P 10 30 14.8 0.0
baz=88
PDAR Pinedale Array 87.97 45 P P 10 30 14.5 -0.3
PDAR Pinedale Array 87.97 45 P P 10 30 14.5 -0.3
comp=Z,0.5nm,0.4s,baz=212,slow=1.2,SNR=10
L18A Fontenelle, Gr 87.98 46 ⇓P P 10 30 15.1 +0.3
baz=88
J19A Crowheart 88.11 45 ⇓P P 10 30 16.2 +0.8
baz=88
M18A Lyman 88.15 47 ⇓P P 10 30 15.9 +0.2
baz=88
Q16A Castle Valley 88.34 49 ⇓P P 10 30 17.2 +0.6
baz=88
K19A Absolon Red Bu 88.43 45 ⇑P P 10 30 16.9 0.0
baz=88
P17A Butcher Ranch, 88.43 49 ⇑P P 10 30 17.4 +0.4
baz=88
U15A North Rim 88.45 52 ⇑P P 10 30 17.9 +0.7
baz=88
I20A Worland 88.45 44 ⇓P P 10 30 17.4 +0.5
baz=88
G21A Lodge Grass 88.52 43 ⇑P P 10 30 17.6 +0.5
baz=88
N18A Larsen Ranch, 88.60 47 ⇓P P 10 30 18.1 +0.4
baz=88
C23A Lambert 88.67 40 ⇑P P 10 30 18.3 +0.6
baz=88
J20A Shoshoni 88.72 44 ⇓P P 10 30 18.6 +0.5
baz=89
SRU San Rafael 88.73 49 ⇑P P 10 30 18.9 +0.5
baz=89
K20A Yellowstone Ra 88.84 45 ⇓P P 10 30 18.9 +0.2
baz=89
H21A Big Horn, Sher 88.88 43 ⇓P P 10 30 19.6 +0.7
baz=89
D23A Lindsay 88.93 40 ⇓P P 10 30 19.4 +0.4
baz=89
Z14A Wintersburg 89.08 55 ⇓P P 10 30 20.8 +0.9
baz=89
M20A Sweetwater, Wa 89.42 46 ⇓P P 10 30 22.0 +0.5
baz=89
WUAZ Wupatki 89.48 53 ⇑P P 10 30 23.3 +1.4
baz=89
K21A Alcova 89.58 45 ⇓P P 10 30 22.5 +0.2
baz=90
P19A Cripple Cowboy 89.62 48 ⇓P P 10 30 23.3 +0.7
baz=90
Q19A Hogan Spring (89.69 49 ⇑P P 10 30 23.0 +0.2
baz=90
214A Organ Pipe Nat 89.69 56 ⇓P P 10 30 23.8 +1.0
baz=90
L21A Rawlins 89.78 46 ⇓P P 10 30 24.1 +0.8
baz=90
X16A Lo Mia Camp, P 89.84 54 ⇑P P 10 30 24.8 +1.1
baz=90
M21A Separation Pea 89.93 46 ⇑P P 10 30 24.1 0.0
baz=90
O20A White River Ci 89.94 47 ⇑P P 10 30 24.5 +0.5
baz=90
N21A Black Mountain 90.18 47 ⇑P P 10 30 25.7 +0.5
baz=90
Q20A Ridgley Place, 90.38 49 ⇑P P 10 30 26.8 +0.7
baz=90
R20A Redvale 90.64 49 ⇑P P 10 30 27.8 +0.4
baz=90
S20A Disappointment 90.80 50 ⇓P P 10 30 28.2 +0.1
baz=91
L23A Garrett 90.84 45 ⇑P P 10 30 28.5 +0.3
baz=91
X18A Snowflake 90.94 53 ⇓P P 10 30 29.7 +1.0
baz=91
Q21A Lamborn Mesa, 90.94 48 ⇑P P 10 30 29.3 +0.6
baz=91
MVCO Mesa Verde 90.95 50 ⇑P P 10 30 29.7 +0.9
baz=91
O22A Kremmling 91.11 47 ⇓P P 10 30 30.1 +0.6
baz=91
M23A Laramie 91.11 45 ⇑P P 10 30 30.1 +0.7
baz=91
R21A Cimarron 91.16 49 ⇑P P 10 30 31.0 +1.3
baz=91
P22A Eagle 91.20 47 ⇑P P 10 30 30.7 +0.8
baz=91
N23A Red Feather La 91.20 46 ⇓P P 10 30 30.9 +1.0
baz=91
S21A Coal Bank Pass 91.28 50 ⇑P P 10 30 31.1 +0.7
baz=91
Q22A Crested Butte, 91.40 48 ⇓P P 10 30 31.8 +0.8
baz=91
V20A Brimhall 91.55 51 ⇓P P 10 30 32.2 +0.7
baz=91
R22A Saguache, Gunn 91.78 49 ⇓P P 10 30 33.6 +0.9
baz=92
W20A Ramah 91.79 52 ⇑P P 10 30 33.6 +0.9
baz=92
U21A Nageezi 91.88 51 ⇓P P 10 30 33.8 +0.6
baz=92
ISCO Idaho Springs 91.91 47 ⇑P P 10 30 34.6 +1.3
baz=92
S22A 4UR Ranch, Cre 91.93 49 ⇑P P 10 30 34.4 +0.9
baz=92
P23A Jefferson 91.94 47 ⇓P P 10 30 34.5 +1.0
baz=92
X20A Quemado 92.03 53 ⇑P P 10 30 35.2 +1.4
baz=92
O24A Longmont 92.14 46 ⇓P P 10 30 35.9 +1.7
baz=92
Q23A Hartsel 92.14 48 ⇓P P 10 30 36.0 +1.6
baz=92
V21A Milan 92.16 51 ⇑P P 10 30 35.3 +0.9
baz=92
T22A Edith 92.19 50 ⇑P P 10 30 35.7 +1.1
baz=92
Y20A Horse Springs, 92.38 53 ⇓P P 10 30 36.9 +1.4
baz=92
W21A San Fidel 92.43 52 ⇓P P 10 30 36.8 +1.1
baz=92
U22A Llaves 92.49 50 ⇑P P 10 30 37.4 +1.5
baz=92
Z20A Nine Sixteen R 92.54 54 ⇑P P 10 30 37.9 +1.7
baz=92
120A U Bar Ranch, L 92.73 55 ⇑P P 10 30 38.0 +1.0
baz=93
NOA NORSAR Array B 92.77 340 P P 10 30 35.8 -0.6
NOA NORSAR Array B 92.77 340 P P 10 30 35.8 -0.6
comp=Z,0.2nm,0.4s,baz=49,slow=4.7,SNR=2.8
U23A El Rito 93.00 50 ⇑P P 10 30 39.1 +0.9
baz=93
Z21A St. Cloud Mine 93.16 53 ⇑P P 10 30 40.8 +1.8
baz=93
ANMO Albuquerque 93.39 52 P P 10 30 40.4 +0.3
ANMO pP pP 10 31 25.9 -1.5
ANMO Albuquerque 93.39 52 P P 10 30 40.4 +0.3
comp=Z,0.8nm,0.8s,baz=220,slow=3.1,SNR=4.2
ANMO pP pP 10 31 25.9 -1.5
comp=Z,1.4nm,1.0s,baz=275,slow=4.8,SNR=4.1
Z22A Elephant Butte 93.72 53 ⇑P P 10 30 42.8 +1.2
baz=94
V24A Rampart Ranch, 93.93 50 ⇑P P 10 30 43.3 +0.7
baz=94
W24A Lazy 6 Ranch, 94.06 51 ⇑P P 10 30 43.7 +0.6
baz=94
BRTR Keskin Array B 94.25 314 P P 10 30 42.3 -1.6
BRTR Keskin Array B 94.25 314 P P 10 30 42.3 -1.6
comp=Z,0.6nm,0.4s,baz=2.9,slow=8.7,SNR=3.0
Z24A Sheeppen Canyo 94.90 53 ⇑P P 10 30 47.6 +0.6
baz=95
X25A Clemmons Ranch 94.91 51 ⇑P P 10 30 47.0 0.0
baz=95
224A Cornudas Mount 95.32 54 ⇑P P 10 30 49.8 +0.9
baz=95
MNTX Cornudas Mount 95.59 54 ⇑P P 10 30 50.8 +0.8
baz=96
TXAR Lajitas Array 97.95 56 P Pdif 10 31 01.7 +0.9
TXAR Lajitas Array 97.95 56 P Pdif 10 31 01.7 +0.9
comp=Z,0.3nm,0.7s,baz=298,slow=4.0,SNR=3.1
TORD Torodi Ar. Bea 132.59 309 PKP **PKPdf** 10 36 37.4 -1.4
TORD SKPbc **SKPbc** 10 39 46.3 -1.8
TORD Torodi Ar. Bea 132.59 309 PKP **PKPdf** 10 36 37.4 -1.4
comp=Z,0.3nm,0.5s,baz=55,slow=2.0,SNR=3.4
TORD SKPbc **SKPbc** 10 39 46.3 -1.8
comp=Z,0.9nm,0.7s,baz=29,slow=2.9,SNR=6.8
PLCA Paso Flores 141.86 133 PKPpre PKPpre 10 36 51.4
PLCA Paso Flores 141.86 133 PKhKP PKPpre 10 36 51.4
comp=Z,1.0nm,0.7s,baz=226,slow=4.1,SNR=3.2
LPAZ La Paz 147.67 91 *e*PKPdf **PKPdf** 10 37 08.0 +1.4
LPAZ *e*PKPbc **PKiKP** 10 37 10.9 -0.6

LPAZ				*e*PKPab	**PKPab**	**10 37 13.5**	**+1.1**
LPAZ	**La Paz**	**147.67**	**91**	PKPbc	**PKPdf**	**10 37 07.8**	**+1.2**
	comp=Z,2.0nm,0.5s,baz=355,slow=7.6,SNR=6.0						
SAML	**Samuel**	**150.43**	**75**	*e*PKPdf	**PKPdf**	**10 37 11.1**	**+0.8**
SAML				*e*PKPbc	**PKPbc**	**10 37 16.1**	**+0.3**
SAML				*e*PKPab	**PKPab**	**10 37 21.4**	**-1.5**

MEX 14 10:23:21.4±0.3, 18°25N×103°23W, h16km±7km, MD3.5, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.12**	**289**	*i* P	Pg	10 23 24.2	-0.8
MMIG				*e*S	Sg	10 23 26.6	-0.8
R15V		**1.16**	**322**	*i* P	Pn	10 23 40.1	-3.0
R15V				*e*S	Sb	10 23 52.8	-5.3
EZ5V		**1.27**	**344**	*i* P	Pn	10 23 41.5	-3.5
EZ5V				*e*S	Sb	10 23 56.2	-5.6
ZIIG	**Zihuatanejo**	**1.79**	**111**	*i* P	Pn	10 23 48.3	-3.4
ZIIG				*e*S	Sn	10 24 09.2	-5.0
ARIG	**Puente Sto Nin**	**2.74**	**89**	*i* P	Pn	10 24 01.5	-3.2
ARIG				*e*S	Sn	10 24 33.5	-4.0

KRSC 14 10:38:29.3±2.5, 48°62N×157°39E, h10km±10km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**3.88**	**10**	P	Pn	10 39 31.0	+2.0
RUS				*i* S	Sn	10 40 16.1	+1.5
MTVR	**Mutnovka**	**3.90**	**7**	P	Pn	10 39 31.4	+2.0
MTVR				*i* S	Sn	10 40 16.6	+1.2
UGLR	**Uglovaya**	**4.68**	**11**	P	Pn	10 39 43.0	+2.8
SDLR	**Sedlovina**	**4.76**	**11**	P	Pn	10 39 43.4	+2.2
GNL	**Ganaly**	**5.09**	**4**	P	Pn	10 39 47.8	+2.0

*IDC **14** 10:41:32.2±0.9, 31°32S×176°73W, h0km, mb4.0/6, mb1 4.2/8, mb1mx4.0/20, mbtmp4.0/8, ML3.7/2, MS3.8/12, Ms1 3.9/12, ms1mx3.6/25, Error ellipse: s-maj=36.3km s-min=22.6km az=160.0*

*ISCJB **14** 10:41:33.1±1.0, 31°61S±0°07×176°6W±0°2, h33km, mb3.9/6, MS4.0/11, Error ellipse: s-maj=22.2km s-min=7.3km az=19.7*

ISC 14 10:41:36.7±0.8, 31°50S±0°10×176°7W±0°1, h35km, n40, σ1§73/32, mb4.0/6, MS4.0/11, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**7.30**	**213**	PN	**Pn**	**10 43 20.6**	**-0.3**
MXZ				SN	**Sn**	**10 44 44.4**	**+1.9**
PUZ	**Puketiti**	**7.75**	**211**	PN	**Pn**	**10 43 25.7**	**-1.3**
PUZ				SN	**Sn**	**10 44 54.8**	**+1.4**
CNGZ	**Carnagh Statio**	**8.11**	**209**	PN	**Pn**	**10 43 31.1**	**-0.8**
MWZ	**Matawai**	**8.29**	**213**	PN	**Pn**	**10 43 33.2**	**-1.3**
MWZ				SN	**Sn**	**10 45 08.1**	**+1.3**
URZ	**Urewera**	**8.43**	**215**	PN	**Pn**	**10 43 36.2**	**-0.1**
URZ				SN	**Sn**	**10 45 10.8**	**+0.7**
URZ	**Urewera**	**8.43**	**215**	**Pn**	**Pn**	**10 43 35.6**	**-0.7**
	1.3nm,0.3s,baz=60,slow=22,SNR=12						
URZ				Sn	**Sn**	**10 45 10.2**	**0.0**
	4.0nm,0.3s,baz=258,slow=21,SNR=11						
KNZ	**Kokohu**	**8.79**	**210**	PN	**Pn**	**10 43 39.6**	**-1.5**
MHGZ	**Mahia Peninsul**	**8.80**	**208**	PN	**Pn**	**10 43 39.9**	**-1.5**
BKZ	**Black Stump Fm**	**9.44**	**214**	PN	**Pn**	**10 43 48.5**	**-1.7**
KAHZ	**Kahuranaki**	**9.77**	**210**	PN	**Pn**	**10 43 52.1**	**-2.6**
PXZ	**Pawanui**	**9.98**	**210**	PN	**Pn**	**10 43 54.7**	**-2.8**
PXZ				SN	**Sn**	**10 45 45.9**	**-2.3**
MRZ	**Mangatainoka R**	**11.05**	**212**	PN	Pn	10 44 08.8	-3.4
KIW	**Kapiti Island**	**11.52**	**213**	PN	Pn	10 44 15.3	-3.4
RPZ	**Rata Peaks**	**15.55**	**215**	Pn	**Pn**	**10 45 10.8**	**-2.4**
	2.1nm,0.3s,baz=60,slow=6.7,SNR=10.0						
RPZ				Sn	Sn	10 47 53.7	-11
	0.6nm,0.3s,baz=18,slow=20,SNR=5.3						
DZM	**Mont Dzumac**	**17.69**	**298**	*e*LR	LR	10 49 05.3	
	764nm,28.2s						
DZM	**Mont Dzumac**	**17.69**	**298**	P	**Pn**	**10 45 37.8**	**-2.6**
	0.1nm,0.3s,baz=94,slow=15,SNR=2.4						
DZM				LR	LR	10 50 13.1	
	comp=Z,131nm,20.9s,baz=197,slow=30						
AFI	**Afiamalu**	**18.09**	**16**	P	Pn	10 45 36.4	-8.9
	1.2nm,0.3s,baz=248,slow=5.4,SNR=2.3						
TBI	**Tubuai**	**25.49**	**78**	*e*LR	LR	10 53 05.3	
	238nm,28.5s						
PPT2	**Papeete2**	**28.23**	**67**	*e*LR	LR	10 54 14.0	
	143nm,25.8s						
CTA	**Charters Tower**	**35.05**	**280**	P	**P**	**10 48 27.9**	**+1.5**
	2.8nm,0.6s,baz=102,slow=11,SNR=3.0						
STKA	**Stephens Creek**	**35.30**	**258**	P	**P**	**10 48 30.6**	**+2.1**
	1.0nm,0.4s,baz=102,slow=9.1,SNR=5.0						
STKA				LR	LR	10 59 32.9	
	comp=Z,130nm,19.9s,baz=29,slow=31						
ASAR	**Alice Springs**	**44.14**	**267**	P	**P**	**10 49 42.1**	**+0.1**
	1.0nm,0.7s,baz=105,slow=7.3,SNR=15						
ASAR				LR	LR	11 06 39.9	
	comp=Z,89nm,20.1s,baz=144,slow=34						
FITZ	**Fitzroy Crossi**	**53.44**	**270**	LR	LR	11 12 44.8	
	comp=Z,75nm,19.1s,baz=138,slow=35						
KAPI	**Kappang**	**64.87**	**280**	LR	LR	11 16 16.4	
	comp=Z,102nm,19.5s,baz=240,slow=32						
PLCA	**Paso Flores**	**80.97**	**132**	LR	LR	11 23 10.7	
	comp=Z,162nm,19.5s,baz=185,slow=31						
KSRS	**Korea Array**	**85.88**	**319**	LR	LR	11 28 28.7	
	comp=Z,31nm,18.7s,baz=31,slow=33						
NVAR	**Mina Array Bea**	**88.31**	**42**	P	**P**	**10 54 25.5**	**+0.7**
	0.5nm,0.5s,baz=224,slow=7.0,SNR=6.0						
NVAR				LR	LR	11 27 13.1	
	comp=Z,69nm,21.0s,baz=84,slow=31						
TXAR	**Lajitas Array**	**92.07**	**57**	P	**P**	**10 54 43.0**	**+0.6**
	0.3nm,0.7s,baz=206,slow=8.3,SNR=3.7						
TXAR				LR	LR	11 30 18.9	
	comp=Z,51nm,18.6s,baz=5.0,slow=32						
CMAR	**Chiang Mai Arr**	**94.78**	**289**	LR	LR	11 33 16.3	
	comp=Z,52nm,18.8s,baz=70,slow=33						
LPAZ	**La Paz**	**96.71**	**114**	LR	LR	11 29 56.9	
	comp=Z,41nm,21.2s,baz=211,slow=30						
CPUP	**Villa Florida**	**98.46**	**128**	LR	LR	11 33 00.2	
	comp=Z,70nm,18.9s,baz=2.5,slow=31						
ILAR	**Eielson Array**	**98.75**	**12**	P	**P**	**10 55 11.6**	**-0.3**
	0.2nm,0.7s,baz=216,slow=5.6,SNR=4.2						
YKA	**Yellowknife Ar**	**105.97**	**25**	PKiKP	**PKiKP**	**10 59 56.5**	**+0.5**
	0.1nm,0.6s,baz=266,slow=1.6,SNR=4.7						
KEV	**Kevo**	**139.42**	**348**	*e*pkp	**PKPdf**	**11 00 54.6**	**-4.7**
ARCES	**ARCESS Array B**	**139.88**	**348**	PKhKP	PKPpre	11 00 56.1	
	4.3nm,1.0s,baz=46,slow=3.0,SNR=2.8						
JOF	**Joensuu**	**143.83**	**339**	*e*pkp	PKPdf	11 01 22.1	+15
	1.6nm,0.6s						
KAF	**Kangasniemi**	**145.94**	**341**	*e*pkp	**PKPdf**	**11 01 10.7**	**-0.3**
FINES	**FINESS Array B**	**146.54**	**340**	PKPbc	**PKPbc**	**11 01 13.5**	**-0.1**
	2.7nm,0.7s,baz=64,slow=4.4,SNR=7.0						
AKASG	**Malin Array Be**	**152.82**	**322**	PKPbc	**PKPbc**	**11 01 30.3**	**+0.8**
	0.2nm,0.4s,baz=54,slow=4.7,SNR=3.0						
AKASG				PKPab	**PKPab**	**11 01 40.0**	**-0.6**
	1.4nm,0.6s,baz=48,slow=4.7,SNR=5.4						
TORD	**Torodi Ar. Bea**	**161.68**	**175**	PKPab	**PKPab**	**11 02 21.4**	**+1.9**
	0.7nm,0.6s,baz=190,slow=3.9,SNR=8.4						

*ISCJB **14** 10:44:44.0±0.8, 23°43S±0°07×66°67W±0°07, h201km, mb3.3/1, Error ellipse: s-maj=11.1km s-min=8.0km az=29.4*

*GUC **14** 10:44:46.0±0.5, 23°40S×67°07W, h230km, ML3.9*

*IDC **14** 10:44:47.1±5.1, 23°18S×66°41W, h207km±29km, mb3.1/2, mb1 3.2/4, mb1mx3.1/17, mbtmp3.0/4, Error ellipse: s-maj=90.1km s-min=22.4km az=49.0*

ISC 14 10:44:44.8±1.0, 23°39S±0°09×66°67W±0°08, h201km, n10, σ1§20/14, 3C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.83**	**293**	⇑*i*P	Pn	10 45 39.5	+7.0
PB04				*i* S	S	10 46 20.7	+12
PB04				AML	AML	10 46 24.3	
	comp=N,142nm,0.4s						
PB09	**Plate Boundary**	**2.86**	**303**	⇑*i*P	**Pn**	**10 45 34.7**	**+1.6**
PB09				*i* S	**S**	**10 46 11.8**	**+1.7**
PB09				AML	AML	10 46 19.3	
	comp=E,223nm,0.4s						
ANCH	**Antofagasta**	**3.45**	**264**	⇑*i*P	**Pn**	**10 45 40.1**	**+0.3**
ANCH				*i* S	**S**	**10 46 21.5**	**-0.8**
PB01	**Plate Boundary**	**3.50**	**311**	*i* P	**Pn**	**10 45 41.3**	**+0.6**
PB01				*i* S	**S**	**10 46 24.1**	**+0.4**
PSGC	**Pisagua**	**4.96**	**319**	⇓*i*P	**Pn**	**10 45 57.8**	**-1.0**
PSGC				*i* S	**S**	**10 46 54.7**	**-2.0**
LPAZ	**La Paz**	**7.19**	**349**	P	**Pn**	**10 46 29.9**	**+1.6**
	comp=E,0.5nm,0.3s,baz=160,slow=11,SNR=13						
LPAZ				S	**S**	**10 47 48.9**	**-1.2**
	comp=E,0.1nm,0.3s,baz=290,slow=18,SNR=3.5						
CPUP	**Villa Florida**	**8.97**	**111**	P	**Pn**	**10 46 50.5**	**-0.2**
	comp=E,0.2nm,0.3s,baz=256,slow=17,SNR=3.2						
TORD	**Torodi Ar. Bea**	**76.06**	**69**	P	**P**	**10 56 10.7**	**0.0**
	comp=E,0.4nm,0.5s,baz=254,slow=4.8,SNR=8.4						
YKA	**Yellowknife Ar**	**93.66**	**340**	P	**P**	**10 57 37.6**	**-0.2**
	comp=E,0.1nm,0.5s,baz=136,slow=4.7,SNR=4.1						
MKAR	**Makanchi Array**	**145.86**	**39**	PKPbc	**PKPab**	**11 04 01.1**	**-0.1**
	comp=E,0.4nm,0.8s,baz=301,slow=4.1,SNR=3.9						

MEX 14 10:46:09.6±0.5, 16°00N×95°92W, h59km±7km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.29**	**219**	*i* P	Pn	10 46 18.4	-1.2
HUIG				*i* S	Sn	10 46 24.8	-1.9
VHO	**Vista Hermosa**	**1.32**	**324**	*i* P	Pn	10 46 30.0	-2.2
VHO				*i* S	Sn	10 46 47.2	-1.9
CMIG	**Matias Romero**	**1.47**	**42**	*e*P	Pn	10 46 33.2	-0.7
CMIG				*i* S	Sn	10 46 49.5	-2.7
PNIG	**Pinotepa**	**2.16**	**281**	*i* P	Pn	10 46 42.2	-1.1
PNIG				*i* S	Sn	10 47 06.3	-2.7
UTMO	**Huajuapan**	**2.56**	**316**	*i* P	Pn	10 46 47.0	-2.1
UTMO				*e*S	Sn	10 47 17.2	-2.1

IDC 14 10:49:44.5±1.3, 6°59S×151°00E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/17, mbtmp3.6/5, Error ellipse: s-maj=68.9km s-min=24.0km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.72**	**233**	Sn	Sn	10 51 54.6	+2.1
	0.7nm,0.3s,baz=115,slow=17,SNR=3.1						
ASAR	**Alice Springs**	**23.62**	**222**	P	P	10 54 57.2	-0.3
	0.5nm,0.8s,baz=55,slow=9.5,SNR=7.6						
STKA	**Stephens Creek**	**26.64**	**198**	P	P	10 55 24.9	-0.1
	1.2nm,0.6s,baz=0.0,slow=15,SNR=2.7						
FITZ	**Fitzroy Crossi**	**27.24**	**243**	P	P	10 55 30.8	+0.3
	0.6nm,0.4s,baz=60,slow=12,SNR=3.2						
ILAR	**Eielson Array**	**84.49**	**22**	P	P	11 02 17.9	-1.1
	0.3nm,0.7s,baz=249,slow=5.7,SNR=6.0						
YKA	**Yellowknife Ar**	**97.84**	**28**	P	Pdif	11 03 23.1	+1.3
	0.0nm,0.3s,baz=268,slow=4.9,SNR=3.2						
TORD	**Torodi Ar. Bea**	**149.09**	**285**	PKPbc	PKPbc	11 09 35.3	-0.6
	0.2nm,0.6s,baz=91,slow=2.4,SNR=2.4						

*ISCJB **14** 11:05:40.1±0.5, 42°69N±0°04×143°29E±0°05, h119km±3km, mb3.5/7, Error ellipse: s-maj=7.5km s-min=5.0km az=148.7*

*IDC **14** 11:05:41.4±2.2, 42°68N×143°38E, h120km±15km, mb3.2/7, mb1 3.3/9, mb1mx3.2/26, mbtmp3.2/9, Error ellipse: s-maj=33.0km s-min=20.5km az=148.0*

*JMA **14** 11:05:42.0±0.1, 42°71N×143°27E, h105km±1km, M3.1*

ISC 14 11:05:41.0±0.8, 42°69N±0°05×143°30E±0°04, h115km±6km, n27, σ0§61/43, mb3.6/7, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCH	**Churui**	**0.09**	**146**	P	**Pn**	**11 05 56.6**	**-0.2**
JCH				*e*S	**Sn**	**11 06 07.3**	**-1.3**
JOB	**Onbets**	**0.45**	**61**	P	**Pn**	**11 05 58.5**	**+0.5**
JOB				*e*S	**Sn**	**11 06 11.1**	**+0.2**
JNBK	**Urakawa-nobuka**	**0.57**	**225**	P	**Pn**	**11 05 59.6**	**+0.8**
JNBK				*e*S	**Sn**	**11 06 12.9**	**+0.6**
JEM	**Erimo**	**0.68**	**189**	P	**Pn**	**11 06 00.5**	**+0.9**
JEM				*e*S	**Sn**	**11 06 14.6**	**+1.0**
JBT2	**Biratori 2**	**0.69**	**278**	P	**Pn**	**11 05 59.8**	**0.0**
JBT2				*e*S	**Sn**	**11 06 13.6**	**-0.3**
JAR	**Ashorobuto**	**0.70**	**29**	P	**Pn**	**11 05 59.9**	**+0.1**
JAR				*e*S	**Sn**	**11 06 13.5**	**-0.6**
JFR	**Furan**	**0.70**	**313**	P	**Pn**	**11 05 59.5**	**-0.4**
JFR				*e*S	**Sn**	**11 06 13.2**	**-0.9**
JAK	**Akkeshi**	**1.07**	**73**	P	**Pn**	**11 06 03.3**	**0.0**
JAK				*e*S	**Sn**	**11 06 20.0**	**-0.2**
JAB	**Ashibetsu**	**1.14**	**317**	P	**Pn**	**11 06 04.2**	**+0.2**
JAB				*e*S	**Sn**	**11 06 21.8**	**+0.4**
JKK2	**Kamakawa 2**	**1.25**	**342**	P	**Pn**	**11 06 05.5**	**+0.2**
JMP	**Maruseppu**	**1.32**	**2**	P	**Pn**	**11 06 06.3**	**+0.3**
JMP				*e*S	**Sn**	**11 06 25.2**	**+0.1**
JTKR	**Abashiri--Toko**	**1.36**	**19**	P	**Pn**	**11 06 06.6**	**+0.2**
JTKR				*e*S	**Sn**	**11 06 25.5**	**-0.3**
JEW	**Eniwo**	**1.37**	**277**	P	**Pn**	**11 06 06.8**	**+0.3**
JEW				*e*S	**Sn**	**11 06 25.9**	**0.0**
JNK	**Nakash**	**1.38**	**49**	P	**Pn**	**11 06 06.6**	**0.0**
JNK				*e*S	**Sn**	**11 06 25.6**	**-0.5**
ASAJ	**Asahikawa**	**1.52**	**341**	P	**Pn**	**11 06 09.1**	**+0.8**
	41nm,0.3s,baz=185,slow=12,SNR=389						
JHR	**Hokuryu**	**1.56**	**313**	P	**Pn**	**11 06 09.3**	**+0.5**
JHR				*e*S	**Sn**	**11 06 30.7**	**+0.7**
JRA	**Rausu**	**1.83**	**46**	P	**Pn**	**11 06 12.7**	**+0.7**
JRA				*e*S	**Sn**	**11 06 36.5**	**+0.8**
JKB	**Kayabe**	**1.86**	**245**	P	**Pn**	**11 06 12.0**	**-0.4**
JKB				*e*S	**Sn**	**11 06 34.7**	**-1.7**
MJAR	**Matsushiro Arr**	**7.28**	**214**	P	**Pn**	**11 07 25.4**	**+0.7**
	0.5nm,0.3s,baz=27,slow=13,SNR=6.9						
PETK	**Petropavlovsk-**	**14.19**	**38**	P	**Pn**	**11 08 56.1**	**-0.3**
	0.2nm,0.3s,baz=206,slow=13,SNR=2.1						
SONM	**Songino Array**	**26.31**	**294**	P	**P**	**11 11 06.8**	**+1.0**
	0.5nm,0.4s,baz=74,slow=8.1,SNR=5.3						
ZALV	**Zalesovo Beam**	**39.40**	**307**	P	**P**	**11 12 59.6**	**+0.5**
	1.0nm,0.4s,baz=76,slow=8.3,SNR=6.9						
MKAR	**Makanchi Array**	**42.58**	**297**	P	**P**	**11 13 25.2**	**-0.1**
	0.5nm,0.5s,baz=80,slow=9.9,SNR=5.1						
ILAR	**Eielson Array**	**44.00**	**35**	P	**P**	**11 13 36.2**	**-0.3**
	0.2nm,0.5s,baz=263,slow=5.7,SNR=6.0						
YKA	**Yellowknife Ar**	**58.23**	**32**	P	**P**	**11 15 22.4**	**-0.3**
	0.2nm,0.9s,baz=307,slow=6.5,SNR=3.5						
FINES	**FINESS Array B**	**64.51**	**332**	P	**P**	**11 16 04.8**	**-0.2**
	0.7nm,0.5s,baz=78,slow=7.3,SNR=4.6						
HFS	**Hagfors**	**69.54**	**336**	P	**P**	**11 16 36.5**	**-0.3**
	0.5nm,0.4s,baz=46,slow=4.3,SNR=4.8						

*IDC **14** 11:26:03.3±2.4, 38°25N×71°42E, h0km, mb3.7/5, mb1 3.7/8, mb1mx3.5/29, mbtmp3.5/8, ML3.2/3, Error ellipse: s-maj=53.6km s-min=16.3km az=141.0*

*ISCJB **14** 11:26:05.9±1.1, 38°12N±0°09×71°4E±0°1, h33km, mb3.6/5, Error ellipse: s-maj=15.7km s-min=9.2km az=137.0*

*NNC **14** 11:26:09.2±2.0, 38°46N×71°44E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=15.7km s-min=11.9km az=177.0*

ISC 14 11:26:07.7±1.5, 38°1N±0°1×71°4E±0°1, h35km, n14, σ1§25/17, mb3.4/5, 5C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.05**	**353**	⇓Pn	**Pn**	**11 27 20.3**	**-0.7**
	1.3nm,0.4s,baz=179,slow=14,SNR=19						
KK31				⇓Sn	**Sn**	**11 28 17.9**	**-0.2**
	1.4nm,0.3s,baz=173,slow=16,SNR=4.1						
KK31				⇓Lg	Lg	11 28 37.1	
	3.0nm,0.5s,baz=163,slow=28,SNR=3.6						
AAK	**Ala-Archa**	**5.11**	**27**	Pn	**Pn**	**11 27 22.6**	**+0.6**
	0.8nm,0.3s,baz=184,slow=9.8,SNR=7.8						
AAK				Sn	**Sn**	**11 28 22.7**	**+2.9**
	0.3nm,0.3s,baz=126,slow=19,SNR=3.7						
TKM2	**Tokmak 2**	**5.79**	**32**	⇑Pn	**Pn**	**11 27 32.4**	**+1.1**
	2.6nm,0.8s						
TKM2				⇑Sn	**Sn**	**11 28 37.0**	**+0.6**
	2.4nm,0.6s						
TKM2				⇑Lg	Lg	11 29 00.9	
	4.5nm,0.8s						
MKAR	**Makanchi Array**	**11.83**	**39**	Pn	**Pn**	**11 28 53.6**	**-0.3**
	0.1nm,0.3s,baz=221,slow=13,SNR=8.8						
AB31	**Akbulak array**	**13.88**	**327**	⇑P	**Pn**	**11 29 23.6**	**+1.7**
	0.4nm,0.5s,baz=151,slow=11,SNR=5.3						
BVAR	**Borovoye Array**	**14.95**	**358**	Pn	**Pn**	**11 29 34.4**	**-1.9**
	0.2nm,0.3s,baz=172,slow=12,SNR=3.5						
AKTO	**Aktyubinsk**	**15.60**	**327**	⇑P	**P**	**11 29 47.5**	**-1.1**
	0.9nm,1.6s						
AKTO	**Aktyubinsk**	**15.60**	**327**	Pn	**Pn**	**11 29 44.9**	**+0.1**
	0.1nm,0.3s,baz=125,slow=16,SNR=4.9						
ZALV	**Zalesovo Beam**	**18.34**	**26**	P	**P**	**11 30 17.5**	**-1.4**
	0.1nm,0.3s,baz=220,slow=8.8,SNR=5.5						
FINES	**FINESS Array B**	**36.36**	**325**	P	**P**	**11 33 07.9**	**-0.1**
	0.6nm,0.4s,baz=102,slow=10,SNR=5.6						
ARCES	**ARCESS Array B**	**39.80**	**337**	P	**P**	**11 33 36.7**	**-0.3**
	10nm,1.2s,baz=102,slow=8.4,SNR=5.8						
NOA	**NORSAR Array B**	**43.31**	**322**	P	**P**	**11 34 05.5**	**-0.4**
	0.5nm,0.7s,baz=93,slow=8.1,SNR=2.7						
TORD	**Torodi Ar. Bea**	**66.08**	**268**	P	**P**	**11 36 52.3**	**+0.8**
	0.2nm,0.8s,baz=49,slow=5.4,SNR=4.6						
YKA	**Yellowknife Ar**	**79.64**	**3**	P	**P**	**11 38 11.2**	**+0.2**
	0.2nm,0.8s,baz=352,slow=5.6,SNR=5.1						

*AUST **14** 11:55:35.3, 6°49N×117°98E, h100km*

*ISCJB **14** 11:56:51.0±0.5, 0°08S±0°05×123°79E±0°06, h110km, mb3.7/7, Error ellipse: s-maj=8.7km s-min=7.5km az=21.8*

*DJA **14** 11:56:54.3±0.6, 0°S±6°×12°4E±°, h59km±17km, M4.4/9, mb4.7/3, mB5.2/1, MLv4.3/9, Mw(mB)4.5/1*

*IDC **14** 11:56:59.0±4.9, 0°02S×123°97E, h180km±48km, mb3.3/7, mb1 3.4/7, mb1mx3.2/22, mbtmp3.3/7, Error ellipse: s-maj=42.6km s-min=12.9km az=67.0*

ISC 14 11:56:52.0±0.6, 0°12S±0°06×123°79E±0°06, h110km, n26, σ1§12/26, mb3.6/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.71**	**15**	P	**Pn**	**11 57 10.8**	**+0.3**
LUWI	**Luwuk**	**1.37**	**228**	P	**Pn**	**11 57 16.6**	**-0.7**
MNI	**Manado**	**1.87**	**34**	P	**Pn**	**11 57 24.1**	**+0.7**
MRSI	**Marisa**	**1.94**	**288**	P	**Pn**	**11 57 25.2**	**+0.9**
LBMI	**Labuha**	**3.74**	**98**	P	**Pn**	**11 57 49.6**	**+1.7**
KDI	**Kendari**	**3.99**	**197**	P	**Pn**	**11 57 51.2**	**-0.1**
TTSI	**Tana Toraja**	**4.92**	**234**	P	**Pn**	**11 58 04.6**	**+0.8**
SPSI	**Sidrap Palu**	**5.55**	**226**	P	**Pn**	**11 58 13.8**	**+1.5**
	142nm,0.6s,2µm						
KAPI	**Kappang**	**6.32**	**220**	P	**Pn**	**11 58 24.1**	**+1.3**
	31nm,0.5s,0.2nm						
BKSI	**Bulukumba**	**6.34**	**215**	P	**Pn**	**11 58 25.0**	**+2.0**
WSI	**Waingapu**	**10.11**	**200**	S	Sn	12 01 56.5	+51
	baz=16,SNR=4.8						
TGY	**Tagaytay City**	**14.41**	**349**	P	**P**	**12 00 16.0**	**+1.4**
	86nm,0.3s,baz=186,slow=10,SNR=3.1						
MTN	**Manton Dam**	**14.59**	**150**	P	**P**	**12 00 15.1**	**-1.4**
	baz=23,SNR=3.7						
FITZ	**Fitzroy Crossi**	**17.96**	**174**	P	**P**	**12 00 53.8**	**0.0**
	baz=26,SNR=3.5						
COEN	**Coen**	**23.61**	**126**	P	**P**	**12 01 53.5**	**+0.3**
	baz=32,SNR=6.8						
ASAR	**Alice Springs**	**25.38**	**158**	P	**P**	**12 02 09.8**	**+0.6**
	0.8nm,0.4s,baz=345,slow=15,SNR=15						
ASAR				PcP	**PcP**	**12 05 38.5**	**-0.5**
	0.6nm,0.6s,baz=347,slow=2.1,SNR=10						
QIS	**Mount Isa**	**25.53**	**144**	P	**P**	**12 02 11.0**	**+0.4**
	baz=34,SNR=9.6						
CMAR	**Chiang Mai Arr**	**30.61**	**308**	P	**P**	**12 02 57.5**	**+1.6**
	0.3nm,0.4s,baz=137,slow=8.1,SNR=3.4						
STKA	**Stephens Creek**	**35.80**	**154**	P	**P**	**12 03 41.0**	**+0.2**
	2.3nm,0.5s,baz=319,slow=10,SNR=15						
STKA	**Stephens Creek**	**35.80**	**154**	P	**P**	**12 03 40.4**	**-0.4**
	baz=44,SNR=6.1						
CMSA	**Cobar Meteorol**	**37.50**	**148**	P	**P**	**12 03 56.3**	**+1.0**
	baz=46,SNR=10						
MJAR	**Matsushiro Arr**	**38.85**	**19**	P	**P**	**12 04 05.4**	**-1.1**
	0.4nm,0.3s,baz=201,slow=9.1,SNR=4.2						
SONM	**Songino Array**	**50.10**	**345**	P	**P**	**12 05 35.0**	**-1.0**
	0.3nm,0.6s,baz=172,slow=6.9,SNR=3.6						
MKAR	**Makanchi Array**	**59.13**	**328**	P	**P**	**12 06 40.5**	**-0.6**
	0.4nm,0.4s,baz=125,slow=8.8,SNR=7.8						
KURBB	**Kurchatov Arra**	**63.46**	**330**	P	**P**	**12 07 09.3**	**-0.9**
	0.3nm,0.4s,baz=131,slow=6.5,SNR=6.0						
TORD	**Torodi Ar. Bea**	**121.20**	**285**	PKP	**PKPdf**	**12 15 31.3**	**-1.8**
	0.3nm,0.8s,baz=68,slow=1.7,SNR=3.2						

*ISCJB **14** 12:15:41.4±0.5, 38°77N±0°04×22°97E±0°03, h10km±6km, Error ellipse: s-maj=6.0km s-min=4.6km az=7.0*

*CSEM **14** 12:15:41.5±0.1, 38°76N×22°96E, h5km, ML1.6/4, Error ellipse: s-maj=2.6km s-min=2.4km az=143.0*

*ATH **14** 12:15:41.4, 38°79N×22°98E, h5km±4km, MD2.8/4*

*THE **14** 12:15:41.7, 38°77N×22°97E, h9km±2km, ML1.6/4, Error ellipse: s-maj=2.3km s-min=0.6km az=150.0*

**ISC 14 12:15:41.3±0.9, 38°76N±0°03×22°98E±0°03, h13km±5km, n20, σ0§38/35,

PCI	**Palu**	**11.59**	**297**	P	Pn	12 21 31.0	-4.9
	baz=11,SNR=5.5						
PCI				S	Sn	12 23 22.9	-21
	baz=11,SNR=7.2						
FITZ	**Fitzroy Crossi**	**12.64**	**200**	P	**Pn**	**12 21 50.9**	**+1.5**
	baz=13,SNR=12						
FITZ				S	Sn	12 24 02.6	-6.6
	baz=13,SNR=4.0						
COEN	**Coen**	**14.92**	**122**	P	**P**	**12 22 22.0**	**+1.6**
	baz=15,SNR=9.9						

CASC 14 12:22:17.9±2.1, 14°06'×89°81'W, h6km±6km, MD3.7, ML3.1, 1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RBDL	**Robledal**	**0.13**	**66**	*e*P	Pg	12 22 21.5	+0.6
RTR	**El Retiro**	**0.23**	**136**	*e*P	Pg	12 22 23.2	+0.6
SNJE	**San Jose**	**0.27**	**134**	*e*P	Pg	12 22 23.9	+0.3
SBLS	**San Blas**	**0.28**	**141**	*e*P	Pg	12 22 24.0	+0.2
MTO2	**Montecristo 2**	**0.55**	**52**	*e*P	Pg	12 22 28.8	0.0
MTO2				*e*S	Sg	12 22 36.8	+0.6
BOQS	**Boqueron**	**0.61**	**122**	*e*P	Pg	12 22 30.2	+0.3
BOQS				*e*S	Sb	12 22 39.3	-0.9
SNET	**Serv Nac Est T**	**0.67**	**124**	⇓*e*P	Pg	12 22 31.5	+0.6
SNET				*e*S	Sb	12 22 41.0	-0.8
SNET				AML	AML	12 22 43.9	
	comp=Z,779nm,0.3s						
NBG	**Las Nubes**	**0.74**	**315**	*e*P	Pb	12 22 33.2	-0.3
NBG				*e*S	Sb	12 22 43.3	-0.9
LFU	**La Fuente**	**0.74**	**115**	*e*P	Pg	12 22 32.6	+0.3
LBRS	**Las Brisas**	**0.81**	**113**	*e*P	Pg	12 22 33.6	0.0
LBRS				*e*S	Sg	12 22 44.3	+0.1
PCG	**Pacaya**	**0.84**	**293**	*e*P	Pg	12 22 34.4	-0.1
PCG				*e*S	Sg	12 22 45.6	-0.1
LFRS	**El Faro**	**0.84**	**121**	*e*P	Pg	12 22 34.0	-0.3
MRL	**Marmol**	**1.00**	**6**	*e*P	Pb	12 22 37.9	-0.1
MRL				*e*S	Sb	12 22 51.6	0.0
FUG	**Fuego 3**	**1.07**	**291**	*e*P	Pg	12 22 38.0	-0.8
FUG				*e*S	Sg	12 22 52.6	-0.3
FG6		**1.16**	**296**	*e*P	Pb	12 22 40.7	0.0
FG6				*e*S	Sg	12 22 55.2	-0.6
CAHU	**Cacacuatique**	**1.58**	**100**	*e*P	Pn	12 22 46.7	0.0
CAHU				*e*S	Sb	12 23 08.3	+0.2
JAT	**Jato**	**1.79**	**278**	*e*P	Pb	12 22 51.6	+0.5
JAT				*e*S	Sn	12 23 09.4	-3.0

*ISCJB **14** 12:43:44.7±0.6, 37°.63N±0°.02×118°.60W±0°.03, h5km±5km, Error ellipse: s-maj=4.2km s-min=3.8km az=177.6*
*NEIC **14** 12:43:45.5, 37°.59N×118°.63W, h13km, ML3.1(NCEDC), After NCEDC.*

ISC 14 12:43:45.4±0.9, 37°.60N±0°.02×118°.63W±0°.02, h13km±7km, n25, σ1§10/46, 8C-13D, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLAC	**Mammoth Lakes**	**0.17**	**281**	⇓P	**Pg**	**12 43 49.7**	**+0.1**
	baz=0.2,SNR=1000						
MLAC				⇓S	**Sg**	**12 43 52.7**	**+0.2**
	baz=0.2						
TIN	**Tinemaha**	**0.63**	**150**	P	**Pg**	**12 43 57.7**	**0.0**
	baz=0.6,SNR=101						
TIN				⇓S	**Sg**	**12 44 06.4**	**+0.4**
	baz=0.6						
NV11	**Mina Array Sit**	**0.91**	**24**	*e*Pg	**Pg**	**12 44 03.1**	**0.0**
NV11				*e*Sg	**Sg**	**12 44 15.6**	**+0.5**
GRAC	**Grapevine Rang**	**1.17**	**120**	⇓P	**Pn**	**12 44 07.7**	**+0.2**
	baz=1.2,SNR=31						
GRAC				⇓S	**Sn**	**12 44 23.5**	**+0.3**
	baz=1.2						
CWC	**Cottonwood Cre**	**1.24**	**159**	⇓P	**Pn**	**12 44 08.0**	**-0.5**
	baz=1.2						
CWC				⇑S	**Sb**	**12 44 24.5**	**-0.1**
	baz=1.2						
RCTC	**Rector, Farmer**	**1.38**	**201**	P	**Pn**	**12 44 10.6**	**+0.2**
	baz=1.4,SNR=8.5						
RCTC				⇑S	**Sn**	**12 44 28.2**	**-0.2**
	baz=1.4						
CMB	**Columbia Colle**	**1.46**	**288**	*e*Pn	**Pb**	**12 44 12.2**	**-0.3**
CMB				*e*Sn	**Sb**	**12 44 31.0**	**0.0**
MPMC	**Manual Prospec**	**1.79**	**149**	⇑P	**Pn**	**12 44 16.4**	**+0.2**
	baz=1.8,SNR=21						
VES	**Vestal, Richgr**	**1.79**	**192**	⇑Pb	**Pb**	**12 44 17.7**	**-0.4**
	baz=1.8,SNR=19						
VES				⇑Sb	**Sb**	**12 44 41.0**	**+0.5**
	baz=1.8						
FURC	**Furnace Creek,**	**1.81**	**128**	⇑Pb	**Pb**	**12 44 18.9**	**+0.6**
	baz=1.8,SNR=15						
WCN	**Washoe City**	**1.92**	**333**	*e*Pn	**Pb**	**12 44 21.2**	**+0.9**
ISA	**Isabella**	**1.94**	**176**	*e*Pn	**Pb**	**12 44 20.2**	**-0.4**
ISA				*e*Sn	**Sb**	**12 44 45.4**	**+0.7**
ISA	**Isabella**	**1.94**	**176**	⇓Pb	**Pb**	**12 44 20.4**	**-0.2**
	baz=1.9,SNR=34						
ISA				⇓Sb	**Sb**	**12 44 45.4**	**+0.7**
	baz=1.9						
SAO	**San Andreas Ge**	**2.40**	**251**	*e*Pn	**Pb**	**12 44 26.5**	**-2.0**
SAO				*e*Sg	**Sg**	**12 45 02.3**	**-0.4**
ARVC	**Arvin**	**2.47**	**184**	⇓Pb	**Pb**	**12 44 29.2**	**-0.5**
	baz=2.5						
ARVC				⇓Sb	**Sb**	**12 45 01.2**	**+1.2**
	baz=2.5						
R11A	**Troy Canyon, C**	**2.52**	**72**	⇓Pb	**Pb**	**12 44 31.1**	**+0.5**
	baz=2.5						
R11A				⇓Sb	**Sg**	**12 45 05.3**	**-1.1**
	baz=2.5						
BEKR	**Beckworth**	**2.64**	**330**	*e*Pg	**Pb**	**12 44 34.2**	**+1.5**
BEKR				*e*Sg	**Sg**	**12 45 09.3**	**-0.9**
GSC	**Goldstone**	**2.72**	**147**	*e*Pn	**Pn**	**12 44 29.7**	**+0.8**
GSC				*e*Sn	**Sn**	**12 45 01.3**	**-0.4**
EDW2	**Edwards Air Fo**	**2.76**	**169**	⇓Pb	**Pb**	**12 44 34.8**	**+0.1**
	baz=2.8						
EDW2				⇑Sb	**Sb**	**12 45 10.4**	**+2.0**
	baz=2.8						
OSI	**Osito Adit**	**2.98**	**182**	*e*Pg	**Pg**	**12 44 41.8**	**-0.7**
OSI				*e*Sg	**Sg**	**12 45 21.2**	**+0.1**
OSI	**Osito Adit**	**2.98**	**182**	⇑Sb	**Sb**	**12 45 16.8**	**+2.1**
	baz=3.0						
ELK	**Elko**	**4.10**	**39**	*e*Pn	**Pn**	**12 44 49.0**	**+1.0**
ELK				*e*Sg	**Sg**	**12 45 54.6**	**-2.5**
MVU	**Marysvale**	**5.14**	**78**	*e*Pg	Pb	12 45 19.6	+4.2
	6.9nm,0.7s						
MVU				*e*Sg	**Sg**	**12 46 32.1**	**+1.6**
MSU	**Marysvale**	**5.17**	**78**	*e*Pg	**Pg**	**12 45 21.9**	**-2.6**
	3.1nm,0.5s						
MSU				*e*Sn	**Sn**	**12 46 03.6**	**+1.2**
MSU				*e*Sg	**Sg**	**12 46 31.2**	**-0.3**
DUG	**Dugway**	**5.22**	**58**	*e*Pg	**Pg**	**12 45 24.1**	**-1.4**
	8.3nm,0.8s						
DUG				*e*Sg	**Sg**	**12 46 30.4**	**-2.7**

*IDC **14** 12:48:55.0±0.4, 30°.21S×177°.82W, h0km, mb4.9/20, mb1 5.0/23, mb1mx5.0/26, mbtmp4.9/23, ML4.6/2, MS4.4/21, Ms1 4.4/21, ms1mx4.3/29, Error ellipse: s-maj=14.8km s-min=14.3km az=110.0*
*BJI **14** 12:48:54.8, 29°.54S×177°.05W, h7km, mB5.7/21, mb5.3/25, Ms5.4/17, Ms7 4.9/18*
*AUST **14** 12:48:56.6, 30°.86S×176°.59W, h60km*
*ISCJB **14** 12:48:56.0±0.1, 30°.63S±0°.02×177°.97W±0°.04, h14km, mb5.2/69, MS4.5/28, Error ellipse: s-maj=5.5km s-min=2.2km az=33.3*
*MOS **14** 12:48:59.6±0.8, 30°.20S×178°.02W, h33km, mb5.5/29, MS4.6/5, Error ellipse: s-maj=11.5km s-min=9.3km az=80.8*
*NEIC **14** 12:49:01.8±1.1, 30°.28S×177°.90W, h48km±9km, mb5.2/40, Error ellipse: s-maj=9.0km s-min=6.0km az=141.0*
*GCMT **14** 12:49:03.8±0.2, 30°.22S×177°.60W, h48km±1km, MW5.2, Moment Tensor Solution. s63,c86; s70,c98; Moment tensor: Scale 10^16 Nm; Mrr6.44±.22; Mθθ0.11±.19; Mφφ-6.54±.16; Mrθ0.19±.15; Mrφ-2.14±.14; Mθφ3.15±.15; Best double couple: M0 7.50000×10^16 NP1:φ203.00000°, δ33.00000°, λ101.00000°. NP2:φ10.00000°, δ57.00000°, λ83.00000°. Principal axes: T 7.1800, Plg76.0000°, Azm259.0000°; N 0.6600, Plg6.0000°, Azm14.0000°; P -7.8300, Plg12.0000°, Azm105.0000°; Data Used: II IU IC G CN.*
*DJA **14** 12:49:20.5±6.1, 30°S±13°×177°7W±4°2, h274km±44km, M5.2/17, mB5.5/3, mb5.3/17, Mw(mB)5.0/3*

ISC 14 12:48:57.3±0.5, 30°.43S±0°.04×177°.77W±0°.05, h17km±2km, h17km:pP-P, n677, σ1§47/702, mb5.3/69, MS4.5/28, 109C-85D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.18**	**354**	*e*Pg	**Pn**	**12 49 18.6**	**-0.4**
RAO				*e*Sn	**Sb**	**12 49 32.4**	**-1.8**
MXZ	**Matakaoa Point**	**7.82**	**204**	PN	**Pn**	**12 50 48.9**	**-1.4**
MXZ				SN	**Sn**	**12 52 17.7**	**-0.7**
PUZ	**Puketiti**	**8.30**	**202**	PN	**Pn**	**12 50 54.6**	**-2.3**
PUZ				SN	**Sn**	**12 52 27.7**	**-2.5**
WCZ	**Waipu Caves**	**8.59**	**228**	PN	Pn	12 51 10.3	+10
OUZ	**Omahuta**	**8.69**	**234**	*e*Pn	Pn	12 51 08.9	+6.8
OUZ	**Omahuta**	**8.69**	**234**	PN	Pn	12 51 11.0	+8.8
OPRZ	**Ohinepanea**	**8.76**	**211**	PN	**Pn**	**12 51 03.9**	**+0.8**
OPRZ				SN	**Sn**	**12 52 45.1**	**+3.6**
MWZ	**Matawai**	**8.79**	**205**	PN	**Pn**	**12 51 01.3**	**-2.3**
MWZ				SN	**Sn**	**12 52 40.6**	**-1.6**
MARZ	**Manawahe**	**8.83**	**210**	PN	**Pn**	**12 51 05.2**	**+1.1**
URZ	**Urewera**	**8.88**	**207**	*e*Pn	**Pn**	**12 51 02.6**	**-2.1**
URZ				SN	**Sn**	**12 52 42.9**	**-1.5**
URZ				*e*Sn	Sn	12 52 44.6	+0.2
URZ	**Urewera**	**8.88**	**207**	PN	**Pn**	**12 51 02.6**	**-2.1**
URZ				SN	**Sn**	**12 52 44.4**	**0.0**
URZ	**Urewera**	**8.88**	**207**	Pn	**Pn**	**12 51 03.9**	**-0.9**
	3.0nm,0.3s,baz=244,slow=2.4,SNR=38						
URZ				Sn	**Sn**	**12 52 42.9**	**-1.5**
	32nm,0.3s,baz=203,slow=23,SNR=17						
PRGZ	**Paritu Road**	**9.20**	**202**	PN	**Pn**	**12 51 06.2**	**-2.9**
PRGZ				SN	**Sn**	**12 52 48.7**	**-3.5**
KNZ	**Kokohu**	**9.35**	**202**	PN	**Pn**	**12 51 08.2**	**-3.0**
KNZ				SN	**Sn**	**12 52 52.2**	**-3.7**
PRRZ	**Plateau Road**	**9.38**	**209**	PN	**Pn**	**12 51 12.2**	**+0.6**
PRRZ				SN	**Sn**	**12 52 57.3**	**+0.7**
MHGZ	**Mahia Peninsul**	**9.40**	**201**	PN	Pn	12 51 08.6	-3.3
RAHZ	**Arahi**	**9.46**	**205**	PN	**Pn**	**12 51 10.4**	**-2.4**
RAHZ				SN	**Sn**	**12 52 57.4**	**-1.3**
NMHZ	**Naumai**	**9.73**	**206**	PN	**Pn**	**12 51 14.2**	**-2.2**
NMHZ				SN	**Sn**	**12 53 03.5**	**-1.8**
BKZ	**Black Stump Fm**	**9.91**	**207**	PN	Pn	12 51 15.1	-3.8
BKZ				SN	**Sn**	**12 53 07.3**	**-2.4**
CKHZ	**Cape Kidnapper**	**10.13**	**203**	PN	Pn	12 51 18.2	-3.6
CKHZ				SN	**Sn**	**12 53 09.9**	**-5.0**
KAHZ	**Kahuranaki**	**10.32**	**204**	PN	Pn	12 51 19.6	-4.9
BHHZ	**Black Hill Sta**	**10.35**	**208**	PN	**Pn**	**12 51 22.7**	**-2.4**
FWVZ	**Far West T-bar**	**10.37**	**210**	PN	Pn	12 51 21.0	-4.4
WNVZ	**Wahianoa**	**10.41**	**210**	PN	Pn	12 51 21.7	-4.2
PXZ	**Pawanui**	**10.53**	**203**	PN	Pn	12 51 22.2	-5.2
PXZ				SN	Sn	12 53 18.2	-6.8
PNHZ	**Pukenui**	**10.67**	**206**	PN	Pn	12 51 24.7	-4.6
PRHZ	**Porangahau**	**10.82**	**203**	PN	Pn	12 51 26.5	-4.8
PRHZ				SN	**Sn**	**12 53 27.6**	**-4.3**
TSZ	**Takapari Road**	**10.88**	**206**	PN	Pn	12 51 28.2	-4.1
ANWZ	**Angora Road**	**11.05**	**204**	PN	Pn	12 51 30.5	-4.0
PRWZ	**Pori Road**	**11.31**	**205**	PN	Pn	12 51 34.7	-3.4
BFZ	**Birch Farm**	**11.32**	**204**	PN	Pn	12 51 32.5	-5.7
TIWZ	**Tintock**	**11.54**	**205**	PN	Pn	12 51 35.2	-6.0
MRZ	**Mangatainoka R**	**11.55**	**206**	PN	Pn	12 51 35.1	-6.2
TMWZ	**Te Maipa**	**11.83**	**204**	PN	Pn	12 51 39.3	-5.8
OGWZ	**Otaki Gorge**	**11.84**	**207**	PN	Pn	12 51 39.9	-5.4
KIW	**Kapiti Island**	**11.98**	**208**	PN	Pn	12 51 42.0	-5.3
CAW	**Cannon Point**	**12.13**	**207**	PN	Pn	12 51 43.4	-5.9
WEL	**Wellington**	**12.40**	**207**	PN	**Pn**	**12 51 52.9**	**0.0**
TCW	**Tory Channel**	**12.54**	**209**	PN	Pn	12 51 48.6	-6.3
TUWZ	**Tuamarina**	**12.86**	**209**	PN	Pn	12 51 54.4	-4.7
NNZ	**Nelson**	**12.93**	**211**	PN	Pn	12 51 53.0	-7.1
MSVF	**Nonsavu**	**13.20**	**342**	*e*P	**P**	**12 52 12.0**	**-2.0**
MSVF	**Nonsavu**	**13.20**	**342**	*e*Pn	**P**	**12 52 12.0**	**-2.0**
NIUE	**Niue**	**13.36**	**34**	S	Sn	12 54 18.8	-15
	baz=13,SNR=6.3						
THZ	**Tophouse**	**13.58**	**211**	PN	Pn	12 52 04.5	-4.6
KHZ	**Kahutara**	**13.85**	**208**	*e*Pn	Pn	12 52 09.3	-3.3
KHZ				*e*Sn	Sn	12 54 35.0	-11
KHZ	**Kahutara**	**13.85**	**208**	PN	Pn	12 52 05.3	-7.3
DSZ	**Denniston Nort**	**14.08**	**214**	PN	**Pn**	**12 52 13.3**	**-2.6**
LTZ	**Lake Taylor**	**14.68**	**210**	PN	Pn	12 52 16.9	-7.2
OXZ	**Oxford**	**15.22**	**209**	PN	Pn	12 52 24.1	-7.2
RPZ	**Rata Peaks**	**15.96**	**211**	*e*Pn	**Pn**	**12 52 41.7**	**+0.7**
	35nm,0.6s						
RPZ				Sn	Sn	12 55 24.7	-13
RPZ	**Rata Peaks**	**15.96**	**211**	Pn	**P**	**12 52 42.8**	**-1.6**
	3.7nm,0.3s,baz=336,slow=14,SNR=23						
RPZ				Sn	Sn	12 55 24.7	-13
	4.1nm,0.3s,baz=8.8,slow=23,SNR=10						
DZM	**Mont Dzumac**	**16.41**	**297**	*e*P	**P**	**12 52 52.0**	**+2.3**
	311nm,1.0s						
DZM				*e*LR	LR	12 56 42.6	
	5μm,18.3s						
DZM	**Mont Dzumac**	**16.41**	**297**	*e*P	**P**	**12 52 50.9**	**+1.2**
DZM	**Mont Dzumac**	**16.41**	**297**	Pn	**P**	**12 52 52.2**	**+2.6**
DZM	**Mont Dzumac**	**16.41**	**297**	Pn	**P**	**12 52 52.2**	**+2.6**
	1.8nm,0.3s,baz=124,slow=15,SNR=14						
DZM				LR	LR	12 57 44.1	
	comp=Z,3μm,20.6s,baz=180,slow=32						
NOUC	**Port Laguerre**	**16.50**	**296**	*e*P	**P**	**12 52 52.2**	**+1.6**
ODZ	**Otahua Downs**	**17.20**	**209**	*e*Pn	**P**	**12 52 58.0**	**-0.2**
	9.7nm,0.8s						
AFI	**Afiamalu**	**17.35**	**20**	*e*Pn	**Pn**	**12 52 58.8**	**+0.1**
	45nm,0.8s						
AFI				*e*Sn	Sn	12 55 49.3	-22
AFI				S	Sn	12 55 55.0	-25
AFI	**Afiamalu**	**17.35**	**20**	P	**Pn**	**12 52 56.2**	**-2.5**
	1.5nm,0.3s,baz=224,slow=16,SNR=5.9						
AFI				S	Sn	12 55 55.0	-17
	2.8nm,0.3s,baz=252,slow=20,SNR=4.3						
RAR	**Rarotonga**	**18.60**	**65**	P	**P**	**12 53 13.4**	**-0.4**
RAR				S	Sn	12 56 26.7	-15
RAR	**Rarotonga**	**18.60**	**65**	P	**P**	**12 53 13.4**	**-0.4**
	1.3nm,0.3s,baz=270,slow=10,SNR=3.9						
RAR				S	Sn	12 56 26.7	-15
	1.3nm,0.3s,baz=90,slow=15,SNR=3.5						
RAR				LR	LR	12 58 16.5	
	comp=Z,2μm,22.0s,baz=271,slow=30						
LHI	**Lord Howe Isla**	**19.89**	**261**	P	Pn	12 53 36.7	+7.3
	baz=21,SNR=4.0						
TBI	**Tubuai**	**26.17**	**81**	*e*LQ	LQ	12 59 40.6	
	1μm,26.5s						
TBI				*e*LR	LR	13 00 55.1	
	2μm,27.2s						
ARMA	**Armidale**	**26.35**	**262**	*e*P	**P**	**12 54 36.4**	**+3.7**
	65nm,0.9s						
ARMA	**Armidale**	**26.35**	**262**	P	**P**	**12 54 36.3**	**+3.7**
	baz=27,SNR=29						
MGCD	**Mangrove Creek**	**26.54**	**256**	P	**P**	**12 54 38.3**	**+4.2**
	baz=27,SNR=40						
EIDS	**Eidsvold**	**27.93**	**273**	*e*P	**P**	**12 54 48.6**	**+1.9**
	72nm,0.8s						
EIDS	**Eidsvold**	**27.93**	**273**	P	**P**	**12 54 48.6**	**+1.9**
	baz=29,SNR=31						
CNB	**Canberra Magne**	**27.95**	**251**	P	**P**	**12 54 50.1**	**+3.2**
	baz=29,SNR=64						
MILA	**Mila**	**28.19**	**248**	P	P	12 54 52.2	+3.2
	baz=29,SNR=43						
CAN	**Canberra**	**28.25**	**251**	*e*P	**P**	**12 54 51.9**	**+2.4**
CAN				pmax	pmax		
	comp=Z,156nm,0.9s						
CAN	**Canberra**	**28.25**	**251**	*e*P	**P**	**12 54 51.9**	**+2.4**
	comp=Z,156nm,0.9s						
PPT2	**Papeete2**	**28.66**	**70**	*e*LQ	LQ	13 00 52.3	
	comp=Z,640nm,14.2s						
PPT2				*e*LR	LR	13 02 01.7	
	comp=Z,2μm,26.2s						
PPT	**Papeete**	**28.68**	**70**	LR	LR	13 03 09.3	
	comp=Z,755nm,21.1s,baz=224,slow=30						
YNG	**Young**	**28.76**	**253**	P	**P**	**12 54 57.1**	**+3.1**
	baz=30,SNR=71						
RMQ	**Roma**	**29.62**	**269**	P	**P**	**12 55 05.0**	**+3.2**
	baz=31,SNR=122						
MOO	**Moorlands**	**30.42**	**237**	P	**P**	**12 55 10.4**	**+1.8**
	baz=31,SNR=5.7						
TAU	**Tasmania Unive**	**30.43**	**236**	*e*P	**P**	**12 55 10.4**	**+1.7**
TAU				pmax	pmax		
	comp=Z,62nm,1.0s						
TAU	**Tasmania Unive**	**30.43**	**236**	*e*P	**P**	**12 55 10.3**	**+1.7**
	comp=Z,62nm,1.0s						
TOO	**Toolangi**	**31.13**	**247**	P	**P**	**12 55 17.4**	**+2.3**
	baz=32,SNR=18						
CMSA	**Cobar Meteorol**	**31.25**	**258**	P	**P**	**12 55 18.5**	**+2.4**
	baz=32,SNR=91						
QLP	**Quilpie**	**33.50**	**267**	P	**P**	**12 55 37.5**	**+1.6**
	baz=34,SNR=145						
CTA	**Charters Tower**	**34.00**	**279**	P	**P**	**12 55 40.4**	**+0.1**
CTA	**Charters Tower**	**34.00**	**279**	P	**P**	**12 55 40.4**	**+0.1**
	comp=Z,300nm,0.7s,baz=103,slow=10,SNR=318						
CTA				LR	LR	13 07 21.0	
	comp=Z,1μm,21.4s,baz=109,slow=33						
CTAO	**Charters Tower**	**34.00**	**279**	*e*P	**P**	**12 55 42.6**	**+2.3**
CTAO				pmax	pmax		
	comp=Z,280nm,0.7s						
CTAO	**Charters Tower**	**34.00**	**279**	*e*P	**P**	**12 55 42.6**	**+2.3**
	comp=Z,280nm,0.7s						
ARPS	**Mount Arapiles**	**34.04**	**248**	P	**P**	**12 55 42.5**	**+2.1**
	baz=35,SNR=9.9						
STKA	**Stephens Creek**	**34.66**	**257**	*e*P	**P**	**12 55 47.8**	**+1.9**
	comp=Z,51nm,0.8s						
STKA	**Stephens Creek**	**34.66**	**257**	P	**P**	**12 55 46.7**	**+0.8**
	comp=Z,230nm,0.7s,baz=98,slow=9.8,SNR=492						
STKA				LR	LR	13 08 53.7	
	comp=Z,989nm,18.1s,baz=49,slow=35						
STKA	**Stephens Creek**	**34.66**	**257**	P	**P**	**12 55 48.0**	**+2.0**
	baz=36,SNR=362						
RKT	**Rikitea**	**38.72**	**90**	*e*LR	LR	13 06 45.3	
	comp=Z,1μm,30.2s,baz=257						
PMG	**Port Moresby**	**38.80**	**295**	*e*P	**P**	**12 56 22.0**	**+0.8**
	comp=Z,57nm,1.3s						
PMG	**Port Moresby**	**38.80**	**295**	P	**P**	**12 56 22.1**	**+0.8**
	comp=Z,34nm,1.1s						
PMG	**Port Moresby**	**38.80**	**295**	P	**P**	**12 56 21.8**	**+0.5**
	comp=Z,24nm,1.0s,baz=103,slow=6.7,SNR=7.3						
BBOO	**Buckleboo**	**39.15**	**254**	*e*P	**P**	**12 56 24.4**	**+0.3**
	comp=Z,2μm,0.9s						
BBOO	**Buckleboo**	**39.15**	**254**	P	**P**	**12 56 24.8**	**+0.7**
	baz=40,SNR=106						
COEN	**Coen**	**39.47**	**286**	*e*P	**P**	**12 56 28.5**	**+1.6**
	comp=Z,286nm,0.8s						
COEN	**Coen**	**39.47**	**286**	P	**P**	**12 56 28.6**	**+1.6**
	baz=41,SNR=24						
QIS	**Mount Isa**	**39.51**	**274**	P	**P**	**12 56 27.9**	**+0.6**
	baz=40,SNR=47						
QIS				S	**S**	**13 02 31.1**	**+2.0**
	baz=40,SNR=5.4						
AS31	**Alice Springs**	**43.30**	**267**	*e*P	**P**	**12 56 58.3**	**-0.1**
ASAR	**Alice Springs**	**43.30**	**267**	P	**P**	**12 56 58.4**	**0.0**
ASAR				PKiKP	**PKiKP**	**13 05 49.1**	**-1.1**
ASAR	**Alice Springs**	**43.30**	**267**	P	**P**	**12 56 58.4**	**0.0**
	comp=Z,40nm,0.6s,baz=104,slow=7.5,SNR=642						
ASAR				PKiKP	**PKiKP**	**13 05 49.1**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=100,slow=1.3,SNR=5.2						
ASAR				LR	LR	13 15 02.1	
	comp=Z,1μm,18.4s,baz=110,slow=36						
WRAB	**Tennant Creek**	**44.29**	**272**	*e*P	**P**	**12 57 05.5**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,103nm,0.6s						
WRAB	**Tennant Creek**	**44.29**	**272**	*e*P	**P**	**12 57 05.5**	**-0.8**
	comp=Z,103nm,0.6s						
FORT	**Forrest**	**46.23**	**255**	*e*P	**P**	**12 57 21.1**	**-0.5**
	comp=Z,94nm,0.7s						
FORT	**Forrest**	**46.23**	**255**	P	**P**	**12 57 21.4**	**-0.2**
	baz=47,SNR=53						
SBA	**Scott Base**	**48.02**	**184**	*e*P	P	12 57 39.9	+5.0
SBA				*e*		12 59 04.7	
SBA				pmax	pmax		
	comp=Z,51nm,0.8s						
SBA	**Scott Base**	**48.02**	**184**	*e*P	P	12 57 39.9	+5.0
	comp=Z,51nm,0.8s						
SBA				*e*PcP	**PcP**	**12 59 04.7**	**+2.1**
VNDA	**Vanda**	**48.09**	**186**	*e*P	P	12 57 39.1	+3.7
	comp=Z,43nm,1.6s						
VNDA	**Vanda**	**48.09**	**186**	P	**P**	**12 57 37.7**	**+2.3**
	comp=Z,7.0nm,0.7s,baz=357,slow=7.9,SNR=24						
VNDA				LR	LR	13 15 44.2	
	comp=Z,187nm,19.3s,baz=48,slow=33						
KDU	**Kakadu**	**49.12**	**280**	P	**P**	**12 57 44.0**	**-0.2**
	baz=50,SNR=7.0						
KDU				S	S	13 04 34.0	-15
	baz=50,SNR=12						
MTN	**Manton Dam**	**50.18**	**279**	P	**P**	**12 57 51.5**	**-0.8**
	baz=51,SNR=6.2						
FITZ	**Fitzroy Crossi**	**52.55**	**270**	*e*P	**P**	**12 58 09.9**	**-0.1**
	comp=Z,79nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.55**	**270**	P	**P**	**12 58 09.7**	**-0.3**
	comp=Z,34nm,0.9s,baz=153,slow=6.4,SNR=51						
FITZ				LR	LR	13 19 07.2	
	comp=Z,655nm,21.1s,baz=122,slow=34						
FITZ	**Fitzroy Crossi**	**52.55**	**270**	P	**P**	**12 58 09.5**	**-0.5**
	baz=54,SNR=44						
TLE	**Tual**	**52.59**	**288**	P	P	12 58 14.6	+4.3
	baz=54,SNR=3.1						
KLBR	**Kellerberrin**	**54.52**	**251**	P	**P**	**12 58 23.4**	**-1.0**
	baz=55,SNR=22						
MEEK	**Meekatharra**	**55.37**	**257**	P	**P**	**12 58 29.5**	**-1.1**
	baz=56,SNR=7.3						
BLDU	**Ballidu**	**55.67**	**252**	P	**P**	**12 58 31.3**	**-1.3**
	baz=56,SNR=6.5						
MBWA	**Marble Bar**	**56.42**	**264**	*e*P	**P**	**12 58 36.9**	**-1.3**
	comp=Z,90nm,1.6s						
MBWA	

IPM	**Ipoh**	84.69	278		*e*P		**P**		**13 01 29.3**	**-1.4**
	comp=Z,20nm,0.9s									
QIZ	**Qiongzhong**	85.19	295		P		**P**		**13 01 31.3**	**-1.7**
QIZ					S		**S**		**13 11 57.9**	**-4.6**
QIZ					pmax		pmax			
	comp=Z,89nm,9.2s									
KULM	**Kulim**	85.42	279		*e*P		**P**		**13 01 33.1**	**-1.3**
	comp=Z,18nm,1.0s									
MURC	**Murrieta**	85.61		47	⇑P		**P**		**13 01 36.7**	**+1.9**
	baz=86									
PET	**Petropavlovsk**	85.61	346		*e*P		P		13 01 37.8	+3.6
PET					*e*S		**S**		**13 12 09.5**	**+4.4**
PET					pmax		pmax			
	comp=Z,46nm,1.4s									
PSI	**Prapat**	85.63	276		P		**P**		**13 01 33.5**	**-2.0**
	baz=87,SNR=6.9									
MONP	**Monument Peak**	85.64		48	⇓P		**P**		**13 01 37.0**	**+1.8**
	baz=86,SNR=5.3									
DVTC	**Desert V Tower**	85.69		48	⇑P		**P**		**13 01 37.3**	**+2.0**
	baz=86									
BFSC	**Mount Baldy Ra**	85.74		46	⇓P		**P**		**13 01 37.4**	**+1.8**
	baz=86									
PETK	**Petropavlovsk-**	85.89	345		P		**P**		**13 01 35.9**	**+0.3**
PETK	**Petropavlovsk-**	85.89	345		P		**P**		**13 01 35.9**	**+0.3**
PETK	**Petropavlovsk-**	85.89	345		P		**P**		**13 01 35.9**	**+0.3**
	comp=Z,18nm,0.7s,baz=125,slow=7.6,SNR=17									
PETK					LR		LR		13 33 25.9	
	comp=Z,130nm,22.0s,baz=162,slow=31									
VES	**Vestal, Richgr**	85.93		44	⇓P		**P**		**13 01 38.2**	**+1.9**
	baz=86									
EDW2	**Edwards Air Fo**	85.96		45	⇑P		**P**		**13 01 38.2**	**+1.7**
	baz=86,SNR=5.8									
SWSC	**Sam W. Stewart**	86.07		48	⇑P		**P**		**13 01 39.1**	**+2.1**
	baz=86									
PFO	**Pinyon Flat Ob**	86.08		47	*e*P		**P**		**13 01 39.3**	**+2.0**
	comp=Z,4.1nm,1.0s									
PFO	**Pinyon Flat Ob**	86.08		47	⇑P		**P**		**13 01 39.4**	**+2.1**
	baz=86									
ISA	**Isabella**	86.18		45	*e*P		**P**		**13 01 39.8**	**+2.1**
ISA					pmax		pmax			
	comp=Z,26nm,1.2s									
ISA	**Isabella**	86.18		45	*e*P		**P**		**13 01 39.8**	**+2.1**
	comp=Z,26nm,1.2s									
ISA	**Isabella**	86.18		45	⇑P		**P**		**13 01 39.5**	**+1.8**
	baz=86,SNR=7.6									
NJ2	**Nanjing**	86.41	310		*e*P		**P**		**13 01 39.6**	**+0.8**
NJ2					pmax		pmax			
	comp=Z,10.0nm,0.6s									
BELC	**Belle Mtn. Jos**	86.63		47	⇓P		**P**		**13 01 41.9**	**+1.9**
	baz=87,SNR=9.1									
CMB	**Columbia Colle**	86.65		42	*e*P		**P**		**13 01 40.9**	**+1.0**
CMB					pmax		pmax			
	comp=Z,17nm,1.2s									
CMB	**Columbia Colle**	86.65		42	*e*P		**P**		**13 01 40.9**	**+1.0**
	comp=Z,17nm,1.2s									
BC3	**Big Chuckawall**	86.75		48	⇑P		**P**		**13 01 42.7**	**+2.2**
	baz=87,SNR=9.0									
GLA	**Glamis**	86.77		49	*e*P		**P**		**13 01 43.2**	**+2.6**
GLA	**Glamis**	86.77		49	*e*P		**P**		**13 01 43.2**	**+2.6**
GLA	**Glamis**	86.77		49	⇓P		**P**		**13 01 42.8**	**+2.2**
	baz=87,SNR=7.9									
OHCM	**Honcut**	86.93		40	*e*P		P		13 01 45.2	+4.1
HEC	**Hector,Ludlow**	86.95		46	⇓P		**P**		**13 01 43.3**	**+1.8**
	baz=87									
GSC	**Goldstone**	86.97		46	*e*P		**P**		**13 01 43.7**	**+2.2**
GSC					pmax		pmax			
	comp=Z,17nm,1.1s									
GSC	**Goldstone**	86.97		46	*e*P		**P**		**13 01 43.7**	**+2.2**
	comp=Z,17nm,1.1s									
GSC	**Goldstone**	86.97		46	⇓P		**P**		**13 01 43.5**	**+2.0**
	baz=87,SNR=8.8									
MPMC	**Manual Prospec**	87.04		45	⇓P		**P**		**13 01 43.9**	**+1.9**
	baz=87,SNR=11									
IRM	**Iron Mountain**	87.27		47	⇓P		**P**		**13 01 45.2**	**+2.2**
	baz=88,SNR=15									
113A	**Mohawk Valley,**	87.28		49	⇑P		**P**		**13 01 44.9**	**+1.9**
	baz=88,SNR=9.6									
USRK	**Uesuriysk Arra**	87.29	326		P		**P**		**13 01 43.1**	**+0.4**
	comp=Z,9.4nm,1.0s,baz=116,slow=4.4,SNR=11									
GMRC	**Granite Mounta**	87.34		47	⇑P		**P**		**13 01 45.2**	**+1.8**
	baz=88,SNR=5.3									
214A	**Organ Pipe Nat**	87.40		50	⇓P		**P**		**13 01 45.7**	**+2.0**
	baz=88									
Y12C	**Blythe**	87.41		48	⇓P		**P**		**13 01 45.6**	**+2.0**
	baz=88									
TUQ	**Turquoise Moun**	87.60		46	⇑P		**P**		**13 01 46.7**	**+2.0**
	baz=88									
SHOC	**Shoshone**	87.68		46	⇓P		**P**		**13 01 47.2**	**+2.3**
	baz=88									
FURC	**Furnace Creek,**	87.69		45	⇓P		**P**		**13 01 46.9**	**+2.0**
	baz=88									
GRAC	**Grapevine Rang**	87.73		44	⇑P		**P**		**13 01 46.8**	**+1.7**
	baz=88,SNR=6.7									
BEKR	**Beckworth**	87.92		40	*e*P		**P**		**13 01 46.6**	**+0.5**
	comp=Z,2.8nm,1.1s									
YBH	**Yreka Blue Hor**	87.94		38	P		**P**		**13 01 46.5**	**+0.5**
YBH	**Yreka Blue Hor**	87.94		38	P		**P**		**13 01 46.6**	**+0.5**
	comp=Z,5.4nm,1.1s,baz=222,slow=6.7,SNR=5.4									
YBH					LR		LR		13 33 49.2	
	comp=Z,175nm,19.7s,baz=233,slow=31									
PDMCI	**Parker Dam,Lak**	88.00		48	⇑P		**P**		**13 01 48.3**	**+1.9**
	baz=88,SNR=5.4									
NVAR	**Mina Array Bea**	88.13		43	P		**P**		**13 01 48.1**	**+0.9**
NVAR					PKKPbc		**PKKPbc**		**13 19 33.2**	**+0.5**
NVAR	**Mina Array Bea**	88.13		43	P		**P**		**13 01 48.1**	**+0.9**
	comp=Z,11nm,1.0s,baz=222,slow=7.3,SNR=38									
NVAR					PKKPbc		**PKKPbc**		**13 19 33.2**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=75,slow=3.8,SNR=7.2									
Z14A	**Wintersburg**	88.19		49	⇑P		**P**		**13 01 49.8**	**+2.4**
	baz=88									
W13A	**Hualapai Mount**	88.67		47	⇑P		**P**		**13 01 51.7**	**+1.8**
	baz=89,SNR=8.2									
MDJ	**Mudanjiang**	88.76	325		P		P		13 01 53.1	+3.4
MDJ					pmax		pmax			
	comp=Z,6.0nm,0.9s									
MDJ					pmax		pmax			
	comp=Z,87nm,4.4s									
TUC	**Tucson**	88.98		51	*e*P		**P**		**13 01 53.1**	**+1.9**
TUC					pmax		pmax			
	comp=Z,6.0nm,1.4s									
TUC	**Tucson**	88.98		51	*e*P		**P**		**13 01 53.1**	**+1.9**
	comp=Z,6.1nm,1.4s									
HABR	**Khabarovsk**	89.17	331		*e*P		**P**		**13 01 50.5**	**-1.0**
HABR					*PP		**pP**		**13 01 57.0**	**-0.3**
HABR									13 05 20.3	
HABR					*e*S		**SKSac**		**13 12 18.2**	**-2.1**
HABR					*e*				13 12 42.8	
HABR					*e*SS		**SS**		**13 18 32.5**	**-1.9**
HABR					*e*SSS		SSS		13 22 07.5	
HABR					pmax		pmax			
	comp=Z,80nm,2.3s									
HABR					pmax		pmax			
	comp=E,69nm,2.5s									
HABR					pmax		pmax			
	comp=N,29nm,2.5s									
HABR					MLR		MLR			
	comp=Z,157nm,19.0s									
319A	**Douglas**	89.44		53	⇓P		**P**		**13 01 55.6**	**+2.2**
	baz=90,SNR=6.5									
R11A	**Troy Canyon, C**	89.69		44	⇓P		**P**		**13 01 55.9**	**+1.3**
	baz=90									
X16A	**Lo Mia Camp, P**	89.82		49	⇑P		**P**		**13 01 57.7**	**+2.4**
	baz=90,SNR=20									
320A	**Kipp Ranch, An**	89.94		53	⇑P		**P**		**13 01 58.1**	**+2.3**
	baz=90,SNR=8.6									
220A	**Playas Peak, P**	90.27		53	⇓P		**P**		**13 01 59.6**	**+2.3**
	baz=90,SNR=8.8									
CN2	**Changchun**	90.28	323		*e*P		**P**		**13 01 56.9**	**0.0**
CN2					pmax		pmax			
	comp=Z,20nm,1.0s									
U15A	**North Rim**	90.51		47	⇑P		**P**		**13 02 00.9**	**+2.4**
	baz=91									
WUAZ	**Wupatki**	90.54		48	*e*P		**P**		**13 02 00.6**	**+2.0**
	comp=Z,20nm,1.2s									
WUAZ	**Wupatki**	90.54		48	⇓P		**P**		**13 02 00.8**	**+2.2**
	baz=91									
120A	**U Bar Ranch, L**	90.58		52	⇑P		**P**		**13 02 00.8**	**+2.0**
	baz=91,SNR=6.5									
221A	**Mesquite Ranch**	90.85		53	⇓P		**P**		**13 02 02.3**	**+2.3**
	baz=91									
X18A	**Snowflake**	90.87		50	⇓P		**P**		**13 02 02.2**	**+2.1**
	baz=91,SNR=10									
Z20A	**Nine Sixteen R**	90.94		52	⇑P		**P**		**13 02 02.6**	**+2.2**
	baz=91,SNR=10									
121A	**Cookes Peak, D**	91.15		53	⇓P		**P**		**13 02 03.4**	**+2.0**
	baz=91									
KLR	**Kul'dur**	91.16	330		*e*P		P		13 01 56.8	-4.0
W18A	**Petrified Fore**	91.36		50	⇑P		**P**		**13 02 04.7**	**+2.3**
	baz=92									
222A	**Williams Famil**	91.37		53	⇓P		**P**		**13 02 04.7**	**+2.3**
	baz=92									
Y20A	**Horse Springs,**	91.55		51	⇓P		**P**		**13 02 05.6**	**+2.2**
	baz=92,SNR=14									
Z21A	**St. Cloud Mine**	91.68		52	⇑P		**P**		**13 02 06.3**	**+2.3**
	baz=92									
X20A	**Quemado**	91.84		51	⇓P		**P**		**13 02 06.7**	**+2.0**
	baz=92,SNR=14									
MSU	**Marysvale**	91.86		46	*e*P		**P**		**13 02 07.1**	**+2.4**
MSU					pmax		pmax			
	comp=Z,9.0nm,1.2s									
MSU	**Marysvale**	91.86		46	*e*P		**P**		**13 02 07.1**	**+2.4**
	comp=Z,9.1nm,1.2s									
626A	**Big Bend Ranch**	92.02		57	⇑P		**P**		**13 02 07.1**	**+1.6**
	baz=92									
Y21A	**Point of Rocks**	92.08		51	⇑P		**P**		**13 02 08.1**	**+2.3**
	baz=92,SNR=9.8									
425A	**Indio Mountain**	92.10		55	⇑P		**P**		**13 02 07.5**	**+1.6**
	baz=92									
324A	**Moseley Ranch,**	92.12		55	⇓P		**P**		**13 02 07.3**	**+1.3**
	baz=92									
Z22A	**Elephant Butte**	92.13		52	⇓P		**P**		**13 02 07.7**	**+1.8**
	baz=92,SNR=7.3									
W20A	**Ramah**	92.18		50	⇓P		**P**		**13 02 08.7**	**+2.5**
	baz=92,SNR=13									
TXAR	**Lajitas Array**	92.24		57	P		**P**		**13 02 07.4**	**+0.9**
TXAR	**Lajitas Array**	92.24		57	P		**P**		**13 02 07.4**	**+0.9**
	comp=Z,1.8nm,1.0s,baz=205,slow=5.5,SNR=11									
TXAR					LR		LR		13 40 12.6	
	comp=Z,131nm,18.1s,baz=270,slow=33									
X21A	**Alamocita Cree**	92.26		51	⇑P		**P**		**13 02 09.0**	**+2.3**
	baz=92,SNR=9.8									
526A	**Mary Lane Ranc**	92.34		56	⇑P		**P**		**13 02 08.3**	**+1.3**
	baz=92									
325A	**Bean Ranch, Si**	92.44		55	⇑P		**P**		**13 02 08.6**	**+1.2**
	baz=93									
224A	**Cornudas Mount**	92.45		54	⇓P		**P**		**13 02 09.2**	**+1.7**
	baz=93									
627A	**Terlingua Ranc**	92.51		57	⇑P		**P**		**13 02 09.4**	**+1.7**
	baz=93									
DUG	**Dugway**	92.52		44	⇓P		**P**		**13 02 09.4**	**+1.9**
	baz=93									
Y22A	**Socorro**	92.52		52	⇓P		**P**		**13 02 09.7**	**+1.9**
	baz=93									
V20A	**Brimhall**	92.60		50	⇓P		**P**		**13 02 10.3**	**+2.1**
	baz=93									
426A	**McDonald Obser**	92.72		56	⇑P		**P**		**13 02 10.5**	**+1.7**
	baz=93									
527A	**Woodward Ranch**	92.73		57	⇓P		**P**		**13 02 10.1**	**+1.3**
	baz=93									
MFID	**Camas Ranch**	92.81		40	*e*P		**P**		**13 02 09.8**	**+1.0**
	comp=Z,11nm,1.1s									
MFID	**Camas Ranch**	92.81		40	⇓P		**P**		**13 02 09.6**	**+0.8**
	baz=93,SNR=6.5									
X22A	**Bernardo**	92.82		51	⇑P		**P**		**13 02 11.3**	**+2.1**
	baz=93									
124A	**Stringfield Ra**	92.85		54	⇓P		**P**		**13 02 11.2**	**+1.8**
	baz=93									
628A	**Black Gap, Mar**	92.89		57	⇑P		**P**		**13 02 11.3**	**+1.9**
	baz=93									
TMUT	**Trail Mountain**	92.94		45	*e*P		**P**		**13 02 11.8**	**+2.1**
	comp=Z,8.1nm,1.0s									
225A	**Deer Hill, Car**	92.96		54	⇑P		**P**		**13 02 11.2**	**+1.3**
	baz=93									
BBB	**Bella Bella**	93.03		28	LR		LR		13 36 31.5	
	comp=Z,104nm,18.7s,baz=251,slow=31									
BJI	**Beijing**	93.08	315		P		**P**		**13 02 10.8**	**+0.9**
BJI					PP		**PP**		**13 05 55.8**	**+2.2**
BJI					pmax		pmax			
	comp=Z,11nm,0.6s									
BJI					LR		LR			
	comp=Z,170nm,33.0s									
Y23A	**Lovelace Mesa,**	93.14		52	⇓P		**P**		**13 02 12.4**	**+1.7**
	baz=93									
V21A	**Milan**	93.15		50	⇓P		**P**		**13 02 12.6**	**+1.9**
	baz=93									
SRU	**San Rafael**	93.25		46	⇑P		**P**		**13 02 12.7**	**+1.6**
	baz=94									
427A	**Hayter Ranch,**	93.27		56	⇑P		**P**		**13 02 12.7**	**+1.5**
	baz=94									
Z24A	**Sheeppen Canyo**	93.27		53	⇑P		**P**		**13 02 12.8**	**+1.5**
	baz=94									
528A	**Cox Ranch, San**	93.33		57	⇓P		**P**		**13 02 13.0**	**+1.4**
	baz=94									
125A	**Gardner Draw,**	93.39		54	⇑P		**P**		**13 02 13.1**	**+1.4**
	baz=94									
226B	**Tecolote Peak,**	93.41		55	⇓P		**P**		**13 02 13.4**	**+1.6**
	baz=94									
MVCO	**Mesa Verde**	93.41		48	⇓P		**P**		**13 02 13.4**	**+1.5**
	baz=94									
X23A	**Hqglass Bar**	93.42		52	⇑P		**P**		**13 02 13.4**	**+1.4**
	baz=94									
I12A	**Atlanta**	93.45		40	⇑P		**P**		**13 02 12.8**	**+1.0**
	baz=94,SNR=11									
U21A	**Nageezi**	93.50		49	⇑P		**P**		**13 02 13.5**	**+1.2**
	baz=94,SNR=6.2									
Y24A	**Capitan**	93.56		53	⇑P		**P**		**13 02 14.0**	**+1.4**
	baz=94									
CMAR	**Chiang Mai Arr**	93.60	289		P		**P**		**13 02 13.2**	**+0.4**
CMAR					PP		**PP**		**13 05 54.9**	**-3.2**
CMAR					PKKPbc		**PKKPbc**		**13 19 17.6**	**0.0**
CMAR	**Chiang Mai Arr**	93.60	289		P		**P**		**13 02 13.2**	**+0.4**
	comp=Z,2.6nm,0.8s,baz=148,slow=3.3,SNR=16									
CMAR					PP		**PP**		**13 05 54.9**	**-3.2**
	comp=Z,1.3nm,0.8s,baz=131,slow=5.5,SNR=6.3									
CMAR					PKKPbc		**PKKPbc**		**13 19 17.6**	**0.0**
	comp=Z,0.5nm,0.7s,baz=285,slow=3.5,SNR=5.6									
Z25A	**Roswell**	93.69		53	⇓P		**P**		**13 02 14.6**	**+1.5**
	baz=94									
HLID	**Hailey**	93.70		41	*e*P		**P**		**13 02 14.6**	**+1.6**
	comp=Z,7.7nm,1.1s									
HLID	**Hailey**	93.70		41	⇑P		**P**		**13 02 14.2**	**+1.3**
	baz=94,SNR=9.9									
428A	**Kincaid Ranch,**	93.72		56	⇓P		**P**		**13 02 14.7**	**+1.5**
	baz=94									
529A	**Stev Forest Ra**	93.72		57	⇓P		**P**		**13 02 14.6**	**+1.4**
	baz=94									
J13A	**Cove Ranch, Pi**	93.73		41	⇑P		**P**		**13 02 14.5**	**+1.4**
	baz=94,SNR=15									
K14A	**Jones Ranch, D**	93.77		42	⇓P		**P**		**13 02 14.3**	**+1.0**
	baz=94									
CHTO	**Chiang Mai**	93.78	289		*e*P		**P**		**13 02 14.4**	**+0.7**
CHTO					pmax		pmax			
	comp=Z,5.0nm,0.9s									
CHTO	**Chiang Mai**	93.78	289		*e*P		**P**		**13 02 14.4**	**+0.7**
	comp=Z,4.5nm,0.9s									
S20A	**Disappointment**	93.86		48	⇑P		**P**		**13 02 15.3**	**+1.3**
	baz=94									
L15A	**Malad City**	93.89		43	⇑P		**P**		**13 02 14.6**	**+0.7**
	baz=94,SNR=7.7									
X24A	**Lazy VL Ranch,**	93.92		52	⇓P		**P**		**13 02 15.4**	**+1.2**
	baz=94									
Q19A	**Hogan Spring (**	93.95		47	⇑P		**P**		**13 02 15.7**	**+1.6**
	baz=94									
KMI	**Kunming**	94.01	297		P		**P**		**13 02 17.1**	**+2.2**
KMI					pP		**pP**		**13 02 18.9**	**-1.8**
KMI					SS		SS		13 19 48.6	+3.0
KMI					pmax		pmax			
	comp=Z,2.0nm,0.5s									
KMI					pmax		pmax			
	comp=Z,89nm,3.7s									
KMI					LR		LR			
	comp=N,110nm,14.9s									
KMI					LR		LR			
	comp=E,120nm,13.8s									
KMI					LR		LR			
	comp=Z,130nm,16.6s									
Y25A	**Mesa, Roswell**	94.07		53	⇑P		**P**		**13 02 16.4**	**+1.5**
	baz=94									
H12A	**Diamond D Ranc**	94.08		40	⇑P		**P**		**13 02 15.6**	**+0.9**
	baz=94,SNR=12									
I13A	**Wildhorse Cree**	94.09		40	⇓P		**P**		**13 02 16.3**	**+1.5**
	baz=94									
S21A	**Coal Bank Pass**	94.13		48	⇑P		**P**		**13 02 16.3**	**+1.0**
	baz=94									
N17A	**Moffit Pass**	94.17		44	⇑P		**P**		**13 02 16.4**	**+1.0**
	baz=94									
Z26A	**Caprock**	94.20		54	⇓P		**P**		**13 02 16.5**	**+1.0**
	baz=94									
K15A	**Arbon**	94.23		42	⇑P		**P**		**13 02 16.6**	**+1.2**
	baz=94									
429A	**Davenport Ranc**	94.23		57	⇑P		**P**		**13 02 16.7**	**+1.1**
	baz=94									
W24A	**Lazy 6 Ranch,**	94.30		51	⇓P		**P**		**13 02 17.3**	**+1.3**
	baz=94									
530A	**J-C Ranch, Com**	94.38		58	⇑P		**P**		**13 02 17.4**	**+1.1**
	baz=95									
H13A	**Challis**	94.42		40	⇓P		**P**		**13 02 18.0**	**+1.8**
	baz=95									
X25A	**Clemmons Ranch**	94.42		52	⇓P		**P**		**13 02 17.9**	**+1.4**
	baz=95									
L16A	**Fish Haven**	94.46		43	⇑P		**P**		**13 02 17.8**	**+1.3**
	baz=95									
I14A	**Mackay**	94.47		41	⇓P		**P**		**13 02 17.6**	**+1.1**
	baz=95,SNR=7.6									
Q20A	**Ridgley Place,**	94.56		47	⇑P		**P**		**13 02 18.4**	**+1.3**
	baz=95									
F12A	**Elk City**	94.63		39	⇑P		**P**		**13 02 18.1**	**+1.0**
	baz=95,SNR=7.2									
V24A	**Rampart Ranch,**	94.68		51	⇑P		**P**		**13 02 19.2**	**+1.4**
	baz=95									
R21A	**Cimarron**	94.69		48	⇓P		**P**		**13 02 19.5**	**+1.7**
	baz=95									
J15A	**Blackfoot**	94.72		42	⇓P		**P**		**13 02 19.0**	**+1.4**
	baz=95,SNR=7.0									
Z27A	**Tatum**	94.76		54	⇑P		**P**		**13 02 19.2**	**+1.2**
	baz=95									
G13A	**Cobalt**	94.77		40	⇑P		**P**		**13 02 19.2**	**+1.4**
	baz=95									
S22A	**4UR Ranch, Cre**	94.80		49	⇑P		**P**		**13 02 19.7**	**+1.4**
	baz=95									
O19A	**Miners Draw (B**	94.83		46	⇑P		**P**		**13 02 19.4**	**+1.1**
	baz=95									
K16A	**Soda Springs**	94.86		42	⇓P		**P**		**13 02 19.4**	**+1.0**
	baz=95,SNR=7.0									
M18A	**Lyman**	94.92		44	⇓P		**P**		**13 02 20.3**	**+1.6**
	baz=95									
W25A	**X Bar L Ranch,**	94.95		52	⇑P		**P**		**13 02 20.5**	**+1.6**
	baz=95									
H14A	**Leadore**	94.95		40	⇓P		**P**		**13 02 20.1**	**+1.3**
	baz=95,SNR=6.8									
531A	**Rocksprings**	94.97		58	⇓P		**P**		**13 02 20.3**	**+1.3**
	baz=95									
Y27A	**Causey**	95.10		54	⇓P		**P**		**13 02 20.8**	**+1.2**
	baz=95									
F13A	**Darby**	95.15		39	⇑P		**P**		**13 02 21.1**	**+1.6**
	baz=95									
V25A	**Rancho No Teng**	95.19		51	⇓P		**P**		**13 02 21.2**	**+1.2**
	baz=95									
K17A	**Gardner Place,**	95.21		43	⇓P		**P**		**13 02 21.5**	**+1.5**
	baz=95									
G14A	**Jackson**	95.29		40	⇑P		**P**		**13 02 21.8**	**+1.6**
	baz=96									
W26A	**Owens Ranch, T**	95.35		52	⇓P		**P**		**13 02 22.3**	**+1.6**
	baz=96									
MCMT	**McKenzie Canyo**	95.37		40	*e*P		**P**		**13 02 22.2**	**+1.5**
	comp=Z,2.9nm,1.2s									
MCMT					*e*PP		**PP**		**13 06 12.2**	**+0.5**
Q22A	**Crested Butte,**	95.39		48	⇑P		**P**		**13 02 22.6**	**+1.6**
	baz=96									
532A	**Rocksprings**	95.42		58	⇓P		**P**		**13 02 22.3**	**+1.3**
	baz=96									
MSTX	**Muleshoe**	95.42		54	⇑P		**P**		**13 02 22.5**	**+1.5**
	baz=96									
U25A	**Circle Dot Ran**	95.64		51	⇓P		**P**		**13 02 23.4**	**+1.3**
	baz=96									
K18A	**Toltan Ranch,**	95.66		43	⇑P		**P**		**13 02 23.6**	**+1.6**
	baz=96									
N20A	**Spence Gulch,**	95.67		46	⇑P		**P**		**13 02 23.8**	**+1.6**
	baz=96									
J17A	**Brown Place, J**	95.70		42	⇑P		**P**		**13 02 23.4**	**+1.3**
	baz=96,SNR=5.4									
R23A	**Moffat**	95.70		49	⇓P		**P**		**13 02 24.1**	**+1.6**
	baz=96									
SNOW	**Snow King Moun**	95.73		42	*e*P		**P**		**13 02 24.3**	**+1.9**
	comp=Z,4.1nm,0.7s									
L19A	**Farson**	95.75		44	⇑P		**P**		**13 02 24.0**	**+1.6**
	baz=96									
G15A	**Dillon**	95.78		40	⇓P		**P**		**13 02 23.3**	**+0.8**
	baz=96,SNR=7.1									
TNA	**Tin City**	95.98		4	*e*P		**P**		**13 02 24.3**	**+1.7**
	comp=Z,16nm,1.0s									
E14A	**Clinton**	96.00		39	⇑P		**P**		**13 02 25.1**	**+1.6**
	baz=96									
J18A	**Kendall Valley**	96.01		43	⇓P		**P**		**13 02 24.5**	**+0.8**
	baz=96,SNR=5.9									
PDAR	**Pinedale Array**	96.02		43

A14A	**Double T Ranch**	**97.63**	**37**	⇑P		Pdif	13 02 32.7	+1.9	
	baz=98								
F18A	**Big Timber**	**97.78**	**41**	⇑P		Pdif	13 02 33.4	+1.9	
	baz=98								
C16A	**Fuhringer Ranc**	**97.79**	**38**	⇓P		Pdif	13 02 33.6	+2.1	
	baz=98								
COLA	**College**	**97.82**	**12**	*e*P		Pdif	13 02 31.2	+0.2	
COLA				pmax		pmax			
	comp=Z,3.0nm,0.8s								
COLA	**College**	**97.82**	**12**	*e*P		Pdif	13 02 31.2	+0.2	
	comp=Z,3.0nm,0.8s								
ILAR	**Eielson Array**	**97.91**	**13**	P		**P**	**13 02 30.9**	**-0.5**	
ILAR				PP		PP	13 06 24.5	-6.0	
ILAR				PKiKP		**PKiKP**	**13 07 04.5**	**-0.3**	
ILAR				PKKPbc		**PKKPbc**	**13 19 03.3**	**-4.5**	
ILAR				PKKP		**PKKPdf**	**13 19 11.4**	**+0.3**	
ILAR	**Eielson Array**	**97.91**	**13**	P		**P**	**13 02 30.9**	**-0.5**	
	comp=Z,0.8nm,0.6s,baz=219,slow=5.6,SNR=9.8								
ILAR				PP		PP	13 06 24.5	-6.0	
	comp=Z,0.8nm,1.1s,baz=219,slow=7.0,SNR=4.2								
ILAR				PKiKP		**PKiKP**	**13 07 04.5**	**-0.3**	
	comp=Z,0.2nm,0.5s,baz=294,slow=2.8,SNR=5.4								
ILAR				PKKPbc		**PKKPbc**	**13 19 03.3**	**-4.5**	
	comp=Z,0.4nm,0.8s,baz=348,slow=2.8,SNR=5.9								
ILAR				PKKP		**PKKPdf**	**13 19 11.4**	**+0.3**	
	comp=Z,0.4nm,0.5s,baz=29,slow=2.6,SNR=12								
LPAZ	**La Paz**	**97.95**	**114**	LR		LR	13 37 53.7		
	comp=Z,122nm,19.4s,baz=160,slow=30								
BILL	**Bilibino**	**98.89**	**354**	*e*P		**P**	**13 02 35.9**	**+0.2**	
BILL				*e*			13 06 38.4		
BILL				pmax		pmax			
	comp=Z,7.0nm,1.6s								
BILL				MLR		MLR			
	comp=Z,200nm,19.0s								
LZH	**Lanzhou**	**98.90**	**307**	*e*P		Pdif	13 02 38.1	+1.3	
LZH				pP		pP	13 02 42.9	+0.3	
LZH				sP		sP	13 02 45.3	+0.6	
LZH				pmax		pmax			
	comp=Z,20nm,1.0s								
CPUP	**Villa Florida**	**99.81**	**128**	LR		LR	13 39 50.6		
	comp=Z,166nm,21.2s,baz=206,slow=31								
RSSD	**Black Hills**	**100.10**	**45**	*e*P		**Pdif**	**13 02 41.8**	**-0.2**	
RSSD				pmax		pmax			
	comp=Z,3.0nm,0.9s								
RSSD	**Black Hills**	**100.10**	**45**	*e*Pdif		**Pdif**	**13 02 41.8**	**-0.2**	
	comp=Z,2.7nm,0.9s								
H24A	**Dirks Ranch, A**	**100.13**	**44**	⇓Pdiff		**Pdif**	**13 02 43.2**	**+1.2**	
	baz=100								
SONM	**Songino Array**	**103.30**	**318**	Pdif		**Pdif**	**13 02 55.8**	**-0.2**	
SONM	**Songino Array**	**103.30**	**318**	Pdiff		**Pdif**	**13 02 55.8**	**-0.2**	
	comp=Z,0.2nm,0.5s,baz=134,slow=4.2,SNR=2.0								
INK	**Inuvik**	**103.76**	**15**	PP		PP	13 07 08.2	-6.4	
INK	**Inuvik**	**103.76**	**15**	PP		PP	13 07 08.2	-6.4	
	comp=Z,1.2nm,1.0s,baz=192,slow=8.0,SNR=2.5								
YKA	**Yellowknife Ar**	**105.39**	**25**	Pdif		**Pdif**	**13 03 05.2**	**+0.5**	
YKA				PKiKP		**PKiKP**	**13 07 17.8**	**-0.5**	
YKA				PKKPbc		**PKKPbc**	**13 18 42.6**	**-3.0**	
YKA				PKKP		**PKKPab**	**13 18 58.0**	**-0.7**	
YKA	**Yellowknife Ar**	**105.39**	**25**	Pdiff		**Pdif**	**13 03 05.2**	**+0.5**	
	comp=Z,0.1nm,0.9s,baz=224,slow=4.3,SNR=2.8								
YKA				PKiKP		**PKiKP**	**13 07 17.8**	**-0.5**	
	comp=Z,0.4nm,0.6s,baz=260,slow=1.6,SNR=25								
YKA				PKKPbc		**PKKPbc**	**13 18 42.6**	**-3.0**	
	comp=Z,1.5nm,0.6s,baz=44,slow=3.1,SNR=7.9								
YKA				PKKP		**PKKPab**	**13 18 57.9**	**-0.7**	
	comp=Z,1.4nm,0.9s,baz=45,slow=2.9,SNR=8.4								
ULM	**Lac du Bonnet**	**107.95**	**42**	PKKPab		PKKPab	13 18 48.2	+0.4	
ULM	**Lac du Bonnet**	**107.95**	**42**	PKKPab		PKKPab	13 18 48.2	+0.4	
	comp=Z,2.3nm,0.6s,baz=56,slow=4.3,SNR=3.8								
WMQ	**Urumqi**	**113.40**	**308**	PKP		**PKiKP**	**13 07 36.0**	**+1.9**	
WMQ				PP		PP	13 08 31.0	+5.3	
WMQ				PKS		**PKSdf**	**13 11 12.0**	**+1.3**	
WMQ				SKS		**SKSdf**	**13 14 47.0**	**+1.6**	
WMQ				SKKS		**SKKSac**	**13 15 24.0**	**-2.4**	
WMQ				SS		**SS**	**13 24 13.0**	**+1.5**	
WMQ				AMB		AMB			
	comp=Z,59nm,10.0s								
WMQ				LR		LR			
	comp=N,71nm,26.0s								
WMQ				LR		LR			
	comp=E,92nm,26.0s								
WMQ				LR		LR			
	comp=Z,97nm,26.0s								
RES	**Resolute Bay**	**117.22**	**17**	*e*PKPdf		**PKPdf**	**13 07 39.5**	**-0.9**	
RES				PKP		**PKPdf**	**13 07 39.5**	**-0.9**	
RES				PKKPbc		**PKKPbc**	**13 18 08.1**	**+1.6**	
RES	**Resolute Bay**	**117.22**	**17**	PKP		**PKPdf**	**13 07 39.5**	**-0.9**	
	comp=Z,3.7nm,1.0s,baz=297,slow=2.3,SNR=10								
RES				PKKPbc		**PKKPbc**	**13 18 08.1**	**+1.6**	
	comp=Z,2.8nm,1.0s,baz=80,slow=2.8,SNR=7.1								
BOSA	**Boshof**	**117.31**	**203**	PKP		**PKPdf**	**13 07 42.9**	**+0.6**	
BOSA	**Boshof**	**117.31**	**203**	PKP		**PKPdf**	**13 07 42.9**	**+0.6**	
	comp=Z,3.4nm,0.5s,baz=112,slow=3.7,SNR=5.3								
MK31	**Makanchi Array**	**117.94**	**310**	*e*PKIKP		**PKPdf**	**13 07 41.3**	**-1.4**	
MK31	**Makanchi Array**	**117.94**	**310**	*e*PKPdf		**PKPdf**	**13 07 41.3**	**-1.4**	
MKAR	**Makanchi Array**	**117.94**	**310**	PKIKP		**PKPdf**	**13 07 41.7**	**-1.0**	
MKAR							13 08 55.9		
MKAR	**Makanchi Array**	**117.94**	**310**	PKP		**PKPdf**	**13 07 41.7**	**-1.0**	
MKAR				PP		**PP**	**13 08 55.9**	**-1.6**	
MKAR				PKKPbc		**PKKPbc**	**13 18 04.0**	**+0.6**	
MKAR	**Makanchi Array**	**117.94**	**310**	PKP		**PKPdf**	**13 07 41.7**	**-1.0**	
	comp=Z,3.9nm,0.6s,baz=200,slow=1.0,SNR=49								
MKAR				PP		**PP**	**13 08 55.9**	**-1.6**	
	comp=Z,1.0nm,0.7s,baz=111,slow=7.9,SNR=2.3								
MKAR				PKKPbc		**PKKPbc**	**13 18 04.0**	**+0.6**	
	comp=Z,0.5nm,0.6s,baz=280,slow=3.8,SNR=4.7								
ZAA0	**Zalesovo Array**	**118.19**	**318**	*e*PKPdf		**PKPdf**	**13 07 41.6**	**-1.3**	
ZALV	**Zalesovo Beam**	**118.19**	**318**	PKIKP		**PKPdf**	**13 07 41.6**	**-1.2**	
ZALV	**Zalesovo Beam**	**118.19**	**318**	PKP		**PKPdf**	**13 07 41.6**	**-1.2**	
ZALV	**Zalesovo Beam**	**118.19**	**318**	PKP		**PKPdf**	**13 07 41.6**	**-1.2**	
	comp=Z,3.2nm,0.6s,baz=129,slow=0.9,SNR=14								
NVS	**Novosibirsk**	**119.29**	**319**	⇑*i*PKIKP		**PKPdf**	**13 07 43.1**	**-1.8**	
NVS				pmax		pmax			
	comp=Z,16nm,1.1s								
NVS				pmax		pmax			
	comp=N,4.0nm,0.9s								
NVS				pmax		pmax			
	comp=E,15nm,1.4s								
KSH	**Kashi**	**120.42**	**301**	*i* PKP		**PKPdf**	**13 07 48.4**	**+0.6**	
KSH				PP		**PP**	**13 09 19.4**	**+4.5**	
KSH				PKS		**PKSdf**	**13 11 23.3**	**-1.3**	
KSH				SKS		**SKSdf**	**13 14 59.4**	**+0.2**	
KSH				SKKS		**SKKSac**	**13 16 12.4**	**-1.2**	
KSH				SS		**SS**	**13 25 47.3**	**+3.9**	
KSH				LR		LR			
	comp=N,44nm,3.9s								
KSH				LR		LR			
	comp=E,71nm,4.5s								
KSH				LR		LR			
	comp=Z,250nm,5.5s								
KURK	**Kurchatov**	**121.21**	**314**	*c i*PKIKP		**PKPdf**	**13 07 47.4**	**-1.4**	
KURK				pmax		pmax			
	comp=Z,34nm,1.0s								
KURK	**Kurchatov**	**121.21**	**314**	*e*PKPdf		**PKPdf**	**13 07 47.5**	**-1.3**	
TKM2	**Tokmak 2**	**121.57**	**304**	*e*PKIKP		**PKPdf**	**13 07 49.4**	**-0.6**	
TKM2	**Tokmak 2**	**121.57**	**304**	*e*PKPdf		**PKPdf**	**13 07 49.4**	**-0.6**	
TKM2	**Tokmak 2**	**121.57**	**304**	P		**PKPdf**	**13 07 49.5**	**-0.6**	
	SNR=24								
KZA	**Kyzart**	**121.62**	**303**	P		**PKPdf**	**13 07 50.1**	**-0.3**	
	SNR=25								
KBK	**Karagaybulak**	**121.97**	**304**	P		**PKPdf**	**13 07 50.2**	**-0.6**	
	SNR=5.3								
CHMS	**Chumysh**	**122.19**	**304**	P		**PKPdf**	**13 07 50.6**	**-0.4**	
	SNR=11								
AAK	**Ala-Archa**	**122.29**	**304**	*c i*PKIKP		**PKPdf**	**13 07 50.2**	**-1.2**	
AAK				pmax		pmax			
	comp=Z,39nm,1.3s								
AAK	**Ala-Archa**	**122.29**	**304**	*e*PKPdf		**PKPdf**	**13 07 51.0**	**-0.4**	
USP	**Ospenovka**	**122.43**	**304**	P		**PKPdf**	**13 07 51.1**	**-0.4**	
	SNR=12								
AML	**Almayashu**	**122.75**	**303**	P		**PKPdf**	**13 07 52.3**	**-0.3**	
	SNR=40								
EKS2	**Erkin-Say**	**122.81**	**304**	*e*PKIKP		**PKPdf**	**13 07 52.3**	**-0.1**	
EKS2	**Erkin-Say**	**122.81**	**304**	*e*PKPdf		**PKPdf**	**13 07 52.3**	**-0.1**	
EKS2	**Erkin-Say**	**122.81**	**304**	P		**PKPdf**	**13 07 52.4**	**+0.1**	
	SNR=5.9								
KBL	**Kabul**	**124.41**	**293**	*e*PKIKP		**PKPdf**	**13 07 56.0**	**+0.2**	
KBL	**Kabul**	**124.41**	**293**	*e*PKPdf		**PKPdf**	**13 07 56.0**	**+0.2**	
KK31	**Karatay Array**	**125.25**	**304**	*i* PKIKP		**PKPdf**	**13 07 56.2**	**-0.7**	
KK31				pmax		pmax			
	comp=Z,20nm,0.7s								
KKAR	**Karatay Array**	**125.25**	**304**	*e*PKIKP		**PKPdf**	**13 07 56.4**	**-0.4**	
KKAR	**Karatay Array**	**125.25**	**304**	*e*PKPdf		**PKPdf**	**13 07 56.4**	**-0.4**	
FRB	**Frobisher Bay**	**125.30**	**31**	PKP		**PKPdf**	**13 07 55.6**	**-0.6**	
FRB	**Frobisher Bay**	**125.30**	**31**	PKP		**PKPdf**	**13 07 55.6**	**-0.6**	
	comp=Z,6.9nm,0.9s,baz=352,slow=3.7,SNR=7.2								
SCHQ	**Schefferville**	**126.13**	**42**	PKP		**PKPdf**	**13 07 57.6**	**-0.5**	
SCHQ	**Schefferville**	**126.13**	**42**	PKP		**PKPdf**	**13 07 57.6**	**-0.5**	
	comp=Z,8.0nm,0.9s,baz=270,slow=1.4,SNR=7.5								
VOSK	**Vostochnaya**	**126.19**	**315**	PKIKP		**PKPdf**	**13 07 57.0**	**-1.3**	
VOSK				pmax		pmax			
	comp=Z,31nm,0.8s								
BVA0	**Borovoye Array**	**126.56**	**316**	*i* PKIKP		**PKPdf**	**13 07 57.7**	**-1.3**	
BVA0				pmax		pmax			
	comp=Z,7.0nm,1.0s								
BRVK	**Borovoye**	**126.63**	**316**	*c i*PKIKP		**PKPdf**	**13 07 57.7**	**-1.4**	
BRVK				pmax		pmax			
	comp=Z,30nm,1.0s								
BRVK	**Borovoye**	**126.63**	**316**	*e*PKPdf		**PKPdf**	**13 07 58.6**	**-0.5**	
ZRNK	**Zerenda**	**127.40**	**316**	PKIKP		**PKPdf**	**13 07 59.5**	**-1.1**	
ZRNK				pmax		pmax			
	comp=Z,24nm,0.8s								
LSZ	**Lusaka**	**128.13**	**212**	*e*PKPdf		**PKPdf**	**13 08 04.7**	**+1.3**	
TSUM	**Tsumeb**	**128.49**	**199**	PKPdf		**PKPdf**	**13 08 02.6**	**-1.4**	
SPITS	**Spitsbergen Ar**	**131.75**	**356**	PKP		**PKPdf**	**13 08 08.1**	**-0.2**	
SPITS	**Spitsbergen Ar**	**131.75**	**356**	PKP		**PKPdf**	**13 08 08.1**	**-0.2**	
	comp=Z,11nm,0.9s,baz=64,slow=4.5,SNR=5.6								
SVE	**Sverdlovsk**	**132.04**	**321**	*e*PKIKP		**PKPdf**	**13 08 09.1**	**-0.2**	
SVE				pmax		pmax			
	comp=Z,25nm,1.1s								
SUMG	**Summit**	**132.68**	**15**	*e*PKIKP		**PKPdf**	**13 08 10.5**	**-0.1**	
SUMG	**Summit**	**132.68**	**15**	*e*PKPdf		**PKPdf**	**13 08 10.5**	**-0.1**	
AB31	**Akbulak array**	**133.08**	**311**	*i* PKIKP		**PKPdf**	**13 08 10.1**	**-1.4**	
AB31				pmax		pmax			
	comp=Z,7.0nm,1.1s								
ABKAR	**Akbulak array**	**133.08**	**311**	*e*PKPdf		**PKPdf**	**13 08 10.8**	**-0.7**	
ARU	**Arti**	**133.24**	**321**	*i* PKIKP		**PKPdf**	**13 08 11.2**	**-0.4**	
ARU							13 10 36.1		
SOKR	**Solikamsk**	**133.53**	**325**	*c i*PKIKP		**PKPdf**	**13 08 12.2**	**+0.3**	
SOKR				pmax		pmax			
	comp=Z,30nm,1.1s								
KMBO	**Kilima Mbogo**	**134.21**	**233**	PKP		**PKPdf**	**13 08 15.3**	**+0.3**	
KMBO				*e*PKPdf		**PKiKP**	**13 08 15.5**	**-0.9**	
KMBO	**Kilima Mbogo**	**134.21**	**233**	PKP		**PKPdf**	**13 08 15.3**	**+0.3**	
	comp=Z,5.0nm,0.9s,baz=98,slow=2.2,SNR=7.9								
AKTO	**Aktyubinsk**	**134.27**	**312**	PKIKP		**PKPdf**	**13 08 12.8**	**-0.9**	
AKTO				pmax		pmax			
	comp=Z,2.0nm,0.8s								
KEV	**Kevo**	**138.19**	**347**	*e*PKIKP		**PKPdf**	**13 08 16.4**	**-4.0**	
KEV	**Kevo**	**138.19**	**347**	*e*pkp		**PKPdf**	**13 08 16.4**	**-4.0**	
ARCES	**ARCESS Array B**	**138.66**	**348**	PKPpre		PKPpre	13 08 12.7		
ARCES				PKP		**PKPdf**	**13 08 22.4**	**+1.0**	
ARCES	**ARCESS Array B**	**138.66**	**348**	PKhKP		PKPpre	13 08 12.7		
	comp=Z,2.4nm,0.7s,baz=60,slow=2.9,SNR=8.4								
ARCES				PKP		**PKPdf**	**13 08 22.4**	**+1.0**	
	comp=Z,5.9nm,0.6s,baz=67,slow=1.4,SNR=8.5								
JOF	**Joensuu**	**142.52**	**339**	*e*PKHKP		PKPpre	13 08 21.0		
JOF	**Joensuu**	**142.52**	**339**	*e*pkp		PKPpre	13 08 21.0		
DGRG	**David-gareji**	**143.72**	**300**	P		PKPbc	13 08 29.3	+0.4	
TBLG	**Delisi**	**144.17**	**300**	*e*PKIKP		PKPbc	13 08 30.2	0.0	
TBLG	**Delisi**	**144.17**	**300**	P		PKPbc	13 08 30.2	0.0	
BHD	**Baghdad**	**144.25**	**286**	*ex*		**PKPab**	**13 08 28.7**	**-1.6**	
BHD				*ex*		x	13 12 10.5		
BHD				*ex*		x	13 14 37.5		
BHD				*ex*		x	13 14 53.0		
BHD				*ex*		x	13 16 38.0		
GNI	**Garni**	**144.26**	**298**	*e*PKPdf		PKPbc	13 08 31.1	+0.3	
VRHR	**Novokhopersk**	**144.29**	**317**	*e*PKIKP		**PKPab**	**13 08 30.1**	**+0.2**	
VRHR				pmax		pmax			
	comp=N,10.0nm,0.6s								
VRHR				pmax		pmax			
	comp=E,10.0nm,0.6s								
VRHR				pmax		pmax			
	comp=Z,20nm,0.6s								
MOS	**Moscow**	**144.47**	**326**	*e*PKIKP		**PKPab**	**13 08 29.0**	**-1.4**	
KAF	**Kangasniemi**	**144.64**	**341**	*e*PKHKP		PKPpre	13 08 27.4		
KAF	**Kangasniemi**	**144.64**	**341**	*e*pkp		PKPpre	13 08 27.4		
ZEI	**Tsey**	**144.69**	**302**	*i* PKIKP		**PKPab**	**13 08 31.0**	**-1.0**	
ZEI				pmax		pmax			
	comp=Z,26nm,0.9s								
ONI	**Oni**	**145.04**	**302**	P		**PKPbc**	**13 08 33.0**	**0.0**	
PUL	**Pulkovo**	**145.11**	**335**	⇓*e*PKIKP		**PKPbc**	**13 08 32.1**	**-0.4**	
AKH	**Akhalkalaki**	**145.13**	**300**	P		**PKPdf**	**13 08 34.0**	**+0.1**	
FIA1	**FINESS Array S**	**145.24**	**340**	*e*PKPbc		**PKPbc**	**13 08 31.7**	**-1.2**	
FINES	**FINESS Array B**	**145.24**	**340**	PKPbc		**PKPbc**	**13 08 31.9**	**-1.0**	
FINES	**FINESS Array B**	**145.24**	**340**	PKPbc		**PKPbc**	**13 08 31.9**	**-1.0**	
	comp=Z,118nm,0.8s,baz=60,slow=3.8,SNR=348								
KBZ	**Khabaz**	**145.29**	**304**	PKIKP		**PKPbc**	**13 08 33.2**	**-0.4**	
KBZ	**Khabaz**	**145.29**	**304**	PKPbc		**PKPbc**	**13 08 33.2**	**-0.4**	
KBZ	**Khabaz**	**145.29**	**304**	PKPbc		**PKPbc**	**13 08 33.2**	**-0.4**	
	comp=Z,14nm,0.9s,baz=130,slow=2.4,SNR=20								
OBN	**Obninsk**	**145.31**	**325**	⇑*i*PKIKP		**PKPbc**	**13 08 32.5**	**-0.8**	
OBN				pmax		pmax			
	comp=Z,187nm,1.4s								
OBN				MLR		MLR			
	comp=Z,100nm,17.0s								
KIV	**Kislovodsk**	**145.41**	**304**	*i* PKIKP		**PKPbc**	**13 08 33.3**	**-0.9**	
KIV				pmax		pmax			
	comp=Z,28nm,0.8s								
VSR	**Storozhevoye**	**145.69**	**318**	*e*PKP2		**PKPdf**	**13 08 33.4**	**-0.9**	
VSR				pmax		pmax			
	comp=Z,70nm,0.8s								
VSR				pmax		pmax			
	comp=N,3.0nm,0.4s								
VSR				pmax		pmax			
	comp=E,20nm,0.8s								
VORD	**Divnogorie**	**145.71**	**317**	*e*PKP2		**PKPdf**	**13 08 33.5**	**-0.8**	
VORD				pmax		pmax			
	comp=N,10.0nm,0.9s								
VORD				pmax		pmax			
	comp=E,20nm,0.9s								
VORD				pmax		pmax			
	comp=Z,50nm,0.9s								
SOC	**Sochi**	**147.59**	**304**	*e*PKIKP		**PKPdf**	**13 08 38.5**	**+0.7**	
SOC				*i*			13 08 41.6		
SOC				*e*			13 12 07.5		
SOC				pmax		pmax			
	comp=Z,17nm,0.6s								
SOC				pmax		pmax			
	comp=Z,30nm,0.7s								
SOC				MLR		MLR			
	comp=Z,92nm,14.0s								
NB2	**NORSAR Subarra**	**148.81**	**352**	PKP		**PKPbc**	**13 08 42.7**	**-0.5**	
	comp=Z,2.2nm,0.6s,baz=28,slow=3.1								
NOA	**NORSAR Array B**	**148.81**	**352**	PKPbc		**PKPbc**	**13 08 42.9**	**-0.3**	
NOA	**NORSAR Array B**	**148.81**	**352**	PKPbc		**PKPbc**	**13 08 42.9**	**-0.3**	
	comp=Z,27nm,0.9s,baz=14,slow=4.2,SNR=48								
ANN	**Anapa**	**148.91**	**307**	*i* PKP2		**PKPbc**	**13 08 43.2**	**-0.7**	
ANN				pmax		pmax			
	comp=Z,75nm,1.1s								
NAO01	**NORSAR Array S**	**149.04**	**352**	*e*PKPdf		**PKPdf**	**13 08 40.0**	**+0.4**	
NAO01				*e*PKPbc		**PKPbc**	**13 08 43.5**	**-0.2**	
NAO01				*e*PKPab		**PKPab**	**13 08 47.9**	**0.0**	
MALT	**Malatya**	**149.25**	**295**	*e*PKIKP		**PKPdf**	**13 08 40.6**	**-0.2**	
MALT				*e*			13 08 45.3		
MALT				*e*			13 08 49.7		
MALT	**Malatya**	**149.25**	**295**	*e*PKPdf		**PKPdf**	**13 08 40.6**	**-0.2**	
MALT				*e*PKPbc		**PKPbc**	**13 08 45.3**	**+0.2**	
MALT				*e*PKPab		**PKPab**	**13 08 49.7**	**0.0**	
MALT	**Malatya**	**149.25**	**295**	⇑*i*P		**PKPdf**	**13 08 41.2**	**+0.4**	
IZAR	**Zarasai**	**149.51**	**333**	*e*P		**PKPbc**	**13 08 44.8**	**-0.2**	
IZAR				AMB		AMB	13 08 46.7		
	comp=Z,40nm,1.3s								
ISAL	**Salakas**	**149.69**	**333**	*e*P		**PKPbc**	**13 08 45.4**	**-0.1**	
ISAL				AMB		AMB	13 08 46.0		
	comp=Z,27nm,1.1s								
MICGM	**Minsk**	**149.71**	**330**	*e*P		**PKPbc**	**13 08 44.0**	**-1.5**	
MNK	**Minsk**	**149.73**	**330**	*e*PKHKP		**PKPbc**	**13 08 44.0**	**-1.6**	
MNK				pmax		pmax			
	comp=Z,360nm,1.0s								
IIGN	**Ignalina**	**149.81**	**332**	*e*P		**PKPbc**	**13 08 45.5**	**-0.3**	
IIGN				AMB		AMB	13 08 47.6		
	comp=Z,34nm,1.4s								
NACGM	**Naroch**	**149.90**	**331**	*e*P		**PKPdf**	**13 08 42.0**	**+0.9**	
KONO	**Kongsberg**	**150.36**	**352**	*e*PKIKP		**PKPdf**	**13 08 42.0**	**+0.3**	
KONO				*e*			13 08 46.8		
KONO				*e*			13 08 52.6		
KONO	**Kongsberg**	**150.36**	**352**	*e*PKPdf		**PKPdf**	**13 08 42.0**	**+0.3**	
KONO				*e*PKPbc		**PKPbc**	**13 08 46.8**	**-0.1**	
KONO				*e*PKPab		**PKPab**	**13 08 52.6**	**-0.7**	
SIM	**Simferopol'**	**151.12**	**309**	*i* PKIKP		**PKPbc**	**13 08 49.7**	**+0.5**	
SIM				*i*			13 08 57.0		
SIM				pmax		pmax			
	comp=Z,54nm,0.9s								
SIM				MLR		MLR			
	comp=Z,200nm,22.0s								
AKASG	**Malin Array Be**	**151.44**	**323**	PKIKP		**PKPbc**	**13 08 49.5**	**-0.3**	
AKASG	**Malin Array Be**	**151.44**	**323**	PKPbc		**PKPbc**	**13 08 49.5**	**-0.3**	
AKASG	**Malin Array Be**	**151.44**	**323**	PKPbc		**PKPbc**	**13 08 49.5**	**-0.3**	
	comp=Z,67nm,0.8s,baz=49,slow=2.3,SNR=16								
AK01	**Malin Array Si**	**151.46**	**323**	*e*PKPdf		**PKPdf**	**13 08 43.3**	**-0.4**	
AK01				*e*PKPbc		**PKPbc**	**13 08 49.5**	**-0.4**	
KIEV	**Kiev**	**151.46**	**323**	*e*PKIKP		**PKPdf**	**13 08 40.9**	**-2.8**	
KIEV				*e*			13 08 49.4		
KIEV	**Kiev**	**151.46**	**323**	*e*PKPdf		**PKPdf**	**13 08 40.9**	**-2.8**	
KIEV				*e*PKPbc		**PKPbc**	**13 08 49.4**	**-0.4**	
AK02	**Malin Array Si**	**151.48**	**323**	*e*PKPbc		**PKPbc**	**13 08 49.4**	**-0.4**	
SUW	**Suwalki**	**151.99**	**333**	*e*PKIKP		**PKPbc**	**13 08 50.9**	**0.0**	
SUW	**Suwalki**	**151.99**	**333**	*e*PKPbc		**PKPbc**	**13 08 50.9**	**0.0**	
SUW	**Suwalki**	**151.99**	**333**	*e*PKP		**PKPbc**	**13 08 51.0**	**0.0**	
BR131	**Keskin Array S**	**152.79**	**298**	*e*PKPdf		**PKPdf**	**13 08 45.7**	**-0.5**	
BR131				*e*PKPbc		**PKPbc**	**13 08 52.8**	**-0.5**	
BRTR	**Keskin Array B**	**152.79**	**298**	PKP		**PKPdf**	**13 08 45.8**	**-0.4**	
BRTR				PKPbc		**PKPbc**	**13 08 52.9**	**-0.5**	
BRTR				PKPab		**PKPab**	**13 09 04.1**	**-0.3**	
BRTR	**Keskin Array B**	**152.79**	**298**	PKP		**PKPdf**	**13 08 45.8**	**-0.4**	
	comp=Z,1.8nm,0.9s,baz=158,slow=1.6,SNR=6.8								
BRTR				PKPbc		**PKPbc**	**13 08 52.9**	**-0.5**	
	comp=Z,16nm,1.0s,baz=130,slow=1.9,SNR=29								
BRTR				PKPab		**PKPab**	**13 09 04.1**	**-0.3**	
	comp=Z,5.5nm,0.8s,baz=132,slow=4.5,SNR=7.5								
ANTO	**Ankara**	**153.40**	**299**	*e*PKIKP		**PKPdf**	**13 08 46.6**	**-0.5**	
ANTO				*e*			13 08 54.7		
ANTO	**Ankara**	**153.40**	**299**	*e*PKPdf		**PKPdf**	**13 08 46.6**	**-0.5**	
ANTO				*e*PKPbc		**PKPbc**	**13 08 54.7**	**+0.1**	
ANTO	**Ankara**	**153.40**	**299**	⇑P		**PKPbc**	**13 08 54.4**	**-0.3**	
CSS	**Prodhromos**	**153.50**	**288**	*e*PKPdf		**PKPdf**	**13 08 46.6**	**-0.6**	
CSS				*e*PKPbc		**PKPbc**	**13 08 54.8**	**-0.2**	
CSS				*e*PKPab		**PKPab**	**13 09 07.5**	**+0.2**	
BEL	**Belsk**	**154.59**	**333**	*e*PKP		**PKPbc**	**13 08 56.8**	**+0.1**	
RGN	**Rugen**	**154.61**	**345**	*e*PKPab		**PKPab**	**13 09 10.8**	**-0.5**	
CFR	**Carcaliu**	**154.93**	**313**	⇓*i*P		**PKPbc**	**13 08 56.6**	**-1.0**	
LIC	**Lamto**	**154.97**	**163**	*e*PKIKP		**PKPdf**	**13 08 47.1**	**-2.9**	
LIC				*e*R					
	comp=Z,166nm,22.8s								
LIC	**Lamto**	**154.97**	**163**	*e*PKPdf		**PKPdf**	**13 08 47.1**	**-2.9**	

SFTF	**Sexfontaines**	**162.12**	**354**	*e*PKIKP	**PKPdf**	**13**	**08**	**57.1 -0.3**
SFTF	**Sexfontaines**	**162.12**	**354**	*e*PKPdf	**PKPdf**	**13**	**08**	**57.1 -0.3**
DAVA	**Damuels**	**162.16**	**343** ⇓	*i*PKPab	**PKPab**	**13**	**09**	**44.2 -0.2**
	comp=Z,26nm,1.1s							
HAU	**Haudompre**	**162.17**	**351**	*e*PKIKP	**PKPdf**	**13**	**08**	**56.7 -0.8**
HAU				*e*R				
	comp=Z,193nm,20.2s							
HAU	**Haudompre**	**162.17**	**351**	*e*PKIKP	**PKPdf**	**13**	**08**	**56.7 -0.8**
HAU	**Haudompre**	**162.17**	**351**	*e*PKPdf	**PKPdf**	**13**	**08**	**56.7 -0.8**
FETA	**Feichten**	**162.18**	**341** ⇑	*i*PKPdf	**PKPdf**	**13**	**08**	**57.7 -0.1**
FETA	comp=Z,7.7nm,1.3s			⇓ *i*PKPab	**PKPab**	**13**	**09**	**44.5 0.0**
	comp=Z,12nm,1.0s							
FETA	**Feichten**	**162.18**	**341** ⇑	*i*P	**PKPdf**	**13**	**08**	**57.7 -0.1**
HINF	**Hinteralfeld**	**162.28**	**350**	*e*PKIKP	**PKPdf**	**13**	**08**	**56.7 -1.0**
HINF	**Hinteralfeld**	**162.28**	**350**	*e*PKIKP	**PKPdf**	**13**	**08**	**56.7 -1.0**
HINF	**Hinteralfeld**	**162.28**	**350**	*e*PKPdf	**PKPdf**	**13**	**08**	**56.7 -1.0**
TORD	**Torodi Ar. Bea**	**162.79**	**178**	PKP	**PKPdf**	**13**	**08**	**59.4 +0.3**
TORD				PKPab	**PKPab**	**13**	**09**	**48.4 +0.7**
TORD				PP	**PP**	**13**	**13**	**32.0 +1.1**
TORD	**Torodi Ar. Bea**	**162.79**	**178**	PKP	**PKPdf**	**13**	**08**	**59.4 +0.3**
	comp=Z,3.4nm,1.1s,baz=274,slow=0.9,SNR=7.3							
TORD				PKPab	**PKPab**	**13**	**09**	**48.4 +0.7**
	comp=Z,15nm,0.9s,baz=189,slow=3.6,SNR=4.8							
TORD				PP	**PP**	**13**	**13**	**32.0 +1.1**
	comp=Z,4.2nm,1.2s,baz=187,slow=4.3,SNR=5.0							
LOR	**Lormes**	**163.14**	**356**	*e*PKIKP	**PKPdf**	**13**	**08**	**58.1 -0.4**
	comp=Z,33nm,1.3s							
LOR				*e*R				
	comp=Z,298nm,20.0s							
LOR	**Lormes**	**163.14**	**356**	*e*PKPdf	**PKPdf**	**13**	**08**	**58.1 -0.4**
SSF	**Saint Saulge**	**163.36**	**357**	*e*PKIKP	**PKPdf**	**13**	**08**	**58.3 -0.4**
	comp=Z,32nm,1.4s							
SSF	**Saint Saulge**	**163.36**	**357**	*e*PKIKP	**PKPdf**	**13**	**08**	**58.3 -0.4**
SSF	**Saint Saulge**	**163.36**	**357**	*e*PKPdf	**PKPdf**	**13**	**08**	**58.3 -0.4**
CABF	**La Chapelle**	**163.57**	**351**	*e*PKIKP	**PKPdf**	**13**	**08**	**59.0 0.0**
	comp=Z,45nm,1.4s							
CABF	**La Chapelle**	**163.57**	**351**	*e*PKIKP	**PKPdf**	**13**	**08**	**59.0 0.0**
CABF	**La Chapelle**	**163.57**	**351**	*e*PKPdf	**PKPdf**	**13**	**08**	**59.0 0.0**
MFF	**Saint Martin d**	**163.75**	**6**	*e*PKIKP	**PKPdf**	**13**	**08**	**59.0 -0.1**
MFF	**Saint Martin d**	**163.75**	**6**	*e*PKIKP	**PKPdf**	**13**	**08**	**59.0 -0.1**
MFF	**Saint Martin d**	**163.75**	**6**	*e*PKPdf	**PKPdf**	**13**	**08**	**59.0 -0.1**
SMF	**Signal de Mont**	**163.76**	**356**	*e*PKIKP	**PKPdf**	**13**	**08**	**58.5 -0.6**
SMF	**Signal de Mont**	**163.76**	**356**	*e*PKIKP	**PKPdf**	**13**	**08**	**58.5 -0.6**
SMF	**Signal de Mont**	**163.76**	**356**	*e*PKPdf	**PKPdf**	**13**	**08**	**58.5 -0.6**
TCF	**Toulx Ste Croi**	**164.17**	**0**	*e*PKIKP	**PKPdf**	**13**	**08**	**59.1 -0.4**
	comp=Z,19nm,1.2s							
TCF	**Toulx Ste Croi**	**164.17**	**0**	*e*PKIKP	**PKPdf**	**13**	**08**	**59.1 -0.4**
TCF	**Toulx Ste Croi**	**164.17**	**0**	*e*PKPdf	**PKPdf**	**13**	**08**	**59.1 -0.4**
LPG	**La Plagne**	**164.54**	**348**	*e*PKIKP	**PKPdf**	**13**	**09**	**00.1 -0.1**
LPG	**La Plagne**	**164.54**	**348**	*e*PKIKP	**PKPdf**	**13**	**09**	**00.1 -0.1**
LPG	**La Plagne**	**164.54**	**348**	*e*PKPdf	**PKPdf**	**13**	**09**	**00.1 -0.1**
RJF	**Les Rejaudoux**	**165.14**	**2**	*e*PKIKP	**PKPdf**	**13**	**09**	**00.1 -0.3**
RJF				*e*R				
	comp=Z,229nm,19.0s							
RJF	**Les Rejaudoux**	**165.14**	**2**	*e*PKIKP	**PKPdf**	**13**	**09**	**00.1 -0.3**
RJF	**Les Rejaudoux**	**165.14**	**2**	*e*PKPdf	**PKPdf**	**13**	**09**	**00.1 -0.3**
MBDF	**Montbardon**	**165.28**	**347**	*e*PKIKP	**PKPdf**	**13**	**09**	**00.4 -0.3**
MBDF	**Montbardon**	**165.28**	**347**	*e*PKIKP	**PKPdf**	**13**	**09**	**00.4 -0.3**
MBDF	**Montbardon**	**165.28**	**347**	*e*PKPdf	**PKPdf**	**13**	**09**	**00.4 -0.3**
LFF	**La Frestale**	**165.47**	**4**	*e*PKIKP	**PKPdf**	**13**	**09**	**00.5 -0.1**
LFF	**La Frestale**	**165.47**	**4**	*e*PKIKP	**PKPdf**	**13**	**09**	**00.5 -0.1**
LFF	**La Frestale**	**165.47**	**4**	*e*PKPdf	**PKPdf**	**13**	**09**	**00.5 -0.1**
VIVF	**Saint-Julien-l**	**165.47**	**353**	*e*PKIKP	**PKPdf**	**13**	**09**	**00.6 -0.1**
VIVF	**Saint-Julien-l**	**165.47**	**353**	*e*PKIKP	**PKPdf**	**13**	**09**	**00.6 -0.1**
VIVF	**Saint-Julien-l**	**165.47**	**353**	*e*PKPdf	**PKPdf**	**13**	**09**	**00.6 -0.1**
CAF	**Calviac**	**165.53**	**0**	*e*PKIKP	**PKPdf**	**13**	**09**	**00.7 0.0**
	comp=Z,23nm,1.3s							
CAF	**Calviac**	**165.53**	**0**	*e*PKIKP	**PKPdf**	**13**	**09**	**00.7 0.0**
CAF	**Calviac**	**165.53**	**0**	*e*PKPdf	**PKPdf**	**13**	**09**	**00.7 0.0**
SMRF	**Simiane la Rot**	**166.22**	**350**	*e*PKIKP	**PKPdf**	**13**	**09**	**01.4 +0.1**
SMRF	**Simiane la Rot**	**166.22**	**350**	*e*PKPdf	**PKPdf**	**13**	**09**	**01.4 +0.1**
LASF	**Ste Croix**	**166.32**	**355**	*e*PKIKP	**PKPdf**	**13**	**09**	**01.4 0.0**
LASF	**Ste Croix**	**166.32**	**355**	*e*PKPdf	**PKPdf**	**13**	**09**	**01.4 0.0**
LMR	**La Mourre**	**166.68**	**346**	*e*PKIKP	**PKPdf**	**13**	**09**	**01.0 -0.6**
	comp=Z,41nm,1.2s							
LMR	**La Mourre**	**166.68**	**346**	*e*PKIKP	**PKPdf**	**13**	**09**	**01.0 -0.6**
LMR	**La Mourre**	**166.68**	**346**	*e*PKPdf	**PKPdf**	**13**	**09**	**01.0 -0.6**
SJPF	**Ste Jean**	**167.04**	**11**	*e*PKIKP	**PKPdf**	**13**	**09**	**01.2 -0.8**
SJPF	**Ste Jean**	**167.04**	**11**	*e*PKIKP	**PKPdf**	**13**	**09**	**01.2 -0.8**
SJPF	**Ste Jean**	**167.04**	**11**	*e*PKPdf	**PKPdf**	**13**	**09**	**01.2 -0.8**
EPF	**Esparros**	**167.33**	**6**	*e*PKIKP	**PKPdf**	**13**	**09**	**01.3 -0.9**
EPF	**Esparros**	**167.33**	**6**	*e*PKIKP	**PKPdf**	**13**	**09**	**01.3 -0.9**
EPF	**Esparros**	**167.33**	**6**	*e*PKPdf	**PKPdf**	**13**	**09**	**01.3 -0.9**
EVOP	**Sao Brissos**	**168.25**	**44**	*e*PKIKP	**PKPdf**	**13**	**09**	**02.3 -0.6**
EVOP	**Sao Brissos**	**168.25**	**44**	*e*PKPdf	**PKPdf**	**13**	**09**	**02.3 -0.6**
EVO	**Evora**	**168.31**	**44**	*e*PKIKP	**PKPdf**	**13**	**09**	**02.3 -0.7**
	comp=Z,46nm,1.4s							
EVO				*e*R				
	comp=Z,210nm,20.8s							
ESDC	**Sonseca Array**	**169.48**	**27**	PKP	**PKPdf**	**13**	**09**	**04.9 +1.1**
ESDC				PKPab	**PKPab**	**13**	**10**	**16.1 -0.7**
ESDC	**Sonseca Array**	**169.48**	**27**	PKP	**PKPdf**	**13**	**09**	**04.9 +1.1**
	comp=Z,0.4nm,0.3s,baz=340,slow=2.5,SNR=11							
ESDC				PKPab	**PKPab**	**13**	**10**	**16.1 -0.7**
	comp=Z,0.2nm,0.2s,baz=336,slow=5.6,SNR=3.4							

MEX 14 12:53:20.9±0.7, 15°.89N×97°.84W, h3km±20km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.57**	**331**	*i* P	Pg	12 53 31.9	-0.2
PNIG				*e*S	Sg	12 53 40.2	+0.6
VHO	**Vista Hermosa**	**1.58**	**42**	*i* P	Pn	12 53 47.1	-3.1
VHO				*i* S	Sn	12 54 06.9	-4.5
UTMO	**Huajuapan**	**1.93**	**1**	*e*P	Pn	12 53 50.8	-4.2
UTMO				*i* S	Sn	12 54 15.1	-4.9
CMIG	**Matias Romero**	**3.08**	**67**	*i* P	Pn	12 54 07.8	-2.6
CMIG				*i* S	Sn	12 54 44.8	-3.0

NIED ***14*** *13:05:00, 46°.00N×152°.40E, h38km, Mw4.6 Best double couple: M0 7.93000×10^15 NP1:φ=132.00000°, δ=75.00000°, λ=-32.00000°. NP2:φ=231.00000°, δ=59.00000°, λ=-163.00000°.*

JMA ***14*** *13:05:01.1±0.7, 46°.01N×152°.36E, h30km, M5.0*

ISCJB ***14*** *13:05:02.3±0.5, 45°.97N±0°.04×152°.04E±0°.05, h41km±4km, mb4.5/88, MS4.0/15, Error ellipse: s-maj=8.7km s-min=3.6km az=145.4*

SKHL ***14*** *13:05:02.1±2.1, 46°.15N×152°.42E, h42km±3km, mb5.1/5, Ms4.0/2, msh5.4/2*

MOS ***14*** *13:05:03.7±1.0, 46°.17N×151°.90E, h46km, mb4.8/45, Error ellipse: s-maj=8.6km s-min=5.5km az=98.9*

BJI ***14*** *13:05:05.6, 45°.98N×151°.92E, h73km, mB4.8/24, mb4.6/31, Ms4.2/21, Ms7 4.0/20*

KRSC ***14*** *13:05:05.2±2.6, 45°.69N×154°.48E, h10km±10km, ML4.8*

NEIC ***14*** *13:05:06.7±0.6, 46°.13N×151°.90E, h61km±5km, mb4.8/26, Error ellipse: s-maj=7.5km s-min=4.2km az=147.0*

IDC ***14*** *13:05:07.3±2.6, 46°.15N×151°.90E, h66km±22km, mb4.0/21, mb1 4.2/25, mb1mx4.1/30, mbtmp4.0/25, MS3.8/10, Ms1 3.8/10, ms1mx3.5/45, Error ellipse: s-maj=16.7km s-min=10.9km az=149.0*

SZGRF ***14*** *13:05:16.1, 47°.91N×150°.91E, h33km, mb4.7, Kuril Islands, Russia*

ISC 14 13:05:06.0±0.5, 45°.99N±0°.06×152°.00E±0°.05, h61km±2km, h60km:pP-P, n339, σ1°20/371, mb4.6/88, 24C-18D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.00**	**257**	⇓ *i*PN	**Pn**	**13**	**05**	**51.0 0.0**
KUR				*e*S	**Sn**	**13**	**06**	**26.0 +0.3**
KUR				pmax	pmax			
	comp=Z,770nm,0.9s							
KUR				pmax	pmax			
	comp=N,150nm,0.5s							
KUR				pmax	pmax			
	comp=E,200nm,0.9s							
KUR				smax	smax			
	comp=N,2μm,0.6s							
KUR				smax	smax			
	comp=E,2μm,1.0s							
KUR				smax	smax			
	comp=N,6μm,2.0s							
KUR				smax	smax			
	comp=E,3μm,2.0s							
KUR	**Kuril'sk**	**3.00**	**257**	⇓ *i*P	**Pn**	**13**	**05**	**51.0 0.0**
KUR				AMB	AMB	13 05 52.3		
	comp=E,150nm,0.5s							
KUR				AMB	AMB	13 05 52.3		
	comp=E,200nm,0.9s							
KUR				AMB	AMB	13 05 52.3		
	comp=E,770nm,0.9s							
KUR				*e*S	**Sn**	**13**	**06**	**26.0 +0.3**
KUR				A	A	13 06 34.2		
	comp=E,2μm,0.8s							
KUR				A	A	13 06 34.2		
	comp=E,2μm,0.8s							
KUR				A	A	13 06 42.8		
	comp=E,6μm,2.0s							
KUR				A	A	13 06 42.8		
	comp=E,3μm,2.0s							
YUK	**Yuzh-Kuril'sk**	**4.77**	**248**	*d i*PN	**Pn**	**13**	**06**	**15.6 +0.3**
YUK				*i* S	**Sn**	**13**	**07**	**11.7 +2.5**
YUK				pmax	pmax			
	comp=Z,234nm,0.3s							
YUK				pmax	pmax			
	comp=N,76nm,0.2s							
YUK				pmax	pmax			
	comp=E,76nm,0.2s							
YUK				smax	smax			
	comp=E,252nm,0.3s							
YUK				smax	smax			
	comp=N,421nm,0.9s							
YUK				smax	smax			
	comp=N,1μm,3.6s							
YUK				smax	smax			
	comp=E,732nm,2.3s							
YUK	**Yuzh-Kuril'sk**	**4.77**	**248**	⇓ *i*P	**Pn**	**13**	**06**	**15.6 +0.3**
YUK				AMB	AMB	13 06 18.9		
	comp=E,76nm,0.2s							
YUK				AMB	AMB	13 06 18.9		
	comp=E,234nm,0.2s							
YUK				*i* sP	**sPn**	**13**	**06**	**33.8 +1.3**
YUK				*i* S	**Sn**	**13**	**07**	**11.8 +2.5**
YUK				A	A	13 07 15.4		
	comp=E,1μm,3.0s							
YUK				A	A	13 07 15.4		
	comp=E,730nm,3.0s							
YUK				A	A	13 07 29.8		
	comp=E,420nm,0.3s							
YUK				A	A	13 07 29.8		
	comp=E,250nm,0.3s							
NEM2	**Nemuro 2**	**5.18**	**242**	P	**Pn**	**13**	**06**	**18.6 -2.2**
NEM2				*e*S	**Sn**	**13**	**07**	**16.0 -3.2**
JRA	**Rausu**	**5.30**	**250**	P	**Pn**	**13**	**06**	**23.1 +0.7**
SKR	**Severo-Kuril's**	**5.44**	**29**	*e*PN	Pn	13 06 16.0		-8.3
SKR				pmax	pmax			
	comp=Z,90nm,0.5s							
SKR	**Severo-Kuril's**	**5.44**	**29**	P	**Pn**	**13**	**06**	**23.2 -1.1**
SKR				S	**Sn**	**13**	**07**	**19.7 -5.8**
SKR	**Severo-Kuril's**	**5.44**	**29**	*e*P	Pn	13 06 16.0		-8.3
SKR				AMB	AMB	13 06 59.0		
	comp=Z,90nm,0.5s							
SKR				*e*S	Sn	13 07 13.0		-12
SKR				A	A	13 07 38.1		
	comp=Z,170nm,0.5s							
SKR				A	A	13 07 38.1		
	comp=Z,250nm,0.5s							
SKR				A	A	13 07 38.1		
	comp=Z,130nm,0.5s							
JNK	**Nakash**	**5.71**	**248**	P	**Pn**	**13**	**06**	**27.8 -0.4**
JAK	**Akkeshi**	**6.02**	**243**	P	**Pn**	**13**	**06**	**30.4 -2.0**
JAK				*e*S	**Sn**	**13**	**07**	**36.4 -3.5**
JTKR	**Abashiri--Toko**	**6.09**	**254**	P	**Pn**	**13**	**06**	**34.0 +0.8**
JMP	**Maruseppu**	**6.44**	**255**	P	**Pn**	**13**	**06**	**39.5 +1.3**
JAR	**Ashorobuto**	**6.46**	**248**	P	**Pn**	**13**	**06**	**38.4 0.0**
YSS	**Yuzh-Sakhalins**	**6.46**	**282** ⇑	*i*P	**Pn**	**13**	**06**	**40.3 +1.9**
YSS				AMB	AMB	13 06 41.5		
	comp=Z,50nm,1.0s							
YSS				AMB	AMB	13 06 41.5		
	comp=Z,60nm,1.0s							
YSS				*e*S	**Sn**	**13**	**07**	**53.0 +2.4**
YSS				AMS	AMS	13 08 56.0		
	comp=Z,900nm,16.0s							
YSS				AMS	AMS	13 08 56.0		
	comp=Z,1μm,16.0s							
JOB	**Onbets**	**6.61**	**245**	P	**Pn**	**13**	**06**	**39.4 -1.0**
JOB				*e*S	**Sn**	**13**	**07**	**52.4 -1.9**
JKK2	**Kamakawa 2**	**6.90**	**255**	P	**Pn**	**13**	**06**	**45.9 +1.5**
ASAJ	**Asahikawa**	**6.92**	**258**	*e*P	**Pn**	**13**	**06**	**46.3 +1.6**
	comp=Z,25nm,0.8s							
ASAJ	**Asahikawa**	**6.92**	**258**	P	**Pn**	**13**	**06**	**46.9 +2.2**
ASAJ	**Asahikawa**	**6.92**	**258**	P	**Pn**	**13**	**06**	**46.3 +1.6**
	comp=Z,8.7nm,0.3s,baz=89,slow=11,SNR=65							
ASAJ				LR	LR	13 09 24.9		
	comp=Z,675nm,19.8s,baz=329,slow=37							
JCH	**Churui**	**7.06**	**245**	P	**Pn**	**13**	**06**	**44.8 -1.7**
JCH				*e*S	**Sn**	**13**	**08**	**02.4 -2.9**
JWK2	**Keihoku**	**7.12**	**268**	P	Pn	13 06 52.3		+5.0
JAB	**Ashibetsu**	**7.39**	**254**	P	**Pn**	**13**	**06**	**53.4 +2.3**
UGL	**Uglegorsk**	**7.40**	**298**	*e*PN	**Pn**	**13**	**06**	**53.0 +1.8**
UGL				pmax	pmax			
	comp=Z,84nm,0.7s							
UGL				MLR	MLR			
	comp=N,400nm,16.0s							
UGL				MLR	MLR			
	comp=E,600nm,16.0s							
UGL	**Uglegorsk**	**7.40**	**298**	*e*P	**Pn**	**13**	**06**	**53.0 +1.8**
UGL				AMB	AMB	13 06 54.0		
	comp=E,84nm,0.7s							
UGL				*e*L	L	13 08 09.0		
UGL				AMS	AMS	13 09 57.0		
	comp=E,400nm,16.0s							
UGL				AMS	AMS	13 09 57.0		
	comp=E,600nm,16.0s							
JEM	**Erimo**	**7.51**	**241**	P	**Pn**	**13**	**06**	**52.2 -0.6**
ERM	**Erimo**	**7.51**	**241**	*d i*PN	**Pn**	**13**	**06**	**52.5 -0.3**
ERM	**Erimo**	**7.51**	**241**	*e*P	**Pn**	**13**	**06**	**52.3 -0.5**
	comp=E,81nm,0.7s							
JBT2	**Biratori 2**	**7.62**	**249**	P	**Pn**	**13**	**06**	**53.2 -1.0**
JNBK	**Urakawa-nobuka**	**7.62**	**244**	P	**Pn**	**13**	**06**	**52.1 -2.1**
JNBK				*e*S	**Sn**	**13**	**08**	**15.2 -3.8**
MTVR	**Mutnovka**	**7.65**	**30**	P	**Pn**	**13**	**06**	**52.9 -1.9**
MTVR				S	Sn	13 08 12.8		-7.2
RUS	**Russkaya**	**7.73**	**31**	PN	**Pn**	**13**	**06**	**52.7 -3.0**
RUS	**Russkaya**	**7.73**	**31**	P	**Pn**	**13**	**06**	**52.7 -3.0**
RUS				S	Sn	13 08 11.8		-10
PEAOB	**Petropavlovsk-**	**8.03**	**25**	*e*P	**Pn**	**13**	**06**	**58.9 -0.9**
PETK	**Petropavlovsk-**	**8.03**	**25**	PN	**Pn**	**13**	**06**	**59.5 -0.3**
PETK				S	Sn	13 08 37.3		+8.3
PETK				pmax	pmax			
	comp=Z,2.0nm,0.3s							
PETK				MLR	MLR			
	comp=Z,159nm,21.3s							
PETK	**Petropavlovsk-**	**8.03**	**25**	P	**Pn**	**13**	**06**	**59.5 -0.3**
PETK				S	Sn	13 08 37.3		+8.3
PETK	**Petropavlovsk-**	**8.03**	**25**	P	**Pn**	**13**	**06**	**59.5 -0.3**
	comp=Z,1.5nm,0.3s,baz=180,slow=13,SNR=17							
PETK				S	Sn	13 08 37.3		+8.3
	comp=Z,0.2nm,0.3s,baz=264,slow=19,SNR=2.2							
PETK				LR	LR	13 10 01.5		
	comp=Z,159nm,21.3s,baz=62,slow=37							
PET	**Petropavlovsk**	**8.26**	**29**	S	Sn	13 08 28.0		-6.7
AVH	**Avacha**	**8.49**	**28**	P	**Pn**	**13**	**07**	**04.8 -1.4**
SDLR	**Sedlovina**	**8.55**	**29**	P	**Pn**	**13**	**07**	**05.6 -1.4**
GNL	**Ganaly**	**8.61**	**24**	P	**Pn**	**13**	**07**	**08.3 +0.4**
JNB	**Noboribetsu**	**8.62**	**250**	P	**Pn**	**13**	**07**	**06.9 -1.1**
SPN	**Mys Shipunski**	**8.82**	**33**	S	Sn	13 08 39.1		-9.2
JKB	**Kayabe**	**8.91**	**247**	P	**Pn**	**13**	**07**	**10.1 -1.8**
JKB				*e*S	Sn	13 08 44.7		-6.0
JYM2	**Yakumo 2**	**9.23**	**249**	P	**Pn**	**13**	**07**	**15.0 -1.2**
JANG	**Nango**	**9.49**	**237**	P	Pn	13 07 15.3		-4.6
JTM	**Tenmabayashi**	**9.51**	**241**	P	**Pn**	**13**	**07**	**17.4 -2.6**
JTH	**Tanohata**	**9.58**	**234**	P	Pn	13 07 16.0		-5.0
JTH				*e*S	Sn	13 08 55.8		-11
OFUJ	**Ofunato**	**10.28**	**231**	P	Pn	13 07 26.2		-4.4
JRG	**Rokugo**	**10.64**	**236**	P	Pn	13 07 32.1		-3.5
TEY	**Ternei**	**10.85**	**270**	*e*P	Pn	13 07 41.7		+3.3
JIO	**Ouri**	**10.91**	**230**	P	Pn	13 07 34.9		-4.3
HABR	**Khabarovsk**	**11.79**	**288**	PN	**Pn**	**13**	**07**	**50.0 -1.2**
HABR				pmax	pmax			
	comp=Z,54nm,2.3s							
HABR				pmax	pmax			
	comp=E,53nm,2.0s							
HABR				pmax	pmax			
	comp=N,30nm,2.3s							
HABR				MLR	MLR			
	comp=Z,542nm,18.0s							
MJAR	**Matsushiro Arr**	**14.01**	**233**	P	Pn	13 08 18.1		-3.2
MJAR	**Matsushiro Arr**	**14.01**	**233**	P	Pn	13 08 18.1		-3.2
	comp=Z,0.3nm,0.3s,baz=27,slow=12,SNR=13							
MAT	**Matsushiro**	**14.01**	**233**	P	Pn	13 08 17.8		-3.5
MAT				*e*S	**Sn**	**13**	**10**	**50.2 -5.0**
KLR	**Kul'dur**	**14.04**	**291**	*e*P	**Pn**	**13**	**08**	**20.2 -1.4**
KLR				MLR	MLR			
	comp=E,600nm,14.0s							
KLR				MLR	MLR			
	comp=Z,1μm,14.0s							
USRK	**Ussuriysk Arra**	**14.24**	**270**	P	**Pn**	**13**	**08**	**23.4 -0.9**
	comp=Z,0.4nm,0.3s,baz=86,slow=12,SNR=12							
FX1	**Attu Island--F**	**15.36**	**56**	LR	LR	13 14 46.0		
	comp=Z,10nm,18.4s,baz=294,slow=38							
MDJ	**Mudanjiang**	**15.82**	**273**	P	**Pn**	**13**	**08**	**43.4 -1.4**
MDJ				pmax	pmax			
	comp=Z,6.0nm,0.6s							
MDJ				pmax	pmax			
	comp=Z,59nm,5.8s							
SEY	**Seymchan**	**16.98**	**1** ⇓	*e*P	**Pn**	**13**	**08**	**57.7 -1.4**
ZEA	**Zeya**	**17.68**	**305**	*e*P	**P**	**13**	**09**	**11.5 +3.6**
ZEA				AMB	AMB	13 09 19.9		
	comp=Z,21nm,1.2s							
ZEA				sP	**sP**	**13**	**09**	**27.4 -1.1**
CN2	**Changchun**	**18.91**	**273**	*e*P	**P**	**13**	**09**	**21.8 +0.2**
CN2				*e*S	**S**	**13**	**12**	**48.4 -4.7**
CN2				pmax	pmax			
	comp=Z,20nm,0.9s							
CN2				pmax	pmax			
	comp=Z,100nm,5.0s							
CN2				LR	LR			
	comp=N,300nm,17.0s							
CN2				LR	LR			
	comp=E,400nm,17.0s							
CN2				LR	LR			
	comp=Z,400nm,20.0s							
KSRS	**Korea Array**	**19.84**	**253**	P	**Pn**	**13**	**09**	**33.0 -0.7**
	comp=Z,0.3nm,0.3s,baz=64,slow=11,SNR=15							
KSRS				LR	LR	13 16 12.6		
	comp=Z,156nm,21.2s,baz=282,slow=34							
KSAR	**Wonju Array Be**	**19.87**	**253**	P	**P**	**13**	**09**	**33.0 +1.0**
CLNS	**Chul'man**	**19.95**	**313**	*e*P	Pn	13 09 43.0		+8.0
CLNS				pmax	pmax			
	comp=Z,18nm,1.1s							
CLNS				pmax	pmax			
	comp=E,13nm,1.1s							
CLNS				pmax	pmax			
	comp=N,18nm,1.4s							
CLNS				pmax	pmax			
	comp=E,4.0nm,0.9s							
CLNS				pmax	pmax			
	comp=Z,3.0nm,0.8s							
CLNS				pmax	pmax			
	comp=N,10.0nm,1.1s							
CLNS				MLR	MLR			
	comp=E,260nm,13.0s							
CLNS				MLR	MLR			
	comp=Z,238nm,16.0s							
CLNS				MLR	MLR			
	comp=N,170nm,14.0s							
YAK	**Yakutsk**	**20.57**	**329**	*e*P	**P**	**13**	**09**	**38.5 -0.8**
YAK				*e*		13 13 49.1		
YAK				pmax	pmax			
	comp=E,2.0nm,0.9s							
YAK				pmax	pmax			
	comp=Z,13nm,0.8s							
YAK				pmax	pmax			
	comp=N,2.0nm,0.9s							
YAK				pmax	pmax			
	comp=N,131nm,4.3s							
YAK				pmax	pmax			
	comp=Z,201nm,4.1s							
YAK				pmax	pmax			
	comp=E,156nm,4.0s							
JNU	**Nakatsue**	**20.67**	**239**	LR	LR	13 17 23.9		
	comp=E,168nm,19.9s,baz=54,slow=36							
BILL	**Bilibino**	**23.31**	**14**	*e*P	**P**	**13**	**10**	**07.9 -0.3**
BILL				*i*		13 10 26.1		
BILL				*e*		13 10 35.0		
BILL				pmax	pmax			
	comp=Z,6.0nm,1.0s							
BILL				MLR	MLR			
	comp=Z,300nm,19.0s							
BJI	**Beijing**	**26.70**	**270**	P	**P**	**13**	**10**	**38.3 -1.0**
BJI				pmax	pmax			
	comp=Z,8.0nm,0.8s							
BJI				LR	LR			
	comp=N,110nm,19.3s							
BJI				LR	LR			
	comp=E,290nm,19.3s							
BJI				LR	LR			
	comp=Z,180nm,20.4s							
NJ2	**Nanjing**	**29.04**	**253**	*e*P	**P**	**13**	**10**	**59.6 -0.6**
NJ2				pP	**pP**	**13**	**11**	**15.3 +0.2**
NJ2				sP	**sP**	**13**	**11**	**22.8 +0.5**
NJ2				S	**S**	**13**	**15**	**46.8 -0.4**
NJ2				sS	**sS**	**13**	**16**	**13.3 +0.6**
NJ2				pmax	pmax			
	comp=Z,20nm,0.6s							
NJ2

CD2 S **S** **13 18 35.3 -1.4**
CD2 SS SS 13 21 27.3 -8.4
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.6s
GYA Guiyang 40.80 257 *e*P **P** **13 12 42.0 +0.5**
GYA pmax pmax
comp=Z,10.0nm,0.8s
ZALV Zalesovo Beam 42.44 306 P **P** **13 12 54.5 +0.1**
ZALV 13 14 46.5
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV pmax pmax
comp=Z,3.0nm,0.8s
ZALV MLR MLR
comp=Z,260nm,19.1s
ZALV Zalesovo Beam 42.44 306 P **P** **13 12 54.5 +0.1**
ZALV PcP **PcP** **13 14 46.5 +0.2**
ZALV Zalesovo Beam 42.44 306 P **P** **13 12 54.5 +0.1**
comp=Z,0.6nm,0.5s,baz=60,slow=6.7,SNR=3.7
ZALV PcP **PcP** **13 14 46.5 +0.2**
comp=Z,2.9nm,0.8s,baz=76,slow=2.6,SNR=12
ZALV LR LR 13 31 41.8
comp=Z,260nm,19.1s,baz=249,slow=38
INK Inuvik 42.70 32 P **P** **13 12 56.8 +0.4**
INK Inuvik 42.70 32 P **P** **13 12 56.8 +0.4**
comp=Z,3.0nm,0.9s,baz=281,slow=7.6,SNR=13
QIZ Qiongzhong 43.84 246 P **P** **13 13 04.4 -1.7**
QIZ sP **sP** **13 13 28.6 0.0**
QIZ S **S** **13 19 31.9 -0.8**
QIZ sS **sS** **13 19 59.0 0.0**
QIZ pmax pmax
comp=Z,100nm,7.3s
KMI Kunming 44.35 259 P **P** **13 13 11.1 +0.7**
KMI pmax pmax
comp=Z,8.0nm,1.0s
WMQ Urumqi 44.49 291 P **P** **13 13 11.0 -0.1**
WMQ pP **pP** **13 13 27.0 +0.3**
WMQ sP **sP** **13 13 34.0 +0.3**
WMQ PP **PP** **13 14 57.0 +1.4**
WMQ ScP **ScP** **13 18 40.0 -0.2**
WMQ S **S** **13 19 40.0 -1.8**
WMQ SS SS 13 22 51.0 -12
WMQ ScS **ScS** **13 23 01.0 -2.2**
WMQ pmax pmax
comp=Z,15nm,0.9s
WMQ pmax pmax
comp=Z,55nm,4.0s
WMQ LR LR
comp=N,100nm,15.0s
WMQ LR LR
comp=E,100nm,15.0s
WMQ LR LR
comp=Z,87nm,15.0s
MK31 Makanchi Array 46.61 298 *e*P **P** **13 13 26.0 -1.8**
MK31 Makanchi Array 46.61 298 *e*P **P** **13 13 26.0 -1.8**
MKAR Makanchi Array 46.61 298 P **P** **13 13 26.8 -1.0**
MKAR 13 15 01.1
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR MLR MLR
comp=Z,179nm,19.8s
MKAR Makanchi Array 46.61 298 P **P** **13 13 26.8 -1.0**
MKAR PcP **PcP** **13 15 01.1 +0.3**
MKAR Makanchi Array 46.61 298 P **P** **13 13 26.8 -1.0**
comp=Z,2.0nm,0.8s,baz=69,slow=8.2,SNR=14
MKAR PcP **PcP** **13 15 01.1 +0.3**
comp=Z,2.4nm,0.7s,baz=59,slow=4.3,SNR=12
MKAR LR LR 13 34 02.6
comp=Z,179nm,19.8s,baz=38,slow=37
KURK Kurchatov 47.15 304↓ *e*P **P** **13 13 29.9 -2.0**
KURK pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 50.79 310↓ *e*P **P** **13 14 01.4 +1.7**
BRVK pmax pmax
comp=Z,3.0nm,0.8s
CHTO Chiang Mai 51.19 256 *e*P **P** **13 14 04.1 +0.9**
CHTO pmax pmax
comp=Z,11nm,0.9s
CHTO Chiang Mai 51.19 256 *e*P **P** **13 14 04.1 +0.9**
comp=Z,11nm,0.9s
CM31 Chiang Mai Arr 51.44 256 *e*P **P** **13 14 06.8 +1.8**
comp=Z,4.1nm,0.7s
CMAR Chiang Mai Arr 51.44 256 P **P** **13 14 06.5 +1.5**
CMAR Chiang Mai Arr 51.44 256 P **P** **13 14 06.5 +1.5**
comp=Z,5.2nm,0.8s,baz=38,slow=7.4,SNR=56
SHL Shillong 51.58 268 *e*P **P** **13 14 07.5 +1.3**
RES Resolute Bay 51.80 18 *e*P **P** **13 14 06.1 -0.8**
comp=Z,1.6nm,0.8s
RES Resolute Bay 51.80 18 P **P** **13 14 06.6 -0.3**
comp=Z,1.7nm,0.8s,baz=324,slow=8.0,SNR=12
YKA Yellowknife Ar 51.99 36 P **P** **13 14 08.8 +0.3**
YKA Yellowknife Ar 51.99 36 P **P** **13 14 08.8 +0.3**
comp=Z,2.0nm,0.8s,baz=296,slow=7.1,SNR=30
TAPN Taplejung 53.37 273 *e*P **P** **13 14 20.8 +1.2**
comp=Z,9.9nm,0.6s
AAK Ala-Archa 53.48 296*d* *i*P **P** **13 14 19.3 -0.8**
AAK pmax pmax
comp=Z,6.0nm,0.8s
AAK Ala-Archa 53.48 296 *e*P **P** **13 14 18.6 -1.5**
ODAN Odare 53.90 273 *e*P **P** **13 14 24.2 +0.8**
KSH Kashi 54.23 292 *e*P P 13 14 29.5 +4.0
KSH pP pP 13 14 45.3 +3.8
KSH sP sP 13 14 52.3 +3.9
KSH PcP **PcP** **13 15 32.3 +3.1**
KSH PP PP 13 16 33.5 +6.0
KSH ScP **ScP** **13 19 24.5 +2.6**
KSH PcS **PcS** **13 19 30.4 +1.6**
KSH S **S** **13 22 01.3 +2.9**
KSH ScS **ScS** **13 24 09.3 0.0**
KSH SS **SS** **13 25 44.3 +3.9**
KSH pmax pmax
comp=Z,4.0nm,0.3s
KSH pmax pmax
comp=Z,100nm,3.0s
KSH LR LR
comp=N,94nm,4.9s
KSH LR LR
comp=E,99nm,4.1s
KSH LR LR
comp=Z,210nm,6.8s
JIRN Jiri 54.24 274 *e*P **P** **13 14 27.4 +1.4**
GUN Gumba 54.30 275 *e*P **P** **13 14 27.6 +1.2**
comp=Z,10nm,0.4s
RAMN Ramite 54.40 273 *e*P **P** **13 14 27.7 +0.7**
comp=Z,13nm,0.4s
KKN Kakani 54.79 275 *e*P **P** **13 14 30.9 +1.1**
PKI Pulchoki 54.84 275 *e*P **P** **13 14 30.9 +0.6**
PKIN Phulchoki 54.84 275 *e*P **P** **13 14 31.2 +0.9**
DMN Daman 55.02 275 *e*P **P** **13 14 32.7 +1.1**
ARU Arti 55.05 317*c* *i*P **P** **13 14 30.0 -1.0**
ARU 13 16 31.8
ARU S **S** **13 22 08.7 +0.1**
ARU pmax pmax
comp=Z,6.0nm,1.2s
DANN Dangsing 55.50 277 *e*P **P** **13 14 36.2 +1.2**
comp=Z,46nm,0.7s
KOLN Koldanda 55.97 276 *e*P **P** **13 14 39.6 +1.3**
comp=Z,38nm,0.9s
PYUN Piuthan 56.19 277 *e*P **P** **13 14 41.3 +1.4**
comp=Z,131nm,1.0s
DAG Danmarks Havn 57.37 357 *i*P **P** **13 14 46.6 -0.7**
DAG pmax pmax
comp=Z,1.0nm,1.0s
DAG Danmarks Havn 57.37 357 *i*P **P** **13 14 46.6 -0.7**
comp=Z,1.4nm,1.0s
KEV Kevo 57.80 340 *e*P **P** **13 14 49.6 -0.8**
KEV pmax pmax
comp=Z,1.0nm,0.3s
KEV Kevo 57.80 340 *e*p **P** **13 14 49.6 -0.8**
comp=Z,0.6nm,0.3s
NEW Newport 58.25 52 LR LR 13 36 04.6
comp=Z,224nm,20.9s,baz=233,slow=32
ARCES ARCESS Array B 58.32 341 P **P** **13 14 53.9 -0.2**
ARCES ARCESS Array B 58.32 341 P **P** **13 14 53.9 -0.2**
comp=Z,1.5nm,0.6s,baz=30,slow=7.2,SNR=15
ABKAR Akbulak array 58.32 310 *e*P **P** **13 14 53.0 -1.3**
comp=Z,1.3nm,0.5s
CHMT Chamberlain Mo 61.16 51 *e*P **P** **13 15 14.4 +0.3**
SUMG Summit 61.51 4 *i*P **P** **13 15 16.6 +0.3**
SUMG pmax pmax
comp=Z,10.0nm,0.8s

SUMG Summit 61.51 4 *e*P **P** **13 15 16.1 -0.3**
comp=Z,16nm,1.0s
SUMG Summit 61.51 4 *i*P **P** **13 15 16.6 +0.3**
comp=Z,9.6nm,0.8s
KBL Kabul 61.63 291 *e*P **P** **13 15 16.1 -1.4**
KBL pmax pmax
comp=Z,13nm,0.9s
KBL Kabul 61.63 291 *e*P **P** **13 15 16.1 -1.4**
comp=Z,13nm,0.9s
JOF Joensuu 61.67 333 *e*P **P** **13 15 15.1 -1.9**
JOF pmax pmax
comp=Z,1.0nm,0.6s
JOF Joensuu 61.67 333 *e*p **P** **13 15 15.1 -1.9**
comp=Z,1.3nm,0.6s
FFC Flin Flon 61.81 39 *i*P **P** **13 15 19.2 +1.1**
NVAR Mina Array Bea 63.47 61 P **P** **13 15 31.0 +1.3**
NVAR Mina Array Bea 63.47 61 P **P** **13 15 31.0 +1.3**
comp=Z,2.4nm,0.8s,baz=290,slow=7.3,SNR=14
SCO Scoresbysund 63.76 358 *i*P **P** **13 15 30.2 -0.6**
SCO pmax pmax
comp=Z,4.0nm,1.0s
SCO Scoresbysund 63.76 358 *i*P **P** **13 15 30.2 -0.6**
comp=Z,3.8nm,1.0s
KAF Kangasniemi 63.81 335 *e*P **P** **13 15 30.1 -1.1**
KAF pmax pmax
comp=Z,2.0nm,0.6s
KAF Kangasniemi 63.81 335 *e*p **P** **13 15 30.1 -1.1**
comp=Z,2.1nm,0.6s
FINES FINESS Array B 64.40 334 P **P** **13 15 33.6 -1.5**
FINES FINESS Array B 64.40 334 P **P** **13 15 33.6 -1.5**
comp=Z,3.7nm,0.5s,baz=35,slow=7.6,SNR=23
RRI2 Red Ridge 64.46 53 *e*P **P** **13 15 37.9 +1.7**
comp=Z,5.3nm,0.7s
TPAW Teton Pass 64.57 53 *e*P **P** **13 15 38.4 +1.4**
comp=Z,3.7nm,1.0s
PDAR Pinedale Array 65.82 53 P **P** **13 15 45.5 +0.5**
PDAR Pinedale Array 65.82 53 P **P** **13 15 45.5 +0.5**
comp=Z,3.2nm,0.8s,baz=318,slow=1.2,SNR=23
VRHR Novokhopersk 66.22 320 *e*P **P** **13 15 45.1 -1.9**
VRHR pmax pmax
comp=N,4.0nm,0.6s
VRHR pmax pmax
comp=Z,5.0nm,0.6s
VRHR pmax pmax
comp=E,3.0nm,0.3s
VSR Storozhevoye 67.22 321 *e*P **P** **13 15 52.6 -0.9**
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,4.0nm,0.6s
VSR pmax pmax
comp=Z,5.0nm,0.6s
VORD Divnogorie 67.35 321 *e*P **P** **13 15 52.2 -2.0**
VORD pmax pmax
comp=N,8.0nm,0.6s
VORD pmax pmax
comp=E,5.0nm,0.6s
VORD pmax pmax
comp=Z,3.0nm,0.6s
SRU San Rafael 67.68 57 *e*P **P** **13 15 57.3 +0.5**
SRU pmax pmax
comp=Z,217nm,0.8s
SRU San Rafael 67.68 57 *e*P **P** **13 15 57.3 +0.5**
comp=Z,217nm,0.8s
RSSD Black Hills 67.90 49 *e*P **P** **13 15 58.5 +0.3**
RSSD pmax pmax
comp=Z,2.0nm,0.7s
RSSD Black Hills 67.90 49 *e*P **P** **13 15 58.5 +0.3**
comp=Z,2.2nm,0.7s
AFI Afiamalu 67.98 142 LR LR 13 38 09.2
comp=Z,66nm,21.5s,baz=309,slow=29
FITZ Fitzroy Crossi 68.11 207 P **P** **13 16 00.4 +1.1**
FITZ Fitzroy Crossi 68.11 207 P **P** **13 16 00.4 +1.1**
comp=Z,2.4nm,0.8s,baz=52,slow=5.7,SNR=7.0
NB2 NORSAR Subarra 68.70 341 P **P** **13 16 02.1 -0.5**
comp=Z,4.0nm,0.5s,baz=28,slow=6.5
NOA NORSAR Array B 68.70 341 P **P** **13 16 02.3 -0.3**
NOA NORSAR Array B 68.70 341 P **P** **13 16 02.3 -0.3**
comp=Z,5.8nm,0.7s,baz=27,slow=6.2,SNR=22
KIV Kislovodsk 70.78 314 *e*P **P** **13 16 17.8 +2.1**
KIV pmax pmax
comp=Z,8.0nm,0.9s
KIV MLR MLR
comp=Z,74nm,18.0s
KBZ Khabaz 70.83 314 P **P** **13 16 16.3 +0.4**
KBZ pmax pmax
comp=Z,10.0nm,0.9s
KBZ MLR MLR
comp=Z,149nm,18.5s
KBZ Khabaz 70.83 314 P **P** **13 16 16.3 +0.4**
KBZ Khabaz 70.83 314 P **P** **13 16 16.3 +0.4**
comp=Z,9.5nm,0.9s,baz=350,slow=6.1,SNR=15
KBZ LR LR 13 52 06.7
comp=Z,149nm,18.5s,baz=148,slow=40
ZEI Tsey 71.01 312 *e*P **P** **13 16 16.3 -1.0**
ZEI pmax pmax
comp=Z,5.0nm,0.9s
AS31 Alice Springs 71.25 198 P **P** **13 16 19.4 +0.8**
ASAR Alice Springs 71.25 198 P **P** **13 16 19.7 +1.1**
ASAR Alice Springs 71.25 198 P **P** **13 16 19.7 +1.1**
comp=Z,0.7nm,0.7s,baz=12,slow=5.2,SNR=21
AKASG Malin Array Be 71.75 326 P **P** **13 16 20.7 -0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG Malin Array Be 71.75 326 P **P** **13 16 20.7 -0.7**
AKASG Malin Array Be 71.75 326 P **P** **13 16 20.7 -0.7**
comp=Z,2.1nm,0.3s,baz=38,slow=6.4,SNR=14
KIEV Kiev 71.76 326 *e*P **P** **13 16 20.2 -1.2**
KIEV pmax pmax
comp=Z,14nm,1.1s
KIEV Kiev 71.76 326 *e*P **P** **13 16 20.2 -1.2**
comp=Z,14nm,1.1s
AK01 Malin Array Si 71.76 326 *e*P **P** **13 16 20.3 -1.1**
BSD Bornholm Skovb 72.94 336 *i*P **P** **13 16 28.2 -0.2**
BSD pmax pmax
comp=Z,5.0nm,0.8s
BSD Bornholm Skovb 72.94 336 *i*P **P** **13 16 28.2 -0.2**
comp=Z,4.9nm,0.7s
SCHQ Schefferville 74.31 22 P **P** **13 16 36.6 +0.2**
SCHQ Schefferville 74.31 22 P **P** **13 16 36.6 +0.2**
comp=Z,2.4nm,0.8s,baz=300,slow=7.9,SNR=3.3
KWP Kalwaria Pacla 75.08 329↑ *i*P **P** **13 16 41.2 +0.2**
OJC Ojcow 75.61 331 *e*P **P** **13 16 44.5 +0.5**
OJC Ojcow 75.61 331 *e*P **P** **13 16 44.5 +0.5**
BUR08 Bucovina Ar. S 75.78 326 *e*P **P** **13 16 45.6 +0.4**
KOLS Kolonicke sedl 75.82 328 *e*P **P** **13 16 45.8 +0.6**
KOLS pmax pmax
comp=Z,6.0nm,1.0s
KOLS Kolonicke sedl 75.82 328 *e*P **P** **13 16 45.8 +0.6**
TESR 76.12 325↓ *i*P **P** **13 16 47.5 +0.5**
CRVS Cervenica-Dubn 76.14 329 *e*P **P** **13 16 47.1 0.0**
CRVS pmax pmax
comp=Z,3.0nm,0.8s
CRVS Cervenica-Dubn 76.14 329 *e*P **P** **13 16 47.1 0.0**
KSP Ksiaz 76.23 333 *e*P **P** **13 16 47.9 +0.4**
TRPA Tarpa 76.39 328↓ *i*P **P** **13 16 49.1 +0.7**
OKC Ostrava-Krasne 76.50 331 *e*P **P** **13 16 49.8 +0.8**
OKC Ostrava-Krasne 76.50 331 *e*P **P** **13 16 49.8 +0.8**
NRDL Niedersach Rie 76.60 337 *e*P **P** **13 16 50.1 +0.7**
comp=Z,6.0nm,0.8s
UPC Upice 76.61 333 *e*P **P** **13 16 50.3 +0.6**
UPC Upice 76.61 333 *e*P **P** **13 16 50.3 +0.6**
VRI Vrincioaia 76.62 324↑ *i*P **P** **13 16 50.2 +0.4**
DPC Dobruska-Polom 76.65 333 *e*P **P** **13 16 50.9 +0.9**
DPC Dobruska-Polom 76.65 333 *e*P **P** **13 16 50.9 +0.9**
MORC Moravsky Berou 76.75 332↑ *i*P **P** **13 16 51.4 +0.9**
CLL Collm 76.83 335↓ *i*P **P** **13 16 50.8 -0.1**
CLL pmax pmax
comp=Z,12nm,0.8s
CLL Collm 76.83 335 *e*P **P** **13 16 50.9 0.0**
comp=Z,8.0nm,0.8s
CLL Collm 76.83 335↓ *i*P **P** **13 16 50.8 -0.1**
comp=Z,12nm,0.8s
BRG Berggiesshubel 76.94 334 *i*P **P** **13 16 51.5 0.0**
comp=Z,8.2nm,1.1s
BRG Berggiesshubel 76.94 334 *i*P **P** **13 16 51.5 0.0**
BRG pmax pmax
comp=Z,8.0nm,1.0s
BRG Berggiesshubel 76.94 334 *e*P **P** **13 16 51.8 +0.3**
comp=Z,4.0nm,0.8s
DOPR Dopca 77.08 325↑ *i*P pP 13 17 07.2 -2.0
MALT Malatya 77.10 312↓ *i*P **P** **13 16 55.0 +2.2**
CLZ Clausthal 77.11 337 *e*P **P** **13 16 53.3 +0.8**
CLZ pmax pmax
comp=Z,8.0nm,0.8s

CLZ Clausthal 77.11 337 *e*P **P** **13 16 53.3 +0.8**
comp=Z,8.0nm,0.8s
ISR Istrita 77.30 324↑ *i*P **P** **13 16 55.1 +1.4**
VYHS Vyhne 77.41 330 *e*P **P** **13 16 54.6 +0.3**
VYHS pmax pmax
comp=Z,4.0nm,0.9s
VYHS Vyhne 77.41 330 *e*P **P** **13 16 54.5 +0.3**
VRAC Vranov 77.47 332↑ *i*P **P** **13 16 55.8 +1.3**
PSZ Piszkesteto 77.53 329↓ *i*P **P** **13 16 56.0 +1.0**
PRU Pruhonice 77.53 333 *e*P **P** **13 16 55.8 +1.0**
PRU Pruhonice 77.53 333 *e*P **P** **13 16 55.8 +1.0**
TANN Tannenbergstha 77.79 335 *e*P **P** **13 16 56.6 +0.3**
comp=Z,2.0nm,0.7s
MOX Moxa 77.83 335 *e*P **P** **13 16 56.9 +0.4**
MOX pmax pmax
comp=Z,4.0nm,0.9s
MOX Moxa 77.83 335 *e*P **P** **13 16 56.9 +0.4**
comp=Z,4.0nm,0.9s
TREC Trest 77.84 333 *e*P **P** **13 16 57.1 +0.5**
TREC Trest 77.84 333 *e*P **P** **13 16 57.1 +0.5**
ARR Arges 77.87 325↑ *i*P **P** **13 16 57.4 +0.5**
NKC Novy Kostel 77.95 335 *e*P **P** **13 16 58.2 +1.0**
NKC Novy Kostel 77.95 335 *e*P **P** **13 16 58.2 +1.0**
UBBA Unterbreizbach 78.13 336 *e*P **P** **13 16 58.7 +0.7**
comp=Z,2.0nm,0.8s
BR131 Keskin Array S 78.41 316 *e*P **P** **13 17 00.8 +0.7**
comp=Z,4.8nm,0.9s
BRTR Keskin Array B 78.41 316 P **P** **13 17 00.7 +0.6**
BRTR Keskin Array B 78.41 316 P **P** **13 17 00.7 +0.6**
comp=Z,5.3nm,0.9s,baz=60,slow=5.9,SNR=16
ROTZ Rotzenmuhle 78.44 335 *e*P **P** **13 17 00.6 +0.7**
comp=Z,5.0nm,0.8s
TXAR Lajitas Array 78.54 60 P **P** **13 17 01.6 +0.6**
TXAR Lajitas Array 78.54 60 P **P** **13 17 01.6 +0.6**
comp=Z,1.7nm,0.6s,baz=298,slow=4.1,SNR=18
KHC Kasperske Hory 78.58 334 *e*P **P** **13 17 01.1 +0.3**
KHC Kasperske Hory 78.58 334 *e*P **P** **13 17 00.9 +0.1**
comp=Z,16nm,0.9s
KHC Kasperske Hory 78.58 334 *e*P **P** **13 17 01.1 +0.3**
WET Wettzell 78.79 334 *e*P **P** **13 17 02.6 +0.7**
WET pmax pmax
comp=Z,8.0nm,0.9s
WET Wettzell 78.79 334 *e*P **P** **13 17 02.6 +0.7**
comp=Z,8.0nm,0.9s
GRF Grafenberg Arr 78.80 335 *e*P **P** **13 17 02.6 +0.7**
GRF pmax pmax
comp=Z,15nm,0.7s
GRF Grafenberg Arr 78.80 335 *e*P **P** **13 17 02.6 +0.7**
comp=Z,15nm,0.7s
GEC2 GERESS Array S 78.80 333 *e*P **P** **13 17 02.4 +0.4**
GEC2 pmax pmax
comp=Z,4.0nm,0.8s
GEC2 GERESS Array S 78.80 333 *e*P **P** **13 17 02.4 +0.4**
comp=Z,4.0nm,0.8s
GERES GERESS Array B 78.80 333 P **P** **13 17 02.0 0.0**
GERES GERESS Array B 78.80 333 P **P** **13 17 02.0 0.0**
comp=Z,5.2nm,0.8s,baz=35,slow=4.9,SNR=23
BZS Buzias 78.84 327↑ *i*P **P** **13 17 02.2 0.0**
CONA Conrad Observa 78.91 332↑ *i*P **P** **13 17 03.3 +0.7**
comp=Z,9.1nm,0.8s
CONA Conrad Observa 78.91 332↑ *i*P **P** **13 17 03.3 +0.7**
comp=Z,9.1nm,0.8s
MOA Molln 79.50 333↑ *i*P **P** **13 17 06.7 +1.0**
comp=Z,7.4nm,0.8s
MOA Molln 79.50 333↑ *i*P **P** **13 17 06.7 +1.0**
comp=Z,7.4nm,0.8s
MPEP Malo Peshtene 79.89 324 *e*P **P** **13 17 08.0 0.0**
RJOB Jochberg 80.06 333 *e*P **P** **13 17 10.1 +1.2**
comp=Z,6.0nm,0.8s
GIVF Givet 80.15 339 *e*P **P** **13 17 08.8 -0.4**
GIVF Givet 80.15 339 *e*P **P** **13 17 08.8 -0.4**
GIVF Givet 80.15 339 *e*P **P** **13 17 08.8 -0.4**
SOKA Soboth 80.27 332↓ *i*P **P** **13 17 10.3 +0.3**
comp=Z,13nm,0.9s
SOKA Soboth 80.27 332↓ *i*P **P** **13 17 10.3 +0.3**
comp=Z,13nm,0.9s
BAIF Baives 80.34 340 *e*P **P** **13 17 10.1 -0.1**
BAIF Baives 80.34 340 *e*P **P** **13 17 10.1 -0.1**
BAIF Baives 80.34 340 *e*P **P** **13 17 10.1 -0.1**
KBA Koelnbreinsper 80.47 333↑ *i*P **P** **13 17 11.9 +0.7**
KBA pmax pmax
comp=Z,19nm,0.9s
KBA Koelnbreinsper 80.47 333↑ *i*P **P** **13 17 11.9 +0.7**
comp=Z,19nm,0.9s
KBA Koelnbreinsper 80.47 333↑ *i*P **P** **13 17 11.9 +0.7**
comp=Z,19nm,0.9s
VTS Vitosha 80.75 324↓ *i*P **P** **13 17 12.6 -0.2**
VTS Vitosha 80.75 324 *e*P **P** **13 17 12.5 -0.2**
WTTA Wattenberg 80.84 334↑ *i*P **P** **13 17 13.9 +0.7**
WTTA pmax pmax
comp=Z,17nm,0.8s
WTTA Wattenberg 80.84 334↑ *i*P **P** **13 17 13.9 +0.7**
comp=Z,17nm,0.8s
WTTA Wattenberg 80.84 334↑ *i*P **P** **13 17 13.9 +0.7**
comp=Z,17nm,0.8s
BFO Black Forest 80.85 336 *e*P **P** **13 17 13.5 +0.5**
BFO pmax pmax
comp=Z,7.0nm,0.8s
BFO Black Forest 80.85 336 *e*P **P** **13 17 13.5 +0.5**
comp=Z,7.0nm,0.8s
RZN Rozhen 80.87 323 *e*P **P** **13 17 13.0 -0.5**
CDF Champ du Feu 81.06 337 *e*P **P** **13 17 14.1 -0.1**
comp=Z,28nm,1.0s
CDF Champ du Feu 81.06 337 *e*P **P** **13 17 14.1 -0.1**
CDF pmax pmax
comp=Z,28nm,1.0s
CDF Champ du Feu 81.06 337 *e*P **P** **13 17 14.1 -0.1**
comp=Z,28nm,1.0s
PMOR Pomariorio Ree 81.29 122 *e*T T 14 46 38.3
comp=Z,9.5nm,0.2s
FETA Feichten 81.33 334↑ *i*P **P** **13 17 16.2 +0.4**
comp=Z,8.3nm,1.0s
FETA Feichten 81.33 334↑ *i*P **P** **13 17 16.2 +0.4**
comp=Z,8.3nm,1.0s
PAGF Fort de Pagny 81.34 338 *e*P **P** **13 17 15.9 +0.3**
comp=Z,15nm,1.1s
PAGF Fort de Pagny 81.34 338 *e*P **P** **13 17 15.9 +0.3**
comp=Z,15nm,1.1s
DAVA Damuels 81.35 335↑ *i*P **P** **13 17 16.4 +0.5**
comp=Z,9.9nm,0.8s
DAVA Damuels 81.35 335↑ *i*P **P** **13 17 16.4 +0.5**
comp=Z,9.9nm,0.8s
MEZF Maizieres J'vi 81.57 338 *e*P **P** **13 17 17.0 +0.2**
MEZF Maizieres J'vi 81.57 338 *e*P **P** **13 17 17.0 +0.2**
HAU Haudompre 81.69 337 *e*P **P** **13 17 17.2 -0.3**
HAU *e*R
comp=Z,108nm,21.8s
HAU Haudompre 81.69 337 *e*P **P** **13 17 17.2 -0.3**
HAU Haudompre 81.69 337 *e*P **P** **13 17 17.2 -0.3**
HINF Hinteralfeld 81.72 337 *e*P **P** **13 17 17.1 -0.6**
comp=Z,10nm,0.8s
HINF Hinteralfeld 81.72 337 *e*P **P** **13 17 17.1 -0.6**
HINF pmax pmax
comp=Z,10.0nm,0.8s
HINF Hinteralfeld 81.72 337 *e*P **P** **13 17 17.1 -0.6**
comp=Z,10nm,0.8s
SFTF Sexfontaines 81.85 338 *e*P **P** **13 17 18.2 -0.1**
SFTF Sexfontaines 81.85 338 *e*P **P** **13 17 18.2 -0.1**
PPT2 Papeete2 82.36 125 *e*LR LR 13 43 15.1
comp=Z,90nm,22.2s
PPT2 *e*T T 14 47 58.7
comp=Z,1.4nm,0.3s
FLN La Foliniere 82.63 342 *e*P **P** **13 17 22.0 -0.3**
FLN *e*R
comp=Z,106nm,17.5s
FLN La Foliniere 82.63 342 *e*P **P** **13 17 22.0 -0.3**
FLN La Foliniere 82.63 342 *e*P **P** **13 17 22.0 -0.3**
LOR Lormes 83.01 339 *e*P **P** **13 17 24.3 -0.1**
LOR *e*R
comp=Z,119nm,23.0s
LOR Lormes 83.01 339 *e*P **P** **13 17 24.3 -0.1**
GRR Gorron 83.06 342 *e*P **P** **13 17 24.5 -0.1**
GRR Gorron 83.06 342 *e*P **P** **13 17 24.5 -0.1**
GRR Gorron 83.06 342 *e*P **P** **13 17 24.5 -0.1**
SSF Saint Saulge 83.30 339 *e*P **P** **13 17 25.8 0.0**
comp=Z,9.5nm,0.9s
SSF Saint Saulge 83.30 339 *e*P **P** **13 17 25.8 0.0**
SSF pmax pmax
comp=Z,10.0nm,0.9s
SSF Saint Saulge 83.30 339 *e*P **P** **13 17 25.8 0.0**
comp=Z,9.5nm,0.9s
AVF Avril sur Loir 83.59 339 *e*P **P** **13 17 27.4 +0.1**
comp=Z,6.1nm,0.6s
AVF Avril sur Loir 83.59 339 *e*P **P** **13 17 27.4 +0.1**
AVF pmax pmax

	comp=Z,6.0nm,0.6s								
AVF	**Avril sur Loir**	**83.59**	**339**	*e*P		**P**	**13 17 27.4**	**+0.1**
	comp=Z,6.1nm,0.6s								
SMF	**Signal de Mont**	**83.60**	**339**	*e*P		**P**	**13 17 27.5**	**+0.1**
	comp=Z,43nm,1.1s								
SMF	**Signal de Mont**	**83.60**	**339**	*e*P		**P**	**13 17 27.5**	**+0.1**
SMF				pmax		pmax			
	comp=Z,43nm,1.1s								
SMF	**Signal de Mont**	**83.60**	**339**	*e*P		**P**	**13 17 27.5**	**+0.1**
	comp=Z,43nm,1.1s								
LPL	**La Plagne**	**83.86**	**336**	*e*P		**P**	**13 17 29.4**	**+0.3**
LPL	**La Plagne**	**83.86**	**336**	*e*P		**P**	**13 17 29.4**	**+0.3**
LPL	**La Plagne**	**83.86**	**336**	*e*P		**P**	**13 17 29.4**	**+0.3**
LPG	**La Plagne**	**83.88**	**336**	*e*P		**P**	**13 17 29.6**	**+0.4**
LPG	**La Plagne**	**83.88**	**336**	*e*P		**P**	**13 17 29.6**	**+0.4**
LPG	**La Plagne**	**83.88**	**336**	*e*P		**P**	**13 17 29.6**	**+0.4**
TCF	**Toulx Ste Croi**	**84.34**	**339**	*e*P		**P**	**13 17 31.4**	**+0.2**
TCF	**Toulx Ste Croi**	**84.34**	**339**	*e*P		**P**	**13 17 31.4**	**+0.2**
TCF	**Toulx Ste Croi**	**84.34**	**339**	*e*P		**P**	**13 17 31.4**	**+0.2**
MFF	**Saint Martin d**	**84.60**	**341**	*e*P		**P**	**13 17 33.3**	**+0.9**
MFF	**Saint Martin d**	**84.60**	**341**	*e*P		**P**	**13 17 33.3**	**+0.9**
MFF	**Saint Martin d**	**84.60**	**341**	*e*P		**P**	**13 17 33.3**	**+0.9**
VIVF	**Saint-Julien-l**	**85.04**	**337**	*e*P		**P**	**13 17 34.5**	**-0.3**
VIVF	**Saint-Julien-l**	**85.04**	**337**	*e*P		**P**	**13 17 34.5**	**-0.3**
VIVF	**Saint-Julien-l**	**85.04**	**337**	*e*P		**P**	**13 17 34.5**	**-0.3**
SBF	**Sospel**	**85.18**	**335**	*e*P		**P**	**13 17 35.0**	**-0.5**
	comp=Z,26nm,1.0s								
SBF	**Sospel**	**85.18**	**335**	*e*P		**P**	**13 17 35.0**	**-0.5**
SBF				pmax		pmax			
	comp=Z,26nm,1.0s								
SBF	**Sospel**	**85.18**	**335**	*e*P		**P**	**13 17 35.0**	**-0.5**
	comp=Z,26nm,1.0s								
CAF	**Calviac**	**85.65**	**339**	*e*P		**P**	**13 17 37.8**	**0.0**
CAF	**Calviac**	**85.65**	**339**	*e*P		**P**	**13 17 37.8**	**0.0**
CAF	**Calviac**	**85.65**	**339**	*e*P		**P**	**13 17 37.8**	**0.0**
TBI	**Tubuai**	**87.02**	**128**	*e*LR		LR	13 44 56.4		
	comp=Z,70nm,27.0s								
TBI				*e*T		T	14 53 46.5		
	comp=Z,4.7nm,0.3s								
TORD	**Torodi Ar. Bea**	**115.34**	**328**	PKP		**PKPdf**	**13 23 40.4**	**-0.6**
TORD	**Torodi Ar. Bea**	**115.34**	**328**	PKP		**PKPdf**	**13 23 40.4**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=48,slow=2.1,SNR=4.0								
PLCA	**Paso Flores**	**148.90**	**96**	PKPbc		**PKPbc**	**13 24 47.3**	**+0.9**
PLCA	**Paso Flores**	**148.90**	**96**	PKPbc		**PKPbc**	**13 24 47.3**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=301,slow=2.0,SNR=4.1								
CPUP	**Villa Florida**	**149.51**	**60**	PKPbc		**PKPbc**	**13 24 48.1**	**-0.1**
CPUP	**Villa Florida**	**149.51**	**60**	PKPbc		**PKPbc**	**13 24 48.1**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=304,slow=3.6,SNR=5.3								

CSEM ***14*** *13:06:29.6, 42°.32N × 13°.33E, h8km, MD1.6/4, After ROM*
ROM 14 13:06:29.6±0.4, 42°.32N×13°.33E, h8km±4km, Md1.6/4, Error ellipse: s-maj=2.5km s-min=1.3km az=4.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**56**	Pg	Pg	13 06 31.6	+0.1
AQU				Sg	Sg	13 06 33.1	+0.2
AQU	**L'Aquila**	**0.06**	**56**	Pg	Pg	13 06 31.6	+0.1
AQU				Sg	Sg	13 06 33.1	+0.2
FIAM	**Fiamignano**	**0.17**	**252**	Pg	Pg	13 06 33.7	+0.5
FIAM				Sg	Sg	13 06 36.8	+1.1
FIAM	**Fiamignano**	**0.17**	**252**	Pg	Pg	13 06 33.7	+0.5
FIAM				Sg	Sg	13 06 36.8	+1.1
FAGN	**Fagnano**	**0.19**	**106**	Pg	Pg	13 06 34.3	+0.6
FAGN				Sg	Sg	13 06 38.2	+1.8
FAGN	**Fagnano**	**0.19**	**106**	Pg	Pg	13 06 34.3	+0.6
FAGN				Sg	Sg	13 06 38.2	+1.8
PTQR	**Pietraquaria**	**0.30**	**170**	Pg	Pg	13 06 36.3	+0.6
PTQR				Sg	Sb	13 06 41.5	-1.1
	18nm,0.2s						
PTQR	**Pietraquaria**	**0.30**	**170**	Pg	Pg	13 06 36.3	+0.6
PTQR				Sg	Sb	13 06 41.5	-1.1
	18nm,0.2s						

CSEM ***14*** *13:07:00.5, 42°.25N × 13°.47E, h9km, MD1.7/3, After ROM*
ROM 14 13:07:00.5±0.1, 42°.25N×13°.47E, h9km±1km, Md1.7/3, Ml1.5/3, Error ellipse: s-maj=1.5km s-min=1.4km az=163.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.09**	**81**	Pg	Pg	13 07 03.3	+0.4
FAGN				Sg	Sg	13 07 04.9	+0.3
FAGN	**Fagnano**	**0.09**	**81**	Pg	Pg	13 07 03.3	+0.4
FAGN				Sg	Sg	13 07 04.9	+0.3
AQU	**L'Aquila**	**0.11**	**334**	Pg	Pg	13 07 03.8	+0.5
AQU				Sg	Sg	13 07 05.8	+0.6
	200nm,0.4s						
AQU	**L'Aquila**	**0.11**	**334**	Pg	Pg	13 07 03.8	+0.5
AQU				Sg	Sg	13 07 05.8	+0.6
	200nm,0.4s						
PTQR	**Pietraquaria**	**0.24**	**192**	Pg	Pg	13 07 06.1	+0.7
PTQR				Sg	Sg	13 07 10.1	+1.4
PTQR	**Pietraquaria**	**0.24**	**192**	Pg	Pg	13 07 06.1	+0.7
PTQR				Sg	Sg	13 07 10.1	+1.4
FIAM	**Fiamignano**	**0.26**	**273**	Pg	Pg	13 07 06.5	+0.6
FIAM				Sg	Sg	13 07 10.6	+1.0
FIAM	**Fiamignano**	**0.26**	**273**	Pg	Pg	13 07 06.5	+0.6
FIAM				Sg	Sg	13 07 10.6	+1.0
VVLD	**Villa Vallelon**	**0.40**	**163**	Pg	Pb	13 07 09.9	0.0
VVLD				Sg	Sb	13 07 15.1	-1.1
	29nm,0.4s						
VVLD	**Villa Vallelon**	**0.40**	**163**	Pg	Pb	13 07 09.9	0.0
VVLD				Sg	Sb	13 07 15.1	-1.1
	29nm,0.4s						
INTR	**Introdacqua**	**0.41**	**126**	Pg	Pg	13 07 08.8	+0.2
INTR				Sg	Sb	13 07 15.2	-1.1
	40nm,0.3s						
INTR	**Introdacqua**	**0.41**	**126**	Pg	Pg	13 07 08.8	+0.2
INTR				Sg	Sb	13 07 15.2	-1.1
	40nm,0.3s						

ATH ***14*** *13:21:58.7, 41°.88N × 22°.95E, h6km, MD3.6/5*
ISCJB ***14*** *13:21:59.2±0.4, 41°.78N±0°.02×22°.89E±0°.03, h2km±4km, Error ellipse: s-maj=3.8km s-min=2.8km az=178.8*
SKO ***14*** *13:21:59.4, 41°.77N × 22°.92E, h15km, M2.1, ML2.5*
SOF ***14*** *13:21:59.2, 41°.79N × 22°.90E, h11km, MD2.8*
CSEM ***14*** *13:21:59.8±0.1, 41°.78N × 22°.90E, h5km, MD2.8, Error ellipse: s-maj=2.1km s-min=1.6km az=85.0*
BEO ***14*** *13:22:00.6±0.3, 41°.76N × 22°.89E, h7km±4km, ML2.8/8*
THE ***14*** *13:22:00.5, 41°.75N × 22°.92E, h5km±1km, ML2.7/11, Error ellipse: s-maj=1.4km s-min=0.8km az=237.0*
ISC 14 13:22:00.1±0.9, 41°.76N±0°.02×22°.91E±0°.02, h9km±8km, n63, σ0°.946/98, 3C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.17**	**52**	*i* Pg	**Pg**	**13 22 03.7**	**0.0**
KKB	**Krupnik**	**0.17**	**52**	*i* Pg	**Pg**	**13 22 03.7**	**0.0**
VAY	**Valandovo**	**0.51**	**210**	P	**Pg**	**13 22 09.9**	**0.0**
VAY				S	**Sg**	**13 22 16.9**	**+0.3**
VAY	**Valandovo**	**0.51**	**210**	*i* Pg	**Pg**	**13 22 09.9**	**0.0**
VAY				*i* Sg	**Sg**	**13 22 16.6**	**0.0**
VAY				*e*Lg	Lg	13 22 16.9	
	comp=N,200nm,0.4s						
VAY				*e*Lg	Lg	13 22 17.0	
	comp=E,210nm,0.4s						
VAY	**Valandovo**	**0.51**	**210**	*e*Pg	**Pg**	**13 22 10.0**	**0.0**
VAY				*i* Sg	**Sg**	**13 22 16.9**	**+0.3**
VAY				*i* Sg	**Sg**	**13 22 17.0**	**+0.3**
VAY	**Valandovo**	**0.51**	**210**	*i* Pg	**Pg**	**13 22 10.4**	**+0.4**
VAY				S	**Sg**	**13 22 16.9**	**+0.3**
VAY				*e*Lg	Lg	13 22 17.4	
	comp=E,210nm,0.4s						
KNT	**Kendrikon**	**0.60**	**181**	P	**Pg**	**13 22 11.8**	**+0.1**
KNT				S	**Sg**	**13 22 20.1**	**+0.5**
MMB	**Musomiste**	**0.64**	**105**	*i* Pg	**Pg**	**13 22 12.7**	**+0.2**
MMB	**Musomiste**	**0.64**	**105**	*i* Pg	**Pg**	**13 22 12.7**	**+0.2**
SRS	**Serrai**	**0.83**	**141**	P	**Pg**	**13 22 15.5**	**-0.5**
SRS				S	**Sb**	**13 22 28.2**	**+0.4**
SRS	**Serrai**	**0.83**	**141**	P	**Pg**	**13 22 15.5**	**-0.5**
SRS				S	**Sb**	**13 22 28.2**	**+0.4**
NVR	**Nevrokopi**	**0.83**	**120**	P	**Pg**	**13 22 15.6**	**-0.4**
NVR				S	**Sg**	**13 22 26.9**	**+0.1**
NVR	**Nevrokopi**	**0.83**	**120**	*e*PB	**Pg**	**13 22 15.6**	**-0.4**
NVR				*e*SB	**Sg**	**13 22 26.9**	**+0.1**
NVR	**Nevrokopi**	**0.83**	**120**	P	**Pg**	**13 22 15.6**	**-0.4**
NVR				S	**Sg**	**13 22 26.9**	**+0.1**
VTS	**Vitosha**	**0.86**	**15**	P	**Pg**	**13 22 16.2**	**-0.4**
VTS	**Vitosha**	**0.86**	**15**	*e*Pg	**Pg**	**13 22 16.2**	**-0.4**
VTS				*i* Sg	**Sg**	**13 22 27.5**	**-0.4**
VTS				*i* Sg	**Sb**	**13 22 27.7**	**-1.2**
VTS	**Vitosha**	**0.86**	**15**	*i* Pg	**Pg**	**13 22 16.3**	**-0.4**
VTS	**Vitosha**	**0.86**	**15**	P	**Pg**	**13 22 16.2**	**-0.4**
VTS				*i* Sg	**Sg**	**13 22 27.5**	**-0.4**
GRG	**Griva**	**0.89**	**205**	P	**Pg**	**13 22 17.1**	**-0.1**
GRG				S	**Sb**	**13 22 29.8**	**+0.1**
GRG	**Griva**	**0.89**	**205**	P	**Pg**	**13 22 17.1**	**-0.1**
GRG				S	**Sb**	**13 22 29.8**	**+0.1**
SOH	**Sokhos**	**1.00**	**160**	P	**Pg**	**13 22 19.0**	**-0.3**
SOH				S	**Sn**	**13 22 34.3**	**-0.2**
SOH	**Sokhos**	**1.00**	**160**	*e*PG	**Pg**	**13 22 19.0**	**-0.3**
SOH				*e*SB	**Sn**	**13 22 34.7**	**+0.2**
SOH	**Sokhos**	**1.00**	**160**	S	**Sn**	**13 22 34.3**	**-0.2**
SOH				*e*Sb	**Sn**	**13 22 34.7**	**+0.2**
THE	**Thessaloniki**	**1.13**	**178**	P	**Pb**	**13 22 21.3**	**-0.5**
THE				S	**Sg**	**13 22 36.3**	**-0.2**
THE	**Thessaloniki**	**1.13**	**178**	P	**Pb**	**13 22 21.3**	**-0.5**
THE				S	**Sg**	**13 22 36.3**	**-0.2**
HORT	**Hortiatis**	**1.17**	**173**	P	**Pb**	**13 22 22.4**	**-0.2**
HORT				S	**Sn**	**13 22 39.1**	**+0.2**
HORT	**Hortiatis**	**1.17**	**173**	P	**Pb**	**13 22 22.4**	**-0.2**
HORT				S	**Sn**	**13 22 39.1**	**+0.2**
PGB	**Panagyurishte**	**1.22**	**50**	*i* P	**Pn**	**13 22 22.7**	**-0.7**
PGB	**Panagyurishte**	**1.22**	**50**	*i* P	**Pn**	**13 22 22.7**	**-0.7**
BARS	**Barje**	**1.33**	**323**	*e*Pg	**Pb**	**13 22 25.2**	**0.0**
BARS				*i* Sg	**Sn**	**13 22 42.7**	**+0.1**
RZN	**Rozhen**	**1.36**	**93**	*i* P	**Pn**	**13 22 25.3**	**-0.1**
RZN	**Rozhen**	**1.36**	**93**	*i* P	**Pn**	**13 22 25.3**	**-0.1**
PLD	**Plovdiv**	**1.38**	**75**	P	**Pb**	**13 22 26.2**	**+0.1**
PLD				S	**Sg**	**13 22 45.0**	**+0.5**
PLD	**Plovdiv**	**1.38**	**75**	*e*Pg	**Pb**	**13 22 26.1**	**0.0**
PLD				*i* Sg	**Sg**	**13 22 45.1**	**+0.5**
PLD	**Plovdiv**	**1.38**	**75**	*i* P	**Pb**	**13 22 26.2**	**+0.1**
PLD	**Plovdiv**	**1.38**	**75**	*e*Pg	**Pb**	**13 22 26.1**	**0.0**
PLD				*i* Sg	**Sg**	**13 22 45.1**	**+0.5**
BIA	**Bitola**	**1.40**	**239**	*e*Pg	**Pb**	**13 22 26.3**	**-0.2**
BIA	**Bitola**	**1.40**	**239**	*e*Pg	**Pb**	**13 22 26.3**	**-0.2**
KAVA	**Kavala**	**1.43**	**122**	P	**Pn**	**13 22 26.3**	**+0.1**
KAVA				S	**Sn**	**13 22 45.2**	**+0.1**
KAVA	**Kavala**	**1.43**	**122**	P	**Pn**	**13 22 26.3**	**+0.1**
KAVA				S	**Sn**	**13 22 45.2**	**+0.1**
PLG	**Polygyros**	**1.45**	**163**	P	**Pn**	**13 22 26.7**	**+0.2**
PLG				S	**Sg**	**13 22 46.3**	**-0.3**
PLG	**Polygyros**	**1.45**	**163**	*e*PB	**Pn**	**13 22 26.6**	**+0.1**
FNA	**Florina**	**1.51**	**230**	P	**Pn**	**13 22 27.9**	**+0.5**
FNA	**Florina**	**1.51**	**230**	P	**Pn**	**13 22 27.9**	**+0.5**
ZAPS	**Zavoj**	**1.52**	**352**	*e*Pg	**Pb**	**13 22 28.9**	**+0.4**
ZAPS				*e*Sg	**Sg**	**13 22 49.4**	**+0.3**
OUR	**Ouranopolis**	**1.64**	**150**	P	**Pn**	**13 22 29.2**	**+0.1**
OUR				S	**Sn**	**13 22 50.5**	**+0.2**
MPEP	**Malo Peshtene**	**1.71**	**21**	*i* P	**Pb**	**13 22 31.9**	**+0.3**
PAIG	**Paliouri**	**1.93**	**162**	P	**Pn**	**13 22 33.3**	**+0.3**
PAIG				S	**Sn**	**13 22 57.3**	**0.0**
PAIG	**Paliouri**	**1.93**	**162**	P	**Pn**	**13 22 33.3**	**+0.3**
PAIG				S	**Sn**	**13 22 57.3**	**0.0**
SELS	**Selova**	**1.97**	**318**	*i* Pg	**Pb**	**13 22 36.3**	**+0.2**
BOLS	**Boljevac**	**2.18**	**342**	*e*Pn	**Pn**	**13 22 36.5**	**0.0**
BOLS	**Boljevac**	**2.18**	**342**	*e*Pn	**Pn**	**13 22 36.5**	**0.0**
ALN	**Alexandroupoli**	**2.52**	**109**	P	**Pn**	**13 22 42.1**	**+1.0**
ALN				S	**Sn**	**13 23 13.6**	**+1.7**
ALN	**Alexandroupoli**	**2.52**	**109**	*e*PN	**Pn**	**13 22 42.3**	**+1.2**
GRUS	**Gruza**	**2.67**	**324**	*e*Pn	**Pn**	**13 22 44.0**	**+0.8**
GRUS	**Gruza**	**2.67**	**324**	*e*Pn	**Pn**	**13 22 44.0**	**+0.8**
AOS	**Alonnisos**	**2.69**	**164**	P	**Pn**	**13 22 43.5**	**-0.1**
AOS	**Alonnisos**	**2.69**	**164**	P	**Pn**	**13 22 43.5**	**-0.1**
AGG	**Agios Georgios**	**2.77**	**189**	*e*PN	**Pb**	**13 22 48.3**	**-1.5**
AGG	**Agios Georgios**	**2.77**	**189**	*e*Pn	**Pb**	**13 22 48.3**	**-1.5**
DIVS	**Divibare**	**3.17**	**318**	P	**Pn**	**13 22 50.0**	**-0.1**
DIVS	**Divibare**	**3.17**	**318**	*e*Pn	**Pn**	**13 22 50.1**	**-0.1**
DIVS	**Divibare**	**3.17**	**318**	*e*Pn	**Pn**	**13 22 50.1**	**-0.1**

ISCJB ***14*** *13:38:52.7±0.6, 40°.49N±0°.05×140°.2E±0°.1, h172km±4km, mb3.1/6, Error ellipse: s-maj=18.9km s-min=7.7km az=15.2*
IDC ***14*** *13:38:53.1±1.6, 40°.53N×140°.11E, h160km±14km, mb2.9/6, mb1 3.2/8, mb1mx3.0/25, mbtmp2.9/8, Error ellipse: s-maj=48.2km s-min=14.2km az=113.0*
JMA ***14*** *13:38:54.0±0.1, 40°.45N×140°.20E, h166km±1km, M3.0*
ISC 14 13:38:53.8±0.8, 40°.48N±0°.06×140°.3E±0°.1, h169km±6km, n17, σ0°.962/24, mb3.2/6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIW	**Iwasaki**	**0.22**	**303**	P	**Pn**	**13 39 15.3**	**-0.1**
JIW				*e*S	**Sn**	**13 39 33.4**	**-0.2**
JAH	**Hinai**	**0.41**	**134**	P	**Pn**	**13 39 16.8**	**-0.2**
JAH				*e*S	**Sn**	**13 39 34.4**	**-0.2**
JTM	**Tenmabayashi**	**0.70**	**63**	P	**Pn**	**13 39 18.5**	**+0.2**
JTM				S	**Sn**	**13 39 37.7**	**+0.6**
JANG	**Nango**	**0.97**	**96**	P	**Pn**	**13 39 20.2**	**0.0**
JANG				S	**Sn**	**13 39 39.9**	**-0.5**
JOT	**Ohata**	**1.09**	**34**	P	**Pn**	**13 39 21.4**	**+0.3**
JOT				*e*S	**Sn**	**13 39 42.3**	**+0.1**
JOM	**Ohasama**	**1.28**	**141**	P	**Pn**	**13 39 22.7**	**-0.1**
JKB	**Kayabe**	**1.53**	**23**	P	**Pn**	**13 39 25.3**	**+0.2**
JYK	**Kaneyama**	**1.56**	**177**	P	**Pn**	**13 39 25.3**	**-0.2**
JYK				S	**Sn**	**13 39 49.2**	**-0.6**
JMK	**Ichinoseki**	**1.70**	**153**	P	**Pn**	**13 39 26.3**	**-0.6**
ASAJ	**Asahikawa**	**4.03**	**25**	P	**Pn**	**13 39 54.2**	**-0.7**
	2.5nm,0.3s,baz=223,slow=12,SNR=61						
ASAJ				S	**Sn**	**13 40 40.9**	**-1.8**
	0.9nm,0.3s,baz=260,slow=17,SNR=2.8						
MJAR	**Matsushiro Arr**	**4.24**	**203**	P	**Pn**	**13 39 57.9**	**+0.1**
	0.6nm,0.3s,baz=14,slow=12,SNR=9.2						
ILAR	**Eielson Array**	**47.12**	**34**	P	**P**	**13 47 09.5**	**+1.0**
	0.2nm,0.6s,baz=285,slow=6.9,SNR=6.2						
YKA	**Yellowknife Ar**	**61.31**	**31**	P	**P**	**13 48 51.2**	**+0.2**
	0.1nm,0.4s,baz=303,slow=7.3,SNR=4.9						
ASAR	**Alice Springs**	**64.08**	**186**	P	**P**	**13 49 09.6**	**-0.2**
	0.1nm,0.3s,baz=2.8,slow=6.9,SNR=5.6						
FINES	**FINESS Array B**	**65.35**	**331**	P	**P**	**13 49 16.9**	**-0.7**
	0.2nm,0.4s,baz=6.9,slow=4.6,SNR=2.9						
NVAR	**Mina Array Bea**	**73.66**	**53**	P	**P**	**13 50 09.3**	**+0.1**
	0.5nm,0.8s,baz=354,slow=3.0,SNR=3.6						
PDAR	**Pinedale Array**	**75.91**	**45**	P	**P**	**13 50 22.6**	**+0.6**
	0.5nm,0.8s,baz=273,slow=3.3,SNR=3.3						

ISCJB ***14*** *13:56:21.0±0.2, 42°.55N±0°.01×13°.28E±0°.01, h10km±1km, mb3.7/14, MS3.6/2, Error ellipse: s-maj=2.3km s-min=1.6km az=33.5*
MOS ***14*** *13:56:21.3±1.2, 42°.58N×13°.28E, h13km, mb4.0/11, Error ellipse: s-maj=6.6km s-min=4.6km az=101.2*
PDG ***14*** *13:56:21.8±0.8, 42°.56N×13°.33E, h5km±1km, ML4.0/9, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
LDG ***14*** *13:56:21.5±0.1, 42°.54N×13°.35E, h2km, Ml3.7/8, Error ellipse: s-maj=5.3km s-min=3.2km az=43.0*
IDC ***14*** *13:56:21.6±0.8, 42°.64N×13°.12E, h0km, mb3.7/11, mb1 3.9/18, mb1mx3.8/34, mbtmp3.7/18, ML3.7/7, MS3.4/3, Ms1 3.4/3, ms1mx2.4/64, Error ellipse: s-maj=15.5km s-min=12.3km az=104.0*
NEIC ***14*** *13:56:21.0, 42°.54N×13°.31E, h10km, ML3.9(ROM), ML3.9(VIE), After ROM.*
NEIC Felt [III] at Ascoli Piceno, Folignano, Montorio al Vomano, Teramo and Torricella; [II] at Ancona, Cassino, Chieti, Foligno, Latina, Pescara, Rieti, Rome, Sulmona and Terni. Felt in Abruzzo, Lazio, Marche and Umbria.
CSEM ***14*** *13:56:21.6±0.1, 42°.55N×13°.26E, h2km, mb3.9/8, ML4.2/14, Error ellipse: s-maj=2.2km s-min=1.6km az=39.0*
ROM ***14*** *13:56:21.2±0.1, 42°.54N×13°.32E, h10km, Ml4.0/35, Error ellipse: s-maj=0.9km s-min=0.7km az=49.0*
PRU ***14*** *13:56:22.6, 42°.53N×13°.56E, h3km*
BEO ***14*** *13:56:22.6±0.8, 42°.60N×13°.33E, h0km, ML4.1/7*
STR ***14*** *13:56:23.9±1.0, 42°.65N×13°.24E, h5km, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 14 13:56:22.5±0.7, 42°.55N±0°.02×13°.31E±0°.01, h8km±4km, n431, σ1°.548/540, mb3.8/14, 52C-21D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**103**	P	**Pg**	**13 56 23.9**	**-0.7**
CAMP				S	**Sg**	**13 56 25.3**	**-0.9**
CAMP	**Campotosto**	**0.07**	**103**	*i* Pg	**Pg**	**13 56 23.9**	**-0.7**
CAMP					**Sg**	**13 56 25.3**	**-0.9**
LNSS	**Leonessa**	**0.21**	**284**	P	**Pg**	**13 56 26.3**	**-0.5**
LNSS				S	**Sg**	**13 56 30.2**	**+0.5**
LNSS	**Leonessa**	**0.21**	**284**	*i* Pg	**Pg**	**13 56 26.3**	**-0.5**
LNSS					**Sg**	**13 56 30.2**	**+0.5**
	66μm,0.6s						
LNSS	**Leonessa**	**0.21**	**284**	*i* Pg	**Pg**	**13 56 26.3**	**-0.5**
AQU	**L'Aquila**	**0.21**	**162**	*i* Pg	**Pg**	**13 56 26.1**	**-0.7**
AQU	**L'Aquila**	**0.21**	**162**	*i* Pg	**Pg**	**13 56 26.1**	**-0.7**
AQU					**Sg**	**13 56 29.7**	**+0.1**
	36μm,0.7s						
AQU	**L'Aquila**	**0.21**	**162**	*i* Pg	**Pg**	**13 56 26.1**	**-0.7**
AQU					**Sg**	**13 56 29.7**	**+0.1**
	36μm,0.7s						
TERO	**Teramo**	**0.23**	**72**	P	**Pg**	**13 56 26.2**	**-0.9**
TERO				S	**Sg**	**13 56 29.2**	**-1.0**
TERO	**Teramo**	**0.23**	**72**	*i* Pg	**Pg**	**13 56 26.2**	**-0.9**
TERO					**Sg**	**13 56 29.7**	**-0.5**
	29μm,0.5s						
TERO	**Teramo**	**0.23**	**72**	*i* Pg	**Pg**	**13 56 26.2**	**-0.9**
TERO				S	**Sg**	**13 56 29.2**	**-1.0**
TERO					**Sg**	13 56 29.7	-0.6
	29μm,0.5s						
NRCA	**Norcia**	**0.32**	**333**	P	**Pg**	**13 56 28.1**	**-0.7**
NRCA				S	**Sg**	**13 56 33.3**	**+0.2**
NRCA	**Norcia**	**0.32**	**333**	*e*Pg	**Pg**	**13 56 28.1**	**-0.7**
NRCA					**Sg**	**13 56 33.3**	**+0.2**
	15μm,0.1s						
NRCA	**Norcia**	**0.32**	**333**	*e*Pg	**Pg**	**13 56 28.1**	**-0.7**
NRCA					**Sg**	**13 56 33.3**	**+0.2**
	15μm,0.1s						
FIAM	**Fiamignano**	**0.32**	**207**	P	**Pg**	**13 56 28.0**	**-0.8**
FIAM	**Fiamignano**	**0.32**	**207**	*i* Pg	**Pg**	**13 56 28.0**	**-0.8**
FIAM					**Sg**	**13 56 33.1**	**0.0**
	18μm,0.7s						
FIAM	**Fiamignano**	**0.32**	**207**	*i* Pg	**Pg**	**13 56 28.0**	**-0.8**
FIAM					**Sg**	**13 56 33.1**	**0.0**
	18μm,0.7s						
GAVE	**Gavelli**	**0.34**	**295**	Pg	**Pg**	**13 56 28.5**	**-0.7**
GAVE	**Gavelli**	**0.34**	**295**	Pg	**Pg**	**13 56 28.5**	**-0.7**
FAGN	**Fagnano**	**0.35**	**145**	P	**Pg**	**13 56 28.4**	**-1.0**
FAGN				S	**Sg**	**13 56 34.1**	**+0.1**
FAGN	**Fagnano**	**0.35**	**145**	Pg	**Pg**	**13 56 28.4**	**-1.0**
FAGN					**Sg**	**13 56 34.1**	**+0.1**
	74μm,0.4s						
FAGN	**Fagnano**	**0.35**	**145**	Pg	**Pg**	**13 56 28.4**	**-1.0**
FAGN					**Sg**	**13 56 34.1**	**+0.1**
	74μm,0.4s						
VCEL	**Villa Celiera**	**0.42**	**112**	P	**Pg**	**13 56 30.0**	**-0.8**
VCEL				S	**Sg**	**13 56 37.1**	**+0.9**
VCEL	**Villa Celiera**	**0.42**	**112**	Pg	**Pg**	**13 56 30.1**	**-0.6**
VCEL					**Sg**	**13 56 36.3**	**0.0**
	59μm,0.7s						
VCEL	**Villa Celiera**	**0.42**	**112**	Pg	**Pg**	**13 56 30.1**	**-0.6**
VCEL					**Sg**	**13 56 36.3**	**0.0**
	59μm,0.7s						
VCEL				S	**Sg**	**13 56 37.2**	**+0.9**
OFFI	**Offida**	**0.47**	**36**	P	**Pg**	**13 56 31.5**	**-0.2**
OFFI				S	**Sb**	**13 56 40.0**	**-0.2**
OFFI	**Offida**	**0.47**	**36**	*i* Pg	**Pg**	**13 56 31.5**	**-0.2**
	36μm,0.8s						
OFFI	**Offida**	**0.47**	**36**	*i* Pg	**Pg**	**13 56 31.5**	**-0.2**
	36μm,0.8s						
OFFI				S	**Sb**	**13 56 40.0**	**-0.2**
MNS	**Montasola**	**0.50**	**251**	P	**Pg**	**13 56 31.0**	**-1.1**
MNS	**Montasola**	**0.50**	**251**	P	**Pg**	**13 56 31.0**	**-1.1**
MNS	**Montasola**	**0.50**	**251**	*i* Pg	**Pg**	**13 56 31.0**	**-1.1**
	10μm,0.5s						
MNS	**Montasola**	**0.50**	**251**	*i* Pg	**Pg**	**13 56 31.0**	**-1.1**
	10μm,0.5s						
FDMO	**Fiordimonte**	**0.51**	**341**	P	**Pg**	**13 56 31.4**	**-1.0**
FDMO				S	**Sg**	**13 56 39.8**

SDI	San Donato	0.92	156		Pg		Pg		13 56 38.4	-1.8
MGAB	Montegabbione	0.95	293		Pg		Pg		13 56 39.4	-1.5
MGAB	Montegabbione	0.95	293		Pg		Pg		13 56 39.4	-1.5
ARVD	Arcevia	0.98	344		Pg		Pg		13 56 39.8	-1.6
	3µm,0.8s										
ARVD	Arcevia	0.98	344		Pg		Pg		13 56 39.8	-1.6
	3µm,0.8s										
GIUL	Giuliano Di Ro	0.99	183		P		Pg		13 56 40.2	-1.4
GIUL	Giuliano Di Ro	0.99	183		Pg		Pg		13 56 39.9	-1.7
	3µm,0.7s										
GIUL	Giuliano Di Ro	0.99	183		Pg		Pg		13 56 39.9	-1.7
	3µm,0.7s										
GIUL	Giuliano Di Ro	0.99	183		P		Pg		13 56 40.2	-1.4
AOI	Ancona	1.02	12		P		Pg		13 56 39.2	-2.9
AOI	Ancona	1.02	12		Pg		Pg		13 56 40.6	-1.5
	2µm,0.7s										
AOI	Ancona	1.02	12		P		Pg		13 56 39.2	-2.9
AOI	Ancona	1.02	12		Pg		Pg		13 56 40.6	-1.5
	2µm,0.7s										
RNI2	Rionero Sannit	1.05	143		Pg		Pg		13 56 40.6	-2.1
	6µm,1.0s										
RNI2	Rionero Sannit	1.05	143		Pg		Pg		13 56 40.6	-2.1
	6µm,1.0s										
SACS	San Casciano d	1.08	286		Pg		Pg		13 56 41.5	-1.7
	3µm,0.8s										
CERA	Filignano	1.09	151		Pg		Pg		13 56 40.7	-2.7
	4µm,0.9s										
CERA	Filignano	1.09	151		Pg		Pg		13 56 40.7	-2.7
	4µm,0.9s										
TOLF	Tolfa	1.09	244		Pg		Pg		13 56 41.4	-2.0
	3µm,0.7s										
TOLF	Tolfa	1.09	244		Pg		Pg		13 56 41.4	-2.0
	3µm,0.7s										
PIEI	Pieia	1.14	330		Pg		Pg		13 56 42.5	-1.8
	2µm,1.2s										
PIEI	Pieia	1.14	330		Pg		Pg		13 56 42.5	-1.8
	2µm,1.2s										
MIDA	Miranda	1.15	142		Pg		Pg		13 56 41.7	-2.8
	2µm,0.7s										
MIDA	Miranda	1.15	142		Pg		Pg		13 56 41.7	-2.8
	2µm,0.7s										
FSSB	Fossombrone	1.21	341		Pn		Pb		13 56 43.7	-1.9
	3µm,0.4s										
FSSB	Fossombrone	1.21	341		Pn		Pb		13 56 43.7	-1.9
	3µm,0.4s										
CAFI	Castiglion Fio	1.26	309		Pn		Pn		13 56 44.7	-1.7
	3µm,1.3s										
CAFI	Castiglion Fio	1.26	309		Pn		Pn		13 56 44.7	-1.7
	3µm,1.3s										
PARC	Parchiule	1.35	325		Pn		Pn		13 56 46.5	-1.2
	2µm,0.9s										
PARC	Parchiule	1.35	325		Pn		Pn		13 56 46.5	-1.2
	2µm,0.9s										
ARCI	Arcidosso	1.39	283		Pn		Pn		13 56 47.5	-0.7
	667nm,1.0s										
ARCI	Arcidosso	1.39	283		Pn		Pn		13 56 47.5	-0.7
	667nm,1.0s										
NVLJ	Novalja	2.31	29		ePn		Pn		13 56 59.9	-0.9
NVLJ					Sn		Sn		13 57 29.0	-0.3
NVLJ	Novalja	2.31	29		ePn		Pn		13 56 59.9	-0.9
NVLJ					Sn		Sn		13 57 29.0	-0.3
MAIM	Mastiano	2.47	304		P		Pn		13 57 02.0	-1.0
CDT	Castel del Mon	2.66	123		eSn		Sb		13 57 41.0	-2.1
VLC	Villacollemand	2.67	308		ePn		Pn		13 57 05.6	-0.2
VLC	Villacollemand	2.67	308		ePn		Pn		13 57 05.6	-0.2
BAI	Bari	3.03	117		ePn		Pn		13 57 11.4	+0.7
BAI					eSn		Sn		13 57 48.5	+1.3
TRI	Trieste	3.17	6		eP		Pn		13 57 11.7	-1.0
TRI	Trieste	3.17	6		ePn		Pn		13 57 11.7	-1.0
TRI	Trieste	3.17	6		eP		Pn		13 57 11.7	-1.0
CUC	Castrocucco	3.18	143		ePn		Pn		13 57 14.0	+1.2
CUC	Castrocucco	3.18	143		ePn		Pn		13 57 14.0	+1.2
PGF	Pioggiola	3.19	271		ePn		Pn		13 57 12.5	-0.5
PGF					eSn		Sn		13 57 52.6	+1.4
	35nm,0.8s										
STON	Ston	3.25	83		ePn		Pn		13 57 13.4	-0.4
STON					Sn		Sn		13 57 50.6	-1.9
STON	Ston	3.25	83		ePn		Pn		13 57 13.3	-0.4
STON					Sn		Sn		13 57 50.6	-1.9
BOJS	Bojanci	3.27	25		i Pn		Pn		13 57 14.0	0.0
BOJS					i Sn		Sn		13 57 54.0	+1.0
BOJS											
	comp=Z,72nm,0.5s										
BOJS	Bojanci	3.27	25		i Pn		Pn		13 57 14.0	0.0
BOJS					i Sn		Sn		13 57 54.0	+1.0
	comp=Z,72nm,0.5s										
JAVS	Javornik	3.38	9		i Pn		Pn		13 57 14.8	-0.9
JAVS					i Sn		Sn		13 57 57.9	+1.8
JAVS											
	comp=Z,33nm,0.4s										
JAVS	Javornik	3.38	9		i Pn		Pn		13 57 14.8	-0.9
JAVS					i Sn		Sn		13 57 57.9	+1.8
	comp=Z,33nm,0.4s										
HCY	Herceg Novi	3.83	90⇓		i Pn		Pn		13 57 22.0	+0.2
HCY					eSn		Sn		13 58 08.4	+1.4
HCY	Herceg Novi	3.83	90		P		Pn		13 57 21.8	0.0
HCY					S		Sn		13 58 08.7	+1.7
HCY	Herceg Novi	3.83	90		P		Pn		13 57 21.8	0.0
HCY					S		Sn		13 58 08.7	+1.7
HCY	Herceg Novi	3.83	90⇓		iPn		Pn		13 57 22.0	+0.2
HCY					eSn		Sn		13 58 08.4	+1.4
HCY					S		Sn		13 58 08.7	+1.7
BRY	Bratogost	3.87	83⇑		iPn		Pn		13 57 22.4	+0.1
BRY					eSn		Sn		13 58 10.4	+2.4
BRY	Bratogost	3.87	83	⇓	P		Pn		13 57 22.5	+0.1
BRY					S		Sn		13 58 10.5	+2.4
BRY	Bratogost	3.87	83	⇓	P		Pn		13 57 22.5	+0.1
BRY					S		Sn		13 58 10.5	+2.5
BRY	Bratogost	3.87	83		P		Pn		13 57 22.5	+0.1
BRY					eSn		Sn		13 58 10.4	+2.5
OBKA	Obir	4.05	12⇓		iPn		Pn		13 57 24.0	-0.9
OBKA	Obir	4.05	12⇓		iPn		Pn		13 57 24.0	-0.9
OBKA	Obir	4.05	12⇓		iPn		Pn		13 57 24.0	-0.9
MYKA	Terra Mystica	4.08	3⇑		iPn		Pn		13 57 24.9	-0.4
MYKA	Terra Mystica	4.08	3⇑		iPn		Pn		13 57 24.9	-0.4
MYKA	Terra Mystica	4.08	3⇑		iPn		Pn		13 57 24.9	-0.4
BUM	Brajici-Budva	4.14	92⇓		iPn		Pn		13 57 26.5	+0.5
BUM					eSn		Sn		13 58 16.7	+2.1
BUM	Brajici-Budva	4.14	92⇓		iPn		Pn		13 57 26.5	+0.5
BUM					eSn		Sn		13 58 16.7	+2.1
UPM	Unac-Piva	4.16	79⇑		iPn		Pn		13 57 27.1	+0.6
UPM					eSn		Sn		13 58 18.0	+2.6
UPM	Unac-Piva	4.16	79⇑		iPn		Pn		13 57 27.1	+0.6
UPM					eSn		Sn		13 58 18.0	+2.6
NKY	Niksic	4.20	85⇑		iPn		Pn		13 57 27.6	+0.7
NKY					eSn		Sn		13 58 18.6	+2.5
NKY	Niksic	4.20	85	⇑	P		Pn		13 57 27.5	+0.7
NKY					S		Sn		13 58 18.0	+1.9
NKY	Niksic	4.20	85	⇑	P		Pn		13 57 27.5	+0.7
NKY					S		Sn		13 58 18.0	+1.9
NKY	Niksic	4.20	85		P		Pn		13 57 27.5	+0.7
NKY					S		Sn		13 58 18.0	+1.9
NKY					eSn		Sn		13 58 18.6	+2.5
ABTA	Abfaltersbach	4.23	353⇑		iPn		Pn		13 57 27.5	+0.1
	SNR=48										
ABTA	Abfaltersbach	4.23	353⇑		iPn		Pn		13 57 27.4	+0.1
ABTA	Abfaltersbach	4.23	353⇑		iPn		Pn		13 57 27.5	+0.1
VSL	Villasalto	4.26	226		ePn		Pn		13 57 26.8	-0.9
VSL	Villasalto	4.26	226		ePn		Pn		13 57 26.8	-0.9
TIP	Timpagrande	4.26	141		ePn		Pn		13 57 30.1	+2.4
TIP	Timpagrande	4.26	141		ePn		Pn		13 57 30.1	+2.4
PDG	Podgorica	4.40	90		ePn		Pn		13 57 30.1	+0.6
PDG	Podgorica	4.40	90		ePn		Pn		13 57 30.1	+0.6
PDG					eSn		Sn		13 58 23.1	+2.3
TTG	Podgorica	4.40	90⇑		iPn		Pn		13 57 30.8	+1.3
TTG					eSn		Sn		13 58 23.1	+2.3
TTG	Podgorica	4.40	90	⇓	P		Pn		13 57 30.0	+0.6
TTG					S		Sn		13 58 23.5	+2.6
TTG	Podgorica	4.40	90	⇓	P		Pn		13 57 30.0	+0.6
TTG					S		Sn		13 58 23.5	+2.6
TTG	Podgorica	4.40	90		P		Pn		13 57 30.0	+0.6
TTG					S		Sn		13 58 23.5	+2.6
SAOF	Saorge	4.44	291		P		Pn		13 57 30.8	+0.6
SAOF	Saorge	4.44	291		P		Pn		13 57 30.8	+0.6
SAOF	Saorge	4.44	291		P		Pn		13 57 30.8	+0.6
SAOF					S		Sn		13 58 26.5	+4.5
ULC	Ulcinj	4.44	96⇓		iPn		Pn		13 57 30.4	+0.2
ULC					eSn		Sn		13 58 23.5	+1.5
ULC	Ulcinj	4.44	96	⇓	P		Pn		13 57 30.6	+0.4
ULC					S		Sn		13 58 23.7	+1.7
ULC	Ulcinj	4.44	96	⇓	P		Pn		13 57 30.6	+0.4
ULC					S		Sn		13 58 23.7	+1.7
ULC	Ulcinj	4.44	96		P		Pn		13 57 30.6	+0.4
ULC					eSn		Sn		13 58 23.5	+1.5
SBF	Sospel	4.49	289		ePn		Pn		13 57 30.8	-0.1
KBA	Koelnbreinsper	4.53	0⇓		iP		Pn		13 57 31.5	+0.1
KBA	Koelnbreinsper	4.53	0⇓		iPn		Pn		13 57 31.5	+0.1
	SNR=20										
KBA	Koelnbreinsper	4.53	0⇓		iPn		Pn		13 57 31.5	+0.1
KBA	Koelnbreinsper	4.53	0		i P		Pn		13 57 31.5	+0.1
PLE	Pljevlja	4.53	78		ePn		Pn		13 57 33.1	+1.7
PLE					eSn		Sn		13 58 26.3	+2.0
PLE	Pljevlja	4.53	78		P		Pn		13 57 32.3	+0.9
PLE					S		Sn		13 58 26.7	+2.4
PLE	Pljevlja	4.53	78		P		Pn		13 57 32.3	+0.9
PLE					S		Sn		13 58 26.7	+2.4
PLE	Pljevlja	4.53	78		P		Pn		13 57 32.3	+0.9
PLE	Pljevlja	4.53	78		ePn		Pn		13 57 33.1	+1.7
PLE					eSn		Sn		13 58 26.3	+2.0
PLE					S		Sb		13 58 26.7	-11
AUTN	L'Aution	4.53	291		P		Pn		13 57 33.0	+1.4
AUTN	L'Aution	4.53	291		P		Pn		13 57 33.0	+1.4
AUTN	L'Aution	4.53	291		P		Pn		13 57 33.0	+1.4
AUTN					S		Sn		13 58 28.1	+3.5
TOUF	Mont Tournerai	4.66	290		P		Pn		13 57 33.4	+0.1
TOUF	Mont Tournerai	4.66	290		P		Pn		13 57 33.4	+0.1
TOUF	Mont Tournerai	4.66	290		P		Pn		13 57 33.4	+0.1
TOUF					S		Sn		13 58 30.4	+2.7
CEL	Celeste	4.72	154		ePn		Pn		13 57 34.4	+0.4
CEL	Celeste	4.72	154		ePn		Pn		13 57 34.4	+0.4
FETA	Feichten	4.83	339⇑		iPn		Pn		13 57 35.8	+0.2
	SNR=23										
FETA	Feichten	4.83	339⇑		iPn		Pn		13 57 35.8	+0.2
FETA	Feichten	4.83	339⇑		iPn		Pn		13 57 35.8	+0.2
TUE	Stuetta	4.84	325		ePn		Pn		13 57 35.4	-0.4
TUE					eSn		Sn		13 58 31.6	-0.4
TUE	Stuetta	4.84	325		ePn		Pn		13 57 35.4	-0.4
TUE					eSn		Sn		13 58 31.6	-0.4
CALN	Calern	4.85	286		P		Pn		13 57 36.0	+0.1
CALN	Calern	4.85	286		P		Pn		13 57 36.0	+0.1
CALN	Calern	4.85	286		P		Pn		13 57 36.0	+0.1
BEY	Berane	4.86	84⇑		iPn		Pn		13 57 37.5	+1.5
BEY					eSn		Sn		13 58 34.3	+1.9
IVA	Berane	4.86	84⇑		iPn		Pn		13 57 37.5	+1.5
IVA					eSn		Sn		13 58 34.3	+1.9
WTTA	Wattenberg	4.86	346⇑		iP		Pn		13 57 35.6	-0.4
WTTA	Wattenberg	4.86	346⇑		iPn		Pn		13 57 35.6	-0.4
	SNR=7.7										
WTTA	Wattenberg	4.86	346⇑		iPn		Pn		13 57 35.6	-0.4
WTTA	Wattenberg	4.86	346		i P		Pn		13 57 35.6	-0.4
DAVOX	Davos/Dischmat	4.88	331		Pn		Pn		13 57 37.7	+1.3
	comp=Z,5.1nm,0.3s,baz=152,slow=18,SNR=28										
DAVOX					Sn		Sn		13 58 33.2	0.0
	comp=Z,1.5nm,0.3s,baz=110,slow=23,SNR=3.1										
DAVOX	Davos/Dischmat	4.88	331		P		Pn		13 57 37.7	+1.3
	comp=Z,5.0nm,0.3s										
DAVOX					S		Sn		13 58 33.2	0.0
	comp=Z,2.0nm,0.3s										
PVY	Plav	4.91	87⇓		iPn		Pn		13 57 38.2	+1.5
PVY					eSn		Sn		13 58 36.3	+2.6
PVY	Plav	4.91	87	⇑	P		Pn		13 57 38.2	+1.5
PVY					S		Sn		13 58 36.2	+2.5
TEKS	Tekeris	4.94	64		ePn		Pn		13 57 37.2	+0.2
TEKS	Tekeris	4.94	64		ePn		Pn		13 57 37.2	+0.2
WATA	Walderalm	4.94	346⇑		iP		Pn		13 57 36.4	-0.7
WATA	Walderalm	4.94	346⇑		iPn		Pn		13 57 36.4	-0.7
	SNR=5.2										
WATA	Walderalm	4.94	346⇑		iPn		Pn		13 57 36.4	-0.7
WATA	Walderalm	4.94	346		i P		Pn		13 57 36.4	-0.7
FRF	La Foret Royal	4.99	284		ePn		Pn		13 57 37.0	-0.6
LMR	La Mourre	5.05	281		ePn		Pn		13 57 37.7	-0.8
DIVS	Divibare	5.11	70		P		Pn		13 57 39.6	+0.2
DIVS	Divibare	5.11	70		ePn		Pn		13 57 39.3	-0.1
DIVS					eSn		Sn		13 58 37.6	-1.0
DIVS	Divibare	5.11	70		ePn		Pn		13 57 39.3	-0.1
DIVS	Divibare	5.11	70		P		Pn		13 57 39.6	+0.2
DIVS					eSn		Sn		13 58 37.6	-1.0
IVAS	Ivanjica	5.11	76		ePn		Pn		13 57 40.0	+0.6
IVAS					eSn		Sn		13 58 36.7	-2.0
IVAS	Ivanjica	5.11	76		ePn		Pn		13 57 40.0	+0.6
IVAS					eSn		Sn		13 58 36.7	-2.0
RJOB	Jochberg	5.20	356		ePn		Pn		13 57 42.0	+1.4
RJOB					eSn		Sn		13 58 39.9	-0.8
RJOB	Jochberg	5.20	356		ePn		Pn		13 57 42.0	+1.4
RJOB					eSn		Sn		13 58 40.6	-0.1
MBDF	Montbardon	5.22	297		eP		Pn		13 57 42.2	+1.2
MBDF	Montbardon	5.22	297		eP		Pn		13 57 42.2	+1.2
OBER	Oberstdorf	5.30	337		ePn		Pn		13 57 42.7	+0.6
OBER					eSn		Sn		13 58 43.0	-0.4
DAVA	Damuels	5.32	334⇓		iPn		Pn		13 57 43.9	+1.5
	SNR=14										
DAVA	Damuels	5.32	334⇓		iPn		Pn		13 57 43.9	+1.5
DAVA	Damuels	5.32	334⇓		iPn		Pn		13 57 43.9	+1.5
MOA	Molln	5.34	7⇑		iPn		Pn		13 57 42.0	-0.5
	SNR=15										
MOA	Molln	5.34	7⇑		iPn		Pn		13 57 42.0	-0.5
BNI	Bardonecchia	5.41	300		eP		Pn		13 57 44.4	+0.8
BNI	Bardonecchia	5.41	300		ePn		Pn		13 57 44.4	+0.8
BNI	Bardonecchia	5.41	300		eP		Pn		13 57 44.4	+0.8
TRUS	Trudelj	5.43	70		ePn		Pn		13 57 43.6	-0.1
TRUS	Trudelj	5.43	70		ePn		Pn		13 57 43.6	-0.1
GRUS	Gruza	5.57	74		ePn		Pn		13 57 45.9	+0.3
GRUS					eSn		Sn		13 58 48.4	-1.4
GRUS	Gruza	5.57	74		ePn		Pn		13 57 45.9	+0.3
LPG	La Plagne	5.57	304		eP		Pn		13 57 48.9	+3.0
LPG					eSn		Sn		13 58 48.0	-2.2
	comp=Z,10nm,0.4s										
LPL	La Plagne	5.59	304		eP		Pn		13 57 49.0	+2.9
LPL					eSn		Sn		13 58 47.1	-3.6
	comp=Z,12nm,0.5s										
SELS	Selova	5.77	81		ePn		Pn		13 57 47.8	-0.7
SELS					eSn		Sn		13 58 53.4	-1.5
SELS	Selova	5.77	81		ePn		Pn		13 57 47.8	-0.7
SMRF	Simiane la Rot	5.83	287		eP		Pn		13 57 50.2	+1.0
SMRF	Simiane la Rot	5.83	287		eP		Pn		13 57 50.2	+1.0
ORIF	Oris-en-Rattie	5.88	296		eP		Pn		13 57 53.2	+3.2
IGT	Igoumenitsa	6.10	117		P		Pn		13 57 54.1	+1.1
IGT	Igoumenitsa	6.10	117		P		Pn		13 57 54.1	+1.1
NEST	Nestorio	6.19	108		P		Pn		13 57 55.5	+1.3
NEST	Nestorio	6.19	108		P		Pn		13 57 55.5	+1.3
BARS	Barje	6.27	85		ePn		Pn		13 57 55.8	+0.5
BARS					eSn		Sn		13 59 05.7	-1.4
FNA	Florina	6.29	104		P		Pn		13 57 56.5	+0.9
FNA	Florina	6.29	104		P		Pn		13 57 56.5	+0.9
GEC2	GERESS Array S	6.30	2		eP		Pn		13 57 55.6	-0.1
GEC2					e				13 59 04.5	
GEC2	GERESS Array S	6.30	2		ePn		Pn		13 57 55.6	-0.1
GEC2					eSn		Sn		13 59 04.5	-3.4
GEC2	GERESS Array S	6.30	2		ePn		Pn		13 57 53.9	-1.8
GEC2					eSn		Sn		13 59 04.7	-3.2
GEC2	GERESS Array S	6.30	2		eP		Pn		13 57 55.6	-0.1
GERES	GERESS Array B	6.30	2		Pn		Pn		13 57 55.3	-0.4
	comp=Z,1.0nm,0.3s,baz=186,slow=12,SNR=15										
GERES					Sn		Sn		13 59 05.4	-2.5
	comp=Z,2.7nm,0.3s,baz=175,slow=21,SNR=6.9										
GERES	GERESS Array B	6.30	2		P		Pn		13 57 55.3	-0.4
	comp=Z,1.0nm,0.3s										
JAN	Janina	6.39	114		P		Pn		13 57 58.4	+1.5
JAN	Janina	6.39	114		P		Pn		13 57 58.4	+1.5
BBS	Basel-Blauen	6.41	322		P		Pn		13 57 58.9	+1.8
BBS	Basel-Blauen	6.41	322		P		Pn		13 57 58.9	+1.8
BBS	Basel-Blauen	6.41	322		P		Pn		13 57 58.9	+1.8
BOLS	Boljevac	6.44	76		ePn		Pn		13 57 56.7	-0.9
BOLS					eSn		Sn		13 59 08.7	-2.6
BOLS	Boljevac	6.44	76		ePn		Pn		13 57 56.7	-0.9
FELD	Feldberg im Sc	6.51	327		P		Pn		13 57 57.7	-1.0
FELD	Feldberg im Sc	6.51	327		P		Pn		13 57 57.7	-1.0
CABF	La Chapelle	6.56	311		ePn		Pn		13 58 00.1	+0.8
CABF	La Chapelle	6.56	311		ePn		Pn		13 58 00.1	+0.8
KHC	Kasperske Hory	6.58	2		eP		Pn		13 57 59.2	-0.4
KHC					e				13 59 11.3	
KHC	Kasperske Hory	6.58	2		ePn		Pn		13 57 58.2	-1.3
KHC					eSn		Sn		13 59 11.1	-3.7
KHC	Kasperske Hory	6.58	2		ePN		Pn		13 57 59.2	-0.4
KHC					eSN		Sn		13 59 11.3	-3.5
KHC	Kasperske Hory	6.58	2		Pn		Pn		13 57 59.2	-0.4
LOMF	Lomont	6.65	318		P		Pn		13 58 01.2	+0.7
LOMF	Lomont	6.65	318		P		Pn		13 58 01.2	+0.7
LOMF	Lomont	6.65	318		P		Pn		13 58 01.2	+0.7
LOMF	Lomont	6.65	318		P		Pn		13 58 01.2	+0.7
VIVF	Saint-Julien-l	6.67	293		eP		Pn		13 58 02.2	+1.4
VIVF	Saint-Julien-l	6.67	293		eP		Pn		13 58 02.2	+1.4
KZN	Kozani	6.74	107		P		Pn		13 58 04.0	+2.2
KZN	Kozani	6.74	107		P		Pn		13 58 04.0	+2.2
BFO	Black Forest	6.76	330		eP		Pn		13 58 02.0	+0.1
BFO					e				13 59 14.1	
BFO	Black Forest	6.76	330		ePn		Pn		13 58 02.0	+0.1
BFO					eSn		Sn		13 59 16.9	-2.1
BFO	Black Forest	6.76	330		ePn		Pn		13 58 02.0	+0.1
BFO					eSn		Sn		13 59 14.1	-4.9
BFO	Black Forest	6.76	330		ePn		Pn		13 57 58.9	-3.0
BFO	Black Forest	6.76	330		eP		Pn		13 58 02.0	+0.1
MOF	Molkenrain	6.86	323		P		Pn		13 58 03.1	-0.4
MOF	Molkenrain	6.86	323		P		Pn		13 58 03.1	-0.4
MOF	Molkenrain	6.86	323		P		Pn		13 58 03.1	-0.4
MOF	Molkenrain	6.86	323		P		Pn		13 58 03.1	-0.4
ZAPS	Zavoj	6.88	81		ePn		Pn		13 58 03.4	-0.3
ZAPS					eSn		Sn		13 59 18.8	-3.4
ZAPS	Zavoj	6.88	81		ePn		Pn		13 58 03.4	-0.3
HINF	Hinteralfeld	6.96	321		ePn		Pn		13 58 04.4	-0.4
HINF					eSn		Sn		13 59 21.5	-2.7
	comp=Z,28nm,0.5s										
HINF	Hinteralfeld	6.96	321		ePn		Pn		13 58 04.4	-0.4
HINF					eSn		Sn		13 59 21.5	-2.7
	comp=Z,14nm,0.5s										
VAY	Valandovo	7.01	97		P		Pn		13 58 05.2	-0.2
VAY	Valandovo	7.01	97		ePn		Pn		13 58 05.0	-0.4
VAY	Valandovo	7.01	97		P		Pn		13 58 05.2	-0.2
LASF	Ste Croix	7.06	286		ePn		Pn		13 58 05.7	-0.5
LASF	Ste Croix	7.06	286		ePn		Pn		13 58 05.7	-0.5
VYHS	Vyhne	7.09	31		eP		Pn		13 58 04.6	-2.0
VYHS					e				13 59 22.4	
VYHS	Vyhne	7.09	31		ePN		Pn		13 58 04.6	-2.0
VYHS					eSN		Sn		13 59 22.4	-4.9
VYHS	Vyhne	7.09	31		eP		Pn		13 58 04.6	-2.0
ECH	Echery	7.13	325		P		Pn		13 58 06.3	-0.7
ECH	Echery	7.13	325		P		Pn		13 58 06.3	-0.7
ECH	Echery	7.13	325		P		Pn		13 58 06.3	-0.7
ECH	Echery	7.13	325		P		Pn		13 58 06.3	-0.7
VRAC	Vranov	7.13	18		Pn		Pn		13 58 08.2	+1.1
	comp=Z,0.7nm,0.3s,baz=18,slow=20,SNR=2.1										
VRAC					LR		LR		14 01 15.8		
	comp=Z,101nm,18.8s,baz=209,slow=42										
VRAC	Vranov	7.13	18		P		Pn		13 58 08.2	+1.1
	comp=Z,101nm,18.8s										
CDF	Champ du Feu	7.23	326		ePn		Pn		13 58 08.1	-0.4
CDF					eSn		Sn		13 59 28.3	-2.5
	comp=Z,31nm,0.7s										
C

ZEI	**Tsey**	**22.44**	**79**	*e*P	**P**	**14 01 25.3**	**+3.4**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JOF	**Joensuu**	**22.97**	**21**	*e*P	**P**	**14 01 26.8**	**-0.3**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.6s						
JOF	**Joensuu**	**22.97**	**21**	*e*p	**P**	**14 01 26.8**	**-0.3**
	comp=Z,1.3nm,0.6s						
JOF	**Joensuu**	**22.97**	**21**	*e*P	**P**	**14 01 26.8**	**-0.3**
	comp=Z,1.0nm,0.6s						
BHD	**Baghdad**	**26.08**	**100**	*ex*	**P**	**14 01 52.0**	**-4.5**
BHD				*ex*	S	14 06 20.5	-7.4
TORD	**Torodi Ar. Bea**	**30.98**	**202**	P	**P**	**14 02 40.2**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=17,slow=8.0,SNR=5.9						
BVAR	**Borovoye Array**	**38.78**	**54**	P	**P**	**14 03 48.7**	**+1.4**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**38.78**	**54**	P	**P**	**14 03 48.7**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=273,slow=5.6,SNR=4.9						
BVAR	**Borovoye Array**	**38.78**	**54**	P	**P**	**14 03 48.7**	**+1.4**
	comp=Z,1.0nm,0.6s						
AAK	**Ala-Archa**	**44.15**	**68**	LR	LR	14 25 43.7	
	comp=Z,51nm,19.8s,baz=164,slow=40						
ZALV	**Zalesovo Beam**	**47.00**	**50**	P	**P**	**14 04 55.2**	**+1.4**
ZALV	**Zalesovo Beam**	**47.00**	**50**	P	**P**	**14 04 55.2**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=297,slow=7.3,SNR=4.3						
ZALV	**Zalesovo Beam**	**47.00**	**50**	P	**P**	**14 04 55.2**	**+1.4**
MKAR	**Makanchi Array**	**47.80**	**60**	P	**P**	**14 04 59.8**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**47.80**	**60**	P	**P**	**14 04 59.8**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=284,slow=6.0,SNR=11						
MKAR	**Makanchi Array**	**47.80**	**60**	P	**P**	**14 04 59.8**	**-0.5**
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**61.89**	**50**	P	**P**	**14 06 43.1**	**+0.7**
	comp=Z,1.2nm,0.9s,baz=287,slow=7.1,SNR=5.7						
SONM	**Songino Array**	**61.89**	**50**	P	**P**	**14 06 43.1**	**+0.7**
	comp=Z,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**67.30**	**337**	P	**P**	**14 07 16.7**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=40,slow=5.9,SNR=18						
YKA	**Yellowknife Ar**	**67.30**	**337**	P	**P**	**14 07 16.7**	**-0.6**
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**71.89**	**351**	LR	LR	14 39 14.8	
	comp=Z,42nm,18.1s,baz=232,slow=36						
CMAR	**Chiang Mai Arr**	**74.61**	**79**	P	**P**	**14 08 01.9**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=309,slow=5.7,SNR=5.1						
CMAR	**Chiang Mai Arr**	**74.61**	**79**	P	**P**	**14 08 01.9**	**-0.5**
PDAR	**Pinedale Array**	**80.76**	**321**	P	**P**	**14 08 36.2**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=39,slow=5.8,SNR=2.4						
TXAR	**Lajitas Array**	**87.95**	**309**	P	**P**	**14 09 13.5**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=35,slow=3.3,SNR=2.4						
TXAR	**Lajitas Array**	**87.95**	**309**	P	**P**	**14 09 13.5**	**+0.3**

RSPR 14 14:00:36.1, 19°10N×65°42W, h19km±8km, MD3.2/3, 4C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**0.87**	**149**	*e*P	Pb	14 00 50.4	-2.1
STVI	**Saint Thomas**	**0.87**	**149**	*e*P	Pb	14 00 50.4	-2.1
STVI				*e*S	Sb	14 01 01.5	-2.3
CBYP	**Canovanas**	**0.92**	**206**	*e*P	Pb	14 00 50.7	-2.9
CBYP	**Canovanas**	**0.92**	**206**	*e*P	Pb	14 00 50.7	-2.9
CBYP				*e*S	Sb	14 01 02.8	-2.7
MTP	**Monte Pirata**	**1.01**	**187**	*i*P	Pb	14 00 52.5	-2.5
MTP	**Monte Pirata**	**1.01**	**187**	*i*P	Pb	14 00 52.5	-2.5
MTP				*e*S	Sb	14 01 05.4	-2.5

*MOS **14** 14:01:38.1±1.5,51°.89N×157°.04E, h127km, mb4.0/2, Error ellipse: s-maj=54.6km s-min=17.9km az=68.4*
*ISCJB **14** 14:01:40.3±0.6,51°.92N±0°.06×157°.5E±0°.1, h135km±4km, mb3.4/7, Error ellipse: s-maj=13.4km s-min=7.4km az=40.4*
*KRSC **14** 14:01:41.0±0.5,51°.91N×157°.77E, h131km±31km, ML3.8*
*IDC **14** 14:01:42.2±1.3,52°.13N×157°.06E, h142km±9km, mb3.2/7, mb1 3.6/7, mb1mx3.2/25, mbtmp3.2/7, Error ellipse: s-maj=38.0km s-min=16.6km az=147.0*
ISC 14 14:01:41.1±0.8, 51°.89N±0°.06×157°.52E±0°.07, h131km±6km, n33, σ1°11/52, mb3.7/7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**0.61**	**310**	*e*P	**Pn**	**14 02 00.8**	**-0.1**
MIPR				*i*S	**Sn**	**14 02 15.5**	**-0.5**
MTVR	**Mutnovka**	**0.72**	**34**	*e*P	**Pn**	**14 02 01.6**	**-0.3**
MTVR				*i*S	**Sn**	**14 02 18.0**	**+0.3**
GRL	**Gorelyy**	**0.74**	**27**	*e*P	**Pn**	**14 02 02.2**	**+0.1**
GRL				*i*S	**Sn**	**14 02 18.4**	**+0.4**
RUS	**Russkaya**	**0.82**	**48**	P	**Pn**	**14 02 02.1**	**-0.4**
RUS				*i*S	**Sn**	**14 02 18.2**	**-0.5**
APC	**Apacha**	**1.06**	**348**	*e*P	**Pn**	**14 02 04.2**	**-0.4**
APC				*i*S	**Sn**	**14 02 21.6**	**-0.9**
PETK	**Petropavlovsk-**	**1.22**	**5**	PN	**Pn**	**14 02 05.9**	**-0.4**
PETK				S	**Sn**	**14 02 26.1**	**+0.6**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PETK				smax	smax		
	comp=N,3.0nm,0.3s						
PETK	**Petropavlovsk-**	**1.22**	**5**	P	**Pn**	**14 02 05.9**	**-0.4**
	comp=N,3.8nm,0.3s,baz=167,slow=11,SNR=63						
PETK				S	**Sn**	**14 02 26.1**	**+0.6**
	comp=N,3.2nm,0.3s,baz=126,slow=18,SNR=6.9						
PET	**Petropavlovsk**	**1.33**	**31**	*e*PN	**Pn**	**14 02 06.7**	**-0.6**
PET				*e*S	**Sn**	**14 02 26.4**	**-1.0**
PET				pmax	pmax		
	comp=Z,17nm,0.3s						
PET				smax	smax		
	comp=E,216nm,0.7s						
PET	**Petropavlovsk**	**1.33**	**31**	P	**Pn**	**14 02 07.0**	**-0.3**
PET				*i*S	**Sn**	**14 02 26.6**	**-0.8**
SKR	**Severo-Kuril's**	**1.50**	**217**	*e*PN	Pn	14 02 04.0	-5.2
SKR				*i*S	**Sn**	**14 02 26.8**	**-3.8**
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR				smax	smax		
	comp=N,1μm,0.9s						
SKR				smax	smax		
	comp=E,410nm,0.9s						
SKR	**Severo-Kuril's**	**1.50**	**217**	*e*P	**Pn**	**14 02 10.6**	**+1.4**
SKR				*i*S	**Sn**	**14 02 32.6**	**+2.0**
UGLR	**Uglovaya**	**1.54**	**31**	P	**Pn**	**14 02 10.5**	**+0.7**
UGLR				*i*S	**Sn**	**14 02 32.4**	**+0.7**
KOK	**Koryaka**	**1.56**	**25**	*e*P	**Pn**	**14 02 10.7**	**+0.7**
KOK				*i*S	**Sn**	**14 02 33.0**	**+0.9**
AVH	**Avacha**	**1.56**	**28**	*e*P	**Pn**	**14 02 11.2**	**+1.2**
AVH				*i*S	**Sn**	**14 02 33.7**	**+1.6**
SMAR	**Somma**	**1.58**	**29**	*e*P	**Pn**	**14 02 10.8**	**+0.4**
SMAR				*i*S	**Sn**	**14 02 32.8**	**+0.1**
KRER	**Koryakskii**	**1.60**	**27**	*e*P	**Pn**	**14 02 11.2**	**+0.6**
KRER				*i*S	**Sn**	**14 02 33.8**	**+0.7**
SDLR	**Sedlovina**	**1.62**	**30**	P	**Pn**	**14 02 10.8**	**+0.1**
SDLR				*i*S	**Sn**	**14 02 33.0**	**-0.3**
GNL	**Ganaly**	**1.82**	**8**	P	**Pn**	**14 02 12.7**	**-0.4**
GNL				*i*S	**Sn**	**14 02 36.3**	**-1.3**
SPN	**Mys Shipunski**	**1.95**	**51**	*e*P	**Pn**	**14 02 14.5**	**0.0**
SPN				*i*S	**Sn**	**14 02 38.3**	**-1.7**
TUMR	**Tumrok**	**3.74**	**24**	*e*P	**Pn**	**14 02 37.9**	**+0.4**
KMNR	**Kamenistaya**	**4.19**	**22**	*e*P	**Pn**	**14 02 44.7**	**+1.3**
BZMR	**Bezymyannaya**	**4.41**	**22**	*e*P	**Pn**	**14 02 47.3**	**+0.9**
BZWR	**Bezymyannyi-We**	**4.44**	**22**	*e*P	**Pn**	**14 02 46.6**	**-0.2**
SRDR	**Sredinnyy**	**4.62**	**15**	*e*P	**Pn**	**14 02 50.5**	**+1.4**
BKI	**Bering**	**6.03**	**53**	*e*P	**Pn**	**14 03 06.2**	**-1.7**
BKI				*i*S	Sn	14 04 08.1	-7.6
ILAR	**Eielson Array**	**30.78**	**44**	P	**P**	**14 07 43.4**	**-0.3**
	comp=E,1.5nm,0.8s,baz=264,slow=7.7,SNR=18						
YKA	**Yellowknife Ar**	**45.11**	**41**	P	**P**	**14 09 43.7**	**0.0**
	comp=E,0.4nm,0.3s,baz=298,slow=7.9,SNR=12						
MKAR	**Makanchi Array**	**47.25**	**295**	P	**P**	**14 09 58.4**	**-2.3**
MKAR				*PP	**pP**	**14 10 31.4**	**+0.7**
MKAR	**Makanchi Array**	**47.25**	**295**	P	**P**	**14 09 58.4**	**-2.3**
	comp=E,0.1nm,0.5s,baz=56,slow=7.5,SNR=3.8						
MKAR				pP	**pP**	**14 10 31.4**	**+0.7**
	comp=E,0.4nm,1.0s,baz=62,slow=9.0,SNR=3.6						
CMAR	**Chiang Mai Arr**	**56.38**	**257**	P	P	14 11 06.1	-2.6
	comp=E,0.3nm,0.3s,baz=43,slow=9.8,SNR=4.1						
PDAR	**Pinedale Array**	**59.49**	**59**	P	**P**	**14 11 31.1**	**+0.7**
	comp=E,0.3nm,0.2s,baz=353,slow=2.2,SNR=6.6						
TXAR	**Lajitas Array**	**72.57**	**65**	P	**P**	**14 12 55.0**	**+1.0**
	comp=E,0.7nm,0.5s,baz=294,slow=4.5,SNR=5.8						
ASAR	**Alice Springs**	**78.03**	**202**	P	**P**	**14 13 25.8**	**+0.9**
	comp=E,0.1nm,0.4s,baz=15,slow=4.9,SNR=8.6						

*CSEM **14** 14:08:12.2, 42°.58N×13°.33E, h8km, MD1.7/3, After ROM*
ROM 14 14:08:12.2±0.1, 42°.58N×13°.33E, h8km±2km, Md1.7/3, Ml1.3/1, Error ellipse: s-maj=1.1km s-min=0.5km az=175.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**129**	Pg	Pg	14 08 14.7	+0.4
CAMP				Sg	Sg	14 08 16.0	+0.2
	106nm,0.5s						
CAMP	**Campotosto**	**0.07**	**129**	Pg	Pg	14 08 14.7	+0.4
CAMP				Sg	Sg	14 08 16.0	+0.2
	106nm,0.5s						
TERO	**Teramo**	**0.20**	**78**	Pg	Pg	14 08 17.0	+0.6
TERO				Sg	Sg	14 08 20.5	+1.2
	45nm,0.2s						
TERO	**Teramo**	**0.20**	**78**	Pg	Pg	14 08 17.0	+0.6
TERO				Sg	Sg	14 08 20.5	+1.2
	45nm,0.2s						
LNSS	**Leonessa**	**0.22**	**276**	Pg	Pg	14 08 17.2	+0.5
LNSS				Sg	Sg	14 08 21.0	+1.2
LNSS	**Leonessa**	**0.22**	**276**	Pg	Pg	14 08 17.2	+0.5
LNSS				Sg	Sg	14 08 21.0	+1.2
NRCA	**Norcia**	**0.30**	**328**	Pg	Pb	14 08 19.2	-0.8
NRCA				Sg	Sb	14 08 24.1	-1.1
	19nm,0.1s						
NRCA	**Norcia**	**0.30**	**328**	Pg	Pb	14 08 19.2	-0.8
NRCA				Sg	Sb	14 08 24.1	-1.1
	19nm,0.1s						

*CSEM **14** 14:08:35.0, 42°.52N×13°.36E, h12km, MD1.6/5, After ROM*
ROM 14 14:08:35.0±0.1, 42°.52N×13°.36E, h12km±2km, Md1.6/5, Ml1.5/3, Error ellipse: s-maj=2.1km s-min=1.7km az=159.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.04**	**61**	Pg	Pg	14 08 37.8	+0.5
CAMP				Sg	Sg	14 08 39.0	0.0
	106nm,0.5s						
CAMP	**Campotosto**	**0.04**	**61**	Pg	Pg	14 08 37.8	+0.5
CAMP				Sg	Sg	14 08 39.0	0.0
	106nm,0.5s						
AQU	**L'Aquila**	**0.17**	**170**	Pg	Pg	14 08 39.3	+0.5
AQU				Sg	Sg	14 08 42.1	+0.6
	67nm,0.2s						
AQU	**L'Aquila**	**0.17**	**170**	Pg	Pg	14 08 39.3	+0.5
AQU				Sg	Sg	14 08 42.1	+0.6
	67nm,0.2s						
TERO	**Teramo**	**0.21**	**59**	Pg	Pg	14 08 40.1	+0.6
TERO				Sg	Sg	14 08 43.4	+0.8
	49nm,0.3s						
TERO	**Teramo**	**0.21**	**59**	Pg	Pg	14 08 40.1	+0.6
TERO				Sg	Sg	14 08 43.4	+0.8
	49nm,0.3s						
LNSS	**Leonessa**	**0.25**	**290**	Pg	Pb	14 08 41.1	-0.6
LNSS				Sg	Sg	14 08 44.8	+0.7
	107nm,0.3s						
LNSS	**Leonessa**	**0.25**	**290**	Pg	Pb	14 08 41.1	-0.6
LNSS				Sg	Sg	14 08 44.8	+0.7
	107nm,0.3s						
NRCA	**Norcia**	**0.37**	**330**	Pg	Pg	14 08 42.9	+0.4
NRCA				Sg	Sg	14 08 47.8	+0.3
NRCA	**Norcia**	**0.37**	**330**	Pg	Pg	14 08 42.9	+0.4
NRCA				Sg	Sg	14 08 47.8	+0.3
FDMO	**Fiordimonte**	**0.56**	**339**	Pg	Pb	14 08 46.7	-0.1
FDMO	**Fiordimonte**	**0.56**	**339**	Pg	Pb	14 08 46.7	-0.1

*IDC **14** 14:08:36.6±1.0,27°.16N×129°.56E, h0km, mb3.5/9, mb1 3.6/10, mb1mx3.6/26, mbtmp3.5/10, ML3.6/1, MS3.1/1, Ms1 3.1/1, ms1mx1.4/40, Error ellipse: s-maj=45.4km s-min=18.9km az=70.0*
*ISCJB **14** 14:08:38.8±0.5,27°.11N±0°.04×130°.01E±0°.04, h29km, mb3.5/9, Error ellipse: s-maj=5.9km s-min=5.0km az=135.4*
*JMA **14** 14:08:39.6±0.1,27°.10N×130°.01E, h49km, M3.9*
ISC 14 14:08:39.4±0.8, 27°.05N±0°.04×129°.89E±0°.05, h29km, n21, σ1°57/26, mb3.4/9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.11**	**312**	P	**Pn**	**14 08 59.9**	**-0.1**
JTK				*e*S	**Sn**	**14 09 14.3**	**+0.2**
JZK	**Kikaishima**	**1.26**	**3**	P	**Pn**	**14 09 01.1**	**0.0**
JAMN	**Amaminishikomi**	**1.35**	**332**	P	**Pn**	**14 09 02.3**	**-1.7**
JAMN				*e*S	**Sn**	**14 09 18.9**	**-0.3**
JAM	**Amami Oshima**	**1.38**	**350**	P	**Pn**	**14 09 02.6**	**-0.1**
JAM				*e*S	**Sn**	**14 09 18.6**	**-1.4**
JOW	**Kunigami**	**1.46**	**262**	P	**Pb**	**14 09 06.0**	**+0.1**
JOW				*e*S	**Sb**	**14 09 24.5**	**+0.5**
JMZ	**Minamidaito 2**	**1.71**	**135**	P	**Pn**	**14 09 06.9**	**-0.3**
JMZ				S	**Sn**	**14 09 26.7**	**-1.4**
JIH	**Iheya**	**1.71**	**270**	P	**Pb**	**14 09 09.5**	**-0.7**
JIH				*e*S	**Sb**	**14 09 31.9**	**+0.5**
JJT2	**Tamagusuku 2**	**2.12**	**245**	P	**Pb**	**14 09 15.3**	**-1.8**
JAGN	**Aguni-jima**	**2.41**	**260**	P	**Pb**	**14 09 19.0**	**-3.0**
JAGN				*e*S	**Sb**	**14 09 48.0**	**-3.3**
JKE	**Kume jima 2**	**2.87**	**256**	P	**Pn**	**14 09 24.8**	**+1.6**
JNU	**Nakatsue**	**6.11**	**8**	Pn	**Pn**	**14 10 08.1**	**+0.3**
	1.4nm,0.3s,baz=282,slow=1.8,SNR=19						
GUMO	**Guam**	**19.38**	**131**	LR	LR	14 20 01.1	
	comp=Z,55nm,20.4s,baz=102,slow=35						
SONM	**Songino Array**	**27.71**	**325**	P	**P**	**14 14 25.3**	**+0.1**
	0.6nm,0.7s,baz=133,slow=8.5,SNR=4.5						
MKAR	**Makanchi Array**	**42.11**	**311**	P	**P**	**14 16 28.8**	**-0.2**
	0.2nm,0.7s,baz=147,slow=38,SNR=2.7						
ZALV	**Zalesovo Beam**	**42.51**	**322**	P	**P**	**14 16 29.6**	**-2.4**
	0.3nm,0.3s,baz=92,slow=7.2,SNR=2.3						
KURBB	**Kurchatov Arra**	**45.30**	**316**	P	**P**	**14 16 52.6**	**-1.8**
	0.2nm,0.4s,baz=101,slow=9.0,SNR=3.2						
CTA	**Charters Tower**	**49.47**	**160**	P	P	14 17 30.2	+3.0
	2.6nm,0.6s,baz=326,slow=7.3,SNR=3.8						
ASAR	**Alice Springs**	**50.57**	**175**	P	**P**	**14 17 38.1**	**+2.7**
	0.7nm,0.5s,baz=5.5,slow=14,SNR=22						
FINES	**FINESS Array B**	**72.88**	**331**	P	**P**	**14 20 07.2**	**+1.8**
	0.7nm,0.6s,baz=55,slow=7.2,SNR=4.1						
YKA	**Yellowknife Ar**	**77.16**	**25**	P	**P**	**14 20 31.7**	**+1.7**
	0.1nm,0.7s,baz=306,slow=5.3,SNR=3.2						
NOA	**NORSAR Array B**	**79.23**	**334**	P	**P**	**14 20 41.2**	**-0.4**
	0.3nm,0.7s,baz=54,slow=5.9,SNR=2.7						

*IDC **14** 14:10:08.6±1.2,27°.11N×129°.89E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/26, mbtmp3.7/7, ML3.6/1, MS3.8/3, Ms1 3.8/3, ms1mx2.7/51, Error ellipse: s-maj=62.9km s-min=18.6km az=68.0*
*ISCJB **14** 14:10:10.5±0.5,27°.10N±0°.04×129°.99E±0°.05, h29km, mb3.7/6, MS3.8/3, Error ellipse: s-maj=6.3km s-min=5.1km az=148.2*
*JMA **14** 14:10:11.0±0.1,27°.11N×130°.01E, h51km, M3.7*
ISC 14 14:10:12.0±0.8, 27°.13N±0°.04×130°.01E±0°.05, h29km, n19, σ1°28/24, mb3.8/6, MS3.6/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.15**	**305**	P	**Pn**	**14 10 31.3**	**-0.8**
JTK				*e*S	**Sn**	**14 10 45.7**	**-1.2**
JZK	**Kikaishima**	**1.19**	**358**	P	**Pn**	**14 10 32.4**	**-0.8**
JAM	**Amami Oshima**	**1.33**	**344**	P	**Pn**	**14 10 33.8**	**-0.8**
JAM				*e*S	**Sn**	**14 10 50.3**	**-1.1**
JAMN	**Amaminishikomi**	**1.34**	**327**	P	**Pn**	**14 10 33.7**	**-1.0**
JAMN				*e*S	**Sn**	**14 10 49.8**	**-1.7**
JOW	**Kunigami**	**1.58**	**260**	P	**Pn**	**14 10 37.6**	**-0.4**
JMZ	**Minamidaito 2**	**1.69**	**140**	P	**Pn**	**14 10 38.4**	**-1.2**
JMZ				*e*S	**Sn**	**14 10 58.1**	**-2.2**
JIH	**Iheya**	**1.82**	**268**	P	**Pn**	**14 10 40.9**	**-0.5**
JJT2	**Tamagusuku 2**	**2.25**	**245**	P	**Pn**	**14 10 46.7**	**-0.6**
JAGN	**Aguni-jima**	**2.53**	**258**	P	**Pn**	**14 10 50.4**	**-0.7**
JAGN				*e*S	**Sn**	**14 11 19.4**	**-1.6**
JKE	**Kume jima 2**	**2.99**	**255**	P	**Pn**	**14 10 56.4**	**-1.1**
JKE				*e*S	**Sn**	**14 11 31.0**	**-1.4**
JNU	**Nakatsue**	**6.02**	**7**	Pn	**Pn**	**14 11 39.5**	**+0.3**
	1.4nm,0.3s,baz=140,slow=19,SNR=5.0						
JNU				Sn	**Sn**	**14 12 44.0**	**-3.1**
	baz=73,slow=19,SNR=1.8						
SONM	**Songino Array**	**27.71**	**325**	P	**P**	**14 15 58.8**	**+1.0**
	0.7nm,0.7s,baz=133,slow=8.1,SNR=3.5						
PMG	**Port Moresby**	**39.94**	**153**	LR	LR	14 33 58.0	
	comp=Z,342nm,19.1s,baz=204,slow=36						
MKAR	**Makanchi Array**	**42.14**	**311**	P	**P**	**14 18 02.1**	**+0.3**
	0.1nm,0.5s,baz=108,slow=9.5,SNR=3.0						
KURBB	**Kurchatov Arra**	**45.32**	**316**	P	**P**	**14 18 27.2**	**0.0**
	0.3nm,0.4s,baz=100,slow=9.3,SNR=5.1						
CTA	**Charters Tower**	**49.50**	**160**	P	**P**	**14 19 01.1**	**+1.1**
	2.7nm,0.5s,baz=336,slow=11,SNR=6.9						
CTA				LR	LR	14 38 28.7	
	comp=Z,60nm,20.4s,baz=24,slow=34						
ASAR	**Alice Springs**	**50.63**	**175**	P	**P**	**14 19 09.5**	**+1.0**
	1.0nm,0.5s,baz=6.9,slow=14,SNR=16						
DZM	**Mont Dzumac**	**60.28**	**141**	LR	LR	14 40 25.1	
	comp=Z,51nm,20.9s,baz=94,slow=30						
FINES	**FINESS Array B**	**72.87**	**331**	P	**P**	**14 21 38.5**	**+0.6**
	1.0nm,0.7s,baz=72,slow=8.9,SNR=3.9						

*SZGRF **14** 14:22:08.4, 16°.84S×178°.74W, h33km, Fiji Islands region*
*ISCJB **14** 14:22:56.7±0.2, 16°.14S±0°.07×179°.23W±0°.05, h450km, mb4.3/28, Error ellipse: s-maj=10.3km s-min=3.9km az=153.3*
*IDC **14** 14:22:58.4±1.0, 16°.27S×179°.09W, h466km±11km, mb4.0/27, mb1 4.1/29, mb1mx4.1/33, mbtmp4.0/29, Error ellipse: s-maj=11.9km s-min=8.3km az=134.0*
*AUST **14** 14:22:59.1±0.0, 16°.25S×178°.91W, h482km, Error ellipse: s-maj=1.6km s-min=1.2km az=23.0*
ISC 14 14:22:57.0±0.3, 16°.20S±0°.08×179°.20W±0°.06, h450km, n355, σ0°.94/341, mb4.4/28, 133C-117D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.52**	**73**	P	**P**	**14 24 49.1**	**+1.7**
	108nm,0.3s,baz=260,slow=18,SNR=210						
AFI				S	**S**	**14 26 19.4**	**+1.5**
	baz=264,slow=19,SNR=3.8						
NIUE	**Niue**	**9.29**	**109**	P	**P**	**14 25 09.0**	**+2.6**
	baz=9.0,SNR=14						
DZM	**Mont Dzumac**	**14.77**	**244**	*e*P	**P**	**14 26 08.1**	**+2.3**
DZM	**Mont Dzumac**	**14.77**	**244**	P	**P**	**14 26 07.5**	**+1.7**
	4.2nm,0.3s,baz=66,slow=20,SNR=34						
NOUC	**Port Laguerre**	**14.90**	**245**	*e*P	**P**	**14 26 08.0**	**+0.9**
URZ	**Urewera**	**22.21**	**188**	P	**P**	**14 27 16.8**	**-1.5**
	24nm,0.6s,baz=0.1,slow=4.7,SNR=34						
RPZ	**Rata Peaks**	**28.65**	**195**	P	**P**	**14 28 14.5**	**-1.0**
	19nm,0.5s,baz=14,slow=3.2,SNR=20						
EIDS	**Eidsvold**	**29.19**	**247**	P	**P**	**14 28 21.4**	**+0.9**
	baz=29,SNR=6.7						
ARMA	**Armidale**	**30.19**	**237**	P	**P**	**14 28 31.7**	**+2.5**
	baz=30,SNR=4.7						
RMQ	**Roma**	**31.47**	**246**	P	**P**	**14 28 42.1**	**+1.9**
	baz=32,SNR=18						
MGCD	**Mangrove Creek**	**31.69**	**232**	P	**P**	**14 28 43.9**	**+1.8**
	baz=32,SNR=7.8						
CTA	**Charters Tower**	**33.02**	**258**	P	**P**	**14 28 54.8**	**+1.2**
	22nm,0.6s,baz=84,slow=10,SNR=32						
PMG	**Port Moresby**	**33.46**	**277**	P	**P**	**14 28 59.8**	**+2.4**
	36nm,0.7s,baz=146,slow=7.3,SNR=20						
CNB	**Canberra Magne**	**33.91**	**230**	P	**P**	**14 29 02.5**	**+1.5**
	baz=34,SNR=11						
CMSA	**Cobar Meteorol**	**35.37**	**238**	P	**P**	**14 29 14.4**	**+1.1**
	baz=36,SNR=15						
QLP	**Quilpie**	**35.47**	**247**	P	**P**	**14 29 15.1**	**+0.9**
	baz=36,SNR=28						
QLP				S	S	14 34 35.7	+19
	baz=36,SNR=4.6						
COEN	**Coen**	**36.37**	**268**	P	**P**	**14 29 23.8**	**+2.0**
	baz=37,SNR=30						
TOO	**Toolangi**	**37.69**	**229**	P	**P**	**14 29 33.8**	**+1.2**
	baz=38,SNR=5.0						
STKA	**Stephens Creek**	**38.82**	**239**	P	**P**	**14 29 43.0**	**+1.2**
	6.3nm,0.9s,baz=63,slow=8.3,SNR=8.1						
STKA				ScP	**ScP**	**14 34 46.0**	**-1.1**
	1.9nm,0.6s,baz=71,slow=3.7,SNR=4.7						
STKA	**Stephens Creek**	**38.82**	**239**	P	**P**	**14 29 43.1**	**+1.3**
	baz=39,SNR=7.6						
QIS	**Mount Isa**	**39.26**	**257**	P	**P**	**14 29 48.4**	**+2.8**
	baz=40,SNR=4.6						
JAY	**Jayapura**	**41.73**	**285**	P	**P**	**14 30 06.9**	**+1.4**
	baz=42,SNR=6.4						
ASAR	**Alice Springs**	**44.55**	**253**	P	**P**	**14 30 28.1**	**+0.5**
	28nm,0.5s,baz=84,slow=8.5,SNR=1481						
ASAR				PcP	**PcP**	**14 32 01.5**	**-0.1**
	2.4nm,0.6s,baz=98,slow=4.3,SNR=6.7						
ASAR				ScP	**ScP**	**14 35 08.9**	**-1.4**
	3.1nm,0.8s,baz=102,slow=3.8,SNR=12						
ASAR				S	**S**	**14 36 25.6**	**-4.1**
	5.1nm,0.8s,baz=85,slow=15,SNR=29						
ASAR				ScS	**ScS**	**14 39 34.2**	**-1.5**
	0.7nm,0.9s,baz=64,slow=6.3,SNR=4.4						
GUMO	**Guam**	**46.23**	**308**	P	**P**	**14 30 41.5**

BBB	Bella Bella	81.19	29	P		P		14 34 24.8	+0.5	N19A	John Jarvie Ra	86.10	46	⇓P		P		14 34 49.5	0.0	J21A	Lysite	88.29	44	⇓P		P		14 35 00.2	+0.5
	23nm,1.0s,baz=256,slow=5.4,SNR=3.0										baz=86										baz=88								
X16A	Lo Mia Camp, P	81.68	51	⇑P		P		14 34 28.5	+0.9	D14A	Greenough	86.11	39	⇓P		P		14 34 48.5	-0.7	N23A	Red Feather La	88.34	47	⇑P		P		14 35 00.8	+0.7
	baz=81,SNR=8.8										baz=86										baz=88								
U15A	North Rim	81.95	49	⇓P		P		14 34 29.9	+0.8	T22A	Edith	86.12	50	⇑P		P		14 34 49.8	+0.1	129A	Stewart Farms,	88.34	55	⇑P		P		14 35 00.5	+0.4
	baz=81,SNR=15										baz=86										baz=88								
319A	Douglas	82.04	54	⇑P		P		14 34 30.6	+1.2	F15A	Butte	86.14	40	⇑P		P		14 34 49.5	-0.1	L22A	Ellis Ranch, M	88.44	45	⇑P		P		14 35 00.4	-0.1
	baz=82										baz=86										baz=88,SNR=5.7								
WUAZ	Wupatki	82.21	50	⇓P		P		14 34 31.2	+0.9	J17A	Brown Place, J	86.14	43	⇓P		P		14 34 50.2	+0.5	R25A	Fountain Ranch	88.48	50	⇑P		P		14 35 00.7	0.0
	baz=82,SNR=6.2										baz=86										baz=88								
320A	Kipp Ranch, An	82.61	55	⇓P		P		14 34 33.7	+1.3	125A	Gardner Draw,	86.15	55	⇓P		P		14 34 50.5	+0.7	531A	Rocksprings	88.56	58	⇓P		P		14 35 01.7	+0.5
	baz=82										baz=86										baz=88								
220A	Playas Peak, P	82.84	54	⇓P		P		14 34 34.6	+1.1	V23A	Ortiz Mt. (NFS	86.16	51	⇑P		P		14 34 50.7	+0.8	G20A	Bridger	88.56	42	⇑P		P		14 35 00.8	-0.1
	baz=82										baz=86										baz=88								
X18A	Snowflake	82.84	51	⇑P		P		14 34 34.4	+0.9	R21A	Cimarron	86.19	48	⇓P		P		14 34 50.2	+0.2	I21A	Big Trails, Te	88.58	43	⇓P		P		14 35 00.8	-0.2
	baz=82										baz=86										baz=88								
MFID	Camas Ranch	82.88	41	⇑P		P		14 34 33.8	+0.4	326A	Caldwell Ranch	86.19	56	⇑P		P		14 34 50.5	+0.5	A17A	Triple J Farms	88.64	38	⇓P		P		14 35 00.8	-0.3
	baz=82										baz=86										baz=88								
120A	U Bar Ranch, L	83.02	53	⇑P		P		14 34 35.6	+1.1	K18A	Toltan Ranch,	86.27	44	⇑P		P		14 34 50.4	+0.2	632A	Uvalde	88.97	59	⇑P		P		14 35 04.0	+1.0
	baz=82										baz=86,SNR=7.8										baz=88								
W18A	Petrified Fore	83.25	51	⇓P		P		14 34 36.2	+0.6	G16A	Moss Hill, Enn	86.28	41	⇑P		P		14 34 50.4	+0.1	331A	San Angelo	89.04	57	⇑P		P		14 35 03.4	+0.1
	baz=83										baz=86										baz=89								
Z20A	Nine Sixteen R	83.28	53	⇓P		P		14 34 36.6	+0.8	E15A	Deer Lodge	86.32	39	⇑P		P		14 34 50.3	0.0	N24A	Carr	89.05	47	⇓P		P		14 35 03.6	+0.2
	baz=83,SNR=6.6										baz=86										baz=88								
DUG	Dugway	83.31	45	⇓P		P		14 34 36.0	+0.3	226B	Tecolote Peak,	86.32	55	⇑P		P		14 34 50.7	+0.1	P25A	Willow Gulch B	89.07	48	⇓P		P		14 35 03.6	+0.1
	baz=83										baz=86,SNR=7.5										baz=88								
221A	Mesquite Ranch	83.46	54	⇓P		P		14 34 37.8	+1.2	H16A	Russell Place,	86.40	41	⇑P		P		14 34 51.4	+0.6	532A	Rocksprings	89.07	58	⇑P		P		14 35 04.0	+0.5
	baz=83										baz=86,SNR=11										baz=89								
I12A	Atlanta	83.51	41	⇑P		P		14 34 37.2	+0.5	628A	Black Gap, Mar	86.42	58	⇓P		P		14 34 52.4	+1.4	C19A	Slack Wire Ran	89.10	39	⇑P		P		14 35 03.5	+0.2
	baz=83,SNR=9.7										baz=86										baz=88								
121A	Cookes Peak, D	83.67	54	⇓P		P		14 34 38.9	+1.2	S22A	4UR Ranch, Cre	86.46	49	⇑P		P		14 34 51.7	+0.2	A18A	Metzger Ranch,	89.14	38	⇑P		P		14 35 03.1	-0.3
	baz=83										baz=86,SNR=5.6										baz=88								
Y20A	Horse Springs,	83.77	52	⇑P		P		14 34 39.3	+1.0	I17A	Pilgrim Ck.	86.48	42	⇓P		P		14 34 52.0	+0.7	R26A	Arlington	89.14	50	⇑P		P		14 35 04.0	+0.2
	baz=83,SNR=9.3										baz=86										baz=89								
HLID	Hailey	83.85	41	⇓P		P		14 34 39.0	+0.6	427A	Hayter Ranch,	86.49	57	⇓P		P		14 34 51.9	+0.5	Z30A	Sanderson Ranc	89.15	55	⇑P		P		14 35 03.9	+0.1
	baz=83,SNR=14										baz=86,SNR=6.5										baz=89								
J13A	Cove Ranch, Pi	83.92	42	⇑P		P		14 34 39.2	+0.5	L19A	Farson	86.49	44	⇓P		P		14 34 51.8	+0.4	I22A	9 Mile Ranch,	89.15	44	⇓P		P		14 35 03.7	0.0
	baz=83,SNR=11										baz=86										baz=88								
X20A	Quemado	83.94	52	⇑P		P		14 34 39.7	+0.7	J18A	Kendall Valley	86.53	43	⇓P		P		14 34 51.9	+0.3	T27A	Campo	89.24	51	⇓P		P		14 35 04.5	+0.3
	baz=83										baz=86,SNR=31										baz=89								
H12A	Diamond D Ranc	84.05	40	⇓P		P		14 34 39.4	+0.1	W24A	Lazy 6 Ranch,	86.53	52	⇓P		P		14 34 51.5	-0.2	231A	Bronte	89.34	57	⇓P		P		14 35 04.3	-0.4
	baz=83,SNR=13										baz=86										baz=89								
Z21A	St. Cloud Mine	84.07	53	⇓P		P		14 34 41.1	+1.3	Y25A	Mesa, Roswell	86.59	53	⇓P		P		14 34 52.0	+0.1	W29A	Amraillo	89.37	53	⇓P		P		14 35 05.1	+0.3
	baz=84										baz=86										baz=89								
S18A	Hurst Farm, Bl	84.16	48	⇑P		P		14 34 40.4	+0.2	PDAR	Pinedale Array	86.64	44	P		P		14 34 51.8	-0.3	D20A	Manuel Ranch,	89.39	40	⇑P		P		14 35 05.1	+0.5
	baz=84										comp=Z,4.8nm,0.8s,baz=211,slow=2.9,SNR=37										baz=89								
K14A	Jones Ranch, D	84.16	43	⇓P		P		14 34 40.6	+0.7	126A	Clayton Basin,	86.65	55	⇓P		P		14 34 52.3	+0.2	432A	Menard	89.41	58	⇓P		P		14 35 05.2	+0.1
	baz=84										baz=86										baz=89								
W20A	Ramah	84.17	51	⇑P		P		14 34 40.6	+0.4	D15A	Lincoln	86.68	39	⇓P		P		14 34 51.9	-0.2	B19A	Brinkman Farms	89.47	39	⇑P		P		14 35 05.3	+0.4
	baz=84,SNR=7.5										baz=86,SNR=9.0										baz=89								
I13A	Wildhorse Cree	84.21	41	⇑P		P		14 34 40.4	+0.2	H17A	Grant Village	86.69	42	⇑P		P		14 34 53.4	+1.2	332A	Millersview	89.62	57	⇑P		P		14 35 06.4	+0.4
	baz=84,SNR=7.1										baz=86										baz=89,SNR=6.8								
Y21A	Point of Rocks	84.34	52	⇑P		P		14 34 41.9	+0.8	N20A	Spence Gulch,	86.70	46	⇑P		P		14 34 52.7	+0.3	C20A	Veseth Ranch,	89.73	40	⇑P		P		14 35 06.0	-0.1
	baz=84										baz=86										baz=89,SNR=5.9								
SRU	San Rafael	84.40	47	⇑P		P		14 34 41.6	+0.4	R22A	Saguache, Gunn	86.71	49	⇓P		P		14 34 52.9	+0.3	A19A	Klindworth Far	89.80	38	⇓P		P		14 35 06.3	-0.2
	baz=84										baz=86										baz=89								
ILAR	Eielson Array	84.41	13	P		P		14 34 39.6	-0.8	528A	Cox Ranch, San	86.74	57	⇓P		P		14 34 53.4	+0.7	232A	Coleman	89.86	57	⇓P		P		14 35 07.5	+0.3
	5.6nm,0.6s,baz=228,slow=5.6,SNR=63										baz=86										baz=89								
L15A	Malad City	84.43	44	⇑P		P		14 34 41.5	+0.3	V24A	Rampart Ranch,	86.83	52	⇑P		P		14 34 53.6	+0.5	D21A	La Casta Ranch	90.09	41	⇓P		P		14 35 08.4	+0.5
	baz=84										baz=86										baz=90								
X21A	Alamocita Cree	84.44	52	⇑P		P		14 34 42.3	+0.7	X25A	Clemmons Ranch	86.84	53	⇓P		P		14 34 53.1	0.0	ABTX	Abilene, Hawle	90.10	56	⇑P		P		14 35 08.3	+0.1
	baz=84										baz=86										baz=90								
H13A	Challis	84.44	41	⇓P		P		14 34 41.3	+0.1	Q22A	Crested Butte,	86.85	48	⇓P		P		14 34 53.4	+0.2	L25A	Engebretsen Ra	90.19	46	⇓P		P		14 35 09.0	+0.5
	baz=84,SNR=8.3										baz=86										baz=90								
V20A	Brimhall	84.48	50	⇑P		P		14 34 41.9	+0.2	B14A	Marquette Ranc	86.86	38	⇑P		P		14 34 52.5	-0.3	N26A	Koester Ranch,	90.22	47	⇑P		P		14 35 08.8	+0.1
	baz=84										baz=86,SNR=13										baz=90								
DLBC	Dease Lake	84.57	24	P		P		14 34 41.5	+0.1	I18A	Diamond G Ranc	86.88	43	⇓P		P		14 34 53.0	-0.2	A20A	Cobblestone Ra	90.27	39	⇑P		P		14 35 08.4	-0.2
	6.2nm,0.8s,baz=224,slow=5.1,SNR=11										baz=86,SNR=5.0										baz=90								
NEW	Newport	84.59	36	⇑P		P		14 34 41.4	-0.3	Z26A	Caprock	86.91	54	⇑P		P		14 34 53.5	+0.1	INK	Inuvik	90.45	15	P		P		14 35 08.4	-0.5
	baz=84										baz=86										comp=Z,2.3nm,1.0s,baz=225,slow=4.7,SNR=6.5								
NEW	Newport	84.59	36	P		P		14 34 41.2	-0.5	E16A	East Helena	86.96	40	⇓P		P		14 34 53.1	-0.2	Z32A	Haskell	90.46	55	⇓P		P		14 35 10.2	+0.4
	4.0nm,0.6s,baz=268,slow=3.1,SNR=9.1										baz=86										baz=90,SNR=7.2								
Z22A	Elephant Butte	84.59	53	⇓P		P		14 34 42.5	+0.3	C15A	Salmond Ranch,	86.97	38	⇑P		P		14 34 53.0	-0.4	D22A	Cohen	90.64	41	⇓P		P		14 35 11.0	+0.6
	baz=84,SNR=6.0										baz=86,SNR=5.9										baz=90								
I14A	Mackay	84.64	41	⇓P		P		14 34 42.8	+0.5	M20A	Sweetwater, Wa	87.03	45	⇑P		P		14 34 54.1	+0.2	H24A	Dirks Ranch, A	90.76	43	⇑P		P		14 35 10.8	-0.2
	baz=84,SNR=10										baz=86										baz=90,SNR=6.5								
G13A	Cobalt	84.71	40	⇓P		P		14 34 42.5	-0.1	A14A	Double T Ranch	87.07	37	⇓P		P		14 34 53.4	-0.3	K26A	Motz Farm, Whi	90.93	46	⇑P		P		14 35 12.1	+0.2
	baz=84										baz=86,SNR=5.9										baz=90								
C11A	Tepee Creek (N	84.86	37	⇓P		P		14 34 43.3	+0.2	L20A	Wamsutter	87.14	45	⇓P		P		14 34 54.6	+0.2	V31A	Spring Creek L	90.98	53	⇓P		P		14 35 13.6	+1.4
	baz=84,SNR=28										baz=87,SNR=11										baz=90								
F13A	Darby	84.98	39	⇑P		P		14 34 43.8	-0.1	K19A	Absolon Red Bu	87.14	44	⇑P		P		14 34 54.0	-0.3	C22A	Vida	91.06	40	⇓P		P		14 35 12.6	+0.4
	baz=84,SNR=11										baz=86,SNR=5.2										baz=90								
N17A	Moffit Pass	84.99	45	⇑P		P		14 34 44.6	+0.4	328A	Wristen Ranch,	87.15	56	⇑P		P		14 34 55.0	+0.5	F24A	Ekalaka	91.24	42	⇑P		P		14 35 13.4	+0.1
	baz=84										baz=87										baz=91								
H14A	Leadore	85.02	41	⇓P		P		14 34 44.6	+0.5	529A	Stev Forest Ra	87.19	58	⇑P		P		14 34 55.1	+0.4	C23A	Lambert	91.51	40	⇓P		P		14 35 15.0	+0.6
	baz=84,SNR=7.4										baz=87										baz=91								
MVCO	Mesa Verde	85.03	49	⇑P		P		14 34 44.4	0.0	J19A	Crowheart	87.19	43	⇓P		P		14 34 54.1	-0.5	A22A	Carney Farms,	91.52	39	⇓P		P		14 35 14.3	-0.1
	baz=84										baz=87,SNR=5.3										baz=91								
J15A	Blackfoot	85.04	42	⇑P		P		14 34 45.1	+0.8	P22A	Eagle	87.25	48	⇓P		P		14 34 55.1	+0.1	SONM	Songino Array	91.77	320	P		P		14 35 15.7	0.0
	baz=84,SNR=5.2										baz=87										comp=Z,0.5nm,0.6s,baz=116,slow=3.4,SNR=2.9								
324A	Moseley Ranch,	85.05	55	⇓P		P		14 34 44.6	0.0	W25A	X Bar L Ranch,	87.25	52	⇓P		P		14 34 54.9	-0.1	SNAA	Sanae	92.31	179	P		P		14 35 16.9	-0.9
	baz=85,SNR=6.4										baz=87										comp=Z,3.6nm,0.8s,baz=196,slow=5.1								
L16A	Fish Haven	85.06	44	⇑P		P		14 34 44.5	+0.1	D16A	Dana Ranch, Ca	87.27	39	⇑P		P		14 34 54.7	0.0	DGMT	Dagmar	92.38	40	⇓P		P		14 35 18.9	+0.6
	baz=84										baz=87,SNR=5.1										baz=92								
425A	Indio Mountain	85.20	56	⇓P		P		14 34 45.8	+0.6	F17A	Fitzpatrick Pl	87.31	41	⇓P		P		14 34 56.0	+1.0	YKA	Yellowknife Ar	93.11	25	P		P		14 35 20.0	-1.3
	baz=85,SNR=8.2										baz=87										comp=Z,1.8nm,0.6s,baz=245,slow=4.4,SNR=43								
MAW	Mawson	85.20	200	P		P		14 34 44.8	+0.4	R23A	Moffat	87.37	49	⇑P		P		14 34 56.0	+0.3	ZALV	Zalesovo Beam	106.43	322	PKiKP		PKiKP		14 40 28.0	-1.4
	21nm,0.7s,baz=117,slow=4.6,SNR=7.1										baz=87										comp=Z,1.0nm,0.6s,baz=182,slow=0.9,SNR=8.7								
Q19A	Hogan Spring (	85.22	47	⇓P		P		14 34 45.3	+0.1	V25A	Rancho No Teng	87.37	52	⇓P		P		14 34 55.6	0.0	ZALV				PKKPbc		PKKPbc		14 51 49.8	-2.8
	baz=85										baz=87										comp=Z,0.3nm,0.4s,baz=280,slow=8.2,SNR=2.5								
C12B	Naegeli Ranch,	85.25	37	⇓P		P		14 34 45.2	+0.2	K20A	Yellowstone Ra	87.41	44	⇓P		P		14 34 55.3	-0.3	MKAR	Makanchi Array	107.41	315	PKiKP		PKiKP		14 40 30.1	-1.4
	baz=85										baz=87										comp=Z,1.0nm,0.5s,baz=134,slow=0.7,SNR=26								
224A	Cornudas Mount	85.25	55	⇓P		P		14 34 45.8	+0.2	A15A	Johnson Ranch,	87.47	37	⇑P		P		14 34 55.1	-0.6	MKAR				PKKPbc		PKKPbc		14 51 46.9	-2.5
	baz=85,SNR=8.2										baz=87										comp=Z,0.5nm,0.7s,baz=267,slow=3.7,SNR=6.3								
G14A	Jackson	85.26	40	⇓P		P		14 34 45.5	+0.1	C16A	Fuhringer Ranc	87.50	39	⇑P		P		14 34 55.4	-0.4	KURBB	Kurchatov Arra	110.11	318	PKKPbc	PKKPbc			14 51 38.8	-2.2
	baz=85,SNR=8.7										baz=87,SNR=5.2										comp=Z,0.5nm,0.7s,baz=274,slow=4.0,SNR=7.3								
K16A	Soda Springs	85.33	43	⇑P		P		14 34 46.4	+0.6	T24A	Torres, Weston	87.51	50	⇑P		P		14 34 57.1	+0.7	BVAR	Borovoye Array	115.05	321	PKKPbc	PKKPbc			14 51 22.7	-2.0
	baz=85										baz=87										comp=Z,0.2nm,0.5s,baz=292,slow=3.9,SNR=2.3								
E13A	Victor	85.39	39	⇑P		P		14 34 45.3	-0.5	I19A	Meeteetse	87.56	43	⇑P		P		14 34 56.7	+0.3	KEV	Kevo	124.06	349	epkp		PKPdf		14 41 01.0	-1.6
	baz=85										baz=87										ARCES	ARCESS Array B	124.51	350	PKP		PKPdf		14 41 02.5	-1.1
S20A	Disappointment	85.39	49	⇓P		P		14 34 46.4	+0.2	CMAR	Chiang Mai Arr	87.60	290	P		P		14 34 57.7	+0.9		comp=Z,7.2nm,0.6s,baz=60,slow=1.0,SNR=37								
	baz=85										comp=Z,0.6nm,0.7s,baz=106,slow=2.4,SNR=6.9										ARCES				PKKPab		PKKPab		14 50 46.7	-1.1
325A	Bean Ranch, Si	85.42	56	⇑P		P		14 34 46.6	+0.2	CMAR				PKKPbc		PKKPbc		14 52 41.6	-0.9		comp=Z,5.3nm,1.0s,baz=191,slow=4.1,SNR=7.7								
	baz=85,SNR=6.2										comp=Z,0.5nm,0.8s,baz=290,slow=5.4,SNR=5.2									SUR	Sutherland	128.03	202	PKP		PKPdf		14 41 11.2	-0.5
626A	Big Bend Ranch	85.43	58	⇑P		P		14 34 47.4	+1.0	S24A	Houchin Ranch,	87.61	50	⇓P		P		14 34 57.0	+0.2		comp=Z,5.0nm,0.9s,baz=157,slow=7.7,SNR=3.7								
	baz=85,SNR=9.5										baz=87									JOF	Joensuu	128.71	343	epkp		PKPdf		14 41 08.9	-2.8
H15A	Lima	85.47	41	⇓P		P		14 34 46.9	+0.5	429A	Davenport Ranc	87.62	57	⇓P		P		14 34 56.8	0.0	BOSA	Boshof	129.56	208	PKP		PKPdf		14 41 14.1	-0.5
	baz=85										baz=87,SNR=5.0										comp=Z,1.0nm,0.5s,baz=72,slow=6.4,SNR=2.8								
L17A	Cokeville	85.47	44	⇑P		P		14 34 46.1	-0.4	O22A	Kremmling	87.62	47	⇑P		P		14 34 56.8	0.0	KAF	Kangasniemi	130.73	345	epkp		PKPdf		14 41 13.8	-1.7
	baz=85										baz=87,SNR=5.7									FINES	INESS Array B	131.35	344	PKP		PKPdf		14 41 15.9	-0.8
HHC	Hu-ho-hao-te	85.54	315	eP		P		14 34 47.8	+1.1	M21A	Separation Pea	87.64	45	⇓P		P		14 34 56.8	0.0		comp=Z,2.9nm,0.5s,baz=46,slow=3.5,SNR=14								
HHC				S		S		14 44 36.8	-3.4		baz=87									FINES				SKPbc		SKPbc		14 43 57.2	-2.1
HHC				pmax		pmax				U25A	Circle Dot Ran	87.73	51	⇑P		P		14 34 57.3	0.0		comp=Z,4.4nm,0.8s,baz=60,slow=3.9,SNR=14								
	comp=Z,25nm,0.7s										baz=87									NB2	NORSAR Subarra	134.60	353	PKP		PKPdf		14 41 21.9	-1.0
HHC				pmax		pmax				G18A	Lazy EL Ranch,	87.74	41	⇑P		P		14 34 57.2	+0.1		comp=Z,1.2nm,0.7s,baz=17,slow=2.6								
	comp=Z,170nm,6.5s										baz=87									NOA	NORSAR Array B	134.60	353	PKP		PKPdf		14 41 22.3	-0.7
124A	Stringfield Ra	85.54	54	⇑P		P		14 34 47.4	+0.3	Y27A	Causey	87.76	54	⇑P		P		14 34 57.5	+0.1		comp=Z,2.2nm,0.8s,baz=15,slow=3.8,SNR=7.9								
	baz=85										baz=87									NOA				SKPbc		SKPbc		14 44 08.0	-2.3
D13A	Huson	85.55	38	⇑P		P		14 34 46.1	-0.4	L21A	Rawlins	87.78	45	⇑P		P		14 34 57.2	-0.2		comp=Z,1.5nm,1.0s,baz=16,slow=4.6,SNR=3.0								
	baz=85										baz=87									AKASG	Malin Array Be	138.71	333	PKP		PKPdf		14 41 30.8	0.0
Y23A	Lovelace Mesa,	85.55	53	⇓P		P		14 34 47.2	+0.2	H19A	Powell	87.83	42	⇓P		P		14 34 57.5	0.0		comp=Z,2.2nm,0.5s,baz=44,slow=3.1,SNR=8.1								
	baz=85										baz=87									KOLS	Kolonicke sedl	142.94	336	ePKP		PKPdf		14 41 35.7	-2.8
ANMO	Albuquerque	85.64	52	P		P		14 34 47.6	+0.2	D17A	Six Diamond Ra	87.85	39	⇓P		P		14 34 57.3	-0.2	BRTR	Keskin Array B	143.04	316	PKP		PKPab		14 41 36.8	+0.5
	comp=Z,4.8nm,0.9s,baz=232,slow=6.6,SNR=12										baz=87,SNR=6.2										comp=Z,7.4nm,0.9s,baz=90,slow=1.2,SNR=24								
526A	Mary Lane Ranc	85.65	57	⇓P		P		14 34 48.1	+0.6	329A	Wagon Wheel Ra	87.85	56	⇑P		P		14 34 58.2	+0.3	NRDL	Niedersach Rie	143.05	351	ePKPbc		PKPbc		14 41 37.2	+1.1
	baz=85										baz=87									CFR	Carcaliu	143.10	327	⇑iP		PKPab		14 41 37.0	+0.9
X23A	Hourglass Bar	85.70	52	⇑P		P		14 34 48.1	+0.4	J20A	Shoshoni	87.87	44	⇑P		P		14 34 57.9	+0.2	NIE	Niedzica	143.26	339	ePKP		PKPab		14 41 37.3	+0.7
	baz=85										baz=87,SNR=10									KSP	Ksiaz	143.27	344	ePKP		PKPab		14 41 36.7	+0.2
P19A	Cripple Cowboy	85.70	47	⇓P		P		14 34 47.6	-0.1	530A	J-C Ranch, Com	87.91	58	⇑P		P		14 34 58.8	+0.7	CRVS	Cervenica-Dubn	143.28	337	ePKP		PKPab		14 41 36.3	-0.4
	baz=85										baz=88									VRI	Vrincioaia	143.34	329	⇓iP		PKPab		14 41 36.9	-0.1
M18A	Lyman	85.72	45	⇑P		P		14 34 47.9	+0.2	N22A	Wattenberg Ran	87.94	47	⇑P		P		14 34 58.3	0.0	PLOR	Plostina	143.38	329	⇑iP		PKPab		14 41 36.6	-0.6
	baz=85										baz=87,SNR=5.9									TIRR	Tirgusor	143.44	326	⇑iP		PKPab		14 41 38.0	+0.6
TXAR	Lajitas Array	85.73	58	P		P		14 34 48.9	+1.1	V26A	Tequesquite Ra	87.98	52	⇓P		P		14 34 58.5	+0.1	TRPA	Tarpa	143.49	335	⇓iP		PKPab		14 41 37.2	-0.2
	comp=Z,3.9nm,0.8s,baz=223,slow=6.5,SNR=29										baz=88									ANTO	Ankara	143.53	317	⇓iP		PKPab		14 41 38.2	+0.2
S21A	Coal Bank Pass	85.73	49	⇓P		P		14 34 48.4	+0.5	C17A	Wharram Farm,	88.02	39	⇓P		P		14 34 58.1	-0.1	OKC	Ostrava-Krasne	143.62	341	⇑ePKP		PKPab		14 41 37.8	-0.1
	baz=85										baz=88									CLL	Collm	143.64	347	ePKPbc		PKPab		14 41 37.7	-0.2
C13A	Hot Springs	85.77	38	⇓P		P		14 34 47.1	-0.4	M22A	Cedar Creek Ra	88.08	46	⇓P		P		14 34 59.1	+0.2	CLL	Collm	143.64	347	i PKPdf		PKPab		14 41 37.5	-0.4
	baz=85										baz=88										comp=Z,16nm,1.1s								
A12A	Yaak River Ran	85.77	36	⇑P		P		14 34 47.7	+0.2

NKC	**Novy Kostel**	**144.77 347**	⇑*e*PKP	**PKPdf**	**14 41 41.7 +0.1**
TREC	**Trest**	**144.89 343**	⇑*e*PKP	**PKPdf**	**14 41 41.9 0.0**
SMOL	**Smolenice**	**145.01 341**	*e*PKP	**PKPdf**	**14 41 43.4 +1.3**
LOT	**Lotru**	**145.05 331**	⇑*i*P	**PKPdf**	**14 41 41.0 -1.4**
ROTZ	**Rotzenmuhle**	**145.26 347**	*e*PKPbc	**PKPdf**	**14 41 43.6 +1.1**
KHC	**Kasperske Hory**	**145.54 345**	⇑*e*PKP	**PKPdf**	**14 41 43.3 +0.3**
WET	**Wettzell**	**145.70 346**	*e*PKPbc	**PKPdf**	**14 41 44.5 +1.2**
GEC2	**GERESS Array S**	**145.78 345**	*e*PKPbc	**PKPdf**	**14 41 44.8 +1.3**
GERES	**GERESS Array B**	**145.78 345**	PKPbc	**PKPdf**	**14 41 44.1 +0.6**
	comp=Z,3.5nm,0.6s,baz=24,slow=3.3,SNR=21				
BZS	**Buzias**	**145.88 334**	⇑*i*P	**PKPdf**	**14 41 45.1 +1.5**
CSNA	**Conrad Observa**	**146.01 342**	⇑*i*PKPab	**PKPdf**	**14 41 45.6 +1.7**
	comp=Z,11nm,0.7s				
WLF	**Walferdange**	**146.34 354**	*e*PKPbc	**PKPbc**	**14 41 46.9 +0.6**
MOA	**Molln**	**146.54 343**	⇑*i*PKPbc	**PKPdf**	**14 41 46.6 +1.9**
	comp=Z,12nm,0.8s				
PKSM	**Moragy**	**146.58 337**	⇓*i*P	**PKPdf**	**14 41 46.1 +1.3**
LANF	**Langenberg**	**146.81 352**	PKP	**PKPdf**	**14 41 47.3 +2.2**
RJOB	**Jochberg**	**147.03 345**	*e*PKPbc	**PKPbc**	**14 41 48.2 -0.2**
BFO	**Black Forest**	**147.37 351**	*e*PKPbc	**PKPbc**	**14 41 49.1 -0.1**
SOKA	**Soboth**	**147.39 342**	⇑*i*PKPbc	**PKPdf**	**14 41 48.4 +2.2**
	comp=Z,6.6nm,0.8s				
PERS	**Pernice**	**147.40 342**	*e*PKPbc	**PKPdf**	**14 41 48.9 +2.6**
VTS	**Vitosha**	**147.45 328**	⇑*i*P	**PKPdf**	**14 41 49.2 +2.6**
KBA	**Koelnbreinsper**	**147.50 344**	⇓*i*PKPbc	**PKPdf**	**14 41 48.6 +2.0**
	comp=Z,7.9nm,0.6s				
THEF	**They Montfort**	**147.78 353**	PKP	**PKPbc**	**14 41 49.7 -0.6**
MYKA	**Terra Mystica**	**147.83 343**	⇑*i*PKPbc	**PKPdf**	**14 41 49.2 +2.3**
	comp=Z,9.3nm,0.6s				
VISS	**Visnje**	**148.23 341**	*i* PKPab	**PKPbc**	**14 41 50.8 -0.7**
BOJS	**Bojanci**	**148.37 340**	*i* PKPbc	**PKPbc**	**14 41 51.5 -0.3**
JAVS	**Javornik**	**148.38 342**	*i* PKPbc	**PKPbc**	**14 41 51.1 -0.9**
APE	**Apeiranthos**	**149.82 318**	⇓*i*P	PKPdf	14 41 42.9 -7.5
AGO	**Saint Agoulin**	**150.17 357**	PKP	**PKPbc**	**14 41 55.9 -0.3**
PYM	**Petit Puy Mans**	**150.48 357**	PKP	**PKPbc**	**14 41 56.8 -0.2**
LBL	**Lubilhac**	**150.99 356**	PKP	**PKPbc**	**14 41 58.7 +0.5**
SAOF	**Saorge**	**151.72 350**	PKP	**PKPbc**	**14 41 59.2 -0.6**
AUTN	**L'Aution**	**151.73 350**	PKP	**PKPbc**	**14 41 59.6 -0.5**
TOUF	**Mont Tournerai**	**151.74 350**	PKP	**PKPbc**	**14 41 58.8 -1.3**
CALN	**Calern**	**152.05 351**	PKP	**PKPbc**	**14 42 00.3 -0.4**
ESDC	**Sonseca Array**	**156.25 9**	PKPab	**PKPab**	**14 42 29.2 -0.9**
	comp=Z,0.3nm,0.3s,baz=344,slow=4.1,SNR=4.5				
DBIC	**Dimbokro**	**169.03 149**	PKPab	**PKPab**	**14 43 25.6 -1.1**
	comp=Z,2.1nm,0.7s,baz=219,slow=4.7,SNR=3.2				
TORD	**Torodi Ar. Bea**	**176.84 196**	PKP	**PKPdf**	**14 42 13.8 -1.7**
	comp=Z,2.2nm,0.8s,baz=333,slow=0.8,SNR=13				
TORD			PKPab	**PKPab**	**14 44 00.3 -1.0**
	comp=Z,1.6nm,0.9s,baz=175,slow=4.2,SNR=7.0				
TORD			PP	**PP**	**14 47 52.7 -0.5**
	comp=Z,1.1nm,0.8s,baz=182,slow=4.6,SNR=6.3				

CASC 14 14:23:52.6±1.7, 14°04'N×89°80'W, h8km±7km, MD3.5, 1C, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RBDL	**Robledal**	**0.14**	**57**	*e*P	Pg	14 23 56.5	+0.7
RTR	**El Retiro**	**0.21**	**132**	*e*P	Pg	14 23 58.0	+1.0
RTR				*e*S	Sg	14 24 01.1	+1.0
SNJE	**San Jose**	**0.26**	**131**	*e*P	Pb	14 23 58.9	-0.9
SNJE				*e*S	Sb	14 24 03.4	-1.2
SBLS	**San Blas**	**0.26**	**138**	*e*P	Pg	14 23 59.0	+0.8
SBLS				*e*S	Sg	14 24 03.2	+1.3
MTO2	**Montecristo 2**	**0.56**	**50**	⇑*e*P	Pg	14 24 03.6	-0.2
MTO2				*e*S	Sg	14 24 12.1	+0.8
BOQS	**Boqueron**	**0.59**	**121**	*e*P	Pg	14 24 04.9	+0.5
BOQS				*e*S	Sb	14 24 14.2	-0.1
MRL	**Marmol**	**1.03**	**6**	*e*P	Pb	14 24 12.8	-0.1
MRL				*e*S	Sb	14 24 26.5	-0.3
FUG	**Fuego 3**	**1.09**	**292**	*e*P	Pg	14 24 11.2	-2.5
FUG				*e*S	Sg	14 24 27.4	-0.6

IDC 14 14:32:03.0±3.1, 22°42'N×11°60'W, h0km, mb1 3.5/2, mb1mx3.1/27, mbtmp3.5/2, ML3.5/2, Error ellipse: s-maj=126.0km s-min=52.4km az=52.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**15.65**	**124**	Pn	Pn	14 35 46.1	+1.1
	0.1nm,0.3s,baz=317,slow=12,SNR=5.1						
TORD				Sn	Sn	14 38 38.5	-0.8
	0.1nm,0.3s,baz=304,slow=21,SNR=4.2						
DBIC	**Dimbokro**	**16.95**	**156**	Pn	Pn	14 36 01.7	0.0
	0.4nm,0.3s,baz=322,slow=10,SNR=4.8						
ASAR	**Alice Springs**	**148.28**	**99**	PKPbc	PKPbc	14 51 51.1	-0.8
	0.2nm,0.5s,baz=277,slow=1.2,SNR=6.7						

*CSEM **14** 14:39:27.6, 42°34'N×13°53'E, h9km, After ROM*
ROM 14 14:39:27.6±0.1, 42°34'N×13°53'E, h9km, Ml2.1/9, Error ellipse: s-maj=1.4km s-min=1.0km az=59.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.08**	**150**	Pg	Pg	14 39 30.3	+0.4
FAGN				Sg	Sg	14 39 31.9	+0.4
	3μm,0.5s						
FAGN	**Fagnano**	**0.08**	**150**	Pg	Pg	14 39 30.3	+0.4
FAGN				Sg	Sg	14 39 31.9	+0.4
	3μm,0.5s						
AQU	**L'Aquila**	**0.10**	**281**	Pg	Pg	14 39 30.2	+0.1
AQU				Sg	Sg	14 39 32.9	+1.0
	2μm,0.4s						
AQU	**L'Aquila**	**0.10**	**281**	Pg	Pg	14 39 30.2	+0.1
AQU				Sg	Sg	14 39 32.9	+1.0
	2μm,0.4s						
CAMP	**Campotosto**	**0.22**	**336**	Pg	Pg	14 39 33.0	+0.7
CAMP				Sg	Sg	14 39 36.9	+1.5
	164nm,0.7s						
CAMP	**Campotosto**	**0.22**	**336**	Pg	Pg	14 39 33.0	+0.7
CAMP				Sg	Sg	14 39 36.9	+1.5
	164nm,0.7s						
VCEL	**Villa Celiera**	**0.24**	**76**	Pg	Pg	14 39 33.5	+0.9
VCEL				Sg	Sg	14 39 37.1	+1.1
	373nm,0.6s						
VCEL	**Villa Celiera**	**0.24**	**76**	Pg	Pg	14 39 33.5	+0.9
VCEL				Sg	Sg	14 39 37.1	+1.1
	373nm,0.6s						
TERO	**Teramo**	**0.29**	**11**	Pg	Pg	14 39 33.5	0.0
TERO				Sg	Sb	14 39 39.1	-1.1
	216nm,0.5s						
TERO	**Teramo**	**0.29**	**11**	Pg	Pg	14 39 33.5	0.0
TERO				Sg	Sb	14 39 39.1	-1.1
	216nm,0.5s						
FIAM	**Fiamignano**	**0.31**	**258**	Pg	Pg	14 39 34.6	+0.6
FIAM				Sg	Sb	14 39 40.3	-0.6
	239nm,0.7s						
FIAM	**Fiamignano**	**0.31**	**258**	Pg	Pg	14 39 34.6	+0.6
FIAM				Sg	Sb	14 39 40.3	-0.6
	239nm,0.7s						
PTQR	**Pietraquaria**	**0.33**	**197**	Pg	Pg	14 39 34.5	+0.3
PTQR				Sg	Sg	14 39 39.9	+1.2
	38nm,0.2s						
PTQR	**Pietraquaria**	**0.33**	**197**	Pg	Pg	14 39 34.5	+0.3
PTQR				Sg	Sg	14 39 39.9	+1.2
	38nm,0.2s						
INTR	**Introdacqua**	**0.43**	**139**	Pg	Pg	14 39 36.3	+0.2
INTR				Sg	Sb	14 39 43.9	-0.2
	206nm,0.3s						
INTR	**Introdacqua**	**0.43**	**139**	Pg	Pg	14 39 36.3	+0.2
INTR				Sg	Sb	14 39 43.9	-0.2
	206nm,0.3s						
VVLD	**Villa Vallelon**	**0.47**	**171**	Pg	Pg	14 39 36.7	-0.2
VVLD				Sg	Sb	14 39 44.5	-0.8
	110nm,0.7s						
VVLD	**Villa Vallelon**	**0.47**	**171**	Pg	Pg	14 39 36.7	-0.2
VVLD				Sg	Sb	14 39 44.5	-0.8
	110nm,0.7s						
LPEL	**Lama dei Pelig**	**0.57**	**121**	Pg	Pg	14 39 39.0	+0.3
LPEL				Sg	Sb	14 39 47.9	-0.1
	87nm,0.2s						
LPEL	**Lama dei Pelig**	**0.57**	**121**	Pg	Pg	14 39 39.0	+0.3
LPEL				Sg	Sb	14 39 47.9	-0.1
	87nm,0.2s						
NRCA	**Norcia**	**0.58**	**329**	Pg	Pg	14 39 38.7	-0.4
NRCA				Sg	Sb	14 39 48.1	-0.6
	75nm,0.1s						
NRCA	**Norcia**	**0.58**	**329**	Pg	Pg	14 39 38.7	-0.4
NRCA				Sg	Sb	14 39 48.1	-0.6
	75nm,0.1s						
SDI	**San Donato**	**0.66**	**161**	Pg	Pg	14 39 40.4	-0.1
SDI				Sg	Sb	14 39 51.1	+0.3
	21nm,0.2s						
SDI	**San Donato**	**0.66**	**161**	Pg	Pg	14 39 40.4	-0.1
SDI				Sg	Sb	14 39 51.1	+0.3
	21nm,0.2s						
FDMO	**Fiordimonte**	**0.77**	**335**	Pg	Pg	14 39 42.7	+0.1
FDMO				Sg	Sg	14 39 53.2	+0.5
FDMO	**Fiordimonte**	**0.77**	**335**	Pg	Pg	14 39 42.7	+0.1
FDMO				Sg	Sg	14 39 53.2	+0.5
CESI	**CESI - Serrava**	**0.81**	**326**	Pg	Pb	14 39 43.8	-0.2
CESI	**CESI - Serrava**	**0.81**	**326**	Pg	Pb	14 39 43.8	-0.2

MEX 14 14:40:13.2±0.4, 17°35N×101°27W, h6km±6km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.31**	**324**	*i* P	Pg	14 40 19.0	-0.3
ZIIG				*i* S	Sg	14 40 23.4	0.0
CAIG	**El Cayaco**	**1.01**	**107**	*i* P	Pg	14 40 29.8	-2.8
CAIG				*e*S	Sg	14 40 42.3	-3.4
ARIG	**Puente Sto Nin**	**1.28**	**44**	*i* P	Pn	14 40 34.2	-3.4
ARIG				*e*S	Sb	14 40 49.2	-5.2
MMIG	**Aquila**	**2.18**	**296**	*i* P	Pn	14 40 46.2	-3.8
MMIG				*e*S	Sn	14 41 13.3	-4.0

*CSEM **14** 14:45:10.0, 38°49N×22°27E, h12km, MD2.5, After ATH*
ATH 14 14:45:10.1, 38°51N×22°29E, h4km, MD2.5/9, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KALE	**Kalithea**	**0.17**	**225**	*e*PG	Pg	14 45 13.9	+0.4
KALE				*e*SG	Sg	14 45 16.5	+0.7
KALE	**Kalithea**	**0.17**	**225**	*e*Pg	Pg	14 45 13.9	+0.4
KALE				*e*Sg	Sg	14 45 16.5	+0.7
TRIZ	**Trizonia**	**0.22**	**230**	*e*PG	Pg	14 45 14.8	+0.4
TRIZ				*e*SG	Sg	14 45 17.4	0.0
TRIZ	**Trizonia**	**0.22**	**230**	*e*Pg	Pg	14 45 14.8	+0.4
TRIZ				*e*Sg	Sg	14 45 17.4	0.0
EFP	**Efpalio**	**0.31**	**255**	*e*PG	Pg	14 45 16.2	0.0
EFP	**Efpalio**	**0.31**	**255**	*e*Pg	Pg	14 45 16.2	0.0
LAKA	**Lakka**	**0.36**	**222**	*e*PG	Pg	14 45 17.2	0.0
LAKA				*e*SG	Sg	14 45 21.2	-0.8
LAKA	**Lakka**	**0.36**	**222**	*e*Pb	Pg	14 45 17.2	0.0
LAKA				*e*Sb	Sg	14 45 21.2	-0.8
KLV	**Kalavryta, Ach**	**0.48**	**193**	*e*PG	Pg	14 45 19.4	0.0
KLV				*e*SG	Sg	14 45 25.9	+0.2
KLV	**Kalavryta, Ach**	**0.48**	**193**	*e*Pg	Pg	14 45 19.4	0.0
KLV				*e*Sb	Sg	14 45 25.9	+0.2
AGG	**Agios Georgios**	**0.51**	**4**	*e*PG	Pg	14 45 19.4	-0.7
AGG	**Agios Georgios**	**0.51**	**4**	*e*Pb	Pg	14 45 19.4	-0.7
EVR	**Evrytania**	**0.55**	**317**	*e*PG	Pg	14 45 20.7	-0.2
EVR	**Evrytania**	**0.55**	**317**	*e*Pb	Pg	14 45 20.7	-0.2
GUR	**Goura**	**0.57**	**176**	*e*PG	Pg	14 45 22.0	+0.7
GUR	**Goura**	**0.57**	**176**	*e*Pb	Pg	14 45 22.0	+0.7
LTK	**Loutraki**	**0.72**	**132**	*e*PG	Pg	14 45 23.8	-0.2
LTK	**Loutraki**	**0.72**	**132**	*e*Pb	Pg	14 45 23.8	-0.2
THL	**Klokotos Trika**	**1.07**	**349**	*e*PG	Pb	14 45 31.4	+0.1
THL	**Klokotos Trika**	**1.07**	**349**	*e*Pn	Pb	14 45 31.4	+0.1

*DDA **14** 14:47:20.4, 39°94N×25°76E, h7km, MD2.7*
*ISK **14** 14:47:21.7, 40°02N×25°64E, h10km, MD2.8*
*CSEM **14** 14:47:22.4±0.9, 39°97N×25°74E, h2km, MD2.8, Error ellipse: s-maj=16.9km s-min=9.8km az=76.0*
ISC 14 14:47:19.0±2.6, 39°88N±0°08×25°6E±0°1, h11km±13km, n30, σ1°21/36, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.36**	**95**	*i* P	**Pg**	**14 47 26.2**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.86**	**52**	*e*PG	**Pb**	**14 47 35.7**	**-0.2**
GELI				*e*SG	**Sb**	**14 47 46.9**	**-0.5**
GELI	**Tayfur-Gelibol**	**0.86**	**52**	*e*Pg	**Pb**	**14 47 35.7**	**-0.2**
GELI				*e*Sg	**Sb**	**14 47 46.9**	**-0.5**
ENEZ	**Enez**	**0.96**	**27**	*e*PG	**Pg**	**14 47 37.2**	**-0.3**
ENEZ				*e*SG	**Sb**	**14 47 49.7**	**-0.7**
ENEZ	**Enez**	**0.96**	**27**	*e*Pg	**Pg**	**14 47 37.3**	**-0.3**
ENEZ				*e*Sg	**Sb**	**14 47 49.7**	**-0.7**
AYVA	**Ayvalik**	**1.03**	**123**	*i* P	Pg	14 47 35.0	-3.7
LPK	**Lapseki**	**1.03**	**61**	*e*PG	**Pn**	**14 47 39.6**	**+0.3**
LPK	**Lapseki**	**1.03**	**61**	*e*Pg	**Pn**	**14 47 39.6**	**+0.3**
KRBG	**Karabiga-Canak**	**1.41**	**68**	*e*PN	**Pg**	**14 47 47.4**	**+1.3**
KRBG	**Karabiga-Canak**	**1.41**	**68**	*e*Pn	**Pg**	**14 47 47.4**	**+1.3**
RKY	**Sarkoy-Tekirda**	**1.46**	**56**	*e*PN	**Pg**	**14 47 47.4**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.46**	**56**	*e*Pn	**Pg**	**14 47 47.4**	**+0.3**
SART	**Tekirdag**	**1.47**	**56**	*i* P	**Pn**	**14 47 45.6**	**+0.2**
SART				*i* S	**Sb**	**14 48 04.0**	**-1.0**
SART	**Tekirdag**	**1.47**	**56**	*i* S	**Sb**	**14 48 04.0**	**-1.0**
BALY	**Balya**	**1.57**	**94**	*i* P	**Pn**	**14 47 47.7**	**+0.8**
BALY				*i* S	**Sn**	**14 48 06.8**	**-0.5**
BALY	**Balya**	**1.57**	**94**	*i* P	**Pn**	**14 47 47.7**	**+0.8**
BALY				*i* S	**Sn**	**14 48 06.8**	**-0.5**
MFT	**Murefte**	**1.58**	**54**	*e*PN	**Pg**	**14 47 49.5**	**+0.1**
MFT	**Murefte**	**1.58**	**54**	*e*Pn	**Pg**	**14 47 49.5**	**+0.1**
GONE	**Gonen-Balikesi**	**1.63**	**83**	*e*PN	**Pg**	**14 47 50.7**	**+0.5**
GONE	**Gonen-Balikesi**	**1.63**	**83**	*e*Pn	**Pg**	**14 47 50.7**	**+0.5**
EDC	**Edincik**	**1.81**	**74**	*e*PN	**Pb**	**14 47 52.9**	**+0.8**
EDC	**Edincik**	**1.81**	**74**	*e*Pn	**Pb**	**14 47 52.9**	**+0.8**
EDRB	**Edirne**	**2.16**	**24**	*e*PN	**Pb**	**14 47 57.6**	**-0.4**
EDRB	**Edirne**	**2.16**	**24**	*e*Pn	**Pb**	**14 47 57.6**	**-0.4**
YLV	**Yalova**	**2.98**	**75**	*e*PN	**Pb**	**14 48 09.9**	**-2.2**
YLV	**Yalova**	**2.98**	**75**	*e*Pn	**Pb**	**14 48 09.9**	**-2.2**
TVSB	**Tavsanli**	**3.02**	**97**	*e*PN	**Pb**	**14 48 11.1**	**-1.8**
TVSB	**Tavsanli**	**3.02**	**97**	*e*Pn	**Pb**	**14 48 11.1**	**-1.8**
HRT	**Hereke**	**3.26**	**72**	*e*PN	**Pn**	**14 48 13.2**	**+3.1**
HRT	**Hereke**	**3.26**	**72**	*e*Pn	**Pn**	**14 48 13.2**	**+3.1**

RSPR 14 15:11:24.2, 18°98N×65°40W, h69km±5km, 4C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STVI	**Saint Thomas**	**0.75**	**145**	⇓*e*P	Pn	15 11 39.0	-0.7
STVI	**Saint Thomas**	**0.75**	**145**	⇓*e*P	Pn	15 11 39.0	-0.7
STVI				*e*S	Sn	15 11 50.8	-0.3
CBYP	**Canovanas**	**0.82**	**212**	*e*S	Sn	15 11 50.7	-2.0
CBYP	**Canovanas**	**0.82**	**212**	*e*S	Sn	15 11 50.7	-2.0
MTP	**Monte Pirata**	**0.89**	**189**	⇑*e*P	Pn	15 11 40.5	-0.8
MTP				*e*S	Sn	15 11 53.5	-0.4
MTP	**Monte Pirata**	**0.89**	**189**	⇑*e*P	Pn	15 11 40.5	-0.8
MTP				*e*S	Sn	15 11 53.5	-0.4
HUMP	**Col San Antoni**	**0.93**	**207**	⇑*e*P	Pn	15 11 41.0	-0.8
HUMP	**Col San Antoni**	**0.93**	**207**	⇑*e*P	Pn	15 11 41.2	-0.6
HUMP				*e*S	Sn	15 11 54.5	-0.4
AOPR	**Arecibo Observ**	**1.43**	**244**	*e*S	Sn	15 12 05.9	-0.4
AOPR	**Arecibo Observ**	**1.43**	**244**	*e*S	Sn	15 12 05.9	-0.4

*BEO **14** 15:15:07.0±0.9, 40°01N×20°93E, h0km, ML3.9/6*
*SKO **14** 15:15:13.5, 40°45N×21°08E, h0km, M3.5, ML3.9*
*ISCJB **14** 15:15:14.7±0.3, 40°57N±0°01×21°08E±0°02, h25km±2km, mb3.6/14, Error ellipse: s-maj=2.5km s-min=1.8km az=143.9*
*ATH **14** 15:15:14.9, 40°55N×21°23E, h23km±1km, MD3.4/18, ML4.0*
*TIR **14** 15:15:14.4, 40°55N×21°16E, h6km, ML3.6*
*PDG **14** 15:15:14.6±0.8, 40°56N×21°20E, h13km±1km, MD3.8/1, ML3.7/9, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*
*SOF **14** 15:15:15.2, 40°60N×21°34E, h9km, MD3.3*
*CSEM **14** 15:15:15.0±0.1, 40°55N×21°18E, h10km, ML3.9/15, Error ellipse: s-maj=2.7km s-min=1.8km az=65.0*
*THE **14** 15:15:15.4, 40°54N×21°19E, h6km±1km, ML3.9/15, Error ellipse: s-maj=1.3km s-min=0.7km az=291.0*
*IDC **14** 15:15:18.6±2.0, 40°55N×21°13E, h53km±19km, mb3.4/13, mb1 3.6/19, mb1mx3.5/35, mbtmp3.5/19, ML3.5/6, MS3.0/2, Ms1 3.0/2, ms1mx2.4/37, Error ellipse: s-maj=15.0km s-min=13.3km az=142.0*
ISC 14 15:15:14.9±0.7, 40°55N±0°01×21°17E±0°02, h18km±2km, n300, σ1°31/394, mb3.6/14, 20C-23D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEST	**Nestorio**	**0.16**	**214**	P	**Pb**	**15 15 18.5**	**-0.3**
NEST				S	**Sb**	**15 15 21.7**	**+0.4**
FNA	**Florina**	**0.28**	**34**	P	**Pg**	**15 15 21.4**	**+0.2**
FNA				S	**Sb**	**15 15 26.4**	**+0.6**
FNA	**Florina**	**0.28**	**34**	P	**Pg**	**15 15 21.4**	**+0.2**
FNA				S	**Sb**	**15 15 26.4**	**+0.6**
BIA	**Bitola**	**0.48**	**14**	P	**Pg**	**15 15 24.2**	**-0.5**
BIA				S	**Sb**	**15 15 32.3**	**+0.6**
BIA	**Bitola**	**0.48**	**14**	*i* Pg	**Pg**	**15 15 23.9**	**-0.8**
BIA				*i* Sg	**Sb**	**15 15 32.5**	**+0.7**
BIA	**Bitola**	**0.48**	**14**	*i* Pg	**Pg**	**15 15 23.9**	**-0.8**
BIA	**Bitola**	**0.48**	**14**	P	**Pg**	**15 15 24.2**	**-0.5**
BIA				S	**Sb**	**15 15 32.3**	**+0.6**
KZN	**Kozani**	**0.52**	**118**	P	**Pg**	**15 15 25.0**	**-0.4**
KZN				S	**Sb**	**15 15 33.4**	**+0.7**
KZN	**Kozani**	**0.52**	**118**	*e*PB	**Pg**	**15 15 25.2**	**-0.2**
KZN	**Kozani**	**0.52**	**118**	P	**Pg**	**15 15 25.0**	**-0.4**
KZN	**Kozani**	**0.52**	**118**	*e*Pb	**Pg**	**15 15 25.3**	**-0.2**
KZN				S	**Sb**	**15 15 33.4**	**+0.7**
JAN	**Janina**	**0.93**	**195**	P	**Pb**	**15 15 31.7**	**-0.7**
JAN				S	**Sg**	**15 15 45.5**	**+0.4**
JAN	**Janina**	**0.93**	**195**	*e*PB	**Pb**	**15 15 31.9**	**-0.5**
JAN				*e*SN	**Sg**	**15 15 45.6**	**+0.4**
JAN	**Janina**	**0.93**	**195**	P	**Pb**	**15 15 31.7**	**-0.7**
JAN				S	**Sg**	**15 15 45.5**	**+0.4**
GRG	**Griva**	**1.02**	**66**	P	**Pb**	**15 15 33.9**	**-0.2**
GRG				S	**Sg**	**15 15 48.9**	**+0.7**
GRG	**Griva**	**1.02**	**66**	P	**Pb**	**15 15 33.9**	**-0.2**
GRG				S	**Sg**	**15 15 48.9**	**+0.7**
THL	**Klokotos Trika**	**1.18**	**146**	P	**Pn**	**15 15 35.8**	**-0.7**
THL				S	**Sg**	**15 15 53.9**	**+0.7**
THL	**Klokotos Trika**	**1.18**	**146**	*e*PB	**Pn**	**15 15 35.9**	**-0.6**
THL				*e*SN	**Sg**	**15 15 53.2**	**0.0**
THL	**Klokotos Trika**	**1.18**	**146**	*e*Pb	**Pn**	**15 15 35.9**	**-0.6**
THL				*e*Sn	**Sg**	**15 15 53.2**	**0.0**
THL				S	**Sg**	**15 15 53.9**	**+0.7**
IGT	**Igoumenitsa**	**1.20**	**213**	P	**Pn**	**15 15 37.0**	**+0.2**
IGT				S	**Sg**	**15 15 55.3**	**+1.4**
IGT	**Igoumenitsa**	**1.20**	**213**	P	**Pn**	**15 15 37.0**	**+0.2**
IGT				S	**Sg**	**15 15 55.3**	**+1.4**
PHP	**Peshkopia**	**1.26**	**334**	*i* PG	**Pn**	**15 15 37.6**	**-0.1**
PHP				*i* SG	**Sg**	**15 15 55.9**	**+0.2**
PHP	**Peshkopia**	**1.26**	**334**	P	**Pn**	**15 15 37.6**	**-0.1**
PHP				S	**Sg**	**15 15 56.9**	**+1.2**
PHP	**Peshkopia**	**1.26**	**334**	*i* Pg	**Pn**	**15 15 37.6**	**-0.1**
PHP				*i* Sg	**Sg**	**15 15 55.9**	**+0.2**
PHP				S	**Sg**	**15 15 56.9**	**+1.2**
TIR	**Tirane**	**1.27**	**309**	*i* PG	**Sg**	**15 15 59.6**	**+3.6**
VAY	**Valandovo**	**1.31**	**54**	P	**Pn**	**15 15 38.6**	**+0.3**
VAY				S	**Sg**	**15 15 58.0**	**+0.6**
VAY	**Valandovo**	**1.31**	**54**	⇑*i* Pg	**Pn**	**15 15 38.6**	**+0.3**
VAY				*i* Sg	**Sg**	**15 15 57.9**	**+0.5**
VAY				*e*Lg	Lg	15 16 01.0	
	comp=E,2μm,0.5s						
VAY				*e*Lg	Lg	15 16 01.4	
	comp=N,2μm,0.6s						
VAY	**Valandovo**	**1.31**	**54**	P	**Pn**	**15 15 38.6**	**+0.3**
VAY	**Valandovo**	**1.31**	**54**	⇑*i* Pg	**Pb**	**15 15 39.1**	**+0.1**
VAY				S	**Sg**	**15 15 58.0**	**+0.6**
VAY				*i* Sg	**Sb**	**15 15 58.3**	**+2.8**
VAY				*e*Lg	Lg	15 16 01.4	
	comp=N,2μm,0.5s						
THE	**Thessaloniki**	**1.37**	**86**	P	**Pn**	**15 15 39.4**	**+0.3**
THE				S	**Sg**	**15 15 58.9**	**-0.3**
THE	**Thessaloniki**	**1.37**	**86**	P	**Pn**	**15 15 39.4**	**+0.3**
THE				S	**Sg**	**15 15 58.9**	**-0.3**
SKO	**Skopje**	**1.43**	**8**	P	**Pn**	**15 15 41.8**	**+0.7**
SKO				S	**Sg**	**15 16 02.5**	**+1.2**
SKO	**Skopje**	**1.43**	**8**	*i* Pg	**Pb**	**15 15 41.8**	**+0.7**
SKO				*i* Sg	**Sg**	**15 16 02.6**	**+1.2**
SKO				*e*Lg	Lg	15 16 04.0	
	comp=E,725nm,0.4s						
SKO				*e*Lg	Lg	15 16 06.5	
	comp=N,971nm,0.4s						
SKO	**Skopje**	**1.43**	**8**	*e*Pn	**Pg**	**15 15 42.1**	**-0.5**
SKO				*e*Sn	Sg	15 16 07.8	+6.5
SKO	**

SMIA	Simia	2.29	136	P		Pn	15 15 52.7	+0.8
BARS	Barje	2.31	12	ePn		Pn	15 15 53.5	+1.4
BARS				eSn		Sg	15 16 29.3	-0.1
BARS	Barje	2.31	12	ePn		Pn	15 15 53.5	+1.4
ATAL	Atalanti	2.34	142	P		Pn	15 15 53.3	+0.8
ATAL	Atalanti	2.34	142	P		Pn	15 15 53.3	+0.8
PDG	Podgorica	2.36	323	⇓iPn		Pn	15 15 54.8	+2.0
TTG	Podgorica	2.36	323	⇓iPn		Pn	15 15 54.8	+2.0
TTG				eSn		Sb	15 16 25.8	0.0
LKR	Lokris	2.37	143	P		Pn	15 15 53.5	+0.7
LKR				S		Sn	15 16 22.8	+1.4
LKR	Lokris	2.37	143	ePN		Pn	15 15 53.7	+0.9
LKR				eSN		Sn	15 16 23.1	+1.7
LKR	Lokris	2.37	143	ePn		Pn	15 15 53.7	+0.9
LKR				S		Sn	15 16 22.8	+1.4
LKR				eSn		Sn	15 16 23.1	+1.7
DSF	Desfina	2.38	153	P		Pn	15 15 54.1	+1.0
DSF	Desfina	2.38	153	P		Pn	15 15 54.1	+1.0
LAKA	Lakka	2.39	165	ePB		Pb	15 15 56.2	-1.2
LAKA	Lakka	2.39	165	ePb		Pb	15 15 56.2	-1.2
VLS	Valsamata	2.41	191	P		Pn	15 15 54.9	+1.4
VLS	Valsamata	2.41	191	ePN		Pn	15 15 54.9	+1.4
VLS	Valsamata	2.41	191	ePn		Pn	15 15 54.9	+1.4
BUM	Brajici-Budva	2.45	316	ePn		Pn	15 15 56.0	+2.0
BUM				eSn		Sb	15 16 27.8	-0.4
BUM	Brajici-Budva	2.45	316	ePn		Pn	15 15 56.0	+2.0
KFL	Anninata	2.46	187	P		Pn	15 15 55.8	+1.8
KFL	Anninata	2.46	187	P		Pn	15 15 55.8	+1.8
RLS	Riolos of Patr	2.50	175	P		Pn	15 15 57.5	-1.7
RLS	Riolos of Patr	2.50	175	ePB		Pb	15 15 57.6	-1.7
RLS	Riolos of Patr	2.50	175	P		Pb	15 15 57.5	-1.7
AOS	Alonnisos	2.50	123	P		Pn	15 15 54.5	-0.2
AOS	Alonnisos	2.50	123	P		Pn	15 15 54.5	-0.2
BEY	Berane	2.51	338	⇓iPn		Pn	15 15 57.0	+2.2
IVA	Berane	2.51	338	⇓iPn		Pn	15 15 57.0	+2.2
IVA				eSn		Sb	15 16 28.8	-1.2
VTS	Vitosha	2.55	36	P		Pn	15 15 57.0	+1.5
VTS	Vitosha	2.55	36	⇓iP		Pn	15 15 57.5	+1.9
VTS	Vitosha	2.55	36	ePn		Pn	15 15 57.4	+1.9
VTS				eSn		Sg	15 16 34.7	-2.2
VTS	Vitosha	2.55	36	iP		Pn	15 15 57.4	+1.9
VTS	Vitosha	2.55	36	P		Pn	15 15 57.0	+1.5
VTS	Vitosha	2.55	36	ePn		Pn	15 15 57.4	+1.9
KAVA	Kavala	2.58	79	P		Pn	15 15 56.0	+0.3
KAVA	Kavala	2.58	79	P		Pn	15 15 56.0	+0.3
KLV	Kalavryta, Ach	2.62	163	ePN		Pn	15 15 58.3	+2.0
KLV	Kalavryta, Ach	2.62	163	ePb		Pn	15 15 58.3	+2.0
MRKA	Markates	2.62	134	P		Pn	15 15 57.4	+1.0
MRKA	Markates	2.62	134	P		Pn	15 15 57.4	+1.0
SELS	Selova	2.67	359	ePn		Pn	15 15 57.8	+0.8
HCY	Herceg Novi	2.76	314	⇑iPn		Pn	15 16 00.5	+2.3
HCY				eSn		Sb	15 16 35.1	-2.1
HCY	Herceg Novi	2.76	314	⇑iPn		Pn	15 16 00.5	+2.3
GUR	Goura	2.77	160	ePN		Pn	15 16 00.5	+2.1
GUR	Goura	2.77	160	ePn		Pn	15 16 00.5	+2.1
NKY	Niksic	2.79	325	⇑iPn		Pb	15 16 02.1	-2.1
NKY				eSn		Sb	15 16 38.0	0.0
NKY	Niksic	2.79	325	⇑iPn		Pb	15 16 02.1	-2.1
SJES	Sjenica	2.85	342	ePn		Pn	15 16 01.0	+1.4
SJES				eSn		Sb	15 16 40.5	+0.6
LTK	Loutraki	2.88	150	P		Pn	15 16 00.7	+0.7
LTK	Loutraki	2.88	150	ePN		Pn	15 16 00.6	+0.6
LTK	Loutraki	2.88	150	P		Pn	15 16 00.7	+0.7
RZN	Rozhen	2.91	66	iP		Pn	15 16 01.9	+1.4
RZN	Rozhen	2.91	66	iP		Pn	15 16 01.9	+1.4
ZAPS	Zavoj	2.93	21	ePn		Pn	15 16 02.9	+2.3
PGB	Panagyurishte	3.01	47	iP		Pn	15 16 03.2	+1.5
AMT	Artemida-Makis	3.04	172	ePN		Pn	15 16 03.9	+1.7
AMT	Artemida-Makis	3.04	172	ePn		Pn	15 16 03.9	+1.7
BRY	Bratogost	3.06	321	ePn		Pn	15 16 04.5	+2.0
BRY				eSn		Sn	15 16 42.0	+3.2
BRY	Bratogost	3.06	321	ePn		Pn	15 16 04.5	+2.0
PLE	Pljevlja	3.08	335	⇑iPn		Pn	15 16 05.5	+2.8
PLE				eSn		Sb	15 16 43.2	-3.2
PLE	Pljevlja	3.08	335	⇑iPn		Pn	15 16 05.5	+2.8
PLD	Plovdiv	3.08	59	P		Pn	15 16 05.5	+2.9
PLD	Plovdiv	3.08	59	iP		Pn	15 16 05.1	+2.5
PLD	Plovdiv	3.08	59	iP		Pn	15 16 05.1	+2.5
IVAS	Ivanjica	3.12	346	ePn		Pn	15 16 04.0	+0.8
IVAS	Ivanjica	3.12	346	ePn		Pn	15 16 04.0	+0.8
LIA	Limnos Island	3.14	101	ePN		Pn	15 16 04.5	+1.0
LIA				eSN		Sn	15 16 40.8	+0.3
LIA	Limnos Island	3.14	101	ePn		Pn	15 16 04.5	+1.0
LIA				eSn		Sn	15 16 40.8	+0.3
UPM	Unac-Piva	3.14	328	⇓iPn		Pn	15 16 06.0	+2.3
UPM				eSn		Sn	15 16 43.8	+3.0
UPM	Unac-Piva	3.14	328	⇓iPn		Pn	15 16 06.0	+2.3
UPM				eSn		Sn	15 16 43.8	+3.0
ATH	Athens Observa	3.25	142	ePN		Pn	15 16 06.2	+1.3
PTL	Penteli	3.26	139	P		Pn	15 16 06.7	+1.6
PTL	Penteli	3.26	139	ePN		Pn	15 16 06.5	+1.4
PTL				eSN		Sn	15 16 43.5	+0.1
PTL	Penteli	3.26	139	P		Pn	15 16 06.7	+1.6
PTL				eSn		Sn	15 16 43.5	+0.1
ATHU	Athens Univers	3.28	141	P		Pn	15 16 07.0	+1.6
ATHU	Athens Univers	3.28	141	P		Pn	15 16 07.0	+1.6
BAI	Bari	3.30	281	ePn		Pn	15 16 06.3	+0.7
BAI				eSn		Sn	15 16 42.5	-1.9
NAIG	Nisos Aigina	3.32	146	ePN		Pn	15 16 07.2	+1.3
BOLS	Boljevac	3.33	10	ePn		Pn	15 16 07.8	+1.8
BOLS	Boljevac	3.33	10	ePn		Pn	15 16 07.8	+1.8
SMTH	Samothraki Isl	3.33	90	ePN		Pn	15 16 07.3	+1.3
SMTH	Samothraki Isl	3.33	90	ePn		Pn	15 16 07.3	+1.3
GRUS	Gruza	3.35	354	ePn		Pn	15 16 07.6	+1.2
GRUS				eSn		Sb	15 16 52.6	-1.6
GRUS	Gruza	3.35	354	ePn		Pn	15 16 07.6	+1.2
MPEP	Malo Peshtene	3.40	34	iP		Pn	15 16 09.2	+2.2
ITM	Ithomi	3.42	170	ePN		Pn	15 16 10.4	+3.1
ITM	Ithomi	3.42	170	ePn		Pn	15 16 10.4	+3.1
DID	Didima	3.44	151	P		Pn	15 16 08.8	+1.1
DID	Didima	3.44	151	ePN		Pn	15 16 08.7	+1.1
DID				eSN		Sn	15 16 48.7	+0.8
DID	Didima	3.44	151	ePn		Pn	15 16 08.7	+1.1
DID				eSn		Sn	15 16 48.7	+0.8
DIDY	Didyma	3.46	152	P		Pn	15 16 09.1	+1.2
DIDY	Didyma	3.46	152	P		Pn	15 16 09.1	+1.2
STON	Ston	3.48	313	ePn		Pn	15 16 09.4	+1.2
STON				Sn		Sn	15 16 49.8	+0.9
STON	Ston	3.48	313	ePn		Pn	15 16 09.3	+1.2
STON				Sn		Sn	15 16 49.8	+0.9
BBLS	Lazići	3.56	339	ePn		Pn	15 16 09.4	+1.1
BBLS	Lazići	3.56	339	ePn		Pn	15 16 09.4	+0.1
DIM	Dimitrovgrad	3.61	64	iP		Pb	15 16 16.9	-1.3
DIVS	Divibare	3.65	347	P		Pn	15 16 11.3	+0.7
DIVS	Divibare	3.65	347	ePn		Pn	15 16 11.6	+1.0
DIVS	Divibare	3.65	347	P		Pn	15 16 11.3	+0.7
DIVS	Divibare	3.65	347	ePn		Pn	15 16 11.6	+1.0
PYL	PYLOS	3.68	173	ePN		Pn	15 16 12.4	+1.6
PYL	PYLOS	3.68	173	ePn		Pn	15 16 12.4	+1.6
TRUS	Trudelj	3.71	352	ePn		Pn	15 16 12.4	+1.1
TRUS	Trudelj	3.71	352	ePn		Pn	15 16 12.4	+1.1
ALN	Alexandroupoli	3.72	83	P		Pn	15 16 12.1	+0.7
ALN	Alexandroupoli	3.72	83	ePN		Pn	15 16 12.2	+0.8
ALN				eSN		Sn	15 16 55.0	+0.2
ALN	Alexandroupoli	3.72	83	ePn		Pn	15 16 12.2	+0.8
ALN				eSn		Sn	15 16 55.0	+0.2
CDT	Castel del Mon	3.75	280	ePn		Pn	15 16 13.0	+1.1
CDT				eSn		Sn	15 16 54.3	-1.9
VLI	Veliai	4.07	160	ePN		Pn	15 16 18.1	+1.9
VLI	Veliai	4.07	160	ePn		Pn	15 16 18.1	+1.9
MS1	Monte Sant'Ang	4.11	288	ePn		Pn	15 16 17.4	+0.5
MS1				eSn		Sn	15 17 03.1	-1.4
CHOS	Chios island	4.36	118	ePN		Pn	15 16 21.5	+1.3
CHOS	Chios island	4.36	118	ePn		Pn	15 16 21.5	+1.3
KYTH	Kithira	4.51	160	P		Pn	15 16 26.4	+4.1
FGSL	Fruska Gora	4.71	348	ePn		Pn	15 16 25.2	+0.2
FRGS	Fruska Gora	4.71	348	ePn		Pn	15 16 25.2	+0.1
APE	Apeiranthos	4.87	134	⇓iP		Pn	15 16 28.6	+1.4
BZS	Buzias	5.07	4	⇓iP		Pn	15 16 29.3	-0.7
BZS	Buzias	5.07	4	⇓iP		Pn	15 16 29.3	-0.7
ARR	Arges	5.44	27	⇓iP		Pn	15 16 36.5	+1.3
ARR	Arges	5.44	27	⇓iP		Pn	15 16 36.5	+1.3
PKSM	Moragy	5.95	343	⇑iP		Pn	15 16 42.3	+0.3
PKSM	Moragy	5.95	343	⇑iP		Pn	15 16 42.3	+0.3
MLR	Muntele Rosu	6.05	34	P		Pn	15 16 46.4	+2.9
	comp=N,0.3nm,0.3s,baz=43,slow=6.1,SNR=9.9							
MLR				S		Sn	15 17 56.2	+3.8
	comp=N,0.4nm,0.3s,baz=303,slow=22,SNR=3.2							
NVLJ	Novalja	6.14	313	ePn		Pn	15 16 44.9	+0.3
NVLJ				Sn		Sn	15 17 52.5	-1.8
NVLJ	Novalja	6.14	313	ePn		Pn	15 16 44.9	+0.3
BOJS	Bojanci	6.58	321	iPn		Pn	15 16 51.5	+0.8
BOJS				iSn		Sn	15 18 05.5	+0.3
BOJS	Bojanci	6.58	321	Pn		Pn	15 16 51.5	+0.8
BOJS				iSn		Sn	15 18 05.5	+0.3
TIRR	Tirgusor	6.62	52	⇑iP		Pb	15 17 09.5	0.0
PLOR	Plostina	6.64	35	⇓iP		Pn	15 16 54.4	+2.8
PLOR	Plostina	6.64	35	⇓iP		Pn	15 16 54.4	+2.8
VRI	Vrincioaia	6.69	36	⇑iP		Pn	15 16 54.7	+2.5
VRI	Vrincioaia	6.69	36	⇑iP		Pn	15 16 54.7	+2.5
CFR	Carcaliu	6.90	46	⇑iP		Pn	15 16 57.1	+2.1
CFR	Carcaliu	6.90	46	⇑iP		Pn	15 16 57.1	+2.1
TLCR		7.28	48	⇓iP		Pn	15 17 02.0	+1.7
TLCR		7.28	48	⇓iP		Pn	15 17 02.0	+1.7
PSZ	Piszkesteto	7.42	353	⇓iP		Pn	15 17 03.3	+1.0
PSZ	Piszkesteto	7.42	353	⇓iP		Pn	15 17 03.3	+1.0
JAVS	Javornik	7.44	318	iPn		Pn	15 17 02.8	+0.2
JAVS				iSn		Sn	15 18 24.6	-2.0
JAVS	Javornik	7.44	318	iPn		Pn	15 17 02.8	+0.2
PERS	Pernice	7.50	326	iPn		Pn	15 17 04.3	+0.9
PERS	Pernice	7.50	326	iPn		Pn	15 17 04.3	+0.9
SOKA	Soboth	7.57	326	⇓iPn		Pn	15 17 05.1	+0.7
SOKA				⇓iSn		Sn	15 18 29.6	-0.1
SOKA	Soboth	7.57	326	Pn		Pn	15 17 05.1	+0.7
SOKA				Sn		Sn	15 18 29.6	-0.1
VOY	Vojsko	7.62	318	ePn		Pn	15 17 05.6	+0.5
VOY				e			15 17 11.6	
VOY				eSn		Sn	15 18 29.0	-2.0
VOY	Vojsko	7.62	318	ePn		Pn	15 17 05.6	+0.5
OBKA	Obir	7.65	323	⇓iPn		Pn	15 17 05.2	-0.3
OBKA				⇑iSn		Sn	15 18 31.8	0.0
OBKA	Obir	7.65	323	Pn		Pn	15 17 05.2	-0.3
OBKA				Sn		Sn	15 18 31.8	0.0
VYHS	Vyhne	8.11	349	ePN		Pn	15 17 11.2	-0.6
VYHS				e			15 17 18.3	
VYHS	Vyhne	8.11	349	eSN		Sn	15 18 38.9	-4.1
VYHS	Vyhne	8.11	349	ePn		Pn	15 17 11.2	-0.6
CRVS	Cervenica-Dubn	8.35	1	ePN		Pn	15 17 18.0	+3.0
CRVS	Cervenica-Dubn	8.35	1	ePn		Pn	15 17 18.0	+3.0
KOLS	Kolonicke sedl	8.42	5	ePN		Pn	15 17 18.3	+2.4
KOLS				e			15 19 57.4	
KOLS	Kolonicke sedl	8.42	5	ePn		Pn	15 17 18.3	+2.4
PGF	Pioggiola	9.34	286	eP		Pn	15 17 30.4	+1.7
BRTR	Keskin Array B	9.59	91	P		Pn	15 17 33.7	+1.6
	comp=N,0.1nm,0.3s,baz=265,slow=17,SNR=3.9							
GERES	GERESS Array B	9.85	330	P		Pn	15 17 37.5	+1.9
	comp=N,0.4nm,0.3s,baz=154,slow=14,SNR=8.6							
GERES				S		Sn	15 19 26.9	+1.3
	comp=N,0.3nm,0.3s,baz=144,slow=25,SNR=3.4							
FETA	Feichten	9.93	314	⇑iPn		Pn	15 17 36.1	-0.7
FETA				⇑iSn		Sn	15 19 27.0	-0.9
FETA	Feichten	9.93	314	Pn		Pn	15 17 36.1	-0.7
FETA				Sn		Sn	15 19 27.0	-0.9
KHC	Kasperske Hory	10.12	330	ePN		Pn	15 17 41.7	+2.4
KHC	Kasperske Hory	10.12	330	P		Pn	15 17 41.7	+2.4
DAVOX	Davos/Dischmat	10.27	311	P		Pn	15 17 43.4	+1.9
	comp=N,0.7nm,0.3s,baz=48,slow=14,SNR=3.4							
DAVOX				S		Sn	15 19 35.3	-0.9
	comp=N,0.9nm,0.3s,baz=217,slow=20,SNR=3.5							
DAVOX				LR		LR	15 22 06.9	
	comp=N,101nm,19.1s,baz=264,slow=40							
KEST	Kesra	10.48	246	P		Pn	15 17 46.8	+2.5
	comp=N,0.1nm,0.3s,baz=352,slow=7.1,SNR=2.8							
MBDF	Montbardon	11.39	296	eP		Pn	15 17 56.8	0.0
	comp=N,5.8nm,0.6s							
LPG	La Plagne	11.65	300	eP		Pn	15 18 00.9	+0.5
	comp=N,8.5nm,0.5s							
LPL	La Plagne	11.67	300	eP		Pn	15 18 00.2	-0.4
	comp=N,4.4nm,0.3s							
ORIF	Oris-en-Rattie	12.06	296	eP		Pn	15 18 00.2	-5.6
CABF	La Chapelle	12.49	304	eP		Pn	15 18 11.1	-0.7
CDF	Champ du Feu	12.64	313	eP		Pn	15 18 12.7	-1.1
HAU	Haudompre	12.96	310	eP		Pn	15 18 18.2	+0.1
	comp=N,4.6nm,0.3s							
MMAI	Mount Meron Ar	13.65	119	P		Pn	15 18 28.7	+1.0
	comp=N,0.6nm,0.3s,baz=302,slow=14,SNR=3.1							
SMF	Signal de Mont	13.94	302	eP		Pn	15 18 30.0	-1.5
	comp=N,3.2nm,0.4s							
AVF	Avril sur Loir	14.31	302	eP		Pn	15 18 34.8	-1.7
ASF	Jabal al Asfar	15.17	119	LR		LR	15 25 55.6	
	comp=N,40nm,19.8s,baz=341,slow=42							
HFS	Hagfors	20.15	349	P		P	15 19 47.7	-0.2
	comp=N,2.0nm,0.5s,baz=163,slow=11,SNR=15							
FINES	FINESS Array B	21.14	7	P		P	15 19 57.7	-0.8
	comp=N,2.4nm,0.9s,baz=167,slow=9.6,SNR=9.0							
NB2	NORSAR Subarra	21.41	347	P		P	15 20 00.1	-1.4
	comp=Z,1.2nm,0.5s,baz=174,slow=12							
NOA	NORSAR Array B	21.41	347	P		P	15 20 00.6	-0.9
	comp=Z,1.1nm,0.5s,baz=154,slow=9.9,SNR=7.9							
KAF	Kangasniemi	21.82	7	ep		P	15 20 08.0	+2.2
	comp=Z,1.4nm,0.4s							
EKA	Eskdalemuir Ar	21.84	321	P		P	15 20 05.5	-0.7
	comp=Z,4.1nm,0.6s,baz=120,slow=9.7,SNR=16							
JOF	Joensuu	23.21	12	ep		P	15 20 21.0	+0.5
	comp=Z,0.9nm,0.5s							
ARCES	ARCESS Array B	29.14	3	P		P	15 21 14.4	0.0
	comp=Z,1.5nm,0.7s,baz=190,slow=10,SNR=5.4							
TORD	Torodi Ar. Bea	32.20	218	P		P	15 21 42.0	0.0
	comp=Z,1.2nm,0.6s,baz=37,slow=8.0,SNR=17							
BVAR	Borovoye Array	35.24	52	P		P	15 22 08.1	0.0
	comp=Z,0.2nm,0.4s,baz=273,slow=5.2,SNR=3.0							
DBIC	Dimbokro	40.99	222	P		P	15 22 55.9	-0.9
	comp=Z,1.6nm,0.3s,baz=18,slow=3.2,SNR=3.8							
MKAR	Makanchi Array	43.67	61	P		P	15 23 17.9	-0.6
	comp=Z,0.4nm,0.6s,baz=283,slow=8.1,SNR=6.0							
ZALV	Zalesovo Beam	43.76	50	P		P	15 23 18.6	-0.4
	comp=Z,0.7nm,0.5s,baz=279,slow=8.7,SNR=4.0							
PYUN	Piuthan	51.59	84	eP		P	15 24 19.2	-1.2
	comp=Z,9.3nm,0.8s							
DANN	Dangsing	52.04	83	eP		P	15 24 23.2	-0.7
	comp=Z,5.9nm,0.6s							
KOLN	Koldanda	52.22	84	eP		P	15 24 24.3	-0.8
	comp=Z,3.5nm,0.7s							
GUN	Gumba	53.87	82	eP		P	15 24 36.8	-0.6
RAMN	Ramite	54.92	83	eP		P	15 24 43.9	-1.1
	comp=Z,4.7nm,0.5s							
TAPN	Taplejung	55.55	82	eP		P	15 24 48.9	-0.6
ODAN	Odare	55.56	82	eP		P	15 24 49.0	-0.6
CMAR	Chiang Mai Arr	69.09	83	P		P	15 26 18.6	-1.4
	comp=Z,0.2nm,0.7s,baz=297,slow=6.0,SNR=3.5							
YKA	Yellowknife Ar	71.33	340	P		P	15 26 32.7	-0.4
	comp=Z,0.2nm,0.6s,baz=34,slow=5.5,SNR=5.7							
ILAR	Eielson Array	74.60	355	P		P	15 26 52.4	+0.1
	comp=Z,0.5nm,0.8s,baz=358,slow=4.8,SNR=6.1							
ASAR	Alice Springs	121.91	95	PKP		PKPdf	15 34 06.8	-1.4
	comp=Z,0.3nm,0.8s,baz=317,slow=1.6,SNR=4.1							

CSEM ***14*** *15:16:04.0, 40°.52N×21°.14E, h17km, ML3.6/3, After THE*
THE 14 15:16:04.0, 40°.52N×21°.14E, h17km±2km, ML3.6/3, Error ellipse: s-maj=2.6km s-min=0.6km az=253.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEST	Nestorio	0.13	215	P	Pg	15 16 07.7	-0.3
NEST				S	Sb	15 16 11.0	+0.2
NEST	Nestorio	0.13	215	P	Pg	15 16 07.7	-0.3
NEST				S	Sb	15 16 11.0	+0.2
FNA	Florina	0.32	34	P	Pg	15 16 10.7	-0.2
FNA				S	Sg	15 16 15.8	+0.2
FNA	Florina	0.32	34	P	Pg	15 16 10.7	-0.2
FNA				S	Sg	15 16 15.8	+0.2
BIA	Bitola	0.52	15	P	Pg	15 16 13.9	-0.6
BIA				S	Sb	15 16 22.6	+0.6
BIA	Bitola	0.52	15	P	Pg	15 16 13.9	-0.6
BIA				S	Sb	15 16 22.6	+0.6
KZN	Kozani	0.52	114	P	Pg	15 16 14.5	-0.1
KZN				S	Sb	15 16 22.7	+0.5
KZN	Kozani	0.52	114	P	Pg	15 16 14.5	-0.1
KZN				S	Sb	15 16 22.7	+0.5

CSEM ***14*** *15:32:25.9, 42°.58N×13°.32E, h8km, MD1.7/5, After ROM*
ROM 14 15:32:25.9±0.1, 42°.58N×13°.32E, h8km, Md1.7/5, Ml1.5/4, Error ellipse: s-maj=1.0km s-min=0.5km az=21.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.08	127	Pg	Pg	15 32 28.6	+0.4
CAMP				Sg	Sg	15 32 30.1	+0.3
	113nm,0.6s						
CAMP	Campotosto	0.08	127	Pg	Pg	15 32 28.6	+0.4
CAMP				Sg	Sg	15 32 30.1	+0.3
	113nm,0.6s						
LNSS	Leonessa	0.21	275	Pg	Pg	15 32 30.8	+0.4
LNSS				Sg	Sg	15 32 34.5	+1.1
	151nm,0.2s						
LNSS	Leonessa	0.21	275	Pg	Pg	15 32 30.8	+0.4
LNSS				Sg	Sg	15 32 34.5	+1.1
	151nm,0.2s						
TERO	Teramo	0.21	79	Pg	Pg	15 32 30.8	+0.5
TERO				Sg	Sg	15 32 34.4	+1.2
	59nm,0.1s						
TERO	Teramo	0.21	79	Pg	Pg	15 32 30.8	+0.5
TERO				Sg	Sg	15 32 34.4	+1.2
	59nm,0.1s						
NRCA	Norcia	0.29	328	Pg	Pg	15 32 32.7	+0.8
NRCA				Sg	Sb	15 32 37.7	-1.0
	53nm,0.1s						
NRCA	Norcia	0.29	328	Pg	Pg	15 32 32.7	+0.8
NRCA				Sg	Sb	15 32 37.7	-1.0
	53nm,0.1s						
VCEL	Villa Celiera	0.43	116	Pg	Pg	15 32 34.7	+0.3
VCEL				Sg	Sb	15 32 41.9	-0.6
VCEL	Villa Celiera	0.43	116	Pg	Pg	15 32 34.7	+0.3
VCEL				Sg	Sb	15 32 41.9	-0.6

CSEM ***14*** *15:33:19.3, 42°.25N×13°.48E, h10km, After ROM*
ROM 14 15:33:19.3±0.1, 42°.25N×13°.48E, h10km, Ml2.0/7, Error ellipse: s-maj=1.2km s-min=0.9km az=78.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.08	81	Pg	Pg	15 33 22.1	+0.4
FAGN				Sg	Sg	15 33 23.5	+0.2
	2µm,0.4s						
FAGN	Fagnano	0.08	81	Pg	Pg	15 33 22.1	+0.4
FAGN				Sg	Sg	15 33 23.5	+0.2
	2µm,0.4s						
AQU	L'Aquila	0.12	330	Pg	Pg	15 33 22.7	+0.5
AQU				Sg	Sg	15 33 24.7	+0.5
	358nm,0.6s						
AQU	L'Aquila	0.12	330	Pg	Pg	15 33 22.7	+0.5
AQU				Sg	Sg	15 33 24.7	+0.5
	358nm,0.6s						
PTQR	Pietraquaria	0.24	194	Pg	Pg	15 33 25.0	+0.7
PTQR				Sg	Sg	15 33 28.9	+1.2
	20nm,0.2s						
PTQR	Pietraquaria	0.24	194	Pg	Pg	15 33 25.0	+0.7
PTQR				Sg	Sg	15 33 28.9	+1.2
	20nm,0.2s						
FIAM	Fiamignano	0.27	273	Pg	Pg	15 33 25.3	+0.4
FIAM				Sg	Sg	15 33 29.7	+1.0
	163nm,0.4s						
FIAM	Fiamignano	0.27	273	Pg	Pg	15 33 25.3	+0.4
FIAM				Sg	Sg	15 33 29.7	+1.0
	163nm,0.4s						
CAMP	Campotosto	0.29	349	Pg	Pg	15 33 26.0	+0.7
CAMP				Sg	Sb	15 33 31.0	-0.8
CAMP	Campotosto	0.29	349	Pg	Pg	15 33 26.0	+0.7
CAMP				Sg	Sb	15 33 31.0	-0.8
VCEL	Villa Celiera	0.30	62	Pg	Pg	15 33 26.0	+0.5
VCEL				Sg	Sb	15 33 31.0	-1.2
	220nm,0.4s						
VCEL	Villa Celiera	0.30	62	Pg	Pg	15 33 26.0	+0.5
VCEL				Sg	Sb	15 33

PRHZ	**Porangahau**	**1.93**	**172**	PN	Pn	15 47 16.9	-0.9
DVHZ	**Dannevirke**	**1.95**	**183**	PN	Pn	15 47 16.7	-1.4
POWZ	**Post Office Ro**	**2.08**	**191**	PN	Pn	15 47 18.3	-1.4
BFZ	**Birch Farm**	**2.33**	**181**	⇓PN	Pn	15 47 21.2	-1.7
MRZ	**Mangatainoka R**	**2.38**	**193**	PN	Pn	15 47 21.5	-1.9
TIWZ	**Tintock**	**2.44**	**187**	PN	Pn	15 47 22.7	-1.7
OGWZ	**Otaki Gorge**	**2.61**	**199**	PN	Pn	15 47 24.5	-1.9
HOWZ	**Holdsworth Sta**	**2.62**	**193**	PN	Pn	15 47 24.3	-2.2
KIW	**Kapiti Island**	**2.73**	**203**	PN	Pn	15 47 25.7	-2.3
TMWZ	**Te Maipa**	**2.77**	**186**	PN	Pn	15 47 26.3	-2.3
MTW	**Mount Morrison**	**2.87**	**192**	PN	Pn	15 47 27.2	-2.6
CAW	**Cannon Point**	**2.91**	**199**	PN	Pn	15 47 27.8	-2.6
TRWZ	**Traveller**	**3.08**	**189**	PN	Pn	15 47 30.3	-2.3
PAWZ	**Paruwai Farm**	**3.10**	**192**	PN	Pn	15 47 30.0	-2.9
WEL	**Wellington**	**3.16**	**201**	PN	Pn	15 47 30.9	-2.7
MSWZ	**Moikau Station**	**3.17**	**194**	PN	Pn	15 47 30.8	-2.9
BHW	**Baring Head**	**3.25**	**199**	*e*PN	Pn	15 47 31.7	-3.0
TCW	**Tory Channel**	**3.25**	**208**	PN	Pn	15 47 31.9	-2.9
PLWZ	**Palliser**	**3.31**	**194**	PN	Pn	15 47 32.5	-3.2
NNZ	**Nelson**	**3.64**	**217**	PN	Pn	15 47 37.9	-2.1
QRZ	**Quartz Range**	**3.82**	**228**	PN	Pn	15 47 40.1	-2.2
THZ	**Tophouse**	**4.29**	**216**	PN	Pn	15 47 45.8	-3.0
KHZ	**Kahutara**	**4.58**	**206**	PN	Pn	15 47 48.6	-3.9

WEL 14 15:48:34.1±0.3**, 39°21S**×**174°77E, h223**km±2km**, ML3.6**/7**, Error ellipse: s-maj=2.9km s-min=1.7km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.09**	**354**	PN	Pn	15 49 02.7	-0.4
VRZ				SN	S	15 49 24.8	-0.9
WAZ	**Wanganui**	**0.57**	**163**	PN	Pn	15 49 04.7	+0.6
MTVZ	**Mangateitei**	**0.57**	**108**	PN	Pn	15 49 04.0	-0.2
MTVZ				SN	S	15 49 26.7	-1.0
WPVZ	**Whakapapa**	**0.60**	**90**	PN	Pn	15 49 04.2	-0.2
WNVZ	**Wahianoa**	**0.65**	**100**	PN	Pn	15 49 04.4	-0.2
TUVZ	**Tukino**	**0.69**	**95**	PN	Pn	15 49 04.7	-0.1
TUVZ				SN	S	15 49 27.6	-1.1
HIZ	**Hauiti**	**0.70**	**5**	PN	Pn	15 49 04.0	-0.7
HIZ				SN	S	15 49 27.2	-1.3
BHHZ	**Black Hill Sta**	**1.04**	**106**	PN	Pn	15 49 06.1	-0.5
TSZ	**Takapari Road**	**1.25**	**133**	PN	Pn	15 49 08.1	+0.2
PNHZ	**Pukenui**	**1.31**	**123**	PN	Pn	15 49 08.5	+0.2
PNHZ				SN	S	15 49 34.5	-0.6
BKZ	**Black Stump Fm**	**1.34**	**89**	PN	Pn	15 49 08.0	-0.7
POWZ	**Post Office Ro**	**1.41**	**147**	PN	Pn	15 49 09.1	0.0
POWZ				SN	S	15 49 36.3	-0.1
MCHZ	**McNeill Hill**	**1.51**	**99**	PN	Pn	15 49 10.7	+0.8
MCHZ				SN	S	15 49 37.6	-0.3
DVHZ	**Dannevirke**	**1.53**	**136**	PN	Pn	15 49 10.0	-0.1
WPHZ	**Waipukurau**	**1.54**	**124**	SN	S	15 49 37.6	-0.8
MRZ	**Mangatainoka R**	**1.57**	**157**	PN	Pn	15 49 10.3	-0.2
NMHZ	**Naumai**	**1.59**	**87**	PN	Pn	15 49 10.0	-0.6
NMHZ				SN	S	15 49 39.0	-0.2
OGWZ	**Otaki Gorge**	**1.63**	**169**	PN	Pn	15 49 11.0	+0.1
KIW	**Kapiti Island**	**1.65**	**176**	PN	Pn	15 49 11.0	-0.1
KIW				SN	S	15 49 38.6	-1.5
KAHZ	**Kahuranaki**	**1.73**	**110**	PN	Pn	15 49 12.1	+0.3
HOWZ	**Holdsworth Sta**	**1.78**	**161**	PN	Pn	15 49 11.9	-0.3
HOWZ				SN	S	15 49 40.6	-1.5
PRHZ	**Porangahau**	**1.78**	**127**	PN	Pn	15 49 12.2	0.0
TIWZ	**Tintock**	**1.78**	**152**	PN	Pn	15 49 12.0	-0.3
PXZ	**Pawanui**	**1.81**	**118**	PN	Pn	15 49 12.3	-0.2
BFZ	**Birch Farm**	**1.85**	**143**	PN	Pn	15 49 12.5	-0.4
CAW	**Cannon Point**	**1.91**	**173**	PN	Pn	15 49 13.2	-0.2
MTW	**Mount Morrison**	**2.02**	**164**	PN	Pn	15 49 14.1	-0.4
TCW	**Tory Channel**	**2.03**	**191**	PN	Pn	15 49 14.8	+0.2
WEL	**Wellington**	**2.07**	**180**	PN	Pn	15 49 14.6	-0.4
SNZO	**South Karori**	**2.10**	**181**	PN	Pn	15 49 15.1	0.0
NNZ	**Nelson**	**2.27**	**208**	PN	Pn	15 49 16.7	-0.3
TUWZ	**Tuamarina**	**2.30**	**196**	PN	Pn	15 49 17.2	-0.1
QRZ	**Quartz Range**	**2.36**	**226**	PN	Pn	15 49 16.9	-1.0
PLWZ	**Palliser**	**2.38**	**171**	PN	Pn	15 49 17.5	-0.8
MHGZ	**Mahia Peninsul**	**2.44**	**90**	PN	Pn	15 49 18.0	-0.8
THZ	**Tophouse**	**2.92**	**209**	PN	Pn	15 49 23.2	-0.8
MXZ	**Matakaoa Point**	**3.23**	**60**	PN	Pn	15 49 25.9	-1.7
KHZ	**Kahutara**	**3.33**	**196**	PN	Pn	15 49 28.3	-0.4
LTZ	**Lake Taylor**	**4.04**	**207**	PN	Pn	15 49 36.1	-1.1

*ISCJB **14** 15:51:21.0±0.6, 37°.12N±0°.04×27°.94E±0°.04, h6km±10km, Error ellipse: s-maj=6.8km s-min=5.0km az=24.0*
*CSEM **14** 15:51:20.9±0.2, 37°.13N×27°.92E, h15km, MD2.0, Error ellipse: s-maj=6.1km s-min=4.8km az=8.0*
*ISK **14** 15:51:20.2, 37°.13N×27°.90E, h5km, MD2.0*
*DDA **14** 15:51:21.4, 37°.16N×27°.87E, h6km, MD2.5*
ISC 14 15:51:20.3±1.1**, 37°09N**±0°.03×**27°94E**±0°.02**, h6**km±13km**, n16**, σ0°44/28, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.24**	**327**	*e*PG	**Pg**	**15 51 25.0**	**-0.1**
MLSB				*e*SG	**Sg**	**15 51 28.4**	**+0.1**
MLSB	**Milas**	**0.24**	**327**	*e*Pg	**Pg**	**15 51 25.0**	**-0.1**
MLSB				*e*Sg	**Sg**	**15 51 28.4**	**+0.1**
YER	**Yerkesik**	**0.28**	**81**	*e*PG	**Pb**	**15 51 27.5**	**-0.3**
YER				*e*SG	**Sb**	**15 51 33.0**	**+0.2**
YER	**Yerkesik**	**0.28**	**81**	*e*Pg	**Pb**	**15 51 27.5**	**-0.3**
YER				*e*Sg	**Sb**	**15 51 33.0**	**+0.2**
DAT	**Datca**	**0.47**	**219**	*e*PG	**Pb**	**15 51 30.5**	**-0.5**
DAT	**Datca**	**0.47**	**219**	*e*Pg	**Pb**	**15 51 30.5**	**-0.5**
BODT	**Bodrum**	**0.50**	**267**	*e*PG	**Pg**	**15 51 30.8**	**+0.7**
BODT				*e*SG	**Sb**	**15 51 38.9**	**-0.3**
BODT	**Bodrum**	**0.50**	**267**	*e*Pg	**Pg**	**15 51 30.8**	**+0.7**
BODT				*e*Sg	**Sb**	**15 51 38.9**	**-0.3**
AYDN	**Tasoluk**	**0.57**	**355**	*i* P	**Pg**	**15 51 31.6**	**+0.3**
AYDN				*i* S	**Sg**	**15 51 38.4**	**-0.3**
AYDN	**Tasoluk**	**0.57**	**355**	*i* P	**Pg**	**15 51 31.6**	**+0.3**
AYDN				*i* S	**Sg**	**15 51 38.4**	**-0.3**
TURN	**Turunc**	**0.57**	**112**	*i* P	**Pg**	**15 51 31.2**	**-0.2**
TURN				*i* S	**Sg**	**15 51 38.5**	**-0.4**
TRN	**Turunc**	**0.57**	**112**	*i* P	**Pg**	**15 51 31.2**	**-0.2**
TURN				*i* S	**Sg**	**15 51 38.5**	**-0.4**
DALT	**Dalyan (Mudla)**	**0.65**	**120**	*e*PG	**Pb**	**15 51 35.0**	**+0.9**
DALT	**Dalyan (Mudla)**	**0.65**	**120**	*e*Pg	**Pb**	**15 51 35.0**	**+0.9**
DNZL	**Cakiroluk**	**1.06**	**56**	*i* P	**Pb**	**15 51 41.3**	**0.0**
DNZL				*i* S	**Sb**	**15 51 55.5**	**0.0**
DNZL	**Cakiroluk**	**1.06**	**56**	*i* P	**Pb**	**15 51 41.3**	**0.0**
DNZL				*i* S	**Sb**	**15 51 55.5**	**0.0**

IDC 14 16:00:05.5±3.1**, 6°28S**×**148°44E, h71**km±27km**, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.2**/17**, mbtmp3.5**/4**, Error ellipse: s-maj=88.3km s-min=17.1km az=119.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.35**	**202**	P	Pn	16 00 55.1	-0.4
	21nm,0.3s,baz=21,slow=11,SNR=79						
PMG				S	Sn	16 01 34.9	+0.8
	12nm,0.3s,baz=38,slow=18,SNR=15						
ASAR	**Alice Springs**	**22.23**	**217**	P	P	16 04 56.2	-0.3
	1.0nm,0.4s,baz=51,slow=9.6,SNR=44						
ASAR				S	S	16 08 57.3	+0.3
	0.6nm,1.0s,baz=36,slow=24,SNR=3.5						
STKA	**Stephens Creek**	**26.25**	**193**	P	P	16 05 34.4	+0.4
	3.2nm,1.1s,baz=24,slow=13,SNR=3.6						
ILAR	**Eielson Array**	**85.18**	**23**	P	P	16 12 32.5	-1.1
	0.2nm,0.8s,baz=239,slow=5.8,SNR=4.2						
TORD	**Torodi Ar. Bea**	**146.55**	**284**	PKPbc	PKPab	16 19 40.4	-0.5
	0.3nm,0.5s,baz=39,slow=2.9,SNR=3.9						

*CSEM **14** 16:00:39.6, 42°.44N×13°.31E, h11km, MD1.8/7, After ROM*
ROM 14 16:00:39.6±0.1**, 42°.44N×13°.31E, h11**km**, Md1.8/7, Error ellipse: s-maj=1.5km s-min=0.9km az=52.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.11**	**141**	Pg	Pg	16 00 42.8	+0.3
AQU				Sg	Sg	16 00 45.1	+0.5
AQU	**L'Aquila**	**0.11**	**141**	Pg	Pg	16 00 42.8	+0.3
AQU				Sg	Sg	16 00 45.1	+0.5
CAMP	**Campotosto**	**0.12**	**38**	Pg	Pg	16 00 43.2	+0.4
CAMP				Sg	Sg	16 00 45.8	+0.7
CAMP	**Campotosto**	**0.12**	**38**	Pg	Pg	16 00 43.2	+0.4
CAMP				Sg	Sg	16 00 45.8	+0.7
LNSS	**Leonessa**	**0.26**	**310**	Pg	Pg	16 00 45.1	0.0
LNSS				Sg	Sg	16 00 49.8	+1.1
LNSS	**Leonessa**	**0.26**	**310**	Pg	Pg	16 00 45.1	0.0
LNSS				Sg	Sg	16 00 49.8	+1.1
FAGN	**Fagnano**	**0.27**	**130**	Pg	Pb	16 00 46.1	-0.5
FAGN				Sg	Sb	16 00 50.2	-1.0
FAGN	**Fagnano**	**0.27**	**130**	Pg	Pb	16 00 46.1	-0.5
FAGN				Sg	Sb	16 00 50.2	-1.0
TERO	**Teramo**	**0.29**	**50**	Pg	Pg	16 00 45.7	+0.2
TERO				Sg	Sg	16 00 50.3	+0.8
TERO	**Teramo**	**0.29**	**50**	Pg	Pg	16 00 45.7	+0.2
TERO				Sg	Sg	16 00 50.3	+0.8
VCEL	**Villa Celiera**	**0.40**	**96**	Pg	Pg	16 00 48.0	+0.4
VCEL				Sg	Sg	16 00 53.9	+0.9
VCEL	**Villa Celiera**	**0.40**	**96**	Pg	Pg	16 00 48.0	+0.4
VCEL				Sg	Sg	16 00 53.9	+0.9
NRCA	**Norcia**	**0.42**	**340**	Pg	Pg	16 00 48.3	+0.3
NRCA				Sg	Sb	16 00 55.0	-0.7
NRCA	**Norcia**	**0.42**	**340**	Pg	Pg	16 00 48.3	+0.3
NRCA				Sg	Sb	16 00 55.0	-0.7

*CSEM **14** 16:01:06.8, 42°.35N×13°.49E, h8km, After ROM*
ROM 14 16:01:06.8±0.1**, 42°.35N×13°.49E, h8**km±1km**, Ml2.6**/20**, Error ellipse: s-maj=1.3km s-min=1.0km az=41.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**277**	Pg	Pg	16 01 09.2	+0.4
AQU				Sg	Sg	16 01 10.9	+0.6
	8μm,0.9s						
AQU	**L'Aquila**	**0.07**	**277**	Pg	Pg	16 01 09.2	+0.4
AQU				Sg	Sg	16 01 10.9	+0.6
	8μm,0.9s						
FAGN	**Fagnano**	**0.10**	**140**	Pg	Pg	16 01 09.7	+0.3
FAGN				Sg	Sg	16 01 11.8	+0.7
FAGN	**Fagnano**	**0.10**	**140**	Pg	Pg	16 01 09.7	+0.3
FAGN				Sg	Sg	16 01 11.8	+0.7
CAMP	**Campotosto**	**0.20**	**342**	Pg	Pg	16 01 11.6	+0.5
CAMP				Sg	Sg	16 01 15.4	+1.4
	927nm,0.7s						
CAMP	**Campotosto**	**0.20**	**342**	Pg	Pg	16 01 11.6	+0.5
CAMP				Sg	Sg	16 01 15.4	+1.4
	927nm,0.7s						
VCEL	**Villa Celiera**	**0.26**	**79**	Pg	Pg	16 01 13.0	+0.8
VCEL				Sg	Sb	16 01 17.6	-1.1
	2μm,0.7s						
VCEL	**Villa Celiera**	**0.26**	**79**	Pg	Pg	16 01 13.0	+0.8
VCEL				Sg	Sb	16 01 17.6	-1.1
	2μm,0.7s						
FIAM	**Fiamignano**	**0.29**	**255**	Pg	Pg	16 01 13.2	+0.5
FIAM	**Fiamignano**	**0.29**	**255**	Pg	Pg	16 01 13.2	+0.5
TERO	**Teramo**	**0.29**	**16**	Pg	Pg	16 01 13.0	+0.4
TERO				Sg	Sg	16 01 17.8	+1.2
	1μm,0.7s						
TERO	**Teramo**	**0.29**	**16**	Pg	Pg	16 01 13.0	+0.4
TERO				Sg	Sg	16 01 17.8	+1.2
	1μm,0.7s						
PTQR	**Pietraquaria**	**0.33**	**192**	Pg	Pg	16 01 13.8	+0.3
PTQR				Sg	Sb	16 01 20.2	-0.4
	165nm,0.5s						
PTQR	**Pietraquaria**	**0.33**	**192**	Pg	Pg	16 01 13.8	+0.3
PTQR				Sg	Sb	16 01 20.2	-0.4
	165nm,0.5s						
LNSS	**Leonessa**	**0.42**	**308**	Pg	Pg	16 01 14.9	-0.3
LNSS				Sg	Sb	16 01 23.2	-0.2
	968nm,0.9s						
LNSS	**Leonessa**	**0.42**	**308**	Pg	Pg	16 01 14.9	-0.3
LNSS				Sg	Sb	16 01 23.2	-0.2
	968nm,0.9s						
INTR	**Introdacqua**	**0.45**	**137**	Pg	Pg	16 01 15.9	+0.2
INTR				Sg	Sb	16 01 23.5	-0.6
	1μm,0.8s						
INTR	**Introdacqua**	**0.45**	**137**	Pg	Pg	16 01 15.9	+0.2
INTR				Sg	Sb	16 01 23.5	-0.6
	1μm,0.8s						
VVLD	**Villa Vallelon**	**0.48**	**169**	Pg	Pg	16 01 16.4	+0.1
	773nm,0.5s						
VVLD	**Villa Vallelon**	**0.48**	**169**	Pg	Pg	16 01 16.4	+0.1
	773nm,0.5s						
CERT	**Cerreto**	**0.55**	**224**	Pg	Pg	16 01 17.6	+0.1
	1μm,0.8s						
CERT	**Cerreto**	**0.55**	**224**	Pg	Pg	16 01 17.6	+0.1
	1μm,0.8s						
NRCA	**Norcia**	**0.56**	**330**	Pg	Pg	16 01 17.8	0.0
NRCA				Sg	Sb	16 01 27.2	-0.1
	196nm,0.8s						
NRCA	**Norcia**	**0.56**	**330**	Pg	Pg	16 01 17.8	0.0
NRCA				Sg	Sb	16 01 27.2	-0.1
	196nm,0.8s						
GUAR	**Guarcino**	**0.57**	**194**	Pg	Pb	16 01 18.8	-0.3
GUAR	**Guarcino**	**0.57**	**194**	Pg	Pb	16 01 18.8	-0.3
LPEL	**Lama dei Pelig**	**0.59**	**120**	Pg	Pg	16 01 18.4	0.0
LPEL				Sg	Sb	16 01 27.6	-0.5
	483nm,0.8s						
LPEL	**Lama dei Pelig**	**0.59**	**120**	Pg	Pg	16 01 18.4	0.0
LPEL				Sg	Sb	16 01 27.6	-0.5
	483nm,0.8s						
MNS	**Montasola**	**0.60**	**274**	Pg	Pg	16 01 18.8	+0.3
	213nm,1.0s						
MNS	**Montasola**	**0.60**	**274**	Pg	Pg	16 01 18.8	+0.3
	213nm,1.0s						
OFFI	**Offida**	**0.61**	**14**	Pg	Pb	16 01 19.7	0.0
	994nm,0.8s						
OFFI	**Offida**	**0.61**	**14**	Pg	Pb	16 01 19.7	0.0
	994nm,0.8s						
MTCE	**Montecelio**	**0.65**	**240**	Pg	Pg	16 01 19.8	+0.5
	267nm,1.0s						
MTCE	**Montecelio**	**0.65**	**240**	Pg	Pg	16 01 19.8	+0.5
	267nm,1.0s						
POFI	**Posta Fibreno**	**0.65**	**165**	Pg	Pg	16 01 19.0	-0.5
POFI	**Posta Fibreno**	**0.65**	**165**	Pg	Pg	16 01 19.0	-0.5
SDI	**San Donato**	**0.68**	**160**	Pg	Pg	16 01 19.8	-0.2
SDI				Sg	Sb	16 01 30.9	+0.3
	212nm,0.5s						
SDI	**San Donato**	**0.68**	**160**	Pg	Pg	16 01 19.8	-0.2
SDI				Sg	Sb	16 01 30.9	+0.3
	212nm,0.5s						
FDMO	**Fiordimonte**	**0.75**	**337**	Pg	Pg	16 01 21.2	-0.2
	109nm,0.8s						
FDMO	**Fiordimonte**	**0.75**	**337**	Pg	Pg	16 01 21.2	-0.2
	109nm,0.8s						
CESI	**CESI - Serrava**	**0.79**	**327**	Pg	Pg	16 01 21.9	-0.2
	49nm,0.7s						
CESI	**CESI - Serrava**	**0.79**	**327**	Pg	Pg	16 01 21.9	-0.2
	49nm,0.7s						
GIUL	**Giuliano Di Ro**	**0.81**	**193**	Pg	Pg	16 01 22.4	0.0
	147nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.81**	**193**	Pg	Pg	16 01 22.4	0.0
	147nm,0.6s						
RNI2	**Rionero Sannit**	**0.81**	**142**	Pg	Pg	16 01 22.5	0.0
	443nm,0.9s						
RNI2	**Rionero Sannit**	**0.81**	**142**	Pg	Pg	16 01 22.5	0.0
	443nm,0.9s						
CERA	**Filignano**	**0.84**	**152**	Pg	Pg	16 01 22.4	-0.8
	325nm,0.7s						
CERA	**Filignano**	**0.84**	**152**	Pg	Pg	16 01 22.4	-0.8
	325nm,0.7s						
MIDA	**Miranda**	**0.90**	**141**	Pg	Pg	16 01 23.4	-0.9
	181nm,0.7s						
MIDA	**Miranda**	**0.90**	**141**	Pg	Pg	16 01 23.4	-0.9
	181nm,0.7s						
VAGA	**Valle Agricola**	**1.08**	**149**	Pg	Pg	16 01 26.9	-0.8
	144nm,1.0s						
VAGA	**Valle Agricola**	**1.08**	**149**	Pg	Pg	16 01 26.9	-0.8
	144nm,1.0s						
SGG	**Gregorio Mates**	**1.17**	**145**	Pg	Pn	16 01 29.4	-0.1
SGG	**Gregorio Mates**	**1.17**	**145**	Pg	Pn	16 01 29.4	-0.1
PTRJ	**Pietraroja**	**1.25**	**141**	Pg	Pn	16 01 30.5	-0.2
	371nm,1.0s						
PTRJ	**Pietraroja**	**1.25**	**141**	Pg	Pn	16 01 30.5	-0.2
	371nm,1.0s						

*ISCJB **14** 16:08:03.4±0.9, 50°.03N±0°.05×88°.22E±0°.08, h11km, Error ellipse: s-maj=7.8km s-min=7.1km az=7.3*
*IDC **14** 16:08:03.5±1.8, 50°.00N×88°.27E, h0km, mb1 3.3/4, mb1mx3.1/30, mbtmp3.3/4, ML3.2/4, Error ellipse: s-maj=17.5km s-min=14.2km az=103.0*
*NNC **14** 16:08:08.3±2.3, 49°.86N×87°.82E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=17.8km s-min=11.0km az=77.0*
ISC 14 16:08:05.5±1.2**, 49°98N**±0°.07×**88°16E**±0°.07**, h11**km**, n12, σ2°35/23, 13C-6D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**4.48**	**334**	Pn	**Pn**	**16 09 14.0**	**+0.6**
	2.2nm,0.3s,baz=153,slow=13,SNR=29						
ZALV				Sn	**Sn**	**16 10 05.2**	**-0.2**
	1.9nm,0.3s,baz=169,slow=17,SNR=4.7						
ZALV				Lg	Lg	16 10 24.9	
	2.4nm,0.3s,baz=146,slow=25,SNR=5.3						
MK31	**Makanchi Array**	**5.04**	**233**	⇓Pn	**Pn**	**16 09 22.2**	**+1.1**
	8.0nm,0.6s,baz=59,slow=14,SNR=269						
MK31				⇓Pg	**Pb**	**16 09 35.9**	**+2.1**
	5.7nm,0.5s,baz=54,slow=19,SNR=5.8						
MK31				⇑Sn	**Sn**	**16 10 20.7**	**+1.4**
	6.5nm,0.5s,baz=64,slow=19,SNR=5.2						
MK31				⇑Lg	Lg	16 10 40.1	
	45nm,0.8s,baz=57,slow=34,SNR=8.0						
MKAR	**Makanchi Array**	**5.04**	**233**	Pn	**Pn**	**16 09 22.4**	**+1.3**
	5.3nm,0.3s,baz=50,slow=15,SNR=177						
MKAR				Sn	**Sn**	**16 10 22.5**	**+3.2**
	5.6nm,0.3s,baz=55,slow=25,SNR=10						
MKAR				Lg	Lg	16 10 42.5	
	6.1nm,0.3s,baz=38,slow=26,SNR=14						
KURK	**Kurchatov**	**6.15**	**281**	⇑Pn	**Pn**	**16 09 37.7**	**+1.5**
	6.0nm,0.7s						
KURK				⇑Sn	**Sn**	**16 10 48.7**	**+2.1**
	3.8nm,0.4s						
KURK				⇓Lg	Lg	16 11 19.1	
	24nm,0.6s						
KUR18	**Kurchatov Arra**	**6.27**	**280**	⇑Pn	**Pn**	**16 09 39.4**	**+1.6**
	0.4nm,0.6s						
KUR18				⇓Sn	**Sn**	**16 10 51.0**	**+1.7**
	0.4nm,0.5s						
KUR18				⇑Lg	Lg	16 11 21.7	
	1.4nm,0.7s						
VOSK	**Vostochnaya**	**11.09**	**291**	⇓Pn	**Pn**	**16 10 43.8**	**-0.2**
	1.5nm,0.8s						
VOSK				⇑Sn	**Sn**	**16 12 46.3**	**-1.6**
	3.2nm,0.9s						
TKM2	**Tokmak 2**	**11.17**	**236**	⇑Sn	**Sn**	**16 12 46.2**	**-3.9**
	2.2nm,1.0s						
BVA0	**Borovoye Array**	**11.49**	**292**	⇑Pn	**Pn**	**16 10 52.4**	**+3.0**
	0.5nm,1.2s,baz=102,slow=12,SNR=5.6						
BVA0				⇑Sn	**Sn**	**16 12 58.6**	**+1.0**
	0.7nm,1.1s,baz=99,slow=23,SNR=3.8						
BVAR	**Borovoye Array**	**11.49**	**292**	Pn	**Pn**	**16 10 48.1**	**-1.2**
	0.1nm,0.3s,baz=98,slow=14,SNR=2.1						
BVAR				Sn	**Sn**	**16 12 52.8**	**-4.8**
	0.2nm,0.3s,baz=102,slow=21,SNR=3.8						
BRVK	**Borovoye**	**11.56**	**292**	⇑Pn	**Pn**	**16 10 53.3**	**+3.0**
	6.4nm,1.5s						
BRVK				⇑Sn	**Sn**	**16 13 00.4**	**+1.2**
	5.6nm,0.8s						
SONM	**Songino Array**	**12.19**	**93**	Pn	**Pn**	**16 10 58.2**	**-0.9**
	0.0nm,0.3s,baz=275,slow=16,SNR=3.3						
SONM				Lg	Lg	16 14 25.2	
	0.1nm,0.3s,baz=290,slow=28,SNR=7.4						
KK31	**Karatay Array**	**13.94**	**247**	⇑Pn	**Pn**	**16 11 21.5**	**-1.4**
	0.3nm,0.3s,baz=47,slow=13,SNR=4.3						
KK31				⇓Sn	**Sn**	**16 13 54.1**	**-3.5**
	1.5nm,0.8s,baz=55,slow=29,SNR=5.8						

*ISCJB **14** 16:08:28.5±0.3, 22°.92N±0°.02×121°.39E±0°.02, h38km±6km, Error ellipse: s-maj=3.4km s-min=2.6km az=139.1*
*TAP **14** 16:08:28.5, 22°.96N×121°.29E, h41km, ML3.6, B*
*JMA **14** 16:08:29.5±0.3, 22°.99N×121°.44E, h98km, M3.1*
ISC 14 16:08:28.9±0.9**, 22°94N**±0°.02×**121°36E**±0°.03**, h32**km±7km**, n60, σ0°82/105, 4C-5D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.16**	**2**	*e*P	**Pb**	**16 08 35.4**	**+0.5**
	baz=38						
CHKT				*e*S	**Sn**	**16 08 41.4**	**+2.3**
	baz=38						
TTN	**Taitung**	**0.27**	**227**	P	**Pb**	**16 08 36.9**	**+0.7**
	baz=209						
TTN				*e*S	**Sn**	**16 08 43.3**	**+1.5**
	baz=209						
TWG	**Pinlang**	**0.29**	**246**	⇓*i*P	**Pb**	**16 08 36.1**	**-0.3**
	baz=232						
TWG				*i* S	**Sb**	**16 08 41.3**	**-0.2**
	baz=232						
ELDTW	**Lidau**	**0.40**	**308**	⇑*i*P	**Pb**	**16 08 37.5**	**-0.5**
	baz=314						
TWF1	**Yuli**	**0.41**	**352**	⇓*i*P	**Pb**	**16 08 37.6**	**-0.6**
	baz=358						
TWF1				*e*S	**Sb**	**16 08 44.0**	**-0.5**
	baz=358						
ECL	**Taimali**	**0.51**	**228**	⇓*i*P	**Pb**	**16 08 38.3**	**-1.3**
	baz=215						
ECL				S	**Sb**	**16 08 45.5**	**-1.3**
	baz=215						
EHY	**Hungye**	**0.56**	**

TYC	**Yuchr**	**1.07**	**334**	*i* P	**Pn**	**16 08 48.0**	**+0.3**
	baz=340							
TYC				S	**Sn**	**16 09 02.4**	**+1.0**
	baz=340							
HEN	**Hengchun**	**1.09**	**212**	*e*P	**Pn**	**16 08 47.9**	**-0.1**
	baz=197							
TWP	**Hsiaoliuchiu**	**1.09**	**238**	*e*P	**Pb**	**16 08 49.3**	**0.0**
	baz=234							
SCLT	**Jiali**	**1.10**	**283**	*e*P	**Pn**	**16 08 48.0**	**-0.2**
	baz=282							
SCLT				*e*S	**Sn**	**16 09 02.4**	**+0.2**
	baz=282							
TWK1	**Hengchun**	**1.12**	**207**	*e*P	**Pn**	**16 08 47.6**	**-0.8**
	baz=193							
TWK1				*e*S	**Sn**	**16 09 02.0**	**-0.7**
	baz=193							
TSEB	**Hengchuen, Pin**	**1.12**	**202**	*e*P	**Pn**	**16 08 49.4**	**+1.0**
	baz=190							
TSEB				*e*S	**Sn**	**16 09 02.5**	**-0.2**
	baz=190							
WNT	**Mingjian**	**1.12**	**327**	*e*P	**Pn**	**16 08 49.0**	**+0.5**
	baz=331							
WNT				*e*S	**Sn**	**16 09 03.7**	**+0.9**
	baz=331							
CHN8	**Yiju**	**1.13**	**291**	P	**Pn**	**16 08 48.0**	**-0.5**
	baz=292							
CHN8				*e*S	**Sn**	**16 09 03.0**	**0.0**
	baz=292							
TWD	**Chiawan**	**1.16**	**11**	*e*P	**Pn**	**16 08 47.5**	**-1.4**
	baz=17							
TWD				*e*S	**Sn**	**16 09 03.4**	**-0.3**
	baz=17							
WHF	**Hehuan Shan**	**1.20**	**356**	*e*P	**Pn**	**16 08 49.1**	**-0.9**
	baz=11							
WHF				*e*S	**Sn**	**16 09 04.9**	**-0.6**
	baz=11							
WSF	**Szhu**	**1.26**	**304**	P	**Pn**	**16 08 49.6**	**-0.7**
	baz=306							
WSF				*e*S	**Sn**	**16 09 05.3**	**-0.8**
	baz=306							
TWT	**Tachien**	**1.32**	**353**	P	**Pn**	**16 08 51.3**	**0.0**
	baz=4.0							
TWT				*e*S	**Sn**	**16 09 09.4**	**+1.5**
	baz=4.0							
WTCT	**Ta-ch'eng**	**1.35**	**313**	*e*P	**Pn**	**16 08 50.9**	**-0.7**
	baz=316							
WTCT				*e*S	**Sn**	**16 09 08.2**	**-0.3**
	baz=316							
TCU	**Taichung**	**1.36**	**333**	*e*P	**Pn**	**16 08 51.9**	**+0.2**
	baz=337							
TCU				*e*S	**Sn**	**16 09 08.8**	**+0.2**
	baz=337							
NNS	**Nan Shan**	**1.49**	**0**	*e*P	**Pn**	**16 08 53.5**	**-0.2**
	baz=18							
NNS				*e*S	**Sb**	**16 09 15.0**	**+0.1**
	baz=18							
TWQ1	**Liyutan**	**1.50**	**339**	*e*P	**Pn**	**16 08 54.2**	**+0.5**
	baz=344							
TWQ1				*e*S	**Sn**	**16 09 14.0**	**+1.8**
	baz=344							
ENA	**Nanau**	**1.52**	**13**	*e*P	**Pn**	**16 08 52.7**	**-1.3**
	baz=19							
NSY	**Sanyi**	**1.57**	**340**	*e*P	**Pn**	**16 08 55.7**	**+1.0**
	baz=345							
NSY				*e*S	**Sb**	**16 09 16.1**	**-0.8**
	baz=345							
ENTT	**Nioudou**	**1.70**	**6**	*e*P	**Pn**	**16 08 55.9**	**-0.6**
	baz=23							
NSTT	**Nanjuang**	**1.72**	**349**	P	**Pn**	**16 08 57.0**	**+0.4**
	baz=355							
NSTT				*e*S	**Sn**	**16 09 17.9**	**+0.5**
	baz=355							
TWC	**Suao**	**1.72**	**15**	*e*P	**Pn**	**16 08 56.5**	**-0.2**
	baz=21							
NSK	**Sanguang**	**1.73**	**360⇑**	*i*P	**Pn**	**16 08 57.1**	**+0.2**
	baz=18							
NSK				*e*S	**Sn**	**16 09 17.1**	**-0.8**
	baz=18							
PNG	**Penghu**	**1.77**	**291**	⇑P	**Pn**	**16 08 56.0**	**-1.4**
	baz=278							
TWE	**Neicheng**	**1.80**	**9**	*e*P	**Pn**	**16 08 57.5**	**-0.3**
	baz=24							
TWE				*e*S	**Sn**	**16 09 20.2**	**+0.8**
	baz=24							
TWB1	**Santiao Chiao**	**2.14**	**15**	P	**Pn**	**16 09 03.4**	**+0.9**
	baz=15							
YOJ	**Yonaguni jima**	**2.14**	**45**	P	**Pn**	**16 09 03.3**	**+0.8**
YOJ				S	**Sn**	**16 09 28.4**	**+0.4**
NWF	**Wu-fen Shan**	**2.16**	**10**	*e*P	**Pn**	**16 09 00.9**	**-1.9**
	baz=17							
NWF				*e*S	**Sn**	**16 09 27.0**	**-1.5**
	baz=17							
HATJ	**Hateruma jima**	**2.50**	**63**	P	**Pn**	**16 09 07.9**	**+0.4**
HATJ				S	**Sn**	**16 09 37.3**	**+0.3**
IRIF	**Iriomote-Funau**	**2.58**	**57**	P	**Pn**	**16 09 09.2**	**+0.7**
IRIF				S	**Sn**	**16 09 39.6**	**+0.8**
JKRS	**Kuro-shima**	**2.75**	**61**	P	**Pn**	**16 09 11.7**	**+0.8**
JKRS				S	**Sn**	**16 09 44.1**	**+1.0**
JIJ	**Ishigaki jima**	**2.92**	**60**	P	**Pn**	**16 09 13.3**	**+0.1**
JIJ				S	**Sn**	**16 09 46.6**	**-0.6**
KNM	**Kinmen**	**3.06**	**299**	*e*P	**Pn**	**16 09 14.9**	**-0.2**
	baz=297							
JTJ	**Tarama**	**3.50**	**60**	P	**Pn**	**16 09 21.7**	**+0.6**
JTJ				S	**Sn**	**16 10 01.4**	**-0.1**

IDC 14 16:38:06.2±4.4, 39°.61N×118°.21E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.4/23, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=109.3km s-min=37.1km az=23.0, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**7.91**	**103**	Pn	Pn	16 40 02.3	-0.2
	0.6nm,0.3s,baz=288,slow=13,SNR=11						
KSRS				Sn	Sn	16 41 24.1	-8.6
	0.2nm,0.3s,baz=283,slow=24,SNR=2.4						
ILAR	**Eielson Array**	**56.95**	**31**	P	P	16 47 52.7	-0.2
	0.1nm,0.6s,baz=269,slow=7.9,SNR=2.9						
FINES	**FINESS Array B**	**57.11**	**325**	P	P	16 47 53.9	-0.1
	0.9nm,0.7s,baz=57,slow=7.0,SNR=4.3						
YKA	**Yellowknife Ar**	**69.78**	**23**	P	P	16 49 17.9	+0.1
	0.6nm,0.7s,baz=322,slow=5.8,SNR=14						

*IDC **14** 16:56:45.7±1.1, 21°.55N×91°.79E, h0km, mb3.7/9, mb1 3.8/10, mb1mx3.6/29, mbtmp3.7/10, ML3.8/1, MS3.3/4, Ms1 3.3/4, ms1mx2.8/41, Error ellipse: s-maj=37.1km s-min=17.9km az=52.0*

*ISCJB **14** 16:56:46.0±0.6, 21°.56N±0°.06×91°.49E±0°.08, h10km, mb3.7/11, MS3.2/4, Error ellipse: s-maj=12.8km s-min=5.3km az=139.0*

ISC 14 16:56:46.8±0.7, 21°.54N±0°.08×91°.66E±0°.06, h10km, n37, σ1s75/38, mb3.8/11, MS3.2/4, Bay of Bengal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT	**Agartala**	**2.36**	**351**	*ex*	Pg	16 57 41.0	+8.9
AGT				*ex*	x	16 58 26.0	
CAL	**Calcutta**	**3.24**	**288**	*e*P	Pg	16 58 03.8	+15
CAL				*ex*	x	16 58 51.1	
IMP	**Imphal**	**3.85**	**33**	*ex*	Pn	16 57 41.0	-5.1
IMP				*e*S	Sn	16 57 59.0	-33
SHL	**Shillong**	**4.01**	**3**	*e*P	Pn	16 57 33.4	-15
SHL				*ex*	x	16 58 26.2	
SHL				AML	AML	16 59 16.7	
	comp=N,165nm,0.9s						
SHL				AML	AML	16 59 17.6	
	comp=E,208nm,0.9s						
BWNR	**Bhubaneshwar**	**5.61**	**258**	*ex*	Pn	16 58 03.0	-7.3
BWNR				*ex*	Sn	16 59 09.0	-5.8
BOK	**Bokaro**	**5.78**	**294**	*ex*	Pn	16 58 16.8	+4.1
BOK				*e*S	**Sn**	**16 59 17.2**	**-2.0**
BOK				AML	AML	16 59 26.4	
	comp=E,114nm,0.2s						
BOK				AML	AML	16 59 26.6	
	comp=N,138nm,0.2s						
ODAN	**Odare**	**6.57**	**324**	*e*Pn	**Pn**	**16 58 25.4**	**+1.6**
ODAN				*e*Sn	**Sn**	**16 59 38.2**	**-0.7**
TAPN	**Taplejung**	**6.81**	**329**	*e*Pn	**Pn**	**16 58 28.6**	**+1.5**
TAPN				*e*Sn	**Sn**	**16 59 43.9**	**-0.9**
	comp=N,308nm,0.6s						
RAMN	**Ramite**	**7.09**	**320**	*e*Pn	**Pn**	**16 58 32.8**	**+1.9**
RAMN				*e*Sn	**Sn**	**16 59 50.9**	**-0.8**
CMAR	**Chiang Mai Arr**	**7.50**	**113**	Pn	**Pn**	**16 58 35.4**	**-1.0**
	comp=N,0.4nm,0.3s,baz=288,slow=14,SNR=37						
CMAR				Sn	**Sn**	**16 59 59.9**	**-1.7**
	comp=N,0.3nm,0.3s,baz=289,slow=17,SNR=4.0						
GUN	**Gumba**	**8.23**	**322**	*e*Pn	**Pn**	**16 58 48.7**	**+2.0**
GUN				*e*Sn	**Sn**	**17 00 18.8**	**-1.1**
	comp=N,401nm,0.7s						
PKI	**Pulchoki**	**8.27**	**318**	*e*Pn	**Pn**	**16 58 48.6**	**+1.5**
PKI				*e*Sn	**Sn**	**17 00 19.9**	**-0.9**
PKIN	**Phulchoki**	**8.28**	**318**	*e*Pn	**Pn**	**16 58 48.5**	**+1.3**
PKIN				*e*Sn	**Sn**	**17 00 19.9**	**-1.1**
	comp=N,338nm,0.5s						
DGPR	**DIGLIPUR**	**8.41**	**171**	*e*P	Pn	16 58 50.8	+2.0
DGPR				AMB	AMB	16 59 01.0	
	comp=Z,83nm,0.3s						
DMN	**Daman**	**8.49**	**317**	*e*Pn	**Pn**	**16 58 51.6**	**+1.5**
DMN				*e*Sn	**Sn**	**17 00 23.7**	**-2.4**
	comp=Z,110nm,0.4s						
KKN	**Kakani**	**8.50**	**318**	*e*Pn	**Pn**	**16 58 51.5**	**+1.2**
KKN				*e*Sn	**Sn**	**17 00 24.9**	**-1.5**
VIS	**Vishakhapatnam**	**8.72**	**246**	*ex*	**Pn**	**16 58 54.7**	**+1.6**
VIS				*ex*	**Sn**	**17 00 31.3**	**-0.2**
VIS				AML	AML	17 00 37.2	
	comp=N,93nm,0.1s						
VIS				AML	AML	17 00 37.5	
	comp=E,47nm,0.1s						
KOLN	**Koldanda**	**9.60**	**312**	*e*Pn	**Pn**	**16 59 06.4**	**+1.1**
KOLN				*e*Sn	**Sn**	**17 00 50.3**	**-3.0**
	comp=E,172nm,0.5s						
DANN	**Dangsing**	**9.86**	**315**	*e*Pn	**Pn**	**16 59 09.4**	**+0.5**
DANN				*e*Sn	**Sn**	**17 00 56.2**	**-3.7**
	comp=E,90nm,0.4s						
PYUN	**Piuthan**	**10.22**	**311**	*e*Pn	**Pn**	**16 59 14.6**	**+0.7**
PYUN				*e*Sn	**Sn**	**17 01 04.9**	**-3.8**
	comp=E,252nm,0.7s						
BHPL	**Bhopal**	**13.28**	**280**	*e*P	**Pn**	**16 59 54.9**	**-0.6**
BHPL				AMB	AMB	16 59 59.7	
	comp=Z,23nm,0.0s						
SMLA	**Simla**	**16.11**	**309**	*e*P	Pn	17 00 26.8	-6.5
SMLA				AMB	AMB	17 00 40.9	
	comp=Z,14nm,7.3s						
SMLA				*ex*	x	17 03 20.3	
SMLA				AML	AML	17 03 30.8	
	comp=E,35nm,0.5s						
SMLA				AML	AML	17 03 32.3	
	comp=N,30nm,0.5s						
AJM	**Ajmer**	**16.30**	**291**	*e*P	**Pn**	**17 00 31.9**	**-4.1**
AJM				*ex*	x	17 01 12.4	
AJM				AML	AML	17 01 15.3	
	comp=E,339nm,0.2s						
AJM				AML	AML	17 01 15.6	
	comp=N,177nm,0.2s						
DHRM	**DHARAMSHALA**	**17.34**	**311**	*e*P	Pn	17 00 42.8	-6.5
DHRM				*ex*	x	17 03 51.9	
DHRM				AML	AML	17 03 56.9	
	comp=E,62nm,0.6s						
DHRM				AML	AML	17 04 00.0	
	comp=N,52nm,0.7s						
AAK	**Ala-Archa**	**25.47**	**330**	P	P	17 02 19.2	+3.9
	comp=N,0.9nm,0.8s,baz=125,slow=5.8,SNR=3.6						
AAK				LR	LR	17 13 00.7	
	comp=N,46nm,21.9s,baz=314,slow=38						
MKAR	**Makanchi Array**	**26.32**	**345**	P	**P**	**17 02 22.9**	**+0.3**
	comp=N,2.2nm,0.6s,baz=158,slow=9.6,SNR=16						
SONM	**Songino Array**	**28.79**	**21**	P	**P**	**17 02 44.1**	**-0.8**
	comp=N,0.3nm,0.8s,baz=194,slow=12,SNR=2.6						
SONM				LR	LR	17 16 23.9	
	comp=N,54nm,18.8s,baz=240,slow=41						
KURBB	**Kurchatov Arra**	**30.80**	**344**	P	**P**	**17 03 03.5**	**+0.9**
	comp=N,1.3nm,0.6s,baz=162,slow=8.5,SNR=4.4						
ZALV	**Zalesovo Beam**	**32.77**	**353**	P	**P**	**17 03 20.9**	**+1.0**
	comp=N,0.4nm,0.3s,baz=167,slow=9.1,SNR=5.1						
BVAR	**Borovoye Array**	**35.41**	**338**	P	**P**	**17 03 44.5**	**+1.7**
	comp=N,0.3nm,0.4s,baz=160,slow=8.8,SNR=3.3						
AKTO	**Aktyubinsk**	**39.08**	**326**	P	P	17 04 23.3	+9.3
	comp=N,1.1nm,0.6s,baz=128,slow=7.8,SNR=4.8						
MLR	**Muntele Rosu**	**58.07**	**311**	LR	LR	17 36 24.9	
	comp=N,20nm,18.7s,baz=8.0,slow=41						
FINES	**FINESS Array B**	**59.66**	**330**	P	**P**	**17 06 51.5**	**+0.5**
	comp=N,0.5nm,0.7s,baz=96,slow=5.6,SNR=2.6						
ASAR	**Alice Springs**	**60.91**	**135**	P	**P**	**17 07 00.2**	**+0.1**
	comp=N,1.0nm,0.8s,baz=311,slow=6.5,SNR=21						
NOA	**NORSAR Array B**	**66.79**	**329**	LR	LR	17 39 21.7	
	comp=N,26nm,18.5s,baz=270,slow=38						
INK	**Inuvik**	**84.55**	**15**	P	**P**	**17 09 20.2**	**+0.4**
	comp=N,1.2nm,0.9s,baz=336,slow=5.0,SNR=3.0						
TORD	**Torodi Ar. Bea**	**85.23**	**282**	P	**P**	**17 09 25.0**	**+0.7**
	comp=N,0.7nm,1.1s,baz=66,slow=4.2,SNR=2.4						

*ISCJB **14** 17:01:57.1±0.8, 6°.91N±0°.09×73°.0W±0°.1, h156km±9km, mb3.1/1, Error ellipse: s-maj=21.8km s-min=6.9km az=37.5*

*IDC **14** 17:01:59.4±6.5, 6°.65N×73°.12W, h172km±39km, mb2.6/1, mb1 3.0/2, mb1mx2.7/23, mbtmp2.8/2, Error ellipse: s-maj=158.6km s-min=41.6km az=98.0*

*FUNV **14** 17:01:59.4, 6°.78N×73°.00W, h143km, MW3.4*

ISC 14 17:01:58.0±1.1, 6°.83N±0°.08×72°.92W±0°.09, h150km±10km, n11, σ1s53/19, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.19**	**30⇑**	*e*P	**Pn**	**17 02 25.9**	**+1.1**
CAPV				*e*S	**Sn**	**17 02 45.0**	**-0.2**
ROSC	**El Rosal**	**2.41**	**216**	P	**Pn**	**17 02 38.1**	**-0.3**
	8.7nm,0.3s,baz=360,slow=3.3,SNR=22						
ROSC				S	**Sn**	**17 03 08.4**	**-1.1**
	17nm,0.3s,baz=360,slow=20,SNR=30						
SOCV	**Socops**	**2.50**	**55**	*e*P	**Pn**	**17 02 40.5**	**+1.3**
SOCV				*e*S	**Sn**	**17 03 10.8**	**-0.2**
VIGV	**El Vigia**	**2.52**	**37⇑**	*e*P	**Pn**	**17 02 40.5**	**+1.0**
VIGV				*e*S	**Sn**	**17 03 11.0**	**-0.5**
ELOV	**Elorza**	**3.41**	**87**	*e*P	**Pn**	**17 02 51.8**	**+1.1**
QARV	**Quebrada Arrib**	**4.11**	**35**	*e*P	**Pn**	**17 03 00.5**	**+0.7**
QARV				*e*S	**Sn**	**17 03 45.8**	**-2.0**
CURV	**Curarigua**	**4.31**	**43**	*e*P	**Pn**	**17 03 02.9**	**+0.5**
CURV				*e*S	**Sn**	**17 03 50.3**	**-2.2**
DABV	**Dabajuro**	**4.65**	**29**	*e*P	**Pn**	**17 03 07.3**	**+0.4**
DABV				*e*S	**Sn**	**17 03 58.4**	**-2.1**
BAUV	**El Baul**	**5.27**	**66**	*e*P	**Pn**	**17 03 15.7**	**+0.7**
BAUV				*e*S	**Sn**	**17 04 12.0**	**-3.1**
YKA	**Yellowknife Ar**	**63.33**	**340**	P	**P**	**17 12 10.4**	**-0.4**
	0.1nm,0.3s,baz=129,slow=7.0,SNR=4.2						
ASAR	**Alice Springs**	**149.28**	**234**	PKPbc	**PKPdf**	**17 21 27.6**	**+2.0**
	0.5nm,0.7s,baz=122,slow=3.6,SNR=8.7						

KRSC 14 17:09:58.7±1.6, 53°.05N×157°.54E, h277km±46km, ML4.1, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PET	**Petropavlovsk**	**0.67**	**92**	P	Pn	17 10 36.4	+1.3
GNL	**Ganaly**	**0.69**	**20**	P	Pn	17 10 35.8	+0.5
SMAR	**Somma**	**0.79**	**74**	P	Pn	17 10 37.5	+1.6
UGLR	**Uglovaya**	**0.79**	**78**	P	Pn	17 10 37.6	+1.8
SDLR	**Sedlovina**	**0.84**	**74**	P	Pn	17 10 37.7	+1.7
RUS	**Russkaya**	**0.86**	**136**	P	Pn	17 10 36.7	+0.8
SPN	**Mys Shipunski**	**1.50**	**87**	P	Pn	17 10 40.6	+1.1
SPN				*i* S	S	17 11 11.2	-0.7
MKZ	**Mys Kozlova**	**2.91**	**57**	P	Pn	17 10 53.3	+1.5
MKZ				*i* S	S	17 11 32.7	-1.4

*BJI **14** 17:14:22.7, 60°.20N×153°.00W, h121km, mB4.9/5, mb4.6/12*

*MOS **14** 17:14:24.7±0.7, 60°.24N×153°.24W, h121km, mb4.6/19, Error ellipse: s-maj=13.3km s-min=5.6km az=85.7*

*IDC **14** 17:14:24.6±1.0, 60°.24N×153°.30W, h103km±9km, mb3.9/21, mb1 4.1/26, mb1mx4.0/33, mbtmp4.0/26, Error ellipse: s-maj=10.7km s-min=8.5km az=90.0*

*ISCJB **14** 17:14:25.3±0.1, 60°.19N±0°.02×153°.10W±0°.04, h127km±1km, mb4.4/54, Error ellipse: s-maj=3.9km s-min=2.7km az=137.4*

*NEIC **14** 17:14:27.4, 60°.16N×153°.06W, h118km, mb4.5/21, After AEIC.*

NEIC Felt at Homer.

ISC 14 17:14:26.4±0.4, 60°.21N±0°.03×153°.14W±0°.03, h122km±3km, h121km; pP-P, n288, σ0s91/325, mb4.4/54, 5C-2D, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILW	**Iliamna West**	**0.15**	**179**	P	**Pn**	**17 14 43.1**	**-0.3**
INE	**Iliamna NE**	**0.15**	**165**	P	**Pn**	**17 14 43.0**	**-0.3**
ILIM	**Iliamna**	**0.16**	**145**	P	**Pn**	**17 14 42.9**	**-0.3**
REF	**Redoubt East F**	**0.35**	**37**	P	**Pn**	**17 14 44.0**	**0.0**
DFR	**Drift River**	**0.45**	**30**	P	**Pn**	**17 14 44.2**	**-0.1**
OPT	**Oil Point**	**0.56**	**185**	P	**Pn**	**17 14 44.8**	**-0.1**
AUL	**Augustine Lava**	**0.84**	**190**	P	**Pn**	**17 14 47.1**	**0.0**
AUL				S	**Sn**	**17 15 02.6**	**-0.1**
AUNW	**Augustine NWes**	**0.85**	**192**	P	**Pn**	**17 14 47.0**	**-0.1**
AUP	**Augustine Pinn**	**0.86**	**190**	P	**Pn**	**17 14 47.2**	**-0.1**
AUP	**Augustine Pinn**	**0.86**	**190**	P	**Pn**	**17 14 47.2**	**-0.1**
HOM	**Homer**	**0.93**	**126**	P	**Pn**	**17 14 48.0**	**+0.2**
NNL	**Ninilchik**	**0.94**	**99**	P	**Pn**	**17 14 48.7**	**+0.8**
NKA	**Nikishka**	**1.08**	**60**	P	**Pn**	**17 14 51.2**	**+1.9**
SPU	**Mount Spurr**	**1.11**	**28**	P	**Pn**	**17 14 50.1**	**+0.4**
BGL	**Barrier Glacie**	**1.12**	**19**	P	**Pn**	**17 14 50.6**	**+0.8**
CRP	**Crater Peak**	**1.17**	**24**	P	**Pn**	**17 14 51.1**	**+0.7**
CRP				S	**Sn**	**17 15 10.1**	**+1.5**
MCNL	**McNeil River**	**1.19**	**211**	P	**Pn**	**17 14 50.2**	**-0.3**
BRLK	**Bradley Lake**	**1.22**	**111**	P	**Pn**	**17 14 50.6**	**-0.2**
BRLK				S	**Sn**	**17 15 08.9**	**-0.4**
FOSS	**Fourpeaked Sta**	**1.44**	**192**	P	**Pn**	**17 14 53.0**	**-0.3**
STLK	**Strandline Lak**	**1.44**	**26**	P	**Pn**	**17 14 53.9**	**+0.6**
SLKM	**Skilak Lake**	**1.48**	**77**	P	**Pn**	**17 14 53.7**	**0.0**
SLKM	**Skilak Lake**	**1.48**	**77**	P	**Pn**	**17 14 53.7**	**0.0**
SVW2	**Sparrevohn**	**1.50**	**308**	P	**Pn**	**17 14 53.7**	**-0.1**
SVW2				S	**Sn**	**17 15 14.7**	**-0.1**
KAPH	**Katmai Pasha**	**1.73**	**201**	P	**Pn**	**17 14 56.5**	**-0.2**
KAPH				S	**Sn**	**17 15 19.4**	**-0.4**
SEW	**Seward**	**1.85**	**92**	P	**Pn**	**17 14 57.5**	**-0.4**
SEW				S	**Sn**	**17 15 20.1**	**-2.0**
SKT	**Skwentna**	**1.94**	**23**	P	**Pn**	**17 14 59.8**	**+0.7**
KAWH	**Katmai**	**2.02**	**206**	P	**Pn**	**17 14 59.8**	**-0.4**
KAKN	**Katmai Knife C**	**2.16**	**208**	P	**Pn**	**17 15 01.6**	**-0.3**
KAKN				S	**Sn**	**17 15 27.3**	**-1.8**
KELA	**Mount Kelaz**	**2.22**	**218**	P	**Pn**	**17 15 02.3**	**-0.4**
KCE	**Katmai Mt Cerb**	**2.23**	**209**	P	**Pn**	**17 15 03.1**	**+0.2**
KABU	**Katmai Buttres**	**2.23**	**210**	P	**Pn**	**17 15 02.9**	**0.0**
KABU				S	**Sn**	**17 15 29.2**	**-1.7**
KABR	**Katmai Barrier**	**2.29**	**205**	P	**Pn**	**17 15 03.4**	**-0.1**
PMR	**Palmer**	**2.40**	**53**	P	**Pn**	**17 15 04.1**	**-0.8**
PMR	**Palmer**	**2.40**	**53**	P	**Pn**	**17 15 04.1**	**-0.8**
KDAK	**Kodiak Island**	**2.45**	**173**	P	**Pn**	**17 15 04.0**	**-1.5**
KDAK	**Kodiak Island**	**2.45**	**173**	P	**Pn**	**17 15 03.8**	**-1.7**
	30nm,0.3s,baz=26,slow=8.2,SNR=166						
KDAK				S	**Sn**	**17 15 32.8**	**-2.7**
	34nm,0.3s,baz=337,slow=15,SNR=6.6						
TRAP	**Trapper Creek**	**2.55**	**32**	P	**Pn**	**17 15 07.2**	**+0.5**
CUT	**Chulitna**	**2.60**	**31**	P	**Pn**	**17 15 08.0**	**+0.6**
PPLA	**Purkeypile**	**2.74**	**9**	P	**Pn**	**17 15 10.8**	**+1.4**
SML	**Sawmill**	**2.84**	**53**	P	**Pn**	**17 15 09.7**	**-0.9**
SML	**Sawmill**	**2.84**	**53**	P	**Pn**	**17 15 09.7**	**-0.9**
OHAK	**Old Harbor**	**3.00**	**182**	P	**Pn**	**17 15 10.6**	**-2.0**
TT01	**Tatalina**	**3.04**	**334**	P	**Pn**	**17 15 13.3**	**+0.2**
HUR	**Hurricane**	**3.24**	**30**	P	**Pn**	**17 15 16.1**	**+0.3**
VLZ	**Valdez**	**3.48**	**72**	P	**Pn**	**17 15 17.5**	**-1.3**
MID	**Middleton Isla**	**3.52**	**100**	P	**Pn**	**17 15 19.3**	**-0.2**
MID	**Middleton Isla**	**3.52**	**100**	P	**Pn**	**17 15 19.3**	**-0.2**
TRF	**Thorofare Moun**	**3.52**	**21**	P	**Pn**	**17 15 19.1**	**-0.6**
EYAK	**Cordova Ski Ar**	**3.69**	**81**	P	**Pn**	**17 15 21.2**	**-0.4**
CHUM	**Lake Minchumin**	**3.71**	**6**	P	**Pn**	**17 15 22.6**	**+0.7**
DIV	**Divide**	**3.74**	**73**	P	**Pn**	**17 15 21.1**	**-1.4**
KLU	**Klutina**	**3.76**	**67**	P	**Pn**	**17 15 21.5**	**-1.3**
RND	**Reindeer**	**3.80**	**31**	P	**Pn**	**17 15 23.0**	**-0.2**
RND	**Reindeer**	**3.80**	**31**	P	**Pn**	**17 15 23.0**	**-0.2**
DHY	**Denali Highway**	**3.98**	**41**	P	**Pn**	**17 15 25.4**	**-0.3**
MCK	**McKinley**	**4.05**	**27**	P	**Pn**	**17 15 26.7**	**+0.1**
MCK	**McKinley**	**4.05**	**27**	P	**Pn**	**17 15 26.7**	**+0.1**
GOAT	**Goat Mountain**	**4.19**	**81**	P	**Pn**	**17 15 28.3**	**-0.1**
ANNW	**Aniakchak Nort**	**4.20**	**221**	P	**Pn**	**17 15 29.2**	**+0.6**
RAGM	**Ragged Mountai**	**4.22**	**84**	P	**Pn**	**17 15 28.3**	**-0.5**
AZAC	**Aniakchak**	**4.26**	**221**	P	**Pn**	**17 15 29.9**	**+0.4**
ANPK	**Aniakchak Peak**	**4.27**	**220**	P	**Pn**	**17 15 29.4**	**-0.1**
BMRM	**Bremner River**	**4.28**	**76**	P	**Pn**	**17 15 28.9**	**-0.8**
ANPB	**Aniakchak Plen**	**4.35**	**221**	P	**Pn**	**17 15 31.1**	**+0.4**
HARP	**HAARP**	**4.44**	**57**	P	**Pn**	**17 15 31.2**	**-0.5**
PAX	**Paxson**	**4.59**	**50**	P	**Pn**	**17 15 33.5**	**-0.3**
PAX	**Paxson**	**4.59**	**50**	P	**Pn**	**17 15 33.5**	**-0.3**
WANC	**Wrangell North**	**4.75**	**64**	P	**Pn**	**17 15 36.2**	**-0.2**
NEA	**Nenana**	**4.77**	**22**	P	**Pn**	**17 15 36.7**	**+0.5**
CHGN	**Chignik**	**4.81**	**218**	*e*Pn	**Pn**	**17 15 35.8**	**-0.9**
VRDI	**Verde Repeater**	**4.87**	**74**	P	**Pn**	**17 15 36.6**	**-1.0**
WRH	**Wood River Hil**	**4.88**	**27**	P	**Pn**	**17 15 37.2**	**-0.4**
DDM	**Donnelly Dome**	**4.96**	**41**	P	**Pn**	**17 15 40.1**	**+1.3**
MLY	**Manley**	**4.96**	**12**	P	**Pn**	**17 15 38.9**	**+0.1**
CCB	**Clear Creek Bu**	**5.10**	**27**	P	**Pn**	**17 15 40.2**	**-0.3**
HDA	**Harding Lake**	**5.10**	**32**	P	**Pn**	**17 15 40.7**	**+0.1**
VNHG	**Veniaminof 1**	**5.11**	**221**	P	**Pn**	**17 15 41.6**	**+0.8**
MENT	**Mentasta**	**5.27**	**55**

RLMT	**Red Lodge**	**29.92**	**100**	*e*P		**P**	17 20 22.9	+0.2
	comp=Z,4.3nm,0.7s							
RLMT				*e*pP		**pP**	17 20 49.3	+0.2
IMW	**Indian Meadow**	**30.00**	**104**	*e*P		**P**	17 20 26.1	+2.7
	comp=Z,4.5nm,0.8s							
IMW				*e*pP		**pP**	17 20 52.5	+2.6
NVAR	**Mina Array Bea**	**30.89**	**119**	P		**P**	17 20 33.2	+2.0
NVAR				ScP		**ScP**	17 26 56.8	+0.8
NVAR	**Mina Array Bea**	**30.89**	**119**	P		**P**	17 20 33.2	+2.0
	comp=Z,1.6nm,0.7s,baz=310,slow=8.5,SNR=6.9							
NVAR				ScP		**ScP**	17 26 56.8	+0.8
	comp=Z,0.5nm,0.4s,baz=6.9,slow=2.2,SNR=3.7							
PDAR	**Pinedale Array**	**31.51**	**104**	P		**P**	17 20 38.6	+1.9
PDAR	**Pinedale Array**	**31.51**	**104**	P		**P**	17 20 38.6	+1.9
	comp=Z,0.8nm,0.6s,baz=306,slow=5.1,SNR=6.1							
ULM	**Lac du Bonnet**	**33.11**	**81**	P		**P**	17 20 50.9	+0.6
ULM	**Lac du Bonnet**	**33.11**	**81**	P		**P**	17 20 50.9	+0.6
	comp=Z,3.5nm,0.5s,baz=308,slow=8.1,SNR=4.8							
SRU	**San Rafael**	**33.88**	**109**	*e*P		**P**	17 20 59.5	+2.2
SRU				pmax	pmax			
	comp=Z,217nm,0.8s							
SRU	**San Rafael**	**33.88**	**109**	*e*P		**P**	17 20 59.5	+2.2
	comp=Z,217nm,0.8s							
YAK	**Yakutsk**	**35.28**	**307**	*e*P		**P**	17 21 08.3	-0.6
HABR	**Khabarovsk**	**41.37**	**287**	*e*P		**P**	17 21 58.9	-1.1
HABR				*SP		**sP**	17 22 39.9	-1.3
HABR							17 23 36.7	
HABR				*e*			17 23 54.2	
HABR				*e*S		**S**	17 28 05.3	+0.1
HABR				*e**SS		**sS**	17 28 53.0	+0.3
HABR				pmax	pmax			
	comp=N,114nm,0.9s							
HABR				pmax	pmax			
	comp=Z,203nm,1.1s							
HABR				pmax	pmax			
	comp=E,351nm,1.9s							
HABR				MLR	MLR			
	comp=Z,629nm,21.0s							
SCHQ	**Schefferville**	**43.51**	**57**	P		**P**	17 22 17.9	+0.7
SCHQ	**Schefferville**	**43.51**	**57**	P		**P**	17 22 17.9	+0.7
	comp=Z,1.2nm,0.5s,baz=280,slow=11,SNR=3.9							
TXAR	**Lajitas Array**	**45.12**	**111**	P		**P**	17 22 32.2	+1.8
TXAR				ScP		**ScP**	17 27 50.5	+0.8
TXAR	**Lajitas Array**	**45.12**	**111**	P		**P**	17 22 32.2	+1.8
	comp=Z,1.4nm,0.8s,baz=313,slow=6.3,SNR=11							
TXAR				ScP		**ScP**	17 27 50.5	+0.8
	comp=Z,0.2nm,0.4s,baz=312,slow=3.2,SNR=4.3							
KEV	**Kevo**	**50.33**	**360**	*e*P		**P**	17 23 10.5	+0.6
KEV	**Kevo**	**50.33**	**360**	*e*p		**P**	17 23 10.5	+0.6
ARCES	**ARCESS Array B**	**50.55**	**1**	P		**P**	17 23 11.1	-0.5
ARCES	**ARCESS Array B**	**50.55**	**1**	P		**P**	17 23 11.1	-0.5
	comp=Z,3.1nm,0.6s,baz=25,slow=6.0,SNR=10							
ARE0	**ARCESS Array S**	**50.55**	**1**	P		**P**	17 23 11.2	-0.4
KRAR	**Krasnoyarsk**	**52.92**	**320**	*i*P		**P**	17 23 29.8	+0.4
KRAR				pmax	pmax			
	comp=Z,45nm,1.0s							
KSRS	**Korea Array**	**53.07**	**282**	P		**P**	17 23 31.1	+0.5
	comp=Z,3.9nm,0.9s,baz=40,slow=6.1,SNR=11							
KSAR	**Wonju Array Be**	**53.09**	**282**	P		**P**	17 23 31.1	+0.3
ZAK	**Zakamensk**	**53.81**	**310**	*e*P		**P**	17 23 36.0	-0.1
ZAK				pmax	pmax			
	comp=Z,1.0nm,0.9s							
ULN	**Ulaanbaatar**	**54.32**	**305**	*e*P		**P**	17 23 40.7	+0.8
	comp=Z,9.4nm,1.0s							
SONM	**Songino Array**	**54.61**	**306**	P		**P**	17 23 43.1	+1.1
SONM	**Songino Array**	**54.61**	**306**	P		**P**	17 23 43.1	+1.1
	comp=Z,9.1nm,0.7s,baz=43,slow=6.9,SNR=65							
JOF	**Joensuu**	**57.15**	**358**	*e*P		**P**	17 23 59.6	0.0
JOF				pmax	pmax			
	comp=Z,2.0nm,0.6s							
JOF	**Joensuu**	**57.15**	**358**	*e*p		**P**	17 23 59.6	0.0
	comp=Z,1.7nm,0.6s							
ZAA0	**Zalesovo Array**	**57.16**	**323**	*e*P		**P**	17 23 59.7	-0.2
ZALV	**Zalesovo Beam**	**57.16**	**323**	P		**P**	17 24 00.2	+0.3
ZALV	**Zalesovo Beam**	**57.16**	**323**	P		**P**	17 24 00.2	+0.3
ZALV	**Zalesovo Beam**	**57.16**	**323**	P		**P**	17 24 00.2	+0.3
	comp=Z,1.1nm,0.5s,baz=29,slow=7.0,SNR=78							
KAF	**Kangasniemi**	**58.00**	**0**	*e*P		**P**	17 24 04.6	-1.0
KAF				pmax	pmax			
	comp=Z,3.0nm,0.6s							
KAF	**Kangasniemi**	**58.00**	**0**	*e*p		**P**	17 24 04.6	-1.0
	comp=Z,2.6nm,0.6s							
HHC	**Hu-ho-hao-te**	**58.03**	**297**	*e*P		**P**	17 24 06.1	-0.1
HHC				pP		**pP**	17 24 35.3	0.0
HHC				sP		**sP**	17 24 50.6	+1.9
HHC				PP		**PP**	17 26 17.4	+1.8
HHC				S		**S**	17 31 54.3	-2.9
HHC				sS		**sS**	17 32 46.3	-0.9
HHC				SS		**SS**	17 35 48.9	-0.5
HHC				pmax	pmax			
	comp=Z,19nm,0.7s							
HHC				pmax	pmax			
	comp=Z,190nm,4.6s							
NB2	**NORSAR Subarra**	**58.48**	**9**	P		**P**	17 24 08.2	-0.8
	comp=Z,0.9nm,0.7s,baz=352,slow=6.9							
NOA	**NORSAR Array B**	**58.48**	**9**	P		**P**	17 24 08.5	-0.5
NOA	**NORSAR Array B**	**58.48**	**9**	P		**P**	17 24 08.5	-0.5
	comp=Z,1.4nm,0.8s,baz=349,slow=6.8,SNR=7.7							
FINES	**FINESS Array B**	**58.67**	**0**	P		**P**	17 24 10.0	-0.3
FINES	**FINESS Array B**	**58.67**	**0**	P		**P**	17 24 10.0	-0.3
	comp=Z,3.3nm,0.7s,baz=9.5,slow=9.1,SNR=13							
SVE	**Sverdlovsk**	**60.29**	**339**	*i*P		**P**	17 24 21.6	+0.1
SVE				pmax	pmax			
	comp=Z,15nm,0.9s							
ARU	**Arti**	**61.03**	**341**	*c i*P		**P**	17 24 25.9	-0.5
ARU							17 26 39.3	
ARU				S		**S**	17 32 36.3	+1.3
ARU				SS		**SS**	17 36 32.5	-2.9
ARU				pmax	pmax			
	comp=Z,11nm,0.6s							
KURK	**Kurchatov**	**61.82**	**325**	*d i*P		**P**	17 24 31.8	0.0
KURK				pmax	pmax			
	comp=Z,8.0nm,0.7s							
BRVK	**Borovoye**	**61.84**	**332**	*e*P		**P**	17 24 31.5	-0.5
BRVK				pmax	pmax			
	comp=Z,17nm,0.9s							
BRVK	**Borovoye**	**61.84**	**332**	*e*P		**P**	17 24 31.5	-0.5
	comp=Z,17nm,0.9s							
MKAR	**Makanchi Array**	**64.22**	**321**	P		**P**	17 24 47.5	-0.4
MKAR	**Makanchi Array**	**64.22**	**321**	P		**P**	17 24 47.5	-0.4
MKAR	**Makanchi Array**	**64.22**	**321**	P		**P**	17 24 47.5	-0.4
	comp=Z,1.4nm,0.6s,baz=40,slow=5.7,SNR=20							
GTA	**Gaotai**	**64.25**	**305**	*e*P		**P**	17 24 48.9	+0.6
GTA				pmax	pmax			
	comp=Z,4.0nm,0.9s							
WMQ	**Urumqi**	**65.06**	**316**	P		**P**	17 24 54.5	+1.1
WMQ				pmax	pmax			
	comp=Z,14nm,1.0s							
LZH	**Lanzhou**	**65.36**	**300**	*e*P		**P**	17 24 55.5	0.0
LZH				pmax	pmax			
	comp=Z,15nm,1.3s							
ABKAR	**Akbulak array**	**67.64**	**337**	*e*P		**P**	17 25 09.1	-0.5
	comp=Z,9.3nm,0.6s							
BAIF	**Baives**	**68.57**	**15**	*e*P		**P**	17 25 15.4	0.0
	comp=Z,5.2nm,0.7s							
BAIF	**Baives**	**68.57**	**15**	*e*P		**P**	17 25 15.4	0.0
BAIF				pmax	pmax			
	comp=Z,5.0nm,0.7s							
BAIF	**Baives**	**68.57**	**15**	*e*P		**P**	17 25 15.4	0.0
	comp=Z,5.2nm,0.7s							
FLN	**La Foliniere**	**69.14**	**19**	*e*P		**P**	17 25 18.5	-0.4
FLN	**La Foliniere**	**69.14**	**19**	*e*P		**P**	17 25 18.5	-0.4
FLN	**La Foliniere**	**69.14**	**19**	*e*P		**P**	17 25 18.5	-0.4
LDF	**La Druitiere**	**69.36**	**19**	*e*P		**P**	17 25 20.2	-0.1
LDF	**La Druitiere**	**69.36**	**19**	*e*P		**P**	17 25 20.2	-0.1
LDF	**La Druitiere**	**69.36**	**19**	*e*P		**P**	17 25 20.2	-0.1
AKASG	**Malin Array Be**	**69.43**	**358**	P		**P**	17 25 20.1	-0.6
AKASG	**Malin Array Be**	**69.43**	**358**	P		**P**	17 25 20.1	-0.6
AKASG	**Malin Array Be**	**69.43**	**358**	P		**P**	17 25 20.1	-0.6
	comp=Z,3.6nm,0.6s,baz=4.4,slow=6.4,SNR=11							
AK01	**Malin Array Si**	**69.44**	**358**	*e*P		**P**	17 25 19.8	-0.9
GRR	**Gorron**	**69.44**	**19**	*e*P		**P**	17 25 20.5	-0.3
GRR	**Gorron**	**69.44**	**19**	*e*P		**P**	17 25 20.5	-0.3
GRR	**Gorron**	**69.44**	**19**	*e*P		**P**	17 25 20.5	-0.3
AK02	**Malin Array Si**	**69.47**	**358**	*e*P		**P**	17 25 20.1	-0.8
TKM2	**Tokmak 2**	**69.76**	**324**	*i*P		**P**	17 25 23.7	+0.6
TKM2	**Tokmak 2**	**69.76**	**324**	*e*P		**P**	17 25 22.2	-1.0
	comp=Z,2.3nm,0.8s							
TKM2	**Tokmak 2**	**69.76**	**324**	P		**P**	17 25 23.7	+0.6
	SNR=5.3							
KBK	**Karagaybulak**	**70.19**	**324**	P		**P**	17 25 26.1	+0.4
	SNR=6.5							
PAGF	**Fort de Pagny**	**70.24**	**15**	*e*P		**P**	17 25 27.1	+1.4
	comp=Z,2.3nm,0.7s							
PAGF	**Fort de Pagny**	**70.24**	**15**	*e*P		**P**	17 25 27.1	+1.4
	comp=Z,2.3nm,0.7s							
AAK	**Ala-Archa**	**70.34**	**325**	*c i*P		**P**	17 25 26.5	-0.2
AAK				pmax	pmax			
	comp=Z,17nm,1.3s							
AAK	**Ala-Archa**	**70.34**	**325**	*e*P		**P**	17 25 26.4	-0.2
	comp=Z,4.1nm,0.8s							
AAK	**Ala-Archa**	**70.34**	**325**	P		**P**	17 25 26.9	+0.3
	SNR=5.6							
AAK	**Ala-Archa**	**70.34**	**325**	P		**P**	17 25 26.5	-0.2
	comp=Z,3.6nm,0.7s,baz=114,slow=2.8,SNR=25							
EKS2	**Erkin-Say**	**70.53**	**325**	*e*P		**P**	17 25 27.9	+0.2
EKS2				pmax	pmax			
	comp=Z,7.0nm,0.7s							
EKS2	**Erkin-Say**	**70.53**	**325**	*e*P		**P**	17 25 27.9	+0.2
	comp=Z,7.1nm,0.7s							
EKS2	**Erkin-Say**	**70.53**	**325**	P		**P**	17 25 28.4	+0.7
	SNR=10							
GERES	**GERESS Array B**	**70.78**	**9**	P		**P**	17 25 28.8	-0.3
GERES	**GERESS Array B**	**70.78**	**9**	P		**P**	17 25 28.8	-0.3
	comp=Z,0.9nm,0.7s,baz=333,slow=4.5,SNR=7.5							
HAU	**Haudompre**	**70.86**	**14**	*e*P		**P**	17 25 29.2	-0.3
HAU	**Haudompre**	**70.86**	**14**	*e*P		**P**	17 25 29.2	-0.3
HAU	**Haudompre**	**70.86**	**14**	*e*P		**P**	17 25 29.2	-0.3
KKAR	**Karatay Array**	**71.02**	**328**	*e*P		**P**	17 25 30.0	-0.5
KKAR				pmax	pmax			
	comp=Z,5.0nm,0.6s							
KKAR	**Karatay Array**	**71.02**	**328**	*e*P		**P**	17 25 30.0	-0.5
	comp=Z,5.2nm,0.6s							
AML	**Almayashu**	**71.04**	**325**	P		**P**	17 25 32.1	+0.9
	SNR=7.0							
LOR	**Lormes**	**71.25**	**16**	*e*P		**P**	17 25 31.7	-0.2
	comp=Z,7.8nm,0.8s							
LOR	**Lormes**	**71.25**	**16**	*e*P		**P**	17 25 31.7	-0.2
	comp=Z,7.8nm,0.8s							
MFF	**Saint Martin d**	**71.29**	**19**	*e*P		**P**	17 25 31.9	-0.2
	comp=Z,5.3nm,0.8s							
MFF	**Saint Martin d**	**71.29**	**19**	*e*P		**P**	17 25 31.9	-0.2
MFF				pmax	pmax			
	comp=Z,5.0nm,0.8s							
MFF	**Saint Martin d**	**71.29**	**19**	*e*P		**P**	17 25 31.9	-0.2
	comp=Z,5.3nm,0.8s							
SSF	**Saint Saulge**	**71.41**	**17**	*e*P		**P**	17 25 32.7	-0.1
	comp=Z,8.1nm,0.7s							
SSF	**Saint Saulge**	**71.41**	**17**	*e*P		**P**	17 25 32.7	-0.1
SSF				pmax	pmax			
	comp=Z,8.0nm,0.7s							
SSF	**Saint Saulge**	**71.41**	**17**	*e*P		**P**	17 25 32.7	-0.1
	comp=Z,8.1nm,0.7s							
AVF	**Avril sur Loir**	**71.65**	**17**	*e*P		**P**	17 25 33.9	-0.3
	comp=Z,7.9nm,0.7s							
AVF	**Avril sur Loir**	**71.65**	**17**	*e*P		**P**	17 25 33.9	-0.3
AVF				pmax	pmax			
	comp=Z,8.0nm,0.7s							
AVF	**Avril sur Loir**	**71.65**	**17**	*e*P		**P**	17 25 33.9	-0.3
	comp=Z,7.9nm,0.7s							
BGF	**Bois d'Agland**	**71.80**	**17**	*e*P		**P**	17 25 34.9	-0.3
BGF	**Bois d'Agland**	**71.80**	**17**	*e*P		**P**	17 25 34.9	-0.3
BGF	**Bois d'Agland**	**71.80**	**17**	*e*P		**P**	17 25 34.9	-0.3
SMF	**Signal de Mont**	**71.86**	**16**	*e*P		**P**	17 25 35.2	-0.3
SMF	**Signal de Mont**	**71.86**	**16**	*e*P		**P**	17 25 35.2	-0.3
SMF	**Signal de Mont**	**71.86**	**16**	*e*P		**P**	17 25 35.2	-0.3
TCF	**Toulx Ste Croi**	**71.97**	**18**	*e*P		**P**	17 25 35.8	-0.4
TCF	**Toulx Ste Croi**	**71.97**	**18**	*e*P		**P**	17 25 35.8	-0.4
TCF	**Toulx Ste Croi**	**71.97**	**18**	*e*P		**P**	17 25 35.8	-0.4
CABF	**La Chapelle**	**72.20**	**15**	*e*P		**P**	17 25 37.8	+0.2
	comp=Z,6.8nm,0.7s							
CABF	**La Chapelle**	**72.20**	**15**	*e*P		**P**	17 25 37.8	+0.2
CABF				pmax	pmax			
	comp=Z,7.0nm,0.7s							
CABF	**La Chapelle**	**72.20**	**15**	*e*P		**P**	17 25 37.8	+0.2
	comp=Z,6.8nm,0.7s							
GYA	**Guiyang**	**72.26**	**292**	*e*P		**P**	17 25 40.0	+1.7
GYA				pmax	pmax			
	comp=Z,10.0nm,1.0s							
LFF	**La Frestale**	**73.05**	**19**	*e*P		**P**	17 25 42.6	0.0
LFF	**La Frestale**	**73.05**	**19**	*e*P		**P**	17 25 42.6	0.0
LFF	**La Frestale**	**73.05**	**19**	*e*P		**P**	17 25 42.6	0.0
VIVF	**Saint-Julien-l**	**73.73**	**16**	*e*P		**P**	17 25 46.6	0.0
VIVF	**Saint-Julien-l**	**73.73**	**16**	*e*P		**P**	17 25 46.6	0.0
VIVF	**Saint-Julien-l**	**73.73**	**16**	*e*P		**P**	17 25 46.6	0.0
SMRF	**Simiane la Rot**	**74.72**	**16**	*e*P		**P**	17 25 53.1	+0.7
	comp=Z,6.4nm,0.7s							
SMRF	**Simiane la Rot**	**74.72**	**16**	*e*P		**P**	17 25 53.1	+0.7
	comp=Z,6.4nm,0.7s							
ETSF	**Etsut**	**74.82**	**21**	*e*P		**P**	17 25 53.4	+0.4
	comp=Z,9.2nm,0.9s							
ETSF	**Etsaut**	**74.82**	**21**	*e*P		**P**	17 25 53.4	+0.4
ETSF				pmax	pmax			
	comp=Z,9.0nm,0.9s							
ETSF	**Etsaut**	**74.82**	**21**	*e*P		**P**	17 25 53.4	+0.4
	comp=Z,9.2nm,0.9s							
EPF	**Esparros**	**74.84**	**20**	*e*P		**P**	17 25 52.9	-0.2
EPF	**Esparros**	**74.84**	**20**	*e*P		**P**	17 25 52.9	-0.2
EPF	**Esparros**	**74.84**	**20**	*e*P		**P**	17 25 52.9	-0.2
MTLF	**Montolieu**	**74.85**	**18**	*e*P		**P**	17 25 53.1	0.0
	comp=Z,6.4nm,0.8s							
MTLF	**Montolieu**	**74.85**	**18**	*e*P		**P**	17 25 53.1	0.0
MTLF				pmax	pmax			
	comp=Z,6.0nm,0.8s							
MTLF	**Montolieu**	**74.85**	**18**	*e*P		**P**	17 25 53.1	0.0
	comp=Z,6.4nm,0.8s							
SBF	**Sospel**	**75.07**	**14**	*e*P		**P**	17 25 54.4	0.0
	comp=Z,15nm,0.9s							
SBF	**Sospel**	**75.07**	**14**	*e*P		**P**	17 25 54.4	0.0
SBF				pmax	pmax			
	comp=Z,15nm,0.9s							
SBF	**Sospel**	**75.07**	**14**	*e*P		**P**	17 25 54.4	0.0
	comp=Z,15nm,0.9s							
FRF	**La Foret Royal**	**75.27**	**15**	*e*P		**P**	17 25 54.5	-1.0
FRF	**La Foret Royal**	**75.27**	**15**	*e*P		**P**	17 25 54.5	-1.0
FRF	**La Foret Royal**	**75.27**	**15**	*e*P		**P**	17 25 54.5	-1.0
PGF	**Pioggiola**	**76.56**	**13**	*e*P		**P**	17 26 02.9	0.0
PGF	**Pioggiola**	**76.56**	**13**	*e*P		**P**	17 26 02.9	0.0
PGF	**Pioggiola**	**76.56**	**13**	*e*P		**P**	17 26 02.9	0.0
ESDC	**Sonseca Array**	**77.29**	**24**	P		**P**	17 26 07.3	+0.3
ESDC	**Sonseca Array**	**77.29**	**24**	P		**P**	17 26 07.3	+0.3
	comp=Z,1.3nm,0.6s,baz=349,slow=5.5,SNR=7.1							
TAPN	**Taplejung**	**79.66**	**308**	*e*P		**P**	17 26 20.8	+0.3
	comp=Z,20nm,0.9s							
GUN	**Gumba**	**79.87**	**310**	*e*P		**P**	17 26 22.0	+0.3
	comp=Z,17nm,1.0s							
KKN	**Kakani**	**80.20**	**310**	*e*P		**P**	17 26 22.9	-0.5
ODAN	**Odare**	**80.22**	**308**	*e*P		**P**	17 26 23.6	+0.1
BR131	**Keskin Array S**	**80.27**	**355**	P		**P**	17 26 22.4	-1.0
BRTR	**Keskin Array B**	**80.27**	**355**	P		**P**	17 26 22.6	-0.8
BRTR	**Keskin Array B**	**80.27**	**355**	P		**P**	17 26 22.6	-0.8
	comp=Z,0.8nm,0.7s,baz=45,slow=1.9,SNR=4.3							
DANN	**Dangsing**	**80.28**	**311**	*e*P		**P**	17 26 24.3	+0.5
	comp=Z,40nm,0.9s							
PKIN	**Phulchoki**	**80.35**	**310**	*e*P		**P**	17 26 25.0	+0.8
DMN	**Daman**	**80.43**	**310**	*e*P		**P**	17 26 24.8	+0.2
RAMN	**Ramite**	**80.45**	**309**	*e*P		**P**	17 26 24.7	0.0
	comp=Z,24nm,0.9s							
PYUN	**Piuthan**	**80.79**	**312**	*e*P		**P**	17 26 26.4	-0.1
	comp=Z,50nm,1.1s							
KOLN	**Koldanda**	**80.86**	**311**	*e*P		**P**	17 26 26.7	-0.1
	comp=Z,10nm,0.8s							
CMAR	**Chiang Mai Arr**	**82.71**	**294**	P		**P**	17 26 35.6	-0.8
CMAR	**Chiang Mai Arr**	**82.71**	**294**	P		**P**	17 26 35.6	-0.8
	comp=Z,2.2nm,0.9s,baz=14,slow=5.7,SNR=23							
MDT	**Midelt**	**83.76**	**26**	P		**P**	17 26 42.3	+0.5
MDT	**Midelt**	**83.76**	**26**	P		**P**	17 26 42.3	+0.5
	comp=Z,4.4nm,0.8s,baz=330,slow=9.1,SNR=6.5							
VNDA	**Vanda**	**140.25**	**194**	PKPpre	PKPpre		17 33 35.2	
VNDA	**Vanda**	**140.25**	**194**	PKhKP	PKPpre		17 33 35.2	
	comp=Z,0.7nm,0.3s,baz=30,slow=1.7,SNR=16							
BOSA	**Boshof**	**148.39**	**3**	PKPbc		**PKPbc**	17 33 57.3	-0.8
BOSA	**Boshof**	**148.39**	**3**	PKPbc		**PKPbc**	17 33 57.3	-0.8
	comp=Z,4.0nm,0.8s,baz=17,slow=6.5,SNR=8.2							
QSPA	**South Pole Qui**	**150.01**	**180**	PKPbc		**PKPbc**	17 34 00.7	-0.1
QSPA	**South Pole Qui**	**150.01**	**180**	PKPbc		**PKPbc**	17 34 00.7	-0.1
	comp=Z,10nm,0.7s,baz=28,slow=1.0,SNR=64							

CSEM ***14*** *17:27:18.2,42.53N×13.33E,h10km, After ROM*
ROM 14 17:27:18.2±0.1,42.53N×13.33E,h10km,Ml2.6/2,Error ellipse: s-maj=1.2km s-min=0.9km az=57.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.06**	**84**	Pg	Pg	17 27 21.0	+0.5
CAMP				Sg	Sg	17 27 22.6	+0.5
CAMP	**Campotosto**	**0.06**	**84**	Pg	Pg	17 27 21.0	+0.5
CAMP				Sg	Sg	17 27 22.6	+0.5
AQU	**L'Aquila**	**0.18**	**163**	Pg	Pg	17 27 23.0	+0.8
AQU				Sg	Sg	17 27 25.7	+0.7
	1μm,0.2s						
AQU	**L'Aquila**	**0.18**	**163**	Pg	Pg	17 27 23.0	+0.8
AQU				Sg	Sg	17 27 25.7	+0.7
	1μm,0.2s						
TERO	**Teramo**	**0.22**	**65**	Pg	Pg	17 27 23.3	+0.4
TERO				Sg	Sg	17 27 26.9	+0.8
TERO	**Teramo**	**0.22**	**65**	Pg	Pg	17 27 23.3	+0.4
TERO				Sg	Sg	17 27 26.9	+0.8
LNSS	**Leonessa**	**0.23**	**289**	Pg	Pg	17 27 23.6	+0.6
LNSS				Sg	Sg	17 27 27.6	+1.3
LNSS	**Leonessa**	**0.23**	**289**	Pg	Pg	17 27 23.6	+0.6
LNSS				Sg	Sg	17 27 27.6	+1.3
FIAM	**Fiamignano**	**0.30**	**211**	Pg	Pg	17 27 25.0	+0.5
FIAM				Sg	Sb	17 27 30.0	-1.1
FIAM	**Fiamignano**	**0.30**	**211**	Pg	Pg	17 27 25.0	+0.5
FIAM				Sg	Sb	17 27 30.0	-1.1
FAGN	**Fagnano**	**0.33**	**144**	Pg	Pg	17 27 25.2	+0.4
FAGN				Sg	Sg	17 27 30.2	+1.0
FAGN	**Fagnano**	**0.33**	**144**	Pg	Pg	17 27 25.2	+0.4
FAGN				Sg	Sg	17 27 30.2	+1.0
NRCA	**Norcia**	**0.34**	**333**	Pg	Pg	17 27 25.6	+0.4
NRCA				Sg	Sg	17 27 30.9	+1.1
NRCA	**Norcia**	**0.34**	**333**	Pg	Pg	17 27 25.6	+0.4
NRCA				Sg	Sg	17 27 30.9	+1.1
VCEL	**Villa Celiera**	**0.40**	**109**	Pg	Pb	17 27 27.1	-0.5
VCEL				Sg	Sg	17 27 32.7	+0.9
VCEL	**Villa Celiera**	**0.40**	**109**	Pg	Pb	17 27 27.1	-0.5
VCEL				Sg	Sg	17 27 32.7	+0.9
OFFI	**Offida**	**0.48**	**33**	Pg	Pb	17 27 28.9	0.0
OFFI	**Offida**	**0.48**	**33**	Pg	Pb	17 27 28.9	0.0
MNS	**Montasola**	**0.50**	**253**	Pg	Pg	17 27 28.2	+0.2
MNS				Sg	Sg	17 27 35.5	+0.8
MNS	**Montasola**	**0.50**	**253**	Pg	Pg	17 27 28.2	+0.2
MNS				Sg	Sg	17 27 35.5	+0.8
PTQR	**Pietraquaria**	**0.51**	**174**	Pg	Pg	17 27 28.4	+0.1
PTQR	**Pietraquaria**	**0.51**	**174**	Pg	Pg	17 27 28.4	+0.1
TRTR	**Tortoreto Alta**	**0.51**	**57**	Pg	Pb	17 27 29.5	+0.2
TRTR	**Tortoreto Alta**	**0.51**	**57**	Pg	Pb	17 27 29.5	+0.2
FDMO	**Fiordimonte**	**0.54**	**341**	Pg	Pg	17 27 28.9	+0.2
FDMO				Sg	Sb	17 27 37.1	-0.5
FDMO	**Fiordimonte**	**0.54**	**341**	Pg	Pg	17 27 28.9	+0.2
FDMO				Sg	Sb	17 27 37.1	-0.5
CESX	**Cesi**	**0.56**	**278**	Pg	Pg	17 27 29.0	-0.1
CESX	**Cesi**	**0.56**	**278**	Pg	Pg	17 27 29.0	-0.1
CESI	**CESI - Serrava**	**0.57**	**327**	Pg	Pg	17 27 29.6	+0.2
CESI				Sg	Pg	17 27 37.4	+0.4
CESI	**CESI - Serrava**	**0.57**	**327**	Pg	Pg	17 27 29.6	+0.2
CESI				Sg	Sg	17 27 37.4	+0.4
CERT	**Cerreto**	**0.64**	**204**	Pg	Pg	17 27 30.4	-0.2
CERT	**Cerreto**	**0.64**	**204**	Pg	Pg	17 27 30.4	-0.2
MTCE	**Montecelio**	**0.67**	**221**	Pg	Pb	17 27 32.1	+0.1
MTCE	**Montecelio**	**0.67**	**221**	Pg	Pb	17

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PTQR	Pietraquaria	0.56	174	Pg	Pg	17 27 41.4	-1.2
PTQR	Pietraquaria	0.56	174	Pg	Pg	17 27 41.4	-1.2
GUMA	Gualdo di Mace	0.66	43	Pg	Pg	17 27 41.7	-2.7
GUMA				Sg	Sg	17 27 50.2	-2.9
GUMA	Gualdo di Mace	0.66	43	Pg	Pg	17 27 41.7	-2.7
GUMA				Sg	Sg	17 27 50.2	-2.9
CERT	Cerreto	0.68	202	Pg	Pg	17 27 42.8	-2.1
	2µm,0.5s						
CERT	Cerreto	0.68	202	Pg	Pg	17 27 42.8	-2.1
	2µm,0.5s						
MTCE	Montecelio	0.71	218	Pg	Pg	17 27 44.3	-1.0
MTCE	Montecelio	0.71	218	Pg	Pg	17 27 44.3	-1.0
INTR	Introdacqua	0.71	143	Pg	Pg	17 27 43.7	-1.8
INTR	Introdacqua	0.71	143	Pg	Pg	17 27 43.7	-1.8
SNTG	Esanatoglia	0.73	337	Pg	Pg	17 27 45.4	-0.4
SNTG	Esanatoglia	0.73	337	Pg	Pg	17 27 45.4	-0.4
CING	Cingoli	0.80	353	Pg	Pg	17 27 47.0	-0.1
CING	Cingoli	0.80	353	Pg	Pg	17 27 47.0	-0.1
LPEL	Lama dei Pelig	0.83	130	Pg	Pg	17 27 45.4	-2.3
LPEL				Sg	Sg	17 27 57.4	-1.1
LPEL	Lama dei Pelig	0.83	130	Pg	Pg	17 27 45.4	-2.3
LPEL				Sg	Sg	17 27 57.4	-1.1
RDP	Rocca di Papa	0.94	209	Pg	Pg	17 27 48.4	-1.4
RDP	Rocca di Papa	0.94	209	Pg	Pg	17 27 48.4	-1.4
AOI	Ancona	0.99	12	Pg	Pg	17 27 50.2	-0.5
AOI	Ancona	0.99	12	Pg	Pg	17 27 50.2	-0.5
GIUL	Giuliano Di Ro	1.02	183	Pg	Pg	17 27 49.8	-1.6
GIUL	Giuliano Di Ro	1.02	183	Pg	Pg	17 27 49.8	-1.6
MS1	Monte Sant'Ang	2.13	113	ePn	Pb	17 28 10.0	-0.7
MS1				eSn	Sb	17 28 38.8	+1.5
NVLJ	Novalja	2.28	29	ePn	Pn	17 28 09.0	-0.5
NVLJ				Sn	Sn	17 28 38.8	+1.0
NVLJ	Novalja	2.28	29	ePn	Pn	17 28 09.0	-0.5
NVLJ				Sn	Sn	17 28 38.7	+1.0
MAIM	Mastiano	2.46	304	P	Pn	17 28 11.8	-0.3
CDT	Castel del Mon	2.67	123	ePn	Pb	17 28 18.9	-0.8
CDT				eSn	Sn	17 28 49.8	+2.4
BAI	Bari	3.04	118	ePn	Pn	17 28 21.1	+1.1
BAI				eSn	Sn	17 28 58.7	+2.2
PGF	Pioggiola	3.19	271	ePn	Pn	17 28 21.5	-0.8
PGF				eSn	Sn	17 29 01.5	+0.9
	20nm,0.4s						
PGF	Pioggiola	3.19	271	ePn	Pn	17 28 21.5	-0.8
PGF				eSn	Sn	17 29 01.5	+0.9
	10nm,0.4s						
BOJS	Bojanci	3.24	25	i Pn	Pn	17 28 24.3	+1.6
BOJS				i Sn	Sn	17 29 03.5	+2.1
BOJS							
	comp=Z,48nm,0.4s						
BOJS	Bojanci	3.24	25	Pn	Pn	17 28 24.3	+1.6
BOJS				i Sn	Sn	17 29 03.5	+2.1
	comp=Z,48nm,0.4s						
STON	Ston	3.24	83	ePn	Pn	17 28 23.0	+0.3
STON				Sn	Sn	17 29 02.1	+0.7
STON	Ston	3.24	83	ePn	Pn	17 28 23.0	+0.3
STON				Sn	Sn	17 29 02.1	+0.7
JAVS	Javornik	3.35	9	i Pn	Pn	17 28 24.1	-0.4
JAVS				i Sn	Sn	17 29 05.7	+1.2
JAVS							
	comp=Z,136nm,0.7s						
JAVS	Javornik	3.35	9	i Pn	Pn	17 28 24.1	-0.4
JAVS				i Sn	Sn	17 29 05.7	+1.2
	comp=Z,136nm,0.7s						
VOY	Vojsko	3.47	7	ePn	Pn	17 28 26.9	+0.8
VOY				e		17 28 30.8	
VOY	Vojsko	3.47	7	ePn	Pn	17 28 26.9	+0.8
VOY				eSn	Sn	17 29 07.8	+0.4
HCY	Herceg Novi	3.82	90⇑	iPn	Pn	17 28 32.3	+1.5
HCY				eSn	Sn	17 29 17.1	+1.1
HCY	Herceg Novi	3.82	90⇑	iPn	Pn	17 28 32.3	+1.5
HCY				eSn	Sn	17 29 17.1	+1.1
BRY	Bratogost	3.85	83⇓	iPn	Pn	17 28 33.1	+1.7
BRY				eSn	Sn	17 29 17.8	+0.9
BRY	Bratogost	3.85	83⇓	iPn	Pn	17 28 33.1	+1.7
BRY				eSn	Sn	17 29 17.8	+0.9
OBKA	Obir	4.02	12⇓	iPn	Pn	17 28 30.6	-3.0
OBKA	Obir	4.02	12	Pn	Pn	17 28 30.6	-3.0
BUM	Brajici-Budva	4.13	92	ePn	Pn	17 28 37.2	+2.1
BUM				eSn	Sn	17 29 24.3	+0.7
BUM	Brajici-Budva	4.13	92	ePn	Pn	17 28 37.2	+2.1
BUM				eSn	Sn	17 29 24.3	+0.7
UPM	Unac-Piva	4.15	79⇓	iPn	Pn	17 28 36.5	+1.0
UPM				eSn	Sn	17 29 25.1	+0.9
UPM	Unac-Piva	4.15	79⇓	iPn	Pn	17 28 36.5	+1.0
UPM				eSn	Sn	17 29 25.1	+0.9
NKY	Niksic	4.18	85⇓	iPn	Pn	17 28 37.2	+1.3
NKY				eSn	Sn	17 29 26.4	+1.4
NKY	Niksic	4.18	85⇓	iPn	Pn	17 28 37.2	+1.3
NKY				eSn	Sn	17 29 26.4	+1.4
ABTA	Abfaltersbach	4.21	352⇑	iPn	Pn	17 28 33.5	-2.6
	SNR=34						
ABTA	Abfaltersbach	4.21	352	Pn	Pn	17 28 33.5	-2.6
	SNR=34						
PDG	Podgorica	4.39	90⇓	iPn	Pn	17 28 40.2	+1.6
PDG				eSn	Sn	17 29 30.9	+1.1
TTG	Podgorica	4.39	90⇓	iPn	Pn	17 28 40.2	+1.6
TTG				eSn	Sn	17 29 30.9	+1.1
ULC	Ulcinj	4.44	96⇓	iPn	Pn	17 28 41.0	+1.7
ULC				eSn	Sn	17 29 32.4	+1.3
ULC	Ulcinj	4.44	96⇓	iPn	Pn	17 28 41.0	+1.7
ULC				eSn	Sn	17 29 32.4	+1.3
SAOF	Saorge	4.44	290	P	Pn	17 28 40.0	+0.7
SAOF	Saorge	4.44	290	P	Pn	17 28 40.0	+0.7
SBF	Sospel	4.49	289	ePn	Pn	17 28 39.8	-0.3
SBF				eSn	Sn	17 29 29.8	-2.7
	comp=Z,30nm,0.5s						
SBF	Sospel	4.49	289	ePn	Pn	17 28 39.8	-0.3
SBF				eSn	Sn	17 29 29.8	-2.7
	comp=Z,15nm,0.5s						
KBA	Koelnbreinsper	4.50	0⇑	iPn	Pn	17 28 40.6	+0.4
	SNR=8.8						
KBA	Koelnbreinsper	4.50	0	Pn	Pn	17 28 40.6	+0.4
	SNR=8.8						
PLE	Pljevlja	4.51	78⇓	iPn	Pn	17 28 42.4	+2.0
PLE				eSn	Sn	17 29 33.7	+0.6
PLE	Pljevlja	4.51	78⇓	iPn	Pn	17 28 42.4	+2.0
PLE				eSn	Sn	17 29 33.7	+0.6
AUTN	L'Aution	4.53	290	P	Pn	17 28 42.3	+1.5
AUTN	L'Aution	4.53	290	P	Pn	17 28 42.3	+1.5
BBLS	Lazići	4.63	72	ePn	Pn	17 28 45.3	+3.4
BBLS				eSn	Sn	17 29 37.8	+2.0
BBLS	Lazići	4.63	72	ePn	Pn	17 28 45.3	+3.4
BBLS				eSn	Sn	17 29 37.8	+2.0
TOUF	Mont Tournerai	4.66	290	P	Pn	17 28 42.3	-0.2
TOUF	Mont Tournerai	4.66	290	P	Pn	17 28 42.3	-0.2
FETA	Feichten	4.81	338⇓	iPn	Pn	17 28 44.2	-0.3
	SNR=14						
FETA	Feichten	4.81	338	Pn	Pn	17 28 44.2	-0.3
	SNR=14						
WTTA	Wattenberg	4.83	346⇓	iPn	Pn	17 28 46.5	+1.6
	SNR=11						
WTTA	Wattenberg	4.83	346	Pn	Pn	17 28 46.5	+1.6
	SNR=11						
BEY	Berane	4.85	84	ePn	Pn	17 28 47.5	+2.5
BEY				eSn	Sn	17 29 41.8	+0.5
IVA	Berane	4.85	84	ePn	Pn	17 28 47.5	+2.5
IVA				eSn	Sn	17 29 41.8	+0.5
CALN	Calern	4.85	286	P	Pn	17 28 45.6	+0.5
CALN	Calern	4.85	286	P	Pn	17 28 45.6	+0.5
DAVOX	Davos/Dischmat	4.86	331	Pn	Pn	17 28 47.5	+2.2
	comp=Z,5.8nm,0.3s,baz=157,slow=19,SNR=40						
DAVOX				Sn	Sn	17 29 43.5	+1.6
	comp=Z,7.3nm,0.3s,baz=272,slow=22,SNR=6.8						
PVY	Plav	4.90	88⇑	iPn	Pn	17 28 47.8	+2.1
PVY				eSn	Sn	17 29 43.5	+0.9
PVY	Plav	4.90	88⇑	iPn	Pn	17 28 47.8	+2.1
PVY				eSn	Sn	17 29 43.5	+0.9
WATA	Walderalm	4.91	346⇑	iPn	Pn	17 28 46.7	+0.8
	SNR=8.0						
WATA	Walderalm	4.91	346	Pn	Pn	17 28 46.7	+0.8
	SNR=8.0						
FRF	La Foret Royal	4.99	284	ePn	Pn	17 28 46.0	-0.8
FRF	La Foret Royal	4.99	284	ePn	Pn	17 28 46.0	-0.8
LMR	La Mourre	5.06	281	ePn	Pn	17 28 46.6	-1.2
LMR	La Mourre	5.06	281	ePn	Pn	17 28 46.6	-1.2
DIVS	Divibare	5.09	70	ePn	Pn	17 28 51.5	+3.1
DIVS	Divibare	5.09	70	ePn	Pn	17 28 51.5	+3.1
IVAS	Ivanjica	5.10	76	ePn	Pn	17 28 50.3	+1.9
IVAS				eSn	Sn	17 29 49.1	+1.6
IVAS	Ivanjica	5.10	76	ePn	Pn	17 28 50.3	+1.9
IVAS				eSn	Sn	17 29 49.1	+1.6
MBDF	Montbardon	5.21	297	eP	Pn	17 28 51.4	+1.3
MBDF	Montbardon	5.21	297	eP	Pn	17 28 51.4	+1.3
DAVA	Damuels	5.30	334⇑	iPn	Pn	17 28 50.1	-1.2
	SNR=13						
DAVA	Damuels	5.30	334	Pn	Pn	17 28 50.1	-1.2
	SNR=13						
MOA	Molln	5.31	7⇑	iPn	Pn	17 28 50.6	-0.7
MOA	Molln	5.31	7	Pn	Pn	17 28 50.6	-0.7
TRUS	Trudelj	5.42	70	ePn	Pn	17 28 54.7	+2.0
TRUS	Trudelj	5.42	70	ePn	Pn	17 28 54.7	+2.0
GRUS	Gruza	5.56	74	ePn	Pn	17 28 56.5	+1.9
GRUS				eSn	Sn	17 29 59.0	+0.4
GRUS	Gruza	5.56	74	ePn	Pn	17 28 56.5	+1.9
GRUS				eSn	Sn	17 29 59.0	+0.4
LPG	La Plagne	5.56	304	eP	Pn	17 28 56.6	+1.6
LPG				eSn	Sn	17 29 56.8	-2.4
	comp=Z,17nm,0.6s						
LPG	La Plagne	5.56	304	eP	Pn	17 28 56.6	+1.6
LPG				eSn	Sn	17 29 56.8	-2.4
	comp=Z,8.4nm,0.6s						
LPL	La Plagne	5.58	304	eP	Pn	17 28 57.9	+2.7
LPL				eSn	Sn	17 29 56.0	-3.6
	comp=Z,12nm,0.4s						
LPL	La Plagne	5.58	304	eP	Pn	17 28 57.9	+2.7
LPL				eSn	Sn	17 29 56.0	-3.6
	comp=Z,5.9nm,0.4s						
CONA	Conrad Observa	5.64	18⇓	iPn	Pn	17 28 53.6	-2.2
	SNR=8.6						
CONA	Conrad Observa	5.64	18	Pn	Pn	17 28 53.6	-2.2
	SNR=8.6						
SELS	Selova	5.76	81	ePn	Pn	17 28 58.3	+0.8
SELS	Selova	5.76	81	ePn	Pn	17 28 58.3	+0.8
SMRF	Simiane la Rot	5.83	286	eP	Pn	17 28 59.2	+0.8
SMRF	Simiane la Rot	5.83	286	eP	Pn	17 28 59.2	+0.8
ORIF	Oris-en-Rattie	5.88	296	eP	Pn	17 29 02.4	+3.3
BARS	Barje	6.26	85	ePn	Pn	17 29 05.3	+1.0
BARS				eSn	Sn	17 30 14.8	-1.2
BARS	Barje	6.26	85	ePn	Pn	17 29 05.3	+1.0
BARS				eSn	Sn	17 30 14.8	-1.2
GERES	GERESS Array B	6.27	2	Pn	Pn	17 29 04.6	+0.1
	comp=Z,0.8nm,0.3s,baz=186,slow=12,SNR=16						
GERES				Sn	Sn	17 30 14.3	-2.1
	comp=Z,3.9nm,0.3s,baz=175,slow=21,SNR=10						
FELD	Feldberg im Sc	6.49	326	P	Pn	17 29 07.2	-0.4
CABF	La Chapelle	6.55	310	ePn	Pn	17 29 09.3	+0.9
CABF	La Chapelle	6.55	310	ePn	Pn	17 29 09.3	+0.9
KHC	Kasperske Hory	6.55	1	ePN	Pn	17 29 08.8	+0.5
KHC				eSN	Sn	17 30 20.5	-2.7
KHC	Kasperske Hory	6.55	1	Pn	Pn	17 29 08.8	+0.5
KHC				Sn	Sn	17 30 20.5	-2.7
LOMF	Lomont	6.63	318	P	Pn	17 29 10.0	+0.6
LOMF	Lomont	6.63	318	P	Pn	17 29 10.0	+0.6
VIVF	Saint-Julien-l	6.67	293	ePn	Pn	17 29 11.1	+1.2
VIVF	Saint-Julien-l	6.67	293	ePn	Pn	17 29 11.1	+1.2
ZAPS	Zavoj	6.87	81	ePn	Pn	17 29 14.9	+2.2
ZAPS				eSn	Sn	17 30 30.3	-0.7
TREC	Trest	6.88	12	ePN	Pn	17 29 12.4	-0.4
TREC				eSN	Sn	17 30 28.0	-3.3
TREC	Trest	6.88	12	Pn	Pn	17 29 12.4	-0.4
TREC				Sn	Sn	17 30 28.0	-3.3
HINF	Hinteralfeld	6.95	321	ePn	Pn	17 29 13.5	-0.3
HINF				eSn	Sn	17 30 30.3	-2.6
	comp=Z,18nm,0.3s						
HINF	Hinteralfeld	6.95	321	ePn	Pn	17 29 13.5	-0.3
HINF				eSn	Sn	17 30 30.3	-2.6
	comp=Z,8.8nm,0.3s						
VAY	Valandovo	7.01	97	ePn	Pb	17 29 28.7	-4.9
LASF	Ste Croix	7.06	285	ePn	Pn	17 29 14.6	-0.8
LASF	Ste Croix	7.06	285	ePn	Pn	17 29 14.6	-0.8
VYHS	Vyhne	7.07	31	ePN	Pn	17 29 16.6	+1.3
VYHS				eSN	Sn	17 30 28.5	-7.3
VYHS	Vyhne	7.07	31	ePn	Pn	17 29 16.6	+1.3
VRAC	Vranov	7.10	18	LR	LR	17 32 16.1	
	comp=Z,56nm,20.8s,baz=21,slow=40						
ECH	Echery	7.11	325	P	Pn	17 29 15.4	-0.6
ECH	Echery	7.11	325	P	Pn	17 29 15.4	-0.6
CDF	Champ du Feu	7.21	326	ePn	Pn	17 29 16.9	-0.5
CDF				eSn	Sn	17 30 37.3	-2.2
	comp=Z,30nm,0.5s						
CDF	Champ du Feu	7.21	326	ePn	Pn	17 29 16.9	-0.5
CDF				eSn	Sn	17 30 37.3	-2.2
	comp=Z,15nm,0.5s						
VTS	Vitosha	7.30	87	eSn	Sn	17 30 40.1	-1.6
VTS	Vitosha	7.30	87	eSn	Sn	17 30 40.1	-1.6
HAU	Haudompre	7.32	320	ePn	Pn	17 29 18.3	-0.6
HAU				eSn	Sn	17 30 37.9	-4.2
	comp=Z,46nm,0.4s						
HAU	Haudompre	7.32	320	ePn	Pn	17 29 18.3	-0.6
HAU				eSn	Sn	17 30 37.9	-4.2
	comp=Z,23nm,0.4s						
PRU	Pruhonice	7.46	6	ePN	Pn	17 29 20.5	-0.2
PRU				eSN	Sn	17 30 42.0	-3.4
PRU	Pruhonice	7.46	6	Pn	Pn	17 29 20.5	-0.2
PRU				Sn	Sn	17 30 42.0	-3.4
KEST	Kesra	7.50	206	Pn	Pn	17 29 25.3	+3.8
	comp=Z,0.6nm,0.3s,baz=337,slow=3.7,SNR=10						
THEF	They Montfort	7.65	320	P	Pn	17 29 23.0	-0.3
THEF	They Montfort	7.65	320	P	Pn	17 29 23.0	-0.3
NKC	Novy Kostel	7.68	356	ePN	Pn	17 29 24.2	+0.4
NKC				eSN	Sn	17 30 48.0	-2.9
NKC	Novy Kostel	7.68	356	Pn	Pn	17 29 24.2	+0.4
NKC				Sn	Sn	17 30 48.0	-2.9
SMF	Signal de Mont	7.89	304	ePn	Pn	17 29 26.6	-0.1
SMF				eSn	Sn	17 30 51.5	-4.6
	comp=Z,16nm,0.6s						
SMF	Signal de Mont	7.89	304	ePn	Pn	17 29 26.6	-0.1
SMF				eSn	Sn	17 30 51.5	-4.6
	comp=Z,8.0nm,0.6s						
PAGF	Fort de Pagny	8.00	321	ePn	Pn	17 29 28.8	+0.6
PAGF	Fort de Pagny	8.00	321	ePn	Pn	17 29 28.8	+0.6
DPC	Dobruska-Polom	8.04	14	ePN	Pn	17 29 28.1	-0.7
DPC				eSN	Sn	17 30 55.2	-4.6
DPC	Dobruska-Polom	8.04	14	Pn	Pn	17 29 28.1	-0.7
DPC				Sn	Sn	17 30 55.2	-4.6
SFTF	Sexfontaines	8.10	317	ePn	Pn	17 29 29.6	+0.1
SFTF				eSn	Sn	17 30 56.3	-4.9
	comp=Z,10nm,0.5s						
SFTF	Sexfontaines	8.10	317	ePn	Pn	17 29 29.6	+0.1
SFTF				eSn	Sn	17 30 56.3	-4.9
	comp=Z,5.1nm,0.5s						
MTLF	Montolieu	8.18	279	ePn	Pn	17 29 29.4	-1.3
MTLF	Montolieu	8.18	279	ePn	Pn	17 29 29.4	-1.3
LOR	Lormes	8.19	308	ePn	Pn	17 29 30.6	-0.1
LOR				eSn	Sn	17 30 59.9	-3.5
	comp=Z,12nm,0.6s						
LOR	Lormes	8.19	308	ePn	Pn	17 29 30.6	-0.1
LOR				eSn	Sn	17 30 59.9	-3.5
	comp=Z,6.2nm,0.6s						
AVF	Avril sur Loir	8.26	304	ePn	Pn	17 29 31.6	-0.1
AVF	Avril sur Loir	8.26	304	ePn	Pn	17 29 31.6	-0.1
MEZF	Maizieres J'vi	8.29	318	ePn	Pn	17 29 32.5	+0.4
MEZF				eSn	Sn	17 31 02.8	-3.0
	comp=Z,24nm,0.8s						
MEZF	Maizieres J'vi	8.29	318	ePn	Pn	17 29 32.5	+0.4
MEZF				eSn	Sn	17 31 02.8	-3.0
	comp=Z,12nm,0.8s						
SSF	Saint Saulge	8.29	306	ePn	Pn	17 29 31.9	-0.2
SSF	Saint Saulge	8.29	306	ePn	Pn	17 29 31.9	-0.2
BRG	Berggiesshubel	8.31	3	e(PG)	Pg	17 30 10.8	+0.1
BRG				e(SN)	Sn	17 31 02.1	-4.2
BRG				eSG	Sg	17 32 06.8	+8.7
BGF	Bois d'Agland	8.47	302	ePn	Pn	17 29 34.9	+0.3
BGF	Bois d'Agland	8.47	302	ePn	Pn	17 29 34.9	+0.3
CAF	Calviac	8.48	290	eP	Pn	17 29 35.6	+0.8
CAF	Calviac	8.48	290	eP	Pn	17 29 35.6	+0.8
CRVS	Cervenica-Dubn	8.50	39	ePN	Pn	17 29 38.7	+3.7
CLL	Collm	8.73	359	ePn	Pn	17 29 36.0	-2.2
CLL				eSn	Sn	17 31 04.0	-13
CLL				eSg	Sg	17 32 00.0	-12
	comp=E,100nm,23.4s						
TCF	Toulx Ste Croi	8.77	299	ePn	Pn	17 29 39.1	+0.3
TCF	Toulx Ste Croi	8.77	299	ePn	Pn	17 29 39.1	+0.3
KOLS	Kolonicke sedl	8.91	41	ePN	Pn	17 29 50.2	+10
RJF	Les Rejaudoux	8.94	292	eP	Pn	17 29 42.9	+1.8
RJF	Les Rejaudoux	8.94	292	eP	Pn	17 29 42.9	+1.8
LFF	La Frestale	9.41	289	eP	Pn	17 29 48.8	+1.4
LFF	La Frestale	9.41	289	eP	Pn	17 29 48.8	+1.4
GIVF	Givet	9.54	325	ePn	Pn	17 29 50.6	+1.3
GIVF	Givet	9.54	325	ePn	Pn	17 29 50.6	+1.3
MLR	Muntele Rosu	9.54	68	Pn	Pn	17 29 54.1	+4.7
	comp=E,0.1nm,0.3s,baz=310,slow=20,SNR=3.1						
EPF	Esparros	9.56	277	ePn	Pn	17 29 47.3	-2.3
EPF	Esparros	9.56	277	ePn	Pn	17 29 47.3	-2.3
BAIF	Baives	9.78	323	ePn	Pn	17 29 52.7	+0.2
BAIF	Baives	9.78	323	ePn	Pn	17 29 52.7	+0.2
BRTR	Keskin Array B	15.56	94	Pn	P	17 31 18.1	+2.2
	comp=E,0.1nm,0.3s,baz=286,slow=7.3,SNR=8.8						
EKA	Eskdalemuir Ar	16.68	326	Pn	Pn	17 31 23.9	-1.6
	baz=126,slow=18,SNR=3.5						
MDT	Midelt	17.19	241	LR	LR	17 38 07.1	
	comp=E,71nm,20.2s,baz=163,slow=37						
NOA	NORSAR Array B	18.53	357	P	Pn	17 31 48.7	+0.2
	comp=E,0.1nm,0.3s,baz=187,slow=12,SNR=3.4						
FINES	FINESS Array B	20.39	18	P	P	17 32 08.4	-0.2
	comp=E,2.2nm,0.7s,baz=199,slow=9.3,SNR=7.6						
KBZ	Khabaz	21.56	77	P	P	17 32 24.7	+3.3
	comp=E,4.3nm,0.9s,baz=300,slow=7.4,SNR=9.5						
TORD	Torodi Ar. Bea	31.01	202	P	P	17 33 49.8	+0.1
	comp=E,0.9nm,0.9s,baz=9.8,slow=8.6,SNR=4.1						
MKAR	Makanchi Array	47.78	60	P	P	17 36 09.7	+0.4
	comp=E,0.5nm,0.8s,baz=290,slow=6.9,SNR=5.7						
SONM	Songino Array	61.87	50	P	P	17 37 51.9	+0.5
	comp=E,0.8nm,0.9s,baz=296,slow=6.6,SNR=6.9						
YKA	Yellowknife Ar	67.28	337	P	P	17 38 26.5	+0.2
	comp=E,0.5nm,0.7s,baz=41,slow=6.1,SNR=14						
CMAR	Chiang Mai Arr	74.59	79	P	P	17 39 10.9	-0.5
	comp=E,0.3nm,0.8s,baz=314,slow=9.2,SNR=5.9						

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*IDC **14** 17:45:34.7±0.6, 15°.50S×74°.65W, h0km, mb4.4/14, mb1 4.5/16, mb1mx4.4/23, mbtmp4.3/16, ML3.7/2, MS3.9/21, Ms1 3.9/21, ms1mx3.8/31, Error ellipse: s-maj=24.8km s-min=15.9km az=52.0*

*ISCJB **14** 17:45:37.0±0.2, 15°.52S±0°.05×74°.63W±0°.07, h26km, mb4.5/33, MS4.0/19, Error ellipse: s-maj=11.4km s-min=5.0km az=146.0*

*BJI **14** 17:45:38.7, 15°.23S×74°.54W, h35km, mB5.2/6, Ms5.3/2, Ms7 5.2/4*

*NEIC **14** 17:45:40.4±0.7, 15°.55S×74°.60W, h40km±6km, mb4.7/20, Error ellipse: s-maj=9.5km s-min=5.0km az=61.0*

NEIC Felt [III] at Chala. Also felt at Acari.

ISC 14 17:45:38.4±0.4**, 15°.60S**±0°.07**×74°.77W**±0°.07**, h26**km**, n355, σ1**s**15**/343**, mb4.5**/33**, MS4.0**/19**, 117C-133D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	4.12	331	ePn	Pn	17 46 40.9	+1.2
NNA				eSn	Sn	17 47 24.0	-3.0
NNA				Sn	Sb	17 47 36.0	-3.6
NNA	Nana	4.12	331	Pn	Pn	17 46 41.4	+1.7
	20nm,0.3s,baz=129,slow=10.0,SNR=37						
NNA				Sn	Sb	17 47 36.0	-3.6
	149nm,0.3s,baz=215,slow=16,SNR=5.8						
LPAZ	La Paz	6.43	97	ePn	Pn	17 47 15.5	+3.6
	60nm,0.6s						
LPAZ				Sn	Sn	17 48 28.1	+3.4
LPAZ	La Paz	6.43	97	Pn	Pn	17 47 15.8	+3.9
	2.0nm,0.3s,baz=274,slow=12,SNR=37						
LPAZ				Sn	Sn	17 48 28.1	+3.4
	baz=250,slow=16,SNR=1.4						
LPAZ				LR	LR	17 49 57.4	
	comp=Z,1µm,20.4s,baz=264,slow=42						
LVC	Limon Verde	8.90	142	ePn	Pn	17 47 45.7	0.0
ATAH	Atahualpa	9.13	337	Pn	Pn	17 47 54.6	+5.7
ATAH				Sn	Sn	17 49 44.0	+13
ATAH	Atahualpa	9.13	337	Pn	Pn	17 47 54.6	+5.7
	0.5nm,0.3s,baz=103,slow=14,SNR=3.5						
ATAH				Sn	Sn	17 49 44.0	+13
	0.1nm,0.3s,baz=214,slow=16,SNR=2.7						
SAML	Samuel	13.11	61	ePn	Pn	17 48 41.6	-1.4
	26nm,0.7s						
SIV	San Ignacio	13.19	94	Pn	Pn	17 48 41.5	-2.7
SIV	San Ignacio	13.19	94	Pn	Pn	17 48 41.5	-2.7
	0.5nm,0.3s,baz=279,slow=12,SNR=11						
SIV				LR	LR	17 54 31.0	
	comp=Z,614nm,18.3s,slow=41						
LCO	Las Campanas	13.87	165	ePn	Pn	17 48 55.4	+1.9
	19nm,1.1s						
OTAV	Otavalo	16.15	347	ePn	P	17 49 29.6	+2.3
	19nm,0.9s						
CFAA	Coronel Fontan	17.01	161	Pn	P	17 49 35.3	-0.9
CFAA	Coronel Fontan	17.01	161	Pn	P	17 49 35.3	-0.9
	0.1nm,0.3s,baz=343,slow=10,SNR=12						
CFAA				LR	LR	17 55 12.1	
	comp=Z,27nm,21.3s,baz=327,slow=34						
CPUP	Villa Florida	19.45	126	LR	LR	17 59 01.0	
	comp=Z,206nm,19.0s,baz=296,slow=42						
ROSC	El Rosal	20.33	1	eP	Pn	17 50 16.9	+1.6
ROSC	El Rosal	20.33	1	LR	LR	17 59 01.2	
	comp=Z,232nm,20.0s,baz=90,slow=40						
PAYG	Puerto Ayora	21.32	313	eP	P	17 50 23.4	-0.1
	11nm,0.7s						
TRQA	Tornquist	25.06	156	eP	P	17 50 59.9	-0.7
	1.1nm,0.8s						
PLCA	Paso Flores	25.31	172	ePn	P	17 51 02.5	-0.5
	16nm,1.1s						
PLCA	Paso Flores	25.31	172	P	P	17 51 03.2	+0.2
	7.8nm,0.7s,baz=343,slow=10,SNR=23						
BDFB	Brasilia	25.77	94	P	P	17 51 07.7	+0.3
BDFB	Brasilia	25.77	94	P	P	17 51 07.7	+0.3
	5.9nm,0.7s,baz=258,slow=11,SNR=7.0						
BDFB				LR	LR	18 02 48.7	
	comp=Z,132nm,20.2s,baz=96,slow=40						
JTS	JuntasAbangare	27.63	338	LR	LR	18 02 41.6	
	comp=Z,133nm,19.9s,baz=343,slow=37						
RPN	Rapa Nui	34.06	245	LR	LR	18 02 25.8	
	comp=Z,412nm,21.0s,baz=60,slow=30						
EFI	East Falkland	38.39	163	P	P	17 52 57.7	+0.3
	31nm,0.9s						
732A	Laxson Ranch,	50.36	331	⇓P	P	17 54 34.3	+1.0
	baz=51						
632A	Uvalde	50.93	332	⇑P	P	17 54 38.4	+0.7
	baz=51						
631A	Perdido Creek	51.22	331	⇑P	P	17 54 40.3	+0.5
	baz=52						
532A	Rocksprings	51.51	332	⇓P	P	17 54 42.7	+0.7
	baz=52						
SWET	Sewanee	51.64	348	P	P	17 54 42.6	-0.3
JCT	Junction City	51.77	332	⇑P	P	17 54 44.6	+0.7
	baz=52						
531A	Rocksprings	51.84	331	⇓P	P	17 54 45.2	+0.7
	baz=52,SNR=6.2						
WHTX	Lake Whitney	52.08	335	⇑P	P	17 54 46.8	+0.6
	baz=52						
432A	Menard	52.10	333	⇓P	P	17 54 46.9	+0.5
	baz=52						
530A	J-C Ranch, Com	52.20	331	⇑P	P	17 54 47.8	+0.6
	baz=52						
431A	Sonora	52.30	332	⇑P	P	17 54 48.3	+0.3
	baz=53,SNR=5.7						
628A	Black Gap, Mar	52.40	329	⇓P	P	17 54 49.8	+1.1
	baz=53,SNR=11						
332A	Millersview	52.51	333	⇓P	P	17 54 49.9	+0.4
	baz=53,SNR=5.4						
529A	Stev Forest Ra	52.60	330	⇑P	P	17 54 50.8	+0.6
	baz=53,SNR=9.7						
627A	Terlingua Ranc	52.62	328	⇑P	P	17 54 51.2	+0.7
	baz=53,SNR=8.4						
TXAR	Lajitas Array	52.67	328	P	P	17 54 51.0	+0.2
TXAR	Lajitas Array	52.67	328	P	P	17 54 51.0	+0.2
	4.2nm,0.9s,baz=146,slow=9.1,SNR=26						
TXAR				LR	LR	18 16 08.3	
	comp=Z,80nm,19.3s,baz=0.0,slow=35						
430A	Baggett Ranch,	52.68	331	⇓P	P	17 54 51.3	+0.5
	baz=53						
331A	San Angelo	52.75	332	⇑P	P	17 54 51.6	+0.3
	baz=53						
429A	Davenport Ranc	52.85	330	⇓P	P	17 54 52.9	+0.8
	baz=53,SNR=6.1						
232A	Coleman	52.90	333	⇓P	P	17 54 52.9	+0.5
	baz=53,SNR=5.9						
528A	Cox Ranch, San	52.90	329	⇑P	P	17 54 53.3	+0.8
	baz=53,SNR=5.3						
626A	Big Bend Ranch	53.09	328	⇑P	P	17 54 55.0	+1.2
	baz=53,SNR=23						
428A	Kincaid Ranch,	53.32	330	⇓P	P	17 54 56.1	+0.6
	baz=54						
526A	Mary Lane Ranc	53.47	328	⇓P	P	17 54 57.7	+0.9
	baz=54,SNR=5.9						
ABTX	Abilene, Hawle	53.53	334	⇑P	P	17 54 57.4	+0.4
	baz=54						
329A	Wagon Wheel Ra	53.61	331	⇑P	P	17 54 58.3	+0.6
	baz=54						
427A	Hayter Ranch,	53.77	329	⇑P	P	17 54 59.5	+0.6
	baz=54						
328A	Wristen Ranch,	53.92	330	⇓P	P	17 55 00.4	+0.5
	baz=54,SNR=5.5						

426A	McDonald Obser baz=54,SNR=5.1	53.93 329	⇑P	P	17 55 00.9	+0.7
Z32A	Haskell baz=54	54.05 334	⇑P	P	17 55 01.2	+0.4
Z31A	Sharp Cattle R baz=55,SNR=6.9	54.34 334	⇓P	P	17 55 03.6	+0.7
228A	UT Block 9, Go baz=55	54.42 331	⇑P	P	17 55 03.8	+0.2
326A	Caldwell Ranch baz=55	54.44 329	⇓P	P	17 55 04.4	+0.7
425A	Indio Mountain baz=55,SNR=8.8	54.51 328	⇓P	P	17 55 04.8	+0.4
Y32A	R-V Farms, Ver baz=55	54.64 335	⇓P	P	17 55 05.2	+0.2
Z30A	Sanderson Ranc baz=55,SNR=9.1	54.74 333	⇓P	P	17 55 06.0	+0.1
128A	Castleberry Fa baz=55	54.80 331	⇑P	P	17 55 06.4	+0.1
Y31A	Rekieta Farm, baz=55	54.95 334	⇓P	P	17 55 07.6	+0.3
TUL1	Tulsa baz=55	54.96 339	⇓P	P	17 55 07.4	+0.1
325A	Bean Ranch, Si baz=55,SNR=6.3	54.98 328	⇑P	P	17 55 08.2	+0.5
Z29A	Hungry Hill Ra baz=55	54.98 332	⇑P	P	17 55 07.2	-0.3
Y30A	Stafford Cattl baz=55	55.15 333	⇓P	P	17 55 09.0	+0.2
226B	Tecolote Peak, baz=55,SNR=5.1	55.15 329	⇓P	P	17 55 09.7	+0.9
324A	Moseley Ranch, baz=56	55.29 328	⇑P	P	17 55 10.1	+0.1
X31A	McDonald Ranch baz=56,SNR=5.7	55.41 335	⇓P	P	17 55 10.7	+0.1
225A	Deer Hill, Car baz=56,SNR=6.2	55.50 329	⇑P	P	17 55 12.0	+0.5
126A	Clayton Basin, baz=56	55.54 330	⇑P	P	17 55 12.2	+0.5
X30A	Coker Ranch, T baz=56	55.62 334	⇑P	P	17 55 12.1	-0.1
Z27A	Tatum baz=56	55.71 331	⇓P	P	17 55 12.8	-0.1
Y28A	McKinney Farm, baz=56	55.77 332	⇓P	P	17 55 13.5	+0.2
224A	Cornudas Mount baz=56,SNR=10	55.82 328	⇓P	P	17 55 13.8	+0.1
125A	Gardner Draw, baz=56	55.86 329	⇓P	P	17 55 14.2	+0.2
W31A	Holland Ranch, baz=56	55.87 335	⇑P	P	17 55 14.1	+0.2
X29A	Tulia baz=56	55.98 333	⇑P	P	17 55 14.8	0.0
Z26A	Caprock baz=56	56.03 330	⇓P	P	17 55 15.3	+0.1
Y27A	Causey baz=56	56.16 332	⇑P	P	17 55 16.2	+0.1
124A	Stringfield Ra baz=57,SNR=7.3	56.29 329	⇓P	P	17 55 17.9	+0.8
Z25A	Roswell baz=57	56.39 330	⇑P	P	17 55 18.0	+0.2
222A	Williams Famil baz=57	56.66 327	⇑P	P	17 55 20.5	+0.8
Z24A	Sheeppen Canyo baz=57	56.75 329	⇑P	P	17 55 20.6	+0.1
X27A	F and S Farms, baz=57	56.77 332	⇓P	P	17 55 20.4	0.0
320A	Kipp Ranch, An baz=57	56.82 325	⇑P	P	17 55 21.7	+0.8
Y25A	Mesa, Roswell baz=57	56.91 330	⇑P	P	17 55 21.6	+0.1
RKT	Rikitea 4.7nm,0.2s	56.96 252	*e*T	T	18 56 37.3	
X26A	CR and CF Fran baz=57	57.01 331	⇓P	P	17 55 22.4	+0.2
220A	Playas Peak, P baz=58	57.26 326	⇑P	P	17 55 25.1	+1.1
Y24A	Capitan baz=58	57.27 330	⇓P	P	17 55 23.9	-0.2
319A	Douglas baz=58,SNR=7.4	57.27 325	⇓P	P	17 55 25.5	+1.5
121A	Cookes Peak, D baz=58	57.35 327	⇑P	P	17 55 25.4	+0.7
T31A	Randall Ranch, baz=58	57.43 336	⇑P	P	17 55 25.1	+0.1
Z22A	Elephant Butte baz=58,SNR=5.8	57.49 328	⇓P	P	17 55 26.7	+1.0
X24A	Lazy VL Ranch, baz=58	57.78 330	⇓P	P	17 55 28.0	+0.2
120A	U Bar Ranch, L baz=58	57.81 326	⇓P	P	17 55 28.6	+0.7
W25A	X Bar L Ranch, baz=58	57.86 331	⇑P	P	17 55 28.1	-0.1
Y22A	Socorro baz=58	58.03 329	⇓P	P	17 55 30.0	+0.6
V26A	Tequesquite Ra baz=58	58.03 332	⇑P	P	17 55 29.7	+0.3
Z20A	Nine Sixteen R baz=58,SNR=7.1	58.23 327	⇑P	P	17 55 31.9	+1.1
W24A	Lazy 6 Ranch, baz=59	58.30 331	⇓P	P	17 55 31.7	+0.4
T28A	Walsh baz=59	58.43 334	⇑P	P	17 55 32.3	+0.3
V25A	Rancho No Teng baz=59,SNR=6.0	58.44 332	⇓P	P	17 55 32.6	+0.3
LAZ	Ladron 5.6nm,1.2s	58.49 329	*e*P	P	17 55 33.7	+1.1
U26A	Atchley Ranch, baz=59	58.51 333	⇑P	P	17 55 32.9	+0.1
ANMO	Albuquerque comp=Z,72nm,21.9s,baz=128,slow=36	58.59 330	LR	LR	18 21 10.6	
T27A	Campo baz=59	58.63 334	⇓P	P	17 55 34.1	+0.6
V24A	Rampart Ranch, baz=59	58.65 331	⇓P	P	17 55 33.8	0.0
U25A	Circle Dot Ran baz=59	58.81 332	⇑P	P	17 55 35.3	+0.5
X21A	Alamocita Cree baz=59	58.85 328	⇓P	P	17 55 36.2	+1.0
T26A	Comanche Natio baz=59	59.10 333	⇑P	P	17 55 37.2	+0.4
NCB	Newcomb 32nm,1.4s	59.28 0	P	P	17 55 35.4	-2.4
X20A	Quemado baz=60	59.29 328	⇑P	P	17 55 39.2	+0.9
S26A	Kim baz=60,SNR=9.1	59.42 334	⇑P	P	17 55 39.6	+0.6
T25A	Trinidad baz=60	59.43 333	⇓P	P	17 55 39.1	-0.1
V22A	San Miguel Ran baz=60	59.58 330	⇓P	P	17 55 41.0	+0.7
214A	Organ Pipe Nat baz=60	59.71 323	⇓P	P	17 55 42.6	+1.7
W20A	Ramah baz=60	59.75 328	⇓P	P	17 55 42.1	+0.7
S25A	Robets Cordova baz=60	59.87 333	⇓P	P	17 55 42.6	+0.4
U22A	Llaves baz=60	59.93 330	⇑P	P	17 55 43.5	+0.9
R26A	Arlington baz=60	59.99 334	⇑P	P	17 55 43.0	+0.2
X18A	Snowflake baz=60	60.03 327	⇑P	P	17 55 44.3	+1.0
S24A	Houchin Ranch, baz=60	60.20 332	⇓P	P	17 55 44.9	+0.3
SADO	Sadowa comp=Z,54nm,19.3s,baz=134,slow=36	60.21 356	LR	LR	18 22 11.2	
V20A	Brimhall baz=60	60.26 329	⇓P	P	17 55 45.8	+0.9
U21A	Nageezi baz=61	60.36 330	⇓P	P	17 55 46.2	+0.6
W18A	Petrified Fore baz=61	60.38 327	⇓P	P	17 55 46.5	+0.9
T22A	Edith baz=61	60.47 331	⇓P	P	17 55 47.2	+0.9
Q26A	Hugo baz=61	60.54 334	⇑P	P	17 55 47.3	+0.6
R24A	Sanders Place, baz=61	60.64 333	⇓P	P	17 55 48.1	+0.6
BGNE	Belgrade baz=61	60.71 340	⇓P	P	17 55 48.0	+0.4
U20A	Newcomb baz=61	60.74 329	⇑P	P	17 55 49.0	+0.9
T21A	Navajo Lake baz=61	60.75 330	⇓P	P	17 55 49.1	+0.9
X16A	Lo Mia Camp, P baz=61	60.75 326	⇓P	P	17 55 49.3	+1.1
Q25A	Bedland, Calha baz=61	60.84 334	⇑P	P	17 55 49.3	+0.6
113A	Mohawk Valley, baz=61	60.86 323	⇓P	P	17 55 50.3	+1.6
R23A	Moffat baz=61	60.93 332	⇑P	P	17 55 50.5	+1.0
P26A	Davis Ranch, A baz=61	61.01 335	⇓P	P	17 55 50.5	+0.6
S22A	4UR Ranch, Cre baz=61	61.02 331	⇑P	P	17 55 51.1	+0.9
Q24A	Divide baz=62	61.27 333	⇑P	P	17 55 52.6	+0.8
P25A	Willow Gulch B baz=62	61.31 334	⇑P	P	17 55 52.8	+0.9
MVCO	Mesa Verde baz=62	61.39 330	⇑P	P	17 55 53.4	+0.8
S21A	Coal Bank Pass baz=62	61.41 330	⇓P	P	17 55 53.7	+1.0
WUAZ	Wupatki baz=62	61.54 326	⇑P	P	17 55 55.1	+1.5
OGNE	Ogallala baz=62	61.68 337	⇓P	P	17 55 55.1	+0.8
S20A	Disappointment baz=62,SNR=6.1	61.81 330	⇓P	P	17 55 56.7	+1.2
R21A	Cimarron baz=62	61.86 331	⇑P	P	17 55 56.4	+0.7
P23A	Jefferson baz=62	61.91 333	⇓P	P	17 55 57.3	+1.1
Y12C	Blythe baz=62	62.00 323	⇓P	P	17 55 58.8	+2.4
ISCO	Idaho Springs baz=62	62.16 333	⇓P	P	17 55 58.2	+0.4
SMCO	Snowmass 5.9nm,1.1s	62.25 332	*e*P	P	17 55 59.4	+0.9
ECSD	EROS Data Cent 13nm,0.8s	62.34 342	*e*P	P	17 55 57.8	-0.8
ECSD			*e*		17 56 09.8	
BC3	Big Chuckawall baz=63	62.48 322	⇓P	P	17 56 02.0	+2.2
P22A	Eagle baz=63	62.49 333	⇓P	P	17 56 00.8	+0.8
O23A	Lake Granby, G baz=63	62.63 334	⇓P	P	17 56 01.8	+0.9
IRM	Iron Mountain baz=63	62.66 323	⇓P	P	17 56 02.7	+1.8
N24A	Carr baz=63	62.71 335	⇓P	P	17 56 02.3	+1.0
U15A	North Rim baz=63	62.72 326	⇑P	P	17 56 03.3	+1.8
P21A	Newcastle baz=63	62.75 332	⇑P	P	17 56 03.0	+1.4
O22A	Kremmling baz=63	62.87 333	⇑P	P	17 56 02.7	+0.2
BELC	Belle Mtn. Jos baz=63	63.04 322	⇑P	P	17 56 05.8	+2.2
PFO	Pinyon Flat Ob baz=63	63.04 321	⇓P	P	17 56 05.4	+1.8
Q19A	Hogan Spring (baz=63	63.13 330	⇓P	P	17 56 05.7	+1.6
N22A	Wattenberg Ran baz=64	63.35 334	⇓P	P	17 56 06.6	+0.9
GMRC	Granite Mounta baz=64	63.39 323	⇓P	P	17 56 07.7	+1.8
P19A	Cripple Cowboy baz=64	63.54 331	⇑P	P	17 56 08.0	+1.1
M23A	Laramie baz=64	63.59 334	⇑P	P	17 56 08.2	+1.0
O20A	White River Ci baz=64	63.60 332	⇓P	P	17 56 08.3	+1.1
SRU	San Rafael baz=64	63.87 330	⇑P	P	17 56 10.3	+1.3
L23A	Garrett baz=64	64.12 335	⇓P	P	17 56 11.6	+1.0
P18A	Preston Nutter baz=64	64.13 330	⇓P	P	17 56 12.0	+1.1
O19A	Miners Draw (B baz=64	64.13 331	⇓P	P	17 56 11.8	+1.0
N20A	Spence Gulch, baz=64	64.17 332	⇓P	P	17 56 12.4	+1.4
P17A	Butcher Ranch, baz=64	64.25 330	⇑P	P	17 56 13.0	+1.5
L22A	Ellis Ranch, M baz=65	64.36 334	⇑P	P	17 56 13.7	+1.5
M21A	Separation Pea baz=65,SNR=5.9	64.40 333	⇓P	P	17 56 13.0	+0.4
K23A	Bowen Ranch, D baz=65	64.63 335	⇑P	P	17 56 14.9	+1.1
N19A	John Jarvie Ra baz=65	64.63 332	⇑P	P	17 56 15.0	+1.0
M20A	Sweetwater, Wa baz=65	64.67 333	⇑P	P	17 56 15.0	+0.8
L21A	Rawlins baz=65,SNR=5.5	64.70 334	⇓P	P	17 56 14.7	+0.3
K22A	Casper baz=65	64.91 335	⇓P	P	17 56 16.5	+0.8
L20A	Wamsutter baz=65	65.15 333	⇑P	P	17 56 18.7	+1.3
I24A	Kuemmerle Ranc baz=65	65.17 337	⇑P	P	17 56 18.1	+0.8
RSSD	Black Hills 3.3nm,1.1s	65.17 337	*e*P	P	17 56 17.3	-0.1
RSSD			*e*		17 56 29.8	
K21A	Alcova baz=66,SNR=5.1	65.19 334	⇓P	P	17 56 18.2	+0.6
ISA	Isabella baz=66	65.66 322	⇓P	P	17 56 23.3	+2.7
L19A	Farson baz=66	65.68 332	⇓P	P	17 56 22.3	+1.5
K20A	Yellowstone Ra baz=66	65.68 333	⇓P	P	17 56 21.3	+0.5
DUG	Dugway baz=66,SNR=8.6	65.83 329	⇓P	P	17 56 23.2	+1.5
L18A	Fontenelle, Gr baz=66,SNR=5.1	65.84 332	⇑P	P	17 56 22.5	+0.6
J21A	Lysite baz=66	65.86 334	⇓P	P	17 56 23.4	+1.4
H24A	Dirks Ranch, A baz=66	65.89 337	⇓P	P	17 56 23.0	+1.0
R11A	Troy Canyon, C baz=66,SNR=5.6	65.90 326	⇑P	P	17 56 23.8	+1.5
I22A	9 Mile Ranch, baz=66,SNR=6.0	65.92 335	⇑P	P	17 56 22.7	+0.5
K19A	Absolon Red Bu baz=66	66.03 333	⇓P	P	17 56 23.9	+0.8
J20A	Shoshoni baz=66	66.14 334	⇑P	P	17 56 24.5	+0.9
I21A	Big Trails, Te baz=66,SNR=6.8	66.18 335	⇑P	P	17 56 24.1	+0.2
BW06	Boulder Array baz=67	66.30 333	⇓P	P	17 56 25.3	+0.5
PDAR	Pinedale Array	66.30 333	P	P	17 56 24.9	+0.1
PDAR	Pinedale Array 2.4nm,1.0s,baz=142,slow=7.5,SNR=9.9	66.30 333	P	P	17 56 24.9	+0.1
HWUT	Hardware Ranch 5.3nm,0.8s	66.30 331	*e*P	P	17 56 24.4	-0.4
L17A	Cokeville baz=67	66.36 331	⇓P	P	17 56 25.6	+0.4
K18A	Toltan Ranch, baz=67	66.41 332	⇑P	P	17 56 26.4	+0.9
J19A	Crotheart baz=67	66.48 333	⇑P	P	17 56 27.1	+1.2
G23A	Biddle baz=67	66.59 337	⇓P	P	17 56 27.0	+0.6
F24A	Ekalaka baz=67	66.79 338	⇓P	P	17 56 28.4	+0.7
J18A	Kendall Valley baz=67	66.86 333	⇓P	P	17 56 29.2	+0.8
MDND	Maddock baz=67	66.95 342	⇑P	P	17 56 29.6	+1.1
G22A	Birney baz=67	66.95 336	⇓P	P	17 56 28.8	+0.1
L15A	Malad City baz=67,SNR=5.6	67.00 330	⇓P	P	17 56 29.6	+0.4
I19A	Meeteetse baz=67	67.08 334	⇑P	P	17 56 30.4	+0.7
I18A	Diamond G Ranc baz=67,SNR=6.3	67.16 333	⇓P	P	17 56 31.1	+0.8
K16A	Soda Springs baz=68,SNR=6.4	67.27 331	⇓P	P	17 56 32.0	+1.1
J17A	Brown Place, J baz=68	67.29 332	⇓P	P	17 56 32.5	+1.4
NVAR	Mina Array Bea	67.46 324	P	P	17 56 33.6	+1.3
NVAR	Mina Array Bea 2.1nm,0.8s,baz=134,slow=6.7,SNR=6.4	67.46 324	P	P	17 56 33.6	+1.3
RRI2	Red Ridge 20nm,1.1s	67.55 332	*e*P	P	17 56 33.5	+0.7
K15A	Arbon baz=68	67.59 331	⇑P	P	17 56 33.7	+0.8
I17A	Pilgrim Ck. baz=68,SNR=8.4	67.67 333	⇓P	P	17 56 34.7	+1.3
G20A	Bridger baz=68	67.72 335	⇓P	P	17 56 34.1	+0.4
K14A	Jones Ranch, D baz=68	67.79 330	⇓P	P	17 56 35.2	+1.0
IMW	Indian Meadow 11nm,1.2s	67.81 333	*e*P	P	17 56 34.1	-0.3
IMW			*e*		17 56 46.5	
H18A	Shoshone NF, C baz=68	67.88 334	⇓P	P	17 56 35.3	+0.5
RLMT	Red Lodge 17nm,1.2s	68.07 334	*e*P	P	17 56 36.4	+0.4
RLMT			*e*		17 56 46.5	
RLMT	Red Lodge baz=68,SNR=5.7	68.07 334	⇑P	P	17 56 36.4	+0.4
J15A	Blackfoot baz=68	68.10 331	⇓P	P	17 56 36.9	+0.8
ULM	Lac du Bonnet	68.15 346	P	P	17 56 35.5	-0.5
ULM	Lac du Bonnet 1.9nm,0.5s,baz=147,slow=7.7,SNR=3.6	68.15 346	P	P	17 56 35.5	-0.5
D23A	Lindsay baz=68	68.20 338	⇑P	P	17 56 37.4	+0.9
G18A	Lazy EL Ranch, baz=69,SNR=6.9	68.35 334	⇓P	P	17 56 38.2	+0.6
F19A	Roth Farm, Mol baz=69,SNR=5.4	68.53 335	⇑P	P	17 56 39.4	+0.7
D22A	Cohagen baz=69,SNR=9.9	68.53 338	⇑P	P	17 56 39.6	+1.0
H16A	Russell Place, baz=69	68.58 333	⇑P	P	17 56 40.6	+1.4
C23A	Lambert baz=69	68.72 339	⇓P	P	17 56 40.9	+1.1
E20A	Meyer Farm, Mu baz=69	68.73 336	⇓P	P	17 56 41.0	+1.1
D21A	La Casta Ranch baz=69	68.76 337	⇑P	P	17 56 41.1	+1.1
GCMT	Greycliff 13nm,1.6s	68.77 335	*e*P	P	17 56 40.7	+0.4
GCMT			*e*		17 56 52.9	
F18A	Big Timber baz=69,SNR=7.8	68.89 335	⇓P	P	17 56 41.7	+0.8
J13A	Cove Ranch, Pi baz=69	68.92 330	⇓P	P	17 56 42.4	+1.2
C22A	Vida baz=69	68.93 338	⇓P	P	17 56 42.0	+0.9
DGMT	Dagmar baz=69	68.96 339	⇓P	P	17 56 42.1	+0.9
E19A	Rath Farm, Rou baz=69,SNR=6.5	68.96 336	⇓P	P	17 56 42.1	+0.7
I14A	Mackay baz=69,SNR=7.1	68.98 331	⇑P	P	17 56 43.0	+1.4
HLID	Hailey 11nm,1.4s	69.15 330	*e*P	P	17 56 43.7	+1.0
HLID	Hailey baz=69,SNR=5.9	69.15 330	⇓P	P	17 56 44.1	+1.4
D20A	Manuel Ranch, baz=70	69.22 336	⇓P	P	17 56 44.2	+1.3
B23A	Brockton baz=70	69.22 339	⇑P	P	17 56 44.5	+1.6
G16A	Moss Hill, Enn baz=70	69.24 333	⇑P	P	17 56 44.2	+1.0
I13A	Wildhorse Cree baz=70,SNR=12	69.28 331	⇓P	P	17 56 44.9	+1.4
F17A	Fitzpatrick Pl baz=70	69.28 334	⇓P	P	17 56 45.1	+1.7
C21A	Desert Coulee baz=70,SNR=5.5	69.44 337	⇓P	P	17 56 44.8	+0.6
H14A	Leadore baz=70,SNR=5.3	69.46 332	⇑P	P	17 56 45.9	+1.2
G15A	Dillon baz=70	69.49 332	⇑P	P	17 56 46.3	+1.6
E18A	Harlowton baz=70,SNR=5.5	69.50 335	⇑P	P	17 56 45.7	+0.9
D19A	Cripps Ranch, baz=70	69.57 336	⇑P	P	17 56 46.4	+1.3
F16A	Kennard Place, baz=70	69.60 333	⇑P	P	17 56 46.9	+1.6
SNAA	Sanae 6.8nm,0.8s	69.63 161	*e*P	P	17 56 45.1	0.0
I12A	Atlanta baz=70,SNR=6.0	69.67 330	⇑P	P	17 56 47.3	+1.4
C20A	Veseth Ranch, baz=70	69.68 337	⇓P	P	17 56 46.7	+1.0
MFID	Camas Ranch baz=70,SNR=7.1	69.73 329	⇓P	P	17 56 47.6	+1.4
MEH	Mehetia 30nm,0.2s	69.80 256	*e*T	T	19 12 39.0	
E17A	Martinsdale baz=70	69.81 334	⇓P	P	17 56 47.6	+0.9
H13A	Challis baz=70	69.83 331	⇑P	P	17 56 48.4	+1.5
D18A	Linhart Farms, baz=70	69.96 335	⇓P	P	17 56 48.5	+0.9
G14A	Jackson baz=70	69.99 332	⇑P	P	17 56 48.8	+0.9
A22A	Carney Farms, baz=70	69.99 339	⇑P	P	17 56 48.4	+0.8
F15A	Butte baz=70	70.02 333	⇓P	P	17 56 48.9	+0.9
C19A	Slack Wire Ran baz=70	70.10 336	⇑P	P	17 56 49.2	+0.8
H12A	Diamond D Ranc baz=70	70.11 331	⇑P	P	17 56 49.3	+0.7
TBI	Tubuai 118nm,26.5s	70.17 250	*e*LR	LR	18 18 21.3	
TBI			*e*T	T	19 13 07.2	
E16A	East Helena 6.4nm,0.2s	70.21 334	⇑P	P	17 56 50.2	+1.1
G13A	Cobalt baz=70,SNR=7.1	70.23 331	⇑P	P	17 56 50.3	+1.0
D17A	Six Diamond Ra baz=71,SNR=5.8	70.29 335	⇑P	P	17 56 50.4	+0.8
B20A	Solberg Farm, baz=71	70.29 337	⇑P	P	17 56 50.6	+1.2
SCHQ	Schefferville comp=Z,54nm,20.2s,baz=343,slow=36	70.48 5	LR	LR	18 27 27.4	
E15A	Deer Lodge baz=71	70.54 333	⇑P	P	17 56 52.4	+1.3
D16A	Dana Ranch, Ca baz=71	70.55 334	⇑P	P	17 56 52.5	+1.3
B19A	Brinkman Farms baz=71,SNR=5.4	70.65 337	⇑P	P	17 56 52.2	+0.6
C17A	Wharram Farm, baz=71	70.70 335	⇓P	P	17 56 52.5	+0.5
F13A	Darby baz=71,SNR=7.6	70.80 332	⇑P	P	17 56 53.8	+1.0
E14A	Clinton baz=71	70.90 333	⇑P	P	17 56 54.3	+0.9
TVO	Taravao 5.6nm,0.3s	70.92 256	*e*T	T	19 14 03.8	
B18A	Beardsley Farm baz=71,SNR=5.6	70.92 336	⇑P	P	17 56 54.2	+0.8
A19A	Klindworth Far baz=71,SNR=6.8	70.97 337	⇑P	P	17 56 54.0	+0.5
D15A	Lincoln baz=71	70.97 334	⇓P	P	17 56 55.1	+1.3
TIAR	Tiarei 12nm,0.3s	71.05 256	*e*T	T	19 14 13.0	
F12A	Elk City baz=72	71.20 331	⇑P	P	17 56 56.6	+1.5
E13A	Victor baz=72	71.23 332	⇓P	P	17 56 56.7	+1.4
C16A	Fuhringer Ranc baz=72	71.24 335	⇑P	P	17 56 55.9	+0.5
PPT2	Papeete2 114nm,24.0s	71.26 256	*e*LR	LR	18 18 50.4	
PPT	Papeete comp=Z,77nm,21.3s,baz=165,slow=30	71.27 256	LR	LR	18 21 09.4	
A18A	Metzger Ranch, baz=72	71.38 336	⇓P	P	17 56 57.5	+1.4
MSO	Missoula baz=72	71.42 333	⇑P	P	17 56 57.9	+1.4
D14A	Greenough baz=72	71.42 333	⇓P	P	17 56 57.7	+1.2
C15A	Salmond Ranch, baz=72	71.58 334	⇓P	P	17 56 58.9	+1.5
A17A	Triple J Farms baz=72,SNR=5.8	71.73 336	⇑P	P	17 56 58.5	+0.3
D13A	Huson baz=72	71.85 333	⇓P	P	17 56 59.7	+0.7
B15A	Bradely Ranch, baz=72	71.98 335	⇑P	P	17 57 00.4	+0.6
A16A	West Butte Ran baz=72	72.09 335	⇓P	P	17 57 01.5	+1.1
YBH	Yreka Blue Hor	72.19 324	P	P	17 57 01.5	+0.4
YBH	Yreka Blue Hor 2.7nm,0.7s,baz=149,slow=3.9,SNR=4.5	72.19 324	P	P	17 57 01.5	+0.4
YBH			LR	LR	18 25 23.1	

comp=Z,97nm,21.9s,baz=171,slow=33

B14A	**Marquette Ranc**	**72.31**	**334**	⫴P		**P**		**17 57 02.6**	**+0.8**
	baz=73,SNR=5.4									
C13A	**Hot Springs**	**72.35**	**333**	⫴P		**P**		**17 57 03.2**	**+1.2**
	baz=73,SNR=5.1									
DBIC	**Dimbokro**	**72.67**	**78**	P		**P**		**17 57 03.6**	**-0.8**
DBIC				*e*				17 57 14.4		
DBIC	**Dimbokro**	**72.67**	**78**	P		**P**		**17 57 03.6**	**-0.8**
	4.1nm,0.8s,baz=248,slow=5.7,SNR=6.9									
DBIC					LR	LR		18 27 21.6		
	comp=Z,209nm,18.3s,baz=231,slow=35									
A14A	**Double T Ranch**	**72.85**	**334**	⫴P		**P**		**17 57 05.8**	**+0.8**
	baz=73									
A12A	**Yaak River Ran**	**73.77**	**333**	⫴P		**P**		**17 57 12.4**	**+2.1**
	baz=74									
NEW	**Newport**	**73.92**	**332**	LR		LR		18 28 21.9		
	comp=Z,64nm,20.5s,baz=71,slow=35									
FRB	**Frobisher Bay**	**79.24**	**3**	LR		LR		18 30 47.2		
	comp=Z,67nm,20.4s,baz=260,slow=34									
SBA	**Scott Base**	**80.57**	**191**	*e*P		**P**		**17 57 49.1**	**+1.1**
	4.3nm,0.9s									
TOA0	**Torodi Ar. Sit**	**80.84**	**74**	*e*P		**P**		**17 57 50.1**	**-0.4**
TOA0				*e*				17 58 01.4		
TORD	**Torodi Ar. Bea**	**80.84**	**74**	P		**P**		**17 57 50.4**	**-0.2**
TORD	**Torodi Ar. Bea**	**80.84**	**74**	P		**P**		**17 57 50.4**	**-0.2**
	6.7nm,0.8s,baz=258,slow=5.1,SNR=36									
TORD					LR	LR		18 32 38.0		
	comp=Z,125nm,19.0s,baz=170,slow=35									
VNDA	**Vanda**	**81.63**	**191**	P		**P**		**17 57 55.2**	**+1.5**
VNDA	**Vanda**	**81.63**	**191**	P		**P**		**17 57 55.2**	**+1.5**
	4.4nm,0.9s,baz=120,slow=5.3,SNR=17									
YKA	**Yellowknife Ar**	**83.87**	**343**	P		**P**		**17 58 04.8**	**-0.5**
YKA	**Yellowknife Ar**	**83.87**	**343**	P		**P**		**17 58 04.8**	**-0.5**
	2.3nm,0.9s,baz=137,slow=5.3,SNR=38									
YKW3	**Yellowknife Ar**	**83.92**	**343**	*e*P		**P**		**17 58 05.1**	**-0.5**
	0.2nm,1.2s									
YKW3				*e*				17 58 16.6		
ESDC	**Sonseca Array**	**85.73**	**47**	P		**P**		**17 58 15.2**	**-0.2**
ESDC	**Sonseca Array**	**85.73**	**47**	P		**P**		**17 58 15.2**	**-0.2**
	0.1nm,0.3s,baz=243,slow=8.5,SNR=2.8									
ESDC					LR	LR		18 33 02.7		
	comp=Z,96nm,20.5s,baz=175,slow=33									
DLBC	**Dease Lake**	**86.47**	**334**	P		**P**		**17 58 19.2**	**+0.6**
DLBC	**Dease Lake**	**86.47**	**334**	P		**P**		**17 58 19.2**	**+0.6**
	3.0nm,0.6s,baz=103,slow=6.7,SNR=8.3									
TAM	**Tamanrasset**	**87.31**	**66**	P		**P**		**17 58 24.4**	**+0.8**
	5.9nm,1.1s									
BOSA	**Boshof**	**91.16**	**120**	LR		LR		18 35 11.8		
	comp=Z,92nm,19.4s,baz=325,slow=33									
SUMG	**Summit**	**91.20**	**10**	*e*P		**P**		**17 58 40.5**	**-0.6**
	20nm,1.3s									
SUMG	**Summit**	**91.20**	**10**	*i* P		**P**		**17 58 41.1**	**0.0**
	7.6nm,1.0s									
INK	**Inuvik**	**93.57**	**341**	P		**P**		**17 58 51.0**	**-0.5**
INK	**Inuvik**	**93.57**	**341**	P		**P**		**17 58 51.0**	**-0.5**
	1.3nm,0.9s,baz=103,slow=5.1,SNR=5.0									
INK					LR	LR		18 41 10.8		
	comp=Z,64nm,20.8s,baz=342,slow=36									
ILAR	**Eielson Array**	**96.58**	**336**	LR		LR		18 43 06.6		
	comp=Z,43nm,19.3s,baz=125,slow=36									
DZM	**Mont Dzumac**	**109.30**	**239**	*e*LR		LR		18 36 29.3		
	144nm,23.6s									
ABKAR	**Akbulak array**	**130.25**	**38**	*e*P		**PKPdf**		**18 04 46.6**	**+0.3**
ZAA0	**Zalesovo Array**	**138.54**	**18**	*e*PKPdf		**PKPdf**		**18 05 02.2**	**+0.6**
ZALV	**Zalesovo Beam**	**138.54**	**18**	PKP		**PKPdf**		**18 05 01.1**	**-0.5**
ZALV	**Zalesovo Beam**	**138.54**	**18**	PKP		**PKPdf**		**18 05 01.1**	**-0.5**
	3.1nm,0.9s,baz=299,slow=3.1,SNR=12									
MKAR	**Makanchi Array**	**143.51**	**27**	PKP		PKPbc		18 05 09.2	+1.1
MKAR	**Makanchi Array**	**143.51**	**27**	PKP		PKPbc		18 05 09.2	+1.1
	0.7nm,0.7s,baz=339,slow=2.6,SNR=6.7									
MJAR	**Matsushiro Arr**	**144.04**	**312**	PKPpre		PKPpre		18 05 08.3		
MJAR	**Matsushiro Arr**	**144.04**	**312**	PKhKP		PKPpre		18 05 08.3		
	1.3nm,0.6s,baz=64,slow=1.3,SNR=4.5									
KSH	**Kashi**	**145.06**	**41**	PKP		**PKPdf**		**18 05 14.4**	**+0.5**
KSH				PP		**PP**		**18 08 36.3**	**+4.3**
KSH				PKS		**PKSdf**		**18 08 48.3**	**-1.2**
KSH				SKS		**SKSdf**		**18 12 18.3**	**-3.4**
KSH				SKKS		**SKKSac**		**18 15 21.4**	**-1.9**
KSH				AMB		AMB				
	comp=Z,64nm,3.4s									
KSH				LR		LR				
	comp=Z,310nm,5.3s									
CN2	**Changchun**	**147.04**	**333**	*e*PKPbc		**PKPdf**		**18 05 17.3**	**+0.3**
ULN	**Ulaanbaatar**	**147.79**	**358**	*e*PKPbc		**PKPbc**		**18 05 20.7**	**-0.5**
SONM	**Songino Array**	**147.84**	**359**	PKP		**PKPdf**		**18 05 18.7**	**+0.3**
SONM				PKPbc		**PKPbc**		**18 05 21.6**	**+0.3**
SONM	**Songino Array**	**147.84**	**359**	PKP		**PKPdf**		**18 05 18.7**	**+0.3**
	comp=Z,2.0nm,0.7s,baz=335,slow=1.1,SNR=21									
SONM				PKPbc		**PKPbc**		**18 05 21.6**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=330,slow=1.8,SNR=22									
WMQ	**Urumqi**	**148.16**	**24**	PKPbc		**PKPdf**		**18 05 17.8**	**-1.1**
KSRS	**Korea Array**	**150.38**	**322**	PKPbc		**PKPbc**		**18 05 28.4**	**+0.7**
	comp=Z,5.8nm,0.9s,baz=331,slow=0.7,SNR=16									
KSAR	**Wonju Array Be**	**150.41**	**321**	PKPbc		**PKPbc**		**18 05 28.4**	**+0.6**
HHC	**Hu-ho-hao-te**	**154.25**	**349**	*e*PKPbc		**PKPdf**		**18 05 26.3**	**-2.1**
HHC				PKS		**PKSdf**		**18 08 58.5**	**-4.2**
HHC				PP		**PP**		**18 09 27.3**	**+3.1**
HHC				SKS		**SKSdf**		**18 12 27.3**	**-6.4**
HHC				AMB		AMB				
	comp=Z,180nm,5.1s									
HHC				LR		LR				
	comp=N,190nm,20.0s									
HHC				LR		LR				
	comp=E,560nm,21.5s									
HHC				LR		LR				
	comp=Z,250nm,21.4s									
LZH	**Lanzhou**	**159.56**	**3**	*e*PKP		**PKPdf**		**18 05 34.8**	**-0.6**
LZH				pPKP		**pPKPdf**		**18 05 45.5**	**+1.4**
CD2	**Chengdu**	**164.70**	**5**	PKP		**PKPdf**		**18 05 39.1**	**-1.5**
GYA	**Guiyang**	**169.11**	**353**	PKP		**PKPdf**		**18 05 42.5**	**-1.6**
GYA				PKPab		**PKPab**		**18 06 55.6**	**+0.1**
GYA				PKS		**PKSdf**		**18 09 14.0**	**-2.9**
GYA				PP		**PP**		**18 10 45.8**	**+2.2**
GYA				AMB		AMB				
	comp=Z,90nm,8.4s									
KMI	**Kunming**	**170.24**	**13**	PKP		**PKPdf**		**18 05 45.1**	**+0.1**

*ISK **14** 17:52:15.5,40˚.00N×39˚.08E,h9km,MD2.7*
*CSEM **14** 17:52:16.4±0.3,40˚.02N×39˚.05E,h2km,MD3.0,Error ellipse: s-maj=10.3km s-min=5.5km az=125.0*
*DDA **14** 17:52:16.4,40˚.05N×39˚.01E,h7km,MD3.0*
ISC 14 17:52:16.7±0.9,**40˚.02N**±0˚.03×**39˚.04E**±0˚.03,**h16**km±7km,
n28,σ**0**⁰**97**/43,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KELT	**Kelkit**	**0.21**	**53**	*i* P		**Pg**	**17 52 21.9**	**+0.1**
KELT				*i* S		**Sg**	**17 52 25.1**	**-0.1**
KELT	**Kelkit**	**0.21**	**53**	*i* P		**Pg**	**17 52 21.9**	**+0.1**
KELT				*i* S		**Sg**	**17 52 25.1**	**-0.1**
EZC	**Erzincan**	**0.36**	**137**	*e*Pg		**Pn**	**17 52 28.1**	**+0.6**
GUMT	**Gumushane**	**0.56**	**38**	*e*PG		**Pg**	**17 52 27.1**	**-0.7**
GUMT				*e*SG		**Sg**	**17 52 35.0**	**-0.2**
GUMT	**Gumushane**	**0.56**	**38**	*e*Pg		**Pg**	**17 52 27.1**	**-0.7**
GUMT				*e*Sg		**Sg**	**17 52 35.0**	**-0.2**
SUSE	**Susehri**	**0.67**	**287**	*i* P		**Pb**	**17 52 29.8**	**-0.2**
SUSE				*i* S		**Sg**	**17 52 38.5**	**-0.2**
SUSE	**Susehri**	**0.67**	**287**	*i* P		**Pb**	**17 52 29.8**	**-0.2**
SUSE				*i* S		**Sg**	**17 52 38.5**	**-0.2**
ILIC	**ilic-Erzincan**	**0.67**	**213**	*e*PG		**Pg**	**17 52 29.1**	**-0.8**
ILIC				*e*SG		**Sb**	**17 52 38.8**	**-0.4**
ILIC	**ilic-Erzincan**	**0.67**	**213**	*e*Pg		**Pg**	**17 52 29.1**	**-0.8**
ILIC				*e*Sg		**Sb**	**17 52 38.8**	**-0.4**
ERZN	**Erzincan**	**0.68**	**129**	*e*PG		**Pg**	**17 52 28.1**	**-2.1**
KEMA	**Kemaliye**	**0.86**	**209**	*i* P		**Pg**	**17 52 32.8**	**-0.6**
KEMA	**Kemaliye**	**0.86**	**209**	*i* P		**Pg**	**17 52 32.8**	**-0.6**
BAYT	**Ayd¨–ntepe-Bay**	**0.93**	**66**	*e*PG		**Pg**	**17 52 33.4**	**-1.3**
BAYT	**Ayd¨–ntepe-Bay**	**0.93**	**66**	*e*Pg		**Pg**	**17 52 33.4**	**-1.3**
ESPY	**Espiye-Giresun**	**0.93**	**345**	*e*PG		**Pg**	**17 52 33.9**	**-0.8**
ESPY	**Espiye-Giresun**	**0.93**	**345**	*e*Pg		**Pg**	**17 52 33.9**	**-0.8**
MACK	**Trabzon**	**1.08**	**31**	*i* P		**Pg**	**17 52 35.5**	**-2.0**
MACK				*i* S		**Sb**	**17 52 51.6**	**+0.7**
MACK	**Trabzon**	**1.08**	**31**	*i* P		**Pg**	**17 52 35.5**	**-2.0**
MACK				*i* S		**Sb**	**17 52 51.6**	**+0.7**
SVRC	**Sivrice-ELAZID**	**1.65**	**173**	*e*PN		**Pn**	**17 52 44.8**	**-0.4**
SVRC	**Sivrice-ELAZID**	**1.65**	**173**	*e*Pn		**Pn**	**17 52 44.8**	**-0.4**
MALT	**Malatya**	**1.77**	**196**	*e*PN		**Pn**	**17 52 47.8**	**+1.1**
MALT	**Malatya**	**1.77**	**196**	*e*Pn		**Pn**	**17 52 47.8**	**+1.1**
AKCD	**Akcadag**	**1.93**	**207**	*i* P		**Pb**	**17 52 52.2**	**+0.7**
AKCD				*i* S		**Sb**	**17 53 16.3**	**+0.9**
AKCD	**Akcadag**	**1.93**	**207**	*i* P		**Pb**	**17 52 52.2**	**+0.7**
AKCD				*i* S		**Sb**	**17 53 16.3**	**+0.9**
DDEM	**Demirkent**	**2.25**	**66**	*i* P		Pg	17 53 02.8	+3.0
DDEM				*i* S		**Sb**	**17 53 26.4**	**+1.8**
DAGI	**Agillar**	**2.44**	**63**	*i* P		**Pb**	**17 53 00.6**	**+0.4**
DAGI				*i* S		**Sb**	**17 53 30.7**	**+0.7**
ARTV	**Artvin**	**2.49**	**61**	*i* P		**Pb**	**17 53 00.7**	**-0.5**
ARTV				*i* S		**Sb**	**17 53 33.4**	**+1.6**
ARTV	**Artvin**	**2.49**	**61**	*i* P		**Pb**	**17 53 00.7**	**-0.5**
ARTV				*i* S		**Sb**	**17 53 33.4**	**+1.6**

*MOS **14** 17:54:44.0±0.4,51˚.36N×158˚.80E,h48km,mb4.0/1,Error ellipse: s-maj=29.4km s-min=12.5km az=80.7*
*IDC **14** 17:54:45.9±4.7,51˚.38N×158˚.54E,h54km±35km,mb3.2/4,mb1 3.7/5,mb1mx3.2/26,mbtmp3.4/5,ML4.1/1,MS2.7/2,Ms1 2.7/2,ms1mx2.5/17,Error ellipse: s-maj=41.4km s-min=21.4km az=31.0*
*ISCJB **14** 17:54:47.7±0.9,51˚.66N±0˚.07×158˚.97E±0˚.10,h62km±11km,mb3.4/4,Error ellipse: s-maj=12.7km s-min=7.6km az=140.7*
*KRSC **14** 17:54:49.1±0.6,51˚.74N×158˚.88E,h40km±30km,ML4.0*
ISC 14 17:54:47.7±1.4,**51˚.61N**±0˚.07×**159˚.02E**±0˚.06,**h47**km±17km,
n31,σ**0**⁰**98**/43,**mb3.4**/4,**Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RUS	**Russkaya**	**0.88**	**339**	PN		**Pn**	**17 55 03.9**	**+0.2**
RUS				S		**Sn**	**17 55 14.8**	**-0.6**
RUS	**Russkaya**	**0.88**	**339**	P		**Pn**	**17 55 03.9**	**+0.2**
RUS				*i* S		**Sn**	**17 55 14.8**	**-0.6**
MTVR	**Mutnovka**	**1.01**	**330**	*e*P		**Pn**	**17 55 05.9**	**+0.2**
MTVR				*i* S		**Sn**	**17 55 18.0**	**-0.8**
GRL	**Gorelyy**	**1.10**	**329**	P		**Pn**	**17 55 07.3**	**+0.4**
GRL				*i* S		**Sn**	**17 55 21.1**	**0.0**
PET	**Petropavlovsk**	**1.43**	**351**	*e*PN		**Pn**	**17 55 11.3**	**+0.1**
PET				*e*S		**Sn**	**17 55 28.2**	**-0.6**
PET				pmax		pmax		
	comp=Z,80nm,0.3s							
PET				smax		smax		
	comp=N,1μm,0.5s							
PET	**Petropavlovsk**	**1.43**	**351**	P		**Pn**	**17 55 11.5**	**+0.3**
PET				*i* S		**Sn**	**17 55 27.8**	**-1.0**
MIPR	**Malaya Ipel'ka**	**1.55**	**296**	*e*P		**Pn**	**17 55 13.1**	**+0.3**
MIPR				*i* S		**Sn**	**17 55 31.0**	**-0.7**
UGLR	**Uglovaya**	**1.60**	**356**	P		**Pn**	**17 55 14.1**	**+0.4**
UGLR				*i* S		**Sn**	**17 55 32.8**	**-0.4**
SPN	**Mys Shipunski**	**1.61**	**22**	PN		**Pn**	**17 55 14.6**	**+0.9**
SPN				S		**Sn**	**17 55 33.2**	**0.0**
SPN	**Mys Shipunski**	**1.61**	**22**	*e*P		**Pn**	**17 55 14.6**	**+0.9**
SPN				*i* S		**Sn**	**17 55 33.2**	**0.0**
SMAR	**Somma**	**1.66**	**356**	P		**Pn**	**17 55 15.6**	**+1.1**
AVH	**Avacha**	**1.66**	**354**	P		**Pn**	**17 55 15.2**	**+0.7**
SDLR	**Sedlovina**	**1.67**	**357**	P		**Pn**	**17 55 14.6**	**0.0**
KOK	**Koryaka**	**1.70**	**352**	P		**Pn**	**17 55 15.8**	**+0.8**
KOK				*i* S		**Sn**	**17 55 34.9**	**-0.6**
PETK	**Petropavlovsk-**	**1.70**	**332**	PN		**Pn**	**17 55 15.1**	**+0.1**
PETK				S		**Sn**	**17 55 36.7**	**+1.2**
PETK				pmax		pmax		
	comp=Z,18nm,0.3s							
PETK				smax		smax		
	comp=N,22nm,0.3s							
PETK	**Petropavlovsk-**	**1.70**	**332**	P		**Pn**	**17 55 15.1**	**+0.1**
	comp=N,18nm,0.3s,baz=126,slow=18,SNR=399							
PETK				S		**Sn**	**17 55 36.7**	**+1.2**
	comp=N,22nm,0.3s,baz=151,slow=36,SNR=10							
KRER	**Koryakskii**	**1.70**	**355**	P		**Pn**	**17 55 15.9**	**+0.8**
KRER				*i* S		**Sn**	**17 55 35.3**	**-0.5**
APC	**Apacha**	**1.74**	**320**	*e*P		**Pn**	**17 55 15.5**	**+0.1**
SKR	**Severo-Kuril's**	**2.05**	**244**	*e*PN		Pn	17 55 14.0	-5.7
SKR				*i* S		Sn	17 55 37.1	-6.9
SKR				pmax		pmax		
	comp=Z,80nm,0.5s							
SKR				pmax		pmax		
	comp=E,80nm,0.4s							
SKR				smax		smax		
	comp=N,420nm,0.4s							
SKR				smax		smax		
	comp=E,820nm,0.4s							
SKR	**Severo-Kuril's**	**2.05**	**244**	*e*P		**Pn**	**17 55 20.3**	**+0.6**
SKR				*i* S		**Sn**	**17 55 43.4**	**-0.6**
GNL	**Ganaly**	**2.19**	**343**	P		**Pn**	**17 55 22.1**	**+0.4**
MKZ	**Mys Kozlova**	**3.37**	**28**	PN		**Pn**	**17 55 39.0**	**+1.2**
MKZ	**Mys Kozlova**	**3.37**	**28**	P		**Pn**	**17 55 39.0**	**+1.2**
MKZ				*i* S		**Sn**	**17 56 14.4**	**-2.1**
FX1	**Attu Island--F**	**8.78**	**76**	P		**Pn**	**17 56 54.1**	**+2.2**
	comp=E,7.1nm,0.3s,baz=86,slow=22,SNR=10							
FX1				S		**Sn**	**17 58 25.9**	**-3.4**
	comp=E,7.5nm,0.3s,baz=169,slow=19,SNR=12							
YKA	**Yellowknife Ar**	**44.71**	**41**	P		**P**	**18 02 55.3**	**-0.3**
	comp=E,0.3nm,0.6s,baz=298,slow=7.8,SNR=4.1							
RES	**Resolute Bay**	**44.95**	**21**	LR		LR	18 24 42.3	
	comp=E,38nm,19.1s,baz=38,slow=40							
MKAR	**Makanchi Array**	**48.21**	**296**	P		P	18 03 19.1	-4.3
MKAR	**Makanchi Array**	**48.21**	**296**	P		P	18 03 19.1	-4.3
	comp=E,0.2nm,0.5s,baz=48,slow=6.2,SNR=4.2							
TGY	**Tagaytay City**	**48.28**	**233**	LR		LR	18 21 00.7	
	comp=E,1.9nm,20.8s,baz=284,slow=33							
PDAR	**Pinedale Array**	**58.84**	**59**	P		**P**	**18 04 42.0**	**+0.5**
	comp=E,0.2nm,0.6s,baz=323,slow=2.4,SNR=4.0							
TXAR	**Lajitas Array**	**71.84**	**66**	P		**P**	**18 06 05.3**	**-0.3**
	comp=E,0.5nm,0.6s,baz=293,slow=5.5,SNR=5.3							

*AUST **14** 17:55:32.6,18˚.69S×170˚.48W,h60km*
*ISCJB **14** 17:56:00.1±0.9,17˚.6S±0˚.2×174˚.4W±0˚.2,h108km,mb4.2/5,Error ellipse: s-maj=34.7km s-min=8.4km az=42.5*
*IDC **14** 17:56:00.8±3.3,17˚.72S×174˚.53W,h88km±38km,mb3.9/5,mb1 4.0/6,mb1mx3.7/21,mbtmp3.9/6,Error ellipse: s-maj=55.0km s-min=21.3km az=123.0*
ISC 14 17:56:01.7±1.2,**17.7S**±0˚.2×**174.4W**±0˚.2,**h108**km,**n13**,
σ**1**⁰**09**/14,**mb4.2/5**,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**4.48**	**34**	P		**Pn**	**17 57 08.4**	**+0.9**
	7.4nm,0.3s,baz=27,slow=5.7,SNR=10							
AFI				S		**Sn**	**17 57 56.3**	**-2.3**
	33nm,0.3s,baz=48,slow=21,SNR=17							
URZ	**Urewera**	**21.85**	**198**	P		**P**	**18 00 44.9**	**-0.5**
	5.5nm,0.5s,baz=308,slow=4.2,SNR=13							
RMQ	**Roma**	**35.19**	**249**	P		**P**	**18 02 46.5**	**+0.9**
	baz=38,SNR=6.5							
QLP	**Quilpie**	**39.23**	**249**	P		**P**	**18 03 19.7**	**0.0**
	baz=42,SNR=9.5							
STKA	**Stephens Creek**	**42.14**	**242**	P		**P**	**18 03 43.6**	**0.0**
	2.5nm,0.7s,baz=73,slow=9.5,SNR=5.4							
BBOO	**Buckleboo**	**46.91**	**241**	P		**P**	**18 04 20.8**	**-0.6**
	baz=50,SNR=12							
ASAR	**Alice Springs**	**48.56**	**254**	P		**P**	**18 04 34.0**	**-0.4**
	9.7nm,0.7s,baz=92,slow=7.7,SNR=168							
KDU	**Kakadu**	**51.42**	**268**	P		**P**	**18 04 56.0**	**0.0**
	baz=55,SNR=5.4							
MTN	**Manton Dam**	**52.66**	**267**	P		**P**	**18 05 04.6**	**-0.6**
	baz=56,SNR=6.1							
FITZ	**Fitzroy Crossi**	**56.87**	**260**	P		**P**	**18 05 35.8**	**+0.2**
	1.4nm,0.4s,baz=112,slow=7.8,SNR=11							
FITZ	**Fitzroy Crossi**	**56.87**	**260**	P		**P**	**18 05 36.0**	**+0.4**
	baz=60,SNR=4.8							
MEEK	**Meekatharra**	**62.12**	**249**	P		**P**	**18 06 10.8**	**-0.8**
	baz=65,SNR=4.0							
ILAR	**Eielson Array**	**84.82**	**11**	P		**P**	**18 08 25.6**	**+2.0**
	0.3nm,0.4s,baz=223,slow=5.6,SNR=12							

*BJI **14** 18:02:42.1,5˚.34N×125˚.88E,h79km,mB4.9/18,mb4.6/23,Ms4.5/10,Ms7 4.2/10*
*MAN **14** 18:02:47,5˚.90N×125˚.68E,h63km,mb5.3,ML4.2,MS4.4*
*DJA **14** 18:02:48.4±1.4,6˚.N±10˚×12˚6E±˚,h59km±10km,M5.2/20,mB5.5/10,mb5.1/20,MLv5.6/3,Mw(mB)5.0/10*
*NEIC **14** 18:02:49.0±0.9,6˚.04N×125˚.55E,h80km±8km,mb4.4/18,Error ellipse: s-maj=9.3km s-min=5.5km az=76.0*
*AUST **14** 18:02:48.2±0.0,6˚.02N×125˚.63E,h77km,Error ellipse: s-maj=1.2km s-min=0.9km az=242.0*
*ISCJB **14** 18:02:48.1±0.3,6˚.02N±0.02˚×125˚.66E±0˚.04,h84km±3km,mb4.5/57,Error ellipse: s-maj=6.4km s-min=3.4km az=164.4*
*IDC **14** 18:02:49.4±0.8,6˚.02N×125˚.51E,h81km±7km,mb4.3/26,mb1 4.3/27,mb1mx4.2/35,mbtmp4.3/27,MS3.2/9,Ms1 3.3/9,ms1mx2.9/45,Error ellipse: s-maj=14.9km s-min=8.4km az=83.0*
ISC 14 18:02:49.4±0.4,**6.02N**±0˚.04×**125˚.65E**±0˚.05,**h81**km±3km,
n183,σ**1**⁰**33**/213,**mb4.6**/57,**1C-3D**,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GSPH	**General Santos**	**0.70**	**276**	*e*P		**Pn**	**18 03 02.8**	**-2.5**
GSPH				*e*S		**Sn**	**18 03 13.3**	**-3.7**
DAV	**Davao City (W)**	**1.05**	**356**	*e*Pn		**Pn**	**18 03 07.7**	**-1.4**
DAV				*e*Sn		**Sn**	**18 03 21.7**	**-2.1**
DAV				S			18 03 23.9	
DAV	**Davao City (W)**	**1.05**	**356**	P		**Pn**	**18 03 09.1**	**-0.1**
	499nm,0.3s,baz=128,slow=1.1,SNR=38							
DAV				S		**Sn**	**18 03 23.9**	**0.0**
	2μm,0.3s,baz=256,slow=22,SNR=33							
DMPH	**Davao City--Mi**	**1.07**	**353**	*e*P		**Pn**	**18 03 09.3**	**-0.1**
DMPH				*e*S		**Sn**	**18 03 19.3**	**-5.0**
MATI	**Mati**	**1.10**	**33**	*e*P		**Pn**	**18 03 08.2**	**-1.6**
CTBH	**Cotabato--PC H**	**1.83**	**311**	⫴*e*P		**Pn**	**18 03 18.2**	**-1.0**
BUKP	**Musuan**	**1.94**	**343**	*e*P		**Pn**	**18 03 21.1**	**+0.5**
PAGZ	**Pagadian**	**2.89**	**309**	*e*P		**Pn**	**18 03 33.8**	**+0.4**
IPIL	**Ipil**	**3.52**	**300**	*e*P		**Pn**	**18 03 42.3**	**+0.4**
SNPH	**Sibulan**	**4.08**	**324**	*e*P		Pn	18 03 39.4	-10
SNPH				*e*S		**Sn**	**18 04 34.6**	**-1.5**
LLP	**Lapu-Lapu**	**4.58**	**339**	*e*P		**Pn**	**18 03 57.1**	**+0.7**
LLP				*e*S		**Sn**	**18 04 51.1**	**+2.7**
MNI	**Manado**	**4.61**	**190**	P		**Pn**	**18 03 56.6**	**-0.2**
PLP	**Palo**	**5.16**	**353**	⫴*e*P		**Pn**	**18 04 03.9**	**-0.3**
TNTI	**Ternate**	**5.49**	**162**	P		**Pn**	**18 04 09.3**	**+0.6**
	257nm,0.9s,5μm1.7nm							
KMSI	**Cibinong**	**5.66**	**197**	P		**Pn**	**18 04 11.4**	**+0.4**
	1μm,0.7s,11μm3.9nm							
RCP	**Roxas**	**6.21**	**333**	⫴*i* P		**Pn**	**18 04 20.3**	**+1.7**
MRSI	**Marisa**	**6.63**	**214**	P		**Pn**	**18 04 24.0**	**-0.3**
	669nm,0.7s,11μm4.0nm							
LBMI	**Labuha**	**6.87**	**164**	P		**Pn**	**18 04 28.1**	**+0.6**
	141nm,1.0s,3μm							
LUWI	**Luwuk**	**7.58**	**202**	P		**Pn**	**18 04 38.9**	**+1.7**
	1μm,1.0s,13μm							
SWI	**Sorong**	**8.84**	**140**	P		**Pn**	**18 04 54.9**	**+0.4**
	baz=8.9,SNR=5.8							
PALU	**Palau**	**8.87**	**81**	S		Sn	18 06 26.4	-6.8
	baz=8.9,SNR=13							
AAI	**Ambon**	**9.97**	**165**	P		**Pn**	**18 05 08.8**	**-1.1**
	82nm,0.8s,1μm							
AAI	**Ambon**	**9.97**	**165**	P		**Pn**	**18 05 09.2**	**-0.7**
	baz=10.0,SNR=13							
KDI	**Kendari**	**10.36**	**197**	P		**Pn**	**18 05 17.3**	**+2.1**
	168nm,0.7s,1μm							
TTSI	**Tana Toraja**	**10.72**	**213**	P		**Pn**	**18 05 21.4**	**+1.3**
	38nm,0.6s							
SPSI	**Sidrap Palu**	**11.52**	**211**	P		**Pn**	**18 05 32.5**	**+1.5**
	28nm,0.8s							
KAPI	**Kappang**	**12.44**	**208**	*e*Pn		**Pn**	**18 05 43.1**	**-0.4**
	10nm,0.4s							
KAPI	**Kappang**	**12.44**	**208**	P		**Pn**	**18 05 43.1**	**-0.4**
	18nm,1.3s							
KAPI	**Kappang**	**12.44**	**208**	P		**Pn**	**18 05 43.7**	**+0.2**
	3.6nm,0.3s,baz=30,slow=8.0,SNR=6.0							
BBKI	**Banjar Baru**	**14.32**	**229**	P		**P**	**18 06 16.3**	**+3.2**
KSM

MJAR				LR	LR	18 19 48.0	
	comp=Z,46nm,20.9s,baz=110,slow=31						
CTAO	**Charters Tower**	**32.92**	**143**	*eP*	**P**	**18 09 17.1**	**+0.7**
	comp=Z,4.0nm,0.6s						
MEEK	**Meekatharra**	**33.17**	**192**	P	**P**	**18 09 17.3**	**-1.1**
	baz=33,SNR=13						
LZH	**Lanzhou**	**36.00**	**329**	*eP*	**P**	**18 09 44.1**	**+1.2**
LZH				pP	**pP**	**18 10 01.3**	**-0.7**
LZH				sP	**sP**	**18 10 10.5**	**-0.9**
LZH				PP	**PP**	**18 11 08.4**	**+2.2**
LZH				*eS*	S	18 15 22.3	+6.3
LZH				sS	**sS**	**18 15 51.5**	**+2.7**
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				pmax	pmax		
	comp=Z,65nm,4.2s						
LZH				LR	LR		
	comp=N,230nm,10.5s						
LZH				LR	LR		
	comp=E,250nm,11.8s						
LZH				LR	LR		
	comp=Z,460nm,13.2s						
MORW	**Morawa**	**36.09**	**194**	P	**P**	**18 09 42.8**	**-0.8**
	baz=36,SNR=9.5						
FORT	**Forrest**	**36.66**	**177**	P	**P**	**18 09 48.2**	**-0.1**
	baz=37,SNR=23						
HHC	**Hu-ho-hao-te**	**36.90**	**342**	*eP*	**P**	**18 09 52.3**	**+1.8**
HHC				pP	**pP**	**18 10 11.1**	**+1.5**
HHC				sP	**sP**	**18 10 18.9**	**-0.1**
HHC				PP	**PnPn**	**18 11 20.6**	**+3.5**
HHC				S	**S**	**18 15 31.8**	**+2.2**
HHC				sS	**sS**	**18 16 02.9**	**+0.4**
HHC				pmax	pmax		
	comp=Z,23nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,4.6s						
HHC				LR	LR		
	comp=N,280nm,16.7s						
HHC				LR	LR		
	comp=E,560nm,16.7s						
HHC				LR	LR		
	comp=Z,220nm,16.7s						
QLP	**Quilpie**	**37.08**	**152**	P	**P**	**18 09 51.8**	**-0.2**
	baz=37,SNR=5.7						
KMBL	**Kambalda**	**37.35**	**185**	P	**P**	**18 09 53.8**	**-0.5**
	baz=38,SNR=12						
BLDU	**Ballidu**	**37.42**	**193**	P	**P**	**18 09 53.8**	**-1.0**
	baz=38,SNR=10						
SHL	**Shillong**	**37.67**	**305**	*eP*	**P**	**18 09 58.0**	**+0.6**
KLBR	**Kellerberrin**	**38.15**	**191**	P	**P**	**18 10 00.2**	**-0.7**
	baz=38,SNR=16						
USRK	**Ussurisyk Arra**	**38.44**	**7**	P	**P**	**18 10 04.1**	**+0.9**
	comp=Z,13nm,0.8s,baz=192,slow=7.4,SNR=26						
MDJ	**Mudanjiang**	**38.60**	**5**	P	**P**	**18 10 06.1**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,17nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,68nm,6.2s						
NWAO	**Narrogin (SRO)**	**39.55**	**191**	P	**P**	**18 10 12.0**	**-0.7**
NWAO	**Narrogin (SRO)**	**39.55**	**191**	P	**P**	**18 10 12.0**	**-0.7**
	comp=Z,6.2nm,0.4s,baz=8,9,slow=3.9,SNR=15						
EIDS	**Eidsvold**	**39.81**	**143**	P	**P**	**18 10 14.9**	**0.0**
	baz=40,SNR=5.4						
BBOO	**Buckleboo**	**39.86**	**166**	*eP*	**P**	**18 10 15.3**	**0.0**
	comp=Z,637nm,0.4s						
BBOO	**Buckleboo**	**39.86**	**166**	P	**P**	**18 10 15.6**	**+0.3**
	baz=40,SNR=98						
GTA	**Gaotai**	**40.59**	**329**	*eP*	**P**	**18 10 21.6**	**+0.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
STKA	**Stephens Creek**	**40.64**	**159**	*eP*	**P**	**18 10 22.0**	**+0.3**
	comp=Z,8.1nm,0.8s						
STKA				PcP	**PcP**	**18 12 21.7**	**-0.5**
STKA	**Stephens Creek**	**40.64**	**159**	P	**P**	**18 10 22.3**	**+0.6**
	comp=Z,45nm,0.7s,baz=334,slow=7.9,SNR=110						
STKA				PcP	**PcP**	**18 12 21.7**	**-0.5**
	comp=Z,5.7nm,0.7s,baz=26,slow=2.7,SNR=2.8						
STKA	**Stephens Creek**	**40.64**	**159**	P	**P**	**18 10 22.3**	**+0.6**
	baz=41,SNR=84						
ASAJ	**Asahikawa**	**40.76**	**19**	P	**P**	**18 10 24.2**	**+1.7**
ASAJ	**Asahikawa**	**40.76**	**19**	P	**P**	**18 10 24.2**	**+1.7**
	comp=Z,4.9nm,0.4s,baz=208,slow=17,SNR=17						
RKGY	**Rocky Gully**	**41.23**	**191**	P	**P**	**18 10 27.4**	**+0.9**
	baz=41,SNR=15						
TAPN	**Taplejung**	**41.81**	**305**	*eP*	**P**	**18 10 32.2**	**+0.4**
	comp=Z,14nm,0.7s						
ODAN	**Odare**	**41.89**	**304**	*eP*	**P**	**18 10 32.5**	**+0.1**
	comp=Z,24nm,0.6s						
CMSA	**Cobar Meteorol**	**41.96**	**154**	P	**P**	**18 10 33.2**	**+0.6**
	baz=42,SNR=17						
RAMN	**Ramite**	**42.57**	**304**	*eP*	**P**	**18 10 38.5**	**+0.6**
	comp=Z,27nm,0.8s						
GUN	**Gumba**	**43.53**	**305**	*eP*	**P**	**18 10 46.0**	**+0.2**
	comp=Z,40nm,0.7s						
PKI	**Pulchoki**	**43.79**	**304**	*eP*	**P**	**18 10 47.6**	**-0.2**
PKIN	**Phulchoki**	**43.80**	**304**	*eP*	**P**	**18 10 48.5**	**+0.6**
	comp=Z,7.0nm,0.6s						
ARMA	**Armidale**	**43.96**	**147**	P	**P**	**18 10 49.7**	**+0.9**
	baz=44,SNR=8.6						
KKN	**Kakani**	**43.97**	**304**	*eP*	**P**	**18 10 49.0**	**-0.2**
	comp=Z,33nm,1.2s						
DMN	**Daman**	**44.05**	**304**	*eP*	**P**	**18 10 49.4**	**-0.5**
	comp=Z,24nm,1.0s						
SONM	**Songino Array**	**44.80**	**342**	P	**P**	**18 10 54.5**	**-0.9**
SONM				PcP	**PcP**	**18 12 34.1**	**-2.0**
SONM	**Songino Array**	**44.80**	**342**	P	**P**	**18 10 54.5**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=156,slow=8.4,SNR=4.6						
SONM				PcP	**PcP**	**18 12 34.1**	**-2.0**
	comp=Z,1.1nm,0.9s,baz=166,slow=6.9,SNR=4.0						
SONM				LR	LR	18 30 23.2	
	comp=Z,42nm,21.5s,baz=335,slow=37						
ARPS	**Mount Arapiles**	**45.18**	**162**	P	**P**	**18 10 59.4**	**+1.1**
	baz=45,SNR=26						
KOLN	**Koldanda**	**45.35**	**303**	*eP*	**P**	**18 11 00.4**	**+0.2**
	comp=Z,13nm,0.5s						
DANN	**Dangsing**	**45.43**	**304**	*eP*	**P**	**18 11 00.8**	**-0.1**
	comp=Z,25nm,0.6s						
YNG	**Young**	**45.50**	**153**	P	**P**	**18 11 02.3**	**+1.4**
	baz=46,SNR=22						
PYUN	**Piuthan**	**45.98**	**304**	*eP*	**P**	**18 11 05.4**	**+0.3**
	comp=Z,53nm,0.9s						
CNB	**Canberra Magne**	**46.78**	**153**	P	**P**	**18 11 12.7**	**+1.7**
	baz=47,SNR=12						
TOO	**Toolangi**	**47.15**	**158**	P	**P**	**18 11 15.7**	**+1.9**
	baz=47,SNR=21						
DZM	**Mont Dzumac**	**48.74**	**126**	*eP*	**P**	**18 11 25.7**	**-0.7**
DZM	**Mont Dzumac**	**48.74**	**126**	P	**P**	**18 11 27.6**	**+1.2**
DZM	**Mont Dzumac**	**48.74**	**126**	P	**P**	**18 11 27.6**	**+1.2**
	comp=Z,23nm,0.6s,baz=106,slow=21,SNR=26						
WMQ	**Urumqi**	**50.24**	**325**	*eP*	**P**	**18 11 37.8**	**+0.2**
WMQ				pP	**pP**	**18 11 56.8**	**-0.7**
WMQ				sP	**sP**	**18 12 05.8**	**-0.9**
WMQ				PcP	**PcP**	**18 12 55.8**	**+0.3**
WMQ				PP	**PP**	**18 13 34.8**	**+1.2**
WMQ				ScP	**ScP**	**18 16 43.8**	**-0.6**
WMQ				S	**S**	**18 18 42.8**	**-1.2**
WMQ				ScS	**ScS**	**18 21 18.8**	**-2.4**
WMQ				pmax	pmax		
	comp=Z,13nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,84nm,5.0s						
WMQ				LR	LR		
	comp=N,90nm,18.0s						
WMQ				LR	LR		
	comp=E,56nm,18.0s						
WMQ				LR	LR		
	comp=Z,44nm,18.0s						
PETK	**Petropavlovsk-**	**53.75**	**23**	P	**P**	**18 12 04.8**	**+1.5**
PETK	**Petropavlovsk-**	**53.75**	**23**	P	**P**	**18 12 04.8**	**+1.5**
	comp=Z,6.5nm,0.7s,baz=196,slow=5.4,SNR=7.7						
MK31	**Makanchi Array**	**55.07**	**325**	*eP*	**P**	**18 12 11.6**	**-1.5**
MKAR	**Makanchi Array**	**55.07**	**325**	P	**P**	**18 12 12.2**	**-0.9**
MKAR				PcP	**PcP**	**18 13 11.8**	**-1.9**
MKAR	**Makanchi Array**	**55.07**	**325**	P	**P**	**18 12 12.2**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=116,slow=7.9,SNR=20						
MKAR				PcP	**PcP**	**18 13 11.8**	**-1.9**
	comp=Z,2.1nm,0.7s,baz=126,slow=3.6,SNR=5.7						
AAK	**Ala-Archa**	**57.95**	**317**	P	**P**	**18 12 32.7**	**-1.1**
AAK	**Ala-Archa**	**57.95**	**317**	P	**P**	**18 12 32.8**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=129,slow=6.5,SNR=3.9						
EKS2	**Erkin-Say**	**58.45**	**317**	*eP*	**P**	**18 12 37.0**	**-0.2**
	comp=Z,2.4nm,0.9s						
KURK	**Kurchatov**	**59.24**	**327**	*eP*	**P**	**18 12 40.4**	**-2.0**
	comp=Z,4.3nm,0.8s						
KBL	**Kabul**	**59.29**	**307**	P	**P**	**18 12 41.8**	**-1.5**
FX1	**Attu Island--F**	**60.67**	**31**	P	**P**	**18 12 53.7**	**+1.6**

FX1	**Attu Island--F**	**60.67**	**31**	P	**P**	**18 12 53.7**	**+1.6**
	comp=Z,3.1nm,0.4s,baz=45,slow=22,SNR=5.3						
KKAR	**Karatay Array**	**60.84**	**317**	*eP*	**P**	**18 12 52.4**	**-1.1**
	comp=Z,1.5nm,0.6s						
BRVK	**Borovoye**	**64.90**	**327**	*eP*	**P**	**18 13 18.9**	**-1.2**
	comp=Z,2.1nm,0.6s						
URZ	**Urewera**	**64.94**	**137**	*eP*	**P**	**18 13 20.4**	**-0.2**
URZ	**Urewera**	**64.94**	**137**	P	**P**	**18 13 21.3**	**+0.6**
	comp=Z,4.0nm,0.4s,baz=76,slow=3.0,SNR=7.5						
ABKAR	**Akbulak array**	**69.71**	**320**	*eP*	**P**	**18 13 48.9**	**-1.8**
KDAK	**Kodiak Island**	**80.55**	**33**	*eP*	**P**	**18 14 53.4**	**+0.6**
KDAK	**Kodiak Island**	**80.55**	**33**	P	**P**	**18 14 53.3**	**+0.6**
	comp=Z,8.4nm,0.7s,baz=301,slow=2.3,SNR=6.8						
KDAK				LR	LR	18 48 35.9	
	comp=Z,67nm,18.6s,baz=275,slow=34						
MCK	**McKinley**	**82.61**	**27**	*eP*	**P**	**18 15 03.5**	**-0.1**
	comp=Z,8.5nm,1.0s						
SML	**Sawmill**	**82.85**	**29**	*eP*	**P**	**18 15 05.9**	**+0.9**
	comp=Z,3.1nm,0.9s						
COLA	**College**	**83.11**	**25**	P	**P**	**18 15 02.9**	**-3.1**
ILAR	**Eielson Array**	**83.52**	**26**	P	**P**	**18 15 07.3**	**-0.9**
ILAR	**Eielson Array**	**83.52**	**26**	P	**P**	**18 15 07.3**	**-0.9**
	comp=Z,2.2nm,0.7s,baz=243,slow=4.7,SNR=24						
BMRM	**Bremner River**	**84.66**	**29**	*eP*	**P**	**18 15 14.7**	**+0.5**
	comp=Z,9.7nm,0.9s						
VNDA	**Vanda**	**85.82**	**173**	P	**P**	**18 15 18.7**	**-0.8**
VNDA	**Vanda**	**85.82**	**173**	P	**P**	**18 15 18.7**	**-0.8**
	comp=Z,2.4nm,0.7s,baz=317,slow=6.9,SNR=23						
JOF	**Joensuu**	**86.66**	**333**	*ep*	**P**	**18 15 21.6**	**-2.4**
	comp=Z,4.7nm,0.6s						
ARCES	**ARCESS Array B**	**87.94**	**340**	P	**P**	**18 15 29.1**	**-1.0**
ARCES	**ARCESS Array B**	**87.94**	**340**	P	**P**	**18 15 29.1**	**-1.0**
	comp=Z,2.6nm,0.8s,baz=76,slow=10,SNR=6.2						
SPITS	**Spitsbergen Ar**	**88.04**	**349**	P	**P**	**18 15 29.6**	**-0.7**
SPITS	**Spitsbergen Ar**	**88.04**	**349**	P	**P**	**18 15 29.6**	**-0.7**
	comp=Z,2.2nm,0.6s,baz=98,slow=9.4,SNR=6.2						
INK	**Inuvik**	**88.44**	**21**	P	**P**	**18 15 31.9**	**-0.4**
INK	**Inuvik**	**88.44**	**21**	P	**P**	**18 15 31.9**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=282,slow=4.4,SNR=8.2						
KAF	**Kangasniemi**	**89.08**	**332**	*ep*	**P**	18 15 31.5	-4.0
	comp=Z,2.4nm,0.7s						
FINES	**FINESS Array B**	**89.32**	**332**	P	**P**	**18 15 34.4**	**-2.2**
FINES	**FINESS Array B**	**89.32**	**332**	P	**P**	**18 15 34.4**	**-2.2**
	comp=Z,2.7nm,0.7s,baz=64,slow=8.7,SNR=11						
SUW	**Suwalki**	**92.44**	**325**	P	**P**	**18 15 48.4**	**-2.9**
CRVS	**Cervenica-Dubn**	**94.74**	**320**	*eP*	P	18 16 09.2	+7.2
RES	**Resolute Bay**	**95.77**	**10**	P	**P**	**18 16 05.4**	**-0.7**
	comp=Z,1.4nm,0.7s						
NB2	**NORSAR Subarra**	**96.27**	**334**	P	P	18 16 05.3	-3.5
	comp=Z,0.2nm,0.7s,baz=69,slow=5.6						
NOA	**NORSAR Array B**	**96.27**	**334**	P	**P**	**18 16 05.6**	**-3.1**
NOA	**NORSAR Array B**	**96.27**	**334**	P	**P**	**18 16 05.6**	**-3.1**
	comp=Z,1.2nm,0.7s,baz=65,slow=4.7,SNR=6.6						
NOA				LR	LR	19 00 50.0	
	comp=Z,43nm,18.4s,baz=270,slow=36						
VYHS	**Vyhne**	**96.52**	**320**	*eP*	P	18 16 15.4	+5.2
YKA	**Yellowknife Ar**	**97.87**	**24**	P	**P**	**18 16 15.4**	**-0.4**
YKA	**Yellowknife Ar**	**97.87**	**24**	P	**P**	**18 16 15.4**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=301,slow=4.8,SNR=17						
TORD	**Torodi Ar. Bea**	**121.17**	**289**	PKP	**PKPdf**	**18 21 32.0**	**-2.0**
TORD	**Torodi Ar. Bea**	**121.17**	**289**	PKP	**PKPdf**	**18 21 32.0**	**-2.0**
	comp=Z,0.6nm,0.5s,baz=33,slow=2.7,SNR=8.1						
TKL	**Tuckaleechee C**	**130.17**	**32**	PKP	**PKPdf**	**18 21 50.5**	**-0.3**
TKL	**Tuckaleechee C**	**130.17**	**32**	PKP	**PKPdf**	**18 21 50.5**	**-0.3**
	comp=Z,3.4nm,0.6s,baz=194,slow=7.5,SNR=3.7						
PLCA	**Paso Flores**	**142.51**	**160**	PKPpre	PKPpre	18 22 09.5	
PLCA	**Paso Flores**	**142.51**	**160**	PKhKP	PKPpre	18 22 09.5	
	comp=Z,1.7nm,0.7s,baz=212,slow=2.8,SNR=3.7						
JTS	**JuntasAbangare**	**145.49**	**62**	PKPbc	**PKPab**	**18 22 20.6**	**+0.8**
JTS	**JuntasAbangare**	**145.49**	**62**	PKPbc	**PKPab**	**18 22 20.7**	**+0.8**
	comp=Z,3.6nm,0.4s,baz=210,slow=4.2,SNR=4.6						
TRQA	**Tornquist**	**147.36**	**169**	*e*PKPbc	**PKPbc**	**18 22 23.8**	**-0.6**
LCO	**Las Campanas**	**152.40**	**148**	*e*PKPbc	**PKPbc**	**18 22 37.1**	**-0.2**
CPUP	**Villa Florida**	**159.60**	**172**	PKPab	**PKPab**	**18 23 18.1**	**+0.1**
CPUP	**Villa Florida**	**159.60**	**172**	PKPab	**PKPab**	**18 23 18.1**	**+0.1**
	comp=Z,2.9nm,0.7s,baz=193,slow=1.4,SNR=8.9						
LPAZ	**La Paz**	**163.08**	**128**	PKPab	**PKPab**	**18 23 36.5**	**+2.1**
LPAZ	**La Paz**	**163.08**	**128**	PKPab	**PKPab**	**18 23 36.5**	**+2.1**
	comp=Z,1.0nm,0.7s,baz=227,slow=6.6,SNR=4.0						

*CSEM **14** 18:33:23.8±0.1, 39.21N×29.40E, h2km, MD2.8, Error ellipse: s-maj=2.4km s-min=2.0km az=162.0*
*ISK **14** 18:33:23.6, 39.20N×29.42E, h7km, MD2.8*
*DDA **14** 18:33:23.4, 39.22N×29.38E, h11km, MD2.8*
ISC 14 18:33:24.0±0.9, 39°21N±0.02×29°39E±0.02, h10km±7km, n65, σ0.975/85, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.14**	**150**	*i* P	**Pg**	**18 33 26.7**	**-0.7**
GDZ				*i* S	**Sg**	**18 33 30.1**	**+0.4**
GDZ	**Gediz**	**0.14**	**150**	*i* P	**Pg**	**18 33 26.7**	**-0.7**
GDZ				*i* S	**Sg**	**18 33 30.1**	**+0.4**
TVSB	**Tavsanli**	**0.24**	**13**	PG	**Pg**	**18 33 29.0**	**-0.1**
TVSB				*e*SG	**Sg**	**18 33 32.5**	**+0.1**
TVSB	**Tavsanli**	**0.24**	**13**	*i* Pg	**Pg**	**18 33 29.0**	**-0.1**
TVSB				*e*Sg	**Sg**	**18 33 32.6**	**+0.1**
DEMI	**Demirci**	**0.55**	**252**	*i* P	**Pg**	**18 33 33.6**	**-1.2**
DEMI				*i* S	**Sg**	**18 33 41.8**	**-0.2**
DEMI	**Demirci**	**0.55**	**252**	*i* P	**Pg**	**18 33 33.6**	**-1.2**
DEMI				*i* S	**Sg**	**18 33 41.8**	**-0.2**
ALT	**Altintas**	**0.58**	**105**	PG	**Pg**	**18 33 35.2**	**-0.1**
ALT				*e*SG	**Sg**	**18 33 43.2**	**+0.2**
ALT	**Altintas**	**0.58**	**105**	*i* Pg	**Pg**	**18 33 35.2**	**-0.1**
ALT				*e*Sg	**Sg**	**18 33 43.2**	**+0.2**
DST	**Dursunbey**	**0.71**	**303**	*e*PG	**Pb**	**18 33 38.9**	**+0.3**
DST	**Dursunbey**	**0.71**	**303**	*e*Pg	**Pb**	**18 33 38.9**	**+0.3**
DURS	**Dursunbey**	**0.81**	**299**	*i* P	**Pg**	**18 33 39.0**	**-0.7**
DURS				*i* S	**Sg**	**18 33 49.4**	**-0.9**
DURS	**Dursunbey**	**0.81**	**299**	*i* P	**Pg**	**18 33 39.0**	**-0.7**
DURS				*i* S	**Sg**	**18 33 49.4**	**-0.9**
KHAL	**Karahalli**	**0.84**	**175**	*i* P	**Pg**	**18 33 40.6**	**+0.3**
KHAL				*i* S	**Sg**	**18 33 51.5**	**+0.2**
KHAL	**Karahalli**	**0.84**	**175**	*i* P	**Pg**	**18 33 40.6**	**+0.3**
KHAL				*i* S	**Sg**	**18 33 51.5**	**+0.2**
KHL	**Karahalli**	**0.89**	**173**	*e*PG	**Pg**	**18 33 40.4**	**-0.8**
KULA	**Kula-Manisa**	**0.90**	**220**	*e*PG	**Pg**	**18 33 41.3**	**-0.1**
KULA	**Kula-Manisa**	**0.90**	**220**	*e*Pg	**Pg**	**18 33 41.3**	**-0.1**
BORA	**Eskisehir**	**1.06**	**51**	*i* P	**Pg**	**18 33 43.6**	**-0.8**
BORA				*i* S	**Sg**	**18 33 57.7**	**-0.5**
BORA	**Eskisehir**	**1.06**	**51**	*i* P	**Pg**	**18 33 43.6**	**-0.8**
BORA				*i* S	**Sg**	**18 33 57.7**	**-0.5**
ESKT	**Eskisehir**	**1.17**	**74**	*e*PN	**Pg**	**18 33 45.8**	**-0.9**
SEYT	**Eskypehyr**	**1.17**	**74**	*i* P	**Pg**	**18 33 45.7**	**-0.9**
SEYT				*i* S	**Sg**	**18 34 00.9**	**-0.9**
SEYT	**Eskypehyr**	**1.17**	**74**	*i* P	**Pg**	**18 33 45.7**	**-0.9**
SEYT				*i* S	**Sg**	**18 34 00.9**	**-0.9**
MDNY	**Mudanya-Bursa**	**1.22**	**342**	*e*PN	**Pn**	**18 33 48.0**	**+0.8**
MDNY	**Mudanya-Bursa**	**1.22**	**342**	*e*Pn	**Pn**	**18 33 48.0**	**+0.8**
GEMT	**Gemlik**	**1.23**	**353**	*e*PN	**Pg**	**18 33 47.8**	**+0.1**
GEMT	**Gemlik**	**1.23**	**353**	*e*Pn	**Pg**	**18 33 47.8**	**+0.1**
BALB	**Balikesir**	**1.25**	**291**	*e*PN	**Pb**	**18 33 48.4**	**+0.8**
BALB	**Balikesir**	**1.25**	**291**	*e*Pn	**Pb**	**18 33 48.4**	**+0.8**
AKHS	**Akhisar**	**1.27**	**255**	*i* P	**Pg**	**18 33 48.5**	**+0.1**
AKHS				*i* S	**Sg**	**18 34 04.2**	**-0.8**
AKHS	**Akhisar**	**1.27**	**255**	*i* P	**Pg**	**18 33 48.5**	**+0.1**
AKHS				*i* S	**Sg**	**18 34 04.2**	**-0.8**
AKS	**Akhisar**	**1.27**	**255**	*e*PN	**Pg**	**18 33 48.4**	**-0.1**
AKS	**Akhisar**	**1.27**	**255**	*e*Pn	**Pg**	**18 33 48.4**	**-0.1**
GPA	**Golpazari**	**1.29**	**33**	*e*Pn	**Pg**	**18 33 48.4**	**-0.4**
GPA	**Golpazari**	**1.29**	**33**	*e*Pn	**Pg**	**18 33 48.4**	**-0.4**
KCTX	**Karacabey (Bur**	**1.32**	**323**	*e*PN	**Pb**	**18 33 49.7**	**+0.8**
KCTX	**Karacabey (Bur**	**1.32**	**323**	*e*Pn	**Pb**	**18 33 49.7**	**+0.8**
YLV	**Yalova**	**1.35**	**359**	*e*PN	**Pb**	**18 33 50.0**	**+0.5**
YLV	**Yalova**	**1.35**	**359**	*e*Pn	**Pb**	**18 33 50.0**	**+0.5**
ARMT	**Armutlu**	**1.41**	**343**	*e*PN	**Pn**	**18 33 50.5**	**+0.7**
ARMT	**Armutlu**	**1.41**	**343**	*e*Pn	**Pn**	**18 33 50.5**	**+0.7**
BALY	**Balya**	**1.47**	**292**	*i* P	**Pn**	**18 33 50.7**	**+0.1**
BALY				*i* S	**Sb**	**18 34 08.8**	**-1.4**
BALY	**Balya**	**1.47**	**292**	*i* P	**Pn**	**18 33 50.7**	**+0.1**
BALY				*i* S	**Sb**	**18 34 08.8**	**-1.4**
DENT	**Denizli**	**1.48**	**191**	*e*PN	**Pn**	**18 33 51.0**	**+0.2**
DENT	**Denizli**	**1.48**	**191**	*e*Pn	**Pn**	**18 33 51.0**	**+0.2**
GULT	**Gulveren**	**1.50**	**35**	*e*PN	**Pn**	**18 33 51.3**	**+0.3**
GULT	**Gulveren**	**1.50**	**35**	*e*Pn	**Pn**	**18 33 51.3**	**+0.3**
GONE	**Gonen-Balikesi**	**1.56**	**303**	*e*PN	**Pn**	**18 33 52.7**	**+0.9**
GONE	**Gonen-Balikesi**	**1.56**	**303**	*e*Pn	**Pn**	**18 33 52.7**	**+0.9**
HRT	**Hereke**	**1.62**	**7**	*e*PN	**Pn**	**18 33 53.7**	**+1.0**
HRT	**Hereke**	**1.62**	**7**	*e*Pn	**Pn**	**18 33 53.7**	**+1.0**
EDC	**Edincik**	**1.63**	**314**	*e*PN	**Pn**	**18 33 53.7**	**+0.9**
EDC	**Edincik**	**1.63**	**314**	*e*Pn	**Pn**	**18 33 53.7**	**+0.9**
SVRH	**Sivrihisar-ESK**	**1.67**	**81**	*e*PN	**Pn**	**18 33 53.8**	**+0.3**
ISK	**Istanbul-Kandi**	**1.87**	**352**	*e*PN	**Pn**	**18 33 57.2**	**+1.1**
ISK	**Istanbul-Kandi**	**1.87**	**352**	*e*Pn	**Pn**	**18 33 57.2**	**+1.1**
MDUB	**Mudurnu**	**1.88**	**47**	*e*PN	**Pn**	**18 33 56.6**	**+0.4**
MDUB	**Mudurnu**	**1.88**	**47**	*e*Pn	**Pn**	**18 33 56.7**	**+0.4**
KRBG	**Karabiga-Canak**	**2.00**	**307**	*e*PN	**Pn**	**18 33 58.5**	**+0.7**
KRBG	**Karabiga-Canak**	**2.00**	**307**	*e*Pn	**Pn**	**18 33 58.5**	**+0.7**
RKY	**Sarkoy-Tekirda**	**2.25**	**312**	*e*PN	**Pn**	**18 34 02.8**	**+1.4**
RKY	**Sarkoy-Tekirda**	**2.25**	**312**	*e*Pn	**Pn**	**18 34 02.8**	**+1.4**
MFT	**Murefte**	**2.26**	**315**	*e*PN	**Pn**	**18 34 03.1**	**+1.6**
MFT	**Murefte**	**2.26**	**315**	*e*Pn	**Pn**	**18 34 03.1**	**+1.6**
LPK	**Lapseki**	**2.33**	**301**	*e*PN	**Pn**	**18 34 03.8**	**+1.3**
LPK	**Lapseki**	**2.33**	**301**	*e*Pn	**Pn**	**18 34 03.8**	**+1.3**

*IDC **14** 18:33:39.7±1.6, 27.77N×53.90E, h0km, mb3.5/9, mb1 3.6/9, mb1mx3.4/29, mbtmp3.5/9, Error ellipse: s-maj=35.4km s-min=24.6km az=173.0*
*ISCJB **14** 18:33:42.7±0.9, 27.8N±0.1×53.77E±0.05, h26km, mb3.4/8, Error ellipse: s-maj=19.5km s-min=5.9km az=3.4*
*KISR **14** 18:33:42.8±0.7, 28.62N×53.94E, h34km±999km, ML3.3*
*CSEM **14** 18:33:45.1±0.9, 27.84N×53.78E, h23km±8km, ML3.3, Error ellipse: s-maj=26.4km s-min=6.9km az=6.0*
ISC 14 18:33:43.5±1.0, 27.8N±0.1×53.84E±0.05, h26km, n19, σ1.9 20/25, mb3.5/8, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GHIR	**Ghir-Karzin**	**0.92**	**305**	*e*Pg	**Pn**	**18 34 00.8**	**-0.1**
BNDS	**Bandar-Abbas**	**2.10**	**99**	*e*Pg	**Pb**	**18 34 19.6**	**-1.4**
KRBR	**Kerman**	**3.39**	**48**	*e*Pn	**Pn**	**18 34 37.0**	**+2.0**
RDF	**Al-Radifah**	**5.66**	**283**	*e*P	**Pn**	**18 35 07.3**	**+1.3**
RDF				*e*S	**Sn**	**18 36 11.0**	**+0.8**
RDF				AML	AML	18 36 13.2	
	comp=Z,21nm,0.5s						
RDF	**Al-Radifah**	**5.66**	**283**	*e*P	**Pn**	**18 35 07.3**	**+1.3**
RDF				*e*S	**Sn**	**18 36 11.0**	**+0.8**
	comp=Z,21nm,0.5s						
NAY	**Al-Naaiem**	**5.99**	**286**	*e*P	**Pn**	**18 35 11.9**	**+1.4**
NAY				*e*S	**Sn**	**18 36 18.8**	**+0.5**
NAY				AML	AML	18 36 19.9	
	comp=Z,6.3nm,0.7s						
NAY	**Al-Naaiem**	**5.99**	**286**	*e*P	**Pn**	**18 35 11.9**	**+1.4**
NAY				*e*S	**Sn**	**18 36 18.8**	**+0.5**
MIB	**Mutribah**	**6.06**	**291**	*e*P	**Pn**	**18 35 11.5**	**+0.1**
MIB				*e*S	**Sn**	**18 36 17.7**	**-2.2**
MIB				AML	AML	18 36 18.2	
	comp=Z,7.9nm,0.6s						
MIB	**Mutribah**	**6.06**	**291**	*e*P	**Pn**	**18 35 11.5**	**+0.1**
MIB				*e*S	**Sn**	**18 36 17.7**	**-2.2**
	comp=Z,7.9nm,0.6s						
**GNI

TRTR	**Tortoreto Alta**	**0.53**	**60**	Pg	**Pb**	**19 28 14.3**	**-0.8**
	5µm,0.7s							
TRTR	**Tortoreto Alta**	**0.53**	**60**	Pg	**Pb**	**19 28 14.3**	**-0.8**
	5µm,0.7s							
CESX	**Cesi**	**0.53**	**277**	Pg	**Pg**	**19 28 13.0**	**-1.2**
CESX				Sg	**Sg**	**19 28 21.3**	**+0.1**
	2µm,0.6s							
CESX	**Cesi**	**0.53**	**277**	Pg	**Pg**	**19 28 13.0**	**-1.2**
CESX				Sg	**Sg**	**19 28 21.3**	**+0.1**
	2µm,0.6s							
PTQR	**Pietraquaria**	**0.53**	**171**	Pg	**Pg**	**19 28 12.9**	**-1.4**
PTQR				Sg	**Sg**	**19 28 21.1**	**-0.2**
	131nm,0.4s							
PTQR	**Pietraquaria**	**0.53**	**171**	Pg	**Pg**	**19 28 12.9**	**-1.4**
PTQR				Sg	**Sg**	**19 28 21.1**	**-0.2**
	131nm,0.4s							
CESI	**CESI - Serrava**	**0.54**	**328**	Pg	**Pg**	**19 28 13.6**	**-0.7**
CESI				Sg	**Sb**	**19 28 22.0**	**-1.2**
CESI	**CESI - Serrava**	**0.54**	**328**	Pg	**Pg**	**19 28 13.6**	**-0.7**
CESI				Sg	**Sb**	**19 28 22.0**	**-1.2**
CERT	**Cerreto**	**0.64**	**201**	Pg	**Pg**	**19 28 14.9**	**-1.4**
	3µm,0.5s							
CERT	**Cerreto**	**0.64**	**201**	Pg	**Pg**	**19 28 14.9**	**-1.4**
	3µm,0.5s							
MTCE	**Montecelio**	**0.67**	**218**	Pg	**Pg**	**19 28 15.2**	**-1.6**
	901nm,0.6s							
MTCE	**Montecelio**	**0.67**	**218**	Pg	**Pg**	**19 28 15.2**	**-1.6**
	901nm,0.6s							
GUMA	**Gualdo di Mace**	**0.70**	**42**	Pg	Pg	19 28 13.4	-3.9
GUMA				Sg	**Sg**	**19 28 21.6**	**-4.9**
	7µm,0.3s							
INTR	**Introdacqua**	**0.70**	**140**	Pg	**Pg**	**19 28 15.9**	**-1.6**
	2µm,0.8s							
INTR	**Introdacqua**	**0.70**	**140**	Pg	**Pg**	**19 28 15.9**	**-1.6**
	2µm,0.8s							
VVLD	**Villa Vallelon**	**0.72**	**160**	Pg	**Pg**	**19 28 17.3**	**-0.5**
	1µm,0.6s							
VVLD	**Villa Vallelon**	**0.72**	**160**	Pg	**Pg**	**19 28 17.3**	**-0.5**
	1µm,0.6s							
SNTG	**Esanatoglia**	**0.75**	**340**	Pg	**Pg**	**19 28 17.1**	**-1.3**
SNTG	**Esanatoglia**	**0.75**	**340**	Pg	**Pg**	**19 28 17.1**	**-1.3**
GUAR	**Guarcino**	**0.76**	**179**	Pg	**Pg**	**19 28 17.0**	**-1.4**
GUAR	**Guarcino**	**0.76**	**179**	Pg	**Pg**	**19 28 17.0**	**-1.4**
CING	**Cingoli**	**0.83**	**355**	Pg	**Pg**	**19 28 18.5**	**-1.3**
CING	**Cingoli**	**0.83**	**355**	Pg	**Pg**	**19 28 18.5**	**-1.3**
LPEL	**Lama dei Pelig**	**0.83**	**127**	Pg	**Pg**	**19 28 18.0**	**-1.9**
LPEL				Sg	**Sg**	**19 28 30.3**	**-0.4**
	963nm,0.8s							
LPEL	**Lama dei Pelig**	**0.83**	**127**	Pg	**Pg**	**19 28 18.0**	**-1.9**
LPEL				Sg	**Sg**	**19 28 30.3**	**-0.4**
	963nm,0.8s							
CAFR	**Castel Frentan**	**0.84**	**112**	Pg	**Pg**	**19 28 19.1**	**-1.0**
CAFR	**Castel Frentan**	**0.84**	**112**	Pg	**Pg**	**19 28 19.1**	**-1.0**
RMP	**Rome, Mte Porz**	**0.86**	**211**	Pg	**Pg**	**19 28 18.4**	**-2.0**
RMP	**Rome, Mte Porz**	**0.86**	**211**	Pg	**Pg**	**19 28 18.4**	**-2.0**
POFI	**Posta Fibreno**	**0.89**	**159**	Pg	**Pg**	**19 28 20.1**	**-0.9**
POFI	**Posta Fibreno**	**0.89**	**159**	Pg	**Pg**	**19 28 20.1**	**-0.9**
MURB	**Monte Urbino**	**0.91**	**322**	Pg	**Pg**	**19 28 20.3**	**-1.1**
MURB	**Monte Urbino**	**0.91**	**322**	Pg	**Pg**	**19 28 20.3**	**-1.1**
SDI	**San Donato**	**0.92**	**155**	Pg	**Pg**	**19 28 20.5**	**-1.2**
SDI	**San Donato**	**0.92**	**155**	Pg	**Pg**	**19 28 20.5**	**-1.2**
MGAB	**Montegabbione**	**0.94**	**293**	Pg	**Pg**	**19 28 20.7**	**-1.3**
MGAB	**Montegabbione**	**0.94**	**293**	Pg	**Pg**	**19 28 20.7**	**-1.3**
ARVD	**Arcevia**	**0.98**	**345**	Pg	**Pg**	**19 28 21.2**	**-1.6**
ARVD	**Arcevia**	**0.98**	**345**	Pg	**Pg**	**19 28 21.2**	**-1.6**
GIUL	**Giuliano Di Ro**	**0.99**	**182**	Pg	**Pg**	**19 28 21.3**	**-1.6**
GIUL	**Giuliano Di Ro**	**0.99**	**182**	Pg	**Pg**	**19 28 21.3**	**-1.6**
AOI	**Ancona**	**1.02**	**13**	Pg	**Pg**	**19 28 22.2**	**-1.4**
AOI	**Ancona**	**1.02**	**13**	Pg	**Pg**	**19 28 22.2**	**-1.4**
RNI2	**Rionero Sannit**	**1.06**	**143**	Pg	**Pg**	**19 28 22.8**	**-1.5**
RNI2	**Rionero Sannit**	**1.06**	**143**	Pg	**Pg**	**19 28 22.8**	**-1.5**
SACS	**San Casciano d**	**1.06**	**287**	Pg	**Pg**	**19 28 22.9**	**-1.4**
TOLF	**Tolfa**	**1.08**	**244**	Pg	**Pg**	**19 28 22.7**	**-1.8**
TOLF	**Tolfa**	**1.08**	**244**	Pg	**Pg**	**19 28 22.7**	**-1.8**
MIDA	**Miranda**	**1.16**	**141**	Pg	**Pg**	**19 28 23.3**	**-2.8**
MIDA	**Miranda**	**1.16**	**141**	Pg	**Pg**	**19 28 23.3**	**-2.8**
FSSB	**Fossombrone**	**1.20**	**342**	Pn	**Pg**	**19 28 25.6**	**-1.4**
FSSB	**Fossombrone**	**1.20**	**342**	Pn	**Pg**	**19 28 25.6**	**-1.4**
BADI	**Badiali**	**1.23**	**322**	Pn	**Pg**	**19 28 26.4**	**-1.1**
BADI	**Badiali**	**1.23**	**322**	Pn	**Pg**	**19 28 26.4**	**-1.1**
PARC	**Parchiule**	**1.34**	**325**	Pn	**Pn**	**19 28 28.5**	**-0.1**
PARC	**Parchiule**	**1.34**	**325**	Pn	**Pn**	**19 28 28.5**	**-0.1**
NVLJ	**Novalja**	**2.32**	**29**	*e*Pn	**Pn**	**19 28 41.3**	**-0.6**
NVLJ				Sn	**Sn**	**19 29 09.9**	**-0.5**
NVLJ	**Novalja**	**2.32**	**29**	*e*Pn	**Pn**	**19 28 41.3**	**-0.6**
NVLJ				Sn	**Sn**	**19 29 09.9**	**-0.5**
MAIM	**Mastiano**	**2.46**	**305**	P	**Pn**	**19 28 44.9**	**+1.0**
PGF	**Pioggiola**	**3.17**	**271**	*e*Pn	**Pn**	**19 28 53.4**	**-0.4**
PGF				*e*Sn	**Sn**	**19 29 33.4**	**+1.7**
	9.6nm,0.6s							
PGF	**Pioggiola**	**3.17**	**271**	*e*Pn	**Pn**	**19 28 53.4**	**-0.4**
PGF				*e*Sn	**Sn**	**19 29 33.4**	**+1.7**
	4.8nm,0.6s							
STON	**Ston**	**3.26**	**83**	*e*Pn	**Pn**	**19 28 55.1**	**+0.2**
STON				Sn	**Sn**	**19 29 33.5**	**-0.2**
STON	**Ston**	**3.26**	**83**	*e*Pn	**Pn**	**19 28 55.1**	**+0.2**
STON				Sn	**Sn**	**19 29 33.5**	**-0.2**
BOJS	**Bojanci**	**3.27**	**25**	*i* Pn	**Pn**	**19 28 55.3**	**+0.2**
BOJS				*i* Sn	**Sn**	**19 29 35.7**	**+1.6**
BOJS								
	comp=Z,12nm,0.3s							
BOJS	**Bojanci**	**3.27**	**25**	Pn	**Pn**	**19 28 55.3**	**+0.2**
BOJS				*i* Sn	**Sn**	**19 29 35.7**	**+1.6**
	comp=Z,12nm,0.3s							
JAVS	**Javornik**	**3.39**	**9**	*i* Pn	**Pn**	**19 28 56.3**	**-0.5**
JAVS				*i* Sn	**Sn**	**19 29 37.5**	**+0.5**
JAVS								
	comp=Z,26nm,0.5s							
JAVS	**Javornik**	**3.39**	**9**	*i* Pn	**Pn**	**19 28 56.3**	**-0.5**
JAVS				*i* Sn	**Sn**	**19 29 37.5**	**+0.5**
	comp=Z,26nm,0.5s							
PCP	**Piancastagn**	**3.98**	**302**	P	**Pn**	**19 29 02.8**	**-2.1**
ABTA	**Abfaltersbach**	**4.23**	**353**	⇓*i*Pn	**Pn**	**19 29 09.0**	**+0.6**
	SNR=33							
ABTA	**Abfaltersbach**	**4.23**	**353**	Pn	**Pn**	**19 29 09.0**	**+0.6**
	SNR=33							
SBF	**Sospel**	**4.48**	**289**	*e*Pn	**Pn**	**19 29 11.7**	**-0.1**
SBF				*e*Sn	**Sn**	**19 30 01.7**	**-2.2**
	comp=Z,13nm,0.6s							
SBF	**Sospel**	**4.48**	**289**	*e*Pn	**Pn**	**19 29 11.7**	**-0.1**
SBF				*e*Sn	**Sn**	**19 30 01.7**	**-2.2**
	comp=Z,6.4nm,0.6s							
KBA	**Koelnbreinsper**	**4.53**	**0**	⇓*i*Pn	**Pn**	**19 29 12.9**	**+0.4**
	SNR=5.9							
KBA	**Koelnbreinsper**	**4.53**	**0**	Pn	**Pn**	**19 29 12.9**	**+0.4**
	SNR=5.9							
BBLS	**Lazići**	**4.66**	**72**	*e*Pn	**Pn**	**19 29 16.5**	**+2.3**
BBLS				*e*Sn	**Sn**	**19 30 08.5**	**+0.2**
BBLS	**Lazići**	**4.66**	**72**	*e*Pn	**Pn**	**19 29 16.5**	**+2.3**
BBLS				*e*Sn	**Sn**	**19 30 08.5**	**+0.2**
DAVOX	**Davos/Dischmat**	**4.88**	**331**	Pn	**Pn**	**19 29 18.9**	**+1.6**
	comp=Z,1.7nm,0.3s,baz=159,slow=18,SNR=15							
DAVOX				Sn	**Sn**	**19 30 15.5**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=354,slow=22,SNR=4.6							
FRF	**La Foret Royal**	**4.97**	**284**	*e*Pn	**Pn**	**19 29 18.0**	**-0.5**
FRF	**La Foret Royal**	**4.97**	**284**	*e*Pn	**Pn**	**19 29 18.0**	**-0.5**
MOTA	**Moosalm**	**5.04**	**343**	⇓*i*Pn	**Pn**	**19 29 21.0**	**+1.5**
	SNR=7.7							
MOTA	**Moosalm**	**5.04**	**343**	Pn	**Pn**	**19 29 21.0**	**+1.5**
	SNR=7.7							
LMR	**La Mourre**	**5.04**	**281**	*e*Pn	**Pn**	**19 29 18.6**	**-0.8**
LMR	**La Mourre**	**5.04**	**281**	*e*Pn	**Pn**	**19 29 18.6**	**-0.8**
DIVS	**Divibare**	**5.12**	**70**	*e*Pn	**Pn**	**19 29 22.4**	**+1.8**
DIVS				*e*Sn	**Sn**	**19 30 19.9**	**0.0**
DIVS	**Divibare**	**5.12**	**70**	*e*Pn	**Pn**	**19 29 22.4**	**+1.8**
DIVS				*e*Sn	**Sn**	**19 30 19.9**	**0.0**
MBDF	**Montbardon**	**5.21**	**297**	*e*P	**Pn**	**19 29 23.7**	**+1.8**
MBDF	**Montbardon**	**5.21**	**297**	*e*P	**Pn**	**19 29 23.7**	**+1.8**
LPG	**La Plagne**	**5.56**	**304**	*e*P	**Pn**	**19 29 29.7**	**+2.9**
LPG				*e*Sn	**Sn**	**19 30 28.9**	**-2.0**
	comp=Z,4.9nm,0.5s							
LPL	**La Plagne**	**5.58**	**304**	*e*P	**Pn**	**19 29 29.8**	**+2.8**
LPL				*e*Sn	**Sn**	**19 30 28.0**	**-3.3**
	comp=Z,5.3nm,0.5s							
GRUS	**Gruza**	**5.59**	**74**	*e*Pn	**Pn**	**19 29 27.7**	**+0.8**
GRUS				*e*Sn	**Sn**	**19 30 30.1**	**-1.0**
GRUS	**Gruza**	**5.59**	**74**	*e*Pn	**Pn**	**19 29 27.7**	**+0.8**
GRUS				*e*Sn	**Sn**	**19 30 30.1**	**-1.0**
SELS	**Selova**	**5.79**	**81**	*e*Pn	**Pn**	**19 29 31.3**	**+1.6**
SELS	**Selova**	**5.79**	**81**	*e*Pn	**Pn**	**19 29 31.3**	**+1.6**
SMRF	**Simiane la Rot**	**5.81**	**287**	*e*P	**Pn**	**19 29 31.1**	**+1.0**
SMRF	**Simiane la Rot**	**5.81**	**287**	*e*P	**Pn**	**19 29 31.1**	**+1.0**
ORIF	**Oris-en-Rattie**	**5.87**	**296**	*e*P	Pn	19 29 34.3	+3.4
BARS	**Barje**	**6.29**	**85**	*e*Pn	**Pn**	**19 29 37.3**	**+0.8**
BARS				*e*Sn	**Sn**	**19 30 48.1**	**-0.3**
BARS	**Barje**	**6.29**	**85**	*e*Pn	**Pn**	**19 29 37.3**	**+0.8**
BARS				*e*Sn	**Sn**	**19 30 48.1**	**-0.3**
GERES	**GERESS Array B**	**6.30**	**2**	Pn	**Pn**	**19 29 36.4**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=169,slow=12,SNR=12							
GERES				Sn	**Sn**	**19 30 46.9**	**-2.0**
	comp=Z,3.3nm,0.3s,baz=173,slow=24,SNR=15							
CABF	**La Chapelle**	**6.55**	**311**	*e*Pn	**Pn**	**19 29 41.3**	**+1.0**
CABF	**La Chapelle**	**6.55**	**311**	*e*Pn	**Pn**	**19 29 41.3**	**+1.0**
KHC	**Kasperske Hory**	**6.58**	**2**	*e*PN	**Pn**	**19 29 41.7**	**+1.1**
KHC				*e*SN	**Sn**	**19 30 52.4**	**-3.3**
KHC	**Kasperske Hory**	**6.58**	**2**	Pn	**Pn**	**19 29 41.7**	**+1.1**
VIVF	**Saint-Julien-l**	**6.66**	**293**	*e*Pn	**Pn**	**19 29 43.1**	**+1.4**
VIVF	**Saint-Julien-l**	**6.66**	**293**	*e*Pn	**Pn**	**19 29 43.1**	**+1.4**
ZAPS	**Zavoj**	**6.90**	**81**	*e*Pn	**Pn**	**19 29 46.2**	**+1.3**
ZAPS				*e*Sn	**Sn**	**19 31 01.2**	**-2.2**
TREC	**Trest**	**6.92**	**12**	*e*PN	**Pn**	**19 29 45.6**	**+0.4**
TREC				*e*SN	**Sn**	**19 31 00.9**	**-2.9**
TREC	**Trest**	**6.92**	**12**	Pn	**Pn**	**19 29 45.6**	**+0.4**
HINF	**Hinteralfeld**	**6.96**	**321**	*e*Pn	**Pn**	**19 29 45.7**	**-0.1**
HINF				*e*Sn	**Sn**	**19 31 02.3**	**-2.6**
	comp=Z,10nm,0.5s							
HINF	**Hinteralfeld**	**6.96**	**321**	*e*Pn	**Pn**	**19 29 45.7**	**-0.1**
LASF	**Ste Croix**	**7.05**	**286**	*e*Pn	**Pn**	**19 29 46.6**	**-0.4**
LASF	**Ste Croix**	**7.05**	**286**	*e*Pn	**Pn**	**19 29 46.6**	**-0.4**
VYHS	**Vyhne**	**7.10**	**31**	*e*PN	**Pn**	**19 29 48.3**	**+0.6**
VYHS				*e*SN	Sn	19 31 00.7	-7.7
VYHS	**Vyhne**	**7.10**	**31**	*e*Pn	**Pn**	**19 29 48.3**	**+0.6**
CDF	**Champ du Feu**	**7.23**	**326**	*e*Pn	**Pn**	**19 29 48.6**	**-0.9**
CDF				*e*Sn	**Sn**	**19 31 09.2**	**-2.4**
	comp=Z,8.8nm,0.5s							
CDF	**Champ du Feu**	**7.23**	**326**	*e*Pn	**Pn**	**19 29 48.6**	**-0.9**
HAU	**Haudompre**	**7.33**	**320**	*e*Pn	**Pn**	**19 29 51.0**	**+0.2**
HAU				*e*Sn	**Sn**	**19 31 09.8**	**-4.2**
	comp=Z,10nm,0.4s							
HAU	**Haudompre**	**7.33**	**320**	*e*Pn	**Pn**	**19 29 51.0**	**+0.2**
KEST	**Kesra**	**7.47**	**206**	Pn	Pn	19 29 57.1	+4.3
	comp=Z,0.2nm,0.3s,baz=294,slow=3.7,SNR=8.3							
PRU	**Pruhonice**	**7.49**	**6**	*e*SN	**Sn**	**19 31 14.4**	**-3.5**
SFTF	**Sexfontaines**	**8.11**	**317**	*e*Pn	**Pn**	**19 30 01.6**	**+0.1**
SFTF	**Sexfontaines**	**8.11**	**317**	*e*Pn	**Pn**	**19 30 01.6**	**+0.1**
LOR	**Lormes**	**8.19**	**308**	*e*Pn	**Pn**	**19 30 02.5**	**-0.1**
LOR				*e*Sn	**Sn**	**19 31 32.0**	**-3.1**
	comp=Z,3.0nm,0.4s							
LOR	**Lormes**	**8.19**	**308**	*e*Pn	**Pn**	**19 30 02.5**	**-0.1**
MLR	**Muntele Rosu**	**9.58**	**68**	Pn	Pn	19 30 26.8	+5.0
	comp=Z,0.0nm,0.3s,baz=203,slow=15,SNR=2.3							
NOA	**NORSAR Array B**	**18.56**	**357**	P	**Pn**	**19 32 24.1**	**+3.4**
	comp=Z,0.0nm,0.3s,baz=176,slow=11,SNR=3.3							
FINES	**FINESS Array B**	**20.42**	**18**	P	**P**	**19 32 41.3**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=190,slow=9.7,SNR=5.0							
KBZ	**Khabaz**	**21.59**	**77**	P	**P**	**19 32 56.6**	**+3.1**
	comp=Z,2.6nm,1.0s,baz=264,slow=18,SNR=3.0							
SONM	**Songino Array**	**61.90**	**50**	P	**P**	**19 38 24.1**	**+0.7**
	comp=Z,0.8nm,1.1s,baz=258,slow=2.2,SNR=4.8							
YKA	**Yellowknife Ar**	**67.29**	**337**	P	**P**	**19 38 58.4**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=36,slow=5.5,SNR=4.9							

IDC ***14*** *19:38:12.6±1.7, 1°.83N×96°.62E, h0km, mb3.8/6, mb1 3.8/8, mb1mx3.6/28, mbtmp3.8/8, ML3.4/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/49, Error ellipse: s-maj=48.5km s-min=24.2km az=49.0*

ISCJB ***14*** *19:38:15.3±0.8, 1°.91N±0°.07×96°.60E±0°.07, h28km, mb3.9/6, MS3.1/1, Error ellipse: s-maj=11.9km s-min=7.1km az=44.8*

DJA ***14*** *19:38:17.3±2.2, 2°.N±8°×9°.7E±°, h31km±34km, M4.0/6, mb4.2/1, MLv3.9/6*

ISC 14 19:38:16.7±1.1, 1°.89N±0°.09×96°.64E±0°.09, h28km, n16, σ0s66/18, mb3.9/6, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.10**	**122**	P	**Pb**	**19 38 36.6**	**-0.5**
GSI				S	**Sb**	**19 38 50.6**	**-0.5**
PSI	**Prapat**	**2.45**	**68**	P	**Pn**	**19 38 54.4**	**-0.5**
PSI	**Prapat**	**2.45**	**68**	Pn	**Pn**	**19 38 54.1**	**-0.9**
	1.3nm,0.3s,baz=251,slow=6.3,SNR=4.8						
TSI	**Tuntungan**	**2.50**	**50**	P	**Pn**	**19 38 56.1**	**+0.6**
TSI				S	**Sn**	**19 39 25.3**	**+0.3**
MNSI	**Mandailing Nat**	**3.13**	**110**	P	**Pn**	**19 39 04.9**	**+0.7**
LHMI	**Lhok Sumawe**	**3.33**	**5**	P	**Pn**	**19 39 07.5**	**+0.6**
BSI	**Banda Aceh**	**3.83**	**339**	P	**Pn**	**19 39 12.9**	**-0.9**
IPM	**Ipoh**	**5.07**	**59**	P	**Pn**	**19 39 30.9**	**-0.1**
CMAR	**Chiang Mai Arr**	**16.62**	**8**	Pn	**P**	**19 42 09.1**	**-0.9**
	0.2nm,0.3s,baz=198,slow=11,SNR=31						
ASAR	**Alice Springs**	**44.25**	**127**	P	**P**	**19 46 24.1**	**0.0**
	0.3nm,0.7s,baz=299,slow=8.2,SNR=5.3						
KSRS	**Korea Array**	**45.60**	**35**	LR	LR	20 07 36.0	
	comp=Z,22nm,20.2s,baz=55,slow=39						
MKAR	**Makanchi Array**	**46.44**	**346**	P	**P**	**19 46 41.1**	**+0.1**
	0.6nm,0.4s,baz=158,slow=8.4,SNR=17						
SONM	**Songino Array**	**46.54**	**9**	P	**P**	**19 46 42.1**	**+0.2**
	0.7nm,0.4s,baz=191,slow=9.3,SNR=20						
SONM				PcP	**PcP**	**19 48 16.6**	**+0.6**
	0.2nm,0.4s,baz=191,slow=3.2,SNR=4.2						
KURBB	**Kurchatov Arra**	**50.92**	**345**	P	**P**	**19 47 16.5**	**+1.1**
	1.0nm,0.6s,baz=164,slow=7.2,SNR=15						
ZALV	**Zalesovo Beam**	**52.79**	**351**	P	**P**	**19 47 29.7**	**+0.4**
	2.5nm,0.6s,baz=175,slow=7.0,SNR=15						
BVAR	**Borovoye Array**	**55.42**	**341**	P	**P**	**19 47 49.0**	**+0.5**
	0.9nm,0.6s,baz=140,slow=9.1,SNR=6.1						

NIED ***14*** *19:43:00, 46°.00N×152°.30E, h35km, Mw3.8 Best double couple: M0 6.28000×10^14 NP1:φs315.00000°, δ89.00000°, λ31.00000°. NP2:φs224.00000°, δ59.00000°, λ179.00000°.*

JMA ***14*** *19:43:36.6±0.8, 46°.04N×152°.31E, h30km, M4.5*

ISCJB ***14*** *19:43:38.1±0.7, 46°.0N±0°.1×152°.0E±0°.1, h48km, mb3.6/11, Error ellipse: s-maj=20.4km s-min=4.8km az=140.7*

MOS ***14*** *19:43:38.2±1.4, 46°.04N×152°.04E, h55km, mb4.1/5, Error ellipse: s-maj=19.8km s-min=11.9km az=59.7*

IDC ***14*** *19:43:43.1±3.0, 46°.21N×151°.91E, h72km±26km, mb3.3/11, mb1 3.6/14, mb1mx3.4/28, mbtmp3.4/14, Error ellipse: s-maj=28.2km s-min=16.8km az=139.0*

ISC 14 19:43:39.0±0.9, 45°.8N±0°.1×152°.2E±0°.1, h48km, n44, σ1s77/51, mb3.8/11, 1C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**4.82**	**251**	*e*/*i* PN	**Pn**	**19 44 49.7**	**+0.8**
YUK				*i* S	**Sn**	**19 45 47.5**	**+4.1**
YUK				pmax	pmax		
	comp=E,70nm,0.4s						
YUK				pmax	pmax		
	comp=Z,92nm,0.4s						
YUK				pmax	pmax		
	comp=N,54nm,0.2s						
YUK				smax	smax		
	comp=N,139nm,0.8s						
YUK				smax	smax		
	comp=E,113nm,0.4s						
NEM2	**Nemuro 2**	**5.20**	**244**	P	**Pn**	**19 44 54.0**	**-0.1**
NEM2				*e*S	**Sn**	**19 45 51.3**	**-1.5**
JRA	**Rausu**	**5.35**	**252**	P	**Pn**	**19 44 58.3**	**+2.2**
SKR	**Severo-Kuril's**	**5.54**	**27**	*e*PN	**Pn**	**19 44 57.0**	**-1.7**
SKR				pmax	pmax		
	comp=Z,30nm,0.5s						
JNK	**Nakash**	**5.76**	**250**	P	**Pn**	**19 45 03.2**	**+1.4**
JAK	**Akkeshi**	**6.05**	**245**	P	**Pn**	**19 45 05.7**	**-0.1**
JAK				*e*S	**Sn**	**19 46 11.6**	**-2.0**
JTKR	**Abashiri--Toko**	**6.15**	**255**	P	**Pn**	**19 45 09.5**	**+2.3**
JAR	**Ashorobuto**	**6.51**	**250**	P	**Pn**	**19 45 13.6**	**+1.5**
JAR				*e*S	**Sn**	**19 46 25.4**	**+0.5**
JMP	**Maruseppu**	**6.51**	**257**	P	**Pn**	**19 45 14.8**	**+2.7**
JOB	**Onbets**	**6.64**	**247**	P	**Pn**	**19 45 14.4**	**+0.5**
JOB				*e*S	**Sn**	**19 46 27.5**	**-0.8**
JKK2	**Kamakawa 2**	**6.97**	**257**	P	**Pn**	**19 45 21.4**	**+2.9**
ASAJ	**Asahikawa**	**7.00**	**259**	P	Pn	19 45 22.2	+3.4
ASAJ	**Asahikawa**	**7.00**	**259**	P	**Pn**	**19 45 21.6**	**+2.8**
	comp=Z,2.4nm,0.3s,baz=88,slow=16,SNR=18						
JCH	**Churui**	**7.09**	**246**	P	**Pn**	**19 45 20.0**	**0.0**
JCH				*e*S	**Sn**	**19 46 36.4**	**-2.8**
JFR	**Furan**	**7.34**	**252**	P	**Pn**	**19 45 25.4**	**+1.9**
JEM	**Erimo**	**7.53**	**243**	P	**Pn**	**19 45 27.6**	**+1.5**
JNBK	**Urakawa-nobuka**	**7.65**	**246**	P	**Pn**	**19 45 27.3**	**-0.4**
JNBK				*e*S	**Sn**	**19 46 50.0**	**-2.9**
PETK	**Petropavlovsk-**	**8.14**	**24**	PN	**Pn**	**19 45 34.7**	**+0.4**
PETK	**Petropavlovsk-**	**8.14**	**24**	P	**Pn**	**19 45 34.7**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=194,slow=14,SNR=3.0						
JKB	**Kayabe**	**8.95**	**248**	P	**Pn**	**19 45 45.1**	**-0.4**
JKB				*e*S	**Sn**	**19 47 20.2**	**-4.7**
JANG	**Nango**	**9.50**	**239**	*e*S	Sn	19 47 30.2	-8.2
MJAR	**Matsushiro Arr**	**13.99**	**233**	P	**Pn**	**19 46 53.3**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=268,slow=19,SNR=4.4						
KSRS	**Korea Array**	**19.90**	**254**	P	**Pn**	**19 48 08.6**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=59,slow=10,SNR=4.9						
MKAR	**Makanchi Array**	**46.79**	**298**	P	**P**	**19 52 02.0**	**-1.5**
MKAR						19 53 36.8	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**46.79**	**298**	P	**P**	**19 52 02.0**	**-1.5**
	comp=Z,0.4nm,0.7s,baz=66,slow=6.0,SNR=5.4						
MKAR				PcP	**PcP**	**19 53 36.8**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=63,slow=2.8,SNR=5.9						
KURK	**Kurchatov**	**47.34**	**304**	P	**P**	**19 52 06.2**	**-1.5**
KURBB	**Kurchatov Arra**	**47.43**	**304**	P	**P**	**19 52 06.2**	**-2.2**
	comp=Z,0.3nm,0.4s,baz=76,slow=8.3,SNR=3.6						
CMAR	**Chiang Mai Arr**	**51.51**	**256**	P	**P**	**19 52 42.0**	**+2.1**
	comp=Z,0.7nm,0.7s,baz=42,slow=7.6,SNR=14						
YKA	**Yellowknife Ar**	**52.06**	**36**	P	**P**	**19 52 43.4**	**0.0**
	comp=Z,0.3nm,0.7s,baz=296,slow=7.1,SNR=4.7						
RAMN	**Ramite**	**54.52**	**274**	*e*P	**P**	**19 53 02.9**	**+0.6**
	comp=Z,3.9nm,0.3s						
KKN	**Kakani**	**54.92**	**275**	*e*P	**P**	**19 53 05.8**	**+0.7**
	comp=Z,2.7nm,0.4s						
PKIN	**Phulchoki**	**54.97**	**275**	*e*P	**P**	**19 53 06.2**	**+0.7**
DMN	**Daman**	**55.15**	**275**	*e*P	**P**	**19 53 07.8**	**+0.9**
	comp=Z,2.7nm,0.4s						
DANN	**Dangsing**	**55.63**	**277**	*e*P	**P**	**19 53 11.5**	**+1.2**
	comp=Z,9.5nm,0.7s						
KOLN	**Koldanda**	**56.10**	**276**	*e*P	**P**	**19 53 14.4**	**+0.8**
	comp=Z,4.1nm,0.6s						
PYUN	**Piuthan**	**56.32**	**277**	*e*P	**P**	**19 53 15.9**	**+0.7**
	comp=Z,14nm,0.9s						
FINES	**FINESS Array B**	**64.60**	**335**	P	**P**	**19 54 08.9**	**-1.9**
	comp=Z,0.6nm,0.4s,baz=35,slow=7.3,SNR=13						
PDAR	**Pinedale Array**	**65.83**	**53**	P	**P**	**19 54 21.0**	**+1.6**
	comp=Z,0.6nm,0.7s,baz=298,slow=3.2,SNR=5.0						
NB2	**NORSAR Subarra**	**68.90**	**341**	P	**P**	**19 54 36.9**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=26

SDLR				*i* S		**Sn**	**20 02 03.2**	**+0.4**
KRER	**Koryakskii**	**3.06**	**237**	*e*P		**Pn**	**20 01 28.5**	**+1.5**
KRER				*i* S		**Sn**	**20 02 04.8**	**+0.7**
SMAR	**Somma**	**3.06**	**236**	*e*P		**Pn**	**20 01 28.2**	**+1.2**
SMAR				*i* S		**Sn**	**20 02 04.3**	**+0.2**
UGLR	**Uglovaya**	**3.08**	**235**	P		**Pn**	**20 01 28.8**	**+1.6**
UGLR				*i* S		**Sn**	**20 02 04.7**	**+0.1**
AVH	**Avacha**	**3.09**	**236**	P		**Pn**	**20 01 29.1**	**+1.9**
AVH				*i* S		**Sn**	**20 02 06.4**	**+1.7**
KOK	**Koryaka**	**3.12**	**237**	*e*P		**Pn**	**20 01 28.8**	**+1.1**
KOK				*i* S		**Sn**	**20 02 05.4**	**-0.1**
GNL	**Ganaly**	**3.26**	**247**	*e*P		**Pn**	**20 01 30.2**	**+0.5**
PET	**Petropavlovsk**	**3.28**	**233**	*e*P		**Pn**	**20 01 31.1**	**+1.3**
PET				*i* S		**Sn**	**20 02 09.6**	**+0.4**
PETK	**Petropavlovsk-**	**3.69**	**240**	Pn		**Pn**	**20 01 37.3**	**+1.9**
	1.4nm,0.3s,baz=69,slow=19,SNR=15							
PETK				Sn		**Sn**	**20 02 22.4**	**+3.0**
	2.2nm,0.3s,baz=95,slow=18,SNR=5.7							
RUS	**Russkaya**	**3.75**	**227**	P		**Pn**	**20 01 35.8**	**-0.4**
RUS				*i* S		**Sn**	**20 02 18.5**	**-2.3**
MTVR	**Mutnovka**	**3.86**	**230**	*e*P		**Pn**	**20 01 39.3**	**+1.5**
MTVR				*i* S		**Sn**	**20 02 23.6**	**-0.1**
FX1	**Attu Island--F**	**6.38**	**106**	Pn		**Pn**	**20 02 13.8**	**+1.4**
	1.3nm,0.3s,baz=270,slow=13,SNR=4.7							
FX1				Sn		**Sn**	**20 03 23.2**	**-2.4**
	2.9nm,0.3s,baz=306,slow=14,SNR=5.3							
ILAR	**Eielson Array**	**26.21**	**48**	P		**P**	**20 06 14.2**	**+1.1**
	0.7nm,0.8s,baz=270,slow=9.0,SNR=7.3							
FINES	**FINESS Array B**	**58.97**	**337**	P		**P**	**20 10 37.2**	**-0.5**
	0.7nm,0.5s,baz=39,slow=8.2,SNR=10							

BJI **14** *20:11:21.5,6˚.53S×128˚.53E,h347km,mB4.4/21,mb4.4/37*
ISCJB **14** *20:11:22.9±0.3,6˚.36S±0˚.02×128˚.25E±0˚.03,h336km±3km, mb4.2/38, Error ellipse: s-maj=5.5km s-min=3.3km az=155.8*
AUST **14** *20:11:22.0±0.2,6˚.38S×128˚.11E,h311km, Error ellipse: s-maj=0.7km s-min=0.6km az=227.0*
NEIC **14** *20:11:23.3±0.2,6˚.36S×128˚.16E,mb4.5/18, Error ellipse: s-maj=9.1km s-min=4.9km az=61.0*
DJA **14** *20:11:24.7±0.2,6˚.S×4˚×12˚.8E±˚, h317km±7km, M4.9/16, mB5.3/14, mb5.1/16, MLv5.2/7, Mw(mB)4.7/14, Mwp6.1/1*
IDC **14** *20:11:24.1±1.3,6˚.42S×128˚.16E,h334km±13km, mb4.0/14, mb1 4.1/19, mb1mx4.0/26, mbtmp4.1/19, Error ellipse: s-maj=13.4km s-min=6.6km az=69.0*
ISC 14 20:11:24.1±0.4,**6˚.45S**±0˚.04×**128˚.24E**±0˚.05,**h333**km±3km, **h333km:pP-P,n150,σ1928/193,mb4.3/38,1C-1D,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.53**	**41**	P	**Pn**	**20 12 17.9**	**-0.1**
AAI	**Ambon**	**2.75**	**359**	P	**Pn**	**20 12 19.7**	**-0.1**
AAI	**Ambon**	**2.75**	**359**	P	**Pn**	**20 12 19.8**	**-0.1**
	baz=2.7,SNR=59						
MSAI	**Masohi**	**3.16**	**13**	P	**Pn**	**20 12 21.9**	**-1.8**
TLE	**Tual**	**4.55**	**80**	P	**Pn**	**20 12 38.0**	**+0.1**
TLE	**Tual**	**4.55**	**80**	P	**Pn**	**20 12 38.1**	**+0.1**
	baz=4.7,SNR=158						
TLE				S	**S**	**20 13 32.7**	**-4.7**
	baz=4.7,SNR=15						
FAKI	**Fak Fak**	**5.32**	**49**	P	**Pn**	**20 12 44.2**	**-2.3**
BBSI	**Bau Bau**	**5.72**	**279**	P	**Pn**	**20 12 52.2**	**+1.1**
	1.0m,1.0s,8μm3.0nm						
LBMI	**Labuha**	**5.82**	**353**	P	**Pn**	**20 12 51.4**	**-0.9**
	1μm,0.6s,15μm5.3nm						
KDI	**Kendari**	**6.12**	**294**	P	**Pn**	**20 12 56.0**	**+0.2**
	397nm,1.1s,5μm1.2nm						
SWI	**Sorong**	**6.32**	**29**	P	Pn	20 12 54.9	-3.1
SWI	**Sorong**	**6.32**	**29**	P	Pn	20 12 55.0	-3.1
	baz=6.3,SNR=32						
SWI				S	S	20 14 06.3	-7.8
	baz=6.3,SNR=7.5						
MMRI	**Maumere**	**6.33**	**250**	P	**Pn**	**20 12 59.3**	**+1.1**
	11nm,1.1s,2μm						
MTN	**Manton Dam**	**6.96**	**156**	P	**Pn**	**20 13 05.3**	**-0.3**
	baz=7.1,SNR=371						
TNTI	**Ternate**	**7.23**	**353**	P	**Pn**	**20 13 08.3**	**-0.5**
	218nm,0.9s,2μm						
KDU	**Kakadu**	**7.47**	**146**	P	**Pn**	**20 13 11.8**	**+0.1**
	baz=7.6,SNR=145						
KDU				S	**S**	**20 14 36.2**	**-2.9**
	baz=7.6,SNR=5.5						
LUWI	**Luwuk**	**7.66**	**314**	P	**Pn**	**20 13 13.9**	**0.0**
	207nm,1.4s,2μm						
BKSI	**Bulukumba**	**8.15**	**277**	P	**Pn**	**20 13 20.2**	**+0.3**
	292nm,1.2s,3μm						
WSI	**Waingapu**	**8.49**	**247**	P	**Pn**	**20 13 21.6**	**-2.3**
WSI	**Waingapu**	**8.49**	**247**	P	**Pn**	**20 13 22.1**	**-1.8**
	baz=8.4,SNR=14						
WSI				S	S	20 14 54.1	-7.5
	baz=8.4,SNR=5.6						
MNI	**Manado**	**8.54**	**336**	P	**Pn**	**20 13 23.3**	**-1.3**
	330nm,0.9s,3μm89μm						
KAPI	**Kappang**	**8.56**	**279**	*e*Pn	**Pn**	**20 13 23.9**	**-1.0**
	67nm,0.6s						
KAPI	**Kappang**	**8.56**	**279**	P	**Pn**	**20 13 23.8**	**-1.0**
	17nm,0.3s,baz=104,slow=5.4,SNR=60						
PCI	**Palu**	**10.03**	**303**	P	Pn	20 13 25.9	-17
	baz=9.9,SNR=3.4						
PCI				S	S	20 15 23.1	-13
	baz=9.9,SNR=7.0						
FITZ	**Fitzroy Crossi**	**11.86**	**192**	*e*Pn	**Pn**	**20 14 03.5**	**-0.8**
	0.3nm,0.6s						
FITZ				S	**S**	**20 16 16.2**	**-0.4**
FITZ	**Fitzroy Crossi**	**11.86**	**192**	P	**Pn**	**20 14 03.9**	**-0.5**
	14nm,0.3s,baz=26,slow=9.7,SNR=172						
FITZ				S	**S**	**20 16 16.2**	**-0.4**
	0.9nm,0.3s,baz=173,slow=23,SNR=3.1						
FITZ	**Fitzroy Crossi**	**11.86**	**192**	P	**Pn**	**20 14 03.8**	**-0.5**
	baz=12,SNR=323						
MMPI	**Merauke**	**12.21**	**100**	P	**P**	**20 14 10.6**	**+1.8**
	1μm,0.8s,11μm						
MMPI	**Merauke**	**12.21**	**100**	P	**P**	**20 14 10.5**	**+1.7**
	baz=12,SNR=8.3						
KBKI	**Kotabaru**	**12.43**	**284**	P	**P**	**20 14 11.7**	**+0.4**
	65nm,1.3s,830nm						
JAY	**Jayapura**	**13.03**	**73**	P	**Pn**	**20 14 19.5**	**+1.1**
	54nm,0.8s,5μm						
JAY	**Jayapura**	**13.03**	**73**	P	**Pn**	**20 14 19.8**	**+1.3**
	baz=13,SNR=3.9						
JAY				S	**S**	**20 16 43.7**	**+1.9**
	baz=13,SNR=6.9						
MATI	**Mati**	**13.45**	**352**	*e*P	**P**	**20 14 22.2**	**-0.5**
BBKI	**Banjar Baru**	**13.67**	**282**	P	**Pn**	**20 14 27.0**	**+1.0**
	170nm,1.4s						
DAV	**Davao City (W)**	**13.69**	**349**	P	**P**	**20 14 24.8**	**-0.4**
DAV				Pn	**Pn**	**20 14 25.0**	**-1.2**
DAV	**Davao City (W)**	**13.69**	**349**	P	**P**	**20 14 24.8**	**-0.4**
	36nm,0.3s,baz=13,slow=6.7,SNR=5.2						
CTBH	**Cotabato--PC H**	**14.15**	**344**	⇑*i*P	**P**	**20 14 29.1**	**-1.3**
BUKP	**Musuan**	**14.58**	**347**	*e*P	**P**	**20 14 34.6**	**-0.5**
WRAB	**Tennant Creek**	**14.66**	**157**	*e*P	**Pn**	**20 14 36.7**	**-0.9**
	79nm,0.9s						
WRAB				*e*S	**S**	**20 17 13.1**	**-1.9**
PAGZ	**Pagadian**	**15.01**	**341**	*e*P	**P**	**20 14 39.7**	**0.0**
PALU	**Palau**	**15.05**	**25**	P	**P**	**20 14 39.9**	**-0.2**
	baz=15,SNR=16						
COEN	**Coen**	**16.48**	**118**	*e*P	**P**	**20 14 56.0**	**+0.3**
	3μm,0.8s						
COEN	**Coen**	**16.48**	**118**	P	**P**	**20 14 56.8**	**+1.1**
	baz=17,SNR=282						
MBWA	**Marble Bar**	**16.78**	**209**	*e*P	**P**	**20 14 58.9**	**0.0**
	86nm,0.9s						
KKM	**Kota Kinabalu**	**17.27**	**316**	*e*P	**P**	**20 15 03.8**	**-0.6**
	30nm,1.0s						
UGM	**Wanagama**	**17.64**	**264**	P	**P**	**20 15 09.1**	**+0.8**
	baz=18,SNR=3.7						
QIS	**Mount Isa**	**17.84**	**143**	P	**P**	**20 15 11.3**	**+1.0**
	baz=18,SNR=155						
QIS				S	**S**	**20 18 16.4**	**-1.6**
	baz=18,SNR=13						
AS31	**Alice Springs**	**17.96**	**163**	*e*P	**P**	**20 15 13.0**	**+1.3**
AS31				*e*S	**S**	**20 18 17.9**	**-2.5**
ASAR	**Alice Springs**	**17.96**	**163**	P	**P**	**20 15 13.1**	**+1.4**
ASAR				S	**S**	**20 18 19.6**	**-0.7**
ASAR				ScP	**ScP**	**20 22 31.3**	**-2.1**
ASAR	**Alice Springs**	**17.96**	**163**	P	**P**	**20 15 13.1**	**+1.4**
	7.4nm,0.3s,baz=344,slow=12,SNR=283						
ASAR				S	**S**	**20 18 19.6**	**-0.7**
	4.1nm,0.3s,baz=343,slow=21,SNR=29						
ASAR				ScP	**ScP**	**20 22 31.3**	**-2.1**
	0.4nm,0.3s,baz=357,slow=1.5,SNR=5.1						
PMG	**Port Moresby**	**18.97**	**100**	*e*P	**P**	**20 15 23.4**	**+1.1**
	151nm,1.1s						
PMG	**Port Moresby**	**18.97**	**100**	P	**P**	**20 15 23.6**	**+1.2**
	4.8nm,0.3s,baz=308,slow=6.3,SNR=25						
KSM	**Kuching**	**19.55**	**293**	*e*P	**P**	**20 15 25.6**	**-3.1**
	11nm,0.9s						
KSM	**Kuching**	**19.55**	**293**	P	**P**	**20 15 28.7**	**0.0**
	baz=19,SNR=7.7						
GIRL	**Giralia**	**21.01**	**219**	P	**P**	**20 15 43.8**	**+1.1**
	baz=21,SNR=8.7						
TGY	**Tagaytay City**	**21.67**	**340**	P	**P**	**20 15 49.0**	**+0.3**
TGY	**Tagaytay City**	**21.67**	**340**	P	**P**	**20 15 49.0**	**+0.3**
	148nm,0.4s,baz=220,slow=6.1,SNR=9.9						
MEEK	**Meekatharra**	**22.07**	**203**	P	**P**	**20 15 51.9**	**-0.4**
	baz=22,SNR=11						
CTA	**Charters Tower**	**22.13**	**129**	P	**P**	**20 15 54.9**	**+2.0**
CTA	**Charters Tower**	**22.13**	**129**	P	**P**	**20 15 54.9**	**+2.0**
	104nm,1.0s,baz=309,slow=10,SNR=62						
CTAO	**Charters Tower**	**22.13**	**129**	*e*P	**P**	**20 15 54.4**	**+1.5**
	126nm,1.0s						
QLP	**Quilpie**	**25.16**	**145**	P	**P**	**20 16 21.8**	**+1.6**
	baz=25,SNR=5.2						
MORW	**Morawa**	**25.28**	**206**	P	**P**	**20 16 21.2**	**0.0**
	baz=25,SNR=6.2						
KMBL	**Kambalda**	**25.49**	**193**	P	**P**	**20 16 23.5**	**+0.4**
	baz=26,SNR=18						
BLDU	**Ballidu**	**26.36**	**203**	P	**P**	**20 16 30.8**	**-0.1**
	baz=26,SNR=6.7						
KLBR	**Kellerberrin**	**26.87**	**200**	P	**P**	**20 16 35.4**	**0.0**
	baz=27,SNR=8.7						
BBOO	**Buckleboo**	**27.22**	**165**	P	**P**	**20 16 39.3**	**+0.9**
	baz=27,SNR=13						
RMQ	**Roma**	**27.92**	**138**	P	**P**	**20 16 45.8**	**+1.0**
	baz=28,SNR=6.5						
STKA	**Stephens Creek**	**28.21**	**155**	P	**P**	**20 16 48.0**	**+0.9**
STKA				pP	**pP**	**20 17 49.4**	**-0.3**
STKA	**Stephens Creek**	**28.21**	**155**	P	**P**	**20 16 48.0**	**+0.9**
	11nm,0.7s,baz=328,slow=11,SNR=24						
STKA				pP	**pP**	**20 17 49.4**	**-0.3**
	11nm,0.7s,baz=321,slow=12,SNR=6.5						
STKA	**Stephens Creek**	**28.21**	**155**	P	**P**	**20 16 48.1**	**+0.9**
	baz=28,SNR=19						
NWAO	**Narrogin (SRO)**	**28.26**	**200**	P	**P**	**20 16 47.7**	**+0.1**
NWAO				pP	**pP**	**20 17 48.8**	**-1.4**
NWAO	**Narrogin (SRO)**	**28.26**	**200**	P	**P**	**20 16 47.7**	**+0.1**
	11nm,0.8s,baz=194,slow=16,SNR=8.8						
NWAO				pP	**pP**	**20 17 48.8**	**-1.4**
	23nm,0.8s,baz=19,slow=12,SNR=7.6						
CMSA	**Cobar Meteorol**	**29.82**	**149**	P	**P**	**20 17 02.7**	**+1.3**
	baz=30,SNR=32						
RKGY	**Rocky Gully**	**29.89**	**199**	P	**P**	**20 17 03.8**	**+1.8**
	baz=30,SNR=4.8						
KULM	**Kulim**	**29.91**	**292**	*e*P	**P**	**20 17 01.1**	**-1.3**
	9.4nm,1.0s						
SSLB	**Suanglung**	**30.88**	**347**	*e*P	P	20 17 06.8	-4.0
GSI	**Gunungsitoli**	**31.56**	**283**	P	**P**	**20 17 15.6**	**-1.3**
	baz=31,SNR=3.2						
YHNB	**Yeheng**	**31.65**	**348**	*e*P	**P**	**20 17 14.8**	**-2.7**
	14nm,0.7s						
TATO	**Taipei**	**31.92**	**348**	P	**P**	**20 17 19.3**	**-0.4**
ARMA	**Armidale**	**32.42**	**140**	P	**P**	**20 17 26.0**	**+1.8**
	baz=33,SNR=6.3						
ARPS	**Mount Arapiles**	**32.64**	**160**	P	**P**	**20 17 27.6**	**+1.7**
	baz=33,SNR=11						
PATS	**Pohnpei**	**32.78**	**67**	S	S	20 22 08.4	-11
	baz=33,SNR=3.8						
YNG	**Young**	**33.39**	**149**	P	**P**	**20 17 34.3**	**+1.9**
	baz=34,SNR=29						
CAN	**Canberra**	**34.50**	**149**	*e*P	**P**	**20 17 43.7**	**+1.8**
	28nm,0.8s						
TOO	**Toolangi**	**34.73**	**156**	P	**P**	**20 17 46.1**	**+2.4**
	baz=35,SNR=4.4						
CM31	**Chiang Mai Arr**	**38.05**	**311**	*e*P	**P**	**20 18 11.3**	**-0.5**
	1.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**38.05**	**311**	P	**P**	**20 18 10.1**	**-1.8**
CMAR				PcP	**PcP**	**20 20 20.4**	**+0.9**
CMAR				ScP	**ScP**	**20 23 35.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**38.05**	**311**	P	**P**	**20 18 10.1**	**-1.8**
	1.1nm,0.4s,baz=141,slow=6.8,SNR=43						
CMAR				PcP	**PcP**	**20 20 20.4**	**+0.9**
	0.7nm,0.7s,baz=165,slow=2.4,SNR=5.1						
CMAR				ScP	**ScP**	**20 23 35.4**	**+0.3**
	1.4nm,0.9s,baz=155,slow=2.9,SNR=11						
CHTO	**Chiang Mai**	**38.27**	**312**	*e*P	**P**	**20 18 12.3**	**-1.3**
	1.1nm,0.4s						
GYA	**Guiyang**	**38.83**	**328**	*e*P	**P**	**20 18 19.0**	**+0.7**
GYA				pP	**pP**	**20 19 23.6**	**-0.1**
GYA				sP	**sP**	**20 20 01.8**	**+0.1**
GYA				PcP	**PcP**	**20 23 20.4**	**+1.6**
GYA				S	**S**	**20 23 51.8**	**+0.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WHN	**Wuhan**	**39.12**	**341**	P	**P**	**20 18 20.1**	**-0.3**
WHN				pmax	pmax		
	comp=Z,48nm,0.6s						
NJ2	**Nanjing**	**39.32**	**347**	*e*P	**P**	**20 18 21.6**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,60nm,1.0s						
DZM	**Mont Dzumac**	**40.00**	**117**	P	**P**	**20 18 27.7**	**-0.2**
DZM	**Mont Dzumac**	**40.00**	**117**	P	**P**	**20 18 27.7**	**-0.2**
	comp=Z,20nm,0.8s,baz=284,slow=13,SNR=12						
KMI	**Kunming**	**40.01**	**323**	P	**P**	**20 18 28.3**	**+0.2**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KSAR	**Wonju Array Be**	**43.67**	**360**	P	**P**	**20 18 56.1**	**-0.8**
KSRS	**Korea Array**	**43.68**	**360**	P	**P**	**20 18 56.1**	**-0.9**
	comp=Z,12nm,0.4s,baz=179,slow=9.4,SNR=74						
MJAR	**Matsushiro Arr**	**43.78**	**12**	P	**P**	**20 18 55.6**	**-2.3**
MJAR	**Matsushiro Arr**	**43.78**	**12**	P	**P**	**20 18 55.6**	**-2.3**
	comp=Z,11nm,1.1s,baz=192,slow=9.8,SNR=12						
MAT	**Matsushiro**	**43.78**	**12**	P	**P**	**20 18 55.5**	**-2.4**
XAN	**Xi'an**	**44.23**	**337**	P	**P**	**20 19 00.1**	**-1.4**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BJI	**Beijing**	**47.58**	**347**	P	**P**	**20 19 25.4**	**-1.8**
BJI				pmax	pmax		
	comp=Z,27nm,1.0s						
BJI	**Beijing**	**47.58**	**347**	P	**P**	**20 19 25.5**	**-1.8**
BJI				pmax	pmax		
	comp=Z,27nm,1.0s						
LZH	**Lanzhou**	**48.12**	**333**	⇓P	**P**	**20 19 31.4**	**-0.3**
LZH				pP	**pP**	**20 20 42.1**	**+2.0**
LZH				sP	**sP**	**20 21 20.0**	**+2.7**
LZH				PP	**PP**	**20 21 27.0**	**-0.6**
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,100nm,4.0s						
HHC	**Hu-ho-hao-te**	**49.50**	**343**	*e*P	**P**	**20 19 42.3**	**+0.4**
HHC				pP	**pP**	**20 20 53.6**	**+2.8**
HHC				sP	sP	20 21 33.4	+5.5
HHC				S	**S**	**20 26 22.8**	**-0.8**
HHC				sS	**sS**	**20 28 29.1**	**+2.6**
HHC				SS	**SS**	**20 29 58.0**	**-2.6**
HHC				pmax	pmax		
	comp=Z,30nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
CN2	**Changchun**	**50.08**	**357**	*e*P	**P**	**20 19 45.3**	**-0.8**
USRK	**Ussuriysk Arra**	**50.53**	**4**	P	**P**	**20 19 48.7**	**-0.7**
	comp=Z,4.2nm,0.4s,baz=190,slow=7.3,SNR=37						
MDJ	**Mudanjiang**	**50.85**	**1**	P	**P**	**20 19 51.5**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,13nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,71nm,5.5s						
ODAN	**Odare**	**51.58**	**312**	*e*P	**P**	**20 19 57.1**	**-0.7**
	comp=Z,7.2nm,0.4s						
TAPN	**Taplejung**	**51.62**	**312**	*e*P	**P**	**20 19 57.5**	**-0.7**
	comp=Z,26nm,0.4s						
RAMN	**Ramite**	**52.22**	**311**	*e*P	**P**	**20 20 02.1**	**-0.4**
	comp=Z,13nm,0.5s						
GTA	**Gaotai**	**52.66**	**332**	P	**P**	**20 20 05.0**	**-0.3**
GTA				S	**S**	**20 27 06.8**	**0.0**
GTA				SS	**SS**	**20 30 51.3**	**+0.6**
GTA				pmax	pmax		
	comp=Z,18nm,0.9s						
GTA				pmax	pmax		
	comp=Z,77nm,5.0s						
GUN	**Gumba**	**53.28**	**312**	*e*P	**P**	**20 20 09.6**	**-0.7**
	comp=Z,15nm,0.3s						
PKI	**Pulchoki**	**53.45**	**311**	*e*P	**P**	**20 20 10.5**	**-1.0**
	comp=Z,4.2nm,0.4s						
PKIN	**Phulchoki**	**53.46**	**311**	*e*P	**P**	**20 20 10.7**	**-0.8**
KKN	**Kakani**	**53.66**	**311**	*e*P	**P**	**20 20 12.1**	**-0.8**
	comp=Z,4.1nm,0.4s						
DMN	**Daman**	**53.69**	**311**	*e*P	**P**	**20 20 12.4**	**-0.8**
KOLN	**Koldanda**	**54.91**	**310**	*e*P	**P**	**20 20 21.3**	**-0.5**
	comp=Z,4.8nm,0.3s						
DANN	**Dangsing**	**55.09**	**311**	*e*P	**P**	**20 20 22.4**	**-0.8**
	comp=Z,5.9nm,0.4s						
PYUN	**Piuthan**	**55.54**	**310**	*e*P	**P**	**20 20 25.8**	**-0.5**
ULN	**Ulaanbaatar**	**57.22**	**343**	*e*P	**P**	**20 20 37.2**	**-0.4**
	comp=Z,20nm,1.1s						
SONM	**Songino Array**	**57.38**	**343**	P	**P**	**20 20 38.9**	**+0.3**
SONM	**Songino Array**	**57.38**	**343**	P	**P**	**20 20 38.9**	**+0.3**
	comp=Z,3.1nm,0.4s,baz=164,slow=7.2,SNR=54						
WMQ	**Urumqi**	**61.99**	**328**	P	**P**	**20 21 10.0**	**+0.2**
WMQ				PcP	**PcP**	**20 21 48.0**	**+1.1**
WMQ				pP	**pP**	**20 22 21.0**	**-1.3**
WMQ				ScP	**ScP**	**20 25 17.0**	**+0.7**
WMQ				S	**S**	**20 29 08.0**	**+0.7**
WMQ				ScS	**SKKSac**	**20 30 27.0**	**-1.1**
WMQ				SS	**SS**	**20 33 19.0**	**+2.2**
WMQ				pmax	pmax		
	comp=Z,15nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,55nm,5.0s						
PETK	**Petropavlovsk-**	**64.37**	**19**	P	**P**	**20 21 24.3**	**-0.7**
PETK	**Petropavlovsk-**	**64.37**	**19**	P	**P**	**20 21 24.3**	**-0.7**
	comp=Z,3.0nm,0.6s,baz=187,slow=7.3,SNR=3.1						
KSH	**Kashi**	**66.44**	**318**	P	**P**	**20 21 39.1**	**+0.4**
KSH				PcP	**PcP**	**20 22 06.1**	**+0.6**
KSH				pP	**pP**	**20 22 51.1**	**-1.1**
KSH				PP	**PP**	**20 24 13.1**	**+3.1**
KSH				ScP		20 25 37.1	
KSH				PcS		20 26 10.1	
KSH				S	**S**	**20 30 04.0**	**+2.1**
KSH				ScS	**SKSac**	**20 31 02.0**	**-0.2**
KSH				SS	**SS**	**20 34 29.0**	**+2.8**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,76nm,4.4s						
KSH				LR	LR		
	comp=N,110nm,3.8s						
KSH				LR	LR		
	comp=E,110nm,4.3s						
KSH				LR	LR		
	comp=Z,310nm,5.5s						
MK31	**Makanchi Array**	**66.82**	**328**	*e*P	**P**	**20 21 40.4**	**-0.4**
MKAR	**Makanchi Array**	**66.82**	**328**	P	**P**	**20 21 40.5**	**-0.3**
MKAR	**Makanchi Array**	**66.82**	**328**	P	**P**	**20 21 40.5**	**-0.3**
	comp=Z,6.5nm,0.4s,baz=115,slow=8.8,SNR=283						
TKM2	**Tokmak 2**	**68.46**	**321**	*e*P	**P**	**20 21 51.3**	**0.0**
	comp=Z,1.2nm,0.4s						
AAK	**Ala-Archa**	**69.00**	**320**	*e*P	**P**	**20 21 54.3**	**-0.2**
	comp=Z,2.0nm,0.9s						
EKS2	**Erkin-Say**	**69.47**	**320**	*e*P	**P**	**20 21 57.5**	**+0.2**
	comp=Z,3.8nm,1.0s						
ZAA0	**Zalesovo Array**	**70.33**	**334**	*e*P	**P**	**20 22 00.4**	**-1.7**
ZALV	**Zalesovo Beam**	**70.33**	**334**	P	**P**	**20 22 00.8**	**-1.2**
ZALV	**Zalesovo Beam**	**70.33**	**334**	P	**P**	**20 22 00.8**	**-1.2**
	comp=Z,4.9nm,0.5s,baz=120,slow=5.3,SNR=31						
KURK	**Kurchatov**	**71.15**	**329**	*e*P	**P**	**20 22 06.6**	**-0.5**
	comp=Z,20nm,0.9s						
KURK				*e*pP	pP	20 23 27.7	+6.0
VNDA	**Vanda**	**73.20**	**173**	P	**P**	**20 22 17.8**	**-0.9**
VNDA	**Vanda**	**73.20**	**173**	P	**P**	**20 22 17.8**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=350,slow=5.8,SNR=5.9						
BRVK	**Borovoye**	**76.75**	**328**	*e*P	**P**	**20 22 38.3**	**-0.9**
QSPA	**South Pole Qui**	**83.52**	**180**	P	**P**	**20 23 14.6**	**-0.5**
QSPA	**South Pole Qui**	**83.52**	**180**	P	**P**	**20 23 14.6**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=13,slow=1.0,SNR=14						
SML	**Sawmill**	**92.53**	**28**	*e*P	**P**	**20 23 56.8**	**-1.0**
	comp=Z,1.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**126.99**	**282**	PKP	**PKPdf**	**20 29 49.8**	**0.0**
TORD	**Torodi Ar. Bea**	**126.99**	**282**	PKP	**PKPdf**	**20 29 49.8**	**0.0**
	comp=Z,0.6nm,0.7s,baz=70,slow=2.2,SNR=9.4						
CPUP	**Villa Florida**	**146.97**	**171**	PKPbc	**PKPbc**	**20 30 28.5**	**0.0**
CPUP	**Villa Florida**	**146.97**	**171**	PKPbc	**PKPbc**	**20 30 28.5**	**0.0**
	comp=Z,6.1nm,0.9s,baz=176,slow=3.1,SNR=9.5						
LPAZ	**La Paz**	**152.20**	**145**	PKPbc	**PKPbc**	**20 30 42.6**	**+0.3**
LPAZ				PKPab	**PKPab**	**20 30 54.8**	**+1.4**
LPAZ	**La Paz**	**152.20**	**145**	PKPbc	**PKPbc**	**20 30 42.6**	**+0.3**
	comp=Z,1.4nm,0.4s,baz=17,slow=0.4,SNR=8.7						
LPAZ				PKPab	**PKPab**	**20 30 54.8**	**+1.4**
	comp=Z,2.5nm,0.8s,baz=232,slow=2.5,SNR=8.1						

STR **14** *20:16:49.3±0.0,40˚.80N×16˚.46E,h5km, Ml3.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISCJB **14** *20:17:26.9±0.2,42˚.56N±0˚.01×13˚.25E±0˚.01,h12km±1km, mb3.6/10, MS3.3/1, Error ellip

FAGN Fagnano 0.35 141 P **Pg** 20 17 34.8 -0.4
FAGN Fagnano 0.35 141 Pg **Pg** 20 17 34.6 -0.7
FAGN Sg **Sg** 20 17 39.1 -0.9
FAGN Fagnano 0.35 141 P **Pg** 20 17 34.8 -0.4
FAGN Sg **Sg** 20 17 39.1 -0.9
VCEL Villa Celiera 0.44 109 P **Pg** 20 17 36.4 -0.4
VCEL S **Sg** 20 17 43.8 +1.2
VCEL Villa Celiera 0.44 109 Pg **Pg** 20 17 35.9 -0.9
VCEL Sg **Sg** 20 17 42.4 -0.2
VCEL Villa Celiera 0.44 109 Pg **Pg** 20 17 35.9 -0.9
VCEL Villa Celiera 0.44 109 P **Pg** 20 17 36.4 -0.4
VCEL Sg **Sg** 20 17 42.4 -0.2
VCEL S **Sg** 20 17 43.8 +1.2
MNS Montasola 0.47 251⇑*i*Pg **Pg** 20 17 36.7 -0.7
MNS Sg **Sg** 20 17 44.0 +0.4
16µm,0.5s
MNS Montasola 0.47 251⇑*i*Pg **Pg** 20 17 36.7 -0.7
MNS Sg **Sg** 20 17 44.0 +0.4
16µm,0.5s
OFFI Offida 0.49 37 P **Pg** 20 17 37.6 -0.2
OFFI S **Sb** 20 17 46.8 +0.6
OFFI Offida 0.49 37 Pg **Pg** 20 17 37.6 -0.2
43µm,0.7s
OFFI Offida 0.49 37 Pg **Pg** 20 17 37.6 -0.2
43µm,0.7s
OFFI S **Sb** 20 17 46.8 +0.6
FDMO Fiordimonte 0.52 344 P **Pg** 20 17 37.6 -0.6
FDMO S **Sg** 20 17 45.6 +0.6
FDMO Fiordimonte 0.52 344 Pg **Pg** 20 17 37.3 -0.9
FDMO Sg **Sg** 20 17 45.6 +0.6
5µm,0.2s
FDMO Fiordimonte 0.52 344 Pg **Pg** 20 17 37.3 -0.9
FDMO Fiordimonte 0.52 344 P **Pg** 20 17 37.6 -0.6
FDMO Sg **Sg** 20 17 45.6 +0.6
5µm,0.2s
CESX Cesi 0.52 278 Pg **Pg** 20 17 37.5 -0.9
CESX Sg **Sg** 20 17 45.4 +0.1
CESX Cesi 0.52 278 Pg **Pg** 20 17 37.5 -0.9
CESX Sg **Sg** 20 17 45.4 +0.1
PTQR Pietraquaria 0.53 170 P **Pg** 20 17 37.3 -1.1
PTQR S **Sg** 20 17 44.9 -0.5
PTQR Pietraquaria 0.53 170 Pg **Pg** 20 17 37.3 -1.1
PTQR Sg **Sg** 20 17 44.9 -0.5
TRTR Tortoreto Alta 0.54 60 Pg **Pg** 20 17 38.6 0.0
18µm,0.6s
TRTR Tortoreto Alta 0.54 60 Pg **Pg** 20 17 38.6 0.0
18µm,0.6s
CESI CESI - Serrava 0.54 329 P **Pg** 20 17 38.0 -0.7
CESI S **Sg** 20 17 46.7 +0.8
CESI CESI - Serrava 0.54 329 Pg **Pg** 20 17 38.0 -0.7
CESI Sg **Sg** 20 17 46.5 +0.6
CESI CESI - Serrava 0.54 329 Pg **Pg** 20 17 38.0 -0.7
CESI Sg **Sg** 20 17 46.5 +0.6
CERT Cerreto 0.63 201 Pg **Pg** 20 17 39.2 -1.2
13µm,0.5s
CERT Cerreto 0.63 201 Pg **Pg** 20 17 39.2 -1.2
13µm,0.5s
MTCE Montecelio 0.66 218 Pg **Pg** 20 17 39.6 -1.3
5µm,0.6s
MTCE Montecelio 0.66 218 Pg **Pg** 20 17 39.6 -1.3
5µm,0.6s
INTR Introdacqua 0.70 139 Pg **Pg** 20 17 40.1 -1.7
14µm,0.9s
INTR Introdacqua 0.70 139 Pg **Pg** 20 17 40.1 -1.7
14µm,0.9s
GUMA Gualdo di Mace 0.71 43 Pg Pg 20 17 37.8 -4.1
GUMA Sg **Sg** 20 17 46.1 -5.1
18µm,0.3s
VVLD Villa Vallelon 0.72 159 Pg **Pg** 20 17 41.2 -0.8
VVLD Villa Vallelon 0.72 159 Pg **Pg** 20 17 41.2 -0.8
GUAR Guarcino 0.75 178 Pg **Pg** 20 17 41.4 -1.2
GUAR Guarcino 0.75 178 Pg **Pg** 20 17 41.4 -1.2
SNTG Esanatoglia 0.76 341 Pg **Pg** 20 17 41.5 -1.3
SNTG Esanatoglia 0.76 341 Pg **Pg** 20 17 41.5 -1.3
LPEL Lama dei Pelig 0.83 126 Pg **Pg** 20 17 42.1 -2.1
LPEL Lama dei Pelig 0.83 126 Pg **Pg** 20 17 42.1 -2.1
CING Cingoli 0.84 356 Pg **Pg** 20 17 43.0 -1.3
CING Cingoli 0.84 356 Pg **Pg** 20 17 43.0 -1.3
RMP Rome, Mte Porz 0.85 211 Pg **Pg** 20 17 42.8 -1.7
RMP Rome, Mte Porz 0.85 211 Pg **Pg** 20 17 42.8 -1.7
CAFR Castel Frentan 0.85 111 Pg **Pg** 20 17 43.1 -1.4
CAFR Castel Frentan 0.85 111 Pg **Pg** 20 17 43.1 -1.4
POFI Posta Fibreno 0.88 159 Pg **Pg** 20 17 44.4 -0.8
POFI Posta Fibreno 0.88 159 Pg **Pg** 20 17 44.4 -0.8
RDP Rocca di Papa 0.89 208 Pg **Pg** 20 17 43.7 -1.6
RDP Rocca di Papa 0.89 208 Pg **Pg** 20 17 43.7 -1.6
MURB Monte Urbino 0.91 323 Pg **Pg** 20 17 44.7 -1.0
MURB Monte Urbino 0.91 323 Pg **Pg** 20 17 44.7 -1.0
SDI San Donato 0.92 155 Pg **Pg** 20 17 44.2 -1.7
SDI San Donato 0.92 155 Pg **Pg** 20 17 44.2 -1.7
MGAB Montegabbione 0.94 294 Pg **Pg** 20 17 45.1 -1.1
MGAB Montegabbione 0.94 294 Pg **Pg** 20 17 45.1 -1.1
GIUL Giuliano Di Ro 0.98 181 Pg **Pg** 20 17 45.2 -1.9
GIUL Giuliano Di Ro 0.98 181 Pg **Pg** 20 17 45.2 -1.9
ARVD Arcevia 0.99 345 Pg **Pg** 20 17 45.7 -1.5
ARVD Arcevia 0.99 345 Pg **Pg** 20 17 45.7 -1.5
AOI Ancona 1.03 13 Pg **Pg** 20 17 46.5 -1.6
AOI Ancona 1.03 13 Pg **Pg** 20 17 46.5 -1.6
SACS San Casciano d 1.06 287 Pg **Pg** 20 17 47.2 -1.3
TOLF Tolfa 1.06 244 Pg **Pg** 20 17 46.7 -1.9
TOLF Tolfa 1.06 244 Pg **Pg** 20 17 46.7 -1.9
CERA Filignano 1.09 150 Pg **Pb** 20 17 46.7 -2.4
CERA Filignano 1.09 150 Pg **Pb** 20 17 46.7 -2.4
LATE Laterza 1.09 274 Pg **Pg** 20 17 48.0 -1.2
LATE Laterza 1.09 274 Pg **Pg** 20 17 48.0 -1.2
PIEI Pieia 1.14 331 Pg **Pb** 20 17 48.6 -1.3
PIEI Pieia 1.14 331 Pg **Pb** 20 17 48.6 -1.3
MIDA Miranda 1.15 141 Pg **Pb** 20 17 47.6 -2.6
MIDA Miranda 1.15 141 Pg **Pb** 20 17 47.6 -2.6
SENI Senigallia 1.16 358 Pn **Pb** 20 17 50.1 -0.2
SENI Senigallia 1.16 358 Pn **Pb** 20 17 50.1 -0.2
FSSB Fossombrone 1.21 342 Pn **Pb** 20 17 49.8 -1.3
FSSB Fossombrone 1.21 342 Pn **Pb** 20 17 49.8 -1.3
BADI Badiali 1.23 322 Pn **Pn** 20 17 50.7 -0.7
BADI Badiali 1.23 322 Pn **Pn** 20 17 50.7 -0.7
CAFI Castiglion Fio 1.25 310 Pn **Pn** 20 17 50.8 -0.8
CAFI Castiglion Fio 1.25 310 Pn **Pn** 20 17 50.8 -0.8
PARC Parchiule 1.34 326 Pn **Pn** 20 17 52.7 -0.3
PARC Parchiule 1.34 326 Pn **Pn** 20 17 52.7 -0.3
PESA Pesaro 1.44 347 Pn **Pn** 20 17 54.3 +0.1
PESA Pesaro 1.44 347 Pn **Pn** 20 17 54.3 +0.1
CRE Caprese Michel 1.45 318 Pn **Pn** 20 17 53.7 -0.9
CRE Caprese Michel 1.45 318 Pn **Pn** 20 17 53.7 -0.9
MAON Monte Argentar 1.59 267 Pn **Pn** 20 17 55.7 -0.7
MAON Monte Argentar 1.59 267 Pn **Pn** 20 17 55.7 -0.7
CSNT Castellina Chi 1.73 303 Pn **Pn** 20 17 58.1 -0.2
CSNT Castellina Chi 1.73 303 Pn **Pn** 20 17 58.1 -0.2
MS1 Monte Sant'Ang 2.15 112 *e*Pn **Pb** 20 18 06.3 -0.9
MS1 *e*Sn **Sg** 20 18 36.6 -0.6
NVLJ Novalja 2.33 29 *i*Pn **Pn** 20 18 06.0 -0.5
NVLJ Sn **Sn** 20 18 33.8 -1.3
NVLJ Novalja 2.33 29 *i*Pn **Pn** 20 18 05.9 -0.5
NVLJ Sn **Sn** 20 18 33.8 -1.3
MAIM Mastiano 2.46 305 P **Pn** 20 18 08.5 +0.2
CRDM Cardoso 2.53 307 P **Pn** 20 18 07.6 -1.6
VLC Villacollemand 2.66 308 *e*Pn **Pn** 20 18 11.1 0.0
VLC Villacollemand 2.66 308 *e*Pn **Pn** 20 18 11.1 0.0
CDT Castel del Mon 2.67 122 *e*Pn **Pn** 20 18 12.2 +1.0
CDT *e*Sn **Sn** 20 18 46.1 +2.5
BAI Bari 3.05 117 *e*Pn **Pn** 20 18 17.4 +1.1
BAI *e*Sn **Sn** 20 18 53.5 +0.7
PGF Pioggiola 3.16 272 *e*Pn **Pn** 20 18 17.7 -0.4
PGF *e*Sn **Sn** 20 18 57.8 +1.9
46nm,0.6s
PGF Pioggiola 3.16 272 *e*Pn **Pn** 20 18 17.7 -0.4
PGF *e*Sn **Sn** 20 18 57.8 +1.9
23nm,0.6s
CUC Castrocucco 3.18 142 *e*Pn **Pn** 20 18 19.7 +1.4
CUC Castrocucco 3.18 142 *e*Pn **Pn** 20 18 19.7 +1.4
TRI Trieste 3.19 6 *e*Pn **Pn** 20 18 17.3 -0.9
TRI *e*Sn **Sn** 20 18 53.9 -2.3
TRI Trieste 3.19 6 *e*Pn **Pn** 20 18 17.3 -0.9
TRI *e*Sn **Sn** 20 18 53.9 -2.3
STON Ston 3.27 83 *e*Pn **Pn** 20 18 19.1 -0.3
STON Sn **Sn** 20 18 57.5 -0.9
STON Ston 3.27 83 *e*Pn **Pn** 20 18 19.1 -0.3
STON Sn **Sn** 20 18 57.5 -0.9
BOJS Bojanci 3.29 25 *i*Pn **Pn** 20 18 19.9 +0.3
BOJS *i*Sn **Sn** 20 19 00.1 +1.4
BOJS comp=Z,63nm,0.4s
BOJS Bojanci 3.29 25 Pn **Pn** 20 18 19.9 +0.3
BOJS *i*Sn **Sn** 20 19 00.1 +1.4
BOJS comp=Z,63nm,0.4s
JAVS Javornik 3.40 9 *i*Pn **Pn** 20 18 20.6 -0.7
JAVS *i*Sn **Sn** 20 19 02.4 +0.7
JAVS comp=Z,88nm,0.4s
JAVS Javornik 3.40 9 *i*Pn **Pn** 20 18 20.6 -0.7
JAVS *i*Sn **Sn** 20 19 02.4 +0.7
JAVS comp=Z,88nm,0.4s
VOY Vojsko 3.52 7 *e*Pn **Pn** 20 18 22.2 -0.7
VOY *e* 20 18 29.1
VOY Vojsko 3.52 7 *e*Pn **Pn** 20 18 22.2 -0.7
VOY *e*Sn **Sn** 20 19 03.8 -0.8
HCY Herceg Novi 3.85 90⇓*i*Pn **Pn** 20 18 28.5 +1.0
HCY *e*Sn **Sn** 20 19 14.7 +1.9
HCY Herceg Novi 3.85 90 ⇓P **Pn** 20 18 28.5 +1.0
HCY S **Sn** 20 19 14.7 +1.9
HCY Herceg Novi 3.85 90⇓*i*Pn **Pn** 20 18 28.5 +1.0
HCY *e*Sn **Sn** 20 19 14.7 +1.9
BRY Bratogost 3.89 83⇓*i*Pn **Pn** 20 18 29.4 +1.3
BRY *e*Sn **Sn** 20 19 16.3 +2.5
BRY Bratogost 3.89 83 ⇓P **Pn** 20 18 29.4 +1.3
BRY S **Sn** 20 19 16.3 +2.5
BRY Bratogost 3.89 83⇓*i*Pn **Pn** 20 18 29.4 +1.3
BRY *e*Sn **Sn** 20 19 16.3 +2.5
PCP Piancastagn 3.98 302 P **Pn** 20 18 28.9 -0.4
OBKA Obir 4.07 12⇑*i*Pn **Pn** 20 18 30.1 -0.4
SNR=25
OBKA Obir 4.07 12⇑*i*Pn **Pn** 20 18 30.1 -0.4
OBKA Obir 4.07 12⇑*i*Pn **Pn** 20 18 30.1 -0.4
MYKA Terra Mystica 4.10 3⇓*i*Pn **Pn** 20 18 30.8 -0.1
MYKA Terra Mystica 4.10 3⇓*i*Pn **Pn** 20 18 30.8 -0.1
MYKA Terra Mystica 4.10 3⇓*i*Pn **Pn** 20 18 30.8 -0.1
BUM Brajici-Budva 4.16 91⇓*i*Pn **Pn** 20 18 33.3 +1.6
BUM *e*Sn **Sn** 20 19 22.5 +2.1
BUM Brajici-Budva 4.16 91⇓*i*Pn **Pn** 20 18 33.3 +1.6
BUM *e*Sn **Sn** 20 19 22.5 +2.1
UPM Unac-Piva 4.19 79⇓*i*Pn **Pn** 20 18 33.1 +0.9
UPM *e*Sn **Sn** 20 19 23.4 +2.2
UPM Unac-Piva 4.19 79⇓*i*Pn **Pn** 20 18 33.1 +0.9
UPM *e*Sn **Sn** 20 19 23.4 +2.2
NKY Niksic 4.22 84⇓*i*Pn **Pn** 20 18 33.4 +0.8
NKY *e*Sn **Sn** 20 19 23.8 +1.9
NKY Niksic 4.22 84 ⇓P **Pn** 20 18 33.4 +0.8
NKY S **Sn** 20 19 23.8 +1.9
NKY Niksic 4.22 84⇓*i*Pn **Pn** 20 18 33.4 +0.8
NKY *e*Sn **Sn** 20 19 23.8 +1.9
VSL Villasalto 4.24 225 *e*Pn **Pn** 20 18 32.5 -0.3
VSL *e*Sn **Sn** 20 19 19.2 -3.1
VSL Villasalto 4.24 225 *e*Pn **Pn** 20 18 32.5 -0.3
VSL *e*Sn **Sn** 20 19 19.2 -3.1
ABTA Abfaltersbach 4.24 353⇓*i*Pn **Pn** 20 18 33.2 +0.3
SNR=50
ABTA Abfaltersbach 4.24 353⇓*i*Pn **Pn** 20 18 33.2 +0.3
ABTA Abfaltersbach 4.24 353⇓*i*Pn **Pn** 20 18 33.2 +0.3
TIP Timpagrande 4.27 141 *e*Pn Pn 20 18 36.5 +3.2
TIP Timpagrande 4.27 141 *e*Pn Pn 20 18 36.5 +3.2
SOKA Soboth 4.32 16⇓*i*Pn **Pn** 20 18 33.9 -0.1
SOKA Soboth 4.32 16⇓*i*Pn **Pn** 20 18 33.9 -0.1
SOKA Soboth 4.32 16⇓*i*Pn **Pn** 20 18 33.9 -0.1
PDG Podgorica 4.42 89⇓*i*Pn **Pn** 20 18 36.2 +1.0
PDG *e*Sn **Sn** 20 19 28.3 +1.6
TTG Podgorica 4.42 89⇓*i*Pn **Pn** 20 18 36.2 +1.0
TTG *e*Sn **Sn** 20 19 28.3 +1.6
TTG Podgorica 4.42 89 ⇓P **Pn** 20 18 36.2 +1.0
TTG S **Sn** 20 19 28.3 +1.6
TTG Podgorica 4.42 89 ⇓P **Pn** 20 18 36.2 +1.0
TTG S **Sn** 20 19 28.3 +1.6
SAOF Saorge 4.42 291 P **Pn** 20 18 36.1 +0.8
SAOF Saorge 4.42 291 P **Pn** 20 18 36.1 +0.8
SAOF Saorge 4.42 291 P **Pn** 20 18 36.1 +0.8
ULC Ulcinj 4.46 95⇓*i*Pn **Pn** 20 18 37.7 +1.8
ULC *e*Sn **Sn** 20 19 29.7 +1.9
ULC Ulcinj 4.46 95 ⇓P **Pn** 20 18 37.7 +1.8
ULC S **Sn** 20 19 29.7 +1.9
ULC Ulcinj 4.46 95⇓*i*Pn **Pn** 20 18 37.7 +1.8
ULC *e*Sn **Sn** 20 19 29.7 +1.9
SBF Sospel 4.47 289 *e*Pn **Pn** 20 18 36.1 +0.1
SBF *e*Sn **Sn** 20 19 26.0 -2.1
comp=Z,38nm,0.5s
SBF Sospel 4.47 289 *e*Pn **Pn** 20 18 36.1 +0.1
SBF *e*Sn **Sn** 20 19 26.0 -2.1
comp=Z,19nm,0.5s
REVF Revere 4.49 287 P **Pn** 20 18 36.5 +0.2
REVF Revere 4.49 287 P **Pn** 20 18 36.5 +0.2
REVF Revere 4.49 287 P **Pn** 20 18 36.5 +0.2
AUTN L'Aution 4.51 291 P **Pn** 20 18 38.4 +1.6
AUTN L'Aution 4.51 291 P **Pn** 20 18 38.4 +1.6
AUTN L'Aution 4.51 291 P **Pn** 20 18 38.4 +1.6
KBA Koelnbreinsper 4.54 1⇑*i*Pn **Pn** 20 18 37.0 0.0
SNR=49
KBA Koelnbreinsper 4.54 1⇑*i*Pn **Pn** 20 18 37.0 0.0
KBA Koelnbreinsper 4.54 1⇑*i*Pn **Pn** 20 18 37.0 0.0
PLE Pljevlja 4.55 78⇑*i*Pn **Pn** 20 18 39.1 +1.9
PLE *e*Sn **Sn** 20 19 32.9 +2.7
PLE Pljevlja 4.55 78 ⇑P **Pn** 20 18 39.1 +1.9
PLE S **Sn** 20 19 32.9 +2.7
PLE Pljevlja 4.55 78⇑*i*Pn **Pn** 20 18 39.1 +1.9
PLE *e*Sn **Sn** 20 19 32.9 +2.7
TOUF Mont Tournerai 4.64 291 P **Pn** 20 18 39.4 +0.9
TOUF Mont Tournerai 4.64 291 P **Pn** 20 18 39.4 +0.9
TOUF Mont Tournerai 4.64 291 P **Pn** 20 18 39.4 +0.9
BEHE Becsehely 4.66 31⇓*e*PPn **Pn** 20 18 40.5 +2.0
BEHE Becsehely 4.66 31⇓*e*P **Pn** 20 18 40.5 +2.0
BBLS Lazići 4.67 71 *e*Pn **Pn** 20 18 39.7 +1.0
BBLS *e*Sn **Sn** 20 19 34.2 +1.3
BBLS Lazići 4.67 71 *e*Pn **Pn** 20 18 39.7 +1.0
BBLS *e*Sn **Sn** 20 19 34.2 +1.3
MVIF Mont Vial 4.68 289 P **Pn** 20 18 39.0 +0.1
MVIF Mont Vial 4.68 289 P **Pn** 20 18 39.0 +0.1
MVIF Mont Vial 4.68 289 P **Pn** 20 18 39.0 +0.1
CEL Celeste 4.72 154 *e*Pn **Pn** 20 18 40.7 +1.3
CEL Celeste 4.72 154 *e*Pn **Pn** 20 18 40.7 +1.3
CALN Calern 4.83 287 P **Pn** 20 18 42.0 +1.0
CALN Calern 4.83 287 P **Pn** 20 18 42.0 +1.0
CALN Calern 4.83 287 P **Pn** 20 18 42.0 +1.0
FETA Feichten 4.83 339⇑*i*Pn **Pn** 20 18 41.7 +0.7
SNR=10.0
FETA Feichten 4.83 339⇑*i*Pn **Pn** 20 18 41.7 +0.7
FETA Feichten 4.83 339⇑*i*Pn **Pn** 20 18 41.7 +0.7
TUE Stuetta 4.83 326 *e*Pn **Pn** 20 18 41.0 -0.1
TUE Stuetta 4.83 326 *e*Pn **Pn** 20 18 41.0 -0.1
WTTA Wattenberg 4.86 347⇑*i*Pn **Pn** 20 18 42.6 +1.1
SNR=37
WTTA Wattenberg 4.86 347⇑*i*Pn **Pn** 20 18 42.6 +1.1
WTTA Wattenberg 4.86 347⇑*i*Pn **Pn** 20 18 42.6 +1.1
BEY Berane 4.88 84⇑*i*Pn **Pn** 20 18 43.6 +1.9
BEY *e*Sn **Sn** 20 19 40.3 +2.0
DAVOX Davos/Dischmat 4.88 331 Pn **Pn** 20 18 42.5 +0.8
comp=Z,6.0nm,0.3s,baz=172,slow=13,SNR=67
DAVOX Sn **Sn** 20 19 39.4 +1.0
comp=Z,5.5nm,0.3s,baz=160,slow=15,SNR=3.7
IVA Berane 4.88 84⇑*i*Pn **Pn** 20 18 43.6 +1.9
IVA *e*Sn **Sn** 20 19 40.3 +2.0
PUK Puka 4.93 94 *i*PN **Pn** 20 18 43.7 +1.4
PUK *i*PN Sn 20 19 45.9 +6.5
PUK Puka 4.93 94 *i*Pn **Pn** 20 18 43.7 +1.4
PVY Plav 4.93 87⇑*i*Pn **Pn** 20 18 44.2 +1.8
PVY *e*Sn **Sn** 20 19 41.9 +2.4
PVY Plav 4.93 87 P **Pn** 20 18 44.2 +1.8
PVY S **Sn** 20 19 41.9 +2.4
WATA Walderalm 4.94 346⇑*i*Pn **Pn** 20 18 43.4 +0.9
SNR=28
WATA Walderalm 4.94 346⇑*i*Pn **Pn** 20 18 43.4 +0.9
WATA Walderalm 4.94 346⇑*i*Pn **Pn** 20 18 43.4 +0.9
FRF La Foret Royal 4.97 284 *e*Pn **Pn** 20 18 42.2 -0.6
FRF La Foret Royal 4.97 284 *e*Pn **Pn** 20 18 42.2 -0.6
ARSA Arzberg 4.97 18⇓*i*Pn **Pn** 20 18 42.4 -0.4
SNR=9.2
ARSA Arzberg 4.97 18⇓*i*Pn **Pn** 20 18 42.4 -0.4
ARSA Arzberg 4.97 18⇓*i*Pn **Pn** 20 18 42.4 -0.4
LMR La Mourre 5.04 281 *e*Pn **Pn** 20 18 42.9 -0.8
LMR La Mourre 5.04 281 *e*Pn **Pn** 20 18 42.9 -0.8
MOTA Moosalm 5.04 343⇓*i*Pn **Pn** 20 18 45.0 +1.0
SNR=35
MOTA Moosalm 5.04 343⇓*i*Pn **Pn** 20 18 45.0 +1.0
MOTA Moosalm 5.04 343⇓*i*Pn **Pn** 20 18 45.0 +1.0
TIR Tirane 5.05 101 *i*PN **Pn** 20 18 44.7 +0.8
TIR *i*SN **Sn** 20 19 43.8 +1.5
TIR Tirane 5.05 101 P **Pn** 20 18 44.7 +0.8
TIR *i*Sn **Sn** 20 19 43.8 +1.5
DIVS Divibare 5.14 70 P **Pn** 20 18 45.6 +0.4
DIVS S Sn 20 19 38.3 -6.2
DIVS Divibare 5.14 70 *e*Pn **Pn** 20 18 45.6 +0.4
DIVS *e*Sn **Sn** 20 19 45.0 +0.5
DIVS Divibare 5.14 70 P **Pn** 20 18 45.6 +0.4
DIVS *e*Sn **Sn** 20 19 45.0 +0.5
IVAS Ivanjica 5.14 76 *e*Pn **Pn** 20 18 46.0 +0.8
IVAS *e*Sn **Sn** 20 19 45.8 +1.3
IVAS Ivanjica 5.14 76 *e*Pn **Pn** 20 18 46.0 +0.8
IVAS *e*Sn **Sn** 20 19 45.8 +1.3
MBDF Montbardon 5.21 297 *e*P **Pn** 20 18 48.1 +1.9
MBDF Montbardon 5.21 297 *e*P **Pn** 20 18 48.1 +1.9
RJOB Jochberg 5.21 356 *e*Pn **Pn** 20 18 47.0 +0.9
RJOB *e*Sn **Sn** 20 19 47.0 +0.8
RETA Reutte 5.26 341⇑*i*Pn **Pn** 20 18 48.2 +1.4
SNR=24
RETA Reutte 5.26 341⇑*i*Pn **Pn** 20 18 48.2 +1.4
RETA Reutte 5.26 341⇑*i*Pn **Pn** 20 18 48.2 +1.4
OBER Oberstdorf 5.31 337 *e*Pn **Pn** 20 18 49.0 +1.5
OBER *e*Sn **Sn** 20 19 49.6 +0.9
PKSM Moragy 5.31 44 *e*pPn Pn 20 18 52.0 +4.5
PKSM Moragy 5.31 44 *e*P Pn 20 18 52.0 +4.5
DAVA Damuels 5.32 334⇓*i*Pn **Pn** 20 18 49.5 +1.7
SNR=22
DAVA Damuels 5.32 334⇓*i*Pn **Pn** 20 18 49.5 +1.7
DAVA Damuels 5.32 334⇓*i*Pn **Pn** 20 18 49.5 +1.7
MOA Molln 5.35 7⇓*i*Pn **Pn** 20 18 48.6 +0.5
SNR=13
MOA Molln 5.35 7⇓*i*Pn **Pn** 20 18 48.6 +0.5
MOA Molln 5.35 7⇓*i*Pn **Pn** 20 18 48.6 +0.5
PHP Peshkopia 5.39 97 *i*PN **Pn** 20 18 49.8 +1.1
PHP *i*SN **Sn** 20 19 52.7 +1.9
PHP Peshkopia 5.39 97 P **Pn** 20 18 50.1 +1.4
PHP S **Sn** 20 19 48.2 -2.6
PHP Peshkopia 5.39 97 *i*Pn **Pn** 20 18 49.8 +1.1
PHP Peshkopia 5.39 97 P **Pn** 20 18 50.1 +1.4
PHP *i*Sn **Sn** 20 19 52.7 +1.9
FGSL Fruska Gora 5.40 59 *e*Pn **Pn** 20 18 49.8 +1.1
FRGS Fruska Gora 5.40 59 *e*Pn **Pn** 20 18 49.8 +1.1
BNI Bardonecchia 5.40 300 *e*Pn **Pn** 20 18 50.3 +1.5
BNI Bardonecchia 5.40 300 *e*Pn **Pn** 20 18 50.3 +1.5
TRUS Trudelj 5.46 70 *e*Pn **Pn** 20 18 51.2 +1.7
TRUS Trudelj 5.46 70 *e*Pn **Pn** 20 18 51.2 +1.7
LPG La Plagne 5.56 304 *e*P **Pn** 20 18 54.0 +2.9
LPG *e*Sn **Sn** 20 19 53.1 -2.1
comp=Z,30nm,0.7s
LPL La Plagne 5.58 304 *e*P **Pn** 20 18 54.2 +2.8
LPL *e*Sn **Sn** 20 19 52.2 -3.4
comp=Z,21nm,0.5s
GRUS Gruza 5.60 74 *e*Pn **Pn** 20 18 51.8 +0.4
GRUS *e*Sn **Sn** 20 19 56.1 +0.4
GRUS Gruza 5.60 74 *e*Pn **Pn** 20 18 51.8 +0.4
GRUS *e*Sn **Sn** 20 19 56.1 +0.4
SOP Sopron 5.64 23⇓*e*pPn **Pn** 20 18 53.8 +1.8
SOP Sopron 5.64 23⇓*e*P **Pn** 20 18 53.8 +1.8
CONA Conrad Observa 5.69 18⇓*i*Pn **Pn** 20 18 52.4 -0.3
SNR=33
CONA Conrad Observa 5.69 18⇓*i*Pn **Pn** 20 18 52.4 -0.3
CONA Conrad Observa 5.69 18⇓*i*Pn **Pn** 20 18 52.4 -0.3
SELS Selova 5.80 81 *e*Pn **Pn** 20 18 54.2 0.0
SELS *e*Sn **Sn** 20 20 00.2 -0.5
SELS Selova 5.80 81 *e*Pn **Pn** 20 18 54.2 0.0
SELS *e*Sn **Sn** 20 20 00.2 -0.5
FUR Furstenfeldbru 5.80 347 *e*Sn **Sn** 20 20 00.2 -0.5
SMRF Simiane la Rot 5.81 287 *e*P **Pn** 20 18 55.5 +1.2
SMRF Simiane la Rot 5.81 287 *e*P **Pn** 20 18 55.5 +1.2
ORIF Oris-en-Rattie 5.87 296 *e*P Pn 20 18 58.6 +3.4
IGT Igoumenitsa 6.12 117 P **Pn** 20 19 00.1 +1.5
IGT Igoumenitsa 6.12 117 P **Pn** 20 19 00.1 +1.5
NEST Nestorio 6.21 107 P **Pn** 20 19 01.4 +1.5
NEST S **Sn** 20 20 08.2 -2.7
NEST Nestorio 6.21 107 P **Pn** 20 19 01.4 +1.5
BARS Barje 6.30 85 *e*Pn **Pn** 20 19 02.0 +1.0
BARS *e*Sn **Sn** 20 20 11.5 -1.5
BARS Barje 6.30 85 *e*Pn **Pn** 20 19 02.0 +1.0
FNA Florina 6.31 103 P **Pn** 20 19 02.7 +1.4
FNA S **Sn** 20 20 07.9 -5.5
FNA Florina 6.31 103 *e*P **Pn** 20 19 02.2 +0.9
FNA Florina 6.31 103 P **Pn** 20 19 02.7 +1.4
GEC2 GERESS Array S 6.31 3 *e*Pn **Pn** 20 19 00.6 -0.7
GEC2 *e*Sn **Sn** 20 20 10.6 -2.8
GERES GERESS Array B 6.31 3 Pn **Pn** 20 19 00.5 -0.8
comp=Z,1.3nm,0.3s,baz=171,slow=13,SNR=37
GERES Sn **Sn** 20 20 11.1 -2.3
comp=Z,15nm,0.3s,baz=175,slow=24,SNR=19
BBS Basel-Blauen 6.40 322 P **Pn** 20 19 03.7 +1.2
BBS Basel-Blauen 6.40 322 P **Pn** 20 19 03.7 +1.2
JAN Janina 6.40 114 P **Pn** 20 19 04.3 +1.8
JAN Janina 6.40 114 *e*P **Pn** 20 19 04.4 +1.9
JAN Janina 6.40 114 P **Pn** 20 19 04.3 +1.8
BOLS Boljevac 6.47 76 *e*Pn **Pn** 20 19 05.0 +1.6
BOLS Boljevac 6.47 76 *e*Pn **Pn** 20 19 05.0 +1.6
FELD Feldberg im Sc 6.51 327 P **Pn** 20 19 03.7 -0.3
FELD Feldberg im Sc 6.51 327 P **Pn** 20 19 03.7 -0.3
CABF La Chapelle 6.55 311 *e*Pn **Pn** 20 19 04.9 +0.3
CABF La Chapelle 6.55 311 *e*Pn **Pn** 20 19 04.9 +0.3
KHC Kasperske Hory 6.59 2 *e*Pn **Pn** 20 19 04.0 -1.1
KHC *e*Sn **Sn** 20 20 16.1 -4.2
KHC Kasperske Hory 6.59 2 *e*PN **Pn** 20 19 04.5 -0.6
KHC *e*SN **Sn** 20 20 16.8 -3.5
KHC Kasperske Hory 6.59 2 Pn **Pn** 20 19 04.5 -0.6
WET Wettzell 6.61 358 *e*Pn **Pn** 20 19 04.1 -1.2
WET *e*Sn **Sn** 20 20 16.6 -4.1
LOMF Lomont 6.64 319 P **Pn** 20 19 06.8 +1.0
LOMF Lomont 6.64 319 P **Pn** 20 19 06.8 +1.0
LOMF Lomont 6.64 319 P **Pn** 20 19 06.8 +1.0
VIVF Saint-Julien-l 6.66 293 *e*Pn **Pn** 20 19 07.4 +1.4
VIVF Saint-Julien-l 6.66 293 *e*Pn **Pn** 20 19 07.4 +1.4
BZS Buzias 6.74 60⇓*i*P **Pn** 20 19 07.3 +0.2
BZS Buzias 6.74 60⇓*i*Pn **Pn** 20 19 07.3 +0.2
BFO Black Forest 6.75 331 *e*Pn **Pn** 20 19 06.7 -0.6
BFO *e*Sn **Sn** 20 20 20.9 -3.3
BFO Black Forest 6.75 331 *e*Pn **Pn** 20 19 05.4 -1.9
BFO *e*Sn **Sn** 20 20 20.4 -3.9
BFO Black Forest 6.75 331 *e*Pn **Pn** 20 19 05.4 -1.9
MOF Molkenrain 6.86 323 P **Pn** 20 19 08.9 +0.1
MOF Molkenrain 6.86 323 P **Pn** 20 19 08.9 +0.1
MOF Molkenrain 6.86 323 P **Pn** 20 19 08.9 +0.1
ZAPS Zavoj 6.91 81 *e*Pn **Pn** 20 19 10.3 +0.9
TREC Trest 6.93 12 *e*PN **Pn** 20 19 09.7 0.0
TREC Trest 6.93 12 Pn **Pn** 20 19 09.7 0.0
HINF Hinteralfeld 6.96 321 *e*Pn **Pn** 20 19 09.5 -0.6
HINF *e*Sn **Sn** 20 20 26.6 -2.7
comp=Z,34nm,0.4s
HINF Hinteralfeld 6.96 321 *e*Pn **Pn** 20 19 09.5 -0.6
GRG Griva 7.00 100 P **Pn** 20 19 11.0 +0.3
GRG S **Sn** 20 20 25.8 -4.6
GRG Griva 7.00 100 *e*P **Pn** 20 19 11.2 +0.5
GRG Griva 7.00 100 P **Pn** 20 19 11.0 +0.3
LASF Ste Croix 7.04 286 *e*Pn **Pn** 20 19 10.9 -0.4
LASF Ste Croix 7

GRFO	**Grafenberg**	**7.29**	**349**	*e*Pn	**Pn**	**20 19 14.2**	**-0.4**
GRFO	**Grafenberg**	**7.29**	**349**	*e*Pn	**Pn**	**20 19 14.2**	**-0.4**
GRF	**Grafenberg Arr**	**7.29**	**349**	*e*Sn	**Sn**	**20 20 31.9**	**-5.6**
VTS	**Vitosha**	**7.33**	**86**	P	**Pn**	**20 19 15.8**	**+0.5**
VTS	**Vitosha**	**7.33**	**86**	⇑*i*P	**Pn**	**20 19 16.1**	**+0.8**
VTS	**Vitosha**	**7.33**	**86**	*e*Pn	**Pn**	**20 19 16.2**	**+0.9**
VTS				*e*Sn	**Sn**	**20 20 37.8**	**-0.8**
VTS	**Vitosha**	**7.33**	**86**	P	**Pn**	**20 19 15.8**	**+0.5**
VTS	**Vitosha**	**7.33**	**86**	*e*Pn	**Pn**	**20 19 16.2**	**+0.9**
HAU	**Haudompre**	**7.33**	**321**	*e*Pn	**Pn**	**20 19 15.2**	**0.0**
HAU				*e*Sn	**Sn**	**20 20 34.2**	**-4.2**
	comp=Z,31nm,0.4s						
HAU	**Haudompre**	**7.33**	**321**	*e*Pn	**Pn**	**20 19 15.2**	**0.0**
EVR	**Evrytania**	**7.42**	**116**	*e*P	Pn	20 19 19.8	+3.3
KEST	**Kesra**	**7.46**	**205**	*e*Pn	Pn	20 19 21.4	+4.4
KEST	**Kesra**	**7.46**	**205**	Pn	**Pn**	**20 19 19.1**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=280,slow=2.9,SNR=17						
PRU	**Pruhonice**	**7.50**	**6**	*e*PN	**Pn**	**20 19 17.4**	**-0.1**
PRU				*e*SN	**Sn**	**20 20 38.9**	**-3.6**
PRU	**Pruhonice**	**7.50**	**6**	Pn	**Pn**	**20 19 17.4**	**-0.1**
MAKR	**Makrakomi, Fth**	**7.58**	**115**	P	**Pn**	**20 19 21.9**	**+3.2**
MAKR	**Makrakomi, Fth**	**7.58**	**115**	P	**Pn**	**20 19 21.9**	**+3.2**
THEF	**They Montfort**	**7.66**	**320**	P	**Pn**	**20 19 19.5**	**-0.2**
THEF	**They Montfort**	**7.66**	**320**	P	**Pn**	**20 19 19.5**	**-0.2**
THEF	**They Montfort**	**7.66**	**320**	P	**Pn**	**20 19 19.5**	**-0.2**
AGG	**Agios Georgios**	**7.71**	**114**	P	**Pn**	**20 19 22.9**	**+2.4**
AGG	**Agios Georgios**	**7.71**	**114**	*e*P	**Pn**	**20 19 23.5**	**+3.0**
AGG	**Agios Georgios**	**7.71**	**114**	P	**Pn**	**20 19 22.9**	**+2.4**
NKC	**Novy Kostel**	**7.71**	**356**	*e*Pn	**Pn**	**20 19 20.4**	**-0.1**
NKC				*ex*	x	20 20 43.7	
NKC	**Novy Kostel**	**7.71**	**356**	Pn	**Pn**	**20 19 20.4**	**-0.1**
LBL	**Lubílhac**	**7.73**	**294**	P	**Pn**	**20 19 22.5**	**+1.7**
LBL	**Lubílhac**	**7.73**	**294**	P	**Pn**	**20 19 22.5**	**+1.7**
LBL	**Lubílhac**	**7.73**	**294**	P	**Pn**	**20 19 22.5**	**+1.7**
EFP	**Efpalio**	**7.75**	**119**	*e*P	Pn	20 19 24.3	+3.3
MORC	**Moravsky Berou**	**7.82**	**21**	*e*Pn	**Pn**	**20 19 22.0**	**+0.1**
MORC	**Moravsky Berou**	**7.82**	**21**	⇑*i*P	**Pn**	**20 19 22.3**	**+0.4**
MORC	**Moravsky Berou**	**7.82**	**21**	*e*Pn	**Pn**	**20 19 22.0**	**+0.1**
MORC	**Moravsky Berou**	**7.82**	**21**	⇑*i*P	**Pn**	**20 19 22.3**	**+0.4**
GUNZ	**Gunzen**	**7.85**	**356**	*e*Pn	**Pn**	**20 19 21.7**	**-0.7**
GUNZ				*e*Sn	**Sn**	**20 20 47.0**	**-4.2**
SMF	**Signal de Mont**	**7.89**	**305**	*e*Pn	**Pn**	**20 19 23.2**	**+0.4**
SMF				*e*Sn	**Sn**	**20 20 47.7**	**-4.4**
	comp=Z,18nm,0.6s						
SMF	**Signal de Mont**	**7.89**	**305**	*e*Pn	**Pn**	**20 19 23.2**	**+0.4**
TANN	**Tannenbergstha**	**7.90**	**356**	*e*Pn	**Pn**	**20 19 22.5**	**-0.5**
TANN				*e*Sn	**Sn**	**20 20 48.2**	**-4.1**
KRLC	**Kraliky**	**7.91**	**17**	*e*PN	**Pn**	**20 19 23.0**	**-0.2**
KRLC	**Kraliky**	**7.91**	**17**	Pn	**Pn**	**20 19 23.0**	**-0.2**
KALE	**Kalithea**	**7.92**	**119**	*e*P	**Pn**	**20 19 26.3**	**+2.9**
PLG	**Polygyros**	**7.94**	**102**	*e*P	**Pn**	**20 19 24.9**	**+1.4**
DRGR		**7.95**	**54**	⇑*i*P	**Pn**	**20 19 24.6**	**+0.8**
DRGR		**7.95**	**54**	⇑*i*P	**Pn**	**20 19 24.6**	**+0.8**
NVR	**Nevrokopi**	**7.98**	**95**	P	**Pn**	**20 19 24.7**	**+0.6**
NVR	**Nevrokopi**	**7.98**	**95**	*e*P	**Pn**	**20 19 25.5**	**+1.4**
NVR	**Nevrokopi**	**7.98**	**95**	P	**Pn**	**20 19 24.7**	**+0.6**
PAGF	**Fort de Pagny**	**8.02**	**321**	*e*Pn	**Pn**	**20 19 24.6**	**0.0**
PAGF	**Fort de Pagny**	**8.02**	**321**	*e*Pn	**Pn**	**20 19 24.6**	**0.0**
AGO	**Saint Agoulin**	**8.08**	**299**	P	**Pn**	**20 19 26.5**	**+1.0**
AGO	**Saint Agoulin**	**8.08**	**299**	P	**Pn**	**20 19 26.5**	**+1.0**
AGO	**Saint Agoulin**	**8.08**	**299**	P	**Pn**	**20 19 26.5**	**+1.0**
DPC	**Dobruska-Polom**	**8.09**	**18**	*e*PN	**Pn**	**20 19 26.0**	**+0.4**
DPC	**Dobruska-Polom**	**8.09**	**14**	Pn	**Pn**	**20 19 26.0**	**+0.4**
SFTF	**Sexfontaines**	**8.11**	**317**	*e*Pn	**Pn**	**20 19 25.8**	**0.0**
SFTF				*e*Sn	**Sn**	**20 20 52.5**	**-4.9**
	comp=Z,8.0nm,0.4s						
SFTF	**Sexfontaines**	**8.11**	**317**	*e*Pn	**Pn**	**20 19 25.8**	**0.0**
MTLF	**Montolieu**	**8.16**	**279**	*e*Pn	**Pn**	**20 19 25.6**	**-1.0**
MTLF	**Montolieu**	**8.16**	**279**	*e*Pn	**Pn**	**20 19 25.6**	**-1.0**
MOX	**Moxa**	**8.19**	**353**	*e*Pn	**Pn**	**20 19 26.2**	**-0.7**
MOX				*e*Sn	Sn	20 20 53.4	-6.0
LOR	**Lormes**	**8.19**	**308**	*e*Pn	**Pn**	**20 19 26.9**	**-0.1**
LOR				*e*Sn	**Sn**	**20 20 56.3**	**-3.2**
	comp=Z,11nm,0.3s						
LOR	**Lormes**	**8.19**	**308**	*e*Pn	**Pn**	**20 19 26.9**	**-0.1**
AVF	**Avril sur Loir**	**8.25**	**304**	*e*Pn	**Pn**	**20 19 27.8**	**0.0**
AVF	**Avril sur Loir**	**8.25**	**304**	*e*Pn	**Pn**	**20 19 27.8**	**0.0**
SSF	**Saint Saulge**	**8.29**	**306**	*e*Pn	**Pn**	**20 19 28.2**	**-0.1**
SSF	**Saint Saulge**	**8.29**	**306**	*e*Pn	**Pn**	**20 19 28.2**	**-0.1**
MEZF	**Maizieres J'vi**	**8.30**	**319**	*e*Pn	**Pn**	**20 19 28.8**	**+0.4**
MEZF	**Maizieres J'vi**	**8.30**	**319**	*e*Pn	**Pn**	**20 19 28.8**	**+0.4**
GUR	**Goura**	**8.31**	**121**	P	**Pn**	**20 19 31.1**	**+2.3**
GUR	**Goura**	**8.31**	**121**	P	**Pn**	**20 19 31.1**	**+2.3**
BRG	**Berggiesshubel**	**8.35**	**3**	*e*(PN)	**Pn**	**20 19 30.7**	**+1.6**
BRG				*i*		20 20 57.1	
BRG	**Berggiesshubel**	**8.35**	**3**	*e*(SG)	Sg	20 22 03.7	+7.8
TNS	**Taunus Mts**	**8.38**	**338**	*e*Pn	**Pn**	**20 19 30.1**	**+0.5**
TNS				*e*Sn	**Sn**	**20 20 58.8**	**-5.3**
FBE	**Freiberg**	**8.38**	**0**	*e*Sn	**Sn**	**20 20 59.3**	**-4.9**
BGF	**Bois d'Agland**	**8.46**	**302**	*e*P	**Pn**	**20 19 31.1**	**+0.4**
BGF				*e*Sn	**Sn**	**20 21 02.2**	**-4.0**
	comp=Z,9.8nm,0.5s						
BGF	**Bois d'Agland**	**8.46**	**302**	*e*P	**Pn**	**20 19 31.1**	**+0.4**
CRVS	**Cervenica-Dubn**	**8.55**	**39**	*e*PN	**Pn**	**20 19 34.5**	**+2.6**
CRVS	**Cervenica-Dubn**	**8.55**	**39**	*e*Pn	**Pn**	**20 19 34.5**	**+2.6**
ARR	**Arges**	**8.66**	**67**	⇓*i*P	**Pn**	**20 19 35.2**	**+1.7**
ARR	**Arges**	**8.66**	**67**	⇓*i*P	**Pn**	**20 19 35.2**	**+1.7**
CLL	**Collm**	**8.77**	**359**	*e*Pn	**Pn**	**20 19 35.0**	**+0.1**
CLL				*e*Pn(2)		20 19 38.0	
CLL				*e*Sn	Sn	20 21 06.0	-7.8
CLL				*e*Sg	Sg	20 22 18.0	+8.5
	comp=E,200nm,23.9s						
KOLS	**Kolonicke sedl**	**8.96**	**41**	*e*PN	**Pn**	**20 19 37.3**	**-0.3**
KOLS	**Kolonicke sedl**	**8.96**	**41**	*e*Pn	**Pn**	**20 19 37.3**	**-0.3**
MLR	**Muntele Rosu**	**9.59**	**68**	⇓*i*P	**Pn**	**20 19 49.1**	**+2.8**
MLR	**Muntele Rosu**	**9.59**	**68**	Pn	**Pn**	**20 19 47.5**	**+1.3**
	comp=E,0.0nm,0.3s,baz=138,slow=19,SNR=9.5						
MLR	**Muntele Rosu**	**9.59**	**68**	⇓*i*P	**Pn**	**20 19 49.1**	**+2.8**
KWP	**Kalwaria Pacla**	**9.65**	**39**	*e*Pn	Pn	20 19 51.3	+4.4
KWP	**Kalwaria Pacla**	**9.65**	**39**	⇑*i*P	Pn	20 19 51.8	+4.9
BAIF	**Baives**	**9.79**	**323**	*e*Pn	**Pn**	**20 19 49.0**	**+0.1**
BAIF	**Baives**	**9.79**	**323**	*e*Pn	**Pn**	**20 19 49.0**	**+0.1**
BURAR	**Bucovina Array**	**9.85**	**55**	⇑*i*P	Pn	20 19 53.2	+3.4
PLOR	**Plostina**	**10.15**	**66**	⇑*i*P	**Pn**	**20 19 54.9**	**+1.0**
PLOR	**Plostina**	**10.15**	**66**	⇑*i*P	**Pn**	**20 19 54.9**	**+1.0**
VRI	**Vrincioaia**	**10.21**	**66**	⇑*i*P	**Pn**	**20 19 54.2**	**-0.5**
VRI	**Vrincioaia**	**10.21**	**66**	⇑*i*P	**Pn**	**20 19 54.2**	**-0.5**
ESDC	**Sonseca Array**	**13.32**	**263**	Pn	**Pn**	**20 20 36.5**	**-0.7**
	comp=E,0.3nm,0.3s,baz=71,slow=14,SNR=6.0						
BRTR	**Keskin Array B**	**15.59**	**94**	Pn	**Pn**	**20 21 08.8**	**+0.7**
	comp=E,0.1nm,0.3s,baz=297,slow=9.5,SNR=2.7						
EKA	**Eskdalemuir Ar**	**16.69**	**326**	Pn	**Pn**	**20 21 22.1**	**+0.2**
	baz=139,slow=13,SNR=4.7						
HFS	**Hagfors**	**17.62**	**1**	Pn	**Pn**	**20 21 32.3**	**-1.2**
	comp=E,0.1nm,0.3s,baz=167,slow=21,SNR=3.3						
NB2	**NORSAR Subarra**	**18.57**	**357**	P	**P**	**20 21 45.1**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=175,slow=12						
NB2	**NORSAR Subarra**	**18.57**	**357**	P	**P**	**20 21 45.1**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=175,slow=11,SNR=1.1						
NOA	**NORSAR Array B**	**18.57**	**357**	P	**P**	**20 21 45.1**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=176,slow=11,SNR=7.4						
FINES	**FINESS Array B**	**20.43**	**18**	P	**P**	**20 22 05.2**	**0.0**
	comp=Z,2.8nm,0.6s,baz=200,slow=9.1,SNR=11						
FIA1	**FINESS Array S**	**20.43**	**18**	*e*Pn	**P**	**20 22 04.6**	**-0.6**
KAF	**Kangasniemi**	**21.08**	**17**	*ep*	**P**	**20 22 10.8**	**-1.4**
	comp=Z,2.1nm,0.7s						
KAF	**Kangasniemi**	**21.08**	**17**	*e*P	**P**	**20 22 10.8**	**-1.4**
	comp=Z,2.1nm,0.7s						
KBZ	**Khabaz**	**21.60**	**77**	P	**P**	**20 22 19.8**	**+1.8**
	comp=Z,2.4nm,0.8s,baz=269,slow=7.9,SNR=5.1						
JOF	**Joensuu**	**22.99**	**21**	*ep*	**P**	**20 22 33.1**	**+0.5**
	comp=Z,1.7nm,0.6s						
JOF	**Joensuu**	**22.99**	**21**	*e*P	**P**	**20 22 33.1**	**+0.5**
	comp=Z,1.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**30.96**	**202**	P	**P**	**20 23 44.9**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=9.3,slow=9.9,SNR=9.3						
ZALV	**Zalesovo Beam**	**47.02**	**50**	P	**P**	**20 25 58.7**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=316,slow=12,SNR=3.3						
ZALV				LR	LR	20 46 48.1	
	comp=Z,33nm,18.7s,baz=54,slow=38						
MKAR	**Makanchi Array**	**47.83**	**60**	P	**P**	**20 26 05.7**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=292,slow=6.4,SNR=4.6						
SONM	**Songino Array**	**61.92**	**50**	P	**P**	**20 27 48.4**	**+0.6**
	comp=Z,1.2nm,0.9s,baz=293,slow=8.8,SNR=12						
YKA	**Yellowknife Ar**	**67.30**	**337**	P	**P**	**20 28 22.7**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=39,slow=5.6,SNR=19						
ILAR	**Eielson Array**	**71.90**	**351**	P	**P**	**20 28 51.8**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=354,slow=5.4,SNR=5.0						
CMAR	**Chiang Mai Arr**	**74.63**	**79**	P	**P**	**20 29 07.0**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=307,slow=7.1,SNR=9.0						

CSEM ***14*** *20:18:21.8, 42°.55N×13°.32E, h11km, After ROM*
ROM 14 20:18:21.8±0.1, 42°.55N×13°.32E, h11km±1km**, MI2.3**/2,
**Error ellipse: s-maj=0.9km s-min=0.5km az=33.0,
Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**104**	Pg	Pg	20 18 24.7	+0.4
CAMP				Sg	Sg	20 18 26.3	+0.1
CAMP	**Campotosto**	**0.07**	**104**	Pg	Pg	20 18 24.7	+0.4
CAMP				Sg	Sg	20 18 26.3	+0.1
AQU	**L'Aquila**	**0.20**	**164**	Pg	Pb	20 18 27.0	-0.6
AQU				Sg	Sg	20 18 30.3	+0.9
AQU	**L'Aquila**	**0.20**	**164**	Pg	Pb	20 18 27.0	-0.6
AQU				Sg	Sg	20 18 30.3	+0.9
LNSS	**Leonessa**	**0.22**	**284**	Pg	Pg	20 18 26.9	+0.3
LNSS				Sg	Sg	20 18 30.5	+0.7
LNSS	**Leonessa**	**0.22**	**284**	Pg	Pg	20 18 26.9	+0.3
LNSS				Sg	Sg	20 18 30.5	+0.7
TERO	**Teramo**	**0.22**	**71**	Pg	Pg	20 18 27.0	+0.5
TERO				Sg	Sg	20 18 30.6	+0.8
TERO	**Teramo**	**0.22**	**71**	Pg	Pg	20 18 27.0	+0.5
TERO				Sg	Sg	20 18 30.6	+0.8
NRCA	**Norcia**	**0.32**	**331**	Pg	Pg	20 18 28.8	+0.3
NRCA				Sg	Sg	20 18 33.8	+0.9
NRCA	**Norcia**	**0.32**	**331**	Pg	Pg	20 18 28.8	+0.3
NRCA				Sg	Sg	20 18 33.8	+0.9

ISCJB ***14*** *20:30:26.7±0.3, 42°.53N±0°.02×13°.31E±0°.02, h12km±3km, Error ellipse: s-maj=3.3km s-min=2.4km az=141.0*
ROM ***14*** *20:30:26.7±0.1, 42°.53N×13°.31E, h9km, MI2.8/28, Error ellipse: s-maj=1.1km s-min=0.8km az=57.0*
CSEM ***14*** *20:30:27.1±0.1, 42°.53N×13°.30E, h5km, ML3.3/14, Error ellipse: s-maj=2.3km s-min=1.7km az=63.0*
PRU ***14*** *20:30:28.7, 42°.44N×13°.60E, h0km*
ISC 14 20:30:27.4±0.8, 42°.54N±0°.02×13°.32E±0°.02, h9km±5km**,
n82, σ0s91/118, 1C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**89**	Pg	**Pg**	**20 30 29.4**	**-0.2**
CAMP				Sg	**Sg**	**20 30 31.3**	**+0.1**
	15μm,0.3s						
CAMP	**Campotosto**	**0.07**	**89**	Pg	**Pg**	**20 30 29.4**	**-0.2**
CAMP				Sg	**Sg**	**20 30 31.3**	**+0.1**
	15μm,0.3s						
AQU	**L'Aquila**	**0.19**	**161**	Pg	**Pg**	**20 30 31.6**	**+0.2**
AQU				Sg	**Sg**	**20 30 34.3**	**+0.2**
	2μm,0.5s						
AQU	**L'Aquila**	**0.19**	**161**	Pg	**Pg**	**20 30 31.6**	**+0.2**
AQU				Sg	**Sg**	**20 30 34.3**	**+0.2**
	2μm,0.5s						
LNSS	**Leonessa**	**0.21**	**289**	Pg	**Pg**	**20 30 31.7**	**-0.1**
LNSS				Sg	**Sg**	**20 30 35.5**	**+0.6**
	5μm,0.2s						
LNSS	**Leonessa**	**0.21**	**289**	Pg	**Pg**	**20 30 31.7**	**-0.1**
LNSS				Sg	**Sg**	**20 30 35.5**	**+0.6**
	5μm,0.2s						
TERO	**Teramo**	**0.23**	**67**	Pg	**Pg**	**20 30 31.7**	**-0.4**
TERO				Sg	**Sg**	**20 30 35.5**	**+0.2**
TERO	**Teramo**	**0.23**	**67**	Pg	**Pg**	**20 30 31.7**	**-0.4**
TERO				Sg	**Sg**	**20 30 35.5**	**+0.2**
FIAM	**Fiamignano**	**0.30**	**209**	Pg	**Pg**	**20 30 33.2**	**-0.3**
FIAM				Sg	**Sg**	**20 30 38.8**	**+1.2**
FIAM	**Fiamignano**	**0.30**	**209**	Pg	**Pg**	**20 30 33.2**	**-0.3**
FIAM				Sg	**Sg**	**20 30 38.8**	**+1.2**
FAGN	**Fagnano**	**0.33**	**143**	Pg	**Pg**	**20 30 34.6**	**+0.6**
FAGN				Sg	**Sg**	**20 30 39.1**	**+0.7**
	2μm,0.3s						
FAGN	**Fagnano**	**0.33**	**143**	Pg	**Pg**	**20 30 34.6**	**+0.6**
FAGN				Sg	**Sg**	**20 30 39.1**	**+0.7**
	2μm,0.3s						
NRCA	**Norcia**	**0.33**	**334**	Pg	**Pg**	**20 30 33.7**	**-0.3**
NRCA				Sg	**Sg**	**20 30 38.9**	**+0.4**
	2μm,0.1s						
NRCA	**Norcia**	**0.33**	**334**	Pg	**Pg**	**20 30 33.7**	**-0.3**
NRCA				Sg	**Sg**	**20 30 38.9**	**+0.4**
	2μm,0.1s						
VCEL	**Villa Celiera**	**0.41**	**110**	Pg	**Pg**	**20 30 35.7**	**+0.2**
VCEL				Sg	**Sg**	**20 30 41.6**	**+0.7**
	3μm,0.4s						
VCEL	**Villa Celiera**	**0.41**	**110**	Pg	**Pg**	**20 30 35.7**	**+0.2**
VCEL				Sg	**Sg**	**20 30 41.6**	**+0.7**
	3μm,0.4s						
OFFI	**Offida**	**0.48**	**34**	Pg	**Pg**	**20 30 37.2**	**+0.4**
	2μm,0.5s						
OFFI	**Offida**	**0.48**	**34**	Pg	**Pg**	**20 30 37.2**	**+0.4**
	2μm,0.5s						
MNS	**Montasola**	**0.49**	**253**	Pg	**Pg**	**20 30 36.3**	**-0.7**
MNS				Sg	**Sg**	**20 30 44.3**	**+0.8**
	509nm,0.4s						
MNS	**Montasola**	**0.49**	**253**	Pg	**Pg**	**20 30 36.3**	**-0.7**
MNS				Sg	**Sg**	**20 30 44.3**	**+0.8**
	509nm,0.4s						
PTQR	**Pietraquaria**	**0.52**	**173**	Pg	**Pg**	**20 30 36.9**	**-0.5**
PTQR				Sg	**Sg**	**20 30 44.8**	**+0.6**
	89nm,0.6s						
PTQR	**Pietraquaria**	**0.52**	**173**	Pg	**Pg**	**20 30 36.9**	**-0.5**
PTQR				Sg	**Sg**	**20 30 44.8**	**+0.6**
	89nm,0.6s						
TRTR	**Tortoreto Alta**	**0.52**	**58**	Pg	**Pg**	**20 30 38.1**	**+0.7**
	2μm,0.6s						
TRTR	**Tortoreto Alta**	**0.52**	**58**	Pg	**Pg**	**20 30 38.1**	**+0.7**
	2μm,0.6s						
FDMO	**Fiordimonte**	**0.53**	**341**	Pg	**Pg**	**20 30 37.2**	**-0.5**
FDMO				Sg	**Sg**	**20 30 45.5**	**+0.9**
	324nm,0.5s						
FDMO	**Fiordimonte**	**0.53**	**341**	Pg	**Pg**	**20 30 37.2**	**-0.5**
FDMO				Sg	**Sg**	**20 30 45.5**	**+0.9**
	324nm,0.5s						
CESX	**Cesi**	**0.55**	**278**	Pg	**Pg**	**20 30 37.2**	**-0.8**
CESX				Sg	**Sg**	**20 30 45.4**	**+0.1**
	320nm,0.4s						
CESX	**Cesi**	**0.55**	**278**	Pg	**Pg**	**20 30 37.2**	**-0.8**
CESX				Sg	**Sg**	**20 30 45.4**	**+0.1**
	320nm,0.4s						
CESI	**CESI - Serrava**	**0.56**	**327**	Pg	**Pg**	**20 30 37.7**	**-0.6**
CESI				Sg	**Sg**	**20 30 46.2**	**+0.6**
	148nm,0.6s						
CESI	**CESI - Serrava**	**0.56**	**327**	Pg	**Pg**	**20 30 37.7**	**-0.6**
CESI				Sg	**Sg**	**20 30 46.2**	**+0.6**
	148nm,0.6s						
CERT	**Cerreto**	**0.64**	**203**	Pg	**Pg**	**20 30 38.8**	**-0.9**
	775nm,0.6s						
CERT	**Cerreto**	**0.64**	**203**	Pg	**Pg**	**20 30 38.8**	**-0.9**
	775nm,0.6s						
MTCE	**Montecelio**	**0.67**	**220**	Pg	**Pg**	**20 30 39.2**	**-1.0**
	193nm,0.5s						
MTCE	**Montecelio**	**0.67**	**220**	Pg	**Pg**	**20 30 39.2**	**-1.0**
	193nm,0.5s						
INTR	**Introdacqua**	**0.68**	**140**	Pg	**Pg**	**20 30 39.6**	**-0.9**
INTR				Sg	**Sg**	**20 30 49.8**	**+0.4**
	812nm,0.9s						
INTR	**Introdacqua**	**0.68**	**140**	Pg	**Pg**	**20 30 39.6**	**-0.9**
INTR				Sg	**Sg**	**20 30 49.8**	**+0.4**
	812nm,0.9s						
GUMA	**Gualdo di Mace**	**0.70**	**41**	Pg	Pg	20 30 37.5	-3.3
GUMA				Sg	**Sg**	**20 30 45.9**	**-4.1**
	1μm,0.4s						
VVLD	**Villa Vallelon**	**0.70**	**161**	Pg	**Pg**	**20 30 41.3**	**+0.4**
	431nm,0.7s						
VVLD	**Villa Vallelon**	**0.70**	**161**	Pg	**Pg**	**20 30 41.3**	**+0.4**
	431nm,0.7s						
GUAR	**Guarcino**	**0.74**	**180**	Pg	**Pg**	**20 30 41.5**	**-0.1**
	405nm,0.8s						
GUAR	**Guarcino**	**0.74**	**180**	Pg	**Pg**	**20 30 41.5**	**-0.1**
	405nm,0.8s						
LPEL	**Lama dei Pelig**	**0.81**	**127**	Pg	**Pg**	**20 30 41.7**	**-1.2**
LPEL				Sg	**Sg**	**20 30 53.1**	**-0.3**
	318nm,0.5s						
LPEL	**Lama dei Pelig**	**0.81**	**127**	Pg	**Pg**	**20 30 41.7**	**-1.2**
LPEL				Sg	**Sg**	**20 30 53.1**	**-0.3**
	318nm,0.5s						
CAFR	**Castel Frentan**	**0.82**	**112**	Pg	**Pg**	**20 30 42.7**	**-0.5**
CAFR	**Castel Frentan**	**0.82**	**112**	Pg	**Pg**	**20 30 42.7**	**-0.5**
CING	**Cingoli**	**0.84**	**354**	Pg	**Pg**	**20 30 42.7**	**-1.0**
	249nm,0.4s						
CING	**Cingoli**	**0.84**	**354**	Pg	**Pg**	**20 30 42.7**	**-1.0**
	249nm,0.4s						
POFI	**Posta Fibreno**	**0.87**	**160**	Pg	**Pg**	**20 30 43.9**	**-0.2**
POFI	**Posta Fibreno**	**0.87**	**160**	Pg	**Pg**	**20 30 43.9**	**-0.2**
SDI	**San Donato**	**0.90**	**156**	Pg	**Pg**	**20 30 44.6**	**-0.1**
	76nm,0.4s						
SDI	**San Donato**	**0.90**	**156**	Pg	**Pg**	**20 30 44.6**	**-0.1**
	76nm,0.4s						
MURB	**Monte Urbino**	**0.93**	**322**	Pg	**Pg**	**20 30 44.8**	**-0.5**
	407nm,0.7s						
MURB	**Monte Urbino**	**0.93**	**322**	Pg	**Pg**	**20 30 44.8**	**-0.5**
	407nm,0.7s						
MGAB	**Montegabbione**	**0.96**	**293**	Pg	**Pg**	**20 30 45.1**	**-0.8**
MGAB	**Montegabbione**	**0.96**	**293**	Pg	**Pg**	**20 30 45.1**	**-0.8**
GIUL	**Giuliano Di Ro**	**0.98**	**183**	Pg	**Pg**	**20 30 46.0**	**-0.1**
	199nm,0.9s						
GIUL	**Giuliano Di Ro**	**0.98**	**183**	Pg	**Pg**	**20 30 46.0**	**-0.1**
	199nm,0.9s						
ARVD	**Arcevia**	**1.00**	**344**	Pg	**Pg**	**20 30 45.7**	**-0.9**
	270nm,1.0s						
ARVD	**Arcevia**	**1.00**	**344**	Pg	**Pg**	**20 30 45.7**	**-0.9**
	270nm,1.0s						
AOI	**Ancona**	**1.04**	**12**	Pg	**Pg**	**20 30 46.5**	**-0.8**
	178nm,0.6s						
AOI	**Ancona**	**1.04**	**12**	Pg	**Pg**	**20 30 46.5**	**-0.8**
	178nm,0.6s						
SACS	**San Casciano d**	**1.08**	**287**	Pg	**Pb**	**20 30 47.6**	**-0.7**
	445nm,1.8s						
TOLF	**Tolfa**	**1.08**	**245**	Pg	**Pb**	**20 30 47.0**	**-1.3**
	131nm,0.7s						
TOLF	**Tolfa**	**1.08**	**245**	Pg	**Pb**	**20 30 47.0**	**-1.3**
	131nm,0.7s						
MIDA	**Miranda**	**1.13**	**142**	Pg	**Pb**	**20 30 47.2**	**-2.0**
	164nm,0.8s						
MIDA	**Miranda**	**1.13**	**142**	Pg	**Pb**	**20 30 47.2**	**-2.0**
	164nm,0.8s						
PIEI	**Pieia**	**1.15**	**330**	Pg	**Pb**	**20 30 48.8**	**-0.7**
	85nm,0.5s						
PIEI	**Pieia**	**1.15**	**330**	Pg	**Pb**	**20 30 48.8**	**-0.7**
	85nm,0.5s						
FSSB	**Fossombrone**	**1.22**	**341**	Pg	**Pn**	**20 30 49.6**	**-1.1**
	293nm,0.4s						
FSSB	**Fossombrone**	**1.22**	**341**	Pg	**Pn**	**20 30 49.6**	**-1.1**
	293nm,0.4s						
NVLJ	**Novalja**	**2.32**	**29**	*e*Pn	**Pn**	**20 31 05.9**	**+0.1**
NVLJ				Sn	**Sn**	**20 31 34.7**	**+0.3**
NVLJ	**Novalja**	**2.32**	**29**	*e*Pn	**Pn**	**20 31 05.8**	**+0.1**
NVLJ				Sn	**Sn**	**20 31 34.6**	**+0.3**
STON	**Ston**	**3.25**	**83**	Sn	**Sn**	**20 31 57.2**	**-0.1**
STON	**Ston**	**3.25**	**83**	Sn	**Sn**	**20 31 57.1**	**-0.1**
BOJS	**Bojanci**	**3.28**	**25**	*i* Pn	**Pn**	**20 31 20.3**	**+1.4**

PETK					MLR	MLR		
	comp=Z,200nm,20.2s							
PETK	**Petropavlovsk-**	**5.71**	**24**	P	**Pn**	**20 45 58.9 +0.4**		
	comp=Z,3.0nm,0.3s,baz=181,slow=14,SNR=30							
PETK					LR	LR	20 48 27.4	
	comp=Z,200nm,20.2s,baz=11,slow=40							
YSS	**Yuzh-Sakhalins**	**7.60**	**267**	*e*PN	Pn	20 46 31.7 +7.4		
ASAJ	**Asahikawa**	**8.73**	**248**	P	**Pn**	**20 46 40.2 +0.5**		
	comp=Z,0.7nm,0.3s,baz=112,slow=27,SNR=6.1							
ASAJ					LR	LR	20 49 38.7	
	comp=Z,74nm,20.8s,baz=215,slow=35							
ERM	**Erimo**	**9.63**	**236**	*i* PN	**Pn**	**20 46 51.1 -1.0**		
FX1	**Attu Island--F**	**13.24**	**61**	LR	LR	20 51 31.8		
	comp=Z,53nm,19.7s,baz=37,slow=32							
USRK	**Ussuriysk Arra**	**15.62**	**264**	P	**P**	**20 48 14.3 -1.1**		
	comp=Z,0.1nm,0.3s,baz=56,slow=15,SNR=4.2							
MJAR	**Matsushiro Arr**	**16.23**	**231**	P	**Pn**	**20 48 20.8 +0.6**		
	comp=Z,0.2nm,0.3s,baz=268,slow=19,SNR=5.3							
MJAR					LR	LR	20 54 38.8	
	comp=Z,72nm,21.8s,baz=325,slow=37							
YAK	**Yakutsk**	**19.61**	**325**	*e*P	**Pn**	**20 49 02.7 +1.8**		
BILL	**Bilibino**	**21.10**	**13**	*e*P	**P**	**20 49 12.6 -2.6**		
BILL					pmax	pmax		
	comp=Z,1.0nm,1.2s							
KSRS	**Korea Array**	**21.66**	**251**	P	**P**	**20 49 22.1 +0.7**		
	comp=Z,0.9nm,0.7s,baz=54,slow=9.7,SNR=5.7							
KSRS					LR	LR	20 59 05.9	
	comp=Z,32nm,18.9s,baz=65,slow=40							
TIXI	**Tiksi**	**26.46**	**343**	*e*P	**P**	**20 50 08.6 +1.7**		
COLA	**College**	**34.88**	**39**	*i* P	**P**	**20 51 18.9 -2.1**		
ILAR	**Eielson Array**	**35.29**	**40**	P	**P**	**20 51 24.4 -0.2**		
	comp=Z,0.8nm,0.6s,baz=256,slow=6.8,SNR=14							
ZALV	**Zalesovo Beam**	**42.33**	**305**	P	**P**	**20 52 25.7 +2.1**		
ZALV							20 54 16.9	
ZALV					pmax	pmax		
	comp=Z,1.0nm,0.6s							
ZALV					pmax	pmax		
	comp=Z,1.0nm,0.6s							
ZALV					MLR	MLR		
	comp=Z,46nm,18.6s							
ZALV	**Zalesovo Beam**	**42.33**	**305**	P	**P**	**20 52 25.7 +2.1**		
	comp=Z,0.5nm,0.6s,baz=54,slow=7.3,SNR=3.5							
ZALV				PcP	**PcP**	**20 54 16.9 +0.9**		
	comp=Z,0.6nm,0.6s,baz=90,slow=1.5,SNR=4.3							
ZALV					LR	LR	21 11 18.4	
	comp=Z,46nm,18.6s,baz=57,slow=38							
MKAR	**Makanchi Array**	**46.85**	**297**	P	**P**	**20 52 59.9 +0.2**		
MKAR					pmax	pmax		
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**46.85**	**297**	P	**P**	**20 52 59.9 +0.2**		
	comp=Z,0.5nm,0.6s,baz=67,slow=6.9,SNR=6.4							
KURK	**Kurchatov**	**47.13**	**303**	*e*P	**P**	**20 53 02.4 +0.6**		
YKA	**Yellowknife Ar**	**49.65**	**38**	P	**P**	**20 53 22.6 +1.6**		
	comp=Z,1.0nm,0.5s,baz=296,slow=7.4,SNR=9.9							
BRVK	**Borovoye**	**50.53**	**309**	*e*P	**P**	**20 53 27.9 +0.1**		
CMAR	**Chiang Mai Arr**	**53.15**	**256**	P	**P**	**20 53 49.4 +1.6**		
	comp=Z,0.4nm,0.7s,baz=34,slow=7.0,SNR=5.8							
CMAR				pP	**pP**	**20 54 00.0 -4.3**		
	comp=Z,0.4nm,0.7s,baz=41,slow=6.7,SNR=4.4							
AAK	**Ala-Archa**	**53.76**	**296**	*e*P	**P**	**20 53 49.6 -2.6**		
FINES	**FINESS Array B**	**63.17**	**335**	P	**P**	**20 54 57.5 +0.5**		
	comp=Z,1.3nm,0.7s,baz=38,slow=8.3,SNR=7.6							
FINES				pP	**pP**	**20 55 10.1 -3.9**		
	comp=Z,0.7nm,0.5s,baz=50,slow=7.2,SNR=2.0							
PDAR	**Pinedale Array**	**63.63**	**55**	P	**P**	**20 55 01.4 +0.7**		
	comp=Z,0.8nm,0.7s,baz=312,slow=1.3,SNR=7.0							
NOA	**NORSAR Array B**	**67.25**	**341**	P	**P**	**20 55 24.5 +0.9**		
	comp=Z,0.6nm,0.6s,baz=26,slow=6.2,SNR=3.3							
NOA				LR	LR	21 29 08.6		
	comp=Z,20nm,18.8s,baz=280,slow=40							
HFS	**Hagfors**	**67.50**	**340**	P	**P**	**20 55 26.1 +1.0**		
	comp=Z,0.7nm,0.4s,baz=57,slow=5.5,SNR=11							
HFS				pP	**pP**	**20 55 37.6 -4.7**		
	comp=Z,0.9nm,0.6s,baz=70,slow=6.5,SNR=1.9							
KIV	**Kislovodsk**	**70.32**	**314**	*e*P	**P**	**20 55 42.2 -0.8**		
KIV					pmax	pmax		
	comp=Z,7.0nm,1.1s							
KIV					MLR	MLR		
	comp=Z,32nm,19.0s							
AKASG	**Malin Array Be**	**70.83**	**326**	P	**P**	**20 55 46.5 +0.7**		
AKASG					pmax	pmax		
	comp=Z,1.0nm,0.4s							
AKASG	**Malin Array Be**	**70.83**	**326**	P	**P**	**20 55 46.5 +0.7**		
	comp=Z,0.7nm,0.4s,baz=32,slow=5.9,SNR=2.7							
KIEV	**Kiev**	**70.84**	**326**	*i* P	**P**	**20 55 44.9 -1.0**		
ASAR	**Alice Springs**	**73.52**	**199**	P	**P**	**20 56 01.2 -0.8**		
	comp=Z,0.7nm,0.8s,baz=10,slow=7.9,SNR=5.9							
EKA	**Eskdalemuir Ar**	**75.28**	**347**	P	**P**	**20 56 12.6 +0.6**		
	comp=Z,0.9nm,0.5s,baz=22,slow=5.0,SNR=11							
TXAR	**Lajitas Array**	**76.46**	**61**	P	**P**	**20 56 19.7 +0.4**		
	comp=Z,1.2nm,0.7s,baz=295,slow=4.2,SNR=13							
TXAR				pP	**PcP**	**20 56 32.6 +1.8**		
	comp=Z,1.1nm,0.9s,baz=291,slow=3.9,SNR=4.3							
GERES	**GERESS Array B**	**77.59**	**334**	LR	LR	21 35 44.2		
	comp=Z,42nm,19.3s,baz=26,slow=40							
BRTR	**Keskin Array B**	**77.86**	**317**	P	**P**	**20 56 29.2 +2.2**		
	comp=Z,0.6nm,0.6s,baz=93,slow=6.1,SNR=3.4							

IDC 14 20:50:35.1±10.0, 18.95S×177.90W, h601km±129km, mb2.9/5, mb1 3.1/5, mb1mx2.8/19, mbtmp2.9/5, Error ellipse: s-maj=94.0km s-min=51.7km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.77**	**262**	P	P	20 56 29.2	+0.3
	1.5nm,0.3s,baz=108,slow=6.9,SNR=5.2						
STKA	**Stephens Creek**	**38.57**	**242**	P	P	20 57 07.9	-0.2
	0.8nm,0.6s,baz=79,slow=10,SNR=3.9						
ASAR	**Alice Springs**	**44.99**	**255**	P	P	20 57 58.2	-0.4
	0.9nm,0.5s,baz=86,slow=8.1,SNR=17						
TXAR	**Lajitas Array**	**86.14**	**57**	P	P	21 02 14.1	0.0
	0.3nm,0.6s,baz=224,slow=5.2,SNR=3.8						
ILAR	**Eielson Array**	**86.79**	**13**	P	P	21 02 15.9	-0.3
	0.3nm,1.0s,baz=229,slow=5.2,SNR=4.7						
GERES	**GERESS Array B**	**148.74**	**345**	PKPbc	PKPbc	21 09 15.7	-0.1
	0.4nm,0.7s,baz=25,slow=4.4,SNR=4.3						

MAN 14 20:52:26, 17.70N×122.69E, h25km, mb4.8, ML3.7, MS3.8, 3C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.69**	**202**	↑*i*P	Pb	20 52 39.7	+0.3
PALP				*e*S	Sn	20 52 50.6	+0.7
CAUP	**Cauayan**	**1.12**	**228**	*e*P	Pb	20 52 46.9	+0.2
ABRA	**Dolores**	**1.89**	**269**	*e*P	Pn	20 52 56.9	+0.3
PIP	**Pasuquin**	**2.06**	**288**	↑*i*P	Pn	20 52 59.0	-0.1
PIP				*e*S	Sn	20 53 25.7	+1.6
BALP	**Baler**	**2.22**	**209**	*e*P	Pn	20 53 01.9	+0.6
PCPH	**Palayan**	**2.62**	**216**	↓*e*P	Pn	20 53 08.2	+1.5
PCPH				*e*S	Sn	20 53 38.8	+1.0
GQP	**Guinayangan**	**3.79**	**184**	↑*e*P	Pn	20 53 24.4	+1.6
GQP				*e*S	Sn	20 54 04.8	-1.7

*CSEM **14** 20:53:09.6±0.1, 42.53N×13.28E, h5km, ML3.3/7, Error ellipse: s-maj=2.7km s-min=2.3km az=45.0*
*LDG **14** 20:53:09.9±0.9, 42.44N×13.34E, h2km, Ml3.1/6, Error ellipse: s-maj=18.8km s-min=10.7km az=102.0*
*ROM **14** 20:53:09.0±0.1, 42.54N×13.29E, h10km, Ml3.1/11, Error ellipse: s-maj=1.0km s-min=0.8km az=36.0*
*IDC **14** 20:53:09.5±1.3, 42.64N×13.60E, h0km, mb3.1/2, mb1 3.3/7, mb1mx3.2/31, mbtmp3.2/7, ML3.2/4, Error ellipse: s-maj=27.7km s-min=13.6km az=102.0*
*ISCJB **14** 20:53:09.0±0.2, 42.53N±0.02×13.30E±0.02, h14km±2km, mb3.0/1, Error ellipse: s-maj=3.0km s-min=2.5km az=27.9*
*BEO **14** 20:53:14.2±1.3, 42.64N×13.49E, h0km, ML3.4/4*

ISC 14 20:53:10.1±0.8, 42.54N±0.02×13.29E±0.02, h10km±5km, n99, σ1§30/144, 1C, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.09**	**93**	Pg	**Pg**	**20 53 11.9**	**-0.7**
CAMP				Sg	**Sg**	**20 53 13.7**	**-0.7**
CAMP	**Campotosto**	**0.09**	**93**	Pg	**Pg**	**20 53 11.9**	**-0.7**
CAMP				Sg	**Sg**	**20 53 13.7**	**-0.7**
LNSS	**Leonessa**	**0.20**	**288**	Pg	**Pg**	**20 53 14.1**	**-0.2**
LNSS				Sg	**Sg**	**20 53 17.5**	**+0.3**
LNSS	**Leonessa**	**0.20**	**288**	Pg	**Pg**	**20 53 14.1**	**-0.2**
LNSS				Sg	**Sg**	**20 53 17.5**	**+0.3**
AQU	**L'Aquila**	**0.20**	**156**	Pg	**Pg**	**20 53 13.9**	**-0.5**
AQU				Sg	**Sg**	**20 53 17.7**	**+0.4**
AQU	**L'Aquila**	**0.20**	**156**	Pg	**Pg**	**20 53 13.9**	**-0.5**
AQU				Sg	**Sg**	**20 53 17.7**	**+0.4**
TERO	**Teramo**	**0.24**	**70**	Pg	**Pg**	**20 53 14.2**	**-0.9**
TERO				Sg	**Sg**	**20 53 17.9**	**-0.6**
TERO	**Teramo**	**0.24**	**70**	Pg	**Pg**	**20 53 14.2**	**-0.9**
TERO				Sg	**Sg**	**20 53 17.9**	**-0.6**
FIAM	**Fiamignano**	**0.30**	**205**	Pg	**Pg**	**20 53 15.6**	**-0.6**
FIAM				Sg	**Sg**	**20 53 20.4**	**+0.1**
FIAM	**Fiamignano**	**0.30**	**205**	Pg	**Pg**	**20 53 15.6**	**-0.6**
FIAM				Sg	**Sg**	**20 53 20.4**	**+0.1**
NRCA	**Norcia**	**0.32**	**336**	Pg	**Pg**	**20 53 16.1**	**-0.5**
NRCA				Sg	**Sg**	**20 53 21.1**	**+0.2**
NRCA	**Norcia**	**0.32**	**336**	Pg	**Pg**	**20 53 16.1**	**-0.5**
NRCA				Sg	**Sg**	**20 53 21.1**	**+0.2**
FAGN	**Fagnano**	**0.35**	**142**	Pg	**Pg**	**20 53 16.3**	**-0.8**
FAGN				Sg	**Sg**	**20 53 22.0**	**+0.3**
	5μm,0.5s						
FAGN	**Fagnano**	**0.35**	**142**	Pg	**Pg**	**20 53 16.3**	**-0.8**
FAGN				Sg	**Sg**	**20 53 22.0**	**+0.3**
	5μm,0.5s						
VCEL	**Villa Celiera**	**0.43**	**110**	Pg	**Pg**	**20 53 18.0**	**-0.6**
VCEL				Sg	**Sg**	**20 53 25.0**	**+0.7**
	587nm,0.4s						
VCEL	**Villa Celiera**	**0.43**	**110**	Pg	**Pg**	**20 53 18.0**	**-0.6**
VCEL				Sg	**Sg**	**20 53 25.0**	**+0.7**
	587nm,0.4s						
MNS	**Montasola**	**0.48**	**251**	Pg	**Pg**	**20 53 18.6**	**-0.9**
MNS				Sg	**Sg**	**20 53 26.1**	**+0.3**
MNS	**Montasola**	**0.48**	**251**	Pg	**Pg**	**20 53 18.6**	**-0.9**
MNS				Sg	**Sg**	**20 53 26.1**	**+0.3**
OFFI	**Offida**	**0.49**	**36**	Pg	**Pg**	**20 53 19.6**	**-0.1**
OFFI	**Offida**	**0.49**	**36**	Pg	**Pg**	**20 53 19.6**	**-0.1**
FDMO	**Fiordimonte**	**0.52**	**343**	Pg	**Pg**	**20 53 19.3**	**-0.9**
FDMO				Sg	**Sg**	**20 53 27.5**	**+0.4**
	1μm,0.7s						
FDMO	**Fiordimonte**	**0.52**	**343**	Pg	**Pg**	**20 53 19.3**	**-0.9**
FDMO				Sg	**Sg**	**20 53 27.5**	**+0.4**
	1μm,0.7s						
TRTR	**Tortoreto Alta**	**0.53**	**60**	Pg	**Pg**	**20 53 20.7**	**+0.3**
TRTR	**Tortoreto Alta**	**0.53**	**60**	Pg	**Pg**	**20 53 20.7**	**+0.3**
CESX	**Cesi**	**0.53**	**278**	Pg	**Pg**	**20 53 19.1**	**-1.3**
CESX				Sg	**Sg**	**20 53 27.1**	**-0.3**
	732nm,0.3s						
CESX	**Cesi**	**0.53**	**278**	Pg	**Pg**	**20 53 19.1**	**-1.3**
CESX				Sg	**Sg**	**20 53 27.1**	**-0.3**
	732nm,0.3s						
CESI	**CESI - Serrava**	**0.55**	**329**	Pg	**Pg**	**20 53 20.0**	**-0.7**
CESI				Sg	**Sg**	**20 53 28.4**	**+0.5**
	215nm,0.4s						
CESI	**CESI - Serrava**	**0.55**	**329**	Pg	**Pg**	**20 53 20.0**	**-0.7**
CESI				Sg	**Sg**	**20 53 28.4**	**+0.5**
	215nm,0.4s						
CERT	**Cerreto**	**0.64**	**201**	Pg	**Pg**	**20 53 21.1**	**-1.3**
	3μm,0.4s						
CERT	**Cerreto**	**0.64**	**201**	Pg	**Pg**	**20 53 21.1**	**-1.3**
	3μm,0.4s						
MTCE	**Montecelio**	**0.66**	**218**	Pg	**Pg**	**20 53 21.4**	**-1.5**
	716nm,0.5s						
MTCE	**Montecelio**	**0.66**	**218**	Pg	**Pg**	**20 53 21.4**	**-1.5**
	716nm,0.5s						
GUAR	**Guarcino**	**0.75**	**179**	Pg	**Pg**	**20 53 23.7**	**-0.8**
GUAR	**Guarcino**	**0.75**	**179**	Pg	**Pg**	**20 53 23.7**	**-0.8**
SNTG	**Esanatoglia**	**0.76**	**340**	Pg	**Pg**	**20 53 23.6**	**-1.2**
	178nm,0.2s						
SNTG	**Esanatoglia**	**0.76**	**340**	Pg	**Pg**	**20 53 23.6**	**-1.2**
	178nm,0.2s						
LPEL	**Lama dei Pelig**	**0.82**	**126**	Pg	**Pg**	**20 53 24.1**	**-1.9**
LPEL				Sg	**Sg**	**20 53 36.3**	**-0.5**
	714nm,0.2s						
LPEL	**Lama dei Pelig**	**0.82**	**126**	Pg	**Pg**	**20 53 24.1**	**-1.9**
LPEL				Sg	**Sg**	**20 53 36.3**	**-0.5**
	714nm,0.2s						
CING	**Cingoli**	**0.84**	**355**	Pg	**Pg**	**20 53 24.9**	**-1.4**
	716nm,0.6s						
CING	**Cingoli**	**0.84**	**355**	Pg	**Pg**	**20 53 24.9**	**-1.4**
	716nm,0.6s						
RMP	**Rome, Mte Porz**	**0.85**	**211**	Pg	**Pg**	**20 53 25.0**	**-1.5**
	1μm,0.5s						
RMP	**Rome, Mte Porz**	**0.85**	**211**	Pg	**Pg**	**20 53 25.0**	**-1.5**
	1μm,0.5s						
POFI	**Posta Fibreno**	**0.88**	**159**	Pg	**Pg**	**20 53 26.0**	**-1.1**
POFI	**Posta Fibreno**	**0.88**	**159**	Pg	**Pg**	**20 53 26.0**	**-1.1**
SDI	**San Donato**	**0.92**	**155**	Pg	**Pg**	**20 53 26.3**	**-1.5**
SDI	**San Donato**	**0.92**	**155**	Pg	**Pg**	**20 53 26.3**	**-1.5**
MGAB	**Montegabbione**	**0.95**	**294**	Pg	**Pg**	**20 53 27.2**	**-1.1**
MGAB	**Montegabbione**	**0.95**	**294**	Pg	**Pg**	**20 53 27.2**	**-1.1**
GIUL	**Giuliano Di Ro**	**0.98**	**182**	Pg	**Pg**	**20 53 28.0**	**-1.0**
GIUL	**Giuliano Di Ro**	**0.98**	**182**	Pg	**Pg**	**20 53 28.0**	**-1.0**
AOI	**Ancona**	**1.03**	**13**	Pg	**Pg**	**20 53 28.5**	**-1.5**
	409nm,0.4s						
AOI	**Ancona**	**1.03**	**13**	Pg	**Pg**	**20 53 28.5**	**-1.5**
	409nm,0.4s						
NVLJ	**Novalja**	**2.33**	**29**	*i* Pn	**Pn**	**20 53 47.7**	**-0.8**
NVLJ				*i* Sn	**Sn**	**20 54 16.9**	**-0.2**
NVLJ	**Novalja**	**2.33**	**29**	*i* Pn	**Pn**	**20 53 47.6**	**-0.8**
NVLJ				*i* Sn	**Sn**	**20 54 16.9**	**-0.2**
PGF	**Pioggiola**	**3.17**	**272**	*e*Pn	**Pn**	**20 53 59.8**	**-0.4**
PGF				*e*Sn	**Sn**	**20 54 39.9**	**+1.7**
	5.1nm,0.4s						
PGF	**Pioggiola**	**3.17**	**272**	*e*Pn	**Pn**	**20 53 59.8**	**-0.4**
PGF				*e*Sn	**Sn**	**20 54 39.9**	**+1.7**
	2.5nm,0.4s						
STON	**Ston**	**3.27**	**83**	Sn	**Sn**	**20 54 39.4**	**-0.9**
STON	**Ston**	**3.27**	**83**	Sn	**Sn**	**20 54 39.4**	**-0.9**
BOJS	**Bojanci**	**3.28**	**25**	*i* Pn	**Pn**	**20 54 01.9**	**+0.3**
BOJS							
	comp=Z,10.0nm,0.3s						
BOJS	**Bojanci**	**3.28**	**25**	*i* Pn	**Pn**	**20 54 01.9**	**+0.3**
	comp=Z,10.0nm,0.3s						
JAVS	**Javornik**	**3.40**	**9**	*i* Pn	**Pn**	**20 54 05.3**	**+2.0**
JAVS				*i* Sn	**Sn**	**20 54 44.9**	**+1.1**
JAVS							
	comp=Z,6.0nm,0.3s						
JAVS	**Javornik**	**3.40**	**9**	*i* Pn	**Pn**	**20 54 05.3**	**+2.0**
JAVS				*i* Sn	**Sn**	**20 54 44.9**	**+1.1**
	comp=Z,6.0nm,0.3s						
ABTA	**Abfaltersbach**	**4.24**	**353**	↑*i*Pn	**Pn**	**20 54 14.8**	**-0.1**
	SNR=16						
ABTA	**Abfaltersbach**	**4.24**	**353**	Pn	**Pn**	**20 54 14.8**	**-0.1**
	SNR=16						
SBF	**Sospel**	**4.48**	**289**	*e*Pn	**Pn**	**20 54 18.3**	**+0.1**
SBF				*e*Sn	**Sn**	**20 55 08.4**	**-2.0**
	comp=Z,16nm,0.7s						
SBF	**Sospel**	**4.48**	**289**	*e*Pn	**Pn**	**20 54 18.3**	**+0.1**
SBF				*e*Sn	**Sn**	**20 55 08.4**	**-2.0**
	comp=Z,7.8nm,0.7s						
BBLS	**Lazići**	**4.66**	**71**	*e*Pn	**Pn**	**20 54 23.5**	**+2.8**
BBLS				*e*Sn	**Sn**	**20 55 15.2**	**+0.3**
BBLS	**Lazići**	**4.66**	**71**	*e*Pn	**Pn**	**20 54 23.5**	**+2.8**
BBLS				*e*Sn	**Sn**	**20 55 15.2**	**+0.3**
DAVOX	**Davos/Dischmat**	**4.89**	**331**	Pn	**Pn**	**20 54 25.8**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=154,slow=19,SNR=12						
DAVOX				Sn	**Sn**	**20 55 22.6**	**+1.9**
	comp=Z,0.9nm,0.3s,baz=137,slow=23,SNR=5.2						
FRF	**La Foret Royal**	**4.97**	**284**	*e*Pn	**Pn**	**20 54 24.4**	**-0.5**
FRF	**La Foret Royal**	**4.97**	**284**	*e*Pn	**Pn**	**20 54 24.4**	**-0.5**
LMR	**La Mourre**	**5.04**	**281**	*e*Pn	**Pn**	**20 54 25.0**	**-0.8**
LMR	**La Mourre**	**5.04**	**281**	*e*Pn	**Pn**	**20 54 25.0**	**-0.8**
DIVS	**Divibare**	**5.13**	**70**	*e*Pn	**Pn**	**20 54 29.3**	**+2.2**
DIVS				*e*Sn	**Sn**	**20 55 25.6**	**-0.8**
DIVS	**Divibare**	**5.13**	**70**	*e*Pn	**Pn**	**20 54 29.3**	**+2.2**
DIVS				*e*Sn	**Sn**	**20 55 25.6**	**-0.8**
MBDF	**Montbardon**	**5.21**	**297**	*e*P	**Pn**	**20 54 30.1**	**+1.8**
MBDF	**Montbardon**	**5.21**	**297**	*e*P	**Pn**	**20 54 30.1**	**+1.8**
LPG	**La Plagne**	**5.56**	**304**	*e*P	**Pn**	**20 54 36.3**	**+3.0**
LPL	**La Plagne**	**5.59**	**304**	*e*P	**Pn**	**20 54 36.4**	**+2.9**
LPL				*e*Sn	**Sn**	**20 55 34.5**	**-3.4**
	comp=Z,1.9nm,0.5s						
SMRF	**Simiane la Rot**	**5.81**	**287**	*e*P	**Pn**	**20 54 37.7**	**+1.2**
SMRF	**Simiane la Rot**	**5.81**	**287**	*e*P	**Pn**	**20 54 37.7**	**+1.2**
BARS	**Barje**	**6.29**	**85**	*e*Pn	**Pn**	**20 54 44.9**	**+1.9**
BARS				*e*Sn	**Sn**	**20 55 54.4**	**-0.5**
BARS	**Barje**	**6.29**	**85**	*e*Pn	**Pn**	**20 54 44.9**	**+1.9**
BARS				*e*Sn	**Sn**	**20 55 54.4**	**-0.5**
GERES	**GERESS Array B**	**6.31**	**2**	Pn	**Pn**	**20 54 42.9**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=172,slow=13,SNR=8.0						
GERES				Sn	**Sn**	**20 55 53.0**	**-2.6**
	comp=Z,1.1nm,0.3s,baz=176,slow=24,SNR=9.0						
KHC	**Kasperske Hory**	**6.59**	**2**	*e*PN	**Pn**	**20 54 47.3**	**+0.1**
KHC				*ex*	x	20 55 58.6	
KHC	**Kasperske Hory**	**6.59**	**2**	Pn	**Pn**	**20 54 47.3**	**+0.1**
ZAPS	**Zavoj**	**6.90**	**81**	*e*Pn	**Pn**	**20 54 53.7**	**+2.3**
ZAPS				*e*Sn	**Sn**	**20 56 07.7**	**-2.2**
HINF	**Hinteralfeld**	**6.96**	**321**	*e*Pn	**Pn**	**20 54 52.3**	**0.0**
HINF				*e*Sn	**Sn**	**20 56 08.7**	**-2.8**
	comp=Z,4.9nm,0.4s						
HINF	**Hinteralfeld**	**6.96**	**321**	*e*Pn	**Pn**	**20 54 52.3**	**0.0**
VRAC	**Vranov**	**7.15**	**18**	Pn	**Pn**	**20 54 55.1**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=170,slow=11,SNR=2.6						
CDF	**Champ du Feu**	**7.23**	**326**	*e*Pn	**Pn**	**20 54 55.6**	**-0.4**
CDF				*e*Sn	**Sn**	**20 56 15.8**	**-2.4**
	comp=Z,5.0nm,0.5s						
CDF	**Champ du Feu**	**7.23**	**326**	*e*Pn	**Pn**	**20 54 55.6**	**-0.4**
HAU	**Haudompre**	**7.34**	**321**	*e*Pn	**Pn**	**20 54 57.7**	**+0.4**
HAU				*e*Sn	**Sn**	**20 56 16.5**	**-4.2**
	comp=Z,8.9nm,0.5s						
HAU	**Haudompre**	**7.34**	**321**	*e*Pn	**Pn**	**20 54 57.7**	**+0.4**
KEST	**Kesra**	**7.46**	**206**	Pn	Pn	20 55 04.0	+5.0
	comp=Z,0.1nm,0.3s,baz=286,slow=11,SNR=7.9						
CLL	**Collm**	**8.77**	**359**	*e*(Sg)	Sg	20 58 04.0	+12
AKASG	**Malin Array Be**	**13.63**	**48**	Pn	**Pn**	**20 56 20.3**	**-3.2**
	comp=Z,0.6nm,0.3s,baz=231,slow=8.8,SNR=3.4						
FINES	**FINESS Array B**	**20.43**	**18**	P	**P**	**20 57 46.0**	**-1.3**
	comp=Z,0.8nm,0.9s,baz=212,slow=13,SNR=3.9						
TORD	**Torodi Ar. Bea**	**30.96**	**202**	P	**P**	**20 59 29.1**	**+1.5**
	comp=Z,0.2nm,0.9s,baz=34,slow=10,SNR=3.3						

*IDC **14** 21:01:04.6±1.4, 33.66S×178.64W, h0km, mb4.1/1, mb1 4.4/2, mb1mx3.8/17, mbtmp4.3/2, ML4.2/1, MS3.5/3, Ms1 3.5/3, ms1mx3.1/25, Error ellipse: s-maj=50.3km s-min=31.6km az=123.0*

ISC 14 21:01:10.4±1.3, 33.75S±0.02×178.76W±0.03, h41km, n15, σ1§38/17, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.60**	**212**	PN	**Pn**	**21 02 16.9**	**-0.6**
MXZ				SN	**Sn**	**21 03 13.0**	**+3.3**
PUZ	**Puketiti**	**5.05**	**209**	PN	**Pn**	**21 02 21.5**	**-2.2**
PUZ				SN	**Sn**	**21 03 20.3**	**-0.4**
MWZ	**Matawai**	**5.59**	**213**	PN	**Pn**	**21 02 29.8**	**-1.3**
MWZ				SN	**Sn**	**21 03 34.7**	**+0.7**
URZ	**Urewera**	**5.72**	**216**	Pn	**Pn**	**21 02 31.6**	**-1.2**
	6.2nm,0.3s,baz=43,slow=6.3,SNR=25						
URZ				Sn	**Sn**	**21 03 37.9**	**+0.6**
	6.3nm,0.3s,baz=170,slow=19,SNR=7.2						
BKZ	**Black Stump Fm**	**6.74**	**214**	PN	**Pn**	**21 02 45.7**	**-1.1**
DZM	**Mont Dzumac**	**17.55**	**307**	LR	LR	21 10 07.8	
	comp=Z,92nm,19.8s,baz=196,slow=31						
STKA	**Stephens Creek**	**33.37**	**262**	LR	LR	21 19 16.5	
	comp=Z,98nm,20.0s,baz=26,slow=33						
ASAR	**Alice Springs**	**42.53**	**271**	P	**P**	**21 09 01.7**	**-0.5**
	2.4nm,0.8s,baz=108,slow=7.6,SNR=21						
ASAR				LR	LR	21 26 16.2	
	comp=Z,78nm,21.4s,baz=152,slow=36						
JOF	**Joensuu**	**145.26**	**336**	*ep*	**PKPdf**	**21 20 44.5**	**+1.7**
	0.3nm,0.4s						
KAF	**Kangasniemi**	**147.45**	**338**	*ep*	**PKPbc**	**21 20 48.2**	**-0.9**
	0.3nm,0.3s						
FINES	**FINESS Array B**	**148.03**	**338**	PKPbc	**PKPbc**	**21 20 50.2**	**-0.4**
	1.5nm,0.5s,baz=36,slow=5.0,SNR=19						
NB2	**NORSAR Subarra**	**151.91**	**350**	PKP	**PKPbc**	**21 21 00.5**	**+0.

CELP				*e*S	**Sn**	21 44 36.0	+1.5	
CELP	**Cerrillos**	**1.86**	**230**	⇓*i*P	**Pn**	21 44 11.6	-0.6	
CELP				*e*S	**Sn**	21 44 36.0	+1.5	
CELP	**Cerrillos**	**1.86**	**230**	⇓*i*P	**Pn**	21 44 11.6	-0.6	
CELP				*e*S	**Sn**	21 44 36.0	+1.5	
OBIP	**Obispado Ponce**	**1.90**	**230**	⇓*e*P	**Pn**	21 44 12.2	-0.5	
OBIP	**Obispado Ponce**	**1.90**	**230**	*e*S	**Sn**	21 44 36.9	+1.5	
OBIP	**Obispado Ponce**	**1.90**	**230**	⇓*e*P	**Pn**	21 44 12.2	-0.5	
OBIP				*e*S	**Sn**	21 44 36.9	+1.5	
OBIP	**Obispado Ponce**	**1.90**	**230**	⇓*e*P	**Pn**	21 44 12.2	-0.5	
OBIP				*e*S	**Sn**	21 44 36.9	+1.5	
LRS	**Lares**	**1.94**	**240**	⇓*e*P	**Pn**	21 44 12.5	-0.8	
LRS	**Lares**	**1.94**	**240**	⇓*e*P	**Pn**	21 44 12.5	-0.8	
LRS	**Lares**	**1.94**	**240**	⇓*e*P	**Pn**	21 44 12.5	-0.8	
AGPR	**Aguadilla, PR**	**2.09**	**247**	⇓*e*P	**Pn**	21 44 14.9	-0.3	
AGPR	**Aguadilla, PR**	**2.09**	**247**	*e*S	**Sn**	21 44 39.6	-0.4	
AGPR	**Aguadilla, PR**	**2.09**	**247**	⇑*e*P	**Pn**	21 44 14.9	-0.3	
AGPR				*e*S	**Sn**	21 44 39.6	-0.4	
AGPR	**Aguadilla, PR**	**2.09**	**247**	⇑*e*P	**Pn**	21 44 14.9	-0.3	
AGPR				*e*S	**Sn**	21 44 39.6	-0.4	
GBPR	**Guanica, Bosqu**	**2.15**	**233**	⇓*e*P	**Pn**	21 44 16.2	+0.2	
GBPR	**Guanica, Bosqu**	**2.15**	**233**	⇓*e*P	**Pn**	21 44 16.2	+0.2	
GBPR	**Guanica, Bosqu**	**2.15**	**233**	⇓*e*P	**Pn**	21 44 16.2	+0.2	
LSP	**Las Mesas**	**2.20**	**240**	⇓*e*P	**Pn**	21 44 16.5	-0.3	
LSP	**Las Mesas**	**2.20**	**240**	⇓*e*P	**Pn**	21 44 16.5	-0.3	
LSP	**Las Mesas**	**2.20**	**240**	⇓*e*P	**Pn**	21 44 16.5	-0.3	
CRPR	**Cabo Rojo, PR**	**2.31**	**237**	⇓*e*P	**Pn**	21 44 18.4	+0.2	
CRPR	**Cabo Rojo, PR**	**2.31**	**237**	⇓*e*P	**Pn**	21 44 18.4	+0.2	
CRPR	**Cabo Rojo, PR**	**2.31**	**237**	⇓*e*P	**Pn**	21 44 18.4	+0.2	
DR12	**Loma Pena Alta**	**4.10**	**264**	⇓*e*P	**Pn**	21 44 43.6	+0.7	
DR12	**Loma Pena Alta**	**4.10**	**264**	⇓*e*P	**Pn**	21 44 43.6	+0.7	
LZG	**Guadaloupe-1**	**4.44**	**134**	*e*P	**Pn**	21 44 45.4	-2.2	
SDDR	**Presa de Saban**	**5.87**	**268**	⇓*e*P	**Pn**	21 45 07.9	+0.7	
SDDR	**Presa de Saban**	**5.87**	**268**	⇓*e*P	**Pn**	21 45 07.9	+0.7	
SDDR	**Presa de Saban**	**5.87**	**268**	⇓*e*P	**Pn**	21 45 07.9	+0.7	
ROSC	**El Rosal**	**16.95**	**213**	LR	LR	21 54 52.2		
	comp=Z,88nm,18.5s,baz=189,slow=40							
SADO	**Sadowa**	**27.98**	**338**	LR	LR	21 59 27.4		
	comp=Z,45nm,18.8s,baz=55,slow=34							
TXAR	**Lajitas Array**	**36.41**	**293**	P	**P**	**21 50 43.3**	**+0.3**	
TXAR	**Lajitas Array**	**36.41**	**293**	P	**P**	**21 50 43.3**	**+0.3**	
	0.4nm,0.8s,baz=102,slow=8.4,SNR=4.3							
ULM	**Lac du Bonnet**	**39.41**	**329**	LR	LR	22 07 24.0		
	comp=Z,46nm,21.5s,baz=294,slow=36							
PDAR	**Pinedale Array**	**44.07**	**312**	P	**P**	**21 51 45.2**	**-1.2**	
PDAR	**Pinedale Array**	**44.07**	**312**	P	**P**	**21 51 45.2**	**-1.2**	
	0.9nm,0.6s,baz=107,slow=6.0,SNR=5.5							
YKA	**Yellowknife Ar**	**54.86**	**334**	P	**P**	**21 53 08.4**	**+0.4**	
YKA	**Yellowknife Ar**	**54.86**	**334**	P	**P**	**21 53 08.4**	**+0.4**	
	0.2nm,0.6s,baz=114,slow=7.5,SNR=3.7							
ILAR	**Eielson Array**	**69.24**	**333**	P	**P**	**21 54 44.5**	**0.0**	
ILAR	**Eielson Array**	**69.24**	**333**	P	**P**	**21 54 44.5**	**0.0**	
	0.3nm,0.6s,baz=101,slow=4.3,SNR=4.9							

IDC 14 21:50:26.1±27.0, 20°.91S×178°.08W, h542km±267km, mb3.2/3, mb1 3.3/3, mb1mx3.0/18, mbtmp3.2/3, Error ellipse: s-maj=167.0km s-min=43.8km az=67.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.37**	**265**	P	P	21 56 19.9	-0.1
	2.0nm,0.5s,baz=104,slow=8.3,SNR=4.8						
STKA	**Stephens Creek**	**37.54**	**245**	P	P	21 56 53.8	-0.6
	1.8nm,0.5s,baz=93,slow=12,SNR=4.3						
ASAR	**Alice Springs**	**44.35**	**257**	P	P	21 57 48.6	0.0
	2.2nm,0.5s,baz=97,slow=8.0,SNR=36						
AKASG	**Malin Array Be**	**143.33**	**331**	PKP	PKPab	22 08 56.9	+0.1
	1.5nm,0.6s,baz=39,slow=4.3,SNR=4.7						
BRTR	**Keskin Array B**	**147.06**	**312**	PKPbc	PKPbc	22 09 08.0	-0.6
	0.5nm,0.7s,baz=138,slow=5.3,SNR=3.0						
GERES	**GERESS Array B**	**150.57**	**344**	PKPbc	PKPbc	22 09 16.9	0.0
	0.1nm,0.3s,baz=48,slow=2.0,SNR=4.6						
TORD	**Torodi Ar. Bea**	**172.28**	**178**	PKP	PKPdf	22 09 33.3	-0.4
	0.3nm,0.8s,baz=241,slow=1.5,SNR=2.3						
TORD				PKPab	PKPab	22 11 01.0	-0.3
	0.4nm,1.0s,baz=177,slow=2.9,SNR=2.5						

*ISCJB **14** 21:53:09.6±0.4, 50°.32N±0°.03×19°.01E±0°.02, h0km, Error ellipse: s-maj=4.3km s-min=2.1km az=9.9*
*IPEC **14** 21:53:11.4±0.2, 50°.31N×19°.07E, h3km±1km, ML2.4/3, Error ellipse: s-maj=2.7km s-min=1.1km az=171.0*
*CSEM **14** 21:53:11.4±0.1, 50°.24N×19°.05E, h2km, ML3.3/9, Error ellipse: s-maj=4.6km s-min=2.0km az=8.0*
*BGR **14** 21:53:12.2±0.2, 50°.25N×19°.07E, h1km, ML3.1/12, Error ellipse: s-maj=11.1km s-min=3.3km az=6.0*
*PRU **14** 21:53:12.1, 50°.24N×19°.07E, h0km*
*IDC **14** 21:53:13.2±2.0, 50°.14N×19°.03E, h0km, mb1 3.4/4, mb1mx3.1/25, mbtmp3.2/4, ML2.9/4, Error ellipse: s-maj=35.2km s-min=10.0km az=131.0*
*VIE **14** 21:53:13.7±0.8, 49°.77N×19°.11E, h0km, mb2.1/4, ML2.6/4, Error ellipse: s-maj=5.9km s-min=4.8km az=167.0 55 km S of Katowice Suspected Mining induced.*

ISC 14 21:53:10.9±0.7, 50°.18N±0°.03×19°.06E±0°.01, h0km, n76, σ1s22/120, 5C-12D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.48**	**85**	*e*Pg	**Pg**	**21 53 20.6**	**+0.6**
OJC				*e*Sg	**Sg**	**21 53 27.3**	**+1.1**
OJC	**Ojcow**	**0.48**	**85**	*e*Pg	**Pg**	**21 53 20.7**	**+0.6**
OJC				*e*Sg	**Sg**	**21 53 27.1**	**+0.9**
OJC	**Ojcow**	**0.48**	**85**	Pg	**Pg**	**21 53 20.6**	**+0.6**
OJC				*e*Sg	**Sg**	**21 53 27.1**	**+0.9**
RAC	**Raciborz**	**0.56**	**260**	*e*Pg	**Pb**	**21 53 25.2**	**+1.6**
RAC				*e*Sg	**Sn**	**21 53 34.7**	**-1.5**
OKC	**Ostrava-Krasne**	**0.68**	**240**	*e*PG	**Pb**	**21 53 26.3**	**+0.6**
OKC				*e*SG	**Sb**	**21 53 35.8**	**+0.2**
	comp=Z,27nm,0.2s						
OKC	**Ostrava-Krasne**	**0.68**	**240**	*e*Pg	**Pb**	**21 53 26.2**	**+0.6**
	baz=51						
OKC				Sg	**Sb**	**21 53 35.8**	**+0.2**
	27nm,0.2s						
MORC	**Moravsky Berou**	**1.06**	**248**	⇑*i*P	**Pg**	**21 53 31.9**	**+0.8**
MORC	**Moravsky Berou**	**1.06**	**248**	⇑*i*P	**Pg**	**21 53 31.9**	**+0.8**
MORC	**Moravsky Berou**	**1.06**	**248**	*e*Pg	**Pb**	**21 53 32.7**	**+0.6**
	baz=61						
MORC				*e*Sg	**Sb**	**21 53 46.6**	**+0.1**
	98nm,0.3s,baz=61						
MORC				S	**Sg**	**21 53 47.1**	**+2.3**
NIE	**Niedzica**	**1.12**	**133**	*e*Pg	**Pg**	**21 53 33.0**	**+0.7**
NIE				*e*Sg	**Sb**	**21 53 49.1**	**+0.9**
NIE	**Niedzica**	**1.12**	**133**	*e*Pg	**Pg**	**21 53 33.0**	**+0.7**
NIE				*e*Sg	**Sb**	**21 53 49.1**	**+0.9**
KRLC	**Kraliky**	**1.47**	**267**	*e*PG	**Pn**	**21 53 38.6**	**0.0**
KRLC	**Kraliky**	**1.47**	**267**	Pg	**Pn**	**21 53 38.6**	**0.0**
DPC	**Dobruska-Polom**	**1.76**	**276**	*e*PG	**Pn**	**21 53 43.6**	**+0.9**
DPC				*e*SG	**Sb**	**21 54 07.2**	**+0.5**
	comp=Z,38nm,0.5s						
DPC	**Dobruska-Polom**	**1.76**	**276**	*e*Pn	**Pn**	**21 53 42.9**	**+0.2**
	baz=90						
DPC	**Dobruska-Polom**	**1.76**	**276**	Pg	**Pn**	**21 53 43.6**	**+0.9**
DPC				Sg	**Sb**	**21 54 07.2**	**+0.5**
	38nm,0.5s						
VRAC	**Vranov**	**1.82**	**242**	⇓*i*P	**Pn**	**21 53 44.5**	**+1.0**
VRAC	**Vranov**	**1.82**	**242**	Pn	**Pb**	**21 53 44.9**	**-0.2**
	5.3nm,0.3s,baz=68,slow=11,SNR=42						
VRAC				Lg	Lg	21 54 09.9	
	10nm,0.3s,baz=158,slow=17,SNR=13						
VRAC	**Vranov**	**1.82**	**242**	⇓*i*P	**Pn**	**21 53 44.5**	**+1.0**
VRAC				S	**Sb**	**21 54 08.8**	**+0.4**
VRAC				*e*Sg	**Sg**	**21 54 10.5**	**+1.1**
	19nm,0.2s,baz=57						
KSP	**Ksiaz**	**1.88**	**292**	*e*Pn	**Pn**	**21 53 45.0**	**+0.7**
KSP				*e*Sg	**Sg**	**21 54 11.8**	**+0.5**
KSP	**Ksiaz**	**1.88**	**292**	*e*Pn	**Pn**	**21 53 44.9**	**+0.6**
KSP				*e*Pg	**Pg**	**21 53 47.7**	**+0.8**
KSP				*e*Sg	**Sg**	**21 54 12.4**	**+1.1**
KSP	**Ksiaz**	**1.88**	**292**	*e*Pn	**Pn**	**21 53 44.9**	**+0.6**
KSP	**Ksiaz**	**1.88**	**292**	*e*Pg	**Pg**	**21 53 47.8**	**+0.8**
KSP				Sg	**Sg**	**21 54 11.8**	**+0.5**
KRUC	**Moravsky**	**2.06**	**238**	*e*Pn	**Pn**	**21 53 47.4**	**+0.6**
	baz=53						
KRUC				*e*Sn	**Sb**	**21 54 16.1**	**+0.8**
	17nm,0.4s,baz=53						
PSZ	**Piszkesteto**	**2.33**	**166**	⇓*i*P	**Pn**	**21 53 51.1**	**+0.5**
PSZ	**Piszkesteto**	**2.33**	**166**	*e*	**Pg**	**21 53 56.8**	**+1.2**
PSZ				*e*		21 54 25.6	
PSZ	**Piszkesteto**	**2.33**	**166**	⇓*i*P	**Pn**	**21 53 51.1**	**+0.5**
PSZ				S	**Sb**	**21 54 22.4**	**-0.8**
KWP	**Kalwaria Pacla**	**2.42**	**102**	*e*Pn	**Pn**	**21 53 52.1**	**+0.3**
KWP				*e*Sn	**Sn**	**21 54 21.7**	**-0.4**
KWP				*e*Sg	**Sg**	**21 54 29.0**	**+0.3**
KWP	**Kalwaria Pacla**	**2.42**	**102**	⇓*i*P	**Pn**	**21 53 52.0**	**+0.2**
KWP	**Kalwaria Pacla**	**2.42**	**102**	*e*Pn	**Pn**	**21 53 52.0**	**+0.2**
KWP				*e*Pg	**Pg**	**21 53 59.5**	**+2.2**
KWP				*e*Sn	**Sb**	**21 54 25.9**	**+0.1**
KWP				*e*Sg	Sg	21 54 35.3	+6.6
KWP	**Kalwaria Pacla**	**2.42**	**102**	*e*Pn	**Pn**	**21 53 52.1**	**+0.3**
KWP	**Kalwaria Pacla**	**2.42**	**102**	*e*Pg	**Pg**	**21 53 59.6**	**+2.2**
KWP				Sn	**Sn**	**21 54 21.7**	**-0.4**
KWP				S	**Sb**	**21 54 23.3**	**-2.5**
KWP				Sg	**Sg**	**21 54 29.0**	**+0.3**
PVCC	**Panska Ves**	**2.89**	**279**	*e*SG	**Sg**	**21 54 43.9**	**+0.1**
	comp=Z,34nm,0.3s						
PVCC	**Panska Ves**	**2.89**	**279**	Sg	**Sg**	**21 54 43.9**	**+0.1**
	34nm,0.3s						
PRU	**Pruhonice**	**2.91**	**268**	*e*PN	**Pn**	**21 53 58.0**	**-0.5**
PRU				*e*PG	**Pb**	**21 54 04.5**	**+0.8**
PRU				*e*SG	**Sg**	**21 54 42.9**	**-1.5**
	comp=Z,9.7nm,0.5s						
PRU	**Pruhonice**	**2.91**	**268**	Pn	**Pn**	**21 53 58.0**	**-0.5**
TRPA	**Tarpa**	**3.07**	**131**	⇓*i*P	**Pn**	**21 54 01.9**	**+1.3**
TRPA	**Tarpa**	**3.07**	**131**	⇓*i*P	**Pn**	**21 54 01.9**	**+1.3**
CONA	**Conrad Observa**	**3.08**	**224**	⇓*i*Pn	**Pn**	**21 54 00.2**	**-0.7**
CONA				⇓*i*Sn	**Sn**	**21 54 36.6**	**-1.9**
CONA	**Conrad Observa**	**3.08**	**224**	Pn	**Pn**	**21 54 00.2**	**+0.7**
CONA				Sn	**Sn**	**21 54 36.6**	**-1.9**
BRG	**Berggiesshubel**	**3.33**	**284**	PG	**Pb**	**21 54 12.8**	**+2.0**
BRG				SG	**Sg**	**21 54 57.2**	**-0.7**
	8.3nm,0.5s						
BRG	**Berggiesshubel**	**3.33**	**284**	*e*Sg	**Sg**	**21 54 58.9**	**+1.0**
BRG	**Berggiesshubel**	**3.33**	**284**	Sg	**Sg**	**21 54 58.9**	**+1.0**
FBE	**Freiberg**	**3.71**	**284**	*e*Sg	**Sg**	**21 55 11.5**	**+1.5**
FBE	**Freiberg**	**3.71**	**284**	Sg	**Sg**	**21 55 11.5**	**+1.5**
KHC	**Kasperske Hory**	**3.71**	**256**	*e*PN	**Pn**	**21 54 09.9**	**+0.4**
KHC				*e*PG	**Pb**	**21 54 17.0**	**-0.3**
KHC				*e*SG	**Sg**	**21 55 10.4**	**+0.4**
	comp=Z,9.4nm,0.3s						
KHC	**Kasperske Hory**	**3.71**	**256**	Pn	**Pn**	**21 54 09.9**	**+0.4**
KHC				Sg	**Sg**	**21 55 10.4**	**+0.4**
	9.4nm,0.3s						
GEC2	**GERESS Array S**	**3.74**	**251**	*e*Pn	**Pn**	**21 54 11.5**	**+1.6**
GEC2				*e*Sg	**Sg**	**21 55 09.3**	**-1.6**
GEC2	**GERESS Array S**	**3.74**	**251**	Pn	**Pn**	**21 54 11.5**	**+1.6**
GEC2				Sg	**Sg**	**21 55 09.3**	**-1.6**
GERES	**GERESS Array B**	**3.74**	**251**	Pn	**Pn**	**21 54 11.8**	**+1.9**
	0.4nm,0.3s,baz=68,slow=15,SNR=13						
GERES				Lg	Lg	21 55 09.1	
	1.9nm,0.3s,baz=63,slow=27,SNR=9.6						
MOA	**Molln**	**3.92**	**235**	⇓*i*Pn	**Pn**	**21 54 12.5**	**+0.2**
MOA				⇑*i*Sg	**Sg**	**21 55 16.1**	**-0.8**
	5.2nm,0.3s						
MOA	**Molln**	**3.92**	**235**	Pn	**Pn**	**21 54 12.5**	**+0.2**
MOA				Sg	**Sg**	**21 55 16.1**	**-0.8**
	5.2nm,0.3s						
CLL	**Collm**	**4.00**	**289**	*e*Sg	**Sg**	**21 55 18.7**	**-0.7**
CLL	**Collm**	**4.00**	**289**	*e*Pg	**Pg**	**21 54 30.0**	**+2.4**
CLL				*e*Sg	**Sg**	**21 55 23.0**	**+3.5**
	comp=Z,9.0nm,0.8s						
CLL	**Collm**	**4.00**	**289**	Sg	**Sg**	**21 55 18.7**	**-0.7**
WET	**Wettzell**	**4.15**	**258**	*e*Pn	**Pn**	**21 54 16.5**	**+1.1**
WET				*e*Sg	**Sg**	**21 55 21.7**	**-2.3**
WET	**Wettzell**	**4.15**	**258**	Pn	**Pn**	**21 54 16.5**	**+1.1**
WET				Sg	**Sg**	**21 55 21.7**	**-2.3**
TANN	**Tannenbergstha**	**4.23**	**276**	*e*Pn	**Pn**	**21 54 17.8**	**+1.2**
TANN				*e*Sg	**Sg**	**21 55 26.9**	**+0.1**
NKC	**Novy Kostel**	**4.25**	**273**	*e*Pn	**Pn**	**21 54 17.1**	**+0.3**
NKC				*e*Sg	**Sg**	**21 55 27.3**	**+0.2**
SCHF	**Schoenfels**	**4.28**	**279**	*e*Sg	**Sg**	**21 55 28.1**	**-0.3**
SCHF	**Schoenfels**	**4.28**	**279**	Sg	**Sg**	**21 55 28.1**	**-0.3**
WERN	**Wernitzgruen**	**4.29**	**274**	*e*Pn	**Pn**	**21 54 18.2**	**+0.8**
WERD	**Werda**	**4.33**	**276**	*e*Sg	**Sg**	**21 55 29.4**	**-0.6**
WERD	**Werda**	**4.33**	**276**	Sg	**Sg**	**21 55 29.4**	**-0.6**
PLN	**Plauen**	**4.43**	**277**	*e*Sg	**Sg**	**21 55 32.7**	**-0.4**
PLN	**Plauen**	**4.43**	**277**	Sg	**Sg**	**21 55 32.7**	**-0.4**
RJOB	**Jochberg**	**4.80**	**242**	*e*Sg	**Sg**	**21 55 48.7**	**+3.9**
RJOB	**Jochberg**	**4.80**	**242**	Sg	**Sg**	**21 55 48.7**	**+3.9**
BURAR	**Bucovina Array**	**4.81**	**120**	⇓*i*P	**Pn**	**21 54 25.6**	**+1.0**
BURAR	**Bucovina Array**	**4.81**	**120**	⇓*i*P	**Pn**	**21 54 25.6**	**+1.0**
BZS	**Buzias**	**4.88**	**158**	⇑*i*P	**Pn**	**21 54 26.4**	**+0.9**
BZS	**Buzias**	**4.88**	**158**	⇑*i*P	**Pn**	**21 54 26.4**	**+0.9**
BSD	**Bornholm Skovb**	**5.54**	**335**	*i* P	**Pn**	**21 54 34.6**	**+0.1**
BSD				*e*S	Sn	21 55 25.1	-14
NOA	**NORSAR Array B**	**11.74**	**341**	Pn	**Pn**	**21 55 57.4**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=159,slow=11,SNR=2.8						
FINES	**FINESS Array B**	**11.95**	**16**	Pn	**Pn**	**21 55 59.0**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=194,slow=11,SNR=7.6						
ARCES	**ARCESS Array B**	**19.66**	**7**	Pn	**P**	**21 57 39.7**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=191,slow=12,SNR=4.4						

AUST 14 22:09:06.0±0.0, 7°.95S×130°.65E, h117km, Error ellipse: s-maj=1.6km s-min=0.9km az=298.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**3.09**	**42**	P	Pn	22 09 53.8	+0.3
TLE				S	Sn	22 10 28.4	-1.7
	baz=3.1,SNR=5.8						
MTN	**Manton Dam**	**4.89**	**174**	P	Pn	22 10 18.7	+1.3
	baz=4.9,SNR=19						
MTN				S	Sn	22 11 14.2	+1.2
	baz=4.9,SNR=15						
KDU	**Kakadu**	**5.04**	**159**	P	Pn	22 10 20.7	+1.3
	baz=5.1,SNR=36						
KDU				S	Sn	22 11 15.7	-0.9
	baz=5.1,SNR=7.0						
MMPI	**Merauke**	**9.65**	**94**	P	Pn	22 11 21.4	-0.4
	baz=9.6,SNR=3.6						
FITZ	**Fitzroy Crossi**	**11.21**	**205**	P	Pn	22 11 41.7	-1.2
	baz=11,SNR=53						
FITZ				S	Sn	22 13 42.0	-4.2
	baz=11,SNR=4.2						
COEN	**Coen**	**13.67**	**117**	P	Pn	22 12 15.8	+0.7
	baz=14,SNR=7.1						
QIS	**Mount Isa**	**15.24**	**146**	S	Sn	22 15 19.0	-4.7
	baz=15,SNR=5.7						

IDC 14 22:09:47.9±1.6, 33°.63S×178°.75W, h0km, mb4.0/1, mb1 4.3/2, mb1mx3.8/17, mbtmp4.2/2, ML4.1/1, Error ellipse: s-maj=52.6km s-min=34.0km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.71**	**215**	Pn	Pn	22 11 13.8	-0.1
	4.9nm,0.3s,baz=18,slow=3.9,SNR=22						
URZ				Sn	Sn	22 12 20.1	0.0
	5.2nm,0.3s,baz=139,slow=23,SNR=7.3						
ASAR	**Alice Springs**	**42.41**	**271**	P	P	22 17 44.5	+0.1
	1.7nm,0.7s,baz=113,slow=7.4,SNR=8.7						
JOF	**Joensuu**	**145.15**	**336**	*ep*	PKPbc	22 29 25.9	-0.1
KAF	**Kangasniemi**	**147.34**	**338**	*ep*	PKPdf	22 29 30.3	+0.1
	1.2nm,0.6s						
FINES	**FINESS Array B**	**147.92**	**338**	PKPbc	PKPbc	22 29 33.3	-0.9
	2.1nm,0.6s,baz=42,slow=4.0,SNR=17						
BRTR	**Keskin Array B**	**153.41**	**293**	PKPbc	PKPbc	22 29 48.0	-0.3
	0.8nm,0.7s,baz=133,slow=4.0,SNR=3.9						
TORD	**Torodi Ar. Bea**	**159.60**	**181**	PKPab	PKPab	22 30 27.1	-0.1
	0.4nm,0.9s,baz=174,slow=5.7,SNR=2.2						

IDC 14 22:13:26.5±2.3, 30°.95N×83°.51E, h0km, mb3.4/5, mb1 3.6/7, mb1mx3.4/29, mbtmp3.4/7, ML3.1/2, Error ellipse: s-maj=54.4km s-min=29.2km az=52.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**15.85**	**357**	Pn	Pn	22 17 10.8	-0.1
	0.1nm,0.3s,baz=186,slow=11,SNR=6.5						
CMAR	**Chiang Mai Ar**	**18.71**	**128**	P	Pn	22 17 47.0	0.0
	0.0nm,0.3s,baz=312,slow=12,SNR=6.0						
KURBB	**Kurchatov Arra**	**20.00**	**351**	P	P	22 17 59.5	-1.0
	0.7nm,0.7s,baz=171,slow=10,SNR=13						
ZALV	**Zalesovo Beam**	**23.00**	**2**	P	P	22 18 32.8	+0.1
	0.4nm,0.5s,baz=165,slow=12,SNR=3.5						
SONM	**Songino Array**	**24.29**	**40**	P	P	22 18 45.9	+0.2
	0.9nm,0.8s,baz=231,slow=9.7,SNR=10.0						
FINES	**FINESS Array B**	**47.85**	**327**	P	P	22 22 06.2	+0.5
	1.2nm,0.8s,baz=123,slow=10,SNR=3.0						
YKA	**Yellowknife Ar**	**85.75**	**8**	P	P	22 26 06.3	-0.8
	0.2nm,0.6s,baz=337,slow=5.1,SNR=5.6						

*BJI **14** 22:24:36.5, 43°.55N×124°.59E, h10km, mB5.2/4, mb4.8/8*
*IDC **14** 22:24:40.8±0.5, 42°.80S×124°.78E, h0km, mb4.4/12, mb1 4.5/13, mb1mx4.4/18, mbtmp4.4/13, ML4.2/1, MS3.4/4, Ms1 3.4/4, ms1mx3.2/23, Error ellipse: s-maj=33.4km s-min=14.7km az=94.0*
*NEIC **14** 22:24:42.3±0.3, 42°.70S×124°.59E, h10km, mb4.5/11, Error ellipse: s-maj=11.9km s-min=8.1km az=97.0*

ISC 14 22:24:43.5±0.9, 42°.72S±0°.08×124°.6E±0°.1, h17km±5km, n67, σ0s90/70, mb4.5/20, South of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**11.36**	**327**	Pn	Pn	**22 27 22.7**	**-2.2**
NWAO				Sn	Sn	22 29 21.5	-10
NWAO	**Narrogin (SRO)**	**11.36**	**327**	Pn	**Pn**	**22 27 22.7**	**-2.2**
	5.4nm,0.3s,baz=144,slow=9.6,SNR=32						
NWAO				Sn	Sn	22 29 21.5	-10
	1.3nm,0.3s,baz=17,slow=14,SNR=3.5						
NWAO				LR	LR	22 30 53.6	
	comp=Z,332nm,21.1s,baz=87,slow=32						
STKA	**Stephens Creek**	**17.31**	**57**	*e*Pn	**Pn**	**22 28 43.8**	**-0.5**
	1.3nm,0.8s						
STKA	**Stephens Creek**	**17.31**	**57**	P	**Pn**	**22 28 44.6**	**+0.3**
	0.5nm,0.3s,baz=249,slow=8.0,SNR=8.7						
STKA				LR	LR	22 34 34.3	
	comp=Z,122nm,19.6s,baz=205,slow=34						
ASAR	**Alice Springs**	**20.52**	**25**	P	**P**	**22 29 19.8**	**-1.1**
ASAR				PcP	**PcP**	**22 33 31.6**	**-0.4**
ASAR	**Alice Springs**	**20.52**	**25**	P	**P**	**22 29 19.8**	**-1.1**
	4.9nm,0.7s,baz=198,slow=9.0,SNR=29						
ASAR				PcP	**PcP**	**22 33 31.6**	**-0.4**
	1.2nm,0.6s,baz=192,slow=0.9,SNR=9.0						
ASAR				LR	LR	22 37 08.4	
	comp=Z,80nm,20.1s,baz=174,slow=36						
AS31	**Alice Springs**	**20.53**	**25**	*e*P	**P**	**22 29 20.5**	**-0.4**
MBWA	**Marble Bar**	**21.88**	**348**	*e*P	**P**	**22 29 35.3**	**-0.1**
	13nm,0.9s						
WRAB	**Tennant Creek**	**24.18**	**23**	*e*P	**P**	**22 29 57.0**	**-1.9**
	21nm,1.1s						
FITZ	**Fitzroy Crossi**	**24.56**	**2**	*e*P	**P**	**22 30 02.5**	**+0.1**
	5.8nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.56**	**2**	P	**P**	**22 30 02.4**	**+0.1**
	5.4nm,0.8s,baz=196,slow=13,SNR=10						
FITZ				LR	LR	22 39 18.2	
	comp=Z,100nm,19.3s,baz=192,slow=36						
ARMA	**Armidale**	**24.85**	**69**	*e*P	**P**	**22 30 05.1**	**0.0**
	18nm,0.9s						
VNDA	**Vanda**	**38.06**	**168**	*e*P	**P**	**22 32 00.5**	**0.0**
	6.1nm,0.8s						
VNDA	**Vanda**	**38.06**	**168**	P	**P**	**22 32 00.2**	**-0.2**
	5.8nm,0.7s,baz=312,slow=8.3,SNR=34						
QSPA	**South Pole Qui**	**47.40**	**180**	*e*P	**P**	**22 33 16.2**	**-0.4**
	4.0nm,0.6s						
QSPA	**South Pole Qui**	**47.40**	**180**	P	**P**	**22 33 15.1**	**-1.4**
	3.5nm,0.6s,baz=313,slow=1.1,SNR=29						
**SNAA

IPIL	Ipil	1.89	287	*e*P	Pn	22 35 24.5	+1.2
IPIL				*e*S	Sb	22 35 48.5	-0.6

IDC **14** *22:37:42.0±1.0, 16°.45S×177°.66W, h0km, mb4.2/9, mb1 4.4/9, mb1mx4.1/21, mbtmp4.2/9, MS4.2/8, Ms1 4.2/8, ms1mx3.9/25, Error ellipse: s-maj=41.4km s-min=20.6km az=134.0*

ISCJB **14** *22:37:45.1±0.5, 16°.5S±0°.1×177°.72W±0°.06, h33km, mb4.2/11, MS4.3/5, Error ellipse: s-maj=16.8km s-min=7.6km az=164.3*

NEIC **14** *22:37:46.9±0.5, 16°.40S×177°.74W, h35km, mb4.6/5, Error ellipse: s-maj=20.2km s-min=10.4km az=155.0*

GCMT **14** *22:37:48.2±0.2, 16°.17S×177°.65W, h17km±1km, MW5.1, Moment Tensor Solution. s28,c35; s79,c124; Moment tensor: Scale 10^16 Nm; Mrr 0.48±.17; Mθθ -4.84±.17; Mφφ 4.36±.15; Mrθ 0.51±.40; Mrφ 0.06±.13; Mθφ 3.67±.58; Best double couple: Mo 5.70000×10^16 NP1:φs 310.00000°, δ 63.00000°, λ 162.00000°. NP2:φs 49.00000°, δ 74.00000°, λ 28.00000°. Principal axes: T 6.5800, Plg31.0000°, Azm272.0000°; N -1.6800, Plg58.0000°, Azm76.0000°; P -4.9000, Plg7.0000°, Azm178.0000°; Data Used: II IU IC G CN.*

ISC 14 22:37:47.2±0.5, 16°.5S±0°.1×177°.64W±0°.08, h35km, n44, σ1 s30/35, mb4.4/11, MS4.2/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.30**	**253**		*e*Pn	Pn	22 38 45.8	-4.4
MSVF					*e*Sn	**Sn**	**22 39 38.0**	**-1.2**
AFI	**Afiamalu**	**6.22**	**66**		Pn	**Pn**	**22 39 15.6**	**-1.1**
AFI	**Afiamalu**	**6.22**	**66**		LR	LR	22 41 03.1	
	comp=Z,3μm,19.6s,baz=253,slow=32							
DZM	**Mont Dzumac**	**16.01**	**247**		*e*LR	LR	22 45 40.5	
	2μm,25.6s							
DZM	**Mont Dzumac**	**16.01**	**247**		LR	LR	22 45 19.0	
	comp=Z,170nm,20.7s,baz=36,slow=28							
RAR	**Rarotonga**	**17.54**	**108**		LR	LR	22 46 46.2	
	comp=Z,994nm,21.7s,baz=289,slow=31							
URZ	**Urewera**	**22.16**	**191**		P	**P**	**22 42 41.7**	**+1.6**
URZ	**Urewera**	**22.16**	**191**		P	**P**	**22 42 41.7**	**+1.6**
	4.7nm,0.5s,baz=58,slow=4.6,SNR=5.1							
URZ					LR	LR	22 49 30.4	
	comp=Z,957nm,21.4s,baz=36,slow=32							
PPT2	**Papeete2**	**26.84**	**96**		*e*S	**S**	**22 47 56.0**	**-3.1**
	197nm,16.2s							
PPT2					*e*LR	LR	22 50 04.0	
	2μm,28.8s							
PPT	**Papeete**	**26.84**	**96**		LR	LR	22 50 59.5	
	comp=Z,584nm,20.0s,baz=1.7,slow=30							
TBI	**Tubuai**	**27.32**	**109**		*e*S	**S**	**22 48 08.3**	**+1.9**
	313nm,19.5s							
TBI					*e*LR	LR	22 50 25.6	
	2μm,30.0s							
TBI					*e*T	T	23 11 52.9	
	5.9nm,0.3s							
VAH	**Vaihoa**	**28.88**	**92**		*e*T	T	23 13 49.0	
	8.1nm,0.3s							
CTA	**Charters Tower**	**34.42**	**258**		P	**P**	**22 44 31.6**	**0.0**
CTA	**Charters Tower**	**34.42**	**258**		P	**P**	**22 44 31.6**	**0.0**
	8.6nm,1.0s,baz=86,slow=15,SNR=4.1							
CTAO	**Charters Tower**	**34.42**	**258**		*e*P	**P**	**22 44 31.2**	**-0.5**
	6.7nm,0.8s							
COEN	**Coen**	**37.85**	**268**		P	**P**	**22 45 00.5**	**-0.5**
STKA	**Stephens Creek**	**39.95**	**240**		*e*P	**P**	**22 45 18.2**	**-0.2**
	2.5nm,0.9s							
STKA	**Stephens Creek**	**39.95**	**240**		P	**P**	**22 45 18.8**	**+0.4**
	12nm,1.0s,baz=96,slow=5.6,SNR=5.3							
STKA					LR	LR	22 58 22.7	
	comp=Z,234nm,21.3s,baz=216,slow=31							
RKT	**Rikitea**	**40.57**	**106**		*e*LR	LR	22 56 23.1	
	1μm,29.0s							
WRAB	**Tennant Creek**	**45.61**	**258**		*e*P	**P**	**22 46 03.2**	**-1.3**
	5.7nm,1.1s							
AS31	**Alice Springs**	**45.89**	**253**		*e*P	**P**	**22 46 06.1**	**-0.5**
ASAR	**Alice Springs**	**45.89**	**253**		P	**P**	**22 46 04.9**	**-1.8**
ASAR	**Alice Springs**	**45.89**	**253**		P	**P**	**22 46 04.9**	**-1.8**
	3.1nm,0.6s,baz=84,slow=8.1,SNR=23							
ASAR					LR	LR	23 04 15.6	
	comp=Z,671nm,18.4s,baz=90,slow=35							
FITZ	**Fitzroy Crossi**	**53.99**	**259**		*e*P	**P**	**22 47 07.8**	**-0.4**
	6.7nm,1.0s							
FITZ	**Fitzroy Crossi**	**53.99**	**259**		P	**P**	**22 47 08.1**	**-0.2**
	5.5nm,1.1s,baz=69,slow=4.0,SNR=3.9							
MBWA	**Marble Bar**	**59.14**	**255**		*e*P	**P**	**22 47 44.3**	**-0.5**
SBA	**Scott Base**	**61.85**	**184**		P	**P**	**22 48 02.3**	**-0.1**
PETK	**Petropavlovsk-**	**72.53**	**345**		P	**P**	**22 49 12.2**	**+1.9**
PETK	**Petropavlovsk-**	**72.53**	**345**		P	**P**	**22 49 12.2**	**+1.9**
	5.3nm,0.8s,baz=146,slow=9.0,SNR=4.2							
QSPA	**South Pole Qui**	**73.54**	**180**		*e*P	**P**	**22 49 17.0**	**+0.6**
	27nm,1.8s							
YBH	**Yreka Blue Hor**	**76.98**	**39**		LR	LR	23 14 02.9	
	comp=Z,191nm,21.4s,baz=12,slow=28							
ILAR	**Eielson Array**	**84.37**	**13**		P	**P**	**22 50 16.1**	**+0.8**
ILAR	**Eielson Array**	**84.37**	**13**		P	**P**	**22 50 16.1**	**+0.8**
	0.7nm,0.9s,baz=235,slow=5.7,SNR=4.8							
TXAR	**Lajitas Array**	**84.63**	**57**		P	**P**	**22 50 16.1**	**-1.5**
TXAR	**Lajitas Array**	**84.63**	**57**		P	**P**	**22 50 16.1**	**-1.5**
	0.2nm,0.5s,baz=254,slow=2.2,SNR=3.4							
YKA	**Yellowknife Ar**	**92.76**	**24**		P	**P**	**22 50 55.5**	**0.0**
YKA	**Yellowknife Ar**	**92.76**	**24**		P	**P**	**22 50 55.5**	**0.0**
	0.1nm,0.6s,baz=238,slow=3.5,SNR=2.5							
CLL	**Collm**	**144.26**	**349**		*i* PKiKP	**PKiKP**	**22 57 22.3**	**-0.7**
BRTR	**Keskin Array B**	**144.30**	**317**		PKP	**PKPdf**	**22 57 20.6**	**+0.6**
BRTR	**Keskin Array B**	**144.30**	**317**		PKP	**PKPdf**	**22 57 20.6**	**+0.6**
	2.6nm,0.9s,baz=0.0,slow=1.2,SNR=7.9							
TREC	**Trest**	**145.60**	**345**		*e*PKP	**PKPab**	**22 57 25.2**	**+2.9**
KHC	**Kasperske Hory**	**146.20**	**347**		*e*PKP	PKPab	22 57 30.1	+5.5
GERES	**GERESS Array B**	**146.44**	**346**		PKPbc	**PKPdf**	**22 57 23.0**	**-0.4**
GERES	**GERESS Array B**	**146.44**	**346**		PKPbc	**PKPdf**	**22 57 23.0**	**-0.4**
	0.5nm,0.7s,baz=23,slow=3.2,SNR=3.4							

ISCJB **14** *22:44:45.1±0.6, 19°.40N±0°.04×155°.28W±0°.03, h9km±3km, mb5.0/149, MS4.3/22, Error ellipse: s-maj=7.4km s-min=4.0km az=176.9*

IDC **14** *22:44:45.8±0.6, 19°.46N×155°.30W, h0km, mb4.8/28, mb1 4.9/28, mb1mx4.9/32, mbtmp4.8/28, MS4.0/10, Ms1 4.0/10, ms1mx3.8/37, Error ellipse: s-maj=17.6km s-min=13.1km az=143.0*

MOS **14** *22:44:45.8±1.4, 19°.55N×155°.32W, h10km, mb5.4/40, Error ellipse: s-maj=7.8km s-min=6.4km az=77.3*

NEIC **14** *22:44:45.0, 19°.33N×155°.21W, h10km, mb5.2/89, ML5.0(HVO), After HVO.*

NEIC Felt [IV] at Hawaii National Park, Honaunau, Kurtistown, Mountain View, Pahoa, Papa'ikou and Pepeekeo; [III] at Captain Cook, Hakalau, Hawaiian Ocean View, Hilo, Holualoa, Honoka'a, Kea'au, Kealakekua, Laupahoehoe, Na'alehu, Ninole, Pahala and Volcano; [II] at Hawi, Kailua Kona, Waimea and Waikoloa. Felt at Honomu, Kapaau, 'O'okala, Pa'auilo and Papa'aloa. Also felt at Hanalei, Kaua'i and at Hickam AFB, Honolulu and Wahiawa, O'ahu.

BJI **14** *22:44:48.3, 19°.92N×155°.79W, h10km, mB5.3/25, mb5.2/44, Ms5.2/23, Ms7 4.7/26*

ISC 14 22:44:47.6±0.4, 19°.48N±0°.05×155°.41W±0°.05, h14km±2km, n603, σ1 s11/604, mb5.1/147, MS4.2/22, 169C-179D, Hawaiian Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PUH	**Pauahi**	**0.20**	**120**		*i*P	Pg	22 44 47.7	-4.6
STCH	**Steam Cracks**	**0.28**	**109**		*e*P	Pg	22 44 48.2	-5.3
STCH					*e*S	Sg	22 44 49.6	-7.9
HPO	**Honuapo**	**0.41**	**200**		*e*Pg	**Pg**	**22 44 54.2**	**-1.7**
HKL	**Haleakala**	**1.46**	**327**		*e*P	**Pn**	**22 45 12.3**	**-1.7**
HKL	**Haleakala**	**1.46**	**327**		*e*Pg	**Pn**	**22 45 12.3**	**-1.7**
HON	**Honolulu**	**3.05**	**307**		*e*P	**Pn**	**22 45 33.4**	**-2.1**
HON					*e*		22 46 14.8	
HON	**Honolulu**	**3.05**	**307**		*e*Pn	**Pn**	**22 45 33.4**	**-2.1**
HON					*e*Sn	**Sn**	**22 46 14.8**	**+3.0**
KIP	**Kipapa**	**3.12**	**309**		*i*P	Pn	22 45 34.1	-2.3
KIP	**Kipapa**	**3.12**	**309**		*e*Pn	Pn	22 45 34.0	-2.3
KIP					*e*Sn	**Sn**	**22 46 12.2**	**-1.2**
PMOR	**Pomariorio Ree**	**35.05**	**167**		*e*T	T	23 28 16.7	
	528nm,0.2s							
VAH	**Vaihoa**	**35.34**	**167**		*e*T	T	23 28 38.0	
	146nm,0.4s							
YBH	**Yreka Blue Hor**	**35.50**	**44**		*e*P	**P**	**22 51 41.8**	**-2.3**
	15nm,1.2s							
ISA	**Isabella**	**36.24**	**56**		*e*P	P	22 51 46.8	-3.7
ISA						pmax	pmax	
	comp=Z,31nm,1.3s							
ISA	**Isabella**	**36.24**	**56**		*e*P	P	22 51 46.8	-3.7
	comp=Z,31nm,1.3s							
ISA	**Isabella**	**36.24**	**56**		⇑P	**P**	**22 51 47.9**	**-2.6**
	baz=36							
AFI	**Afiamalu**	**36.89**	**207**		LR	LR	23 05 51.0	
	comp=Z,135nm,18.1s,baz=48,slow=34							
MOD	**Modoc**	**37.18**	**45**		*e*P	**P**	**22 51 56.0**	**-2.5**
	comp=Z,23nm,1.0s							
NVAR	**Mina Array Bea**	**37.23**	**52**		P	**P**	**22 51 59.1**	**0.0**
NVAR	**Mina Array Bea**	**37.23**	**52**		P	**P**	**22 51 59.1**	**0.0**
	comp=Z,2.4nm,0.7s,baz=243,slow=11,SNR=6.2							
PPT2	**Papeete2**	**37.28**	**171**		*e*LR	LR	23 01 55.8	
	comp=Z,1μm,25.2s,baz=349							
PPT2					*e*T	T	23 31 04.3	
	comp=Z,58nm,0.3s							
TIAR	**Tiarei**	**37.28**	**170**		*e*T	T	23 31 04.3	
	comp=Z,313nm,0.2s							
PAE	**Paea**	**37.35**	**171**		*e*T	T	23 31 06.3	
	comp=Z,12nm,0.3s							
GSC	**Goldstone**	**37.46**	**57**		*e*P	**P**	**22 52 00.8**	**-0.1**
GSC						pmax	pmax	
	comp=Z,16nm,1.1s							
GSC	**Goldstone**	**37.46**	**57**		*e*P	**P**	**22 52 00.8**	**-0.1**
	comp=Z,16nm,1.1s							
GSC	**Goldstone**	**37.46**	**57**		⇑P	**P**	**22 52 00.4**	**-0.5**
	baz=37							
TVO	**Taravao**	**37.52**	**170**		*e*T	T	23 31 22.0	
	comp=Z,127nm,0.3s							
BELC	**Belle Mtn. Jos**	**37.80**	**59**		⇑P	**P**	**22 52 03.5**	**-0.5**
	baz=38							
MEH	**Mehetia**	**37.81**	**169**		*e*T	T	23 31 43.9	
	comp=Z,146nm,0.3s							
DIB	**Dawson Inlet,**	**38.05**	**22**		T	T	23 32 20.4	
	SNR=1019							
GMRC	**Granite Mounta**	**38.25**	**58**		⇓P	**P**	**22 52 07.1**	**-0.5**
	baz=38							
KDAK	**Kodiak Island**	**38.31**	**2**		P	**P**	**22 52 08.4**	**+0.8**
KDAK	**Kodiak Island**	**38.31**	**2**		P	**P**	**22 52 08.4**	**+0.8**
	comp=Z,22nm,0.8s,baz=249,slow=4.1,SNR=8.3							
IRM	**Iron Mountain**	**38.53**	**59**		⇓P	**P**	**22 52 09.2**	**-0.7**
	baz=38							
GLA	**Glamis**	**38.58**	**61**		*e*P	P	22 52 06.3	-4.1
GLA						pmax	pmax	
	comp=Z,130nm,1.8s							
GLA	**Glamis**	**38.58**	**61**		*e*P	P	22 52 06.3	-4.1
	comp=Z,130nm,1.8s							
LON	**Longmire**	**38.64**	**38**		*e*P	**P**	**22 52 10.4**	**-0.3**
LON						pmax	pmax	
	comp=Z,54nm,1.9s							
LON	**Longmire**	**38.64**	**38**		*e*P	**P**	**22 52 10.4**	**-0.3**
	comp=Z,54nm,1.9s							
Y12C	**Blythe**	**38.96**	**60**		⇓P	**P**	**22 52 12.5**	**-0.9**
	baz=39							
BBB	**Bella Bella**	**38.98**	**27**		LR	LR	23 03 42.6	
	comp=Z,221nm,19.2s,baz=277,slow=29							
R11A	**Troy Canyon, C**	**39.23**	**53**		⇓P	**P**	**22 52 15.4**	**-0.6**
	baz=39,SNR=12							
PDMCI	**Parker Dam,Lak**	**39.37**	**59**		⇑P	**P**	**22 52 16.0**	**-0.9**
	baz=39							
113A	**Mohawk Valley,**	**39.41**	**62**		⇑P	**P**	**22 52 16.7**	**-0.5**
	baz=39							
W13A	**Hualapai Mount**	**39.74**	**58**		⇑P	**P**	**22 52 19.2**	**-1.0**
	baz=40,SNR=11							
HAWA	**Hanford**	**39.79**	**39**		*e*P	**P**	**22 52 20.4**	**+0.2**
	comp=Z,51nm,1.6s							
214A	**Organ Pipe Nat**	**40.09**	**63**		⇓P	**P**	**22 52 22.3**	**-0.7**
	baz=40							
Z14A	**Wintersburg**	**40.19**	**61**		⇓P	**P**	**22 52 23.0**	**-0.7**
	baz=40							
ELK	**Elko**	**40.24**	**49**		*e*P	**P**	**22 52 22.5**	**-1.9**
	comp=Z,1μm,1.9s							
BMO	**Blue Mountains**	**40.44**	**43**		*e*P	**P**	**22 52 26.8**	**+1.0**
BMO						pmax	pmax	
	comp=Z,15nm,1.4s							
BMO	**Blue Mountains**	**40.44**	**43**		*e*P	**P**	**22 52 26.8**	**+1.0**
	comp=Z,15nm,1.4s							
RAR	**Rarotonga**	**40.67**	**186**		P	**P**	**22 52 27.6**	**0.0**
RAR	**Rarotonga**	**40.67**	**186**		P	**P**	**22 52 27.6**	**0.0**
	comp=Z,24nm,1.0s,baz=262,slow=11,SNR=3.2							
RAR					LR	LR	23 05 14.1	
	comp=Z,479nm,18.4s,baz=183,slow=30							
ARUT	**Antelope Range**	**40.71**	**54**		*e*P	P	22 52 25.0	-3.2
ARUT						pmax	pmax	
	comp=Z,36nm,1.4s							
ARUT	**Antelope Range**	**40.71**	**54**		*e*P	P	22 52 24.9	-3.2
	comp=Z,36nm,1.4s							
WRAK	**Wrangell Islan**	**40.71**	**19**		*e*P	**P**	**22 52 26.8**	**-0.8**
MFID	**Camas Ranch**	**40.81**	**45**		*e*P	**P**	**22 52 30.6**	**+1.7**
	comp=Z,12nm,1.2s							
MFID	**Camas Ranch**	**40.81**	**45**		⇑P	**P**	**22 52 28.8**	**-0.1**
	baz=41							
FX1	**Attu Island--F**	**41.27**	**331**		LR	LR	23 05 48.3	
	comp=Z,232nm,19.8s,baz=339,slow=30							
U15A	**North Rim**	**41.28**	**57**		⇑P	**P**	**22 52 32.2**	**-0.9**
	baz=41							
I12A	**Atlanta**	**41.42**	**45**		⇓P	**P**	**22 52 33.6**	**-0.4**
	baz=41,SNR=7.3							
SVW2	**Sparrevohn**	**41.58**	**360**		*e*P	**P**	**22 52 36.7**	**+2.0**
	comp=Z,83nm,1.8s							
X16A	**Lo Mia Camp, P**	**41.59**	**60**		⇓P	**P**	**22 52 34.5**	**-1.0**
	baz=42,SNR=9.1							
SPU	**Mount Spurr**	**41.73**	**2**		*e*P	**P**	**22 52 37.5**	**+1.4**
PNL	**Peninsula**	**41.77**	**12**		*e*P	**P**	**22 52 35.9**	**-0.4**
	comp=Z,33nm,1.0s							
HLID	**Hailey**	**41.82**	**46**		*e*P	**P**	**22 52 37.8**	**+0.6**
	comp=Z,21nm,1.2s							
HLID	**Hailey**	**41.82**	**46**		⇓P	**P**	**22 52 37.1**	**-0.1**
	baz=42,SNR=13							
G12A	**Big Creek, Yel**	**41.83**	**43**		⇑P	**P**	**22 52 36.8**	**-0.4**
	baz=42,SNR=17							
DUG	**Dugway**	**41.83**	**51**		*e*P	**P**	**22 52 37.8**	**+0.5**
DUG						pmax	pmax	
	comp=Z,9.0nm,1.0s							
DUG	**Dugway**	**41.83**	**51**		*e*P	**P**	**22 52 37.8**	**+0.5**
	comp=Z,9.3nm,1.0s							
DUG	**Dugway**	**41.83**	**51**		⇓P	**P**	**22 52 37.2**	**-0.1**
	baz=42							
WUAZ	**Wupatki**	**41.84**	**58**		*e*P	**P**	**22 52 34.9**	**-2.5**
	comp=Z,94nm,1.7s							
WUAZ	**Wupatki**	**41.84**	**58**		⇑P	**P**	**22 52 37.1**	**-0.4**
	baz=42							
TUC	**Tucson**	**41.84**	**63**		*e*P	**P**	**22 52 38.1**	**+0.6**
TUC						pmax	pmax	
	comp=Z,8.0nm,1.6s							
TUC	**Tucson**	**41.84**	**63**		*e*P	**P**	**22 52 38.1**	**+0.6**
	comp=Z,8.3nm,1.6s							
H12A	**Diamond D Ranc**	**41.90**	**44**		⇑P	**P**	**22 52 37.6**	**-0.2**
	baz=42,SNR=14							
J13A	**Cove Ranch, Pi**	**41.92**	**46**		⇓P	**P**	**22 52 37.9**	**-0.1**
	baz=42							
F12A	**Elk City**	**42.14**	**42**		⇑P	**P**	**22 52 39.3**	**-0.5**
	baz=42,SNR=9.9							
NEW	**Newport**	**42.14**	**38**		*e*P	**P**	**22 52 37.4**	**-2.2**
	comp=Z,13nm,1.1s							
NEW	**Newport**	**42.14**	**38**		⇓P	**P**	**22 52 39.5**	**-0.1**
	baz=42,SNR=8.3							
NEW	**Newport**	**42.14**	**38**		P	**P**	**22 52 40.8**	**+1.2**
	comp=Z,4.2nm,0.7s,baz=239,slow=7.0,SNR=5.1							
NEW					LR	LR	23 06 15.0	
	comp=Z,133nm,18.1s,baz=235,slow=31							
I13A	**Wildhorse Cree**	**42.15**	**45**		⇑P	**P**	**22 52 39.5**	**-0.5**
	baz=42,SNR=14							
BMRM	**Bremner River**	**42.15**	**8**		*e*P	**P**	**22 52 38.2**	**-1.3**
	comp=Z,28nm,1.0s							
DIV	**Divide**	**42.16**	**7**		*e*P	**P**	**22 52 41.3**	**+1.7**
	comp=Z,37nm,1.1s							
H13A	**Challis**	**42.30**	**44**		⇓P	**P**	**22 52 40.9**	**-0.2**
	baz=42							
PMR	**Palmer**	**42.30**	**4**		*e*P	**P**	**22 52 40.4**	**-0.2**
PMR						pmax	pmax	
	comp=Z,36nm,0.9s							
PMR	**Palmer**	**42.30**	**4**		*e*P	**P**	**22 52 40.4**	**-0.2**
	comp=Z,36nm,0.9s							
K14A	**Jones Ranch, D**	**42.30**	**48**		⇓P	**P**	**22 52 40.8**	**-0.4**
	baz=42,SNR=8.0							
HVU	**Hansel Valley**	**42.34**	**49**		*e*P	**P**	**22 52 41.4**	**-0.1**
HVU						pmax	pmax	
	comp=Z,32nm,1.0s							
HVU	**Hansel Valley**	**42.34**	**49**		*e*P	**P**	**22 52 41.4**	**-0.1**
	comp=Z,32nm,1.0s							
G13A	**Cobalt**	**42.52**	**44**		⇑P	**P**	**22 52 42.2**	**-0.7**
	baz=42,SNR=14							
SML	**Sawmill**	**42.58**	**5**		*e*P	**P**	**22 52 43.2**	**+0.2**
SML						pmax	pmax	
	comp=Z,20nm,1.0s							
SML	**Sawmill**	**42.58**	**5**		*e*P	**P**	**22 52 43.2**	**+0.2**
	comp=Z,20nm,1.0s							
I14A	**Mackay**	**42.60**	**46**		⇑P	**P**	**22 52 43.5**	**-0.1**
	baz=43,SNR=7.2							
L15A	**Malad City**	**42.68**	**49**		⇑P	**P**	**22 52 43.4**	**-0.9**
	baz=43,SNR=8.0							
Q16A	**Castle Valley**	**42.72**	**53**		⇑P	**P**	**22 52 44.2**	**-0.4**
	baz=43,SNR=9.8							
F13A	**Darby**	**42.74**	**43**		⇓P	**P**	**22 52 43.9**	**-0.7**
	baz=43,SNR=11							
TMUT	**Trail Mountain**	**42.78**	**53**		*e*P	**P**	**22 52 43.8**	**-1.5**
	comp=Z,141nm,2.1s							
K15A	**Arbon**	**42.80**	**48**		⇓P	**P**	**22 52 45.2**	**0.0**
	baz=43							
X18A	**Snowflake**	**42.83**	**60**		⇑P	**P**	**22 52 44.6**	**-1.0**
	baz=43							
C12B	**Naegeli Ranch,**	**42.86**	**40**		⇑P	**P**	**22 52 45.6**	**+0.2**
	baz=43							
H14A	**Leadore**	**42.91**	**45**		⇑P	**P**	**22 52 45.8**	**-0.3**
	baz=43,SNR=6.3							
TBI	**Tubuai**	**42.96**	**172**		*e*S	**S**	**22 59 07.2**	**-4.1**
	comp=Z,74nm,25.2s							
TBI					*e*LQ	LQ	23 02 44.1	
	comp=Z,849nm,15.0s							
TBI					*e*LR	LR	23 04 35.1	
	comp=Z,785nm,28.0s,baz=351							
TBI					*e*T	T	23 38 10.1	
	comp=Z,1μm,0.3s							
M16A	**Huntsville**	**43.02**	**50**		⇑P	**P**	**22 52 46.1**	**-1.0**
	baz=43,SNR=7.8							
319A	**Douglas**	**43.03**	**65**		⇓P	**P**	**22 52 45.8**	**-1.4**
	baz=43							
DAU	**Daniels Canyon**	**43.03**	**51**		*e*P	**P**	**22 52 48.9**	**+1.6**
DAU	**Daniels Canyon**	**43.03**	**51**		*e*P	**P**	**22 52 48.9**	**+1.6**
DAU					*e*ScP	ScP	22 58 35.4	+7.0
G14A	**Jackson**	**43.08**	**44**		⇓P	**P**	**22 52 46.9**	**-0.7**
	baz=43,SNR=6.0							
W18A	**Petrified Fore**	**43.09**	**59**		⇑P	**P**	**22 52 46.6**	**-1.1**
	baz=43							
DLBC	**Dease Lake**	**43.09**	**19**		*e*P	**P**	**22 52 45.4**	**-1.8**
DLBC	**Dease Lake**	**43.09**	**19**		P	**P**	**22 52 48.4**	**+1.1**
	comp=Z,2.9nm,0.4s,baz=229,slow=6.6,SNR=6.9							
DLBC					LR	LR	23 05 59.0	
	comp=Z,274nm,20.4s,baz=342,slow=30							
E13A	**Victor**	**43.10**	**42**		⇓P	**P**	**22 52 46.8**	**-0.7**
	baz=43,SNR=7.9							
J15A	**Blackfoot**	**43.10**	**47**		⇓P	**P**	**22 52 47.7**	**0.0**
	baz=43,SNR=19							
B12A	**Libby**	**43.14**	**39**		⇓P	**P**	**22 52 48.1**	**+0.3**
	baz=43							
HWUT	**Hardware Ranch**	**43.15**	**49**		*e*P	**P**	**22 52 48.4**	**+0.3**
	comp=Z,32nm,1.1s							
P17A	**Butcher Ranch,**	**43.18**	**53**		⇓P	**P**	**22 52 47.7**	**-0.6**
	baz=43,SNR=5.9							
D13A	**Huson**	**43.20**	**41**		⇓P	**P**	**22 52 47.7**	**-0.6**
	baz=43,SNR=21							
SRU	**San Rafael**	**43.25**	**53**		*e*P	**P**	**22 52 49.9**	**+0.9**
SRU						pmax	pmax	
	comp=Z,595nm,0.9s							
SRU	**San Rafael**	**43.25**	**53**		*e*P	**P**	**22 52 49.9**	**+0.9**
	comp=Z,595nm,0.9s							
SRU	**San Rafael**	**43.25**	**53**		⇑P	**P**	**22 52 48.3**	**-0.7**
	baz=43							
I15A	**Monteview**	**43.28**	**46**		⇓P	**P**	**22 52 48.8**	**-0.2**
	baz=43							
A12A	**Yaak River Ran**	**43.32**	**38**		⇓P	**P**	**22 52 49.3**	**+0.1**
	baz=43							
MCMT	**McKenzie Canyo**	**43.33**	**45**		*e*P	**P**	**22 52 47.8**	**-1.7**
	comp=Z,5.3nm,1.3s							
BSMT	**Bassoo Peak**	**43.34**	**40**		*e*P	**P**	**22 52 49.9**	**+0.4**
S18A	**Hurst Farm, Bl**	**43.34**	**55**		⇓P	**P**	**22 52 48.7**	**-1.1**
	baz=43,SNR=18							
F14A	**Wisdom**	**43.36**	**43**		⇑P	**P**	**22 52 49.7**	**-0.1**
	baz=43							
C13A	**Hot Springs**	**43.39**	**40**		⇑P	**P**	**22 52 49.5**	**-0.3**
	baz=43,SNR=27							
H15A	**Lima**	**43.39**	**45**		⇑P	**P**	**22 52 49.7**	**-0.3**
	baz=43							
MSO	**Missoula**	**43.41**	**41**		*e*P	**P**	**22 52 50.0**	**0.0**
	comp=Z,21nm,1.4s							
MSO	**Missoula**	**43.41**	**41**		⇑P	**P**	**22 52 49.6**	**-0.4**
	baz=43,SNR=9.3							
K16A	**Soda Springs**	**43.51**	**48**		⇑P	**P**	**22 52 50.5**	**-0.5**
	baz=44							
E14A	**Linton**	**43.52**	**42**		⇓P	**P**	**22 52 51.1**	**+0.1**
	baz=44,SNR=22							
P18A	**Preston Nutter**	**43.59**	**53**		⇓P	**P**	**22 52 51.3**	**-0.5**
	baz=44,SNR=6.6							
JTMT	**Jette**	**43.59**	**40**		*e*P	**P**	**22 52 51.8**	**+0.3**
BLMT	**Blacktail Moun**	**43.66**	**40**		*e*P	**P**	**22 52 52.5**	**+0.3**

121A	Cookes Peak, D baz=44	44.39	63	⇑P		P	22 52 57.1	-1.1
WALA	Waterton Lakes comp=Z,1.9nm,1.3s	44.40	39	*e*P		P	22 52 57.5	-0.4
MVCO	Mesa Verde comp=Z,82nm,1.6s	44.42	56	*e*P		P	22 52 59.1	+0.7
MVCO	Mesa Verde baz=44,SNR=9.6	44.42	56	⇑P		P	22 52 58.2	-0.3
LOHW	Long Hollow comp=Z,32nm,1.5s	44.43	47	*e*P		P	22 52 58.6	+0.2
MCK	McKinley	44.44	4	*e*P		P	22 52 59.1	+1.2
MCK				pmax		pmax		
MCK	McKinley comp=Z,70nm,1.1s	44.44	4	*e*P		P	22 52 59.0	+1.2
B14A	Marquette Ranc baz=44,SNR=18	44.47	40	⇓P		P	22 52 58.6	0.0
F16A	Kennard Place, baz=44,SNR=14	44.48	44	⇑P		P	22 52 58.3	-0.3
YMR	Madison River comp=Z,37nm,1.4s	44.53	45	*e*P		P	22 52 56.8	-2.4
K18A	Toltan Ranch, baz=44,SNR=8.6	44.53	48	⇓P		P	22 52 58.9	-0.3
P19A	Cripple Cowboy baz=44	44.54	53	⇑P		P	22 52 58.5	-0.8
I17A	Pilgrim Ck. baz=44,SNR=19	44.55	47	⇑P		P	22 52 59.6	+0.3
Z21A	St. Cloud Mine baz=44	44.56	62	⇑P		P	22 52 59.2	-0.4
O19A	Miners Draw (B baz=44	44.58	52	⇓P		P	22 52 59.5	-0.1
X21A	Alamocita Cree baz=44,SNR=14	44.59	60	⇓P		P	22 52 59.3	-0.5
Y21A	Point of Rocks baz=44,SNR=14	44.63	61	⇓P		P	22 52 59.7	-0.5
C15A	Salmond Ranch, baz=45,SNR=16	44.63	41	⇓P		P	22 52 59.9	+0.1
S20A	Disappointment baz=44	44.64	56	⇓P		P	22 52 59.6	-0.6
A14A	Double T Ranch baz=45,SNR=24	44.65	39	⇓P		P	22 52 59.9	-0.1
N19A	John Jarvie Ra baz=45,SNR=6.4	44.69	51	⇑P		P	22 52 59.8	-0.7
HRY	Holter Researc	44.70	42	*e*P		P	22 53 01.9	+1.5
R20A	Redvale baz=45	44.70	55	⇑P		P	22 53 00.0	-0.6
J18A	Kendall Valley baz=45	44.72	48	⇑P		P	22 53 00.4	-0.3
E16A	East Helena baz=45	44.73	43	⇓P		P	22 53 00.5	-0.1
W21A	San Fidel baz=45	44.78	59	⇑P		P	22 53 01.1	-0.3
DOT	Dot Lake comp=Z,50nm,0.8s	44.81	7	*e*P		P	22 53 01.6	+0.7
L19A	Farson baz=45	44.87	49	⇓P		P	22 53 01.0	-0.9
LKWY	Lake	44.88	46	*e*P		P	22 53 03.8	+1.8
LKWY				pmax		pmax		
LKWY	Lake comp=Z,34nm,1.5s	44.88	46	*e*P		P	22 53 03.8	+1.8
B15A	Bradely Ranch, baz=45,SNR=11	44.88	40	⇓P		P	22 53 01.2	-0.6
Q20A	Ridgley Place, baz=45,SNR=7.8	44.91	54	⇑P		P	22 53 01.1	-1.2
BW06	Boulder Array comp=Z,19nm,1.1s	44.91	48	*e*P		P	22 53 01.3	-1.0
BW06	Boulder Array baz=45,SNR=6.6	44.91	48	⇓P		P	22 53 01.4	-0.9
PDAR	Pinedale Array	44.91	48	P		P	22 53 01.8	-0.5
PDAR	Pinedale Array comp=Z,7.1nm,1.0s,baz=243,slow=4.8,SNR=31	44.91	48	P		P	22 53 01.8	-0.5
P20A	De Beque baz=45	44.95	53	⇓P		P	22 53 01.5	-1.0
U21A	Nageezi baz=45	44.96	58	⇑P		P	22 53 01.8	-1.0
D16A	Dana Ranch, Ca baz=45,SNR=5.6	45.00	42	⇓P		P	22 53 02.8	0.0
I18A	Diamond G Ranc baz=45,SNR=9.9	45.00	47	⇓P		P	22 53 02.5	-0.5
S21A	Coal Bank Pass baz=45,SNR=16	45.06	56	⇑P		P	22 53 02.8	-0.8
A15A	Johnson Ranch, baz=45,SNR=18	45.06	39	⇓P		P	22 53 03.1	-0.1
LAZ	Ladron comp=Z,24nm,1.7s	45.11	61	*e*P		P	22 53 01.5	-2.4
Z22A	Elephant Butte baz=45	45.14	62	⇓P		P	22 53 03.2	-1.0
T21A	Navajo Lake baz=45,SNR=6.7	45.15	57	⇑P		P	22 53 03.4	-0.8
F17A	Fitzpatrick Pl baz=45,SNR=9.4	45.16	44	⇑P		P	22 53 03.6	-0.5
C16A	Fuhringer Ranc baz=45,SNR=8.6	45.17	41	⇓P		P	22 53 03.2	-0.9
O20A	White River Ci baz=45	45.20	52	⇑P		P	22 53 03.4	-1.1
LENM	Lemitar	45.22	61	*e*P		P	22 53 05.6	+0.8
E17A	Martinsdale baz=45,SNR=7.1	45.23	43	⇓P		P	22 53 04.0	-0.6
N20A	Spence Gulch, baz=45,SNR=10	45.35	51	⇑P		P	22 53 05.1	-0.6
R21A	Cimarron baz=45,SNR=9.9	45.37	55	⇑P		P	22 53 05.5	-0.5
J19A	Crowheart baz=45	45.41	48	⇓P		P	22 53 05.4	-0.8
H18A	Shoshone NF, C baz=45,SNR=19	45.41	46	⇓P		P	22 53 06.1	-0.1
K19A	Absolon Red Bu baz=45	45.43	49	⇓P		P	22 53 05.3	-1.1
Q21A	Lamborn Mesa, baz=45,SNR=7.0	45.44	54	⇑P		P	22 53 05.7	-0.8
B16A	M & M Farms, S baz=45	45.44	40	⇑P		P	22 53 06.0	-0.2
V22A	San Miguel Ran baz=45,SNR=8.8	45.48	58	⇓P		P	22 53 05.9	-1.0
BNM	Barren Site comp=Z,94nm,2.0s	45.51	61	*e*P		P	22 53 06.8	-0.3
LPM	Los Pinos Moun	45.52	61	*e*P		P	22 52 58.9	-8.3
LPM				*e*ScP		ScP	22 58 45.1	+6.6
M20A	Sweetwater, Wa baz=46,SNR=7.0	45.56	51	⇓P		P	22 53 07.1	-0.3
L20A	Wamsutter baz=46	45.58	50	⇑P		P	22 53 07.3	-0.3
D17A	Six Diamond Ra baz=46,SNR=16	45.59	42	⇑P		P	22 53 07.7	+0.2
U22A	Llaves baz=46,SNR=9.1	45.59	58	⇓P		P	22 53 06.8	-1.0
ILAR	Eielson Array	45.62	5	P		P	22 53 07.3	+0.1
ILAR	Eielson Array comp=Z,22nm,0.8s,baz=195,slow=7.3,SNR=198	45.62	5	P		P	22 53 07.3	+0.1
GAMB	Gambell comp=Z,54nm,1.1s	45.63	350	*e*P		P	22 53 06.6	-0.7
COLA	College	45.65	5	*e*P		P	22 53 08.3	+0.9
COLA				pmax		pmax		
COLA	College comp=Z,31nm,0.8s	45.65	5	*e*P		P	22 53 08.3	+0.9
T22A	Edith baz=46,SNR=6.9	45.65	57	⇑P		P	22 53 07.5	-0.7
P21A	Newcastle baz=46,SNR=7.7	45.67	53	⇑P		P	22 53 08.0	-0.4
I19A	Meeteetse baz=46,SNR=11	45.67	47	⇑P		P	22 53 08.3	0.0
G18A	Lazy EL Ranch, baz=46,SNR=6.5	45.68	45	⇓P		P	22 53 08.6	+0.3
C17A	Wharram Farm, baz=46,SNR=37	45.72	42	⇓P		P	22 53 08.5	+0.1
ANMO	Albuquerque comp=Z,28nm,1.5s	45.73	60	*e*P		P	22 53 07.4	-1.5
Z23A	Rita Site, Whi baz=46,SNR=7.8	45.75	62	⇑P		P	22 53 08.5	-0.4
GCMT	Greycliff comp=Z,11nm,1.1s	45.77	44	*e*P		P	22 53 07.5	-1.5
F18A	Big Timber baz=46	45.77	44	⇓P		P	22 53 09.1	+0.1
RLMT	Red Lodge comp=Z,24nm,1.2s	45.82	45	*e*P		P	22 53 10.2	+0.8
RLMT	Red Lodge baz=46,SNR=15	45.82	45	⇓P		P	22 53 09.9	+0.4
S22A	4UR Ranch, Cre baz=46	45.82	56	⇑P		P	22 53 09.3	-0.3
H19A	Powell baz=46	45.87	46	⇓P		P	22 53 09.5	-0.2
E18A	Harlowton baz=46,SNR=6.4	45.87	43	⇑P		P	22 53 09.6	-0.1
N21A	Black Mountain baz=46	45.88	52	⇑P		P	22 53 09.1	-0.9
X23A	Hourglass Bar baz=46,SNR=8.2	45.91	60	⇓P		P	22 53 09.7	-0.6
Q22A	Crested Butte, baz=46,SNR=24	45.95	54	⇑P		P	22 53 10.5	-0.2
Y23A	Lovelace Mesa, baz=46,SNR=11	45.96	61	⇑P		P	22 53 10.2	-0.5
R22A	Saguache, Gunn baz=46,SNR=17	45.96	55	⇑P		P	22 53 10.8	0.0
SMCO	Snowmass comp=Z,72nm,1.6s	45.96	54	*e*P		P	22 53 10.7	-0.2
W23A	Werner Place, baz=46	46.01	60	⇓P		P	22 53 10.5	-0.6
V23A	Ortiz Mt. (NFS baz=46,SNR=8.0	46.05	59	⇓P		P	22 53 11.2	-0.1
J20A	Shoshoni baz=46	46.11	48	⇓P		P	22 53 11.5	-0.1
U23A	El Rito baz=46	46.12	58	⇑P		P	22 53 11.7	-0.2
D18A	Linhart Farms, baz=46,SNR=8.1	46.17	42	⇑P		P	22 53 12.2	+0.2
M21A	Separation Pea baz=46,SNR=11	46.19	51	⇓P		P	22 53 11.4	-1.0
P22A	Eagle baz=46	46.21	53	⇑P		P	22 53 12.2	-0.4
I20A	Worland baz=46,SNR=9.7	46.24	47	⇑P		P	22 53 12.4	-0.3
A17A	Triple J Farms baz=46,SNR=19	46.27	40	⇑P		P	22 53 12.5	-0.2
L21A	Rawlins baz=46,SNR=9.8	46.27	50	⇓P		P	22 53 12.1	-0.9
F19A	Roth Farm, Mol baz=46	46.27	45	⇓P		P	22 53 12.3	-0.5
224A	Cornudas Mount baz=46,SNR=12	46.27	64	⇑P		P	22 53 12.4	-0.7
324A	Moseley Ranch, baz=46	46.27	65	⇓P		P	22 53 12.3	-0.8
T23A	Casias Ranch, baz=46	46.34	57	⇓P		P	22 53 12.8	-0.9
124A	Stringfield Ra baz=46,SNR=13	46.36	63	⇑P		P	22 53 13.3	-0.6
Y24A	Capitan baz=46,SNR=18	46.47	61	⇓P		P	22 53 14.0	-0.7
O22A	Kremmling baz=46,SNR=11	46.48	53	⇓P		P	22 53 14.2	-0.6
Z24A	Sheeppen Canyo baz=46	46.48	62	⇑P		P	22 53 13.8	-1.0
H20A	Greybull baz=46	46.49	47	⇓P		P	22 53 14.3	-0.2
EGMT	Eagleton comp=Z,65nm,1.4s	46.50	41	*e*P		P	22 53 14.4	-0.1
EGMT	Eagleton baz=46,SNR=19	46.50	41	⇑P		P	22 53 14.7	+0.2
K21A	Alcova baz=46	46.52	49	⇓P		P	22 53 14.4	-0.5
G20A	Bridger baz=46	46.56	46	⇑P		P	22 53 14.8	-0.3
J21A	Lysite baz=46,SNR=7.9	46.56	48	⇓P		P	22 53 14.7	-0.6
E19A	Rath Farm, Rou baz=46,SNR=8.8	46.57	44	⇑P		P	22 53 15.2	+0.1
W24A	Lazy 6 Ranch, baz=46	46.62	60	⇓P		P	22 53 14.8	-1.0
B18A	Beardsley Farm baz=47,SNR=5.5	46.62	41	⇓P		P	22 53 14.7	-0.8
425A	Indio Mountain baz=46,SNR=35	46.67	66	⇑P		P	22 53 15.8	-0.5
R23A	Moffat baz=47,SNR=15	46.68	56	⇓P		P	22 53 16.0	-0.3
N22A	Wattenberg Ran baz=47,SNR=8.6	46.68	52	⇓P		P	22 53 15.5	-0.9
M22A	Cedar Creek Ra baz=47,SNR=11	46.70	51	⇓P		P	22 53 15.8	-0.7
325A	Bean Ranch, Si baz=47,SNR=18	46.71	65	⇑P		P	22 53 15.9	-0.6
D19A	Cripps Ranch, baz=47,SNR=7.4	46.74	43	⇑P		P	22 53 16.0	-0.5
A18A	Metzger Ranch, baz=47,SNR=8.3	46.77	40	⇑P		P	22 53 16.5	-0.2
V24A	Rampart Ranch, baz=47,SNR=12	46.78	59	⇑P		P	22 53 16.5	-0.7
Q23A	Hartsel baz=47	46.79	55	⇑P		P	22 53 16.5	-0.8
I21A	Big Trails, Te baz=47,SNR=8.1	46.79	48	⇓P		P	22 53 15.9	-1.1
TNA	Tin City	46.80	353	*e*P		P	22 53 19.1	+2.6
TNA				*e*PcP		PcP	22 54 47.9	-1.6
RKT	Rikitea	46.80	154	*e*T		T	23 42 54.3	
C19A	comp=Z,61nm,0.2s Slack Wire Ran baz=47,SNR=29	46.84	42	⇓P		P	22 53 17.6	+0.4
U24A	Meno Valley baz=47	46.86	58	⇓P		P	22 53 17.0	-0.8
225A	Deer Hill, Car baz=47,SNR=12	46.86	64	⇑P		P	22 53 16.7	-1.1
P23A	Jefferson baz=47,SNR=6.7	46.87	54	⇓P		P	22 53 18.1	+0.2
L22A	Ellis Ranch, M baz=47	46.96	50	⇓P		P	22 53 18.1	-0.3
O23A	Lake Granby, G baz=47,SNR=7.2	46.96	53	⇑P		P	22 53 18.4	-0.2
E20A	Meyer Farm, Mu baz=47,SNR=7.3	47.01	44	⇑P		P	22 53 18.9	+0.3
Z25A	Roswell baz=47,SNR=9.0	47.02	62	⇑P		P	22 53 18.9	-0.1
125A	Gardner Draw, baz=47,SNR=24	47.03	63	⇓P		P	22 53 18.9	-0.1
K22A	Casper baz=47	47.04	49	⇑P		P	22 53 18.3	-0.7
S24A	Houchin Ranch, baz=47,SNR=7.4	47.07	56	⇓P		P	22 53 19.2	-0.3
N23A	Red Feather La baz=47,SNR=15	47.08	52	⇓P		P	22 53 19.3	-0.1
Y25A	Mesa, Roswell baz=47,SNR=8.8	47.09	61	⇑P		P	22 53 18.9	-0.5
ISCO	Idaho Springs	47.11	53	*e*P		P	22 53 19.8	0.0
ISCO				pmax		pmax		
ISCO	Idaho Springs comp=Z,21nm,1.4s	47.11	53	*e*P		P	22 53 19.8	0.0
ISCO	Idaho Springs baz=47,SNR=10	47.11	53	⇑P		P	22 53 19.5	-0.2
T24A	Torres, Weston baz=47	47.12	57	⇑P		P	22 53 19.5	-0.4
B19A	Brinkman Farms baz=47	47.16	41	⇓P		P	22 53 20.0	+0.4
X25A	Clemmons Ranch baz=47	47.16	61	⇑P		P	22 53 19.4	-0.7
D20A	Mauel Ranch, baz=47,SNR=8.7	47.20	43	⇑P		P	22 53 20.5	+0.5
G21A	Lodge Grass baz=47	47.24	46	⇓P		P	22 53 20.5	0.0
R24A	Sanders Place, baz=47	47.24	56	⇑P		P	22 53 20.0	-0.7
GDL2	Guadalupe Moun	47.26	64	*e*P		P	22 53 19.8	-1.0
Q24A	Divide baz=47,SNR=7.9	47.32	55	⇑P		P	22 53 20.9	-0.6
V25A	Rancho No Teng baz=47,SNR=19	47.33	59	⇑P		P	22 53 21.1	-0.3
M23A	Laramie baz=47,SNR=10	47.36	51	⇑P		P	22 53 21.0	-0.5
I22A	9 Mile Ranch, baz=47,SNR=6.0	47.37	48	⇑P		P	22 53 20.8	-0.7
W25A	X Bar L Ranch, baz=47,SNR=8.7	47.39	60	⇓P		P	22 53 21.1	-0.7
626A	Big Bend Ranch baz=47,SNR=16	47.39	67	⇓P		P	22 53 20.7	-1.1
226B	Tecolote Peak, baz=47,SNR=22	47.42	64	⇓P		P	22 53 21.8	-0.2
A19A	Klindworth Far baz=47,SNR=15	47.45	41	⇓P		P	22 53 21.7	-0.3
C20A	Veseth Ranch, baz=48,SNR=16	47.49	42	⇑P		P	22 53 22.6	+0.3
426A	McDonald Obser baz=47,SNR=14	47.49	66	⇓P		P	22 53 22.4	-0.3
L23A	Garrett baz=47,SNR=20	47.51	50	⇓P		P	22 53 21.9	-0.9
PHWY	Pilot Hill comp=Z,71nm,1.6s	47.52	51	*e*P		P	22 53 22.4	-0.4
PHWY				*e*ScP		ScP	22 58 54.0	+7.1
326A	Caldwell Ranch baz=47	47.55	65	⇓P		P	22 53 22.3	-0.8
126A	Clayton Basin, baz=47	47.57	63	⇓P		P	22 53 22.4	-0.8
Z26A	Caprock baz=48,SNR=12	47.64	62	⇓P		P	22 53 23.3	-0.4
T25A	Trinidad baz=48,SNR=7.4	47.64	57	⇑P		P	22 53 23.5	-0.3
H22A	Clearmont baz=48	47.65	47	⇓P		P	22 53 23.4	-0.3
K23A	Bowen Ranch, D baz=48	47.71	49	⇓P		P	22 53 23.5	-0.7
B20A	Solberg Farm, baz=48,SNR=11	47.73	41	⇑P		P	22 53 24.1	0.0
TXAR	Lajitas Array	47.80	68	P		P	22 53 25.2	+0.2
TXAR	Lajitas Array comp=Z,7.3nm,0.6s,baz=255,slow=8.3,SNR=38	47.80	68	P		P	22 53 25.2	+0.2
COLD	Coldfoot comp=Z,19nm,1.1s	47.85	3	*e*P		P	22 53 25.5	+0.8
G22A	Birney baz=48	47.86	46	⇓P		P	22 53 25.1	-0.1
R25A	Fountain Ranch baz=48,SNR=9.3	47.87	56	⇑P		P	22 53 25.3	-0.2
D21A	La Casta Ranch baz=48,SNR=5.3	47.93	44	⇑P		P	22 53 26.2	+0.4
A20A	Cobblestone Ra baz=48,SNR=9.2	47.94	41	⇓P		P	22 53 26.1	+0.3
W26A	Owens Ranch, T baz=48	47.94	60	⇓P		P	22 53 25.3	-0.8
V26A	Tequesquite Ra baz=48,SNR=15	47.99	59	⇓P		P	22 53 25.9	-0.6
Q25A	Bedland, Calha baz=48	48.01	55	⇑P		P	22 53 26.1	-0.6
M24A	Cheyenne baz=48,SNR=12	48.02	51	⇑P		P	22 53 26.4	-0.2
F22A	Rosebud baz=48	48.04	45	⇓P		P	22 53 26.8	+0.2
427A	Hayter Ranch, baz=48,SNR=14	48.04	66	⇓P		P	22 53 26.3	-0.6
627A	Terlingua Ranc baz=48,SNR=18	48.04	68	⇑P		P	22 53 26.4	-0.5
L24A	Wheatland baz=48	48.05	51	⇓P		P	22 53 26.6	-0.3
U26A	Atchley Ranch, baz=48,SNR=13	48.09	58	⇓P		P	22 53 26.9	-0.4
C21A	Desert Coulee baz=48,SNR=13	48.11	43	⇓P		P	22 53 27.6	+0.5
127A	Arkansas Junct baz=48	48.13	63	⇓P		P	22 53 26.8	-0.7
P25A	Willow Gulch B baz=48	48.16	54	⇑P		P	22 53 26.9	-0.9
Z27A	Tatum baz=48,SNR=13	48.28	62	⇓P		P	22 53 28.0	-0.7
T26A	Comanche Natio baz=48,SNR=7.3	48.29	57	⇑P		P	22 53 28.0	-0.8
O25A	Wiggins baz=48	48.30	53	⇑P		P	22 53 28.5	-0.3
Y27A	Causey baz=48,SNR=7.3	48.35	62	⇓P		P	22 53 28.0	-1.3
E22A	Miles City baz=48	48.43	45	⇑P		P	22 53 29.8	+0.3
S26A	Kim baz=48,SNR=15	48.44	57	⇑P		P	22 53 29.6	-0.3
G23A	Biddle baz=48,SNR=12	48.47	46	⇓P		P	22 53 29.4	-0.5
628A	Black Gap, Mar baz=48,SNR=11	48.48	68	⇓P		P	22 53 29.6	-0.6
D22A	Cohagen baz=48	48.49	44	⇓P		P	22 53 30.3	+0.3
W27A	Bowe Ranch, En baz=48	48.52	60	⇓P		P	22 53 29.8	-0.7
J24A	Dixon Ranch, L baz=48,SNR=7.0	48.52	49	⇓P		P	22 53 29.8	-0.7
R26A	Arlington baz=48,SNR=16	48.55	56	⇑P		P	22 53 30.2	-0.5
328A	Wristen Ranch, baz=48,SNR=15	48.55	65	⇑P		P	22 53 30.1	-0.7
528A	Cox Ranch, San baz=48,SNR=20	48.56	67	⇑P		P	22 53 30.7	-0.2
Q26A	Hugo baz=48	48.57	55	⇓P		P	22 53 30.5	-0.4
F23A	Volborg baz=48	48.59	46	⇑P		P	22 53 30.6	-0.3
A21A	Bergtoll Ranch baz=49	48.60	41	⇓P		P	22 53 30.8	0.0
428A	Kincaid Ranch, baz=48	48.65	66	⇓P		P	22 53 31.0	-0.6
PET	Petropavlovsk	48.66	325	*e*P		P	22 53 42.4	+11
PET				*e*S		S	23 00 41.3	+8.4
PET				MLR		MLR		
I24A	comp=Z,300nm,13.0s Kuemmerle Ranc baz=49,SNR=7.9	48.67	48	⇓P		P	22 53 30.8	-0.8
MSTX	Muleshoe baz=48,SNR=7.8	48.68	62	⇑P		P	22 53 31.0	-0.8
228A	UT Block 9, Go baz=49,SNR=10.0	48.76	64	⇓P		P	22 53 31.8	-0.6
P26A	Davis Ranch, A baz=49,SNR=11	48.80	54	⇓P		P	22 53 32.3	-0.4
C22A	Vida baz=49,SNR=8.8	48.86	43	⇓P		P	22 53 32.9	+0.1
128A	Castleberry Fa baz=49,SNR=11	48.86	63	⇑P		P	22 53 32.7	-0.4
E23A	Ismay baz=49	48.87	45	⇑P		P	22 53 32.7	-0.2
O26A	Horse Wrangler baz=49,SNR=7.5	48.93	53	⇓P		P	22 53 33.2	-0.4
H24A	Dirks Ranch, A baz=49,SNR=12	48.93	47	⇓P		P	22 53 32.5	-1.0
K25A	Mack Ranch, Ha baz=49,SNR=8.7	48.94	50	⇑P		P	22 53 33.4	-0.2
Z28A	Tucker Farm, M baz=49	48.97	62	⇓P		P	22 53 33.0	-1.0
T27A	Campo baz=49	48.97	57	⇓P		P	22 53 33.1	-0.9
R27A	Eads baz=49,SNR=18	49.05	56	⇓P		P	22 53 34.0	-0.5
529A	Stev Forest Ra baz=49,SNR=24	49.05	67	⇓P		P	22 53 34.0	-0.7
D23A	Lindsay baz=49	49.13	44	⇓P		P	22 53 35.0	0.0
RSSD	Black Hills	49.14	48	*e*P		P	22 53 34.5	-0.8
RSSD				pmax		pmax		
RSSD	Black Hills comp=Z,31nm,1.2s	49.14	48	*e*P		P	22 53 34.5	-0.8
G24A	Alzada baz=49	49.16	46	⇑P		P	22 53 34.9	-0.4
X28A	Dimmitt baz=49	49.19	61	⇑P		P	22 53 34.9	-0.7
PETK	Petropavlovsk-	49.22	324	P		P	22 53 37.5	+2.0
PETK	Petropavlovsk-	49.22	324	P		P	22 53 37.5	+2.0
PETK	Petropavlovsk- comp=Z,29nm,1.0s,baz=125,slow=12,SNR=9.5	49.22	324	P		P	22 53 37.5	+2.0
A22A	Carney Farms, baz=49,SNR=7.2	49.23	41	⇓P		P	22 53 36.1	+0.4
V28A	Channing baz=49	49.25	59	⇑P		P	22 53 35.3	-0.8
M26A	McRoberts Ranc baz=49	49.26	52	⇓P		P	22 53 35.9	-0.2
329A	Wagon Wheel Ra baz=49	49.26	65	⇑P		P	22 53 35.6	-0.6
KSCO	Kaye Shedlock' baz=49	49.27	55	⇑P		P	22 53 36.5	+0.2
F24A	Ekalaka baz=49	49.28	46	⇓P		P	22 53 36.2	0.0
C23A	Lambert baz=49,SNR=9.3	49.32	43	⇓P		P	22 53 36.5	+0.1
429A	Davenport Ranc baz=49	49.34	66	⇓P		P	22 53 35.8	-1.0
129A	Stewart Farms, baz=49	49.38	63	⇓P		P	22 53 36.3	-0.8
K26A	Motz Farm, Whi baz=49,SNR=7.2	49.46	50	⇑P		P	22 53 37.5	-0.1
T28A	Walsh baz=49	49.46	57	⇑P		P	22 53 37.4	-0.3
Z29A	Hungry Hill Ra baz=49	49.54	63	⇑P		P	22 53 37.7	-0.7
E24A	Baker baz=50	49.55	45	⇓P		P	22 53 38.3	+0.1
Y29A	Porterfield Fa baz=50	49.59	62	⇓P		P	22 53 38.3	-0.4
X29A	Tulia baz=50	49.60	61	⇑P		P	22 53 38.2	-0.6
AMTX	Amarillo	49.64	60	*e*P		P	22 53 36.4	-2.7
B23A	Brockton baz=50,SNR=7.3	49.64	42	⇓P		P	22 53 39.0	+0.1
C24A	Savage baz=50	49.74	44	⇑P		P	22 53 40.0	+0.4
530A	J-C Ranch, Com baz=50	49.82	67	⇑P		P	22 53 39.8	-0.7
V29A	Stinnett baz=50	49.83	59	⇓P		P	22 53 39.9	-0.6
430A	Baggett Ranch, baz=50,SNR=19	49.90	66	⇓P		P	22 53 40.7	-0.4
330A	Mertzon baz=50	49.95	65	⇓P		P	22 53 40.2	-1.2

L27A	T5 Ranch, Ells	49.98	51	⇓P		P		22 53 41.5	0.0	
	baz=50									
230A	Sterling City	50.01	64	⇑P		P		22 53 40.9	-1.0	
	baz=50									
Z30A	Sanderson Ranc	50.02	63	⇑P		P		22 53 41.1	-0.9	
	baz=50									
K27A	Flueckinger Fa	50.14	50	⇓P		P		22 53 42.2	-0.6	
	baz=50									
130A	Snyder	50.14	63	⇓P		P		22 53 42.4	-0.5	
	baz=50,SNR=9.6									
DGMT	Dagmar	50.15	43	*e*P		P		22 53 43.2	+0.5	
	comp=Z,65nm,1.1s									
DGMT	Dagmar	50.15	43	⇓P		P		22 53 43.0	+0.3	
	baz=50,SNR=9.0									
X30A	Coker Ranch, T	50.28	61	⇓P		P		22 53 43.2	-0.7	
	baz=50									
A24A	Westby	50.41	42	⇑P		P		22 53 44.5	-0.1	
	baz=50,SNR=10.0									
431A	Sonora	50.44	66	⇓P		P		22 53 44.7	-0.5	
	baz=50,SNR=17									
631A	Perdido Creek	50.50	68	⇓P		P		22 53 44.8	-0.8	
	baz=50,SNR=13									
531A	Rocksprings	50.50	67	⇑P		P		22 53 44.6	-1.0	
	baz=50,SNR=24									
U30A	WK&E Inc. Balk	50.58	58	⇓P		P		22 53 45.6	-0.6	
	baz=50									
331A	San Angelo	50.59	65	⇓P		P		22 53 45.6	-0.7	
	baz=50									
131A	Roby	50.63	63	⇓P		P		22 53 45.7	-0.9	
	baz=50									
231A	Bronte	50.69	64	⇓P		P		22 53 46.0	-1.1	
	baz=50									
INK	Inuvik	50.71	10	P		P		22 53 46.3	-0.2	
INK	Inuvik	50.71	10	P		P		22 53 46.3	-0.2	
	comp=Z,44nm,0.9s,baz=206,slow=8.0,SNR=71									
Y31A	Rekieta Farm,	50.77	62	⇑P		P		22 53 46.9	-0.7	
	baz=51									
Z31A	Sharp Cattle R	50.85	63	⇑P		P		22 53 47.1	-1.1	
	baz=51									
X31A	McDonald Ranch	51.02	61	⇑P		P		22 53 48.5	-1.0	
	baz=51									
732A	Laxson Ranch,	51.05	68	⇑P		P		22 53 48.6	-1.1	
	baz=51									
532A	Rocksprings	51.06	67	⇑P		P		22 53 48.6	-1.3	
	baz=51,SNR=15									
W31A	Holland Ranch,	51.08	60	⇑P		P		22 53 48.9	-1.0	
	baz=51									
432A	Menard	51.14	66	⇓P		P		22 53 49.0	-1.5	
	baz=51,SNR=6.2									
JCT	Junction City	51.14	66	*e*P		P		22 53 49.1	-1.3	
JCT					pmax	pmax				
	comp=Z,48nm,1.6s									
JCT	Junction City	51.14	66	*e*P		P		22 53 49.1	-1.3	
	comp=Z,48nm,1.6s									
JCT	Junction City	51.14	66	⇑P		P		22 53 49.2	-1.3	
	baz=51									
332A	Millersview	51.18	65	⇑P		P		22 53 49.3	-1.4	
	baz=51,SNR=12									
632A	Uvalde	51.18	67	⇓P		P		22 53 49.9	-0.9	
	baz=51,SNR=5.1									
V31A	Spring Creek L	51.19	59	⇓P		P		22 53 50.4	-0.4	
	baz=51									
U31A	Nine Bar Ranch	51.22	59	⇑P		P		22 53 50.0	-1.0	
	baz=51									
232A	Coleman	51.26	64	⇑P		P		22 53 50.0	-1.3	
	baz=51,SNR=16									
ABTX	Abilene, Hawle	51.26	63	⇑P		P		22 53 50.0	-1.3	
	baz=51,SNR=10									
YKA	Yellowknife Ar	51.30	23	P		P		22 53 50.8	-0.3	
YKA	Yellowknife Ar	51.30	23	P		P		22 53 50.7	-0.3	
	comp=Z,8.2nm,0.7s,baz=232,slow=7.6,SNR=186									
YKW3	Yellowknife Ar	51.34	23	*e*P		P		22 53 49.9	-1.5	
	comp=Z,0.4nm,1.1s									
T31A	Randall Ranch,	51.40	58	⇓P		P		22 53 51.3	-1.0	
	baz=51									
Z32A	Haskell	51.41	63	⇑P		P		22 53 51.3	-1.1	
	baz=51,SNR=16									
Y32A	R-V Farms, Ver	51.45	62	⇑P		P		22 53 51.5	-1.2	
	baz=51									
WMOK	Wichita Mounta	52.01	61	*e*P		P		22 53 55.0	-1.9	
WMOK					pmax	pmax				
	comp=Z,8.0nm,1.1s									
WMOK	Wichita Mounta	52.01	61	*e*P		P		22 53 55.0	-1.9	
	comp=Z,8.5nm,1.1s									
BGNE	Belgrade	52.97	52	⇑P		P		22 54 03.2	-0.6	
	baz=53									
MDND	Maddock	52.97	44	⇓P		P		22 54 03.6	-0.2	
	baz=53									
WHTX	Lake Whitney	53.12	64	⇑P		P		22 54 04.1	-1.0	
	baz=53									
FFC	Flin Flon	53.41	35	*i* P		P		22 54 05.8	-1.0	
FFC	Flin Flon	53.41	35	*e*P		P		22 54 07.0	+0.2	
	comp=Z,17nm,1.2s									
KSU1	Kansas State U	53.95	55	*e*P		P		22 54 10.6	-0.5	
	comp=Z,154nm,1.8s									
ECSD	EROS Data Cent	54.36	50	*e*P		P		22 54 12.7	-1.4	
	comp=Z,28nm,1.1s									
TUL1	Tulsa	54.48	59	⇓P		P		22 54 14.0	-1.1	
	baz=54									
HKT	Hockley	54.59	67	*e*P		P		22 54 15.2	-0.6	
HKT					pmax	pmax				
	comp=Z,98nm,1.7s									
HKT	Hockley	54.59	67	*e*P		P		22 54 15.2	-0.6	
	comp=Z,98nm,1.7s									
ULM	Lac du Bonnet	55.86	42	*e*P		P		22 54 23.4	-1.3	
ULM	Lac du Bonnet	55.86	42	P		P		22 54 23.1	-1.6	
	comp=Z,20nm,1.0s,baz=278,slow=7.3,SNR=18									
SEY	Seymchan	56.00	334	⇑*i*P		P		22 54 26.7	+1.2	
ERM	Erimo	56.14	308	⇑*e*P		P		22 54 29.0	+2.2	
ERM					pmax	pmax				
	comp=Z,64nm,1.3s									
MIAR	Mount Ida	56.31	61	*e*P		P		22 54 27.5	-0.7	
MIAR					pmax	pmax				
	comp=Z,57nm,1.6s									
MIAR	Mount Ida	56.31	61	*e*P		P		22 54 27.5	-0.7	
	comp=Z,58nm,1.6s									
SCIA	State Center	56.69	52	*e*P		P		22 54 29.9	-0.9	
	comp=Z,46nm,1.0s									
ASAJ	Asahikawa	56.70	310	*e*P		P		22 54 26.5	-4.3	
	comp=Z,20nm,1.1s									
SPMN	St. Paul	57.23	48	⇑P		P		22 54 33.3	-1.2	
	baz=57,SNR=5.6									
UALR	University of	57.31	61	*e*P		P		22 54 34.2	-1.1	
	comp=Z,64nm,1.6s									
GUMO	Guam	57.32	274	LR		LR		23 12 57.5		
	comp=Z,134nm,20.9s,baz=45,slow=30									
EYMN	Ely	58.38	45	*e*P		P		22 54 40.6	-2.0	
	comp=Z,40nm,1.5s									
COWI	Conover	59.85	47	*e*P		P		22 54 50.5	-2.3	
	comp=Z,37nm,1.3s									
MJAR	Matsushiro Arr	59.94	302	P		P		22 54 55.3	+1.6	
MJAR	Matsushiro Arr	59.94	302	P		P		22 54 55.3	+1.6	
	comp=Z,22nm,1.1s,baz=91,slow=4.8,SNR=13									
MJAR					LR		LR	23 14 32.3		
	comp=Z,75nm,21.8s,baz=105,slow=30									
MAJO	Matsushiro	59.94	302	*e*P		P		22 54 53.2	-0.5	
MAJO					pmax	pmax				
	comp=Z,27nm,1.0s									
MAJO	Matsushiro	59.94	302	*e*P		P		22 54 53.2	-0.5	
	comp=Z,27nm,1.0s									
MAT	Matsushiro	59.94	302	P		P		22 54 51.4	-2.3	
OLIL	Olney	60.58	56	*e*P		P		22 54 55.5	-2.5	
	comp=Z,70nm,1.4s									
SFIN	Scholer Farm	61.30	54	⇓P		P		22 55 01.8	-1.0	
	baz=61									
SWET	Sewanee	62.54	60	*e*P		P		22 55 11.6	+0.3	
	comp=Z,71nm,1.8s									
URZ	Urewera	62.97	204	P		P		22 55 15.8	+2.0	
URZ	Urewera	62.97	204	P		P		22 55 15.8	+2.0	
	comp=Z,7.5nm,0.8s,baz=26,slow=6.2,SNR=4.1									
CPCT	Cooper Cave	63.66	59	*e*P		P		22 55 17.4	-1.4	
RES	Resolute Bay	63.70	15	*e*P		P		22 55 16.9	-1.3	
	comp=Z,9.0nm,0.7s									
RES	Resolute Bay	63.70	15	P		P		22 55 18.0	-0.2	
	comp=Z,6.8nm,0.6s,baz=244,slow=13,SNR=52									
USRK	Ussuriysk Arra	64.32	310	P		P		22 55 24.1	+1.2	
	comp=Z,9.0nm,1.0s,baz=92,slow=5.7,SNR=11									
TZTN	Tazewell	64.33	58	*e*P		P		22 55 21.7	-1.5	
	comp=Z,92nm,1.6s									
KLR	Kul'dur	64.36	316	*e*P		P		22 55 19.8	-3.2	
GOGA	Godfrey	64.77	62	*e*P		P		22 55 24.3	-1.7	
GOGA					pmax	pmax				
	comp=Z,110nm,1.7s									
GOGA	Godfrey	64.77	62	*e*P		P		22 55 24.3	-1.7	
	comp=Z,110nm,1.7s									
TIGA	Tifton	64.93	64	⇓P		P		22 55 26.4	-0.7	
	baz=65									

YAK	Yakutsk	65.91	330	*e*P		P		22 55 32.6	-0.3	
YAK				*e*				22 56 04.5		
YAK				*e*				22 57 59.4		
YAK				*e*PPP		PPP		22 59 35.6		
YAK				*e*S		S		23 04 13.6	-5.9	
YAK				*e**SS		sS		23 04 56.4	+29	
YAK				*e*				23 05 21.2		
YAK					pmax	pmax				
	comp=Z,60nm,1.0s									
YAK					pmax	pmax				
	comp=E,23nm,1.2s									
YAK					pmax	pmax				
	comp=Z,26nm,1.5s									
YAK					pmax	pmax				
	comp=N,53nm,3.3s									
YAK					pmax	pmax				
	comp=E,68nm,3.5s									
YAK					smax	smax				
	comp=N,94nm,4.2s									
YAK					smax	smax				
	comp=E,95nm,4.4s									
MDJ	Mudanjiang	66.02	311	P		P		22 55 34.3	+0.4	
MDJ					pmax	pmax				
	comp=Z,25nm,1.3s									
MDJ					pmax	pmax				
	comp=Z,93nm,4.1s									
KSRS	Korea Array	68.05	303	P		P		22 55 48.9	+1.9	
	comp=Z,11nm,1.1s,baz=83,slow=7.3,SNR=13									
KSRS					PcP	PcP		22 56 15.1	+2.0	
	comp=Z,3.4nm,0.8s,baz=113,slow=4.6,SNR=5.0									
KSRS					LR	LR		23 22 51.4		
	comp=Z,89nm,18.7s,baz=296,slow=34									
KSAR	Wonju Array Be	68.08	303	P		P		22 55 48.9	+1.7	
KSAR					PcP	PcP		22 56 15.1	+1.8	
SSPA	Standing Stone	68.27	53	*e*P		P		22 55 47.1	-1.2	
	comp=Z,37nm,1.5s									
CLNS	Chul'man	68.31	324	*e*P		P		22 55 48.5	+0.2	
CLNS					pmax	pmax				
	comp=Z,23nm,1.0s									
CLNS					pmax	pmax				
	comp=E,10.0nm,1.0s									
CLNS					pmax	pmax				
	comp=N,12nm,1.2s									
JTS	JuntasAbangare	68.32	86	*e*P		P		22 55 52.0	+3.0	
	comp=N,105nm,2.0s									
CN2	Changchun	69.07	310	*e*P		P		22 55 53.8	+0.6	
CN2				*e*S		S		23 04 58.8	+0.7	
CN2					pmax	pmax				
	comp=Z,20nm,0.7s									
CN2					pmax	pmax				
	comp=Z,100nm,3.0s									
CN2					LR	LR				
	comp=N,200nm,19.0s									
CN2					LR	LR				
	comp=E,300nm,19.0s									
CN2					LR	LR				
	comp=Z,300nm,24.0s									
BINY	Binghamton	69.48	51	*e*P		P		22 55 54.4	-1.4	
	comp=Z,358nm,2.8s									
MVL	Millersville	69.52	54	*e*P		P		22 55 55.1	-0.9	
	comp=Z,27nm,1.1s									
LONY	Lake Ozonia	70.15	49	*e*P		P		22 56 00.2	+0.3	
	comp=Z,20nm,1.3s									
SNY	Shenyang	70.71	309	⇑P		P		22 56 03.9	+0.6	
SNY					pmax	pmax				
	comp=Z,20nm,1.9s									
FRNY	Flat Rock	70.83	48	*e*P		P		22 56 02.3	-1.7	
	comp=Z,28nm,1.0s									
ARMA	Armidale	71.10	227	*e*P		P		22 56 03.7	-2.2	
	comp=Z,19nm,1.1s									
ALE	Alert	71.22	8	P		P		22 56 05.3	-0.4	
	comp=Z,127nm,1.2s,SNR=18									
SCHQ	Schefferville	73.50	37	P		P		22 56 18.5	-1.4	
SCHQ	Schefferville	73.50	37	P		P		22 56 18.5	-1.4	
	comp=Z,3.3nm,0.8s,baz=341,slow=5.3,SNR=3.7									
NJ2	Nanjing	76.43	299	*e*P		P		22 56 38.6	+1.4	
NJ2					pmax	pmax				
	comp=Z,90nm,1.0s									
BJI	Beijing	76.56	308	P		P		22 56 38.4	+0.7	
BJI					pmax	pmax				
	comp=Z,45nm,1.2s									
BJI					LR	LR				
	comp=Z,89nm,27.7s									
OTAV	Otavalo	77.62	94	*e*P		P		22 56 43.8	-1.0	
	comp=Z,29nm,1.3s									
SFJD	Kangerlussuaq	77.87	23	*i* P		P		22 56 47.4	+2.9	
	comp=Z,15nm,0.9s									
STKA	Stephens Creek	79.03	231	P		P		22 56 50.5	-1.1	
STKA	Stephens Creek	79.03	231	P		P		22 56 50.5	-1.1	
	comp=Z,8.2nm,0.9s,baz=85,slow=6.5,SNR=5.6									
SUMG	Summit	79.21	16	⇑*i*P		P		22 56 52.5	+0.1	
SUMG					pmax	pmax				
	comp=Z,15nm,1.1s									
SUMG	Summit	79.21	16	*e*P		P		22 56 52.0	-0.4	
	comp=Z,52nm,1.3s									
SUMG	Summit	79.21	16	⇑*i*P		P		22 56 52.5	+0.1	
	comp=Z,15nm,1.1s									
HHC	Hu-ho-hao-te	79.74	310	*e*P		P		22 56 55.8	+0.3	
HHC					sP	sP		22 57 03.0	+1.2	
HHC					PP	PP		22 59 57.4	+1.0	
HHC					S	S		23 06 56.8	-1.3	
HHC					SKS	SKSac		23 07 06.8	-5.6	
HHC					pmax	pmax				
	comp=Z,48nm,0.8s									
HHC					pmax	pmax				
	comp=Z,240nm,4.4s									
HHC					LR	LR				
	comp=N,310nm,15.5s									
HHC					LR	LR				
	comp=E,460nm,15.5s									
HHC					LR	LR				
	comp=Z,250nm,16.7s									
ROSC	El Rosal	80.00	88	P		P		22 56 58.7	+1.0	
ROSC	El Rosal	80.00	88	P		P		22 56 58.7	+1.0	
	comp=Z,4.6nm,0.3s,baz=111,slow=21,SNR=7.8									
DAG	Danmarks Havn	80.54	9	⇑*i*P		P		22 56 58.1	-0.9	
DAG					pmax	pmax				
	comp=Z,13nm,1.1s									
DAG	Danmarks Havn	80.54	9	⇑*i*P		P		22 56 58.1	-0.9	
	comp=Z,11nm,1.1s									
WHN	Wuhan	80.55	299	P		P		22 57 01.3	+1.4	
ULN	Ulaanbaatar	80.69	317	*e*P		P		22 57 00.8	+0.2	
	comp=Z,45nm,1.0s									
BTO	Baotou	80.93	310	*e*P		P		22 57 02.3	+0.4	
IRK	Irkutsk	80.94	322	*e*P		P		22 57 01.4	-0.2	
IRK					pmax	pmax				
	comp=Z,47nm,1.1s									
SONM	Songino Array	81.12	318	P		P		22 57 03.6	+0.7	
SONM	Songino Array	81.12	318	P		P		22 57 03.6	+0.7	
	comp=Z,19nm,1.0s,baz=58,slow=3.3,SNR=75									
SONM					LR	LR		23 32 21.0		
	comp=Z,109nm,18.2s,baz=208,slow=35									
AS31	Alice Springs	81.15	241	*e*P		P		22 57 02.1	-1.2	
ASAR	Alice Springs	81.16	241	P		P		22 57 03.1	-0.1	
ASAR	Alice Springs	81.16	241	P		P		22 57 03.1	-0.1	
	comp=Z,7.2nm,1.0s,baz=63,slow=6.2,SNR=16									
TLY	Talaya	81.50	322	*e*P		P		22 57 04.4	-0.2	
TLY				*e*PPP		PPP		23 02 00.1		
TLY				*e*S		S		23 07 15.6	-0.4	
TLY					pmax	pmax				
	comp=Z,18nm,1.0s									
TLY					MLR	MLR				
	comp=Z,93nm,20.0s									
TLY	Talaya	81.50	322	P		P		22 57 06.7	+2.1	
	comp=Z,110nm,1.0s,SNR=5.8									
KBS	Kingsbay	81.53	2	*de*P		P		22 57 05.3	+1.0	
KBS					pmax	pmax				
	comp=Z,19nm,1.3s									
ZAK	Zakamensk	82.17	321	⇑*i*P		P		22 57 09.3	+1.0	
ZAK					pmax	pmax				
	comp=Z,12nm,1.3s									
SDV	Santo Domingo	82.19	83	*e*P		P		22 57 08.4	-0.8	
	comp=Z,19nm,0.8s									
MOY	Mondy	83.04	322	*e*P		P		22 57 13.7	+0.9	
MOY					pmax	pmax				
	comp=Z,27nm,1.5s									
SCO	Scoresbysund	84.60	14	⇑*i*P		P		22 57 20.1	-0.1	
SCO					pmax	pmax				
	comp=Z,6.0nm,1.1s									
SCO	Scoresbysund	84.60	14	⇑*i*P		P		22 57 20.1	-0.1	
	comp=Z,6.0nm,1.1s									
KRAR	Krasnoyarsk	85.52	328	⇑*e*P		P		22 57 26.5	+1.4	
KRAR					pmax	pmax				
	comp=Z,82nm,1.3s									
KAPI	Kappang	86.81	264	*e*P		P		22 57 35.4	+3.2	
	comp=Z,18nm,1.3s									

LZH	Lanzhou	87.03	307	⇑P		P		22 57 34.3	+1.1	
LZH					pP	pP		22 57 37.9	0.0	
LZH					sP	sP		22 57 40.1	+0.6	
LZH					PP	PP		23 01 01.3	+5.1	
LZH					SKS	SKSac		23 07 52.3	-8.3	
LZH					*e*S	SKKSac		23 08 10.5	+1.2	
LZH					sS	ScS		23 08 21.3	+1.5	
LZH					pmax	pmax				
	comp=Z,22nm,1.0s									
LZH					pmax	pmax				
	comp=Z,96nm,4.3s									
LZH					LR	LR				
	comp=N,460nm,18.4s									
LZH					LR	LR				
	comp=E,420nm,16.5s									
LZH					LR	LR				
	comp=Z,510nm,19.2s									
QIZ	Qiongzhong	88.08	289	P		P		22 57 38.8	+0.4	
QIZ				S		S		23 08 17.5	-5.0	
QIZ					pmax	pmax				
	comp=Z,86nm,6.3s									
QIZ					LR	LR				
	comp=N,110nm,7.9s									
QIZ					LR	LR				
	comp=Z,180nm,19.1s									
GYA	Guiyang	88.27	297	⇑*i*P		P		22 57 39.1	-0.2	
GYA					PP	PP		23 01 08.8	+2.4	
GYA					SKS	SKSac		23 08 05.4	-3.0	
GYA					S	S		23 08 23.8	-0.5	
GYA					pmax	pmax				
	comp=Z,20nm,1.0s									
GYA					pmax	pmax				
	comp=Z,120nm,5.0s									
GYA					LR	LR				
	comp=N,520nm,20.1s									
GYA					LR	LR				
	comp=E,510nm,21.2s									
GYA					LR	LR				
	comp=Z,560nm,20.8s									
GTA	Gaotai	88.67	311	*e*P		P		22 57 42.3	+1.3	
GTA					pP	pP		22 57 45.8	+0.2	
GTA					sP	sP		22 57 48.5	+1.2	
GTA					SKS	SKSac		23 08 09.1	-1.3	
GTA					S	S		23 08 29.3	+1.6	
GTA					sS	sS		23 08 37.6	+2.2	
GTA					pmax	pmax				
	comp=Z,23nm,1.0s									
GTA					pmax	pmax				
	comp=Z,140nm,4.7s									
GTA					LR	LR				
	comp=N,87nm,14.7s									
GTA					LR	LR				
	comp=E,120nm,14.0s									
GTA					LR	LR				
	comp=Z,100nm,13.3s									
CD2	Chengdu	89.03	302	P		P		22 57 42.0	-0.7	
CD2					pP	pP		22 57 46.8	-0.6	
CD2					sP	sP		22 57 49.0	0.0	
CD2					PP	PP		23 01 14.5	+2.2	
CD2					SKS	SKSac		23 08 09.8	-2.8	
CD2					S	S		23 08 28.8	-2.4	
CD2					sS	ScS		23 08 36.8	+0.5	
CD2					pmax	pmax				
	comp=Z,10.0nm,0.5s									
CD2					pmax	pmax				
	comp=Z,120nm,5.4s									
ZAA0	Zalesovo Array	90.55	329	*e*P		P		22 57 49.2	0.0	
ZALV	Zalesovo Beam	90.55	329	P		P		22 57 49.9	+0.7	
ZALV	Zalesovo Beam	90.55	329	P		P		22 57 49.9	+0.7	
ZALV	Zalesovo Beam	90.55	329	P		P		22 57 49.9	+0.7	
	comp=Z,18nm,1.0s,baz=56,slow=5.6,SNR=29									
NVS	Novosibirsk	90.78	330	⇑*i*P		P		22 57 50.5	+0.2	
NVS					pmax	pmax				
	comp=Z,32nm,1.3s									
NVS					pmax	pmax				
	comp=N,6.0nm,1.7s									
NVS					pmax	pmax				
	comp=E,19nm,1.5s									
ARCES	ARCESS Array B	91.23	360	P		P		22 57 53.0	+0.8	
ARCES	ARCESS Array B	91.23	360	P		P		22 57 53.0	+0.8	
	comp=E,7.8nm,0.9s,baz=347,slow=9.9,SNR=5.7									
KMI	Kunming	92.05	297	P		P		22 57 58.0	+0.9	
KMI					pP	pP		22 58 00.3	-1.5	
KMI					sP	sP		22 58 01.5	-1.9	
KMI					PP	PP		23 01 39.6	+3.0	
KMI					S	S		23 08 59.3	-0.2	
KMI					pmax	pmax				
	comp=Z,11nm,1.3s									
KMI					LR	LR				
	comp=Z,91nm,23.9s									
LPAZ	La Paz	92.83	106	P		P		22 58 02.9	+1.6	
LPAZ	La Paz	92.83	106	P		P		22 58 02.9	+1.6	
	comp=Z,2.0nm,0.8s,baz=92,slow=5.8,SNR=5.5									
APA	Apatity	92.96	357	⇓*e*P		P		22 57 52.0	-8.2	
APA					MLR	MLR				
	comp=Z,300nm,29.0s									
KSM	Kuching	93.56	273	*e*P		P		22 58 07.7	+3.7	
	comp=Z,17nm,1.2s									
WMQ	Urumqi	94.60	320	P		P		22 58 08.0	-0.3	
WMQ					sP	sP		22 58 15.0	+0.4	
WMQ					PP	PP		23 01 59.0	+3.2	
WMQ					SKS	SKSac		23 08 42.0	-1.6	
WMQ					S	S		23 09 18.0	-3.1	
WMQ					sS	sS		23 09 27.0	-1.8	
WMQ					pmax	pmax				
	comp=Z,12nm,1.0s									
WMQ					pmax	pmax				
	comp=Z,54nm,8.0s									
WMQ					LR	LR				
	comp=N,140nm,20.0s									
WMQ					LR	LR				
	comp=E,140nm,20.0s									
WMQ					LR	LR				
	comp=Z,100nm,20.0s									
LCO	Las Campanas	94.80	119	*e*P		P		22 58 10.3	+0.6	
KURK	Kurchatov	95.53	329	⇑*e*P		P		22 58 13.4	+1.1	
KURK					pmax	pmax				
	comp=Z,7.0nm,1.3s									
KURK	Kurchatov	95.53	329	*e*P		P		22 58 20.6	+8.2	
	comp=Z,8.5nm,1.3s									
MK31	Makanchi Array	96.06	324	*e*P		P		22 58 13.4	-1.5	
M

MSAI	**Masohi**	**0.96**	**228**	P	Pn	22 46 48.4	-0.8
AAI	**Ambon**	**1.75**	**236**	P	Pn	22 47 01.2	+1.2
BNDI	**Bandanaira**	**1.83**	**172**	P	Pn	22 47 01.2	0.0
SWI	**Sorong**	**2.44**	**42**	P	Pn	22 47 09.8	+0.2

*ISCJB **14** 22:56:26.0±0.4, 39.99N±0.02×27.57E±0.03, h7km±4km, Error ellipse: s-maj=4.4km s-min=3.2km az=152.5*
*CSEM **14** 22:56:26.3±0.1, 39.98N×27.61E, h8km, MD2.8, Error ellipse: s-maj=3.6km s-min=2.6km az=62.0*
*ISK **14** 22:56:26.0, 39.99N×27.61E, h9km, MD2.8*
*DDA **14** 22:56:26.5, 39.93N×27.52E, h18km, MD2.8*
ISC 14 22:56:26.5±0.9, 39.96N±0.02×27.58E±0.02, h13km±7km, n70, σ0.70/86, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALY	**Balya**	**0.23**	**173**	*i* P	**Pg**	**22 56 31.7**	**+0.3**
BALY				*i* S	**Sg**	**22 56 34.9**	**+0.2**
BALY	**Balya**	**0.23**	**173**	*i* P	**Pg**	**22 56 31.7**	**+0.3**
BALY				*i* S	**Sg**	**22 56 34.9**	**+0.2**
BALB	**Balikesir**	**0.40**	**145**	PG	**Pb**	**22 56 34.8**	**-0.5**
BALB				*e*SG	**Sg**	**22 56 40.2**	**+0.5**
BALB	**Balikesir**	**0.40**	**145**	*i* Pg	**Pb**	**22 56 34.8**	**-0.5**
BALB				*e*Sg	**Sg**	**22 56 40.2**	**+0.5**
EDC	**Edincik**	**0.44**	**29**	PG	**Pb**	**22 56 35.4**	**-0.6**
EDC	**Edincik**	**0.44**	**29**	*i* Pg	**Pb**	**22 56 35.4**	**-0.6**
KRBG	**Karabiga-Canak**	**0.48**	**333**	*e*PG	**Pg**	**22 56 35.6**	**-0.4**
KRBG	**Karabiga-Canak**	**0.48**	**333**	*e*Pg	**Pg**	**22 56 35.6**	**-0.4**
LPK	**Lapseki**	**0.75**	**303**	*e*PG	**Pb**	**22 56 41.4**	**0.0**
LPK	**Lapseki**	**0.75**	**303**	*e*Pg	**Pb**	**22 56 41.4**	**0.0**
DURS	**Dursunbey**	**0.78**	**118**	*i* P	**Pg**	**22 56 39.5**	**-2.0**
DURS	**Dursunbey**	**0.78**	**118**	*i* P	**Pg**	**22 56 39.5**	**-2.0**
RKY	**Sarkoy-Tekirda**	**0.79**	**337**	*e*PG	**Pg**	**22 56 41.2**	**-0.5**
RKY	**Sarkoy-Tekirda**	**0.79**	**337**	*e*Pg	**Pg**	**22 56 41.2**	**-0.5**
SART	**Tekirdag**	**0.79**	**337**	*i* P	**Pb**	**22 56 42.2**	**+0.2**
SART				*i* S	**Sb**	**22 56 52.7**	**+0.1**
SART	**Tekirdag**	**0.79**	**337**	*i* P	**Pb**	**22 56 42.2**	**+0.2**
SART				*i* S	**Sb**	**22 56 52.7**	**+0.1**
MFT	**Murefte**	**0.85**	**344**	*e*PG	**Pg**	**22 56 42.6**	**-0.4**
MFT	**Murefte**	**0.85**	**344**	*e*Pg	**Pg**	**22 56 42.6**	**-0.4**
DST	**Dursunbey**	**0.88**	**114**	*e*PG	**Pg**	**22 56 42.5**	**-0.9**
DST	**Dursunbey**	**0.88**	**114**	*e*Pg	**Pg**	**22 56 42.5**	**-0.9**
AYVA	**Ayvalik**	**0.95**	**227**	*i* P	**Pg**	**22 56 43.2**	**-1.6**
AYVA				*i* S	**Sg**	**22 56 56.8**	**-0.5**
AYVA	**Ayvalik**	**0.95**	**227**	*i* P	**Pg**	**22 56 43.2**	**-1.6**
AYVA				*i* S	**Sg**	**22 56 56.8**	**-0.5**
GELI	**Tayfur-Gelibol**	**0.95**	**297**	*e*PG	**Pg**	**22 56 44.7**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.95**	**297**	*e*Pg	**Pg**	**22 56 44.7**	**-0.2**
EZN	**Ezine**	**0.98**	**262**	*e*PG	**Pb**	**22 56 45.5**	**+0.3**
EZN	**Ezine**	**0.98**	**262**	*e*Pg	**Pb**	**22 56 45.5**	**+0.3**
ORLT	**Orhaneli**	**1.01**	**85**	*e*PG	**Pb**	**22 56 45.5**	**-0.3**
ORLT	**Orhaneli**	**1.01**	**85**	*e*Pg	**Pb**	**22 56 45.5**	**-0.3**
TKR	**Tekirdag**	**1.03**	**358**	*e*PG	**Pb**	**22 56 46.0**	**0.0**
TKR	**Tekirdag**	**1.03**	**358**	*e*Pg	**Pb**	**22 56 46.0**	**0.0**
MDNY	**Mudanya-Bursa**	**1.07**	**67**	*e*PG	**Pg**	**22 56 46.2**	**-0.9**
MDNY	**Mudanya-Bursa**	**1.07**	**67**	*e*Pg	**Pg**	**22 56 46.3**	**-0.9**
AKS	**Akhisar**	**1.10**	**171**	*e*PN	**Pb**	**22 56 47.4**	**+0.1**
AKS	**Akhisar**	**1.10**	**171**	*e*Pn	**Pb**	**22 56 47.4**	**+0.1**
AKHS	**Akhisar**	**1.10**	**171**	*i* P	**Pg**	**22 56 47.0**	**-0.6**
AKHS				*i* S	**Sg**	**22 57 01.3**	**-0.7**
AKHS	**Akhisar**	**1.10**	**171**	*i* P	**Pg**	**22 56 47.0**	**-0.6**
AKHS				*i* S	**Sg**	**22 57 01.3**	**-0.7**
ARMT	**Armutlu**	**1.15**	**58**	*e*PN	**Pg**	**22 56 47.6**	**-1.0**
ARMT	**Armutlu**	**1.15**	**58**	*e*Pn	**Pg**	**22 56 47.6**	**-1.0**
CRLT	**Corlu**	**1.17**	**6**	*e*PN	**Pb**	**22 56 47.8**	**-0.7**
CRLT	**Corlu**	**1.17**	**6**	*e*Pn	**Pb**	**22 56 47.8**	**-0.7**
BOZC	**Bozcaada**	**1.18**	**265**	*i* P	**Pb**	**22 56 48.4**	**-0.4**
BOZC				*i* S	**Sb**	**22 57 02.7**	**-1.2**
DEMI	**Demirci**	**1.27**	**136**	*i* P	**Pg**	**22 56 51.1**	**+0.2**
DEMI				*i* S	**Sn**	**22 57 07.9**	**+1.0**
DEMI	**Demirci**	**1.27**	**136**	*i* P	**Pg**	**22 56 51.1**	**+0.2**
DEMI				*i* S	**Sn**	**22 57 07.9**	**+1.0**
GEMT	**Gemlik**	**1.32**	**69**	*e*PN	**Pn**	**22 56 50.5**	**0.0**
GEMT	**Gemlik**	**1.32**	**69**	*e*Pn	**Pn**	**22 56 50.5**	**0.0**
ENEZ	**Enez**	**1.34**	**306**	*e*PN	**Pb**	**22 56 51.5**	**+0.2**
ENEZ	**Enez**	**1.34**	**306**	*e*Pn	**Pb**	**22 56 51.6**	**+0.2**
SLVT	**Silivri**	**1.35**	**20**	*e*PN	**Pn**	**22 56 50.8**	**-0.2**
SLVT	**Silivri**	**1.35**	**20**	*e*Pn	**Pn**	**22 56 50.8**	**-0.2**
CTKS	**Kestanelik-??a**	**1.45**	**29**	*e*PN	**Pn**	**22 56 52.6**	**+0.3**
CTKS	**Kestanelik-??a**	**1.45**	**29**	*e*Pn	**Pn**	**22 56 52.6**	**+0.3**
YLV	**Yalova**	**1.50**	**66**	*e*PN	**Pb**	**22 56 53.5**	**-0.6**
YLV	**Yalova**	**1.50**	**66**	*e*Pn	**Pb**	**22 56 53.5**	**-0.6**
BGKT	**Bogazkoy**	**1.52**	**36**	*e*PN	**Pn**	**22 56 53.4**	**+0.2**
BGKT	**Bogazkoy**	**1.52**	**36**	*e*Pn	**Pn**	**22 56 53.4**	**+0.2**
TVSB	**Tavsanli**	**1.54**	**109**	*e*PN	**Pn**	**22 56 53.9**	**+0.3**
TVSB	**Tavsanli**	**1.54**	**109**	*e*Pn	**Pn**	**22 56 53.9**	**+0.3**
IZM	**Izmir**	**1.58**	**189**	*e*PN	**Pb**	**22 56 55.8**	**+0.2**
IZM	**Izmir**	**1.58**	**189**	*e*Pn	**Pb**	**22 56 55.8**	**+0.2**
BLCB	**Balcova**	**1.63**	**195**	*e*PN	**Pb**	**22 56 56.6**	**+0.2**
BLCB	**Balcova**	**1.63**	**195**	*e*Pn	**Pb**	**22 56 56.6**	**+0.2**
KULA	**Kula-Manisa**	**1.67**	**150**	*e*PN	**Pb**	**22 56 56.6**	**-0.5**
KULA	**Kula-Manisa**	**1.67**	**150**	*e*Pn	**Pb**	**22 56 56.6**	**-0.5**
GDZ	**Gediz**	**1.71**	**120**	*i* P	**Pg**	**22 56 58.6**	**-0.7**
GDZ				*i* S	**Sg**	**22 57 22.5**	**+1.1**
GDZ	**Gediz**	**1.71**	**120**	*i* P	**Pg**	**22 56 58.6**	**-0.7**
EDRB	**Edirne**	**1.99**	**342**	*e*PN	**Pn**	**22 57 00.0**	**+0.3**
EDRB	**Edirne**	**1.99**	**342**	*e*Pn	**Pn**	**22 57 00.0**	**+0.3**
KHAL	**Karahalli**	**2.18**	**136**	*i* P	**Pn**	**22 57 02.0**	**-0.4**
KHAL				*i* S	**Sb**	**22 57 34.0**	**+1.4**
KHAL	**Karahalli**	**2.18**	**136**	*i* P	**Pn**	**22 57 02.0**	**-0.4**
BORA	**Eskisehir**	**2.21**	**91**	*i* P	**Pg**	**22 57 08.8**	**0.0**
BORA				*i* S	**Sg**	**22 57 39.5**	**+2.1**

*IDC **14** 23:01:05.7±3.8, 24.21S×177.74W, h0km, mb4.4/4, mb1 4.5/4, mb1mx3.9/18, mbtmp4.3/4, Error ellipse: s-maj=146.0km s-min=51.1km az=149.0*
*AUST **14** 23:02:13.0±5.7, 23.64S×173.82E, h35km, Error ellipse: s-maj=1.7km s-min=1.3km az=278.0*
ISC 14 23:01:08.7±4.6, 23.9S±0.7×177.6W±0.7, h35km, n12, σ1.9/57/10, mb4.2/4, South Pacific Ocean Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMSA	**Cobar Meteorol**	**33.31**	**248**	P	**P**	**23 07 44.2**	**+0.9**
	baz=26,SNR=9.1						
CTA	**Charters Tower**	**33.71**	**269**	P	**P**	**23 07 48.5**	**+1.6**
	8.7m,0.3s,baz=96,slow=10,SNR=23						
QLP	**Quilpie**	**34.59**	**257**	P	**P**	**23 07 55.0**	**+0.5**
	baz=27,SNR=5.2						
STKA	**Stephens Creek**	**36.81**	**248**	P	**P**	**23 08 13.6**	**+0.1**
	2.8nm,0.4s,baz=92,slow=10,SNR=14						
STKA	**Stephens Creek**	**36.81**	**248**	P	**P**	**23 08 13.9**	**+0.4**
	baz=30,SNR=9.9						
ASAR	**Alice Springs**	**44.25**	**260**	P	**P**	**23 09 13.8**	**-1.3**
	1.0nm,0.4s,baz=92,slow=7.9,SNR=19						
KDU	**Kakadu**	**48.51**	**274**	P	**P**	**23 09 47.5**	**-1.1**
	baz=41,SNR=7.2						
FITZ	**Fitzroy Crossi**	**53.06**	**265**	P	**P**	**23 10 22.1**	**-0.7**
	baz=45,SNR=4.6						
PCI	**Palu**	**64.69**	**281**	P	P	23 12 04.5	+21
	baz=57,SNR=13						
CMAR	**Chiang Mai Arr**	**91.61**	**289**	P	**P**	**23 14 14.9**	**+2.3**
	0.2nm,0.4s,baz=128,slow=2.2,SNR=4.4						
FINES	**FINESS Array B**	**139.09**	**343**	PKhKP	PKPpre	23 20 29.1	
	1.2nm,0.9s,baz=64,slow=4.4,SNR=3.4						
BRTR	**Keskin Array B**	**149.31**	**308**	PKPbc	**PKPab**	**23 20 56.7**	**-2.1**
	0.4nm,0.6s,baz=46,slow=8.3,SNR=3.6						

*NEIC **14** 23:02:06.2, 46.15S×167.77E, h5km, ML4.5(WEL), After WEL.*
NEIC Felt [IV] at Otautau and Tuatapere. Also felt at Invercargill and on Stewart Island.
WEL 14 23:02:07.3±0.1, 46.14S×167.79E, h12km, ML4.5/16, 4C-1D, Error ellipse: s-maj=1.0km s-min=0.8km az=90.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WHZ	**Wether Hill Ro**	**0.27**	**24**	P*	Pg	23 02 13.1	+0.2
WHZ				S*	Sg	23 02 17.3	+0.6
WHZ	**Wether Hill Ro**	**0.27**	**24**	Pg	Pg	23 02 12.3	-0.6
APZ	**The Paps**	**0.70**	**169**	P*	Pg	23 02 20.3	-0.7
APZ				S*	Sg	23 02 29.9	-0.5
APZ	**The Paps**	**0.70**	**169**	P*	Pg	23 02 20.3	-0.7
APZ				S*	Sg	23 02 29.9	-0.4
PYZ	**Puysegur Point**	**0.77**	**268**	⇑P*	Pg	23 02 21.4	-0.8
PYZ	**Puysegur Point**	**0.77**	**268**	P*	Pg	23 02 21.4	-0.8
DCZ	**Deep Cove**	**0.80**	**326**	P*	Pg	23 02 21.9	-0.8
DCZ				S*	Sg	23 02 32.6	-0.6
DCZ	**Deep Cove**	**0.80**	**326**	P*	Pg	23 02 21.5	-1.2
DCZ				S*	Sg	23 02 32.7	-0.5
MLZ	**Mavora Lakes**	**0.84**	**19**	⇓P*	Pg	23 02 22.3	-1.3
MLZ	**Mavora Lakes**	**0.84**	**19**	P*	Pg	23 02 21.8	-1.8
SYZ	**Scrubby Hill**	**1.01**	**113**	⇑P*	Pb	23 02 25.5	-1.2
SYZ				S*	Sg	23 02 39.8	-0.2
SYZ	**Scrubby Hill**	**1.01**	**113**	P*	Pb	23 02 25.3	-1.4
SYZ				S*	Sg	23 02 39.5	-0.6
TUZ	**Tuapeka**	**1.30**	**82**	⇑PN	Pn	23 02 30.6	-0.6
TUZ				SN	Sb	23 02 47.5	-0.7
TUZ	**Tuapeka**	**1.30**	**82**	P*	Pn	23 02 30.5	-0.7
EAZ	**Earnscleugh**	**1.40**	**50**	PN	Pn	23 02 32.1	-0.6
EAZ	**Earnscleugh**	**1.40**	**50**	Pn	Pn	23 02 31.8	-0.8
MSZ	**Milford Sound**	**1.47**	**4**	PN	Pn	23 02 32.7	-0.9
MSZ				SN	Sn	23 02 51.7	-1.1
MSZ	**Milford Sound**	**1.47**	**4**	Pn	Pn	23 02 32.6	-1.0
WKZ	**Wanaka**	**1.57**	**34**	PN	Pn	23 02 35.1	+0.1
WKZ	**Wanaka**	**1.57**	**34**	Pn	Pn	23 02 35.1	0.0
JCZ	**Jackson Bay**	**2.18**	**19**	PN	Pn	23 02 43.7	+0.2
JCZ	**Jackson Bay**	**2.18**	**19**	Pn	Pn	23 02 43.7	+0.2
ODZ	**Otahua Downs**	**2.29**	**62**	PN	Pn	23 02 43.9	-0.9
ODZ	**Otahua Downs**	**2.29**	**62**	Pn	Pn	23 02 43.9	-0.9
LBZ	**Lake Benmore**	**2.44**	**45**	PN	Pn	23 02 45.8	-1.1
LBZ	**Lake Benmore**	**2.44**	**45**	Pn	Pn	23 02 45.6	-1.3
FOZ	**Fox Glacier**	**2.91**	**28**	PN	Pn	23 02 54.2	+0.9
FOZ	**Fox Glacier**	**2.91**	**28**	Pn	Pn	23 02 54.3	+0.9
RPZ	**Rata Peaks**	**3.36**	**45**	⇑PN	Pn	23 02 57.4	-2.1
RPZ	**Rata Peaks**	**3.36**	**45**	Pn	Pn	23 02 57.4	-2.1
WVZ	**Waitaha Valley**	**3.72**	**36**	PN	Pn	23 03 03.7	-0.8
MQZ	**McQueen's Vall**	**4.22**	**57**	PN	Pn	23 03 10.0	-1.5
MQZ	**McQueen's Vall**	**4.22**	**57**	Pn	Pn	23 03 09.7	-1.8
LTZ	**Lake Taylor**	**4.64**	**45**	PN	Pn	23 03 15.1	-2.2
LTZ	**Lake Taylor**	**4.64**	**45**	Pn	Pn	23 03 14.8	-2.5
DSZ	**Dennistoun Nort**	**5.26**	**35**	PN	Pn	23 03 23.7	-2.1
KHZ	**Kahutara**	**5.56**	**50**	PN	Pn	23 03 27.7	-2.1
KHZ	**Kahutara**	**5.56**	**50**	Pn	Pn	23 03 27.6	-2.1
QRZ	**Quartz Range**	**6.33**	**35**	PN	Pn	23 03 38.6	-1.8
QRZ	**Quartz Range**	**6.33**	**35**	Pn	Pn	23 03 38.6	-1.9
OUZ	**Omahuta**	**11.76**	**24**	*e*Pn	Pn	23 04 50.1	-4.7

GUC 14 23:16:42.2±1.0, 31.20S×68.58W, h140km, ML3.5, 3C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLL	**Tololo Astrono**	**2.17**	**298**	⇑*i* P	Pn	23 17 20.4	+1.2
TLL				*i* S	Sn	23 17 48.9	+1.4
TLL				AML	AML	23 17 52.0	
	comp=N,202nm,0.5s						
FCH	**Farellones**	**2.57**	**214**	*e*P	Pn	23 17 23.1	-1.0
FCH				*e*S	Sn	23 17 55.0	-1.3
FCH				AML	AML	23 18 04.2	
	comp=E,94nm,0.3s						
PEL	**Peldehue**	**2.63**	**222**	⇑*i* P	Pn	23 17 25.1	+0.5
PEL				*i* S	Sn	23 17 58.0	+0.8
PEL				AML	AML	23 17 59.9	
	comp=E,164nm,0.5s						
ROCH	**El Roble**	**2.71**	**229**	*e*P	Pn	23 17 26.5	+0.7
ROCH				*e*S	Sn	23 18 00.4	+0.9
LCO	**Las Campanas**	**2.85**	**319**	⇑*i* P	Pn	23 17 28.3	+0.6
LCO				*i* S	Sn	23 18 03.0	+0.3
LCO				AML	AML	23 18 07.2	
	comp=E,178nm,0.2s						
RCDM	**Rinconada Maip**	**2.96**	**219**	*e*P	Pn	23 17 29.1	+0.4
RCDM				*e*S	Sn	23 18 05.2	+0.7
RCDM				AML	AML	23 18 09.2	
	comp=E,146nm,0.2s						
LMEL	**Las Melosas**	**2.97**	**207**	*e*P	Pn	23 17 29.7	+0.7
LMEL				AML	AML	23 18 27.8	
	comp=N,66nm,0.4s						

*ISCJB **14** 23:19:46.0±0.5, 39.03N±0.03×29.68E±0.03, h10km±4km, Error ellipse: s-maj=4.8km s-min=3.6km az=12.4*
*ISK **14** 23:19:45.8, 39.05N×29.67E, h12km, MD2.8*
*CSEM **14** 23:19:46.1±0.1, 39.05N×29.67E, h8km, MD2.8, Error ellipse: s-maj=2.0km s-min=1.7km az=20.0*
*DDA **14** 23:19:46.1, 39.04N×29.63E, h13km, MD2.8*
ISC 14 23:19:46.2±0.9, 39.04N±0.02×29.67E±0.02, h11km±7km, n45, σ0.62/61, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.16**	**289**	*i* P	**Pg**	**23 19 50.1**	**+0.2**
GDZ				*i* S	**Sg**	**23 19 52.1**	**-0.3**
GDZ	**Gediz**	**0.16**	**289**	*i* P	**Pg**	**23 19 50.1**	**+0.2**
GDZ				*i* S	**Sg**	**23 19 52.1**	**-0.3**
ALT	**Altintas**	**0.34**	**87**	PG	**Pg**	**23 19 53.2**	**+0.1**
ALT				*e*SG	**Sg**	**23 19 58.4**	**+0.8**
ALT	**Altintas**	**0.34**	**87**	*i* Pg	**Pg**	**23 19 53.2**	**+0.1**
ALT				*e*Sg	**Sg**	**23 19 58.4**	**+0.8**
TVSB	**Tavsanli**	**0.44**	**338**	*e*PG	**Pg**	**23 19 55.0**	**0.0**
TVSB				*e*SG	**Sg**	**23 20 01.1**	**+0.2**
TVSB	**Tavsanli**	**0.44**	**338**	*e*Pg	**Pg**	**23 19 55.0**	**0.0**
TVSB				*e*Sg	**Sg**	**23 20 01.1**	**+0.2**
KHAL	**Karahalli**	**0.68**	**192**	*i* P	**Pg**	**23 19 59.6**	**+0.2**
KHAL				*i* S	**Sg**	**23 20 07.6**	**-0.7**
KHAL	**Karahalli**	**0.68**	**192**	*i* P	**Pg**	**23 19 59.6**	**+0.2**
KHAL				*i* S	**Sg**	**23 20 07.6**	**-0.7**
KHL	**Karahalli**	**0.72**	**189**	*e*PG	**Pg**	**23 20 00.4**	**+0.2**
KHL	**Karahalli**	**0.72**	**189**	*e*Pg	**Pg**	**23 20 00.4**	**+0.2**
DEMI	**Demirci**	**0.75**	**271**	*i* P	**Pg**	**23 20 00.8**	**+0.2**
DEMI	**Demirci**	**0.75**	**271**	*i* P	**Pg**	**23 20 00.8**	**+0.2**
SHUT	**Suhut-Afyon**	**0.84**	**125**	*e*PG	**Pg**	**23 20 02.9**	**+0.5**
SHUT	**Suhut-Afyon**	**0.84**	**125**	*e*Pg	**Pg**	**23 20 02.9**	**+0.5**
KULA	**Kula-Manisa**	**0.95**	**237**	*e*PG	**Pb**	**23 20 04.3**	**-0.4**
KULA	**Kula-Manisa**	**0.95**	**237**	*e*Pg	**Pb**	**23 20 04.3**	**-0.4**
DST	**Dursunbey**	**0.99**	**305**	*e*PG	**Pb**	**23 20 05.2**	**-0.3**
DST	**Dursunbey**	**0.99**	**305**	*e*Pg	**Pb**	**23 20 05.2**	**-0.3**
ESKT	**Eskisehir**	**1.03**	**62**	*e*PG	**Pb**	**23 20 05.9**	**-0.3**
ESKT	**Eskisehir**	**1.03**	**62**	*e*Pg	**Pb**	**23 20 05.9**	**-0.3**
SEYT	**Eskypehyr**	**1.03**	**62**	*i* P	Pb	23 20 03.2	-3.0
SEYT				*i* S	**Sb**	**23 20 17.0**	**-2.8**
BORA	**Eskisehir**	**1.04**	**35**	*i* P	**Pb**	**23 20 05.9**	**-0.3**
BORA				*i* S	**Sb**	**23 20 20.1**	**+0.2**
BORA	**Eskisehir**	**1.04**	**35**	*i* P	**Pb**	**23 20 05.9**	**-0.3**
BORA				*i* S	**Sb**	**23 20 20.1**	**+0.2**
BOLV	**Bolvadin**	**1.05**	**107**	*i* P	**Pb**	**23 20 07.3**	**+0.9**
BOLV				*i* S	**Sb**	**23 20 18.9**	**-1.3**
BOLV	**Bolvadin**	**1.05**	**107**	*i* P	**Pb**	**23 20 07.3**	**+0.9**
BOLV				*i* S	**Sb**	**23 20 18.9**	**-1.3**
DURS	**Dursunbey**	**1.09**	**302**	*i* P	**Pb**	**23 20 07.5**	**+0.4**
DURS				*i* S	**Sb**	**23 20 21.1**	**-0.3**
DURS	**Dursunbey**	**1.09**	**302**	*i* P	**Pb**	**23 20 07.5**	**+0.4**
DURS				*i* S	**Sb**	**23 20 21.1**	**-0.3**
ORLT	**Orhaneli**	**1.17**	**329**	*e*PN	**Pb**	**23 20 08.5**	**-0.1**
ORLT	**Orhaneli**	**1.17**	**329**	*e*Pn	**Pb**	**23 20 08.5**	**-0.1**
GEMT	**Gemlik**	**1.45**	**345**	*e*PN	**Pn**	**23 20 11.7**	**-0.7**
GEMT	**Gemlik**	**1.45**	**345**	*e*Pn	**Pn**	**23 20 11.7**	**-0.7**
SVRH	**Sivrihisar-ESK**	**1.49**	**73**	*e*PN	**Pn**	**23 20 13.3**	**+0.2**
SVRH	**Sivrihisar-ESK**	**1.49**	**73**	*e*Pn	**Pn**	**23 20 13.3**	**+0.2**
BALB	**Balikesir**	**1.52**	**294**	*e*PN	**Pn**	**23 20 13.3**	**0.0**
BALB	**Balikesir**	**1.52**	**294**	*e*Pn	**Pn**	**23 20 13.3**	**0.0**
GULT	**Gulveren**	**1.54**	**25**	*e*PN	**Pn**	**23 20 13.3**	**-0.4**
GULT	**Gulveren**	**1.54**	**25**	*e*Pn	**Pn**	**23 20 13.3**	**-0.4**
YLV	**Yalova**	**1.55**	**351**	*e*PN	**Pn**	**23 20 13.9**	**+0.1**
YLV	**Yalova**	**1.55**	**351**	*e*Pn	**Pn**	**23 20 13.9**	**+0.1**
ARMT	**Armutlu**	**1.65**	**338**	*e*PN	**Pn**	**23 20 14.9**	**-0.3**
ARMT	**Armutlu**	**1.65**	**338**	*e*Pn	**Pn**	**23 20 14.9**	**-0.3**
BALY	**Balya**	**1.74**	**294**	*i* P	**Pb**	**23 20 19.1**	**+0.9**
BALY				*i* S	**Sn**	**23 20 39.5**	**+0.8**
BALY	**Balya**	**1.74**	**294**	*i* P	**Pb**	**23 20 19.1**	**+0.9**
BALY				*i* S	**Sn**	**23 20 39.5**	**+0.8**
GONE	**Gonen-Balikesi**	**1.84**	**304**	*e*PN	**Pn**	**23 20 18.1**	**+0.3**
GONE	**Gonen-Balikesi**	**1.84**	**304**	*e*Pn	**Pn**	**23 20 18.1**	**+0.3**

*ISCJB **14** 23:26:25.4±0.9, 39.62N±0.03×37.22E±0.05, h1km±8km, Error ellipse: s-maj=6.6km s-min=5.1km az=142.7*
*ISK **14** 23:26:25.6, 39.65N×37.28E, h14km, MD2.7*
*DDA **14** 23:26:26.1, 39.66N×37.25E, h7km, MD2.8*
*CSEM **14** 23:26:27.6±0.3, 39.78N×37.24E, h10km, MD2.8, Error ellipse: s-maj=8.2km s-min=5.7km az=59.0*
ISC 14 23:26:26.4±1.0, 39.67N±0.02×37.24E±0.03, h11km±8km, n27, σ0.89/41, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCER	**sogukcermik**	**0.21**	**337**	*i* P	**Pg**	**23 26 30.7**	**-0.2**
SCER				*i* S	**Sg**	**23 26 34.1**	**+0.1**
SCER	**sogukcermik**	**0.21**	**337**	*i* P	**Pg**	**23 26 30.7**	**-0.2**
SCER				*i* S	**Sg**	**23 26 34.1**	**+0.1**
RSDY	**Resadiye-TOKAT**	**0.73**	**6**	*e*PG	**Pb**	**23 26 40.9**	**-0.3**
RSDY				*e*SG	**Sb**	**23 26 51.5**	**+0.3**
RSDY	**Resadiye-TOKAT**	**0.73**	**6**	*e*Pg	**Pb**	**23 26 40.9**	**-0.3**
RSDY				*e*Sg	**Sb**	**23 26 51.5**	**+0.3**
TOKA	**Tokat**	**0.88**	**319**	*i* P	**Pg**	**23 26 42.6**	**-0.7**
TOKA				*i* S	**Sn**	**23 26 57.3**	**-0.2**
TOKA	**Tokat**	**0.88**	**319**	*i* P	**Pg**	**23 26 42.6**	**-0.7**
SUSE	**Susehri**	**0.92**	**54**	*i* P	**Pg**	**23 26 44.0**	**-0.1**
SUSE				*i* S	**Sb**	**23 26 58.0**	**+1.3**
SUSE	**Susehri**	**0.92**	**54**	*i* P	**Pg**	**23 26 44.0**	**-0.1**
ILIC	**ilic-Erzincan**	**1.05**	**101**	*e*PG	**Pg**	**23 26 45.3**	**-1.3**
ILIC	**ilic-Erzincan**	**1.05**	**101**	*e*Pg	**Pg**	**23 26 45.3**	**-1.3**
KEMA	**Kemaliye**	**1.05**	**112**	*i* P	**Pg**	**23 26 45.0**	**-1.6**
ERBA	**Erbaa**	**1.08**	**340**	*i* P	**Pg**	**23 26 46.7**	**-0.4**
ERBA				*i* S	**Sb**	**23 27 02.1**	**+0.9**
ERBA	**Erbaa**	**1.08**	**340**	*i* P	**Pg**	**23 26 46.7**	**-0.4**
DARE	**Darende-Malaty**	**1.11**	**170**	*e*PN	**Pg**	**23 26 46.7**	**-1.0**
DARE				*e*SN	**Sb**	**23 27 02.7**	**+0.5**
SARI	**SarD1z-Kayseri**	**1.41**	**207**	*e*PN	**Pn**	**23 26 51.2**	**-1.0**
SARI	**SarD1z-Kayseri**	**1.41**	**207**	*e*Pn	**Pn**	**23 26 51.2**	**-1.0**
AKCD	**Akcadag**	**1.47**	**158**	*i* P	**Pg**	**23 26 54.3**	**-0.3**
AKCD				*i* S	**Sg**	**23 27 16.2**	**+2.5**
AKCD	**Akcadag**	**1.47**	**158**	*i* P	**Pg**	**23 26 54.3**	**-0.3**
AKCD				*i* S	**Sg**	**23 27 16.2**	**+2.5**
KELT	**Kelkit**	**1.63**	**72**	*i* P	**Pb**	**23 26 56.4**	**-0.1**
KELT				*i* S	**Sb**	**23 27 17.9**	**+0.7**
KELT	**Kelkit**	**1.63**	**72**	*i* P	**Pb**	**23 26 56.4**	**-0.1**
KELT				*i* S	**Sb**	**23 27 17.9**	**+0.7**
MALT	**Malatya**	**1.64**	**145**	*e*PN	**Pn**	**23 26 54.9**	**-0.3**
KVT	**Kavak**	**1.68**	**328**	*e*PN	**Pn**	**23 26 55.8**	**+0.1**
KVT	**Kavak**	**1.68**	**328**	*e*Pn	**Pn**	**23 26 55.8**	**+0.1**
ELZG	**Elazig**	**1.79**	**130**	*i* P	**Pg**	**23 27 00.3**	**-0.5**
ELZG				*i* S	**Sg**	**23 27 24.7**	**+0.6**
ELZG	**Elazig**	**1.79**	**130**	*i* P	**Pg**	**23 27 00.3**	**-0.5**
ELZG				*i* S

RPZ Rata Peaks 28.87 197 LR LR 23 45 28.9
comp=Z,17µm,21.8s,baz=38,slow=33

EIDS Eidsvold 30.46 248⇑ *e*P **P** **23 35 46.4 -0.4**
comp=Z,37nm,1.1s

EIDS Eidsvold 30.46 248 P P 23 35 51.1 +4.3
baz=32,SNR=4.2

ARMA Armidale 31.32 238 *e*P **P** **23 35 55.9 +1.5**
comp=Z,159nm,1.8s

ARMA Armidale 31.32 238 P P **23 35 55.9 +1.5**
baz=32,SNR=10.0

RMQ Roma 32.73 246 P P **23 36 07.2 +0.4**
baz=34,SNR=21

JOHN Johnston Islan 33.89 14 PFAKE 23 36 30.0 +13
JOHN LR LR
comp=Z,4.0nm,22.0s

CTAO Charters Tower 34.41 258 *e*P **P** **23 36 20.6 -0.9**
CTAO 23 38 56.9
CTAO *e*S **S** **23 41 49.1 -0.3**
CTAO pmax pmax
comp=Z,195nm,1.1s
CTAO MLR MLR
comp=Z,14µm,20.0s

CTAO Charters Tower 34.41 258 *e*P **P** **23 36 20.6 -0.9**
comp=Z,195nm,1.1s
CTAO PcP **PcP** **23 38 56.9 -0.2**
CTAO *e*S **S** **23 41 49.1 -0.3**
CTAO LR LR
comp=Z,14µm,20.0s

CNB Canberra Magne 34.91 231 P P **23 36 26.4 +0.7**
baz=36,SNR=9.7

PMG Port Moresby 34.94 277⇑ *e*P **P** **23 36 25.3 -0.7**
comp=Z,194nm,1.3s
PMG *e*PP **PP** **23 37 44.3 -1.0**
PMG *e*S **S** **23 41 55.7 -1.8**
PMG LR LR
comp=Z,4µm,20.0s

CAN Canberra 35.18 231 *e*P **P** **23 36 26.9 -1.1**
CAN *e*S **S** **23 42 01.8 +0.8**
CAN pmax pmax
comp=Z,118nm,1.7s
CAN MLR MLR
comp=Z,4µm,19.0s

CAN Canberra 35.18 231 *e*P **P** **23 36 26.9 -1.1**
comp=Z,118nm,1.7s
CAN *e*S **S** **23 42 01.8 +0.8**
CAN LR LR
comp=Z,4µm,19.0s

CMSA Cobar Meteorol 36.52 239 P P **23 36 39.6 +0.3**
baz=38,SNR=16

QLP Quilpie 36.74 247 P P **23 36 41.1 -0.3**
baz=38,SNR=40

COEN Coen 37.83 268 *e*P **P** **23 36 50.7 0.0**
comp=Z,473nm,1.0s

COEN Coen 37.83 268 P P **23 36 50.7 0.0**
baz=39,SNR=14

WAKE Wake Island 38.66 336 PFAKE 23 37 10.0 +12
WAKE LR LR
comp=Z,5µm,21.0s

TAU Tasmania Unive 39.83 221 PFAKE 23 37 20.0 +13
TAU LR LR
comp=Z,9µm,20.0s

STKA Stephens Creek 39.98 240 *e*P **P** **23 37 08.9 +0.4**
comp=Z,55nm,1.5s

STKA Stephens Creek 39.98 240 P P **23 37 08.9 +0.4**
comp=Z,46nm,1.1s,baz=72,slow=7.5,SNR=22
STKA LR LR 23 52 08.0
comp=Z,6µm,19.6s,baz=70,slow=34

STKA Stephens Creek 39.98 240 P P **23 37 09.0 +0.4**
baz=41,SNR=15

RKT Rikitea 40.63 106 *e*S **S** **23 43 24.1 +0.4**
comp=Z,4µm,18.8s
RKT *e*LQ LQ 23 46 29.5
comp=Z,6µm,17.0s
RKT *e*LR LR 23 48 20.9
comp=Z,22µm,29.5s,baz=280

QIS Mount Isa 40.65 257 P P **23 37 14.6 +0.4**
baz=42,SNR=8.6

KIP Kipapa 42.24 28 PFAKE 23 37 40.0 +13
KIP LR LR
comp=Z,6µm,21.0s

JAY Jayapura 43.19 284 P P **23 37 32.1 -3.1**
baz=44,SNR=5.2

MIDW Midway 44.35 0 PFAKE 23 37 50.0 +5.9
MIDW LR LR
comp=Z,6µm,22.0s

BBOO Buckleboo 44.76 240 *e*P **P** **23 37 47.5 0.0**
comp=Z,2µm,1.1s

BBOO Buckleboo 44.76 240 P P **23 37 50.5 +2.9**
baz=46,SNR=5.7

WRAB Tennant Creek 45.60 258⇑ *e*P **P** **23 37 52.1 -2.3**
WRAB *e* 23 39 36.3
WRAB pmax pmax
comp=Z,103nm,1.4s
WRAB MLR MLR
comp=Z,7µm,20.0s

WRAB Tennant Creek 45.60 258⇑ *e*P **P** **23 37 52.1 -2.3**
comp=Z,103nm,1.4s
WRAB *e*PcP **PcP** **23 39 36.3 +3.5**
WRAB LR LR
comp=Z,7µm,20.0s

AS31 Alice Springs 45.89 253 *e*P **P** **23 37 55.3 -1.3**
ASAR Alice Springs 45.89 253 P **P** **23 37 55.5 -1.1**
ASAR Alice Springs 45.89 253 P **P** **23 37 55.5 -1.1**
comp=Z,25nm,0.9s,baz=85,slow=8.2,SNR=123
ASAR LR LR 23 56 05.8
comp=Z,14µm,18.6s,baz=94,slow=35

GUMO Guam 47.52 307 PFAKE 23 38 20.0 +11
GUMO LR LR
comp=Z,3µm,21.0s

KDU Kakadu 48.30 267 P P **23 38 14.7 -0.9**
baz=49,SNR=4.8

MTN Manton Dam 49.56 267 P P **23 38 24.1 -1.1**
baz=51,SNR=6.2
MTN S S 23 45 43.5 +10
baz=51,SNR=3.4

FORT Forrest 51.30 244 *e*P **P** **23 38 37.1 -1.0**
comp=Z,76nm,0.9s

FORT Forrest 51.30 244 P P **23 38 37.5 -0.7**
baz=52,SNR=6.4

FITZ Fitzroy Crossi 53.98 259 *e*P **P** **23 38 57.3 -0.9**
comp=Z,151nm,1.5s

FITZ Fitzroy Crossi 53.98 259 LR LR 00 00 22.4
comp=Z,10µm,19.9s,baz=171,slow=34

FITZ Fitzroy Crossi 53.98 259 P P **23 38 57.4 -0.9**
baz=55,SNR=11

CBIJ Chichi jima 58.20 317 LR LR 23 59 46.8
comp=Z,2µm,20.1s,baz=128,slow=31

MBWA Marble Bar 59.13 255 *e*P **P** **23 39 33.8 -1.1**
comp=Z,78nm,1.1s
MBWA LR LR
comp=Z,4µm,20.0s

MEEK Meekatharra 59.63 248 P P **23 39 36.7 -1.6**
baz=61,SNR=4.4

KLBR Kellerberrin 60.13 243 P P **23 39 40.3 -1.4**
baz=61,SNR=7.5

NWAO Narrogin (SRO) 60.54 241 *e*P **P** **23 39 44.2 -0.2**
comp=Z,89nm,1.4s

NWAO Narrogin (SRO) 60.54 241 LR LR 00 06 05.5
comp=Z,7µm,18.3s,baz=108,slow=36

WSI Waingapu 60.61 268 S S 23 48 13.0 +12
baz=62,SNR=3.3

DAV Davao City (W) 60.79 288 LR LR 00 05 05.8
comp=Z,2µm,19.1s,baz=306,slow=35

SBA Scott Base 61.96 184 *e*P **P** **23 39 53.7 +0.5**
SBA pmax pmax
comp=Z,453nm,2.5s
SBA MLR MLR
comp=Z,3µm,19.0s

SBA Scott Base 61.96 184 *e*P **P** **23 39 53.7 +0.5**
comp=Z,453nm,2.5s
SBA LR LR
comp=Z,3µm,19.0s

VNDA Vanda 62.00 185 *e*P **P** **23 39 54.4 +0.9**
VNDA Vanda 62.00 185 P **P** **23 39 53.3 -0.2**
comp=Z,6.2nm,1.1s,baz=45,slow=11,SNR=3.8
VNDA LR LR 00 02 03.9
comp=Z,3µm,19.5s,baz=28,slow=31

KAPI Kappang 62.30 273 *e*P **P** **23 39 56.3 -0.3**
comp=Z,94nm,1.3s

KAPI Kappang 62.30 273 P **P** **23 39 55.2 -1.4**
comp=Z,255nm,1.2s,SNR=9.4

KAPI Kappang 62.30 273 P **P** **23 39 55.9 -0.7**
comp=Z,57nm,1.4s,comp=Z,1µm

KAPI Kappang 62.30 273 LR LR 00 05 34.3
comp=Z,1µm,21.5s,baz=149,slow=35

PCI Palu 63.40 277 P P 23 39 58.9 -5.1
baz=64,SNR=4.2

RPN Rapa Nui 63.71 112 LR LR 00 01 06.7
comp=Z,3µm,18.8s,baz=280,slow=30

JHJ Hachijo jima 2 63.84 321 LR LR 00 01 47.6
comp=Z,2µm,20.5s,baz=99,slow=30

MJAR Matsushiro Arr 67.13 323 P **P** **23 40 26.0 -1.6**
MJAR Matsushiro Arr 67.13 323 P **P** **23 40 26.0 -1.6**
comp=Z,8.6nm,0.9s,baz=167,slow=6.6,SNR=7.3
MJAR LR LR 00 04 10.9
comp=Z,2µm,20.5s,baz=110,slow=31

MAJO Matsushiro 67.13 323 *e*P **P** **23 40 27.6 0.0**
MAJO pmax pmax
comp=Z,108nm,1.6s
MAJO MLR MLR
comp=Z,3µm,22.0s

MAJO Matsushiro 67.13 323 *e*P **P** **23 40 27.6 0.0**
comp=Z,108nm,1.6s
MAJO LR LR
comp=Z,3µm,22.0s

MAT Matsushiro 67.13 323 P **P** **23 40 25.8 -1.8**
KMMI Kalianget 67.32 269 P P 23 40 34.6 +5.3
BBKI Banjar Baru 67.44 273 P **P** **23 40 30.3 +0.2**
BLJI Banyuglugur 67.50 268 P **P** **23 40 32.7 +2.2**
TGY Tagaytay City 67.79 293 LR LR 00 04 40.1
comp=Z,14nm,20.0s,baz=166,slow=31

CASY Casey 67.80 205 *e*P **P** **23 40 31.6 +0.2**
comp=Z,375nm,2.5s
CASY LR LR
comp=Z,6µm,20.0s

ERM Erimo 68.44 330 PFAKE 23 40 50.0 +14
ERM LR LR
comp=Z,3µm,22.0s

KRKI Karangkates 68.50 268 P P 23 40 51.7 +15
YUK Yuzh-Kuril'sk 68.75 333*c i*P **P** **23 40 36.5 -1.1**
YUK 23 41 08.2
YUK S **S** **23 49 39.9 -0.8**
YUK SS **SS** **23 54 06.5 +0.5**
YUK pmax pmax
comp=Z,741nm,1.4s
YUK pmax pmax
comp=N,543nm,1.4s
YUK pmax pmax
comp=E,660nm,1.4s
YUK pmax pmax
comp=Z,150nm,7.0s

KKM Kota Kinabalu 69.07 283 *e*P **P** **23 40 40.1 -0.3**
KKM LR LR
comp=Z,840nm,20.0s

KKM Kota Kinabalu 69.07 283 P **P** **23 40 40.4 0.0**
KKM Kota Kinabalu 69.07 283 P **P** **23 40 40.6 +0.2**
baz=70,SNR=8.1

PWJI Pagerwojo 69.15 268 P **P** **23 40 44.0 +3.2**
SJI Sawahan 69.26 268 P **P** **23 40 43.6 +2.0**
FX1 Attu Island--F 69.44 354 LR LR 00 06 02.3
comp=Z,1µm,19.8s,baz=195,slow=32

JNU Nakatsue 69.55 316 *e*P **P** **23 40 40.6 -2.2**
comp=Z,137nm,2.3s

JNU Nakatsue 69.55 316 P **P** **23 40 42.4 -0.5**
comp=Z,10nm,0.9s,baz=2.3,slow=1.8,SNR=3.6

PCJI Pacitan 69.71 267 P **P** **23 40 45.8 +1.5**
ASAJ Asahikawa 70.30 331 *e*P **P** **23 40 46.4 -0.8**
comp=Z,73nm,1.9s

ASAJ Asahikawa 70.30 331 P **P** **23 40 47.1 -0.1**
comp=Z,8.5nm,0.8s,baz=188,slow=11,SNR=4.2
ASAJ LR LR 00 10 13.4
comp=Z,3µm,19.6s,baz=150,slow=35

PBKI Pangkalan Bun 70.69 273 P P 23 40 55.4 +5.1
SMRI Semarang 70.71 268 P P 23 40 54.9 +4.5
BJII Banjamegara 71.33 268 P P 23 40 58.5 +4.2
YULB Yu-li 71.55 302 *e*P **P** **23 40 54.8 -0.5**
comp=Z,171nm,1.9s

STKI Sintang 71.67 276 P P 23 41 01.4 +5.2
SBUM Sibu 71.67 278 P **P** **23 40 56.4 +0.2**
SBUM Sibu 71.67 278 P **P** **23 40 55.6 -0.6**
comp=Z,31nm,2.0s,comp=Z,664nm

NACB Ninganchiao 71.68 303 *e*P **P** **23 40 58.4 +2.3**
comp=Z,139nm,1.4s
NACB *e*S **S** **23 50 14.9 -0.8**
CLJI Cilicap 71.90 267 P **P** **23 41 00.8 +3.2**
SSLB Suanglung 72.02 302 *e*P P 23 41 02.8 +4.6
comp=Z,226nm,2.2s
SSLB *e*S **S** **23 50 18.6 -1.1**
TGJI Tegal 72.02 268 P **P** **23 40 59.2 +0.9**
TPUB Ta-pu 72.06 302 *e*P **P** **23 40 57.1 -1.2**
comp=Z,200nm,1.5s
TPUB *e*S **S** **23 50 19.4 -0.8**
PET Petropavlovsk 72.10 345 *e*P P 23 40 53.9 -3.9
PET *e*S S 23 50 11.8 -7.6
PET *e*PS **PnS** **23 50 49.6 -0.2**
PET pmax pmax
comp=Z,600nm,13.8s
YSS Yuzh-Sakhalins 72.39 333 *e*P P 23 41 04.0 +4.2
YSS *e**SP sP 23 41 10.0 +4.3
YSS *e* 23 43 48.0
YSS *e*S **S** **23 50 29.0 +5.9**
YSS *e*PS **PnS** **23 50 54.0 0.0**
YSS *e*SS **SS** **23 55 06.0 +4.0**
YSS pmax pmax
comp=Z,120nm,1.3s
PETK Petropavlovsk- 72.41 345 P **P** **23 41 00.2 +0.4**
PETK Petropavlovsk- 72.41 345 P **P** **23 41 00.1 +0.4**
PETK Petropavlovsk- 72.41 345 P **P** **23 41 00.1 +0.4**
comp=Z,29nm,0.9s,baz=150,slow=10,SNR=12
PETK LR LR 00 06 47.2
comp=Z,2µm,20.2s,baz=155,slow=31

CISI Cisompet, Garu 73.09 267 P **P** **23 41 05.5 +0.7**
KSM Kuching 73.20 277 *e*P **P** **23 41 04.3 -1.0**
comp=Z,84nm,1.1s
KSM LR LR
comp=Z,1µm,22.0s

KSM Kuching 73.20 277 P **P** **23 41 05.9 +0.5**
KSM Kuching 73.20 277 P **P** **23 41 03.9 -1.4**
comp=Z,72nm,1.1s,comp=Z,1µm

KSM Kuching 73.20 277 P **P** **23 41 06.0 +0.7**
baz=74,SNR=12

LEM Lembang 73.47 268 P **P** **23 41 07.9 +0.7**
QSPA South Pole Qui 73.65 180 LR LR 00 08 16.2
comp=Z,4µm,22.0s,baz=226,slow=32

KSRS Korea Array 74.05 318 P **P** **23 41 08.9 -0.9**
comp=Z,4.3nm,0.9s,baz=126,slow=6.3,SNR=8.7

KSAR Wonju Array Be 74.07 318 P **P** **23 41 08.9 -1.0**
CBJI Citeko 74.31 268 P P 23 41 15.2 +3.3
DBJI Dramaga 74.37 268 P **P** **23 41 13.2 +0.9**
QZH Quanzhou 74.46 302 P **P** **23 41 12.1 -0.3**
QZH S **S** **23 50 47.0 -0.3**
QZH LR LR
comp=N,4µm,12.2s
QZH LR LR
comp=E,3µm,10.8s
QZH LR LR
comp=Z,4µm,20.8s

TPI Tanjungpandan 74.52 272 P P 23 41 17.8 +4.7
MIR Mirnyy 74.83 204 *e*P **P** **23 41 15.0 +1.1**
MIR *e* 23 41 27.0
MIR pmax pmax
comp=Z,81nm,2.0s

INCN Inchon 74.91 317 *e*P **P** **23 41 14.2 -0.7**
INCN LR LR
comp=Z,1µm,19.0s

SBJI Serang 75.08 268 P P 23 41 20.8 +4.5
VLA Vladivostok 75.13 324 P **P** **23 41 14.1 -1.8**
VLA 23 41 27.4
VLA S **S** **23 50 53.0 -1.1**
VLA pmax pmax
comp=Z,36nm,0.8s

BFSC Mount Baldy Ra 76.10 48⇑P **P** **23 41 22.1 +0.2**
baz=76

EDW2 Edwards Air Fo 76.20 47⇓P **P** **23 41 22.7 +0.3**
baz=76

CMB Columbia Colle 76.26 43 *e*P **P** **23 41 23.5 +0.8**
CMB pmax pmax
comp=Z,16nm,1.0s

CMB Columbia Colle 76.26 43 *e*P **P** **23 41 23.5 +0.8**
comp=Z,16nm,1.0s

ISA Isabella 76.27 46 *e*P **P** **23 41 22.4 -0.4**
ISA pmax pmax
comp=Z,25nm,1.2s

ISA Isabella 76.27 46 *e*P **P** **23 41 22.4 -0.4**
comp=Z,25nm,1.2s

ISA Isabella 76.27 46⇑P **P** **23 41 23.1 +0.3**
baz=76

MONP Monument Peak 76.31 49⇓P **P** **23 41 23.2 -0.1**
baz=76

PFO Pinyon Flat Ob 76.64 49 PFAKE 23 41 40.0 +15
PFO LR LR
comp=Z,1µm,19.0s

KDAK Kodiak Island 76.78 13 LR LR 00 07 40.2
comp=Z,4µm,21.9s,baz=221,slow=30

YBH Yreka Blue Hor 76.92 39 *e*P **P** **23 41 25.1 -1.3**
comp=Z,44nm,1.3s

YBH Yreka Blue Hor 76.92 39 LR LR 00 07 46.3
comp=Z,2µm,20.4s,baz=234,slow=30

LPIG La Paz 77.08 60 LR LR 00 06 49.7
comp=Z,116nm,20.5s,baz=242,slow=29

MTUM Tungsten Hills 77.11 45 *e*P **P** **23 41 28.5 +0.9**
MPMC Manual Prospec 77.16 46⇓P **P** **23 41 28.5 +0.6**
baz=77

HUMO Hull Mountain 77.29 38 *e*P **P** **23 41 30.2 +1.9**
comp=Z,23nm,1.1s

BEKR Beckworth 77.30 42 *e*P **P** **23 41 27.7 -0.9**
comp=Z,19nm,1.4s

MDJ Mudanjiang 77.37 324 P **P** **23 41 28.1 -0.5**
MDJ PP **PP** **23 44 23.6 +0.3**
MDJ S **S** **23 51 21.3 +2.6**
MDJ pmax pmax
comp=Z,16nm,1.9s
MDJ pmax pmax
comp=Z,190nm,8.0s
MDJ LR LR
comp=N,840nm,19.1s
MDJ LR LR
comp=E,590nm,25.4s
MDJ LR LR
comp=Z,1µm,27.3s

WCN Washoe City 77.38 42 *e*P **P** **23 41 29.0 -0.1**
WCN pmax pmax
comp=Z,19nm,1.2s

WCN Washoe City 77.38 42 *e*P **P** **23 41 29.0 -0.1**
comp=Z,19nm,1.2s

BC3 Big Chuckawall 77.39 49⇓P **P** **23 41 29.9 +0.7**
baz=78

NJ2 Nanjing 77.53 309 *e*P **P** **23 41 30.4 +0.6**
NJ2 pP **pP** **23 41 33.9 -0.3**
NJ2 sP **sP** **23 41 35.5 -0.3**
NJ2 PP **PP** **23 44 24.8 -0.2**
NJ2 S **S** **23 51 24.8 +3.8**
NJ2 sS **sS** **23 51 29.3 +1.1**
NJ2 pmax pmax
comp=Z,30nm,1.2s
NJ2 pmax pmax
comp=Z,1µm,5.4s
NJ2 LR LR
comp=N,410nm,17.0s
NJ2 LR LR
comp=E,570nm,19.0s
NJ2 LR LR
comp=Z,7µm,16.8s

GLA Glamis 77.55 50⇓P **P** **23 41 30.9 +0.9**
baz=78

GMRC Granite Mounta 77.79 48⇑P **P** **23 41 31.4 0.0**
baz=78

NVAR Mina Array Bea 77.85 44 P **P** **23 41 30.0 -1.8**
NVAR Mina Array Bea 77.85 44 P **P** **23 41 30.0 -1.8**
comp=Z,4.7nm,0.7s,baz=225,slow=8.9,SNR=6.1
NVAR LR LR 00 12 46.4
comp=Z,1µm,18.2s,baz=120,slow=33

NV11 Mina Array Sit 77.95 44 *e*P **P** **23 41 30.5 -1.7**
GZH Guangzhou 78.02 299 P **P** **23 41 35.6 +2.9**
GZH S **S** **23 51 32.3 +5.8**
GZH LR LR
comp=N,1µm,19.7s
GZH LR LR
comp=E,1µm,17.6s
GZH LR LR
comp=Z,2µm,16.6s

Y12C Blythe 78.11 49⇑P **P** **23 41 33.1 +0.1**
baz=78

113A Mohawk Valley, 78.20 51⇑P **P** **23 41 33.9 +0.3**
baz=78

TPH Tonopah 78.39 44 PFAKE 23 41 50.0 +15
TPH LR LR
comp=Z,1µm,20.0s

214A Organ Pipe Nat 78.53 52⇑P **P** **23 41 35.6 +0.1**
baz=79

PDMCI Parker Dam,Lak 78.65 49⇓P **P** **23 41 35.8 -0.3**
baz=79

Z14A Wintersburg 79.08 50⇑P **P** **23 41 37.7 -0.7**
baz=79

KLR Kul'dur 79.18 329 *e*P P 23 41 33.4 -5.2
W13A Hualapai Mount 79.22 48⇑P **P** **23 41 38.9 -0.6**
baz=79

CN2 Changchun 79.27 322 *e*P **P** **23 41 38.3 -0.9**
CN2 SS SS 23 56 47.3 +0.9
CN2 pmax pmax
comp=Z,20nm,2.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,3µm,13.0s
CN2 LR LR
comp=E,2µm,13.0s
CN2 LR LR
comp=Z,3µm,12.0s

SNY Shenyang 79.29 319⇓P **P** **23 41 38.9 -0.4**
SNY S S 23 51 45.8 +6.3
SNY pmax pmax
comp=Z,52nm,1.8s
SNY pmax pmax
comp=Z,260nm,3.5s
SNY LR LR
comp=N,690nm,23.1s
SNY LR LR
comp=E,960nm,21.1s
SNY LR LR
comp=Z,1µm,20.2s

QIZ Qiongzhong 79.49 293 P P 23 41 45.5 +4.5
QIZ PP **PP** **23 44 42.5 +0.9**
QIZ S **S** **23 51 44.3 +1.8**
QIZ pmax pmax
comp=Z,24nm,1.7s
QIZ pmax pmax
comp=Z,150nm,5.5s
QIZ LR LR
comp=N,1µm,19.8s
QIZ LR LR
comp=Z,3µm,26.9s

SEW Seward 79.58 14 *e*P **P** **23 41 39.6 -0.9**
BMN Battle Mountai 79.63 42 *e*P **P** **23 41 41.1 -0.3**
BMN pmax pmax
comp=Z,67nm,1.8s
BMN MLR MLR
comp=Z,2µm,22.0s

BMN Battle Mountai 79.63 42 *e*P **P** **23 41 41.1 -0.3**
comp=Z,67nm,1.8s
BMN LR LR
comp=Z,2µm,22.0s

R11A Troy Canyon, C 79.64 45⇑P **P** **23 41 41.2 -0.3**
baz=80

NLWA Neilton Lookou 79.67 34 PFAKE 23 41 50.0 +8.6
NLWA LR LR
comp=Z,2µm,19.0s

VIPM Ingram Point 79.78 38 P **P** **23 41 44.0 +1.8**
VIPM Ingram Point 79.78 38 P **P** **23 41 44.0 +1.8**
TDL Tradedollar La 79.94 35 P **P** **23 41 41.3 -1.7**
GAMB Gambell 80.05 3 *e*P **P** **23 41 41.1 -1.8**
comp=Z,18nm,1.1s

TUC Tucson 80.22 52 *e*P **P** **23 41 43.4 -1.4**
TUC pmax pmax
comp=Z,5.0nm,1.4s
TUC MLR MLR
comp=Z,1µm,22.0s

TUC Tucson 80.22 52 *e*P **P** **23 41 43.4 -1.4**
comp=Z,5.3nm,1.4s
TUC LR LR
comp=Z,1µm,22.0s

WHN Wuhan 80.29 306 P P 23 41 48.8 +3.8
LON Longmire 80.41 35 *e*P **P** **23 41 46.9 +1.5**
LON pmax pmax
comp=Z,21nm,1.3s

LON Longmire 80.41 35 *e*P **P** **23 41 46.9 +1.5**
comp=Z,21nm,1.3s

BBB Bella Bella 80.66 28 LR LR 00 08 51.3
comp=Z,2µm,21.6s,baz=227,slow=29

PGC Sidney 80.67 33 *e*P **P** **23 41 46.0 -0.6**
comp=Z,2.0nm,1.0s

X16A Lo Mia Camp, P 80.68 50⇓P **P** **23 41 46.8 -0.5**
baz=81

CCUT Cedar City 80.77 47 *e*P **P** **23 41 47.6 -0.2**
comp=Z,30nm,1.7s

319A Douglas 80.97 54⇑P **P** **23 41 49.0 +0.2**
baz=81

U15A North Rim 80.99 48⇓P **P** **23 41 48.9 -0.2**
baz=81

ELK	**Elko**	**81.08**	**43**	*eP*		**P**	**23 41 48.9**	**-0.5**
WUAZ	**Wupatki**	**81.23**	**49**	PFAKE			23 42 00.0	+10
WUAZ				LR	LR			
	comp=Z,1µm,19.0s							
WUAZ	**Wupatki**	**81.23**	**49**	⇑P		**P**	**23 41 50.3**	**+0.1**
	baz=81							
DIV	**Divide**	**81.36**	**15**	*eP*		**P**	**23 41 53.3**	**+3.1**
	comp=Z,39nm,1.2s							
HAWA	**Hanford**	**81.48**	**36**	*eP*		**P**	**23 41 50.9**	**-0.1**
	comp=Z,75nm,1.6s							
HAWA				LR	LR			
	comp=Z,2µm,21.0s							
BMRM	**Bremner River**	**81.52**	**16**	*eP*		**P**	**23 41 50.4**	**-0.6**
	comp=Z,55nm,1.1s							
320A	**Kipp Ranch, An**	**81.54**	**54**	⇓P		**P**	**23 41 51.5**	**-0.4**
	baz=82							
ETW	**Entiat**	**81.72**	**35**	P		**P**	**23 41 51.8**	**-0.7**
220A	**Playas Peak, P**	**81.78**	**53**	⇑P		**P**	**23 41 53.3**	**+0.1**
	baz=82,SNR=7.8							
X18A	**Snowflake**	**81.83**	**51**	⇓P		**P**	**23 41 53.7**	**+0.2**
	baz=82							
WRAK	**Wrangell Islan**	**81.85**	**24**	PFAKE			23 42 00.0	+7.3
WRAK				LR	LR			
	comp=Z,5µm,20.0s							
BMO	**Blue Mountains**	**81.93**	**39**	*eP*		**P**	**23 41 52.2**	**-1.4**
BMO				pmax	pmax			
	comp=Z,32nm,1.3s							
BMO				MLR	MLR			
	comp=Z,2µm,19.0s							
BMO	**Blue Mountains**	**81.93**	**39**	*eP*		**P**	**23 41 52.2**	**-1.4**
	comp=Z,32nm,1.3s							
BMO				LR	LR			
	comp=Z,2µm,19.0s							
120A	**U Bar Ranch, L**	**81.97**	**53**	⇓P		**P**	**23 41 54.3**	**+0.1**
	baz=82							
MVU	**Marysvale**	**82.02**	**46**	PFAKE			23 42 10.0	+16
MVU				LR	LR			
	comp=Z,2µm,19.0s							
TNA	**Tin City**	**82.04**	**4**	⇓*eP*		**P**	**23 41 53.0**	**-0.5**
	comp=Z,49nm,1.3s							
MSU	**Marysvale**	**82.05**	**46**	*eP*		**P**	**23 41 55.9**	**+1.3**
MSU	**Marysvale**	**82.05**	**46**	*eP*		**P**	**23 41 55.9**	**+1.3**
MFID	**Camas Ranch**	**82.08**	**40**	*eP*		**P**	**23 41 56.2**	**+1.8**
	comp=Z,48nm,1.6s							
MFID	**Camas Ranch**	**82.08**	**40**	⇓P		**P**	**23 41 54.9**	**+0.4**
	baz=82							
Z20A	**Nine Sixteen R**	**82.24**	**52**	⇑P		**P**	**23 41 55.4**	**-0.1**
	baz=82,SNR=7.5							
COCO	**West Island**	**82.38**	**260**	PFAKE			23 42 10.0	+14
COCO				LR	LR			
	comp=Z,2µm,20.0s							
TRF	**Thorofare Moun**	**82.39**	**12**	*eP*		**P**	**23 41 53.8**	**-1.9**
	comp=Z,21nm,0.8s							
221A	**Mesquite Ranch**	**82.40**	**54**	⇓P		**P**	**23 41 56.5**	**+0.1**
	baz=82							
DUG	**Dugway**	**82.42**	**44**	*eP*		**P**	**23 41 55.0**	**-1.3**
DUG				pmax	pmax			
	comp=Z,15nm,1.3s							
DUG				MLR	MLR			
	comp=Z,1µm,19.0s							
DUG	**Dugway**	**82.42**	**44**	*eP*		**P**	**23 41 55.0**	**-1.3**
	comp=Z,14nm,1.3s							
DUG				LR	LR			
	comp=Z,1µm,19.0s							
DUG	**Dugway**	**82.42**	**44**	⇑P		**P**	**23 41 55.4**	**-0.9**
	baz=83							
SEY	**Seymchan**	**82.47**	**347**	⇓*eP*		**P**	**23 41 55.6**	**-0.2**
OD2	**Odessa Site #2**	**82.51**	**36**	P		**P**	**23 41 57.5**	**+1.0**
121A	**Cookes Peak, D**	**82.61**	**53**	⇓P		**P**	**23 41 56.7**	**-0.8**
	baz=83							
I12A	**Atlanta**	**82.70**	**40**	⇑P		**P**	**23 41 57.4**	**-0.4**
	baz=83							
Y20A	**Horse Springs,**	**82.74**	**52**	⇑P		**P**	**23 41 58.4**	**+0.1**
	baz=83,SNR=7.3							
X20A	**Quemado**	**82.92**	**51**	⇓P		**P**	**23 41 59.2**	**0.0**
	baz=83,SNR=7.4							
MCK	**McKinley**	**82.92**	**12**	*eP*		**P**	**23 41 57.6**	**-0.7**
MCK				pmax	pmax			
	comp=Z,33nm,1.0s							
MCK	**McKinley**	**82.92**	**12**	*eP*		**P**	**23 41 57.6**	**-0.7**
	comp=Z,34nm,1.0s							
Q16A	**Castle Valley**	**82.93**	**46**	⇓P		**P**	**23 41 58.7**	**-0.4**
	baz=83							
IPM	**Ipoh**	**82.94**	**277**	*eP*		**P**	**23 41 59.2**	**-0.2**
	comp=Z,70nm,1.1s							
IPM	**Ipoh**	**82.94**	**277**	P		**P**	**23 41 59.3**	**-0.2**
IPM	**Ipoh**	**82.94**	**277**	P		**P**	**23 41 58.2**	**-1.2**
	comp=Z,63nm,1.7s,comp=Z,726nm							
Z21A	**St. Cloud Mine**	**83.02**	**52**	⇓P		**P**	**23 41 59.6**	**-0.1**
	baz=83,SNR=9.3							
L14A	**Malta**	**83.03**	**43**	⇓P		**P**	**23 41 59.0**	**-0.5**
	baz=83							
HLID	**Hailey**	**83.03**	**41**	*eP*		**P**	**23 41 57.8**	**-1.7**
	comp=Z,22nm,1.2s							
HLID				LR	LR			
	comp=Z,1µm,19.0s							
HLID	**Hailey**	**83.03**	**41**	⇑P		**P**	**23 41 58.3**	**-1.2**
	baz=83							
SKAG	**Skagway**	**83.05**	**20**	*eP*		**P**	**23 42 01.0**	**+2.1**
	comp=Z,33nm,1.0s							
TMUT	**Trail Mountain**	**83.08**	**46**	*eP*		**P**	**23 41 59.5**	**-0.5**
	comp=Z,30nm,1.1s							
J13A	**Cove Ranch, Pi**	**83.10**	**41**	⇓P		**P**	**23 41 58.8**	**-1.0**
	baz=83							
MPU	**Maple Canyon**	**83.13**	**45**	*eP*		**P**	**23 41 59.8**	**-0.3**
	comp=Z,20nm,1.3s							
W20A	**Ramah**	**83.16**	**51**	⇓P		**P**	**23 42 00.1**	**-0.3**
	baz=83,SNR=8.9							
S18A	**Hurst Farm, Bl**	**83.20**	**48**	⇓P		**P**	**23 41 59.9**	**-0.7**
	baz=83							
HVU	**Hansel Valley**	**83.20**	**43**	*eP*		**P**	**23 42 00.1**	**-0.3**
HVU				pmax	pmax			
	comp=Z,30nm,1.4s							
HVU	**Hansel Valley**	**83.20**	**43**	*eP*		**P**	**23 42 00.1**	**-0.3**
	comp=Z,30nm,1.4s							
BJI	**Beijing**	**83.21**	**315**	P		**P**	**23 41 59.9**	**-0.3**
BJI				S		**S**	**23 52 24.4**	**+4.1**
BJI				SS		**SS**	**23 57 49.6**	**+4.2**
BJI				pmax	pmax			
	comp=Z,28nm,1.5s							
BJI				pmax	pmax			
	comp=Z,420nm,4.0s							
BJI				LR	LR			
	comp=N,3µm,16.6s							
BJI				LR	LR			
	comp=E,830nm,16.1s							
BJI				LR	LR			
	comp=Z,760nm,28.8s							
H12A	**Diamond D Ranc**	**83.26**	**40**	⇑P		**P**	**23 41 59.6**	**-1.0**
	baz=83,SNR=15							
G12A	**Big Creek, Yel**	**83.27**	**39**	⇓P		**P**	**23 41 59.7**	**-1.0**
	baz=83,SNR=19							
Y21A	**Point of Rocks**	**83.31**	**52**	⇑P		**P**	**23 41 59.7**	**-1.5**
	baz=83							
K14A	**Jones Ranch, D**	**83.32**	**42**	⇑P		**P**	**23 41 59.9**	**-1.0**
	baz=84							
I13A	**Wildhorse Cree**	**83.40**	**41**	⇓P		**P**	**23 42 00.4**	**-1.0**
	baz=84							
X21A	**Alamocita Cree**	**83.41**	**51**	⇓P		**P**	**23 42 00.9**	**-0.9**
	baz=84							
223A	**Chaparral, Ant**	**83.44**	**54**	⇓P		**P**	**23 42 01.2**	**-0.7**
	baz=84							
SRU	**San Rafael**	**83.47**	**46**	*eP*		**P**	**23 42 03.3**	**+1.4**
SRU				pmax	pmax			
	comp=Z,3µm,2.0s							
SRU	**San Rafael**	**83.47**	**46**	*eP*		**P**	**23 42 03.3**	**+1.4**
	comp=Z,3µm,2.0s							
SRU	**San Rafael**	**83.47**	**46**	⇓P		**P**	**23 42 01.6**	**-0.3**
	baz=84							
V20A	**Brimhall**	**83.48**	**50**	⇑P		**P**	**23 42 01.8**	**-0.2**
	baz=84							
J14A	**Carey**	**83.48**	**41**	⇑P		**P**	**23 42 00.8**	**-1.0**
	baz=84							
P17A	**Butcher Ranch,**	**83.49**	**46**	⇑P		**P**	**23 42 01.5**	**-0.4**
	baz=84							
JLU	**Jordanelle**	**83.53**	**45**	*eP*		**P**	**23 42 02.0**	**-0.2**
	comp=Z,13nm,1.0s							
KULM	**Kulim**	**83.53**	**277**	*eP*		**P**	**23 42 01.2**	**-1.3**
	comp=Z,55nm,1.4s							
KULM				*eP*	PP	PP	23 45 08.5	-6.5
KULM				LR	LR			
	comp=Z,2µm,21.0s							
Z22A	**Elephant Butte**	**83.54**	**53**	⇓P		**P**	**23 42 01.6**	**-0.7**
	baz=84							
DAU	**Daniels Canyon**	**83.57**	**45**	*eP*		**P**	**23 42 04.6**	**+2.1**
DAU	**Daniels Canyon**	**83.57**	**45**	*eP*		**P**	**23 42 04.6**	**+2.1**
L15A	**Malad City**	**83.57**	**43**	⇓P		**P**	**23 42 01.6**	**-0.7**
	baz=84							
H13A	**Challis**	**83.64**	**40**	⇓P		**P**	**23 42 02.0**	**-0.5**
	baz=84							
F12A	**Elk City**	**83.64**	**39**	⇑P		**P**	**23 42 01.6**	**-0.9**
	baz=84,SNR=23							
U20A	**Newcomb**	**83.69**	**49**	⇓P		**P**	**23 42 02.5**	**-0.5**
	baz=84							
M16A	**Huntsville**	**83.74**	**44**	⇓P		**P**	**23 42 03.1**	**-0.1**
	baz=84							
K15A	**Arbon**	**83.80**	**42**	⇓P		**P**	**23 42 03.1**	**-0.3**
	baz=84							
Y22A	**Socorro**	**83.82**	**52**	⇑P		**P**	**23 42 03.4**	**-0.3**
	baz=84							
I14A	**Mackay**	**83.82**	**41**	⇑P		**P**	**23 42 03.3**	**-0.2**
	baz=84							
LAZ	**Ladron**	**83.88**	**52**	*eP*		**P**	**23 42 03.0**	**-1.0**
	comp=Z,5.1nm,1.2s							
NEW	**Newport**	**83.88**	**36**	*eP*		**P**	**23 42 03.8**	**+0.2**
	comp=Z,124nm,3.0s							
NEW				LR	LR			
	comp=Z,1µm,22.0s							
NEW	**Newport**	**83.88**	**36**	⇓P		**P**	**23 42 03.0**	**-0.5**
	baz=84							
P18A	**Preston Nutter**	**83.90**	**46**	⇓P		**P**	**23 42 03.5**	**-0.7**
	baz=84							
G13A	**Cobalt**	**83.92**	**40**	⇑P		**P**	**23 42 03.6**	**-0.4**
	baz=84							
HWUT	**Hardware Ranch**	**83.92**	**44**	*eP*		**P**	**23 42 02.8**	**-1.3**
	comp=Z,18nm,1.2s							
HWUT				LR	LR			
	comp=Z,2µm,20.0s							
DOT	**Dot Lake**	**83.94**	**14**	*eP*		**P**	**23 42 03.0**	**-0.4**
	comp=Z,48nm,1.1s							
324A	**Moseley Ranch,**	**83.96**	**55**	⇑P		**P**	**23 42 04.0**	**-0.5**
	baz=84,SNR=11							
X22A	**Bernardo**	**84.02**	**52**	⇓P		**P**	**23 42 04.6**	**-0.2**
	baz=84							
MVCO	**Mesa Verde**	**84.06**	**49**	PFAKE			23 42 20.0	+15
MVCO				LR	LR			
	comp=Z,997nm,20.0s							
MVCO	**Mesa Verde**	**84.06**	**49**	⇑P		**P**	**23 42 04.8**	**-0.2**
	baz=84							
V21A	**Milan**	**84.09**	**50**	⇓P		**P**	**23 42 04.9**	**-0.2**
	baz=84							
425A	**Indio Mountain**	**84.09**	**56**	⇓P		**P**	**23 42 05.1**	**-0.1**
	baz=84							
N17A	**Moffit Pass**	**84.10**	**44**	⇓P		**P**	**23 42 03.7**	**-1.5**
	baz=84							
Z23A	**Rita Site, Whi**	**84.10**	**53**	⇑P		**P**	**23 42 04.7**	**-0.4**
	baz=84							
MNTX	**Cornudas Mount**	**84.14**	**55**	*eP*		**P**	**23 42 03.4**	**-1.8**
	comp=Z,21nm,1.3s							
MNTX				LR	LR			
	comp=Z,1µm,19.0s							
MNTX	**Cornudas Mount**	**84.14**	**55**	⇓P		**P**	**23 42 03.9**	**-1.4**
	baz=84							
C11A	**Tepee Creek (N**	**84.14**	**36**	⇑P		**P**	**23 42 03.3**	**-1.7**
	baz=84							
COLA	**College**	**84.16**	**12**	*eP*		**P**	**23 42 02.9**	**-1.5**
COLA				pmax	pmax			
	comp=Z,44nm,1.0s							
COLA				MLR	MLR			
	comp=Z,4µm,20.0s							
COLA	**College**	**84.16**	**12**	*eP*		**P**	**23 42 02.9**	**-1.5**
	comp=Z,44nm,1.0s							
COLA				LR	LR			
	comp=Z,4µm,20.0s							
BNM	**Barren Site**	**84.16**	**52**	*eP*		**P**	**23 42 04.7**	**-0.9**
	comp=Z,26nm,1.4s							
DLBC	**Dease Lake**	**84.17**	**23**	*eP*		**P**	**23 42 03.7**	**-1.1**
224A	**Cornudas Mount**	**84.18**	**54**	⇑P		**P**	**23 42 05.6**	**0.0**
	baz=84,SNR=15							
CHBT	**CHBT**	**84.19**	**285**	P		**P**	**23 42 05.3**	**-0.5**
	comp=Z,44nm,1.6s,comp=Z,801nm							
L16A	**Fish Haven**	**84.20**	**43**	⇑P		**P**	**23 42 04.6**	**-0.9**
	baz=84							
J15A	**Blackfoot**	**84.21**	**42**	⇑P		**P**	**23 42 05.2**	**-0.3**
	baz=84,SNR=12							
F13A	**Darby**	**84.21**	**39**	⇑P		**P**	**23 42 04.3**	**-1.1**
	baz=84,SNR=5.7							
H14A	**Leadore**	**84.21**	**40**	⇓P		**P**	**23 42 05.3**	**-0.2**
	baz=84,SNR=10.0							
LPM	**Los Pinos Moun**	**84.22**	**52**	*eP*		**P**	**23 42 07.5**	**+1.7**
D12A	**Red Ives Fores**	**84.25**	**37**	⇓P		**P**	**23 42 04.6**	**-1.0**
	baz=84							
ILAR	**Eielson Array**	**84.27**	**13**	P		**P**	**23 42 02.8**	**-2.3**
ILAR	**Eielson Array**	**84.27**	**13**	P		**P**	**23 42 02.8**	**-2.3**
	comp=Z,7.1nm,0.9s,baz=220,slow=4.0,SNR=31							
ILAR				LR	LR		00 14 05.0	
	comp=Z,2µm,19.2s,baz=221,slow=32							
Q19A	**Hogan Spring (**	**84.28**	**47**	⇑P		**P**	**23 42 05.4**	**-0.5**
	baz=84							
626A	**Big Bend Ranch**	**84.30**	**57**	⇓P		**P**	**23 42 06.3**	**0.0**
	baz=84							
325A	**Bean Ranch, Si**	**84.33**	**55**	⇓P		**P**	**23 42 05.8**	**-0.6**
	baz=84,SNR=9.1							
U21A	**Nageezi**	**84.34**	**50**	⇑P		**P**	**23 42 06.4**	**0.0**
	baz=84,SNR=9.2							
W22A	**Albuquerque**	**84.36**	**51**	⇓P		**P**	**23 42 06.5**	**0.0**
	baz=84							
S20A	**Disappointment**	**84.43**	**48**	⇓P		**P**	**23 42 06.7**	**-0.2**
	baz=85							
M17A	**Scullys Gap (B**	**84.45**	**44**	⇑P		**P**	**23 42 06.7**	**-0.2**
	baz=85							
PSI	**Prapat**	**84.46**	**275**	P		**P**	**23 42 04.6**	**-2.8**
	comp=Z,45nm,1.4s							
PSI	**Prapat**	**84.46**	**275**	P		**P**	**23 42 06.4**	**-1.0**
	baz=86,SNR=4.8							
I15A	**Monteview**	**84.47**	**41**	⇑P		**P**	**23 42 06.7**	**0.0**
	baz=85							
G14A	**Jackson**	**84.47**	**40**	⇓P		**P**	**23 42 05.4**	**-1.5**
	baz=85							
124A	**Stringfield Ra**	**84.47**	**54**	⇑P		**P**	**23 42 05.5**	**-1.7**
	baz=85							
K16A	**Soda Springs**	**84.48**	**43**	⇓P		**P**	**23 42 05.9**	**-1.0**
	baz=85							
Y23A	**Lovelace Mesa,**	**84.50**	**52**	⇓P		**P**	**23 42 06.3**	**-1.0**
	baz=85							
C12B	**Naegeli Ranch,**	**84.52**	**37**	⇓P		**P**	**23 42 06.0**	**-0.8**
	baz=85							
R20A	**Redvale**	**84.57**	**48**	⇓P		**P**	**23 42 05.9**	**-1.6**
	baz=85							
TXAR	**Lajitas Array**	**84.60**	**57**	P		**P**	**23 42 06.8**	**-0.9**
TXAR	**Lajitas Array**	**84.60**	**57**	P		**P**	**23 42 06.8**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=234,slow=4.2,SNR=12							
TXAR				LR	LR		00 13 28.1	
	comp=Z,1µm,19.0s,baz=300,slow=31							
L17A	**Cokeville**	**84.61**	**43**	⇓P		**P**	**23 42 06.3**	**-1.3**
	baz=85							
ANMO	**Albuquerque**	**84.61**	**51**	*eP*		**P**	**23 42 06.4**	**-1.4**
	comp=Z,20nm,1.2s							
ANMO				LR	LR			
	comp=Z,1µm,19.0s							
E13A	**Victor**	**84.63**	**38**	⇓P		**P**	**23 42 06.8**	**-0.7**
	baz=85							
MCMT	**McKenzie Canyo**	**84.64**	**40**	*eP*		**P**	**23 42 07.3**	**-0.5**
	comp=Z,7.5nm,1.1s							
T21A	**Navajo Lake**	**84.66**	**49**	⇑P		**P**	**23 42 06.9**	**-1.2**
	baz=85							
H15A	**Lima**	**84.67**	**41**	⇓P		**P**	**23 42 07.5**	**-0.4**
	baz=85							
X23A	**Hourglass Bar**	**84.67**	**52**	⇑P		**P**	**23 42 07.4**	**-0.7**
	baz=85							
V22A	**San Miguel Ran**	**84.67**	**50**	⇓P		**P**	**23 42 06.9**	**-1.2**
	baz=85							
225A	**Deer Hill, Car**	**84.73**	**55**	⇓P		**P**	**23 42 07.0**	**-1.5**
	baz=85							
S21A	**Coal Bank Pass**	**84.76**	**48**	⇓P		**P**	**23 42 08.0**	**-0.7**
	baz=85,SNR=11							
AHID	**Auburn Hatcher**	**84.77**	**43**	*eP*		**P**	**23 42 10.3**	**+1.9**
	comp=Z,55nm,1.6s							
AHID				LR	LR			
	comp=Z,1µm,21.0s							
P19A	**Cripple Cowboy**	**84.77**	**46**	⇓P		**P**	**23 42 06.8**	**-1.8**
	baz=85							
Z24A	**Sheeppen Canyo**	**84.79**	**53**	⇓P		**P**	**23 42 06.9**	**-1.9**
	baz=85							
D13A	**Huson**	**84.80**	**38**	⇓P		**P**	**23 42 07.0**	**-1.3**
	baz=85							
426A	**McDonald Obser**	**84.81**	**56**	⇓P		**P**	**23 42 07.4**	**-1.5**
	baz=85							
M18A	**Lyman**	**84.83**	**44**	⇑P		**P**	**23 42 07.8**	**-1.0**
	baz=85							
627A	**Terlingua Ranc**	**84.87**	**57**	⇑P		**P**	**23 42 08.3**	**-0.8**
	baz=85							
K17A	**Gardner Place,**	**84.88**	**43**	⇑P		**P**	**23 42 08.5**	**-0.4**
	baz=85							
RRI2	**Red Ridge**	**84.90**	**42**	*eP*		**P**	**23 42 07.8**	**-1.3**
	comp=Z,21nm,0.9s							
GYA	**Guiyang**	**84.91**	**299**	⇑*iP*		**P**	**23 42 10.3**	**+0.9**
GYA				PP		**PP**	**23 45 28.3**	**+2.0**
GYA				SKS		**SKSac**	**23 52 31.3**	**-2.7**
GYA				S		**S**	**23 52 37.6**	**-0.6**
GYA				SS		**SS**	**23 58 13.5**	**+2.2**
GYA				pmax	pmax			
	comp=Z,40nm,1.0s							
GYA				pmax	pmax			
	comp=Z,190nm,5.2s							
GYA				LR	LR			
	comp=N,7µm,19.1s							
GYA				LR	LR			
	comp=E,5µm,20.2s							
GYA				LR	LR			
	comp=Z,9µm,19.8s							
PMSA	**Palmer Station**	**84.91**	**157**	LR		LR	00 15 31.9	
	comp=Z,953nm,18.6s,baz=238,slow=32							
527A	**Woodward Ranch**	**84.94**	**57**	⇑P		**P**	**23 42 07.9**	**-1.6**
	baz=85							
Q20A	**Ridgley Place,**	**84.96**	**47**	⇓P		**P**	**23 42 08.6**	**-0.8**
	baz=85							
MSO	**Missoula**	**84.97**	**38**	*eP*		**P**	**23 42 10.6**	**+1.4**
	comp=Z,12nm,1.2s							
MSO				LR	LR			
	comp=Z,1µm,20.0s							
MSO	**Missoula**	**84.97**	**38**	⇑P		**P**	**23 42 08.8**	**-0.4**
	baz=85							
O19A	**Miners Draw (B**	**84.97**	**46**	⇑P		**P**	**23 42 08.8**	**-0.7**
	baz=85							
Y24A	**Capitan**	**84.97**	**53**	⇑P		**P**	**23 42 08.8**	**-0.9**
	baz=85,SNR=9.9							
BSMT	**Bassoo Peak**	**84.99**	**37**	*eP*		**P**	**23 42 08.5**	**-1.0**
BILL	**Bilibino**	**85.01**	**354**	*eP*		**P**	**23 42 08.1**	**-0.6**
BILL				pmax	pmax			
	comp=Z,54nm,1.6s							
BILL				MLR	MLR			
	comp=Z,1µm,19.0s							
BILL	**Bilibino**	**85.01**	**354**	*eP*		**P**	**23 42 08.1**	**-0.6**
	comp=Z,54nm,1.6s							
BILL				LR	LR			
	comp=Z,1µm,19.0s							
G15A	**Dillon**	**85.03**	**40**	⇑P		**P**	**23 42 08.9**	**-0.7**
	baz=85,SNR=16							
C13A	**Hot Springs**	**85.03**	**37**	⇓P		**P**	**23 42 08.8**	**-0.6**
	baz=85							
E14A	**Clinton**	**85.03**	**39**	⇓P		**P**	**23 42 08.6**	**-1.0**
	baz=85,SNR=5.9							
I16A	**Newdale**	**85.04**	**42**	⇑P		**P**	**23 42 08.5**	**-1.2**
	baz=85							
DLMT	**Dillon**	**85.06**	**40**	*eP*		**P**	**23 42 09.7**	**0.0**
	comp=Z,46nm,1.4s							
125A	**Gardner Draw,**	**85.08**	**54**	⇓P		**P**	**23 42 09.2**	**-0.9**
	baz=85							
L18A	**Fontenelle, Gr**	**85.08**	**44**	⇓P		**P**	**23 42 09.1**	**-1.0**
	baz=85							
326A	**Caldwell Ranch**	**85.09**	**56**	⇑P		**P**	**23 42 09.4**	**-0.8**
	baz=85							
P20A	**De Beque**	**85.13**	**47**	⇓P		**P**	**23 42 09.5**	**-0.7**
	baz=85							
GDL2	**Guadalupe Moun**	**85.13**	**55**	*eP*		**P**	**23 42 11.3**	**+0.9**
T22A	**Edith**	**85.13**	**49**	⇓P		**P**	**23 42 09.7**	**-0.7**
	baz=85							
V23A	**Ortiz Mt. (NFS**	**85.14**	**51**	⇓P		**P**	**23 42 09.7**	**-0.7**
	baz=85							
TPAW	**Teton Pass**	**85.20**	**42**	*eP*		**P**	**23 42 08.8**	**-1.9**
	comp=Z,31nm,1.3s							
REDW	**Red Top Meadow**	**85.21**	**42**	*eP*		**P**	**23 42 10.4**	**-0.2**
	comp=Z,1.0nm,1.4s							
JTMT	**Jette**	**85.23**	**37**	*eP*		**P**	**23 42 11.4**	**+0.9**
R21A	**Cimarron**	**85.23**	**48**	⇓P		**P**	**23 42 10.4**	**-0.5**
	baz=85							
226B	**Tecolote Peak,**	**85.24**	**55**	⇓P		**P**	**23 42 10.8**	**0.0**
	baz=85,SNR=8.3							
Z25A	**Roswell**	**85.27**	**53**	⇑P		**P**	**23 42 10.3**	**-0.8**
	baz=85							
SWMT	**Swartz Lake**	**85.28**	**38**	*eP*		**P**	**23 42 10.8**	**+0.1**
628A	**Black Gap, Mar**	**85.28**	**58**	⇑P		**P**	**23 42 10.6**	**-0.6**
	baz=85							
J17A	**Brown Place, J**	**85.30**	**42**	⇓P		**P**	**23 42 10.5**	**-0.5**
	baz=85,SNR=5.1							
SNOW	**Snow King Moun**	**85.31**	**42**	*eP*		**P**	**23 42 11.7**	**+0.5**
	comp=Z,60nm,1.4s							
F15A	**Butte**	**85.35**	**40**	⇓P		**P**	**23 42 10.3**	**-1.0**
	baz=86							
D14A	**Greenough**	**85.35**	**38**	⇑P		**P**	**23 42 10.3**	**-0.9**
	baz=86							
LRM	**Limekiln Ridge**	**85.37**	**40**	*eP*		**P**	**23 42 10.1**	**-1.3**
427A	**Hayter Ranch,**	**85.38**	**56**	⇑P		**P**	**23 42 11.8**	**+0.2**
	baz=86							
IMW	**Indian Meadow**	**85.40**	**42**	*eP*		**P**	**23 42 09.9**	**-1.8**
	comp=Z,35nm,1.4s							
K18A	**Toltan Ranch,**	**85.40**	**43**	⇑P		**P**	**23 42 10.7**	**-1.0**
	baz=86							
CHMT	**Chamberlain Mo**	**85.42**	**38**	*eP*		**P**	**23 42 12.8**	**+1.2**
SLMT	**Seeley Lake**	**85.44**	**38**	*eP*		**P**	**23 42 11.9**	**+0.2**
B13A	**Whitefish**	**85.45**	**37**	⇑P		**P**	**23 42 10.9**	**-0.6**
	baz=86							
MOOW	**Moose Ponds**	**85.45**	**42**	⇑*eP*		P	23 42 06.6	-5.3
	comp=Z,21nm,1.5s							
G16A	**Moss Hill, Enn**	**85.48**	**40**	⇓P		**P**	**23 42 11.2**	**-0.7**
	baz=86							
LOHW	**Long Hollow**	**85.48**	**42**	*eP*		**P**	**23 42 10.7**	**-1.3**
	comp=Z,53nm,1.8s							
S22A	**4UR Ranch, Cre**	**85.49**	**49**	⇓P		**P**	**23 42 11.1**	**-1.2**
	baz=86							
O20A	**White River Ci**	**85.50**	**46**	⇑P		**P**	**23 42 11.2**	**-1.0**
	baz=86							
W24A	**Lazy 6 Ranch,**	**85

H17A	**Grant Village**	**85.86**	**41**	⇓P		**P**		**23 42 12.3**	**-1.6**
	baz=86								
Q22A	**Crested Butte,**	**85.90**	**48**	⇑P		**P**		**23 42 12.4**	**-1.9**
	baz=86								
428A	**Kincaid Ranch,**	**85.90**	**56**	⇑P		**P**		**23 42 12.3**	**-2.0**
	baz=86								
XAN	**Xi'an**	**85.91**	**307**		P	**P**		**23 42 14.0**	**-0.1**
XAN					pP	pP		23 42 24.8	+6.2
XAN					LR	LR			
	comp=N,2μm,14.9s								
XAN					LR	LR			
	comp=E,1μm,11.1s								
XAN					LR	LR			
	comp=Z,1μm,12.7s								
D15A	**Lincoln**	**85.92**	**38**	⇓P		**P**		**23 42 13.0**	**-1.0**
	baz=86								
SMCO	**Snowmass**	**85.98**	**47**	*e*P		**P**		**23 42 15.3**	**+0.5**
	comp=Z,16nm,1.4s								
I18A	**Diamond G Ranc**	**86.03**	**42**	⇓P		**P**		**23 42 13.4**	**-1.4**
	baz=86								
328A	**Wristen Ranch,**	**86.05**	**56**	⇓P		**P**		**23 42 13.5**	**-1.4**
	baz=86								
LKWY	**Lake**	**86.05**	**41**	*e*P		**P**		**23 42 12.7**	**-2.2**
LKWY	**Lake**	**86.05**	**41**	*e*P		**P**		**23 42 12.7**	**-2.2**
529A	**Stev Forest Ra**	**86.06**	**57**	⇓P		**P**		**23 42 13.4**	**-1.6**
	baz=86								
127A	**Arkansas Junct**	**86.10**	**54**	⇓P		**P**		**23 42 13.5**	**-1.7**
	baz=86								
B14A	**Marquette Ranc**	**86.13**	**37**	⇑P		**P**		**23 42 13.6**	**-1.4**
	baz=86,SNR=19								
M20A	**Sweetwater, Wa**	**86.13**	**45**	⇓P		**P**		**23 42 13.6**	**-1.6**
	baz=86								
HRY	**Holter Researc**	**86.17**	**39**	*e*P		**P**		**23 42 15.0**	**-0.3**
E16A	**East Helena**	**86.18**	**39**	⇓P		**P**		**23 42 13.6**	**-1.6**
	baz=86								
G17A	**Pierce Place,**	**86.19**	**41**	⇓P		**P**		**23 42 13.9**	**-1.4**
	baz=86								
W25A	**X Bar L Ranch,**	**86.22**	**52**	⇑P		**P**		**23 42 14.3**	**-1.4**
	baz=86								
C15A	**Salmond Ranch,**	**86.23**	**38**	⇑P		**P**		**23 42 14.7**	**-0.8**
	baz=86,SNR=10								
L20A	**Wamsutter**	**86.25**	**44**	⇓P		**P**		**23 42 15.0**	**-0.9**
	baz=86								
N21A	**Black Mountain**	**86.27**	**46**	⇓P		**P**		**23 42 14.7**	**-1.3**
	baz=86								
K19A	**Absolon Red Bu**	**86.27**	**43**	⇓P		**P**		**23 42 14.6**	**-1.3**
	baz=86								
J19A	**Crowheart**	**86.33**	**43**	⇑P		**P**		**23 42 14.9**	**-1.3**
	baz=86								
V25A	**Rancho No Teng**	**86.35**	**51**	⇑P		**P**		**23 42 14.6**	**-1.9**
	baz=86								
A14A	**Double T Ranch**	**86.35**	**36**	⇑P		**P**		**23 42 14.7**	**-1.3**
	baz=86								
R23A	**Moffat**	**86.39**	**49**	⇓P		**P**		**23 42 15.1**	**-1.7**
	baz=86								
Z27A	**Tatum**	**86.45**	**54**	⇑P		**P**		**23 42 14.7**	**-2.2**
	baz=87								
D16A	**Dana Ranch, Ca**	**86.50**	**39**	⇓P		**P**		**23 42 15.6**	**-1.3**
	baz=87								
429A	**Davenport Ranc**	**86.50**	**57**	⇑P		**P**		**23 42 16.1**	**-1.1**
	baz=87								
F17A	**Fitzpatrick Pl**	**86.51**	**40**	⇓P		**P**		**23 42 16.2**	**-0.7**
	baz=87								
T24A	**Torres, Weston**	**86.51**	**50**	⇑P		**P**		**23 42 16.2**	**-1.1**
	baz=87								
B15A	**Bradely Ranch,**	**86.52**	**37**	⇓P		**P**		**23 42 16.1**	**-0.7**
	baz=87								
H18A	**Shoshone NF, C**	**86.57**	**42**	⇑P		**P**		**23 42 16.8**	**-0.6**
	baz=87								
E17A	**Martinsdale**	**86.65**	**40**	⇓P		**P**		**23 42 17.5**	**-0.1**
	baz=87								
O22A	**Kremmling**	**86.69**	**47**	⇓P		**P**		**23 42 17.0**	**-1.2**
	baz=87,SNR=6.2								
I19A	**Meeteetse**	**86.71**	**42**	⇓P		**P**		**23 42 16.7**	**-1.3**
	baz=87								
HHC	**Hu-ho-hao-te**	**86.72**	**314**	*e*P		**P**		**23 42 18.4**	**+0.3**
HHC					pP	**pP**		**23 42 22.4**	**-0.1**
HHC					sP	**sP**		**23 42 26.3**	**+2.2**
HHC					PP	**PP**		**23 45 43.0**	**+2.3**
HHC					S	**SKKSac**		**23 52 53.3**	**+0.2**
HHC					sS	**sS**		**23 53 00.9**	**-1.8**
HHC					SS	**SS**		**23 58 35.8**	**-1.6**
HHC					pmax	pmax			
	comp=Z,50nm,1.1s								
HHC					pmax	pmax			
	comp=Z,460nm,5.6s								
HHC					LR	LR			
	comp=N,4μm,16.9s								
HHC					LR	LR			
	comp=E,2μm,11.5s								
HHC					LR	LR			
	comp=Z,4μm,14.0s								
M21A	**Separation Pea**	**86.74**	**45**	⇑P		**P**		**23 42 16.5**	**-1.8**
	baz=87								
329A	**Wagon Wheel Ra**	**86.74**	**56**	⇑P		**P**		**23 42 16.6**	**-1.7**
	baz=87								
A15A	**Johnson Ranch,**	**86.74**	**37**	⇑P		**P**		**23 42 16.5**	**-1.4**
	baz=87								
C16A	**Fuhringer Ranc**	**86.75**	**38**	⇓P		**P**		**23 42 16.1**	**-1.8**
	baz=87								
L21A	**Rawlins**	**86.89**	**45**	⇓P		**P**		**23 42 17.3**	**-1.6**
	baz=87								
G18A	**Lazy EL Ranch,**	**86.92**	**41**	⇑P		**P**		**23 42 17.6**	**-1.4**
	baz=87								
V26A	**Tequesquite Ra**	**86.95**	**51**	⇓P		**P**		**23 42 17.8**	**-1.6**
	baz=87								
H19A	**Powell**	**87.00**	**42**	⇑P		**P**		**23 42 17.9**	**-1.5**
	baz=87								
J20A	**Shoshoni**	**87.00**	**43**	⇑P		**P**		**23 42 17.8**	**-1.6**
	baz=87								
N22A	**Wattenberg Ran**	**87.02**	**46**	⇓P		**P**		**23 42 17.6**	**-2.1**
	baz=87								
RLMT	**Red Lodge**	**87.02**	**41**	*e*P		**P**		**23 42 18.6**	**-0.9**
	comp=Z,19nm,1.1s								
RLMT					LR	LR			
	comp=Z,2μm,21.0s								
RLMT	**Red Lodge**	**87.02**	**41**	⇑P		**P**		**23 42 19.1**	**-0.5**
	baz=87,SNR=10								
B16A	**M & M Farms, S**	**87.06**	**38**	⇓P		**P**		**23 42 17.1**	**-2.4**
	baz=87								
D17A	**Six Diamond Ra**	**87.07**	**39**	⇑P		**P**		**23 42 19.0**	**-0.7**
	baz=87,SNR=20								
F18A	**Big Timber**	**87.09**	**40**	⇑P		**P**		**23 42 18.2**	**-1.5**
	baz=87								
631A	**Perdido Creek**	**87.14**	**58**	⇓P		**P**		**23 42 18.4**	**-1.8**
	baz=87								
O23A	**Lake Granby, G**	**87.15**	**47**	⇑P		**P**		**23 42 18.9**	**-1.5**
	baz=87								
CLNS	**Chul'man**	**87.16**	**332**	*e*P		**P**		**23 42 21.3**	**+1.6**
CLNS				*e*				23 45 43.5	
CLNS				*e*PPP		PPP		23 47 37.8	
CLNS				*e*S		**SKSac**		**23 52 45.1**	**-1.5**
CLNS					pmax	pmax			
	comp=Z,15nm,1.4s								
CLNS					pmax	pmax			
	comp=E,4.0nm,1.1s								
CLNS					pmax	pmax			
	comp=N,8.0nm,1.2s								
CLNS					pmax	pmax			
	comp=E,3.0nm,1.0s								
CLNS					pmax	pmax			
	comp=Z,2.0nm,1.0s								
CLNS					pmax	pmax			
	comp=N,3.0nm,0.9s								
CLNS					smax	smax			
	comp=E,366nm,11.8s								
CLNS					smax	smax			
	comp=N,153nm,10.3s								
CLNS					MLR	MLR			
	comp=Z,281nm,12.0s								
CLNS					MLR	MLR			
	comp=E,424nm,14.0s								
CLNS					MLR	MLR			
	comp=N,314nm,17.0s								
S25A	**Robets Cordova**	**87.19**	**50**	⇓P		**P**		**23 42 18.6**	**-1.9**
	baz=87								
ISCO	**Idaho Springs**	**87.20**	**47**	PFAKE				23 42 30.0	+9.3
ISCO				LR		LR			
	comp=Z,708nm,20.0s								
I20A	**Worland**	**87.24**	**43**	⇑P		**P**		**23 42 19.5**	**-1.0**
	baz=87								
K21A	**Alcova**	**87.25**	**44**	⇑P		**P**		**23 42 19.3**	**-1.4**
	baz=87								
C17A	**Wharram Farm,**	**87.25**	**39**	⇓P		**P**		**23 42 19.3**	**-1.1**
	baz=87,SNR=18								
E18A	**Harlowton**	**87.27**	**40**	⇑P		**P**		**23 42 19.8**	**-0.8**
	baz=87								
PAYG	**Puerto Ayora**	**87.31**	**90**	PFAKE				23 42 30.0	+8.6
PAYG				LR		LR			
	comp=Z,2μm,20.0s								
330A	**Mertzon**	**87.36**	**56**	⇓P		**P**		**23 42 20.1**	**-1.2**
	baz=88								
A16A	**West Butte Ran**	**87.39**	**37**	⇓P		**P**		**23 42 20.3**	**-0.8**
	baz=88								
732A	**Laxson Ranch,**	**87.40**	**59**	⇓P		**P**		**23 42 20.7**	**-0.8**
	baz=88								
J21A	**Lysite**	**87.42**	**43**	⇓P		**P**		**23 42 20.4**	**-1.1**
	baz=88								
531A	**Rocksprings**	**87.43**	**58**	⇓P		**P**		**23 42 20.4**	**-1.2**
	baz=88								
R25A	**Fountain Ranch**	**87.49**	**49**	⇑P		**P**		**23 42 20.6**	**-1.3**
	baz=88								
B17A	**L&G Farms, Che**	**87.54**	**38**	⇑P		**P**		**23 42 20.9**	**-0.8**
	baz=88								
F19A	**Roth Farm, Mol**	**87.55**	**41**	⇑P		**P**		**23 42 20.6**	**-1.3**
	baz=88								
BTO	**Baotou**	**87.69**	**313**	*e*P		P		23 42 18.8	-3.9
I21A	**Big Trails, Te**	**87.72**	**43**	⇑P		**P**		**23 42 21.7**	**-1.2**
	baz=88								
KMI	**Kunming**	**87.78**	**297**	P		**P**		**23 42 24.3**	**+0.7**
KMI				pP		**PcP**		**23 42 25.8**	**+0.3**
KMI				PP		**PP**		**23 45 52.3**	**+2.7**
KMI				SKS		**SKSac**		**23 52 50.5**	**-1.6**
KMI				S		**S**		**23 53 05.4**	**-1.0**
KMI				SS		**SS**		**23 58 55.1**	**+1.5**
KMI				pmax		pmax			
	comp=Z,8.0nm,1.6s								
KMI				pmax		pmax			
	comp=Z,110nm,3.1s								
KMI				LR		LR			
	comp=N,3μm,15.2s								
KMI				LR		LR			
	comp=E,2μm,13.3s								
KMI				LR		LR			
	comp=Z,2μm,21.1s								
632A	**Ivalde**	**87.82**	**59**	⇑P		**P**		**23 42 22.5**	**-1.0**
	baz=88								
A17A	**Triple J Farms**	**87.90**	**37**	⇑P		**P**		**23 42 22.4**	**-1.1**
	baz=88								
E19A	**Rath Farm, Rou**	**87.92**	**40**	⇑P		**P**		**23 42 23.3**	**-0.4**
	baz=88,SNR=8.2								
532A	**Rocksprings**	**87.93**	**58**	⇑P		**P**		**23 42 23.2**	**-0.9**
	baz=88								
EGMT	**Eagleton**	**88.04**	**38**	*e*P		**P**		**23 42 24.9**	**+0.8**
	comp=Z,44nm,1.7s								
EGMT					LR	LR			
	comp=Z,1μm,20.0s								
EGMT	**Eagleton**	**88.04**	**38**	⇓P		**P**		**23 42 23.7**	**-0.5**
	baz=88								
Z30A	**Sanderson Ranc**	**88.06**	**55**	⇓P		**P**		**23 42 24.2**	**-0.4**
	baz=88								
L23A	**Garrett**	**88.08**	**45**	⇑P		**P**		**23 42 23.7**	**-1.0**
	baz=88								
P25A	**Willow Gulch B**	**88.11**	**48**	⇑P		**P**		**23 42 23.8**	**-1.1**
	baz=88								
JCT	**Junction City**	**88.14**	**58**	*e*P		**P**		**23 42 24.2**	**-0.8**
JCT					MLR	MLR			
	comp=Z,992nm,20.0s								
JCT	**Junction City**	**88.14**	**58**	*e*P		**P**		**23 42 24.2**	**-0.8**
JCT					LR	LR			
	comp=Z,992nm,20.0s								
D19A	**Cripps Ranch,**	**88.18**	**40**	⇑P		**P**		**23 42 24.2**	**-0.7**
	baz=88								
B18A	**Beardsley Farm**	**88.19**	**38**	⇑P		**P**		**23 42 24.2**	**-0.7**
	baz=88,SNR=5.2								
AMTX	**Amarillo**	**88.21**	**53**	PFAKE				23 42 40.0	+15
AMTX				LR		LR			
	comp=Z,1μm,20.0s								
432A	**Menard**	**88.28**	**57**	⇑P		**P**		**23 42 25.1**	**-0.6**
	baz=88								
C19A	**Slack Wire Ran**	**88.33**	**39**	⇑P		**P**		**23 42 25.7**	**+0.1**
	baz=88,SNR=5.4								
E20A	**Meyer Farm, Mu**	**88.35**	**40**	⇑P		**P**		**23 42 25.7**	**0.0**
	baz=88								
D20A	**Manuel Ranch,**	**88.60**	**40**	⇑P		**P**		**23 42 26.0**	**-0.9**
	baz=89								
B19A	**Brinkman Farms**	**88.71**	**38**	⇑P		**P**		**23 42 26.9**	**-0.5**
	baz=89								
CD2	**Chengdu**	**88.85**	**303**	P		**P**		**23 42 28.4**	**0.0**
CD2				pP		**pP**		**23 42 33.3**	**+0.5**
CD2				sP		**sP**		**23 42 35.4**	**+1.0**
CD2				PP		**PP**		**23 45 59.8**	**+1.9**
CD2				SKS		**SKSac**		**23 52 55.8**	**-2.2**
CD2				S		**S**		**23 53 13.8**	**-2.2**
CD2				ScS		**ScS**		**23 53 19.3**	**-2.0**
CD2				sS		**sS**		**23 53 21.3**	**-2.1**
CD2				SS		**SS**		**23 59 08.8**	**+0.1**
CD2				pmax		pmax			
	comp=Z,20nm,0.5s								
CD2				pmax		pmax			
	comp=Z,210nm,5.4s								
CD2				LR		LR			
	comp=N,4μm,13.5s								
CD2				LR		LR			
	comp=E,4μm,14.3s								
CD2				LR		LR			
	comp=Z,6μm,11.7s								
C20A	**Veseth Ranch,**	**88.95**	**39**	⇓P		**P**		**23 42 27.6**	**-0.9**
	baz=89								
CM31	**Chiang Mai Arr**	**89.04**	**289**	*e*P		**P**		**23 42 29.4**	**-0.1**
	comp=Z,41nm,1.5s								
CM31				*e*PP		**PP**		**23 45 57.1**	**-2.5**
CMAR	**Chiang Mai Arr**	**89.04**	**289**	P		**P**		**23 42 29.4**	**0.0**
CMAR				PP		**PP**		**23 46 03.5**	**+3.8**
CMAR	**Chiang Mai Arr**	**89.04**	**289**	P		**P**		**23 42 29.4**	**0.0**
	comp=Z,1.6nm,0.9s,baz=111,slow=2.6,SNR=13								
CMAR				PP		**PP**		**23 46 03.5**	**+3.8**
	comp=Z,0.8nm,0.7s,baz=121,slow=5.6,SNR=6.1								
CMAR				LR		LR		00 18 53.3	
	comp=Z,1μm,19.0s,baz=304,slow=33								
A19A	**Klindworth Far**	**89.05**	**38**	⇓P		**P**		**23 42 28.5**	**-0.4**
	baz=89								
CMMT	**Chiang Mai**	**89.14**	**290**	P		**P**		**23 42 31.0**	**+1.0**
	comp=Z,21nm,1.9s,comp=Z,528nm								
CHTO	**Chiang Mai**	**89.15**	**290**	*e*P		**P**		**23 42 31.0**	**+1.0**
CHTO					pmax	pmax			
	comp=Z,54nm,1.6s								
CHTO					MLR	MLR			
	comp=Z,1μm,22.0s								
CHTO	**Chiang Mai**	**89.15**	**290**	*e*P		**P**		**23 42 31.0**	**+1.0**
	comp=Z,54nm,1.6s								
CHTO					LR	LR			
	comp=Z,1μm,22.0s								
CHTO	**Chiang Mai**	**89.15**	**290**	P		**P**		**23 42 30.5**	**+0.5**
D21A	**La Casta Ranch**	**89.29**	**40**	⇑P		**P**		**23 42 29.8**	**-0.3**
	baz=89								
Z32A	**Haskell**	**89.36**	**55**	⇑P		**P**		**23 42 30.2**	**-0.6**
	baz=90								
A20A	**Cobblestone Ra**	**89.51**	**38**	⇓P		**P**		**23 42 30.9**	**-0.2**
	baz=90								
G23A	**Biddle**	**89.54**	**42**	⇓P		**P**		**23 42 30.4**	**-0.9**
	baz=90								
F23A	**Volborg**	**89.74**	**42**	⇑P		**P**		**23 42 31.7**	**-0.5**
	baz=90								
H24A	**Dirks Ranch, A**	**89.90**	**43**	⇑P		**P**		**23 42 32.8**	**-0.3**
	baz=90,SNR=6.9								
RSSD	**Black Hills**	**90.00**	**44**	*e*P		**P**		**23 42 31.8**	**-1.9**
RSSD					pmax	pmax			
	comp=Z,9.0nm,1.1s								
RSSD	**Black Hills**	**90.00**	**44**	*e*P		**P**		**23 42 31.8**	**-1.9**
	comp=Z,8.6nm,1.1s								
A21A	**Bergtoll Ranch**	**90.15**	**38**	⇓P		**P**		**23 42 33.8**	**-0.3**
	baz=90								
OGNE	**Ogallala**	**90.16**	**47**	PFAKE				23 42 50.0	+16
OGNE				LR		LR			
	comp=Z,733nm,21.0s								
CIT	**Chita**	**90.33**	**325**	*e*P		P		23 42 38.2	+3.4
WMOK	**Wichita Mounta**	**90.39**	**54**	PFAKE				23 42 50.0	+14
WMOK				LR		LR			
	comp=Z,1μm,19.0s								
F24A	**Ekalaka**	**90.40**	**42**	⇓P		**P**		**23 42 34.8**	**-0.6**
	baz=90								
LZH	**Lanzhou**	**90.53**	**307**	*e*P		**P**		**23 42 36.3**	**0.0**
LZH				pP		**pP**		**23 42 40.5**	**-0.2**
LZH				sP		**sP**		**23 42 43.3**	**+1.0**
LZH				SKS		**SKSac**		**23 53 08.0**	**+0.1**
LZH				*e*S		**S**		**23 53 28.0**	**-3.7**
LZH				sS		**ScS**		**23 53 36.3**	**+1.0**
LZH				SS		**SS**		**23 59 34.0**	**+0.8**
LZH				pmax		pmax			
	comp=Z,19nm,1.0s								
LZH				pmax		pmax			
	comp=Z,180nm,4.2s								
LZH				LR		LR			
	comp=N,2μm,12.7s								
LZH				LR		LR			
	comp=E,3μm,11.6s								
LZH				LR		LR			
	comp=Z,4μm,13.3s								
C23A	**Lambert**	**90.72**	**40**	⇑P		**P**		**23 42 36.0**	**-0.7**
	baz=91								
HKT	**Hockley**	**91.21**	**59**	*e*P		P		23 42 42.8	+3.5
HKT					pmax	pmax			
	comp=Z,27nm,1.6s								
HKT	**Hockley**	**91.21**	**59**	*e*P		P		23 42 42.8	+3.5
	comp=Z,27nm,1.6s								
DGMT	**Dagmar**	**91.59**	**40**	*e*P		P		23 42 44.5	+3.8
DGMT					LR	LR			
	comp=Z,2μm,20.0s								
PLCA	**Paso Flores**	**91.86**	**133**	P		**P**		**23 42 42.9**	**+0.5**
PLCA	**Paso Flores**	**91.86**	**133**	P		**P**		**23 42 42.9**	**+0.5**
	comp=Z,4.9nm,0.9s,baz=198,slow=6.4,SNR=3.0								
PLCA					LR	LR		00 14 50.5	
	comp=Z,950nm,20.6s,baz=246,slow=30								
SNAA	**Sanae**	**92.08**	**178**	*e*P		**P**		**23 42 43.8**	**+1.1**
	comp=Z,81nm,2.4s								
SNAA	**Sanae**	**92.08**	**178**	LR		LR		00 22 02.0	
	comp=Z,595nm,18.3s,baz=194,slow=34								
ULN	**Ulaanbaatar**	**92.47**	**319**	*e*P		**P**		**23 42 44.1**	**-0.9**
	comp=Z,15nm,1.1s								
ULN					LR	LR			
	comp=Z,1μm,20.0s								
YKA	**Yellowknife Ar**	**92.67**	**24**	P		**P**		**23 42 44.5**	**-0.8**
YKA					PP	**PP**		**23 46 28.8**	**+1.4**
YKA	**Yellowknife Ar**	**92.67**	**24**	P		**P**		**23 42 44.5**	**-0.8**
	comp=Z,4.4nm,1.1s,baz=241,slow=4.4,SNR=15								
YKA					PP	**PP**		**23 46 28.7**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=241,slow=7.4,SNR=3.9								
YKW3	**Yellowknife Ar**	**92.70**	**24**	*e*P		**P**		**23 42 45.1**	**-0.4**
	comp=Z,0.2nm,1.3s								
SONM	**Songino Array**	**92.87**	**319**	P		**P**		**23 42 45.7**	**-1.2**
SONM					PP	**PP**		**23 46 32.1**	**+2.6**
SONM	**Songino Array**	**92.87**	**319**	P		**P**		**23 42 45.7**	**-1.2**
	comp=Z,2.5nm,1.0s,baz=108,slow=2.6,SNR=8.9								
SONM					PP	**PP**		**23 46 32.1**	**+2.6**
	comp=Z,1.0nm,1.1s,baz=112,slow=6.7,SNR=3.6								
KSU1	**Kansas State U**	**93.45**	**50**	PFAKE				23 43 00.0	+10
KSU1				LR		LR			
	comp=Z,948nm,19.0s								
TGUH	**Tegucigalpa,Un**	**94.26**	**77**	PFAKE				23 43 00.0	+6.3
TGUH				LR		LR			
	comp=Z,3μm,20.0s								
EFI	**East Falkland**	**94.35**	**147**	PFAKE				23 43 00.0	+6.6
EFI				LR		LR			
	comp=Z,1μm,19.0s								
MIAR	**Mount Ida**	**94.41**	**55**	PFAKE				23 43 00.0	+5.9
MIAR				LR		LR			
	comp=Z,1μm,19.0s								
GTA	**Gaotai**	**94.62**	**310**	*e*P		**P**		**23 42 54.8**	**-0.2**
GTA				pP		**pP**		**23 42 58.5**	**-1.0**
GTA				sP		**sP**		**23 43 01.0**	**-0.1**
GTA				SKS		**SKSac**		**23 53 30.3**	**-0.1**
GTA				S		**S**		**23 54 04.0**	**-4.0**
GTA				sS		**ScS**		**23 54 11.3**	**+2.2**
GTA				pmax		pmax			
	comp=Z,3.0nm,1.0s								
GTA				pmax		pmax			
	comp=Z,110nm,5.5s								
GTA				LR		LR			
	comp=N,2μm,13.1s								
GTA				LR		LR			
	comp=E,2μm,13.3s								
GTA				LR		LR			
	comp=Z,3μm,12.8s								
TIXI	**Tiksi**	**94.88**	**345**	PFAKE				23 43 10.0	+15
TIXI				LR		LR			
	comp=Z,3μm,20.0s								
ECSD	**EROS Data Cent**	**94.89**	**46**	*e*P		**P**		**23 42 56.0**	**-0.1**
	comp=Z,16nm,1.5s								
ECSD					LR	LR			
	comp=Z,1μm,22.0s								
TEIG	**Tepich**	**94.99**	**70**	PFAKE				23 43 10.0	+13
TEIG				LR		LR			
	comp=Z,1μm,22.0s								
FFC	**Flin Flon**	**95.22**	**34**	PFAKE				23 43 10.0	+13
FFC				LR		LR			
	comp=Z,1μm,20.0s								
JTS	**JuntasAbangare**	**95.43**	**81**	PFAKE				23 43 10.0	+11
JTS				LR		LR			
	comp=Z,4μm,20.0s								
ZAK	**Zakamensk**	**95.67**	**321**	⇓*i*P		P		23 43 04.3	+4.8
ZAK					pmax	pmax			
	comp=Z,5.0nm,1.4s								
VBMS	**Vicksburg**	**96.23**	**58**	PFAKE				23 43 10.0	+7.6
VBMS				LR		LR			
	comp=Z,926nm,19.0s								
LCO	**Las Campanas**	**96.32**	**123**	PFAKE				23 43 10.0	+6.6
LCO				LR		LR			
	comp=Z,3μm,21.0s								
SCIA	**State Center**	**96.75**	**48**	PFAKE				23 43 20.0	+15
SCIA				LR		LR			
	comp=Z,1μm,19.0s								
AGMN	**Agassiz Nation**	**96.75**	**42**	PFAKE				23 43 20.0	+16
AGMN				LR		LR			
	comp=Z,1μm,20.0s								
NNA	**Nana**	**96.81**	**105**	PFAKE				23 43 20.0	+14
NNA				LR		LR			
	comp=Z,2μm,20.0s								
ULM	**Lac du Bonnet**	**97.31**	**40**	LR		LR		00 20 25.9	
	comp=Z,1μm,19.9s,baz=127,slow=31								
OXF	**Oxford**	**97.72**	**56**	PFAKE				23 43 20.0	+11
OXF				LR		LR			
	comp=Z,992nm,19.0s								
BRAL	**Brewton**	**98.78**	**60**	PFAKE				23 43 20.0	+6.0
BRAL				LR		LR			
	comp=Z,437nm,19.0s								
OTAV	**Otavalo**	**98.92**	**92**	PFAKE				23 43 30.0	+14
OTAV				LR		LR			
	comp=Z,2μm,21.0s								
TRQA	**Tornquist**	**98.99**	**134**	PFAKE				23 43 30.0	+15
TRQA				LR		LR			
	comp=Z,975nm,22.0s								
LRAL	**Lakeview Retre**	**99.31**	**58**	PFAKE				23 43 30.0	+14
LRAL				LR		LR			
	comp=Z,894nm,20.0s								
EYMN	**Ely**	**99.48**	**43**	PFAKE				23 43 30.0	+13
EYMN				LR		LR			
	comp=Z,1μm,19.0s								
BCIP	**Isla Barro Col**	**100.00**	**83

CBN LR LR
comp=Z,1µm,19.0s
MKAR Makanchi Array 108.59 314 P **Pdif** **23 43 58.3 +1.0**
MKAR Makanchi Array 108.59 314 Pdif **Pdif** **23 43 58.3 +1.0**
MKAR PKiKP **PKiKP** **23 48 02.3 -0.5**
MKAR PKKPbc **PKKPbc** **23 59 12.7 -0.9**
MKAR Makanchi Array 108.59 314 Pdiff **Pdif** **23 43 58.3 +1.0**
comp=Z,0.7nm,1.0s,baz=116,slow=3.4,SNR=3.4
MKAR PKiKP **PKiKP** **23 48 02.3 -0.5**
comp=Z,0.5nm,0.8s,baz=96,slow=2.9,SNR=4.7
MKAR PKKPbc **PKKPbc** **23 59 12.7 -0.9**
comp=Z,0.6nm,0.9s,baz=257,slow=4.4,SNR=4.7
SDV Santo Domingo 108.72 86 PFAKE 23 48 20.0
SDV LR LR
comp=Z,5.0nm,19.0s
BINY Binghamton 109.41 50 PFAKE 23 48 20.0
BINY LR LR
comp=Z,1µm,19.0s
SDDR Presa de Saban 110.30 75 PFAKE 23 48 20.0
SDDR LR LR
comp=Z,4µm,20.0s
SAML Samuel 110.47 106 PFAKE 23 48 20.0
SAML LR LR
comp=Z,2µm,20.0s
LONY Lake Ozonia 110.59 48 PFAKE 23 48 20.0
LONY LR LR
comp=Z,1µm,21.0s
NCB Newcomb 110.81 49 PFAKE 23 48 20.0
NCB LR LR
comp=Z,1µm,20.0s
GRTK Grand Turk 110.90 73 PFAKE 23 48 20.0
GRTK LR LR
comp=Z,1µm,21.0s
KURK Kurchatov 111.17 319*c i*PKiKP **PKiKP** **23 48 06.6 -0.8**
KURK Kurchatov 111.17 319 PFAKE 23 48 20.0
KURK LR LR
comp=Z,1µm,22.0s
LBNH Lisbon 112.48 48 PFAKE 23 48 20.0
LBNH LR LR
comp=Z,2µm,19.0s
TKM2 Tokmak 2 113.16 310 PFAKE 23 48 20.0
TKM2 LR LR
comp=Z,895nm,20.0s
AAK Ala-Archa 113.97 310⇑*i*PKiKP **PKiKP** **23 48 12.2 -1.1**
AAK Ala-Archa 113.97 310 PFAKE 23 48 20.0
AAK LR LR
comp=Z,943nm,20.0s
EKS2 Erkin-Say 114.50 310 PFAKE 23 48 30.0 +16
EKS2 LR LR
comp=Z,915nm,20.0s
NIL Nilore 114.61 300 PFAKE 23 48 30.0 +15
NIL LR LR
comp=Z,30nm,19.0s
SJG San Juan 114.94 77 PFAKE 23 48 30.0 +14
SJG LR LR
comp=Z,1µm,21.0s
BVAR Borovoye Array 116.12 321 PKiKP **PKPdf** **23 48 17.3 +0.4**
BVAR Borovoye Array 116.12 321 PKP **PKPdf** **23 48 17.3 +0.4**
BVAR Borovoye Array 116.12 321 PKP **PKPdf** **23 48 17.3 +0.4**
comp=Z,0.3nm,0.4s,baz=240,slow=39,SNR=4.5
BRVK Borovoye 116.17 321⇓*i*PKiKP **PKPdf** **23 48 16.6 -0.3**
BRVK Borovoye 116.17 321 PFAKE 23 48 30.0 +13
BRVK LR LR
comp=Z,1µm,20.0s
SPB Sao Paulo 117.21 128 PFAKE 23 48 30.0 +10
SPB LR LR
comp=Z,2µm,21.0s
KBS Kingsbay 117.27 358 PFAKE 23 48 30.0 +12
KBS LR LR
comp=Z,2µm,20.0s
BBSR BB Station 117.81 62 PFAKE 23 48 30.0 +9.3
BBSR LR LR
comp=Z,1µm,20.0s
GRGR Grenville 118.06 85 PFAKE 23 48 30.0 +8.3
GRGR LR LR
comp=Z,680nm,20.0s
ANWB Willy Bob 118.96 79 PFAKE 23 48 30.0 +6.7
ANWB LR LR
comp=Z,951nm,21.0s
FDF Fort de France 119.05 82 PFAKE 23 48 40.0 +16
FDF LR LR
comp=Z,961nm,21.0s
BBGH Gun Hill 120.27 84 PFAKE 23 48 40.0 +14
BBGH LR LR
comp=Z,3µm,22.0s
SVE Sverdlovsk 120.77 327*e*PKiKP PKPdf 23 48 32.0 +6.3
SVE pmax pmax
comp=Z,8.0nm,1.1s
ARU Arti 121.98 327 *i* PKiKP **PKPdf** **23 48 26.8 -1.2**
ARU 23 50 00.5
ARU 23 55 25.2
ARU SP SP 23 59 48.6 -5.0
ARU PS **PS** **23 59 55.7 -0.6**
ABKAR Akbulak array 123.28 319*e*PKPdf **PKPdf** **23 48 32.1 +1.4**
MSEY Mahe Island 123.44 253 PFAKE 23 48 40.0 +7.8
MSEY LR LR
comp=Z,2µm,19.0s
ABPO Ambohimpanom 123.53 233 PFAKE 23 48 40.0 +7.6
ABPO LR LR
comp=Z,2µm,20.0s
AKTO Aktyubinsk 124.17 320 PKiKP **PKPdf** **23 48 32.2 -0.2**
AKTO Aktyubinsk 124.17 320 PKP **PKPdf** **23 48 32.2 -0.2**
AKTO Aktyubinsk 124.17 320 PKP **PKPdf** **23 48 32.2 -0.2**
comp=Z,0.9nm,0.8s,baz=47,slow=5.0,SNR=2.6
KEV Kevo 124.51 350 PFAKE 23 48 40.0 +7.5
KEV LR LR
comp=Z,985nm,20.0s
LVZ Lovozero 124.52 346⇑*i*PKiKP **PKPdf** **23 48 34.0 +1.4**
LVZ pmax pmax
comp=Z,62nm,2.5s
ARCES ARCESS Array B 124.96 350 PKP **PKPdf** **23 48 34.2 +0.9**
ARCES ARCESS Array B 124.96 350 PKP **PKPdf** **23 48 34.2 +0.9**
comp=Z,2.9nm,0.8s,baz=17,slow=8.9,SNR=3.7
APA Apatity 125.07 346⇑*i*PKiKP **PKPdf** **23 48 38.6 +5.0**
APA *i* SS SS 00 07 24.0 +6.3
SUR Sutherland 128.37 200 PFAKE 23 48 50.0 +8.6
SUR LR LR
comp=Z,3µm,19.0s
BORG Borgarnes 129.09 13 PFAKE 23 48 50.0 +8.7
BORG LR LR
comp=Z,2µm,22.0s
JOF Joensuu 129.32 343*e*PKiKP **PKPdf** **23 48 43.2 +1.3**
JOF Joensuu 129.32 343*ep* **PKPdf** **23 48 43.2 +1.3**
KAF Kangasniemi 131.30 345*e*PKiKP **PKPdf** **23 48 43.2 -2.4**
KAF Kangasniemi 131.30 345*ep* **PKPdf** **23 48 43.2 -2.4**
FINES FINESS Array B 131.93 345 PKP **PKPdf** **23 48 45.8 -1.0**
FINES FINESS Array B 131.93 345 PKP **PKPdf** **23 48 45.8 -1.0**
comp=Z,1.7nm,0.9s,baz=336,slow=3.0,SNR=3.9
OBN Obninsk 133.28 334⇓*i*PKiKP **PKPdf** **23 48 52.7 +3.2**
OBN *e* 23 51 17.8
OBN *e*SS SS 00 09 01.3 +1.9
OBN pmax pmax
comp=Z,20nm,1.6s
OBN MLR MLR
comp=Z,1µm,20.0s
NB2 NORSAR Subarra 134.96 354 PKP **PKPdf** **23 48 54.0 +1.4**
comp=Z,25nm,2.0s,baz=17,slow=2.6
RCBR Riachuelo 136.21 117 PFAKE 23 49 10.0 +14
RCBR LR LR
comp=Z,1µm,20.0s
KIV Kislovodsk 136.24 317 *i* PKiKP **PKPdf** **23 48 55.9 +0.3**
KIV pmax pmax
comp=Z,7.0nm,1.2s
KIV MLR MLR
comp=Z,1µm,21.0s
GNI Garni 136.33 312 PFAKE 23 49 10.0 +14
GNI LR LR
comp=Z,500nm,20.0s
KONO Kongsberg 136.49 355 PFAKE 23 49 10.0 +15
KONO LR LR
comp=Z,858nm,20.0s
ANN Anapa 139.12 321 *i* PKiKP PKPdf 23 48 55.4 -5.3
ANN *e* 23 49 00.1
ANN pmax pmax
comp=Z,46nm,1.3s
AKASG Malin Array Be 139.54 334 PKiKP **PKPdf** **23 49 01.0 -0.4**
AKASG 23 51 57.9
AKASG Malin Array Be 139.54 334 PKP **PKPdf** **23 49 00.9 -0.4**
AKASG PP **PP** **23 51 57.9 +2.4**
AKASG Malin Array Be 139.54 334 PKP **PKPdf** **23 49 00.9 -0.4**
comp=Z,0.3nm,0.3s,baz=10,slow=1.0,SNR=3.9
AKASG PP **PP** **23 51 57.9 +2.4**
comp=Z,0.3nm,0.3s,baz=20,slow=3.5,SNR=4.1
KIEV Kiev 139.55 334 PFAKE 23 49 10.0 +8.7
KIEV LR LR
comp=Z,2µm,21.0s
ESK Eskdalemuir 140.92 5 PFAKE 23 49 20.0 +16
ESK LR LR
comp=Z,2µm,19.0s
KMBO Kilima Mbogo 141.38 247 PFAKE 23 49 20.0 +14
KMBO LR LR
comp=Z,1µm,20.0s
MALT Malatya 141.56 312 PFAKE 23 49 20.0 +14
MALT LR LR
comp=Z,666nm,22.0s
MALT Malatya 141.56 312⇑*iP* **PKPdf** **23 49 09.0 +3.4**
LVV L'vov 142.31 337*e*PKiKP **PKPdf** **23 49 10.6 +4.2**
LVV MLR MLR
comp=N,300nm,22.0s
LVV MLR MLR
comp=Z,600nm,22.0s
LVV MLR MLR
comp=E,500nm,21.0s
KIS Kishinev 142.42 330*e*PKiKP **PKPdf** **23 49 06.0 -0.6**
KIS *e* 23 49 20.0
KIS *e*PPP PPP 23 55 22.0
KIS *e*PPS PPS 00 04 46.0
KIS MLR MLR
comp=N,1µm,20.0s
KIS MLR MLR
comp=Z,2µm,20.0s
KIS MLR MLR
comp=Z,2µm,20.0s
KIS Kishinev 142.42 330*e*PKP **PKPdf** **23 49 06.0 -0.6**
KIS Kishinev 142.42 330*e*PP PP 23 52 26.0 +13
KIS *e*SKP 23 52 42.0
KIS Kishinev 142.42 330*e*PKKP **PKKPdf** **23 58 24.0 +0.5**
KIS *e*SKSP 00 02 16.0
KWP Kalwaria Pacla 142.96 338*e*PKiKP **PKPdf** **23 49 05.2 -2.3**
KWP 23 52 15.0
KWP MLR MLR
comp=Z,1µm,20.0s
KWP Kalwaria Pacla 142.96 338*e*PKPdf **PKPdf** **23 49 05.2 -2.3**
KWP PP **PP** **23 52 14.9 -1.3**
KWP LR LR
comp=Z,1µm,20.0s
KWP Kalwaria Pacla 142.96 338⇓*i*P **PKPdf** **23 49 05.4 -2.2**
OJC Ojcow 143.43 341*e*PKiKP **PKPdf** **23 49 08.9 +0.5**
OJC Ojcow 143.43 341*e*PKPdf **PKPdf** **23 49 08.9 +0.5**
OJC *ep*PKPdf **pPKPdf** **23 49 12.4 -0.5**
NRDL Niedersach Rie 143.46 352*e*PKPbc PKPab 23 49 04.1 -0.3
BUR08 Bucovina Ar. S 143.58 334*e*PKPdf **PKPdf** **23 49 08.7 -0.2**
BURAR Bucovina Array 143.60 334⇑*i*P **PKPdf** **23 49 09.8 +0.9**
TESR 143.80 331⇓*i*P **PKPdf** **23 49 12.3 +3.2**
FURI Furi 143.80 263*e*PKPdf **PKPdf** **23 49 15.1 +4.6**
KSP Ksiaz 143.85 345*e*PKiKP **PKPdf** **23 49 07.9 -1.2**
KSP *e*SS SS 00 11 00.0 -3.9
UZH Uzhgorod 143.94 337*e*PKiKP PKPab 23 49 06.2 -0.3
UZH *e* 23 49 16.4
UZH MLR MLR
comp=N,500nm,17.0s
UZH MLR MLR
comp=E,420nm,17.0s
UZH MLR MLR
comp=Z,380nm,17.0s
CFR Carcaliu 144.05 328⇑*iP* **PKPab** **23 49 06.4 -0.6**
CLZ Clausthal 144.06 351*e*PKiKP PKPbc 23 49 08.1 +0.7
CLZ Clausthal 144.06 351*e*PKPbc PKPbc 23 49 08.1 +0.7
CLL Collm 144.14 349 *i* PKiKP PKPbc 23 49 08.4 +0.8
CLL *i* 23 49 14.6
CLL MLR MLR
comp=Z,800nm,21.2s
CLL Collm 144.14 349*e*PKPbc **PKPab** **23 49 07.3 +0.2**
CLL Collm 144.14 349 *i* PKPdf PKPbc 23 49 08.4 +0.8
CLL *i* (PKiKP) 23 49 14.6
comp=Z,35nm,1.9s
CLL *e*(PP) 23 52 11.0
CLL *e*SS SS 00 11 03.0 -4.0
CLL *e*PSS PSS 00 11 56.0
CLL *e*SSS SSS 00 16 12.0
CLL LV 00 56 00.0
comp=Z,800nm,21.2s
BR131 Keskin Array S 144.19 317*e*PKPdf **PKPab** **23 49 06.4 -1.5**
BRTR Keskin Array B 144.19 317 PKP **PKPab** **23 49 07.0 -0.9**
BRTR Keskin Array B 144.19 317 PKP **PKPab** **23 49 07.0 -0.9**
comp=Z,12nm,0.9s,baz=116,slow=2.9,SNR=17
UPC Upice 144.23 345*e*PKiKP **PKPdf** **23 49 09.3 -0.5**
UPC *e* 23 49 14.4
UPC Upice 144.23 345*e*PKP **PKPdf** **23 49 09.3 -0.5**
UPC *ep*PKP **pPKPdf** **23 49 14.4 +0.1**
VRI Vrincioaia 144.24 330⇑*iP* PKPbc 23 49 08.8 +0.7
TRPA Tarpa 144.26 337⇑*iP* **PKPdf** **23 49 11.8 +2.0**
TRPA Tarpa 144.26 337*e*PKPdf **PKPdf** **23 49 11.4 +1.6**
OKC Ostrava-Krasne 144.27 342*e*PKiKP **PKPdf** **23 49 09.3 -0.5**
OKC Ostrava-Krasne 144.27 342*e*PKP **PKPdf** **23 49 09.3 -0.5**
PLOR Plostina 144.29 330⇓*iP* **PKPdf** **23 49 13.1 +3.1**
DPC Dobruska-Polom 144.30 345*e*PKiKP **PKPab** **23 49 06.8 -1.1**
DPC *e* 23 49 13.8
DPC Dobruska-Polom 144.30 345*e*PKPdf **PKPab** **23 49 06.7 -1.1**
DPC Dobruska-Polom 144.30 345*e*PKP **PKPab** **23 49 06.8 -1.1**
DPC *ep*PKP **PKiKP** **23 49 13.8 +0.3**
WTSB Winterswijk 144.34 355*e*PKPdf **PKPab** **23 49 07.2 -0.6**
BRG Berggiesshubel 144.36 347*e*PKP **PKPdf** **23 49 13.0 +3.0**
comp=Z,30nm,1.8s
BRG *e* 23 50 25.1
comp=Z,45nm,1.9s
BRG Berggiesshubel 144.36 347*e*PKiKP **PKPdf** **23 49 13.0 +3.0**
BRG pmax pmax
comp=Z,30nm,1.8s
BRG pmax pmax
comp=Z,45nm,1.8s
TIRR Tirgusor 144.41 327⇑*iP* **PKPdf** **23 49 14.1 +3.9**
MORC Moravsky Berou 144.49 343*e*PKiKP **PKPab** **23 49 07.6 -1.0**
MORC Moravsky Berou 144.49 343*e*PKPdf **PKPab** **23 49 07.6 -1.0**
MORC Moravsky Berou 144.49 343⇓*iP* **PKPdf** **23 49 09.8 -0.5**
PVCC Panska Ves 144.55 347*e*PKiKP **PKPdf** **23 49 11.3 +1.0**
PVCC *e* 23 49 15.8
PVCC Panska Ves 144.55 347*e*PKP **PKPdf** **23 49 11.3 +1.0**
PVCC *ep*PKP **pPKPdf** **23 49 15.8 +0.9**
ANTO Ankara 144.67 318*e*PKiKP PKPbc 23 49 09.9 +0.1
ANTO MLR MLR
comp=Z,820nm,22.0s
ANTO Ankara 144.67 318*e*PKPdf PKPbc 23 49 09.9 +0.2
ANTO LR LR
comp=Z,820nm,22.0s
ANTO Ankara 144.67 318⇓*iP* PKPbc 23 49 09.8 0.0
DOPR Dopca 144.79 332⇓*iP* **PKPdf** **23 49 14.6 +3.7**
BUG Bochum--Univer 144.82 355*e*PKPbc **PKPdf** **23 49 10.7 0.0**
AMRR Amara 144.85 328⇓*iP* **PKPab** **23 49 09.5 -0.5**
ISR Istrita 144.88 330⇓*iP* PKPbc 23 49 10.2 0.0
MLR Muntele Rosu 144.89 331⇑*iP* **PKPab** **23 49 09.7 -0.6**
PRA Prague 145.01 346 PKP **PKPbc** **23 49 09.0 -1.4**
PRA AMS AMS 00 44 00.0
MOX Moxa 145.03 350*e*PKiKP **PKPdf** **23 49 12.8 +1.7**
MOX Moxa 145.03 350*e*PKPbc **PKPdf** **23 49 12.8 +1.7**
PRU Pruhonice 145.06 346*e*PKiKP **PKPbc** **23 49 09.5 -1.1**
PRU *e* 23 49 16.8
PRU Pruhonice 145.06 346*e*PKP **PKPbc** **23 49 09.5 -1.1**
PRU *ep*PKP **pPKPdf** **23 49 16.8 +1.0**
TANN Tannenbergstha 145.10 349*e*PKPbc **PKPbc** **23 49 10.3 -0.4**
UBBA Unterbreizbach 145.11 351*e*PKPbc **PKPdf** **23 49 11.8 +0.7**
SECR 145.16 330⇓*iP* **PKPdf** **23 49 11.5 -0.1**
VRAC Vranov 145.18 344⇓*iP* **PKPbc** **23 49 09.5 -1.5**
NKC Novy Kostel 145.27 349*e*PKiKP **PKPdf** **23 49 13.1 +1.5**
NKC *e* 23 49 17.6
NKC Novy Kostel 145.27 349*e*PKP **PKPdf** **23 49 13.1 +1.5**
NKC *ep*PKP **pPKPdf** **23 49 17.6 +1.4**
DRSR 145.29 335⇓*iP* **PKPbc** **23 49 10.3 -1.2**
VOIR 145.34 331⇑*iP* **PKPbc** **23 49 11.2 -0.5**
PSZ Piszkesteto 145.40 339*e*PKiKP **PKPbc** **23 49 10.5 -1.4**
PSZ MLR MLR
comp=Z,2µm,19.0s
PSZ Piszkesteto 145.40 339*e*PKPab **PKPbc** **23 49 10.5 -1.4**
PSZ LR LR
comp=Z,2µm,19.0s
PSZ Piszkesteto 145.40 339⇓*iP* **PKPbc** **23 49 10.4 -1.4**
PSZ Piszkesteto 145.40 339*e*PKPbc **PKPbc** **23 49 10.4 -1.4**
TREC Trest 145.48 345*e*PKP2 **PKPdf** **23 49 10.5 -1.5**
TREC *e* 23 49 10.7
TREC *e* 23 49 18.7
TREC Trest 145.48 345*e*PKP **PKPdf** **23 49 10.5 -1.5**
TREC *ex* x 23 49 10.7
TREC *ep*PKP **pPKPdf** **23 49 18.7 +2.1**
BEBN Eben Emael 145.58 356 PKP **PKPab** **23 49 13.4 +1.0**
ARR Arges 145.59 332⇓*iP* **PKPdf** **23 49 11.7 -0.6**
HGN Heimansgroeve 145.59 356*e*PKPdf **PKPdf** **23 49 11.2 -0.9**
UCC Uccle 145.65 358 PKP **PKPdf** **23 49 11.3 -0.9**
MEM Membach 145.74 356 PKP **PKPdf** **23 49 11.3 -1.1**
ROTZ Rotzenmuhle 145.76 349*e*PKPbc **PKPdf** **23 49 11.6 -0.8**
PRD Provadia 145.80 327*eP* **PKPab** **23 49 18.5 +5.0**
TNS Taunus Mts 145.90 353*e*PKiKP **PKPdf** **23 49 11.6 -1.1**
TNS Taunus Mts 145.90 353*e*PKPbc **PKPdf** **23 49 11.6 -1.1**
LOT Lotru 145.91 333⇓*iP* **PKPdf** **23 49 12.1 -0.9**
SNF Seneffe 145.94 358 PKP **PKPab** **23 49 15.2 +1.5**
BCLA Clavier 145.98 357 PKP **PKPdf** **23 49 11.4 -1.4**
GRF Grafenberg Arr 146.01 350*e*PKiKP **PKPdf** **23 49 10.5 -2.4**
GRF Grafenberg Arr 146.01 350*e*PKPbc **PKPdf** **23 49 10.5 -2.4**
GRFO Grafenberg 146.02 350*e*PKP2 **PKPdf** **23 49 12.3 -0.5**
GRFO Grafenberg 146.02 350*e*PKPdf **PKPdf** **23 49 12.3 -0.5**
GRFO *e*PKPdf **PKPbc** **23 49 12.8 -0.8**
BUD Budapest 146.07 340*e*PKPdf **PKPbc** **23 49 13.8 0.0**
KHC Kasperske Hory 146.09 347*e*PKP2 **PKPdf** **23 49 12.9 -0.1**
KHC Kasperske Hory 146.09 347*e*PKPdf **PKPdf** **23 49 12.2 -0.9**
KHC *e*PKPdf **PKPbc** **23 49 12.4 -1.5**
KHC Kasperske Hory 146.09 347*e*PKP **PKPdf** **23 49 12.9 -0.1**
KHC *ep*PKP **pPKPdf** **23 49 20.1 +2.5**
WET Wettzell 146.22 348*e*PKiKP **PKPdf** **23 49 12.5 -0.8**
WET Wettzell 146.22 348*e*PKPbc **PKPdf** **23 49 12.5 -0.8**
PKSN Nyarlorinc 146.28 338*e*PKPdf **PKPbc** **23 49 14.2 -0.3**
GEC2 GERESS Array S 146.33 346*e*PKP2 **PKPdf** **23 49 13.2 -0.3**
GEC2 GERESS Array S 146.33 346*e*PKPbc **PKPdf** **23 49 13.2 -0.3**
GERES GERESS Array B 146.33 346 PKPbc **PKPdf** **23 49 12.4 -1.1**
GERES GERESS Array B 146.33 346 PKPbc **PKPdf** **23 49 12.4 -1.1**
comp=Z,2.5nm,0.7s,baz=14,slow=2.8,SNR=26
ABH Alteburg 146.33 354 PKP **PKPbc** **23 49 14.1 -0.5**
DOU Dourbes 146.34 357 PKP **PKPbc** **23 49 14.5 0.0**
PKSG 146.36 340*e*PKPdf **PKPab** **23 49 16.7 +1.2**
PKS7 Kunszentmiklos 146.40 339*e*PKPdf **PKPbc** **23 49 14.3 -0.5**
TOD Tromm 146.46 352 PKP2 **PKPbc** **23 49 14.6 -0.4**
TOD Tromm 146.46 352 PKP **PKPbc** **23 49 14.6 -0.4**
SZH Strazhica 146.52 328*eP* **PKPab** **23 49 19.5 +3.2**
RUP Ruppelstein 146.56 354 PKP2 **PKPbc** **23 49 15.0 -0.3**
RUP Ruppelstein 146.56 354 PKP **PKPbc** **23 49 15.0 -0.3**
PKST T''s 146.59 340*e*PKPdf **PKPab** **23 49 17.1 +0.7**
CONA Conrad Observa 146.64 343⇑*i*PKPab **PKPdf** **23 49 14.5 +0.5**
comp=Z,57nm,1.6s,SNR=15
CONA Conrad Observa 146.64 343⇑*iP* **PKPdf** **23 49 14.5 +0.5**
PKS6 Bocsa 146.65 338*e*PKPdf **PKPdf** **23 49 14.4 +0.4**
SOP Sopron 146.66 342*e*PKPdf **PKPdf** **23 49 14.7 +0.7**
WLF Walferdange 146.67 355 PKPbc **PKPdf** **23 49 14.1 +0.2**
WLF Walferdange 146.67 355*e*PKiKP **PKPdf** **23 49 12.9 -1.1**
WLF MLR MLR
comp=Z,2µm,20.0s
WLF Walferdange 146.67 355*e*PKPbc **PKPdf** **23 49 12.8 -1.1**
WLF Walferdange 146.67 355*e*PKPdf **PKPdf** **23 49 12.9 -1.1**
WLF LR LR
comp=Z,2µm,20.0s
BZS Buzias 146.69 335⇓*iP* **PKPdf** **23 49 13.2 -0.9**
CSS Prodhromos 146.69 310 PFAKE 23 49 30.0 +13
CSS LR LR
comp=Z,1µm,20.0s
PKS2 Kecel 146.86 338*e* **PKPab** **23 49 18.6 +1.1**
SHEL Horse Pasture 146.88 166 PFAKE 23 49 30.0 +12
SHEL LR LR
comp=Z,1µm,19.0s
PKS9 Tamasi 147.10 340*e* **PKPab** **23 49 18.7 +0.3**
MOA Molln 147.13 345⇑*iP* **PKPbc** **23 49 15.7 +0.9**
comp=Z,81nm,1.7s,SNR=19
MOA Molln 147.13 345⇑*iP* **PKPdf** **23 49 15.7 +0.9**
LANF Langenberg 147.20 353 PKP2 **PKPab** **23 49 18.5 -0.2**
LANF Langenberg 147.20 353 PKP **PKPab** **23 49 18.5 -0.2**
LANF Langenberg 147.20 353 PKP **PKPab** **23 49 18.5 -0.2**
STU Stuttgart 147.23 352*e*PKP2 **PKPbc** **23 49 17.8 +0.7**
STU Stuttgart 147.23 352*e*PKPbc **PKPbc** **23 49 16.4 -0.8**
STU Stuttgart 147.23 352*e*PKPab **PKPbc** **23 49 17.8 +0.7**
ISP Isparta 147.27 316 PFAKE 23 49 30.0 +10
ISP LR LR
comp=Z,916nm,19.0s
PKSM Moragy 147.31 339⇓*iP* **PKPab** **23 49 19.5 +0.3**
PKSM Moragy 147.31 339*e*PKPdf **PKPdf** **23 49 12.0 -3.1**
ARSA Arzberg 147.35 343⇓*i*PKPbc **PKPdf** **23 49 16.3 +1.1**
comp=Z,40nm,1.7s,SNR=10
ARSA Arzberg 147.35 343⇓*iP* **PKPdf** **23 49 16.3 +1.1**
CMLA Cha da Macela 147.53 44 PFAKE 23 49 30.0 +10
CMLA LR LR
comp=Z,1µm,21.0s
MPEP Malo Peshtene 147.53 330*eP* **PKPbc** **23 49 18.9 +0.7**
RJOB Jochberg 147.58 347*e*PKPbc **PKPbc** **23 49 17.1 -1.1**
BEHE Becsehely 147.69 341*e*PKPdf **PKPbc** **23 49 19.3 +0.8**
BFO Black Forest 147.78 352*e*PKiKP **PKPdf** **23 49 15.9 0.0**
BFO MLR MLR
comp=Z,1µm,19.0s
BFO Black Forest 147.78 352*e*PKPbc **PKPbc** **23 49 17.4 -1.3**
BFO Black Forest 147.78 352*e*PKPdf **PKPdf** **23 49 15.8 0.0**
BFO LR LR
comp=Z,1µm,19.0s
SPAK Spaichingen-Ko 147.94 352 PKP **PKPbc** **23 49 19.1 -0.1**
SOKA Soboth 148.01 343⇑*i*PKPbc **PKPdf** **23 49 17.4 +1.0**
comp=Z,35nm,1.3s
SOKA Soboth 148.01 343⇑*iP* **PKPdf** **23 49 17.4 +1.0**
ECH Echery 148.02 354*e*PKiKP **PKPdf** **23 49 16.0 -0.3**
ECH 23 49 19.1
ECH MLR MLR
comp=Z,1µm,21.0s
ECH Echery 148.02 354*e*PKPdf **PKPdf** **23 49 16.0 -0.3**
ECH PKP **PKPbc** **23 49 19.1 -0.3**
ECH LR LR
comp=Z,1µm,21.0s
THEF They Montfort 148.12 355 PKP2 **PKPbc** **23 49 19.5 -0.1**
THEF They Montfort 148.12 355 PKP **PKPbc** **23 49 19.5 -0.1**
THEF They Montfort 148.12 355 PKP **PKPbc** **23 49 19.5 -0.1**
RDO Rodhopi 148.22 326 P **PKPbc** **23 49 16.3 -0.5**
RETA Reutte 148.22 349⇑*i*PKPbc **PKPdf** **23 49 18.3 +1.5**
comp=Z,34nm,1.3s,SNR=8.1
RETA Reutte 148.22 349⇑*iP* **PKPdf** **23 49 18.3 +1.5**
FELD Feldberg im Sc 148.26 353 PKP **PKPbc** **23 49 18.7 -1.5**
WTTA Wattenberg 148.27 348⇑*i*PKP2 **PKPbc** **23 49 18.7 -1.6**
WTTA Wattenberg 148.27 348⇑*ip*PKPdf **PKPbc** **23 49 18.7 -1.6**
comp=Z,46nm,1.0s,SNR=9.3
WTTA Wattenberg 148.27 348⇑*iP* **PKPbc** **23 49 18.7 -1.6**
RZN Rozhen 148.28 327*eP* **PKPbc** **23 49 19.5 -1.0**
MOTA Moosalm 148.30 349⇑*i*PKiKP **PKPdf** **23 49 16.8 -0.2**
MOTA Moosalm 148.30 349⇑*i*PKPdf **PKPdf** **23 49 16.8 -0.2**
comp=Z,21nm,0.9s,SNR=8.6
MOTA Moosalm 148.30 349⇑*iP* **PKPdf** **23 49 16.8 -0.2**
VTS Vitosha 148.37 330 P **PKPdf** **23 49 16.7 -0.5**
VTS Vitosha 148.37 330⇑*iP* **PKPdf** **23 49 17.1 -0.1**
VTS Vitosha 148.37 330*eP* **PKPdf** **23 49 19.4 +0.7**
MOF Molkenrain 148.38 354 PKP **PKPbc** **23 49 21.9 +1.5**
MYKA Terra Mystica 148.42 345⇑*ip*PKPdf **PKPbc** **23 49 19.1 -1.5**
comp=Z,44nm,1.6s
MYKA Terra Mystica 148.42 345⇑*iP* **PKPbc** **23 49 19.1 -1.5**
DAVA Damuels 148.57 350⇑*i*sPKPdf sPKPdf 23 49 20.3 -3.2
comp=Z,69nm,1.6s,SNR=12
DAVA Damuels 148.57 350⇑*iP* sPKPdf 23 49 20.3 -3.2
ABTA Abfaltersbach 148.57 347 *i* PKPbc **PKPbc** **23 49 19.4 -1.6**
comp=Z,43nm,1.3s,SNR=6.4
ABTA Abfaltersbach 148.57 347 *i* P **PKPbc** **23 49 19.4 -1.6**
DIVS Divibare 148.59 335 P **PKPdf** **23 49 17.5 +0.1**
FETA Feichten 148.68 349⇑*i*PKPbc **PKPbc** **23 49 20.0 -1.4**
comp=Z,39nm,1.5s,SNR=12
FETA Feichten 148.68 349⇑*iP* **PKPbc** **23 49 19.9 -1.4**
BBS Basel-Blauen 148.72 353 PKP2 **PKPbc** **23 49 20.6 -0.7**
BBS Basel-Blauen 148.72 353 PKP **PKPbc** **23 49 20.6 -0.7**
MMB Musomiste 148.86 328*eP* **PKPbc** **23 49 21.3 -0.5**
KAVA Kavala 148.88 326 P **PKPdf** **23 49 17.3 -0.6**
LOMF Lomont 148.91 354 PKP **PKPbc** **23 49 22.6 +0.8**
VOY Vojsko 148.91 344*e*PKP **PKPbc** **23 49 21.8 -0.1**
VOY *e* 23 49 26.7
NVR Nevrokopi 148.96 328 P **PKPdf** **23 49 19.6 +1.5**
KKB Krupnik 148.97 329*eP* **PKPbc** **23 49 21.3 -0.8**
TRI Trieste 149.25 344*e*PKP2 **PKPbc** **23 49 23.8 +1.2**
TRI Trieste 149.25 344*e*PKPab **PKPbc** **23 49 23.8 +1.2**
TUE Stuetta 149.45 350*e*PKPdf **PKPdf** **23 49 19.5 +0.6**
TUE *e*PKPdf **PKPbc** **23 49 21.9 -1.4**
TUE LR LR
comp=Z,2µm,21.0s
KNT Kendrikon 149.59 328 P **PKPbc** **23 49 22.7 -0.9**
PLG Polygyros 149.89 327 P **PKPbc** **23 49 25.5 +1.1**
PHP Peshkopia 150.36 332 P **PKPbc** **23 49 26.5 +1.0**
AGO Saint Agoulin 150.43 359 PKP **PKPbc** **23 49 27.3 +1.8**
LIT Litokhoron 150.59 327 P **PKPbc** **23 49 23.5 -2.6**
FNA Florina 150.63 330 P **PKPbc** **23 49 24.7 -1.5**
PYM Petit Puy Mans 150.73 359 PKP **PKPbc** **23 49 26.2 -0.1**
TIR Tirane 150.89 332 PFAKE 23 49 30.0 +3.3
TIR LR LR
comp=Z,2µm,22.0s
NEST Nestorio 151.07 330 P **PKPbc** **23 49 25.2 -2.1**

GRN	**Grenoble**	**151.10**	**355**	PKP	**PKPbc**	**23 49 29.2**	**+2.0**
GDM	**Grand'Maison**	**151.10**	**354**	PKP	**PKPbc**	**23 49 29.3**	**+2.0**
SSB	**Saint Sauveur**	**151.15**	**357**	*e*PKIKP	**PKPdf**	**23 49 21.5**	**+0.1**
SSB				MLR	MLR		
	comp=Z,1μm,21.0s						
SSB	**Saint Sauveur**	**151.15**	**357**	*e*PKPdf	**PKPdf**	**23 49 21.5**	**+0.1**
SSB				LR	LR		
	comp=Z,1μm,21.0s						
BNI	**Bardonecchia**	**151.20**	**354**	*e*PKIKP	**PKPbc**	**23 49 28.5**	**+1.0**
BNI				MLR	MLR		
	comp=Z,2μm,22.0s						
BNI	**Bardonecchia**	**151.20**	**354**	*e*PKPdf	**PKPbc**	**23 49 28.5**	**+1.0**
BNI				LR	LR		
	comp=Z,2μm,22.0s						
LBL	**Lubilhac**	**151.24**	**359**	PKP	**PKPbc**	**23 49 28.7**	**+1.2**
AGG	**Agios Georgios**	**151.46**	**326**	P	**PKPbc**	**23 49 29.5**	**+1.3**
VLC	**Villacollemand**	**151.50**	**348**	PFAKE		23 49 30.0	+1.9
VLC				LR	LR		
	comp=Z,1μm,21.0s						
MAKR	**Makrakomi, Fth**	**151.57**	**326**	P	**PKPdf**	**23 49 23.8**	**+1.6**
SURF	**Saint Ours**	**151.75**	**353**	PKP	**PKPbc**	**23 49 29.8**	**+0.9**
JAN	**Janina**	**151.75**	**329**	P	**PKPbc**	**23 49 27.6**	**-1.2**
SAOF	**Saorge**	**152.14**	**352**	PKP	**PKPbc**	**23 49 31.3**	**+1.7**
AUTN	**L'Aution**	**152.15**	**352**	PKP	**PKPbc**	**23 49 33.7**	**+3.9**
TOUF	**Mont Tournerai**	**152.16**	**352**	PKP	**PKPbc**	**23 49 30.7**	**+0.9**
GUR	**Goura**	**152.23**	**324**	P	**PKPbc**	**23 49 28.1**	**-1.9**
AQU	**L'Aquila**	**152.44**	**342**	PFAKE		23 49 30.0	-0.3
AQU				LR	LR		
	comp=Z,2μm,19.0s						
CALN	**Calern**	**152.46**	**353**	PKP	**PKPbc**	**23 49 31.7**	**+1.3**
CUC	**Castrocucco**	**153.72**	**336**	PFAKE		23 49 40.0	-5.9
CUC				LR	LR		
	comp=Z,762nm,19.0s						
TIP	**Timpagrande**	**154.03**	**334**	PFAKE		23 49 40.0	+6.1
TIP				LR	LR		
	comp=Z,2μm,20.0s						
MTE	**Manteigas**	**154.59**	**18**	PFAKE		23 49 40.0	+4.9
MTE				LR	LR		
	comp=Z,3μm,21.0s						
SACV	**Santiago Islan**	**155.00**	**90**	PFAKE		23 49 40.0	+3.5
SACV				LR	LR		
	comp=Z,1μm,22.0s						
CEL	**Celeste**	**155.17**	**334**	PFAKE		23 49 40.0	-12
CEL				LR	LR		
	comp=Z,1μm,20.0s						
ESDC	**Sonseca Array**	**156.17**	**12**	PKPbc	PKPdf	23 49 38.8	+10
ESDC	**Sonseca Array**	**156.17**	**12**	PKPbc	PKPdf	23 49 38.8	+10
	comp=Z,0.6nm,0.7s,baz=8,2,slow=2.4,SNR=3.3						
VSL	**Villasalto**	**156.18**	**346**	PFAKE		23 49 40.0	+11
VSL				LR	LR		
	comp=Z,1μm,20.0s						
PAB	**San Pablo**	**156.21**	**13**	PFAKE		23 49 40.0	+11
PAB				LR	LR		
	comp=Z,2μm,21.0s						
WDD	**Wield Dalam**	**157.77**	**333**	PFAKE		23 49 40.0	+9.2
WDD				LR	LR		
	comp=Z,2μm,22.0s						
RTC	**Rabat Centre**	**160.63**	**24**	PFAKE		23 49 40.0	+5.8
RTC				LR	LR		
	comp=Z,1μm,22.0s						
DBIC	**Dimbokro**	**168.05**	**143**	PKP	**PKPdf**	**23 49 39.4**	**-2.0**
DBIC	**Dimbokro**	**168.05**	**143**	PKP	**PKPdf**	**23 49 39.4**	**-2.0**
	comp=Z,2.4nm,0.8s,baz=182,slow=7.4,SNR=3.3						
TAM	**Tamanrasset**	**172.96**	**335**	*e*PKIKP	**PKPdf**	**23 49 42.8**	**-1.2**
TAM				MLR	MLR		
	comp=Z,1μm,20.0s						
TAM	**Tamanrasset**	**172.96**	**335**	*e*PKPdf	**PKPdf**	**23 49 42.8**	**-1.2**
TAM				LR	LR		
	comp=Z,1μm,20.0s						
TOA0	**Torodi Ar. Sit**	**176.71**	**169**	*e*PKPdf	**PKPdf**	**23 49 44.4**	**-0.7**
TOA0				*e*PKPab	**PKPab**	**23 51 27.7**	**+0.7**
TORD	**Torodi Ar. Bea**	**176.71**	**169**	PKP	**PKPdf**	**23 49 44.1**	**-1.0**
TORD				PP	**PP**	**23 55 21.9**	**+3.5**
TORD	**Torodi Ar. Bea**	**176.71**	**169**	PKP	**PKPdf**	**23 49 44.1**	**-1.0**
	comp=Z,2.8nm,1.0s,baz=326,slow=1.2,SNR=11						
TORD				PP	**PP**	**23 55 21.9**	**+3.5**
	comp=Z,2.7nm,1.3s,baz=180,slow=5.9,SNR=5.5						

CSEM ***14*** *23:35:26.7, 42°.27N×13°.48E, h10km, MD2.4/15, After ROM*

ROM 14 23:35:26.7±0.1, 42°.27N×13°.48E, h10km, Md2.4/15, MI1.8/11, Error ellipse: s-maj=0.9km s-min=0.7km az=50.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.08**	**94**	Pg	Pg	23 35 29.7	+0.6
FAGN				Sg	Sg	23 35 31.2	+0.4
FAGN	**Fagnano**	**0.08**	**94**	Pg	Pg	23 35 29.7	+0.6
FAGN				Sg	Sg	23 35 31.2	+0.4
AQU	**L'Aquila**	**0.10**	**325**	Pg	Pg	23 35 29.2	-0.2
AQU				Sg	Sg	23 35 31.8	+0.5
AQU	**L'Aquila**	**0.10**	**325**	Pg	Pg	23 35 29.2	-0.2
AQU				Sg	Sg	23 35 31.8	+0.5
PTQR	**Pietraquaria**	**0.26**	**193**	Pg	Pg	23 35 32.8	+0.8
PTQR				Sg	Sg	23 35 36.8	+1.2
	22nm,0.3s						
PTQR	**Pietraquaria**	**0.26**	**193**	Pg	Pg	23 35 32.8	+0.8
PTQR				Sg	Sg	23 35 36.8	+1.2
	22nm,0.3s						
CAMP	**Campotosto**	**0.27**	**349**	Pg	Pb	23 35 33.2	-0.7
CAMP				Sg	Sg	23 35 36.9	+0.7
	48nm,0.5s						
CAMP	**Campotosto**	**0.27**	**349**	Pg	Pb	23 35 33.2	-0.7
CAMP				Sg	Sg	23 35 36.9	+0.7
	48nm,0.5s						
FIAM	**Fiamignano**	**0.27**	**269**	Pg	Pg	23 35 32.9	+0.6
FIAM				Sg	Sg	23 35 37.1	+1.0
	106nm,0.3s						
FIAM	**Fiamignano**	**0.27**	**269**	Pg	Pg	23 35 32.9	+0.6
FIAM				Sg	Sg	23 35 37.1	+1.0
	106nm,0.3s						
VCEL	**Villa Celiera**	**0.29**	**65**	Pg	Pg	23 35 33.5	+0.7
VCEL				Sg	Sg	23 35 37.8	+0.9
	204nm,0.3s						
VCEL	**Villa Celiera**	**0.29**	**65**	Pg	Pg	23 35 33.5	+0.7
VCEL				Sg	Sg	23 35 37.8	+0.9
	204nm,0.3s						
TERO	**Teramo**	**0.36**	**15**	Pg	Pg	23 35 34.2	+0.2
TERO				Sg	Sg	23 35 39.9	+1.0
	88nm,0.5s						
TERO	**Teramo**	**0.36**	**15**	Pg	Pg	23 35 34.2	+0.2
TERO				Sg	Sg	23 35 39.9	+1.0
	88nm,0.5s						
INTR	**Introdacqua**	**0.41**	**129**	Pg	Pg	23 35 35.3	+0.4
INTR				Sg	Sb	23 35 41.8	-0.8
	130nm,0.3s						
INTR	**Introdacqua**	**0.41**	**129**	Pg	Pg	23 35 35.3	+0.4
INTR				Sg	Sb	23 35 41.8	-0.8
	130nm,0.3s						
VVLD	**Villa Vallelon**	**0.41**	**165**	Pg	Pg	23 35 35.4	+0.4
VVLD				Sg	Sb	23 35 41.8	-1.0
	43nm,0.2s						
VVLD	**Villa Vallelon**	**0.41**	**165**	Pg	Pg	23 35 35.4	+0.4
VVLD				Sg	Sb	23 35 41.8	-1.0
	43nm,0.2s						
LNSS	**Leonessa**	**0.46**	**316**	Pg	Pb	23 35 36.7	-0.5
LNSS				Sg	Sb	23 35 43.9	-0.3
	60nm,0.5s						
LNSS	**Leonessa**	**0.46**	**316**	Pg	Pb	23 35 36.7	-0.5
LNSS				Sg	Sb	23 35 43.9	-0.3
	60nm,0.5s						
CERT	**Cerreto**	**0.49**	**229**	Pg	Pg	23 35 36.6	+0.2
CERT				Sg	Sb	23 35 44.0	-0.9
	67nm,0.4s						
CERT	**Cerreto**	**0.49**	**229**	Pg	Pg	23 35 36.6	+0.2
CERT				Sg	Sb	23 35 44.0	-0.9
	67nm,0.4s						
LPEL	**Lama dei Pelig**	**0.57**	**113**	Pg	Pg	23 35 38.0	+0.1
LPEL				Sg	Sb	23 35 46.6	-0.6
	133nm,0.6s						
LPEL	**Lama dei Pelig**	**0.57**	**113**	Pg	Pg	23 35 38.0	+0.1
LPEL				Sg	Sb	23 35 46.6	-0.6
	133nm,0.6s						
POFI	**Posta Fibreno**	**0.58**	**163**	Pg	Pg	23 35 38.4	+0.3
POFI	**Posta Fibreno**	**0.58**	**163**	Pg	Pg	23 35 38.4	+0.3
MNS	**Montasola**	**0.60**	**281**	Pg	Pg	23 35 38.5	0.0
	26nm,0.8s						
MNS	**Montasola**	**0.60**	**281**	Pg	Pg	23 35 38.5	0.0
	26nm,0.8s						
SDI	**San Donato**	**0.61**	**156**	Pg	Pg	23 35 39.0	+0.3
	31nm,0.3s						
SDI	**San Donato**	**0.61**	**156**	Pg	Pg	23 35 39.0	+0.3
	31nm,0.3s						
NRCA	**Norcia**	**0.62**	**334**	Pg	Pg	23 35 39.0	+0.1
NRCA				Sg	Sb	23 35 48.3	-0.5
	25nm,0.1s						
NRCA	**Norcia**	**0.62**	**334**	Pg	Pg	23 35 39.0	+0.1
NRCA				Sg	Sb	23 35 48.3	-0.5
	25nm,0.1s						

CSEM ***14*** *23:35:35.1±1.2, 37°.23N×34°.88E, h18km±8km, MD2.6, Error ellipse: s-maj=53.9km s-min=12.4km az=142.0*
DDA ***14*** *23:35:45.8, 37°.66N×35°.67E, h7km, MD2.7*
ISCJB ***14*** *23:35:47.6±0.8, 37°.45N±0°.09×35°.70E±0°.06, h10km±5km, Error ellipse: s-maj=15.9km s-min=6.4km az=163.6*
ISK ***14*** *23:35:47.7, 37°.47N×35°.70E, h12km, MD2.6*
ISC 14 23:35:45.8±1.5, 37°.63N±0°.08×35°.64E±0°.05, h13km±9km, n13, σ0s71/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.21**	**135**	PG	**Pg**	**23 35 50.7**	**+0.3**
KOZT				*e*SG	**Sg**	**23 35 53.1**	**-0.4**
KOZT	**Kozan**	**0.21**	**135**	*i* Pg	**Pg**	**23 35 50.7**	**+0.3**
ANDN	**Andirin**	**0.56**	**95**	*i* P	**Pb**	**23 35 57.6**	**0.0**
ANDN				*i* S	**Sb**	**23 36 05.3**	**-0.3**
ANDN	**Andirin**	**0.56**	**95**	*i* P	**Pb**	**23 35 57.6**	**0.0**
GULE	**Gulek**	**0.77**	**244**	*i* P	**Pn**	**23 36 02.1**	**-0.5**
GULE				*i* S	**Sb**	**23 36 12.8**	**+1.1**
AYKD	**Aykdinkavak**	**0.95**	**103**	*i* P	**Pb**	**23 36 03.1**	**-1.1**
AYKD				*i* S	**Sn**	**23 36 18.3**	**-0.1**
AYKD	**Aykdinkavak**	**0.95**	**103**	*i* P	**Pb**	**23 36 03.1**	**-1.1**
SARI	**SarD1z-Kayseri**	**0.99**	**38**	*e*PN	Pn	23 36 09.2	+3.6
SARI				*e*SN	Sn	23 36 24.6	+4.9
SARI	**SarD1z-Kayseri**	**0.99**	**38**	*e*Pn	Pn	23 36 09.3	+3.6
KMRS	**Kahramanmaras**	**1.01**	**97**	*e*PG	**Pn**	**23 36 06.5**	**+0.7**
KMRS	**Kahramanmaras**	**1.01**	**97**	*e*Pg	**Pn**	**23 36 06.5**	**+0.7**
DARE	**Darende-Malaty**	**1.73**	**56**	*e*PN	**Pg**	**23 36 19.2**	**+0.1**
DARE	**Darende-Malaty**	**1.73**	**56**	*e*Pn	**Pg**	**23 36 19.2**	**+0.1**

IDC ***14*** *23:41:45.5±1.3, 33°.25N×90°.94E, h0km, mb3.6/3, mb1 3.6/6, mb1mx3.4/27, mbtmp3.4/6, ML3.1/3, Error ellipse: s-maj=42.6km s-min=25.4km az=69.0*
ISCJB ***14*** *23:41:47.9±0.8, 33°.32N±0°.08×90°.9E±0°.2, h33km, mb3.5/3, Error ellipse: s-maj=26.3km s-min=11.1km az=169.0*
ISC 14 23:41:49.9±0.9, 33°.3N±0°.1×90°.9E±0°.2, h35km, n7, σ1s36/7, mb3.6/3, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.59**	**177**	Pn	**Pn**	**23 42 43.0**	**-0.4**
LSA				Sn	Sn	23 43 31.8	+7.0
LSA				smax	smax		
	comp=N,40nm,1.0s						
LSA				smax	smax		
	comp=E,90nm,1.0s						
MKAR	**Makanchi Array**	**15.01**	**337**	Pn	**Pn**	**23 45 17.5**	**-1.7**
	comp=E,0.1nm,0.3s,baz=149,slow=13,SNR=4.2						
CMAR	**Chiang Mai Arr**	**16.43**	**152**	Pn	**Pn**	**23 45 36.5**	**-1.2**
	comp=E,0.1nm,0.3s,baz=331,slow=11,SNR=8.5						
SONM	**Songino Array**	**18.63**	**34**	P	**Pn**	**23 46 05.3**	**+0.3**
	comp=E,0.0nm,0.3s,baz=219,slow=11,SNR=2.7						
ZALV	**Zalesovo Beam**	**21.10**	**350**	P	**P**	**23 46 31.2**	**0.0**
	comp=E,1.0nm,0.4s,baz=172,slow=11,SNR=11						
ASAR	**Alice Springs**	**69.89**	**138**	P	**P**	**23 52 58.4**	**+1.0**
	comp=E,0.2nm,0.3s,baz=319,slow=6.9,SNR=4.3						
TORD	**Torodi Ar. Bea**	**82.28**	**281**	P	**P**	**23 54 09.4**	**+1.3**
	comp=E,0.8nm,1.1s,baz=54,slow=4.3,SNR=2.8						

CSEM ***14*** *23:47:07.0, 42°.35N×13°.48E, h10km, MD2.1/6, After ROM*
ROM 14 23:47:07.0±0.1, 42°.35N×13°.48E, h10km±1km, Md2.1/6, MI1.5/5, Error ellipse: s-maj=1.5km s-min=1.4km az=3.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**275**	Pg	Pg	23 47 09.6	+0.5
AQU				Sg	Sg	23 47 11.2	+0.6
	334nm,0.3s						
AQU	**L'Aquila**	**0.06**	**275**	Pg	Pg	23 47 09.6	+0.5
AQU				Sg	Sg	23 47 11.2	+0.6
	334nm,0.3s						
FAGN	**Fagnano**	**0.12**	**136**	Pg	Pg	23 47 10.1	+0.2
FAGN				Sg	Sg	23 47 12.4	+0.5
	240nm,0.4s						
FAGN	**Fagnano**	**0.12**	**136**	Pg	Pg	23 47 10.1	+0.2
FAGN				Sg	Sg	23 47 12.4	+0.5
	240nm,0.4s						
VCEL	**Villa Celiera**	**0.27**	**80**	Pg	Pb	23 47 13.5	-0.7
VCEL				Sg	Sb	23 47 18.4	-0.7
	66nm,0.4s						
VCEL	**Villa Celiera**	**0.27**	**80**	Pg	Pb	23 47 13.5	-0.7
VCEL				Sg	Sb	23 47 18.4	-0.7
	66nm,0.4s						
FIAM	**Fiamignano**	**0.28**	**253**	Pg	Pg	23 47 13.5	+0.7
FIAM				Sg	Sb	23 47 18.3	-0.9
	30nm,0.7s						
FIAM	**Fiamignano**	**0.28**	**253**	Pg	Pg	23 47 13.5	+0.7
FIAM				Sg	Sb	23 47 18.3	-0.9
	30nm,0.7s						
TERO	**Teramo**	**0.29**	**19**	Pg	Pg	23 47 13.5	+0.6
TERO				Sg	Sg	23 47 17.8	+0.9
	29nm,0.4s						
TERO	**Teramo**	**0.29**	**19**	Pg	Pg	23 47 13.5	+0.6
TERO				Sg	Sg	23 47 17.8	+0.9
	29nm,0.4s						
PTQR	**Pietraquaria**	**0.33**	**190**	Pg	Pg	23 47 14.2	+0.5
PTQR				Sg	Sg	23 47 19.2	+0.9
	5.0nm,0.3s						
PTQR	**Pietraquaria**	**0.33**	**190**	Pg	Pg	23 47 14.2	+0.5
PTQR				Sg	Sg	23 47 19.2	+0.9
	5.0nm,0.3s						
INTR	**Introdacqua**	**0.46**	**137**	Pg	Pg	23 47 16.4	+0.2
INTR				Sg	Sb	23 47 24.2	-0.2
INTR	**Introdacqua**	**0.46**	**137**	Pg	Pg	23 47 16.4	+0.2
INTR				Sg	Sb	23 47 24.2	-0.2
SDI	**San Donato**	**0.69**	**159**	Pg	Pg	23 47 20.3	-0.1
	3.0nm,0.2s						
SDI	**San Donato**	**0.69**	**159**	Pg	Pg	23 47 20.3	-0.1
	3.0nm,0.2s						

DJA ***14*** *23:54:43.8±0.6, 27°.8°×13°.0E±1°.0, h10km, M5.1/10, mB5.6/1, mb5.1/10, Mw(mB)5.1/1*
ISCJB ***14*** *23:54:43.6±1.0, 27°.07N±0°.02×129°.94E±0°.02, h3km±6km, mb4.8/111, MS5.1/30, Error ellipse: s-maj=4.0km s-min=3.2km az=154.6*
BJI ***14*** *23:54:43.2, 26°.99N×130°.14E, h18km, mB5.0/31, mb4.9/42, Ms5.0/41, Ms7 4.8/38*
IDC ***14*** *23:54:44.1±0.4, 27°.09N×130°.01E, h0km, mb4.6/41, mb1 4.7/46, mb1mx4.6/52, mbtmp4.6/46, ML3.9/5, MS5.0/9, Ms1 5.0/9, ms1mx4.2/38, Error ellipse: s-maj=14.2km s-min=9.2km az=72.0*
JMA ***14*** *23:54:46.1±0.1, 27°.10N×130°.02E, h73km, M4.8*
JMA Felt I J1.
TEH ***14*** *23:54:47.0, 27°.10N×129°.86E, h10km, ML5.0*
MOS ***14*** *23:54:47.9±1.3, 27°.14N×130°.03E, h33km, mb5.1/66, MS5.2/10, Error ellipse: s-maj=10.6km s-min=5.0km az=110.1*
NEIC ***14*** *23:54:49.5±0.2, 27°.07N×129°.82E, h35km, mb5.0/35, MW4.8(NIED), Error ellipse: s-maj=6.4km s-min=5.3km az=136.0*
NEIC Felt at Chatan, Okinawa. Recorded [1 JMA] on Amami-oshima and Tokuno-shima.
BGS ***14*** *23:54:57.4±2.5, 26°.78N×126°.68E, h33km, mb4.8*
NIED ***14*** *23:55:00, 27°.10N×130°.00E, h5km, Mw4.8 Best double couple: Mo1.79000×10^16 NP1:φs=244.00000°, δ75.00000°, λ121.00000°. NP2:φs=358.00000°, δ34.00000°, λ28.00000°.*
ISC 14 23:54:47.2±0.4, 27°.09N±0°.03×129°.95E±0°.04, h18km±1km, h18km:pP-P, n444, σ1s35/476, mb4.9/110, MS5.2/30, 51C-39D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.12**	**308**	P	**Pn**	**23 55 07.0**	**-1.0**
JTK				S	**Sg**	**23 55 23.5**	**-0.2**
JZK	**Kikaishima**	**1.22**	**1**	P	**Pn**	**23 55 07.9**	**-1.4**
JZK				*e*S	**Sb**	**23 55 24.7**	**-0.4**
JAMN	**Amaminishikomi**	**1.34**	**329**	P	**Pn**	**23 55 09.3**	**-1.6**
JAMN				*e*S	**Sn**	**23 55 26.6**	**-1.7**
JAM	**Amami Oshima**	**1.35**	**347**	P	**Pn**	**23 55 09.6**	**-1.5**
JAM				*e*S	**Sn**	**23 55 26.3**	**-2.3**
JOW	**Kunigami**	**1.52**	**261**	⇑ *i* Pn	**Pn**	**23 55 13.0**	**-0.3**
JOW				Sn	**Sn**	**23 55 31.8**	**-0.9**
JOW	**Kunigami**	**1.52**	**261**	P	**Pn**	**23 55 13.1**	**-0.3**
JOW				*e*S	**Sn**	**23 55 32.7**	**0.0**
JMZ	**Minamidaito 2**	**1.71**	**138**	P	**Pn**	**23 55 13.8**	**-2.2**
JMZ				*e*S	**Sn**	**23 55 33.5**	**-3.8**
JIH	**Iheya**	**1.77**	**269**	P	**Pn**	**23 55 16.6**	**-0.3**
JIH				*e*S	**Sn**	**23 55 37.5**	**-1.4**
JJT2	**Tamagusuku 2**	**2.19**	**245**	P	**Pn**	**23 55 22.0**	**-0.6**
JJT2				*e*S	**Sn**	**23 55 49.1**	**-0.1**
JAGN	**Aguni-jima**	**2.47**	**259**	P	**Pn**	**23 55 26.0**	**-0.5**
JAGN				S	**Sn**	**23 55 55.6**	**-0.6**
JNN	**Nakanoshima**	**2.74**	**359**	P	**Pn**	**23 55 28.7**	**-1.6**
JNN				*e*S	**Sn**	**23 56 00.0**	**-3.0**
JKE	**Kume jima 2**	**2.93**	**256**	P	**Pn**	**23 55 31.8**	**-1.0**
JKE				*e*S	**Sn**	**23 56 05.5**	**-2.1**
JKC	**Kuchinoerabu**	**3.37**	**4**	P	**Pn**	**23 55 37.3**	**-1.5**
JKC				S	**Sn**	**23 56 13.4**	**-4.9**
JNU	**Nakatsue**	**6.06**	**7**	*e*Pn	**Pn**	**23 56 15.8**	**-0.2**
JNU				Sn	**Sn**	**23 57 20.6**	**-4.4**
JNU	**Nakatsue**	**6.06**	**7**	Pn	**Pn**	**23 56 15.7**	**-0.3**
	13nm,0.3s,baz=194,slow=1.8,SNR=84						
JNU				Sn	**Sn**	**23 57 20.6**	**-4.4**
	7.5nm,0.3s,baz=18,slow=20,SNR=3.8						
TATO	**Taipei**	**7.90**	**256**	*e*Pn	**Pn**	**23 56 42.0**	**+0.9**
	57nm,0.8s						
NACB	**Ninganchiao**	**8.08**	**251**	*e*Pn	**Pn**	**23 56 40.8**	**-2.8**
NACB				*e*Sn	**Sn**	**23 58 11.1**	**-3.5**
YHNB	**Yeheng**	**8.09**	**255**	*e*Pn	**Pn**	**23 56 43.5**	**-0.3**
	179nm,0.8s						
YHNB				*e*Sn	**Sn**	**23 58 14.0**	**-0.9**
YULB	**Yu-li**	**8.65**	**247**	*e*Pn	Pn	23 56 46.8	-4.8
	33nm,0.4s						
SSLB	**Suanglung**	**8.77**	**250**	*e*Pn	**Pn**	**23 56 50.0**	**-3.1**
SSLB				*e*Sn	**Sn**	**23 58 28.1**	**-3.4**
TWG	**Pinlang**	**9.11**	**244**	*e*Pn	Pn	23 56 53.0	-4.7
TWG				*e*Sn	Sn	23 58 33.4	-6.4
TPUB	**Ta-pu**	**9.24**	**248**	*e*Pn	**Pn**	**23 56 56.9**	**-2.7**
TPUB				*e*Sn	**Sn**	**23 58 41.4**	**-1.9**
KSAR	**Wonju Array Be**	**10.47**	**351**	Pn	**Pn**	**23 57 17.3**	**+1.0**
KSRS	**Korea Array**	**10.47**	**351**	Pn	**Pn**	**23 57 17.3**	**+0.9**
	0.7nm,0.3s,baz=170,slow=14,SNR=14						
MJAR	**Matsushiro Arr**	**11.75**	**35**	Pn	**Pn**	**23 57 34.4**	**+0.5**
MJAR	**Matsushiro Arr**	**11.75**	**35**	Pn	**Pn**	**23 57 34.4**	**+0.5**
	0.3nm,0.3s,baz=214,slow=14,SNR=2.8						
WHN	**Wuhan**	**14.10**	**288**	P	**P**	**23 58 14.8**	**+1.2**
WHN				LR	LR		
	comp=N,7μm,10.3s						
WHN				LR	LR		
	comp=E,6μm,11.8s						
WHN				LR	LR		
	comp=Z,9μm,12.4s						
SNY	**Shenyang**	**15.60**	**342**	⇓ P	**Pn**	**23 58 27.0**	**+0.9**
SNY				pmax	pmax		
	comp=Z,33nm,1.3s						
SNY				pmax	pmax		
	comp=Z,560nm,12.0s						
SNY				LR	LR		
	comp=N,1μm,13.8s						
SNY				LR	LR		
	comp=E,3μm,13.5s						
SNY				LR	LR		
	comp=Z,3μm,11.9s						
CN2	**Changchun**	**17.07**	**349**	*e*P	**P**	**23 58 46.9**	**+0.4**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
CN2				pmax	pmax		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=N,3μm,13.0s						
CN2				LR	LR		
	comp=E,2μm,13.0s						
CN2				LR	LR		
	comp=Z,3μm,12.0s						
USRK	**Ussuriysk Arra**	**17.15**	**5**	P	**P**	**23 58 47.0**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=177,slow=8.6,SNR=15						
MDJ	**Mudanjiang**	**17.49**	**359**	P	**P**	**23 58 51.3**	**+0.1**
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,330nm,9.3s						
GUMO	**Guam**	**19.37**	**131**	LR	LR	00 05 05.8	
	comp=Z,910nm,19.3s,baz=87,slow=32						
ASAJ	**Asahikawa**	**19.82**	**28**	P	**P**	**23 59 16.8**	**+0.1**
ASAJ	**Asahikawa**	**19.82**	**28**	P	**P**	**23 59 16.8**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=211,slow=19,SNR=6.0						
HHC	**Hu-ho-hao-te**	**20.46**	**317**	*e*P	**P**	**23 59 23.3**	**-0.6**
HHC				PP	**PnPn**	**23 59 43.8**	**+2.6**
HHC				pmax	pmax		
	comp=Z,44nm,0.8s						
HHC				pmax	pmax		
	comp=Z,650nm,4.8s						
HHC				LR	LR		
	comp=N,2μm,13.9s						
HHC				LR	LR		
	comp=E,3μm,15.9s						
HHC				LR	LR		
	comp=Z,4μm,14.1s						
GYA	**Guiyang**	**20.80**	**274**	⇑ *i* P	**P**	**23 59 28.1**	**+0.4**
GYA				pmax	pmax		
	comp=Z,50nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,4.9s						
GYA				LR	LR		
	comp=N,580nm,16.1s						
GYA				LR	LR		
	comp=E,540nm,17.2s						
GYA				LR	LR		
	comp=Z,570nm,16.8s						
BTO	**Baotou**	**21.28**	**314**	*e*P	**P**	**23 59 31.3**	**-1.5**
HABR	**Khabarovsk**	**21.71**	**9**	*e*P	**P**	**23 59 36.0**	**-1.2**
HABR				*SP	**sP**	**23 59 44.4**	**-0.3**
HABR				*e*S	**S**	**00 03 36.3**	**-0.4**
HABR				*e*SS	Sn	00 03 45.7	-0.3
HABR				*e*SS	**SnSn**	**00 04 02.7**	**+1.2**
HABR				*e*SSS	SSS	00 04 15.7	
HABR						00 10 56.3	
HABR				pmax	pmax		
	comp=E,69nm,1.3s						
HABR				pmax	pm

comp=Z,260nm,3.9s
KMI LR LR
comp=N,2µm,12.5s
KMI LR LR
comp=E,2µm,12.9s
KMI LR LR
comp=Z,3µm,15.9s
KKM Kota Kinabalu 24.68 214 *e*P **P 00 00 10.0 +2.7**
comp=Z,25nm,0.9s
KKM Kota Kinabalu 24.68 214 P **P 00 00 06.3 -1.0**
comp=Z,43nm,1.2s
ULN Ulaanbaatar 27.39 325 *e*P **P 00 00 30.3 -1.3**
comp=Z,10nm,0.9s
ULN Ulaanbaatar 27.39 325 P **P 00 00 29.5 -2.1**
comp=Z,14nm,0.9s
MRSI Marisa 27.56 198 P **P 00 00 33.8 +0.6**
SONM Songino Array 27.70 325 P **P 00 00 33.1 -1.3**
SONM Songino Array 27.70 325 P **P 00 00 33.1 -1.3**
comp=Z,7.6nm,0.7s,baz=146,slow=10.0,SNR=35
GTA Gaotai 27.90 304 *e*P **P 00 00 35.1 -1.2**
GTA pmax pmax
comp=Z,16nm,0.6s
GTA pmax pmax
comp=Z,210nm,6.2s
GTA LR LR
comp=N,2µm,15.7s
GTA LR LR
comp=E,2µm,12.8s
GTA LR LR
comp=Z,3µm,13.3s
CMMT Chiang Mai 29.65 260 P **P 00 00 53.6 +1.7**
comp=Z,30nm,1.0s
CHTO Chiang Mai 29.65 260 *e*P **P 00 00 53.1 +1.2**
CHTO pmax pmax
comp=Z,17nm,0.7s
CHTO Chiang Mai 29.65 260 *e*P **P 00 00 53.1 +1.2**
comp=Z,17nm,0.7s
CHTO Chiang Mai 29.65 260 P **P 00 00 53.1 +1.2**
comp=Z,33nm,1.0s
CMAR Chiang Mai Arr 29.79 260 P **P 00 00 54.5 +1.3**
CMAR PcP **PcP 00 03 56.8 +0.1**
CMAR Chiang Mai Arr 29.79 260 P **P 00 00 54.5 +1.3**
comp=Z,5.6nm,0.6s,baz=56,slow=7.3,SNR=42
CMAR PcP **PcP 00 03 56.8 +0.1**
comp=Z,1.1nm,0.8s,baz=25,slow=1.0,SNR=6.1
BNDI Bandanaira 31.43 180 P **P 00 01 07.8 +0.3**
BKSI Bulukumba 33.59 198 P **P 00 01 25.6 -0.9**
comp=Z,8.0nm,1.1s
BBKI Banjar Baru 33.70 208 P **P 00 01 29.1 +1.7**
YAK Yakutsk 34.94 360 *e*P **P 00 01 37.2 -0.5**
YAK *e**PP pP 00 01 52.3 +9.1
YAK *e* 00 02 55.7
YAK *e* 00 04 09.3
YAK *e*S S 00 07 01.8 -6.4
YAK *e* 00 09 28.9
YAK *e*SS **SS 00 09 46.1 +6.2**
YAK pmax pmax
comp=Z,23nm,0.9s
YAK pmax pmax
comp=N,12nm,1.3s
YAK pmax pmax
comp=Z,115nm,4.4s
YAK pmax pmax
comp=N,128nm,4.4s
YAK pmax pmax
comp=E,57nm,3.0s
YAK smax smax
comp=N,40nm,2.1s
YAK smax smax
comp=E,91nm,2.5s
KULM Kulim 35.34 237 *e*P **P 00 01 43.5 +1.8**
comp=E,46nm,1.7s
TAPN Taplejung 37.43 280 *e*P **P 00 02 01.3 +1.5**
comp=E,118nm,1.3s
ODAN Odare 37.80 280 *e*P **P 00 02 03.0 +0.1**
comp=E,154nm,0.7s
WMQ Urumqi 37.80 307 P **P 00 02 03.0 +0.5**
WMQ sP **sP 00 02 10.0 -0.3**
WMQ PP **PnPn 00 03 32.0 +2.0**
WMQ PcP **PcP 00 04 20.0 +1.0**
WMQ S **S 00 07 53.0 +0.5**
WMQ ScP **ScP 00 08 06.0 +0.3**
WMQ SS **SnSn 00 10 28.0 -5.2**
WMQ ScS **ScS 00 12 13.0 -1.5**
WMQ pmax pmax
comp=Z,14nm,0.8s
WMQ pmax pmax
comp=Z,46nm,5.0s
WMQ LR LR
comp=N,2µm,15.0s
WMQ LR LR
comp=E,1µm,15.0s
WMQ LR LR
comp=Z,1µm,15.0s
RAMN Ramite 38.47 280 *e*P **P 00 02 08.8 +0.2**
comp=Z,44nm,0.7s
SEY Seymchan 38.76 16‖ *e*P **P 00 02 10.6 +0.4**
GUN Gumba 38.94 282 *e*P **P 00 02 13.8 +1.2**
comp=Z,48nm,0.6s
PKI Pulchoki 39.41 281 *e*P **P 00 02 16.8 +0.3**
comp=Z,89nm,0.6s
PKIN Phulchoki 39.42 281 *e*P **P 00 02 16.5 0.0**
comp=Z,30nm,0.5s
KKN Kakani 39.48 282 *e*P **P 00 02 17.1 +0.1**
comp=Z,96nm,0.8s
DMN Daman 39.67 281 *e*P **P 00 02 19.5 +0.9**
PMG Port Moresby 39.94 153 *e*P **P 00 02 19.9 -0.6**
PMG Port Moresby 39.94 153 P **P 00 02 18.6 -1.9**
comp=Z,26nm,0.9s
PMG Port Moresby 39.94 153 P **P 00 02 19.3 -1.2**
comp=Z,14nm,0.8s,baz=340,slow=7.0,SNR=8.0
DANN Dangsing 40.71 283 *e*P **P 00 02 27.9 +0.6**
comp=Z,195nm,0.9s
KOLN Koldanda 40.95 282 *e*P **P 00 02 29.6 +0.4**
comp=Z,44nm,0.7s
PYUN Piuthan 41.43 283 *e*P **P 00 02 33.9 +0.8**
comp=Z,228nm,1.0s
MK31 Makanchi Array 42.12 311 *e*P **P 00 02 35.9 -2.4**
MK31 *e* 00 04 15.6
MK31 Makanchi Array 42.12 311 *e*P **P 00 02 35.9 -2.4**
MK31 *e*PcP **PP 00 04 15.6 -0.2**
MKAR Makanchi Array 42.12 311 *e*P **P 00 02 36.9 -1.4**
MKAR 00 04 33.0
MKAR Makanchi Array 42.12 311 *e*P **P 00 02 36.9 -1.4**
MKAR PcP **PcP 00 04 33.0 +0.3**
MKAR Makanchi Array 42.12 311 P **P 00 02 36.6 -1.7**
comp=Z,1.8nm,0.6s,baz=92,slow=11,SNR=44
MKAR PcP **PcP 00 04 33.0 +0.3**
comp=Z,2.7nm,0.7s,baz=75,slow=5.1,SNR=3.9
ZAA0 Zalesovo Array 42.51 322 *e*P **P 00 02 39.6 -1.7**
ZALV Zalesovo Beam 42.51 322 P **P 00 02 39.8 -1.5**
ZALV 00 04 33.8
ZALV pmax pmax
comp=Z,3.0nm,0.5s
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 42.51 322 P **P 00 02 39.8 -1.5**
ZALV PcP **PcP 00 04 33.8 0.0**
ZALV Zalesovo Beam 42.51 322 P **P 00 02 39.8 -1.5**
comp=Z,3.1nm,0.5s,baz=109,slow=9.3,SNR=23
ZALV PcP **PcP 00 04 33.8 0.0**
comp=Z,0.9nm,0.4s,baz=92,slow=5.0,SNR=4.1
NVS Novosibirsk 43.69 322 *e*P **P 00 02 49.8 -1.0**
NVS pmax pmax
comp=E,4.0nm,0.7s
NVS pmax pmax
comp=N,4.0nm,0.9s
FITZ Fitzroy Crossi 45.12 186 P **P 00 03 02.7 +0.1**
FITZ Fitzroy Crossi 45.12 186 P **P 00 03 02.7 +0.1**
comp=N,9.3nm,0.8s,baz=15,slow=7.2,SNR=32
KURK Kurchatov 45.27 316 *de*P **P 00 03 02.5 -1.0**
KURK pmax pmax
comp=Z,19nm,1.7s
KURK Kurchatov 45.27 316 *e*P **P 00 03 02.5 -1.0**
comp=Z,8.0nm,0.8s
KURK *e*PcP **PcP 00 04 41.2 -2.0**
KURK *e*PP **PP 00 04 48.8 -0.5**
KURK PP PP 00 04 49.9 +0.5
KURK Kurchatov 45.27 316 P **P 00 03 02.3 -1.2**
comp=Z,64nm,0.7s,SNR=7.8
KURBB Kurchatov Arra 45.30 316 P **P 00 03 02.3 -1.5**
comp=Z,5.3nm,0.5s,baz=102,slow=9.3,SNR=40
KURBB PP **PP 00 04 49.9 +0.1**
comp=Z,1.5nm,0.8s,baz=101,slow=11,SNR=7.5
BILL Bilibino 46.38 18‖ *e*P **P 00 03 12.3 +0.3**
BILL *e* 00 03 21.0
BILL *e* 00 03 28.3
BILL *e* 00 04 48.2
BILL *e* 00 05 00.5
BILL pmax pmax
comp=Z,11nm,1.7s
WRAB Tennant Creek 46.94 174 P **P 00 03 16.0 -1.0**
comp=Z,116nm,1.1s,SNR=6.2
AAK Ala-Archa 47.25 304‖ *e*P **P 00 03 19.2 -0.3**
AAK pmax pmax
comp=Z,10.0nm,1.7s
AAK Ala-Archa 47.25 304 P **P 00 03 18.7 -0.8**
AAK Ala-Archa 47.25 304 P **P 00 03 18.7 -0.8**
comp=Z,1.6nm,0.6s,baz=105,slow=6.1,SNR=4.5
CTA Charters Tower 49.49 160 P **P 00 03 37.2 +0.6**
CTA Charters Tower 49.49 160 P **P 00 03 37.2 +0.6**
comp=Z,37nm,0.6s,baz=339,slow=8.3,SNR=71
KKAR Karatay Array 50.17 305 *e*P **P 00 03 41.9 +0.1**
KKAR Karatay Array 50.17 305 *e*P **P 00 03 41.9 +0.1**
AS31 Alice Springs 50.60 175 *e*P **P 00 03 45.0 -0.1**
ASAR Alice Springs 50.60 175 P **P 00 03 45.0 -0.1**
ASAR PcP **PcP 00 05 01.9 -0.8**
ASAR Alice Springs 50.60 175 P **P 00 03 45.0 -0.1**
comp=Z,11nm,0.5s,baz=6.8,slow=14,SNR=129
ASAR PcP **PcP 00 05 01.9 -0.8**
comp=Z,3.7nm,0.8s,baz=0.9,slow=3.8,SNR=6.8
BVAR Borovoye Array 50.67 318 P **P 00 03 44.8 -0.5**
BVAR 00 05 02.0
BVAR pmax pmax
comp=Z,3.0nm,0.4s
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR Borovoye Array 50.67 318 P **P 00 03 44.8 -0.5**
BVAR PcP **PcP 00 05 02.0 -0.6**
BVAR Borovoye Array 50.67 318 P **P 00 03 44.8 -0.5**
comp=Z,3.0nm,0.4s,baz=93,slow=9.3,SNR=24
BVAR PcP **PcP 00 05 02.0 -0.6**
comp=Z,1.5nm,0.6s,baz=89,slow=4.8,SNR=4.3
BRVK Borovoye 50.73 318 *de*P **P 00 03 45.1 -0.7**
BRVK pmax pmax
comp=Z,21nm,1.3s
BRVK Borovoye 50.73 318 *e*P **P 00 03 44.7 -1.1**
comp=Z,16nm,1.0s
BRVK Borovoye 50.73 318 P **P 00 03 45.6 -0.2**
comp=Z,97nm,1.1s,SNR=13
GAMB Gambell 52.15 29 *e*P **P 00 03 56.2 +0.1**
comp=Z,3.7nm,0.9s
KBL Kabul 52.16 294 *e*P **P 00 03 57.6 +0.6**
KBL pmax pmax
comp=Z,108nm,1.8s
KBL Kabul 52.16 294 *e*P **P 00 03 57.6 +0.6**
comp=Z,108nm,1.8s
SVE Sverdlovsk 56.53 322‖ *e*P **P 00 04 29.4 +1.2**
SVE *e*PPP PPP 00 07 56.0
SVE *e*S **S 00 12 18.4 -0.3**
SVE pmax pmax
comp=Z,28nm,1.0s
SVE MLR MLR
comp=Z,2µm,22.0s
ABKAR Akbulak array 57.18 313 *e*P **P 00 04 32.6 -0.3**
ARU Arti 57.67 321 *d i*P **P 00 04 36.2 -0.1**
ARU 00 06 46.9
ARU PPP PPP 00 08 01.8
ARU S **S 00 12 35.3 +1.5**
ARU SS **SS 00 16 22.4 -1.4**
ARU pmax pmax
comp=Z,27nm,1.0s
ARU MLR MLR
comp=Z,2µm,25.0s
ARU Arti 57.67 321 P **P 00 04 36.1 -0.2**
comp=Z,132nm,1.0s,SNR=12
AKTO Aktyubinsk 58.33 314 P **P 00 04 40.5 -0.5**
AKTO pmax pmax
comp=Z,5.0nm,0.6s
AKTO Aktyubinsk 58.33 314 P **P 00 04 40.5 -0.5**
AKTO Aktyubinsk 58.33 314 P **P 00 04 40.5 -0.5**
comp=Z,4.6nm,0.6s,baz=82,slow=12,SNR=16
SOKR Solikamsk 58.57 325‖ *i*P **P 00 04 43.9 +1.4**
SOKR pmax pmax
comp=Z,10.0nm,1.1s
SOKR MLR MLR
comp=Z,800nm,15.0s
IMYA Miami 58.98 298 *e*P **P 00 04 47.7 +1.6**
STKA Stephens Creek 59.68 169 P **P 00 04 49.5 -0.9**
STKA Stephens Creek 59.68 169 P **P 00 04 49.5 -0.9**
comp=Z,3.1nm,0.6s,baz=118,slow=21,SNR=11
IKRD Kardeh 60.14 299 *e*P P 00 04 50.4 -3.7
DZM Mont Dzumac 60.29 141 P **P 00 04 54.4 -0.5**
DZM Mont Dzumac 60.29 141 P **P 00 04 54.4 -0.5**
comp=Z,6.5nm,0.5s,baz=3,slow=23,SNR=13
PPLA Purkeypile 60.76 31 *e*P **P 00 04 58.9 +1.1**
NWAO Narrogin (SRO) 60.90 192 P **P 00 04 58.4 -0.4**
NWAO Narrogin (SRO) 60.90 192 P **P 00 04 58.4 -0.4**
comp=Z,10nm,0.6s,baz=13,slow=10,SNR=7.4
KDAK Kodiak Island 60.91 37 P **P 00 04 58.6 0.0**
KDAK Kodiak Island 60.91 37 P **P 00 04 58.6 0.0**
comp=Z,14nm,0.8s,baz=272,slow=24,SNR=4.6
ILAR Eielson Array 62.95 29 P **P 00 05 10.8 -1.5**
ILAR Eielson Array 62.95 29 P **P 00 05 10.8 -1.5**
comp=Z,1.4nm,0.7s,baz=275,slow=5.9,SNR=15
IBAF Bafgh 63.83 294 *e*P **P 00 05 20.1 +1.2**
IANJ Anjilo 64.07 298 *e*P **P 00 05 21.6 +1.1**
DOT Dot Lake 64.33 30 *e*P **P 00 05 21.1 -0.4**
comp=Z,138nm,1.8s
BMRM Bremner River 64.54 33 *e*P **P 00 05 23.9 +1.0**
comp=Z,26nm,1.1s
IMEH Mehriz 64.67 294 *e*P **P 00 05 24.8 +0.3**
ILAS Lasjerd 64.84 298 *e*P **P 00 05 26.7 +1.1**
EGAK Eagle 65.38 28 *e*P **P 00 05 28.3 +0.1**
comp=Z,7.8nm,1.3s
IZEF Zefreh 66.07 296 *e*P **P 00 05 34.2 +0.6**
ISRV Sarvestan 66.53 292 *e*P **P 00 05 37.1 +0.5**
IKLH Kolahrood 66.54 297 *e*P **P 00 05 37.4 +0.8**
TMCR Tamitsa 66.79 332 *e*P P 00 05 32.2 -5.0
TMCR pmax pmax
comp=Z,26nm,1.1s
IPIR Pirpir 67.28 296 *e*P **P 00 05 43.0 +1.6**
INK Inuvik 67.49 24 P **P 00 05 41.8 +0.1**
INK Inuvik 67.49 24 P **P 00 05 41.8 +0.1**
comp=Z,5.0nm,0.6s,baz=310,slow=6.8,SNR=33
APA Apatity 67.71 336‖ *i*P **P 00 05 44.2 +1.2**
APA *e*S S 00 14 40.0 +0.6
APA *e*SS **SS 00 19 00.0 +0.1**
APA MLR MLR
comp=Z,1µm,24.0s
SPITS Spitsbergen Ar 68.30 348 P **P 00 05 47.2 +0.5**
SPITS Spitsbergen Ar 68.30 348 P **P 00 05 47.2 +0.5**
comp=Z,3.2nm,0.5s,baz=92,slow=12,SNR=28
VRHR Novokhopersk 68.41 317 *e*P **P 00 05 47.3 -0.4**
VRHR *e**SP **sP 00 05 56.8 +1.0**
VRHR pmax pmax
comp=N,6.0nm,0.9s
VRHR pmax pmax
comp=Z,10.0nm,0.9s
VRHR pmax pmax
comp=E,2.0nm,0.4s
IHRS Heris 68.51 303 *e*P **P 00 05 49.4 +0.5**
KEV Kevo 69.20 339 *e*P **P 00 05 51.2 -1.1**
KEV pmax pmax
comp=Z,8.0nm,0.6s
KEV Kevo 69.20 339 *ep* **P 00 05 51.2 -1.1**
comp=Z,7.6nm,0.6s
IMRD Marand 69.39 304 *e*P **P 00 05 55.1 +0.8**
ZEI Tsey 69.41 308 *e*P **P 00 05 54.1 -0.3**
ZEI pmax pmax
comp=Z,29nm,0.9s
GNI Garni 69.63 305 P **P 00 05 57.1 +1.3**
GNI Garni 69.63 305 P **P 00 05 57.1 +1.3**
comp=Z,4.0nm,0.7s,baz=5.0,slow=4.8,SNR=5.2
ARCES ARCESS Array B 69.77 339 P **P 00 05 55.2 -0.6**
ARCES ARCESS Array B 69.77 339 P **P 00 05 55.2 -0.6**
comp=Z,3.7nm,0.8s,baz=47,slow=8.8,SNR=11
ARCES LR LR 00 38 56.9
comp=Z,2µm,21.8s,baz=21,slow=38
KBZ Khabaz 69.80 310 P **P 00 05 58.1 +1.6**
KBZ pmax pmax
comp=Z,23nm,0.9s
KBZ Khabaz 69.80 310 P **P 00 05 58.0 +1.6**
KBZ Khabaz 69.80 310 P **P 00 05 58.0 +1.6**
comp=Z,23nm,0.9s,baz=107,slow=4.9,SNR=36
VSR Storozhevoye 69.85 318 *e*P **P 00 05 56.4 -0.2**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VSR pmax pmax
comp=N,6.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,1.0s
KIV Kislovodsk 69.88 310 *e*P **P 00 05 58.5 +1.4**
KIV *e*S **S 00 15 07.1 +1.0**
KIV pmax pmax
comp=Z,33nm,0.9s
KIV pmax pmax
comp=Z,36nm,3.6s
JOF Joensuu 70.03 331 *e*P **P 00 05 57.6 0.0**
JOF pmax pmax
comp=Z,9.0nm,0.6s
JOF Joensuu 70.03 331 *ep* **P 00 05 57.6 0.0**
comp=Z,9.2nm,0.6s
OBN Obninsk 70.09 322‖ *e*P **P 00 05 58.7 +0.7**
OBN *e**SP **sP 00 06 07.6 +1.5**
OBN 00 06 16.0
OBN pmax pmax
comp=Z,29nm,1.7s
IGHG Ghaleghazi 70.16 299 *e*P **P 00 05 58.9 -0.3**
IDHR Dehrash 70.18 300 *e*P **P 00 05 59.5 +0.2**
MIB Mutribah 71.11 294 *e*P **P 00 06 04.8 0.0**
MIB AMb AMB 00 06 09.4
comp=Z,17nm,1.1s
HAKT HAKKARI 71.25 303 *i*P **P 00 06 06.0 +0.2**
RDF Al-Radifah 71.25 293 *e*P **P 00 06 06.0 +0.3**
RDF AMb AMB 00 06 07.9
comp=Z,20nm,0.7s
NAY Al-Naaiem 71.39 294 *e*P **P 00 06 06.4 -0.1**
NAY AMb AMB 00 06 09.7
comp=Z,13nm,1.4s
SOC Sochi 72.03 310 *e*P **P 00 06 09.8 -0.2**
SOC *e**SP **sP 00 06 20.2 +2.1**
SOC *e*PPP PPP 00 10 33.7
SOC *e*S **S 00 15 31.7 +0.8**
SOC pmax pmax
comp=Z,26nm,1.0s
BHD Baghdad 72.24 299 *ex* P 00 06 16.0 +4.5
BHD *ex* x 00 15 41.0
DLBC Dease Lake 72.32 33 P **P 00 06 12.2 +0.5**
DLBC Dease Lake 72.32 33 P **P 00 06 12.2 +0.5**
comp=Z,1.2nm,0.8s,baz=327,slow=4.5,SNR=3.1
KAF Kangasniemi 72.49 331 *e*P **P 00 06 12.0 -0.4**
KAF pmax pmax
comp=Z,6.0nm,0.6s
KAF Kangasniemi 72.49 331 *ep* **P 00 06 12.0 -0.4**
comp=Z,5.6nm,0.6s
FIA1 FINESS Array S 72.87 331 *e*P **P 00 06 14.5 -0.2**
FINES FINESS Array B 72.87 331 P **P 00 06 14.7 0.0**
FINES FINESS Array B 72.87 331 P **P 00 06 14.7 0.0**
comp=Z,7.1nm,0.5s,baz=65,slow=5.9,SNR=37
FINES LR LR 00 43 58.3
comp=Z,1µm,20.0s,baz=40,slow=40
ANN Anapa 73.13 312 *e*P **P 00 06 15.3 -1.2**
ANN pmax pmax
comp=Z,40nm,1.1s
RES Resolute Bay 74.41 11 *e*P **P 00 06 23.4 -0.2**
comp=Z,6.4nm,0.7s
RES Resolute Bay 74.41 11 P **P 00 06 23.4 -0.2**
comp=Z,4.4nm,0.7s,baz=302,slow=5.9,SNR=33
DAG Danmarks Havn 74.60 353 *i*P **P 00 06 24.5 -0.1**
DAG pmax pmax
comp=Z,2.0nm,0.8s
DAG MLR MLR
comp=Z,2µm,23.0s
DAG Danmarks Havn 74.60 353 *i*P **P 00 06 24.5 -0.1**
comp=Z,3.1nm,0.8s
DAG
comp=Z,2µm,22.0s
MALT Malatya 74.87 305‖ *i*P **P 00 06 28.6 +1.6**
GZT Gaziantep 75.87 305 *i*P **P 00 06 33.0 +0.2**
AKASG Malin Array Be 75.87 320 P **P 00 06 32.8 +0.4**
AKASG pmax pmax
comp=Z,7.0nm,0.5s
AKASG Malin Array Be 75.87 320 P **P 00 06 32.8 +0.4**
AKASG Malin Array Be 75.87 320 P **P 00 06 32.8 +0.4**
comp=Z,6.6nm,0.5s,baz=58,slow=6.5,SNR=10
KIEV Kiev 75.88 320 *e*P **P 00 06 32.2 -0.2**
KIEV pmax pmax
comp=Z,26nm,1.5s
KIEV Kiev 75.88 320 *e*P **P 00 06 32.2 -0.2**
comp=Z,26nm,1.5s
YKW3 Yellowknife Ar 77.05 25 *e*P **P 00 06 38.5 -0.4**
comp=Z,0.3nm,1.4s
YKA Yellowknife Ar 77.09 25 P **P 00 06 38.9 -0.3**
YKA Yellowknife Ar 77.09 25 P **P 00 06 38.8 -0.3**
comp=Z,2.3nm,0.8s,baz=300,slow=5.6,SNR=38
SUW Suwalki 77.65 325 *e*P **P 00 06 44.6 +2.2**
SUW pmax pmax
comp=Z,16nm,0.8s
SUW Suwalki 77.65 325 *e*P **P 00 06 44.6 +2.2**
comp=Z,16nm,0.8s
SUW Suwalki 77.65 325 *e*P **P 00 06 43.8 +1.4**
BR131 Keskin Array S 77.71 308 *e*P **P 00 06 42.8 -0.5**
comp=Z,6.4nm,0.8s
BRTR Keskin Array B 77.71 308 P **P 00 06 43.8 +0.6**
BRTR Keskin Array B 77.71 308 P **P 00 06 43.8 +0.6**
comp=Z,5.1nm,0.7s,baz=98,slow=4.6,SNR=29
GULE Gulek 77.93 306 *i*P **P 00 06 43.7 -0.8**
ASF Jabal al Asfar 78.47 300 P **P 00 06 48.4 +0.9**
ASF Jabal al Asfar 78.47 300 P **P 00 06 48.4 +0.9**
comp=Z,5.2nm,0.8s,baz=86,slow=5.1,SNR=4.7
URZ Urewera 78.59 144 P **P 00 06 46.7 -0.9**
URZ Urewera 78.59 144 P **P 00 06 46.7 -0.9**
comp=Z,3.3nm,0.5s,baz=286,slow=5.4,SNR=3.7
HFS Hagfors 78.77 333 P **P 00 06 48.8 +0.3**
HFS Hagfors 78.77 333 P **P 00 06 48.8 +0.3**
comp=Z,2.3nm,0.5s,baz=104,slow=6.3,SNR=13
HFS LR LR 00 48 02.8
comp=Z,1µm,18.0s,baz=38,slow=41
CFR Carcaliu 78.98 315‖ *i*P **P 00 06 51.4 +1.5**
NB2 NORSAR Subarra 79.22 334 P **P 00 06 50.6 -0.3**
comp=Z,3.0nm,0.6s,baz=52,slow=5.9
NOA NORSAR Array B 79.22 334 P **P 00 06 50.6 -0.3**
NOA NORSAR Array B 79.22 334 P **P 00 06 50.6 -0.3**
comp=Z,2.9nm,0.5s,baz=51,slow=5.6,SNR=18
LVV L'vov 79.24 321 *e*P **P 00 06 54.0 +2.8**
TESR 79.28 317‖ *i*P **P 00 06 52.8 +1.2**
KDHN Kadinhani 79.30 308 *i*P **P 00 06 51.2 -0.8**
VRI Vrincioaia 79.54 316‖ *i*P **P 00 06 54.7 +1.7**
PLOR Plostina 79.59 316‖ *i*P **P 00 06 54.6 +1.3**
BURB8 Bucovina Ar. S 79.62 318 *e*P **P 00 06 53.9 +0.4**
BURAR Bucovina Array 79.62 318‖ *i*P **P 00 06 54.6 +1.1**
SEYT Eskypehyr 79.74 309 *i*P **P 00 06 51.8 -2.5**
BORA Eskisehir 79.86 310 *i*P **P 00 06 55.2 +0.2**
KWP Kalwaria Pacla 80.08 321‖ *i*P **P 00 06 56.6 +0.8**
KWP Kalwaria Pacla 80.08 321 *e*P **P 00 06 57.3 +1.5**
MLR Muntele Rosu 80.20 316 P **P 00 06 57.7 +1.0**
MLR Muntele Rosu 80.20 316‖ *i*P **P 00 06 59.3 +2.6**
MLR Muntele Rosu 80.20 316 P **P 00 06 57.7 +1.0**
comp=Z,0.8nm,0.9s,baz=39,slow=4.4,SNR=9.0
SUMG Summit 80.28 356 *e*P **P 00 06 57.6 +0.6**
SUMG pmax pmax
comp=Z,18nm,0.7s
SUMG Summit 80.28 356 *e*P **P 00 06 57.6 +0.6**
comp=Z,18nm,0.7s
SUMG Summit 80.28 356 *i*P **P 00 06 57.7 +0.7**
comp=Z,17nm,0.8s
SUMG
comp=Z,1µm,16.0s
SCO Scoresbysund 80.66 351 *i*P P 00 07 02.3 +3.8
SCO pmax pmax
comp=Z,7.0nm,0.8s
SCO MLR MLR
comp=Z,2µm,22.0s
SCO Scoresbysund 80.66 351 *i*P P 00 07 02.3 +3.8
comp=Z,6.7nm,0.8s
SCO
comp=Z,2µm,22.0s
KOLS Kolonicke sedl 80.67 320 *e*P **P 00 07 00.9 +1.8**
KOLS pmax pmax
comp=Z,5.0nm,1.5s
KOLS Kolonicke sedl 80.67 320 *e*P **P 00 07 00.9 +1.8**
UZH Uzhgorod 80.82 320 *e*P P 00 07 04.6 +4.8
UZH *e* 00 07 17.2
ARR Arges 81.07 317‖ *i*P **P 00 07 03.6 +2.3**
CRVS Cervenica-Dubn 81.15 321 *e*P **P 00 07 03.8 +2.2**
CRVS pmax pmax
comp=Z,14nm,1.5s
CRVS Cervenica-Dubn 81.15 321 *e*P **P 00 07 03.8 +2.2**
HUMR Humele 81.26 316‖ *i*P **P 00 07 03.6 +1.3**
OJC Ojcow 81.38 322 *e*P **P 00 07 04.7 +1.9**
OJC Ojcow 81.38 322 *e*P **P 00 07 04.7 +1.9**
DRGR 81.51 318‖ *i*P **P 00 07 06.0 +2.4**
NIE Niedzica 81.52 322 *e*P **P 00 07 06.0 +2.4**
NIE Niedzica 81.52 322 *e*P **P 00 07 06.0 +2.4**
ATD Arta Tunnel 82.29 279 LR LR 00 49 00.7

comp=Z,923nm,19.5s,baz=101,slow=40
OKC Ostrava-Krasne 82.48 323 eP P 00 07 11.0 +2.4
OKC e 00 07 21.7
OKC MLR MLR
comp=Z,1µm,20.9s
OKC Ostrava-Krasne 82.48 323 eP P 00 07 11.0 +2.4
OKC ex x 00 07 21.7
OKC AMS AMS 00 51 10.0
comp=Z,1µm,20.9s
VYHS Vyhne 82.84 321 eP P 00 07 11.1 +0.6
VYHS pmax pmax
comp=Z,9.0nm,1.3s
VYHS Vyhne 82.84 321 eP P 00 07 11.1 +0.6
MORC Moravsky Berou 82.84 323 eP P 00 07 12.9 +2.4
MORC pmax pmax
comp=Z,27nm,2.0s
MORC Moravsky Berou 82.84 323 eP P 00 07 12.9 +2.4
comp=Z,27nm,2.0s
MORC Moravsky Berou 82.84 323 ⇑iP P 00 07 12.9 +2.4
DPC Dobruska-Polom 83.17 324 eP P 00 07 15.3 +3.1
DPC e 00 07 22.9
DPC MLR MLR
comp=Z,1µm,23.1s
DPC Dobruska-Polom 83.17 324 eP P 00 07 15.3 +3.1
DPC ex x 00 07 22.9
DPC AMS AMS 00 45 40.0
comp=Z,1µm,23.1s
UPC Upice 83.24 324 eP P 00 07 14.8 +2.3
UPC e 00 07 27.7
UPC Upice 83.24 324 eP P 00 07 14.8 +2.3
UPC ex x 00 07 27.7
VTS Vitosha 83.35 315 ⇑iP P 00 07 14.3 +0.9
SMOL Smolenice 83.61 322 eP P 00 07 17.3 +2.8
SMOL Smolenice 83.61 322 eP P 00 07 17.3 +2.8
VRAC Vranov 83.62 323 P P 00 07 15.3 +0.8
VRAC Vranov 83.62 323 ⇑iP P 00 07 17.0 +2.5
VRAC Vranov 83.62 323 P P 00 07 15.3 +0.8
comp=Z,4.9nm,0.8s,baz=86,slow=6.8,SNR=6.8
VRAC LR LR 00 50 12.6
comp=Z,1µm,21.8s,baz=26,slow=40
PVCC Panska Ves 83.98 325 AMS AMS 00 43 50.0
comp=Z,2µm,27.1s
BRG Berggiesshubel 84.10 325 eP P 00 07 19.1 +2.2
comp=Z,1.7nm,0.8s
BRG e 00 07 22.0
comp=Z,3.7nm,0.9s
BRG
comp=N,2µm,25.1s
BRG
comp=E,789nm,24.0s
BRG
comp=Z,2µm,26.7s
BRG Berggiesshubel 84.10 325 eP P 00 07 19.1 +2.2
BRG pmax pmax
comp=Z,2.0nm,0.7s
BRG pmax pmax
comp=Z,4.0nm,0.8s
BRG MLR MLR
comp=N,2µm,25.1s
BRG MLR MLR
comp=E,789nm,24.0s
PKSM Moragy 84.20 319 ⇓iP P 00 07 19.0 +1.5
TREC Trest 84.22 323 eP P 00 07 19.1 +1.5
TREC MLR MLR
comp=Z,2µm,22.5s
TREC Trest 84.22 323 eP P 00 07 19.1 +1.5
TREC ex x 00 07 22.8
TREC AMS AMS 00 45 40.0
comp=Z,2µm,22.5s
PRU Pruhonice 84.31 324 eP P 00 07 19.4 +1.4
PRU MLR MLR
comp=Z,2µm,27.0s
PRU Pruhonice 84.31 324 eP P 00 07 19.4 +1.4
PRU AMS AMS 00 44 00.0
comp=Z,2µm,27.0s
CLL Collm 84.32 326 iP P 00 07 19.1 +1.1
CLL pmax pmax
comp=Z,6.0nm,1.1s
CLL Collm 84.32 326 iP P 00 07 19.1 +1.1
comp=Z,6.0nm,1.1s
CLL iPcP pP 00 07 23.0 -1.0
CLL esP sP 00 07 34.0 +7.9
C11A Tepee Creek (N 84.70 38 ⇓P P 00 07 21.3 +1.2
baz=85
CONA Conrad Observa 84.81 322 ⇑iPcP P 00 07 21.8 +1.1
comp=Z,9.1nm,0.7s,SNR=8.0
CONA Conrad Observa 84.81 322 ⇑iP P 00 07 21.8 +1.1
comp=Z,9.1nm,0.7s
A13A Flathead Natio 85.06 37 ⇑P P 00 07 22.4 +0.5
baz=85
NKC Novy Kostel 85.25 325 AMS AMS 00 42 50.0
comp=Z,2µm,32.4s
KHC Kasperske Hory 85.33 324 eP P 00 07 24.6 +1.4
KHC MLR MLR
comp=Z,2µm,26.3s
KHC Kasperske Hory 85.33 324 eP P 00 07 25.2 +2.0
comp=Z,33nm,2.0s
KHC Kasperske Hory 85.33 324 eP P 00 07 24.6 +1.4
KHC AMS AMS 00 44 20.0
comp=Z,2µm,26.3s
B13A Whitefish 85.36 37 ⇓P P 00 07 23.6 +0.2
baz=85
GEC2 GERESS Array S 85.43 324 eP P 00 07 26.0 +2.2
GEC2 GERESS Array S 85.43 324 eP P 00 07 26.0 +2.2
GERES GERESS Array B 85.43 324 P P 00 07 25.4 +1.6
GERES GERESS Array B 85.43 324 P P 00 07 25.4 +1.6
comp=Z,3.2nm,0.8s,baz=44,slow=4.4,SNR=18
GERES LR LR 00 51 01.7
comp=Z,628nm,18.9s,baz=25,slow=40
KOGS Kog 85.44 321 iP P 00 07 28.1 +4.4
BSMT Bassoo Peak 85.50 38 eP P 00 07 25.9 +1.6
A14A Double T Ranch 85.56 36 ⇓P P 00 07 24.6 +0.2
baz=85
D12A Red Ives Fores 85.65 39 ⇓P P 00 07 25.1 +0.2
baz=86
C13A Hot Springs 85.71 38 ⇑P P 00 07 25.8 +0.6
baz=86
BMO Blue Mountains 85.80 41 eP P 00 07 26.5 +0.8
BMO pmax pmax
comp=Z,6.0nm,1.1s
BMO Blue Mountains 85.80 41 eP P 00 07 26.5 +0.8
comp=Z,5.6nm,1.1s
B14A Marquette Ranc 86.01 37 ⇓P P 00 07 27.3 +0.6
baz=86
C14A Swan Lake 86.11 37 ⇑P P 00 07 27.6 +0.5
baz=86
SWMT Swartz Lake 86.13 38 eP P 00 07 27.9 +0.6
comp=Z,1.8nm,0.8s
SFJD Kangerlussuaq 86.21 0 P P 00 07 26.0 -1.1
SFJD Kangerlussuaq 86.21 0 iP P 00 07 32.3 +5.2
comp=Z,8.6nm,0.7s
SFJD
comp=Z,2µm,24.0s
SFJD Kangerlussuaq 86.21 0 P P 00 07 26.0 -1.1
comp=Z,7.1nm,0.8s,baz=356,slow=5.6,SNR=3.4
B15A Bradely Ranch, 86.41 36 ⇑P P 00 07 28.3 -0.3
baz=86
F12A Elk City 86.47 40 ⇑P P 00 07 28.8 -0.2
baz=86
SLMT Seeley Lake 86.56 38 eP P 00 07 30.1 +0.6
MSO Missoula 86.56 38 ⇓P P 00 07 29.7 +0.2
baz=86
D14A Greenough 86.65 38 ⇓P P 00 07 29.7 -0.2
baz=86
B16A M & M Farms, S 86.80 36 ⇓P P 00 07 30.7 +0.1
baz=87
CEY Cerknica 86.89 321 iP P 00 07 35.9 +4.9
F13A Darby 86.97 39 ⇑P P 00 07 31.4 -0.1
baz=87
CADS Cadrg 86.98 321 iP P 00 07 35.7 +4.3
A17A Triple J Farms 86.99 35 ⇓P P 00 07 31.4 -0.1
baz=87
E14A Clinton 87.06 38 ⇑P P 00 07 31.9 0.0
baz=87
FFC Flin Flon 87.13 27 eP P 00 07 25.4 -6.5
FFC pmax pmax
comp=Z,8.0nm,0.9s
FFC Flin Flon 87.13 27 eP P 00 07 25.4 -6.5
comp=Z,8.2nm,0.9s
C16A Fuhringer Ranc 87.16 36 ⇑P P 00 07 32.3 0.0
baz=87
D15A Lincoln 87.21 37 ⇓P P 00 07 32.3 -0.4
baz=87
ABTA Abfaltersbach 87.34 322 ⇑iPcP PcP 00 07 34.6 -0.6
comp=Z,6.7nm,0.7s,SNR=7.6
ABTA Abfaltersbach 87.34 322 ⇑iP PcP 00 07 34.6 -0.6
comp=Z,6.7nm,0.7s
B17A L&G Farms, Che 87.35 36 ⇑P P 00 07 33.1 -0.1
baz=87
H12A Diamond D Ranc 87.40 40 ⇓P P 00 07 33.7 0.0
baz=87
MOTA Moosalm 87.73 323 P P 00 07 38.6 +3.5
comp=Z,8.0nm,0.8s,SNR=8.8
KAC Achnashellach 87.74 338 eP P 00 07 38.5 +3.7
KAC Achnashellach 87.74 338 P P 00 07 38.5 +3.7
D16A Dana Ranch, Ca 87.74 37 ⇑P P 00 07 35.4 +0.2
baz=88
C17A Wharram Farm, 87.78 36 ⇓P P 00 07 35.2 -0.1
baz=88
G14A Jackson 87.78 39 ⇑P P 00 07 35.7 +0.2
baz=88
B18A Beardsley Farm 87.81 35 ⇑P P 00 07 35.5 +0.1
baz=88
F15A Butte 87.96 38 ⇓P P 00 07 36.9 +0.5
baz=88
KPL Plockton 87.98 338 eP P 00 07 40.0 +4.1
KPL AMB AMB 00 07 44.6
comp=Z,51nm,4.7s
KPL Plockton 87.98 338 P P 00 07 40.0 +4.1
KPL AMB AMB 00 07 44.6
comp=Z,51nm,4.7s
A19A Klindworth Far 88.00 34 ⇓P P 00 07 36.6 +0.3
baz=88
ESY Stoneypath 88.00 335 eP P 00 07 39.4 +3.3
ESY Stoneypath 88.00 335 P P 00 07 39.4 +3.3
EGMT Eagleton 88.06 35 ⇓P P 00 07 36.8 +0.1
baz=88
D17A Six Diamond Ra 88.13 37 ⇓P P 00 07 37.0 0.0
baz=88
DLMT Dillon 88.20 39 eP P 00 07 38.1 +0.7
comp=Z,5.9nm,0.8s
I13A Wildhorse Cree 88.21 41 ⇑P P 00 07 38.2 +0.6
baz=88
HLID Hailey 88.24 41 ⇓P P 00 07 37.7 0.0
baz=88
EBL Broad Law 88.27 336 eP P 00 07 41.0 +3.7
EBL Broad Law 88.27 336 P P 00 07 41.0 +3.7
FRB Frobisher Bay 88.30 8 P P 00 07 36.3 -1.0
FRB Frobisher Bay 88.30 8 P P 00 07 36.3 -1.0
comp=Z,4.4nm,0.7s,baz=342,slow=6.8,SNR=7.8
EAU Auchinoon 88.36 336 eP P 00 07 41.6 +3.9
EAU Auchinoon 88.36 336 P P 00 07 41.6 +3.9
G15A Dillon 88.38 39 ⇑P P 00 07 38.5 +0.1
baz=88
E17A Martinsdale 88.47 37 ⇓P P 00 07 38.7 0.0
baz=88
F16A Kennard Place, 88.47 38 ⇓P P 00 07 38.7 0.0
baz=88
J13A Cove Ranch, Pi 88.48 41 ⇑P P 00 07 38.8 0.0
baz=88
BOZ Bozeman (W) 88.56 38 ⇑P P 00 07 38.9 -0.2
baz=88
I14A Mackay 88.58 40 ⇓P P 00 07 40.6 +1.3
baz=88
C19A Slack Wire Ran 88.61 35 ⇓P P 00 07 39.2 0.0
baz=88
FUORN Ofenpass-Fuorn 88.63 323 eP P 00 07 42.9 +3.3
comp=Z,14nm,0.8s
EKA Eskdalemuir Ar 88.64 335 P P 00 07 40.1 +1.0
EKA Eskdalemuir Ar 88.64 335 P P 00 07 40.1 +1.0
comp=Z,2.5nm,0.5s,baz=43,slow=5.2,SNR=25
DAVOX Davos/Dischmat 88.73 323 P P 00 07 41.3 +1.4
DAVOX Davos/Dischmat 88.73 323 P P 00 07 41.3 +1.4
comp=Z,10nm,0.6s,baz=291,slow=2.2,SNR=26
DAVOX LR LR 00 51 42.7
comp=Z,1µm,21.8s,baz=12,slow=38
ECK Cauldkaine Hil 88.75 335 eP P 00 07 42.8 +3.1
ECK Cauldkaine Hil 88.75 335 P P 00 07 42.8 +3.1
E18A Harlowton 88.91 37 ⇑P P 00 07 41.1 +0.4
baz=89
J14A Carey 88.91 41 ⇑P P 00 07 43.0 +2.1
baz=89
CDF Champ du Feu 89.02 326 eP P 00 07 40.3 -0.8
comp=Z,5.2nm,0.7s
CDF Champ du Feu 89.02 326 eP P 00 07 40.3 -0.8
CDF pmax pmax
comp=Z,5.0nm,0.7s
CDF Champ du Feu 89.02 326 eP P 00 07 40.3 -0.8
comp=Z,5.2nm,0.7s
GIVF Givet 89.07 328 eP P 00 07 40.4 -0.8
GIVF Givet 89.07 328 eP P 00 07 40.4 -0.8
GIVF Givet 89.07 328 eP P 00 07 40.4 -0.8
TUE Stuetta 89.21 323 eP P 00 07 47.0 +4.8
comp=Z,8.0nm,0.7s
A22A Carney Farms, 89.35 33 ⇓P P 00 07 42.4 -0.3
baz=89
H16A Russell Place, 89.36 39 ⇑P P 00 07 43.3 +0.3
baz=89
BAIF Baives 89.39 328 eP P 00 07 41.9 -0.8
comp=Z,10nm,1.0s
BAIF Baives 89.39 328 eP P 00 07 41.9 -0.8
BAIF pmax pmax
comp=Z,10.0nm,1.0s
BAIF Baives 89.39 328 eP P 00 07 41.9 -0.8
comp=Z,10nm,1.0s
F18A Big Timber 89.44 37 ⇑P P 00 07 43.4 +0.2
baz=89
D20A Manuel Ranch, 89.50 35 ⇑P P 00 07 44.1 +0.7
baz=89
E19A Rath Farm, Rou 89.57 36 ⇓P P 00 07 44.3 +0.5
baz=89
HINF Hinteralfeld 89.62 326 eP P 00 07 43.3 -0.6
HINF Hinteralfeld 89.62 326 eP P 00 07 43.3 -0.6
HINF Hinteralfeld 89.62 326 eP P 00 07 43.3 -0.6
PAGF Fort de Pagny 89.69 327 eP P 00 07 43.5 -0.7
PAGF Fort de Pagny 89.69 327 eP P 00 07 43.5 -0.7
PPT Papeete 89.72 110 LR LR 00 41 53.1
comp=Z,363nm,18.9s,baz=346,slow=32
HAU Haudompre 89.75 326 eP P 00 07 43.5 -1.0
HAU Haudompre 89.75 326 eP P 00 07 43.5 -1.0
HAU Haudompre 89.75 326 eP P 00 07 43.5 -1.0
E20A Meyer Farm, Mu 89.89 36 ⇓P P 00 07 45.7 +0.5
baz=90
IMW Indian Meadow 90.03 39 eP P 00 07 48.4 +2.1
comp=Z,4.4nm,1.0s
J16A Bone 90.04 40 ⇑P P 00 07 46.1 -0.1
baz=90
RLMT Red Lodge 90.18 37 eP P 00 07 47.8 +1.0
comp=Z,3.4nm,0.8s
RLMT Red Lodge 90.18 37 ⇓P P 00 07 46.7 -0.1
baz=90
H18A Shoshone NF, C 90.25 38 ⇓P P 00 07 47.3 +0.1
baz=90
SFTF Sexfontaines 90.26 327 eP P 00 07 45.2 -1.7
SFTF Sexfontaines 90.26 327 eP P 00 07 45.2 -1.7
K16A Soda Springs 90.33 40 ⇑P P 00 07 48.8 +1.3
baz=90
L15A Malad City 90.37 41 ⇑P P 00 07 48.6 +0.9
baz=90
R11A Troy Canyon, C 90.60 46 ⇑P P 00 07 49.2 +0.3
baz=90
LRMC Laurel Mountai 90.87 49 ⇑P P 00 07 51.4 +1.4
baz=91
J18A Kendall Valley 90.98 39 ⇑P P 00 07 51.0 +0.4
baz=91
HWUT Hardware Ranch 91.10 41 eP P 00 07 52.3 +1.2
comp=Z,7.6nm,1.0s
LPL La Plagne 91.22 324 eP P 00 07 50.4 -1.2
comp=Z,12nm,1.2s
LPL La Plagne 91.22 324 eP P 00 07 50.4 -1.2
LPL pmax pmax
comp=Z,12nm,1.2s
LPL La Plagne 91.22 324 eP P 00 07 50.4 -1.2
comp=Z,12nm,1.2s
LPG La Plagne 91.22 324 eP P 00 07 50.8 -0.9
comp=Z,9.7nm,1.0s
LPG La Plagne 91.22 324 eP P 00 07 50.8 -0.9
LPG pmax pmax
comp=Z,10.0nm,1.0s
LPG La Plagne 91.22 324 eP P 00 07 50.8 -0.9
comp=Z,9.7nm,1.0s
DUG Dugway 91.22 43 ⇓P P 00 07 51.8 +0.1
baz=91
M16A Huntsville 91.25 42 ⇓P P 00 07 51.6 -0.2
baz=91
LOR Lormes 91.49 327 eP P 00 07 51.6 -1.0
LOR Lormes 91.49 327 eP P 00 07 51.6 -1.0
BW06 Boulder Array 91.53 39 ⇑P P 00 07 53.3 +0.1
baz=91
PDAR Pinedale Array 91.53 39 P P 00 07 53.2 +0.1
PDAR Pinedale Array 91.53 39 P P 00 07 53.2 +0.1
comp=Z,2.3nm,0.9s,baz=304,slow=2.7,SNR=11
SSF Saint Saulge 91.80 327 eP P 00 07 52.8 -1.2
comp=Z,13nm,1.3s
SSF Saint Saulge 91.80 327 eP P 00 07 52.8 -1.2
SSF pmax pmax
comp=Z,13nm,1.3s
SSF Saint Saulge 91.80 327 eP P 00 07 52.8 -1.2
comp=Z,13nm,1.3s
LDF La Druitiere 92.42 329 eP P 00 07 55.9 -0.9
LDF La Druitiere 92.42 329 eP P 00 07 55.9 -0.9
LDF La Druitiere 92.42 329 eP P 00 07 55.9 -0.9
FLN La Foliniere 92.46 330 eP P 00 07 56.0 -1.0
FLN La Foliniere 92.46 330 eP P 00 07 56.0 -1.0
FLN La Foliniere 92.46 330 eP P 00 07 56.0 -1.0
GRR Gorron 92.91 330 eP P 00 07 58.5 -0.6
comp=Z,66nm,1.5s
GRR Gorron 92.91 330 eP P 00 07 58.5 -0.6
GRR pmax pmax
comp=Z,66nm,1.5s
GRR Gorron 92.91 330 eP P 00 07 58.5 -0.6
comp=Z,66nm,1.5s
ULM Lac du Bonnet 92.95 27 P P 00 07 59.0 -0.3
ULM Lac du Bonnet 92.95 27 P P 00 07 59.0 -0.3
comp=Z,1.3nm,0.4s,baz=275,slow=2.6,SNR=3.5
TCF Toulx Ste Croi 92.98 327 eP P 00 07 58.2 -1.3
TCF Toulx Ste Croi 92.98 327 eP P 00 07 58.2 -1.3
TCF Toulx Ste Croi 92.98 327 eP P 00 07 58.2 -1.3
SGMF Saint Gilles 93.76 330 eP P 00 08 02.2 -0.8
SGMF Saint Gilles 93.76 330 eP P 00 08 02.2 -0.8
SGMF Saint Gilles 93.76 330 eP P 00 08 02.2 -0.8
ROSF Rostrenen 94.01 331 eP P 00 08 02.8 -1.4
ROSF Rostrenen 94.01 331 eP P 00 08 02.8 -1.4
ROSF Rostrenen 94.01 331 eP P 00 08 02.8 -1.4
CAF Calviac 94.02 326 eP P 00 08 03.4 -0.9
CAF Calviac 94.02 326 eP P 00 08 03.4 -0.9
CAF Calviac 94.02 326 eP P 00 08 03.4 -0.9
TORD Torodi Ar. Bea 115.81 302 PKP PKPdf 00 13 28.6 -0.9
TORD PP PP 00 14 38.2 +6.0
TORD Torodi Ar. Bea 115.81 302 PKP PKPdf 00 13 28.6 -0.9
comp=Z,0.4nm,0.6s,baz=13,slow=2.3,SNR=5.8
TORD PP PP 00 14 38.2 +6.0
comp=Z,0.9nm,1.0s,baz=57,slow=5.5,SNR=4.0
QSPA South Pole Qui 116.86 180 PKP PKPdf 00 13 29.2 -0.7
QSPA South Pole Qui 116.86 180 PKP PKPdf 00 13 29.2 -0.7
comp=Z,1.0nm,0.6s,baz=130,slow=3.2,SNR=12

JMA 15 00:10:58.9±0.3, 27.08N×129.97E, h42km, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**1.15**	**308**	P	Pn	00 11 18.9	+0.4
JTK				eS	Sn	00 11 33.1	+0.1
JZK	**Kikaishima**	**1.23**	**0**	P	Pn	00 11 21.2	+1.6
JZK				eS	Sn	00 11 37.0	+1.9
JAMN	**Amaminishikomi**	**1.36**	**329**	P	Pn	00 11 21.3	-0.1
JAMN				eS	Sn	00 11 37.4	-0.7
JAM	**Amami Oshima**	**1.36**	**346**	P	Pn	00 11 21.5	0.0
JAM				S	Sn	00 11 37.8	-0.6
JOW	**Kunigami**	**1.53**	**261**	P	Pn	00 11 25.2	+1.4
JOW				eS	Sn	00 11 43.9	+1.3
JMZ	**Minamidaito 2**	**1.68**	**138**	P	Pn	00 11 25.9	0.0
JMZ				eS	Sn	00 11 45.6	-0.6
JIH	**Iheya**	**1.79**	**269**	P	Pn	00 11 28.9	+1.6
JIH				eS	Sn	00 11 50.7	+2.0
JJT2	**Tamagusuku 2**	**2.20**	**245**	eS	Sn	00 12 00.3	+1.4
JAGN	**Aguni-jima**	**2.49**	**259**	P	Pn	00 11 38.3	+1.4
JAGN				eS	Sn	00 12 07.5	+1.5
JNN	**Nakanoshima**	**2.75**	**358**	eS	Sn	00 12 12.0	-0.6
JKE	**Kume jima 2**	**2.94**	**256**	P	Pn	00 11 44.7	+1.5
JKE				eS	Sn	00 12 17.8	+0.5
JTN	**Tanegashima 3**	**3.67**	**14**	P	Pn	00 11 53.1	-0.1
JTN				eS	Sn	00 12 33.5	-1.7

IDC 15 00:16:38.6±1.3, 20.07N×146.48E, h0km, mb3.6/8, mb1 3.7/8, mb1mx3.6/24, mbtmp3.6/8, Error ellipse: s-maj=36.9km s-min=26.4km az=83.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**23.69**	**321**	P	P	00 21 51.6	-0.4
	0.9nm,0.6s,baz=134,slow=8.7,SNR=4.1						
SONM	**Songino Array**	**42.55**	**320**	P	P	00 24 36.8	+0.6
	0.3nm,0.4s,baz=133,slow=7.5,SNR=4.2						
CMAR	**Chiang Mai Arr**	**44.79**	**276**	P	P	00 24 54.8	+0.3
	0.4nm,0.6s,baz=76,slow=7.5,SNR=4.9						
ASAR	**Alice Springs**	**45.16**	**196**	P	P	00 24 57.0	-0.3
	0.1nm,0.3s,baz=12,slow=9.5,SNR=3.7						
ZALV	**Zalesovo Beam**	**57.39**	**322**	P	P	00 26 28.2	-0.5
	1.5nm,0.5s,baz=110,slow=8.1,SNR=11						
MKAR	**Makanchi Array**	**58.06**	**313**	P	P	00 26 34.1	+0.5
	0.4nm,0.5s,baz=87,slow=8.6,SNR=7.3						
YKA	**Yellowknife Ar**	**76.44**	**28**	P	P	00 28 30.4	+0.5
	0.2nm,0.5s,baz=293,slow=5.2,SNR=5.4						
FINES	**FINESS Array B**	**85.95**	**335**	P	P	00 29 19.3	-1.2
	0.8nm,0.8s,baz=51,slow=4.4,SNR=7.2						
TORD	**Torodi Ar. Bea**	**132.15**	**311**	PKP	PKPdf	00 35 55.2	-0.2
	0.1nm,0.5s,baz=36,slow=3.0,SNR=4.1						

*DDA **15** 00:17:09.4, 39.01N×28.00E, h17km, MD2.6*
*ISK **15** 00:17:09.7, 39.00N×28.02E, h5km, MD2.8*
*CSEM **15** 00:17:10.2±0.1, 39.00N×28.02E, h2km, MD2.6, Error ellipse: s-maj=1.8km s-min=1.6km az=16.0*

ISC 15 00:17:09.9±0.8, 39.00N±0.02×28.01E±0.02, h15km±7km, n36, σ0.961/56, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.20**	**231**	iP	Pg	00 17 14.4	-0.1
AKHS				iS	Sg	00 17 17.8	+0.2
AKHS	**Akhisar**	**0.20**	**231**	iP	Pg	00 17 14.4	-0.1
AKHS				iS	Sg	00 17 17.8	+0.2
AKS	**Akhisar**	**0.20**	**232**	PG	Pg	00 17 14.4	0.0
AKS	**Akhisar**	**0.20**	**232**	iPg	Pg	00 17 14.5	0.0
DEMI	**Demirci**	**0.55**	**86**	iP	Pb	00 17 21.1	-0.2
DEMI				iS	Sg	00 17 27.4	-0.8
DEMI	**Demirci**	**0.55**	**86**	iP	Pb	00 17 21.1	-0.2
DEMI				iS	Sg	00 17 27.4	-0.8
BALB	**Balikesir**	**0.65**	**351**	ePG	Pb	00 17 22.3	-0.6
BALB				eSG	Sb	00 17 31.6	-0.1
BALB	**Balikesir**	**0.65**	**351**	ePg	Pb	00 17 22.3	-0.6
BALB				eSg	Sb	00 17 31.6	-0.1
KULA	**Kula-Manisa**	**0.70**	**134**	ePG	Pb	00 17 24.0	+0.1
KULA				eSG	Sb	00 17 32.9	-0.5
KULA	**Kula-Manisa**	**0.70**	**134**	ePg	Pb	00 17 24.0	+0.1
KULA				eSg	Sb	00 17 32.9	-0.5
DST	**Dursunbey**	**0.76**	**38**	ePG	Pb	00 17 25.1	+0.2
DST	**Dursunbey**	**0.76**	**38**	ePg	Pb	00 17 25.1	+0.2
BALY	**Balya**	**0.80**	**338**	iP	Pb	00 17 25.4	-0.1
BALY				iS	Sg	00 17 35.4	-0.5
BALY	**Balya**	**0.80**	**338**	iP	Pb	00 17 25.4	-0.1
BALY				iS	Sg	00 17 35.4	-0.5
IZM	**Izmir**	**0.84**	**224**	ePG	Pb	00 17 25.9	-0.3
IZM	**Izmir**	**0.84**	**224**	ePg	Pb	00 17 25.9	-0.3
BLCB	**Balcova**	**0.98**	**231**	ePG	Pn	00 17 29.4	+0.4
BLCB	**Balcova**	**0.98**	**231**	ePg	Pn	00 17 29.4	+0.4
AYVA	**Ayvalik**	**1.07**	**287**	iP	Pn	00 17 30.6	+0.3
AYVA				iS	Sn	00 17 45.6	+0.7
AYVA	**Ayvalik**	**1.07**	**287**	iP	Pn	00 17 30.6	+0.3
AYVA				iS	Sn	00 17 45.6	+0.7
GONE	**Gonen-Balikesi**	**1.07**	**347**	ePG	Pn	00 17 31.1	+0.8
GONE	**Gonen-Balikesi**	**1.07**	**347**	ePg	Pn	00 17 31.2	+0.8
GDZ	**Gediz**	**1.15**	**85**	iP	Pn	00 17 32.2	+0.7
GDZ				iS	Sn	00 17 47.7	+0.7
GDZ	**Gediz**	**1.15**	**85**	iP	Pn	00 17 32.2	+0.7
GDZ				iS	Sn	00 17 47.7	+0.7
TVSB	**Tavsanli**	**1.21**	**68**	ePN	Pg	00 17 34.1	+0.8
TVSB	**Tavsanli**	**1.21**	**68**	ePn	Pg	00 17 34.1	+0.8
KHAL	**Karahalli**	**1.32**	**118**	iP	Pg	00 17 34.2	-1.1
KHAL				iS	Sg	00 17 52.8	+0.3
KHAL	**Karahalli**	**1.32**	**118**	iP	Pg	00 17 34.2	-1.1
KHAL				iS	Sg	00 17 52.8	+0.3
AYDN	**Tasoluk**	**1.34**	**184**	iP	Pg	00 17 35.3	-0.4
AYDN				iS	Sg	00 17 52.6	-0.6
AYDN	**Tasoluk**	**1.34**	**184**	iP	Pg	00 17 35.3	-0.4
AYDN				iS	Sg	00 17 52.6	-0.6
KHL	**Karahalli**	**1.36**	**119**	ePN	Pg	00 17 36.0	-0.1
KHL	**Karahalli**	**1.36**	**119**	ePn	Pg	00 17 36.0	-0.1
EZN	**Ezine**	**1.54**	**303**	ePN	Pg	00 17 39.0	-0.5

EZN	**Ezine**	**1.54**	**303**	*e*Pn	**Pg**	**00 17 39.0**	**-0.5**
BORA	**Eskisehir**	**2.08**	**64**	*i* P	**Pg**	**00 17 48.2**	**-1.7**
BORA				*i* S	**Sb**	**00 18 13.2**	**0.0**
BORA	**Eskisehir**	**2.08**	**64**	*i* P	**Pg**	**00 17 48.2**	**-1.7**
BORA				*i* S	**Sb**	**00 18 13.2**	**0.0**

ISK ***15*** *00:37:46.2, 39.°13N× 28.°95E, h21km, MD2.8*
ISCJB ***15*** *00:37:47.0±0.5, 39.°14N±0.°03× 28.°90E±0.°03, h12km±4km, Error ellipse: s-maj=4.9km s-min=4.0km az=171.2*
CSEM ***15*** *00:37:47.2±0.2, 39.°13N× 28.°89E, h10km, MD2.6, Error ellipse: s-maj=4.4km s-min=3.8km az=30.0*
DDA ***15*** *00:37:47.3, 39.°13N× 28.°85E, h20km, MD2.6*
ISC 15 00:37:46.9±0.9, 39.°14N±0.°02× 28.°91E±0.°02, h17km±8km, n22, σ0§51/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.18**	**237**	*i* P	**Pg**	**00 37 51.8**	**+0.4**
DEMI				*i* S	**Sb**	**00 37 54.5**	**-0.4**
DEMI	**Demirci**	**0.18**	**237**	*i* P	**Pg**	**00 37 51.8**	**+0.4**
DEMI				*i* S	**Sb**	**00 37 54.5**	**-0.4**
GDZ	**Gediz**	**0.45**	**96**	*i* P	**Pb**	**00 37 56.6**	**+0.2**
GDZ				*i* S	**Sb**	**00 38 03.0**	**+0.1**
GDZ	**Gediz**	**0.45**	**96**	*i* P	**Pb**	**00 37 56.6**	**+0.2**
GDZ				*i* S	**Sb**	**00 38 03.0**	**+0.1**
TVSB	**Tavsanli**	**0.53**	**54**	PG	**Pg**	**00 37 57.6**	**+0.1**
TVSB				SG	**Sg**	**00 38 04.4**	**-0.3**
TVSB	**Tavsanli**	**0.53**	**54**	*i* Pg	**Pg**	**00 37 57.7**	**+0.1**
TVSB				*i* Sg	**Sg**	**00 38 04.4**	**-0.3**
DURS	**Dursunbey**	**0.57**	**324**	*i* P	**Pb**	**00 37 58.9**	**+0.5**
DURS				*i* S	**Sg**	**00 38 05.5**	**-0.4**
DURS	**Dursunbey**	**0.57**	**324**	*i* P	**Pb**	**00 37 58.9**	**+0.5**
DURS				*i* S	**Sg**	**00 38 05.5**	**-0.4**
KULA	**Kula-Manisa**	**0.65**	**197**	*e*PG	**Pg**	**00 38 00.3**	**+0.5**
KULA				*e*SG	**Sb**	**00 38 08.7**	**+0.1**
KULA	**Kula-Manisa**	**0.65**	**197**	*e*Pg	**Pg**	**00 38 00.3**	**+0.5**
KULA				*e*Sg	**Sb**	**00 38 08.7**	**+0.1**
AKHS	**Akhisar**	**0.89**	**253**	*i* P	**Pg**	**00 38 04.6**	**+0.4**
AKHS				*i* S	**Sb**	**00 38 16.0**	**+0.6**
AKHS	**Akhisar**	**0.89**	**253**	*i* P	**Pg**	**00 38 04.6**	**+0.4**
AKHS				*i* S	**Sb**	**00 38 16.0**	**+0.6**
KHAL	**Karahalli**	**0.89**	**149**	*i* P	**Pn**	**00 38 04.9**	**+0.2**
KHAL				*i* S	**Sb**	**00 38 15.3**	**-0.3**
KHAL	**Karahalli**	**0.89**	**149**	*i* P	**Pn**	**00 38 04.9**	**+0.2**
KHAL				*i* S	**Sb**	**00 38 15.3**	**-0.3**
KHL	**Karahalli**	**0.95**	**149**	*e*PG	**Pb**	**00 38 04.2**	**-0.7**
KHL				*e*SG	**Sg**	**00 38 17.8**	**0.0**
KHL	**Karahalli**	**0.95**	**149**	*e*Pg	**Pb**	**00 38 04.2**	**-0.7**
KHL				*e*Sg	**Sg**	**00 38 17.8**	**0.0**
BALY	**Balya**	**1.16**	**302**	*i* P	**Pg**	**00 38 09.8**	**+0.4**
BALY				*i* S	**Sb**	**00 38 21.6**	**-1.7**
BALY	**Balya**	**1.16**	**302**	*i* P	**Pg**	**00 38 09.8**	**+0.4**
GONE	**Gonen-Balikesi**	**1.31**	**314**	*e*PN	**Pn**	**00 38 09.8**	**-0.5**
GONE				*e*SN	**Sb**	**00 38 27.8**	**+0.3**
GONE	**Gonen-Balikesi**	**1.31**	**314**	*e*Pn	**Pn**	**00 38 09.8**	**-0.5**
GONE				*e*Sn	**Sb**	**00 38 27.8**	**+0.3**
BORA	**Eskisehir**	**1.41**	**58**	*i* P	**Pg**	**00 38 14.8**	**+0.8**
BORA				*i* S	**Sg**	**00 38 32.0**	**-0.4**
BORA	**Eskisehir**	**1.41**	**58**	*i* P	**Pg**	**00 38 14.8**	**+0.8**
BORA				*i* S	**Sg**	**00 38 32.0**	**-0.4**

ISCJB ***15*** *00:50:07.6±0.5, 16.°23S×0.°09× 177.°8W×0.°1, h10km, mb4.2/14, MS4.2/5, Error ellipse: s-maj=17.0km s-min=11.4km az=31.9*
IDC ***15*** *00:50:07.8±0.9, 16.°14S× 177.°77W, h0km, mb3.9/8, mb1 4.2/8, mb1mx4.1/17, mbtmp3.9/8, MS4.1/7, Ms1 4.1/7, ms1mx3.9/24, Error ellipse: s-maj=42.3km s-min=22.8km az=133.0*
NEIC ***15*** *00:50:09.2±0.4, 16.°20S× 177.°76W, h10km, mb4.4/5, Error ellipse: s-maj=13.5km s-min=8.7km az=120.0*
ISC 15 00:50:09.0±0.6, 16.°2S±0.°1× 177.°7W±0.°1, h10km, n44, σ0§68/29, mb4.3/14, MS4.0/5, 1C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.19**	**69**	LR	LR	00 53 48.8	
	comp=Z,458nm,18.6s,baz=76,slow=36						
RAO	**Raoul Island**	**13.01**	**181**	*e*Pn	**Pn**	**00 53 13.9**	**0.0**
DZM	**Mont Dzumac**	**16.05**	**246**	*e*LR	LR	00 58 08.0	
	595nm,26.1s						
RAR	**Rarotonga**	**17.73**	**109**	LR	LR	00 58 49.2	
	comp=Z,374nm,19.6s,baz=76,slow=29						
URZ	**Urewera**	**22.45**	**191**	*e*P	**P**	**00 55 08.8**	**+0.6**
	8.0nm,0.8s						
URZ	**Urewera**	**22.45**	**191**	P	**P**	**00 55 08.9**	**+0.7**
	2.7nm,0.6s,baz=36,slow=8.7,SNR=2.9						
URZ				LR	LR	01 02 27.0	
	comp=Z,549nm,18.9s,baz=228,slow=33						
SNZO	**South Karori**	**25.87**	**193**	P	**P**	**00 55 41.6**	**+0.8**
PPT	**Papeete**	**26.98**	**97**	LR	LR	01 04 56.0	
	comp=Z,264nm,19.0s,baz=337,slow=33						
TBI	**Tubuai**	**27.52**	**110**	*e*LR	LR	01 02 34.2	
	448nm,30.5s						
CTAO	**Charters Tower**	**34.40**	**258**	*e*P	**P**	**00 56 56.7**	**0.0**
	5.6nm,0.9s						
CAN	**Canberra**	**35.27**	**231**	*e*P	**P**	**00 57 04.3**	**+0.2**
TAU	**Tasmania Unive**	**39.95**	**221**	*e*P	**P**	**00 57 42.8**	**-0.7**
	38nm,1.0s						
STKA	**Stephens Creek**	**40.03**	**240**	P	**P**	**00 57 44.5**	**+0.1**
STKA	**Stephens Creek**	**40.03**	**240**	LR	LR	01 11 49.6	
	comp=Z,343nm,19.4s,baz=27,slow=32						
WRAB	**Tennant Creek**	**45.59**	**258**	P	**P**	**00 58 29.8**	**+0.1**
AS31	**Alice Springs**	**45.89**	**253**	*e*P	**P**	**00 58 32.2**	**+0.1**
ASAR	**Alice Springs**	**45.89**	**253**	P	**P**	**00 58 31.9**	**-0.2**
ASAR	**Alice Springs**	**45.89**	**253**	P	**P**	**00 58 31.9**	**-0.2**
	3.0nm,0.9s,baz=84,slow=8.6,SNR=17						
ASAR				LR	LR	01 15 23.7	
	comp=Z,171nm,18.5s,baz=350,slow=33						
MBWA	**Marble Bar**	**59.13**	**255**	*e*P	**P**	**01 00 10.1**	**-0.1**
	4.1nm,1.0s						
NWAO	**Narrogin (SRO)**	**60.59**	**241**	P	**P**	**01 00 20.6**	**+0.4**
MJAR	**Matsushiro Arr**	**66.93**	**323**	P	P	01 01 06.8	+5.1
MJAR	**Matsushiro Arr**	**66.93**	**323**	P	P	01 01 06.8	+5.1
	1.7nm,0.7s,baz=127,slow=5.6,SNR=3.0						
PETK	**Petropavlovsk-**	**72.19**	**345**	P	P	01 01 39.0	+5.1
PETK	**Petropavlovsk-**	**72.19**	**345**	P	P	01 01 38.9	+5.1
	5.6nm,0.9s,baz=152,slow=6.5,SNR=4.7						
QSPA	**South Pole Qui**	**73.86**	**180**	*e*P	**P**	**01 01 42.8**	**-1.1**
	1.9nm,0.8s						
NVAR	**Mina Array Bea**	**77.75**	**44**	P	**P**	**01 02 07.0**	**+0.3**
NVAR	**Mina Array Bea**	**77.75**	**44**	P	**P**	**01 02 07.0**	**+0.3**
	1.9nm,0.8s,baz=228,slow=9.5,SNR=2.9						
ILAR	**Eielson Array**	**84.08**	**13**	P	**P**	**01 02 38.7**	**-0.8**
ILAR	**Eielson Array**	**84.08**	**13**	P	**P**	**01 02 38.7**	**-0.8**
	4.4nm,1.1s,baz=218,slow=5.2,SNR=9.3						
TXAR	**Lajitas Array**	**84.54**	**58**	P	**P**	**01 02 43.4**	**+0.6**
TXAR	**Lajitas Array**	**84.54**	**58**	P	**P**	**01 02 43.4**	**+0.6**
	0.5nm,0.9s,baz=224,slow=2.5,SNR=3.6						
PDAR	**Pinedale Array**	**85.67**	**43**	P	**P**	**01 02 47.5**	**-0.9**
PDAR	**Pinedale Array**	**85.67**	**43**	P	**P**	**01 02 47.5**	**-0.9**
	0.4nm,0.7s,baz=213,slow=4.3,SNR=2.5						
YKA	**Yellowknife Ar**	**92.51**	**24**	P	P	01 03 22.1	+2.1
YKA	**Yellowknife Ar**	**92.51**	**24**	P	P	01 03 22.1	+2.1
	0.1nm,0.5s,baz=245,slow=4.7,SNR=3.7						
SONM	**Songino Array**	**92.67**	**319**	P	**P**	**01 03 20.8**	**-0.5**
SONM	**Songino Array**	**92.67**	**319**	P	**P**	**01 03 20.8**	**-0.5**
	0.2nm,0.8s,baz=101,slow=2.9,SNR=2.6						
ULM	**Lac du Bonnet**	**97.19**	**40**	LR	LR	01 41 07.3	
	comp=Z,281nm,19.6s,baz=52,slow=32						
BRTR	**Keskin Array B**	**144.00**	**317**	PKP	**PKPdf**	**01 09 46.4**	**+1.1**
BRTR	**Keskin Array B**	**144.00**	**317**	PKP	**PKPdf**	**01 09 46.4**	**+1.1**
	2.1nm,0.9s,baz=250,slow=0.8,SNR=9.0						
GERES	**GERESS Array B**	**146.11**	**346**	PKPbc	**PKPab**	**01 09 51.0**	**+1.0**
GERES	**GERESS Array B**	**146.11**	**346**	PKPbc	**PKPab**	**01 09 51.0**	**+1.0**
	1.2nm,0.6s,baz=25,slow=3.5,SNR=9.3						
CONA	**Conrad Observa**	**146.42**	**343**	∥*i*sPKPab	sPKPab	01 09 54.6	-1.2
	3.3nm,0.8s						
ABTA	**Abfaltersbach**	**148.36**	**347**	⇑*i*sPKPbc	sPKPbc	01 10 00.1	-0.3
	3.5nm,0.8s						

CSEM ***15*** *01:36:12.5±0.3, 38.°01N× 38.°15E, h2km, MD2.8, Error ellipse: s-maj=6.3km s-min=5.6km az=155.0*
DDA ***15*** *01:36:12.7, 38.°05N× 38.°20E, h5km, MD2.8*
ISK ***15*** *01:36:12.3, 38.°02N× 38.°20E, h6km, MD2.5*
ISC 15 01:36:13.2±1.0, 38.°03N±0.°03× 38.°19E±0.°03, h9km±10km, n23, σ0§62/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALT	**Malatya**	**0.34**	**33**	PG	**Pg**	**01 36 20.4**	**+0.4**
MALT				SG	**Sg**	**01 36 25.3**	**+0.7**
MALT	**Malatya**	**0.34**	**33**	*i* Pg	**Pg**	**01 36 20.4**	**+0.4**
MALT				*i* Sg	**Sg**	**01 36 25.3**	**+0.7**
AKCD	**Akcadag**	**0.34**	**321**	*i* P	**Pg**	**01 36 20.0**	**-0.1**
AKCD				*i* S	**Sg**	**01 36 25.0**	**+0.4**
AKCD	**Akcadag**	**0.34**	**321**	*i* P	**Pg**	**01 36 20.0**	**-0.1**
AKCD				*i* S	**Sg**	**01 36 25.0**	**+0.4**
MYA	**Malataya**	**0.35**	**32**	PG	**Pg**	**01 36 19.9**	**-0.3**
MYA				SG	**Sg**	**01 36 24.8**	**0.0**
MYA	**Malataya**	**0.35**	**32**	*i* Pg	**Pg**	**01 36 19.9**	**-0.3**
MYA				*i* Sg	**Sg**	**01 36 24.8**	**0.0**
URFA	**Urfa**	**0.77**	**140**	*e*PG	**Pg**	**01 36 27.3**	**-0.8**
URFA				*e*SG	**Sg**	**01 36 38.3**	**+0.2**
URFA	**Urfa**	**0.77**	**140**	*e*Pg	**Pg**	**01 36 27.3**	**-0.8**
URFA				*e*Sg	**Sg**	**01 36 38.3**	**+0.2**
DARE	**Darende-Malaty**	**0.78**	**314**	*e*PG	**Pg**	**01 36 27.6**	**-0.7**
DARE	**Darende-Malaty**	**0.78**	**314**	*e*Pg	**Pg**	**01 36 27.6**	**-0.7**
ELZG	**Elazig**	**0.78**	**53**	*i* P	**Pg**	**01 36 27.6**	**-0.7**
ELZG				*i* S	**Sg**	**01 36 37.6**	**-0.9**
ELZG	**Elazig**	**0.78**	**53**	*i* P	**Pg**	**01 36 27.6**	**-0.7**
ELZG				*i* S	**Sg**	**01 36 37.6**	**-0.9**
GZT	**Gaziantep**	**0.84**	**217**	*i* P	**Pn**	**01 36 31.6**	**+0.2**
GZT				*i* S	**Sn**	**01 36 43.5**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.94**	**68**	*e*PG	**Pg**	**01 36 30.6**	**-0.8**
SVRC	**Sivrice-ELAZID**	**0.94**	**68**	*e*Pg	**Pg**	**01 36 30.6**	**-0.8**
KMRS	**Kahramanmaras**	**1.15**	**243**	*e*PN	**Pb**	**01 36 34.9**	**-0.4**
KMRS	**Kahramanmaras**	**1.15**	**243**	*e*Pn	**Pb**	**01 36 34.9**	**-0.4**
AYKD	**Aykdinkavak**	**1.26**	**241**	*i* P	**Pg**	**01 36 37.6**	**+0.2**
AYKD				*i* S	**Sn**	**01 36 54.2**	**+0.1**
ILIC	**ilic-Erzincan**	**1.45**	**12**	*e*PN	**Pn**	**01 36 40.1**	**+0.4**
ILIC	**ilic-Erzincan**	**1.45**	**12**	*e*Pn	**Pn**	**01 36 40.1**	**+0.4**
DIYA	**Diyarbakir**	**1.53**	**93**	*i* P	**Pg**	**01 36 43.0**	**+0.5**
DIYA				*i* S	**Sg**	**01 37 03.7**	**+1.4**
DIYA	**Diyarbakir**	**1.53**	**93**	*i* P	**Pg**	**01 36 43.0**	**+0.5**
DIYA				*i* S	**Sg**	**01 37 03.7**	**+1.4**
KUZU	**Kuzuini**	**1.54**	**216**	*i* P	**Pg**	**01 36 42.5**	**-0.3**
KUZU				*i* S	**Sb**	**01 37 01.8**	**+0.3**

ISCJB ***15*** *01:37:31.5±0.4, 37.°70N±0.°03× 28.°05E±0.°03, h8km±5km, Error ellipse: s-maj=5.1km s-min=3.5km az=135.6*
CSEM ***15*** *01:37:31.8±0.1, 37.°69N× 28.°05E, h12km, MD2.7, Error ellipse: s-maj=2.8km s-min=2.5km az=63.0*
DDA ***15*** *01:37:31.8, 37.°71N× 28.°05E, h12km, MD2.7*
ISK ***15*** *01:37:31.3, 37.°68N× 28.°06E, h17km, MD3.0*
ISC 15 01:37:31.8±0.8, 37.°69N±0.°02× 28.°04E±0.°02, h15km±6km, n54, σ0§46/74, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYDN	**Tasoluk**	**0.13**	**256**	*i* P	**Pg**	**01 37 35.7**	**+0.2**
AYDN				*i* S	**Sg**	**01 37 37.7**	**-0.3**
AYDN	**Tasoluk**	**0.13**	**256**	*i* P	**Pg**	**01 37 35.7**	**+0.2**
AYDN				*i* S	**Sg**	**01 37 37.7**	**-0.3**
MLSB	**Milas**	**0.45**	**208**	PG	**Pg**	**01 37 41.1**	**+0.3**
MLSB				SG	**Sg**	**01 37 47.3**	**+0.4**
MLSB	**Milas**	**0.45**	**208**	*i* Pg	**Pg**	**01 37 41.1**	**+0.3**
MLSB				*i* Sg	**Sg**	**01 37 47.3**	**+0.4**
YER	**Yerkesik**	**0.59**	**161**	*e*PG	**Pb**	**01 37 43.8**	**-0.1**
YER				*e*SG	**Sg**	**01 37 50.9**	**-0.4**
YER	**Yerkesik**	**0.59**	**161**	*e*Pg	**Pb**	**01 37 43.8**	**-0.1**
YER				*e*Sg	**Sg**	**01 37 50.9**	**-0.4**
GCAM	**G?zelcaml?**	**0.64**	**271**	*i* P	**Pg**	**01 37 44.5**	**+0.1**
GCAM				*i* S	**Sg**	**01 37 52.4**	**-0.5**
GCAM	**G?zelcaml?**	**0.64**	**271**	*i* P	**Pg**	**01 37 44.5**	**+0.1**
GCAM				*i* S	**Sg**	**01 37 52.4**	**-0.5**
DENT	**Denizli**	**0.79**	**85**	*e*PG	**Pb**	**01 37 47.4**	**+0.2**
DENT	**Denizli**	**0.79**	**85**	*e*Pg	**Pb**	**01 37 47.4**	**+0.2**
DNZL	**Cakiroluk**	**0.80**	**90**	*i* P	**Pb**	**01 37 47.7**	**+0.2**
DNZL				*i* S	**Sb**	**01 37 57.9**	**-0.2**
DNZL	**Cakiroluk**	**0.80**	**90**	*i* P	**Pb**	**01 37 47.7**	**+0.2**
DNZL				*i* S	**Sb**	**01 37 57.9**	**-0.2**
BODT	**Bodrum**	**0.86**	**223**	*e*PG	**Pg**	**01 37 48.2**	**-0.2**
BODT	**Bodrum**	**0.86**	**223**	*e*Pg	**Pg**	**01 37 48.2**	**-0.2**
TURN	**Turunc**	**0.93**	**151**	*i* P	**Pg**	**01 37 49.8**	**0.0**
TURN				*i* S	**Sn**	**01 38 03.6**	**+0.2**
TURN	**Turunc**	**0.93**	**151**	*i* P	**Pg**	**01 37 49.8**	**0.0**
TURN				*i* S	**Sn**	**01 38 03.6**	**+0.2**
IZM	**Izmir**	**0.94**	**319**	*e*PG	**Pg**	**01 37 50.1**	**+0.2**
IZM	**Izmir**	**0.94**	**319**	*e*Pg	**Pg**	**01 37 50.1**	**+0.2**
KULA	**Kula-Manisa**	**0.95**	**31**	*e*PG	**Pg**	**01 37 50.3**	**0.0**
KULA	**Kula-Manisa**	**0.95**	**31**	*e*Pg	**Pg**	**01 37 50.3**	**0.0**
DAT	**Datca**	**1.03**	**201**	*e*PG	**Pn**	**01 37 52.0**	**+0.2**
DAT	**Datca**	**1.03**	**201**	*e*Pg	**Pn**	**01 37 52.0**	**+0.2**
DALT	**Dalyan (Mudla)**	**1.04**	**153**	*e*PG	**Pb**	**01 37 51.4**	**-0.1**
DALT	**Dalyan (Mudla)**	**1.04**	**153**	*e*Pg	**Pb**	**01 37 51.4**	**-0.1**
BLCB	**Balcova**	**1.05**	**311**	*e*PG	**Pg**	**01 37 52.5**	**+0.4**
BLCB	**Balcova**	**1.05**	**311**	*e*Pg	**Pg**	**01 37 52.5**	**+0.4**
AKHS	**Akhisar**	**1.20**	**351**	*i* P	**Pb**	**01 37 54.3**	**+0.1**
AKHS				*i* S	**Sg**	**01 38 10.3**	**-0.2**
AKHS	**Akhisar**	**1.20**	**351**	*i* P	**Pb**	**01 37 54.3**	**+0.1**
AKHS				*i* S	**Sg**	**01 38 10.3**	**-0.2**
AKS	**Akhisar**	**1.20**	**351**	*e*PN	**Pn**	**01 37 53.8**	**-0.2**
AKS	**Akhisar**	**1.20**	**351**	*e*Pn	**Pn**	**01 37 53.8**	**-0.2**
GLHS	**Glhisar (BURDU**	**1.28**	**114**	*e*PN	**Pn**	**01 37 54.2**	**-0.9**
GLHS	**Glhisar (BURDU**	**1.28**	**114**	*e*Pn	**Pn**	**01 37 54.3**	**-0.9**
GOLH	**Golhisar**	**1.29**	**110**	*i* P	**Pg**	**01 37 56.7**	**0.0**
GOLH				*i* S	**Sg**	**01 38 14.9**	**+1.4**
GOLH	**Golhisar**	**1.29**	**110**	*i* P	**Pg**	**01 37 56.7**	**0.0**
GOLH				*i* S	**Sg**	**01 38 14.9**	**+1.4**
URLA	**Izmir**	**1.32**	**301**	*i* P	**Pb**	**01 37 56.5**	**+0.2**
URLA				*i* S	**Sg**	**01 38 14.1**	**-0.4**
URLA	**Izmir**	**1.32**	**301**	*i* P	**Pb**	**01 37 56.5**	**+0.2**
URLA				*i* S	**Sg**	**01 38 14.1**	**-0.4**
KHL	**Karahalli**	**1.33**	**61**	*e*PN	**Pn**	**01 37 55.6**	**-0.3**
KHL	**Karahalli**	**1.33**	**61**	*e*Pn	**Pn**	**01 37 55.6**	**-0.3**
KHAL	**Karahalli**	**1.33**	**59**	*i* P	**Pb**	**01 37 56.7**	**+0.2**
KHAL				*i* S	**Sb**	**01 38 13.3**	**0.0**
KHAL	**Karahalli**	**1.33**	**59**	*i* P	**Pb**	**01 37 56.7**	**+0.2**
KHAL				*i* S	**Sb**	**01 38 13.3**	**0.0**
FETY	**Fethiye**	**1.34**	**142**	*e*PN	**Pn**	**01 37 55.7**	**-0.3**
FETY	**Fethiye**	**1.34**	**142**	*e*Pn	**Pn**	**01 37 55.7**	**-0.3**
DEMI	**Demirci**	**1.45**	**21**	*i* P	**Pg**	**01 37 59.1**	**-0.6**
DEMI	**Demirci**	**1.45**	**21**	*i* P	**Pg**	**01 37 59.1**	**-0.6**
ELL	**Elmali**	**1.76**	**122**	*e*PN	**Pn**	**01 38 01.4**	**-0.5**
ELL	**Elmali**	**1.76**	**122**	*e*Pn	**Pn**	**01 38 01.4**	**-0.5**
DURS	**Dursunbey**	**1.93**	**10**	*i* P	**Pn**	**01 38 04.8**	**+0.6**
DURS	**Dursunbey**	**1.93**	**10**	*i* P	**Pn**	**01 38 04.8**	**+0.6**
BALB	**Balikesir**	**1.95**	**356**	*e*PN	**Pn**	**01 38 03.9**	**-0.4**
BALB	**Balikesir**	**1.95**	**356**	*e*Pn	**Pn**	**01 38 03.9**	**-0.4**
BALY	**Balya**	**2.07**	**351**	*i* P	**Pn**	**01 38 07.2**	**+1.1**
BALY	**Balya**	**2.07**	**351**	*i* P	**Pn**	**01 38 07.2**	**+1.1**
TVSB	**Tavsanli**	**2.08**	**32**	*e*PN	**Pn**	**01 38 05.5**	**-0.7**
TVSB	**Tavsanli**	**2.08**	**32**	*e*Pn	**Pn**	**01 38 05.5**	**-0.7**

BJI ***15*** *01:41:06.7, 31.°24N× 103.°61E, h5km, ML3.6/14*
ISCJB ***15*** *01:41:08.0±0.6, 31.°22N±0.°04× 103.°76E±0.°08, h13km, mb3.1/4, Error ellipse: s-maj=9.6km s-min=5.2km az=177.3*
IDC ***15*** *01:41:09.7±1.9, 31.°57N× 103.°91E, h0km, mb3.3/5, mb1 3.4/6, mb1mx3.3/27, mbtmp3.3/6, ML3.5/2, Error ellipse: s-maj=38.4km s-min=30.4km az=19.0*
ISC 15 01:41:08.8±0.7, 31.°27N±0.°04× 103.°74E±0.°07, h13km, n12, σ2§35/18, mb3.3/4, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**178**	⇑*i*Pg	**Pg**	**01 41 13.6**	**-2.5**
CD2				Sg	**Sg**	**01 41 19.0**	**-2.0**
CD2				smax	smax		
	comp=N,9μm,0.7s						
CD2				smax	smax		
	comp=E,10μm,0.8s						
LZH	**Lanzhou**	**4.80**	**1**	*e*Pg	**Pg**	**01 42 40.0**	**-0.9**
LZH				Sg	**Sg**	**01 43 44.5**	**+1.4**
LZH				smax	smax		
	comp=N,57nm,1.0s						
LZH				smax	smax		
	comp=E,71nm,0.8s						
LZH				LR	LR		
	comp=N,120nm,4.2s						
LZH				LR	LR		
	comp=E,120nm,4.0s						
LZH				LR	LR		
	comp=Z,210nm,5.3s						
XAN	**Xi'an**	**5.17**	**56**	Pn	**Pn**	**01 42 28.5**	**+2.5**
XAN				Pg	Pb	01 42 43.5	+4.4
XAN				Sn	**Sn**	**01 43 27.3**	**+1.8**
XAN				Sg	**Sg**	**01 43 49.0**	**-5.8**
XAN				smax	smax		
	comp=N,43nm,0.6s						
XAN				smax	smax		
	comp=E,30nm,1.2s						
GYA	**Guiyang**	**5.44**	**151**	Pn	**Pn**	**01 42 32.3**	**+2.6**
GYA				Sn	**Sn**	**01 43 33.8**	**+1.6**
GYA				Sg	**Sg**	**01 44 04.4**	**+1.0**
GYA				smax	smax		
	comp=N,90nm,0.9s						
GYA				smax	smax		
	comp=E,100nm,1.0s						
GTA	**Gaotai**	**8.73**	**340**	*e*P	**Pg**	**01 43 53.1**	**-2.9**
GTA				pP	Px	01 43 56.9	
GTA				sP	Px	01 43 59.3	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**13.48**	**200**	Pn	**P**	**01 44 28.1**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=8.5,slow=9.1,SNR=10						
SONM	**Songino Array**	**16.67**	**6**	Pn	**Pn**	**01 45 02.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=3.3						
KSRS	**Korea Array**	**20.87**	**66**	P	**P**	**01 45 51.2**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=265,slow=11,SNR=11						
MKAR	**Makanchi Array**	**22.65**	**319**	P	**P**	**01 46 11.2**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=137,slow=11,SNR=4.2						
ZALV	**Zalesovo Beam**	**26.44**	**334**	P	**P**	**01 46 47.2**	**+1.9**
	comp=Z,0.4nm,0.4s,baz=131,slow=6.1,SNR=3.4						
KURBB	**Kurchatov Arra**	**26.92**	**323**	P	**P**	**01 46 50.6**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=130,slow=9.2,SNR=5.8						
YKA	**Yellowknife Ar**	**81.62**	**17**	P	**P**	**01 53 26.1**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=325,slow=5.2,SNR=4.6						

IDC 15 01:42:22.1±3.0, 4.°63S× 151.°84E, h164km±27km, mb3.3/11, mb1 3.4/12, mb1mx3.4/21, mbtmp3.3/12, Error ellipse: s-maj=21.9km s-min=17.1km az=90.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.64**	**224**	P	Pn	**01 43 57.9**	**+0.5**
	1.2nm,0.3s,baz=209,slow=11,SNR=2.4						
PMG				S	Sn	01 45 11.7	-0.6
	5.4nm,0.3s,baz=341,slow=21,SNR=7.7						
GUMO	**Guam**	**19.38**	**339**	P	P	01 46 34.9	-0.6
	7.7nm,0.3s,baz=180,slow=20,SNR=2.3						
DZM	**Mont Dzumac**	**22.38**	**142**	P	P	01 47 08.0	+0.8
	5.4nm,0.5s,baz=308,slow=12,SNR=9.1						
ASAR	**Alice Springs**	**25.64**	**221**	P	P	01 47 37.1	+0.4
	0.3nm,0.4s,baz=53,slow=8.8,SNR=2.8						
FITZ	**Fitzroy Crossi**	**28.91**	**240**	P	P	01 48 04.9	-0.9
	0.8nm,0.6s,baz=66,slow=10.0,SNR=5.1						
USRK	**Ussuriysk Arra**	**51.78**	**342**	P	P	01 51 13.7	+0.8
	0.7nm,0.6s,baz=147,slow=8.6,SNR=3.0						
CMAR	**Chiang Mai Arr**	**56.94**	**295**	P	P	01 51 51.8	+1.1
	0.8nm,0.8s,baz=118,slow=5.4,SNR=7.7						
SONM	**Songino Array**	**65.68**	**328**	P	P	01 52 49.6	+0.5
	0.8nm,0.6s,baz=138,slow=4.8,SNR=7.8						
MKAR	**Makanchi Array**	**79.57**	**319**	P	P	01 54 11.0	0.0
	0.3nm,0.6s,baz=120,slow=5.1,SNR=4.1						
ZALV	**Zalesovo Beam**	**80.48**	**327**

SBA	**Scott Base**	**18.50**	**203**	*e*P		**P**	**02 59 08.0**	**-0.5**
	20nm,1.0s							
VNDA	**Vanda**	**19.25**	**205**	*e*P		**Pn**	**02 59 19.1**	**+1.3**
	11nm,0.8s							
VNDA	**Vanda**	**19.25**	**205**	LR		LR	03 04 45.3	
	comp=Z,791nm,20.9s,baz=67,slow=31							
RPZ	**Rata Peaks**	**26.39**	**302**	LR		LR	03 08 52.2	
	comp=Z,216nm,18.7s,baz=140,slow=32							
QSPA	**South Pole Qui**	**27.11**	**180**	*e*P		**P**	**03 00 36.2**	**+0.7**
	9.7nm,0.9s							
QSPA	**South Pole Qui**	**27.11**	**180**	P		**P**	**03 00 36.7**	**+1.2**
	9.3nm,0.8s,baz=43,slow=7.3,SNR=26							
QSPA				LR		LR	03 09 36.2	
	comp=Z,615nm,18.2s,baz=242,slow=33							
URZ	**Urewera**	**29.09**	**317**	LR		LR	03 09 17.8	
	comp=Z,457nm,21.5s,baz=165,slow=30							
TBI	**Tubuai**	**40.03**	**12**	*e*S		**S**	**03 08 35.1**	**+1.9**
	116nm,28.8s							
TBI				*e*LQ		LQ	03 11 41.8	
	288nm,27.5s							
TBI				*e*LR		LR	03 13 16.6	
	949nm,27.8s,baz=182							
RAR	**Rarotonga**	**41.79**	**357**	LR		LR	03 15 28.8	
	comp=Z,392nm,19.6s,baz=7.0,slow=30							
RKT	**Rikitea**	**42.71**	**32**	*e*LQ		LQ	03 12 40.6	
	1µm,29.5s							
VNA3	**Neumayer Olymp**	**44.22**	**166**	*e*P		**P**	**03 03 01.4**	**+0.1**
SNAA	**Sanae**	**44.49**	**169**	*e*P		**P**	**03 03 03.3**	**-0.2**
SNAA	**Sanae**	**44.49**	**169**	*e*P		**P**	**03 03 02.7**	**-0.8**
	16nm,1.1s							
SNAA	**Sanae**	**44.49**	**169**	P		**P**	**03 03 03.4**	**-0.2**
	2.8nm,0.9s,baz=211,slow=11,SNR=29							
VNA2	**Neumayer--Watz**	**44.77**	**167**	*e*P		**P**	**03 03 05.9**	**+0.2**
	baz=205,slow=7.6							
VNA1	**Neumayer--Stat**	**44.93**	**166**	*e*P		**P**	**03 03 07.6**	**+0.6**
PPT2	**Papeete2**	**45.73**	**11**	*e*S		**S**	**03 09 55.8**	**-1.2**
	164nm,25.8s							
PPT2				*e*LR		LR	03 15 51.4	
	1µm,27.2s,baz=191							
MAW	**Mawson**	**46.44**	**200**	LR		LR	03 22 12.8	
	comp=Z,270nm,21.7s,baz=350,slow=35							
STKA	**Stephens Creek**	**48.87**	**280**	P		**P**	**03 03 39.1**	**+0.9**
STKA	**Stephens Creek**	**48.87**	**280**	P		**P**	**03 03 39.1**	**+0.9**
	2.7nm,0.7s,baz=172,slow=7.1,SNR=3.1							
STKA				LR		LR	03 18 57.7	
	comp=Z,409nm,20.9s,baz=307,slow=30							
AFI	**Afiamalu**	**50.03**	**342**	LR		LR	03 19 45.0	
	comp=Z,186nm,18.5s,baz=212,slow=30							
PLCA	**Paso Flores**	**53.45**	**109**	P		**P**	**03 04 13.5**	**+0.8**
PLCA	**Paso Flores**	**53.45**	**109**	P		**P**	**03 04 13.5**	**+0.8**
	3.4nm,0.8s,baz=212,slow=7.6,SNR=12							
PLCA				LR		LR	03 20 47.1	
	comp=Z,216nm,21.7s,baz=15,slow=29							
CTA	**Charters Tower**	**57.07**	**292**	P		**P**	**03 04 40.2**	**+1.3**
CTA	**Charters Tower**	**57.07**	**292**	P		**P**	**03 04 40.2**	**+1.3**
	4.5nm,0.8s,baz=165,slow=8.5,SNR=7.3							
CTA				LR		LR	03 26 00.6	
	comp=Z,248nm,18.7s,baz=142,slow=33							
CTAO	**Charters Tower**	**57.07**	**292**	*e*P		**P**	**03 04 39.8**	**+0.9**
	14nm,1.1s							
NWAO	**Narrogin (SRO)**	**59.03**	**258**	LR		LR	03 24 52.0	
	comp=Z,312nm,21.7s,baz=42,slow=30							
TRQA	**Tornquist**	**59.33**	**114**	*e*P		**P**	**03 04 54.7**	**+0.2**
	1.9nm,1.1s							
ASAR	**Alice Springs**	**59.37**	**278**	P		**P**	**03 04 54.5**	**-0.5**
ASAR	**Alice Springs**	**59.37**	**278**	P		**P**	**03 04 54.5**	**-0.5**
	2.6nm,0.8s,baz=150,slow=7.3,SNR=15							
AS31	**Alice Springs**	**59.37**	**278**	*e*P		**P**	**03 04 54.6**	**-0.4**
WRAB	**Tennant Creek**	**62.42**	**280**	*e*P		**P**	**03 05 14.7**	**-1.0**
	6.1nm,1.0s							
PMG	**Port Moresby**	**66.30**	**298**	*e*P		**P**	**03 05 41.3**	**+0.3**
	15nm,1.1s							
FITZ	**Fitzroy Crossi**	**67.97**	**273**	P		**P**	**03 05 50.1**	**-1.5**
FITZ	**Fitzroy Crossi**	**67.97**	**273**	P		**P**	**03 05 50.1**	**-1.5**
	2.0nm,1.0s,baz=187,slow=8.1,SNR=3.5							
FITZ				LR		LR	03 30 47.1	
	comp=Z,236nm,20.9s,baz=138,slow=32							
CPUP	**Villa Florida**	**71.42**	**111**	P		**P**	**03 06 12.8**	**-0.1**
CPUP	**Villa Florida**	**71.42**	**111**	P		**P**	**03 06 12.8**	**-0.1**
	2.1nm,0.6s,baz=203,slow=7.7,SNR=6.9							
CPUP				LR		LR	03 32 36.6	
	comp=Z,168nm,18.8s,baz=193,slow=32							
LPAZ	**La Paz**	**75.46**	**97**	*e*P		**P**	**03 06 37.9**	**+0.3**
	6.9nm,1.1s							
LPAZ	**La Paz**	**75.46**	**97**	P		**P**	**03 06 38.7**	**+1.1**
	2.5nm,1.0s,baz=189,slow=4.7,SNR=5.5							
LPAZ				LR		LR	03 32 47.2	
	comp=Z,70nm,19.1s,baz=344,slow=30							
SAML	**Samuel**	**84.16**	**98**	*e*P		**P**	**03 07 23.5**	**-0.5**
	8.3nm,1.4s							
BDFB	**Brasilia**	**84.83**	**114**	P		**P**	**03 07 27.2**	**-0.3**
BDFB	**Brasilia**	**84.83**	**114**	P		**P**	**03 07 27.2**	**-0.3**
	2.8nm,0.9s,baz=202,slow=5.4,SNR=3.7							
BDFB				LR		LR	03 42 41.3	
	comp=Z,253nm,18.9s,baz=1.3,slow=34							
BOSA	**Boshof**	**88.67**	**183**	LR		LR	03 42 27.4	
	comp=Z,297nm,20.9s,baz=168,slow=32							
ROSC	**El Rosal**	**91.30**	**82**	LR		LR	03 43 13.5	
	comp=Z,52nm,18.9s,baz=89,slow=32							
ILAR	**Eielson Array**	**127.73**	**6**	PKP		**PKPdf**	**03 13 56.8**	**+0.3**
ILAR	**Eielson Array**	**127.73**	**6**	PKP		**PKPdf**	**03 13 56.8**	**+0.3**
	1.4nm,1.0s,baz=208,slow=1.5,SNR=11							
TORD	**Torodi Ar. Bea**	**128.12**	**154**	PKP		**PKPdf**	**03 13 58.6**	**-0.3**
TORD	**Torodi Ar. Bea**	**128.12**	**154**	PKP		**PKPdf**	**03 13 58.6**	**-0.3**
	0.4nm,0.8s,baz=197,slow=0.3,SNR=2.9							
RES	**Resolute Bay**	**143.37**	**23**	*e*PKPdf		**PKPdf**	**03 14 24.9**	**-0.3**
MKAR	**Makanchi Array**	**143.44**	**273**	PKPpre		PKPpre	03 14 22.7	
MKAR				PKP		**PKPdf**	**03 14 26.4**	**+0.2**
MKAR	**Makanchi Array**	**143.44**	**273**	PKhKP		PKPpre	03 14 22.7	
	0.2nm,0.6s,baz=149,slow=3.0,SNR=3.8							
MKAR				PKP		**PKPdf**	**03 14 26.4**	**+0.2**
	0.7nm,0.9s,baz=128,slow=2.4,SNR=3.2							
MK31	**Makanchi Array**	**143.44**	**273**	*e*PKPdf		**PKPdf**	**03 14 27.1**	**+0.8**
TKM2	**Tokmak 2**	**143.51**	**262**	*e*PKPdf		**PKPdf**	**03 14 25.6**	**-1.2**
AAK	**Ala-Archa**	**143.78**	**261**	*e*PKPdf		PKPbc	03 14 25.6	+0.7
EKS2	**Erkin-Say**	**144.12**	**260**	*e*PKPdf		PKPbc	03 14 26.0	+0.1
ZALV	**Zalesovo Beam**	**147.36**	**283**	PKPbc		**PKPbc**	**03 14 34.4**	**-0.8**
ZALV	**Zalesovo Beam**	**147.36**	**283**	PKPbc		**PKPbc**	**03 14 34.4**	**-0.8**
	1.4nm,0.7s,baz=116,slow=3.4,SNR=6.3							
KURK	**Kurchatov**	**147.95**	**274**	*e*PKPbc		**PKPbc**	**03 14 36.8**	**-0.1**
KEST	**Kesra**	**151.55**	**158**	*e*PKPdf		**PKPdf**	**03 14 39.8**	**-0.3**
KEST				*e*PKPab		**PKPab**	**03 14 53.6**	**-1.2**
ESDC	**Sonseca Array**	**151.85**	**134**	PKPbc		**PKPbc**	**03 14 46.6**	**-0.2**
ESDC	**Sonseca Array**	**151.85**	**134**	PKPbc		**PKPbc**	**03 14 46.6**	**-0.2**
	1.5nm,0.9s,baz=292,slow=2.5,SNR=4.7							
MALT	**Malatya**	**153.40**	**209**	*e*PKPdf		**PKPdf**	**03 14 42.6**	**-0.2**
GNI	**Garni**	**153.47**	**221**	*e*PKPbc		**PKPbc**	**03 14 49.2**	**-1.4**

IDC 15 03:02:29.7±1.3,25°.18S×177°.10W,h0km,mb4.3/5, mb1 4.3/5,mb1mx4.0/19,mbtmp4.3/5,MS4.1/2,Ms1 4.1/2, ms1mx3.2/34,Error ellipse: s-maj=47.0km s-min=27.9km az=61.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**37.40**	**288**	P	P	03 09 44.8	+0.1
	7.7nm,0.6s,baz=137,slow=8.2,SNR=4.8						
ASAR	**Alice Springs**	**44.44**	**261**	P	P	03 10 41.9	-0.9
	0.1nm,0.3s,baz=97,slow=8.2,SNR=5.8						
QSPA	**South Pole Qui**	**64.91**	**180**	P	P	03 13 11.6	+0.7
	5.3nm,0.9s,baz=332,slow=3.9,SNR=22						
PETK	**Petropavlovsk-**	**80.98**	**345**	P	P	03 14 45.4	-0.5
	5.6nm,0.7s,baz=148,slow=8.7,SNR=4.3						
NVAR	**Mina Array Bea**	**83.87**	**43**	LR	LR	03 45 50.8	
	comp=Z,944nm,18.9s,baz=202,slow=31						
PDAR	**Pinedale Array**	**91.80**	**43**	LR	LR	03 49 10.8	
	comp=Z,90nm,20.1s,baz=68,slow=30						
CMAR	**Chiang Mai Arr**	**92.44**	**289**	P	P	03 15 44.1	+1.1
	0.2nm,0.4s,baz=139,slow=3.0,SNR=4.5						
AKASG	**Malin Array Be**	**147.45**	**328**	PKPbc	PKPbc	03 22 15.1	-0.3
	1.3nm,0.4s,baz=45,slow=4.6,SNR=3.9						
TORD	**Torodi Ar. Bea**	**167.98**	**174**	PKPab	PKPab	03 23 44.0	-2.0
	0.4nm,0.8s,baz=189,slow=3.0,SNR=7.4						

*NOU **15** 03:11:12.5±0.3, 14°.57S×168°.55E, h30km, MD3.9*
*ISCJB **15** 03:11:15.9±0.4, 14°.83S±0°.04×167°.39E±0°.07, h129km, mb4.7/43, Error ellipse: s-maj=9.2km s-min=5.2km az=169.7*
*IDC **15** 03:11:19.0±1.5, 14°.86S×167°.32E, h146km±12km, mb4.2/20,mb1 4.3/21,mb1mx4.2/28,mbtmp4.2/21,MS4.4/3, Ms1 4.4/3,ms1mx3.4/33,Error ellipse: s-maj=13.0km s-min=10.7km az=78.0*
*NEIC **15** 03:11:25.3±1.6, 14°.92S×167°.28E, h204km±14km,*

mb4.8/25,Error ellipse: s-maj=8.6km s-min=6.2km az=213.0
*AUST **15** 03:11:34.4±3.5, 15°.18S×167°.06E, h276km, Error ellipse: s-maj=2.0km s-min=1.5km az=28.0*
ISC 15 03:11:17.1±0.4,14°.81S±0°.05×167°.37E±0°.08,h129km, n134,σ1♀48/149,mb4.8/42,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.28**	**187**	*e*P	**Pn**	**03 13 01.8**	**+0.9**
DZM				AMP		03 14 37.0	
DZM	**Mont Dzumac**	**7.28**	**187**	*e*Pn	**Pn**	**03 13 01.8**	**+0.9**
	71nm,0.4s						
DZM				*e*Sn	**Sn**	**03 14 23.6**	**+1.4**
DZM	**Mont Dzumac**	**7.28**	**187**	P	**Pn**	**03 13 01.9**	**+0.9**
	18nm,0.3s,baz=46,slow=15,SNR=101						
DZM				S	**Sn**	**03 14 24.6**	**+2.5**
	15nm,0.3s,baz=159,slow=23,SNR=7.2						
BAYA	**Yate Dam**	**7.32**	**184**	*e*S	**Sn**	**03 14 22.1**	**-1.0**
NOUC	**Port Laguerre**	**7.32**	**188**	*e*P	**Pn**	**03 13 02.5**	**+1.0**
NOUC				AMP		03 14 31.0	
	comp=Z,53nm,6.2s						
EIDS	**Eidsvold**	**18.54**	**233**	*e*P	**Pn**	**03 15 26.2**	**+0.7**
	comp=Z,51nm,0.6s						
EIDS	**Eidsvold**	**18.54**	**233**	P	**Pn**	**03 15 26.4**	**+0.9**
	baz=18,SNR=31						
RAO	**Raoul Island**	**19.78**	**139**	*e*P	**Pn**	**03 15 40.0**	**-0.1**
	comp=Z,2µm,2.0s						
AFI	**Afiamalu**	**20.22**	**90**	*e*P	Pn	03 15 46.6	+1.2
	comp=Z,78nm,1.3s						
PMG	**Port Moresby**	**20.47**	**283**	*e*P	Pn	03 15 47.0	-1.3
	comp=Z,19nm,0.8s						
PMG	**Port Moresby**	**20.47**	**283**	P	Pn	03 15 46.7	-1.7
	comp=Z,20nm,0.9s,baz=92,slow=5.2,SNR=8.8						
CTA	**Charters Tower**	**20.81**	**252**	P	**P**	**03 15 50.1**	**+1.6**
CTA	**Charters Tower**	**20.81**	**252**	P	**P**	**03 15 50.1**	**+1.6**
	comp=Z,21nm,0.7s,baz=85,slow=11,SNR=26						
CTAO	**Charters Tower**	**20.81**	**252**	*e*P	**P**	**03 15 50.1**	**+1.6**
	comp=Z,28nm,0.9s						
RMQ	**Roma**	**20.90**	**233**	P	Pn	03 15 51.5	-1.9
	baz=20,SNR=24						
OUZ	**Omahuta**	**21.08**	**166**	*e*P	**P**	**03 15 53.6**	**+2.4**
	comp=Z,41nm,0.8s						
COEN	**Coen**	**23.45**	**269**	*e*P	**P**	**03 16 15.7**	**+0.5**
COEN	**Coen**	**23.45**	**269**	P	**P**	**03 16 14.2**	**-1.0**
	baz=23,SNR=5.0						
QLP	**Quilpie**	**24.56**	**238**	P	**P**	**03 16 26.0**	**+0.9**
	baz=24,SNR=18						
URZ	**Urewera**	**24.90**	**162**	*e*P	**P**	**03 16 28.4**	**+0.4**
	comp=Z,42nm,1.6s						
URZ	**Urewera**	**24.90**	**162**	P	**P**	**03 16 28.4**	**+0.4**
	comp=Z,7.1nm,0.4s,baz=265,slow=1.8,SNR=10.0						
KHZ	**Kahutara**	**28.02**	**170**	*e*P	**P**	**03 16 56.3**	**+0.3**
	comp=Z,168nm,2.0s						
RPZ	**Rata Peaks**	**28.98**	**174**	*e*P	**P**	**03 17 04.1**	**-0.4**
	comp=Z,20nm,0.8s						
RPZ	**Rata Peaks**	**28.98**	**174**	P	**P**	**03 17 04.5**	**0.0**
	comp=Z,17nm,0.7s,baz=23,slow=13,SNR=7.7						
STKA	**Stephens Creek**	**29.02**	**230**	*e*P	**P**	**03 17 06.3**	**+1.3**
	comp=Z,4.1nm,0.4s						
STKA				PcP	**PcP**	**03 20 10.1**	**-0.3**
STKA				ScP	**ScP**	**03 23 40.0**	**-0.1**
STKA	**Stephens Creek**	**29.02**	**230**	P	**P**	**03 17 06.3**	**+1.3**
	comp=Z,22nm,0.6s,baz=50,slow=8.6,SNR=63						
STKA				PcP	**PcP**	**03 20 10.1**	**-0.3**
	comp=Z,5.0nm,0.8s,baz=101,slow=4.1,SNR=3.7						
STKA				ScP	**ScP**	**03 23 40.0**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=90,slow=7.1,SNR=3.8						
STKA	**Stephens Creek**	**29.02**	**230**	P	**P**	**03 17 06.3**	**+1.3**
	baz=29,SNR=47						
WHZ	**Wether Hill Ro**	**30.99**	**179**	*e*P	**P**	**03 17 22.0**	**-0.2**
	comp=Z,372nm,2.4s						
RAR	**Rarotonga**	**31.85**	**106**	LR	LR	03 27 58.8	
	comp=Z,1µm,20.4s,baz=110,slow=31						
WRAB	**Tennant Creek**	**31.89**	**256**	*e*P	**P**	**03 17 29.4**	**-1.1**
	comp=Z,9.1nm,1.1s						
AS31	**Alice Springs**	**32.73**	**249**	*e*P	**P**	**03 17 36.9**	**-1.0**
ASAR	**Alice Springs**	**32.74**	**249**	P	**P**	**03 17 37.0**	**-0.8**
ASAR				PcP	**PcP**	**03 20 19.9**	**-0.7**
ASAR				S	**S**	**03 22 40.7**	**-4.6**
ASAR				ScP	**ScP**	**03 23 52.5**	**-0.2**
ASAR	**Alice Springs**	**32.74**	**249**	P	**P**	**03 17 37.0**	**-0.8**
	comp=Z,9.5nm,0.5s,baz=78,slow=9.0,SNR=164						
ASAR				PcP	**PcP**	**03 20 19.9**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=89,slow=2.6,SNR=6.6						
ASAR				S	**S**	**03 22 40.7**	**-4.6**
	comp=Z,0.8nm,0.8s,baz=83,slow=16,SNR=6.9						
ASAR				ScP	**ScP**	**03 23 52.5**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=89,slow=3.3,SNR=9.0						
BBOO	**Buckleboo**	**33.61**	**232**	*e*P	**P**	**03 17 46.0**	**+0.7**
	comp=Z,3µm,2.1s						
BBOO	**Buckleboo**	**33.61**	**232**	P	**P**	**03 17 46.1**	**+0.8**
	baz=33,SNR=10						
KDU	**Kakadu**	**33.94**	**269**	P	**P**	**03 17 48.2**	**-0.2**
	baz=34,SNR=3.6						
MTN	**Manton Dam**	**35.22**	**269**	P	**P**	**03 18 00.6**	**+1.3**
	baz=35,SNR=3.5						
FORT	**Forrest**	**39.34**	**239**	*e*P	**P**	**03 18 33.7**	**-0.3**
	comp=Z,33nm,0.6s						
FORT	**Forrest**	**39.34**	**239**	P	**P**	**03 18 34.2**	**+0.2**
	baz=39,SNR=14						
PALU	**Palau**	**39.35**	**302**	P	**P**	**03 18 36.4**	**+2.2**
	baz=39,SNR=3.7						
FITZ	**Fitzroy Crossi**	**40.10**	**259**	*e*P	**P**	**03 18 40.4**	**0.0**
	comp=Z,15nm,0.6s						
FITZ	**Fitzroy Crossi**	**40.10**	**259**	P	**P**	**03 18 40.1**	**-0.3**
	comp=Z,13nm,0.4s,baz=76,slow=10,SNR=91						
FITZ	**Fitzroy Crossi**	**40.10**	**259**	P	**P**	**03 18 40.1**	**-0.3**
	baz=40,SNR=28						
MBWA	**Marble Bar**	**45.62**	**255**	*e*P	**P**	**03 19 24.9**	**+0.1**
	comp=Z,28nm,1.5s						
MEEK	**Meekatharra**	**46.84**	**247**	P	**P**	**03 19 34.3**	**-0.1**
	baz=46,SNR=10.0						
KAPI	**Kappang**	**47.81**	**277**	*e*P	**P**	**03 19 41.7**	**-0.4**
	comp=Z,8.3nm,1.0s						
KAPI	**Kappang**	**47.81**	**277**	P	**P**	**03 19 42.1**	**+0.1**
	comp=Z,6.5nm,0.8s,baz=107,slow=11						
PCI	**Palu**	**48.94**	**282**	S	S	03 26 32.8	-12
	baz=49,SNR=3.2						
MORW	**Morawa**	**49.32**	**244**	P	**P**	**03 19 53.4**	**0.0**
	baz=49,SNR=5.1						
TGY	**Tagaytay City**	**54.18**	**300**	P	**P**	**03 20 30.0**	**+0.3**
TGY	**Tagaytay City**	**54.18**	**300**	P	**P**	**03 20 30.0**	**+0.3**
	comp=Z,122nm,0.4s,baz=238,slow=13,SNR=2.4						
UGM	**Wanagama**	**56.03**	**270**	*e*P	**P**	**03 20 43.2**	**+0.1**
	comp=Z,531nm,1.9s						
MJAR	**Matsushiro Arr**	**58.02**	**332**	P	**P**	**03 20 57.0**	**+0.4**
MJAR	**Matsushiro Arr**	**58.02**	**332**	P	**P**	**03 20 57.0**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=169,slow=8.5,SNR=5.7						
MAJO	**Matsushiro**	**58.02**	**332**	*e*P	**P**	**03 20 57.2**	**+0.7**
MAT	**Matsushiro**	**58.02**	**332**	P	**P**	**03 20 57.3**	**+0.7**
JNU	**Nakatsue**	**59.05**	**324**	*e*P	**P**	**03 21 04.9**	**+1.1**
	comp=Z,72nm,2.4s						
JNU	**Nakatsue**	**59.05**	**324**	P	**P**	**03 21 04.2**	**+0.5**
	comp=Z,4.0nm,0.7s,baz=135,slow=4.3,SNR=4.2						
VNDA	**Vanda**	**62.78**	**181**	*e*P	**P**	**03 21 27.9**	**-0.4**
	comp=Z,43nm,1.9s						
VNDA	**Vanda**	**62.78**	**181**	P	**P**	**03 21 27.9**	**-0.4**
	comp=Z,4.3nm,0.7s,baz=1.2,slow=7.1,SNR=42						
SBA	**Scott Base**	**63.06**	**180**	*e*P	**P**	**03 21 30.9**	**+0.8**
	comp=Z,16nm,0.8s						
CASY	**Casey**	**63.49**	**202**	*e*P	**P**	**03 21 33.2**	**+0.1**
	comp=Z,126nm,2.5s						
NJ2	**Nanjing**	**65.80**	**316**	*e*P	**P**	**03 21 51.8**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
MDJ	**Mudanjiang**	**68.40**	**332**	P	**P**	**03 22 06.6**	**+1.8**
MDJ				pP	pP	03 22 47.0	+11
MDJ				sP	sP	03 23 05.4	+15
MDJ				S	**S**	**03 30 55.1**	**-0.8**
MDJ				ScS	**SKSac**	**03 31 49.6**	**-1.9**
MDJ				sS	ScS	03 32 05.8	+14
MDJ				pmax	pmax		
	comp=Z,12nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,69nm,4.5s						
KULM	**Kulim**	**69.06**	**282**	*e*P	**P**	**03 22 10.1**	**+0.5**
	comp=Z,11nm,0.9s						
CN2	**Changchun**	**69.77**	**329**	*e*P	P	03 22 18.9	+5.6
CN2				*e*pP	pP	03 23 01.0	+16
CN2				*e*S	**S**	**03 31 14.8**	**+2.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
PSI	**Prapat**	**69.97**	**279**	P	**P**	**03 22 14.2**	**-1.1**
PSI	**Prapat**	**69.97**	**279**	P	**P**	**03 22 14.2**	**-1.1**
	comp=Z,5.4nm,0.4s,baz=157,slow=7.2,SNR=3.7						
GYA	**Guiyang**	**71.84**	**305**	*e*P	**P**	**03 22 28.8**	**+2.4**
GYA				pP	pP	03 23 11.0	+13
GYA				sP	sP	03 23 30.4	+18
GYA				PP	**PP**	**03 25 12.3**	**+4.5**
GYA				S	**S**	**03 31 33.6**	**-3.4**
GYA				SKS	SKSac	03 32 11.0	-7.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJI	**Beijing**	**72.39**	**321**	P	**P**	**03 22 31.8**	**+2.6**
BJI				S	**S**	**03 31 40.8**	**-1.6**
BJI				pmax	pmax		
	comp=Z,11nm,0.5s						
BJI				pmax	pmax		
	comp=Z,170nm,3.8s						
BJI				LR	LR		
	comp=N,180nm,14.3s						
BJI				LR	LR		
	comp=E,200nm,14.6s						
BJI				LR	LR		
	comp=Z,27nm,16.7s						
KMI	**Kunming**	**74.43**	**302**	P	P	03 22 45.6	+3.8
KMI				S	**S**	**03 32 02.4**	**-4.2**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**75.07**	**294**	P	**P**	**03 22 43.8**	**-1.5**
CMAR	**Chiang Mai Arr**	**75.07**	**294**	P	**P**	**03 22 43.8**	**-1.5**
	comp=Z,1.8nm,0.7s,baz=134,slow=5.4,SNR=12						
CHTO	**Chiang Mai**	**75.20**	**294**	*e*P	**P**	**03 22 46.8**	**+0.7**
	comp=Z,3.2nm,0.9s						
QSPA	**South Pole Qui**	**75.22**	**180**	*e*P	**P**	**03 22 44.1**	**-1.4**
	comp=Z,9.1nm,0.9s						
QSPA	**South Pole Qui**	**75.22**	**180**	P	**P**	**03 22 44.7**	**-0.8**
	comp=Z,8.8nm,0.8s,baz=345,slow=3.4,SNR=15						
HHC	**Hu-ho-hao-te**	**75.71**	**320**	*e*P	**P**	**03 22 48.8**	**+0.2**
HHC				pP	pP	03 23 31.9	+11
HHC				sP	sP	03 23 50.5	+16
HHC				PP	**PP**	**03 25 43.3**	**+2.9**
HHC				S	**S**	**03 32 15.6**	**-4.3**
HHC				SKS	SKSac	03 32 36.9	-10
HHC				ScS	**SKKSac**	**03 32 43.8**	**-3.7**
HHC				sS	sS	03 33 29.8	+14
HHC				SS	**SS**	**03 37 14.5**	**-0.1**
HHC				pmax	pmax		
	comp=Z,53nm,0.7s						
HHC				pmax	pmax		
	comp=Z,230nm,7.2s						
CD2	**Chengdu**	**76.14**	**308**	P	**P**	**03 22 52.8**	**+1.6**
CD2				pP	pP	03 23 35.6	+12
CD2				sP	sP	03 23 54.5	+17
CD2				PP	**PP**	**03 25 48.1**	**+4.0**
CD2				S	**S**	**03 32 21.3**	**-3.5**
CD2				SKS	SKSac	03 32 41.9	-8.6
CD2				ScS	**SKKSac**	**03 32 48.1**	**-2.9**
CD2				sS	sS	03 33 35.9	+16
CD2				SS	**SS**	**03 37 22.0**	**+0.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH	**Lanzhou**	**78.45**	**312**	*e*P	**P**	**03 23 06.8**	**+2.7**
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
KDAK	**Kodiak Island**	**79.51**	**21**	LR	LR	03 56 39.7	
	comp=Z,169nm,18.2s,baz=93,slow=34						
ULN	**Ulaanbaatar**	**82.26**	**324**	*e*P	**P**	**03 23 24.9**	**+0.7**
	comp=Z,4.6nm,0.8s						
SONM	**Songino Array**	**82.62**	**324**	P	**P**	**03 23 26.5**	**+0.4**
SONM	**Songino Array**	**82.62**	**324**	P	**P**	**03 23 26.5**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=152,slow=7.9,SNR=13						
GTA	**Gaotai**	**82.79**	**314**	*e*P	**P**	**03 23 28.8**	**+1.6**
GTA				pP	pP	03 24 13.3	+13
GTA				sP	sP	03 24 32.0	+18
ILAR	**Eielson Array**	**86.57**	**18**	P	**P**	**03 23 43.9**	**-1.5**
ILAR	**Eielson Array**	**86.57**	**18**	P	**P**	**03 23 43.9**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=238,slow=5.0,SNR

JMA 15 03:11:28.4±0.2,27.05N×127.30E,h96km±3km,M3.8
JMA Felt I J1.
IDC 15 03:11:30.4±7.7,27.06N×127.31E,h118km±51km, mb3.8/13,mb1 3.9/14,mb1mx3.8/26,mbtmp3.8/14,Error ellipse: s-maj=65.9km s-min=23.8km az=172.0

ISC 15 03:11:28.2±0.7,26.91N±0.06×127.41E±0.06,h109km±6km, n38,σ1§21/55,mb4.1/17,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.35**	**206**	P	**Pn**	**03 11 43.7**	**-0.3**
JAGN				S	**Sn**	**03 11 54.8**	**-1.1**
JIH	**Iheya**	**0.51**	**76**	P	**Pn**	**03 11 44.9**	**0.0**
JIH				S	**Sn**	**03 11 56.3**	**-1.2**
JOW	**Kunigami**	**0.77**	**95**	P	**Pn**	**03 11 47.5**	**+0.4**
JOW				S	**Sn**	**03 12 00.6**	**-0.7**
JKE	**Kume jima 2**	**0.81**	**224**	P	**Pn**	**03 11 47.0**	**-0.4**
JKE				S	**Sn**	**03 12 00.5**	**-1.3**
JJT2	**Tamagusuku 2**	**0.82**	**158**	P	**Pn**	**03 11 48.8**	**+1.3**
JJT2				S	**Sn**	**03 12 04.0**	**+1.9**
JTK	**Tokunoshima**	**1.62**	**57**	P	**Pn**	**03 11 56.2**	**-0.2**
JTK				S	**Sn**	**03 12 16.1**	**-1.8**
JAMN	**Amaminishikomi**	**2.05**	**49**	P	**Pn**	**03 12 01.1**	**-0.7**
JAMN				S	**Sn**	**03 12 24.9**	**-2.6**
JAM	**Amami Oshima**	**2.46**	**52**	P	**Pn**	**03 12 06.6**	**-0.3**
JAM				S	**Sn**	**03 12 34.9**	**-1.8**
JZK	**Kikaishima**	**2.67**	**58**	P	**Pn**	**03 12 09.9**	**+0.1**
JZK				S	**Sn**	**03 12 41.8**	**+0.1**
JOGS	**Gusukube**	**2.80**	**221**	P	**Pn**	**03 12 11.7**	**+0.2**
JOGS				S	**Sn**	**03 12 45.0**	**+0.1**
JMJ	**Miyako jima 2**	**2.83**	**223**	P	**Pn**	**03 12 12.1**	**+0.2**
JTJ	**Tarama**	**3.33**	**228**	P	**Pn**	**03 12 17.9**	**-0.6**
JMZ	**Minamidaito 2**	**3.58**	**107**	P	**Pn**	**03 12 21.3**	**-0.6**
JMZ				*e*S	**Sn**	**03 12 59.2**	**-4.3**
JNN	**Nakanoshima**	**3.64**	**36**	P	**Pn**	**03 12 22.7**	**0.0**
JNN				S	**Sn**	**03 13 05.3**	**+0.5**
JIJ	**Ishigaki jima**	**3.89**	**230**	P	**Pn**	**03 12 24.7**	**-1.3**
JIJ				S	**Sn**	**03 13 08.0**	**-2.8**
JKRS	**Kuro-shima**	**4.06**	**230**	P	**Pn**	**03 12 27.3**	**-1.1**
JKRS				S	**Sn**	**03 13 13.2**	**-1.8**
IRIF	**Iriomote-Funau**	**4.20**	**233**	P	**Pn**	**03 12 28.9**	**-1.3**
HATJ	**Hateruma jima**	**4.32**	**230**	P	**Pn**	**03 12 30.6**	**-1.3**
HATJ				S	**Sn**	**03 13 22.7**	**+1.4**
YOJ	**Yonaguni jima**	**4.66**	**239**	P	**Pn**	**03 12 35.8**	**-0.6**
YOJ				S	**Sn**	**03 13 29.0**	**-0.4**
JNU	**Nakatsue**	**6.88**	**25**	P	**Pn**	**03 13 07.4**	**+0.9**
	2.6nm,0.3s,baz=206,slow=4.7,SNR=22						
JNU				S	**Sn**	**03 14 23.7**	**+0.4**
	0.5nm,0.3s,baz=3.6,slow=19,SNR=2.9						
SONM	**Songino Array**	**26.59**	**327**	P	**P**	**03 16 57.8**	**+1.5**
	2.0nm,0.4s,baz=148,slow=10,SNR=15						
MKAR	**Makanchi Array**	**40.54**	**311**	P	**P**	**03 18 56.1**	**-0.5**
	0.7nm,0.3s,baz=94,slow=9.3,SNR=24						
MKAR				PcP	**PcP**	**03 20 57.4**	**+0.3**
	0.3nm,0.5s,baz=90,slow=3.2,SNR=4.2						
ZALV	**Zalesovo Beam**	**41.27**	**323**	P	**P**	**03 19 01.5**	**-1.0**
	0.9nm,0.3s,baz=115,slow=9.1,SNR=5.9						
BVAR	**Borovoye Array**	**49.28**	**318**	P	**P**	**03 20 04.7**	**-1.1**
	0.6nm,0.3s,baz=98,slow=4.4,SNR=6.3						
ILAR	**Eielson Array**	**64.19**	**28**	P	**P**	**03 21 51.7**	**+0.7**
	0.3nm,0.8s,baz=243,slow=6.0,SNR=4.1						
KBZ	**Khabaz**	**68.16**	**309**	P	**P**	**03 22 17.9**	**+1.1**
	5.6nm,0.8s,baz=98,slow=2.9,SNR=8.4						
ARCES	**ARCESS Array B**	**69.11**	**339**	P	**P**	**03 22 21.9**	**-0.3**
	1.8nm,0.7s,baz=71,slow=6.8,SNR=6.0						
FINES	**FINESS Array B**	**71.91**	**330**	P	**P**	**03 22 39.2**	**-0.1**
	1.2nm,0.3s,baz=50,slow=5.7,SNR=21						
DAG	**Danmarks Havn**	**74.49**	**352**	*i* P	**P**	**03 22 54.2**	**0.0**
	2.4nm,0.8s						
AKASG	**Malin Array Be**	**74.54**	**319**	P	**P**	**03 22 54.5**	**-0.5**
	1.1nm,0.3s,baz=62,slow=6.4,SNR=4.6						
BRTR	**Keskin Array B**	**76.04**	**308**	P	**P**	**03 23 04.4**	**+0.4**
	4.3nm,0.8s,baz=94,slow=4.6,SNR=20						
YKA	**Yellowknife Ar**	**78.22**	**25**	P	**P**	**03 23 16.5**	**+1.0**
	0.5nm,0.6s,baz=301,slow=5.6,SNR=12						
NB2	**NORSAR Subarra**	**78.38**	**334**	P	**P**	**03 23 15.5**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=52,slow=5.9						
NOA	**NORSAR Array B**	**78.38**	**334**	P	**P**	**03 23 15.9**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=52,slow=5.7,SNR=7.7						
SUMG	**Summit**	**80.31**	**356**	*i* P	**P**	**03 23 27.5**	**+0.3**
	comp=Z,5.7nm,0.9s						
SCO	**Scoresbysund**	**80.46**	**350**	*i* P	**P**	**03 23 28.1**	**+0.6**
	comp=Z,3.2nm,1.0s						
GERES	**GERESS Array B**	**84.22**	**323**	P	**P**	**03 23 48.4**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=49,slow=4.5,SNR=14						
SFJD	**Kangerlussuaq**	**86.38**	**359**	*i* P	P	03 23 51.4	-6.5
	comp=Z,6.2nm,0.9s						

AUST 15 03:14:11.8,32.81S×151.62E,h10km,Near southeast coast of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGCD	**Mangrove Creek**	**0.59**	**227**	P	Pg	03 14 22.6	-0.6
	baz=0.6,SNR=38						
MGCD				S	Sg	03 14 31.6	+0.7
	baz=0.6,SNR=13						
ARMA	**Armidale**	**2.38**	**0**	P	Pn	03 14 52.1	+1.0
	baz=2.4,SNR=8.6						
ARMA				S	Sn	03 15 21.2	+0.7
	baz=2.4,SNR=5.9						
YNG	**Young**	**3.07**	**240**	P	Pn	03 15 00.1	-0.4
	baz=3.1,SNR=8.2						
YNG				S	Sn	03 15 37.4	+0.1
	baz=3.1,SNR=10						
CNB	**Canberra Magne**	**3.12**	**216**	P	Pb	03 15 06.9	-0.6
	baz=3.1,SNR=6.0						

IDC 15 03:17:57.5±0.8,6.79N×82.61E,h0km,mb4.0/16, mb1 4.1/16,mb1mx3.9/31,mbtmp4.0/16,Error ellipse: s-maj=33.1km s-min=16.1km az=43.0
NEIC 15 03:17:59.0±0.6,6.80N×82.62E,h10km,mb4.5/1,Error ellipse: s-maj=27.6km s-min=13.7km az=223.0
NEIC Felt at Badulla, Kandy, Matara and Monaragala.

ISC 15 03:17:58.7±0.7,6.6N±0.1×82.4E±0.1,h10km,n39, σ1§34/35,mb4.1/17,Sri Lanka

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HYB	**Hyderabad**	**11.38**	**341**	P	Pn	03 20 33.5	-8.0
HYB				S	Sn	03 22 34.0	-15
HYB	**Hyderabad**	**11.38**	**341**	*i* P	Pn	03 20 33.5	-8.0
HYB				*e*S	Sn	03 22 34.0	-15
NGP	**Nagpur**	**14.81**	**348**	*e*P	Pn	03 21 18.8	-10
CMAR	**Chiang Mai Arr**	**19.93**	**52**	P	**Pn**	**03 22 34.9**	**+2.2**
CMAR	**Chiang Mai Arr**	**19.93**	**52**	P	**Pn**	**03 22 34.9**	**+2.2**
	0.1nm,0.3s,baz=237,slow=12,SNR=4.6						
KURBB	**Kurchatov Arra**	**43.98**	**356**	P	**P**	**03 26 03.1**	**-3.0**
	0.2nm,0.5s,baz=166,slow=7.2,SNR=2.7						
KURK	**Kurchatov**	**44.07**	**357**	P	P	03 26 03.1	-3.7
SONM	**Songino Array**	**45.87**	**22**	P	**P**	**03 26 19.8**	**-1.6**
SONM	**Songino Array**	**45.87**	**22**	P	**P**	**03 26 19.8**	**-1.6**
	0.4nm,0.7s,baz=193,slow=5.9,SNR=2.6						
ZALV	**Zalesovo Beam**	**47.23**	**2**	P	**P**	**03 26 29.6**	**-2.2**
ZALV	**Zalesovo Beam**	**47.23**	**2**	P	**P**	**03 26 29.6**	**-2.2**
	1.2nm,0.5s,baz=186,slow=6.0,SNR=6.6						
FITZ	**Fitzroy Crossi**	**49.21**	**121**	P	**P**	**03 26 48.9**	**+1.3**
FITZ	**Fitzroy Crossi**	**49.21**	**121**	P	**P**	**03 26 48.9**	**+1.3**
	4.8nm,0.6s,baz=281,slow=4.9,SNR=16						
BRTR	**Keskin Array B**	**54.72**	**315**	P	**P**	**03 27 28.6**	**0.0**
BRTR	**Keskin Array B**	**54.72**	**315**	P	**P**	**03 27 28.6**	**0.0**
	2.0nm,0.8s,baz=132,slow=7.1,SNR=11						
WRAB	**Tennant Creek**	**57.48**	**119**	*e*P	**P**	**03 27 48.3**	**-0.2**
	3.1nm,0.6s						
ASAR	**Alice Springs**	**58.56**	**123**	P	**P**	**03 27 55.5**	**-0.5**
ASAR	**Alice Springs**	**58.56**	**123**	P	**P**	**03 27 55.5**	**-0.5**
	1.4nm,0.8s,baz=296,slow=6.7,SNR=9.3						
MLR	**Muntele Rosu**	**62.15**	**318**	P	**P**	**03 28 21.2**	**+0.9**
MLR	**Muntele Rosu**	**62.15**	**318**	P	**P**	**03 28 21.2**	**+0.9**
	0.7nm,0.7s,baz=101,slow=5.8,SNR=6.5						
STKA	**Stephens Creek**	**68.10**	**128**	P	**P**	**03 28 57.9**	**-1.2**
STKA	**Stephens Creek**	**68.10**	**128**	P	**P**	**03 28 57.9**	**-1.2**
	5.7nm,1.1s,baz=170,slow=6.1,SNR=4.0						
FINES	**FINESS Array B**	**68.60**	**335**	P	**P**	**03 29 03.2**	**+1.5**
FINES	**FINESS Array B**	**68.60**	**335**	P	**P**	**03 29 03.2**	**+1.5**
	1.1nm,0.8s,baz=116,slow=6.3,SNR=2.5						
GERES	**GERESS Array B**	**71.09**	**319**	P	**P**	**03 29 17.7**	**+0.3**
GERES	**GERESS Array B**	**71.09**	**319**	P	**P**	**03 29 17.7**	**+0.3**
	0.8nm,0.7s,baz=104,slow=7.2,SNR=5.7						
DAVOX	**Davos/Dischmat**	**73.27**	**317**	P	**P**	**03 29 31.1**	**+0.4**
DAVOX	**Davos/Dischmat**	**73.27**	**317**	P	**P**	**03 29 31.1**	**+0.4**
	2.7nm,0.4s,baz=29,slow=2.4,SNR=6.5						
HFS	**Hagfors**	**73.77**	**331**	P	**P**	**03 29 34.3**	**+1.2**
HFS	**Hagfors**	**73.77**	**331**	P	**P**	**03 29 34.3**	**+1.2**
	1.2nm,0.4s,baz=134,slow=8.3,SNR=10						
NOA	**NORSAR Array B**	**75.18**	**332**	P	**P**	**03 29 42.3**	**+1.0**
NOA	**NORSAR Array B**	**75.18**	**332**	P	**P**	**03 29 42.3**	**+1.0**
	1.1nm,0.7s,baz=108,slow=5.8,SNR=4.0						
TORD	**Torodi Ar. Bea**	**79.53**	**282**	P	**P**	**03 30 06.2**	**-0.4**
TORD	**Torodi Ar. Bea**	**79.53**	**282**	P	**P**	**03 30 06.2**	**-0.4**
	0.5nm,0.8s,baz=70,slow=5.4,SNR=8.2						
EKA	**Eskdalemuir Ar**	**82.09**	**325**	P	**P**	**03 30 20.8**	**+1.4**
EKA	**Eskdalemuir Ar**	**82.09**	**325**	P	**P**	**03 30 20.8**	**+1.4**
	1.0nm,0.5s,baz=104,slow=7.4,SNR=6.7						
ESDC	**Sonseca Array**	**83.05**	**309**	P	**P**	**03 30 25.4**	**+0.5**
ESDC	**Sonseca Array**	**83.05**	**309**	P	**P**	**03 30 25.4**	**+0.5**
	0.4nm,0.7s,baz=42,slow=5.4,SNR=4.1						
DBIC	**Dimbokro**	**86.56**	**276**	*e*P	**P**	**03 30 42.5**	**-0.5**

ISCJB 15 03:25:42.9±0.7,24.08N±0.07×122.86E±0.02,h18km±9km, Error ellipse: s-maj=12.1km s-min=3.4km az=6.1
JMA 15 03:25:42.9±0.3,24.12N×122.86E,h24km,M2.6
TAP 15 03:25:43.6,24.24N×122.95E,h38km±2km,ML3.2,C

ISC 15 03:25:42.9±1.4,24.11N±0.08×122.87E±0.02,h23km±15km, n16,σ0§66/27,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.38**	**20**	P	**Pb**	**03 25 50.8**	**-0.2**
YOJ				S	**Sb**	**03 25 56.1**	**-0.4**
IRIF	**Iriomote-Funau**	**0.82**	**74**	P	**Pb**	**03 25 58.2**	**-0.3**
IRIF				S	**Sn**	**03 26 10.5**	**0.0**
HATJ	**Hateruma jima**	**0.86**	**93**	P	**Pb**	**03 25 58.5**	**-0.6**
HATJ				S	**Sb**	**03 26 10.5**	**+0.3**
JKRS	**Kuro-shima**	**1.05**	**83**	P	**Pn**	**03 26 02.1**	**-0.2**
JKRS				S	**Sb**	**03 26 17.1**	**+1.4**
TWC	**Suao**	**1.06**	**299**	*i* P	**Pn**	**03 26 02.2**	**-0.1**
	baz=301						
TWC				*i* S	**Sn**	**03 26 16.0**	**-0.4**
	baz=301						
ENA	**Nanau**	**1.08**	**288**	*e*P	**Pn**	**03 26 01.4**	**-1.3**
	baz=289						
ENA				*e*S	**Sb**	**03 26 17.2**	**+0.7**
	baz=289						
TWD	**Chiawan**	**1.16**	**269**	*e*P	**Pn**	**03 26 03.5**	**-0.3**
	baz=262						
JIJ	**Ishigaki jima**	**1.19**	**77**	P	**Pn**	**03 26 03.7**	**-0.5**
JIJ				S	**Sb**	**03 26 20.7**	**+0.9**
TWE	**Neicheng**	**1.25**	**299**	*e*P	**Pn**	**03 26 04.9**	**-0.2**
	baz=302						
TWE				*e*S	**Sb**	**03 26 21.6**	**0.0**
	baz=302						
ENTT	**Nioudou**	**1.30**	**294**	*e*P	**Pb**	**03 26 06.5**	**-0.2**
	baz=295						
ENTT				*e*S	**Sb**	**03 26 23.8**	**+0.8**
	baz=295						
NWF	**Wu-fen Shan**	**1.38**	**314**	P	**Pn**	**03 26 06.9**	**+0.1**
	baz=307						
NNS	**Nan Shan**	**1.40**	**284**	P	**Pb**	**03 26 08.4**	**-0.1**
	baz=264						
NNS				S	**Sb**	**03 26 27.0**	**+0.9**
	baz=264						
WHF	**Hehuan Shan**	**1.47**	**272**	*e*P	**Pn**	**03 26 07.8**	**-0.6**
	baz=266						
NSK	**Sanguang**	**1.49**	**293**	*e*P	**Pb**	**03 26 09.7**	**-0.2**
	baz=295						
NSK				*e*S	**Sb**	**03 26 28.7**	**+0.3**
	baz=295						
JTJ	**Tarama**	**1.75**	**72**	P	**Pn**	**03 26 12.3**	**+0.3**
NSTT	**Nanjuang**	**1.78**	**287**	*e*P	**Pn**	**03 26 13.8**	**+1.4**
	baz=281						

IDC 15 03:31:40.8±4.0,54.56N×164.72E,h0km,mb3.3/2, mb1 3.6/3,mb1mx3.3/27,mbtmp3.3/3,ML2.9/1,MS3.3/1, Ms1 3.3/1,ms1mx2.3/34,Error ellipse: s-maj=199.3km s-min=31.4km az=153.0
KRSC 15 03:31:47.6±0.7,56.41N×161.52E,h112km±21km,ML3.8
ISCJB 15 03:31:49.1±0.6,56.42N±0.04×161.51E±0.07, h105km±4km,mb3.2/2,Error ellipse: s-maj=7.9km s-min=5.4km az=142.1

ISC 15 03:31:48.4±2.3,56.44N±0.09×161.52E±0.05, h110km±12km,n32,σ1§20/50,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMKR	**Semkarok**	**0.14**	**349**	*e*P	**Pn**	**03 32 04.0**	**+0.3**
SMKR				*i* S	**Sn**	**03 32 15.5**	**+0.2**
BDR	**Baidarnaya**	**0.21**	**306**	*e*P	**Pn**	**03 32 04.1**	**+0.2**
BDR				*i* S	**Sn**	**03 32 15.9**	**+0.3**
SRKR	**Sorokina**	**0.29**	**318**	*e*P	**Pn**	**03 32 04.4**	**+0.2**
SRKR				*i* S	**Sn**	**03 32 16.8**	**+0.8**
KLY	**Klyuchi**	**0.50**	**255**	*e*P	**Pn**	**03 32 04.1**	**-1.1**
KLY				*i* S	**Sn**	**03 32 15.7**	**-2.1**
CIRR	**Tsirk**	**0.54**	**233**	*e*P	**Pn**	**03 32 05.6**	**-0.1**
CIRR				*i* S	**Sn**	**03 32 18.5**	**-0.1**
KRSR	**Krestovskiy**	**0.58**	**247**	*e*P	**Pn**	**03 32 05.4**	**-0.5**
KRSR				*i* S	**Sn**	**03 32 18.2**	**-0.8**
ZLN	**Zelenaya**	**0.58**	**223**	*e*P	**Pn**	**03 32 06.1**	**+0.2**
ZLN				*i* S	**Sn**	**03 32 19.2**	**+0.1**
LGNR	**Loginova**	**0.59**	**232**	*e*P	**Pn**	**03 32 06.3**	**+0.1**
LGNR				*i* S	**Sn**	**03 32 19.6**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**0.68**	**223**	*e*P	**Pn**	**03 32 06.9**	**+0.2**
BZGR				*i* S	**Sn**	**03 32 20.7**	**+0.2**
KBG	**Krutoberegovo**	**0.69**	**105**	*e*P	**Pn**	**03 32 06.6**	**0.0**
KBG				*i* S	**Sn**	**03 32 20.3**	**0.0**
BZWR	**Bezymyannyi-We**	**0.75**	**230**	*e*P	**Pn**	**03 32 07.6**	**+0.3**
BZWR				*i* S	**Sn**	**03 32 22.0**	**+0.5**
KBTR	**Krutoberegovo**	**0.76**	**107**	P	**Pn**	**03 32 07.4**	**+0.2**
KBTR				*i* S	**Sn**	**03 32 21.5**	**+0.1**
BZMR	**Bezymyannaya**	**0.77**	**229**	*e*P	**Pn**	**03 32 07.7**	**+0.2**
BZMR				*i* S	**Sn**	**03 32 22.6**	**+0.8**
KIRR	**Kirishev**	**0.82**	**234**	*e*P	**Pn**	**03 32 07.6**	**-0.4**
KIRR				*i* S	**Sn**	**03 32 22.9**	**+0.2**
KPT	**Kopyto**	**0.87**	**237**	*e*P	**Pn**	**03 32 08.0**	**-0.3**
KPT				*i* S	**Sn**	**03 32 23.4**	**0.0**
KMNR	**Kamenistaya**	**0.99**	**227**	*e*P	**Pn**	**03 32 09.8**	**+0.2**
KOZ	**Kozyrevsk**	**0.99**	**248**	*e*P	**Pn**	**03 32 09.3**	**-0.2**
KOZ				*i* S	**Sn**	**03 32 24.9**	**-0.6**
SRDR	**Sredinnyy**	**1.01**	**264**	*e*P	**Pn**	**03 32 09.5**	**-0.2**
SRDR				*i* S	**Sn**	**03 32 25.0**	**-0.8**
TUMR	**Tumrok**	**1.40**	**214**	*e*P	**Pn**	**03 32 14.8**	**+0.8**
TUMR				*i* S	**Sn**	**03 32 34.9**	**+1.4**
ESO	**Esso**	**1.66**	**253**	*e*P	**Pn**	**03 32 17.3**	**+0.2**
ESO				*i* S	**Sn**	**03 32 39.0**	**+0.1**
MKZ	**Mys Kozlova**	**1.90**	**176**	P	**Pn**	**03 32 19.5**	**-0.5**
MKZ				*i* S	**Sn**	**03 32 43.0**	**-1.1**
SPN	**Mys Shipunski**	**3.46**	**195**	*e*P	**Pn**	**03 32 40.6**	**+0.2**
SPN				*i* S	**Sn**	**03 33 18.1**	**-2.6**
SDLR	**Sedlovina**	**3.52**	**207**	*e*P	Pn	03 32 42.9	+1.6
SMAR	**Somma**	**3.55**	**207**	*e*P	Pn	03 32 44.0	+2.1
AVH	**Avacha**	**3.57**	**208**	P	Pn	03 32 44.7	+2.8
AVH				*i* S	**Sn**	**03 33 26.6**	**+3.3**
UGLR	**Uglovaya**	**3.60**	**207**	P	Pn	03 32 44.9	+2.6
UGLR				*i* S	**Sn**	**03 33 26.8**	**+2.7**
PETK	**Petropavlovsk-**	**4.01**	**215**	Pn	**Pn**	**03 32 49.2**	**+1.4**
	0.6nm,0.3s,baz=65,slow=12,SNR=6.3						
RUS	**Russkaya**	**4.38**	**205**	*e*P	**Pn**	**03 32 54.1**	**+1.3**
RUS				*e*S	**Sn**	**03 33 42.9**	**+0.1**
MTVR	**Mutnovka**	**4.42**	**207**	P	**Pn**	**03 32 51.9**	**-1.5**
MTVR				*i* S	**Sn**	**03 33 39.3**	**-4.6**
ILAR	**Eielson Array**	**25.94**	**50**	P	P	03 37 15.1	+5.1
	0.3nm,0.5s,baz=256,slow=8.4,SNR=9.3						
YKA	**Yellowknife Ar**	**40.18**	**46**	P	P	03 39 16.4	+3.2
	0.3nm,0.5s,baz=301,slow=8.0,SNR=7.2						
DAV	**Davao City (W)**	**56.77**	**224**	LR	LR	04 06 10.9	
	comp=Z,23nm,19.1s,baz=140,slow=36						

ISCJB 15 03:53:09.7±0.3,51.45N±0.02×16.07E±0.02,h0km, mb3.3/2,Error ellipse: s-maj=2.7km s-min=1.8km az=15.9
IPEC 15 03:53:10.8±0.2,51.50N×16.12E,h0km,ML2.7/3,Error ellipse: s-maj=1.7km s-min=0.9km az=34.0
WAR 15 03:53:10.5,51.53N×16.00E
BGR 15 03:53:11.7±0.3,51.47N×16.14E,h1km,ML3.1/12,Error ellipse: s-maj=3.3km s-min=1.1km az=22.0
IDC 15 03:53:11.9±0.6,51.51N×15.81E,h0km,mb3.3/2, mb1 3.5/11,mb1mx3.3/31,mbtmp3.3/11,ML3.4/8,Error ellipse: s-maj=14.4km s-min=7.0km az=96.0
CSEM 15 03:53:11.4±0.1,51.45N×16.09E,h2km,ML3.5/9,Error ellipse: s-maj=2.7km s-min=1.7km az=18.0
PRU 15 03:53:12.8,51.42N×16.07E,h0km
VIE 15 03:53:13.9±0.5,51.24N×16.07E,h0km,mb2.7/6,ML3.1/6, Error ellipse: s-maj=2.9km s-min=2.1km az=11.0 67 km WNW of Wroclaw Suspected Mining induced.
UPP 15 03:53:33.1,53.10N×15.55E,h0km,ML2.0,Suspected Mining explosion.

ISC 15 03:53:10.4±0.6,51.52N±0.02×16.07E±0.02,h0km,n120, σ1§16/194,3C-5D,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**168**	*e*Pg	**Pg**	**03 53 24.1**	**+0.6**
KSP				*e*Sg	**Sg**	**03 53 32.7**	**+0.3**
KSP	**Ksiaz**	**0.69**	**168**	*e*Pg	**Pg**	**03 53 23.8**	**+0.3**
KSP				*e*Sg	**Sg**	**03 53 33.2**	**+0.8**
KSP	**Ksiaz**	**0.69**	**168**	*e*	**Sg**	**03 53 36.0**	**+3.6**
KSP	**Ksiaz**	**0.69**	**168**	*e*Pg	**Pg**	**03 53 23.8**	**+0.3**
	baz=350						
KSP				Sg	**Sg**	**03 53 32.7**	**+0.3**
UPC	**Upice**	**1.01**	**182**	*e*PG	**Pg**	**03 53 30.1**	**+0.4**
UPC	**Upice**	**1.01**	**182**	*e*Pg	**Pg**	**03 53 30.0**	**+0.4**
	baz=3.8						
DPC	**Dobruska-Polom**	**1.18**	**172**	*e*Pg	**Pg**	**03 53 32.9**	**0.0**
DPC				*e*Sg	**Sg**	**03 53 47.5**	**-0.6**
DPC	**Dobruska-Polom**	**1.18**	**172**	*e*PG	**Pg**	**03 53 32.9**	**0.0**
DPC				*e*SG	**Sg**	**03 53 47.6**	**-0.6**
	comp=Z,79nm,0.5s						
DPC	**Dobruska-Polom**	**1.18**	**172**	Pg	**Pg**	**03 53 32.9**	**0.0**
DPC				Sg	**Sg**	**03 53 47.5**	**-0.6**
PVCC	**Panska Ves**	**1.37**	**224**	*e*PG	**Pb**	**03 53 37.1**	**+0.3**
PVCC				*e*SG	**Sn**	**03 53 55.1**	**-0.4**
	comp=Z,273nm,0.5s						
PVCC	**Panska Ves**	**1.37**	**224**	Pg	**Pb**	**03 53 37.1**	**+0.3**
PVCC	**Panska Ves**	**1.37**	**224**	*e*Pn	**Pb**	**03 53 37.4**	**+0.6**
	baz=45						
PVCC				*e*Sg	**Sb**	**03 53 54.0**	**-0.9**
	baz=45						
BRG	**Berggiesshubel**	**1.48**	**245**	PN	**Pb**	**03 53 38.4**	**-0.4**
BRG				PG	**Pg**	**03 53 39.9**	**+1.1**
BRG				SG	**Sn**	**03 53 59.5**	**+1.1**
	138nm,0.5s						
BRG	**Berggiesshubel**	**1.48**	**245**	*e*Pn	**Pb**	**03 53 38.5**	**-0.4**
BRG				*e*Pg	**Pg**	**03 53 40.1**	**+1.4**
BRG				*e*Sg	**Sn**	**03 53 59.7**	**+1.3**
BRG	**Berggiesshubel**	**1.48**	**245**	*e*Pn	**Pb**	**03 53 39.2**	**+0.4**
	baz=65						
KRLC	**Kraliky**	**1.51**	**162**	*e*PG	**Pn**	**03 53 38.4**	**-0.3**
KRLC	**Kraliky**	**1.51**	**162**	Pg	**Pn**	**03 53 38.4**	**-0.3**
RUE	**Ruedersdorf**	**1.71**	**305**	*e*Pn	**Pb**	**03 53 41.6**	**-1.1**
RUE				*e*Sg	**Sg**	**03 54 08.1**	**+2.7**
RUE	**Ruedersdorf**	**1.71**	**305**	Pn	**Pb**	**03 53 41.6**	**-1.1**
RUE				Sg	**Sg**	**03 54 08.1**	**+2.7**
FBE	**Freiberg**	**1.81**	**252**	*e*Sg	**Sg**	**03 54 09.3**	**+0.9**
FBE	**Freiberg**	**1.81**	**252**	Sg	**Sg**	**03 54 09.3**	**+0.9**
PRU	**Pruhonice**	**1.81**	**213**	*e*PN	**Pn**	**03 53 42.9**	**+0.1**
PRU				*e*PG	**Pg**	**03 53 44.7**	**-0.3**
PRU				*e*SG	**Sb**	**03 54 07.4**	**-0.2**
	comp=Z,41nm,0.7s						
PRU	**Pruhonice**	**1.81**	**213**	Pn	**Pn**	**03 53 42.9**	**+0.1**
PRU	**Pruhonice**	**1.81**	**213**	Pg	**Pg**	**03 53 44.7**	**-0.3**
PRU				Sg	**Sb**	**03 54 07.4**	**-0.2**
	41nm,0.7s						
GKP	**Gorka Klasztor**	**1.90**	**22**	*e*Pn	**Pg**	**03 53 46.1**	**-0.6**
GKP				*e*Pg	Pb	03 53 53.6	+7.8
GKP				*e*Sg	Sg	03 54 17.1	+5.8
GKP	**Gorka Klasztor**	**1.90**	**22**	*e*Pn	**Pg**	**03 53 46.1**	**-0.6**
CLL	**Collm**	**1.93**	**265**	*e*Pn	**Pb**	**03 53 44.6**	**-1.8**
CLL				*e*Sg	**Sg**	**03 54 14.3**	**+1.9**
CLL	**Collm**	**1.93**	**265**	*e*Pn	**Pb**	**03 53 45.0**	**-1.4**
CLL				*e*Pg	**Pg**	**03 53 48.0**	**+0.6**
CLL				*e*		03 53 52.0	
CLL				*e*Sg	**Sg**	**03 54 14.0**	**+1.6**
	comp=Z,58nm,0.5s						
CLL	**Collm**	**1.93**	**265**	Pn	**Pb**	**03 53 44.6**	**-1.8**
CLL				Sg	**Sg**	**03

KHC Sn **Sn** **03 54 32.2 -0.5**
KHC Sg **Sg** **03 54 42.8 +0.3**
comp=Z,35nm,0.6s
MOX Moxa 2.94 255 *e*Pn **Pn** **03 53 59.2 +0.9**
MOX *e*Sg **Sg** **03 54 46.1 +1.3**
MOX Moxa 2.94 255 Pn **Pn** **03 53 59.2 +0.9**
MOX Sg **Sg** **03 54 46.1 +1.3**
ROTZ Rotzenmuhle 3.02 236 *e*Pn **Pn** **03 54 00.3 +0.9**
ROTZ *e*Sg **Sg** **03 54 47.8 +0.5**
ROTZ Rotzenmuhle 3.02 236 Pn **Pn** **03 54 00.3 +0.9**
ROTZ Sg **Sg** **03 54 47.8 +0.5**
GEC2 GERESS Array S 3.08 211 *e*Pn **Pn** **03 54 01.2 +0.9**
GEC2 GERESS Array S 3.08 211 Pn **Pn** **03 54 01.2 +0.9**
GERES GERESS Array B 3.08 211 Pn **Pn** **03 54 00.8 +0.5**
comp=Z,2.0nm,0.3s,baz=28,slow=12,SNR=56
GERES Lg Lg 03 54 45.3
comp=Z,3.7nm,0.3s,baz=30,slow=28,SNR=6.0
SMOL Smolenice 3.13 163 *e* **Pg** **03 54 10.3 0.0**
SMOL Smolenice 3.13 163 *e*SG **Sg** **03 54 50.2 -0.6**
SMOL Smolenice 3.13 163 *e*Sg **Sg** **03 54 50.2 -0.6**
WET Wettzell 3.13 222 *e*Pn **Pn** **03 54 01.6 +0.6**
WET Wettzell 3.13 222 Pn **Pn** **03 54 01.6 +0.6**
SCHD Schmiedefeld 3.22 254 *e*Pn **Pn** **03 54 02.9 +0.7**
SCHD Schmiedefeld 3.22 254 Pn **Pn** **03 54 02.9 +0.7**
NIE Niedzica 3.43 126 *e*P **Pg** **03 54 14.9 -1.1**
NIE *e*S **Sg** **03 54 59.1 -1.3**
VYHS Vyhne 3.51 148 *e*PN **Pn** **03 54 06.4 +0.2**
VYHS *e* 03 54 17.1
VYHS Vyhne 3.51 148 *e*SG **Sg** **03 55 03.6 +0.5**
VYHS Vyhne 3.51 148 *e*Sg **Sg** **03 55 03.6 +0.5**
GRA1 Grafenberg Arr 3.59 241 Sg **Sg** **03 55 06.4 +0.9**
GRF Grafenberg Arr 3.59 241 *e*Sg **Sg** **03 55 06.4 +0.9**
CONA Conrad Observa 3.59 182 ⇓*i*Pn **Pn** **03 54 07.8 +0.4**
SNR=10
CONA ⇓*i*Sg **Sg** **03 55 04.8 -0.9**
comp=Z,39nm,0.6s
CONA Conrad Observa 3.59 182 Pn **Pn** **03 54 07.8 +0.4**
SNR=10
CONA Sg **Sg** **03 55 04.8 -0.9**
comp=Z,39nm,0.6s
BSD Bornholm Skovb 3.67 350 *i* P **Pn** **03 54 07.5 -0.8**
BSD *i* S **Sn** **03 54 48.3 -4.0**
MOA Molln 3.85 198 ⇓*i*Pn **Pn** **03 54 11.5 +0.7**
SNR=8.0
MOA ⇓*i*Sg **Sg** **03 55 13.0 -1.0**
comp=Z,28nm,0.4s
MOA Molln 3.85 198 Pn **Pn** **03 54 11.5 +0.7**
SNR=8.0
MOA Sg **Sg** **03 55 13.0 -1.0**
comp=Z,28nm,0.4s
UBBA Unterbreizbach 3.88 262 *e*Pg **Pg** **03 54 24.2 -0.5**
UBBA *e*Sg **Sg** **03 55 15.6 +0.6**
UBBA Unterbreizbach 3.88 262 Pg **Pg** **03 54 24.2 -0.5**
UBBA Sg **Sg** **03 55 15.6 +0.6**
ARSA Arzberg 4.28 185 ⇑*i*Pn **Pn** **03 54 16.8 0.0**
SNR=7.6
ARSA ⇓*i*Sg **Sg** **03 55 25.8 -2.1**
comp=Z,25nm,0.7s
ARSA Arzberg 4.28 185 Pn **Pn** **03 54 16.8 0.0**
SNR=7.6
ARSA Sg **Sg** **03 55 25.8 -2.1**
comp=Z,25nm,0.7s
CRVS Cervenica-Dubn 4.34 125 *e*PN **Pn** **03 54 19.3 +1.7**
CRVS *e* 03 54 35.0
CRVS Cervenica-Dubn 4.34 125 *e*Pn **Pn** **03 54 19.3 +1.7**
CRVS *e*Sg **Sg** **03 55 33.4 +3.7**
KWP Kalwaria Pacla 4.63 111 *e*Pn **Pn** **03 54 22.4 +0.8**
KWP *e*Pb **Pb** **03 54 35.2 +2.8**
KWP Kalwaria Pacla 4.63 111 *e*Pn **Pn** **03 54 22.4 +0.8**
KOLS Kolonicke sedl 4.75 121 *e*PN **Pn** **03 54 22.7 -0.5**
KOLS *e* 03 54 42.4
KOLS Kolonicke sedl 4.75 121 *e*Pn **Pn** **03 54 22.7 -0.5**
KOLS *e*Sg **Sg** **03 55 45.6 +2.8**
KBA Koelnbreinsper 4.79 203 ⇑*i*Pn **Pn** **03 54 24.6 +0.8**
KBA ⇑*i*Sg **Sg** **03 55 43.5 -0.5**
comp=Z,11nm,0.5s
KBA Koelnbreinsper 4.79 203 Pn **Pn** **03 54 24.6 +0.8**
KBA Sg **Sg** **03 55 43.5 -0.5**
comp=Z,11nm,0.5s
BLEU Blekinge 4.80 358 P **Pn** **03 54 24.4 +0.6**
DEL Delary 5.13 346 P **Pn** **03 54 28.2 -0.2**
DAVOX Davos/Dischmat 6.24 223 Pn **Pn** **03 54 44.2 +0.4**
comp=Z,0.4nm,0.3s,baz=45,slow=13,SNR=4.9
DAVOX Lg Lg 03 56 29.4
comp=Z,0.3nm,0.3s,baz=234,slow=19,SNR=3.2
AKASG Malin Array Be 8.32 90 Pn **Pn** **03 55 12.1 -0.1**
comp=Z,1.1nm,0.3s,baz=282,slow=12,SNR=4.7
HFS Hagfors 8.74 352 Pn **Pn** **03 55 17.6 -0.3**
HFS Sn **Sn** **03 56 57.8 +0.7**
NOA NORSAR Array B 9.92 346 Pn **Pn** **03 55 32.6 -1.5**
comp=Z,0.2nm,0.3s,baz=167,slow=12,SNR=4.6
FINES FINESS Array B 11.37 25 Pn **Pn** **03 55 52.3 -1.5**
comp=Z,0.3nm,0.3s,baz=209,slow=11,SNR=11
FINES Sn Sn 03 57 52.5 -9.0
comp=Z,0.2nm,0.3s,baz=213,slow=23,SNR=3.4
EKA Eskdalemuir Ar 12.08 296 Pn **Pn** **03 56 01.5 -2.1**
baz=102,slow=13,SNR=3.4
ARCES ARCESS Array B 18.62 10 Pn **P** **03 57 26.5 -2.6**
comp=Z,0.4nm,0.3s,baz=194,slow=11,SNR=13
TORD Torodi Ar. Bea 39.99 202 P **P** **04 00 47.5 +0.7**
comp=Z,0.4nm,0.9s,baz=14,slow=7.5,SNR=3.6
YKA Yellowknife Ar 59.84 336 P **P** **04 03 18.4 +1.4**
comp=Z,0.4nm,0.6s,baz=30,slow=6.7,SNR=11

IDC 15 04:16:20.8±6.5, 17°68S×69°57W, h142km±36km, mb3.5/2, mb1 3.4/3, mb1mx3.0/19, mbtmp3.4/3, Error ellipse: s-maj=73.9km s-min=69.7km az=96.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**1.95**	**45**	P	Pn	04 16 55.7	-0.1
	1.0nm,0.3s,baz=229,slow=9.2,SNR=25						
LPAZ				S	Sn	04 17 22.6	+0.1
	0.6nm,0.3s,baz=166,slow=22,SNR=7.9						
SIV	**San Ignacio**	**8.31**	**80**	P	Pn	04 18 18.1	-0.4
	0.8nm,0.3s,baz=283,slow=9.5,SNR=15						
DBIC	**Dimbokro**	**68.30**	**75**	P	P	04 27 07.6	+0.5
	1.0nm,0.6s,baz=212,slow=10,SNR=3.6						
TORD	**Torodi Ar. Bea**	**76.70**	**71**	P	P	04 27 56.5	-0.3
	0.5nm,0.9s,baz=248,slow=5.3,SNR=6.1						

*ISCJB **15** 04:44:41.6±0.6, 5°.46N±0°.06×126°.5E±0°.1, h66km, mb4.1/20, Error ellipse: s-maj=20.1km s-min=7.4km az=164.3*
*IDC **15** 04:44:43.7±2.6, 5°.47N×126°.44E, h66km±21km, mb3.8/13, mb1 3.8/14, mb1mx3.7/27, mbtmp3.8/14, MS3.5/5, Ms1 3.5/5, ms1mx3.1/40, Error ellipse: s-maj=48.9km s-min=13.6km az=72.0*
*NEIC **15** 04:44:43.7±1.3, 5°.42N×126°.39E, h67km±10km, mb4.4/7, Error ellipse: s-maj=22.6km s-min=6.6km az=77.0*
ISC 15 04:44:43.1±0.7, 5°.45N±0°.07×126°.6E±0°.2, h66km, n49, σ1℘23/46, mb4.3/20, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.54**	**346**	*e*P	**Pn**	**04 45 05.6**	**-2.9**
MATI				*e*S	**Sn**	**04 45 32.0**	**+4.4**
GSPH	**General Santos**	**1.80**	**291**	⇑*e*P	Pn	04 45 06.5	-5.6
DAV	**Davao City (W)**	**1.93**	**327**	P	**Pn**	**04 45 12.5**	**-1.3**
DAV				S	Sn	04 45 45.3	+8.3
DAV	**Davao City (W)**	**1.93**	**327**	P	**Pn**	**04 45 12.5**	**-1.3**
	96nm,0.3s,baz=272,slow=1.3,SNR=20						
DAV				S	Sn	04 45 45.3	+8.3
	86nm,0.3s,baz=72,slow=23,SNR=8.4						
DAV				LR	LR	04 46 11.5	
	comp=Z,1μm,18.7s,baz=172,slow=49						
BUKP	**Musuan**	**2.88**	**327**	*e*P	**Pn**	**04 45 27.4**	**+0.6**
CTBH	**Cotabato--PC H**	**2.96**	**307**	⇑*i*P	**Pn**	**04 45 28.0**	**+0.2**
PAGZ	**Pagadian**	**4.02**	**307**	*e*P	Pn	04 45 45.9	+3.7
KAPI	**Kappang**	**12.46**	**214**	*e*Pn	**Pn**	**04 47 36.9**	**-0.8**
KAPI	**Kappang**	**12.46**	**214**	P	**Pn**	**04 47 38.4**	**+0.6**
	0.3nm,0.3s,baz=105,slow=15,SNR=3.0						
KAPI				LR	LR	04 52 53.3	
	comp=Z,202nm,19.4s,baz=81,slow=40						
GUMO	**Guam**	**19.70**	**64**	LR	LR	04 55 28.8	
	comp=Z,110nm,18.1s,baz=130,slow=32						
FITZ	**Fitzroy Crossi**	**23.42**	**182**	P	**P**	**04 49 46.0**	**-0.6**
FITZ	**Fitzroy Crossi**	**23.42**	**182**	P	**P**	**04 49 46.0**	**-0.6**
	2.2nm,0.7s,baz=341,slow=8.8,SNR=6.6						
WRAB	**Tennant Creek**	**26.34**	**163**	*e*P	**P**	**04 50 14.4**	**+1.4**
	17nm,1.3s						
MBWA	**Marble Bar**	**27.30**	**194**	*e*P	**P**	**04 50 19.6**	**-2.1**
	3.3nm,0.6s						
PSI	**Prapat**	**27.76**	**266**	LR	LR	05 01 59.3	
	comp=Z,138nm,18.5s,baz=144,slow=38						
ASAR	**Alice Springs**	**29.79**	**167**	P	**P**	**04 50 45.5**	**+1.6**
ASAR	**Alice Springs**	**29.79**	**167**	P	**P**	**04 50 45.5**	**+1.6**
	0.4nm,0.5s,baz=350,slow=7.3,SNR=3.6						
CMAR	**Chiang Mai Arr**	**29.96**	**298**	P	**P**	**04 50 44.3**	**-1.1**
CMAR	**Chiang Mai Arr**	**29.96**	**298**	P	**P**	**04 50 44.3**	**-1.1**
	0.6nm,0.6s,baz=112,slow=10,SNR=3.1						
STKA	**Stephens Creek**	**39.76**	**160**	P	**P**	**04 52 10.7**	**+1.1**
STKA	**Stephens Creek**	**39.76**	**160**	P	**P**	**04 52 10.7**	**+1.1**
	3.9nm,0.9s,baz=358,slow=11,SNR=2.9						
ULN	**Ulaanbaatar**	**45.47**	**342**	*e*P	**P**	**04 52 56.4**	**+0.6**
	4.5nm,0.9s						
SONM	**Songino Array**	**45.65**	**341**	P	**P**	**04 52 57.0**	**-0.3**
SONM	**Songino Array**	**45.65**	**341**	P	**P**	**04 52 57.0**	**-0.3**
	0.8nm,0.8s,baz=157,slow=8.2,SNR=5.5						
MK31	**Makanchi Array**	**56.11**	**325**	*e*P	**P**	**04 54 15.5**	**-0.2**
MKAR	**Makanchi Array**	**56.11**	**325**	P	**P**	**04 54 14.9**	**-0.8**
MKAR				PcP	**PcP**	**04 55 13.3**	**+0.2**
MKAR	**Makanchi Array**	**56.11**	**325**	P	**P**	**04 54 14.9**	**-0.8**
	1.7nm,0.5s,baz=127,slow=8.0,SNR=26						
MKAR				PcP	**PcP**	**04 55 13.3**	**+0.2**
	0.8nm,0.8s,baz=112,slow=4.7,SNR=2.7						
ZAA0	**Zalesovo Array**	**59.03**	**333**	*e*P	**P**	**04 54 36.4**	**+0.3**
ZALV	**Zalesovo Beam**	**59.03**	**333**	P	**P**	**04 54 35.7**	**-0.4**
ZALV	**Zalesovo Beam**	**59.03**	**333**	P	**P**	**04 54 35.7**	**-0.4**
	1.0nm,0.5s,baz=116,slow=6.8,SNR=6.7						
EKS2	**Erkin-Say**	**59.53**	**317**	*e*P	**P**	**04 54 40.0**	**0.0**
	3.9nm,0.9s						
KURBB	**Kurchatov Arra**	**60.26**	**327**	P	**P**	**04 54 43.5**	**-1.1**
	5.6nm,0.8s,baz=125,slow=6.0,SNR=37						
KURK	**Kurchatov**	**60.26**	**327**	*e*P	**P**	**04 54 43.5**	**-1.1**
	4.5nm,0.7s						
AFI	**Afiamalu**	**64.06**	**108**	LR	LR	05 18 04.2	
	comp=Z,8.4nm,19.1s,baz=282,slow=31						
BVAR	**Borovoye Array**	**65.84**	**327**	P	**P**	**04 55 22.4**	**+0.7**
BVAR	**Borovoye Array**	**65.84**	**327**	P	**P**	**04 55 22.4**	**+0.7**
	3.5nm,0.7s,baz=120,slow=8.8,SNR=19						
BRVK	**Borovoye**	**65.91**	**327**	*e*P	**P**	**04 55 22.5**	**+0.4**
	6.2nm,0.8s						
ABKAR	**Akbulak array**	**70.77**	**320**	*e*P	**P**	**04 55 51.5**	**-1.1**
	2.9nm,0.9s						
AKTO	**Aktyubinsk**	**72.27**	**321**	P	**P**	**04 56 01.1**	**-0.3**
AKTO	**Aktyubinsk**	**72.27**	**321**	P	**P**	**04 56 01.1**	**-0.3**
	1.7nm,0.7s,baz=81,slow=9.7,SNR=6.9						
ARCES	**ARCESS Array B**	**88.82**	**340**	P	**P**	**04 57 28.8**	**-0.8**
ARCES	**ARCESS Array B**	**88.82**	**340**	P	**P**	**04 57 28.8**	**-0.8**
	5.4nm,1.0s,baz=64,slow=5.6,SNR=4.4						
BRTR	**Keskin Array B**	**88.86**	**310**	P	**P**	**04 57 30.0**	**-0.6**
BRTR	**Keskin Array B**	**88.86**	**310**	P	**P**	**04 57 30.0**	**-0.6**
	0.9nm,0.9s,baz=82,slow=3.1,SNR=2.9						
FINES	**FINESS Array B**	**90.28**	**332**	P	**P**	**04 57 38.2**	**+1.6**
FINES	**FINESS Array B**	**90.28**	**332**	P	**P**	**04 57 38.2**	**+1.6**
	0.7nm,0.6s,baz=116,slow=4.4,SNR=2.0						
NOA	**NORSAR Array B**	**97.22**	**334**	LR	LR	05 45 38.5	
	comp=Z,45nm,19.6s,baz=10.0,slow=38						
TORD	**Torodi Ar. Bea**	**122.29**	**289**	PKP	**PKPdf**	**05 03 31.5**	**-0.2**
TORD	**Torodi Ar. Bea**	**122.29**	**289**	PKP	**PKPdf**	**05 03 31.5**	**-0.2**
	0.4nm,0.8s,baz=40,slow=2.3,SNR=3.4						

IDC 15 04:54:49.8±1.1, 33°55N×82°12E, h0km, mb3.3/6, mb1 3.5/7, mb1mx3.4/27, mbtmp3.4/7, ML3.0/1, Error ellipse: s-maj=32.6km s-min=23.9km az=70.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**13.23**	**1**	Pn	Pn	04 57 59.4	+0.4
	0.1nm,0.3s,baz=188,slow=12,SNR=4.1						
ZALV	**Zalesovo Beam**	**20.48**	**5**	P	P	04 59 29.9	+0.8
	0.5nm,0.4s,baz=186,slow=5.5,SNR=3.3						
CMAR	**Chiang Mai Arr**	**21.27**	**131**	P	P	04 59 37.5	-0.4
	1.0nm,0.9s,baz=311,slow=10,SNR=7.5						
SONM	**Songino Array**	**23.16**	**45**	P	P	04 59 58.4	+0.4
	0.2nm,0.3s,baz=231,slow=11,SNR=3.2						
TORD	**Torodi Ar. Bea**	**74.95**	**276**	P	P	05 06 33.6	+0.4
	0.4nm,0.9s,baz=33,slow=4.4,SNR=5.7						
ASAR	**Alice Springs**	**75.28**	**132**	P	P	05 06 35.3	+0.5
	0.4nm,0.8s,baz=304,slow=6.6,SNR=3.5						
YKA	**Yellowknife Ar**	**83.35**	**8**	P	P	05 07 16.8	-1.6
	0.1nm,0.5s,baz=336,slow=5.5,SNR=6.1						

*NIED **15** 04:59:00.29°.10N×131°.80E, h5km, Mw4.4 Best double couple: M0=4.62000×10^15 NP1:φs=223.00000°, δ59.00000°, λ=-45.00000°. NP2:φs=341.00000°, δ53.00000°, λ=-139.00000°.*
*ISCJB **15** 04:59:33.0±1.2, 29°.12N±0°.02×131°.77E±0°.03, h18km±9km, mb4.3/43, MS3.6/11, Error ellipse: s-maj=5.0km s-min=3.9km az=20.0*
*NEIC **15** 04:59:34.7±2.7, 29°.10N×131°.76E, h16km±17km, mb4.5/13, MW4.4(NIED), Error ellipse: s-maj=7.4km s-min=6.6km az=102.0*
*MOS **15** 04:59:35.1±1.0, 29°.15N×131°.81E, h33km, mb4.6/28, Error ellipse: s-maj=12.9km s-min=7.0km az=105.2*
*JMA **15** 04:59:35.3±0.2, 29°.14N×131°.75E, h72km, M4.4*
*IDC **15** 04:59:37.1±3.1, 29°.15N×131°.76E, h31km±22km, mb4.0/19, mb1 4.2/24, mb1mx4.1/32, mbtmp4.1/24, ML3.9/4, MS3.5/15, Ms1 3.5/15, ms1mx3.3/36, Error ellipse: s-maj=16.4km s-min=13.0km az=69.0*
ISC 15 04:59:36.1±1.9, 29°09N±0°.03×131°78E±0°.05, h27km±13km, n124, σ1℘40/137, mb4.3/43, MS3.6/11, 1C-5D, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTN	**Tanegashima 3**	**1.71**	**336**	P	**Pn**	**05 00 02.8**	**-1.3**
JTN				*e*S	**Sn**	**05 00 22.9**	**-2.1**
JZK	**Kikaishima**	**1.77**	**244**	P	**Pn**	**05 00 04.6**	**-0.4**
JZK				*e*S	**Sn**	**05 00 27.5**	**+0.9**
JNN	**Nakanoshima**	**1.82**	**295**	P	**Pn**	**05 00 04.7**	**-1.0**
JNN				*e*S	**Sn**	**05 00 27.0**	**-0.9**
JKC	**Kuchinoerabu**	**1.94**	**315**	P	**Pn**	**05 00 06.5**	**-0.8**
JKC				*e*S	**Sn**	**05 00 29.6**	**-1.2**
JAM	**Amami Oshima**	**2.03**	**251**	P	**Pn**	**05 00 07.2**	**-1.3**
JAM				S	**Sn**	**05 00 31.0**	**-2.0**
JTSR	**Tashiro 2**	**2.20**	**340**	P	**Pn**	**05 00 09.8**	**-1.1**
JTSR				S	**Sn**	**05 00 34.9**	**-2.3**
JAMN	**Amaminishikomi**	**2.44**	**250**	P	**Pn**	**05 00 13.2**	**-1.0**
JAMN				*e*S	**Sn**	**05 00 41.5**	**-1.7**
JNAR	**Kushima--Naru**	**2.46**	**350**	P	**Pn**	**05 00 13.5**	**-1.0**
JNAR				*e*S	**Sn**	**05 00 41.7**	**-2.0**
JTK	**Tokunoshima**	**2.81**	**243**	P	**Pn**	**05 00 18.1**	**-1.2**
JTK				S	**Sn**	**05 00 50.7**	**-1.7**
JTZ	**Takazaki**	**2.86**	**348**	P	**Pn**	**05 00 19.2**	**-0.8**
JTZ				S	**Sn**	**05 00 51.3**	**-2.2**
JSJ	**Shimokoshiki**	**3.13**	**326**	P	**Pn**	**05 00 22.6**	**-1.1**
JSJ				*e*S	**Sn**	**05 00 58.1**	**-2.2**
JMZ	**Minamidaito 2**	**3.30**	**189**	P	**Pn**	**05 00 24.2**	**-1.8**
JMZ				S	**Sn**	**05 00 59.7**	**-4.7**
JIU2	**Izumi 2**	**3.54**	**347**	P	**Pn**	**05 00 28.3**	**-1.0**
JIU2				*e*S	**Sn**	**05 01 07.2**	**-3.1**
JOW	**Kunigami**	**3.84**	**235**	*e*Pn	**Pn**	**05 00 31.7**	**-1.6**
JOW				*e*Sn	**Sn**	**05 01 15.2**	**-2.4**
JOW	**Kunigami**	**3.84**	**235**	P	**Pn**	**05 00 31.9**	**-1.5**
JNU	**Nakatsue**	**4.09**	**349**	Pn	**Pn**	**05 00 36.1**	**-0.7**
JNU				Sn	**Sn**	**05 01 21.6**	**-2.3**
JNU	**Nakatsue**	**4.09**	**349**	Pn	**Pn**	**05 00 36.1**	**-0.7**
	8.1nm,0.3s,baz=24,slow=2.4,SNR=39						
JNU				Sn	**Sn**	**05 01 21.6**	**-2.3**
	9.0nm,0.3s,baz=185,slow=8.8,SNR=4.2						
JHJ	**Hachijo jima 2**	**7.94**	**58**	Pn	**Pn**	**05 01 30.1**	**+0.3**
	22nm,0.3s,baz=83,slow=23,SNR=4.2						
JHJ				LR	LR	05 04 15.7	
	comp=Z,648nm,20.5s,baz=98,slow=35						
KSAR	**Wonju Array Be**	**8.94**	**340**	Pn	**Pn**	**05 01 43.0**	**-0.5**
KSRS	**Korea Array**	**8.94**	**340**	Pn	**Pn**	**05 01 43.0**	**-0.4**
	0.5nm,0.3s,baz=159,slow=13,SNR=4.8						
MAJO	**Matsushiro**	**9.18**	**34**	*e*P	**Pn**	**05 01 47.6**	**+0.8**
MAJO	**Matsushiro**	**9.18**	**34**	*e*Pn	**Pn**	**05 01 47.6**	**+0.8**
MJAR	**Matsushiro Arr**	**9.18**	**34**	Pn	**Pn**	**05 01 47.1**	**+0.3**
MJAR	**Matsushiro Arr**	**9.18**	**34**	Pn	**Pn**	**05 01 47.1**	**+0.3**
	0.8nm,0.3s,baz=228,slow=13,SNR=7.5						
MJAR				LR	LR	05 05 03.4	
	comp=Z,154nm,20.4s,baz=235,slow=36						
CBIJ	**Chichi jima**	**9.40**	**100**	Pn	**Pn**	**05 01 49.1**	**-0.6**
CBIJ	**Chichi jima**	**9.40**	**100**	Pn	**Pn**	**05 01 49.1**	**-0.6**
VLA	**Vladivostok**	**14.00**	**0**	⇓*e*P	P	05 02 56.5	-3.7
VLA				*e*S	Sn	05 05 34.8	+7.8
VLA				pmax	pmax		
	comp=Z,33nm,1.0s						
USRK	**Ussuriysk Arra**	**15.08**	**1**	Pn	**P**	**05 03 14.2**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=169,slow=12,SNR=11						
USRK				LR	LR	05 08 47.4	
	comp=Z,95nm,18.2s,baz=142,slow=37						
ASAJ	**Asahikawa**	**17.30**	**27**	LR	LR	05 09 58.6	
	comp=Z,175nm,18.9s,baz=201,slow=36						
GUMO	**Guam**	**19.63**	**139**	LR	LR	05 09 33.3	
	comp=Z,95nm,21.9s,baz=40,slow=30						
KLR	**Kul'dur**	**20.11**	**360**	*e*P	**P**	**05 04 07.0**	**-0.7**
ULN	**Ulaanbaatar**	**26.76**	**321**	*e*P	**P**	**05 05 13.3**	**-0.4**
	comp=Z,1.9nm,0.6s						
SONM	**Songino Array**	**27.10**	**321**	P	**P**	**05 05 16.0**	**-0.8**
SONM	**Songino Array**	**27.10**	**321**	P	**P**	**05 05 16.0**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=137,slow=10,SNR=10						
SONM				LR	LR	05 17 08.0	
	comp=Z,110nm,19.1s,baz=254,slow=38						
PETK	**Petropavlovsk-**	**30.62**	**31**	LR	LR	05 17 51.8	
	comp=Z,47nm,19.1s,baz=77,slow=36						
CHTO	**Chiang Mai**	**31.61**	**259**	*e*P	**P**	**05 05 57.8**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHTO	**Chiang Mai**	**31.61**	**259**	*e*P	**P**	**05 05 57.8**	**+0.9**
	comp=Z,2.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**31.77**	**258**	P	**P**	**05 05 59.0**	**+0.7**
CMAR				PcP	**PcP**	**05 08 50.5**	**+1.2**
CMAR	**Chiang Mai Arr**	**31.77**	**258**	P	**P**	**05 05 59.0**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=51,slow=7.8,SNR=6.4						
CMAR				PcP	**PcP**	**05 08 50.5**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=48,slow=1.3,SNR=4.3						
CMAR				LR	LR	05 19 52.4	
	comp=Z,96nm,18.0s,baz=262,slow=38						
ZALV	**Zalesovo Beam**	**41.99**	**320**	P	**P**	**05 07 25.5**	**+0.7**
ZALV						05 09 19.2	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ZALV				MLR	MLR		
	comp=Z,53nm,18.5s						
ZALV	**Zalesovo Beam**	**41.99**	**320**	P	**P**	**05 07 25.5**	**+0.7**
ZALV				PcP	**PcP**	**05 09 19.2**	**-0.4**
ZALV				ScP	**ScP**	**05 13 06.1**	**-2.1**
ZALV	**Zalesovo Beam**	**41.99**	**320**	P	**P**	**05 07 25.5**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=74,slow=5.1,SNR=2.9						
ZALV				PcP	**PcP**	**05 09 19.2**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=82,slow=3.1,SNR=4.1						
ZALV				ScP	**ScP**	**05 13 06.1**	**-2.1**
	comp=Z,0.3nm,0.4s,baz=93,slow=2.9,SNR=2.1						
ZALV				LR	LR	05 26 22.1	
	comp=Z,53nm,18.5s,baz=28,slow=38						
MK31	**Makanchi Array**	**42.09**	**309**	*e*P	**P**	**05 07 25.1**	**-0.7**
MK31	**Makanchi Array**	**42.09**	**309**	*e*P	**P**	**05 07 25.1**	**-0.7**
MKAR	**Makanchi Array**	**42.09**	**309**	P	**P**	**05 07 25.4**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**42.09**	**309**	P	**P**	**05 07 25.4**	**-0.4**
MKAR	**Makanchi Array**	**42.09**	**309**	P	**P**	**05 07 25.4**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=97,slow=9.6,SNR=19						
TIXI	**Tiksi**	**42.63**	**359**	⇓*e*P	**P**	**05 07 30.8**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BILL	**Bilibino**	**43.98**	**18**	P	P	05 07 44.0	+3.3
BILL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	**Kurchatov**	**45.01**	**314**	*de*P	**P**	**05 07 48.8**	**-0.3**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KURK	**Kurchatov**	**45.01**	**314**	*e*P	**P**	**05 07 48.5**	**-0.6**
	comp=Z,4.7nm,0.8s						
KURBB	**Kurchatov Arra**	**45.05**	**314**	P	**P**	**05 07 49.6**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=102,slow=9.0,SNR=11						
KURBB				LR	LR	05 28 07.6	
	comp=Z,109nm,21.7s,baz=120,slow=38						
HNR	**Honiara**	**46.96**	**140**	LR	LR	05 25 56.1	
	comp=Z,47nm,19.2s,baz=137,slow=34						
FITZ	**Fitzroy Crossi**	**47.29**	**188**	P	**P**	**05 08 07.7**	**+0.4**
FITZ	**Fitzroy Crossi**	**47.29**	**188**	P	**P**	**05 08 07.7**	**+0.4**
	comp=Z,3.3nm,0.6s,baz=22,slow=8.3,SNR=23						
AAK	**Ala-Archa**	**47.51**	**303**	*de*P	**P**	**05 08 06.8**	**-2.3**
AAK				pmax	pmax		
	comp=Z,92nm,0.9s						
AAK	**Ala-Archa**	**47.51**	**303**	LR	LR	05 29 55.9	
	comp=Z,62nm,18.9s,baz=297,slow=38						
WRAB	**Tennant Creek**	**48.80**	**177**	*e*P	**P**	**05 08 18.9**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,13nm,1.3s						
WRAB	**Tennant Creek**	**48.80**	**177**	*e*P	**P**	**05 08 18.9**	**-0.2**
	comp=Z,13nm,1.3s						
BVAR	**Borovoye Array**	**50.31**	**316**	P	**P**	**05 08 30.7**	**+0.4**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BVAR				MLR	MLR		
	comp=Z,71nm,18.1s						
BVAR	**Borovoye Array**	**50.31**	**316**	P	**P**	**05 08

comp=Z,3.0nm,1.0s
DAG Danmarks Havn 72.82 353 *i* P P 05 10 58.0 -3.7
comp=Z,3.0nm,1.0s
YKW3 Yellowknife Ar 74.55 26 *e*P P 05 11 12.6 +0.5
YKA Yellowknife Ar 74.59 26 P P 05 11 11.8 -0.5
YKA Yellowknife Ar 74.59 26 P P 05 11 11.8 -0.5
comp=Z,0.6nm,0.7s,baz=300,slow=5.8,SNR=12
AKASG Malin Array Be 75.39 320 P P 05 11 17.2 0.0
AKASG Malin Array Be 75.39 320 P P 05 11 17.1 0.0
AKASG Malin Array Be 75.39 320 P P 05 11 17.1 0.0
comp=Z,1.3nm,0.5s,baz=56,slow=5.9,SNR=5.0
KIEV Kiev 75.40 320 *e*P P 05 11 18.3 +1.0
KIEV pmax pmax
comp=Z,5.0nm,0.9s
KIEV Kiev 75.40 320 *e*P P 05 11 18.3 +1.0
comp=Z,4.8nm,0.9s
BR131 Keskin Array S 77.74 309 *e*P P 05 11 29.8 -1.2
comp=Z,6.0nm,1.1s
BRTR Keskin Array B 77.74 309 P P 05 11 30.2 -0.7
BRTR Keskin Array B 77.74 309 P P 05 11 30.2 -0.7
comp=Z,2.1nm,1.0s,baz=87,slow=2.6,SNR=4.9
NB2 NORSAR Subarra 78.11 335 P P 05 11 31.2 -1.2
comp=Z,1.9nm,0.9s,baz=46,slow=5.6
NOA NORSAR Array B 78.11 335 P P 05 11 31.3 -1.2
NOA NORSAR Array B 78.11 335 P P 05 11 31.3 -1.2
comp=Z,1.1nm,0.7s,baz=49,slow=5.4,SNR=4.3
SUMG Summit 78.38 357 *e*P P 05 11 35.3 +1.1
SUMG pmax pmax
comp=Z,7.0nm,0.8s
SUMG Summit 78.38 357 *i* P P 05 11 35.3 +1.1
comp=Z,7.2nm,0.8s
SCO Scoresbysund 78.94 351 *e*P P 05 11 35.8 -1.0
SCO pmax pmax
comp=Z,3.0nm,0.9s
SCO Scoresbysund 78.94 351 *i* P P 05 11 35.8 -1.0
comp=Z,2.6nm,0.9s
BUR08 Bucovina Ar. S 79.19 319 *e*P P 05 11 39.2 +0.5
NEW Newport 81.41 39 *e*P P 05 11 48.6 -2.0
comp=Z,3.0nm,1.1s
CLL Collm 83.56 326 *e*P P 05 12 02.0 +0.3
CLL *i* 05 12 12.9
CLL Collm 83.56 326 *e*P P 05 12 02.0 +0.3
CLL *i* pPcP 05 12 12.9
comp=Z,8.0nm,1.0s
GERES GERESS Array B 84.78 324 P P 05 12 11.1 +3.0
GERES GERESS Array B 84.78 324 P P 05 12 11.1 +3.0
comp=Z,0.4nm,0.3s,baz=44,slow=4.2,SNR=5.0
HLID Hailey 85.67 42 *e*P P 05 12 12.5 -0.3
comp=Z,1.5nm,0.8s
NVAR Mina Array Bea 86.25 48 P P 05 12 15.9 +0.1
NVAR Mina Array Bea 86.25 48 P P 05 12 15.9 +0.1
comp=Z,1.8nm,0.6s,baz=306,slow=3.4,SNR=6.0
HWUT Hardware Ranch 88.53 42 *e*P P 05 12 25.6 -1.1
comp=Z,4.4nm,1.0s
PDAR Pinedale Array 88.96 40 P P 05 12 30.5 +1.8
PDAR Pinedale Array 88.96 40 P P 05 12 30.5 +1.8
comp=Z,1.0nm,1.0s,baz=5.7,slow=1.5,SNR=4.4
VNA2 Neumayer--Watz 132.42 197 *e*P PKPdf 05 18 48.0 +1.0
baz=61,slow=1.3
VNA3 Neumayer Olymp 132.78 196 *e*P PKPdf 05 18 47.9 +0.2

IDC 15 05:05:32.5±4.8, 20.75S×178.42W, h557km±53km, mb3.2/7, mb1 3.5/8, mb1mx3.3/18, mbtmp3.2/8, Error ellipse: s-maj=29.3km s-min=21.1km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	Urewera	17.87	192	P		P		05 09 08.0	-0.7
	0.7nm,0.3s,baz=72,slow=5.5,SNR=5.1								
ASAR	Alice Springs	44.08	257	P		P		05 12 51.6	-0.3
	3.0nm,0.5s,baz=96,slow=7.5,SNR=32								
ASAR				PcP		PcP		05 14 24.4	-0.5
	0.7nm,0.6s,baz=113,slow=4.2,SNR=5.0								
VNDA	Vanda	57.62	185	P		P		05 14 29.5	+0.3
	0.9nm,1.0s,baz=16,slow=7.4,SNR=2.6								
MJAR	Matsushiro Arr	70.18	324	P		P		05 15 49.3	-0.3
	1.4nm,0.4s,baz=163,slow=5.5,SNR=4.0								
PETK	Petropavlovsk-	76.41	345	P		P		05 16 25.1	+0.3
	1.4nm,0.6s,baz=179,slow=8.6,SNR=4.2								
ILAR	Eielson Array	88.65	13	P		P		05 17 25.5	-0.6
	0.6nm,0.5s,baz=217,slow=5.1,SNR=15								
PDAR	Pinedale Array	89.42	43	P		P		05 17 31.5	+0.9
	0.6nm,0.7s,baz=204,slow=3.3,SNR=3.8								
CMAR	Chiang Mai Arr	89.83	290	P		P		05 17 33.9	+1.2
	1.0nm,0.8s,baz=116,slow=2.9,SNR=7.2								
MKAR	Makanchi Array	111.08	313	PKiKP		PKiKP		05 23 02.2	-0.8
	0.1nm,0.4s,baz=98,slow=3.0,SNR=4.3								
BVAR	Borovoye Array	119.02	320	PKP		PKPdf		05 23 16.4	-1.6
	0.9nm,0.4s,baz=127,slow=3.3,SNR=5.7								
ARCES	ARCESS Array B	129.10	349	PKP		PKPdf		05 23 36.1	-0.7
	3.7nm,1.0s,baz=359,slow=4.9,SNR=4.2								
FINES	FINESS Array B	135.90	343	PKP		PKPdf		05 23 49.6	-0.2
	0.5nm,0.5s,baz=56,slow=2.5,SNR=2.8								
AKASG	Malin Array Be	143.04	331	PKhKP		PKPpre		05 23 59.4	
	3.1nm,0.4s,baz=43,slow=4.2,SNR=20								
BRTR	Keskin Array B	146.71	312	PKPbc		PKPbc		05 24 11.7	-1.0
	1.0nm,0.6s,baz=140,slow=3.6,SNR=5.0								
MMAI	Mount Meron Ar	147.59	299	PKPbc		PKPbc		05 24 15.0	0.0
	1.1nm,0.4s,baz=94,slow=5.8,SNR=2.9								
GERES	GERESS Array B	150.33	344	PKPbc		PKPbc		05 24 20.6	-0.7
	0.2nm,0.3s,baz=17,slow=1.8,SNR=4.5								

*NNC **15** 05:05:43.6±1.4, 38°.41N×70°.27E, h0km, mb4.4, mpv4.4, Error ellipse: s-maj=12.0km s-min=8.6km az=36.0*
*IDC **15** 05:05:45.2±1.6, 38°.34N×70°.57E, h0km, mb3.8/7, mb1 4.0/11, mb1mx3.8/30, mbtmp3.8/11, ML3.7/4, MS2.8/1, Ms1 2.8/1, ms1mx2.2/41, Error ellipse: s-maj=37.1km s-min=13.2km az=144.0*
*ISCJB **15** 05:05:47.6±1.0, 38°.50N±0°.08×70°.24E±0°.06, h23km, mb3.6/7, Error ellipse: s-maj=11.2km s-min=7.1km az=177.0*

ISC 15 05:05:50.7±1.0, 38°.64N±0°.09×70°.31E±0°.07, h23km, n32, σ2s12/34, mb3.8/7, 8C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AML	Almayashu	4.34	35	P		Pn		05 06 56.7	+1.1
	SNR=60								
KK31	Karatay Array	4.46	2	Pn		Pn		05 06 59.2	+2.3
	9.6nm,0.3s,baz=182,slow=12,SNR=244								
KK31				⇑Sn		Sb		05 07 57.0	-4.7
	22nm,0.6s,baz=177,slow=20,SNR=3.5								
KK31				⇑Lg		Lg		05 08 10.9	
	84nm,0.7s,baz=187,slow=36,SNR=9.7								
EKS2	Erkin-Say	4.81	32	P		Pn		05 07 04.4	+2.6
	SNR=31								
KZA	Kyzart	5.10	46	P		Pn		05 07 07.2	+1.1
	SNR=18								
AAK	Ala-Archa	5.10	37	P		Pn		05 07 07.7	+1.8
	SNR=19								
AAK	Ala-Archa	5.10	37	Pn		Pn		05 07 07.6	+1.7
	2.0nm,0.3s,baz=177,slow=5.9,SNR=23								
AAK				Sn		Sn		05 08 08.2	+4.0
	1.7nm,0.3s,baz=163,slow=15,SNR=4.6								
AAK				Lg		Lg		05 08 30.9	
	3.2nm,0.3s,baz=127,slow=21,SNR=3.9								
AAK				LR		LR		05 09 19.7	
	comp=Z,87nm,18.8s,baz=109,slow=41								
KBK	Karagaybulak	5.34	40	P		Pn		05 07 11.3	+2.1
	SNR=29								
CHMS	Chumysh	5.51	36	P		Pn		05 07 17.5	+6.2
	SNR=12								
USP	Ospenovka	5.61	33	P		Pn		05 07 16.7	+4.0
	SNR=27								
ULHL	Ulahol	5.78	50	P		Pn		05 07 16.1	+0.8
	SNR=8.1								
TKM2	Tokmak 2	5.86	42	⇑Pn		Pn		05 07 15.1	-1.3
	40nm,0.5s								
TKM2				⇑Sn		Sn		05 08 26.9	+3.9
	22nm,0.7s								
TKM2				⇑Lg		Lg		05 08 56.6	
	22nm,0.8s								
TKM2	Tokmak 2	5.86	42	P		Pn		05 07 17.2	+0.8
	SNR=24								
MK31	Makanchi Array	11.99	43	Pn		Pn		05 08 40.1	0.0
	3.2nm,0.7s,baz=231,slow=10,SNR=12								
MKAR	Makanchi Array	11.99	43	Pn		Pn		05 08 40.0	-0.2
	0.3nm,0.3s,baz=227,slow=12,SNR=12								
AB31	Akbulak array	12.96	328	⇑Pn		Pn		05 08 51.4	-1.9
	3.9nm,0.6s,baz=141,slow=12,SNR=49								
AB31				⇓Sn		Sn		05 11 18.5	+1.7
	4.3nm,0.5s,baz=140,slow=24,SNR=10								

KURBB Kurchatov Arra 13.32 23 Pn Pn 05 08 57.3 -1.0
0.1nm,0.3s,baz=214,slow=13,SNR=6.5
VOSK Vostochnaya 14.09 2 ⇓Pn Pn 05 09 07.8 -1.0
4.3nm,0.9s
BVA0 Borovoye Array 14.39 0 Pn Pn 05 09 11.3 -1.5
0.7nm,0.8s,baz=86,slow=10,SNR=22
BVAR Borovoye Array 14.39 0 Pn P 05 09 16.0 -3.5
0.9nm,0.3s,baz=171,slow=7.0,SNR=5.8
BRVK Borovoye 14.42 360 ⇑Pn Pn 05 09 12.2 -1.0
6.5nm,0.6s
AKTO Aktyubinsk 14.67 327 ⇑Sn Sn 05 12 00.2 +1.9
0.8nm,0.8s
AKTO Aktyubinsk 14.67 327 P P 05 09 19.7 -3.0
AKTO Aktyubinsk 14.67 327 Pn P 05 09 19.7 -3.0
0.3nm,0.3s,baz=130,slow=13,SNR=4.8
AKTO Sn Sn 05 12 00.8 +2.5
baz=21,slow=21,SNR=4.0
ZALV Zalesovo Beam 18.24 28 P P 05 10 00.8 -1.4
0.9nm,0.3s,baz=218,slow=11,SNR=11
SONM Songino Array 27.64 59 P P 05 11 34.6 -2.0
0.3nm,0.5s,baz=256,slow=8.5,SNR=3.0
FINES FINESS Array B 35.41 325 P P 05 12 45.2 +0.7
1.2nm,0.8s,baz=341,slow=17,SNR=3.7
ARCES ARCESS Array B 38.96 337 P P 05 13 14.8 +0.2
6.4nm,1.1s,baz=106,slow=7.7,SNR=5.5
NB2 NORSAR Subarra 42.35 322 P P 05 13 45.0 +2.3
comp=Z,0.1nm,0.6s,baz=96,slow=8.6
NOA NORSAR Array B 42.35 322 P P 05 13 45.1 +2.3
comp=Z,0.7nm,0.8s,baz=95,slow=8.2,SNR=4.3
TORD Torodi Ar. Bea 65.24 267 P P 05 16 30.2 -0.5
comp=Z,0.5nm,0.7s,baz=49,slow=5.8,SNR=7.4
ILAR Eielson Array 72.87 16 P P 05 17 16.1 -1.2
comp=Z,0.6nm,0.9s,baz=333,slow=2.9,SNR=5.3
YKA Yellowknife Ar 79.13 2 P P 05 17 52.6 -0.4
comp=Z,0.6nm,0.4s,baz=352,slow=5.6,SNR=41

RSPR 15 05:48:39.7, 19°.50N×65°.21W, h11km±11km, 8C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STVI	Saint Thomas	1.17	168	⇑*e*P		Pb		05 48 58.7	-3.2
STVI	Saint Thomas	1.17	168	⇑*e*P		Pb		05 48 58.7	-3.2
STVI				*e*S		Sb		05 49 13.6	-3.4
CBYP	Canovanas	1.37	207	⇑*e*P		Pn		05 49 01.6	-3.2
CBYP	Canovanas	1.37	207	⇑*e*P		Pn		05 49 01.6	-3.2
CBYP				*e*S		Sb		05 49 18.6	-4.3
MTP	Monte Pirata	1.43	193	⇑*e*P		Pn		05 49 02.6	-3.0
MTP	Monte Pirata	1.43	193	⇑*e*P		Pn		05 49 02.6	-3.0
MTP				*e*S		Sn		05 49 20.7	-3.7
HUMP	Col San Antoni	1.48	204	*e*S		Sn		05 49 21.8	-3.8
HUMP	Col San Antoni	1.48	204	⇑*e*P		Pn		05 49 03.4	-2.8
HUMP	Col San Antoni	1.48	204	⇑*e*P		Pn		05 49 03.4	-2.8
HUMP				*e*S		Sn		05 49 21.8	-3.8
SJG	San Juan	1.64	213	*e*S		Sn		05 49 25.4	-4.3
SJG	San Juan	1.64	213	*e*S		Sn		05 49 25.4	-4.3

*NEIC **15** 05:49:09.5, 19°.26N×65°.14W, h68km±8km, MD3.5(RSPR), After RSPR.*

RSPR 15 05:49:09.5, 19°.26N×65°.14W, h68km±8km, MD3.5/8, 28C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STVI	Saint Thomas	0.92	169	⇑*e*P		Pn		05 49 25.7	-1.3
STVI	Saint Thomas	0.92	169	*e*S		Sn		05 49 39.2	-0.7
STVI	Saint Thomas	0.92	169	⇑*e*P		Pn		05 49 25.7	-1.3
STVI				*e*S		Sn		05 49 39.2	-0.7
STVI	Saint Thomas	0.92	169	⇑*e*P		Pn		05 49 25.7	-1.3
STVI				*e*S		Sn		05 49 39.2	-0.7
TBVI	Tortola	0.98	149	⇑*e*P		Pn		05 49 27.2	-0.5
TBVI				*e*S		Sn		05 49 40.7	-0.4
TBVI	Tortola	0.98	149	⇑*e*P		Pn		05 49 27.2	-0.5
TBVI				*e*S		Sn		05 49 40.7	-0.4
TBVI	Tortola	0.98	149	⇑*e*P		Pn		05 49 27.2	-0.5
TBVI				*e*S		Sn		05 49 40.7	-0.4
CBYP	Canovanas	1.20	215	⇑*e*P		Pn		05 49 29.4	-1.1
CBYP	Canovanas	1.20	215	⇑*e*P		Pn		05 49 29.4	-1.1
CBYP	Canovanas	1.20	215	⇑*e*P		Pn		05 49 29.4	-1.1
MTP	Monte Pirata	1.22	199	⇑*e*P		Pn		05 49 29.9	-1.0
MTP	Monte Pirata	1.22	199	*e*S		Sn		05 49 46.4	-0.4
MTP	Monte Pirata	1.22	199	⇑*e*P		Pn		05 49 29.9	-1.0
MTP				*e*S		Sn		05 49 46.4	-0.4
MTP	Monte Pirata	1.22	199	⇑*e*P		Pn		05 49 29.9	-1.0
MTP				*e*S		Sn		05 49 46.4	-0.4
HUMP	Col San Antoni	1.30	211	*e*S		Sn		05 49 47.8	-0.8
HUMP	Col San Antoni	1.30	211	⇑*e*P		Pn		05 49 30.9	-1.0
HUMP				*e*S		Sn		05 49 47.8	-0.8
HUMP	Col San Antoni	1.30	211	⇑*e*P		Pn		05 49 30.9	-1.0
HUMP				*e*S		Sn		05 49 47.8	-0.8
CPD	Cerro la Pandu	1.42	211	⇑*e*P		Pn		05 49 32.7	-0.8
CPD	Cerro la Pandu	1.42	211	*e*S		Sn		05 49 50.7	-0.8
CPD	Cerro la Pandu	1.42	211	⇑*e*P		Pn		05 49 32.7	-0.8
CPD				*e*S		Sn		05 49 50.7	-0.8
CPD	Cerro la Pandu	1.42	211	⇑*e*P		Pn		05 49 32.7	-0.8
CPD				*e*S		Sn		05 49 50.7	-0.8
SJG	San Juan	1.49	220	⇑*e*P		Pn		05 49 33.7	-0.6
SJG	San Juan	1.49	220	⇑*e*P		Pn		05 49 33.7	-0.6
SJG	San Juan	1.49	220	⇑*e*P		Pn		05 49 33.7	-0.6
SJG	San Juan	1.49	220	⇑*e*P		Pn		05 49 33.7	-0.6
SJG	San Juan	1.49	220	⇑*e*P		Pn		05 49 33.7	-0.6
AOPR	Arecibo Observ	1.78	239	⇑*e*P		Pn		05 49 37.5	-0.7
AOPR	Arecibo Observ	1.78	239	⇑*e*P		Pn		05 49 37.5	-0.7
AOPR	Arecibo Observ	1.78	239	⇑*e*P		Pn		05 49 37.5	-0.7
CELP	Cerrillos	1.80	229	⇑*e*P		Pn		05 49 38.0	-0.5
CELP				*e*S		Sn		05 50 00.2	-0.4
CELP	Cerrillos	1.80	229	⇑*e*P		Pn		05 49 38.0	-0.5
CELP				*e*S		Sn		05 50 00.2	-0.4
CELP	Cerrillos	1.80	229	⇑*e*P		Pn		05 49 38.4	-0.1
CELP				*e*S		Sn		05 50 00.2	-0.4

IGQ 15 05:57:50.8, 0.85S×79.89W, h108km±103km, Mb4.1, Ms3.9, 18C-21D, Error ellipse: s-maj=1.8km s-min=1.4km az=3.9, Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PECV	Mancha de Ca P	0.17	294	⇓P		Pn		05 58 07.2	+1.2
JAMA	Jama	0.66	332	S		Sn		05 58 20.9	-1.3
JAMA	Jama	0.66	332	P		Pn		05 58 08.0	-0.8
CHIS	Cerro-Chispas-	0.86	256	S		Sn		05 58 25.6	+0.3
CHIS	Cerro-Chispas-	0.86	256	P		Pn		05 58 10.5	+0.1
GOLV	Golondrinas	1.29	36	⇑P		Pn		05 58 14.7	-0.5
GOLV	Golondrinas	1.29	36	⇑S		Sn		05 58 32.6	-0.9
CAMI	Rancho Maria	1.40	83	⇓S		Sn		05 58 37.5	+0.9
CAMI	Rancho Maria	1.40	83	⇓P		Pn		05 58 18.2	+1.3
IGUA	Igualata	1.41	117	⇑S		Sn		05 58 35.0	-2.2
IGUA	Igualata	1.41	117	⇑P		Pn		05 58 16.9	-0.3
JUA2	San Juan 2	1.43	64	⇑S		Sn		05 58 36.6	-0.8
JUA2	San Juan 2	1.43	64	⇑P		Pn		05 58 17.8	+0.4
NAS2	Nasa	1.44	82	S		Sn		05 58 37.6	0.0
NAS2	Nasa	1.44	82	P		Pn		05 58 18.4	+0.9
TERV	Terraza Guagua	1.45	63	⇓P		Pn		05 58 17.6	-0.1
PINO	Pino	1.46	62	⇑P		Pn		05 58 17.7	-0.1
MOV1	Cotopaxi Vol s	1.46	85	⇓P		Pn		05 58 18.2	+0.4
MOV1	Cotopaxi Vol s	1.46	85	⇓S		Sn		05 58 37.5	-0.8
GGP	Refugio Guagua	1.46	63	⇑S		Sn		05 58 36.8	-1.4
GGP	Refugio Guagua	1.46	63	⇑P		Pn		05 58 17.5	-0.3
VC1	Cotopaxi 1	1.50	82	⇓S		Sn		05 58 38.7	-0.4
VC1	Cotopaxi 1	1.50	82	⇓P		Pn		05 58 19.2	+0.9
PISA	Pisayambo	1.52	98	⇓S		Sn		05 58 39.5	0.0
PISA	Pisayambo	1.52	98	⇓P		Pn		05 58 19.5	+1.1
JUI6	Juive	1.54	112	⇑S		Sn		05 58 38.4	-0.8
JUI6	Juive	1.54	112	⇑P		Pn		05 58 18.9	+0.5
RIOE	Riobamba	1.55	126	⇑P		Pn		05 58 18.3	-0.3
COV1	Cotopaxi Volc	1.56	83	⇓P		Pn		05 58 18.9	-0.2
COV1	Cotopaxi Volc	1.56	83	⇓S		Sn		05 58 38.9	-1.6
ARRY	Arrayan	1.58	115	⇑S		Sn		05 58 39.2	-1.2
ARRY	Arrayan	1.58	115	⇑P		Pn		05 58 19.4	+0.4
PAT1	Patacocha	1.60	114	⇑S		Sn		05 58 40.2	-0.8
PAT1	Patacocha	1.60	114	⇑P		Pn		05 58 19.9	+0.5
ULBA	Ulba	1.60	112	⇓P		Pn		05 58 20.0	+0.7
ULBA	Ulba	1.60	112	⇓S		Sn		05 58 40.4	-0.5
ANTI	Antisana	1.78	77	⇓S		Sn		05 58 46.0	+0.9
ANTI	Antisana	1.78	77	⇓P		Pn		05 58 23.0	+1.3
OTAV	Otavalo	1.80	53	⇓S		Sn		05 58 45.1	-0.3
OTAV	Otavalo	1.80	53	⇓P		Pn		05 58 22.1	+0.3
COTA	Cotacachi	1.95	53	⇑S		Sn		05 58 50.2	+1.4
COTA	Cotacachi	1.95	53	⇑P		Pn		05 58 25.0	+1.2
CAYA	Cayambe	2.11	64	S		Sn		05 58 54.7	+2.1
CAYA	Cayambe	2.11	64	P		Pn		05 58 28.6	+2.7
MACE	Macas	2.20	130	⇓P		Pn		05 58 28.5	+1.9
LITE	Lita	2.24	43	⇓S		Sn		05 58 54.9	+0.1
LITE	Lita	2.24	43	⇓P		Pn		05 58 27.8	+0.7

NNC 15 06:13:55.1±1.8, 38°.62N×70°.20E, h0km, mb3.7, mpv3.3, 6C-1D, Error ellipse: s-maj=13.4km s-min=12.2km az=36.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	4.49	3	⇑Pn		Pn		06 15 06.8	+2.3
	1.3nm,0.4s,baz=176,slow=12,SNR=27								
KK31				⇑Pg		Pb		06 15 17.4	+2.6
	1.6nm,0.4s,baz=181,slow=16,SNR=4.8								
KK31				⇑Sn		Sb		06 16 04.0	-5.5
	2.4nm,0.5s								
KK31				⇑Lg		Lg		06 16 16.7	
	3.1nm,0.5s,baz=186,slow=27,SNR=5.7								
TKM2	Tokmak 2	5.94	42	⇑Pn		Pn		06 15 25.8	+1.2
	2.7nm,0.4s								
TKM2				⇑Sn		Sn		06 16 34.0	+0.4
	1.4nm,0.6s								
AB31	Akbulak array	12.94	329	Pn		Pn		06 17 00.6	+0.4
	0.8nm,0.3s,baz=152,slow=11,SNR=37								
AB31				⇓Sn		Sn		06 19 25.6	+0.8
	0.8nm,0.6s,baz=154,slow=22,SNR=5.0								

*NEIC **15** 06:25:38.1, 19°.40N×65°.05W, h47km±7km, MD3.5(RSPR), After RSPR.*

RSPR 15 06:25:38.1, 19°.40N×65°.05W, h47km±7km, MD3.5/5, 24C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STVI	Saint Thomas	1.04	175	⇑*e*P		Pn		06 25 55.2	-1.1
STVI	Saint Thomas	1.04	175	*e*S		Sn		06 26 09.0	-0.8
STVI	Saint Thomas	1.04	175	⇑*e*P		Pn		06 25 55.2	-1.1
STVI				*e*S		Sn		06 26 09.0	-0.8
STVI	Saint Thomas	1.04	175	⇑*e*P		Pn		06 25 55.2	-1.1
STVI				*e*S		Sn		06 26 09.0	-0.8
TBVI	Tortola	1.06	157	⇑*e*P		Pn		06 25 55.5	-1.0
TBVI	Tortola	1.06	157	⇑*e*P		Pn		06 25 55.5	-1.0
TBVI	Tortola	1.06	157	⇑*e*P		Pn		06 25 55.5	-1.0
CBYP	Canovanas	1.36	214	⇑*e*P		Pn		06 25 59.6	-1.1
CBYP	Canovanas	1.36	214	*e*S		Sn		06 26 16.4	-1.3
CBYP	Canovanas	1.36	214	⇑*e*P		Pn		06 25 59.6	-1.1
CBYP				*e*S		Sn		06 26 16.4	-1.3
CBYP	Canovanas	1.36	214	⇑*e*P		Pn		06 25 59.6	-1.1
CBYP				*e*S		Sn		06 26 16.4	-1.3
MTP	Monte Pirata	1.38	200	⇑*e*P		Pn		06 26 00.0	-0.9
MTP	Monte Pirata	1.38	200	*e*S		Sn		06 26 17.0	-1.0
MTP	Monte Pirata	1.38	200	⇑*e*P		Pn		06 26 00.0	-0.9
MTP				*e*S		Sn		06 26 17.0	-1.0
MTP	Monte Pirata	1.38	200	⇑*e*P		Pn		06 26 00.2	-0.7
MTP				*e*S		Sn		06 26 17.0	-1.0
HUMP	Col San Antoni	1.46	211	⇑*e*P		Pn		06 26 00.9	-1.1
HUMP	Col San Antoni	1.46	211	*e*S		Sn		06 26 19.0	-1.1
HUMP	Col San Antoni	1.46	211	⇑*e*P		Pn		06 26 00.9	-1.1
HUMP				*e*S		Sn		06 26 19.0	-1.1
HUMP	Col San Antoni	1.46	211	⇑*e*P		Pn		06 26 00.9	-1.1
HUMP				*e*S		Sn		06 26 19.0	-1.1
CPD	Cerro la Pandu	1.58	211	⇑*e*P		Pn		06 26 02.8	-1.0
CPD	Cerro la Pandu	1.58	211	*e*S		Sn		06 26 22.1	-1.1
CPD	Cerro la Pandu	1.58	211	⇑*e*P		Pn		06 26 02.8	-1.0
CPD				*e*S		Sn		06 26 22.1	-1.1
CPD	Cerro la Pandu	1.58	211	⇑*e*P		Pn		06 26 02.8	-1.0
CPD				*e*S		Sn		06 26 22.5	-0.6
AOPR	Arecibo Observ	1.93	237	⇑*e*P		Pn		06 26 07.5	-0.9
AOPR	Arecibo Observ	1.93	237	⇑*e*P		Pn		06 26 07.5	-0.9
AOPR	Arecibo Observ	1.93	237	⇑*e*P		Pn		06 26 07.5	-0.9
CELP	Cerrillos	1.96	228	⇑*e*P		Pn		06 26 08.1	-0.8
CELP	Cerrillos	1.96	228	⇑*e*P		Pn		06 26 08.1	-0.8
CELP	Cerrillos	1.96	228	⇑*e*P		Pn		06 26 08.1	-0.8

*ISCJB **15** 06:31:53.4±0.6, 38°.68N±0°.03×21°.69E±0°.05, h24km±5km, Error ellipse: s-maj=7.1km s-min=4.7km az=5.9*
*ATH **15** 06:31:53.9, 38°.67N×21°.67E, h16km±3km, MD2.9/11*
*CSEM **15** 06:31:53.2±0.1, 38°.70N×21°.69E, h19km±1km, ML1.7/6, Error ellipse: s-maj=3.8km s-min=2.8km az=72.0*
*THE **15** 06:31:54.5, 38°.69N×21°.76E, h13km±2km, ML1.7/6, Error ellipse: s-maj=2.2km s-min=0.3km az=271.0*

ISC 15 06:31:53.9±1.0, 38°.68N±0°.02×21°.70E±0°.03, h17km±8km, n34, σ0s47/59, Greece

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

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.86**	**30**	P	**Pb**	**06 38 35.0**	**+1.0**
LWLI	**Liwa**	**2.24**	**65**	P	**Pb**	**06 38 39.5**	**-1.0**
KSI	**Kapahiang**	**2.39**	**14**	P	**Pb**	**06 38 43.8**	**+0.8**
KASI	**Kota Agung**	**2.50**	**80**	P	**Pn**	**06 38 41.4**	**+1.3**
TPI	**Tanjungpandan** 155nm,0.8s,4μm0.9nm	**6.46**	**60**	P	Pn	06 39 38.5	+3.9
TPRI	**Tanjung Pinang** 1μm,0.9s,46μm7.3nm	**7.30**	**20**	P	Pn	06 39 50.7	+4.5
STKI	**Sintang** 61nm,0.5s,19μm	**11.18**	**58**	P	**Pn**	**06 40 39.0**	**-0.5**
WSI	**Waingapu**	**18.46**	**103**	P	**P**	**06 42 15.6**	**+0.3**
CMAR	**Chiang Mai Arr** 0.3nm,0.6s,baz=176,slow=11,SNR=4.2	**24.48**	**353**	P	**P**	**06 43 17.7**	**-0.8**
ASAR	**Alice Springs** 0.5nm,0.9s,baz=303,slow=7.3,SNR=4.4	**35.33**	**123**	P	**P**	**06 44 54.9**	**0.0**
STKA	**Stephens Creek** 2.9nm,0.9s,baz=297,slow=14,SNR=4.2	**45.03**	**130**	P	**P**	**06 46 16.0**	**+0.9**
SONM	**Songino Array** 0.7nm,0.7s,baz=186,slow=11,SNR=5.2	**53.73**	**4**	P	**P**	**06 47 20.5**	**-0.8**
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=154,slow=7.8,SNR=5.9	**55.39**	**344**	P	**P**	**06 47 33.1**	**-0.2**
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=178,slow=6.6,SNR=2.8	**61.44**	**349**	P	**P**	**06 48 14.8**	**-0.6**
TXAR	**Lajitas Array** 0.3nm,0.8s,baz=211,slow=2.1,SNR=3.4	**146.42**	**43**	PKPbc	**PKPbc**	**06 57 40.8**	**-0.2**

NIED ***15*** *06:40:00,27.˝10N×130.˝00E,h5km,Mw3.8 Best double couple: M₀5.22000×10¹⁴ NP1:φ₀=235.00000°,δ59.00000°, λ-67.00000°. NP2:φ₀16.00000°,δ38.00000°, λ-123.00000°.*

ISCJB ***15*** *06:40:47.7±1.3,27.˝09N±0.˝05×130.˝01E±0.˝04, h19km±11km,mb3.5/6,Error ellipse: s-maj=7.8km s-min=6.2km az=175.6*

IDC ***15*** *06:40:47.4±1.1,27.˝04N×130.˝58E,h0km,mb3.5/6, mb1 3.7/7,mb1mx3.6/25,mbtmp3.6/7,ML3.4/1,MS3.5/1, Ms1 3.5/1,ms1mx2.5/36,Error ellipse: s-maj=47.3km s-min=19.5km az=79.0*

JMA ***15*** *06:40:48.8,27.˝11N×130.˝05E,h46km,M3.6*

ISC 15 06:40:46.9±3.4,27.˝09N±0.˝04×130.˝01E±0.˝05,h3km±22km, n18,σ1§78/23,mb3.6/6,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.16**	**307**	P	**Pb**	**06 41 09.4**	**-0.2**
JTK				S	**Sb**	**06 41 24.3**	**-0.8**
JAM	**Amami Oshima**	**1.36**	**345**	P	**Pn**	**06 41 12.1**	**-0.7**
JAM				*e*S	**Sn**	**06 41 28.8**	**-2.5**
JAMN	**Amaminishikomi**	**1.36**	**327**	P	**Pn**	**06 41 11.8**	**-1.0**
JOW	**Kunigami**	**1.57**	**261**	P	**Pb**	**06 41 15.7**	**-0.8**
JOW				*e*S	**Sn**	**06 41 34.6**	**-1.9**
JMZ	**Minamidaito 2**	**1.67**	**139**	P	**Pn**	**06 41 16.2**	**-0.9**
JMZ				*e*S	**Sn**	**06 41 36.3**	**-2.7**
JIH	**Iheya**	**1.82**	**269**	P	**Pn**	**06 41 19.2**	**+0.1**
JIH				*e*S	**Sn**	**06 41 41.9**	**-0.7**
JJT2	**Tamagusuku 2**	**2.23**	**245**	*e*S	**Sn**	**06 41 51.8**	**-1.1**
JAGN	**Aguni-jima**	**2.52**	**259**	P	**Pn**	**06 41 28.7**	**0.0**
JAGN				*e*S	**Sn**	**06 41 57.7**	**-2.2**
JNN	**Nakanoshima**	**2.74**	**358**	*e*S	**Sn**	**06 42 02.0**	**-3.4**
JKE	**Kume jima 2**	**2.98**	**256**	P	**Pn**	**06 41 34.7**	**-0.4**
JKE				*e*S	**Sn**	**06 42 09.0**	**-2.3**
JNU	**Nakatsue** 1.0nm,0.3s,baz=194,slow=11,SNR=5.8	**6.05**	**7**	Pn	**Pn**	**06 42 18.2**	**+0.8**
JHJ	**Hachijo jima 2** comp=Z,273nm,19.5s,baz=110,slow=36	**10.38**	**52**	LR	LR	06 46 53.7	
SONM	**Songino Array** 0.4nm,0.7s,baz=119,slow=12,SNR=3.1	**27.73**	**325**	P	**P**	**06 46 39.8**	**+3.1**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=92,slow=11,SNR=2.5	**42.16**	**311**	P	P	06 48 46.6	+5.9
FITZ	**Fitzroy Crossi** 1.6nm,1.1s,baz=8.7,slow=13,SNR=2.9	**45.13**	**186**	P	**P**	**06 49 03.9**	**-0.8**
ASAR	**Alice Springs** 0.6nm,0.5s,baz=6.2,slow=15,SNR=12	**50.60**	**175**	P	**P**	**06 49 48.8**	**+1.6**
FINES	**FINESS Array B** 0.5nm,0.3s,baz=196,slow=39,SNR=1.3	**72.89**	**331**	P	**P**	**06 52 18.6**	**+1.5**
YKA	**Yellowknife Ar** 0.3nm,0.8s,baz=300,slow=5.6,SNR=5.0	**77.07**	**25**	P	**P**	**06 52 41.4**	**+0.3**

IDC 15 06:49:26.6±1.4,3.˝35N×126.˝20E,h0km,mb3.6/6, mb1 3.7/6,mb1mx3.6/23,mbtmp3.7/6,Error ellipse: s-maj=124.7km s-min=18.9km az=70.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.8nm,0.7s,baz=144,slow=14,SNR=1.7	**21.32**	**181**	P	P	06 54 14.2	-1.0
ASAR	**Alice Springs** 0.3nm,0.6s,baz=348,slow=6.6,SNR=5.4	**27.88**	**165**	P	P	06 55 18.9	+0.6
STKA	**Stephens Creek** 2.2nm,0.7s,baz=306,slow=11,SNR=3.3	**37.96**	**158**	P	P	06 56 46.0	-0.2
SONM	**Songino Array** 0.4nm,0.6s,baz=150,slow=9.8,SNR=4.2	**47.49**	**342**	P	P	06 58 02.6	-0.9
MKAR	**Makanchi Array** 0.8nm,0.6s,baz=120,slow=8.6,SNR=13	**57.57**	**326**	P	P	06 59 18.1	-0.1
KURBB	**Kurchatov Arra** 0.6nm,0.4s,baz=130,slow=6.4,SNR=7.2	**61.78**	**328**	P	P	06 59 47.6	+0.5

BJI ***15*** *06:54:48.7,80.˝60N×107.˝80W,h5km,mB5.1/29,mb5.0/50, Ms4.9/28,Ms7 4.6/27*

IDC ***15*** *06:54:51.6±0.4,80.˝60N×108.˝00W,h0km,mb4.6/35, mb1 4.7/39,mb1mx4.6/42,mbtmp4.6/39,ML4.4/4,MS4.0/39, Ms1 4.0/39,ms1mx4.0/60,Error ellipse: s-maj=11.2km s-min=9.0km az=111.0*

MOS ***15*** *06:54:51.7±0.8,80.˝56N×107.˝97W,h12km,mb5.3/79, MS4.2/12,Error ellipse: s-maj=30.3km s-min=3.8km az=85.3*

OTT ***15*** *06:54:51.5±0.4,80.˝44N×107.˝88W,h18km,mb5.0, ML5.3/21,Offshore Queen Elizabeth Island region, Nt. 203km northwest from Isachsen, Nu*

ISCJB ***15*** *06:54:53.0±0.1,80.˝59N±0.˝01×107.˝9W±0.˝1,h20km, mb4.9/209,MS4.1/53,Error ellipse: s-maj=3.2km s-min=1.6km az=15.8*

NEIC ***15*** *06:54:53.4±0.1,80.˝61N×107.˝75W,h10km,mb5.0/121, ML5.2(OTT),Error ellipse: s-maj=3.1km s-min=1.8km az=126.0*

GCMT ***15*** *06:54:54.2±0.2,80.˝57N×108.˝63W,h12km,MW5.0, Moment Tensor Solution. s34,c38; s83,c122; Moment tensor: Scale 10¹⁶Nm; Mrr3.69±.09; Mθθ-1.69±.11; Mφφ-2.00±.12; Mrθ0.32±.31; Mφφ-1.75±.08; Mφr-1.78±.38; Best double couple: M₀4.00000×10¹⁶ NP1:φ₀59.00000°, δ39.00000°,λ118.00000°. NP2:φ₀204.00000°,δ56.00000°, λ69.00000°. Principal axes: T 4.3100, Plg70.0000°, Azm65.0000°; N -0.5400, Plg17.0000°, Azm216.0000°; P -3.7800, Plg9.0000°, Azm309.0000°; Data Used: II IU IC CN G.*

SZGRF ***15*** *06:55:11.3,82.˝48N×101.˝21W,h24km,mb4.4,Arctic Ocean*

ISC 15 06:54:53.9±0.3,80.˝52N±0.˝04×107.˝62W±0.˝04,h15km±1km, h15km:pP-P,n834,σ1§17/896,mb5.0/209,MS4.1/53, 153C-147D,Arctic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EUNU	**Eureka**	**3.61**	**87**	Pn	**Pn**	**06 55 48.1**	**-1.0**
EUNU				Sn	**Sn**	**06 56 27.7**	**-3.8**
EUNU	**Eureka**	**3.61**	**87**	⇓PN	**Pn**	**06 55 48.1**	**-1.0**
EUNU				SN	**Sn**	**06 56 27.7**	**-3.8**
EUNU	comp=Z,1μm,0.8s			Trac		06 56 34.9	
RES	**Resolute Bay** 121nm,0.7s	**6.45**	**149**	*e*Pn	Pn	06 56 24.4	-3.6
RES				Sn	Sn	06 57 33.9	-7.2
RES				*e*Sn	Sb	06 57 35.1	-27
RES	**Resolute Bay**	**6.45**	**149**	PN	Pn	06 56 24.6	-3.4
RES				SN	Sn	06 57 33.0	-8.1
RES	comp=Z,161nm,0.3s			Trac		06 57 39.8	
RES	**Resolute Bay** 10nm,0.3s,baz=350,slow=14,SNR=98	**6.45**	**149**	Pn	Pn	06 56 24.4	-3.6
RES	40nm,0.3s,baz=257,slow=22,SNR=16			Sn	Sn	06 57 33.9	-7.2
RES	comp=Z,2μm,19.6s,baz=343,slow=41			LR	LR	06 59 20.5	
ALE	**Alert** 584nm,0.3s	**6.81**	**52**	Pn	**Pn**	**06 56 30.0**	**-3.0**
CB31	**Cambridge Bay**	**11.47**	**175**	PN	Pn	06 57 31.1	-5.7
CB31				SN	Sn	06 59 32.6	-12
CB31	comp=Z,219nm,0.3s			Trac		06 59 38.0	
GIFN	**Gifford Fjord,**	**12.26**	**135**	Pn	Pn	06 57 42.1	-5.4
GIFN				Sn	Sn	06 59 50.3	-13
GIFN	**Gifford Fjord,**	**12.26**	**135**	PN	Pn	06 57 41.8	-5.7
GIFN	comp=Z,246nm,0.6s			mb		06 57 44.1	
GIFN				SN	Sn	06 59 50.3	-13
ILON	**Igloolik, Nuna**	**12.82**	**136**	PN	Pn	06 57 49.3	-5.9
ILON	comp=Z,360nm,2.3s			mb		06 57 50.4	
ILON				SN	Sn	07 00 02.4	-15
ILON	comp=Z,168nm,0.9s			Trac		07 00 20.5	
KUGN	**Kugaaruk Camp,**	**13.25**	**150**	PN	Pn	06 57 55.2	-5.7
KUGN				SN	Sn	07 00 14.1	-14
SRLN	**Sarcpa Lake, N**	**13.44**	**139**	PN	Pn	06 57 57.4	-6.2
SRLN	comp=Z,32nm,0.5s			mb		06 57 60.0	
SRLN				SN	Sn	07 00 16.9	-15
SRLN	comp=Z,65nm,0.6s			Trac		07 00 35.6	
STLN	**Stellar Camp,**	**13.79**	**156**	PN	Pn	06 58 03.0	-5.4
STLN				SN	Sn	07 00 27.4	-14
STLN	comp=Z,29nm,0.4s			Trac		07 00 48.0	
INK	**Inuvik**	**13.85**	**223**	Pn	Pn	06 58 03.0	-6.2
INK				Sn	Sn	07 00 29.4	-13
INK	**Inuvik**	**13.85**	**223**	PN	Pn	06 58 04.0	-5.2
INK	comp=Z,32nm,0.7s			mb		06 58 07.6	
INK				SN	Sn	07 00 26.9	-16
INK	comp=Z,13nm,0.3s			Trac		07 00 34.2	
INK	**Inuvik** 1.2nm,0.3s,baz=22,slow=17,SNR=61	**13.85**	**223**	Pn	Pn	06 58 03.0	-6.2
INK	4.3nm,0.3s,baz=150,slow=18,SNR=8.0			Sn	Sn	07 00 29.4	-13
JERN	**Jeri Cho Mine,**	**14.62**	**186**	PN	Pn	06 58 13.6	-6.1
JERN	comp=Z,25nm,0.5s			mb		06 58 15.4	
JERN				SN	Sn	07 00 44.8	-16
JERN	comp=Z,76nm,0.7s			Trac		07 00 48.8	
BULN	**Bullion Camp,**	**14.69**	**157**	PN	Pn	06 58 15.0	-5.7
BULN				SN	Sn	07 00 47.8	-15
BULN	comp=Z,64nm,0.8s			Trac		07 00 59.2	
QILN	**Qililugaq Expl**	**14.97**	**146**	PN	Pn	06 58 18.6	-5.9
QILN				SN	Sn	07 00 55.1	-15
QILN	comp=Z,54nm,0.8s			Trac		07 01 11.7	
WAGN	**Wager Bay**	**15.47**	**151**	PN	Pn	06 58 24.6	-6.4
WAGN				SN	Sn	07 01 07.2	-15
NUNN	**Nunuq Camp, NU**	**16.00**	**154**	PN	Pn	06 58 33.0	-4.9
NUNN				SN	Sn	07 01 21.3	-13
NUNN	comp=Z,36nm,0.8s			Trac		07 01 44.5	
DAG	**Danmarks Havn**	**16.19**	**56**	*i* P	**Pn**	**06 58 37.8**	**-2.5**
DAG	**Danmarks Havn**	**16.19**	**56**	*i* P	**Pn**	**06 58 37.8**	**-2.5**
DAG				*i* S	Sn	07 01 24.2	-15
CTLN	**Castor Lake**	**16.34**	**193**	PN	Pn	06 58 36.9	-5.4
CTLN				SN	Sn	07 01 23.8	-19
CTLN	comp=Z,107nm,1.4s			Trac		07 01 55.6	
ILKN	**Indian Lake**	**16.51**	**192**	PN	Pn	06 58 39.2	-5.2
ILKN				SN	Sn	07 01 29.8	-17
ILKN	comp=Z,72nm,0.7s			Trac		07 01 34.1	
SUMG	**Summit**	**16.64**	**79**	*e*P	Pn	06 58 40.0	-6.4
SUMG	comp=Z,111nm,0.5s			pmax	pmax		
SUMG	**Summit**	**16.64**	**79**	*e*Pn	Pn	06 58 40.0	-6.4
SUMG	comp=Z,111nm,0.5s			*e*Sn	Sn	07 01 24.9	-26
SUMG	**Summit**	**16.64**	**79**	*i* P	Pn	06 58 41.6	-4.9
SUMG				*i* S	Sn	07 01 29.7	-21
GALN	**Gameti Lake**	**16.70**	**195**	PN	Pn	06 58 41.8	-5.1
GALN				SN	Sn	07 01 34.2	-17
GALN	comp=Z,93nm,0.8s			Trac		07 01 40.4	
COLD	**Coldfoot** comp=Z,20nm,0.8s	**17.08**	**244**	*e*Pn	**Pn**	**06 58 49.8**	**-1.8**
COKN	**Cook Lake**	**17.34**	**182**	PN	Pn	06 58 49.2	-5.7
COKN				SN	Sn	07 01 49.2	-18
COKN	comp=Z,95nm,0.7s			Trac		07 01 52.5	
KBS	**Kingsbay**	**17.87**	**33**	*e*P	**P**	**06 59 02.5**	**+0.6**
KBS	**Kingsbay**	**17.87**	**33**	*e*Pn	**Pn**	**06 59 01.6**	**+0.2**
SEDN	**First Sedna Si**	**17.94**	**155**	PN	Pn	06 58 57.3	-4.9
SEDN				SN	Sn	07 02 03.9	-18
SEDN	comp=Z,68nm,1.2s			Trac		07 02 06.4	
JOSN	**Second Sedna S**	**18.00**	**156**	PN	Pn	06 58 58.3	-4.8
JOSN				SN	Sn	07 02 06.4	-17
JOSN	comp=Z,27nm,0.6s			Trac		07 02 14.0	
WHFN	**White Fish Lak**	**18.06**	**179**	PN	Pn	06 58 58.4	-5.4
WHFN				SN	Sn	07 02 06.8	-18
WHFN	comp=Z,33nm,0.8s			Trac		07 02 25.8	
EGAK	**Eagle** comp=Z,41nm,1.0s	**18.15**	**229**	*e*Pn	**Pn**	**06 59 01.4**	**-3.4**
YKW3	**Yellowknife Ar** comp=Z,0.3nm,0.6s	**18.16**	**190**	*e*Pn	**Pn**	**06 59 01.4**	**-3.5**
YKW3	**Yellowknife Ar**	**18.16**	**190**	PN	**Pn**	**06 59 00.8**	**-4.1**
YKW3	comp=Z,11nm,0.2s			mb		06 59 04.8	
YKW3				SN	Sn	07 02 08.8	-18
YKW3				SN	S	07 02 08.9	-23
YKW3	comp=Z,23nm,0.6s			Trac		07 02 15.5	
YKA	**Yellowknife Ar**	**18.23**	**190**	P	**Pn**	**06 59 01.1**	**-4.7**
YKA				S	Sn	07 02 12.0	-17
YKA	**Yellowknife Ar** comp=Z,2.3nm,0.3s,baz=19,slow=13,SNR=140	**18.23**	**190**	P	**Pn**	**06 59 01.1**	**-4.7**
YKA	comp=Z,2.8nm,0.3s,baz=311,slow=30,SNR=10.0			S	Sn	07 02 12.0	-17
GDLN	**Gardenia Lake,**	**18.60**	**178**	PN	P	06 59 05.0	-5.0
GDLN				SN	Sn	07 02 16.7	-21
GDLN	comp=Z,25nm,0.4s			Trac		07 02 26.8	
ILAR	**Eielson Array**	**18.91**	**237**	P	**P**	**06 59 13.3**	**-0.2**
ILAR				S	Sn	07 02 33.0	-12
ILAR	**Eielson Array** comp=Z,0.6nm,0.3s,baz=15,slow=10.0,SNR=53	**18.91**	**237**	P	**P**	**06 59 13.3**	**-0.2**
ILAR	comp=Z,0.8nm,0.3s,baz=218,slow=7.0,SNR=8.7			S	Sn	07 02 33.0	-12
ILAR	comp=Z,175nm,21.8s,baz=290,slow=38			LR	LR	07 06 48.0	
SPITS	**Spitsbergen Ar**	**18.94**	**32**	P	**P**	**06 59 14.1**	**+0.4**
SPITS	**Spitsbergen Ar** baz=21,slow=7.3,SNR=4.5	**18.94**	**32**	P	**P**	**06 59 14.1**	**+0.4**
SPITS	comp=Z,386nm,21.9s,baz=335,slow=34			LR	LR	07 05 29.4	
COLA	**College**	**18.95**	**238**	*e*P	**Pn**	**06 59 14.8**	**+0.3**
COLA	comp=Z,96nm,0.3s			pmax	pmax		
COLA	**College** comp=Z,96nm,0.3s	**18.95**	**238**	*e*P	**Pn**	**06 59 14.8**	**+0.3**
SFJD	**Kangerlussuaq**	**19.56**	**100**	P	**P**	**06 59 20.6**	**+0.2**
SFJD	**Kangerlussuaq** comp=Z,2.0nm,0.3s,baz=348,slow=12,SNR=9.6	**19.56**	**100**	P	**P**	**06 59 20.7**	**+0.2**
SFJD	comp=Z,495nm,21.1s,baz=341,slow=38			LR	LR	07 07 15.9	
DOT	**Dot Lake** comp=Z,79nm,1.0s	**19.60**	**232**	*e*P	**P**	**06 59 21.6**	**+0.5**
FRB	**Frobisher Bay**	**19.86**	**124**	P	**P**	**06 59 21.7**	**-2.1**
FRB	**Frobisher Bay**	**19.86**	**124**	PN	**P**	**06 59 21.4**	**-2.5**
FRB				SN	S	07 02 48.7	-18
FRB	comp=Z,124nm,1.7s			Trac		07 03 00.4	
FRB	**Frobisher Bay** comp=Z,0.8nm,0.3s,baz=344,slow=12,SNR=15	**19.86**	**124**	P	**P**	**06 59 21.7**	**-2.1**
FRB	comp=Z,976nm,20.0s,baz=13,slow=39			LR	LR	07 07 43.7	
ARVN	**Arviat, NU**	**19.91**	**160**	PN	**P**	**06 59 22.4**	**-2.0**
ARVN				SN	S	07 02 50.1	-17
IVKQ	**Ivujivik**	**19.97**	**138**	PN	**P**	**06 59 22.2**	**-2.8**
IVKQ				SN	S	07 02 50.6	-18
MCK	**McKinley** comp=Z,80nm,1.3s	**20.19**	**238**	*e*P	Pn	06 59 29.0	-0.4
MCK				pmax	pmax		
MCK	**McKinley** comp=Z,80nm,1.3s	**20.19**	**238**	*e*P	Pn	06 59 28.9	-0.4
MENT	**Mentasta**	**20.24**	**231**	*e*P	**P**	**06 59 28.7**	**+0.6**
PAX	**Paxson**	**20.44**	**233**	*e*P	**P**	**06 59 31.3**	**+1.0**
PAX	comp=Z,41nm,0.8s			pmax	pmax		
PAX	**Paxson** comp=Z,41nm,0.8s	**20.44**	**233**	*e*P	**P**	**06 59 31.2**	**+1.0**
TRF	**Thorofare Moun** comp=Z,72nm,1.3s	**20.65**	**240**	*e*P	**P**	**06 59 33.1**	**+0.6**
SCO	**Scoresbysund**	**21.09**	**69**	*i* P	**P**	**06 59 37.2**	**+0.1**
SCO	**Scoresbysund**	**21.09**	**69**	*i* P	**P**	**06 59 37.2**	**+0.1**
SCO				*e*S	S	07 03 12.8	-18
TNA	**Tin City** comp=Z,36nm,0.8s	**21.42**	**262**	*e*P	**P**	**06 59 42.2**	**+1.6**
PPLA	**Purkeypile** comp=Z,96nm,1.2s	**21.45**	**242**	*e*P	**P**	**06 59 42.2**	**+1.1**
SML	**Sawmill**	**21.95**	**236**	*e*P	**P**	**06 59 48.2**	**+1.8**
SML	comp=Z,32nm,0.9s			pmax	pmax		
SML	**Sawmill** comp=Z,32nm,0.9s	**21.95**	**236**	*e*P	**P**	**06 59 48.2**	**+1.8**
DIV	**Divide** comp=Z,419nm,2.4s	**22.25**	**232**	*e*P	**P**	**06 59 50.9**	**+1.2**
BMRM	**Bremner River** comp=Z,96nm,1.1s	**22.26**	**231**	*e*P	**P**	**06 59 50.9**	**+1.1**
PMR	**Palmer**	**22.26**	**237**	*e*P	**P**	**06 59 50.2**	**+0.5**
PMR	comp=Z,79nm,1.3s			pmax	pmax		
PMR	**Palmer** comp=Z,79nm,1.3s	**22.26**	**237**	*e*P	**P**	**06 59 50.2**	**+0.5**
JMIC	**Jan Mayen** comp=Z,207nm,21.5s,baz=69,slow=34	**22.62**	**57**	LR	LR	07 07 52.2	
SKAG	**Skagway** comp=Z,41nm,1.0s	**22.66**	**218**	*e*P	**P**	**06 59 54.4**	**+0.5**
RAGM	**Ragged Mountai** comp=Z,179nm,1.2s	**22.83**	**230**	*e*P	**P**	**06 59 57.4**	**+1.5**
SPU	**Mount Spurr**	**23.07**	**240**	*e*P	**P**	**06 59 58.2**	**-0.1**
DLBC	**Dease Lake**	**23.17**	**211**	P	**P**	**07 00 00.3**	**+1.0**
DLBC	**Dease Lake** comp=Z,26nm,1.0s,baz=12,slow=10,SNR=20	**23.17**	**211**	P	**P**	**07 00 00.3**	**+1.0**
DLBC	comp=Z,218nm,19.1s,baz=174,slow=41			LR	LR	07 10 36.1	
BILL	**Bilibino**	**23.37**	**289**	*i* P	**P**	**07 00 00.7**	**-0.5**
BILL				*e**PP	**pP**	**07 00 06.6**	**+0.9**
BILL				*i*		07 00 29.4	
BILL				*e*S	**S**	**07 04 15.4**	**+2.3**
BILL				*e*SS	**SnSn**	**07 04 48.6**	**+0.9**
BILL	comp=Z,12nm,1.6s			pmax	pmax		
BILL	**Bilibino** comp=Z,56nm,1.2s	**23.37**	**289**	*e*P	**P**	**07 00 01.0**	**-0.2**
SVW2	**Sparrevohn** comp=Z,50nm,1.2s	**23.67**	**244**	*e*P	**P**	**07 00 05.2**	**+1.0**
GAMB	**Gambell** comp=Z,34nm,0.8s	**23.70**	**264**	*e*P	**P**	**07 00 05.0**	**+0.6**
SEW	**Seward** comp=Z,96nm,1.1s	**23.74**	**236**	*e*P	**P**	**07 00 05.7**	**+0.9**
WRAK	**Wrangell Islan** comp=Z,36nm,1.2s	**25.37**	**213**	*e*P	**P**	**07 00 21.5**	**+1.7**
FFC	**Flin Flon**	**25.98**	**173**	*e*P	P	07 00 31.6	+6.3
FFC	comp=Z,42nm,1.3s			pmax	pmax		
FFC	**Flin Flon** comp=Z,42nm,1.3s	**25.98**	**173**	*e*P	P	07 00 31.6	+6.3
KDAK	**Kodiak Island**	**26.42**	**238**	P	**P**	**07 00 30.3**	**+1.1**
KDAK	**Kodiak Island** comp=Z,30nm,0.8s,baz=27,slow=9.9,SNR=9.0	**26.42**	**238**	P	**P**	**07 00 30.3**	**+1.1**
KDAK	comp=Z,238nm,21.9s,baz=87,slow=40			LR	LR	07 12 18.5	
BORG	**Borgarnes**	**26.44**	**74**	P	**P**	**07 00 31.2**	**+1.8**
BORG	**Borgarnes** comp=Z,21nm,1.1s,baz=77,slow=0.2,SNR=2.2	**26.44**	**74**	P	**P**	**07 00 31.2**	**+1.8**
BORG	comp=Z,239nm,18.4s,baz=180,slow=37			LR	LR	07 11 18.2	
OHAK	**Old Harbor**	**27.06**	**239**	*e*P	**P**	**07 00 37.3**	**+2.2**
KEV	**Kevo**	**27.88**	**32**	*e*P	**P**	**07 00 40.5**	**-1.8**
KEV	comp=Z,7.0nm,0.5s			pmax	pmax		
KEV	**Kevo** comp=Z,6.9nm,0.5s	**27.88**	**32**	*e*p	**P**	**07 00 40.5**	**-1.8**
ARCES	**ARCESS Array B**	**27.96**	**33**	P	**P**	**07 00 42.6**	**-0.5**
ARCES	**ARCESS Array B** comp=Z,9.7nm,1.0s,baz=356,slow=6.7,SNR=5.4	**27.96**	**33**	P	**P**	**07 00 42.6**	**-0.5**
ARCES	comp=Z,274nm,20.0s,baz=96,slow=35			LR	LR	07 11 05.6	
SCHQ	**Schefferville** comp=Z,16nm,0.8s	**28.72**	**128**	*e*P	**P**	**07 00 49.7**	**-0.3**
SCHQ	**Schefferville** comp=Z,7.9nm,0.8s,baz=329,slow=8.7,SNR=10	**28.72**	**128**	P	**P**	**07 00 49.7**	**-0.3**
SCHQ	comp=Z,850nm,20.1s,baz=157,slow=38			LR	LR	07 12 52.3	
BBB	**Bella Bella** comp=Z,420nm,18.2s,baz=193,slow=40	**29.23**	**206**	LR	LR	07 14 14.1	
SEY	**Seymchan**	**30.26**	**297**	*e*P	**P**	**07 01 03.6**	**+0.1**
ULM	**Lac du Bonnet**	**30.65**	**165**	*e*P	**P**	**07 01 07.8**	**+0.8**
ULM	**Lac du Bonnet** comp=Z,4.8nm,0.8s,baz=351,slow=9.2,SNR=7.5	**30.65**	**165**	P	**P**	**07 01 07.8**	**+0.8**
ULM	comp=Z,416nm,21.7s,baz=24,slow=35			LR	LR	07 12 57.9	
A22A	**Carney Farms,** baz=32	**31.66**	**178**	⇓P	**P**	**07 01 16.6**	**+0.6**
A15A	**Johnson Ranch,** baz=32	**31.72**	**186**	⇑P	**P**	**07 01 16.7**	**+0.1**
A17A	**Triple J Farms** baz=32	**31.72**	**184**	⇑P	**P**	**07 01 16.8**	**+0.2**
A19A	**Klindworth Far** baz=32	**31.72**	**181**	⇑P	**P**	**07 01 16.9**	**+0.4**
A16A	**West Butte Ran** baz=32	**31.73**	**185**	⇓P	**P**	**07 01 17.1**	**+0.4**
A14A	**Double T Ranch** baz=32	**31.74**	**187**	⇑P	**P**	**07 01 16.7**	**0.0**
A24A	**Westby** baz=32	**31.75**	**175**	⇑P	**P**	**07 01 17.5**	**+0.7**
A13A	**Flathead Natio** baz=32	**31.80**	**189**	⇓P	**P**	**07 01 17.0**	**-0.3**
DGMT	**Dagmar** comp=Z,23nm,1.1s	**32.20**	**176**	*e*P	P	07 01 24.2	+3.4
B20A	**Solberg Farm,** baz=32	**32.21**	**180**	⇓P	**P**	**07 01 21.3**	**+0.5**
B14A	**Marquette Ranc** baz=32	**32.34**	**187**	⇓P	**P**	**07 01 22.5**	**+0.3**
B17A	**L&G Farms, Che** baz=32	**32.37**	**184**	⇑P	**P**	**07 01 22.8**	**+0.4**
B15A	**Bradely Ranch,** baz=32	**32.38**	**186**	⇓P	**P**	**07 01 22.7**	**+0.3**
PGC	**Sidney**	**32.45**	**200**	P	**P**	**07 01 22.8**	**0.0**
NEW	**Newport** comp=Z,424nm,18.6s,baz=8.9,slow=39	**32.55**	**192**	LR	LR	07 16 14.2	
AGMN	**Agassiz Nation** comp=Z,36nm,1.3s	**32.60**	**165**	*e*P	**P**	**07 01 24.5**	**+0.3**
C23A	**Lambert** baz=33,SNR=6.9	**32.86**	**177**	⇑P	**P**	**07 01 27.5**	**+1.0**
C22A	**Vida** baz=33	**32.91**	**178**	⇓P	**P**	**07 01 27.7**	**+0.7**
C15A	**Salmond Ranch,** baz=33	**32.92**	**186**	⇓P	**P**	**07 01 27.8**	**+0.6**
C14A	**Swan Lake** baz=33	**32.95**	**188**	⇓P	**P**	**07 01 27.5**	**+0.2**
C17A	**Wharram Farm,** baz=33	**33.03**	**184**	⇑P	**P**	**07 01 28.4**	**+0.3**
C13A	**Hot Springs** baz=33	**33.06**	**189**	⇑P	**P**	**07 01 29.0**	**+0.7**
C24A	**Savage** baz=33	**33.14**	**176**	⇓P	**P**	**07

D16A **Dana Ranch, Ca** 33.65 185 ⇓P P 07 01 34.0 +0.5
baz=34
D15A **Lincoln** 33.65 186 ⇑P P 07 01 34.3 +0.7
baz=34
D12A **Red Ives Fores** 33.70 190 ⇑P P 07 01 34.4 +0.4
baz=34
CHMT **Chamberlain Mo** 33.79 187 *e*P P 07 01 35.6 +0.8
MSO **Missoula** 33.89 188 *e*P P 07 01 36.6 +1.0
comp=Z,130nm,2.9s
MSO **Missoula** 33.89 188 ⇓P P 07 01 36.2 +0.6
baz=34
E18A **Harlowton** 34.09 183 ⇓P P 07 01 37.9 +0.5
baz=34
E16A **East Helena** 34.15 185 ⇓P P 07 01 38.3 +0.4
baz=34
E23A **Ismay** 34.16 177 ⇓P P 07 01 38.5 +0.7
baz=34
YAK **Yakutsk** 34.16 315 *e*P P 07 01 35.6 -2.0
YAK *e* 07 02 49.6
YAK *e*PPP PPP 07 03 02.5
YAK *e* 07 04 11.6
YAK *e*S **S** **07 07 00.3 -2.5**
YAK *e*SS **SnSn** **07 09 10.5 0.0**
YAK *e*SSS SSS 07 09 28.6
YAK pmax pmax
comp=Z,44nm,0.9s
YAK pmax pmax
comp=N,18nm,1.1s
YAK pmax pmax
comp=Z,212nm,4.8s
YAK pmax pmax
comp=N,166nm,4.9s
YAK pmax pmax
comp=E,52nm,3.9s
YAK smax smax
comp=N,42nm,2.3s
YAK smax smax
comp=E,58nm,2.7s
YAK MLR MLR
comp=Z,505nm,21.0s
YAK MLR MLR
comp=N,384nm,20.0s
YAK MLR MLR
comp=E,178nm,20.0s
E19A **Rath Farm, Rou** 34.19 181 ⇑P P 07 01 38.9 +0.7
baz=34
E17A **Martinsdale** 34.21 184 ⇓P P 07 01 38.8 +0.4
baz=34,SNR=8.7
E22A **Miles City** 34.22 178 ⇓P P 07 01 39.4 +1.1
baz=34
E15A **Deer Lodge** 34.27 186 ⇑P P 07 01 39.6 +0.7
baz=34
E13A **Victor** 34.28 188 ⇓P P 07 01 39.5 +0.5
baz=34
NB2 **NORSAR Subarra** 34.66 49 P P 07 01 41.6 -0.4
comp=Z,11nm,0.9s,baz=345,slow=8.6
NOA **NORSAR Array B** 34.66 49 P P 07 01 41.5 -0.5
NOA **NORSAR Array B** 34.66 49 P P 07 01 41.5 -0.5
comp=Z,2.4nm,0.6s,baz=344,slow=8.7,SNR=9.2
NOA LR LR 07 16 12.5
comp=Z,129nm,18.9s,baz=5.0,slow=37
F18A **Big Timber** 34.75 183 ⇓P P 07 01 43.9 +0.8
baz=35
F17A **Fitzpatrick Pl** 34.76 184 ⇑P P 07 01 43.5 +0.3
baz=35,SNR=8.1
F19A **Roth Farm, Mol** 34.80 182 ⇓P P 07 01 43.9 +0.5
baz=35
F24A **Ekalaka** 34.82 176 ⇑P P 07 01 44.3 +0.6
baz=35
F15A **Butte** 34.85 186 ⇑P P 07 01 44.7 +0.6
baz=35
GCMT **Greycliff** 34.87 183 *e*P P 07 01 45.0 +0.9
comp=Z,11nm,0.9s
LRM **Limekiln Ridge** 34.87 186 *e*P P 07 01 45.4 +1.2
F22A **Rosebud** 34.87 178 ⇓P P 07 01 44.8 +0.7
baz=35
F23A **Volborg** 34.94 177 ⇑P P 07 01 45.4 +0.8
baz=35
F13A **Darby** 34.94 188 ⇑P P 07 01 45.1 +0.4
baz=35,SNR=5.1
JOF **Joensuu** 34.96 32 *e*P P 07 01 43.3 -1.2
JOF pmax pmax
comp=Z,7.0nm,0.5s
JOF **Joensuu** 34.96 32 *e*p P 07 01 43.3 -1.2
comp=Z,6.5nm,0.5s
JOF **Joensuu** 34.96 32 *e*P P 07 01 43.3 -1.2
comp=Z,6.5nm,0.5s
F12A **Elk City** 35.00 189 ⇑P P 07 01 45.7 +0.5
baz=35,SNR=8.2
BOZ **Bozeman (W)** 35.03 185 *e*P P 07 01 46.7 +1.2
BOZ pmax pmax
comp=Z,40nm,2.1s
BOZ **Bozeman (W)** 35.03 185 *e*P P 07 01 46.7 +1.2
comp=Z,40nm,2.1s
BOZ **Bozeman (W)** 35.03 185 ⇑P P 07 01 45.7 +0.2
baz=35
KAF **Kangasniemi** 35.29 36 *e*P P 07 01 46.7 -0.7
KAF pmax pmax
comp=Z,2.0nm,0.7s
KAF **Kangasniemi** 35.29 36 *e*p P 07 01 46.7 -0.7
comp=Z,1.8nm,0.7s
G18A **Lazy EL Ranch,** 35.34 182 ⇑P P 07 01 48.4 +0.2
baz=35
G24A **Alzada** 35.34 176 ⇓P P 07 01 48.8 +0.7
baz=35
G17A **Pierce Place,** 35.34 184 ⇓P P 07 01 48.4 +0.2
baz=35
G20A **Bridger** 35.43 181 ⇑P P 07 01 48.9 -0.1
baz=35
G22A **Birney** 35.43 178 ⇓P P 07 01 49.3 +0.4
baz=35
G16A **Moss Hill, Enn** 35.45 185 ⇑P P 07 01 49.6 +0.4
baz=35
G23A **Biddle** 35.46 177 ⇑P P 07 01 49.9 +0.8
baz=35
G14A **Jackson** 35.47 187 ⇑P P 07 01 49.8 +0.5
baz=35
G15A **Dillon** 35.52 186 ⇓P P 07 01 50.5 +0.6
baz=36
RLMT **Red Lodge** 35.53 182 *e*P P 07 01 53.8 +3.9
comp=Z,32nm,1.9s
RLMT **Red Lodge** 35.53 182 ⇑P P 07 01 50.5 +0.6
baz=36
G12A **Big Creek, Yel** 35.62 189 ⇑P P 07 01 51.1 +0.4
baz=36
G13A **Cobalt** 35.63 188 ⇑P P 07 01 51.4 +0.7
baz=36,SNR=8.4
SPMN **St. Paul** 35.81 162 ⇑P P 07 01 52.6 +0.6
baz=36
HFS **Hagfors** 35.84 47 P P 07 01 52.3 +0.1
HFS **Hagfors** 35.84 47 P P 07 01 52.3 +0.1
comp=Z,7.9nm,0.9s,baz=12,slow=7.6,SNR=12
HFS LR LR 07 17 33.2
comp=Z,246nm,19.2s,baz=154,slow=38
QLMT **Earthquake Lak** 35.84 185 *e*P P 07 01 54.1 +1.5
comp=Z,1.0nm,0.9s
MCMT **McKenzie Canyo** 35.87 186 *e*P P 07 01 53.8 +0.9
comp=Z,12nm,1.6s
H24A **Dirks Ranch, A** 35.92 176 ⇑P P 07 01 53.9 +0.8
baz=36
FIA1 **FINESS Array S** 35.92 36 *e*P P 07 01 52.0 -0.8
FINES **FINESS Array B** 35.92 36 P P 07 01 52.4 -0.4
FINES PcP **PcP** **07 04 18.7 -0.5**
FINES **FINESS Array B** 35.92 36 P P 07 01 52.4 -0.4
comp=Z,11nm,0.9s,baz=358,slow=9.5,SNR=21
FINES PcP **PcP** 07 04 18.7 -0.5
comp=Z,2.5nm,0.9s,baz=335,slow=6.2,SNR=3.3
FINES LR LR 07 15 23.8
comp=Z,178nm,21.7s,baz=2.6,slow=34
BMO **Blue Mountains** 35.96 192 *e*P P 07 01 55.1 +1.6
H16A **Russell Place,** 35.97 184 ⇑P P 07 01 54.7 +1.0
baz=36,SNR=11
H18A **Shoshone NF, C** 35.98 182 ⇑P P 07 01 54.5 +0.7
baz=36
YMR **Madison River** 36.00 184 *e*P P 07 01 54.9 +1.0
comp=Z,14nm,1.0s
H21A **Big Horn, Sher** 36.02 179 ⇑P P 07 01 55.2 +1.1
baz=36
H15A **Lima** 36.08 186 ⇓P P 07 01 55.4 +0.8
baz=36
H14A **Leadore** 36.09 187 ⇓P P 07 01 55.7 +1.0
baz=36,SNR=8.4
LKWY **Lake** 36.10 183 *e*P P 07 01 56.2 +1.4
LKWY pmax pmax
comp=Z,8.0nm,1.0s
LKWY **Lake** 36.10 183 *e*P P 07 01 56.2 +1.4
comp=Z,8.5nm,1.0s

H20A **Greybull** 36.16 180 ⇓P P 07 01 55.6 +0.4
baz=36
H12A **Diamond D Ranc** 36.19 189 ⇓P P 07 01 55.9 +0.4
baz=36
RSSD **Black Hills** 36.55 176 *e*P P 07 01 59.8 +1.2
RSSD pmax pmax
comp=Z,20nm,1.1s
RSSD **Black Hills** 36.55 176 *e*P P 07 01 59.8 +1.2
comp=Z,20nm,1.1s
I19A **Meeteetse** 36.62 182 ⇓P P 07 01 59.5 +0.3
baz=37
I20A **Worland** 36.70 181 ⇓P P 07 02 00.3 +0.5
baz=37
I17A **Pilgrim Ck.** 36.74 184 ⇓P P 07 02 01.5 +1.2
baz=37
I22A **9 Mile Ranch,** 36.76 179 ⇑P P 07 02 01.6 +1.2
baz=37,SNR=8.4
IMW **Indian Meadow** 36.77 184 *e*P P 07 02 02.9 +2.3
I14A **Mackay** 36.78 187 ⇓P P 07 02 01.5 +0.9
baz=37
I16A **Newdale** 36.80 185 ⇓P P 07 02 02.4 +1.7
baz=37,SNR=13
I13A **Wildhorse Cree** 36.81 188 ⇑P P 07 02 01.9 +1.1
baz=37,SNR=9.2
I21A **Big Trails, Te** 36.84 180 ⇓P P 07 02 01.6 +0.6
baz=37
MOOW **Moose Ponds** 36.92 184 *e*P P 07 02 03.2 +1.4
comp=Z,9.9nm,0.8s
I12A **Atlanta** 36.95 189 ⇑P P 07 02 02.6 +0.6
baz=37
I18A **Diamond G Ranc** 36.96 183 ⇑P P 07 02 02.6 +0.5
baz=37
LOHW **Long Hollow** 37.05 184 *e*P P 07 02 04.7 +1.8
comp=Z,69nm,2.3s
ECSD **EROS Data Cent** 37.13 167 *e*P P 07 02 04.2 +0.9
comp=Z,13nm,1.0s
HLID **Hailey** 37.17 188 *e*P P 07 02 05.4 +1.6
comp=Z,5.7nm,1.1s
HLID **Hailey** 37.17 188 ⇓P P 07 02 04.3 +0.4
baz=37
TPAW **Teton Pass** 37.18 184 *e*P P 07 02 06.2 +2.1
comp=Z,55nm,1.8s
SNOW **Snow King Moun** 37.20 184 *e*P P 07 02 05.7 +1.4
comp=Z,6.8nm,0.8s
J22A **Midwest** 37.24 179 ⇑P P 07 02 04.9 +0.5
baz=37
SADO **Sadowa** 37.25 146 LR LR 07 17 44.4
comp=Z,627nm,21.6s,baz=180,slow=37
J20A **Shoshoni** 37.30 181 ⇑P P 07 02 05.3 +0.4
baz=37
J17A **Brown Place, J** 37.30 184 ⇑P P 07 02 04.8 -0.2
baz=37
J21A **Lysite** 37.30 180 ⇓P P 07 02 05.5 +0.4
baz=37
RRI2 **Red Ridge** 37.33 184 *e*P P 07 02 07.2 +1.9
comp=Z,59nm,1.8s
J13A **Cove Ranch, Pi** 37.33 188 ⇑P P 07 02 05.6 +0.4
baz=37
MFID **Camas Ranch** 37.35 190 *e*P P 07 02 07.3 +2.0
comp=Z,4.8nm,0.9s
MFID **Camas Ranch** 37.35 190 ⇓P P 07 02 05.9 +0.6
baz=37
J14A **Carey** 37.39 187 ⇓P P 07 02 06.1 +0.4
baz=37
J19A **Crowheart** 37.39 182 ⇑P P 07 02 06.5 +0.8
baz=37
J18A **Kendall Valley** 37.45 183 ⇓P P 07 02 07.1 +0.8
baz=37
MSNY **Massena** 37.45 141 *e*P P 07 02 07.0 +1.1
comp=Z,221nm,0.8s
K19A **Absolon Red Bu** 37.83 181 ⇑P P 07 02 10.0 +0.5
baz=38
K16A **Soda Springs** 37.84 185 ⇑P P 07 02 10.8 +1.2
baz=38
LONY **Lake Ozonia** 37.85 141 *e*P P 07 02 10.4 +1.0
comp=Z,19nm,1.0s
BW06 **Boulder Array** 37.89 182 *e*P P 07 02 10.8 +0.8
comp=Z,41nm,2.0s
BW06 **Boulder Array** 37.89 182 ⇑P P 07 02 10.6 +0.6
baz=38
PDAR **Pinedale Array** 37.89 182 P P 07 02 10.4 +0.4
PDAR **Pinedale Array** 37.89 182 P P 07 02 10.4 +0.4
comp=Z,1.4nm,0.5s,baz=20,slow=7.2,SNR=11
PDAR LR LR 07 18 37.6
comp=Z,199nm,18.9s,baz=9.7,slow=38
K17A **Gardner Place,** 37.92 184 ⇑P P 07 02 10.6 +0.4
baz=38
K22A **Casper** 38.00 179 ⇓P P 07 02 11.3 +0.4
baz=38,SNR=8.1
K21A **Alcova** 38.02 180 ⇓P P 07 02 11.7 +0.6
baz=38
K18A **Toltan Ranch,** 38.02 183 ⇓P P 07 02 11.9 +0.8
baz=38
K14A **Jones Ranch, D** 38.16 187 ⇓P P 07 02 13.2 +1.0
baz=38
EKA **Eskdalemuir Ar** 38.22 63 P P 07 02 11.8 -0.6
EKA **Eskdalemuir Ar** 38.22 63 P P 07 02 11.8 -0.6
comp=Z,7.8nm,0.7s,baz=350,slow=8.0,SNR=12
ESK **Eskdalemuir** 38.23 63 *e*P P 07 02 12.3 -0.2
ESK pmax pmax
comp=Z,72nm,1.5s
ESK **Eskdalemuir** 38.23 63 *e*P P 07 02 12.3 -0.2
comp=Z,72nm,1.5s
WVL **Waterville** 38.46 135 *e*P P 07 02 16.7 +2.2
comp=Z,32nm,1.1s
NCB **Newcomb** 38.53 140 *e*P P 07 02 16.1 +1.0
comp=Z,20nm,0.9s
L23A **Garrett** 38.54 178 ⇓P P 07 02 15.7 +0.2
baz=38
L19A **Farson** 38.55 182 ⇑P P 07 02 15.7 +0.1
baz=38
L17A **Cokeville** 38.57 184 ⇓P P 07 02 16.1 +0.4
baz=38
MDV **Middlebury** 38.62 139 *e*P P 07 02 17.2 +1.4
L22A **Ellis Ranch, M** 38.62 179 ⇓P P 07 02 17.0 +0.8
baz=39
L26A **Underwood Farm** 38.65 175 ⇑P P 07 02 17.4 +1.2
baz=39
L16A **Fish Haven** 38.66 185 ⇓P P 07 02 17.1 +0.6
baz=39
L14A **Malta** 38.67 187 ⇓P P 07 02 17.6 +1.1
baz=39
L15A **Malad City** 38.68 186 ⇑P P 07 02 17.2 +0.5
baz=39
L21A **Rawlins** 38.68 180 ⇑P P 07 02 17.3 +0.6
baz=39
L18A **Fontenelle, Gr** 38.73 183 ⇓P P 07 02 17.8 +0.7
baz=39
PET **Petropavlovsk** 38.79 286 *e*P P 07 02 19.8 +2.6
PET *e*S **S** **07 08 13.6 0.0**
PET MLR MLR
comp=Z,200nm,19.0s
PET MLR MLR
comp=Z,300nm,17.0s
PETK **Petropavlovsk-** 38.86 287 LR LR 07 21 53.2
comp=Z,156nm,18.0s,baz=14,slow=42
M21A **Separation Pea** 39.04 180 ⇑P P 07 02 20.0 +0.3
baz=39,SNR=10
HWUT **Hardware Ranch** 39.07 185 *e*P P 07 02 20.7 +0.8
SCIA **State Center** 39.10 163 *e*P P 07 02 21.0 +1.1
M19A **Rock Springs** 39.15 182 ⇓P P 07 02 21.2 +0.6
baz=39
M20A **Sweetwater, Wa** 39.16 181 ⇑P P 07 02 21.4 +0.7
baz=39
M23A **Laramie** 39.19 178 ⇓P P 07 02 22.1 +1.2
baz=39
M25A **Palm-Egli Farm** 39.23 176 ⇓P P 07 02 21.3 0.0
baz=39
BGNE **Belgrade** 39.39 169 ⇑P P 07 02 22.9 +0.5
baz=39
N17A **Moffit Pass** 39.72 184 ⇑P P 07 02 26.4 +0.9
baz=40
N23A **Red Feather La** 39.76 178 ⇓P P 07 02 26.3 +0.6
baz=40
N20A **Spence Gulch,** 39.81 181 ⇓P P 07 02 26.9 +0.7
baz=40
SOKR **Solikamsk** 39.87 12*c* *i*P P 07 02 25.2 -0.8
SOKR pmax pmax
comp=Z,60nm,1.3s
N27A **Anderson Farm,** 39.88 174 ⇓P P 07 02 27.9 +1.3
baz=40
N21A **Black Mountain** 39.89 180 ⇓P P 07 02 27.5 +0.7
baz=40
ELK **Elko** 40.00 189 *e*P P 07 02 29.8 +2.1
comp=Z,25nm,1.7s
O19A **Miners Draw (B** 40.35 182 ⇑P P 07 02 31.6 +1.1
baz=40
BMN **Battle Mountai** 40.37 191 *e*P P 07 02 32.9 +2.2

BMN **Battle Mountai** 40.37 191 *e*P P 07 02 32.9 +2.2
O26A **Horse Wrangler** 40.44 175 ⇓P P 07 02 32.3 +1.1
baz=40
O23A **Lake Granby, G** 40.44 178 ⇑P P 07 02 32.2 +0.7
baz=40
O22A **Kremmling** 40.49 179 ⇑P P 07 02 32.6 +0.7
baz=40
DUG **Dugway** 40.50 186 *e*P P 07 02 32.8 +1.1
DUG pmax pmax
comp=Z,22nm,1.7s
DUG **Dugway** 40.50 186 *e*P P 07 02 32.8 +1.1
comp=Z,22nm,1.7s
DUG **Dugway** 40.50 186 ⇑P P 07 02 32.8 +1.1
baz=40
O27A **Beecher Island** 40.50 174 ⇓P P 07 02 32.5 +0.8
baz=40
O20A **White River Ci** 40.51 181 ⇓P P 07 02 32.6 +0.6
baz=40
O24A **Longmont** 40.53 177 ⇑P P 07 02 33.1 +1.1
baz=40
O25A **Wiggins** 40.55 176 ⇑P P 07 02 33.3 +1.1
baz=40
ISCO **Idaho Springs** 40.85 178 *e*P P 07 02 35.8 +0.9
ISCO pmax pmax
comp=Z,12nm,1.2s
ISCO **Idaho Springs** 40.85 178 *e*P P 07 02 35.8 +0.9
comp=Z,12nm,1.2s
ISCO **Idaho Springs** 40.85 178 ⇓P P 07 02 35.4 +0.5
baz=41
SFIN **Scholer Farm** 40.98 156 ⇓P P 07 02 35.7 +0.2
baz=41
P19A **Cripple Cowboy** 41.02 182 ⇓P P 07 02 36.7 +0.6
baz=41
P18A **Preston Nutter** 41.03 183 ⇓P P 07 02 37.2 +0.9
baz=41
P22A **Eagle** 41.05 179 ⇓P P 07 02 37.7 +1.3
baz=41
BEKR **Beckworth** 41.05 195 *e*P P 07 02 37.4 +1.0
comp=Z,3.7nm,1.0s
P26A **Davis Ranch, A** 41.12 175 ⇓P P 07 02 37.0 +0.1
baz=41,SNR=6.4
P21A **Newcastle** 41.12 180 ⇓P P 07 02 38.3 +1.3
baz=41
P25A **Willow Gulch B** 41.15 176 ⇑P P 07 02 37.5 +0.3
baz=41
P23A **Jefferson** 41.28 178 ⇑P P 07 02 39.2 +0.8
baz=41
BSEG **Bad Segeberg** 41.46 52 *e*P P 07 02 40.1 +0.8
BSEG *e**PP pP 07 02 46.3 +2.2
BSEG pmax pmax
comp=Z,10.0nm,0.9s
BSEG **Bad Segeberg** 41.46 52 *e*P P 07 02 40.1 +0.8
comp=Z,10.0nm,0.9s
BSEG *e*pP pP 07 02 46.3 +2.2
SRU **San Rafael** 41.55 183 *e*P P 07 02 41.1 +0.7
SRU pmax pmax
comp=Z,351nm,1.0s
SRU **San Rafael** 41.55 183 *e*P P 07 02 41.1 +0.7
comp=Z,351nm,1.0s
SRU **San Rafael** 41.55 183 ⇓P P 07 02 41.8 +1.3
baz=42
KSCO **Kaye Shedlock'** 41.68 174 ⇓P P 07 02 42.5 +1.1
baz=42
Q23A **Hartsel** 41.75 178 ⇓P P 07 02 42.7 +0.5
baz=42
KSU1 **Kansas State U** 41.75 167 *e*P P 07 02 42.1 +0.2
comp=Z,16nm,0.9s
Q16A **Castle Valley** 41.75 184 ⇑P P 07 02 43.1 +1.0
baz=42
Q26A **Hugo** 41.75 175 ⇑P P 07 02 43.8 +1.8
baz=42
Q22A **Crested Butte,** 41.78 179 ⇑P P 07 02 44.4 +1.9
baz=42
Q21A **Lamborn Mesa,** 41.81 180 ⇑P P 07 02 43.9 +1.4
baz=42
MSU **Marysvale** 42.17 185 *e*P P 07 02 41.0 -4.5
MSU **Marysvale** 42.17 185 *e*P P 07 02 41.0 -4.5
R21A **Cimarron** 42.28 180 ⇑P P 07 02 46.9 +0.4
baz=42
R26A **Arlington** 42.37 175 ⇑P P 07 02 47.2 +0.1
baz=42
R27A **Eads** 42.40 174 ⇑P P 07 02 47.6 +0.3
baz=42,SNR=8.9
NV11 **Mina Array Sit** 42.40 192 *e*P P 07 02 48.3 +1.0
R11A **Troy Canyon, C** 42.40 189 ⇓P P 07 02 48.0 +0.6
baz=42
NVAR **Mina Array Bea** 42.41 192 P P 07 02 49.4 +1.9
NVAR PcP **PcP** **07 04 41.5 +1.2**
NVAR **Mina Array Bea** 42.41 192 P P 07 02 49.4 +1.9
comp=Z,5.0nm,0.9s,baz=1.4,slow=5.3,SNR=11
NVAR PcP **PcP** 07 04 41.5 +1.2
comp=Z,3.2nm,0.7s,baz=3.4,slow=3.3,SNR=5.1
NVAR LR LR 07 22 37.5
comp=Z,239nm,21.2s,baz=4.6,slow=39
R24A **Sanders Place,** 42.42 177 ⇓P P 07 02 49.0 +1.4
baz=42
R20A **Redvale** 42.46 181 ⇓P P 07 02 48.9 +1.0
baz=42
R23A **Moffat** 42.46 178 ⇑P P 07 02 49.3 +1.3
baz=42
MOS **Moscow** 42.59 28 *e*P P 07 02 46.2 -2.3
MOS *e* 07 04 25.7
MOS pmax pmax
comp=Z,33nm,0.8s
SVE **Sverdlovsk** 42.73 9⇓ *i*P P 07 02 50.5 +0.9
SVE pmax pmax
comp=Z,36nm,0.8s
NRDL **Niedersach Rie** 42.84 53 *e*P P 07 02 51.1 +0.6
comp=Z,6.0nm,0.9s
NRDL *e*pP pP 07 02 57.9 +2.6
S22A **4UR Ranch, Cre** 42.90 179 ⇓P P 07 02 52.5 +0.9
baz=43
MNK **Minsk** 42.94 37 *e*P P 07 02 50.0 -1.3
MICGM **Minsk** 42.94 37 *e* P 07 02 50.0 -1.4
S25A **Robets Cordova** 43.00 176 ⇓P P 07 02 52.8 +0.5
baz=43
S24A **Houchin Ranch,** 43.01 177 ⇑P P 07 02 53.8 +1.2
baz=43
ARU **Arti** 43.07 11*d* *i*P P 07 02 52.1 -0.3
ARU 07 04 29.7
ARU 07 04 40.9
ARU PPP PPP 07 05 04.2
ARU S **S** **07 09 18.2 +1.1**
ARU SS **SS** **07 12 30.0 +1.2**
ARU pmax pmax
comp=Z,38nm,1.2s
OBN **Obninsk** 43.12 29⇓ *i*P P 07 02 52.8 0.0
OBN *i* *PP pP 07 02 59.0 +1.4
OBN *i* *SP sP 07 03 00.8 +1.3
OBN *e* 07 05 13.4
OBN pmax pmax
comp=Z,48nm,1.7s
OBN MLR MLR
comp=Z,200nm,14.0s
CCUT **Cedar City** 43.15 187 *e*P P 07 02 55.3 +1.8
comp=Z,13nm,1.3s
KRAR **Krasnoyarsk** 43.22 343 *e*P P 07 02 52.9 -0.7
KRAR pmax pmax
comp=Z,43nm,1.3s
CLZ **Clausthal** 43.52 53 *e*P P 07 02 56.9 +0.8
CLZ *e*PP pP 07 03 03.6 +2.7
CLZ pmax pmax
comp=Z,6.0nm,0.8s
CLZ **Clausthal** 43.52 53 *e*P P 07 02 56.9 +0.8
comp=Z,6.0nm,0.8s
CLZ *e*pP pP 07 03 03.7 +2.8
T28A **Walsh** 43.57 174 ⇓P P 07 02 57.0 +0.2
baz=44,SNR=10
T24A **Torres, Weston** 43.58 177 ⇓P P 07 02 58.0 +0.9
baz=44
T27A **Campo** 43.62 174 ⇓P P 07 02 58.3 +1.1
baz=44
T22A **Edith** 43.63 179 ⇓P P 07 02 59.4 +2.0
baz=44
T31A **Randall Ranch,** 43.65 171 ⇑P P 07 02 58.9 +1.6
baz=44
U21A **Nageezi** 44.21 180 ⇑P P 07 03 04.5 +2.4
baz=44
U25A **Circle Dot Ran** 44.26 176 ⇑P P 07 03 03.5 +1.1
baz=44
U22A **Llaves** 44.26 179 ⇓P P 07 03 03.5 +1.0
baz=44
U26A **Atchley Ranch,** 44.27 176 ⇓P P 07 03 04.6 +2.1
baz=44
U23A **El Rito** 44.31 178 ⇓P P 07 03 03.7 +0.8
baz=44,SNR=12
NEUB **Neuenburg** 44.32 52 *e*pP pP 07 03 09.9 +2.6

CLL Collm 44.38 51⇑ *iP* **P** 07 03 02.8 -0.2
CLL *i* 07 03 09.6
CLL *e*S S 07 09 52.0 +16
CLL pmax pmax
comp=Z,18nm,0.9s
CLL MLR MLR
comp=Z,200nm,19.9s
CLL Collm 44.38 51 *e*P **P** 07 03 03.1 +0.1
comp=Z,7.0nm,0.8s
CLL *e*pP **pP** 07 03 09.9 +2.1
CLL Collm 44.38 51⇑ *iP* **P** 07 03 02.8 -0.2
comp=Z,18nm,0.9s
CLL *i* (sP) **sP** 07 03 09.6 -0.1
comp=Z,37nm,1.3s
CLL *e*S S 07 09 52.0 +16
CLL *e*SS **ScS** 07 13 00.0 +0.3
CLL *e* 07 14 24.0
CLL Lm MLR 07 22 00.0
comp=Z,200nm,19.9s
BAIF Baives 44.42 59 *e*P **P** 07 03 03.4 +0.1
comp=Z,43nm,1.1s
BAIF Baives 44.42 59 *e*P **P** 07 03 03.4 +0.1
BAIF pmax pmax
comp=Z,43nm,1.1s
BAIF Baives 44.42 59 *e*P **P** 07 03 03.4 +0.1
comp=Z,43nm,1.1s
GIVF Givet 44.46 58 *e*P **P** 07 03 03.5 -0.2
comp=Z,17nm,0.8s
GIVF Givet 44.46 58 *e*P **P** 07 03 03.5 -0.2
GIVF pmax pmax
comp=Z,17nm,0.8s
GIVF Givet 44.46 58 *e*P **P** 07 03 03.5 -0.2
comp=Z,17nm,0.8s
UBBA Unterbreizbach 44.47 53 *e*P **P** 07 03 04.5 +0.9
comp=Z,3.0nm,0.8s
UBBA *e*pP **pP** 07 03 10.9 +2.5
PARMO Parma 44.51 159 *e*P **P** 07 03 05.4 +1.2
MPMC Manual Prospec 44.74 191 ⇓P **P** 07 03 06.7 +0.4
baz=45,SNR=5.5
NVS Novosibirsk 44.74 351⇑ *iP* **P** 07 03 05.0 -0.8
NVS *e*S S 07 09 34.0 -7.5
NVS pmax pmax
comp=Z,72nm,0.8s
NVS pmax pmax
comp=N,32nm,0.8s
NVS pmax pmax
comp=E,20nm,0.8s
NVS smax smax
comp=E,65nm,3.7s
V25A Rancho No Teng 44.82 177 ⇑P **P** 07 03 07.3 +0.4
baz=45,SNR=8.0
V20A Brimhall 44.84 181 ⇓P **P** 07 03 07.4 +0.3
baz=45
TNS Taunus Mts 44.85 55 *e*P **P** 07 03 08.2 +1.4
TNS *e**PP **pP** 07 03 14.2 +2.6
TNS pmax pmax
comp=Z,4.0nm,0.8s
TNS Taunus Mts 44.85 55 *e*P **P** 07 03 08.2 +1.4
comp=Z,4.0nm,0.8s
TNS *e*pP **pP** 07 03 14.2 +2.6
MOX Moxa 44.85 52 *e*P **P** 07 03 07.9 +1.1
MOX *e**PP **pP** 07 03 13.7 +2.1
MOX pmax pmax
comp=Z,5.0nm,0.7s
MOX Moxa 44.85 52 *e*P **P** 07 03 07.9 +1.1
comp=Z,5.0nm,0.7s
MOX *e*pP **pP** 07 03 13.7 +2.1
V26A Tequesquite Ra 44.87 176 ⇓P **P** 07 03 07.7 +0.5
baz=45,SNR=9.6
V23A Ortiz Mt. (NFS 44.90 178 ⇑P **P** 07 03 07.9 +0.3
baz=45
V24A Rampart Ranch, 44.92 177 ⇓P **P** 07 03 08.8 +1.0
baz=45
BRG Berggiesshubel 44.93 50 *e*P **P** 07 03 07.6 +0.3
comp=Z,19nm,1.2s
BRG *e* 07 03 14.0
comp=Z,34nm,1.5s
BRG Berggiesshubel 44.93 50 *e*P **P** 07 03 08.1 +0.7
comp=Z,6.0nm,0.9s
BRG *e*pP **pP** 07 03 14.5 +2.3
V28A Channing 44.94 174 ⇑P **P** 07 03 08.2 +0.5
baz=45
TUL1 Tulsa 44.96 166 ⇑P **P** 07 03 07.4 -0.4
baz=45,SNR=9.2
ROSF Rostrenen 45.00 66 *e*P **P** 07 03 07.6 -0.3
comp=Z,35nm,1.0s
ROSF Rostrenen 45.00 66 *e*P **P** 07 03 07.6 -0.3
ROSF pmax pmax
comp=Z,35nm,1.0s
ROSF Rostrenen 45.00 66 *e*P **P** 07 03 07.6 -0.3
comp=Z,35nm,1.0s
FLN La Foliniere 45.00 63 *e*P **P** 07 03 07.3 -0.7
comp=Z,41nm,1.2s
FLN *e*R
comp=Z,192nm,18.2s
FLN La Foliniere 45.00 63 *e*P **P** 07 03 07.3 -0.7
FLN pmax pmax
comp=Z,41nm,1.2s
FLN La Foliniere 45.00 63 *e*P **P** 07 03 07.3 -0.7
comp=Z,41nm,1.2s
WLF Walferdange 45.08 57 *e*P **P** 07 03 10.5 +2.0
comp=Z,6.0nm,0.7s
WLF *e*pP **pP** 07 03 16.5 +3.1
TANN Tannenbergstha 45.19 51 *e*P **P** 07 03 09.8 +0.3
comp=Z,5.0nm,0.8s
TANN *e*pP **pP** 07 03 16.1 +1.8
LDF La Druitiere 45.22 63 *e*P **P** 07 03 09.2 -0.5
comp=Z,43nm,1.1s
LDF La Druitiere 45.22 63 *e*P **P** 07 03 09.2 -0.5
LDF pmax pmax
comp=Z,43nm,1.1s
LDF La Druitiere 45.22 63 *e*P **P** 07 03 09.2 -0.5
comp=Z,43nm,1.1s
GRR Gorron 45.31 64 *e*P **P** 07 03 10.0 -0.4
comp=Z,74nm,1.4s
GRR Gorron 45.31 64 *e*P **P** 07 03 10.0 -0.4
GRR pmax pmax
comp=Z,74nm,1.4s
GRR Gorron 45.31 64 *e*P **P** 07 03 10.0 -0.4
comp=Z,74nm,1.4s
QUIF Quistinic 45.42 66 *e*P **P** 07 03 11.4 +0.1
QUIF Quistinic 45.42 66 *e*P **P** 07 03 11.4 +0.1
QUIF Quistinic 45.42 66 *e*P **P** 07 03 11.4 +0.1
W24A Lazy 6 Ranch, 45.44 177 ⇑P **P** 07 03 12.5 +0.7
baz=45
W25A X Bar L Ranch, 45.44 176 ⇑P **P** 07 03 11.4 -0.3
baz=45,SNR=6.4
W23A Werner Place, 45.48 178 ⇓P **P** 07 03 12.9 +0.7
baz=46
UPC Upice 45.55 48 *e*P **P** 07 03 12.7 +0.4
UPC *e* 07 03 19.0
UPC Upice 45.55 48 *e*P **P** 07 03 12.7 +0.4
UPC *e*pP **pP** 07 03 19.0 +1.9
W31A Holland Ranch, 45.55 171 ⇓P **P** 07 03 14.5 +2.0
baz=46
W29A Amraillo 45.58 173 ⇑P **P** 07 03 14.0 +1.2
baz=46
ZAA0 Zalesovo Array 45.59 350 *e*P **P** 07 03 11.5 -1.0
ZALV Zalesovo Beam 45.59 350 P **P** 07 03 11.6 -1.0
ZALV 07 04 49.9
ZALV Zalesovo Beam 45.59 350 P **P** 07 03 11.6 -1.0
ZALV PcP **PcP** 07 04 49.9 -0.7
ZALV Zalesovo Beam 45.59 350 P **P** 07 03 11.6 -1.0
comp=Z,15nm,0.5s,baz=4.6,slow=7.7,SNR=58
ZALV PcP **PcP** 07 04 49.9 -0.7
comp=Z,4.1nm,0.7s,baz=241,slow=1.4,SNR=4.6
ZALV LR LR 07 21 34.0
comp=Z,144nm,20.7s,baz=48,slow=35
W13A Hualapai Mount 45.60 187 ⇓P **P** 07 03 14.2 +1.0
baz=46
W27A Bowe Ranch, En 45.61 175 ⇓P **P** 07 03 14.3 +1.2
baz=46
ANMO Albuquerque 45.69 179 *e*P **P** 07 03 15.1 +1.3
ANMO Albuquerque 45.69 179 LR LR 07 22 46.5
comp=Z,428nm,18.8s,baz=360,slow=37
GRF Grafenberg Arr 45.74 53 *e*P **P** 07 03 15.6 +1.8
GRF *e**PP **pP** 07 03 21.3 +2.7
GRF pmax pmax
comp=Z,8.0nm,0.8s
GRF Grafenberg Arr 45.74 53 *e*P **P** 07 03 15.6 +1.8
comp=Z,8.0nm,0.8s
GRF *e*pP **pP** 07 03 21.3 +2.7
DPC Dobruska-Polom 45.74 48 *e*P **P** 07 03 14.1 +0.2
DPC *e* 07 03 20.2
DPC Dobruska-Polom 45.74 48 *e*P **P** 07 03 14.2 +0.4
DPC Dobruska-Polom 45.74 48 *e*P **P** 07 03 14.1 +0.2
DPC *e*pP **pP** 07 03 20.2 +1.5
ROTZ Rotzenmuhle 45.79 52 *e*P **P** 07 03 15.5 +1.3
comp=Z,3.0nm,0.8s
ROTZ *e*pP **pP** 07 03 21.8 +2.8
PRU Pruhonice 45.87 50 *e*P **P** 07 03 15.6 +0.7
PRU *e* 07 03 21.8
PRU MLR MLR
comp=Z,300nm,21.7s
PRU Pruhonice 45.87 50 *e*P **P** 07 03 15.6 +0.7
PRU *e*pP **pP** 07 03 21.8 +2.1
PRU AMS AMS 07 23 20.0
comp=Z,300nm,21.7s
TKL Tuckaleechee C 45.91 153 P **P** 07 03 16.4 +1.1
TKL PcP **PcP** 07 04 51.1 -0.9
TKL Tuckaleechee C 45.91 153 P **P** 07 03 16.4 +1.1
comp=Z,4.9nm,0.9s,baz=171,slow=4.4,SNR=3.1
TKL PcP **PcP** 07 04 51.1 -0.9
comp=Z,3.0nm,0.8s,baz=146,slow=8.9,SNR=3.9
TKL LR LR 07 23 14.7
comp=Z,661nm,20.2s,baz=357,slow=37
WMOK Wichita Mounta 46.03 170 *e*P **P** 07 03 16.3 0.0
WMOK pmax pmax
comp=Z,8.0nm,0.8s
WMOK Wichita Mounta 46.03 170 *e*P **P** 07 03 16.3 0.0
comp=Z,8.3nm,0.8s
CPCT Cooper Cave 46.06 154 *e*P **P** 07 03 17.6 +1.2
KRLC Kraliky 46.07 48 *e*P **P** 07 03 17.0 +0.6
PAGF Fort de Pagny 46.10 58 *e*P **P** 07 03 17.2 +0.5
comp=Z,9.8nm,0.8s
PAGF Fort de Pagny 46.10 58 *e*P **P** 07 03 17.2 +0.5
comp=Z,9.8nm,0.8s
X31A McDonald Ranch 46.10 171 ⇑P **P** 07 03 17.1 +0.3
baz=46
X26A CR and CF Fran 46.11 176 ⇓P **P** 07 03 18.2 +1.2
baz=46
X28A Dimmitt 46.17 174 ⇑P **P** 07 03 19.0 +1.5
baz=46
SWET Sewanee 46.19 155 *e*P **P** 07 03 17.4 -0.1
LAZ Ladron 46.23 179 P P 07 03 23.1 +4.9
comp=Z,1.8nm,1.0s
X29A Tulia 46.25 173 ⇑P **P** 07 03 20.0 +1.9
baz=46
X30A Coker Ranch, T 46.27 172 ⇑P **P** 07 03 18.8 +0.6
baz=46
IRK Irkutsk 46.28 333 *e*P **P** 07 03 15.7 -2.3
IRK pmax pmax
comp=Z,54nm,0.8s
OJC Ojcow 46.29 45 *e*P **P** 07 03 18.4 +0.3
OJC Ojcow 46.29 45 *e*P **P** 07 03 18.4 +0.3
OJC Ojcow 46.29 45 *e*P **P** 07 03 18.7 +0.6
LPM Los Pinos Moun 46.33 179 P **P** 07 03 19.7 +0.9
comp=Z,9.9nm,1.4s
SFTF Sexfontaines 46.35 59 *e*P **P** 07 03 19.5 +0.9
comp=Z,28nm,0.8s
SFTF Sexfontaines 46.35 59 *e*P **P** 07 03 19.5 +0.9
comp=Z,28nm,0.8s
PDMCI Parker Dam,Lak 46.41 187 ⇑P **P** 07 03 19.8 +0.6
baz=46
MIAR Mount Ida 46.41 164 *e*P **P** 07 03 19.5 +0.2
MIAR Mount Ida 46.41 164 *e*P **P** 07 03 19.5 +0.2
KLR Kul'dur 46.42 309 *e*P P 07 03 14.8 -4.4
KLR pmax pmax
comp=Z,57nm,1.6s
MORC Moravsky Berou 46.45 47 ⇓P **P** 07 03 20.3 +0.8
MORC Moravsky Berou 46.45 47 *e*P **P** 07 03 19.3 -0.2
comp=Z,16nm,0.9s
MORC Moravsky Berou 46.45 47 ⇓ *iP* **P** 07 03 20.3 +0.8
CDF Champ du Feu 46.46 56 *e*P **P** 07 03 19.8 +0.2
comp=Z,98nm,1.7s
CDF Champ du Feu 46.46 56 *e*P **P** 07 03 19.8 +0.2
CDF pmax pmax
comp=Z,98nm,1.7s
CDF Champ du Feu 46.46 56 *e*P **P** 07 03 19.8 +0.2
comp=Z,98nm,1.7s
OKC Ostrava-Krasne 46.47 46 *e*P **P** 07 03 19.9 +0.4
OKC *e* 07 03 26.9
OKC Ostrava-Krasne 46.47 46 *e*P **P** 07 03 19.9 +0.4
OKC *e*pP **pP** 07 03 26.9 +2.6
BNM Barren Site 46.49 179 *e*P **P** 07 03 21.0 +0.9
comp=Z,5.5nm,1.3s
WET Wettzell 46.49 51 *e*P **P** 07 03 20.4 +0.6
WET *e**PP **pP** 07 03 27.1 +2.5
WET pmax pmax
comp=Z,4.0nm,0.8s
WET Wettzell 46.49 51 *e*P **P** 07 03 20.4 +0.6
comp=Z,4.0nm,0.8s
WET *e*pP **pP** 07 03 27.1 +2.5
KHC Kasperske Hory 46.59 51 *e*P **P** 07 03 21.8 +1.2
KHC *e* 07 03 27.5
KHC MLR MLR
comp=Z,200nm,17.1s
KHC Kasperske Hory 46.59 51 *e*P **P** 07 03 21.6 +1.0
KHC Kasperske Hory 46.59 51 *e*P **P** 07 03 21.8 +1.2
KHC *e*pP **pP** 07 03 27.5 +2.1
KHC AMS AMS 07 23 40.0
comp=Z,200nm,17.1s
KMSC Kings Mountain 46.61 150 ⇓P **P** 07 03 21.4 +0.6
baz=47
ECH Echery 46.63 57 *e*P **P** 07 03 21.6 +0.7
ECH pmax pmax
comp=Z,9.0nm,1.0s
ECH Echery 46.63 57 *e*P **P** 07 03 21.6 +0.7
comp=Z,8.5nm,1.0s
BRVK Borovoye 46.66 2 *c iP* **P** 07 03 21.0 -0.1
BRVK pmax pmax
comp=Z,23nm,1.3s
BRVK Borovoye 46.66 2 *e*P **P** 07 03 20.9 -0.1
comp=Z,16nm,0.8s
OXF Oxford 46.67 159 *e*P **P** 07 03 22.0 +0.7
OXF pmax pmax
comp=Z,74nm,1.1s
OXF Oxford 46.67 159 *e*P **P** 07 03 22.0 +0.7
comp=Z,74nm,1.1s
TREC Trest 46.67 49 *e*P **P** 07 03 21.8 +0.6
TREC *e* 07 03 28.0
TREC Trest 46.67 49 *e*P **P** 07 03 21.8 +0.6
TREC *e*pP **pP** 07 03 28.0 +2.0
BFO Black Forest 46.68 56 *e*P **P** 07 03 21.8 +0.5
BFO pmax pmax
comp=Z,33nm,1.5s
BFO Black Forest 46.68 56 *e*P **P** 07 03 22.6 +1.3
comp=Z,5.0nm,0.8s
BFO Black Forest 46.68 56 *e*P **P** 07 03 21.8 +0.5
comp=Z,33nm,1.5s
BVA0 Borovoye Array 46.70 2 *i* P **P** 07 03 21.3 0.0
BVA0 pmax pmax
comp=Z,6.0nm,1.3s
BVAR Borovoye Array 46.70 2 P **P** 07 03 21.3 0.0
BVAR 07 04 54.3
BVAR Borovoye Array 46.70 2 P **P** 07 03 21.3 0.0
BVAR PcP **PcP** 07 04 54.3 -0.2
BVAR Borovoye Array 46.70 2 P **P** 07 03 21.3 0.0
comp=Z,5.1nm,0.6s,baz=356,slow=5.9,SNR=46
BVAR PcP **PcP** 07 04 54.3 -0.2
comp=Z,2.9nm,0.6s,baz=325,slow=3.9,SNR=6.1
Y22A Socorro 46.70 179 ⇓P **P** 07 03 23.2 +1.5
baz=47
MSTX Muleshoe 46.70 174 ⇑P **P** 07 03 23.2 +1.5
baz=47
Y23A Lovelace Mesa, 46.71 178 ⇑P **P** 07 03 22.6 +0.7
baz=47
Y24A Capitan 46.72 178 ⇓P **P** 07 03 22.3 +0.4
baz=47,SNR=15
HAU Haudompre 46.73 57 *e*P **P** 07 03 21.9 +0.3
comp=Z,72nm,1.4s
HAU *e*R
comp=Z,178nm,20.5s
HAU Haudompre 46.73 57 *e*P **P** 07 03 21.9 +0.3
HAU pmax pmax
comp=Z,72nm,1.4s
HAU Haudompre 46.73 57 *e*P **P** 07 03 21.9 +0.3
comp=Z,72nm,1.4s
Y25A Mesa, Roswell 46.73 177 ⇑P **P** 07 03 23.4 +1.5
baz=47
HABR Khabarovsk 46.73 306 *e*P P 07 03 29.0 +7.4
HABR *e**SP sP 07 03 33.6 +5.3
HABR *e* 07 05 09.3
HABR *e*PPP PPP 07 05 52.1
HABR *e*S **S** 07 10 06.7 -3.5
HABR *e**SS sS 07 10 23.5 +5.4
HABR *e* 07 13 11.4
HABR SS **SS** 07 13 34.6 -1.3
HABR *e*SSS SSS 07 14 32.2
HABR pmax pmax
comp=N,42nm,1.5s
HABR pmax pmax
comp=Z,98nm,1.8s
HABR pmax pmax
comp=E,111nm,1.9s
HABR MLR MLR
comp=Z,724nm,19.0s
Y32A R-V Farms, Ver 46.74 171 ⇓P **P** 07 03 22.2 +0.3
baz=47
Y31A Rekieta Farm, 46.76 172 ⇑P **P** 07 03 22.4 +0.3
baz=47,SNR=8.6
Y28A McKinney Farm, 46.77 174 ⇑P **P** 07 03 23.5 +1.2
baz=47
Y27A Causey 46.78 175 ⇑P **P** 07 03 23.2 +0.8
baz=47
VRAC Vranov 46.80 48⇑ *iP* **P** 07 03 22.3 +0.2
VRAC Vranov 46.80 48 LR LR 07 23 55.0
comp=Z,160nm,18.9s,baz=343,slow=37
AKASG Malin Array Be 46.83 37 P **P** 07 03 20.8 -1.5
AKASG Malin Array Be 46.83 37 P **P** 07 03 20.8 -1.5
AKASG Malin Array Be 46.83 37 P **P** 07 03 20.8 -1.5
comp=Z,5.1nm,0.8s,baz=348,slow=8.5,SNR=18
Y29A Porterfield Fa 46.83 173 ⇑P **P** 07 03 23.2 +0.5
baz=47
KIEV Kiev 46.84 37 *e*P **P** 07 03 21.4 -1.0
KIEV pmax pmax
comp=Z,9.0nm,0.8s
KIEV Kiev 46.84 37 *e*P **P** 07 03 21.4 -1.0
comp=Z,8.9nm,0.8s
AK01 Malin Array Si 46.84 37 *e*P **P** 07 03 21.4 -0.9
AK02 Malin Array Si 46.87 37 *e*P **P** 07 03 22.6 -0.1
TLY Talaya 46.88 334 *e*P **P** 07 03 21.1 -1.7
TLY *e* 07 04 54.2
TLY pmax pmax
comp=Z,8.0nm,1.1s
GEC2 GERESS Array S 46.89 51 *e*P **P** 07 03 24.2 +1.2
GEC2 *e**PP **pP** 07 03 30.3 +2.5
GEC2 pmax pmax
comp=Z,3.0nm,0.7s
GEC2 GERESS Array S 46.89 51 *e*P **P** 07 03 24.2 +1.2
comp=Z,3.0nm,0.7s
GEC2 *e*pP **pP** 07 03 30.3 +2.5
GERES GERESS Array B 46.89 51 P **P** 07 03 23.5 +0.5
GERES GERESS Array B 46.89 51 P **P** 07 03 23.5 +0.5
comp=Z,2.4nm,0.5s,baz=353,slow=5.8,SNR=22
GERES LR LR 07 24 22.5
comp=Z,146nm,18.7s,baz=271,slow=38
HYF Humbligny 46.92 61 *e*P **P** 07 03 23.2 +0.1
HYF Humbligny 46.92 61 *e*P **P** 07 03 23.2 +0.1
HINF Hinteralfeld 46.98 57 *e*P **P** 07 03 23.8 +0.2
comp=Z,75nm,1.5s
HINF Hinteralfeld 46.98 57 *e*P **P** 07 03 23.8 +0.2
HINF pmax pmax
comp=Z,75nm,1.5s
HINF Hinteralfeld 46.98 57 *e*P **P** 07 03 23.8 +0.2
comp=Z,75nm,1.5s
LOR Lormes 47.09 60 *e*P **P** 07 03 24.5 0.0
comp=Z,45nm,0.9s
LOR *e*R
comp=Z,235nm,17.8s
LOR Lormes 47.09 60 *e*P **P** 07 03 24.5 0.0
comp=Z,45nm,0.9s
YSS Yuzh-Sakhalins 47.13 298 *e*P P 07 03 31.5 +6.8
LVV L'vov 47.16 41 *e*P **P** 07 03 23.8 -1.1
MFF Saint Martin d 47.16 64 *e*P **P** 07 03 25.0 0.0
comp=Z,24nm,0.9s
MFF Saint Martin d 47.16 64 *e*P **P** 07 03 25.0 0.0
MFF pmax pmax
comp=Z,24nm,0.9s
MFF Saint Martin d 47.16 64 *e*P **P** 07 03 25.0 0.0
comp=Z,24nm,0.9s
KWP Kalwaria Pacla 47.20 42 ⇓P **P** 07 03 26.2 +0.9
KWP Kalwaria Pacla 47.20 42 *e*P **P** 07 03 25.4 +0.1
comp=Z,11nm,0.9s
KWP Kalwaria Pacla 47.20 42 ⇓ *iP* **P** 07 03 26.1 +0.8
KWP Kalwaria Pacla 47.20 42 *e*P **P** 07 03 25.4 +0.1
KWP *e* 07 03 32.0
VSR Storozhevoye 47.20 28 *e*P **P** 07 03 24.2 -1.0
VSR *e**PP **pP** 07 03 31.3 +1.3
VSR pmax pmax
comp=N,10.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSR pmax pmax
comp=E,2.0nm,0.3s
VSR MLR MLR
comp=N,170nm,16.0s
VSR MLR MLR
comp=Z,220nm,16.0s
VSR MLR MLR
comp=E,90nm,13.0s
SSF Saint Saulge 47.25 60 *e*P **P** 07 03 25.7 0.0
comp=E,33nm,0.9s
SSF Saint Saulge 47.25 60 *e*P **P** 07 03 25.7 0.0
SSF pmax pmax
comp=Z,33nm,0.9s
SSF Saint Saulge 47.25 60 *e*P **P** 07 03 25.7 0.0
comp=Z,33nm,0.9s
Z24A Sheeppen Canyo 47.31 177 ⇑P **P** 07 03 26.8 +0.2
baz=47,SNR=5.5
Z25A Roswell 47.37 177 ⇓P **P** 07 03 27.8 +0.9
baz=47
Z26A Caprock 47.38 176 ⇑P **P** 07 03 25.8 -1.2
baz=47
Z31A Sharp Cattle R 47.41 171 ⇓P **P** 07 03 28.1 +1.0
baz=47
Z29A Hungry Hill Ra 47.43 173 ⇓P **P** 07 03 28.6 +1.3
baz=47
Z32A Haskell 47.44 171 ⇑P **P** 07 03 28.3 +1.0
baz=47
JSC Jenkinsville 47.47 150 *e*P **P** 07 03 28.5 +1.0
JSC Jenkinsville 47.47 150 *e*P **P** 07 03 28.5 +1.0
AVF Avril sur Loir 47.49 60 *e*P **P** 07 03 27.6 +0.1
comp=Z,68nm,1.1s
AVF Avril sur Loir 47.49 60 *e*P **P** 07 03 27.6 +0.1
AVF pmax pmax
comp=Z,68nm,1.1s
AVF Avril sur Loir 47.49 60 *e*P **P** 07 03 27.6 +0.1
comp=Z,68nm,1.1s
VRHR Novokhopersk 47.50 26 *e*P **P** 07 03 26.2 -1.4
VRHR *e**PP **pP** 07 03 33.0 +0.6
VRHR pmax pmax
comp=Z,8.0nm,0.4s
VRHR pmax pmax
comp=N,1.0nm,0.2s
VRHR pmax pmax
comp=E,1.0nm,0.2s
VRHR MLR MLR
comp=N,280nm,16.0s
VRHR MLR MLR
comp=Z,270nm,16.0s
VRHR MLR MLR
comp=E,760nm,15.0s
Z20A Nine Sixteen R 47.52 181 ⇓P **P** 07 03 28.6 +0.4
baz=48
BGF Bois d'Agland 47.64 61 *e*P **P** 07 03 28.7 -0.1
comp=E,128nm,1.4s
BGF Bois d'Agland 47.64 61 *e*P **P** 07 03 28.7 -0.1
BGF pmax pmax
comp=Z,128nm,1.4s
BGF Bois d'Agland 47.64 61 *e*P **P** 07 03 28.7 -0.1
comp=Z,128nm,1.4s
SMF Signal de Mont 47.70 60 *e*P **P** 07 03 29.0 -0.2
comp=Z,38nm,0.9s
SMF Signal de Mont 47.70 60 *e*P **P** 07 03 29.0 -0.2
SMF pmax pmax
comp=Z,38nm,0.9s
SMF Signal de Mont 47.70 60 *e*P **P** 07 03 29.0 -0.2
comp=Z,38nm,0.9s
CRVS Cervenica-Dubn 47.78 44 *e*P **P** 07 03 29.9 +0.1
CRVS *e* 07 03 36.1
CRVS pmax pmax
comp=Z,8.0nm,1.4s
CRVS Cervenica-Dubn 47.78 44 *e*P **P** 07 03 29.9 +0.1
CRVS *e*pP **pP** 07 03 36.1 +1.5
TCF Toulx Ste Croi 47.81 62 *e*P **P** 07 03 29.8 -0.3
comp=Z,28nm,0.9s
TCF Toulx Ste Croi 47.81 62 *e*P **P** 07 03 29.8 -0.3
TCF pmax pmax
comp=Z,28nm,0.9s
TCF Toulx Ste Croi 47.81 62 *e*P **P** 07 03 29.8 -0.3
comp=Z,28nm,0.9s
KOLS Kolonicke sedl 47.84 43 *e*P **P** 07 03 30.5 +0.3
KOLS pmax pmax
comp=Z,12nm,1.1s
KOLS Kolonicke sedl 47.84 43 *e*P **P** 07 03 30.5 +0.3
RJOB Jochberg 47.86 52 *e*P **P** 07 03 31.2 +0.7

comp=Z,2.0nm,0.6s
VYHS Vyhne 47.87 46 *e*P **P** **07 03 30.6 +0.1**
VYHS pmax pmax
comp=Z,8.0nm,1.2s
VYHS Vyhne 47.87 46 *e*P **P** **07 03 30.6 +0.1**
DAVA Damuels 47.92 54⇑*i*pP **P** **07 03 31.9 +0.9**
comp=Z,12nm,1.2s
DAVA Damuels 47.92 54⇑*i*P **P** **07 03 31.9 +0.9**
comp=Z,12nm,1.2s
124A Stringfield Ra 47.94 178 ⇓P **P** **07 03 31.9 +0.4**
baz=48
MOA Molln 47.94 50⇑*i*pP **P** **07 03 32.1 +1.0**
comp=Z,19nm,1.8s
MOA Molln 47.94 50⇑*i*P **P** **07 03 32.1 +1.0**
comp=Z,19nm,1.8s
125A Gardner Draw, 47.99 177 ⇑P **P** **07 03 31.6 -0.1**
baz=48,SNR=7.6
126A Clayton Basin, 48.01 176 ⇑P **P** **07 03 33.4 +1.6**
baz=48
CABF La Chapelle 48.05 58 *e*P **P** **07 03 32.3 +0.2**
comp=Z,40nm,0.8s
CABF La Chapelle 48.05 58 *e*P **P** **07 03 32.3 +0.2**
CABF pmax pmax
comp=Z,40nm,0.8s
CABF La Chapelle 48.05 58 *e*P **P** **07 03 32.3 +0.2**
comp=Z,40nm,0.8s
CONA Conrad Observa 48.06 49⇓*i*pP **P** **07 03 32.4 +0.3**
comp=Z,14nm,1.3s
CONA Conrad Observa 48.06 49⇓*i*P **P** **07 03 32.4 +0.3**
comp=Z,14nm,1.3s
121A Cookes Peak, D 48.10 180 ⇓P **P** **07 03 33.8 +1.1**
baz=48
ABTX Abilene, Hawle 48.11 171 ⇑P **P** **07 03 34.2 +1.7**
baz=48
UZH Uzhgorod 48.14 43 *e*P **P** **07 03 32.6 +0.1**
UZH *i* 07 03 35.2
UZH *i* 07 03 39.4
LRAL Lakeview Retre 48.29 157 *e*P **P** **07 03 33.5 -0.3**
comp=Z,20nm,0.9s
DAVOX Davos/Dischmat 48.41 55 P **P** **07 03 36.7 +1.8**
DAVOX Davos/Dischmat 48.41 55 P **P** **07 03 36.7 +1.8**
comp=Z,4.0nm,0.6s,baz=317,slow=6.6,SNR=6.6
DAVOX LR LR 07 26 31.1
comp=Z,136nm,19.1s,baz=182,slow=39
GDL2 Guadalupe Moun 48.45 176 *e*P **P** **07 03 35.7 +0.4**
225A Deer Hill, Car 48.53 177 ⇑P **P** **07 03 36.1 +0.1**
baz=48,SNR=8.3
224A Cornudas Mount 48.56 178 ⇓P **P** **07 03 37.7 +1.5**
baz=48
PSZ Piszkesteto 48.56 45 ⇓P **P** **07 03 36.5 +0.6**
PSZ Piszkesteto 48.56 45 *e*P **P** **07 03 36.5 +0.6**
PSZ Piszkesteto 48.56 45⇓*i*P **P** **07 03 36.5 +0.6**
PSZ Piszkesteto 48.56 45⇑*e*P **P** **07 03 36.5 +0.6**
226B Tecolote Peak, 48.57 176 ⇑P **P** **07 03 36.8 +0.6**
baz=49
KBA Koelnbreinsper 48.58 51⇑*i*P **P** **07 03 36.9 +0.7**
KBA pmax pmax
comp=Z,12nm,1.0s
KBA Koelnbreinsper 48.58 51⇑*i*pP **P** **07 03 36.9 +0.7**
comp=Z,12nm,1.1s
KBA Koelnbreinsper 48.58 51⇑*i*P **P** **07 03 36.9 +0.7**
comp=Z,12nm,1.0s
TUE Stuetta 48.64 55 *e*P **P** **07 03 37.7 +1.0**
comp=Z,17nm,0.9s
227A Bennet, Jal 48.65 175 ⇑P **P** **07 03 38.4 +1.6**
baz=49
TRPA Tarpa 48.66 43⇑*i*P **P** **07 03 36.8 +0.3**
TRPA Tarpa 48.66 43⇑*e*P **P** **07 03 36.8 +0.3**
RJF Les Rejaudoux 48.67 63 *e*P **P** **07 03 36.4 -0.3**
RJF *e*R
comp=Z,173nm,17.5s
RJF Les Rejaudoux 48.67 63 *e*P **P** **07 03 36.4 -0.3**
RJF Les Rejaudoux 48.67 63 *e*P **P** **07 03 36.4 -0.3**
229A Bryant Ranch, 48.72 173 ⇑P **P** **07 03 38.9 +1.6**
baz=49
231A Bronte 48.78 172 ⇑P **P** **07 03 38.7 +1.0**
baz=49
WHTX Lake Whitney 48.81 169 ⇑P **P** **07 03 38.9 +1.1**
baz=49
232A Coleman 48.84 171 ⇑P **P** **07 03 38.1 -0.1**
baz=49,SNR=9.4
PKSG 48.90 47 *e*P **P** **07 03 39.5 +1.1**
LFF La Frestale 48.92 63 *e*P **P** **07 03 38.6 0.0**
LFF La Frestale 48.92 63 *e*P **P** **07 03 38.6 0.0**
LFF La Frestale 48.92 63 *e*P **P** **07 03 38.6 0.0**
MNTX Cornudas Mount 48.94 177 *e*P **P** **07 03 39.0 +0.1**
comp=Z,3.1nm,0.9s
MNTX Cornudas Mount 48.94 177 ⇑P **P** **07 03 39.9 +1.0**
baz=49
KURK Kurchatov 48.97 355*c i*P **P** **07 03 38.1 -0.8**
KURK pmax pmax
comp=Z,34nm,1.3s
KURK Kurchatov 48.97 355 *e*P **P** **07 03 37.8 -1.1**
comp=Z,48nm,1.1s
PKST T''s 48.99 47 *e*P **P** **07 03 39.7 +0.6**
AKTO Aktyubinsk 49.05 12 *i* P **P** **07 03 38.1 -1.4**
MYKA Terra Mystica 49.06 51⇑*i*pP **P** **07 03 40.1 +0.4**
comp=Z,15nm,1.2s
MYKA Terra Mystica 49.06 51⇑*i*P **P** **07 03 40.1 +0.4**
comp=Z,15nm,1.2s
KURBB Kurchatov Arra 49.06 355 P **P** **07 03 39.6 0.0**
comp=Z,11nm,0.5s,baz=360,slow=7.7,SNR=80
SSB Saint Sauveur 49.14 60 *e*P **P** **07 03 40.8 +0.5**
SSB pmax pmax
comp=Z,11nm,0.8s
SSB Saint Sauveur 49.14 60 *e*P **P** **07 03 40.8 +0.5**
comp=Z,11nm,0.8s
324A Moseley Ranch, 49.19 178 ⇓P **P** **07 03 42.2 +1.2**
baz=49
329A Wagon Wheel Ra 49.19 174 ⇑P **P** **07 03 42.2 +1.3**
baz=49
LPL La Plagne 49.22 58 *e*P **P** **07 03 42.0 +0.8**
comp=Z,21nm,0.9s
LPL La Plagne 49.22 58 *e*P **P** **07 03 42.0 +0.8**
LPL pmax pmax
comp=Z,21nm,0.9s
LPL La Plagne 49.22 58 *e*P **P** **07 03 42.0 +0.8**
comp=Z,21nm,0.9s
LPG La Plagne 49.24 58 *e*P **P** **07 03 42.4 +1.0**
comp=Z,80nm,1.5s
LPG La Plagne 49.24 58 *e*P **P** **07 03 42.4 +1.0**
LPG pmax pmax
comp=Z,80nm,1.5s
LPG La Plagne 49.24 58 *e*P **P** **07 03 42.4 +1.0**
comp=Z,80nm,1.5s
328A Wristen Ranch, 49.28 175 ⇓P **P** **07 03 41.9 +0.3**
baz=49
330A Mertzon 49.29 173 ⇓P **P** **07 03 42.3 +0.6**
baz=49
326A Caldwell Ranch 49.33 176 ⇓P **P** **07 03 42.3 +0.3**
baz=49
332A Millersview 49.35 171 ⇑P **P** **07 03 42.3 +0.2**
baz=49,SNR=16
331A San Angelo 49.40 172 ⇓P **P** **07 03 43.1 +0.6**
baz=49,SNR=11
BUR08 Bucovina Ar. S 49.44 41 *e*P **P** **07 03 42.6 0.0**
BURAR Bucovina Array 49.47 41⇑*i*P **P** **07 03 42.9 0.0**
CADS Cadrg 49.47 51 *i* P **P** **07 03 43.1 +0.3**
YUK Yuzh-Kuril'sk 49.53 295 *i* P P 07 03 47.8 +4.6
YUK *i* 07 05 04.6
YUK *i* 07 05 39.5
YUK *i* S S 07 10 56.8 +6.9
YUK pmax pmax
comp=E,237nm,1.4s
YUK pmax pmax
comp=N,1μm,1.6s
YUK pmax pmax
comp=Z,1μm,1.6s
PKSN Nyarlorinc 49.57 46⇓*e*P **P** **07 03 45.1 +1.6**
VIVF Saint-Julien-l 49.57 60 *e*P **P** **07 03 44.0 +0.4**
VIVF Saint-Julien-l 49.57 60 *e*P **P** **07 03 44.0 +0.4**
VIVF Saint-Julien-l 49.57 60 *e*P **P** **07 03 44.0 +0.4**
BNI Bardonecchia 49.66 58 *e*P **P** **07 03 45.6 +1.1**
BNI pmax pmax
comp=Z,12nm,0.9s
BNI Bardonecchia 49.66 58 *e*P **P** **07 03 45.6 +1.1**
comp=Z,12nm,0.9s
PKS9 Tamasi 49.68 47⇓*e*P **P** **07 03 45.5 +1.1**
ORIF Oris-en-Rattie 49.68 59 *e*P **P** **07 03 44.9 +0.3**
comp=Z,46nm,1.3s
ORIF *e*R
comp=Z,147nm,22.8s
ORIF Oris-en-Rattie 49.68 59 *e*P **P** **07 03 44.9 +0.3**
ORIF pmax pmax
comp=Z,46nm,1.3s
ORIF Oris-en-Rattie 49.68 59 *e*P **P** **07 03 44.9 +0.3**

comp=Z,46nm,1.3s
LJU Ljubljana 49.75 51 *i* P **P** **07 03 46.1 +1.2**
427A Hayter Ranch, 49.80 175 ⇑P **P** **07 03 45.8 +0.1**
baz=50,SNR=9.2
PKS6 Bocsa 49.82 46⇑*e*P **P** **07 03 47.5 +2.0**
JAVS Javornik 49.84 51 *i* P **P** **07 03 45.1 -0.6**
JAVS *e* 07 03 52.0
432A Menard 49.85 171 ⇑P **P** **07 03 47.6 +1.7**
baz=50
425A Indio Mountain 49.85 177 ⇑P **P** **07 03 47.6 +1.6**
baz=50
PKS2 Kecel 49.89 46⇑*e*P **P** **07 03 48.1 +2.2**
430A Baggett Ranch, 49.91 173 ⇓P **P** **07 03 47.7 +1.3**
baz=50
ASAJ Asahikawa 49.93 298 P **P** **07 03 45.2 -1.1**
ASAJ Asahikawa 49.93 298 P **P** **07 03 45.2 -1.1**
comp=Z,6.5nm,0.6s,baz=113,slow=4.9,SNR=3.2
428A Kincaid Ranch, 49.94 174 ⇓P **P** **07 03 48.0 +1.3**
baz=50
426A McDonald Obser 49.98 176 ⇑P **P** **07 03 47.9 +0.8**
baz=50
MBDF Montbardon 50.00 58 *e*P **P** **07 03 47.9 +0.9**
comp=Z,25nm,0.9s
MBDF Montbardon 50.00 58 *e*P **P** **07 03 47.9 +0.9**
MBDF pmax pmax
comp=Z,25nm,0.9s
MBDF Montbardon 50.00 58 *e*P **P** **07 03 47.9 +0.9**
comp=Z,25nm,0.9s
DRGR 50.00 43 ⇓P **P** **07 03 47.9 +1.0**
DRGR 50.00 43⇓*i*P **P** **07 03 47.9 +1.0**
431A Sonora 50.02 172 ⇑P **P** **07 03 48.3 +1.0**
baz=50
429A Davenport Ranc 50.05 174 ⇑P **P** **07 03 48.8 +1.3**
baz=50
PKSM Moragy 50.09 47⇓*e*P **P** **07 03 47.9 +0.4**
LASF Ste Croix 50.22 61 *e*P **P** **07 03 49.2 +0.6**
comp=Z,54nm,1.3s
LASF Ste Croix 50.22 61 *e*P **P** **07 03 49.2 +0.6**
comp=Z,54nm,1.3s
JCT Junction City 50.24 171 *e*P **P** **07 03 49.9 +1.0**
JCT pmax pmax
comp=Z,18nm,0.8s
JCT Junction City 50.24 171 *e*P **P** **07 03 49.9 +1.0**
comp=Z,18nm,0.8s
JCT Junction City 50.24 171 ⇓P **P** **07 03 49.1 +0.2**
baz=50,SNR=13
AB31 Akbulak array 50.29 11 *i* P **P** **07 03 48.4 -0.6**
AB31 pmax pmax
comp=Z,9.0nm,0.8s
ABKAR Akbulak array 50.29 11 *e*P **P** **07 03 48.4 -0.5**
comp=Z,14nm,1.1s
SJPF Ste Jean 50.41 66 *e*P **P** **07 03 49.5 -0.5**
comp=Z,22nm,1.0s
SJPF Ste Jean 50.41 66 *e*P **P** **07 03 49.5 -0.5**
SJPF pmax pmax
comp=Z,22nm,1.0s
SJPF Ste Jean 50.41 66 *e*P **P** **07 03 49.5 -0.5**
comp=Z,22nm,1.0s
ULN Ulaanbaatar 50.41 330 *e*P **P** **07 03 49.8 -0.3**
comp=Z,40nm,1.1s
KIS Kishinev 50.45 38 *e*P **P** **07 03 49.0 -1.2**
KIS *e* 07 03 56.0
KIS MLR MLR
comp=Z,300nm,14.0s
KIS MLR MLR
comp=N,300nm,15.0s
KIS MLR MLR
comp=Z,300nm,14.0s
KIS Kishinev 50.45 38 *e*P **P** **07 03 49.0 -1.2**
KIS *e*L L 07 22 08.0
KIS LRM MLR 07 26 40.0
comp=Z,300nm,14.0s
SONM Songino Array 50.49 331 P **P** **07 03 51.2 +0.4**
SONM PcP **PcP** **07 05 09.3 +0.8**
SONM Songino Array 50.49 331 P **P** **07 03 51.2 +0.4**
comp=Z,26nm,0.9s,baz=359,slow=6.5,SNR=135
SONM PcP **PcP** **07 05 09.3 +0.8**
comp=Z,3.5nm,1.0s,baz=0.0,slow=4.8,SNR=1.8
528A Cox Ranch, San 50.50 175 ⇑P **P** **07 03 51.0 0.0**
baz=50,SNR=11
527A Woodward Ranch 50.50 175 ⇑P **P** **07 03 51.9 +0.9**
baz=50
530A J-C Ranch, Com 50.54 173 ⇓P **P** **07 03 51.6 +0.4**
baz=50,SNR=15
531A Rocksprings 50.54 172 ⇓P **P** **07 03 51.2 0.0**
baz=50
529A Stev Forest Ra 50.55 174 ⇓P **P** **07 03 52.9 +1.7**
baz=50
526A Mary Lane Ranc 50.58 176 ⇓P **P** **07 03 51.8 +0.2**
baz=51,SNR=19
532A Rocksprings 50.59 171 ⇓P **P** **07 03 52.0 +0.4**
baz=51,SNR=9.1
MTLF Montolieu 50.70 62 *e*P **P** **07 03 52.2 0.0**
MTLF Montolieu 50.70 62 *e*P **P** **07 03 52.2 0.0**
MTLF Montolieu 50.70 62 *e*P **P** **07 03 52.2 0.0**
ETSF Etsaut 50.72 65 *e*P **P** **07 03 53.1 +0.7**
ETSF Etsaut 50.72 65 *e*P **P** **07 03 53.1 +0.7**
ETSF Etsaut 50.72 65 *e*P **P** **07 03 53.1 +0.7**
EPF Esparros 50.73 64 *e*P **P** **07 03 52.7 +0.3**
comp=Z,23nm,1.1s
EPF Esparros 50.73 64 *e*P **P** **07 03 52.7 +0.3**
EPF pmax pmax
comp=Z,23nm,1.1s
EPF Esparros 50.73 64 *e*P **P** **07 03 52.7 +0.3**
comp=Z,23nm,1.1s
HKT Hockley 50.90 167 *e*P **P** **07 03 54.4 +0.7**
HKT pmax pmax
comp=Z,23nm,1.7s
HKT Hockley 50.90 167 *e*P **P** **07 03 54.4 +0.7**
comp=Z,23nm,1.7s
SBF Sospel 50.94 58 *e*P **P** **07 03 55.0 +1.0**
comp=Z,88nm,0.8s
SBF Sospel 50.94 58 *e*P **P** **07 03 55.0 +1.0**
SBF pmax pmax
comp=Z,88nm,0.8s
SBF Sospel 50.94 58 *e*P **P** **07 03 55.0 +1.0**
comp=Z,88nm,0.8s
BZS Buzias 51.03 44 ⇑P **P** **07 03 55.0 +0.4**
BZS Buzias 51.03 44⇑*i*P **P** **07 03 55.0 +0.4**
626A Big Bend Ranch 51.09 176 ⇑P **P** **07 03 56.3 +1.0**
baz=51
FRF La Foret Royal 51.12 58 *e*P **P** **07 03 55.5 +0.2**
comp=Z,25nm,0.8s
FRF La Foret Royal 51.12 58 *e*P **P** **07 03 55.5 +0.2**
FRF pmax pmax
comp=Z,25nm,0.8s
FRF La Foret Royal 51.12 58 *e*P **P** **07 03 55.5 +0.2**
comp=Z,25nm,0.8s
628A Black Gap, Mar 51.17 175 ⇑P **P** **07 03 56.5 +0.6**
baz=51,SNR=11
627A Terlingua Ranc 51.20 175 ⇑P **P** **07 03 56.6 +0.4**
baz=51,SNR=12
632A Uvalde 51.21 171 ⇑P **P** **07 03 56.8 +0.6**
baz=51,SNR=16
MDJ Mudanjiang 51.23 310 P **P** **07 03 54.6 -1.5**
MDJ pP **pP** **07 03 57.8 -3.2**
MDJ sP **sP** **07 03 59.0 -3.9**
MDJ ScP **ScP** **07 09 07.4 +1.0**
MDJ PcS **PcS** **07 09 08.8 +0.1**
MDJ S **S** **07 11 11.3 -2.3**
MDJ pmax pmax
comp=Z,13nm,1.6s
MDJ pmax pmax
comp=Z,31nm,3.9s
MDJ LR LR
comp=N,160nm,29.9s
MDJ LR LR
comp=E,99nm,28.4s
MDJ LR LR
comp=Z,160nm,27.6s
631A Perdido Creek 51.29 172 ⇑P **P** **07 03 57.5 +0.8**
baz=51
TXAR Lajitas Array 51.31 176 P **P** **07 03 56.9 -0.1**
TXAR Lajitas Array 51.31 176 P **P** **07 03 56.9 -0.1**
comp=Z,1.3nm,0.8s,baz=4.7,slow=6.4,SNR=17
TXAR LR LR 07 25 40.4
comp=Z,276nm,18.6s,baz=345,slow=36
LMR La Mourre 51.33 59 *e*P **P** **07 03 57.3 +0.5**
comp=Z,42nm,1.3s
LMR La Mourre 51.33 59 *e*P **P** **07 03 57.3 +0.5**
LMR pmax pmax
comp=Z,42nm,1.3s
LMR La Mourre 51.33 59 *e*P **P** **07 03 57.3 +0.5**
comp=Z,42nm,1.3s
USRK Ussurisk Arra 51.33 307 P **P** **07 03 56.0 -0.9**
comp=Z,12nm,0.9s,baz=7.6,slow=7.9,SNR=18

PLOR Plostina 51.36 40⇑*e*P **P** **07 03 58.0 +0.8**
PLOR Plostina 51.36 40⇑*i*P **P** **07 03 58.0 +0.8**
ARR Arges 51.62 42⇑*i*P **P** **07 04 00.6 +1.5**
MLR Muntele Rosu 51.64 41⇓*i*P **P** **07 04 00.3 +0.9**
ERM Erimo 51.91 297 *e*P **P** **07 03 59.7 -1.5**
ERM pmax pmax
comp=Z,48nm,1.3s
732A Laxson Ranch, 51.98 171 ⇓P **P** **07 04 02.5 +0.6**
baz=52,SNR=13
CFR Carcaliu 52.18 39⇑*i*P **P** **07 04 03.2 0.0**
PGF Pioggiola 52.45 56 *e*P **P** **07 04 05.2 -0.1**
comp=Z,55nm,1.4s
PGF Pioggiola 52.45 56 *e*P **P** **07 04 05.2 -0.1**
PGF pmax pmax
comp=Z,55nm,1.4s
PGF Pioggiola 52.45 56 *e*P **P** **07 04 05.2 -0.1**
comp=Z,55nm,1.4s
CN2 Changchun 52.55 313 *e*P **P** **07 04 07.0 +1.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
MK31 Makanchi Array 52.82 351 *i* P **P** **07 04 06.5 -1.5**
MK31 pmax pmax
comp=Z,36nm,1.0s
MK31 Makanchi Array 52.82 351 *e*P **P** **07 04 06.4 -1.5**
MKAR Makanchi Array 52.82 351 P **P** **07 04 06.4 -1.6**
MKAR 07 05 16.2
MKAR Makanchi Array 52.82 351 P **P** **07 04 06.4 -1.6**
MKAR PcP **PcP** **07 05 16.1 -0.9**
MKAR Makanchi Array 52.82 351 P **P** **07 04 06.4 -1.6**
comp=Z,7.7nm,0.6s,baz=342,slow=6.5,SNR=76
MKAR PcP **PcP** **07 05 16.1 -0.9**
comp=Z,3.2nm,0.6s,baz=47,slow=2.8,SNR=5.2
MKAR LR LR 07 27 09.9
comp=Z,112nm,18.9s,baz=89,slow=37
SIM Simferopol' 52.99 33 *e*P **P** **07 04 10.5 +1.3**
SIM *e*S **S** **07 11 39.0 +1.3**
SIM MLR MLR
comp=Z,200nm,15.0s
ESDC Sonseca Array 53.35 69 P **P** **07 04 12.4 +0.3**
ESDC Sonseca Array 53.35 69 P **P** **07 04 12.4 +0.3**
comp=Z,1.7nm,0.6s,baz=352,slow=6.8,SNR=10
ESDC LR LR 07 26 34.4
comp=Z,185nm,18.6s,baz=315,slow=36
PAB San Pablo 53.42 70 *e*P **P** **07 04 12.6 0.0**
PAB pmax pmax
comp=Z,18nm,1.1s
PAB San Pablo 53.42 70 *e*P **P** **07 04 12.6 0.0**
comp=Z,18nm,1.1s
KIV Kislovodsk 54.68 26 *e*P **P** **07 04 22.1 +0.4**
KIV *e*S **S** **07 12 00.3 -0.5**
KIV pmax pmax
comp=Z,16nm,1.0s
KIV MLR MLR
comp=Z,90nm,17.0s
KBZ Khabaz 54.92 26 P **P** **07 04 23.8 +0.5**
KBZ Khabaz 54.92 26 P **P** **07 04 23.8 +0.5**
KBZ Khabaz 54.92 26 P **P** **07 04 23.8 +0.5**
comp=Z,12nm,0.9s,baz=302,slow=3.8,SNR=17
KBZ LR LR 07 30 25.2
comp=Z,93nm,18.6s,baz=352,slow=39
WMQ Urumqi 55.62 347 P **P** **07 04 31.0 +2.6**
WMQ sP **sP** **07 04 38.0 +2.8**
WMQ PcP **PcP** **07 05 30.0 +2.1**
WMQ PP **PP** **07 06 37.0 +4.8**
WMQ ScP **ScP** **07 09 27.0 +1.4**
WMQ S **S** **07 12 15.0 +1.7**
WMQ ScS **ScS** **07 14 17.0 +0.5**
WMQ SS **SS** **07 16 00.0 +2.4**
WMQ pmax pmax
comp=Z,32nm,1.0s
WMQ pmax pmax
comp=Z,120nm,5.0s
WMQ LR LR
comp=N,160nm,17.0s
WMQ LR LR
comp=E,160nm,17.0s
WMQ LR LR
comp=Z,180nm,17.0s
ZEI Tsey 55.95 25 *e*P **P** **07 04 31.0 0.0**
ZEI pmax pmax
comp=Z,24nm,1.6s
MAK Makhachkala 56.00 22 *e*P P 07 04 38.3 +7.3
MAK *e*S S 07 12 36.1 +18
MAK pmax pmax
comp=Z,73nm,0.6s
USP Ospenovka 56.46 358 P **P** **07 04 34.5 +0.1**
SNR=8.1
LPIG La Paz 56.51 183 LR LR 07 30 41.3
comp=Z,18nm,18.1s,baz=16,slow=38
KK31 Karatay Array 56.63 2 *i* P **P** **07 04 35.1 -0.5**
KK31 pmax pmax
comp=Z,12nm,0.7s
KKAR Karatay Array 56.63 2 *e*P **P** **07 04 35.4 -0.2**
KKAR pmax pmax
comp=Z,14nm,0.8s
KKAR Karatay Array 56.63 2 *e*P **P** **07 04 35.4 -0.2**
comp=Z,14nm,0.8s
TKM2 Tokmak 2 56.80 357 *i* P **P** **07 04 36.4 -0.7**
TKM2 pmax pmax
comp=Z,37nm,1.3s
TKM2 Tokmak 2 56.80 357 P **P** **07 04 37.2 +0.1**
SNR=25
FRU Bishkek 56.90 358⇓*i*P **P** **07 04 37.8 +0.3**
FRU *i* 07 04 46.0
FRU pmax pmax
comp=Z,87nm,1.8s
HHC Hu-ho-hao-te 56.97 325 *e*P **P** **07 04 38.1 -0.1**
HHC PcP **PcP** **07 05 34.5 +1.3**
HHC PP **PP** **07 06 45.5 +1.2**
HHC ScP **ScP** **07 09 31.3 -0.4**
HHC PcS **PcS** **07 09 33.4 -0.7**
HHC S **S** **07 12 28.4 -3.0**
HHC sS **sS** **07 12 36.8 -2.7**
HHC ScS **ScS** **07 14 23.8 -2.6**
HHC SS **SS** **07 16 16.9 -2.1**
HHC pmax pmax
comp=Z,53nm,0.7s
HHC pmax pmax
comp=Z,360nm,6.4s
HHC LR LR
comp=N,1μm,16.1s
HHC LR LR
comp=E,950nm,16.4s
HHC LR LR
comp=Z,880nm,16.3s
EKS2 Erkin-Say 57.07 359 *e*P **P** **07 04 39.2 +0.3**
EKS2 pmax pmax
comp=Z,10.0nm,0.8s
EKS2 Erkin-Say 57.07 359 *e*P **P** **07 04 39.1 +0.3**
comp=Z,10nm,0.8s
EKS2 Erkin-Say 57.07 359 P **P** **07 04 39.7 +0.8**
SNR=7.6
AAK Ala-Archa 57.10 358 P **P** **07 04 39.4 +0.3**
AAK Ala-Archa 57.10 358 P **P** **07 04 39.4 +0.3**
AAK Ala-Archa 57.10 358 P **P** **07 04 39.3 +0.3**
SNR=19
AAK Ala-Archa 57.10 358 P **P** **07 04 39.4 +0.3**
comp=Z,8.8nm,0.6s,baz=0.6,slow=1.0,SNR=29
BJI Beijing 57.31 321 P **P** **07 04 39.9 -0.5**
BJI S **S** **07 12 35.1 -0.5**
BJI SS **SS** **07 16 25.1 +0.9**
BJI pmax pmax
comp=Z,31nm,1.2s
BJI pmax pmax
comp=Z,85nm,3.0s
BJI LR LR
comp=N,78nm,24.0s
BJI LR LR
comp=E,140nm,25.0s
ULHL Ulahol 57.47 357 P **P** **07 04 40.8 -1.0**
SNR=6.8
AML Almayashu 57.60 359 P **P** **07 04 43.7 +0.8**
SNR=22
KZA Kyzart 57.65 357 P **P** **07 04 43.8 +0.5**
SNR=10
MAT Matsushiro 58.00 300 P **P** **07 04 43.7 -1.6**
MJAR Matsushiro Arr 58.00 300 P **P** **07 04 44.5 -0.9**
MJAR Matsushiro Arr 58.00 300 P **P** **07 04 44.5 -0.9**
comp=E,4.9nm,0.8s,baz=349,slow=7.5,SNR=9.6
BR131 Keskin Array S 58.13 35 *e*P **P** **07 04 46.7 +0.4**
comp=E,3.7nm,0.8s
BRTR Keskin Array B 58.13 35 P **P** **07 04 47.0 +0.7**
BRTR Keskin Array B 58.13 35 P **P** **07 04 47.0 +0.7**
comp=E,3.1nm,0.9s,baz=339,slow=3.1,SNR=12
BRTR LR LR 07 31 05.7

comp=E,83nm,19.3s,baz=107,slow=37
KSRS Korea Array 58.50 310 P **P** 07 04 47.8 -1.0
comp=E,3.6nm,1.0s,baz=351,slow=8.0,SNR=7.1
KSAR Wonju Array Be 58.52 310 P **P** 07 04 47.8 -1.1
KEST Kesra 59.19 58 *eP* **P** 07 04 53.7 -0.1
KEST Kesra 59.19 58 P **P** 07 04 54.5 +0.8
comp=E,2.8nm,0.6s,baz=292,slow=3.1,SNR=13
KEST LR LR 07 32 49.9
comp=E,41nm,19.8s,baz=109,slow=38
GTA Gaotai 59.36 335 *eP* **P** 07 04 55.3 +0.3
GTA pP **pP** 07 04 59.3 -0.6
GTA sP **sP** 07 05 01.8 +0.1
GTA PP **PP** 07 07 06.6 +1.0
GTA S **S** 07 13 01.9 -0.8
GTA sS **sS** 07 13 07.6 -3.2
GTA SS **SS** 07 16 58.0 +1.3
GTA pmax pmax
comp=Z,16nm,1.1s
GTA pmax pmax
comp=Z,99nm,6.7s
GTA LR LR
comp=N,220nm,24.2s
GTA LR LR
comp=E,240nm,22.3s
GTA LR LR
comp=Z,320nm,22.3s
MALT Malatya 59.96 30 ⇓P **P** 07 05 00.7 +1.7
MALT Malatya 59.96 30 *eP* **P** 07 04 59.7 +0.7
comp=Z,9.4nm,0.8s
MALT Malatya 59.96 30 ⇓*iP* **P** 07 05 00.7 +1.7
KSH Kashi 60.20 357 ⇑*iP* **P** 07 05 03.3 +2.6
KSH pP **pP** 07 05 06.8 +1.2
KSH sP **sP** 07 05 10.1 +2.6
KSH PcP **PcP** 07 05 48.0 +1.9
KSH PP **PP** 07 07 17.1 +4.2
KSH ScP **ScP** 07 09 47.1 +1.1
KSH PcS **PcS** 07 09 48.3 -0.2
KSH S **S** 07 13 15.3 +1.9
KSH ScS SKKSac 07 14 49.3 -0.8
KSH SS **SS** 07 17 13.4 +3.7
KSH pmax pmax
comp=Z,29nm,1.3s
KSH LR LR
comp=N,140nm,5.0s
KSH LR LR
comp=E,120nm,5.6s
KSH LR LR
comp=Z,220nm,4.5s
TEIG Tepich 60.93 159 *eP* **P** 07 05 06.0 +0.3
comp=Z,66nm,1.2s
JHJ Hachijo jima 2 61.13 298 LR LR 07 31 38.2
comp=Z,1μm,19.1s,baz=336,slow=36
LZH Lanzhou 62.37 331 ⇓P **P** 07 05 16.0 +0.5
LZH pP **pP** 07 05 21.5 +1.1
LZH sP **sP** 07 05 23.6 +1.3
LZH PP **PP** 07 07 35.8 +3.6
LZH *e*S **S** 07 13 41.3 +0.1
LZH sS **sS** 07 13 50.1 +0.8
LZH pmax pmax
comp=Z,24nm,1.0s
LZH pmax pmax
comp=Z,190nm,4.2s
LZH LR LR
comp=N,550nm,15.4s
LZH LR LR
comp=E,350nm,12.8s
LZH LR LR
comp=Z,620nm,16.2s
XAN Xi'an 63.97 327 P **P** 07 05 24.8 -1.1
XAN pP **pP** 07 05 34.6 +3.7
XAN pmax pmax
comp=Z,4.0nm,1.5s
NJ2 Nanjing 64.92 317 *eP* **P** 07 05 31.4 -0.7
NJ2 pmax pmax
comp=Z,30nm,1.0s
KBL Kabul 65.17 3 *eP* **P** 07 05 33.6 -0.4
KBL pmax pmax
comp=Z,14nm,1.0s
KBL Kabul 65.17 3 *eP* **P** 07 05 33.6 -0.4
comp=Z,14nm,1.0s
WHN Wuhan 66.90 321 ⇓*iP* **P** 07 05 43.8 -1.1
CD2 Chengdu 67.52 331 P **P** 07 05 49.5 +0.6
CD2 pP **pP** 07 05 54.3 +0.5
CD2 sP **sP** 07 05 56.5 +0.8
CD2 PcP **PcP** 07 06 17.4 +1.3
CD2 PP **PP** 07 08 19.4 +2.2
CD2 PcS 07 10 20.8
CD2 S **S** 07 14 42.9 -1.4
CD2 sS **sS** 07 14 50.3 -2.2
CD2 SKS **SKSac** 07 15 44.1 -1.6
CD2 SS **SS** 07 19 03.9 0.0
CD2 pmax pmax
comp=Z,50nm,0.6s
CD2 pmax pmax
comp=Z,140nm,4.9s
MIB Mutribah 69.08 23 *eP* **P** 07 05 56.8 -1.8
MIB AMb AMB 07 05 59.7
comp=Z,34nm,1.0s
DDI Dehra Dun 69.34 355 *ex* **P** 07 06 01.0 +0.7
UMR Umm Al-Rimmam 69.35 23 *eP* **P** 07 05 58.9 -1.3
UMR AMb AMB 07 06 01.3
comp=Z,34nm,1.1s
NAY Al-Naaiem 69.62 23 *eP* **P** 07 06 00.5 -1.4
NAY AMb AMB 07 06 02.7
comp=Z,7.5nm,1.4s
DANN Dangsing 71.18 349 *eP* **P** 07 06 11.2 -0.7
comp=Z,120nm,0.9s
TAM Tamanrasset 71.36 64 *eP* **P** 07 06 12.6 -0.2
TAM pmax pmax
comp=Z,4.0nm,0.8s
TAM Tamanrasset 71.36 64 *eP* **P** 07 06 12.6 -0.2
comp=Z,3.8nm,0.8s
PYUN Piuthan 71.45 350 *eP* **P** 07 06 12.4 -1.0
comp=Z,104nm,1.0s
GUN Gumba 71.55 347 *eP* **P** 07 06 13.7 -0.4
comp=Z,173nm,1.0s
GYA Guiyang 71.69 328 ⇑*iP* **P** 07 06 14.5 -0.2
GYA PP **PP** 07 08 55.8 +2.5
GYA S **S** 07 15 33.3 -0.3
GYA SKS **SKSac** 07 16 15.8 -1.7
GYA SS **SS** 07 20 09.8 +1.4
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.2s
GYA LR LR
comp=N,530nm,20.1s
GYA LR LR
comp=E,480nm,21.2s
GYA LR LR
comp=Z,510nm,20.8s
KKN Kakani 71.69 348 *eP* **P** 07 06 14.5 -0.3
comp=Z,80nm,0.8s
KOLN Koldanda 71.76 350 *eP* **P** 07 06 14.2 -1.1
DMN Daman 71.87 348 *eP* **P** 07 06 15.8 -0.2
comp=Z,63nm,0.9s
PKIN Phulchoki 71.90 348 *eP* **P** 07 06 15.9 -0.3
comp=Z,19nm,0.6s
PKI Pulchoki 71.90 348 *eP* **P** 07 06 15.7 -0.6
comp=Z,127nm,1.2s
TAPN Taplejung 72.03 346 *eP* **P** 07 06 16.6 -0.4
comp=Z,67nm,0.8s
RAMN Ramite 72.48 347 *eP* **P** 07 06 19.0 -0.6
comp=Z,85nm,0.9s
ODAN Odare 72.53 346 *eP* **P** 07 06 19.6 -0.3
comp=Z,89nm,0.9s
KMI Kunming 73.34 331 P **P** 07 06 24.3 -0.4
KMI pP **pP** 07 06 27.0 -2.7
KMI PP **PP** 07 09 10.6 +3.0
KMI S **S** 07 15 51.3 -1.4
KMI SS **SS** 07 20 35.0 +1.1
KMI pmax pmax
comp=Z,21nm,1.1s
KMI pmax pmax
comp=Z,86nm,3.8s
ROSC El Rosal 77.23 146 *eP* **P** 07 06 49.0 +1.7
ROSC El Rosal 77.23 146 P **P** 07 06 49.2 +1.9
comp=Z,7.5nm,0.9s,baz=360,slow=14,SNR=8.8
CHTO Chiang Mai 79.88 335 *eP* **P** 07 07 00.1 -1.4
CHTO pmax pmax
comp=Z,7.0nm,0.8s
CHTO Chiang Mai 79.88 335 *eP* **P** 07 07 00.1 -1.4
comp=Z,7.5nm,0.8s
CM31 Chiang Mai Arr 80.24 334 *eP* **P** 07 07 02.7 -0.7
comp=Z,13nm,0.9s
CMAR Chiang Mai Arr 80.24 334 P **P** 07 07 02.5 -0.9
CMAR Chiang Mai Arr 80.24 334 P **P** 07 07 02.5 -0.9
comp=Z,15nm,0.9s,baz=348,slow=5.9,SNR=82
TOA0 Torodi Ar. Sit 80.24 69 *eP* **P** 07 07 02.9 -0.5
TORD Torodi Ar. Bea 80.24 69 P **P** 07 07 02.8 -0.7
TORD Torodi Ar. Bea 80.24 69 P **P** 07 07 02.8 -0.7
comp=Z,4.6nm,0.9s,baz=337,slow=5.6,SNR=19
TORD LR LR 07 42 22.2
comp=Z,56nm,19.1s,baz=30,slow=36
DBIC Dimbokro 85.56 76 P **P** 07 07 31.6 +0.6
DBIC Dimbokro 85.56 76 P **P** 07 07 31.6 +0.6
comp=Z,2.2nm,0.9s,baz=321,slow=2.9,SNR=2.5
DBIC LR LR 07 44 24.5
comp=Z,170nm,19.9s,baz=171,slow=35
LIC Lamto 85.97 77 *eP* **P** 07 07 32.8 -0.2
comp=Z,22nm,0.9s
LIC *e*R
comp=Z,243nm,19.2s
LIC Lamto 85.97 77 *eP* **P** 07 07 32.8 -0.2
comp=Z,22nm,0.9s
MBAR Mbarara 97.71 42 LR LR 07 54 14.3
comp=Z,95nm,19.6s,baz=213,slow=36
LPAZ La Paz 98.74 142 LR LR 07 56 32.4
comp=Z,103nm,18.0s,baz=319,slow=37
PPT2 Papeete2 100.29 220 *e*LR LR 07 41 33.8
comp=Z,91nm,22.8s
TBI Tubuai 105.97 220 *e*LR LR 07 44 13.2
comp=Z,98nm,27.0s
DZM Mont Dzumac 110.95 262 *e*LR LR 07 46 30.9
comp=Z,403nm,23.1s
ASAR Alice Springs 117.78 294 PKP **PKPdf** 07 13 37.0 -1.7
ASAR Alice Springs 117.78 294 PKP **PKPdf** 07 13 37.0 -1.7
comp=Z,1.5nm,0.8s,baz=24,slow=1.6,SNR=13
PLCA Paso Flores 122.72 147 PKP **PKPdf** 07 13 47.3 -0.3
PLCA Paso Flores 122.72 147 PKP **PKPdf** 07 13 47.3 -0.3
comp=Z,1.5nm,0.8s,baz=292,slow=2.4,SNR=4.6
STKA Stephens Creek 124.63 285 PKP **PKPdf** 07 13 50.4 -1.2
STKA Stephens Creek 124.63 285 PKP **PKPdf** 07 13 50.4 -1.2
comp=Z,5.8nm,1.1s,baz=6.8,slow=3.4,SNR=3.7
BOSA Boshof 124.68 52 PKP **PKPdf** 07 13 51.8 -0.1
BOSA Boshof 124.68 52 PKP **PKPdf** 07 13 51.8 -0.1
comp=Z,2.1nm,0.9s,baz=198,slow=17,SNR=2.3
SNAA Sanae 161.60 104 PKPab **PKPab** 07 15 37.3 +0.3
SNAA Sanae 161.60 104 PKPab **PKPab** 07 15 37.3 +0.3
comp=Z,1.1nm,1.0s,baz=43,slow=1.3,SNR=4.2
VNDA Vanda 164.34 234 PKPab **PKPab** 07 15 50.0 +1.1
VNDA Vanda 164.34 234 PKPab **PKPab** 07 15 50.0 +1.1
comp=Z,2.1nm,0.8s,baz=346,slow=5.6,SNR=7.4

JMA 15 06:55:53.1±0.2, 37°.22N×143°.53E, *h*44km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**2.12**	**306**	P		Pn	06 56 27.4	+1.4
JIO				S		Sn	06 56 52.3	+1.1
JFK	**Kawauchi**	**2.12**	**275**	P		Pn	06 56 27.5	+1.4
JFK				*e*S		Sn	06 56 52.8	+1.5
ONAJ	**Iwakimizuishiy**	**2.19**	**268**	P		Pn	06 56 28.3	+1.3
ONAJ				*e*S		Sn	06 56 54.1	+1.2
JMM	**Marumori**	**2.27**	**287**	P		Pn	06 56 29.3	+1.2
JMM				*e*S		Sn	06 56 56.3	+1.5
JMK	**Ichinoseki**	**2.51**	**314**	P		Pn	06 56 32.7	+1.3
JMK				*e*S		Sn	06 57 02.2	+1.4
JFT	**Otama**	**2.56**	**278**	P		Pn	06 56 34.8	+2.7
JFT				*e*S		Sn	06 57 04.6	+2.5
JOM	**Ohasama**	**2.86**	**323**	P		Pn	06 56 37.6	+1.4
JOM				S		Sn	06 57 10.3	+1.0
JYK	**Kaneyama**	**3.02**	**305**	P		Pn	06 56 40.9	+2.5
JYK				*e*S		Sn	06 57 16.3	+2.9
BSO1	**Boso 1**	**3.29**	**220**	P		Pn	06 56 41.8	+0.4
BSO1				*e*S		Sn	06 57 20.7	+1.8
JRY	**Ryogami san**	**3.91**	**254**	P		Pn	06 56 51.6	+0.9
JRY				*e*S		Sn	06 57 34.9	-0.5
JKB	**Kayabe**	**5.04**	**338**	P		Pn	06 57 07.4	+1.2
JKB				*e*S		Sn	06 58 01.7	-1.4
JCH	**Churui**	**5.39**	**359**	P		Pn	06 57 09.9	-1.0
JCH				*e*S		Sn	06 58 08.3	-3.3

*ISCJB **15** 06:56:17.1±0.5, 38°.68N×0°.02×21°.66E±0°.03, h11km±3km, Error ellipse: s-maj=4.3km s-min=3.1km az=13.9*
*THE **15** 06:56:17.6, 38°.67N×21°.68E, h14km, ML2.7/8, Error ellipse: s-maj=0.8km s-min=0.4km az=90.0*
*ATH **15** 06:56:17.3, 38°.66N×21°.66E, h22km±1km, MD3.0/16*
*CSEM **15** 06:56:17.4±0.2, 38°.68N×21°.67E, h10km, ML2.7/8, Error ellipse: s-maj=3.3km s-min=2.6km az=105.0*

ISC 15 06:56:17.7±0.9, 38°.68N±0°.02×21°.68E±0°.02, *h*13km±7km, n68, σ0°63/110, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.26**	**22**	P		Pg	06 56 23.0	-0.3
EVR				S		Sg	06 56 27.6	+0.5
EVR	**Evrytania**	**0.26**	**22**	P		Pg	06 56 23.0	-0.3
EVR				S		Sg	06 56 27.6	+0.5
EFP	**Efpalio**	**0.30**	**144**	P		Pg	06 56 23.8	-0.2
EFP				S		Sg	06 56 28.5	+0.4
EFP	**Efpalio**	**0.30**	**144**	*e*PB		Pg	06 56 23.7	-0.2
EFP				*e*SB		Sb	06 56 29.0	-1.0
EFP	**Efpalio**	**0.30**	**144**	*e*Pb		Pg	06 56 23.7	-0.2
EFP				S		Sg	06 56 28.5	+0.4
EFP				*e*Sb		Sb	06 56 29.0	-1.0
UPR	**University Cam**	**0.40**	**168**	*e*PB		Pg	06 56 25.5	-0.2
UPR				*e*SB		Sb	06 56 32.9	+0.2
UPR	**University Cam**	**0.40**	**168**	*e*Pb		Pg	06 56 25.5	-0.2
UPR				*e*Sb		Sb	06 56 32.9	+0.2
TRIZ	**Trizonia**	**0.44**	**135**	P		Pg	06 56 25.8	-0.6
TRIZ				S		Sb	06 56 33.0	-0.7
TRIZ	**Trizonia**	**0.44**	**135**	*e*PB		Pg	06 56 25.7	-0.6
TRIZ				*e*SB		Sb	06 56 33.0	-0.7
TRIZ	**Trizonia**	**0.44**	**135**	P		Pg	06 56 25.8	-0.6
TRIZ				S		Sb	06 56 33.0	-0.7
KALE	**Kalithea**	**0.46**	**128**	P		Pg	06 56 26.2	-0.6
KALE				S		Sg	06 56 33.0	+0.1
KALE	**Kalithea**	**0.46**	**128**	*e*PB		Pg	06 56 26.1	-0.7
KALE				*e*SB		Sg	06 56 33.2	+0.3
KALE	**Kalithea**	**0.46**	**128**	P		Pg	06 56 26.2	-0.6
KALE				*e*Sb		Sg	06 56 33.2	+0.3
MAKR	**Makrakomi, Fth**	**0.49**	**46**	P		Pg	06 56 27.2	-0.2
MAKR				S		Sb	06 56 35.1	-0.3
MAKR	**Makrakomi, Fth**	**0.49**	**46**	P		Pg	06 56 27.2	-0.2
MAKR				S		Sb	06 56 35.1	-0.3
LAKA	**Lakka**	**0.49**	**152**	P		Pg	06 56 27.1	-0.3
LAKA				S		Sg	06 56 34.6	+0.6
LAKA	**Lakka**	**0.49**	**152**	*e*PB		Pg	06 56 26.8	-0.6
LAKA				*e*SB		Sg	06 56 34.1	+0.1
LAKA	**Lakka**	**0.49**	**152**	*e*Pb		Pg	06 56 26.8	-0.6
LAKA	**Lakka**	**0.49**	**152**	P		Pg	06 56 27.1	-0.3
LAKA				*e*Sb		Sg	06 56 34.1	+0.1
LAKA				S		Sg	06 56 34.6	+0.6
AGG	**Agios Georgios**	**0.61**	**55**	P		Pg	06 56 29.5	-0.3
AGG				S		Sb	06 56 39.0	0.0
AGG	**Agios Georgios**	**0.61**	**55**	*e*PN		Pb	06 56 30.3	-0.1
AGG				*e*SN		Sb	06 56 39.1	0.0
AGG	**Agios Georgios**	**0.61**	**55**	P		Pg	06 56 29.5	-0.3
AGG	**Agios Georgios**	**0.61**	**55**	*e*Pn		Pb	06 56 30.3	-0.1
AGG				S		Sb	06 56 39.0	0.0
RLS	**Riolos of Patr**	**0.64**	**195**	P		Pg	06 56 29.8	-0.4
RLS				S		Sg	06 56 38.8	+0.2
RLS	**Riolos of Patr**	**0.64**	**195**	P		Pg	06 56 29.8	-0.4
RLS				S		Sg	06 56 38.8	+0.2
DSF	**Desfina**	**0.71**	**111**	P		Pg	06 56 30.2	-1.4
DSF				S		Sg	06 56 41.3	+0.3
DSF	**Desfina**	**0.71**	**111**	P		Pg	06 56 30.2	-1.4
DSF				S		Sg	06 56 41.3	+0.3
AXAR	**Agios Charalam**	**0.77**	**83**	P		Pg	06 56 31.7	-1.0
AXAR				S		Sb	06 56 44.0	+0.5
AXAR	**Agios Charalam**	**0.77**	**83**	P		Pg	06 56 31.7	-1.0
AXAR				S		Sb	06 56 44.0	+0.5
LKD2	**Lefkada island**	**0.81**	**278**	P		Pg	06 56 32.8	-0.6
LKD2	**Lefkada island**	**0.81**	**278**	*e*PN		Pg	06 56 32.8	-0.6
LKD2	**Lefkada island**	**0.81**	**278**	P		Pg	06 56 32.8	-0.6
KFL	**Anninata**	**0.90**	**231**	P		Pg	06 56 34.2	-0.9
KFL	**Anninata**	**0.90**	**231**	P		Pg	06 56 34.2	-0.9
GUR	**Goura**	**0.90**	**145**	P		Pg	06 56 35.0	-0.2
GUR				S		Sb	06 56 47.8	+0.5
GUR	**Goura**	**0.90**	**145**	*e*PN		Pg	06 56 34.7	-0.5
GUR				*e*SN		Sb	06 56 47.6	+0.3
GUR	**Goura**	**0.90**	**145**	*e*Pn		Pg	06 56 34.7	-0.5
GUR	**Goura**	**0.90**	**145**	P		Pg	06 56 35.0	-0.2
GUR				S		Sb	06 56 47.8	+0.5
THL	**Klokotos Trika**	**0.93**	**16**	P		Pg	06 56 35.0	-0.6
THL	**Klokotos Trika**	**0.93**	**16**	P		Pg	06 56 35.0	-0.6
VLS	**Valsamata**	**0.99**	**240**	P		Pg	06 56 35.9	-0.9
VLS	**Valsamata**	**0.99**	**240**	P		Pg	06 56 35.9	-0.9
LKR	**Lokris**	**1.03**	**91**	P		Pg	06 56 36.5	-1.1
LKR				S		Sg	06 56 51.1	0.0
LKR	**Lokris**	**1.03**	**91**	P		Pg	06 56 36.5	-1.1
LKR				S		Sg	06 56 51.1	0.0
ATAL	**Atalanti**	**1.05**	**89**	P		Pg	06 56 36.8	-1.2
ATAL				S		Sb	06 56 52.0	+0.5
ATAL	**Atalanti**	**1.05**	**89**	P		Pg	06 56 36.8	-1.2
ATAL				S		Sb	06 56 52.0	+0.5
AMT	**Artemida-Makis**	**1.14**	**179**	P		Pb	06 56 38.2	-1.1
AMT				S		Sb	06 56 54.0	-0.1
AMT	**Artemida-Makis**	**1.14**	**179**	*e*PN		Pb	06 56 39.1	-0.2
AMT				*e*SN		Sn	06 56 56.2	+1.2
AMT	**Artemida-Makis**	**1.14**	**179**	P		Pb	06 56 38.2	-1.1
AMT	**Artemida-Makis**	**1.14**	**179**	*e*Pn		Pb	06 56 39.1	-0.2
AMT				S		Sb	06 56 54.0	-0.1
AMT				*e*Sn		Sn	06 56 56.2	+1.2
LTK	**Loutraki**	**1.20**	**122**	*e*PN		Pn	06 56 40.0	-0.3
LTK	**Loutraki**	**1.20**	**122**	*e*Pn		Pn	06 56 40.0	-0.3
XOR	**Xorichti**	**1.36**	**59**	P		Pn	06 56 41.7	-0.9
XOR	**Xorichti**	**1.36**	**59**	P		Pn	06 56 41.7	-0.9
VLX	**Vlachokerasia**	**1.41**	**157**	*e*PN		Pb	06 56 44.0	-0.1
VLX				*e*SN		Sg	06 57 03.5	+0.2
VLX	**Vlachokerasia**	**1.41**	**157**	*e*Pn		Pb	06 56 44.0	-0.1
VLX				*e*Sn		Sg	06 57 03.5	+0.2
NAIG	**Nisos Aigina**	**1.69**	**122**	*e*PN		Pb	06 56 48.3	-0.4
NAIG	**Nisos Aigina**	**1.69**	**122**	*e*Pn		Pb	06 56 48.3	-0.4
DID	**Didima**	**1.69**	**133**	*e*PN		Pn	06 56 48.1	+1.0
DID	**Didima**	**1.69**	**133**	*e*Pn		Pn	06 56 48.1	+1.0
PYL	**PYLOS**	**1.78**	**178**	*e*PB		Pn	06 56 48.0	-0.2
PYL	**PYLOS**	**1.78**	**178**	*e*Pb		Pn	06 56 48.0	-0.2
SOH	**Sokhos**	**2.50**	**31**	*e*PN		Pn	06 56 58.9	+0.7
SOH	**Sokhos**	**2.50**	**31**	*e*Pn		Pn	06 56 58.9	+0.7
KYTH	**Kithira**	**2.62**	**155**	*e*PN		Pn	06 57 01.0	+1.2
KYTH	**Kithira**	**2.62**	**155**	*e*Pn		Pn	06 57 01.0	+1.2
VAY	**Valandovo**	**2.73**	**14**	*e*Pn		Pn	06 57 01.0	-0.3
VAY	**Valandovo**	**2.73**	**14**	*e*Pn		Pn	06 57 01.5	+0.2

*CSEM **15** 07:19:24.3, 42°.59N×13°.34E, h8km, After ROM*
ROM 15 07:19:24.3±0.2, 42°.59N×13°.34E, h8km±2km, Ml1.5/2, Error ellipse: s-maj=4.9km s-min=1.1km az=178.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.07**	**133**	Pg	Pg	07 19 26.6	+0.2
CAMP				Sg	Sg	07 19 28.0	+0.1
CAMP	**Campotosto**	**0.07**	**133**	Pg	Pg	07 19 26.6	+0.2
CAMP				Sg	Sg	07 19 28.0	+0.1
TERO	**Teramo**	**0.20**	**79**	Pg	Pg	07 19 29.0	+0.5
TERO				Sg	Sg	07 19 32.4	+1.1
	59nm,0.2s						
TERO	**Teramo**	**0.20**	**79**	Pg	Pg	07 19 29.0	+0.5
TERO				Sg	Sg	07 19 32.4	+1.1
	59nm,0.2s						
LNSS	**Leonessa**	**0.22**	**275**	Pg	Pg	07 19 29.2	+0.3
LNSS				Sg	Sg	07 19 33.2	+1.2
LNSS	**Leonessa**	**0.22**	**275**	Pg	Pg	07 19 29.2	+0.3
LNSS				Sg	Sg	07 19 33.2	+1.2
NRCA	**Norcia**	**0.30**	**327**	Pg	Pg	07 19 31.2	+0.9
NRCA				Sg	Sb	07 19 36.6	-0.7
	55nm,0.1s						
NRCA	**Norcia**	**0.30**	**327**	Pg	Pg	07 19 31.2	+0.9
NRCA				Sg	Sb	07 19 36.6	-0.7
	55nm,0.1s						

RSPR 15 07:22:24.4, 18°.94N×64°.91W, h109km±11km, 6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STVI	**Saint Thomas**	**0.58**	**185**	⇓*eP*		Pn	07 22 41.4	-0.4
STVI	**Saint Thomas**	**0.58**	**185**	⇓*eP*		Pn	07 22 41.4	-0.4
STVI				*e*S		Sn	07 22 53.9	-0.9
MTP	**Monte Pirata**	**1.04**	**216**	⇓*eP*		Pn	07 22 45.7	-0.3
MTP	**Monte Pirata**	**1.04**	**216**	⇓*eP*		Pn	07 22 45.7	-0.3
MTP				*e*S		Sn	07 23 01.9	-0.3
HUMP	**Col San Antoni**	**1.20**	**229**	⇓*eP*		Pn	07 22 47.4	-0.3
HUMP	**Col San Antoni**	**1.20**	**229**	⇓*eP*		Pn	07 22 47.4	-0.3
HUMP				*e*S		Sn	07 23 04.6	-0.7

*NIED **15** 07:23:00.2, 27°.00N×129°.90E, h5km, Mw5.0 Best double couple: M0 3.20000×10^16 NP1:φs175.00000°, δ72.00000°, λ-106.00000°. NP2:φs37.00000°, δ24.00000°, λ-51.00000°.*
*BJI **15** 07:23:30.5, 26°.90N×129°.85E, h7km, mB5.0/42, mb4.7/43, Ms5.1/60, Ms7 4.9/58*
*IDC **15** 07:23:31.8±0.4, 27°.05N×129°.89E, h0km, mb4.5/32, mb1 4.7/38, mb1mx4.6/42, mbtmp4.6/38, ML4.4/5, MS4.5/32, Ms1 4.5/32, ms1mx4.3/46, Error ellipse: s-maj=13.0km s-min=9.5km az=85.0*
*JMA **15** 07:23:33.9±0.1, 27°.00N×129°.91E, h62km, M5.0*
JMA Felt I J1.
*ISCJB **15** 07:23:33.9±0.1, 26°.95N±0°.02×129°.85E±0°.02, h23km, mb4.8/118, MS4.8/63, Error ellipse: s-maj=2.7km s-min=2.3km az=167.0*
*DJA **15** 07:23:33.9±0.6, 27°N±8°×13°0E±°, h10km, M5.1/14, mB5.4/1, mb5.1/14, Mw(mB)4.8/1*
*MOS **15** 07:23:35.1±1.1, 27°.00N×129°.95E, h33km, mb5.1/58, MS4.7/27, Error ellipse: s-maj=8.4km s-min=4.9km az=102.4*
*NEIC **15** 07:23:37.1±0.2, 26°.97N×129°.85E, h35km, mb5.1/41, MW4.9(NIED), Error ellipse: s-maj=4.5km s-min=3.7km az=123.0*
NEIC Recorded [1 JMA] on Amami-oshima and Kikaiga-shima.
*GCMT **15** 07:23:37.2±0.3, 27°.04N×129°.81E, h12km, MW5.1, Moment Tensor Solution. s31,c40; s77,c118; Moment tensor: Scale 10^16Nm; Mrr-3.83±.15; Mθθ-0.23±.14; Mφφ4.06±.12; Mrθ0.41±.51; Mθφ1.90±.11; Mφr2.89±.39; Best double couple: M0 5.20000×10^16 NP1:φs32.00000°, δ29.00000°, λ-73.00000°. NP2:φs192.00000°, δ62.00000°, λ-99.00000°. Principal axes: T 5.6400, Plg17.0000°, Azm289.0000°; N -0.8600, Plg8.0000°, Azm197.0000°; P -4.7900, Plg71.0000°, Azm81.0000°; Data Used: II IU IC G CN.*

ISC 15 07:23:33.8±0.3, 27°.00N±0°.03×129°.94E±0°.03, *h*14km±1km, h13km: pP-P, n437, σ1s72/523, mb5.0/118, MS4.9/63, 53C-52D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**1.18**	**312**	P		Pn	07 23 54.3	-1.6
JTK				*e*S		Sb	07 24 09.4	-1.7
JZK	**Kikaishima**	**1.31**	**1**	P		Pn	07 23 56.8	-1.0
JZK				*e*S		Sb	07 24 14.5	-0.5
JAMN	**Amaminishikomi**	**1.41**	**332**	P		Pn	07 23 57.4	-1.8
JAMN				*e*S		Sn	07 24 14.9	-2.7
JAM	**Amami Oshima**	**1.44**	**348**	P		Pn	07 23 58.0	-1.5
JAM				*e*S		Sn	07 24 15.4	-2.9
JOW	**Kunigami**	**1.49**	**264**	*e*Pn		Pn	07 23 59.1	-1.2
JOW	**Kunigami**	**1.49**	**264**	P		Pn	07 23 59.1	-1.2
JOW				*e*S		Sn	07 24 16.4	-3.2
JMZ	**Minamidaito 2**	**1.64**	**135**	P		Pn	07 24 01.2	-1.1
JMZ				*e*S		Sn	07 24 20.9	-2.4
JIH	**Iheya**	**1.76**	**272**	P		Pn	07 24 02.7	-1.2
JIH				*e*S		Sn	07 24 23.3	-2.8
JJT2	**Tamagusuku 2**	**2.14**	**247**	P		Pn	07 24 08.0	-1.1
JJT2				*e*S		Sn	07 24 33.0	-2.5
JAGN	**Aguni-jima**	**2.44**	**261**	P		Pn	07 24 12.1	-1.2
JAGN				*e*S		Sn	07 24 39.7	-3.3
JNN	**Nakanoshima**	**2.83**	**359**	P		Pn	07 24 17.5	-1.2
JNN				*e*S		Sn	07 24 49.6	-3.1
JKE	**Kume jima 2**	**2.90**	**257**	P		Pn	07 24 17.8	-1.8
JKE				*e*S		Sn	07 24 51.4	-2.9
JKC	**Kuchinoerabu**	**3.46**	**4**	P		Pn	07 24 25.9	-1.4
JKC				*e*S		Sn	07 25 04.4	-3.7
JTN	**Tanegashima 3**	**3.76**	**14**	P		Pn	07 24 30.1	-1.3
JTN				*e*S		Sn	07 25 12.8	-2.7
JNU	**Nakatsue**	**6.16**	**7**	*e*Pn		Pn	07 25 04.7	+0.2
JNU				Sn		Sn	07 26 11.1	-3.6

JNU **Nakatsue** 6.16 7 Pn **Pn** 07 25 04.3 -0.2
16nm,0.3s,baz=202,slow=5.2,SNR=71
JNU Sn **Sn** 07 26 11.1 -3.6
5.5nm,0.3s,baz=250,slow=14,SNR=3.0
NACB Ninganchiao 8.04 251 *e*Pn **Pn** 07 25 27.6 -2.7
YHNB Yeheng 8.05 255 *e*Pn **Pn** 07 25 29.2 -1.4
151nm,0.9s
YULB Yu-li 8.61 247 *e*Pn Pn 07 25 33.2 -4.9
43nm,0.8s
SSE Sheshan 8.68 300 P **Pn** **07 25 36.4 -2.6**
SSE S **Sn** **07 27 19.4 +2.7**
SSE pmax pmax
comp=Z,11nm,0.9s
SSE pmax pmax
comp=Z,160nm,5.8s
SSE LR LR
comp=N,6μm,15.8s
SSE LR LR
comp=E,3μm,15.8s
SSE LR LR
comp=Z,6μm,14.0s
SSLB Suanglung 8.73 250 *e*Pn Pn 07 25 36.3 -3.5
TWG Pinlang 9.06 245 *e*Pn Pn 07 25 38.5 -5.7
TPUB Ta-pu 9.20 248 *e*Pn **Pn** **07 25 44.0 -2.3**
QZH Quanzhou 10.41 261 ⇑*i*P **Pn** **07 26 02.3 -0.5**
QZH *e*S **Sn** **07 27 57.3 -2.0**
QZH LR LR
comp=N,6μm,11.4s
QZH LR LR
comp=E,6μm,15.1s
QZH LR LR
comp=Z,8μm,10.9s
JHJ Hachijo jima 2 10.48 52 Pn **Pn** **07 26 05.3 +1.6**
comp=Z,52nm,0.3s,baz=248,slow=22,SNR=8.6
KSAR Wonju Array Be 10.56 351 Pn **Pn** **07 26 07.1 +2.4**
KSRS Korea Array 10.56 351 Pn **Pn** **07 26 07.1 +2.3**
comp=Z,0.6nm,0.3s,baz=169,slow=14,SNR=15
KSRS LR LR 07 30 41.2
comp=Z,2μm,18.7s,baz=178,slow=41
NJ2 Nanjing 10.88 300 *e*P **Pn** **07 26 08.4 -0.8**
NJ2 S **Sn** **07 28 09.0 -1.9**
NJ2 pmax pmax
comp=Z,460nm,3.6s
NJ2 LR LR
comp=N,5μm,15.5s
NJ2 LR LR
comp=E,6μm,14.3s
NJ2 LR LR
comp=Z,7μm,13.4s
CBIJ Chichi jima 10.92 87 Pn **Pn** **07 26 09.7 -0.1**
CBIJ Sn **Sn** **07 28 08.4 -3.4**
CBIJ Chichi jima 10.92 87 Pn **Pn** **07 26 09.7 -0.1**
CBIJ Sn **Sn** **07 28 08.4 -3.4**
comp=Z,5.0nm,0.3s,baz=308,slow=18,SNR=2.7
CBIJ LR LR 07 29 04.6
comp=Z,1μm,18.5s,baz=182,slow=30
MAJO Matsushiro 11.83 34 *e*P Pn 07 26 25.8 +3.6
MAJO Matsushiro 11.83 34 *e*Pn Pn 07 26 25.8 +3.6
MAT Matsushiro 11.83 34 P **Pn** **07 26 23.2 +1.0**
MAT *e*S Sn 07 28 18.1 -16
MJAR Matsushiro Arr 11.83 34 Pn **Pn** **07 26 23.9 +1.7**
MJAR Matsushiro Arr 11.83 34 Pn **Pn** **07 26 23.9 +1.7**
comp=Z,0.7nm,0.3s,baz=223,slow=15,SNR=7.4
WHN Wuhan 14.12 288 ⇑*i*P **Pn** **07 26 52.5 -1.0**
WHN pP **P** **07 27 01.9 +0.8**
WHN S **Sn** **07 29 35.8 +5.8**
WHN LR LR
comp=N,10μm,14.1s
WHN LR LR
comp=E,6μm,12.8s
WHN LR LR
comp=Z,9μm,15.2s
TGY Tagaytay City 15.34 215 Pn **Pn** **07 27 09.8 -0.4**
TGY Tagaytay City 15.34 215 Pn **Pn** **07 27 09.8 -0.4**
comp=Z,108nm,0.3s,baz=171,slow=9.4,SNR=2.6
GZH Guangzhou 15.53 259 P **Pn** **07 27 14.1 +1.6**
GZH S **Sn** **07 30 10.3 +5.8**
GZH LR LR
comp=N,3μm,11.3s
GZH LR LR
comp=E,1μm,11.1s
GZH LR LR
comp=Z,3μm,10.3s
SNY Shenyang 15.69 342 ⇓P **P** **07 27 18.5 0.0**
SNY S **Sn** **07 30 12.3 +4.2**
SNY pmax pmax
comp=Z,35nm,1.1s
SNY pmax pmax
comp=Z,460nm,3.1s
SNY LR LR
comp=N,4μm,13.9s
SNY LR LR
comp=E,9μm,14.5s
SNY LR LR
comp=Z,4μm,12.2s
VLA Vladivostok 16.16 5 P **P** **07 27 25.3 +1.6**
VLA S **Sn** **07 30 24.2 +4.5**
CN2 Changchun 17.16 349 *e*P **P** **07 27 35.0 +0.3**
CN2 *e*sP **sP** **07 27 41.0 +0.7**
CN2 *e*S **Sn** **07 30 45.0 +1.3**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,2μm,14.0s
CN2 LR LR
comp=E,8μm,14.0s
CN2 LR LR
comp=Z,3μm,15.0s
USRK Ussuriysk Arra 17.25 5 P **P** **07 27 35.9 +0.2**
comp=Z,0.9nm,0.3s,baz=185,slow=9.5,SNR=19
USRK LR LR 07 34 34.9
comp=Z,1μm,19.1s,baz=41,slow=39
BJI Beijing 17.32 322 P **P** **07 27 37.4 +0.9**
BJI S **Sn** **07 30 46.9 -0.8**
BJI pmax pmax
comp=Z,110nm,0.8s
BJI pmax pmax
comp=Z,450nm,3.9s
BJI LR LR
comp=N,4μm,17.4s
BJI LR LR
comp=E,3μm,19.3s
BJI LR LR
comp=Z,860nm,26.6s
MDJ Mudanjiang 17.58 359 P **Pn** **07 27 37.6 -0.9**
MDJ pP **pP** **07 27 41.6 -1.7**
MDJ sP **sP** **07 27 43.0 -2.1**
MDJ S **Sn** **07 30 53.9 -0.2**
MDJ sS **sS** **07 31 06.5 -1.3**
MDJ ScP **ScP** **07 35 52.3 -0.2**
MDJ PcS **PcS** **07 35 53.6 -0.3**
MDJ pmax pmax
comp=Z,79nm,4.1s
MDJ LR LR
comp=N,2μm,12.1s
MDJ LR LR
comp=E,630nm,11.3s
MDJ LR LR
comp=Z,3μm,12.3s
TIY Taiyuan 18.21 310 *e*P **Pn** **07 27 46.3 -0.1**
TIY sP **sP** **07 27 53.1 +0.9**
TIY S **Sn** **07 31 07.8 -1.7**
TIY SS **SnSn** **07 31 26.6 +3.3**
TIY pmax pmax
comp=Z,580nm,5.9s
TIY LR LR
comp=N,2μm,10.1s
TIY LR LR
comp=E,4μm,10.9s
TIY LR LR
comp=Z,5μm,10.9s
GUMO Guam 19.31 131 P **Pn** **07 27 59.6 -0.2**
GUMO Guam 19.31 131 P **Pn** **07 27 59.6 -0.2**
comp=Z,2.2nm,0.3s,baz=195,slow=8.4,SNR=3.2
GUMO LR LR 07 35 21.9
comp=Z,654nm,18.0s,baz=85,slow=37
XAN Xi'an 19.40 296 P **P** **07 27 58.3 -1.3**
XAN S **Sn** **07 31 33.8 -4.5**
XAN pmax pmax
comp=Z,150nm,11.4s
XAN LR LR
comp=N,2μm,12.8s
XAN LR LR
comp=E,1μm,15.4s
XAN LR LR
comp=Z,2μm,14.8s
ASAJ Asahikawa 19.91 28 *e*P **P** **07 28 05.8 +0.8**
ASAJ Asahikawa 19.91 28 P **P** **07 28 04.0 -0.9**
comp=Z,1.0nm,0.3s,baz=215,slow=17,SNR=13
ASAJ LR LR 07 36 00.9
comp=Z,1μm,19.7s,baz=88,slow=38
QIZ Qiongzhong 20.11 251 P **P** **07 28 07.1 -0.3**
QIZ S **S** **07 31 47.0 -6.0**
QIZ pmax pmax
comp=Z,20nm,1.6s
QIZ pmax pmax
comp=Z,660nm,10.3s
QIZ LR LR
comp=N,2μm,10.8s
QIZ LR LR
comp=Z,1μm,12.2s
CTBH Cotabato--PC H 20.40 196 ⇓*i*P Pn 07 28 13.2 +0.6
HHC Hu-ho-hao-te 20.52 317 *e*P **P** **07 28 11.8 0.0**
HHC PP **PnPn** **07 28 32.8 +3.5**
HHC S **S** **07 31 55.0 -6.1**
HHC sS Sn 07 32 00.9 -4.3
HHC SS **SnSn** **07 32 24.0 +4.1**
HHC ScP **ScP** **07 35 57.9 -1.5**
HHC PcS **PcS** **07 36 00.4 -0.5**
HHC pmax pmax
comp=Z,35nm,0.5s
HHC pmax pmax
comp=Z,550nm,5.3s
HHC LR LR
comp=N,5μm,14.4s
HHC LR LR
comp=E,5μm,13.1s
HHC LR LR
comp=Z,4μm,13.1s
GYA Guiyang 20.79 274 ⇑*i*P **P** **07 28 13.9 -1.0**
GYA PP **PnPn** **07 28 36.0 +2.9**
GYA S **S** **07 32 01.3 -5.5**
GYA SS **SnSn** **07 32 29.8 +3.0**
GYA ScP **ScP** **07 36 01.0 +0.7**
GYA pmax pmax
comp=Z,30nm,0.8s
GYA pmax pmax
comp=Z,130nm,4.8s
GYA LR LR
comp=N,630nm,16.1s
GYA LR LR
comp=E,580nm,17.2s
GYA LR LR
comp=Z,710nm,17.8s
YUK Yuzh-Kuril'sk 21.31 33 *i*P **P** **07 28 18.6 -1.6**
YUK *i*S **S** **07 32 13.8 -2.8**
YUK pmax pmax
comp=N,489nm,1.4s
YUK pmax pmax
comp=Z,791nm,1.4s
YUK pmax pmax
comp=E,613nm,1.1s
YUK pmax pmax
comp=Z,1μm,1.5s
YUK MLR MLR
comp=E,201nm,19.0s
YUK MLR MLR
comp=Z,713nm,19.0s
YUK MLR MLR
comp=N,402nm,19.0s
BTO Baotou 21.34 315 *e*P **P** **07 28 18.8 -1.9**
HABR Khabarovsk 21.81 9 *e*P **P** **07 28 25.8 +0.3**
HABR *e**SS **S** **07 32 29.3 +3.1**
HABR SSS SSS 07 33 03.8
HABR *e* 07 39 44.6
HABR pmax pmax
comp=N,28nm,1.2s
HABR pmax pmax
comp=E,53nm,1.8s
HABR pmax pmax
comp=Z,74nm,1.2s
HABR MLR MLR
comp=Z,2μm,20.0s
KLR Kul'dur 22.24 3 *e*P P 07 28 25.0 -5.1
KLR *e*S **S** **07 32 33.0 -1.5**
KLR pmax pmax
comp=E,28nm,1.6s
KLR pmax pmax
comp=Z,62nm,1.6s
KLR MLR MLR
comp=Z,6μm,12.0s
YSS Yuzh-Sakhalins 22.34 24κ *i*P **P** **07 28 31.8 +0.6**
YSS *e* 07 28 46.0
YSS *e*S **S** **07 32 32.0 -4.4**
YSS *e*SS Sn 07 32 48.0 -0.6
YSS *e* 07 33 23.0
YSS pmax pmax
comp=Z,90nm,1.2s
YSS pmax pmax
comp=Z,500nm,3.0s
YSS MLR MLR
comp=N,2μm,18.0s
YSS MLR MLR
comp=Z,1μm,18.0s
CD2 Chengdu 23.22 286 ⇑P **P** **07 28 39.0 -1.6**
CD2 pP **pP** **07 28 43.3 -1.3**
CD2 sP **sP** **07 28 46.0 -0.3**
CD2 PP **PnPn** **07 29 08.9 +2.7**
CD2 PcP **PcP** **07 32 29.9 +1.3**
CD2 S **S** **07 32 45.3 -7.1**
CD2 sS sS 07 32 51.8 -7.4
CD2 SS **SnSn** **07 33 29.8 +3.7**
CD2 pmax pmax
comp=Z,50nm,0.9s
CD2 pmax pmax
comp=Z,310nm,6.0s
CD2 LR LR
comp=N,4μm,17.6s
CD2 LR LR
comp=E,5μm,15.6s
CD2 LR LR
comp=Z,5μm,14.7s
LZH Lanzhou 23.95 299 ⇓P **P** **07 28 47.6 -0.4**
LZH pP **pP** **07 28 53.9 +1.8**
LZH sP **sP** **07 28 56.5 +2.7**
LZH PP **PnPn** **07 29 23.5 +7.1**
LZH S **S** **07 33 04.3 -0.1**
LZH sS **sS** **07 33 11.0 -0.2**
LZH pmax pmax
comp=Z,44nm,1.0s
LZH pmax pmax
comp=Z,230nm,4.0s
LZH LR LR
comp=N,4μm,15.0s
LZH LR LR
comp=E,5μm,14.0s
LZH LR LR
comp=Z,6μm,15.8s
KMI Kunming 24.49 272 P **P** **07 28 52.3 -0.7**
KMI pP **pP** **07 28 55.0 -2.1**
KMI PP **PnPn** **07 29 26.3 +2.5**
KMI S **S** **07 33 07.4 -5.9**
KMI SS **SnSn** **07 34 00.3 +2.8**
KMI pmax pmax
comp=Z,40nm,1.7s
KMI LR LR
comp=N,6μm,13.4s
KMI LR LR
comp=E,2μm,13.1s
KMI LR LR
comp=Z,3μm,10.9s
KKM Kota Kinabalu 24.60 215 *e*P **P** **07 28 54.4 +0.5**
comp=Z,103nm,1.5s
UBPT Khong Chiam 25.57 248 P **P** **07 29 01.1 -1.5**
comp=Z,31nm,1.6s
MNI Manado 25.88 192 P **P** **07 29 02.8 -2.6**
comp=Z,209nm,0.7s
TNTI Ternate 26.19 186 P **P** **07 29 06.9 -1.3**
comp=Z,130nm,1.2s
ULN Ulaanbaatar 27.46 325 *e*P **P** **07 29 20.0 +0.4**
comp=Z,26nm,1.3s
ULN Ulaanbaatar 27.46 325 P **P** **07 29 19.3 -0.3**
comp=Z,18nm,1.2s
SONM Songino Array 27.77 325 P **P** **07 29 23.2 +0.8**
SONM PcP **PcP** **07 32 39.1 +0.5**
SONM Songino Array 27.77 325 P **P** **07 29 23.2 +0.8**
comp=Z,5.1nm,0.9s,baz=126,slow=9.7,SNR=20
SONM PcP **PcP** **07 32 39.1 +0.5**
comp=Z,1.0nm,0.9s,baz=66,slow=1.7,SNR=3.7
SONM LR LR 07 41 49.4
comp=Z,1μm,18.9s,baz=312,slow=40
GTA Gaotai 27.95 304 *e*P **P** **07 29 22.8 -1.2**
GTA pP **pP** **07 29 27.3 -0.8**
GTA sP **sP** **07 29 29.6 -0.2**
GTA PP **PnPn** **07 30 12.6 +1.8**
GTA S **S** **07 34 05.4 -2.3**
GTA sS **sS** **07 34 12.0 -2.5**
GTA SS **SnSn** **07 35 27.1 +5.4**
GTA pmax pmax
comp=Z,7.0nm,0.5s
GTA pmax pmax
comp=Z,310nm,7.1s
GTA LR LR
comp=N,5μm,13.8s
GTA LR LR
comp=E,3μm,13.8s
GTA LR LR
comp=Z,5μm,13.8s
LUWI Luwuk 28.72 195 P **P** **07 29 29.3 -1.6**
comp=Z,28nm,1.0s
CHBT CHBT 29.49 247 P **P** **07 29 35.6 -2.2**
comp=Z,14nm,1.3s
CMMT Chiang Mai 29.62 261 P **P** **07 29 38.2 -0.8**
comp=Z,23nm,1.1s,comp=Z,481nm
CHTO Chiang Mai 29.63 261 *e*P **P** **07 29 39.2 +0.2**
CHTO Chiang Mai 29.63 261 *e*P **P** **07 29 39.2 +0.2**
CHTO Chiang Mai 29.63 261 P **P** **07 29 37.8 -1.2**
comp=Z,26nm,1.1s
CM31 Chiang Mai Arr 29.76 260 *e*P **P** **07 29 39.9 -0.3**
CMAR Chiang Mai Arr 29.76 260 P **P** **07 29 40.7 +0.5**
CMAR PcP **PcP** **07 32 44.6 +0.7**
CMAR Chiang Mai Arr 29.76 260 P **P** **07 29 40.7 +0.5**
comp=Z,2.5nm,0.8s,baz=57,slow=6.3,SNR=20
CMAR PcP **PcP** **07 32 44.6 +0.7**
comp=Z,1.4nm,0.8s,baz=43,slow=1.4,SNR=5.5
FAKI Fak Fak 29.83 175 P **P** **07 29 38.1 -2.6**
comp=Z,85nm,1.1s
ZAK Zakamensk 30.98 326 *e*P P 07 29 59.3 +8.6
ZAK *e* 07 31 03.7
ZAK *e* 07 32 45.6
ZAK pmax pmax
comp=Z,2.0nm,1.5s
KDI Kendari 31.58 194 P **P** **07 29 55.9 -0.3**
comp=Z,33nm,1.4s
KSM Kuching 31.61 220 *e*P **P** **07 29 56.6 +0.2**
comp=Z,28nm,1.2s
KSM Kuching 31.61 220 P **P** **07 29 55.9 -0.6**
comp=Z,23nm,1.2s
TLY Talaya 31.64 328 *e*P P 07 30 01.0 +4.6
TLY pmax pmax
comp=Z,5.0nm,1.8s
TLY MLR MLR
comp=Z,520nm,15.0s
PETK Petropavlovsk- 33.25 31 P **P** **07 30 10.3 -0.3**
PETK pmax pmax
comp=Z,12nm,1.0s
PETK MLR MLR
comp=Z,440nm,19.0s
PETK Petropavlovsk- 33.25 31 P **P** **07 30 10.3 -0.3**
PETK Petropavlovsk- 33.25 31 P **P** **07 30 10.3 -0.3**
comp=Z,12nm,1.0s,baz=205,slow=6.6,SNR=5.6
PETK LR LR 07 46 04.4
comp=Z,440nm,19.0s,baz=3.1,slow=41
KAPI Kappang 33.31 199 P **P** **07 30 11.6 +0.2**
KAPI Kappang 33.31 199 P **P** **07 30 11.6 +0.2**
comp=Z,1.7nm,0.3s,baz=95,slow=8.4,SNR=3.4
PET Petropavlovsk 33.64 32 *e*P **P** **07 30 16.1 +2.2**
PET *e*S **S** **07 35 34.7 -1.4**
PET pmax pmax
comp=Z,200nm,14.9s
PET pmax pmax
comp=Z,29nm,1.3s
PET MLR MLR
comp=Z,800nm,19.0s
PET MLR MLR
comp=Z,500nm,14.0s
SHL Shillong 34.07 276 *i*P **P** **07 30 18.5 +0.3**
SHL *i*S **S** **07 35 39.5 -4.3**
LSA Lhasa 34.14 284 P **P** **07 30 19.9 +0.8**
LSA sP sP 07 30 32.0 +7.1
LSA pmax pmax
comp=Z,40nm,0.9s
LSA pmax pmax
comp=Z,160nm,5.0s
LSA LR LR
comp=N,590nm,18.0s
LSA LR LR
comp=E,690nm,17.0s
LSA LR LR
comp=Z,840nm,18.0s
YAK Yakutsk 35.03 360 *e*P **P** **07 30 24.4 -1.4**
YAK *e**PP **pP** **07 30 33.9 +3.9**
YAK *e* 07 31 41.0
YAK *e*PPP PPP 07 31 56.3
YAK *e* 07 32 55.5
YAK *e*S **S** **07 35 54.8 -2.6**
YAK *e*SS **SnSn** **07 38 13.3 +0.2**
YAK *e*SSS SSS 07 38 31.5
YAK *e* 07 40 39.9
YAK pmax pmax
comp=Z,48nm,1.0s
YAK pmax pmax
comp=N,40nm,1.3s
YAK pmax pmax
comp=Z,105nm,4.0s
YAK pmax pmax
comp=N,144nm,4.0s
YAK pmax pmax
comp=E,156nm,4.9s
YAK smax smax
comp=N,176nm,4.1s
YAK smax smax
comp=E,104nm,3.6s
YAK MLR MLR
comp=Z,851nm,14.0s
YAK MLR MLR
comp=N,817nm,15.0s
YAK MLR MLR
comp=E,512nm,13.0s
TAPN Taplejung 37.44 280 *e*P **P** **07 30 49.2 +2.0**
ODAN Odare 37.80 280 *e*P **P** **07 30 51.4 +1.1**
WMQ Urumqi 37.84 308 P **P** **07 30 50.0 -0.2**
WMQ sP **sP** **07 30 57.0 +0.9**
WMQ PP **PnPn** **07 32 19.0 +1.2**
WMQ PcP **PcP** **07 33 07.0 +0.5**
WMQ S **S** **07 36 40.0 -1.1**
WMQ sS **sS** **07 36 47.0 -1.0**
WMQ ScP **ScP** **07 36 53.0 -0.8**
WMQ SS **SnSn** **07 39 15.0 -6.8**
WMQ ScS **ScS** **07 41 00.0 -2.7**
WMQ pmax pmax
comp=Z,16nm,1.0s
WMQ pmax pmax
comp=Z,190nm,5.0s
WMQ LR LR
comp=N,2μm,15.0s
WMQ LR LR
comp=E,1μm,15.0s
WMQ LR LR
comp=Z,2μm,15.0s
PSI Prapat 38.21 236 P **P** **07 30 54.6 +1.0**
PSI Prapat 38.21 236 P **P** **07 30 54.6 +1.0**
comp=Z,4.1nm,0.6s,baz=141,slow=6.2,SNR=4.3
PSI LR LR 07 46 15.7
comp=Z,341nm,20.0s,baz=211,slow=36
RAMN Ramite 38.48 280 *e*P **P** **07 30 57.6 +1.6**
comp=Z,57nm,1.2s
SEY Seymchan 38.85 16 ⇑*i*P **P** **07 30 58.7 +0.4**
GUN Gumba 38.95 282 *e*P **P** **07 31 02.0 +2.0**
PKI Pulchoki 39.42 281 *e*P **P** **07 31 05.5 +1.6**
comp=Z,58nm,1.0s
PKIN Phulchoki 39.43 281 *e*P **P** **07 31 05.6 +1.7**
comp=Z,31nm,0.8s
DMN Daman 39.67 281 *e*P **P** **07 31 07.9 +1.9**
comp=Z,180nm,1.4s
PMG Port Moresby 39.86 153 *e*P **P** **07 31 07.0 -0.2**
comp=Z,31nm,1.0s
PMG Port Moresby 39.86 153 P **P** **07 31 06.3 -0.9**
comp=Z,30nm,1.1s
PMG Port Moresby 39.86 153 P **P** **07 31 07.3 +0.1**
comp=Z,31nm,1.0s,baz=336,slow=10,SNR=5.8
DANN Dangsing 40.73 283 *e*P **P** **07 31 15.3 +0.5**
comp=Z,156nm,1.0s
KOLN Koldanda 40.96 282 *e*P **P** **07 31 17.0 +0.4**
comp=Z,49nm,0.9s

PYUN Piuthan 41.44 283 *e*P P 07 31 21.1 +0.6
comp=Z,202nm,1.1s
MK31 Makanchi Array 42.18 311 *e*P P 07 31 26.5 +0.4
MK31 Makanchi Array 42.18 311 *e*P P 07 31 26.5 +0.4
MKAR Makanchi Array 42.18 311 P P 07 31 24.6 -1.5
MKAR 07 33 19.1
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR MLR MLR
comp=Z,435nm,18.4s
MKAR Makanchi Array 42.18 311 *e*P P 07 31 26.4 +0.3
MKAR PcP PcP 07 33 19.1 -1.1
MKAR Makanchi Array 42.18 311 P P 07 31 24.6 -1.5
comp=Z,2.5nm,0.8s,baz=95,slow=9.7,SNR=22
MKAR PcP PcP 07 33 19.1 -1.1
comp=Z,1.1nm,0.7s,baz=82,slow=6.9,SNR=3.6
MKAR LR LR 07 49 15.6
comp=Z,435nm,18.4s,baz=113,slow=37
ZALV Zalesovo Beam 42.58 322 P P 07 31 26.8 -2.4
ZALV 07 33 20.5
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV pmax pmax
comp=Z,3.0nm,0.9s
ZALV MLR MLR
comp=Z,858nm,18.3s
ZALV Zalesovo Beam 42.58 322 P P 07 31 26.8 -2.4
ZALV PcP PcP 07 33 20.5 -0.9
ZALV Zalesovo Beam 42.58 322 P P 07 31 26.8 -2.4
comp=Z,1.4nm,0.5s,baz=109,slow=8.0,SNR=7.6
ZALV PcP PcP 07 33 20.5 -0.9
comp=Z,3.1nm,0.9s,baz=132,slow=2.2,SNR=4.1
ZALV LR LR 07 49 12.4
comp=Z,858nm,18.3s,baz=106,slow=36
COEN Coen 42.69 161 *e*P P 07 31 30.6 +0.1
comp=Z,158nm,1.1s
FITZ Fitzroy Crossi 45.02 186 *e*P P 07 31 49.2 0.0
comp=Z,25nm,1.1s
FITZ Fitzroy Crossi 45.02 186 P P 07 31 49.4 +0.2
comp=Z,6.3nm,0.7s,baz=16,slow=7.8,SNR=17
KURK Kurchatov 45.33 316 *ce*P P 07 31 51.4 +0.1
KURK pmax pmax
comp=Z,11nm,1.7s
KURK Kurchatov 45.33 316 *e*P P 07 31 51.1 -0.3
comp=Z,6.5nm,0.9s
KURBB Kurchatov Arra 45.36 316 LR LR 07 52 28.2
comp=Z,1μm,19.6s,baz=115,slow=38
KSH Kashi 46.20 300 *e*P P 07 32 02.6 +4.0
KSH pP pP 07 32 07.0 +4.2
KSH sP sP 07 32 10.0 +5.5
KSH PcP PcP 07 33 38.4 +4.1
KSH PP PP 07 33 52.0 +5.1
KSH ScP ScP 07 37 30.3 +3.0
KSH PcS PcS 07 37 32.4 +3.5
KSH S S 07 38 49.0 +4.3
KSH sS sS 07 38 56.8 +5.1
KSH ScS ScS 07 41 56.1 +2.0
KSH SS SS 07 42 07.8 -2.1
KSH pmax pmax
comp=Z,1.0nm,0.2s
KSH LR LR
comp=N,1μm,12.2s
KSH LR LR
comp=E,780nm,9.7s
KSH LR LR
comp=Z,1μm,11.8s
NDI New Delhi 46.33 285 *e*P P 07 32 01.0 +1.4
HNR Honiara 46.46 137 LR LR 07 49 29.9
comp=Z,159nm,18.8s,baz=159,slow=34
BILL Bilibino 46.47 18⇑ *e*P P 07 32 00.3 +0.2
BILL *e* 07 32 10.2
BILL *e*S S 07 38 51.9 +4.3
BILL *e*SS SS 07 42 06.8 -6.4
BILL pmax pmax
comp=Z,12nm,1.0s
BILL MLR MLR
comp=Z,400nm,15.0s
BILL Bilibino 46.47 18 *e*P P 07 31 59.8 -0.3
comp=Z,21nm,1.2s
TKM2 Tokmak 2 46.49 305 *e*P P 07 32 00.3 -0.6
TKM2 Tokmak 2 46.49 305 *e*P P 07 32 00.3 -0.6
WRAB Tennant Creek 46.85 174 *e*P P 07 32 03.2 -0.4
WRAB pmax pmax
comp=Z,33nm,0.9s
WRAB Tennant Creek 46.85 174 *e*P P 07 32 03.2 -0.4
comp=Z,33nm,0.9s
WRAB Tennant Creek 46.85 174 P P 07 32 03.0 -0.6
comp=Z,218nm,1.0s,SNR=8.6
FRU Bishkek 47.21 304 *e*P P 07 32 07.0 +0.7
AAK Ala-Archa 47.30 304 *e*P P 07 32 06.1 -1.1
AAK pmax pmax
comp=Z,8.0nm,1.6s
AAK Ala-Archa 47.30 304 *e*P P 07 32 07.9 +0.7
comp=Z,8.0nm,1.4s
AAK Ala-Archa 47.30 304 LR LR 07 53 43.8
comp=Z,1μm,18.2s,baz=212,slow=38
MBWA Marble Bar 48.88 193 *e*P P 07 32 19.0 -0.3
comp=Z,16nm,0.8s
CTA Charters Tower 49.41 160 P P 07 32 24.4 +1.0
CTA Charters Tower 49.41 160 P P 07 32 24.4 +1.0
comp=Z,22nm,0.7s,baz=340,slow=9.4,SNR=40
CTAO Charters Tower 49.41 160 *e*P P 07 32 24.2 +0.8
CTAO pmax pmax
comp=Z,39nm,1.0s
CTAO Charters Tower 49.41 160 *e*P P 07 32 24.2 +0.8
comp=Z,39nm,1.0s
KKAR Karatay Array 50.22 305 *e*P P 07 32 29.4 -0.1
KKAR Karatay Array 50.22 305 *e*P P 07 32 29.4 -0.1
AS31 Alice Springs 50.51 175 *e*P P 07 32 31.8 0.0
ASAR Alice Springs 50.51 175 P P 07 32 32.0 +0.2
ASAR PcP PcP 07 33 50.6 +0.9
ASAR Alice Springs 50.51 175 P P 07 32 32.0 +0.2
comp=Z,5.5nm,0.5s,baz=6.8,slow=14,SNR=78
ASAR PcP PcP 07 33 50.6 +0.9
comp=Z,3.4nm,0.9s,baz=357,slow=3.6,SNR=2.7
BVAR Borovoye Array 50.73 318 LR LR 07 56 00.7
comp=Z,2μm,19.0s,baz=97,slow=38
BRVK Borovoye 50.80 318 *ce*P P 07 32 33.2 -0.4
BRVK pmax pmax
comp=Z,17nm,1.2s
BRVK Borovoye 50.80 318 *e*P P 07 32 33.0 -0.7
comp=Z,28nm,1.3s
KBL Kabul 52.18 294 *e*P P 07 32 44.7 +0.1
KBL pmax pmax
comp=Z,41nm,1.3s
KBL Kabul 52.18 294 *e*P P 07 32 44.6 +0.1
comp=Z,41nm,1.3s
GAMB Gambell 52.23 29 *e*P P 07 32 44.1 0.0
comp=Z,12nm,1.1s
TNA Tin City 54.26 27 *e*P P 07 33 00.6 +1.5
comp=Z,24nm,1.2s
SVE Sverdlovsk 56.59 322⇓ *e*P P 07 33 16.5 +0.5
SVE *e* 07 35 25.4
SVE *e*S S 07 41 03.6 -3.8
SVE pmax pmax
comp=Z,34nm,1.3s
SVE MLR MLR
comp=Z,1μm,15.0s
ABKAR Akbulak array 57.24 313 *e*P P 07 33 20.2 -0.5
ARU Arti 57.74 321 *d*P P 07 33 24.4 +0.3
ARU S S 07 41 24.3 +1.8
ARU SS SS 07 45 14.2 +1.6
ARU pmax pmax
comp=Z,25nm,1.2s
ARU MLR MLR
comp=Z,785nm,15.0s
SOKR Solikamsk 58.64 325⇑ *i*P P 07 33 33.1 +2.7
SOKR S S 07 41 41.0 +6.9
SOKR pmax pmax
comp=Z,20nm,1.1s
SOKR MLR MLR
comp=Z,1μm,16.0s
STKA Stephens Creek 59.59 169 P P 07 33 37.4 +0.1
STKA Stephens Creek 59.59 169 P P 07 33 37.4 +0.1
comp=Z,5.1nm,0.9s,baz=314,slow=9.6,SNR=8.1
DZM Mont Dzumac 60.23 141 P P 07 33 42.6 +0.7
DZM Mont Dzumac 60.23 141 P P 07 33 42.6 +0.7
comp=Z,12nm,0.9s,baz=339,slow=21,SNR=6.2
ARMA Armidale 60.74 159 *e*P P 07 33 45.8 +0.5
NWAO Narrogin (SRO) 60.81 192 P P 07 33 45.9 +0.3
NWAO Narrogin (SRO) 60.81 192 P P 07 33 45.9 +0.3
comp=Z,15nm,0.9s,baz=306,slow=2.7,SNR=4.8
PPLA Purkeypile 60.84 31 *e*P P 07 33 46.9 +1.2

SPU Mount Spurr 61.00 33 *e*P P 07 33 47.2 +0.5
MCK McKinley 62.25 30 *e*P P 07 33 55.3 +0.2
MCK pmax pmax
comp=Z,18nm,1.0s
MCK McKinley 62.25 30 *e*P P 07 33 55.2 +0.2
comp=Z,18nm,1.0s
COLA College 62.62 28 *e*P P 07 33 58.0 +0.6
COLA pmax pmax
comp=Z,8.0nm,0.8s
COLA College 62.62 28 *e*P P 07 33 58.0 +0.6
comp=Z,8.3nm,0.8s
ILAR Eielson Array 63.04 29 P P 07 33 59.1 -1.2
ILAR Eielson Array 63.04 29 P P 07 33 59.1 -1.2
comp=Z,1.4nm,0.8s,baz=271,slow=6.0,SNR=14
ILAR LR LR 08 02 42.4
comp=Z,138nm,19.1s,baz=313,slow=37
PAX Paxson 63.89 30 *e*P P 07 34 06.4 +0.4
PAX pmax pmax
comp=Z,54nm,2.2s
PAX Paxson 63.89 30 *e*P P 07 34 06.4 +0.4
comp=Z,54nm,2.2s
DIV Divide 64.03 32 *e*P P 07 34 07.6 +0.6
DOT Dot Lake 64.42 30 *e*P P 07 34 09.3 -0.1
BMRM Bremner River 64.62 33 *e*P P 07 34 11.4 +0.6
MENT Mentasta 64.69 30 *e*P P 07 34 11.3 +0.2
EGAK Eagle 65.46 28 *e*P P 07 34 15.8 -0.3
comp=Z,4.7nm,0.8s
MAK Makhachkala 66.87 308 *e*P P 07 34 24.9 -0.6
MAK *e*S S 07 43 19.0 +1.1
MAK *e* 07 44 24.2
MAK pmax pmax
comp=Z,26nm,0.2s
INK Inuvik 67.58 24 P P 07 34 29.6 0.0
INK Inuvik 67.58 24 P P 07 34 29.6 0.0
comp=Z,6.5nm,0.9s,baz=294,slow=6.8,SNR=27
VRHR Novokhopersk 68.47 317 *e*P P 07 34 34.0 -1.5
VRHR pmax pmax
comp=N,8.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s
VRHR MLR MLR
comp=N,190nm,17.0s
VRHR MLR MLR
comp=E,2μm,17.0s
VRHR MLR MLR
comp=Z,730nm,17.0s
KEV Kevo 69.28 339 *e*P P 07 34 40.6 +0.4
KEV Kevo 69.28 339 *ep* P 07 34 40.6 +0.4
comp=Z,0.4nm,0.3s
MOS Moscow 69.39 323 *e*P P 07 34 39.5 -1.6
MOS *e* 07 34 56.9
MOS *e* 07 37 19.5
ZEI Tsey 69.46 308 *e*P P 07 34 40.9 -1.2
ZEI pmax pmax
comp=Z,18nm,0.9s
GNI Garni 69.68 305 LR LR 08 06 47.7
comp=Z,179nm,18.6s,baz=332,slow=37
ARCES ARCESS Array B 69.85 339 P P 07 34 44.5 +0.7
ARCES ARCESS Array B 69.85 339 P P 07 34 44.5 +0.7
comp=Z,4.0nm,1.0s,baz=99,slow=7.9,SNR=5.4
ARCES LR LR 08 09 33.6
comp=Z,544nm,18.5s,baz=48,slow=40
KBZ Khabaz 69.85 310 P P 07 34 44.8 +0.6
KBZ pmax pmax
comp=Z,21nm,0.9s
KBZ MLR MLR
comp=Z,696nm,18.1s
KBZ Khabaz 69.85 310 P P 07 34 44.8 +0.6
KBZ Khabaz 69.85 310 P P 07 34 44.8 +0.6
comp=Z,21nm,0.9s,baz=160,slow=2.7,SNR=17
KBZ LR LR 08 08 06.5
comp=Z,696nm,18.1s,baz=259,slow=38
VSR Storozhevoye 69.91 318 *e*P P 07 34 43.6 -0.8
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,4.0nm,0.5s
VSR pmax pmax
comp=Z,8.0nm,0.5s
VSR MLR MLR
comp=N,310nm,14.0s
VSR MLR MLR
comp=E,560nm,14.0s
VSR MLR MLR
comp=Z,900nm,14.0s
VORD Divnogorie 69.91 318 *e*P P 07 34 43.6 -0.8
VORD pmax pmax
comp=N,10.0nm,0.4s
VORD pmax pmax
comp=E,6.0nm,0.4s
VORD pmax pmax
comp=Z,5.0nm,0.4s
VORD MLR MLR
comp=Z,920nm,16.0s
VORD MLR MLR
comp=N,180nm,14.0s
VORD MLR MLR
comp=E,610nm,16.0s
KIV Kislovodsk 69.93 310 *e*P P 07 34 45.4 +0.6
KIV *e* 07 35 07.4
KIV *e*S S 07 43 55.0 +0.4
KIV *e*SS SS 07 48 25.5 +2.3
KIV pmax pmax
comp=Z,43nm,1.1s
KIV pmax pmax
comp=Z,38nm,3.4s
KIV MLR MLR
comp=Z,496nm,19.0s
JOF Joensuu 70.11 331 *e*P P 07 34 47.5 +2.1
JOF pmax pmax
comp=Z,5.0nm,0.6s
JOF Joensuu 70.11 331 *ep* P 07 34 47.5 +2.1
comp=Z,4.8nm,0.6s
OBN Obninsk 70.16 322⇓ *e*P P 07 34 46.1 +0.3
OBN *e* 07 34 55.2
OBN *e* 07 35 03.8
OBN *e*S S 07 44 03.3 +6.7
OBN pmax pmax
comp=Z,11nm,1.2s
OBN MLR MLR
comp=Z,1μm,14.0s
MIB Mutribah 71.14 294 *e*P P 07 34 51.8 -0.5
MIB AMb AMB 07 34 54.4
comp=Z,25nm,1.1s
NAY Al-Naaiem 71.42 294 *e*P P 07 34 53.2 -0.9
NAY AMb AMB 07 34 58.0
comp=Z,17nm,2.3s
SOC Sochi 72.08 310 *e*P P 07 34 55.1 -2.6
SOC *e**SP **sP** 07 35 00.2 -3.6
SOC *e*S S 07 44 18.8 -0.6
SOC *e* 07 45 07.1
SOC MLR MLR
comp=Z,571nm,16.0s
DLBC Dease Lake 72.41 33 P P 07 35 00.8 +1.2
DLBC Dease Lake 72.41 33 P P 07 35 00.8 +1.2
comp=Z,1.6nm,0.9s,baz=227,slow=4.3,SNR=4.0
KAF Kangasniemi 72.56 331 *e*P P 07 35 02.7 +2.4
KAF pmax pmax
comp=Z,5.0nm,0.8s
KAF Kangasniemi 72.56 331 *ep* P 07 35 02.7 +2.4
comp=Z,4.7nm,0.8s
FINES FINESS Array B 72.94 331 P P 07 35 02.3 -0.2
FINES FINESS Array B 72.94 331 P P 07 35 02.3 -0.2
comp=Z,3.4nm,0.5s,baz=65,slow=6.1,SNR=12
FINES LR LR 08 10 01.6
comp=Z,695nm,20.0s,baz=73,slow=38
ANN Anapa 73.18 312 *e*P P 07 35 01.7 -2.6
ANN *e*S S 07 44 27.0 -4.9
ANN pmax pmax
comp=Z,34nm,0.9s
ANN MLR MLR
comp=N,1μm,20.0s
ANN MLR MLR
comp=E,1μm,20.0s
ANN MLR MLR
comp=Z,501nm,20.0s
RES Resolute Bay 74.50 11 P P 07 35 11.4 -0.1
RES Resolute Bay 74.50 11 P P 07 35 11.4 -0.1
comp=Z,5.1nm,0.8s,baz=309,slow=6.0,SNR=21
DAG Danmarks Havn 74.69 353 *i*P P 07 35 13.1 +0.6
DAG pmax pmax
comp=Z,3.0nm,0.9s
DAG Danmarks Havn 74.69 353 *i*P P 07 35 13.1 +0.6
comp=Z,4.0nm,0.9s

MALT Malatya 74.91 305 *e*P P 07 35 15.1 +0.4
MALT pmax pmax
comp=Z,14nm,1.1s
MALT Malatya 74.91 305 *e*P P 07 35 15.1 +0.4
comp=Z,14nm,1.1s
MICGM Minsk 75.05 324 *e* P 07 35 16.0 +1.0
MNK Minsk 75.07 324 *e*P P 07 35 16.0 +0.9
NACGM Naroch 75.45 324 *e*P PcP 07 35 35.0 +4.6
AKASG Malin Array Be 75.94 320 *i*P P 07 35 19.2 -0.9
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKASG Malin Array Be 75.94 320 P P 07 35 19.2 -0.9
AKASG Malin Array Be 75.94 320 P P 07 35 19.2 -0.9
comp=Z,5.1nm,0.7s,baz=56,slow=6.2,SNR=8.5
AKASG LR LR 08 11 24.3
comp=Z,746nm,18.5s,baz=60,slow=38
AK01 Malin Array Si 75.95 320 *e*P P 07 35 19.6 -0.6
KIEV Kiev 75.95 320 *e*P P 07 35 19.3 -0.9
KIEV pmax pmax
comp=Z,15nm,1.1s
KIEV Kiev 75.95 320 *e*P P 07 35 19.3 -0.9
comp=Z,15nm,1.1s
AK02 Malin Array Si 75.97 320 *e*P P 07 35 19.5 -0.8
YKW3 Yellowknife Ar 77.14 25 *e*P P 07 35 26.8 +0.1
comp=Z,0.1nm,1.0s
YKA Yellowknife Ar 77.18 25 P P 07 35 26.8 -0.1
YKA Yellowknife Ar 77.18 25 P P 07 35 26.8 -0.1
comp=Z,2.3nm,0.8s,baz=301,slow=5.4,SNR=44
BR131 Keskin Array S 77.76 308 *e*P P 07 35 30.8 -0.1
comp=Z,9.0nm,0.9s
BRTR Keskin Array B 77.76 308 P P 07 35 30.8 -0.1
BRTR Keskin Array B 77.76 308 P P 07 35 30.8 -0.1
comp=Z,3.1nm,0.8s,baz=90,slow=4.9,SNR=12
BRTR LR LR 08 11 60.0
comp=Z,234nm,21.5s,baz=177,slow=37
ASF Jabal al Asfar 78.51 300 LR LR 08 12 59.3
comp=Z,175nm,20.3s,baz=88,slow=38
NB2 NORSAR Subarra 79.29 334 P P 07 35 37.4 -1.4
comp=Z,6.0nm,0.7s,baz=52,slow=5.9
NOA NORSAR Array B 79.29 334 P P 07 35 37.8 -1.0
NOA NORSAR Array B 79.29 334 P P 07 35 37.8 -1.0
comp=Z,1.4nm,0.5s,baz=51,slow=5.6,SNR=6.3
NOA LR LR 08 15 58.2
comp=Z,422nm,18.2s,baz=90,slow=40
MMAI Mount Meron Ar 79.30 302 LR LR 08 12 31.0
comp=Z,254nm,21.0s,baz=65,slow=37
BUR08 Bucovina Ar. S 79.68 318 *e*P P 07 35 41.3 0.0
KWP Kalwaria Pacla 80.14 321 *e*P P 07 35 43.8 +0.2
KWP pmax pmax
comp=Z,57nm,0.3s
KWP Kalwaria Pacla 80.14 321 *e*P P 07 35 43.8 +0.2
comp=Z,57nm,0.3s
MLR Muntele Rosu 80.26 316 P P 07 35 45.5 +1.1
MLR Muntele Rosu 80.26 316 P P 07 35 45.5 +1.1
comp=Z,0.8nm,0.7s,baz=60,slow=11,SNR=5.6
MLR LR LR 08 15 01.9
comp=Z,194nm,19.0s,baz=54,slow=38
SUMG Summit 80.37 356 *e*P P 07 35 44.8 -0.1
SUMG pmax pmax
comp=Z,29nm,1.0s
SUMG Summit 80.37 356 *e*P P 07 35 44.8 -0.1
comp=Z,29nm,1.0s
SUMG Summit 80.37 356 *i*P P 07 35 45.2 +0.3
comp=Z,20nm,0.9s
KOLS Kolonicke sedl 80.74 320 *e*P P 07 35 47.0 +0.2
KOLS pmax pmax
comp=Z,32nm,2.4s
KOLS Kolonicke sedl 80.74 320 *e*P P 07 35 47.0 +0.2
SCO Scoresbysund 80.75 351 *e*P P 07 35 43.9 -2.5
SCO pmax pmax
comp=Z,7.0nm,1.0s
SCO Scoresbysund 80.75 351 *i*P P 07 35 43.9 -2.5
comp=Z,5.5nm,1.0s
UZH Uzhgorod 80.88 320 *e*P P 07 35 49.0 +1.5
UZH *i* 07 36 01.6
EIL Elat 81.09 299 LR LR 08 16 46.8
comp=Z,328nm,20.2s,baz=276,slow=39
CRVS Cervenica-Dubn 81.22 321 *e*P P 07 35 50.1 +0.7
CRVS pmax pmax
comp=Z,14nm,1.3s
CRVS Cervenica-Dubn 81.22 321 *e*P P 07 35 50.1 +0.7
CRVS *e* 07 45 59.9
OJC Ojcow 81.45 322 *e*P P 07 35 50.8 +0.3
OJC Ojcow 81.45 322 *e*P P 07 35 50.8 +0.3
OKC Ostrava-Krasne 82.55 323 AMS AMS 08 15 10.0
comp=Z,800nm,17.2s
VYHS Vyhne 82.91 321 *e*P P 07 35 58.9 +0.7
VYHS pmax pmax
comp=Z,16nm,1.3s
VYHS Vyhne 82.91 321 *e*P P 07 35 58.9 +0.7
MORC Moravsky Berou 82.91 323 *e*P P 07 35 58.0 -0.3
MORC pmax pmax
comp=Z,24nm,1.5s
MORC Moravsky Berou 82.91 323 *e*P P 07 35 58.0 -0.3
comp=Z,24nm,1.5s
KSP Ksiaz 82.97 324 *e*P P 07 35 59.2 +0.7
KRLC Kraliky 83.15 323 *e*P P 07 35 59.9 +0.4
DPC Dobruska-Polom 83.24 324 *e*P P 07 36 00.0 0.0
DPC MLR MLR
comp=Z,1μm,13.9s
DPC Dobruska-Polom 83.24 324 *e*P P 07 36 00.0 0.0
DPC AMS AMS 08 16 50.0
comp=Z,1μm,13.9s
VRAC Vranov 83.69 323 P P 07 36 03.1 +0.8
VRAC Vranov 83.69 323 P P 07 36 03.1 +0.8
comp=Z,2.6nm,0.4s,baz=357,slow=21,SNR=5.9
VRAC LR LR 08 16 27.6
comp=Z,765nm,18.0s,baz=239,slow=38
PVCC Panska Ves 84.05 325 AMS AMS 08 17 10.0
comp=Z,1μm,15.6s
NEW Newport 84.06 38 *e*P P 07 36 04.2 0.0
comp=Z,4.3nm,0.9s
NEW Newport 84.06 38 ⇓P P 07 36 04.4 +0.2
baz=84
BRG Berggiesshubel 84.17 325 *e*P P 07 36 13.5 +8.9
comp=Z,5.3nm,1.2s
BRG *e* 07 36 17.3
comp=Z,9.1nm,1.1s
TREC Trest 84.29 323 AMS AMS 08 16 10.0
comp=Z,1μm,17.6s
PRU Pruhonice 84.38 324 AMS AMS 08 17 10.0
comp=Z,1μm,14.6s
CLL Collm 84.39 326⇓ *i*P P 07 36 05.4 -0.3
CLL *i* 07 36 12.5
CLL *e*S S 07 46 32.0 +0.6
CLL pmax pmax
comp=Z,8.0nm,1.2s
CLL MLR MLR
comp=Z,600nm,18.8s
CLL Collm 84.39 326⇓ *i*P P 07 36 05.4 -0.3
comp=Z,8.0nm,1.2s
CLL *ep*P pP 07 36 14.0 +3.8
CLL *es*P sP 07 36 18.0 +6.2
CLL *i* 07 36 27.9
CLL *e*S S 07 46 32.0 +0.6
CLL *e*SS SS 07 52 06.0 +5.6
CLL LmH 08 13 00.0
comp=Z,600nm,18.8s
CONA Conrad Observa 84.87 322⇑ *i*PcP P 07 36 09.3 +0.9
comp=Z,17nm,1.3s
CONA Conrad Observa 84.87 322⇑ *i*P P 07 36 09.3 +0.9
comp=Z,17nm,1.3s
NKC Novy Kostel 85.32 325 AMS AMS 08 18 00.0
comp=Z,1μm,16.1s
KHC Kasperske Hory 85.40 324 *e*P P 07 36 11.0 0.0
KHC pmax pmax
comp=Z,16nm,1.4s
KHC Kasperske Hory 85.40 324 *e*P P 07 36 11.0 0.0
comp=Z,16nm,1.4s
KHC Kasperske Hory 85.40 324 *e*P P 07 36 11.2 +0.3
KHC *es*P sP 07 36 26.0 +8.9
KHC AMS AMS 08 18 10.0
comp=Z,1μm,15.2s
B13A Whitefish 85.44 37 ⇓P P 07 36 11.6 +0.4
baz=85
GERES GERESS Array B 85.50 324 P P 07 36 11.8 +0.3
GERES GERESS Array B 85.50 324 P P 07 36 11.8 +0.3
comp=Z,0.4nm,0.4s,baz=60,slow=5.3,SNR=5.3
GERES LR LR 08 17 26.3
comp=Z,980nm,18.1s,baz=57,slow=38
A14A Double T Ranch 85.64 36 ⇓P P 07 36 12.8 +0.6
baz=86,SNR=6.6
D12A Red Ives Fores 85.73 39 ⇑P P 07 36 13.1 +0.3
baz=86
C13A Hot Springs 85.79 38 ⇑P P 07 36 13.1 +0.1
baz=86

A15A	Johnson Ranch,	86.00	36	⇑P		P	07 36 14.3	+0.3
	baz=86							
SOKA	Soboth	86.06	321	⇑*i*PcP		P	07 36 14.8	+0.5
	comp=Z,16nm,1.3s							
SOKA	Soboth	86.06	321	⇑*i*P		P	07 36 14.8	+0.5
	comp=Z,16nm,1.3s							
B14A	Marquette Ranc	86.09	37	⇑P		P	07 36 15.0	+0.5
	baz=86,SNR=7.3							
C14A	Swan Lake	86.19	37	⇓P		P	07 36 15.2	+0.2
	baz=86							
SFJD	Kangerlussuaq	86.30	0	P		P	07 36 14.5	-0.4
SFJD	Kangerlussuaq	86.30	0	*i* P		P	07 36 23.0	+8.0
	comp=Z,14nm,0.8s							
SFJD	Kangerlussuaq	86.30	0	P		P	07 36 14.5	-0.4
	comp=Z,5.0nm,0.7s,baz=0.3,slow=7.8,SNR=2.6							
B15A	Bradely Ranch,	86.49	36	⇓P		P	07 36 16.6	+0.2
	baz=86							
F12A	Elk City	86.54	40	⇓P		P	07 36 17.0	+0.1
	baz=86,SNR=8.0							
SLMT	Seeley Lake	86.64	38	*e*P		P	07 36 17.3	0.0
	comp=Z,14nm,1.2s							
MSO	Missoula	86.64	38	*e*P		P	07 36 17.2	-0.1
	comp=Z,3.9nm,1.3s							
MSO	Missoula	86.64	38	⇑P		P	07 36 16.9	-0.3
	baz=86							
D14A	Greenough	86.73	38	⇓P		P	07 36 17.7	0.0
	baz=87							
E13A	Victor	86.74	39	⇓P		P	07 36 17.0	-0.7
	baz=87							
C15A	Salmond Ranch,	86.80	37	⇓P		P	07 36 18.9	+0.9
	baz=87,SNR=5.1							
G12A	Big Creek, Yel	86.87	40	⇑P		P	07 36 18.3	-0.2
	baz=87							
B16A	M & M Farms, S	86.88	36	⇓P		P	07 36 18.0	-0.3
	baz=87							
F13A	Darby	87.05	39	⇑P		P	07 36 18.7	-0.6
	baz=87							
A17A	Triple J Farms	87.07	35	⇑P		P	07 36 19.1	-0.2
	baz=87							
FFC	Flin Flon	87.22	27	*e*P		P	07 36 19.5	-0.2
FFC				pmax		pmax		
	comp=Z,22nm,1.4s							
FFC	Flin Flon	87.22	27	*e*P		P	07 36 19.5	-0.2
	comp=Z,22nm,1.4s							
FFC	Flin Flon	87.22	27	P		P	07 36 19.8	+0.1
	comp=Z,59nm,1.0s,SNR=6.8							
C16A	Fuhringer Ranc	87.24	36	⇑P		P	07 36 19.9	-0.2
	baz=87							
B17A	L&G Farms, Che	87.43	36	⇑P		P	07 36 20.8	-0.2
	baz=87,SNR=5.7							
H12A	Diamond D Ranc	87.48	40	⇑P		P	07 36 21.7	+0.3
	baz=87,SNR=8.0							
A18A	Metzger Ranch,	87.53	35	⇓P		P	07 36 21.6	+0.2
	baz=87							
F14A	Wisdom	87.57	39	⇑P		P	07 36 21.6	-0.3
	baz=87							
MFID	Camas Ranch	87.57	42	⇑P		P	07 36 22.3	+0.4
	baz=87							
E15A	Deer Lodge	87.60	38	⇓P		P	07 36 21.6	-0.4
	baz=87							
I12A	Atlanta	87.76	41	⇑P		P	07 36 22.8	-0.1
	baz=88							
H13A	Challis	87.82	40	⇑P		P	07 36 23.5	+0.4
	baz=88,SNR=5.7							
D16A	Dana Ranch, Ca	87.82	37	⇓P		P	07 36 23.0	0.0
	baz=88							
C17A	Wharram Farm,	87.86	36	⇓P		P	07 36 22.8	-0.3
	baz=88							
B18A	Beardsley Farm	87.90	35	⇑P		P	07 36 23.0	-0.2
	baz=88							
F15A	Butte	88.04	38	⇓P		P	07 36 23.9	-0.2
	baz=88							
E16A	East Helena	88.06	37	⇑P		P	07 36 24.4	+0.2
	baz=88							
LRM	Limekiln Ridge	88.08	38	*e*P		P	07 36 25.0	+0.7
	comp=Z,114nm,1.4s							
A19A	Klindworth Far	88.08	34	⇓P		P	07 36 24.6	+0.5
	baz=88							
EGMT	Eagleton	88.14	35	*e*P		P	07 36 25.0	+0.6
	comp=Z,16nm,1.1s							
EGMT	Eagleton	88.14	35	⇑P		P	07 36 25.1	+0.6
	baz=88							
D17A	Six Diamond Ra	88.21	37	⇓P		P	07 36 25.1	+0.3
	baz=88							
DLMT	Dillon	88.28	39	*e*P		P	07 36 25.9	+0.7
	comp=Z,15nm,1.1s							
B19A	Brinkman Farms	88.28	35	⇓P		P	07 36 25.2	+0.2
	baz=88							
I13A	Wildhorse Cree	88.28	41	⇑P		P	07 36 25.7	+0.3
	baz=88,SNR=6.8							
H14A	Leadore	88.29	40	⇓P		P	07 36 25.3	-0.1
	baz=88							
HLID	Hailey	88.32	41	⇓P		P	07 36 25.8	+0.3
	baz=88							
G15A	Dillon	88.46	39	⇑P		P	07 36 26.6	+0.5
	baz=88,SNR=9.4							
A20A	Cobblestone Ra	88.52	34	⇓P		P	07 36 25.9	-0.2
	baz=88							
E17A	Martinsdale	88.55	37	⇓P		P	07 36 27.1	+0.6
	baz=88							
F16A	Kennard Place,	88.55	38	⇑P		P	07 36 27.1	+0.6
	baz=88							
J13A	Cove Ranch, Pi	88.56	41	⇑P		P	07 36 27.4	+0.8
	baz=88							
BOZ	Bozeman (W)	88.64	38	⇓P		P	07 36 27.7	+0.8
	baz=88							
I14A	Mackay	88.66	40	⇓P		P	07 36 28.0	+0.9
	baz=88							
C19A	Slack Wire Ran	88.69	35	⇑P		P	07 36 27.7	+0.6
	baz=88							
H15A	Lima	88.70	39	⇑P		P	07 36 27.5	+0.3
	baz=88							
B20A	Solberg Farm,	88.76	34	⇑P		P	07 36 27.4	+0.2
	baz=89							
DAVOX	Davos/Dischmat	88.80	323	P		P	07 36 32.1	+4.4
DAVOX	Davos/Dischmat	88.80	323	P		P	07 36 32.1	+4.4
	comp=Z,5.4nm,0.7s,baz=35,slow=5.3,SNR=6.8							
NVAR	Mina Array Bea	88.87	47	P		P	07 36 30.4	+2.2
NVAR	Mina Array Bea	88.87	47	P		P	07 36 30.4	+2.2
	comp=Z,0.5nm,0.4s,baz=276,slow=6.6,SNR=3.5							
J14A	Carey	88.99	41	⇑P		P	07 36 29.2	+0.6
	baz=89							
E18A	Harlowton	88.99	37	⇓P		P	07 36 29.2	+0.7
	baz=89							
F17A	Fitzpatrick Pl	89.01	37	⇑P		P	07 36 29.4	+0.8
	baz=89							
CDF	Champ du Feu	89.09	326	*e*P		P	07 36 29.8	+0.9
	comp=Z,15nm,1.0s							
CDF	Champ du Feu	89.09	326	*e*P		P	07 36 29.8	+0.9
CDF				pmax		pmax		
	comp=Z,15nm,1.0s							
CDF	Champ du Feu	89.09	326	*e*P		P	07 36 29.8	+0.9
	comp=Z,15nm,1.0s							
GIVF	Givet	89.14	328	*e*P		P	07 36 30.1	+1.1
GIVF	Givet	89.14	328	*e*P		P	07 36 30.1	+1.1
GIVF	Givet	89.14	328	*e*P		P	07 36 30.1	+1.1
D19A	Cripps Ranch,	89.15	36	⇑P		P	07 36 29.7	+0.5
	baz=89							
C20A	Veseth Ranch,	89.24	35	⇑P		P	07 36 30.4	+0.8
	baz=89							
B21A	Ellsworth Farm	89.27	34	⇓P		P	07 36 30.6	+0.9
	baz=89							
TUE	Stuetta	89.28	323	*e*P		P	07 36 29.5	-0.5
	comp=Z,13nm,1.0s							
A22A	Carney Farms,	89.44	33	⇓P		P	07 36 30.2	-0.2
	baz=89							
H16A	Russell Place,	89.44	39	⇓P		P	07 36 31.5	+0.7
	baz=89							
BAIF	Baives	89.46	328	*e*P		P	07 36 31.4	+1.0
BAIF	Baives	89.46	328	*e*P		P	07 36 31.4	+1.0
BAIF	Baives	89.46	328	*e*P		P	07 36 31.4	+1.0
F18A	Big Timber	89.52	37	⇓P		P	07 36 32.0	+1.0
	baz=89							
D20A	Manuel Ranch,	89.58	35	⇓P		P	07 36 31.7	+0.5
	baz=89							
E19A	Rath Farm, Rou	89.65	36	⇓P		P	07 36 32.3	+0.7
	baz=90							
K14A	Jones Ranch, D	89.66	41	⇑P		P	07 36 32.4	+0.7
	baz=90							
HINF	Hinteralfeld	89.70	326	*e*P		P	07 36 32.8	+1.1
HINF	Hinteralfeld	89.70	326	*e*P		P	07 36 32.8	+1.1
HINF	Hinteralfeld	89.70	326	*e*P		P	07 36 32.8	+1.1
PPT	Papeete	89.70	110	LR		LR	08 15 07.3	
	comp=Z,154nm,18.1s,baz=339,slow=34							
PPT2	Papeete2	89.71	110	*e*LR		LR	08 05 04.4	
	comp=Z,517nm,32.8s							
PAGF	Fort de Pagny	89.76	327	*e*P		P	07 36 32.8	+0.9
PAGF	Fort de Pagny	89.76	327	*e*P		P	07 36 32.8	+0.9
YFT	Old Faithful	89.82	39	P		P	07 36 33.9	+1.2
F19A	Roth Farm, Mol	89.96	37	⇑P		P	07 36 33.5	+0.4
	baz=90							
E20A	Meyer Farm, Mu	89.97	36	⇓P		P	07 36 33.9	+0.9
	baz=90							
LKWY	Lake	89.99	38	*e*P		P	07 36 34.4	+1.0
LKWY				pmax		pmax		
	comp=Z,13nm,1.3s							
LKWY	Lake	89.99	38	*e*P		P	07 36 34.4	+1.0
	comp=Z,13nm,1.3s							
H17A	Grant Village	90.00	39	⇑P		P	07 36 35.1	+1.6
	baz=90							
D21A	La Casta Ranch	90.19	35	⇓P		P	07 36 34.6	+0.6
	baz=90							
B23A	Brockton	90.24	33	⇓P		P	07 36 34.6	+0.4
	baz=90							
RLMT	Red Lodge	90.26	37	⇑P		P	07 36 35.6	+1.0
	baz=90							
H18A	Shoshone NF, C	90.33	38	⇓P		P	07 36 35.8	+0.9
	baz=90							
ARVC	Arvin	90.36	50	⇓P		P	07 36 36.4	+1.4
	baz=90							
J17A	Brown Place, J	90.58	39	⇓P		P	07 36 37.3	+1.2
	baz=90							
DGMT	Dagmar	90.62	33	⇑P		P	07 36 36.7	+0.7
	baz=90							
R11A	Troy Canyon, C	90.67	46	⇑P		P	07 36 37.1	+0.5
	baz=90							
H19A	Powell	90.70	38	⇓P		P	07 36 37.6	+1.0
	baz=90							
G20A	Bridger	90.76	37	⇓P		P	07 36 37.3	+0.5
	baz=91							
L16A	Fish Haven	91.00	41	⇑P		P	07 36 37.8	-0.3
	baz=91							
J18A	Kendall Valley	91.06	39	⇑P		P	07 36 40.7	+2.3
	baz=91							
HWUT	Harare Ranch	91.18	41	*e*P		P	07 36 39.6	+0.7
	comp=Z,21nm,1.3s							
LPL	La Plagne	91.29	324	*e*P		P	07 36 40.4	+1.0
LPL	La Plagne	91.29	324	*e*P		P	07 36 40.4	+1.0
LPL	La Plagne	91.29	324	*e*P		P	07 36 40.4	+1.0
LPG	La Plagne	91.29	324	*e*P		P	07 36 40.7	+1.2
	comp=Z,20nm,1.1s							
LPG	La Plagne	91.29	324	*e*P		P	07 36 40.7	+1.2
LPG				pmax		pmax		
	comp=Z,21nm,1.1s							
LPG	La Plagne	91.29	324	*e*P		P	07 36 40.7	+1.2
	comp=Z,20nm,1.1s							
LOR	Lormes	91.56	327	*e*P		P	07 36 41.0	+0.7
LOR	Lormes	91.56	327	*e*P		P	07 36 41.0	+0.7
J19A	Crowheart	91.57	39	⇑P		P	07 36 42.4	+1.7
	baz=91							
PDAR	Pinedale Array	91.61	39	P		P	07 36 41.2	+0.3
PDAR	Pinedale Array	91.61	39	P		P	07 36 41.2	+0.3
	comp=Z,1.8nm,0.9s,baz=304,slow=2.1,SNR=11							
MBDF	Montbardon	91.79	323	*e*P		P	07 36 41.1	-0.5
MBDF	Montbardon	91.79	323	*e*P		P	07 36 41.1	-0.5
MBDF	Montbardon	91.79	323	*e*P		P	07 36 41.1	-0.5
SSF	Saint Saulge	91.88	327	*e*P		P	07 36 42.6	+0.8
SSF	Saint Saulge	91.88	327	*e*P		P	07 36 42.6	+0.8
SSF	Saint Saulge	91.88	327	*e*P		P	07 36 42.6	+0.8
F23A	Volborg	91.91	35	⇓P		P	07 36 41.9	-0.2
	baz=92							
AVF	Avril sur Loir	92.14	326	*e*P		P	07 36 43.9	+0.9
AVF	Avril sur Loir	92.14	326	*e*P		P	07 36 43.9	+0.9
AVF	Avril sur Loir	92.14	326	*e*P		P	07 36 43.9	+0.9
L19A	Farson	92.15	40	⇓P		P	07 36 43.8	+0.3
	baz=92							
TBI	Tubuai	92.52	115	*e*LR		LR	08 06 23.3	
	comp=Z,273nm,32.0s							
J22A	Midwest	92.89	37	⇓P		P	07 36 49.1	+2.3
	baz=93							
P17A	Butcher Ranch,	93.00	43	⇑P		P	07 36 48.4	+1.1
	baz=93							
ULM	Lac du Bonnet	93.04	27	P		P	07 36 46.9	-0.1
ULM	Lac du Bonnet	93.04	27	P		P	07 36 46.9	-0.1
	comp=Z,3.0nm,0.6s,baz=316,slow=5.3,SNR=4.8							
ULM				LR		LR	08 22 04.3	
	comp=Z,128nm,18.1s,baz=342,slow=38							
Q16A	Castle Valley	93.08	43	⇑P		P	07 36 49.5	+1.7
	baz=93							
KEST	Kesra	96.14	315	LR		LR	08 24 49.0	
	comp=Z,129nm,18.5s,baz=329,slow=38							
SCHQ	Schefferville	97.24	10	LR		LR	08 23 53.6	
	comp=Z,359nm,18.1s,baz=354,slow=37							
TORD	Torodi Ar. Bea	115.84	302	PKP		PKPdf	07 42 15.5	-1.4
TORD	Torodi Ar. Bea	115.84	302	PKP		PKPdf	07 42 15.5	-1.4
	comp=Z,0.5nm,0.9s,baz=49,slow=2.6,SNR=2.6							
PLCA	Paso Flores	158.23	134	PKPab		PKPab	07 44 05.8	+1.0
PLCA	Paso Flores	158.23	134	PKPab		PKPab	07 44 05.8	+1.0
	comp=Z,7.3nm,1.3s,baz=187,slow=1.5,SNR=4.3							
LPAZ	La Paz	160.13	61	PKPab		PKPab	07 44 12.2	-2.2
LPAZ	La Paz	160.13	61	PKPab		PKPab	07 44 12.2	-2.2
	comp=Z,1.5nm,0.7s,baz=22,slow=13,SNR=4.3							
CPUP	Villa Florida	173.47	86	PKPab		PKPab	07 45 12.7	+0.4
CPUP	Villa Florida	173.47	86	PKPab		PKPab	07 45 12.7	+0.4
	comp=Z,0.8nm,0.6s,baz=257,slow=20,SNR=3.1							

CSEM ***15*** *07:34:08.0, 42°.37N×13°.41E, h9km, MD1.7/6, After ROM*
ROM 15 07:34:08.0±0.1, 42°.37N×13°.41E, h9km, Md1.7/6, Ml1.3/5, Error ellipse: s-maj=1.6km s-min=1.2km az=155.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.02	197	Pg	Pg	07 34 10.2	+0.4
AQU				Sg	Sg	07 34 11.2	+0.2
AQU	L'Aquila	0.02	197	Pg	Pg	07 34 10.2	+0.4
AQU				Sg	Sg	07 34 11.2	+0.2
CAMP	Campotosto	0.17	0	Pg	Pg	07 34 12.4	+0.6
CAMP				Sg	Sg	07 34 15.1	+0.7
	60nm,0.5s						
CAMP	Campotosto	0.17	0	Pg	Pg	07 34 12.4	+0.6
CAMP				Sg	Sg	07 34 15.1	+0.7
	60nm,0.5s						
FIAM	Fiamignano	0.24	245	Pg	Pg	07 34 13.7	+0.7
FIAM				Sg	Sg	07 34 17.6	+1.2
	39nm,0.4s						
FIAM	Fiamignano	0.24	245	Pg	Pg	07 34 13.7	+0.7
FIAM				Sg	Sg	07 34 17.6	+1.2
	39nm,0.4s						
TERO	Teramo	0.29	30	Pg	Pg	07 34 14.4	+0.4
TERO				Sg	Sb	07 34 19.5	-1.0
	49nm,0.5s						
TERO	Teramo	0.29	30	Pg	Pg	07 34 14.4	+0.4
TERO				Sg	Sb	07 34 19.5	-1.0
	49nm,0.5s						
VCEL	Villa Celiera	0.32	85	Pg	Pg	07 34 14.5	-0.1
VCEL				Sg	Sb	07 34 20.7	-0.8
	51nm,0.5s						
VCEL	Villa Celiera	0.32	85	Pg	Pg	07 34 14.5	-0.1
VCEL				Sg	Sb	07 34 20.7	-0.8
	51nm,0.5s						
LNSS	Leonessa	0.36	311	Pg	Pg	07 34 15.6	+0.3
LNSS				Sg	Sb	07 34 21.7	-0.9
	27nm,0.4s						
LNSS	Leonessa	0.36	311	Pg	Pg	07 34 15.6	+0.3
LNSS				Sg	Sb	07 34 21.7	-0.9
	27nm,0.4s						

CSEM ***15*** *07:35:03.3, 42°.48N×13°.40E, h12km, MD1.7/3, After ROM*
ROM 15 07:35:03.3±0.1, 42°.48N×13°.40E, h12km, Md1.7/3, Ml1.9/1, Error ellipse: s-maj=1.6km s-min=1.2km az=14.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.06	10	Pg	Pg	07 35 06.1	+0.2
CAMP				Sg	Sg	07 35 08.0	+0.3
	73nm,0.6s						
CAMP	Campotosto	0.06	10	Pg	Pg	07 35 06.1	+0.2
CAMP				Sg	Sg	07 35 08.0	+0.3
	73nm,0.6s						
TERO	Teramo	0.21	47	Pg	Pg	07 35 08.1	+0.2
TERO				Sg	Sg	07 35 11.8	+0.7
TERO	Teramo	0.21	47	Pg	Pg	07 35 08.1	+0.2
TERO				Sg	Sg	07 35 11.8	+0.7
FAGN	Fagnano	0.25	147	Pg	Pg	07 35 08.7	0.0
FAGN				Sg	Sg	07 35 13.3	+1.0
FAGN	Fagnano	0.25	147	Pg	Pg	07 35 08.7	0.0
FAGN				Sg	Sg	07 35 13.3	+1.0
LNSS	Leonessa	0.29	295	Pg	Pg	07 35 09.7	+0.3
LNSS				Sg	Sg	07 35 14.5	+1.0
LNSS	Leonessa	0.29	295	Pg	Pg	07 35 09.7	+0.3
LNSS				Sg	Sg	07 35 14.5	+1.0
VCEL	Villa Celiera	0.34	104	Pg	Pg	07 35 10.8	+0.5
VCEL				Sg	Sb	07 35 16.5	-0.5
VCEL	Villa Celiera	0.34	104	Pg	Pg	07 35 10.8	+0.5
VCEL				Sg	Sb	07 35 16.5	-0.5
NRCA	Norcia	0.41	330	Pg	Pg	07 35 11.7	+0.1
NRCA				Sg	Sb	07 35 18.2	-0.8
	75nm,0.2s						
NRCA	Norcia	0.41	330	Pg	Pg	07 35 11.7	+0.1
NRCA				Sg	Sb	07 35 18.2	-0.8
	75nm,0.2s						

DDA ***15*** *07:37:22.8, 34°.03N×32°.16E, h10km, MD3.3*
ISK ***15*** *07:37:25.3, 34°.24N×32°.21E, h68km, ML3.7*
ISCJB ***15*** *07:37:26.6±0.2, 34°.30N±0°.01×32°.15E±0°.02, h50km±7km, mb3.6/4, Error ellipse: s-maj=3.3km s-min=2.0km az=148.4*
NIC ***15*** *07:37:26.8±0.4, 34°.34N×31°.97E, h25km, ML3.3, MW3.4*
NSSC ***15*** *07:37:26.9±2.4, 34°.44N×32°.44E, h0km±51km, ML2.8*
CSEM ***15*** *07:37:27.8±0.1, 34°.34N×32°.19E, h30km, Mw3.4, Error ellipse: s-maj=2.5km s-min=1.6km az=64.0*
HLW ***15*** *07:37:28.6, 34°.27N×32°.08E, h33km±33km, Md3.6, Ml3.0*
IDC ***15*** *07:37:28.9±1.9, 34°.33N×32°.21E, h47km±27km, mb3.5/4, mb1 3.5/11, mb1mx3.3/30, mbtmp3.4/11, ML3.5/7, Error ellipse: s-maj=22.7km s-min=16.0km az=43.0*
ISC 15 07:37:27.3±1.1, 34°.33N±0°.02×32°.19E±0°.02, h31km±10km, n163, σ1°13/218, mb3.6/4, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	Paphos	0.57	13	P	Pb	07 37 38.3	-0.6
PPCY	Paphos	0.57	13	P	Pb	07 37 38.3	-0.6
AKMC	Akamas	0.70	9	P	Pb	07 37 40.2	-1.0
AKMC	Akamas	0.70	9	P	Pb	07 37 40.2	-1.0
SZAC	Souni-Zanaja	0.71	53	P	Pb	07 37 41.1	-0.1
SZAC	Souni-Zanaja	0.71	53	P	Pb	07 37 41.1	-0.1
ALFC	Alevga	0.89	22	P	Pn	07 37 43.0	-0.8
	51nm,0.2s						
ALFC				S	Sn	07 37 55.5	-0.2
ALFC	Alevga	0.89	22	P	Pn	07 37 43.0	-0.8
	51nm,0.2s						
ALFC				S	Sn	07 37 55.5	-0.2
LEF	Lefka	0.97	36	*e*PG	Pn	07 37 44.5	-0.3
LEF				*e*SG	Sb	07 37 58.9	+0.7
CSS	Prodhromos	1.13	56	P	Pn	07 37 46.9	-0.1
	17nm,0.3s						
CSS				S	Sb	07 38 03.6	+1.0
CSS	Prodhromos	1.13	56	*e*PN	Pn	07 37 47.0	-0.1
CSS				*e*SN	Sb	07 38 02.6	0.0
CSS	Prodhromos	1.13	56	P	Pn	07 37 46.9	-0.1
	17nm,0.3s						
CSS				Sg	Sn	07 38 02.1	+0.6
CSS				*e*Sn	Sb	07 38 02.6	0.0
CSS				S		07 38 03.6	
AKDN	Akdeniz- K¨–br	1.16	33	*e*PN	Pn	07 37 47.4	0.0
AKDN	Akdeniz- K¨–br	1.16	33	*e*Pn	Pn	07 37 47.4	0.0
MAMC	Mammari	1.19	45	P	Pb	07 37 48.7	-0.6
MAMC	Mammari	1.19	45	P	Pb	07 37 48.7	-0.6
AKIN	Ak¨–nc¨–lar- K	1.25	56	*e*PN	Pn	07 37 48.3	-0.4
AKIN				*e*SN	Sn	07 38 04.8	+0.3
LFK	Lefkose	1.45	49	*e*PN	Pn	07 37 51.8	+0.3
LFK	Lefkose	1.45	49	*e*Pn	Pn	07 37 51.8	+0.3
PHNC	Paralimni	1.66	66	P	Pn	07 37 55.3	+1.0
PHNC				S	Sb	07 38 17.4	-0.3
PHNC	Paralimni	1.66	66	P	Pn	07 37 55.3	+1.0
PHNC				S	Sb	07 38 17.4	-0.3
GAZI	Gazipasa	1.90	3	*i* P	Pn	07 37 56.9	-0.8
GAZI				*i* S	Sn	07 38 18.4	-2.3
GAZI	Gazipasa	1.90	3	*i* P	Pn	07 37 56.9	-0.8
GAZI				*i* S	Sn	07 38 18.4	-2.3
EREN	Erenkoy	2.02	53	*e*PN	Pn	07 37 58.9	-0.3
EREN	Erenkoy	2.02	53	*e*Pn	Pn	07 37 58.9	-0.3
ERMK	Ermenek	2.38	14	*i* P	Pn	07 38 06.9	+2.5
ERMK				*i* S	Sn	07 38 34.3	+1.6
ERMK	Ermenek	2.38	14	*i* P	Pn	07 38 06.9	+2.5
ERMK				*i* S	Sn	07 38 34.3	+1.6
HNTI	Hanita	2.78	116	Pn	Pn	07 38 10.8	+1.1
HNTI				Sn	Sn	07 38 43.0	+0.8
AKAS	Kas	2.85	313	*i* P	Pn	07 38 10.9	+0.2
AKAS				*i* S	Sn	07 38 42.7	-1.4
AKAS	Kas	2.85	313	*i* P	Pn	07 38 10.9	+0.2
OFRI	'Ofer	2.89	125	Pn	Pn	07 38 11.7	+0.5
MMA0	Mount Meron ar	2.98	115	Pn	Pn	07 38 13.2	+0.7
MMA0				Sn	Sn	07 38 47.6	+0.3
MMAI	Mount Meron Ar	2.98	115	P	Pn	07 38 13.4	+0.9
	8.9nm,0.3s,baz=329,slow=11,SNR=21						
MMAI				S	Sn	07 38 48.1	+0.8
	48nm,0.3s,baz=298,slow=26,SNR=15						
ELL	Elmali	3.05	323	*e*PN	Pn	07 38 14.1	+0.6
ELL	Elmali	3.05	323	*e*Pn	Pn	07 38 14.1	+0.6
KORT	Korkueli	3.06	331	*i* P	Pn	07 38 16.1	+2.4
KORT				*i* S	Sn	07 38 53.2	+3.9
KSDI	Kefar Szold	3.10	110	Pn	Pn	07 38 14.6	+0.5
KSDI				Sn	Sn	07 38 50.6	+0.5
HWQ	Hawqa	3.11	90	*e*P	Pn	07 38 15.2	+0.8
RCY	Rachaya	3.14	104	*e*P	Pn	07 38 15.2	+0.4
RCY	Rachaya	3.14	104	*e*P	Pn	07 38 15.2	+0.4
MERS	Mersin	3.17	36	*e*PN	Pn	07 38 16.3	+1.2
MERS	Mersin	3.17	36	*e*Pn	Pn	07 38 16.3	+1.2
SLTI	Sal'it	3.17	130	Sn	Sn	07 38 52.1	+0.4
BRBR	Barbar	3.26	105	*e*P	Pn	07 38 15.6	-0.8
BRBR				*e*S	Sn	07 38 52.2	-2.1
BRBR				AML	AML	07 38

DALT	Dalyan (Mudla)	3.79	311	ePn		Pn	07 38 24.3	+0.7
YTIR	Yattir	3.85	139	Pn		Pn	07 38 25.9	+1.4
LADK	Ladik-KONYA	3.87	2	ePN		Pn	07 38 25.7	+1.0
TURN	Turunc	3.87	312	iP		Pn	07 38 26.1	+1.4
TURN				iS		Sn	07 39 10.8	+1.6
TURN	Turunc	3.87	312	iP		Pn	07 38 26.1	+1.4
RTMI	Retamim	3.88	147	Sn		Sn	07 39 10.1	+0.6
BTCH	Batrach	3.89	63	eP		Pn	07 38 25.4	+0.4
BTCH				eS		Sn	07 39 07.4	-2.2
BTCH				AML		AML	07 39 12.2	
	comp=E,87nm,0.3s							
BTCH				AML		AML	07 39 15.1	
	comp=Z,98nm,0.3s							
BTCH	Batrach	3.89	63	eP		Pn	07 38 25.4	+0.4
	SNR=45							
BTCH				eS		Sn	07 39 07.4	-2.2
	comp=Z,98nm,0.3s,SNR=40							
DNZL	Cakiroluk	4.21	324	iP		Pn	07 38 30.7	+1.1
DNZL				iS		Sn	07 39 16.0	-1.8
DNZL	Cakiroluk	4.21	324	iP		Pn	07 38 30.7	+1.1
DNZL				iS		Sn	07 39 16.0	-1.8
YER	Yerkesik	4.24	312	ePN		Pn	07 38 30.5	+0.7
YER	Yerkesik	4.24	312	ePn		Pn	07 38 30.5	+0.7
HBRG	Burj al 'Arab	4.24	209	P		Pn	07 38 29.7	-0.1
	baz=208							
HBRG	Burj al 'Arab	4.24	209	P		Pn	07 38 29.7	-0.1
DENT	Denizli	4.27	324	ePN		Pn	07 38 30.5	+0.3
DENT	Denizli	4.27	324	ePn		Pn	07 38 30.5	+0.3
HHAG	Hagoal	4.36	181	P		Pn	07 38 32.1	+0.6
	baz=179							
HHAG				AMP			07 39 00.0	
	comp=N,50µm,0.2s,logA/T=5.3,baz=179							
HHAG				S		Sn	07 39 20.4	-1.0
	baz=179							
HHAG	Hagoal	4.36	181	P		Pn	07 38 32.1	+0.6
HHAG				S		Sn	07 39 20.4	-1.0
KOT	Kottamia	4.40	184	P		Pn	07 38 32.3	+0.3
	baz=183							
KOT				AMP			07 39 00.0	
	comp=N,30µm,0.2s,logA/T=5.1,baz=183							
KOT				S		Sn	07 39 20.8	-1.5
	baz=183							
KOT	Kottamia	4.40	184	P		Pn	07 38 32.3	+0.3
KOT				S		Sn	07 39 20.8	-1.5
SHUT	Suhut-Afyon	4.42	343	ePN		Pn	07 38 33.1	+0.8
SHUT	Suhut-Afyon	4.42	343	ePn		Pn	07 38 33.2	+0.8
DAT	Datca	4.46	300	ePN		Pn	07 38 33.1	+0.2
DAT	Datca	4.46	304	ePn		Pn	07 38 33.2	+0.2
ASF	Jabal al Asfar	4.49	117	P		Pn	07 38 34.9	+1.6
	comp=N,1.0nm,0.3s,baz=345,slow=2.5,SNR=4.6							
ASF				S		Sn	07 39 26.4	+1.8
	comp=N,1.5nm,0.3s,baz=206,slow=18,SNR=2.1							
SUZ		4.51	173	P		Pn	07 38 34.1	+0.6
	baz=171							
SUZ		4.51	173	P		Pn	07 38 34.1	+0.6
KHL	Karahalli	4.53	332	ePN		Pn	07 38 34.6	+0.7
KHL	Karahalli	4.53	332	ePn		Pn	07 38 34.6	+0.7
KHAL	Karahalli	4.58	332	iP		Pn	07 38 35.2	+0.6
KHAL				iS		Sn	07 39 25.4	-1.5
KHAL	Karahalli	4.58	332	iP		Pn	07 38 35.2	+0.6
KHAL				iS		Sn	07 39 25.4	-1.5
PRNI	Paran	4.62	148	Sn		Sn	07 39 28.1	+0.3
HNKL	Nakhl	4.64	160	P		Pn	07 38 36.5	+1.2
	baz=159							
HNKL				AMP			07 39 00.0	
	comp=E,20µm,0.6s,logA/T=4.5,baz=159							
HNKL				S		Sn	07 39 28.2	0.0
	baz=159							
HNKL	Nakhl	4.64	160	P		Pn	07 38 36.5	+1.2
HNKL				S		Sn	07 39 28.2	0.0
MLSB	Milas	4.65	311	ePN		Pn	07 38 36.1	+0.6
MLSB	Milas	4.65	311	ePn		Pn	07 38 36.1	+0.6
KRMI	Paran Flat	4.71	152	Pn		Pn	07 38 37.8	+1.4
KRMI				Sn		Sn	07 39 30.5	+0.5
FYM	Al Fayyum	4.72	192	P		Pn	07 38 37.2	+0.8
	baz=192							
FYM	Al Fayyum	4.72	192	P		Pn	07 38 37.2	+0.8
HSAF	As Saff	4.73	187	P		Pn	07 38 37.1	+0.6
	baz=186							
HSAF	As Saff	4.73	187	P		Pn	07 38 37.2	+0.6
GLL	Jalalah	4.76	185	P		Pn	07 38 37.2	+0.3
	baz=184							
GLL	Jalalah	4.76	185	P		Pn	07 38 37.2	+0.3
BODT	Bodrum	4.82	306	ePN		Pn	07 38 38.3	+0.5
BODT	Bodrum	4.82	306	ePn		Pn	07 38 38.3	+0.5
AYDN	Tasoluk	4.83	315	iP		Pn	07 38 38.9	+1.0
AYDN	Tasoluk	4.83	315	iP		Pn	07 38 38.9	+1.0
AYKD	Aykdinkavak	4.85	49	iP		Pn	07 38 39.5	+1.3
AYKD				iS		Sn	07 39 33.4	+0.1
HNAT	Natroun	4.87	196	P		Pn	07 38 39.1	+0.6
	baz=196							
HNAT	Natroun	4.87	196	P		Pn	07 38 39.1	+0.6
HRFI	Mount Harif	4.91	150	Pn		Pn	07 38 40.5	+1.4
HRFI				Sn		Sn	07 39 35.4	+0.5
ZNM		4.97	173	P		Pn	07 38 40.9	+1.1
	baz=171							
ZNM		4.97	173	P		Pn	07 38 40.9	+1.1
ALT	Altintas	5.00	341	ePN		Pn	07 38 41.1	+0.7
ALT	Altintas	5.00	341	ePn		Pn	07 38 41.1	+0.7
ZAF		5.04	176	P		Pn	07 38 41.7	+0.9
	baz=175							
ZAF		5.04	176	P		Pn	07 38 41.7	+0.9
KULA	Kula-Manisa	5.06	327	ePN		Pn	07 38 41.4	+0.3
KULA	Kula-Manisa	5.06	327	ePn		Pn	07 38 41.4	+0.3
MBRI	Mt Berech	5.08	152	Pn		Pn	07 38 42.7	+1.3
MBRI				Sn		Sn	07 39 39.8	+0.8
MATC	Matruh	5.13	236	P		Pn	07 38 42.2	+0.3
	baz=236							
EIL	Elat	5.20	153	P		Pn	07 38 44.0	+1.0
	comp=E,2.1nm,0.3s,baz=4.0,slow=8.5,SNR=29							
EIL				S		Sn	07 39 43.9	+1.9
	comp=E,2.9nm,0.3s,baz=104,slow=17,SNR=4.0							
EIL	Elat	5.20	153	Pn		Pn	07 38 44.1	+1.1
EIL				Sn		Sn	07 39 42.3	+0.3
GDZ	Gediz	5.23	336	iP		Pn	07 38 44.3	+0.8
GDZ				iS		Sn	07 39 41.2	-1.5
GDZ	Gediz	5.23	336	iP		Pn	07 38 44.3	+0.8
GDZ				iS		Sn	07 39 41.2	-1.5
GCAM	G?zelcaml?	5.24	311	iP		Pn	07 38 43.6	+0.1
GCAM				iS		Sn	07 39 36.9	-6.0
GCAM	G?zelcaml?	5.24	311	iP		Pn	07 38 43.6	+0.1
HMAT	Matruh	5.37	235	P		Pn	07 38 45.4	+0.1
	baz=235							
HMAT				AMP			07 39 00.0	
	comp=E,40µm,0.1s,logA/T=5.4,baz=235							
HMAT	Matruh	5.37	235	P		Pn	07 38 45.4	+0.1
BRTR	Keskin Array B	5.51	12	P		Pn	07 38 48.8	+1.4
	comp=E,0.2nm,0.3s,baz=189,slow=16,SNR=4.1							
TVSB	Tavsanli	5.56	338	ePN		Pn	07 38 48.2	+0.2
TVSB	Tavsanli	5.56	338	ePn		Pn	07 38 48.2	+0.2
IZM	Izmir	5.69	317	ePN		Pn	07 38 49.8	+0.2
IZM	Izmir	5.69	317	ePn		Pn	07 38 49.8	+0.2
BLCB	Balcova	5.80	316	ePN		Pn	07 38 51.5	+0.3
BLCB	Balcova	5.80	316	ePn		Pn	07 38 51.5	+0.3
HDHB	Dhahab	5.96	159	P		Pn	07 38 54.7	+1.3
	baz=157							
HDHB	Dhahab	5.96	159	P		Pn	07 38 54.7	+1.3
HKAT	Jabal Katrina	5.99	165	P		Pn	07 38 55.0	+1.0
	baz=163							
HKAT	Jabal Katrina	5.99	165	P		Pn	07 38 55.0	+1.0
APE	Apeiranthos	6.07	299	ePN		Pn	07 38 55.5	+0.5
APE	Apeiranthos	6.07	299	ePn		Pn	07 38 55.5	+0.5
MALT	Malatya	6.41	50	Pn		Pn	07 39 01.0	+1.3
HFRF	Wahat Farafira	7.90	206	P		Pn	07 39 19.4	-0.7
	baz=206							
HFRF	Wahat Farafira	7.90	206	P		Pn	07 39 19.4	-0.7
AKASG	Malin Array Be	16.51	353	P		P	07 41 17.8	-1.0
	comp=E,1.2nm,0.3s,baz=174,slow=9.2,SNR=6.2							
KEST	Kesra	18.76	281	P		P	07 41 44.2	+0.3
	comp=E,0.1nm,0.3s,baz=49,slow=17,SNR=2.4							
GERES	GERESS Array B	19.96	322	P		P	07 41 56.8	-0.2
	comp=E,0.1nm,0.3s,baz=119,slow=11,SNR=3.7							
AKTO	Aktyubinsk	24.77	42	P		P	07 42 46.7	+0.5
	comp=E,1.2nm,0.6s,baz=279,slow=6.5,SNR=7.0							
FINES	FINESS Array B	27.41	354	P		P	07 43 08.6	-1.2
	comp=E,0.6nm,0.4s,baz=152,slow=8.6,SNR=3.5							
ARCES	ARCESS Array B	35.45	356	P		P	07 44 20.3	-0.2
	comp=E,4.3nm,1.1s,baz=173,slow=9.1,SNR=5.1							
YKA	Yellowknife Ar	79.88	345	P		P	07 49 32.1	-0.5
	comp=E,0.1nm,0.6s,baz=28,slow=5.6,SNR=4.7							

CSEM ***15*** *07:40:19.0±0.1, 30.°68N×49.°98E, h10km, mb4.3/39, Ms4.1,*

Error ellipse: s-maj=5.6km s-min=4.1km az=23.0
THR ***15*** *07:40:20.5±0.9, 30.°66N×50.°01E, h33km±13km, ML4.5*
MOS ***15*** *07:40:20.3±1.1, 30.°79N×50.°05E, h33km, mb4.5/37, Error ellipse: s-maj=8.6km s-min=5.5km az=123.0*
TEH ***15*** *07:40:20.6, 30.°70N×50.°07E, h6km, ML4.4*
NEIC ***15*** *07:40:21.5, 30.°74N×50.°07E, h10km, mb4.5/24, ML4.5(THR), MN4.4(TEH), After TEH.*
BJI ***15*** *07:40:22.6, 30.°90N×50.°20E, h30km, mb4.9/4*
IDC ***15*** *07:40:23.4±2.5, 30.°82N×50.°07E, h41km±23km, mb3.9/26, mb1 4.0/31, mb1mx4.0/38, mbtmp3.9/31, ML4.0/5, MS3.2/3, Ms1 3.2/3, ms1mx3.0/42, Error ellipse: s-maj=14.6km s-min=10.6km az=157.0*
OMAN ***15*** *07:40:25.7±0.1, 30.°66N×50.°50E, h107km±63km, Error ellipse: s-maj=19.6km s-min=4.8km az=231.0*

ISC 15 07:40:19.5±1.0, 30.°67N±0.°03×50.°10E±0.°03, h17km±6km, n377, σ1$36/387, mb4.3/58, 17C-17D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	1.81	323	ePg		Pb		07 40 52.3	+0.2
SHGR				AML		AML		07 41 21.3	
	comp=N,6µm,0.6s								
SHGR	Shooshtar-Gavs	1.81	323	ePg		Pg		07 40 53.0	-1.2
SHGR				eSg		Sg		07 41 18.0	+0.3
SHGR	Shooshtar-Gavs	1.81	323	ePg		Pg		07 40 53.0	-1.2
IPIR	Pirpir	2.12	18	P		Pb		07 40 57.1	-0.5
IPIR	Pirpir	2.12	18	ePn		Pn		07 40 56.5	+2.1
IPIR				eSg		Sb		07 41 25.7	+2.0
IPIR				e				07 41 28.7	
	comp=Z,33µm,0.4s								
IPIR	Pirpir	2.12	18	ePn		Pn		07 40 56.5	+2.1
IPIR	Pirpir	2.12	18	P		Pb		07 40 57.1	-0.5
IPIR				eSg		Sb		07 41 25.7	+2.0
SHI	Shiraz	2.33	116	ePn		Pn		07 41 00.3	+3.0
SHI				e				07 41 42.2	
	comp=E,65µm,0.3s								
SHI	Shiraz	2.33	116	ePn		Pn		07 41 00.3	+3.0
IGAR	Gharneh	2.39	43	ePn		Pn		07 41 00.4	+2.2
IGAR				e				07 41 36.2	
	comp=Z,11µm,0.3s								
IGAR	Gharneh	2.39	43	ePn		Pn		07 41 00.4	+2.2
MIB	Mutribah	2.54	251	eP		Pb		07 41 04.0	-0.6
MIB	Mutribah	2.54	251	eP		Pb		07 41 04.0	-0.6
KBD	Kabd	2.57	235	eP		Pb		07 41 04.7	-0.4
KBD				eS		Sb		07 41 38.1	+1.8
KBD				AML		AML		07 41 40.5	
	comp=Z,438nm,0.6s								
KBD	Kabd	2.57	235	eP		Pb		07 41 04.7	-0.4
QRN	Al-Qurain	2.70	225	eP		Pb		07 41 06.4	-0.9
QRN				AML		AML		07 41 42.9	
	comp=Z,804nm,0.6s								
RDF	Al-Radifah	2.82	232	eP		Pb		07 41 08.5	-0.9
RDF				eS		Sb		07 41 44.4	+0.8
RDF	Al-Radifah	2.82	232	eP		Pb		07 41 08.5	-0.9
NAY	Al-Naaiem	2.85	241	eP		Pb		07 41 08.8	-1.2
NAY				eS		Sb		07 41 45.0	+0.3
NAY				AML		AML		07 41 48.0	
	comp=Z,317nm,0.4s								
NAY	Al-Naaiem	2.85	241	eP		Pb		07 41 08.8	-1.2
ISRV	Sarvestan	2.92	115	eSg		Sg		07 41 52.6	-0.6
ISRV				ePn		Pn		07 41 08.6	+3.2
ISRV				e				07 42 06.7	
	comp=Z,24µm,0.4s								
IZEF	Zefreh	2.92	40	e				07 41 12.9	
	comp=Z,5µm,0.3s								
IZEF				ePn		Pn		07 41 07.5	+2.1
IKLH	Kolahrood	2.92	25	Pn		Pn		07 41 08.1	+2.6
IKLH	Kolahrood	2.92	25	e				07 41 57.9	
	comp=Z,10µm,0.2s								
IKLH				ePn		Pn		07 41 07.7	+2.2
IKLH	Kolahrood	2.92	25	Pn		Pn		07 41 08.1	+2.6
KHMZ	Khomeyn	3.06	358	ePn		Pn		07 41 09.3	+2.0
KHMZ	Khomeyn	3.06	358	ePn		Pn		07 41 09.3	+2.0
NASN	Na'in	3.13	47	ePn		Pn		07 41 10.5	+2.1
NASN	Na'in	3.13	47	ePn		Pn		07 41 10.0	+1.6
NASN	Na'in	3.13	47	ePn		Pn		07 41 10.5	+2.1
GHIR	Ghir-Karzin	3.47	133	ePn		Pn		07 41 15.3	+2.5
GHIR				AML		AML		07 42 31.8	
	comp=N,783nm,0.7s								
GHIR	Ghir-Karzin	3.47	133	ePn		Pn		07 41 15.0	+2.2
GHIR	Ghir-Karzin	3.47	133	ePn		Pn		07 41 15.3	+2.5
GHVR	GHOM	3.93	15	ePn		Pn		07 41 21.6	+2.5
GHVR	GHOM	3.93	15	ePn		Pn		07 41 21.0	+1.9
GHVR	GHOM	3.93	15	ePn		Pn		07 41 21.0	+1.9
IMEH	Mehriz	3.94	78	ePn		Pn		07 41 21.5	+2.0
IMEH				e				07 42 34.9	
	comp=Z,9µm,0.5s								
IMEH	Mehriz	3.94	78	ePn		Pn		07 41 21.5	+2.0
ICHK	Chekchek	4.00	66	Pn		Pn		07 41 22.0	+1.7
ICHK	Chekchek	4.00	66	ePn		Pn		07 41 22.2	+1.9
ICHK				e				07 42 15.1	
	comp=Z,5µm,0.3s								
ICHK	Chekchek	4.00	66	ePn		Pn		07 41 22.2	+1.9
IKOM	Komasi	4.12	329	ePn		Pn		07 41 23.3	+1.5
IKOM				e				07 42 50.9	
	comp=Z,5µm,0.4s								
IKOM	Komasi	4.12	329	ePn		Pn		07 41 23.3	+1.5
IVRN	Varamin	4.52	17	ePn		Pn		07 41 28.8	+1.5
IVRN				e				07 42 47.9	
	comp=Z,2µm,0.4s								
IVRN	Varamin	4.52	17	ePn		Pn		07 41 28.8	+1.5
IR5	Iran Long-Peri	4.54	5	ePn		Pn		07 41 28.7	+1.1
IR5	Iran Long-Peri	4.54	5	ePn		Pn		07 41 28.7	+1.1
IGHG	Ghaleghazi	4.71	322	ePn		Pn		07 41 31.2	+1.2
IGHG				e				07 43 19.5	
	comp=Z,5µm,0.4s								
IGHG	Ghaleghazi	4.71	322	ePn		Pn		07 41 31.2	+1.2
IVIS	Veis	4.72	325	ePn		Pn		07 41 30.9	+0.9
IVIS	Veis	4.72	325	ePn		Pn		07 41 30.9	+0.9
IRAZ	Razeghan	4.72	358	ePn		Pn		07 41 31.5	+1.4
IRAZ				e				07 42 33.2	
	comp=Z,2µm,0.3s								
IRAZ	Razeghan	4.72	358	ePn		Pn		07 41 31.5	+1.4
IBAF	Bafgh	4.78	78	Pn		Pn		07 41 32.4	+1.5
IBAF	Bafgh	4.78	78	ePn		Pn		07 41 32.0	+1.1
IBAF				e				07 42 58.4	
	comp=Z,3µm,0.4s								
IBAF	Bafgh	4.78	78	Pn		Pn		07 41 32.4	+1.5
IR3	Iran Long-Peri	4.85	9	eSg		Sg		07 42 51.3	-3.9
SNGE	Sanandaj	4.98	333	ePn		Pn		07 41 34.5	+0.9
SNGE	Sanandaj	4.98	333	ePn		Pn		07 41 34.5	+0.9
ILIN	Lien	4.99	329	ePn		Pn		07 41 35.3	+1.5
ILIN	Lien	4.99	329	ePn		Pn		07 41 35.3	+1.5
IDHR	Dehrash	5.09	323	ePn		Pn		07 41 35.6	+0.4
IDHR				e				07 42 35.4	
	comp=Z,5µm,0.1s								
IDHR	Dehrash	5.09	323	ePn		Pn		07 41 35.6	+0.4
IDMV	Damavand	5.15	18	Pn		Pn		07 41 37.1	+1.0
IDMV	Damavand	5.15	18	ePn		Pn		07 41 37.5	+1.4
IDMV				e				07 42 35.9	
	comp=Z,2µm,0.2s								
IDMV	Damavand	5.15	18	ePn		Pn		07 41 37.5	+1.4
THKV	Tehran--Karaj	5.27	7	ePn		Pn		07 41 39.6	+2.0
THKV	Tehran--Karaj	5.27	7	ePn		Pn		07 41 39.6	+2.0
ILAS	Lasjerd	5.27	26	ePn		Pn		07 41 39.2	+1.4
ILAS				e				07 42 41.2	
	comp=Z,1µm,0.2s								
ILAS	Lasjerd	5.27	26	ePn		Pn		07 41 39.2	+1.4
IFIR	Firoozkooh	5.43	24	ePn		Pn		07 41 41.4	+1.4
IFIR				e				07 41 47.7	
	comp=Z,2µm,0.1s								
IFIR	Firoozkooh	5.43	24	ePn		Pn		07 41 41.4	+1.4
BHD	Baghdad	5.50	300	ex		Pn		07 41 46.2	+5.5
BHD				ex		x		07 42 10.8	
BHD				ex		x		07 42 50.0	
BHD				ex		x		07 43 16.6	
BHD				ex		x		07 43 22.0	
IGZV	Ghazvin	5.70	1	ePn		Pn		07 41 44.8	+1.2
IGZV				e				07 43 29.9	
	comp=Z,933nm,0.4s								
IGZV	Ghazvin	5.70	1	ePn		Pn		07 41 44.8	+1.2
IANJ	Anjilo	5.75	33	ePn		Pn		07 41 45.6	+1.2
IANJ				e				07 42 49.5	
	comp=Z,891nm,0.3s								
IANJ	Anjilo	5.75	33	ePn		Pn		07 41 45.6	+1.2
ISHM	Shahmirzad	5.78	27	ePn		Pn		07 41 46.1	+1.4
ISHM				e				07 42 53.9	
	comp=Z,3µm,0.4s								
ISHM	Shahmirzad	5.78	27	ePn		Pn		07 41 46.1	+1.4
KRBR	Kerman	5.80	95	ePn		Pn		07 41 47.7	+2.6

KRBR	Kerman	5.80	95	ePn		Pn	07 41 47.0	+1.9
KRBR	Kerman	5.80	95	ePn		Pn	07 41 47.7	+2.6
IPRN	Peran	5.86	18	ePn		Pn	07 41 47.2	+1.5
BANOM	Banah	7.23	129	P		Pn	07 42 04.8	+0.3
BANOM				S		Sn	07 43 24.3	-2.0
BANOM	Banah	7.23	129	P		Pn	07 42 04.8	+0.3
	SNR=74							
ASUD	Al Ashush, Dub	7.60	141	P		Pn	07 42 12.2	+2.7
	SNR=30							
ASUD				S		Sn	07 43 34.2	-1.2
ASUD	Al Ashush, Dub	7.60	141	P		Pn	07 42 12.2	+2.7
	SNR=30							
IKOO	Kooshah	7.80	75	ePn		Pn	07 42 13.5	+1.0
IKOO				e			07 44 57.3	
	comp=Z,658nm,0.5s							
IKOO	Kooshah	7.80	75	ePn		Pn	07 42 13.5	+1.0
HATD	Hatta, Dubai	7.91	136	P		Pn	07 42 14.0	+0.3
	SNR=8.1							
HATD				P		Pn	07 42 14.1	+0.4
HATD				S		Sn	07 43 40.1	-2.8
HATD	Hatta, Dubai	7.91	136	P		Pn	07 42 14.9	+1.2
ASHO	Ashiyiah	7.97	137	P		Pn	07 42 15.2	+0.6
	SNR=18							
ASHO				S		Sn	07 43 41.8	-2.7
ASHO	Ashiyiah	7.97	137	P		Pn	07 42 15.3	+0.7
	SNR=22							
ARQ	Araqi	9.28	140	P		Pn	07 42 33.7	+1.1
ARQ				S		Sn	07 44 13.6	-3.2
ARQ	Araqi	9.28	140	P		Pn	07 42 33.7	+1.1
SMDO	Samad	10.38	135	P		Pn	07 42 47.9	+0.1
	SNR=38							
SMDO				S		Sn	07 44 39.7	-4.2
SMDO	Samad	10.38	135	P		Pn	07 42 47.9	+0.1
	SNR=38							
JMDO	Jabal Madar	10.94	137	P		Pn	07 42 57.7	+2.3
	SNR=12							
JMDO	Jabal Madar	10.94	137	P		Pn	07 42 57.7	+2.3
	SNR=12							
WBK	Wadi Bani Khal	11.29	133	P		Pn	07 42 59.1	-1.0
WBK				P			07 43 03.6	
	SNR=8.2							
WBK	Wadi Bani Khal	11.29	133	P		Pn	07 43 03.6	+3.5
	SNR=8.2							
ASF	Jabal al Asfar	11.38	281	P		Pn	07 43 01.9	+0.5
ASF				S		Sn	07 45 05.3	-2.9
ASF	Jabal al Asfar	11.38	281	P		Pn	07 43 01.9	+0.5
	comp=Z,2.2nm,0.3s,baz=298,slow=2.9,SNR=8.2							
ASF				S		Sn	07 45 05.3	-2.9
	comp=Z,1.2nm,0.3s,baz=166,slow=19,SNR=4.8							
ASF				LR		LR	07 48 19.0	
	comp=Z,128nm,20.6s,baz=326,slow=42							
MMAI	Mount Meron Ar	12.71	284	P		Pn	07 43 20.9	+1.4
MMAI				S		Sn	07 45 37.9	-2.9
MMAI	Mount Meron Ar	12.71	284	P		Pn	07 43 20.9	+1.4
	comp=Z,0.9nm,0.3s,baz=105,slow=17,SNR=2.6							
MMAI				S		Sn	07 45 37.9	-2.9
	comp=Z,2.3nm,0.3s,baz=97,slow=40,SNR=3.4							
MMAI	Mount Meron Ar	12.71	284	P		Pn	07 43 20.9	+1.4
MMAI				S		Sn	07 45 37.9	-2.9
EIL	Elat	13.14	269	P		Pn	07 43 26.5	+1.1
EIL				S		Sn	07 45 49.4	-1.9
EIL	Elat	13.14	269	P		Pn	07 43 26.5	+1.1
	comp=Z,0.7nm,0.3s,baz=91,slow=12,SNR=2.9							
EIL				S		Sn	07 45 49.4	-1.9
	comp=Z,0.6nm,0.3s,baz=23,slow=15,SNR=2.5							
EIL				LR		LR	07 49 13.2	
	comp=Z,126nm,19.7s,baz=281,slow=40							
EIL	Elat	13.14	269	P		Pn	07 43 26.5	+1.1
EIL				S		Sn	07 45 49.4	-1.9
KBZ	Khabaz	14.23	338	P		Pn	07 43 41.6	+1.5
KBZ	Khabaz	14.23	338	P		Pn	07 43 41.6	+1.5
KBZ	Khabaz	14.23	338	P		Pn	07 43 41.6	+1.5
	comp=Z,0.2nm,0.3s,baz=158,slow=10,SNR=3.6							
KIV	Kislovodsk	14.50	338	eP		Pn	07 43 34.4	-10
KIV				pmax		pmax		
	comp=Z,10.0nm,0.8s							
KIV				MLR		MLR		
	comp=Z,41nm,10.0s							
BR131	Keskin Array S	16.18	308	ePn		Pn	07 44 08.3	+2.1
	comp=Z,4.5nm,0.7s							
BR131	Keskin Array S	16.18	308	ePn		Pn	07 44 08.3	+2.1
	comp=Z,4.5nm,0.7s							
BRTR	Keskin Array B	16.18	308	P		Pn	07 44 06.7	+0.5
BRTR	Keskin Array B	16.18	308	P		Pn	07 44 06.7	+0.5
	comp=Z,0.3nm,0.3s,baz=127,slow=12,SNR=12							
BRTR	Keskin

comp=Z,1.1nm,0.3s,baz=124,slow=7.4,SNR=7.6
AKASG **Malin Array Be** 25.35 328 P P 07 45 44.8 -0.7
KIEV **Kiev** 25.35 328 *e*P P 07 45 43.4 -2.1
KIEV pmax pmax
comp=Z,4.0nm,0.4s
KIEV **Kiev** 25.35 328 *e*P P 07 45 43.4 -2.1
comp=Z,4.1nm,0.4s
KIEV **Kiev** 25.35 328 *e*P P 07 45 43.4 -2.1
comp=Z,4.0nm,0.4s
BUR08 **Bucovina Ar. S** 25.52 319 *e*P P 07 45 47.5 +0.3
BUR08 **Bucovina Ar. S** 25.52 319 *e*P P 07 45 47.5 +0.3
OBN **Obninsk** 26.27 342 ⇓*e*P P 07 45 53.1 -0.6
OBN *e* 07 46 01.3
OBN pmax pmax
comp=Z,5.0nm,0.6s
OBN **Obninsk** 26.27 342 *e*P P 07 45 53.1 -0.6
comp=Z,5.0nm,0.6s
ARU **Arti** 26.43 11*d* *i*P P 07 45 51.5 -3.6
ARU pmax pmax
comp=Z,9.0nm,1.7s
DRGR 26.56 315 ⇓P P 07 45 57.8 +1.2
DRGR 26.56 315 ⇓*i*P P 07 45 57.8 +1.2
DRGR 26.56 315 P P 07 45 57.8 +1.2
BRVK **Borovoye** 26.77 28 *e*P P 07 45 58.4 +0.1
BRVK pmax pmax
comp=Z,3.0nm,0.6s
BRVK **Borovoye** 26.77 28 *e*P P 07 45 58.4 +0.1
comp=Z,2.9nm,0.6s
BRVK **Borovoye** 26.77 28 *e*P P 07 45 58.4 +0.1
comp=Z,3.0nm,0.6s
BVAR **Borovoye Array** 26.79 28 P P 07 45 58.7 +0.2
BVAR 07 49 20.1
BVAR pmax pmax
comp=Z,4.0nm,0.5s
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR **Borovoye Array** 26.79 28 P P 07 45 58.7 +0.2
BVAR PcP PcP 07 49 20.1 -0.9
BVAR **Borovoye Array** 26.79 28 P P 07 45 58.7 +0.2
comp=Z,3.5nm,0.5s,baz=226,slow=7.0,SNR=23
BVAR PcP PcP 07 49 20.1 -0.9
comp=Z,0.7nm,0.6s,baz=232,slow=1.6,SNR=3.5
BVAR **Borovoye Array** 26.79 28 P P 07 45 58.7 +0.2
comp=Z,4.0nm,0.5s
BVAR **Borovoye Array** 26.79 28 PcP PcP 07 49 20.1 -0.9
comp=Z,1.0nm,0.6s
KOLS **Kolonicke sedl** 27.86 319 *e*P P 07 46 15.4 +7.2
KOLS **Kolonicke sedl** 27.86 319 *e*P P 07 46 15.4 +7.2
CRVS **Cervenica-Dubn** 28.31 318 *e*P P 07 46 16.1 +3.9
CRVS **Cervenica-Dubn** 28.31 318 *e*P P 07 46 16.1 +3.9
PKSM **Moragy** 28.88 311 ⇑P P 07 46 05.3 -12
PKSM **Moragy** 28.88 311 ⇑*i*P P 07 46 05.3 -12
KURBB **Kurchatov Arra** 29.08 39 P P 07 46 20.2 +1.2
comp=Z,0.6nm,0.6s,baz=123,slow=30,SNR=13
KURK **Kurchatov** 29.18 39 ⇑*i*P P 07 46 20.8 +1.0
KURK pmax pmax
comp=Z,11nm,2.5s
KURK **Kurchatov** 29.18 39 P P 07 46 20.2 +0.3
KURK **Kurchatov** 29.18 39 P P 07 46 20.2 +0.3
MK31 **Makanchi Array** 29.57 48 *e*P P 07 46 24.0 +0.6
MK31 **Makanchi Array** 29.57 48 *e*P P 07 46 24.0 +0.6
MK31 **Makanchi Array** 29.57 48 *e*P P 07 46 24.0 +0.6
MKAR **Makanchi Array** 29.57 48 *ce*P P 07 46 24.2 +0.8
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR **Makanchi Array** 29.57 48 P P 07 46 24.2 +0.8
MKAR **Makanchi Array** 29.57 48 P P 07 46 24.2 +0.8
comp=Z,1.0nm,0.7s,baz=237,slow=10,SNR=12
MKAR **Makanchi Array** 29.57 48 *e*P P 07 46 24.2 +0.8
comp=Z,1.0nm,0.7s
GERES **GERESS Array B** 32.94 314 P P 07 46 52.9 -0.3
GERES PcP PcP 07 49 36.6 -0.5
GERES **GERESS Array B** 32.94 314 P P 07 46 52.9 -0.3
comp=Z,0.7nm,0.5s,baz=107,slow=8.9,SNR=6.9
GERES PcP PcP 07 49 36.6 -0.5
comp=Z,0.6nm,0.6s,baz=123,slow=4.0,SNR=3.7
GERES **GERESS Array B** 32.94 314 P P 07 46 52.9 -0.3
comp=Z,1.0nm,0.5s
GERES **GERESS Array B** 32.94 314 PcP PcP 07 49 36.6 -0.5
comp=Z,1.0nm,0.6s
KHC **Kasperske Hory** 33.12 314 *e*P P 07 46 51.5 -3.1
KHC **Kasperske Hory** 33.12 314 *e*P P 07 46 51.5 -3.1
ZALV **Zalesovo Beam** 34.10 37 P P 07 47 02.6 -0.5
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV **Zalesovo Beam** 34.10 37 P P 07 47 02.6 -0.5
ZALV **Zalesovo Beam** 34.10 37 P P 07 47 02.6 -0.5
comp=Z,1.3nm,0.4s,baz=240,slow=7.9,SNR=9.5
ZALV **Zalesovo Beam** 34.10 37 P P 07 47 02.6 -0.5
comp=Z,1.0nm,0.4s
JOF **Joensuu** 34.45 345 *e*P P 07 47 04.0 -1.9
JOF pmax pmax
comp=Z,3.0nm,0.6s
JOF **Joensuu** 34.45 345 *ep* P 07 47 04.0 -1.9
comp=Z,3.3nm,0.6s
JOF **Joensuu** 34.45 345 *e*P P 07 47 04.0 -1.9
comp=Z,3.0nm,0.6s
FINES **FINESS Array B** 34.58 340 P P 07 47 05.8 -1.3
FINES **FINESS Array B** 34.58 340 P P 07 47 05.8 -1.3
comp=Z,1.2nm,0.4s,baz=139,slow=8.7,SNR=12
FINES **FINESS Array B** 34.58 340 P P 07 47 05.8 -1.3
comp=Z,1.0nm,0.4s
PGF **Pioggiola** 34.73 302 *e*P P 07 47 08.3 -0.5
PGF **Pioggiola** 34.73 302 *e*P P 07 47 08.3 -0.5
PGF **Pioggiola** 34.73 302 *e*P P 07 47 08.3 -0.5
PGF **Pioggiola** 34.73 302 *e*P P 07 47 08.3 -0.5
DAVOX **Davos/Dischmat** 34.83 309 P P 07 47 11.4 +1.7
DAVOX **Davos/Dischmat** 34.83 309 P P 07 47 11.4 +1.7
comp=Z,3.5nm,0.8s,baz=110,slow=6.8,SNR=3.5
DAVOX **Davos/Dischmat** 34.83 309 P P 07 47 11.4 +1.7
comp=Z,4.0nm,0.8s
KAF **Kangasniemi** 35.05 341 *e*P P 07 47 09.0 -2.1
KAF pmax pmax
comp=Z,2.0nm,0.7s
KAF **Kangasniemi** 35.05 341 *ep* P 07 47 09.0 -2.1
comp=Z,1.6nm,0.7s
KAF **Kangasniemi** 35.05 341 *e*P P 07 47 09.0 -2.1
comp=Z,2.0nm,0.7s
SBF **Sospel** 36.02 304 *e*P P 07 47 19.0 -0.8
comp=Z,20nm,0.8s
SBF **Sospel** 36.02 304 *e*P P 07 47 19.0 -0.8
SBF pmax pmax
comp=Z,20nm,0.8s
SBF **Sospel** 36.02 304 *e*P P 07 47 19.0 -0.8
comp=Z,20nm,0.8s
SBF **Sospel** 36.02 304 *e*P P 07 47 19.0 -0.8
comp=Z,9.8nm,0.8s
MBDF **Montbardon** 36.60 305 *e*P P 07 47 24.5 -0.4
comp=Z,11nm,0.8s
MBDF **Montbardon** 36.60 305 *e*P P 07 47 24.5 -0.4
MBDF pmax pmax
comp=Z,11nm,0.8s
MBDF **Montbardon** 36.60 305 *e*P P 07 47 24.5 -0.4
comp=Z,11nm,0.8s
MBDF **Montbardon** 36.60 305 *e*P P 07 47 24.5 -0.4
comp=Z,5.6nm,0.8s
LPG **La Plagne** 36.72 306 *e*P P 07 47 25.3 -0.8
comp=Z,12nm,0.8s
LPG **La Plagne** 36.72 306 *e*P P 07 47 25.3 -0.8
LPG pmax pmax
comp=Z,12nm,0.8s
LPG **La Plagne** 36.72 306 *e*P P 07 47 25.3 -0.8
comp=Z,12nm,0.8s
LPG **La Plagne** 36.72 306 *e*P P 07 47 25.3 -0.8
comp=Z,5.8nm,0.8s
LPL **La Plagne** 36.74 306 *e*P P 07 47 25.2 -0.9
LPL **La Plagne** 36.74 306 *e*P P 07 47 25.2 -0.9
LPL **La Plagne** 36.74 306 *e*P P 07 47 25.2 -0.9
LPL **La Plagne** 36.74 306 *e*P P 07 47 25.2 -0.9
CDF **Champ du Feu** 36.91 311 *e*P P 07 47 27.4 0.0
CDF **Champ du Feu** 36.91 311 *e*P P 07 47 27.4 0.0
CDF **Champ du Feu** 36.91 311 *e*P P 07 47 27.4 0.0
CDF **Champ du Feu** 36.91 311 *e*P P 07 47 27.4 0.0
HINF **Hinteralfeld** 37.06 310 *e*P P 07 47 28.0 -0.6
HINF **Hinteralfeld** 37.06 310 *e*P P 07 47 28.0 -0.6
HINF **Hinteralfeld** 37.06 310 *e*P P 07 47 28.0 -0.6
HINF **Hinteralfeld** 37.06 310 *e*P P 07 47 28.0 -0.6
ORIF **Oris-en-Rattie** 37.26 305 *e*P P 07 47 28.8 -1.6
comp=Z,7.3nm,0.6s
ORIF *e*R
comp=Z,111nm,20.4s
ORIF **Oris-en-Rattie** 37.26 305 *e*P P 07 47 28.8 -1.6
ORIF pmax pmax
comp=Z,7.0nm,0.6s
ORIF **Oris-en-Rattie** 37.26 305 *e*P P 07 47 28.8 -1.6
comp=Z,7.3nm,0.6s
ORIF **Oris-en-Rattie** 37.26 305 *e*P P 07 47 28.8 -1.6
comp=Z,3.7nm,0.6s
CABF **La Chapelle** 37.35 308 *e*P P 07 47 30.6 -0.6
comp=Z,18nm,1.1s
CABF **La Chapelle** 37.35 308 *e*P P 07 47 30.6 -0.6
CABF pmax pmax
comp=Z,19nm,1.1s
CABF **La Chapelle** 37.35 308 *e*P P 07 47 30.6 -0.6
comp=Z,18nm,1.1s
CABF **La Chapelle** 37.35 308 *e*P P 07 47 30.6 -0.6
comp=Z,9.2nm,1.1s
HAU **Haudompre** 37.43 310 *e*P P 07 47 30.0 -1.8
comp=Z,4.3nm,0.4s
HAU *e*R
comp=Z,106nm,18.5s
HAU **Haudompre** 37.43 310 *e*P P 07 47 30.0 -1.8
HAU pmax pmax
comp=Z,4.0nm,0.4s
HAU **Haudompre** 37.43 310 *e*P P 07 47 30.0 -1.8
comp=Z,4.3nm,0.4s
HAU **Haudompre** 37.43 310 *e*P P 07 47 30.0 -1.8
comp=Z,2.2nm,0.4s
VIVF **Saint-Julien-l** 38.10 305 *e*P P 07 47 36.9 -0.6
comp=Z,4.4nm,0.6s
VIVF **Saint-Julien-l** 38.10 305 *e*P P 07 47 36.9 -0.6
VIVF pmax pmax
comp=Z,4.0nm,0.6s
VIVF **Saint-Julien-l** 38.10 305 *e*P P 07 47 36.9 -0.6
comp=Z,4.4nm,0.6s
VIVF **Saint-Julien-l** 38.10 305 *e*P P 07 47 36.9 -0.6
comp=Z,2.2nm,0.6s
LASF **Ste Croix** 38.61 303 *e*P P 07 47 40.7 -1.1
LASF **Ste Croix** 38.61 303 *e*P P 07 47 40.7 -1.1
LASF **Ste Croix** 38.61 303 *e*P P 07 47 40.7 -1.1
SMF **Signal de Mont** 38.89 308 *e*P P 07 47 43.3 -0.8
comp=Z,16nm,0.8s
SMF **Signal de Mont** 38.89 308 *e*P P 07 47 43.3 -0.8
SMF pmax pmax
comp=Z,16nm,0.8s
SMF **Signal de Mont** 38.89 308 *e*P P 07 47 43.3 -0.8
comp=Z,16nm,0.8s
SMF **Signal de Mont** 38.89 308 *e*P P 07 47 43.3 -0.8
comp=Z,7.9nm,0.8s
LOR **Lormes** 38.96 309 *e*P P 07 47 43.4 -1.3
comp=Z,7.8nm,0.8s
LOR *e*R
comp=Z,90nm,19.0s
LOR **Lormes** 38.96 309 *e*P P 07 47 43.4 -1.3
comp=Z,7.8nm,0.8s
LOR **Lormes** 38.96 309 *e*P P 07 47 43.4 -1.3
comp=Z,3.9nm,0.8s
SSF **Saint Saulge** 39.17 308 *e*P P 07 47 45.6 -0.8
comp=Z,4.8nm,0.7s
SSF **Saint Saulge** 39.17 308 *e*P P 07 47 45.6 -0.8
SSF pmax pmax
comp=Z,5.0nm,0.7s
SSF **Saint Saulge** 39.17 308 *e*P P 07 47 45.6 -0.8
comp=Z,4.8nm,0.7s
SSF **Saint Saulge** 39.17 308 *e*P P 07 47 45.6 -0.8
comp=Z,2.4nm,0.7s
AVF **Avril sur Loir** 39.24 308 *e*P P 07 47 45.8 -1.2
AVF **Avril sur Loir** 39.24 308 *e*P P 07 47 45.8 -1.2
AVF **Avril sur Loir** 39.24 308 *e*P P 07 47 45.8 -1.2
AVF **Avril sur Loir** 39.24 308 *e*P P 07 47 45.8 -1.2
NB2 **NORSAR Subarra** 39.66 331 P P 07 47 48.4 -1.9
comp=Z,0.8nm,0.5s,baz=122,slow=8.6
NB2 **NORSAR Subarra** 39.66 331 P P 07 47 48.4 -1.9
comp=Z,0.8nm,0.5s,SNR=6.6
NOA **NORSAR Array B** 39.66 331 P P 07 47 48.7 -1.6
NOA **NORSAR Array B** 39.66 331 P P 07 47 48.7 -1.6
comp=Z,0.7nm,0.5s,baz=122,slow=8.4,SNR=6.6
NOA **NORSAR Array B** 39.66 331 P P 07 47 48.7 -1.6
comp=Z,1.0nm,0.5s
TAM **Tamanrasset** 40.37 270 *e*P P 07 47 58.0 +1.2
TAM pmax pmax
comp=Z,2.0nm,0.3s
TAM **Tamanrasset** 40.37 270 *e*P P 07 47 58.0 +1.2
comp=Z,2.2nm,0.3s
TAM **Tamanrasset** 40.37 270 *e*P P 07 47 58.0 +1.2
comp=Z,2.0nm,0.3s
KEV **Kevo** 41.26 348 *e*P P 07 48 00.0 -3.3
KEV pmax pmax
comp=Z,8.0nm,0.8s
KEV **Kevo** 41.26 348 *ep* P 07 48 00.0 -3.3
comp=Z,8.2nm,0.8s
ARCES **ARCESS Array B** 41.35 347 P P 07 48 04.7 +0.6
ARCES **ARCESS Array B** 41.35 347 P P 07 48 04.7 +0.6
comp=Z,3.2nm,0.8s,baz=154,slow=8.2,SNR=6.2
ARCES **ARCESS Array B** 41.35 347 P P 07 48 04.7 +0.6
comp=Z,3.0nm,0.8s
LDF **La Druitiere** 41.79 310 *e*P P 07 48 06.9 -1.1
LDF **La Druitiere** 41.79 310 *e*P P 07 48 06.9 -1.1
LDF **La Druitiere** 41.79 310 *e*P P 07 48 06.9 -1.1
LDF **La Druitiere** 41.79 310 *e*P P 07 48 06.9 -1.1
FLN **La Foliniere** 42.05 310 *e*P P 07 48 09.0 -1.1
comp=Z,7.7nm,0.5s
FLN **La Foliniere** 42.05 310 *e*P P 07 48 09.0 -1.1
FLN pmax pmax
comp=Z,8.0nm,0.5s
FLN **La Foliniere** 42.05 310 *e*P P 07 48 09.0 -1.1
comp=Z,7.7nm,0.5s
FLN **La Foliniere** 42.05 310 *e*P P 07 48 09.0 -1.1
comp=Z,3.8nm,0.5s
GRR **Gorron** 42.25 310 *e*P P 07 48 10.6 -1.2
comp=Z,7.0nm,0.7s
GRR **Gorron** 42.25 310 *e*P P 07 48 10.6 -1.2
GRR pmax pmax
comp=Z,7.0nm,0.7s
GRR **Gorron** 42.25 310 *e*P P 07 48 10.6 -1.2
comp=Z,7.0nm,0.7s
GRR **Gorron** 42.25 310 *e*P P 07 48 10.6 -1.2
comp=Z,3.5nm,0.7s
SJPF **Ste Jean** 42.27 302 *e*P P 07 48 11.0 -1.0
comp=Z,8.1nm,0.6s
SJPF **Ste Jean** 42.27 302 *e*P P 07 48 11.0 -1.0
SJPF pmax pmax
comp=Z,8.0nm,0.6s
SJPF **Ste Jean** 42.27 302 *e*P P 07 48 11.0 -1.0
comp=Z,8.1nm,0.6s
SJPF **Ste Jean** 42.27 302 *e*P P 07 48 11.0 -1.0
comp=Z,4.1nm,0.6s
SGMF **Saint Gilles** 43.37 309 *e*P P 07 48 19.8 -1.1
comp=Z,9.9nm,0.6s
SGMF **Saint Gilles** 43.37 309 *e*P P 07 48 19.8 -1.1
SGMF pmax pmax
comp=Z,10.0nm,0.6s
SGMF **Saint Gilles** 43.37 309 *e*P P 07 48 19.8 -1.1
comp=Z,9.9nm,0.6s
SGMF **Saint Gilles** 43.37 309 *e*P P 07 48 19.8 -1.1
comp=Z,4.9nm,0.6s
QUIF **Quistinic** 43.76 309 *e*P P 07 48 23.0 -1.0
QUIF **Quistinic** 43.76 309 *e*P P 07 48 23.0 -1.0
QUIF **Quistinic** 43.76 309 *e*P P 07 48 23.0 -1.0
QUIF **Quistinic** 43.76 309 *e*P P 07 48 23.0 -1.0
ROSF **Rostrenen** 43.85 309 *e*P P 07 48 23.7 -1.1
ROSF **Rostrenen** 43.85 309 *e*P P 07 48 23.7 -1.1
ROSF **Rostrenen** 43.85 309 *e*P P 07 48 23.7 -1.1
ROSF **Rostrenen** 43.85 309 *e*P P 07 48 23.7 -1.1
ZAK **Zakamensk** 43.91 48 *e*P P 07 48 22.7 -2.6
ZAK *e* 07 50 08.4
ZAK pmax pmax
comp=Z,2.0nm,1.7s
ESDC **Sonseca Array** 44.51 297 P P 07 48 31.7 +1.4
ESDC **Sonseca Array** 44.51 297 P P 07 48 31.7 +1.4
comp=Z,0.4nm,0.5s,baz=88,slow=7.1,SNR=4.2
ESDC **Sonseca Array** 44.51 297 P P 07 48 31.7 +1.4
CHTO **Chiang Mai** 45.59 93 *e*P P 07 48 38.8 -0.2
CHTO pmax pmax
comp=Z,5.0nm,1.0s
CHTO **Chiang Mai** 45.59 93 *e*P P 07 48 38.8 -0.2
comp=Z,5.0nm,1.0s
CHTO **Chiang Mai** 45.59 93 *e*P P 07 48 38.8 -0.2
comp=Z,5.0nm,1.0s
CMAR **Chiang Mai Arr** 45.74 94 P P 07 48 40.3 +0.1
CMAR **Chiang Mai Arr** 45.74 94 P P 07 48 40.3 +0.1
comp=Z,2.2nm,0.9s,baz=295,slow=8.0,SNR=11
CMAR **Chiang Mai Arr** 45.74 94 P P 07 48 40.3 +0.1
comp=Z,2.0nm,1.0s
SONM **Songino Array** 45.80 51 P P 07 48 40.9 +0.5
SONM **Songino Array** 45.80 51 P P 07 48 40.9 +0.5
comp=Z,0.7nm,0.4s,baz=16,slow=42,SNR=3.9
SONM **Songino Array** 45.80 51 P P 07 48 40.9 +0.5
comp=Z,1.0nm,0.4s
MDT **Midelt** 46.14 288 P P 07 48 43.7 +0.4
MDT **Midelt** 46.14 288 P P 07 48 43.7 +0.4
comp=Z,2.0nm,0.8s,baz=337,slow=3.5,SNR=3.1
MDT **Midelt** 46.14 288 P P 07 48 43.7 +0.4
TOA0 **Torodi Ar. Sit** 47.78 260 *e*P P 07 48 57.1 +0.9
TOA0 **Torodi Ar. Sit** 47.78 260 *e*P P 07 48 57.1 +0.9
TORD **Torodi Ar. Bea** 47.78 260 P P 07 48 57.2 +1.0
TORD **Torodi Ar. Bea** 47.78 260 P P 07 48 57.2 +1.0
comp=Z,7.3nm,0.9s,baz=56,slow=8.1,SNR=27
TORD **Torodi Ar. Bea** 47.78 260 P P 07 48 57.2 +1.0
HHC **Hu-ho-hao-te** 49.99 60 *e*P P 07 49 13.8 +0.8
HHC S S 07 56 18.1 -5.0
HHC pmax pmax
comp=Z,41nm,0.6s
LSZ **Lusaka** 50.32 208 P P 07 49 18.3 +2.7
LSZ **Lusaka** 50.32 208 P P 07 49 18.3 +2.7
comp=Z,0.7nm,0.3s,baz=14,slow=10,SNR=4.6
DBIC **Dimbokro** 56.63 257 *e*P P 07 50 02.9 +0.9
DBIC **Dimbokro** 56.63 257 P P 07 50 02.6 +0.7
comp=Z,4.6nm,0.8s,baz=33,slow=9.1,SNR=6.5
DBIC **Dimbokro** 56.63 257 *e*P P 07 50 02.9 +0.9
LIC **Lamto** 57.01 257 *e*P P 07 50 05.5 +0.8
comp=Z,18nm,0.8s
LIC *e*R
comp=Z,244nm,18.2s
LIC **Lamto** 57.01 257 *e*P P 07 50 05.5 +0.8
comp=Z,18nm,0.8s
LIC **Lamto** 57.01 257 *e*P P 07 50 05.5 +0.8
comp=Z,8.9nm,0.8s
KSAR **Wonju Array Be** 63.10 61 P P 07 50 46.2 0.0
KSAR **Wonju Array Be** 63.10 61 P P 07 50 46.2 0.0
KSRS **Korea Array** 63.13 61 P P 07 50 46.2 -0.2
comp=Z,3.2nm,1.1s,baz=285,slow=7.6,SNR=4.3
KSRS **Korea Array** 63.13 61 P P 07 50 46.2 -0.2
comp=Z,3.0nm,1.1s
BOSA **Boshof** 63.54 204 P P 07 50 50.3 +1.1
BOSA **Boshof** 63.54 204 P P 07 50 50.3 +1.1
comp=Z,4.2nm,0.9s,baz=56,slow=11,SNR=5.4
BOSA **Boshof** 63.54 204 P P 07 50 50.3 +1.1
comp=Z,4.0nm,0.9s
BILL **Bilibino** 70.89 21 P P 07 51 36.0 +0.8
BILL pmax pmax
comp=Z,8.0nm,1.5s
BILL **Bilibino** 70.89 21 P P 07 51 36.0 +0.8
comp=Z,8.0nm,1.5s
SCHQ **Schefferville** 79.15 328 P P 07 52 22.6 -0.6
SCHQ **Schefferville** 79.15 328 P P 07 52 22.6 -0.6
comp=Z,2.8nm,0.7s,baz=23,slow=7.2,SNR=5.8
SCHQ **Schefferville** 79.15 328 P P 07 52 22.6 -0.6
ILAR **Eielson Array** 83.94 7 P P 07 52 47.8 -0.6
ILAR **Eielson Array** 83.94 7 P P 07 52 47.8 -0.6
comp=Z,0.6nm,0.6s,baz=346,slow=6.6,SNR=12
ILAR **Eielson Array** 83.94 7 P P 07 52 47.8 -0.6
comp=Z,1.0nm,0.6s
YKA **Yellowknife Ar** 86.35 353 P P 07 53 00.0 -0.4
YKA **Yellowknife Ar** 86.35 353 P P 07 52 60.0 -0.4
comp=Z,1.1nm,0.8s,baz=8.6,slow=5.2,SNR=24
YKA **Yellowknife Ar** 86.35 353 P P 07 53 00.0 -0.4
comp=Z,1.0nm,0.8s
FITZ **Fitzroy Crossi** 87.26 113 P P 07 53 05.6 +0.1
FITZ **Fitzroy Crossi** 87.26 113 P P 07 53 05.6 +0.1
comp=Z,2.5nm,0.7s,baz=113,slow=4.9,SNR=6.5
FITZ **Fitzroy Crossi** 87.26 113 P P 07 53 05.6 +0.1
ASAR **Alice Springs** 96.74 113 P P 07 53 48.4 -1.1
ASAR **Alice Springs** 96.74 113 P P 07 53 48.4 -1.1
comp=Z,0.3nm,0.7s,baz=316,slow=3.9,SNR=3.5
ASAR **Alice Springs** 96.74 113 P P 07 53 48.4 -1.1

NIED ***15*** *07:41:00,27.00N×129.90E,h5km,Mw4.4 Best double couple: M0 5.16000×10^15 NP1:φs 190.00000°,δ 76.00000°, λ -98.00000°. NP2:φs 40.00000°,δ 16.00000°,λ -61.00000°.*
ISCJB ***15*** *07:41:36.6±0.4,27.04N±0.03×129.89E±0.03,h29km, mb3.9/17,MS3.9/1,Error ellipse: s-maj=4.7km s-min=3.4km az=36.1*
JMA ***15*** *07:41:36.2±0.1,27.00N×129.92E,h56km,M4.1*
NEIC ***15*** *07:41:39.9±0.6,26.96N×129.70E,h35km,MG4.1(JMA), Error ellipse: s-maj=13.0km s-min=8.6km az=129.0*
IDC ***15*** *07:41:40.0±3.4,27.05N×129.99E,h38km±31km,mb3.7/15, mb1 3.9/18,mb1mx3.9/29,mbtmp3.8/18,ML4.1/2,MS3.8/2, Ms1 3.8/2,ms1mx3.0/36,Error ellipse: s-maj=23.6km s-min=13.6km az=72.0*

ISC 15 07:41:39.0±0.5, 27.05N±0.04×129.83E±0.05, h29km, n70, σ1§57/79, mb3.9/17, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**1.07**	**313**	P	**Pn**	**07 41 56.4**	**-1.7**
JTK				*e*S	**Sb**	**07 42 11.7**	**-0.8**
JZK	**Kikaishima**	**1.26**	**6**	P	**Pn**	**07 41 59.0**	**-1.8**
JZK				*e*S	**Sn**	**07 42 16.5**	**-0.3**
JAMN	**Amaminishikomi**	**1.32**	**334**	P	**Pn**	**07 41 59.6**	**-1.9**
JAMN				*e*S	**Sn**	**07 42 16.2**	**-1.9**
JAM	**Amami Oshima**	**1.37**	**352**	P	**Pn**	**07 42 00.3**	**-1.9**
JAM				*e*S	**Sn**	**07 42 17.5**	**-1.8**
JOW	**Kunigami**	**1.40**	**261**	*e*Pn	**Pn**	**07 42 01.1**	**-1.6**
JOW	**Kunigami**	**1.40**	**261**	P	**Pn**	**07 42 01.3**	**-1.4**
JOW				*e*S	**Sn**	**07 42 19.2**	**-1.0**
JIH	**Iheya**	**1.66**	**270**	P	**Pn**	**07 42 05.0**	**-1.2**
JIH				*e*S	**Sn**	**07 42 26.3**	**-0.2**
JMZ	**Minamidaito 2**	**1.75**	**134**	P	Pn	07 42 03.5	-4.0
JMZ				*e*S	Sn	07 42 23.0	-5.9
JJT2	**Tamagusuku 2**	**2.07**	**244**	P	**Pn**	**07 42 10.5**	**-1.3**
JJT2				*e*S	**Sn**	**07 42 35.5**	**-1.2**
JAGN	**Aguni-jima**	**2.35**	**259**	P	**Pn**	**07 42 14.3**	**-1.4**
JAGN				*e*S	**Sn**	**07 42 41.7**	**-2.0**
JNN	**Nakanoshima**	**2.78**	**1**	P	**Pn**	**07 42 19.8**	**-1.8**
JNN				*e*S	**Sn**	**07 42 51.6**	**-2.6**
JKE	**Kume jima 2**	**2.81**	**256**	P	**Pn**	**07 42 20.3**	**-1.8**
JKE				*e*S	**Sn**	**07 42 53.7**	**-1.3**
JKC	**Kuchinoerabu**	**3.41**	**5**	P	**Pn**	**07 42 28.8**	**-1.5**
JKC				*e*S	**Sn**	**07 43 05.5**	**-4.3**
JTN	**Tanegashima 3**	**3.73**	**15**	P	**Pn**	**07 42 32.3**	**-2.4**
JTN				*e*S	**Sn**	**07 43 14.8**	**-2.8**
JNU	**Nakatsue**	**6.12**	**8**	Pn	**Pn**	**07 43 06.8**	**-0.7**
JNU				Sn	**Sn**	**07 44 15.3**	**-1.3**
JNU	**Nakatsue**	**6.12**	**8**	Pn	**Pn**	**07 43 06.8**	**-0.7**
	9.4nm,0.3s,baz=223,slow=3.5,SNR=49						
JNU				Sn	**Sn**	**07 44 15.3**	**-1.3**
	0.5nm,0.3s,baz=231,slow=6.3,SNR=2.5						
NACB	**Ninganchiao**	**7.96**	**251**	*e*Pn	Pn	07 43 29.6	-3.2
YHNB	**Yeheng**	**7.97**	**255**	*e*Pn	**Pn**	**07 43 31.6**	**-1.5**
	41nm,0.9s						
SSLB	**Suanglung**	**8.65**	**250**	*e*Pn	Pn	07 43 39.4	-3.0
	14nm,0.5s						
KSAR	**Wonju Array Be**	**10.49**	**351**	Pn	**Pn**	**07 44 08.1**	**+0.7**
KSRS	**Korea Array**	**10.49**	**352**	Pn	**Pn**	**07 44 08.1**	**+0.6**
	0.3nm,0.3s,baz=173,slow=15,SNR=5.1						
JHJ	**Hachijo jima 2**	**10.53**	**53**	Pn	**Pn**	**07 44 07.8**	**-0.2**
	39nm,0.3s,baz=239,slow=23,SNR=6.0						
MAJO	**Matsushiro**	**11.84**	**35**	*e*Pn	**Pn**	**07 44 28.3**	**+2.3**
MJAR	**Matsushiro Arr**	**11.84**	**35**	Pn	Pn	07 44 29.9	+3.9
MJAR	**Matsushiro Arr**	**11.84**	**35**	Pn	Pn	07 44 29.9	+3.9
	0.2nm,0.3s,baz=253,slow=9.4,SNR=4.2						
USRK	**Ussuriysk Arra**	**17.20**	**5**	P	**P**	**07 45 40.0**	**+1.5**
	0.3nm,0.3s,baz=182,slow=11,SNR=6.0						
GUMO	**Guam**	**19.43**	**131**	LR	LR	07 51 40.1	
	comp=Z,232nm,18.4s,baz=305,slow=31						
ASAJ	**Asahikawa**	**19.90**	**28**	P	**P**	**07 46 04.6**	**-3.6**
ASAJ	**Asahikawa**	**19.90**	**28**	P	**P**	**07 46 04.6**	**-3.6**
	0.2nm,0.3s,baz=162,slow=26,SNR=4.5						
SONM	**Songino Array**	**27.67**	**325**	P	**P**	**07 47 25.9**	**+1.4**
SONM	**Songino Array**	**27.67**	**325**	P	**P**	**07 47 25.9**	**+1.4**
	0.6nm,0.5s,baz=139,slow=8.9,SNR=5.6						
GTA	**Gaotai**	**27.83**	**304**	*e*P	**P**	**07 47 27.3**	**+1.2**
GTA				pP	**pP**	**07 47 37.0**	**+2.5**
GTA				sP	**sP**	**07 47 41.3**	**+3.2**
GTA				PcP	PnPn	07 48 04.6	-8.3
GTA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**29.67**	**260**	P	**P**	**07 47 43.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**29.67**	**260**	P	**P**	**07 47 43.0**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=65,slow=6.9,SNR=6.1						
TAPN	**Taplejung**	**37.33**	**280**	*e*P	**P**	**07 48 51.1**	**+1.7**
ODAN	**Odare**	**37.69**	**280**	*e*P	**P**	**07 48 54.0**	**+1.6**
PKI	**Pulchoki**	**39.31**	**281**	*e*P	**P**	**07 49 06.8**	**+0.8**
KKN	**Kakani**	**39.38**	**282**	*e*P	**P**	**07 49 08.1**	**+1.6**
DANN	**Dangsing**	**40.62**	**283**	*e*P	**P**	**07 49 17.7**	**+0.8**
	comp=Z,17nm,0.6s						
KOLN	**Koldanda**	**40.85**	**282**	*e*P	**P**	**07 49 18.7**	**0.0**
PYUN	**Piuthan**	**41.33**	**283**	*e*P	**P**	**07 49 23.0**	**+0.4**
	comp=Z,34nm,0.9s						
MKAR	**Makanchi Array**	**42.06**	**311**	P	**P**	**07 49 27.6**	**-0.6**
MKAR				PcP	**PcP**	**07 51 22.5**	**-0.2**

MKAR	**Makanchi Array**	**42.06**	**311**	P	**P**	**07 49 27.6**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=112,slow=8.0,SNR=7.1						
MKAR				PcP	**PcP**	**07 51 22.5**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=101,slow=2.9,SNR=2.8						
ZALV	**Zalesovo Beam**	**42.47**	**322**	P	**P**	**07 49 33.4**	**+2.1**
ZALV	**Zalesovo Beam**	**42.47**	**322**	P	**P**	**07 49 33.4**	**+2.1**
	comp=Z,0.5nm,0.3s,baz=122,slow=7.7,SNR=3.3						
FITZ	**Fitzroy Crossi**	**45.07**	**186**	P	**P**	**07 49 51.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**45.07**	**186**	P	**P**	**07 49 51.5**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=335,slow=18,SNR=4.3						
CTA	**Charters Tower**	**49.49**	**160**	P	**P**	**07 50 26.6**	**-0.4**
CTA	**Charters Tower**	**49.49**	**160**	P	**P**	**07 50 26.6**	**-0.4**
	comp=Z,3.8nm,0.5s,baz=1.6,slow=11,SNR=5.8						
ASAR	**Alice Springs**	**50.58**	**175**	P	**P**	**07 50 34.5**	**-0.7**
ASAR	**Alice Springs**	**50.58**	**175**	P	**P**	**07 50 34.5**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=6.0,slow=13,SNR=21						
BVAR	**Borovoye Array**	**50.62**	**318**	P	**P**	**07 50 36.9**	**+1.6**
BVAR	**Borovoye Array**	**50.62**	**318**	P	**P**	**07 50 36.9**	**+1.6**
	comp=Z,0.8nm,0.6s,baz=93,slow=7.8,SNR=5.8						
BVAR				LR	LR	08 11 29.4	
	comp=Z,126nm,19.8s,baz=334,slow=35						
STKA	**Stephens Creek**	**59.67**	**168**	P	**P**	**07 51 41.3**	**+0.6**
STKA	**Stephens Creek**	**59.67**	**168**	P	**P**	**07 51 41.3**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=320,slow=20,SNR=3.3						
ILAR	**Eielson Array**	**63.04**	**29**	P	**P**	**07 52 02.0**	**-1.1**
ILAR	**Eielson Array**	**63.04**	**29**	P	**P**	**07 52 02.1**	**-1.1**
	comp=Z,0.6nm,1.0s,baz=263,slow=7.2,SNR=4.3						
KBZ	**Khabaz**	**69.74**	**309**	P	**P**	**07 52 47.5**	**+1.1**
KBZ	**Khabaz**	**69.74**	**309**	P	**P**	**07 52 47.5**	**+1.1**
	comp=Z,6.2nm,0.8s,baz=115,slow=1.7,SNR=6.1						
FINES	**FINESS Array B**	**72.85**	**331**	P	**P**	**07 53 05.5**	**+0.7**
FINES	**FINESS Array B**	**72.85**	**331**	P	**P**	**07 53 05.5**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=66,slow=6.5,SNR=4.2						
YKA	**Yellowknife Ar**	**77.18**	**25**	P	**P**	**07 53 28.8**	**-1.0**
YKA	**Yellowknife Ar**	**77.18**	**25**	P	**P**	**07 53 28.7**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=292,slow=6.6,SNR=2.5						
BRTR	**Keskin Array B**	**77.65**	**308**	P	**P**	**07 53 32.4**	**-0.7**
BRTR	**Keskin Array B**	**77.65**	**308**	P	**P**	**07 53 32.4**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=69,slow=4.2,SNR=3.5						
NB2	**NORSAR Subarra**	**79.20**	**334**	P	P	07 53 46.0	+4.9
	comp=Z,1.3nm,0.7s,baz=50,slow=5.9						
NOA	**NORSAR Array B**	**79.20**	**334**	P	P	07 53 46.0	+4.9
NOA	**NORSAR Array B**	**79.20**	**334**	P	P	07 53 46.0	+4.9
	comp=Z,0.7nm,0.6s,baz=51,slow=5.6,SNR=3.4						
MLR	**Muntele Rosu**	**80.15**	**316**	P	**P**	**07 53 45.8**	**-0.9**
MLR	**Muntele Rosu**	**80.15**	**316**	P	**P**	**07 53 45.8**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=164,slow=12,SNR=2.7						

RSPR 15 07:42:30.7, 19.29N×65.07W, h8km±16km, MD3.2/3,6C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**0.94**	**173**	⇑*eP*	Pg	07 42 46.6	-2.1
STVI	**Saint Thomas**	**0.94**	**173**	⇑*eP*	Pg	07 42 46.6	-2.1
STVI				*eS*	Sg	07 42 59.7	-1.3
CBYP	**Canovanas**	**1.26**	**217**	⇑*eP*	Pn	07 42 51.9	-2.8
CBYP	**Canovanas**	**1.26**	**217**	⇑*eP*	Pn	07 42 51.9	-2.8
CBYP				*eS*	Sb	07 43 07.6	-3.6
MTP	**Monte Pirata**	**1.27**	**201**	*eS*	Sb	07 43 08.4	-3.1
MTP	**Monte Pirata**	**1.27**	**201**	*eS*	Sb	07 43 08.4	-3.1
HUMP	**Col San Antoni**	**1.36**	**213**	⇑*eP*	Pn	07 42 52.6	-3.4
HUMP	**Col San Antoni**	**1.36**	**213**	⇑*eP*	Pn	07 42 52.6	-3.4
HUMP				*eS*	Sb	07 43 09.8	-4.2

CSEM 15 07:44:04.3, 42.58N×13.30E, h11km, After ROM
ROM 15 07:44:04.3±0.2, 42.58N×13.30E, h11km, Ml1.3/1, Error ellipse: s-maj=5.3km s-min=2.6km az=7.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.09**	**119**	Pg	Pg	07 44 07.5	+0.4
CAMP				Sg	Sg	07 44 09.5	+0.4
	30nm,0.3s						
CAMP	**Campotosto**	**0.09**	**119**	Pg	Pg	07 44 07.5	+0.4
CAMP				Sg	Sg	07 44 09.5	+0.4
	30nm,0.3s						
LNSS	**Leonessa**	**0.20**	**277**	Pg	Pg	07 44 09.2	+0.5
LNSS				Sg	Sg	07 44 12.6	+0.9
LNSS	**Leonessa**	**0.20**	**277**	Pg	Pg	07 44 09.2	+0.5
LNSS				Sg	Sg	07 44 12.6	+0.9
TERO	**Teramo**	**0.23**	**79**	Pg	Pg	07 44 09.7	+0.5
TERO				Sg	Sg	07 44 13.6	+1.1
TERO	**Teramo**	**0.23**	**79**	Pg	Pg	07 44 09.7	+0.5
TERO				Sg	Sg	07 44 13.6	+1.1
AQU	**L'Aquila**	**0.24**	**162**	Pg	Pb	07 44 10.9	+0.2
AQU				Sg	Sg	07 44 13.6	+0.9
	40nm,0.2s						
AQU	**L'Aquila**	**0.24**	**162**	Pg	Pb	07 44 10.9	+0.2
AQU				Sg	Sg	07 44 13.6	+0.9
	40nm,0.2s						
NRCA	**Norcia**	**0.29**	**332**	Pg	Pb	07 44 11.3	-0.4
NRCA				Sg	Sb	07 44 16.3	-0.3
NRCA	**Norcia**	**0.29**	**332**	Pg	Pb	07 44 11.3	-0.4
NRCA				Sg	Sb	07 44 16.3	-0.3
FIAM	**Fiamignano**	**0.34**	**204**	Pg	Pg	07 44 10.8	-0.5
FIAM				Sg	Sg	07 44 15.6	-0.3
FIAM	**Fiamignano**	**0.34**	**204**	Pg	Pg	07 44 10.8	-0.5
FIAM				Sg	Sg	07 44 15.6	-0.3

NEIC 15 07:54:01.9, 37.72N×55.90E, h14km, ML4.0(THR), MN4.1(TEH), After THR.
CSEM 15 07:54:01.4±0.2, 37.79N×55.85E, h2km, ML3.9, Error ellipse: s-maj=5.0km s-min=4.0km az=157.0
IDC 15 07:54:01.2±1.9, 37.57N×55.74E, h0km, mb3.1/4, mb1 3.7/8, mb1mx3.5/30, mbtmp3.6/8, ML3.8/4, Error ellipse: s-maj=28.4km s-min=15.6km az=6.0
THR 15 07:54:02.0±0.6, 37.72N×55.90E, h14km±7km, ML3.9
TEH 15 07:54:03.1, 37.69N×55.81E, h20km, ML4.1
NNC 15 07:54:08.4±2.7, 38.21N×56.74E, h0km, mb3.7, Error ellipse: s-maj=26.2km s-min=15.7km az=11.0
ISC 15 07:54:02.0±1.0, 37.77N±0.05×55.88E±0.03, h11km±8km, n88, σ1°46/105, mb3.2/3, 8C-3D, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRVT	**Maraveh tapeh**	**0.20**	**124**	*e*Pg	**Pg**	**07 54 06.0**	**-0.3**
MRVT				*e*Sg	**Sg**	**07 54 09.2**	**-0.1**
MRVT				AML	AML	07 54 09.7	
	comp=E,53μm,0.2s						
MRVT	**Maraveh tapeh**	**0.20**	**124**	*e*Pg	**Pg**	**07 54 05.0**	**-1.3**
MRVT				*e*Sg	**Sg**	**07 54 09.0**	**-0.3**
MRVT	**Maraveh tapeh**	**0.20**	**124**	*e*Pg	**Pg**	**07 54 06.0**	**-0.3**
MRVT				*e*Sg	**Sg**	**07 54 09.2**	**-0.1**
IMND	**Minoodasht**	**0.64**	**216**	⇑*e*Pg	**Pg**	**07 54 13.9**	**-0.4**
IMND				*e*Sg	**Sg**	**07 54 22.1**	**-0.5**
IMND	**Minoodasht**	**0.64**	**216**	⇑*e*Pg	**Pg**	**07 54 13.9**	**-0.4**
IMND				*e*Sg	**Sg**	**07 54 22.1**	**-0.5**
ISHV	**Shirvan**	**1.47**	**99**	Pn	**Pb**	**07 54 28.9**	**-0.5**
ISHV	**Shirvan**	**1.47**	**99**	*e*Pn	**Pb**	**07 54 29.3**	**-0.1**
ISHV				*e*Sg	**Sg**	**07 54 50.7**	**+1.5**
ISHV				*e*		07 54 58.0	
	comp=Z,54μm,0.3s						
ISHV	**Shirvan**	**1.47**	**99**	*e*Pn	**Pb**	**07 54 29.3**	**-0.1**
ISHV				*e*Sg	**Sg**	**07 54 50.7**	**+1.5**
SHRO	**Shahrood**	**1.78**	**177**	*e*Pg	**Pb**	**07 54 33.1**	**-1.5**
ISFR	**Sfrayin**	**1.83**	**112**	Pn	**Pb**	**07 54 35.5**	**-0.2**
ISFR	**Sfrayin**	**1.83**	**112**	*e*Pn	**Pb**	**07 54 35.3**	**-0.4**
ISFR				*e*Sg	**Sg**	**07 55 01.8**	**+0.8**
ISFR				*e*		07 55 07.7	
	comp=Z,28μm,0.3s						
ISFR	**Sfrayin**	**1.83**	**112**	*e*Pn	**Pb**	**07 54 35.3**	**-0.4**
ISFR				*e*Sg	**Sg**	**07 55 01.8**	**+0.8**
IGLO	**Ghaloghah**	**2.07**	**233**	Pn	**Pn**	**07 54 37.4**	**+0.6**
IGLO	**Ghaloghah**	**2.07**	**233**	*e*Pn	**Pn**	**07 54 37.4**	**+0.6**
IGLO				*e*		07 55 11.8	
	comp=N,65μm,0.2s						
IQHU	**Qucahn**	**2.23**	**107**	*e*Pn	**Pb**	**07 54 41.1**	**-1.2**
IQHU	**Qucahn**	**2.23**	**107**	*e*Pn	**Pb**	**07 54 41.1**	**-1.2**
IKIA	**Kiasar**	**2.35**	**229**	Pn	**Pn**	**07 54 41.3**	**+0.5**
IKIA	**Kiasar**	**2.35**	**229**	⇑*e*Pn	**Pn**	**07 54 41.2**	**+0.5**
IKIA				*e*Sg	**Sb**	**07 55 12.6**	**-1.0**
IKIA				*e*		07 55 20.7	
	comp=Z,5μm,0.2s						
IKIA	**Kiasar**	**2.35**	**229**	⇑*e*Pn	**Pn**	**07 54 41.2**	**+0.5**
IKIA				*e*Sg	**Sb**	**07 55 12.6**	**-1.0**
IAKL	**Akhelmad**	**2.58**	**116**	*e*Pn	**Pb**	**07 54 45.8**	**-2.6**
IAKL	**Akhelmad**	**2.58**	**116**	*e*Sg	**Sg**	**07 55 23.8**	**-1.0**
IAKL				*e*		07 55 33.1	
	comp=Z,4μm,0.1s						
IANJ	**Anjilo**	**2.79**	**215**	Pn	**Pn**	**07 54 47.3**	**+0.5**
IANJ	**Anjilo**	**2.79**	**215**	*e*Pn	**Pn**	**07 54 47.0**	**+0.2**
IANJ				*e*Sg	**Sb**	**07 55 26.7**	**+0.5**
IANJ				*e*		07 55 34.8	
	comp=Z,4μm,0.2s						
IANJ	**Anjilo**	**2.79**	**215**	*e*Pn	**Pn**	**07 54 47.0**	**+0.2**
IANJ				*e*Sg	**Sb**	**07 55 26.7**	**+0.5**
ISHM	**Shahmirzad**	**2.85**	**227**	Pn	**Pn**	**07 54 48.7**	**+1.0**
ISHM	**Shahmirzad**	**2.85**	**227**	*e*Pn	**Pn**	**07 54 48.6**	**+0.9**
ISHM				*e*		07 55 33.6	
	comp=Z,9μm,0.1s						
ISHM	**Shahmirzad**	**2.85**	**227**	*e*Pn	**Pn**	**07 54 48.6**	**+0.9**
IALA	**Alasht**	**2.98**	**237**	Pn	**Pn**	**07 54 49.1**	**-0.4**
IALA	**Alasht**	**2.98**	**237**	*e*Pn	**Pn**	**07 54 48.8**	**-0.7**
IALA				*e*		07 55 28.1	
	comp=Z,9μm,0.1s						
IALA	**Alasht**	**2.98**	**237**	*e*Pn	**Pn**	**07 54 48.8**	**-0.7**
IPRN	**Peran**	**3.22**	**243**	*e*Pn	**Pn**	**07 54 52.6**	**0.0**
IPRN				*e*		07 55 55.3	
	comp=Z,8μm,0.3s						
IFIR	**Firoozkooh**	**3.29**	**231**	Pn	**Pn**	**07 54 54.8**	**+1.1**
IFIR	**Firoozkooh**	**3.29**	**231**	*e*Pn	**Pn**	**07 54 54.2**	**+0.5**
IFIR				*e*		07 54 58.7	
	comp=Z,4μm,0.1s						
IFIR	**Firoozkooh**	**3.29**	**231**	*e*Pn	**Pn**	**07 54 54.2**	**+0.5**
ILAS	**Lasjerd**	**3.35**	**225**	*e*Pn	**Pn**	**07 54 54.8**	**+0.4**
ILAS				*e*		07 55 54.4	
	comp=Z,2μm,0.2s						
ILAS	**Lasjerd**	**3.35**	**225**	*e*Pn	**Pn**	**07 54 54.8**	**+0.4**
IDMV	**Damavand**	**3.79**	**236**	Pn	**Pn**	**07 55 01.2**	**+0.6**
IDMV	**Damavand**	**3.79**	**236**	*e*Pn	**Pn**	**07 55 00.8**	**+0.2**
IDMV				*e*		07 55 13.0	
	comp=Z,3μm,0.3s						
IDMV	**Damavand**	**3.79**	**236**	*e*Pn	**Pn**	**07 55 00.8**	**+0.2**
DAMV	**Damavand**	**3.80**	**237**	*e*Pn	**Pn**	**07 55 02.1**	**+1.5**
DAMV				AML	AML	07 56 04.5	
	comp=E,113nm,0.5s						
DAMV	**Damavand**	**3.80**	**237**	*e*Pn	**Pn**	**07 55 02.0**	**+1.3**
DAMV	**Damavand**	**3.80**	**237**	*e*Pn	**Pn**	**07 55 02.1**	**+1.5**
TABS	**Tabas**	**4.24**	**166**	*e*Pn	**Pn**	**07 55 07.7**	**+1.1**
TABS	**Tabas**	**4.24**	**166**	*e*Pn	**Pn**	**07 55 07.7**	**+1.1**
IVRN	**Varamin**	**4.35**	**232**	*e*	**Pg**	**07 55 22.7**	**-2.5**
	comp=Z,965nm,0.1s						
IGZV	**Ghazvin**	**4.73**	**255**	*e*Pn	**Pn**	**07 55 13.6**	**+0.1**
IGZV				*e*		07 56 12.9	
	comp=Z,1μm,0.2s						
IGZV	**Ghazvin**	**4.73**	**255**	*e*Pn	**Pn**	**07 55 13.6**	**+0.1**
DGRG	**David-gareji**	**8.90**	**298**	P	**Pn**	**07 56 11.3**	**+0.8**
DGRG	**David-gareji**	**8.90**	**298**	P	**Pn**	**07 56 11.3**	**+0.8**
BHD	**Baghdad**	**10.39**	**248**	*ex*	Pn	07 56 25.2	-5.7
BHD				*ex*	x	07 58 20.0	
KBZ	**Khabaz**	**11.50**	**305**	Pn	**Pn**	**07 56 47.2**	**+1.2**
KBZ				Sn	**Sn**	**07 58 54.0**	**-0.4**
KBZ	**Khabaz**	**11.50**	**305**	Pn	**Pn**	**07 56 47.2**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=104,slow=6.6,SNR=4.8						
KBZ				Sn	**Sn**	**07 58 54.0**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=317,slow=20,SNR=1.9						
KBZ	**Khabaz**	**11.50**	**305**	Pn	**Pn**	**07 56 47.2**	**+1.2**
KBZ				Sn	**Sn**	**07 58 54.0**	**-0.4**
AB31	**Akbulak array**	**11.85**	**13**	Pn	**Pn**	**07 56 50.8**	**0.0**
	comp=Z,0.5nm,0.3s,baz=198,slow=13,SNR=23						
AB31				⇓Sn	**Sn**	**07 58 58.0**	**-5.0**
	comp=Z,1.6nm,0.5s,baz=136,slow=38,SNR=12						
AB31	**Akbulak array**	**11.85**	**13**	Pn	**Pn**	**07 56 50.8**	**0.0**
	comp=Z,0.5nm,0.3s,SNR=23						
ABKAR	**Akbulak array**	**11.85**	**13**	*e*Pn	**Pn**	**07 56 50.8**	**0.0**
	comp=Z,1.2nm,0.3s						
ABKAR	**Akbulak array**	**11.85**	**13**	*e*Pn	**Pn**	**07 56 50.8**	**0.0**
	comp=Z,1.2nm,0.3s						
KK31	**Karatay Array**	**12.35**	**60**	⇓Pn	**Pn**	**07 56 57.1**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=251,slow=13,SNR=8.5						
KK31				⇓Sn	**Sn**	**07 59 10.2**	**-5.1**
	comp=Z,1.4nm,0.6s,baz=245,slow=22,SNR=3.8						
KK31	**Karatay Array**	**12.35**	**60**	Pn	**Pn**	**07 56 57.1**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=251,SNR=8.5						
AKTO	**Aktyubinsk**	**12.75**	**6**	⇑Pn	**Pn**	**07 57 03.8**	**+0.7**
	comp=Z,0.5nm,0.7s						
AKTO				⇑Sn	**Sn**	**07 59 22.7**	**-2.3**
	comp=Z,0.5nm,0.5s						
AKTO	**Aktyubinsk**	**12.75**	**6**	Pn	**Pn**	**07 57 03.8**	**+0.7**
AKTO				Sn	**Sn**	**07 59 22.0**	**-3.1**
AKTO	**Aktyubinsk**	**12.75**	**6**	Pn	**Pn**	**07 57 03.8**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=188,slow=15,SNR=12						
AKTO				Sn	**Sn**	**07 59 22.0**	**-3.1**
	comp=Z,0.6nm,0.3s,baz=80,slow=20,SNR=6.1						
AKTO	**Aktyubinsk**	**12.75**	**6**	Pn	**Pn**	**07 57 03.8**	**+0.7**
	comp=Z,0.5nm,0.7s						
EKS2	**Erkin-Say**	**14.52**	**65**	*e*Pn	**Pn**	**07 57 25.8**	**-1.6**
	comp=Z,1.7nm,0.6s						
AAK	**Ala-Archa**	**15.03**	**65**	Pn	**Pn**	**07 57 33.4**	**-1.0**
AAK				Sn	**Sn**	**08 00 18.0**	**-2.8**
AAK	**Ala-Archa**	**15.03**	**65**	Pn	**Pn**	**07 57 33.4**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=204,slow=9.2,SNR=2.7						
AAK				Sn	**Sn**	**08 00 18.0**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=200,slow=23,SNR=1.8						
AAK	**Ala-Archa**	**15.03**	**65**	Pn	**Pn**	**07 57 33.4**	**-1.0**
BRVK	**Borovoye**	**18.27**	**29**	⇑Pn	**Pn**	**07 58 13.8**	**-1.5**
	comp=Z,3.3nm,0.7s						
BRVK	**Borovoye**	**18.27**	**29**	Pn	**Pn**	**07 58 13.8**	**-1.5**
	comp=Z,3.3nm,0.7s						
BVA0	**Borovoye Array**	**18.29**	**29**	Pn	**Pn**	**07 58 15.3**	**-0.2**
BVA0	**Borovoye Array**	**18.29**	**29**	Pn	**Pn**	**07 58 15.3**	**-0.2**
BVAR	**Borovoye Array**	**18.29**	**29**	P	**P**	**07 58 17.4**	**+1.8**
BVAR	**Borovoye Array**	**18.29**	**29**	P	**P**	**07 58 17.4**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=210,slow=11,SNR=12						
BVAR	**Borovoye Array**	**18.29**	**29**	P	**P**	**07 58 17.4**	**+1.8**
VOSK	**Vostochnaya**	**18.29**	**30**	⇑Pn	**Pn**	**07 58 13.9**	**-1.6**
	comp=Z,1.5nm,0.8s						
KURBB	**Kurchatov Arra**	**20.61**	**44**	P	Pn	07 58 43.8	+0.5
	comp=Z,0.3nm,0.3s,baz=244,slow=10,SNR=3.9						
KURK	**Kurchatov**	**20.70**	**44**	P	Pn	07 58 43.8	-0.6
KURK	**Kurchatov**	**20.70**	**44**	P	Pn	07 58 43.8	-0.6
MKAR	**Makanchi Array**	**21.44**	**57**	P	**P**	**07 58 52.2**	**+2.2**
MKAR	**Makanchi Array**	**21.44**	**57**	P	**P**	**07 58 52.2**	**+2.2**
	comp=Z,0.6nm,0.6s,baz=244,slow=11,SNR=6.0						
MKAR	**Makanchi Array**	**21.44**	**57**	P	**P**	**07 58 52.2**	**+2.2**
AK01	**Malin Array Si**	**22.91**	**313**	*e*P	**P**	**07 59 08.3**	**+2.6**
AK01	**Malin Array Si**	**22.91**	**313**	*e*P	**P**	**07 59 08.3**	**+2.6**
ILAR	**Eielson Array**	**76.24**	**10**	P	**P**	**08 05 52.4**	**+2.4**
ILAR	**Eielson Array**	**76.24**	**10**	P	**P**	**08 05 52.4**	**+2.4**
	comp=Z,0.3nm,1.0s,baz=335,slow=4.0,SNR=3.6						
ILAR	**Eielson Array**	**76.24**	**10**	P	**P**	**08 05 52.4**	**+2.4**
YKA	**Yellowknife Ar**	**79.78**	**356**	P	P	08 06 13.4	+3.7
YKA	**Yellowknife Ar**	**79.78**	**356**	P	P	08 06 13.4	+3.7
	comp=Z,0.1nm,0.7s,baz=4.0,slow=6.3,SNR=6.1						

IDC 15 08:16:02.1±2.4, 13.67N×145.64E, h73km±17km, mb3.6/7, mb1 3.8/7, mb1mx3.5/26, mbtmp3.6/7, Error ellipse: s-maj=89.1km s-min=28.9km az=171.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.75**	**264**	P	Pn	08 16 18.6	+0.8
	206nm,0.3s,baz=123,slow=7.0,SNR=344						
GUMO				S	Sn	08 16 30.7	+1.2
	701nm,0.3s,baz=15,slow=20,SNR=37						
CMAR	**Chiang Mai Arr**	**45.03**	**282**	P	P	08 24 11.4	+0.4
	0.2nm,0.3s,baz=85,slow=5.2,SNR=4.1						
MKAR	**Makanchi Array**	**61.96**	**316**	P	P	08 26 14.9	+0.5
	0.4nm,0.3s,baz=92,slow=8.6,SNR=8.0						
KURBB	**Kurchatov Arra**	**65.05**	**320**	P	P	08 26 34.6	-0.2
	1.3nm,0.6s,baz=100,slow=6.4,SNR=4.2						
ILAR	**Eielson Array**	**68.18**	**25**	P	P	08 26 54.4	-0.1
	1.0nm,0.5s,baz=252,slow=5.7,SNR=34						
BVAR	**Borovoye Array**	**70.33**	**322**	P	P	08 27 08.0	0.0
	0.8nm,0.4s,baz=104,slow=10.0,SNR=5.1						
YKA	**Yellowknife Ar**	**82.45**	**27**	P	P	08 28 16.8	+0.5
	0.2nm,0.4s,baz=286,slow=5.1,SNR=14						
FINES	**FINESS Array B**	**91.41**	**335**	P	P	08 28 58.6	-1.3
	1.7nm,0.9s,baz=64,slow=6.3,SNR=3.1						
DBIC	**Dimbokro**	**144.41**	**303**	PKP	PKPbc	08 35 29.9	+0.2
	1.7nm,0.6s,baz=50,slow=3.9,SNR=3.5						

HEL 15 08:16:26.2±0.8, 67.63N×34.60E, h0km, ML1.9, Explosion
CSEM 15 08:16:28.7±0.3, 67.64N×33.90E, h1km, ML2.8, Error ellipse: s-maj=5.2km s-min=4.7km az=81.0, Mining explosion.
NAO 15 08:16:28.2±1.6, 67.61N×34.10E, ML2.4
ISC 15 08:16:25.6±2.5, 67.65N±0.06×34.4E±0.1, h0km, n23, σ1°71/32, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.55**	**266**	Pg	**Pg**	**08 16 35.8**	**-0.4**
	baz=89,slow=16						
APA0				Lg	Lg	08 16 41.9	
	baz=85,slow=22						
APA0				Rg	Rg	08 16 45.2	
	baz=80,slow=37						
APA0	**Apatity Array**	**0.55**	**266**	Pg	**Pg**	**08 16 35.8**	**-0.4**
	baz=89,slow=16						
APA0				Lg	Lg	08 16 41.9	
	baz=85,slow=22						
APA0				Rg	Rg	08 16 45.2	
	baz=80,slow=37						
APA0	**Apatity Array**	**0.55**	**266**	Pg	**Pg**	**08 16 35.8**	**-0.4**
	baz=89,slow=15,SNR=90						
APA0				Lg	Lg	08 16 41.9	
	baz=85,slow=21,SNR=1.3						
VRF	**Varrio**	**1.84**	**275**	PN	**Pn**	**08 16 58.6**	**+0.1**
VRF				SG	**Sb**	**08 17 23.5**	**-0.2**
VRF				MSG		08 17 23.5	
	comp=Z,5.4nm,0.1s						
VRF	**Varrio**	**1.84**	**275**	Pn	**Pn**	**08 16 58.6**	**+0.1**
VRF				Sg	**Sb**	**08 17 23.5**	**-0.2**
MSF	**Maaselka**	**2.76**	**233**	SG	**Sb**	**08 17 51.1**	**+1.0**
MSF				MSG		08 17 51.1	
	comp=Z,1.3nm,0.4s						
MSF	**Maaselka**	**2.76**	**233**	Sg	**Sb**	**08 17 51.1**	**+1.0**
SGF	**Sodankyl**	**3.04**	**270**	PN	**Pb**	**08 17 19.1**	**-1.5**
	baz=89						
SGF				SG	**Sb**	**08 17 59.6**	**+1.4**
SGF				MSG		08 17 59.6	
	comp=Z,5.4nm,0.4s						
SGF	**Sodankyl**	**3.04**	**270**	Pn	**Pb**	**08 17 19.1**	**-1.5**
SGF				Sg	**Sb**	**08 17 59.6**	**+1.4**
KEV	**Kevo**	**3.44**	**311**	PN	**Pn**	**08 17 21.6**	**+1.3**
	baz=134						
KEV	**Kevo**	**3.44**	**311**	Pn	**Pn**	**08 17 21.6**	**+1.3**
RNF	**Rovaniemi**	**3.45**	**256**	PN	**Pn**	**08 17 21.0**	**+0.5**
	baz=67						
RNF	**Rovaniemi**	**3.45**	**256**	Pn	**Pn**	**08 17 21.0**	**+0.5**
ARA0	**ARCESS Array S**	**3.78**	**304**	Pn	**Pn**	**08 17 25.6**	**+0.6**
	baz=122,slow=16						
ARA0				Sn	**Sn**	**08 18 08.2**	**-2.0**
	baz=124,slow=28						
ARA0				Lg	Lg	08 18 22.4	
	baz=118,slow=37						
ARA0	**ARCESS Array S**	**3.78**	**304**	Pn	**Pn**	**08 17 25.6**	**+0.6**
	baz=122,slow=16						
ARA0				Sn	**Sn**	**08 18 08.2**	**-2.0**
	baz=124,slow=28						
ARA0				Lg	Lg	08 18 22.4	
	baz=118,slow=37						
ARA0	**ARCESS Array S**	**3.78**	**304**	Pn	**Pn**	**08 17 25.6**	**+0.6**
	baz=122,slow=15,SNR=50						
ARA0				Sn	**Sn**	**08 18 08.1**	**-2.0**
	baz=124,slow=26,SNR=50						
ARA0				Lg	Lg	08 18 22.4	
	baz=118,slow=28,SNR=2.1						
HEF	**Hetta**	**4.12**	**286**	PN	**Pn**	**08 17 32.8**	**+3.1**
	baz=103						
HEF				SG	**Sb**	**08 18 33.1**	**+4.0**
HEF				MSG		08 18 33.1	
	comp=Z,5.3nm,0.4s						
HEF	**Hetta**	**4.12**	**286**	Pn	**Pn**	**08 17 32.8**	**+3.1**
HEF				Sg	**Sb**	**08 18 33.1**	**+4.0**
KTK1	**Kautokeino**	**4.37**	**293**	*e*P	**Pn**	**08 17 33.8**	**+0.6**
KTK1	

comp=E,14nm,0.2s
CLNS AMB AMB 08 18 28.3
comp=E,8.0nm,0.2s
CLNS AMB AMB 08 18 28.3
comp=E,16nm,0.2s
KLR Kul'dur 4.62 168 ⇓ *i* P **Pn 08 18 29.0 -0.3**
KLR pmax pmax
comp=N,28nm,0.8s
KLR pmax pmax
comp=E,44nm,0.8s
KLR pmax pmax
comp=Z,84nm,0.8s
KLR MLR MLR
comp=N,700nm,10.0s
KLR MLR MLR
comp=Z,1μm,10.0s
KLR Kul'dur 4.62 168 ⇓ *i* Pn **Pn 08 18 29.0 -0.3**
KLR AMB AMB 08 18 29.7
comp=Z,28nm,0.8s
KLR AMB AMB 08 18 29.7
comp=Z,44nm,0.8s
KLR AMB AMB 08 18 29.7
comp=Z,84nm,0.8s
KLR AMS AMS 08 20 02.5
comp=Z,700nm,10.0s
KLR AMS AMS 08 20 02.5
comp=Z,1μm,10.0s
GRNR Gornyy 4.79 126 *e*Pg Pg 08 18 48.0 -3.0
GRNR *e*rx rx 08 18 57.0
GRNR *e*Sg **Sg 08 19 52.0 -1.1**
GRNR A A 08 20 01.0
comp=Z,126nm,0.6s
TUP Tupik 6.14 280 *e*Pn **Pn 08 18 50.5 +0.3**
TUP *e*Pg Pb 08 19 10.0 +3.6
TUP AMB AMB 08 19 16.5
comp=Z,23nm,0.5s
TUP *e*Sg Sg 08 20 30.9 -5.5
TUP A A 08 20 44.4
comp=Z,511nm,1.4s
NKL Nikolayevsk 6.21 91 *e*Pn **Pn 08 18 49.6 -1.5**
NKL *e*Pg Pb 08 19 10.0 +2.4
NKL AMB AMB 08 19 10.5
comp=Z,23nm,1.0s
NKL *e*Sn **Sn 08 20 00.5 -1.6**
NKL *e*Sg **Sg 08 20 34.2 -4.5**
NKL A A 08 20 46.0
comp=Z,148nm,0.9s
NKL A A 08 20 46.0
comp=Z,60nm,0.9s
NKL AMS AMS 08 21 20.0
comp=Z,500nm,10.0s
TYV Tymovskoe 8.09 106 *e*Sg Sb 08 21 34.0 +18
USRK Ussuriysk Arra 9.63 173 Pn Pn 08 19 40.6 +2.7
comp=Z,1.3nm,0.3s,baz=351,slow=15,SNR=27
USRK Lg Lg 08 22 20.4
comp=Z,0.5nm,0.3s,baz=351,slow=26,SNR=5.7
ASAJ Asahikawa 12.56 135 LR LR 08 25 30.5
comp=Z,91nm,19.7s,baz=182,slow=39
SONM Songino Array 16.21 258 Pn **P 08 21 08.4 -2.0**
comp=Z,0.3nm,0.3s,baz=58,slow=13,SNR=6.2
SONM Lg Lg 08 25 49.8
comp=Z,0.4nm,0.3s,baz=64,slow=25,SNR=11
ZAK Zakamensk 16.93 269 *e*P **P 08 21 20.9 +2.6**
ZAK pmax pmax
comp=Z,2.0nm,1.5s
MKAR Makanchi Array 30.97 277 P **P 08 23 37.6 +1.0**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 30.97 277 *e*P **P 08 23 37.6 +1.0**
MKAR Makanchi Array 30.97 277 P **P 08 23 37.6 +1.0**
comp=Z,0.8nm,0.6s,baz=53,slow=10,SNR=3.8
KURK Kurchatov 31.24 286 P **P 08 23 40.2 +1.4**
KURK pmax pmax
comp=Z,1.0nm,1.0s
KURK Kurchatov 31.24 286 *e*P **P 08 23 40.2 +1.4**
KURBB Kurchatov Arra 31.33 286 P **P 08 23 40.2 +0.5**
comp=Z,1.2nm,0.9s,baz=61,slow=9.5,SNR=3.9
BVAR Borovoye Array 34.83 294 P **P 08 24 11.3 +1.2**
BVAR pmax pmax
comp=Z,2.0nm,0.8s
BVAR Borovoye Array 34.83 294 P **P 08 24 11.3 +1.2**
comp=Z,1.6nm,0.8s,baz=54,slow=7.5,SNR=7.9
ILAR Eielson Array 40.63 41 *e*P **P 08 25 00.6 +1.5**
ILAR Eielson Array 40.63 41 P **P 08 25 00.6 +1.5**
comp=Z,0.8nm,0.8s,baz=281,slow=5.5,SNR=7.8
CMAR Chiang Mai Arr 42.75 227 *e*P **P 08 25 17.9 +1.0**
CMAR Chiang Mai Arr 42.75 227 P **P 08 25 17.9 +1.0**
comp=Z,0.3nm,0.4s,baz=21,slow=12,SNR=4.2
AKTO Aktyubinsk 42.78 296 P **P 08 25 18.1 +1.3**
AKTO pmax pmax
comp=Z,1.0nm,0.8s
AKTO Aktyubinsk 42.78 296 P **P 08 25 18.1 +1.3**
comp=Z,1.0nm,0.8s,baz=50,slow=10,SNR=2.6
FINES FINESS Array B 50.55 323 P **P 08 26 18.1 +0.6**
comp=Z,1.7nm,0.6s,baz=44,slow=8.5,SNR=5.9
YKA Yellowknife Ar 53.43 32 *e*P **P 08 26 39.6 +0.7**
YKA Yellowknife Ar 53.43 32 P **P 08 26 39.6 +0.7**
comp=Z,0.1nm,0.5s,baz=324,slow=6.8,SNR=8.4
NB2 NORSAR Subarra 55.79 329 P **P 08 26 56.2 +0.1**
comp=Z,0.8nm,0.6s,baz=39,slow=6.9
NOA NORSAR Array B 55.79 329 P **P 08 26 56.6 +0.5**
comp=Z,1.3nm,0.7s,baz=39,slow=6.8,SNR=6.5
AKASG Malin Array Be 56.75 312 P **P 08 27 03.1 0.0**
AKASG Malin Array Be 56.75 312 P **P 08 27 03.1 0.0**
comp=Z,0.4nm,0.4s,baz=45,slow=7.9,SNR=2.8
BRTR Keskin Array B 62.69 300 P **P 08 27 44.6 +0.3**
comp=Z,0.4nm,0.5s,baz=310,slow=1.1,SNR=2.1
PDAR Pinedale Array 71.03 42 P P 08 28 40.0 +2.5
comp=Z,0.2nm,0.5s,baz=35,slow=5.4,SNR=2.1
ASAR Alice Springs 77.16 177 *e*P **P 08 29 14.0 +0.9**
ASAR Alice Springs 77.16 177 P **P 08 29 13.9 +0.9**
comp=Z,0.7nm,0.7s,baz=3.8,slow=6.0,SNR=9.2
CPUP Villa Florida 152.02 15 PKPbc **PKPbc 08 37 13.9 -0.6**
comp=Z,0.4nm,0.4s,baz=89,slow=20,SNR=3.9

CSEM ***15*** *08:23:23.1,39.°06N×21.°59E,h11km, MD2.7, After ATH*
ATH 15 08:23:23.0,39.°06N×21.°59E,h13km±6km, MD2.7/6, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EVR	**Evrytania**	**0.22**	**130**	*e*PG		Pg	08 23 27.8	-0.2
EVR				*e*SG		Sg	08 23 31.2	-0.2
EVR	**Evrytania**	**0.22**	**130**	*e*Pg		Pg	08 23 27.8	-0.2
EVR				*e*Sg		Sg	08 23 31.2	-0.2
AGG	**Agios Georgios**	**0.58**	**94**	*e*PB		Pg	08 23 33.3	-1.1
AGG				*e*SB		Sg	08 23 42.6	+0.5
AGG	**Agios Georgios**	**0.58**	**94**	*e*Pb		Pg	08 23 33.3	-1.1
AGG				*e*Sb		Sg	08 23 42.6	+0.5
THL	**Klokotos Trika**	**0.60**	**33**	*e*PB		Pg	08 23 34.9	+0.1
THL	**Klokotos Trika**	**0.60**	**33**	*e*Pb		Pg	08 23 34.9	+0.1
EFP	**Efpalio**	**0.68**	**159**	*e*PB		Pg	08 23 36.0	-0.2
EFP				*e*SB		Sb	08 23 45.8	-0.2
EFP	**Efpalio**	**0.68**	**159**	*e*Pg		Pg	08 23 36.0	-0.2
EFP				*e*Sb		Sb	08 23 45.8	-0.2
TRIZ	**Trizonia**	**0.79**	**151**	*e*PB		Pb	08 23 38.9	+0.3
TRIZ	**Trizonia**	**0.79**	**151**	*e*Pb		Pb	08 23 38.9	+0.3
KALE	**Kalithea**	**0.79**	**147**	*e*PG		Pg	08 23 37.7	-0.8
KALE				*e*SB		Sb	08 23 49.3	-0.2
KALE	**Kalithea**	**0.79**	**147**	*e*Pg		Pg	08 23 37.7	-0.8
KALE				*e*Sb		Sb	08 23 49.3	-0.2
KLV	**Kalavryta, Ach**	**1.11**	**156**	*e*PB		Pb	08 23 43.7	-0.4
KLV	**Kalavryta, Ach**	**1.11**	**156**	*e*Pn		Pb	08 23 43.7	-0.4

NIED ***15*** *08:34:00,41.°70N×144.°30E,h17km,Mw4.1 Best double couple: M0 1.79000×10^15 NP1:φs 13.00000°,δ 77.00000°, λ 56.00000°. NP2:φs 265.00000°,δ 37.00000°,λ 158.00000°.*
IDC ***15*** *08:34:39.7±0.9,41.°79N×144.°20E,h0km,mb3.9/15, mb1 4.0/17,mb1mx4.0/27,mbtmp3.8/17,ML3.4/2,MS3.2/4, Ms1 3.2/4,ms1mx2.8/45, Error ellipse: s-maj=24.1km s-min=17.0km az=148.0*
MOS ***15*** *08:34:41.2±1.0,41.°67N×144.°34E,h26km,mb4.4/14, Error ellipse: s-maj=13.4km s-min=9.6km az=94.0*
JMA ***15*** *08:34:42.9±0.2,41.°73N×144.°31E,h27km±2km, M4.1*
NEIC ***15*** *08:34:42.9,41.°73N×144.°31E,h27km,mb4.3/4, After JMA.*
ISCJB ***15*** *08:34:43.2±0.5,41.°70N±0.°04×144.°33E±0.°07,h42km, mb4.0/22,MS3.5/1, Error ellipse: s-maj=7.7km s-min=5.1km az=28.6*
ISC 15 08:34:45.6±0.6, 41.°79N±0.°06×144.°26E±0.°06, h42km, n66, σ0 90/68, mb4.1/22, 3C, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ERM	**Erimo**	**0.85**	**286**	*ce*P		**Pn**	**08 35 00.3**	**-0.9**
ERM				pmax		pmax		
comp=Z,4μm,1.7s								
ERM	**Erimo**	**0.85**	**286**	*e*Pn		**Pn**	**08 35 00.4**	**-0.7**
JEM	**Erimo**	**0.85**	**286**	P		**Pn**	**08 35 00.4**	**-0.8**
JCH	**Churui**	**1.06**	**321**	P		**Pn**	**08 35 02.9**	**-1.1**
JCH				*e*S		**Sn**	**08 35 18.2**	**+0.6**
JOB	**Onbets**	**1.16**	**344**	P		**Pn**	**08 35 04.0**	**-1.4**
JOB				*e*S		**Sn**	**08 35 20.7**	**+0.7**
JNBK	**Urakawa-nobuka**	**1.23**	**294**	P		**Pn**	**08 35 06.1**	**-0.2**
JAK	**Akkeshi**	**1.25**	**15**	P		**Pn**	**08 35 04.7**	**-1.9**
JAK				*e*S		**Sn**	**08 35 21.5**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**2.54**	**27**	*i* P		**Pn**	**08 35 23.7**	**-0.5**
YUK				*i* S		**Sn**	**08 35 54.0**	**+0.1**
YUK				pmax		pmax		
comp=N,39nm,0.2s								
YUK				pmax		pmax		
comp=E,36nm,0.2s								
YUK				pmax		pmax		
comp=Z,98nm,0.2s								
YUK				smax		smax		
comp=N,221nm,0.5s								
YUK				smax		smax		
comp=E,27nm,0.5s								
YUK				MLR		MLR		
comp=E,195nm,15.0s								
YUK				MLR		MLR		
comp=Z,222nm,15.0s								
ASAJ	**Asahikawa**	**2.63**	**333**	*e*Pn		**Pn**	**08 35 24.8**	**-0.7**
ASAJ	**Asahikawa**	**2.63**	**333**	Pn		**Pn**	**08 35 24.5**	**-1.1**
comp=Z,5.1nm,0.3s,baz=195,slow=13,SNR=21								
ASAJ				LR		LR	08 36 50.7	
comp=Z,316nm,18.9s,baz=177,slow=50								
MAJO	**Matsushiro**	**7.04**	**224**	*e*P		**Pn**	**08 36 24.4**	**-1.7**
MAJO	**Matsushiro**	**7.04**	**224**	*e*Pn		**Pn**	**08 36 24.4**	**-1.7**
MJAR	**Matsushiro Arr**	**7.04**	**224**	Pn		**Pn**	**08 36 24.5**	**-1.6**
MJAR	**Matsushiro Arr**	**7.04**	**224**	Pn		**Pn**	**08 36 24.5**	**-1.6**
comp=Z,0.8nm,0.3s,baz=26,slow=14,SNR=12								
MJAR				LR		LR	08 39 45.2	
comp=Z,226nm,18.5s,baz=35,slow=44								
USRK	**Ussuriysk Arra**	**9.30**	**289**	Pn		**Pn**	**08 36 58.6**	**+1.6**
comp=Z,0.2nm,0.3s,baz=98,slow=13,SNR=8.3								
KSRS	**Korea Array**	**13.31**	**256**	LR		LR	08 42 12.6	
comp=Z,44nm,19.9s,baz=12,slow=34								
JNU	**Nakatsue**	**13.69**	**235**	Pn		**Pn**	**08 37 55.6**	**-1.5**
HHC	**Hu-ho-hao-te**	**24.50**	**279**	*e*P		**P**	**08 40 00.8**	**-0.2**
HHC				S		**S**	**08 44 17.0**	**-1.5**
HHC				pmax		pmax		
comp=Z,32nm,0.5s								
HHC				pmax		pmax		
comp=Z,160nm,5.5s								
ULN	**Ulaanbaatar**	**26.89**	**296**	*e*P		**P**	**08 40 23.1**	**+0.5**
comp=Z,7.4nm,0.9s								
SONM	**Songino Array**	**27.33**	**296**	P		**P**	**08 40 25.6**	**-0.9**
SONM	**Songino Array**	**27.33**	**296**	P		**P**	**08 40 25.6**	**-0.9**
comp=Z,1.7nm,0.5s,baz=88,slow=9.5,SNR=20								
ZAK	**Zakamensk**	**29.37**	**301**	*e*P		**P**	**08 40 44.9**	**+0.3**
ZAK				pmax		pmax		
comp=Z,2.0nm,0.9s								
ZAA0	**Zalesovo Array**	**40.52**	**308**	*e*P		**P**	**08 42 19.8**	**-0.4**
ZALV	**Zalesovo Beam**	**40.52**	**308**	P		**P**	**08 42 20.1**	**-0.2**
ZALV				pmax		pmax		
comp=Z,3.0nm,0.5s								
ZALV	**Zalesovo Beam**	**40.52**	**308**	P		**P**	**08 42 20.1**	**-0.2**
ZALV	**Zalesovo Beam**	**40.52**	**308**	P		**P**	**08 42 20.1**	**-0.2**
comp=Z,2.9nm,0.5s,baz=91,slow=8.0,SNR=13								
ILAR	**Eielson Array**	**44.32**	**35**	P		**P**	**08 42 51.1**	**0.0**
ILAR	**Eielson Array**	**44.32**	**35**	P		**P**	**08 42 51.1**	**0.0**
comp=Z,0.5nm,0.8s,baz=252,slow=5.9,SNR=7.9								
KURK	**Kurchatov**	**44.88**	**305**	*ce*P		**P**	**08 42 55.0**	**-0.7**
KURK				pmax		pmax		
comp=Z,3.0nm,0.6s								
KURK	**Kurchatov**	**44.88**	**305**	*e*P		**P**	**08 42 54.9**	**-0.7**
comp=Z,4.4nm,0.6s								
CMAR	**Chiang Mai Arr**	**44.92**	**253**	P		**P**	**08 42 56.4**	**0.0**
CMAR	**Chiang Mai Arr**	**44.92**	**253**	P		**P**	**08 42 56.4**	**0.0**
comp=Z,0.9nm,0.6s,baz=45,slow=7.8,SNR=8.3								
RAMN	**Ramite**	**48.98**	**272**	*e*P		**P**	**08 43 28.6**	**+0.3**
comp=Z,12nm,0.8s								
GUN	**Gumba**	**49.00**	**273**	*e*P		**P**	**08 43 28.8**	**+0.3**
comp=Z,19nm,0.5s								
BVAR	**Borovoye Array**	**49.11**	**310**	LR		LR	09 04 21.2	
comp=Z,45nm,19.0s,baz=71,slow=36								
INK	**Inuvik**	**49.16**	**29**	P		**P**	**08 43 28.8**	**0.0**
INK	**Inuvik**	**49.16**	**29**	P		**P**	**08 43 28.8**	**0.0**
comp=Z,0.9nm,0.5s,baz=312,slow=7.0,SNR=14								
BRVK	**Borovoye**	**49.16**	**310**	*ce*P		**P**	**08 43 30.9**	**+1.8**
BRVK				pmax		pmax		
comp=Z,4.0nm,1.0s								
KKN	**Kakani**	**49.51**	**273**	*e*P		P	08 43 27.2	-5.1
ABKAR	**Akbulak array**	**56.63**	**309**	*e*P		**P**	**08 44 24.0**	**-0.1**
comp=Z,1.2nm,0.4s								
RES	**Resolute Bay**	**57.45**	**16**	*e*P		**P**	**08 44 29.1**	**-0.4**
comp=Z,3.0nm,0.8s								
RES	**Resolute Bay**	**57.45**	**16**	P		**P**	**08 44 29.2**	**-0.3**
comp=Z,3.0nm,0.6s,baz=310,slow=7.5,SNR=31								
YKA	**Yellowknife Ar**	**58.61**	**32**	P		**P**	**08 44 37.5**	**-0.4**
YKA	**Yellowknife Ar**	**58.61**	**32**	P		**P**	**08 44 37.4**	**-0.4**
comp=Z,0.1nm,0.6s,baz=290,slow=8.1,SNR=3.1								
FINES	**FINESS Array B**	**65.64**	**332**	P		**P**	**08 45 24.6**	**-0.3**
FINES	**FINESS Array B**	**65.64**	**332**	P		**P**	**08 45 24.6**	**-0.3**
comp=Z,2.5nm,0.7s,baz=47,slow=6.5,SNR=6.6								
ASAR	**Alice Springs**	**65.82**	**190**	P		**P**	**08 45 25.7**	**-0.9**
ASAR	**Alice Springs**	**65.82**	**190**	P		**P**	**08 45 25.7**	**-0.9**
comp=Z,0.3nm,0.8s,baz=9.7,slow=3.2,SNR=2.0								
KIV	**Kislovodsk**	**69.46**	**311**	*e*P		**P**	**08 45 50.6**	**+1.1**
KIV				pmax		pmax		
comp=Z,10.0nm,0.8s								
KBZ	**Khabaz**	**69.48**	**311**	P		**P**	**08 45 50.0**	**+0.5**
KBZ				pmax		pmax		
comp=Z,2.0nm,0.8s								
KBZ	**Khabaz**	**69.48**	**311**	P		**P**	**08 45 50.0**	**+0.5**
KBZ	**Khabaz**	**69.48**	**311**	P		**P**	**08 45 50.0**	**+0.5**
comp=Z,2.3nm,0.8s,baz=68,slow=11,SNR=4.0								
NB2	**NORSAR Subarra**	**70.64**	**338**	P		**P**	**08 45 55.9**	**-0.5**
comp=Z,0.7nm,0.4s,baz=36,slow=6.2								
NOA	**NORSAR Array B**	**70.64**	**338**	P		**P**	**08 45 56.1**	**-0.3**
NOA	**NORSAR Array B**	**70.64**	**338**	P		**P**	**08 45 56.1**	**-0.3**
comp=Z,0.7nm,0.5s,baz=36,slow=6.1,SNR=4.0								
AKASG	**Malin Array Be**	**71.88**	**323**	*i* P		**P**	**08 46 03.4**	**-0.6**
AKASG				pmax		pmax		
comp=Z,1.0nm,0.4s								
AKASG	**Malin Array Be**	**71.88**	**323**	P		**P**	**08 46 03.4**	**-0.6**
AKASG	**Malin Array Be**	**71.88**	**323**	P		**P**	**08 46 03.4**	**-0.6**
comp=Z,0.9nm,0.4s,baz=41,slow=6.4,SNR=5.9								
PDAR	**Pinedale Array**	**72.80**	**48**	P		**P**	**08 46 11.9**	**+2.0**
PDAR	**Pinedale Array**	**72.80**	**48**	P		**P**	**08 46 12.0**	**+2.0**
comp=Z,0.4nm,0.6s,baz=343,slow=2.8,SNR=3.1								
BRTR	**Keskin Array B**	**77.32**	**312**	P		**P**	**08 46 36.3**	**+0.4**
BRTR	**Keskin Array B**	**77.32**	**312**	P		**P**	**08 46 36.3**	**+0.4**
comp=Z,0.6nm,0.6s,baz=90,slow=1.4,SNR=2.4								
CLL	**Collm**	**78.04**	**331**	*i* P		**P**	**08 46 39.7**	**+0.2**
CLL	**Collm**	**78.04**	**331**	*i* P		**P**	**08 46 39.7**	**+0.2**
TXAR	**Lajitas Array**	**85.52**	**54**	P		**P**	**08 47 20.4**	**+0.9**
TXAR	**Lajitas Array**	**85.52**	**54**	P		**P**	**08 47 20.4**	**+0.9**
comp=Z,0.3nm,0.8s,baz=322,slow=3.8,SNR=1.7								

NEIC ***15*** *08:49:38.8,14.°83N×94.°18W,h18km,MD4.0(MEX), After MEX.*
MEX 15 08:49:38.8±0.7, 14.°83N×94.°18W, h18km±49km, MD4.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
THIG		**1.85**	**87**	*i* P		Pn	08 50 05.8	-3.8
THIG				*i* S		Sn	08 50 28.6	-4.0
THIG		**1.85**	**87**	*i* P		Pn	08 50 05.8	-3.8
THIG				*i* S		Sn	08 50 28.6	-4.0
HUIG	**Huatulco**	**2.08**	**297**	*i* P		Pn	08 50 10.5	-2.4
HUIG				*i* S		Sn	08 50 34.0	-4.5
HUIG	**Huatulco**	**2.08**	**297**	*i* P		Pn	08 50 10.5	-2.4
HUIG				*i* S		Sn	08 50 34.0	-4.5
TGIG		**2.19**	**28**	*i* P		Pn	08 50 11.7	-2.8
TGIG				*i* S		Sn	08 50 37.3	-3.9
TGIG		**2.19**	**28**	*i* P		Pn	08 50 11.7	-2.8
TGIG				*i* S		Sn	08 50 37.3	-3.9
CMIG	**Matias Romero**	**2.35**	**343**	*i* P		Pn	08 50 13.4	-3.2
CMIG				*i* S		Sn	08 50 40.3	-4.8
CMIG	**Matias Romero**	**2.35**	**343**	*i* P		Pn	08 50 13.4	-3.2
CMIG				*i* S		Sn	08 50 40.3	-4.8
CCIG	**Comitan**	**2.44**	**53**	*i* P		Pn	08 50 15.7	-2.4
CCIG				*i* S		Sn	08 50 44.1	-3.5
CCIG	**Comitan**	**2.44**	**53**	*i* P		Pn	08 50 15.7	-2.4
CCIG				*i* S		Sn	08 50 44.1	-3.5
VHO	**Vista Hermosa**	**3.32**	**313**	*i* P		Pn	08 50 28.2	-2.0
VHO				*i* S		Sn	08 51 06.0	-3.4
VHO	**Vista Hermosa**	**3.32**	**313**	*i* P		Pn	08 50 28.2	-2.0
VHO				*i* S		Sn	08 51 06.0	-3.4
PNIG	**Pinotepa**	**4.11**	**293**	*i* P		Pn	08 50 37.7	-3.1
PNIG				*i* S		Sn	08 51 24.6	-4.0
PNIG	**Pinotepa**	**4.11**	**293**	*i* P		Pn	08 50 37.7	-3.1
PNIG				*i* S		Sn	08 51 24.6	-4.0
UTMO	**Huajuapan**	**4.58**	**311**	*i* P		Pn	08 50 46.0	-1.6
UTMO	**Huajuapan**	**4.58**	**311**	*i* P		Pn	08 50 46.0	-1.6
TGUH	**Tegucigalpa,Un**	**6.73**	**96**	*e*Pn		Pn	08 51 16.8	-0.1
TEIG	**Tepich**	**7.78**	**46**	*e*Pn		Pn	08 51 29.6	-1.6

HEL ***15*** *08:59:31.5±0.4,64.°74N×31.°19E,h0km,ML1.8, ML1.9(UPP), Explosion*
IDC ***15*** *08:59:31.1±3.2,64.°66N×31.°85E,h0km,mb1 3.1/4, mb1mx2.9/29,mbtmp3.0/4,ML2.5/4, Error ellipse: s-maj=45.4km s-min=10.5km az=99.0*
ISCJB ***15*** *08:59:32.5±0.7,64.°74N±0.°03×30.°5E±0.°1,h0km, Error ellipse: s-maj=7.7km s-min=4.2km az=175.5*
CSEM ***15*** *08:59:34.0±0.4,64.°75N×30.°61E,h2km,ML1.8/1, Error ellipse: s-maj=11.3km s-min=5.3km az=91.0, Mining explosion.*
UPP ***15*** *08:59:37.9,64.°72N×29.°84E,h0km,ML1.9, Suspected Mining explosion.*
ISC 15 08:59:32.7±1.2, 64.°75N±0.°03×30.°88E±0.°06, h0km, n31, σ1 85/51, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSF	**Maaselka**	**1.40**	**327**	*e*P		**Pn**	**08 59 57.9**	**-1.6**
MSF				*e*SN		**Sn**	**09 00 21.8**	**+3.1**
MSF				MSG			09 00 21.8	
comp=Z,4.0nm,0.4s								
MSF	**Maaselka**	**1.40**	**327**	P		**Pn**	**08 59 57.9**	**-1.6**
JOF	**Joensuu**	**1.85**	**174**	*e*PN		**Pn**	**09 00 04.1**	**-1.5**
baz=350								
JOF				MSG		**Sn**	**09 00 31.3**	**+1.7**
comp=Z,7.5nm,0.4s								
JOF				*e*SN		**Sn**	**09 00 31.3**	**+1.7**
OUL	**Oulu**	**2.15**	**281**	*e*P		**Pn**	**09 00 09.3**	**-0.5**
baz=96								
OUL				MSG		**Sn**	**09 00 36.2**	**-0.8**
comp=Z,3.2nm,0.2s								
OUL				*e*S		**Sn**	**09 00 36.2**	**-0.8**
OUL	**Oulu**	**2.15**	**281**	P		**Pn**	**09 00 09.3**	**-0.5**
OUL				S		**Sn**	**09 00 36.2**	**-0.8**
RNF	**Rovaniemi**	**2.75**	**315**	*e*PB		**Pn**	**09 00 19.7**	**+1.7**
RNF				MSG		**Sg**	**09 01 00.1**	**-0.8**
comp=Z,3.7nm,0.4s								
RNF				*e*SG		**Sg**	**09 01 00.1**	**-0.8**
SUF	**Sumiainen**	**2.93**	**228**	*e*P		**Pn**	**09 00 21.1**	**+0.6**
SUF				MSG		**Sb**	**09 01 02.3**	**+0.4**
comp=Z,2.3nm,0.4s								
SUF				*e*SB		**Sb**	**09 01 02.3**	**+0.4**
SUF	**Sumiainen**	**2.93**	**228**	P		**Pn**	**09 00 21.0**	**+0.6**
VRF	**Varrio**	**3.06**	**351**	*e*P		**Pn**	**09 00 23.1**	**+0.8**
baz=176								
VRF				*e*			09 01 11.6	
VRF				MSG			09 01 11.6	
comp=Z,2.2nm,0.4s								
VRF	**Varrio**	**3.06**	**351**	P		**Pn**	**09 00 23.0**	**+0.8**
SGF	**Sodankyl**	**3.23**	**329**	MSG		**Sg**	**09 01 13.8**	**-2.7**
comp=Z,2.4nm,0.4s								
SGF				*e*SG		**Sg**	**09 01 13.8**	**-2.7**
KAF	**Kangasniemi**	**3.35**	**220**	*e*P		**Pn**	**09 00 27.5**	**+1.2**
KAF				MSG		**Sg**	**09 01 18.0**	**-2.2**
comp=Z,2.3nm,0.4s								
KAF				*e*SG		**Sg**	**09 01 18.0**	**-2.2**
KAF	**Kangasniemi**	**3.35**	**220**	P		**Pn**	**09 00 27.4**	**+1.2**
KAF				Sg		**Sg**	**09 01 18.0**	**-2.2**
KEF	**Keuruu**	**3.74**	**229**	*e*P		**Pn**	**09 01 31.5**	**-0.1**
KEF	**Keuruu**	**3.74**	**229**	P		**Pn**	**09 01 31.5**	**-0.1**
PAJU	**Pajala**	**3.92**	**309**	*e*P		**Pn**	**09 00 33.8**	**-0.3**
PAJU	**Pajala**	**3.92**	**309**	P		**Pn**	**09 00 33.8**	**-0.3**
FIA0	**FINESS Array S**	**3.97**	**216**	*e*P		**Pn**	**09 00 33.9**	**-0.8**
baz=33								
FIA0				MSG		**Sg**	**09 01 36.3**	**-3.8**
comp=Z,1.8nm,0.5s								
FIA0				*e*SG		**Sg**	**09 01 36.3**	**-3.8**
FIA0	**FINESS Array S**	**3.97**	**216**	P		**Pn**	**09 00 33.9**	**-0.8**
FINES	**FINESS Array B**	**3.97**	**216**	Pn		**Pn**	**09 00 33.8**	**-0.9**
comp=Z,0.1nm,0.3s,baz=34,slow=13,SNR=3.6								
FINES				Pg		**Pb**	**09 00 44.5**	**+1.1**
comp=Z,0.4nm,0.3s,baz=30,slow=17,SNR=7.7								
FINES				Lg		Lg	09 01 34.0	
comp=Z,0.8nm,0.3s,baz=36,slow=27,SNR=6.9								
VAF	**Ylistaro**	**4.01**	**248**	*e*P		**Pn**	**09 00 34.8**	**-0.5**
VAF				*e*SG		**Sb**	**09 01 38.6**	**+5.5**
VAF				MSG			09 01 38.6	
comp=Z,3.0nm,0.4s								
VAF	**Ylistaro**	**4.01**	**248**	P		**Pn**	**09 00 34.8**	**-0.5**
VAF				Sg		**Sb**	**09 01 38.6**	**+5.5**
comp=Z,3.0nm,0.4s								
ERTU	**Ertsjaerv**	**4.03**	**301**	*e*P		**Pn**	**09 00 35.1**	**-0.4**
ERTU	**Ertsjaerv**	**4.03**	**301**	P		**Pn**	**09 00 35.2**	**-0.4**
MASU	**Masugnsbyn**	**4.52**	**311**	*e*P		**Pn**	**09 00 43.6**	**+1.3**
MASU	**Masugnsbyn**	**4.52**	**311**	P		**Pn**	**09 00 43.6**	**+1.3**
ARCES	**ARCESS Array B**	**5.24**	**339**	Pn		**Pn**	**09 00 51.8**	**-0.5**
comp=Z,0.2nm,0.3s,baz=152,slow=12,SNR=26								
ARCES				Sn		**Sn**	**09 01 52.6**	**-0.7**
comp=Z,0.3nm,0.3s,baz=157,slow=22,SNR=3.2								
ARCES				Lg		Lg	09 02 17.9	
comp=Z,0.8nm,0.3s,baz=154,slow=29,SNR=7.1								
SALU	**Saltoluokta**	**5.68**	**303**	*

MTBL	**Makushin Table**	**0.46**	**280**	P	**Pn**	**09 21 08.2**	**+0.3**
MREP	**Makushin Rep't**	**0.50**	**261**	P	**Pn**	**09 21 08.3**	**+0.1**
MGOD	**Makushin Gods**	**0.58**	**260**	P	**Pn**	**09 21 08.5**	**-0.5**
MCIR	**Makushin Cirqu**	**0.58**	**276**	P	**Pn**	**09 21 09.6**	**+0.6**
WESE	**West Dahl East**	**0.97**	**53**	P	**Pn**	**09 21 13.2**	**-0.1**
WESE				S	**Sn**	**09 21 27.8**	**+0.6**
WESN	**West Dahl Nort**	**1.03**	**49**	P	**Pn**	**09 21 14.2**	**+0.2**
OKFG	**Magazine Ridge**	**1.28**	**249**	P	**Pn**	**09 21 16.7**	**-0.4**
OKFG				S	**Sn**	**09 21 33.2**	**-0.7**
SSLW	**Shishaldin Wes**	**1.37**	**49**	P	**Pn**	**09 21 18.3**	**0.0**
OKSO	**Okmok South**	**1.44**	**249**	P	**Pn**	**09 21 18.6**	**-0.5**
OKSO				S	**Sn**	**09 21 36.7**	**-0.9**
BRPK	**Brown Peak**	**1.48**	**59**	P	**Pn**	**09 21 19.3**	**-0.3**
OKSP	**Okmok Steeple**	**1.56**	**247**	P	**Pn**	**09 21 20.9**	**+0.2**
FALS	**False Pass**	**1.75**	**56**	P	**Pn**	**09 21 23.6**	**+0.5**
DRIA	**Deer Island**	**2.39**	**62**	P	**Pn**	**09 21 32.0**	**+0.4**
DT1	**Dutton Round H**	**2.44**	**59**	P	**Pn**	**09 21 32.8**	**+0.4**
SDPT	**Sand Point**	**3.48**	**63**	P	**Pn**	**09 21 46.8**	**+0.4**
OHAK	**Old Harbor**	**7.90**	**60**	*e*Pn	**Pn**	**09 22 46.7**	**+0.1**
KDAK	**Kodiak Island**	**8.45**	**57**	P	**Pn**	**09 22 52.0**	**-2.2**
	1.1nm,0.3s,baz=217,slow=4.7,SNR=10						
KDAK				S	**Sn**	**09 24 22.9**	**-4.9**
	0.1nm,0.3s,baz=127,slow=20,SNR=2.2						
ILAR	**Eielson Array**	**14.52**	**34**	P	**Pn**	**09 24 16.3**	**+0.4**
	0.1nm,0.3s,baz=218,slow=9.8,SNR=6.9						
INK	**Imuvik**	**20.92**	**34**	P	**P**	**09 25 30.2**	**-0.3**
	0.6nm,0.4s,baz=231,slow=7.9,SNR=9.2						
YKA	**Yellowknife Ar**	**27.66**	**51**	P	**P**	**09 26 35.2**	**+0.4**
	0.2nm,0.4s,baz=275,slow=8.5,SNR=12						
TXAR	**Lajitas Array**	**50.69**	**93**	P	**P**	**09 29 48.4**	**+2.1**
	0.2nm,0.6s,baz=297,slow=4.4,SNR=4.4						
TXAR				pP	**pP**	**09 30 05.2**	**-0.3**
	0.2nm,0.8s,baz=289,slow=3.8,SNR=4.0						

ISCJB ***15*** *09:27:12.0±0.8,36°.52N±0°.04×28°.91E±0°.04, h9km±4km, Error ellipse: s-maj=7.5km s-min=4.8km az=17.4*
ISK ***15*** *09:27:12.4,36°.62N×28°.92E, h5km, ML2.3*
DDA ***15*** *09:27:12,36°.56N×28°.90E, h7km, MD2.8*
CSEM ***15*** *09:27:12.1±0.5,36°.52N×28°.93E, h12km, ML2.3, Error ellipse: s-maj=9.9km s-min=5.8km az=16.0*

ISC 15 09:27:11.5±1.2,36°.54N±0°.04×28°.90E±0°.03, h6km±8km, n30,σ1§20/47, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FETY	**Fethiye**	**0.18**	**58**	*e*PG	**Pg**	**09 27 15.2**	**+0.1**
FETY				*e*SG	**Sg**	**09 27 17.7**	**+0.3**
FETY	**Fethiye**	**0.18**	**58**	*e*Pg	**Pg**	**09 27 15.2**	**+0.1**
FETY				*e*Sg	**Sg**	**09 27 17.7**	**+0.3**
DALT	**Dalyan (Mudla)**	**0.31**	**317**	*e*PG	**Pb**	**09 27 18.8**	**-0.8**
DALT				*e*SG	**Sb**	**09 27 24.6**	**-0.3**
DALT	**Dalyan (Mudla)**	**0.31**	**317**	*e*Pg	**Pb**	**09 27 18.8**	**-0.8**
DALT				*e*Sg	**Sb**	**09 27 24.6**	**-0.3**
TURN	**Turunc**	**0.41**	**324**	*i* P	**Pn**	**09 27 22.9**	**-1.1**
TURN				*i* S	**Sb**	**09 27 32.0**	**+4.3**
TURN	**Turunc**	**0.41**	**324**	*i* P	**Pn**	**09 27 22.9**	**-1.1**
AKAS	**Kas**	**0.65**	**118**	*i* P	**Pg**	**09 27 23.5**	**-0.5**
AKAS				*i* S	**Sb**	**09 27 35.1**	**+0.4**
AKAS	**Kas**	**0.65**	**118**	*i* P	**Pg**	**09 27 23.5**	**-0.5**
AKAS				*i* S	**Sb**	**09 27 35.1**	**+0.4**
YER	**Yerkesik**	**0.77**	**320**	*e*PG	**Pb**	**09 27 27.3**	**-0.2**
YER	**Yerkesik**	**0.77**	**320**	*e*Pg	**Pb**	**09 27 27.3**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.78**	**38**	*e*PG	**Pb**	**09 27 27.3**	**-0.3**
GLHS				*e*SG	**Sb**	**09 27 38.4**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.78**	**38**	*e*Pg	**Pb**	**09 27 27.3**	**-0.3**
GLHS				*e*Sg	**Sb**	**09 27 38.4**	**-0.1**
ELL	**Elmali**	**0.84**	**75**	*e*PG	**Pn**	**09 27 29.4**	**-0.7**
ELL	**Elmali**	**0.84**	**75**	*e*Pg	**Pn**	**09 27 29.4**	**-0.7**
GOLH	**Golhisar**	**0.87**	**37**	*i* P	**Pg**	**09 27 28.0**	**-0.3**
GOLH				*i* S	**Sb**	**09 27 41.7**	**+0.4**
GOLH	**Golhisar**	**0.87**	**37**	*i* P	**Pg**	**09 27 28.0**	**-0.3**
GOLH				*i* S	**Sb**	**09 27 41.7**	**+0.4**
DAT	**Datca**	**1.08**	**280**	*e*PN	**Pn**	**09 27 34.0**	**+0.7**
DAT	**Datca**	**1.08**	**280**	*e*Pn	**Pn**	**09 27 34.1**	**+0.7**
DNZL	**Cakiroluk**	**1.15**	**6**	*i* P	**Pb**	**09 27 33.1**	**-1.0**
DNZL				*i* S	**Sn**	**09 27 50.0**	**-0.7**
DNZL	**Cakiroluk**	**1.15**	**6**	*i* P	**Pb**	**09 27 33.1**	**-1.0**
DNZL				*i* S	**Sn**	**09 27 50.0**	**-0.7**
DENT	**Denizli**	**1.22**	**5**	*e*PN	**Pg**	**09 27 35.0**	**+0.2**
DENT	**Denizli**	**1.22**	**5**	*e*Pn	**Pg**	**09 27 35.1**	**+0.2**
KORT	**Korkueli**	**1.25**	**68**	*i* P	**Pg**	**09 27 36.7**	**+1.1**
KORT				*i* S	**Sn**	**09 27 56.6**	**+3.5**
KORT	**Korkueli**	**1.25**	**68**	*i* P	**Pg**	**09 27 36.7**	**+1.1**
AYDN	**Tasoluk**	**1.38**	**324**	*i* P	**Pg**	**09 27 37.6**	**-0.5**
AYDN				*i* S	**Sg**	**09 27 58.2**	**+2.2**
AYDN	**Tasoluk**	**1.38**	**324**	*i* P	**Pg**	**09 27 37.6**	**-0.5**
AYDN				*i* S	**Sg**	**09 27 58.2**	**+2.2**
GCAM	**G?zelcaml?**	**1.76**	**312**	*i* P	**Pn**	**09 27 41.1**	**-1.6**
GCAM				*i* S	**Sb**	**09 28 04.9**	**-1.8**
GCAM	**G?zelcaml?**	**1.76**	**312**	*i* P	**Pn**	**09 27 41.1**	**-1.6**
KHAL	**Karahalli**	**1.89**	**14**	*i* P	Pn	09 27 40.9	-3.6
KHAL				*i* S	**Sn**	**09 28 08.6**	**0.0**
KHAL	**Karahalli**	**1.89**	**14**	*i* P	Pn	09 27 40.9	-3.6
KHAL				*i* S	**Sn**	**09 28 08.6**	**0.0**

NIED ***15*** *09:38:00,27°.00N×129°.90E, h8km, Mw4.0 Best double couple: M0 1.27000×10^15 NP1:φs 164.00000°, δ76.00000°, λ67.00000°. NP2:φs 45.00000°, δ27.00000°, λ148.00000°.*
ISCJB ***15*** *09:38:45.5±1.3,27°.01N±0°.03×129°.92E±0°.04, h24km±10km, mb3.6/10, Error ellipse: s-maj=5.8km s-min=4.4km az=36.5*
JMA ***15*** *09:38:46.4±0.1,27°.00N×129°.93E, h53km, M3.9*
IDC ***15*** *09:38:50.2±3.7,27°.01N×129°.93E, h40km±33km, mb3.5/10, mb1 3.8/14,mb1mx3.7/27, mbtmp3.6/14, ML3.6/4, Error ellipse: s-maj=24.9km s-min=18.7km az=98.0*

ISC 15 09:38:45.1±3.4,27°.01N±0°.04×129°.91E±0°.04, h8km±22km, n27,σ1§45/39, mb3.8/10, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**1.16**	**312**	P	**Pb**	**09 39 06.8**	**-0.5**
JTK				*e*S	**Sb**	**09 39 21.3**	**-1.2**
JZK	**Kikaishima**	**1.30**	**2**	P	**Pn**	**09 39 09.3**	**-0.3**
JZK				*e*S	**Sn**	**09 39 27.1**	**-0.1**
JAMN	**Amaminishikomi**	**1.40**	**332**	P	**Pn**	**09 39 09.8**	**-1.1**
JAMN				*e*S	**Sn**	**09 39 27.0**	**-2.5**
JAM	**Amami Oshima**	**1.43**	**349**	P	**Pn**	**09 39 10.6**	**-0.7**
JAM				*e*S	**Sn**	**09 39 27.9**	**-2.3**
JOW	**Kunigami**	**1.47**	**264**	P	**Pn**	**09 39 11.6**	**-0.3**
JOW				*e*S	**Sn**	**09 39 29.7**	**-1.7**
JMZ	**Minamidaito 2**	**1.67**	**135**	P	**Pn**	**09 39 13.3**	**-1.3**
JMZ				*e*S	**Sn**	**09 39 33.0**	**-3.1**
JIH	**Iheya**	**1.74**	**271**	P	**Pn**	**09 39 15.3**	**-0.2**
JIH				*e*S	**Sn**	**09 39 36.0**	**-1.9**
JJT2	**Tamagusuku 2**	**2.12**	**246**	P	**Pn**	**09 39 20.9**	**0.0**
JJT2				*e*S	**Sn**	**09 39 45.4**	**-2.0**
JAGN	**Aguni-jima**	**2.42**	**261**	P	**Pn**	**09 39 24.9**	**-0.1**
JAGN				*e*S	**Sn**	**09 39 52.5**	**-2.3**
JNN	**Nakanoshima**	**2.83**	**359**	P	**Pn**	**09 39 29.8**	**-0.7**
JNN				S	**Sn**	**09 40 02.6**	**-2.2**
JKE	**Kume jima 2**	**2.88**	**257**	P	**Pn**	**09 39 30.3**	**-1.0**
JKE				*e*S	**Sn**	**09 40 04.7**	**-1.4**
JKC	**Kuchinoerabu**	**3.45**	**4**	P	**Pn**	**09 39 38.6**	**-0.5**
JKC				*e*S	**Sn**	**09 40 17.6**	**-2.6**
JTN	**Tanegashima 3**	**3.75**	**14**	P	**Pn**	**09 39 42.8**	**-0.5**
JTN				S	**Sn**	**09 40 26.1**	**-1.6**
JNU	**Nakatsue**	**6.15**	**8**	Pn	**Pn**	**09 40 16.8**	**+0.5**
	7.6nm,0.3s,baz=225,slow=2.7,SNR=55						
KSRS	**Korea Array**	**10.55**	**351**	Pn	Pn	09 41 19.6	+3.0
	0.1nm,0.3s,baz=176,slow=15,SNR=5.0						
USRK	**Ussuriysk Arra**	**17.24**	**5**	P	**P**	**09 42 49.7**	**+2.0**
	0.3nm,0.3s,baz=176,slow=11,SNR=10						
ASAJ	**Asahikawa**	**19.91**	**28**	P	**Pn**	**09 43 17.9**	**-0.7**
	0.3nm,0.3s,baz=69,slow=20,SNR=5.5						
SONM	**Songino Array**	**27.76**	**325**	P	**P**	**09 44 35.8**	**+1.4**
	0.4nm,0.6s,baz=132,slow=8.9,SNR=3.9						
CMAR	**Chiang Mai Arr**	**29.74**	**260**	P	**P**	**09 44 53.5**	**+1.3**
	0.4nm,0.7s,baz=37,slow=8.8,SNR=5.4						
MKAR	**Makanchi Array**	**42.16**	**311**	P	**P**	**09 46 37.0**	**-1.0**
	0.3nm,0.6s,baz=92,slow=11,SNR=2.8						
ASAR	**Alice Springs**	**50.52**	**175**	P	**P**	**09 47 44.6**	**+0.7**
	0.7nm,0.5s,baz=6.0,slow=13,SNR=22						
STKA	**Stephens Creek**	**59.60**	**168**	P	**P**	**09 48 49.8**	**+0.3**
	0.9nm,0.7s,baz=33,slow=20,SNR=0.9						
ILAR	**Eielson Array**	**63.04**	**29**	P	**P**	**09 49 12.2**	**-0.2**
	0.5nm,0.9s,baz=270,slow=7.0,SNR=4.7						
FINES	**FINESS Array B**	**72.93**	**331**	P	**P**	**09 50 16.1**	**+1.5**
	2.1nm,0.9s,baz=72,slow=8.6,SNR=3.7						
YKA	**Yellowknife Ar**	**77.18**	**25**	P	**P**	**09 50 39.6**	**+0.5**
	0.5nm,0.8s,baz=298,slow=5.2,SNR=10						
BRTR	**Keskin Array B**	**77.74**	**308**	P	**P**	**09 50 42.9**	**-0.1**
	1.2nm,0.9s,baz=44,slow=5.5,SNR=4.4						
PDAR	**Pinedale Array**	**91.61**	**39**	P	**P**	**09 51 53.5**	**+0.3**
	0.5nm,0.8s,baz=69,slow=1.3,SNR=3.3						

ISK ***15*** *09:39:54.4,36°.89N×28°.10E, h20km, ML1.9*
ISCJB ***15*** *09:39:55.2±0.8,36°.90N±0°.05×28°.10E±0°.05, h19km±14km, Error ellipse: s-maj=8.4km s-min=6.3km az=163.9*
CSEM ***15*** *09:39:55.1±0.2,36°.90N×28°.08E, h17km±1km, ML1.9, Error ellipse: s-maj=4.8km s-min=3.2km az=177.0*
DDA ***15*** *09:39:55,36°.93N×28°.01E, h7km, MD2.6*

ISC 15 09:39:53.8±1.1,36°.83N±0°.04×28°.13E±0°.03, h14km±10km, n20,σ1§62/30, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.33**	**22**	*e*PG	**Pg**	**09 40 01.5**	**+0.8**
YER				*e*SG	**Sg**	**09 40 06.1**	**+0.7**
YER	**Yerkesik**	**0.33**	**22**	*e*Pg	**Pg**	**09 40 01.5**	**+0.8**
YER				*e*Sg	**Sg**	**09 40 06.1**	**+0.7**
TURN	**Turunc**	**0.39**	**83**	*i* P	**Pg**	**09 40 00.5**	**-1.1**
TURN				*i* S	**Sg**	**09 40 04.6**	**-2.3**
TURN	**Turunc**	**0.39**	**83**	*i* P	**Pg**	**09 40 00.5**	**-1.1**
TURN				*i* S	**Sg**	**09 40 04.6**	**-2.3**
DALT	**Dalyan (Mudla)**	**0.41**	**98**	*e*PG	**Pb**	**09 40 04.1**	**+1.2**
DALT	**Dalyan (Mudla)**	**0.41**	**98**	*e*Pg	**Pb**	**09 40 04.1**	**+1.2**
DAT	**Datca**	**0.45**	**258**	*e*PG	**Pb**	**09 40 03.9**	**+0.3**
DAT				*e*SG	**Sb**	**09 40 11.2**	**+1.1**
DAT	**Datca**	**0.45**	**258**	*e*Pg	**Pb**	**09 40 03.9**	**+0.3**
DAT				*e*Sg	**Sb**	**09 40 11.3**	**+1.1**
MLSB	**Milas**	**0.55**	**329**	*e*PG	**Pb**	**09 40 04.7**	**-0.5**
MLSB	**Milas**	**0.55**	**329**	*e*Pg	**Pb**	**09 40 04.7**	**-0.5**
BODT	**Bodrum**	**0.70**	**290**	*e*PG	**Pg**	**09 40 07.8**	**+0.4**
BODT	**Bodrum**	**0.70**	**290**	*e*Pg	**Pg**	**09 40 07.8**	**+0.4**
AYDN	**Tasoluk**	**0.86**	**347**	*i* P	Pb	09 40 05.9	-4.6
AYDN				*i* S	**Sb**	**09 40 19.4**	**-2.5**
AYDN	**Tasoluk**	**0.86**	**347**	*i* P	Pb	09 40 05.9	-4.6
AYDN				*i* S	**Sb**	**09 40 19.4**	**-2.5**
GCAM	**G?zelcaml?**	**1.13**	**321**	*i* P	**Pn**	**09 40 14.6**	**-0.5**
GCAM				*i* S	**Sb**	**09 40 27.7**	**-1.8**
GCAM	**G?zelcaml?**	**1.13**	**321**	*i* P	**Pn**	**09 40 14.6**	**-0.5**
GCAM				*i* S	**Sb**	**09 40 27.7**	**-1.8**
DNZL	**Cakiroluk**	**1.13**	**40**	*i* P	**Pg**	**09 40 16.5**	**+0.8**
DNZL				*i* S	**Sg**	**09 40 34.0**	**+3.5**
DNZL	**Cakiroluk**	**1.13**	**40**	*i* P	**Pg**	**09 40 16.5**	**+0.8**
DNZL				*i* S	**Sg**	**09 40 34.0**	**+3.5**
GOLH	**Golhisar**	**1.22**	**70**	*i* P	**Pb**	**09 40 17.7**	**+1.0**
GOLH				*i* S	Sg	09 40 40.4	+7.2
GOLH	**Golhisar**	**1.22**	**70**	*i* P	**Pb**	**09 40 17.7**	**+1.0**

IDC ***15*** *09:40:59.1±1.0,18°.37S×72°.14W, h43km±5km, mb4.2/3, mb1 4.3/6,mb1mx3.8/20, mbtmp4.3/6, ML4.4/3, MS3.1/3, Ms1 3.2/3, ms1mx2.9/30, Error ellipse: s-maj=37.4km s-min=14.4km az=170.0*
NEIC ***15*** *09:41:03.0, 17°.05S×72°.13W, h45km, MG4.2(ARE), After ARE.*
NEIC Felt [II] at Arequipa and Mollendo.

ISC 15 09:41:01.6±0.8,17°.5S±0°.1×72°.04W±0°.09, h42km±5km, h42km:pP-P, n24,σ0§75/24, mb4.5/3, 1D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	**1.13**	**28**	*i* P	Pn	09 41 19.1	-2.2
LPAZ	**La Paz**	**3.92**	**73**	*e*Pn	Pn	09 42 04.3	+4.4
LPAZ				*e*Sn	Sn	09 42 53.0	+7.9
LPAZ				S		09 42 54.4	
LPAZ	**La Paz**	**3.92**	**73**	P	Pn	09 42 04.3	+4.4
	11nm,0.3s,baz=255,slow=8.7,SNR=147						
LPAZ				S	Sn	09 42 54.4	+9.3
	3.5nm,0.3s,baz=166,slow=21,SNR=2.8						
LPAZ				LR	LR	09 43 54.1	
	comp=Z,210nm,21.0s,baz=292,slow=40						
NNA	**Nana**	**7.16**	**319**	*e*Pn	Pn	09 42 49.9	+6.0
	14nm,0.6s						
NNA				S	Sn	09 44 12.1	+8.2
NNA	**Nana**	**7.16**	**319**	P	Pn	09 42 50.6	+6.7
	4.5nm,0.3s,baz=140,slow=11,SNR=8.5						
NNA				S	Sn	09 44 12.1	+8.2
	4.0nm,0.3s,baz=221,slow=20,SNR=4.4						
SIV	**San Ignacio**	**10.61**	**84**	P	**Pn**	**09 43 31.9**	**+0.7**
SIV				S	**Sn**	**09 45 29.1**	**+0.3**
SIV	**San Ignacio**	**10.61**	**84**	P	**Pn**	**09 43 31.9**	**+0.7**
	1.8nm,0.3s,baz=282,slow=11,SNR=36						
SIV				S	**Sn**	**09 45 29.1**	**+0.3**
	0.2nm,0.3s,baz=306,slow=19,SNR=1.9						
SIV				LR	LR	09 48 04.6	
	comp=Z,139nm,20.2s,slow=39						
LCO	**Las Campanas**	**11.56**	**174**	*e*Pn	Pn	09 43 49.4	+5.0
LCO				*e*Sn	**Sn**	**09 45 52.3**	**+0.1**
SAML	**Samuel**	**12.08**	**47**	*e*Pn	Pn	09 43 48.6	-2.7
	6.0nm,0.8s						
SAML				Sn	Sn	09 45 49.6	-15
CPUP	**Villa Florida**	**16.24**	**125**	LR	LR	09 52 14.6	
	comp=Z,73nm,18.5s,baz=167,slow=43						
PLCA	**Paso Flores**	**23.22**	**177**	*e*P	P	09 46 12.0	+6.9
DBIC	**Dimbokro**	**70.54**	**76**	P	**P**	**09 52 12.1**	**-0.7**
DBIC	**Dimbokro**	**70.54**	**76**	P	**P**	**09 52 12.1**	**-0.7**
	4.1nm,0.6s,baz=228,slow=7.1,SNR=7.7						
TOA0	**Torodi Ar. Sit**	**78.87**	**72**	*e*P	**P**	**09 52 59.9**	**-1.1**
TORD	**Torodi Ar. Bea**	**78.87**	**72**	P	**P**	**09 53 00.1**	**-0.9**
TORD				pP	**pP**	**09 53 13.1**	**-0.5**
TORD				sP	**sP**	**09 53 17.9**	**-0.6**
TORD	**Torodi Ar. Bea**	**78.87**	**72**	P	**P**	**09 53 00.1**	**-0.9**
	4.1nm,0.8s,baz=252,slow=5.3,SNR=32						
TORD				pP	**pP**	**09 53 13.1**	**-0.5**
	1.0nm,0.5s,baz=258,slow=5.3,SNR=4.0						
TORD				sP	**sP**	**09 53 17.9**	**-0.6**
	3.1nm,0.9s,baz=255,slow=5.4,SNR=5.9						
YKA	**Yellowknife Ar**	**86.43**	**342**	P	**P**	**09 53 39.2**	**-0.1**
YKA				pP	**pP**	**09 53 52.1**	**+0.1**
YKA	**Yellowknife Ar**	**86.43**	**342**	P	**P**	**09 53 39.2**	**-0.1**
	0.5nm,0.4s,baz=138,slow=5.1,SNR=33						
YKA				pP	**pP**	**09 53 52.1**	**+0.1**
	0.4nm,0.6s,baz=135,slow=5.1,SNR=6.2						
MKAR	**Makanchi Array**	**143.88**	**30**	PKP	PKPab	10 00 30.1	+0.5
MKAR	**Makanchi Array**	**143.88**	**30**	PKP	PKPab	10 00 30.1	+0.5
	0.3nm,0.5s,baz=324,slow=3.1,SNR=3.9						
MJAR	**Matsushiro Arr**	**147.23**	**311**	PKPbc	**PKPdf**	**10 00 39.0**	**+0.5**
MJAR	**Matsushiro Arr**	**147.23**	**311**	PKPbc	**PKPdf**	**10 00 39.0**	**+0.5**
	2.0nm,0.8s,baz=127,slow=1.7,SNR=5.1						
SONM	**Songino Array**	**149.68**	**2**	PKPbc	**PKPbc**	**10 00 48.0**	**+1.0**
SONM				pPKPbc	**pPKPbc**	**10 01 01.2**	**+1.1**
SONM	**Songino Array**	**149.68**	**2**	PKPbc	**PKPbc**	**10 00 48.0**	**+1.0**
	0.7nm,0.6s,baz=308,slow=1.7,SNR=6.5						
SONM				pPKPbc	**pPKPbc**	**10 01 01.2**	**+1.1**
	0.8nm,0.6s,baz=319,slow=2.4,SNR=5.9						

NIED ***15*** *09:43:00,27°.00N×129°.90E, h8km, Mw4.6 Best double couple: M0 7.62000×10^15 NP1:φs 160.00000°, δ79.00000°, λ77.00000°. NP2:φs 29.00000°, δ17.00000°, λ138.00000°.*
IDC ***15*** *09:43:22.9±0.8,27°.04N×129°.93E, h0km, mb4.0/16, mb1 4.2/20, mb1mx4.2/28, mbtmp4.1/20, ML3.5/4, MS3.5/6, Ms1 3.6/6, ms1mx3.1/52, Error ellipse: s-maj=20.3km s-min=17.4km az=115.0*
JMA ***15*** *09:43:25.0±0.1,26°.99N×129°.93E, h42km, M4.3*
MOS ***15*** *09:43:26.0±1.1,27°.01N×130°.01E, h33km, mb4.4/18, Error ellipse: s-maj=12.8km s-min=7.2km az=93.0*
NEIC ***15*** *09:43:27.1±0.5,26°.96N×129°.83E, h30km, mb4.5/6, MW4.5(NIED), Error ellipse: s-maj=12.2km s-min=7.5km az=135.0*

ISC 15 09:43:23.2±1.7,27°.00N±0°.04×129°.91E±0°.04, h4km±10km, n111,σ1§56/135, mb4.3/35, MS3.4/5, 4C-1D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**1.16**	**313**	P	**Pg**	**09 43 45.5**	**0.0**
JTK				S	**Sg**	**09 44 00.3**	**-0.2**
JZK	**Kikaishima**	**1.31**	**2**	P	**Pn**	**09 43 48.0**	**-0.3**
JZK				S	**Sg**	**09 44 05.3**	**-0.1**
JAMN	**Amaminishikomi**	**1.40**	**332**	P	**Pn**	**09 43 48.7**	**-0.8**
JAMN				S	**Sb**	**09 44 06.1**	**-2.0**
JAM	**Amami Oshima**	**1.43**	**349**	P	**Pn**	**09 43 49.3**	**-0.7**
JAM				S	**Sb**	**09 44 06.7**	**-2.4**
JOW	**Kunigami**	**1.47**	**264**	*e*Pn	**Pn**	**09 43 50.3**	**-0.2**
JOW				*e*Sn	**Sb**	**09 44 08.6**	**-1.6**
JOW	**Kunigami**	**1.47**	**264**	P	**Pn**	**09 43 50.3**	**-0.2**
JOW				S	**Sb**	**09 44 08.3**	**-1.8**
JMZ	**Minamidaito 2**	**1.66**	**135**	P	**Pn**	**09 43 52.0**	**-1.1**
JMZ				S	**Sn**	**09 44 11.6**	**-3.3**
JIH	**Iheya**	**1.73**	**272**	P	**Pn**	**09 43 54.0**	**-0.1**
JIH				S	**Sn**	**09 44 14.8**	**-1.8**
JJT2	**Tamagusuku 2**	**2.12**	**247**	P	**Pn**	**09 43 59.5**	**+0.1**
JJT2				S	**Sn**	**09 44 24.6**	**-1.5**
JAGN	**Aguni-jima**	**2.42**	**261**	P	**Pn**	**09 44 03.1**	**-0.4**
JAGN				S	**Sn**	**09 44 31.9**	**-1.7**
JNN	**Nakanoshima**	**2.83**	**359**	P	**Pn**	**09 44 08.6**	**-0.6**
JNN				S	**Sn**	**09 44 39.7**	**-4.1**
JKE	**Kume jima 2**	**2.88**	**257**	P	**Pn**	**09 44 09.2**	**-0.6**
JKE				S	**Sn**	**09 44 43.3**	**-1.5**
JOGS	**Gusukube**	**4.63**	**242**	P	**Pn**	**09 44 33.2**	**-0.7**
JOGS				S	**Sn**	**09 45 24.8**	**-3.3**
JMJ	**Miyako jima 2**	**4.69**	**243**	P	**Pn**	**09 44 34.3**	**-0.5**
JTJ	**Tarama**	**5.25**	**245**	P	Pn	09 44 31.3	-11
JTJ				*e*S	**Sn**	**09 45 37.9**	**-5.5**
JIJ	**Ishigaki jima**	**5.83**	**245**	P	**Pn**	**09 44 48.4**	**-2.0**
JIJ				*e*S	**Sn**	**09 45 54.8**	**-2.9**
JKRS	**Kuro-shima**	**5.99**	**244**	P	**Pn**	**09 44 51.4**	**-1.3**
JNU	**Nakatsue**	**6.16**	**8**	Pn	**Pn**	**09 44 55.2**	**+0.2**
	5.2nm,0.8s						
JNU				Sn	**Sn**	**09 46 02.1**	**-3.8**
JNU				*e*Sn	**Sn**	**09 46 03.6**	**-2.3**
JNU	**Nakatsue**	**6.16**	**8**	Pn	**Pn**	**09 44 55.2**	**+0.2**
	5.7nm,0.3s,baz=195,slow=2.3,SNR=39						
JNU				Sn	**Sn**	**09 46 02.1**	**-3.8**
	baz=176,slow=14,SNR=2.3						
YHNB	**Yeheng**	**8.03**	**255**	*e*Pn	**Pn**	**09 45 20.3**	**-0.5**
	92nm,0.8s						
YHNB				*e*Sn	**Sn**	**09 46 51.3**	**-0.8**
YULB	**Yu-li**	**8.59**	**247**	*e*Pn	Pn	09 45 24.0	-4.3
	15nm,0.6s						
YULB				*e*Sn	Sn	09 46 58.3	-7.4
SSLB	**Suanglung**	**8.71**	**250**	*e*Pn	**Pn**	**09 45 27.7**	**-2.3**
	29nm,0.6s						
SSLB				*e*Sn	**Sn**	**09 47 04.0**	**-4.7**
TPUB	**Ta-pu**	**9.18**	**248**	*e*Pn	**Pn**	**09 45 34.1**	**-2.3**
	24nm,0.8s						
KSAR	**Wonju Array Be**	**10.55**	**351**	Pn	**Pn**	**09 45 57.7**	**+2.5**
KSRS	**Korea Array**	**10.56**	**351**	Pn	**Pn**	**09 45 57.7**	**+2.4**
	0.2nm,0.3s,baz=170,slow=13,SNR=10.0						
MJAR	**Matsushiro Arr**	**11.84**	**35**	Pn	**Pn**	**09 46 13.3**	**+0.5**
MJAR	**Matsushiro Arr**	**11.84**	**35**	Pn	**Pn**	**09 46 13.3**	**+0.5**
	0.1nm,0.3s,baz=169,slow=11,SNR=3.2						
VLA	**Vladivostok**	**16.16**	**5**	P	**Pn**	**09 47 12.1**	**+0.9**
VLA				S	**Sn**	**09 50 12.3**	**+1.5**
VLA				pmax	pmax		
	comp=Z,28nm,0.9s						
USRK	**Ussuriysk Arra**	**17.25**	**5**	P	**P**	**09 47 26.0**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=177,slow=10,SNR=20						
ERM	**Erimo**	**18.50**	**33**	*e*P	**P**	**09 47 40.3**	**0.0**
ASAJ	**Asahikawa**	**19.91**	**28**	P	**P**	**09 47 55.5**	**-0.3**
ASAJ	**Asahikawa**	**19.91**	**28**	P	**P**

AS31	**Alice Springs**	**50.52**	**175**	P	**P**	**09 52 22.4**	**-0.2**
ASAR	**Alice Springs**	**50.52**	**175**	P	**P**	**09 52 23.4**	**+0.7**
ASAR				PcP	**PcP**	**09 53 41.1**	**+0.4**
ASAR	**Alice Springs**	**50.52**	**175**	P	**P**	**09 52 23.4**	**+0.7**
	comp=Z,3.0nm,0.9s,baz=1.1,slow=8.1,SNR=26						
ASAR				PcP	**PcP**	**09 53 41.1**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=359,slow=4.4,SNR=3.1						
BVAR	**Borovoye Array**	**50.71**	**318**	P	**P**	**09 52 26.0**	**+2.1**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR				MLR	MLR		
	comp=Z,185nm,18.8s						
BVAR	**Borovoye Array**	**50.71**	**318**	P	**P**	**09 52 26.0**	**+2.1**
BVAR	**Borovoye Array**	**50.71**	**318**	P	**P**	**09 52 26.0**	**+2.1**
	comp=Z,1.7nm,0.7s,baz=99,slow=9.3,SNR=9.0						
BVAR				LR	LR	10 15 52.4	
	comp=Z,185nm,18.8s,baz=95,slow=38						
BRVK	**Borovoye**	**50.78**	**318**	*i* P	**P**	**09 52 25.7**	**+1.3**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TNA	**Tin City**	**54.27**	**27**	*eP*	**P**	**09 52 51.8**	**+1.8**
	comp=Z,8.4nm,1.0s						
SVE	**Sverdlovsk**	**56.58**	**322**	*eP*	**P**	**09 53 08.3**	**+1.5**
SVE				pmax	pmax		
	comp=Z,18nm,0.7s						
ABKAR	**Akbulak array**	**57.22**	**313**	*eP*	**P**	**09 53 12.6**	**+1.1**
	comp=Z,1.2nm,0.7s						
ARU	**Arti**	**57.72**	**321**	*d iP*	P	09 53 08.3	-6.6
ARU				S	S	10 01 04.6	-10
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ILAR	**Eielson Array**	**63.05**	**29**	P	**P**	**09 53 50.4**	**-0.9**
ILAR	**Eielson Array**	**63.05**	**29**	P	**P**	**09 53 50.4**	**-0.9**
	comp=Z,1.0nm,0.9s,baz=265,slow=5.8,SNR=8.9						
MENT	**Mentasta**	**64.70**	**30**	*eP*	**P**	**09 54 02.4**	**+0.3**
TMCR	**Tamitsa**	**66.85**	**332**	*eP*	P	09 54 09.3	-6.6
TMCR				pmax	pmax		
	comp=Z,44nm,1.0s						
ZEI	**Tsey**	**69.44**	**308**	*eP*	**P**	**09 54 32.4**	**-0.5**
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KBZ	**Khabaz**	**69.83**	**310**	P	**P**	**09 54 38.1**	**+3.1**
KBZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KBZ	**Khabaz**	**69.83**	**310**	P	**P**	**09 54 38.1**	**+3.1**
KBZ	**Khabaz**	**69.83**	**310**	P	**P**	**09 54 38.1**	**+3.1**
	comp=Z,9.9nm,0.9s,baz=11,slow=0.7,SNR=13						
KIV	**Kislovodsk**	**69.91**	**310**	*eP*	**P**	**09 54 36.4**	**+0.8**
KIV				pmax	pmax		
	comp=Z,12nm,0.9s						
OBN	**Obninsk**	**70.14**	**322**	P	**P**	**09 54 38.0**	**+1.4**
OBN				pmax	pmax		
	comp=Z,9.0nm,1.4s						
FINES	**FINESS Array B**	**72.93**	**331**	P	**P**	**09 54 54.7**	**+1.3**
FINES	**FINESS Array B**	**72.93**	**331**	P	**P**	**09 54 54.7**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=79,slow=10,SNR=4.8						
AKASG	**Malin Array Be**	**75.92**	**320**	P	**P**	**09 55 11.2**	**+0.2**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	**Malin Array Be**	**75.92**	**320**	P	**P**	**09 55 11.2**	**+0.2**
AKASG	**Malin Array Be**	**75.92**	**320**	P	**P**	**09 55 11.2**	**+0.2**
	comp=Z,2.8nm,0.9s,baz=58,slow=5.8,SNR=5.4						
YKA	**Yellowknife Ar**	**77.19**	**25**	P	**P**	**09 55 18.0**	**0.0**
YKA	**Yellowknife Ar**	**77.19**	**25**	P	**P**	**09 55 18.0**	**0.0**
	comp=Z,1.2nm,0.9s,baz=300,slow=5.5,SNR=18						
BRTR	**Keskin Array B**	**77.74**	**308**	P	**P**	**09 55 22.1**	**+0.4**
BRTR	**Keskin Array B**	**77.74**	**308**	P	**P**	**09 55 22.1**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=98,slow=5.4,SNR=7.7						
NB2	**NORSAR Subarra**	**79.28**	**334**	P	**P**	**09 55 29.0**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=52,slow=5.3						
NOA	**NORSAR Array B**	**79.28**	**334**	P	**P**	**09 55 29.0**	**-0.7**
NOA	**NORSAR Array B**	**79.28**	**334**	P	**P**	**09 55 29.0**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=50,slow=5.4,SNR=4.7						
SUMG	**Summit**	**80.37**	**356**	*eP*	**P**	**09 55 36.5**	**+0.7**
SUMG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SUMG	**Summit**	**80.37**	**356**	*eP*	**P**	**09 55 36.5**	**+0.7**
	comp=Z,9.1nm,0.9s						
SUMG	**Summit**	**80.37**	**356**	*i* P	**P**	**09 55 36.3**	**+0.5**
	comp=Z,8.1nm,1.0s						
GERES	**GERESS Array B**	**85.49**	**324**	P	**P**	**09 56 03.9**	**+1.5**
GERES	**GERESS Array B**	**85.49**	**324**	P	**P**	**09 56 03.9**	**+1.5**
	comp=Z,0.3nm,0.2s,baz=48,slow=2.0,SNR=4.3						
FFC	**Flin Flon**	**87.23**	**27**	*i* P	**P**	**09 56 11.7**	**+1.0**
PDAR	**Pinedale Array**	**91.62**	**39**	P	**P**	**09 56 33.0**	**+1.0**
PDAR	**Pinedale Array**	**91.62**	**39**	P	**P**	**09 56 33.0**	**+1.0**
	comp=Z,1.1nm,0.9s,baz=336,slow=3.3,SNR=6.8						

CSEM ***15*** *10:12:33.0,42°.33N×13°.45E,h10km,MD2.0/11,After ROM*

ROM 15 10:12:33.0±0.1,42°.33N×13°.45E,h10km,Md2.0/11, Ml1.7/9,Error ellipse: s-maj=1.2km s-min=0.9km az=54.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**299**	Pg	Pg	10 12 35.4	+0.4
AQU				Sg	Sg	10 12 36.6	+0.2
	673nm,0.3s						
AQU	**L'Aquila**	**0.04**	**299**	Pg	Pg	10 12 35.4	+0.4
AQU				Sg	Sg	10 12 36.6	+0.2
	673nm,0.3s						
FAGN	**Fagnano**	**0.12**	**124**	Pg	Pg	10 12 36.7	+0.8
FAGN				Sg	Sg	10 12 38.6	+0.6
	667nm,0.3s						
FAGN	**Fagnano**	**0.12**	**124**	Pg	Pg	10 12 36.7	+0.8
FAGN				Sg	Sg	10 12 38.6	+0.6
	667nm,0.3s						
CAMP	**Campotosto**	**0.20**	**351**	Pg	Pg	10 12 38.3	+0.8
CAMP				Sg	Sg	10 12 41.7	+1.2
	61nm,0.6s						
CAMP	**Campotosto**	**0.20**	**351**	Pg	Pg	10 12 38.3	+0.8
CAMP				Sg	Sg	10 12 41.7	+1.2
	61nm,0.6s						
FIAM	**Fiamignano**	**0.26**	**255**	Pg	Pg	10 12 38.7	+0.3
FIAM				Sg	Sb	10 12 43.5	-1.0
	66nm,0.3s						
FIAM	**Fiamignano**	**0.26**	**255**	Pg	Pg	10 12 38.7	+0.3
FIAM				Sg	Sb	10 12 43.5	-1.0
	66nm,0.3s						
VCEL	**Villa Celiera**	**0.29**	**78**	Pg	Pb	10 12 39.9	-0.7
VCEL				Sg	Sb	10 12 44.5	-1.2
	131nm,0.3s						
VCEL	**Villa Celiera**	**0.29**	**78**	Pg	Pb	10 12 39.9	-0.7
VCEL				Sg	Sb	10 12 44.5	-1.2
	131nm,0.3s						
TERO	**Teramo**	**0.31**	**21**	Pg	Pg	10 12 39.8	+0.5
TERO				Sg	Sg	10 12 44.7	+1.1
	67nm,0.4s						
TERO	**Teramo**	**0.31**	**21**	Pg	Pg	10 12 39.8	+0.5
TERO				Sg	Sg	10 12 44.7	+1.1
	67nm,0.4s						
PTQR	**Pietraquaria**	**0.31**	**187**	Pg	Pg	10 12 39.9	+0.5
PTQR				Sg	Sb	10 12 45.1	-1.0
	14nm,0.3s						
PTQR	**Pietraquaria**	**0.31**	**187**	Pg	Pg	10 12 39.9	+0.5
PTQR				Sg	Sb	10 12 45.1	-1.0
	14nm,0.3s						
INTR	**Introdacqua**	**0.47**	**134**	Pg	Pg	10 12 41.7	-0.5
INTR				Sg	Sb	10 12 49.7	-0.8
	56nm,0.5s						
INTR	**Introdacqua**	**0.47**	**134**	Pg	Pg	10 12 41.7	-0.5
INTR				Sg	Sb	10 12 49.7	-0.8
	56nm,0.5s						
VVLD	**Villa Vallelon**	**0.48**	**165**	Pg	Pb	10 12 43.3	-0.4
	38nm,0.4s						
VVLD	**Villa Vallelon**	**0.48**	**165**	Pg	Pb	10 12 43.3	-0.4
	38nm,0.4s						
NRCA	**Norcia**	**0.56**	**334**	Pg	Pg	10 12 43.5	-0.5
NRCA				Sg	Sb	10 12 53.0	-0.2
	23nm,0.1s						
NRCA	**Norcia**	**0.56**	**334**	Pg	Pg	10 12 43.5	-0.5
NRCA				Sg	Sb	10 12 53.0	-0.2
	23nm,0.1s						
LPEL	**Lama dei Pelig**	**0.61**	**118**	Pg	Pg	10 12 45.3	+0.3
LPEL				Sg	Sb	10 12 54.3	-0.4
	31nm,0.2s						
LPEL	**Lama dei Pelig**	**0.61**	**118**	Pg	Pg	10 12 45.3	+0.3
LPEL				Sg	Sb	10 12 54.3	-0.4
	31nm,0.2s						

STR ***15*** *10:19:51.9±0.0,11°.26N×59°.40E,Mb5.5,Ms5.1,Error ellipse: s-maj=0.0km s-min=0.0km az=109.0*

BJI ***15*** *10:19:54.9,11°.63N×57°.39E,h10km,mB5.6/43,mb5.2/57, Ms5.4/64,Ms7 5.2/59*

IDC ***15*** *10:20:02.8±0.4,12°.28N×58°.27E,h0km,mb4.8/31, mb1 4.9/32,mb1mx4.8/34,mbtmp4.8/32,ML4.6/1,MS4.9/34, Ms1 4.9/34,ms1mx4.9/39,Error ellipse: s-maj=12.8km s-min=11.1km az=153.0*

ISCJB ***15*** *10:20:03.1±0.6,12°.32N±0°.02×58°.08E±0°.02,h11km±3km, mb5.3/214,MS5.1/217,Error ellipse: s-maj=4.0km s-min=2.9km az=10.7*

NEIC ***15*** *10:20:04.6±0.2,12°.35N×58°.07E,h10km,mb5.6/101, MS5.1/134,MW5.7,MW5.6,Error ellipse: s-maj=5.5km s-min=4.0km az=204.0,Moment Tensor Solution. s28 Moment tensor: Scale 10^17Nm; Mrr=0.12; Mθθ=-2.49; Mφφ=2.37; Mrθ=0.80; Mθφ=-2.22; Mφr=0.04; Best double couple: M0=3.40000×10^17 NP1:φs=23.00000°,δ77.00000°, λ=-4.00000°. NP2:φs=114.00000°,δ86.00000°, λ=-167.00000°. Principal axes: T 3.2700, Plg6.0000°, Azm248.0000°; N 0.2400, Plg76.0000°, Azm130.0000°; P -3.5000, Plg11.0000°, Azm339.0000°;*

CSEM ***15*** *10:20:04.9±0.1,12°.29N×58°.13E,h10km,mb5.4/99,Ms5.1, Mw5.7 Error ellipse: s-maj=5.5km s-min=5.0km az=18.0*

GCMT ***15*** *10:20:05.1±0.1,12°.35N×57°.98E,h17km,MW5.7,Moment Tensor Solution. s100,c188; s57,c64; Moment tensor: Scale 10^17Nm; Mrr=0.13±.04; Mθθ-2.70±.04; Mφφ2.57±.04; Mrθ 1.10±.11; Mθφ-2.74±.03; Mφr-0.90±.11; Best double couple: M0=4.10000×10^17 NP1:φs=203.00000°,δ71.00000°, λ6.00000°. NP2:φs=111.00000°,δ84.00000°,λ161.00000°. Principal axes: T 4.1400, Plg18.0000°, Azm65.0000°; N -0.1600, Plg70.0000°, Azm276.0000°; P -3.9800, Plg10.0000°, Azm159.0000°; Data Used: II IU CN IC G. Surface waves: sta=108, comp=231, per= 50.*

TEH ***15*** *10:20:05.0,12°.36N×58°.09E,h10km,ML5.6*

MOS ***15*** *10:20:06.1±1.1,12°.33N×58°.04E,h33km,mb5.7/79, MS5.0/52,Error ellipse: s-maj=6.3km s-min=3.3km az=116.2*

DJA ***15*** *10:20:12.8±2.9,12°.N±7°×5°.8E±°,h70km±32km,M5.4/10, mB5.9/10,mb5.1/10,Mw(mB)5.5/10*

DHMR ***15*** *10:20:16.3±1.5,13°.50N×57°.78E,h68km±999km,mb5.7*

ISC 15 10:20:05.8±0.3,12°.35N±0°.04×58°.16E±0°.03,h16km±1km, h16km:pP-P,n1268,σ1949/1331,mb5.4/215,MS5.1/218, 222C-108D,Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RBK	**Rabkut**	**6.40**	**324**	Pn	**Pn**	**10 21 40.6**	**+1.1**
	SNR=123						
RBK	**Rabkut**	**6.40**	**324**	P	**Pn**	**10 21 40.6**	**+1.1**
	SNR=123						
ABTO	**Aybut**	**6.85**	**317**	Pn	**Pn**	**10 21 47.3**	**+1.6**
	SNR=192						
ABTO	**Aybut**	**6.85**	**317**	P	**Pn**	**10 21 47.3**	**+1.6**
	SNR=192						
MUKL	**Al Mukalla**	**9.13**	**284**	*i* P	**Pn**	**10 22 15.4**	**-1.5**
MUKL				*i* S	Sn	10 23 50.3	-9.0
JMDO	**Jabal Madar**	**9.97**	**360**	Pn	**Pn**	**10 22 28.4**	**-0.1**
	SNR=364						
JMDO	**Jabal Madar**	**9.97**	**360**	P	**Pn**	**10 22 28.4**	**-0.1**
	SNR=364						
WBK	**Wadi Bani Khal**	**10.24**	**4**	Pn	**Pn**	**10 22 32.7**	**+0.6**
	SNR=43						
WBK	**Wadi Bani Khal**	**10.24**	**4**	P	**Pn**	**10 22 32.7**	**+0.6**
	SNR=43						
BSYO	**Bisya**	**10.37**	**355**	P	**Pn**	**10 22 34.7**	**+0.8**
BSY	**Bisya**	**10.38**	**355**	⇑Pn	**Pn**	**10 22 34.7**	**+0.5**
SMDO	**Samad**	**10.65**	**359**	⇓Pn	**Pn**	**10 22 38.0**	**0.0**
	SNR=79						
SMDO	**Samad**	**10.65**	**359**	P	**Pn**	**10 22 38.0**	**0.0**
	SNR=79						
ARQ	**Araqi**	**11.04**	**352**	⇓Pn	**Pn**	**10 22 44.2**	**+1.0**
	SNR=105						
ARQ	**Araqi**	**11.04**	**352**	P	**Pn**	**10 22 44.2**	**+1.0**
	SNR=105						
HOQ	**Hoqain**	**11.21**	**356**	⇓Pn	**Pn**	**10 22 45.9**	**+0.5**
	SNR=27						
HOQ	**Hoqain**	**11.21**	**356**	P	**Pn**	**10 22 45.9**	**+0.5**
	SNR=27						
BDHA	**Al Bayda'**	**12.37**	**279**	*eP*	**Pn**	**10 23 02.3**	**+0.7**
BDHA				AMb	AMB	10 23 03.8	
	comp=Z,462nm,1.9s						
BDHA	**Al Bayda'**	**12.37**	**279**	*eP*	**Pn**	**10 23 02.3**	**+0.7**
	comp=Z,231nm,1.9s						
ASHO	**Ashiyiah**	**12.43**	**351**	⇑Pn	**Pn**	**10 23 02.7**	**+0.5**
	SNR=76						
ASHO	**Ashiyiah**	**12.43**	**351**	P	**Pn**	**10 23 02.7**	**+0.5**
	SNR=76						
ASUD	**Al Ashush, Dub**	**12.51**	**348**	⇑Pn	**Pn**	**10 23 03.5**	**+0.3**
	SNR=17						
ASUD	**Al Ashush, Dub**	**12.51**	**348**	P	**Pn**	**10 23 03.5**	**+0.3**
	SNR=17						
HATD	**Hatta, Dubai**	**12.56**	**351**	⇑Pn	**Pn**	**10 23 04.5**	**+0.6**
	SNR=27						
HATD	**Hatta, Dubai**	**12.56**	**351**	P	**Pn**	**10 23 04.5**	**+0.6**
	SNR=27						
FAQ	**Al Faqa, Dubai**	**12.57**	**349**	P	**Pn**	**10 23 03.6**	**-0.5**
	SNR=34						
LBOS		**12.67**	**278**	⇑*eP*	**Pn**	**10 23 05.8**	**+0.1**
LBOS				*i* S	Sn	10 25 17.3	-9.4
NAZ	**Nazwa, Dubai**	**12.80**	**350**	⇑Pn	**Pn**	**10 23 07.7**	**+0.6**
	SNR=43						
NAZ	**Nazwa, Dubai**	**12.80**	**350**	P	**Pn**	**10 23 07.7**	**+0.6**
	SNR=43						
ADEN	**Aden**	**12.87**	**273**	*i* P	**Pn**	**10 23 09.3**	**+1.2**
ADEN	**Aden**	**12.87**	**273**	*i* P	**Pn**	**10 23 09.4**	**+1.2**
BANOM	**Banah**	**13.62**	**353**	⇑Pn	**Pn**	**10 23 18.3**	**-0.1**
	SNR=9.4						
BANOM	**Banah**	**13.62**	**353**	P	**Pn**	**10 23 18.3**	**-0.1**
	SNR=9.4						
TRBA	**At Turbah**	**13.73**	**275**	*i* P	**Pn**	**10 23 19.9**	**-0.2**
UDYN	**Al 'Udayn**	**13.92**	**278**	*i* P	**Pn**	**10 23 22.0**	**-0.7**
ATD	**Arta Tunnel**	**15.01**	**269**	Pn	**Pn**	**10 23 36.8**	**-0.7**
ATD	**Arta Tunnel**	**15.01**	**269**	Pn	**Pn**	**10 23 36.8**	**-0.7**
	comp=Z,2.4nm,0.3s,baz=81,slow=7.9,SNR=45						
ATD				LR	LR	10 27 31.2	
	comp=Z,3μm,21.1s,baz=88,slow=30						
ATD	**Arta Tunnel**	**15.01**	**269**	Pn	**Pn**	**10 23 36.8**	**-0.7**
IBND	**Bandar-abas**	**15.10**	**354**	*eP*	**Pn**	**10 23 37.0**	**-1.6**
GOA	**Goa**	**15.52**	**77**	*i*⇑*eP*	**Pn**	**10 23 43.0**	**-1.2**
POO	**Poona**	**16.32**	**66**	*i*⇓*x*	**Pn**	**10 23 51.0**	**-3.5**
	comp=Z,20nm,1.5s						
MSEY	**Mahe Island**	**17.12**	**189**	*e*Pn	**Pn**	**10 24 02.6**	**-2.0**
	comp=Z,374nm,1.5s						
MSEY				*e*S	**S**	**10 27 26.7**	**+2.5**
MSEY	**Mahe Island**	**17.12**	**189**	Pn	**Pn**	**10 24 04.7**	**+0.2**
	SNR=12						
MSEY	**Mahe Island**	**17.12**	**189**	Pn	**Pn**	**10 24 04.8**	**+0.2**
	comp=Z,619nm,1.4s,SNR=14						
MSEY	**Mahe Island**	**17.12**	**189**	Pn	**Pn**	**10 24 04.7**	**+0.2**
	SNR=12						
DESE	**Dese**	**18.18**	**268**	*eP*	**P**	**10 24 19.8**	**+1.5**
DESE				*e*S	**S**	**10 27 48.0**	**+1.7**
QRN	**Al-Qurain**	**18.91**	**331**	*eP*	**P**	**10 24 23.4**	**-2.5**
QRN				AMb	AMB	10 24 36.2	
	comp=Z,1μm,1.9s						
QRN	**Al-Qurain**	**18.91**	**331**	*eP*	**P**	**10 24 23.0**	**-2.8**
QRN				AMb	AMB	10 24 32.9	
	comp=Z,784nm,2.1s						
RDF	**Al-Radifah**	**19.23**	**331**	*eP*	**P**	**10 24 27.4**	**-2.0**
RDF				AMb	AMB	10 24 37.6	
	comp=Z,1μm,1.9s						
RDF	**Al-Radifah**	**19.23**	**331**	*eP*	**P**	**10 24 27.0**	**-2.4**
RDF				AMb	AMB	10 24 37.6	
	comp=Z,1μm,1.9s						
RDF	**Al-Radifah**	**19.23**	**331**	*eP*	**P**	**10 24 27.4**	**-2.0**
	comp=Z,1μm,1.9s						
IMEH	**Mehriz**	**19.23**	**351**	*eP*	**Pn**	**10 24 30.3**	**-0.4**
IMEH	**Mehriz**	**19.23**	**351**	*eP*	**Pn**	**10 24 30.3**	**-0.4**
IBAF	**Bafgh**	**19.30**	**353**	*eP*	**P**	**10 24 29.6**	**-0.7**
IBAF	**Bafgh**	**19.30**	**353**	*eP*	**P**	**10 24 29.6**	**-0.7**
KBD	**Kabd**	**19.38**	**331**	*eP*	**P**	**10 24 28.3**	**-2.6**
KBD				AMb	AMB	10 24 39.2	
	comp=Z,677nm,1.7s						
KBD	**Kabd**	**19.38**	**331**	*eP*	**P**	**10 24 28.1**	**-2.9**
KBD				AMb	AMB	10 24 39.2	
	comp=Z,676nm,1.7s						
NAY	**Al-Naaiem**	**19.65**	**331**	*eP*	**P**	**10 24 31.4**	**-2.5**
NAY				AMb	AMB	10 24 42.2	
	comp=Z,298nm,1.5s						
NAY	**Al-Naaiem**	**19.65**	**331**	*eP*	**P**	**10 24 30.9**	**-3.0**
NAY				AMb	AMB	10 24 42.2	
	comp=Z,298nm,1.5s						

UMR	**Umm Al-Rimmam**	**19.68**	**332**	*eP*	**P**	**10 24 31.9**	**-2.4**
UMR				AMb	AMB	10 24 43.9	
	comp=Z,1μm,2.1s						
UMR	**Umm Al-Rimmam**	**19.68**	**332**	*eP*	**P**	**10 24 32.1**	**-2.2**
UMR				AMb	AMB	10 24 43.9	
	comp=Z,1μm,2.1s						
AKL	**Akola**	**19.88**	**63**	*eP*	**Pn**	**10 24 38.9**	**+0.7**
AKL				*i* x	x	10 28 27.5	
IKOO	**Kooshah**	**20.00**	**2**	*eP*	Pn	10 24 40.5	+0.6
IKOO	**Kooshah**	**20.00**	**2**	*eP*	Pn	10 24 40.5	+0.6
MIB	**Mutribah**	**20.07**	**332**	*eP*	**P**	**10 24 36.1**	**-2.4**
MIB				AMb	AMB	10 24 50.0	
	comp=Z,868nm,1.4s						
MIB	**Mutribah**	**20.07**	**332**	*eP*	**P**	**10 24 36.3**	**-2.2**
MIB				AMb	AMB	10 24 50.0	
	comp=Z,868nm,1.4s						
ICHK	**Chekchek**	**20.10**	**351**	*eP*	**P**	**10 24 39.4**	**+0.3**
ICHK	**Chekchek**	**20.10**	**351**	*eP*	**P**	**10 24 39.4**	**+0.3**
HYB	**Hyderabad**	**20.34**	**73**	*i* P	**P**	**10 24 41.5**	**-0.1**
	comp=Z,1μm,2.0s						
HYB				*e*S	**S**	**10 28 30.0**	**+0.8**
HYB				LR	LR	10 30 52.0	
	comp=Z,9.2nm,20.0s						
IDAH	**Dahanechab**	**20.36**	**4**	*eP*	Pn	10 24 44.3	+0.2
IDAH	**Dahanechab**	**20.36**	**4**	*eP*	Pn	10 24 44.3	+0.2
ITEG	**Tejag**	**20.46**	**1**	*eP*	Pn	10 24 45.9	+0.7
ITEG	**Tejag**	**20.46**	**1**	*eP*	Pn	10 24 45.9	+0.7
IGAR	**Gharneh**	**20.74**	**345**	*eP*	**P**	**10 24 46.3**	**+0.2**
IZEF	**Zefreh**	**21.14**	**346**	*eP*	**P**	**10 24 49.3**	**-1.1**
IPIR	**Pirpir**	**21.31**	**343**	*eP*	**P**	**10 24 53.6**	**+1.3**
IPIR	**Pirpir**	**21.31**	**343**	*eP*	**P**	**10 24 53.6**	**+1.3**
IKLH	**Kolahrood**	**21.73**	**345**	*eP*	**P**	**10 24 56.7**	**0.0**
IKLH	**Kolahrood**	**21.73**	**345**	*eP*	**P**	**10 24 56.7**	**0.0**
NGP	**Nagpur**	**21.81**	**64**	*eP*	**P**	**10 24 57.2**	**-0.3**
NGP				*ex*	x	10 25 01.6	
	comp=Z,334nm,1.6s						
NGP				*ex*	x	10 29 09.1	
PALK	**Pallekele**	**22.77**	**101**	*eP*	**P**	**10 25 09.0**	**+1.2**
	comp=Z,296nm,1.4s						
PALK	**Pallekele**	**22.77**	**101**	P	**P**	**10 25 11.0**	**+3.2**
	SNR=7.3						
PALK	**Pallekele**	**22.77**	**101**	P	**P**	**10 25 10.0**	**+2.2**
	comp=Z,616nm,1.4s,SNR=5.1						
PALK	**Pallekele**	**22.77**	**101**	*eP*	**P**	**10 25 09.0**	**+1.2**
	comp=Z,296nm,1.4s						
IVRN	**Varamin**	**23.29**	**347**	*eP*	**P**	**10 25 13.2**	**+0.2**
IVRN	**Varamin**	**23.29**	**347**	*eP*	**P**	**10 25 13.2**	**+0.2**
JBP	**Jabalpur**	**23.37**	**60**	⇑*iP*	**P**	**10 25 14.4**	**+0.6**
JBP				*e*S	**S**	**10 29 28.8**	**+2.6**
IR5	**Iran Long-Peri**	**23.78**	**344**	*eP*	**P**	**10 25 18.2**	**+0.3**
IR5	**Iran Long-Peri**	**23.78**	**344**	*eP*	**P**	**10 25 18.2**	**+0.3**
IDMV	**Damavand**	**23.79**	**348**	*eP*	**P**	**10 25 17.9**	**-0.2**
IDMV	**Damavand**	**23.79**	**348**	*eP*	**P**	**10 25 17.9**	**-0.2**
NDI	**New Delhi**	**24.08**	**45**	*eP*	**P**	**10 25 19.0**	**-1.6**
NDI				*ex*	x	10 29 45.0	
IKIA	**Kiasar**	**24.10**	**351**	*eP*	**P**	**10 25 22.6**	**+1.6**
IKIA	**Kiasar**	**24.10**	**351**	*eP*	**P**	**10 25 22.6**	**+1.6**
IALA	**Alasht**	**24.12**	**349**	*eP*	**P**	**10 25 22.9**	**+1.6**
IALA	**Alasht**	**24.12**	**349**	*eP*	**P**	**10 25 22.9**	**+1.6**
IRAZ	**Razeghan**	**24.14**	**343**	*eP*	**P**	**10 25 22.2**	**+0.9**
IRAZ	**Razeghan**	**24.14**	**343**	*eP*	**P**	**10 25 22.2**	**+0.9**
IMHD	**Mahdasht**	**24.20**	**345**	*eP*	**P**	**10 25 22.9**	**+1.1**
IMHD	**Mahdasht**	**24.20**	**345**	*eP*	**P**	**10 25 22.9**	**+1.1**
KBL	**Kabul**	**24.21**	**22**	*eP*	**P**	**10 25 23.7**	**+1.7**
KBL				pmax	pmax		
	comp=Z,365nm,1.4s						
KBL	**Kabul**	**24.21**	**22**	*eP*	**P**	**10 25 23.7**	**+1.7**
	comp=Z,365nm,1.4s						
KBL				*e*S	S	10 29 55.2	+15
KBL	**Kabul**	**24.21**	**22**	*eP*	**P**	**10 25 23.7**	**+1.7**
	comp=Z,365nm,1.4s						
DGAR	**Diego Garcia**	**24.23**	**143**	PFAKE		10 25 30.0	+7.9
DGAR				LR	LR		
	comp=Z,7μm,21.0s						
BHD	**Baghdad**	**24.34**	**331**	*ex*	**P**	**10 25 19.7**	**-3.3**
BHD				*i* x	x	10 29 40.8	
BHD				*i* x	x	10 33 27.7	
BHD				*i* x	x	10 34 58.3	
IPRN	**Peran**	**24.36**	**349**	*eP*	**P**	**10 25 24.6**	**+1.3**
KMBO	**Kilima Mbogo**	**24.70**	**239**	⇓*iP*	**P**	**10 25 27.1**	**+0.4**
KMBO	**Kilima Mbogo**	**24.70**	**239**	*eP*	**P**	**10 25 25.6**	**-1.1**
	comp=Z,2μm,2.1s						
KMBO				*e*S	**S**	**10 29 43.7**	**-4.6**
KMBO	**Kilima Mbogo**	**24.70**	**239**	P	**P**	**10 25 26.9**	**+0.2**
	SNR=109						
KMBO	**Kilima Mbogo**	**24.70**	**239**	P	**P**	**10 25 26.7**	**0.0**
	comp=Z,108nm,0.9s,baz=47,slow=12,SNR=71						
KMBO				LR	LR	10 34 20.7	
	comp=Z,4μm,21.4s,baz=242,slow=35						
KMBO	**Kilima Mbogo**	**24.70**	**239**	*eP*	**P**	**10 25 25.6**	**-1.1**
	comp=Z,2μm,2.1s

ERZM Erzurum 31.20 335 *i* P **P 10 26 27.2 +2.5**
MALT Malatya 31.27 329 *e*P **P 10 26 26.6 +1.5**
MALT pmax pmax
comp=Z,637nm,2.6s
MALT MLR MLR
comp=Z,4μm,19.0s
MALT Malatya 31.27 329 *e*P **P 10 26 26.6 +1.5**
comp=Z,637nm,2.6s
MALT LR LR
comp=Z,4μm,19.0s
MALT Malatya 31.27 329 *e*P **P 10 26 25.3 +0.2**
MALT Malatya 31.27 329 *e*P **P 10 26 26.6 +1.5**
comp=Z,637nm,2.6s
KSH Kashi 31.32 27⇓ *i*P **P 10 26 22.8 -2.7**
KSH pP **pP 10 26 26.8 -3.8**
KSH sP **sP 10 26 29.5 -3.1**
KSH PP **PnPn 10 27 24.3 -3.7**
KSH PcP **PcP 10 29 18.4 -1.1**
KSH S S 10 31 24.4 -7.6
KSH PcS **PcS 10 33 01.8 -2.0**
KSH ScS **ScS 10 36 55.9 -3.7**
KSH pmax pmax
comp=Z,51nm,1.1s
KSH pmax pmax
comp=Z,470nm,3.1s
KSH LR LR
comp=N,5μm,16.3s
KSH LR LR
comp=E,9μm,16.7s
KSH LR LR
comp=Z,4μm,14.9s
TAPN Taplejung 31.44 57 *e*P **P 10 26 29.0 +2.0**
comp=Z,897nm,1.9s
AYKD Aykdinkavak 31.44 326 *i*P **P 10 26 26.8 +0.3**
AKCD Akcadag 31.51 329 *i*P **P 10 26 29.4 +2.1**
AKCD Akcadag 31.51 329 *i*P **P 10 26 29.4 +2.1**
TBLG Delisi 31.54 341 *e*P **P 10 26 28.6 +1.3**
TBLG Delisi 31.54 341 *e*P **P 10 26 28.6 +1.3**
KOPT Kop Dagi 31.67 334 *i*P **P 10 26 29.0 +0.2**
KOPT Kop Dagi 31.67 334 *i*P **P 10 26 29.0 +0.2**
AKH Akhalkalaki 31.67 339 P **P 10 26 28.9 +0.2**
CSS Prodhromos 31.83 319 *e*P **P 10 26 30.1 +0.1**
CSS LR LR
comp=Z,5μm,20.0s
CSS Prodhromos 31.83 319 *e*P **P 10 26 30.1 +0.1**
MAK Makhachkala 31.87 345 *e*P P 10 26 26.1 -4.1
MAK *e*PPP PPP 10 27 44.3
MAK *e*S **S 10 31 35.5 -4.7**
MAK *e*SS **SnSn 10 33 26.8 -1.9**
MAK pmax pmax
comp=Z,38nm,0.3s
DDEM Demirkent 31.88 336 *i*P **P 10 26 31.1 +0.7**
DAGI Agillar 31.97 336 *i*P P 10 26 23.9 -7.3
KEMA Kemaliye 31.98 330 *i*P **P 10 26 33.1 +1.8**
KEMA Kemaliye 31.98 330 *i*P **P 10 26 33.1 +1.8**
ARTV Artvin 32.06 337 *i*P **P 10 26 33.1 +1.0**
ARTV Artvin 32.06 337 *i*P **P 10 26 33.1 +1.0**
KELT Kelkit 32.32 332 *i*P **P 10 26 36.4 +1.9**
KELT Kelkit 32.32 332 *i*P **P 10 26 36.4 +1.9**
KK31 Karatay Array 32.46 17*c e*P **P 10 26 36.2 +0.8**
KK31 pmax pmax
comp=Z,10.0nm,0.6s
KK31 Karatay Array 32.46 17 *e*P **P 10 26 36.2 +0.8**
comp=Z,10.0nm,0.6s
GULE Gulek 32.49 324 *i*P **P 10 26 34.9 -1.0**
GULE Gulek 32.49 324 *i*P **P 10 26 34.9 -1.0**
PINB Pinarbasi 32.59 327 *i*P **P 10 26 38.1 +1.2**
PINB Pinarbasi 32.59 327 *i*P **P 10 26 38.1 +1.2**
AML Almayashu 32.62 22 P **P 10 26 39.1 +1.9**
SNR=18
AML Almayashu 32.62 22 P **P 10 26 38.1 +0.9**
SNR=24
MACK Trabzon 32.74 334 *i*P **P 10 26 40.0 +2.1**
MACK Trabzon 32.74 334 *i*P **P 10 26 40.0 +2.1**
ZEI Tsey 32.74 340 *e*P **P 10 26 38.8 +0.7**
ZEI *e* 10 27 49.7
ZEI *e*S **S 10 31 59.6 +5.3**
ZEI pmax pmax
comp=Z,112nm,1.7s
ZEI MLR MLR
comp=Z,1μm,10.0s
ZEI Tsey 32.74 340 *e*P **P 10 26 38.8 +0.7**
comp=Z,112nm,1.7s
SUSE Susehri 32.86 331 *i*P **P 10 26 40.7 +1.6**
SUSE Susehri 32.86 331 *i*P **P 10 26 40.7 +1.6**
ABPO Ambohimpanom 32.98 199 P **P 10 26 41.5 +1.2**
ABPO pmax pmax
comp=Z,17nm,1.0s
ABPO MLR MLR
comp=Z,4μm,21.0s
ABPO Ambohimpanom 32.98 199 P **P 10 26 41.5 +1.2**
comp=Z,17nm,1.0s
ABPO LR LR
comp=Z,4μm,21.0s
ABPO Ambohimpanom 32.98 199 P **P 10 26 41.5 +1.2**
comp=Z,17nm,1.0s
EKS2 Erkin-Say 33.11 21 *e*P **P 10 26 43.6 +2.4**
EKS2 pmax pmax
comp=Z,229nm,1.3s
EKS2 MLR MLR
comp=Z,4μm,19.0s
EKS2 Erkin-Say 33.11 21 *e*P **P 10 26 43.6 +2.4**
comp=Z,229nm,1.3s
EKS2 LR LR
comp=Z,4μm,19.0s
EKS2 Erkin-Say 33.11 21 P **P 10 26 43.7 +2.4**
SNR=43
EKS2 Erkin-Say 33.11 21 *e*P **P 10 26 43.6 +2.4**
comp=Z,229nm,1.3s
KZA Kyzart 33.15 24 P **P 10 26 44.3 +2.4**
SNR=29
ERMK Ermenek 33.16 321 *i*P **P 10 26 44.1 +2.2**
ERMK Ermenek 33.16 321 *i*P **P 10 26 44.1 +2.2**
AAK Ala-Archa 33.34 22*c i*P **P 10 26 45.5 +2.2**
AAK pmax pmax
comp=Z,258nm,1.9s
AAK Ala-Archa 33.34 22 *e*P **P 10 26 45.0 +1.7**
comp=Z,21nm,1.3s
AAK LR LR
comp=Z,2μm,20.0s
AAK Ala-Archa 33.34 22 P **P 10 26 45.5 +2.2**
SNR=53
AAK Ala-Archa 33.34 22 P **P 10 26 46.1 +2.8**
SNR=25
AAK Ala-Archa 33.34 22 P **P 10 26 46.0 +2.7**
comp=Z,267nm,1.3s,SNR=26
AAK Ala-Archa 33.34 22 *e*P **P 10 26 45.0 +1.7**
comp=Z,21nm,1.3s
AGT Agartala 33.39 65 *ex* x 10 26 51.0
GRSN GİRESUNGRSN 33.40 332 *i*P **P 10 26 45.3 +1.7**
GRSN GİRESUNGRSN 33.40 332 *i*P **P 10 26 45.3 +1.7**
KBK Karagaybulak 33.53 23 P **P 10 26 47.6 +2.6**
SNR=12
FRU Bishkek 33.56 22⇑ *i*P **P 10 26 46.5 +1.4**
FRU pmax pmax
comp=Z,420nm,2.2s
FRU Bishkek 33.56 22 *i*P **P 10 26 46.5 +1.4**
comp=Z,420nm,2.2s
ULHL Ulahol 33.69 25 P **PP 10 27 59.3 -3.5**
SNR=9.6
CHMS Chumysh 33.76 22 P **P 10 26 48.8 +2.1**
SNR=10
ERBA Erbaa 33.92 330 *i*P **P 10 26 49.6 +1.4**
ERBA Erbaa 33.92 330 *i*P **P 10 26 49.6 +1.4**
KBZ Khabaz 33.93 340 P **P 10 26 49.3 +1.1**
KBZ 10 27 57.6
KBZ Khabaz 33.93 340 P **P 10 26 49.2 +1.1**
KBZ PP **PnPn 10 27 57.6 -3.6**
KBZ Khabaz 33.93 340 P **P 10 26 49.2 +1.1**
comp=Z,24nm,1.1s,baz=181,slow=6.0,SNR=18
KBZ PP **PnPn 10 27 57.6 -3.6**
comp=Z,35nm,1.2s,baz=164,slow=13,SNR=4.6
KBZ Khabaz 33.93 340 P **P 10 26 49.2 +1.1**
TKM2 Tokmak 2 34.01 23 *e*P **P 10 26 49.1 0.0**
TKM2 pmax pmax
comp=Z,30nm,1.1s
TKM2 MLR MLR
comp=Z,2μm,20.0s
TKM2 Tokmak 2 34.01 23 *e*P **P 10 26 49.1 0.0**
comp=Z,30nm,1.1s
TKM2 LR LR
comp=Z,2μm,20.0s
TKM2 Tokmak 2 34.01 23 P **P 10 26 51.0 +1.8**
SNR=16
TKM2 Tokmak 2 34.01 23 *e*P **P 10 26 49.1 0.0**
comp=Z,30nm,1.1s
KIV Kislovodsk 34.20 340 *e*P **P 10 26 51.6 +0.9**
KIV *e* 10 28 06.3
KIV *e* 10 29 26.8
KIV *e*S **S 10 32 16.9 +0.2**
KIV *e*SS **SnSn 10 34 26.5 +1.1**
KIV pmax pmax
comp=Z,72nm,1.1s
KIV pmax pmax
comp=Z,365nm,6.1s
KIV MLR MLR
comp=Z,2μm,16.0s
KIV Kislovodsk 34.20 340 *e*P **P 10 26 51.6 +0.9**
comp=Z,365nm,6.1s
CDAG Cicekdag 34.36 326 *i*P **P 10 26 52.5 +0.4**
CDAG Cicekdag 34.36 326 *i*P **P 10 26 52.5 +0.4**
SHL Shillong 34.38 63 *i*P **P 10 26 54.0 +1.4**
SHL *i*S **S 10 32 20.0 -0.1**
HAVZ Havza 34.73 330 *i*P **P 10 26 55.9 +0.7**
HAVZ Havza 34.73 330 *i*P **P 10 26 55.9 +0.7**
BR131 Keskin Array S 34.83 326 *e*P **P 10 26 56.7 +0.5**
comp=Z,23nm,1.2s
BR131 Keskin Array S 34.83 326 *e*P **P 10 26 56.7 +0.5**
comp=Z,23nm,1.2s
BRTR Keskin Array B 34.83 326 P **P 10 26 57.1 +1.0**
BRTR PcP **PcP 10 29 29.5 +0.2**
BRTR Keskin Array B 34.83 326 P **P 10 26 57.1 +1.0**
comp=Z,16nm,1.1s,baz=144,slow=8.7,SNR=44
BRTR PcP **PcP 10 29 29.5 +0.2**
comp=Z,2.1nm,0.8s,baz=151,slow=5.4,SNR=1.1
BRTR LR LR 10 42 32.9
comp=Z,4μm,19.7s,baz=122,slow=39
BRTR Keskin Array B 34.83 326 *e*P **P 10 26 57.2 +1.0**
comp=Z,16nm,1.1s
CTKT Corum 34.86 328 *i*P **P 10 26 57.9 +1.4**
CTKT Corum 34.86 328 *i*P **P 10 26 57.9 +1.4**
KDHN Kadinhani 34.87 323 *i*P **P 10 26 56.9 +0.3**
KDHN Kadinhani 34.87 323 *i*P **P 10 26 56.9 +0.3**
SOC Sochi 34.96 336*c i*P **P 10 26 56.8 -0.3**
SOC *e**SP **sP 10 27 08.7 +4.5**
SOC *e* 10 28 13.1
SOC *e*S **S 10 32 28.9 +0.7**
SOC pmax pmax
comp=Z,30nm,0.9s
SOC MLR MLR
comp=Z,2μm,16.0s
SOC Sochi 34.96 336 *i*P **P 10 26 56.8 -0.3**
comp=Z,30nm,0.9s
BBAL Bala 34.98 325 *i*P **P 10 26 56.2 -1.4**
BBAL Bala 34.98 325 *i*P **P 10 26 56.2 -1.4**
KORT Korkueli 34.99 319 *i*P **P 10 26 57.9 +0.3**
KORT Korkueli 34.99 319 *i*P **P 10 26 57.9 +0.3**
AKAS Kas 35.02 318 *i*P **P 10 26 59.9 +2.0**
AKAS Kas 35.02 318 *i*P **P 10 26 59.9 +2.0**
LKFR Kufra 35.11 295 *i*P **P 10 26 59.1 +0.4**
comp=Z,93nm,1.5s,SNR=27
LKFR *e*S **S 10 32 28.2 -2.8**
SNR=28
ISP Isparta 35.39 321 PFAKE 10 27 10.0 +9.0
ISP LR LR
comp=Z,2μm,21.0s
ANTO Ankara 35.39 325⇓ *i*P **P 10 27 02.2 +1.2**
ANTO Ankara 35.39 325 *e*P **P 10 27 02.3 +1.2**
ANTO LR LR
comp=Z,3μm,20.0s
ANTO Ankara 35.39 325⇓ *i*P **P 10 27 02.2 +1.2**
ANTO Ankara 35.39 325 P **P 10 27 02.9 +1.9**
SNR=14
ANTO Ankara 35.39 325 P **P 10 27 02.2 +1.2**
GOLH Golhisar 35.64 319 *i*P P 10 26 52.2 -11
BOLV Bolvadin 35.69 322 *i*P **P 10 27 04.8 +1.1**
BOLV Bolvadin 35.69 322 *i*P **P 10 27 04.8 +1.1**
BALT Daday 36.25 328 *i*P **P 10 27 05.7 -2.7**
SEYT Eskypehyr 36.27 323 *i*P **P 10 27 09.4 +0.8**
SEYT Eskypehyr 36.27 323 *i*P **P 10 27 09.4 +0.8**
KHAL Karahalli 36.37 321 *i*P **P 10 27 08.8 -0.6**
KHAL Karahalli 36.37 321 *i*P **P 10 27 08.8 -0.6**
BORA Eskisehir 36.74 323 *i*P P 10 27 15.7 +3.2
GDZ Gediz 36.81 321 *i*P **P 10 27 13.1 -0.2**
GDZ Gediz 36.81 321 *i*P **P 10 27 13.1 -0.2**
AB31 Akbulak array 36.83 2*c e*P **P 10 27 13.8 +0.8**
AB31 pmax pmax
comp=Z,118nm,1.4s
ABKAR Akbulak array 36.83 2 *e*P **P 10 27 13.9 +0.9**
ABKAR Akbulak array 36.83 2 *e*P **P 10 27 13.9 +0.9**
ANN Anapa 36.88 335 *e*P **P 10 27 13.2 -0.4**
ANN *e* 10 28 36.7
ANN *e*S **S 10 32 57.1 -0.5**
ANN *e*SS **SnSn 10 35 22.0 -8.2**
ANN pmax pmax
comp=Z,55nm,1.0s
XRY Khrisi 36.99 313 *e*P **P 10 27 15.6 +1.0**
HENT Hendek 37.10 325 *i*P **P 10 27 16.0 +0.4**
HENT Hendek 37.10 325 *i*P **P 10 27 16.0 +0.4**
DEMI Demirci 37.26 321 *i*P **P 10 27 17.5 +0.6**
DEMI Demirci 37.26 321 *i*P **P 10 27 17.5 +0.6**
GCAM G?zelcaml? 37.41 318 *i*P P 10 27 21.8 +3.6
AKHS Akhisar 37.72 320 *i*P **P 10 27 21.4 +0.6**
AKHS Akhisar 37.72 320 *i*P **P 10 27 21.4 +0.6**
DURS Dursunbey 37.74 321 *i*P **P 10 27 20.8 -0.3**
DURS Dursunbey 37.74 321 *i*P **P 10 27 20.8 -0.3**
IDI Anoyia 37.76 313 *e*P **P 10 27 22.7 +1.4**
comp=Z,178nm,1.0s
IDI Anoyia 37.76 313 *e*P **P 10 27 22.7 +1.4**
comp=Z,178nm,1.0s
AKTO Aktyubinsk 37.98 360 LR LR 10 44 51.7
comp=Z,2μm,20.6s,baz=347,slow=39
LUJL Ujela 38.10 302 *i*P **P 10 27 22.8 -1.3**
comp=Z,202nm,2.1s,SNR=26
APE Apeiranthos 38.21 316⇓ *i*P **P 10 27 25.7 +0.7**
APE Apeiranthos 38.21 316⇓ *i*P **P 10 27 25.7 +0.7**
APE Apeiranthos 38.21 316⇓ *i*P **P 10 27 25.7 +0.7**
BALY Balya 38.35 321 *i*P **P 10 27 26.7 +0.5**
BALY Balya 38.35 321 *i*P **P 10 27 26.7 +0.5**
SIM Simferopol' 38.44 332*d i*P **P 10 27 27.1 +0.3**
SIM *i* 10 28 58.0
SIM *i*S **S 10 33 27.0 +5.7**
SIM pmax pmax
comp=Z,51nm,1.2s
KARN Karanos 38.52 312 P **P 10 27 29.3 +1.7**
CHOS Chios island 38.57 318 *e*P **P 10 27 28.2 +0.2**
PRK Paraskevi 38.91 319 *e*P **P 10 27 31.6 +0.8**
SART Tekirdag 39.19 322 *i*P **P 10 27 31.5 -1.7**
SART Tekirdag 39.19 322 *i*P **P 10 27 31.5 -1.7**
BOZC Bozcaada 39.39 320 *i*P P 10 27 24.4 -10
CM31 Chiang Mai Arr 39.72 76 *e*P **P 10 27 38.6 +0.8**
comp=Z,57nm,1.1s
CM31 *e*PP **PP 10 29 06.8 -2.4**
CM31 Chiang Mai Arr 39.72 76 *e*P **P 10 27 38.6 +0.8**
comp=Z,57nm,1.1s
CMAR Chiang Mai Arr 39.72 76 P **P 10 27 39.5 +1.7**
CMAR PcP **PcP 10 29 44.4 -0.1**
CMAR Chiang Mai Arr 39.72 76 P **P 10 27 39.5 +1.7**
comp=Z,11nm,0.9s,baz=275,slow=8.2,SNR=84
CMAR PcP **PcP 10 29 44.4 -0.1**
comp=Z,5.0nm,1.0s,baz=264,slow=4.7,SNR=4.3
CMAR LR LR 10 43 37.8
comp=Z,816nm,18.3s,baz=290,slow=36
CMAR Chiang Mai Arr 39.72 76 P **P 10 27 39.5 +1.7**
CHTO Chiang Mai 39.74 75 *e*P **P 10 27 39.0 +1.0**
CHTO pmax pmax
comp=Z,108nm,1.6s
CHTO MLR MLR
comp=Z,2μm,21.0s
CHTO Chiang Mai 39.74 75 *e*P **P 10 27 39.0 +1.0**
comp=Z,108nm,1.6s
CHTO LR LR
comp=Z,2μm,21.0s
CHTO Chiang Mai 39.74 75 P **P 10 27 39.8 +1.8**
SNR=33
CHTO Chiang Mai 39.74 75 P **P 10 27 37.5 -0.5**
comp=Z,47nm,1.8s,comp=Z,1μm
CHTO Chiang Mai 39.74 75 *e*P **P 10 27 39.0 +1.0**
comp=Z,108nm,1.6s
CMMT Chiang Mai 39.74 75 P **P 10 27 38.0 -0.1**
comp=Z,42nm,1.8s,comp=Z,1μm
MK31 Makanchi Array 39.91 26*c e*P **P 10 27 39.0 -0.1**
MK31 pmax pmax
comp=Z,64nm,1.1s
MK31 Makanchi Array 39.91 26 *e*P **P 10 27 39.2 +0.1**
MK31 *e*PcP **PcP 10 29 44.5 0.0**
MK31 Makanchi Array 39.91 26 *e*P **P 10 27 39.2 +0.1**
MKAR Makanchi Array 39.91 26*c e*P **P 10 27 39.7 +0.7**
MKAR pmax pmax
comp=Z,9.0nm,0.9s
MKAR Makanchi Array 39.91 26 *e*P **P 10 27 39.7 +0.7**
MKAR PcP **PcP 10 29 44.2 -0.3**
MKAR Makanchi Array 39.91 26 P **P 10 27 39.8 +0.7**
comp=Z,9.4nm,0.8s,baz=213,slow=8.7,SNR=65
MKAR PcP **PcP 10 29 44.2 -0.3**
comp=Z,7.5nm,0.9s,baz=219,slow=2.6,SNR=5.9
MKAR LR LR 10 45 25.2
comp=Z,2μm,20.1s,baz=216,slow=38
MKAR Makanchi Array 39.91 26 *e*P **P 10 27 39.7 +0.7**
MKAR Makanchi Array 39.91 26 PcP **PcP 10 29 44.2 -0.3**
LIA Limnos Island 39.97 319 *e*P **P 10 27 39.0 -0.6**
ALN Alexandroupoli 40.01 321 P **P 10 27 40.2 +0.3**
ALN Alexandroupoli 40.01 321 *e*P **P 10 27 39.7 -0.2**
DID Didima 40.01 315 *e*P **P 10 27 39.1 -0.9**
WMQ Urumqi 40.36 33 P **P 10 27 44.0 +1.1**
WMQ sP **sP 10 27 51.0 +1.0**
WMQ PP **PnPn 10 29 21.0 +1.3**
WMQ ScP **ScP 10 33 35.0 +0.1**
WMQ S **S 10 33 52.0 +1.7**
WMQ ScS **ScS 10 37 48.0 -0.8**
WMQ pmax pmax
comp=Z,51nm,1.0s
WMQ pmax pmax
comp=Z,510nm,5.0s
WMQ LR LR
comp=N,3μm,16.0s
WMQ LR LR
comp=E,5μm,16.0s
WMQ LR LR
comp=Z,2μm,16.0s
LSZ Lusaka 40.42 228 *e*P **P 10 27 44.4 +0.6**
LSZ Lusaka 40.42 228 P **P 10 27 44.4 +0.6**
LSZ Lusaka 40.42 228 P **P 10 27 44.9 +1.2**
SNR=18
LSZ Lusaka 40.42 228 P **P 10 27 44.4 +0.6**
comp=Z,11nm,0.8s,baz=43,slow=11,SNR=17
LSZ Lusaka 40.42 228 P **P 10 27 44.9 +1.2**
SNR=18
LTK Loutraki 40.45 315 *e*P **P 10 27 42.4 -1.3**
RDO Rodhopi 40.47 321 P **P 10 27 43.9 +0.2**
RDO Rodhopi 40.47 321 *e*P **P 10 27 43.7 0.0**
VLX Vlachokerasia 40.54 314 *e*P **P 10 27 44.5 0.0**
PRD Provadia 40.63 325 *i*P **P 10 27 46.8 +1.8**
JMB Yambol 40.63 323 P **P 10 27 46.3 +1.2**
LKR Lokris 40.74 316 *e*P P 10 27 41.7 -4.3
KDZ Kurdzhali 40.83 322 *i*P **P 10 27 46.0 -0.8**
GUR Goura 40.84 315 *e*P **P 10 27 46.3 -0.7**
TIRR Tirgusor 40.90 327⇑ P **P 10 27 46.8 -0.4**
TIRR Tirgusor 40.90 327 *e*P **P 10 27 47.3 0.0**
comp=Z,166nm,2.0s
TIRR Tirgusor 40.90 327⇑ *i*P **P 10 27 46.8 -0.4**
TIRR Tirgusor 40.90 327 *e*P **P 10 27 47.3 0.0**
comp=Z,166nm,2.0s
VRHR Novokhopersk 40.92 344 *e*P **P 10 27 47.9 +0.6**
VRHR *e*S **S 10 33 58.5 +0.2**
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,0.5s
VRHR pmax pmax
comp=Z,30nm,0.5s
VRHR smax smax
comp=N,150nm,2.1s
VRHR smax smax
comp=Z,10.0nm,0.4s
VRHR smax smax
comp=E,110nm,2.1s
VRHR MLR MLR
comp=N,600nm,18.0s
VRHR MLR MLR
comp=E,2μm,18.0s
VRHR MLR MLR
comp=Z,2μm,18.0s
PAIG Paliouri 40.95 318 P **P 10 27 48.1 +0.3**
OUR Ouranopolis 40.98 319 P **P 10 27 48.1 +0.1**
KAVA Kavala 41.01 320 P **P 10 27 48.5 +0.3**
LZLA Zalla 41.09 299 *i*P **P 10 27 49.0 -0.1**
comp=Z,55nm,1.2s,SNR=26
RZN Rozhen 41.28 321 *i*P **P 10 27 49.6 -1.1**
PLG Polygyros 41.35 319 *e*P **P 10 27 50.1 -1.0**
AGG Agios Georgios 41.38 316 *e*P **P 10 27 49.5 -1.8**
PSI Prapat 41.45 100 P **P 10 27 53.4 +1.1**
PSI Prapat 41.45 100 P **P 10 27 53.4 +1.1**
comp=Z,7.9nm,0.9s,baz=292,slow=12,SNR=7.7
PSI LR LR 10 41 56.7
comp=Z,2μm,20.6s,baz=271,slow=32
VORD Divnogorie 41.47 342 *e*P **P 10 27 50.7 -1.1**
VORD *e* 10 29 29.3
VORD *e*S **S 10 34 05.2 -1.3**
VORD *e*SS SS 10 37 00.2 -11
VORD pmax pmax
comp=N,30nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.8s
VORD pmax pmax
comp=Z,10.0nm,0.8s
VORD pmax pmax
comp=N,50nm,1.2s
VORD pmax pmax
comp=Z,50nm,1.2s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD smax smax
comp=N,400nm,2.7s
VORD smax smax
comp=Z,130nm,2.7s
VORD smax smax
comp=E,60nm,1.6s
VORD MLR MLR
comp=N,670nm,20.0s
VORD MLR MLR
comp=E,1μm,20.0s
VORD MLR MLR
comp=Z,1μm,20.0s
RLS Riolos of Patr 41.50 315 *e*P **P 10 27 49.6 -2.7**
SZH Strazhica 41.50 324 *i*P **P 10 27 50.9 -1.4**
CFR Carcaliu 41.53 328⇑ P **P 10 27 52.1 -0.3**
CFR Carcaliu 41.53 328⇑ *i*P **P 10 27 52.1 -0.3**
CFR Carcaliu 41.53 328⇑ *i*P **P 10 27 52.1 -0.3**
PLD Plovdiv 41.53 322 P **P 10 27 52.5 0.0**
PLD Plovdiv 41.53 322 *i*P **P 10 27 55.4 +2.9**
PLD Plovdiv 41.53 322 *i*P **P 10 27 55.4 +2.9**
NVR Nevrokopi 41.62 320 P **P 10 27 52.9 -0.4**
NVR Nevrokopi 41.62 320 *e*P **P 10 27 54.3 +1.0**
KURBB Kurchatov Arra 41.65 19 P **P 10 27 53.8 +0.5**
comp=Z,14nm,0.8s,baz=216,slow=8.1,SNR=115
KURBB PcP **PcP 10 29 49.4 -0.6**
comp=Z,3.3nm,0.7s,baz=224,slow=3.4,SNR=12
EVR Evrytania 41.68 316 *e*P **P 10 27 56.4 +2.5**
VSR Storozhevoye 41.73 342 *e*P **P 10 27 53.1 -0.9**
VSR *e**SP sP 10 28 07.0 +5.9
VSR *e* 10 29 31.9
VSR *e*S **S 10 34 09.1 -1.2**
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,20nm,0.6s
VSR pmax pmax
comp=N,20nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,20nm,0.9s
VSR smax smax
comp=N,370nm,2.8s
VSR smax smax
comp=E,300nm,2.8s
VSR smax smax
comp=Z,130nm,2.8s
VSR MLR MLR
comp=N,250nm,12.0s
VSR MLR MLR
comp=E,480nm,12.0s
VSR MLR MLR
comp=Z,730nm,12.0s
BVAR Borovoye Array 41.74 11 PcP **PcP 10 29 50.0 -0.3**
BVAR Borovoye Array 41.74 11 PcP **PcP 10 29 50.0 -0.3**
comp=Z,6.3nm,0.6s,baz=197,slow=2.9,SNR=6.7
BVAR LR LR 10 44 27.7
comp=Z,1μm,19.1s,baz=40,slow=35
BVAR Borovoye Array 41.74 11 PcP **PcP 10 29 50.0 -0.3**
BRVK Borovoye 41.75 11*c i*P **P 10 27 53.9 -0.2**

BRVK pmax pmax
comp=Z,87nm,2.5s
BRVK Borovoye 41.75 11 *e*P **P 10 27 54.0 -0.2**
comp=Z,107nm,1.8s
BRVK LR LR
comp=Z,2μm,20.0s
BRVK Borovoye 41.75 11 P **P 10 27 56.2 +2.1**
comp=Z,108nm,1.8s,SNR=18
BRVK Borovoye 41.75 11 *e*P **P 10 27 54.0 -0.2**
comp=Z,107nm,1.8s
KURK Kurchatov 41.75 19*d* iP **P 10 27 54.3 +0.1**
KURK pmax pmax
comp=Z,82nm,2.5s
KURK Kurchatov 41.75 19 *e*P **P 10 27 54.4 +0.2**
comp=Z,58nm,1.3s
KURK PcP **PcP 10 29 49.4 -1.0**
KURK LR LR
comp=Z,3μm,20.0s
KURK Kurchatov 41.75 19 P **P 10 27 55.0 +0.9**
SNR=29
KURK Kurchatov 41.75 19 P **P 10 27 55.3 +1.1**
comp=Z,128nm,0.9s,SNR=16
KURK Kurchatov 41.75 19 *e*P **P 10 27 54.4 +0.2**
comp=Z,58nm,1.3s
PVL Pavlikeni 41.82 324 *i* P **P 10 27 55.4 +0.6**
LIT Litokhoron 41.82 318 *e*P **P 10 27 54.9 -0.1**
THL Klokotos Trika 41.86 317 *e*P **P 10 27 52.6 -2.6**
KNT Kendrikon 42.12 319 P **P 10 27 56.8 -0.6**
ISR Istrita 42.34 327 ⇓P **P 10 28 00.9 +1.8**
ISR Istrita 42.34 327 ⇓*i*P **P 10 28 00.9 +1.8**
ISR Istrita 42.34 327 ⇓*i*P **P 10 28 00.9 +1.8**
KKB Krupnik 42.39 320 *i* P **P 10 27 58.8 -0.7**
KZN Kozani 42.40 318 *e*P **P 10 27 57.4 -2.3**
VAY Valandovo 42.42 319 P **P 10 27 58.2 -1.5**
VAY Valandovo 42.42 319 *i* P **P 10 27 59.2 -0.5**
VAY Valandovo 42.42 319 *i* P **P 10 27 59.7 0.0**
KIS Kishinev 42.45 330 *e*P **P 10 27 57.0 -2.9**
KIS *e* 10 29 39.0
KIS *e*S **S 10 34 17.0 -4.0**
KIS *e*SS SS 10 37 17.0 -13
KIS pmax pmax
comp=Z,500nm,5.0s
KIS smax smax
comp=E,1μm,14.0s
KIS smax smax
comp=E,2μm,12.0s
KIS MLR MLR
comp=E,1μm,17.0s
KIS MLR MLR
comp=Z,2μm,17.0s
KIS MLR MLR
comp=Z,2μm,18.0s
KIS Kishinev 42.45 330 *i* P **P 10 27 57.0 -2.9**
comp=Z,500nm,5.0s
KIS Kishinev 42.45 330 *e*PP PP 10 29 39.0 +0.7
KULM Kulim 42.52 96 *e*P **P 10 28 00.2 -0.8**
comp=Z,88nm,1.4s
KULM LR LR
comp=Z,1μm,21.0s
KULM Kulim 42.52 96 P **P 10 28 00.9 -0.1**
KULM Kulim 42.52 96 *e*P **P 10 28 00.2 -0.8**
comp=Z,88nm,1.4s
LJFR Jufra 42.71 300 *i* P **P 10 28 02.8 +0.5**
comp=Z,40nm,1.5s,SNR=25
VTS Vitosha 42.72 321 P **P 10 28 02.2 -0.2**
VTS Vitosha 42.72 321 ⇑P **P 10 28 02.9 +0.5**
VTS Vitosha 42.72 321 ⇑*i*P **P 10 28 02.9 +0.5**
VTS Vitosha 42.72 321 *i* P **P 10 28 01.9 -0.5**
VTS Vitosha 42.72 321 *i* P **P 10 28 01.9 -0.5**
VRI Vrincioaia 42.73 328 ⇑P **P 10 28 03.1 +0.9**
VRI Vrincioaia 42.73 328 ⇑*i*P **P 10 28 03.1 +0.9**
VRI Vrincioaia 42.73 328 ⇑*i*P **P 10 28 03.1 +0.9**
PLOR Plostina 42.76 327 ⇑P **P 10 28 03.7 +1.2**
PLOR Plostina 42.76 327 ⇑*i*P **P 10 28 03.7 +1.2**
PLOR Plostina 42.76 327 ⇑*i*P **P 10 28 03.7 +1.2**
MPEP Malo Peshtene 42.84 323 P **P 10 28 01.9 -1.2**
MLR Muntele Rosu 42.90 327 ⇓*i*P **P 10 28 05.8 +2.0**
MLR Muntele Rosu 42.90 327 ⇓*i*P **P 10 28 05.8 +2.0**
IPM Ipoh 43.07 97 P **P 10 28 06.1 +0.7**
CHBT CHBT 43.08 84 P **P 10 28 06.4 +1.0**
TESR 43.20 328 ⇓*i*P **P 10 28 06.3 +0.3**
SKO Skopje 43.48 320 *i* P **P 10 28 08.0 -0.3**
ARR Arges 43.54 326 ⇓*i*P **P 10 28 08.7 -0.2**
KMI Kunming 43.89 67 P **P 10 28 12.8 +0.6**
KMI pP **pP 10 28 17.0 -0.3**
KMI sP **sP 10 28 18.3 -1.1**
KMI PP **PcP 10 29 56.8 -1.6**
KMI S **S 10 34 43.5 +0.2**
KMI pmax pmax
comp=Z,45nm,1.0s
KMI pmax pmax
comp=Z,600nm,4.7s
KMI LR LR
comp=N,2μm,18.8s
KMI LR LR
comp=E,2μm,19.5s
KMI LR LR
comp=Z,4μm,20.6s
FRIM Kepong 43.94 98 P **P 10 28 13.8 +1.4**
ARU Arti 43.99 0*c* iP **P 10 28 13.4 +1.2**
ARU 10 29 54.1
ARU 10 29 58.8
ARU PPP PPP 10 30 34.2
ARU S **S 10 34 46.1 +2.8**
ARU SS **SS 10 37 59.8 -0.6**
ARU pmax pmax
comp=Z,75nm,1.7s
ARU MLR MLR
comp=Z,1μm,19.0s
ARU Arti 43.99 0 P **P 10 28 13.9 +1.7**
comp=Z,142nm,1.1s,SNR=14
LOT Lotru 44.07 325 ⇓*i*P **P 10 28 13.1 -0.1**
MSNA Messina 44.16 219 *e*P **P 10 28 15.8 +1.8**
MSNA AMB AMB 10 28 18.5
comp=Z,92nm,2.1s
LSHF Shwairf 44.24 300 *i* P **P 10 28 13.5 -1.2**
comp=Z,71nm,1.3s,SNR=25
SVE Sverdlovsk 44.43 2 ⇓*i*P **P 10 28 16.8 +1.1**
SVE *e*S **S 10 34 48.5 -1.2**
SVE *e* 10 38 10.9
SVE pmax pmax
comp=Z,101nm,1.9s
SVE MLR MLR
comp=Z,1μm,18.0s
BURAR Bucovina Array 44.66 328 ⇑*i*P **P 10 28 19.0 +1.1**
BUR08 Bucovina Ar. S 44.69 328 *e*P **P 10 28 16.8 -1.3**
BUR08 Bucovina Ar. S 44.69 328 *e*P **P 10 28 16.8 -1.3**
AK02 Malin Array Si 44.92 334 *e*P **P 10 28 19.0 -0.7**
AK02 Malin Array Si 44.92 334 *e*P **P 10 28 19.0 -0.7**
AK01 Malin Array Si 44.94 334 *e*P **P 10 28 19.3 -0.6**
AK01 Malin Array Si 44.94 334 *e*P **P 10 28 19.3 -0.6**
AKASG Malin Array Be 44.95 334*c e*P **P 10 28 19.0 -0.9**
AKASG pmax pmax
comp=Z,6.0nm,0.7s
AKASG Malin Array Be 44.95 334 P **P 10 28 19.0 -0.9**
AKASG PP **PcP 10 30 02.6 +1.5**
AKASG Malin Array Be 44.95 334 P **P 10 28 19.0 -0.9**
comp=Z,5.7nm,0.7s,baz=139,slow=7.4,SNR=16
AKASG PP **PcP 10 30 02.6 +1.5**
comp=Z,13nm,1.1s,baz=144,slow=9.1,SNR=6.4
AKASG LR LR 10 49 22.1
comp=Z,1μm,19.4s,baz=140,slow=39
AKASG Malin Array Be 44.95 334 P **P 10 28 19.0 -0.9**
AKASG Malin Array Be 44.95 334 PP PP 10 30 02.6 -2.4
KIEV Kiev 44.95 334 *e*P **P 10 28 19.5 -0.4**
KIEV pmax pmax
comp=Z,619nm,3.0s
KIEV MLR MLR
comp=Z,1μm,20.0s
KIEV Kiev 44.95 334 *e*P **P 10 28 19.5 -0.4**
comp=Z,619nm,3.0s
KIEV LR LR
comp=Z,1μm,20.0s
KIEV Kiev 44.95 334 *e*P **P 10 28 19.5 -0.4**
comp=Z,619nm,3.0s
TIP Timpagrande 45.30 314 *e*P **P 10 28 22.6 -0.5**
comp=Z,50nm,1.3s
TIP LR LR
comp=Z,2μm,21.0s
TIP Timpagrande 45.30 314 *e*P **P 10 28 22.6 -0.5**
comp=Z,50nm,1.3s
BZS Buzias 45.39 324 ⇓P **P 10 28 23.8 +0.3**
BZS Buzias 45.39 324 ⇓*i*P **P 10 28 23.8 +0.3**
BZS Buzias 45.39 324 ⇓*i*P **P 10 28 23.8 +0.3**

COCO West Island 45.47 121 PFAKE 10 28 40.0 +15
COCO LR LR
comp=Z,1μm,19.0s
DRGR 45.47 326 ⇑P **P 10 28 25.6 +1.3**
DRGR 45.47 326 ⇑*i*P **P 10 28 25.6 +1.3**
DRGR 45.47 326 ⇑*i*P **P 10 28 25.6 +1.3**
DIVS Divibare 45.51 321 P **P 10 28 22.9 -1.7**
CEL Celeste 45.55 312 PFAKE 10 28 40.0 +15
CEL LR LR
comp=Z,1μm,20.0s
GTA Gaotai 45.58 46 ⇑P **P 10 28 25.8 +0.5**
GTA pP **pP 10 28 31.1 +0.6**
GTA sP **sP 10 28 33.6 +1.1**
GTA PcP **PcP 10 30 04.0 +0.2**
GTA PP **PP 10 30 13.8 +1.7**
GTA S **S 10 35 08.3 +1.1**
GTA pmax pmax
comp=Z,22nm,1.3s
GTA pmax pmax
comp=Z,470nm,4.8s
GTA LR LR
comp=N,2μm,18.1s
GTA LR LR
comp=E,3μm,20.9s
GTA LR LR
comp=Z,3μm,25.2s
BMR Baia Mare 45.59 327 P **P 10 28 25.9 +0.8**
WDD Wield Dalam 45.71 308 PFAKE 10 28 40.0 +14
WDD LR LR
comp=Z,1μm,20.0s
GHAR Gharyan 45.74 303 *i* P **P 10 28 26.4 -0.2**
comp=Z,56nm,1.0s,SNR=25
CD2 Chengdu 45.87 59 P **P 10 28 29.0 +1.3**
CD2 pP **pP 10 28 33.5 +0.7**
CD2 sP **sP 10 28 36.0 +1.1**
CD2 PP **PP 10 30 17.0 +1.7**
CD2 PcS **PcS 10 33 59.3 0.0**
CD2 S **S 10 35 12.9 +1.3**
CD2 ScS **ScS 10 38 22.5 -1.1**
CD2 pmax pmax
comp=Z,40nm,0.5s
CD2 pmax pmax
comp=Z,260nm,5.3s
CD2 LR LR
comp=N,3μm,15.7s
CD2 LR LR
comp=E,2μm,16.6s
CD2 LR LR
comp=Z,3μm,20.1s
KGM Kluang 45.89 99 P **P 10 28 29.3 +1.3**
OBN Obninsk 45.90 343⇑*e*P **P 10 28 27.8 +0.4**
OBN *e* 10 28 42.2
OBN *e* 10 30 17.7
OBN *e*PPP PPP 10 30 59.4
OBN *i* S S 10 35 17.8 +6.8
OBN pmax pmax
comp=Z,98nm,1.9s
OBN MLR MLR
comp=Z,2μm,21.0s
MOS Moscow 46.15 344 *e*P **P 10 28 29.2 -0.2**
MOS *e* 10 30 02.2
MOS *e* 10 30 21.3
MOS *e*PPP PPP 10 31 00.7
MOS pmax pmax
comp=Z,207nm,2.0s
MOS pmax pmax
comp=Z,900nm,2.7s
CUC Castrocucco 46.30 314 *e*P **P 10 28 31.1 +0.1**
comp=Z,47nm,0.8s
CUC LR LR
comp=Z,989nm,20.0s
CUC Castrocucco 46.30 314 *e*P **P 10 28 31.1 +0.1**
comp=Z,47nm,0.8s
TRPA Tarpa 46.38 327⇑*e*P **P 10 28 31.8 +0.5**
MYKOM Kota Tinggi 46.46 99 P **P 10 28 33.7 +1.3**
MYKOM Kota Tinggi 46.46 99 P **P 10 28 34.0 +1.6**
ZAA0 Zalesovo Array 46.56 21 *e*P **P 10 28 31.9 -0.7**
ZAA0 Zalesovo Array 46.56 21 *e*P **P 10 28 31.9 -0.7**
ZALV Zalesovo Beam 46.56 21 P **P 10 28 32.1 -0.6**
ZALV Zalesovo Beam 46.56 21 P **P 10 28 32.1 -0.6**
ZALV Zalesovo Beam 46.56 21 P **P 10 28 32.1 -0.6**
comp=Z,28nm,0.7s,baz=220,slow=7.4,SNR=124
ZALV LR LR 10 49 33.4
comp=Z,1μm,19.6s,baz=215,slow=38
ZALV Zalesovo Beam 46.56 21 P **P 10 28 32.1 -0.6**
LVV L'vov 46.70 330 *e*P **P 10 28 33.4 -0.4**
LVV *e*S S 10 35 16.4 -6.4
NVS Novosibirsk 46.74 20 *e*P **P 10 28 33.7 -0.3**
NVS *e* 10 30 00.2
NVS *e*S S 10 35 15.7 -7.5
NVS pmax pmax
comp=Z,275nm,2.3s
NVS pmax pmax
comp=N,127nm,2.4s
NVS smax smax
comp=N,101nm,2.9s
UZH Uzhgorod 46.82 328⇓*i*P **P 10 28 35.0 +0.2**
UZH *i* 10 28 46.2
UZH *e*PPP PPP 10 31 11.0
UZH *i* S **S 10 35 23.0 -1.5**
UZH *i* SP 10 35 34.8
UZH *e* 10 38 23.2
UZH *e*SS SS 10 38 43.7 -7.4
UZH MLR MLR
comp=N,600nm,19.0s
UZH MLR MLR
comp=E,750nm,19.0s
UZH MLR MLR
comp=Z,400nm,19.0s
KOLS Kolonicke sedl 47.02 328 *e*P **P 10 28 36.9 +0.5**
KOLS pmax pmax
comp=Z,134nm,2.1s
KOLS Kolonicke sedl 47.02 328 *e*P **P 10 28 36.9 +0.5**
KOLS *e*PP **PP 10 30 27.2 +0.2**
KOLS *e*S **S 10 35 26.0 -1.4**
KOLS *e*SS **SS 10 38 59.7 +5.4**
ALAS Alassa 47.12 303 *i* P **P 10 28 36.8 -0.6**
comp=Z,108nm,1.2s,SNR=24
POGA Pongola 47.14 213 *e*P **P 10 28 36.9 -0.6**
POGA AMB AMB 10 28 41.0
comp=Z,79nm,2.4s
SOKR Solikamsk 47.15 359*d* iP **P 10 28 37.8 +0.7**
SOKR S **S 10 35 29.6 +0.9**
SOKR SS ScS 10 38 41.8 +11
SOKR pmax pmax
comp=Z,100nm,1.9s
SOKR MLR MLR
comp=Z,1μm,19.0s
KWP Kalwaria Pacla 47.24 329 P **P 10 28 37.5 -0.6**
KWP *e* 10 30 31.0
KWP pmax pmax
comp=Z,55nm,0.4s
KWP MLR MLR
comp=Z,2μm,22.0s
KWP Kalwaria Pacla 47.24 329 P **P 10 28 37.5 -0.6**
comp=Z,55nm,0.4s
KWP *e*PP **PP 10 30 31.0 +1.9**
KWP LR LR
comp=Z,2μm,22.0s
KWP Kalwaria Pacla 47.24 329 *e*P **P 10 28 38.0 0.0**
KWP *e*PP **PP 10 30 27.9 -1.2**
KWP *e*S **S 10 35 31.2 +0.7**
KWP LMZ LR 10 47 55.7
KWP Kalwaria Pacla 47.24 329 P **P 10 28 37.5 -0.6**
comp=Z,55nm,0.4s
KWP Kalwaria Pacla 47.24 329 *e*PP PP 10 30 31.0 +1.9
LZH Lanzhou 47.35 52 ⇓P **P 10 28 39.4 +0.1**
LZH pP **pP 10 28 45.0 +0.5**
LZH sP **sP 10 28 47.1 +0.6**
LZH PP **PP 10 30 28.6 -2.0**
LZH S **S 10 35 34.0 +1.2**
LZH sS sS 10 35 46.1 +4.9
LZH SS **SS 10 39 01.8 +1.4**
LZH pmax pmax
comp=Z,53nm,1.0s
LZH pmax pmax
comp=Z,470nm,4.8s
LZH LR LR
comp=N,3μm,17.9s
LZH LR LR
comp=E,4μm,18.0s
LZH LR LR
comp=Z,6μm,19.4s
CRVS Cervenica-Dubn 47.42 328 *e*P **P 10 28 39.1 -0.4**

CRVS pmax pmax
comp=Z,82nm,1.9s
CRVS Cervenica-Dubn 47.42 328 *e*P **P 10 28 39.0 -0.4**
CRVS *e*PP **PP 10 30 35.0 +4.2**
CRVS *e*S **S 10 35 32.0 -1.1**
CRVS *e*SS SS 10 39 10.7 +10
PKSM Moragy 47.44 323 ⇓P **P 10 28 39.9 +0.2**
PKSM Moragy 47.44 323⇓*i*P **P 10 28 39.9 +0.2**
PKSM Moragy 47.44 323⇓*e*P **P 10 28 39.1 -0.6**
PKSM Moragy 47.44 323⇓*i*P **P 10 28 39.9 +0.2**
GYA Guiyang 47.58 65⇑*i*P **P 10 28 40.5 -0.7**
GYA PP **PP 10 30 32.8 0.0**
GYA S **S 10 35 38.5 +2.2**
GYA SS **SS 10 39 01.3 -3.1**
GYA pmax pmax
comp=Z,60nm,1.0s
GYA pmax pmax
comp=Z,620nm,4.9s
GYA LR LR
comp=N,7μm,16.1s
GYA LR LR
comp=E,6μm,17.2s
GYA LR LR
comp=Z,11μm,17.8s
PSZ Piszkesteto 47.68 326 *e*P **P 10 28 40.6 -1.0**
PSZ pmax pmax
comp=Z,111nm,2.0s
PSZ MLR MLR
comp=Z,2μm,19.0s
PSZ Piszkesteto 47.68 326 *e*P **P 10 28 40.6 -1.0**
comp=Z,112nm,2.0s
PSZ LR LR
comp=Z,2μm,19.0s
PSZ Piszkesteto 47.68 326 *e*P **P 10 28 40.6 -1.0**
PSZ Piszkesteto 47.68 326 *e*P **P 10 28 40.6 -1.0**
comp=Z,112nm,2.0s
BUD Budapest 47.92 325⇓*e*P **P 10 28 45.7 +2.4**
ERPM east rand prop 48.22 217 *e*P **P 10 28 45.6 -0.6**
ERPM AML AML 10 29 02.3
comp=Z,5.7nm,0.5s
LGHD Ghdames 48.33 299 *i* P **P 10 28 47.2 +0.3**
comp=Z,128nm,1.2s,SNR=24
VYHS Vyhne 48.59 326 *e*P **P 10 28 47.9 -0.7**
VYHS pmax pmax
comp=Z,40nm,1.9s
VYHS Vyhne 48.59 326 *e*P **P 10 28 47.9 -0.7**
VYHS *e*PCP **PcP 10 30 18.0 +3.9**
VYHS *e*PP **PP 10 30 45.5 +4.0**
VYHS *e*S S 10 35 58.9 +9.2
VYHS *e*SS SS 10 39 38.6 +19
KSR Koster 48.66 219 *e*P **P 10 28 46.8 -2.8**
KSR AMB AMB 10 28 58.8
comp=Z,38nm,3.1s
BEHE Becsehely 48.68 323⇓*e*P **P 10 28 49.2 -0.1**
LBTB Lobatse 48.86 220 *e*P **P 10 28 51.5 +0.4**
LBTB AMB AMB 10 28 55.3
comp=Z,150nm,2.2s
LBTB Lobatse 48.86 220 P **P 10 28 51.3 +0.3**
LBTB Lobatse 48.86 220 P **P 10 28 51.3 +0.3**
comp=Z,17nm,0.8s,baz=60,slow=8.2,SNR=19
LBTB Lobatse 48.86 220 P **P 10 28 51.3 +0.3**
AQU L'Aquila 48.93 316 PFAKE 10 29 00.0 +8.6
AQU LR LR
comp=Z,1μm,19.0s
KOGS Kog 48.98 322 *e*P **P 10 28 51.0 -0.6**
KOGS *e*PP **PP 10 30 47.2 +2.1**
KOGS *e*S S 10 36 02.5 +7.3
KOGS *e*SS SS 10 39 40.0 +14
NACGM Naroch 49.06 337 *e*P **P 10 28 49.0 -3.0**
OJC Ojcow 49.08 328⇑*i*P **P 10 28 51.6 -0.7**
OJC *i* 10 30 46.7
OJC *e*S **S 10 35 58.6 +2.1**
OJC MLR MLR
comp=Z,2μm,19.8s
OJC Ojcow 49.08 328 *e*P **P 10 28 52.0 -0.3**
OJC Ojcow 49.08 328 *i* P **P 10 28 51.6 -0.7**
OJC *e*pP **pP 10 28 53.9 -3.5**
OJC *e*PP **PP 10 30 46.7 +0.8**
OJC *e*S **S 10 35 58.6 +2.1**
OJC *e*SS **SS 10 39 30.5 +2.9**
OJC L L 10 52 44.2
comp=Z,2μm,19.8s
OJC Ojcow 49.08 328 *e*P **P 10 28 52.0 -0.3**
BOJS Bojanci 49.13 321 *e*P **P 10 28 52.2 -0.5**
BOJS *e*S S 10 36 05.3 +8.0
PRYS Parys 49.18 217 *e*P **P 10 28 52.5 -1.0**
PRYS AMB AMB 10 28 57.1
comp=Z,58nm,2.2s
SOP Sopron 49.43 324⇓*e*P **P 10 28 54.2 -0.8**
BEL Belsk 49.57 330 *e*P **P 10 28 55.9 -0.1**
BEL *e*PcP **PcP 10 30 17.3 -0.2**
BEL *e*PP **PP 10 30 50.1 -0.3**
BEL *e*S **S 10 36 05.4 +2.1**
BEL LMZ LR 10 46 45.2
IIGN Ignalina 49.61 337 *e*P **P 10 28 55.3 -0.9**
IIGN AMB AMB 10 28 59.1
comp=Z,12nm,1.4s
IIGN Ignalina 49.61 337 *e*P **P 10 28 55.3 -0.9**
comp=Z,12nm,1.4s,SNR=23
KEST Kesra 49.68 307 *e*P **P 10 28 57.8 +0.6**
KEST Kesra 49.68 307 P **P 10 28 58.0 +0.8**
comp=Z,1.6nm,0.7s,baz=256,slow=3.4,SNR=8.7
KEST LR LR 10 51 31.8
comp=Z,868nm,19.1s,baz=231,slow=38
KEST Kesra 49.68 307 *e*P **P 10 28 57.8 +0.6**
OKC Ostrava-Krasne 49.72 327 *e*P **P 10 28 56.2 -1.0**
OKC *e* 10 29 04.3
OKC *e* 10 30 53.0
OKC *e*S **S 10 36 08.7 +3.2**
OKC MLR MLR
comp=Z,2μm,19.6s
OKC Ostrava-Krasne 49.72 327 *e*P **P 10 28 56.2 -1.0**
OKC *e*pP **pP 10 29 04.3 +1.9**
OKC *e*PP **PP 10 30 53.0 +1.2**
OKC *e*S **S 10 36 08.7 +3.2**
OKC AMS AMS 10 52 30.0
comp=Z,2μm,19.6s
OKC Ostrava-Krasne 49.72 327 P **P 10 28 56.2 -1.0**
OKC S **S 10 36 08.7 +3.2**
PERS Pernice 49.76 322 *e*P **P 10 28 56.7 -0.9**
PERS *e*PP **PP 10 30 54.8 +2.6**
ISAL Salakas 49.81 337 *e*P **P 10 28 56.8 -0.9**
ISAL AMB AMB 10 28 58.8
comp=Z,9.7nm,1.3s
ISAL Salakas 49.81 337 *e*P **P 10 28 56.8 -0.9**
comp=Z,9.7nm,1.3s,SNR=23
ARSA Arzberg 49.82 323⇓*i*P **P 10 28 57.3 -0.7**
comp=Z,45nm,1.6s,SNR=13
ARSA Arzberg 49.82 323⇓*i*P **P 10 28 57.3 -0.7**
comp=Z,45nm,1.5s
ARSA Arzberg 49.82 323 P **P 10 28 57.3 -0.7**
comp=Z,45nm,1.6s,SNR=13
SOKA Soboth 49.83 322⇑*i*P **P 10 28 57.0 -1.1**
comp=Z,32nm,1.3s
SOKA Soboth 49.83 322⇑*i*P **P 10 28 57.0 -1.1**
comp=Z,32nm,1.3s
SOKA Soboth 49.83 322 P **P 10 28 57.0 -1.1**
comp=Z,32nm,1.3s
LJU Ljubljana 49.83 321 *e*P **P 10 28 57.5 -0.6**
LJU *e*PP **PP 10 30 55.7 +2.8**
LJU *e*S S 10 36 13.7 +6.5
LJU *e*SS SS 10 39 56.2 +16
IZAR Zarasai 49.89 337 *e*P **P 10 28 57.4 -1.0**
IZAR AMB AMB 10 28 59.4
comp=Z,9.1nm,1.3s
SUW Suwalki 49.91 334 *e*P **P 10 28 58.1 -0.4**
SUW pmax pmax
comp=Z,95nm,1.1s
SUW Suwalki 49.91 334 *e*P **P 10 28 58.1 -0.4**
comp=Z,95nm,1.1s
SUW Suwalki 49.91 334 *e*P **P 10 28 57.8 -0.7**
SUW *e*pP **pP 10 29 01.8 -1.9**
SUW *e*PcP **PcP 10 30 20.9 +2.2**
SUW *e*PP **PP 10 30 50.1 -3.2**
SUW *e*S **S 10 36 11.9 +4.0**
SUW LMZ LR 10 51 10.7
SUW Suwalki 49.91 334 *e*P **P 10 28 58.1 -0.4**
comp=Z,95nm,1.1s
CONA Conrad Observa 49.96 324⇓*i*P **P 10 28 58.2 -0.9**
comp=Z,72nm,1.4s,SNR=14
CONA Conrad Observa 49.96 324⇓*i*P **P 10 28 58.2 -0.9**
comp=Z,72nm,1.4s
CONA Conrad Observa 49.96 324 P **P 10 28 58.2 -0.9**
comp=Z,72nm,1.4s,SNR=14

MORC Moravsky Berou 50.01 327 ⇓P P 10 28 58.5 -0.9
MORC Moravsky Berou 50.01 327 eP P 10 28 58.6 -0.9
comp=Z,132nm,1.8s
MORC Moravsky Berou 50.01 327 ⇓iP P 10 28 58.5 -0.9
MORC Moravsky Berou 50.01 327 eP P 10 28 58.6 -0.9
comp=Z,132nm,1.8s
OBKA Obir 50.04 322 ⇓iP P 10 28 58.9 -0.9
comp=Z,56nm,1.7s,SNR=11
OBKA Obir 50.04 322 ⇓iP P 10 28 58.9 -0.9
comp=Z,56nm,1.7s
OBKA Obir 50.04 322 P P 10 28 58.9 -0.9
comp=Z,56nm,1.7s,SNR=11
QIZ Qiongzhong 50.06 75 P P 10 28 59.5 -0.7
QIZ PP PP 10 30 54.0 -1.4
QIZ S S 10 36 11.8 +0.7
QIZ SS SS 10 39 50.6 +6.2
QIZ pmax pmax
comp=Z,39nm,2.0s
QIZ pmax pmax
comp=Z,320nm,10.1s
QIZ LR LR
comp=N,960nm,16.9s
QIZ LR LR
comp=Z,1μm,17.4s
SEK Senekal 50.08 216 eP P 10 29 00.6 +0.3
SEK AMB AMB 10 29 03.9
comp=Z,112nm,2.1s
TRI Trieste 50.15 320 eP P 10 28 59.5 -1.0
TRI pmax pmax
comp=Z,45nm,0.9s
TRI Trieste 50.15 320 eP P 10 28 59.5 -1.0
comp=Z,45nm,0.9s
TRI Trieste 50.15 320 eP P 10 28 59.5 -1.0
comp=Z,45nm,0.9s
VOY Vojsko 50.22 321 eP P 10 29 00.2 -0.9
VOY e 10 29 03.3
VOY e 10 31 00.3
VOY e 10 31 03.4
VRAC Vranov 50.27 326⇑iP P 10 29 03.5 +2.1
VRAC Vranov 50.27 326⇑iP P 10 29 03.5 +2.1
SWZ Schweizer 50.59 219 eP P 10 29 03.9 -0.3
SWZ AMB AMB 10 29 07.9
comp=Z,120nm,2.2s
KRLC Kraliky 50.59 327 eP P 10 29 03.2 -0.6
MYKA Terra Mystica 50.65 321 ⇓iP P 10 29 03.2 -1.1
comp=Z,66nm,1.2s
MYKA Terra Mystica 50.65 321 ⇓iP P 10 29 03.2 -1.1
comp=Z,66nm,1.2s
MYKA Terra Mystica 50.65 321 P P 10 29 03.2 -1.1
comp=Z,66nm,1.2s
VSL Villasalto 50.74 311 PFAKE 10 29 20.0 +15
VSL LR LR
comp=Z,762nm,22.0s
TSUM Tsumeb 50.81 232 eP P 10 29 06.5 +0.5
TSUM AMB AMB 10 29 10.7
comp=Z,2μm,1.7s
XAN Xi'an 50.83 56 P P 10 29 04.3 -1.6
XAN pP pP 10 29 13.3 +2.2
XAN sP sP 10 29 17.6 +4.5
XAN S S 10 36 20.3 -1.2
XAN pmax pmax
comp=Z,6.0nm,1.3s
XAN pmax pmax
comp=Z,110nm,12.6s
XAN LR LR
comp=N,990nm,24.8s
XAN LR LR
comp=E,290nm,21.4s
XAN LR LR
comp=Z,500nm,23.0s
MOA Molln 50.85 323 ⇓iP P 10 29 04.8 -1.0
comp=Z,38nm,1.4s,SNR=19
MOA Molln 50.85 323 ⇓iP P 10 29 04.8 -1.0
comp=Z,38nm,1.4s
MOA Molln 50.85 323 P P 10 29 04.8 -1.0
comp=Z,38nm,1.4s,SNR=19
TREC Trest 50.88 325 eP P 10 29 05.0 -1.0
TREC e 10 29 13.0
TREC eS S 10 36 23.7 +2.0
TREC MLR MLR
comp=Z,1μm,15.6s
TREC Trest 50.88 325 eP P 10 29 05.0 -1.0
TREC epP pP 10 29 13.0 +1.8
TREC eS S 10 36 23.7 +2.0
TREC AMS AMS 10 53 10.0
comp=Z,1μm,15.6s
TREC Trest 50.88 325 P P 10 29 05.0 -1.0
TREC S S 10 36 23.7 +2.0
DPC Dobruska-Polom 50.98 327 eP P 10 29 06.1 -0.7
DPC e 10 31 05.9
DPC eS S 10 36 18.7 -4.5
DPC MLR MLR
comp=Z,1μm,17.4s
DPC Dobruska-Polom 50.98 327 eP P 10 29 06.2 -0.7
DPC Dobruska-Polom 50.98 327 eP P 10 29 06.1 -0.7
DPC ePP PP 10 31 05.9 +2.6
DPC eS S 10 36 18.7 -4.5
DPC AMS AMS 10 53 00.0
comp=Z,1μm,17.4s
DPC Dobruska-Polom 50.98 327 eP P 10 29 06.2 -0.6
TAM Tamanrasset 51.02 289 eP P 10 29 07.2 -0.4
TAM pmax pmax
comp=Z,36nm,1.1s
TAM MLR MLR
comp=Z,2μm,20.0s
TAM Tamanrasset 51.02 289 eP P 10 29 07.2 -0.4
comp=Z,36nm,1.1s
TAM LR LR
comp=Z,2μm,20.0s
TAM Tamanrasset 51.02 289 eP P 10 29 07.2 -0.4
comp=Z,36nm,1.1s
KBA Koelnbreinsper 51.04 322 ⇓iP P 10 29 06.2 -1.2
KBA pmax pmax
comp=Z,20nm,1.2s
KBA Koelnbreinsper 51.04 322 ⇓iP P 10 29 06.2 -1.2
comp=Z,20nm,1.2s,SNR=9.0
KBA Koelnbreinsper 51.04 322 ⇓iP P 10 29 06.2 -1.2
comp=Z,20nm,1.2s
KBA Koelnbreinsper 51.04 322 P P 10 29 06.2 -1.2
comp=Z,20nm,1.2s,SNR=9.0
UPC Upice 51.24 327 eP P 10 29 08.0 -0.6
UPC e 10 31 06.6
UPC Upice 51.24 327 eP P 10 29 08.0 -0.6
UPC ePP PP 10 31 06.6 +1.1
UPC Upice 51.24 327 P P 10 29 08.0 -0.6
KSP Ksiaz 51.27 327⇓eP P 10 29 07.8 -1.1
KSP e 10 31 07.2
KSP eS S 10 36 24.0 -3.0
KSP MLR MLR
comp=Z,5μm,20.1s
KSP Ksiaz 51.27 327 eP P 10 29 07.9 -1.0
KSP epP pP 10 29 11.1 -3.0
KSP ePP PP 10 31 08.9 +3.1
KSP eS S 10 36 28.2 +1.2
KSP LMZ LR 10 51 50.6
ABTA Abfaltersbach 51.39 321⇑iP P 10 29 08.9 -1.1
comp=Z,34nm,1.2s,SNR=14
ABTA Abfaltersbach 51.39 321⇑iP P 10 29 08.9 -1.1
comp=Z,34nm,1.2s
ABTA Abfaltersbach 51.39 321 P P 10 29 08.9 -1.1
comp=Z,34nm,1.2s,SNR=14
GERES GERESS Array B 51.67 324 P P 10 29 09.6 -2.4
GERES PcP PcP 10 30 25.4 -0.1
GERES GERESS Array B 51.67 324 P P 10 29 09.6 -2.4
comp=Z,1.3nm,0.7s,baz=116,slow=6.1,SNR=11
GERES PcP PcP 10 30 25.4 -0.1
comp=Z,2.5nm,0.9s,baz=154,slow=3.7,SNR=3.7
GERES LR LR 10 53 32.2
comp=Z,891nm,21.3s,baz=30,slow=39
GERES GERESS Array B 51.67 324 P P 10 29 09.6 -2.4
GERES GERESS Array B 51.67 324 PcP PcP 10 30 25.4 -0.1
VLC Villacollemand 51.67 317 P P 10 29 10.6 -1.5
comp=Z,136nm,1.7s
VLC LR LR
comp=Z,927nm,20.0s
VLC Villacollemand 51.67 317 P P 10 29 10.6 -1.5
comp=Z,136nm,1.7s
BOSA Boshof 51.68 218 eP P 10 29 12.4 +0.1
BOSA AMB AMB 10 29 16.2
comp=Z,67nm,2.0s
BOSA Boshof 51.68 218 P P 10 29 12.1 -0.2
BOSA Boshof 51.68 218 P P 10 29 12.1 -0.2
comp=Z,5.4nm,0.8s,baz=56,slow=7.6,SNR=9.0
BOSA LR LR 10 48 28.6
comp=Z,2μm,19.6s,baz=47,slow=33
BOSA Boshof 51.68 218 P P 10 29 12.1 -0.2
PRU Pruhonice 51.77 325 eP P 10 29 11.7 -0.9
PRU e 10 29 17.4
PRU e 10 31 13.7
PRU eS S 10 36 29.1 -4.8
PRU MLR MLR
comp=Z,1μm,17.8s
PRU Pruhonice 51.77 325 eP P 10 29 11.7 -0.9
PRU epP pP 10 29 17.4 -0.4
PRU ePP PP 10 31 13.7 +3.4
PRU eS S 10 36 29.1 -4.8
PRU AMS AMS 10 53 40.0
comp=Z,1μm,17.8s
PRU Pruhonice 51.77 325 P P 10 29 11.7 -0.9
PRA Prague 51.87 326 P P 10 29 12.0 -1.3
PRA PP PP 10 31 16.0 +4.8
KHC Kasperske Hory 51.88 324 eP P 10 29 11.5 -2.0
KHC e 10 29 19.5
KHC e 10 31 16.2
KHC eS S 10 36 31.5 -4.0
KHC MLR MLR
comp=Z,1μm,20.4s
KHC Kasperske Hory 51.88 324 eP P 10 29 11.7 -1.8
comp=Z,33nm,1.4s
KHC Kasperske Hory 51.88 324 eP P 10 29 11.5 -2.0
KHC epP pP 10 29 19.5 +0.8
KHC ePP PP 10 31 16.2 +4.8
KHC eS S 10 36 31.5 -4.0
KHC AMS AMS 10 53 00.0
comp=Z,1μm,20.4s
KHC Kasperske Hory 51.88 324 eP P 10 29 11.7 -1.8
comp=Z,33nm,1.4s
PGF Pioggiola 52.02 315⇑iP P 10 29 11.7 -3.1
comp=Z,154nm,1.6s
PGF Pioggiola 52.02 315⇑iP P 10 29 11.7 -3.1
PGF pmax pmax
comp=Z,154nm,1.5s
PGF Pioggiola 52.02 315⇑iP P 10 29 11.7 -3.1
comp=Z,154nm,1.5s
PVCC Panska Ves 52.03 326 eP P 10 29 14.3 -0.2
PVCC MLR MLR
comp=Z,2μm,19.8s
PVCC Panska Ves 52.03 326 eP P 10 29 14.3 -0.2
PVCC AMS AMS 10 53 50.0
comp=Z,2μm,19.8s
PVCC Panska Ves 52.03 326 P P 10 29 14.3 -0.2
WTTA Wattenberg 52.16 321⇑iP P 10 29 13.7 -2.1
WTTA pmax pmax
comp=Z,81nm,1.1s
WTTA Wattenberg 52.16 321⇑iP P 10 29 13.7 -2.1
comp=Z,81nm,1.1s,SNR=18
WTTA Wattenberg 52.16 321⇑iP P 10 29 13.7 -2.1
comp=Z,81nm,1.1s
WTTA Wattenberg 52.16 321⇑iP P 10 29 13.7 -2.1
comp=Z,81nm,1.1s
GKP Gorka Klasztor 52.17 330 eP P 10 29 15.3 -0.2
GKP eS S 10 36 41.6 +2.3
GKP LMZ LR 10 47 19.6
WATA Walderalm 52.23 321 ⇓iP P 10 29 14.3 -2.0
WATA pmax pmax
comp=Z,46nm,1.1s
WATA Walderalm 52.23 321 ⇓iP P 10 29 14.3 -2.0
comp=Z,46nm,1.1s
WATA Walderalm 52.23 321 ⇓iP P 10 29 14.3 -2.0
comp=Z,46nm,1.1s
WATA Walderalm 52.23 321 ⇓iP P 10 29 14.3 -2.0
comp=Z,46nm,1.1s
MOY Mondy 52.23 32 eP P 10 29 17.0 +0.8
MOY pmax pmax
comp=Z,80nm,2.5s
MOTA Moosalm 52.52 321 ⇓iP P 10 29 16.2 -2.2
MOTA pmax pmax
comp=Z,47nm,1.0s
MOTA Moosalm 52.52 321 ⇓iP P 10 29 16.2 -2.2
comp=Z,47nm,1.0s,SNR=16
MOTA Moosalm 52.52 321 ⇓iP P 10 29 16.2 -2.2
comp=Z,47nm,1.0s
MOTA Moosalm 52.52 321 ⇓iP P 10 29 16.2 -2.2
comp=Z,47nm,1.0s
BRG Berggiesshubel 52.55 326 eP P 10 29 17.5 -0.9
comp=Z,38nm,1.8s
BRG S S 10 36 40.0 -4.6
BRG SS SKiKP 10 40 36.0 -3.8
BRG
comp=N,1μm,20.1s
BRG
comp=E,963nm,23.8s
BRG
comp=Z,2μm,18.1s
FETA Feichten 52.61 321 ⇓iP P 10 29 17.4 -1.8
comp=Z,59nm,1.2s,SNR=11
FETA Feichten 52.61 321 ⇓iP P 10 29 17.4 -1.8
comp=Z,59nm,1.2s
FETA Feichten 52.61 321 ⇓iP P 10 29 17.4 -1.8
comp=Z,59nm,1.2s
FUORN Ofenpass-Fuorn 52.73 320 eP P 10 29 19.4 -0.8
FUORN Ofenpass-Fuorn 52.73 320 eP P 10 29 19.4 -0.8
KSM Kuching 52.78 98 eP P 10 29 21.9 +1.3
comp=Z,29nm,1.1s
KSM LR LR
comp=Z,1μm,19.0s
KSM Kuching 52.78 98 P P 10 29 22.5 +1.8
KSM Kuching 52.78 98 eP P 10 29 22.0 +1.3
comp=Z,29nm,1.1s
ZAK Zakamensk 52.80 35 ⇓iP P 10 29 20.4 0.0
ZAK pmax pmax
comp=Z,12nm,1.9s
NKC Novy Kostel 53.06 325 eP P 10 29 21.0 -1.2
NKC e 10 29 29.3
NKC eS S 10 36 54.9 +3.3
NKC MLR MLR
comp=Z,1μm,17.2s
NKC Novy Kostel 53.06 325 eP P 10 29 21.0 -1.2
NKC epP pP 10 29 29.3 +1.9
NKC eS S 10 36 54.9 +3.3
NKC AMS AMS 10 55 20.0
comp=Z,1μm,17.2s
NKC Novy Kostel 53.06 325 P P 10 29 21.0 -1.2
NKC S S 10 36 54.9 +3.3
DAVA Damuels 53.25 321 ⇓iP P 10 29 22.0 -1.9
comp=Z,51nm,1.4s,SNR=11
DAVA Damuels 53.25 321 ⇓iP P 10 29 22.0 -1.9
comp=Z,51nm,1.4s
DAVA Damuels 53.25 321 ⇓iP P 10 29 22.0 -1.9
comp=Z,51nm,1.4s
TUE Stuetta 53.25 320 eP P 10 29 21.9 -2.0
comp=Z,77nm,1.6s
TUE LR LR
comp=Z,953nm,21.0s
TUE Stuetta 53.25 320 eP P 10 29 22.0 -2.0
comp=Z,77nm,1.6s
CLL Collm 53.28 326⇑iP P 10 29 22.9 -0.9
CLL i 10 29 30.4
CLL i 10 31 31.3
CLL eS S 10 36 42.0 -13
CLL pmax pmax
comp=Z,86nm,1.7s
CLL pmax pmax
comp=Z,31nm,1.4s
CLL MLR MLR
comp=Z,1μm,18.3s
CLL Collm 53.28 326⇑iP P 10 29 22.9 -0.9
comp=Z,86nm,1.7s
CLL i 10 29 30.4
CLL i PP PP 10 31 31.3 +7.3
comp=Z,31nm,1.4s
CLL eS S 10 36 53.0 -1.5
comp=N,600nm,26.1s
CLL eS S 10 36 53.0 -1.5
comp=E,2μm,27.6s
CLL eSS SKiKP 10 40 42.0 +1.4
CLL eSSS SSS 10 42 18.0
CLL LmV 10 55 00.0
comp=Z,1μm,18.3s
BTO Baotou 53.33 48 eP P 10 29 23.9 -0.6
GZH Guangzhou 53.37 70 P P 10 29 26.4 +1.5
GZH S S 10 37 03.3 +6.7
GZH LR LR
comp=N,2μm,21.2s
GZH LR LR
comp=E,430nm,21.1s
GZH LR LR
comp=Z,2μm,25.4s
SONM Songino Array 53.45 39 P P 10 29 25.4 +0.1
SONM Songino Array 53.45 39 P P 10 29 25.4 +0.1
comp=Z,5.5nm,0.6s,baz=240,slow=7.8,SNR=34
SONM LR LR 10 55 25.2
comp=Z,1μm,18.3s,baz=255,slow=40
SONM Songino Array 53.45 39 P P 10 29 25.4 +0.1
RUE Ruedersdorf 53.47 328 eP P 10 29 27.5 +2.4
comp=Z,101nm,1.4s
RUE Ruedersdorf 53.47 328 eP P 10 29 27.5 +2.4
comp=Z,101nm,1.4s
SAOF Saorge 53.51 316 eP P 10 29 25.1 -0.6
SAOF Saorge 53.51 316 eP P 10 29 25.1 -0.6
SAOF Saorge 53.51 316 eP P 10 29 25.1 -0.6
SBF Sospel 53.55 316 eP P 10 29 25.4 -0.6
comp=Z,110nm,1.2s
SBF Sospel 53.55 316 eP P 10 29 25.4 -0.6
SBF pmax pmax
comp=Z,110nm,1.2s
SBF Sospel 53.55 316 eP P 10 29 25.4 -0.6
comp=Z,110nm,1.2s
SBF Sospel 53.55 316 eP P 10 29 25.4 -0.6
comp=Z,55nm,1.2s
REVF Revere 53.55 316 eP P 10 29 25.2 -0.8
AUTN L'Aution 53.60 316 eP P 10 29 25.0 -1.6
AUTN L'Aution 53.60 316 eP P 10 29 25.0 -1.6
AUTN L'Aution 53.60 316 eP P 10 29 25.0 -1.6
TLY Talaya 53.64 33 eP P 10 29 25.8 -0.7
TLY e 10 31 24.6
TLY eS S 10 36 49.2 -10
TLY pmax pmax
comp=Z,15nm,1.7s
TLY MLR MLR
comp=Z,2μm,19.0s
TLY Talaya 53.64 33 P P 10 29 26.9 +0.4
comp=Z,52nm,1.2s,SNR=8.0
TOUF Mont Tournerai 53.73 316 eP P 10 29 27.2 -0.3
TOUF Mont Tournerai 53.73 316 eP P 10 29 27.2 -0.3
TOUF Mont Tournerai 53.73 316 eP P 10 29 27.2 -0.3
MVIF Mont Vial 53.75 316 eP P 10 29 27.4 -0.2
MVIF Mont Vial 53.75 316 eP P 10 29 27.4 -0.2
MVIF Mont Vial 53.75 316 eP P 10 29 27.4 -0.2
ULN Ulaanbaatar 53.87 39 eP P 10 29 28.8 +0.4
comp=Z,141nm,2.1s
ULN LR LR
comp=Z,2μm,20.0s
ULN Ulaanbaatar 53.87 39 P P 10 29 28.7 +0.3
SNR=22
ULN Ulaanbaatar 53.87 39 eP P 10 29 28.8 +0.4
comp=Z,141nm,2.1s
CALN Calern 53.88 316 eP P 10 29 26.8 -1.7
CALN Calern 53.88 316 eP P 10 29 26.8 -1.7
CALN Calern 53.88 316 eP P 10 29 26.8 -1.7
FRF La Foret Royal 53.99 315⇑iP P 10 29 28.5 -0.6
comp=Z,294nm,1.7s
FRF La Foret Royal 53.99 315⇑iP P 10 29 28.5 -0.6
FRF pmax pmax
comp=Z,294nm,1.7s
FRF La Foret Royal 53.99 315⇑iP P 10 29 28.5 -0.6
comp=Z,294nm,1.7s
FRF La Foret Royal 53.99 315⇑iP P 10 29 28.5 -0.6
comp=Z,147nm,1.7s
JOF Joensuu 53.99 345 eP P 10 29 26.2 -2.6
JOF pmax pmax
comp=Z,7.0nm,0.7s
JOF Joensuu 53.99 345 ep P 10 29 26.2 -2.6
comp=Z,6.5nm,0.7s
LMR La Mourre 54.01 315 eP P 10 29 28.5 -0.8
comp=Z,258nm,1.5s
LMR La Mourre 54.01 315 eP P 10 29 28.5 -0.8
LMR pmax pmax
comp=Z,258nm,1.5s
LMR La Mourre 54.01 315 eP P 10 29 28.5 -0.8
comp=Z,258nm,1.5s
LMR La Mourre 54.01 315 eP P 10 29 28.5 -0.8
comp=Z,129nm,1.5s
SURF Saint Ours 54.18 316 eP P 10 29 30.5 -0.3
SURF Saint Ours 54.18 316 eP P 10 29 30.5 -0.3
FIA1 FINESS Array S 54.26 342 eP P 10 29 29.3 -1.4
FIA1 FINESS Array S 54.26 342 eP P 10 29 29.3 -1.4
FINES FINESS Array B 54.26 342 P P 10 29 30.0 -0.7
FINES FINESS Array B 54.26 342 P P 10 29 30.0 -0.7
comp=Z,9.6nm,0.7s,baz=120,slow=11,SNR=14
FINES LR LR 10 55 42.4
comp=Z,1μm,19.5s,baz=268,slow=39
FINES FINESS Array B 54.26 342 P P 10 29 30.0 -0.7
SPAK Spaichingen-Ko 54.26 321 eP P 10 29 29.9 -1.2
IRK Irkutsk 54.26 33 eP P 10 29 31.3 +0.3
IRK e 10 31 28.5
IRK pmax pmax
comp=Z,99nm,2.6s
MBDF Montbardon 54.29 317 eP P 10 29 29.1 -2.4
comp=Z,41nm,0.9s
MBDF Montbardon 54.29 317 eP P 10 29 29.1 -2.4
MBDF pmax pmax
comp=Z,41nm,0.9s
MBDF Montbardon 54.29 317 eP P 10 29 29.1 -2.4
comp=Z,41nm,0.9s
MBDF Montbardon 54.29 317 eP P 10 29 29.1 -2.4
comp=Z,21nm,0.9s
SBUM Sibu 54.41 96 P P 10 29 33.9 +1.3
TIY Taiyuan 54.41 52 eP P 10 29 31.6 -0.8
TIY sP sP 10 29 39.9 +0.2
TIY S S 10 37 07.5 -3.0
TIY LR LR
comp=N,2μm,15.6s
TIY LR LR
comp=E,3μm,16.9s
TIY LR LR
comp=Z,4μm,18.6s
BNI Bardonecchia 54.46 317 eP P 10 29 32.5 -0.3
BNI MLR MLR
comp=Z,970nm,21.0s
BNI Bardonecchia 54.46 317 eP P 10 29 32.5 -0.3
BNI LR LR
comp=Z,970nm,21.0s
BNI Bardonecchia 54.46 317 eP P 10 29 32.5 -0.3
SENIN Lac Senin/Sane 54.52 319 eP P 10 29 32.4 -0.9
SENIN Lac Senin/Sane 54.52 319 eP P 10 29 32.4 -0.9
HHC Hu-ho-hao-te 54.52 48 eP P 10 29 33.5 +0.3
HHC PcP PcP 10 30 36.4 -0.1
HHC PP PP 10 31 37.3 +1.8
HHC ScP ScP 10 34 32.8 -1.6
HHC PcS PcS 10 34 35.1 -1.0
HHC S S 10 37 11.3 -0.7
HHC ScS ScS 10 39 18.6 -3.7
HHC pmax pmax
comp=Z,78nm,0.9s
HHC pmax pmax
comp=Z,1μm,6.2s
HHC LR LR
comp=N,4μm,17.0s
HHC LR LR
comp=E,9μm,16.4s
HHC LR LR
comp=Z,9μm,16.5s
LPG La Plagne 54.57 318⇑iP P 10 29 32.3 -1.4
comp=Z,128nm,1.0s
LPG La Plagne 54.57 318⇑iP P 10 29 32.3 -1.4
LPG pmax pmax
comp=Z,128nm,1.0s
LPG La Plagne 54.57 318⇑iP P 10 29 32.3 -1.4
comp=Z,128nm,1.0s
LPG La Plagne 54.57 318⇑iP P 10 29 32.3 -1.4
comp=Z,64nm,1.0s
LPL La Plagne 54.59 318⇑iP P 10 29 32.3 -1.5
comp=Z,157nm,1.0s
LPL La Plagne 54.59 318⇑iP P 10 29 32.3 -1.5
LPL pmax pmax
comp=Z,157nm,1.0s
LPL La Plagne 54.59 318⇑iP P 10 29 32.3 -1.5
comp=Z,157nm,1.0s
LPL La Plagne 54.59 318⇑iP P 10 29 32.3 -1.5
comp=Z,79nm,1.0s
BFO Black Forest 54.63 321 eP P 10 29 32.9 -0.9
BFO MLR MLR
comp=Z,978nm,19.0s
BFO Black Forest 54.63 321 eP P 10 29 32.9 -0.9
BFO LR LR
comp=Z,978nm,19.0s
BFO Black Forest 54.63 321 eP P 10 29 32.9 -0.9
FELD Feldberg im Sc 54.65 321 eP P 10 29 33.0 -1.1
FELD Feldberg im Sc 54.65 321 eP P 10 29 33.0 -1.1
KAF Kangasniemi 54.71 342 eP P 10 29 30.0 -4.0
KAF pmax pmax
comp=Z,5.0nm,0.7s
KAF Kangasniemi 54.71 342 ep P 10 29 30.0 -4.0
comp=Z,4.9nm,0.7s

WHN	**Wuhan**	**54.79**	**61**	P	**P**	**10 29 34.9**	**-0.3**		
WHN				S	**S**	**10 37 16.9**	**+1.3**		
WHN				LR	LR				
	comp=N,770nm,12.0s								
WHN				LR	LR				
	comp=E,4µm,17.6s								
WHN				LR	LR				
	comp=Z,6µm,19.9s								
BBS	**Basel-Blauen**	**54.80**	**320**	*e*P	**P**	**10 29 34.0**	**-1.0**		
BBS	**Basel-Blauen**	**54.80**	**320**	*e*P	**P**	**10 29 34.0**	**-1.0**		
SMRF	**Simiane la Rot**	**54.86**	**315**⇑	*i*P	**P**	**10 29 35.1**	**-0.4**		
	comp=Z,109nm,1.3s								
SMRF	**Simiane la Rot**	**54.86**	**315**⇑	*i*P	**P**	**10 29 35.1**	**-0.4**		
	comp=Z,109nm,1.3s								
SMRF	**Simiane la Rot**	**54.86**	**315**⇑	*i*P	**P**	**10 29 35.1**	**-0.4**		
	comp=Z,54nm,1.3s								
ORIF	**Oris-en-Rattie**	**54.95**	**317**	*e*P	**P**	**10 29 37.3**	**+1.1**		
	comp=Z,60nm,1.3s								
ORIF				*e*R					
	comp=Z,2µm,22.0s								
ORIF	**Oris-en-Rattie**	**54.95**	**317**	*e*P	**P**	**10 29 37.3**	**+1.1**		
ORIF				pmax	pmax				
	comp=Z,60nm,1.3s								
ORIF	**Oris-en-Rattie**	**54.95**	**317**	*e*P	**P**	**10 29 37.3**	**+1.1**		
	comp=Z,60nm,1.3s								
ORIF	**Oris-en-Rattie**	**54.95**	**317**	*e*P	**P**	**10 29 37.3**	**+1.1**		
	comp=Z,30nm,1.3s								
TOA0	**Torodi Ar. Sit**	**54.98**	**277**	*e*P	**P**	**10 29 36.2**	**-0.6**		
TOA0	**Torodi Ar. Sit**	**54.98**	**277**	*e*P	**P**	**10 29 36.2**	**-0.6**		
TORD	**Torodi Ar. Bea**	**54.98**	**277**	P	**P**	**10 29 36.3**	**-0.5**		
TORD	**Torodi Ar. Bea**	**54.98**	**277**	P	**P**	**10 29 36.3**	**-0.5**		
	comp=Z,10.0nm,1.0s,baz=84,slow=6.2,SNR=46								
TORD				LR	LR	10 51 01.6			
	comp=Z,2µm,19.6s,baz=110,slow=34								
TORD	**Torodi Ar. Bea**	**54.98**	**277**	P	**P**	**10 29 36.3**	**-0.5**		
BTM	**Bintulu**	**55.08**	**95**	P	**P**	**10 29 39.2**	**+1.7**		
GRN	**Grenoble**	**55.15**	**317**	*e*P	**P**	**10 29 35.9**	**-1.8**		
GRN	**Grenoble**	**55.15**	**317**	*e*P	**P**	**10 29 35.9**	**-1.8**		
GRN	**Grenoble**	**55.15**	**317**	*e*P	**P**	**10 29 35.9**	**-1.8**		
MOF	**Molkenrain**	**55.18**	**320**	*e*P	**P**	**10 29 36.6**	**-1.2**		
MOF	**Molkenrain**	**55.18**	**320**	*e*P	**P**	**10 29 36.6**	**-1.2**		
MOF	**Molkenrain**	**55.18**	**320**	*e*P	**P**	**10 29 36.6**	**-1.2**		
LOMF	**Lomont**	**55.19**	**320**	*e*P	**P**	**10 29 37.1**	**-0.8**		
LOMF	**Lomont**	**55.19**	**320**	*e*P	**P**	**10 29 37.1**	**-0.8**		
LOMF	**Lomont**	**55.19**	**320**	*e*P	**P**	**10 29 37.1**	**-0.8**		
ECH	**Echery**	**55.30**	**321**	*e*P	**P**	**10 29 37.5**	**-1.1**		
ECH				*e*		10 31 42.6			
ECH				pmax	pmax				
	comp=Z,73nm,1.6s								
ECH				MLR	MLR				
	comp=Z,704nm,22.0s								
ECH	**Echery**	**55.30**	**321**	*e*P	**P**	**10 29 37.5**	**-1.1**		
	comp=Z,72nm,1.6s								
ECH				*e*PP	**PP**	**10 31 42.6**	**+0.3**		
ECH				LR	LR				
	comp=Z,704nm,22.0s								
ECH	**Echery**	**55.30**	**321**	*e*P	**P**	**10 29 37.5**	**-1.1**		
CDF	**Champ du Feu**	**55.31**	**321**⇑	*i*P	**P**	**10 29 37.6**	**-1.1**		
	comp=Z,222nm,1.7s								
CDF	**Champ du Feu**	**55.31**	**321**⇑	*i*P	**P**	**10 29 37.6**	**-1.1**		
CDF				pmax	pmax				
	comp=Z,222nm,1.7s								
CDF	**Champ du Feu**	**55.31**	**321**⇑	*i*P	**P**	**10 29 37.6**	**-1.1**		
	comp=Z,222nm,1.7s								
CDF	**Champ du Feu**	**55.31**	**321**⇑	*i*P	**P**	**10 29 37.6**	**-1.1**		
	comp=Z,111nm,1.7s								
HINF	**Hinteralfeld**	**55.34**	**320**⇑	*i*P	**P**	**10 29 37.6**	**-1.4**		
	comp=Z,217nm,1.9s								
HINF	**Hinteralfeld**	**55.34**	**320**⇑	*i*P	**P**	**10 29 37.6**	**-1.4**		
HINF				pmax	pmax				
	comp=Z,217nm,1.9s								
HINF	**Hinteralfeld**	**55.34**	**320**⇑	*i*P	**P**	**10 29 37.6**	**-1.4**		
	comp=Z,217nm,1.9s								
HINF	**Hinteralfeld**	**55.34**	**320**⇑	*i*P	**P**	**10 29 37.6**	**-1.4**		
	comp=Z,108nm,1.9s								
CABF	**La Chapelle**	**55.39**	**319**⇑	*i*P	**P**	**10 29 38.9**	**-0.5**		
	comp=Z,467nm,1.3s								
CABF	**La Chapelle**	**55.39**	**319**⇑	*i*P	**P**	**10 29 38.9**	**-0.5**		
CABF				pmax	pmax				
	comp=Z,467nm,1.3s								
CABF	**La Chapelle**	**55.39**	**319**⇑	*i*P	**P**	**10 29 38.9**	**-0.5**		
	comp=Z,467nm,1.3s								
CABF	**La Chapelle**	**55.39**	**319**⇑	*i*P	**P**	**10 29 38.9**	**-0.5**		
	comp=Z,234nm,1.3s								
OG35	**Corcelles**	**55.53**	**318**	*e*P	**P**	**10 29 38.9**	**-1.5**		
HAU	**Haudompre**	**55.73**	**320**⇑	*i*P	**P**	**10 29 40.2**	**-1.5**		
	comp=Z,62nm,1.4s								
HAU				*e*R					
	comp=Z,1µm,20.8s								
HAU	**Haudompre**	**55.73**	**320**⇑	*i*P	**P**	**10 29 40.2**	**-1.5**		
HAU				pmax	pmax				
	comp=Z,62nm,1.4s								
HAU	**Haudompre**	**55.73**	**320**⇑	*i*P	**P**	**10 29 40.2**	**-1.5**		
	comp=Z,62nm,1.4s								
HAU	**Haudompre**	**55.73**	**320**⇑	*i*P	**P**	**10 29 40.2**	**-1.5**		
	comp=Z,31nm,1.4s								
VIVF	**Saint-Julien-l**	**55.75**	**316**	*e*P	**P**	**10 29 40.9**	**-1.0**		
	comp=Z,118nm,1.6s								
VIVF	**Saint-Julien-l**	**55.75**	**316**	*e*P	**P**	**10 29 40.9**	**-1.0**		
VIVF				pmax	pmax				
	comp=Z,118nm,1.6s								
VIVF	**Saint-Julien-l**	**55.75**	**316**	*e*P	**P**	**10 29 40.9**	**-1.0**		
	comp=Z,118nm,1.6s								
VIVF	**Saint-Julien-l**	**55.75**	**316**	*e*P	**P**	**10 29 40.9**	**-1.0**		
	comp=Z,59nm,1.6s								
SSB	**Saint Sauveur**	**55.97**	**317**	*e*P	**P**	**10 29 41.9**	**-1.6**		
SSB				pmax	pmax				
	comp=Z,74nm,1.3s								
SSB				MLR	MLR				
	comp=Z,575nm,20.0s								
SSB	**Saint Sauveur**	**55.97**	**317**	*e*P	**P**	**10 29 41.9**	**-1.6**		
	comp=Z,74nm,1.3s								
SSB				LR	LR				
	comp=Z,575nm,20.0s								
SSB	**Saint Sauveur**	**55.97**	**317**	*e*P	**P**	**10 29 42.4**	**-1.1**		
SSB	**Saint Sauveur**	**55.97**	**317**	*e*P	**P**	**10 29 41.9**	**-1.6**		
	comp=Z,74nm,1.3s								
THEF	**They Montfort**	**56.04**	**320**	*e*P	**P**	**10 29 42.7**	**-1.2**		
LASF	**Ste Croix**	**56.07**	**315**	*e*P	**P**	**10 29 43.4**	**-0.8**		
	comp=Z,232nm,1.8s								
LASF	**Ste Croix**	**56.07**	**315**	*e*P	**P**	**10 29 43.4**	**-0.8**		
	comp=Z,232nm,1.8s								
LASF	**Ste Croix**	**56.07**	**315**	*e*P	**P**	**10 29 43.4**	**-0.8**		
	comp=Z,116nm,1.8s								
PAGF	**Fort de Pagny**	**56.32**	**321**⇑	*i*P	**P**	**10 29 45.1**	**-0.8**		
	comp=Z,68nm,1.7s								
PAGF	**Fort de Pagny**	**56.32**	**321**⇑	*i*P	**P**	**10 29 45.1**	**-0.8**		
	comp=Z,68nm,1.7s								
PAGF	**Fort de Pagny**	**56.32**	**321**⇑	*i*P	**P**	**10 29 45.1**	**-0.8**		
	comp=Z,34nm,1.7s								
WLF	**Walferdange**	**56.47**	**322**	P	**P**	**10 29 46.8**	**-0.1**		
	comp=Z,41nm,1.9s								
WLF	**Walferdange**	**56.47**	**322**	*e*P	**P**	**10 29 46.1**	**-0.8**		
WLF				pmax	pmax				
	comp=Z,48nm,1.3s								
WLF				MLR	MLR				
	comp=Z,1µm,20.0s								
WLF	**Walferdange**	**56.47**	**322**	*e*P	**P**	**10 29 46.1**	**-0.8**		
	comp=Z,48nm,1.3s								
WLF				LR	LR				
	comp=Z,1µm,20.0s								
WLF	**Walferdange**	**56.47**	**322**	*e*P	**P**	**10 29 46.1**	**-0.8**		
	comp=Z,48nm,1.3s								
SFTF	**Sexfontaines**	**56.62**	**320**⇑	*i*P	**P**	**10 29 47.2**	**-0.8**		
	comp=Z,216nm,1.2s								
SFTF	**Sexfontaines**	**56.62**	**320**⇑	*i*P	**P**	**10 29 47.2**	**-0.8**		
	comp=Z,216nm,1.2s								
SFTF	**Sexfontaines**	**56.62**	**320**⇑	*i*P	**P**	**10 29 47.2**	**-0.8**		
	comp=Z,108nm,1.2s								
MEZF	**Maizieres J'vi**	**56.72**	**320**⇑	*i*P	**P**	**10 29 48.1**	**-0.6**		
	comp=Z,561nm,1.7s								
MEZF	**Maizieres J'vi**	**56.72**	**320**⇑	*i*P	**P**	**10 29 48.1**	**-0.6**		
	comp=Z,561nm,1.7s								
MEZF	**Maizieres J'vi**	**56.72**	**320**⇑	*i*P	**P**	**10 29 48.1**	**-0.6**		
	comp=Z,280nm,1.7s								
LBL	**Lubilhac**	**56.82**	**316**	*e*P	**P**	**10 29 48.6**	**-1.0**		
LBL	**Lubilhac**	**56.82**	**316**	*e*P	**P**	**10 29 48.6**	**-1.0**		
LBL	**Lubilhac**	**56.82**	**316**	*e*P	**P**	**10 29 48.6**	**-1.0**		
SMF	**Signal de Mont**	**56.86**	**318**⇑	*i*P	**P**	**10 29 48.6**	**-1.2**		
	comp=Z,104nm,1.4s								
SMF	**Signal de Mont**	**56.86**	**318**⇑	*i*P	**P**	**10 29 48.6**	**-1.2**		
SMF				pmax	pmax				
	comp=Z,104nm,1.4s								
SMF	**Signal de Mont**	**56.86**	**318**⇑	*i*P	**P**	**10 29 48.6**	**-1.2**		
	comp=Z,104nm,1.4s								
SMF	**Signal de Mont**	**56.86**	**318**⇑	*i*P	**P**	**10 29 48.6**	**-1.2**		
	comp=Z,52nm,1.4s								
MEM	**Membach**	**56.92**	**323**	P	**P**	**10 29 51.4**	**+1.2**		
	comp=Z,16nm,1.8s								
MTLF	**Montolieu**	**57.01**	**314**⇑	*i*P	**P**	**10 29 50.0**	**-0.9**		
	comp=Z,90nm,1.5s								
MTLF	**Montolieu**	**57.01**	**314**⇑	*i*P	**P**	**10 29 50.0**	**-0.9**		
MTLF				pmax	pmax				
	comp=Z,90nm,1.5s								
MTLF	**Montolieu**	**57.01**	**314**⇑	*i*P	**P**	**10 29 50.0**	**-0.9**		
	comp=Z,90nm,1.5s								
MTLF	**Montolieu**	**57.01**	**314**⇑	*i*P	**P**	**10 29 50.0**	**-0.9**		
	comp=Z,45nm,1.5s								
SUR	**Sutherland**	**57.04**	**218**	*e*P	**P**	**10 29 50.1**	**-1.4**		
SUR				AMB	AMB	10 29 55.9			
	comp=Z,61nm,2.5s								
SUR	**Sutherland**	**57.04**	**218**	*e*P	**P**	**10 29 52.6**	**+1.2**		
	comp=Z,594nm,2.6s								
SUR				LR	LR				
	comp=Z,2µm,22.0s								
SUR	**Sutherland**	**57.04**	**218**	*e*P	**P**	**10 29 52.6**	**+1.2**		
	comp=Z,594nm,2.6s								
CVNA	**Calvinia**	**57.05**	**219**	*e*P	**P**	**10 29 50.0**	**-1.5**		
CVNA				AMB	AMB	10 29 55.5			
	comp=Z,70nm,1.7s								
LOR	**Lormes**	**57.05**	**319**⇑	*i*P	**P**	**10 29 50.1**	**-1.0**		
	comp=Z,133nm,1.2s								
LOR				*e*R					
	comp=Z,911nm,18.5s								
LOR	**Lormes**	**57.05**	**319**⇑	*i*P	**P**	**10 29 50.1**	**-1.0**		
	comp=Z,133nm,1.2s								
LOR	**Lormes**	**57.05**	**319**⇑	*i*P	**P**	**10 29 50.1**	**-1.0**		
	comp=Z,67nm,1.2s								
PYM	**Petit Puy Mans**	**57.14**	**317**	*e*P	**P**	**10 29 50.9**	**-1.0**		
PYM	**Petit Puy Mans**	**57.14**	**317**	*e*P	**P**	**10 29 50.9**	**-1.0**		
PYM	**Petit Puy Mans**	**57.14**	**317**	*e*P	**P**	**10 29 50.9**	**-1.0**		
AGO	**Saint Agoulin**	**57.15**	**317**	*e*P	**P**	**10 29 50.9**	**-0.9**		
AGO	**Saint Agoulin**	**57.15**	**317**	*e*P	**P**	**10 29 50.9**	**-0.9**		
SSF	**Saint Saulge**	**57.21**	**318**⇑	*i*P	**P**	**10 29 51.2**	**-1.1**		
	comp=Z,54nm,0.9s								
SSF	**Saint Saulge**	**57.21**	**318**⇑	*i*P	**P**	**10 29 51.2**	**-1.1**		
SSF				pmax	pmax				
	comp=Z,54nm,0.9s								
SSF	**Saint Saulge**	**57.21**	**318**⇑	*i*P	**P**	**10 29 51.2**	**-1.1**		
	comp=Z,54nm,0.9s								
SSF	**Saint Saulge**	**57.21**	**318**⇑	*i*P	**P**	**10 29 51.2**	**-1.1**		
	comp=Z,27nm,0.9s								
AVF	**Avril sur Loir**	**57.23**	**318**⇑	*i*P	**P**	**10 29 50.9**	**-1.4**		
	comp=Z,70nm,1.1s								
AVF	**Avril sur Loir**	**57.23**	**318**⇑	*i*P	**P**	**10 29 50.9**	**-1.4**		
AVF				pmax	pmax				
	comp=Z,70nm,1.1s								
AVF	**Avril sur Loir**	**57.23**	**318**⇑	*i*P	**P**	**10 29 50.9**	**-1.4**		
	comp=Z,70nm,1.1s								
AVF	**Avril sur Loir**	**57.23**	**318**⇑	*i*P	**P**	**10 29 50.9**	**-1.4**		
	comp=Z,35nm,1.1s								
BCLA	**Clavier**	**57.27**	**323**	P	**P**	**10 29 52.1**	**-0.4**		
	comp=Z,23nm,2.0s								
GIVF	**Givet**	**57.44**	**322**⇑	*i*P	**P**	**10 29 53.2**	**-0.6**		
	comp=Z,117nm,1.3s								
GIVF	**Givet**	**57.44**	**322**⇑	*i*P	**P**	**10 29 53.2**	**-0.6**		
GIVF				pmax	pmax				
	comp=Z,117nm,1.3s								
GIVF	**Givet**	**57.44**	**322**⇑	*i*P	**P**	**10 29 53.2**	**-0.6**		
	comp=Z,117nm,1.3s								
GIVF	**Givet**	**57.44**	**322**⇑	*i*P	**P**	**10 29 53.2**	**-0.6**		
	comp=Z,58nm,1.3s								
BGF	**Bois d'Agland**	**57.49**	**318**⇑	*i*P	**P**	**10 29 53.4**	**-0.8**		
	comp=Z,201nm,1.1s								
BGF	**Bois d'Agland**	**57.49**	**318**⇑	*i*P	**P**	**10 29 53.4**	**-0.8**		
BGF				pmax	pmax				
	comp=Z,201nm,1.1s								
BGF	**Bois d'Agland**	**57.49**	**318**⇑	*i*P	**P**	**10 29 53.4**	**-0.8**		
	comp=Z,201nm,1.1s								
BGF	**Bois d'Agland**	**57.49**	**318**⇑	*i*P	**P**	**10 29 53.4**	**-0.8**		
	comp=Z,100nm,1.1s								
APA	**Apatity**	**57.54**	**349**⇑	*e*P	P	10 30 00.0	+5.8		
APA				*i* S	S	10 37 58.0	+7.0		
APA				*i* PS	**PnS**	**10 38 10.0**	**+7.4**		
APA				*i*		10 39 32.0			
APA				*i* SS	**SS**	**10 41 46.0**	**+5.2**		
APA				MLR	MLR				
	comp=Z,1µm,19.0s								
CAF	**Calviac**	**57.54**	**316**	*e*P	**P**	**10 29 53.5**	**-1.1**		
CAF	**Calviac**	**57.54**	**316**	*e*P	**P**	**10 29 53.5**	**-1.1**		
CAF	**Calviac**	**57.54**	**316**	*e*P	**P**	**10 29 53.5**	**-1.1**		
CAF	**Calviac**	**57.54**	**316**	*e*P	**P**	**10 29 53.5**	**-1.1**		
KKM	**Kota Kinabalu**	**57.56**	**91**	*e*P	**P**	**10 29 55.2**	**-0.1**		
	comp=Z,249nm,2.2s								
KKM				LR	LR				
	comp=Z,2µm,20.0s								
KKM	**Kota Kinabalu**	**57.56**	**91**	P	**P**	**10 29 56.8**	**+1.4**		
KKM	**Kota Kinabalu**	**57.56**	**91**	*e*P	**P**	**10 29 55.2**	**-0.1**		
	comp=Z,249nm,2.2s								
DOU	**Dourbes**	**57.57**	**322**	P	**P**	**10 29 54.0**	**-0.7**		
	comp=Z,26nm,1.8s								
BJI	**Beijing**	**57.76**	**50**	P	**P**	**10 29 56.3**	**+0.1**		
BJI				S	**S**	**10 37 55.6**	**+0.9**		
BJI				SS	**SS**	**10 41 48.6**	**+3.4**		
BJI				pmax	pmax				
	comp=Z,38nm,0.6s								
BJI				pmax	pmax				
	comp=Z,410nm,5.8s								
BJI				LR	LR				
	comp=N,2µm,21.2s								
BJI				LR	LR				
	comp=E,4µm,20.6s								
BJI				LR	LR				
	comp=Z,6µm,24.9s								
BAIF	**Baives**	**57.79**	**322**⇑	*i*P	**P**	**10 29 55.7**	**-0.5**		
	comp=Z,208nm,1.5s								
BAIF	**Baives**	**57.79**	**322**⇑	*i*P	**P**	**10 29 55.7**	**-0.5**		
BAIF				pmax	pmax				
	comp=Z,208nm,1.5s								
BAIF	**Baives**	**57.79**	**322**⇑	*i*P	**P**	**10 29 55.7**	**-0.5**		
	comp=Z,208nm,1.5s								
BAIF	**Baives**	**57.79**	**322**⇑	*i*P	**P**	**10 29 55.7**	**-0.5**		
	comp=Z,104nm,1.5s								
TCF	**Toulx Ste Croi**	**57.83**	**317**	*e*P	**P**	**10 29 55.5**	**-1.1**		
	comp=Z,54nm,1.2s								
TCF	**Toulx Ste Croi**	**57.83**	**317**	*e*P	**P**	**10 29 55.5**	**-1.1**		
TCF				pmax	pmax				
	comp=Z,54nm,1.2s								
TCF	**Toulx Ste Croi**	**57.83**	**317**	*e*P	**P**	**10 29 55.5**	**-1.1**		
	comp=Z,54nm,1.2s								
TCF	**Toulx Ste Croi**	**57.83**	**317**	*e*P	**P**	**10 29 55.5**	**-1.1**		
	comp=Z,27nm,1.2s								
HYF	**Humbligny**	**57.84**	**318**	*e*P	**P**	**10 29 55.9**	**-0.8**		
HYF	**Humbligny**	**57.84**	**318**	*e*P	**P**	**10 29 55.9**	**-0.8**		
HYF	**Humbligny**	**57.84**	**318**	*e*P	**P**	**10 29 55.9**	**-0.8**		
SNF	**Seneffe**	**57.91**	**322**	P	**P**	**10 29 57.2**	**+0.2**		
	comp=Z,26nm,1.9s								
UCC	**Uccle**	**57.97**	**323**	P	**P**	**10 29 58.8**	**+1.3**		
KDM	**Kudat**	**58.01**	**90**	P	**P**	**10 29 58.6**	**+0.2**		
RJF	**Les Rejaudoux**	**58.02**	**316**	*e*P	**P**	**10 29 57.1**	**-0.9**		
RJF				*e*R					
	comp=Z,727nm,22.0s								
RJF	**Les Rejaudoux**	**58.02**	**316**	*e*P	**P**	**10 29 57.1**	**-0.9**		
RJF	**Les Rejaudoux**	**58.02**	**316**	*e*P	**P**	**10 29 57.1**	**-0.9**		
RJF	**Les Rejaudoux**	**58.02**	**316**	*e*P	**P**	**10 29 57.1**	**-0.9**		
QZH	**Quanzhou**	**58.21**	**68**	P	P	10 29 53.3	-6.3		
QZH				PP	PP	10 32 14.3	+5.7		
QZH				S	**S**	**10 37 58.1**	**-2.9**		
QZH				LR	LR				
	comp=N,3µm,16.1s								
QZH				LR	LR				
	comp=E,910nm,14.2s								
QZH				LR	LR				
	comp=Z,2µm,18.2s								
LFF	**La Frestale**	**58.45**	**315**⇑	*i*P	**P**	**10 30 00.3**	**-0.7**		
	comp=Z,254nm,1.6s								
LFF	**La Frestale**	**58.45**	**315**⇑	*i*P	**P**	**10 30 00.3**	**-0.7**		
LFF				pmax	pmax				
	comp=Z,254nm,1.6s								
LFF	**La Frestale**	**58.45**	**315**⇑	*i*P	**P**	**10 30 00.3**	**-0.7**		
	comp=Z,254nm,1.6s								
LFF	**La Frestale**	**58.45**	**315**⇑	*i*P	**P**	**10 30 00.3**	**-0.7**		
	comp=Z,127nm,1.6s								
NJ2	**Nanjing**	**58.78**	**60**	*e*P	**P**	**10 30 03.1**	**-0.4**		
NJ2				pP	**pP**	**10 30 06.3**	**-2.4**		
NJ2				sP	**sP**	**10 30 07.8**	**-2.9**		
NJ2				PP	**PP**	**10 32 12.3**	**-1.2**		
NJ2				S	**S**	**10 38 10.0**	**+1.7**		
NJ2				pmax	pmax				
	comp=Z,30nm,1.0s								
NJ2				pmax	pmax				
	comp=Z,390nm,4.8s								
NJ2				LR	LR				
	comp=N,4µm,20.6s								
NJ2				LR	LR				
	comp=E,7µm,18.8s								
NJ2				LR	LR				
	comp=Z,3µm,23.8s								
ETSF	**Etsaut**	**58.87**	**313**⇑	*i*P	**P**	**10 30 03.4**	**-0.7**		
	comp=Z,107nm,1.3s								
ETSF	**Etsaut**	**58.87**	**313**⇑	*i*P	**P**	**10 30 03.4**	**-0.7**		
ETSF				pmax	pmax				
	comp=Z,107nm,1.3s								
ETSF	**Etsaut**	**58.87**	**313**⇑	*i*P	**P**	**10 30 03.4**	**-0.7**		
	comp=Z,107nm,1.3s								
ETSF	**Etsaut**	**58.87**	**313**⇑	*i*P	**P**	**10 30 03.4**	**-0.7**		
	comp=Z,54nm,1.3s								
KONO	**Kongsberg**	**59.24**	**334**	PFAKE		10 30 20.0	+14		
KONO				LR	LR				
	comp=N,838nm,20.0s								
NB2	**NORSAR Subarra**	**59.32**	**336**	P	**P**	**10 30 04.5**	**-2.3**		
	comp=Z,25nm,1.7s,baz=124,slow=7.4								
NB2	**NORSAR Subarra**	**59.32**	**336**	P	**P**	**10 30 04.5**	**-2.3**		
	comp=Z,25nm,1.7s,SNR=5.9								
NOA	**NORSAR Array B**	**59.32**	**336**	P	**P**	**10 30 05.8**	**-0.9**		
NOA	**NORSAR Array B**	**59.32**	**336**	P	**P**	**10 30 05.8**	**-0.9**		
	comp=Z,1.0nm,0.9s,baz=108,slow=8.4,SNR=4.9								
NOA				LR	LR	11 00 29.2			
	comp=Z,795nm,19.0s,baz=120,slow=41								
NOA	**NORSAR Array B**	**59.32**	**336**	P	**P**	**10 30 05.8**	**-0.9**		
CIT	**Chita**	**59.34**	**36**	*e*P	**P**	**10 30 06.2**	**-0.9**		
CIT				*e*		10 30 16.2			
CIT				*e*		10 30 24.3			
SJPF	**Ste Jean**	**59.40**	**313**⇑	*i*P	**P**	**10 30 07.0**	**-0.6**		
	comp=Z,56nm,1.0s								
SJPF	**Ste Jean**	**59.40**	**313**⇑	*i*P	**P**	**10 30 07.0**	**-0.6**		
SJPF				pmax	pmax				
	comp=Z,56nm,1.0s								
SJPF	**Ste Jean**	**59.40**	**313**⇑	*i*P	**P**	**10 30 07.0**	**-0.6**		
	comp=Z,56nm,1.0s								
SJPF	**Ste Jean**	**59.40**	**313**⇑	*i*P	**P**	**10 30 07.0**	**-0.6**		
	comp=Z,28nm,1.0s								
MFF	**Saint Martin d**	**59.48**	**317**	*e*P	**P**	**10 30 06.9**	**-1.2**		
	comp=Z,119nm,1.7s								
MFF	**Saint Martin d**	**59.48**	**317**	*e*P	**P**	**10 30 06.9**	**-1.2**		
MFF				pmax	pmax				
	comp=Z,119nm,1.7s								
MFF	**Saint Martin d**	**59.48**	**317**	*e*P	**P**	**10 30 06.9**	**-1.2**		
	comp=Z,119nm,1.7s								
MFF	**Saint Martin d**	**59.48**	**317**	*e*P	**P**	**10 30 06.9**	**-1.2**		
	comp=Z,59nm,1.7s								
TSM	**Tawau**	**59.52**	**92**	P	**P**	**10 30 09.3**	**+0.5**		
MYLDM	**Lahad Datu**	**59.95**	**91**	P	**P**	**10 30 13.1**	**+1.2**		
LDF	**La Druitiere**	**60.01**	**319**⇑	*i*P	**P**	**10 30 10.3**	**-1.4**		
	comp=Z,189nm,1.4s								
LDF	**La Druitiere**	**60.01**	**319**⇑	*i*P	**P**	**10 30 10.3**	**-1.4**		
LDF				pmax	pmax				
	comp=Z,189nm,1.4s								
LDF	**La Druitiere**	**60.01**	**319**⇑	*i*P	**P**	**10 30 10.3**	**-1.4**		
	comp=Z,189nm,1.4s								
LDF	**La Druitiere**	**60.01**	**319**⇑	*i*P	**P**	**10 30 10.3**	**-1.4**		
	comp=Z,94nm,1.4s								
FLN	**La Foliniere**	**60.28**	**319**	*e*P	**P**	**10 30 12.3**	**-1.3**		
	comp=Z,244nm,1.7s								
FLN				*e*R					
	comp=Z,970nm,22.2s								
FLN	**La Foliniere**	**60.28**	**319**	*e*P	**P**	**10 30 12.3**	**-1.3**		
FLN				pmax	pmax				
	comp=Z,244nm,1.7s								
FLN	**La Foliniere**	**60.28**	**319**	*e*P	**P**	**10 30 12.3**	**-1.3**		
	comp=Z,244nm,1.7s								
FLN	**La Foliniere**	**60.28**	**319**	*e*P	**P**	**10 30 12.3**	**-1.3**		
	comp=Z,122nm,1.7s								
GRR	**Gorron**	**60.42**	**319**	*e*P	**P**	**10 30 11.6**	**-2.9**		
	comp=Z,126nm,1.6s								
GRR	**Gorron**	**60.42**	**319**	*e*P

comp=Z,76nm,1.0s
LIC eR
comp=Z,1µm,18.2s
LIC Lamto 62.54 271 ⇑ iP P 10 30 29.2 -0.3
comp=Z,76nm,1.0s
LIC Lamto 62.54 271 ⇑ iP P 10 30 29.2 -0.3
comp=Z,38nm,1.0s
PBAR Barrancos 63.01 307 eP P 10 30 34.9 +2.7
comp=Z,91nm,1.5s
PMRV Marv??o 63.41 308 eP P 10 30 36.7 +1.9
comp=Z,74nm,1.7s
PMRV Marv??o 63.41 308 eP P 10 30 36.7 +1.9
comp=Z,74nm,1.7s
PVAQ Vaqueiros 63.48 306 eP P 10 30 37.8 +2.5
comp=Z,79nm,1.8s
PVAQ Vaqueiros 63.48 306 eP P 10 30 37.8 +2.5
comp=Z,79nm,1.8s
SNY Shenyang 63.58 49 ⇓ P P 10 30 35.1 -0.8
SNY S S 10 39 12.3 +3.2
SNY pmax pmax
comp=Z,14nm,1.8s
SNY pmax pmax
comp=Z,360nm,3.7s
SNY LR LR
comp=N,1µm,16.5s
SNY LR LR
comp=E,2µm,20.4s
SNY LR LR
comp=Z,2µm,21.6s
KAPI Kappang 63.60 102 P P 10 30 35.0 -1.4
KAPI Kappang 63.60 102 P P 10 30 35.7 -0.7
SNR=20
KAPI Kappang 63.60 102 P P 10 30 34.3 -2.1
comp=Z,297nm,0.9s,SNR=8.8
KAPI Kappang 63.60 102 P P 10 30 35.0 -1.4
comp=Z,30nm,0.7s,baz=289,slow=7.4,SNR=31
KAPI LR LR 10 55 08.6
comp=Z,769nm,19.8s,baz=297,slow=33
MTE Manteigas 63.63 309 PFAKE 10 30 50.0 +14
MTE LR LR
comp=Z,592nm,22.0s
ESK Eskdalemuir 63.77 326 *i* P **P 10 30 35.8 -1.1**
ESK Eskdalemuir 63.77 326 PFAKE 10 30 50.0 +13
ESK LR LR
comp=Z,760nm,19.0s
EVO Evora 63.81 307 ⇑ iP P 10 30 37.3 -0.2
comp=Z,161nm,1.7s
EVO eR
comp=Z,1µm,21.0s
EVO Evora 63.81 307 *e*P P 10 30 40.9 +3.4
comp=Z,73nm,1.3s
EVOP Sao Brissos 63.89 307 ⇑ iP P 10 30 37.3 -0.7
EVOP pmax pmax
comp=Z,161nm,1.7s
EVOP Sao Brissos 63.89 307 ⇑ iP P 10 30 37.3 -0.7
comp=Z,161nm,1.7s
EVOP Sao Brissos 63.89 307 ⇑ iP P 10 30 37.3 -0.7
comp=Z,81nm,1.7s
CN2 Changchun 65.18 47 ⇑ P P 10 30 46.5 +0.1
CN2 *es*P **sP 10 30 52.5 -1.1**
CN2 *e*S **S 10 39 27.6 -1.3**
CN2 pmax pmax
comp=Z,60nm,1.1s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1µm,22.0s
CN2 LR LR
comp=E,1µm,22.0s
CN2 LR LR
comp=Z,1µm,23.0s
INCN Inchon 65.55 54 PFAKE 10 31 00.0 +11
INCN LR LR
comp=Z,1µm,21.0s
DAV Davao City (W) 66.52 88 PFAKE 10 31 10.0 +14
DAV LR LR
comp=Z,969nm,22.0s
KSAR Wonju Array Be 66.54 54 P P 10 30 54.3 -0.9
KSAR Wonju Array Be 66.54 54 P P 10 30 54.3 -0.9
KSRS Korea Array 66.57 54 P P 10 30 54.3 -1.1
comp=Z,8.1nm,0.8s,baz=272,slow=6.5,SNR=19
KSRS LR LR 11 01 38.7
comp=Z,1µm,21.5s,baz=271,slow=38
CLNS Chul'man 67.07 33 eP P 10 30 57.5 -0.8
CLNS *e**PP **pP 10 31 07.5 +3.9**
CLNS *e* 10 31 23.8
CLNS *e* 10 33 24.3
CLNS *e*PPP PPP 10 35 00.9
CLNS *e*S **S 10 39 48.9 -2.6**
CLNS pmax pmax
comp=Z,16nm,1.0s
CLNS pmax pmax
comp=E,10.0nm,1.0s
CLNS pmax pmax
comp=N,6.0nm,1.0s
CLNS pmax pmax
comp=Z,5.0nm,1.1s
CLNS pmax pmax
comp=N,4.0nm,0.8s
CLNS pmax pmax
comp=E,7.0nm,1.2s
CLNS smax smax
comp=E,162nm,10.8s
CLNS smax smax
comp=N,450nm,14.2s
CLNS MLR MLR
comp=N,830nm,12.0s
CLNS MLR MLR
comp=Z,783nm,20.0s
CLNS MLR MLR
comp=E,726nm,17.0s
MDJ Mudanjiang 68.23 47 P P 10 31 05.3 -0.5
MDJ pP **pP 10 31 08.5 -2.6**
MDJ sP **sP 10 31 09.8 -3.3**
MDJ S **S 10 40 05.9 +0.2**
MDJ pmax pmax
comp=Z,14nm,1.5s
MDJ pmax pmax
comp=Z,290nm,7.0s
MDJ LR LR
comp=N,660nm,23.5s
MDJ LR LR
comp=E,850nm,26.1s
MDJ LR LR
comp=Z,2µm,21.3s
JNU Nakatsue 68.95 59 *e*P **P 10 31 10.9 +0.3**
comp=Z,34nm,1.3s
JNU *e*PP **PP 10 33 39.5 -3.4**
JNU Nakatsue 68.95 59 *e*P **P 10 31 10.9 +0.3**
comp=Z,34nm,1.3s
MBWA Marble Bar 69.02 118 PFAKE 10 31 20.0 +8.9
MBWA LR LR
comp=Z,616nm,20.0s
SHEL Horse Pasture 69.18 248 PFAKE 10 31 20.0 +7.8
SHEL LR LR
comp=Z,2µm,22.0s
VLA Vladivostok 69.81 48 α *i* P **P 10 31 14.1 -1.5**
VLA *i* 10 31 36.5
VLA S **S 10 40 23.0 -1.5**
VLA pmax pmax
comp=Z,25nm,0.7s
USRK Ussuriysk Arra 69.93 47 P P 10 31 15.2 -1.1
comp=Z,9.8nm,0.8s,baz=250,slow=6.8,SNR=14
USRK LR LR 11 02 55.6
comp=Z,1µm,20.8s,baz=259,slow=37
KLR Kul'dur 70.04 42 *e*P P 10 31 12.2 -4.7
KLR *e* 10 35 31.0
KLR pmax pmax
comp=E,35nm,1.8s
KLR pmax pmax
comp=Z,90nm,1.8s
KLR MLR MLR
comp=E,2µm,14.0s
KLR MLR MLR
comp=Z,3µm,14.0s
KBS Kingsbay 70.17 351 PFAKE 10 31 30.0 +13
KBS LR LR
comp=Z,983nm,19.0s
YAK Yakutsk 70.53 28 *e*P **P 10 31 18.3 -1.3**
YAK *e**PP **PcP 10 31 42.8 +2.0**
YAK *e* 10 33 54.2
YAK *e*PPP PPP 10 35 38.2
YAK *e*S S 10 40 24.5 -7.7
YAK *e**SS **SKiKP 10 41 09.9 +6.8**
YAK *e* 10 41 20.8
YAK *e*SS **SS 10 45 01.8 -1.4**
YAK pmax pmax
comp=Z,71nm,0.9s
YAK pmax pmax
comp=E,22nm,1.0s
YAK pmax pmax
comp=Z,125nm,4.9s
YAK pmax pmax
comp=N,107nm,4.6s
YAK pmax pmax
comp=E,189nm,5.4s
YAK smax smax
comp=N,181nm,5.0s
YAK smax smax
comp=E,102nm,4.8s
NWAO Narrogin (SRO) 72.09 131 LR LR 10 57 37.2
comp=E,598nm,19.0s,baz=237,slow=31
HABR Khabarovsk 72.18 43 ‖ *e*P **P 10 31 28.2 -1.7**
HABR *e**PP **pP 10 31 38.6 +3.4**
HABR *e**SP sP 10 31 42.5 +5.3
HABR *e* 10 31 45.7
HABR *e*PPP PPP 10 35 52.8
HABR *e*S **S 10 40 49.4 -2.4**
HABR *e* 10 41 31.9
HABR *e*SS **SS 10 45 28.8 -0.3**
HABR pmax pmax
comp=Z,142nm,2.7s
HABR pmax pmax
comp=E,48nm,1.4s
HABR pmax pmax
comp=N,31nm,1.8s
HABR pmax pmax
comp=Z,147nm,1.7s
HABR MLR MLR
comp=E,2µm,16.0s
HABR MLR MLR
comp=Z,2µm,17.0s
HABR MLR MLR
comp=N,1µm,17.0s
TIXI Tiksi 72.31 18 ⇓ *i*P **P 10 31 29.4 -0.9**
TIXI pmax pmax
comp=Z,50nm,1.5s
FITZ Fitzroy Crossi 73.12 113 *e*P **P 10 31 35.2 -0.8**
comp=Z,25nm,1.1s
FITZ Fitzroy Crossi 73.12 113 LR LR 10 55 24.9
comp=Z,362nm,21.1s,baz=173,slow=29
FITZ Fitzroy Crossi 73.12 113 *e*P **P 10 31 35.2 -0.8**
comp=Z,25nm,1.1s
MAJO Matsushiro 74.81 55 *e*P **P 10 31 45.1 -0.6**
MAJO pmax pmax
comp=Z,17nm,1.1s
MAJO MLR MLR
comp=Z,2µm,19.0s
MAJO Matsushiro 74.81 55 *e*P **P 10 31 45.1 -0.6**
comp=Z,17nm,1.1s
MAJO LR LR
comp=Z,2µm,19.0s
MAJO Matsushiro 74.81 55 *e*P **P 10 31 45.1 -0.6**
comp=Z,17nm,1.1s
MAT Matsushiro 74.81 55 P P **10 31 44.3 -1.4**
MAT S **S 10 41 17.8 -4.3**
MJAR Matsushiro Arr 74.81 55 P **P 10 31 45.5 -0.2**
MJAR Matsushiro Arr 74.81 55 P **P 10 31 45.5 -0.2**
comp=Z,6.2nm,0.8s,baz=267,slow=6.4,SNR=21
MJAR LR LR 11 07 09.1
comp=Z,1µm,19.8s,baz=270,slow=38
MJAR Matsushiro Arr 74.81 55 P **P 10 31 45.5 -0.2**
DAG Danmarks Havn 75.05 347 ⇑ iP P 10 31 46.0 -0.2
DAG pmax pmax
comp=Z,13nm,1.0s
DAG Danmarks Havn 75.05 347 ⇑ iP P 10 31 46.0 -0.2
comp=Z,13nm,1.0s
SCO Scoresbysund 75.14 340 *i* P **P 10 31 47.5 +0.7**
SCO pmax pmax
comp=Z,9.0nm,1.1s
SCO Scoresbysund 75.14 340 *i* P **P 10 31 47.5 +0.7**
comp=Z,8.7nm,1.1s
SCO Scoresbysund 75.14 340 *i* P **P 10 31 47.6 +0.7**
comp=Z,8.7nm,1.1s,SNR=19
YSS Yuzh-Sakhalins 77.42 44 *e*P **P 10 32 00.0 -0.3**
YSS *e*S **S 10 41 50.0 -0.3**
YSS *e*PS **PnS 10 42 32.0 +1.6**
YSS MLR MLR
comp=Z,1µm,18.0s
YSS MLR MLR
comp=E,1µm,17.0s
ASAJ Asahikawa 77.55 47 P **P 10 32 00.7 -0.4**
ASAJ Asahikawa 77.55 47 P **P 10 32 00.7 -0.4**
comp=E,15nm,0.8s,baz=233,slow=3.8,SNR=9.2
ASAJ Asahikawa 77.55 47 P **P 10 32 00.7 -0.4**
ERM Erimo 78.16 49 PFAKE 10 32 20.0 +15
ERM LR LR
comp=Z,1µm,19.0s
SACV Santiago Islan 79.06 283 PFAKE 10 32 20.0 +10
SACV LR LR
comp=Z,744nm,20.0s
MAW Mawson 79.81 178 LR LR 11 00 07.6
comp=Z,1µm,20.5s,baz=348,slow=30
YUK Yuzh-Kuril'sk 79.90 47 *i* P P 10 32 08.9 -5.1
YUK *i* S **S 10 42 11.8 -5.2**
YUK pmax pmax
comp=E,124nm,1.2s
YUK pmax pmax
comp=N,223nm,1.2s
YUK pmax pmax
comp=Z,668nm,1.2s
YUK pmax pmax
comp=Z,799nm,1.2s
YUK MLR MLR
comp=N,558nm,22.0s
YUK MLR MLR
comp=E,462nm,22.0s
YUK MLR MLR
comp=Z,1µm,22.0s
SUMG Summit 80.29 342 *e*P **P 10 32 16.2 +0.1**
SUMG *e* 10 35 21.4
SUMG pmax pmax
comp=Z,186nm,2.3s
SUMG Summit 80.29 342 *e*P **P 10 32 16.2 +0.1**
comp=Z,186nm,2.3s
SUMG *e*PP **PP 10 35 21.4 +3.0**
SUMG Summit 80.29 342 *i* P P 10 32 19.3 +3.2
comp=Z,8.7nm,0.9s
SUMG Summit 80.29 342 *e*P **P 10 32 16.2 +0.1**
comp=Z,186nm,2.3s
SEY Seymchan 81.03 28 *c i*P **P 10 32 19.7 0.0**
WRAB Tennant Creek 81.52 113 *e*P **P 10 32 21.6 -1.5**
WRAB pmax pmax
comp=Z,17nm,0.8s
WRAB MLR MLR
comp=Z,309nm,19.0s
WRAB Tennant Creek 81.52 113 *e*P **P 10 32 21.6 -1.5**
comp=Z,17nm,0.8s
WRAB LR LR
comp=Z,309nm,19.0s
WRAB Tennant Creek 81.52 113 P **P 10 32 22.2 -0.9**
comp=Z,125nm,0.7s,SNR=6.7
WRAB Tennant Creek 81.52 113 *e*P **P 10 32 21.6 -1.5**
comp=Z,17nm,0.8s
ASAR Alice Springs 82.19 116 P **P 10 32 25.1 -1.5**
ASAR Alice Springs 82.19 116 P **P 10 32 25.1 -1.5**
comp=Z,6.1nm,0.6s,baz=289,slow=5.0,SNR=145
ASAR Alice Springs 82.19 116 P **P 10 32 25.1 -1.5**
AS31 Alice Springs 82.19 116 *e*P **P 10 32 25.2 -1.4**
AS31 Alice Springs 82.19 116 *e*P **P 10 32 25.2 -1.4**
SYO Syowa Base 82.21 187 ‖ *e*P **P 10 32 28.3 +2.7**
GUMO Guam 84.02 77 PFAKE 10 32 50.0 +14
GUMO LR LR
comp=Z,654nm,20.0s
BILL Bilibino 85.26 21 α *e*P **P 10 32 41.2 -0.3**
BILL *e* 10 32 46.8
BILL *e*S **S 10 43 10.6 -0.4**
BILL *e*SS **SS 10 48 44.0 -0.6**
BILL pmax pmax
comp=Z,21nm,0.9s
BILL MLR MLR
comp=Z,1µm,17.0s
BILL Bilibino 85.26 21 *e*P **P 10 32 41.2 -0.3**
comp=Z,18nm,0.8s
BILL Bilibino 85.26 21 *e*P **P 10 32 41.2 -0.3**
comp=Z,18nm,0.8s
PETK Petropavlovsk- 85.88 37 P **P 10 32 45.8 +0.9**
PETK Petropavlovsk- 85.88 37 P **P 10 32 45.8 +0.9**
PETK Petropavlovsk- 85.88 37 P **P 10 32 45.8 +0.9**
PETK LR LR 11 16 04.7
comp=Z,1µm,18.4s,baz=290,slow=39
PETK Petropavlovsk- 85.88 37 P **P 10 32 45.8 +0.9**
PET Petropavlovsk 86.46 37 *e*P P 10 32 44.5 -3.2
PET *e* 10 43 10.1
PET *e*S **S 10 43 18.5 -4.7**
PET *e*PS **PnS 10 44 24.5 +2.4**
PET *e*SS **SS 10 49 08.9 +6.1**
PET pmax pmax
comp=Z,27nm,1.1s
PET pmax pmax
comp=Z,100nm,13.4s
PET MLR MLR
comp=Z,1µm,21.0s
PET MLR MLR
comp=Z,1µm,13.0s
CASY Casey 87.30 161 PFAKE 10 33 00.0 +8.6
CASY LR LR
comp=Z,971nm,19.0s
MAIT Maitri 88.70 194 *e*P P 10 32 47.6 -10
MAIT *e* 10 32 59.2
STKA Stephens Creek 90.95 122 P **P 10 33 08.2 -1.2**
STKA Stephens Creek 90.95 122 P **P 10 33 08.2 -1.2**
comp=Z,2.0nm,0.6s,baz=302,slow=5.3,SNR=8.0
STKA LR LR 11 07 16.5
comp=Z,1µm,21.0s,baz=278,slow=31
STKA Stephens Creek 90.95 122 P **P 10 33 08.2 -1.2**
PMG Port Moresby 91.01 99 PFAKE 10 33 20.0 +10
PMG LR LR
comp=Z,408nm,22.0s
CTAO Charters Tower 92.41 110 PFAKE 10 33 30.0 +14
CTAO LR LR
comp=Z,475nm,20.0s
SNAA Sanae 92.96 196 P **P 10 33 17.4 -0.5**
SNAA Sanae 92.96 196 P **P 10 33 17.4 -0.5**
comp=Z,0.4nm,0.8s,baz=82,slow=6.3,SNR=4.1
SNAA Sanae 92.96 196 P **P 10 33 17.4 -0.5**
VNA2 Neumayer--Watz 93.88 197 *e*P **P 10 33 24.4 +2.4**
baz=26,slow=3.8
VNA3 Neumayer Olymp 94.69 197 *e*P **P 10 33 25.6 -0.2**
TNA Tin City 95.09 18 *e*P **P 10 33 28.9 +1.1**
comp=Z,16nm,1.5s
TNA Tin City 95.09 18 *e*P **P 10 33 28.9 +1.1**
comp=Z,16nm,1.5s
GAMB Gambell 95.14 20 *e*P **P 10 33 27.6 -0.4**
comp=Z,9.3nm,0.9s
GAMB Gambell 95.14 20 *e*P **P 10 33 27.6 -0.4**
comp=Z,9.3nm,0.9s
RCBR Riachuelo 95.18 265 PFAKE 10 33 40.0 +11
RCBR LR LR
comp=Z,2µm,20.0s
SCHQ Schefferville 98.68 331 LR LR 11 19 52.8
comp=Z,305nm,18.6s,baz=74,slow=36
COLA College 100.53 11 PFAKE 10 34 00.0 +7.7
COLA LR LR
comp=Z,880nm,20.0s
ILAR Eielson Array 100.81 11 Pdif **Pdif 10 33 52.7 -0.9**
ILAR PP **PP 10 37 59.2 -1.3**
ILAR Eielson Array 100.81 11 Pdiff **Pdif 10 33 52.7 -0.9**
comp=Z,0.1nm,0.6s,baz=305,slow=3.2,SNR=2.4
ILAR PP **PP 10 37 59.2 -1.3**
comp=Z,1.6nm,1.0s,baz=325,slow=5.6,SNR=7.0
EGAK Eagle 101.72 8 PFAKE 10 34 10.0 +12
EGAK LR LR
comp=Z,574nm,21.0s
QSPA South Pole Qui 102.26 180 PP PP 10 38 08.8 -3.4
QSPA LR LR
comp=Z,1µm,19.0s
QSPA South Pole Qui 102.26 180 PP PP 10 38 08.8 -3.4
comp=Z,3.4nm,1.1s,baz=268,slow=9.8,SNR=4.1
HNR Honiara 103.39 97 PFAKE 10 34 20.0 +14
HNR LR LR
comp=Z,551nm,22.0s
YKA Yellowknife Ar 105.18 357 Pdif **Pdif 10 34 14.9 +1.9**
YKA PKiKP **PKiKP 10 38 26.2 -1.1**
YKA Yellowknife Ar 105.18 357 Pdiff **Pdif 10 34 14.9 +1.9**
comp=Z,0.3nm,1.0s,baz=18,slow=2.8,SNR=4.3
YKA PKiKP **PKiKP 10 38 26.2 -1.1**
comp=Z,0.4nm,0.8s,baz=352,slow=1.7,SNR=6.5
KDAK Kodiak Island 105.69 17 PFAKE 10 38 40.0
KDAK LR LR
comp=Z,2µm,22.0s
SBA Scott Base 105.88 168 PFAKE 10 38 40.0
SBA LR LR
comp=Z,2µm,19.0s
LBNH Lisbon 107.73 325 PFAKE 10 38 40.0
LBNH LR LR
comp=Z,466nm,22.0s
LONY Lake Ozonia 108.96 326 PFAKE 10 38 50.0
LONY LR LR
comp=Z,582nm,20.0s
SPB Sao Paulo 109.00 249 PFAKE 10 38 50.0
SPB LR LR
comp=Z,806nm,20.0s
NCB Newcomb 109.19 326 PFAKE 10 38 50.0
NCB LR LR
comp=Z,593nm,22.0s
BBSR BB Station 109.60 311 PFAKE 10 38 50.0
BBSR LR LR
comp=Z,248nm,20.0s
WRAK Wrangell Islan 110.93 6 PFAKE 10 38 50.0
WRAK LR LR
comp=Z,612nm,20.0s
FFC Flin Flon 111.11 348 PFAKE 10 38 50.0
FFC LR LR
comp=Z,733nm,22.0s
BINY Binghamton 111.32 325 PFAKE 10 38 50.0
BINY LR LR
comp=Z,497nm,19.0s
ERPA Erie 113.55 327 PFAKE 10 38 50.0
ERPA LR LR
comp=Z,431nm,20.0s
ANWB Willy Bob 113.64 296 PFAKE 10 39 00.0
ANWB LR LR
comp=Z,430nm,19.0s
TARA Tarawa 113.84 83 PFAKE 10 39 00.0
TARA LR LR
comp=Z,946nm,20.0s
GLMI Grayling 113.86 332 PFAKE 10 39 00.0
GLMI LR LR
comp=Z,566nm,19.0s
FDF Fort de France 114.15 292 PFAKE 10 39 00.0 +15
FDF LR LR
comp=Z,261nm,19.0s
EYMN Ely 114.19 338 PFAKE 10 39 00.0 +15
EYMN LR LR
comp=Z,726nm,19.0s
CBN Corbin 114.74 323 PFAKE 10 39 00.0 +14
CBN LR LR
comp=Z,525nm,21.0s
AAM Ann Arbor 115.30 330 PFAKE 10 39 00.0 +13
AAM LR LR
comp=Z,616nm,21.0s
GRGR Grenville 115.52 290 PFAKE 10 39 00.0 +12
GRGR LR LR
comp=Z,431nm,20.0s
EFI East Falkland 115.79 218 PFAKE 10 39 00.0 +13
EFI LR LR
comp=Z,1µm,21.0s
ACSO Alum Creek Sta 116.48 328 PFAKE 10 39 00.0 +11
ACSO LR LR
comp=Z,541nm,20.0s
CNNC Cliffs of the 116.99 320 PFAKE 10 39 00.0 +10
CNNC LR LR
comp=Z,586nm,19.0s
BLA Blacksburg 117.20 324 PFAKE 10 39 00.0 +9.2
BLA LR LR
comp=Z,551nm,20.0s
SJG San Juan 117.27 298 PFAKE 10 39 00.0 +8.7
SJG LR LR
comp=Z,593nm,21.0s
DGMT Dagmar 117.46 347 PFAKE 10 39 00.0 +9.0
DGMT LR LR
comp=Z,607nm,22.0s
SNZO South Karori 117.95 130 PFAKE 10 39 00.0 +8.1
SNZO LR LR
comp=Z,251nm,20.0s
C21A Desert Coulee 118.67 349 ⇑ P **PKPdf 10 38 53.0 -0.4**
baz=118
B17A L&G Farms, Che 118.84 352 ⇓ P **PKPdf 10 38 53.3 -0.4**
baz=119
B16A M & M Farms, S 118.85 352 ⇑ P **PKPdf 10 38 53.1 -0.7**
baz=119
EGMT Eagleton 118.94 351 PFAKE 10 39 10.0 +16
EGMT LR LR
comp=Z,447nm,19.0s
EGMT Eagleton 118.94 351 ⇑ P **PKPdf 10 38 53.3 -0.7**

baz=119
B15A Bradely Ranch, 119.05 353 ⇑P PKPdf 10 38 53.2 -0.9
baz=119
C19A Slack Wire Ran 119.11 350 ⇑P PKPdf 10 38 53.7 -0.5
baz=119
D22A Cohagen 119.14 348 ⇓P PKPdf 10 38 53.8 -0.5
baz=119
C17A Wharram Farm, 119.48 351 ⇓P PKPdf 10 38 54.4 -0.6
baz=119
NEW Newport 119.52 356 *e*PKPdf **PKPdf 10 38 55.4 +0.4**
NEW LR LR
comp=Z,441nm,21.0s
NEW Newport 119.52 356 ⇓P PKPdf 10 38 54.9 -0.1
baz=119
NEW Newport 119.52 356 *e*PKIKP **PKPdf 10 38 55.4 +0.4**
ECSD EROS Data Cent 119.63 339 PFAKE 10 39 10.0 +15
ECSD LR LR
comp=Z,549nm,19.0s
C14A Swan Lake 119.72 354 ⇑P PKPdf 10 38 54.7 -0.7
baz=119
SCIA State Center 119.93 336 PFAKE 10 39 10.0 +14
SCIA LR LR
comp=Z,579nm,21.0s
SWMT Swartz Lake 120.01 354 *e*PKPdf **PKPdf 10 38 55.1 -0.9**
SWMT *e*SKPdf **SKPdf 10 42 31.0 0.0**
SWMT Swartz Lake 120.01 354 *e*PKIKP **PKPdf 10 38 55.1 -0.9**
E20A Meyer Farm, Mu 120.14 349 ⇑P PKPdf 10 38 56.4 +0.2
baz=120
D15A Lincoln 120.30 353 ⇓P PKPdf 10 38 56.3 -0.4
baz=120
E19A Rath Farm, Rou 120.30 350 ⇓P PKPdf 10 38 56.4 -0.2
baz=120
D14A Greenough 120.38 353 ⇑P PKPdf 10 38 56.0 -0.8
baz=120
G24A Alzada 120.47 346 ⇑P PKPdf 10 38 56.3 -0.6
baz=120
NLWA Neilton Lookou 120.51 2 PFAKE 10 39 10.0 +13
NLWA LR LR
comp=Z,529nm,19.0s
MSO Missoula 120.67 354 *e*PKPdf **PKPdf 10 38 57.5 +0.1**
MSO LR LR
comp=Z,462nm,20.0s
MSO Missoula 120.67 354 ⇑P PKPdf 10 38 56.9 -0.4
baz=120
MSO Missoula 120.67 354 *e*PKIKP **PKPdf 10 38 57.5 +0.1**
E16A East Helena 120.69 352 ⇓P PKPdf 10 38 57.2 -0.1
baz=120
F19A Roth Farm, Mol 120.92 350 ⇑P PKPdf 10 38 57.6 -0.2
baz=121
H24A Dirks Ranch, A 121.05 346 ⇓P PKPdf 10 38 57.6 -0.5
baz=121
E13A Victor 121.08 354 ⇓P PKPdf 10 38 57.7 -0.4
baz=121
F17A Fitzpatrick Pl 121.15 351 ⇑P PKPdf 10 38 58.1 -0.2
baz=121
TRQA Tornquist 121.18 233 PFAKE 10 39 10.0 +12
TRQA LR LR
comp=Z,1μm,22.0s
SDDR Presa de Saban 121.25 301 PFAKE 10 39 10.0 +11
SDDR LR LR
comp=Z,440nm,20.0s
HAWA Hanford 121.50 358 PFAKE 10 39 10.0 +11
HAWA LR LR
comp=Z,733nm,21.0s
BOZ Bozeman (W) 121.55 352 PFAKE 10 39 10.0 +11
BOZ LR LR
comp=Z,569nm,21.0s
RLMT Red Lodge 121.68 350 PFAKE 10 39 10.0 +11
RLMT LR LR
comp=Z,654nm,20.0s
RLMT Red Lodge 121.68 350 ⇑P PKPdf 10 38 59.0 -0.5
baz=121
F13A Darby 121.74 354 ⇓P PKPdf 10 38 59.0 -0.5
baz=122
H19A Powell 122.07 349 ⇑P PKPdf 10 38 60.0 -0.2
baz=122
G15A Dillon 122.14 352 ⇓P PKPdf 10 39 00.1 -0.2
baz=122
H18A Shoshone NF, C 122.18 350 ⇑P PKPdf 10 39 00.1 -0.4
baz=122
SAML Samuel 122.35 267 PFAKE 10 39 10.0 +8.8
SAML LR LR
comp=Z,1μm,22.0s
J24A Dixon Ranch, L 122.41 345 ⇑P PKPdf 10 39 00.7 -0.1
baz=122
H16A Russell Place, 122.41 351 ⇓P PKPdf 10 39 00.8 -0.1
baz=122
LKWY Lake 122.42 350 PFAKE 10 39 10.0 +9.0
LKWY LR LR
comp=Z,1μm,20.0s
I21A Big Trails, Te 122.56 348 ⇑P PKPdf 10 39 00.3 -0.8
baz=122
I20A Worland 122.60 348 ⇑P PKPdf 10 39 00.5 -0.6
baz=122
H14A Leadore 122.79 353 ⇓P PKPdf 10 39 01.8 +0.2
baz=122
BMO Blue Mountains 122.93 356 *e*PKIKP **PKPdf 10 39 01.2 -0.5**
BMO MLR MLR
comp=Z,582nm,19.0s
BMO Blue Mountains 122.93 356 *e*PKPdf **PKPdf 10 39 01.2 -0.5**
BMO LR LR
comp=Z,582nm,19.0s
BMO Blue Mountains 122.93 356 *e*PKIKP **PKPdf 10 39 01.2 -0.5**
I17A Pilgrim Ck. 123.07 350 ⇑P PKPdf 10 39 02.2 +0.1
baz=123
IMW Indian Meadow 123.15 351 *e*PKPdf **PKPdf 10 39 02.4 0.0**
IMW Indian Meadow 123.15 351 *e*PKIKP **PKPdf 10 39 02.4 0.0**
K23A Bowen Ranch, D 123.19 346 ⇑P PKPdf 10 39 01.6 -0.8
baz=123
I16A Newdale 123.26 351 ⇑P PKPdf 10 39 02.2 -0.3
baz=123
LOHW Long Hollow 123.38 350 *e*PKPdf **PKPdf 10 39 02.8 0.0**
LOHW Long Hollow 123.38 350 *e*PKIKP **PKPdf 10 39 02.8 0.0**
J19A Crowheart 123.44 349 ⇓P PKPdf 10 39 02.3 -0.6
baz=123
DCID1 Drake Creek 123.49 351 *e*PKPdf **PKPdf 10 39 04.1 +1.1**
DCID1 Drake Creek 123.49 351 *e*PKIKP **PKPdf 10 39 04.1 +1.1**
K22A Casper 123.50 346 ⇓P PKPdf 10 39 02.4 -0.6
baz=123
TPAW Teton Pass 123.55 351 *e*PKPdf **PKPdf 10 39 03.3 +0.1**
TPAW Teton Pass 123.55 351 *e*PKIKP **PKPdf 10 39 03.3 +0.1**
I13A Wildhorse Cree 123.57 353 ⇑P PKPdf 10 39 02.5 -0.6
baz=123
J17A Brown Place, J 123.64 350 ⇓P PKPdf 10 39 02.4 -0.8
baz=123
J18A Kendall Valley 123.67 350 ⇓P PKPdf 10 39 02.6 -0.7
baz=123
KSU1 Kansas State U 123.67 337 PFAKE 10 39 10.0 +6.8
KSU1 LR LR
comp=Z,604nm,19.0s
K21A Alcova 123.68 347 ⇓P PKPdf 10 39 03.0 -0.3
baz=123
I12A Atlanta 123.80 354 ⇓P PKPdf 10 39 02.7 -0.8
baz=124
L23A Garrett 123.81 346 ⇑P PKPdf 10 39 02.4 -1.3
baz=124
K19A Absolon Red Bu 123.82 349 ⇑P PKPdf 10 39 02.5 -1.1
baz=124
K20A Yellowstone Ra 123.88 348 ⇓P PKPdf 10 39 03.1 -0.7
baz=124
OGNE Ogallala 123.90 342 PFAKE 10 39 10.0 +6.3
OGNE LR LR
comp=Z,627nm,21.0s
GTBY Guantanamo Bay 123.93 304 PFAKE 10 39 20.0 +16
GTBY LR LR
comp=Z,389nm,21.0s
LRAL Lakeview Retre 123.95 325 PFAKE 10 39 20.0 +16
LRAL LR LR
comp=Z,457nm,20.0s
HLID Hailey 123.95 353 PFAKE 10 39 20.0 +16
HLID LR LR
comp=Z,803nm,19.0s
HLID Hailey 123.95 353 ⇑P PKPdf 10 39 03.4 -0.4
baz=124
BW06 Boulder Array 124.01 349 PFAKE 10 39 20.0 +16
BW06 LR LR
comp=Z,809nm,22.0s
BW06 Boulder Array 124.01 349 ⇓P PKPdf 10 39 03.0 -1.0
baz=124
PDAR Pinedale Array 124.01 349 PKP **PKPdf 10 39 03.2 -0.8**
PDAR Pinedale Array 124.01 349 PKP **PKPdf 10 39 03.2 -0.8**
comp=Z,4.2nm,0.6s,baz=73,slow=2.6,SNR=37
PDAR Pinedale Array 124.01 349 PKIKP **PKPdf 10 39 03.2 -0.8**
L22A Ellis Ranch, M 124.06 346 ⇓P PKPdf 10 39 03.9 -0.2
baz=124
J14A Carey 124.08 353 ⇑P PKPdf 10 39 04.2 +0.1
baz=124
OXF Oxford 124.14 328 PFAKE 10 39 20.0 +16
OXF LR LR
comp=Z,464nm,20.0s
M24A Cheyenne 124.20 345 ⇑P PKPdf 10 39 04.3 0.0
baz=124
K18A Toltan Ranch, 124.23 349 ⇓P PKPdf 10 39 04.1 -0.4
baz=124
MFID Camas Ranch 124.24 355 *e*PKPdf **PKPdf 10 39 05.0 +0.7**
MFID Camas Ranch 124.24 355 *e*PKIKP **PKPdf 10 39 05.0 +0.7**
AHID Auburn Hatcher 124.28 350 PFAKE 10 39 20.0 +15
AHID LR LR
comp=Z,538nm,21.0s
L21A Rawlins 124.34 347 ⇑P PKPdf 10 39 04.1 -0.6
baz=124
L20A Wamsutter 124.51 348 ⇑P PKPdf 10 39 04.7 -0.3
baz=124
K14A Jones Ranch, D 124.80 352 ⇓P PKPdf 10 39 05.7 +0.3
baz=124
L18A Fontenelle, Gr 124.92 349 ⇓P PKPdf 10 39 05.9 +0.1
baz=125
M20A Sweetwater, Wa 124.97 348 ⇓P PKPdf 10 39 05.1 -0.8
baz=125
N23A Red Feather La 125.02 345 ⇑P PKPdf 10 39 05.6 -0.5
baz=125
L15A Malad City 125.22 351 ⇓P PKPdf 10 39 06.3 +0.1
baz=125
HWUT Hardware Ranch 125.49 351 *e*PKPdf **PKPdf 10 39 06.7 -0.1**
HWUT LR LR
comp=Z,415nm,20.0s
HWUT Hardware Ranch 125.49 351 *e*PKIKP **PKPdf 10 39 06.7 -0.1**
P26A Davis Ranch, A 125.57 342 ⇑P PKPdf 10 39 06.7 -0.3
baz=125
N20A Spence Gulch, 125.62 347 ⇑P PKPdf 10 39 07.0 -0.1
baz=125
O23A Lake Granby, G 125.66 345 ⇓P PKPdf 10 39 07.0 -0.3
baz=125
O22A Kremmling 125.86 346 ⇑P PKPdf 10 39 06.9 -0.9
baz=126
ISCO Idaho Springs 125.97 345 PFAKE 10 39 20.0 +12
ISCO LR LR
comp=Z,708nm,20.0s
TUL1 Tulsa 126.06 334 ⇑P PKPdf 10 39 07.2 -0.6
baz=126
MIAR Mount Ida 126.19 331 *e*PKIKP **PKPdf 10 39 08.3 +0.2**
MIAR MLR MLR
comp=Z,617nm,20.0s
MIAR Mount Ida 126.19 331 *e*PKPdf **PKPdf 10 39 08.3 +0.2**
MIAR LR LR
comp=Z,617nm,20.0s
MIAR Mount Ida 126.19 331 *e*PKIKP **PKPdf 10 39 08.3 +0.2**
O20A White River Ci 126.28 347 ⇓P PKPdf 10 39 07.7 -0.7
baz=126
O19A Miners Draw (B 126.31 348 ⇑P PKPdf 10 39 07.8 -0.6
baz=126
P23A Jefferson 126.43 345 ⇑P PKPdf 10 39 08.3 -0.6
baz=126
P22A Eagle 126.45 346 ⇓P PKPdf 10 39 08.2 -0.6
baz=126
VBMS Vicksburg 126.50 327 PFAKE 10 39 20.0 +11
VBMS LR LR
comp=Z,531nm,21.0s
R27A Eads 126.57 341 ⇑P PKPdf 10 39 08.8 -0.1
baz=126
P21A Newcastle 126.69 346 ⇑P PKPdf 10 39 09.5 +0.3
baz=126
MTDJ Mount Denham 126.77 304 PFAKE 10 39 20.0 +10
MTDJ LR LR
comp=Z,489nm,21.0s
SMCO Snowmass 126.90 346 *e*PKPdf **PKPdf 10 39 10.2 +0.3**
SMCO Snowmass 126.90 346 *e*PKIKP **PKPdf 10 39 10.2 +0.3**
DUG Dugway 127.06 351 PFAKE 10 39 20.0 +10
DUG LR LR
comp=Z,610nm,19.0s
P18A Preston Nutter 127.18 349 ⇓P PKPdf 10 39 10.2 -0.1
baz=127
BMN Battle Mountai 127.32 356 PFAKE 10 39 20.0 +10
BMN LR LR
comp=Z,577nm,21.0s
S26A Kim 127.39 342 ⇑P PKPdf 10 39 10.2 -0.3
baz=127
Q19A Hogan Spring (127.63 348 ⇑P PKPdf 10 39 10.2 -0.7
baz=127
T27A Campo 127.67 341 ⇑P PKPdf 10 39 10.7 -0.4
baz=127
SRU San Rafael 127.73 349 ⇓P PKPdf 10 39 11.0 -0.2
baz=128
S24A Houchin Ranch, 127.89 343 ⇓P PKPdf 10 39 11.3 -0.4
baz=128
BEKR Beckworth 128.04 359 *e*PKPdf **PKPdf 10 39 11.6 -0.1**
BEKR Beckworth 128.04 359 *e*PKIKP **PKPdf 10 39 11.6 -0.1**
WMOK Wichita Mounta 128.31 336 PFAKE 10 39 20.0 +7.8
WMOK LR LR
comp=Z,536nm,20.0s
U26A Atchley Ranch, 128.60 341 ⇑P PKPdf 10 39 12.6 -0.4
baz=128
MVU Marysvale 128.62 350 PFAKE 10 39 20.0 +7.0
MVU LR LR
comp=Z,870nm,19.0s
U25A Circle Dot Ran 128.80 342 ⇑P PKPdf 10 39 13.0 -0.3
baz=128
RFTA Plano 128.90 333 *e*PKPdf **PKPdf 10 39 15.1 +1.7**
RFTA *e*SKPdf **SKPdf 10 42 47.9 -0.4**
RFTA Plano 128.90 333 *e*PKIKP **PKPdf 10 39 15.1 +1.7**
T22A Edith 128.93 345 ⇑P PKPdf 10 39 14.1 +0.4
baz=129
MVCO Mesa Verde 129.14 346 PFAKE 10 39 30.0 +16
MVCO LR LR
comp=Z,902nm,22.0s
V26A Tequesquite Ra 129.17 341 ⇓P PKPdf 10 39 13.5 -0.4
baz=129
AMTX Amarillo 129.28 339 PFAKE 10 39 30.0 +16
AMTX LR LR
comp=Z,776nm,21.0s
NVAR Mina Array Bea 129.38 356 PKP **PKPdf 10 39 15.9 +1.5**
NVAR Mina Array Bea 129.38 356 PKP **PKPdf 10 39 15.9 +1.5**
comp=Z,9.6nm,1.0s,baz=29,slow=0.7,SNR=10.0
NVAR Mina Array Bea 129.38 356 *e*PKIKP **PKPdf 10 39 15.9 +1.5**
U23A El Rito 129.39 344 ⇑P PKPdf 10 39 14.5 0.0
baz=129
V25A Rancho No Teng 129.39 342 ⇑P PKPdf 10 39 14.4 -0.1
baz=129
Y31A Rekieta Farm, 129.58 337 ⇑P PKPdf 10 39 14.3 -0.4
baz=129
TPH Tonopah 129.66 355 PFAKE 10 39 30.0 +15
TPH LR LR
comp=Z,754nm,20.0s
U21A Nageezi 129.68 345 ⇑P PKPdf 10 39 14.9 -0.1
baz=129
LCO Las Campanas 129.76 243 PFAKE 10 39 30.0 +15
LCO LR LR
comp=Z,1μm,21.0s
W26A Owens Ranch, T 129.81 341 ⇑P PKPdf 10 39 15.6 +0.4
baz=130
Z30A Sanderson Ranc 130.51 337 ⇓P PKPdf 10 39 16.3 -0.2
baz=130
Y27A Causey 130.71 339 ⇑P PKPdf 10 39 16.2 -0.7
baz=130
ANMO Albuquerque 130.76 343 PFAKE 10 39 30.0 +13
ANMO LR LR
comp=Z,726nm,21.0s
HKT Hockley 131.05 330 *e*PKIKP **PKPdf 10 39 18.5 +1.1**
HKT Hockley 131.05 330 *e*PKPdf **PKPdf 10 39 18.5 +1.1**
HKT Hockley 131.05 330 *e*PKIKP **PKPdf 10 39 18.5 +1.1**
Y25A Mesa, Roswell 131.18 341 ⇑P PKPdf 10 39 17.1 -0.7
baz=131
WUAZ Wupatki 131.38 349 PFAKE 10 39 30.0 +12
WUAZ LR LR
comp=Z,597nm,20.0s
LAZ Ladron 131.46 344 *e*PKPdf **PKPdf 10 39 18.6 +0.2**
LAZ Ladron 131.46 344 *e*PKIKP **PKPdf 10 39 18.6 +0.2**
Z26A Caprock 131.54 340 ⇓P PKPdf 10 39 17.3 -1.2
baz=131
BNM Barren Site 131.55 343 *e*PKPdf **PKPdf 10 39 21.0 +2.4**
BNM Barren Site 131.55 343 *e*PKIKP **PKPdf 10 39 21.0 +2.4**
JCT Junction City 132.43 334 *e*PKIKP **PKPdf 10 39 20.5 +0.3**
JCT MLR MLR
comp=Z,420nm,20.0s
JCT Junction City 132.43 334 *e*PKPdf **PKPdf 10 39 20.5 +0.3**
JCT LR LR
comp=Z,420nm,20.0s
JCT Junction City 132.43 334 *e*PKIKP **PKPdf 10 39 20.5 +0.3**
BCIP Isla Barro Col 133.11 295 PFAKE 10 39 30.0 +8.3
BCIP LR LR
comp=Z,353nm,20.0s
224A Cornudas Mount 133.15 341 ⇑P PKPdf 10 39 21.8 +0.2
baz=133
530A J-C Ranch, Com 133.36 335 ⇓P PKPdf 10 39 21.8 -0.2
baz=133
428A Kincaid Ranch, 133.38 337 ⇑P PKPdf 10 39 21.7 -0.3
baz=133
MNTX Cornudas Mount 133.45 341 PFAKE 10 39 30.0 +8.0
MNTX LR LR
comp=Z,656nm,21.0s
MNTX Cornudas Mount 133.45 341 ⇓P PKPdf 10 39 20.8 -1.2
baz=133
529A Stev Forest Ra 133.74 336 ⇓P PKPdf 10 39 22.0 -0.7
baz=134
TEIG Tepich 133.76 314 PFAKE 10 39 30.0 +7.2
TEIG LR LR
comp=Z,444nm,20.0s
528A Cox Ranch, San 133.93 337 ⇑P PKPdf 10 39 22.4 -0.7
baz=134
426A McDonald Obser 133.93 339 ⇓P PKPdf 10 39 22.4 -0.8
baz=134
TUC Tucson 134.35 347 PFAKE 10 39 40.0 +16
TUC LR LR
comp=Z,507nm,22.0s
627A Terlingua Ranc 134.79 337 ⇑P PKPdf 10 39 24.0 -0.8
baz=134
626A Big Bend Ranch 134.98 338 ⇑P PKPdf 10 39 23.9 -1.2
baz=135
TXAR Lajitas Array 135.00 337 PKPpre PKPpre 10 39 14.4
TXAR PKP **PKPdf 10 39 25.1 0.0**
TXAR Lajitas Array 135.00 337 PKhKP PKPpre 10 39 14.4
comp=Z,0.2nm,0.6s,baz=64,slow=2.9,SNR=3.8
TXAR PKP **PKPdf 10 39 25.1 0.0**
comp=Z,0.8nm,0.6s,baz=176,slow=2.7,SNR=13
OTAV Otavalo 135.17 283 PFAKE 10 39 40.0 +14
OTAV LR LR
comp=Z,643nm,22.0s
NNA Nana 136.05 265 PFAKE 10 39 40.0 +13
NNA LR LR
comp=Z,596nm,20.0s
TGUH Tegucigalpa,Un 136.85 306 PFAKE 10 39 40.0 +11
TGUH LR LR
comp=Z,397nm,21.0s
JTS JuntasAbangare 137.01 300 PFAKE 10 39 40.0 +11
JTS LR LR
comp=Z,417nm,20.0s
PAYG Puerto Ayora 146.63 288 *e*PKPdf **PKPab 10 39 49.3 +0.4**
PAYG LR LR
comp=Z,616nm,20.0s
TBI Tubuai 151.58 116 *e*SS SS 11 03 08.2 +3.2
comp=Z,610nm,30.8s
TBI *e*LR LR 11 30 23.2
comp=Z,485nm,34.2s
PPT2 Papeete2 152.72 104 *e*LR LR 11 30 52.3
comp=Z,380nm,24.0s

ROM 15 10:26:06.6±0.1, 42°43N×13°27E, h6km±3km, Md1.6/2, Ml1.1/2, Error ellipse: s-maj=0.9km s-min=0.4km az=131.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.12**	**126**	Pg	Pg	10 26 09.5	+0.2
AQU				Sg	Sg	10 26 11.8	+0.7
CAMP	**Campotosto**	**0.15**	**44**	Pg	Pg	10 26 10.1	+0.2
CAMP				Sg	Sg	10 26 12.7	+0.6
	54nm,0.4s						
FIAM	**Fiamignano**	**0.19**	**215**	Pg	Pg	10 26 11.1	+0.5
FIAM				Sg	Sg	10 26 14.3	+1.0
	39nm,0.4s						

ISCJB ***15*** *10:36:18.8±0.9, 36°47N±0°05×28°95E±0°04, h4km±5km, Error ellipse: s-maj=7.7km s-min=5.1km az=0.9*
ISK ***15*** *10:36:18.5, 36°50N×28°95E, h3km, ML2.5*
CSEM ***15*** *10:36:19.1±0.3, 36°49N×28°93E, h5km, ML2.5, Error ellipse: s-maj=5.4km s-min=3.3km az=5.0*
DDA ***15*** *10:36:20.1, 36°57N×28°91E, h7km, MD3.0*

ISC 15 10:36:20.2±1.1, 36°54N±0°04×28°94E±0°02, h6km±10km, n30, σ0°83/48, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FETY	**Fethiye**	**0.15**	**50**	Pg	**Pg**	**10 36 22.7**	**-0.5**
FETY				SG	**Sg**	**10 36 25.5**	**+0.2**
FETY	**Fethiye**	**0.15**	**50**	*i* Pg	**Pg**	**10 36 22.7**	**-0.5**
FETY				*i* Sg	**Sg**	**10 36 25.5**	**+0.2**
DALT	**Dalyan (Mudla)**	**0.34**	**313**	*e*PG	**Pg**	**10 36 26.3**	**-0.5**
DALT				*e*SG	**Sg**	**10 36 32.6**	**+1.3**
DALT	**Dalyan (Mudla)**	**0.34**	**313**	*e*Pg	**Pg**	**10 36 26.3**	**-0.5**
DALT				*e*Sg	**Sg**	**10 36 32.6**	**+1.3**
TURN	**Turunc**	**0.43**	**321**	*i* P	**Pb**	**10 36 30.9**	**+0.6**
TURN				*i* S	**Sb**	**10 36 40.3**	**+3.3**
TURN	**Turunc**	**0.43**	**321**	*i* P	**Pb**	**10 36 30.9**	**+0.6**
AKAS	**Kas**	**0.61**	**120**	*i* P	**Pg**	**10 36 31.9**	**-0.2**
AKAS				*i* S	**Sb**	**10 36 43.3**	**+0.9**
AKAS	**Kas**	**0.61**	**120**	*i* P	**Pg**	**10 36 31.9**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.76**	**36**	*e*PG	**Pg**	**10 36 34.3**	**-0.5**
GLHS				*e*SG	**Sb**	**10 36 46.2**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.76**	**36**	*e*Pg	**Pg**	**10 36 34.3**	**-0.5**
GLHS				*e*Sg	**Sb**	**10 36 46.2**	**-0.4**
YER	**Yerkesik**	**0.80**	**318**	*e*PG	**Pg**	**10 36 34.8**	**-0.7**
YER				*e*SG	**Sb**	**10 36 46.9**	**-0.7**
YER	**Yerkesik**	**0.80**	**318**	*e*Pg	**Pg**	**10 36 34.8**	**-0.7**
YER				*e*Sg	**Sb**	**10 36 46.9**	**-0.7**
ELL	**Elmali**	**0.80**	**75**	*e*PG	**Pg**	**10 36 34.8**	**-0.8**
ELL	**Elmali**	**0.80**	**75**	*e*Pg	**Pg**	**10 36 34.8**	**-0.8**
GOLH	**Golhisar**	**0.85**	**35**	*i* P	**Pg**	**10 36 35.8**	**-0.8**
GOLH				*i* S	**Sb**	**10 36 49.6**	**+0.2**
GOLH	**Golhisar**	**0.85**	**35**	*i* P	**Pg**	**10 36 35.8**	**-0.8**
GOLH				*i* S	**Sb**	**10 36 49.6**	**+0.2**
DAT	**Datca**	**1.11**	**280**	*e*PN	**Pg**	**10 36 40.7**	**-0.9**
DAT				*e*SN	**Sb**	**10 36 56.9**	**+0.1**
DAT	**Datca**	**1.11**	**280**	*e*Pn	**Pg**	**10 36 40.7**	**-0.9**
DAT				*e*Sn	**Sb**	**10 36 56.9**	**+0.1**
DNZL	**Cakiroluk**	**1.15**	**4**	*i* P	**Pg**	**10 36 41.7**	**-0.6**
DNZL				*i* S	**Sb**	**10 36 58.0**	**0.0**
DNZL	**Cakiroluk**	**1.15**	**4**	*i* P	**Pg**	**10 36 41.7**	**-0.6**
DNZL				*i* S	**Sb**	**10 36 58.0**	**0.0**
MLSB	**Milas**	**1.20**	**309**	*e*PN	**Pb**	**10 36 42.6**	**-0.8**
MLSB	**Milas**	**1.20**	**309**	*e*Pn	**Pb**	**10 36 42.7**	**-0.8**
AYDN	**Tasoluk**	**1.41**	**323**	*i* P	**Pn**	**10 36 46.1**	**-0.4**
AYDN				*i* S	**Sg**	**10 37 06.5**	**+1.1**
AYDN	**Tasoluk**	**1.41**	**323**	*i* P	**Pn**	**10 36 46.1**	**-0.4**
AYDN				*i* S	**Sg**	**10 37 06.5**	**+1.1**
BODT	**Bodrum**	**1.41**	**292**	*e*PN	**Pn**	**10 36 45.9**	**-0.6**
BODT	**Bodrum**	**1.41**	**292**	*e*Pn	**Pn**	**10 36 45.9**	**-0.6**
BCK	**Bucak**	**1.61**	**55**	*e*PN	**Pn**	**10 36 49.3**	**+0.1**
BCK	**Bucak**	**1.61**	**55**	*e*Pn	**Pn**	**10 36 49.3**	**+0.1**
KHL	**Karahalli**	**1.84**	**14**	*e*PN	**Pn**	**10 36 52.7**	**+0.2**
KHL	**Karahalli**	**1.84**	**14**	*e*Pn	**Pn**	**10 36 52.7**	**+0.2**

VIE ***15*** *10:43:00.2±0.3, 50°07N×13°20E, h0km, mb1.9/1, ML2.7/2, Error ellipse: s-maj=4.0km s-min=1.4km az=47.0 39 km NNW of Plzen Suspected Mining explosion.*

ISC 15 10:43:00.4±3.6, 50°11N±0°10×13°2E±0°2, h10km, n3, σ1s0s3/7, 2C-3D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**2.13**	**69**	*e*Pg	**Pg**	**10 43 40.5**	**-0.8**
KSP				*e*Sg	**Sg**	**10 44 09.1**	**+0.2**
MOA	**Molln**	**2.37**	**162**	⇑*i*Pn	**Pn**	**10 43 39.9**	**+0.5**
MOA				⇑*i*Sg	**Sg**	**10 44 16.2**	**-0.4**
	18nm,0.6s						
CONA	**Conrad Observa**	**2.81**	**140**	⇓*i*Pn	**Pn**	**10 43 45.9**	**+0.4**
CONA				⇓*i*Pg	**Pg**	**10 43 53.2**	**-1.1**
CONA				⇓*i*Sn	**Sn**	**10 44 20.8**	**+1.3**

ISCJB ***15*** *10:55:22.3±0.5, 38°46N±0°03×21°98E±0°04, h9km±4km, Error ellipse: s-maj=5.0km s-min=4.2km az=7.1*
CSEM ***15*** *10:55:22.3±0.1, 38°44N×21°97E, h8km, MD2.5, Error ellipse: s-maj=2.9km s-min=2.4km az=78.0*
THE ***15*** *10:55:22.4, 38°45N×21°98E, h10km±1km, ML2.1/5, Error ellipse: s-maj=1.3km s-min=0.4km az=230.0*
ATH ***15*** *10:55:23.2, 38°45N×21°95E, h5km±4km, MD2.5/7*

ISC 15 10:55:22.4±0.9, 38°45N±0°02×21°99E±0°02, h10km±5km, n28, σ0s8/51, Greece

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

EFP	**Efpalio**	**0.07**	**251**	P	**Pg**	**10**	**55**	**24.4 -0.1**
EFP				S	**Sg**	**10**	**55**	**25.8 -0.3**
EFP	**Efpalio**	**0.07**	**251**	*e*PG	**Pg**	**10**	**55**	**24.3 -0.2**
EFP				*e*SG	**Sg**	**10**	**55**	**26.1 0.0**
EFP	**Efpalio**	**0.07**	**251**	*e*Pg	**Pg**	**10**	**55**	**24.3 -0.2**
EFP				S	**Sg**	**10**	**55**	**25.8 -0.3**
EFP				*e*Sg	Sg	10	55	26.1 0.0
TRIZ	**Trizonia**	**0.11**	**142**	P	**Pg**	**10**	**55**	**25.1 +0.1**
TRIZ				S	**Sg**	**10**	**55**	**27.4 +0.5**
TRIZ	**Trizonia**	**0.11**	**142**	*e*PG	**Pg**	**10**	**55**	**25.1 +0.1**
TRIZ				*e*SG	**Sg**	**10**	**55**	**27.7 +0.8**
TRIZ	**Trizonia**	**0.11**	**142**	P	**Pg**	**10**	**55**	**25.1 +0.1**
TRIZ				S	**Sg**	**10**	**55**	**27.4 +0.5**
TRIZ				*e*Sg	Sg	10	55	27.7 +0.8
KALE	**Kalithea**	**0.13**	**116**	P	**Pg**	**10**	**55**	**25.6 +0.1**
KALE				S	**Sg**	**10**	**55**	**28.0 +0.4**
KALE	**Kalithea**	**0.13**	**116**	*e*PG	**Pg**	**10**	**55**	**25.6 +0.1**
KALE				*e*SG	**Sg**	**10**	**55**	**28.3 +0.7**
KALE	**Kalithea**	**0.13**	**116**	P	**Pg**	**10**	**55**	**25.6 +0.1**
KALE				S	**Sg**	**10**	**55**	**28.0 +0.4**
KALE				*e*Sg	Sg	10	55	28.3 +0.6
PSA1	**Psathopyrgos**	**0.15**	**214**	*e*PG	**Pg**	**10**	**55**	**25.8 +0.1**
PSA1				*e*SG	**Sg**	**10**	**55**	**28.7 +0.8**
LAKA	**Lakka**	**0.21**	**182**	P	**Pg**	**10**	**55**	**26.8 +0.1**
LAKA				S	**Sg**	**10**	**55**	**30.3 +0.6**
LAKA	**Lakka**	**0.21**	**182**	*e*PG	**Pg**	**10**	**55**	**26.8 +0.1**
LAKA	**Lakka**	**0.21**	**182**	P	**Pg**	**10**	**55**	**26.8 +0.1**
LAKA				S	**Sg**	**10**	**55**	**30.3 +0.6**
DSF	**Desfina**	**0.42**	**95**	P	**Pg**	**10**	**55**	**30.2 -0.5**
DSF				S	**Sg**	**10**	**55**	**37.1 +0.8**
DSF	**Desfina**	**0.42**	**95**	P	**Pg**	**10**	**55**	**30.2 -0.5**
DSF				S	**Sg**	**10**	**55**	**37.1 +0.8**
EVR	**Evrytania**	**0.49**	**343**	P	**Pg**	**10**	**55**	**31.6 -0.3**
EVR				S	**Sg**	**10**	**55**	**39.3 +0.9**
EVR	**Evrytania**	**0.49**	**343**	*e*PB	**Pg**	**10**	**55**	**31.7 -0.2**
EVR				*e*SB	**Sg**	**10**	**55**	**39.3 +0.9**
EVR	**Evrytania**	**0.49**	**343**	*e*Pb	**Pg**	**10**	**55**	**31.7 -0.2**
EVR				S	**Sg**	**10**	**55**	**39.3 +0.9**
RLS	**Riolos of Patr**	**0.57**	**227**	*e*PB	**Pg**	**10**	**55**	**33.9 +0.5**
RLS				*e*SB	**Sb**	**10**	**55**	**42.2 -0.4**
RLS	**Riolos of Patr**	**0.57**	**227**	*e*Pb	**Pg**	**10**	**55**	**33.9 +0.5**
RLS				*e*Sb	**Sb**	**10**	**55**	**42.2 -0.4**
MAKR	**Makrakomi, Fth**	**0.57**	**11**	P	**Pg**	**10**	**55**	**33.6 +0.1**
MAKR				S	**Sg**	**10**	**55**	**41.6 +0.5**
MAKR	**Makrakomi, Fth**	**0.57**	**11**	P	**Pg**	**10**	**55**	**33.6 +0.1**
MAKR				S	**Sg**	**10**	**55**	**41.6 +0.5**
GUR	**Goura**	**0.58**	**151**	P	**Pg**	**10**	**55**	**33.2 -0.5**
GUR				S	**Sg**	**10**	**55**	**41.9 +0.5**
GUR	**Goura**	**0.58**	**151**	*e*PB	**Pb**	**10**	**55**	**34.6 -0.2**
GUR	**Goura**	**0.58**	**151**	P	**Pg**	**10**	**55**	**33.2 -0.5**
GUR	**Goura**	**0.58**	**151**	*e*Pb	**Pb**	**10**	**55**	**34.6 -0.2**
GUR				S	**Sg**	**10**	**55**	**41.9 +0.5**
LKR	**Lokris**	**0.82**	**75**	*e*PB	**Pn**	**10**	**55**	**39.9 -0.1**
LKR	**Lokris**	**0.82**	**75**	*e*Pb	**Pn**	**10**	**55**	**39.9 -0.1**

IDC 15 11:20:21.4±3.0, 2°04′S×100°15′E, *h*0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/23, mbtmp3.8/5, MS3.1/1, Ms1 3.1/1, ms1mx2.5/43, Error ellipse: s-maj=133.3km s-min=26.6km az=60.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**4.96**	**346**	LR	LR	11 23 36.9	
	comp=Z,172nm,18.1s,baz=184,slow=40						
CMAR	**Chiang Mai Arr**	**20.41**	**357**	P	P	11 25 00.9	+0.7
	0.6nm,0.7s,baz=182,slow=10,SNR=4.3						
ASAR	**Alice Springs**	**39.11**	**126**	P	P	11 27 51.0	+0.2
	1.0nm,0.6s,baz=303,slow=7.5,SNR=4.8						
SONM	**Songino Array**	**49.97**	**5**	P	P	11 29 16.7	-0.7
	0.4nm,0.5s,baz=187,slow=12,SNR=4.4						
MKAR	**Makanchi Array**	**51.11**	**344**	P	P	11 29 26.3	+0.4
	1.5nm,0.5s,baz=149,slow=8.0,SNR=20						
ZALV	**Zalesovo Beam**	**57.24**	**349**	P	P	11 30 10.1	-0.3
	1.0nm,0.3s,baz=164,slow=6.0,SNR=11						
TXAR	**Lajitas Array**	**144.65**	**38**	PKP	PKPab	11 39 59.5	0.0
	0.5nm,0.5s,baz=198,slow=0.9,SNR=13						

*IDC **15** 11:21:20.1±1.1, 3°42′S×145°08′E, h0km, mb4.0/9, mb1 4.1/10, mb1mx4.0/18, mbtmp4.0/10, ML2.6/1, MS4.1/15, Ms1 4.1/15, ms1mx3.8/29, Error ellipse: s-maj=38.5km s-min=18.2km az=93.0*

*ISCJB **15** 11:21:21.6±0.7, 3°43′S±0°06′×145°24′E±0°08, h22km, mb4.0/10, MS4.1/14, Error ellipse: s-maj=11.4km s-min=8.6km az=156.7*

*NEIC **15** 11:21:25.1±0.8, 3°47′S×145°18′E, h35km, mb4.6/3, Error ellipse: s-maj=21.1km s-min=10.3km az=85.0*

*AUST **15** 11:21:54.1±1.4, 5°39′S×144°10′E, h133km, Error ellipse: s-maj=1.9km s-min=1.3km az=324.0*

ISC 15 11:21:23.3±0.8, 3°47′S±0°08′×145°2′E±0°1, h22km, n42, σ1s30/33, mb4.1/10, MS4.1/14, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.21**	**162**	Pn	**Pn**	**11**	**22**	**54.2 +0.5**
PMG	**Port Moresby**	**6.21**	**162**	Pn	**Pn**	**11**	**22**	**54.2 +0.5**
	0.8nm,0.3s,baz=310,slow=9.5,SNR=4.2							
COEN	**Coen**	**10.62**	**191**	*e*Pn	**Pn**	**11**	**23**	**55.7 +1.4**
COEN	**Coen**	**10.62**	**191**	P	Pn	11	23	57.8 +3.5
	baz=8.6,SNR=4.0							
SWI	**Sorong**	**14.19**	**280**	S	**Sn**	**11**	**27**	**21.9 +2.0**
	baz=14,SNR=7.7							
KDU	**Kakadu**	**15.59**	**233**	P	**P**	**11**	**25**	**03.9 -2.0**
	baz=14,SNR=4.5							
HNR	**Honiara**	**15.78**	**113**	LR	LR	11	29	57.6
	comp=Z,470nm,21.5s,baz=159,slow=32							
PATS	**Pohnpei**	**16.60**	**52**	P	P	11	26	03.4 +46
	baz=19,SNR=3.5							
MTN	**Manton Dam**	**16.76**	**235**	P	**Pn**	**11**	**25**	**17.0 +0.2**
	baz=15,SNR=5.5							
WRAB	**Tennant Creek**	**19.50**	**212**	*e*P	**P**	**11**	**25**	**48.2 -0.9**
	42nm,1.1s							
DAV	**Davao City (W)**	**22.22**	**298**	LR	LR	11	34	41.0
	comp=Z,165nm,19.8s,baz=235,slow=36							
AS31	**Alice Springs**	**22.87**	**208**	*e*P	**P**	**11**	**26**	**24.9 -0.5**
ASAR	**Alice Springs**	**22.87**	**208**	P	**P**	**11**	**26**	**24.6 -0.8**
ASAR				S	**S**	**11**	**30**	**32.4 -1.6**
ASAR	**Alice Springs**	**22.87**	**208**	P	**P**	**11**	**26**	**24.6 -0.8**
	11nm,0.9s,baz=36,slow=8.8,SNR=94							
ASAR				S	**S**	**11**	**30**	**32.4 -1.6**
	1.6nm,1.1s,baz=28,slow=18,SNR=4.3							
ASAR				LR	LR	11	36	25.9
	comp=Z,787nm,18.4s,baz=25,slow=40							
QLP	**Quilpie**	**23.01**	**182**	P	**P**	**11**	**26**	**28.1 +1.4**
	baz=21,SNR=7.8							
RMQ	**Roma**	**23.14**	**172**	P	**P**	**11**	**26**	**30.9 +2.7**
	baz=22,SNR=4.4							
FITZ	**Fitzroy Crossi**	**24.07**	**231**	P	**P**	**11**	**26**	**35.8 -1.5**
	18nm,1.2s							
FITZ	**Fitzroy Crossi**	**24.07**	**231**	P	**P**	**11**	**26**	**35.8 -1.5**
	11nm,0.7s,baz=52,slow=9.2,SNR=37							
FITZ				LR	LR	11	37	22.2
	comp=Z,249nm,18.3s,baz=298,slow=40							
FITZ	**Fitzroy Crossi**	**24.07**	**231**	P	**P**	**11**	**26**	**35.4 -1.9**
	baz=22,SNR=20							
KAPI	**Kappang**	**25.45**	**266**	*e*P	**P**	**11**	**26**	**51.2 +1.4**
	7.5nm,0.9s							
PCI	**Palu**	**25.49**	**275**	S	S	11	31	02.5 -14
	baz=25,SNR=3.3							
STKA	**Stephens Creek**	**28.47**	**186**	P	**P**	**11**	**27**	**18.3 +1.4**
STKA	**Stephens Creek**	**28.47**	**186**	P	**P**	**11**	**27**	**18.3 +1.4**
	5.9nm,0.9s,baz=356,slow=7.9,SNR=9.1							
STKA				LR	LR	11	39	51.7
	comp=Z,336nm,21.1s,baz=167,slow=39							
STKA	**Stephens Creek**	**28.47**	**186**	P	**P**	**11**	**27**	**18.2 +1.3**
	baz=27,SNR=5.3							
CBIJ	**Chichi jima**	**30.52**	**355**	LR	LR	11	37	07.7
	comp=Z,1μm,20.8s,baz=5.1,slow=31							
MEEK	**Meekatharra**	**34.35**	**225**	P	**P**	**11**	**28**	**07.7 -1.1**
	baz=32,SNR=3.4							
KSRS	**Korea Array**	**43.77**	**340**	LR	LR	11	45	19.9
	comp=Z,146nm,18.8s,baz=177,slow=33							
URZ	**Urewera**	**45.23**	**144**	LR	LR	11	46	39.0
	comp=Z,224nm,19.4s,baz=256,slow=34							
RPZ	**Rata Peaks**	**46.15**	**154**	LR	LR	11	46	05.5
	comp=Z,430nm,20.3s,baz=192,slow=32							
USRK	**Ussuriysk Arra**	**48.91**	**347**	P	**P**	**11**	**30**	**08.3 +0.7**
	2.0nm,0.7s,baz=129,slow=47,SNR=1.8							
CMAR	**Chiang Mai Arr**	**50.51**	**297**	P	**P**	**11**	**30**	**21.0 +0.7**
CMAR	**Chiang Mai Arr**	**50.51**	**297**	P	**P**	**11**	**30**	**21.0 +0.7**
	0.4nm,0.6s,baz=108,slow=5.8,SNR=1.7							
CMAR				LR	LR	11	49	29.1
	comp=Z,58nm,20.1s,baz=5.0,slow=34							
SONM	**Songino Array**	**61.34**	**331**	P	**P**	**11**	**31**	**36.3 -1.2**
SONM	**Songino Array**	**61.34**	**331**	P	**P**	**11**	**31**	**36.3 -1.2**
	0.2nm,0.3s,baz=123,slow=5.3,SNR=2.0							
SONM				LR	LR	11	55	51.6
	comp=Z,168nm,20.2s,baz=125,slow=34							
MKAR	**Makanchi Array**	**74.43**	**321**	P	**P**	**11**	**32**	**59.1 -0.7**
MKAR	**Makanchi Array**	**74.43**	**321**	P	**P**	**11**	**32**	**59.1 -0.7**
	0.7nm,1.0s,baz=81,slow=4.5,SNR=3.5							
MKAR				LR	LR	12	04	35.9
	comp=Z,63nm,21.5s,baz=252,slow=35							
ZALV	**Zalesovo Beam**	**75.94**	**328**	LR	LR	12	05	00.2
	comp=Z,166nm,19.8s,baz=72,slow=35							
BVAR	**Borovoye Array**	**83.69**	**324**	P	**P**	**11**	**33**	**50.4 0.0**
BVAR	**Borovoye Array**	**83.69**	**324**	P	**P**	**11**	**33**	**50.4 0.0**
	0.3nm,0.4s,baz=91,slow=8.9,SNR=2.3							
ILAR	**Eielson Array**	**83.87**	**24**	P	**P**	**11**	**33**	**51.1 +0.1**
ILAR	**Eielson Array**	**83.87**	**24**	P	**P**	**11**	**33**	**51.1 +0.1**
	0.7nm,0.8s,baz=246,slow=5.9,SNR=8.2							
ILAR				LR	LR	12	08	02.7
	comp=Z,73nm,18.4s,baz=176,slow=33							
QSPA	**South Pole Qui**	**86.49**	**180**	LR	LR	12	16	36.0
	comp=Z,196nm,18.6s,baz=113,slow=38							

*ISCJB **15** 11:35:41.5±0.4, 23°02′N±0°02′×121°46′E±0°02, h19km±4km, Error ellipse: s-maj=3.9km s-min=3.2km az=16.4*

*TAP **15** 11:35:42.2, 23°06′N×121°35′E, h21km, ML3.6, C*

*JMA **15** 11:35:43.3±0.2, 22°90′N×121°59′E, h90km, M2.9*

ISC 15 11:35:41.6±0.9, 23°03′N±0°02′×121°42′E±0°02, h24km±6km, n50, σ0s91/79, 12C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.09**	**324**	⇓*i*P	**Pb**	**11**	**35**	**46.2 +0.3**
	baz=31							
CHKT				S	**Sb**	**11**	**35**	**48.9 0.0**
	baz=31							
TWF1	**Yuli**	**0.34**	**340**	⇑*i*P	**Pb**	**11**	**35**	**49.1 -0.1**
	baz=339							
TWF1				*i* S	**Sb**	**11**	**35**	**54.4 0.0**
	baz=339							
TTN	**Taitung**	**0.37**	**223**	*e*P	**Pn**	**11**	**35**	**50.0 -1.4**
	baz=204							
TTN				*e*S	**Sn**	**11**	**35**	**56.9 -1.1**
	baz=204							
TWG	**Pinlang**	**0.38**	**238**	⇑*i*P	**Pb**	**11**	**35**	**49.8 0.0**
	baz=236							
TWG				*e*S	**Sb**	**11**	**35**	**55.2 -0.2**
	baz=236							
ELDTW	**Lidau**	**0.41**	**294**	⇑*i*P	**Pb**	**11**	**35**	**49.3 -0.9**
	baz=292							
ELDTW				S	**Sb**	**11**	**35**	**54.1 -2.0**
	baz=292							
EHY	**Hungye**	**0.49**	**349**	⇑*i*P	**Pb**	**11**	**35**	**51.2 -0.3**
	baz=342							
EHY				S	**Sb**	**11**	**35**	**58.8 +0.5**
	baz=342							
ECL	**Taimali**	**0.61**	**225**	P	**Pb**	**11**	**35**	**52.9 -0.7**
	baz=228							
WTP	**Ta-pu**	**0.78**	**287**	⇑*i*P	**Pn**	**11**	**35**	**56.3 -0.8**
	baz=284							
WTP				*e*S	**Sn**	**11**	**36**	**07.3 -0.8**
	baz=284							
ESL	**Shilin**	**0.79**	**1**	*e*P	**Pb**	**11**	**35**	**55.6 -1.0**
	baz=355							
TAW	**Tawu**	**0.82**	**216**	*e*P	**Pb**	**11**	**35**	**56.4 -0.8**
	baz=220							
TAW				*e*S	**Sb**	**11**	**36**	**07.2 -0.7**
	baz=220							
CHN4	**Tsaushan**	**0.83**	**293**	⇑*i*P	**Pn**	**11**	**35**	**57.4 -0.4**
	baz=296							
CHN4				*e*S	**Sb**	**11**	**36**	**08.0 -0.1**
	baz=296							
EAST	**Anshuo**	**0.83**	**220**	*e*P	**Pb**	**11**	**35**	**56.9 -0.5**
	baz=215							
EAST				*e*S	**Sn**	**11**	**36**	**09.1 -0.3**
	baz=215							
CHN1	**Nanshi**	**0.84**	**281**	⇑*i*P	**Pn**	**11**	**35**	**57.9 -0.1**
	baz=277							
CHN1				S	**Sn**	**11**	**36**	**08.7 -0.8**
	baz=277							
CHN5	**Tsauling**	**0.89**	**310**	⇑*i*P	**Pn**	**11**	**35**	**58.6 0.0**
	baz=309							
CHN5				*e*S	**Sn**	**11**	**36**	**10.2 -0.7**
	baz=309							
TWK	**Hsinying**	**0.89**	**286**	⇑*i*P	**Pn**	**11**	**35**	**58.5 -0.2**
	baz=284							
TWK				*e*S	**Sb**	**11**	**36**	**09.5 -0.5**
	baz=284							
SGLT	**Jiouru**	**0.91**	**251**	*e*P	**Pn**	**11**	**35**	**58.4 -0.4**
	baz=247							
TWM1	**Shoushan**	**0.94**	**258**	⇑P	**Pn**	**11**	**36**	**00.6 +1.2**
	baz=254							
HWA	**Hwalien**	**0.96**	**10**	*e*P	**Pn**	**11**	**36**	**00.7 +1.1**
	baz=359							
CHN3	**Shinhua**	**0.97**	**273**	*e*P	**Pn**	**11**	**36**	**01.3 +1.5**
	baz=270							
CHN3				*e*S	**Sn**	**11**	**36**	**15.8 +3.0**
	baz=270							
SMLT	**Sun Moon Lake**	**0.98**	**331**	P	**Pn**	**11**	**35**	**59.8 -0.1**
	baz=337							
SMLT				*e*S	**Sn**	**11**	**36**	**12.4 -0.7**
	baz=337							
SCZT	**Fangliau**	**0.99**	**229**	*e*P	**Pn**	**11**	**35**	**59.5 -0.4**
	baz=221							
CHN2	**Minshiung**	**1.01**	**300**	*e*P	**Pb**	**11**	**36**	**00.7 +0.4**
	baz=299							
CHN2				*e*S	**Sn**	**11**	**36**	**13.5 -0.1**
	baz=299							
TYC	**Yuchr**	**1.02**	**329**	*e*P	**Pb**	**11**	**36**	**00.3 -0.2**
	baz=339							
TYC				*e*S	**Sn**	**11**	**36**	**13.4 -0.5**
	baz=339							
WGK	**Gukeng**	**1.03**	**310**	*e*P	**Pb**	**11**	**36**	**01.3 +0.6**
	baz=309							
WGK				*e*S	**Sn**	**11**	**36**	**15.6 +1.5**
	baz=309							
CHY	**Chiayi**	**1.03**	**297**	⇑P	**Pb**	**11**	**36**	**01.2 +0.4**
	baz=296							
TWD	**Chiawan**	**1.06**	**9**	*e*P	**Pn**	**11**	**36**	**00.2 -0.7**
	baz=358							
WNT	**Mingjian**	**1.09**	**322**	*e*P	**Pb**	**11**	**36**	**02.1 +0.4**
	baz=321							
WNT				*e*S	**Sn**	**11**	**36**	**16.0 +0.4**
	baz=321							
WHF	**Hehuan Shan**	**1.12**	**353**	*e*P	**Pn**	**11**	**36**	**01.5 -0.7**
	baz=5.0							
CHN8	**Yiju**	**1.16**	**286**	*e*P	**Pb**	**11**	**36**	**02.9 0.0**
	baz=284							
CHN8				*e*S	**Sb**	**11**	**36**	**18.4 +0.9**
	baz=284							
TWP	**Hsiaoliuchiu**	**1.19**	**236**	*e*P	**Pb**	**11**	**36**	**05.7 +2.3**
	baz=233							
TWK1	**Hengchun**	**1.22**	**208**	*e*P	**Pb**	**11**	**36**	**04.2 +0.3**
	baz=198							
TSEB	**Hengchuen, Pin**	**1.22**	**203**	*e*P	**Pb**	**11**	**36**	**03.7 -0.2**
	baz=195							
TWT	**Tachien**	**1.24**	**350**	*e*P	**Pb**	**11**	**36**	**03.6 -0.9**
	baz=349							
WSF	**Szhu**	**1.26**	**299**	*e*P	**Pb**	**11**	**36**	**04.5 -0.2**
	baz=297							
WSF				*e*S	**Sb**	**11**	**36**	**20.1 -0.3**
	baz=297							
NNS	**Nan Shan**	**1.41**	**358**	*e*P	**Pb**	**11**	**36**	**06.8 -0.4**
	baz=13							
ENA	**Nanau**	**1.43**	**12**	*e*P	**Pb**	**11**	**36**	**07.3 -0.2**
TWQ1	**Liyutan**	**1.44**	**336**	⇑*i*P	**Pb**	**11**	**36**	**08.4 +0.6**
	baz=334							
TWQ1				*e*S	**Sb**	**11**	**36**	**26.4 +0.7**
	baz=334							
NSY	**Sanyi**	**1.51**	**336**	*e*P	**Pb**	**11**	**36**	**08.6 -0.4**
	baz=335							
NSY				*e*S	**Sb**	**11**	**36**	**29.2 +1.6**
	baz=335							
ENTT	**Nioudou**	**1.61**	**5**	*e*P	**Pn**	**11**	**36**	**08.7 +0.1**
	baz=4.0							
TWC	**Suao**	**1.62**	**14**	*e*P	**Pb**	**11**	**36**	**10.0 -0.8**
	baz=2.0							
NSK	**Sanguang**	**1.64**	**358**	*e*P	**Pb**	**11**	**36**	**09.6 -1.6**
	baz=12							
NSTT	**Nanjuang**	**1.64**	**347**	*e*P	**Pb**	**11**	**36**	**09.8 -1.4**
	baz=355							
TWE	**Neicheng**	**1.70**	**8**	*e*P	**Pb**	**11**	**36**	**10.7 -1.5**
	baz=7.0							
PNG	**Penghu**	**1.80**	**288**	*e*P	**Pn**	**11**	**36**	**11.0 -0.2**
	baz=285							
YOJ	**Yonaguni jima**	**2.04**	**45**	P	**Pb**	**11**	**36**	**16.4 -1.5**
YOJ				*e*S	**Sb**	**11**	**36**	**41.9 -1.0**
HATJ	**Hateruma jima**	**2.42**	**64**	P	**Pn**	**11**	**36**	**20.6 +1.0**
HATJ				*e*S	**Sn**	**11**	**36**	**48.6 +0.2**
IRIF	**Iriomote-Funau**	**2.48**	**58**	P	**Pn**	**11**	**36**	**21.8 +1.3**
IRIF				*e*S	**Sn**	**11**	**36**	**50.7 +0.6**
JKRS	**Kuro-shima**	**2.66**	**63**	P	**Pn**	**11**	**36**	**24.1 +1.1**
JKRS				*e*S	**Sn**	**11**	**36**	**55.2 +0.7**
JIJ	**Ishigaki jima**	**2.83**	**61**	P	**Pn**	**11**	**36**	**26.3 +1.0**
JIJ				*e*S	**Sn**	**11**	**36**	**58.5 -0.1**
JTJ	**Tarama**	**3.41**	**61**	P	**Pn**	**11**	**36**	**34.4 +1.2**
JTJ				*e*S	**Sn**	**11**	**37**	**13.5 +0.6**

GUC 15 11:40:57.3±0.7, 32°61′S×71°78′W, h7km±9km, MD3.6, ML2.5, 2C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROCH	**El Roble**	**0.74**	**119**	⇓*i*P	Pg	11	41	11.8 -0.1
ROCH					AML	AML	11	41	26.5	
	comp=N,283nm,0.2s									
CHNG	**Los Chungos**	**0.76**	**18**	⇑*i*P	Pg	11	41	12.2 +0.2
CHNG				*i* S	Sb	11	41	23.0 -0.5
CHNG				AML	AML	11	41	23.6	
	comp=E,111nm,0.2s									
PEL	**Peldehue**	**1.06**	**120**	⇑*i*P	Pg	11	41	17.2 -0.6
PEL				*i* S	Sb	11	41	32.2 -0.1
PEL				AML	AML	11	41	35.4	
	comp=N,521nm,0.2s									
CLCH	**Cerro Calan**	**1.30**	**127**	⇓*i*P	Pn	11	41	20.7 -1.3
CLCH				*i* S	Sb	11	41	38.4 -0.9
CLCH				AML	AML	11	41	43.7	
	comp=E,175nm,0.4s									
CMCH	**Combarbala**	**1.58**	**25**	⇓*i*P	Pn	11	41	25.4 -0.4
CMCH				*e*S	Sn	11	41	46.4 -0.2
CMCH				AML	AML	11	41	52.0	
	comp=E,260nm,0.6s									
CHCH	**Chadas Angostu**	**1.62**	**145**	⇓*i*P	Pn	11	41	25.8 -0.6
CACH	**El Canelo**	**1.80**	**147**	*e*P	Pn	11	41	29.4 +0.4
CACH				*e*S	Sb	11	41	54.1 +0.5
LMEL	**Las Melosas**	**1.81**	**133**	⇓*i*P	Pn	11	41	29.4 +0.3
LMEL				AML	AML	11	41	56.9	
	comp=N,144nm,0.2s									

*ISCJB **15** 11:44:40.4±0.3, 42°29′N±0°02′×13°48′E±0°03, h14km±3km, Error ellipse: s-maj=3.9km s-min=2.7km az=153.7*

*ROM **15** 11:44:40.6±0.1, 42°28′N×13°47′E, h10km, Ml3.0/25, Error ellipse: s-maj=1.1km s-min=0.8km az=53.0*

*CSEM **15** 11:44:40.9±0.1, 42°29′N×13°48′E, h2km, ML3.6/9, Error ellipse: s-maj=3.1km s-min=2.2km az=58.0*

*LDG **15** 11:44:44.5±0.9, 42°46′N×13°36′E, h2km, Ml3.0/5, Error ellipse: s-maj=19.8km s-min=12.2km az=112.0*

ISC 15 11:44:40.6±0.6, 42°30′N±0°02′×13°52′E±0°02, h16km±4km, n90, σ1s17/114, 1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.06**	**125**	Pg	**Pg**	**11**	**44**	**43.4 -0.4**
FAGN				Sg	**Sg**	**11**	**44**	**45.1 -0.7**
	43μm,0.4s							
FAGN	**Fagnano**	**0.06**	**125**	Pg	**Pg**	**11**	**44**	**43.4 -0.4**
FAGN				Sg	**Sg**	**11**	**44**	**45.1 -0.7**
	43μm,0.4s							
AQU	**L'Aquila**	**0.10**	**302**	Pg	**Pg**	**11**	**44**	**43.6 -0.5**
AQU				Sg	**Sg**	**11**	**44**	**45.6 -0.8**
	20μm,1.0s							
AQU	**L'Aquila**	**0.10**	**302**	Pg	**Pg**	**11**	**44**	**43.6 -0.5**
AQU				Sg	**Sg**	**11**	**44**	**45.6 -0.8**
	20μm,1.0s							
CAMP	**Campotosto**	**0.25**	**341**	Pg	**Pg**	**11**	**44**	**46.4 +0.2**
CAMP				Sg	**Sb**	**11**	**44**	**50.6 -0.4**
	2μm,0.6s							
CAMP	**Campotosto**	**0.25**	**341**	Pg	**Pg**	**11**	**44**	**46.4 +0.2**
CAMP				Sg	**Sb**	**11**	**44**	**50.6 -0.4**
	2μm,0.6s							
VCEL	**Villa Celiera**	**0.26**	**69**	Pg	**Pb**	**11**	**44**	**47.1 +0.1**
VCEL				Sg	**Sb**	**11**	**44**	**51.3 +0.1**
	7μm,0.6s							
VCEL	**Villa Celiera**	**0.26**	**69**	Pg	**Pb**	**11**	**44**	**47.1 +0.1**
VCEL				Sg	**Sb**	**11**	**44**	**51.3 +0.1**
	7μm,0.6s							
PTQR	**Pietraquaria**	**0.29**	**197**	Pg	**Pg**	**11**	**44**	**46.7 -0.2**
PTQR				Sg	**Sg**	**11**	**44**	**50.9 -0.3**
PTQR	**Pietraquaria**	**0.29**	**197**	Pg	**Pg**	**11**	**44**	**46.7 -0.2**
PTQR				Sg	**Sg**	**11**	**44**	**50.9 -0.3**
FIAM	**Fiamignano**	**0.30**	**264**	Pg	**Pg**	**11**	**44**	**46.7 -0.3**
FIAM				Sg	**Sg**	**11**	**44**

	722nm,0.6s							
RNI2	**Rionero Sannit**	**0.76**	**141**	Pg	**Pb**	**11 44 55.5**	**-0.1**
	722nm,0.6s							
GIUL	**Giuliano Di Ro**	**0.77**	**195**	Pg	**Pg**	**11 44 54.8**	**-0.8**
	445nm,0.8s							
GIUL	**Giuliano Di Ro**	**0.77**	**195**	Pg	**Pg**	**11 44 54.8**	**-0.8**
	445nm,0.8s							
FDMO	**Fiordimonte**	**0.80**	**337**	Pg	**Pg**	**11 44 55.7**	**-0.5**
	278nm,0.5s							
FDMO	**Fiordimonte**	**0.80**	**337**	Pg	**Pg**	**11 44 55.7**	**-0.5**
	278nm,0.5s							
GUMA	**Gualdo di Mace**	**0.82**	**22**	Pg	**Pg**	**11 44 56.1**	**-0.5**
GUMA	**Gualdo di Mace**	**0.82**	**22**	Pg	**Pg**	**11 44 56.1**	**-0.5**
CESI	**CESI - Serrava**	**0.83**	**328**	Pg	**Pg**	**11 44 56.3**	**-0.6**
	153nm,0.6s							
CESI	**CESI - Serrava**	**0.83**	**328**	Pg	**Pg**	**11 44 56.3**	**-0.6**
	153nm,0.6s							
MIDA	**Miranda**	**0.86**	**140**	Pg	**Pg**	**11 44 56.6**	**-0.7**
	481nm,0.5s							
MIDA	**Miranda**	**0.86**	**140**	Pg	**Pg**	**11 44 56.6**	**-0.7**
	481nm,0.5s							
ASSB	**Assisi San Ben**	**0.97**	**320**	Pg	**Pg**	**11 44 59.2**	**-0.3**
	367nm,0.7s							
ASSB	**Assisi San Ben**	**0.97**	**320**	Pg	**Pg**	**11 44 59.2**	**-0.3**
	367nm,0.7s							
VAGA	**Valle Agricola**	**1.03**	**149**	Pg	**Pb**	**11 45 00.0**	**-0.2**
	253nm,0.6s							
VAGA	**Valle Agricola**	**1.03**	**149**	Pg	**Pb**	**11 45 00.0**	**-0.2**
	253nm,0.6s							
SNTG	**Esanatoglia**	**1.04**	**336**	Pg	**Pb**	**11 45 00.1**	**-0.2**
	161nm,0.6s							
SNTG	**Esanatoglia**	**1.04**	**336**	Pg	**Pb**	**11 45 00.1**	**-0.2**
	161nm,0.6s							
CING	**Cingoli**	**1.10**	**348**	Pg	**Pb**	**11 45 01.6**	**+0.3**
	311nm,0.7s							
CING	**Cingoli**	**1.10**	**348**	Pg	**Pb**	**11 45 01.6**	**+0.3**
	311nm,0.7s							
ARVD	**Arcevia**	**1.27**	**341**	Pg	**Pb**	**11 45 04.6**	**+0.5**
	326nm,0.8s							
ARVD	**Arcevia**	**1.27**	**341**	Pg	**Pb**	**11 45 04.6**	**+0.5**
	326nm,0.8s							
PGF	**Pioggiola**	**3.35**	**276**	*e*Pn	**Pn**	**11 45 34.4**	**+2.0**
PGF				*e*Sn	**Sn**	**11 46 14.6**	**+2.6**
	7.4nm,0.7s							
PGF	**Pioggiola**	**3.35**	**276**	*e*Pn	**Pn**	**11 45 34.4**	**+2.0**
PGF				*e*Sn	**Sn**	**11 46 14.6**	**+2.6**
	3.7nm,0.7s							
ABTA	**Abfaltersbach**	**4.50**	**351**	⇓*i*Pn	**Pn**	**11 45 50.2**	**+2.0**
ABTA	**Abfaltersbach**	**4.50**	**351**	Pn	**Pn**	**11 45 50.2**	**+2.0**
SBF	**Sospel**	**4.72**	**291**	*e*Pn	**Pn**	**11 45 53.0**	**+1.8**
SBF	**Sospel**	**4.72**	**291**	*e*Pn	**Pn**	**11 45 53.0**	**+1.8**
FRF	**La Foret Royal**	**5.20**	**286**	*e*Pn	**Pn**	**11 45 59.1**	**+1.4**
FRF	**La Foret Royal**	**5.20**	**286**	*e*Pn	**Pn**	**11 45 59.1**	**+1.4**
LMR	**La Mourre**	**5.26**	**284**	*e*Pn	**Pn**	**11 45 59.6**	**+1.1**
LMR				*e*Sn	**Sn**	**11 46 55.5**	**-3.2**
	5.2nm,0.5s							
LMR	**La Mourre**	**5.26**	**284**	*e*Pn	**Pn**	**11 45 59.6**	**+1.1**
MBDF	**Montbardon**	**5.47**	**299**	*e*P	Pn	11 46 05.0	+3.4
MBDF	**Montbardon**	**5.47**	**299**	*e*P	Pn	11 46 05.0	+3.4
LPG	**La Plagne**	**5.84**	**305**	*e*P	Pn	11 46 10.8	+4.1
LPG				*e*Sn	**Sn**	**11 47 09.9**	**-3.6**
	1.1nm,0.2s							
LPG	**La Plagne**	**5.84**	**305**	*e*P	Pn	11 46 10.8	+4.1
LPL	**La Plagne**	**5.86**	**306**	*e*P	Pn	11 46 11.0	+4.0
LPL				*e*Sn	**Sn**	**11 47 09.1**	**-4.8**
	1.6nm,0.2s							
LPL	**La Plagne**	**5.86**	**306**	*e*P	Pn	11 46 11.0	+4.0
SMRF	**Simiane la Rot**	**6.05**	**289**	*e*P	**Pn**	**11 46 12.3**	**+2.9**
SMRF	**Simiane la Rot**	**6.05**	**289**	*e*P	**Pn**	**11 46 12.3**	**+2.9**
HINF	**Hinteralfeld**	**7.25**	**322**	*e*Pn	**Pn**	**11 46 26.9**	**+0.9**
HINF	**Hinteralfeld**	**7.25**	**322**	*e*Pn	**Pn**	**11 46 26.9**	**+0.9**
CDF	**Champ du Feu**	**7.52**	**326**	*e*Pn	**Pn**	**11 46 30.5**	**+0.8**
CDF				*e*Sn	**Sn**	**11 47 50.3**	**-4.4**
	9.7nm,0.5s							
CDF	**Champ du Feu**	**7.52**	**326**	*e*Pn	**Pn**	**11 46 30.5**	**+0.8**
HAU	**Haudompre**	**7.63**	**321**	*e*Pn	**Pn**	**11 46 31.4**	**+0.4**
HAU	**Haudompre**	**7.63**	**321**	*e*Pn	**Pn**	**11 46 31.4**	**+0.4**

*ISCJB **15** 11:47:07.0±0.4,50.˚54N±0.˚04×73.˚48E±0.˚05, h10km, mb3.5/3, MS3.8/2, Error ellipse: s-maj=5.8km s-min=4.0km az=35.1.*
*NNC **15** 11:47:07.3±0.3,50.˚54N×73.˚46E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=3.7km s-min=2.4km az=52.0*
*IDC **15** 11:47:08.7±0.6,50.˚85N×73.˚66E, h0km, mb3.5/3, mb1 3.7/9, mb1mx3.5/32, mbtmpb3.5/9, ML3.5/6, MS3.4/3, Ms1 3.4/3, ms1mx2.8/33, Error ellipse: s-maj=11.8km s-min=7.1km az=32.0*

ISC 15 11:47:08.3±0.7, 50.˚75N±0.˚05×73.˚54E±0.˚04, h10km, n20, σ1§93/27, mb3.5/3, 10C-11D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VOSK	**Vostochnaya**	**2.53**	**322**	⇓Pn	**Pb**	**11 47 51.6**	**-2.2**
	6.0nm,0.3s						
VOSK				⇑Sn	**Sb**	**11 48 25.1**	**+0.1**
	80nm,1.2s						
BVA0	**Borovoye Array**	**3.00**	**321**	Pn	**Pb**	**11 47 58.9**	**-2.8**
	0.6nm,0.3s,baz=135,slow=13,SNR=92						
BVA0				⇑Sn	**Sb**	**11 48 37.3**	**-0.9**
	5.0nm,0.5s,baz=127,slow=26,SNR=9.0						
BVAR	**Borovoye Array**	**3.00**	**321**	Pn	**Pn**	**11 47 57.5**	**+1.8**
	3.4nm,0.3s,baz=120,slow=15,SNR=32						
BVAR				Sn	**Sb**	**11 48 34.4**	**-3.9**
	5.1nm,0.3s,baz=122,slow=16,SNR=6.4						
BVAR				Lg	Lg	11 48 44.4	
	12nm,0.3s,baz=120,slow=27,SNR=4.9						
BRVK	**Borovoye**	**3.06**	**320**	⇓Pn	**Pn**	**11 47 58.6**	**+1.9**
	13nm,0.7s						
BRVK				⇓Sn	**Sb**	**11 48 39.0**	**-1.2**
	57nm,0.6s						
KURBB	**Kurchatov Arra**	**3.18**	**90**	Pn	**Pn**	**11 47 59.4**	**+1.1**
	0.9nm,0.3s,baz=280,slow=13,SNR=52						
KURBB				Lg	Lg	11 48 47.2	
	2.8nm,0.3s,baz=202,slow=40,SNR=5.2						
KURK	**Kurchatov**	**3.23**	**89**	⇑Pn	**Pn**	**11 47 59.7**	**+0.7**
	12nm,0.6s						
KURK				⇓Sn	**Sb**	**11 48 41.7**	**-3.4**
	53nm,0.6s						
MK31	**Makanchi Array**	**7.01**	**121**	⇑Pn	**Pn**	**11 48 52.5**	**+1.6**
	0.5nm,0.5s,baz=307,slow=10,SNR=20						
MK31				⇑Pg	Pb	11 49 13.7	+3.7
	1.1nm,0.3s,baz=289,slow=13,SNR=3.8						
MK31				⇑Lg	Lg	11 50 45.2	
	8.7nm,0.6s,baz=316,slow=26,SNR=7.8						
MKAR	**Makanchi Array**	**7.01**	**121**	Pn	**Pn**	**11 48 51.8**	**+0.9**
	0.4nm,0.3s,baz=294,slow=12,SNR=14						
MKAR				Lg	Lg	11 50 50.7	
	1.7nm,0.3s,baz=313,slow=26,SNR=9.9						
ZALV	**Zalesovo Beam**	**7.61**	**61**	Pn	**Pn**	**11 48 59.4**	**+0.2**
	0.7nm,0.3s,baz=249,slow=13,SNR=14						
ZALV				Sn	**Sn**	**11 50 29.1**	**+3.8**
	0.6nm,0.3s,baz=248,slow=24,SNR=5.3						
ZALV				Lg	Lg	11 51 05.4	
	0.3nm,0.3s,baz=247,slow=25,SNR=3.0						
ZALV				LR	LR	11 52 23.6	
	comp=Z,65nm,20.3s,baz=333,slow=42						
KK31	**Karatay Array**	**7.93**	**196**	⇑Pn	**Pn**	**11 49 03.1**	**-0.4**
	0.8nm,0.3s,baz=45,slow=58,SNR=10						
KK31				⇓Sn	**Sn**	**11 50 35.5**	**+2.3**
	0.8nm,0.5s,baz=12,slow=28,SNR=3.7						
KK31				⇓Lg	Lg	11 51 09.4	
	7.2nm,0.7s,baz=12,slow=28,SNR=3.5						
TKM2	**Tokmak 2**	**7.96**	**169**	⇓Pn	**Pn**	**11 49 01.8**	**-2.4**
	1.6nm,0.7s						
TKM2				⇑Sn	**Sn**	**11 50 32.0**	**-2.3**
	1.5nm,0.7s						
TKM2				⇓Lg	Lg	11 51 14.2	
	19nm,0.8s						
AAK	**Ala-Archa**	**8.15**	**175**	Pn	Pn	11 49 09.5	+2.8
	2.0nm,0.3s,baz=6.8,slow=0.5,SNR=20						
AAK				Lg	Lg	11 51 31.0	
	0.6nm,0.3s,baz=37,slow=22,SNR=6.0						
AB31	**Akbulak array**	**8.88**	**266**	Pn	**Pn**	**11 49 17.3**	**+0.7**
	0.5nm,0.3s,baz=80,slow=8.5,SNR=27						
AB31				⇓Sn	**Sn**	**11 50 58.3**	**+1.6**
	0.4nm,0.4s						
AB31				⇓Lg	Lg	11 51 46.5	
	0.7nm,0.5s,baz=87,slow=28,SNR=4.0						
AKTO	**Aktyubinsk**	**9.88**	**274**	⇑Pn	**Pn**	**11 49 30.5**	**+0.3**
	0.3nm,0.4s						
AKTO				⇓Sn	**Sn**	**11 51 21.8**	**+0.7**
	0.3nm,0.7s						
AKTO				⇑Lg	Lg	11 52 19.9	
	0.7nm,0.9s						
AKTO	**Aktyubinsk**	**9.88**	**274**	Pn	**Pn**	**11 49 31.4**	**+1.3**
	1.3nm,0.3s,baz=92,slow=12,SNR=18						
AKTO				Lg	Lg	11 52 23.9	
	0.1nm,0.3s,baz=163,slow=22,SNR=5.7						
ILAR	**Eielson Array**	**60.62**	**19**	P	**P**	**11 57 18.9**	**+0.2**
	0.6nm,0.5s,baz=325,slow=5.2,SNR=18						
DAV	**Davao City (W)**	**61.17**	**117**	LR	LR	12 26 03.5	
	comp=Z,35nm,20.5s,baz=264,slow=38						
YKA	**Yellowknife Ar**	**66.91**	**4**	P	**P**	**11 58 00.2**	**+0.1**
	0.1nm,0.5s,baz=350,slow=6.8,SNR=6.1						
TORD	**Torodi Ar. Bea**	**68.44**	**264**	P	**P**	**11 58 11.2**	**+0.8**
	0.2nm,0.6s,baz=39,slow=4.9,SNR=5.7						
SCHQ	**Schefferville**	**69.70**	**337**	LR	LR	12 33 32.6	
	comp=Z,99nm,18.7s,baz=71,slow=40						

MEX 15 11:51:16.0±0.8, 13.˚99N×93.˚29W, h64km±42km, MD4.1, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**1.34**	**47**	*e*P	Pn	11 51 36.3	-2.4
THIG				*i* S	Sn	11 51 54.4	-1.3
CCIG	**Comitan**	**2.53**	**26**	*i* P	Pn	11 51 54.6	-0.4
CCIG				*i* S	Sn	11 52 23.1	-1.8
TGIG		**2.77**	**3**	*i* P	Pn	11 51 56.9	-1.3
TGIG				*i* S	Sn	11 52 28.3	-2.3
HUIG	**Huatulco**	**3.25**	**303**	*i* P	Pn	11 52 04.3	-0.2
HUIG				*i* S	Sn	11 52 40.7	-1.4
CMIG	**Matias Romero**	**3.44**	**334**	*i* P	Pn	11 52 06.4	-0.8
CMIG				*i* S	Sn	11 52 45.0	-1.8
VHO	**Vista Hermosa**	**4.52**	**313**	*i* P	Pn	11 52 21.3	-0.8
VHO				*i* S	Sn	11 53 13.2	-0.5
PNIG	**Pinotepa**	**5.25**	**298**	*e*P	Pn	11 52 31.9	0.0
PNIG				*i* S	Sn	11 53 30.8	-0.4
UTMO	**Huajuapan**	**5.78**	**312**	*i* P	Pn	11 52 42.1	+2.6
UTMO				*i* S	Sn	11 53 43.3	-1.4

DJA 15 11:53:12.6±0.3, 4.˚S±3.˚×10.˚5E±.˚, h10km, M3.6/6, MLv3.6/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLSI	**Bandar Lampung**	**1.60**	**186**	P	Pn	11 53 41.1	+0.2
BLSI				S	Sn	11 54 00.2	-1.5
PPBI	**Pangkal Pinang**	**1.75**	**24**	P	Pn	11 53 40.4	-2.6
PPBI				S	Sn	11 54 04.4	-1.0
LWLI	**Liwa**	**1.84**	**228**	P	Pn	11 53 42.7	-1.7
LWLI				S	Sn	11 54 07.6	-0.2
KASI	**Kota Agung**	**1.97**	**208**	P	Pn	11 53 45.1	-1.0
TPI	**Tanjungpandan**	**2.45**	**66**	P	Pn	11 53 54.2	+1.6
TPI				S	Sn	11 54 24.6	+2.0
KSI	**Kapahiang**	**2.82**	**272**	P	Pn	11 54 00.4	+2.5

IDC 15 12:02:39.8±5.4, 23.˚72S×67.˚61W, h192km±42km, mb3.2/3, mb1 3.3/5, mb1mx3.2/18, mbtmpb3.2/5, Error ellipse: s-maj=48.4km s-min=38.3km az=69.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPUP	**Villa Florida**	**9.68**	**108**	P	Pn	12 04 56.4	+1.5
	0.5nm,0.3s,baz=265,slow=11,SNR=6.4						
SIV	**San Ignacio**	**9.84**	**40**	P	Pn	12 04 56.3	-0.9
	0.8nm,0.3s,baz=235,slow=10,SNR=9.5						
BDFB	**Brasilia**	**20.11**	**70**	P	P	12 06 58.3	-0.9
	1.7nm,0.5s,baz=194,slow=15,SNR=3.0						
QSPA	**South Pole Qui**	**66.48**	**180**	P	P	12 13 05.4	-3.0
	0.7nm,0.5s,baz=135,slow=4.3,SNR=11						
TORD	**Torodi Ar. Bea**	**76.99**	**69**	P	P	12 14 11.6	-0.2
	0.5nm,0.7s,baz=253,slow=5.5,SNR=6.0						
YKA	**Yellowknife Ar**	**93.67**	**340**	P	P	12 15 34.4	+0.6
	0.1nm,0.5s,baz=134,slow=4.6,SNR=7.1						
ASAR	**Alice Springs**	**128.47**	**205**	PKP	PKPdf	12 21 22.8	-1.5
	0.2nm,0.5s,baz=126,slow=1.6,SNR=3.2						
MKAR	**Makanchi Array**	**146.66**	**39**	PKPbc	PKPbc	12 21 59.0	+0.3
	0.3nm,0.5s,baz=323,slow=4.3,SNR=3.6						

*ISCJB **15** 12:03:33.2±0.5, 40.˚38N±0.˚03×40.˚55E±0.˚02, h6km±4km, Error ellipse: s-maj=4.2km s-min=2.9km az=174.2*
*ISK **15** 12:03:33.1, 40.˚40N×40.˚56E, h8km, ML2.8*
*CSEM **15** 12:03:33.1±0.2, 40.˚38N×40.˚56E, h5km, ML2.8, Error ellipse: s-maj=4.8km s-min=3.5km az=163.0*
*DDA **15** 12:03:34.1, 40.˚34N×40.˚57E, h17km, MD3.5*

ISC 15 12:03:32.7±1.1, 40.˚41N±0.˚02×40.˚53E±0.˚02, h4km±10km, n42, σ0§84/73, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAYT	**Ayd¨–ntepe-Bay**	**0.30**	**268**	PG	**Pb**	**12 03 40.5**	**-0.2**
BAYT				SG	**Sb**	**12 03 45.1**	**-0.8**
BAYT	**Ayd¨–ntepe-Bay**	**0.30**	**268**	*i* Pg	**Pb**	**12 03 40.5**	**-0.2**
BAYT				*i* Sg	**Sb**	**12 03 45.2**	**-0.8**
KOPT	**Kop Dagi**	**0.39**	**184**	*i* P	**Pg**	**12 03 41.0**	**+0.7**
KOPT				*i* S	**Sg**	**12 03 44.7**	**-0.7**
KOPT	**Kop Dagi**	**0.39**	**184**	*i* P	**Pg**	**12 03 41.0**	**+0.7**
KOPT				*i* S	**Sg**	**12 03 44.7**	**-0.7**
GUMT	**Gumushane**	**0.80**	**274**	*e*PG	**Pb**	**12 03 49.4**	**+0.1**
GUMT				*e*SG	**Sb**	**12 04 00.6**	**+0.1**
GUMT	**Gumushane**	**0.80**	**274**	*e*Pg	**Pb**	**12 03 49.4**	**+0.1**
GUMT				*e*Sg	**Sb**	**12 04 00.6**	**+0.1**
EZM	**Erzurum**	**0.81**	**128**	*e*PG	**Pg**	**12 03 48.7**	**+0.4**
EZM				*e*SG	**Sg**	**12 04 00.5**	**-0.4**
ERZM	**Erzurum**	**0.81**	**128**	*i* P	**Pg**	**12 03 48.8**	**+0.5**
ERZM				*i* S	**Sg**	**12 03 59.2**	**+0.4**
ERZM	**Erzurum**	**0.81**	**128**	*i* P	**Pg**	**12 03 48.8**	**+0.5**
ERZM				*i* S	**Sg**	**12 03 59.2**	**+0.4**
PZAR	**Pazar-Rize**	**0.82**	**20**	*e*PG	**Pg**	**12 03 48.1**	**-0.4**
PZAR				*e*SG	**Sb**	**12 04 01.5**	**+0.6**
PZAR	**Pazar-Rize**	**0.82**	**20**	*e*Pg	**Pg**	**12 03 48.1**	**-0.4**
PZAR				*e*Sg	**Sb**	**12 04 01.5**	**+0.6**
KELT	**Kelkit**	**1.01**	**256**	*i* P	**Pg**	**12 03 52.5**	**+0.4**
KELT				*i* S	**Sg**	**12 04 05.3**	**+0.2**
KELT	**Kelkit**	**1.01**	**256**	*i* P	**Pg**	**12 03 52.5**	**+0.4**
KELT				*i* S	**Sg**	**12 04 05.3**	**+0.2**
ERZN	**Erzincan**	**1.03**	**217**	*e*PG	**Pg**	**12 03 52.8**	**+0.4**
DDEM	**Demirkent**	**1.05**	**62**	*i* P	**Pg**	**12 03 52.9**	**+0.1**
DDEM				*i* S	**Sg**	**12 04 06.3**	**-0.1**
DDEM	**Demirkent**	**1.05**	**62**	*i* P	**Pg**	**12 03 52.9**	**+0.1**
DDEM				*i* S	**Sg**	**12 04 06.3**	**-0.1**
HOMI	**Horasan**	**1.11**	**108**	*i* P	**Pb**	**12 03 54.5**	**+0.1**
HOMI				*e*S	**Sg**	**12 04 08.8**	**+0.3**
EZC	**Erzincan**	**1.11**	**234**	*e*Pg	**Pg**	**12 03 52.8**	**-1.3**
DAGI	**Agillar**	**1.25**	**57**	*i* P	**Pg**	**12 03 56.5**	**-0.1**
DAGI				*i* S	**Sg**	**12 04 13.0**	**+0.2**
DBOC	**Borcka**	**1.27**	**42**	*i* P	**Pg**	**12 03 57.4**	**+0.3**
DBOC				*i* S	**Sg**	**12 04 13.4**	**-0.3**
DBOC	**Borcka**	**1.27**	**42**	*i* P	**Pg**	**12 03 57.4**	**+0.3**
DBOC				*i* S	**Sg**	**12 04 13.4**	**-0.3**
ARTV	**Artvin**	**1.32**	**53**	*i* P	**Pn**	**12 03 57.9**	**-0.1**
ARTV				*i* S	**Sg**	**12 04 15.5**	**+0.5**
ARTV	**Artvin**	**1.32**	**53**	*i* P	**Pn**	**12 03 57.9**	**-0.1**
ARTV				*i* S	**Sg**	**12 04 15.5**	**+0.5**
BCA	**Borcka**	**1.33**	**38**	*e*PN	**Pg**	**12 03 58.3**	**+0.1**
BCA	**Borcka**	**1.33**	**38**	*e*Pn	**Pg**	**12 03 58.3**	**+0.1**
BNGB	**Bing¶ll**	**1.42**	**175**	*e*PN	**Pb**	**12 03 59.5**	**-0.2**
VRTB	**Varto-Mus**	**1.44**	**150**	*e*PN	**Pn**	**12 03 59.3**	**-0.3**
VRTB	**Varto-Mus**	**1.44**	**150**	*e*Pn	**Pn**	**12 03 59.3**	**-0.3**
ESPY	**Espiye-Giresun**	**1.46**	**291**	*e*PN	**Pg**	**12 04 00.5**	**+0.1**
ESPY				*e*SN	**Sg**	**12 04 20.9**	**+1.2**
ESPY	**Espiye-Giresun**	**1.46**	**291**	*e*Pn	**Pg**	**12 04 00.5**	**+0.1**
ESPY				*e*Sn	**Sg**	**12 04 20.9**	**+1.2**
BINT	**Bingol**	**1.53**	**181**	*e*Pn	**Pn**	**12 03 59.5**	**-1.4**
SUSE	**Susehri**	**1.79**	**264**	*i* P	**Pb**	**12 04 06.3**	**+0.2**
SUSE				*i* S	**Sn**	**12 04 28.5**	**+0.8**
SUSE	**Susehri**	**1.79**	**264**	*i* P	**Pb**	**12 04 06.3**	**+0.2**
SUSE				*i* S	**Sn**	**12 04 28.5**	**+0.8**
GRSN	**GIRESUNGRSN**	**1.80**	**287**	*i* P	**Pg**	**12 04 07.1**	**0.0**
GRSN				*i* S	**Sn**	**12 04 28.2**	**+0.5**
GRSN	**GIRESUNGRSN**	**1.80**	**287**	*i* P	**Pg**	**12 04 07.1**	**0.0**
GRSN				*i* S	**Sn**	**12 04 28.2**	**+0.5**
AKH	**Akhalkalaki**	**2.46**	**65**	P	**Pb**	**12 04 17.3**	**-0.2**
AKH				S	**Sg**	**12 04 56.2**	**+4.5**
AKH	**Akhalkalaki**	**2.46**	**65**	P	**Pb**	**12 04 17.3**	**-0.2**
ERBA	**Erbaa**	**2.89**	**277**	*e*P	**Pb**	**12 04 25.9**	**+1.1**
ERBA				*e*S	**Sg**	**12 05 04.2**	**-1.3**
ERBA	**Erbaa**	**2.89**	**277**	*e*P	**Pb**	**12 04 25.9**	**+1.1**
ERBA				*e*S	**Sg**	**12 05 04.2**	**-1.3**
ONI	**Oni**	**3.10**	**44**	P	**Pb**	**12 04 27.0**	**-1.3**
ONI				S	**Sg**	**12 05 10.5**	**-1.6**
ONI	**Oni**	**3.10**	**44**	P	**Pb**	**12 04 27.0**	**-1.3**
DGRG	**David-gareji**	**3.81**	**73**	P	**Pg**	**12 04 44.9**	**-0.8**

*ISCJB **15** 12:07:49.2±0.5, 8.˚39S±0.˚05×121.˚81E±0.˚08, h33km, mb4.2/8, Error ellipse: s-maj=12.6km s-min=5.3km az=158.6*
*DJA **15** 12:07:49.9±0.6, 8.˚5S±8.˚×12.˚2E±.˚1˚0, h19km±16km, M4.1/7, mb4.5/2, mB4.8/1, MLv3.9/7, Mw(mB)4.1/1*
*IDC **15** 12:07:52.0±3.4, 8.˚22S×121.˚77E, h39km±32km, mb3.7/7, mb1 3.9/10, mb1mx3.8/24, mbtmpb3.8/10, ML3.5/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/32, Error ellipse: s-maj=58.9km s-min=14.1km az=67.0*

ISC 15 12:07:51.5±0.7, 8.˚34S±0.˚05×121.˚66E±0.˚10, h35km, n20, σ1§24/18, mb4.0/8, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**0.64**	**117**	P	Pn	12 07 59.6	-4.6
WSI	**Waingapu**	**1.88**	**225**	P	**Pn**	**12 08 21.8**	**+0.6**
BBSI	**Bau Bau**	**2.98**	**18**	P	**Pn**	**12 08 36.6**	**+0.3**
BKSI	**Bulukumba**	**3.37**	**333**	P	**Pn**	**12 08 42.1**	**+0.4**
KAPI	**Kappang**	**3.81**	**330**	P	**Pn**	**12 08 46.2**	**-1.6**
KAPI	**Kappang**	**3.81**	**330**	Pn	**Pn**	**12 08 47.5**	**-0.3**
	2.8nm,0.3s,baz=132,slow=10,SNR=8.3						
KAPI				Sn	Sn	12 09 40.0	+8.6
	2.8nm,0.3s,baz=218,slow=19,SNR=4.1						
KAPI				LR	LR	12 10 18.5	
	comp=Z,335nm,19.8s,baz=158,slow=39						
KDI	**Kendari**	**4.46**	**12**	P	**Pn**	**12 08 56.2**	**-0.5**
SPSI	**Sidrap Palu**	**4.74**	**337**	P	Pn	12 09 06.6	+6.1
TTSI	**Tana Toraja**	**5.57**	**341**	P	Pn	12 09 16.0	+4.0
	15nm,0.8s						
LUWI	**Luwuk**	**7.34**	**9**	P	**Pn**	**12 09 37.9**	**+1.6**
FITZ	**Fitzroy Crossi**	**10.44**	**159**	Pn	**Pn**	**12 10 18.6**	**-0.3**
	0.3nm,0.3s,baz=357,slow=12,SNR=13						
FITZ				Sn	**Sn**	**12 12 11.8**	**-2.9**
	0.1nm,0.3s,baz=323,slow=20,SNR=3.0						
ASAR	**Alice Springs**	**19.23**	**144**	P	**Pn**	**12 12 14.7**	**+0.6**
	0.3nm,0.3s,baz=327,slow=13,SNR=32						
ASAR				S	Sn	12 15 39.1	-10
	0.0nm,0.3s,baz=311,slow=21,SNR=8.4						
TGY	**Tagaytay City**	**22.31**	**358**	P	**P**	**12 12 44.8**	**-1.5**
	316nm,0.4s,baz=173,slow=5.7,SNR=4.9						
STKA	**Stephens Creek**	**29.87**	**144**	P	**P**	**12 13 56.6**	**+0.8**
	2.2nm,0.8s,baz=322,slow=12,SNR=4.3						
CMAR	**Chiang Mai Arr**	**34.81**	**320**	P	**P**	**12 14 40.6**	**+1.4**
	0.6nm,0.6s,baz=146,slow=7.8,SNR=5.4						
SONM	**Songino Array**	**57.54**	**348**	P	**P**	**12 17 37.6**	**-0.1**
	2.1nm,1.1s,baz=168,slow=7.6,SNR=8.4						
MKAR	**Makanchi Array**	**65.11**	**331**	P	**P**	**12 18 28.1**	**-0.7**
	1.3nm,0.6s,baz=139,slow=8.1,SNR=12						
ZALV	**Zalesovo Beam**	**69.40**	**338**	P	**P**	**12 18 54.4**	**-1.3**
	0.4nm,0.3s,baz=134,slow=8.4,SNR=3.2						
VNDA	**Vanda**	**72.23**	**172**	P	**P**	**12 19 13.7**	**+1.1**
	0.4nm,0.4s,baz=311,slow=7.9,SNR=3.7						
QSPA	**South Pole Qui**	**81.64**	**180**	P	**P**	**12 20 06.2**	**+0.3**
	1.3nm,0.7s,baz=288,slow=4.6,SNR=8.8						

IDC 15 12:30:12.1±1.4, 15.˚25S×71.˚44W, h151km±13km, mb3.2/2, mb1 3.2/7, mb1mx3.1/25, mbtmpb3.1/7, MS2.9/1, Ms1 2.9/1, ms1mx2.3/9, Error ellipse: s-maj=42.3km s-min=11.5km az=26.0, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.35**	**108**	P	Pn	12 31 05.9	+1.2
	5.3nm,0.3s,ba

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**23.59**	**25**	P	**P**	**13 54 09.4**	**-0.9**
CMIG	**Matias Romero**	**23.59**	**25**	P	**P**	**13 54 09.4**	**-0.9**
	4.9nm,1.1s,baz=214,slow=8.1,SNR=3.9						
CMIG				LR	LR	14 01 03.7	
	comp=Z,3μm,20.6s,baz=191,slow=31						
JTS	**JuntasAbangare**	**24.75**	**54**	LR	LR	14 01 09.4	
	comp=Z,3μm,20.8s,baz=271,slow=29						
ATAH	**Atahualpa**	**26.63**	**97**	LR	LR	14 02 14.3	
	comp=Z,1μm,21.7s,baz=124,slow=30						
OTAV	**Otavalo**	**26.95**	**81**	P	**P**	**13 54 43.5**	**+1.8**
	8.7nm,1.0s						
LPIG	**La Paz**	**28.79**	**350**	LR	LR	14 03 23.9	
	comp=Z,147nm,19.9s,baz=172,slow=30						
NNA	**Nana**	**28.88**	**107**	LR	LR	14 03 11.1	
	comp=Z,2μm,21.3s,baz=287,slow=30						
TEIG	**Tepich**	**29.49**	**33**	LR	LR	14 04 48.6	
	comp=Z,2μm,20.4s,baz=33,slow=32						
TXAR	**Lajitas Array**	**33.56**	**2**	P	**P**	**13 55 39.6**	**-0.1**
TXAR	**Lajitas Array**	**33.56**	**2**	P	**P**	**13 55 39.6**	**-0.1**
	0.1nm,0.3s,baz=186,slow=7.3,SNR=4.4						
TXAR				LR	LR	14 07 02.8	
	comp=Z,702nm,20.9s,baz=275,slow=32						
RKT	**Rikitea**	**34.40**	**234**	eLR	LR	14 04 56.4	
	2μm,26.5s,baz=51						
LPAZ	**La Paz**	**38.09**	**111**	LR	LR	14 09 01.4	
	comp=Z,820nm,20.0s,baz=270,slow=32						
LAZ	**Ladron**	**38.64**	**357**	P	**P**	**13 56 24.4**	**+1.2**
	7.2nm,1.4s						
ANMO	**Albuquerque**	**39.16**	**358**	P	**P**	**13 56 28.4**	**+0.9**
ANMO	**Albuquerque**	**39.16**	**358**	P	**P**	**13 56 28.4**	**+0.9**
	1.5nm,0.9s,baz=148,slow=10,SNR=3.0						
ANMO				LR	LR	14 10 47.0	
	comp=Z,203nm,18.5s,baz=1.0,slow=33						
SAML	**Samuel**	**41.78**	**98**	eP	**P**	**13 56 47.0**	**-2.4**
	4.7nm,0.7s						
CFAA	**Coronel Fontan**	**43.86**	**132**	P	**P**	**13 57 07.2**	**+1.1**
CFAA	**Coronel Fontan**	**43.86**	**132**	P	**P**	**13 57 07.2**	**+1.1**
	0.2nm,0.3s,baz=293,slow=4.4,SNR=3.6						
CFAA				LR	LR	14 10 45.5	
	comp=Z,179nm,20.6s,baz=344,slow=30						
NVAR	**Mina Array Bea**	**44.35**	**345**	P	**P**	**13 57 11.2**	**+1.1**
NVAR	**Mina Array Bea**	**44.35**	**345**	P	**P**	**13 57 11.2**	**+1.1**
	0.8nm,0.7s,baz=162,slow=9.2,SNR=2.0						
NVAR				LR	LR	14 12 01.8	
	comp=Z,695nm,18.5s,baz=200,slow=31						
SJG	**San Juan**	**44.38**	**59**	LR	LR	14 11 30.9	
	comp=Z,463nm,21.9s,baz=275,slow=30						
TKL	**Tuckaleechee C**	**44.56**	**25**	LR	LR	14 15 47.7	
	comp=Z,394nm,18.3s,baz=232,slow=36						
PPT	**Papeete**	**45.52**	**250**	LR	LR	14 11 48.1	
	comp=Z,517nm,18.7s,baz=82,slow=30						
PPT2	**Papeete2**	**45.52**	**250**	eS	**S**	**14 04 01.4**	**-0.2**
	157nm,24.0s						
PPT2				eLQ	LQ	14 08 06.0	
	1μm,28.5s						
PPT2				eLR	LR	14 10 04.3	
	1μm,26.5s,baz=72						
TBI	**Tubuai**	**46.81**	**242**	eS	**S**	**14 04 19.7**	**-0.1**
	249nm,25.8s						
TBI				eLQ	LQ	14 08 37.3	
	597nm,36.5s						
TBI				eLR	LR	14 10 39.8	
	1μm,27.8s,baz=64						
PDAR	**Pinedale Array**	**47.12**	**355**	P	**P**	**13 57 32.9**	**+1.0**
PDAR	**Pinedale Array**	**47.12**	**355**	P	**P**	**13 57 32.9**	**+1.0**
	1.9nm,1.0s,baz=166,slow=7.3,SNR=7.4						
PDAR				LR	LR	14 14 39.8	
	comp=Z,409nm,18.7s,baz=191,slow=33						
IMW	**Indian Meadow**	**48.37**	**354**	eP	**P**	**13 57 42.8**	**+1.2**
	8.7nm,1.2s						
HLID	**Hailey**	**48.49**	**351**	eP	**P**	**13 57 44.4**	**+2.0**
	4.1nm,1.1s						
YBH	**Yreka Blue Hor**	**48.66**	**342**	LR	LR	14 13 45.7	
	comp=Z,816nm,21.6s,baz=169,slow=31						
RLMT	**Red Lodge**	**49.44**	**356**	eP	**P**	**13 57 49.9**	**+0.1**
	5.5nm,1.1s						
MCMT	**McKenzie Canyo**	**49.50**	**353**	P	**P**	**13 57 49.8**	**-0.4**
	3.0nm,1.1s						
CPUP	**Villa Florida**	**50.52**	**121**	P	**P**	**13 57 58.5**	**+0.5**
CPUP	**Villa Florida**	**50.52**	**121**	P	**P**	**13 57 58.5**	**+0.5**
	0.9nm,0.5s,baz=283,slow=15,SNR=4.3						
CPUP				LR	LR	14 16 10.1	
	comp=Z,628nm,18.1s,baz=272,slow=32						
AGMN	**Agassiz Nation**	**53.09**	**8**	eP	**P**	**13 58 16.8**	**0.0**
	10nm,1.0s						
NEW	**Newport**	**53.50**	**350**	P	**P**	**13 58 21.3**	**+1.4**
NEW	**Newport**	**53.50**	**350**	P	**P**	**13 58 21.3**	**+1.4**
	1.3nm,0.4s,baz=139,slow=8.6,SNR=3.5						
SADO	**Sadowa**	**54.16**	**23**	LR	LR	14 19 21.8	
	comp=Z,262nm,21.7s,baz=30,slow=34						
ULM	**Lac du Bonnet**	**55.00**	**7**	P	**P**	**13 58 30.3**	**-0.4**
ULM	**Lac du Bonnet**	**55.00**	**7**	P	**P**	**13 58 30.3**	**-0.4**
	5.7nm,0.6s,baz=199,slow=2.6,SNR=4.6						
ULM				LR	LR	14 20 33.6	
	comp=Z,720nm,18.7s,baz=235,slow=34						
RAR	**Rarotonga**	**55.64**	**247**	LR	LR	14 16 37.2	
	comp=Z,204nm,18.4s,baz=86,slow=30						
BDFB	**Brasilia**	**57.08**	**106**	LR	LR	14 21 10.2	
	comp=Z,671nm,18.8s,baz=95,slow=34						
YKA	**Yellowknife Ar**	**67.11**	**355**	P	**P**	**13 59 52.1**	**-0.5**
YKA	**Yellowknife Ar**	**67.11**	**355**	P	**P**	**13 59 52.1**	**-0.5**
	0.4nm,0.8s,baz=164,slow=6.5,SNR=8.2						
ILAR	**Eielson Array**	**75.56**	**343**	P	**P**	**14 00 44.0**	**+0.3**
ILAR	**Eielson Array**	**75.56**	**343**	P	**P**	**14 00 44.0**	**+0.3**
	1.0nm,0.7s,baz=158,slow=5.7,SNR=16						
ILAR				LR	LR	14 31 05.4	
	comp=Z,242nm,19.4s,baz=277,slow=34						
PETK	**Petropavlovsk-**	**97.87**	**323**	LR	LR	14 38 26.0	
	comp=Z,338nm,20.1s,baz=106,slow=30						
CMAR	**Chiang Mai Arr**	**152.72**	**303**	PKPbc	**PKPbc**	**14 08 55.6**	**-1.8**
CMAR	**Chiang Mai Arr**	**152.72**	**303**	PKPbc	**PKPbc**	**14 08 55.6**	**-1.8**
	0.3nm,0.5s,baz=40,slow=1.5,SNR=3.7						

IDC 15 13:51:54.9±7.2, 22°.89N×144°.16E, h33km±53km, mb3.5/11, mb1 3.7/13, mb1mx3.6/26, mbtmp3.5/13, ML3.7/1, MS3.4/3, Ms1 3.5/3, ms1mx2.7/20, Error ellipse: s-maj=31.8km s-min=21.1km az=87.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.56**	**337**	Pn	Pn	13 53 02.1	+0.6
	baz=151,slow=19						
CBIJ				Sn	Sn	13 53 51.7	-1.7
	baz=287,slow=19						
CBIJ				LR	LR	13 53 58.6	
	comp=Z,732nm,21.1s,baz=182,slow=27						
MJAR	**Matsushiro Arr**	**14.55**	**341**	Pn	Pn	13 55 18.0	-0.5
	0.3nm,0.3s,baz=144,slow=6.5,SNR=1.5						
MJAR				Sn	Sn	13 57 53.6	-5.0
	0.5nm,0.3s,baz=145,slow=32,SNR=5.9						
KSRS	**Korea Array**	**20.15**	**320**	P	P	13 56 26.8	+0.5
	3.8nm,0.9s,baz=146,slow=9.1,SNR=4.7						
KSRS				LR	LR	14 03 50.7	
	comp=Z,32nm,19.5s,baz=356,slow=36						
SONM	**Songino Array**	**39.02**	**319**	P	P	13 59 16.8	-1.7
	0.3nm,0.5s,baz=133,slow=5.0,SNR=3.1						
CMAR	**Chiang Mai Arr**	**42.41**	**273**	P	P	13 59 47.5	+0.8
	0.3nm,0.5s,baz=66,slow=6.9,SNR=2.1						
ASAR	**Alice Springs**	**47.34**	**193**	P	P	14 00 24.9	-0.9
	0.2nm,0.5s,baz=14,slow=8.4,SNR=3.0						
ZALV	**Zalesovo Beam**	**53.85**	**321**	P	P	14 01 13.8	-0.7
	0.4nm,0.3s,baz=111,slow=8.1,SNR=4.0						
ZALV				PcP	PcP	14 02 19.7	-0.2
	0.4nm,0.4s,baz=97,slow=3.6,SNR=4.0						
STKA	**Stephens Creek**	**54.51**	**183**	P	P	14 01 19.5	0.0
	1.1nm,0.6s,baz=346,slow=9.1,SNR=1.3						
MKAR	**Makanchi Array**	**54.57**	**312**	P	P	14 01 20.7	+0.7
	0.7nm,0.5s,baz=91,slow=9.0,SNR=7.1						
ILAR	**Eielson Array**	**60.57**	**27**	P	P	14 02 02.6	+0.7
	0.3nm,0.7s,baz=253,slow=5.6,SNR=4.8						
YKA	**Yellowknife Ar**	**74.99**	**28**	P	P	14 03 32.2	-0.4
	0.2nm,0.7s,baz=294,slow=6.0,SNR=4.2						
KBZ	**Khabaz**	**82.19**	**314**	P	P	14 04 12.6	-0.1
	2.4nm,0.6s,baz=58,slow=1.2,SNR=4.6						
FINES	**FINESS Array B**	**82.50**	**335**	P	P	14 04 14.0	0.0
	1.9nm,0.8s,baz=61,slow=7.1,SNR=6.2						
NOA	**NORSAR Array B**	**88.16**	**339**	LR	LR	14 47 19.9	
	comp=Z,46nm,21.4s,baz=290,slow=38						

*CSEM **15** 13:54:27.9±0.6, 37°.57N×44°.17E, h15km, MD3.0, Error ellipse: s-maj=17.1km s-min=7.8km az=65.0*

*DDA **15** 13:54:28.3, 37°.63N×44°.18E, h8km, MD3.0*
ISC 15 13:54:25.5±2.1, 37°.61N±0°.04×44°.37E±0°.08, h5km±12km, n13, σ1°.45/26, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.50**	**267**	ePG	**Pg**	**13 54 35.0**	**-0.2**
HKR				eSG	**Sg**	**13 54 40.5**	**-1.2**
HAKT	**HAKKARI**	**0.53**	**265**	iP	**Pg**	**13 54 35.4**	**-0.3**
HAKT				iS	**Sg**	**13 54 42.1**	**-0.5**
HAKT	**HAKKARI**	**0.53**	**265**	iP	**Pg**	**13 54 35.4**	**-0.3**
HAKT				iS	**Sg**	**13 54 42.1**	**-0.5**
CUKT	**Cukurca**	**0.71**	**240**	ePG	**Pg**	**13 54 38.7**	**-0.4**
CUKT				eSG	**Sg**	**13 54 45.5**	**-2.7**
TVAN	**Van**	**1.20**	**321**	iP	**Pb**	**13 54 48.7**	**-0.1**
TVAN				iS	**Sn**	**13 55 05.4**	**-0.5**
TVAN	**Van**	**1.20**	**321**	iP	**Pb**	**13 54 48.7**	**-0.1**
TVAN				iS	**Sn**	**13 55 05.4**	**-0.5**
GEVA	**Gevas**	**1.25**	**305**	iP	**Pg**	**13 54 50.4**	**+0.8**
GEVA				eS	**Sb**	**13 55 03.2**	**-3.1**
GEVA	**Gevas**	**1.25**	**305**	iP	**Pg**	**13 54 50.4**	**+0.8**
GEVA				eS	**Sb**	**13 55 03.2**	**-3.1**
SIRN	**S¨–rnak**	**1.56**	**267**	iP	**Pg**	**13 54 57.7**	**+2.2**
SIRN				iS	**Sg**	**13 55 17.9**	**+2.3**
BEST	**Besiri**	**2.48**	**278**	iP	**Pn**	**13 55 08.0**	**+1.5**
BEST				iS	**Sb**	**13 55 42.1**	**+0.8**
MARD	**Mardin**	**2.87**	**265**	eP	**Pb**	**13 55 17.7**	**+0.4**
MARD				iS	**Sb**	**13 55 53.2**	**+0.3**
BHD	**Baghdad**	**4.33**	**180**	ex	**Pn**	**13 55 32.8**	**+0.8**
BHD				ex	**Sn**	**13 56 22.3**	**-0.5**
BHD	**Baghdad**	**4.33**	**180**	ePn	**Pn**	**13 55 32.8**	**+0.8**
BHD				eSn	**Sn**	**13 56 22.3**	**-0.5**

IDC 15 13:56:22.8±2.2, 11°.82N×86°.92W, h53km±24km, mb3.7/7, mb1 3.9/9, mb1mx3.7/25, mbtmp3.7/9, ML3.6/2, Error ellipse: s-maj=46.7km s-min=13.7km az=45.0, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**2.46**	**128**	P	Pn	13 57 02.3	+1.8
	7.9nm,0.3s,baz=317,slow=12,SNR=11						
JTS				S	Sn	13 57 29.8	+0.5
	18nm,0.3s,baz=287,slow=20,SNR=6.2						
CMIG	**Matias Romero**	**9.32**	**305**	P	Pn	13 58 32.9	-1.7
	0.9nm,0.3s,baz=129,slow=9.4,SNR=8.9						
TXAR	**Lajitas Array**	**23.39**	**321**	P	P	14 01 27.6	+0.5
	1.4nm,0.6s,baz=136,slow=9.4,SNR=15						
PDAR	**Pinedale Array**	**36.57**	**332**	P	P	14 03 24.1	+0.3
	0.7nm,0.6s,baz=129,slow=10,SNR=5.8						
SIV	**San Ignacio**	**37.65**	**137**	P	P	14 03 32.4	-0.7
	4.0nm,0.8s,baz=324,slow=10.0,SNR=14						
ULM	**Lac du Bonnet**	**39.02**	**351**	P	P	14 03 43.0	-1.1
	3.2nm,0.6s,baz=178,slow=8.2,SNR=4.3						
SCHQ	**Schefferville**	**45.74**	**16**	P	P	14 04 38.6	0.0
	1.9nm,0.7s,baz=217,slow=10,SNR=3.6						
YKA	**Yellowknife Ar**	**54.35**	**345**	P	P	14 05 43.6	-0.1
	0.8nm,0.7s,baz=142,slow=7.3,SNR=22						
ILAR	**Eielson Array**	**66.81**	**336**	P	P	14 07 08.9	+0.3
	0.4nm,0.7s,baz=153,slow=4.7,SNR=7.5						
ASAR	**Alice Springs**	**139.51**	**247**	PKP	PKPdf	14 15 46.3	+1.0
	0.5nm,1.0s,baz=108,slow=2.8,SNR=3.8						

*IDC **15** 14:04:28.2±1.4, 4°.19S×104°.90W, h0km, mb3.6/9, mb1 3.9/9, mb1mx3.8/18, mbtmp3.6/9, MS4.2/19, Ms1 4.3/19, ms1mx4.2/22, Error ellipse: s-maj=51.7km s-min=20.7km az=59.0*
*ISCJB **15** 14:04:29.6±0.6, 3°.95S±0°.10×104°.42W±0°.10, h10km, mb3.9/13, MS4.2/19, Error ellipse: s-maj=14.8km s-min=13.1km az=139.7*
*NEIC **15** 14:04:30.0±1.0, 4°.16S×104°.72W, h10km, mb4.3/4, Error ellipse: s-maj=31.9km s-min=14.0km az=56.0*
*GCMT **15** 14:04:35.0±0.3, 3°.97S×104°.39W, h26km±1km, MW5.2, Moment Tensor Solution. s35,c43; s86,c134; Moment tensor: Scale 10¹⁶Nm; Mrr-0.49±.30; Mθθ0.48±.25; Mφφ0.01±.29; Mrθ3.16±.49; Mrφ8.17±.22; Mθφ-1.58±.49; Best double couple: M₀8.90000×10¹⁶ NP1:ϕ₁3.00000°, δ69.00000°, λ-170.00000°. NP2:ϕ₂269.00000°, δ81.00000°, λ-21.00000°. Principal axes: T 8.5800, Plg8.0000°, Azm317.0000°; N 0.6400, Plg67.0000°, Azm67.0000°; P -9.2200, Plg21.0000°, Azm224.0000°; Data Used: lI lU lC G CN.*
ISC 15 14:04:31.1±0.7, 4°.0S±0°.1×104°.5W±0°.1, h10km, n43, σ1°.46/29, mb3.8/13, MS4.2/19, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**23.03**	**24**	P	**P**	**14 09 38.5**	**+2.0**
CMIG	**Matias Romero**	**23.03**	**24**	P	**P**	**14 09 38.5**	**+2.0**
	2.6nm,0.9s,baz=198,slow=9.7,SNR=3.7						
CMIG				LR	LR	14 16 31.5	
	comp=Z,2μm,20.0s,baz=192,slow=31						
JTS	**JuntasAbangare**	**24.11**	**54**	LR	LR	14 16 36.9	
	comp=Z,2μm,20.6s,baz=273,slow=30						
ATAH	**Atahualpa**	**26.17**	**98**	LR	LR	14 17 51.9	
	comp=Z,520nm,20.3s,baz=108,slow=30						
OTAV	**Otavalo**	**26.38**	**81**	P	**P**	**14 10 09.8**	**+1.4**
NNA	**Nana**	**28.50**	**108**	LR	LR	14 18 38.5	
	comp=Z,951nm,20.5s,baz=289,slow=30						
LPIG	**La Paz**	**28.51**	**349**	LR	LR	14 18 52.3	
	comp=Z,72nm,20.4s,baz=320,slow=30						
TEIG	**Tepich**	**28.89**	**33**	LR	LR	14 20 16.2	
	comp=Z,1μm,20.5s,baz=183,slow=32						
ROSC	**El Rosal**	**31.41**	**74**	LR	LR	14 20 03.1	
	comp=Z,306nm,21.2s,baz=270,slow=29						
TXAR	**Lajitas Array**	**33.17**	**1**	P	**P**	**14 11 09.8**	**+1.7**
TXAR	**Lajitas Array**	**33.17**	**1**	P	**P**	**14 11 09.8**	**+1.7**
	0.2nm,0.4s,baz=198,slow=8.3,SNR=3.1						
TXAR				LR	LR	14 22 30.7	
	comp=Z,350nm,21.2s,baz=90,slow=32						
RKT	**Rikitea**	**35.03**	**234**	eLR	LR	14 20 47.2	
	1μm,27.0s,baz=54						
LPAZ	**La Paz**	**37.75**	**111**	LR	LR	14 24 18.2	
	comp=Z,433nm,20.2s,baz=86,slow=31						
LAZ	**Ladron**	**38.29**	**356**	P	**P**	**14 11 52.0**	**-0.1**
	4.6nm,1.3s						
ANMO	**Albuquerque**	**38.80**	**357**	LR	LR	14 25 15.4	
	comp=Z,156nm,18.8s,baz=0.4,slow=32						
SAML	**Samuel**	**41.34**	**99**	eP	**P**	**14 12 15.0**	**-2.5**
	0.9nm,0.7s						
CFAA	**Coronel Fontan**	**43.74**	**133**	P	**P**	**14 12 37.1**	**+0.2**
CFAA	**Coronel Fontan**	**43.74**	**133**	P	**P**	**14 12 37.1**	**+0.2**
	0.2nm,0.4s,baz=315,slow=7.1,SNR=2.7						
TKL	**Tuckaleechee C**	**44.00**	**25**	LR	LR	14 31 15.9	
	comp=Z,282nm,18.5s,baz=3.0,slow=36						
NVAR	**Mina Array Bea**	**44.12**	**344**	LR	LR	14 27 20.6	
	comp=Z,402nm,18.1s,baz=0.2,slow=31						
SIV	**San Ignacio**	**44.30**	**109**	P	**P**	**14 12 44.3**	**+2.7**
SIV	**San Ignacio**	**44.30**	**109**	P	**P**	**14 12 44.3**	**+2.7**
	1.0nm,0.8s,baz=312,slow=5.9,SNR=4.4						
PPT	**Papeete**	**46.13**	**250**	LR	LR	14 25 38.4	
	comp=Z,150nm,21.6s,baz=160,slow=28						
PPT2	**Papeete2**	**46.13**	**249**	eS	**S**	**14 19 44.2**	**+1.6**
	105nm,23.5s						
PPT2				eLQ	LQ	14 23 47.5	
	963nm,31.5s						
PPT2				eLR	LR	14 25 55.7	
	838nm,26.5s,baz=68						
PDAR	**Pinedale Array**	**46.79**	**355**	P	**P**	**14 13 00.7**	**-0.4**
PDAR	**Pinedale Array**	**46.79**	**355**	P	**P**	**14 13 00.7**	**-0.4**
	0.9nm,0.9s,baz=157,slow=2.5,SNR=3.8						
PDAR				LR	LR	14 30 07.2	
	comp=Z,233nm,18.6s,baz=219,slow=33						
TBI	**Tubuai**	**47.44**	**242**	eS	**S**	**14 20 01.9**	**+0.9**
	197nm,26.8s						
TBI				eLR	LR	14 26 31.5	
	732nm,28.2s,baz=60						
HLID	**Hailey**	**48.20**	**350**	eP	**P**	**14 13 12.3**	**+0.3**
	4.2nm,1.0s						
CPUP	**Villa Florida**	**50.27**	**121**	P	**P**	**14 13 26.6**	**-1.4**
CPUP	**Villa Florida**	**50.27**	**121**	P	**P**	**14 13 26.6**	**-1.4**
	1.2nm,0.6s,baz=246,slow=5.7,SNR=3.2						
CPUP				LR	LR	14 31 08.0	
	comp=Z,382nm,19.7s,baz=258,slow=32						
EYMN	**Ely**	**52.99**	**11**	eP	**P**	**14 13 47.3**	**-0.7**
	14nm,1.2s						
ULM	**Lac du Bonnet**	**54.56**	**7**	P	**P**	**14 13 57.9**	**-1.5**
ULM	**Lac du Bonnet**	**54.56**	**7**	P	**P**	**14 13 57.9**	**-1.5**
	1.4nm,0.4s,baz=197,slow=6.0,SNR=2.7						
ULM				LR	LR	14 36 02.4	
	comp=Z,310nm,19.0s,baz=255,slow=35						
BDFB	**Brasilia**	**56.69**	**106**	LR	LR	14 37 05.5	
	comp=Z,260nm,18.3s,baz=336,slow=34						
YKA	**Yellowknife Ar**	**66.77**	**355**	P	**P**	**14 15 21.8**	**-0.6**
YKA	**Yellowknife Ar**	**66.77**	**355**	P	**P**	**14 15 21.8**	**-0.6**
	0.7nm,1.1s,baz=160,slow=4.3,SNR=5.8						
ILAR	**Eielson Array**	**75.35**	**343**	P	**P**	**14 16 13.5**	**-0.9**
ILAR	**Eielson Array**	**75.35**	**343**	P	**P**	**14 16 13.5**	**-0.9**
	1.1nm,1.0s,baz=152,slow=4.6,SNR=7.6						
ILAR				LR	LR	14 43 12.7	
	comp=Z,100nm,19.4s,baz=145,slow=31						
VNDA	**Vanda**	**86.89**	**193**	LR	LR	14 47 27.3	
	comp=Z,166nm,20.5s,baz=271,slow=30						
MKAR	**Makanchi Array**	**136.98**	**353**	PKP	**PKPdf**	**14 23 53.8**	**-0.7**
MKAR	**Makanchi Array**	**136.98**	**353**	PKP	**PKPdf**	**14 23 53.8**	**-0.7**
	0.6nm,1.0s,baz=39,slow=2.3,SNR=2.9						
CMAR	**Chiang Mai Arr**	**152.94**	**304**	PKPbc	**PKPbc**	**14 24 28.6**	**-1.1**
CMAR	**Chiang Mai Arr**	**152.94**	**304**	PKPbc	**PKPbc**	**14 24 28.6**	**-1.1**
	0.3nm,0.4s,baz=29,slow=2.1,SNR=3.4						

*BJI **15** 14:07:03.9, 18°.80S×65°.42E, h5km, mB5.1/32, mb4.9/45, Ms4.9/33, Ms7 4.6/32*
*IDC **15** 14:07:08.6±0.5, 18°.47S×65°.97E, h0km, mb4.6/24, mb1 4.7/24, mb1mx4.7/26, mbtmp4.6/24, MS4.3/8, Ms1 4.3/8, ms1mx3.8/29, Error ellipse: s-maj=15.3km s-min=14.4km az=6.0*
*ISCJB **15** 14:07:08.5±2.1, 18°.50S±0°.05×65°.94E±0°.04, h10km±13km, mb5.0/118, MS4.4/23, Error ellipse: s-maj=8.9km s-min=6.3km az=176.2*
*NEIC **15** 14:07:10.0±0.1, 18°.49S×65°.95E, h10km, mb5.2/52, Error ellipse: s-maj=5.4km s-min=4.5km az=202.0*
*MOS **15** 14:07:10.3±0.7, 18°.45S×65°.99E, h22km, mb5.4/53, Error ellipse: s-maj=10.5km s-min=5.5km az=109.3*
*DJA **15** 14:07:14.7±4.3, 19°S±7°×6°6E±°, h36km±33km, M4.9/16, mb4.9/16*
ISC 15 14:07:10.8±0.4, 18°.49S±0°.06×65°.90E±0°.06, h14km±1km, h13km:pP-P, n594, σ1°00/667, mb5.0/118, MS4.4/23, 138C-108D, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**17.75**	**267**	LR	LR	14 16 28.4	
	comp=Z,812nm,19.6s,baz=354,slow=31						
KMBO	**Kilima Mbogo**	**32.98**	**298**	P	**P**	**14 13 47.5**	**+1.6**
KMBO	**Kilima Mbogo**	**32.98**	**298**	P	**P**	**14 13 47.5**	**+1.6**
	1.7nm,0.8s,baz=117,slow=12,SNR=4.3						
KMBO				LR	LR	14 25 17.8	
	comp=Z,285nm,18.1s,baz=96,slow=33						
HYB	**Hyderabad**	**37.79**	**20**	iP	**P**	**14 14 26.0**	**-0.9**
LBTB	**Lobatse**	**37.89**	**253**	eP	**P**	**14 14 28.3**	**+0.5**
	44nm,1.3s						
MNSI	**Mandailing Nat**	**38.25**	**64**	P	**P**	**14 14 32.0**	**+1.2**
BOSA	**Boshof**	**38.44**	**247**	eP	**P**	**14 14 32.0**	**-0.5**
	10nm,1.1s						
BOSA	**Boshof**	**38.44**	**247**	P	**P**	**14 14 32.5**	**+0.1**
	13nm,1.2s,baz=84,slow=9.1,SNR=6.9						
KULM	**Kulim**	**41.62**	**59**	P	**P**	**14 15 00.2**	**+1.4**
MYKOM	**Kota Tinggi**	**42.42**	**66**	P	**P**	**14 15 06.6**	**+1.2**
MYKOM	**Kota Tinggi**	**42.42**	**66**	P	**P**	**14 15 06.4**	**+1.0**
	27nm,1.2s						
SUR	**Sutherland**	**42.70**	**242**	eP	**P**	**14 15 09.4**	**+1.7**
SUR	**Sutherland**	**42.70**	**242**	P	**P**	**14 15 09.3**	**+1.5**
	9.7nm,1.1s,baz=63,slow=6.8,SNR=3.7						
KSM	**Kuching**	**47.96**	**70**	P	**P**	**14 15 50.0**	**+0.6**
	15nm,1.2s						
CM31	**Chiang Mai Arr**	**49.01**	**43**	eP	**P**	**14 15 58.2**	**+0.8**
	9.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**49.01**	**43**	P	**P**	**14 15 58.1**	**+0.7**
CMAR				PcP	**PcP**	**14 17 21.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**49.01**	**43**	P	**P**	**14 15 58.1**	**+0.7**
	9.7nm,1.1s,baz=235,slow=7.7,SNR=50						
CMAR				PcP	**PcP**	**14 17 21.8**	**+0.4**
	1.1nm,0.7s,baz=237,slow=4.5,SNR=4.4						
CMAR				LR	LR	14 33 47.8	
	comp=Z,169nm,18.4s,baz=155,slow=33						
KOLN	**Koldanda**	**49.08**	**21**	eP	**P**	**14 15 58.8**	**+0.8**
	22nm,0.9s						
MAW	**Mawson**	**49.13**	**182**	eP	**P**	**14 15 58.3**	**+0.6**
MAW	**Mawson**	**49.13**	**182**	P	**P**	**14 15 58.6**	**+1.0**
	12nm,0.7s,baz=14,slow=9.0,SNR=7.6						
PYUN	**Piuthan**	**49.18**	**20**	eP	**P**	**14 15 59.6**	**+0.8**
	106nm,1.1s						
CHTO	**Chiang Mai**	**49.27**	**43**	eP	**P**	**14 15 59.7**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,13nm,1.4s						
CHTO	**Chiang Mai**	**49.27**	**43**	eP	**P**	**14 15 59.7**	**+0.3**
	comp=Z,13nm,1.4s						
CHTO	**Chiang Mai**	**49.27**	**43**	P	**P

GYA Guiyang 59.69 43 P **P** 14 17 14.9 -0.3
GYA PP **PP** 14 19 31.3 +4.1
GYA ScP **ScP** 14 22 03.0 +0.1
GYA S **S** 14 25 27.9 +2.0
GYA SS **SS** 14 29 25.4 +3.3
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,630nm,16.6s
GYA LR LR
comp=E,580nm,17.0s
GYA LR LR
comp=Z,710nm,17.5s
AML Almayashu 60.74 7 P **P** 14 17 22.5 0.0
SNR=14
KZA Kyzart 60.88 8 P **P** 14 17 23.8 +0.4
SNR=12
CD2 Chengdu 61.13 37 P P 14 17 16.0 -8.9
CD2 pP pP 14 17 36.1 +6.8
CD2 sP sP 14 17 40.0 +9.0
CD2 PcP **PcP** 14 18 08.1 +0.3
CD2 PP **PP** 14 19 43.1 +3.3
CD2 PcS **PcS** 14 22 09.5 -1.1
CD2 S **S** 14 25 42.1 -1.9
CD2 sS sS 14 25 59.0 +7.7
CD2 SS **SS** 14 29 44.1 -0.3
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,230nm,5.4s
CD2 LR LR
comp=Z,210nm,30.0s
EKS2 Erkin-Say 61.28 7 *e*P **P** 14 17 26.1 +0.4
EKS2 pmax pmax
comp=Z,23nm,1.1s
EKS2 Erkin-Say 61.28 7 *e*P **P** 14 17 26.1 +0.4
comp=Z,23nm,1.1s
EKS2 Erkin-Say 61.28 7 P **P** 14 17 26.2 +0.4
SNR=19
AAK Ala-Archa 61.33 7 *i*P **P** 14 17 26.1 -0.1
AAK pmax pmax
comp=Z,41nm,1.2s
AAK Ala-Archa 61.33 7 *e*P **P** 14 17 26.3 +0.1
comp=Z,27nm,1.3s
AAK Ala-Archa 61.33 7 P **P** 14 17 26.1 -0.1
SNR=15
AAK Ala-Archa 61.33 7 P **P** 14 17 26.5 +0.3
comp=Z,80nm,1.2s,SNR=13
KBK Karagaybulak 61.41 8 P **P** 14 17 27.0 +0.3
SNR=7.7
KKAR Karatay Array 61.43 4 *e*P **P** 14 17 26.6 0.0
KKAR pmax pmax
comp=Z,27nm,1.4s
KKAR Karatay Array 61.43 4 *e*P **P** 14 17 26.6 0.0
comp=Z,27nm,1.4s
GNI Garni 61.58 342 *e*P **P** 14 17 29.6 +1.6
comp=Z,27nm,1.1s
TKM2 Tokmak 2 61.76 8 *i*P **P** 14 17 28.9 -0.1
TKM2 Tokmak 2 61.76 8 P **P** 14 17 28.9 -0.1
SNR=17
USP Ospenovka 61.96 7 P **P** 14 17 30.2 -0.1
SNR=13
CTBH Cotabato--PC H 62.95 71 ⇓*i*P **P** 14 17 37.2 -0.2
ASAR Alice Springs 63.15 108 P **P** 14 17 38.0 -0.7
ASAR Alice Springs 63.15 108 P **P** 14 17 38.0 -0.7
comp=Z,9.6nm,0.7s,baz=269,slow=5.8,SNR=160
ASAR LR LR 14 40 50.2
comp=Z,451nm,20.1s,baz=191,slow=32
AS31 Alice Springs 63.15 108 *e*P **P** 14 17 37.1 -1.6
WRAB Tennant Creek 64.23 104 *e*P **P** 14 17 45.6 -0.3
WRAB pmax pmax
comp=Z,36nm,0.9s
WRAB Tennant Creek 64.23 104 *e*P **P** 14 17 45.6 -0.3
comp=Z,36nm,0.9s
WRAB Tennant Creek 64.23 104 P **P** 14 17 45.0 -0.9
comp=Z,214nm,1.0s,SNR=15
ZEI Tsey 64.24 342 *e*P **P** 14 17 46.3 +0.7
ZEI pmax pmax
comp=Z,11nm,1.3s
LZH Lanzhou 65.08 33 *e*P **P** 14 17 51.5 +0.3
LZH pP **pP** 14 17 55.6 -0.1
LZH sP **sP** 14 17 57.8 +0.5
LZH PP **PP** 14 20 17.3 +2.6
LZH S **S** 14 26 35.4 +1.9
LZH sS **sS** 14 26 45.0 +4.1
LZH pmax pmax
comp=Z,35nm,1.2s
LZH pmax pmax
comp=Z,150nm,4.0s
LZH LR LR
comp=N,400nm,13.6s
LZH LR LR
comp=E,370nm,17.0s
LZH LR LR
comp=Z,600nm,19.2s
WMQ Urumqi 65.15 17 P **P** 14 17 52.0 +0.7
WMQ sP **sP** 14 17 59.0 +1.5
WMQ PcP **PcP** 14 18 25.0 +1.1
WMQ PP **PP** 14 20 17.0 +2.0
WMQ ScP 14 22 26.0
WMQ S **S** 14 26 33.0 -0.8
WMQ ScS **SKSac** 14 27 42.0 -4.0
WMQ SS **SS** 14 30 46.0 -0.8
WMQ pmax pmax
comp=Z,21nm,1.0s
WMQ pmax pmax
comp=Z,110nm,6.0s
WMQ LR LR
comp=N,160nm,18.0s
WMQ LR LR
comp=E,130nm,18.0s
WMQ LR LR
comp=Z,160nm,18.0s
BR131 Keskin Array S 65.28 333 *e*P **P** 14 17 52.8 +0.4
BRTR Keskin Array B 65.28 333 P **P** 14 17 52.6 +0.3
BRTR Keskin Array B 65.28 333 P **P** 14 17 52.6 +0.3
comp=Z,2.2nm,0.9s,baz=153,slow=8.3,SNR=9.1
KIV Kislovodsk 65.68 342 *e*P **P** 14 17 54.1 -0.7
KIV pmax pmax
comp=Z,17nm,1.0s
KIV MLR MLR
comp=Z,41nm,18.0s
GTA Gaotai 65.75 28 *e*P **P** 14 17 55.8 +0.4
GTA pP **pP** 14 17 59.9 0.0
GTA sP **sP** 14 18 02.5 +1.0
GTA PcP **PcP** 14 18 29.3 +2.7
GTA PP **PP** 14 20 22.4 +2.0
GTA S **S** 14 26 40.0 -1.5
GTA pmax pmax
comp=Z,14nm,1.1s
GTA pmax pmax
comp=Z,100nm,4.7s
GTA LR LR
comp=N,94nm,15.2s
GTA LR LR
comp=E,110nm,17.1s
GTA LR LR
comp=Z,120nm,17.6s
SNAA Sanae 65.92 199 *e*P **P** 14 17 56.5 +0.4
SNAA Sanae 65.92 199 *e* P 14 18 01.1 +5.0
SNAA Sanae 65.92 199 *e*P **P** 14 17 56.4 +0.4
comp=Z,14nm,1.4s
XAN Xi'an 66.39 38 P **P** 14 17 58.8 -0.7
XAN pmax pmax
comp=Z,5.0nm,1.2s
MK31 Makanchi Array 66.64 12 *i*P **P** 14 17 59.8 -1.0
MK31 pmax pmax
comp=Z,7.0nm,0.7s
MK31 Makanchi Array 66.64 12 *e*P **P** 14 18 00.0 -0.8
MKAR Makanchi Array 66.64 12 P **P** 14 18 00.3 -0.5
MKAR Makanchi Array 66.64 12 P **P** 14 18 00.3 -0.5
MKAR Makanchi Array 66.64 12 P **P** 14 18 00.3 -0.5
comp=Z,7.5nm,1.1s,baz=197,slow=6.3,SNR=40
VNA2 Neumayer--Watz 67.21 200 *e*P **P** 14 18 05.1 +0.9
VNA2 Neumayer--Watz 67.21 200 *e* P 14 18 09.6 +5.4
WHN Wuhan 67.44 44 P **P** 14 18 06.5 +0.3
AB31 Akbulak array 67.65 356 *i*P **P** 14 18 06.6 -0.5
AB31 pmax pmax
comp=Z,7.0nm,0.6s
ABKAR Akbulak array 67.65 356 *e*P **P** 14 18 06.7 -0.4
comp=Z,7.9nm,0.8s
VNA3 Neumayer Olymp 67.99 200 *e*P **P** 14 18 09.8 +0.7
VNA3 Neumayer Olymp 67.99 200 *e* P 14 18 14.4 +5.3

STKA Stephens Creek 68.58 118 P **P** 14 18 13.2 -0.3
STKA Stephens Creek 68.58 118 P **P** 14 18 13.2 -0.3
comp=Z,9.3nm,0.8s,baz=299,slow=3.8,SNR=9.4
STKA LR LR 14 42 27.3
comp=Z,281nm,21.2s,baz=296,slow=31
AKTO Aktyubinsk 68.97 355 *i*P **P** 14 18 14.9 -0.5
AKTO pmax pmax
comp=Z,3.0nm,1.2s
KURK Kurchatov 69.81 9 *c*/P **P** 14 18 20.1 -0.5
KURK pmax pmax
comp=Z,27nm,1.3s
KURK Kurchatov 69.81 9 *e*P **P** 14 18 20.1 -0.5
comp=Z,33nm,1.3s
KURK Kurchatov 69.81 9 P **P** 14 18 20.7 +0.1
comp=Z,94nm,1.4s,SNR=11
TOA0 Torodi Ar. Sit 70.67 292 *e*P **P** 14 18 25.1 -1.5
TORD Torodi Ar. Bea 70.67 292 P **P** 14 18 26.7 +0.1
TORD Torodi Ar. Bea 70.67 292 P **P** 14 18 26.7 +0.1
comp=Z,9.0nm,1.2s,baz=123,slow=1.3,SNR=22
TORD LR LR 14 50 01.8
comp=Z,107nm,18.3s,baz=260,slow=36
BRVK Borovoye 71.35 3 *c*/P **P** 14 18 29.4 -0.5
BRVK pmax pmax
comp=Z,36nm,1.3s
BRVK Borovoye 71.35 3 *e*P **P** 14 18 29.2 -0.7
comp=Z,28nm,1.0s
BRVK Borovoye 71.35 3 P **P** 14 18 29.9 0.0
comp=Z,154nm,0.8s,SNR=12
TIRR Tirgusor 71.39 333 ⇓P **P** 14 18 30.6 +0.2
TIRR Tirgusor 71.39 333 ⇓*i*P **P** 14 18 30.5 +0.2
NJ2 Nanjing 71.40 46 *e*P **P** 14 18 30.6 -0.1
NJ2 pP **pP** 14 18 33.3 -1.9
NJ2 sP **sP** 14 18 34.5 -2.4
NJ2 PP **PP** 14 21 08.8 -0.6
NJ2 S **S** 14 27 48.0 -0.7
NJ2 sS **sS** 14 27 57.0 +0.9
NJ2 pmax pmax
comp=Z,40nm,1.0s
NJ2 pmax pmax
comp=Z,140nm,4.6s
NJ2 LR LR
comp=N,660nm,21.7s
NJ2 LR LR
comp=E,1μm,23.7s
NJ2 LR LR
comp=Z,510nm,22.0s
QSPA South Pole Qui 71.61 180 *e*P **P** 14 18 31.6 -0.1
comp=Z,36nm,1.2s
TAM Tamanrasset 71.85 302 *e*P **P** 14 18 34.9 +1.1
TAM pmax pmax
comp=Z,2.0nm,0.6s
TAM Tamanrasset 71.85 302 *e*P **P** 14 18 34.9 +1.1
comp=Z,2.2nm,0.6s
CFR Carcaliu 72.08 333 ⇓P **P** 14 18 35.0 +0.6
CFR Carcaliu 72.08 333 ⇓*i*P **P** 14 18 35.0 +0.6
SSE Sheshan 72.45 48 P **P** 14 18 37.8 +0.8
SSE S **S** 14 28 03.8 +3.0
SSE pmax pmax
comp=Z,48nm,0.7s
SSE pmax pmax
comp=Z,55nm,4.9s
SSE LR LR
comp=N,99nm,24.6s
SSE LR LR
comp=E,220nm,24.6s
SSE LR LR
comp=Z,320nm,24.5s
VRHR Novokhopersk 72.49 344 *e*P **P** 14 18 37.3 +0.5
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s
HHC Hu-ho-hao-te 72.68 35 *e*P **P** 14 18 38.5 +0.2
HHC PcP **PcP** 14 18 55.8 +0.1
HHC PP **PP** 14 21 22.8 +2.4
HHC S **S** 14 28 03.3 0.0
HHC sS **sS** 14 28 11.6 +0.8
HHC SKS **SKSac** 14 28 38.8 -4.5
HHC ScS **SKKSac** 14 28 41.6 -1.8
HHC SS **SS** 14 32 45.8 +2.4
HHC pmax pmax
comp=Z,47nm,0.6s
HHC pmax pmax
comp=Z,200nm,6.7s
HHC LR LR
comp=N,190nm,16.5s
HHC LR LR
comp=E,320nm,16.6s
HHC LR LR
comp=Z,340nm,16.5s
VRI Vrincioaia 73.23 333 ⇑P **P** 14 18 42.6 +1.2
VRI Vrincioaia 73.23 333 ⇑*i*P **P** 14 18 42.6 +1.2
PLOR Plostina 73.25 332 ⇑P **P** 14 18 42.7 +1.2
PLOR Plostina 73.25 332 ⇑*i*P **P** 14 18 42.7 +1.2
VSR Storozhevoye 73.26 343 *e*P **P** 14 18 41.0 -0.4
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR pmax pmax
comp=N,5.0nm,0.3s
VSR pmax pmax
comp=E,10.0nm,0.7s
MLR Muntele Rosu 73.28 332 ⇓*i*P **P** 14 18 43.1 +1.3
VNDA Vanda 73.36 167 P **P** 14 18 41.8 0.0
VNDA Vanda 73.36 167 P **P** 14 18 41.8 0.0
comp=E,4.9nm,1.0s,baz=268,slow=8.4,SNR=13
VOIR 73.65 331 ⇑P **P** 14 18 43.5 -0.4
VOIR 73.65 331 ⇑*i*P **P** 14 18 43.5 -0.4
ZAA0 Zalesovo Array 73.96 12 *e*P **P** 14 18 44.5 -0.9
ZALV Zalesovo Beam 73.96 12 P **P** 14 18 44.7 -0.7
ZALV Zalesovo Beam 73.96 12 P **P** 14 18 44.7 -0.7
ZALV Zalesovo Beam 73.96 12 P **P** 14 18 44.7 -0.7
comp=E,8.1nm,0.6s,baz=204,slow=6.2,SNR=44
LIC Lamto 74.08 282 ⇑*i*P **P** 14 18 47.2 +0.2
comp=E,21nm,0.7s,baz=107
LIC *e*R
comp=E,190nm,17.2s
LIC Lamto 74.08 282 ⇑*i*P **P** 14 18 47.2 +0.2
comp=E,21nm,0.7s
DBIC Dimbokro 74.08 283 P **P** 14 18 47.0 0.0
DBIC Dimbokro 74.08 283 P **P** 14 18 47.0 0.0
comp=E,6.9nm,0.8s,baz=114,slow=9.1,SNR=8.6
NVS Novosibirsk 74.52 10 *e*P **P** 14 18 48.3 -0.4
NVS pmax pmax
comp=Z,27nm,1.3s
NVS pmax pmax
comp=N,17nm,1.5s
BJI Beijing 74.72 38 P **P** 14 18 50.9 +0.8
BJI S **S** 14 28 23.0 -3.1
BJI SS **SS** 14 33 16.8 +2.6
BJI pmax pmax
comp=Z,9.0nm,0.6s
BJI pmax pmax
comp=Z,79nm,3.8s
BJI LR LR
comp=N,110nm,19.0s
BJI LR LR
comp=E,270nm,18.0s
BJI LR LR
comp=Z,300nm,31.0s
ARU Arti 74.89 356 *c*/P **P** 14 18 50.5 -0.3
ARU 14 21 36.2
ARU S **S** 14 28 27.9 +0.6
ARU SS **SS** 14 33 15.9 -0.3
ARU pmax pmax
comp=Z,52nm,1.2s
ARU Arti 74.89 356 P **P** 14 18 50.7 -0.1
comp=Z,187nm,1.2s,SNR=13
CTAO Charters Tower 75.10 106 *e*P **P** 14 18 53.0 0.0
CTAO pmax pmax
comp=Z,38nm,1.3s
CTAO Charters Tower 75.10 106 *e*P **P** 14 18 53.0 0.0
comp=Z,38nm,1.3s
SVE Sverdlovsk 75.16 357 ⇑*i*P **P** 14 18 52.5 +0.2
SVE *e* 14 21 46.0
SVE *e*S **S** 14 28 33.6 +3.3
SVE pmax pmax
comp=Z,51nm,1.5s
BUR08 Bucovina Ar. S 75.27 333 *e*P **P** 14 18 53.4 0.0
SONM Songino Array 75.33 27 P **P** 14 18 54.3 +0.6
SONM Songino Array 75.33 27 P **P** 14 18 54.3 +0.6
comp=Z,7.9nm,0.9s,baz=219,slow=5.8,SNR=35
ULN Ulaanbaatar 75.64 27 *e*P **P** 14 18 54.7 -0.8
comp=Z,11nm,1.1s

ULN Ulaanbaatar 75.64 27 P **P** 14 18 54.8 -0.7
comp=Z,9.3nm,1.1s
DRGR 75.74 331 ⇑P **P** 14 18 55.6 -0.4
DRGR 75.74 331 ⇑*i*P **P** 14 18 55.6 -0.4
KEST Kesra 75.98 316 *e*P **P** 14 18 58.8 +1.1
KEST Kesra 75.98 316 P **P** 14 18 58.5 +0.8
comp=Z,2.3nm,0.9s,baz=310,slow=5.1,SNR=6.5
AK02 Malin Array Si 76.04 337 *e*P **P** 14 18 57.1 -0.4
AKASG Malin Array Be 76.07 337 P **P** 14 18 57.3 -0.4
AKASG Malin Array Be 76.07 337 P **P** 14 18 57.3 -0.4
AKASG Malin Array Be 76.07 337 P **P** 14 18 57.3 -0.4
comp=Z,10nm,1.0s,baz=140,slow=5.0,SNR=13
ZAK Zakamensk 76.08 24 ⇑*e*P **P** 14 18 57.8 -0.1
ZAK pmax pmax
comp=Z,2.0nm,1.2s
MOY Mondy 76.29 22 *e*P **P** 14 18 59.7 +0.6
TRPA Tarpa 76.81 332 ⇓*e*P **P** 14 19 02.8 +0.9
TLY Talaya 77.26 23 *e*P **P** 14 19 04.4 -0.1
TLY pmax pmax
comp=Z,7.0nm,1.2s
TLY MLR MLR
comp=Z,310nm,29.0s
PKSM Moragy 77.27 328 ⇑P **P** 14 19 04.6 0.0
PKSM Moragy 77.27 328 ⇑*i*P **P** 14 19 04.6 0.0
PKSM Moragy 77.27 328 ⇑*e*P **P** 14 19 04.8 +0.2
UZH Uzhgorod 77.29 332 *c*/P **P** 14 19 04.8 +0.2
UZH *i* 14 19 09.0
UZH *e*PPP PPP 14 23 54.8
UZH *e*S **S** 14 28 52.0 -2.1
UZH *i*SP **SPn** 14 29 38.4 +6.3
LVV L'vov 77.43 334 *e*P **P** 14 19 05.0 -0.4
OBN Obninsk 77.45 343 ⇓*e*P **P** 14 19 06.1 +0.8
OBN *e**PP **pP** 14 19 10.2 +0.3
OBN *e* 14 19 13.6
OBN pmax pmax
comp=Z,64nm,1.7s
KOLS Kolonicke sedl 77.53 332 *e*P **P** 14 19 06.6 +0.6
KOLS pmax pmax
comp=Z,14nm,1.4s
KOLS Kolonicke sedl 77.53 332 *e*P **P** 14 19 06.6 +0.6
MOS Moscow 77.72 344 *e*P **P** 14 19 06.5 -0.4
MOS pmax pmax
comp=Z,40nm,0.8s
CRVS Cervenica-Dubn 77.86 332 *e*P **P** 14 19 08.0 +0.1
CRVS pmax pmax
comp=Z,12nm,1.3s
CRVS Cervenica-Dubn 77.86 332 *e*P **P** 14 19 08.0 +0.1
SOKR Solikamsk 78.13 355 *c*/P **P** 14 19 09.8 +0.8
SOKR pmax pmax
comp=Z,40nm,1.1s
BOJS Bojanci 78.52 326 *e*P **P** 14 19 11.4 -0.2
CRES Cresnjev 78.62 327 *e*P **P** 14 19 12.4 +0.2
VYHS Vyhne 78.78 330 *e*P **P** 14 19 12.9 0.0
VYHS pmax pmax
comp=Z,8.0nm,1.5s
VYHS Vyhne 78.78 330 *e*P **P** 14 19 12.9 0.0
DOBS Dobrina 78.83 327 *e*P **P** 14 19 13.6 +0.3
PMG Port Moresby 78.84 96 *e*P **P** 14 19 13.1 -1.0
comp=Z,31nm,1.1s
PMG Port Moresby 78.84 96 P **P** 14 19 15.1 +1.0
PDKS Podkum 79.02 327 *i*P **P** 14 19 14.7 +0.3
LJU Ljubljana 79.26 326 *e*P **P** 14 19 15.4 -0.2
SOP Sopron 79.31 329 ⇓*e*P **P** 14 19 16.5 +0.6
SOKA Soboth 79.41 327 ⇑*i*P **P** 14 19 16.5 0.0
comp=Z,12nm,1.7s
SOKA Soboth 79.41 327 ⇑*i*P **P** 14 19 16.5 0.0
comp=Z,12nm,1.7s
ARSA Arzberg 79.54 328 ⇓*i*P **P** 14 19 17.7 +0.5
comp=Z,16nm,1.3s
ARSA Arzberg 79.54 328 ⇓*i*P **P** 14 19 17.7 +0.5
comp=Z,16nm,1.3s
OJC Ojcow 79.57 332 *e*P **P** 14 19 17.6 +0.4
OJC Ojcow 79.57 332 *e*P **P** 14 19 17.6 +0.4
CONA Conrad Observa 79.83 328 ⇑*i*P **P** 14 19 19.0 +0.2
comp=Z,24nm,1.2s
CONA Conrad Observa 79.83 328 ⇑*i*P **P** 14 19 19.0 +0.2
comp=Z,24nm,1.2s
OKC Ostrava-Krasne 80.05 331 *e*P **P** 14 19 20.3 +0.5
OKC Ostrava-Krasne 80.05 331 *e*P **P** 14 19 20.3 +0.5
PGF Pioggiola 80.18 321 *e*P **P** 14 19 21.5 +0.7
comp=Z,48nm,1.5s
PGF Pioggiola 80.18 321 *e*P **P** 14 19 21.5 +0.7
PGF pmax pmax
comp=Z,48nm,1.5s
PGF Pioggiola 80.18 321 *e*P **P** 14 19 21.5 +0.7
comp=Z,48nm,1.5s
MORC Moravsky Berou 80.28 331 ⇑P **P** 14 19 21.6 +0.4
MORC Moravsky Berou 80.28 331 ⇑*i*P **P** 14 19 21.6 +0.4
JNU Nakatsue 80.48 50 LR LR 14 51 00.7
comp=Z,256nm,19.2s,baz=47,slow=33
KBA Koelnbreinsper 80.55 327 ⇑*i*P **P** 14 19 22.6 -0.2
KBA pmax pmax
comp=Z,10.0nm,1.4s
KBA Koelnbreinsper 80.55 327 ⇑*i*P **P** 14 19 22.6 -0.2
comp=Z,9.7nm,1.4s
KBA Koelnbreinsper 80.55 327 ⇑*i*P **P** 14 19 22.6 -0.2
comp=Z,9.7nm,1.4s
KSAR Wonju Array Be 80.56 45 P **P** 14 19 22.9 0.0
MOA Molln 80.58 328 ⇓*i*P **P** 14 19 22.7 -0.1
comp=Z,22nm,1.2s
MOA Molln 80.58 328 ⇓*i*P **P** 14 19 22.7 -0.1
comp=Z,22nm,1.3s
KSRS Korea Array 80.60 45 P **P** 14 19 22.9 -0.1
comp=Z,6.7nm,0.9s,baz=235,slow=6.6,SNR=9.2
ABTA Abfaltersbach 80.78 326 ⇑*i*P **P** 14 19 24.2 +0.3
comp=Z,16nm,1.2s
ABTA Abfaltersbach 80.78 326 ⇑*i*P **P** 14 19 24.2 +0.3
comp=Z,16nm,1.2s
KRLC Kraliky 80.84 330 *e*P **P** 14 19 24.7 +0.5
DPC Dobruska-Polom 81.25 330 *e*P **P** 14 19 26.9 +0.6
DPC Dobruska-Polom 81.25 330 *e*P **P** 14 19 26.9 +0.6
UPC Upice 81.50 330 *e*P **P** 14 19 28.0 +0.4
UPC Upice 81.50 330 *e*P **P** 14 19 28.0 +0.4
GERES GERESS Array B 81.51 328 P **P** 14 19 26.8 -1.0
GERES GERESS Array B 81.51 328 P **P** 14 19 26.8 -1.0
comp=Z,0.4nm,0.5s,baz=129,slow=4.3,SNR=7.6
KHC Kasperske Hory 81.76 328 *e*P **P** 14 19 28.4 -0.7
KHC Kasperske Hory 81.76 328 *e*P **P** 14 19 28.4 -0.7
PRU Pruhonice 81.85 329 *e*P **P** 14 19 29.9 +0.5
PRU Pruhonice 81.85 329 *e*P **P** 14 19 29.9 +0.5
SBF Sospel 81.88 321 *e*P **P** 14 19 29.8 0.0
SBF Sospel 81.88 321 *e*P **P** 14 19 29.8 0.0
SBF Sospel 81.88 321 *e*P **P** 14 19 29.8 0.0
FETA Feichten 81.90 325 ⇑*i*P **P** 14 19 28.7 -1.3
comp=Z,8.4nm,1.0s
FETA Feichten 81.90 325 ⇑*i*P **P** 14 19 28.6 -1.3
comp=Z,8.4nm,1.0s
LMR La Mourre 82.12 321 *e*P **P** 14 19 31.2 +0.2
LMR La Mourre 82.12 321 *e*P **P** 14 19 31.2 +0.2
LMR La Mourre 82.12 321 *e*P **P** 14 19 31.2 +0.2
FRF La Foret Royal 82.17 321 *e*P **P** 14 19 31.4 +0.1
FRF La Foret Royal 82.17 321 *e*P **P** 14 19 31.4 +0.1
FRF La Foret Royal 82.17 321 *e*P **P** 14 19 31.4 +0.1
PVCC Panska Ves 82.20 330 *e*P **P** 14 19 32.5 +1.3
PVCC Panska Ves 82.20 330 *e*P **P** 14 19 32.5 +1.3
TUE Stuetta 82.32 324 *e*P **P** 14 19 31.7 -0.6
comp=Z,15nm,1.2s
CN2 Changchun 82.48 39 *e*P **P** 14 19 33.6 +0.7
CN2 *es*P **sP** 14 19 39.5 +0.4
CN2 *e*S **S** 14 29 49.0 -0.2
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,18.0s
CN2 LR LR
comp=E,300nm,18.0s
CN2 LR LR
comp=Z,500nm,19.0s
BRG Berggiesshubel 82.72 330 *e*(P) **P** 14 19 34.8 +0.8
comp=Z,23nm,1.8s
MBDF Montbardon 82.76 322 *e*P **P** 14 19 34.9 +0.4
comp=Z,36nm,1.1s
MBDF Montbardon 82.76 322 *e*P **P** 14 19 34.9 +0.4
MBDF pmax pmax
comp=Z,36nm,1.1s
MBDF Montbardon 82.76 322 *e*P **P** 14 19 34.9 +0.4
comp=Z,36nm,1.1s
SMRF Simiane la Rot 83.05 321 *e*P **P** 14 19 36.0 +0.1
SMRF Simiane la Rot 83.05 321 *e*P **P** 14 19 36.0 +0.1
LPG La Plagne 83.21 323 *e*P **P** 14 19 36.3 -0.7
comp=Z,10nm,0.8s
LPG La Plagne 83.21 323 *e*P **P** 14 19 36.3 -0.7

LPG pmax pmax
comp=Z,10.0nm,0.8s
LPG La Plagne 83.21 323 *e*P **P** **14 19 36.3 -0.7**
comp=Z,10nm,0.8s
LPL La Plagne 83.23 323 *e*P **P** **14 19 36.4 -0.7**
LPL La Plagne 83.23 323 *e*P **P** **14 19 36.4 -0.7**
LPL La Plagne 83.23 323 *e*P **P** **14 19 36.4 -0.7**
ORIF Oris-en-Rattie 83.39 322 *e*P **P** **14 19 37.9 +0.2**
ORIF *e*R
comp=Z,188nm,20.8s
ORIF Oris-en-Rattie 83.39 322 *e*P **P** **14 19 37.9 +0.2**
ORIF Oris-en-Rattie 83.39 322 *e*P **P** **14 19 37.9 +0.2**
CLL Collm 83.46 330⇓*i*P **P** **14 19 38.6 +0.8**
CLL pmax pmax
comp=Z,29nm,1.7s
CLL Collm 83.46 330⇓*i*P **P** **14 19 38.6 +0.8**
comp=Z,29nm,1.7s
CLL LmV 15 05 00.0
comp=Z,100nm,18.8s
CABF La Chapelle 84.23 323 *e*P **P** **14 19 42.1 +0.1**
comp=Z,62nm,1.4s
CABF La Chapelle 84.23 323 *e*P **P** **14 19 42.1 +0.1**
CABF pmax pmax
comp=Z,62nm,1.4s
CABF La Chapelle 84.23 323 *e*P **P** **14 19 42.1 +0.1**
comp=Z,62nm,1.4s
MDT Midelt 84.46 307 P **P** **14 19 44.7 +1.2**
MDT Midelt 84.46 307 P **P** **14 19 44.7 +1.2**
comp=Z,2.3nm,0.6s,baz=63,slow=2.3,SNR=3.4
HINF Hinteralfeld 84.49 325 *e*P **P** **14 19 42.6 -0.6**
comp=Z,32nm,1.1s
HINF Hinteralfeld 84.49 325 *e*P **P** **14 19 42.6 -0.6**
HINF pmax pmax
comp=Z,32nm,1.1s
HINF Hinteralfeld 84.49 325 *e*P **P** **14 19 42.6 -0.6**
comp=Z,32nm,1.1s
CDF Champ du Feu 84.60 325 *e*P **P** **14 19 43.5 -0.3**
comp=Z,32nm,1.2s
CDF Champ du Feu 84.60 325 *e*P **P** **14 19 43.5 -0.3**
CDF pmax pmax
comp=Z,32nm,1.2s
CDF Champ du Feu 84.60 325 *e*P **P** **14 19 43.5 -0.3**
comp=Z,32nm,1.2s
MTLF Montolieu 84.76 319 *e*P **P** **14 19 43.8 -0.8**
comp=Z,35nm,1.2s
MTLF Montolieu 84.76 319 *e*P **P** **14 19 43.8 -0.8**
MTLF pmax pmax
comp=Z,35nm,1.2s
MTLF Montolieu 84.76 319 *e*P **P** **14 19 43.8 -0.8**
comp=Z,35nm,1.2s
HAU Haudompre 84.87 324 *e*P **P** **14 19 44.8 -0.3**
comp=Z,33nm,1.2s
HAU *e*R
comp=Z,138nm,20.8s
HAU Haudompre 84.87 324 *e*P **P** **14 19 44.8 -0.3**
HAU pmax pmax
comp=Z,33nm,1.2s
HAU Haudompre 84.87 324 *e*P **P** **14 19 44.8 -0.3**
comp=Z,33nm,1.2s
TMCR Tamitsa 85.17 348 *e*P **P** **14 19 45.6 -0.5**
TMCR pmax pmax
comp=Z,59nm,1.4s
MDJ Mudanjiang 85.43 40 P **P** **14 19 47.4 -0.5**
MDJ pP **PcP** **14 19 50.6 -0.3**
MDJ sP **sP** **14 19 52.0 -2.2**
MDJ S **S** **14 30 18.8 +0.1**
MDJ pmax pmax
comp=Z,9.0nm,1.4s
MDJ pmax pmax
comp=Z,59nm,4.5s
MDJ LR LR
comp=N,83nm,16.0s
MDJ LR LR
comp=E,120nm,17.1s
MDJ LR LR
comp=Z,300nm,17.9s
PAGF Fort de Pagny 85.53 325 *e*P **P** **14 19 48.4 +0.1**
PAGF Fort de Pagny 85.53 325 *e*P **P** **14 19 48.4 +0.1**
JOF Joensuu 85.57 345 *e*P **P** **14 19 46.9 -1.3**
JOF pmax pmax
comp=Z,13nm,0.7s
JOF Joensuu 85.57 345 *e*p **P** **14 19 46.9 -1.3**
comp=Z,13nm,0.7s
SFTF Sexfontaines 85.71 324 *e*P **P** **14 19 49.4 +0.1**
comp=Z,53nm,1.1s
SFTF Sexfontaines 85.71 324 *e*P **P** **14 19 49.4 +0.1**
comp=Z,53nm,1.1s
FIA1 FINESS Array S 85.77 342 *e*P **P** **14 19 49.0 -0.2**
FINES FINESS Array B 85.77 342 P **P** **14 19 49.6 +0.4**
FINES FINESS Array B 85.77 342 P **P** **14 19 49.6 +0.4**
comp=Z,12nm,1.0s,baz=130,slow=6.0,SNR=16
EPF Esparros 85.78 318 *e*P **P** **14 19 49.7 -0.1**
EPF Esparros 85.78 318 *e*P **P** **14 19 49.7 -0.1**
EPF Esparros 85.78 318 *e*P **P** **14 19 49.7 -0.1**
LOR Lormes 85.86 323 *e*P **P** **14 19 49.8 -0.3**
comp=Z,17nm,1.1s
LOR *e*R
comp=Z,180nm,22.0s
LOR Lormes 85.86 323 *e*P **P** **14 19 49.8 -0.3**
comp=Z,17nm,1.1s
AVF Avril sur Loir 85.90 322 *e*P **P** **14 19 49.9 -0.3**
AVF Avril sur Loir 85.90 322 *e*P **P** **14 19 49.9 -0.3**
AVF Avril sur Loir 85.90 322 *e*P **P** **14 19 49.9 -0.3**
SSF Saint Saulge 85.95 323 *e*P **P** **14 19 50.3 -0.2**
comp=Z,20nm,1.1s
SSF Saint Saulge 85.95 323 *e*P **P** **14 19 50.3 -0.2**
SSF pmax pmax
comp=Z,20nm,1.1s
SSF Saint Saulge 85.95 323 *e*P **P** **14 19 50.3 -0.2**
comp=Z,20nm,1.1s
BGF Bois d'Agland 86.07 322 *e*P **P** **14 19 51.4 +0.3**
BGF Bois d'Agland 86.07 322 *e*P **P** **14 19 51.4 +0.3**
BGF Bois d'Agland 86.07 322 *e*P **P** **14 19 51.4 +0.3**
VLA Vladivostok 86.10 42⇓*i*P **P** **14 19 49.1 -2.2**
VLA *e* 14 19 51.8
VLA *e* 14 23 09.4
VLA S S 14 30 11.6 -14
VLA pmax pmax
comp=Z,6.0nm,0.9s
RJF Les Rejaudoux 86.20 320 *e*P **P** **14 19 52.1 +0.3**
comp=Z,59nm,1.4s
RJF *e*R
comp=Z,194nm,22.2s
RJF Les Rejaudoux 86.20 320 *e*P **P** **14 19 52.1 +0.3**
RJF pmax pmax
comp=Z,59nm,1.4s
RJF Les Rejaudoux 86.20 320 *e*P **P** **14 19 52.1 +0.3**
comp=Z,59nm,1.4s
KAF Kangasniemi 86.24 343 *e*P **P** **14 19 50.4 -1.1**
KAF pmax pmax
comp=Z,9.0nm,0.7s
KAF Kangasniemi 86.24 343 *e*p **P** **14 19 50.4 -1.1**
comp=Z,9.4nm,0.7s
ETSF Etsaut 86.29 318 *e*P **P** **14 19 51.8 -0.6**
ETSF Etsaut 86.29 318 *e*P **P** **14 19 51.8 -0.6**
ETSF Etsaut 86.29 318 *e*P **P** **14 19 51.8 -0.6**
TCF Toulx Ste Croi 86.30 321 *e*P **P** **14 19 51.4 -0.9**
comp=Z,18nm,1.2s
TCF Toulx Ste Croi 86.30 321 *e*P **P** **14 19 51.4 -0.9**
TCF pmax pmax
comp=Z,18nm,1.2s
TCF Toulx Ste Croi 86.30 321 *e*P **P** **14 19 51.4 -0.9**
comp=Z,18nm,1.2s
LFF La Frestale 86.49 320 *e*P **P** **14 19 52.9 -0.3**
comp=Z,55nm,1.3s
LFF La Frestale 86.49 320 *e*P **P** **14 19 52.9 -0.3**
LFF pmax pmax
comp=Z,55nm,1.3s
LFF La Frestale 86.49 320 *e*P **P** **14 19 52.9 -0.3**
comp=Z,55nm,1.3s
USRK Ussuriysk Arra 86.70 41 P **P** **14 19 53.2 -0.9**
comp=Z,2.1nm,0.7s,baz=208,slow=3.7,SNR=4.6
SJPF Ste Jean 86.82 317 *e*P **P** **14 19 54.3 -0.6**
comp=Z,38nm,1.2s
SJPF Ste Jean 86.82 317 *e*P **P** **14 19 54.3 -0.6**
SJPF pmax pmax
comp=Z,38nm,1.2s
SJPF Ste Jean 86.82 317 *e*P **P** **14 19 54.3 -0.6**
comp=Z,38nm,1.2s
GIVF Givet 86.88 326 *e*P **P** **14 19 55.5 +0.5**
GIVF Givet 86.88 326 *e*P **P** **14 19 55.5 +0.5**
GIVF Givet 86.88 326 *e*P **P** **14 19 55.5 +0.5**
ESDC Sonseca Array 87.04 313 P **P** **14 19 56.2 +0.2**
ESDC Sonseca Array 87.04 313 P **P** **14 19 56.2 +0.2**
comp=Z,2.8nm,0.6s,baz=103,slow=3.6,SNR=17
ESDC LR LR 14 56 15.4
comp=Z,123nm,20.2s,baz=250,slow=34
BAIF Baives 87.19 325 *e*P **P** **14 19 57.1 +0.6**
comp=Z,55nm,1.4s
BAIF Baives 87.19 325 *e*P **P** **14 19 57.1 +0.6**
BAIF pmax pmax
comp=Z,55nm,1.4s
BAIF Baives 87.19 325 *e*P **P** **14 19 57.1 +0.6**
comp=Z,55nm,1.4s
PAB San Pablo 87.25 313 *e*P **P** **14 19 56.9 -0.2**
PAB pmax pmax
comp=Z,8.0nm,0.8s
PAB San Pablo 87.25 313 *e*P **P** **14 19 56.9 -0.2**
comp=Z,7.9nm,0.8s
MAJO Matsushiro 87.40 50 *e*P **P** **14 19 57.7 -0.2**
MAJO pmax pmax
comp=Z,49nm,1.4s
MAJO Matsushiro 87.40 50 *e*P **P** **14 19 57.7 -0.2**
comp=Z,49nm,1.4s
MAT Matsushiro 87.40 50 P **P** **14 19 57.4 -0.4**
MJAR Matsushiro Arr 87.40 50 P **P** **14 19 58.5 +0.6**
MJAR Matsushiro Arr 87.40 50 P **P** **14 19 58.5 +0.6**
comp=Z,14nm,1.0s,baz=234,slow=6.1,SNR=24
MFF Saint Martin d 87.86 321 *e*P **P** **14 19 59.9 +0.1**
comp=Z,53nm,1.3s
MFF Saint Martin d 87.86 321 *e*P **P** **14 19 59.9 +0.1**
MFF pmax pmax
comp=Z,53nm,1.3s
MFF Saint Martin d 87.86 321 *e*P **P** **14 19 59.9 +0.1**
comp=Z,53nm,1.3s
LDF La Druitiere 88.84 323 *e*P **P** **14 20 04.4 0.0**
LDF La Druitiere 88.84 323 *e*P **P** **14 20 04.4 0.0**
LDF La Druitiere 88.84 323 *e*P **P** **14 20 04.4 0.0**
KLR Kul'dur 89.06 37 *e*P P 14 20 01.8 -3.6
FLN La Foliniere 89.13 323 *e*P **P** **14 20 05.8 +0.1**
comp=Z,38nm,1.2s
FLN *e*R
comp=Z,115nm,21.2s
FLN La Foliniere 89.13 323 *e*P **P** **14 20 05.8 +0.1**
FLN pmax pmax
comp=Z,38nm,1.2s
FLN La Foliniere 89.13 323 *e*P **P** **14 20 05.8 +0.1**
comp=Z,38nm,1.2s
SGMF Saint Gilles 90.09 322 *e*P **P** **14 20 09.9 -0.3**
comp=Z,37nm,1.2s
SGMF Saint Gilles 90.09 322 *e*P **P** **14 20 09.9 -0.3**
SGMF pmax pmax
comp=Z,37nm,1.2s
SGMF Saint Gilles 90.09 322 *e*P **P** **14 20 09.9 -0.3**
comp=Z,37nm,1.2s
QUIF Quistinic 90.30 321 *e*P **P** **14 20 10.7 -0.5**
QUIF Quistinic 90.30 321 *e*P **P** **14 20 10.7 -0.5**
QUIF Quistinic 90.30 321 *e*P **P** **14 20 10.7 -0.5**
ROSF Rostrenen 90.56 321 *e*P **P** **14 20 12.0 -0.4**
ROSF Rostrenen 90.56 321 *e*P **P** **14 20 12.0 -0.4**
ROSF Rostrenen 90.56 321 *e*P **P** **14 20 12.0 -0.4**
HABR Khabarovsk 90.60 38 *e*P **P** **14 20 12.3 -0.3**
HABR *e**PP pP 14 20 23.0 +5.8
HABR *e*PPP PPP 14 25 45.1
HABR S **SKSac** **14 30 40.5 -3.2**
HABR *e* 14 31 08.5
HABR *e*PS **PnS** **14 32 17.1 0.0**
HABR *e*SS **SS** **14 37 08.3 -1.5**
HABR SSS SSS 14 40 45.2
HABR pmax pmax
comp=E,23nm,2.5s
HABR pmax pmax
comp=Z,37nm,1.4s
HABR pmax pmax
comp=N,59nm,2.2s
HABR MLR MLR
comp=Z,140nm,22.0s
ARCES ARCESS Array B 92.34 347 P **P** **14 20 20.9 +0.7**
ARCES ARCESS Array B 92.34 347 P **P** **14 20 20.9 +0.7**
comp=Z,5.4nm,0.9s,baz=145,slow=3.3,SNR=5.3
YUK Yuzh-Kuril'sk 95.69 46 P P 14 20 39.4 +3.3
YUK 14 24 29.4
YUK PPP PPP 14 26 32.5
YUK S **SKSac** **14 31 11.4 -0.6**
YUK SS SS 14 38 30.2 +7.4
LPAZ La Paz 123.06 235 PKP **PKPdf** **14 26 08.5 -0.1**
LPAZ La Paz 123.06 235 PKP **PKPdf** **14 26 08.5 -0.1**
comp=Z,1.7nm,0.8s,baz=92,slow=6.8,SNR=4.7
ILAR Eielson Array 128.81 17 PKPpre PKPpre 14 26 04.5
ILAR PKP **PKPdf** **14 26 16.1 -1.3**
ILAR Eielson Array 128.81 17 PKhKP PKPpre 14 26 04.5
comp=Z,0.4nm,1.2s,baz=261,slow=7.1,SNR=2.6
ILAR PKP **PKPdf** **14 26 16.1 -1.3**
comp=Z,1.5nm,1.0s,baz=322,slow=4.0,SNR=10
YKA Yellowknife Ar 136.04 0 PKPpre PKPpre 14 26 14.8
YKA PKP **PKPdf** **14 26 30.0 -1.1**
YKA PP **PP** **14 29 11.2 +1.3**
YKA Yellowknife Ar 136.04 0 PKhKP PKPpre 14 26 14.9
comp=Z,0.1nm,0.4s,baz=351,slow=14,SNR=3.8
YKA PKP **PKPdf** **14 26 30.0 -1.1**
comp=Z,2.2nm,1.1s,baz=351,slow=2.3,SNR=12
YKA PP **PP** **14 29 11.3 +1.3**
comp=Z,0.6nm,0.9s,baz=358,slow=7.2,SNR=8.6
ULM Lac du Bonnet 145.12 339 PKPbc **PKPbc** **14 26 45.5 -1.7**
ULM Lac du Bonnet 145.12 339 PKPbc **PKPbc** **14 26 45.5 -1.7**
comp=Z,11nm,0.6s,baz=35,slow=3.3,SNR=16
EYMN Ely 145.32 333 *e*PKP **PKPbc** **14 26 47.4 -0.6**
BCIP Isla Barro Col 145.52 259 *e*PKP **PKPab** **14 26 50.5 +0.6**
ACSO Alum Creek Sta 145.57 316 *e*PKP **PKPdf** **14 26 49.0 +0.1**
COWI Conover 145.59 329 *e*PKP **PKPdf** **14 26 48.5 -0.3**
KMSC Kings Mountain 146.58 306⇓PKiKP **PKPbc** **14 26 52.1 -0.2**
baz=147
SFIN Scholer Farm 148.14 319⇓PKiKP **PKPbc** **14 26 55.5 -0.9**
baz=148
MDND Maddock 148.42 341⇓PKiKP **PKPbc** **14 26 55.6 -1.3**
baz=148
A24A Westby 148.56 347⇑PKiKP **PKPbc** **14 26 56.4 -0.9**
baz=148
A23A Redstone 148.70 348⇓PKiKP **PKPbc** **14 26 56.8 -0.9**
baz=149
A22A Carney Farms, 148.86 350⇓PKiKP **PKPbc** **14 26 58.4 +0.2**
baz=149
DGMT Dagmar 149.03 347 *e*PKPbc **PKPbc** **14 26 59.0 +0.5**
DGMT *e*PKPab **PKPab** **14 27 03.6 +1.0**
DGMT Dagmar 149.03 347⇑PKiKP **PKPbc** **14 26 59.0 +0.5**
baz=149
B23A Brockton 149.20 348⇑PKiKP **PKPbc** **14 26 58.7 -0.3**
baz=149
A20A Cobblestone Ra 149.28 352⇓PKiKP **PKPbc** **14 26 58.8 -0.4**
baz=149
A19A Klindworth Far 149.33 353⇓PKiKP **PKPbc** **14 26 59.4 +0.1**
baz=149
A18A Metzger Ranch, 149.45 354⇑PKiKP **PKPbc** **14 26 59.0 -0.6**
baz=149
A17A Triple J Farms 149.50 356⇓PKiKP **PKPbc** **14 26 59.7 0.0**
baz=149
WALA Waterton Lakes 149.51 360 *e*PKPbc **PKPbc** **14 26 59.7 -0.2**
RPW Rockport 149.52 10 P **PKPbc** **14 26 59.8 0.0**
B22A Reddig Ranch S 149.54 349⇑PKiKP **PKPbc** **14 26 59.4 -0.5**
baz=150
A16A West Butte Ran 149.55 357⇑PKiKP **PKPbc** **14 26 59.5 -0.5**
baz=150
A15A Johnson Ranch, 149.57 358⇑PKiKP **PKPbc** **14 26 59.9 -0.1**
baz=150
A14A Double T Ranch 149.59 359⇓PKiKP **PKPbc** **14 26 59.9 -0.1**
baz=150
B21A Ellsworth Farm 149.59 351⇓PKiKP **PKPbc** **14 27 00.2 +0.3**
baz=150
TIGA Tifton 149.60 301⇑PKiKP **PKPbc** **14 27 00.4 0.0**
baz=150
A12A Yaak River Ran 149.61 2⇑PKiKP **PKPbc** **14 27 00.4 +0.4**
baz=150
B19A Brinkman Farms 149.82 353⇑PKiKP **PKPbc** **14 27 00.5 0.0**
baz=150
C23A Lambert 149.87 348⇓PKiKP **PKPbc** **14 27 01.0 +0.4**
baz=150
OSR Olympics--Salm 149.96 13 P **PKPbc** **14 27 02.5 +1.6**
B18A Beardsley Farm 149.97 354⇓PKiKP **PKPbc** **14 27 00.3 -0.6**
baz=150
C24A Savage 149.97 347⇓PKiKP **PKPbc** **14 27 00.2 -0.7**
baz=150
SWET Sewanee 150.00 309 *e*PKPbc **PKPbc** **14 26 59.8 -1.6**
C22A Vida 150.06 349⇑PKiKP **PKPbc** **14 27 01.3 +0.1**
baz=150
B12A Libby 150.07 2⇓PKiKP **PKPbc** **14 27 00.3 -0.8**
baz=150
B16A M & M Farms, S 150.09 357⇑PKiKP **PKPbc** **14 27 01.2 -0.1**
baz=150
B17A L&G Farms, Che 150.15 356⇓PKiKP **PKPbc** **14 27 01.2 -0.1**
baz=150
C21A Desert Coulee 150.19 350⇓PKiKP **PKPbc** **14 27 01.1 -0.3**
baz=150
B13A Whitefish 150.19 0⇓PKiKP **PKPbc** **14 27 01.2 -0.2**
baz=150
B14A Marquette Ranc 150.20 359⇓PKiKP **PKPbc** **14 27 01.4 -0.2**
baz=150
NEW Newport 150.20 4 *e*PKPdf **PKPdf** **14 26 56.8 +0.4**
NEW *e*PKPbc **PKiKP** **14 27 02.0 -0.3**
NEW Newport 150.20 4⇑PKiKP **PKPbc** **14 27 01.2 -0.2**
baz=150
B15A Bradely Ranch, 150.23 358⇑PKiKP **PKPbc** **14 27 01.3 -0.2**
baz=150
EGMT Eagleton 150.33 354 *e*PKPdf **PKPdf** **14 26 57.1 +0.5**
EGMT *e*PKPbc **PKPbc** **14 27 01.9 +0.1**
EGMT Eagleton 150.33 354⇑PKiKP **PKPbc** **14 27 01.7 -0.1**
baz=150
D24A Glendive 150.34 346⇓PKiKP **PKPbc** **14 27 01.4 -0.5**
baz=150
C20A Veseth Ranch, 150.43 352⇑PKiKP **PKPbc** **14 27 02.1 +0.1**
baz=150
D23A Lindsay 150.48 348⇑PKiKP **PKPbc** **14 27 02.3 +0.2**
baz=150
ETW Entiat 150.52 9 P **PKPbc** **14 27 02.3 0.0**
C19A Slack Wire Ran 150.54 353⇑PKiKP **PKPbc** **14 27 02.6 +0.3**
baz=150
SCIA State Center 150.65 327 *e*PKPbc **PKPbc** **14 27 02.2 -0.5**
C11A Tepee Creek (N 150.68 3⇓PKiKP **PKPbc** **14 27 02.0 -0.6**
baz=151
D22A Cohagen 150.69 349⇓PKiKP **PKPbc** **14 27 02.9 +0.3**
baz=151
C16A Fuhringer Ranc 150.70 357⇓PKiKP **PKPbc** **14 27 02.4 -0.3**
baz=151
BSMT Bassoo Peak 150.71 1 *e*PKPbc **PKPbc** **14 27 03.0 +0.1**
BSMT *e*PKPab **PKPab** **14 27 10.2 +0.4**
C15A Salmond Ranch, 150.77 358⇓PKiKP **PKPbc** **14 27 02.7 -0.2**
baz=151
C17A Wharram Farm, 150.81 355⇑PKiKP **PKPbc** **14 27 02.9 -0.1**
baz=151
C12B Naegeli Ranch, 150.84 2⇑PKiKP **PKPbc** **14 27 02.3 -0.6**
baz=151
ECSD EROS Data Cent 150.84 333 *e*PKPbc **PKPbc** **14 27 02.1 -0.9**
E24A Baker 150.86 346⇑PKiKP **PKPbc** **14 27 02.7 -0.4**
baz=151
C13A Hot Springs 150.88 1⇓PKiKP **PKPbc** **14 27 02.7 -0.5**
baz=151
TBM Table Mountain 150.90 9 P **PKPbc** **14 27 03.4 +0.2**
D21A La Casta Ranch 150.91 350⇑PKiKP **PKPbc** **14 27 03.2 +0.1**
baz=151
WVT Waverly 150.93 312 *e*PKiKP **PKPbc** **14 27 02.2 -1.3**
WVT Waverly 150.93 312 *e*PKPbc **PKPbc** **14 27 02.2 -1.3**
OD2 Odessa Site #2 150.93 6 P **PKPbc** **14 27 03.4 +0.2**
SIUC Southern Illin 151.02 316 *e*PKPbc **PKPbc** **14 27 03.9 +0.3**
SWMT Swartz Lake 151.06 360 *e*PKPbc **PKPbc** **14 27 03.1 -0.5**
D20A Manuel Ranch, 151.06 352⇑PKiKP **PKPbc** **14 27 03.7 +0.2**
baz=151
D19A Cripps Ranch, 151.08 353⇓PKiKP **PKPbc** **14 27 03.6 0.0**
baz=151
LON Longmire 151.11 11 *e*PKiKP **PKPbc** **14 27 03.7 0.0**
LON Longmire 151.11 11 *e*PKPbc **PKPbc** **14 27 03.7 0.0**
E23A Ismay 151.14 347⇓PKiKP **PKPbc** **14 27 03.7 0.0**
baz=151
D18A Linhart Farms, 151.16 354⇑PKiKP **PKPbc** **14 27 04.1 +0.2**
baz=151
BRSD Miller 151.18 337⇓PKiKP **PKPbc** **14 27 03.3 -0.5**
baz=151
WPW White Pass 151.21 11 P **PKPbc** **14 27 04.5 +0.5**
D17A Six Diamond Ra 151.28 355⇑PKiKP **PKPbc** **14 27 03.7 -0.5**
baz=151
SLMT Seeley Lake 151.32 359 *e*PKPbc **PKPbc** **14 27 04.3 0.0**
E22A Miles City 151.33 348⇑PKiKP **PKPbc** **14 27 03.5 -0.7**
baz=151
TDL Tradedollar La 151.42 12 P **PKPbc** **14 27 05.0 +0.6**
E21A Keefer Ranch, 151.43 350⇓PKiKP **PKPbc** **14 27 03.3 -1.1**
baz=151
D16A Dana Ranch, Ca 151.46 356⇓PKiKP **PKPbc** **14 27 04.6 0.0**
baz=151
D13A Huson 151.47 1⇓PKiKP **PKPbc** **14 27 03.8 -0.7**
baz=151
D14A Greenough 151.48 359⇑PKiKP **PKPbc** **14 27 04.4 -0.2**
baz=151
D15A Lincoln 151.50 358⇑PKiKP **PKPbc** **14 27 04.8 +0.1**
baz=151
F24A Ekalaka 151.57 346⇑PKiKP **PKPbc** **14 27 04.7 -0.1**
baz=152
E20A Meyer Farm, Mu 151.63 351⇑PKiKP **PKPbc** **14 27 05.0 +0.1**
baz=152
CHMT Chamberlain Mo 151.65 359 *e*PKPbc **PKPbc** **14 27 04.7 -0.4**
MSO Missoula 151.74 360 *e*PKPbc **PKPbc** **14 27 04.8 -0.4**
MSO Missoula 151.74 360⇑PKiKP **PKPbc** **14 27 05.2 +0.1**
baz=152
E19A Rath Farm, Rou 151.76 352⇓PKiKP **PKiKP** **14 27 05.5 -0.1**
baz=152
E18A Harlowton 151.79 354⇑PKiKP **PKiKP** **14 27 05.7 0.0**
baz=152
HRY Holter Researc 151.79 357 *e*PKPbc **PKPbc** **14 27 05.3 0.0**
F23A Volborg 151.90 347⇑PKiKP **PKPbc** **14 27 05.0 -0.5**
baz=152
E16A East Helena 151.96 356⇑PKiKP **PKPbc** **14 27 05.8 +0.1**
baz=152
E17A Martinsdale 151.98 355⇓PKiKP **PKPbc** **14 27 05.2 -0.6**
baz=152
F22A Rosebud 152.02 348⇑PKiKP **PKPbc** **14 27 05.5 -0.3**
baz=152
G24A Alzada 152.05 345⇑PKiKP **PKPbc** **14 27 05.2 -0.7**
baz=152
E15A Deer Lodge 152.12 358⇓PKiKP **PKPbc** **14 27 05.5 -0.6**
baz=152
E13A Victor 152.13 0⇓PKiKP **PKPbc** **14 27 05.2 -0.9**
baz=152
F21A Absaloka Mine, 152.14 350⇑PKiKP **PKPbc** **14 27 05.3 -0.7**
baz=152
E14A Clinton 152.15 359⇑PKiKP **PKPbc** **14 27 05.5 -0.7**
baz=152
F20A Billings 152.32 351⇑PKiKP **PKPbc** **14 27 05.6 -0.9**
baz=152
F19A Roth Farm, Mol 152.38 352⇓PKiKP **PKPbc** **14 27 06.6 0.0**
baz=152
G23A Biddle 152.40 347⇑PKiKP **PKPbc** **14 27 06.0 -0.7**
baz=152
F18A Big Timber 152.42 353⇑PKiKP **PKPbc** **14 27 06.8 0.0**
baz=152
F17A Fitzpatrick Pl 152.51 355⇓PKiKP **PKPbc** **14 27 06.3 -0.8**
baz=152
GCMT Greycliff 152.53 353 *e*PKPbc **PKPbc** **14 27 07.4 +0.3**
G22A Birney 152.57 348⇓PKiKP **PKPbc** **14 27 05.7 -1.4**
baz=152
H24A Dirks Ranch, A 152.63 345⇓PKiKP **PKPbc** **14 27 06.6 -0.6**
baz=153
F15A Butte 152.69 358⇓PKiKP **PKPbc** **14 27 06.9 -0.6**
baz=153
F16A Kennard Place, 152.71 356⇓PKPab **PKPab** **14 27 17.8 -0.2**
baz=153
F13A Darby 152.78 0⇑PKiKP **PKPbc** **14 27 07.2 -0.4**
baz=153
BOZ Bozeman (W) 152.84 356⇓PKiKP **PKPbc** **14 27 07.5 -0.3**
baz=153
G20A Bridger 152.90 351⇑PKiKP **PKPbc** **14 27 07.8 -0.1**
baz=153
G18A Lazy EL Ranch, 152.99 353⇑PKiKP **PKPbc** **14 27 07.9 -0.2**
baz=153
H23A Clabaugh Cattl 153.00 346⇑PKiKP **PKPbc** **14 27 07.9 -0.2**
baz=153
RSSD Black Hills 153.08 344 PKiKP **PKPdf** **14 27 01.7 +0.6**
RSSD *e* 14 27 08.3
RSSD Black Hills 153.08 344 PKPdf **PKPdf** **14 27 01.7 +0.6**
RSSD *e*PKPbc **PKPbc** **14 27 08.3 -0.1**
RLMT Red Lodge 153.14 352⇑PKiKP **PKPbc** **14 27 08.4 -0.1**
baz=153
DLMT Dillon 153.18 358 *e*PKPbc **PKPbc** **14 27 09.2 +0.7**
H22A Clearmont 153.18 348⇓PKiKP **PKiKP** **14 27 08.6 0.0**
baz=153
G16A Moss Hill, Enn 153.27 356⇓PKiKP **PKPbc** **14 27 08.2 -0.5**
baz=153
H21A Big Horn, Sher 153.28 349⇑PKiKP **PKPbc** **14 27 08.3 -0.5**
baz=153
G14A Jackson 153.32 359⇓PKiKP **PKPbc** **14 27 08.5 -0.4**
baz=153
G15A Dillon 153.37 357⇓PKiKP **PKiKP** **14 27 09.4 +0.3**
baz=153
BGNE Belgrade 153.39 333⇑PKiKP **PKPbc** **14 27 09.0 0.0**
baz=153
G13A Cobalt 153.47 0⇑PKiKP **PKPbc** **14 27 08.9 -0.3**
baz=153
I24A Kuemmerle Ranc 153.48 345⇓PKiKP **PKPbc** **14 27 08.8 -0.4**
baz=153
H18A Shoshone NF, C 153.63 353⇑PKiKP **PKPbc** **14 27 09.2 -0.4**
baz=154
H16A Russell Place, 153.76 355⇓PKiKP **PKiKP** **14 27 09.9 0.0**
baz=154

I22A	9 Mile Ranch, baz=154	153.88	347	⇑PKiKP	PKPbc	14 27 09.9	-0.2
H14A	Leadore baz=154	153.94	359	⇑PKiKP	PKPbc	14 27 10.2	-0.1
J24A	Dixon Ranch, L baz=154	153.99	344	⇓PKiKP	PKPbc	14 27 10.2	-0.1
H13A	Challis baz=154	154.00	0	⇑PKiKP	PKiKP	14 27 10.4	0.0
H17A	Grant Village baz=154	154.00	354	⇓PKPab	PKPab	14 27 23.1	-0.6
H12A	Diamond D Ranc baz=154	154.01	1	⇓PKiKP	PKPbc	14 27 10.4	0.0
I21A	Big Trails, Te baz=154	154.11	349	⇓PKiKP	PKPbc	14 27 10.6	0.0
I20A	Worland baz=154	154.13	350	⇑PKiKP	PKiKP	14 27 10.7	+0.1
K26A	Motz Farm, Whi baz=154	154.15	341	⇓PKPab	PKPab	14 27 23.4	-0.7
I19A	Meeteetse baz=154	154.17	352	⇓PKiKP	PKPbc	14 27 10.8	0.0
J22A	Midwest baz=154	154.34	347	⇑PKiKP	PKPbc	14 27 10.8	-0.3
I17A	Pilgrim Ck. baz=154	154.47	354	⇓PKiKP	PKiKP	14 27 11.6	+0.1
J21A	Lysite baz=154	154.59	349	⇑PKiKP	PKPbc	14 27 11.6	-0.1
I16A	Newdale baz=154	154.60	356	⇑PKPab	PKPab	14 27 26.5	+0.4
I18A	Diamond G Ranc baz=154	154.61	353	⇓PKPab	PKPab	14 27 26.5	+0.2
I14A	Mackay baz=155	154.63	359	⇑PKPab	PKPab	14 27 26.4	+0.1
I13A	Wildhorse Cree baz=155	154.65	0	⇑PKiKP	PKiKP	14 27 12.3	+0.4
I12A	Atlanta baz=155	154.76	2	⇓PKPab	PKPab	14 27 27.2	+0.4
J19A	Crowheart baz=155	154.94	351	⇓PKPab	PKPab	14 27 27.4	-0.2
HLID	Hailey baz=155	155.00	1	⇓PKPab	PKPab	14 27 27.8	-0.1
K22A	Casper baz=155	155.07	347	⇑PKPab	PKPab	14 27 27.8	-0.4
MFID	Camas Ranch baz=155	155.11	3	⇓PKPab	PKPab	14 27 28.1	-0.2
J18A	Kendall Valley baz=155	155.12	353	⇑PKPab	PKPab	14 27 28.6	+0.1
K21A	Alcova baz=155	155.24	348	⇓PKiKP	PKPdf	14 27 12.5	+8.4
K19A	Absolon Red Bu baz=155	155.34	351	⇑PKPab	PKPab	14 27 28.9	-0.4
L23A	Garrett baz=155	155.39	345	⇓PKiKP	PKPdf	14 27 13.1	+8.7
PDAR	Pinedale Array	155.50	352	PKP	PKPdf	14 27 03.8	-0.7
PDAR	Pinedale Array comp=Z,1.1nm,1.0s,baz=333,slow=2.0,SNR=6.7	155.50	352	PKP	PKPdf	14 27 03.8	-0.7
K16A	Soda Springs baz=156	155.64	356	⇑PKPab	PKPab	14 27 30.4	-0.2
L22A	Ellis Ranch, M baz=156	155.64	346	⇑PKPab	PKPab	14 27 31.1	+0.4
K18A	Toltan Ranch, baz=156	155.69	353	⇑PKPab	PKPab	14 27 30.0	-0.9
M24A	Cheyenne baz=156	155.76	343	⇓PKPab	PKPab	14 27 30.0	-1.2
L21A	Rawlins baz=156	155.91	348	⇑PKPab	PKPab	14 27 31.2	-0.7
K14A	Jones Ranch, D baz=156	156.01	358	⇑PKPab	PKPab	14 27 32.0	-0.1
L20A	Wamsutter baz=156	156.05	349	⇑PKPab	PKPab	14 27 32.0	-0.5
M21A	Separation Pea baz=156	156.25	347	⇑PKPab	PKPab	14 27 32.5	-0.9
M22A	Cedar Creek Ra baz=156	156.28	346	⇑PKPab	PKPab	14 27 33.0	-0.5
HWUT	Hardware Ranch	156.86	355	*e*PKPab	PKPab	14 27 36.2	+0.3
M17A	Scullys Gap (B baz=157	156.91	353	⇑PKPab	PKPab	14 27 35.6	-0.6
N21A	Black Mountain baz=157	157.10	347	⇑PKPab	PKPab	14 27 36.1	-0.9
N20A	Spence Gulch, baz=157	157.17	349	⇑PKPab	PKPab	14 27 37.3	0.0
O22A	Kremmling baz=157	157.44	345	⇑PKPab	PKPab	14 27 38.1	-0.5
ISCO	Idaho Springs baz=158	157.53	343	⇓PKPab	PKPab	14 27 38.5	-0.5
P23A	Jefferson baz=158	157.99	343	⇑PKPab	PKPab	14 27 41.0	-0.1
P22A	Eagle baz=158	158.03	345	⇑PKPab	PKPab	14 27 41.4	+0.3
R26A	Arlington baz=158	158.18	337	⇑PKPab	PKPab	14 27 41.3	-0.3
DUG	Dugway baz=158	158.34	357	⇑PKPab	PKPab	14 27 42.3	+0.1
Q22A	Crested Butte, baz=159	158.76	344	⇓PKPab	PKPab	14 27 44.4	0.0
S26A	Kim baz=159	158.79	336	⇑PKPab	PKPab	14 27 44.4	+0.1
R23A	Moffat baz=159	159.09	341	⇓PKPab	PKPab	14 27 45.0	-0.7
SRU	San Rafael baz=159	159.22	352	⇓PKPab	PKPab	14 27 46.4	+0.2
R22A	Saguache, Gunn baz=159	159.31	343	⇑PKPab	PKPab	14 27 46.3	-0.5
Q16A	Castle Valley baz=159	159.49	353	⇑PKPab	PKPab	14 27 47.6	+0.2
X31A	McDonald Ranch baz=160	159.59	325	⇓PKPab	PKPab	14 27 48.3	+0.5
Y32A	R-V Farms, Ver baz=160	159.75	323	⇓PKPab	PKPab	14 27 49.3	+0.8
S22A	4UR Ranch, Cre baz=160	159.79	343	⇓PKPab	PKPab	14 27 49.3	+0.5
NVAR	Mina Array Bea	159.80	10	PKP	PKPdf	14 27 09.7	-0.3
NVAR				PKPab	PKPab	14 27 49.2	+0.5
NVAR	Mina Array Bea comp=Z,0.3nm,0.3s,baz=111,slow=5.1,SNR=3.0	159.80	10	PKP	PKPdf	14 27 09.7	-0.3
NVAR				PKPab	PKPab	14 27 49.2	+0.5
T24A	comp=Z,2.7nm,0.8s,baz=322,slow=3.1,SNR=5.8 Torres, Weston baz=160	159.85	339	⇑PKPab	PKPab	14 27 49.2	0.0
S20A	Disappointment baz=160	160.09	347	⇑PKPab	PKPab	14 27 50.1	+0.1
S21A	Coal Bank Pass baz=160	160.12	345	⇑PKPab	PKPab	14 27 50.7	+0.4
R11A	Troy Canyon, C baz=160	160.17	3	⇑PKPab	PKPab	14 27 49.8	-0.5
U25A	Circle Dot Ran baz=160	160.22	336	⇓PKPab	PKPab	14 27 50.3	-0.3
Z32A	Haskell baz=160	160.27	321	⇑PKPab	PKPab	14 27 51.5	+0.8
T22A	Edith baz=160	160.49	343	⇓PKPab	PKPab	14 27 52.0	+0.1
Z31A	Sharp Cattle R baz=161	160.65	322	⇓PKPab	PKPab	14 27 53.0	+0.5
T21A	Navajo Lake baz=161	160.69	344	⇓PKPab	PKPab	14 27 52.9	+0.3
MVCO	Mesa Verde baz=161	160.71	346	⇓PKPab	PKPab	14 27 53.1	+0.3
ABTX	Abilene, Hawle baz=161	160.84	320	⇑PKPab	PKPab	14 27 53.7	+0.3
U21A	Nageezi baz=161	161.25	344	⇑PKPab	PKPab	14 27 56.0	+0.9
232A	Coleman baz=161	161.35	318	⇓PKPab	PKPab	14 27 56.4	+0.9
V22A	San Miguel Ran baz=162	161.52	341	⇓PKPab	PKPab	14 27 57.1	+0.7
231A	Bronte baz=162	161.73	320	⇑PKPab	PKPab	14 27 57.6	+0.4
332A	Millersview baz=162	161.74	317	⇓PKPab	PKPab	14 27 57.7	+0.4
V20A	Brimhall baz=162	162.05	345	⇓PKPab	PKPab	14 27 59.1	+0.5
U15A	North Rim baz=162	162.06	355	⇑PKPab	PKPab	14 27 58.7	0.0
MPMC	Manual Prospec baz=162	162.24	9	⇑PKPab	PKPab	14 27 59.7	+0.2
Y25A	Mesa, Roswell baz=162	162.48	333	⇑PKPab	PKPab	14 28 01.1	+0.6
330A	Mertzon baz=163	162.62	320	⇑PKPab	PKPab	14 28 01.5	+0.3
532A	Rocksprings baz=163	162.65	315	⇓PKPab	PKPab	14 28 01.3	-0.1
W20A	Ramah baz=163	162.70	344	⇑PKPab	PKPab	14 28 01.5	0.0
Z26A	Caprock baz=163	162.71	330	⇓PKPab	PKPab	14 28 01.4	-0.1
431A	Sonora baz=163	162.76	317	⇓PKPab	PKPab	14 28 02.4	+0.6
Z25A	Roswell baz=163	163.04	332	⇓PKPab	PKPab	14 28 03.2	+0.3
329A	Wagon Wheel Ra baz=163	163.05	322	⇓PKPab	PKPab	14 28 03.4	+0.4
GSC	Goldstone baz=163	163.08	8	⇓PKPab	PKPab	14 28 03.5	+0.5
430A	Baggett Ranch, baz=163	163.09	319	⇑PKPab	PKPab	14 28 03.6	+0.3
X21A	Alamocita Cree baz=163	163.14	342	⇑PKPab	PKPab	14 28 04.2	+0.7
X20A	Quemado baz=163	163.25	344	⇓PKPab	PKPab	14 28 04.4	+0.5
Y21A	Point of Rocks baz=164	163.51	341	⇓PKPab	PKPab	14 28 04.7	-0.5
631A	Perdido Creek baz=164	163.56	314	⇑PKPab	PKPab	14 28 05.6	+0.4
328A	Wristen Ranch, baz=164	163.60	324	⇓PKPab	PKPab	14 28 05.3	-0.1
Z23A	Rita Site, Whi baz=164	163.69	336	⇓PKPab	PKPab	14 28 05.9	+0.1
226B	Tecolote Peak, baz=164	163.78	328	⇑PKPab	PKPab	14 28 06.1	-0.1
Y20A	Horse Springs, baz=164	163.82	343	⇑PKPab	PKPab	14 28 06.6	+0.1
529A	Stev Forest Ra baz=164	164.16	319	⇓PKPab	PKPab	14 28 07.7	-0.3
528A	Cox Ranch, San baz=164	164.48	321	⇑PKPab	PKPab	14 28 09.6	+0.2
Z20A	Nine Sixteen R baz=165	164.62	342	⇓PKPab	PKPab	14 28 10.7	+0.8
426A	McDonald Obser baz=165	164.82	325	⇑PKPab	PKPab	14 28 10.9	-0.1
324A	Moseley Ranch, baz=165	164.93	330	⇑PKPab	PKPab	14 28 11.5	+0.1
628A	Black Gap, Mar baz=165	165.02	319	⇑PKPab	PKPab	14 28 11.9	+0.2
526A	Mary Lane Ranc baz=165	165.32	324	⇑PKPab	PKPab	14 28 12.4	-0.7
627A	Terlingua Ranc baz=165	165.35	320	⇓PKPab	PKPab	14 28 13.5	+0.2
TXAR	Lajitas Array	165.61	321	PKP	PKPdf	14 27 14.8	-1.0
TXAR				PKPab	PKPab	14 28 15.3	+0.9
TXAR	Lajitas Array comp=Z,0.8nm,0.6s,baz=57,slow=3.3,SNR=8.6	165.61	321	PKP	PKPdf	14 27 14.8	-1.0
TXAR				PKPab	PKPab	14 28 15.3	+0.9
626A	comp=Z,3.2nm,0.9s,baz=72,slow=4.1,SNR=16 Big Bend Ranch baz=166	165.72	322	⇓PKPab	PKPab	14 28 14.6	-0.2

*CSEM **15** 14:10:02.0, 42°.27N×13°.50E, h10km, MD1.8/6, After ROM*
ROM 15 14:10:02.0±0.1, 42°.27N×13°.50E, h10km, Md1.8/6, MI1.5/3, Error ellipse: s-maj=1.6km s-min=0.7km az=52.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAGN	Fagnano	0.06	93	Pg	Pg	14 10 04.5	+0.3
FAGN				Sg	Sg	14 10 05.9	+0.1
FAGN	Fagnano	0.06	93	Pg	Pg	14 10 04.5	+0.3
FAGN				Sg	Sg	14 10 06.0	+0.2
	589nm,0.3s						
FAGN	Fagnano	0.06	93	Pg	Pg	14 10 04.5	+0.3
FAGN				Sg	Sg	14 10 06.0	+0.2
	589nm,0.3s						
AQU	L'Aquila	0.11	318	Pg	Pg	14 10 05.2	+0.3
AQU				Sg	Sg	14 10 07.4	+0.5
AQU	L'Aquila	0.11	318	Pg	Pg	14 10 05.2	+0.3
AQU				Sg	Sg	14 10 07.7	+0.8
	123nm,0.3s						
AQU	L'Aquila	0.11	318	Pg	Pg	14 10 05.2	+0.3
AQU				Sg	Sg	14 10 07.7	+0.8
	123nm,0.3s						
VCEL	Villa Celiera	0.28	63	Pg	Pb	14 10 08.8	-0.5
VCEL				Sg	Sb	14 10 13.1	-1.1
	50nm,0.3s						
VCEL	Villa Celiera	0.28	63	Pg	Pb	14 10 08.8	-0.5
VCEL				Sg	Sb	14 10 13.0	-1.2
	50nm,0.3s						
VCEL	Villa Celiera	0.28	63	Pg	Pb	14 10 08.8	-0.5
VCEL				Sg	Sb	14 10 13.0	-1.2
	50nm,0.3s						
TERO	Teramo	0.36	12	Pg	Pg	14 10 09.5	+0.2
TERO				Sg	Sg	14 10 14.9	+0.7
TERO	Teramo	0.36	12	Pg	Pg	14 10 09.5	+0.2
TERO				Sg	Sg	14 10 15.3	+1.1
TERO	Teramo	0.36	12	Pg	Pg	14 10 09.5	+0.2
TERO				Sg	Sg	14 10 15.3	+1.1
INTR	Introdacqua	0.39	131	Pg	Pg	14 10 10.1	+0.2
INTR				Sg	Sg	14 10 16.1	+0.9
	33nm,0.3s						
INTR	Introdacqua	0.39	131	Pg	Pg	14 10 10.2	+0.3
INTR				Sg	Sg	14 10 16.3	+1.1
	33nm,0.3s						
INTR	Introdacqua	0.39	131	Pg	Pg	14 10 10.2	+0.3
INTR				Sg	Sg	14 10 16.3	+1.1
	33nm,0.3s						
LPEL	Lama dei Pelig	0.55	114	Pg	Pg	14 10 13.0	+0.2
LPEL				Sg	Sb	14 10 21.3	-0.6
LPEL	Lama dei Pelig	0.55	114	Pg	Pg	14 10 13.0	+0.2
LPEL				Sg	Sb	14 10 21.3	-0.6

*CSEM **15** 14:27:48.5±0.3, 38°.56N×37°.33E, h2km, MD2.9, Error ellipse: s-maj=5.1km s-min=3.4km az=117.0*
*ISK **15** 14:27:49.9, 38°.57N×37°.50E, h5km, MD2.9*
*DDA **15** 14:27:51.0, 38°.64N×37°.53E, h7km, MD2.9*
ISC 15 14:27:51.4±1.6, 38°.62N±0°.04×37°.54E±0°.04, h3km±11km, n16, σ0°.68/26, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKCD	Akcadag	0.44	137	*i* P	**Pg**	**14 27 59.3**	**-0.6**
AKCD				*i* S	**Sg**	**14 28 06.6**	**+1.0**
AKCD	Akcadag	0.44	137	*i* P	**Pg**	**14 27 59.3**	**-0.6**
AKCD				*i* S	**Sg**	**14 28 06.6**	**+1.0**
SARI	SarD1z-Kayseri	0.66	276	*e*PG	**Pn**	**14 28 06.6**	**-1.3**
SARI				*e*SG	**Sn**	**14 28 20.8**	**+1.9**
MYA	Malataya	0.75	112	*e*PG	**Pg**	**14 28 05.3**	**-0.6**
MYA	Malataya	0.75	112	*e*Pg	**Pg**	**14 28 05.3**	**-0.6**
MALT	Malatya	0.76	113	*e*PG	**Pg**	**14 28 05.6**	**-0.4**
MALT				*e*SG	**Sb**	**14 28 17.9**	**-0.1**
MALT	Malatya	0.76	113	*e*Pg	**Pg**	**14 28 05.6**	**-0.4**
MALT				*e*Sg	**Sb**	**14 28 18.0**	**-0.1**
KEMA	Kemaliye	0.99	48	*e*P	**Pg**	**14 28 10.3**	**0.0**
KEMA				*e*S	**Sn**	**14 28 26.5**	**-0.3**
KEMA	Kemaliye	0.99	48	*e*P	**Pg**	**14 28 10.3**	**0.0**
KEMA				*e*S	**Sn**	**14 28 26.5**	**-0.3**
ELZG	Elazig	1.14	96	*e*P	**Pg**	**14 28 12.9**	**-0.3**
ELZG				*e*S	**Sn**	**14 28 30.7**	**+0.1**
ELZG	Elazig	1.14	96	*e*P	**Pg**	**14 28 12.9**	**-0.3**
ELZG				*e*S	**Sn**	**14 28 30.7**	**+0.1**
ILIC	ilic-Erzincan	1.16	43	*e*PN	**Pn**	**14 28 14.4**	**-0.2**
ILIC	ilic-Erzincan	1.16	43	*e*Pn	**Pn**	**14 28 14.4**	**-0.2**
GZT	Gaziantep	1.26	179	*e*P	**Pn**	**14 28 15.6**	**-0.4**
GZT				*e*S	**Sn**	**14 28 34.3**	**+0.8**
PTK	Pertek	1.47	79	*e*PN	**Pn**	**14 28 18.9**	**-0.1**
PTK	Pertek	1.47	79	*e*Pn	**Pn**	**14 28 18.9**	**-0.1**

TAP 15 14:28:22.4, 24°.38N×121°.65E, h23km, ML2.8, 3C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENA	Nanau baz=61	0.09	58	⇑*i* P	Pb	14 28 27.0	+0.2
ENA				*i* S	Sb	14 28 30.0	+0.3
	baz=61						
NNS	Nan Shan baz=283	0.26	283	⇑*i* P	Pb	14 28 29.0	+0.1
NNS				*e*S	Sb	14 28 33.3	-0.1
	baz=283						
ENTT	Nioudou baz=347	0.27	343	*i* P	Pb	14 28 29.1	+0.2
ENTT				*i* S	Sb	14 28 33.6	+0.2
	baz=347						
TWC	Suao baz=39	0.29	38	*i* P	Pb	14 28 29.4	+0.2
TWC				*i* S	Sb	14 28 33.9	+0.2
	baz=39						
TWD	Chiawan baz=189	0.30	190	*i* P	Pb	14 28 29.1	-0.2
TWD				S	Sb	14 28 34.3	+0.2
	baz=189						
TWE	Neicheng baz=7.0	0.34	2	*i* P	Pb	14 28 30.1	+0.1
TWE				S	Sb	14 28 35.3	+0.2
	baz=7.0						
ILA	Ilan baz=12	0.39	13	*e*P	Pb	14 28 31.0	+0.2
ILA				S	Sb	14 28 37.3	+0.8
	baz=12						
NSK	Sanguang baz=318	0.40	318	P	Pb	14 28 31.1	+0.1
NSK				S	Sb	14 28 36.7	-0.2
	baz=318						
HWA	Hwalien baz=193	0.40	186	P	Pb	14 28 31.3	+0.4
HWA				S	Sb	14 28 38.1	+1.4
	baz=193						
TWT	Tachien baz=252	0.45	254	P	Pb	14 28 32.3	+0.3
TWT				S	Sb	14 28 39.1	+0.5
	baz=252						
ESL	Shilin baz=195	0.60	200	⇑*i* P	Pb	14 28 34.0	-0.2
ESL				*e*S	Sb	14 28 42.8	+0.5
	baz=195						
NSTT	Nanjuang baz=286	0.65	293	*e*P	Pn	14 28 36.0	-0.1
NSTT				*e*S	Sb	14 28 44.3	+0.6
	baz=286						
TWB1	Santiao Chiao baz=25	0.70	26	*e*P	Pb	14 28 36.2	+0.3
TWB1				*e*S	Sb	14 28 45.0	0.0
	baz=25						
NWF	Wu-fen Shan baz=8.0	0.70	9	*i* P	Pb	14 28 36.4	+0.4
NWF				S	Sb	14 28 45.6	+0.3
	baz=8.0						
NCU	National Centr baz=323	0.73	324	*e*P	Pn	14 28 37.4	+0.2
TWS1	Kuangyinshan baz=348	0.75	343	P	Pn	14 28 37.3	-0.2
TWS1				*e*S	Sn	14 28 48.5	+0.3
	baz=348						
TWQ1	Liyutan baz=268	0.80	268	*e*P	Pn	14 28 38.8	+0.5
TWQ1				*e*S	Sn	14 28 49.9	+0.3
	baz=268						
SMLT	Sun Moon Lake baz=235	0.85	235	*e*P	Pn	14 28 40.1	+1.0
TYC	Yuchr baz=238	0.87	237	*e*P	Pn	14 28 39.2	0.0
TYC				*e*S	Sb	14 28 50.1	+0.2
	baz=238						
TWY	Chenhua baz=344	0.89	357	*e*P	Pn	14 28 40.6	+1.0
EHY	Hungye baz=192	0.92	199	*e*P	Pb	14 28 39.6	-0.1
EHY				*e*S	Sn	14 28 52.4	0.0
	baz=192						
TWF1	Yuli baz=199	1.07	198	*e*P	Pb	14 28 42.5	+0.2
TWF1				*e*S	Sn	14 28 56.2	0.0
	baz=199						
CHN5	Tsauling baz=240	1.18	229	*e*P	Pb	14 28 45.3	+1.0
CHN5				*e*S	Sb	14 29 01.5	+2.2
	baz=240						
CHN4	Tsaushan baz=238	1.41	224	*e*P	Pn	14 28 47.1	+0.5
CHN4				*e*S	Sb	14 29 08.0	+2.4
	baz=238						
WTP	Ta-pu baz=207	1.48	220	*e*P	Pb	14 28 49.8	+0.6
WTP				*e*S	Sb	14 29 10.0	+2.4
	baz=207						
CHN1	Nanshi baz=210	1.57	221	*e*P	Pb	14 28 52.0	+1.1
CHN1				*e*S	Sb	14 29 13.3	+2.9
	baz=210						

JMA 15 14:28:55.3±0.2, 24°.96N×123°.16E, h114km±3km, M3.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.51	195	P	Pn	14 29 12.8	+0.1
YOJ				S	Sn	14 29 26.3	+0.6
IRIF	Iriomote-Funau	0.81	140	P	Pn	14 29 15.0	0.0
IRIF				*e*S	Sn	14 29 30.4	+0.6
JKRS	Kuro-shima	1.06	133	P	Pn	14 29 17.8	+0.4
JKRS				S	Sn	14 29 34.6	+0.5
JIJ	Ishigaki jima	1.07	123	P	Pn	14 29 17.6	0.0
JIJ				S	Sn	14 29 33.8	-0.6
HATJ	Hateruma jima	1.07	147	P	Pn	14 29 17.9	+0.3
HATJ				*e*S	Sn	14 29 34.9	+0.5
JTJ	Tarama	1.44	102	P	Pn	14 29 22.1	+0.5
JTJ				*e*S	Sn	14 29 41.9	+0.4
JMJ	Miyako jima 2	1.94	94	*e*S	Sn	14 29 53.9	+1.4
JOGS	Gusukube	2.05	95	P	Pn	14 29 30.2	+1.1
JOGS				*e*S	Sn	14 29 56.3	+1.4
JKE	Kume jima 2	3.54	67	P	Pn	14 29 48.7	+0.1
JKE				*e*S	Sn	14 30 31.0	+1.1
JIH	Iheya	4.79	63	P	Pn	14 30 04.3	-1.1
JOW	Kunigami	4.97	67	P	Pn	14 30 06.3	-1.5

MEX 15 14:30:58.3±1.1, 16°.88N×94°.70W, h118km±9km, MD4.2, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.28	321	*i* P	Pn	14 31 13.3	-1.6
CMIG				*i* S	Sn	14 31 25.5	-1.9
TGIG		1.52	93	*i* P	Pn	14 31 24.5	-1.3
TGIG				*e*S	Sn	14 31 44.7	-2.0
HUIG	Huatulco	1.74	231	*i* P	Pn	14 31 26.1	-2.4
HUIG				*i* S	Sn	14 31 50.8	-0.7
VHO	Vista Hermosa	1.95	276	*i* P	Pn	14 31 30.6	-0.8
VHO				*i* S	Sn	14 31 55.4	-1.2
CCIG	Comitan	2.53	103	*i* P	Pn	14 31 37.9	-0.7
CCIG				*i* S	Sn	14 32 08.5	-1.1
THIG		3.05	130	*i* P	Pn	14 31 43.2	-2.0
THIG				*i* S	Sn	14 32 19.4	-2.0
UTMO	Huajuapan	3.11	288	*i* P	Pn	14 31 44.8	-1.4
UTMO				*i* S	Sn	14 32 20.9	-2.4
PNIG	Pinotepa	3.32	262	*i* P	Pn	14 31 45.9	-2.8
PNIG				*i* S	Sn	14 32 25.3	-2.5

IDC 15 14:33:23.8±9.2, 23°.20N×144°.03E, h64km±63km, mb3.2/5, mb1 3.4/7, mb1mx3.2/25, mbtmp3.3/7, ML3.4/2, MS3.5/1, Ms1 3.5/1, ms1mx2.6/14, Error ellipse: s-maj=65.8km s-min=36.0km az=179.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	4.22	337	P	Pn	14 34 25.3	-0.4
	2.0nm,0.3s,baz=75,slow=20,SNR=4.3						
CBIJ				S	Sn	14 35 14.4	+0.6
	6.0nm,0.3s,baz=359,slow=17,SNR=2.9						
CBIJ				LR	LR	14 36 00.5	
	comp=Z,630nm,21.0s,baz=243,slow=37						
KSRS	Korea Array	19.84	319	P	Pn	14 37 50.5	-0.9
	0.1nm,0.3s,baz=144,slow=10,SNR=3.4						
ZALV	Zelesovo Beam	53.53	321	P	P	14 42 36.9	-0.9
	0.3nm,0.3s,baz=104,slow=6.1,SNR=2.4						
MKAR	Makanchi Array	54.27	312	P	P	14 42 44.0	+0.6
	0.4nm,0.6s,baz=88,slow=9.9,SNR=5.3						
ILAR	Eielson Array	60.35	27	P	P	14 43 25.6	-0.2
	0.2nm,0.6s,baz=264,slow=5.4,SNR=4.3						
YKA	Yellowknife Ar	74.76	28	P	P	14 44 57.2	+0.4
	0.1nm,0.6s,baz=299,slow=5.8,SNR=3.5						
FINES	FINESS Array B	82.17	335	P	P	14 45 37.0	-0.4
	1.8nm,0.9s,baz=70,slow=6.7,SNR=4.4						

*ISCJB **15** 15:03:48.9±0.6, 38°.50N±0°.03×29°.68E±0°.04, h9km±14km, Error ellipse: s-maj=5.6km s-min=4.3km az=26.3*
*CSEM **15** 15:03:48.6±0.2, 38°.46N×29°.70E, h5km, Error ellipse: s-maj=3.3km s-min=2.8km az=121.0*
*ISK **15** 15:03:48.3, 38°.49N×29°.67E, h8km, MD2.6*
*DDA **15** 15:03:49.2, 38°.48N×29°.63E, h7km, MD2.6*
ISC 15 15:03:48.7±1.0, 38°.47N±0°.03×29°.69E±0°.03, h10km±8km, n16, σ0°.42/31, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHAL	Karahalli	0.19	236	*i* P	**Pg**	**15 03 52.6**	**-0.1**

KHAL				*i* S		**Sg**	**15 03 55.5**	**0.0**
KHAL	**Karahalli**	**0.19**	**236**	*i* P		**Pg**	**15 03 52.6**	**-0.1**
KHAL				*i* S		**Sg**	**15 03 55.5**	**0.0**
KHL	**Karahalli**	**0.20**	**221**	*e*PG		**Pg**	**15 03 52.7**	**-0.2**
KHL				*e*SG		**Sg**	**15 03 56.3**	**+0.5**
KHL	**Karahalli**	**0.20**	**221**	*e*Pg		**Pg**	**15 03 52.7**	**-0.2**
KHL				*e*Sg		**Sg**	**15 03 56.3**	**+0.5**
GDZ	**Gediz**	**0.64**	**345**	*e*P		**Pg**	**15 04 01.3**	**+0.2**
GDZ				*e*S		**Sb**	**15 04 10.7**	**-0.4**
GDZ	**Gediz**	**0.64**	**345**	*e*P		**Pg**	**15 04 01.3**	**+0.2**
GDZ				*e*S		**Sb**	**15 04 10.7**	**-0.4**
SHUT	**Suhut-Afyon**	**0.68**	**83**	*e*PG		**Pg**	**15 04 01.4**	**-0.5**
SHUT				*e*SG		**Sb**	**15 04 12.4**	**+0.1**
SHUT	**Suhut-Afyon**	**0.68**	**83**	*e*Pg		**Pg**	**15 04 01.4**	**-0.5**
SHUT				*e*Sg		**Sb**	**15 04 12.4**	**+0.1**
KULA	**Kula-Manisa**	**0.81**	**273**	*e*PG		**Pb**	**15 04 04.7**	**-0.2**
KULA				*e*SG		**Sb**	**15 04 15.1**	**-0.8**
KULA	**Kula-Manisa**	**0.81**	**273**	*e*Pg		**Pb**	**15 04 04.7**	**-0.2**
KULA				*e*Sg		**Sb**	**15 04 15.1**	**-0.8**
DNZL	**Cakiroluk**	**0.93**	**213**	*e*P		**Pg**	**15 04 06.5**	**-0.2**
DNZL				*e*S		**Sn**	**15 04 22.6**	**+1.1**
DNZL	**Cakiroluk**	**0.93**	**213**	*e*P		**Pg**	**15 04 06.5**	**-0.2**
DEMI	**Demirci**	**0.95**	**307**	*e*P		**Pb**	**15 04 07.4**	**+0.1**
DEMI				*e*S		**Sb**	**15 04 19.7**	**-0.3**
DEMI	**Demirci**	**0.95**	**307**	*e*P		**Pb**	**15 04 07.4**	**+0.1**
DEMI				*e*S		**Sb**	**15 04 19.7**	**-0.3**
TVSB	**Tavsanli**	**0.99**	**350**	*e*PG		**Pg**	**15 04 07.5**	**-0.3**
TVSB				*e*SG		**Sb**	**15 04 21.2**	**-0.1**
TVSB	**Tavsanli**	**0.99**	**350**	*e*Pg		**Pg**	**15 04 07.5**	**-0.3**
TVSB				*e*Sg		**Sb**	**15 04 21.2**	**-0.1**

IDC ***15*** *15:30:29.4±1.9,9˝.36S×124˚.79E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.6/18, mbtmp3.7/4, ML3.6/1, MS2.9/1, Ms1 2.9/1, ms1mx2.1/38, Error ellipse: s-maj=278.8km s-min=40.4km az=60.0*

DJA ***15*** *15:30:35.6±0.4,9˚S±5˚×12˚5E±˚, h10km, M4.3/5, mb4.5/5, mB5.1/3, MLv4.1/5, Mw(mB)4.5/3*

ISC 15 15:30:34.2±1.1,9˚.5S±0˚.1×125˚.1E±0˚.2, h33km, n12, σ1§39/9, mb3.8/4, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**2.96**	**286**	P	**Pb**	**15 31 26.3**	**+0.1**
BBSI	**Bau Bau**	**4.69**	**327**	P	**Pn**	**15 31 44.4**	**+1.7**
KDI	**Kendari**	**6.01**	**336**	P	**Pn**	**15 32 00.0**	**-0.9**
	39nm,0.8s,504nm0.1nm						
BKSI	**Bulukumba**	**6.44**	**309**	P	Pn	15 32 12.6	+5.9
	9.2nm,0.7s,0.0nm						
KAPI	**Kappang**	**6.92**	**309**	LR	LR	15 34 41.2	
	comp=Z,107nm,20.2s,baz=11,slow=38						
LUWI	**Luwuk**	**8.69**	**344**	P	**Pn**	**15 32 39.4**	**+1.7**
	184nm,0.5s,3µm						
IGBI	**Denpasar**	**9.86**	**273**	P	Pn	15 33 05.8	+12
ASAR	**Alice Springs**	**16.43**	**150**	Pn	**P**	**15 34 24.8**	**-0.1**
	0.2nm,0.3s,baz=321,slow=11,SNR=60						
ASAR				Sn	**Sn**	**15 37 24.7**	**+0.9**
	0.1nm,0.3s,baz=316,slow=21,SNR=5.8						
STKA	**Stephens Creek**	**27.03**	**148**	P	P	15 36 19.4	+5.9
	2.8nm,1.1s,baz=323,slow=14,SNR=3.4						
MKAR	**Makanchi Array**	**67.77**	**330**	P	**P**	**15 41 28.0**	**-0.6**
	0.7nm,0.5s,baz=133,slow=7.0,SNR=6.0						
ZALV	**Zalesovo Beam**	**71.76**	**336**	P	**P**	**15 41 51.3**	**-1.7**
	0.5nm,0.6s,baz=129,slow=2.0,SNR=3.6						
KURBB	**Kurchatov Arra**	**72.19**	**331**	P	**P**	**15 41 54.8**	**-0.9**
	0.3nm,0.5s,baz=137,slow=5.2,SNR=6.6						

IDC ***15*** *15:32:44.5±1.6,29˚.72N×95˚.34E, h0km, mb3.3/4, mb1 3.3/5, mb1mx3.2/27, mbtmp3.3/5, ML3.6/1, Error ellipse: s-maj=69.9km s-min=23.4km az=64.0*

ISC 15 15:32:45.3±1.2,29˚.6N±0˚.1×95˚.2E±0˚.2, h10km, n6, σ0§94/7, mb3.5/3, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**4.97**	**217**	*e*P	**Pg**	**15 34 20.0**	**-0.5**
SHL				*e*S	**Sg**	**15 35 25.0**	**+0.1**
MKAR	**Makanchi Array**	**19.87**	**333**	P	**P**	**15 37 17.8**	**+1.2**
	0.2nm,0.3s,baz=151,slow=11,SNR=2.7						
SONM	**Songino Array**	**20.16**	**22**	P	**P**	**15 37 18.7**	**-1.2**
	0.5nm,0.5s,baz=212,slow=9.8,SNR=6.7						
KURBB	**Kurchatov Arra**	**24.43**	**334**	P	**P**	**15 38 04.2**	**+0.2**
	0.9nm,0.7s,baz=144,slow=10,SNR=11						
ZALV	**Zalesovo Beam**	**25.46**	**346**	P	**P**	**15 38 13.3**	**+0.1**
	0.5nm,0.3s,baz=162,slow=10,SNR=7.0						
ASAR	**Alice Springs**	**64.75**	**141**	P	**P**	**15 43 24.8**	**+0.7**
	0.2nm,0.8s,baz=324,slow=6.3,SNR=3.7						

IDC ***15*** *15:42:24.3±1.3,38˚.20N×1˚.15W, h0km, mb3.3/4, mb1 3.4/6, mb1mx3.2/32, mbtmp3.3/6, ML3.6/2, MS2.8/1, Ms1 2.9/1, ms1mx2.4/27, Error ellipse: s-maj=27.2km s-min=16.0km az=27.0*

CSEM ***15*** *15:42:24.6±0.1, 38˚.29N×1˚.18W, h10km, ML4.2/39, Error ellipse: s-maj=2.5km s-min=1.6km az=144.0*

CRAAG ***15*** *15:42:25.0, 38˚.25N×1˚.15W, Mw3.7*

LDG ***15*** *15:42:25.3±0.1, 38˚.27N×1˚.14W, h2km, Ml3.7/29, Error ellipse: s-maj=2.1km s-min=1.2km az=135.0*

MDD ***15*** *15:42:25.9±0.2, 38˚.24N×1˚.16W, h10km, mbLg3.7/37, Error ellipse: s-maj=2.9km s-min=2.0km az=115.0, PRXIMO*

MDD EMS: SENTIDO EN LA ZONA EPICENTRAL.

SFS ***15*** *15:42:25.0, 38˚.25N×1˚.14W, h5km*

INMG ***15*** *15:42:26.1±1.7, 38˚.27N×1˚.18W, h11km±3km, ML3.7, Error ellipse: s-maj=2.2km s-min=2.2km az=123.0*

IGIL ***15*** *15:42:26.0, 38˚.25N×1˚.15W, h8km, ML3.6*

STR ***15*** *15:42:40.2±9.6, 39˚.30N×0˚.86W, h5km, Ml3.7, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 15 15:42:24.1±0.4, 38˚.32N±0˚.01×1˚.15W±0˚.01, h19km±1km, n257, σ1§61/339, mb3.4/4, 9C-5D, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETOB	**Tobarra**	**0.45**	**316**	⇑Pg	**Pn**	**15 42 35.2**	**-0.4**
	1µm,0.5s,SNR=18						
ETOB				Lg	Lg	15 42 41.6	
	6µm,0.5s,SNR=9.6						
ETOB	**Tobarra**	**0.45**	**316**	Pg	**Pn**	**15 42 35.2**	**-0.4**
	1µm,0.5s,SNR=18						
ETOB				Lg	Lg	15 42 41.6	
	6µm,0.5s,SNR=9.6						
EMUR	**La Murta**	**0.49**	**189**	⇓Pg	**Pg**	**15 42 32.9**	**-1.0**
	894nm,0.4s,SNR=18						
EMUR				Lg	Lg	15 42 39.6	
	7µm,0.4s,SNR=20						
EMUR	**La Murta**	**0.49**	**189**	Pg	**Pg**	**15 42 32.9**	**-1.0**
	894nm,0.4s,SNR=18						
EMUR				Lg	Lg	15 42 39.6	
	7µm,0.4s,SNR=20						
CART	**Cartagena**	**0.74**	**171**	⇓Pg	**Pb**	**15 42 37.9**	**-0.5**
CART				Lg	Lg	15 42 46.6	
CART	**Cartagena**	**0.74**	**171**	Pg	**Pb**	**15 42 37.9**	**-0.5**
CART				*i* S	**Sg**	**15 42 46.7**	**-1.9**
CART				Lg	Lg	15 42 46.7	
EBEN	**Beniarda**	**0.82**	**62**	⇑Pg	**Pn**	**15 42 41.9**	**+1.3**
	258nm,0.3s,SNR=18						
EBEN				Lg	Lg	15 42 54.3	
	5µm,0.7s,SNR=18						
EBEN	**Beniarda**	**0.82**	**62**	Pg	**Pn**	**15 42 41.9**	**+1.3**
	258nm,0.3s,SNR=18						
EBEN				Lg	Lg	15 42 54.3	
	5µm,0.7s,SNR=18						
EVIA	**Vianos**	**1.11**	**287**	⇑Pg	**Pg**	**15 42 46.2**	**+0.7**
	476nm,0.3s,SNR=18						
EVIA	**Vianos**	**1.11**	**287**	Pg	**Pg**	**15 42 46.2**	**+0.7**
	476nm,0.3s,SNR=18						
EHUE	**Huescar**	**1.25**	**246**	⇓Pg	**Pg**	**15 42 48.5**	**+0.3**
	55nm,0.6s,SNR=18						
EHUE				Lg	Lg	15 43 04.6	
	204nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**1.25**	**246**	Pg	**Pg**	**15 42 48.5**	**+0.3**
	55nm,0.6s,SNR=18						
EHUE				Lg	Lg	15 43 04.6	
	204nm,0.2s,SNR=7.9						
ECHE	**Chera**	**1.27**	**6**	⇓Pn	**Pg**	**15 42 49.2**	**+0.5**
	416nm,0.3s,SNR=18						
ECHE				Pg	Pb	15 42 50.6	+3.2
	60nm,0.3s,SNR=7.9						
ECHE				Lg	Lg	15 43 07.7	
	266nm,0.2s,SNR=8.5						
ECHE	**Chera**	**1.27**	**6**	Pn	**Pg**	**15 42 49.2**	**+0.5**
	416nm,0.3s,SNR=18						
ENIJ	**Nijar**	**1.59**	**212**	⇑Pn	**Pn**	**15 42 51.4**	**+0.2**
	4.8nm,0.1s,SNR=18						
ENIJ				Pg	**Pg**	**15 42 54.4**	**-0.3**
	110nm,0.4s,SNR=7.9						
ENIJ				Lg	Lg	15 43 12.7	
	494nm,0.6s,SNR=7.9						
ENIJ	**Nijar**	**1.59**	**212**	Pn	**Pn**	**15 42 51.4**	**+0.2**
	4.8nm,0.1s,SNR=18						
EQES	**Quesada**	**1.60**	**252**	⇑Pn	**Pb**	**15 42 53.7**	**+0.6**
	680nm,0.6s,SNR=18						
EQES				Pg	**Pg**	**15 42 55.3**	**+0.4**
	40nm,0.1s,SNR=7.9						
EQES				Lg	Lg	15 43 15.5	
	1µm,0.3s,SNR=17						
EQES	**Quesada**	**1.60**	**252**	Pn	**Pb**	**15 42 53.7**	**+0.6**
	680nm,0.6s,SNR=18						
EBER	**Berja**	**1.98**	**225**	Pn	**Pn**	**15 42 57.7**	**+0.9**
	78nm,0.6s,SNR=28						
EBER				Pg	**Pb**	**15 43 01.2**	**+1.6**
	74nm,0.4s,SNR=11						
EBER				Lg	Lg	15 43 27.7	
	705nm,0.8s,SNR=5.1						
EBER	**Berja**	**1.98**	**225**	Pn	**Pn**	**15 42 57.7**	**+0.9**
	78nm,0.6s,SNR=28						
EIBI	**Ibiza**	**2.07**	**69**	Pn	**Pn**	**15 42 59.8**	**+2.0**
	43nm,0.6s,SNR=24						
EIBI				Pg	**Pg**	**15 43 05.3**	**+1.4**
	38nm,0.2s,SNR=7.9						
EIBI				Sn	**Sn**	**15 43 25.1**	**+1.9**
	146nm,0.3s						
EIBI	**Ibiza**	**2.07**	**69**	Pn	**Pn**	**15 42 59.8**	**+2.0**
	43nm,0.6s,SNR=24						
EBAN	**Banos Encina**	**2.08**	**266**	⇑Pn	**Pn**	**15 42 59.4**	**+1.4**
	120nm,0.2s,SNR=18						
EBAN				Lg	Lg	15 43 32.2	
	189nm,0.4s						
EBAN	**Banos Encina**	**2.08**	**266**	Pn	**Pn**	**15 42 59.4**	**+1.4**
	120nm,0.2s,SNR=18						
EBAN				Lg	Lg	15 43 32.2	
	189nm,0.4s						
EMOS	**Mosqueruela**	**2.10**	**14**	Pn	**Pb**	**15 43 01.2**	**-0.5**
	32nm,0.7s,SNR=24						
EMOS				Pg	**Pg**	**15 43 06.3**	**+1.8**
	214nm,0.7s,SNR=13						
EMOS				Lg	Lg	15 43 32.6	
	349nm,0.5s						
EMOS	**Mosqueruela**	**2.10**	**14**	Pn	**Pb**	**15 43 01.2**	**-0.5**
	32nm,0.7s,SNR=24						
EQUE	**Quentar**	**2.13**	**239**	Pn	**Pn**	**15 43 00.1**	**+1.4**
	63nm,0.4s,SNR=4.0						
EQUE				Pg	**Pb**	**15 43 03.9**	**+1.8**
	176nm,0.6s,SNR=15						
EQUE				Lg	Lg	15 43 31.1	
	880nm,0.9s,SNR=7.9						
EQUE	**Quentar**	**2.13**	**239**	Pn	**Pn**	**15 43 00.1**	**+1.4**
	63nm,0.4s,SNR=4.0						
EGUA	**Guajares**	**2.43**	**233**	Pn	**Pn**	**15 43 04.5**	**+1.8**
	5.5nm,0.4s,SNR=7.9						
EGUA				Pg	**Pb**	**15 43 09.2**	**+2.1**
	73nm,0.4s,SNR=7.9						
EGUA				Lg	Lg	15 43 41.4	
	1µm,0.8s,SNR=7.9						
EGUA	**Guajares**	**2.43**	**233**	Pn	**Pn**	**15 43 04.5**	**+1.8**
	5.5nm,0.4s,SNR=7.9						
ESDC	**Sonseca Array**	**2.57**	**302**	Pn	**Pn**	**15 43 06.2**	**+1.4**
	6.5nm,0.3s,baz=117,slow=14,SNR=22						
ESDC				Pg	**Pg**	**15 43 13.9**	**+0.4**
	38nm,0.3s,baz=120,slow=17,SNR=8.3						
ESDC				Lg	Lg	15 43 47.4	
	101nm,0.2s,baz=124,slow=30,SNR=12						
ESDC	**Sonseca Array**	**2.57**	**302**	Pn	**Pn**	**15 43 06.2**	**+1.4**
	6.7nm,0.3s,baz=120,slow=14,SNR=32						
ESDC				Pg	**Pg**	**15 43 13.3**	**-0.1**
	112nm,0.3s,baz=119,slow=16,SNR=179						
ESDC				Lg	Lg	15 43 47.2	
	182nm,0.3s,baz=116,slow=25,SNR=8.3						
ESDC	**Sonseca Array**	**2.57**	**302**	Pn	**Pn**	**15 43 06.2**	**+1.4**
	6.5nm,0.3s,slow=14,SNR=22						
ESDC	**Sonseca Array**	**2.57**	**302**	Pg	**Pg**	**15 43 13.9**	**+0.4**
	38nm,0.3s,baz=120,slow=17,SNR=8.3						
ESDC				Lg	Lg	15 43 47.4	
	101nm,0.2s,SNR=12						
ELUQ	**Luque**	**2.58**	**254**	⇑Pn	**Pn**	**15 43 07.0**	**+2.2**
	44nm,0.2s,SNR=18						
ELUQ				Pg	**Pg**	**15 43 13.1**	**-0.4**
	46nm,0.4s,SNR=7.9						
ELUQ				Sn	**Sb**	**15 43 41.0**	**-0.1**
	31nm,0.2s,SNR=7.9						
ELUQ				Lg	Lg	15 43 51.6	
	372nm,0.6s,SNR=7.9						
ELUQ	**Luque**	**2.58**	**254**	Pn	**Pn**	**15 43 07.0**	**+2.2**
	44nm,0.2s,SNR=18						
ELUQ	**Luque**	**2.58**	**254**	Pg	**Pg**	**15 43 13.1**	**-0.4**
	46nm,0.4s,SNR=7.9						
ELUQ				Sn	**Sb**	**15 43 41.0**	**-0.1**
	31nm,0.2s,SNR=7.9						
ELUQ				Lg	Lg	15 43 51.6	
	372nm,0.6s,SNR=7.9						
ETOR	**Torete**	**2.59**	**345**	Pn	**Pb**	**15 43 08.7**	**-1.2**
	8.0nm,0.3s,SNR=20						
ETOR				Pg	**Pg**	**15 43 14.8**	**+1.1**
	163nm,0.4s,SNR=69						
ETOR				Sn	**Sn**	**15 43 38.0**	**+2.0**
	208nm,0.4s,SNR=5.8						
ETOR				Lg	Lg	15 43 49.5	
	760nm,0.4s,SNR=9.9						
ETOR	**Torete**	**2.59**	**345**	Pn	**Pb**	**15 43 08.7**	**-1.2**
	8.0nm,0.3s,SNR=20						
USTO	**Oran**	**2.63**	**169**	P	**Sn**	**15 43 37.0**	**+0.2**
OKGL	**Djebel Kef Gue**	**2.69**	**147**	Pn	**Pn**	**15 43 08.0**	**+1.6**
	4.3nm,0.1s,SNR=7.9						
OKGL				Sn	**Sn**	**15 43 38.0**	**-0.5**
	422nm,0.5s,SNR=7.9						
OKGL	**Djebel Kef Gue**	**2.69**	**147**	P	**Pb**	**15 43 14.0**	**+2.3**
OKGL	**Djebel Kef Gue**	**2.69**	**147**	Pn	**Pn**	**15 43 08.0**	**+1.6**
	4.3nm,0.1s,SNR=7.9						
OKGL				Sn	**Sn**	**15 43 38.0**	**-0.5**
	422nm,0.5s,SNR=7.9						
EADA	**Adamuz**	**2.70**	**268**	⇑Pn	**Pn**	**15 43 07.4**	**+0.9**
	21nm,0.4s,SNR=18						
EADA				Pg	**Pg**	**15 43 15.0**	**-0.9**
	45nm,0.4s,SNR=20						
EADA				Sn	**Sn**	**15 43 38.7**	**0.0**
	48nm,0.5s,SNR=5.0						
EADA				Lg	Lg	15 43 51.8	
	111nm,0.2s						
EADA	**Adamuz**	**2.70**	**268**	Pn	**Pn**	**15 43 07.4**	**+0.9**
	21nm,0.4s,SNR=18						
ERTA	**Horta de San J**	**2.87**	**23**	Pn	**Pb**	**15 43 12.2**	**-2.4**
	43nm,0.6s,SNR=10.0						
ERTA				Sn	**Sn**	**15 43 45.2**	**+2.4**
	41nm,0.4s,SNR=18						
ERTA				Lg	Lg	15 43 58.4	
	76nm,0.3s,SNR=4.0						
ERTA	**Horta de San J**	**2.87**	**23**	Pn	**Pb**	**15 43 12.2**	**-2.4**
	43nm,0.6s,SNR=10.0						
ERTA				Sn	**Sn**	**15 43 45.2**	**+2.4**
	41nm,0.4s,SNR=18						
ERTA				Lg	Lg	15 43 58.4	
	76nm,0.3s,SNR=4.0						
ECHF	**Ech Chlef**	**2.94**	**137**	Pn	**Pb**	**15 43 18.1**	**+2.3**
ECHF	**Ech Chlef**	**2.94**	**137**	Pn	**Pb**	**15 43 18.1**	**+2.3**
EBNR	**Beni Rached**	**2.95**	**133**	P	**Pb**	**15 43 16.5**	**+0.5**
ECHA	**Ech Chlef**	**2.96**	**136**	P	**Pb**	**15 43 18.1**	**+2.0**
EANR	**'Ain N'Sour**	**2.97**	**142**	Pn	**Pn**	**15 43 12.1**	**+1.8**
EANR	**'Ain N'Sour**	**2.97**	**142**	P	**Pn**	**15 43 12.1**	**+1.8**
EANR	**'Ain N'Sour**	**2.97**	**142**	P	**Pn**	**15 43 12.1**	**+1.8**
OLHC	**Oulhaca**	**3.08**	**184**	Pn	Pn	15 43 08.0	-3.7
OLHC	**Oulhaca**	**3.08**	**184**	P	Pn	15 43 08.0	-3.7
OLHC	**Oulhaca**	**3.08**	**184**	P	Pn	15 43 08.0	-3.7
ODJA	**Bouhanifia**	**3.09**	**165**	Pn	**Pn**	**15 43 14.0**	**+2.1**
ODJA	**Bouhanifia**	**3.09**	**165**	P	**Pn**	**15 43 14.0**	**+2.1**
ODJA	**Bouhanifia**	**3.09**	**165**	P	**Pn**	**15 43 14.0**	**+2.1**
OJGS	**Djebel Guires**	**3.20**	**151**	P	Pg	15 43 35.0	+10
GUD	**Guadarrama**	**3.28**	**316**	Pn	**Pn**	**15 43 17.3**	**+2.7**
	3.2nm,0.3s,SNR=11						
GUD				Pg	**Pg**	**15 43 26.4**	**-0.5**
	61nm,0.7s,SNR=20						
GUD				Sn	**Sn**	**15 43 57.0**	**+3.8**
	56nm,0.4s,SNR=7.9						
GUD				Lg	Lg	15 44 10.0	
	152nm,0.3s						
GUD	**Guadarrama**	**3.28**	**316**	Pn	**Pn**	**15 43 17.3**	**+2.7**
	3.2nm,0.3s,SNR=11						
GUD	**Guadarrama**	**3.28**	**316**	Pg	**Pg**	**15 43 26.4**	**-0.5**
	61nm,0.7s,SNR=20						
GUD				Sn	**Sn**	**15 43 57.0**	**+3.8**
	56nm,0.4s,SNR=7.9						
GUD				Lg	Lg	15 44 10.0	
	152nm,0.3s						
EMIJ	**Mijas**	**3.38**	**240**	Pn	**Pn**	**15 43 18.6**	**+2.8**
	17nm,0.6s,SNR=7.9						
EMIJ				Pg	**Pg**	**15 43 27.3**	**-1.5**
	73nm,0.7s,SNR=8.6						
EMIJ				Lg	Lg	15 44 12.4	
	125nm,0.6s						
EMIJ	**Mijas**	**3.38**	**240**	Pn	**Pn**	**15 43 18.6**	**+2.8**
	17nm,0.6s,SNR=7.9						
ESAC	**San Caprasio**	**3.43**	**9**	⇓Pn	Pn	15 43 20.6	+4.0
	43nm,0.4s,SNR=18						
ESAC				Pg	**Pg**	**15 43 30.4**	**+0.5**
	143nm,0.3s,SNR=6.3						
ESAC				Sn	**Sb**	**15 44 02.1**	**-3.5**
	123nm,0.3s,SNR=7.9						
ESAC				Lg	Lg	15 44 15.1	
	282nm,0.3s						
ESAC	**San Caprasio**	**3.43**	**9**	Pn	Pn	15 43 20.6	+4.0
	43nm,0.4s,SNR=18						
EPOB	**Poblet**	**3.48**	**29**	Pn	Pn	15 43 20.2	+3.0
	11nm,0.3s,SNR=33						
EPOB				Pg	**Pg**	**15 43 31.6**	**+0.9**
	24nm,0.3s,SNR=13						
EPOB				Sn	**Sn**	**15 43 59.9**	**+2.0**
	43nm,0.5s						
EPOB				Lg	Lg	15 44 13.2	
	2.2nm,1.4s,SNR=7.9						
EPOB	**Poblet**	**3.48**	**29**	Pn	Pn	15 43 20.2	+3.0
	11nm,0.3s,SNR=33						
ETRT	**Tiaret**	**3.53**	**145**	P	Pn	15 43 09.2	-8.7
LIJA	**Lijar**	**3.66**	**249**	Pn	**Pn**	**15 43 21.8**	**+2.0**
LIJA				Lg	Lg	15 44 20.0	
LIJA	**Lijar**	**3.66**	**249**	*i* P	**Pn**	**15 43 21.8**	**+2.0**
LIJA				Lg	Lg	15 44 20.0	
EMHD	**Djebel Mahouad**	**3.90**	**122**	Pn	**Pn**	**15 43 21.7**	**-1.3**
EMHD	**Djebel Mahouad**	**3.90**	**122**	P	**Pn**	**15 43 21.7**	**-1.3**
EMHD	**Djebel Mahouad**	**3.90**	**122**	P	**Pn**	**15 43 21.7**	**-1.3**
ESPR	**Espera**	**4.01**	**250**	Pn	**Pn**	**15 43 26.2**	**+1.8**
	14nm,0.7s,SNR=11						
ESPR				Pg	Pb	15 43 37.0	+3.0
	58nm,0.8s,SNR=10						
ESPR				Sn	**Sn**	**15 44 11.1**	**+0.3**
	57nm,0.8s,SNR=4.6						
ESPR				Lg	Lg	15 44 34.1	
	89nm,0.6s						
ESPR	**Espera**	**4.01**	**250**	Pn	**Pn**	**15 43 26.2**	**+1.8**
	14nm,0.7s,SNR=11						
EMIR	**Miracle**	**4.13**	**29**	Pn	Pn	15 43 29.6	+3.4
	16nm,0.3s,SNR=14						
EMIR				Lg	Lg	15 44 34.0	
	54nm,0.6s,SNR=5.0						
EMIR	**Miracle**	**4.13**	**29**	Pn	Pn	15 43 29.6	+3.4
	16nm,0.3s,SNR=14						
EMIR				Lg	Lg	15 44 34.0	
	54nm,0.6s,SNR=5.0						
EPLA	**Plasencia**	**4.21**	**296**	⇑Pn	**Pn**	**15 43 28.7**	**+1.5**
	21nm,0.8s,SNR=18						
EPLA				Pg	**Pg**	**15 43 45.0**	**+0.4**
	54nm,0.8s,SNR=10.0						
EPLA				Sn	**Sn**	**15 44 16.3**	**+0.5**
	12nm,0.2s,SNR=7.9						
EPLA				Lg	Lg	15 44 38.5	
	128nm,0.5s,SNR=5.0						
EPLA	**Plasencia**	**4.21**	**296**	Pn	**Pn**	**15 43 28.7**	**+1.5**
	21nm,0.8s,SNR=18						
CFON	**Fontmartina**	**4.40**	**38**	Pn	**Pn**	**15 43 32.8**	**+2.9**
	8.6nm,0.3s,SNR=12						
CFON				Sn	**Sn**	**15 44 21.1**	**+0.5**
	13nm,0.3s,SNR=7.9						
CFON	**Fontmartina**	**4.40**	**38**	Pn	**Pn**	**15 43 32.8**	**+2.9**
	8.6nm,0.3s,SNR=12						
CFON				Sn	**Sn**	**15 44 21.1**	**+0.5**
	13nm,0.3s,SNR=7.9						
CSOR	**Sort**	**4.41**	**23**	Pn	Pn	15 43 33.7	+3.7
	9.3nm,0.3s,SNR=22						
CSOR				Pg	**Pg**	**15 43 48.0**	**-0.5**
	11nm,0.3s,SNR=5.7						
CSOR				Sn	**Sn**	**15 44 22.8**	**+1.9**
	12nm,0.4s,SNR=7.9						
CSOR				Lg	Lg	15 44 48.5	
	81nm,0.6s,SNR=6.3						
CSOR	**Sort**	**4.41**	**23**	Pn	Pn	15 43 33.7	+3.7
	9.3nm,0.3s,SNR=22						
IEPA	**Eparoz**	**4.45**	**359**	Pn	Pn	15 43 36.2	+5.7
	SNR=7.9						
IEPA				Lg	Lg	15 44 52.1	
	170nm,0.9s,SNR=7.9						
IEPA	**Eparoz**	**4.45**	**359**	Pn	Pn	15 43 36.2	+5.7
	SNR=7.9						
IEPA				Lg	Lg	15 44 52.1	
	170nm,0.9s,SNR=7.9						
IELO	**Elcoad**	**4.51**	**359**	Pn	Pn	15 43 35.5	+4.1
	SNR=7.9						
IELO				Pg	**Pg**	**15 43 52.0**	**+1.5**
	34nm,0.6s,SNR=7.9						
IELO				Lg	Lg	15 44 56.6	
	139nm,0.7s,SNR=7.9						
IELO	**

EPF Sn **Sn** **15 44 31.4 +0.1**
EPF *e*Sg **Sg** **15 44 58.3 -1.0**
61nm,0.7s
ELIZ **Elizondo** **4.84 357** Pn Pn 15 43 41.0 +5.1
9.3nm,0.3s,SNR=9.5
ELIZ Lg Lg 15 45 05.3
26nm,0.4s,SNR=7.9
ELIZ **Elizondo** **4.84 357** Pn Pn 15 43 41.0 +5.1
9.3nm,0.3s,SNR=9.5
ELIZ Lg Lg 15 45 05.3
26nm,0.4s,SNR=7.9
ORDF **Ordiarp** **4.89 2** P Pn 15 43 40.9 +4.4
ORDF **Ordiarp** **4.89 2** P Pn 15 43 40.9 +4.4
OSSF **Osses** **4.93 359** P Pn 15 43 41.1 +4.1
OSSF **Osses** **4.93 359** P Pn 15 43 41.1 +4.1
MLS **Moulis** **4.93 20** P Pn 15 43 41.2 +4.0
MLS **Moulis** **4.93 20** P Pn 15 43 41.2 +4.0
PMRV **Marv??o** **4.99 285** *e*Pn **Pn** **15 43 39.4 +1.4**
PMRV *e*Sg **Sg** **15 45 05.9 +1.6**
PMRV A A 15 45 11.1
159nm,0.6s
PMRV **Marv??o** **4.99 285** Pn **Pn** **15 43 39.4 +1.4**
PMRV Lg Lg 15 45 05.9
159nm,0.6s
PMRV **Marv??o** **4.99 285** Pn **Pn** **15 43 39.4 +1.4**
PMRV *e*Sg **Sg** **15 45 05.9 +1.6**
159nm,0.6s
EGRO **El Granado** **5.07 263** Pn **Pn** **15 43 39.5 +0.5**
7.0nm,0.3s,SNR=41
EGRO Sn **Sn** **15 44 35.5 -1.5**
7.0nm,0.3s,SNR=6.6
EGRO Lg Lg 15 45 08.6
111nm,0.6s,SNR=7.9
EGRO **El Granado** **5.07 263** Pn **Pn** **15 43 39.5 +0.5**
7.0nm,0.3s,SNR=41
EGRO Sn **Sn** **15 44 35.5 -1.5**
7.0nm,0.3s,SNR=6.6
EGRO Lg Lg 15 45 08.6
111nm,0.6s,SNR=7.9
PESTR **Estremoz** **5.08 278** *e*Pn **Pn** **15 43 39.7 +0.6**
PESTR *e*Sn **Sn** **15 44 37.3 +0.1**
PESTR *e*Sg **Sg** **15 45 05.7 -1.2**
PESTR A A 15 45 10.8
105nm,0.5s
PESTR **Estremoz** **5.08 278** Pn **Pn** **15 43 39.7 +0.6**
PESTR Sn **Sn** **15 44 37.3 +0.1**
PESTR Lg Lg 15 45 05.7
105nm,0.5s
PESTR **Estremoz** **5.08 278** Pn **Pn** **15 43 39.7 +0.6**
PESTR Sn **Sn** **15 44 37.3 +0.1**
PESTR *e*Sg **Sg** **15 45 05.7 -1.2**
105nm,0.5s
ELAN **Lanestosa** **5.20 341** Pn Pn 15 43 43.8 +3.1
3.0nm,0.3s,SNR=16
ELAN Pg **Pg** **15 44 01.3 -2.3**
15nm,0.5s,SNR=7.9
ELAN Sn **Sn** **15 44 41.7 +1.6**
3.3nm,0.3s,SNR=7.2
ELAN Lg Lg 15 45 15.0
125nm,0.9s,SNR=7.9
ELAN **Lanestosa** **5.20 341** Pn Pn 15 43 43.8 +3.1
3.0nm,0.3s,SNR=16
PVAQ **Vaqueiros** **5.28 262** *e*Pn **Pn** **15 43 42.5 +0.6**
PVAQ *e*Sn **Sn** **15 44 41.3 -0.9**
PVAQ *e*Sg **Sg** **15 45 11.2 -2.2**
PVAQ A A 15 45 24.6
68nm,0.6s
PVAQ **Vaqueiros** **5.28 262** Pn **Pn** **15 43 42.5 +0.6**
PVAQ Sn **Sn** **15 44 41.3 -0.9**
PVAQ Lg Lg 15 45 11.2
68nm,0.6s
PVAQ **Vaqueiros** **5.28 262** Pn **Pn** **15 43 42.5 +0.6**
PVAQ Sn **Sn** **15 44 41.3 -0.9**
PVAQ *e*Sg **Sg** **15 45 11.2 -2.2**
68nm,0.6s
PBEJ **Beja** **5.30 269** *e*Pn **Pn** **15 43 43.6 +1.4**
PBEJ *e*Sg **Sg** **15 45 14.6 +0.4**
PBEJ A A 15 45 22.3
71nm,0.6s
PBEJ **Beja** **5.30 269** Pn **Pn** **15 43 43.6 +1.4**
PBEJ Lg Lg 15 45 14.6
35nm,0.6s
PBEJ **Beja** **5.30 269** Pn **Pn** **15 43 43.6 +1.4**
PBEJ *e*Sg **Sg** **15 45 14.6 +0.4**
71nm,0.6s
MVO **Moncorvo** **5.35 304** *e*Pn **Pn** **15 43 44.9 +2.0**
MVO *e*Sg **Sg** **15 45 17.3 +1.7**
MVO A A 15 45 27.7
162nm,0.6s
MVO **Moncorvo** **5.35 304** *e*Pn **Pn** **15 43 44.9 +2.0**
MVO *e*Sg **Sg** **15 45 17.3 +1.7**
162nm,0.6s
MTE **Manteigas** **5.37 295** *e*Pn **Pn** **15 43 45.5 +2.3**
MTE *e*Sn **Sn** **15 44 45.2 +0.6**
MTE *e*Sg **Sg** **15 45 16.7 +0.3**
MTE A A 15 45 26.1
90nm,0.6s
MTE **Manteigas** **5.37 295** Pn **Pn** **15 43 45.5 +2.3**
MTE Sn **Sn** **15 44 45.2 +0.6**
MTE Lg Lg 15 45 16.7
45nm,0.6s
MTE **Manteigas** **5.37 295** Pn **Pn** **15 43 45.5 +2.3**
MTE Sn **Sn** **15 44 45.2 +0.6**
MTE *e*Sg **Sg** **15 45 16.7 +0.3**
90nm,0.6s
EVO **Evora** **5.39 274** *e*Pn **Pn** **15 43 45.8 +2.3**
EVO **Evora** **5.39 274** *e*Pg **Pg** **15 44 06.5 -0.8**
EVO *e*Sn **Sn** **15 44 46.0 +1.0**
EVO *e*Sg **Sg** **15 45 17.7 +0.6**
344nm,0.7s
EVO **Evora** **5.39 274** *e*Sg **Sg** **15 45 16.9 -0.2**
EVO A A 15 45 22.6
86nm,0.5s
EVO **Evora** **5.39 274** Lg Lg 15 45 16.9
86nm,0.5s
EVO **Evora** **5.39 274** *e*Sg **Sg** **15 45 16.9 -0.2**
86nm,0.5s
PBDV **Barranco-do-Ve** **5.48 261** *e*Pn **Pn** **15 43 45.5 +0.8**
PBDV *e*Sn **Sn** **15 44 46.9 -0.3**
PBDV *e*Sg **Sg** **15 45 19.9 0.0**
PBDV A A 15 45 33.2
67nm,0.7s
PBDV **Barranco-do-Ve** **5.48 261** Pn **Pn** **15 43 45.5 +0.8**
PBDV Sn **Sn** **15 44 46.9 -0.3**
PBDV Lg Lg 15 45 19.9
67nm,0.7s
PBDV **Barranco-do-Ve** **5.48 261** Pn **Pn** **15 43 45.5 +0.8**
PBDV Sn **Sn** **15 44 46.9 -0.3**
PBDV *e*Sg **Sg** **15 45 19.9 0.0**
67nm,0.7s
EVOP **Sao Brissos** **5.48 274** *e*Pn **Pn** **15 43 45.8 +1.2**
EVOP *e*Sg **Sg** **15 45 17.7 -2.2**
172nm,0.7s
PCVE **Castro Verde** **5.49 265** *e*Pn **Pn** **15 43 46.0 +1.3**
PCVE *e*Sg **Sg** **15 45 19.8 -0.3**
PCVE A A 15 45 41.4
47nm,0.7s
PCVE **Castro Verde** **5.49 265** Pn **Pn** **15 43 46.0 +1.3**
PCVE Lg Lg 15 45 19.8
47nm,0.7s
PCVE **Castro Verde** **5.49 265** Pn **Pn** **15 43 46.0 +1.3**
PCVE *e*Sg **Sg** **15 45 19.8 -0.3**
47nm,0.7s
PBRG **Braganca** **5.52 311** *e*Pn **Pn** **15 43 47.2 +1.9**
PBRG *e*Sg **Sg** **15 45 22.3 +1.1**
PBRG A A 15 45 25.6
85nm,0.5s
PBRG **Braganca** **5.52 311** Pn **Pn** **15 43 47.2 +1.9**
PBRG Lg Lg 15 45 22.3
42nm,0.5s
PBRG **Braganca** **5.52 311** Pn **Pn** **15 43 47.2 +1.9**
PBRG *e*Sg **Sg** **15 45 22.3 +1.1**
85nm,0.5s
PMTG **Montargil** **5.58 280** *e*Sg **Sg** **15 45 23.0 -0.3**
PMTG A A 15 45 27.6
154nm,0.6s
PMTG **Montargil** **5.58 280** *e*Sg **Sg** **15 45 23.0 -0.3**
154nm,0.6s
ECAL **Calabor** **5.60 312** Pn **Pn** **15 43 48.4 +2.0**
13nm,0.3s,SNR=12
ECAL Sn **Sn** **15 44 49.7 -0.6**
15nm,0.4s,SNR=6.4
ECAL Lg Lg 15 45 27.7
164nm,0.5s,SNR=7.9
ECAL **Calabor** **5.60 312** Pn **Pn** **15 43 48.4 +2.0**
13nm,0.3s,SNR=12
ECAL Sn **Sn** **15 44 49.7 -0.6**
15nm,0.4s,SNR=6.4
ECAL Lg Lg 15 45 27.7
164nm,0.5s,SNR=7.9
MTLF **Montolieu** **5.62 26** *e*Pn **Pn** **15 43 48.5 +1.9**
MTLF *e*Sg **Sg** **15 45 22.7 -1.8**
40nm,0.6s
MTLF **Montolieu** **5.62 26** Pn **Pn** **15 43 48.5 +1.9**
MTLF Lg Lg 15 45 22.7
9.9nm,0.6s
PVIS **Viseu** **5.74 297** *e*Pn **Pn** **15 43 49.6 +1.4**
PVIS *e*Sg **Sg** **15 45 28.3 +0.2**
PVIS A A 15 45 41.8
74nm,0.6s
PVIS **Viseu** **5.74 297** Pn **Pn** **15 43 49.6 +1.4**
PVIS Lg Lg 15 45 28.3
37nm,0.6s
PVIS **Viseu** **5.74 297** Pn **Pn** **15 43 49.6 +1.4**
PVIS *e*Sg **Sg** **15 45 28.3 +0.2**
74nm,0.6s
PTOM **Tomar** **5.80 285** *e*Pn **Pn** **15 43 50.8 +1.7**
PTOM *e*Sg **Sg** **15 45 29.8 -0.5**
PTOM A A 15 45 48.2
96nm,0.6s
PTOM **Tomar** **5.80 285** Pn **Pn** **15 43 50.8 +1.7**
PTOM Lg Lg 15 45 29.8
48nm,0.6s
PTOM **Tomar** **5.80 285** Pn **Pn** **15 43 50.8 +1.7**
PTOM *e*Sg **Sg** **15 45 29.8 -0.5**
96nm,0.6s
EARI **Arriondas** **5.85 330** Pn **Pn** **15 43 52.6 +2.9**
5.7nm,0.5s,SNR=12
EARI Pg **Pg** **15 44 16.3 +0.3**
35nm,0.8s,SNR=7.9
EARI Sn **Sn** **15 44 56.7 +0.4**
37nm,0.8s,SNR=8.3
EARI Lg Lg 15 45 33.2
178nm,1.0s,SNR=7.9
EARI **Arriondas** **5.85 330** Pn **Pn** **15 43 52.6 +2.9**
5.7nm,0.5s,SNR=12
PVRL **Vila Real** **5.85 302** *e*Pn **Pn** **15 43 52.0 +2.2**
PVRL *e*Sg **Sg** **15 45 32.9 +1.1**
PVRL A A 15 45 36.7
84nm,0.6s
PVRL **Vila Real** **5.85 302** Pn **Pn** **15 43 52.0 +2.2**
PVRL Lg Lg 15 45 32.9
42nm,0.6s
PVRL **Vila Real** **5.85 302** Pn **Pn** **15 43 52.0 +2.2**
PVRL *e*Sg **Sg** **15 45 32.9 +1.1**
84nm,0.6s
ALMR **Almeirim** **5.87 280** *e*P **Pn** **15 43 51.2 +1.2**
ALMR AML AML 15 45 03.1
comp=N,112nm,0.2s
ALMR **Almeirim** **5.87 280** Pn **Pn** **15 43 51.2 +1.2**
ALMR **Almeirim** **5.87 280** *e*P **Pn** **15 43 51.2 +1.2**
POLO **Lamas de Olo** **5.95 303** *e*Pn **Pn** **15 43 53.0 +1.8**
POLO *e*Sg **Sg** **15 45 34.9 -0.1**
POLO A A 15 45 44.5
comp=N,37nm,0.6s
POLO **Lamas de Olo** **5.95 303** *e*Pn **Pn** **15 43 53.0 +1.8**
POLO *e*Sg **Sg** **15 45 34.9 -0.1**
comp=N,37nm,0.6s
MORF **Marmelete** **6.03 263** *e*Pn **Pn** **15 43 53.5 +1.3**
MORF *e*Sn **Sn** **15 44 59.4 -1.3**
MORF A A 15 45 09.4
comp=N,11nm,0.4s
MORF **Marmelete** **6.03 263** Pn **Pn** **15 43 53.5 +1.3**
MORF Sn **Sn** **15 44 59.4 -1.3**
comp=N,11nm,0.4s
MORF **Marmelete** **6.03 263** Pn **Pn** **15 43 53.5 +1.3**
MORF Sn **Sn** **15 44 59.4 -1.3**
comp=N,11nm,0.4s
PTEO **Sao Teotonio** **6.04 265** *e*Pn **Pn** **15 43 53.4 +1.1**
PTEO **Sao Teotonio** **6.04 265** Pn **Pn** **15 43 53.4 +1.1**
PTEO **Sao Teotonio** **6.04 265** Pn **Pn** **15 43 53.4 +1.1**
ERUA **La Rua** **6.12 313** Lg Lg 15 45 37.6
comp=N,86nm,0.6s,SNR=7.9
ERUA **La Rua** **6.12 313** Lg Lg 15 45 37.6
comp=N,86nm,0.6s,SNR=7.9
PCAB **Cabril** **6.27 305** *e*Sg **Sg** **15 45 46.0 +0.9**
PCAB A A 15 45 57.4
comp=N,66nm,0.6s
PCAB **Cabril** **6.27 305** *e*Sg **Sg** **15 45 46.0 +0.9**
comp=N,66nm,0.6s
PMAFR **Mafra** **6.40 278** *e*Sg **Sg** **15 45 50.5 +1.2**
PMAFR A A 15 46 03.9
comp=N,81nm,0.8s
PMAFR **Mafra** **6.40 278** *e*Sg **Sg** **15 45 50.5 +1.2**
comp=N,81nm,0.8s
PGAV **Gavieira, Arco** **6.55 306** *e*Pn **Pn** **15 44 01.4 +1.9**
PGAV *e*Sg **Sg** **15 45 54.6 +0.3**
PGAV A A 15 46 10.1
comp=N,69nm,0.6s
PGAV **Gavieira, Arco** **6.55 306** *e*Pn **Pn** **15 44 01.4 +1.9**
PGAV *e*Sg **Sg** **15 45 54.6 +0.3**
comp=N,69nm,0.6s
EPON **Pontenova** **6.76 320** Pn Pn 15 44 05.5 +3.3
comp=N,2.6nm,0.4s,SNR=4.9
EPON Lg Lg 15 46 01.7
comp=N,70nm,0.7s,SNR=7.9
EPON **Pontenova** **6.76 320** Pn Pn 15 44 05.5 +3.3
comp=N,2.6nm,0.4s,SNR=4.9
EPON Lg Lg 15 46 01.7
comp=N,70nm,0.7s,SNR=7.9
LFF **La Frestale** **6.76 11** *e*Pn **Pn** **15 44 04.0 +1.8**
LFF *e*Sn **Sn** **15 45 17.9 -0.7**
LFF *e*Sg **Sg** **15 45 58.5 -2.3**
comp=N,71nm,0.8s
LFF **La Frestale** **6.76 11** Pn **Pn** **15 44 04.0 +1.8**
LFF Sn **Sn** **15 45 17.9 -0.7**
LFF Lg Lg 15 45 58.5
comp=N,18nm,0.8s
LASF **Ste Croix** **6.87 32** *e*Pn **Pn** **15 44 06.3 +2.5**
LASF *e*Sn **Sn** **15 45 19.9 -1.6**
LASF *e*Sg **Sg** **15 46 01.5 -3.0**
comp=N,86nm,1.2s
LASF **Ste Croix** **6.87 32** Pn **Pn** **15 44 06.3 +2.5**
LASF Sn **Sn** **15 45 19.9 -1.6**
LASF Lg Lg 15 46 01.5
comp=N,22nm,1.2s
EZAM **Zamans** **6.92 306** Lg Lg 15 46 05.4
comp=N,73nm,0.6s,SNR=7.9
EZAM **Zamans** **6.92 306** Lg Lg 15 46 05.4
comp=N,73nm,0.6s,SNR=7.9
CAF **Calviac** **7.02 19** *e*Pn **Pn** **15 44 08.3 +2.5**
CAF *e*Sn **Sn** **15 45 23.2 -1.9**
CAF *e*Sg **Sg** **15 46 06.4 -2.8**
comp=N,34nm,0.8s
CAF **Calviac** **7.02 19** Pn **Pn** **15 44 08.3 +2.5**
CAF Sn **Sn** **15 45 23.2 -1.9**
CAF Lg Lg 15 46 06.4
comp=N,8.5nm,0.8s
STS **Santiago** **7.24 311** Lg Lg 15 46 17.2
comp=N,106nm,1.2s,SNR=7.9
STS **Santiago** **7.24 311** Lg Lg 15 46 17.2
comp=N,106nm,1.2s,SNR=7.9
RJF **Les Rejaudoux** **7.25 15** *e*Pn **Pn** **15 44 10.9 +1.9**
RJF *e*Sn **Sn** **15 45 29.3 -1.5**
comp=N,26nm,0.9s
RJF **Les Rejaudoux** **7.25 15** Pn **Pn** **15 44 10.9 +1.9**
RJF Sn **Sn** **15 45 29.3 -1.5**
comp=N,6.4nm,0.9s
EMAZ **Mazaricos** **7.53 310** Lg Lg 15 46 25.9
comp=N,221nm,2.1s,SNR=7.9
EMAZ **Mazaricos** **7.53 310** Lg Lg 15 46 25.9
comp=N,221nm,2.1s,SNR=7.9
SMRF **Simiane la Rot** **7.59 40** *e*Pn **Pn** **15 44 15.2 +1.6**
SMRF *e*Sn **Sn** **15 45 36.7 -2.4**
comp=N,49nm,1.1s
SMRF **Simiane la Rot** **7.59 40** Pn **Pn** **15 44 15.2 +1.6**
SMRF Sn **Sn** **15 45 36.7 -2.4**
comp=N,24nm,1.1s
LMR **La Mourre** **7.66 47** *e*Pn **Pn** **15 44 15.8 +1.2**
LMR *e*Sn **Sn** **15 45 38.3 -2.6**
comp=N,3.1nm,0.2s
LMR **La Mourre** **7.66 47** Pn **Pn** **15 44 15.8 +1.2**
LMR Sn **Sn** **15 45 38.3 -2.6**
comp=N,0.8nm,0.2s
VIVF **Saint-Julien-l** **7.85 32** *e*Pn **Pn** **15 44 18.2 +1.0**
VIVF *e*Sn **Sn** **15 45 43.3 -2.2**
VIVF *e*Sg Sb 15 46 32.1 +19
comp=N,4.4nm,0.5s
VIVF **Saint-Julien-l** **7.85 32** Pn **Pn** **15 44 18.2 +1.0**
VIVF Sn **Sn** **15 45 43.3 -2.2**
VIVF Lg Lg 15 46 32.1
comp=N,1.1nm,0.5s
FRF **La Foret Royal** **7.88 46** *e*Pn **Pn** **15 44 18.6 +1.0**
FRF *e*Sn **Sn** **15 45 43.7 -2.6**
comp=N,6.7nm,0.5s
FRF **La Foret Royal** **7.88 46** Pn **Pn** **15 44 18.6 +1.0**
FRF Sn **Sn** **15 45 43.7 -2.6**
comp=N,1.7nm,0.5s
MFF **Saint Martin d** **8.31 5** *e*Pn **Pn** **15 44 25.2 +1.8**
MFF *e*Sn **Sn** **15 45 54.8 -1.8**
comp=N,3.5nm,0.5s
MFF **Saint Martin d** **8.31 5** Pn **Pn** **15 44 25.2 +1.8**
MFF Sn **Sn** **15 45 54.8 -1.8**
comp=N,0.9nm,0.5s
TCF **Toulx Ste Croi** **8.34 16** *e*Pn **Pn** **15 44 25.3 +1.4**
TCF *e*Sg Sb 15 46 47.7 +21
comp=N,45nm,1.2s
TCF **Toulx Ste Croi** **8.34 16** *e*Pn **Pn** **15 44 25.3 +1.4**
ORIF **Oris-en-Rattie** **8.43 36** *e*Pn **Pn** **15 44 26.7 +1.5**
ORIF *e*Sn **Sn** **15 45 57.1 -2.8**
comp=N,1.2nm,0.3s
ORIF **Oris-en-Rattie** **8.43 36** Pn **Pn** **15 44 26.7 +1.5**
ORIF Sn **Sn** **15 45 57.1 -2.8**
comp=N,0.3nm,0.3s
SBF **Sospel** **8.52 47** *e*Pn **Pn** **15 44 27.7 +1.3**
SBF *e*Sn **Sn** **15 45 59.1 -2.9**
comp=N,12nm,0.6s
SBF **Sospel** **8.52 47** Pn **Pn** **15 44 27.7 +1.3**
SBF Sn **Sn** **15 45 59.1 -2.9**
comp=N,2.9nm,0.6s
MBDF **Montbardon** **8.73 40** *e*Pn **Pn** **15 44 30.9 +1.6**
MBDF *e*Sn **Sn** **15 46 04.2 -3.0**
comp=N,0.9nm,0.3s
MBDF **Montbardon** **8.73 40** *e*Pn **Pn** **15 44 30.9 +1.6**
BGF **Bois d'Agland** **8.74 18** *e*Pn **Pn** **15 44 30.4 +1.0**
BGF *e*Sg Sn 15 47 00.2 +53
comp=N,18nm,0.5s
BGF **Bois d'Agland** **8.74 18** *e*Pn **Pn** **15 44 30.4 +1.0**
KEST **Kesra** **8.78 104** Pn Pn 15 44 35.3 +5.2
comp=N,0.5nm,0.3s,baz=202,slow=2.5,SNR=9.1
KEST Sn **Sn** **15 46 13.1 +4.5**
comp=N,0.2nm,0.3s,baz=180,slow=14,SNR=2.2
PGF **Pioggiola** **8.81 58** *e*Pn Pn 15 44 34.2 +3.7
PGF *e*Sn **Sn** **15 46 06.7 -2.6**
comp=N,1.4nm,0.5s
PGF **Pioggiola** **8.81 58** *e*Pn Pn 15 44 34.2 +3.7
AVF **Avril sur Loir** **9.09 20** *e*Pn **Pn** **15 44 35.4 +1.3**
AVF *e*Sg Sn 15 47 10.8 +55
comp=N,11nm,0.8s
AVF **Avril sur Loir** **9.09 20** *e*Pn **Pn** **15 44 35.4 +1.3**
LPG **La Plagne** **9.27 37** *e*Pn **Pn** **15 44 38.6 +1.7**
LPG *e*Sn **Sn** **15 46 17.4 -3.4**
comp=N,2.3nm,0.5s
LPG **La Plagne** **9.27 37** *e*Pn **Pn** **15 44 38.6 +1.7**
LPL **La Plagne** **9.28 37** *e*Pn **Pn** **15 44 38.2 +1.2**
LPL *e*Sn **Sn** **15 46 17.5 -3.4**
comp=N,1.1nm,0.4s
LPL **La Plagne** **9.28 37** *e*Pn **Pn** **15 44 38.2 +1.2**
SSF **Saint Saulge** **9.38 20** *e*Pn **Pn** **15 44 39.4 +1.3**
SSF *e*Sg Sn 15 47 20.2 +57
comp=N,11nm,0.8s
SSF **Saint Saulge** **9.38 20** *e*Pn **Pn** **15 44 39.4 +1.3**
LOR **Lormes** **9.66 21** *e*Pn **Pn** **15 44 43.0 +0.9**
LOR *e*Sg Sn 15 47 29.0 +59
comp=N,18nm,0.9s
LOR **Lormes** **9.66 21** *e*Pn **Pn** **15 44 43.0 +0.9**
QUIF **Quistinic** **9.70 352** *e*Pn **Pn** **15 44 44.0 +1.5**
QUIF *e*Sn **Sn** **15 46 27.7 -3.1**
comp=N,18nm,0.7s
QUIF **Quistinic** **9.70 352** *e*Pn **Pn** **15 44 44.0 +1.5**
SGMF **Saint Gilles** **9.98 355** *e*Pn **Pn** **15 44 47.6 +1.3**
SGMF *e*Sn **Sn** **15 46 34.5 -3.2**
SGMF **Saint Gilles** **9.98 355** *e*Pn **Pn** **15 44 47.6 +1.3**
GRR **Gorron** **10.06 1** *e*Pn **Pn** **15 44 48.7 +1.2**
GRR *e*Sn **Sn** **15 46 36.2 -3.5**
comp=N,2.1nm,0.4s
GRR **Gorron** **10.06 1** *e*Pn **Pn** **15 44 48.7 +1.2**
ROSF **Rostrenen** **10.13 352** *e*Pn **Pn** **15 44 49.4 +1.1**
ROSF *e*Sn **Sn** **15 46 37.9 -3.4**
comp=N,3.9nm,0.5s
ROSF **Rostrenen** **10.13 352** *e*Pn **Pn** **15 44 49.4 +1.1**
GERES **GERESS Array B** **15.02 41** Pn **P** **15 45 60.0 -0.6**
comp=N,0.1nm,0.3s,baz=237,slow=9.0,SNR=2.4
NOA **NORSAR Array B** **24.02 15** LR LR 15 57 05.6
comp=N,22nm,18.6s,baz=320,slow=36
TORD **Torodi Ar. Bea** **25.20 173** P **P** **15 47 49.8 +1.3**
comp=N,0.6nm,0.9s,baz=348,slow=9.0,SNR=2.9
KURBB **Kurchatov Arra** **55.54 49** P P 15 52 01.1 +3.3
comp=N,0.3nm,0.6s,baz=290,slow=8.3,SNR=3.9
MKAR **Makanchi Array** **59.31 53** P P 15 52 28.1 +3.6
comp=N,0.3nm,0.7s,baz=282,slow=2.8,SNR=2.5
YKA **Yellowknife Ar** **66.32 332** P P 15 53 16.8 +6.0
comp=N,0.1nm,0.5s,baz=54,slow=5.7,SNR=3.2

BJI ***15*** *15:51:30.6,2˙.00S×133˙.60E,h15km,mB5.1/26,mb4.8/34, Ms4.6/22,Ms7 4.3/22*
GCMT ***15*** *15:51:32.7±0.2,1˙.97S×133˙.66E,h12km,MW5.0,Moment Tensor Solution. s37,c49; s75,c116; Moment tensor: Scale 10¹⁶Nm; Mrr2.90±.08; Mθθ-2.96±.06; Mφφ0.06±.09; Mrθ0.86±.21; Mθφ0.90±.06; Mφr1.35±.29; Best double couple: M₀3.40000×10¹⁶ NP1:ϕ308.00000°,δ45.00000°, λ125.00000°. NP2:ϕ82.00000°,δ54.00000°,λ60.00000°. Principal axes: T 3.6300, Plg65.0000°, Azm294.0000°; N -0.3900, Plg24.0000°, Azm101.0000°; P -3.2500, Plg5.0000°, Azm193.0000°; Data Used: II IU IC G CN.*
ISCJB ***15*** *15:51:33.5±0.8,2˙.05S±0˙.04×133˙.64E±0˙.04,h40km±7km, mb4.7/49,MS4.2/26 Error ellipse: s-maj=8.3km s-min=5.4km az=142.3*
IDC ***15*** *15:51:33.1±2.7,1˙.95S×133˙.66E,h22km±16km,mb4.4/18, mb1 4.5/19,mb1mx4.4/25,mbtmp4.4/19,ML3.9/1,MS4.1/22, Ms1 4.1/22,ms1mx3.9/36,Error ellipse: s-maj=22.1km s-min=10.2km az=75.0*
NEIC ***15*** *15:51:35.5±1.3,2˙.04S×133˙.62E,h46km±13km,mb4.7/24, Error ellipse: s-maj=11.5km s-min=6.7km az=52.0*
AUST ***15*** *15:51:36.2,1˙.98S×133˙.51E,h60km*
DJA ***15*** *15:51:39.4±0.4,2˙.S±.5˙×13˙.3E±˙,h10km,M4.8/18,mB5.1/5, mb4.7/18,MLv5.0/4,Mw(mB)4.4/5*
ISC 15 15:51:33.2±0.3,2˙.07S±0˙.04×133˙.55E±0˙.05,h21km±3km, n157,σ1s82/192,mb4.8/49,MS4.1/28,1C,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.55**	**237**	P	**Pb**	**15 52 01.0**	**-0.2**
SWI	**Sorong**	**2.58**	**298**	P	**Pn**	**15 52 12.0**	**-1.8**
	baz=2.5,SNR=263						
TLE	**Tual**	**3.64**	**193**	P	**Pn**	**15 52 31.4**	**+3.0**
TLE	**Tual**	**3.64**	**193**	P	**Pn**	**15 52 31.1**	**+2.8**
	baz=3.7,SNR=82						
TLE				S	**Sb**	**15 53 17.6**	**-3.0**
	baz=3.7,SNR=5.2						
BNDI	**Bandanaira**	**4.38**	**236**	P	**Pn**	**15 52 40.5**	**+2.0**
LBMI	**Labuha**	**6.21**	**283**	P	**Pn**	**15 53 05.5**	**+1.8**
	178nm,0.9s,2µm0.6nm						
JAY	**Jayapura**	**7.17**	**94**	P	**Pn**	**15 53 19.2**	**+2.3**
	baz=7.2,SNR=6.5						
MNI	**Manado**	**9.38**	**292**	P	Pn	15 53 52.7	+5.4
	144nm,0.9s						
PALU	**Palau**	**9.39**	**6**	P	**Pn**	**15 53 48.7**	**+1.2**
	baz=9.4,SNR=4.2						
KMSI	**Cibinong**	**9.92**	**285**	P	Pn	15 54 12.4	+18
KDU	**Kakadu**	**10.60**	**186**	P	**Pn**	**15 54 04.0**	**0.0**
	baz=11,SNR=70						
KDU				S	**Sn**	**15 55 59.5**	**-2.7**
	baz=11,SNR=5.6						
MTN	**Manton Dam**	**10.97**	**192**	P	**Pn**	**15 54 08.8**	**-0.3**
	baz=11,SNR=130						
MTN				S	**Sn**	**15 56 08.2**	**-3.1**
	baz=11,SNR=8.4						
KDI	**Kendari**	**11.07**	**260**	P	**Pn**	**15 54 11.4**	**+0.9**
	32nm,0.9s						
BBSI	**Bau Bau**	**11.46**	**252**	P	Pn	15 54 21.5	+5.6
	61nm,0.9s						
MRSI	**Marisa**	**11.88**	**282**	P	Pn	15 54 37.2	+16
DAV	**Davao City (W)**	**12.07**	**319**	Pn	Pn	15 54 28.2	+4.1
DAV	**Davao City (W)**	**12.07**	**319**	Pn	Pn	15 54 28.2	+4.1
	32nm,0.3s,baz=268,slow=16,SNR=2.6						
DAV				LR	LR	15 59 27.2	
	comp=Z,630nm,20.1s,baz=221,slow=39						
TTSI	**Tana Toraja**	**13.75**	**266**	P	**P**	**15 54 58.5**	**+3.0**
BKSI	**Bulukumba**	**13.78**	**256**	P	Pn	15 54 51.6	+4.1

26nm,1.2s,466nm
SPSI Sidrap Palu 13.89 262 P Pn 15 54 53.0 +4.0
27nm,1.1s
KAPI Kappang 14.07 258 *e*P **Pn 15 54 52.6 +1.1**
38nm,0.9s
KAPI Kappang 14.07 258 P **Pn 15 54 53.9 +2.3**
43nm,0.9s
KAPI Kappang 14.07 258 Pn **Pn 15 54 52.7 +1.1**
0.5nm,0.3s,baz=65,slow=22,SNR=6.3
KAPI LR LR 16 00 47.4
comp=Z,791nm,21.1s,baz=339,slow=39
COEN Coen 15.17 142 *e*P **Pn 15 55 04.0 -2.5**
84nm,0.6s
COEN Coen 15.17 142 P **Pn 15 55 05.2 -1.2**
baz=15,SNR=11
PMG Port Moresby 15.37 119 P **Pn 15 55 09.4 +0.3**
45nm,1.1s
PMG Port Moresby 15.37 119 P **P 15 55 16.0 +2.4**
18nm,0.9s
PMG Port Moresby 15.37 119 Pn **P 15 55 13.8 +0.2**
0.6nm,0.3s,baz=308,slow=9.2,SNR=7.3
MYLDM Lahad Datu 16.67 296 P P 15 55 33.6 +5.6
29nm,0.8s,841nm
KBKI Kotabaru 17.40 266 P P 15 55 45.4 +9.3
FITZ Fitzroy Crossi 17.72 205 *e*P **Pn 15 55 36.9 -2.0**
46nm,0.9s
FITZ eS Sn 15 58 40.8 -15
FITZ S S 15 58 45.9 -17
FITZ Fitzroy Crossi 17.72 205 P **Pn 15 55 37.1 -1.8**
1.4nm,0.3s,baz=40,slow=11,SNR=37
FITZ S Sn 15 58 45.9 -10
2.1nm,0.3s,baz=107,slow=14,SNR=7.2
FITZ Fitzroy Crossi 17.72 205 P **Pn 15 55 36.9 -2.0**
baz=18,SNR=33
FITZ S Sn 15 58 45.9 -10
baz=18,SNR=4.4
WRAB Tennant Creek 17.77 178 *e*P **Pn 15 55 37.7 -1.8**
39nm,0.6s
KHKI Kahang-Kahang 18.92 250 P Pn 15 56 04.5 +11
KKM Kota Kinabalu 19.09 295 *e*P **Pn 15 55 56.5 +0.8**
21nm,1.0s
KKM Kota Kinabalu 19.09 295 P **Pn 15 55 58.0 +2.3**
21nm,1.1s,423nm
KKM Kota Kinabalu 19.09 295 P **Pn 15 55 56.6 +0.8**
baz=19,SNR=5.2
GUMO Guam 19.19 36 LR LR 16 01 50.3
comp=Z,347nm,18.8s,baz=358,slow=32
QIS Mount Isa 19.30 163 P **P 15 55 57.3 +0.3**
baz=20,SNR=12
KMMI Kalianget 20.13 255 P Pn 15 56 20.4 +12
BLJI Banyuglugur 20.66 253 P Pn 15 56 26.2 +12
AS31 Alice Springs 21.47 179 *e*P **P 15 56 21.6 +1.0**
ASAR Alice Springs 21.47 179 P **P 15 56 22.8 +2.1**
ASAR S **S 16 00 19.9 +1.9**
ASAR Alice Springs 21.47 179 P **P 15 56 22.8 +2.1**
31nm,0.8s,baz=2.7,slow=11,SNR=517
ASAR S **S 16 00 19.9 +1.9**
3.2nm,0.5s,baz=2.3,slow=24,SNR=4.8
ASAR LR LR 16 05 49.5
comp=Z,1µm,19.0s,baz=356,slow=40
CTA Charters Tower 21.79 146 P **P 15 56 24.2 +0.2**
CTA Charters Tower 21.79 146 P **P 15 56 24.2 +0.2**
3.0nm,0.5s,baz=323,slow=9.6,SNR=4.1
CTAO Charters Tower 21.79 146 P **P 15 56 24.4 +0.3**
19nm,0.9s
PBKI Pangkalan Bun 21.87 268 P P 15 56 34.7 +10
STKI Sintang 22.17 275 P P 15 56 34.0 +5.9
17nm,1.1s
MBWA Marble Bar 23.27 214 *e*P **P 15 56 40.2 +0.6**
27nm,0.8s
KSM Kuching 23.50 278 *e*P **P 15 56 43.4 +1.4**
15nm,0.8s
KSM Kuching 23.50 278 P **P 15 56 44.1 +2.1**
baz=23,SNR=7.1
QLP Quilpie 26.45 158 P **P 15 57 09.0 +0.2**
baz=27,SNR=6.8
HNR Honiara 27.25 107 P **P 15 57 15.0 -1.2**
HNR Honiara 27.25 107 P **P 15 57 15.6 -0.7**
22nm,0.5s,baz=274,slow=5.3,SNR=3.6
EIDS Eidsvold 28.68 145 *e*P **P 15 57 31.1 +2.2**
6.4nm,0.8s
STKA Stephens Creek 30.61 166 *e*P **P 15 57 46.0 +0.1**
STKA Stephens Creek 30.61 166 P **P 15 57 46.1 +0.3**
2.8nm,0.6s,baz=326,slow=7.6,SNR=12
STKA LR LR 16 11 24.9
comp=Z,2µm,19.2s,baz=340,slow=39
STKA Stephens Creek 30.61 166 P **P 15 57 46.2 +0.3**
baz=31,SNR=9.0
CMSA Cobar Meteorol 31.48 160 P **P 15 57 53.6 0.0**
baz=32,SNR=6.6
ARMA Armidale 33.00 151 P **P 15 58 07.6 +0.5**
baz=33,SNR=7.2
JNU Nakatsue 35.09 356 LR LR 16 10 05.8
comp=Z,330nm,19.8s,baz=341,slow=32
ARPS Mount Arapiles 35.37 168 P **P 15 58 27.8 +0.3**
baz=36,SNR=12
JHJ Hachijo jima 2 35.49 9 LR LR 16 09 56.4
comp=Z,380nm,19.2s,baz=216,slow=31
NJ2 Nanjing 36.68 339 *e*P **P 15 58 38.3 -0.4**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
WHN Wuhan 37.24 332 P P 15 58 47.3 +3.8
DZM Mont Dzumac 37.65 124 eLR LR 16 09 05.1
comp=Z,365nm,26.2s
GYA Guiyang 38.45 319 *e*P **P 15 58 55.0 +1.1**
GYA pP **pP 15 59 01.5 +1.1**
GYA PP **PnPn 16 00 27.5 +3.5**
GYA S **S 16 04 51.3 +2.9**
GYA ScP **ScP 16 04 53.8 -0.3**
GYA SS **SnSn 16 07 31.0 -4.4**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,4.8s
GYA LR LR
comp=N,430nm,16.9s
GYA LR LR
comp=E,380nm,17.2s
GYA LR LR
comp=Z,410nm,17.4s
MJAR Matsushiro Arr 38.66 6 P **P 15 58 52.9 -2.5**
MJAR Matsushiro Arr 38.66 6 P **P 15 58 52.9 -2.5**
comp=Z,1.8nm,0.8s,baz=186,slow=8.0,SNR=5.5
MJAR LR LR 16 12 08.2
comp=Z,280nm,19.4s,baz=185,slow=32
KSRS Korea Array 39.67 353 LR LR 16 15 02.2
comp=Z,284nm,18.6s,baz=11,slow=36
CM31 Chiang Mai Arr 39.69 302 *e*P **P 15 59 04.2 -0.1**
comp=Z,2.8nm,0.8s
CMAR Chiang Mai Arr 39.69 302 P **P 15 59 04.5 +0.2**
CMAR ScP **ScP 16 04 59.5 +0.7**
CMAR Chiang Mai Arr 39.69 302 P **P 15 59 04.5 +0.2**
comp=Z,2.9nm,0.8s,baz=125,slow=6.5,SNR=23
CMAR ScP **ScP 16 04 59.5 +0.7**
comp=Z,0.6nm,0.9s,baz=141,slow=3.5,SNR=4.5
CHTO Chiang Mai 39.85 303 *e*P **P 15 59 04.8 -0.9**
comp=Z,5.9nm,1.1s
KMI Kunming 40.27 314 P **P 15 59 11.0 +1.6**
KMI pmax pmax
comp=Z,7.0nm,0.8s
CD2 Chengdu 43.35 322 P **P 15 59 34.5 +0.2**
CD2 pP **pP 15 59 40.9 +0.1**
CD2 sP **sP 15 59 43.9 +0.5**
CD2 PP **PP 16 01 17.8 +2.5**
CD2 PcP **PcP 16 01 22.9 +0.1**
CD2 PcS **PcS 16 05 14.3 -1.3**
CD2 S **S 16 06 01.6 +0.4**
CD2 sS **sS 16 06 12.1 +0.2**
CD2 SS **SS 16 09 08.8 -6.6**
CD2 ScS **ScS 16 09 30.8 -2.8**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,230nm,5.4s
CD2 LR LR
comp=N,180nm,19.6s
CD2 LR LR
comp=E,290nm,16.5s
CD2 LR LR
comp=Z,260nm,11.8s
SNY Shenyang 44.62 349 ⇑P P 15 59 50.9 +6.8
SNY S S 16 06 26.1 +7.0
SNY pmax pmax
comp=Z,10.0nm,0.6s
SNY pmax pmax
comp=Z,110nm,5.0s
SNY LR LR
comp=N,270nm,26.3s
SNY LR LR
comp=E,300nm,18.0s
SNY LR LR
comp=Z,350nm,27.4s
BJI Beijing 44.83 341 P **P 15 59 45.3 -0.5**
BJI S **S 16 06 24.8 +2.6**
BJI pmax pmax
comp=Z,47nm,0.7s
BJI pmax pmax
comp=Z,120nm,3.7s
BJI LR LR
comp=N,120nm,12.8s
BJI LR LR
comp=E,420nm,22.4s
BJI LR LR
comp=Z,190nm,31.3s
USRK Ussuriysk Arra 46.08 358 P **P 15 59 55.2 -0.4**
comp=Z,3.0nm,0.7s,baz=199,slow=7.5,SNR=6.8
USRK LR LR 16 15 54.6
comp=Z,212nm,20.8s,baz=157,slow=32
CN2 Changchun 46.24 352 *e*P P 16 00 00.3 +3.3
CN2 pmax pmax
comp=Z,10.0nm,0.6s
MDJ Mudanjiang 46.61 356 P **P 16 00 00.8 +0.9**
MDJ pP **pP 16 00 06.8 +0.4**
MDJ sP **sP 16 00 09.3 +0.3**
MDJ ScP **ScP 16 05 25.8 -0.5**
MDJ PcS **PcS 16 05 28.6 +0.3**
MDJ S **S 16 06 50.1 +2.3**
MDJ sS **sS 16 07 00.9 +2.3**
MDJ pmax pmax
comp=Z,5.0nm,0.6s
MDJ pmax pmax
comp=Z,110nm,5.2s
MDJ LR LR
comp=N,88nm,17.8s
MDJ LR LR
comp=E,170nm,31.1s
MDJ LR LR
comp=Z,250nm,32.4s
ASAJ Asahikawa 46.69 9 LR LR 16 19 00.7
comp=Z,109nm,18.9s,baz=184,slow=35
LZH Lanzhou 46.99 327 *e*P **P 16 00 05.3 +2.1**
LZH pP **pP 16 00 10.8 +1.0**
LZH sP **sP 16 00 14.4 +2.0**
LZH PP **PP 16 01 55.0 +1.0**
LZH S **S 16 06 59.1 +5.2**
LZH sS **sS 16 07 09.3 +4.6**
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,150nm,5.0s
LZH LR LR
comp=N,200nm,13.6s
LZH LR LR
comp=E,250nm,15.1s
LZH LR LR
comp=Z,390nm,16.8s
HHC Hu-ho-hao-te 47.19 337 *e*P P 16 00 07.9 +3.3
HHC PcP **PcP 16 01 39.0 +3.0**
HHC PP **PP 16 01 58.3 +2.6**
HHC ScP **ScP 16 05 30.6 +1.7**
HHC PcS **PcS 16 05 32.6 +1.5**
HHC S **S 16 07 02.0 +5.6**
HHC sS sS 16 07 09.8 +2.6
HHC ScS **ScS 16 09 58.6 +0.7**
HHC SS **SS 16 10 20.3 -3.6**
HHC pmax pmax
comp=Z,39nm,0.7s
HHC pmax pmax
comp=Z,420nm,6.5s
HHC LR LR
comp=N,220nm,16.7s
HHC LR LR
comp=E,210nm,16.2s
HHC LR LR
comp=Z,270nm,16.1s
GTA Gaotai 51.60 327 *e*P **P 16 00 38.8 +0.4**
GTA pP **pP 16 00 45.0 0.0**
GTA sP **sP 16 00 47.8 +0.3**
GTA PP **PP 16 02 36.8 +0.8**
GTA S **S 16 07 57.1 -1.3**
GTA sS **sS 16 08 05.8 -3.4**
GTA SS **SS 16 11 29.5 -5.4**
GTA pmax pmax
comp=Z,4.0nm,0.6s
GTA pmax pmax
comp=Z,99nm,6.2s
GTA LR LR
comp=N,140nm,18.1s
GTA LR LR
comp=E,190nm,20.9s
GTA LR LR
comp=Z,210nm,15.7s
TAPN Taplejung 52.92 307 *e*P **P 16 00 48.1 -0.5**
comp=Z,54nm,0.9s
ODAN Odare 52.97 306 *e*P **P 16 00 48.4 -0.5**
comp=Z,77nm,0.7s
RAMN Ramite 53.64 306 *e*P **P 16 00 53.6 -0.3**
comp=Z,48nm,0.6s
GUN Gumba 54.63 307 *e*P **P 16 01 00.7 -0.5**
comp=Z,50nm,0.7s
ULN Ulaanbaatar 54.85 338 *e*P **P 16 01 01.3 -0.9**
comp=Z,8.6nm,0.8s
PKI Pulchoki 54.86 306 *e*P **P 16 01 01.9 -1.0**
comp=Z,13nm,0.6s
PKIN Phulchoki 54.88 306 *e*P **P 16 01 03.2 +0.3**
comp=Z,9.0nm,0.6s
KKN Kakani 55.06 306 *e*P **P 16 01 03.4 -0.7**
comp=Z,28nm,0.9s
SONM Songino Array 55.07 338 P **P 16 01 03.7 -0.1**
SONM PcP **PcP 16 02 04.9 -0.1**
SONM Songino Array 55.07 338 P **P 16 01 03.7 -0.1**
comp=Z,3.3nm,0.6s,baz=155,slow=7.7,SNR=21
SONM PcP **PcP 16 02 04.9 -0.1**
comp=Z,1.5nm,0.7s,baz=147,slow=8.2,SNR=2.3
SONM LR LR 16 23 47.2
comp=Z,170nm,19.9s,baz=149,slow=35
DMN Daman 55.12 306 *e*P **P 16 01 04.0 -0.7**
comp=Z,46nm,0.8s
KOLN Koldanda 56.41 305 *e*P **P 16 01 13.6 -0.2**
comp=Z,56nm,0.7s
DANN Dangsing 56.51 306 *e*P **P 16 01 14.2 -0.5**
comp=Z,56nm,0.8s
PYUN Piuthan 57.04 306 *e*P **P 16 01 18.1 -0.2**
comp=Z,165nm,0.9s
HYB Hyderabad 57.54 292 *i* P **P 16 01 20.0 -1.8**
PETK Petropavlovsk- 58.59 17 P **P 16 01 28.5 0.0**
PETK Petropavlovsk- 58.59 17 P **P 16 01 28.5 0.0**
comp=Z,3.2nm,0.8s,baz=214,slow=10,SNR=7.1
PETK LR LR 16 22 24.1
comp=Z,106nm,20.2s,baz=201,slow=32
WMQ Urumqi 61.37 324 P **P 16 01 48.0 +0.1**
WMQ pP **pP 16 01 54.0 -0.6**
WMQ sP **sP 16 01 57.0 -0.1**
WMQ PcP **PcP 16 02 30.0 0.0**
WMQ PP **PP 16 04 05.0 +1.8**
WMQ ScP **ScP 16 06 29.0 -1.7**
WMQ S **S 16 10 06.0 -1.6**
WMQ sS **sS 16 10 15.0 -3.7**
WMQ ScS **SKKSac 16 11 35.0 -3.3**
WMQ SS **SS 16 14 09.0 +0.4**
WMQ pmax pmax
comp=Z,24nm,1.0s
WMQ pmax pmax
comp=Z,160nm,6.0s
WMQ LR LR
comp=N,220nm,18.0s
WMQ LR LR
comp=E,160nm,18.0s
WMQ LR LR
comp=Z,210nm,18.0s
DDI Dehra Dun 61.87 306 *ex* **P 16 01 52.0 +0.6**
MK31 Makanchi Array 66.19 324 *e*P **P 16 02 19.0 -0.6**
MKAR Makanchi Array 66.19 324 P **P 16 02 19.0 -0.5**
MKAR PP PP 16 04 51.7 +6.3
MKAR Makanchi Array 66.19 324 P **P 16 02 19.0 -0.5**
comp=Z,15nm,0.7s,baz=114,slow=8.1,SNR=144
MKAR PP PP 16 04 51.7 +6.3
comp=Z,2.2nm,0.6s,baz=111,slow=8.1,SNR=5.4
MKAR LR LR 16 35 08.3
comp=Z,52nm,18.2s,baz=248,slow=40
KSH Kashi 66.93 315 P **P 16 02 25.8 +1.3**
KSH pP **pP 16 02 31.8 +0.5**
KSH sP **sP 16 02 35.0 +1.2**
KSH PcP **PcP 16 02 54.4 +1.4**
KSH PP **PP 16 04 56.4 +4.2**
KSH ScP 16 06 54.6
KSH PcS 16 06 56.5
KSH S **S 16 11 16.9 0.0**
KSH sS **sS 16 11 26.8 -1.2**
KSH ScS **SKSac 16 12 18.3 -2.5**
KSH SS **SS 16 15 38.5 +2.9**
KSH pmax pmax
comp=Z,8.0nm,0.7s
KSH pmax pmax
comp=Z,160nm,3.7s
KSH LR LR
comp=Z,200nm,4.6s
ZAA0 Zalesovo Array 68.85 332 *e*P P 16 02 33.1 -3.1
ZALV Zalesovo Beam 68.85 332 P **P 16 02 34.9 -1.2**
ZALV Zalesovo Beam 68.85 332 P **P 16 02 34.9 -1.2**
comp=Z,4.9nm,0.6s,baz=121,slow=6.6,SNR=21
ZALV LR LR 16 32 45.4
comp=Z,63nm,19.0s,baz=84,slow=36
AAK Ala-Archa 69.20 317 *e*P **P 16 02 37.5 -1.3**
comp=Z,7.5nm,1.2s
AAK Ala-Archa 69.20 317 P **P 16 02 38.0 -0.8**
comp=Z,1.1nm,0.6s,baz=172,slow=11,SNR=7.1
EKS2 Erkin-Say 69.70 317 P **P 16 02 40.4 -1.4**
comp=Z,7.0nm,0.8s
KURK Kurchatov 70.28 326 *e*P **P 16 02 44.2 -0.8**
comp=Z,28nm,0.8s
KURBB Kurchatov Arra 70.28 326 P **P 16 02 44.8 -0.3**
comp=Z,25nm,0.8s,baz=121,slow=5.5,SNR=132
KBL Kabul 70.43 308 *e*P **P 16 02 45.4 -1.2**
comp=Z,7.6nm,0.7s
KBL Kabul 70.43 308 P **P 16 02 46.0 -0.6**
baz=70,SNR=4.3
KKAR Karatay Array 72.09 317 *e*P **P 16 02 55.7 -0.5**
comp=Z,6.9nm,0.8s
BVAR Borovoye Array 75.88 326 P **P 16 03 17.6 -0.6**
BVAR Borovoye Array 75.88 326 P **P 16 03 17.6 -0.6**
comp=Z,15nm,0.8s,baz=122,slow=7.4,SNR=36
BRVK Borovoye 75.95 326 *e*P **P 16 03 17.7 -0.8**
comp=Z,17nm,0.8s
PPT2 Papeete2 76.87 107 *e*LR LR 16 27 14.6
comp=Z,118nm,26.0s
VNDA Vanda 76.92 174 P **P 16 03 24.3 +0.7**
VNDA Vanda 76.92 174 P **P 16 03 24.3 +0.7**
comp=Z,0.9nm,0.6s,baz=315,slow=8.6,SNR=8.5
VNDA LR LR 16 37 31.3
comp=Z,480nm,18.1s,baz=358,slow=36
GAMB Gambell 77.05 22 *e*P **P 16 03 23.7 -0.8**
comp=Z,2.0nm,0.7s
TBI Tubuai 77.24 113 *e*LR LR 16 27 24.3
comp=Z,134nm,25.8s
MAW Mawson 80.80 201 LR LR 16 33 49.6
comp=Z,333nm,21.9s,baz=316,slow=31
ABKAR Akbulak array 80.92 320 *e*P **P 16 03 44.8 -1.3**
comp=Z,7.3nm,0.6s
SML Sawmill 86.21 28 *e*P **P 16 04 11.9 -1.1**
comp=Z,4.3nm,0.9s
COLD Coldfoot 86.59 22 *e*P **P 16 04 13.9 -0.9**
comp=Z,2.7nm,0.8s
DIV Divide 87.30 29 *e*P **P 16 04 17.1 -1.3**
comp=Z,25nm,0.8s
ILAR Eielson Array 87.41 25 P **P 16 04 16.7 -2.1**
ILAR Eielson Array 87.41 25 P **P 16 04 16.7 -2.1**
comp=Z,2.9nm,0.6s,baz=258,slow=4.7,SNR=63
ILAR LR LR 16 38 50.2
comp=Z,59nm,21.3s,baz=302,slow=32
PAX Paxson 87.73 27 *e*P **P 16 04 19.5 -1.0**
comp=Z,39nm,2.0s
BMRM Bremner River 87.83 29 *e*P **P 16 04 20.3 -0.6**
GNI Garni 90.40 310 LR LR 16 51 32.7
comp=Z,34nm,18.0s,baz=277,slow=40
INK Inuvik 93.00 22 P **P 16 04 42.0 -2.8**
INK Inuvik 93.00 22 P **P 16 04 42.0 -2.8**
comp=Z,1.2nm,0.6s,baz=330,slow=6.0,SNR=6.7
ARCES ARCESS Array B 98.19 340 P **P 16 05 06.1 -2.3**
ARCES ARCESS Array B 98.19 340 P **P 16 05 06.1 -2.3**
comp=Z,5.0nm,0.8s,baz=71,slow=9.1,SNR=6.1
ARCES LR LR 16 56 05.6
comp=Z,81nm,18.1s,baz=277,slow=40
EIL Elat 98.49 300 LR LR 16 51 19.5
comp=Z,59nm,21.1s,baz=84,slow=36
BRTR Keskin Array B 98.94 310 LR LR 16 59 32.2
comp=Z,37nm,21.3s,baz=260,slow=41
FINES FINESS Array B 100.11 332 P **Pdif 16 05 14.6 -2.5**
FINES FINESS Array B 100.11 332 P **Pdif 16 05 14.6 -2.5**
comp=Z,1.4nm,0.8s,baz=66,slow=3.4,SNR=3.0
YKA Yellowknife Ar 101.80 26 P **Pdif 16 05 22.6 -2.1**
YKA Yellowknife Ar 101.80 26 P **Pdif 16 05 22.6 -2.1**
comp=Z,0.3nm,0.6s,baz=290,slow=4.6,SNR=5.7
RES Resolute Bay 102.17 12 P **Pdif 16 05 23.6 -2.5**
RES Resolute Bay 102.17 12 P **Pdif 16 05 23.6 -2.5**
comp=Z,0.7nm,0.6s,baz=301,slow=6.8,SNR=6.6
TORD Torodi Ar. Bea 131.12 286 PKP **PKPdf 16 10 44.2 -0.5**
TORD SKPbc **SKPbc 16 14 07.3 -1.0**
TORD Torodi Ar. Bea 131.12 286 PKP **PKPdf 16 10 44.2 -0.5**
comp=Z,0.6nm,0.5s,baz=38,slow=1.3,SNR=5.9
TORD SKPbc **SKPbc 16 14 07.3 -1.0**
comp=Z,0.9nm,0.8s,baz=76,slow=4.0,SNR=4.4
CPUP Villa Florida 149.88 160 PKPbc **PKPbc 16 11 22.7 0.0**
CPUP Villa Florida 149.88 160 PKPbc **PKPbc 16 11 22.7 0.0**
comp=Z,1.2nm,0.4s,baz=110,slow=1.2,SNR=7.4
LPAZ La Paz 151.87 131 *e*PKPbc **PKPbc 16 11 28.7 +0.3**
LPAZ La Paz 151.87 131 PKPbc **PKPbc 16 11 28.9 +0.4**
comp=Z,4.6nm,0.7s,baz=324,slow=1.3,SNR=11

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*ISK **15** 16:07:58.7,39°.23N×27°.95E,h10km, MD2.9*
*ISCJB **15** 16:07:59.1±0.4,39°.23N±0°.02×27°.97E±0°.03,h9km±4km,*
Error ellipse: s-maj=4.3km s-min=3.4km az=11.5
*CSEM **15** 16:07:59.1±0.1,39°.23N×27°.96E,h10km, Error ellipse:*
s-maj=2.7km s-min=2.2km az=90.0
*DDA **15** 16:07:59.1,39°.23N×28°.00E,h7km, MD2.8*
ISC 15 16:07:59.3±1.0, 39°.24N±0°.02×27°.96E±0°.02, h11km±9km, n60, σ0°.49/76, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.37**	**197**	*i* P	**Pg**	**16 08 06.5**	**-0.2**
AKHS				*i* S	**Sg**	**16 08 12.4**	**+0.7**
AKHS	**Akhisar**	**0.37**	**197**	*i* P	**Pg**	**16 08 06.5**	**-0.2**
AKS	**Akhisar**	**0.37**	**197**	*e*PG	**Pg**	**16 08 06.4**	**-0.3**
AKS				*e*SG	**Sg**	**16 08 12.3**	**+0.6**
AKS	**Akhisar**	**0.37**	**197**	*e*Pg	**Pg**	**16 08 06.4**	**-0.3**
AKS				*e*Sg	**Sg**	**16 08 12.3**	**+0.6**
BALB	**Balikesir**	**0.41**	**352**	*e*PG	**Pg**	**16 08 07.6**	**+0.2**
BALB				*e*SG	**Sb**	**16 08 14.2**	**-0.6**
BALB	**Balikesir**	**0.41**	**352**	*e*Pg	**Pg**	**16 08 07.6**	**+0.2**
BALB				*e*Sg	**Sb**	**16 08 14.2**	**-0.6**
DURS	**Dursunbey**	**0.54**	**48**	*i* P	**Pg**	**16 08 09.6**	**-0.4**
DURS				*i* S	**Sb**	**16 08 18.2**	**-0.5**
DURS	**Dursunbey**	**0.54**	**48**	*i* P	**Pg**	**16 08 09.6**	**-0.4**
BALY	**Balya**	**0.57**	**333**	*i* P	**Pg**	**16 08 10.5**	**+0.1**
BALY				*i* S	**Sb**	**16 08 19.3**	**-0.1**
BALY	**Balya**	**0.57**	**333**	*i* P	**Pg**	**16 08 10.5**	**+0.1**
BALY				*i* S	**Sb**	**16 08 19.3**	**-0.1**
DEMI	**Demirci**	**0.62**	**108**	*i* P	**Pg**	**16 08 11.3**	**-0.1**
DEMI				*i* S	**Sg**	**16 08 19.7**	**+0.1**
DEMI	**Demirci**	**0.62**	**108**	*i* P	**Pg**	**16 08 11.3**	**-0.1**
DEMI				*i* S	**Sg**	**16 08 19.7**	**+0.1**
DST	**Dursunbey**	**0.63**	**54**	*e*PG	**Pg**	**16 08 11.0**	**-0.6**
DST				*e*SG	**Sb**	**16 08 20.8**	**-0.5**
DST	**Dursunbey**	**0.63**	**54**	*e*Pg	**Pg**	**16 08 11.0**	**-0.6**
DST				*e*Sg	**Sb**	**16 08 20.8**	**-0.5**
GONE	**Gonen-Balikesi**	**0.84**	**346**	*e*PG	**Pg**	**16 08 15.2**	**-0.3**
GONE				*e*SG	**Sb**	**16 08 27.3**	**+0.2**
GONE	**Gonen-Balikesi**	**0.84**	**346**	*e*Pg	**Pg**	**16 08 15.2**	**-0.3**
GONE				*e*Sg	**Sb**	**16 08 27.3**	**+0.2**
KULA	**Kula-Manisa**	**0.91**	**142**	*e*PG	**Pg**	**16 08 16.3**	**-0.5**
KULA	**Kula-Manisa**	**0.91**	**142**	*e*Pg	**Pg**	**16 08 16.3**	**-0.5**
AYVA	**Ayvalik**	**0.98**	**275**	*i* P	**Pn**	**16 08 19.0**	**0.0**
AYVA				*i* S	**Sn**	**16 08 33.7**	**+0.8**
AYVA	**Ayvalik**	**0.98**	**275**	*i* P	**Pn**	**16 08 19.0**	**0.0**
AYVA				*i* S	**Sn**	**16 08 33.7**	**+0.8**
IZM	**Izmir**	**1.00**	**213**	*e*PG	**Pg**	**16 08 18.1**	**-0.4**
IZM	**Izmir**	**1.00**	**213**	*e*Pg	**Pg**	**16 08 18.1**	**-0.4**
KCTX	**Karacabey (Bur**	**1.07**	**17**	*e*PG	**Pg**	**16 08 19.6**	**-0.4**
KCTX	**Karacabey (Bur**	**1.07**	**17**	*e*Pg	**Pg**	**16 08 19.6**	**-0.4**
ORLT	**Orhaneli**	**1.09**	**42**	*e*PN	**Pb**	**16 08 20.0**	**-0.2**
ORLT	**Orhaneli**	**1.09**	**42**	*e*Pn	**Pb**	**16 08 20.0**	**-0.2**
BLCB	**Balcova**	**1.11**	**220**	*e*PN	**Pg**	**16 08 19.9**	**-0.7**
BLCB	**Balcova**	**1.11**	**220**	*e*Pn	**Pg**	**16 08 19.9**	**-0.7**

EDC	**Edincik**	**1.11**	**356**	*e*PN	**Pg**	**16 08 19.8**	**-0.9**
EDC	**Edincik**	**1.11**	**356**	*e*Pn	**Pg**	**16 08 19.8**	**-0.9**
BNT	**Bandirma**	**1.12**	**359**	*e*PN	**Pn**	**16 08 20.8**	**-0.1**
BNT	**Bandirma**	**1.12**	**359**	*e*Pn	**Pn**	**16 08 20.8**	**-0.1**
TVSB	**Tavsanli**	**1.19**	**79**	*e*PN	**Pg**	**16 08 22.1**	**0.0**
TVSB	**Tavsanli**	**1.19**	**79**	*e*Pn	**Pg**	**16 08 22.1**	**0.0**
KRBG	**Karabiga-Canak**	**1.26**	**337**	*e*PN	**Pn**	**16 08 22.6**	**-0.2**
KRBG	**Karabiga-Canak**	**1.26**	**337**	*e*Pn	**Pn**	**16 08 22.7**	**-0.2**
MDNY	**Mudanya-Bursa**	**1.34**	**32**	*e*PN	**Pn**	**16 08 23.8**	**-0.1**
MDNY	**Mudanya-Bursa**	**1.34**	**32**	*e*Pn	**Pn**	**16 08 23.8**	**-0.1**
MRMT	**Marmara Adasi**	**1.39**	**349**	*e*PN	**Pn**	**16 08 24.3**	**-0.5**
MRMT	**Marmara Adasi**	**1.39**	**349**	*e*Pn	**Pn**	**16 08 24.3**	**-0.5**
LPK	**Lapseki**	**1.46**	**321**	*e*PN	**Pn**	**16 08 25.6**	**0.0**
LPK	**Lapseki**	**1.46**	**321**	*e*Pn	**Pn**	**16 08 25.6**	**0.0**
ARMT	**Armutlu**	**1.50**	**27**	*e*PN	**Pn**	**16 08 25.8**	**-0.4**
ARMT	**Armutlu**	**1.50**	**27**	*e*Pn	**Pn**	**16 08 25.8**	**-0.4**
KHL	**Karahalli**	**1.53**	**126**	*e*PN	**Pb**	**16 08 27.2**	**-0.5**
KHL	**Karahalli**	**1.53**	**126**	*e*Pn	**Pb**	**16 08 27.2**	**-0.5**
GEMT	**Gemlik**	**1.53**	**38**	*e*PN	**Pn**	**16 08 26.9**	**+0.4**
GEMT	**Gemlik**	**1.53**	**38**	*e*Pn	**Pn**	**16 08 27.0**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.57**	**338**	*e*PN	**Pn**	**16 08 26.9**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.57**	**338**	*e*Pn	**Pn**	**16 08 27.0**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.63**	**316**	*e*PN	**Pn**	**16 08 28.0**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.63**	**316**	*e*Pn	**Pn**	**16 08 28.0**	**+0.1**
MFT	**Murefte**	**1.63**	**342**	*e*PN	**Pn**	**16 08 28.8**	**+0.7**
MFT	**Murefte**	**1.63**	**342**	*e*Pn	**Pn**	**16 08 28.8**	**+0.7**
YLV	**Yalova**	**1.72**	**39**	*e*PN	**Pn**	**16 08 30.0**	**+0.8**
YLV	**Yalova**	**1.72**	**39**	*e*Pn	**Pn**	**16 08 30.0**	**+0.8**
CAVI	**Cavuskoy**	**1.75**	**56**	*e*PN	**Pn**	**16 08 29.9**	**+0.3**
CAVI	**Cavuskoy**	**1.75**	**56**	*e*Pn	**Pn**	**16 08 29.9**	**+0.3**
GULT	**Gulveren**	**2.31**	**58**	*e*PN	**Pn**	**16 08 38.6**	**+1.3**
GULT	**Gulveren**	**2.31**	**58**	*e*Pn	**Pn**	**16 08 38.6**	**+1.3**

IDC ***15*** *16:15:58.4±3.9,36°.37N×70°.51E,h185km±33km,mb3.0/9, mb1 3.1/14,mb1mx3.0/31,mbtmp3.0/14,Error ellipse: s-maj=29.4km s-min=18.8km az=6.0*
ISCJB ***15*** *16:15:59.5±0.4,36°.51N±0.03×70°.43E±0°.06,h204km, mb3.1/8,Error ellipse: s-maj=7.6km s-min=3.7km az=159.9*
NNC ***15*** *16:16:00.3±9.0,36°.75N×69°.86E,h129km±105km,mb3.2, mpv4.2,Error ellipse: s-maj=70.3km s-min=40.6km az=17.0*

ISC 15 16:16:00.4±0.6,36°.57N±0°.05×70°.42E±0°.08,h204km,n43, σ1§51/50,mb3.2/8,7C-4D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.00**	**155**	⇓P		**Pn**	**16 16 49.8**	**-0.6**
CEP				S		**S**	**16 17 27.0**	**-1.9**
CHCP	**Chirah Chowk**	**3.72**	**140**	⇓P		**Pn**	**16 16 58.9**	**-0.1**
THW	**Thamme Wali**	**3.92**	**163**	⇓P		**Pn**	**16 17 00.3**	**-1.1**
AML	**Almayashu** SNR=83	**6.11**	**24**	P		**Pn**	**16 17 29.8**	**+0.4**
UCH	**Uchtor** SNR=16	**6.48**	**28**	P		**S**	**16 18 46.6**	**-1.9**
KK31	**Karatay Array** 5.9nm,0.5s,baz=187,slow=12,SNR=115	**6.53**	**1**	P		**Pn**	**16 17 33.2**	**-1.2**
KK31				⇑S		**S**	**16 18 44.4**	**-4.5**
	8.7nm,0.6s,baz=192,slow=22,SNR=6.9							
EKS2	**Erkin-Say** SNR=12	**6.62**	**22**	P		**Pn**	**16 17 36.3**	**+0.6**
AAK	**Ala-Archa** SNR=14	**6.83**	**26**	P		**Pn**	**16 17 39.2**	**+0.7**
AAK	**Ala-Archa** 2.2nm,0.3s,baz=189,slow=6.6,SNR=45	**6.83**	**26**	P		**Pn**	**16 17 39.1**	**+0.7**
AAK				S		**S**	**16 18 55.4**	**-0.8**
	1.3nm,0.3s,baz=357,slow=20,SNR=20							
KBK	**Karagaybulak** SNR=10	**7.01**	**29**	P		**Pn**	**16 17 41.7**	**+0.8**
CHMS	**Chumysh** SNR=9.2	**7.24**	**26**	P		**Pn**	**16 17 44.2**	**+0.6**
USP	**Ospenovka** SNR=6.3	**7.39**	**24**	P		**Pn**	**16 17 45.9**	**+0.2**
TKM2	**Tokmak 2** 16nm,0.6s	**7.50**	**31**	⇑P		**Pn**	**16 17 47.2**	**0.0**
TKM2				⇑S		**S**	**16 19 11.2**	**-0.9**
	7.4nm,0.8s							
TKM2	**Tokmak 2** SNR=21	**7.50**	**31**	P		**Pn**	**16 17 47.4**	**+0.2**
MK31	**Makanchi Array** 0.6nm,0.5s,baz=216,slow=13,SNR=9.8	**13.52**	**37**	P		**P**	**16 19 06.6**	**+0.2**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=214,slow=13,SNR=10	**13.52**	**37**	P		**Pn**	**16 19 05.2**	**+1.1**
PYUN	**Piuthan** 9.8nm,0.4s	**13.56**	**125**	*e*P		**Pn**	**16 19 03.7**	**-1.3**
DANN	**Dangsing** 9.2nm,0.4s	**13.92**	**122**	*e*P		**Pn**	**16 19 08.3**	**-1.2**
KOLN	**Koldanda** 3.9nm,0.3s	**14.19**	**124**	*e*P		**Pn**	**16 19 10.9**	**-1.8**
AB31	**Akbulak array** 1.7nm,0.5s,baz=145,slow=12,SNR=56	**14.80**	**332**	P		**Pn**	**16 19 19.3**	**-0.5**
AB31				⇑S		**S**	**16 21 59.0**	**-4.9**
	0.7nm,0.6s,baz=234,slow=11,SNR=6.2							
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=210,slow=10,SNR=3.8	**15.22**	**20**	P		**Pn**	**16 19 24.4**	**-0.4**
DMN	**Daman** 6.4nm,0.4s	**15.31**	**122**	*e*P		**Pn**	**16 19 25.8**	**-0.7**
KKN	**Kakani** 4.6nm,0.2s	**15.31**	**121**	*e*P		**Pn**	**16 19 25.4**	**-1.1**
PKIN	**Phulchoki** 8.0nm,0.4s	**15.53**	**121**	*e*P		**Pn**	**16 19 29.1**	**0.0**
PKI	**Pulchoki** 22nm,0.6s	**15.54**	**121**	*e*P		**P**	**16 19 29.4**	**0.0**
GUN	**Gumba** 9.5nm,0.4s	**15.66**	**119**	*e*P		**P**	**16 19 30.5**	**-0.2**
BVA0	**Borovoye Array** 0.4nm,1.0s,baz=172,slow=17,SNR=8.3	**16.46**	**360**	⇓P		**Pn**	**16 19 41.1**	**+1.3**
BVAR	**Borovoye Array** 0.3nm,0.3s,baz=185,slow=11,SNR=9.0	**16.46**	**360**	P		**Pn**	**16 19 40.7**	**+1.0**
BVAR				S		**S**	**16 22 37.6**	**-2.9**
	0.4nm,0.3s,baz=206,slow=36,SNR=4.3							
AKTO	**Aktyubinsk** 1.2nm,0.8s	**16.49**	**331**	⇑P		**P**	**16 19 40.3**	**+1.1**
AKTO				⇑S		**S**	**16 22 40.0**	**-1.3**
	0.4nm,0.9s							
AKTO	**Aktyubinsk** 0.5nm,0.3s,baz=143,slow=11,SNR=25	**16.49**	**331**	P		**Pn**	**16 19 41.2**	**+1.0**
BRVK	**Borovoye** 3.7nm,0.7s	**16.49**	**360**	⇑P		**Pn**	**16 19 42.4**	**+2.2**
RAMN	**Ramite** 11nm,0.5s	**16.75**	**120**	*e*P		**P**	**16 19 42.9**	**+0.3**
TAPN	**Taplejung** 14nm,0.8s	**17.29**	**117**	*e*P		**Pn**	**16 19 50.5**	**+0.2**
ODAN	**Odare** 0.6nm,0.3s,baz=211,slow=11,SNR=5.6	**17.36**	**119**	*e*P		**Pn**	**16 19 52.4**	**+1.4**
ZALV	**Zalesovo Beam** 0.6nm,0.3s,baz=211,slow=11,SNR=5.6	**20.05**	**25**	P		**P**	**16 20 18.9**	**+1.1**
SONM	**Songino Array** 0.4nm,0.8s,baz=260,slow=5.7,SNR=3.4	**28.68**	**56**	P		**P**	**16 21 39.6**	**+1.2**
BRTR	**Keskin Array B** 0.3nm,0.5s,baz=95,slow=5.6,SNR=2.5	**28.96**	**288**	P		**P**	**16 21 43.3**	**+2.3**
FINES	**FINESS Array B** 0.4nm,0.4s,baz=138,slow=8.6,SNR=3.6	**37.17**	**326**	P		**P**	**16 22 53.1**	**+1.7**
NOA	**NORSAR Array B** 0.7nm,0.8s,baz=94,slow=7.7,SNR=2.9	**44.04**	**323**	P		**P**	**16 23 48.9**	**+1.3**
TORD	**Torodi Ar. Bea** 0.4nm,0.7s,baz=49,slow=5.0,SNR=3.3	**65.25**	**268**	P		**P**	**16 26 19.3**	**-1.2**
ILAR	**Eielson Array** 0.2nm,0.6s,baz=307,slow=5.2,SNR=4.2	**74.84**	**16**	P		**P**	**16 27 19.0**	**+1.0**
YKA	**Yellowknife Ar** 0.3nm,0.7s,baz=346,slow=5.2,SNR=6.4	**81.20**	**2**	P		**P**	**16 27 53.7**	**+0.8**
ASAR	**Alice Springs** 0.3nm,0.6s,baz=312,slow=4.9,SNR=12	**84.68**	**125**	P		**P**	**16 28 10.5**	**-0.9**

ISCJB ***15*** *16:27:52.1±0.5,49°.85N±0°.05×18°.48E±0°.03,h0km, Error ellipse: s-maj=7.4km s-min=3.2km az=176.3*
CSEM ***15*** *16:27:52.7±0.3,49°.82N×18°.54E,h1km,ML2.5/5,Error ellipse: s-maj=7.1km s-min=3.8km az=164.0*
PRU ***15*** *16:27:53.9,49°.85N×18°.52E,h0km*
IPEC ***15*** *16:27:53.4±0.2,49°.82N×18°.56E,h0km±3km,ML1.6/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*

ISC 15 16:27:52.9±0.9,49°.81N±0°.06×18°.54E±0°.03,h0km,n15, σ0§69/28,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.25**	**277**	*e*PG		**Pb**	**16 27 59.3**	**-1.1**
OKC				*e*SG		**Sg**	**16 28 02.5**	**+1.5**
	comp=Z,36nm,0.7s							
OKC	**Ostrava-Krasne** baz=93	**0.25**	**277**	*e*Pg		**Pg**	**16 27 58.9**	**+1.1**
OKC				Sg		**Sg**	**16 28 02.5**	**+1.5**
	36nm,0.7s							
MORC	**Moravsky Berou**	**0.64**	**268**	*e*Pg		**Pg**	**16 28 06.3**	**+1.1**
MORC				*e*Sg		**Sg**	**16 28 14.0**	**+0.4**
	11nm,0.3s,baz=86							
OJC	**Ojcow**	**0.91**	**63**	*e*Pg		**Pg**	**16 28 10.4**	**0.0**
OJC				*e*Sg		**Sg**	**16 28 22.5**	**+0.2**
OJC	**Ojcow** baz=244	**0.91**	**63**	*e*Pg		**Pg**	**16 28 10.3**	**-0.1**
NIE	**Niedzica**	**1.22**	**108**	*e*Pg		**Pg**	**16 28 16.6**	**+0.3**
NIE				*e*Sg		**Sn**	**16 28 35.4**	**+0.9**
VRAC	**Vranov**	**1.36**	**249**	*e*Pn		**Pg**	**16 28 18.7**	**-0.2**
VRAC	**Vranov** baz=67	**1.36**	**249**	*e*Pg		**Pn**	**16 28 19.2**	**+0.1**
VRAC				*e*Sg		**Sg**	**16 28 36.4**	**-0.1**
	11nm,0.3s,baz=67							
DPC	**Dobruska-Polom**	**1.53**	**292**	*e*PG		**Pn**	**16 28 21.5**	**0.0**
DPC				*e*SG		**Sn**	**16 28 41.3**	**-0.8**
	comp=Z,4.2nm,0.3s							
DPC	**Dobruska-Polom** 4.2nm,0.3s	**1.53**	**292**	Pg		**Pn**	**16 28 21.5**	**0.0**
DPC				Sg		**Sn**	**16 28 41.3**	**-0.8**
KRUC	**Moravsky** baz=61	**1.58**	**243**	*e*Pg		**Pn**	**16 28 22.7**	**+0.5**
KRUC				*e*Sg		**Sb**	**16 28 43.6**	**0.0**
	3.8nm,0.2s,baz=61							
UPC	**Upice**	**1.77**	**294**	*e*PG		**Pb**	**16 28 25.9**	**-0.3**
UPC				*e*SG		**Sb**	**16 28 49.0**	**+0.1**
UPC	**Upice**	**1.77**	**294**	Pg		**Pb**	**16 28 25.9**	**-0.3**
UPC				Sg		**Sb**	**16 28 49.0**	**+0.1**
KHC	**Kasperske Hory**	**3.30**	**260**	*e*PG		**Pg**	**16 28 55.5**	**-0.7**
KHC				*e*SG		**Sg**	**16 29 38.8**	**-0.2**
	comp=Z,2.2nm,0.5s							
KHC	**Kasperske Hory** 2.2nm,0.5s	**3.30**	**260**	Pg		**Pg**	**16 28 55.5**	**-0.7**
KHC				Sg		**Sg**	**16 29 38.8**	**-0.2**

IDC ***15*** *16:28:27.1±4.0,24°.77S×177°.26W,h91km±34km,mb3.7/8, mb1 3.9/10,mb1mx3.8/20,mbtmp3.8/10,Error ellipse: s-maj=45.0km s-min=19.2km az=145.0*
ISCJB ***15*** *16:28:37.1±1.2,23°.9S±0°.2×177°.7W±0°.2,h171km,mb3.7/8, Error ellipse: s-maj=36.4km s-min=9.0km az=138.9*
AUST ***15*** *16:29:35.3,23°.20S×179°.25E,h600km*

ISC 15 16:28:38.2±1.2,23°.8S±0°.2×177°.7W±0°.2,h171km,n24, σ1§12/17,mb3.6/8,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu** 1.1nm,0.3s,baz=208,slow=17,SNR=2.9	**11.30**	**31**	P		**Pn**	**16 31 13.6**	**-1.4**
AFI				S		**Sn**	**16 33 21.2**	**+0.7**
	2.6nm,0.3s,baz=100,slow=20,SNR=4.1							
URZ	**Urewera** 0.9nm,0.3s,baz=288,slow=6.4,SNR=7.6	**15.09**	**196**	P		Pn	16 31 45.7	-17
URZ				S		Sn	16 34 03.4	-48
	0.4nm,0.3s,baz=294,slow=20,SNR=4.2							
RMQ	**Roma** baz=28,SNR=5.1	**30.47**	**258**	P		**P**	**16 34 35.9**	**+0.8**
CTA	**Charters Tower** 6.0nm,0.5s,baz=105,slow=8.4,SNR=14	**33.62**	**269**	P		**P**	**16 35 03.5**	**+0.9**
MCQ	**Macquarie Isla** baz=35,SNR=6.2	**35.28**	**204**	P		P	16 35 36.6	+20
STKA	**Stephens Creek** 1.1nm,0.7s,baz=97,slow=12,SNR=6.2	**36.75**	**248**	P		P	16 35 25.2	-4.0
ASAR	**Alice Springs** 0.4nm,0.3s,baz=96,slow=7.4,SNR=32	**44.17**	**260**	P		**P**	**16 36 27.9**	**-2.4**
KDU	**Kakadu** baz=46,SNR=4.0	**48.42**	**274**	P		**P**	**16 37 04.2**	**+0.8**
MTN	**Manton Dam** baz=47,SNR=4.1	**49.59**	**273**	P		**P**	**16 37 12.3**	**-0.1**
FITZ	**Fitzroy Crossi** baz=50,SNR=3.7	**52.98**	**265**	P		**P**	**16 37 36.6**	**-0.9**
PCI	**Palu** baz=62,SNR=21	**64.59**	**281**	P		**P**	**16 38 58.2**	**+0.5**
PCI				S		S	16 46 36.7	-47
	baz=62,SNR=3.1							
PETK	**Petropavlovsk-** 3.9nm,0.9s,baz=145,slow=5.3,SNR=5.3	**79.53**	**345**	P		P	16 40 29.9	+4.3
PSI	**Prapat** baz=82,SNR=3.6	**85.10**	**275**	P		P	16 40 59.0	+3.4
GSI	**Gunungsitoli** baz=83,SNR=10	**85.73**	**273**	P		P	16 40 52.4	-6.2
TXAR	**Lajitas Array** 0.2nm,0.6s,baz=218,slow=7.9,SNR=3.5	**88.56**	**57**	P		**P**	**16 41 12.4**	**+0.5**
PDAR	**Pinedale Array** 0.4nm,0.8s,baz=238,slow=5.2,SNR=2.8	**91.14**	**43**	P		**P**	**16 41 24.4**	**+0.6**
ILAR	**Eielson Array** 0.4nm,0.6s,baz=219,slow=4.2,SNR=5.0	**91.45**	**13**	P		P	16 41 26.1	+1.7
CMAR	**Chiang Mai Arr** 0.5nm,0.8s,baz=145,slow=2.2,SNR=5.0	**91.51**	**289**	P		**P**	**16 41 27.6**	**+1.8**
ZALV	**Zalesovo Beam** 0.3nm,0.4s,baz=137,slow=3.0,SNR=2.4	**113.24**	**320**	PKP			16 46 54.6	
ARCES	**ARCESS Array B** 6.1nm,1.0s,baz=30,slow=2.5,SNR=5.0	**132.21**	**349**	PKP		**PKPdf**	**16 47 30.9**	**-0.1**
FINES	**FINESS Array B** 2.5nm,1.0s,baz=233,slow=6.8,SNR=3.3	**139.01**	**343**	PKP		**PKPdf**	**16 47 43.1**	**-0.6**
NOA	**NORSAR Array B** 0.7nm,0.7s,baz=16,slow=4.6,SNR=3.8	**142.28**	**353**	PKP		**PKPdf**	**16 47 50.6**	**+0.8**
AKASG	**Malin Array Be** 1.1nm,0.4s,baz=39,slow=4.3,SNR=3.7	**146.02**	**329**	PKPbc		**PKPab**	**16 47 57.3**	**-1.2**
BRTR	**Keskin Array B** 0.7nm,0.7s,baz=123,slow=4.6,SNR=3.8	**149.21**	**308**	PKPbc		**PKPbc**	**16 48 06.6**	**-0.2**

NNC 15 16:30:32.8±1.2,37°.25N×70°.70E,h0km,mb3.6,mpv3.4, 2C-1D,Error ellipse: s-maj=14.2km s-min=9.0km az=76.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array** 0.9nm,0.2s,baz=178,slow=13,SNR=81	**5.85**	**359**	Pn		Pn	16 32 03.7	+2.9
KK31				⇓Sn		Sn	16 33 15.2	+6.5
	0.5nm,0.3s,baz=179,slow=21,SNR=4.2							
TKM2	**Tokmak 2** 1.9nm,0.6s	**6.80**	**32**	⇑Pn		Pn	16 32 13.5	-0.6
AB31	**Akbulak array** 0.2nm,0.3s,baz=81,slow=40,SNR=11	**14.32**	**330**	Pn		Pn	16 33 56.2	-0.5
AB31				⇑Sn		Sn	16 36 37.1	+1.0
	0.2nm,0.4s							

PRE 15 16:39:27.9±2.2,26°.40S×27°.48E,h2km,ML3.1,2C-1D, South Africa

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KLOF	**Kloof**	**0.13**	**67**	*e*P		Pg	16 39 31.2	+0.5
KLOF				*e*S		Sg	16 39 32.8	+0.2
KLOF				AML		AML	16 39 34.9	
	comp=Z,5μm,0.2s							
PRYS	**Parys**	**0.53**	**191**	*e*P		Pg	16 39 38.2	-0.1
PRYS				*e*S		Sg	16 39 44.2	-1.3
PRYS				AML		AML	16 39 50.2	
	comp=Z,318nm,0.6s							
ERPM	**east rand prop**	**0.69**	**85**	⇑*i*P		Pg	16 39 41.6	+0.2
ERPM				*e*S		Sg	16 39 49.4	-1.1
ERPM				AML		AML	16 39 50.3	
	comp=Z,222nm,0.5s							
KSR	**Koster**	**0.76**	**316**	*e*P		Pg	16 39 42.7	+0.1
KSR				*e*S		Sg	16 39 51.8	-0.9
KSR				AML		AML	16 39 52.9	
	comp=Z,463nm,0.5s							
SLR	**Silverton**	**0.98**	**48**	*e*P		Pg	16 39 46.7	-0.2
SLR				*e*S		Sg	16 40 00.1	+0.2
SLR				AML		AML	16 40 07.1	
	comp=Z,160nm,0.2s							
SEK	**Senekal**	**1.92**	**176**	*e*P		Pb	16 40 03.1	-0.8
SEK				*e*S		Sn	16 40 26.7	0.0
SEK				AML		AML	16 40 28.3	
	comp=Z,158nm,0.2s							
SWZ	**Schweizer**	**2.07**	**247**	*e*P		Pn	16 40 03.4	-0.5
SWZ				*e*S		Sb	16 40 31.9	-0.9
SWZ				AML		AML	16 40 33.2	
	comp=Z,216nm,0.5s							
LBTB	**Lobatse**	**2.19**	**309**	⇓*i*P		Pn	16 40 06.6	+1.1
LBTB				*e*S		Sn	16 40 32.9	-0.3
LBTB				AML		AML	16 40 38.0	
	comp=Z,228nm,0.5s							
BOSA	**Boshof**	**2.96**	**221**	⇑*i*P		Pn	16 40 15.9	-0.2
BOSA				*e*S		Sn	16 40 52.0	-0.3
BOSA				AML		AML	16 41 10.4	
	comp=Z,22nm,0.3s							
POGA	**Pongola**	**3.82**	**106**	*e*P		Pn	16 40 29.0	+1.2
POGA				*e*S		Sn	16 41 13.1	-0.2
POGA				AML		AML	16 41 31.6	
	comp=Z,52nm,0.4s							
KSD	**Kokstad**	**4.46**	**158**	*e*P		Pn	16 40 38.8	+2.0
KSD				*e*S		Sn	16 41 29.2	-0.3
KSD				AML		AML	16 41 51.0	
	comp=Z,52nm,0.5s							
MSNA	**Messina**	**4.66**	**30**	*e*P		Pn	16 40 39.0	-0.4
MSNA				*e*S		Sn	16 41 31.8	-2.3
MSNA				AML		AML	16 41 57.8	
	comp=Z,17nm,0.4s							
UPI	**Upington**	**5.87**	**249**	*e*P		Pn	16 40 55.7	-0.3
UPI				*e*S		Sn	16 42 02.7	-1.3
UPI				AML		AML	16 42 31.1	
	comp=Z,12nm,0.5s							
BLWY	**Bulawayo**	**6.32**	**10**	*i* P		Pn	16 41 02.5	+0.2
BLWY				*i*			16 41 02.6	
	baz=238,slow=12							
BLWY				*i* S		Sn	16 42 11.7	-3.6
SUR	**Sutherland**	**8.32**	**223**	*e*P		Pn	16 41 30.0	+0.1
SUR				*e*S		Sn	16 43 00.3	-4.4
SUR				AML		AML	16 43 52.2	
	comp=Z,5.2nm,0.6s							

DJA 15 16:39:56.1±0.3,0°.S±2°.×10°.0E±°,h10km,M3.9/8,MLv3.9/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**0.10**	**254**	P		Pg	16 39 57.6	-1.1
PPI				S		Sg	16 40 00.1	-0.4
PDSI	**Padang**	**0.48**	**183**	P		Pg	16 40 04.5	-1.0
PDSI				S		Sg	16 40 11.4	-0.5
BKNI	**Bangkinang**	**0.93**	**36**	P		Pg	16 40 13.2	-0.9
BKNI				S		Sb	16 40 27.0	+0.2
MNSI	**Mandailing Nat**	**1.52**	**323**	P		Pn	16 40 22.5	-0.9
RGRI	**Rengat**	**1.85**	**88**	P		Pb	16 40 29.1	-0.9
KRJI	**Kerinci**	**1.92**	**150**	P		Pb	16 40 30.3	-1.0
GSI	**Gunungsitoli**	**3.38**	**301**	P		Pn	16 40 50.3	+1.2
PSI	**Prapat**	**3.57**	**334**	P		Pn	16 40 51.5	-0.3
BTDF	**Bukit Timah Da**	**3.73**	**62**	P		Pn	16 40 55.2	+1.4

ISCJB ***15*** *16:43:16.0±0.9,0°.40S±0°.05×100°.42E±0°.06,h8km±8km, mb3.4/3,Error ellipse: s-maj=10.4km s-min=7.6km az=152.1*
DJA ***15*** *16:43:16.7±0.3,0°.S±2°.×10°.0E±°,h10km,M4.0/10, MLv4.0/10*
IDC ***15*** *16:43:22.3±5.4,1°.06S×99°.82E,h109km±33km,mb3.0/3, mb1 3.1/4,mb1mx3.0/23,mbtmp3.1/4,MS2.9/2,Ms1 2.9/2, ms1mx2.5/8,Error ellipse: s-maj=126.4km s-min=22.7km az=61.0*

ISC 15 16:43:16.1±1.1,0°.40S±0°.04×100°.50E±0°.04,h10km±10km, n16,σ1§18/18,mb3.6/3,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**0.11**	**243**	P		**Pg**	**16 43 18.7**	**-0.2**
PDSI	**Padang**	**0.51**	**184**	P		**Pg**	**16 43 25.1**	**-0.9**
PDSI				S		**Sg**	**16 43 32.5**	**-0.2**
BKNI	**Bangkinang**	**0.91**	**37**	P		**Pg**	**16 43 33.0**	**-0.6**
BKNI				S		**Sn**	**16 43 47.7**	**-0.4**
SDSI	**Sungai Dareh**	**1.07**	**119**	P		**Pn**	**16 43 37.9**	**+0.7**
MNSI	**Mandailing Nat**	**1.50**	**322**	P		**Pn**	**16 43 43.2**	**0.0**
RGRI	**Rengat**	**1.84**	**88**	P		**Pb**	**16 43 50.0**	**+0.1**
RGRI				S		**Sb**	**16 44 13.9**	**+0.9**
KRJI	**Kerinci**	**1.93**	**150**	P		**Pb**	**16 43 51.4**	**-0.2**
GSI	**Gunungsitoli**	**3.38**	**300**	P		**Pn**	**16 44 09.7**	**+0.7**
PSI	**Prapat**	**3.55**	**334**	P		**Pn**	**16 44 13.2**	**+1.7**
PSI	**Prapat** 5.0nm,0.3s,baz=151,slow=19,SNR=5.9	**3.55**	**334**	P		**Pb**	**16 44 19.2**	**0.0**
PSI				S		**Sb**	**16 45 04.5**	**+2.1**
	8.0nm,0.3s,baz=60,slow=20,SNR=4.3							
PSI				LR		LR	16 45 41.1	
	comp=Z,179nm,19.1s,baz=23,slow=36							
BTDF	**Bukit Timah Da**	**3.71**	**62**	P		**Pn**	**16 44 14.2**	**+0.6**
KSI	**Kapahiang**	**3.85**	**147**	P		**Pn**	**16 44 17.6**	**+2.1**
KAPI	**Kappang** comp=Z,28nm,18.4s,baz=295,slow=43	**19.77**	**104**	LR		LR	16 57 55.8	
ASAR	**Alice Springs** 0.3nm,0.7s,baz=305,slow=8.0,SNR=6.3	**39.81**	**128**	P		P	16 50 46.2	-3.7
SONM	**Songino Array** 0.2nm,0.3s,baz=190,slow=7.3,SNR=2.7	**48.32**	**5**	P		**P**	**16 51 58.1**	**+0.1**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=159,slow=8.7,SNR=9.0	**49.64**	**344**	P		**P**	**16 52 06.0**	**-2.0**

MAN ***15*** *16:57:03,5°.95N×125°.75E,h141km,mb4.7,ML3.6,MS3.5*
ISCJB ***15*** *16:57:05.1±0.7,5°.91N±0°.06×125°.84E±0°.10,h111km, mb3.5/4,Error ellipse: s-maj=14.1km s-min=8.5km az=163.4*
IDC ***15*** *16:57:06.4±1.0,6°.11N×125°.59E,h132km±21km,mb3.2/4, mb1 3.3/4,mb1mx3.0/24,mbtmp3.2/4,Error ellipse: s-maj=116.6km s-min=18.3km az=69.0*

ISC 15 16:57:06.4±1.0,5°.97N±0°.08×125°.69E±0°.09,h111km,n12, σ2§18/15,mb3.5/4,2C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.75**	**279**	⇑*i*P		**Pn**	**16 57 26.7**	**+1.3**
GSPH				*e*S		**Sn**	**16 57 42.4**	**+2.7**
DAV	**Davao City (W)** 60nm,0.3s,baz=191,slow=

KBTR	**Krutoberegovo**	**3.36**	**2**	P	Pn	16 59 12.7	+1.1
KRSR	**Krestovskiy**	**3.58**	**341**	P	Pn	16 59 17.9	+3.2
KOZ	**Kozyrevsk**	**3.59**	**334**	P	Pn	16 59 18.9	+4.1
KLY	**Klyuchi**	**3.65**	**342**	P	Pn	16 59 18.2	+2.6
SMKR	**Semkarok**	**3.79**	**350**	P	Pn	16 59 20.3	+2.6
SMKR				S	Sn	17 00 03.5	+2.5
BDR	**Baidarnaya**	**3.81**	**348**	P	Pn	16 59 21.3	+3.4
ESO	**Esso**	**3.84**	**325**	P	Pn	16 59 21.8	+3.5
ESO				S	Sn	17 00 04.8	+2.7
SRDR	**Sredinnyy**	**3.86**	**335**	P	Pn	16 59 21.7	+3.1
SRKR	**Sorokina**	**3.90**	**348**	P	Pn	16 59 22.4	+3.3

IDC 15 17:07:28.3±4.8, 6°.14S×154°.03E, h82km±43km, mb3.2/5, mb1 3.5/7, mb1mx3.3/20, mbtmp3.4/7, ML3.5/2, MS3.3/1, Ms1 3.3/1, ms1mx2.4/10, Error ellipse: s-maj=31.6km s-min=27.7km az=179.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.54**	**244**	P	Pn	17 09 14.6	-1.1
	2.4nm,0.3s,baz=38,slow=7.5,SNR=9.6						
PMG				S	Sn	17 10 41.7	+2.1
	2.5nm,0.3s,baz=36,slow=19,SNR=8.6						
DZM	**Mont Dzumac**	**19.87**	**144**	P	P	17 11 53.9	+0.7
	0.4nm,0.3s,baz=338,slow=19,SNR=3.7						
ASAR	**Alice Springs**	**26.05**	**226**	P	P	17 12 54.3	+0.1
	0.3nm,0.7s,baz=56,slow=9.2,SNR=10						
FITZ	**Fitzroy Crossi**	**30.14**	**244**	P	P	17 13 29.9	-0.8
	1.3nm,0.7s,baz=87,slow=12,SNR=3.6						
FITZ				LR	LR	17 25 27.8	
	comp=Z,56nm,19.9s,baz=67,slow=36						
SONM	**Songino Array**	**68.10**	**328**	P	P	17 18 19.5	0.0
	0.2nm,0.5s,baz=134,slow=8.2,SNR=2.8						
MKAR	**Makanchi Array**	**82.13**	**319**	P	P	17 19 41.9	+1.8
	0.1nm,0.4s,baz=96,slow=8.5,SNR=5.4						
ILAR	**Eielson Array**	**82.93**	**22**	P	P	17 19 43.4	-0.4
	0.5nm,0.8s,baz=245,slow=5.7,SNR=7.3						
TORD	**Torodi Ar. Bea**	**151.87**	**286**	PKPbc	PKPbc	17 27 13.7	-1.1
	0.3nm,0.7s,baz=76,slow=2.3,SNR=2.3						

KRSC 15 17:10:41.7±0.9, 50°.19N×159°.07E, h62km±61km, ML3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**1.92**	**313**	P	Pn	17 11 14.8	+2.7
PAU				S	Sn	17 11 38.6	+3.5
SKR	**Severo-Kuril's**	**1.95**	**286**	P	Pn	17 11 13.6	+1.1
SKR				S	Sn	17 11 37.2	+1.3
RUS	**Russkaya**	**2.27**	**351**	P	Pn	17 11 18.7	+1.9
RUS				S	Sn	17 11 45.5	+1.8
MTVR	**Mutnovka**	**2.36**	**347**	P	Pn	17 11 20.3	+2.0
MTVR				S	Sn	17 11 48.6	+2.3
GRL	**Gorelyy**	**2.45**	**346**	P	Pn	17 11 22.3	+2.9
GRL				S	Sn	17 11 51.5	+3.2
PET	**Petropavlovsk**	**2.85**	**355**	P	Pn	17 11 27.0	+2.3
PET				S	Sn	17 11 59.5	+1.7
SPN	**Mys Shipunski**	**2.97**	**11**	S	Sn	17 12 05.0	+4.2
UGLR	**Uglovaya**	**3.03**	**357**	P	Pn	17 11 30.5	+3.2
AVH	**Avacha**	**3.09**	**356**	P	Pn	17 11 31.5	+3.4
SDLR	**Sedlovina**	**3.10**	**358**	P	Pn	17 11 30.6	+2.4
SDLR				S	Sn	17 12 06.0	+1.9
MKZ	**Mys Kozlova**	**4.67**	**19**	P	Pn	17 11 51.9	+2.4

*AUST **15** 17:29:58.6±12.0, 8°.05N×125°.87E, h0km, Error ellipse: s-maj=4.1km s-min=1.6km az=10.0*
*ISCJB **15** 17:30:17.9±0.5, 6°.53N±0°.07×125°.98E±0°.06, h60km±9km, mb3.5/3, Error ellipse: s-maj=11.7km s-min=9.3km az=179.3*
*MAN **15** 17:30:17, 6°.75N×126°.07E, h58km, mb4.6, ML3.5, MS3.4*
*IDC **15** 17:30:18.9±1.8, 6°.49N×125°.54E, h62km±31km, mb3.2/3, mb1 3.4/3, mb1mx3.1/23, mbtmp3.2/3, Error ellipse: s-maj=114.0km s-min=22.0km az=69.0*

ISC 15 17:30:18.1±0.9, 6°.55N±0°.08×126°.02E±0°.07, h58km±10km, n22, σ1°.12/21, mb3.5/3, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.46**	**30**	*e*P	**Pn**	**17 30 29.3**	**-0.1**
MATI				*e*S	**Sn**	**17 30 37.4**	**-0.4**
DAV	**Davao City (W)**	**0.68**	**320**	P	**Pn**	**17 30 32.9**	**+0.9**
	249nm,0.3s,baz=212,slow=2.9,SNR=38						
DAV				S	**Sn**	**17 30 43.4**	**+1.3**
	321nm,0.3s,baz=229,slow=20,SNR=25						
DMPH	**Davao City--Mi**	**0.74**	**316**	*e*P	**Pn**	**17 30 33.3**	**+0.6**
DMPH				*e*S	**Sn**	**17 30 44.2**	**+0.9**
GSPH	**General Santos**	**1.16**	**247**	*i*P	**Pn**	**17 30 37.1**	**-1.2**
GSPH				*i*S	**Sn**	**17 30 51.0**	**-1.3**
BUKP	**Musuan**	**1.63**	**324**	*e*P	**Pn**	**17 30 45.1**	**+0.6**
CTBH	**Cotabato--PC H**	**1.89**	**291**	*i*P	**Pn**	**17 30 48.1**	**+0.1**
CGP	**Cagayan de Oro**	**2.31**	**325**	*i*P	**Pn**	**17 30 53.2**	**-0.5**
CGP				*i* S	Sn	17 31 27.3	+6.3
PAGZ	**Pagadian**	**2.92**	**296**	*e*P	**Pn**	**17 31 02.7**	**+0.6**
IPIL	**Ipil**	**3.64**	**290**	*e*P	**Pn**	**17 31 13.0**	**+1.0**
TBP	**Tagbilaran**	**3.79**	**326**	*e*P	**Pn**	**17 31 12.2**	**-1.8**
SWI	**Sorong**	**9.03**	**144**	P	Pn	17 32 30.4	+4.5
	baz=10,SNR=3.7						
PCI	**Palu**	**9.64**	**220**	P	**Pn**	**17 32 32.8**	**-1.4**
	baz=11,SNR=10						
MTN	**Manton Dam**	**19.92**	**165**	P	**Pn**	**17 34 47.2**	**-0.1**
	baz=22,SNR=5.9						
KDU	**Kakadu**	**20.15**	**161**	P	Pn	17 34 50.2	+0.1
	baz=22,SNR=4.5						
FITZ	**Fitzroy Crossi**	**24.49**	**181**	P	**P**	**17 35 32.3**	**+0.3**
	0.8nm,0.4s,baz=6.3,slow=9.2,SNR=12						
FITZ	**Fitzroy Crossi**	**24.49**	**181**	P	**P**	**17 35 33.7**	**+1.6**
	baz=26,SNR=6.9						
PPI	**Padang Panjang**	**26.50**	**256**	P	P	17 35 40.6	-10
	baz=27,SNR=4.7						
ASAR	**Alice Springs**	**31.00**	**166**	P	**P**	**17 36 30.7**	**+0.4**
	0.3nm,0.3s,baz=342,slow=7.1,SNR=17						
BBOO	**Buckleboo**	**40.28**	**167**	P	P	17 37 52.6	+2.9
	baz=42,SNR=6.5						
STKA	**Stephens Creek**	**41.00**	**160**	P	**P**	**17 37 57.1**	**+1.5**
	baz=330,slow=14						
MKAR	**Makanchi Array**	**54.86**	**324**	P	**P**	**17 39 41.2**	**-1.4**
	0.3nm,0.6s,baz=120,slow=6.9,SNR=5.7						
MCQ	**Macquarie Isla**	**66.77**	**160**	P	P	17 41 13.2	+10
	baz=68,SNR=3.3						

IDC 15 17:43:09.5±6.1, 6°.10S×154°.12E, h60km±58km, mb3.1/3, mb1 3.4/5, mb1mx3.2/19, mbtmp3.3/5, ML3.2/2, Error ellipse: s-maj=40.8km s-min=31.1km az=11.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.64**	**244**	P	Pn	17 44 57.7	-0.5
	0.7nm,0.3s,baz=65,slow=8.5,SNR=4.4						
PMG				S	Sn	17 46 25.3	+1.9
	1.9nm,0.3s,baz=9.0,slow=19,SNR=7.9						
DZM	**Mont Dzumac**	**19.85**	**144**	P	Pn	17 47 36.9	-0.9
	0.4nm,0.3s,baz=324,slow=14,SNR=3.4						
ASAR	**Alice Springs**	**26.14**	**226**	P	P	17 48 37.0	-1.2
	0.4nm,0.9s,baz=57,slow=8.9,SNR=6.1						
MKAR	**Makanchi Array**	**82.16**	**319**	P	P	17 55 25.8	+1.8
	0.3nm,0.9s,baz=92,slow=7.0,SNR=3.5						
ILAR	**Eielson Array**	**82.87**	**22**	P	P	17 55 26.2	-1.0
	0.2nm,0.6s,baz=247,slow=5.4,SNR=6.2						

*CSEM **15** 17:44:13.8, 42°.35N×13°.50E, h8km, MD1.8/5, After ROM*
ROM 15 17:44:13.8±0.1, 42°.35N×13°.50E, h8km, Md1.8/5, Ml1.1/2, Error ellipse: s-maj=2.2km s-min=1.5km az=146.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.07**	**271**	Pg	Pg	17 44 16.4	+0.5
AQU				Sg	Sg	17 44 18.3	+0.9
	146nm,0.4s						
AQU	**L'Aquila**	**0.07**	**271**	Pg	Pg	17 44 16.4	+0.5
AQU				Sg	Sg	17 44 18.3	+0.9
	146nm,0.4s						
FAGN	**Fagnano**	**0.10**	**145**	Pg	Pg	17 44 16.7	+0.4
FAGN	**Fagnano**	**0.10**	**145**	Pg	Pg	17 44 16.7	+0.4
VCEL	**Villa Celiera**	**0.25**	**80**	Pg	Pb	17 44 20.0	-0.8
VCEL				Sg	Sb	17 44 24.1	-1.4
	38nm,0.5s						
TERO	**Teramo**	**0.28**	**15**	Pg	Pg	17 44 19.8	+0.3
TERO				Sg	Sb	17 44 24.8	-1.4
	18nm,0.3s						
TERO	**Teramo**	**0.28**	**15**	Pg	Pg	17 44 19.8	+0.3
TERO				Sg	Sb	17 44 24.8	-1.4
	18nm,0.3s						

*BJI **15** 17:47:20.8, 3°.52S×100°.44E, h9km, mB5.8/49, mb5.4/62, Ms5.9/70, Ms7 5.7/60*
*IDC **15** 17:47:24.4±0.4, 3°.14S×100°.49E, h0km, mb5.3/30, mb1 5.4/32, mb1mx5.3/33, mbtmp5.3/32, ML4.5/2, MS5.3/19, Ms1 5.3/19, ms1mx5.0/40, Error ellipse: s-maj=12.0km s-min=8.8km az=26.0*
*ISCJB **15** 17:47:25.1±0.7, 3°.18S±0°.02×100°.36E±0°.02, h15km±4km, mb5.4/207, MS5.5/182, Error ellipse: s-maj=4.1km s-min=2.8km az=30.3*
*NEIC **15** 17:47:27.8±0.1, 3°.08S×100°.42E, h19km, mb5.4/79, ME5.7, MS5.6/117, MW5.5, Error ellipse: s-maj=5.7km s-min=4.2km az=41.0, Moment Tensor Solution. s62 Moment tensor: Scale 10^17^Nm; Mrr 1.47; Mθθ -2.12; Mφφ 0.65; Mrθ 1.36; Mrφ -0.55; Mθφ -0.90; Best double couple: M☐2.50000×10^17^ NP1:☐ϕ229.00000°, δ38.00000°, λ37.00000°. NP2:☐ϕ108.00000°, δ68.00000°, λ122.00000°. Principal axes: T 2.5000, Plg55.0000°, Azm58.0000°; N 0.1000, Plg29.0000°, Azm275.0000°; P -2.5900, Plg17.0000°, Azm175.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
*AUST **15** 17:47:27.1±1.2, 2°.91S×100°.75E, h5km Error ellipse: s-maj=1.2km s-min=0.5km az=231.0*
*MOS **15** 17:47:28.5±1.1, 2°.96S×100°.53E, h34km, mb5.7/78, MS5.4/47, Error ellipse: s-maj=8.3km s-min=4.2km az=117.2*
*DJA **15** 17:47:28.3±0.4, 3°.S±3°×10°0E±°, h42km±5km, M5.5/39, mb5.6/39, mB5.9/36, MLv6.0/18, Mw(mB)5.5/36, Mwp5.7/8*
*GCMT **15** 17:47:29.9±0.1, 3°.41S×100°.15E, h15km, MW5.7, Moment Tensor Solution. s81,c147; s18,c20; Moment tensor: Scale 10^17^Nm; Mrr 1.29±.03; Mθθ -0.64±.02; Mφφ -0.65±.03; Mrθ 4.08±.08; Mrφ 0.76±.02; Mθφ -2.84±.09; Best double couple: M☐5.20000×10^17^ NP1:☐ϕ327.00000°, δ8.00000°, λ112.00000°. NP2:☐ϕ125.00000°, δ83.00000°, λ87.00000°. Principal axes: T 5.1200, Plg52.0000°, Azm32.0000°; N 0.0700, Plg3.0000°, Azm126.0000°; P -5.1900, Plg37.0000°, Azm218.0000°; Data Used: II IU IC G CN. Surface waves: sta= 87, comp=133, per= 50.*
*SZGRF **15** 17:47:36.2, 2°.05S×99°.46E, h31km, mb5.0, Southern Sumatera, Indonesia*

ISC 15 17:47:27.5±0.3, 3°.11S±0°.03×100°.35E±0°.03, h21km±2km, h21km:pP-P, n1051, σ1°.50/1136, mb5.4/205, MS5.5/182, 181C-115D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**1.50**	**48**	P	**Pb**	**17 47 55.6**	**+0.8**
MASI	**Maura Aman, Be**	**1.89**	**91**	P	**Pn**	**17 47 59.7**	**+1.0**
PDSI	**Padang**	**2.18**	**3**	P	**Pn**	**17 48 04.1**	**+1.4**
KSI	**Kapahiang**	**2.31**	**104**	P	**Pn**	**17 48 05.1**	**+0.7**
PPI	**Padang Panjang**	**2.63**	**1**	P	**Pn**	**17 48 11.2**	**+2.4**
PPI	**Padang Panjang**	**2.63**	**1**	P	**Pn**	**17 48 11.2**	**+2.4**
	baz=2.5,SNR=95						
MNAI	**Manna**	**2.89**	**116**	P	**Pn**	**17 48 12.8**	**+0.4**
RGRI	**Rengat**	**3.38**	**36**	P	**Pn**	**17 48 21.7**	**+2.5**
BKNI	**Bangkinang**	**3.48**	**12**	P	**Pn**	**17 48 22.5**	**+2.0**
LWLI	**Liwa**	**4.16**	**117**	P	**Pn**	**17 48 30.5**	**+0.5**
KASI	**Kota Agung**	**4.79**	**120**	P	**Pn**	**17 48 38.2**	**-0.3**
GSI	**Gunungsitoli**	**5.18**	**328**	P	**Pn**	**17 48 43.6**	**-0.3**
	1μm,0.9s,19μm6.8nm						
GSI	**Gunungsitoli**	**5.18**	**328**	P	**Pn**	**17 48 43.6**	**-0.3**
	baz=5.3,SNR=36						
BLSI	**Bandar Lampung**	**5.38**	**115**	P	**Pn**	**17 48 47.5**	**+0.9**
	943nm,0.8s,24μm22μm5.8nm						
BTDF	**Bukit Timah Da**	**5.61**	**38**	P	**Pn**	**17 48 51.6**	**+1.9**
	726nm,1.0s,7μm30μm4.1nm						
KGM	**Kluang**	**5.89**	**30**	P	**Pn**	**17 48 56.1**	**+2.4**
MYKOM	**Kota Tinggi**	**5.99**	**36**	P	**Pn**	**17 48 57.7**	**+2.6**
PSI	**Prapat**	**6.04**	**346**	Pn	**Pn**	**17 48 55.4**	**-0.4**
PSI	**Prapat**	**6.04**	**346**	P	**Pn**	**17 48 54.9**	**-0.9**
	542nm,1.1s,6μm30μm2.0nm						
PSI	**Prapat**	**6.04**	**346**	Pn	**Pn**	**17 48 55.4**	**-0.4**
	3.6nm,0.3s,baz=168,slow=14,SNR=19						
PSI				LR	LR	17 51 54.6	
	comp=Z,61μm,20.2s,baz=145,slow=45						
PSI	**Prapat**	**6.04**	**346**	P	**Pn**	**17 48 55.5**	**-0.4**
	baz=5.9,SNR=9.3						
CGJI	**Cibinong**	**6.37**	**123**	P	**Pn**	**17 48 58.7**	**-1.5**
	970nm,1.0s						
FRIM	**Kepong**	**6.43**	**11**	P	**Pn**	**17 49 04.3**	**+3.2**
TSI	**Tuntungan**	**6.80**	**345**	P	**Pn**	**17 49 07.3**	**+1.2**
	1μm,0.1s,11μm6.1nm						
TNG	**Tangerang**	**6.98**	**116**	P	**Pn**	**17 49 09.6**	**+1.0**
	3μm,0.9s,41μm33μm18nm						
DBJI	**Dramaga**	**7.24**	**118**	P	**Pn**	**17 49 12.6**	**+0.3**
	1μm,1.5s,17μm6.4nm						
IPM	**Ipoh**	**7.56**	**5**	*e*Pn	**Pn**	**17 49 19.6**	**+2.9**
IPM	**Ipoh**	**7.56**	**5**	P	Pn	17 49 20.2	+3.5
LEM	**Lembang**	**8.13**	**117**	P	**Pn**	**17 49 24.0**	**-0.6**
	1μm,0.8s,15μm						
LEM	**Lembang**	**8.13**	**117**	P	**Pn**	**17 49 24.8**	**+0.1**
	baz=7.9,SNR=36						
KULM	**Kulim**	**8.34**	**2**	*e*Pn	**Pn**	**17 49 28.2**	**+0.8**
KULM	**Kulim**	**8.34**	**2**	P	**Pn**	**17 49 29.1**	**+1.7**
CISI	**Cisompet, Garu**	**8.65**	**121**	P	**Pn**	**17 49 29.5**	**-2.2**
	2μm,0.7s,15μm						
KTGM	**Kuala Trenggan**	**8.83**	**18**	P	Pn	17 49 37.4	+3.3
XMI	**Christmas Isla**	**9.02**	**144**	P	Pn	17 49 33.1	-3.6
	baz=9.0,SNR=7.5						
XMI				S	Sn	17 51 03.2	-15
	baz=9.0,SNR=16						
XMIS	**Christmas Isla**	**9.02**	**145**	P	**Pn**	**17 49 33.8**	**-3.0**
	baz=9.0,SNR=4.4						
XMIS				S	Sn	17 51 03.3	-15
	baz=9.0,SNR=8.3						
COCO	**West Island**	**9.67**	**201**	*e*P	Pn	17 49 42.3	-3.3
COCO	**West Island**	**9.67**	**201**	*e*Pn	Pn	17 49 42.2	-3.3
COCO	**West Island**	**9.67**	**201**	P	Pn	17 49 42.1	-3.5
	1μm,1.0s						
BJII	**Banjamegara**	**10.23**	**115**	P	**Pn**	**17 49 54.5**	**+1.2**
	258nm,1.1s,4μm						
KSM	**Kuching**	**10.95**	**66**	*e*Pn	**Pn**	**17 50 05.7**	**+2.5**
KSM	**Kuching**	**10.95**	**66**	P	**Pn**	**17 50 05.0**	**+1.9**
UGM	**Wanagama**	**11.20**	**116**	*e*Pn	**Pn**	**17 50 05.7**	**-0.9**
UGM	**Wanagama**	**11.20**	**116**	P	**Pn**	**17 50 05.7**	**-0.9**
	baz=11,SNR=8.0						
PBKI	**Pangkalan Bun**	**11.32**	**88**	P	Pn	17 50 12.0	+3.8
	293nm,1.3s,5μm						
STKI	**Sintang**	**11.56**	**74**	P	**Pn**	**17 50 14.6**	**+3.1**
	145nm,1.2s,9μm						
SJI	**Sawahan**	**12.26**	**112**	P	**Pn**	**17 50 20.9**	**-0.3**
	296nm,0.7s,3μm						
PWJI	**Pagerwojo**	**12.40**	**114**	P	**Pn**	**17 50 21.7**	**-1.3**
	168nm,0.8s,2μm						
SBUM	**Sibu**	**13.09**	**65**	P	Pn	17 50 36.8	+4.4
BLJI	**Banyuglugur**	**13.97**	**110**	P	**Pn**	**17 50 46.4**	**+2.0**
	150nm,0.7s,3μm						
GMJI	**Gumukmas**	**14.01**	**112**	P	**Pn**	**17 50 45.7**	**+0.8**
	133nm,0.9s,2μm						
KMMI	**Kalianget**	**14.12**	**107**	P	**Pn**	**17 50 46.5**	**0.0**
	282nm,1.0s,5μm						
BTM	**Bintulu**	**14.19**	**64**	P	**P**	**17 50 53.6**	**-1.2**
BBKI	**Banjar Baru**	**14.48**	**92**	P	**Pn**	**17 50 53.4**	**+2.0**
	411nm,1.2s,9μm						
SRBI	**Singaraja**	**15.60**	**109**	P	**Pn**	**17 51 04.1**	**-2.2**
	185nm,0.7s,3μm						
KBKI	**Kotabaru**	**15.80**	**91**	P	**Pn**	**17 51 09.9**	**+1.0**
	159nm,1.9s,3μm21μm						
CHBT	**CHBT**	**15.88**	**7**	P	**Pn**	**17 51 09.7**	**-0.2**
	80nm,1.0s,2μm						
KHKI	**Kahang-Kahang**	**16.05**	**110**	P	**Pn**	**17 51 09.4**	**-2.8**
	106nm,0.8s,2μm						
PBA	**Port Blair**	**16.50**	**333**	*ex*	Pn	17 51 11.6	-6.3
SMKI	**Samarinda**	**17.06**	**81**	P	**P**	**17 51 27.9**	**+1.2**
	455nm,1.6s,9μm						
SGKI	**Sangatta, Kali**	**17.44**	**82**	P	**P**	**17 51 34.0**	**+3.1**
DGPR	**DIGLIPUR**	**17.77**	**336**	*e*P	**P**	**17 51 34.4**	**-0.1**
DGPR				AMB	AMB	17 51 43.4	
DGPR				*ex*	x	17 55 33.3	
DGPR				AMB	AMB	18 02 12.6	
	comp=E,9μm,34.4s						
KKM	**Kota Kinabalu**	**18.27**	**60**	*e*P	**P**	**17 51 40.5**	**+0.4**
	comp=E,268nm,1.1s						
KKM	**Kota Kinabalu**	**18.27**	**60**	P	**P**	**17 51 41.8**	**+1.7**
SDKM	**Sandakan**	**18.94**	**63**	P	**Pn**	**17 51 49.7**	**+1.5**
UBPT	**Khong Chiam**	**18.96**	**15**	P	**P**	**17 51 45.6**	**-2.0**
	comp=E,114nm,0.9s,comp=E,2μm						
TSM	**Tawau**	**18.99**	**67**	P	**Pn**	**17 51 50.2**	**+1.4**
KDM	**Kudat**	**19.23**	**59**	P	**Pn**	**17 51 52.6**	**+0.9**
SPSI	**Sidrap Palu**	**19.41**	**93**	P	**P**	**17 51 52.5**	**0.0**
	comp=E,194nm,1.0s,comp=E,3μmcomp=E,11μm						
KAPI	**Kappang**	**19.45**	**96**	*e*P	**P**	**17 51 50.3**	**-2.7**
	comp=E,418nm,0.9s						
KAPI				S	**S**	**17 55 27.6**	**-4.6**
KAPI	**Kappang**	**19.45**	**96**	P	**P**	**17 51 51.4**	**-1.6**
	SNR=116						
KAPI	**Kappang**	**19.45**	**96**	P	**P**	**17 51 51.6**	**-1.4**
	comp=E,488nm,0.9s,comp=E,7μmcomp=E,9μm						
KAPI	**Kappang**	**19.45**	**96**	P	**P**	**17 51 51.3**	**-1.7**
	comp=E,4.5nm,0.3s,baz=269,slow=9.0,SNR=99						
KAPI				S	**S**	**17 55 27.6**	**-4.6**
	baz=30,slow=20,SNR=3.2						
PCI	**Palu**	**19.60**	**84**	S	S	17 55 17.1	-18
	baz=19,SNR=30						
BKSI	**Bulukumba**	**19.84**	**97**	P	**P**	**17 51 57.6**	**+0.3**
	comp=E,548nm,1.3s,comp=E,8μm						
MYLDM	**Lahad Datu**	**19.92**	**66**	P	**Pn**	**17 52 00.5**	**+0.7**
WSI	**Waingapu**	**20.86**	**109**	P	P	17 52 03.4	-5.0
WSI	**Waingapu**	**20.86**	**109**	P	Pn	17 52 12.0	+1.1
	baz=21,SNR=4.7						
WSI				S	**S**	**17 55 57.5**	**-2.9**
	baz=21,SNR=4.1						
BATP	**Bataraza**	**21.04**	**56**	*e*P	**P**	**17 52 11.5**	**+1.2**
BASI	**Baing, Sumba**	**21.29**	**110**	P	**P**	**17 52 10.2**	**-2.8**
	comp=E,870nm,0.8s,comp=E,7μm						
CM31	**Chiang Mai Arr**	**21.47**	**356**	P	**P**	**17 52 13.9**	**-1.0**
	comp=E,43nm,0.8s						
CMAR	**Chiang Mai Arr**	**21.47**	**356**	P	**P**	**17 52 14.2**	**-0.6**
CMAR				PcP	**PcP**	**17 56 18.5**	**+0.7**
CMAR				ScP	**ScP**	**17 59 54.3**	**+0.4**
CMAR				*e*		18 26 19.1	
CMAR	**Chiang Mai Arr**	**21.47**	**356**	P	**P**	**17 52 14.2**	**-0.6**
	comp=E,63nm,1.0s,baz=185,slow=9.6,SNR=97						
CMAR				PcP	**PcP**	**17 56 18.5**	**+0.7**
	comp=E,8.4nm,0.9s,baz=213,slow=2.7,SNR=9.8						
CMAR				ScP	**ScP**	**17 59 54.3**	**+0.4**
	comp=E,0.6nm,1.0s,baz=218,slow=5.2,SNR=4.6						
CMAR				LR	LR	18 02 09.1	
	comp=E,13μm,18.2s,baz=184,slow=41						
CMAR				P3KPbc		18 26 19.1	
	comp=E,0.3nm,0.9s,baz=324,slow=4.3,SNR=4.2						
CMMT	**Chiang Mai**	**21.82**	**356**	P	**P**	**17 52 18.8**	**+0.1**
	comp=E,96nm,1.0s,comp=E,3μmcomp=E,227μm						
CHTO	**Chiang Mai**	**21.82**	**356**	*e*P	**P**	**17 52 18.0**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,70nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,10μm,21.0s						
CHTO	**Chiang Mai**	**21.82**	**356**	*e*P	**P**	**17 52 18.0**	**-0.7**
	comp=Z,17nm,1.0s						
CHTO				LR	LR		
	comp=Z,10μm,21.0s						
CHTO	**Chiang Mai**	**21.82**	**356**	P	**P**	**17 52 18.5**	**-0.2**
	SNR=23						
CHTO	**Chiang Mai**	**21.82**	**356**	P	**P**	**17 52 18.0**	**-0.7**
	comp=Z,108nm,1.0s,comp=Z,3μm						
MRSI	**Marisa**	**21.88**	**81**	P	**P**	**17 52 18.0**	**-1.3**
	comp=Z,253nm,0.8s,comp=Z,3μm						
KDI	**Kendari**	**22.25**	**93**	P	**P**	**17 52 23.0**	**-0.3**
	comp=Z,190nm,1.1s,comp=Z,3μm						
BBSI	**Bau Bau**	**22.29**	**97**	P	**P**	**17 52 23.7**	**0.0**
	comp=Z,213nm,0.9s,comp=Z,2μm						
MMRI	**Maumere**	**22.45**	**105**	P	**P**	**17 52 22.3**	**-3.2**
	comp=Z,150nm,0.9s,comp=Z,1μm						
ENPP	**El Nido**	**23.72**	**53**	*e*P	**P**	**17 52 38.9**	**+0.5**
QIZ	**Qiongzhong**	**23.90**	**23**	P	**P**	**17 52 39.3**	**-0.7**
QIZ				S	**S**	**17 56 57.9**	**+2.5**
QIZ				pmax	pmax		
	comp=Z,75nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,2μm,8.6s						
QIZ				LR	LR		
	comp=N,10μm,14.3s						
QIZ				LR	LR		
	comp=Z,12μm,15.5s						
CUYO	**Cuyo Island**	**24.81**	**56**	*e*P	**P**	**17 52 49.0**	**+0.6**
MNI	**Manado**	**24.90**	**80**	P	**P**	**17 52 48.9**	**-0.4**
	comp=Z,858nm,0.9s,comp=Z,9μm						
PAGZ	**Pagadian**	**25.43**	**65**	*e*P	**P**	**17 52 55.0**	**+0.9**
SJMP	**San Jose**	**25.79**	**53**	*e*P	**P**	**17 52 58.0**	**+0.7**
LUBP	**Lubang**	**25.88**	**49**	*e*P	**P**	**17 52 58.1**	**0.0**
CTBH	**Cotabato--PC H**	**25.96**	**67**	*i*P	**P**	**17 52 58.6**	**-0.3**
GUIM	**Jordan**	**26.01**	**58**	*e*P	**P**	**17 53 00.1**	**+0.8**
TRD	**Trivandrum**	**26.02**	**296**	*e*P	P	17 53 06.3	+6.9
MBWA	**Marble Bar**	**26.04**	**135**	*e*P	**P**	**17 52 59.6**	**+0.1**
	comp=Z,363nm,2.3s						
MBWA				LR	LR		
	comp=Z,12μm,21.0s						
OTRP	**Odiongan**	**26.46**	**54

HYB Hyderabad 29.63 314 *i* P **P 17 53 32.0 +0.2**
HYB *e*S **S 17 58 23.0 -3.4**
HYB LR LR 18 06 30.0
comp=Z,6.8nm,18.0s
HYB Hyderabad 29.63 314 *e*P **P 17 53 32.1 +0.2**
HYB AMB AMB 17 53 35.8
comp=Z,24nm,0.8s
SHL Shillong 29.66 344 *i* P **P 17 53 34.0 +1.9**
SHL *i* S **S 17 58 26.0 -0.9**
GYA Guiyang 30.02 11⇑ *i* P **P 17 53 34.9 -0.3**
GYA PP **PnPn 17 54 36.8 +4.5**
GYA PcP **PcP 17 56 39.4 +2.1**
GYA S **S 17 58 36.8 +4.4**
GYA SS **ScP 18 00 13.5 -5.0**
GYA ScP SS 18 00 20.4 -20
GYA ScS **ScS 18 04 14.9 +0.8**
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,150nm,4.8s
GYA LR LR
comp=N,4μm,17.9s
GYA LR LR
comp=E,2μm,18.2s
GYA LR LR
comp=Z,6μm,17.4s
BOK Bokaro 30.22 333 *e*P **P 17 53 39.8 +2.9**
BOK AMB AMB 17 53 46.3
comp=Z,173nm,0.0s
BOK AMB AMB 18 05 15.6
comp=E,1μm,31.7s
BOK *ex* x 18 07 19.6
BOK AMB AMB 18 07 51.3
comp=N,2μm,10.6s
SWI Sorong 30.97 87 P **P 17 53 42.2 -1.5**
baz=31,SNR=13
NGP Nagpur 31.88 320 *e*P **P 17 53 51.4 -0.2**
NGP *ex* x 17 54 02.1
comp=Z,45nm,1.1s
NGP *ex* x 17 59 13.7
MTN Manton Dam 31.95 109 P **P 17 53 50.0 -2.3**
baz=32,SNR=18
ODAN Odare 32.31 338 *e*P **P 17 53 57.2 +1.6**
comp=Z,193nm,1.1s
TAPN Taplejung 32.64 339 *e*P **P 17 54 00.8 +2.3**
comp=Z,473nm,0.9s
RAMN Ramite 32.70 337 *e*P **P 17 54 01.0 +2.1**
comp=Z,129nm,0.9s
KLBR Kellerberrin 32.74 152 P P 17 53 50.1 -8.9
baz=33,SNR=148
TWG Pinlang 32.76 37 *e*P **P 17 54 00.0 +0.7**
comp=Z,392nm,1.4s
JBP Jabalpur 32.81 324⇓ *i* x **S 17 59 16.7 +0.9**
JBP *ex* x 18 04 25.7
TPUB Ta-pu 32.86 36 *e*P **P 17 53 59.9 -0.3**
comp=Z,120nm,1.3s
QZH Quanzhou 33.03 31⇑ *i* P **P 17 54 03.6 +2.0**
QZH S S 17 59 29.3 +10
QZH pmax pmax
comp=Z,90nm,1.0s
QZH pmax pmax
comp=Z,2μm,3.4s
QZH LR LR
comp=N,7μm,13.6s
QZH LR LR
comp=E,20μm,16.1s
QZH LR LR
comp=Z,17μm,19.0s
KDU Kakadu 33.17 108 P **P 17 54 00.6 -2.5**
baz=33,SNR=14
YULB Yu-li 33.33 37 *e*P **P 17 54 01.9 -2.3**
comp=Z,50nm,1.3s
SSLB Suanglung 33.42 36 *e*P **P 17 54 05.5 +0.4**
comp=Z,489nm,2.5s
NWAO Narrogin (SRO) 33.62 154 P **P 17 54 08.2 +1.5**
NWAO LR LR
comp=Z,8μm,20.0s
NWAO Narrogin (SRO) 33.62 154 P **P 17 54 08.2 +1.5**
comp=Z,9.4nm,0.9s,baz=319,slow=9.3,SNR=4.1
PKI Pulchoki 33.73 336 *e*P **P 17 54 09.5 +1.5**
comp=Z,68nm,1.0s
PKIN Phulchoki 33.74 336 *e*P **P 17 54 09.0 +0.9**
comp=Z,54nm,0.8s
POO Poona 33.81 310⇓ *i* P **P 17 54 08.0 -0.5**
GUN Gumba 33.84 337 *e*P **P 17 54 11.0 +2.0**
comp=Z,416nm,1.0s
DMN Daman 33.88 335 *e*P **P 17 54 10.7 +1.4**
comp=Z,167nm,1.0s
KKN Kakani 33.97 336 *e*P **P 17 54 11.6 +1.6**
comp=Z,202nm,1.0s
CD2 Chengdu 33.98 5⇑ P **P 17 54 10.6 +0.7**
CD2 pP **pP 17 54 15.0 -1.3**
CD2 sP **sP 17 54 17.6 -1.8**
CD2 PP **PnPn 17 55 25.1 +1.8**
CD2 PcP **PcP 17 56 47.8 -0.1**
CD2 S **S 17 59 35.4 +1.4**
CD2 sS **sS 17 59 42.6 -2.0**
CD2 PcS **PcS 18 00 32.9 -1.1**
CD2 SS **SnSn 18 01 43.8 +2.5**
CD2 pmax pmax
comp=Z,90nm,0.9s
CD2 pmax pmax
comp=Z,870nm,4.9s
CD2 LR LR
comp=N,15μm,15.2s
CD2 LR LR
comp=E,15μm,15.7s
CD2 LR LR
comp=Z,16μm,14.9s
YHNB Yeheng 34.35 35 *e*P **P 17 54 12.1 -1.1**
comp=Z,40nm,0.9s
YHNB LR LR
comp=Z,6μm,19.0s
BHPL Bhopal 34.43 321 *e*P **P 17 54 15.1 +1.2**
BHPL AMB AMB 17 54 30.0
comp=Z,30nm,5.3s
TATO Taipei 34.65 35 PFAKE 17 54 30.0 +14
TATO LR LR
comp=Z,5μm,19.0s
KMBL Kambalda 34.67 146 P **P 17 54 16.7 +0.8**
baz=35,SNR=6.1
KOLN Koldanda 34.68 333 *e*P **P 17 54 17.8 +1.7**
comp=Z,234nm,0.9s
DANN Dangsing 35.11 334 *e*P **P 17 54 21.4 +1.4**
comp=Z,267nm,0.7s
PYUN Piuthan 35.24 333 *e*P **P 17 54 22.6 +1.6**
comp=Z,364nm,1.0s
PALU Palau 35.60 73 P **P 17 54 21.9 -2.2**
baz=35,SNR=6.9
WHN Wuhan 36.03 21⇑ *i* P **P 17 54 28.3 +0.8**
WHN pP **pP 17 54 38.3 +4.4**
WHN PP **PP 17 55 54.6 +4.9**
WHN S **S 18 00 09.4 +3.9**
WHN pmax pmax
comp=Z,130nm,1.0s
WHN pmax pmax
comp=Z,1μm,5.9s
WHN LR LR
comp=N,29μm,15.2s
WHN LR LR
comp=E,10μm,13.0s
WHN LR LR
comp=Z,36μm,14.5s
WRAB Tennant Creek 37.15 119 *e*P **P 17 54 36.0 -1.3**
WRAB pmax pmax
comp=Z,47nm,0.8s
WRAB MLR MLR
comp=Z,8μm,21.0s
WRAB Tennant Creek 37.15 119 *e*P **P 17 54 36.0 -1.3**
comp=Z,47nm,0.8s
WRAB LR LR
comp=Z,8μm,21.0s
LGTI Lohaghat 37.67 331 *e*P **P 17 54 44.2 +2.8**
PTH Pithoragarh 37.76 331 *e*P **P 17 54 44.4 +1.9**
PTH *ex* x 17 56 31.0
FORT Forrest 37.98 139 *e*P **P 17 54 45.2 +1.1**
comp=Z,82nm,0.9s
ASAR Alice Springs 38.33 125 P **P 17 54 46.5 -0.8**
ASAR PcP **PcP 17 57 01.1 +0.1**
ASAR S **S 18 00 42.2 +1.3**
ASAR Alice Springs 38.33 125 P **P 17 54 46.5 -0.8**
comp=Z,59nm,0.8s,baz=301,slow=7.8,SNR=391
ASAR PcP **PcP 17 57 01.1 +0.1**
comp=Z,2.0nm,0.5s,baz=307,slow=3.1,SNR=4.2
ASAR S **S 18 00 42.2 +1.3**
comp=Z,5.0nm,0.8s,baz=301,slow=16,SNR=7.8
ASAR LR LR 18 12 04.8
comp=Z,10μm,20.9s,baz=292,slow=39
AS31 Alice Springs 38.33 125 *e*P **P 17 54 46.6 -0.7**
AJM Ajmer 38.50 321 *e*P **P 17 54 49.0 +0.4**
NDI New Delhi 38.63 326 *e*P **P 17 54 48.0 -1.6**
NDI *ex* x 18 01 11.0
LZH Lanzhou 39.12 4⇑⇑ P **P 17 54 54.6 +0.8**
LZH pP **pP 17 54 59.0 -1.3**
LZH sP **sP 17 55 01.3 -1.6**
LZH S **S 18 00 54.8 +2.1**
LZH sS **sS 18 01 03.6 +0.3**
LZH ScS **ScS 18 05 02.4 0.0**
LZH pmax pmax
comp=Z,78nm,1.0s
LZH pmax pmax
comp=Z,290nm,4.8s
LZH LR LR
comp=N,11μm,16.1s
LZH LR LR
comp=E,9μm,12.9s
LZH LR LR
comp=Z,13μm,16.5s
NJ2 Nanjing 39.13 25 *e*P **P 17 54 54.6 +0.9**
NJ2 pP **pP 17 54 58.6 -1.6**
NJ2 sP **sP 17 55 00.0 -2.8**
NJ2 PP **PnPn 17 56 25.3 -1.1**
NJ2 S **S 18 00 58.0 +5.4**
NJ2 sS **sS 18 01 03.0 -0.2**
NJ2 pmax pmax
comp=Z,30nm,1.0s
NJ2 pmax pmax
comp=Z,820nm,8.1s
NJ2 LR LR
comp=N,11μm,16.4s
NJ2 LR LR
comp=E,6μm,17.1s
NJ2 LR LR
comp=Z,14μm,17.1s
SSE Sheshan 39.38 29 P **P 17 54 56.8 +0.9**
SSE pP **pP 17 54 58.9 -3.4**
SSE PP **PnPn 17 56 31.3 +1.9**
SSE S S 18 01 05.9 +10
SSE sS **sS 18 01 12.0 +5.0**
SSE pmax pmax
comp=Z,43nm,0.8s
SSE pmax pmax
comp=Z,680nm,6.1s
SSE LR LR
comp=N,4μm,21.2s
SSE LR LR
comp=E,2μm,21.2s
SSE LR LR
comp=Z,4μm,19.1s
DDI Dehra Dun 39.48 329 *e*P **P 17 54 56.5 -0.2**
DDI *e*P **pP 17 54 59.8 -3.4**
DDI AMB AMB 17 55 00.6
comp=Z,263nm,1.1s
DDI *ex* x 18 00 54.5
BHJ Bhuj 39.77 313 *ex* P 17 54 53.9 -5.3
BHJ AMB AMB 17 55 14.6
comp=Z,46nm,0.8s
JOW Kunigami 40.17 40 *e*P **P 17 55 03.0 +0.6**
comp=Z,33nm,1.1s
JAY Jayapura 40.31 90 P **P 17 55 01.5 -2.4**
baz=40,SNR=4.4
JAY S S 18 00 56.6 -14
baz=40,SNR=4.5
SMLA Simla 40.58 329 *e*P **P 17 55 05.2 -0.6**
SMLA *e*P **P 17 55 06.5 +0.8**
SMLA *i* P **P 17 55 06.9 +1.2**
SMLA AMB AMB 17 55 34.2
comp=Z,85nm,0.7s
SDNR Sundarnagar 40.98 329 *e*P **P 17 55 11.5 +2.4**
DHRM DHARAMSHALA 41.92 329 *e*P **P 17 55 17.9 +0.8**
DHRM AMB AMB 17 55 43.1
comp=Z,153nm,1.1s
QIS Mount Isa 41.99 118 P **P 17 55 17.0 -0.6**
baz=42,SNR=47
QIS S **S 18 01 32.8 -2.8**
baz=42,SNR=8.7
TIY Taiyuan 42.13 14 *e*P **P 17 55 19.1 +0.5**
TIY sP **sP 17 55 26.3 -1.3**
TIY S **S 18 01 35.3 -2.0**
TIY pmax pmax
comp=Z,88nm,0.8s
TIY pmax pmax
comp=Z,830nm,7.2s
TIY LR LR
comp=N,8μm,15.6s
TIY LR LR
comp=E,3μm,13.0s
TIY LR LR
comp=Z,7μm,15.3s
TIA Tai'an 42.14 20 *e*P **P 17 55 18.3 -0.2**
TIA S S 18 01 46.3 +9.0
TIA pmax pmax
comp=Z,40nm,0.8s
TIA LR LR
comp=N,7μm,14.7s
TIA LR LR
comp=E,11μm,13.7s
TIA LR LR
comp=Z,18μm,14.7s
GTA Gaotai 42.31 359⇑ *i* P **P 17 55 21.0 +1.0**
GTA pP **pP 17 55 25.6 -0.9**
GTA sP **sP 17 55 28.1 -1.0**
GTA PcP **PcP 17 57 14.8 +1.2**
GTA ScP **ScP 18 01 05.8 +2.6**
GTA S **S 18 01 41.4 +1.4**
GTA sS **sS 18 01 49.0 -1.7**
GTA ScS **ScS 18 05 19.0 -2.3**
GTA pmax pmax
comp=Z,67nm,1.1s
GTA pmax pmax
comp=Z,1μm,6.7s
GTA LR LR
comp=N,7μm,13.3s
GTA LR LR
comp=E,10μm,16.6s
GTA LR LR
comp=Z,7μm,13.3s
THN Thein Dam 42.36 328 *ex* **P 17 55 17.9 -2.5**
COEN Coen 43.62 107 *e*P **P 17 55 29.1 -1.9**
comp=Z,192nm,1.1s
COEN Coen 43.62 107 P **P 17 55 29.0 -1.9**
baz=43,SNR=7.9
BTO Baotou 44.39 11 *e*P **P 17 55 37.3 +0.5**
BBOO Buckleboo 44.62 136 *e*P P 17 55 46.4 +7.7
comp=Z,776nm,1.1s
BBOO Buckleboo 44.62 136 P P 17 55 46.4 +7.7
baz=45,SNR=7.5
MSEY Mahe Island 44.78 267 PFAKE 17 55 50.0 +10
MSEY LR LR
comp=Z,3μm,19.0s
HHC Hu-ho-hao-te 44.93 12 *e*P **P 17 55 42.5 +1.4**
HHC PcP **PcP 17 57 23.6 +1.2**
HHC PP **PP 17 57 28.5 +2.1**
HHC ScP **ScP 18 01 13.8 0.0**
HHC PcS **PcS 18 01 15.9 -0.1**
HHC S **S 18 02 20.8 +2.6**
HHC sS **sS 18 02 28.0 -1.0**
HHC SS **ScS 18 05 33.6 -4.0**
HHC ScS **SS 18 05 37.1 -3.2**
HHC pmax pmax
comp=Z,240nm,1.0s
HHC pmax pmax
comp=Z,3μm,6.6s
HHC LR LR
comp=N,7μm,16.1s
HHC LR LR
comp=E,5μm,16.8s
HHC LR LR
comp=Z,5μm,16.5s
BJI Beijing 45.33 17 P **P 17 55 45.1 +1.0**
BJI S **S 18 02 28.4 +4.7**
BJI pmax pmax
comp=Z,110nm,1.1s
BJI pmax pmax
comp=Z,1μm,3.5s
BJI LR LR
comp=N,14μm,17.4s
BJI LR LR
comp=E,8μm,16.3s
BJI LR LR
comp=Z,9μm,18.0s
JNU Nakatsue 46.17 36 *e*P **P 17 55 50.9 0.0**
comp=Z,92nm,1.0s
JNU Nakatsue 46.17 36 P **P 17 55 51.1 +0.2**
comp=Z,202nm,1.0s,baz=158,slow=3.5,SNR=52
JNU LR LR 18 15 39.3
comp=Z,4μm,21.7s,baz=25,slow=37
PMG Port Moresby 46.92 100 *e*P **P 17 55 55.4 -1.7**
comp=Z,56nm,1.0s
PMG LR LR
comp=Z,2μm,22.0s
GUMO Guam 47.18 68 P **P 17 55 56.5 -2.6**
GUMO LR LR
comp=Z,1μm,20.0s
GUMO Guam 47.18 68 P **P 17 55 56.5 -2.6**
comp=Z,21nm,0.3s,baz=315,slow=1.4,SNR=3.8
INCN Inchon 47.19 29 *e*P **P 17 55 58.2 -0.6**
comp=Z,9.2nm,1.0s
INCN LR LR
comp=Z,3μm,20.0s
KBL Kabul 47.63 325 *e*P **P 17 56 02.9 +0.3**
KBL pmax pmax
comp=Z,33nm,0.9s
KBL Kabul 47.63 325 *e*P **P 17 56 02.9 +0.3**
comp=Z,33nm,0.9s
KBL Kabul 47.63 325 P P 17 56 11.2 +8.7
baz=48,SNR=7.9
KSAR Wonju Array Be 47.77 30 P **P 17 56 03.5 +0.2**
KSAR PcP **PcP 17 57 33.4 +1.2**
KSRS Korea Array 47.79 30 P **P 17 56 03.5 0.0**
comp=Z,70nm,1.0s,baz=225,slow=7.8,SNR=62
KSRS PcP **PcP 17 57 33.4 +1.1**
comp=Z,4.1nm,1.1s,baz=238,slow=2.5,SNR=4.0
CTA Charters Tower 47.82 114 P **P 17 56 03.6 -0.5**
CTA Charters Tower 47.82 114 P **P 17 56 03.6 -0.5**
comp=Z,38nm,0.8s,baz=282,slow=7.9,SNR=34
CTAO Charters Tower 47.82 114 *e*P **P 17 56 03.7 -0.4**
CTAO pmax pmax
comp=Z,402nm,2.1s
CTAO MLR MLR
comp=Z,6μm,20.0s
CTAO Charters Tower 47.82 114 *e*P **P 17 56 03.7 -0.4**
comp=Z,402nm,2.1s
CTAO LR LR
comp=Z,6μm,20.0s
KSH Kashi 47.97 335⇑ *i* P **P 17 56 04.8 -0.3**
KSH pP **pP 17 56 10.3 -1.3**
KSH sP **sP 17 56 11.8 -2.4**
KSH PcP **PcP 17 57 33.8 +0.7**
KSH PP **PP 17 57 55.3 -2.0**
KSH ScP **ScP 18 01 26.6 0.0**
KSH PcS **PcS 18 01 27.8 -1.1**
KSH S **S 18 03 00.0 -2.0**
KSH sS **sS 18 03 09.4 -3.4**
KSH ScS **ScS 18 05 54.0 -3.5**
KSH SS **SS 18 06 24.4 -6.7**
KSH pmax pmax
comp=Z,47nm,0.8s
KSH LR LR
comp=N,1μm,11.0s
KSH LR LR
comp=E,2μm,13.5s
KSH LR LR
comp=Z,4μm,19.6s
QLP Quilpie 48.06 123 P **P 17 56 06.4 +0.6**
baz=48,SNR=51
WMQ Urumqi 48.08 348 P **P 17 56 07.0 +1.3**
WMQ sP **sP 17 56 14.0 -0.8**
WMQ PcP **PcP 17 57 35.0 +1.7**
WMQ PP **PP 17 57 58.0 -0.1**
WMQ ScP **ScP 18 01 27.0 +0.1**
WMQ S **S 18 03 04.0 +0.8**
WMQ sS **sS 18 03 12.0 -2.0**
WMQ ScS **ScS 18 05 57.0 -0.9**
WMQ SS **SS 18 06 28.0 -4.6**
WMQ pmax pmax
comp=Z,190nm,0.8s
WMQ pmax pmax
comp=Z,2μm,5.0s
WMQ LR LR
comp=N,3μm,18.0s
WMQ LR LR
comp=E,3μm,17.0s
WMQ LR LR
comp=Z,3μm,17.0s
STKA Stephens Creek 48.16 131 P **P 17 56 06.7 +0.1**
baz=48,SNR=22
BSY Bisya 49.32 304 P **P 17 56 17.8 +2.2**
SNR=6.4
SNY Shenyang 49.46 23⇑ P **P 17 56 15.8 -0.4**
SNY PP **PP 17 58 12.8 +2.2**
SNY S S 18 03 29.0 +6.5
SNY pmax pmax
comp=Z,44nm,1.3s
SNY pmax pmax
comp=Z,950nm,3.9s
SNY LR LR
comp=N,6μm,15.7s
SNY LR LR
comp=E,5μm,15.3s
SNY LR LR
comp=Z,6μm,15.7s
KZA Kyzart 50.41 336 P **P 17 56 25.4 +1.4**
SNR=21
UCH Uchtor 50.84 335 P **P 17 56 28.9 +1.6**
SNR=6.4
TKM2 Tokmak 2 50.98 337 *i* P **P 17 56 29.3 +1.3**
TKM2 Tokmak 2 50.98 337 PFAKE 17 56 40.0 +12
TKM2 LR LR
comp=Z,4μm,20.0s
TKM2 Tokmak 2 50.98 337 P **P 17 56 29.4 +1.3**
SNR=71
SONM Songino Array 51.00 5 P **P 17 56 30.1 +2.0**
SONM Songino Array 51.00 5 P **P 17 56 30.1 +2.0**
comp=Z,196nm,0.9s,baz=191,slow=6.6,SNR=523
KBK Karagaybulak 51.02 336 P **P 17 56 30.2 +1.9**
SNR=42
ULN Ulaanbaatar 51.10 6 *e*P **P 17 56 30.0 +1.2**
comp=Z,147nm,0.9s
ULN LR LR
comp=Z,6μm,20.0s
ULN Ulaanbaatar 51.10 6 P **P 17 56 30.3 +1.5**
SNR=88
AML Almayashu 51.10 335 P **P 17 56 30.4 +1.1**
SNR=23
CMSA Cobar Meteorol 51.15 129 P **P 17 56 29.6 +0.3**
baz=51,SNR=85
AAK Ala-Archa 51.18 336 *e*P **P 17 56 31.0 +1.5**
AAK pmax pmax
comp=Z,12nm,1.1s
AAK MLR MLR
comp=Z,3μm,21.0s
AAK Ala-Archa 51.18 336 *e*P **P 17 56 31.0 +1.5**
comp=Z,12nm,1.1s
AAK LR LR
comp=Z,3μm,21.0s
AAK Ala-Archa 51.18 336 P **P 17 56 31.3 +1.8**
SNR=20
AAK Ala-Archa 51.18 336 P **P 17 56 30.9 +1.4**
SNR=21
AAK Ala-Archa 51.18 336 P **P 17 56 31.2 +1.7**
comp=Z,19nm,0.9s,baz=144,slow=4.8,SNR=34
FRU Bishkek 51.30 336⇑ *i* P **P 17 56 33.0 +2.8**
FRU *e*S **S 18 03 52.0 +3.8**
FRU *i* 18 04 06.0
FRU pmax pmax
comp=Z,260nm,3.5s
FRU smax smax
comp=E,120μm,4.5s
CHMS Chumysh 51.38 336 P **P 17 56 31.8 +0.9**
SNR=23
EKS2 Erkin-Say 51.50 335 *e*P **P 17 56 33.6 +1.7**
EKS2 pmax pmax
comp=Z,97nm,0.9s
EKS2 MLR MLR
comp=Z,2μm,20.0s
EKS2 Erkin-Say 51.50 335 *e*P **P 17 56 33.6 +1.7**
comp=Z,97nm,0.9s
EKS2 LR LR
comp=Z,2μm,20.0s
EKS2 Erkin-Say 51.50 335 P **P 17 56 33.3 +1.4**
SNR=84
USP Ospenovka 51.71 336 P **P 17 56 34.5 +1.1**
SNR=37
RMQ Roma 51.84 122 P **P 17 56 35.1 +0.5**
baz=52,SNR=12
CN2 Changchun 51.86 23⇑ P **P 17 56 34.3 0.0**

CN2 *es*P **sP** **17 56 40.4 -3.1**
CN2 *es* **S** **18 03 55.8 0.0**
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,7μm,16.0s
CN2 LR LR
comp=E,5μm,16.0s
CN2 LR LR
comp=Z,8μm,16.0s
MK31 Makanchi Array 52.18 344 *e*P **P** **17 56 37.5 +0.8**
MK31 Makanchi Array 52.18 344 *e*P **P** **17 56 37.5 +0.8**
MKAR Makanchi Array 52.18 344 P **P** **17 56 37.8 +1.1**
MKAR Makanchi Array 52.18 344 P **P** **17 56 37.8 +1.1**
MKAR Makanchi Array 52.18 344 P **P** **17 56 37.8 +1.1**
comp=Z,150nm,0.9s,baz=149,slow=6.4,SNR=562
MKAR LR LR 18 23 43.1
comp=Z,2μm,19.3s,baz=163,slow=42
PAF Port-aux-Franc 52.74 204 PFAKE 17 56 50.0 +9.2
PAF LR LR
comp=Z,4μm,19.0s
MAJO Matsushiro 52.92 38 *e*P **P** **17 56 41.5 -0.9**
MAJO pmax pmax
comp=Z,73nm,1.3s
MAJO Matsushiro 52.92 38 *e*P **P** **17 56 41.5 -0.9**
comp=Z,12nm,1.3s
MAT Matsushiro 52.92 38 P **P** **17 56 40.4 -2.0**
MAT S S 18 04 19.6 +9.0
MJAR Matsushiro Arr 52.92 38 P **P** **17 56 41.5 -0.9**
MJAR Matsushiro Arr 52.92 38 P **P** **17 56 41.5 -0.9**
comp=Z,42nm,1.0s,baz=222,slow=8.4,SNR=88
KK31 Karatay Array 53.29 333 *i* P **P** **17 56 44.6 -0.4**
KK31 pmax pmax
comp=Z,51nm,1.2s
KKAR Karatay Array 53.29 333 *e*P **P** **17 56 45.5 +0.5**
KKAR Karatay Array 53.29 333 *e*P **P** **17 56 45.5 +0.5**
ZAK Zakamensk 53.34 2⇓ *i*P **P** **17 56 45.8 +0.5**
ZAK *e* 17 56 55.1
ZAK *e* 17 57 52.8
ZAK pmax pmax
comp=Z,14nm,1.1s
EIDS Eidsvold 53.51 119 *e*P **P** **17 56 46.8 -0.2**
comp=Z,50nm,1.1s
EIDS Eidsvold 53.51 119 P **P** **17 56 46.8 -0.2**
baz=53,SNR=18
VLA Vladivostok 54.09 28⇑ *i*P **P** **17 56 49.2 -1.6**
VLA *e* 17 57 53.7
VLA S **S** **18 04 23.2 -3.1**
VLA pmax pmax
comp=Z,55nm,0.9s
VLA Vladivostok 54.09 28*c i*P **P** **17 56 50.9 +0.1**
VLA pmax pmax
comp=Z,57nm,0.9s
OPO Ambohidratompo 54.20 249 P **P** **17 56 53.5 +1.2**
OPO Ambohidratompo 54.20 249 P **P** **17 56 53.5 +1.2**
comp=Z,7.2nm,0.9s,baz=76,slow=9.1,SNR=3.7
MDJ Mudanjiang 54.23 25 P **P** **17 56 52.0 +0.2**
MDJ pP **pP** **17 56 55.3 -3.1**
MDJ sP **sP** **17 56 56.6 -4.4**
MDJ ScP **ScP** **18 01 54.8 +1.5**
MDJ PcS **PcS** **18 01 56.0 +0.7**
MDJ S **S** **18 04 29.5 +1.4**
MDJ sS **sS** **18 04 35.0 -4.0**
MDJ pmax pmax
comp=Z,39nm,1.1s
MDJ pmax pmax
comp=Z,750nm,7.0s
MDJ LR LR
comp=N,6μm,15.1s
MDJ LR LR
comp=E,4μm,20.2s
MDJ LR LR
comp=Z,8μm,17.0s
ABPO Ambohimpanom 54.24 249 PFAKE 17 57 00.0 +7.4
ABPO LR LR
comp=Z,4μm,20.0s
YNG Young 54.35 131 P **P** **17 56 53.7 +0.7**
baz=54,SNR=8.2
MOY Mondy 54.57 0 *e*P **P** **17 56 55.2 +0.9**
MOY pmax pmax
comp=Z,12nm,2.2s
TLY Talaya 54.65 3 *e*P **P** **17 56 53.7 -1.1**
TLY *es* S 18 04 24.0 -10
TLY *es*S **ScS** **18 06 40.1 -2.8**
TLY *es*SS SSS 18 08 17.2
TLY pmax pmax
comp=Z,25nm,0.8s
TLY MLR MLR
comp=Z,5μm,16.0s
TLY Talaya 54.65 3 P **P** **17 56 56.0 +1.2**
comp=Z,208nm,1.0s,SNR=22
USRK Ussuriysk Arra 54.97 27 P **P** **17 56 57.6 +0.4**
comp=Z,206nm,0.8s,baz=223,slow=6.5,SNR=267
USRK LR LR 18 22 46.7
comp=Z,6μm,18.8s,baz=217,slow=39
CAN Canberra 55.22 132 *e*P **P** **17 56 59.3 0.0**
CAN pmax pmax
comp=Z,31nm,0.9s
CAN MLR MLR
comp=Z,9μm,20.0s
CAN Canberra 55.22 132 *e*P **P** **17 56 59.3 0.0**
comp=Z,31nm,0.9s
CAN LR LR
comp=Z,9μm,20.0s
IRK Irkutsk 55.24 3 *e*P **P** **17 56 59.9 +0.9**
IRK *e* 18 04 33.6
IRK *es* S 18 04 58.1 +17
IRK pmax pmax
comp=Z,152nm,3.4s
ARMA Armidale 55.49 125 *e*P **P** **17 57 03.1 +1.7**
comp=Z,38nm,1.0s
ARMA Armidale 55.49 125 P **P** **17 57 02.8 +1.4**
baz=55,SNR=13
MGCD Mangrove Creek 56.02 128 P **P** **17 57 06.3 +1.3**
baz=56,SNR=5.3
CIT Chita 56.05 10 *e*P **P** **17 57 06.5 +1.6**
CIT *e* 17 57 16.2
CIT *es* **S** **18 04 55.4 +3.0**
CIT pmax pmax
comp=Z,335nm,2.7s
ABKT Ailbek 56.51 320 P **P** **17 57 08.4 -0.1**
comp=Z,284nm,1.0s,SNR=12
KURBB Kurchatov Arra 56.70 344 P **P** **17 57 09.8 +0.3**
comp=Z,86nm,0.9s,baz=160,slow=6.8,SNR=340
KURBB S S 18 05 13.1 +12
comp=Z,2.4nm,1.1s,baz=163,slow=13,SNR=6.2
KURK Kurchatov 56.76 344 *e*P **P** **17 57 10.0 +0.1**
KURK S S 18 05 13.1 +11
KURK pmax pmax
comp=Z,174nm,1.0s
KURK MLR MLR
comp=Z,5μm,20.0s
KURK Kurchatov 56.76 344 *e*P **P** **17 57 10.0 +0.1**
comp=Z,174nm,1.0s
KURK S S 18 05 13.1 +11
KURK LR LR
comp=Z,5μm,20.0s
KURK Kurchatov 56.76 344 P **P** **17 57 10.6 +0.8**
SNR=88
TAU Tasmania Unive 57.52 140 PFAKE 17 57 30.0 +15
TAU LR LR
comp=Z,4μm,19.0s
ZAA0 Zalesovo Array 58.31 349 *e*P **P** **17 57 21.0 +0.3**
ZALV Zalesovo Beam 58.31 349 P **P** **17 57 21.3 +0.5**
ZALV S S 18 05 35.2 +13
ZALV Zalesovo Beam 58.31 349 P **P** **17 57 21.2 +0.5**
ZALV S S 18 05 35.2 +13
ZALV P'P' 18 27 00.9
ZALV ⇑*e* 18 27 09.5
ZALV Zalesovo Beam 58.31 349 P **P** **17 57 21.2 +0.5**
comp=Z,215nm,0.9s,baz=160,slow=4.7,SNR=354
ZALV S S 18 05 35.2 +13
comp=Z,3.1nm,0.9s,baz=170,slow=12,SNR=4.6
ZALV LR LR 18 25 28.3
comp=Z,2μm,21.4s,baz=166,slow=39
ZALV PKPPKP **P'P'df** **18 27 00.9 +1.7**
comp=Z,0.3nm,0.4s,baz=311,slow=3.3,SNR=3.1
ZALV PKP2bc 18 27 09.5
comp=Z,1.2nm,0.9s,baz=300,slow=3.3,SNR=5.3
KLR Kul'dur 58.80 24⇓ *i*P **P** **17 57 21.7 -2.6**
KLR *es* **S** **18 05 29.5 +1.0**
KLR pmax pmax
comp=E,64nm,1.2s
KLR pmax pmax
comp=Z,160nm,1.2s
KLR pmax pmax
comp=Z,1μm,7.0s
KLR MLR MLR
comp=E,5μm,13.0s
KLR MLR MLR
comp=Z,17μm,13.0s
KRAR Krasnoyarsk 59.23 355*c i*P **P** **17 57 27.7 +0.6**
KRAR pmax pmax
comp=Z,108nm,1.3s
ERM Erimo 59.34 36 PFAKE 17 57 40.0 +12
ERM LR LR
comp=Z,2μm,19.0s
NVS Novosibirsk 59.46 349⇑ *i*P **P** **17 57 28.4 -0.3**
NVS *e* 17 57 44.9
NVS *es* **S** **18 05 35.4 -1.4**
NVS pmax pmax
comp=Z,67nm,1.0s
NVS pmax pmax
comp=N,27nm,1.0s
NVS pmax pmax
comp=E,26nm,1.2s
NVS smax smax
comp=E,139nm,3.1s
HNR Honiara 59.52 99 *e*P **P** **17 57 28.9 -1.0**
comp=E,337nm,0.9s
HNR LR LR
comp=Z,4μm,21.0s
HABR Khabarovsk 59.59 26*ce*P **P** **17 57 29.1 -0.7**
HABR *e**PP **pP** **17 57 37.8 +1.3**
HABR *e**SP **sP** **17 57 42.0 +3.0**
HABR *e* 17 58 14.9
HABR *e* 17 59 39.0
HABR *es* **S** **18 05 36.1 -2.7**
HABR *e**SS **sS** **18 05 52.8 +3.0**
HABR *e* 18 07 16.6
HABR *es*S **SS** **18 09 32.2 -2.4**
HABR pmax pmax
comp=Z,185nm,2.1s
HABR pmax pmax
comp=N,32nm,1.3s
HABR pmax pmax
comp=E,34nm,0.9s
HABR MLR MLR
comp=E,5μm,19.0s
HABR MLR MLR
comp=Z,6μm,19.0s
HABR MLR MLR
comp=N,4μm,17.0s
KBD Kabd 59.76 306 *e*P **P** **17 57 31.5 +0.2**
KBD AMb AMB 17 57 33.2
comp=Z,48nm,1.1s
RDF Al-Radifah 59.77 306 *e*P **P** **17 57 31.8 +0.3**
RDF AMb AMB 17 57 34.2
comp=Z,80nm,1.0s
UMR Umm Al-Rimmam 59.89 307 *e*P **P** **17 57 32.4 +0.2**
UMR AMb AMB 17 57 41.5
comp=Z,84nm,1.3s
NAY Al-Naaiem 60.15 306 *e*P **P** **17 57 34.2 +0.2**
NAY AMb AMB 17 57 36.1
comp=Z,32nm,1.0s
ASAJ Asahikawa 60.33 34 *e*P **P** **17 57 35.6 +0.7**
comp=Z,433nm,2.9s
BVAR Borovoye Array 61.33 340 P **P** **17 57 41.5 -0.1**
BVAR Borovoye Array 61.33 340 P **P** **17 57 41.5 -0.1**
BVAR Borovoye Array 61.33 340 P **P** **17 57 41.5 -0.1**
comp=Z,25nm,0.8s,baz=142,slow=7.5,SNR=80
BRVK Borovoye 61.40 340*c i*P **P** **17 57 41.8 -0.2**
BRVK pmax pmax
comp=Z,45nm,1.3s
BRVK Borovoye 61.40 340 *e*P **P** **17 57 42.1 +0.1**
comp=Z,29nm,0.9s
BRVK LR LR
comp=Z,2μm,20.0s
BRVK Borovoye 61.40 340 P **P** **17 57 42.1 +0.1**
SNR=19
YUK Yuzh-Kuril'sk 62.13 36*c i*P P 17 57 42.9 -4.3
YUK *i* 17 58 33.4
YUK *i* S S 18 06 03.4 -8.0
YUK *i* SSS SSS 18 12 59.6
YUK pmax pmax
comp=Z,1μm,1.8s
YUK pmax pmax
comp=N,978nm,1.8s
YUK pmax pmax
comp=E,818nm,1.5s
YUK pmax pmax
comp=Z,2μm,1.8s
YUK MLR MLR
comp=E,791nm,22.0s
YUK MLR MLR
comp=Z,1μm,22.0s
YSS Yuzh-Sakhalins 62.23 31⇑ *i*P **P** **17 57 48.0 +0.2**
YSS *e**SP sP 17 58 05.0 +8.0
YSS *e* 18 00 10.0
YSS *es* **S** **18 06 10.0 -2.5**
YSS *es*PS **PnS** **18 06 24.0 -4.9**
YSS *es*PPS PPS 18 06 36.0
YSS pmax pmax
comp=Z,190μm,1.0s
YSS pmax pmax
comp=Z,500nm,6.0s
YSS MLR MLR
comp=Z,2μm,16.0s
YSS MLR MLR
comp=N,2μm,18.0s
AB31 Akbulak array 62.77 331 *i* P **P** **17 57 51.2 -0.1**
AB31 pmax pmax
comp=Z,99nm,0.8s
ABKAR Akbulak array 62.77 331 *e*P **P** **17 57 51.1 -0.2**
CLNS Chul'man 62.98 15 *e*P **P** **17 57 50.9 -1.8**
CLNS *e* 17 58 27.3
CLNS *e* 18 00 09.0
CLNS *es* **S** **18 06 24.4 +2.7**
CLNS *e* 18 07 39.1
CLNS pmax pmax
comp=N,17nm,0.9s
CLNS pmax pmax
comp=Z,39nm,1.0s
CLNS pmax pmax
comp=E,20nm,1.1s
CLNS pmax pmax
comp=E,8.0nm,0.8s
CLNS pmax pmax
comp=N,7.0nm,0.8s
CLNS pmax pmax
comp=Z,6.0nm,1.1s
CLNS smax smax
comp=E,251nm,15.3s
CLNS smax smax
comp=N,399nm,12.1s
CLNS MLR MLR
comp=N,6μm,18.0s
CLNS MLR MLR
comp=Z,7μm,16.0s
CLNS MLR MLR
comp=E,4μm,17.0s
KMBO Kilima Mbogo 63.07 270 *e*P P 17 57 49.2 -5.2
KMBO Kilima Mbogo 63.07 270 *e*P **P** **17 57 55.5 +1.1**
comp=E,132nm,2.5s
KMBO Kilima Mbogo 63.07 270 P **P** **17 57 55.3 +1.0**
comp=E,2.2nm,0.8s,baz=153,slow=11,SNR=3.3
KMBO LR LR 18 22 02.3
comp=E,1μm,18.6s,baz=96,slow=33
CASY Casey 63.46 175 *e*P P 17 58 04.1 +8.5
comp=E,37nm,1.2s
CASY LR LR
comp=Z,5μm,20.0s
MIR Mirnyy 63.54 183⇑ *i*P P 17 58 03.8 +7.7
MIR *i* 17 58 20.0
MIR pmax pmax
comp=Z,50nm,1.0s
BHD Baghdad 63.97 309 *i* x **P** **17 57 58.8 -0.8**
BHD *i* x x 18 06 33.6
BHD *i* x x 18 08 22.0
AKTO Aktyubinsk 64.49 332 *i* P **P** **17 58 02.2 -0.5**
AKTO pmax pmax
comp=Z,9.0nm,1.3s
MAK Makhachkala 66.03 320 *e*P **P** **17 58 09.8 -3.0**
MAK *e* 18 00 43.7
MAK *es* **S** **18 06 54.4 -5.3**
MAK pmax pmax
comp=Z,60nm,0.9s
MAK MLR MLR
comp=Z,735nm,18.0s
GNI Garni 66.56 316 P **P** **17 58 18.2 +1.8**
SNR=7.2
DZM Mont Dzumac 66.71 113 *e*S S 18 07 02.1 -6.9
comp=Z,2μm,27.4s
DZM *e*LR LR 18 18 20.5
comp=Z,5μm,22.1s
DZM Mont Dzumac 66.71 113 P **P** **17 58 19.3 +1.6**
DZM Mont Dzumac 66.71 113 P **P** **17 58 19.3 +1.6**
comp=Z,14nm,0.8s,baz=45,slow=1.4,SNR=4.7
DGRG David-gareji 66.71 318 P **P** **17 58 18.4 +1.1**
DGRG S S 18 07 18.0 +10
TBLG Delisi 67.26 318 *e*P **P** **17 58 21.5 +0.8**
TBLG *es* **S** **18 07 15.0 +0.2**
TBLG Delisi 67.26 318 P **P** **17 58 21.5 +0.8**
TBLG S **S** **18 07 15.1 +0.2**
SVE Sverdlovsk 67.83 338⇓ *i*P **P** **17 58 24.6 +0.6**
SVE *e*PPP PPP 18 02 37.9
SVE *es* **S** **18 07 19.7 -1.3**
SVE *e* 18 08 24.1
SVE pmax pmax
comp=Z,106nm,1.1s
SVE MLR MLR
comp=Z,3μm,21.0s
AKH Akhalkalaki 67.96 317 P **P** **17 58 26.1 +0.7**
AKH S **S** **18 07 25.4 +1.8**
ZEI Tsey 68.28 319 *e*P **P** **17 58 28.6 +1.2**
ZEI *es* **S** **18 07 27.4 -0.1**
ZEI *e* 18 08 27.1
ZEI pmax pmax
comp=Z,43nm,1.1s
ARU Arti 68.35 337*c i*P **P** **17 58 27.1 -0.2**
ARU *e* 17 58 51.5
ARU *e* 18 00 55.5
ARU PPP PPP 18 02 39.4
ARU S **S** **18 07 26.5 -0.7**
ARU 18 08 23.8
ARU SSS SSS 18 14 56.5
ARU pmax pmax
comp=Z,65nm,1.2s
ARU MLR MLR
comp=Z,3μm,21.0s
ARU Arti 68.35 337 P **P** **17 58 27.9 +0.6**
comp=Z,265nm,0.9s,SNR=23
ONI Oni 68.50 318 P **P** **17 58 28.7 +0.1**
ONI S **S** **18 07 26.2 -3.5**
YAK Yakutsk 68.72 14*c i*P **P** **17 58 28.9 -0.5**
YAK *e**PP **pP** **17 58 38.3 +2.1**
YAK *e* 17 58 53.4
YAK *e* 18 00 58.4
YAK *e*PPP PPP 18 02 41.7
YAK *es* **S** **18 07 31.7 +0.4**
YAK *e* 18 08 28.4
YAK *es*SS **SS** **18 11 58.8 +2.4**
YAK pmax pmax
comp=Z,217nm,0.9s
YAK pmax pmax
comp=N,66nm,1.1s
YAK pmax pmax
comp=E,45nm,1.1s
YAK pmax pmax
comp=Z,222nm,4.2s
YAK pmax pmax
comp=N,235nm,4.5s
YAK pmax pmax
comp=E,136nm,4.6s
YAK smax smax
comp=N,316nm,6.3s
YAK smax smax
comp=E,187nm,5.6s
YAK MLR MLR
comp=Z,9μm,18.0s
YAK MLR MLR
comp=N,6μm,17.0s
YAK MLR MLR
comp=E,3μm,17.0s
DRV Dumont d'Urvil 69.17 164 S S 18 07 24.0 -13
DRV SS **SS** **18 12 04.0 +0.9**
DRV L L 18 15 00.0
DRV R 18 19 00.0
MAW Mawson 69.31 194 LR LR 18 21 57.1
comp=E,3μm,21.6s,baz=32,slow=30
KBZ Khabaz 69.36 319 P **P** **17 58 34.5 +0.7**
KBZ 17 58 55.1
KBZ Khabaz 69.36 319 P **P** **17 58 34.5 +0.7**
KBZ PcP **PcP** **17 58 55.1 -2.1**
KBZ Khabaz 69.36 319 P **P** **17 58 34.5 +0.7**
comp=E,47nm,1.0s,baz=111,slow=5.5,SNR=45
KBZ PcP **PcP** **17 58 55.1 -2.1**
comp=E,19nm,0.8s,baz=131,slow=3.8,SNR=4.8
KIV Kislovodsk 69.60 319 *e*P **P** **17 58 35.7 +0.3**
KIV *e* 17 58 57.7
KIV *es* **S** **18 07 42.3 -0.4**
KIV *es*SS **SS** **18 12 10.2 -0.8**
KIV pmax pmax
comp=Z,64nm,0.9s
KIV pmax pmax
comp=Z,116nm,3.2s
MBAR Mbarara 69.61 271 *e*P **P** **17 58 37.4 +1.2**
MBAR Mbarara 69.61 271 P **P** **17 58 37.9 +1.7**
MBAR LR LR
comp=Z,865nm,21.0s
MBAR Mbarara 69.61 271 P **P** **17 58 37.9 +1.7**
comp=Z,1.4nm,0.3s,baz=85,slow=9.1,SNR=2.9
POGA Pongola 69.72 242 *e*P **P** **17 58 36.0 -0.3**
POGA AMb AMB 17 58 49.6
comp=Z,47nm,3.2s
ELZG Elazig 69.99 313 *i* P **P** **17 58 39.5 +1.5**
MALT Malatya 70.33 313⇑ P **P** **17 58 41.0 +0.9**
MALT Malatya 70.33 313 *e*P **P** **17 58 40.8 +0.7**
comp=Z,29nm,1.0s
MALT LR LR
comp=Z,2μm,21.0s
MALT Malatya 70.33 313⇑ *i*P **P** **17 58 41.0 +0.9**
EIL Elat 70.41 303 P **P** **17 58 42.0 +1.4**
baz=71,SNR=13
MSNA Messina 70.63 248 *e*P P 17 58 38.6 -3.6
MSNA AMb AMB 17 58 42.2
comp=Z,26nm,5.5s
SOKR Solikamsk 71.21 338*c i*P **P** **17 58 45.5 +0.8**
SOKR 18 01 27.4
SOKR S **S** **18 07 58.7 -1.9**
SOKR SSS SSS 18 15 34.1
SOKR pmax pmax
comp=Z,130nm,1.2s
SOKR MLR MLR
comp=Z,2μm,21.0s
SOC Sochi 71.40 318*c i*P **P** **17 58 45.6 -0.7**
SOC *e**PP **pP** **17 58 55.5 +2.4**
SOC *e* 18 01 26.0
SOC *e*PPP PPP 18 03 04.4
SOC *i* S **S** **18 08 00.8 -2.7**
SOC *es*SS **SS** **18 12 40.0 +1.5**
SOC pmax pmax
comp=Z,39nm,0.8s
SOC MLR MLR
comp=Z,1μm,19.0s
SKR Severo-Kuril's 71.59 34 *e*P **P** **17 58 45.0 -2.2**
SKR *e* 17 58 54.0
SKR *e* 17 59 01.8
SKR *e* 18 08 46.0
SKR pmax pmax
comp=Z,220nm,1.0s
SKR MLR MLR
comp=Z,3μm,16.0s
SKR MLR MLR
comp=N,2μm,14.0s
LSZ Lusaka 71.98 255 *e*P **P** **17 58 49.8 -0.7**
LSZ Lusaka 71.98 255 P **P** **17 58 51.4 +0.9**
LSZ Lusaka 71.98 255 P **P** **17 58 51.4 +0.9**
comp=N,2.9nm,0.9s,baz=46,slow=9.4,SNR=4.5
SLR Silverton 72.51 244 *e*P **P** **17 58 51.2 -2.3**
SLR AMb AMB 17 59 01.8
comp=Z,40nm,5.1s
CSS Prodhromos 73.17 308 PFAKE 17 59 10.0 +13
CSS LR LR
comp=Z,606nm,19.0s
ANN Anapa 73.39 319 *e*P **P** **17 58 56.3 -1.8**
ANN *es* S 18 08 19.9 -6.3
ANN pmax pmax
comp=Z,40nm,1.3s
VRHR Novokhopersk 73.43 326 *e*P **P** **17 58 57.9 -0.3**
VRHR *es* **S** **18 08 22.0 -4.4**
VRHR pmax pmax
comp=N,30nm,0.8s

VRHR pmax pmax
comp=E,90nm,0.8s
VRHR pmax pmax
comp=Z,100nm,0.8s
VRHR smax smax
comp=N,320nm,3.3s
VRHR smax smax
comp=E,170nm,3.3s
VRHR smax smax
comp=Z,30nm,3.3s
VRHR MLR MLR
comp=Z,2µm,24.0s
VRHR MLR MLR
comp=N,110nm,12.0s
VRHR MLR MLR
comp=E,1µm,24.0s
PRYS Parys 73.44 243 *e*P **P** **17 58 58.1 -0.9**
PRYS AMB AMB 17 59 08.3
comp=Z,38nm,2.7s
PEA0B Petropavlovsk- 73.63 32 *e*P **P** **17 58 59.0 -0.4**
PETK Petropavlovsk- 73.63 32 P **P** **17 58 58.7 -0.7**
PETK Petropavlovsk- 73.63 32 P **P** **17 58 58.7 -0.7**
PETK Petropavlovsk- 73.63 32 P **P** **17 58 58.7 -0.7**
comp=Z,28nm,0.9s,baz=196,slow=5.1,SNR=17
PETK LR LR 18 33 27.4
comp=Z,701nm,18.7s,baz=245,slow=38
CDAG Cicekdag 73.75 313 *i* P **P** **17 59 00.6 0.0**
RPZ Rata Peaks 73.96 135 *e*P **P** **17 59 03.0 +1.4**
comp=Z,35nm,0.9s
PET Petropavlovsk 74.10 32⇑ *i*P **P** **17 59 01.6 -0.5**
PET *e* 17 59 17.3
PET *i* 18 01 50.8
PET *e*S **S** **18 08 31.6 -2.2**
PET pmax pmax
comp=Z,98nm,1.0s
PET pmax pmax
comp=Z,600nm,15.4s
PET pmax pmax
comp=Z,800nm,5.1s
PET pmax pmax
comp=Z,500nm,15.7s
PET MLR MLR
comp=Z,2µm,16.0s
PET MLR MLR
comp=Z,2µm,15.0s
BR131 Keskin Array S 74.32 313 *e*P **P** **17 59 03.2 -0.7**
comp=Z,16nm,0.8s
BRTR Keskin Array B 74.32 313 P **P** **17 59 03.5 -0.4**
BRTR Keskin Array B 74.32 313 P **P** **17 59 03.5 -0.4**
comp=Z,16nm,0.8s,baz=135,slow=5.8,SNR=52
BRTR LR LR 18 34 12.8
comp=Z,880nm,20.5s,baz=268,slow=38
VORD Divnogorie 74.70 325 *e*P **P** **17 59 04.8 -0.8**
VORD *e*S **SKiKP** **18 08 35.2 +5.0**
VORD pmax pmax
comp=N,30nm,0.9s
VORD pmax pmax
comp=E,50nm,0.9s
VORD pmax pmax
comp=Z,40nm,0.9s
VORD smax smax
comp=N,180nm,2.8s
VORD smax smax
comp=E,80nm,2.8s
VORD smax smax
comp=Z,30nm,2.8s
ELDT Eldivan 74.71 313 *i* P **P** **17 59 05.6 -0.6**
LBTB Lobatse 74.87 245 *e*P P 17 59 02.8 -4.6
LBTB AMB AMB 17 59 15.9
comp=Z,43nm,4.8s
LBTB Lobatse 74.87 245 *e*P P 17 59 15.5 +8.1
comp=Z,125nm,2.5s
VSR Storozhevoye 74.88 325 *e*P **P** **17 59 06.1 -0.6**
VSR *e**PP **pP** **17 59 16.4 +2.9**
VSR *e*S **S** **18 08 37.8 -4.9**
VSR pmax pmax
comp=N,20nm,0.7s
VSR pmax pmax
comp=E,50nm,0.7s
VSR pmax pmax
comp=Z,80nm,0.7s
VSR smax smax
comp=N,250nm,2.8s
VSR smax smax
comp=E,120nm,2.8s
VSR smax smax
comp=Z,40nm,2.8s
VSR MLR MLR
comp=N,920nm,22.0s
VSR MLR MLR
comp=E,990nm,22.0s
VSR MLR MLR
comp=Z,1µm,22.0s
ANTO Ankara 74.98 313⇑ P **P** **17 59 07.0 -0.7**
ANTO Ankara 74.98 313 *e*P **P** **17 59 07.8 +0.1**
comp=Z,28nm,1.0s
ANTO Ankara 74.98 313⇑ *i*P **P** **17 59 07.0 -0.7**
ANTO Ankara 74.98 313 P **P** **17 59 08.5 +0.8**
SNR=5.5
VOR Voronezh 75.07 326 P **P** **17 59 09.0 +1.2**
VOR pmax pmax
comp=Z,250nm,1.4s
SWZ Schweizer 75.26 243 *e*P **P** **17 59 07.4 -2.2**
SWZ AMB AMB 17 59 16.4
comp=Z,44nm,2.9s
BOSA Boshof 75.43 241 *e*P **P** **17 59 08.9 -1.6**
BOSA AMB AMB 17 59 31.9
comp=Z,29nm,4.0s
BOSA Boshof 75.43 241 *e*P **P** **17 59 10.9 +0.3**
comp=Z,296nm,3.0s
BOSA Boshof 75.43 241 P **P** **17 59 11.6 +1.0**
comp=Z,3.6nm,0.9s,baz=124,slow=6.1,SNR=5.6
BOSA LR LR 18 29 54.5
comp=Z,2µm,18.1s,baz=106,slow=34
SIM Simferopol' 75.64 318 *e*P **P** **17 59 11.5 +0.2**
SIM *i* S **S** **18 08 49.0 -2.5**
SIM pmax pmax
comp=Z,30nm,1.1s
ISP Isparta 76.12 310 PFAKE 17 59 30.0 +16
ISP LR LR
comp=Z,1µm,19.0s
SEY Seymchan 76.52 22⇑ *i*P **P** **17 59 16.3 +0.5**
TIXI Tiksi 76.89 9 PFAKE 17 59 30.0 +12
TIXI LR LR
comp=Z,7µm,19.0s
MSVF Nonsavu 77.35 107 PFAKE 17 59 30.0 +8.4
MSVF LR LR
comp=Z,2µm,20.0s
MOS Moscow 77.62 329 *e*P **P** **17 59 22.4 +0.3**
MOS *e* 17 59 31.8
MOS *e* 18 02 14.2
MOS *e*S **S** **18 09 09.1 -3.5**
MOS *e* 18 09 24.5
MOS pmax pmax
comp=Z,100nm,0.9s
MOS pmax pmax
comp=Z,200nm,1.5s
URZ Urewera 77.69 128 *e*P **P** **17 59 22.9 -0.1**
comp=Z,77nm,1.4s
URZ Urewera 77.69 128 LR LR 18 34 02.9
comp=Z,3µm,21.7s,baz=307,slow=36
OBN Obninsk 77.91 328α *i*P **P** **17 59 24.1 +0.3**
OBN *i* 17 59 32.6
OBN *i* 17 59 43.4
OBN *e* 18 02 23.1
OBN PPP PPP 18 04 14.0
OBN *i* S **S** **18 09 12.7 -3.0**
OBN *i* 18 09 27.5
OBN *e*PS **PnS** **18 10 01.1 +3.4**
OBN *e*SS **SS** **18 14 12.5 -4.3**
OBN pmax pmax
comp=Z,99nm,1.1s
OBN Obninsk 77.91 328 P **P** **17 59 24.5 +0.7**
comp=Z,499nm,0.8s,SNR=7.3
TLCR 79.30 317⇑ P **P** **17 59 32.5 +0.8**
TLCR 79.30 317⇑ *i*P **P** **17 59 32.5 +0.8**
PSN Preselentsi 79.34 315 *i*P **P** **17 59 31.9 -0.1**
TIRR Tirgusor 79.38 316⇑ P **P** **17 59 32.3 +0.1**
TIRR Tirgusor 79.38 316 *e*P **P** **17 59 31.4 -0.7**
comp=Z,40nm,1.1s
TIRR Tirgusor 79.38 316⇑ *i*P **P** **17 59 32.3 +0.1**
SUR Sutherland 79.50 238 *e*P **P** **17 59 32.4 -1.0**
SUR AMB AMB 17 59 41.1
comp=Z,37nm,3.3s
SUR Sutherland 79.50 238 *e*P **P** **17 59 36.1 +2.7**
comp=Z,145nm,2.1s
SUR LR LR
comp=Z,3µm,20.0s
CFR Carcaliu 79.76 317⇑ P **P** **17 59 34.4 +0.2**
CFR Carcaliu 79.76 317⇑ *i*P **P** **17 59 34.4 +0.2**
PRD Provadia 79.78 315 *i* P **P** **17 59 34.1 -0.2**
KIS Kishinev 79.78 319 *e*P **P** **17 59 33.0 -1.3**
KIS *e* 18 02 32.0
KIS *e*S **S** **18 09 32.0 -4.2**
KIS *e*PS **PnS** **18 10 26.0 +4.2**
KIS pmax pmax
comp=Z,400nm,10.0s
KIS Kishinev 79.78 319 *e*P **P** **17 59 33.0 -1.3**
comp=Z,400nm,10.0s
KIS Kishinev 79.78 319 *e*PP PP 18 02 32.0 -3.7
KIS *e*S **S** **18 09 32.0 -4.2**
IDI Anoyia 79.97 306 *e*P **P** **17 59 36.9 +1.3**
comp=Z,28nm,0.9s
LEOM Leova 80.02 318⇓ P **P** **17 59 36.4 +0.8**
LEOM Leova 80.02 318⇓ *i*P **P** **17 59 36.4 +0.8**
CVNA Calvinia 80.36 239 *e*P P 17 59 34.7 -3.2
CVNA AMB AMB 17 59 51.0
comp=Z,44nm,5.9s
AK02 Malin Array Si 80.56 322 *e*P **P** **17 59 37.7 -0.7**
AKASG Malin Array Be 80.56 322 P **P** **17 59 38.0 -0.4**
AKASG Malin Array Be 80.56 322 P **P** **17 59 38.0 -0.4**
AKASG Malin Array Be 80.56 322 P **P** **17 59 38.0 -0.4**
comp=Z,19nm,1.0s,baz=96,slow=4.5,SNR=34
AK01 Malin Array Si 80.57 322 *e*P **P** **17 59 38.0 -0.4**
KIEV Kiev 80.57 322 *e*P **P** **17 59 37.4 -1.0**
KIEV pmax pmax
comp=Z,26nm,1.2s
KIEV Kiev 80.57 322 *e*P **P** **17 59 37.4 -1.0**
comp=Z,26nm,1.2s
SZH Strazhica 80.84 315 *i* P **P** **17 59 40.1 0.0**
ISR Istrita 80.84 316⇓ P **P** **17 59 41.8 +1.7**
ISR Istrita 80.84 316⇓ *i*P **P** **17 59 41.8 +1.7**
VRI Vrincioaia 80.89 317 P **P** **17 59 41.5 +1.2**
VRI Vrincioaia 80.89 317⇓ *i*P **P** **17 59 41.8 +1.5**
PLOR Plostina 80.94 317 P **P** **17 59 41.8 +1.2**
VNDA Vanda 81.02 169 *e*P **P** **17 59 41.2 +0.8**
comp=Z,28nm,1.1s
VNDA Vanda 81.02 169 P **P** **17 59 40.8 +0.4**
comp=Z,5.9nm,1.0s,baz=294,slow=4.6,SNR=13
VNDA LR LR 18 30 57.8
comp=Z,1µm,20.8s,baz=308,slow=32
TMCR Tamitsa 81.09 337 *e*P **P** **17 59 40.8 -0.1**
TMCR pmax pmax
comp=Z,133nm,1.2s
TESR 81.10 318⇑ *i*P **P** **17 59 42.0 +0.6**
ZIMR 81.33 315 P **P** **17 59 43.9 +1.3**
MLR Muntele Rosu 81.34 317⇑ *i*P **P** **17 59 43.5 +0.7**
PLD Plovdiv 81.47 313 P **P** **17 59 43.5 +0.1**
PAIG Paliouri 81.80 311 P **P** **17 59 45.1 -0.1**
NVR Nevrokopi 81.93 312 P **P** **17 59 46.0 0.0**
PGB Panagyurishte 81.95 314 *i* P **P** **17 59 45.8 -0.3**
SMIA Simia 81.96 310 P **P** **17 59 46.2 +0.1**
PLG Polygyros 82.06 311 P **P** **17 59 46.5 -0.1**
MMB Musomiste 82.08 313 *i* P **P** **17 59 46.6 -0.1**
SRS Serrai 82.09 312 P **P** **17 59 46.3 -0.5**
SBA Scott Base 82.11 169 *e*P P 17 59 52.1 +6.0
SBA pmax pmax
comp=Z,163nm,2.0s
SBA Scott Base 82.11 169 *e*P P 17 59 52.1 +6.0
comp=Z,163nm,2.0s
TSUM Tsumeb 82.16 251 *e*P **P** **17 59 48.6 +0.9**
TSUM Tsumeb 82.16 251 P **P** **17 59 49.1 +1.4**
TSUM Tsumeb 82.16 251 P **P** **17 59 49.1 +1.4**
baz=141,slow=6.5
FX1 Attu Island--F 82.19 36 P **P** **17 59 48.7 +1.7**
FX1 Attu Island--F 82.19 36 P **P** **17 59 48.7 +1.7**
comp=Z,21nm,0.9s,baz=270,slow=4.0,SNR=3.0
SOH Sokhos 82.21 312 P **P** **17 59 47.1 -0.4**
BURAR Bucovina Array 82.31 319⇑ *i*P **P** **17 59 48.8 +0.9**
BUR08 Bucovina Ar. S 82.33 319 *e*P **P** **17 59 49.4 +1.4**
MPEP Malo Peshtene 82.42 314 *i* P **P** **17 59 48.7 +0.3**
MICGM Minsk 82.43 326⇓ *e*P **P** **17 59 48.0 -0.2**
MNK Minsk 82.45 326⇓ *e*P **P** **17 59 48.0 -0.3**
GUR Goura 82.46 309 P **P** **17 59 48.1 -0.8**
KKB Krupnik 82.61 313 *i* P **P** **17 59 49.2 -0.3**
KNT Kendrikon 82.61 312 P **P** **17 59 49.1 -0.4**
VTS Vitosha 82.65 313 P **P** **17 59 49.8 -0.1**
VTS Vitosha 82.65 313⇑ P **P** **17 59 50.4 +0.5**
VTS Vitosha 82.65 313⇑ *i*P **P** **17 59 50.4 +0.5**
VTS Vitosha 82.65 313 *i* P **P** **17 59 47.6 -2.3**
LIT Litokhoron 82.73 311 P **P** **17 59 49.6 -0.5**
PUL Pulkovo 82.75 331⇓ *i*P **P** **17 59 51.1 +1.4**
PUL pmax pmax
comp=Z,116nm,0.4s
LAKA Lakka 82.80 309 P **P** **17 59 50.2 -0.3**
VAY Vaslandovo 82.88 312 *i* P **P** **17 59 50.0 -0.9**
GRG Griva 82.94 312 P **P** **17 59 50.9 -0.4**
THL Klokotos Trika 82.99 310 P **P** **17 59 50.0 -1.5**
EVR Evrytania 83.04 310 P **P** **17 59 52.0 +0.1**
NACGM Naroch 83.15 326 *e*P **P** **17 59 50.0 -1.9**
JOF Joensuu 83.36 335 *e*P **P** **17 59 52.1 -0.7**
JOF pmax pmax
comp=Z,15nm,0.8s
JOF Joensuu 83.36 335 *e*p **P** **17 59 52.1 -0.7**
comp=Z,15nm,0.8s
BMR Baia Mare 83.46 319⇑ P **P** **17 59 55.0 +1.3**
BMR Baia Mare 83.46 319⇑ *i*P **P** **17 59 55.0 +1.3**
DEV Deva 83.50 317 P **P** **17 59 55.4 +1.4**
LVV L'vov 83.57 321 *e*P **P** **17 59 54.4 +0.2**
LVV *e* 18 03 10.4
LVV *e*S **S** **18 10 13.0 -2.2**
LVV *e* 18 11 10.2
IIGN Ignalina 83.58 326 *e*P **P** **17 59 55.0 +0.9**
IIGN AMB AMB 17 59 57.0
comp=Z,33nm,0.9s
IZAR Zarasai 83.67 327 *e*P **P** **17 59 55.5 +0.9**
IZAR AMB AMB 17 59 56.2
comp=Z,18nm,1.2s
FNA Florina 83.68 311 P **P** **17 59 54.3 -0.8**
ISAL Salakas 83.69 327 *e*P **P** **17 59 55.5 +0.9**
ISAL AMB AMB 17 59 58.4
comp=Z,23nm,1.1s
DRGR 83.81 318⇑ P **P** **17 59 56.5 +0.9**
DRGR 83.81 318⇑ *i*P **P** **17 59 56.5 +0.9**
LVZ Lovozero 83.93 340 *e*P **P** **17 59 56.2 +0.5**
LVZ pmax pmax
comp=Z,27nm,1.0s
BILL Bilibino 84.07 20 PFAKE 18 00 10.0 +14
BILL LR LR
comp=Z,3µm,19.0s
TRPA Tarpa 84.18 319⇑ *i*P **P** **17 59 58.3 +0.9**
TRPA Tarpa 84.18 319⇑ *e*P **P** **17 59 58.6 +1.2**
APA Apatity 84.24 339⇑ *i*P **P** **17 59 58.0 +0.8**
APA *i* S **S** **18 10 22.0 +0.8**
APA pmax pmax
comp=Z,54nm,1.2s
APA MLR MLR
comp=Z,2µm,19.0s
BZS Buzias 84.34 316⇓ P **P** **17 59 58.8 +0.6**
BZS Buzias 84.34 316⇓ *i*P **P** **17 59 58.8 +0.6**
KWP Kalwaria Pacla 84.37 320⇑ P **P** **17 59 59.2 +0.9**
KWP Kalwaria Pacla 84.37 320 *e*P **P** **17 59 58.9 +0.6**
comp=Z,44nm,1.1s
KWP LR LR
comp=Z,725nm,20.0s
KWP Kalwaria Pacla 84.37 320⇑ *i*P **P** **17 59 59.2 +0.9**
KWP Kalwaria Pacla 84.37 320 *e*P **P** **17 59 58.7 +0.4**
KWP *e*S **S** **18 10 25.0 +1.7**
KWP LMZ LR 18 41 24.7
UZH Uzhgorod 84.44 319 *e*P **P** **17 59 56.8 -1.9**
UZH *i* 18 00 13.4
UZH *i* S **S** **18 10 20.7 -3.3**
UZH *e*PS **PnS** **18 11 22.6 +3.3**
KOLS Kolonicke sedl 84.51 320 *e*P **P** **18 00 00.4 +1.3**
KOLS *e* 18 00 10.7
KOLS *e*S **S** **18 10 24.2 -0.5**
KOLS pmax pmax
comp=Z,55nm,1.0s
KOLS Kolonicke sedl 84.51 320 *e*P **P** **18 00 00.4 +1.3**
KOLS *e*pP **pP** **18 00 10.7 +4.7**
SUW Suwalki 84.98 325 *e*P **P** **18 00 01.5 +0.2**
SUW pmax pmax
comp=Z,181nm,1.0s
SUW Suwalki 84.98 325 *e*P **P** **18 00 01.5 +0.2**
comp=Z,181nm,1.0s
SUW Suwalki 84.98 325 *e*P **P** **18 00 01.4 +0.2**
SUW LMZ LR 18 44 31.3
CRVS Cervenica-Dubn 85.03 319 *e*P **P** **18 00 02.1 +0.4**
CRVS *e* 18 00 13.4
CRVS *e*S **S** **18 10 26.4 -3.5**
CRVS pmax pmax
comp=Z,16nm,1.2s
CRVS Cervenica-Dubn 85.03 319 *e*P **P** **18 00 02.1 +0.4**
CRVS *e*pP **pP** **18 00 13.4 +4.8**
FIA1 FINESS Array S 85.24 332 *e*P **P** **18 00 02.7 +0.3**
FINES FINESS Array B 85.24 332 P **P** **18 00 03.1 +0.7**
FINES FINESS Array B 85.24 332 P **P** **18 00 03.1 +0.7**
comp=Z,30nm,1.0s,baz=106,slow=6.8,SNR=33
FINES LR LR 18 45 50.5
comp=Z,2µm,19.6s,baz=108,slow=41
KAF Kangasniemi 85.32 333 *e*P **P** **18 00 01.2 -1.6**
KAF pmax pmax
comp=Z,21nm,0.9s
KAF Kangasniemi 85.32 333 *e*p **P** **18 00 01.2 -1.6**
comp=Z,21nm,0.9s
PKSN Nyarlorinc 85.75 317⇓ *e*P **P** **18 00 07.1 +1.8**
PSZ Piszkesteto 85.89 318⇑ P **P** **18 00 06.8 +0.7**
PSZ Piszkesteto 85.89 318 *e*P **P** **18 00 07.3 +1.2**
comp=Z,19nm,1.0s
PSZ LR LR
comp=Z,603nm,20.0s
PSZ Piszkesteto 85.89 318⇑ *i*P **P** **18 00 06.8 +0.7**
PSZ Piszkesteto 85.89 318⇑ *e*P **P** **18 00 07.0 +0.9**
PKS2 Kecel 86.13 317⇓ *e*P **P** **18 00 09.0 +1.8**
PKS7 Kunszentmiklos 86.25 317⇓ *e*P **P** **18 00 09.2 +1.4**
OJC Ojcow 86.32 321⇑ *i*P **P** **18 00 08.7 +0.7**
OJC *e**PP **pP** **18 00 17.3 +2.3**
OJC *e*S **S** **18 10 41.3 -1.2**
OJC MLR MLR
comp=Z,900nm,21.8s
OJC Ojcow 86.32 321 *e*P **P** **18 00 08.8 +0.7**
OJC pmax pmax
comp=Z,32nm,1.3s
OJC Ojcow 86.32 321 *e*P **P** **18 00 08.8 +0.7**
comp=Z,32nm,1.3s
OJC Ojcow 86.32 321 *i* P **P** **18 00 08.7 +0.7**
OJC *e*pP **pP** **18 00 17.3 +2.3**
OJC *e*S **S** **18 10 41.3 -1.2**
OJC *e*sS **sS** **18 10 57.5 +3.5**
OJC L L 18 46 40.4
comp=Z,900nm,21.8s
BUD Budapest 86.41 318⇑ *e*P **P** **18 00 08.8 +0.3**
PKSM Moragy 86.48 316⇑ P **P** **18 00 09.3 +0.4**
PKSM Moragy 86.48 316⇑ *i*P **P** **18 00 09.3 +0.4**
PKSM Moragy 86.48 316⇑ *e*P **P** **18 00 09.3 +0.4**
MAIT Maitri 86.63 199 *e*P P 18 00 00.9 -8.3
VYHS Vyhne 86.68 319 *e*P **P** **18 00 10.6 +0.7**
VYHS *e* 18 00 18.0
VYHS *e*S **S** **18 10 43.1 -3.0**
VYHS pmax pmax
comp=Z,13nm,1.5s
VYHS Vyhne 86.68 319 *e*P **P** **18 00 10.6 +0.7**
VYHS *e*pP **pP** **18 00 18.0 +1.2**
VYHS Vyhne 86.68 319 *e*S **S** **18 10 43.1 -3.0**
PKS9 Tamasi 86.78 317⇓ *e*P **P** **18 00 11.5 +1.1**
PKSG 86.82 318⇓ *e*P **P** **18 00 11.9 +1.3**
TIP Timpagrande 86.97 309 *e*P **P** **18 00 13.0 +1.4**
comp=Z,33nm,1.2s
TIP LR LR
comp=Z,670nm,21.0s
PKST T"s 87.04 317⇑ *e*P **P** **18 00 12.2 +0.5**
KEV Kevo 87.18 340 *e*P P 18 00 04.2 -7.6
KEV pmax pmax
comp=Z,13nm,0.8s
KEV Kevo 87.18 340 PFAKE 18 00 20.0 +8.2
KEV LR LR
comp=Z,2µm,20.0s
KEV Kevo 87.18 340 *e*p P 18 00 04.2 -7.6
comp=Z,13nm,0.8s
OKC Ostrava-Krasne 87.32 320 *e*P **P** **18 00 13.5 +0.6**
OKC *e**PP **pP** **18 00 22.2 +2.3**
OKC *e* 18 10 48.8
OKC MLR MLR
comp=Z,600nm,16.1s
OKC Ostrava-Krasne 87.32 320⇑ *e*P **P** **18 00 13.5 +0.6**
OKC *e*x x 18 00 22.2
OKC *e*S **S** **18 10 48.8 -3.4**
OKC AMS AMS 18 47 20.0
comp=Z,600nm,16.1s
CEL Celeste 87.55 308 *e*P **P** **18 00 16.1 +1.7**
comp=Z,46nm,1.2s
CEL LR LR
comp=Z,605nm,19.0s
SMOL Smolenice 87.61 319 *e*P **P** **18 00 16.1 +1.7**
SMOL Smolenice 87.61 319 *e*P **P** **18 00 16.1 +1.7**
ARCES ARCESS Array B 87.62 340 P **P** **18 00 14.8 +0.8**
ARCES PP **PP** **18 03 39.7 +0.5**
ARCES ARCESS Array B 87.62 340 P **P** **18 00 14.8 +0.8**
comp=Z,41nm,0.9s,baz=84,slow=3.8,SNR=27
ARCES PP **PP** **18 03 39.7 +0.5**
comp=Z,18nm,1.1s,baz=72,slow=12,SNR=5.3
ARCES LR LR 18 43 53.9
comp=Z,2µm,20.4s,baz=104,slow=39
ARE0 ARCESS Array S 87.62 340 *e*P **P** **18 00 14.7 +0.7**
MORC Moravsky Berou 87.70 320⇓ P **P** **18 00 15.7 +0.9**
MORC Moravsky Berou 87.70 320 *e*P **P** **18 00 15.8 +0.9**
comp=Z,27nm,1.3s
MORC Moravsky Berou 87.70 320⇓ *i*P **P** **18 00 15.7 +0.9**
CUC Castrocucco 87.78 310 *e*P **P** **18 00 16.4 +1.0**
comp=Z,21nm,1.3s
CUC LR LR
comp=Z,735nm,21.0s
BEHE Becsehely 87.80 317⇑ *e*P **P** **18 00 16.5 +1.2**
SOP Sopron 88.09 316⇑ *e*P **P** **18 00 17.0 +0.3**
KOGS Kog 88.16 317 *i* P **P** **18 00 17.9 +0.9**
KRLC Krailiky 88.22 320⇑ *e*P **P** **18 00 18.4 +1.1**
GKP Gorka Klasztor 88.34 323 *e*P **P** **18 00 18.1 +0.4**
GKP *e*S **S** **18 10 59.8 -1.9**
GKP LMZ LR 18 46 38.5
WDD Wield Dalam 88.41 306 PFAKE 18 00 30.0 +12
WDD LR LR
comp=Z,869nm,20.0s
DPC Dobruska-Polom 88.55 320⇑ *i*P **P** **18 00 20.2 +1.3**
DPC *e**PP **pP** **18 00 28.5 +2.7**
DPC *e* 18 11 01.3
DPC MLR MLR
comp=Z,1µm,19.9s
DPC Dobruska-Polom 88.55 320 *e*P **P** **18 00 20.4 +1.5**
DPC pmax pmax
comp=Z,48nm,1.4s
DPC Dobruska-Polom 88.55 320 *e*P **P** **18 00 20.4 +1.5**
comp=Z,48nm,1.4s
DPC Dobruska-Polom 88.55 320⇑ *i*P **P** **18 00 20.2 +1.3**
DPC *e*x x 18 00 28.5
DPC *e*S **S** **18 11 01.3 -2.7**
DPC AMS AMS 18 47 30.0
comp=Z,1µm,19.9s
CSNA Conrad Observa 88.58 318⇑ *i*P **P** **18 00 19.0 -0.1**
comp=Z,8.2nm,1.3s
CSNA Conrad Observa 88.58 318⇑ *i*P **P** **18 00 19.0 -0.1**
comp=Z,8.2nm,1.3s
KSP Ksiaz 88.62 321⇑ *e*P **P** **18 00 20.3 +1.2**
KSP *e**PP **pP** **18 00 28.2 +2.1**
KSP *e*S **S** **18 11 00.0 -4.6**
KSP MLR MLR
comp=Z,2µm,23.9s
KSP Ksiaz 88.62 321 *e*P **P** **18 00 20.0 +0.9**
KSP *e*S **S** **18 11 02.0 -2.6**
KSP LMZ LR 18 43 31.4
DOBS Dobrina 88.66 316 *i* P **P** **18 00 20.4 +0.9**
ARSA Arzberg 88.74 317⇑ *i*P **P** **18 00 20.2 +0.4**
comp=Z,18nm,1.1s
ARSA Arzberg 88.74 317⇑ *i*P **P** **18 00 20.2 +0.4**
comp=Z,18nm,1.1s
BOJS Bojanci 88.75 316 *e*P **P** **18 00 20.4 +0.6**
BOJS *e*PP PP 18 04 09.9 +21
BOJS *e*S **S** **18 11 04.7 -1.3**
UPC Upice 88.77 321 *e*P **P** **18 00 21.5 +1.7**
UPC *e**PP **pP** **18 00 30.0 +3.2**
UPC Upice 88.77 321⇑ *e*P **P** **18 00 21.5 +1.7**
UPC *e*x x 18 00 30.0
PERS Pernice 88.95 317 *i* P **P** **18 00 21.7 +0.8**
PERS *e*S **S** **18 11 08.0 -0.1**
PERS *e* 18 11 23.1
TREC Trest 88.97 319 *e*P **P** **18 00 21.6 +0.7**
TREC *e* 18 11 09.2
TREC MLR MLR
comp=Z,700nm,19.9s
TREC Trest 88.97 319⇑ *e*P **P** **18 00 21.6 +0.7**
TREC *e*S **S** **18 11 09.2 +1.2**
TREC AMS AMS 18 46 40.0
comp=Z,700nm,19.9s

SOKA Soboth 89.02 317⇑ *i*PcP **PcP** 18 00 22.3 -0.4
comp=Z,27nm,1.1s
SOKA Soboth 89.02 317⇑ *i*P **PcP** 18 00 22.3 -0.4
comp=Z,27nm,1.1s
LJU Ljubljana 89.31 316 *i* P **P** 18 00 23.6 +1.1
LJU *e*S **S** 18 11 10.8 -0.5
LJU *e* 18 11 25.1
PRU Pruhonice 89.65 320 *e*P **P** 18 00 24.7 +0.7
PRU *e**PP **pP** 18 00 33.6 +2.7
PRU *e* 18 11 14.6
PRU MLR MLR
comp=Z,1μm,19.9s
PRU Pruhonice 89.65 320⇑ *e*P **P** 18 00 24.7 +0.7
PRU *ex* x 18 00 33.6
PRU *e*S **S** 18 11 14.6 +0.3
PRU AMS AMS 18 50 30.0
comp=Z,1μm,19.9s
PVCC Panska Ves 89.68 320 *e*P **P** 18 00 25.7 +1.6
PVCC *e* 18 11 06.7
PVCC MLR MLR
comp=Z,1μm,20.3s
PVCC Panska Ves 89.68 320⇑ *e*P **P** 18 00 25.7 +1.6
PVCC *e*SKKS S 18 11 06.7 -7.8
PVCC AMS AMS 18 47 00.0
comp=Z,1μm,20.3s
PRA Prague 89.73 320 ⇑P **P** 18 00 25.0 +0.7
VOY Vojsko 89.75 316 *e*P **P** 18 00 25.1 +0.5
AQU L'Aquila 89.81 312 *e*P **P** 18 00 26.3 +1.3
comp=Z,62nm,1.0s
AQU LR LR
comp=Z,806nm,20.0s
CADS Cadrg 89.87 316 *i* P **P** 18 00 25.4 +0.2
BSD Bornholm Skovb 89.90 325 *e*P **P** 18 00 26.0 +1.0
BSD Bornholm Skovb 89.90 325 *i* P **P** 18 00 26.0 +1.0
GEC2 GERESS Array S 90.10 319 *e*P **P** 18 00 27.5 +1.3
GEC2 pmax pmax
comp=Z,14nm,1.1s
GEC2 GERESS Array S 90.10 319 *e*P **P** 18 00 27.5 +1.3
comp=Z,14nm,1.1s
GEC2 GERESS Array S 90.10 319 *e*P **P** 18 00 27.6 +1.3
GERES GERESS Array B 90.10 319 P **P** 18 00 27.1 +0.8
GERES GERESS Array B 90.10 319 P **P** 18 00 27.1 +0.8
comp=Z,11nm,1.0s,baz=104,slow=4.3,SNR=42
BRG Berggiesshubel 90.11 321 *e*P **P** 18 00 26.9 +0.8
comp=Z,27nm,1.3s
BRG *e* 18 00 35.6
comp=Z,43nm,1.6s
BRG Berggiesshubel 90.11 321 *e*P **P** 18 00 27.5 +1.4
comp=Z,9.0nm,0.9s
KBA Koelnbreinsper 90.20 317⇓ *i*P **P** 18 00 26.6 -0.3
KBA pmax pmax
comp=Z,9.0nm,1.0s
KBA Koelnbreinsper 90.20 317⇓ *i*P **P** 18 00 26.6 -0.3
comp=Z,9.0nm,1.0s
KBA Koelnbreinsper 90.20 317⇓ *i*P **P** 18 00 26.6 -0.3
comp=Z,9.0nm,1.0s
KHC Kasperske Hory 90.20 319⇑ *i*P **P** 18 00 26.9 +0.2
KHC *e**PP **pP** 18 00 35.4 +1.8
KHC *e* 18 11 20.0
KHC MLR MLR
comp=Z,900nm,17.1s
KHC Kasperske Hory 90.20 319 *e*P **P** 18 00 27.9 +1.2
comp=Z,9.3nm,1.2s
KHC Kasperske Hory 90.20 319⇑ *i*P **P** 18 00 26.9 +0.2
KHC *ex* x 18 00 35.4
KHC *e*S **S** 18 11 20.0 +0.5
KHC AMS AMS 18 51 00.0
comp=Z,900nm,17.1s
RUE Ruedersdorf 90.34 322 *e*P **P** 18 00 29.2 +2.1
comp=Z,24nm,0.8s
RUE *e*pP **pP** 18 00 38.8 +4.7
RJOB Jochberg 90.62 318 *e*P **P** 18 00 29.7 +1.0
comp=Z,7.0nm,0.8s
WET Wettzell 90.66 319 *e*P **P** 18 00 30.2 +1.4
WET *e**PP **pP** 18 00 38.7 +3.0
WET pmax pmax
comp=Z,11nm,0.9s
WET Wettzell 90.66 319 *e*P **P** 18 00 30.2 +1.4
comp=Z,11nm,0.9s
WET *e*pP **pP** 18 00 38.7 +3.0
CLL Collm 90.73 321 *i* P **P** 18 00 29.2 +0.2
CLL *i* 18 00 38.6
CLL *e*S S 18 11 17.0 -7.2
CLL pmax pmax
comp=Z,26nm,1.5s
CLL MLR MLR
comp=Z,1μm,18.9s
CLL Collm 90.73 321 *e*P **P** 18 00 29.5 +0.5
comp=Z,12nm,1.1s
CLL *e*pP **pP** 18 00 39.1 +3.1
CLL Collm 90.73 321 *i* P **P** 18 00 29.2 +0.2
comp=Z,26nm,1.5s
CLL *i* sP **sP** 18 00 38.6 +0.2
CLL *e*PP PP 18 04 12.0 +7.5
CLL *e*SKKSac **SKKSac** 18 11 12.0 -2.1
CLL *e*S **S** 18 11 24.0 -0.2
CLL *e*PS **PnS** 18 12 35.0 +0.6
CLL *e* 18 16 24.0
CLL *e*SS SS 18 17 12.0 -14
CLL *e*SSSS 18 24 14.0
CLL LmV 18 50 00.0
comp=Z,1μm,18.9s
ABTA Abfaltersbach 90.75 317⇑ *i*P **P** 18 00 28.8 -0.5
comp=Z,12nm,1.1s
ABTA Abfaltersbach 90.75 317⇑ *i*P **P** 18 00 28.8 -0.5
comp=Z,12nm,1.1s
NKC Novy Kostel 91.02 320 *e*P **P** 18 00 31.2 +0.8
NKC *e**PP **pP** 18 00 40.8 +3.5
NKC *e* 18 11 28.7
NKC MLR MLR
comp=Z,900nm,16.2s
NKC Novy Kostel 91.02 320⇑ *e*P **P** 18 00 31.2 +0.8
NKC *ex* x 18 00 40.8
NKC *e*S **S** 18 11 28.7 +1.8
NKC AMS AMS 18 50 40.0
comp=Z,900nm,16.2s
TANN Tannenbergstha 91.02 320 *e*P **P** 18 00 32.2 +1.8
comp=Z,6.0nm,1.1s
TANN *e*pP **pP** 18 00 40.6 +3.2
ROTZ Rotzenmuhle 91.14 320 *e*P **P** 18 00 32.7 +1.8
comp=Z,7.0nm,0.9s
SNAA Sanae 91.20 198 *e*P P 18 00 40.5 +10
SNAA Sanae 91.20 198 *e*P **P** 18 00 31.7 +0.8
SNAA AMB AMB 18 00 42.1
comp=Z,35nm,9.1s
SNAA Sanae 91.20 198 *e*P P 18 00 36.0 +5.1
comp=Z,15nm,1.1s
MANZ Manzenberg 91.22 320 *e*P **P** 18 00 33.0 +1.7
comp=Z,10.0nm,0.9s
MANZ *e*pP **pP** 18 00 41.8 +3.5
COP Copenhagen 91.36 326 *e*P **P** 18 00 33.9 +2.1
COP Copenhagen 91.36 326 *i* P **P** 18 00 33.9 +2.1
WTTA Wattenberg 91.38 317⇑ *i*P **P** 18 00 32.3 0.0
WTTA pmax pmax
comp=Z,16nm,1.1s
WTTA Wattenberg 91.38 317⇑ *i*P **P** 18 00 32.3 0.0
comp=Z,16nm,1.1s
WTTA Wattenberg 91.38 317⇑ *i*P **P** 18 00 32.3 0.0
comp=Z,16nm,1.1s
NEUB Neuenburg 91.50 321 *e*P **P** 18 00 33.6 +1.1
comp=Z,13nm,0.8s
MOX Moxa 91.57 320 *e*P **P** 18 00 34.6 +1.7
MOX *e**PP **pP** 18 00 44.0 +4.1
MOX pmax pmax
comp=Z,6.0nm,0.9s
MOX Moxa 91.57 320 *e*P **P** 18 00 34.6 +1.7
comp=Z,6.0nm,0.9s
MOX *e*pP **pP** 18 00 44.0 +4.1
MOTA Moosalm 91.75 317⇑ *i*P **P** 18 00 33.8 -0.2
MOTA pmax pmax
comp=Z,16nm,1.0s
MOTA Moosalm 91.75 317⇑ *i*P **P** 18 00 33.8 -0.2
comp=Z,16nm,1.0s
MOTA Moosalm 91.75 317⇑ *i*P **P** 18 00 33.8 -0.2
comp=Z,16nm,1.0s
GRF Grafenberg Arr 91.78 319 *e*P **P** 18 00 35.4 +1.5
GRF pmax pmax
comp=Z,10.0nm,0.9s
GRF Grafenberg Arr 91.78 319 *e*P **P** 18 00 35.4 +1.5
comp=Z,10.0nm,0.9s
GRFO Grafenberg 91.78 319 *e*P **P** 18 00 35.5 +1.6
GRFO *e* 18 04 10.2
GRFO pmax pmax
comp=Z,19nm,1.1s
GRFO Grafenberg 91.78 319 *e*P **P** 18 00 35.5 +1.6
comp=Z,19nm,1.1s
GRFO *e*PP **PP** 18 04 10.2 -2.7
GAMB Gambell 91.85 26 *e*P **P** 18 00 33.9 +0.1
comp=Z,17nm,1.6s
FETA Feichten 91.99 317⇓ *i*P **P** 18 00 35.6 +0.5
comp=Z,9.8nm,1.1s
FETA Feichten 91.99 317⇓ *i*P **P** 18 00 35.6 +0.5
comp=Z,9.8nm,1.1s
VLC Villacollemand 92.11 314 PFAKE 18 00 50.0 +14
VLC LR LR
comp=Z,817nm,21.0s
NB2 NORSAR Subarra 92.27 331 P **P** 18 00 36.0 0.0
baz=91,slow=5.1
NB2 NORSAR Subarra 92.27 331 P **P** 18 00 36.0 0.0
comp=Z,17nm,1.0s,baz=91,slow=5.1
NOA NORSAR Array B 92.27 331 P **P** 18 00 36.4 +0.4
NOA PP **PP** 18 04 21.5 +5.0
NOA NORSAR Array B 92.27 331 P **P** 18 00 36.4 +0.4
comp=Z,11nm,1.0s,baz=95,slow=4.6,SNR=22
NOA PP **PP** 18 04 21.5 +5.0
comp=Z,2.1nm,0.9s,baz=87,slow=7.4,SNR=4.5
NOA LR LR 18 49 14.0
comp=Z,780nm,20.3s,baz=85,slow=40
FUORN Ofenpass-Fuorn 92.29 316 *e*P **P** 18 00 38.0 +1.3
comp=Z,23nm,1.0s
CLZ Clausthal 92.40 322 *e*P **P** 18 00 38.1 +1.3
CLZ pmax pmax
comp=Z,8.0nm,1.0s
CLZ Clausthal 92.40 322 *e*P **P** 18 00 38.1 +1.3
comp=Z,8.0nm,1.0s
DAVA Damuels 92.58 317⇑ *i*P **P** 18 00 37.2 -0.6
comp=Z,17nm,1.2s
DAVA Damuels 92.58 317⇑ *i*P **P** 18 00 37.2 -0.6
comp=Z,17nm,1.2s
KEST Kesra 92.61 305 *e*P **P** 18 00 40.4 +2.2
KEST Kesra 92.61 305 P **P** 18 00 39.9 +1.7
comp=Z,8.4nm,1.0s,baz=320,slow=2.3,SNR=14
KEST LR LR 18 45 18.5
comp=Z,608nm,18.6s,baz=16,slow=38
VSL Villasalto 92.70 309 PFAKE 18 00 50.0 +12
VSL LR LR
comp=Z,433nm,22.0s
KBS Kingsbay 92.72 349 *e*P **P** 18 00 37.6 0.0
VNA2 Neumayer--Watz 92.82 198 *e*P P 18 00 48.9 +11
TUE Stuetta 92.92 316 PFAKE 18 00 50.0 +10
TUE LR LR
comp=Z,803nm,20.0s
KONO Kongsberg 93.04 329 *e*P **P** 18 00 39.3 -0.1
KONO pmax pmax
comp=Z,17nm,1.0s
KONO Kongsberg 93.04 329 *e*P **P** 18 00 39.3 -0.1
comp=Z,4.0nm,1.0s
PGF Pioggiola 93.07 312 *e*P **P** 18 00 40.4 +0.2
comp=Z,20nm,1.1s
PGF Pioggiola 93.07 312 *e*P **P** 18 00 40.4 +0.2
PGF pmax pmax
comp=Z,21nm,1.1s
PGF Pioggiola 93.07 312 *e*P **P** 18 00 40.4 +0.2
comp=Z,20nm,1.1s
MUD Monsted U'grnd 93.22 326 *e*P **P** 18 00 40.4 +0.1
MUD Monsted U'grnd 93.22 326 *i* P **P** 18 00 40.4 +0.1
VNA3 Neumayer Olymp 93.42 198 *e*P P 18 00 50.8 +10
TNA Tin City 93.52 25 *e*P **P** 18 00 42.0 +0.4
comp=Z,8.6nm,0.9s
TNS Taunus Mts 93.58 320 *e*P **P** 18 00 43.8 +1.5
TNS pmax pmax
comp=Z,11nm,0.9s
TNS Taunus Mts 93.58 320 *e*P **P** 18 00 43.8 +1.5
comp=Z,11nm,0.9s
BFO Black Forest 93.64 318 PFAKE 18 00 50.0 +7.4
BFO LR LR
comp=Z,685nm,20.0s
SBF Sospel 94.23 314 *e*P **P** 18 00 45.5 +0.1
comp=Z,22nm,0.9s
SBF Sospel 94.23 314 *e*P **P** 18 00 45.5 +0.1
SBF pmax pmax
comp=Z,22nm,0.9s
SBF Sospel 94.23 314 *e*P **P** 18 00 45.5 +0.1
comp=Z,22nm,0.9s
ECH Echery 94.42 318 PFAKE 18 01 00.0 +14
ECH LR LR
comp=Z,876nm,20.0s
LPG La Plagne 94.72 315 *e*P **P** 18 00 48.0 +0.1
comp=Z,23nm,1.3s
LPG La Plagne 94.72 315 *e*P **P** 18 00 48.0 +0.1
LPG pmax pmax
comp=Z,23nm,1.3s
LPG La Plagne 94.72 315 *e*P **P** 18 00 48.0 +0.1
comp=Z,23nm,1.3s
LPL La Plagne 94.73 315 *e*P **P** 18 00 48.0 +0.1
comp=Z,55nm,1.5s
LPL La Plagne 94.73 315 *e*P **P** 18 00 48.0 +0.1
LPL pmax pmax
comp=Z,55nm,1.5s
LPL La Plagne 94.73 315 *e*P **P** 18 00 48.0 +0.1
comp=Z,55nm,1.5s
BNI Bardonecchia 94.77 315 PFAKE 18 01 00.0 +12
BNI LR LR
comp=Z,954nm,21.0s
LMR La Mourre 94.91 313 *e*P **P** 18 00 48.7 +0.3
comp=Z,38nm,1.2s
LMR La Mourre 94.91 313 *e*P **P** 18 00 48.7 +0.3
LMR pmax pmax
comp=Z,38nm,1.3s
LMR La Mourre 94.91 313 *e*P **P** 18 00 48.7 +0.3
comp=Z,38nm,1.3s
HAU Haudompre 94.97 318 *e*P **P** 18 00 48.6 -0.1
HAU Haudompre 94.97 318 *e*P **P** 18 00 48.6 -0.1
HAU Haudompre 94.97 318 *e*P **P** 18 00 48.6 -0.1
WLF Walferdange 95.07 319 PFAKE 18 01 00.0 +11
WLF LR LR
comp=Z,1μm,19.0s
CABF La Chapelle 95.17 316 *e*P **P** 18 00 50.1 +0.4
comp=Z,58nm,1.5s
CABF La Chapelle 95.17 316 *e*P **P** 18 00 50.1 +0.4
CABF pmax pmax
comp=Z,58nm,1.5s
CABF La Chapelle 95.17 316 *e*P **P** 18 00 50.1 +0.4
comp=Z,58nm,1.5s
TAM Tamanrasset 95.64 292 PFAKE 18 01 00.0 +7.6
TAM LR LR
comp=Z,1μm,19.0s
SSB Saint Sauveur 96.28 315 PFAKE 18 01 10.0 +15
SSB LR LR
comp=Z,724nm,19.0s
BAIF Baives 96.31 320 *e*P **P** 18 00 55.0 +0.3
comp=Z,20nm,1.1s
BAIF Baives 96.31 320 *e*P **P** 18 00 55.0 +0.3
BAIF pmax pmax
comp=Z,20nm,1.1s
BAIF Baives 96.31 320 *e*P **P** 18 00 55.0 +0.3
comp=Z,20nm,1.1s
LOR Lormes 96.67 317 *e*P **P** 18 00 56.5 +0.1
comp=Z,58nm,1.8s
LOR Lormes 96.67 317 *e*P **P** 18 00 56.5 +0.1
comp=Z,58nm,1.8s
SMF Signal de Mont 96.72 316 *e*P **P** 18 00 56.6 0.0
comp=Z,19nm,1.1s
SMF Signal de Mont 96.72 316 *e*P **P** 18 00 56.6 0.0
SMF pmax pmax
comp=Z,19nm,1.1s
SMF Signal de Mont 96.72 316 *e*P **P** 18 00 56.6 0.0
comp=Z,19nm,1.1s
SSF Saint Saulge 96.92 317 *e*P **P** 18 00 57.8 +0.2
SSF Saint Saulge 96.92 317 *e*P **P** 18 00 57.8 +0.2
SSF Saint Saulge 96.92 317 *e*P **P** 18 00 57.8 +0.2
AVF Avril sur Loir 97.04 317 *e*P **P** 18 00 57.3 -0.8
AVF Avril sur Loir 97.04 317 *e*P **P** 18 00 57.3 -0.8
AVF Avril sur Loir 97.04 317 *e*P **P** 18 00 57.3 -0.8
TORD Torodi Ar. Bea 99.12 283 P **Pdif** 18 01 07.8 -0.3
TORD PKiKP **PKiKP** 18 05 37.2 -1.4
TORD Torodi Ar. Bea 99.12 283 P **Pdif** 18 01 07.8 -0.3
comp=Z,1.1nm,1.0s,baz=95,slow=2.6,SNR=4.7
TORD PKiKP **PKiKP** 18 05 37.2 -1.4
comp=Z,1.5nm,1.2s,baz=88,slow=0.7,SNR=3.9
TORD LR LR 18 46 47.7
comp=Z,979nm,18.3s,baz=65,slow=36
DAG Danmarks Havn 99.43 348 *i* P **Pdif** 18 01 07.4 -0.8
DAG pmax pmax
comp=Z,7.0nm,0.9s
DAG Danmarks Havn 99.43 348 *i* P **Pdif** 18 01 07.4 -0.8
comp=Z,8.3nm,0.9s
ESK Eskdalemuir 100.25 326 PFAKE 18 01 20.0 +7.8
ESK LR LR
comp=Z,864nm,20.0s
KDAK Kodiak Island 101.68 32 PFAKE 18 01 30.0 +11
KDAK LR LR
comp=Z,2μm,21.0s
ILAR Eielson Array 102.37 24 P **Pdif** 18 01 20.1 -1.4
ILAR PP PP 18 05 26.2 -7.6
ILAR PKKPbc **PKKPbc** 18 17 23.2 -2.4
ILAR PKKP **PKKPdf** 18 17 31.6 -1.0
ILAR Eielson Array 102.37 24 P **Pdif** 18 01 20.1 -1.4
comp=Z,0.6nm,0.9s,baz=285,slow=5.4,SNR=6.9
ILAR PP PP 18 05 26.2 -7.6
comp=Z,2.5nm,1.0s,baz=290,slow=8.2,SNR=7.3
ILAR PKKPbc **PKKPbc** 18 17 23.2 -2.4
comp=Z,0.9nm,1.0s,baz=134,slow=2.6,SNR=6.3
ILAR PKKP **PKKPdf** 18 17 31.6 -1.0
comp=Z,0.8nm,0.8s,baz=141,slow=2.2,SNR=6.4
SCO Scoresbysund 103.30 343 *e*P **Pdif** 18 01 26.6 +1.1
SCO Scoresbysund 103.30 343 *i* P **Pdif** 18 01 26.6 +1.1
SHEL Horse Pasture 104.57 253 PFAKE 18 01 40.0 +7.6
SHEL LR LR
comp=Z,2μm,20.0s
EGAK Eagle 104.64 23 PFAKE 18 01 40.0 +8.4
EGAK LR LR
comp=Z,2μm,22.0s
BORG Borgarnes 105.87 338 PFAKE 18 06 00.0
BORG LR LR
comp=Z,1μm,20.0s
RTC Rabat Centre 105.98 304 PFAKE 18 06 00.0
RTC LR LR
comp=Z,1μm,20.0s
TBI Tubuai 107.19 115 *e*LR LR 18 37 05.7
comp=Z,2μm,23.5s
RES Resolute Bay 107.93 4 PKiKP **PKiKP** 18 05 53.6 +0.6
RES Resolute Bay 107.93 4 PKiKP **PKiKP** 18 05 53.6 +0.6
comp=Z,2.1nm,1.0s,baz=311,slow=2.5,SNR=6.1
PPT2 Papeete2 108.11 110 *e*LR LR 18 37 34.7
comp=Z,2μm,24.5s
DLBC Dease Lake 112.38 26 PKiKP **PKiKP** 18 06 04.0 +2.1
DLBC Dease Lake 112.38 26 PKiKP **PKiKP** 18 06 04.0 +2.1
comp=Z,1.5nm,0.9s,baz=304,slow=12,SNR=3.4
WRAK Wrangell Islan 112.40 29 PFAKE 18 06 10.0
WRAK LR LR
comp=Z,1μm,21.0s
YKW3 Yellowknife Ar 115.26 17 *e*PKiKP **PKiKP** 18 06 05.7 -1.6
YKA Yellowknife Ar 115.32 17 PKP **PKPdf** 18 06 06.7 -0.7
YKA PKKPab **PKKPab** 18 16 49.0 +1.3
YKA Yellowknife Ar 115.32 17 PKP **PKPdf** 18 06 06.6 -0.7
comp=Z,3.4nm,0.9s,baz=318,slow=2.1,SNR=29
YKA PKKPab **PKKPab** 18 16 49.0 +1.3
comp=Z,0.3nm,0.9s,baz=150,slow=3.6,SNR=4.3
RKT Rikitea 120.14 119 *e*LR LR 18 43 06.2
comp=Z,2μm,26.2s
NLWA Neilton Lookou 121.72 34 PFAKE 18 06 30.0 +10
NLWA LR LR
comp=Z,2μm,19.0s
EFI East Falkland 122.42 196 PFAKE 18 06 30.0 +8.7
EFI LR LR
comp=Z,2μm,20.0s
SACV Santiago Islan 123.56 286 PFAKE 18 06 40.0 +15
SACV LR LR
comp=Z,892nm,20.0s
HAWA Hanford 124.70 33 PFAKE 18 06 40.0 +14
HAWA LR LR
comp=Z,2μm,19.0s
NEW Newport 124.72 30 PKP **PKPdf** 18 06 26.4 +0.5
NEW *e*PKPdf **PKPdf** 18 06 26.5 +0.5
NEW LR LR
comp=Z,2μm,20.0s
NEW Newport 124.72 30 ⇑PKiKP **PKPdf** 18 06 25.7 -0.2
baz=125
NEW Newport 124.72 30 PKP **PKPdf** 18 06 26.4 +0.5
comp=Z,4.5nm,0.8s,baz=4.1,slow=2.2,SNR=7.5
HUMO Hull Mountain 124.94 38 *e*PKPdf **PKPdf** 18 06 27.8 +1.2
A12A Yaak River Ran 124.97 28 ⇓PKiKP **PKPdf** 18 06 26.3 -0.2
baz=125
B12A Libby 125.33 29 ⇑PKiKP **PKPdf** 18 06 27.0 -0.1
baz=125
KHMM Horse Mountain 125.39 40 *e*PKPdf **PKPdf** 18 06 30.4 +2.8
FFC Flin Flon 125.43 16 *e*PKiKP **PKPdf** 18 06 26.5 -0.5
FFC MLR MLR
comp=Z,2μm,20.0s
FFC Flin Flon 125.43 16 *e*PKPdf **PKPdf** 18 06 26.5 -0.5
FFC LR LR
comp=Z,4μm,20.0s
YBH Yreka Blue Hor 125.58 39 PKP **PKPdf** 18 06 28.9 +1.0
YBH Yreka Blue Hor 125.58 39 PKP **PKPdf** 18 06 28.9 +1.0
comp=Z,2.0nm,0.7s,baz=332,slow=7.2,SNR=4.7
C12B Naegeli Ranch, 125.91 29 ⇑PKiKP **PKPdf** 18 06 28.0 -0.2
baz=126
B13A Whitefish 125.92 28 ⇑PKiKP **PKPdf** 18 06 28.1 -0.2
baz=126
A14A Double T Ranch 125.98 27 ⇓PKiKP **PKPdf** 18 06 27.9 -0.5
baz=126
BSMT Bassoo Peak 126.14 29 *e*PKPdf **PKPdf** 18 06 29.0 +0.1
A15A Johnson Ranch, 126.28 26 ⇓PKiKP **PKPdf** 18 06 28.6 -0.4
baz=126
C13A Hot Springs 126.37 29 ⇓PKiKP **PKPdf** 18 06 28.7 -0.5
baz=126
B14A Marquette Ranc 126.49 27 ⇓PKiKP **PKPdf** 18 06 29.1 -0.4
baz=126
SWMT Swartz Lake 126.76 29 *e*PKPdf **PKPdf** 18 06 29.7 -0.2
A16A West Butte Ran 126.80 26 ⇑PKiKP **PKPdf** 18 06 29.6 -0.4
baz=127
D13A Huson 126.83 29 ⇑PKiKP **PKPdf** 18 06 29.4 -0.7
baz=127
B15A Bradely Ranch, 126.85 27 ⇑PKiKP **PKPdf** 18 06 29.5 -0.6
baz=127
BMO Blue Mountains 126.88 33 PFAKE 18 06 40.0 +10
BMO LR LR
comp=Z,970nm,20.0s
B16A M & M Farms, S 127.16 26 ⇓PKiKP **PKPdf** 18 06 30.1 -0.6
baz=127
SLMT Seeley Lake 127.19 28 *e*PKPdf **PKPdf** 18 06 30.8 0.0
C15A Salmond Ranch, 127.22 27 ⇓PKiKP **PKPdf** 18 06 30.5 -0.4
baz=127
MSO Missoula 127.27 29 *e*PKPdf **PKPdf** 18 06 30.7 -0.3
MSO LR LR
comp=Z,1μm,19.0s
MSO Missoula 127.27 29 ⇓PKiKP **PKPdf** 18 06 30.4 -0.6
baz=127
D14A Greenough 127.30 29 ⇓PKiKP **PKPdf** 18 06 30.3 -0.7
baz=127
SCHQ Schefferville 127.39 351 PKP **PKPdf** 18 06 30.8 0.0
SCHQ *e*PKPdf **PKiKP** 18 06 31.6 +0.3
SCHQ Schefferville 127.39 351 PKP **PKPdf** 18 06 30.8 0.0
comp=Z,10.0nm,0.9s,baz=354,slow=1.7,SNR=7.8
E13A Victor 127.42 30 ⇓PKiKP **PKPdf** 18 06 30.6 -0.6
baz=127
CHMT Chamberlain Mo 127.54 29 *e*PKPdf **PKPdf** 18 06 31.7 +0.1
A18A Metzger Ranch, 127.57 25 ⇑PKiKP **PKPdf** 18 06 31.4 0.0
baz=127
C16A Fuhringer Ranc 127.59 27 ⇓PKiKP **PKPdf** 18 06 31.0 -0.6
baz=127
B17A L&G Farms, Che 127.65 26 ⇑PKiKP **PKPdf** 18 06 31.2 -0.3
baz=128
WVOR Wild Horse Val 127.65 36 PFAKE 18 06 40.0 +8.2
WVOR LR LR
comp=Z,1μm,21.0s
E14A Clinton 127.78 29 ⇓PKiKP **PKPdf** 18 06 31.4 -0.6
baz=128
D15A Lincoln 127.80 28 ⇓PKiKP **PKPdf** 18 06 31.6 -0.4
baz=128
F13A Darby 127.81 30 ⇓PKiKP **PKPdf** 18 06 31.1 -0.9
baz=128
B18A Beardsley Farm 128.01 25 ⇑PKiKP **PKPdf** 18 06 32.1 -0.2
baz=128
A19A Klindworth Far 128.02 24 ⇑PKiKP **PKPdf** 18 06 31.9 -0.3
baz=128
BEKR Beckworth 128.09 40 *e*PKPdf **PKPdf** 18 06 33.6 +0.8
C17A Wharram Farm, 128.16 26 ⇑PKiKP **PKPdf** 18 06 32.2 -0.4
baz=128
E15A Deer Lodge 128.19 29 ⇓PKiKP **PKPdf** 18 06 32.3 -0.5
baz=128
D16A Dana Ranch, Ca 128.26 27 ⇓PKiKP **PKPdf** 18 06 32.8 -0.1
baz=128
EGMT Eagleton 128.30 25 *e*PKPdf **PKPdf** 18 06 32.6 -0.2
EGMT LR LR
comp=Z,1μm,20.0s
EGMT Eagleton 128.30 25 ⇑PKiKP **PKPdf** 18 06 32.6 -0.2
baz=128
B19A Brinkman Farms 128.31 25 ⇑PKiKP **PKPdf** 18 06 32.5 -0.3
baz=128
A20A Cobblestone Ra 128.39 24 ⇓PKiKP **PKPdf** 18 06 32.6 -0.3
baz=128
H12A Diamond D Ranc 128.39 32 ⇓PKiKP **PKPdf** 18 06 33.2 0.0
baz=128
D17A Six Diamond Ra 128.56 27 ⇓PKiKP **PKPdf** 18 06 32.8 -0.6
baz=128

E16A East Helena 128.56 28 ⇑PKiKP PKPdf 18 06 33.3 -0.2
baz=128
MFID Camas Ranch 128.62 33 ePKPdf PKPdf 18 06 34.8 +1.1
MFID Camas Ranch 128.62 33 ⇑PKiKP PKPdf 18 06 33.9 +0.2
baz=128
G14A Jackson 128.63 30 ⇓PKiKP PKPdf 18 06 33.5 -0.2
baz=128
F15A Butte 128.68 29 ⇑PKiKP PKPdf 18 06 33.3 -0.5
baz=128
H13A Challis 128.69 31 ⇓PKiKP PKPdf 18 06 33.4 -0.4
baz=128
LRM Limekiln Ridge 128.71 29 ePKPdf PKPdf 18 06 34.4 +0.5
I12A Atlanta 128.75 33 ⇓PKiKP PKPdf 18 06 33.6 -0.3
baz=129
D18A Linhart Farms, 128.92 26 ⇓PKiKP PKPdf 18 06 33.6 -0.5
baz=129
DLMT Dillon 128.97 30 ePKPdf PKPdf 18 06 35.1 +0.8
E17A Martinsdale 129.00 27 ⇑PKiKP PKPdf 18 06 33.6 -0.8
baz=129
A22A Carney Farms, 129.07 22 ⇓PKiKP PKPdf 18 06 34.3 0.0
baz=129
CMB Columbia Colle 129.09 42 ePKIKP PKPdf 18 06 35.9 +1.3
CMB Columbia Colle 129.09 42 ePKPdf PKPdf 18 06 35.9 +1.3
H14A Leadore 129.11 31 ⇓PKiKP PKPdf 18 06 34.5 -0.2
baz=129
F16A Kennard Place, 129.14 29 ⇑PKiKP PKPdf 18 06 34.2 -0.4
baz=129
G15A Dillon 129.17 30 ⇓PKiKP PKiKP 18 06 35.1 -0.3
baz=129
I13A Wildhorse Cree 129.21 32 ⇓PKiKP PKPdf 18 06 35.2 +0.3
baz=129
BOZ Bozeman (W) 129.24 29 ePKIKP PKPdf 18 06 36.1 +1.3
BOZ MLR MLR
comp=Z,1μm,19.0s
BOZ Bozeman (W) 129.24 29 ePKPdf PKPdf 18 06 36.1 +1.3
BOZ LR LR
comp=Z,2μm,19.0s
C20A Veseth Ranch, 129.28 24 ⇑PKiKP PKPdf 18 06 34.8 +0.1
baz=129
HLID Hailey 129.29 32 ePKPdf PKPdf 18 06 36.2 +1.2
HLID Hailey 129.29 32 ⇑PKiKP PKPdf 18 06 35.2 +0.2
baz=129
E18A Harlowton 129.35 27 ⇑PKiKP PKPdf 18 06 34.9 0.0
baz=129
G16A Moss Hill, Enn 129.46 29 ⇑PKiKP PKPdf 18 06 35.4 +0.1
baz=129
H15A Lima 129.48 30 ⇑PKiKP PKiKP 18 06 35.8 -0.3
baz=129
F17A Fitzpatrick Pl 129.50 28 ⇓PKiKP PKiKP 18 06 35.7 -0.3
baz=129
J13A Cove Ranch, Pi 129.53 32 ⇑PKiKP PKiKP 18 06 35.9 -0.3
baz=129
BMN Battle Mountai 129.71 37 PFAKE 18 06 50.0 +14
BMN LR LR
comp=Z,817nm,20.0s
A24A Westby 129.83 21 ⇑PKiKP PKiKP 18 06 36.2 -0.3
baz=130
B23A Brockton 129.85 22 ⇑PKiKP PKiKP 18 06 36.6 0.0
baz=130
QLMT Earthquake Lak 129.93 29 ePKPdf PKPdf 18 06 37.9 +1.6
J14A Carey 129.93 32 ⇑PKiKP PKiKP 18 06 36.8 -0.2
baz=130
C22A Vida 130.11 23 ⇑PKiKP PKPdf 18 06 36.6 +0.3
baz=130
H16A Russell Place, 130.11 29 ⇑PKiKP PKiKP 18 06 37.4 0.0
baz=130
DGMT Dagmar 130.14 21 ePKPdf PKPdf 18 06 38.3 +2.0
DGMT LR LR
comp=Z,2μm,19.0s
DGMT Dagmar 130.14 21 ⇑PKiKP PKPdf 18 06 36.2 0.0
baz=130
D21A La Casta Ranch 130.21 24 ⇑PKiKP PKPdf 18 06 36.8 +0.3
baz=130
NVAR Mina Array Bea 130.23 40 PKP PKPdf 18 06 38.9 +1.9
NVAR SKPbc SKPab 18 09 58.9 +0.1
NVAR Mina Array Bea 130.23 40 PKP PKPdf 18 06 38.9 +1.9
comp=Z,5.3nm,0.8s,baz=275,slow=2.9,SNR=11
NVAR SKPbc SKPab 18 09 58.9 +0.1
comp=Z,2.9nm,0.8s,baz=269,slow=4.3,SNR=4.7
YMR Madison River 130.27 29 ePKPdf PKPdf 18 06 39.0 +2.1
J15A Blackfoot 130.45 31 ⇑PKiKP PKPdf 18 06 37.4 +0.3
baz=130
D22A Cohagen 130.48 24 ⇑PKiKP PKiKP 18 06 37.7 -0.1
baz=130
LKWY Lake 130.62 29 ePKIKP PKPdf 18 06 41.1 +3.5
LKWY MLR MLR
comp=Z,3μm,20.0s
LKWY Lake 130.62 29 ePKPdf PKPdf 18 06 41.1 +3.5
LKWY LR LR
comp=Z,3μm,20.0s
RLMT Red Lodge 130.74 27 PFAKE 18 06 50.0 +12
RLMT LR LR
comp=Z,2μm,20.0s
ULM Lac du Bonnet 131.06 14 ePKPdf PKPdf 18 06 38.5 +0.7
ULM PKP PKPdf 18 06 38.9 +1.0
ULM Lac du Bonnet 131.06 14 PKP PKPdf 18 06 38.9 +1.0
comp=Z,12nm,0.8s,baz=343,slow=2.6,SNR=14
TPH Tonopah 131.12 40 PFAKE 18 06 50.0 +11
TPH LR LR
comp=Z,1μm,21.0s
TPAW Teton Pass 131.14 30 ePKPdf PKPdf 18 06 42.0 +3.3
H19A Powell 131.21 28 ⇑PKiKP PKiKP 18 06 39.2 -0.3
baz=131
D24A Glendive 131.23 22 ⇑PKiKP PKPdf 18 06 38.6 +0.2
baz=131
SNOW Snow King Moun 131.26 30 ePKPdf PKPdf 18 06 39.1 +0.2
K16A Soda Springs 131.29 31 ⇓PKiKP PKPdf 18 06 39.3 +0.4
baz=131
HVU Hansel Valley 131.39 33 ePKIKP PKPdf 18 06 40.0 +1.0
HVU Hansel Valley 131.39 33 ePKPdf PKPdf 18 06 40.0 +1.0
AHID Auburn Hatcher 131.59 31 PFAKE 18 06 50.0 +11
AHID LR LR
comp=Z,2μm,19.0s
ISA Isabella 131.66 43 ⇓PKiKP PKiKP 18 06 40.4 -0.2
baz=132
E24A Baker 131.69 23 ⇓PKiKP PKPdf 18 06 39.8 +0.4
baz=132
R11A Troy Canyon, C 131.99 38 ⇓PKiKP PKiKP 18 06 40.9 -0.4
baz=132
HWUT Hardware Ranch 132.16 32 ePKPdf PKPdf 18 06 39.5 -1.0
HWUT ePP PP 18 09 00.3 -1.5
HWUT LR LR
comp=Z,1μm,21.0s
L17A Cokeville 132.18 31 ⇓PKiKP PKPdf 18 06 40.7 +0.1
baz=132
MDND Maddock 132.22 18 ⇑PKiKP PKPdf 18 06 40.5 +0.3
baz=132
BW06 Boulder Array 132.36 30 PFAKE 18 06 50.0 +9.1
BW06 LR LR
comp=Z,2μm,19.0s
PDAR Pinedale Array 132.36 30 PKP PKPdf 18 06 44.1 +3.2
PDAR Pinedale Array 132.36 30 PKP PKPdf 18 06 44.1 +3.2
comp=Z,1.7nm,0.8s,baz=34,slow=3.7,SNR=3.9
DUG Dugway 132.45 35 PFAKE 18 06 50.0 +8.9
DUG LR LR
comp=Z,1μm,20.0s
DUG Dugway 132.45 35 ⇓PKiKP PKPdf 18 06 41.5 +0.4
baz=132
J20A Shoshoni 132.64 28 ⇓PKiKP PKPdf 18 06 41.8 +0.4
baz=132
K19A Absolon Red Bu 132.67 29 ⇑PKiKP PKPdf 18 06 41.2 -0.2
baz=132
AGMN Agassiz Nation 132.87 15 PFAKE 18 06 50.0 +8.6
AGMN LR LR
comp=Z,1μm,20.0s
JLU Jordanelle 132.93 33 ePKPdf PKPdf 18 06 44.4 +2.3
GSC Goldstone 133.00 42 ePKIKP PKPdf 18 06 43.7 +1.5
GSC Goldstone 133.00 42 ePKPdf PKPdf 18 06 43.7 +1.5
GSC Goldstone 133.00 42 ⇑PKiKP PKPdf 18 06 42.6 +0.4
baz=133
DAU Daniels Canyon 133.17 33 ePKIKP PKPdf 18 06 44.9 +2.3
DAU Daniels Canyon 133.17 33 ePKPdf PKPdf 18 06 44.9 +2.3
J22A Midwest 133.33 27 ⇓PKiKP PKPdf 18 06 42.4 -0.2
baz=133
MVU Marysvale 133.92 36 PFAKE 18 06 50.0 +6.0
MVU LR LR
comp=Z,1μm,20.0s
N19A John Jarvie Ra 133.93 31 ⇓PKiKP PKPdf 18 06 43.7 -0.2
baz=134
TMUT Trail Mountain 133.96 34 ePKPdf PKPdf 18 06 46.7 +2.6
M20A Sweetwater, Wa 133.99 30 ⇑PKiKP PKPdf 18 06 44.3 +0.3
baz=134
L21A Rawlins 134.04 29 ⇓PKiKP PKPdf 18 06 44.3 +0.2
baz=134
GMRC Granite Mounta 134.06 42 ⇓PKiKP PKPdf 18 06 44.6 +0.4
baz=134

P17A Butcher Ranch, 134.10 34 ⇑PKiKP PKPdf 18 06 44.6 +0.4
baz=134
EYMN Ely 134.18 11 ePKPdf PKPdf 18 06 44.1 +0.2
EYMN LR LR
comp=Z,2μm,20.0s
PFO Pinyon Flat Ob 134.18 44 PFAKE 18 06 50.0 +5.5
PFO LR LR
comp=Z,1μm,19.0s
PFO Pinyon Flat Ob 134.18 44 ⇓PKiKP PKiKP 18 06 45.4 -0.5
baz=134
M21A Separation Pea 134.31 29 ⇓PKiKP PKPdf 18 06 44.2 -0.5
baz=134
N20A Spence Gulch, 134.44 31 ⇑PKiKP PKPdf 18 06 45.1 +0.1
baz=134
MONP Monument Peak 134.60 45 ⇑PKiKP PKiKP 18 06 46.1 -0.7
baz=134
N21A Black Mountain 134.87 30 ⇑PKiKP PKPdf 18 06 45.7 0.0
baz=135
P19A Cripple Cowboy 134.95 32 ⇑PKiKP PKPdf 18 06 46.3 +0.4
baz=135
O20A White River Ci 134.97 31 ⇓PKiKP PKPdf 18 06 46.1 +0.2
baz=135
Q19A Hogan Spring (135.28 33 ⇓PKiKP PKPdf 18 06 46.7 +0.3
baz=135
BRSD Miller 135.45 20 ⇓PKiKP PKPdf 18 06 47.0 +0.6
baz=135
PHWY Pilot Hill 135.46 28 ePKPdf PKPdf 18 06 47.8 +0.9
N23A Red Feather La 135.54 29 ⇓PKiKP PKPdf 18 06 47.2 +0.2
baz=135
PLCA Paso Flores 135.59 190 PKP PKPdf 18 06 51.0 +4.1
PLCA Paso Flores 135.59 190 PKP PKPdf 18 06 51.0 +4.1
comp=Z,2.1nm,1.0s,baz=129,slow=5.2,SNR=3.3
M24A Cheyenne 135.62 27 ⇓PKiKP PKPdf 18 06 47.2 +0.2
baz=135
GLA Glamis 135.62 44 ⇓PKiKP PKPdf 18 06 47.8 +0.7
baz=136
COWI Conover 136.38 10 PFAKE 18 07 00.0 +12
COWI LR LR
comp=Z,1μm,20.0s
WUAZ Wupatki 136.39 38 PFAKE 18 07 00.0 +11
WUAZ LR LR
comp=Z,1μm,21.0s
ISCO Idaho Springs 136.55 29 ePKIKP PKPdf 18 06 49.3 +0.3
ISCO MLR MLR
comp=Z,1μm,21.0s
ISCO Idaho Springs 136.55 29 ePKPdf PKPdf 18 06 49.3 +0.3
ISCO LR LR
comp=Z,1μm,21.0s
ISCO Idaho Springs 136.55 29 ⇑PKiKP PKPdf 18 06 48.8 -0.2
baz=136
Q22A Crested Butte, 136.61 31 ⇓PKiKP PKPdf 18 06 49.6 +0.5
baz=136
R21A Cimarron 136.63 32 ⇑PKiKP PKPdf 18 06 49.6 +0.5
baz=136
ECSD EROS Data Cent 136.84 18 ePKPdf PKPdf 18 06 48.2 -0.8
ECSD LR LR
comp=Z,2μm,19.0s
MVCO Mesa Verde 136.95 34 PFAKE 18 07 00.0 +10
MVCO LR LR
comp=Z,1μm,19.0s
S21A Coal Bank Pass 137.02 33 ⇑PKiKP PKPdf 18 06 50.5 +0.6
baz=137
R22A Saguache, Gunn 137.16 32 ⇑PKiKP PKPdf 18 06 50.4 +0.3
baz=137
OGNE Ogallala 137.27 25 PFAKE 18 07 00.0 +10
OGNE LR LR
comp=Z,2μm,20.0s
P25A Willow Gulch B 137.47 28 ⇓PKiKP PKPdf 18 06 50.7 +0.2
baz=137
S22A 4UR Ranch, Cre 137.47 32 ⇓PKiKP PKPdf 18 06 51.0 +0.2
baz=137
W18A Petrified Fore 137.66 38 ⇓PKiKP PKPdf 18 06 51.8 +0.8
baz=138
R23A Moffat 137.67 31 ⇑PKiKP PKPdf 18 06 51.6 +0.6
baz=138
P26A Davis Ranch, A 137.82 28 ⇓PKiKP PKPdf 18 06 51.3 +0.2
baz=138
Q25A Bedland, Calha 137.90 29 ⇑PKiKP PKPdf 18 06 51.4 +0.1
baz=138
V20A Brimhall 137.95 36 ⇑PKiKP PKPdf 18 06 52.0 +0.5
baz=138
T22A Edith 137.97 33 ⇓PKiKP PKPdf 18 06 51.9 +0.3
baz=138
U21A Nageezi 137.97 34 ⇓PKiKP PKPdf 18 06 52.1 +0.5
baz=138
R24A Sanders Place, 138.01 30 ⇓PKiKP PKPdf 18 06 52.0 +0.4
baz=138
W20A Ramah 138.40 37 ⇑PKiKP PKPdf 18 06 53.0 +0.6
baz=138
S24A Houchin Ranch, 138.40 31 ⇑PKiKP PKPdf 18 06 52.6 +0.2
baz=138
LONY Lake Ozonia 138.41 355 PFAKE 18 07 00.0 +8.1
LONY LR LR
comp=Z,2μm,22.0s
T23A Casias Ranch, 138.42 32 ⇓PKiKP PKPdf 18 06 52.8 +0.3
baz=138
LBNH Lisbon 138.47 352 PFAKE 18 07 00.0 +8.0
LBNH LR LR
comp=Z,2μm,20.0s
R25A Fountain Ranch 138.48 30 ⇑PKiKP PKPdf 18 06 52.3 -0.1
baz=138
SADO Sadowa 138.50 359 PKP PKPdf 18 06 51.4 -0.6
SADO Sadowa 138.50 359 PKP PKPdf 18 06 51.4 -0.6
comp=Z,8.7nm,0.9s,baz=277,slow=4.6,SNR=5.2
R26A Arlington 138.77 29 ⇓PKiKP PKPdf 18 06 52.9 0.0
baz=139
S25A Robert Cordova 138.78 30 ⇑PKiKP PKPdf 18 06 53.3 +0.3
baz=139
SPB Sao Paulo 138.90 228 PFAKE 18 07 00.0 +6.7
SPB LR LR
comp=Z,1μm,21.0s
W21A San Fidel 138.91 36 ⇓PKiKP PKPdf 18 06 53.7 +0.4
baz=139
T24A Torres, Weston 138.92 31 ⇑PKiKP PKPdf 18 06 54.0 +0.6
baz=139
NCB Newcomb 139.02 354 PFAKE 18 07 00.0 +7.0
NCB LR LR
comp=Z,1μm,21.0s
T25A Trinidad 139.20 31 ⇑PKiKP PKPdf 18 06 54.7 +0.9
baz=139
X21A Alamocita Cree 139.29 37 ⇑PKiKP PKPdf 18 06 54.9 +0.9
baz=139
S26A Kim 139.29 29 ⇑PKiKP PKPdf 18 06 54.8 +1.0
baz=139
Y20A Horse Springs, 139.30 38 ⇓PKiKP PKPdf 18 06 54.3 +0.2
baz=139
SCIA State Center 139.50 16 PFAKE 18 07 00.0 +6.1
SCIA LR LR
comp=Z,2μm,20.0s
T26A Comanche Natio 139.58 30 ⇑PKiKP PKPdf 18 06 55.2 +0.7
baz=139
Y21A Point of Rocks 139.66 37 ⇓PKiKP PKPdf 18 06 55.6 +0.8
baz=140
Z20A Nine Sixteen R 139.70 39 ⇓PKiKP PKPdf 18 06 55.8 +1.0
baz=140
ANMO Albuquerque 139.72 35 ePKPdf PKPpre 18 06 49.1
ANMO PKP PKPdf 18 06 55.0 +0.2
ANMO SKPbc SKPbc 18 10 29.9 +0.4
ANMO SKPab SKPab 18 10 39.9 -0.3
ANMO LR LR
comp=Z,1μm,21.0s
ANMO Albuquerque 139.72 35 PKP PKPdf 18 06 55.0 +0.2
comp=Z,7.2nm,0.9s,baz=258,slow=1.0,SNR=5.0
ANMO SKPbc SKPbc 18 10 29.9 +0.4
comp=Z,5.0nm,1.2s,baz=353,slow=3.6,SNR=3.8
ANMO SKPab SKPab 18 10 39.9 -0.3
comp=Z,1.4nm,0.8s,baz=278,slow=3.2,SNR=4.0
W23A Werner Place, 139.74 34 ⇑PKiKP PKPdf 18 06 55.4 +0.5
baz=140
V24A Rampart Ranch, 139.81 33 ⇑PKiKP PKPdf 18 06 56.0 +1.0
baz=140
120A U Bar Ranch, L 140.05 40 ⇓PKiKP PKPdf 18 06 56.3 +0.9
baz=140
V25A Rancho No Teng 140.08 32 ⇓PKiKP PKPdf 18 06 56.3 +0.9
baz=140
W24A X Bar L Ranch, 140.12 34 ⇓PKiKP PKPdf 18 06 56.5 +1.0
baz=140
Y22A Socorro 140.13 37 ⇑PKiKP PKPdf 18 06 56.6 +1.0
baz=140
BNM Barren Site 140.18 36 ePKPpre PKPpre 18 06 51.1
220A Playas Peak, P 140.53 40 ⇓PKiKP PKPdf 18 06 57.1 +0.8
baz=140
V26A Tequesquite Ra 140.55 32 ⇑PKiKP PKPdf 18 06 56.9 +0.7
baz=140
W25A X Bar L Ranch, 140.63 33 ⇓PKiKP PKPdf 18 06 57.2 +0.8
baz=140
Y23A Lovelace Mesa, 140.67 36 ⇑PKiKP PKPdf 18 06 57.7 +1.2
baz=140

AAM Ann Arbor 140.81 5 PFAKE 18 07 10.0 +14
AAM LR LR
comp=Z,2μm,19.0s
320A Kipp Ranch, An 140.90 41 ⇓PKiKP PKPdf 18 06 58.0 +1.0
baz=141
BINY Binghamton 140.94 356 ePKPdf PKPdf 18 06 57.3 +0.8
BINY LR LR
comp=Z,2μm,21.0s
KSU1 Kansas State U 140.99 21 PFAKE 18 07 10.0 +13
KSU1 LR LR
comp=Z,1μm,20.0s
Y24A Capitan 141.03 35 ⇓PKiKP PKPdf 18 06 57.7 +0.5
baz=141
W26A Owens Ranch, T 141.10 32 ⇓PKiKP PKPdf 18 06 57.7 +0.5
baz=141
ERPA Erie 141.16 0 PFAKE 18 07 10.0 +13
ERPA LR LR
comp=Z,2μm,20.0s
Y25A Mesa, Roswell 141.46 34 ⇓PKiKP PKPdf 18 06 58.2 +0.3
baz=141
X26A CR and CF Fran 141.48 33 ⇓PKiKP PKPdf 18 06 58.4 +0.5
baz=141
W27A Bowe Ranch, En 141.49 32 ⇓PKiKP PKPdf 18 06 58.7 +0.8
baz=141
HDIL Hopedale 141.71 12 PFAKE 18 07 10.0 +12
HDIL LR LR
comp=Z,2μm,19.0s
124A Stringfield Ra 141.90 36 ⇓PKiKP PKPdf 18 06 59.6 +0.8
baz=142
AMTX Amarillo 142.34 30 PFAKE 18 07 10.0 +11
AMTX LR LR
comp=Z,1μm,19.0s
GDL2 Guadalupe Moun 142.90 36 ePKPdf PKPdf 18 06 59.2 -1.3
GDL2 eSKPbc SKiKP 18 10 51.7 +13
ACSO Alum Creek Sta 142.92 4 ePKPdf PKPdf 18 06 58.5 -1.7
ACSO LR LR
comp=Z,2μm,22.0s
BDFB Brasilia 143.57 238 PKP PKPdf 18 07 02.2 +0.2
BDFB Brasilia 143.57 238 PKP PKPdf 18 07 02.2 +0.2
comp=Z,2.8nm,0.5s,baz=213,slow=6.4,SNR=3.1
CPUP Villa Florida 143.63 215 PKP PKPbc 18 06 59.8 +0.7
CPUP Villa Florida 143.63 215 PKP PKPbc 18 06 59.8 +0.7
comp=Z,5.0nm,0.9s,baz=90,slow=1.2,SNR=8.2
CFAA Coronel Fontan 143.81 197 PKP PKPbc 18 06 59.5 0.0
CFAA Coronel Fontan 143.81 197 PKP PKPbc 18 06 59.5 0.0
comp=Z,0.4nm,0.7s,baz=301,slow=5.2,SNR=6.8
WMOK Wichita Mounta 143.85 27 ePKIKP PKPab 18 06 58.6 -0.3
WMOK MLR MLR
comp=Z,2μm,21.0s
WMOK Wichita Mounta 143.85 27 ePKPpre PKPab 18 06 58.6 -0.3
WMOK LR LR
comp=Z,2μm,21.0s
FVM French Village 143.91 15 ePKIKP PKPab 18 06 59.1 +0.1
FVM French Village 143.91 15 ePKPpre PKPab 18 06 59.1 0.0
328A Wristen Ranch, 144.40 35 ⇓PKiKP PKPbc 18 07 02.0 +0.6
baz=144
427A Hayter Ranch, 144.44 37 ⇑PKiKP PKPbc 18 07 01.9 +0.3
baz=144
130A Snyder 144.50 32 ⇓PKiKP PKPbc 18 07 01.7 0.0
baz=144
WCI Wyandotte Cave 144.52 9 ePKIKP PKPab 18 07 01.0 -0.3
WCI Wyandotte Cave 144.52 9 ePKPpre PKPab 18 07 00.9 -0.3
229A Bryant Ranch, 144.53 34 ⇑PKiKP PKPbc 18 07 02.3 +0.5
baz=144
USIN University of 144.54 11 ePKPpre PKPab 18 07 00.4 -1.0
526A Mary Lane Ranc 144.58 38 ⇑PKiKP PKPdf 18 07 03.0 -0.5
baz=144
Z32A Haskell 144.69 29 ⇓PKiKP PKPab 18 07 02.1 -0.1
baz=144
131A Roby 144.74 31 ⇓PKiKP PKPbc 18 07 02.8 +0.4
baz=145
329A Wagon Wheel Ra 144.79 34 ⇑PKiKP PKPbc 18 07 03.1 +0.4
baz=145
626A Big Bend Ranch 144.91 39 ⇑PKiKP PKPdf 18 07 04.1 +0.1
baz=145
428A Kincaid Ranch, 144.95 36 ⇓PKiKP PKPdf 18 07 04.5 +0.4
baz=145
230A Sterling City 144.97 33 ⇓PKiKP PKPdf 18 07 03.7 -0.3
baz=145
CBN Corbin 145.00 357 PFAKE 18 07 10.0 +6.2
CBN LR LR
comp=Z,2μm,22.0s
ABTX Abilene, Hawle 145.16 30 ⇓PKiKP PKPab 18 07 04.0 +0.1
baz=145
528A Cox Ranch, San 145.30 37 ⇑PKiKP PKPdf 18 07 05.3 +0.5
baz=145
330A Mertzon 145.30 33 ⇓PKiKP PKPbc 18 07 04.4 0.0
baz=145
PARMO Parma 145.33 14 ePKPdf PKPbc 18 07 03.9 -0.2
TXAR Lajitas Array 145.35 39 PKPbc PKPdf 18 07 06.3 +1.5
TXAR SKPbc SKiKP 18 10 44.6 +0.6
TXAR Lajitas Array 145.35 39 PKPbc PKPdf 18 07 06.3 +1.5
comp=Z,130nm,0.9s,baz=281,slow=2.0,SNR=442
TXAR SKPbc SKiKP 18 10 44.6 +0.6
comp=Z,3.1nm,1.0s,baz=316,slow=5.2,SNR=4.1
231A Bronte 145.36 32 ⇑PKiKP PKPbc 18 07 04.4 0.0
baz=145
627A Terlingua Ranc 145.44 38 ⇑PKiKP PKPab 18 07 05.7 +0.6
baz=145
429A Davenport Ranc 145.49 35 ⇓PKiKP PKPab 18 07 05.3 +0.1
baz=145
529A Stev Forest Ra 145.67 36 ⇑PKiKP PKPab 18 07 06.2 +0.3
baz=146
628A Black Gap, Mar 145.73 38 ⇓PKiKP PKPab 18 07 06.5 +0.4
baz=146
430A Baggett Ranch, 145.74 34 ⇑PKiKP PKPbc 18 07 05.9 +0.1
baz=146
232A Coleman 145.74 31 ⇓PKiKP PKPab 18 07 06.0 -0.1
baz=146
331A San Angelo 145.79 33 ⇑PKiKP PKPab 18 07 06.2 0.0
baz=146
GLAT Glass 145.82 14 ePKPdf PKPbc 18 07 05.6 -0.1
UTMT University of 145.85 13 ePKPdf PKPdf 18 07 02.7 -2.6
TLL Tololo Astrono 145.85 194 i P PKPab 18 07 06.7 0.0
GNAR Gosnell 145.93 15 ePKPdf PKPab 18 07 06.7 +0.2
BLA Blacksburg 146.05 1 PFAKE 18 07 20.0 +13
BLA LR LR
comp=Z,2μm,20.0s
332A Millersview 146.09 32 ⇓PKiKP PKPab 18 07 07.3 -0.1
baz=146
MIAR Mount Ida 146.14 21 ePKP2 PKPbc 18 07 06.9 +0.1
MIAR MLR MLR
comp=Z,2μm,19.0s
MIAR Mount Ida 146.14 21 ePKPdf PKPbc 18 07 06.9 +0.1
MIAR LR LR
comp=Z,2μm,19.0s
HALT Halls 146.15 14 ePKPdf PKPbc 18 07 06.7 0.0
530A J-C Ranch, Com 146.16 35 ⇑PKiKP PKPab 18 07 07.8 +0.1
baz=146
431A Sonora 146.17 34 ⇓PKiKP PKPbc 18 07 07.4 +0.3
baz=146
WVT Waverly 146.28 12 ePKP2 PKPbc 18 07 06.6 -0.5
WVT Waverly 146.28 12 ePKPdf PKPbc 18 07 06.6 -0.5
UALR University of 146.35 19 ePKPdf PKPbc 18 07 07.1 -0.3
432A Menard 146.46 32 ⇑PKiKP PKPbc 18 07 08.0 0.0
baz=146
TZTN Tazewell 146.53 6 ePKPdf PKPbc 18 07 07.5 -0.4
531A Rocksprings 146.60 34 ⇑PKiKP PKPbc 18 07 08.6 +0.3
baz=146
WHTX Lake Whitney 146.74 28 ⇑PKiKP PKPbc 18 07 08.4 -0.2
baz=147
JCT Junction City 146.77 33 ePKP2 PKPdf 18 07 07.5 +0.4
JCT MLR MLR
comp=Z,2μm,19.0s
JCT Junction City 146.77 33 ePKPdf PKPdf 18 07 07.5 +0.4
JCT LR LR
comp=Z,2μm,19.0s
JCT Junction City 146.77 33 ⇓PKiKP PKPbc 18 07 09.2 +0.4
baz=147
LCO Las Campanas 146.93 194 ePKPdf PKPbc 18 07 08.8 -0.8
532A Rocksprings 146.98 33 ⇑PKiKP PKPbc 18 07 09.6 +0.1
baz=147
631A Perdido Creek 147.15 35 ⇑PKiKP PKPbc 18 07 10.0 +0.1
baz=147
TKL Tuckaleechee C 147.38 6 PKPbc PKPbc 18 07 09.8 -0.5
TKL ePKPdf PKPdf 18 07 10.0 +2.1
TKL Tuckaleechee C 147.38 6 PKPbc PKPbc 18 07 09.8 -0.5
comp=Z,43nm,1.0s,baz=178,slow=0.7,SNR=22
OXF Oxford 147.46 15 ePKP2 PKPbc 18 07 10.1 -0.4
OXF MLR MLR
comp=Z,1μm,19.0s
OXF Oxford 147.46 15 ePKPbc PKPbc 18 07 10.1 -0.4
OXF LR LR
comp=Z,1μm,19.0s
CPCT Cooper Cave 147.50 7 ePKPdf PKPdf 18 07 09.1 +1.0

SWET	**Sewanee**	**147.52**	**10**	*e*PKPdf	**PKPbc**	**18 07 10.3**	**-0.5**
632A	**Uvalde**	**147.53**	**34**	⇑PKiKP	**PKPbc**	**18 07 11.3**	**+0.3**
	baz=147						
BBSR	**BB Station**	**147.67**	**336**	PFAKE		18 07 20.0	+6.6
BBSR				LR	LR		
	comp=Z,1μm,20.0s						
CNNC	**Cliffs of the**	**147.98**	**357**	PFAKE		18 07 20.0	+5.5
CNNC				LR	LR		
	comp=Z,1μm,21.0s						
732A	**Laxson Ranch,**	**148.01**	**35**	⇑PKiKP	**PKPbc**	**18 07 12.5**	**+0.2**
	baz=148						
KMSC	**Kings Mountain**	**148.09**	**3**	⇓PKiKP	**PKPbc**	**18 07 11.6**	**-0.7**
	baz=148						
JSC	**Jenkinsville**	**148.94**	**3**	*e*PKP2	**PKPbc**	**18 07 14.2**	**-0.3**
JSC	**Jenkinsville**	**148.94**	**3**	*e*PKPbc	**PKPbc**	**18 07 14.2**	**-0.3**
HKT	**Hockley**	**149.21**	**28**	*e*PKiKP	**PKPdf**	**18 07 11.9**	**+0.9**
HKT	**Hockley**	**149.21**	**28**	*e*PKPdf	**PKPdf**	**18 07 11.9**	**+0.9**
VBMS	**Vicksburg**	**149.29**	**18**	*e*PKPbc	**PKPbc**	**18 07 15.8**	**+0.4**
VBMS				LR	LR		
	comp=Z,1μm,20.0s						
LRAL	**Lakeview Retre**	**149.44**	**12**	*e*PKPdf	**PKPdf**	**18 07 13.4**	**+2.0**
LRAL				LR	LR		
	comp=Z,1μm,19.0s						
GOGA	**Godfrey**	**149.64**	**6**	*e*PKHKP	**PKPdf**	**18 07 13.0**	**+1.4**
GOGA	**Godfrey**	**149.64**	**6**	*e*PKPdf	**PKPdf**	**18 07 13.0**	**+1.4**
NHSC	**New Hope**	**150.15**	**1**	*e*PKPbc	**PKPbc**	**18 07 16.8**	**-0.7**
NHSC				LR	LR		
	comp=Z,2μm,20.0s						
BRAL	**Brewton**	**151.38**	**13**	PFAKE		18 07 20.0	-0.4
BRAL				LR	LR		
	comp=Z,2μm,22.0s						
SIV	**San Ignacio**	**153.59**	**224**	PKP	**PKPdf**	**18 07 17.7**	**-0.4**
SIV				PKPbc	**PKiKP**	**18 07 26.1**	**+0.1**
SIV	**San Ignacio**	**153.59**	**224**	PKP	**PKPdf**	**18 07 17.7**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=225,slow=0.8,SNR=6.4						
SIV				PKPbc	**PKiKP**	**18 07 26.1**	**+0.1**
	comp=Z,5.6nm,0.9s,baz=154,slow=3.1,SNR=12						
ANWB	**Willy Bob**	**157.27**	**311**	PFAKE		18 07 30.0	+7.0
ANWB				LR	LR		
	comp=Z,967nm,21.0s						
LPAZ	**La Paz**	**157.62**	**210**	PKP	**PKPdf**	**18 07 25.0**	**+0.8**
LPAZ	**La Paz**	**157.62**	**210**	PKP	**PKPdf**	**18 07 25.0**	**+0.8**
	comp=Z,2.1nm,0.7s,baz=62,slow=20,SNR=4.9						
BBGH	**Gun Hill**	**157.77**	**298**	PFAKE		18 07 30.0	+6.3
BBGH				LR	LR		
	comp=Z,1μm,19.0s						
FDF	**Fort de France**	**158.40**	**303**	PFAKE		18 07 40.0	+15
FDF				LR	LR		
	comp=Z,886nm,19.0s						
CMIG	**Matias Romero**	**159.58**	**46**	PKP	**PKPdf**	**18 07 25.8**	**0.0**
CMIG	**Matias Romero**	**159.58**	**46**	PKP	**PKPdf**	**18 07 25.8**	**0.0**
	comp=Z,5.0nm,0.9s,baz=320,slow=2.5,SNR=9.8						
SAML	**Samuel**	**159.68**	**234**	*e*PKPdf	**PKPdf**	**18 07 26.0**	**0.0**
GRTK	**Grand Turk**	**159.91**	**336**	PFAKE		18 07 40.0	+14
GRTK				LR	LR		
	comp=Z,909nm,20.0s						
GRGR	**Grenville**	**160.05**	**298**	PFAKE		18 07 40.0	+14
GRGR				LR	LR		
	comp=Z,836nm,20.0s						
SDDR	**Presa de Saban**	**162.22**	**333**	PFAKE		18 07 40.0	+11
SDDR				LR	LR		
	comp=Z,1μm,20.0s						
GTBY	**Guantanamo Bay**	**162.70**	**345**	PFAKE		18 07 40.0	+11
GTBY				LR	LR		
	comp=Z,1μm,21.0s						
NNA	**Nana**	**164.75**	**191**	PFAKE		18 07 40.0	+8.8
NNA				LR	LR		
	comp=Z,1μm,20.0s						
MTDJ	**Mount Denham**	**164.83**	**352**	PFAKE		18 07 40.0	+8.8
MTDJ				LR	LR		
	comp=Z,879nm,21.0s						
TGUH	**Tegucigalpa,Un**	**166.77**	**34**	PFAKE		18 07 40.0	+7.3
TGUH				LR	LR		
	comp=Z,897nm,21.0s						
JTS	**JuntasAbangare**	**171.13**	**36**	PFAKE		18 07 50.0	+14
JTS				LR	LR		
	comp=Z,1μm,22.0s						
BCIP	**Isla Barro Col**	**173.97**	**2**	PFAKE		18 07 50.0	+13
BCIP				LR	LR		
	comp=Z,1μm,21.0s						
OTAV	**Otavalo**	**176.91**	**203**	*e*PKPdf	**PKPdf**	**18 07 38.3**	**+0.1**
OTAV				LR	LR		
	comp=Z,1μm,20.0s						

KRSC 15 17:48:27.4±1.0, **51.87N**×**161.79E, h32**km±31km, **ML3.6,**
Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.64**	**319**	S	Sb	17 49 15.7	-1.5
RUS	**Russkaya**	**2.10**	**287**	P	Pb	17 49 02.8	-1.9
RUS				S	Sb	17 49 28.3	-2.0
PET	**Petropavlovsk**	**2.24**	**302**	S	Sn	17 49 30.1	+1.4
UGLR	**Uglovaya**	**2.25**	**308**	P	Pb	17 49 05.4	-2.2
SDLR	**Sedlovina**	**2.27**	**310**	P	Pn	17 49 04.8	+2.0
MTVR	**Mutnovka**	**2.30**	**287**	P	Pn	17 49 05.4	+2.1
MTVR				S	Sn	17 49 33.4	+2.7
MKZ	**Mys Kozlova**	**2.69**	**359**	P	Pn	17 49 10.2	+1.8
MKZ				S	Sn	17 49 42.0	+2.2
SKR	**Severo-Kuril's**	**3.75**	**254**	S	Sn	17 50 07.1	+1.0
KMNR	**Kamenistaya**	**4.00**	**347**	P	Pn	17 49 30.5	+3.9

CSEM ***15*** *17:59:08.1±0.3,37.21N×31.82E, h10km, Error ellipse: s-maj=6.6km s-min=5.1km az=177.0*
ISK ***15*** *17:59:08.1,37.24N×31.80E, h11km, MD2.9*
ISC 15 17:59:06.1±1.4, **37.11N**±0.04×**31.84E**±0.04, **h3**km±12km,
n21, σ1**21/31, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONT	**Konya--Tatoy**	**0.94**	**26**	*e*Pg	**Pb**	**17 59 24.6**	**-0.4**
KONT				*e*SG	**Sb**	**17 59 37.3**	**-0.6**
KONT	**Konya--Tatoy**	**0.94**	**26**	*e*Pg	**Pb**	**17 59 24.7**	**-0.4**
KONT				*e*Sg	**Sb**	**17 59 37.3**	**-0.6**
GAZI	**Gazipasa**	**0.95**	**156**	*i* P	**Pg**	**17 59 22.8**	**-1.6**
ANTB	**Antalya**	**0.97**	**258**	*e*PG	**Pn**	**17 59 27.8**	**+1.2**
ANTB	**Antalya**	**0.97**	**258**	*e*Pg	**Pn**	**17 59 27.8**	**+1.2**
ERMK	**Ermenek**	**0.98**	**118**	*i* P	**Pn**	**17 59 27.0**	**0.0**
ERMK				*i* S	**Sn**	**17 59 44.4**	**+2.9**
ERMK	**Ermenek**	**0.98**	**118**	*i* P	**Pn**	**17 59 27.0**	**0.0**
ERMK				*i* S	**Sn**	**17 59 44.4**	**+2.9**
BCK	**Bucak**	**1.05**	**290**	*e*PG	**Pn**	**17 59 27.1**	**-0.8**
BCK				*e*SG	**Sn**	**17 59 41.5**	**-1.7**
BCK	**Bucak**	**1.05**	**290**	*e*Pg	**Pn**	**17 59 27.1**	**-0.8**
BCK				*e*Sg	**Sn**	**17 59 41.5**	**-1.7**
LADK	**Ladik-KONYA**	**1.17**	**21**	*e*PG	**Pb**	**17 59 28.6**	**-0.5**
LADK				*e*SG	**Sg**	**17 59 43.6**	**-0.2**
LADK	**Ladik-KONYA**	**1.17**	**21**	*e*Pg	**Pb**	**17 59 28.6**	**-0.5**
LADK				*e*Sg	**Sg**	**17 59 43.6**	**-0.2**
ISP	**Isparta**	**1.27**	**305**	*e*PN	**Pg**	**17 59 31.6**	**+1.2**
ISP	**Isparta**	**1.27**	**305**	*e*Pn	**Pg**	**17 59 31.6**	**+1.2**
KDHN	**Kadinhani**	**1.43**	**9**	*i* P	**Pn**	**17 59 32.4**	**-0.7**
KDHN				*i* S	**Sg**	**17 59 53.4**	**+1.3**
KDHN	**Kadinhani**	**1.43**	**9**	*i* P	**Pn**	**17 59 32.4**	**-0.7**
KDHN				*i* S	**Sg**	**17 59 53.4**	**+1.3**
SHUT	**Suhut-Afyon**	**1.77**	**325**	*e*PN	**Pn**	**17 59 37.4**	**-0.3**
SHUT	**Suhut-Afyon**	**1.77**	**325**	*e*Pn	**Pn**	**17 59 37.4**	**-0.3**
MERS	**Mersin**	**2.17**	**95**	*e*PN	**Pb**	**17 59 45.1**	**-0.9**
MERS	**Mersin**	**2.17**	**95**	*e*Pn	**Pb**	**17 59 45.1**	**-0.9**
ALT	**Altintas**	**2.38**	**326**	*e*PN	**Pn**	**17 59 46.3**	**+0.2**
ALT	**Altintas**	**2.38**	**326**	*e*Pn	**Pn**	**17 59 46.3**	**+0.2**

BJI ***15*** *18:26:29.4, 6.14S×154.52E, h39km, mB5.4/25, mb5.1/46, Ms5.0/33, Ms7 4.8/31*
AUST ***15*** *18:26:31.2±2.0, 5.90S×154.13E, h15km, Error ellipse: s-maj=1.2km s-min=0.7km az=228.0*
ISCJB ***15*** *18:26:32.8±0.9, 5.89S±0.03×154.11E±0.03, h43km±8km, mb5.1/80, MS4.7/31, Error ellipse: s-maj=5.6km s-min=5.3km az=18.6*
MOS ***15*** *18:26:32.1±1.1, 5.75S×154.02E, h33km, mb5.2/14, Error ellipse: s-maj=10.7km s-min=8.3km az=89.2*
NEIC ***15*** *18:26:34.2±0.6, 5.83S×154.06E, h41km±6km, mb5.2/35, Error ellipse: s-maj=6.6km s-min=5.5km az=94.0*
IDC ***15*** *18:26:34.1±1.9, 5.86S×154.13E, h42km±16km, mb4.6/24, mb1 4.7/26, mb1mx4.7/28, mbtmp4.6/26, ML4.3/2, MS4.7/22, Ms1 4.7/22, ms1mx4.5/37, Error ellipse: s-maj=15.3km s-min=10.5km az=86.0*
GCMT ***15*** *18:26:36.4±0.2, 6.05S×154.08E, h36km, MW5.3, Moment Tensor Solution. s74,c111; s88,c136; Moment tensor: Scale 10¹⁷Nm; Mrr1.07±.03; Mθθ-0.35±.02; Mφφ-0.72±.02; Mrθ-0.31±.02; Mrφ0.66±.02; Mθφ-0.04±.02; Best double couple: M₀1.20000×10¹⁷ NP1:φ₁158.00000°, δ43.00000°, λ112.00000°. NP2:φ₂309.00000°, δ51.00000°, λ71.00000°. Principal axes: T 1.1500, Plg75.0000°, Azm157.0000°; N 0.0800, Plg15.0000°, Azm321.0000°; P -1.2300, Plg4.0000°, Azm52.0000°; Data Used: II IU CN IC G.*
DJA ***15*** *18:26:40.9±1.0, 6.5S×154.15E, h84km±10km, M5.7/27, mB5.9/10, mb5.3/27, MLv6.2/1, Mw(mB)5.5/10*
ISC 15 18:26:34.1±0.3, **5.83S**±0.04×**154.12E**±0.04, **h39**km±2km,
h39km**:pP-P, n252,** σ1**31/308, mb5.2/80, MS4.7/32, 5C-1D,**
Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.79**	**122**	P	Pn	18 28 14.4	+3.0
HNR				S	**Sn**	**18 29 29.3**	**+1.8**
HNR	**Honiara**	**6.79**	**122**	P	Pn	18 28 14.4	+3.0
	22nm,0.3s,baz=225,slow=3.8,SNR=13						
HNR				S	**Sn**	**18 29 29.3**	**+1.8**
	2.3nm,0.3s,baz=249,slow=14,SNR=2.5						
PMG	**Port Moresby**	**7.76**	**242**	*e*Pn	**Pn**	**18 28 24.9**	**+0.4**
PMG				S	**Sn**	**18 29 52.6**	**+1.4**
PMG	**Port Moresby**	**7.76**	**242**	P	**Pn**	**18 28 25.5**	**+0.9**
	511nm,1.0s,7μm6.0nm						
PMG	**Port Moresby**	**7.76**	**242**	P	**Pn**	**18 28 25.0**	**+0.4**
	37nm,0.3s,baz=54,slow=13,SNR=115						
PMG				S	**Sn**	**18 29 52.6**	**+1.4**
	119nm,0.3s,baz=342,slow=20,SNR=24						
PMG				LR	LR	18 31 11.0	
	comp=Z,7μm,21.4s,baz=143,slow=36						
PATS	**Pohnpei**	**13.26**	**18**	S	**Sn**	**18 32 07.9**	**+1.7**
	baz=13,SNR=3.3						
COEN	**Coen**	**13.46**	**232**	*e*Pn	**Pn**	**18 29 43.2**	**+0.5**
COEN	**Coen**	**13.46**	**232**	P	**Pn**	**18 29 43.2**	**+0.5**
	baz=14,SNR=4.3						
JAY	**Jayapura**	**13.78**	**283**	P	P	18 29 57.3	+2.4
JAY	**Jayapura**	**13.78**	**283**	P	**Pn**	**18 29 49.3**	**+2.2**
	baz=14,SNR=4.1						
MMPI	**Merauke**	**13.88**	**258**	S	**Sn**	**18 32 17.9**	**-3.4**
	baz=14,SNR=4.7						
CTA	**Charters Tower**	**16.10**	**208**	P	**Pn**	**18 30 18.0**	**+0.2**
CTA	**Charters Tower**	**16.10**	**208**	P	**Pn**	**18 30 18.0**	**+0.2**
	0.5nm,0.3s,baz=31,slow=13,SNR=14						
CTA				LR	LR	18 35 46.0	
	comp=Z,3μm,20.4s,baz=26,slow=34						
CTAO	**Charters Tower**	**16.10**	**208**	*e*P	**P**	**18 30 19.0**	**-1.6**
CTAO				pmax	pmax		
	comp=Z,341nm,2.0s						
CTAO	**Charters Tower**	**16.10**	**208**	*e*Pn	**P**	**18 30 19.0**	**-1.6**
	comp=Z,341nm,2.0s						
EIDS	**Eidsvold**	**19.64**	**188**	*e*P	**P**	**18 31 00.0**	**+0.4**
	comp=Z,88nm,1.0s						
EIDS	**Eidsvold**	**19.64**	**188**	P	**P**	**18 31 00.0**	**+0.4**
	baz=20,SNR=12						
EIDS				S	Sn	18 34 50.4	+9.5
	baz=20,SNR=4.5						
NOUC	**Port Laguerre**	**20.01**	**145**	*e*P	**P**	**18 31 02.2**	**-1.4**
DZM	**Mont Dzumac**	**20.07**	**145**	*e*P	**P**	**18 31 02.3**	**-2.1**
DZM	**Mont Dzumac**	**20.07**	**145**	*e*P	**P**	**18 31 04.6**	**+0.2**
	comp=Z,145nm,1.1s						
DZM	**Mont Dzumac**	**20.07**	**145**	P	**P**	**18 31 04.3**	**0.0**
	comp=Z,54nm,0.6s,baz=331,slow=12,SNR=56						
DZM				LR	LR	18 37 17.4	
	comp=Z,3μm,21.7s,baz=106,slow=32						
TARA	**Tarawa**	**20.09**	**70**	*e*Pn	Pn	18 31 08.2	+1.6
	comp=Z,478nm,1.4s						
QIS	**Mount Isa**	**20.32**	**223**	P	**P**	**18 31 07.3**	**+0.3**
	baz=20,SNR=87						
RMQ	**Roma**	**21.17**	**193**	P	**P**	**18 31 16.7**	**+0.6**
	baz=21,SNR=61						
TLE	**Tual**	**21.28**	**269**	P	**P**	**18 31 21.1**	**+3.6**
	comp=Z,505nm,1.2s,comp=Z,7μm						
TLE	**Tual**	**21.28**	**269**	P	**P**	**18 31 21.0**	**+3.6**
	baz=21,SNR=9.7						
GUMO	**Guam**	**21.37**	**335**	LR	LR	18 39 06.5	
	comp=Z,395nm,18.5s,baz=162,slow=35						
KDU	**Kakadu**	**22.41**	**251**	P	**P**	**18 31 28.7**	**-0.9**
	baz=22,SNR=22						
KDU				S	Sn	18 35 41.4	-6.3
	baz=22,SNR=4.7						
QLP	**Quilpie**	**22.69**	**203**	P	**P**	**18 31 31.9**	**-0.5**
	baz=23,SNR=44						
PALU	**Palau**	**23.57**	**303**	P	**P**	**18 31 42.8**	**+1.4**
	baz=24,SNR=5.1						
MTN	**Manton Dam**	**23.71**	**251**	P	**P**	**18 31 42.3**	**-0.5**
	baz=24,SNR=25						
MTN				S	**S**	**18 35 55.8**	**+0.4**
	baz=24,SNR=6.0						
WRAB	**Tennant Creek**	**23.79**	**232**	*e*P	**P**	**18 31 42.2**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,65nm,0.8s						
WRAB	**Tennant Creek**	**23.79**	**232**	*e*P	**P**	**18 31 42.2**	**-1.2**
	comp=Z,65nm,0.8s						
WRAB	**Tennant Creek**	**23.79**	**232**	P	**P**	**18 31 43.0**	**-0.4**
	comp=Z,513nm,0.8s,SNR=27						
ARMA	**Armidale**	**24.57**	**185**	*e*P	**P**	**18 31 51.2**	**+0.7**
	comp=Z,122nm,1.0s						
ARMA	**Armidale**	**24.57**	**185**	P	**P**	**18 31 51.1**	**+0.5**
	baz=25,SNR=22						
AS31	**Alice Springs**	**26.32**	**226**	*e*P	**P**	**18 32 05.5**	**-1.1**
ASAR	**Alice Springs**	**26.32**	**226**	P	**P**	**18 32 06.0**	**-0.6**
ASAR				PcP	**PcP**	**18 35 32.1**	**0.0**
ASAR				ScP	**ScP**	**18 39 09.1**	**+0.1**
ASAR	**Alice Springs**	**26.32**	**226**	P	**P**	**18 32 06.0**	**-0.6**
	comp=Z,26nm,0.8s,baz=63,slow=8.9,SNR=194						
ASAR				PcP	**PcP**	**18 35 32.1**	**0.0**
	comp=Z,13nm,0.9s,baz=53,slow=3.0,SNR=13						
ASAR				ScP	**ScP**	**18 39 09.1**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=47,slow=4.1,SNR=4.7						
ASAR				LR	LR	18 42 27.6	
	comp=Z,3μm,18.3s,baz=331,slow=36						
CMSA	**Cobar Meteorol**	**26.76**	**196**	P	**P**	**18 32 10.0**	**-0.4**
	baz=27,SNR=44						
LBMI	**Labuha**	**27.06**	**280**	P	**P**	**18 32 14.7**	**+1.4**
	comp=Z,116nm,1.0s,comp=Z,1μm						
MGCD	**Mangrove Creek**	**27.38**	**185**	P	**P**	**18 32 16.6**	**+0.8**
	baz=27,SNR=4.0						
STKA	**Stephens Creek**	**28.44**	**203**	*e*P	**P**	**18 32 23.8**	**-1.5**
	comp=Z,5.5nm,0.9s						
STKA				PcP	**PcP**	**18 35 36.2**	**-0.7**
STKA	**Stephens Creek**	**28.44**	**203**	P	**P**	**18 32 24.2**	**-1.2**
	comp=Z,18nm,0.9s,baz=33,slow=9.9,SNR=19						
STKA				PcP	**PcP**	**18 35 36.2**	**-0.7**
	comp=Z,8.4nm,0.9s,baz=25,slow=4.2,SNR=4.3						
STKA				LR	LR	18 43 55.1	
	comp=Z,2μm,18.3s,baz=22,slow=37						
STKA	**Stephens Creek**	**28.44**	**203**	P	**P**	**18 32 24.1**	**-1.2**
	baz=28,SNR=23						
CNB	**Canberra Magne**	**29.66**	**188**	P	**P**	**18 32 36.7**	**+0.5**
	baz=30,SNR=4.4						
FITZ	**Fitzroy Crossi**	**30.35**	**244**	*e*P	**P**	**18 32 41.1**	**-1.4**
	comp=Z,68nm,0.8s						
FITZ	**Fitzroy Crossi**	**30.35**	**244**	P	**P**	**18 32 41.6**	**-0.8**
	comp=Z,65nm,0.7s,baz=75,slow=8.0						
FITZ				LR	LR	18 45 30.5	
	comp=Z,1μm,18.6s,baz=344,slow=37						
FITZ	**Fitzroy Crossi**	**30.35**	**244**	P	**P**	**18 32 41.4**	**-1.1**
	baz=30,SNR=105						
KMSI	**Cibinong**	**30.76**	**281**	P	**P**	**18 32 46.4**	**+0.3**
	comp=Z,156nm,1.1s,comp=Z,1μm						
KDI	**Kendari**	**31.44**	**272**	P	**P**	**18 32 52.5**	**+0.4**
	comp=Z,27nm,1.0s						
BBOO	**Buckleboo**	**31.68**	**210**	P	**P**	**18 32 52.9**	**-1.2**
	baz=32,SNR=6.7						
MMRI	**Maumere**	**31.74**	**263**	P	**P**	**18 32 53.3**	**-1.5**
	comp=Z,257nm,1.0s,comp=Z,2μm						
MRSI	**Marisa**	**32.73**	**280**	P	**P**	**18 33 02.8**	**-0.7**
	comp=Z,28nm,1.1s						
ARPS	**Mount Arapiles**	**32.78**	**198**	P	**P**	**18 33 03.5**	**0.0**
	baz=33,SNR=6.5						
BASI	**Baing, Sumba**	**33.48**	**260**	P	**P**	**18 33 10.5**	**+0.5**
	comp=Z,371nm,1.4s,comp=Z,4μm						
WSI	**Waingapu**	**33.72**	**261**	P	**P**	**18 33 11.7**	**-0.3**
	comp=Z,466nm,0.8s,comp=Z,4μm						
WSI	**Waingapu**	**33.72**	**261**	P	**P**	**18 33 11.8**	**-0.3**
	baz=34,SNR=4.8						
BKSI	**Bulukumba**	**33.84**	**269**	P	**P**	**18 33 13.1**	**0.0**
	comp=Z,27nm,1.1s						
KAPI	**Kappang**	**34.22**	**270**	*e*P	**P**	**18 33 15.5**	**-0.9**
	comp=Z,67nm,1.0s						
KAPI	**Kappang**	**34.22**	**270**	P	**P**	**18 33 16.2**	**-0.3**
	comp=Z,340nm,1.0s,SNR=7.7						
KAPI	**Kappang**	**34.22**	**270**	P	**P**	**18 33 16.1**	**-0.4**
	comp=Z,75nm,1.2s						
KAPI	**Kappang**	**34.22**	**270**	P	**P**	**18 33 15.6**	**-0.9**
	comp=Z,40nm,0.8s,baz=85,slow=6.0,SNR=6.6						
SPSI	**Sidrap Palu**	**34.27**	**272**	P	**P**	**18 33 16.8**	**-0.1**
	comp=Z,61nm,0.9s						
TTSI	**Tana Toraja**	**34.30**	**273**	P	**P**	**18 33 17.6**	**+0.4**
	comp=Z,35nm,1.2s						
AFI	**Afiamalu**	**34.51**	**106**	LR	LR	18 44 50.0	
	comp=Z,920nm,20.2s,baz=276,slow=32						
PCI	**Palu**	**34.56**	**277**	P	**P**	**18 33 19.8**	**+0.4**
	baz=35,SNR=23						
PCI				S	S	18 39 13.8	+28
	baz=35,SNR=95						
FORT	**Forrest**	**34.85**	**221**	*e*P	**P**	**18 33 20.7**	**-1.0**
	comp=Z,71nm,0.7s						
FORT	**Forrest**	**34.85**	**221**	P	**P**	**18 33 20.9**	**-0.8**
	baz=35,SNR=16						
MBWA	**Marble Bar**	**36.62**	**242**	*e*P	**P**	**18 33 35.7**	**-1.4**
MOO	**Moorlands**	**36.97**	**189**	P	**P**	**18 33 40.9**	**+1.2**
	baz=37,SNR=3.6						
MYLDM	**Lahad Datu**	**37.21**	**286**	P	**P**	**18 33 40.0**	**-2.1**
MYLDM	**Lahad Datu**	**37.21**	**286**	P	**P**	**18 33 43.4**	**+1.3**
TAU	**Tasmania Unive**	**37.41**	**188**	*e*P	**P**	**18 33 44.2**	**+0.8**
TAU				pmax	pmax		
	comp=Z,151nm,1.2s						
TAU	**Tasmania Unive**	**37.41**	**188**	*e*P	**P**	**18 33 44.2**	**+0.8**
	comp=Z,150nm,1.2s						
TSM	**Tawau**	**37.57**	**285**	P	**P**	**18 33 45.8**	**+0.6**
URZ	**Urewera**	**38.44**	**150**	*e*P	**P**	**18 33 52.5**	**+0.3**
	comp=Z,68nm,1.1s						
URZ	**Urewera**	**38.44**	**150**	P	**P**	**18 33 52.0**	**-0.2**
	comp=Z,26nm,0.8s,baz=36,slow=4.9,SNR=14						
URZ				LR	LR	18 46 53.8	
	comp=Z,2μm,18.1s,baz=116,slow=32						
KMBL	**Kambalda**	**39.45**	**226**	P	**P**	**18 34 00.1**	**-0.7**
	baz=40,SNR=6.2						
KKM	**Kota Kinabalu**	**39.63**	**287**	*e*P	**P**	**18 34 00.7**	**-1.9**
	comp=Z,15nm,1.1s						
KKM	**Kota Kinabalu**	**39.63**	**287**	P	**P**	**18 34 02.8**	**+0.2**
MEEK	**Meekatharra**	**39.65**	**235**	P	**P**	**18 34 01.5**	**-1.0**
	baz=40,SNR=16						
KHZ	**Kahutara**	**40.30**	**158**	*e*P	**P**	**18 34 05.9**	**-1.7**
	comp=Z,94nm,1.0s						
RPZ	**Rata Peaks**	**40.57**	**161**	*e*P	**P**	**18 34 10.0**	**+0.1**
	comp=Z,47nm,0.9s						
RPZ	**Rata Peaks**	**40.57**	**161**	P	**P**	**18 34 08.7**	**-1.1**
	comp=Z,39nm,0.8s,baz=360,slow=10,SNR=7.8						
JOW	**Kunigami**	**41.00**	**324**	*e*P	**P**	**18 34 14.2**	**+0.6**
	comp=Z,14nm,0.9s						
BTM	**Bintulu**	**41.95**	**281**	P	**P**	**18 34 22.4**	**+0.7**
KLBR	**Kellerberrin**	**42.58**	**228**	P	**P**	**18 34 25.1**	**-1.4**
	baz=43,SNR=11						
SBUM	**Sibu**	**42.65**	**280**	P	**P**	**18 34 28.1**	**+0.9**
MORW	**Morawa**	**42.74**	**233**	P	**P**	**18 34 27.0**	**-0.9**
	baz=43,SNR=13						
BLDU	**Ballidu**	**42.91**	**230**	P	**P**	**18 34 28.1**	**-1.1**
	baz=43,SNR=12						
YULB	**Yu-li**	**43.26**	**313**	*e*P	**P**	**18 34 32.2**	**+0.1**
	comp=Z,20nm,0.8s						
NACB	**Ninganchiao**	**43.53**	**315**	*e*P	**P**	**18 34 35.5**	**+1.2**
	comp=Z,56nm,1.1s						
NWAO	**Narrogin (SRO)**	**43.63**	**227**	*e*P	**P**	**18 34 33.7**	**-1.3**
NWAO	**Narrogin (SRO)**	**43.63**	**227**	P	**P**	**18 34 33.3**	**-1.6**
	comp=Z,11nm,0.9s,baz=57,slow=10						
TPUB	**Ta-pu**	**43.69**	**313**	*e*P	**P**	**18 34 35.3**	**-0.2**
	comp=Z,21nm,0.8s						
SSLB	**Suanglung**	**43.75**	**314**	*e*P	**P**	**18 34 36.2**	**+0.2**
	comp=Z,30nm,0.9s						
YHNB	**Yeheng**	**43.99**	**315**	*e*P	**P**	**18 34 37.2**	**-0.8**
	comp=Z,84nm,1.3s						
KSM	**Kuching**	**44.35**	**278**	*e*P	**P**	**18 34 41.0**	**+0.1**
	comp=Z,40nm,0.9s						
KSM	**Kuching**	**44.35**	**278**	P	**P**	**18 34 41.7**	**+0.7**
KSM	**Kuching**	**44.35**	**278**	P	**P**	**18 34 41.8**	**+0.8**
	baz=44,SNR=8.6						
JNU	**Nakatsue**	**44.58**	**332**	*e*P	**P**	**18 34 41.8**	**-0.8**
	comp=Z,85nm,2.0s						
JNU	**Nakatsue**	**44.58**	**332**	P	**P**	**18 34 41.7**	**-0.9**
	comp=Z,85nm,0.8s,baz=112,slow=6.7						
RKGY	**Rocky Gully**	**44.67**	**225**	P	**P**	**18 34 43.2**	**0.0**
	baz=45,SNR=13						
MJAR	**Matsushiro Arr**	**44.71**	**342**	P	**P**	**18 34 42.5**	**-1.0**
MJAR	**Matsushiro Arr**	**44.71**	**342**	P	**P**	**18 34 42.5**	**-1.0**
	comp=Z,2.5nm,0.9s,baz=169,slow=9.9,SNR=5.6						
MJAR				LR	LR	18 51 28.9	
	comp=Z,372nm,20.3s,baz=180,slow=33						
MAT	**Matsushiro**	**44.71**	**342**	P	**P**	**18 34 44.2**	**+0.7**

HABR MLR MLR
comp=Z,119nm,15.0s
GSI Gunungsitoli 56.90 275 P **P** **18 36 14.5 -1.3**
baz=57,SNR=5.9
BJI Beijing 57.48 326 P **P** **18 36 20.9 +1.6**
BJI S **S** **18 44 17.9 +3.9**
BJI pmax pmax
comp=Z,10.0nm,0.8s
BJI pmax pmax
comp=Z,670nm,3.6s
BJI LR LR
comp=N,330nm,16.7s
BJI LR LR
comp=E,430nm,14.0s
BJI LR LR
comp=Z,310nm,20.5s
KLR Kul'dur 58.21 343 *e*P **P** **18 36 21.1 -3.2**
KLR pmax pmax
comp=Z,43nm,1.4s
XAN Xi'an 58.27 316 P **P** **18 36 25.3 +0.2**
XAN pP **pP** **18 36 35.3 -1.4**
XAN sP **sP** **18 36 39.3 -2.0**
XAN PP **PP** **18 38 35.3 +0.8**
XAN S **S** **18 44 21.0 -3.7**
XAN pmax pmax
comp=Z,13nm,0.9s
XAN pmax pmax
comp=Z,140nm,10.9s
XAN LR LR
comp=N,290nm,15.3s
XAN LR LR
comp=E,120nm,17.5s
XAN LR LR
comp=Z,130nm,16.4s
KMI Kunming 58.65 304 ⇑P **P** **18 36 29.8 +1.7**
KMI pP **pP** **18 36 40.3 +0.6**
KMI sP **sP** **18 36 44.0 -0.3**
KMI PP **PP** **18 38 42.1 +3.8**
KMI S **S** **18 44 28.1 -2.2**
KMI sS **sS** **18 44 47.9 -1.6**
KMI SS **SS** **18 48 24.8 +0.9**
KMI pmax pmax
comp=Z,32nm,1.2s
KMI pmax pmax
comp=Z,980nm,7.0s
KMI LR LR
comp=N,380nm,13.4s
KMI LR LR
comp=E,440nm,19.9s
KMI LR LR
comp=Z,640nm,20.8s
PETK Petropavlovsk- 58.80 3 P **P** **18 36 28.4 +0.1**
PETK Petropavlovsk- 58.80 3 P **P** **18 36 28.4 +0.1**
PETK Petropavlovsk- 58.80 3 P **P** **18 36 28.4 +0.1**
comp=Z,5.5nm,0.8s,baz=186,slow=6.7,SNR=6.8
PETK LR LR 18 57 39.3
comp=Z,685nm,21.3s,baz=184,slow=32
CM31 Chiang Mai Arr 59.50 295 *e*P **P** **18 36 35.0 +1.2**
comp=Z,28nm,0.9s
CMAR Chiang Mai Arr 59.50 295 P **P** **18 36 35.1 +1.2**
CMAR Chiang Mai Arr 59.50 295 P **P** **18 36 35.1 +1.2**
comp=Z,27nm,0.9s,baz=110,slow=5.0,SNR=146
CMAR LR LR 19 02 23.4
comp=Z,275nm,18.6s,baz=125,slow=36
CHTO Chiang Mai 59.62 296 *e*P **P** **18 36 35.2 +0.5**
CHTO pmax pmax
comp=Z,50nm,1.2s
CHTO Chiang Mai 59.62 296 *e*P **P** **18 36 35.2 +0.5**
comp=Z,50nm,1.2s
CD2 Chengdu 60.40 310 ⇑P **P** **18 36 40.8 +0.9**
CD2 pP **pP** **18 36 50.9 -0.6**
CD2 sP **sP** **18 36 54.8 -1.3**
CD2 PcP **PcP** **18 37 25.6 +1.0**
CD2 PP **PP** **18 38 55.8 +2.3**
CD2 PcS **PcS** **18 41 26.6 -0.6**
CD2 S **S** **18 44 50.9 -1.5**
CD2 SS **SS** **18 48 49.5 -1.4**
CD2 pmax pmax
comp=Z,60nm,0.8s
CD2 pmax pmax
comp=Z,260nm,6.2s
CD2 LR LR
comp=N,390nm,18.6s
CD2 LR LR
comp=E,550nm,17.6s
CD2 LR LR
comp=Z,620nm,21.0s
HHC Hu-ho-hao-te 60.65 324 *e*P **P** **18 36 43.0 +1.5**
HHC PcP **PcP** **18 37 26.3 +0.9**
HHC PP **PP** **18 38 58.8 +3.3**
HHC ScP **ScP** **18 41 24.3 +0.4**
HHC PcS **PcS** **18 41 27.8 -0.3**
HHC S **S** **18 44 55.4 +0.1**
HHC sS **sS** **18 45 12.4 -2.2**
HHC ScS SKKSac 18 46 27.5 -1.9
HHC SS **SS** **18 48 55.6 +1.1**
HHC pmax pmax
comp=Z,27nm,0.6s
HHC pmax pmax
comp=Z,960nm,6.5s
HHC LR LR
comp=N,570nm,16.6s
HHC LR LR
comp=E,490nm,16.8s
HHC LR LR
comp=Z,450nm,16.5s
LZH Lanzhou 62.88 316 ⇑P **P** **18 36 58.3 +1.6**
LZH pP **pP** **18 37 06.8 -1.6**
LZH sP **sP** **18 37 11.8 -1.1**
LZH S **S** **18 45 25.6 +1.7**
LZH sS **sS** **18 45 45.0 +1.7**
LZH pmax pmax
comp=Z,65nm,1.1s
LZH pmax pmax
comp=Z,240nm,4.2s
LZH LR LR
comp=N,400nm,15.1s
LZH LR LR
comp=E,430nm,15.4s
LZH LR LR
comp=Z,540nm,16.0s
GTA Gaotai 67.30 317 ⇑P **P** **18 37 26.6 +1.3**
GTA pP **pP** **18 37 35.6 -1.4**
GTA sP **sP** **18 37 39.3 -2.3**
GTA S **S** **18 46 17.3 -0.7**
GTA SS **SS** **18 50 39.9 +1.4**
GTA pmax pmax
comp=Z,37nm,1.1s
GTA pmax pmax
comp=Z,560nm,10.0s
GTA LR LR
comp=N,260nm,16.6s
GTA LR LR
comp=E,290nm,19.0s
GTA LR LR
comp=Z,340nm,21.4s
CASY Casey 67.43 198 *e*P **P** **18 37 24.5 -0.9**
comp=Z,32nm,1.2s
ULN Ulaanbaatar 67.56 328 *e*P **P** **18 37 26.9 +0.1**
comp=Z,15nm,1.2s
SONM Songino Array 67.89 327 P **P** **18 37 29.0 +0.2**
SONM Songino Array 67.89 327 P **P** **18 37 29.0 +0.2**
comp=Z,19nm,1.3s,baz=128,slow=5.0,SNR=31
SONM LR LR 19 08 41.2
comp=Z,454nm,19.0s,baz=138,slow=37
SEY Seymchan 68.58 359 *e*P **P** **18 37 31.2 -1.4**
YAK Yakutsk 70.25 348 *e*P **P** **18 37 41.7 -1.2**
YAK pmax pmax
comp=Z,19nm,1.3s
YAK pmax pmax
comp=N,7.0nm,1.4s
YAK pmax pmax
comp=E,9.0nm,1.5s
ZAK Zakamensk 71.05 328 *e*P **P** **18 37 48.2 -0.1**
ZAK *e* 18 38 12.0
ZAK pmax pmax
comp=Z,9.0nm,1.0s
VNDA Vanda 71.76 178 *e*P **P** **18 37 52.0 0.0**
comp=Z,27nm,1.2s
VNDA Vanda 71.76 178 P **P** **18 37 51.7 -0.2**
comp=Z,11nm,1.0s,baz=344,slow=7.3,SNR=31
TAPN Taplejung 72.06 301 *e*P **P** **18 37 55.6 +0.5**
comp=Z,156nm,1.4s
ODAN Odare 72.20 300 *e*P **P** **18 37 56.1 +0.3**
comp=Z,85nm,0.9s

RAMN Ramite 72.90 300 *e*P **P** **18 38 00.2 +0.2**
comp=Z,79nm,1.3s
MOY Mondy 72.97 329 *e*P **P** **18 38 00.1 +0.4**
GUN Gumba 73.78 301 *e*P **P** **18 38 05.5 +0.2**
comp=Z,141nm,1.3s
PKI Pulchoki 74.09 301 *e*P **P** **18 38 07.0 -0.1**
comp=Z,128nm,1.3s
PKIN Phulchoki 74.10 301 *e*P **P** **18 38 06.9 -0.2**
BILL Bilibino 74.20 5 *e*P **P** **18 38 05.7 -0.7**
BILL pmax pmax
comp=Z,16nm,1.1s
BILL Bilibino 74.20 5 *e*P **P** **18 38 05.7 -0.7**
comp=Z,16nm,1.1s
KKN Kakani 74.25 301 *e*P **P** **18 38 07.9 0.0**
DMN Daman 74.36 301 *e*P **P** **18 38 09.0 +0.4**
KOLN Koldanda 75.69 300 *e*P **P** **18 38 16.1 -0.1**
comp=Z,93nm,1.0s
DANN Dangsing 75.70 301 *e*P **P** **18 38 16.2 -0.1**
comp=Z,85nm,1.1s
PYUN Piuthan 76.29 301 *e*P **P** **18 38 19.4 -0.2**
comp=Z,244nm,1.0s
WMQ Urumqi 77.39 317 P **P** **18 38 26.0 +0.7**
WMQ pP **PcP** **18 38 36.0 +0.3**
WMQ sP **sP** **18 38 41.0 -0.7**
WMQ PP **PP** **18 41 22.0 +1.8**
WMQ S **S** **18 48 13.0 -0.1**
WMQ ScS **ScS** **18 48 38.0 -2.4**
WMQ SS **SS** **18 53 13.0 +0.5**
WMQ pmax pmax
comp=Z,24nm,1.1s
WMQ pmax pmax
comp=Z,160nm,8.0s
WMQ LR LR
comp=N,300nm,18.0s
WMQ LR LR
comp=E,300nm,18.0s
WMQ LR LR
comp=Z,350nm,18.0s
HYB Hyderabad 78.07 289 *i*P **P** **18 38 28.0 -1.6**
TRF Thorofare Moun 80.65 22 *e*P **P** **18 38 45.1 +2.2**
MCK McKinley 81.31 22 *e*P **P** **18 38 46.8 +0.6**
MCK pmax pmax
comp=Z,55nm,1.8s
MCK McKinley 81.31 22 *e*P **P** **18 38 46.8 +0.6**
comp=Z,55nm,1.8s
MK31 Makanchi Array 81.96 319 *i*P **P** **18 38 49.6 -0.4**
MK31 pmax pmax
comp=Z,13nm,0.9s
MK31 Makanchi Array 81.96 319 *e*P **P** **18 38 49.1 -0.8**
MKAR Makanchi Array 81.96 319 *i*P **P** **18 38 49.7 -0.3**
MKAR pmax pmax
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 81.96 319 P **P** **18 38 49.7 -0.3**
MKAR Makanchi Array 81.96 319 P **P** **18 38 49.7 -0.3**
comp=Z,4.5nm,0.9s,baz=102,slow=4.8,SNR=27
MKAR LR LR 19 15 17.9
comp=Z,284nm,18.8s,baz=241,slow=36
ILAR Eielson Array 82.62 22 P **P** **18 38 51.6 -1.4**
ILAR Eielson Array 82.62 22 P **P** **18 38 51.6 -1.4**
comp=Z,3.1nm,0.6s,baz=247,slow=5.4,SNR=29
ILAR LR LR 19 13 33.5
comp=Z,865nm,19.4s,baz=293,slow=34
ZAA0 Zalesovo Array 82.74 326 *e*P **P** **18 38 52.0 -1.8**
ZALV Zalesovo Beam 82.74 326 P **P** **18 38 52.0 -1.8**
ZALV Zalesovo Beam 82.74 326 P **P** **18 38 52.0 -1.8**
ZALV Zalesovo Beam 82.74 326 P **P** **18 38 52.0 -1.8**
comp=Z,1.6nm,0.4s,baz=120,slow=6.9,SNR=18
ZALV LR LR 19 12 50.2
comp=Z,305nm,21.7s,baz=75,slow=34
COLD Coldfoot 82.80 19 *e*pP pP 18 39 03.7 -2.2
DOT Dot Lake 83.15 23 *e*P **P** **18 38 58.2 +2.4**
NVS Novosibirsk 83.91 327 *e*P **P** **18 38 59.7 -0.1**
NVS *e*S **S** **18 49 19.9 -0.7**
NVS pmax pmax
comp=Z,51nm,1.6s
NVS pmax pmax
comp=N,12nm,1.7s
NVS pmax pmax
comp=E,22nm,1.5s
NVS smax smax
comp=E,48nm,3.2s
NVS smax smax
comp=N,33nm,3.8s
KSH Kashi 84.60 310 P **P** **18 39 05.9 +2.0**
KSH pP **pP** **18 39 16.8 +0.8**
KSH sP **sP** **18 39 21.3 +0.9**
KSH PP **PP** **18 42 23.4 +3.4**
KSH SKS **SKSac** **18 49 25.3 +0.1**
KSH S **SKKSac** **18 49 31.3 +0.3**
KSH sS **sS** **18 49 49.3 +0.7**
KSH pmax pmax
comp=Z,56nm,1.2s
KSH LR LR
comp=N,210nm,6.1s
KSH LR LR
comp=E,220nm,5.1s
KSH LR LR
comp=Z,370nm,10.8s
MAW Mawson 85.13 203 LR LR 19 12 10.0
comp=Z,618nm,19.9s,baz=113,slow=32
KURK Kurchatov 85.39 322 *e*P **P** **18 39 06.3 -1.1**
KURK Kurchatov 85.39 322 *e*P **P** **18 39 06.3 -1.1**
KURK Kurchatov 85.39 322 P **P** **18 39 06.2 -1.1**
comp=Z,46nm,0.6s,SNR=5.5
TKM2 Tokmak 2 85.59 314 *i*P **P** **18 39 09.3 +0.5**
TKM2 Tokmak 2 85.59 314 *e*P **P** **18 39 08.2 -0.7**
comp=Z,22nm,0.6s
TKM2 Tokmak 2 85.59 314 P **P** **18 39 09.4 +0.5**
SNR=9.0
KZA Kyzart 85.67 313 P **P** **18 39 11.1 +1.5**
SNR=7.1
CHMS Chumysh 86.21 314 P **P** **18 39 12.8 +1.1**
SNR=5.2
FRU Bishkek 86.28 314 *e*P P 18 39 21.0 +8.9
AAK Ala-Archa 86.33 313 *e*P **P** **18 39 13.3 +0.8**
AAK pmax pmax
comp=Z,3.0nm,1.1s
AAK Ala-Archa 86.33 313 *e*P **P** **18 39 13.2 +0.8**
comp=Z,3.4nm,1.1s
AAK Ala-Archa 86.33 313 P **P** **18 39 13.3 +0.8**
SNR=6.7
AAK Ala-Archa 86.33 313 P **P** **18 39 13.5 +1.0**
comp=Z,57nm,0.8s,SNR=6.1
USP Ospenovka 86.45 314 P **P** **18 39 13.4 +0.5**
SNR=10
AML Almayashu 86.81 313 P **P** **18 39 16.3 +1.1**
SNR=14
EKS2 Erkin-Say 86.85 313 *e*P **P** **18 39 15.8 +0.8**
EKS2 Erkin-Say 86.85 313 *e*P **P** **18 39 15.8 +0.8**
EKS2 Erkin-Say 86.85 313 P **P** **18 39 17.0 +2.0**
SNR=5.8
YBH Yreka Blue Hor 88.76 48 LR LR 19 11 24.6
comp=Z,2µm,21.1s,baz=344,slow=30
INK Inuvik 88.95 21 P **P** **18 39 23.1 -1.1**
INK Inuvik 88.95 21 P **P** **18 39 23.1 -1.1**
comp=Z,0.8nm,0.5s
KK31 Karatay Array 89.29 313 *i*P **P** **18 39 26.5 0.0**
KK31 pmax pmax
comp=Z,4.0nm,0.7s
KKAR Karatay Array 89.29 313 *e*P **P** **18 39 26.7 +0.2**
KKAR *e* 18 39 35.1
KKAR Karatay Array 89.29 313 *e*P **P** **18 39 26.7 +0.2**
KKAR *e* 18 39 35.1
BRVK Borovoye 90.92 323 *e*P **P** **18 39 32.8 -1.0**
BRVK pmax pmax
comp=Z,8.0nm,1.1s
BRVK Borovoye 90.92 323 *e*P **P** **18 39 32.8 -1.0**
comp=Z,8.2nm,1.1s
BRVK Borovoye 90.92 323 P **P** **18 39 32.6 -1.2**
comp=Z,36nm,1.1s,SNR=5.0
NVAR Mina Array Bea 91.69 52 P **P** **18 39 37.5 -0.5**
NVAR Mina Array Bea 91.69 52 P **P** **18 39 37.5 -0.5**
comp=Z,2.2nm,0.8s,baz=260,slow=5.1,SNR=7.5
YKA Yellowknife Ar 95.72 28 P **P** **18 39 55.1 -0.5**
YKA PKKP PKKPbc 18 56 42.8 -5.5
YKA Yellowknife Ar 95.72 28 P **P** **18 39 55.1 -0.5**
comp=Z,0.7nm,0.8s,baz=269,slow=4.5,SNR=11
YKA PKKP PKKPbc 18 56 42.7 -5.5
comp=Z,1.5nm,1.1s,baz=87,slow=2.8,SNR=9.6
PDAR Pinedale Array 98.57 48 P **P** **18 40 07.6 -1.8**
PDAR Pinedale Array 98.57 48 P **P** **18 40 07.6 -1.8**
comp=Z,1.0nm,1.0s,baz=329,slow=1.6,SNR=3.1
PDAR LR LR 19 18 13.5
comp=Z,1µm,18.7s,baz=337,slow=31
GDL2 Guadalupe Moun 102.82 58 *e*Pdif **Pdif** **18 40 27.7 -0.7**

BRTR Keskin Array B 116.97 312 PP PP 18 46 24.4 -0.3
BRTR Keskin Array B 116.97 312 PP PP 18 46 24.4 -0.3
comp=Z,2.0nm,0.9s,baz=93,slow=6.3,SNR=6.9
BOSA Boshof 120.05 232 PKP **PKPdf** **18 45 20.9 -0.7**
BOSA Boshof 120.05 232 PKP **PKPdf** **18 45 20.9 -0.7**
comp=Z,5.0nm,0.9s,baz=104,slow=4.2,SNR=6.7
KOLS Kolonicke sedl 120.90 325 *e*PKIKP **PKPdf** **18 45 25.4 +3.0**
KOLS Kolonicke sedl 120.90 325 *e*PKP **PKPdf** **18 45 25.4 +3.0**
VYHS Vyhne 123.07 326 *e*PKIKP PKPdf 18 45 36.4 +10
VYHS Vyhne 123.07 326 *e* PKPdf 18 45 36.4 +10
BRG Berggiesshubel 124.21 331 *e*PKP PKPdf 18 45 35.3 +6.6
comp=Z,3.2nm,0.9s
CLL Collm 124.38 331 *e*PKIKP **PKPdf** **18 45 32.0 +3.0**
KHC Kasperske Hory 125.50 329 *e*PKIKP PKPdf 18 45 26.0 -5.3
KHC Kasperske Hory 125.50 329 *e*PKPdf PKPdf 18 45 26.0 -5.3
KHC *ex* x 18 46 19.5
GERES GERESS Array B 125.61 329 PKP **PKPdf** **18 45 32.6 +1.1**
GERES GERESS Array B 125.61 329 PKP **PKPdf** **18 45 32.6 +1.1**
comp=Z,0.6nm,0.5s,baz=108,slow=3.2,SNR=6.4
LPAZ La Paz 132.77 118 PKP **PKPdf** **18 45 46.3 -0.5**
LPAZ SKPbc **SKPbc** **18 49 08.8 -2.4**
LPAZ La Paz 132.77 118 PKP **PKPdf** **18 45 46.3 -0.5**
comp=Z,1.0nm,0.6s,baz=343,slow=2.0,SNR=5.2
LPAZ SKPbc **SKPbc** **18 49 08.8 -2.4**
comp=Z,1.9nm,0.8s,baz=199,slow=4.0,SNR=6.3
TAM Tamanrasset 145.34 302 *e*PKIKP **PKPdf** **18 46 09.7 +0.8**
TAM Tamanrasset 145.34 302 *e*PKPdf **PKPdf** **18 46 09.7 +0.8**
BDFB Brasilia 149.41 134 PKP **PKPdf** **18 46 15.8 0.0**
BDFB Brasilia 149.41 134 PKP **PKPdf** **18 46 15.8 0.0**
comp=Z,7.5nm,0.9s,baz=108,slow=2.8,SNR=3.1
TOA0 Torodi Ar. Sit 151.87 287 *e*PKPbc **PKPbc** **18 46 25.6 -0.3**
TORD Torodi Ar. Bea 151.87 287 PKPbc **PKPbc** **18 46 25.1 -0.8**
TORD PKPab **PKPab** **18 46 34.0 -1.1**
TORD PP **PP** **18 50 06.2 -0.7**
TORD Torodi Ar. Bea 151.87 287 PKPbc **PKPbc** **18 46 25.1 -0.8**
comp=Z,18nm,0.9s,baz=62,slow=1.7,SNR=78
TORD PKPab **PKPab** **18 46 34.0 -1.1**
comp=Z,33nm,1.1s,baz=74,slow=3.0,SNR=22
TORD PP **PP** **18 50 06.2 -0.7**
comp=Z,2.1nm,1.0s,baz=60,slow=3.8,SNR=4.0
DBIC Dimbokro 159.08 273 PKPab **PKPab** **18 47 05.0 -1.0**
DBIC Dimbokro 159.08 273 PKPab **PKPab** **18 47 05.0 -1.0**
comp=Z,5.1nm,0.8s,baz=74,slow=5.9,SNR=4.4

IDC ***15*** *18:31:58.6±1.0,5°.86S×154°.33E,h0km,mb4.2/14, mb1 4.4/15,mb1mx4.3/21,mbtmp4.2/15,ML3.9/1,Error ellipse: s-maj=29.1km s-min=16.7km az=103.0*
ISCJB ***15*** *18:32:04.3±0.5,5°.90S±0°.07×154°.18E±0°.07,h48km, mb4.1/14,Error ellipse: s-maj=11.8km s-min=9.1km az=136.8*
ISC 15 18:32:05.9±0.7,5°.83S±0°.10×154°.18E±0°.09,h48km,n27, σ1s01/30,mb4.0/14,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**6.74**	**122**	Pn		**Pn**	**18 33 43.6**	**+1.2**
	4.3nm,0.3s,baz=324,slow=8.7,SNR=2.7							
HNR				Sn		Sn	18 35 07.1	+9.2
	2.9nm,0.3s,baz=247,slow=14,SNR=2.2							
PMG	**Port Moresby**	**7.82**	**243**	Pn		**Pn**	**18 33 57.2**	**+0.1**
	9.8nm,0.3s,baz=50,slow=12,SNR=14							
PMG				Sn		**Sn**	**18 35 25.6**	**+1.3**
	9.0nm,0.3s,baz=350,slow=18,SNR=13							
ASAR	**Alice Springs**	**26.37**	**226**	P		**P**	**18 37 36.6**	**-1.3**
	1.9nm,0.6s,baz=56,slow=9.3,SNR=7.6							
ASAR				PcP		**PcP**	**18 41 03.5**	**+0.6**
	3.6nm,0.6s,baz=60,slow=2.4,SNR=17							
STKA	**Stephens Creek**	**28.47**	**203**	P		**P**	**18 37 55.5**	**-1.0**
	1.6nm,0.5s,baz=22,slow=10,SNR=2.9							
FITZ	**Fitzroy Crossi**	**30.41**	**244**	P		**P**	**18 38 13.0**	**-1.0**
	8.9nm,0.7s,baz=68,slow=8.5,SNR=5.4							
KAPI	**Kappang**	**34.28**	**270**	P		**P**	**18 38 47.0**	**-0.9**
	4.2nm,0.4s,baz=128,slow=9.1,SNR=4.9							
JNU	**Nakatsue**	**44.60**	**332**	P		**P**	**18 40 13.4**	**-0.3**
	14nm,0.8s,baz=93,slow=4.6,SNR=7.8							
MJAR	**Matsushiro Arr**	**44.72**	**342**	P		**P**	**18 40 14.7**	**+0.1**
	0.9nm,0.9s,baz=128,slow=7.9,SNR=3.5							
KSRS	**Korea Array**	**49.53**	**332**	P		**P**	**18 40 51.5**	**-0.5**
	2.5nm,0.8s,baz=148,slow=7.8,SNR=5.7							
USRK	**Usuriysk Arra**	**53.66**	**340**	P		**P**	**18 41 23.7**	**+1.1**
	0.8nm,0.5s,baz=142,slow=5.5,SNR=3.9							
CMAR	**Chiang Mai Arr**	**59.56**	**295**	P		**P**	**18 42 06.7**	**+1.6**
	5.3nm,0.9s,baz=109,slow=5.0,SNR=33							
SONM	**Songino Array**	**67.92**	**327**	P		**P**	**18 43 00.8**	**+1.0**
	1.2nm,0.4s,baz=111,slow=3.7,SNR=7.1							
VNDA	**Vanda**	**71.77**	**178**	P		**P**	**18 43 23.1**	**+0.4**
	1.8nm,0.9s,baz=341,slow=5.6,SNR=6.2							
TAPN	**Taplejung**	**72.11**	**301**	*e*P		**P**	**18 43 27.3**	**+1.1**
	16nm,1.1s							
ODAN	**Odare**	**72.25**	**300**	*e*P		**P**	**18 43 28.0**	**+1.1**
	21nm,0.9s							
RAMN	**Ramite**	**72.95**	**300**	*e*P		**P**	**18 43 32.0**	**+0.9**
GUN	**Gumba**	**73.83**	**301**	*e*P		**P**	**18 43 37.7**	**+1.3**
	14nm,0.5s							
PKI	**Pulchoki**	**74.14**	**301**	*e*P		**P**	**18 43 38.8**	**+0.6**
PKIN	**Phulchoki**	**74.15**	**301**	*e*P		**P**	**18 43 38.6**	**+0.4**
KKN	**Kakani**	**74.31**	**301**	*e*P		**P**	**18 43 39.9**	**+0.9**
KOLN	**Koldanda**	**75.74**	**300**	*e*P		**P**	**18 43 48.2**	**+0.9**
	17nm,0.7s							
DANN	**Dangsing**	**75.75**	**301**	*e*P		**P**	**18 43 47.9**	**+0.5**
	14nm,0.6s							
PYUN	**Piuthan**	**76.34**	**301**	*e*P		**P**	**18 43 51.1**	**+0.4**
	37nm,0.9s							
MKAR	**Makanchi Array**	**82.00**	**319**	P		**P**	**18 44 20.8**	**-0.2**
	0.5nm,0.4s,baz=101,slow=7.6,SNR=5.8							
ILAR	**Eielson Array**	**82.59**	**22**	P		**P**	**18 44 21.5**	**-2.2**
	0.3nm,0.6s,baz=233,slow=4.4,SNR=3.7							
ZALV	**Zalesovo Beam**	**82.77**	**326**	P		**P**	**18 44 23.6**	**-1.1**
	0.7nm,0.6s,baz=124,slow=7.3,SNR=3.5							
TORD	**Torodi Ar. Bea**	**151.93**	**287**	PKPbc		**PKPbc**	**18 51 56.4**	**-0.3**
	4.6nm,0.7s,baz=91,slow=2.5,SNR=21							
TORD				PKPab		**PKPab**	**18 52 06.4**	**+0.4**
	4.3nm,0.9s,baz=62,slow=3.1,SNR=8.1							

IDC 15 18:40:23.1±4.7,6°.17S×154°.17E,h69km±42km,mb3.3/5, mb1 3.6/7,mb1mx3.5/19,mbtmp3.6/7,ML4.0/2,Error ellipse: s-maj=30.6km s-min=25.1km az=27.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**6.58**	**120**	P		Pn	18 42 02.7	+5.4
	7.6nm,0.3s,baz=197,slow=6.1,SNR=4.0							
HNR				S		Sn	18 43 14.3	+3.4
	baz=244,slow=14,SNR=2.6							
PMG	**Port Moresby**	**7.65**	**245**	P		Pn	18 42 10.8	-1.1
	8.1nm,0.3s,baz=26,slow=4.1,SNR=18							
PMG				S		Sn	18 43 38.4	+1.1
	3.3nm,0.3s,baz=116,slow=8.9,SNR=14							
DZM	**Mont Dzumac**	**19.76**	**144**	P		Pn	18 44 49.5	-0.4
	0.7nm,0.3s,baz=323,slow=20,SNR=7.1							
ASAR	**Alice Springs**	**26.12**	**226**	P		P	18 45 50.6	-0.3
	0.2nm,0.5s,baz=56,slow=9.2,SNR=5.9							
ASAR				PcP		PcP	18 49 16.6	-0.4
	0.5nm,0.6s,baz=61,slow=2.7,SNR=8.1							
CMAR	**Chiang Mai Arr**	**59.69**	**295**	P		P	18 50 21.1	+0.1
	0.2nm,0.7s,baz=120,slow=5.3,SNR=3.3							
SONM	**Songino Array**	**68.20**	**327**	P		P	18 51 17.0	+0.5
	0.6nm,0.5s,baz=136,slow=5.0,SNR=5.8							
MKAR	**Makanchi Array**	**82.25**	**319**	P		P	18 52 38.8	+1.7
	0.3nm,0.4s,baz=91,slow=8.8,SNR=12							
ILAR	**Eielson Array**	**82.91**	**22**	P		P	18 52 39.0	-1.1
	0.7nm,0.6s,baz=240,slow=5.7,SNR=13							
TORD	**Torodi Ar. Bea**	**152.01**	**286**	PKPbc		PKPbc	19 00 09.9	-1.7
	0.4nm,0.6s,baz=96,slow=2.0,SNR=3.7							

MAN 15 19:22:44,17°.35N×119°.81E,h20km,mb4.6,ML3.5,MS3.4, 2C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**0.84**	**47**	⇑*i*P		Pn	19 23 05.4	+4.7
ABRA	**Dolores**	**0.91**	**71**	*e*P		Pn	19 23 00.9	-0.1
ABRA				*e*S		Sn	19 23 14.5	+0.4
BOLP	**Bolinao**	**0.97**	**174**	*e*P		Pb	19 23 01.0	-1.2
BOLP				*e*S		Sn	19 23 18.0	+2.3
PIP	**Pasuquin**	**1.23**	**38**	⇑*i*P		Pb	19 23 06.4	-0.2
CAUP	**Cauayan**	**1.96**	**102**	*e*P		Pb	19 23 18.7	-0.4
PCPH	**Palayan**	**2.17**	**145**	⇓*e*P		Pn	19 23 19.1	+0.1
PCPH				*e*S		Sn	19 23 45.2	0.0
BALP	**Baler**	**2.33**	**133**	*e*P		Pn	19 23 21.8	+0.5

PALP Palanan 2.51 96 *e*P Pn 19 23 25.4 +1.7

GUC 15 19:30:40.3±0.5, 28°22S×70°83W, h37km±3km, ML3.5, 2C-1D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.80**	**172**	*i*P	Pn	19 30 56.0	+0.6
LCO				*i* S	Sn	19 31 07.5	+1.2
LCO				AML	AML	19 31 09.8	
	comp=E,1μm,0.3s						
CPCH	**Copiapo**	**0.96**	**26⇑**	*i*P	Pn	19 30 57.7	+0.5
CPCH				*i* S	Sn	19 31 10.9	+1.2
CPCH				AML	AML	19 31 11.7	
	comp=E,30μm,0.1s						
CDCH	**Caldera**	**1.15**	**0**	*e*P	Pn	19 31 00.3	+0.5
CDCH				AML	AML	19 31 20.1	
	comp=E,764nm,0.2s						
TLL	**Tololo Astrono**	**1.94**	**179⇓**	*i*P	Pn	19 31 13.0	+1.9
TLL				*i* S	Sn	19 31 37.2	+2.7
TLL				AML	AML	19 31 41.5	
	comp=E,301nm,0.5s						

*BEO **15** 19:36:44.8±1.1, 42°.67N×13°.15E, h0km, ML3.4/6*
*ROM **15** 19:36:44.9±0.1, 42°.51N×13°.31E, h10km, ML3.2/33, Error ellipse: s-maj=1.1km s-min=0.8km az=59.0*
*ISCJB **15** 19:36:45.0±0.2, 42°.53N±0°.02×13°.34E±0°.02, h15km±3km, Error ellipse: s-maj=2.8km s-min=2.2km az=29.9*
*PRU **15** 19:36:45.5, 42°.55N×13°.41E, h0km*
*CSEM **15** 19:36:45.1±0.1, 42°.51N×13°.30E, h8km, ML3.6/14, Error ellipse: s-maj=2.1km s-min=1.7km az=48.0*
*LDG **15** 19:36:45.6±0.9, 42°.45N×13°.33E, h2km, Ml3.1/6, Error ellipse: s-maj=20.4km s-min=10.8km az=98.0*

ISC 15 19:36:45.2±0.7, 42°53N±0°.01×13°31E±0°.01, h14km±4km, n166, σ1§29/214, 3C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**83⇓**	*i*Pg	**Pg**	**19 36 47.6**	**-0.6**
CAMP				Sg	**Sg**	**19 36 49.3**	**-0.9**
	25μm,0.6s						
CAMP	**Campotosto**	**0.07**	**83⇓**	*i*Pg	**Pg**	**19 36 47.6**	**-0.6**
CAMP				Sg	**Sg**	**19 36 49.3**	**-0.9**
	25μm,0.6s						
AQU	**L'Aquila**	**0.18**	**159**	Pg	**Pg**	**19 36 49.3**	**-0.2**
AQU				Sg	**Sg**	**19 36 52.5**	**0.0**
AQU	**L'Aquila**	**0.18**	**159**	Pg	**Pg**	**19 36 49.3**	**-0.2**
AQU				Sg	**Sg**	**19 36 52.5**	**0.0**
LNSS	**Leonessa**	**0.22**	**291**	Pg	**Pg**	**19 36 50.1**	**0.0**
LNSS				Sg	**Sg**	**19 36 54.0**	**+0.6**
LNSS	**Leonessa**	**0.22**	**291**	Pg	**Pg**	**19 36 50.1**	**0.0**
LNSS				Sg	**Sg**	**19 36 54.0**	**+0.6**
TERO	**Teramo**	**0.23**	**66**	Pg	**Pg**	**19 36 50.0**	**-0.3**
TERO				Sg	**Sg**	**19 36 53.7**	**-0.1**
TERO	**Teramo**	**0.23**	**66**	Pg	**Pg**	**19 36 50.0**	**-0.3**
TERO				Sg	**Sg**	**19 36 53.7**	**-0.1**
FIAM	**Fiamignano**	**0.30**	**209**	Pg	**Pg**	**19 36 51.1**	**-0.3**
FIAM				Sg	**Sg**	**19 36 55.4**	**-0.2**
	4μm,0.7s						
FIAM	**Fiamignano**	**0.30**	**209**	Pg	**Pg**	**19 36 51.1**	**-0.3**
FIAM				Sg	**Sg**	**19 36 55.4**	**-0.2**
	4μm,0.7s						
FAGN	**Fagnano**	**0.33**	**142**	Pg	**Pg**	**19 36 52.4**	**+0.4**
FAGN				Sg	**Sg**	**19 36 57.4**	**+0.9**
FAGN	**Fagnano**	**0.33**	**142**	Pg	**Pg**	**19 36 52.4**	**+0.4**
FAGN				Sg	**Sg**	**19 36 57.4**	**+0.9**
NRCA	**Norcia**	**0.34**	**334**	Pg	**Pg**	**19 36 52.1**	**-0.1**
NRCA				Sg	**Sg**	**19 36 57.4**	**+0.5**
NRCA	**Norcia**	**0.34**	**334**	Pg	**Pg**	**19 36 52.1**	**-0.1**
NRCA				Sg	**Sg**	**19 36 57.4**	**+0.5**
VCEL	**Villa Celiera**	**0.41**	**109**	Pg	**Pg**	**19 36 53.6**	**+0.1**
VCEL				Sg	**Sg**	**19 36 59.4**	**+0.3**
	6μm,0.9s						
VCEL	**Villa Celiera**	**0.41**	**109**	Pg	**Pg**	**19 36 53.6**	**+0.1**
VCEL				Sg	**Sg**	**19 36 59.4**	**+0.3**
	6μm,0.9s						
MNS	**Montasola**	**0.49**	**253**	Pg	**Pg**	**19 36 54.4**	**-0.5**
MNS				Sg	**Sg**	**19 37 01.6**	**+0.2**
	2μm,0.3s						
MNS	**Montasola**	**0.49**	**253**	Pg	**Pg**	**19 36 54.4**	**-0.5**
MNS				Sg	**Sg**	**19 37 01.6**	**+0.2**
	2μm,0.3s						
OFFI	**Offida**	**0.49**	**34**	Pg	**Pg**	**19 36 55.4**	**+0.5**
	8μm,0.5s						
OFFI	**Offida**	**0.49**	**34**	Pg	**Pg**	**19 36 55.4**	**+0.5**
	8μm,0.5s						
PTQR	**Pietraquaria**	**0.51**	**173**	Pg	**Pg**	**19 36 54.6**	**-0.7**
PTQR				Sg	**Sb**	**19 37 02.9**	**-0.4**
	148nm,0.5s						
PTQR	**Pietraquaria**	**0.51**	**173**	Pg	**Pg**	**19 36 54.6**	**-0.7**
PTQR				Sg	**Sb**	**19 37 02.9**	**-0.4**
	148nm,0.5s						
TRTR	**Tortoreto Alta**	**0.52**	**57**	Pg	**Pb**	**19 36 56.3**	**+0.1**
	5μm,0.5s						
TRTR	**Tortoreto Alta**	**0.52**	**57**	Pg	**Pb**	**19 36 56.3**	**+0.1**
	5μm,0.5s						
FDMO	**Fiordimonte**	**0.54**	**342**	Pg	**Pg**	**19 36 55.5**	**-0.3**
FDMO				Sg	**Sb**	**19 37 03.7**	**-0.4**
	1μm,0.2s						
FDMO	**Fiordimonte**	**0.54**	**342**	Pg	**Pg**	**19 36 55.5**	**-0.3**
FDMO				Sg	**Sb**	**19 37 03.7**	**-0.4**
	1μm,0.2s						
CESX	**Cesi**	**0.55**	**279**	Pg	**Pg**	**19 36 55.3**	**-0.7**
CESX				Sg	**Sg**	**19 37 03.4**	**+0.1**
	1μm,0.3s						
CESX	**Cesi**	**0.55**	**279**	Pg	**Pg**	**19 36 55.3**	**-0.7**
CESX				Sg	**Sg**	**19 37 03.4**	**+0.1**
	1μm,0.3s						
CESI	**CESI - Serrava**	**0.56**	**328**	Pg	**Pg**	**19 36 56.1**	**-0.2**
CESI				Sg	**Sb**	**19 37 05.0**	**+0.1**
	589nm,0.7s						
CESI	**CESI - Serrava**	**0.56**	**328**	Pg	**Pg**	**19 36 56.1**	**-0.2**
CESI				Sg	**Sb**	**19 37 05.0**	**+0.1**
	589nm,0.7s						
CERT	**Cerreto**	**0.63**	**203**	Pg	**Pg**	**19 36 56.6**	**-0.9**
	2μm,0.5s						
CERT	**Cerreto**	**0.63**	**203**	Pg	**Pg**	**19 36 56.6**	**-0.9**
	2μm,0.5s						
MTCE	**Montecelio**	**0.66**	**220**	Pg	**Pg**	**19 36 57.1**	**-0.9**
	569nm,0.5s						
MTCE	**Montecelio**	**0.66**	**220**	Pg	**Pg**	**19 36 57.1**	**-0.9**
	569nm,0.5s						
INTR	**Introdacqua**	**0.68**	**139**	Pg	**Pg**	**19 36 57.5**	**-0.9**
INTR				Sg	**Sg**	**19 37 07.6**	**+0.3**
	1μm,0.8s						
INTR	**Introdacqua**	**0.68**	**139**	Pg	**Pg**	**19 36 57.5**	**-0.9**
INTR				Sg	**Sg**	**19 37 07.6**	**+0.3**
	1μm,0.8s						
VVLD	**Villa Vallelon**	**0.69**	**161**	Pg	**Pg**	**19 36 58.2**	**-0.5**
	1μm,0.7s						
VVLD	**Villa Vallelon**	**0.69**	**161**	Pg	**Pg**	**19 36 58.2**	**-0.5**
	1μm,0.7s						
GUMA	**Gualdo di Mace**	**0.70**	**40**	Pg	Pg	19 36 55.8	-3.1
GUMA				Sg	**Sg**	**19 37 04.6**	**-3.6**
ASSB	**Assisi San Ben**	**0.71**	**317**	Pg	**Pg**	**19 36 58.6**	**-0.4**
ASSB				Sg	**Sb**	**19 37 09.1**	**+0.1**
	860nm,0.3s						
ASSB	**Assisi San Ben**	**0.71**	**317**	Pg	**Pg**	**19 36 58.6**	**-0.4**
ASSB				Sg	**Sb**	**19 37 09.1**	**+0.1**
	860nm,0.3s						
GUAR	**Guarcino**	**0.73**	**180**	Pg	**Pg**	**19 36 59.6**	**+0.2**
	811nm,0.8s						
GUAR	**Guarcino**	**0.73**	**180**	Pg	**Pg**	**19 36 59.6**	**+0.2**
	811nm,0.8s						
SNTG	**Esanatoglia**	**0.78**	**339**	Pg	**Pg**	**19 36 59.7**	**-0.6**
SNTG	**Esanatoglia**	**0.78**	**339**	Pg	**Pg**	**19 36 59.7**	**-0.6**
LPEL	**Lama dei Pelig**	**0.80**	**126**	Pg	**Pg**	**19 36 59.7**	**-1.1**
LPEL				Sg	**Sg**	**19 37 11.1**	**-0.3**
	528nm,0.5s						
LPEL	**Lama dei Pelig**	**0.80**	**126**	Pg	**Pg**	**19 36 59.7**	**-1.1**
LPEL				Sg	**Sg**	**19 37 11.1**	**-0.3**
	528nm,0.5s						
CAFR	**Castel Frentan**	**0.82**	**111**	Pg	**Pg**	**19 37 00.6**	**-0.5**
	1μm,0.7s						
CAFR	**Castel Frentan**	**0.82**	**111**	Pg	**Pg**	**19 37 00.6**	**-0.5**
	1μm,0.7s						
RMP	**Rome, Mte Porz**	**0.85**	**213**	Pg	**Pg**	**19 37 01.6**	**0.0**
	1μm,0.8s						
RMP	**Rome, Mte Porz**	**0.85**	**213**	Pg	**Pg**	**19 37 01.6**	**0.0**
	1μm,0.8s						
CING	**Cingoli**	**0.85**	**354**	Pg	**Pg**	**19 37 00.8**	**-0.9**
	1μm,0.2s						
CING	**Cingoli**	**0.85**	**354**	Pg	**Pg**	**19 37 00.8**	**-0.9**
	1μm,0.2s						
POFI	**Posta Fibreno**	**0.86**	**160**	Pg	**Pg**	**19 37 01.1**	**-0.8**
	363nm,0.7s						
POFI	**Posta Fibreno**	**0.86**	**160**	Pg	**Pg**	**19 37 01.1**	**-0.8**
	363nm,0.7s						
SDI	**San Donato**	**0.90**	**156**	Pg	**Pg**	**19 37 01.6**	**-1.0**
	168nm,0.4s						
SDI	**San Donato**	**0.90**	**156**	Pg	**Pg**	**19 37 01.6**	**-1.0**
	168nm,0.4s						
MURB	**Monte Urbino**	**0.94**	**322**	Pg	**Pb**	**19 37 02.9**	**-0.4**
	1μm,0.3s						
MURB	**Monte Urbino**	**0.94**	**322**	Pg	**Pb**	**19 37 02.9**	**-0.4**
	1μm,0.3s						
MGAB	**Montegabbione**	**0.97**	**294**	Pg	**Pb**	**19 37 03.0**	**-0.8**
MGAB	**Montegabbione**	**0.97**	**294**	Pg	**Pb**	**19 37 03.0**	**-0.8**
GIUL	**Giuliano Di Ro**	**0.97**	**183**	Pg	**Pb**	**19 37 03.3**	**-0.5**
	1μm,1.3s						
GIUL	**Giuliano Di Ro**	**0.97**	**183**	Pg	**Pb**	**19 37 03.3**	**-0.5**
	1μm,1.3s						
ARVD	**Arcevia**	**1.01**	**344**	Pg	**Pb**	**19 37 03.7**	**-0.8**
	570nm,0.7s						
ARVD	**Arcevia**	**1.01**	**344**	Pg	**Pb**	**19 37 03.7**	**-0.8**
	570nm,0.7s						
AOI	**Ancona**	**1.04**	**12**	Pg	**Pb**	**19 37 04.6**	**-0.5**
	669nm,0.7s						
AOI	**Ancona**	**1.04**	**12**	Pg	**Pb**	**19 37 04.6**	**-0.5**
	669nm,0.7s						
CERA	**Filignano**	**1.07**	**150**	Pg	**Pb**	**19 37 04.9**	**-0.6**
	720nm,1.1s						
CERA	**Filignano**	**1.07**	**150**	Pg	**Pb**	**19 37 04.9**	**-0.6**
	720nm,1.1s						
TOLF	**Tolfa**	**1.08**	**245**	Pg	**Pb**	**19 37 04.9**	**-0.8**
	413nm,0.8s						
TOLF	**Tolfa**	**1.08**	**245**	Pg	**Pb**	**19 37 04.9**	**-0.8**
	413nm,0.8s						
SACS	**San Sascciano d**	**1.08**	**288**	Pg	**Pb**	**19 37 05.4**	**-0.4**
	363nm,0.7s						
MIDA	**Miranda**	**1.13**	**141**	Pg	**Pb**	**19 37 04.9**	**-1.6**
	200nm,0.6s						
MIDA	**Miranda**	**1.13**	**141**	Pg	**Pb**	**19 37 04.9**	**-1.6**
	200nm,0.6s						
PIEI	**Pieia**	**1.16**	**331**	Pg	**Pb**	**19 37 06.4**	**-0.7**
	451nm,0.6s						
PIEI	**Pieia**	**1.16**	**331**	Pg	**Pb**	**19 37 06.4**	**-0.7**
	451nm,0.6s						
FSSB	**Fossombrone**	**1.23**	**342**	Pn	**Pn**	**19 37 07.7**	**-0.3**
	156nm,0.3s						
FSSB	**Fossombrone**	**1.23**	**342**	Pn	**Pn**	**19 37 07.7**	**-0.3**
	156nm,0.3s						
CAFI	**Castiglion Fio**	**1.27**	**309**	Pn	**Pn**	**19 37 09.8**	**+0.1**
	285nm,0.8s						
CAFI	**Castiglion Fio**	**1.27**	**309**	Pn	**Pn**	**19 37 09.8**	**+0.1**
	285nm,0.8s						
PARC	**Parchiule**	**1.37**	**325**	Pn	**Pb**	**19 37 10.9**	**+0.2**
	462nm,0.8s						
PARC	**Parchiule**	**1.37**	**325**	Pn	**Pb**	**19 37 10.9**	**+0.2**
	462nm,0.8s						
ARCI	**Arcidosso**	**1.39**	**284**	Pn	**Pg**	**19 37 11.6**	**-0.4**
	154nm,1.2s						
ARCI	**Arcidosso**	**1.39**	**284**	Pn	**Pg**	**19 37 11.6**	**-0.4**
	154nm,1.2s						
PESA	**Pesaro**	**1.46**	**346**	Pn	**Pg**	**19 37 12.7**	**-0.5**
	684nm,0.3s						
PESA	**Pesaro**	**1.46**	**346**	Pn	**Pg**	**19 37 12.7**	**-0.5**
	684nm,0.3s						
MAON	**Monte Argentar**	**1.62**	**267**	Pn	**Pn**	**19 37 13.5**	**+0.2**
	95nm,0.9s						
MAON	**Monte Argentar**	**1.62**	**267**	Pn	**Pn**	**19 37 13.5**	**+0.2**
	95nm,0.9s						
MS1	**Monte Sant'Ang**	**2.12**	**112**	*e*Pn	**Pb**	**19 37 24.4**	**+0.9**
NVLJ	**Novalja**	**2.33**	**29**	*e*Pn	**Pn**	**19 37 23.6**	**+0.5**
NVLJ					Sn	**19 37 53.4**	**+1.9**
NVLJ	**Novalja**	**2.33**	**29**	*e*Pn	**Pn**	**19 37 23.5**	**+0.5**
NVLJ					Sn	**19 37 53.4**	**+1.9**
MAIM	**Mastiano**	**2.49**	**305**	P	**Pb**	**19 37 27.5**	**-2.1**
SKDS	**Skadanscina**	**3.06**	**9⇑**	*i*Pn	**Pn**	**19 37 33.5**	**+0.3**
SKDS				*i* Sn	**Sn**	**19 38 09.8**	**+0.1**
SKDS							
	comp=Z,28nm,0.3s						
SKDS	**Skadanscina**	**3.06**	**9**	Pn	**Pn**	**19 37 33.5**	**+0.3**
SKDS				*i* Sn	**Sn**	**19 38 09.8**	**+0.1**
	comp=Z,28nm,0.3s						
PGF	**Pioggiola**	**3.19**	**272**	*e*Pn	**Pn**	**19 37 35.3**	**+0.3**
PGF				*e*Sn	**Sn**	**19 38 15.5**	**+2.6**
	comp=Z,4.6nm,0.4s						
PGF	**Pioggiola**	**3.19**	**272**	*e*Pn	**Pn**	**19 37 35.3**	**+0.3**
PGF				*e*Sn	**Sn**	**19 38 15.5**	**+2.6**
	comp=Z,2.3nm,0.4s						
STON	**Ston**	**3.25**	**82**	*i* Pn	**Pn**	**19 37 37.1**	**+1.3**
STON				Sn	**Sn**	**19 38 14.8**	**+0.6**
STON	**Ston**	**3.25**	**82**	*i* Pn	**Pn**	**19 37 37.0**	**+1.3**
STON				Sn	**Sn**	**19 38 14.8**	**+0.6**
VOY	**Vojsko**	**3.53**	**7**	*e*Pn	**Pn**	**19 37 40.0**	**+0.3**
VOY				*e*		19 37 49.8	
VOY	**Vojsko**	**3.53**	**7**	*e*Pn	**Pn**	**19 37 40.0**	**+0.3**
VOY				*e*Sn	**Sn**	**19 38 24.3**	**+3.0**
ABTA	**Abfaltersbach**	**4.26**	**353**	*i* Pn	**Pn**	**19 37 51.2**	**+1.5**
	SNR=49						
ABTA	**Abfaltersbach**	**4.26**	**353**	Pn	**Pn**	**19 37 51.2**	**+1.5**
	SNR=49						
SBF	**Sospel**	**4.50**	**289**	*e*Pn	**Pn**	**19 37 53.8**	**+0.8**
SBF	**Sospel**	**4.50**	**289**	*e*Pn	**Pn**	**19 37 53.8**	**+0.8**
KBA	**Koelnbreinsper**	**4.55**	**0⇑**	*i*Pn	**Pn**	**19 37 54.8**	**+1.0**
	SNR=10						
KBA	**Koelnbreinsper**	**4.55**	**0**	Pn	**Pn**	**19 37 54.8**	**+1.0**
	SNR=10						
BBLS	**Lazići**	**4.65**	**71**	*e*Pn	**Pn**	**19 37 57.3**	**+2.2**
BBLS				*e*Sn	**Sn**	**19 38 51.3**	**+2.4**
BBLS	**Lazići**	**4.65**	**71**	*e*Pn	**Pn**	**19 37 57.3**	**+2.2**
BBLS				*e*Sn	**Sn**	**19 38 51.3**	**+2.4**
FETA	**Feichten**	**4.86**	**339⇓**	*i*Pn	**Pn**	**19 37 59.9**	**+1.9**
FETA	**Feichten**	**4.86**	**339**	Pn	**Pn**	**19 37 59.9**	**+1.9**
FRF	**La Foret Royal**	**4.99**	**284**	*e*Pn	**Pn**	**19 38 00.0**	**+0.3**
FRF	**La Foret Royal**	**4.99**	**284**	*e*Pn	**Pn**	**19 38 00.0**	**+0.3**
TIR	**Tirane**	**5.03**	**101**	*e*P	Sn	19 39 34.0	+36
LMR	**La Mourre**	**5.06**	**281**	*e*Pn	**Pn**	**19 38 00.7**	**+0.1**
LMR	**La Mourre**	**5.06**	**281**	*e*Pn	**Pn**	**19 38 00.7**	**+0.1**
DIVS	**Divibare**	**5.12**	**70**	*e*Pn	**Pn**	**19 38 02.8**	**+1.3**
DIVS				*e*Sn	**Sn**	**19 39 02.1**	**+1.6**
DIVS	**Divibare**	**5.12**	**70**	*e*Pn	**Pn**	**19 38 02.8**	**+1.3**
DIVS				*e*Sn	**Sn**	**19 39 02.1**	**+1.6**
IVAS	**Ivanjica**	**5.12**	**76**	*e*Pn	**Pn**	**19 38 03.5**	**+2.0**
IVAS				*e*Sn	**Sn**	**19 39 01.9**	**+1.4**
IVAS	**Ivanjica**	**5.12**	**76**	*e*Pn	**Pn**	**19 38 03.5**	**+2.0**
IVAS				*e*Sn	**Sn**	**19 39 01.9**	**+1.4**
MBDF	**Montbardon**	**5.23**	**297**	*e*P	**Pn**	**19 38 05.9**	**+2.7**
MBDF	**Montbardon**	**5.23**	**297**	*e*P	**Pn**	**19 38 05.9**	**+2.7**
GRUS	**Gruza**	**5.58**	**73**	*e*Pn	**Pn**	**19 38 09.1**	**+1.3**
GRUS				*e*Sn	**Sn**	**19 39 12.6**	**+0.9**
GRUS	**Gruza**	**5.58**	**73**	*e*Pn	**Pn**	**19 38 09.1**	**+1.3**
GRUS				*e*Sn	**Sn**	**19 39 12.6**	**+0.9**
LPG	**La Plagne**	**5.59**	**304**	*e*P	Pn	19 38 11.8	+3.7
LPG				*e*Sn	**Sn**	**19 39 10.9**	**-1.4**
	comp=Z,2.6nm,0.5s						
LPL	**La Plagne**	**5.61**	**304**	*e*P	Pn	19 38 11.9	+3.5
LPL				*e*Sn	**Sn**	**19 39 10.1**	**-2.6**
	comp=Z,1.7nm,0.3s						
CONA	**Conrad Observa**	**5.69**	**18⇑**	*i*Pn	**Pn**	**19 38 09.7**	**+0.3**
CONA	**Conrad Observa**	**5.69**	**18**	Pn	**Pn**	**19 38 09.7**	**+0.3**
SMRF	**Simiane la Rot**	**5.83**	**287**	*e*P	**Pn**	**19 38 13.3**	**+2.0**
SMRF	**Simiane la Rot**	**5.83**	**287**	*e*P	**Pn**	**19 38 13.3**	**+2.0**
BARS	**Barje**	**6.27**	**84**	*e*Pn	**Pn**	**19 38 18.8**	**+1.5**
BARS				*e*Sn	**Sn**	**19 39 30.8**	**+2.0**
BARS	**Barje**	**6.27**	**84**	*e*Pn	**Pn**	**19 38 18.8**	**+1.5**
BARS				*e*Sn	**Sn**	**19 39 30.8**	**+2.0**
KHC	**Kasperske Hory**	**6.61**	**2**	*e*PN	**Pn**	**19 38 22.6**	**+0.7**
KHC				*ex*	x	19 38 33.5	
KHC				*e*SN	**Sn**	**19 39 35.1**	**-1.9**
KHC	**Kasperske Hory**	**6.61**	**2**	Pn	**Pn**	**19 38 22.6**	**+0.7**
SMOL	**Smolenice**	**6.65**	**24**	*e*PN	Pn	19 38 26.2	+3.8
KZN	**Kozani**	**6.73**	**106**	*e*P	**Sb**	**19 39 59.0**	**-3.4**
ZAPS	**Zavoj**	**6.88**	**81**	*e*Pn	**Pn**	**19 38 27.6**	**+1.9**
ZAPS				*e*Sn	**Sn**	**19 39 44.3**	**+0.4**
ZAPS	**Zavoj**	**6.88**	**81**	*e*Pn	**Pn**	**19 38 27.6**	**+1.9**
ZAPS				*e*Sn	**Sn**	**19 39 44.3**	**+0.4**
HINF	**Hinteralfeld**	**6.99**	**321**	*e*Pn	**Pn**	**19 38 27.8**	**+0.7**
HINF				*e*Sn	**Sn**	**19 39 44.3**	**-2.1**
	comp=Z,5.7nm,0.5s						
HINF	**Hinteralfeld**	**6.99**	**321**	*e*Pn	**Pn**	**19 38 27.8**	**+0.7**
VLS	**Valsamata**	**7.05**	**126**	*e*P	Sn	19 40 02.5	+15
VYHS	**Vyhne**	**7.12**	**31**	*e*PN	**Pn**	**19 38 30.4**	**+1.5**
VYHS				*e*SN	**Sn**	**19 39 49.3**	**-0.2**
VYHS	**Vyhne**	**7.12**	**31**	*e*Pn	**Pn**	**19 38 30.4**	**+1.5**
VYHS				*e*Sn	**Sn**	**19 39 49.3**	**-0.2**
THL	**Klokotos Trika**	**7.21**	**111**	*e*P	Sn	19 40 04.5	+13
CDF	**Champ du Feu**	**7.25**	**326**	*e*Pn	**Pn**	**19 38 31.6**	**+0.8**
CDF				*e*Sn	**Sn**	**19 39 51.3**	**-1.7**
	comp=Z,8.2nm,0.6s						
CDF	**Champ du Feu**	**7.25**	**326**	*e*Pn	**Pn**	**19 38 31.6**	**+0.8**
CDF				*e*Sn	**Sn**	**19 39 51.3**	**-1.7**
	comp=Z,4.1nm,0.6s						
HAU	**Haudompre**	**7.36**	**321**	*e*Pn	**Pn**	**19 38 33.1**	**+0.9**
HAU				*e*Sn	**Sn**	**19 39 51.9**	**-3.6**
	comp=Z,8.3nm,0.4s						
HAU	**Haudompre**	**7.36**	**321**	*e*Pn	**Pn**	**19 38 33.1**	**+0.9**
EVR	**Evrytania**	**7.39**	**116**	*e*P	Sn	19 40 08.0	+12
PRU	**Pruhonice**	**7.51**	**6**	*e*SN	**Sn**	**19 39 56.8**	**-2.4**
RLS	**Riolos of Patr**	**7.66**	**123**	*e*P	Sn	19 40 11.5	+8.5
EFP	**Efpalio**	**7.72**	**119**	*e*P	Sn	19 40 12.5	+8.1
NKC	**Novy Kostel**	**7.73**	**356**	*e*SN	**Sn**	**19 40 03.0**	**-1.7**
TRIZ	**Trizonia**	**7.87**	**119**	*e*P	Sn	19 40 14.5	+6.6
LAKA	**Lakka**	**7.88**	**120**	*e*P	Sn	19 40 14.5	+6.2
KALE	**Kalithea**	**7.89**	**119**	*e*P	Sn	19 40 15.5	+6.7
PLG	**Polygyros**	**7.91**	**102**	*e*P	**Sn**	**19 40 13.5**	**+4.4**
AMT	**Artemida-Makis**	**8.14**	**125**	*e*P	**Sn**	**19 40 20.0**	**+5.1**
NEO	**Neokhori**	**8.16**	**110**	*e*P	**Sn**	**19 40 16.5**	**+1.2**
GUR	**Goura**	**8.29**	**121**	*e*P	**Sn**	**19 40 20.0**	**+1.5**
LKR	**Lokris**	**8.32**	**114**	*e*P	**Sn**	**19 40 20.0**	**+0.8**
ITM	**Ithomi**	**8.51**	**126**	*e*P	**Sn**	**19 40 23.0**	**-0.8**
LTK	**Loutraki**	**8.64**	**118**	*e*P	**Sn**	**19 40 23.5**	**-3.5**
VLX	**Vlachokerasia**	**8.66**	**123**	*e*P	**Sn**	**19 40 27.0**	**-0.6**
AOS	**Alonnisos**	**8.68**	**109**	*e*P	**Sn**	**19 40 23.0**	**-5.0**
CLL	**Collm**	**8.79**	**359**	*e*(Sb)	Sn	19 40 23.0	-7.5
CLL				*e*Sg	Sg	19 41 39.0	+12
DID	**Didima**	**9.11**	**120**	*e*P	Sn	19 40 30.0	-8.7

*ISCJB **15** 19:55:57.2±0.2, 42°.46N±0°.02×13°.38E±0°.02, h14km±2km, Error ellipse: s-maj=2.9km s-min=2.3km az=144.4*
*CSEM **15** 19:55:57.6±0.1, 42°.45N×13°.39E, h10km, ML3.9/9, Error ellipse: s-maj=2.5km s-min=1.9km az=59.0*
*LDG **15** 19:55:57.8±1.4, 42°.44N×13°.51E, h2km, Ml3.0/4, Error ellipse: s-maj=30.6km s-min=14.7km az=108.0*
*ROM **15** 19:55:57.6±0.1, 42°.46N×13°.38E, h11km, Ml3.1/38, Error ellipse: s-maj=0.9km s-min=0.7km az=69.0*

ISC 15 19:55:57.8±0.7, 42°47N±0°.01×13°40E±0°.02, h16km±4km, n124, σ1§11/161, 1C, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**8**	Pg	**Pg**	**19 56 00.6**	**-0.6**
CAMP				Sg	**Sg**	**19 56 02.4**	**-1.0**
CAMP	**Campotosto**	**0.07**	**8**	Pg	**Pg**	**19 56 00.6**	**-0.6**
CAMP				Sg	**Sg**	**19 56 02.4**	**-1.0**
AQU	**L'Aquila**	**0.11**	**177**	Pg	**Pg**	**19 56 01.0**	**-0.5**
AQU				Sg	**Sg**	**19 56 03.4**	**-0.4**
	6μm,0.3s						
AQU	**L'Aquila**	**0.11**	**177**	Pg	**Pg**	**19 56 01.0**	**-0.5**
AQU				Sg	**Sg**	**19 56 03.4**	**-0.4**
	6μm,0.3s						
TERO	**Teramo**	**0.22**	**44**	Pg	**Pg**	**19 56 02.8**	**-0.2**
TERO				Sg	**Sg**	**19 56 06.4**	**0.0**
	7μm,0.2s						
TERO	**Teramo**	**0.22**	**44**	Pg	**Pg**	**19 56 02.8**	**-0.2**
TERO				Sg	**Sg**	**19 56 06.4**	**0.0**
	7μm,0.2s						
FAGN	**Fagnano**	**0.24**	**145**	Pg	**Pg**	**19 56 03.6**	**+0.3**
FAGN				Sg	**Sb**	**19 56 08.1**	**+0.2**
FAGN	**Fagnano**	**0.24**	**145**	Pg	**Pg**	**19 56 03.6**	**+0.3**
FIAM	**Fiamignano**	**0.28**	**226**	Pg	**Pg**	**19 56 03.7**	**-0.3**
FIAM				Sg	**Sg**	**19 56 08.1**	**-0.2**
FIAM	**Fiamignano**	**0.28**	**226**	Pg	**Pg**	**19 56 03.7**	**-0.3**
FIAM				Sg	**Sg**	**19 56 08.1**	**-0.2**
LNSS	**Leonessa**	**0.30**	**298**	Pg	**Pg**	**19 56 03.9**	**-

	444nm,0.3s							
SDI	**San Donato**	**0.82**	**158**	Pg	**Pb**	**19 56 12.9**	**-0.7**	
SDI	**San Donato**	**0.82**	**158**	Pg	**Pb**	**19 56 12.9**	**-0.7**	
RMP	**Rome, Mte Porz**	**0.83**	**218**	Pg	**Pb**	**19 56 13.9**	**0.0**	
	584nm,0.4s							
RMP	**Rome, Mte Porz**	**0.83**	**218**	Pg	**Pb**	**19 56 13.9**	**0.0**	
	584nm,0.4s							
SNTG	**Esanatoglia**	**0.86**	**337**	Pg	**Pb**	**19 56 13.8**	**-0.5**	
	133nm,0.3s							
SNTG	**Esanatoglia**	**0.86**	**337**	Pg	**Pb**	**19 56 13.8**	**-0.5**	
	133nm,0.3s							
RDP	**Rocca di Papa**	**0.87**	**216**	Pg	**Pb**	**19 56 14.5**	**0.0**	
	1µm,0.6s							
RDP	**Rocca di Papa**	**0.87**	**216**	Pg	**Pb**	**19 56 14.5**	**0.0**	
	1µm,0.6s							
GIUL	**Giuliano Di Ro**	**0.91**	**187**	Pg	**Pb**	**19 56 14.6**	**-0.7**	
	1µm,1.1s							
GIUL	**Giuliano Di Ro**	**0.91**	**187**	Pg	**Pb**	**19 56 14.6**	**-0.7**	
	1µm,1.1s							
CING	**Cingoli**	**0.92**	**351**	Pg	**Pb**	**19 56 14.9**	**-0.5**	
	321nm,0.3s							
CING	**Cingoli**	**0.92**	**351**	Pg	**Pb**	**19 56 14.9**	**-0.5**	
	321nm,0.3s							
RNI2	**Rionero Sannit**	**0.95**	**143**	Pg	**Pb**	**19 56 15.2**	**-0.7**	
	651nm,0.6s							
RNI2	**Rionero Sannit**	**0.95**	**143**	Pg	**Pb**	**19 56 15.2**	**-0.7**	
	651nm,0.6s							
CERA	**Filignano**	**0.98**	**152**	Pg	**Pb**	**19 56 15.5**	**-1.0**	
	695nm,0.7s							
CERA	**Filignano**	**0.98**	**152**	Pg	**Pb**	**19 56 15.5**	**-1.0**	
	695nm,0.7s							
MURB	**Monte Urbino**	**1.02**	**322**	Pg	**Pb**	**19 56 16.8**	**-0.4**	
	732nm,0.3s							
MURB	**Monte Urbino**	**1.02**	**322**	Pg	**Pb**	**19 56 16.8**	**-0.4**	
	732nm,0.3s							
MIDA	**Miranda**	**1.04**	**142**	Pg	**Pb**	**19 56 16.3**	**-1.2**	
	332nm,0.4s							
MIDA	**Miranda**	**1.04**	**142**	Pg	**Pb**	**19 56 16.3**	**-1.2**	
	332nm,0.4s							
MGAB	**Montegabbione**	**1.05**	**296**	Pg	**Pb**	**19 56 17.2**	**-0.4**	
MGAB	**Montegabbione**	**1.05**	**296**	Pg	**Pb**	**19 56 17.2**	**-0.4**	
FRES	**Fresagrandinar**	**1.07**	**117**	Pg	**Pb**	**19 56 17.1**	**-0.8**	
	278nm,0.5s							
FRES	**Fresagrandinar**	**1.07**	**117**	Pg	**Pb**	**19 56 17.1**	**-0.8**	
	278nm,0.5s							
ARVD	**Arcevia**	**1.08**	**342**	Pg	**Pb**	**19 56 17.9**	**-0.3**	
	133nm,0.5s							
ARVD	**Arcevia**	**1.08**	**342**	Pg	**Pb**	**19 56 17.9**	**-0.3**	
	133nm,0.5s							
AOI	**Ancona**	**1.09**	**8**	Pg	**Pn**	**19 56 18.6**	**+0.1**	
	169nm,0.3s							
AOI	**Ancona**	**1.09**	**8**	Pg	**Pn**	**19 56 18.6**	**+0.1**	
	169nm,0.3s							
TRIV	**Trivento**	**1.11**	**129**	Pg	**Pb**	**19 56 17.9**	**-0.7**	
	218nm,0.6s							
TRIV	**Trivento**	**1.11**	**129**	Pg	**Pb**	**19 56 17.9**	**-0.7**	
	218nm,0.6s							
TOLF	**Tolfa**	**1.11**	**249**	Pg	**Pb**	**19 56 17.8**	**-0.8**	
	203nm,0.5s							
TOLF	**Tolfa**	**1.11**	**249**	Pg	**Pb**	**19 56 17.8**	**-0.8**	
	203nm,0.5s							
SACS	**San Casciano d**	**1.16**	**290**	Pn	**Pn**	**19 56 19.1**	**-0.3**	
	169nm,0.5s							
LATE	**Laterza**	**1.19**	**278**	Pn	**Pn**	**19 56 19.7**	**-0.1**	
	310nm,0.4s							
LATE	**Laterza**	**1.19**	**278**	Pn	**Pn**	**19 56 19.7**	**-0.1**	
	310nm,0.4s							
VAGA	**Valle Agricola**	**1.22**	**149**	Pn	**Pn**	**19 56 20.2**	**-0.1**	
	194nm,0.7s							
VAGA	**Valle Agricola**	**1.22**	**149**	Pn	**Pn**	**19 56 20.2**	**-0.1**	
	194nm,0.7s							
PIEI	**Pieia**	**1.24**	**330**	Pn	**Pn**	**19 56 20.6**	**0.0**	
	121nm,0.4s							
PIEI	**Pieia**	**1.24**	**330**	Pn	**Pn**	**19 56 20.6**	**0.0**	
	121nm,0.4s							
BSSO	**Busso**	**1.28**	**135**	Pn	**Pn**	**19 56 21.1**	**0.0**	
	240nm,0.8s							
BSSO	**Busso**	**1.28**	**135**	Pn	**Pn**	**19 56 21.1**	**0.0**	
	240nm,0.8s							
CAFI	**Castiglion Fio**	**1.36**	**310**	Pn	**Pb**	**19 56 23.0**	**+0.1**	
	183nm,0.7s							
CAFI	**Castiglion Fio**	**1.36**	**310**	Pn	**Pb**	**19 56 23.0**	**+0.1**	
	183nm,0.7s							
MS1	**Monte Sant'Ang**	**2.04**	**111**	*e*Pn	**Pg**	**19 56 36.3**	**-0.7**	
NVLJ	**Novalja**	**2.36**	**27**	*e*Pn	**Pn**	**19 56 37.4**	**+1.6**	
NVLJ				Sn	**Sn**	**19 57 06.3**	**+2.0**	
NVLJ	**Novalja**	**2.36**	**27**	*e*Pn	**Pn**	**19 56 37.3**	**+1.6**	
NVLJ				Sn	**Sn**	**19 57 06.3**	**+2.0**	
SKDS	**Skadanscina**	**3.11**	**8**	*i* Pn	**Pn**	**19 56 46.6**	**+0.3**	
SKDS	**Skadanscina**	**3.11**	**8**	Pn	**Pn**	**19 56 46.6**	**+0.3**	
STON	**Ston**	**3.20**	**81**	*e*Pn	**Pn**	**19 56 49.4**	**+2.0**	
STON				Sn	**Sn**	**19 57 27.4**	**+2.3**	
STON	**Ston**	**3.20**	**81**	*e*Pn	**Pn**	**19 56 49.4**	**+2.0**	
STON				Sn	**Sn**	**19 57 27.4**	**+2.3**	
PGF	**Pioggiola**	**3.25**	**273**	*e*Pn	**Pn**	**19 56 49.0**	**+0.8**	
PGF				*e*Sn	**Sn**	**19 57 29.1**	**+2.5**	
	9.5nm,0.7s							
PGF	**Pioggiola**	**3.25**	**273**	*e*Pn	**Pn**	**19 56 49.0**	**+0.8**	
PGF				*e*Sn	**Sn**	**19 57 29.1**	**+2.5**	
	4.8nm,0.7s							
BOJS	**Bojanci**	**3.32**	**23**	*i* Pn	**Pn**	**19 56 51.7**	**+2.6**	
BOJS	**Bojanci**	**3.32**	**23**	*i* Pn	**Pn**	**19 56 51.7**	**+2.6**	
ABTA	**Abfaltersbach**	**4.33**	**352**	*i* Pn	**Pn**	**19 57 04.3**	**+1.3**	
ABTA	**Abfaltersbach**	**4.33**	**352**	Pn	**Pn**	**19 57 04.3**	**+1.3**	
SBF	**Sospel**	**4.58**	**290**	*e*Pn	**Pn**	**19 57 07.4**	**+1.0**	
SBF	**Sospel**	**4.58**	**290**	*e*Pn	**Pn**	**19 57 07.4**	**+1.0**	
FRF	**La Foret Royal**	**5.07**	**285**	*e*Pn	**Pn**	**19 57 13.5**	**+0.4**	
FRF	**La Foret Royal**	**5.07**	**285**	*e*Pn	**Pn**	**19 57 13.5**	**+0.4**	
LMR	**La Mourre**	**5.13**	**282**	*e*Pn	**Pn**	**19 57 14.3**	**+0.3**	
LMR	**La Mourre**	**5.13**	**282**	*e*Pn	**Pn**	**19 57 14.3**	**+0.3**	
MBDF	**Montbardon**	**5.32**	**297**	*e*P	**Pn**	**19 57 19.6**	**+3.0**	
MBDF	**Montbardon**	**5.32**	**297**	*e*P	**Pn**	**19 57 19.6**	**+3.0**	
LPG	**La Plagne**	**5.67**	**305**	*e*P	Pn	19 57 25.4	+3.8	
LPL	**La Plagne**	**5.69**	**305**	*e*P	Pn	19 57 25.4	+3.5	
SMRF	**Simiane la Rot**	**5.91**	**287**	*e*P	**Pn**	**19 57 26.9**	**+2.2**	
SMRF	**Simiane la Rot**	**5.91**	**287**	*e*P	**Pn**	**19 57 26.9**	**+2.2**	
HINF	**Hinteralfeld**	**7.07**	**321**	*e*Pn	**Pn**	**19 57 41.5**	**+0.9**	
HINF				*e*Sn	**Sn**	**19 58 00.0**	**-2.6**	
	2.2nm,0.4s							
HINF	**Hinteralfeld**	**7.07**	**321**	*e*Pn	**Pn**	**19 57 41.5**	**+0.9**	
CDF	**Champ du Feu**	**7.34**	**326**	*e*Pn	**Pn**	**19 57 45.1**	**+0.8**	
CDF				*e*Sn	**Sn**	**19 59 04.9**	**-2.4**	
	1.7nm,0.4s							
CDF	**Champ du Feu**	**7.34**	**326**	*e*Pn	**Pn**	**19 57 45.1**	**+0.8**	
HAU	**Haudompre**	**7.44**	**321**	*e*Pn	**Pn**	**19 57 46.8**	**+1.1**	
HAU				*e*Sn	**Sn**	**19 59 05.3**	**-4.4**	
	3.6nm,0.4s							
HAU	**Haudompre**	**7.44**	**321**	*e*Pn	**Pn**	**19 57 46.8**	**+1.1**	

*ISCJB **15** 19:57:37.6±1.2,55˚38N±0˙04×163˚81E±0˙06, h6km±9km, Error ellipse: s-maj=6.6km s-min=5.9km az=34.7*
*MOS **15** 19:57:38.8±1.6,55˚35N×163˚80E, h24km, mb4.2/1, Error ellipse: s-maj=25.2km s-min=20.3km az=123.5*
*KRSC **15** 19:57:38.5±0.0,55˚39N×163˚85E, h23km±22km, ML4.1*
ISC 15 19:57:36.9±1.5,55˚39N±0˙04×163˚76E±0˙03, h6km±12km, n32,σ1°s24/55, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.98**	**327**	P	**Pg**	**19 57 55.5**	**-0.2**
KBTR				S	**Sg**	**19 58 08.0**	**-0.3**
KBTR	**Krutoberegovo**	**0.98**	**327**	P	**Pg**	**19 57 55.5**	**-0.2**
KBTR				S	**Sg**	**19 58 08.0**	**-0.3**
BKI	**Bering**	**1.28**	**98**	PN	**Pb**	**19 58 01.3**	**0.0**
BKI				S	**Sn**	**19 58 17.9**	**-0.8**
BKI	**Bering**	**1.28**	**98**	P	**Pb**	**19 58 01.3**	**0.0**
BKI				S	**Sn**	**19 58 17.9**	**-0.8**
MKZ	**Mys Kozlova**	**1.44**	**235**	PN	**Pn**	**19 58 03.9**	**+0.4**
MKZ				S	**Sn**	**19 58 21.5**	**-1.2**
MKZ	**Mys Kozlova**	**1.44**	**235**	P	**Pn**	**19 58 03.9**	**+0.4**
MKZ				S	**Sn**	**19 58 21.5**	**-1.2**
SMKR	**Semkarok**	**1.76**	**314**	P	**Pn**	**19 58 08.4**	**+0.4**
SMKR				S	**Sn**	**19 58 31.1**	**+0.3**
ZLN	**Zelenaya**	**1.79**	**292**	P	**Pb**	**19 58 10.4**	**+0.2**
ZLN				S	**Sb**	**19 58 33.4**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**1.82**	**289**	P	**Pb**	**19 58 10.4**	**-0.3**
BZGR				S	**Sb**	**19 58 34.6**	**+0.7**
CIRR	**Tsirk**	**1.85**	**294**	S	**Sb**	**19 58 35.8**	**+1.0**
BDR	**Baidarnaya**	**1.86**	**310**	P	**Pb**	**19 58 10.7**	**-0.6**
LGNR	**Loginova**	**1.87**	**293**	P	**Pb**	**19 58 11.7**	**0.0**
LGNR				S	**Sb**	**19 58 36.2**	**+0.8**
SRKR	**Sorokina**	**1.93**	**312**	P	**Pb**	**19 58 11.7**	**-0.9**
SRKR				S	**Sb**	**19 58 36.8**	**-0.1**
KLY	**Klyuchi**	**1.98**	**299**	PN	**Pn**	**19 58 10.9**	**-0.1**
KLY				S	**Sn**	**19 58 35.5**	**-0.7**
KLY	**Klyuchi**	**1.98**	**299**	P	**Pn**	**19 58 10.9**	**-0.1**
KLY				S	**Sn**	**19 58 35.5**	**-0.7**
KRSR	**Krestovskiy**	**1.99**	**296**	P	**Pn**	**19 58 12.3**	**+1.1**
KRSR				S	**Sb**	**19 58 37.9**	**-0.7**
KIRR	**Kirishev**	**2.02**	**288**	P	**Pn**	**19 58 13.1**	**+1.4**
KIRR				S	**Sb**	**19 58 39.1**	**-0.4**
KMNR	**Kamenistaya**	**2.04**	**282**	P	**Pb**	**19 58 14.2**	**-0.2**
KMNR				S	**Sb**	**19 58 40.4**	**+0.4**
TUMR	**Tumrok**	**2.07**	**268**	P	**Pb**	**19 58 14.5**	**-0.4**
TUMR				S	**Sb**	**19 58 41.2**	**+0.2**
KPT	**Kopyto**	**2.09**	**287**	P	**Pn**	**19 58 14.0**	**+1.5**
KPT				S	**Sb**	**19 58 40.5**	**-0.9**
KOZR	**Kozyr**	**2.29**	**289**	PN	**Pb**	**19 58 18.1**	**-0.5**
KOZR				S	**Sb**	**19 58 47.6**	**+0.4**
KOZ	**Kozyrevsk**	**2.30**	**289**	P	**Pb**	**19 58 18.1**	**-0.7**
KOZ				S	**Sb**	**19 58 47.6**	**+0.1**
SRDR	**Sredinnyy**	**2.46**	**294**	P	**Pn**	**19 58 19.4**	**+1.7**
SRDR				S	**Sb**	**19 58 50.3**	**-1.9**
ESO	**Esso**	**2.92**	**283**	PN	**Pn**	**19 58 26.2**	**+2.3**
ESO	**Esso**	**2.92**	**283**	P	**Pn**	**19 58 26.2**	**+2.3**
SPN	**Mys Shipunski**	**3.18**	**225**	PN	**Pn**	**19 58 26.9**	**-0.5**
SPN	**Mys Shipunski**	**3.18**	**225**	P	**Pn**	**19 58 26.9**	**-0.5**
SPN				S	**Sn**	**19 59 02.4**	**-3.2**
SDLR	**Sedlovina**	**3.56**	**235**	P	**Pn**	**19 58 34.9**	**+2.2**
SMAR	**Somma**	**3.60**	**236**	P	**Pn**	**19 58 35.9**	**+2.4**
UGLR	**Uglovaya**	**3.63**	**235**	P	**Pn**	**19 58 36.1**	**+2.4**
AVH	**Avacha**	**3.63**	**236**	P	**Pn**	**19 58 36.8**	**+3.0**
MTVR	**Mutnovka**	**4.40**	**231**	P	**Pn**	**19 58 46.9**	**+2.5**
MTVR				S	**Sn**	**19 59 36.5**	**+0.5**

*BJI **15** 20:01:28.4,3˚42S×100˚44E, h8km, mB6.6/58, mb6.0/70, Ms6.7/77, Ms7 6.6/68*
*ISCJB **15** 20:01:31.0±0.6,3˚18S±0˙02×100˚40E±0˙01, h10km±3km, mb5.9/254, MS6.4/202, Error ellipse: s-maj=3.3km s-min=2.1km az=33.5*
*IDC **15** 20:01:30.6±0.3,3˚17S×100˚49E, h0km, mb5.5/47, mb1 5.6/49, mb1mx5.6/49, mbtmp5.5/49, ML4.9/2, MS6.3/26, Ms1 6.3/26, ms1mx6.1/40, Error ellipse: s-maj=9.9km s-min=5.9km az=43.0*
*DJA **15** 20:01:33.8±0.5,3˚S±1˚×10˚0E±˚, h13km±4km, M6.3/113, mb5.9/113, mB6.6/107, MLv6.7/25, Mw(mB)6.4/107, Mwp6.3/60*
*NEIC **15** 20:01:34.7±0.1,3.˚12S×100.˚47E, h22km, mb6.0/88, ME6.1, MS6.4/110, MW6.2, MW6.1, Error ellipse: s-maj=5.0km s-min=3.6km az=36.0, Moment Tensor Solution. s94 Moment tensor: Scale 10¹⁸Nm; M_{rr}1.08; $M_{\theta\theta}$-0.55; $M_{\phi\phi}$-0.53; $M_{r\theta}$1.41; $M_{\theta\phi}$0.35; $M_{\phi r}$-0.82; Best double couple: $M_0$1.9000×10¹⁸ NP1:φs319.00000°, δ16.00000°, λ106.00000°. NP2:φs123.00000°, δ75.00000°, λ86.00000°. Principal axes: T 2.0200, Plg60.0000°, Azm26.0000°; N -0.2200, Plg4.0000°, Azm123.0000°; P -1.8000, Plg29.0000°, Azm216.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt at Padang, Sumatra. Also felt at Sekudai, Malaysia and in Singapore.
*MOS **15** 20:01:34.9±1.0,3˚01S×100˚54E, h33km, mb6.2/89, MS6.3/66 Error ellipse: s-maj=7.3km s-min=3.9km az=119.7*
*AUST **15** 20:01:35.0±0.9,3˚21S×100˚49E, h20km, Error ellipse: s-maj=0.8km s-min=0.6km az=225.0*
*GCMT **15** 20:01:37.9±0.1,3˚40S×100˚16E, h15km, MW6.3, Moment Tensor Solution. s93,c165; s84,c112; Moment tensor: Scale 10¹⁸Nm; M_{rr}0.97±.01; $M_{\theta\theta}$-0.51±.01; $M_{\phi\phi}$-0.46±.01; $M_{r\theta}$2.50±.03; $M_{\theta\phi}$0.55±.01; $M_{\phi r}$-1.70±.03; Best double couple: $M_0$3.20000×10¹⁸ NP1:φs324.00000°, δ10.00000°, λ109.00000°. NP2:φs125.00000°, δ81.00000°, λ87.00000°. Principal axes: T 3.1700, Plg54.0000°, Azm31.0000°; N 0.0300, Plg3.0000°, Azm125.0000°; P -3.2000, Plg36.0000°, Azm217.0000°; Data Used: II IU IC G CN. Surface waves: sta=100, comp=180, per= 50.*
*SZGRF **15** 20:01:38.3,3˚28S×100˚07E, h37km, mb5.5, MS6.3, Southern Sumatera, Indonesia*
ISC 15 20:01:35.3±0.3,3˚13S±0˙03×100˚46E±0˙03, h28km±1km, h28km:pP-P,n1775,σ1942/1979, mb6.0/255, MS6.4/204, 356C-242D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**1.44**	**44**	P	**Pb**	**20 02 01.9**	**+0.3**
KRJI				S	Sb	20 02 26.2	+6.7
MASI	**Maura Aman, Be**	**1.78**	**90**	P	**Pn**	**20 02 05.8**	**+1.5**
MASI				S	**Sb**	**20 02 30.3**	**+1.0**
KSI	**Kapahiang**	**2.20**	**104**	P	**Pn**	**20 02 10.7**	**+0.6**
KSI				S	**Sb**	**20 02 39.7**	**-1.6**
PDSI	**Padang**	**2.20**	**0**	P	**Pn**	**20 02 11.3**	**+1.2**
PDSI				S	**Sb**	**20 02 40.1**	**-1.3**
PPI	**Padang Panjang**	**2.65**	**359**	P	**Pn**	**20 02 17.9**	**+1.6**
PPI				S	**Sb**	**20 02 53.5**	**-0.9**
MNAI	**Manna**	**2.78**	**116**	P	**Pn**	**20 02 18.7**	**+0.7**
MNAI				S	**Sn**	**20 02 52.3**	**+1.6**
EGSI	**Enggano, Bengk**	**2.86**	**141**	P	**Pn**	**20 02 18.2**	**-0.9**
EGSI				S	**Sn**	**20 02 51.0**	**-1.7**
RGRI	**Rengat**	**3.34**	**34**	P	**Pn**	**20 02 28.7**	**+3.0**
BKNI	**Bangkinang**	**3.48**	**10**	P	**Pn**	**20 02 29.5**	**+1.8**
MNSI	**Mandailing Nat**	**3.99**	**347**	P	**Pn**	**20 02 34.9**	**+0.1**
LWLI	**Liwa**	**4.05**	**118**	P	**Pn**	**20 02 36.2**	**+0.5**
GSI	**Gunungsitoli**	**5.26**	**327**	P	**Pn**	**20 02 50.4**	**-1.8**
	3µm,1.6s,156µm374µm43nn						
GSI				S	**Sn**	**20 03 54.1**	**+2.2**
	3µm,1.6s,156µm374µm43nn						
BLSI	**Bandar Lampung**	**5.27**	**115**	P	**Pn**	**20 02 53.6**	**+1.3**
	3µm,1.2s,73µm180µm20nn						
BTDF	**Bukit Timah Da**	**5.56**	**37**	P	**Pn**	**20 02 58.5**	**+2.3**
	2µm,1.1s,35µm267µm40nn						
PPBI	**Pangkal Pinang**	**5.75**	**81**	P	**Pn**	**20 03 00.5**	**+1.5**
	685nm,1.2s,39µm300µm20nn						
KGM	**Kluang**	**5.86**	**29**	P	**Pn**	**20 03 03.4**	**+3.0**
MYKOM	**Kota Tinggi**	**5.95**	**35**	P	**Pn**	**20 03 04.7**	**+3.0**
MYKOM	**Kota Tinggi**	**5.95**	**35**	P	**Pn**	**20 03 03.7**	**+2.1**
	2µm,1.4s,52µm622µm53nn						
PSI	**Prapat**	**6.08**	**345**	Pn	**Pn**	**20 03 02.2**	**-1.5**
PSI				Sn	Sn	20 04 20.8	+8.3
PSI	**Prapat**	**6.08**	**345**	P	**Pn**	**20 03 02.7**	**-0.9**
	2µm,1.5s,45µm294µm18nn						
PSI	**Prapat**	**6.08**	**345**	Pn	**Pn**	**20 03 02.2**	**-1.5**
	10.0nm,0.3s,baz=152,slow=12,SNR=32						
PSI				Sn	Sn	20 04 20.8	+8.3
	20nm,0.3s,baz=170,slow=17,SNR=1.8						
CGJI	**Cibinong**	**6.26**	**124**	P	**Pn**	**20 03 04.6**	**-1.3**
SBJI	**Serang**	**6.39**	**118**	P	**Pn**	**20 03 08.5**	**+0.8**
	2µm,1.4s,61µm32nn						
FRIM	**Kepong**	**6.43**	**10**	P	**Pn**	**20 03 10.8**	**+2.6**
TSI	**Tuntungan**	**6.85**	**344**	P	**Pn**	**20 03 14.4**	**+0.4**
	4µm,1.1s,91µm320µm43nn						
TNG	**Tangerang**	**6.87**	**116**	P	**Pn**	**20 03 15.6**	**+1.3**
	8µm,1.1s,100µm211µm44nn						
TNG	**Tangerang**	**6.87**	**116**	P	**Pn**	**20 03 15.6**	**+1.3**
	13µm,1.1s,157µm227µm69nn						
SNSI	**Sinabang, Aceh**	**6.88**	**323**	P	**Pn**	**20 03 12.2**	**-2.2**
KCSI	**Kotacane, Aceh**	**7.13**	**338**	P	**Pn**	**20 03 16.9**	**-1.0**
	1µm,1.6s,41µm						
DBJI	**Dramaga**	**7.13**	**119**	P	**Pn**	**20 03 18.4**	**+0.4**
	3µm,1.6s,68µm135µm31nn						
SKJI	**Sukabumi**	**7.19**	**123**	P	**Pn**	**20 03 16.7**	**-2.1**
	4µm,1.1s,52µm						
TPI	**Tanjungpandan**	**7.20**	**87**	P	**Pn**	**20 03 19.8**	**+1.0**
	263nm,2.4s,9µm171µm12nn						
IPM	**Ipoh**	**7.58**	**4**	*e*Pn	**Pn**	**20 03 26.4**	**+2.4**
IPM	**Ipoh**	**7.58**	**4**	P	**Pn**	**20 03 26.2**	**+2.1**
IPM	**Ipoh**	**7.58**	**4**	P	**Pn**	**20 03 25.9**	**+1.8**
	1µm,1.2s,35µm250µm20nn						
LEM	**Lembang**	**8.02**	**118**	P	**Pn**	**20 03 30.3**	**0.0**
	3µm,1.0s,64µm233µm						
LEM	**Lembang**	**8.02**	**118**	P	**Pn**	**20 03 30.5**	**+0.2**
	baz=8.0,SNR=74						
MLSI	**Meulaboh, Aceh**	**8.39**	**331**	P	**Pn**	**20 03 34.4**	**-0.7**
CISI	**Cisompet, Garu**	**8.54**	**121**	P	**Pn**	**20 03 35.5**	**-1.9**
	4µm,0.7s,44µm86µm						
KTGM	**Kuala Trenggan**	**8.81**	**18**	P	**Pn**	**20 03 43.9**	**+2.9**
XMI	**Christmas Isla**	**8.94**	**145**	P	Pn	20 03 36.9	-5.9
	baz=8.9,SNR=16						
XMI				S	Sn	20 05 10.5	-12
	baz=8.9,SNR=19						
XMIS	**Christmas Isla**	**8.94**	**145**	P	**Pn**	**20 03 40.6**	**-2.2**
	baz=8.9,SNR=3.7						
XMIS				S	Sn	20 05 09.1	-14
	baz=8.9,SNR=11						
LHMI	**Lhok Sumawe**	**9.01**	**337**	P	**Pn**	**20 03 43.8**	**+0.1**
	705nm,1.5s,29µm145µm						
TGJI	**Tegal**	**9.40**	**114**	P	**Pn**	**20 03 51.0**	**+2.0**
	793nm,0.8s,29µm						
CLJI	**Cilicap**	**9.66**	**119**	P	**Pn**	**20 03 53.9**	**+1.3**
	416nm,1.3s,14µm						
COCO	**West Island**	**9.69**	**202**	*e*P	Pn	20 03 47.6	-5.4
COCO	**West Island**	**9.69**	**202**	*e*Pn	Pn	20 03 47.6	-5.4
COCO	**West Island**	**9.69**	**202**	Pn	Pn	20 03 49.3	-3.7
	SNR=11						
COCO	**West Island**	**9.69**	**202**	P	Pn	20 03 47.0	-6.0
	2µm,1.1s,23µm182µm						
BSI	**Banda Aceh**	**10.00**	**329**	P	**Pn**	**20 03 54.5**	**-2.8**
	691nm,1.2s,8µm89µm						
BJII	**Banjamegara**	**10.12**	**115**	P	**Pn**	**20 03 59.9**	**+1.0**
	551nm,1.0s,16µm189µm						
SMRI	**Semarang**	**10.68**	**112**	P	**Pn**	**20 04 07.9**	**+1.3**
	1µm,1.0s,39µm						
YOGI	**Yogyakarta**	**10.84**	**116**	P	**Pn**	**20 04 08.9**	**+0.1**
	1µm,1.2s,42µm87µm						
KSM	**Kuching**	**10.86**	**65**	*e*Pn	**Pn**	**20 04 11.7**	**+2.7**
KSM	**Kuching**	**10.86**	**65**	P	Pn	20 04 12.5	+3.5
KSM	**Kuching**	**10.86**	**65**	P	**Pn**	**20 04 11.8**	**+2.7**
	400nm,1.4s,16µm217µm						
KSM	**Kuching**	**10.86**	**65**	P	Pn	20 04 12.8	+3.8
	baz=11,SNR=24						
UGM	**Wanagama**	**11.09**	**116**	*e*Pn	**Pn**	**20 04 11.1**	**-1.2**
UGM	**Wanagama**	**11.09**	**116**	P	**Pn**	**20 04 10.6**	**-1.6**
	881nm,1.2s,27µm86µm						
UGM	**Wanagama**	**11.09**	**116**	P	**Pn**	**20 04 11.0**	**-1.2**
	baz=11,SNR=100						
PBKI	**Pangkalan Bun**	**11.21**	**88**	P	**Pn**	**20 04 16.8**	**+3.0**
	1µm,1.9s,32µm126µm						
STKI	**Sintang**	**11.46**	**74**	P	**Pn**	**20 04 20.5**	**+3.2**
	947nm,2.3s,33µm96µm						
PCJI	**Pacitan**	**11.79**	**116**	P	**Pn**	**20 04 19.6**	**-2.2**
	629nm,1.2s,12µm43µm						
SJI	**Sawahan**	**12.15**	**113**	P	**Pn**	**20 04 26.3**	**-0.5**
	652nm,0.9s,11µm61µm						
PWJI	**Pagerwojo**	**12.29**	**114**	P	**Pn**	**20 04 27.1**	**-1.6**
	482nm,1.2s,13µm98µm						
BWJI	**Bawean**	**12.46**	**103**	P	**Pn**	**20 04 34.0**	**+3.0**
	246nm,1.5s,5µm19µm						
KRKI	**Karangkates**	**12.94**	**113**	P	**Pn**	**20 04 36.7**	**-0.8**
	817nm,1.1s,33µm92µm						
SBUM	**Sibu**	**13.00**	**65**	P	Pn	20 04 42.8	+4.5
SBUM	**Sibu**	**13.00**	**65**	P	Pn	20 04 42.8	+4.5
	1µm,1.9s,41µm189µm						
BLJI	**Banyuglugur**	**13.86**	**110**	P	**Pn**	**20 04 51.3**	**+1.2**
	497nm,1.4s,12µm58µm						
GMJI	**Gumukmas**	**13.89**	**112**	P	**Pn**	**20 04 48.8**	**-1.8**
	261nm,1.3s,15µm42µm						
KMMI	**Kaliangket**	**14.01**	**107**	P	**Pn**	**20 04 52.6**	**+0.5**
	719nm,1.3s,28µm93µm						
BTM	**Bintulu**	**14.10**	**64**	P	**P**	**20 04 58.6**	**-2.2**
BBKI	**Banjar Baru**	**14.37**	**92**	P	**Pn**	**20 04 57.9**	**+0.9**
	2µm,2.1s,46µm109µm						
MTKI	**Muara Teweh, K**	**14.59**	**82**	P	**Pn**	**20 05 02.4**	**+2.3**
	1µm,2.9s,43µm95µm						
BYJI	**Banyuwangi**	**14.72**	**111**	P	**Pn**	**20 05 00.6**	**-1.2**
	826nm,1.1s,29µm						
SRBI	**Singaraja**	**15.49**	**109**	P	**Pn**	**20 05 09.9**	**-2.1**
IGBI	**Denpasar**	**15.66**	**112**	P	**Pn**	**20 05 10.9**	**-3.3**
	236nm,1.0s,107µm						
DNP	**Denpasar**	**15.67**	**111**	P	**Pn**	**20 05 13.8**	**-0.6**
	747nm,1.0s,21µm68µm						
KBKI	**Kotabaru**	**15.69**	**91**	P	**Pn**	**20 05 15.5**	**+0.9**

QIZ comp=Z,530nm,2.0s pmax pmax
QIZ comp=Z,13µm,8.0s LR LR
QIZ comp=N,79µm,14.0s LR LR
MNI Manado 24.79 80 comp=Z,2µm,0.9s,comp=Z,30µm P **P 20 06 54.6 -0.7**
MDRS Chennai 25.72 309 *eP* **P 20 07 03.9 +0.3**
SNPH Sibulan 25.86 61⇓ *eP* P 20 06 53.9 -11
CTBH Cotabato--PC H 25.87 67⇑ *iP* **P 20 07 06.1 +1.1**
MBWA Marble Bar 25.94 135 *eP* **P 20 07 06.4 +0.8**
comp=Z,265nm,1.3s
MBWA Marble Bar 25.94 135 P **P 20 07 07.0 +1.4**
SNR=11
RCP Roxas 26.54 56⇑ *eP* **P 20 07 12.2 +1.2**
TGY Tagaytay City 26.56 49 P **P 20 07 12.5 +1.2**
TGY Tagaytay City 26.56 49 P **P 20 07 12.5 +1.2**
comp=Z,530nm,0.5s,baz=168,slow=2.4,SNR=36
TBP Tagbilaran 26.57 61 *eP* **P 20 07 12.4 +1.1**
VIS Vishakhapatnam 26.73 321 *eP* **P 20 07 13.7 +1.0**
LLP Lapu-Lapu 26.95 60⇑ *eP* **P 20 07 14.8 0.0**
LQP Lukban 27.03 50 *eP* **P 20 07 17.7 +2.1**
DAV Davao City (W) 27.04 68 P **P 20 07 16.5 +0.9**
DAV Davao City (W) 27.04 68 P **P 20 07 16.8 +1.2**
SNR=37
DAV Davao City (W) 27.04 68 P **P 20 07 18.8 +3.2**
comp=Z,796nm,2.1s,comp=Z,24µmcomp=Z,58µm
DAV Davao City (W) 27.04 68 P **P 20 07 16.5 +0.9**
comp=Z,193nm,0.4s,baz=270,slow=3.0,SNR=28
LBMI Labuha 27.14 85 P **P 20 07 16.8 +0.3**
comp=Z,1µm,1.1s,comp=Z,15µmcomp=Z,46µm
TNTI Ternate 27.18 82 P **P 20 07 16.8 0.0**
comp=Z,601nm,1.7s,comp=Z,11µmcomp=Z,59µm
BOLP Bolinao 27.30 44 *eP* **P 20 07 18.4 +0.5**
GQP Guinayangan 27.61 52⇓ *eP* **P 20 07 20.9 +0.3**
PCPH Palayan 27.61 47 *eP* **P 20 07 20.0 -0.6**
BALP Baler 28.07 48 *eP* **P 20 07 25.4 +0.6**
CAL Calcutta 28.13 336 *eP* **P 20 07 25.4 +0.3**
CAL *ex* x 20 12 05.8
KMI Kunming 28.17 4⇑ P **P 20 07 26.9 +1.1**
KMI pP **pP 20 07 30.6 -3.4**
KMI sP sP 20 07 31.8 -5.6
KMI PP **PnPn 20 08 18.6 +4.3**
KMI PcP **PcP 20 10 42.4 +2.9**
KMI S **S 20 12 12.4 +2.5**
KMI SS SnSn 20 13 37.6 +10
KMI pmax pmax
comp=Z,250nm,1.6s
KMI pmax pmax
comp=Z,7µm,13.7s
KMI LR LR
comp=N,92µm,13.9s
KMI LR LR
comp=E,81µm,13.9s
KMI LR LR
comp=Z,104µm,17.2s
DGAR Diego Garcia 28.20 260 PFAKE 20 07 40.0 +14
DGAR LR LR
comp=Z,47µm,20.0s
PLP Palo 28.23 59⇑ *eP* pP 20 07 26.0 -8.4
AGT Agartala 28.30 342 *ex* **pP 20 07 34.0 -0.9**
AGT *ex* x 20 08 44.0
MSAI Masohi 28.43 91 P P 20 07 17.4 -11
IMP Imphal 28.46 347 *ex* P 20 07 25.0 -3.2
IMP *ex* x 20 12 10.0
HKC Hong Kong Obse 28.61 27⇑ *iP* **P 20 07 30.0 +0.5**
HKC S **S 20 12 17.0 +0.6**
ABRA Dolores 28.73 43 *eP* **P 20 07 31.2 +0.6**
FITZ Fitzroy Crossi 28.81 123 P **P 20 07 31.1 -0.3**
FITZ Fitzroy Crossi 28.81 123 P **P 20 07 31.1 -0.3**
comp=Z,61nm,0.8s,baz=288,slow=6.1,SNR=111
FITZ Fitzroy Crossi 28.81 123 P **P 20 07 30.7 -0.7**
baz=29,SNR=69
GZH Guangzhou 28.93 25 P P 20 07 38.5 +6.2
GZH S S 20 12 41.0 +20
GZH LR LR
comp=N,147µm,13.9s
GZH LR LR
comp=E,39µm,13.8s
GZH LR LR
comp=Z,185µm,14.2s
CAUP Cauayan 29.03 46 *eP* **P 20 07 33.5 +0.2**
MEEK Meekatharra 29.14 145 P **P 20 07 34.9 +0.6**
baz=29,SNR=20
PALP Palanan 29.55 47 *eP* P 20 07 42.2 +4.3
SHL Shillong 29.71 344 *i* P **P 20 07 40.0 +0.6**
SHL *i* x x 20 12 43.0
HYB Hyderabad 29.73 314 *i* P **P 20 07 39.0 -0.5**
comp=Z,80nm,1.0s
HYB *eS* **S 20 12 34.0 -0.2**
HYB LR LR 20 17 00.0
comp=Z,43nm,18.0s
HYB Hyderabad 29.73 314 *eP* **P 20 07 39.8 +0.2**
MORW Morawa 29.75 152 P **P 20 07 40.3 +0.7**
baz=30,SNR=5.2
GYA Guiyang 30.02 11⇑ *iP* **P 20 07 41.9 -0.2**
GYA PP **PnPn 20 08 44.3 +4.9**
GYA PcP **PcP 20 10 45.6 +1.6**
GYA S **S 20 12 40.8 +2.1**
GYA SS **ScP 20 14 20.9 -3.6**
GYA ScP SS 20 14 28.0 -19
GYA pmax pmax
comp=Z,240nm,1.0s
GYA pmax pmax
comp=Z,7µm,13.0s
GYA LR LR
comp=N,86µm,16.1s
GYA LR LR
comp=E,76µm,15.2s
GYA LR LR
comp=Z,121µm,16.4s
BOK Bokaro 30.29 333 *eP* **P 20 07 46.4 +2.0**
BOK AMB AMB 20 07 53.7
comp=Z,507nm,1.4s
SWI Sorong 30.86 86 P **P 20 07 48.2 -1.4**
comp=Z,484nm,1.3s,comp=Z,7µmcomp=Z,39µm
SWI Sorong 30.86 86 P **P 20 07 48.6 -1.0**
baz=31,SNR=36
SWI S **S 20 12 48.8 -3.3**
baz=31,SNR=4.6
BLDU Ballidu 31.36 152 P P 20 08 03.9 +10
baz=31,SNR=5.7
FAKI Fak Fak 31.75 90 P **P 20 07 56.4 -1.0**
comp=Z,336nm,1.1s,comp=Z,7µmcomp=Z,37µm
LATR Latur 31.82 313 *eP* **P 20 07 56.3 -1.6**
MTN Manton Dam 31.84 109 P **P 20 07 56.1 -2.0**
baz=32,SNR=70
NGP Nagpur 31.97 320 *eP* **P 20 07 58.0 -1.2**
NGP *ex* x 20 08 24.2
comp=Z,220nm,1.6s
NGP *ex* x 20 13 06.8
GOA Goa 32.20 306⇓ *ex* **P 20 08 03.7 +2.4**
TLE Tual 32.28 96 P **P 20 08 01.8 -0.3**
baz=32,SNR=4.9
ODAN Odare 32.37 338 *eP* **P 20 08 03.6 +0.6**
comp=Z,985nm,1.0s
KLBR Kellerberrin 32.67 152 P **P 20 08 07.2 +2.0**
baz=33,SNR=8.3
TAPN Taplejung 32.70 339 *eP* **P 20 08 06.7 +0.8**
comp=Z,3µm,1.3s
TAPN Taplejung 32.70 339 *eP* **P 20 08 07.5 +1.6**
comp=Z,3µm,1.2s
TWG Pinlang 32.71 37 *eP* **P 20 08 06.9 +1.1**
comp=Z,6µm,2.0s
RAMN Ramite 32.76 337 *eP* **P 20 08 07.0 +0.6**
TPUB Ta-pu 32.82 36 *eP* **P 20 08 07.3 +0.6**
comp=Z,1µm,1.5s
JBP Jabalpur 32.89 324⇑ *iP* **P 20 08 09.2 +2.0**
JBP *eS* **S 20 13 23.3 -0.1**
QZH Quanzhou 33.00 31⇑ *iP* **P 20 08 09.9 +1.7**
QZH S **S 20 13 29.3 +4.3**
QZH pmax pmax
comp=Z,2µm,1.6s
QZH pmax pmax
comp=Z,11µm,3.0s
QZH LR LR
comp=N,68µm,14.0s
QZH LR LR
comp=E,125µm,12.9s
QZH LR LR
comp=Z,141µm,19.2s
KDU Kakadu 33.06 108 P **P 20 08 06.8 -2.2**
baz=33,SNR=33

YULB Yu-li 33.28 37 *eP* **P 20 08 10.5 -0.2**
comp=Z,563nm,1.6s
SSLB Suanglung 33.38 36 *eP* **P 20 08 12.3 +0.7**
comp=Z,1µm,1.8s
NWAO Narrogin (SRO) 33.55 154 *eP* **P 20 08 13.6 +0.7**
comp=Z,120nm,1.1s
NWAO Narrogin (SRO) 33.55 154 P **P 20 08 13.1 +0.1**
comp=Z,31nm,1.0s,baz=313,slow=11,SNR=10
NWAO LR LR 20 21 25.0
comp=Z,84µm,20.0s,baz=332,slow=36
PKI Pulchoki 33.79 336 *eP* **P 20 08 15.8 +0.3**
comp=Z,2µm,1.6s
PKIN Phulchoki 33.80 336 *eP* **P 20 08 15.7 +0.2**
LSA Lhasa 33.84 345 P **P 20 08 17.8 +1.8**
LSA S S 20 13 32.1 -6.8
LSA pmax pmax
comp=Z,100nm,1.0s
LSA LR LR
comp=N,24µm,25.0s
LSA LR LR
comp=E,34µm,25.0s
LSA LR LR
comp=Z,43µm,22.0s
GUN Gumba 33.90 336 *eP* **P 20 08 16.4 -0.1**
comp=Z,5µm,1.5s
POO Poona 33.91 310 *eP* **P 20 08 17.4 +1.1**
POO *i* PP **PnPn 20 09 28.0 -1.6**
POO *i* S **S 20 13 40.0 +0.6**
DMN Daman 33.95 335 *eP* **P 20 08 16.5 -0.3**
comp=Z,1µm,1.4s
CD2 Chengdu 33.99 5⇑ *iP* **P 20 08 17.4 +0.5**
CD2 pP **pP 20 08 27.1 +2.0**
CD2 sP **sP 20 08 31.0 +2.5**
CD2 PP **PnPn 20 09 32.3 +1.8**
CD2 PcP **PcP 20 10 54.3 -0.3**
CD2 S **S 20 13 40.4 -0.1**
CD2 sS **sS 20 13 56.4 +2.3**
CD2 PcS **PcS 20 14 39.4 -1.4**
CD2 SS **SnSn 20 15 49.8 +1.3**
CD2 pmax pmax
comp=Z,120nm,0.6s
CD2 pmax pmax
comp=Z,7µm,4.9s
CD2 LR LR
comp=N,125µm,15.1s
CD2 LR LR
comp=E,106µm,13.9s
CD2 LR LR
comp=Z,137µm,17.1s
KKN Kakani 34.04 336 *eP* **P 20 08 17.7 +0.2**
NACB Ninganchiao 34.05 36 *eP* **P 20 08 18.9 +1.6**
comp=Z,1µm,1.9s
YHNB Yeheng 34.30 35 *eP* **P 20 08 20.9 +1.2**
comp=Z,906nm,1.8s
YHNB LR LR
comp=Z,29µm,19.0s
BHPL Bhopal 34.52 321 *eP* **P 20 08 20.9 -0.6**
BHPL AMB AMB 20 08 23.8
comp=Z,143nm,0.9s
KMBL Kambalda 34.59 147 P **P 20 08 22.8 +0.7**
baz=35,SNR=15
TATO Taipei 34.60 35 *eP* **P 20 08 24.4 +2.2**
comp=Z,1µm,2.0s
TATO Taipei 34.60 35 P **P 20 08 24.7 +2.6**
SNR=9.9
KOLN Koldanda 34.75 333 *eP* **P 20 08 23.8 +0.2**
RKGY Rocky Gully 34.89 156 P **P 20 08 25.6 +1.1**
baz=35,SNR=8.0
DANN Dangsing 35.18 334 *eP* **P 20 08 27.6 +0.2**
PYUN Piuthan 35.31 333 *eP* **P 20 08 28.5 +0.1**
comp=Z,2µm,1.2s
PALU Palau 35.51 73 P **P 20 08 27.9 -2.2**
baz=36,SNR=20
PALU S **S 20 14 00.4 -3.7**
baz=36,SNR=5.0
BAKI Biak 35.67 88 P **P 20 08 30.4 -1.2**
comp=Z,245nm,1.3s,comp=Z,7µm
WHN Wuhan 36.02 21⇑ *iP* **P 20 08 34.9 +0.7**
WHN pP **pP 20 08 44.6 +2.1**
WHN PP **PP 20 10 01.3 +4.8**
WHN S **S 20 14 14.8 +3.3**
WHN pmax pmax
comp=Z,920nm,1.2s
WHN pmax pmax
comp=Z,12µm,4.6s
WHN LR LR
comp=N,255µm,15.1s
WHN LR LR
comp=E,110µm,12.8s
WHN LR LR
comp=Z,340µm,14.4s
WRAB Tennant Creek 37.04 119 *eP* **P 20 08 42.1 -1.1**
WRAB pmax pmax
comp=Z,649nm,1.5s
WRAB MLR MLR
comp=Z,71µm,21.0s
WRAB Tennant Creek 37.04 119 *eP* **P 20 08 42.1 -1.1**
comp=Z,648nm,1.5s
WRAB LR LR
comp=Z,71µm,21.0s
LGTI Lohaghat 37.74 331 *eP* **P 20 08 51.4 +2.5**
LGTI *ex* x 20 09 59.1
XAN Xi'an 37.82 11 P **P 20 08 49.3 -0.3**
XAN pP **pP 20 08 53.3 -4.6**
XAN sP sP 20 08 55.3 -6.0
XAN S **S 20 14 38.9 -0.1**
XAN pmax pmax
comp=Z,87nm,0.6s
XAN pmax pmax
comp=Z,2µm,7.6s
XAN LR LR
comp=N,65µm,14.5s
XAN LR LR
comp=E,30µm,15.0s
XAN LR LR
comp=Z,43µm,15.5s
PTH Pithoragarh 37.84 331 *eP* **P 20 08 50.9 +0.9**
PTH *eS* **S 20 14 43.9 +4.2**
FORT Forrest 37.89 140 *eP* **P 20 08 51.2 +1.0**
comp=Z,196nm,0.9s
FORT Forrest 37.89 140 P **P 20 08 51.5 +1.3**
baz=38,SNR=7.9
AS31 Alice Springs 38.23 125 *eP* **P 20 08 52.6 -0.7**
ASAR Alice Springs 38.23 125 P **P 20 08 52.9 -0.4**
ASAR S **S 20 14 48.2 +2.6**
ASAR Alice Springs 38.23 125 P **P 20 08 52.9 -0.4**
comp=Z,117nm,0.6s,baz=301,slow=7.9,SNR=555
ASAR S **S 20 14 48.2 +2.6**
comp=Z,17nm,0.9s,baz=301,slow=15,SNR=6.0
ASAR LR LR 20 26 00.9
comp=Z,65µm,20.8s,baz=292,slow=38
AJM Ajmer 38.59 321 *eP* **P 20 08 56.0 -0.2**
NDI New Delhi 38.71 326 *ex* **P 20 08 54.0 -3.2**
NDI *ex* x 20 15 05.0
NJ2 Nanjing 39.11 25 *eP* **P 20 09 02.3 +1.9**
NJ2 pP **pP 20 09 06.8 -1.9**
NJ2 sP **sP 20 09 09.8 -2.3**
NJ2 PP **PnPn 20 10 36.3 +3.2**
NJ2 S S 20 15 05.0 +6.6
NJ2 sS **sS 20 15 12.0 -0.1**
NJ2 pmax pmax
comp=Z,410nm,1.0s
NJ2 pmax pmax
comp=Z,4µm,5.4s
NJ2 LR LR
comp=N,92µm,16.8s
NJ2 LR LR
comp=E,49µm,16.8s
NJ2 LR LR
comp=Z,80µm,17.2s
LZH Lanzhou 39.14 4⇑ P **P 20 09 01.6 +0.8**
LZH pP **pP 20 09 05.3 -3.8**
LZH sP **sP 20 09 08.6 -3.9**
LZH PP **PnPn 20 10 33.0 -0.6**
LZH S **S 20 15 03.3 +4.2**
LZH sS **sS 20 15 10.0 -2.9**
LZH SS **SS 20 17 51.6 -1.0**
LZH ScS **ScS 20 19 06.5 -2.0**
LZH pmax pmax
comp=Z,1µm,1.5s
LZH pmax pmax
comp=Z,3µm,4.4s
LZH LR LR
comp=N,16µm,18.3s
LZH LR LR
comp=E,23µm,18.6s
LZH LR LR
comp=Z,53µm,20.1s
SSE Sheshan 39.35 29 P **P 20 09 03.3 +0.9**
SSE PP **PnPn 20 10 38.3 +2.3**
SSE S S 20 15 11.4 +9.3
SSE sS **sS 20 15 19.1 +3.3**
SSE pmax pmax
comp=Z,300nm,2.0s
SSE pmax pmax
comp=Z,6µm,6.5s
SSE LR LR
comp=N,73µm,14.9s
SSE LR LR
comp=E,34µm,14.9s
SSE LR LR
comp=Z,74µm,15.8s
DDI Dehra Dun 39.55 329⇑ *iP* **P 20 09 04.5 +0.3**
DDI *eP* pP 20 09 04.9 -7.6
DDI AMB AMB 20 09 06.2
comp=Z,1µm,2.4s
DDI *ex* x 20 15 02.0
BHJ Bhuj 39.87 313 *ex* pP 20 09 16.7 +1.5
JOW Kunigami 40.11 40 *eP* **P 20 09 09.4 +0.6**
comp=Z,241nm,1.5s
JAY Jayapura 40.20 90 P **P 20 09 07.6 -2.3**
comp=Z,163nm,0.9s,comp=Z,5µm
JAY Jayapura 40.20 90 P **P 20 09 07.0 -2.9**
baz=40,SNR=21
JAY S S 20 15 04.6 -11
baz=40,SNR=3.5
SMLA Simla 40.66 329 *i* P **P 20 09 13.8 +0.6**
SMLA *eP* **P 20 09 13.8 +0.6**
SMLA AMb AMB 20 09 21.7
comp=Z,43nm,0.1s
SMLA *i* x x 20 15 11.2
SDNR Sundarnagar 41.05 329 *eP* **P 20 09 18.5 +1.9**
SDNR *eS* **S 20 15 29.5 +1.8**
QIS Mount Isa 41.88 118 P **P 20 09 23.0 -0.5**
baz=42,SNR=94
QIS S **S 20 15 43.8 +3.6**
baz=42,SNR=5.0
DHRM DHARAMSHALA 41.99 329 *eP* **P 20 09 24.8 +0.3**
TIA Tai'an 42.12 20 P **P 20 09 26.3 +1.0**
TIA pP **pP 20 09 33.0 -0.6**
TIA sP **sP 20 09 37.8 +0.8**
TIA PP **PP 20 11 05.8 +2.6**
TIA S S 20 15 54.8 +11
TIA pmax pmax
comp=Z,220nm,1.8s
TIA pmax pmax
comp=Z,7µm,5.9s
TIA LR LR
comp=N,59µm,16.6s
TIA LR LR
comp=E,60µm,17.3s
TIA LR LR
comp=Z,51µm,19.6s
TIY Taiyuan 42.13 14 *eP* **P 20 09 26.3 +0.9**
TIY sP **sP 20 09 33.9 -3.2**
TIY PP **PP 20 11 03.1 -0.2**
TIY S **S 20 15 41.6 -1.9**
TIY sS **sS 20 15 57.4 +0.1**
TIY pmax pmax
comp=Z,1µm,1.7s
TIY pmax pmax
comp=Z,7µm,6.8s
TIY LR LR
comp=N,83µm,15.3s
TIY LR LR
comp=E,26µm,13.7s
TIY LR LR
comp=Z,69µm,14.4s
GTA Gaotai 42.33 359⇑ P **P 20 09 27.8 +0.7**
GTA pP **pP 20 09 32.6 -2.9**
GTA sP **sP 20 09 36.4 -2.4**
GTA PP **PP 20 11 09.1 +3.6**
GTA PcP **PcP 20 11 22.4 +2.0**
GTA ScP **ScP 20 15 11.8 +2.5**
GTA PcS **PcS 20 15 12.8 +0.5**
GTA S **S 20 15 49.4 +2.8**
GTA sS **sS 20 15 56.5 -3.9**
GTA ScS **ScS 20 19 26.5 -0.9**
GTA pmax pmax
comp=Z,430nm,1.6s
GTA pmax pmax
comp=Z,9µm,7.1s
GTA LR LR
comp=N,56µm,13.8s
GTA LR LR
comp=E,71µm,18.5s
GTA LR LR
comp=Z,55µm,14.3s
COEN Coen 43.51 107 *eP* **P 20 09 35.4 -1.5**
comp=Z,986nm,1.4s
COEN Coen 43.51 107 P **P 20 09 35.3 -1.5**
baz=44,SNR=13
BTO Baotou 44.40 10 *eP* **P 20 09 44.5 +0.8**
BBOO Buckleboo 44.53 136 *eP* **P 20 09 45.6 +0.8**
comp=Z,4µm,1.4s
BBOO Buckleboo 44.53 136 P **P 20 09 45.2 +0.5**
baz=44,SNR=5.8
NIL Nilore 44.69 327 PFAKE 20 10 00.0 +14
NIL LR LR
comp=Z,26nm,21.0s
MSEY Mahe Island 44.89 267 *eP* **P 20 09 50.5 +2.5**
comp=Z,600nm,2.6s
MSEY *ep* **pP pP 20 10 01.4 +4.9**
MSEY LR LR
comp=Z,20µm,19.0s
HHC Hu-ho-hao-te 44.93 12 *eP* **P 20 09 49.3 +1.4**
HHC PcP **PcP 20 11 30.8 +1.7**
HHC PP **PP 20 11 35.6 +2.3**
HHC ScP **ScP 20 15 20.8 +1.0**
HHC PcS **PcS 20 15 23.6 +0.8**
HHC S **S 20 16 27.3 +2.8**
HHC sS **sS 20 16 35.3 -3.0**
HHC SS **ScS 20 19 40.4 -3.2**
HHC ScS **SS 20 19 44.3 -2.4**
HHC pmax pmax
comp=Z,1µm,1.4s
HHC pmax pmax
comp=Z,22µm,6.4s
HHC LR LR
comp=N,52µm,16.1s
HHC LR LR
comp=E,64µm,16.8s
HHC LR LR
comp=Z,61µm,16.6s
MRIV Mauritius Mete 45.20 244 *eP* **P 20 09 52.1 +1.7**
BJI Beijing 45.32 17 P **P 20 09 51.8 +0.9**
BJI S S 20 16 37.1 +7.3
BJI pmax pmax
comp=Z,400nm,1.3s
BJI pmax pmax
comp=Z,10µm,3.9s
BJI LR LR
comp=N,144µm,15.8s
BJI LR LR
comp=E,39µm,16.7s
BJI LR LR
comp=Z,81µm,17.8s
JNU Nakatsue 46.12 36 *eP* **P 20 09 57.7 +0.2**
comp=Z,357nm,1.2s
JNU Nakatsue 46.12 36 P **P 20 09 57.5 +0.1**
comp=Z,485nm,1.0s,baz=216,slow=5.1,SNR=46
JNU LR LR 20 29 57.0
comp=Z,30µm,20.0s,baz=232,slow=37
DL2 Dalian 46.16 23 P **P 20 09 58.0 +0.4**
DL2 S **S 20 16 38.4 -3.7**
DL2 pmax pmax
comp=Z,42nm,1.8s
DL2 pmax pmax
comp=Z,820nm,6.1s
DL2 LR LR
comp=N,8µm,16.2s
DL2 LR LR
comp=E,4µm,15.0s
DL2 LR LR
comp=Z,12µm,15.9s
PMG Port Moresby 46.80 100 *eP* **P 20 10 01.8 -1.2**
comp=Z,2µm,2.5s
PMG Port Moresby 46.80 100 P **P 20 10 01.4 -1.7**
comp=Z,201nm,2.8s,comp=Z,7µmcomp=Z,18µm
PMG Port Moresby 46.80 100 P **P 20 10 01.9 -1.2**
comp=Z,62nm,0.8s,baz=251,slow=6.4,SNR=27

RER Riviere de l'E 47.02 244 PFAKE 20 10 20.0 +15
RER LR LR
comp=Z,15µm,19.0s
GUMO Guam 47.09 68 *e*P **P** **20 10 03.4 -1.8**
comp=Z,839nm,1.9s
GUMO Guam 47.09 68 P **P** **20 10 02.5 -2.7**
comp=Z,68nm,0.5s,baz=184,slow=16,SNR=3.5
INCN Inchon 47.16 29 *e*P **P** **20 10 04.7 -0.7**
comp=Z,468nm,1.6s
INCN Inchon 47.16 29 P **P** **20 10 06.8 +1.3**
SNR=5.8
KBL Kabul 47.71 324 *e*P **P** **20 10 09.3 -0.8**
KBL pmax pmax
comp=Z,473nm,1.8s
KBL Kabul 47.71 324 *e*P **P** **20 10 09.2 -0.8**
comp=Z,473nm,1.8s
KBL Kabul 47.71 324 P **P** **20 10 11.3 +1.2**
baz=48,SNR=15
KBL S S 20 17 37.7 +33
baz=48,SNR=3.7
CTA Charters Tower 47.71 114 P **P** **20 10 09.8 -0.3**
CTA S **S** **20 17 04.3 -0.6**
CTA Charters Tower 47.71 114 P **P** **20 10 09.8 -0.3**
comp=Z,128nm,0.9s,baz=286,slow=9.8,SNR=69
CTA S **S** **20 17 04.3 -0.6**
comp=Z,6.2nm,0.9s,baz=83,slow=17,SNR=16
CTA LR LR 20 32 50.3
comp=Z,50µm,19.9s,baz=288,slow=39
CTAO Charters Tower 47.71 114 *e*P **P** **20 10 08.8 -1.3**
CTAO Charters Tower 47.71 114 *e*P **P** **20 10 08.8 -1.3**
KSAR Wonju Array Be 47.73 30 P **P** **20 10 10.3 +0.5**
KSRS Korea Array 47.76 30 P **P** **20 10 10.3 +0.3**
comp=Z,145nm,1.1s,baz=232,slow=7.2,SNR=87
WBK Wadi Bani Khal 47.90 304 P **P** **20 10 13.1 +1.7**
SNR=9.8
QLP Quilpie 47.95 123 P **P** **20 10 12.5 +0.6**
baz=48,SNR=91
KSH Kashi 48.04 334 ⇑*i*P **P** **20 10 11.6 -0.8**
KSH pP **pP** **20 10 16.6 -4.3**
KSH sP sP 20 10 18.3 -5.9
KSH PcP **PcP** **20 11 40.3 +0.2**
KSH PP **PP** **20 12 03.3 -1.5**
KSH ScP **ScP** **20 15 32.5 -0.4**
KSH PcS **PcS** **20 15 34.5 -1.4**
KSH S **S** **20 17 08.5 -0.7**
KSH sS sS 20 17 15.8 -7.3
KSH ScS **ScS** **20 20 01.1 -2.9**
KSH SS **SS** **20 20 31.6 -7.0**
KSH pmax pmax
comp=Z,83nm,0.8s
KSH pmax pmax
comp=Z,12µm,4.0s
KSH LR LR
comp=N,10µm,13.5s
KSH LR LR
comp=E,17µm,14.3s
KSH LR LR
comp=Z,33µm,19.2s
STKA Stephens Creek 48.07 131 *e*P **P** **20 10 12.8 +0.1**
comp=Z,86nm,1.4s
STKA S **S** **20 17 09.8 +0.2**
STKA Stephens Creek 48.07 131 P **P** **20 10 13.2 +0.6**
comp=Z,68nm,0.8s,baz=309,slow=8.4,SNR=66
STKA S **S** **20 17 09.8 +0.2**
comp=Z,9.4nm,1.2s,baz=41,slow=20,SNR=2.1
STKA LR LR 20 32 12.3
comp=Z,78µm,21.2s,baz=299,slow=38
STKA Stephens Creek 48.07 131 P **P** **20 10 12.9 +0.2**
baz=48,SNR=46
WMQ Urumqi 48.12 348 P **P** **20 10 14.0 +1.1**
WMQ PcP **PcP** **20 11 42.0 +1.8**
WMQ PP **PP** **20 12 06.0 +0.6**
WMQ ScP **ScP** **20 15 31.0 -2.1**
WMQ S **S** **20 17 08.0 -2.1**
WMQ ScS **ScS** **20 20 00.0 -4.3**
WMQ pmax pmax
comp=Z,630nm,1.0s
WMQ pmax pmax
comp=Z,13µm,5.0s
WMQ LR LR
comp=N,30µm,17.0s
WMQ LR LR
comp=E,31µm,18.0s
WMQ LR LR
comp=Z,27µm,16.0s
JMDO Jabal Madar 48.51 304 P **P** **20 10 17.1 +0.9**
SNR=12
SMDO Samad 48.85 304 P **P** **20 10 20.0 +1.0**
SNR=18
BSY Bisya 49.42 304 P **P** **20 10 24.5 +1.3**
SNR=31
SNY Shenyang 49.43 23 ⇑P **P** **20 10 22.4 -0.5**
SNY S S 20 17 36.4 +8.0
SNY pmax pmax
comp=Z,300nm,1.9s
SNY pmax pmax
comp=Z,960nm,6.7s
SNY LR LR
comp=N,44µm,15.2s
SNY LR LR
comp=E,37µm,15.6s
SNY LR LR
comp=Z,54µm,15.6s
HOQ Hoqain 49.70 305 P **P** **20 10 26.6 +1.3**
SNR=15
RBK Rabkut 50.01 296 P P 20 10 31.1 +3.3
SNR=12
ULHL Ulahol 50.22 337 P **P** **20 10 30.0 +0.9**
SNR=9.3
CBIJ Chichi jima 50.22 51 P **P** **20 10 26.8 -2.4**
CBIJ Chichi jima 50.22 51 P **P** **20 10 26.8 -2.4**
comp=Z,170nm,0.6s,baz=239,slow=8.8
ARQ Araqi 50.24 304 P **P** **20 10 30.5 +1.1**
SNR=15
KZA Kyzart 50.48 336 P **P** **20 10 32.4 +1.0**
SNR=95
ARPS Mount Arapiles 50.66 137 P P 20 10 39.2 +6.8
baz=51,SNR=8.8
AAA Alma-Ata 50.82 338 *i*P **P** **20 10 34.2 +0.7**
AAA *i*S **S** **20 17 50.5 +2.7**
AAA pmax pmax
comp=Z,13µm,4.6s
AAA smax smax
comp=E,32µm,9.9s
AAA MLR MLR
comp=Z,26µm,19.0s
UCH Uchtor 50.91 335 P **P** **20 10 36.2 +1.6**
SNR=14
SONM Songino Array 51.02 5 P **P** **20 10 36.4 +1.4**
SONM S **S** **20 17 53.6 +3.1**
SONM P'P' 20 41 14.6
SONM Songino Array 51.02 5 P **P** **20 10 36.4 +1.4**
comp=Z,397nm,0.9s,baz=190,slow=7.0,SNR=1172
SONM S **S** **20 17 53.6 +3.1**
comp=Z,2.8nm,1.1s,baz=188,slow=7.3,SNR=2.8
SONM PKPPKP **P'P'df** **20 41 14.6 -2.1**
comp=Z,1.5nm,1.2s,baz=149,slow=0.8,SNR=4.5
TKM2 Tokmak 2 51.04 337 *e*P **P** **20 10 35.1 -0.3**
TKM2 MLR MLR
comp=Z,35µm,20.0s
TKM2 Tokmak 2 51.04 337 *e*P **P** **20 10 35.1 -0.3**
TKM2 LR LR
comp=Z,35µm,20.0s
TKM2 Tokmak 2 51.04 337 P **P** **20 10 36.3 +1.0**
SNR=227
CMSA Cobar Meteorol 51.05 129 P **P** **20 10 35.8 +0.4**
baz=51,SNR=162
CMSA S **S** **20 17 53.1 +1.8**
baz=51,SNR=4.9
KBK Karagaybulak 51.08 336 P **P** **20 10 36.8 +1.1**
SNR=162
ULN Ulaanbaatar 51.11 6 *e*P **P** **20 10 36.4 +0.7**
ULN Ulaanbaatar 51.11 6 P **P** **20 10 37.1 +1.4**
SNR=427
ULN Ulaanbaatar 51.11 6 P **P** **20 10 37.4 +1.7**
comp=Z,760nm,1.6s,comp=Z,14µmcomp=Z,27µm
AML Almayashu 51.17 335 P **P** **20 10 38.9 +2.3**
SNR=11
ASHO Ashiyiah 51.21 305 P **P** **20 10 37.4 +0.7**
SNR=14
HATD Hatta, Dubai 51.21 305 P **P** **20 10 37.2 +0.5**
SNR=29
AAK Ala-Archa 51.25 336 *e*P **P** **20 10 38.0 +1.1**
AAK S **S** **20 17 57.0 +3.0**
AAK pmax pmax
comp=Z,191nm,1.7s
AAK MLR MLR
comp=Z,28µm,21.0s
AAK Ala-Archa 51.25 336 *e*P **P** **20 10 38.0 +1.1**
comp=Z,191nm,1.7s
AAK S **S** **20 17 57.0 +3.0**
AAK LR LR
comp=Z,28µm,21.0s
AAK Ala-Archa 51.25 336 P **P** **20 10 38.1 +1.3**
SNR=116
AAK Ala-Archa 51.25 336 P **P** **20 10 38.0 +1.1**
SNR=56
AAK Ala-Archa 51.25 336 P **P** **20 10 37.9 +1.0**
comp=Z,31nm,0.8s,baz=151,slow=5.3,SNR=60
AAK S **S** **20 17 57.0 +3.0**
comp=Z,3.4nm,0.8s,baz=261,slow=19,SNR=4.4
AAK LR LR 20 36 59.5
comp=Z,25µm,18.9s,baz=141,slow=42
FRU Bishkek 51.36 336 ⇑*i*P **P** **20 10 40.0 +2.4**
FRU *e*S **S** **20 17 59.5 +4.2**
FRU *i* 20 18 04.5
FRU pmax pmax
comp=Z,2µm,3.5s
FRU smax smax
comp=E,950µm,4.5s
CHMS Chumysh 51.45 336 P **P** **20 10 38.8 +0.6**
SNR=51
EKS2 Erkin-Say 51.57 335 *e*P **P** **20 10 40.4 +1.2**
EKS2 pmax pmax
comp=Z,310nm,0.9s
EKS2 MLR MLR
comp=Z,19µm,20.0s
EKS2 Erkin-Say 51.57 335 *e*P **P** **20 10 40.4 +1.2**
comp=Z,310nm,0.9s
EKS2 LR LR
comp=Z,19µm,20.0s
EKS2 Erkin-Say 51.57 335 P **P** **20 10 40.7 +1.5**
SNR=9.8
NAZ Nazwa, Dubai 51.66 305 P **P** **20 10 41.0 +0.9**
SNR=9.8
RMQ Roma 51.73 122 P **P** **20 10 41.5 +0.9**
baz=52,SNR=48
USP Ospenovka 51.77 336 P **P** **20 10 41.3 +0.7**
SNR=129
CN2 Changchun 51.84 23 ⇑P **P** **20 10 41.1 +0.1**
CN2 *e*sP sP 20 10 47.0 -5.9
CN2 *e*PP **PP** **20 12 40.3 +1.2**
CN2 *e*S **S** **20 18 02.6 +0.9**
CN2 LR LR
comp=N,64µm,13.0s
CN2 LR LR
comp=E,48µm,13.0s
CN2 LR LR
comp=Z,67µm,16.0s
MK31 Makanchi Array 52.23 344 *e*P **P** **20 10 44.3 +0.4**
MK31 Makanchi Array 52.23 344 *e*P **P** **20 10 44.3 +0.4**
MKAR Makanchi Array 52.23 344 *e*P **P** **20 10 44.6 +0.6**
MKAR S **S** **20 18 10.6 +3.5**
MKAR Makanchi Array 52.23 344 *e*P **P** **20 10 44.6 +0.6**
MKAR S **S** **20 18 10.6 +3.5**
MKAR P'P' 20 41 24.1
MKAR Makanchi Array 52.23 344 P **P** **20 10 44.5 +0.6**
comp=Z,165nm,0.6s,baz=149,slow=8.0,SNR=838
MKAR S **S** **20 18 10.6 +3.5**
comp=Z,2.6nm,0.9s,baz=163,slow=10,SNR=4.0
MKAR LR LR 20 37 51.6
comp=Z,13µm,19.1s,baz=164,slow=42
MKAR PKPPKP P'P'df 20 41 24.1 +8.9
comp=Z,0.9nm,0.9s,baz=153,slow=1.0,SNR=3.7
PAF Port-aux-Franc 52.76 204 P **P** **20 10 49.3 +1.5**
PAF MLR MLR
comp=Z,38µm,19.0s
PAF Port-aux-Franc 52.76 204 P **P** **20 10 49.3 +1.5**
PAF LR LR
comp=Z,38µm,19.0s
MAJO Matsushiro 52.87 38 *e*P **P** **20 10 48.1 -0.8**
MAJO pmax pmax
comp=Z,704nm,1.7s
MAJO Matsushiro 52.87 38 *e*P **P** **20 10 48.1 -0.8**
comp=Z,704nm,1.7s
MAT Matsushiro 52.87 38 P **P** **20 10 47.9 -0.9**
MAT S **S** **20 18 14.4 -1.7**
MJAR Matsushiro Arr 52.87 38 P **P** **20 10 48.1 -0.7**
MJAR Matsushiro Arr 52.87 38 P **P** **20 10 48.1 -0.7**
comp=Z,101nm,1.0s,baz=216,slow=6.2,SNR=64
ZAK Zakamensk 53.35 2 ⇓*i*P **P** **20 10 52.5 +0.2**
ZAK *e* 20 18 26.4
ZAK pmax pmax
comp=Z,129nm,1.7s
KKAR Karatay Array 53.36 333 *e*P **P** **20 10 52.0 -0.3**
KKAR Karatay Array 53.36 333 *e*P **P** **20 10 52.0 -0.3**
EIDS Eidsvold 53.40 119 *e*P **P** **20 10 53.0 0.0**
comp=Z,500nm,1.4s
EIDS Eidsvold 53.40 119 P **P** **20 10 53.0 0.0**
baz=53,SNR=61
TOO Toolangi 53.59 136 P **P** **20 10 57.0 +2.8**
baz=54,SNR=7.3
VLA Vladivostok 54.06 28 ⇑*i*P **P** **20 10 56.8 -0.6**
VLA *e*S **S** **20 18 30.5 -1.5**
VLA pmax pmax
comp=Z,306nm,1.4s
MDJ Mudanjiang 54.20 25 P **P** **20 11 01.3 +2.9**
MDJ S S 20 18 41.9 +8.0
MDJ pmax pmax
comp=Z,120nm,1.2s
MDJ pmax pmax
comp=Z,6µm,6.3s
MDJ LR LR
comp=N,40µm,16.9s
MDJ LR LR
comp=E,21µm,19.3s
MDJ LR LR
comp=Z,67µm,15.2s
YNG Young 54.26 131 P **P** **20 10 59.9 +0.8**
baz=54,SNR=15
OPO Ambohidratompo 54.29 249 LR LR 20 29 35.6
comp=Z,39µm,20.2s,baz=54,slow=31
ABPO Ambohimpanom 54.33 249 *e*P **P** **20 11 01.0 +0.9**
ABPO pmax pmax
comp=Z,35nm,0.9s
ABPO MLR MLR
comp=Z,31µm,20.0s
ABPO Ambohimpanom 54.33 249 *e*P **P** **20 11 00.9 +0.9**
comp=Z,35nm,0.9s
ABPO LR LR
comp=Z,31µm,20.0s
MOY Mondy 54.59 0 *e*P **P** **20 11 02.3 +1.0**
MOY pmax pmax
comp=Z,929nm,3.8s
TLY Talaya 54.67 2 *c i*P **P** **20 11 03.1 +1.4**
TLY *e* 20 12 12.1
TLY *e*S **S** **20 18 37.8 -2.2**
TLY pmax pmax
comp=Z,279nm,1.4s
TLY MLR MLR
comp=Z,44µm,14.0s
TLY Talaya 54.67 2 P **P** **20 11 03.4 +1.7**
comp=Z,1µm,1.6s,SNR=82
USRK Ussuriysk Arra 54.94 27 P **P** **20 11 04.2 +0.5**
comp=Z,355nm,0.8s,baz=220,slow=5.3,SNR=389
USRK LR LR 20 36 54.6
comp=Z,48µm,18.8s,baz=217,slow=39
CAN Canberra 55.12 132 *e*P **P** **20 11 05.9 +0.4**
CAN pmax pmax
comp=Z,369nm,1.3s
CAN MLR MLR
comp=Z,68µm,21.0s
CAN Canberra 55.12 132 *e*P **P** **20 11 05.9 +0.4**
comp=Z,368nm,1.3s
CAN LR LR
comp=Z,68µm,21.0s
IRK Irkutsk 55.26 3 ⇑*i*P **P** **20 11 06.8 +0.8**
IRK *e* 20 14 28.4
IRK *e*S **S** **20 18 51.8 +3.9**
IRK *e* 20 20 49.7
IRK pmax pmax
comp=Z,1µm,2.4s
ARMA Armidale 55.38 125 *e*P **P** **20 11 08.9 +1.4**
comp=Z,158nm,1.1s
ARMA Armidale 55.38 125 P **P** **20 11 08.8 +1.4**
baz=55,SNR=18
CNB Canberra Magne 55.39 132 P **P** **20 11 09.1 +1.7**
baz=55,SNR=9.7
MGCD Mangrove Creek 55.92 128 P **P** **20 11 12.6 +1.4**
baz=56,SNR=5.7
CIT Chita 56.06 10 *e*P **P** **20 11 13.5 +1.7**
CIT *e*S **S** **20 19 03.4 +4.8**
CIT pmax pmax
comp=Z,2µm,2.7s
ABKT Ailbek 56.60 320 P **P** **20 11 15.4 -0.5**
comp=Z,569nm,1.1s,SNR=32
KURBB Kurchatov Arra 56.75 343 P **P** **20 11 16.9 +0.2**
comp=Z,174nm,0.9s,baz=161,slow=7.4,SNR=590
KURBB S **S** **20 19 09.2 +1.4**
comp=Z,3.2nm,1.0s,baz=153,slow=13,SNR=4.6
KURK Kurchatov 56.81 344 *c i*P **P** **20 11 17.3 +0.2**
KURK pmax pmax
comp=Z,962nm,1.7s
KURK MLR MLR
comp=Z,42µm,20.0s
KURK Kurchatov 56.81 344 *e*P **P** **20 11 17.5 +0.4**
comp=Z,495nm,1.0s
KURK S **S** **20 19 09.2 +0.7**
KURK LR LR
comp=Z,42µm,20.0s
KURK Kurchatov 56.81 344 P **P** **20 11 17.7 +0.6**
SNR=320
TAU Tasmania Unive 57.43 140 PFAKE 20 11 30.0 +8.4
TAU LR LR
comp=Z,24µm,20.0s
ZAA0 Zalesovo Array 58.35 349 *e*P **P** **20 11 27.8 0.0**
ZALV Zalesovo Beam 58.35 349 P **P** **20 11 28.0 +0.1**
ZALV S **S** **20 19 29.7 +1.0**
ZALV Zalesovo Beam 58.35 349 P **P** **20 11 28.0 +0.1**
ZALV S **S** **20 19 29.7 +1.0**
ZALV P'P' 20 41 05.2
ZALV Zalesovo Beam 58.35 349 P **P** **20 11 28.0 +0.1**
comp=Z,293nm,0.8s,baz=146,slow=5.2,SNR=636
ZALV S **S** **20 19 29.7 +1.0**
comp=Z,5.9nm,0.9s,baz=166,slow=13,SNR=5.0
ZALV LR LR 20 39 36.6
comp=Z,15µm,21.4s,baz=166,slow=39
ZALV PKPPKP **P'P'df** **20 41 05.2 -0.8**
comp=Z,1.6nm,0.9s,baz=336,slow=3.2,SNR=6.0
PATS Pohnpei 58.59 80 P **P** **20 11 32.6 +2.2**
baz=59,SNR=4.9
KLR Kul'dur 58.77 23 *d i*P **P** **20 11 28.5 -2.4**
KLR *e*S **S** **20 19 33.5 -0.8**
KLR *e* 20 21 15.8
KLR pmax pmax
comp=N,300nm,1.8s
KLR pmax pmax
comp=E,530nm,1.8s
KLR pmax pmax
comp=Z,2µm,1.8s
KLR pmax pmax
comp=N,4µm,7.5s
KLR pmax pmax
comp=Z,9µm,7.5s
ATD Arta Tunnel 59.10 285 P **P** **20 11 33.6 -0.3**
ATD S **S** **20 19 42.3 +2.4**
ATD Arta Tunnel 59.10 285 P **P** **20 11 33.6 -0.3**
comp=Z,6.0nm,0.5s,baz=168,slow=20,SNR=2.3
ATD S **S** **20 19 42.3 +2.4**
comp=Z,12nm,1.0s,baz=246,slow=19,SNR=2.5
ATD LR LR 20 33 00.3
comp=Z,14µm,20.3s,baz=101,slow=32
KRAR Krasnoyarsk 59.27 355 *c i*P **P** **20 11 34.3 +0.1**
KRAR pmax pmax
comp=Z,436nm,1.3s
KRAR MLR MLR
comp=Z,25µm,17.0s
ERM Erimo 59.29 36 *e*P **P** **20 11 34.6 0.0**
ERM pmax pmax
comp=Z,216nm,2.5s
ERM Erimo 59.29 36 *e*P **P** **20 11 37.3 +2.6**
comp=Z,352nm,1.6s
ERM LR LR
comp=Z,10µm,20.0s
HNR Honiara 59.40 99 *e*P **P** **20 11 35.2 -0.7**
comp=Z,1µm,1.1s
HNR Honiara 59.40 99 P **P** **20 11 34.9 -1.1**
comp=Z,654nm,0.9s,baz=212,slow=2.9,SNR=42
NVS Novosibirsk 59.50 349 ⇑*i*P **P** **20 11 35.4 -0.4**
NVS *e*S **S** **20 19 43.0 -0.5**
NVS pmax pmax
comp=N,502nm,2.0s
NVS pmax pmax
comp=Z,951nm,2.0s
NVS pmax pmax
comp=E,254nm,1.8s
NVS smax smax
comp=E,3µm,4.1s
HABR Khabarovsk 59.57 26 *i*P **P** **20 11 36.4 0.0**
HABR *e**SP **sP** **20 11 48.2 -0.2**
HABR *e* 20 12 22.0
HABR *e* 20 13 46.8
HABR *e*S **S** **20 19 44.2 -0.4**
HABR *e* 20 19 54.5
HABR *e**SS **sS** **20 19 59.0 +0.2**
HABR *e* 20 21 24.4
HABR *e*SS **SS** **20 23 41.5 +1.0**
HABR pmax pmax
comp=N,192nm,2.1s
HABR pmax pmax
comp=Z,939nm,2.1s
HABR pmax pmax
comp=E,293nm,1.5s
HABR pmax pmax
comp=Z,3µm,2.3s
HABR MLR MLR
comp=E,33µm,19.0s
HABR MLR MLR
comp=Z,52µm,19.0s
HABR MLR MLR
comp=N,35µm,17.0s
KBD Kabd 59.86 306 *e*P **P** **20 11 37.5 -1.4**
KBD AMb AMB 20 11 50.6
comp=Z,154nm,2.0s
RDF Al-Radifah 59.88 306 *e*P **P** **20 11 37.7 -1.3**
RDF AMb AMB 20 11 51.0
comp=Z,242nm,1.3s
UMR Umm Al-Rimmam 59.99 307 *e*P **P** **20 11 39.0 -0.7**
NAY Al-Naaiem 60.25 306 *e*P **P** **20 11 40.1 -1.4**
NAY AMb AMB 20 11 54.5
comp=Z,73nm,1.0s
ASAJ Asahikawa 60.28 34 *e*P **P** **20 11 42.3 +0.8**
ASAJ Asahikawa 60.28 34 P **P** **20 11 41.4 -0.1**
comp=Z,155nm,1.1s,baz=242,slow=9.2,SNR=23
BVAR Borovoye Array 61.39 340 P **P** **20 11 48.3 -0.5**
BVAR Borovoye Array 61.39 340 P **P** **20 11 48.3 -0.5**
BVAR Borovoye Array 61.39 340 P **P** **20 11 48.3 -0.5**
comp=Z,79nm,0.8s,baz=140,slow=9.2,SNR=189
BRVK Borovoye 61.46 340 *c i*P **P** **20 11 48.7 -0.5**
BRVK pmax pmax
comp=Z,386nm,2.5s
BRVK MLR MLR
comp=Z,16µm,17.0s
BRVK Borovoye 61.46 340 *e*P **P** **20 11 48.8 -0.5**
comp=Z,187nm,1.2s
BRVK LR LR
comp=Z,20µm,20.0s
BRVK Borovoye 61.46 340 P **P** **20 11 49.1 -0.2**
SNR=86
YUK Yuzh-Kuril'sk 62.09 36 *i*P P 20 11 48.3 -5.4
YUK *i* 20 14 08.3
YUK *i*S **S** **20 20 18.7 +1.7**
YUK pmax pmax
comp=N,1µm,1.9s
YUK pmax pmax
comp=E,1µm,1.9s
YUK pmax pmax
comp=Z,2µm,1.9s
YUK pmax pmax
comp=Z,8µm,3.1s
YUK MLR MLR
comp=N,5µm,19.0s
YUK MLR MLR
comp=E,5µm,19.0s
YUK MLR MLR
comp=Z,13µm,19.0s
DESE Dese 62.13 284 *e*P P 20 11 58.9 +4.0
DESE *e*S S 20 20 26.1 +6.9
YSS Yuzh-Sakhalins 62.20 31 *α i*P **P** **20 11 55.0 +0.7**
YSS *e**PP **pP** **20 12 06.0 +3.0**
YSS *e**SP sP 20 12 12.0 +5.7
YSS *e* 20 12 29.0
YSS *e* 20 14 15.0
YSS *e*S **S** **20 20 18.0 -0.2**
YSS *e*PS **PnS** **20 20 34.0 -1.6**
YSS *e*PPS PPS 20 20 46.0
YSS pmax pmax
comp=Z,1µm,1.2s

YSS					pmax	pmax					
	comp=Z,4μm,8.0s										
FURI	**Furi**	**62.73**	**282**		P	**P**	**20**	**12**	**01.3**	**+2.4**
FURI					S	**S**	**20**	**20**	**30.8**	**+4.1**
ABKAR	**Akbulak array**	**62.84**	**331**	*e*	P	**P**	**20**	**11**	**58.2**	**-0.4**
CLNS	**Chul'man**	**62.98**	**15**	*e*	P	**P**	**20**	**11**	**59.5**	**+0.1**
CLNS				*e*	*e*PP	**pP**	**20**	**12**	**10.5**	**+2.4**
CLNS				*e*			20	12	44.8	
CLNS				*e*			20	14	13.6	
CLNS				*e*	S	**S**	**20**	**20**	**32.9**	**+5.1**
CLNS				*e*			20	21	47.3	
CLNS				*e*	SS	**SS**	**20**	**24**	**29.1**	**-4.6**
CLNS					pmax	pmax					
	comp=Z,145nm,1.1s										
CLNS					pmax	pmax					
	comp=E,73nm,1.3s										
CLNS					pmax	pmax					
	comp=N,105nm,1.3s										
CLNS					pmax	pmax					
	comp=N,26nm,1.3s										
CLNS					pmax	pmax					
	comp=Z,29nm,1.3s										
CLNS					pmax	pmax					
	comp=E,29nm,1.0s										
CLNS					smax	smax					
	comp=E,2μm,14.4s										
CLNS					smax	smax					
	comp=N,4μm,14.4s										
CLNS					MLR	MLR					
	comp=N,52μm,17.0s										
CLNS					MLR	MLR					
	comp=Z,65μm,16.0s										
CLNS					MLR	MLR					
	comp=E,39μm,16.0s										
KMBO	**Kilima Mbogo**	**63.18**	**270**	*e*	P	**P**	**20**	**12**	**02.7**	**+0.8**
KMBO	**Kilima Mbogo**	**63.18**	**270**	*e*	P	**P**	**20**	**12**	**03.4**	**+1.5**
	comp=E,79nm,1.5s										
KMBO	**Kilima Mbogo**	**63.18**	**270**		P	**P**	**20**	**12**	**00.7**	**-1.2**
	comp=E,11nm,0.9s,baz=97,slow=7.8,SNR=15										
KMBO					LR	LR	20	39	04.1		
	comp=E,12μm,18.0s,baz=85,slow=36										
CASY	**Casey**	**63.43**	**175**	*e*	P	**P**	**20**	**12**	**04.5**	**+2.3**
	comp=E,385nm,2.0s										
MIR	**Mirnyy**	**63.52**	**183**	⇓ *i*	P	P	20	12	06.0	+3.2
MIR				*i*			20	12	25.0		
MIR				*e*			20	12	38.0		
MIR					pmax	pmax					
	comp=Z,698nm,3.0s										
BHD	**Baghdad**	**64.07**	**309**	*i*	x	**S**	**20**	**12**	**04.8**	**-2.2**
BHD				*i*	x	**S**	**20**	**20**	**41.6**	**-0.6**
AKTO	**Aktyubinsk**	**64.56**	**331**		P	**P**	**20**	**12**	**09.3**	**-0.7**
AKTO					S	**S**	**20**	**20**	**43.9**	**-3.7**
AKTO	**Aktyubinsk**	**64.56**	**331**		P	**P**	**20**	**12**	**09.3**	**-0.7**
AKTO					S	**S**	**20**	**20**	**43.9**	**-3.7**
AKTO	**Aktyubinsk**	**64.56**	**331**		P	**P**	**20**	**12**	**09.3**	**-0.7**
	comp=Z,60nm,0.9s,baz=135,slow=8.0,SNR=60										
AKTO					S	**S**	**20**	**20**	**43.9**	**-3.7**
	comp=Z,1.7nm,0.8s,baz=280,slow=19,SNR=5.6										
MAK	**Makhachkala**	**66.12**	**320**	*e*	P	**P**	**20**	**12**	**19.7**	**-0.5**
MAK				*e*			20	12	51.6		
MAK				*e*			20	14	48.0		
MAK				*e*	PPP	PPP	20	16	29.0		
MAK				*e*	S	**S**	**20**	**21**	**06.8**	**-0.2**
MAK				*e*			20	22	15.0		
MAK				*e*	SS	**SS**	**20**	**25**	**19.7**	**-3.4**
MAK					pmax	pmax					
	comp=Z,199nm,1.0s										
CUKT	**Cukurca**	**66.23**	**313**	*e*	P	**P**	**20**	**12**	**19.1**	**-2.1**
HKR	**Hakkari**	**66.27**	**313**	*e*	P	**P**	**20**	**12**	**23.1**	**+1.6**
HAKT	**HAKKARI**	**66.28**	**313**	*i*	P	**P**	**20**	**12**	**20.9**	**-0.8**
NOUC	**Port Laguerre**	**66.47**	**113**	*e*	P	**P**	**20**	**12**	**21.9**	**-1.0**
DZM	**Mont Dzumac**	**66.60**	**113**	*e*	P	**P**	**20**	**12**	**24.0**	**+0.2**
	comp=Z,359nm,1.2s										
DZM				*e*	S	**S**	**20**	**21**	**09.3**	**-4.5**
	comp=Z,18μm,26.6s										
DZM				*e*	LR	LR	20	32	22.5		
	comp=Z,39μm,21.9s										
DZM	**Mont Dzumac**	**66.60**	**113**	*e*	P	**P**	**20**	**12**	**23.2**	**-0.6**
DZM	**Mont Dzumac**	**66.60**	**113**	*e*	P	**P**	**20**	**12**	**23.8**	**-0.1**
	comp=Z,206nm,1.3s										
DZM					S	**S**	**20**	**21**	**12.3**	**-1.5**
DZM	**Mont Dzumac**	**66.60**	**113**		P	**P**	**20**	**12**	**24.1**	**+0.3**
	comp=Z,43nm,1.0s,baz=305,slow=7.1,SNR=14										
DZM					S	**S**	**20**	**21**	**12.3**	**-1.5**
	comp=Z,6.3nm,0.9s,baz=240,slow=20,SNR=1.7										
DZM					LR	LR	20	44	21.8		
	comp=Z,33μm,20.4s,baz=288,slow=39										
GNI	**Garni**	**66.65**	**316**		P	**P**	**20**	**12**	**24.6**	**+0.7**
GNI					S	**S**	**20**	**21**	**16.0**	**+2.1**
GNI	**Garni**	**66.65**	**316**		P	**P**	**20**	**12**	**24.5**	**+0.7**
	SNR=27										
GNI	**Garni**	**66.65**	**316**		P	**P**	**20**	**12**	**24.6**	**+0.7**
	comp=Z,35nm,1.0s,baz=20,slow=1.8,SNR=18										
GNI					S	**S**	**20**	**21**	**16.0**	**+2.1**
	comp=Z,1.0nm,0.5s,baz=0.0,slow=20,SNR=3.3										
CLDR	**Caldiran**	**66.79**	**315**	*e*	P	**P**	**20**	**12**	**24.4**	**-0.5**
DGRG	**David-gareji**	**66.80**	**318**		P	**P**	**20**	**12**	**25.4**	**+0.8**
DGRG					S	**S**	**20**	**21**	**16.3**	**+0.8**
DYDN	**Diyadin**	**67.12**	**315**	*i*	P	**P**	**20**	**12**	**27.6**	**+0.6**
SIRN	**S¨–rnak**	**67.20**	**313**	*i*	P	**P**	**20**	**12**	**29.8**	**+2.5**
TBLG	**Delisi**	**67.35**	**318**	*e*	P	**P**	**20**	**12**	**28.4**	**+0.3**
TBLG				*e*	S	**S**	**20**	**21**	**21.2**	**-0.8**
TBLG	**Delisi**	**67.35**	**318**		P	**P**	**20**	**12**	**28.4**	**+0.3**
TBLG					S	**S**	**20**	**21**	**21.3**	**-0.8**
TUTA	**Tutak**	**67.68**	**315**	*i*	P	**P**	**20**	**12**	**30.5**	**0.0**
TATV	**Tatvan**	**67.71**	**314**	*i*	P	**P**	**20**	**12**	**30.1**	**-0.6**
GOR	**Gori**	**67.89**	**318**		P	**P**	**20**	**12**	**33.5**	**+2.0**
SVE	**Sverdlovsk**	**67.89**	**338**	*d*	*i*P	**P**	**20**	**12**	**31.5**	**+0.3**
SVE				*e*			20	14	58.6		
SVE				*e*	PPP	PPP	20	16	42.1		
SVE				*e*	S	**S**	**20**	**21**	**26.6**	**-1.3**
SVE				*e*			20	22	28.2		
SVE				*e*	SS	SS	20	25	42.5	-7.6	
SVE					pmax	pmax					
	comp=Z,601nm,2.0s										
SVE					pmax	pmax					
	comp=Z,2μm,10.1s										
SVE					MLR	MLR					
	comp=Z,22μm,21.0s										
SVE					MLR	MLR					
	comp=N,14μm,22.0s										
KARS	**Kars**	**68.00**	**316**	*e*	P	**P**	**20**	**12**	**32.5**	**+0.1**
AKH	**Akhalkalaki**	**68.05**	**317**		P	**P**	**20**	**12**	**32.9**	**+0.1**
AKH					S	**S**	**20**	**21**	**32.6**	**+1.9**
MARD	**Mardin**	**68.33**	**312**	*i*	P	**P**	**20**	**12**	**34.6**	**0.0**
ZEI	**Tsey**	**68.38**	**319**	*e*	P	**P**	**20**	**12**	**35.3**	**+0.5**
ZEI				*e*	S	**S**	**20**	**21**	**31.6**	**-3.1**
ZEI					pmax	pmax					
	comp=Z,99nm,1.0s										
ARU	**Arti**	**68.42**	**336**	*c*	*i*P	**P**	**20**	**12**	**33.9**	**-0.6**
ARU							20	13	00.0		
ARU							20	15	00.7		
ARU					PPP	PPP	20	16	45.5		
ARU				*e*	S	**S**	**20**	**21**	**31.3**	**-2.8**
ARU							20	22	29.7		
ARU					SSS	SSS	20	29	00.4		
ARU					pmax	pmax					
	comp=Z,314nm,1.7s										
ARU					MLR	MLR					
	comp=Z,22μm,21.0s										
ARU	**Arti**	**68.42**	**336**		P	**P**	**20**	**12**	**34.6**	**+0.1**
	comp=Z,744nm,1.4s,SNR=57										
VRTB	**Varto-Mus**	**68.55**	**314**	*e*	P	**P**	**20**	**12**	**36.5**	**+0.7**
HOMI	**Horasan**	**68.58**	**315**	*i*	P	**P**	**20**	**12**	**36.4**	**+0.3**
ONI	**Oni**	**68.59**	**318**		P	**P**	**20**	**12**	**36.1**	**+0.1**
ONI					S	**S**	**20**	**21**	**38.0**	**+1.1**
YAK	**Yakutsk**	**68.71**	**14**	*c*	*i*P	**P**	**20**	**12**	**35.7**	**-0.5**
YAK				*e*	*e*PP	**pP**	**20**	**12**	**45.6**	**+0.7**
YAK				*e*			20	13	00.7		
YAK				*e*			20	15	05.7		
YAK				*e*	PPP	PPP	20	16	42.1		
YAK				*e*	S	**S**	**20**	**21**	**34.5**	**-2.9**
YAK				*e*			20	22	30.9		
YAK				*e*	SSS	SSS	20	29	08.5		
YAK					pmax	pmax					
	comp=Z,502nm,0.9s										
YAK					pmax	pmax					
	comp=N,178nm,1.1s										
YAK					pmax	pmax					
	comp=E,169nm,1.3s										
YAK					pmax	pmax					
	comp=E,2μm,6.8s										
YAK					pmax	pmax					
	comp=N,1μm,5.9s										
YAK					pmax	pmax					
	comp=E,282nm,3.2s										
YAK					smax	smax					
	comp=E,630nm,2.5s										
YAK					smax	smax					
	comp=N,1μm,4.0s										
YAK					MLR	MLR					
	comp=Z,70μm,16.0s										
YAK					MLR	MLR					
	comp=N,54μm,18.0s										
YAK					MLR	MLR					
	comp=E,32μm,18.0s										
ERZM	**Erzurum**	**68.90**	**315**	*i*	P	**P**	**20**	**12**	**38.9**	**+0.7**
EZM	**Erzurum**	**68.91**	**315**	*e*	P	**P**	**20**	**12**	**38.6**	**+0.3**
DAGI	**Agillar**	**68.99**	**316**	*i*	P	**P**	**20**	**12**	**38.0**	**-0.6**
ARTV	**Artvin**	**69.03**	**316**	*i*	P	**P**	**20**	**12**	**38.4**	**-0.5**
DDEM	**Demirkent**	**69.03**	**316**	*i*	P	**P**	**20**	**12**	**38.9**	**+0.2**
BNGB	**Bing¨¶l**	**69.04**	**314**	*e*	P	**P**	**20**	**12**	**39.0**	**+0.1**
DIYA	**Diyarbakir**	**69.04**	**313**	*i*	P	**P**	**20**	**12**	**39.4**	**+0.5**
DBAD	**Bademkaya**	**69.12**	**316**	*i*	P	**P**	**20**	**12**	**39.5**	**+0.2**
DRV	**Dumont d'Urvil**	**69.12**	**164**		P	P	20	12	24.0	-15
DRV	**Dumont d'Urvil**	**69.12**	**164**		PP	PP	20	15	06.0	-5.5
DRV					S	S	20	21	23.0	-19
DRV					SS	SS	20	25	41.0	-28
DRV					L	L	20	29	00.0	
DRV					R		20	33	00.0	
DBOC	**Borcka**	**69.27**	**316**	*i*	P	**P**	**20**	**12**	**40.1**	**0.0**
MAW	**Mawson**	**69.31**	**194**		P	**P**	**20**	**12**	**38.4**	**-1.4**
MAW	**Mawson**	**69.31**	**194**		P	**P**	**20**	**12**	**38.4**	**-1.4**
	comp=E,13nm,0.9s,baz=27,slow=11,SNR=2.1										
MAW					LR	LR	20	36	37.8		
	comp=E,25μm,21.6s,baz=36,slow=30										
BCA	**Borcka**	**69.34**	**317**	*e*	P	**P**	**20**	**12**	**39.9**	**-0.7**
KBZ	**Khabaz**	**69.45**	**319**		P	**P**	**20**	**12**	**41.4**	**+0.2**
KBZ	**Khabaz**	**69.45**	**319**		P	**P**	**20**	**12**	**41.4**	**+0.2**
KBZ	**Khabaz**	**69.45**	**319**		P	**P**	**20**	**12**	**41.4**	**+0.2**
	comp=E,85nm,0.9s,baz=143,slow=6.0,SNR=51										
KOPT	**Kop Dagi**	**69.56**	**315**	*i*	P	**P**	**20**	**12**	**42.3**	**-0.1**
ASF	**Jabal al Asfar**	**69.61**	**306**		P	**P**	**20**	**12**	**43.2**	**+0.7**
ASF	**Jabal al Asfar**	**69.61**	**306**		P	**P**	**20**	**12**	**43.2**	**+0.7**
	comp=E,28nm,1.1s,baz=312,slow=1.1,SNR=13										
KIV	**Kislovodsk**	**69.69**	**319**	*c*	*i*P	**P**	**20**	**12**	**42.6**	**-0.2**
KIV				*e*			20	13	03.4		
KIV				*e*			20	15	16.4		
KIV				*e*	PPP	PPP	20	17	00.7		
KIV				*e*	S	**S**	**20**	**21**	**49.8**	**-0.1**
KIV				*e*	SS	**SS**	**20**	**26**	**24.3**	**+5.7**
KIV					pmax	pmax					
	comp=Z,138nm,1.0s										
KIV					pmax	pmax					
	comp=Z,1μm,4.7s										
MBAR	**Mbarara**	**69.72**	**271**	*e*	P	**P**	**20**	**12**	**43.6**	**0.0**
MBAR	**Mbarara**	**69.72**	**271**		P	**P**	**20**	**12**	**44.0**	**+0.4**
MBAR					LR	LR					
	comp=Z,548nm,19.0s										
MBAR	**Mbarara**	**69.72**	**271**		P	**P**	**20**	**12**	**44.0**	**+0.4**
	comp=Z,2.7nm,0.2s,baz=90,slow=12,SNR=1.8										
PZAR	**Pazar-Rize**	**69.73**	**316**	*e*	P	**P**	**20**	**12**	**42.0**	**-0.9**
POGA	**Pongola**	**69.80**	**242**	*e*	P	**P**	**20**	**12**	**42.5**	**-1.2**
POGA					AMB	AMB	20	12	44.3		
	comp=Z,80nm,4.0s										
SVRC	**Sivrice-ELAZID**	**69.81**	**313**	*e*	P	**P**	**20**	**12**	**43.8**	**+0.1**
PTK	**Pertek**	**69.93**	**313**	*e*	P	**P**	**20**	**12**	**44.7**	**+0.2**
ERZN	**Erzincan**	**69.95**	**314**	*e*	P	**P**	**20**	**12**	**43.4**	**-1.1**
BAYT	**Ayd¨–ntepe-Bay**	**69.96**	**315**	*e*	P	**P**	**20**	**12**	**42.6**	**-2.0**
ELZG	**Elazig**	**70.09**	**313**	*i*	P	**P**	**20**	**12**	**45.8**	**+0.4**
ATAB	**Bozova**	**70.23**	**312**	*i*	P	**P**	**20**	**12**	**46.6**	**+0.4**
MALT	**Malatya**	**70.43**	**312**	*e*	P	**P**	**20**	**12**	**45.7**	**-1.8**
MALT	**Malatya**	**70.43**	**312**	⇓	P	**P**	**20**	**12**	**47.5**	**0.0**
MALT	**Malatya**	**70.43**	**312**	*e*	P	**P**	**20**	**12**	**47.5**	**0.0**
	comp=Z,183nm,1.4s										
MALT					LR	LR					
	comp=Z,17μm,22.0s										
MALT	**Malatya**	**70.43**	**312**	⇓ *i*	P	**P**	**20**	**12**	**47.5**	**0.0**
MACK	**Trabzon**	**70.43**	**315**	*i*	P	**P**	**20**	**12**	**46.7**	**-0.6**
MYA	**Malatya**	**70.44**	**313**	*e*	P	**P**	**20**	**12**	**48.7**	**+1.2**
KTUT	**Trabzon**	**70.45**	**316**	*e*	P	**P**	**20**	**12**	**47.5**	**+0.1**
GUMT	**Gumushane**	**70.45**	**315**	*e*	P	**P**	**20**	**12**	**47.7**	**+0.1**
KELT	**Kelkit**	**70.49**	**315**	*i*	P	**P**	**20**	**12**	**48.0**	**0.0**
EIL	**Elat**	**70.51**	**303**		P	**P**	**20**	**12**	**48.4**	**+0.4**
EIL	**Elat**	**70.51**	**303**		P	**P**	**20**	**12**	**48.4**	**+0.4**
	comp=Z,55nm,0.9s,baz=109,slow=5.3,SNR=23										
EIL	**Elat**	**70.51**	**303**		P	**P**	**20**	**12**	**48.4**	**+0.4**
	baz=71,SNR=28										
MSNA	**Messina**	**70.73**	**248**	*e*	P	**P**	**20**	**12**	**50.8**	**+1.2**
MSNA					AMB	AMB	20	13	08.1		
	comp=Z,65nm,2.1s										
ILIC	**ilic-Erzincan**	**70.73**	**314**	*e*	P	**P**	**20**	**12**	**49.5**	**+0.2**
GZT	**Gaziantep**	**70.74**	**311**	*i*	P	**P**	**20**	**12**	**50.2**	**+0.8**
AKCD	**Akcadag**	**70.80**	**312**	*i*	P	**P**	**20**	**12**	**49.7**	**-0.1**
KUZU	**Kuzuini**	**70.92**	**311**	*i*	P	**P**	**20**	**12**	**51.1**	**+0.7**
GAZ	**Gaziantep**	**70.95**	**311**	*e*	P	**P**	**20**	**12**	**51.3**	**+0.7**
MMAI	**Mount Meron Ar**	**71.07**	**306**		P	**P**	**20**	**12**	**52.2**	**+0.8**
MMAI	**Mount Meron Ar**	**71.07**	**306**		P	**P**	**20**	**12**	**52.2**	**+0.8**
	comp=Z,22nm,0.8s,baz=100,slow=7.5,SNR=11										
ESPY	**Espiye-Giresun**	**71.15**	**315**	*e*	P	**P**	**20**	**12**	**50.3**	**-1.4**
DARE	**Darende-Malaty**	**71.22**	**312**	*e*	P	**P**	**20**	**12**	**50.3**	**-1.9**
SUSE	**Susehri**	**71.27**	**314**	*i*	P	**P**	**20**	**12**	**53.0**	**+0.4**
SOKR	**Solikamsk**	**71.27**	**338**	*c*	*i*P	**P**	**20**	**12**	**52.2**	**+0.3**
SOKR							20	15	26.4		
SOKR					PPP	PPP	20	17	07.7		
SOKR					S	**S**	**20**	**22**	**06.2**	**-1.3**
SOKR					pmax	pmax					
	comp=Z,290nm,1.0s										
SOKR					MLR	MLR					
	comp=Z,21μm,22.0s										
KMRS	**Kahramanmaras**	**71.29**	**311**	*e*	P	**P**	**20**	**12**	**51.2**	**-1.4**
SOC	**Sochi**	**71.49**	**318**	*c*	*i*P	**P**	**20**	**12**	**52.2**	**-1.4**
SOC					*e*PP	**pP**	**20**	**13**	**02.0**	**-0.5**
SOC					*e*SP	**sP**	**20**	**13**	**05.9**	**+0.2**
SOC					*i*		20	15	29.3		
SOC					*e*PPP	PPP	20	17	13.1		
SOC					*i* S	**S**	**20**	**22**	**07.8**	**-2.9**
SOC					*i*		20	22	53.7		
SOC					*e*SS	**SS**	**20**	**26**	**42.9**	**-3.2**
SOC					pmax	pmax					
	comp=Z,136nm,1.0s										
SOC					pmax	pmax					
	comp=Z,2μm,4.0s										
SOC					MLR	MLR					
	comp=Z,7μm,15.0s										
SOC					MLR	MLR					
	comp=N,4μm,15.0s										
SOC					MLR	MLR					
	comp=E,2μm,15.0s										
SKR	**Severo-Kuril's**	**71.55**	**34**	⇑ *i*	P	**P**	**20**	**12**	**51.0**	**-2.8**
SKR				*e*			20	13	03.0		
SKR				*e*			20	13	08.7		
SKR				*e*			20	15	32.0		
SKR				*e*	PPP	PPP	20	17	12.0		
SKR				*e*	S	**S**	**20**	**22**	**12.0**	**+1.0**
SKR				*e*			20	22	50.0		
SKR				*e*	PS	**PnS**	**20**	**22**	**52.0**	**+10**
SKR					pmax	pmax					
	comp=Z,310nm,1.0s										
SKR					pmax	pmax					
	comp=N,640nm,1.5s										
SKR					pmax	pmax					
	comp=E,800nm,1.5s										
SKR					pmax	pmax					
	comp=N,2μm,4.0s										
SKR					pmax	pmax					
	comp=E,4μm,4.0s										
SKR					pmax	pmax					
	comp=Z,8μm,4.0s										
SKR					smax	smax					
	comp=N,6μm,14.0s										
SKR					MLR	MLR					
	comp=N,7μm,18.0s										
SKR					MLR	MLR					
	comp=E,8μm,18.0s										
SKR					MLR	MLR					
	comp=Z,17μm,18.0s										
SARR	**Saratov**	**71.63**	**327**	*c*	*e*P	**P**	**20**	**12**	**53.4**	**-0.9**
SARR					*i* S	**S**	**20**	**22**	**08.4**	**-3.6**
SARR					pmax	pmax					
	comp=Z,153nm,0.7s										
SARI	**SarD1z-Kayseri**	**71.95**	**312**	*e*	P	**P**	**20**	**12**	**55.2**	**-1.6**
RSDY	**Resadiye-TOKAT**	**71.96**	**314**	*e*	P	**P**	**20**	**12**	**54.8**	**-1.8**
PINB	**Pinarbasi**	**72.05**	**312**	*i*	P	**P**	**20**	**12**	**56.9**	**-0.5**
LSZ	**Lusaka**	**72.08**	**255**	*e*	P	**P**	**20**	**12**	**58.2**	**+0.4**
LSZ	**Lusaka**	**72.08**	**255**		P	**P**	**20**	**13**	**00.5**	**+2.6**
	SNR=12										
LSZ	**Lusaka**	**72.08**	**255**		S	**S**	**20**	**22**	**18.2**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=314,slow=19,SNR=3.7										
KOZT	**Kozan**	**72.09**	**311**	*e*	P	**P**	**20**	**12**	**58.4**	**+1.0**
KSD	**Kokstad**	**72.10**	**239**	*e*	P	**P**	**20**	**12**	**58.5**	**+0.7**
KSD					AMB	AMB	20	13	11.5		
	comp=Z,150nm,3.9s										
ERBA	**Erbaa**	**72.47**	**314**	*i*	P	**P**	**20**	**12**	**59.7**	**+0.1**
BNN	**Bunyan**	**72.52**	**312**	*e*	P	**P**	**20**	**12**	**58.2**	**-1.9**
SLR	**Silverton**	**72.60**	**244**	*e*	P	**P**	**20**	**13**	**00.3**	**-0.5**
SLR					AMB	AMB	20	13	20.2		
	comp=Z,92nm,2.2s										
ERPM	**east rand prop**	**72.69**	**244**	*e*	P	**P**	**20**	**13**	**01.6**	**+0.2**
ERPM					AMB	AMB	20	13	14.4		
	comp=Z,68nm,4.3s										
GULE	**Gulek**	**72.82**	**310**	*i*	P	**P**	**20**	**13**	**02.1**	**+0.1**
KVT	**Kavak**	**73.11**	**315**	*e*	P	**P**	**20**	**13**	**01.8**	**-1.7**
LFK	**Lefkose**	**73.20**	**308**	*e*	P	**P**	**20**	**13**	**03.1**	**-1.0**
NIG	**Nigde**	**73.20**	**311**	*e*	P	**P**	**20**	**13**	**03.7**	**-0.6**
CSS	**Prodhromos**	**73.27**	**308**	*e*	P	**P**	**20**	**13**	**04.9**	**+0.5**
CSS					LR	LR					
	comp=Z,4μm,19.0s										
HAVZ	**Havza**	**73.34**	**314**	*i*	P	**P**	**20**	**13**	**03.4**	**-1.4**
SEK	**Senekal**	**73.42**	**242**	*e*	P	**P**	**20**	**13**	**04.7**	**-1.0**
SEK					AMB	AMB	20	13	15.9		
	comp=Z,101nm,5.6s										
ANN	**Anapa**	**73.48**	**319**	*c*	*i*P	**P**	**20**	**13**	**03.3**	**-2.1**
ANN					*i* S	**S**	**20**	**22**	**29.2**	**-4.1**
ANN					pmax	pmax					
	comp=N,36nm,1.7s										
ANN					pmax	pmax					
	comp=E,23nm,1.7s										
ANN					pmax	pmax					
	comp=Z,73nm,1.7s										
ANN					pmax	pmax					
	comp=N,490nm,8.0s										
ANN					pmax	pmax					
	comp=E,504nm,8.0s										
ANN					pmax	pmax					
	comp=Z,2μm,8.0s										
ANN					smax	smax					
	comp=N,4μm,8.3s										
ANN					smax	smax					
	comp=E,2μm,8.3s										
ANN					smax	smax					
	comp=Z,1μm,8.3s										
VRHR	**Novokhopersk**	**73.51**	**326**	*e*	P	**P**	**20**	**13**	**04.7**	**-0.8**
VRHR				*e*	*e*PP	**pP**	**20**	**13**	**14.7**	**+0.4**
VRHR				*e*			20	15	46.0		
VRHR				*e*	S	**S**	**20**	**22**	**29.6**	**-3.9**
VRHR					pmax	pmax					
	comp=N,220nm,1.9s										
VRHR					pmax	pmax					
	comp=E,680nm,1.9s										
VRHR					pmax	pmax					
	comp=Z,1μm,1.9s										
VRHR					pmax	pmax					
	comp=N,40nm,0.8s										
VRHR					pmax	pmax					
	comp=E,110nm,0.8s										
VRHR					pmax	pmax					
	comp=Z,270nm,0.8s										
VRHR					pmax	pmax					
	comp=Z,450nm,3.1s										
VRHR					pmax	pmax					
	comp=N,60nm,1.5s										
VRHR					pmax	pmax					
	comp=E,270nm,3.1s										
VRHR					smax	smax					
	comp=N,3μm,3.3s										
VRHR					smax	smax					
	comp=E,920nm,3.3s										
VRHR					smax	smax					
	comp=Z,300nm,3.3s										
VRHR					MLR	MLR					
	comp=Z,15μm,23.0s										
VRHR					MLR	MLR					
	comp=N,640nm,11.0s										
VRHR					MLR	MLR					
	comp=E,9μm,23.0s										
PRYS	**Parys**	**73.52**	**243**	*e*	P	**P**	**20**	**13**	**05.3**	**-1.0**
PRYS					AMB	AMB	20	13	18.6		
	comp=Z,79nm,3.6s										
PEA0B	**Petropavlovsk-**	**73.59**	**32**	*e*	P	**P**	**20**	**13**	**04.6**	**-1.4**
PETK	**Petropavlovsk-**	**73.59**	**32**		P	**P**	**20**	**13**	**05.5**	**-0.4**
PETK	**Petropavlovsk-**	**73.59**	**32**		P	**P**	**20**	**13**	**05.5**	**-0.4**
**

VSR pmax pmax
comp=N,80nm,0.9s
VSR pmax pmax
comp=E,230nm,0.9s
VSR pmax pmax
comp=Z,260nm,0.9s
VSR pmax pmax
comp=N,90nm,0.9s
VSR pmax pmax
comp=E,260nm,0.9s
VSR pmax pmax
comp=Z,500nm,0.9s
VSR pmax pmax
comp=Z,490nm,3.2s
VSR pmax pmax
comp=N,20nm,1.0s
VSR pmax pmax
comp=E,360nm,3.2s
VSR smax smax
comp=N,2μm,3.7s
VSR smax smax
comp=E,1μm,3.7s
VSR smax smax
comp=Z,270nm,3.7s
VSR MLR MLR
comp=N,1μm,22.0s
VSR MLR MLR
comp=E,5μm,22.0s
VSR MLR MLR
comp=Z,11μm,22.0s
LBTB Lobatse 74.96 245 *e*P **P 20 13 15.4 +0.7**
LBTB AMB AMB 20 13 17.4
comp=Z,64nm,5.8s
LBTB Lobatse 74.96 245 *e*P **P 20 13 13.7 -1.1**
comp=Z,212nm,1.9s
ANTO Ankara 75.08 313 *e*P **P 20 13 11.9 -3.1**
ANTO Ankara 75.08 313⇑P **P 20 13 14.2 -0.8**
ANTO Ankara 75.08 313 *e*P **P 20 13 14.3 -0.8**
ANTO Ankara 75.08 313⇑*e*P **P 20 13 14.2 -0.8**
ANTO Ankara 75.08 313 P **P 20 13 14.5 -0.5**
SNR=15
LOD Lodumlu 75.11 313 *e*P **P 20 13 12.2 -3.0**
BALT Daday 75.15 314 *i*P **P 20 13 14.2 -1.3**
VOR Voronezh 75.16 326 *e*P **P 20 13 15.0 -0.1**
VOR *e*S **S 20 22 48.0 -3.9**
VOR pmax pmax
comp=Z,500nm,2.0s
KDHN Kadinhani 75.20 311 *i*P **P 20 13 13.6 -2.2**
SWZ Schweizer 75.35 243 *e*P **P 20 13 16.2 -0.7**
SWZ AMB AMB 20 13 31.1
comp=Z,104nm,1.9s
KHZ Kahutara 75.43 133 *e*P **P 20 13 15.9 -0.9**
comp=Z,116nm,1.2s
BOSA Boshof 75.52 241 *e*P **P 20 13 16.9 -0.9**
BOSA AMB AMB 20 13 36.0
comp=Z,70nm,2.4s
BOSA Boshof 75.52 241 *e*P **P 20 13 16.9 -0.9**
comp=Z,52nm,1.0s
BOSA Boshof 75.52 241 P **P 20 13 16.8 -1.1**
comp=Z,27nm,0.8s,baz=93,slow=6.6,SNR=34
BOSA LR LR 20 42 35.0
comp=Z,14μm,18.2s,baz=101,slow=33
SAFT Safranbolu 75.56 314 *e*P **P 20 13 15.1 -2.6**
SOE Somerset East 75.61 237 *e*P **P 20 13 18.0 -0.3**
SOE AMB AMB 20 13 31.6
comp=Z,126nm,5.0s
SIM Simferopol' **75.74 318***c i*P **P 20 13 17.9 -0.7**
SIM *i*S **S 20 22 54.0 -4.6**
SIM *e*SS **SS 20 27 50.0 -0.8**
SIM pmax pmax
comp=Z,70nm,1.1s
SIM MLR MLR
comp=Z,6μm,18.0s
HIZ Hauiti 75.86 129 PN **P 20 13 20.9 +1.4**
ANTB Antalya 75.88 309 *e*P **P 20 13 16.7 -2.9**
SVRH Sivrihisar-ESK 75.90 312 *e*P **P 20 13 17.5 -2.3**
BCK Bucak 76.07 310 *e*P P 20 13 17.1 -3.7
BOLV Bolvadin 76.13 311 *i*P **P 20 13 20.3 -0.9**
KORT Korkueli 76.14 309 *i*P **P 20 13 20.8 -0.5**
ISP Isparta 76.22 310 *e*P **P 20 13 20.6 -1.0**
ISP Isparta 76.22 310⇑P **P 20 13 20.3 -1.3**
ISP Isparta 76.22 310 PFAKE 20 13 30.0 +8.4
ISP LR LR
comp=Z,11μm,20.0s
ISP Isparta 76.22 310⇑*i*P **P 20 13 20.3 -1.3**
SHUT Suhut-Afyon 76.39 311 *e*P **P 20 13 21.1 -1.4**
ELL Elmali 76.42 309 *e*P **P 20 13 20.1 -2.7**
ESKT Eskisehir 76.42 312 *e*P P 20 13 19.5 -3.2
MDUB Mudurnu 76.42 313 *e*P **P 20 13 20.7 -2.0**
BUFB Buffelsbos 76.43 236 *e*P **P 20 13 19.8 -3.0**
BUFB AMB AMB 20 13 36.6
comp=Z,133nm,3.7s
MTVZ Mangateitei 76.45 130 PN **P 20 13 23.4 +0.5**
KDZE Karadeniz Ereo 76.48 314 *e*P **P 20 13 22.2 -0.7**
WPVZ Whakapapa 76.48 129 PN **P 20 13 23.9 +0.8**
FWVZ Far West T-bar 76.49 130 PN **P 20 13 23.8 +0.5**
TRVZ Turoa 76.50 130 PN **P 20 13 24.2 +0.8**
SEY Seymchan 76.50 22⇑*i*P **P 20 13 23.0 +0.5**
DRZ Dome Shelter 76.50 130 PN **P 20 13 24.2 +0.7**
WTVZ West Tongariro 76.50 129 PN **P 20 13 24.2 +0.9**
NGZ Ngauruhoe 76.52 129 PN **P 20 13 23.3 -0.1**
AKAS Kas 76.53 308 *i*P **P 20 13 20.8 -2.7**
WNVZ Wahianoa 76.54 130 PN **P 20 13 23.9 +0.4**
KRVZ Karewarewa 76.54 129 PN **P 20 13 24.0 +0.5**
OTVZ Oturere 76.57 129 PN **P 20 13 24.5 +0.8**
HENT Hendek 76.74 313 *i*P **P 20 13 24.0 -0.4**
GOLH Golhisar 76.81 309 *i*P **P 20 13 25.0 0.0**
BORA Eskisehir 76.81 312 *i*P **P 20 13 23.9 -1.0**
GLHS Glhisar (BURDU 76.84 309 *e*P **P 20 13 23.6 -1.6**
ALT Altintas 76.85 311 *e*P **P 20 13 22.4 -2.8**
ALT Altintas 76.85 311 *i*P P 20 13 32.9 +7.7
TIXI Tiksi 76.89 9 *e*P **P 20 13 23.4 -1.2**
TIXI pmax pmax
comp=Z,704nm,1.5s
TIXI MLR MLR
comp=Z,66μm,20.0s
TIXI Tiksi 76.89 9 *e*P **P 20 13 23.4 -1.2**
comp=Z,704nm,1.5s
TIXI LR LR
comp=Z,66μm,20.0s
TSZ Takapari Road 76.91 130 PN **P 20 13 25.5 +0.1**
GULT Gulveren 76.91 313 *e*P **P 20 13 23.6 -1.9**
SYO Syowa Base 76.95 199⇑*e*P **P 20 13 25.4 +0.4**
SYO Syowa Base 76.95 199⇑*e*P P 20 13 34.7 +10
KHAL Karahalli 77.14 310 *i*P **P 20 13 25.3 -1.6**
BKZ Black Stump Fm 77.21 129 PN **P 20 13 27.2 0.0**
MSVF Nonsavu 77.24 107 *e*P **P 20 13 27.6 -0.1**
MSVF pmax pmax
comp=Z,370nm,1.5s
MSVF MLR MLR
comp=Z,10μm,21.0s
MSVF Nonsavu 77.24 107 *e*P **P 20 13 27.6 -0.1**
comp=Z,419nm,1.5s
MSVF LR LR
comp=Z,11μm,21.0s
MSVF Nonsavu 77.24 107 P **P 20 13 29.8 +2.1**
comp=Z,451nm,1.4s,SNR=5.6
DNZL Cakiroluk 77.32 310 *i*P **P 20 13 27.0 -0.9**
GDZ Gediz 77.33 311 *i*P **P 20 13 27.1 -0.8**
CAVI Cavuskoy 77.35 312 *e*P **P 20 13 24.8 -3.1**
TVSB Tavsanli 77.44 311 *e*P **P 20 13 26.8 -1.7**
URZ Urewera 77.59 128 *e*P **P 20 13 29.4 +0.2**
comp=Z,357nm,1.8s
URZ Urewera 77.59 128 P **P 20 13 28.4 -0.9**
comp=Z,16nm,0.5s,baz=96,slow=1.0,SNR=12
URZ LR LR 20 48 09.4
comp=Z,22μm,21.4s,baz=300,slow=36
HRT Hereke 77.64 313 *e*P **P 20 13 28.0 -1.4**
MOS Moscow **77.69 329***e i*P **P 20 13 29.5 +0.2**
MOS *e* 20 13 38.3
MOS *i* 20 16 21.8
MOS *e*PPP PPP 20 18 16.0
MOS *i*S **S 20 23 17.0 -2.5**
MOS *e* 20 24 12.5
MOS *e*SS **SS 20 28 16.5 -3.3**
MOS pmax pmax
comp=Z,128nm,1.0s
MOS pmax pmax
comp=Z,2μm,2.5s
MOS smax smax
comp=E,3μm,3.9s
MOS smax smax
comp=N,6μm,4.4s
SILT Sile 77.74 313 *e*P **P 20 13 27.2 -2.7**

YER Yerkesik 77.78 309 *e*P **P 20 13 29.2 -1.1**
KULA Kula-Manisa 77.81 310 *e*P **P 20 13 28.5 -2.0**
GEMT Gemlik 77.89 312 *e*P **P 20 13 28.8 -2.0**
DEMI Demirci 77.90 311 *i*P **P 20 13 30.4 -0.7**
OBN Obninsk 77.99 328α *i*P **P 20 13 31.0 0.0**
OBN *i* 20 13 40.7
OBN *i* 20 16 24.1
OBN *i*PPP PPP 20 18 21.6
OBN *i*S **S 20 23 20.1 -2.6**
OBN *e* 20 23 33.7
OBN *i*PS **PnS 20 23 58.0 -7.8**
OBN *i*SS **SS 20 28 20.7 -3.6**
OBN pmax pmax
comp=Z,556nm,1.7s
OBN Obninsk 77.99 328 P **P 20 13 31.7 +0.7**
comp=Z,1μm,1.1s,SNR=24
MDNY Mudanya-Bursa 78.10 312 *e*P P 20 13 28.0 -3.9
ISK Istanbul-Kandi 78.15 313 *e*P **P 20 13 31.3 -0.9**
ARMT Armutlu 78.17 312 *e*P P 20 13 28.4 -4.0
MLSB Milas 78.21 309 *e*P **P 20 13 30.9 -1.8**
AYDN Tasoluk 78.21 309 *i*P **P 20 13 32.9 +0.1**
DURS Dursunbey 78.22 311 *i*P **P 20 13 32.0 -0.7**
BGKT Bogazkoy 78.39 313 *e*P **P 20 13 31.3 -2.3**
KCTX Karacabey (Bur 78.47 312 *e*P **P 20 13 31.3 -2.8**
BODT Bodrum 78.52 309 *e*P **P 20 13 32.0 -2.4**
AKHS Akhisar 78.54 311 *i*P **P 20 13 33.9 -0.6**
CTKS Kestanelik-??a 78.59 313 *e*P **P 20 13 32.1 -2.6**
ELBA Catalca 78.63 313 *i*P **P 20 13 34.5 -0.4**
BALB Balikesir 78.67 311 *e*P **P 20 13 33.5 -1.7**
GCAM G?zlcaml? 78.72 309 *i*P **P 20 13 36.3 +0.9**
SLVT Silivri 78.81 313 *e*P **P 20 13 33.3 -2.6**
BNT Bandirma 78.81 312 *e*P **P 20 13 32.9 -3.0**
CTYL Yal??k??y-??at 78.81 313 *e*P **P 20 13 34.1 -1.8**
IZM Izmir 78.85 310 *e*P **P 20 13 34.5 -1.7**
BALY Balya 78.89 311 *i*P **P 20 13 35.6 -0.8**
GONE Gonen-Balikesi 78.91 312 *e*P **P 20 13 35.3 -1.1**
BLCB Balcova 79.02 310 *e*P **P 20 13 35.3 -1.8**
MRMT Marmara Adasi 79.11 312 *e*P **P 20 13 35.6 -2.1**
CRLT Corlu 79.13 313 *e*P **P 20 13 36.5 -1.1**
TKR Tekirdag 79.25 313 *e*P P 20 13 34.9 -3.4
URLA Izmir 79.36 310 *i*P **P 20 13 38.6 -0.4**
TLCR 79.39 317 P **P 20 13 39.2 +0.2**
SART Tekirdag 79.44 312 *i*P **P 20 13 38.3 -1.1**
PSN Preselentsi 79.44 315 *i*P **P 20 13 39.4 +0.1**
RKY Sarkoy-Tekirda 79.44 312 *e*P P 20 13 35.7 -3.7
TIRR Tirgusor 79.48 316⇓P **P 20 13 39.0 -0.4**
TIRR Tirgusor 79.48 316 *e*P **P 20 13 38.9 -0.6**
comp=Z,132nm,1.2s
TIRR Tirgusor 79.48 316⇓*i*P **P 20 13 39.0 -0.4**
AYVA Ayvalik 79.49 311 *i*P **P 20 13 39.2 -0.4**
SUR Sutherland 79.59 238 *e*P **P 20 13 41.6 +0.9**
SUR AMB AMB 20 13 44.1
comp=Z,70nm,3.1s
SUR Sutherland 79.59 238 *e*P **P 20 13 40.8 +0.2**
SUR LR LR
comp=Z,23μm,19.0s
SUR Sutherland 79.59 238 P **P 20 13 42.9 +2.3**
comp=Z,292nm,1.0s,SNR=5.3
CVD Cernavoda 79.70 316 P **P 20 13 41.3 +0.6**
PRK Paraskevi 79.80 311 *e*P **P 20 13 41.9 +0.6**
CFR Carcaliu 79.85 317⇑P **P 20 13 40.9 -0.6**
CFR Carcaliu 79.85 317⇑*i*P **P 20 13 40.9 -0.6**
PRD Provadia 79.87 315 *i*P **P 20 13 40.9 -0.7**
KIS Kishinev 79.88 319 *e*P **P 20 13 40.0 -1.6**
KIS *e* 20 16 43.0
KIS *e*PPP PPP 20 18 36.0
KIS *e*S **S 20 23 38.0 -5.2**
KIS *i* 20 23 55.0
KIS *e*SS **SS 20 28 56.0 +2.9**
KIS pmax pmax
comp=Z,800nm,2.4s
KIS pmax pmax
comp=Z,2μm,9.0s
KIS pmax pmax
comp=Z,3μm,16.0s
KIS smax smax
comp=N,4μm,12.0s
KIS smax smax
comp=E,1μm,8.0s
KIS Kishinev 79.88 319 *e*P **P 20 13 40.0 -1.6**
comp=E,800nm,2.4s
KIS Kishinev 79.88 319 *e*PP PP 20 16 43.0 -0.3
KIS Kishinev 79.88 319⇓*i*P **P 20 13 41.8 +0.2**
APE Apeiranthos 79.91 308⇑P **P 20 13 39.8 -2.3**
APE Apeiranthos 79.91 308⇑*i*P **P 20 13 39.8 -2.3**
IDI Anoyia 80.07 306 *e*P **P 20 13 43.0 0.0**
BOZC Bozcaada 80.09 311 *i*P **P 20 13 42.3 -0.6**
LEOM Leova 80.11 318⇑P **P 20 13 43.0 +0.2**
LEOM Leova 80.11 318⇑*i*P **P 20 13 43.0 +0.2**
AMRR Amara 80.26 316⇑P **P 20 13 43.9 +0.2**
AMRR Amara 80.26 316⇑*i*P **P 20 13 43.9 +0.2**
JMB Yambol 80.28 314 *i*P **P 20 13 44.1 +0.2**
CVNA Calvinia 80.44 239 *e*P **P 20 13 47.3 +2.2**
CVNA AMB AMB 20 13 57.6
comp=Z,131nm,6.5s
GHRR 80.57 318⇑*i*P **P 20 13 46.7 +1.4**
PETR 80.61 317⇓*i*P **P 20 13 45.7 +0.2**
AK02 Malin Array Si 80.65 322 *e*P **P 20 13 45.2 -0.4**
AKASG Malin Array Be 80.65 322 P **P 20 13 44.8 -0.8**
AKASG 20 16 51.3
AKASG S **S 20 23 48.5 -2.7**
AKASG Malin Array Be 80.65 322 P **P 20 13 44.8 -0.8**
comp=Z,34nm,1.0s,baz=92,slow=4.5,SNR=32
AKASG PP **PP 20 16 51.2 +1.6**
comp=Z,4.5nm,0.9s,baz=95,slow=6.7,SNR=4.0
AKASG S **S 20 23 48.5 -2.7**
comp=Z,0.3nm,0.2s,baz=102,slow=8.6,SNR=5.6
AK01 Malin Array Si 80.65 322 *e*P **P 20 13 44.6 -1.1**
KIEV Kiev 80.66 322 *e*P **P 20 13 45.1 -0.6**
KIEV Kiev 80.66 322 *e*P **P 20 13 45.1 -0.6**
IAS Iasi 80.75 319⇓*i*P **P 20 13 46.1 -0.2**
IAS Iasi 80.75 319⇓*i*P **P 20 13 46.1 -0.2**
LIA Limnos Island 80.75 311 *e*P **P 20 13 46.8 +0.4**
ISR Istrita 80.93 316⇑P **P 20 13 48.2 +0.8**
ISR Istrita 80.93 316⇑*i*P **P 20 13 48.2 +0.8**
SZH Strazhica 80.93 315 *i*P **P 20 13 46.1 -1.2**
VNDA Vanda 80.97 169 *e*P **P 20 13 47.4 +0.5**
comp=Z,101nm,1.3s
VNDA Vanda 80.97 169 P **P 20 13 47.0 +0.1**
comp=Z,13nm,1.0s,baz=309,slow=6.6,SNR=14
VNDA LR LR 20 45 15.5
comp=Z,12μm,21.2s,baz=309,slow=32
VRI Vrincioaia 80.98 317⇑P **P 20 13 47.5 -0.1**
VRI Vrincioaia 80.98 317⇑*i*P **P 20 13 47.5 -0.1**
SULR 81.03 316⇑*i*P **P 20 13 46.3 -1.5**
PLOR Plostina 81.03 317⇓P **P 20 13 48.2 +0.3**
PLOR Plostina 81.03 317⇓*i*P **P 20 13 48.2 +0.3**
TMCR Tamitsa 81.15 337 *e*P **P 20 13 48.4 +0.4**
TMCR pmax pmax
comp=Z,232nm,1.0s
TESR 81.19 318⇑*i*P **P 20 13 48.7 0.0**
SECR 81.24 316⇑*i*P **P 20 13 50.3 +1.3**
PVL Pavlikeni 81.35 314 *i*P **P 20 13 50.1 +0.6**
PTL Penteli 81.40 309 *e*P **P 20 13 49.5 -0.5**
ZIMR 81.42 315 P **P 20 13 50.5 +0.6**
MLR Muntele Rosu 81.43 317 P **P 20 13 50.3 +0.2**
MLR Muntele Rosu 81.43 317⇑*i*P **P 20 13 50.3 +0.2**
MLR Muntele Rosu 81.43 317 P **P 20 13 50.3 +0.2**
comp=Z,17nm,1.0s,baz=90,slow=5.9,SNR=58
RZN Rozhen 81.47 313 *i*P **P 20 13 50.0 -0.5**
ATH Athens Observa 81.50 309 *e*P **P 20 13 50.4 -0.1**
DID Didima 81.79 308 *e*P **P 20 13 50.9 -1.2**
HUMR Humele 81.88 316⇓*i*P **P 20 13 50.4 -1.9**
VLI Veliai 81.89 308 *e*P **P 20 13 52.6 0.0**
PAIG Paliouri 81.89 311 *e*P **P 20 13 51.7 -0.8**
VOIR 82.03 317⇓P **P 20 13 52.6 -0.6**
VOIR 82.03 317⇓*i*P **P 20 13 52.6 -0.6**
NVR Nevrokopi 82.03 312 *e*P **P 20 13 52.5 -0.8**
PGB Panagyurishte 82.05 314 *i*P **P 20 13 52.4 -0.9**
LTK Loutraki 82.09 309 *e*P **P 20 13 52.7 -0.9**
FX1 Attu Island--F 82.14 36 *e*P **P 20 13 53.4 -0.1**
PLG Polygyros 82.16 311 *e*P **P 20 13 53.4 -0.5**
MMB Musomiste 82.18 313 *i*P **P 20 13 52.9 -1.1**
LKR Lokris 82.18 310 *e*P **P 20 13 52.8 -1.2**
TSUM Tsumeb 82.25 251 *e*P **P 20 13 56.1 +1.1**
ARR Arges 82.30 316⇓*i*P **P 20 13 54.0 -0.6**
SOH Sokhos 82.31 312 *e*P **P 20 13 54.2 -0.5**
KOMG Komaggas 82.36 241 *e*P P 20 13 51.2 -4.0

KOMG AMB AMB 20 14 14.2
comp=Z,79nm,2.4s
DYR Agios Nikonas 82.37 308 *e*P **P 20 13 55.7 +0.6**
BURAR Bucovina Array 82.40 319 P **P 20 13 56.0 +0.9**
BURAR Bucovina Array 82.40 319⇑*i*P **P 20 13 56.0 +0.9**
BUR08 Bucovina Ar. S 82.42 319 *e*P **P 20 13 55.6 +0.4**
MICGM Minsk 82.51 326⇑*e*P **P 20 13 54.0 -1.4**
MPEP Malo Peshtene 82.51 314 *i*P **P 20 13 55.6 -0.1**
MNK Minsk 82.53 326*ce*P **P 20 13 54.0 -1.5**
MNK *e*S **S 20 24 06.0 -4.6**
MNK S **SKSac 20 24 08.0 -6.7**
MNK *e*PS **PnS 20 25 05.0 +2.2**
MNK pmax pmax
comp=Z,8μm,16.0s
MNK pmax pmax
comp=E,340nm,1.3s
MNK pmax pmax
comp=Z,720nm,1.4s
GUR Goura 82.56 309 *e*P **P 20 13 55.5 -0.7**
THE Thessaloniki 82.56 311 *e*P **P 20 13 56.2 +0.2**
KKB Krupnik 82.70 313 *i*P **P 20 13 55.5 -1.2**
VTS Vitosha 82.75 313⇓P **P 20 13 56.3 -0.8**
VTS Vitosha 82.75 313⇓*i*P **P 20 13 56.3 -0.8**
VTS Vitosha 82.75 313 *i*P **P 20 13 56.6 -0.5**
AGG Agios Georgios 82.76 310 *e*P **P 20 13 56.0 -1.1**
ITM Ithomi 82.76 308 *e*P **P 20 13 56.8 -0.4**
KALE Kalithea 82.80 309 *e*P **P 20 13 56.5 -0.9**
LIT Litokhoron 82.82 311 *e*P **P 20 13 56.4 -1.0**
PUL Pulkovo 82.82 331 *e*P **P 20 13 58.2 +1.3**
PUL pmax pmax
comp=Z,189nm,0.4s
PUL MLR MLR
comp=Z,9μm,21.0s
LAKA Lakka 82.90 309 *e*P **P 20 13 57.6 -0.2**
EVR Evrytania 83.14 310 *e*P **P 20 13 58.8 -0.4**
NACGM Naroch 83.23 326 *e*P P 20 13 55.0 -4.1
RLS Riolos of Patr 83.27 309 *e*P **P 20 14 00.7 +1.0**
JOF Joensuu 83.42 334 *e*P **P 20 13 58.4 -1.5**
JOF pmax pmax
comp=Z,32nm,0.8s
JOF Joensuu 83.42 334 *ep* **P 20 13 58.4 -1.5**
comp=Z,32nm,0.8s
BMR Baia Mare 83.55 319⇑P **P 20 14 01.7 +0.7**
BMR Baia Mare 83.55 319⇑*i*P **P 20 14 01.7 +0.7**
DEV Deva 83.59 317⇓P **P 20 14 01.8 +0.6**
DEV Deva 83.59 317⇓*i*P **P 20 14 01.8 +0.6**
LVV L'vov 83.66 321 *e*P **P 20 14 01.4 0.0**
LVV *e* 20 17 11.8
LVV *e*S **S 20 24 20.2 -2.0**
LVV *e* 20 25 19.4
IIGN Ignalina 83.66 326 *e*P **P 20 14 01.9 +0.6**
IIGN AMB AMB 20 14 05.5
comp=Z,113nm,1.1s
IZAR Zarasai 83.75 327 *e*P **P 20 14 02.4 +0.6**
IZAR AMB AMB 20 14 05.9
comp=Z,61nm,1.2s
ISAL Salakas 83.77 327 *e*P **P 20 14 02.5 +0.6**
ISAL AMB AMB 20 14 06.0
comp=Z,74nm,1.1s
FNA Florina 83.78 311 *e*P **P 20 14 01.4 -1.0**
BIA Bitola 83.86 312⇓*e*P **P 20 14 02.2 -0.5**
DRGR 83.90 318⇑P **P 20 14 03.2 +0.3**
DRGR 83.90 318⇑*i*P **P 20 14 03.2 +0.3**
SKO Skopje 83.93 313⇑*i*P **P 20 14 01.9 -1.2**
VLS Valsamata 83.97 309 *e*P **P 20 14 03.7 +0.4**
LVZ Lovozero 83.99 340*c i*P **P 20 14 02.8 0.0**
LVZ pmax pmax
comp=Z,261nm,1.7s
JAN Janina 83.99 310 *e*P **P 20 14 03.4 -0.1**
LKD2 Lefkada island 84.01 309 *e*P **P 20 14 03.8 +0.3**
BILL Bilibino 84.05 20 *e*P **P 20 14 02.3 -0.8**
BILL pmax pmax
comp=Z,216nm,1.4s
BILL MLR MLR
comp=Z,25μm,19.0s
BILL Bilibino 84.05 20 *e*P **P 20 14 02.2 -0.8**
comp=Z,216nm,1.4s
BILL LR LR
comp=Z,25μm,19.0s
TRPA Tarpa 84.27 319⇑*i*P **P 20 14 04.1 -0.5**
TRPA Tarpa 84.27 319⇑*e*P **P 20 14 04.9 +0.3**
APA Apatity 84.30 339⇓*i*P **P 20 14 05.4 +1.1**
APA *i*S **S 20 24 26.0 -1.9**
APA *i*PS **PnS 20 25 20.0 -3.9**
APA *i*SS **SS 20 30 00.0 +2.1**
APA pmax pmax
comp=Z,78nm,2.0s
APA MLR MLR
comp=Z,15μm,22.0s
BZS Buzias 84.43 316⇑P **P 20 14 05.3 -0.2**
BZS Buzias 84.43 316⇑*i*P **P 20 14 05.3 -0.2**
KWP Kalwaria Pacla 84.46 320⇑P **P 20 14 05.8 +0.2**
KWP Kalwaria Pacla 84.46 320 *e*P **P 20 14 05.1 -0.4**
comp=Z,232nm,1.4s
KWP LR LR
comp=Z,5μm,20.0s
KWP Kalwaria Pacla 84.46 320⇑*i*P **P 20 14 05.8 +0.2**
KWP Kalwaria Pacla 84.46 320 *e*P **P 20 14 05.8 +0.2**
KWP *ep*P **pP 20 14 16.7 +2.2**
KWP *e*S S **20 24 29.7 -0.6**
KWP LMZ LR 20 55 32.7
UZH Uzhgorod 84.53 319 *e*P **P 20 14 06.0 +0.1**
UZH *e* 20 14 15.8
UZH *i* 20 14 23.8
UZH *e* 20 17 15.6
UZH *e*S **S 20 24 29.0 -1.9**
UZH *e*PS **PnS 20 25 29.6 +2.2**
KOLS Kolonicke sedl 84.60 320 *e*P **P 20 14 07.2 +0.9**
KOLS pmax pmax
comp=Z,176nm,1.1s
KOLS Kolonicke sedl 84.60 320 *e*P **P 20 14 07.2 +0.9**
KOLS *ep*P **pP 20 14 18.0 +2.7**
KOLS Kolonicke sedl 84.60 320 *e*S S **20 24 32.3 +0.6**
KOLS *e*SS SS 20 30 19.4 +16
PHP Peshkopia 84.62 312 *i*P **P 20 14 04.8 -1.8**
KEK Kerkira 84.81 310 *e*P **P 20 14 08.1 +0.6**
TIR Tirane 85.00 312 *i*P **P 20 14 08.4 -0.1**
BCI Bajram Curri 85.00 313 *i*P **P 20 14 08.9 +0.4**
SUW Suwalki 85.06 325 *e*P **P 20 14 08.3 -0.2**
SUW pmax pmax
comp=Z,478nm,1.0s
SUW Suwalki 85.06 325 *e*P **P 20 14 08.3 -0.2**
comp=Z,478nm,1.0s
SUW Suwalki 85.06 325 *e*P **P 20 14 08.2 -0.2**
SUW *e*SKSac **SKSac 20 24 33.4 +2.2**
SUW *e*S **SKKSac 20 24 40.5 +3.1**
SUW LMZ LR 20 58 29.5
PUK Puka 85.08 312 *i*P **P 20 14 08.1 -0.8**
PVY Plav 85.11 313 *e*P **P 20 14 08.5 -0.7**
CRVS Cervenica-Dubn 85.12 319 *e*P **P 20 14 09.0 +0.1**
CRVS pmax pmax
comp=Z,411nm,2.6s
CRVS Cervenica-Dubn 85.12 319 *e*P **P 20 14 09.0 +0.1**
CRVS *ep*P **pP 20 14 20.7 +2.8**
CRVS Cervenica-Dubn 85.12 319 *e*S S **20 24 34.5 -2.4**
CRVS *e*SS SS 20 30 23.3 +12
IVA Berane 85.20 313⇑*i*P **P 20 14 09.3 -0.3**
FIA1 FINESS Array S 85.31 332 *e*P **P 20 14 09.4 -0.1**
FINES FINESS Array B 85.32 332 P **P 20 14 09.7 +0.1**
FINES FINESS Array B 85.32 332 P **P 20 14 09.7 +0.1**
comp=Z,50nm,0.9s,baz=107,slow=4.7,SNR=48
FINES LR LR 20 59 59.0
comp=Z,13μm,19.6s,baz=106,slow=41
KAF Kangasniemi 85.39 333 *e*P **P 20 14 09.1 -0.8**
KAF pmax pmax
comp=Z,40nm,0.8s
KAF Kangasniemi 85.39 333 *ep* **P 20 14 09.1 -0.8**
comp=Z,40nm,0.8s
ULC Ulcinj 85.55 312⇑*i*P **P 20 14 11.0 -0.2**
TTG Podgorica 85.60 313⇑*i*P **P 20 14 10.9 -0.5**
PLE Pljevlja 85.64 314⇑*i*P **P 20 14 11.6 -0.2**
PKSN Nyarlorinc 85.84 317⇑*e*P P 20 14 15.8 +3.3
NKY Niksic 85.85 313⇑*i*P **P 20 14 12.5 -0.3**
BUM Brajici-Budva 85.85 313⇑*i*P **P 20 14 12.4 -0.4**
NIE Niedzica 85.95 320⇑*e*P **P 20 14 13.7 +0.6**
NIE *e*PP **pP 20 14 24.5 +2.4**
NIE Niedzica 85.95 320 *e*P **P 20 14 13.7 +0.6**
NIE *ep*P **pP 20 14 24.5 +2.4**
UPM Unac-Piva 85.97 314 *e*P **P 20 14 12.8 -0.7**
PSZ Piszkesteto 85.98 318⇑P **P 20 14 13.5 +0.1**
PSZ Piszkesteto 85.98 318 *e*P **P 20 14 13.4 +0.1**
comp=Z,736nm,2.5s

PSZ LR LR
comp=Z,6µm,20.0s
PSZ Piszkesteto 85.98 318⇑ *iP* **P 20 14 13.4 +0.1**
PSZ Piszkesteto 85.98 318⇑ *eP* **P 20 14 13.4 +0.1**
BEL Belsk 86.06 322 *eP* **P 20 14 14.0 +0.5**
BEL *epP* **pP 20 14 24.8 +2.3**
BEL *eS* **S 20 24 45.7 -0.3**
BEL *esS* **sS 20 25 03.2 +2.4**
BEL LMZ LR 20 57 01.8
HCY Herceg Novi 86.16 313⇑ *iP* **P 20 14 13.6 -0.6**
BRY Bratogost 86.19 313 *eP* **P 20 14 14.0 -0.6**
PKS2 Kecel 86.22 317⇑ *eP* P 20 14 17.8 +3.4
PKS7 Kunszentmiklos 86.34 317⇑ *eP* **P 20 14 18.0 +3.0**
OJC Ojcow 86.41 321⇑ *iP* **P 20 14 15.3 0.0**
OJC *e*PP* **pP 20 14 26.1 +1.8**
OJC *i S* **S 20 24 48.7 -0.8**
OJC *eSS* **SS 20 30 29.9 +0.1**
OJC MLR MLR
comp=Z,8µm,21.8s
OJC Ojcow 86.41 321 *eP* **P 20 14 15.5 +0.2**
OJC Ojcow 86.41 321 *eP* **P 20 14 15.5 +0.2**
OJC Ojcow 86.41 321 *i P* **P 20 14 15.3 0.0**
OJC *epP* **pP 20 14 26.1 +1.8**
OJC *i S* **S 20 24 48.7 -0.8**
OJC *eSS* **SS 20 30 29.9 +0.1**
OJC L L 21 00 49.4
comp=Z,8µm,21.8s
BUD Budapest 86.50 318⇑ *eP* **P 20 14 15.9 +0.2**
PKSM Moragy 86.58 316 ⇑ *iP* **P 20 14 16.0 -0.2**
PKSM Moragy 86.58 316⇑ *iP* **P 20 14 16.0 -0.2**
PKSM Moragy 86.58 316⇑ *eP* **P 20 14 16.3 +0.1**
MAIT Maitri 86.64 199 *eP* P 20 14 06.4 -10
LIKS Likavka 86.68 319 *eP* **P 20 14 19.4 +2.8**
LIKS Likavka 86.68 319 *eP* **P 20 14 19.4 +2.8**
VYHS Vyhne 86.77 319 *eP* **P 20 14 17.1 -0.1**
VYHS pmax pmax
comp=Z,95nm,1.8s
VYHS Vyhne 86.77 319 *eP* **P 20 14 17.0 -0.1**
VYHS *epP* **pP 20 14 28.4 +2.3**
VYHS Vyhne 86.77 319 *eS* **S 20 24 51.6 -1.5**
VYHS *eSS* SS 20 30 15.0 -20
QSPA South Pole Qui 86.84 180 PKKP **PKKPbc 20 32 09.8 -4.7**
comp=Z,6.4nm,1.0s,baz=170,slow=1.5,SNR=7.6
PKSG 86.91 318⇑ *eP* **P 20 14 18.1 +0.3**
TIP Timpagrande 87.07 309 *eP* **P 20 14 19.3 +0.5**
TIP LR LR
comp=Z,6µm,21.0s
AFI Afiamalu 87.09 104 *eP* **P 20 14 22.0 +2.6**
PKST T"s 87.13 317⇑ *eP* **P 20 14 19.0 +0.1**
KEV Kevo 87.24 340 *eP* **P 20 14 18.6 -0.2**
KEV pmax pmax
comp=Z,37nm,0.9s
KEV Kevo 87.24 340 *eP* **P 20 14 19.1 +0.3**
KEV LR LR
comp=Z,13µm,21.0s
KEV Kevo 87.24 340 *ep* **P 20 14 18.6 -0.2**
comp=Z,37nm,0.9s
OKC Ostrava-Krasne 87.41 320⇑ *iP* **P 20 14 20.5 +0.4**
OKC *e*PP* **sP 20 14 30.9 -1.5**
OKC *e* 20 17 42.8
OKC *e* 20 24 58.1
OKC MLR MLR
comp=Z,6µm,16.8s
OKC Ostrava-Krasne 87.41 320⇑ *iP* **P 20 14 20.5 +0.4**
OKC *esP* **sP 20 14 30.9 -1.5**
OKC *ePP* **PP 20 17 42.8 -2.0**
OKC *eS* **S 20 24 58.1 -1.0**
OKC AMS AMS 21 04 40.0
comp=Z,6µm,16.8s
RAC Raciborz 87.41 320 *eP* **P 20 14 21.1 +1.0**
RAC *e* 20 17 44.1
RAC *e* 20 24 47.7
RAC *eS* **S 20 25 01.8 +2.7**
RAC MLR MLR
comp=Z,6µm,18.0s
CEL Celeste 87.65 308 *eP* **P 20 14 22.2 +0.6**
comp=Z,230nm,1.3s
CEL LR LR
comp=Z,5µm,20.0s
ARCES ARCESS Array B 87.68 340 P **P 20 14 21.5 +0.5**
ARCES ARCESS Array B 87.68 340 P **P 20 14 21.5 +0.5**
comp=Z,80nm,0.9s,baz=102,slow=5.2,SNR=56
ARCES LR LR 20 58 02.6
comp=Z,18µm,20.3s,baz=106,slow=39
ARE0 ARCESS Array S 87.68 340 *eP* **P 20 14 21.1 0.0**
ARE0 ARCESS Array S 87.68 340 *eP* **P 20 14 21.4 +0.4**
MORC Moravsky Berou 87.79 320 ⇑P **P 20 14 21.7 -0.3**
MORC Moravsky Berou 87.79 320 *eP* **P 20 14 22.3 +0.3**
MORC Moravsky Berou 87.79 320⇑ *iP* **P 20 14 21.7 -0.3**
CUC Castrocucco 87.88 310 *eP* **P 20 14 21.6 -1.1**
CUC LR LR
comp=Z,6µm,20.0s
SOP Sopron 88.18 318⇑ *eP* **P 20 14 24.0 +0.1**
KOGS Kog 88.25 317 *i P* **P 20 14 24.5 +0.3**
KOGS *eS* **S 20 25 07.3 0.0**
KOGS *e* 20 38 03.1
KRLC Kraliky 88.31 320⇑ *iP* **P 20 14 25.1 +0.6**
KTK1 Kautokeino 88.34 339⇑ *iP* P 20 14 13.6 -11
KTK1 AMB AMB 20 14 19.8
comp=Z,705nm,1.6s
KTK1 *eSKS* **SKSac 20 24 47.3 -3.5**
KTK1 AMS AMS 20 57 21.2
comp=Z,30µm,22.2s
VRAC Vranov 88.34 319 P **P 20 14 24.6 0.0**
VRAC Vranov 88.34 319⇑ *iP* **P 20 14 24.1 -0.5**
VRAC Vranov 88.34 319 P **P 20 14 24.6 0.0**
comp=Z,6.9nm,1.0s,baz=117,slow=6.8,SNR=26
GKP Gorka Klasztor 88.42 323 *eP* **P 20 14 25.1 +0.2**
GKP *epP* **pP 20 14 35.8 +1.9**
GKP *eS* **S 20 25 06.1 -2.5**
GKP *esS* **sS 20 25 23.0 -0.5**
GKP LMZ LR 21 00 44.5
WDD Wield Dalam 88.52 306 PFAKE 20 14 40.0 +14
WDD LR LR
comp=Z,7µm,21.0s
DPC Dobruska-Polom 88.64 320⇑ *iP* **P 20 14 26.9 +0.9**
DPC *e*PP* **sP 20 14 37.9 -0.4**
DPC *e* 20 17 57.8
DPC *e* 20 25 08.4
DPC MLR MLR
comp=Z,10µm,22.2s
DPC Dobruska-Polom 88.64 320⇑ *iP* **P 20 14 26.9 +0.9**
DPC *esP* **sP 20 14 37.9 -0.4**
DPC *ePP* **PP 20 17 57.8 +3.0**
DPC *eS* **S 20 25 08.4 -2.5**
DPC AMS AMS 21 03 50.0
comp=Z,10µm,22.2s
CONA Conrad Observa 88.67 318⇑ *iP* **P 20 14 26.4 +0.1**
comp=Z,883nm,3.5s,SNR=27
CONA Conrad Observa 88.67 318⇑ *iP* **P 20 14 26.4 +0.1**
comp=Z,883nm,3.5s
KSP Ksiaz 88.71 321⇑ *eP* **P 20 14 27.1 +0.8**
KSP *e*PP* **pP 20 14 37.6 +2.3**
KSP *eS* **S 20 25 06.5 -5.0**
KSP MLR MLR
comp=Z,18µm,21.9s
KSP Ksiaz 88.71 321 *eP* **P 20 14 27.1 +0.8**
KSP *epP* **pP 20 14 37.9 +2.6**
KSP *eS* **S 20 25 10.8 -0.7**
KSP *esS* **sS 20 25 27.3 +0.9**
KSP LMZ LR 20 57 41.8
ARSA Arzberg 88.83 317 *i P* **P 20 14 27.4 +0.4**
comp=Z,1µm,3.1s,SNR=49
ARSA Arzberg 88.83 317 *i P* **P 20 14 27.4 +0.4**
comp=Z,1µm,3.1s
BOJS Bojanci 88.84 315 *i P* **P 20 14 27.3 +0.3**
UPC Upice 88.85 321 *eP* **P 20 14 27.7 +0.7**
UPC *e*PP* **sP 20 14 38.5 -0.7**
UPC Upice 88.85 321⇑ *eP* **P 20 14 27.7 +0.7**
UPC *esP* **sP 20 14 38.5 -0.7**
PERS Pernice 89.05 317 *i P* **P 20 14 28.4 +0.3**
PERS *ePP* PP 20 17 41.9 -16
TREC Trest 89.06 319 *eP* **P 20 14 28.6 +0.6**
TREC *e*PP* **pP 20 14 39.2 +2.1**
TREC *e* 20 25 16.6
TREC MLR MLR
comp=Z,6µm,17.1s
TREC Trest 89.06 319⇑ *eP* **P 20 14 28.6 +0.6**
TREC *ex* x 20 14 39.2
TREC *eS* **S 20 25 16.6 +1.7**
TREC AMS AMS 21 05 50.0
comp=Z,6µm,17.1s

SOKA Soboth 89.11 317⇑ *iPcP* **P 20 14 29.1 +0.7**
comp=Z,1µm,3.2s
SOKA Soboth 89.11 317⇑ *iP* **P 20 14 29.1 +0.7**
comp=Z,1µm,3.2s
LJU Ljubljana 89.40 316 *eP* **P 20 14 30.2 +0.5**
LJU *ePP* PP 20 17 51.3 -10
LJU *eS* **S 20 25 18.1 -0.1**
LJU *e* 20 38 12.3
OBKA Obir 89.42 316 *i PcP* **P 20 14 30.5 +0.6**
comp=Z,1µm,3.3s,SNR=40
OBKA Obir 89.42 316 *i P* **P 20 14 30.5 +0.6**
comp=Z,1µm,3.3s
JAVS Javornik 89.71 316 *eP* **P 20 14 30.9 -0.3**
MOA Molln 89.73 318 *i P* **P 20 14 31.1 -0.1**
comp=Z,863nm,3.5s,SNR=10.0
MOA Molln 89.73 318 *i P* **P 20 14 31.1 -0.1**
comp=Z,863nm,3.5s
PRU Pruhonice 89.74 320 *eP* **P 20 14 31.6 +0.4**
PRU *e*PP* **sP 20 14 42.7 -0.7**
PRU *e* 20 18 07.4
PRU *e* 20 25 13.8
PRU MLR MLR
comp=Z,8µm,20.2s
PRU Pruhonice 89.74 320⇑ *eP* **P 20 14 31.6 +0.4**
PRU *esP* **sP 20 14 42.7 -0.7**
PRU *ePP* **PP 20 18 07.4 +3.9**
PRU *eSKKS* **SKKSac 20 25 13.8 +1.0**
PRU AMS AMS 21 02 30.0
comp=Z,8µm,20.2s
PVCC Panska Ves 89.77 320 *eP* **P 20 14 32.1 +0.8**
PVCC *e*PP* **pP 20 14 41.5 +1.2**
PVCC *e* 20 25 23.1
PVCC MLR MLR
comp=Z,8µm,17.8s
PVCC Panska Ves 89.77 320⇑ *eP* **P 20 14 32.1 +0.8**
PVCC *epP* **pP 20 14 41.5 +1.2**
PVCC *eS* **S 20 25 23.1 +1.7**
PVCC AMS AMS 21 05 30.0
comp=Z,8µm,17.8s
PRA Prague 89.82 320 ⇑P **P 20 14 32.0 +0.5**
PRA sP **sP 20 14 43.0 -0.8**
PRA S **S 20 25 24.0 +2.1**
PRA AMS AMS 21 02 30.0
VOY Vojsko 89.84 316 *eP* **P 20 14 31.7 -0.1**
VOY *e* 20 14 42.1
VOY *e* 20 15 01.9
VOY *e* 20 15 25.2
AQU L'Aquila 89.91 312 *eP* **P 20 14 32.9 +0.7**
AQU LR LR
comp=Z,6µm,20.0s
AQU L'Aquila 89.91 312⇑ *iP* **P 20 14 32.3 +0.1**
TRO Tromso 89.96 340 *eP* **P 20 14 31.8 +0.1**
TRO AMB AMB 20 14 36.4
comp=Z,254nm,2.0s
TRO *eSKS* **SKSac 20 24 58.2 -2.1**
TRO *eSS* **SS 20 31 23.7 +3.3**
TRO AMS AMS 20 58 19.7
comp=Z,15µm,18.3s
CADS Cadrg 89.96 316 *i P* **P 20 14 32.3 -0.1**
CADS *eS* **S 20 25 22.8 -0.7**
BSD Bornholm Skovb 89.99 325⇑ *iP* **P 20 14 32.3 +0.2**
BSD pmax pmax
comp=Z,53nm,1.0s
BSD MLR MLR
comp=Z,9µm,20.0s
BSD Bornholm Skovb 89.99 325⇑ *iP* **P 20 14 32.3 +0.2**
comp=Z,53nm,0.9s
BSD
comp=Z,9µm,19.0s
MYKA Terra Mystica 90.06 317⇑ *iP* **P 20 14 33.0 +0.2**
comp=Z,920nm,3.2s
MYKA Terra Mystica 90.06 317⇑ *iP* **P 20 14 33.0 +0.2**
comp=Z,920nm,3.2s
GEC2 GERESS Array S 90.19 319 *eP* **P 20 14 34.3 +0.9**
GEC2 *e*PP* **pP 20 14 45.1 +2.6**
GEC2 pmax pmax
comp=Z,43nm,1.1s
GEC2 GERESS Array S 90.19 319 *eP* **P 20 14 34.3 +0.9**
comp=Z,43nm,1.1s
GEC2 *epP* **pP 20 14 45.1 +2.6**
GERES GERESS Array B 90.19 319 P **P 20 14 33.5 +0.1**
GERES GERESS Array B 90.19 319 P **P 20 14 33.5 +0.1**
comp=Z,23nm,1.0s,baz=95,slow=4.4,SNR=55
BRG Berggiesshubel 90.20 321 *i P* **P 20 14 33.9 +0.6**
comp=Z,9.4nm,0.9s
BRG *i* PP **PP 20 18 07.4 +0.3**
comp=Z,38nm,1.6s
BRG S **S 20 25 27.0 +1.6**
BRG SS **SS 20 31 24.0 -0.9**
BRG
comp=N,6µm,21.2s
BRG
comp=E,7µm,18.9s
BRG
comp=Z,10µm,18.8s
BRG Berggiesshubel 90.20 321 *eP* **P 20 14 34.4 +1.1**
comp=Z,37nm,1.0s
BRG *epP* **pP 20 14 45.3 +3.0**
KHC Kasperske Hory 90.30 319⇑ *iP* **P 20 14 33.8 0.0**
KHC *e*PP* **pP 20 14 44.5 +1.6**
KHC *e* 20 25 17.0
KHC MLR MLR
comp=Z,8µm,17.7s
KHC Kasperske Hory 90.30 319 *eP* **P 20 14 34.1 +0.3**
KHC Kasperske Hory 90.30 319⇑ *iP* **P 20 14 33.8 0.0**
KHC *esP* **pP 20 14 44.5 +1.6**
KHC *ex* x 20 14 55.0
KHC *eSKKS* **SKKSac 20 25 17.0 -0.1**
KHC AMS AMS 21 05 10.0
comp=Z,8µm,17.7s
KBA Koelnbreinsper 90.30 317 *i P* **P 20 14 33.6 -0.5**
KBA pmax pmax
comp=Z,400nm,3.0s
KBA Koelnbreinsper 90.30 317 *i P* **P 20 14 33.6 -0.5**
comp=Z,400nm,3.0s,SNR=24
KBA Koelnbreinsper 90.30 317 *i P* **P 20 14 33.6 -0.5**
comp=Z,400nm,3.0s
RUE Ruedersdorf 90.43 322 *eP* **P 20 14 35.3 +1.0**
comp=Z,101nm,1.0s
RUE *epP* **pP 20 14 46.1 +2.8**
RUE Ruedersdorf 90.43 322 *eP* **P 20 14 34.8 +0.5**
comp=Z,244nm,1.2s
RJOB Jochberg 90.72 318 *eP* **P 20 14 35.9 +0.1**
comp=Z,12nm,0.8s
WET Wettzell 90.75 319 *eP* **P 20 14 36.8 +0.8**
WET *e*PP* **pP 20 14 47.9 +2.9**
WET pmax pmax
comp=Z,34nm,1.0s
WET Wettzell 90.75 319 *eP* **P 20 14 36.8 +0.8**
comp=Z,34nm,1.0s
WET *epP* **pP 20 14 47.9 +2.9**
CLL Collm 90.82 321⇑ *iP* **P 20 14 36.3 +0.1**
CLL *i* 20 14 43.9
CLL pmax pmax
comp=Z,113nm,1.5s
CLL MLR MLR
comp=Z,8µm,19.2s
CLL Collm 90.82 321 *eP* **P 20 14 36.6 +0.4**
comp=Z,36nm,1.1s
CLL *epP* **pP 20 14 47.6 +2.4**
CLL Collm 90.82 321⇑ *iP* **P 20 14 36.3 +0.1**
comp=Z,113nm,1.5s
CLL *i pP* **pP 20 14 43.9 -1.3**
CLL *i sP* **sP 20 14 47.1 -1.3**
CLL *i* 20 15 59.5
CLL *ePP* **PP 20 18 10.0 -2.1**
comp=Z,544nm,3.7s
CLL *ePPlp* 20 18 24.0
CLL *eSKKSac* **SKKSac 20 25 17.0 -3.8**
comp=N,7µm,22.7s
CLL *eSKKSac* **SKKSac 20 25 17.0 -3.8**
comp=E,2µm,21.6s
CLL *eS* **S 20 25 32.0 +0.9**
CLL *esS* **sS 20 25 43.0 -3.0**
CLL *e* 20 26 10.0
CLL *ePS* PnS 20 26 54.0 +12
CLL *eSSS* SSS 20 35 24.0
CLL *eSSSS* 20 38 27.0
CLL *lmV* 21 04 00.0
comp=Z,8µm,19.2s
ABTA Abfaltersbach 90.84 317⇑ *iP* P 20 14 32.6 -3.9
comp=Z,454nm,3.2s,SNR=22
ABTA Abfaltersbach 90.84 317⇑ *iP* P 20 14 32.6 -3.9
comp=Z,454nm,3.2s

STEI Steigen 91.07 338 *eP* **P 20 14 36.7 -0.2**
STEI AMB AMB 20 14 40.6
comp=Z,160nm,0.9s
NKC Novy Kostel 91.10 320 *eP* **P 20 14 38.3 +0.8**
NKC *e*PP* **pP 20 14 48.7 +2.1**
NKC *e* 20 25 21.4
NKC MLR MLR
comp=Z,8µm,19.1s
NKC Novy Kostel 91.10 320⇑ *eP* **P 20 14 38.3 +0.8**
NKC *ex* x 20 14 48.7
NKC *eSKKS* **SKKSac 20 25 21.4 -1.6**
NKC AMS AMS 21 03 20.0
comp=Z,8µm,19.1s
TANN Tannenbergstha 91.11 320 *eP* **P 20 14 38.4 +0.8**
comp=Z,21nm,1.1s
SNAA Sanae 91.22 198 *eP* **P 20 14 39.0 +1.3**
SNAA Sanae 91.22 198 *eP* **P 20 14 39.5 +1.7**
SNAA Sanae 91.22 198 *eP* **P 20 14 38.6 +0.9**
comp=Z,56nm,1.3s
MOR8 Moi Rana 91.22 336 *eP* **P 20 14 36.9 -0.8**
MOR8 *eP* **PcP 20 14 37.5 -1.1**
MOR8 AMB AMB 20 14 41.3
comp=Z,139nm,1.4s
MOR8 AMB AMB 20 14 42.0
comp=Z,138nm,1.5s
ROTZ Rotzenmuhle 91.23 320 *eP* **P 20 14 39.5 +1.4**
comp=Z,29nm,1.1s
ROTZ *epP* **pP 20 14 50.3 +3.1**
MANZ Manzenberg 91.31 320 *eP* **P 20 14 39.8 +1.3**
comp=Z,44nm,1.1s
MANZ *epP* **pP 20 14 50.7 +3.2**
COP Copenhagen 91.44 326⇑ *iP* **P 20 14 40.1 +1.2**
COP pmax pmax
comp=Z,41nm,1.0s
COP MLR MLR
comp=Z,5µm,19.0s
COP Copenhagen 91.44 326⇑ *iP* **P 20 14 40.1 +1.2**
comp=Z,41nm,0.9s
COP
comp=Z,5µm,19.0s
WTTA Wattenberg 91.47 317⇑ *iP* **P 20 14 37.6 -1.9**
WTTA pmax pmax
comp=Z,818nm,3.3s
WTTA Wattenberg 91.47 317⇑ *iP* **P 20 14 37.6 -1.9**
comp=Z,818nm,3.3s,SNR=23
WTTA Wattenberg 91.47 317⇑ *iP* **P 20 14 37.6 -1.9**
comp=Z,818nm,3.3s
NEUB Neuenburg 91.59 321 *eP* **P 20 14 40.4 +0.7**
comp=Z,49nm,1.0s
NEUB *epP* **pP 20 14 50.6 +1.9**
MOX Moxa 91.66 320 *eP* **P 20 14 41.0 +0.9**
MOX *e*PP* **pP 20 14 51.8 +2.7**
MOX pmax pmax
comp=Z,31nm,1.1s
MOX Moxa 91.66 320 *eP* **P 20 14 41.0 +0.9**
comp=Z,31nm,1.1s
MOX *epP* **pP 20 14 51.8 +2.7**
FUR Furstenfeldbru 91.76 318 *eP* **P 20 14 40.5 -0.1**
FUR *e*PP* **pP 20 14 51.9 +2.2**
FUR Furstenfeldbru 91.76 318 *eP* **P 20 14 40.5 -0.1**
FUR *epP* **pP 20 14 51.9 +2.2**
KONS Konsvik 91.78 336 *eP* P 20 14 37.0 -3.3
KONS AMB AMB 20 14 42.3
comp=Z,108nm,1.6s
STOK Stokkvaagen 91.81 336 *eP* **P 20 14 39.4 -1.0**
STOK *eP* **PcP 20 14 40.3 -0.9**
STOK AMB AMB 20 15 00.2
comp=Z,156nm,1.6s
STOK *ePP* **PP 20 18 18.4 -1.0**
STOK *eSKS* **SKSac 20 25 11.1 +0.1**
SPA0 Spitsbergen Ar 91.82 348 *eP* **P 20 14 39.9 -0.4**
GAMB Gambell 91.83 26 *eP* **P 20 14 40.1 -0.4**
comp=Z,186nm,1.8s
MOTA Moosalm 91.84 317⇑ *iP* **P 20 14 40.9 -0.3**
MOTA pmax pmax
comp=Z,59nm,1.2s
MOTA Moosalm 91.84 317⇑ *iP* **P 20 14 40.9 -0.3**
comp=Z,59nm,1.2s,SNR=15
MOTA Moosalm 91.84 317⇑ *iP* **P 20 14 40.9 -0.3**
comp=Z,59nm,1.2s
GRF Grafenberg Arr 91.86 319 *eP* **P 20 14 42.3 +1.2**
GRF *e*PP* **pP 20 14 53.1 +3.0**
GRF pmax pmax
comp=Z,36nm,1.1s
GRF MLR MLR
comp=Z,10µm,19.1s
GRF Grafenberg Arr 91.86 319 *eP* **P 20 14 42.3 +1.2**
comp=Z,36nm,1.1s
GRF *epP* **pP 20 14 53.1 +3.0**
GRF *eL* L 21 04 21.4
comp=Z,10µm,19.1s
RETA Reutte 92.08 317 *i P* **P 20 14 42.2 0.0**
comp=Z,665nm,3.2s,SNR=22
RETA Reutte 92.08 317 *i P* **P 20 14 42.2 0.0**
comp=Z,665nm,3.2s
FETA Feichten 92.08 317 *i P* **P 20 14 42.4 0.0**
comp=Z,852nm,3.4s,SNR=24
FETA Feichten 92.08 317 *i P* **P 20 14 42.4 0.0**
comp=Z,852nm,3.4s
NSS Namsos 92.15 334 *eP* **P 20 14 40.1 -1.8**
NSS AMB AMB 20 14 44.7
comp=Z,49nm,1.7s
NSS AMS AMS 21 04 29.9
comp=Z,4µm,17.2s
VLC Villacollemand 92.21 314 PFAKE 20 14 50.0 +7.2
VLC LR LR
comp=Z,7µm,21.0s
NB2 NORSAR Subarra 92.34 331 P **P 20 14 42.7 -0.4**
baz=96,slow=4.8
NB2 NORSAR Subarra 92.34 331 P **P 20 14 42.7 -0.4**
comp=Z,64nm,1.1s,baz=96,slow=4.8
NOA NORSAR Array B 92.34 331 P **P 20 14 42.7 -0.4**
NOA PP **PP 20 18 23.0 -0.8**
NOA NORSAR Array B 92.34 331 P **P 20 14 42.7 -0.4**
comp=Z,22nm,0.9s,baz=93,slow=4.8,SNR=38
NOA PP **PP 20 18 23.0 -0.8**
comp=Z,5.0nm,0.9s,baz=96,slow=7.6,SNR=4.2
NOA LR LR 21 05 29.3
comp=Z,6µm,18.4s,baz=100,slow=42
CLZ Clausthal 92.49 322 *eP* **P 20 14 44.4 +0.5**
CLZ *e*PP* **pP 20 14 55.7 +2.7**
CLZ pmax pmax
comp=Z,28nm,1.1s
CLZ Clausthal 92.49 322 *eP* **P 20 14 44.4 +0.5**
comp=Z,28nm,1.1s
CLZ *epP* **pP 20 14 55.7 +2.7**
NAO01 NORSAR Array S 92.50 331 *eP* **P 20 14 43.5 -0.2**
comp=Z,23nm,1.0s
BSEG Bad Segeberg 92.59 324 *eP* **P 20 14 44.5 +0.3**
BSEG *e*PP* **pP 20 14 56.1 +2.8**
BSEG pmax pmax
comp=Z,30nm,1.0s
BSEG Bad Segeberg 92.59 324 *eP* **P 20 14 44.5 +0.3**
comp=Z,30nm,1.0s
BSEG *epP* **pP 20 14 56.1 +2.8**
DAVA Damuels 92.67 317 *i PcP* **PcP 20 14 45.4 -0.3**
comp=Z,878nm,3.3s,SNR=18
DAVA Damuels 92.67 317 *i P* **PcP 20 14 45.4 -0.3**
comp=Z,878nm,3.3s
NRDL Niedersach Rie 92.67 322 *epP* pP 20 14 56.5 +2.9
UBBA Unterbreizbach 92.69 321 *eP* **P 20 14 45.3 +0.6**
comp=Z,58nm,1.6s
KEST Kesra 92.71 305 *eP* **P 20 14 46.1 +0.7**
KEST Kesra 92.71 305 P **P 20 14 46.6 +1.2**
comp=Z,14nm,1.0s,baz=296,slow=1.6,SNR=23
KEST LR LR 20 59 27.0
comp=Z,5µm,18.5s,baz=200,slow=38
KBS Kingsbay 92.76 349 *eP* **P 20 14 43.5 -1.1**
KBS AMB AMB 20 14 48.5
comp=Z,83nm,1.5s
KBS *ePP* **PP 20 18 26.1 -0.6**
KBS *eSKS* **SKSac 20 25 14.2 -1.8**
KBS AMS AMS 21 05 03.1
comp=Z,16µm,16.5s
KBS Kingsbay 92.76 349 *c iP* **P 20 14 45.1 +0.5**
KBS pmax pmax
comp=Z,68nm,1.3s
KBS Kingsbay 92.76 349 *eP* **P 20 14 44.4 -0.2**
VSL Villasalto 92.80 309 *eP* **P 20 14 45.3 -0.4**
comp=Z,36nm,1.3s
VSL LR LR
comp=Z,3µm,21.0s
VNA2 Neumayer--Watz 92.83 198 *eP* **P 20 14 45.9 +0.8**
baz=84,slow=4.0
VNA2 Neumayer--Watz 92.83 198 *epP* pP 20 14 54.9 +0.7
baz=84,slow=4.0

VNA2 Neumayer--Watz 92.83 198 *e*PP PP 20 18 26.4 -0.9
baz=84,slow=4.0
TBLU Trondheim 92.86 333⇑ *i*P P 20 14 35.6 -10
TBLU AMS AMS 21 00 08.3
comp=Z,9μm,21.1s
TUE Stuetta 93.01 316 *e*P **P** **20 14 48.8 +2.1**
comp=Z,34nm,1.2s
TUE LR LR
comp=Z,7μm,19.0s
KONO Kongsberg 93.11 329⇑ *i*P **P** **20 14 46.8 +0.2**
KONO AMB AMB 20 14 51.2
comp=Z,79nm,1.9s
KONO *e*SKS **SKSac** **20 25 19.1 +0.5**
KONO AMS AMS 21 04 22.1
comp=Z,7μm,17.4s
STU Stuttgart 93.16 319 *e*P **P** **20 14 49.8 +2.7**
STU pmax pmax
comp=Z,8.0nm,0.8s
STU Stuttgart 93.16 319 *e*P **P** **20 14 49.8 +2.7**
comp=Z,8.0nm,0.8s
PGF Pioggiola 93.17 312 *e*P **P** **20 14 47.4 0.0**
comp=Z,150nm,1.7s
PGF Pioggiola 93.17 312 *e*P **P** **20 14 47.4 0.0**
PGF pmax pmax
comp=Z,150nm,1.7s
PGF Pioggiola 93.17 312 *e*P **P** **20 14 47.4 0.0**
comp=Z,150nm,1.7s
VNA1 Neumayer--Stat 93.19 198 *e*P P 20 14 50.1 +3.4
MUD Monsted U'grnd 93.30 326⇑ *i*P **P** **20 14 47.6 +0.2**
MUD pmax pmax
comp=Z,13nm,0.9s
MUD MLR MLR
comp=Z,9μm,20.0s
MUD Monsted U'grnd 93.30 326⇑ *i*P **P** **20 14 47.6 +0.2**
comp=Z,13nm,0.9s
MUD
comp=Z,9μm,19.0s
SPAK Spaichingen-Ko 93.42 318 *e*P **P** **20 14 49.7 +1.3**
VNA3 Neumayer Olymp 93.43 198 *e*P **P** **20 14 49.3 +1.4**
VNA3 Neumayer Olymp 93.43 198 *e*pP pP 20 14 59.7 +2.8
TOD Tromm 93.43 319 *e*P **P** **20 14 48.8 +0.5**
TOD Tromm 93.43 319 *e*P **P** **20 14 48.8 +0.5**
TNA Tin City 93.50 25 *e*P **P** **20 14 48.6 +0.4**
comp=Z,36nm,1.1s
TNS Taunus Mts 93.67 320 *e*P **P** **20 14 50.3 +0.8**
TNS *e**PP **pP** **20 15 01.2 +2.7**
TNS pmax pmax
comp=Z,27nm,0.9s
TNS Taunus Mts 93.67 320 *e*P **P** **20 14 50.3 +0.8**
comp=Z,27nm,0.9s
TNS *e*pP **pP** **20 15 01.2 +2.7**
BFO Black Forest 93.73 318 *e*P **P** **20 14 50.1 +0.4**
BFO *e**PP **pP** **20 15 00.7 +1.9**
BFO pmax pmax
comp=Z,8.0nm,1.0s
BFO Black Forest 93.73 318 *e*P **P** **20 14 50.1 +0.4**
comp=Z,8.0nm,1.0s
BFO *e*pP **pP** **20 15 00.7 +1.9**
BFO Black Forest 93.73 318 *e*P **P** **20 14 49.2 -0.6**
comp=Z,40nm,1.4s
BFO LR LR
comp=Z,5μm,19.0s
FELD Feldberg im Sc 93.95 318 *e*P **P** **20 14 52.1 +1.2**
LANF Langenberg 94.08 319 *e*P **P** **20 14 52.3 +1.0**
LANF Langenberg 94.08 319 *e*P **P** **20 14 52.3 +1.0**
LANF Langenberg 94.08 319 *e*P **P** **20 14 52.3 +1.0**
MOL Molde 94.10 332 *e*P **P** **20 14 50.1 -0.9**
MOL AMB AMB 20 14 56.4
comp=Z,78nm,1.7s
LIBD Limburg 94.22 318 *e*P **P** **20 14 54.9 +3.0**
LIBD Limburg 94.22 318 *e*P **P** **20 14 54.9 +3.0**
ABH Alteburg 94.25 320 *e*P **P** **20 14 52.7 +0.6**
BBS Basel-Blauen 94.28 317 *e*P **P** **20 14 53.1 +0.8**
BBS Basel-Blauen 94.28 317 *e*P **P** **20 14 53.1 +0.8**
SBF Sospel 94.33 314 *e*P **P** **20 14 52.4 -0.2**
comp=Z,102nm,1.2s
SBF Sospel 94.33 314 *e*P **P** **20 14 52.4 -0.2**
SBF pmax pmax
comp=Z,102nm,1.2s
SBF Sospel 94.33 314 *e*P **P** **20 14 52.4 -0.2**
comp=Z,102nm,1.2s
BUG Bochum--Univer 94.42 321 *e*P **P** **20 14 54.2 +1.5**
comp=Z,7.0nm,0.9s
CDF Champ du Feu 94.44 318 *e*P **P** **20 14 52.6 -0.5**
comp=Z,84nm,1.6s
CDF Champ du Feu 94.44 318 *e*P **P** **20 14 52.6 -0.5**
CDF pmax pmax
comp=Z,84nm,1.6s
CDF Champ du Feu 94.44 318 *e*P **P** **20 14 52.6 -0.5**
comp=Z,84nm,1.6s
ECH Echery 94.51 318 *e*P **P** **20 14 52.8 -0.5**
ECH pmax pmax
comp=Z,164nm,2.3s
ECH MLR MLR
comp=Z,6μm,20.0s
ECH Echery 94.51 318 *e*P **P** **20 14 52.8 -0.5**
comp=Z,164nm,2.3s
ECH LR LR
comp=Z,6μm,20.0s
ECH Echery 94.51 318 *e*P **P** **20 14 55.1 +1.8**
MOF Molkenrain 94.53 318 *e*P **P** **20 14 53.6 +0.1**
MOF Molkenrain 94.53 318 *e*P **P** **20 14 53.6 +0.1**
MOF Molkenrain 94.53 318 *e*P **P** **20 14 53.6 +0.1**
RUP Ruppelstein 94.57 319 *e*P **P** **20 14 54.7 +1.1**
RUP Ruppelstein 94.57 319 *e*P **P** **20 14 54.7 +1.1**
ODD1 Odda 94.61 330 *e*P **P** **20 14 52.5 -1.0**
ODD1 AMB AMB 20 14 58.6
comp=Z,34nm,1.9s
HINF Hinteralfeld 94.72 318 *e*P **P** **20 14 53.6 -0.7**
HINF Hinteralfeld 94.72 318 *e*P **P** **20 14 53.6 -0.7**
HINF Hinteralfeld 94.72 318 *e*P **P** **20 14 53.6 -0.7**
MBDF Montbardon 94.80 314 *e*P **P** **20 14 54.2 -0.7**
comp=Z,73nm,1.5s
MBDF Montbardon 94.80 314 *e*P **P** **20 14 54.2 -0.7**
MBDF pmax pmax
comp=Z,73nm,1.5s
MBDF Montbardon 94.80 314 *e*P **P** **20 14 54.2 -0.7**
comp=Z,73nm,1.5s
LPG La Plagne 94.81 315 *e*P **P** **20 14 54.8 -0.3**
comp=Z,26nm,0.9s
LPG La Plagne 94.81 315 *e*P **P** **20 14 54.8 -0.3**
LPG pmax pmax
comp=Z,27nm,0.9s
LPG La Plagne 94.81 315 *e*P **P** **20 14 54.8 -0.3**
comp=Z,26nm,0.9s
LPL La Plagne 94.83 315 *e*P **P** **20 14 54.9 -0.2**
comp=Z,38nm,1.0s
LPL La Plagne 94.83 315 *e*P **P** **20 14 54.9 -0.2**
LPL pmax pmax
comp=Z,38nm,1.0s
LPL La Plagne 94.83 315 *e*P **P** **20 14 54.9 -0.2**
comp=Z,38nm,1.0s
BNI Bardonecchia 94.87 315 *e*P **P** **20 14 57.8 +2.6**
BNI pmax pmax
comp=Z,10.0nm,0.9s
BNI MLR MLR
comp=Z,8μm,22.0s
BNI Bardonecchia 94.87 315 *e*P **P** **20 14 57.8 +2.6**
comp=Z,10nm,0.9s
BNI LR LR
comp=Z,8μm,22.0s
FRF La Foret Royal 94.90 313 *e*P **P** **20 14 55.1 -0.1**
FRF La Foret Royal 94.90 313 *e*P **P** **20 14 55.1 -0.1**
FRF La Foret Royal 94.90 313 *e*P **P** **20 14 55.1 -0.1**
LMR La Mourre 95.00 313 *e*P **P** **20 14 55.5 -0.1**
comp=Z,102nm,1.6s
LMR La Mourre 95.00 313 *e*P **P** **20 14 55.5 -0.1**
LMR pmax pmax
comp=Z,102nm,1.6s
LMR La Mourre 95.00 313 *e*P **P** **20 14 55.5 -0.1**
comp=Z,102nm,1.6s
HAU Haudompre 95.06 318 *e*P **P** **20 14 55.4 -0.4**
comp=Z,58nm,1.2s
HAU Haudompre 95.06 318 *e*P **P** **20 14 55.4 -0.4**
HAU pmax pmax
comp=Z,58nm,1.2s
HAU Haudompre 95.06 318 *e*P **P** **20 14 55.4 -0.4**
comp=Z,58nm,1.2s
WLF Walferdange 95.16 319 P **P** **20 14 58.1 +1.9**
comp=Z,26nm,1.7s
WLF Walferdange 95.16 319 *e*P **P** **20 14 59.2 +3.0**
WLF pmax pmax
comp=Z,4.0nm,0.8s
WLF MLR MLR
comp=Z,8μm,19.0s
WLF Walferdange 95.16 319 *e*P **P** **20 14 59.2 +3.0**
comp=Z,4.0nm,0.8s
WLF LR LR
comp=Z,8μm,19.0s
MEM Membach 95.23 320 P **P** **20 14 57.0 +0.5**
comp=Z,12nm,1.6s
BER Bergen 95.24 330 *e*P **P** **20 14 55.6 -0.6**
BER AMB AMB 20 15 00.3
comp=Z,49nm,1.8s
BER AMS AMS 21 04 57.0
comp=Z,10μm,19.2s
CABF La Chapelle 95.26 316 *e*P **P** **20 14 56.9 0.0**
comp=Z,93nm,1.5s
CABF La Chapelle 95.26 316 *e*P **P** **20 14 56.9 0.0**
CABF pmax pmax
comp=Z,93nm,1.5s
CABF La Chapelle 95.26 316 *e*P **P** **20 14 56.9 0.0**
comp=Z,93nm,1.5s
ORIF Oris-en-Rattie 95.44 315 *e*P **P** **20 14 57.6 -0.1**
ORIF Oris-en-Rattie 95.44 315 *e*P **P** **20 14 57.6 -0.1**
ORIF Oris-en-Rattie 95.44 315 *e*P **P** **20 14 57.6 -0.1**
PAGF Fort de Pagny 95.46 318 *e*P **P** **20 14 57.4 -0.2**
comp=Z,16nm,1.4s
PAGF Fort de Pagny 95.46 318 *e*P **P** **20 14 57.4 -0.2**
comp=Z,16nm,1.4s
BCLA Clavier 95.68 320 P **P** **20 15 01.2 +2.6**
comp=Z,19nm,2.1s
TAM Tamanrasset 95.75 292 *e*P **P** **20 15 00.9 +1.2**
TAM *e* 20 15 10.3
TAM pmax pmax
comp=Z,2.0nm,0.8s
TAM MLR MLR
comp=Z,11μm,20.0s
TAM Tamanrasset 95.75 292 *e*P **P** **20 15 00.9 +1.2**
comp=Z,1.5nm,0.8s
TAM *e* 20 15 10.2
TAM LR LR
comp=Z,11μm,20.0s
MEZF Maizieres J'vi 95.91 318 *e*P **P** **20 14 59.5 -0.2**
comp=Z,125nm,1.6s
MEZF Maizieres J'vi 95.91 318 *e*P **P** **20 14 59.5 -0.2**
comp=Z,125nm,1.6s
GIVF Givet 96.00 320 *e*P **P** **20 14 59.9 -0.1**
GIVF Givet 96.00 320 *e*P **P** **20 14 59.9 -0.1**
GIVF Givet 96.00 320 *e*P **P** **20 14 59.9 -0.1**
VIVF Saint-Julien-l 96.30 315 *e*P **P** **20 15 01.2 -0.4**
comp=Z,48nm,1.4s
VIVF Saint-Julien-l 96.30 315 *e*P **P** **20 15 01.2 -0.4**
VIVF pmax pmax
comp=Z,48nm,1.4s
VIVF Saint-Julien-l 96.30 315 *e*P **P** **20 15 01.2 -0.4**
comp=Z,48nm,1.4s
SNF Seneffe 96.33 320 P **P** **20 15 03.4 +1.9**
SSB Saint Sauveur 96.38 315 *e*P **P** **20 15 00.0 -1.9**
SSB pmax pmax
comp=Z,12nm,1.0s
SSB MLR MLR
comp=Z,5μm,20.0s
SSB Saint Sauveur 96.38 315 *e*P **P** **20 15 00.0 -1.9**
comp=Z,12nm,1.0s
SSB LR LR
comp=Z,5μm,20.0s
BAIF Baives 96.40 320 *e*P **P** **20 15 01.9 +0.1**
comp=Z,119nm,1.7s
BAIF Baives 96.40 320 *e*P **P** **20 15 01.9 +0.1**
BAIF pmax pmax
comp=Z,119nm,1.7s
BAIF Baives 96.40 320 *e*P **P** **20 15 01.9 +0.1**
comp=Z,119nm,1.7s
LOR Lormes 96.77 317 *e*P **P** **20 15 03.4 -0.2**
comp=Z,46nm,1.2s
LOR Lormes 96.77 317 *e*P **P** **20 15 03.4 -0.2**
comp=Z,46nm,1.2s
SMF Signal de Mont 96.81 316 *e*P **P** **20 15 03.4 -0.4**
comp=Z,74nm,1.3s
SMF Signal de Mont 96.81 316 *e*P **P** **20 15 03.4 -0.4**
SMF pmax pmax
comp=Z,74nm,1.3s
SMF Signal de Mont 96.81 316 *e*P **P** **20 15 03.4 -0.4**
comp=Z,74nm,1.3s
SSF Saint Saulge 97.02 317 *e*P **P** **20 15 04.6 -0.1**
comp=Z,47nm,1.4s
SSF Saint Saulge 97.02 317 *e*P **P** **20 15 04.6 -0.1**
SSF pmax pmax
comp=Z,47nm,1.4s
SSF Saint Saulge 97.02 317 *e*P **P** **20 15 04.6 -0.1**
comp=Z,47nm,1.4s
AVF Avril sur Loir 97.14 317 *e*P **P** **20 15 04.8 -0.5**
comp=Z,74nm,1.7s
AVF Avril sur Loir 97.14 317 *e*P **P** **20 15 04.8 -0.5**
AVF pmax pmax
comp=Z,74nm,1.7s
AVF Avril sur Loir 97.14 317 *e*P **P** **20 15 04.8 -0.5**
comp=Z,74nm,1.7s
BGF Bois d'Agland 97.50 316 *e*P Pdif 20 15 07.1 +0.1
comp=Z,94nm,1.5s
BGF Bois d'Agland 97.50 316 *e*P Pdif 20 15 07.1 +0.1
BGF pmax pmax
comp=Z,94nm,1.5s
BGF Bois d'Agland 97.50 316 *e*P Pdif 20 15 07.1 +0.1
comp=Z,94nm,1.5s
TCF Toulx Ste Croi 97.95 316 *e*P Pdif 20 15 09.2 +0.1
comp=Z,108nm,1.8s
TCF Toulx Ste Croi 97.95 316 *e*P Pdif 20 15 09.2 +0.1
TCF pmax pmax
comp=Z,108nm,1.8s
TCF Toulx Ste Croi 97.95 316 *e*P Pdif 20 15 09.2 +0.1
comp=Z,108nm,1.8s
JMIC Jan Mayen 99.06 342 *e*P **Pdif** **20 15 13.8 +0.4**
JMIC AMS AMS 21 07 23.4
comp=Z,7μm,21.7s
TOA0 Torodi Ar. Sit 99.23 283 *e*Pdif **Pdif** **20 15 15.1 -0.3**
TORD Torodi Ar. Bea 99.23 283 P **Pdif** **20 15 14.8 -0.6**
TORD PKKPbc **PKKPbc** **20 31 39.5 -0.4**
TORD Torodi Ar. Bea 99.23 283 P **Pdif** **20 15 14.8 -0.6**
comp=Z,1.5nm,1.1s,baz=106,slow=4.8,SNR=6.2
TORD PKKPbc **PKKPbc** **20 31 39.5 -0.4**
comp=Z,1.3nm,0.7s,baz=336,slow=1.6,SNR=15
TORD LR LR 21 00 29.1
comp=Z,8μm,18.6s,baz=65,slow=36
DAG Danmarks Havn 99.47 348⇑ *i*P **Pdif** **20 15 15.0 -0.1**
DAG pmax pmax
comp=Z,18nm,1.0s
DAG MLR MLR
comp=Z,12μm,19.0s
DAG Danmarks Havn 99.47 348⇑ *i*P **Pdif** **20 15 15.0 -0.1**
comp=Z,18nm,1.0s
DAG
comp=Z,11μm,18.0s
COLD Oldfoot 100.29 22 *e*Pdif **Pdif** **20 15 19.1 +0.2**
comp=Z,103nm,2.0s
ESK Eskdalemuir 100.33 326 PFAKE 20 15 30.0 +11
ESK LR LR
comp=Z,7μm,19.0s
KDAK Kodiak Island 101.64 32 PFAKE 20 15 40.0 +15
KDAK LR LR
comp=Z,15μm,20.0s
MCK McKinley 101.83 25 *e*P **Pdif** **20 15 24.9 -1.0**
MCK pmax pmax
comp=Z,52nm,1.3s
MCK McKinley 101.83 25 *e*Pdif **Pdif** **20 15 24.9 -1.0**
comp=Z,52nm,1.3s
ILAR Eielson Array 102.35 24 P **Pdif** **20 15 28.0 -0.2**
ILAR PP PP 20 19 27.9 -13
ILAR PKKPbc **PKKPbc** **20 31 29.2 -3.3**
ILAR Eielson Array 102.35 24 P **Pdif** **20 15 28.0 -0.2**
comp=Z,2.4nm,1.0s,baz=291,slow=4.8,SNR=15
ILAR PP PP 20 19 27.9 -13
comp=Z,3.0nm,0.9s,baz=294,slow=8.3,SNR=6.2
ILAR PKKPbc **PKKPbc** **20 31 29.2 -3.3**
comp=Z,0.8nm,0.9s,baz=148,slow=2.3,SNR=7.9
ESDC Sonseca Array 103.08 310 PP PP 20 19 35.1 -12
comp=Z,1.4nm,0.9s,baz=113,slow=9.9,SNR=3.1
ESDC PKKP PKKPdf 20 31 46.1 +8.5
comp=Z,0.6nm,0.6s,baz=246,slow=3.7,SNR=2.9
SCO Scoresbysund 103.35 343 *e*P **Pdif** **20 15 32.3 -0.1**
SCO MLR MLR
comp=Z,9μm,18.0s
SCO Scoresbysund 103.35 343 *i*P **Pdif** **20 15 32.3 -0.1**
SCO
comp=Z,9μm,18.0s
EGAK Eagle 104.62 23 PFAKE 20 15 50.0 +12
EGAK LR LR
comp=Z,14μm,22.0s
SHEL Horse Pasture 104.67 253 PFAKE 20 15 50.0 +10
SHEL LR LR
comp=Z,15μm,21.0s
MVO Moncorvo 105.19 312 *e*PP PP 20 20 06.9 +4.3
MVO *e*Sdif Sdif 20 27 36.4 +1.6
MVO *e*SS SKKPbc 20 35 20.6 +16
MVO A A 21 29 31.6
comp=Z,3μm,16.0s
MTE Manteigas 105.70 311 *e*PP PP 20 20 12.1 +5.7
MTE *e*Sdif Sdif 20 27 41.5 +2.4
MTE *e*SS SS 20 35 26.0 +22
MTE A A 21 29 15.7
comp=Z,5μm,18.0s
MTE Manteigas 105.70 311 PFAKE 20 20 10.0
MTE LR LR
comp=Z,5μm,20.0s
PMRV Marv??o 105.74 310 *e*PP PP 20 20 09.2 +2.5
PMRV *e*Sdif Sdif 20 27 43.1 +3.7
PMRV *e*SS SS 20 35 29.4 +25
PMRV A A 21 13 36.6
comp=Z,4μm,18.0s
BORG Borgarnes 105.94 338 PFAKE 20 20 10.0
BORG LR LR
comp=Z,8μm,19.0s
PGAV Gavieira, Arco 105.97 313 *e*PP PP 20 20 12.5 +4.1
PGAV *e*Sdif Sdif 20 27 45.4 +4.0
PGAV A A 21 24 53.6
comp=Z,5μm,18.0s
RTC Rabat Centre 106.08 304 PFAKE 20 20 10.0
RTC LR LR
comp=Z,8μm,19.0s
SUMG Summit 106.17 348 *e*P **Pdif** **20 15 46.7 +1.2**
SUMG pmax pmax
comp=Z,159nm,2.4s
SUMG Summit 106.17 348 *e*Pdif **Pdif** **20 15 46.7 +1.2**
comp=Z,159nm,2.4s
SUMG Summit 106.17 348 *i*P **Pdif** **20 15 47.6 +2.1**
SUMG
comp=Z,11μm,17.0s
PVAQ Vaqueiros 106.31 308 *e*PP PP 20 20 14.1 +3.2
PVAQ *e*Sdif Sdif 20 27 46.1 +2.0
PVAQ *e*SS SS 20 35 24.2 +12
PVAQ A A 21 12 44.1
comp=Z,5μm,18.0s
TBI Tubuai 107.08 115 *e*Pdif **Pdif** **20 15 48.9 -1.2**
comp=Z,328nm,28.5s
TBI Tubuai 107.08 115 *e*PP PP 20 20 10.5 -6.4
comp=Z,685nm,26.8s
TBI *e*Sdif Sdif 20 27 44.2 -6.9
comp=Z,6μm,28.5s
TBI Tubuai 107.08 115 *e*PS PS 20 29 38.9 +0.7
comp=Z,3μm,27.2s
TBI *e*SS SS 20 35 21.4 -1.6
comp=Z,7μm,27.2s
TBI *e*LR LR 20 51 16.0
comp=Z,18μm,23.5s
LIS Lisbon 107.21 310 *e*PP PP 20 20 17.2 -0.2
LIS AMS AMS 21 12 36.4
comp=Z,5μm,20.7s
LIS Lisbon 107.21 310 *e*PP PP 20 20 17.2 -0.2
RES Resolute Bay 107.95 4 *e*Pdif **Pdif** **20 15 46.6 -6.2**
comp=E,5.5nm,1.0s
RES *e*PKiKP **PKiKP** **20 19 59.5 -0.3**
PPT2 Papeete2 108.00 110 *e*Pdif **Pdif** **20 15 53.5 -0.9**
comp=E,455nm,25.5s
PPT2 Papeete2 108.00 110 *e*PP PP 20 20 13.8 -10
comp=E,993nm,26.5s
PPT2 *e*Sdif Sdif 20 27 42.6 -17
comp=E,7μm,25.8s
PPT2 Papeete2 108.00 110 *e*PS PS 20 29 43.3 -4.6
comp=E,4μm,28.0s
PPT2 *e*SS SS 20 35 30.2 -5.6
comp=E,3μm,25.8s
PPT2 *e*LR LR 20 51 40.1
comp=E,16μm,24.5s
WRAK Wrangell Islan 112.37 29 PFAKE 20 20 20.0
WRAK LR LR
comp=Z,8μm,20.0s
PMOZ Porto Moniz, M 114.80 305 *e*SS SS 20 37 09.9 +4.0
PMOZ A A 21 08 33.9
comp=Z,6μm,20.0s
YKW3 Yellowknife Ar 115.25 17 *e*PKiKP **PKiKP** **20 20 12.1 -1.9**
YKA Yellowknife Ar 115.31 17 PKP **PKPdf** **20 20 13.2 -0.8**
YKA PP **PP** **20 21 15.0 +0.5**
YKA PKKPbc **PKKPbc** **20 30 50.3 -0.7**
YKA Yellowknife Ar 115.31 17 PKP **PKPdf** **20 20 13.2 -0.8**
comp=Z,7.8nm,0.9s,baz=320,slow=1.9,SNR=30
YKA PP **PP** **20 21 15.0 +0.5**
comp=Z,18nm,1.2s,baz=323,slow=6.5,SNR=11
YKA PKKPbc **PKKPbc** **20 30 50.3 -0.7**
comp=Z,0.5nm,0.7s,baz=144,slow=3.5,SNR=6.7
BBB Bella Bella 116.71 31 PKP **PKPdf** **20 20 16.0 -1.1**
BBB Bella Bella 116.71 31 PKP **PKPdf** **20 20 16.0 -1.1**
comp=Z,8.9nm,0.9s,baz=296,slow=1.4,SNR=3.6
CMLA Cha da Macela 119.87 312 PFAKE 20 20 30.0 +6.4
CMLA LR LR
comp=Z,5μm,19.0s
RKT Rikitea 120.03 119 *e*PS PS 20 31 36.9 -2.5
comp=Z,4μm,26.0s
RKT *e*SS SS 20 38 12.1 -1.9
comp=Z,7μm,28.2s
RKT *e*LR LR 20 57 12.5
comp=Z,15μm,26.2s
NLWA Neilton Lookou 121.68 34 PFAKE 20 20 40.0 +13
NLWA LR LR
comp=Z,7μm,19.0s
HDW Hoodsport 121.98 33 P **PKPdf** **20 20 28.4 +1.0**
EFI East Falkland 122.42 196 PFAKE 20 20 40.0 +12
EFI LR LR
comp=Z,11μm,20.0s
LON Longmire 123.19 34 *e*PKiKP **PKPdf** **20 20 29.9 +0.1**
LON Longmire 123.19 34 *e*PKPdf **PKPdf** **20 20 29.9 +0.1**
TDL Tradedollar La 123.20 34 P **PKPdf** **20 20 30.7 +0.8**
FL2 Flat Top 2 123.22 34 P **PKPdf** **20 20 30.8 +0.9**
WPW White Pass 123.37 33 P **PKPdf** **20 20 31.1 +0.9**
MPOR Mary's Peak 123.49 37 P **PKPdf** **20 20 31.9 +1.3**
TBM Table Mountain 123.60 33 P **PKPdf** **20 20 31.2 +0.6**
SACV Santiago Islan 123.67 286 PFAKE 20 20 40.0 +8.5
SACV LR LR
comp=Z,7μm,19.0s
BROR Big Rock Looko 124.27 36 P **PKPdf** **20 20 32.4 +0.5**
HAWA Hanford 124.66 33 *e*PKPdf **PKPdf** **20 20 32.9 +0.4**
HAWA LR LR
comp=Z,9μm,20.0s
NEW Newport 124.69 30 *e*PKPdf **PKPdf** **20 20 31.0 -1.7**
NEW PKP **PKPdf** **20 20 32.4 -0.2**
NEW PP **PP** **20 22 21.9 +2.6**
NEW *e*PP PP 20 22 22.3 +3.0
NEW LR LR
comp=Z,9μm,20.0s
NEW Newport 124.69 30 ⇑P **PKPdf** **20 20 32.5 -0.1**
baz=125
NEW Newport 124.69 30 PKP **PKPdf** **20 20 32.4 -0.2**
comp=Z,13nm,0.9s,baz=324,slow=1.1,SNR=17
NEW PP **PP** **20 22 21.9 +2.6**
comp=Z,4.5nm,0.8s,baz=315,slow=5.4,SNR=11
HUMO Hull Mountain 124.89 38 *e*PKPdf **PKPdf** **20 20 33.8 +0.6**
A12A Yaak River Ran 124.94 28 ⇓P **PKPdf** **20 20 33.8 +0.7**
baz=125
B12A Libby 125.29 29 ⇑P **PKPdf** **20 20 33.7 -0.1**
baz=125
KHMM Horse Mountain 125.33 40 *e*PKPdf **PKPdf** **20 20 34.5 +0.3**
FFC Flin Flon 125.42 16 *e*PKiKP **PKPdf** **20 20 32.9 -0.8**
FFC MLR MLR
comp=Z,17μm,19.0s
FFC Flin Flon 125.42 16 *e*PKPdf **PKPdf** **20 20 32.9 -0.8**
FFC LR LR
comp=Z,30μm,19.0s
YBH Yreka Blue Hor 125.53 39 PKP **PKPdf** **20 20 34.5 +0.1**
YBH *e*PKPdf **PKiKP** **20 20 35.2 +0.3**
YBH Yreka Blue Hor 125.53 39 PKP **PKPdf** **20 20 34.6 +0.1**
comp=Z,6.2nm,1.0s,baz=56,slow=3.6,SNR=6.7
WALA Waterton Lakes 125.66 27 *e*PKPdf **PKPdf** **20 20 32.8 -1.7**
C12B Naegeli Ranch, 125.88 29 ⇓P **PKPdf** **20 20 35.0 +0.1**
baz=126
B13A Whitefish 125.89 28 ⇓P **PKPdf** **20 20 34.6 -0.3**
baz=126
A14A Double T Ranch 125.95 27 ⇓P **PKPdf** **20 20 34.5 -0.6**
baz=126
A15A Johnson Ranch, 126.25 27 ⇓P **PKPdf** **20 20 35.2 -0.5**
baz=126
WDC Whiskeytown Da 126.25 40 *e*PKiKP **PKPdf** **20 20 35.5 -0.3**
WDC Whiskeytown Da 126.25 40 *e*PKPdf **PKPdf** **20 20 35.5 -0.3**
C13A Hot Springs 126.33 29 ⇑P **PKPdf** **20 20 35.4 -0.4**
baz=126
D12A Red Ives Fores 126.39 30 ⇑P **PKPdf** **20 20 35.0 -1.0**
baz=126

JTMT **Jette** 126.42 29 *e*PKPdf **PKPdf** 20 20 36.2 +0.1
B14A **Marquette Ranc** 126.46 27 ⇓P **PKPdf** 20 20 35.4 -0.7
baz=126
YBMT **Yellow Bay** 126.47 28 *e*PKPdf **PKPdf** 20 20 37.1 +0.9
C14A **Swan Lake** 126.66 28 ⇑P **PKPdf** 20 20 35.8 -0.6
baz=126
SWMT **Swartz Lake** 126.73 29 *e*PKPdf **PKPdf** 20 20 36.0 -0.6
D13A **Huson** 126.80 29 ⇑P **PKPdf** 20 20 36.1 -0.6
baz=127
B15A **Bradely Ranch,** 126.82 27 ⇑P **PKPdf** 20 20 35.9 -0.9
baz=127
BMO **Blue Mountains** 126.84 33 *e*PKIKP **PKPdf** 20 20 37.0 +0.1
BMO MLR MLR
comp=Z,8µm,19.0s
BMO **Blue Mountains** 126.84 33 *e*PKPdf **PKPdf** 20 20 37.0 +0.1
BMO LR LR
comp=Z,8µm,19.0s
MOD **Modoc** 126.92 38 *e*PKPdf **PKPdf** 20 20 38.1 +0.8
B16A **M & M Farms, S** 127.13 26 ⇓P **PKPdf** 20 20 36.7 -0.6
baz=127
SLMT **Seeley Lake** 127.16 29 *e*PKPdf **PKPdf** 20 20 36.6 -0.9
A17A **Triple J Farms** 127.17 25 ⇑P **PKPdf** 20 20 37.0 -0.4
baz=127
C15A **Salmond Ranch,** 127.19 28 ⇓P **PKPdf** 20 20 36.8 -0.7
baz=127
MSO **Missoula** 127.24 29 *e*PKPdf **PKPdf** 20 20 36.9 -0.7
MSO LR LR
comp=Z,9µm,19.0s
MSO **Missoula** 127.24 29 ⇑P **PKPdf** 20 20 36.9 -0.7
baz=127
D14A **Greenough** 127.27 29 ⇓P **PKPdf** 20 20 37.1 -0.6
baz=127
F12A **Elk City** 127.33 31 ⇑P **PKPdf** 20 20 37.2 -0.6
baz=127
E13A **Victor** 127.39 30 ⇑P **PKPdf** 20 20 37.2 -0.7
baz=127
SCHQ **Schefferville** 127.43 351 *e*PKPdf **PKPdf** 20 20 35.9 -1.7
SCHQ PKP **PKPdf** 20 20 36.9 -0.7
SCHQ **Schefferville** 127.43 351 PKP **PKPdf** 20 20 36.9 -0.7
comp=Z,25nm,0.9s,baz=18,slow=4.0,SNR=15
CHMT **Chamberlain Mo** 127.51 29 *e*PKPdf **PKPdf** 20 20 37.5 -0.7
A18A **Metzger Ranch,** 127.55 25 ⇑P **PKPdf** 20 20 38.0 0.0
baz=127,SNR=15
C16A **Fuhringer Ranc** 127.56 27 ⇑P **PKPdf** 20 20 38.0 -0.2
baz=127
WVOR **Wild Horse Val** 127.60 36 *e*PKIKP **PKPdf** 20 20 40.1 +1.6
WVOR MLR MLR
comp=Z,8µm,21.0s
WVOR **Wild Horse Val** 127.60 36 *e*PKPdf **PKPdf** 20 20 40.1 +1.6
WVOR LR LR
comp=Z,8µm,21.0s
B17A **L&G Farms, Che** 127.62 26 ⇑P **PKPdf** 20 20 38.2 -0.1
baz=128
G12A **Big Creek, Yel** 127.71 32 ⇑P **PKPdf** 20 20 38.5 -0.2
baz=128
E14A **Clinton** 127.75 29 ⇑P **PKPdf** 20 20 38.4 -0.2
baz=128
D15A **Lincoln** 127.77 28 ⇑P **PKPdf** 20 20 38.4 -0.3
baz=128
F13A **Darby** 127.77 30 ⇓P **PKPdf** 20 20 38.2 -0.5
baz=128
B18A **Beardsley Farm** 127.98 25 ⇑P **PKPdf** 20 20 39.0 0.0
baz=128,SNR=9.3
A19A **Klindworth Far** 128.00 24 ⇑P **PKPdf** 20 20 37.9 -1.1
baz=128,SNR=15
BEKR **Beckworth** 128.04 40 *e*PKPdf **PKPdf** 20 20 39.4 0.0
C17A **Wharram Farm,** 128.13 26 ⇓P **PKPdf** 20 20 38.6 -0.7
baz=128
E15A **Deer Lodge** 128.15 29 ⇓P **PKPdf** 20 20 39.1 -0.3
baz=128
D16A **Dana Ranch, Ca** 128.22 27 ⇓P **PKPdf** 20 20 39.6 0.0
baz=128
F14A **Wisdom** 128.24 30 ⇑P **PKPdf** 20 20 39.4 -0.3
baz=128
EGMT **Eagleton** 128.28 25 *e*PKPdf **PKPdf** 20 20 40.5 +0.9
EGMT LR LR
comp=Z,9µm,21.0s
EGMT **Eagleton** 128.28 25 ⇑P **PKPdf** 20 20 40.1 +0.5
baz=128,SNR=11
B19A **Brinkman Farms** 128.28 25 ⇓P **PKPdf** 20 20 39.4 -0.1
baz=128,SNR=7.2
G13A **Cobalt** 128.30 31 ⇑P **PKPdf** 20 20 39.7 0.0
baz=128
H12A **Diamond D Ranc** 128.35 32 ⇑P **PKPdf** 20 20 40.3 +0.3
baz=128
A20A **Cobblestone Ra** 128.36 24 ⇓P **PKPdf** 20 20 39.6 -0.1
baz=128
D17A **Six Diamond Ra** 128.53 27 ⇑P **PKPdf** 20 20 40.0 -0.1
baz=128
E16A **East Helena** 128.53 28 ⇑P **PKPdf** 20 20 40.4 +0.2
baz=128
MFID **Camas Ranch** 128.58 33 *e*PKPdf **PKPdf** 20 20 40.7 +0.4
MFID *e*PP **PP** 20 22 48.1 +2.8
MFID **Camas Ranch** 128.58 33 ⇑P **PKPdf** 20 20 40.4 +0.1
baz=128
G14A **Jackson** 128.59 30 ⇓P **PKPdf** 20 20 40.6 +0.2
baz=128
F15A **Butte** 128.65 29 ⇑P **PKPdf** 20 20 40.5 0.0
baz=128
H13A **Challis** 128.66 31 ⇑P **PKPdf** 20 20 40.7 +0.3
baz=128
A21A **Bergtoll Ranch** 128.67 23 ⇓P **PKPdf** 20 20 40.2 0.0
baz=128
LRM **Limekiln Ridge** 128.68 29 *e*PKPdf **PKPdf** 20 20 40.9 +0.3
I12A **Atlanta** 128.71 33 ⇓P **PKPdf** 20 20 40.6 0.0
baz=129
WCN **Washoe City** 128.74 40 *e*PKIKP **PKPdf** 20 20 42.7 +1.9
WCN **Washoe City** 128.74 40 *e*PKPdf **PKPdf** 20 20 42.7 +1.9
C19A **Slack Wire Ran** 128.80 25 ⇓P **PKPdf** 20 20 40.9 +0.4
baz=129,SNR=15
D18A **Linhart Farms,** 128.89 26 ⇓P **PKPdf** 20 20 40.9 +0.1
baz=129
DLMT **Dillon** 128.94 30 *e*PKPdf **PKPdf** 20 20 42.1 +1.2
E17A **Martinsdale** 128.97 28 ⇑P **PKPdf** 20 20 41.3 +0.2
baz=129
CMB **Columbia Colle** 129.03 42 *e*PKIKP **PKPdf** 20 20 42.0 +0.8
CMB **Columbia Colle** 129.03 42 *e*PKPdf **PKPdf** 20 20 42.0 +0.8
A22A **Carney Farms,** 129.05 22 ⇑P **PKPdf** 20 20 41.4 +0.4
baz=129
H14A **Leadore** 129.08 31 ⇓P **PKPdf** 20 20 42.0 +0.6
baz=129
B21A **Ellsworth Farm** 129.09 23 ⇓P **PKPdf** 20 20 41.3 +0.3
baz=129
F16A **Kennard Place,** 129.10 29 ⇑P **PKPdf** 20 20 41.7 +0.4
baz=129
G15A **Dillon** 129.13 30 ⇓P **PKPdf** 20 20 41.7 +0.3
baz=129
I13A **Wildhorse Cree** 129.17 32 ⇓P **PKPdf** 20 20 42.1 +0.6
baz=129
MCMT **McKenzie Canyo** 129.19 30 *e*PKPdf **PKPdf** 20 20 41.6 0.0
BOZ **Bozeman (W)** 129.20 29 *e*PKIKP **PKPdf** 20 20 42.1 +0.6
BOZ MLR MLR
comp=Z,9µm,21.0s
BOZ **Bozeman (W)** 129.20 29 *e*PKPdf **PKPdf** 20 20 42.1 +0.6
BOZ LR LR
comp=Z,10µm,21.0s
BOZ **Bozeman (W)** 129.20 29 ⇑P **PKPdf** 20 20 41.6 +0.2
baz=129
HLID **Hailey** 129.25 32 *e*PKPdf **PKPdf** 20 20 43.1 +1.5
HLID *e*PP **PP** 20 22 51.9 +2.1
HLID LR LR
comp=Z,10µm,20.0s
HLID **Hailey** 129.25 32 ⇑P **PKPdf** 20 20 42.3 +0.6
baz=129
C20A **Veseth Ranch,** 129.26 25 ⇑P **PKPdf** 20 20 41.8 +0.4
baz=129
D19A **Cripps Ranch,** 129.31 26 ⇑P **PKPdf** 20 20 41.9 +0.4
baz=129,SNR=6.6
E18A **Harlowton** 129.32 27 ⇑P **PKPdf** 20 20 41.8 +0.2
baz=129
G16A **Moss Hill, Enn** 129.42 29 ⇑P **PKPdf** 20 20 42.5 +0.5
baz=129
H15A **Lima** 129.44 30 ⇓P **PKPdf** 20 20 43.3 +1.3
baz=129
A23A **Redstone** 129.46 21 ⇓P **PKPdf** 20 20 42.2 +0.5
baz=129
F17A **Fitzpatrick Pl** 129.47 28 ⇑P **PKPdf** 20 20 43.1 +1.1
baz=129
J13A **Cove Ranch, Pi** 129.49 32 ⇓P **PKPdf** 20 20 43.0 +0.9
baz=129
I14A **Mackay** 129.51 31 ⇑P **PKPdf** 20 20 42.4 +0.3
baz=129
C21A **Desert Coulee** 129.54 24 ⇓P **PKPdf** 20 20 41.8 -0.1
baz=129
B22A **Reddig Ranch S** 129.59 23 ⇓P **PKPdf** 20 20 42.1 +0.1
baz=129
BMN **Battle Mountai** 129.66 37 PFAKE 20 20 50.0 +7.5
BMN LR LR
comp=Z,6µm,20.0s
D20A **Manuel Ranch,** 129.69 25 ⇑P **PKPdf** 20 20 42.4 +0.2
baz=130
A24A **Westby** 129.81 21 ⇑P **PKPdf** 20 20 43.1 +0.8
baz=130
B23A **Brockton** 129.83 22 ⇓P **PKPdf** 20 20 43.0 +0.5
baz=130
G17A **Piece Place,** 129.87 28 ⇓P **PKPdf** 20 20 43.1 +0.3
baz=130
J14A **Carey** 129.89 32 ⇓P **PKPdf** 20 20 43.7 +0.8
baz=130
QLMT **Earthquake Lak** 129.89 29 *e*PKPdf **PKPdf** 20 20 44.8 +1.9
E19A **Rath Farm, Rou** 129.90 26 ⇓P **PKPdf** 20 20 42.9 +0.2
baz=130,SNR=6.5
F18A **Big Timber** 129.91 27 ⇓P **PKPdf** 20 20 43.5 +0.7
baz=130,SNR=13
I15A **Montview** 129.96 31 ⇓P **PKPdf** 20 20 43.1 +0.1
baz=130
GCMT **Greycliff** 130.02 27 *e*PKPdf **PKPdf** 20 20 44.0 +1.0
H16A **Russell Place,** 130.08 29 ⇑P **PKPdf** 20 20 44.5 +1.2
baz=130
C22A **Vida** 130.09 23 ⇑P **PKPdf** 20 20 43.7 +0.7
baz=130
DGMT **Dagmar** 130.12 21 *e*PKPdf **PKPdf** 20 20 43.9 +0.9
DGMT LR LR
comp=Z,10µm,19.0s
DGMT **Dagmar** 130.12 21 ⇓P **PKPdf** 20 20 43.8 +0.9
baz=130
E20A **Meyer Farm, Mu** 130.15 26 ⇑P **PKPdf** 20 20 43.5 +0.4
baz=130,SNR=5.7
NVAR **Mina Array Bea** 130.17 40 PKP **PKPdf** 20 20 44.6 +1.0
NVAR PP **PP** 20 22 54.4 -1.7
NVAR **Mina Array Bea** 130.17 40 PKP **PKPdf** 20 20 44.6 +1.0
comp=Z,19nm,1.0s,baz=304,slow=2.1,SNR=8.7
NVAR PP **PP** 20 22 54.4 -1.7
comp=Z,5.7nm,1.1s,baz=311,slow=7.1,SNR=3.6
D21A **La Casta Ranch** 130.19 24 ⇑P **PKPdf** 20 20 43.8 +0.6
baz=130
YMR **Madison River** 130.24 29 *e*PKPdf **PKPdf** 20 20 44.2 +0.6
NV11 **Mina Array Sit** 130.27 40 *e*PKPdf **PKPdf** 20 20 45.5 +1.8
MLAC **Mammoth Lakes** 130.28 41 ⇑P **PKPdf** 20 20 44.6 +0.8
baz=130
F19A **Roth Farm, Mol** 130.30 27 ⇑P **PKPdf** 20 20 44.0 +0.5
baz=130,SNR=6.5
C23A **Lambert** 130.31 22 ⇓P **PKPdf** 20 20 44.3 +1.0
baz=130
J15A **Blackfoot** 130.41 31 ⇑P **PKPdf** 20 20 44.5 +0.6
baz=130
G18A **Lazy EL Ranch,** 130.42 28 ⇑P **PKPdf** 20 20 43.9 +0.1
baz=130,SNR=5.4
D22A **Cohagen** 130.45 24 ⇓P **PKPdf** 20 20 44.5 +0.8
baz=130
I16A **Newdale** 130.56 30 ⇓P **PKPdf** 20 20 44.7 +0.6
baz=130
E21A **Keefer Ranch,** 130.57 25 ⇓P **PKPdf** 20 20 44.7 +0.8
baz=130
LKWY **Lake** 130.59 29 *e*PKIKP **PKPdf** 20 20 47.4 +3.1
LKWY MLR MLR
comp=Z,22µm,19.0s
LKWY **Lake** 130.59 29 *e*PKPdf **PKPdf** 20 20 47.4 +3.1
LKWY LR LR
comp=Z,22µm,19.0s
K14A **Jones Ranch, D** 130.61 33 ⇑P **PKPdf** 20 20 45.0 +0.7
baz=130
H17A **Grant Village** 130.63 29 ⇓P **PKPdf** 20 20 45.7 +1.4
baz=130,SNR=5.6
ELK **Elk** 130.65 36 *e*PKPdf **PKPdf** 20 20 45.2 +0.7
F20A **Billings** 130.69 26 ⇑P **PKPdf** 20 20 44.5 +0.3
baz=130
RLMT **Red Lodge** 130.71 28 *e*PKPdf **PKPdf** 20 20 44.5 +0.1
RLMT LR LR
comp=Z,13µm,20.0s
RLMT **Red Lodge** 130.71 28 ⇓P **PKPdf** 20 20 44.7 +0.2
baz=131
SMMC **Simmler** 130.74 44 ⇑P **PKPdf** 20 20 45.3 +0.7
baz=131
IMW **Indian Meadow** 130.81 30 *e*PKPdf **PKPdf** 20 20 46.2 +1.4
D23A **Lindsay** 130.82 23 ⇑P **PKPdf** 20 20 45.0 +0.7
baz=131
H18A **Shoshone NF, C** 130.86 28 ⇓P **PKPdf** 20 20 45.5 +0.7
baz=131,SNR=6.7
K15A **Arbon** 130.86 32 ⇑P **PKPdf** 20 20 45.4 +0.7
baz=131
DCID1 **Drake Creek** 130.91 30 *e*PKPdf **PKPdf** 20 20 45.9 +1.0
L14A **Malta** 130.92 33 ⇓P **PKPdf** 20 20 45.9 +1.0
baz=131
I17A **Pilgrim Ck.** 130.98 30 ⇑P **PKPdf** 20 20 45.5 +0.5
baz=131
TIN **Tinemaha** 131.00 41 ⇑P **PKPdf** 20 20 46.0 +0.9
baz=131
MOOW **Moose Ponds** 131.02 30 *e*PKPdf **PKPdf** 20 20 45.0 -0.1
RRI2 **Red Ridge** 131.02 31 *e*PKPdf **PKPdf** 20 20 43.2 -1.9
ULM **Lac du Bonnet** 131.05 14 PKP **PKPdf** 20 20 44.9 +0.3
ULM PP **PP** 20 23 00.2 -0.4
ULM **Lac du Bonnet** 131.05 14 PKP **PKPdf** 20 20 44.9 +0.3
comp=Z,34nm,1.0s,baz=353,slow=3.1,SNR=18
ULM PP **PP** 20 23 00.2 -0.4
comp=Z,3.3nm,0.5s,baz=284,slow=4.3,SNR=3.4
TPH **Tonopah** 131.07 40 PFAKE 20 21 00.0 +15
TPH LR LR
comp=Z,6µm,21.0s
PKM **Peak Mountain** 131.08 45 ⇓P **PKPdf** 20 20 44.4 -1.0
baz=131
VES **Vestal, Richgr** 131.09 43 ⇓P **PKPdf** 20 20 45.5 +0.4
baz=131
TPAW **Teton Pass** 131.10 30 *e*PKPdf **PKPdf** 20 20 45.7 +0.4
G20A **Bridger** 131.11 27 ⇑P **PKPdf** 20 20 45.7 +0.7
baz=131,SNR=6.3
E22A **Miles City** 131.12 24 ⇓P **PKPdf** 20 20 45.4 +0.5
baz=131
F21A **Absaloka Mine,** 131.12 25 ⇑P **PKPdf** 20 20 45.5 +0.5
baz=131
H19A **Powell** 131.18 28 ⇓P **PKPdf** 20 20 46.2 +1.0
baz=131,SNR=23
LOHW **Long Hollow** 131.19 30 *e*PKPdf **PKPdf** 20 20 44.4 -1.0
D24A **Glendive** 131.21 22 ⇑P **PKPdf** 20 20 45.0 -0.1
baz=131
SNOW **Snow King Moun** 131.22 30 *e*PKPdf **PKPdf** 20 20 45.2 -0.3
REDW **Red Top Meadow** 131.25 30 *e*PKPdf **PKPdf** 20 20 47.6 +2.1
K16A **Soda Springs** 131.25 31 ⇓P **PKPdf** 20 20 45.9 +0.4
baz=131
J17A **Brown Place, J** 131.32 30 ⇑P **PKPdf** 20 20 45.9 +0.3
baz=131
E23A **Ismay** 131.33 24 ⇑P **PKPdf** 20 20 45.6 +0.2
baz=131
HVU **Hansel Valley** 131.35 33 *e*PKIKP **PKPdf** 20 20 45.6 -0.1
HVU **Hansel Valley** 131.35 33 *e*PKPdf **PKPdf** 20 20 45.6 -0.1
L15A **Malad City** 131.41 33 ⇑P **PKPdf** 20 20 46.3 +0.6
baz=131
CWC **Cottonwood Cre** 131.44 42 ⇓P **PKPdf** 20 20 46.3 +0.2
baz=131
I18A **Diamond G Ranc** 131.51 29 ⇓P **PKPdf** 20 20 46.3 +0.3
baz=131
F22A **Rosebud** 131.52 25 ⇓P **PKPdf** 20 20 46.0 +0.2
baz=131
AHID **Auburn Hatcher** 131.55 31 PFAKE 20 21 00.0 +14
AHID LR LR
comp=Z,8µm,19.0s
G21A **Lodge Grass** 131.56 26 ⇑P **PKPdf** 20 20 46.3 +0.5
baz=131
GRAC **Grapevine Rang** 131.60 41 ⇑P **PKPdf** 20 20 46.8 +0.6
baz=132
ISA **Isabella** 131.60 43 ⇑P **PKPdf** 20 20 46.3 +0.1
baz=132
ARVC **Arvin** 131.65 44 ⇓P **PKPdf** 20 20 46.9 +0.7
baz=132
K17A **Gardner Place,** 131.65 31 ⇓P **PKPdf** 20 20 46.5 +0.2
baz=132
I19A **Meeteetse** 131.66 28 ⇓P **PKPdf** 20 20 46.8 +0.5
baz=132
BSC **Santa Cruz Isl** 131.67 46 ⇓P **PKPdf** 20 20 46.6 +0.3
baz=132
E24A **Baker** 131.67 23 ⇓P **PKPdf** 20 20 46.4 +0.4
baz=132
J18A **Kendall Valley** 131.77 30 ⇓P **PKPdf** 20 20 46.8 +0.2
baz=132
H20A **Greybull** 131.78 27 ⇓P **PKPdf** 20 20 46.6 +0.2
baz=132
L16A **Fish Haven** 131.91 32 ⇑P **PKPdf** 20 20 46.9 +0.2
baz=132
F23A **Volborg** 131.92 24 ⇓P **PKPdf** 20 20 46.5 0.0
baz=132
R11A **Troy Canyon, C** 131.94 38 ⇑P **PKPdf** 20 20 48.1 +1.2
baz=132
G22A **Birney** 131.96 25 ⇑P **PKPdf** 20 20 47.0 +0.3
baz=132
OSI **Osito Adit** 131.99 45 ⇑P **PKPdf** 20 20 47.4 +0.5
baz=132
BLG **Laguna Peak** 132.02 45 ⇑P **PKPdf** 20 20 46.8 -0.2
baz=132
MPMC **Manual Prospec** 132.05 42 ⇑P **PKPdf** 20 20 48.1 +0.8
baz=132
H21A **Big Horn, Sher** 132.10 26 ⇓P **PKPdf** 20 20 46.8 -0.1
baz=132
HWUT **Hardware Ranch** 132.12 32 *e*PKPdf **PKPdf** 20 20 47.1 -0.1
HWUT LR LR
comp=Z,11µm,20.0s
I20A **Worland** 132.13 28 ⇑P **PKPdf** 20 20 47.1 +0.1
baz=132
L17A **Cokeville** 132.14 31 ⇑P **PKPdf** 20 20 47.1 -0.2
baz=132
K18A **Toltan Ranch,** 132.18 30 ⇓P **PKPdf** 20 20 47.1 -0.2
baz=132
J19A **Crowheart** 132.21 29 ⇑P **PKPdf** 20 20 47.7 +0.4
baz=132,SNR=7.5
MDND **Maddock** 132.21 18 ⇓P **PKPdf** 20 20 47.1 +0.2
baz=132
F24A **Ekalaka** 132.21 23 ⇑P **PKPdf** 20 20 47.1 0.0
baz=132
FURC **Furnace Creek,** 132.24 41 ⇓P **PKPdf** 20 20 48.3 +1.0
baz=132
LRMC **Laurel Mountai** 132.24 43 ⇑P **PKPdf** 20 20 47.4 -0.1
baz=132
BW06 **Boulder Array** 132.33 30 PFAKE 20 21 00.0 +12
BW06 LR LR
comp=Z,9µm,20.0s
BW06 **Boulder Array** 132.33 30 ⇓P **PKPdf** 20 20 47.4 -0.2
baz=132
PDAR **Pinedale Array** 132.33 30 PKPpre PKPpre 20 20 36.6
PDAR PKP **PKiKP** 20 20 48.9 +0.2
PDAR PP **PP** 20 23 10.2 +0.6
PDAR SKPab **SKiKP** 20 24 18.9 -4.1
PDAR **Pinedale Array** 132.33 30 PKhKP PKPpre 20 20 36.6
comp=Z,0.7nm,0.8s,baz=315,slow=0.4,SNR=3.8
PDAR PKP **PKiKP** 20 20 48.9 +0.2
comp=Z,6.4nm,1.0s,baz=347,slow=1.2,SNR=16
PDAR PP **PP** 20 23 10.2 +0.6
comp=Z,6.9nm,1.1s,baz=300,slow=2.0,SNR=4.3
PDAR SKPab **SKiKP** 20 24 18.9 -4.1
comp=Z,4.1nm,0.9s,baz=25,slow=2.4,SNR=3.7
G23A **Biddle** 132.35 25 ⇓P **PKPdf** 20 20 47.1 -0.3
baz=132
EDW2 **Edwards Air Fo** 132.36 44 ⇓P **PKPdf** 20 20 48.0 +0.3
baz=132
DUG **Dugway** 132.40 35 *e*PKIKP **PKPdf** 20 20 48.8 +1.1
DUG MLR MLR
comp=Z,7µm,19.0s
DUG **Dugway** 132.40 35 *e*PKPdf **PKPdf** 20 20 48.8 +1.1
DUG LR LR
comp=Z,7µm,19.0s
DUG **Dugway** 132.40 35 ⇓P **PKPdf** 20 20 48.2 +0.5
baz=132
H22A **Clearmont** 132.43 26 ⇑P **PKPdf** 20 20 47.3 -0.2
baz=132
DECC **Green Verdugo** 132.46 45 ⇓P **PKPdf** 20 20 47.8 0.0
baz=132
J20A **Shoshoni** 132.60 28 ⇓P **PKPdf** 20 20 48.0 0.0
baz=132
I21A **Big Trails, Te** 132.62 27 ⇓P **PKPdf** 20 20 47.7 -0.3
baz=132
K19A **Absolon Red Bu** 132.64 29 ⇓P **PKPdf** 20 20 48.3 +0.2
baz=132,SNR=10
G24A **Alzada** 132.65 24 ⇓P **PKPdf** 20 20 47.6 -0.3
baz=132
M17A **Scullys Gap (B** 132.70 32 ⇓P **PKPdf** 20 20 48.3 0.0
baz=133
L18A **Fontenelle, Gr** 132.70 31 ⇑P **PKPdf** 20 20 48.3 0.0
baz=133
H23A **Clabaugh Cattl** 132.86 25 ⇓P **PKPdf** 20 20 48.0 -0.4
baz=133
AGMN **Agassiz Nation** 132.86 15 *e*PKPdf **PKPdf** 20 20 46.9 -1.2
AGMN LR LR
comp=Z,11µm,20.0s
JLU **Jordanelle** 132.89 33 *e*PKPdf **PKPdf** 20 20 48.9 +0.2
J21A **Lysite** 132.91 28 ⇑P **PKPdf** 20 20 48.6 -0.1
baz=133,SNR=5.9
L19A **Farson** 132.92 30 ⇑P **PKPdf** 20 20 48.4 -0.3
baz=133
I22A **9 Mile Ranch,** 132.92 27 ⇓P **PKPdf** 20 20 48.6 0.0
baz=133
BFSC **Mount Baldy Ra** 132.94 44 ⇑P **PKPdf** 20 20 49.0 +0.1
baz=133
GSC **Goldstone** 132.94 43 *e*PKIKP **PKPdf** 20 20 50.4 +1.6
GSC **Goldstone** 132.94 43 *e*PKPdf **PKPdf** 20 20 50.4 +1.6
GSC **Goldstone** 132.94 43 ⇑P **PKPdf** 20 20 49.7 +0.9
baz=133
SHOC **Shoshone** 132.95 42 ⇓P **PKPdf** 20 20 49.0 +0.3
baz=133
SCI **San Clemente I** 132.97 46 ⇑P **PKPdf** 20 20 49.3 +0.6
baz=133
N17A **Moffit Pass** 132.98 33 ⇑P **PKPdf** 20 20 49.7 +0.8
baz=133
K20A **Yellowstone Ra** 133.01 29 ⇓P **PKPdf** 20 20 48.8 0.0
baz=133
RRX **Edison Barstow** 133.04 43 ⇑P **PKPdf** 20 20 49.3 +0.4
baz=133
M18A **Lyman** 133.04 32 ⇓P **PKPdf** 20 20 48.7 -0.2
baz=133
H24A **Dirks Ranch, A** 133.07 24 ⇓P **PKPdf** 20 20 48.7 0.0
baz=133
DAU **Daniels Canyon** 133.12 33 *e*PKIKP **PKPdf** 20 20 50.1 +0.8
DAU **Daniels Canyon** 133.12 33 *e*PKPdf **PKPdf** 20 20 50.1 +0.8
MPU **Maple Canyon** 133.19 34 *e*PKPdf **PKPdf** 20 20 52.0 +2.7
J22A **Midwest** 133.30 27 ⇓P **PKPdf** 20 20 49.1 -0.2
baz=133
I23A **Meade Ranch, G** 133.32 26 ⇓P **PKPdf** 20 20 48.9 -0.4
baz=133
BBRC **Big Bear Solar** 133.44 44 ⇓P **PKPdf** 20 20 50.2 +0.3
baz=133
TUQ **Turquoise Moun** 133.45 42 ⇓P **PKPdf** 20 20 50.2 +0.4
baz=133
M19A **Rock Springs** 133.46 31 ⇑P **PKPdf** 20 20 49.9 +0.2
baz=133
L20A **Wamsutter** 133.50 30 ⇑P **PKPdf** 20 20 50.1 +0.3
baz=133
HEC **Hector,Ludlow** 133.53 43 ⇑P **PKPdf** 20 20 50.3 +0.4
baz=133
K21A **Alcova** 133.55 28 ⇑P **PKPdf** 20 20 50.2 +0.3
baz=133
N18A **Larsen Ranch,** 133.57 32 ⇓P **PKPdf** 20 20 50.1 +0.1
baz=133
MURC **Murrieta** 133.60 45 ⇑P **PKPdf** 20 20 49.9 -0.1
baz=134
J23A **Dilts Ranch, B** 133.72 26 ⇓P **PKPdf** 20 20 50.0 0.0
baz=134
I24A **Kuemmerle Ranc** 133.76 25 ⇑P **PKPdf** 20 20 49.9 -0.2
baz=134
K22A **Casper** 133.88 28 ⇑P **PKPdf** 20 20 50.4 -0.1
baz=134
MVU **Marysvale** 133.88 36 *e*PKPdf **PKPdf** 20 20 50.5 -0.1
MVU LR LR
comp=Z,6µm,20.0s
MSU **Marysvale** 133.89 36 *e*PKIKP **PKPdf** 20 20 52.4 +1.7
MSU **Marysvale** 133.89 36 *e*PKPdf **PKPdf** 20 20 52.4 +1.7
N19A **John Jarvie Ra** 133.89 31 ⇑P **PKPdf** 20 20 50.5 0.0
baz=134
TMUT **Trail Mountain** 133.92 34 *e*PKPdf **PKPdf** 20 20 52.2 +1.4
M20A **Sweetwater, Wa** 133.96 30 ⇓P **PKPdf** 20 20 50.6 -0.1
baz=134
L21A **Rawlins** 134.00 29 ⇑P **PKPdf** 20 20 50.9 +0.2
baz=134,SNR=9.1
GMRC **Granite Mounta** 134.01 42 ⇓P **PKPdf** 20 20 52.3 +1.5
baz=134
109C **Camp Elliot, M** 134.05 46 ⇓P **PKPdf** 20 20 50.8 0.0
baz=134
P17A **Butcher Ranch,** 134.06 34 ⇑P **PKPdf** 20 20 51.2 +0.3
baz=134
PFO **Pinyon Flat Ob** 134.12 44 *e*PKPdf **PKPdf** 20 20 51.7 +0.6
PFO LR LR
comp=Z,5µm,19.0s
PFO **Pinyon Flat Ob** 134.12 44 ⇑P **PKPdf** 20 20 51.0 -0.1
baz=134
J24A **Dixon Ranch, L** 134.17 26 ⇓P **PKPdf** 20 20 51.1 +0.2
baz=134
EYMN **Ely** 134.18 11 *e*PKPdf **PKPdf** 20 20 49.3 -1.3
EYMN LR LR
comp=Z,18µm,20.0s
Q16A **Castle Valley** 134.20 35 ⇑P **PKPdf** 20 20 52.2 +1.0
baz=134
K23A **Bowen Ranch, D** 134.21 27 ⇑P **PKPdf** 20 20 50.7 -0.3
baz=134
BELC **Belle Mtn. Jos** 134.22 44 ⇓P **PKPdf** 20 20 52.1 +0.8
baz=134

P18A	Preston Nutter	134.23	33	⇑P		PKPdf	20 20 52.6	+1.2
	baz=134							
M21A	Separation Pea	134.28	29	⇑P		PKPdf	20 20 51.4	+0.1
	baz=134,SNR=18							
O19A	Miners Draw (B	134.35	32	⇑P		PKPdf	20 20 51.9	+0.5
	baz=134							
L22A	Ellis Ranch, M	134.40	28	⇑P		PKPdf	20 20 52.2	+0.7
	baz=134							
N20A	Spence Gulch,	134.41	31	⇓P		PKPdf	20 20 51.9	+0.3
	baz=134							
SRU	San Rafael	134.43	34	ePKIKP		PKPdf	20 20 52.5	+0.9
SRU	San Rafael	134.43	34	ePKPdf		PKPdf	20 20 52.5	+0.9
SRU	San Rafael	134.43	34	⇑P		PKPdf	20 20 51.8	+0.2
	baz=134							
MONP	Monument Peak	134.53	45	⇑P		PKPdf	20 20 52.6	+0.6
	baz=134							
K24A	Anderson Ranch	134.59	26	⇑P		PKPdf	20 20 51.5	-0.3
	baz=134							
L23A	Garrett	134.67	27	⇓P		PKPdf	20 20 52.3	+0.3
	baz=134							
IRM	Iron Mountain	134.71	43	⇓P		PKPdf	20 20 52.7	+0.6
	baz=135							
NEE2	Needles Airpor	134.71	42	⇑P		PKPdf	20 20 52.7	+0.7
	baz=135							
BC3	Big Chuckawall	134.79	44	⇓P		PKPdf	20 20 53.6	+1.3
	baz=135							
M22A	Cedar Creek Ra	134.81	29	⇑P		PKPdf	20 20 52.7	+0.4
	baz=135,SNR=6.4							
N21A	Black Mountain	134.84	30	⇓P		PKPdf	20 20 53.1	+0.8
	baz=135,SNR=7.3							
P19A	Cripple Cowboy	134.91	32	⇓P		PKPdf	20 20 53.3	+0.8
	baz=135							
O20A	White River Ci	134.93	31	⇑P		PKPdf	20 20 52.7	+0.2
	baz=135							
SWSC	Sam W. Stewart	134.95	45	⇓P		PKPdf	20 20 53.1	+0.7
	baz=135							
W13A	Hualapai Mount	135.00	41	⇓P		PKPdf	20 20 54.5	+1.7
	baz=135							
L24A	Wheatland	135.08	27	⇑P		PKPdf	20 20 52.8	+0.1
	baz=135							
K25A	Mack Ranch, Ha	135.09	26	⇑P		PKPdf	20 20 52.7	0.0
	baz=135							
M23A	Laramie	135.17	28	⇓P		PKPdf	20 20 53.5	+0.6
	baz=135							
U15A	North Rim	135.18	38	⇓P		PKPdf	20 20 54.4	+1.2
	baz=135							
Q19A	Hogan Spring (	135.24	33	⇑P		PKPdf	20 20 53.7	+0.7
	baz=135							
O21A	Pagoda	135.27	31	⇑P		PKPdf	20 20 53.2	0.0
	baz=135							
PDMCI	Parker Dam,Lak	135.31	42	⇓P		PKPdf	20 20 53.4	+0.3
	baz=135							
K26A	Motz Farm, Whi	135.31	25	⇓P		PKPdf	20 20 52.9	-0.1
	baz=135							
P20A	De Begue	135.32	32	⇓P		PKPdf	20 20 53.5	+0.3
	baz=135							
N22A	Wattenberg Ran	135.33	29	⇓P		PKPdf	20 20 53.8	+0.5
	baz=135,SNR=9.0							
Y12C	Blythe	135.37	43	⇓P		PKPdf	20 20 53.8	+0.5
	baz=135							
L25A	Engebretsen Ra	135.42	26	⇑P		PKPdf	20 20 53.5	+0.3
	baz=135							
PHWY	Pilot Hill	135.42	28	ePKPdf		PKPdf	20 20 53.5	0.0
BRSD	Miller	135.43	20	⇓P		PKPdf	20 20 53.2	+0.1
	baz=135							
N23A	Red Feather La	135.51	29	⇑P		PKPdf	20 20 54.3	+0.6
	baz=135							
GLA	Glamis	135.56	44	⇓P		PKPdf	20 20 54.5	+0.8
	baz=136							
PLCA	Paso Flores	135.58	190	PKP		PKPdf	20 20 54.7	+1.1
PLCA				ePKPdf		PKiKP	20 20 55.7	+0.5
PLCA	Paso Flores	135.58	190	PKP		PKPdf	20 20 54.7	+1.1
	comp=Z,3.6nm,0.8s,baz=164,slow=3.2,SNR=5.2							
M24A	Cheyenne	135.59	27	⇑P		PKPdf	20 20 54.3	+0.6
	baz=135							
K27A	Flueckinger Fa	135.70	24	⇓P		PKPdf	20 20 53.5	-0.3
	baz=136							
S18A	Hurst Farm, Bl	135.72	35	⇑P		PKPdf	20 20 54.8	+0.7
	baz=136							
Q20A	Ridgley Place,	135.77	33	⇑P		PKPdf	20 20 54.7	+0.6
	baz=136							
O22A	Kremmling	135.78	30	⇓P		PKPdf	20 20 54.7	+0.5
	baz=136							
P21A	Newcastle	135.80	31	⇓P		PKPdf	20 20 54.9	+0.7
	baz=136							
L26A	Underwood Farm	135.90	25	⇑P		PKPdf	20 20 53.8	-0.4
	baz=136							
M25A	Palm-Egli Farm	135.96	27	⇓P		PKPdf	20 20 54.4	+0.1
	baz=136							
O23A	Lake Granby, G	136.05	29	⇓P		PKPdf	20 20 54.7	0.0
	baz=136							
P22A	Eagle	136.10	31	⇑P		PKPdf	20 20 55.3	+0.5
	baz=136							
L27A	T5 Ranch, Ells	136.18	25	⇓P		PKPdf	20 20 54.6	-0.1
	baz=136							
Q21A	Lamborn Mesa,	136.24	32	⇑P		PKPdf	20 20 55.1	+0.1
	baz=136							
R20A	Redvale	136.27	33	⇓P		PKPdf	20 20 55.1	0.0
	baz=136							
SMCO	Snowmass	136.30	31	ePKPpre		PKPpre	20 20 41.5	
WUAZ	Wupatki	136.34	39	PFAKE			20 21 10.0	+15
WUAZ				LR		LR		
	comp=Z,5μm,19.0s							
WUAZ	Wupatki	136.34	39	⇓P		PKPdf	20 20 55.6	+0.4
	baz=136							
M26A	McRoberts Ranc	136.34	26	⇓P		PKPdf	20 20 55.1	+0.1
	baz=136							
COWI	Conover	136.39	10	ePKPdf		PKPdf	20 20 52.5	-2.3
COWI				LR		LR		
	comp=Z,14μm,20.0s							
N25A	Grover	136.44	27	⇑P		PKPdf	20 20 55.3	0.0
	baz=136							
113A	Mohawk Valley,	136.45	43	⇓P		PKPdf	20 20 55.7	+0.4
	baz=136							
SPMN	St. Paul	136.49	14	⇓P		PKPdf	20 20 55.3	+0.3
	baz=136							
ISCO	Idaho Springs	136.51	29	ePKIKP		PKPdf	20 20 54.1	-1.5
ISCO				MLR		MLR		
	comp=Z,9μm,20.0s							
ISCO	Idaho Springs	136.51	29	ePKPdf		PKPdf	20 20 54.1	-1.5
ISCO				LR		LR		
	comp=Z,9μm,20.0s							
ISCO	Idaho Springs	136.51	29	⇑P		PKPdf	20 20 55.7	+0.1
	baz=136							
O24A	Longmont	136.53	29	⇓P		PKPdf	20 20 55.5	0.0
	baz=136							
S20A	Disappointment	136.54	34	⇓P		PKPdf	20 20 56.2	+0.5
	baz=136							
Q22A	Crested Butte,	136.57	31	⇓P		PKPdf	20 20 56.3	+0.6
	baz=136							
R21A	Cimarron	136.59	32	⇑P		PKPdf	20 20 56.3	+0.6
	baz=136							
M27A	Reverse DX Ran	136.61	25	⇑P		PKPdf	20 20 55.6	+0.1
	baz=136							
Z14A	Wintersburg	136.66	42	⇓P		PKPdf	20 20 56.7	+1.0
	baz=137							
P23A	Jefferson	136.73	30	⇑P		PKPdf	20 20 56.5	+0.4
	baz=137							
N26A	Koester Ranch,	136.82	26	⇓P		PKPdf	20 20 55.9	0.0
	baz=137							
ECSD	EROS Data Cent	136.82	18	ePKPpre		PKPpre	20 20 43.6	
ECSD				LR		LR		
	comp=Z,16μm,19.0s							
MVCO	Mesa Verde	136.90	34	ePKPdf		PKPdf	20 20 56.7	+0.4
MVCO				LR		LR		
	comp=Z,8μm,20.0s							
MVCO	Mesa Verde	136.90	34	⇓P		PKPdf	20 20 57.0	+0.7
	baz=137							
S21A	Coal Bank Pass	136.97	33	⇑P		PKPdf	20 20 57.3	+0.8
	baz=137							
O25A	Wiggins	136.99	28	⇑P		PKPdf	20 20 56.3	0.0
	baz=137							
X16A	Lo Mia Camp, P	137.00	40	⇓P		PKPdf	20 20 57.3	+0.8
	baz=137							
P24A	Kohler Place,	137.08	29	⇑P		PKPdf	20 20 56.8	+0.3
	baz=137							
Q23A	Hartsel	137.09	31	⇑P		PKPdf	20 20 57.0	+0.2
	baz=137							
R22A	Saguache, Gunn	137.12	32	⇓P		PKPdf	20 20 57.0	+0.2
	baz=137							
N27A	Anderson Farm,	137.14	26	⇑P		PKPdf	20 20 56.4	-0.1
	baz=137							
OGNE	Ogallala	137.24	25	PFAKE			20 21 10.0	+13
OGNE				LR		LR		
	comp=Z,12μm,20.0s							
OGNE	Ogallala	137.24	25	⇓P		PKPdf	20 20 57.0	+0.3
	baz=137							
O26A	Horse Wrangler	137.25	27	⇓P		PKPdf	20 20 57.1	+0.4
	baz=137							
Q24A	Divide	137.39	30	⇓P		PKPdf	20 20 57.6	+0.3
	baz=137							
S22A	4UR Ranch, Cre	137.44	32	⇓P		PKPdf	20 20 57.7	+0.3
	baz=137							
P25A	Willow Gulch B	137.44	28	⇓P		PKPdf	20 20 57.5	+0.3
	baz=137							
U20A	Newcomb	137.47	35	⇑P		PKPdf	20 20 57.4	0.0
	baz=137							
214A	Organ Pipe Nat	137.58	44	⇑P		PKPdf	20 20 58.7	+1.3
	baz=138							
T21A	Navajo Lake	137.60	34	⇓P		PKPdf	20 20 58.2	+0.7
	baz=138							
W18A	Petrified Fore	137.61	38	⇓P		PKPdf	20 20 58.4	+0.8
	baz=138							
R23A	Moffat	137.63	31	⇓P		PKPdf	20 20 58.1	+0.4
	baz=138							
O27A	Beecher Island	137.67	26	⇑P		PKPdf	20 20 57.1	-0.4
	baz=138							
P26A	Davis Ranch, A	137.79	28	⇑P		PKPdf	20 20 57.7	-0.1
	baz=138							
WVL	Waterville	137.82	349	ePKPdf		PKPdf	20 20 57.4	-0.1
X18A	Snowflake	137.87	39	⇑P		PKPdf	20 20 58.9	+0.8
	baz=138							
Q25A	Bedland, Calha	137.87	29	⇑P		PKPdf	20 20 57.7	-0.3
	baz=138							
S23A	Nye Farm, Mont	137.91	32	⇓P		PKPdf	20 20 58.6	+0.4
	baz=138							
V20A	Brimhall	137.91	36	⇓P		PKPdf	20 20 58.3	+0.1
	baz=138							
T22A	Edith	137.93	33	⇓P		PKPdf	20 20 59.3	+1.0
	baz=138,SNR=6.7							
U21A	Nageezi	137.93	35	⇑P		PKPdf	20 20 59.0	+0.7
	baz=138							
R24A	Sanders Place,	137.97	31	⇑P		PKPdf	20 20 58.5	+0.2
	baz=138							
MSNY	Massena	138.10	355	ePKPdf		PKPdf	20 20 56.0	-1.9
FRNY	Flat Rock	138.13	354	ePKPdf		PKPdf	20 20 57.8	-0.2
Q26A	Hugo	138.21	28	⇓P		PKPdf	20 20 58.9	+0.3
	baz=138							
GLMI	Grayling	138.24	5	PFAKE			20 21 10.0	+12
GLMI				LR		LR		
	comp=Z,14μm,19.0s							
W20A	Ramah	138.35	37	⇓P		PKPdf	20 20 59.4	+0.4
	baz=138							
S24A	Houchin Ranch,	138.37	31	⇑P		PKPdf	20 20 59.2	+0.1
	baz=138							
BGNE	Belgrade	138.38	21	⇑P		PKPdf	20 20 58.7	0.0
	baz=138							
V21A	Milan	138.38	35	⇓P		PKPdf	20 20 59.6	+0.5
	baz=138							
T23A	Casias Ranch,	138.38	33	⇓P		PKPdf	20 20 59.7	+0.6
	baz=138							
RPN	Rapa Nui	138.40	138	PFAKE			20 21 10.0	+11
RPN				LR		LR		
	comp=Z,6μm,20.0s							
U22A	Llaves	138.42	34	⇓P		PKPdf	20 21 00.2	+1.0
	baz=138							
LONY	Lake Ozonia	138.45	355	PFAKE			20 21 10.0	+11
LONY				LR		LR		
	comp=Z,11μm,22.0s							
R25A	Fountain Ranch	138.45	30	⇑P		PKPdf	20 20 59.2	+0.2
	baz=138							
LBNH	Lisbon	138.51	352	ePKIKP		PKPdf	20 20 59.2	+0.4
LBNH				MLR		MLR		
	comp=Z,14μm,19.0s							
LBNH	Lisbon	138.51	352	ePKPdf		PKPdf	20 20 59.2	+0.4
LBNH				LR		LR		
	comp=Z,14μm,19.0s							
KSCO	Kaye Shedlock'	138.56	27	⇓P		PKPdf	20 20 59.6	+0.4
	baz=138							
V22A	San Miguel Ran	138.72	34	⇑P		PKPdf	20 21 00.3	+0.6
	baz=139							
R26A	Arlington	138.74	29	⇓P		PKPdf	20 20 59.8	+0.3
	baz=139							
S25A	Robets Cordova	138.75	30	⇓P		PKPdf	20 20 60.0	+0.3
	baz=139							
X20A	Quemado	138.75	37	⇓P		PKPdf	20 21 00.6	+0.8
	baz=139							
U23A	El Rito	138.82	33	⇑P		PKPdf	20 21 00.7	+0.8
	baz=139							
W21A	San Fidel	138.86	36	⇓P		PKPdf	20 21 00.6	+0.6
	baz=139							
T24A	Torres, Weston	138.88	32	⇓P		PKPdf	20 21 00.8	+0.7
	baz=139							
MDV	Middlebury	138.91	353	ePKPdf		PKPdf	20 21 00.0	+0.5
SPB	Sao Paulo	138.97	228	PFAKE			20 21 10.0	+10
SPB				LR		LR		
	comp=Z,8μm,19.0s							
NCB	Newcomb	139.06	354	ePKPdf		PKPdf	20 20 59.5	-0.3
NCB				LR		LR		
	comp=Z,11μm,21.0s							
R27A	Eads	139.06	28	⇑P		PKPdf	20 21 00.6	+0.5
	baz=139							
HNH	Hanover	139.08	352	ePKPdf		PKPdf	20 20 59.9	+0.1
T25A	Trinidad	139.16	31	⇓P		PKPdf	20 21 00.9	+0.5
	baz=139							
X21A	Alamocita Cree	139.24	37	⇑P		PKPdf	20 21 02.0	+1.3
	baz=139							
V23A	Ortiz Mt. (NFS	139.25	34	⇑P		PKPdf	20 21 02.2	+1.6
	baz=139							
Y20A	Horse Springs,	139.25	38	⇑P		PKPdf	20 21 01.9	+1.2
	baz=139							
U24A	Moreno Valley	139.26	32	⇑P		PKPdf	20 21 01.5	+0.7
	baz=139							
S26A	Kim	139.26	30	⇓P		PKPdf	20 21 01.1	+0.6
	baz=139							
W22A	Albuquerque	139.35	35	⇓P		PKPdf	20 21 02.1	+1.2
	baz=139							
S27A	Las Animas	139.49	29	⇓P		PKPdf	20 21 01.7	+0.8
	baz=139							
SCIA	State Center	139.49	16	PFAKE			20 21 10.0	+9.4
SCIA				LR		LR		
	comp=Z,11μm,19.0s							
T26A	Comanche Natio	139.55	30	⇓P		PKPdf	20 21 02.0	+0.8
	baz=139							
Y21A	Point of Rocks	139.61	37	⇑P		PKPdf	20 21 02.2	+0.8
	baz=140							
Z20A	Nine Sixteen R	139.65	39	⇓P		PKPdf	20 21 02.5	+1.1
	baz=140							
LAZ	Ladron	139.66	36	ePKPdf		PKPdf	20 21 00.1	-1.3
X22A	Bernardo	139.66	36	⇓P		PKPdf	20 21 02.2	+0.8
	baz=140							
ANMO	Albuquerque	139.67	35	ePKPpre		PKPpre	20 20 56.0	
ANMO				LR		LR		
	comp=Z,10μm,20.0s							
W23A	Werner Place,	139.69	35	⇓P		PKPdf	20 21 02.4	+0.9
	baz=140							
U25A	Circle Dot Ran	139.72	32	⇓P		PKPdf	20 21 01.9	+0.4
	baz=140							
V24A	Rampart Ranch,	139.77	33	⇓P		PKPdf	20 21 02.2	+0.5
	baz=140,SNR=6.9							
120A	U Bar Ranch, L	140.00	40	⇓P		PKPdf	20 21 02.5	+0.5
	baz=140							
Y22D	IRIS PASSCAL I	140.02	36	⇑P		PKPdf	20 21 02.7	+0.7
	baz=140							
LPM	Los Pinos Moun	140.02	36	ePKPpre		PKPpre	20 20 56.1	
V25A	Rancho No Teng	140.04	32	⇑P		PKPdf	20 21 03.0	+0.9
	baz=140,SNR=26							
T27A	Campo	140.07	29	⇓P		PKPdf	20 21 02.7	+0.7
	baz=140							
W24A	Lazy 6 Ranch,	140.07	34	⇓P		PKPdf	20 21 03.0	+0.9
	baz=140							
U26A	Atchley Ranch,	140.07	31	⇑P		PKPdf	20 21 02.6	+0.5
	baz=140							
Y22A	Socorro	140.09	37	⇑P		PKPdf	20 21 03.0	+0.8
	baz=140							
X23A	Hourglass Bar	140.09	35	⇑P		PKPdf	20 21 03.2	+1.0
	baz=140							
Z21A	St. Cloud Mine	140.09	38	⇓P		PKPdf	20 21 03.1	+0.8
	baz=140							
BNM	Barren Site	140.14	36	ePKPpre		PKPpre	20 20 57.1	
TRY	Troy	140.22	353	ePKPdf		PKPdf	20 21 02.9	+1.0
T28A	Nash	140.32	29	⇑P		PKPdf	20 21 02.8	+0.4
	baz=140							
319A	Douglas	140.32	42	⇓P		PKPdf	20 21 03.4	+0.8
	baz=140							
220A	Playas Peak, P	140.48	40	⇓P		PKPdf	20 21 03.8	+0.9
	baz=140							
V26A	Tequesquite Ra	140.51	32	⇑P		PKPdf	20 21 03.6	+0.8
	baz=140,SNR=6.3							
X24A	Lazy VL Ranch,	140.53	35	⇑P		PKPdf	20 21 03.8	+0.7
	baz=140							
121A	Cookes Peak, D	140.54	39	⇓P		PKPdf	20 21 03.9	+0.9
	baz=140							
Z22A	Elephant Butte	140.56	37	⇑P		PKPdf	20 21 03.8	+0.8
	baz=140							
W25A	X Bar L Ranch,	140.59	33	⇑P		PKPdf	20 21 03.7	+0.7
	baz=140							
Y23A	Lovelace Mesa,	140.63	36	⇓P		PKPdf	20 21 03.9	+0.8
	baz=140							
BRYW	Bryant College	140.72	351	ePKPdf		PKPdf	20 21 02.9	+0.1
AAM	Ann Arbor	140.82	5	PFAKE			20 21 10.0	+7.0
AAM				LR		LR		
	comp=Z,18μm,19.0s							
320A	Kipp Ranch, An	140.84	41	⇑P		PKPdf	20 21 03.9	+0.3
	baz=141							
221A	Mesquite Ranch	140.89	40	⇓P		PKPdf	20 21 04.7	+1.0
	baz=141							
122A	Conniff Cattle	140.92	38	⇑P		PKPdf	20 21 04.4	+0.7
	baz=141							
KSU1	Kansas State U	140.97	21	ePKPpre		PKPpre	20 20 58.1	
KSU1				LR		LR		
	comp=Z,13μm,20.0s							
BINY	Binghamton	140.97	356	ePKPdf		PKPdf	20 21 04.0	+0.7
BINY				LR		LR		
	comp=Z,14μm,21.0s							
X25A	Clemmons Ranch	140.99	34	⇓P		PKPdf	20 21 04.6	+0.8
	baz=141							
Y24A	Capitan	140.99	35	⇑P		PKPdf	20 21 04.4	+0.5
	baz=141							
Z23A	Rita Site, Whi	140.99	37	⇑P		PKPdf	20 21 04.7	+0.9
	baz=141							
W26A	Owens Ranch, T	141.06	32	⇓P		PKPdf	20 21 04.2	+0.4
	baz=141,SNR=6.2							
ERPA	Erie	141.18	1	PFAKE			20 21 10.0	+6.3
ERPA				LR		LR		
	comp=Z,14μm,20.0s							
222A	Williams Famil	141.26	39	⇑P		PKPdf	20 21 05.2	+0.9
	baz=141							
V28A	Channing	141.35	30	⇓P		PKPdf	20 21 05.2	+0.9
	baz=141							
123A	Bell Site, Whi	141.41	37	⇓P		PKPdf	20 21 05.1	+0.6
	baz=141							
Y25A	Mesa, Roswell	141.42	35	⇑P		PKPdf	20 21 05.2	+0.7
	baz=141							
X26A	CR and CF Fran	141.44	33	⇑P		PKPdf	20 21 04.6	0.0
	baz=141,SNR=7.0							
W27A	Bowe Ranch, En	141.45	32	⇑P		PKPdf	20 21 05.2	+0.6
	baz=141,SNR=15							
T31A	Randall Ranch,	141.46	26	⇑P		PKPdf	20 21 05.1	+0.8
	baz=141							
Z24A	Sheeppen Canyo	141.46	36	⇓P		PKPdf	20 21 05.4	+0.7
	baz=141							
U30A	WK&E Inc. Balk	141.48	28	⇓P		PKPdf	20 21 05.2	+0.7
	baz=141							
V29A	Stinnett	141.60	29	⇓P		PKPdf	20 21 05.3	+0.6
	baz=142							
HDIL	Hopedale	141.71	12	ePKPpre		PKPpre	20 20 59.0	
HDIL				LR		LR		
	comp=Z,12μm,20.0s							
223A	Chaparral, Ant	141.74	38	⇑P		PKPdf	20 21 05.7	+0.5
	baz=142							
W28A	Vega	141.74	31	⇓P		PKPdf	20 21 06.1	+1.1
	baz=142							
X27A	F and S Farms,	141.75	32	⇑P		PKPdf	20 21 06.1	+1.0
	baz=142							
124A	Stringfield Ra	141.85	37	⇑P		PKPdf	20 21 06.2	+0.8
	baz=142							
Z25A	Roswell	141.87	35	⇑P		PKPdf	20 21 05.7	+0.4
	baz=142							
U31A	Nine Bar Ranch	141.98	27	⇓P		PKPdf	20 21 06.1	+0.7
	baz=142							
V30A	Spur Ranch, Mi	142.09	29	⇓P		PKPdf	20 21 06.1	+0.5
	baz=142							
W29A	Amraillo	142.13	30	⇓P		PKPdf	20 21 06.2	+0.5
	baz=142							
224A	Cornudas Mount	142.25	37	⇓P		PKPdf	20 21 06.4	+0.3
	baz=142							
SFIN	Scholer Farm	142.29	9	⇑P		PKPdf	20 21 06.3	+0.6
	baz=142							
Y27A	Causey	142.29	33	⇓P		PKPdf	20 21 07.1	+1.0
	baz=142							
Z26A	Caprock	142.30	35	⇓P		PKPdf	20 21 06.9	+0.8
	baz=142,SNR=8.4							
AMTX	Amarillo	142.30	30	ePKPpre		PKPpre	20 20 59.4	
AMTX				LR		LR		
	comp=Z,9μm,20.0s							
AMTX	Amarillo	142.30	30	⇑P		PKPdf	20 21 07.0	+0.9
	baz=142							
X28A	Dimmitt	142.32	31	⇑P		PKPdf	20 21 06.7	+0.6
	baz=142,SNR=12							
125A	Gardner Draw,	142.35	36	⇓P		PKPdf	20 21 07.1	+0.9
	baz=142							
MSTX	Muleshoe	142.44	33	⇑P		PKPdf	20 21 06.8	+0.5
	baz=142,SNR=14							
V31A	Spring Creek L	142.48	28	⇓P		PKPdf	20 21 07.5	+1.2
	baz=142							
W30A	Crocket Farms	142.61	29	⇓P		PKPdf	20 21 07.6	+1.1
	baz=142							
X29A	Tulia	142.64	31	⇓P		PKPdf	20 21 07.2	+0.6
	baz=142							
225A	Deer Hill, Car	142.65	37	⇓P		PKPdf	20 21 07.8	+1.0
	baz=142							
Z27A	Tatum	142.69	34	⇓P		PKPdf	20 21 07.4	+0.6
	baz=143,SNR=25							
324A	Moseley Ranch,	142.71	38	⇑P		PKPdf	20 21 07.2	+0.3
	baz=143							
126A	Clayton Basin,	142.73	35	⇑P		PKPdf	20 21 07.4	+0.6
	baz=143							
Y28A	McKinney Farm,	142.77	32	⇓P		PKPdf	20 21 07.5	+0.6
	baz=143							
GDL2	Guadalupe Moun	142.85	36	ePKPpre		PKPpre	20 21 03.9	
W31A	Holland Ranch,	142.91	28	⇓P		PKPdf	20 21 07.7	+0.7
	baz=143							
ACSO	Alum Creek Sta	142.93	4	ePKPpre		PKPpre	20 21 01.0	
ACSO				LR		LR		
	comp=Z,14μm,20.0s							
X30A	Coker Ranch, T	143.05	30	⇓P		PKPdf	20 21 07.8	+0.5
	baz=143							
226B	Tecolote Peak,	143.06	36	⇑P		PKPdf	20 21 08.1	+0.7
	baz=143							
325A	Bean Ranch, Si	143.08	38	⇑P		PKPdf	20 21 08.7	+1.1
	baz=143							
127A	Arkansas Junct	143.09	35	⇑P		PKPdf	20 21 08.2	+0.7
	baz=143,SNR=5.4							
Y29A	Porterfield Fa

baz=144
Z31A Sharp Cattle R 144.32 30 ⇓P PKPdf 20 21 11.4 +1.9
baz=144
328A Wristen Ranch, 144.35 35 ⇑P PKPdf 20 21 09.3 -0.4
baz=144,SNR=98
427A Hayter Ranch, 144.39 37 ⇑P PKPdf 20 21 09.5 -0.3
baz=144
SIUC Southern Illin 144.45 13 *e*PKPpre PKPab 20 21 06.9 -0.9
130A Snyder 144.46 32 ⇑P PKPdf 20 21 09.3 -0.5
baz=144,SNR=46
229A Bryant Ranch, 144.49 34 ⇓P PKPdf 20 21 09.3 -0.6
baz=144,SNR=51
526A Mary Lane Ranc 144.53 38 ⇑P PKPdf 20 21 10.2 +0.1
baz=144
USIN University of 144.54 11 *e*PKPpre PKPab 20 21 07.9 -0.2
Z32A Haskell 144.66 30 ⇑P PKPbc 20 21 09.5 +0.6
baz=144
131A Roby 144.70 31 ⇑P PKPdf 20 21 10.0 -0.3
baz=145
329A Wagon Wheel Ra 144.75 34 ⇑P PKPdf 20 21 10.0 -0.4
baz=145,SNR=103
626A Big Bend Ranch 144.86 39 ⇑P PKPdf 20 21 10.5 -0.2
baz=145
428A Kincaid Ranch, 144.91 36 ⇑P PKPdf 20 21 10.9 +0.1
baz=145
230A Sterling City 144.93 33 ⇓P PKPdf 20 21 10.4 -0.3
baz=145,SNR=197
CBN Corbin 145.03 357 *e*PKPdf PKPbc 20 21 09.3 -0.6
CBN LR LR
comp=Z,14μm,22.0s
ABTX Abilene, Hawle 145.12 30 ⇓P PKPdf 20 21 11.1 +0.2
baz=145
528A Cox Ranch, San 145.25 37 ⇓P PKPdf 20 21 11.5 +0.2
baz=145
330A Mertzon 145.26 34 ⇓P PKPdf 20 21 11.4 +0.2
baz=145,SNR=275
TXAR Lajitas Array 145.30 39 PKPbc PKPdf 20 21 12.0 +0.5
TXAR Lajitas Array 145.30 39 PKPbc PKPdf 20 21 12.0 +0.5
comp=Z,246nm,0.7s,baz=318,slow=1.2,SNR=1017
231A Bronte 145.32 32 ⇓P PKPdf 20 21 11.7 +0.3
baz=145
PARMO **Parma** 145.33 15 *e*PKPdf PKPbc 20 21 10.6 -0.2
627A Terlingua Ranc 145.39 38 ⇓P PKPab 20 21 11.9 +0.3
baz=145
429A Davenport Ranc 145.44 35 ⇑P PKPab 20 21 12.0 +0.2
baz=145,SNR=164
529A Stev Forest Ra 145.62 36 ⇑P PKPab 20 21 12.7 +0.3
baz=146
628A Black Gap, Mar 145.68 38 ⇓P PKPab 20 21 13.2 +0.5
baz=146
430A Baggett Ranch, 145.70 34 ⇑P PKPab 20 21 12.8 +0.2
baz=146,SNR=80
232A Coleman 145.71 31 ⇓P PKPab 20 21 12.7 +0.1
baz=146
331A San Angelo 145.75 33 ⇓P PKPab 20 21 12.8 0.0
baz=146,SNR=117
GLAT Glass 145.81 14 *e*PKPdf PKPbc 20 21 12.3 -0.2
UTMT University of 145.85 13 *e*PKPdf PKPbc 20 21 12.6 +0.1
TLL Tololo Astrono 145.85 194 *i* P PKPab 20 21 13.8 +0.3
GNAR Gosnell 145.92 15 *e*PKPdf PKPbc 20 21 12.9 +0.1
332A Millersview 146.05 32 ⇓P PKPab 20 21 14.0 0.0
baz=146
BLA Blacksburg 146.07 1 *e*PKP2 PKPdf 20 21 11.8 -0.7
BLA MLR MLR
comp=Z,14μm,20.0s
BLA Blacksburg 146.07 1 *e*PKPdf PKPdf 20 21 11.8 -0.7
BLA LR LR
comp=Z,14μm,20.0s
530A J-C Ranch, Com 146.12 35 ⇓P PKPab 20 21 14.5 +0.3
baz=146,SNR=285
MIAR Mount Ida 146.12 21 *e*PKP2 PKPdf 20 21 12.8 +0.2
MIAR MLR MLR
comp=Z,13μm,19.0s
MIAR Mount Ida 146.12 21 *e*PKPdf PKPdf 20 21 12.8 +0.2
MIAR LR LR
comp=Z,13μm,19.0s
431A Sonora 146.13 34 ⇑P PKPab 20 21 14.0 -0.3
baz=146,SNR=87
HBAR Harrisburg 146.13 16 *e*PKPdf PKPdf 20 21 12.1 -0.4
HALT Halls 146.14 14 *e*PKPdf PKPdf 20 21 11.0 -1.6
UALR University of 146.34 19 *e*PKPdf PKPdf 20 21 13.4 +0.5
432A Menard 146.42 33 ⇓P PKPbc 20 21 14.8 +0.3
baz=146,SNR=91
TZTN Tazewell 146.54 6 *e*PKPdf PKPdf 20 21 12.9 -0.3
531A Rocksprings 146.56 34 ⇑P PKPab 20 21 15.6 -0.3
baz=146,SNR=326
WHTX Lake Whitney 146.71 28 ⇑P PKPbc 20 21 15.8 +0.5
baz=147
JCT Junction City 146.73 33 *e*PKP2 PKPdf 20 21 13.9 +0.1
JCT MLR MLR
comp=Z,8μm,20.0s
JCT Junction City 146.73 33 *e*PKPdf PKPdf 20 21 13.9 +0.1
JCT LR LR
comp=Z,8μm,20.0s
JCT Junction City 146.73 33 ⇓P PKPbc 20 21 16.0 +0.5
baz=147,SNR=411
LCO Las Campanas 146.94 194 *i* P PKPdf 20 21 14.0 -0.5
532A Rocksprings 146.94 34 ⇑P PKPab 20 21 17.0 -0.5
baz=147,SNR=81
631A Perdido Creek 147.10 35 ⇑P PKPab 20 21 17.5 -0.6
baz=147,SNR=49
TKL Tuckaleechee C 147.40 6 *e*PKPdf PKPdf 20 21 14.4 -0.3
TKL PKPbc PKPdf 20 21 15.3 +0.7
TKL Tuckaleechee C 147.40 6 PKPbc PKPdf 20 21 15.3 +0.7
comp=Z,94nm,0.9s,baz=110,slow=1.3,SNR=43
OXF Oxford 147.45 15 *e*PKP2 PKPdf 20 21 15.5 +0.7
OXF MLR MLR
comp=Z,9μm,22.0s
OXF Oxford 147.45 15 *e*PKPdf PKPdf 20 21 15.5 +0.7
OXF LR LR
comp=Z,9μm,22.0s
632A Uvalde 147.48 34 ⇓P PKPbc 20 21 18.3 +0.8
baz=147,SNR=116
CPCT Cooper Cave 147.51 8 *e*PKPdf PKPdf 20 21 14.9 0.0
SWET Sewanee 147.53 10 *e*PKPdf PKPbc 20 21 16.4 -1.1
BBSR BB Station 147.74 336 *e*PKPbc PKPbc 20 21 18.2 +0.1
BBSR LR LR
comp=Z,8μm,21.0s
732A Laxson Ranch, 147.97 35 ⇓P PKPbc 20 21 19.2 +0.4
baz=148,SNR=56
CNNC Cliffs of the 148.01 357 *e*PKPbc PKPbc 20 21 18.4 -0.4
CNNC LR LR
comp=Z,11μm,19.0s
KMSC Kings Mountain 148.10 3 ⇓P PKPbc 20 21 19.4 +0.4
baz=148
JSC Jenkinsville 148.96 3 *e*PKIKP PKPdf 20 21 17.7 +0.4
JSC Jenkinsville 148.96 3 *e*PKPdf PKPdf 20 21 17.7 +0.4
VBMS Vicksburg 149.28 18 *e*PKPdf PKPdf 20 21 19.7 +1.8
VBMS LR LR
comp=Z,11μm,19.0s
LRAL Lakeview Retre 149.44 12 *e*PKPdf PKPdf 20 21 18.6 +0.5
LRAL LR LR
comp=Z,10μm,19.0s
NHSC New Hope 150.17 1 *e*PKPbc PKPbc 20 21 24.5 +0.2
NHSC LR LR
comp=Z,14μm,20.0s
BRAL Brewton 151.37 14 *e*PKPdf PKPdf 20 21 22.5 +1.3
BRAL LR LR
comp=Z,13μm,21.0s
PB09 Plate Boundary 153.26 202 *e*P PKPdf 20 21 18.5 -5.9
PB07 Plate Boundary 153.55 201 *e*P PKPdf 20 21 23.5 -1.4
SIV San Ignacio 153.65 223 PKP PKPdf 20 21 25.1 +0.2
SIV PKPbc PKPbc 20 21 31.5 -1.2
SIV PKPab PKPab 20 21 42.4 -2.8
SIV San Ignacio 153.65 223 PKP PKPdf 20 21 25.1 +0.2
comp=Z,2.5nm,0.7s,baz=146,slow=3.7
SIV PKPbc PKPbc 20 21 31.5 -1.2
baz=155,slow=4.6
SIV PKPab PKPab 20 21 42.4 -2.8
comp=Z,14nm,0.8s,baz=127,slow=4.3,SNR=3.8
ANWB Willy Bob 157.37 311 PFAKE 20 21 40.0 +10
ANWB LR LR
comp=Z,6μm,22.0s
LPAZ La Paz 157.65 210 PKP PKPdf 20 21 31.4 +0.4
LPAZ La Paz 157.65 210 PKP PKPdf 20 21 31.4 +0.4
comp=Z,10nm,1.2s,baz=200,slow=1.5,SNR=11
BBGH Gun Hill 157.88 298 PFAKE 20 21 40.0 +9.4
BBGH LR LR
comp=Z,10μm,20.0s
FDF Fort de France 158.51 304 PFAKE 20 21 40.0 +8.6
FDF LR LR
comp=Z,6μm,20.0s
CMIG Matias Romero 159.52 46 PKP PKPdf 20 21 32.6 +0.2
CMIG Matias Romero 159.52 46 PKP PKPdf 20 21 32.6 +0.2
comp=Z,13nm,1.0s,baz=325,slow=1.3,SNR=16
GRTK Grand Turk 159.98 337 PFAKE 20 21 40.0 +7.2
GRTK LR LR
comp=Z,6μm,20.0s
GRGR Grenville 160.16 298 PFAKE 20 21 40.0 +6.8
GRGR LR LR
comp=Z,6μm,21.0s
CELP Cerrillos 160.45 320 *e*PKPdf PKPdf 20 21 32.8 -0.6
OBIP Obispado Ponce 160.49 320 *e*PKPdf PKPdf 20 21 35.0 +1.4
TEIG Tepich 160.99 26 PKP PKPdf 20 21 34.6 +0.6
TEIG Tepich 160.99 26 PKP PKPdf 20 21 34.6 +0.6
comp=Z,8.3nm,0.9s,baz=335,slow=3.9,SNR=3.8
SDDR Presa de Saban 162.29 333 PFAKE 20 21 50.0 +15
SDDR LR LR
comp=Z,9μm,20.0s
GTBY Guantanamo Bay 162.75 346 PFAKE 20 21 50.0 +14
GTBY LR LR
comp=Z,9μm,21.0s
NNA Nana 164.75 190 PKP PKPdf 20 21 38.0 +0.1
NNA LR LR
comp=Z,8μm,21.0s
NNA Nana 164.75 190 PKP PKPdf 20 21 38.0 +0.1
comp=Z,8.0nm,0.7s,baz=17,slow=2.5,SNR=2.9
MTDJ Mount Denham 164.87 353 PFAKE 20 21 50.0 +12
MTDJ LR LR
comp=Z,8μm,21.0s
TGUH Tegucigalpa,Un 166.73 35 PFAKE 20 21 50.0 +11
TGUH LR LR
comp=Z,9μm,22.0s
ATAH Atahualpa 169.74 186 PKP PKPdf 20 21 43.0 +0.9
ATAH Atahualpa 169.74 186 PKP PKPdf 20 21 43.0 +0.9
comp=Z,21nm,1.3s,baz=22,slow=2.8,SNR=7.9
JTS JuntasAbangare 171.09 37 PKP PKPdf 20 21 41.8 -0.4
JTS LR LR
comp=Z,7μm,22.0s
JTS JuntasAbangare 171.09 37 PKP PKPdf 20 21 41.8 -0.4
comp=Z,2.3nm,0.3s,baz=147,slow=3.3,SNR=3.3
BCIP Isla Barro Col 173.99 3 PFAKE 20 21 50.0 +6.5
BCIP LR LR
comp=Z,9μm,21.0s
ROSC El Rosal 174.52 288 PKP PKPdf 20 21 44.8 +0.6
ROSC El Rosal 174.52 288 PKP PKPdf 20 21 44.8 +0.6
comp=Z,3.8nm,0.3s,baz=0.3,slow=3.0,SNR=5.7
OTAV Otavalo 176.93 201 *e*PKPdf PKPdf 20 21 43.4 -1.4
OTAV LR LR
comp=Z,9μm,20.0s

*CSEM **15** 20:05:04.8±0.1, 42°.49N×13°.40E, h19km, ML2.3/7, Error ellipse: s-maj=3.3km s-min=2.7km az=71.0*
ROM 15 20:05:05.3±0.1, 42°.46N×13°.37E, h10km, Md2.3/15, Ml1.8/9, 4C-2D, Error ellipse: s-maj=1.3km s-min=1.0km az=81.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.08**	**19**	Pg	Pg	20 05 08.2	+0.3
CAMP				Sg	Sg	20 05 10.0	+0.2
	169nm,0.2s						
CAMP	**Campotosto**	**0.08**	**19**	Pg	Pg	20 05 08.2	+0.3
CAMP				Sg	Sg	20 05 10.0	+0.2
	169nm,0.2s						
AQU	**L'Aquila**	**0.11**	**169**	⇑*i* Pg	Pg	20 05 08.6	+0.4
AQU				Sg	Sg	20 05 10.8	+0.6
	125nm,0.3s						
AQU	**L'Aquila**	**0.11**	**169**	⇑*i* Pg	Pg	20 05 08.6	+0.4
AQU				Sg	Sg	20 05 10.8	+0.6
	125nm,0.3s						
TERO	**Teramo**	**0.24**	**46**	⇓*i* Pg	Pg	20 05 10.3	0.0
TERO				Sg	Sg	20 05 14.1	+0.5
	305nm,0.1s						
TERO	**Teramo**	**0.24**	**46**	⇓*i* Pg	Pg	20 05 10.3	0.0
TERO				Sg	Sg	20 05 14.1	+0.5
	305nm,0.1s						
FAGN	**Fagnano**	**0.25**	**141**	Pg	Pg	20 05 11.0	+0.5
	342nm,0.3s						
FAGN	**Fagnano**	**0.25**	**141**	Pg	Pg	20 05 11.0	+0.5
	342nm,0.3s						
FIAM	**Fiamignano**	**0.27**	**225**	Pg	Pg	20 05 11.3	+0.3
FIAM				Sg	Sg	20 05 15.7	+1.0
	32nm,0.6s						
FIAM	**Fiamignano**	**0.27**	**225**	Pg	Pg	20 05 11.3	+0.3
FIAM				Sg	Sg	20 05 15.7	+1.0
	32nm,0.6s						
LNSS	**Leonessa**	**0.28**	**300**	Pg	Pg	20 05 11.5	+0.2
LNSS				Sg	Sb	20 05 16.5	-1.1
	271nm,0.2s						
LNSS	**Leonessa**	**0.28**	**300**	Pg	Pg	20 05 11.5	+0.2
LNSS				Sg	Sb	20 05 16.5	-1.1
	271nm,0.2s						
VCEL	**Villa Celiera**	**0.35**	**101**	Pg	Pg	20 05 12.9	+0.4
	100nm,0.3s						
VCEL	**Villa Celiera**	**0.35**	**101**	Pg	Pg	20 05 12.9	+0.4
	100nm,0.3s						
NRCA	**Norcia**	**0.42**	**333**	⇑*i* Pg	Pg	20 05 13.7	0.0
NRCA				Sg	Sg	20 05 20.2	+0.8
	127nm,0.1s						
NRCA	**Norcia**	**0.42**	**333**	⇑*i* Pg	Pg	20 05 13.7	0.0
NRCA				Sg	Sg	20 05 20.2	+0.8
	127nm,0.1s						
PTQR	**Pietraquaria**	**0.44**	**177**	Pg	Pg	20 05 14.4	+0.4
	3.0nm,0.2s						
PTQR	**Pietraquaria**	**0.44**	**177**	Pg	Pg	20 05 14.4	+0.4
	3.0nm,0.2s						
MNS	**Montasola**	**0.52**	**262**	Pg	Pg	20 05 15.5	0.0
	18nm,0.3s						
MNS	**Montasola**	**0.52**	**262**	Pg	Pg	20 05 15.5	0.0
	18nm,0.3s						
OFFI	**Offida**	**0.53**	**26**	Pg	Pb	20 05 16.6	-0.1
OFFI	**Offida**	**0.53**	**26**	Pg	Pb	20 05 16.6	-0.1
CERT	**Cerreto**	**0.59**	**210**	Pg	Pg	20 05 16.9	+0.1
CERT	**Cerreto**	**0.59**	**210**	Pg	Pg	20 05 16.9	+0.1
INTR	**Introdacqua**	**0.60**	**138**	Pg	Pg	20 05 16.8	-0.2
INTR	**Introdacqua**	**0.60**	**138**	Pg	Pg	20 05 16.8	-0.2
FDMO	**Fiordimonte**	**0.61**	**340**	Pg	Pg	20 05 17.3	0.0
FDMO				Sg	Sb	20 05 26.6	-0.3
FDMO	**Fiordimonte**	**0.61**	**340**	Pg	Pg	20 05 17.3	0.0
FDMO				Sg	Sb	20 05 26.6	-0.3
CESI	**CESI - Serrava**	**0.65**	**328**	Pg	Pg	20 05 17.7	-0.2
CESI	**CESI - Serrava**	**0.65**	**328**	Pg	Pg	20 05 17.7	-0.2
LPEL	**Lama dei Pelig**	**0.73**	**124**	Pg	Pg	20 05 19.7	+0.2
LPEL				Sg	Sb	20 05 29.7	-0.6
	35nm,0.3s						
LPEL	**Lama dei Pelig**	**0.73**	**124**	Pg	Pg	20 05 19.7	+0.2
LPEL				Sg	Sb	20 05 29.7	-0.6
	35nm,0.3s						
GUMA	**Gualdo di Mace**	**0.73**	**34**	Pg	Pg	20 05 17.3	-2.2
GUMA				Sg	Sg	20 05 27.0	-2.2
GUMA	**Gualdo di Mace**	**0.73**	**34**	Pg	Pg	20 05 17.3	-2.2
GUMA				Sg	Sg	20 05 27.0	-2.2

*CSEM **15** 20:06:20.5±0.2, 45°.16N×14°.81E, h10km, ML2.4/10, Error ellipse: s-maj=4.1km s-min=3.5km az=76.0*
VIE 15 20:06:20.2±0.4, 45°.16N×14°.85E, h8km±1km, mb1.6/1, ML1.9/3, 8C-2D, Error ellipse: s-maj=2.6km s-min=1.6km az=174.0 40 km ESE of Rijeka, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBRS	**Gornja Briga**	**0.38**	**355**	*i* Pg	Pg	20 06 28.2	+0.5
	24nm,0.1s						
BOJS	**Bojanci**	**0.45**	**39**	⇑*i* Pg	Pg	20 06 29.5	+0.6
BOJS				*i* Sg	Sb	20 06 36.2	-1.0
BOJS							
	comp=Z,25nm,0.2s						
BOJS	**Bojanci**	**0.45**	**39**	⇑*i* Pg	Pg	20 06 29.5	+0.6
BOJS				*i* Sg	Sb	20 06 36.2	-1.0
	comp=Z,25nm,0.2s						
KNDS	**Knezji Dol**	**0.50**	**318**	*i* Pg	Pg	20 06 30.0	-0.1
KNDS				*i* Sg	Sb	20 06 38.0	-0.9
KNDS							
	comp=Z,13nm,0.2s						
KNDS	**Knezji Dol**	**0.50**	**318**	*i* Pg	Pg	20 06 30.0	0.0
KNDS				*i* Sg	Sb	20 06 38.0	-0.9
	comp=Z,13nm,0.2s						
NVLJ	**Novalja**	**0.59**	**179**	*e*Pg	Pg	20 06 32.1	+0.5
NVLJ				Sg	Sb	20 06 42.0	+0.8
NVLJ	**Novalja**	**0.59**	**179**	*e*Pg	Pg	20 06 32.1	+0.5
NVLJ				Sg	Sb	20 06 42.0	+0.8
VISS	**Visnje**	**0.65**	**359**	*i* Pg	Pg	20 06 32.8	+0.1
VISS				*i* Sg	Sg	20 06 41.8	+0.5
VISS							
	comp=Z,16nm,0.2s						
VISS	**Visnje**	**0.65**	**359**	*i* Pg	Pg	20 06 32.8	+0.1
VISS				*i* Sg	Sg	20 06 41.8	+0.5
	comp=Z,16nm,0.2s						
CEY	**Cerknica**	**0.66**	**333**	*i* Pg	Pg	20 06 32.9	0.0
CEY				*i* Sg	Sb	20 06 42.6	-0.7
CEY							
	comp=Z,13nm,0.2s						
CEY	**Cerknica**	**0.66**	**333**	*i* Pg	Pg	20 06 32.9	0.0
CEY				*i* Sg	Sb	20 06 42.6	-0.7
	comp=Z,13nm,0.2s						
SKDS	**Skadanscina**	**0.71**	**304**	*i* Pg	Pg	20 06 33.2	-0.7
SKDS				*i* Sg	Sb	20 06 44.1	-0.7
SKDS							
	comp=Z,8.0nm,0.2s						
SKDS	**Skadanscina**	**0.71**	**304**	*i* Pg	Pg	20 06 33.2	-0.7
SKDS				*i* Sg	Sb	20 06 44.1	-0.7
	comp=Z,8.0nm,0.2s						
CRES	**Cresnjev**	**0.79**	**32**	*i* Pg	Pb	20 06 36.2	-0.1
CRES							
	comp=Z,9.0nm,0.2s						
CRES	**Cresnjev**	**0.79**	**32**	*i* Pg	Pb	20 06 36.2	-0.1
	comp=Z,9.0nm,0.2s						
LEGS	**Legarje**	**0.86**	**22**	*i* Pg	Pb	20 06 37.5	+0.1
LEGS	**Legarje**	**0.86**	**22**	*i* Pg	Pb	20 06 37.5	+0.1
GCIS	**Gornji Cirnik**	**0.90**	**37**	*i* Pg	Pn	20 06 38.9	-0.2
GCIS	**Gornji Cirnik**	**0.90**	**37**	*i* Pg	Pn	20 06 38.9	-0.2
PDKS	**Podkum**	**0.91**	**6**	*i* Pg	Pb	20 06 38.1	-0.2
PDKS				*i* Sg	Sb	20 06 50.5	-0.2
PDKS							
	comp=Z,6.0nm,0.2s						
PDKS	**Podkum**	**0.91**	**6**	*i* Pg	Pb	20 06 38.1	-0.2
PDKS				*i* Sg	Sb	20 06 50.5	-0.1
	comp=Z,6.0nm,0.2s						
JAVS	**Javornik**	**0.92**	**323**	*i* Sg	Sb	20 06 51.2	+0.2
JAVS	**Javornik**	**0.92**	**323**	*i* Sg	Sb	20 06 51.2	+0.1
CRNS	**Crni Vrh**	**1.01**	**336**	*i* Pg	Pn	20 06 40.7	-0.1
CRNS				*e*Sg	Sn	20 06 54.4	-0.8
CRNS							
	comp=Z,4.0nm,0.1s						
VOJS	**Vojsko**	**1.11**	**322**	*i* Pg	Pg	20 06 40.2	-1.4
VOJS	**Vojsko**	**1.11**	**322**	*i* Pg	Pg	20 06 40.2	-1.5
GORS	**Gorjuse**	**1.31**	**333**	*i* Sg	Sn	20 07 03.9	+1.3
GORS	**Gorjuse**	**1.31**	**333**	*i* Sg	Sn	20 07 03.9	+1.3
CADS	**Cadrg**	**1.33**	**324**	*i* Sg	Sg	20 07 04.7	+1.6
CADS							
	comp=Z,8.0nm,0.2s						
CADS	**Cadrg**	**1.33**	**324**	*i* Sg	Sg	20 07 04.7	+1.6
	comp=Z,8.0nm,0.2s						
OBKA	**Obir**	**1.37**	**351**	⇓*i* Pg	Pg	20 06 46.7	0.0
OBKA				⇑*i* Sg	Sg	20 07 06.2	+1.6
	comp=Z,5.7nm,0.2s						
OBKA	**Obir**	**1.37**	**351**	Pg	Pg	20 06 46.7	+0.1
OBKA				Sg	Sg	20 07 06.2	+1.7
	comp=Z,5.7nm,0.2s						
SOKA	**Soboth**	**1.53**	**5**	⇑*i* Pg	Pg	20 06 49.5	-0.2
SOKA				⇑*i* Sn	Sb	20 07 08.6	+0.1
SOKA				⇓*i* Sg	Sb	20 07 10.3	+0.8
	comp=Z,4.7nm,0.4s						
SOKA	**Soboth**	**1.53**	**5**	Pg	Pg	20 06 49.5	-0.1
SOKA				Sn	Sb	20 07 08.6	+0.1
SOKA				Sg	Sg	20 07 10.3	+0.7
	comp=Z,4.7nm,0.4s						
MYKA	**Terra Mystica**	**1.70**	**331**	⇑*i* Pn	Pn	20 06 50.3	+0.1
MYKA				⇑*i* Pg	Pg	20 06 52.9	0.0
MYKA				⇑*i* Sg	Sg	20 07 16.6	+1.5
	comp=Z,2.2nm,0.2s						
MYKA	**Terra Mystica**	**1.70**	**331**	Pn	Pn	20 06 50.3	+0.1

*IDC **15** 20:14:38.3±2.8, 3°.03S×100°.87E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/23, mbtmp3.5/5, Error ellipse: s-maj=99.9km s-min=28.2km az=61.0*
*DJA **15** 20:14:38.0±0.6, 3°.5S×10°.0E±°, h23km, M4.6/8, mb4.3/1, MLv4.7/8*
ISC 15 20:14:40.4±1.2, 3°.17S±0°.10×100°.40E±0°.10, h28km, n19, σ1°.27/21, mb3.7/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**1.51**	**45**	P	**Pb**	**20 15 06.7**	**-1.0**
MASI	**Maura Aman, Be**	**1.83**	**89**	P	**Pn**	**20 15 09.4**	**-0.7**
KSI	**Kapahiang**	**2.24**	**102**	P	**Pn**	**20 15 15.6**	**0.0**
KSI				S	**Sb**	**20 15 46.3**	**-1.2**
PDSI	**Padang**	**2.24**	**1**	P	**Pn**	**20 15 13.5**	**-2.2**
SDSI	**Sungai Dareh**	**2.45**	**25**	P	**Pn**	**20 15 20.1**	**+1.6**
PPI	**Padang Panjang**	**2.69**	**360**	P	**Pn**	**20 15 20.1**	**-1.8**
MNAI	**Manna**	**2.81**	**115**	P	**Pn**	**20 15 23.8**	**+0.4**
MNAI				S	**Sn**	**20 15 55.7**	**-0.7**
LWLI	**Liwa**	**4.08**	**117**	P	**Pn**	**20 15 41.8**	**+0.7**
KASI	**KCo Agung**	**4.70**	**120**	P	**Pn**	**20 15 49.2**	**-0.3**
GSI	**Gunungsitoli**	**5.27**	**328**	P	**Pn**	**20 15 55.6**	**-1.7**
	160nm,4.7s,4.3nm						
MYKOM	**Kota Tinggi**	**6.01**	**35**	P	**Pn**	**20 16 08.8**	**+1.3**
CGJI	**Cibinong**	**6.28**	**123**	P	**Pn**	**20 16 10.0**	**-1.2**
CISI	**Cisompet, Garu**	**8.57**	**121**	P	**Pn**	**20 16 41.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**21.54**	**356**	P	**P**	**20 19 28.6**	**+1.1**
	0.1nm,0.3s,baz=173,slow=8.2,SNR=3.9						
ASAR	**Alice Springs**	**38.25**	**125**	P	**P**	**20 21 58.2**	**-0.2**
	0.4nm,0.3s,baz=300,slow=7.6,SNR=4.3						
SONM	**Songino Array**	**51.06**	**5**	P	**P**	**20 23 41.0**	**+0.6**
	1.0nm,0.9s,baz=191,slow=7.0,SNR=3.6						
MKAR	**Makanchi Array**	**52.26**	**344**	P	**P**	**20 23 51.5**	**+2.3**
	0.3nm,0.4s,baz=148,slow=8.5,SNR=5.9						
USRK	**Ussuriysk Arra**	**55.00**	**27**	P	**P**	**20 24 08.7**	**-0.5**
	0.7nm,0.4s,baz=235,slow=6.1,SNR=4.6						
TXAR	**Lajitas Array**	**145.37**	**39**	PKP	**PKPdf**	**20 34 17.0**	**+0.4**
	0.3nm,0.5s,baz=307,slow=0.9,SNR=4.0						

IDC 15 20:15:38.4±1.6, 3°.47S×99°.99E, h25km±5km, mb3.4/6, mb1 3.5/6, mb1mx3.3/24, mbtmp3.4/6, Error ellipse: s-maj=64.2km s-min=22.7km az=51.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**38.42**	**125**	P	P	20 22 57.5	-0.8
	0.6nm,0.6s,baz=300,slow=7.4,SNR=2.7						
SONM	**Songino Array**	**51.40**	**6**	P	P	20 24 40.7	-0.6
	0.8nm,0.7s,baz=192,slow=7.8,SNR=4.2						
SONM				pP	pP	20 24 48.3	-0.8
	2.1nm,0.9s,baz=185,slow=9.0,SNR=6.6						
MKAR	**Makanchi Array**	**52.44**	**345**	P	P	20 24 48.7	-0.2
	0.6nm,0.8s,baz=167,slow=9.1,SNR=2.6						
MKAR				pP	pP	20 24 56.9	+0.1
	0.6nm,0.6s,baz=158,slow=7.8,SNR=2.7						
KURBB	**Kurchatov Arra**	**56.95**	**344**	P	P	20 25 21.5	0.0
	0.4nm,0.7s,baz=169,slow=6.8,SNR=3.1						
KURBB				pP	pP	20 25 29.6	+0.2
	0.3nm,0.5s,baz=162,slow=6.8,SNR=2.2						
ZALV	**Zalesovo Beam**	**58.60**	**350**	P	P	20 25 32.9	-0.1
	0.3nm,0.4s,baz=140,slow=7.0,SNR=2.5						
BRTR	**Keskin Array B**	**74.30**	**313**	P	P	20 27 13.7	-0.4
	0.5nm,0.8s,baz=94,slow=6.0,SNR=3.0						
TXAR	**Lajitas Array**	**145.86**	**39**	PKPbc	PKPab	20 35 17.0	+0.1
	0.4nm,0.6s,baz=292,slow=0.5,SNR=3.3						
TXAR				pPKPbc	pPKPbc	20 35 24.4	-0.4
	0.5nm,0.5s,baz=310,slow=0.6,SNR=4.3						

MEX 15 20:21:07.7±0.3, 16°.28N×98°.01W, h24km±11km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.16**	**316**	*i* P	Pb	20 21 11.8	-1.1
PNIG				*i* S	Sb	20 21 14.9	-1.4
VHO	**Vista Hermosa**	**1.46**	**57**	*i* P	Pn	20 21 29.9	-2.9
VHO				*i* S	Sn	20 21 47.6	-3.8
UTMO	**Huajuapan**	**1.56**	**7**	*i* P	Pn	20 21 31.1	-3.1
UTMO				*i* S	Sn	20 21 50.3	-3.6
HUIG	**Huatulco**	**1.90**	**105**	*i* P	Pn	20 21 38.5	-0.2

**IDC 15 20:25:42.8±1.6, 16°.91S×177°.98W, h0km, mb4.1/6, mb1 4.4/6, mb1mx4.0/19, mbtmp4.1/6, Error ellipse: s-maj=105.6km s-min=22.7km az=149.0, Fiji Isl

ASAR	**Alice Springs**	**45.46**	**253**	P		P	20 34 02.6	-1.4	
	14nm,0.6s,baz=88,slow=8.4,SNR=235								
ILAR	**Eielson Array**	**84.83**	**13**	P		P	20 38 17.9	-0.9	
	0.1nm,0.4s,baz=222,slow=5.3,SNR=5.2								
TXAR	**Lajitas Array**	**85.12**	**58**	P		P	20 38 22.1	+0.9	
	0.3nm,0.6s,baz=213,slow=6.5,SNR=3.6								
PDAR	**Pinedale Array**	**86.35**	**43**	P		P	20 38 27.3	0.0	
	0.4nm,0.6s,baz=239,slow=3.0,SNR=3.4								

IDC ***15*** *20:26:16.5±0.5, 23°.17S×174°.99W, h0km, mb4.5/18, mb1 4.7/20, mb1mx4.6/24, mbtmp4.5/20, ML4.1/2, Error ellipse: s-maj=18.7km s-min=16.4km az=149.0*
ISCJB ***15*** *20:26:19.9±0.4, 23°.22S±0°.08×175°.08W±0°.08, h30km, mb4.5/20, Error ellipse: s-maj=11.5km s-min=10.9km az=164.4*
NEIC ***15*** *20:26:24.5±2.1, 23°.32S×175°.06W, h60km±17km, mb4.7/3, Error ellipse: s-maj=14.8km s-min=12.2km az=97.0*
AUST ***15*** *20:27:56.2±14.0, 23°.25S×178°.44E, h611km±1km, Error ellipse: s-maj=4.2km s-min=2.3km az=241.0*

ISC 15 20:26:21.1±0.4, 23°.16S±0°.10×175°.02W±0°.09, h30km, n107, σ0.96/101, mb4.6/20, 12C-7D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**8.45**	**308**	*e*P		Pn	20 28 26.8	+5.2
	62nm,1.0s							
AFI	**Afiamalu**	**9.70**	**19**	Sn		Sn	20 30 13.1	-14
AFI	**Afiamalu**	**9.70**	**19**	Sn		Sn	20 30 13.1	-14
	25nm,0.3s,baz=68,slow=19,SNR=3.3							
RAR	**Rarotonga**	**14.25**	**85**	Pn		Pn	20 29 30.8	-10
RAR				Sn		Sn	20 31 50.7	-27
RAR	**Rarotonga**	**14.25**	**85**	Pn		Pn	20 29 30.8	-10
	4.0nm,0.3s,baz=346,slow=3.9,SNR=7.9							
RAR				Sn		Sn	20 31 50.7	-27
	0.8nm,0.3s,baz=140,slow=17,SNR=2.3							
NFK	**Norfolk Island**	**16.39**	**245**	P		P	20 30 37.9	+26
	baz=11,SNR=6.6							
URZ	**Urewera**	**16.49**	**202**	Pn		**Pn**	**20 30 07.9**	**-2.3**
URZ				Sn		Sn	20 32 57.1	-15
URZ	**Urewera**	**16.49**	**202**	Pn		**Pn**	**20 30 07.9**	**-2.3**
	1.2nm,0.3s,baz=63,slow=9.0,SNR=4.6							
URZ				Sn		Sn	20 32 57.1	-15
	1.8nm,0.3s,baz=305,slow=19,SNR=7.1							
DZM	**Mont Dzumac**	**17.16**	**270**	Pn		**P**	**20 30 20.1**	**-0.2**
DZM	**Mont Dzumac**	**17.16**	**270**	Pn		**P**	**20 30 20.1**	**-0.2**
	0.5nm,0.3s,baz=270,slow=23,SNR=5.9							
CNB	**Canberra Magne**	**33.18**	**240**	S		S	20 36 59.2	-74
	baz=28,SNR=15							
MILA	**Mila**	**33.73**	**237**	P		P	20 33 04.1	+4.0
	baz=29,SNR=6.7							
CTA	**Charters Tower**	**36.06**	**267**	P		**P**	**20 33 19.9**	**-0.4**
CTA	**Charters Tower**	**36.06**	**267**	P		**P**	**20 33 19.9**	**-0.4**
	19nm,0.6s,baz=96,slow=11,SNR=38							
PMG	**Port Moresby**	**38.66**	**284**	P		**P**	**20 33 41.7**	**-0.6**
PMG	**Port Moresby**	**38.66**	**284**	P		**P**	**20 33 41.7**	**-0.6**
	45nm,1.0s,baz=130,slow=6.3,SNR=14							
STKA	**Stephens Creek**	**39.23**	**248**	*e*P		**P**	**20 33 46.5**	**-0.5**
	1.1nm,0.9s							
STKA	**Stephens Creek**	**39.23**	**248**	P		**P**	**20 33 45.7**	**-1.3**
	3.3nm,0.6s,baz=92,slow=10,SNR=7.1							
STKA	**Stephens Creek**	**39.23**	**248**	P		**P**	**20 33 48.3**	**+1.3**
	baz=34,SNR=5.1							
AS31	**Alice Springs**	**46.66**	**259**	*e*P		**P**	**20 34 44.8**	**-2.5**
ASAR	**Alice Springs**	**46.67**	**259**	P		**P**	**20 34 46.6**	**-0.7**
ASAR	**Alice Springs**	**46.67**	**259**	P		**P**	**20 34 46.6**	**-0.7**
	8.8nm,1.0s,baz=102,slow=7.4,SNR=20							
WRAB	**Tennant Creek**	**47.02**	**264**	*e*P		**P**	**20 34 48.6**	**-1.5**
	12nm,0.5s							
WRAB				*e*			20 35 02.9	
JAY	**Jayapura**	**47.52**	**289**	P		**P**	**20 34 53.6**	**-0.5**
	baz=42,SNR=4.8							
FITZ	**Fitzroy Crossi**	**55.45**	**263**	P		**P**	**20 35 52.9**	**-0.4**
FITZ	**Fitzroy Crossi**	**55.45**	**263**	P		**P**	**20 35 52.9**	**-0.4**
	8.4nm,0.8s,baz=92,slow=7.2,SNR=14							
FITZ	**Fitzroy Crossi**	**55.45**	**263**	P		**P**	**20 35 53.2**	**-0.1**
	baz=49,SNR=8.7							
VNDA	**Vanda**	**55.54**	**186**	P		**P**	**20 35 54.0**	**+0.9**
VNDA	**Vanda**	**55.54**	**186**	P		**P**	**20 35 54.0**	**+0.9**
	1.4nm,1.0s,baz=16,slow=7.4,SNR=3.8							
SWI	**Sorong**	**56.61**	**285**	P		**P**	**20 36 01.4**	**-0.2**
	baz=51,SNR=13							
KLBR	**Kellerberrin**	**59.48**	**246**	P		**P**	**20 36 21.8**	**+0.2**
	baz=54,SNR=7.0							
MORW	**Morawa**	**61.41**	**248**	P		**P**	**20 36 35.0**	**+0.2**
	baz=56,SNR=4.2							
WSI	**Waingapu**	**63.05**	**271**	P		**P**	**20 36 48.0**	**+2.0**
	baz=57,SNR=4.0							
QSPA	**South Pole Qui**	**66.92**	**180**	P		**P**	**20 37 10.9**	**+0.4**
QSPA	**South Pole Qui**	**66.92**	**180**	P		**P**	**20 37 10.9**	**+0.4**
	6.1nm,1.0s,baz=25,slow=4.4,SNR=12							
MJAR	**Matsushiro Arr**	**73.99**	**322**	P		**P**	**20 37 54.3**	**+0.4**
MJAR	**Matsushiro Arr**	**73.99**	**322**	P		**P**	**20 37 54.3**	**+0.4**
	2.4nm,0.5s,baz=159,slow=6.6,SNR=15							
PETK	**Petropavlovsk-**	**79.57**	**344**	P		**P**	**20 38 25.4**	**+0.5**
PETK	**Petropavlovsk-**	**79.57**	**344**	P		**P**	**20 38 25.4**	**+0.5**
	12nm,1.0s,baz=150,slow=6.0,SNR=5.8							
KSRS	**Korea Array**	**80.71**	**317**	P		**P**	**20 38 33.1**	**+1.7**
	3.2nm,0.9s,baz=137,slow=5.0,SNR=5.6							
KSAR	**Wonju Array Be**	**80.73**	**317**	P		**P**	**20 38 33.1**	**+1.6**
NVAR	**Mina Array Bea**	**81.11**	**42**	P		**P**	**20 38 33.8**	**0.0**
NVAR	**Mina Array Bea**	**81.11**	**42**	P		**P**	**20 38 33.8**	**0.0**
	5.2nm,1.0s,baz=224,slow=7.5,SNR=4.5							
USRK	**Ussuriysk Arra**	**82.72**	**325**	P		**P**	**20 38 43.6**	**+1.7**
	6.8nm,0.8s,baz=117,slow=3.6,SNR=18							
USRK				pP		pP	20 38 58.3	+6.9
	8.9nm,1.0s,baz=166,slow=4.3,SNR=8.0							
SNAA	**Sanae**	**85.26**	**178**	*e*P		**P**	**20 38 54.5**	**-0.2**
SNAA	**Sanae**	**85.26**	**178**	*e*		**P**	**20 38 56.3**	**+1.6**
VNA3	**Neumayer Olymp**	**85.29**	**175**	*e*P		**P**	**20 38 54.7**	**-0.1**
VNA3	**Neumayer Olymp**	**85.29**	**175**	*e*		**P**	**20 38 56.7**	**+1.9**
PLCA	**Paso Flores**	**85.44**	**132**	P		**P**	**20 38 56.1**	**-0.1**
PLCA	**Paso Flores**	**85.44**	**132**	P		**P**	**20 38 56.1**	**-0.1**
	2.2nm,1.0s,baz=252,slow=3.2,SNR=2.9							
VNA2	**Neumayer--Watz**	**85.77**	**176**	*e*P		**P**	**20 38 57.5**	**+0.4**
	baz=215,slow=2.5							
VNA2	**Neumayer--Watz**	**85.77**	**176**	*e*		**P**	**20 38 58.7**	**+1.6**
	baz=215,slow=2.5							
VNA1	**Neumayer--Stat**	**85.98**	**176**	*e*P		**P**	**20 38 58.2**	**+0.1**
TXAR	**Lajitas Array**	**86.19**	**56**	P		**P**	**20 38 59.7**	**-0.3**
TXAR	**Lajitas Array**	**86.19**	**56**	P		**P**	**20 38 59.7**	**-0.3**
	2.9nm,1.1s,baz=211,slow=5.1,SNR=9.9							
GSI	**Gunungsitoli**	**88.12**	**272**	P		**P**	**20 39 11.9**	**+2.3**
	baz=82,SNR=3.0							
PDAR	**Pinedale Array**	**89.03**	**42**	P		**P**	**20 39 12.3**	**-1.1**
PDAR	**Pinedale Array**	**89.03**	**42**	P		**P**	**20 39 12.3**	**-1.1**
	0.7nm,0.9s,baz=230,slow=4.2,SNR=3.4							
ILAR	**Eielson Array**	**90.32**	**12**	P		**P**	**20 39 18.4**	**-0.2**
ILAR	**Eielson Array**	**90.32**	**12**	P		**P**	**20 39 18.4**	**-0.2**
	3.7nm,1.0s,baz=220,slow=5.5,SNR=16							
RLMT	**Red Lodge**	**90.49**	**40**	*e*P		P	20 39 23.7	+3.5
	3.5nm,0.7s							
CMAR	**Chiang Mai Arr**	**93.60**	**288**	P		**P**	**20 39 36.6**	**+1.7**
CMAR	**Chiang Mai Arr**	**93.60**	**288**	P		**P**	**20 39 36.6**	**+1.7**
	2.6nm,0.9s,baz=125,slow=3.3,SNR=17							
YKA	**Yellowknife Ar**	**97.78**	**24**	P		**P**	**20 39 51.5**	**-1.4**
YKA	**Yellowknife Ar**	**97.78**	**24**	P		**P**	**20 39 51.5**	**-1.4**
	0.6nm,1.0s,baz=237,slow=4.3,SNR=5.7							
ZALV	**Zalesovo Beam**	**114.30**	**320**	PKP		PKPdf	20 44 56.3	-1.2
ZALV				SKP			20 48 36.2	
ZALV	**Zalesovo Beam**	**114.30**	**320**	PKP		PKPdf	20 44 56.3	-1.2
	0.5nm,0.5s,baz=115,slow=3.2,SNR=3.8							
ZALV				SKP			20 48 36.2	
	1.1nm,0.8s,baz=180,slow=0.4,SNR=5.2							
MKAR	**Makanchi Array**	**115.03**	**312**	PKP		**PKPdf**	**20 44 58.2**	**-0.9**
MKAR	**Makanchi Array**	**115.03**	**312**	PKP		**PKPdf**	**20 44 58.2**	**-0.9**
	0.7nm,0.6s,baz=81,slow=2.7,SNR=6.3							
BOSA	**Boshof**	**124.94**	**202**	PKP		**PKPdf**	**20 45 19.2**	**+0.2**
BOSA	**Boshof**	**124.94**	**202**	PKP		**PKPdf**	**20 45 19.2**	**+0.2**
	2.3nm,0.8s,baz=202,slow=5.4,SNR=3.5							
ARCES	**ARCESS Array B**	**132.01**	**350**	PKP		**PKPdf**	**20 45 31.3**	**+0.3**
ARCES	**ARCESS Array B**	**132.01**	**350**	PKP		**PKPdf**	**20 45 31.3**	**+0.3**
	3.8nm,0.9s,baz=357,slow=1.8,SNR=5.3							
AKASG	**Malin Array Be**	**146.67**	**332**	PKPbc		**PKPbc**	**20 45 59.2**	**-0.5**
AKASG	**Malin Array Be**	**146.67**	**332**	PKPbc		**PKPbc**	**20 45 59.2**	**-0.5**
	5.0nm,0.6s,baz=42,slow=3.9,SNR=21							
AK01	**Malin Array Si**	**146.68**	**332**	*e*PKPdf		**PKPbc**	**20 45 59.3**	**-0.5**
AK02	**Malin Array Si**	**146.71**	**332**	*e*PKPdf		**PKPbc**	**20 45 59.3**	**-0.5**
MALT	**Malatya**	**147.74**	**306**	↑*i*P		**PKPab**	**20 46 04.4**	**-1.2**
KWP	**Kalwaria Pacla**	**150.13**	**337**	*e*PKPbc		**PKPbc**	**20 46 09.2**	**+0.3**
KWP	**Kalwaria Pacla**	**150.13**	**337**	↓*i*P		**PKPbc**	**20 46 09.5**	**+0.7**
BR131	**Keskin Array S**	**150.67**	**311**	*e*PKPbc		**PKPbc**	**20 46 10.4**	**-0.2**
BRTR	**Keskin Array B**	**150.67**	**311**	PKPbc		**PKPbc**	**20 46 10.7**	**+0.1**
BRTR	**Keskin Array B**	**150.67**	**311**	PKPbc		**PKPbc**	**20 46 10.7**	**+0.1**
	4.9nm,0.8s,baz=121,slow=3.0,SNR=24							
BUR08	**Bucovina Ar. S**	**150.71**	**331**	*e*PKPbc		**PKPbc**	**20 46 10.4**	**0.0**
BURAR	**Bucovina Array**	**150.72**	**331**	↓*i*P		**PKPbc**	**20 46 11.8**	**+1.4**
TESR		**150.88**	**328**	↑*i*P		**PKPbc**	**20 46 10.9**	**+0.2**
CFR	**Carcaliu**	**151.05**	**325**	↓*i*P		**PKPbc**	**20 46 11.3**	**+0.2**
NIE	**Niedzica**	**151.15**	**339**	*e*PX		**PKPbc**	**20 46 12.3**	**+1.0**
ANTO	**Ankara**	**151.19**	**312**	↓*i*P		**PKPbc**	**20 46 12.0**	**+0.3**
CLL	**Collm**	**151.22**	**350**	↓*i*PKPbc		**PKPbc**	**20 46 11.2**	**-0.1**
	comp=Z,11nm,0.9s							
CLL				*e*(pPKPab)			20 46 40.0	
VRI	**Vrincioaia**	**151.30**	**327**	↑*i*P		**PKPbc**	**20 46 12.0**	**+0.3**
TIRR	**Tirgusor**	**151.37**	**324**	↑*i*P		**PKPbc**	**20 46 12.3**	**+0.4**
UPC	**Upice**	**151.38**	**345**	↑*e*PKP		**PKPbc**	**20 46 12.0**	**+0.3**
TRPA	**Tarpa**	**151.43**	**335**	↑*i*P		**PKPbc**	**20 46 11.8**	**-0.1**
DPC	**Dobruska-Polom**	**151.45**	**345**	↑*e*PKP		**PKPbc**	**20 46 12.5**	**+0.5**
DPC				*e*pPKP		PKPab	20 46 27.3	+7.0
BRG	**Berggiesshubel**	**151.47**	**348**	*e*P		**PKPbc**	**20 46 12.4**	**+0.5**
	comp=Z,7.2nm,0.9s							
GRER		**151.51**	**326**	↓*i*P		**PKPbc**	**20 46 11.4**	**-0.8**
MORC	**Moravsky Berou**	**151.66**	**343**	↓*i*P		**PKPbc**	**20 46 13.0**	**+0.5**
PVCC	**Panska Ves**	**151.68**	**347**	↓*e*PKP		**PKPbc**	**20 46 13.0**	**+0.6**
MLR	**Muntele Rosu**	**151.95**	**328**	↑*i*P		**PKPbc**	**20 46 14.1**	**+0.7**
PRU	**Pruhonice**	**152.19**	**347**	↓*e*PKP		**PKPbc**	**20 46 13.5**	**-0.1**
ARR	**Arges**	**152.68**	**329**	↑*i*P		**PKPbc**	**20 46 16.0**	**+1.1**
KHC	**Kasperske Hory**	**153.21**	**347**	↑*e*PKP		**PKPbc**	**20 46 16.3**	**+0.4**
KHC				*e*PKPAB		**PKPab**	**20 46 26.2**	**-1.6**
GERES	**GERESS Array B**	**153.46**	**347**	PKP		**PKPdf**	**20 46 07.8**	**-1.1**
GERES				PKPbc		**PKPbc**	**20 46 16.5**	**-0.1**
GERES	**GERESS Array B**	**153.46**	**347**	PKP		**PKPdf**	**20 46 07.8**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=20,slow=3.1,SNR=3.4							
GERES				PKPbc		**PKPbc**	**20 46 16.5**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=95,slow=1.5,SNR=4.5							
TORD	**Torodi Ar. Bea**	**169.56**	**162**	PKP		**PKPdf**	**20 46 25.4**	**-1.0**
TORD				PKPab		**PKPab**	**20 47 40.8**	**+1.2**
TORD	**Torodi Ar. Bea**	**169.56**	**162**	PKP		**PKPdf**	**20 46 25.4**	**-1.0**
	comp=Z,1.4nm,1.0s,baz=187,slow=2.2,SNR=6.1							
TORD				PKPab		**PKPab**	**20 47 40.8**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=188,slow=4.6,SNR=3.8							

MEX 15 21:00:21.7±0.3, 18°.31N×102°.37W, h32km±16km, MD3.8, Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MMIG	**Aquila**	**0.93**	**269**	*i* P		Pn	21 00 36.4	-2.1
MMIG				*e*S		Sn	21 00 47.3	-3.4
ZIIG	**Zihuatanejo**	**1.11**	**129**	*i* P		Pn	21 00 39.5	-1.6
ZIIG				*e*S		Sn	21 00 52.4	-2.8
EZ5V		**1.65**	**315**	*i* P		Pn	21 00 47.1	-1.7
EZ5V				*i* S		Sn	21 01 06.1	-3.1
R15V		**1.75**	**300**	*i* P		Pn	21 00 48.7	-1.3
R15V				*e*S		Sn	21 01 08.7	-2.6
ARIG	**Puente Sto Nin**	**1.92**	**90**	*i* P		Pn	21 00 50.3	-2.0
ARIG				*i* S		Sn	21 01 12.6	-2.8
SFJM	**Santa Fe**	**2.26**	**344**	*i* P		Pn	21 00 55.0	-2.1
SFJM				*i* S		Sn	21 01 20.1	-3.9
CAIG	**El Cayaco**	**2.37**	**122**	*i* P		Pn	21 00 56.4	-1.9
CAIG				*e*S		Sn	21 01 23.5	-2.7
ANIG	**Ahuacatlan**	**3.40**	**324**	*i* P		Pn	21 01 10.6	-2.1

CSEM ***15*** *21:06:56.8, 42°.37N×13°.37E, h10km, MD2.0/7, After ROM*
ROM 15 21:06:56.8±0.1, 42°.37N×13°.37E, h10km, Md2.0/7, Ml1.4/4, Error ellipse: s-maj=1.3km s-min=1.3km az=21.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AQU	**L'Aquila**	**0.03**	**128**	Pg		Pg	21 06 59.1	+0.3
AQU				Sg		Sg	21 07 00.1	-0.1
	753nm,0.2s							
AQU	**L'Aquila**	**0.03**	**128**	Pg		Pg	21 06 59.1	+0.3
AQU				Sg		Sg	21 07 00.1	-0.1
	753nm,0.2s							
FAGN	**Fagnano**	**0.19**	**124**	Pg		Pb	21 07 01.7	-0.8
FAGN				Sg		Sg	21 07 05.0	+1.2
	137nm,0.4s							
FAGN	**Fagnano**	**0.19**	**124**	Pg		Pb	21 07 01.7	-0.8
FAGN				Sg		Sg	21 07 05.0	+1.2
	137nm,0.4s							
FIAM	**Fiamignano**	**0.21**	**242**	Pg		Pg	21 07 02.2	+0.7
FIAM				Sg		Sg	21 07 05.8	+1.2
	30nm,0.4s							
FIAM	**Fiamignano**	**0.21**	**242**	Pg		Pg	21 07 02.2	+0.7
FIAM				Sg		Sg	21 07 05.8	+1.2
	30nm,0.4s							
TERO	**Teramo**	**0.30**	**34**	Pg		Pg	21 07 03.3	+0.3
TERO				Sg		Sg	21 07 07.8	+0.6
	36nm,0.3s							
TERO	**Teramo**	**0.30**	**34**	Pg		Pg	21 07 03.3	+0.3
TERO				Sg		Sg	21 07 07.8	+0.6
	36nm,0.3s							
VCEL	**Villa Celiera**	**0.35**	**86**	Pg		Pb	21 07 04.6	-0.6
VCEL				Sg		Sb	21 07 10.5	-0.4
	46nm,0.4s							
VCEL	**Villa Celiera**	**0.35**	**86**	Pg		Pb	21 07 04.6	-0.6
VCEL				Sg		Sb	21 07 10.5	-0.4
	46nm,0.4s							
PTQR	**Pietraquaria**	**0.35**	**177**	Pg		Pg	21 07 04.1	+0.2
PTQR				Sg		Sg	21 07 09.6	+0.9
	3.0nm,0.2s							
PTQR	**Pietraquaria**	**0.35**	**177**	Pg		Pg	21 07 04.1	+0.2
PTQR				Sg		Sg	21 07 09.6	+0.9
	3.0nm,0.2s							
NRCA	**Norcia**	**0.50**	**338**	Pg		Pg	21 07 06.9	+0.2
NRCA				Sg		Sb	21 07 14.5	-0.7
	5.0nm,0.1s							
NRCA	**Norcia**	**0.50**	**338**	Pg		Pg	21 07 06.9	+0.2
NRCA				Sg		Sb	21 07 14.5	-0.7
	5.0nm,0.1s							

CSEM ***15*** *21:07:34.9, 42°.37N×13°.44E, h8km, MD1.8/4, After ROM*
ROM 15 21:07:34.9±0.1, 42°.37N×13°.44E, h8km, Md1.8/4, Error ellipse: s-maj=1.2km s-min=0.9km az=98.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AQU	**L'Aquila**	**0.03**	**240**	Pg		Pg	21 07 36.6	+0.1
AQU				Sg		Sg	21 07 37.5	-0.1
AQU	**L'Aquila**	**0.03**	**240**	Pg		Pg	21 07 36.6	+0.1
AQU				Sg		Sg	21 07 37.5	-0.1
FAGN	**Fagnano**	**0.15**	**133**	Pg		Pg	21 07 39.2	+1.0
FAGN				Sg		Sg	21 07 41.6	+1.2
FAGN	**Fagnano**	**0.15**	**133**	Pg		Pg	21 07 39.2	+1.0
FAGN				Sg		Sg	21 07 41.6	+1.2
CAMP	**Campotosto**	**0.17**	**353**	Pg		Pg	21 07 39.3	+0.7
CAMP				Sg		Sg	21 07 42.4	+1.2
CAMP	**Campotosto**	**0.17**	**353**	Pg		Pg	21 07 39.3	+0.7
CAMP				Sg		Sg	21 07 42.4	+1.2
FIAM	**Fiamignano**	**0.26**	**247**	Pg		Pg	21 07 40.9	+0.7
FIAM				Sg		Sb	21 07 45.3	-1.3
FIAM	**Fiamignano**	**0.26**	**247**	Pg		Pg	21 07 40.9	+0.7
FIAM				Sg		Sb	21 07 45.3	-1.3
TERO	**Teramo**	**0.28**	**26**	Pg		Pg	21 07 41.1	+0.5
TERO				Sg		Sg	21 07 45.9	+1.4
TERO	**Teramo**	**0.28**	**26**	Pg		Pg	21 07 41.1	+0.5
TERO				Sg		Sg	21 07 45.9	+1.4
PTQR	**Pietraquaria**	**0.35**	**184**	Pg		Pg	21 07 42.5	+0.7
PTQR				Sg		Sb	21 07 48.2	-1.0
PTQR	**Pietraquaria**	**0.35**	**184**	Pg		Pg	21 07 42.5	+0.7
PTQR				Sg		Sb	21 07 48.2	-1.0
LNSS	**Leonessa**	**0.38**	**309**	Pg		Pg	21 07 43.2	+0.8
LNSS				Sg		Sb	21 07 49.8	-0.3
LNSS	**Leonessa**	**0.38**	**309**	Pg		Pg	21 07 43.2	+0.8
LNSS				Sg		Sb	21 07 49.8	-0.3
INTR	**Introdacqua**	**0.50**	**135**	Pg		Pb	21 07 45.4	-0.7
INTR				Sg		Sb	21 07 52.8	-0.8
INTR	**Introdacqua**	**0.50**	**135**	Pg		Pb	21 07 45.4	-0.7
INTR				Sg		Sb	21 07 52.8	-0.8
NRCA	**Norcia**	**0.52**	**333**	Pg		Pg	21 07 45.3	+0.1
NRCA				Sg		Sg	21 07 52.9	+0.8
NRCA	**Norcia**	**0.52**	**333**	Pg		Pg	21 07 45.3	+0.1
NRCA				Sg		Sg	21 07 52.9	+0.8
SDI	**San Donato**	**0.71**	**157**	Pg		Pg	21 07 49.0	+0.2
SDI	**San Donato**	**0.71**	**157**	Pg		Pg	21 07 49.0	+0.2

GUC 15 21:45:55.1±0.6, 34°.01S×72°.42W, h28km±5km, MD3.6, ML2.8, 1C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHCH	**Chadas Angostu**	**1.47**	**88**	↑*i*P		Pn	21 46 20.8	+1.0
CACH	**El Canelo**	**1.51**	**95**	*e*P		Pn	21 46 21.5	+1.0
ROCH	**El Roble**	**1.56**	**49**	*e*P		Pb	21 46 22.6	-1.2
ROCH				*e*S		Sb	21 46 42.8	-0.6
ROCH				AML		AML	21 46 53.3	
	comp=N,150nm,0.4s							
PEL	**Peldehue**	**1.68**	**60**	*e*P		Pn	21 46 23.8	+1.0
PEL				*i* S		Sb	21 46 45.8	-0.6
PEL				AML		AML	21 46 55.3	
	comp=E,314nm,0.5s							
LMEL	**Las Melosas**	**1.85**	**86**	↓*i*P		Pn	21 46 26.6	+1.4
LMEL				*i* S		Sb	21 46 50.6	-0.7
LMEL				AML		AML	21 46 53.6	
	comp=N,135nm,0.3s							
FCH	**Farellones**	**1.90**	**70**	↓*i*P		Pn	21 46 27.6	+1.6
FCH				*i* S		Sb	21 46 54.1	+0.9
FCH				AML		AML	21 47 00.2	
	comp=N,120nm,0.3s							

IDC ***15*** *21:48:12.9±4.0, 3°.46S×100°.23E, h0km, mb3.7/4, mb1 3.7/4, mb1mx3.4/23, mbtmp3.7/4, Error ellipse: s-maj=173.2km s-min=30.1km az=56.0*
DJA ***15*** *21:48:12.1±0.6, 3°.5S±3°×10°.0E±°, h10km, M4.0/8, mb4.1/1, MLv3.9/8*

ISC 15 21:48:17.6±1.2, 3°.26S±0°.09×100°.6E±0°.1, h29km, n16, σ1.28/17, mb3.7/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRJI	**Kerinci**	**1.45**	**37**	P		**Pb**	**21 48 44.0**	**+0.1**
KRJI				S		Sb	21 49 07.6	+5.6
KSI	**Kapahiang**	**2.02**	**101**	P		**Pb**	**21 48 53.5**	**-0.3**
PDSI	**Padang**	**2.34**	**357**	P		**Pn**	**21 48 54.3**	**+0.2**
SDSI	**Sungai Dareh**	**2.46**	**20**	P		**Pb**	**21 48 58.7**	**-2.4**
MNAI	**Manna**	**2.59**	**115**	P		**Pn**	**21 48 57.7**	**+0.1**
MNAI				S		**Sb**	**21 49 33.0**	**-1.8**
EGSI	**Enggano, Bengk**	**2.67**	**141**	P		**Pn**	**21 48 56.3**	**-2.3**
PPI	**Padang Panjang**	**2.79**	**356**	P		**Pn**	**21 48 59.7**	**-0.7**
LWLI	**Liwa**	**3.86**	**117**	P		**Pn**	**21 49 16.2**	**+1.0**
MNSI	**Mandailing Nat**	**4.16**	**346**	P		**Pn**	**21 49 17.6**	**-1.5**
KASI	**Kota Agung**	**4.49**	**120**	P		**Pn**	**21 49 23.2**	**-0.5**
CGJI	**Cibinong**	**6.07**	**123**	P		**Pn**	**21 49 45.3**	**-0.1**
ASAR	**Alice Springs**	**38.03**	**125**	P		**P**	**21 55 34.4**	**+0.6**
	0.5nm,0.5s,baz=297,slow=7.5,SNR=2.7							
SONM	**Songino Array**	**51.13**	**5**	P		**P**	**21 57 19.3**	**+1.4**
	0.9nm,0.7s,baz=184,slow=6.5,SNR=9.1							
MKAR	**Makanchi Array**	**52.40**	**344**	P		**P**	**21 57 27.4**	**+0.2**
	0.6nm,0.5s,baz=157,slow=7.6,SNR=10							
ZALV	**Zalesovo Beam**	**58.51**	**349**	P		**P**	**21 58 11.4**	**+0.4**
	0.2nm,0

VLX	**Vlachokerasia**	**1.10**	**158**	*e*Pn	Pg	21 52 31.6	0.0		
THL	**Klokotos Trika**	**1.18**	**5**	P	Pb	21 52 32.4	-0.6		
THL				S	Sn	21 52 49.0	-0.3		
THL	**Klokotos Trika**	**1.18**	**5**	*e*PN	Pg	21 52 33.0	0.0		
THL	**Klokotos Trika**	**1.18**	**5**	P	Pb	21 52 32.4	-0.6		
THL	**Klokotos Trika**	**1.18**	**5**	*e*Pn	Pg	21 52 33.0	0.0		
THL				S	Sn	21 52 49.0	-0.3		
DID	**Didima**	**1.40**	**129**	*e*PB	Pg	21 52 37.2	-0.1		
DID	**Didima**	**1.40**	**129**	*e*Pb	Pg	21 52 37.2	-0.1		
NEO	**Neokhori**	**1.40**	**49**	*e*PN	Pn	21 52 36.4	+0.2		
NEO				*e*SB	Sg	21 52 56.9	+1.5		
NEO	**Neokhori**	**1.40**	**49**	*e*Pn	Pn	21 52 36.4	+0.2		
NEO				*e*Sb	Sg	21 52 56.9	+1.5		
XOR	**Xorichti**	**1.42**	**46**	P	Pn	21 52 35.8	-0.7		
XOR	**Xorichti**	**1.42**	**46**	P	Pn	21 52 35.8	-0.7		

*BJI **15** 22:05:05.5, 39°.45N×73°.50E, h10km, mb3.8/2, ML3.8/6*
*NNC **15** 22:05:06.5±0.9, 39°.33N×73°.65E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=7.8km s-min=4.0km az=10.0*
*IDC **15** 22:05:07.5±1.1, 39°.34N×73°.75E, h0km, mb3.7/10, mb1 3.8/16, mb1mx3.6/33, mbtmp3.7/16, ML3.2/6, MS3.2/1, Ms1 3.2/1, ms1mx3.0/49, Error ellipse: s-maj=20.4km s-min=13.5km az=143.0*

ISC 15 22:05:11.0±0.6, 39°.59N±0°.07×74°.06E±0°.05, h28km, n48, σ1§99/49, mb3.6/10, 12C-11D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.48**	**92**	⇓*i*Pg	**Pn**	**22 05 34.4**	**-1.6**
KSH				Sg	**Sn**	**22 05 51.4**	**-3.1**
KSH				smax	smax		
	comp=N,670nm,0.6s						
KSH				smax	smax		
	comp=E,610nm,0.6s						
AML	**Almayashu**	**2.55**	**354**	P	**Pb**	**22 05 54.7**	**-1.6**
	SNR=58						
KZA	**Kyzart**	**2.64**	**20**	P	**Pb**	**22 05 58.5**	**+0.6**
	SNR=18						
UCH	**Uchtor**	**2.66**	**7**	P	**Pb**	**22 05 58.6**	**+0.4**
	SNR=22						
AAK	**Ala-Archa**	**3.06**	**6**	P	**Pb**	**22 06 03.2**	**-1.6**
	SNR=38						
AAK	**Ala-Archa**	**3.06**	**6**	Pn	**Pb**	**22 06 03.0**	**-1.8**
	comp=E,5.8nm,0.3s,baz=171,slow=7.8,SNR=53						
AAK				Lg	Lg	22 06 46.3	
	comp=E,6.2nm,0.3s,baz=69,slow=22,SNR=7.0						
AAK				LR	LR	22 06 58.0	
	comp=E,374nm,20.6s,baz=335,slow=33						
EKS2	**Erkin-Say**	**3.07**	**356**	P	**Pb**	**22 06 02.4**	**-2.7**
	SNR=33						
ULHL	**Ulahol**	**3.12**	**31**	P	**Pb**	**22 06 06.0**	**0.0**
	SNR=6.8						
KBK	**Karagaybulak**	**3.13**	**12**	P	**Pb**	**22 06 04.9**	**-1.3**
	SNR=55						
CHMS	**Chumysh**	**3.44**	**9**	P	**Pb**	**22 06 08.5**	**-2.9**
	SNR=11						
TKM2	**Tokmak 2**	**3.52**	**19**	⇓Pn	Pn	22 06 07.8	+3.7
TKM2				⇑Pg	Pb	22 06 17.7	+4.9
	comp=E,9.9nm,0.4s						
TKM2				⇓Lg	Lg	22 07 10.2	
	comp=E,75nm,0.6s						
TKM2	**Tokmak 2**	**3.52**	**19**	P	**Pb**	**22 06 10.5**	**-2.3**
	SNR=8.1						
USP	**Ospenovka**	**3.69**	**5**	P	Pb	22 06 11.8	-3.7
	SNR=9.7						
KNDC	**Almaty**	**4.23**	**30**	⇑Pn	Pn	22 06 18.3	+4.6
	comp=E,3.4nm,0.3s						
KNDC				⇑Pg	Pb	22 06 30.7	+5.9
	comp=E,72nm,0.6s						
KNDC				⇑Lg	Lg	22 07 30.3	
	comp=E,318nm,0.8s						
KK31	**Karatay Array**	**4.41**	**324**	⇓Pn	**Pn**	**22 06 17.8**	**+1.8**
	comp=E,3.8nm,0.3s,baz=130,slow=12,SNR=226						
KK31				⇓Pg	**Pb**	**22 06 27.9**	**+0.1**
	comp=E,17nm,0.6s,baz=144,slow=15,SNR=11						
KK31				⇑Sn	**Sb**	**22 07 14.5**	**-5.9**
	comp=E,9.1nm,0.3s						
KK31				⇓Lg	Lg	22 07 27.2	
	comp=E,51nm,0.7s						
MK31	**Makanchi Array**	**9.37**	**37**	⇑Pg	Pn	22 08 04.9	+41
	comp=E,2.4nm,0.7s,baz=222,slow=12,SNR=3.8						
MK31				⇓Lg	Lg	22 10 13.1	
	comp=E,4.3nm,0.8s,baz=222,slow=28,SNR=4.1						
MKAR	**Makanchi Array**	**9.37**	**37**	Pn	Pn	22 07 30.5	+6.3
	comp=E,0.0nm,0.3s,baz=222,slow=17,SNR=3.2						
MKAR				Lg	Lg	22 10 12.8	
	comp=E,0.1nm,0.3s,baz=227,slow=26,SNR=4.4						
KURBB	**Kurchatov Arra**	**11.47**	**14**	Pn	Pn	22 07 57.1	+4.3
	comp=E,0.0nm,0.3s,baz=206,slow=12,SNR=4.9						
KURK	**Kurchatov**	**11.58**	**15**	⇑Pn	**Pn**	**22 07 56.9**	**+2.6**
	comp=E,1.7nm,1.0s						
KURK				⇓Lg	Lg	22 11 23.3	
	comp=E,38nm,1.4s						
VOSK	**Vostochnaya**	**13.30**	**352**	⇑Pn	**Pn**	**22 08 18.3**	**+0.4**
	comp=E,2.6nm,0.7s						
VOSK				⇓Lg	Lg	22 12 15.9	
	comp=E,12nm,1.0s						
PYUN	**Piuthan**	**13.65**	**144**	*e*P	**Pn**	**22 08 22.4**	**-0.5**
	comp=E,32nm,0.6s						
BVA0	**Borovoye Array**	**13.67**	**351**	Pn	**Pn**	**22 08 23.9**	**+1.0**
	comp=E,0.6nm,0.8s,baz=166,slow=13,SNR=22						
BVA0				⇑Lg	Lg	22 12 26.8	
	comp=E,2.7nm,1.5s						
BVAR	**Borovoye Array**	**13.67**	**351**	Pn	**Pn**	**22 08 23.0**	**+0.1**
	comp=E,0.3nm,0.3s,baz=156,slow=11,SNR=19						
BRVK	**Borovoye**	**13.72**	**350**	⇓Pn	**Pn**	**22 08 24.4**	**+0.8**
	comp=E,8.8nm,0.9s						
BRVK				⇑Lg	Lg	22 12 28.2	
	comp=E,20nm,1.4s						
DANN	**Dangsing**	**13.79**	**141**	*e*P	**Pn**	**22 08 23.5**	**-1.5**
	comp=E,10nm,0.5s						
AB31	**Akbulak array**	**13.94**	**318**	Pn	**Pn**	**22 08 24.7**	**-2.0**
	comp=E,1.6nm,0.6s,baz=128,slow=14,SNR=24						
AB31				⇓Sn	**Sn**	**22 10 59.4**	**-1.0**
	comp=E,0.9nm,0.6s,baz=131,slow=27,SNR=2.8						
KOLN	**Koldanda**	**14.21**	**143**	*e*P	**Pn**	**22 08 29.7**	**-0.8**
	comp=E,13nm,0.7s						
KKN	**Kakani**	**15.01**	**138**	*e*P	**Pn**	**22 08 38.9**	**-2.6**
	comp=E,5.5nm,0.6s						
GUN	**Gumba**	**15.23**	**136**	*e*P	**Pn**	**22 08 41.1**	**-3.4**
AKTO	**Aktyubinsk**	**15.65**	**319**	⇑Pn	**Pn**	**22 08 48.0**	**-1.5**
AKTO				⇑Sn	**Sn**	**22 11 44.0**	**+2.0**
	comp=E,0.4nm,0.9s						
AKTO	**Aktyubinsk**	**15.65**	**319**	Pn	**Pn**	**22 08 49.0**	**-0.6**
	comp=E,0.3nm,0.3s,baz=124,slow=13,SNR=10						
ZALV	**Zalesovo Beam**	**16.11**	**23**	Pn	**P**	**22 08 58.6**	**+0.1**
	comp=E,0.1nm,0.3s,baz=207,slow=12,SNR=7.2						
RAMN	**Ramite**	**16.38**	**137**	*e*P	**Pn**	**22 08 57.5**	**-1.7**
TAPN	**Taplejung**	**16.67**	**133**	*e*P	**Pn**	**22 09 00.6**	**-2.4**
ODAN	**Odare**	**16.88**	**135**	*e*P	**Pn**	**22 09 02.8**	**-2.7**
GTA	**Gaotai**	**19.86**	**82**	*e*P	**Pn**	**22 09 45.0**	**+3.3**
GTA				pP	**pP**	**22 09 48.1**	**+0.5**
GTA				sP	**sP**	**22 09 50.6**	**-0.5**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GNI	**Garni**	**22.47**	**281**	P	**P**	**22 10 06.4**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=181,slow=14,SNR=2.3						
ONI	**Oni**	**23.20**	**287**	P	**P**	**22 10 16.6**	**+1.0**
SONM	**Songino Array**	**24.64**	**60**	P	**P**	**22 10 33.6**	**+4.4**
	comp=Z,0.7nm,1.0s,baz=262,slow=10,SNR=5.5						
BRTR	**Keskin Array B**	**30.93**	**283**	P	**P**	**22 11 26.6**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=84,slow=5.8,SNR=4.7						
FINES	**FINESS Array B**	**36.37**	**323**	P	**P**	**22 12 13.6**	**+1.2**
	comp=Z,0.6nm,0.4s,baz=112,slow=9.1,SNR=8.0						
ARCES	**ARCESS Array B**	**39.27**	**335**	P	**P**	**22 12 37.9**	**+1.1**
	comp=Z,4.5nm,0.9s,baz=99,slow=7.5,SNR=8.5						
GERES	**GERESS Array B**	**43.20**	**303**	P	**P**	**22 13 09.6**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=40,slow=6.9,SNR=3.6						
NB2	**NORSAR Subarra**	**43.43**	**321**	P	**P**	**22 13 11.2**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=90,slow=8.6						
NOA	**NORSAR Array B**	**43.43**	**321**	P	**P**	**22 13 11.2**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=91,slow=7.9,SNR=4.7						
TORD	**Torodi Ar. Bea**	**68.19**	**269**	P	**P**	**22 16 07.7**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=44,slow=5.2,SNR=10						
YKA	**Yellowknife Ar**	**78.02**	**4**	P	**P**	**22 17 08.2**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=348,slow=5.7,SNR=5.6						
ASAR	**Alice Springs**	**84.12**	**127**	P	**P**	**22 17 40.5**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=312,slow=4.4,SNR=4.5						

*ISK **15** 22:06:35.2, 38°.30N×39°.37E, h11km, MD2.7*
*ISCJB **15** 22:06:37.4±0.6, 38°.39N±0°.03×39°.36E±0°.04, h6km±4km, Error ellipse: s-maj=5.8km s-min=4.8km az=5.4*
*CSEM **15** 22:06:37.5±0.3, 38°.40N×39°.31E, h8km, Error ellipse: s-maj=6.5km s-min=5.4km az=170.0*
*DDA **15** 22:06:37.2, 38°.35N×39°.35E, h3km, ML2.8*

ISC 15 22:06:36.8±0.9, 38°.38N±0°.03×39°.35E±0°.03, h8km±5km, n20, σ0§95/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVRC	**Sivrice-ELAZID**	**0.04**	**272**	PG	**Pg**	**22 06 38.9**	**+0.4**
SVRC				SG	**Sg**	**22 06 39.9**	**+0.2**
SVRC	**Sivrice-ELAZID**	**0.04**	**272**	*i* Pg	**Pg**	**22 06 38.9**	**+0.4**
SVRC				*i* Sg	**Sg**	**22 06 39.9**	**+0.2**
ELZG	**Elazig**	**0.31**	**293**	*i* P	**Pg**	**22 06 44.0**	**+1.0**
ELZG				*i* S	**Sg**	**22 06 49.0**	**+1.8**
ELZG	**Elazig**	**0.31**	**293**	*i* P	**Pg**	**22 06 44.0**	**+1.0**
ELZG				*i* S	**Sg**	**22 06 49.0**	**+1.8**
PTK	**Pertek**	**0.52**	**4**	*e*PG	**Pg**	**22 06 47.6**	**+0.8**
PTK				*e*SG	**Sb**	**22 06 55.9**	**-0.1**
PTK	**Pertek**	**0.52**	**4**	*e*Pg	**Pg**	**22 06 47.6**	**+0.8**
PTK				*e*Sg	**Sb**	**22 06 55.9**	**-0.1**
MALT	**Malatya**	**0.73**	**265**	*e*PG	**Pg**	**22 06 50.4**	**-0.4**
MALT	**Malatya**	**0.73**	**265**	*e*Pg	**Pg**	**22 06 50.4**	**-0.4**
MYA	**Malataya**	**0.73**	**266**	*e*PG	**Pg**	**22 06 49.6**	**-1.2**
MYA				*e*SG	**Sg**	**22 07 00.6**	**+0.3**
MYA	**Malataya**	**0.73**	**266**	*e*Pg	**Pg**	**22 06 49.6**	**-1.2**
MYA				*e*Sg	**Sg**	**22 07 00.6**	**+0.3**
DIYA	**Diyarbakir**	**0.76**	**126**	*e*P	**Pn**	**22 06 53.5**	**-0.4**
DIYA				*i* S	**Sb**	**22 07 02.5**	**-0.3**
DIYA	**Diyarbakir**	**0.76**	**126**	*e*P	**Pn**	**22 06 53.5**	**-0.4**
DIYA				*i* S	**Sb**	**22 07 02.6**	**-0.3**
BINT	**Bingol**	**1.02**	**60**	*e*Pn	**Pn**	**22 06 58.2**	**+0.6**
AKCD	**Akcadag**	**1.13**	**266**	*i* P	**Pg**	**22 06 58.5**	**+0.1**
AKCD				*i* S	**Sn**	**22 07 15.5**	**+0.7**
AKCD	**Akcadag**	**1.13**	**266**	*i* P	**Pg**	**22 06 58.5**	**+0.1**
AKCD				*i* S	**Sn**	**22 07 15.5**	**+0.7**
BNGB	**Bing¨¶l**	**1.21**	**59**	*e*PN	**Pb**	**22 06 58.1**	**-1.9**
ATAB	**Bozova**	**1.23**	**223**	*i* P	**Pg**	**22 07 02.0**	**+1.6**
ATAB				*i* S	**Sn**	**22 07 18.0**	**+0.7**
ATAB	**Bozova**	**1.23**	**223**	*i* P	**Pg**	**22 07 02.0**	**+1.6**
ATAB				*i* S	**Sn**	**22 07 18.0**	**+0.7**
ILIC	**ilic-Erzincan**	**1.23**	**331**	*e*PN	**Pn**	**22 06 59.5**	**-1.1**
ILIC				*e*SN	**Sn**	**22 07 18.5**	**+1.0**
ILIC	**ilic-Erzincan**	**1.23**	**331**	*e*Pn	**Pn**	**22 06 59.5**	**-1.1**
ILIC				*e*Sn	**Sn**	**22 07 18.5**	**+1.0**

IDC 15 22:16:37.1±3.3, 4°.80N×128°.28E, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.6/22, mbtmp4.1/3, Error ellipse: s-maj=307.8km s-min=24.3km az=66.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**28.82**	**169**	P	P	22 22 37.0	-0.2
	1.2nm,0.5s,baz=356,slow=8.4,SNR=20						
STKA	**Stephens Creek**	**38.62**	**162**	P	P	22 24 02.2	+0.1
	3.2nm,0.4s,baz=330,slow=8.2,SNR=14						
MKAR	**Makanchi Array**	**57.58**	**324**	P	P	22 26 28.7	-0.1
	0.4nm,0.4s,baz=111,slow=8.2,SNR=12						

*ISCJB **15** 22:21:36.9±0.5, 40°.45N±0°.02×40°.49E±0°.02, h5km±4km, mb4.0/24, Error ellipse: s-maj=2.8km s-min=2.3km az=172.4*
*DDA **15** 22:21:36.6, 40°.41N×40°.55E, h13km, MD3.6*
*NEIC **15** 22:21:36.9, 40°.39N×40°.57E, h5km, mb4.4/14, ML4.3(ISK), After ISK.*
*ISK **15** 22:21:37.0, 40°.36N×40°.55E, h7km, ML4.2*
*IDC **15** 22:21:37.7±0.7, 40°.51N×40°.57E, h0km, mb3.8/11, mb1 4.0/18, mb1mx3.8/35, mbtmp3.9/18, ML3.8/6, MS3.2/1, Ms1 3.1/1, ms1mx2.9/50, Error ellipse: s-maj=12.1km s-min=7.1km az=9.0*
*MOS **15** 22:21:37.6±1.4, 40°.52N×40°.49E, h10km, mb4.4/15, Error ellipse: s-maj=5.7km s-min=3.7km az=123.3*
*CSEM **15** 22:21:37.8±0.1, 40°.42N×40°.54E, h5km, mb4.4/14, Error ellipse: s-maj=3.6km s-min=3.1km az=165.0*

ISC 15 22:21:37.3±1.0, 40°.38N±0°.02×40°.54E±0°.01, h2km±7km, n395, σ1§46/420, mb4.2/25, 29C-27D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAYT	**Ayd¨¬ntepe-Bay**	**0.31**	**273**	PG	**Pg**	**22 21 44.2**	**+0.9**
BAYT				SG	**Sg**	**22 21 48.5**	**+1.2**
BAYT	**Ayd¨¬ntepe-Bay**	**0.31**	**273**	*i* Pg	**Pg**	**22 21 44.2**	**+0.9**
BAYT				*i* Sg	**Sg**	**22 21 48.5**	**+1.2**
KOPT	**Kop Dagi**	**0.36**	**186**	*i* P	**Pg**	**22 21 44.5**	**+0.2**
KOPT				*i* S	**Sb**	**22 21 50.4**	**-2.5**
KOPT	**Kop Dagi**	**0.36**	**186**	*i* P	**Pg**	**22 21 44.5**	**+0.2**
EZM	**Erzurum**	**0.79**	**127**	PG	**Pg**	**22 21 52.5**	**+0.1**
EZM	**Erzurum**	**0.79**	**127**	Pg	**Pg**	**22 21 52.5**	**+0.1**
MACK	**Trabzon**	**0.81**	**314**	*i* P	**Pb**	**22 21 53.7**	**-0.5**
MACK				*i* S	**Sb**	**22 22 05.9**	**+0.3**
MACK	**Trabzon**	**0.81**	**314**	*i* P	**Pb**	**22 21 53.7**	**-0.5**
MACK				*i* S	**Sb**	**22 22 05.9**	**+0.3**
GUMT	**Gumushane**	**0.82**	**276**	PG	**Pg**	**22 21 52.9**	**-0.1**
GUMT	**Gumushane**	**0.82**	**276**	Pg	**Pg**	**22 21 53.0**	**+0.1**
GUMT	**Gumushane**	**0.82**	**276**	Pg	**Pg**	**22 21 53.0**	**+0.1**
PZAR	**Pazar-Rize**	**0.84**	**19**	PG	**Pb**	**22 21 54.0**	**-0.6**
PZAR				SG	**Sb**	**22 22 06.3**	**0.0**
PZAR	**Pazar-Rize**	**0.84**	**19**	*i* Pg	**Pb**	**22 21 54.0**	**-0.6**
PZAR				*i* Sg	**Sb**	**22 22 06.3**	**0.0**
KTUT	**Trabzon**	**0.85**	**316**	PG	**Pb**	**22 21 54.0**	**-0.6**
KTUT	**Trabzon**	**0.85**	**316**	*i* Pg	**Pb**	**22 21 54.1**	**-0.6**
ERZN	**Erzincan**	**1.01**	**219**	*e*PG	**Pg**	**22 21 55.6**	**-1.1**
KELT	**Kelkit**	**1.01**	**257**	*i* P	**Pg**	**22 21 56.1**	**-0.6**
KELT				*i* S	**Sg**	**22 22 09.3**	**-0.6**
KELT	**Kelkit**	**1.01**	**257**	*i* P	**Pg**	**22 21 56.1**	**-0.6**
KELT				*i* S	**Sg**	**22 22 09.3**	**-0.6**
DDEM	**Demirkent**	**1.05**	**60**	*i* P	**Pg**	**22 21 56.6**	**-0.9**
DDEM				*i* S	**Sg**	**22 22 10.9**	**-0.2**
DDEM	**Demirkent**	**1.05**	**60**	*i* P	**Pg**	**22 21 56.6**	**-0.9**
DDEM				*i* S	**Sg**	**22 22 10.9**	**-0.2**
HOMI	**Horasan**	**1.09**	**107**	*i* P	**Pg**	**22 21 57.8**	**-0.5**
HOMI				*i* S	**Sn**	**22 22 14.1**	**-1.5**
DAGI	**Agillar**	**1.25**	**56**	*i* P	**Pn**	**22 22 00.2**	**-1.7**
DAGI				*i* S	**Sb**	**22 22 16.9**	**-1.5**
DBOC	**Borcka**	**1.29**	**41**	*i* P	**Pn**	**22 22 01.0**	**-1.3**
DBOC				*i* S	**Sb**	**22 22 18.3**	**-0.9**
DBOC	**Borcka**	**1.29**	**41**	*i* P	**Pn**	**22 22 01.0**	**-1.3**
DBOC				*i* S	**Sb**	**22 22 18.3**	**-0.9**
ARTV	**Artvin**	**1.32**	**52**	*i* P	**Pn**	**22 22 01.4**	**-1.6**
ARTV				*i* S	**Sb**	**22 22 19.4**	**-1.0**
ARTV	**Artvin**	**1.32**	**52**	*i* P	**Pn**	**22 22 01.4**	**-1.6**
ARTV				*i* S	**Sb**	**22 22 19.4**	**-1.0**
BCA	**Borcka**	**1.34**	**37**	*e*PN	**Pn**	**22 22 01.8**	**-1.3**
BCA	**Borcka**	**1.34**	**37**	Pn	**Pn**	**22 22 01.7**	**-1.3**
BCA	**Borcka**	**1.34**	**37**	*e*Pn	**Pn**	**22 22 01.8**	**-1.3**
BNGB	**Bing¨¶l**	**1.39**	**176**	*e*PN	**Pn**	**22 22 02.3**	**-1.5**
VRTB	**Varto-Mus**	**1.41**	**150**	*e*PN	**Pn**	**22 22 03.2**	**-0.8**
VRTB	**Varto-Mus**	**1.41**	**150**	*e*Pn	**Pn**	**22 22 03.2**	**-0.8**
ESPY	**Espiye-Giresun**	**1.48**	**292**	*e*PN	**Pn**	**22 22 04.6**	**-0.4**
ESPY	**Espiye-Giresun**	**1.48**	**292**	*e*Pn	**Pn**	**22 22 04.6**	**-0.4**
PTK	**Pertek**	**1.73**	**211**	*e*PN	**Pb**	**22 22 08.7**	**-1.2**
PTK	**Pertek**	**1.73**	**211**	Pn	**Pb**	**22 22 09.7**	**-0.3**
PTK	**Pertek**	**1.73**	**211**	Pn	**Pb**	**22 22 09.6**	**-0.3**
ILIC	**ilic-Erzincan**	**1.78**	**239**	*e*PN	**Pb**	**22 22 09.1**	**-1.6**
ILIC	**ilic-Erzincan**	**1.78**	**239**	*e*Pn	**Pb**	**22 22 09.1**	**-1.6**
SUSE	**Susehri**	**1.80**	**265**	*i* P	**Pb**	**22 22 10.1**	**-1.0**
SUSE				*i* S	**Sb**	**22 22 33.3**	**-0.8**
SUSE	**Susehri**	**1.80**	**265**	*i* P	**Pb**	**22 22 10.1**	**-1.0**
SUSE				*i* S	**Sb**	**22 22 33.3**	**-0.8**
KEMA	**Kemaliye**	**1.93**	**236**	*i* P	**Pb**	**22 22 11.7**	**-1.5**
KEMA				*i* S	**Sg**	**22 22 39.4**	**+0.1**
KEMA	**Kemaliye**	**1.93**	**236**	*i* P	**Pb**	**22 22 11.7**	**-1.5**
KEMA				*i* S	**Sg**	**22 22 39.4**	**+0.1**
KARS	**Kars**	**1.95**	**82**	*e*PN	**Pn**	**22 22 11.7**	**+0.2**
KARS	**Kars**	**1.95**	**82**	PN	**Pb**	**22 22 12.5**	**-1.1**
KARS	**Kars**	**1.95**	**82**	Pn	**Pb**	**22 22 12.5**	**-1.1**
KARS	**Kars**	**1.95**	**82**	*e*Pn	**Pn**	**22 22 11.7**	**+0.2**
TUTA	**Tutak**	**2.00**	**118**	*i* P	**Pb**	**22 22 13.2**	**-1.3**
TUTA				*i* S	**Sg**	**22 22 40.5**	**-1.1**
TUTA	**Tutak**	**2.00**	**118**	*i* P	**Pb**	**22 22 13.2**	**-1.3**
TUTA				*i* S	**Sg**	**22 22 40.5**	**-1.1**
SVRC	**Sivrice-ELAZID**	**2.22**	**206**	*e*PN	**Pn**	**22 22 14.8**	**-0.4**
SVRC	**Sivrice-ELAZID**	**2.22**	**206**	*e*Pn	**Pn**	**22 22 14.8**	**-0.4**
ELZG	**Elazig**	**2.23**	**213**	*i* P	**Pn**	**22 22 15.9**	**+0.4**
ELZG	**Elazig**	**2.23**	**213**	*i* P	**Pn**	**22 22 15.9**	**+0.4**
BTMT	**Batman**	**2.31**	**161**	*e*PN	**Pn**	**22 22 16.9**	**+0.6**
BTMT	**Batman**	**2.31**	**161**	*e*Pn	**Pn**	**22 22 16.9**	**+0.6**
RSDY	**Resadiye-TOKAT**	**2.46**	**271**	*e*PN	**Pn**	**22 22 18.7**	**+0.3**
RSDY	**Resadiye-TOKAT**	**2.46**	**271**	Pn	**Pb**	**22 22 20.2**	**-2.0**
RSDY	**Resadiye-TOKAT**	**2.46**	**271**	*e*Pn	**Pn**	**22 22 18.7**	**+0.3**
AKH	**Akhalkalaki**	**2.46**	**64**	P	**Pn**	**22 22 18.8**	**+0.2**
AKH				S	**Sb**	**22 22 54.4**	**+1.2**
AKH	**Akhalkalaki**	**2.46**	**64**	P	**Pn**	**22 22 18.8**	**+0.2**
DIYA	**Diyarbakir**	**2.48**	**188**	*i* P	**Pn**	**22 22 19.3**	**+0.6**
DIYA	**Diyarbakir**	**2.48**	**188**	*i* P	**Pn**	**22 22 19.3**	**+0.6**
DIY	**Diyarbakir**	**2.49**	**186**	*e*PN	**Pn**	**22 22 19.0**	**+0.1**
DIY	**Diyarbakir**	**2.49**	**186**	Pn	**Pb**	**22 22 20.6**	**-2.2**
DIY	**Diyarbakir**	**2.49**	**186**	*e*Pn	**Pn**	**22 22 19.0**	**+0.1**
BEST	**Besiri**	**2.55**	**167**	*e*P	**Pn**	**22 22 20.4**	**+0.7**
DYDN	**Diyadin**	**2.56**	**108**	*i* P	**Pb**	**22 22 24.0**	**0.0**
DYDN	**Diyadin**	**2.56**	**108**	*i* P	**Pb**	**22 22 24.0**	**0.0**
MYA	**Malataya**	**2.63**	**219**	*e*PN	**Pn**	**22 22 20.8**	**0.0**
MYA	**Malataya**	**2.63**	**219**	PN	**Pn**	**22 22 21.8**	**+1.0**
MYA	**Malataya**	**2.63**	**219**	Pn	**Pn**	**22 22 21.8**	**+1.0**
MYA	**Malataya**	**2.63**	**219**	Pn	**Pn**	**22 22 21.8**	**+1.0**
MALT	**Malatya**	**2.64**	**219**	*e*PN	**Pn**	**22 22 21.2**	**+0.3**
MALT	**Malatya**	**2.64**	**219**	*e*PN	**Pn**	**22 22 21.6**	**+0.7**
MALT				*e*		22 23 02.2	
MALT	**Malatya**	**2.64**	**219**	*e*Pn	**Pn**	**22 22 21.6**	**+0.7**
MALT				*e*Sn	**Sg**	**22 23 02.2**	**+0.2**
MALT	**Malatya**	**2.64**	**219**	⇓*i*P	**Pb**	**22 22 24.3**	**-1.0**
MALT	**Malatya**	**2.64**	**219**	*e*Pn	**Pn**	**22 22 21.6**	**+0.7**
MALT	**Malatya**	**2.64**	**219**	⇓*i*P	**Pb**	**22 22 24.3**	**-1.0**
MALT				*e*Sb	**Sg**	**22 23 02.2**	**+0.2**
GEVA	**Gevas**	**2.84**	**136**	*i* P	**Pb**	**22 22 28.7**	**-0.1**
GEVA	**Gevas**	**2.84**	**136**	*i* P	**Pb**	**22 22 28.7**	**-0.1**
CLDR	**Caldiran**	**2.88**	**114**	*e*PN	**Pn**	**22 22 24.2**	**-0.2**
CLDR	**Caldiran**	**2.88**	**114**	Pn	**Pb**	**22 22 26.7**	**-2.7**
CLDR	**Caldiran**	**2.88**	**114**	*e*Pn	**Pn**	**22 22 24.2**	**-0.2**
ERBA	**Erbaa**	**2.90**	**277**	*e*P	**Pb**	**22 22 28.3**	**-1.5**
ERBA	**Erbaa**	**2.90**	**277**	*e*P	**Pb**	**22 22 28.3**	**-1.5**
AKCD	**Akcadag**	**2.91**	**225**	*i* P	**Pn**	**22 22 25.2**	**+0.5**
AKCD				*i* S	**Sg**	**22 23 10.6**	**-0.2**
AKCD	**Akcadag**	**2.91**	**225**	*i* P	**Pn**	**22 22 25.2**	**+0.5**
DOMR	**Dombai**	**3.02**	**15**	*e*PN	**Pn**	**22 22 27.2**	**+1.0**
DOMR	**Dombai**	**3.02**	**15**	*e*Pn	**Pn**	**22 22 27.2**	**+1.0**
MARD	**Mardin**	**3.07**	**176**	*e*P	**Pn**	**22 22 28.0**	**+1.2**
MARD				*i* S	**Sg**	**22 23 14.7**	**-1.1**
KZR	**Kazreti**	**3.10**	**70**	P	**Pb**	**22 22 33.1**	**-0.1**
KZR				S	**Sg**	**22 23 14.9**	**-2.0**
ONI	**Oni**	**3.11**	**44**	P	**Pn**	**22 22 28.8**	**+1.5**
ONI				S	**Sg**	**22 23 14.4**	**-2.7**
TOKA	**Tokat**	**3.11**	**270**	*i* P	**Pg**	**22 22 35.8**	**-1.0**
TOKA				*i* S	**Sg**

SEKA				⇑S		Sg	22 24 20.7	-1.0	
SEKA	**Sheki**	**5.12**	**79**	P		Pb	22 23 00.8	-6.8	
	SNR=3.0								
SEKA				S		Sg	22 24 20.7	-1.0	
NIG	**Nigde**	**5.13**	**246**	*e*PN		Pn	22 22 56.9	+1.5	
NIG	**Nigde**	**5.13**	**246**	Pn		Pn	22 22 58.1	+2.7	
NIG	**Nigde**	**5.13**	**246**	*e*Pn		Pn	22 22 56.9	+1.5	
BR131	**Keskin Array S**	**5.34**	**265**	*e*Pn		Pn	22 23 01.4	+3.3	
	comp=Z,15nm,0.6s								
BR131	**Keskin Array S**	**5.34**	**265**	*e*Pn		Pn	22 23 01.4	+3.3	
	comp=Z,15nm,0.6s								
BRTR	**Keskin Array B**	**5.34**	**265**	Pn		Pn	22 23 00.8	+2.7	
BRTR				Pg		Pb	22 23 14.7	+3.3	
BRTR				Lg		Lg	22 24 28.6		
BRTR	**Keskin Array B**	**5.34**	**265**	Pn		Pn	22 23 00.8	+2.7	
	comp=Z,0.8nm,0.3s,baz=87,slow=13,SNR=24								
BRTR				Pg		Pb	22 23 14.7	+3.3	
	comp=Z,1.8nm,0.3s,baz=99,slow=16,SNR=23								
BRTR				Lg		Lg	22 24 28.6		
	comp=Z,1.5nm,0.3s,baz=284,slow=26,SNR=2.6								
BRTR	**Keskin Array B**	**5.34**	**265**	Pn		Pn	22 23 00.8	+2.7	
	comp=Z,1.0nm,0.3s								
BRTR	**Keskin Array B**	**5.34**	**265**	Pb		Pb	22 23 14.7	+3.3	
	comp=Z,2.0nm,0.3s								
KERU	**Kerch**	**5.77**	**330**	*e*P		**Pn**	**22 23 05.3**	**+1.5**	
KERU	**Kerch**	**5.77**	**330**	*e*P		**Pn**	**22 23 05.3**	**+1.5**	
IML	**Ismayilli**	**5.83**	**83**	⇓P		Pg	22 23 25.3	-3.7	
	SNR=3.7								
IML	**Ismayilli**	**5.83**	**83**	P		Pg	22 23 25.3	-3.7	
	SNR=3.7								
ANTO	**Ankara**	**5.96**	**268**	*e*P		Pn	22 23 10.6	+4.0	
ANTO	**Ankara**	**5.96**	**268**	*e*Pn		Pn	22 23 10.6	+4.0	
ANTO				*e*Sg		**Sg**	**22 24 50.7**	**+1.9**	
FEO	**Feodosiya**	**5.99**	**322**	⇓*e*P		**Pn**	**22 23 06.8**	**-0.1**	
FEO				*e*S		**Sn**	**22 24 10.8**	**-5.2**	
FEO	**Feodosiya**	**5.99**	**322**	*e*P		**Pn**	**22 23 06.8**	**-0.1**	
SUDU	**Sudak**	**6.08**	**320**	⇓*e*P		**Pn**	**22 23 08.1**	**-0.1**	
SUDU				*e*S		**Sn**	**22 24 17.4**	**-0.9**	
SUDU	**Sudak**	**6.08**	**320**	*e*P		**Pn**	**22 23 08.1**	**-0.1**	
SUDU				*e*S		**Sn**	**22 24 17.4**	**-0.9**	
PQL	**Pirkuli**	**6.14**	**84**	⇑S		Sg	22 25 11.5	+17	
PQL	**Pirkuli**	**6.14**	**84**	S		Sg	22 25 11.5	+17	
GLBA	**Cilalabad**	**6.15**	**98**	P		Pn	22 23 14.5	+5.4	
	SNR=5.8								
GLBA	**Cilalabad**	**6.15**	**98**	P		Pn	22 23 14.5	+5.4	
	SNR=5.8								
ALU	**Alushta**	**6.25**	**315**	*e*P		**Pn**	**22 23 10.6**	**+0.2**	
ALU				*e*S		**Sn**	**22 24 21.0**	**-1.3**	
ALU	**Alushta**	**6.25**	**315**	*e*P		**Pn**	**22 23 10.6**	**+0.2**	
ALU				*e*S		**Sn**	**22 24 21.0**	**-1.3**	
YAL	**Yalta**	**6.26**	**313**	⇑*i*P		**Pn**	**22 23 11.0**	**+0.4**	
YAL				*e*S		**Sn**	**22 24 20.4**	**-2.2**	
YAL	**Yalta**	**6.26**	**313**	*i* P		**Pn**	**22 23 11.0**	**+0.4**	
YAL				*e*S		**Sn**	**22 24 20.4**	**-2.2**	
SEV	**Sevastopol'**	**6.57**	**312**	⇑*i*P		**Pn**	**22 23 13.6**	**-1.2**	
SEV				*e*S		**Sn**	**22 24 27.5**	**-2.7**	
SEV	**Sevastopol'**	**6.57**	**312**	*i* P		**Pn**	**22 23 13.6**	**-1.2**	
SEV				*e*S		**Sn**	**22 24 27.5**	**-2.7**	
SIM	**Simferopol'**	**6.58**	**316**	*e*P		**Pn**	**22 23 15.7**	**+0.7**	
SIM				*e*S		**Sn**	**22 24 27.0**	**-3.5**	
SIM				pmax		pmax			
	comp=Z,46nm,0.8s								
SIM	**Simferopol'**	**6.58**	**316**	*e*P		**Pn**	**22 23 15.7**	**+0.7**	
	comp=Z,46nm,0.8s								
MMAI	**Mount Meron Ar**	**8.43**	**211**	Pn		Pn	22 23 44.1	+3.7	
MMAI	**Mount Meron Ar**	**8.43**	**211**	Pn		Pn	22 23 44.1	+3.7	
	comp=Z,0.8nm,0.3s,baz=62,slow=16,SNR=4.9								
ASF	**Jabal al Asfar**	**8.70**	**201**	Pn		Pn	22 23 46.9	+2.7	
ASF				Lg		Lg	22 26 20.7		
ASF	**Jabal al Asfar**	**8.70**	**201**	Pn		Pn	22 23 46.9	+2.7	
	comp=Z,0.3nm,0.3s,baz=51,slow=23,SNR=7.6								
ASF				Lg		Lg	22 26 20.7		
	comp=Z,0.1nm,0.3s,baz=282,slow=16,SNR=2.3								
TIRR	**Tirgusor**	**9.85**	**298**	⇑P		**Pn**	**22 23 58.4**	**-1.4**	
TIRR	**Tirgusor**	**9.85**	**298**	*e*Pn		**Pn**	**22 23 58.5**	**-1.4**	
TIRR	**Tirgusor**	**9.85**	**298**	⇑*i*P		**Pn**	**22 23 58.4**	**-1.4**	
TIRR	**Tirgusor**	**9.85**	**298**	*e*Pn		**Pn**	**22 23 58.5**	**-1.4**	
TLCR		**9.87**	**303**	⇓P		**Pn**	**22 23 58.6**	**-1.4**	
TLCR		**9.87**	**303**	⇓*i*P		**Pn**	**22 23 58.6**	**-1.4**	
TLCR		**9.87**	**303**	P		**Pn**	**22 23 58.6**	**-1.4**	
CVD	**Cernavoda**	**10.06**	**297**	⇑P		**Pn**	**22 24 02.0**	**-0.7**	
CVD	**Cernavoda**	**10.06**	**297**	⇑*i*P		**Pn**	**22 24 02.0**	**-0.7**	
CVD	**Cernavoda**	**10.06**	**297**	P		**Pn**	**22 24 02.0**	**-0.7**	
CFR	**Carcaliu**	**10.30**	**302**	⇓P		**Pn**	**22 24 04.3**	**-1.7**	
CFR	**Carcaliu**	**10.30**	**302**	⇓*i*P		**Pn**	**22 24 04.3**	**-1.7**	
CFR	**Carcaliu**	**10.30**	**302**	P		**Pn**	**22 24 04.3**	**-1.7**	
VRHR	**Novokhopersk**	**10.74**	**4**	*e*P		**Pn**	**22 24 13.5**	**+1.5**	
VRHR				pmax		pmax			
	comp=N,20nm,0.6s								
VRHR				pmax		pmax			
	comp=E,9.0nm,0.6s								
VRHR				pmax		pmax			
	comp=Z,20nm,0.6s								
VRHR	**Novokhopersk**	**10.74**	**4**	*e*P		**Pn**	**22 24 13.5**	**+1.5**	
KIS	**Kishinev**	**10.76**	**312**	*e*		Pn	22 24 25.0	+13	
LEOM	**Leova**	**10.81**	**308**	⇓P		**Pn**	**22 24 12.4**	**-0.6**	
LEOM	**Leova**	**10.81**	**308**	⇓*i*P		**Pn**	**22 24 12.4**	**-0.6**	
LEOM	**Leova**	**10.81**	**308**	P		**Pn**	**22 24 12.4**	**-0.6**	
VSR	**Storozhevoye**	**10.88**	**355**	*e*P		**Pn**	**22 24 12.2**	**-1.7**	
VSR				pmax		pmax			
	comp=Z,10.0nm,0.6s								
VSR				pmax		pmax			
	comp=N,5.0nm,0.3s								
VSR				pmax		pmax			
	comp=E,5.0nm,0.6s								
VSR	**Storozhevoye**	**10.88**	**355**	*e*P		**Pn**	**22 24 12.2**	**-1.7**	
	comp=E,5.0nm,0.3s								
GHRR		**11.13**	**305**	⇑*i*P		**Pn**	**22 24 16.6**	**-0.8**	
GHRR		**11.13**	**305**	⇑*i*P		**Pn**	**22 24 16.6**	**-0.8**	
ISR	**Istrita**	**11.33**	**299**	⇓P		**Pn**	**22 24 20.8**	**+0.7**	
ISR	**Istrita**	**11.33**	**299**	⇓*i*P		**Pn**	**22 24 20.8**	**+0.7**	
ISR	**Istrita**	**11.33**	**299**	P		**Pn**	**22 24 20.8**	**+0.7**	
VRI	**Vrincioaia**	**11.48**	**303**	⇓P		**Pn**	**22 24 21.9**	**-0.3**	
VRI	**Vrincioaia**	**11.48**	**303**	⇓*i*P		**Pn**	**22 24 21.9**	**-0.3**	
VRI	**Vrincioaia**	**11.48**	**303**	P		**Pn**	**22 24 21.9**	**-0.3**	
PLOR	**Plostina**	**11.53**	**303**	⇑P		**Pn**	**22 24 22.4**	**-0.4**	
PLOR	**Plostina**	**11.53**	**303**	⇑*i*P		**Pn**	**22 24 22.4**	**-0.4**	
PLOR	**Plostina**	**11.53**	**303**	P		**Pn**	**22 24 22.4**	**-0.4**	
TESR		**11.81**	**306**	⇑*i*P		**Pn**	**22 24 25.7**	**-0.9**	
TESR		**11.81**	**306**	⇑*i*P		**Pn**	**22 24 25.7**	**-0.9**	
MLR	**Muntele Rosu**	**11.85**	**300**	Pn		**Pn**	**22 24 26.7**	**-0.7**	
MLR				Sn		**Sn**	**22 26 38.4**	**-1.8**	
MLR	**Muntele Rosu**	**11.85**	**300**	⇓*i*P		**Pn**	**22 24 27.1**	**-0.3**	
MLR	**Muntele Rosu**	**11.85**	**300**	Pn		**Pn**	**22 24 26.7**	**-0.7**	
	comp=E,0.4nm,0.3s,baz=331,slow=1.8,SNR=26								
MLR				Sn		**Sn**	**22 26 38.4**	**-1.8**	
	comp=E,0.1nm,0.3s,baz=346,slow=22,SNR=3.6								
MLR	**Muntele Rosu**	**11.85**	**300**	P		**Pn**	**22 24 26.7**	**-0.7**	
DOPR	**Dopca**	**12.39**	**302**	⇓P		**Pn**	**22 24 33.5**	**-1.1**	
DOPR	**Dopca**	**12.39**	**302**	⇓*i*P		**Pn**	**22 24 33.5**	**-1.1**	
VOIR		**12.43**	**299**	⇑P		**Pn**	**22 24 34.8**	**-0.4**	
VOIR		**12.43**	**299**	⇑*i*P		**Pn**	**22 24 34.8**	**-0.4**	
VOIR		**12.43**	**299**	P		**Pn**	**22 24 34.8**	**-0.4**	
ARR	**Arges**	**12.69**	**298**	⇑*i*P		**Pn**	**22 24 38.7**	**0.0**	
ARR	**Arges**	**12.69**	**298**	⇑*i*P		**Pn**	**22 24 38.7**	**0.0**	
AK02	**Malin Array Si**	**12.98**	**326**	*e*Pn		**Pn**	**22 24 39.7**	**-2.9**	
AK02				*e*Sn		Sn	22 26 59.9	-7.5	
AK01	**Malin Array Si**	**13.00**	**326**	*e*Pn		**Pn**	**22 24 40.6**	**-2.2**	
AK01	**Malin Array Si**	**13.00**	**326**	*e*Pn		**Pn**	**22 24 40.6**	**-2.2**	
AKASG	**Malin Array Be**	**13.00**	**326**	P		**Pn**	**22 24 40.4**	**-2.5**	
AKASG							22 27 02.7		
AKASG				pmax		pmax			
	comp=Z,16nm,0.3s								
AKASG				smax		smax			
	comp=N,3.0nm,0.3s								
AKASG	**Malin Array Be**	**13.00**	**326**	Pn		**Pn**	**22 24 40.4**	**-2.5**	
AKASG				Sn		**Sn**	**22 27 02.7**	**-5.3**	
AKASG	**Malin Array Be**	**13.00**	**326**	Pn		**Pn**	**22 24 40.4**	**-2.5**	
	comp=N,16nm,0.3s,baz=134,slow=13,SNR=37								
AKASG				Sn		**Sn**	**22 27 02.7**	**-5.3**	
	comp=N,3.1nm,0.3s,baz=131,slow=25,SNR=4.7								
AKASG	**Malin Array Be**	**13.00**	**326**	P		**Pn**	**22 24 40.4**	**-2.5**	
	comp=N,16nm,0.3s								
KIEV	**Kiev**	**13.00**	**326**	*e*P		**Pn**	**22 24 40.7**	**-2.2**	
KIEV	**Kiev**	**13.00**	**326**	*e*Pn		**Pn**	**22 24 40.7**	**-2.2**	
KIEV	**Kiev**	**13.00**	**326**	*e*P		**Pn**	**22 24 40.7**	**-2.2**	
BURAR	**Bucovina Array**	**13.18**	**308**	⇑*i*P		**Pn**	**22 24 44.0**	**-1.5**	
BURAR	**Bucovina Array**	**13.18**	**308**	⇑*i*P		**Pn**	**22 24 44.0**	**-1.5**	
BUR08	**Bucovina Ar. S**	**13.20**	**308**	*e*Pn		**Pn**	**22 24 43.0**	**-2.8**	
BUR08				*e*Sn		**Sn**	**22 27 08.3**	**-4.9**	
LOT	**Lotru**	**13.29**	**298**	⇓*i*P		**Pn**	**22 24 46.1**	**-0.9**	
LOT	**Lotru**	**13.29**	**298**	⇓*i*P		**Pn**	**22 24 46.1**	**-0.9**	
DRGR		**14.41**	**302**	⇓P		**Pn**	**22 25 01.1**	**-1.2**	
DRGR		**14.41**	**302**	⇓*i*P		**Pn**	**22 25 01.1**	**-1.2**	
OBN	**Obninsk**	**14.98**	**351**	⇑*e*P		**Pn**	**22 25 10.5**	**+0.7**	
OBN				*e*S		**Sn**	**22 28 00.5**	**+4.4**	
OBN				pmax		pmax			
	comp=Z,16nm,1.0s								
TRPA	**Tarpa**	**15.03**	**307**	⇑*i*P		**Pn**	**22 25 08.7**	**-1.8**	
UZH	**Uzhgorod**	**15.39**	**308**	*e*P		**Pn**	**22 25 14.0**	**-1.3**	
KOLS	**Kolonicke sedl**	**15.53**	**309**	*e*P		**Pn**	**22 25 16.6**	**-0.6**	
KOLS	**Kolonicke sedl**	**15.53**	**309**	*e*PN		**Pn**	**22 25 16.6**	**-0.6**	
KOLS	**Kolonicke sedl**	**15.53**	**309**	*e*Pn		**Pn**	**22 25 16.6**	**-0.6**	
KWP	**Kalwaria Pacla**	**15.61**	**312**	⇑P		**Pn**	**22 25 17.9**	**-0.3**	
KWP	**Kalwaria Pacla**	**15.61**	**312**	*e*Pn		**Pn**	**22 25 18.2**	**-0.1**	
	comp=Z,8.8nm,0.7s								
KWP	**Kalwaria Pacla**	**15.61**	**312**	⇑*i*P		**Pn**	**22 25 17.9**	**-0.3**	
KWP	**Kalwaria Pacla**	**15.61**	**312**	*e*Pn		**Pn**	**22 25 18.2**	**-0.1**	
	comp=Z,8.8nm,0.7s								
AKTO	**Aktyubinsk**	**15.82**	**45**	P		**Pn**	**22 25 19.2**	**-1.8**	
AKTO	**Aktyubinsk**	**15.82**	**45**	Pn		**Pn**	**22 25 19.2**	**-1.8**	
AKTO	**Aktyubinsk**	**15.82**	**45**	Pn		**Pn**	**22 25 19.2**	**-1.8**	
	comp=Z,0.3nm,0.3s,baz=244,slow=9.6,SNR=5.5								
AKTO	**Aktyubinsk**	**15.82**	**45**	Pn		**Pn**	**22 25 19.2**	**-1.8**	
CRVS	**Cervenica-Dubn**	**16.00**	**308**	*e*P		**Pn**	**22 25 20.0**	**-3.3**	
CRVS	**Cervenica-Dubn**	**16.00**	**308**	*e*PN		**Pn**	**22 25 20.0**	**-3.3**	
ABKAR	**Akbulak array**	**16.34**	**51**	*e*Pn		**Pn**	**22 25 26.4**	**-1.3**	
ABKAR	**Akbulak array**	**16.34**	**51**	*e*Pn		**Pn**	**22 25 26.4**	**-1.3**	
MICAM	**Minsk**	**16.48**	**333**	*e*		Pn	22 25 23.0	-6.4	
MNK	**Minsk**	**16.50**	**333**	*e*P		Pn	22 25 23.0	-6.6	
VYHS	**Vyhne**	**17.45**	**305**	*e*P		**P**	**22 25 42.6**	**-0.4**	
VYHS	**Vyhne**	**17.45**	**305**	*e*PN		**P**	**22 25 42.6**	**-0.4**	
VYHS	**Vyhne**	**17.45**	**305**	*e*P		**P**	**22 25 42.6**	**-0.4**	
OJC	**Ojcow**	**17.55**	**311**	*e*P		**Pn**	**22 25 42.0**	**-0.9**	
OJC				pmax		pmax			
	comp=Z,5.0nm,0.6s								
OJC	**Ojcow**	**17.55**	**311**	*e*Pn		**Pn**	**22 25 42.0**	**-0.9**	
	comp=Z,4.7nm,0.6s								
OJC	**Ojcow**	**17.55**	**311**	*e*P		**Pn**	**22 25 42.0**	**-0.9**	
	comp=Z,5.0nm,0.6s								
IIGN	**Ignalina**	**17.74**	**332**	*e*P		**Pn**	**22 25 44.0**	**-1.2**	
IIGN				AMB		AMB	22 25 48.3		
	comp=Z,3.9nm,0.9s								
IIGN	**Ignalina**	**17.74**	**332**	*e*P		**Pn**	**22 25 44.0**	**-1.2**	
	comp=Z,3.9nm,0.9s,SNR=33								
ISAL	**Salakas**	**17.95**	**333**	*e*P		**Pn**	**22 25 46.4**	**-1.4**	
ISAL				AMB		AMB	22 25 47.6		
	comp=Z,3.1nm,0.9s								
ISAL	**Salakas**	**17.95**	**333**	*e*P		**Pn**	**22 25 46.4**	**-1.4**	
	comp=Z,3.1nm,0.9s,SNR=33								
SUW	**Suwalki**	**17.96**	**325**	*e*P		**Pn**	**22 25 47.1**	**-0.9**	
SUW				pmax		pmax			
	comp=Z,32nm,0.9s								
SUW	**Suwalki**	**17.96**	**325**	*e*Pn		**Pn**	**22 25 47.1**	**-0.9**	
	comp=Z,32nm,0.9s								
SUW	**Suwalki**	**17.96**	**325**	*e*P		**Pn**	**22 25 46.9**	**-1.1**	
SUW	**Suwalki**	**17.96**	**325**	*e*P		**Pn**	**22 25 47.1**	**-0.9**	
	comp=Z,32nm,0.9s								
IZAR	**Zarasai**	**18.05**	**333**	*e*P		**Pn**	**22 25 47.5**	**-1.5**	
IZAR				AMB		AMB	22 25 49.8		
	comp=Z,5.6nm,0.7s								
IZAR	**Zarasai**	**18.05**	**333**	*e*P		**Pn**	**22 25 47.5**	**-1.5**	
	comp=Z,5.6nm,0.7s,SNR=28								
DPC	**Dobruska-Polom**	**19.64**	**309**	*e*P		Pn	22 26 20.5	+12	
DPC	**Dobruska-Polom**	**19.64**	**309**	*e*P		Pn	22 26 20.5	+12	
UPC	**Upice**	**19.88**	**309**	*e*P		**Pn**	**22 26 12.1**	**+0.8**	
UPC	**Upice**	**19.88**	**309**	*e*P		**Pn**	**22 26 12.1**	**+0.8**	
UPC	**Upice**	**19.88**	**309**	*e*P		**Pn**	**22 26 12.1**	**+0.8**	
ARU	**Arti**	**19.92**	**30**	*d*iP		**Pn**	**22 26 10.5**	**-1.2**	
ARU				S		**Sn**	**22 29 56.5**	**+0.6**	
ARU				pmax		pmax			
	comp=Z,8.0nm,1.7s								
ARU	**Arti**	**19.92**	**30**	*i* P		**Pn**	**22 26 10.5**	**-1.2**	
	comp=Z,8.0nm,1.7s								
PRU	**Pruhonice**	**20.60**	**306**	*e*P		Pn	22 26 18.8	-0.9	
PRU	**Pruhonice**	**20.60**	**306**	*e*P		Pn	22 26 18.8	-0.9	
PRU	**Pruhonice**	**20.60**	**306**	*e*P		Pn	22 26 18.8	-0.9	
GERES	**GERESS Array B**	**20.81**	**303**	P		**P**	**22 26 20.1**	**+0.2**	
GERES	**GERESS Array B**	**20.81**	**303**	P		**P**	**22 26 20.1**	**+0.2**	
	comp=Z,0.9nm,0.8s,baz=108,slow=11,SNR=7.2								
GERES	**GERESS Array B**	**20.81**	**303**	P		**P**	**22 26 20.1**	**+0.2**	
	comp=Z,1.1nm,0.8s								
KHC	**Kasperske Hory**	**20.96**	**304**	*e*P		Pn	22 26 22.5	-1.5	
KHC				*e*			22 26 24.8		
KHC	**Kasperske Hory**	**20.96**	**304**	*e*Pn		Pn	22 26 22.5	-1.6	
	comp=Z,1.1nm,1.6s								
KHC	**Kasperske Hory**	**20.96**	**304**	*e*P		Pn	22 26 22.5	-1.5	
KHC				*e*pP		pP	22 26 24.8	+2.6	
KHC	**Kasperske Hory**	**20.96**	**304**	*e*P		Pn	22 26 22.5	-1.5	
SVE	**Sverdlovsk**	**21.02**	**32**	⇑*e*P		**P**	**22 26 22.5**	**+0.5**	
SVE				pmax		pmax			
	comp=Z,24nm,1.2s								
SVE	**Sverdlovsk**	**21.02**	**32**	*e*P		**P**	**22 26 22.5**	**+0.5**	
	comp=Z,24nm,1.2s								
CLL	**Collm**	**21.95**	**309**	*e*P		**P**	**22 26 35.0**	**+3.0**	
CLL	**Collm**	**21.95**	**309**	*es*P		**P**	**22 26 35.0**	**+3.0**	
CLL				*e*			22 26 47.0		
NKC	**Novy Kostel**	**21.96**	**306**	*e*P		**P**	**22 26 35.8**	**+3.6**	
NKC	**Novy Kostel**	**21.96**	**306**	*e*P		**P**	**22 26 35.8**	**+3.6**	
KKAR	**Karatay Array**	**22.47**	**73**	*e*P		**P**	**22 26 38.3**	**+0.6**	
KKAR	**Karatay Array**	**22.47**	**73**	*e*P		**P**	**22 26 38.2**	**+0.6**	
FIA1	**FINESS Array S**	**22.87**	**342**	*e*P		**P**	**22 26 39.2**	**-2.5**	
FINES	**FINESS Array B**	**22.87**	**342**	P		**P**	**22 26 42.6**	**+0.9**	
FINES	**FINESS Array B**	**22.87**	**342**	P		**P**	**22 26 42.6**	**+0.9**	
	comp=Z,9.0nm,0.7s,baz=149,slow=9.1,SNR=20								
DAVOX	**Davos/Dischmat**	**23.02**	**296**	P		**P**	**22 26 43.1**	**-0.5**	
DAVOX	**Davos/Dischmat**	**23.02**	**296**	P		**P**	**22 26 43.1**	**-0.5**	
	comp=Z,2.0nm,0.7s,baz=204,slow=18,SNR=2.1								
JOF	**Joensuu**	**23.24**	**349**	*e*P		**P**	**22 26 48.3**	**+2.8**	
JOF				pmax		pmax			
	comp=Z,10.0nm,0.7s								
JOF	**Joensuu**	**23.24**	**349**	*e*p		**P**	**22 26 48.3**	**+2.8**	
	comp=Z,10nm,0.7s								
KAF	**Kangasniemi**	**23.41**	**343**	*e*P		**P**	**22 26 48.9**	**+1.7**	
KAF				pmax		pmax			
	comp=Z,8.0nm,0.7s								
KAF	**Kangasniemi**	**23.41**	**343**	*e*p		**P**	**22 26 48.9**	**+1.7**	
	comp=Z,7.5nm,0.7s								
PGF	**Pioggiola**	**23.67**	**286**	*e*P		**P**	**22 26 51.2**	**+1.0**	
	comp=Z,14nm,1.1s								
PGF	**Pioggiola**	**23.67**	**286**	*e*P		**P**	**22 26 51.2**	**+1.0**	
PGF				pmax		pmax			
	comp=Z,14nm,1.1s								
PGF	**Pioggiola**	**23.67**	**286**	*e*P		**P**	**22 26 51.2**	**+1.0**	
	comp=Z,14nm,1.1s								
BRVK	**Borovoye**	**23.81**	**48**	*e*P		**P**	**22 26 51.9**	**+0.6**	
BRVK				pmax		pmax			
	comp=Z,2.0nm,1.2s								
BVAR	**Borovoye Array**	**23.86**	**48**	P		**P**	**22 26 50.9**	**-0.9**	
BVAR				pmax		pmax			
	comp=Z,2.0nm,0.8s								
BVAR	**Borovoye Array**	**23.86**	**48**	P		**P**	**22 26 50.9**	**-0.9**	
BVAR	**Borovoye Array**	**23.86**	**48**	P		**P**	**22 26 50.9**	**-0.9**	
	comp=Z,1.7nm,0.8s,baz=251,slow=9.2,SNR=7.2								
SBF	**Sospel**	**24.71**	**289**	*e*P		**P**	**22 26 59.0**	**-0.8**	
	comp=Z,25nm,1.0s								
SBF	**Sospel**	**24.71**	**289**	*e*P		**P**	**22 26 59.0**	**-0.8**	
SBF				pmax		pmax			
	comp=Z,25nm,1.0s								
SBF	**Sospel**	**24.71**	**289**	*e*P		**P**	**22 26 59.0**	**-0.8**	
	comp=Z,25nm,1.0s								
EKS2	**Erkin-Say**	**24.90**	**74**	*e*P		**P**	**22 27 02.5**	**+0.9**	
EKS2				pmax		pmax			
	comp=Z,7.0nm,1.1s								
EKS2	**Erkin-Say**	**24.90**	**74**	*e*P		**P**	**22 27 02.5**	**+0.9**	
	comp=Z,6.6nm,1.1s								
KEST	**Kesra**	**24.93**	**269**	*e*P		**P**	**22 27 01.3**	**-0.6**	
KEST	**Kesra**	**24.93**	**269**	P		**P**	**22 27 04.6**	**+2.8**	
	comp=Z,4.4nm,1.0s,baz=54,slow=1.0,SNR=11								
CDF	**Champ du Feu**	**24.93**	**300**	*e*P		**P**	**22 27 01.9**	**+0.1**	
	comp=Z,5.9nm,1.0s								
CDF	**Champ du Feu**	**24.93**	**300**	*e*P		**P**	**22 27 01.9**	**+0.1**	
CDF				pmax		pmax			
	comp=Z,6.0nm,1.0s								
CDF	**Champ du Feu**	**24.93**	**300**	*e*P		**P**	**22 27 01.9**	**+0.1**	
	comp=Z,5.9nm,1.0s								
LPG	**La Plagne**	**25.14**	**293**	*e*P		**P**	**22 27 03.8**	**-0.1**	
LPG	**La Plagne**	**25.14**	**293**	*e*P		**P**	**22 27 03.8**	**-0.1**	
LPG	**La Plagne**	**25.14**	**293**	*e*P		**P**	**22 27 03.8**	**-0.1**	
MBDF	**Montbardon**	**25.14**	**291**	*e*P		**P**	**22 27 05.0**	**+1.2**	
	comp=Z,27nm,1.2s								
MBDF	**Montbardon**	**25.14**	**291**	*e*P		**P**	**22 27 05.0**	**+1.2**	
MBDF				pmax		pmax			
	comp=Z,27nm,1.2s								
MBDF	**Montbardon**	**25.14**	**291**	*e*P		**P**	**22 27 05.0**	**+1.2**	
	comp=Z,27nm,1.2s								
LPL	**La Plagne**	**25.16**	**293**	*e*P		**P**	**22 27 03.6**	**-0.4**	
LPL	**La Plagne**	**25.16**	**293**	*e*P		**P**	**22 27 03.6**	**-0.4**	
HINF	**Hinteralfeld**	**25.16**	**298**	*e*P		**P**	**22 27 04.2**	**+0.4**	
HINF	**Hinteralfeld**	**25.16**	**298**	*e*P		**P**	**22 27 04.2**	**+0.4**	
HINF	**Hinteralfeld**	**25.16**	**298**	*e*P		**P**	**22 27 04.2**	**+0.4**	
FRF	**La Foret Royal**	**25.30**	**288**	*e*P		**P**	**22 27 06.4**	**+1.4**	
	comp=Z,8.1nm,0.8s								
FRF	**La Foret Royal**	**25.30**	**288**	*e*P		**P**	**22 27 06.4**	**+1.4**	
FRF				pmax		pmax			
	comp=Z,8.0nm,0.8s								
FRF	**La Foret Royal**	**25.30**	**288**	*e*P		**P**	**22 27 06.4**	**+1.4**	
	comp=Z,8.1nm,0.8s								
AAK	**Ala-Archa**	**25.43**	**74**	*e*P		**P**	**22 27 04.0**	**-2.4**	
AAK				pmax		pmax			
	comp=Z,7.0nm,1.1s								
CABF	**La Chapelle**	**25.62**	**296**	*e*P		**P**	**22 27 07.8**	**-0.2**	
	comp=Z,18nm,1.0s								
CABF	**La Chapelle**	**25.62**	**296**	*e*P		**P**	**22 27 07.8**	**-0.2**	
CABF				pmax		pmax			
	comp=Z,18nm,1.0s								
CABF	**La Chapelle**	**25.62**	**296**	*e*P		**P**	**22 27 07.8**	**-0.2**	
	comp=Z,18nm,1.0s								
ORIF	**Oris-en-Rattie**	**25.77**	**292**	*e*P		**P**	**22 27 10.2**	**+0.8**	
ORIF	**Oris-en-Rattie**	**25.77**	**292**	*e*P		**P**	**22 27 10.2**	**+0.8**	
ORIF	**Oris-en-R

ellipse: s-maj=0.0km s-min=0.0km az=0.0°

ISC 15 22:53:08.6±0.5,**42°54N**±0.01×**13°32E**±0.01,**h6**km±3km,
n454,σ1°51/580,**mb3.9**/10,**50C-55D,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**95**	P	**Pg**	**22 53 10.4**	**0.0**
CAMP				S	**Sg**	**22 53 11.7**	**+0.1**
CAMP	**Campotosto**	**0.07**	**95**	⇑*i*Pg	**Pg**	**22 53 10.3**	**0.0**
CAMP				Sg	**Sg**	**22 53 11.7**	**+0.1**
	220µm,1.1s						
CAMP	**Campotosto**	**0.07**	**95**	⇑*i*Pg	**Pg**	**22 53 10.3**	**0.0**
CAMP				Sg	**Sg**	**22 53 11.7**	**+0.1**
	220µm,1.1s						
AQU	**L'Aquila**	**0.20**	**161**	P	**Pg**	**22 53 12.2**	**-0.3**
AQU				S	**Sg**	**22 53 14.2**	**-0.9**
AQU	**L'Aquila**	**0.20**	**161**	⇑*i*Pg	**Pg**	**22 53 12.2**	**-0.3**
AQU				Sg	**Sg**	**22 53 14.9**	**-0.2**
	27µm,0.7s						
AQU	**L'Aquila**	**0.20**	**161**	⇑*i*Pg	**Pg**	**22 53 12.2**	**-0.3**
AQU				S	**Sg**	**22 53 14.2**	**-0.9**
AQU				Sg	Sg	22 53 14.9	-0.4
	27µm,0.7s						
LNSS	**Leonessa**	**0.21**	**287**	P	**Pg**	**22 53 13.0**	**+0.2**
LNSS				S	**Sg**	**22 53 17.0**	**+1.3**
LNSS	**Leonessa**	**0.21**	**287**	⇑*i*Pg	**Pg**	**22 53 13.0**	**+0.2**
LNSS				Sg	**Sg**	**22 53 17.0**	**+1.3**
	78µm,0.5s						
LNSS	**Leonessa**	**0.21**	**287**	⇑*i*Pg	**Pg**	**22 53 13.0**	**+0.2**
TERO	**Teramo**	**0.23**	**69**	P	**Pg**	**22 53 12.6**	**-0.4**
TERO				S	**Sg**	**22 53 16.0**	**0.0**
TERO	**Teramo**	**0.23**	**69**	⇑*i*Pg	**Pg**	**22 53 12.7**	**-0.4**
TERO				Sg	**Sg**	**22 53 16.1**	**0.0**
	23µm,0.3s						
TERO	**Teramo**	**0.23**	**69**	P	**Pg**	**22 53 12.6**	**-0.4**
TERO				Sg	**Sg**	**22 53 16.1**	**0.0**
	23µm,0.3s						
FIAM	**Fiamignano**	**0.31**	**208**	P	**Pg**	**22 53 14.3**	**-0.4**
FIAM				S	**Sg**	**22 53 17.2**	**-1.5**
FIAM	**Fiamignano**	**0.31**	**208**	⇑*i*Pg	**Pg**	**22 53 14.3**	**-0.4**
FIAM				Sg	**Sg**	**22 53 18.9**	**+0.1**
	15µm,0.9s						
FIAM	**Fiamignano**	**0.31**	**208**	⇑*i*Pg	**Pg**	**22 53 14.3**	**-0.4**
FIAM				S	**Sg**	**22 53 17.2**	**-1.5**
FIAM				Sg	**Sg**	**22 53 18.9**	**+0.1**
	15µm,0.9s						
NRCA	**Norcia**	**0.33**	**333**	P	**Pg**	**22 53 14.9**	**-0.1**
NRCA				S	**Sg**	**22 53 20.3**	**+0.9**
NRCA	**Norcia**	**0.33**	**333**	Pg	**Pg**	**22 53 14.9**	**-0.1**
NRCA				Sg	**Sg**	**22 53 20.3**	**+0.9**
	22µm,0.1s						
NRCA	**Norcia**	**0.33**	**333**	Pg	**Pg**	**22 53 14.9**	**-0.1**
NRCA				Sg	**Sg**	**22 53 20.3**	**+0.9**
	22µm,0.1s						
FAGN	**Fagnano**	**0.34**	**144**	P	**Pg**	**22 53 14.3**	**-0.9**
FAGN				S	**Sg**	**22 53 19.6**	**-0.1**
FAGN	**Fagnano**	**0.34**	**144**	Pg	**Pg**	**22 53 14.5**	**-0.7**
FAGN				Sg	**Sg**	**22 53 19.6**	**-0.1**
	16µm,0.5s						
FAGN	**Fagnano**	**0.34**	**144**	Pg	**Pg**	**22 53 14.5**	**-0.7**
FAGN				S	**Sg**	**22 53 19.5**	**-0.1**
GAVE	**Gavelli**	**0.35**	**296**	Pg	**Pg**	**22 53 15.3**	**-0.1**
GAVE	**Gavelli**	**0.35**	**296**	Pg	**Pg**	**22 53 15.3**	**-0.1**
VCEL	**Villa Celiera**	**0.41**	**111**	P	**Pg**	**22 53 16.0**	**-0.6**
VCEL				S	**Sg**	**22 53 23.0**	**+0.9**
VCEL	**Villa Celiera**	**0.41**	**111**	Pg	**Pg**	**22 53 16.0**	**-0.6**
VCEL				Sg	**Sg**	**22 53 21.4**	**-0.7**
	20µm,0.6s						
VCEL	**Villa Celiera**	**0.41**	**111**	Pg	**Pg**	**22 53 16.0**	**-0.6**
VCEL				Sg	**Sg**	**22 53 21.4**	**-0.7**
	20µm,0.6s						
VCEL				S	**Sg**	**22 53 23.0**	**+0.9**
OFFI	**Offida**	**0.48**	**35**	P	**Pg**	**22 53 18.1**	**+0.3**
OFFI				S	**Sb**	**22 53 26.9**	**+0.1**
OFFI	**Offida**	**0.48**	**35**	Pg	**Pg**	**22 53 18.1**	**+0.3**
	29µm,0.7s						
OFFI	**Offida**	**0.48**	**35**	Pg	**Pg**	**22 53 18.1**	**+0.3**
	29µm,0.7s						
OFFI				S	**Sb**	**22 53 26.9**	**+0.1**
MNS	**Montasola**	**0.50**	**252**	P	**Pg**	**22 53 17.5**	**-0.6**
MNS				S	**Sg**	**22 53 25.1**	**+0.5**
MNS	**Montasola**	**0.50**	**252**	P	**Pg**	**22 53 17.5**	**-0.6**
MNS				S	**Sg**	**22 53 25.1**	**+0.5**
MNS	**Montasola**	**0.50**	**252**	Pg	**Pg**	**22 53 17.5**	**-0.6**
MNS				Sg	**Sg**	**22 53 25.1**	**+0.5**
	7µm,0.6s						
MNS	**Montasola**	**0.50**	**252**	Pg	**Pg**	**22 53 17.5**	**-0.6**
MNS				Sg	**Sg**	**22 53 25.1**	**+0.5**
	7µm,0.6s						
TRTR	**Tortoreto Alta**	**0.52**	**59**	Pg	**Pg**	**22 53 19.0**	**+0.5**
	19µm,0.8s						
TRTR	**Tortoreto Alta**	**0.52**	**59**	Pg	**Pg**	**22 53 19.0**	**+0.5**
	19µm,0.8s						
FDMO	**Fiordimonte**	**0.52**	**341**	P	**Pg**	**22 53 18.2**	**-0.5**
FDMO				S	**Sg**	**22 53 26.5**	**+1.0**
FDMO	**Fiordimonte**	**0.52**	**341**	Pg	**Pg**	**22 53 18.2**	**-0.5**
FDMO				Sg	**Sg**	**22 53 26.5**	**+1.0**
	6µm,0.3s						
FDMO	**Fiordimonte**	**0.52**	**341**	Pg	**Pg**	**22 53 18.2**	**-0.5**
FDMO				Sg	**Sg**	**22 53 26.5**	**+1.0**
	6µm,0.3s						
PTQR	**Pietraquaria**	**0.52**	**173**	P	**Pg**	**22 53 17.5**	**-1.1**
PTQR	**Pietraquaria**	**0.52**	**173**	Pg	**Pg**	**22 53 17.5**	**-1.1**
PTQR	**Pietraquaria**	**0.52**	**173**	Pg	**Pg**	**22 53 17.5**	**-1.1**
CESX	**Cesi**	**0.55**	**277**	P	**Pg**	**22 53 18.4**	**-0.7**
CESX				S	**Sg**	**22 53 27.1**	**+0.8**
CESX	**Cesi**	**0.55**	**277**	Pg	**Pg**	**22 53 18.4**	**-0.7**
CESX				Sg	**Sg**	**22 53 26.5**	**+0.2**
CESX	**Cesi**	**0.55**	**277**	Pg	**Pg**	**22 53 18.4**	**-0.7**
CESX				Sg	**Sg**	**22 53 26.5**	**+0.2**
CESX				S	**Sg**	**22 53 27.1**	**+0.8**
CESI	**CESI - Serrava**	**0.55**	**327**	P	**Pg**	**22 53 18.9**	**-0.4**
CESI				S	**Sg**	**22 53 28.1**	**+1.5**
CESI	**CESI - Serrava**	**0.55**	**327**	Pg	**Pg**	**22 53 18.9**	**-0.4**
CESI				Sg	**Sg**	**22 53 27.6**	**+1.1**
CESI	**CESI - Serrava**	**0.55**	**327**	Pg	**Pg**	**22 53 18.9**	**-0.4**
CESI				Sg	**Sg**	**22 53 27.6**	**+1.1**
CESI				S	**Sg**	**22 53 28.0**	**+1.5**
CERT	**Cerreto**	**0.64**	**203**	P	**Pg**	**22 53 19.7**	**-1.2**
CERT	**Cerreto**	**0.64**	**203**	Pg	**Pg**	**22 53 19.7**	**-1.2**
	6µm,0.4s						
CERT	**Cerreto**	**0.64**	**203**	Pg	**Pg**	**22 53 19.7**	**-1.2**
	6µm,0.4s						
MTCE	**Montecelio**	**0.67**	**220**	P	Pg	22 53 16.2	-5.2
MTCE				S	**Sb**	**22 53 33.1**	**+0.9**
MTCE	**Montecelio**	**0.67**	**220**	Pg	**Pg**	**22 53 20.1**	**-1.4**
MTCE	**Montecelio**	**0.67**	**220**	P	Pg	22 53 16.2	-5.2
MTCE	**Montecelio**	**0.67**	**220**	Pg	**Pg**	**22 53 20.1**	**-1.4**
MTCE				S	**Sb**	**22 53 33.2**	**+0.9**
INTR	**Introdacqua**	**0.69**	**140**	P	**Pg**	**22 53 20.3**	**-1.5**
INTR				S	**Sg**	**22 53 30.2**	**-0.5**
INTR	**Introdacqua**	**0.69**	**140**	Pg	**Pg**	**22 53 20.3**	**-1.5**
INTR				Sg	**Sg**	**22 53 30.2**	**-0.5**
	4µm,0.5s						
INTR	**Introdacqua**	**0.69**	**140**	Pg	**Pg**	**22 53 20.3**	**-1.5**
INTR				Sg	**Sg**	**22 53 30.2**	**-0.5**
	4µm,0.5s						
GUMA	**Gualdo di Mace**	**0.69**	**41**	Pg	Pg	22 53 18.5	-3.4
GUMA				Sg	**Sg**	**22 53 27.2**	**-3.7**
	29µm,0.4s						
ASSB	**Assisi San Ben**	**0.70**	**316**	Pg	**Pg**	**22 53 21.3**	**-0.7**
ASSB				Sg	**Sg**	**22 53 31.6**	**+0.6**
	5µm,0.5s						
ASSB	**Assisi San Ben**	**0.70**	**316**	Pg	**Pg**	**22 53 21.3**	**-0.7**
ASSB				Sg	**Sg**	**22 53 31.6**	**+0.6**
	5µm,0.5s						
VVLD	**Villa Vallelon**	**0.71**	**161**	P	**Pg**	**22 53 20.6**	**-1.6**
VVLD	**Villa Vallelon**	**0.71**	**161**	Pg	**Pg**	**22 53 20.6**	**-1.6**
	5µm,0.9s						
VVLD	**Villa Vallelon**	**0.71**	**161**	Pg	**Pg**	**22 53 20.6**	**-1.6**
	5µm,0.9s						
GUAR	**Guarcino**	**0.75**	**180**	P	**Pg**	**22 53 21.7**	**-1.2**
GUAR	**Guarcino**	**0.75**	**180**	Pg	**Pg**	**22 53 21.7**	**-1.2**
GUAR	**Guarcino**	**0.75**	**180**	Pg	**Pg**	**22 53 21.7**	**-1.2**
SNTG	**Esanatoglia**	**0.77**	**339**	P	**Pg**	**22 53 22.4**	**-0.8**
SNTG				S	**Sg**	**22 53 34.0**	**+0.8**
SNTG	**Esanatoglia**	**0.77**	**339**	Pg	**Pg**	**22 53 22.5**	**-0.8**
SNTG	**Esanatoglia**	**0.77**	**339**	Pg	**Pg**	**22 53 22.5**	**-0.8**
SNTG				S	**Sg**	**22 53 34.0**	**+0.8**
LPEL	**Lama dei Pelig**	**0.81**	**127**	Pg	**Pg**	**22 53 22.1**	**-2.0**
LPEL				Sg	**Sg**	**22 53 33.6**	**-1.1**
	2µm,0.2s						
LPEL	**Lama dei Pelig**	**0.81**	**127**	Pg	**Pg**	**22 53 22.1**	**-2.0**
LPEL				Sg	**Sg**	**22 53 33.6**	**-1.1**
	2µm,0.2s						
CAFR	**Castel Frentan**	**0.82**	**112**	Pg	**Pg**	**22 53 23.2**	**-1.2**
	4µm,0.3s						
CAFR	**Castel Frentan**	**0.82**	**112**	Pg	**Pg**	**22 53 23.2**	**-1.2**
	4µm,0.3s						
CING	**Cingoli**	**0.84**	**354**	P	**Pg**	**22 53 23.8**	**-0.9**
CING				S	**Sb**	**22 53 37.6**	**+0.4**
CING	**Cingoli**	**0.84**	**354**	Pg	**Pg**	**22 53 23.8**	**-0.9**
	4µm,0.5s						
CING	**Cingoli**	**0.84**	**354**	Pg	**Pg**	**22 53 23.8**	**-0.9**
	4µm,0.5s						
CING				S	**Sb**	**22 53 37.6**	**+0.4**
RMP	**Rome, Mte Porz**	**0.86**	**212**	Pg	**Pg**	**22 53 23.5**	**-1.6**
	6µm,1.1s						
RMP	**Rome, Mte Porz**	**0.86**	**212**	Pg	**Pg**	**22 53 23.5**	**-1.6**
	6µm,1.1s						
POFI	**Posta Fibreno**	**0.87**	**160**	Pg	**Pg**	**22 53 23.9**	**-1.5**
POFI	**Posta Fibreno**	**0.87**	**160**	Pg	**Pg**	**22 53 23.9**	**-1.5**
SDI	**San Donato**	**0.91**	**156**	Pg	**Pg**	**22 53 24.0**	**-2.0**
SDI	**San Donato**	**0.91**	**156**	Pg	**Pg**	**22 53 24.0**	**-2.0**
MURB	**Monte Urbino**	**0.93**	**321**	Pg	**Pg**	**22 53 25.7**	**-0.7**
	6µm,0.3s						
MURB	**Monte Urbino**	**0.93**	**321**	Pg	**Pg**	**22 53 25.7**	**-0.7**
	6µm,0.3s						
MGAB	**Montegabbione**	**0.96**	**293**	Pg	**Pg**	**22 53 26.1**	**-0.9**
MGAB	**Montegabbione**	**0.96**	**293**	Pg	**Pg**	**22 53 26.1**	**-0.9**
GIUL	**Giuliano Di Ro**	**0.98**	**183**	Pg	**Pg**	**22 53 25.7**	**-1.7**
GIUL	**Giuliano Di Ro**	**0.98**	**183**	Pg	**Pg**	**22 53 25.7**	**-1.7**
ARVD	**Arcevia**	**0.99**	**344**	Pg	**Pg**	**22 53 26.5**	**-1.2**
	3µm,0.5s						
ARVD	**Arcevia**	**0.99**	**344**	Pg	**Pg**	**22 53 26.5**	**-1.2**
	3µm,0.5s						
AOI	**Ancona**	**1.03**	**12**	Pg	**Pg**	**22 53 27.2**	**-1.1**
	2µm,0.5s						
AOI	**Ancona**	**1.03**	**12**	Pg	**Pg**	**22 53 27.2**	**-1.1**
	2µm,0.5s						
RNI2	**Rionero Sannit**	**1.04**	**143**	Pg	**Pg**	**22 53 26.8**	**-1.8**
RNI2	**Rionero Sannit**	**1.04**	**143**	Pg	**Pg**	**22 53 26.8**	**-1.8**
CERA	**Filignano**	**1.08**	**151**	Pg	**Pg**	**22 53 26.9**	**-2.4**
	3µm,1.1s						
CERA	**Filignano**	**1.08**	**151**	Pg	**Pg**	**22 53 26.9**	**-2.4**
	3µm,1.1s						
SACS	**San Casciano d**	**1.08**	**287**	Pg	**Pg**	**22 53 28.3**	**-1.0**
	2µm,0.8s						
TOLF	**Tolfa**	**1.09**	**244**	Pg	**Pg**	**22 53 27.7**	**-1.7**
TOLF	**Tolfa**	**1.09**	**244**	Pg	**Pg**	**22 53 27.7**	**-1.7**
LATE	**Laterza**	**1.12**	**274**	Pg	**Pg**	**22 53 28.8**	**-1.3**
	3µm,0.5s						
LATE	**Laterza**	**1.12**	**274**	Pg	**Pg**	**22 53 28.8**	**-1.3**
	3µm,0.5s						
MIDA	**Miranda**	**1.14**	**142**	Pg	Pg	22 53 27.6	-2.8
MIDA	**Miranda**	**1.14**	**142**	Pg	Pg	22 53 27.6	-2.8
PIEI	**Pieia**	**1.15**	**330**	Pn	**Pg**	**22 53 29.1**	**-1.5**
	3µm,1.1s						
PIEI	**Pieia**	**1.15**	**330**	Pn	**Pg**	**22 53 29.1**	**-1.5**
	3µm,1.1s						
FRES	**Fresagrandinar**	**1.15**	**119**	Pg	Pg	22 53 28.2	-2.5
	3µm,1.1s						
FRES	**Fresagrandinar**	**1.15**	**119**	Pg	Pg	22 53 28.2	-2.5
	3µm,1.1s						
BADI	**Badiali**	**1.25**	**321**	Pn	**Pn**	**22 53 31.8**	**-0.8**
	4µm,0.9s						
BADI	**Badiali**	**1.25**	**321**	Pn	**Pn**	**22 53 31.8**	**-0.8**
	4µm,0.9s						
CAFI	**Castiglion Fio**	**1.27**	**309**	Pn	**Pn**	**22 53 31.8**	**-1.1**
	2µm,0.8s						
CAFI	**Castiglion Fio**	**1.27**	**309**	Pn	**Pn**	**22 53 31.8**	**-1.1**
	2µm,0.8s						
PARC	**Parchiule**	**1.36**	**325**	Pn	**Pn**	**22 53 33.8**	**-0.4**
	3µm,0.7s						
PARC	**Parchiule**	**1.36**	**325**	Pn	**Pn**	**22 53 33.8**	**-0.4**
	3µm,0.7s						
ARCI	**Arcidosso**	**1.39**	**283**	Pn	**Pn**	**22 53 34.2**	**-0.5**
ARCI	**Arcidosso**	**1.39**	**283**	Pn	**Pn**	**22 53 34.2**	**-0.5**
PESA	**Pesaro**	**1.44**	**346**	Pn	**Pn**	**22 53 35.3**	**0.0**
	4µm,0.8s						
PESA	**Pesaro**	**1.44**	**346**	Pn	**Pn**	**22 53 35.3**	**0.0**
	4µm,0.8s						
CRE	**Caprese Michel**	**1.47**	**318**	Pn	**Pn**	**22 53 34.6**	**-1.2**
CRE	**Caprese Michel**	**1.47**	**318**	Pn	**Pn**	**22 53 34.6**	**-1.2**
MAON	**Monte Argentar**	**1.62**	**267**	Pn	**Pn**	**22 53 36.6**	**-1.1**
MAON	**Monte Argentar**	**1.62**	**267**	Pn	**Pn**	**22 53 36.6**	**-1.1**
ASQU	**Asqua**	**1.68**	**319**	Pn	**Pn**	**22 53 37.4**	**-1.2**
	1µm,1.0s						
ASQU	**Asqua**	**1.68**	**319**	Pn	**Pn**	**22 53 37.4**	**-1.2**
	1µm,1.0s						
SFI	**Santa Sofia**	**1.73**	**322**	Pn	**Pn**	**22 53 38.3**	**-1.1**
	2µm,1.2s						
SFI	**Santa Sofia**	**1.73**	**322**	Pn	**Pn**	**22 53 38.3**	**-1.1**
	2µm,1.2s						
CSNT	**Castellina Chi**	**1.75**	**303**	Pn	**Pn**	**22 53 39.0**	**-0.6**
CSNT	**Castellina Chi**	**1.75**	**303**	Pn	**Pn**	**22 53 39.0**	**-0.6**
CASP	**Castiglione de**	**1.82**	**279**	Pn	**Pn**	**22 53 39.7**	**-0.9**
CASP	**Castiglione de**	**1.82**	**279**	Pn	**Pn**	**22 53 39.7**	**-0.9**
MS1	**Monte Sant'Ang**	**2.12**	**112**	*e*Pn	**Pn**	**22 53 45.7**	**+1.0**
NVLJ	**Novalja**	**2.32**	**29**	*e*Pn	**Pn**	**22 53 46.7**	**-0.6**
NVLJ				Sn	**Sn**	**22 54 15.5**	**-0.6**
NVLJ	**Novalja**	**2.32**	**29**	*e*Pn	**Pn**	**22 53 46.7**	**-0.6**
NVLJ				Sn	**Sn**	**22 54 15.5**	**-0.6**
MAIM	**Mastiano**	**2.48**	**305**	P	**Pn**	**22 53 49.5**	**0.0**
CRDM	**Cardoso**	**2.55**	**307**	P	**Pn**	**22 53 49.7**	**-0.8**
CDT	**Castel del Mon**	**2.65**	**122**	*e*Pn	**Pn**	**22 53 52.3**	**+0.4**
CDT				*e*Sn	**Sn**	**22 54 26.0**	**+1.6**
ADRI	**Adria, Italy**	**2.67**	**340**	⇑*e*Pn	**Pn**	**22 53 53.3**	**+1.2**
ADRI	**Adria, Italy**	**2.67**	**340**	⇑*e*Pn	**Pn**	**22 53 53.3**	**+1.2**
VLC	**Villacollemand**	**2.68**	**308**	*e*Pn	**Pn**	**22 53 51.9**	**-0.4**
VLC				*e*Sn	**Sn**	**22 54 25.0**	**-0.2**
VLC	**Villacollemand**	**2.68**	**308**	*e*Pn	**Pn**	**22 53 51.9**	**-0.4**
VLC				*e*Sn	**Sn**	**22 54 25.0**	**-0.2**
VALM	**Valbona**	**2.87**	**310**	P	**Pn**	**22 53 54.3**	**-0.7**
BAI	**Bari**	**3.02**	**117**	*e*Pn	**Pn**	**22 53 57.5**	**+0.5**
BAI				*e*Sn	**Sn**	**22 54 35.1**	**+1.6**
SKDS	**Skadanscina**	**3.05**	**9**	*i* Pn	**Pn**	**22 53 56.6**	**-0.8**
SKDS				*e*Sn	**Sn**	**22 54 32.8**	**-1.4**
SKDS							
	comp=Z,96nm,0.4s						
SKDS	**Skadanscina**	**3.05**	**9**	*i* Pn	**Pn**	**22 53 56.6**	**-0.8**
SKDS				*e*Sn	**Sn**	**22 54 32.8**	**-1.4**
	comp=Z,96nm,0.4s						
GRAM	**Graiana**	**3.06**	**311**	P	**Pn**	**22 53 56.6**	**-1.1**
CODM	**Codolo**	**3.13**	**307**	P	**Pn**	**22 53 57.6**	**-0.9**
CUC	**Castrocucco**	**3.17**	**143**	*e*Pn	**Pn**	**22 53 59.9**	**+0.9**
CUC				S	**Sb**	**22 54 34.4**	**+3.2**
CUC	**Castrocucco**	**3.17**	**143**	*e*Pn	**Pn**	**22 53 59.9**	**+0.9**
TRI	**Trieste**	**3.18**	**6**	*i,e*Pn	**Pn**	**22 53 58.2**	**-1.0**
TRI	**Trieste**	**3.18**	**6**	*i,e*Pn	**Pn**	**22 53 58.2**	**-1.0**
PGF	**Pioggiola**	**3.19**	**272**	*e*Pn	**Pn**	**22 53 58.9**	**-0.5**
PGF				*e*Sn	**Sn**	**22 54 39.0**	**+1.2**
	comp=Z,21nm,0.4s						
PGF	**Pioggiola**	**3.19**	**272**	*e*Pn	**Pn**	**22 53 58.9**	**-0.5**
PGF				*e*Sn	**Sn**	**22 54 39.0**	**+1.2**
	comp=Z,11nm,0.4s						
STON	**Ston**	**3.25**	**83**	*i* Pn	**Pn**	**22 53 60.0**	**-0.1**
STON				Sn	**Sn**	**22 54 37.4**	**-1.7**
STON	**Ston**	**3.25**	**83**	*i* Pn	**Pn**	**22 53 59.9**	**-0.1**
STON				Sn	**Sn**	**22 54 37.3**	**-1.7**
BOJS	**Bojanci**	**3.27**	**25**	*i* Pn	**Pn**	**22 54 00.1**	**-0.3**
BOJS	**Bojanci**	**3.27**	**25**	*i* Pn	**Pn**	**22 54 00.1**	**-0.3**
MTLO	**Montello**	**3.39**	**345**	⇑*e*Pn	**Pn**	**22 54 02.0**	**0.0**
MTLO				*e*Sn	**Sn**	**22 54 41.4**	**-1.1**
MTLO	**Montello**	**3.39**	**345**	⇑*e*Pn	**Pn**	**22 54 02.0**	**0.0**
MTLO				*e*Sn	**Sn**	**22 54 41.4**	**-1.1**
JAVS	**Javornik**	**3.39**	**9**	*i* Pn	**Pn**	**22 54 01.4**	**-0.8**
JAVS				*e*Sn	**Sn**	**22 54 41.0**	**-1.9**
JAVS							
	comp=Z,240nm,0.8s						
JAVS	**Javornik**	**3.39**	**9**	*i* Pn	**Pn**	**22 54 01.4**	**-0.8**
JAVS				*e*Sn	**Sn**	**22 54 41.0**	**-1.9**
	comp=Z,240nm,0.8s						
VISS	**Visnje**	**3.44**	**18**	*i* Pn	**Pn**	**22 54 02.2**	**-0.5**
VISS	**Visnje**	**3.44**	**18**	*i* Pn	**Pn**	**22 54 02.2**	**-0.5**
SABO	**M.te Sabotino**	**3.44**	**3**	*i,e*Pn	**Pn**	**22 54 01.9**	**-0.9**
SABO	**M.te Sabotino**	**3.44**	**3**	*i,e*Pn	**Pn**	**22 54 02.0**	**-0.9**
CGRP	**Cima Grappa**	**3.51**	**342**	⇑*e*Pn	**Pn**	**22 54 03.8**	**-0.1**
CGRP				*e*Sn	**Sn**	**22 54 42.4**	**-3.5**
CGRP	**Cima Grappa**	**3.51**	**342**	⇑*e*Pn	**Pn**	**22 54 03.8**	**-0.1**
CGRP				*e*Sn	**Sn**	**22 54 42.3**	**-3.5**
VOY	**Vojsko**	**3.51**	**7**	*e*Pn	**Pn**	**22 54 03.1**	**-0.8**
VOY				*e*		22 54 03.8	
VOY				*e*Sn	**Sn**	**22 54 45.6**	**-0.2**
VOY	**Vojsko**	**3.51**	**7**	*e*Pn	**Pn**	**22 54 03.1**	**-0.8**
VOY				*e*Sn	**Sn**	**22 54 45.6**	**-0.2**
POLC	**Polcenigo**	**3.53**	**351**	*e*Pn	**Pn**	**22 54 03.9**	**-0.1**
COLI	**Coloredo**	**3.59**	**1**	⇓*e*Pn	**Pn**	**22 54 04.0**	**-0.8**
COLI	**Coloredo**	**3.59**	**1**	⇓*e*Pn	**Pn**	**22 54 04.0**	**-0.8**
DRE	**Drenchia**	**3.64**	**4**	⇑*e*Pn	**Pn**	**22 54 04.7**	**-0.9**
DRE	**Drenchia**	**3.64**	**4**	⇑*e*Pn	**Pn**	**22 54 04.7**	**-0.9**
MLNI	**Malnisio**	**3.64**	**352**	⇓*e*Pn	**Pn**	**22 54 05.1**	**-0.5**
MLNI	**Malnisio**	**3.64**	**352**	⇓*e*Pn	**Pn**	**22 54 05.1**	**-0.5**
DDS	**Dosso del Somm**	**3.67**	**336**	*e*Pn	**Pn**	**22 54 05.8**	**-0.3**
DDS	**Dosso del Somm**	**3.67**	**336**	*e*Pn	**Pn**	**22 54 05.8**	**-0.3**
BUA	**Buia**	**3.68**	**358**	Pn	**Pn**	**22 54 05.7**	**-0.3**
BUA	**Buia**	**3.68**	**358**	Pn	**Pn**	**22 54 05.7**	**-0.3**
BAD	**Bernadia**	**3.69**	**359**	⇓*e*Pn	**Pn**	**22 54 05.4**	**-0.9**
BAD	**Bernadia**	**3.69**	**359**	⇓*e*Pn	**Pn**	**22 54 05.4**	**-0.9**
CADS	**Cadrg**	**3.70**	**5**	*i* Pn	**Pn**	**22 54 05.5**	**-0.9**
CADS				*e*Sn	**Sn**	**22 54 48.1**	**-2.2**
CADS							
	comp=Z,85nm,0.6s						
CADS	**Cadrg**	**3.70**	**5**	*i* Pn	**Pn**	**22 54 05.5**	**-0.9**
CADS				*e*Sn	**Sn**	**22 54 48.1**	**-2.2**
	comp=Z,85nm,0.6s						
MPRI	**Monte Prat**	**3.71**	**356**	⇓*e*Pn	**Pn**	**22 54 06.0**	**-0.4**
MPRI				*e*Sn	**Sn**	**22 54 48.7**	**-1.8**
MPRI	**Monte Prat**	**3.71**	**356**	⇓*e*Pn	**Pn**	**22 54 06.1**	**-0.4**
MPRI				*e*Sn	**Sn**	**22 54 48.7**	**-1.8**
VINO	**Villanova**	**3.71**	**360**	*e*Pn	**Pn**	**22 54 05.6**	**-1.0**
VINO	**Villanova**	**3.71**	**360**	*e*Pn	**Pn**	**22 54 05.6**	**-1.0**
BOO	**Bordano**	**3.78**	**358**	⇓*e*Pn	**Pn**	**22 54 06.6**	**-0.9**
BOO	**Bordano**	**3.78**	**358**	⇓*e*Pn	**Pn**	**22 54 06.6**	**-0.9**
PANI	**Panarotta**	**3.79**	**338**	*e*Pn	**Pn**	**22 54 08.2**	**+0.4**
PANI	**Panarotta**	**3.79**	**338**	*e*Pn	**Pn**	**22 54 08.2**	**+0.4**
CSO	**Casso**	**3.80**	**350**	⇑*e*Pn	**Pn**	**22 54 07.0**	**-0.8**
CSO	**Casso**	**3.80**	**350**	⇑*e*Pn	**Pn**	**22 54 07.0**	**-0.8**
CIMO	**Cimolais**	**3.82**	**351**	⇓*e*Pn	**Pn**	**22 54 07.2**	**-0.8**
CIMO	**Cimolais**	**3.82**	**351**	⇓*e*Pn	**Pn**	**22 54 07.2**	**-0.8**
HCY	**Herceg Novi**	**3.83**	**90**	⇓*i* Pn	**Pn**	**22 54 08.5**	**+0.4**
HCY				*e*Sn	**Sn**	**22 54 55.8**	**+2.3**
HCY	**Herceg Novi**	**3.83**	**90**	⇓*i* Pn	**Pn**	**22 54 08.5**	**+0.4**
HCY				*e*Sn	**Sn**	**22 54 55.8**	**+2.3**
AGOR	**Agordo**	**3.85**	**347**	*e*Pn	**Pn**	**22 54 08.2**	**-0.2**
BRY	**Bratogost**	**3.87**	**83**	⇓*i* Pn	**Pn**	**22 54 09.9**	**+1.2**
BRY				*e*Sn	**Sn**	**22 54 56.2**	**+1.7**
BRY	**Bratogost**	**3.87**	**83**	⇓*i* Pn	**Pn**	**22 54 09.9**	**+1.2**
BRY				*e*Sn	**Sn**	**22 54 56.2**	**+1.7**
FUSE	**Fusea**	**3.88**	**357**	⇓*e*Pn	**Pn**	**22 54 07.9**	**-0.9**
FUSE

TIR	Tirane	5.03	102	ePn		Pn	22 54 23.9	-0.7	
	comp=Z,33nm,0.4s								
TIR				eSn		Sn	22 55 20.5	-2.5	
TIR	Tirane	5.03	102	ePn		Pn	22 54 23.9	-0.7	
	comp=Z,33nm,0.4s								
TIR	Tirane	5.03	102	*i* P		Pn	22 54 24.9	+0.3	
TIR				eS		Sn	22 55 20.5	-2.5	
MOTA	Moosalm	5.05	343	⇑*i* Pn		Pn	22 54 26.5	+1.4	
	SNR=10								
MOTA	Moosalm	5.05	343	Pn		Pn	22 54 26.5	+1.4	
	SNR=10								
LMR	La Mourre	5.06	281	ePn		Pn	22 54 24.1	-0.9	
LMR	La Mourre	5.06	281	ePn		Pn	22 54 24.1	-0.9	
DIVS	Divibare	5.11	70	ePn		Pn	22 54 25.5	-0.3	
DIVS				eSn		Sn	22 55 20.9	-4.3	
DIVS	Divibare	5.11	70	ePn		Pn	22 54 25.5	-0.3	
DIVS				eSn		Sn	22 55 20.9	-4.3	
IVAS	Ivanjica	5.11	76	ePn		Pn	22 54 26.2	+0.4	
IVAS				eSn		Sn	22 55 21.1	-4.1	
IVAS	Ivanjica	5.11	76	ePn		Pn	22 54 26.2	+0.4	
IVAS				eSn		Sn	22 55 21.1	-4.1	
RJOB	Jochberg	5.21	356	ePn		Pn	22 54 27.9	+0.8	
RJOB				eSn		Sn	22 55 28.3	+0.8	
MBDF	Montbardon	5.23	297	eP		Pn	22 54 28.1	+0.6	
MBDF	Montbardon	5.23	297	eP		Pn	22 54 28.1	+0.6	
PKSM	Moragy	5.29	44	⇓epPn		Pn	22 54 33.8	+5.6	
DAVA	Damuels	5.33	334	⇑*i* Pn		Pn	22 54 30.3	+1.3	
	SNR=12								
DAVA	Damuels	5.33	334	Pn		Pn	22 54 30.3	+1.3	
	SNR=12								
MOA	Molln	5.35	7	⇓*i* Pn		Pn	22 54 28.3	-0.7	
MOA	Molln	5.35	7	Pn		Pn	22 54 28.3	-0.7	
PHP	Peshkopia	5.37	97	*i* P		Pn	22 54 30.4	+1.1	
PHP	Peshkopia	5.37	97	P		Pn	22 54 30.6	+1.3	
PHP	Peshkopia	5.37	97	P		Pn	22 54 30.6	+1.3	
TRUS	Trudelj	5.43	70	ePn		Pn	22 54 30.3	+0.2	
GRUS	Gruza	5.57	74	ePn		Pn	22 54 32.2	+0.2	
GRUS				eSn		Sn	22 55 32.8	-3.6	
LPG	La Plagne	5.58	304	eP		Pn	22 54 34.8	+2.4	
LPG				eSn		Sn	22 55 34.4	-2.6	
	comp=Z,24nm,0.7s								
LPL	La Plagne	5.60	304	eP		Pn	22 54 34.4	+1.8	
LPL				eSn		Sn	22 55 33.5	-3.9	
	comp=Z,21nm,0.6s								
SOP	Sopron	5.63	23	⇓epPn		Pn	22 54 34.4	+1.6	
KEK	Kerkira	5.65	118	P		Pn	22 54 33.8	+0.7	
CONA	Conrad Observa	5.68	18	⇑*i* Pn		Pn	22 54 33.2	-0.4	
	SNR=14								
CONA	Conrad Observa	5.68	18	Pn		Pn	22 54 33.2	-0.4	
	SNR=14								
SELS	Selova	5.77	81	ePn		Pn	22 54 35.0	+0.2	
PKST	T"'s	5.79	34	ePn		Pn	22 54 34.0	-1.0	
SMRF	Simiane la Rot	5.83	287	eP		Pn	22 54 36.7	+1.0	
ORIF	Oris-en-Rattie	5.89	296	eP		Pn	22 54 39.0	+2.5	
ORIF				eSn		Sn	22 55 40.9	-3.4	
	comp=Z,20nm,0.8s								
PKS6	Bocsa	6.03	46	ePn		Pn	22 54 35.4	-2.9	
PKSG		6.04	35	epPn		Pn	22 54 44.0	+5.6	
IGT	Igoumenitsa	6.10	117	P		Pn	22 54 40.2	+0.9	
NEST	Nestorio	6.18	108	P		Pn	22 54 42.1	+1.6	
BARS	Barje	6.27	85	ePn		Pn	22 54 42.4	+0.8	
GEC2	GERESS Array S	6.31	2	eP		Pn	22 54 41.7	-0.6	
GEC2				*e*			22 55 51.9		
GEC2	GERESS Array S	6.31	2	ePn		Pn	22 54 41.7	-0.6	
GEC2				eSn		Sn	22 55 51.9	-2.8	
GERES	GERESS Array B	6.31	2	Pn		Pn	22 54 41.6	-0.6	
	comp=Z,0.7nm,0.3s,baz=179,slow=13,SNR=25								
GERES				Sn		Sn	22 55 51.8	-2.9	
	comp=Z,2.9nm,0.3s,baz=169,slow=22,SNR=9.5								
JAN	Janina	6.38	114	P		Pn	22 54 44.9	+1.7	
BUD	Budapest	6.38	37	ePb		Pb	22 55 02.4	+2.3	
FELD	Feldberg im Sc	6.52	327	P		Pn	22 54 44.5	-0.7	
CABF	La Chapelle	6.57	311	ePn		Pn	22 54 46.8	+0.9	
KHC	Kasperske Hory	6.59	1	eP		Pn	22 54 45.4	-0.7	
KHC				*e*			22 55 57.6		
KHC	Kasperske Hory	6.59	1	ePn		Pn	22 54 44.5	-1.6	
	comp=Z,9.5nm,0.8s								
KHC				eSn		Sn	22 55 57.9	-3.7	
KHC	Kasperske Hory	6.59	1	ePN		Pn	22 54 45.4	-0.7	
KHC				ex		x	22 54 59.0		
KHC				eSN		Sn	22 55 57.6	-4.0	
WET	Wettzell	6.61	357	eSn		Sn	22 55 56.6	-5.4	
SMOL	Smolenice	6.63	24	eP		Pn	22 54 48.5	+1.9	
SMOL	Smolenice	6.63	24	ePN		Pn	22 54 48.5	+1.9	
LOMF	Lomont	6.66	318	P		Pn	22 54 47.1	+0.1	
LOMF	Lomont	6.66	318	P		Pn	22 54 47.1	+0.1	
LOMF	Lomont	6.66	318	P		Pn	22 54 47.1	+0.1	
VIVF	Saint-Julien-l	6.68	293	ePn		Pn	22 54 48.1	+0.8	
BZS	Buzias	6.72	60	⇑P		Pn	22 54 49.5	+1.7	
BZS	Buzias	6.72	60	⇑*i* P		Pn	22 54 49.5	+1.7	
BZS	Buzias	6.72	60	⇑*i* P		Pn	22 54 49.5	+1.7	
LKD2	Lefkada island	6.72	121	P		Pn	22 54 49.8	+1.9	
BFO	Black Forest	6.77	331	eP		Pn	22 54 48.1	-0.4	
BFO				*e*			22 55 59.8		
BFO	Black Forest	6.77	331	ePn		Pn	22 54 48.1	-0.4	
BFO				eSn		Sn	22 55 59.8	-6.1	
BFO	Black Forest	6.77	331	ePn		Pn	22 54 47.5	-1.0	
	comp=Z,7.4nm,0.7s								
BFO				eSn		Sn	22 56 04.6	-1.3	
STU	Stuttgart	6.87	337	eP		Pn	22 54 47.0	-2.8	
STU				pmax		pmax			
	comp=Z,9.0nm,0.6s								
STU	Stuttgart	6.87	337	ePn		Pn	22 54 47.0	-2.8	
	comp=Z,9.0nm,0.6s								
MOF	Molkenrain	6.87	323	P		Pn	22 54 50.1	+0.1	
MOF	Molkenrain	6.87	323	P		Pn	22 54 50.1	+0.1	
MOF	Molkenrain	6.87	323	P		Pn	22 54 50.1	+0.1	
ZAPS	Zavoj	6.88	81	ePn		Pn	22 54 51.4	+1.3	
ZAPS				eSn		Sn	22 56 02.0	-6.7	
TREC	Trest	6.92	12	eP		Pn	22 54 50.4	-0.2	
TREC				*e*			22 56 06.7		
TREC	Trest	6.92	12	ePN		Pn	22 54 50.4	-0.2	
TREC				eSN		Sn	22 56 06.7	-2.9	
HINF	Hinteralfeld	6.97	321	ePn		Pn	22 54 51.2	-0.1	
HINF				eSn		Sn	22 56 07.8	-3.2	
	comp=Z,78nm,0.9s								
PSZ	Piszkesteto	7.10	39	⇓epPn		Pn	22 54 55.6	+2.5	
VYHS	Vyhne	7.10	31	eP		Pn	22 54 53.2	+0.2	
VYHS				*e*			22 56 05.6		
VYHS	Vyhne	7.10	31	ePN		Pn	22 54 53.2	+0.2	
VYHS				eSN		Sn	22 56 05.6	-8.5	
VYHS				eSG		Sg	22 57 03.0	+6.5	
ECH	Echery	7.14	325	eP		Pn	22 54 52.4	-1.2	
ECH				*e*			22 56 11.9		
ECH				pmax		pmax			
	comp=Z,13nm,0.8s								
ECH	Echery	7.14	325	ePn		Pn	22 54 52.4	-1.2	
	comp=Z,13nm,0.8s								
ECH				eSn		Sn	22 56 11.9	-3.1	
ECH	Echery	7.14	325	P		Pn	22 54 52.7	-0.9	
VRAC	Vranov	7.14	18	Pn		Pn	22 54 52.6	-1.0	
	comp=Z,0.4nm,0.3s,baz=210,slow=13,SNR=4.1								
VRAC				Sn		Sn	22 56 13.8	-1.3	
	comp=Z,0.6nm,0.3s,baz=282,slow=19,SNR=2.8								
THL	Klokotos Trika	7.21	111	P		Pn	22 54 56.2	+1.6	
KFL	Anninata	7.22	125	P		Pn	22 54 57.4	+2.7	
CDF	Champ du Feu	7.24	326	ePn		Pn	22 54 54.0	-1.1	
CDF				eSn		Sn	22 56 14.7	-3.0	
	comp=Z,42nm,0.5s								
ROTZ	Rotzenmuhle	7.27	354	ePn		Pn	22 54 55.6	+0.3	
ROTZ				eSn		Sn	22 56 10.2	-7.9	
KKB	Krupnik	7.28	92	*i* P		Pn	22 54 57.6	+2.0	
VTS	Vitosha	7.30	86	⇑P		Pn	22 54 58.9	+3.0	
VTS	Vitosha	7.30	86	⇑*i* P		Pn	22 54 58.9	+3.0	
VTS	Vitosha	7.30	86	*i* P		Pn	22 54 59.0	+3.0	
HAU	Haudompre	7.35	320	ePn		Pn	22 54 55.5	-0.9	
HAU				eSn		Sn	22 56 15.4	-4.7	
	comp=Z,70nm,0.7s								
EVR	Evrytania	7.39	116	P		Pn	22 54 59.1	+1.9	
KEST	Kesra	7.47	206	ePn		Pn	22 55 02.9	+4.7	
KEST	Kesra	7.47	206	Pn		Pn	22 55 01.2	+3.0	
	comp=Z,0.2nm,0.3s,baz=286,slow=3.0,SNR=14								
MANZ	Manzenberg	7.49	354	ePn		Pn	22 54 58.5	+0.1	
MANZ				eSn		Sn	22 56 16.0	-7.7	
PRU	Pruhonice	7.50	6	eP		Pn	22 54 58.0	-0.4	
PRU				*e*			22 56 19.2		
PRU	Pruhonice	7.50	6	ePN		Pn	22 54 58.0	-0.4	
PRU				eSN		Sn	22 56 19.2	-4.5	
LANF	Langenberg	7.50	331	P		Pn	22 54 58.1	-0.4	
LANF	Langenberg	7.50	331	P		Pn	22 54 58.1	-0.4	
LANF	Langenberg	7.50	331	P		Pn	22 54 58.1	-0.4	
THEF	They Montfort	7.67	320	P		Pn	22 54 59.6	-1.3	
THEF	They Montfort	7.67	320	P		Pn	22 54 59.6	-1.3	
AGG	Agios Georgios	7.69	114	P		Pn	22 55 03.1	+2.0	
NKC	Novy Kostel	7.72	356	eP		Pn	22 55 01.5	0.0	
NKC				*e*			22 56 26.4		
NKC	Novy Kostel	7.72	356	ePN		Pn	22 55 01.5	0.0	
NKC				eSN		Sn	22 56 26.4	-2.8	
EFP	Efpalio	7.73	119	P		Pn	22 55 03.7	+2.1	
WERN	Wernitzgruen	7.78	356	eSn		Sn	22 56 25.5	-5.2	
MMB	Musomiste	7.80	93	*i* P		Pn	22 55 03.8	+1.1	
MORC	Moravsky Berou	7.81	21	⇓P		Pn	22 55 04.1	+1.3	
MORC	Moravsky Berou	7.81	21	ePn		Pn	22 55 01.5	-1.2	
	comp=Z,3.8nm,0.7s								
MORC	Moravsky Berou	7.81	21	⇓*i* P		Pn	22 55 04.1	+1.3	
MORC	Moravsky Berou	7.81	21	P		Pn	22 55 04.1	+1.3	
KRLC	Kraliky	7.91	16	ePN		Pn	22 55 03.8	-0.3	
KRLC				eSN		Sn	22 56 29.4	-4.5	
KRLC	Kraliky	7.91	16	Pn		Pn	22 55 03.8	-0.3	
SMF	Signal de Mont	7.91	304	eSn		Sn	22 56 29.0	-4.9	
	comp=Z,16nm,0.6s								
DRGR		7.93	54	⇓P		Pn	22 55 05.0	+0.5	
DRGR		7.93	54	⇓*i* P		Pn	22 55 05.0	+0.5	
DRGR		7.93	54	P		Pn	22 55 05.0	+0.5	
WERD	Werda	7.94	355	eSn		Sn	22 56 33.2	-1.5	
PGB	Panagyurishte	8.01	86	eP		Pn	22 55 07.5	+1.9	
PAGF	Fort de Pagny	8.03	321	ePn		Pn	22 55 06.4	+0.6	
PAGF	Fort de Pagny	8.03	321	ePn		Pn	22 55 06.4	+0.6	
PVCC	Panska Ves	8.04	6	eP		Pn	22 55 05.2	-0.6	
PVCC				*e*			22 56 33.1		
PVCC	Panska Ves	8.04	6	ePN		Pn	22 55 05.2	-0.6	
PVCC				eSN		Sn	22 56 33.1	-3.9	
PVCC	Panska Ves	8.04	6	Pn		Pn	22 55 05.2	-0.6	
DPC	Dobruska-Polom	8.08	14	eP		Pn	22 55 05.5	-1.0	
DPC	Dobruska-Polom	8.08	14	ePN		Pn	22 55 05.5	-1.0	
DPC	Dobruska-Polom	8.08	14	Pn		Pn	22 55 05.5	-1.0	
MOX	Moxa	8.19	352	eP		Pn	22 55 07.5	-0.5	
MOX				*e*			22 56 35.5		
MOX	Moxa	8.19	352	ePn		Pn	22 55 07.5	-0.5	
MOX				eSn		Sn	22 56 35.5	-5.3	
MOX	Moxa	8.19	352	eP		Pn	22 55 07.5	-0.5	
LOR	Lormes	8.21	308	ePn		Pn	22 55 08.1	-0.1	
LOR				eSn		Sn	22 56 37.5	-3.8	
	comp=Z,9.0nm,0.4s								
LOR	Lormes	8.21	308	ePn		Pn	22 55 08.1	-0.1	
SSF	Saint Saulge	8.31	306	ePn		Pn	22 55 09.4	-0.2	
SSF	Saint Saulge	8.31	306	ePn		Pn	22 55 09.4	-0.2	
MEZF	Maizieres J'vi	8.31	319	ePn		Pn	22 55 10.1	+0.4	
MEZF				eSn		Sn	22 56 40.3	-3.6	
	comp=Z,29nm,0.9s								
MEZF	Maizieres J'vi	8.31	319	ePn		Pn	22 55 10.1	+0.4	
BRG	Berggiesshubel	8.35	3	e(SN)		Pb	22 55 32.2	-1.2	
BRG				*e*		Sn	22 56 43.2	-1.4	
BGF	Bois d'Agland	8.49	302	eSn		Sn	22 56 43.4	-4.7	
	comp=Z,12nm,0.6s								
CAF	Calviac	8.49	290	eP		Pn	22 55 13.2	+1.1	
CAF	Calviac	8.49	290	eP		Pn	22 55 13.2	+1.1	
RZN	Rozhen	8.52	92	*i* P		Pn	22 55 13.6	+1.0	
CRVS	Cervenica-Dubn	8.54	39	eP		Pn	22 55 13.5	+0.8	
CRVS				MLR		MLR			
	comp=Z,100nm,3.4s								
CRVS	Cervenica-Dubn	8.54	39	ePN		Pn	22 55 13.5	+0.8	
CRVS				ePG		Pg	22 55 55.4	+3.5	
CRVS				eSN		Sn	22 56 36.0	-13	
CRVS	Cervenica-Dubn	8.54	39	eP		Pn	22 55 13.5	+0.8	
	comp=Z,100nm,3.4s								
ARR	Arges	8.64	67	⇓*i* P		Pn	22 55 15.1	+0.9	
UZH	Uzhgorod	8.75	43	eP		Pn	22 55 17.8	+2.1	
UZH	Uzhgorod	8.75	43	eP		Pn	22 55 17.8	+2.1	
CLL	Collm	8.77	359	ePn		Pn	22 55 06.0	-10	
CLL				eSn		Sn	22 56 47.0	-8.1	
CLL				e(Sb)		Sg	22 57 38.0	-12	
CLL				eSg		Sg	22 57 55.0	+5.0	
TCF	Toulx Ste Croi	8.79	299	ePn		Pn	22 55 16.7	+0.5	
TCF	Toulx Ste Croi	8.79	299	ePn		Pn	22 55 16.7	+0.5	
KOLS	Kolonicke sedl	8.94	41	eP		Pn	22 55 19.0	+0.7	
KOLS				MLR		MLR			
	comp=Z,100nm,3.7s								
KOLS	Kolonicke sedl	8.94	41	ePN		Pn	22 55 19.0	+0.7	
KOLS	Kolonicke sedl	8.94	41	eP		Pn	22 55 19.0	+0.7	
	comp=Z,100nm,3.7s								
SZH	Strazhica	9.29	81	eP		Pn	22 55 24.2	+1.1	
MLR	Muntele Rosu	9.56	68	⇑*i* P		Pn	22 55 28.3	+1.4	
MLR	Muntele Rosu	9.56	68	⇑*i* P		Pn	22 55 28.3	+1.4	
KWP	Kalwaria Pacla	9.63	39	⇓P		Pn	22 55 27.6	-0.1	
KWP	Kalwaria Pacla	9.63	39	ePn		Pn	22 55 27.0	-0.7	
	comp=Z,8.5nm,0.9s								
KWP	Kalwaria Pacla	9.63	39	⇓*i* P		Pn	22 55 27.6	-0.1	
KWP	Kalwaria Pacla	9.63	39	⇓*i* P		Pn	22 55 27.6	-0.1	
PLOR	Plostina	10.13	66	⇑P		Pn	22 55 36.1	+1.5	
PLOR	Plostina	10.13	66	⇑*i* P		Pn	22 55 36.1	+1.5	
PLOR	Plostina	10.13	66	⇑*i* P		Pn	22 55 36.1	+1.5	
VRI	Vrincioaia	10.19	66	⇓*i* P		Pn	22 55 42.4	+7.1	
AKASG	Malin Array Be	13.62	48	P		Pn	22 56 23.9	+1.7	
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.3s								
AKASG	Malin Array Be	13.62	48	Pn		Pn	22 56 23.9	+1.7	
	comp=Z,0.5nm,0.3s,baz=234,slow=14,SNR=3.4								
BR131	Keskin Array S	15.57	94	ePn		Pn	22 56 47.3	-1.4	
	comp=Z,1.5nm,0.7s								
BRTR	Keskin Array B	15.57	94	Pn		P	22 56 52.9	-0.2	
	comp=Z,0.0nm,0.3s,baz=294,slow=9.6,SNR=9.3								
ANN	Anapa	17.58	74	eP		Pn	22 57 13.8	-0.3	
ANN				pmax		pmax			
	comp=Z,53nm,1.7s								
NOA	NORSAR Array B	18.57	357	P		P	22 57 25.6	-0.4	
	comp=Z,0.1nm,0.3s,baz=177,slow=13,SNR=3.7								
FINES	FINESS Array B	20.42	18	P		P	22 57 46.5	+0.2	
	comp=Z,3.7nm,0.8s,baz=200,slow=7.5,SNR=6.6								
DOMR	Dombai	20.71	78	eP		Pn	22 57 54.6	+2.5	
VRHR	Novokhopersk	21.07	56	eP		P	22 57 56.5	+3.2	
VRHR				pmax		pmax			
	comp=N,3.0nm,0.6s								
VRHR				pmax		pmax			
	comp=E,3.0nm,0.6s								
VRHR				pmax		pmax			
	comp=Z,5.0nm,0.6s								
KIV	Kislovodsk	21.39	76	eP		P	22 58 00.1	+3.1	
KIV				pmax		pmax			
	comp=Z,6.0nm,1.0s								
KBZ	Khabaz	21.57	77	P		P	22 58 01.2	+2.4	
KBZ				pmax		pmax			
	comp=Z,5.0nm,0.9s								
KBZ	Khabaz	21.57	77	P		P	22 58 01.2	+2.4	
	comp=Z,5.2nm,0.8s,baz=319,slow=8.0,SNR=11								
TORD	Torodi Ar. Bea	30.97	202	P		P	22 59 26.6	-0.1	
	comp=Z,0.8nm,0.9s,baz=9.6,slow=8.1,SNR=4.7								
ARU	Arti	31.88	48	*d* iP		P	22 59 36.7	+2.4	
ARU							23 00 33.3		
ARU				S		S	23 04 48.4	+3.2	
ARU				SS		SnSn	23 06 41.3	+8.7	
ARU				pmax		pmax			
	comp=Z,6.0nm,1.0s								
BRVK	Borovoye	38.71	54	eP		P	23 00 36.0	+2.8	
BRVK				pmax		pmax			
	comp=Z,7.0nm,1.7s								
MKAR	Makanchi Array	47.80	60	*c*eP		P	23 01 50.2	+3.5	
MKAR				pmax		pmax			
	comp=Z,1.0nm,0.8s								
MKAR	Makanchi Array	47.80	60	P		P	23 01 46.5	-0.2	
	comp=Z,0.7nm,0.8s,baz=282,slow=7.3,SNR=4.3								
SONM	Songino Array	61.90	50	P		P	23 03 29.4	+0.5	
	comp=Z,0.6nm,0.5s,baz=301,slow=8.0,SNR=7.0								
YKA	Yellowknife Ar	67.31	337	P		P	23 04 03.1	-0.7	
	comp=Z,0.6nm,0.7s,baz=40,slow=6.0,SNR=11								
SEY	Seymchan	69.90	19	*c*eP		P	23 04 22.5	+2.5	
ILAR	Eielson Array	71.90	351	P		P	23 04 33.8	+1.7	
	comp=Z,0.3nm,0.8s,baz=12,slow=4.7,SNR=4.9								

IDC **15** *23:03:02.6±3.1,* **22°03S×68°14W, h115**km±31km**, mb3.7**/3**, mb1 3.5**/5**, mb1mx3.3**/18**, mbtmp3.5**/5**, Error ellipse: s-maj=54.2km s-min=28.8km az=115.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LPAZ	La Paz	5.71	0	P		Pn	23 04 26.1	+0.2
	0.5nm,0.3s,baz=175,slow=7.5,SNR=15							
LPAZ				S		Sn	23 05 16.6	-14
	0.2nm,0.3s,baz=205,slow=8.6,SNR=5.3							
SIV	San Ignacio	8.98	49	P		Pn	23 05 08.4	-1.1
PLCA	Paso Flores	18.76	186	P		P	23 07 12.7	0.0
	0.1nm,0.3s,baz=15,slow=12,SNR=4.2							
BDFB	Brasilia	20.07	75	P		P	23 07 28.1	+1.0
	1.5nm,0.6s,baz=216,slow=11,SNR=3.1							
DBIC	Dimbokro	68.20	73	P		P	23 13 51.2	+0.1
	3.1nm,0.8s,baz=211,slow=12,SNR=3.6							
TORD	Torodi Ar. Bea	76.86	70	P		P	23 14 42.3	-0.1
	0.9nm,0.4s,baz=254,slow=5.6,SNR=28							
TORD				pP		pP	23 15 11.3	-0.3
	0.8nm,0.7s,baz=255,slow=5.3,SNR=3.9							

CSEM **15** *23:13:00.6±0.5, 36°65N×19°37E, h20*km*, ML2.5/4, Error ellipse: s-maj=10.3km s-min=6.7km az=26.0*
THE **15** *23:13:02.3, 36°80N×19°50E, h15*km*±8km, ML2.5/4, Error ellipse: s-maj=11.6km s-min=1.5km az=240.0*

ATH 15 23:13:00.4, 36°80N×19°74E, h5km±2km**, MD3.4**/21**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
VLS	Valsamata	1.53	26	ePG		Pb	23 13 29.2	-0.1
VLS				eSB		Sg	23 13 50.6	+0.8
VLS	Valsamata	1.53	26	ePg		Pb	23 13 29.2	-0.1
KFL	Anninata	1.55	32	P		Pg	23 13 30.1	-0.1
KFL				S		Sg	23 13 51.5	+1.2
KFL	Anninata	1.55	32	P		Pg	23 13 30.1	-0.1
KFL				S		Sg	23 13 51.5	+1.2
PYL	PYLOS	1.61	86	P		Pg	23 13 31.8	+0.5
PYL				S		Sg	23 13 55.9	+3.7
PYL	PYLOS	1.61	86	ePB		Pg	23 13 31.7	+0.4
PYL				eSB		Sg	23 13 53.0	+0.8
PYL	PYLOS	1.61	86	ePb		Pg	23 13 31.7	+0.4
PYL				S		Sg	23 13 55.9	+3.7
AMT	Artemida-Makis	1.73	64	P		Pg	23 13 33.6	-0.1
AMT				S		Sg	23 13 58.0	+1.7
AMT	Artemida-Makis	1.73	64	ePN		Pg	23 13 33.3	-0.4
AMT				eSN		Sg	23 13 56.9	+0.6
AMT	Artemida-Makis	1.73	64	ePn		Pg	23 13 33.3	-0.4
AMT	Artemida-Makis	1.73	64	P		Pg	23 13 33.6	-0.1
AMT				S		Sg	23 13 58.0	+1.7
ITM	Ithomi	1.79	77	P		Pg	23 13 34.4	-0.4
ITM	Ithomi	1.79	77	ePN		Pg	23 13 34.3	-0.5
ITM				eSN		Sg	23 13 59.3	+1.2
ITM	Ithomi	1.79	77	P		Pg	23 13 34.4	-0.4
RLS	Riolos of Patr	1.86	47	ePN		Pb	23 13 35.5	+0.6
RLS	Riolos of Patr	1.86	47	ePn		Pb	23 13 35.5	+0.6
DYR	Agios Nikonas	2.08	90	ePN		Pb	23 13 37.9	-0.8
DYR				eSN		Sg	23 14 06.4	-1.0
DYR	Agios Nikonas	2.08	90	ePn		Pb	23 13 37.9	-0.8
DYR				eSg		Sg	23 14 06.4	-1.0
LKD2	Lefkada island	2.11	20	P		Pb	23 13 38.4	-0.9
LKD2				S		Sb	23 14 05.1	-0.8
LKD2	Lefkada island	2.11	20	ePN		Pb	23 13 39.1	-0.2
LKD2	Lefkada island	2.11	20	P		Pb	23 13 38.4	-0.9
LKD2	Lefkada island	2.11	20	ePn		Pb	23 13 39.1	-0.2
LKD2				S		Sb	23 14 05.1	-0.8
VLX	Vlachokerasia	2.19	74	P		Pb	23 13 40.6	0.0
VLX	Vlachokerasia	2.19	74	ePN		Pb	23 13 39.8	-0.8
VLX	Vlachokerasia	2.19	74	ePn		Pb	23 13 39.8	-0.8
VLX	Vlachokerasia	2.19	74	P		Pb	23 13 40.6	0.0
KLV	Kalavryta, Ach	2.29	56	ePN		Pb	23 13 41.2	-1.0
KLV	Kalavryta, Ach	2.29	56	ePg		Pb	23 13 41.2	-1.0
LAKA	Lakka	2.29	50	P		Pb	23 13 41.5	-0.7
LAKA				S		Sb	23 14 11.9	+1.0

ERBM				Sg	Sb	23 15 17.9	+1.1	
ERBM	**Eremo**	**0.27**	**138**	Pg	Pb	23 15 11.8	-0.4	
ERBM				Sg	Sb	23 15 17.9	+1.1	
GSCL	**Gusciola**	**0.41**	**131**	Pg	Pb	23 15 14.2	0.0	
GSCL	**Gusciola**	**0.41**	**131**	Pg	Pb	23 15 14.2	0.0	
NOVE	**Novellara**	**0.44**	**66**	Pg	Pb	23 15 14.6	0.0	
NOVE				Sg	Sn	23 15 23.0	-0.1	
	209nm,0.3s							
NOVE	**Novellara**	**0.44**	**66**	Pg	Pb	23 15 14.6	0.0	
NOVE				Sg	Sn	23 15 23.0	-0.1	
	209nm,0.3s							
VLC	**Villacollemand**	**0.49**	**160**	Pg	Pb	23 15 15.2	-0.3	
VLC				Sg	Sb	23 15 23.2	+0.8	
VLC	**Villacollemand**	**0.49**	**160**	Pg	Pb	23 15 15.2	-0.3	
VLC				Sg	Sb	23 15 23.2	+0.8	
BOB	**Bobbio (Coli)**	**0.53**	**286**	Pg	Pb	23 15 16.2	0.0	
BOB				Sg	Sn	23 15 25.2	-0.4	
BOB	**Bobbio (Coli)**	**0.53**	**286**	Pg	Pb	23 15 16.2	0.0	
BOB				Sg	Sn	23 15 25.2	-0.4	
MSSA	**Maissana**	**0.55**	**237**	Pg	Pb	23 15 15.9	-0.7	
MSSA				Sg	Sb	23 15 25.0	+0.8	
MSSA	**Maissana**	**0.55**	**237**	Pg	Pb	23 15 15.9	-0.7	
BDI	**Bagni Di Lucca**	**0.64**	**150**	Pg	Pb	23 15 17.7	-0.4	
BDI				Sg	Sn	23 15 27.9	-0.4	
	43nm,0.4s							
BDI	**Bagni Di Lucca**	**0.64**	**150**	Pg	Pb	23 15 17.7	-0.4	
BDI				Sg	Sn	23 15 27.9	-0.4	
	43nm,0.4s							
ZCCA	**Zocca**	**0.65**	**114**	Pg	Pn	23 15 19.2	+0.2	
ZCCA	**Zocca**	**0.65**	**114**	Pg	Pn	23 15 19.2	+0.2	
MAIM	**Mastiano**	**0.74**	**161**	Pg	Pb	23 15 19.0	-0.8	
MAIM	**Mastiano**	**0.74**	**161**	Pg	Pb	23 15 19.0	-0.8	
PII	**Pisa**	**0.94**	**163**	Pg	Pb	23 15 23.3	+0.3	
PII	**Pisa**	**0.94**	**163**	Pg	Pb	23 15 23.3	+0.3	
PCP	**Piancastagn**	**1.16**	**267**	Pg	Pb	23 15 27.1	+0.3	
PCP	**Piancastagn**	**1.16**	**267**	Pg	Pb	23 15 27.1	+0.3	
CSNT	**Castellina Chi**	**1.41**	**144**	Pg	Pb	23 15 31.0	-0.1	
CSNT	**Castellina Chi**	**1.41**	**144**	Pg	Pb	23 15 31.0	-0.1	
CTI	**Castel Tesino**	**1.77**	**36**	Pg	Pn	23 15 34.8	+0.2	
SBF	**Sospel**	**2.10**	**250**	*e*Pn	Pn	23 15 39.9	+0.9	
SBF				*e*Sn	Sn	23 16 04.9	+0.6	
	6.2nm,0.4s							
SBF	**Sospel**	**2.10**	**250**	*e*Pn	Pn	23 15 39.9	+0.9	
SBF				*e*Sn	Sn	23 16 04.9	+0.6	
	3.1nm,0.4s							
PGF	**Pioggiola**	**2.23**	**203**	*e*Pn	Pn	23 15 41.1	+0.2	
PGF				*e*Sn	Sn	23 16 07.3	-0.5	
	2.0nm,0.4s							
PGF	**Pioggiola**	**2.23**	**203**	*e*Pn	Pn	23 15 41.1	+0.2	
PGF				*e*Sn	Sn	23 16 07.3	-0.5	
	1.0nm,0.4s							
MBDF	**Montbardon**	**2.42**	**274**	*e*Pn	Pn	23 15 44.5	+1.0	
MBDF				*e*Sg	Sb	23 16 22.0	+4.1	
	4.0nm,0.4s							
MBDF	**Montbardon**	**2.42**	**274**	*e*Pn	Pn	23 15 44.5	+1.0	
MBDF				*e*Sg	Sb	23 16 22.0	+4.1	
	2.0nm,0.4s							
LPG	**La Plagne**	**2.57**	**291**	*e*Pn	Pn	23 15 46.8	+1.1	
LPG				*e*Sn	Sn	23 16 17.3	+0.9	
	1.9nm,0.5s							
LPG	**La Plagne**	**2.57**	**291**	*e*Pn	Pn	23 15 46.8	+1.1	
LPG				*e*Sn	Sn	23 16 17.3	+0.9	
	0.9nm,0.5s							
LPL	**La Plagne**	**2.59**	**291**	*e*Pn	Pn	23 15 46.8	+0.9	
LPL				*e*Sn	Sn	23 16 17.5	+0.8	
LPL				*e*Sg	Sb	23 16 27.8	+4.8	
	2.9nm,0.4s							
LPL	**La Plagne**	**2.59**	**291**	*e*Pn	Pn	23 15 46.8	+0.9	
LPL				*e*Sn	Sn	23 16 17.5	+0.8	
LPL				*e*Sg	Sb	23 16 27.8	+4.8	
	1.5nm,0.4s							
FRF	**La Foret Royal**	**2.74**	**249**	*e*Pn	Pn	23 15 48.6	+0.9	
FRF				*e*Sn	Sn	23 16 20.3	+0.3	
	2.5nm,0.3s							
FRF	**La Foret Royal**	**2.74**	**249**	*e*Pn	Pn	23 15 48.6	+0.9	
LMR	**La Mourre**	**2.93**	**245**	*e*Pn	Pn	23 15 50.9	+0.6	
LMR				*e*Sn	Sn	23 16 24.6	-0.1	
	3.4nm,0.5s							
LMR	**La Mourre**	**2.93**	**245**	*e*Pn	Pn	23 15 50.9	+0.6	
LMR				*e*Sn	Sn	23 16 24.6	-0.1	
	1.7nm,0.5s							
ORIF	**Oris-en-Rattie**	**3.06**	**277**	*e*Pn	Pn	23 15 53.7	+1.5	
ORIF				*e*Sn	Sn	23 16 28.5	+0.4	
	3.6nm,0.5s							
ORIF	**Oris-en-Rattie**	**3.06**	**277**	*e*Pn	Pn	23 15 53.7	+1.5	
ORIF				*e*Sn	Sn	23 16 28.5	+0.4	
	1.8nm,0.5s							
CABF	**La Chapelle**	**3.48**	**306**	*e*Pn	Pn	23 15 59.1	+1.1	
CABF				*e*Sn	Sn	23 16 38.9	+0.4	
	0.8nm,0.3s							
CABF	**La Chapelle**	**3.48**	**306**	*e*Pn	Pn	23 15 59.1	+1.1	
CABF				*e*Sn	Sn	23 16 38.9	+0.4	
	0.4nm,0.3s							
VIVF	**Saint-Julien-l**	**3.92**	**275**	*e*Pn	Pn	23 16 05.2	+1.3	
VIVF	**Saint-Julien-l**	**3.92**	**275**	*e*Pn	Pn	23 16 05.2	+1.3	
CDF	**Champ du Feu**	**4.28**	**333**	*e*Pn	Pn	23 16 08.5	-0.5	
CDF				*e*Sn	Sn	23 16 57.8	-0.4	
	1.7nm,0.4s							
CDF	**Champ du Feu**	**4.28**	**333**	*e*Pn	Pn	23 16 08.5	-0.5	
CDF				*e*Sn	Sn	23 16 57.8	-0.4	
	0.9nm,0.4s							
LOR	**Lormes**	**5.13**	**303**	*e*Pn	Pn	23 16 21.3	+0.7	
LOR				*e*Sn	Sn	23 17 18.1	-0.8	
	1.6nm,0.3s							
LOR	**Lormes**	**5.13**	**303**	*e*Pn	Pn	23 16 21.3	+0.7	
LOR				*e*Sn	Sn	23 17 18.1	-0.8	
	0.8nm,0.3s							
SSF	**Saint Saulge**	**5.25**	**300**	*e*Pn	Pn	23 16 23.0	+0.8	
SSF				*e*Sn	Sn	23 17 21.0	-0.8	
	1.0nm,0.4s							
SSF	**Saint Saulge**	**5.25**	**300**	*e*Pn	Pn	23 16 23.0	+0.8	
SSF				*e*Sn	Sn	23 17 21.0	-0.8	
	0.5nm,0.4s							
BGF	**Bois d'Agland**	**5.49**	**293**	*e*Pn	Pn	23 16 26.1	+0.7	
BGF				*e*Sn	Sn	23 17 26.5	-1.2	
	1.5nm,0.4s							
BGF	**Bois d'Agland**	**5.49**	**293**	*e*Pn	Pn	23 16 26.1	+0.7	
BGF				*e*Sn	Sn	23 17 26.5	-1.2	
	0.8nm,0.4s							

*ISCJB **15** 23:25:46.9±0.5, 37°.85N±0°.02×27°.54E±0°.04, h4km±5km, Error ellipse: s-maj=5.7km s-min=3.3km az=159.8*
*ISK **15** 23:25:46.5, 37°.85N×27°.54E, h5km, MD2.9*
*DDA **15** 23:25:46.9, 37°.85N×27°.56E, h11km, MD2.6*
*CSEM **15** 23:25:47.2±0.1, 37°.83N×27°.52E, h8km, Error ellipse: s-maj=3.9km s-min=2.5km az=72.0*

ISC 15 23:25:47.0±1.0, 37°.84N±0°.02×27°.54E±0°.02, h4km±10km, n52, σ0s80/70, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.28**	**240**	*i* P	**Pg**	**23 25 52.8**	**+0.4**
GCAM				*i* S	**Sg**	**23 25 56.3**	**+0.3**
GCAM	**G?zelcaml?**	**0.28**	**240**	*i* P	**Pg**	**23 25 52.8**	**+0.4**
GCAM				*i* S	**Sg**	**23 25 56.3**	**+0.3**
AYDN	**Tasoluk**	**0.33**	**124**	*i* P	**Pg**	**23 25 53.6**	**+0.3**
AYDN				*i* S	**Sg**	**23 25 57.8**	**+0.2**
AYDN	**Tasoluk**	**0.33**	**124**	*i* P	**Pg**	**23 25 53.6**	**+0.3**
AYDN				*i* S	**Sg**	**23 25 57.8**	**+0.2**
MLSB	**Milas**	**0.58**	**161**	PG	**Pg**	**23 25 58.3**	**+0.2**
MLSB				SG	**Sg**	**23 26 06.2**	**+0.6**
MLSB	**Milas**	**0.58**	**161**	*i* Pg	**Pg**	**23 25 58.3**	**+0.2**
MLSB				*i* Sg	**Sg**	**23 26 06.2**	**+0.6**
IZM	**Izmir**	**0.60**	**339**	PG	**Pg**	**23 25 58.5**	**+0.1**
IZM				SG	**Sg**	**23 26 06.2**	**0.0**
IZM	**Izmir**	**0.60**	**339**	*i* Pg	**Pg**	**23 25 58.5**	**+0.1**
IZM				*i* Sg	**Sg**	**23 26 06.2**	**0.0**
BLCB	**Balcova**	**0.67**	**324**	PG	**Pg**	**23 26 00.1**	**+0.3**
BLCB				SG	**Sg**	**23 26 08.8**	**+0.3**
BLCB	**Balcova**	**0.67**	**324**	*i* Pg	**Pg**	**23 26 00.1**	**+0.3**
BLCB				*i* Sg	**Sg**	**23 26 08.8**	**+0.3**
BODT	**Bodrum**	**0.80**	**193**	*e*PG	**Pb**	**23 26 03.0**	**-0.4**
BODT				*e*SG	**Sb**	**23 26 14.9**	**+0.3**
BODT	**Bodrum**	**0.80**	**193**	*e*Pg	**Pb**	**23 26 03.1**	**-0.4**
BODT				*e*Sg	**Sb**	**23 26 14.9**	**+0.3**
YER	**Yerkesik**	**0.92**	**140**	*e*PG	**Pg**	**23 26 04.7**	**0.0**
YER	**Yerkesik**	**0.92**	**140**	*e*Pg	**Pg**	**23 26 04.7**	**0.0**
AKHS	**Akhisar**	**1.06**	**12**	*i* P	**Pb**	**23 26 07.5**	**-0.4**
AKHS				*i* S	**Sb**	**23 26 21.4**	**-0.7**
AKHS	**Akhisar**	**1.06**	**12**	*i* P	**Pb**	**23 26 07.5**	**-0.4**
AKHS				*i* S	**Sb**	**23 26 21.4**	**-0.7**
AKS	**Akhisar**	**1.06**	**12**	*e*PG	**Pb**	**23 26 07.5**	**-0.3**
AKS	**Akhisar**	**1.06**	**12**	*e*Pg	**Pb**	**23 26 07.5**	**-0.3**
DAT	**Datca**	**1.11**	**178**	*e*PN	**Pg**	**23 26 08.4**	**+0.1**
DAT	**Datca**	**1.11**	**178**	*e*Pn	**Pg**	**23 26 08.4**	**+0.1**
KULA	**Kula-Manisa**	**1.11**	**52**	*e*PN	**Pb**	**23 26 08.2**	**-0.6**
KULA	**Kula-Manisa**	**1.11**	**52**	*e*Pn	**Pb**	**23 26 08.2**	**-0.6**
DENT	**Denizli**	**1.19**	**94**	*e*PN	**Pb**	**23 26 09.5**	**-0.6**
DENT	**Denizli**	**1.19**	**94**	*e*Pn	**Pb**	**23 26 09.5**	**-0.6**
DNZL	**Cakiroluk**	**1.21**	**97**	*i* P	**Pg**	**23 26 11.7**	**+1.6**
DNZL				*i* S	**Sn**	**23 26 29.3**	**+1.6**
DNZL	**Cakiroluk**	**1.21**	**97**	*i* P	**Pg**	**23 26 11.7**	**+1.6**
DNZL				*i* S	**Sn**	**23 26 29.3**	**+1.6**
TURN	**Turunc**	**1.29**	**138**	*i* P	**Pn**	**23 26 11.0**	**-0.7**
TURN				*i* S	**Sb**	**23 26 26.7**	**-1.9**
TURN	**Turunc**	**1.29**	**138**	*i* P	**Pn**	**23 26 11.0**	**-0.7**
TURN				*i* S	**Sb**	**23 26 26.7**	**-1.9**
DALT	**Dalyan (Mudla)**	**1.38**	**140**	*e*PN	**Pb**	**23 26 12.7**	**-0.7**
DALT	**Dalyan (Mudla)**	**1.38**	**140**	*e*Pn	**Pb**	**23 26 12.7**	**-0.7**
DEMI	**Demirci**	**1.52**	**37**	*i* P	**Pb**	**23 26 15.6**	**-0.1**
DEMI	**Demirci**	**1.52**	**37**	*i* P	**Pb**	**23 26 15.6**	**-0.1**
KHL	**Karahalli**	**1.64**	**72**	*e*PN	**Pb**	**23 26 17.2**	**-0.6**
KHL	**Karahalli**	**1.64**	**72**	*e*Pn	**Pb**	**23 26 17.2**	**-0.6**
FETY	**Fethiye**	**1.72**	**134**	*e*PN	**Pb**	**23 26 18.0**	**-1.2**
FETY	**Fethiye**	**1.72**	**134**	*e*Pn	**Pb**	**23 26 18.0**	**-1.2**
APE	**Apeiranthos**	**1.77**	**245**	*e*PN	**Pn**	**23 26 18.6**	**+0.2**
APE	**Apeiranthos**	**1.77**	**245**	*e*Pn	**Pn**	**23 26 18.6**	**+0.2**
BALB	**Balikesir**	**1.82**	**8**	*e*PN	**Pb**	**23 26 19.6**	**-1.1**
BALB	**Balikesir**	**1.82**	**8**	*e*Pn	**Pb**	**23 26 19.6**	**-1.1**
BALY	**Balya**	**1.90**	**2**	*i* P	**Pn**	**23 26 19.5**	**-0.7**
BALY				*i* S	Sn	23 26 24.0	-21
BALY	**Balya**	**1.90**	**2**	*i* P	**Pn**	**23 26 19.5**	**-0.7**
BALY				*i* S	Sn	23 26 24.0	-21
DST	**Dursunbey**	**1.95**	**25**	*e*PN	**Pn**	**23 26 20.7**	**-0.2**
DST	**Dursunbey**	**1.95**	**25**	*e*Pn	**Pn**	**23 26 20.7**	**-0.2**
ELL	**Elmali**	**2.18**	**119**	*e*PN	**Pn**	**23 26 24.2**	**0.0**
ELL	**Elmali**	**2.18**	**119**	*e*Pn	**Pn**	**23 26 24.2**	**0.0**
TVSB	**Tavsanli**	**2.20**	**43**	*e*PN	**Pb**	**23 26 25.5**	**-1.9**
TVSB	**Tavsanli**	**2.20**	**43**	*e*Pn	**Pb**	**23 26 25.5**	**-1.9**
GONE	**Gonen-Balikesi**	**2.21**	**3**	*e*PN	**Pn**	**23 26 25.0**	**+0.6**
GONE	**Gonen-Balikesi**	**2.21**	**3**	*e*Pn	**Pn**	**23 26 25.0**	**+0.6**
KCTX	**Karacabey (Bur**	**2.50**	**15**	*e*PN	**Pn**	**23 26 29.2**	**+0.7**
KCTX	**Karacabey (Bur**	**2.50**	**15**	*e*Pn	**Pn**	**23 26 29.2**	**+0.7**

*IDC **15** 23:26:28.1±0.6, 10°.30S×75°.43W, h0km, mb4.1/8, mb1 4.2/12, mb1mx4.1/26, mbtmp4.1/12, ML3.7/4, MS3.8/4, Ms1 3.8/4, ms1mx3.2/42, Error ellipse: s-maj=15.3km s-min=13.0km az=69.0*
*ISCJB **15** 23:26:30.3±0.3, 10°.33S±0°.04×75°.47W±0°.05, h25km, mb4.2/17, MS4.3/3, Error ellipse: s-maj=7.6km s-min=5.6km az=152.0*
*NEIC **15** 23:26:31.9±1.7, 10°.34S×75°.49W, h24km±12km, mb4.7/11, Error ellipse: s-maj=9.1km s-min=5.7km az=58.0*
NEIC Felt at Ambo, Cerro de Pasco, Huanuco, Oxapampa and San Ramon.

ISC 15 23:26:31.6±0.4, 10°.35S±0°.05×75°.51W±0°.07, h25km, n70, σ1s76/92, mb4.3/18, MS4.1/3, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.09**	**219**	*e*Pn	**Pn**	**23 27 05.1**	**+0.1**
NNA				*e*Sn	**Sn**	**23 27 30.8**	**+0.5**
NNA				Lg	Lg	23 27 37.4	
NNA	**Nana**	**2.09**	**219**	Pn	**Pn**	**23 27 05.1**	**+0.1**
	75nm,0.3s,baz=41,slow=15,SNR=141						
NNA				Lg	Lg	23 27 37.4	
	287nm,0.3s,baz=197,slow=13,SNR=22						
NNA				LR	LR	23 27 59.4	
	comp=Z,1μm,18.5s,baz=318,slow=42						
ATAH	**Atahualpa**	**4.28**	**318**	Pn	**Pn**	**23 27 37.0**	**+1.4**
ATAH				Lg	Lg	23 28 44.0	
ATAH	**Atahualpa**	**4.28**	**318**	Pn	**Pn**	**23 27 37.0**	**+1.4**
	13nm,0.3s,baz=162,slow=4.0,SNR=46						
ATAH				Lg	Lg	23 28 44.0	
	7.5nm,0.3s,baz=335,slow=16,SNR=4.2						
LPAZ	**La Paz**	**9.30**	**130**	*e*Pn	**Pn**	**23 28 47.2**	**+2.5**
LPAZ				*e*Sn	**Sn**	**23 30 29.7**	**+0.8**
LPAZ				Lg	Lg	23 31 26.2	
LPAZ	**La Paz**	**9.30**	**130**	Pn	**Pn**	**23 28 47.2**	**+2.5**
	0.1nm,0.3s,baz=296,slow=14,SNR=4.6						
LPAZ				Lg	Lg	23 31 26.2	
	0.5nm,0.3s,baz=179,slow=18,SNR=3.8						
OTAV	**Otavalo**	**10.92**	**344**	*e*Pn	**Pn**	**23 29 07.4**	**+0.6**
SIV	**San Ignacio**	**15.13**	**113**	Pn	**Pn**	**23 30 04.2**	**+0.2**
SIV				Lg	Lg	23 34 26.7	
SIV	**San Ignacio**	**15.13**	**113**	Pn	**Pn**	**23 30 04.2**	**+0.2**
	0.2nm,0.3s,baz=324,slow=13,SNR=7.6						
SIV				Lg	Lg	23 34 26.7	
	0.6nm,0.3s,baz=43,slow=23,SNR=8.9						
SIV				LR	LR	23 36 06.6	
	comp=Z,309nm,18.5s,slow=38						
ROSC	**El Rosal**	**15.15**	**5**	Pn	**Pn**	**23 30 03.8**	**-0.7**
ROSC				Lg	Lg	23 34 32.0	
ROSC	**El Rosal**	**15.15**	**5**	Pn	**Pn**	**23 30 03.0**	**-1.5**
	1.3nm,0.3s,baz=182,slow=18,SNR=2.3						
ROSC				Lg	Lg	23 34 32.0	
	0.4nm,0.3s,baz=180,slow=17,SNR=2.8						
SDV	**Santo Domingo**	**19.72**	**14**	*e*Pn	**Pn**	**23 31 01.2**	**0.0**
	8.4nm,0.8s						
CFAA	**Coronel Fontan**	**22.20**	**163**	P	**P**	**23 31 26.1**	**-0.1**
CFAA	**Coronel Fontan**	**22.20**	**163**	P	**P**	**23 31 26.1**	**-0.1**
	0.1nm,0.4s,baz=338,slow=12,SNR=3.3						
CPUP	**Villa Florida**	**23.41**	**135**	P	**P**	**23 31 39.0**	**+0.1**
CPUP	**Villa Florida**	**23.41**	**135**	P	**P**	**23 31 39.0**	**+0.1**
	1.4nm,0.7s,baz=302,slow=8.4,SNR=7.1						
BDFB	**Brasilia**	**27.29**	**104**	P	**P**	**23 32 14.3**	**-0.3**
BDFB	**Brasilia**	**27.29**	**104**	P	**P**	**23 32 14.3**	**-0.3**
	3.3nm,0.8s,baz=297,slow=13,SNR=4.5						
BDFB				LR	LR	23 43 36.9	
	comp=Z,227nm,18.5s,baz=100,slow=38						
RPN	**Rapa Nui**	**35.95**	**238**	*e*P	**P**	**23 33 30.9**	**+0.4**
	18nm,0.6s						
MIAR	**Mount Ida**	**47.82**	**340**	*e*P	**P**	**23 35 08.2**	**+1.0**
	2.7nm,0.9s						
TXAR	**Lajitas Array**	**47.89**	**326**	P	**P**	**23 35 09.0**	**+1.0**
TXAR	**Lajitas Array**	**47.89**	**326**	P	**P**	**23 35 09.0**	**+1.0**
	2.5nm,0.7s,baz=149,slow=9.1,SNR=18						
ANMO	**Albuquerque**	**53.74**	**328**	*e*P	**P**	**23 35 52.4**	**+0.3**
	1.9nm,0.9s						
ANMO	**Albuquerque**	**53.74**	**328**	P	**P**	**23 35 52.9**	**+0.8**
	1.8nm,0.9s,baz=131,slow=11,SNR=4.3						
CCUT	**Cedar City**	**59.39**	**325**	*e*P	**P**	**23 36 34.6**	**+2.2**
	60nm,2.8s						
ARUT	**Antelope Range**	**59.60**	**326**	*e*P	**P**	**23 36 35.2**	**+1.5**
	4.2nm,0.5s						
DUG	**Dugway**	**61.00**	**328**	*e*P	**P**	**23 36 44.6**	**+1.4**
	5.4nm,0.8s						
ISA	**Isabella**	**61.13**	**321**	P	**P**	**23 36 45.1**	**+1.0**
ELK	**Elko**	**62.68**	**327**	P	**P**	**23 36 54.1**	**-0.5**
ELK	**Elko**	**62.68**	**327**	P	**P**	**23 36 54.1**	**-0.5**
	1.4nm,0.8s,baz=128,slow=4.7,SNR=5.9						
HLID	**Hailey**	**64.27**	**330**	*e*P	**P**	**23 37 05.7**	**+0.7**
	3.3nm,1.1s						
MFID	**Camas Ranch**	**64.88**	**329**	*e*P	**P**	**23 37 10.3**	**+1.4**
	6.6nm,0.9s						
MSO	**Missoula**	**66.45**	**332**	*e*P	**P**	**23 37 19.8**	**+0.8**
	70nm,3.0s						
VNA3	**Neumayer Olymp**	**72.59**	**162**	*e*P	**P**	**23 37 57.8**	**+1.3**
VNA2	**Neumayer--Watz**	**73.19**	**161**	*e*P	**P**	**23 37 58.1**	**-1.9**
YKA	**Yellowknife Ar**	**78.67**	**343**	P	**P**	**23 38 30.8**	**-0.4**
YKA	**Yellowknife Ar**	**78.67**	**343**	P	**P**	**23 38 30.8**	**-0.4**
	1.5nm,0.8s,baz=138,slow=6.3,SNR=22						
TOA0	**Torodi Ar. Sit**	**80.10**	**75**	*e*P	**P**	**23 38 39.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**80.10**	**75**	P	**P**	**23 38 39.7**	**-0.4**
TORD	**Torodi Ar. Bea**	**80.10**	**75**	P	**P**	**23 38 39.7**	**-0.4**
	5.3nm,1.0s,baz=260,slow=4.5,SNR=14						
TORD				LR	LR	00 13 41.6	
	comp=Z,92nm,21.3s,baz=240,slow=35						
TAM	**Tamanrasset**	**85.83**	**66**	*e*P	**P**	**23 39 10.3**	**+0.5**
	4.9nm,1.4s						
ILAR	**Eielson Array**	**91.52**	**336**	P	**P**	**23 39 35.9**	**+0.1**
ILAR	**Eielson Array**	**91.52**	**336**	P	**P**	**23 39 35.9**	**+0.1**
	0.6nm,0.9s,baz=142,slow=2.2,SNR=5.1						
STKA	**Stephens Creek**	**125.02**	**219**	PKP	**PKPdf**	**23 45 32.8**	**+2.4**
STKA	**Stephens Creek**	**125.02**	**219**	PKP	**PKPdf**	**23 45 32.8**	**+2.4**
	0.5nm,0.3s,baz=187,slow=21,SNR=2.9						
BVAR	**Borovoye Array**	**129.38**	**26**	PKP	**PKPdf**	**23 45 38.9**	**+1.0**
BVAR	**Borovoye Array**	**129.38**	**26**	PKP	**PKPdf**	**23 45 38.9**	**+1.0**
	0.6nm,0.8s,baz=289,slow=4.5,SNR=4.3						
ZALV	**Zalesovo Beam**	**133.76**	**16**	PKP	**PKPdf**	**23 45 46.5**	**+0.3**
ZALV	**Zalesovo Beam**	**133.76**	**16**	PKP	**PKPdf**	**23 45 46.5**	**+0.3**
	1.0nm,0.5s,baz=250,slow=0.7,SNR=5.4						
KURK	**Kurchatov**	**134.48**	**23**	PKP	**PKPdf**	**23 45 48.0**	**+0.4**
KURBB	**Kurchatov Arra**	**134.52**	**23**	PKP	**PKPdf**	**23 45 48.0**	**+0.3**
	0.6nm,0.6s,baz=308,slow=2.6,SNR=6.2						
ASAR	**Alice Springs**	**135.61**	**220**	PKP	**PKPdf**	**23 45 50.6**	**-0.1**
ASAR	**Alice Springs**	**135.61**	**220**	PKP	**PKPdf**	**23 45 50.6**	**-0.1**
	0.8nm,0.8s,baz=107,slow=1.5,SNR=4.9						
MDJ	**Mudanjiang**	**139.57**	**332**	PKP	**PKPdf**	**23 45 57.3**	**0.0**
KSH	**Kashi**	**141.44**	**36**	*e*PKP	**PKPdf**	**23 46 00.8**	**-0.2**
KSH				sPKP		23 46 14.3	
KSH				PP	**PP**	**23 49 06.8**	**+3.4**
KSH				PKS	**PKSdf**	**23 49 34.0**	**-2.2**
KSH				SKS	**SKSdf**	**23 53 04.0**	**-5.8**
KSH				SKKS	**SKKSac**	**23 55 52.8**	**-3.3**
KSH				SS	**SS**	**00 07 32.1**	**+0.2**
KSH				AMB	AMB		
	comp=Z,69nm,6.1s						
KSH				LR	LR		
	comp=Z,360nm,5.6s						
SONM	**Songino Array**	**142.60**	**358**	PKP	**PKPdf**	**23 46 03.6**	**+0.7**
SONM	**Songino Array**	**142.60**	**358**	PKP	**PKPdf**	**23 46 03.6**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=349,slow=1.5,SNR=3.5						
WMQ	**Urumqi**	**143.61**	**21**	PKP	**PKPdf**	**23 46 05.0**	**+0.3**
FITZ	**Fitzroy Crossi**	**144.85**	**217**	PKP	**PKPab**	**23 46 06.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**144.85**	**217**	PKP	**PKPab**	**23 46 06.3**	**-0.1**
	comp=Z,3.3nm,1.1s,baz=76,slow=9.0,SNR=3.5						
KSRS	**Korea Array**	**145.74**	**326**	PKPbc	**PKPbc**	**23 46 09.2**	**+0.4**
	comp=Z,5.2nm,0.8s,baz=38,slow=3.8,SNR=12						
KSAR	**Wonju Array Be**	**145.77**	**326**	PKPbc	**PKPbc**	**23 46 09.2**	**+0.2**
HHC	**Hu-ho-hao-te**	**148.98**	**350**	*e*PKPbc	**PKPdf**	**23 46 11.5**	**-2.4**
HHC				sPKP		23 46 25.8	
HHC				PKS	**PP**	**23 49 44.8**	**-2.7**
HHC				PP	PP	23 49 49.8	+2.3
HHC				SKS	**SKSdf**	**23 53 14.4**	**-6.4**
HHC				SKKS	**SKKSac**	**23 56 35.0**	**-3.6**
HHC				SS	**SS**	**00 08 54.9**	**-1.7**
HHC				AMB	AMB		
	comp=Z,440nm,9.3s						
HHC				LR	LR		
	comp=N,150nm,20.3s						
HHC				LR	LR		
	comp=E,200nm,20.7s						
HHC				LR	LR		
	comp=Z,200nm,21.4s						
GTA	**Gaotai**	**150.76**	**7**	PKPbc	**PKPbc**	**23 46 19.8**	**-2.5**
LZH	**Lanzhou**	**154.37**	**1**	*e*PKPbc	**PKPdf**	**23 46 20.1**	**-2.1**
LZH				pPKP	**pPKPdf**	**23 46 30.9**	**+0.2**
LZH				sPKP		23 46 34.5	
CDQ	**Chengdu**	**159.53**	**2**	PKP	**PKPdf**	**23 46 28.4**	**-0.4**
CD2				pPKP	**pPKPdf**	**23 46 39.3**	**+2.0**
CD2				sPKP		23 46 42.8	
CD2				PKPab	**PKPab**	**23 47 08.5**	**+1.8**
CD2				PKS	**PKSdf**	**23 50 00.5**	**-2.0**
CD2				PP	**PP**	**23 50 50.6**	**+4.0**
CD2				SKS	**SKSdf**	**23 53 29.8**	**-3.2**
CD2				SKKS	**SKKSac**	**23 57 34.8**	**-0.7**
CD2				SS	**SS**	**00 10 52

MKAR	Makanchi Array	63.19	324	P		P		23 39 20.3	-2.1
MKAR	Makanchi Array	63.19	324	P		P		23 39 20.3	-2.1
	0.4nm,0.4s,baz=35,slow=6.5,SNR=12								
AKASG	Malin Array Be	66.04	2	P		P		23 39 40.3	-0.6
AKASG	Malin Array Be	66.04	2	P		P		23 39 40.3	-0.6
	0.3nm,0.4s,baz=354,slow=5.8,SNR=4.0								

IDC 15 23:32:46.5±1.8, 6°67S×154°61E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.8/21, mbtmp3.9/9, ML3.5/1, Error ellipse: s-maj=59.2km s-min=22.5km az=130.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	Port Moresby	7.86	249	Pn		Pn	23 34 44.1	+1.8
	3.4nm,0.3s,baz=58,slow=10.0,SNR=7.2							
PMG				Sn		Sn	23 36 11.9	-0.2
	2.8nm,0.3s,baz=215,slow=23,SNR=3.8							
ASAR	Alice Springs	26.10	227	P		P	23 38 22.8	+0.4
	0.6nm,0.5s,baz=58,slow=9.3,SNR=9.2							
FITZ	Fitzroy Crossi	30.44	245	P		P	23 39 00.4	-0.7
	0.9nm,0.5s,baz=87,slow=7.6,SNR=5.3							
SONM	Songino Array	68.86	327	P		P	23 43 53.9	+0.7
	0.6nm,0.6s,baz=140,slow=4.9,SNR=6.9							
MKAR	Makanchi Array	82.91	319	P		P	23 45 14.2	+0.8
	1.1nm,0.8s,baz=101,slow=7.6,SNR=6.0							
ILAR	Eielson Array	83.22	22	P		P	23 45 14.6	+0.1
	0.3nm,0.7s,baz=242,slow=4.9,SNR=3.6							
ZALV	Zalesovo Beam	83.70	326	P		P	23 45 17.1	-0.1
	0.9nm,0.5s,baz=122,slow=5.0,SNR=9.1							
KURBB	Kurchatov Arra	86.38	322	P		P	23 45 29.9	-0.8
	0.3nm,0.6s,baz=93,slow=5.7,SNR=4.3							
BVAR	Borovoye Array	91.81	323	P		P	23 45 55.8	-0.7
	0.5nm,0.6s,baz=102,slow=6.8,SNR=4.9							
TORD	Torodi Ar. Bea	152.57	286	PKPbc		PKPbc	23 52 46.5	+0.3
	0.7nm,0.7s,baz=79,slow=2.3,SNR=14							
TORD				PKPab		PKPab	23 52 54.8	-1.8
	0.8nm,0.7s,baz=82,slow=3.1,SNR=6.7							

ISCJB 15 23:53:52.1±0.8, 21°68S±0°06×68°1W±0°1, h121km, mb3.9/4, Error ellipse: s-maj=17.3km s-min=8.2km az=178.0

IDC 15 23:53:53.4±2.4, 21°61S×68°09W, h122km±20km, mb3.7/4, mb1 3.6/8, mb1mx3.5/19, mbtmp3.5/8, Error ellipse: s-maj=23.7km s-min=17.2km az=64.0

ISC 15 23:53:53.9±0.8, 21°62S±0°08×68°0W±0°1, h121km, n13, σ1§53/16, mb4.0/4, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LPAZ	La Paz	5.31	359	P		Pn	23 55 12.8	+1.2
	1.7nm,0.3s,baz=182,slow=5.1,SNR=52							
LPAZ				S		Sn	23 56 12.1	+0.1
	0.4nm,0.3s,baz=184,slow=11,SNR=4.2							
SIV	San Ignacio	8.63	51	P		Pn	23 55 56.6	+0.6
	1.1nm,0.3s,baz=249,slow=11,SNR=15							
SIV				S		Sn	23 57 29.5	-2.2
	0.2nm,0.3s,baz=324,slow=23,SNR=8.8							
CPUP	Villa Florida	10.83	118	P		Pn	23 56 25.6	0.0
	0.4nm,0.3s,baz=269,slow=7.5,SNR=6.8							
PLCA	Paso Flores	19.18	186	P		P	23 58 07.1	-1.0
	0.1nm,0.3s,baz=350,slow=5.4							
VNA3	Neumayer Olymp	59.69	161	eP		P	00 03 45.9	+0.6
VNA2	Neumayer--Watz	60.26	161	eP		P	00 03 50.0	+0.8
	baz=279,slow=10							
TXAR	Lajitas Array	61.21	324	P		P	00 03 54.2	-2.0
	0.1nm,0.4s,baz=126,slow=6.8,SNR=3.3							
SNAA	Sanae	61.89	161	eP		P	00 04 00.5	+0.3
DBIC	Dimbokro	67.97	73	P		P	00 04 40.6	+0.2
	4.3nm,0.7s,baz=210,slow=6.6,SNR=8.9							
TORD	Torodi Ar. Bea	76.61	70	P		P	00 05 31.6	-0.1
	2.3nm,0.7s,baz=253,slow=5.4,SNR=51							
TORD				pP		pP	00 06 06.1	+3.9
	1.3nm,0.7s,baz=255,slow=5.4,SNR=4.2							
BOSA	Boshof	82.65	118	P		P	00 06 04.4	0.0
	0.7nm,0.4s,baz=264,slow=3.1,SNR=6.3							
ZALV	Zalesovo Beam	141.70	26	PKP		PKPdf	00 13 09.5	-1.3
	0.5nm,0.5s,baz=355,slow=3.1,SNR=3.6							
MKAR	Makanchi Array	145.23	37	PKPbc		PKPbc	00 13 17.0	-0.2
	0.7nm,0.6s,baz=332,slow=2.4,SNR=8.3							

ATH 15 23:56:06.9, 36°17N×22°26E, h41km±1km, MD3.4/18

CSEM 15 23:56:09.0±0.4, 36°26N×22°29E, h30km, ML2.6/4, Error ellipse: s-maj=9.7km s-min=5.1km az=44.0

THE 15 23:56:10.3, 36°35N×22°32E, h28km±1km, ML2.6/4, Error ellipse: s-maj=2.2km s-min=1.3km az=62.0

ISC 15 23:56:08.4±1.3, 36°23N±0°05×22°28E±0°05, h28km±11km, n63, σ0§77/82, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DYR	Agios Nikonas	0.53	5	P		Pb	23 56 18.9	-0.4
DYR				S		Sb	23 56 26.2	-0.5
DYR	Agios Nikonas	0.53	5	eP		Pb	23 56 18.9	-0.4
DYR				eS		Sn	23 56 28.5	+0.4
DYR	Agios Nikonas	0.53	5	P		Pb	23 56 18.9	-0.4
DYR				S		Sb	23 56 26.2	-0.5
KYTH	Kithira	0.61	85	P		Pb	23 56 21.1	+0.4
KYTH	Kithira	0.61	85	eP		Pb	23 56 21.0	+0.4
KYTH	Kithira	0.61	85	P		Pb	23 56 21.1	+0.4
VLI	Veliai	0.72	47	P		Pb	23 56 22.0	-0.4
VLI	Veliai	0.72	47	eP		Pb	23 56 22.0	-0.4
VLI				eS		Sn	23 56 33.9	+1.1
VLI	Veliai	0.72	47	P		Pb	23 56 22.0	-0.4
VLI				eS		Sn	23 56 33.9	+1.1
PYL	PYLOS	0.79	327	P		Pn	23 56 23.0	-0.6
PYL	PYLOS	0.79	327	eP		Pn	23 56 22.7	-0.9
PYL				eS		Sn	23 56 35.9	+1.4
PYL	PYLOS	0.79	327	P		Pn	23 56 23.0	-0.6
PYL				eS		Sn	23 56 35.9	+1.4
ITM	Ithomi	0.99	344	P		Pn	23 56 26.2	-0.2
ITM	Ithomi	0.99	344	eP		Pn	23 56 26.2	-0.2
ITM				eS		Sb	23 56 41.1	+1.5
ITM	Ithomi	0.99	344	P		Pn	23 56 26.2	-0.2
ITM				eS		Sb	23 56 41.1	+1.5
VLX	Vlachokerasia	1.14	4	P		Pn	23 56 28.5	0.0
VLX				S		Sn	23 56 41.5	-1.8
VLX	Vlachokerasia	1.14	4	eP		Pn	23 56 28.6	0.0
VLX				eS		Sb	23 56 45.2	+1.2
VLX	Vlachokerasia	1.14	4	P		Pn	23 56 28.5	0.0
VLX				S		Sn	23 56 41.5	-1.8
AMT	Artemida-Makis	1.38	341	P		Pn	23 56 31.6	-0.1
AMT	Artemida-Makis	1.38	341	eP		Pn	23 56 32.4	+0.7
AMT				eS		Sb	23 56 50.7	0.0
AMT	Artemida-Makis	1.38	341	P		Pn	23 56 31.6	-0.1
AMT				eS		Sb	23 56 50.7	0.0
DID	Didima	1.49	31	P		Pn	23 56 32.6	-0.7
DID				S		Sn	23 56 50.6	-1.1
DID	Didima	1.49	31	eP		Pn	23 56 32.5	-0.7
DID	Didima	1.49	31	P		Pn	23 56 32.6	-0.7
DID				S		Sn	23 56 50.6	-1.1
KARN	Karanos	1.57	121	P		Pb	23 56 36.9	+0.1
KARN	Karanos	1.57	121	P		Pb	23 56 36.9	+0.1
GUR	Goura	1.70	2	P		Pn	23 56 36.6	+0.3
GUR				S		Sn	23 56 56.0	-1.1
GUR	Goura	1.70	2	eP		Pn	23 56 37.2	+0.9
GUR	Goura	1.70	2	P		Pn	23 56 36.6	+0.3
GUR				S		Sn	23 56 56.0	-1.1
VAM	Vamos	1.77	117	eP		Pn	23 56 36.3	-0.8
VAM	Vamos	1.77	117	eP		Pn	23 56 36.3	-0.8
NAIG	Nisos Aigina	1.81	32	eP		Pn	23 56 38.2	+0.6
NAIG	Nisos Aigina	1.81	32	eP		Pn	23 56 38.2	+0.6
KLV	Kalavryta, Ach	1.81	357	eP		Pn	23 56 38.4	+0.7
KLV	Kalavryta, Ach	1.81	357	eP		Pn	23 56 38.4	+0.7
LTK	Loutraki	1.87	17	P		Pn	23 56 38.3	-0.2
LTK	Loutraki	1.87	17	eP		Pn	23 56 38.3	-0.2
LTK				eS		Sn	23 57 01.5	+0.3
LTK	Loutraki	1.87	17	P		Pn	23 56 38.3	-0.2
RLS	Riolos of Patr	1.93	341	eP		Pn	23 56 39.8	+0.5
RLS	Riolos of Patr	1.93	341	eP		Pn	23 56 39.8	+0.5
LAKA	Lakka	2.02	353	eP		Pn	23 56 41.8	+1.2
LAKA	Lakka	2.02	353	eP		Pn	23 56 41.8	+1.2
TRIZ	Trizonia	2.13	356	eP		Pn	23 56 42.8	+0.7
TRIZ	Trizonia	2.13	356	eP		Pn	23 56 42.8	+0.7
KALE	Kalithea	2.16	357	eP		Pn	23 56 42.4	-0.1
KALE	Kalithea	2.16	357	eP		Pn	23 56 42.4	-0.1
EFP	Efpalio	2.21	352	eP		Pn	23 56 44.6	+1.4
EFP	Efpalio	2.21	352	eP		Pn	23 56 44.6	+1.4
PTL	Penteli	2.21	35	eP		Pn	23 56 43.4	+0.2
PTL	Penteli	2.21	35	eP		Pn	23 56 43.4	+0.2
VLS	Valsamata	2.36	326	eP		Pn	23 56 44.5	-0.8
VLS	Valsamata	2.36	326	eP		Pn	23 56 44.5	-0.8
LKR	Lokris	2.48	13	P		Pn	23 56 46.3	-0.6
LKR	Lokris	2.48	13	eP		Pn	23 56 46.6	-0.3
LKR	Lokris	2.48	13	eP		Pn	23 56 46.6	-0.3
EVR	Evrytania	2.71	352	eP		Pn	23 56 49.8	-0.3
EVR	Evrytania	2.71	352	eP		Pn	23 56 49.8	-0.3
AGG	Agios Georgios	2.79	1	eP		Pn	23 56 51.7	+0.6
AGG	Agios Georgios	2.79	1	eP		Pn	23 56 51.7	+0.6
NEO	Neokhori	3.16	13	eP		Pn	23 56 56.8	+0.6
NEO	Neokhori	3.16	13	eP		Pn	23 56 56.8	+0.6
JAN	Janina	3.60	342	eP		Pn	23 57 02.0	-0.3
JAN	Janina	3.60	342	eP		Pn	23 57 02.0	-0.3

CSEM 16 00:30:26.8, 42°61N×13°32E, h7km, MD1.6/4, After ROM

ROM 16 00:30:26.8±0.2, 42°61N×13°32E, h7km±4km, Md1.6/4, Ml0.7/3, Error ellipse: s-maj=6.2km s-min=1.4km az=1.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CAMP	Campotosto	0.10	135	Pg		Pg	00 30 29.6	+0.3
CAMP				Sg		Sg	00 30 31.2	+0.2
	20nm,0.7s							
CAMP	Campotosto	0.10	135	Pg		Pg	00 30 29.6	+0.3
CAMP				Sg		Sg	00 30 31.2	+0.2
	20nm,0.7s							
LNSS	Leonessa	0.20	270	Pg		Pg	00 30 31.6	+0.5
LNSS				Sg		Sg	00 30 35.1	+1.1
	36nm,0.2s							
LNSS	Leonessa	0.20	270	Pg		Pg	00 30 31.6	+0.5
LNSS				Sg		Sg	00 30 35.1	+1.1
	36nm,0.2s							
TERO	Teramo	0.21	85	Pg		Pg	00 30 31.8	+0.6
TERO				Sg		Sg	00 30 35.4	+1.3
	12nm,0.2s							
TERO	Teramo	0.21	85	Pg		Pg	00 30 31.8	+0.6
TERO				Sg		Sg	00 30 35.4	+1.3
	12nm,0.2s							
NRCA	Norcia	0.27	327	Pg		Pb	00 30 33.4	-0.8
NRCA				Sg		Sb	00 30 38.3	-0.8
NRCA	Norcia	0.27	327	Pg		Pb	00 30 33.4	-0.8
NRCA				Sg		Sb	00 30 38.3	-0.8

IDC 16 00:33:48.1±47.0, 44°01N×149°56E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.4/23, mbtmp3.8/3, Error ellipse: s-maj=1092.0km s-min=88.3km az=156.0

JMA 16 00:34:14.5±0.6, 44°54N×148°19E, h110km, M3.2

ISC 16 00:34:18.0±4.6, 44°6N±0°2×148°0E±0°3, h65km, n13, σ1§43/14, mb3.8/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NEM2	Nemuro 2	2.00	234	P		Pn	00 34 49.4	-0.1
NEM2				eS		Sn	00 35 16.2	+2.8
JRA	Rausu	2.13	254	P		Pn	00 34 52.0	+0.6
JAK	Akkeshi	2.83	238	P		Pn	00 35 00.3	-0.6
JAK				eS		Sn	00 35 35.4	+1.6
JTKR	Abashiri--Toko	2.97	260	P		Pn	00 35 02.6	-0.2
JAR	Ashorobuto	3.28	249	P		Pn	00 35 07.5	+0.5
JKK2	Kamakawa 2	3.81	262	P		Pn	00 35 14.3	0.0
JCH	Churui	3.87	242	P		Pn	00 35 14.3	-0.7
JCH				eS		Sn	00 35 59.8	+0.7
JNBK	Urakawa-nobuka	4.42	241	P		Pn	00 35 22.2	-0.4
JNBK				eS		Sn	00 36 12.7	-0.1
JKB	Kayabe	5.72	245	eS		Sn	00 36 43.1	-1.5
JOT	Ohata	5.98	240	eS		Sn	00 36 48.2	-2.8
MKAR	Makanchi Array	44.74	297	P		P	00 42 12.8	-12
	0.3nm,0.6s,baz=69,slow=7.9,SNR=3.6							
FINES	FINESS Array B	64.43	333	P		P	00 44 32.3	-15
	1.4nm,0.5s,baz=38,slow=9.6,SNR=9.4							
NOA	NORSAR Array B	69.07	339	P		P	00 45 00.8	-16
	0.5nm,0.4s,baz=31,slow=6.5,SNR=3.7							

IDC 16 00:43:18.8±0.4, 6°41S×154°14E, h0km, mb5.0/26, mb1 5.1/29, mb1mx5.1/30, mbtmp5.0/29, ML4.3/3, MS5.5/20, Ms1 5.5/20, ms1mx5.4/28, Error ellipse: s-maj=15.2km s-min=11.2km az=87.0

NEIC 16 00:43:20.7±0.2, 6°48S×154°15E, h10km, mb5.3/47, MS5.8/123, MW5.7, Error ellipse: s-maj=6.6km s-min=5.1km az=121.0

BJI 16 00:43:22.4, 6°25S×154°96E, h44km, mB5.7/48, mb5.3/66, Ms5.8/70, Ms7 5.7/62

MOS 16 00:43:23.7±1.3, 6°40S×154°02E, h33km, mb5.5/29, MS5.6/35, Error ellipse: s-maj=9.1km s-min=6.4km az=84.0

ISCJB 16 00:43:24.5±0.1, 6°46S±0°03×154°20E±0°02, h43km, mb5.3/113, MS5.7/184, Error ellipse: s-maj=4.2km s-min=3.3km az=169.0

GCMT 16 00:43:26.9±0.1, 6°78S×154°17E, h13km, MW5.8, Moment Tensor Solution. s106,c208; s71,c77; Moment tensor: Scale 10^17 Nm; Mrr=4.59±.05; Mθθ=-2.48±.04; Mφφ=-2.11±.04; Mrθ=2.76±.12; Mθφ=2.33±.03; Mφr=-1.73±.11; Best double couple: Mo=5.70000×10^17 NP1:φ=319.00000°, δ=28.00000°, λ=101.00000°. NP2:φ=127.00000°, δ=63.00000°, λ=84.00000°. Principal axes: T 5.6500, Plg=72.0000°, Azm=24.0000°; N -0.0100, Plg=5.0000°, Azm=129.0000°; P -5.6400, Plg=17.0000°, Azm=221.0000°; Data Used: II IU CN IC G. Surface waves: sta=105, comp=232, per= 50.

AUST 16 00:43:31.6, 6°57S×154°16E, h100km

DJA 16 00:43:31.9±0.9, 7°S±5°×15°4E±°, h67km±10km, M5.7/26, mB6.0/23, mb5.4/26, MLv5.8/1, Mw(mB)5.7/23, Mwp5.7/4

ISC 16 00:43:25.7±0.3, 6°51S±0°04×154°26E±0°04, h45km±1km, h44km:pP-P, n772, σ1§54/728, mb5.2/113, MS5.7/187, 101C-86D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	Port Moresby	7.60	247	ePn		Pn	00 45 12.3	-1.7
PMG	Port Moresby	7.60	247	P		Pn	00 45 13.2	-0.8
	464nm,0.9s,6µm41µm2.4nm							
PMG	Port Moresby	7.60	247	Pn		Pn	00 45 10.7	-3.3
	17nm,0.3s,baz=50,slow=8.2,SNR=23							
PMG				Sn		Sn	00 46 40.3	+1.5
	13nm,0.3s,baz=208,slow=22,SNR=7.4							
PMG				LR		LR	00 48 08.9	
	comp=Z,54µm,18.1s,baz=29,slow=38							
COEN	Coen	13.18	235	ePn		Pn	00 46 25.4	-5.0
COEN	Coen	13.18	235	P		Pn	00 46 33.8	+3.4
	baz=13,SNR=10							
JAY	Jayapura	14.08	286	P		Pn	00 46 41.8	-0.9
	baz=14,SNR=9.5							
CTA	Charters Tower	15.58	209	Pn		Pn	00 47 00.3	-2.1
CTA	Charters Tower	15.58	209	Pn		Pn	00 47 00.3	-2.1
	0.6nm,0.3s,baz=32,slow=13,SNR=7.2							
CTAO	Charters Tower	15.58	209	eP		Pn	00 47 00.6	-1.8
CTAO				pmax		pmax		
	comp=Z,694nm,2.4s							
CTAO	Charters Tower	15.58	209	ePn		Pn	00 47 00.6	-1.8
	comp=Z,694nm,2.4s							
EIDS	Eidsvold	19.00	189	eP		P	00 47 43.2	-0.6
	comp=Z,1µm,2.8s							
EIDS	Eidsvold	19.00	189	P		Pn	00 47 45.9	+1.1
	baz=19,SNR=6.2							
NOUC	Port Laguerre	19.38	144	eP		Pn	00 47 49.2	-0.2
DZM	Mont Dzumac	19.44	144	eP		Pn	00 47 49.7	-0.5
	comp=Z,457nm,1.2s							
DZM				eLR		LR	00 52 28.0	
	comp=Z,18µm,20.9s							
DZM	Mont Dzumac	19.44	144	eP		Pn	00 47 49.5	-0.7
DZM	Mont Dzumac	19.44	144	P		Pn	00 47 50.2	0.0
	comp=Z,9.3nm,1.1s							
DZM	Mont Dzumac	19.44	144	P		Pn	00 47 50.2	0.0
	comp=Z,2.6nm,0.3s,baz=332,slow=13,SNR=14							
QIS	Mount Isa	19.92	224	P		P	00 47 51.0	-2.9
	baz=20,SNR=19							
RMQ	Roma	20.55	194	P		P	00 48 00.8	+0.2
	baz=21,SNR=65							
TLE	Tual	21.42	271	P		P	00 48 12.9	+2.8
	comp=Z,860nm,1.1s,comp=Z,31µm							
TLE	Tual	21.42	271	P		P	00 48 12.6	+2.5
	baz=21,SNR=4.4							
GUMO	Guam	22.04	335	eP		P	00 48 17.7	+1.0
GUMO	Guam	22.04	335	P		P	00 48 14.8	-1.9
	comp=Z,39nm,0.5s,baz=210,slow=14,SNR=2.8							
QLP	Quilpie	22.13	204	P		P	00 48 15.8	-1.8
	baz=22,SNR=29							
FAKI	Fak Fak	22.22	278	P		P	00 48 35.1	+16
KDU	Kakadu	22.33	252	P		P	00 48 20.9	+1.0
	baz=22,SNR=4.6							
KDU				S		Sn	00 52 36.5	-0.6
	baz=22,SNR=5.4							
WRAB	Tennant Creek	23.49	233	eP		P	00 48 29.6	-2.1
WRAB				pmax		pmax		
	comp=Z,192nm,1.0s							
WRAB				MLR		MLR		
	comp=Z,11µm,19.0s							
WRAB	Tennant Creek	23.49	233	eP		P	00 48 29.6	-2.1
	comp=Z,192nm,1.0s							
WRAB				LR		LR		
	comp=Z,11µm,19.0s							
SWI	Sorong	23.62	283	P		P	00 48 33.4	+0.4
	comp=Z,122nm,1.3s,comp=Z,4µm							
MTN	Manton Dam	23.64	253	P		P	00 48 34.2	+1.0
	baz=24,SNR=7.2							
ARMA	Armidale	23.91	186	eP		P	00 48 35.3	-0.4
	comp=Z,87nm,1.0s							
ARMA	Armidale	23.91	186	P		P	00 48 36.9	+1.2
	baz=24,SNR=9.4							
PALU	Palau	24.06	305	P		P	00 48 38.8	+1.7
	baz=24,SNR=5.6							
BNDI	Bandanaira	24.32	273	P		P	00 48 51.3	+12
MSVF	Nonsavu	25.76	118	PFAKE			00 49 00.0	+7.4
MSVF				LR		LR		
	comp=Z,9µm,20.0s							
AS31	Alice Springs	25.96	227	eP		P	00 48 51.7	-2.6
ASAR	Alice Springs	25.96	227	P		P	00 48 51.8	-2.5
ASAR				ScP		ScP	00 56 04.0	+5.6
ASAR	Alice Springs	25.96	227	P		P	00 48 51.8	-2.5
	comp=Z,32nm,1.0s,baz=60,slow=8.4,SNR=77							
ASAR				ScP		ScP	00 56 04.0	+5.6
	comp=Z,2.2nm,1.0s,baz=58,slow=2.9,SNR=4.1							
ASAR				LR		LR	00 58 49.1	
	comp=Z,9µm,19.6s,baz=137,slow=36							
CMSA	Cobar Meteorol	26.16	197	P		P	00 48 54.9	-1.1
	baz=26,SNR=23							
MGCD	Mangrove Creek	26.73	186	P		P	00 49 03.0	+1.9
	baz=27,SNR=8.3							
NLAI	Namlea	27.25	276	P		P	00 49 10.4	+4.4
	comp=Z,90nm,1.5s,comp=Z,3µm							
LBMI	Labuha	27.32	281	P		P	00 49 08.7	+2.0
	comp=Z,517nm,1.3s,comp=Z,8µm							
STKA	Stephens Creek	27.88	204	eP		P	00 49 10.7	-0.7
	comp=Z,7.8nm,0.9s							
STKA				ePP		PP	00 50 14.0	-1.0
STKA	Stephens Creek	27.88	204	P		P	00 49 08.8	-2.6
	comp=Z,28nm,0.8s,baz=19,slow=8.4,SNR=15							
STKA				LR		LR	01 00 38.7	
	comp=Z,15µm,18.9s,baz=14,slow=37							
STKA	Stephens Creek	27.88	204	P		P	00 49 10.9	-0.5
	baz=28,SNR=23							
CAN	Canberra	29.08	189	PFAKE			00 49 30.0	+7.8
CAN				LR		LR		
	comp=Z,16µm,19.0s							
FITZ	Fitzroy Crossi	30.19	245	eP		P	00 49 29.6	-2.5
	comp=Z,24nm,1.1s							
FITZ				e			00 49 43.6	
FITZ	Fitzroy Crossi	30.19	245	P		P	00 49 29.5	-2.6
	baz=30,SNR=43							
KMSI	Cibinong	31.03	282	P		P	00 49 43.8	+4.2
	comp=Z,607nm,0.9s,comp=Z,14µm							
BBOO	Buckleboo	31.17	211	P		P	00 49 38.9	-1.7
	baz=31,SNR=5.6							
BBSI	Bau Bau	31.53	270	P		P	00 49 48.4	+4.4
	comp=Z,159nm,1.4s,comp=Z,3µm							
KDI	Kendari	31.61	273	P		P	00 49 57.7	+13
MMRI	Maumere	31.81	264	P		P	00 49 47.1	+0.7
	comp=Z,199nm,1.2s,comp=Z,3µm							
LUWI	Luwuk	31.87	279	P		P	00 49 48.2	+1.2
	comp=Z,202nm,1.2s,comp=Z,4µm							
ARPS	Mount Arapiles	32.19	199	P		P	00 49 50.9	+1.4
	baz=32,SNR=5.2							
MRSI	Marisa	32.99	281	P		P	00 49 57.0	+0.2
	comp=Z,81nm,1.2s,comp=Z,2µm							
BKSI	Bulukumba	33.97	270	P		P	00 50 05.1	-0.3
	comp=Z,35nm,1.1s,comp=Z,1µm							
KAPI	Kappang	34.36	271	eP		P	00 50 07.5	-1.3
KAPI				epP		pP	00 50 20.4	-0.4
KAPI				eScP		ScP	00 56 28.3	+2.5
KAPI				LR		LR		
	comp=Z,5µm,20.0s							
KAPI	Kappang	34.36	271	P		P	00 50 07.9	-0.9
	SNR=25							
KAPI	Kappang	34.36	271	P		P	00 50 07.1	-1.6
	comp=Z,250nm,1.0s,SNR=6.3							
KAPI	Kappang	34.36	271	P		P	00 50 08.1	-0.6
	comp=Z,51nm,1.5s,comp=Z,1µm							
KAPI	Kappang	34.36	271	P		P	00 50 06.5	-2.3
	comp=Z,22nm,0.7s,baz=111,slow=12,SNR=25							
SPSI	Sidrap Palu	34.43	272	P		P	00 50 09.5	+0.1
	comp=Z,46nm,1.2s,comp=Z,1µm							
TTSI	Tana Toraja	34.48	274	P		P	00 50 11.6	+1.8
PCI	Palu	34.78	278	P		P	00 50 27.7	+15
PCI	Palu	34.78	278	P		P	00 50 27.6	+15
	baz=35,SNR=3.4							
PCI				S		S	00 55 32.0	-8.2
	baz=35,SNR=6.5							
TAU	Tasmania Unive	36.77	189	eP		P	00 50 29.7	+0.7
TAU				pmax		pmax		
	comp=Z,158nm,1.3s							
TAU				MLR		MLR		
	comp=Z,5µm,19.0s							
TAU	Tasmania Unive	36.77	189	eP		P	00 50 29.6	+0.7
	comp=Z,158nm,1.3s							
TAU				LR		LR		
	comp=Z,5µm,19.0s							

KSM LR LR
comp=Z,2μm,20.0s
KSM Kuching 44.58 279 P **P** **00 51 35.3 +1.4**
KSM Kuching 44.58 279 P **P** **00 51 35.3 +1.4**
baz=44,SNR=3.1
JNU Nakatsue 45.24 332 *e*P **P** **00 51 38.7 -0.2**
comp=Z,34nm,1.1s
JNU Nakatsue 45.24 332 P P 00 51 35.0 -3.9
comp=Z,54nm,0.8s,baz=114,slow=5.1,SNR=21
MJAR Matsushiro Arr 45.39 342 P **P** **00 51 37.8 -2.2**
MJAR PP **PcP** **00 53 14.6 -4.2**
MJAR Matsushiro Arr 45.39 342 P **P** **00 51 37.8 -2.2**
comp=Z,3.4nm,0.6s,baz=174,slow=8.3,SNR=7.5
MJAR PP **PcP** **00 53 14.6 -4.2**
comp=Z,3.2nm,0.9s,baz=156,slow=9.3,SNR=2.6
MJAR LR LR 01 10 09.1
comp=Z,3μm,18.2s,baz=185,slow=36
MAJO Matsushiro 45.39 342 *e*P P 00 51 44.9 +4.9
MAJO pmax pmax
comp=Z,17nm,0.9s
MAJO Matsushiro 45.39 342 *e*P P 00 51 44.9 +4.9
comp=Z,17nm,0.9s
MAT Matsushiro 45.39 342 P **P** **00 51 39.2 -0.8**
MAT S **S** **00 58 15.0 -3.1**
QZH Quanzhou 46.72 313 ⇓*i*P P 00 51 55.0 +4.4
QZH S **S** **00 58 41.3 +3.9**
QZH pmax pmax
comp=Z,230nm,1.0s
QZH LR LR
comp=N,11μm,23.0s
QZH LR LR
comp=E,14μm,19.1s
QZH LR LR
comp=Z,10μm,19.6s
RAR Rarotonga 46.77 113 LR LR 01 09 32.6
comp=Z,2μm,18.7s,baz=282,slow=34
SSE Sheshan 48.97 322 P **P** **00 52 09.3 +1.4**
SSE PP **PP** **00 54 03.8 +2.0**
SSE S **S** **00 59 11.6 +2.4**
SSE pmax pmax
comp=Z,41nm,0.7s
SSE pmax pmax
comp=Z,370nm,3.7s
SSE LR LR
comp=N,2μm,20.2s
SSE LR LR
comp=E,3μm,20.8s
SSE LR LR
comp=Z,4μm,19.5s
ERM Érimo 49.34 349 PFAKE 00 52 20.0 +9.4
ERM LR LR
comp=Z,5μm,19.0s
GZH Guangzhou 49.64 308 P P 00 52 16.8 +3.6
GZH S S 00 59 25.8 +6.9
GZH LR LR
comp=N,2μm,19.1s
GZH LR LR
comp=E,8μm,19.0s
GZH LR LR
comp=Z,12μm,20.0s
KSRS Korea Array 50.17 333 P **P** **00 52 15.7 -1.3**
comp=Z,23nm,1.0s,baz=148,slow=8.8,SNR=37
KSRS LR LR 01 12 26.5
comp=Z,2μm,18.6s,baz=351,slow=35
KSAR Wonju Array Be 50.18 333 P **P** **00 52 15.7 -1.4**
QIZ Qiongzhong 50.59 301 P **P** **00 52 20.5 +0.1**
QIZ S **S** **00 59 33.3 +1.1**
QIZ sS **sS** **00 59 52.5 -0.5**
QIZ LR LR
comp=N,1μm,16.4s
QIZ LR LR
comp=E,2μm,17.9s
QIZ LR LR
comp=Z,6μm,18.9s
INCN Inchon 50.80 332 *e*P **P** **00 52 22.2 +0.5**
comp=Z,74nm,0.9s
YUK Yuzh-Kuril'sk 50.88 352 *d i*P P 00 52 18.9 -3.2
YUK *i* 00 54 16.5
YUK *i* PPP PPP 00 55 13.6
YUK *e*S **S** **00 59 32.7 -2.6**
YUK *i* SS **SS** **01 03 07.8 -3.0**
YUK *e*SSS SSS 01 04 36.2
YUK pmax pmax
comp=Z,172nm,3.5s
MYKOM **Kota Tinggi 50.99 278** P P 00 52 36.6 +13
NJ2 Nanjing 51.08 321 *e*P **P** **00 52 23.6 -0.3**
NJ2 pP **pP** **00 52 35.3 -1.1**
NJ2 sP **sP** **00 52 38.8 -2.8**
NJ2 S **S** **00 59 43.5 +5.0**
NJ2 pmax pmax
comp=Z,60nm,1.0s
NJ2 pmax pmax
comp=Z,2μm,8.7s
NJ2 LR LR
comp=N,6μm,15.6s
NJ2 LR LR
comp=E,2μm,19.2s
NJ2 LR LR
comp=Z,8μm,19.3s
ASAJ Asahikawa 51.48 349 P **P** **00 52 26.7 0.0**
ASAJ Asahikawa 51.48 349 LR LR 01 13 38.3
comp=Z,7μm,19.0s,baz=360,slow=35
KGM Kluang 51.55 278 P P 00 52 41.9 +14
KTGM Kuala Trenggan 52.37 282 P **P** **00 52 36.0 +2.1**
WHN Wuhan 53.09 316 ⇑*i*P **P** **00 52 40.5 +1.6**
WHN pP **pP** **00 52 53.6 +2.2**
WHN S **S** **01 00 10.8 +4.7**
WHN pmax pmax
comp=Z,260nm,1.1s
WHN pmax pmax
comp=Z,1μm,5.1s
WHN LR LR
comp=N,10μm,18.2s
WHN LR LR
comp=E,10μm,17.0s
WHN LR LR
comp=Z,18μm,19.6s
VLA Vladivostok 53.41 340 ⇓*i*P **P** **00 52 39.9 -1.1**
VLA *e* 00 53 45.9
VLA *e*S **S** **01 00 09.4 -0.6**
VLA pmax pmax
comp=Z,31nm,1.2s
FRIM Kepong 53.43 279 P P 00 52 58.7 +17
YSS Yuzh-Sakhalins 54.20 350 *ce*P **P** **00 52 46.0 -0.7**
YSS *e*PPP PPP 00 55 54.0
YSS *e*S **S** **01 00 17.0 -3.6**
YSS *e*PS **PnS** **01 00 42.0 +6.6**
YSS *e* 01 02 32.0
YSS smax smax
comp=E,2μm,13.0s
YSS MLR MLR
comp=N,3μm,19.0s
YSS MLR MLR
comp=Z,4μm,19.0s
IPM Ipoh 54.25 280 P **P** **00 52 47.8 0.0**
IPM Ipoh 54.25 280 P P 00 53 05.4 +18
USRK Ussuriysk Arra 54.33 340 P **P** **00 52 45.0 -2.7**
comp=Z,8.2nm,0.8s,baz=165,slow=7.9,SNR=11
USRK LR LR 01 14 21.8
comp=Z,2μm,18.8s,baz=148,slow=34
TIA Tai'an 54.94 323 P **P** **00 52 52.3 -0.1**
TIA S **S** **01 00 35.0 +3.9**
TIA LR LR
comp=N,3μm,17.2s
TIA LR LR
comp=E,4μm,19.2s
TIA LR LR
comp=Z,5μm,16.7s
MDJ Mudanjiang 55.52 339 P **P** **00 52 56.1 -0.3**
MDJ pP **pP** **00 53 06.6 -2.4**
MDJ sP **sP** **00 53 11.8 -2.3**
MDJ PP **PP** **00 54 59.8 -1.1**
MDJ S **S** **01 00 35.8 -2.7**
MDJ SS **SS** **01 04 23.8 -0.4**
MDJ pmax pmax
comp=Z,19nm,1.2s
MDJ pmax pmax
comp=Z,400nm,12.9s
MDJ LR LR
comp=E,2μm,33.5s
MDJ LR LR
comp=Z,3μm,17.9s
SNY Shenyang 55.68 332 ⇑P P 00 52 54.0 -3.5
SNY sP sP 00 53 13.0 -2.3
SNY S **S** **01 00 41.4 +0.8**
SNY pmax pmax
comp=Z,6.0nm,0.6s
SNY pmax pmax
comp=Z,370nm,10.6s
SNY LR LR
comp=N,1μm,21.0s
SNY LR LR
comp=E,1μm,22.3s
SNY LR LR
comp=Z,4μm,17.0s
PPT Papeete 55.84 107 LR LR 01 14 13.8
comp=Z,3μm,18.0s,baz=267,slow=33
PPT2 Papeete2 55.84 107 *e*S **S** **01 00 46.4 +2.6**
comp=Z,2μm,25.5s
PPT2 *e*LQ LQ 01 06 58.3
comp=Z,5μm,26.0s
PPT2 *e*LR LR 01 09 22.5
comp=Z,3μm,20.0s
PSI Prapat 56.01 278 P P 00 53 04.0 +3.4
baz=56,SNR=5.6
CN2 Changchun 56.45 335 *e*P **P** **00 53 01.4 -1.6**
CN2 *es*P **sP** **00 53 19.4 -1.3**
CN2 *e*PP **PP** **00 55 09.1 0.0**
CN2 *e*S **S** **01 00 48.4 -2.4**
CN2 *e*SS **SS** **01 04 36.9 -1.9**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,200nm,9.0s
CN2 LR LR
comp=N,3μm,17.0s
CN2 LR LR
comp=E,900nm,17.0s
CN2 LR LR
comp=Z,3μm,18.0s
TBI Tubuai 56.54 114 *e*S **S** **01 00 52.9 0.0**
comp=Z,1μm,25.5s
TBI *e*LQ LQ 01 07 19.2
comp=Z,9μm,29.8s
TBI *e*LR LR 01 09 38.9
comp=Z,3μm,39.5s
GYA Guiyang 56.58 308 ⇑*i*P **P** **00 53 06.0 +1.6**
GYA pP **pP** **00 53 19.3 +2.2**
GYA sP **sP** **00 53 24.3 +2.1**
GYA PcP **PcP** **00 54 02.0 +1.4**
GYA PP **PP** **00 55 14.8 +4.0**
GYA ScP **ScP** **00 57 55.4 -1.2**
GYA S **S** **01 00 53.8 +0.3**
GYA sS **sS** **01 01 15.3 +0.7**
GYA SS **SS** **01 04 42.9 +1.2**
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,5μm,11.8s
GYA LR LR
comp=N,19μm,19.1s
GYA LR LR
comp=E,16μm,20.2s
GYA LR LR
comp=Z,21μm,19.4s
COCO West Island 56.86 260 PFAKE 00 53 20.0 +14
COCO LR LR
comp=Z,2μm,20.0s
SKR Severo-Kuril's 56.98 1 *e*P **P** **00 53 06.0 -0.6**
SKR *e* 01 01 05.0
SKR MLR MLR
comp=N,3μm,16.0s
SKR MLR MLR
comp=Z,5μm,16.0s
HABR Khabarovsk 57.29 345 *e*P P 00 53 15.9 +7.1
HABR 00 53 59.7
HABR 00 55 12.7
HABR S **S** **01 00 59.6 -2.2**
HABR *e* 01 01 12.3
HABR *e**SS sS 01 01 16.6 -6.3
HABR *e* 01 02 52.6
HABR *e*SS **SS** **01 04 50.9 -1.0**
HABR pmax pmax
comp=Z,298nm,1.9s
HABR pmax pmax
comp=N,51nm,0.8s
HABR pmax pmax
comp=E,94nm,0.8s
HABR MLR MLR
comp=Z,3μm,18.0s
BJI Beijing 58.11 326 P **P** **00 53 16.1 +1.3**
BJI S **S** **01 01 14.8 +2.0**
BJI SS **SS** **01 05 09.8 +4.7**
BJI pmax pmax
comp=Z,15nm,1.3s
BJI pmax pmax
comp=Z,550nm,10.9s
BJI LR LR
comp=N,3μm,18.8s
BJI LR LR
comp=E,3μm,20.6s
BJI LR LR
comp=Z,3μm,19.8s
XAN Xi'an 58.85 316 P **P** **00 53 19.8 -0.4**
XAN pP **pP** **00 53 32.3 -0.6**
XAN PP **PP** **00 55 34.3 +3.5**
XAN S **S** **01 01 25.3 +2.4**
XAN SS **SS** **01 05 18.8 +1.7**
XAN pmax pmax
comp=Z,16nm,1.0s
XAN pmax pmax
comp=Z,140nm,9.3s
XAN LR LR
comp=N,2μm,19.7s
XAN LR LR
comp=E,2μm,19.7s
XAN LR LR
comp=Z,2μm,20.1s
KLR Kul'dur 58.89 343 *e*P P 00 53 15.5 -4.5
KLR *e*S **S** **01 01 20.0 -2.7**
KLR pmax pmax
comp=Z,1μm,12.0s
KLR smax smax
comp=E,2μm,13.5s
KMI Kunming 59.14 304 P **P** **00 53 24.5 +2.0**
KMI pP **pP** **00 53 36.8 +1.5**
KMI sP **sP** **00 53 41.6 +1.2**
KMI S **S** **01 01 28.1 +0.8**
KMI SS **SS** **01 05 24.8 +2.5**
KMI pmax pmax
comp=Z,27nm,1.4s
KMI pmax pmax
comp=Z,1μm,9.8s
KMI LR LR
comp=N,3μm,19.7s
KMI LR LR
comp=E,3μm,18.0s
KMI LR LR
comp=Z,5μm,20.1s
PET Petropavlovsk 59.42 3 *e*P **P** **00 53 25.2 +1.6**
PET pmax pmax
comp=Z,600nm,7.4s
PET pmax pmax
comp=Z,600nm,8.9s
PETK Petropavlovsk- 59.46 2 P **P** **00 53 22.5 -1.4**
PETK Petropavlovsk- 59.46 2 P **P** **00 53 22.5 -1.4**
PETK Petropavlovsk- 59.46 2 P **P** **00 53 22.5 -1.4**
comp=Z,14nm,1.1s,baz=145,slow=5.3,SNR=4.1
PETK LR LR 01 19 11.2
comp=Z,3μm,18.4s,baz=182,slow=36
CM31 Chiang Mai Arr 59.92 296 *e*P **P** **00 53 28.2 +0.5**
comp=Z,33nm,1.0s
CM31 *e* 00 53 46.2
CMAR Chiang Mai Arr 59.92 296 P **P** **00 53 27.8 +0.1**
CMAR Chiang Mai Arr 59.92 296 P **P** **00 53 27.8 +0.1**
comp=Z,22nm,1.1s,baz=111,slow=5.1,SNR=74
CMAR LR LR 01 19 06.6
comp=Z,3μm,19.3s,baz=334,slow=36
CHTO Chiang Mai 60.03 296 *e*P **P** **00 53 29.5 +1.0**
CHTO pmax pmax
comp=Z,79nm,1.4s
CHTO Chiang Mai 60.03 296 *e*P **P** **00 53 29.5 +1.0**
comp=Z,79nm,1.4s
CHTO Chiang Mai 60.03 296 P **P** **00 53 29.9 +1.3**
SNR=23
DRV Dumont d'Urvil 60.86 186 S S 01 01 22.0 -26
DRV SS **SS** **01 05 48.0 +0.8**
DRV L L 01 08 00.0
DRV R 01 12 00.0
CD2 Chengdu 60.94 311 P **P** **00 53 36.3 +1.7**
CD2 pP **pP** **00 53 49.0 +1.6**
CD2 sP **sP** **00 53 54.3 +1.8**
CD2 PcP **PcP** **00 54 18.9 +1.2**
CD2 PP **PP** **00 55 52.9 +3.5**
CD2 PcS **PcS** **00 58 20.3 -0.3**
CD2 S **S** **01 01 49.8 -0.1**
CD2 sS **sS** **01 02 11.3 +0.1**
CD2 ScS SKKSac 01 03 19.6 -2.8
CD2 SS **SS** **01 05 50.9 +0.8**
CD2 pmax pmax
comp=Z,90nm,0.9s
CD2 pmax pmax
comp=Z,2μm,8.0s
CD2 LR LR
comp=N,6μm,20.1s
CD2 LR LR
comp=E,7μm,20.6s
CD2 LR LR
comp=Z,9μm,20.6s
HHC Hu-ho-hao-te 61.27 324 *e*P **P** **00 53 36.9 +0.2**
HHC sP **sP** **00 53 55.5 +0.9**
HHC PcP **PcP** **00 54 18.8 -0.1**
HHC PP **PP** **00 55 54.3 +2.2**
HHC ScP **ScP** **00 58 15.3 -1.8**
HHC PcS **PcS** **00 58 20.3 -1.5**
HHC S **S** **01 01 52.8 -1.1**
HHC sS **sS** **01 02 14.6 -0.5**
HHC ScS **SKKSac** **01 03 20.5 -4.0**
HHC SS **SS** **01 05 55.8 +0.8**
HHC pmax pmax
comp=Z,51nm,0.6s
HHC pmax pmax
comp=Z,960nm,6.5s
HHC LR LR
comp=N,6μm,18.2s
HHC LR LR
comp=E,10μm,18.6s
HHC LR LR
comp=Z,6μm,17.4s
FX1 Attu Island--F 61.31 13 *e*P **P** **00 53 36.5 0.0**
FX1 Attu Island--F 61.31 13 P **P** **00 53 36.8 +0.3**
comp=Z,13nm,0.8s,baz=295,slow=15,SNR=1.8
FX1 LR LR 01 18 56.0
comp=Z,8μm,19.2s,baz=209,slow=35
BTO Baotou 62.03 323 *e*P **P** **00 53 41.6 -0.2**
LZH Lanzhou 63.46 316 ⇓P **P** **00 53 52.8 +1.3**
LZH pP **pP** **00 54 02.3 -2.0**
LZH sP **sP** **00 54 08.8 -0.6**
LZH S **S** **01 02 26.1 +4.4**
LZH sS **sS** **01 02 47.5 +4.5**
LZH SS **SS** **01 06 30.8 +1.3**
LZH pmax pmax
comp=Z,61nm,1.0s
LZH pmax pmax
comp=Z,340nm,4.2s
LZH LR LR
comp=N,3μm,16.3s
LZH LR LR
comp=E,5μm,17.6s
LZH LR LR
comp=Z,6μm,18.3s
IMP Imphal 66.41 300 P **P** **00 54 08.0 -2.8**
CLNS Chul'man 67.55 343 *e*P **P** **00 54 17.4 +0.1**
CLNS *e**PP **pP** **00 54 25.5 -4.8**
CLNS *e* 00 54 52.0
CLNS *e* 01 03 52.4
CLNS pmax pmax
comp=Z,27nm,0.8s
CLNS pmax pmax
comp=N,11nm,0.8s
CLNS pmax pmax
comp=E,2.0nm,0.8s
CLNS pmax pmax
comp=Z,16nm,2.0s
CLNS pmax pmax
comp=N,14nm,1.9s
CLNS pmax pmax
comp=E,13nm,1.8s
GTA Gaotai 67.89 317 ⇑P **P** **00 54 21.5 +1.5**
GTA pP **pP** **00 54 34.4 +1.5**
GTA sP **sP** **00 54 39.9 +1.9**
GTA PP PP 00 56 56.3 +6.1
GTA S **S** **01 03 20.1 +4.5**
GTA sS **sS** **01 03 40.5 +3.4**
GTA pmax pmax
comp=Z,61nm,1.0s
GTA pmax pmax
comp=Z,450nm,7.6s
GTA LR LR
comp=N,3μm,19.5s
GTA LR LR
comp=E,4μm,19.5s
GTA LR LR
comp=Z,5μm,19.5s
ULN Ulaanbaatar 68.20 328 *e*P **P** **00 54 22.7 +0.9**
ULN Ulaanbaatar 68.20 328 P **P** **00 54 23.1 +1.3**
SNR=23
SHL Shillong 68.42 301 *e*P **P** **00 54 23.0 -0.6**
SHL *ex* x 01 03 25.0
SONM Songino Array 68.53 328 P **P** **00 54 24.3 +0.5**
SONM ⇑*e* 01 22 35.3
SONM Songino Array 68.53 328 P **P** **00 54 24.3 +0.5**
comp=Z,14nm,0.8s,baz=135,slow=4.6,SNR=44
SONM PKP2bc 01 22 35.3
comp=Z,0.3nm,0.8s,baz=262,slow=3.0,SNR=3.9
SONM LR LR 01 24 57.4
comp=Z,5μm,19.5s,baz=125,slow=36
SEY Seymchan 69.26 359 *e*P **P** **00 54 26.8 -1.0**
RKT Rikitea 69.80 112 *e*S **S** **01 03 40.2 +1.6**
comp=Z,790nm,26.8s
RKT *e*LQ LQ 01 12 50.9
comp=Z,3μm,30.0s
RKT *e*LR LR 01 15 54.2
comp=Z,3μm,23.0s
LSA Lhasa 70.40 305 P **P** **00 54 38.9 +2.8**
LSA S **S** **01 03 45.9 -0.3**
LSA pmax pmax
comp=Z,20nm,1.0s
LSA LR LR
comp=N,1μm,23.0s
LSA LR LR
comp=E,2μm,23.0s
CAL Calcutta 70.62 297 *e*P **P** **00 54 36.3 -0.7**
CAL *ex* x 01 03 37.9
CAL AMS AMS 01 06 34.6
comp=N,1μm,10.1s
YAK Yakutsk 70.93 348 *e*P **P** **00 54 37.4 -0.7**
YAK *e**PP pP 00 54 45.8 -5.3
YAK *e* 00 54 58.2
YAK *e* 00 57 13.5
YAK *e*PPP PPP 00 58 52.5
YAK *e*S **S** **01 03 52.9 +2.7**
YAK *e**SS **sS** **01 04 13.6 +1.7**
YAK *e*SS **SS** **01 08 25.0 +1.1**
YAK pmax pmax
comp=Z,44nm,1.2s
YAK pmax pmax
comp=N,13nm,1.3s
YAK pmax pmax
comp=Z,555nm,8.1s
YAK pmax pmax
comp=E,204nm,5.7s
YAK pmax pmax
comp=N,268nm,5.2s
YAK smax smax
comp=N,1μm,11.6s
YAK smax smax
comp=E,2μm,11.6s
YAK MLR MLR
comp=N,2μm,21.0s
YAK MLR MLR
comp=E,481nm,16.0s
YAK MLR MLR
comp=Z,2μm,18.0s
VNDA Vanda 71.09 178 *e*P **P** **00 54 40.1 +1.3**
VNDA Vanda 71.09 178 P **P** **00 54 39.7 +0.8**
comp=Z,9.4nm,1.0s,baz=341,slow=6.7,SNR=19
VNDA LR LR 01 24 25.8
comp=Z,2μm,18.3s,baz=354,slow=35
SBA Scott Base 71.61 177 *e*P P 00 54 45.4 +3.4
SBA pmax pmax
comp=Z,205nm,2.1s
SBA Scott Base 71.61 177 *e*P P 00 54 45.4 +3.4
comp=Z,205nm,2.1s
ZAK Zakamensk 71.70 328 *e*P **P** **00 54 41.7 -1.4**

ZAK pmax pmax
comp=Z,38nm,1.6s
TLY Talaya 72.28 330 *e*P **P 00 54 46.4 -0.1**
TLY *e* 00 55 07.2
TLY pmax pmax
comp=Z,12nm,0.9s
TLY MLR MLR
comp=Z,2µm,17.0s
TLY Talaya 72.28 330 P **P 00 54 46.9 +0.4**
comp=Z,76nm,1.2s,SNR=6.1
IRK Irkutsk 72.30 330 *e*P **P 00 54 46.4 -0.2**
IRK pmax pmax
comp=Z,48nm,1.8s
TAPN Taplejung 72.53 301 *e*P **P 00 54 50.0 +1.2**
comp=Z,135nm,1.2s
ODAN Odare 72.66 301 *e*P **P 00 54 50.8 +1.3**
comp=Z,70nm,0.8s
MIR Mirnyy 72.87 202⇓*i*P P 00 55 05.0 +15
MIR *i* 00 55 15.0
MIR pmax pmax
comp=Z,70nm,1.3s
RAMN Ramite 73.36 300 *e*P **P 00 54 54.6 +0.9**
comp=Z,27nm,0.8s
MOY Mondy 73.62 329 *e*P **P 00 54 55.4 +0.9**
MOY pmax pmax
comp=Z,65nm,2.5s
VIS Vishakhapatnam 74.02 290 *e*P **P 00 54 56.2 -1.2**
GUN Gumba 74.24 301 *e*P **P 00 55 00.1 +1.1**
comp=Z,79nm,0.8s
PKI Pulchoki 74.55 301 *e*P **P 00 55 01.5 +0.7**
comp=Z,140nm,1.2s
PKIN Phulchoki 74.56 301 *e*P **P 00 55 01.9 +1.2**
GAMB Gambell 74.64 15 *e*P **P 00 54 59.6 -0.4**
comp=Z,30nm,1.1s
GAMB *e* 00 55 07.3
KKN Kakani 74.72 301 *e*P **P 00 55 02.6 +1.0**
comp=Z,72nm,1.0s
DMN Daman 74.82 301 *e*P **P 00 55 03.4 +1.2**
comp=Z,238nm,1.1s
BILL Bilibino 74.86 5 *e*P **P 00 54 59.6 -1.6**
BILL *e* 00 57 48.1
BILL pmax pmax
comp=Z,3.0nm,0.8s
BILL Bilibino 74.86 5 *e*P **P 00 55 00.5 -0.7**
comp=Z,22nm,0.9s
BILL *e* 00 55 08.7
BILL LR LR
comp=Z,2µm,20.0s
KOLN Koldanda 76.15 301 *e*P **P 00 55 09.9 +0.1**
comp=Z,88nm,0.7s
DANN Dangsing 76.16 301 *e*P **P 00 55 09.9 -0.1**
comp=Z,69nm,0.7s
OHAK Old Harbor 76.41 26 *e*P **P 00 55 10.4 +0.1**
PYUN Piuthan 76.75 301 *e*P **P 00 55 13.6 +0.4**
comp=Z,371nm,1.0s
TNA Tin City 77.05 15 *e*P **P 00 55 14.9 +1.2**
comp=Z,23nm,1.1s
TNA *e* 00 55 22.3
TNA *e*PP **PP 00 58 08.8 +1.1**
KDAK Kodiak Island 77.05 26 PFAKE 00 55 30.0 +16
KDAK LR LR
comp=Z,5µm,20.0s
WMQ Urumqi 77.97 317 P **P 00 55 21.0 +1.5**
WMQ PcP **pP 00 55 31.0 -1.7**
WMQ pP **pwP 00 55 34.0 +1.3**
WMQ sP **sP 00 55 40.0 +2.3**
WMQ PP **PP 00 58 19.0 +2.9**
WMQ S **S 01 05 09.0 -1.0**
WMQ SKS **SKSac 01 05 26.0 -4.2**
WMQ sS **sS 01 05 32.0 +0.1**
WMQ SS **SS 01 10 14.0 +2.0**
WMQ pmax pmax
comp=Z,68nm,1.2s
WMQ pmax pmax
comp=Z,1µm,8.0s
WMQ LR LR
comp=N,2µm,18.0s
WMQ LR LR
comp=E,2µm,18.0s
WMQ LR LR
comp=Z,2µm,18.0s
JBP Jabalpur 78.24 295⇑*ix* x 00 55 40.9
JBP *ex* x 00 58 31.9
HYB Hyderabad 78.42 289 *i*P **P 00 55 22.0 -0.5**
HYB *e*PcP **PcP 00 55 31.5 -0.1**
HYB *e*S **S 01 05 10.0 -5.6**
TRD Trivandrum 78.49 280⇓*ex* pP 00 55 37.5 +1.4
LGTI Lohaghat 79.42 301 *e*P **P 00 55 29.7 +2.0**
TIXI Tiksi 79.77 352 *e*P **P 00 55 27.6 -1.1**
TIXI pmax pmax
comp=Z,5.0nm,1.0s
TIXI MLR MLR
comp=Z,1µm,20.0s
TIXI Tiksi 79.77 352 *e*P **P 00 55 27.8 -0.8**
comp=Z,30nm,1.5s
TIXI LR LR
comp=Z,1µm,21.0s
PPLA Purkeypile 80.20 22 *e*P **P 00 55 33.8 +2.4**
comp=Z,28nm,1.2s
PMR Palmer 80.64 24 *e*P **P 00 55 32.8 -0.7**
PMR pmax pmax
comp=Z,45nm,1.3s
PMR Palmer 80.64 24 *e*P **P 00 55 32.8 -0.7**
comp=Z,45nm,1.3s
SML Sawmill 81.08 24 *e*P **P 00 55 35.6 -0.4**
SML *e* 00 55 42.1
SML pmax pmax
comp=Z,17nm,1.2s
SML Sawmill 81.08 24 *e*P **P 00 55 35.6 -0.4**
comp=Z,17nm,1.2s
SML *e*PcP **PcP 00 55 42.1 -0.1**
TRF Thorofare Moun 81.22 22 *e*P **P 00 55 34.5 -2.3**
comp=Z,14nm,0.9s
TRF *e* 00 55 51.3
PAF Port-aux-Franc 81.22 221 PFAKE 00 55 50.0 +13
PAF LR LR
comp=Z,4µm,20.0s
DDI Dehra Dun 81.47 302 *ex* **P 00 55 39.5 +0.7**
DIV Divide 81.78 25 *e*P **P 00 55 38.8 -0.9**
comp=Z,29nm,1.1s
NDI New Delhi 81.84 300 *e*P **P 00 55 38.0 -2.7**
MCK McKinley 81.88 22 *e*P **P 00 55 39.0 -1.1**
MCK pmax pmax
comp=Z,36nm,1.0s
MCK McKinley 81.88 22 *e*P **P 00 55 39.0 -1.1**
comp=Z,36nm,1.0s
SMLA Simla 82.39 303 *i*P **P 00 55 44.3 +0.8**
SMLA *e*P **P 00 55 44.3 +0.8**
KAD Karad 82.51 288 *ex* P 00 55 48.0 +3.5
MK31 Makanchi Array 82.56 319*ce*P **P 00 55 44.1 0.0**
MK31 pmax pmax
comp=Z,81nm,1.1s
MK31 Makanchi Array 82.56 319 *e*P **P 00 55 43.5 -0.6**
MKAR Makanchi Array 82.56 319 P **P 00 55 43.5 -0.6**
MKAR Makanchi Array 82.56 319 P **P 00 55 43.5 -0.6**
MKAR Makanchi Array 82.56 319 P **P 00 55 43.5 -0.6**
comp=Z,46nm,1.0s,baz=98,slow=4.0,SNR=104
MKAR LR LR 01 32 52.8
comp=Z,4µm,19.6s,baz=99,slow=36
PAX Paxson 82.82 24 *e*P **P 00 55 45.1 -0.1**
PAX *e*'PP **pP 00 55 59.3 +0.9**
PAX Paxson 82.82 24 *e*P **P 00 55 45.1 -0.1**
PAX epP **pP 00 55 59.3 +0.9**
COLA College 82.89 21 *e*P **P 00 55 44.1 -1.2**
COLA College 82.89 21 *e*P **P 00 55 44.1 -1.2**
POO Poona 83.02 290 *ex* **P 00 55 50.0 +2.9**
ILAR Eielson Array 83.19 22 P P 00 55 43.5 -3.4
ILAR Eielson Array 83.19 22 P P 00 55 43.5 -3.4
comp=Z,10nm,1.0s,baz=258,slow=4.9,SNR=45
ILAR LR LR 01 30 50.5
comp=Z,7µm,19.7s,baz=242,slow=34
ZAA0 Zalesovo Array 83.37 326⇑*e*P **P 00 55 46.1 -1.9**
ZALV Zalesovo Beam 83.37 326 P **P 00 55 46.4 -1.7**
ZALV Zalesovo Beam 83.37 326 P **P 00 55 46.4 -1.7**
ZALV Zalesovo Beam 83.37 326 P **P 00 55 46.4 -1.7**
comp=Z,8.7nm,0.5s,baz=118,slow=5.6,SNR=43
ZALV LR LR 01 34 03.2
comp=Z,2µm,19.5s,baz=114,slow=37
COLD Coldfoot 83.39 19 *e*P **P 00 55 48.0 +0.1**
MENT Mentasta 83.51 24 *e*P **P 00 55 47.6 -1.0**
DOT Dot Lake 83.71 23 *e*P **P 00 55 49.3 -0.3**
comp=Z,31nm,1.0s
THN Thein Dam 83.87 304 *e*P **P 00 55 49.8 -1.3**
NVS Novosibirsk 84.55 327 *e*P **P 00 55 53.3 -0.7**
NVS *e*S **S 01 06 13.0 -4.5**

NVS pmax pmax
comp=Z,177nm,2.0s
NVS pmax pmax
comp=N,50nm,2.1s
NVS pmax pmax
comp=E,69nm,1.9s
NVS smax smax
comp=E,104nm,3.5s
MAW Mawson 84.56 203 P **P 00 55 55.3 +1.4**
MAW Mawson 84.56 203 P **P 00 55 55.3 +1.4**
comp=E,16nm,0.8s,baz=90,slow=9.1,SNR=2.9
MAW LR LR 01 33 16.9
comp=E,1µm,18.9s,baz=86,slow=35
EGAK Eagle 85.35 23 *e*P **P 00 55 57.3 -0.6**
comp=E,29nm,1.0s
EGAK LR LR
comp=Z,10µm,20.0s
ULHL Ulahol 85.54 313 P **P 00 56 01.3 +1.7**
SNR=7.0
KURK Kurchatov 86.00 322*c i*P **P 00 56 00.5 -0.9**
KURK pmax pmax
comp=Z,61nm,1.2s
KURK MLR MLR
comp=Z,2µm,20.0s
KURK Kurchatov 86.00 322 *e*P **P 00 56 01.0 -0.4**
comp=Z,67nm,1.3s
KURK LR LR
comp=Z,2µm,20.0s
KURK Kurchatov 86.00 322 P **P 00 56 01.4 0.0**
SNR=30
NIL Nilore 86.13 304 PFAKE 00 56 10.0 +7.5
NIL LR LR
comp=Z,24nm,22.0s
TKM2 Tokmak 2 86.15 314 *e*P **P 00 56 03.3 +0.7**
TKM2 MLR MLR
comp=Z,2µm,19.0s
TKM2 Tokmak 2 86.15 314 *e*P **P 00 56 03.3 +0.7**
TKM2 LR LR
comp=Z,2µm,19.0s
TKM2 Tokmak 2 86.15 314 P **P 00 56 03.4 +0.8**
SNR=23
KZA Kyzart 86.22 313 P **P 00 56 04.5 +1.3**
SNR=27
WRAK Wrangell Islan 86.32 32 PFAKE 00 56 10.0 +7.2
WRAK LR LR
comp=Z,4µm,19.0s
KBK Karagaybulak 86.56 313 P **P 00 56 05.6 +1.0**
SNR=14
CHMS Chumysh 86.78 314 P **P 00 56 05.7 +0.3**
SNR=8.4
FRU Bishkek 86.84 314⇓*i*P **P 00 56 07.0 +1.2**
FRU *i* 00 56 18.0
FRU *e* 01 06 45.0
FRU pmax pmax
comp=Z,325nm,2.4s
AAK Ala-Archa 86.89 313 *i* P **P 00 56 04.9 -1.3**
AAK pmax pmax
comp=Z,30nm,1.1s
AAK MLR MLR
comp=Z,7µm,21.0s
AAK Ala-Archa 86.89 313 *e*P **P 00 56 05.5 -0.7**
comp=Z,198nm,2.3s
AAK LR LR
comp=Z,3µm,20.0s
AAK Ala-Archa 86.89 313 P **P 00 56 07.3 +1.1**
SNR=19
AAK Ala-Archa 86.89 313 P **P 00 56 07.1 +0.9**
SNR=14
AAK Ala-Archa 86.89 313 P **P 00 56 06.0 -0.2**
comp=Z,73nm,1.4s,SNR=10.0
USP Ospenovka 87.01 314 P **P 00 56 07.7 +1.1**
SNR=14
AML Almayashu 87.37 313 P **P 00 56 10.5 +1.7**
SNR=14
EKS2 Erkin-Say 87.41 313 *e*P **P 00 56 08.8 +0.1**
EKS2 pmax pmax
comp=Z,157nm,1.9s
EKS2 MLR MLR
comp=Z,2µm,20.0s
EKS2 Erkin-Say 87.41 313 *e*P **P 00 56 08.8 +0.1**
comp=Z,157nm,1.9s
EKS2 LR LR
comp=Z,2µm,20.0s
EKS2 Erkin-Say 87.41 313 P **P 00 56 10.1 +1.4**
SNR=18
DLBC Dease Lake 88.10 31 *e*P **P 00 56 11.8 +0.3**
DLBC Dease Lake 88.10 31 P **P 00 56 10.7 -0.8**
comp=Z,9.5nm,1.0s,baz=216,slow=10,SNR=8.0
HUMO Hull Mountain 89.07 47 *e*P **P 00 56 17.6 +1.2**
comp=Z,15nm,1.1s
YBH Yreka Blue Hor 89.11 48 *e*P **P 00 56 16.4 -0.3**
comp=Z,16nm,1.1s
YBH Yreka Blue Hor 89.11 48 P **P 00 56 16.6 -0.1**
comp=Z,14nm,1.0s,baz=208,slow=4.3,SNR=5.8
NLWA Neilton Lookou 89.26 42 PFAKE 00 56 30.0 +13
NLWA LR LR
comp=Z,6µm,20.0s
INK Inuvik 89.53 21 P **P 00 56 16.9 -0.9**
INK Inuvik 89.53 21 P **P 00 56 16.9 -0.9**
comp=Z,4.4nm,0.9s,baz=247,slow=5.0
KK31 Karatay Array 89.85 313*ce*P **P 00 56 19.7 -0.3**
KK31 pmax pmax
comp=Z,143nm,2.5s
KKAR Karatay Array 89.85 313 *e*P **P 00 56 20.4 +0.4**
KKAR Karatay Array 89.85 313 *e*P **P 00 56 20.4 +0.4**
CMB Columbia Colle 90.32 52 *e*P **P 00 56 23.0 +0.6**
CMB Columbia Colle 90.32 52 *e*P **P 00 56 23.0 +0.6**
PKM Peak Mountain 90.35 55⇑P **P 00 56 23.0 +0.2**
baz=90
BEKR Beckworth 90.59 50 *e*P **P 00 56 24.0 +0.3**
comp=Z,5.7nm,1.1s
WCN Washoe City 90.98 51 *e*P **P 00 56 26.5 +0.9**
WCN pmax pmax
comp=Z,21nm,1.1s
WCN Washoe City 90.98 51 *e*P **P 00 56 26.5 +0.9**
comp=Z,21nm,1.1s
VES Vestal, Richgr 91.06 54⇓P **P 00 56 25.8 0.0**
baz=91
ARVC Arvin 91.18 55⇓P **P 00 56 27.3 +0.9**
baz=91
CIS Catalina Islan 91.32 57⇑P **P 00 56 28.2 +1.0**
baz=91
ISA Isabella 91.53 54 *e*P **P 00 56 29.2 +1.1**
ISA Isabella 91.53 54 *e*P **P 00 56 29.2 +1.1**
ISA Isabella 91.53 54⇑P **P 00 56 28.9 +0.8**
baz=92
BRVK Borovoye 91.54 323 *e*P **P 00 56 26.2 -1.4**
BRVK pmax pmax
comp=Z,17nm,1.1s
BRVK MLR MLR
comp=Z,2µm,21.0s
BRVK Borovoye 91.54 323 *e*P **P 00 56 26.2 -1.4**
comp=Z,17nm,1.1s
BRVK LR LR
comp=Z,2µm,21.0s
BRVK Borovoye 91.54 323 P **P 00 56 27.0 -0.6**
SNR=11
PASC Pasadena Art C 91.59 56 *e*P **P 00 56 30.2 +1.9**
comp=Z,257nm,1.1s
MTUM Tungsten Hills 91.66 53 *e*P **P 00 56 30.6 +1.8**
MWC Mount Wilson 91.70 56 *e*P **P 00 56 30.6 +1.5**
MWC Mount Wilson 91.70 56 *e*P **P 00 56 30.6 +1.5**
EDW2 Edwards Air Fo 91.84 55⇓P **P 00 56 30.6 +1.0**
baz=92,SNR=7.9
CWC Cottonwood Cre 91.94 54⇑P **P 00 56 30.9 +0.8**
baz=92
NVAR Mina Array Bea 91.99 52 P **P 00 56 29.9 -0.4**
NVAR Mina Array Bea 91.99 52 P **P 00 56 29.9 -0.4**
comp=Z,36nm,1.1s,baz=250,slow=5.9,SNR=35
NVAR LR LR 01 33 32.0
comp=Z,4µm,19.3s,baz=91,slow=33
BFSC Mount Baldy Ra 92.03 56⇓P **P 00 56 31.4 +0.8**
baz=92,SNR=9.4
HAWA Hanford 92.05 44 *e*P **P 00 56 30.3 +0.1**
HAWA LR LR
comp=Z,3µm,20.0s
NV11 Mina Array Sit 92.11 52 *e*P **P 00 56 30.7 -0.1**
LRMC Laurel Mountai 92.15 55⇓P **P 00 56 32.2 +1.1**
baz=92,SNR=6.5
WVOR Wild Horse Val 92.21 48 PFAKE 00 56 40.0 +8.8
WVOR LR LR
comp=Z,6µm,19.0s
MURC Murrieta 92.34 57⇓P **P 00 56 32.3 +0.4**
baz=92
109C Camp Elliot, M 92.35 57⇑P **P 00 56 32.4 +0.6**
baz=92
MPMC Manual Prospec 92.37 54⇑P **P 00 56 32.9 +0.8**
baz=92,SNR=11
GRAC Grapevine Rang 92.57 53⇑P **P 00 56 33.6 +0.7**
baz=93
BAR Barrett 92.69 58 *e*P **P 00 56 35.6 +2.1**
RPN Rapa Nui 92.74 118 PFAKE 00 56 50.0 +16
RPN LR LR
comp=Z,3µm,19.0s
TPH Tonopah 92.80 52 PFAKE 00 56 50.0 +16
TPH LR LR
comp=Z,5µm,20.0s
GSC Goldstone 92.85 55 *e*P **P 00 56 35.6 +1.4**
GSC Goldstone 92.85 55 *e*P **P 00 56 35.6 +1.4**
GSC Goldstone 92.85 55⇑P **P 00 56 34.9 +0.6**
baz=93
MONP Monument Peak 92.92 57⇓P **P 00 56 36.2 +1.4**
baz=93,SNR=8.9
FURC Furnace Creek, 92.92 54⇓P **P 00 56 35.4 +1.1**
baz=93,SNR=11
PFO Pinyon Flat Ob 92.96 57 *e*P **P 00 56 36.4 +1.5**
comp=Z,37nm,1.1s
PFO LR LR
comp=Z,4µm,19.0s
PFO Pinyon Flat Ob 92.96 57⇑P **P 00 56 36.0 +1.1**
baz=93,SNR=6.6
BMN Battle Mountai 93.05 50 *e*P **P 00 56 35.1 0.0**
BMN *e* 00 56 50.0
BMN pmax pmax
comp=Z,12nm,1.1s
BMN MLR MLR
comp=Z,3µm,19.0s
BMN Battle Mountai 93.05 50 *e*P **P 00 56 35.1 0.0**
comp=Z,12nm,1.1s
BMN *e* 00 56 50.0
BMN LR LR
comp=Z,3µm,19.0s
HEC Hector,Ludlow 93.19 55⇓P **P 00 56 36.1 +0.3**
baz=93
SHOC Shoshone 93.33 54⇑P **P 00 56 37.1 +0.7**
baz=94,SNR=7.3
BELC Belle Mtn. Jos 93.38 56⇑P **P 00 56 37.7 +0.9**
baz=94,SNR=28
BMO Blue Mountains 93.43 45 *e*P **P 00 56 36.0 -0.7**
BMO pmax pmax
comp=Z,10.0nm,1.3s
BMO MLR MLR
comp=Z,6µm,20.0s
BMO Blue Mountains 93.43 45 *e*P **P 00 56 36.0 -0.7**
comp=Z,9.9nm,1.3s
BMO LR LR
comp=Z,6µm,20.0s
SWSC Sam W. Stewart 93.45 57⇓P **P 00 56 37.6 +0.7**
baz=94
GMRC Granite Mounta 93.73 56⇑P **P 00 56 39.2 +0.8**
baz=94,SNR=14
BC3 Big Chuckawall 93.80 57⇑P **P 00 56 39.7 +1.0**
baz=94,SNR=18
NEW Newport 93.89 42 *e*P **P 00 56 38.2 -0.5**
NEW LR LR
comp=Z,10µm,20.0s
NEW Newport 93.89 42⇑P **P 00 56 38.0 -0.7**
baz=94,SNR=7.5
NEW Newport 93.89 42 P **P 00 56 37.9 -0.8**
comp=Z,9.5nm,1.0s,baz=236,slow=3.3,SNR=7.5
IRM Iron Mountain 94.10 56⇑P **P 00 56 41.0 +1.0**
baz=94,SNR=14
R11A Troy Canyon, C 94.11 52⇓P **P 00 56 41.0 +0.9**
baz=94,SNR=28
GLA Glamis 94.27 57 *e*P **P 00 56 43.0 +2.2**
GLA Glamis 94.27 57 *e*P **P 00 56 43.0 +2.2**
GLA Glamis 94.27 57⇓P **P 00 56 42.3 +1.6**
baz=94,SNR=11
C11A Tepee Creek (N 94.43 43⇑P **P 00 56 40.9 -0.2**
baz=94
ELK Elko 94.58 50 *e*P **P 00 56 42.9 +0.6**
Y12C Blythe 94.58 57⇑P **P 00 56 42.8 +0.7**
baz=95
G12A Big Creek, Yel 94.85 45⇓P **P 00 56 43.0 -0.3**
baz=95
I12A Atlanta 94.89 47⇑P **P 00 56 43.8 +0.2**
baz=95
PDMCI Parker Dam,Lak 94.94 56⇑P **P 00 56 44.9 +1.2**
baz=95,SNR=14
F12A Elk City 94.95 45⇓P **P 00 56 43.3 -0.4**
baz=95
D12A Red Ives Fores 94.98 43⇓P **P 00 56 43.3 -0.4**
baz=95,SNR=12
113A Mohawk Valley, 95.13 58⇑P **P 00 56 45.2 +0.5**
baz=95
W13A Hualapai Mount 95.21 55⇑P **P 00 56 46.3 +1.0**
baz=95,SNR=18
HLID Hailey 95.40 47 *e*P **P 00 56 46.1 +0.3**
HLID LR LR
comp=Z,7µm,20.0s
HLID Hailey 95.40 47⇑P **P 00 56 46.3 +0.5**
baz=96
BSMT Bassoo Peak 95.42 43 *e*P **P 00 56 45.8 -0.1**
J13A Cove Ranch, Pi 95.56 47⇑P **P 00 56 46.7 +0.1**
baz=96
H13A Challis 95.58 46⇓P **P 00 56 46.9 +0.3**
baz=96
F13A Darby 95.60 45⇓P **P 00 56 47.1 +0.4**
baz=96,SNR=10
G13A Cobalt 95.62 45⇑P **P 00 56 47.0 +0.2**
baz=96
I13A Wildhorse Cree 95.63 47⇑P **P 00 56 46.9 -0.1**
baz=96,SNR=8.4
B13A Whitefish 95.66 42⇓P **P 00 56 46.8 0.0**
baz=96,SNR=5.4
A13A Flathead Natio 95.73 41⇑P **P 00 56 47.3 +0.2**
baz=96
E13A Victor 95.74 44⇑P **P 00 56 47.2 0.0**
baz=96
CCUT Cedar City 95.80 53 *e*P **P 00 56 49.6 +1.7**
MSO Missoula 95.93 44 PFAKE 00 57 00.0 +12
MSO LR LR
comp=Z,2µm,20.0s
I14A Mackay 96.11 47⇓P **P 00 56 48.9 -0.2**
baz=96
L14A Malta 96.17 48⇓P **P 00 56 49.6 +0.2**
baz=96
G14A Jackson 96.18 45⇑P **P 00 56 49.7 +0.3**
baz=96
H14A Leadore 96.21 46⇓P **P 00 56 50.1 +0.6**
baz=96
E14A Clinton 96.22 44⇑P **P 00 56 50.1 +0.6**
baz=96
K14A Jones Ranch, D 96.24 48⇓P **P 00 56 49.5 -0.1**
baz=96
YKW3 Yellowknife Ar 96.25 28 *e*P **P 00 56 47.5 -1.5**
comp=Z,1.2nm,2.2s
YKA Yellowknife Ar 96.25 28 P **P 00 56 47.6 -1.4**
YKA PKKPbc **PKKPbc 01 13 36.2 -1.6**
YKA Yellowknife Ar 96.25 28 P **P 00 56 47.6 -1.4**
comp=Z,4.1nm,1.0s,baz=269,slow=4.6,SNR=36
YKA PKKPbc **PKKPbc 01 13 36.2 -1.6**
comp=Z,0.2nm,0.7s,baz=86,slow=2.7,SNR=5.3
A14A Double T Ranch 96.38 41⇑P **P 00 56 50.3 +0.1**
baz=96
DUG Dugway 96.39 50 *e*P **P 00 56 51.5 +1.1**
DUG MLR MLR
comp=Z,1µm,20.0s
DUG Dugway 96.39 50 *e*P **P 00 56 51.5 +1.1**
DUG LR LR
comp=Z,1µm,20.0s
DUG Dugway 96.39 50⇑P **P 00 56 50.3 -0.1**
baz=96
B14A Marquette Ranc 96.45 42⇑P **P 00 56 50.8 +0.3**
baz=96
HVU Hansel Valley 96.50 49 *e*P **P 00 56 51.7 +0.8**
HVU Hansel Valley 96.50 49 *e*P **P 00 56 51.7 +0.8**
MCMT McKenzie Canyo 96.59 46 *e*P **P 00 56 51.8 +0.4**
comp=Z,1.0nm,0.8s
U15A North Rim 96.59 54⇑P **P 00 56 52.3 +0.7**
baz=97,SNR=7.2
K15A Arbon 96.72 48⇑P **P 00 56 52.1 +0.2**
baz=97
MVU Marysvale 96.76 52 PFAKE 00 57 00.0 +7.7
MVU LR LR
comp=Z,3µm,20.0s
L15A Malad City 96.80 49⇓P **P 00 56 52.5 +0.3**
baz=97
G15A Dillon 96.86 45⇓P **P 00 56 52.9 +0.4**
baz=97
C15A Salmond Ranch, 96.88 43⇓P **P 00 56 52.2 -0.2**
baz=97
F15A Butte 96.88 45⇓P **P 00 56 53.5 +0.9**
baz=97

LRM Limekiln Ridge 96.91 45 eP P 00 56 55.3 +2.5
WUAZ Wupatki 97.29 55 PFAKE 00 57 10.0 +15
WUAZ LR LR
comp=Z,4µm,19.0ns
WUAZ Wupatki 97.29 55 ⇑P Pdif 00 56 55.6 +0.9
baz=97
SVE Sverdlovsk 97.39 326 eP P 00 56 54.0 -0.3
SVE eS SKSac 01 07 28.2 +0.3
SVE e 01 14 51.2
SVE pmax pmax
comp=Z,17nm,1.6s
SVE MLR MLR
comp=Z,4µm,19.0s
SVE MLR MLR
comp=E,4µm,20.0s
HWUT Hardware Ranch 97.40 49 PFAKE 00 57 10.0 +15
HWUT LR LR
comp=Z,4µm,20.0s
K16A Soda Springs 97.42 48 ⇓P Pdif 00 56 55.7 +0.5
baz=98
JLU Jordanelle 97.45 50 eP Pdif 00 56 56.3 +0.9
BOZ Bozeman (W) 97.48 45 PFAKE 00 57 10.0 +15
BOZ LR LR
comp=Z,3µm,20.0s
BOZ Bozeman (W) 97.48 45 ⇓P Pdif 00 56 55.7 +0.4
baz=98
I16A Newdale 97.53 47 ⇑P Pdif 00 56 55.8 +0.2
baz=98
D16A Dana Ranch, Ca 97.57 43 ⇓P Pdif 00 56 56.1 +0.4
baz=98
TMUT Trail Mountain 97.58 51 eP Pdif 00 56 58.0 +1.9
Q16A Castle Valley 97.60 52 ⇑P Pdif 00 56 56.6 +0.5
baz=98
AB31 Akbulak array 97.70 319 ceP P 00 56 54.7 -1.2
AB31 pmax pmax
comp=Z,5.0nm,1.0s
ABKAR Akbulak array 97.70 319 eP P 00 56 53.9 -2.0
comp=Z,3.7nm,0.9s
H16A Russell Place, 97.73 46 ⇓P Pdif 00 56 56.8 +0.3
baz=98
AHID Auburn Hatcher 97.78 48 PFAKE 00 57 10.0 +13
AHID LR LR
comp=Z,3µm,19.0s
IMW Indian Meadow 97.93 47 eP Pdif 00 56 57.6 +0.1
J17A Brown Place, J 98.08 47 ⇓P Pdif 00 56 58.2 +0.1
baz=98
G17A Pierce Place, 98.10 45 ⇓P Pdif 00 56 58.5 +0.5
baz=98
SRU San Rafael 98.11 51 eP Pdif 00 56 59.2 +0.9
SRU San Rafael 98.11 51 eP Pdif 00 56 59.2 +0.9
SRU San Rafael 98.11 51 ⇓P Pdif 00 56 58.5 +0.2
baz=98
C17A Wharram Farm, 98.12 43 ⇑P Pdif 00 56 58.1 +0.1
baz=98
D17A Six Diamond Ra 98.17 43 ⇓P P 00 56 58.2 -0.1
baz=98
F17A Fitzpatrick Pl 98.17 45 ⇑P P 00 56 58.2 -0.1
baz=98
MSEY Mahe Island 98.17 264 PFAKE 00 57 10.0 +11
MSEY LR LR
comp=Z,1µm,20.0s
A17A Triple J Farms 98.18 42 ⇓P P 00 56 58.0 -0.2
baz=98
I17A Pilgrim Ck. 98.19 47 ⇑P Pdif 00 56 58.6 0.0
baz=98
H17A Grant Village 98.20 46 ⇑P P 00 56 58.6 0.0
baz=98
LKWY Lake 98.33 46 PFAKE 00 57 10.0 +11
LKWY LR LR
comp=Z,7µm,19.0s
P18A Preston Nutter 98.34 51 ⇑Pdiff Pdif 00 56 59.7 +0.3
baz=98
S18A Hurst Farm, Bl 98.48 53 ⇑Pdiff Pdif 00 57 00.5 +0.4
baz=99
ARU Arti 98.53 326 dP P 00 56 59.0 -0.5
ARU 01 01 01.1
ARU S SKSac 01 07 34.5 +0.7
ARU SP SP 01 09 48.5 -0.8
ARU PS PS 01 09 58.1 +2.6
ARU pmax pmax
comp=Z,9.0nm,1.2s
ARU MLR MLR
comp=Z,5µm,20.0s
K18A Toltan Ranch, 98.56 48 ⇓Pdiff Pdif 00 57 00.5 +0.2
baz=99
J18A Kendall Valley 98.58 47 ⇑Pdiff Pdif 00 57 00.4 0.0
baz=99
E18A Harlowton 98.69 44 ⇑Pdiff Pdif 00 57 00.8 +0.1
baz=99
B18A Beardsley Farm 98.79 42 ⇓Pdiff Pdif 00 57 01.3 +0.4
baz=99
EGMT Eagleton 98.80 42 PFAKE 00 57 10.0 +9.0
EGMT LR LR
comp=Z,6µm,20.0s
EGMT Eagleton 98.80 42 ⇓Pdiff Pdif 00 57 01.4 +0.4
baz=99
N18A Larsen Ranch, 98.81 50 ⇑Pdiff P 00 57 01.3 0.0
baz=99
F18A Big Timber 98.83 45 ⇓Pdiff Pdif 00 57 01.5 +0.3
baz=99
H18A Shoshone NF, C 98.86 46 ⇓Pdiff Pdif 00 57 02.0 +0.5
baz=99
BW06 Boulder Array 98.92 48 PFAKE 00 57 10.0 +8.1
BW06 LR LR
comp=Z,3µm,19.0s
BW06 Boulder Array 98.92 48 ⇓Pdiff P 00 57 01.4 -0.4
baz=99
PDAR Pinedale Array 98.92 48 P P 00 56 59.6 -2.3
PDAR Pinedale Array 98.92 48 P P 00 56 59.6 -2.3
comp=Z,2.6nm,0.9s,baz=229,slow=3.0,SNR=13
PDAR LR LR 01 41 11.9
comp=Z,2µm,18.4s,baz=286,slow=35
RLMT Red Lodge 99.14 45 PFAKE 00 57 10.0 +7.2
RLMT LR LR
comp=Z,3µm,20.0s
RLMT Red Lodge 99.14 45 ⇑Pdiff Pdif 00 57 02.6 -0.1
baz=99
O19A Miners Draw (B 99.21 50 ⇓Pdiff Pdif 00 57 03.1 0.0
baz=99
C19A Slack Wire Ran 99.28 43 ⇓Pdiff Pdif 00 57 03.1 0.0
baz=99
J19A Crowheart 99.29 47 ⇓Pdiff Pdif 00 57 03.4 0.0
baz=99
P19A Cripple Cowboy 99.31 51 ⇓Pdiff Pdif 00 57 03.7 0.0
baz=99
I19A Meeteetse 99.33 47 ⇓Pdiff Pdif 00 57 03.5 -0.1
baz=99
H19A Powell 99.34 46 ⇑Pdiff Pdif 00 57 03.7 +0.1
baz=99
B19A Brinkman Farms 99.34 42 ⇑Pdiff Pdif 00 57 03.5 +0.2
baz=99
F19A Roth Farm, Mol 99.36 45 ⇓Pdiff Pdif 00 57 03.9 +0.3
baz=100
D19A Cripps Ranch, 99.40 43 ⇑Pdiff Pdif 00 57 03.9 +0.2
baz=100
K19A Absolon Red Bu 99.44 48 ⇑Pdiff Pdif 00 57 03.9 -0.3
baz=100
E19A Rath Farm, Rou 99.47 44 ⇑Pdiff Pdif 00 57 04.2 +0.2
baz=100
MVCO Mesa Verde 99.66 53 PFAKE 00 57 20.0 +15
MVCO LR LR
comp=Z,4µm,20.0s
Q20A Ridgley Place, 99.84 52 ⇓Pdiff Pdif 00 57 06.8 +0.8
baz=100
N20A Spence Gulch, 99.87 50 ⇓Pdiff Pdif 00 57 06.4 +0.2
baz=100
O20A White River Ci 99.89 50 ⇓Pdiff Pdif 00 57 06.5 +0.3
baz=100
E20A Meyer Farm, Mu 99.92 44 ⇑Pdiff Pdif 00 57 06.2 +0.2
baz=100
M20A Sweetwater, Wa 99.93 49 ⇑Pdiff Pdif 00 57 06.7 +0.3
baz=100
C20A Veseth Ranch, 99.98 43 ⇑Pdiff Pdif 00 57 06.5 +0.2
baz=100
J20A Shoshoni 100.00 47 ⇑Pdiff Pdif 00 57 06.8 +0.3
baz=100
S21A Coal Bank Pass 100.23 53 ⇓Pdiff Pdif 00 57 08.4 +0.4
baz=100
Q21A Lamborn Mesa, 100.40 52 ⇓Pdiff Pdif 00 57 08.8 +0.2
baz=100
R21A Cimarron 100.42 52 ⇑Pdiff Pdif 00 57 09.1 +0.4
baz=100
N21A Black Mountain 100.44 50 ⇑Pdiff Pdif 00 57 09.2 +0.5
baz=100
L21A Rawlins 100.54 49 ⇑Pdiff Pdif 00 57 09.5 +0.4
baz=101
M21A Separation Pea 100.55 49 ⇓Pdiff Pdif 00 57 08.6 -0.5
baz=101
I21A Big Trails, Te 100.57 47 ⇓Pdiff Pdif 00 57 09.3 +0.3
baz=101
SMCO Snowmass 100.87 51 ePdif Pdif 00 57 10.3 -0.6
comp=Z,8.4nm,1.1s
Q22A Crested Butte, 100.92 52 ⇑Pdiff Pdif 00 57 11.8 +0.8
baz=101
P22A Eagle 101.03 51 ⇓Pdiff Pdif 00 57 12.0 +0.7
baz=101
M22A Cedar Creek Ra 101.13 49 ⇓Pdiff Pdif 00 57 12.2 +0.5
baz=101
I22A 9 Mile Ranch, 101.15 47 ⇑Pdiff Pdif 00 57 12.0 +0.4
baz=101
O22A Kremmling 101.19 50 ⇑Pdiff Pdif 00 57 12.5 +0.4
baz=101
ANMO Albuquerque 101.30 56 PFAKE 00 57 20.0 +7.4
ANMO LR LR
comp=Z,3µm,20.0s
A22A Carney Farms, 101.33 41 ⇑Pdiff Pdif 00 57 12.4 +0.2
baz=101
N23A Red Feather La 101.63 50 ⇑Pdiff Pdif 00 57 14.2 +0.2
baz=102
F23A Volborg 101.84 45 ⇑Pdiff Pdif 00 57 15.0 +0.4
baz=102
G23A Biddle 101.88 45 ⇓Pdiff Pdif 00 57 14.8 0.0
baz=102
C23A Lambert 101.88 43 ⇓Pdiff Pdif 00 57 14.8 +0.1
baz=102
ISCO Idaho Springs 101.91 51 PFAKE 00 57 30.0 +15
ISCO LR LR
comp=Z,3µm,20.0s
ISCO Idaho Springs 101.91 51 ⇑Pdiff Pdif 00 57 15.8 +0.5
baz=102
224A Cornudas Mount 102.07 59 ⇑Pdiff Pdif 00 57 17.3 +1.3
baz=102
V24A Rampart Ranch, 102.26 55 ⇑Pdiff Pdif 00 57 18.1 +1.2
baz=102
J24A Dixon Ranch, L 102.49 47 ⇑Pdiff Pdif 00 57 17.7 +0.1
baz=103
DGMT Dagmar 102.50 42 PFAKE 00 57 30.0 +13
DGMT LR LR
comp=Z,7µm,20.0s
DGMT Dagmar 102.50 42 ⇓Pdiff Pdif 00 57 17.6 +0.2
baz=103
F24A Ekalaka 102.51 45 ⇑Pdiff Pdif 00 57 18.2 +0.6
baz=103
A24A Westby 102.59 41 ⇑Pdiff Pdif 00 57 18.0 +0.2
baz=103
Y25A Mesa, Roswell 102.76 57 ⇓Pdiff Pdif 00 57 20.2 +1.2
baz=103
V25A Rancho No Teng 102.79 55 ⇑Pdiff Pdif 00 57 20.5 +1.3
baz=103
S25A Robets Cordova 102.89 53 ⇑Pdiff Pdif 00 57 20.3 +0.7
baz=103
FFC Flin Flon 103.23 35 PFAKE 00 57 30.0 +10
FFC LR LR
comp=Z,2µm,20.0s
626A Big Bend Ranch 103.26 61 ⇓Pdiff Pdif 00 57 21.5 +0.2
baz=103
V26A Tequesquite Ra 103.47 55 ⇑Pdiff Pdif 00 57 22.8 +0.7
baz=104
T26A Comanche Natio 103.58 53 ⇓Pdiff Pdif 00 57 21.7 -1.0
baz=104
S26A Kim 103.66 53 ⇑Pdiff Pdif 00 57 23.8 +0.9
baz=104
TXAR Lajitas Array 103.67 61 Pdif Pdif 00 57 24.4 +1.3
TXAR PP PP 01 01 37.2 -3.0
TXAR Lajitas Array 103.67 61 Pdiff Pdif 00 57 24.4 +1.3
comp=Z,1.1nm,1.2s,baz=232,slow=1.0,SNR=3.1
TXAR PP PP 01 01 37.2 -3.0
comp=Z,0.7nm,1.1s,baz=250,slow=4.5,SNR=2.9
ABPO Ambohimpanom 103.82 249 PFAKE 00 57 30.0 +5.9
ABPO LR LR
comp=Z,2µm,20.0s
OGNE Ogallala 104.59 50 PFAKE 00 57 40.0 +13
OGNE LR LR
comp=Z,3µm,19.0s
AMTX Amarillo 105.22 56 PFAKE 01 02 00.0
AMTX LR LR
comp=Z,3µm,20.0s
MAK Makhachkala 106.66 313 i P Pdif 00 57 46.8 +11
MAK e 01 02 02.4
MAK ePPP PPP 01 04 25.9
MAK e 01 08 15.4
MAK e 01 08 52.5
MAK ePS PS 01 11 24.1 +2.2
MAK eSS SS 01 17 02.4 -0.9
MAK pmax pmax
comp=Z,48nm,0.5s
JCT Junction City 107.00 60 PFAKE 01 02 00.0
JCT LR LR
comp=Z,4µm,20.0s
APA Apatity 107.43 340 ⇑ eP Pdif 00 57 35.2 -3.6
APA i PPS PPS 01 11 28.0
APA MLR MLR
comp=Z,2µm,17.0s
WMOK Wichita Mounta 107.61 56 PFAKE 01 02 00.0
WMOK LR LR
comp=Z,2µm,20.0s
AGMN Agassiz Nation 108.03 41 PFAKE 01 02 00.0
AGMN LR LR
comp=Z,6µm,20.0s
ECSD EROS Data Cent 108.27 46 PFAKE 01 02 00.0
ECSD LR LR
comp=Z,2µm,20.0s
KEV Kevo 108.36 343 PFAKE 01 02 00.0
KEV LR LR
comp=Z,1µm,20.0s
KSU1 Kansas State U 108.91 51 PFAKE 01 02 00.0
KSU1 LR LR
comp=Z,3µm,20.0s
DAG Danmarks Havn 109.67 358 i P P 01 02 24.8 +2.3
DAG i 01 12 00.4
DAG
comp=Z,1µm,16.0s
KIV Kislovodsk 109.98 314 i P Pdif 00 57 38.5 -12
BHD Baghdad 110.15 303 ex PKiKP 01 02 06.9 +14
BHD ex x 01 02 31.0
BHD ex x 01 04 46.0
BHD ex x 01 08 27.5
BHD ex x 01 09 08.0
BHD ex x 01 09 29.0
VSR Storozhevoye 110.64 323 ePKIKP PKiKP 01 01 51.8 -1.7
VSR e 01 02 30.3
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,8.0nm,0.6s
VSR pmax pmax
comp=Z,3.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,1.2s
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,1.2s
VSR MLR MLR
comp=N,670nm,22.0s
VSR MLR MLR
comp=E,1µm,22.0s
VSR MLR MLR
comp=Z,2µm,22.0s
OBN Obninsk 110.94 327 eP Pdif 00 57 56.0 +1.3
OBN e 01 02 31.2
OBN e 01 09 02.9
OBN ePS PS 01 12 02.3 -1.5
OBN pmax pmax
comp=Z,3.0nm,1.2s
OBN MLR MLR
comp=Z,4µm,21.0s
EYMN Ely 110.96 41 PFAKE 01 02 10.0
EYMN LR LR
comp=Z,6µm,20.0s
SCIA State Center 111.04 48 PFAKE 01 02 10.0
SCIA LR LR
comp=Z,5µm,20.0s
MIAR Mount Ida 111.90 55 PFAKE 01 02 10.0
MIAR LR LR
comp=Z,3µm,20.0s
SOC Sochi 112.17 314 i PKIKP PKiKP 01 02 04.4 +7.7
SOC e 01 02 43.5
SOC ePS PS 01 12 07.5 -8.2
SOC MLR MLR
comp=Z,2µm,21.0s
COWI Conover 112.98 43 PFAKE 01 02 10.0
COWI LR LR
comp=Z,6µm,20.0s
ANN Anapa 113.47 316 i PKIKP PKiKP 01 01 55.1 -4.0
ANN e 01 08 37.2
ANN eSS SS 01 18 38.9 +4.6
ANN pmax pmax
comp=Z,43nm,1.2s
SUMG Summit 113.54 4 i P PP 01 02 48.8 -1.9
SUMG i 01 13 02.8
SUMG
comp=Z,2µm,15.0s
HDIL Hopedale 114.21 48 PFAKE 01 02 10.0 +9.3
HDIL LR LR
comp=Z,5µm,20.0s
MALT Malatya 114.21 309 ⇑PKIKP PKPdf 01 02 01.7 +0.8
MALT Malatya 114.21 309 PFAKE 01 02 10.0 +9.1
MALT LR LR
comp=Z,1µm,20.0s
MALT Malatya 114.21 309 ⇑ iP PKPdf 01 02 01.7 +0.8
VBMS Vicksburg 114.75 58 PFAKE 01 02 10.0 +8.1
VBMS LR LR
comp=Z,2µm,20.0s
OXF Oxford 115.31 55 PFAKE 01 02 10.0 +7.0
OXF LR LR
comp=Z,3µm,20.0s
EFI East Falkland 115.77 158 PFAKE 01 02 20.0 +17
EFI LR LR
comp=Z,2µm,20.0s
SCO Scoresbysund 116.06 359 i P PP 01 03 10.3 +2.4
SCO i 01 13 05.4
SCO
comp=Z,2µm,17.0s
PLAL Pickwick Lake 116.30 54 PFAKE 01 02 20.0 +15
PLAL LR LR
comp=Z,3µm,19.0s
GLMI Grayling 116.40 43 PFAKE 01 02 20.0 +15
GLMI LR LR
comp=Z,6µm,21.0s
AKASG Malin Array Be 116.72 324 PKIKP PKPdf 01 02 03.0 -2.2
AKASG 01 03 09.7
AKASG Malin Array Be 116.72 324 PKP PKPdf 01 02 03.0 -2.2
AKASG PP PP 01 03 09.7 -3.6
AKASG Malin Array Be 116.72 324 PKP PKPdf 01 02 03.0 -2.2
comp=Z,3.1nm,0.8s,baz=71,slow=1.9,SNR=6.5
AKASG PP PP 01 03 09.7 -3.6
comp=Z,0.2nm,0.3s,baz=56,slow=7.1,SNR=5.3
SFJD Kangerlussuaq 117.25 11 i P PP 01 03 08.4 -7.9
SFJD i 01 13 01.5
BR131 Keskin Array S 117.52 312 ePKPdf PKPdf 01 02 07.1 -0.1
BRTR Keskin Array B 117.52 312 PKP PKPdf 01 02 03.9 -3.4
BRTR Keskin Array B 117.52 312 PKP PKPdf 01 02 03.9 -3.4
comp=Z,2.8nm,1.0s,baz=127,slow=1.3,SNR=7.9
BRTR PP PP 01 03 14.2 -5.4
comp=Z,2.9nm,1.1s,baz=76,slow=7.0,SNR=4.2
LRAL Lakeview Retre 117.55 56 PFAKE 01 02 20.0 +13
LRAL LR LR
comp=Z,4µm,20.0s
PLCA Paso Flores 117.55 143 PKP PKPdf 01 02 08.5 +1.2
PLCA Paso Flores 117.55 143 PKP PKPdf 01 02 08.5 +1.2
comp=Z,1.6nm,0.7s,baz=137,slow=1.7,SNR=3.3
AAM Ann Arbor 117.84 45 PFAKE 01 02 20.0 +12
AAM LR LR
comp=Z,3µm,21.0s
BRAL Brewton 117.85 58 PFAKE 01 02 20.0 +12
BRAL LR LR
comp=Z,2µm,20.0s
KIS Kishinev 118.45 321 e PP 01 03 33.0 +7.5
KIS Kishinev 118.45 321 ePP PP 01 03 46.0 +20
KIS eSKP 01 05 48.0
KIS Kishinev 118.45 321 ePS PS 01 13 28.0 +15
KIS eSS SS 01 19 44.0 +4.8
KIS eLR LR 01 52 46.0
comp=Z,3µm,20.0s
CSS Prodhromos 118.93 306 PFAKE 01 02 20.0 +10
CSS LR LR
comp=Z,864nm,20.0s
ACSO Alum Creek Sta 118.95 47 PFAKE 01 02 20.0 +10
ACSO LR LR
comp=Z,3µm,21.0s
NB2 NORSAR Subarra 119.00 340 PKPdf PKPdf 01 02 08.3 -1.1
comp=Z,0.5nm,0.6s,baz=45,slow=1.9
NOA NORSAR Array B 119.00 340 PKP PKPdf 01 02 09.2 -0.2
NOA NORSAR Array B 119.00 340 PKP PKPdf 01 02 09.2 -0.2
comp=Z,0.8nm,0.7s,baz=43,slow=1.9,SNR=3.9
TGUH Tegucigalpa,Un 119.13 78 PFAKE 01 02 20.0 +9.2
TGUH LR LR
comp=Z,3µm,19.0s
CFR Carcaliu 119.60 319 ⇓PKIKP PKPdf 01 02 11.4 +0.5
CFR Carcaliu 119.60 319 ⇓ iP PKPdf 01 02 11.4 +0.5
BOSA Boshof 119.75 232 PKP PKPdf 01 02 12.4 +0.5
BOSA Boshof 119.75 232 PKP PKPdf 01 02 12.4 +0.5
comp=Z,2.1nm,0.7s,baz=158,slow=6.3,SNR=6.8
LVV L'vov 120.10 325 ePKIKP PKPdf 01 02 14.7 +3.0
LVV e 01 03 37.1
LVV MLR MLR
comp=Z,1µm,20.0s
LVV MLR MLR
comp=N,300nm,18.0s
LVV MLR MLR
comp=E,1µm,21.0s
ISP Isparta 120.38 310 PFAKE 01 02 20.0 +7.2
ISP LR LR
comp=Z,723nm,21.0s
BURAR Bucovina Array 120.42 322 ⇑ iP PKPdf 01 02 14.2 +1.6
ERPA Erie 120.47 44 PFAKE 01 02 20.0 +7.3
ERPA LR LR
comp=Z,2µm,20.0s
MLR Muntele Rosu 120.89 320 ⇑ iP PKPdf 01 02 14.2 +0.6
KWP Kalwaria Pacla 120.94 325 ePKIKP PKPdf 01 02 13.1 -0.3
KWP e 01 03 40.5
KWP MLR MLR
comp=Z,2µm,21.0s
KWP Kalwaria Pacla 120.94 325 ePKPdf PKPdf 01 02 13.1 -0.3
KWP ePP PP 01 03 40.5 -1.9
KWP LR LR
comp=Z,2µm,21.0s
KWP Kalwaria Pacla 120.94 325 ⇑ iP PKPdf 01 02 14.2 +0.8
KWP Kalwaria Pacla 120.94 325 ePKP PKPdf 01 02 14.6 +1.2
SUR Sutherland 121.21 226 PFAKE 01 02 30.0 +15
SUR LR LR
comp=Z,3µm,19.0s
JTS JuntasAbangare 121.37 82 PFAKE 01 02 30.0 +15
JTS LR LR
comp=Z,1µm,19.0s
KOLS Kolonicke sedl 121.53 325 ePKIKP PKPdf 01 02 16.0 +1.4
KOLS Kolonicke sedl 121.53 325 ePKP PKPdf 01 02 16.0 +1.4
UZH Uzhgorod 121.67 325 i PKIKP PKPdf 01 02 19.0 +4.2
UZH e 01 03 50.6
UZH ePPP PPP 01 06 27.6
UZH e 01 09 23.4
UZH e 01 13 29.2
UZH eSS SS 01 20 30.1 +10
BSD Bornholm Skovb 121.69 334 i P PP 01 03 44.7 -2.5
BSD i 01 15 01.2
BSD
comp=Z,1µm,17.0s
BLA Blacksburg 121.76 50 PFAKE 01 02 30.0 +15
BLA LR LR
comp=Z,4µm,20.0s
ARR Arges 121.78 320 ⇓ iP PKPdf 01 02 15.9 +0.7
BORG Borgarnes 121.78 358 PFAKE 01 02 30.0 +15
BORG LR LR
comp=Z,1µm,21.0s
HUMR Humele 121.91 319 ⇑ iP PKPdf 01 02 15.9 +0.5
CRVS Cervenica-Dubn 122.01 325 ePKIKP PKPdf 01 02 16.1 +0.6
CRVS Cervenica-Dubn 122.01 325 ePKP PKPdf 01 02 16.0 +0.6
CRVS e 01 18 09.0
COP Copenhagen 122.36 336 i P PP 01 03 51.2 -0.4
COP i 01 15 10.3
COP
comp=Z,790nm,20.0s
NIE Niedzica 122.38 326 ePKIKP PKiKP 01 02 18.1 +1.7
DIM Dimitrovgrad 122.56 316 i P PKPdf 01 02 17.1 +0.4
KDZ Kurdzhali 122.79 316 i P PKPdf 01 02 17.3 +0.1
LONY Lake Ozonia 123.08 40 PFAKE 01 02 30.0 +12
LONY LR LR
comp=Z,4µm,21.0s
NHSC New Hope 123.11 55 PFAKE 01 02 30.0 +12
NHSC LR LR
comp=Z,3µm,20.0s
BINY Binghamton 123.20 43 PFAKE 01 02 30.0 +12
BINY LR LR
comp=Z,3µm,20.0s
MBAR Mbarara 123.20 265 PFAKE 01 02 30.0 +11
MBAR LR LR

comp=Z,536nm,19.0s
MPEP Malo Peshtene 123.22 318 *i* P **PKPdf 01 02 18.6 +0.6**
RZN Rozhen 123.26 316 *i* P **PKPdf 01 02 18.1 -0.2**
OKC Ostrava-Krasne 123.33 328 AMS AMS 02 58 30.0
comp=Z,2µm,18.3s
PSZ Piszkesteto 123.41 325 *e*PKIKP **PKPdf 01 02 17.9 -0.4**
PSZ MLR MLR
comp=Z,2µm,20.0s
PSZ Piszkesteto 123.41 325 *e*PKPdf **PKPdf 01 02 17.9 -0.4**
PSZ LR LR
comp=Z,2µm,20.0s
PSZ Piszkesteto 123.41 325⇓ *e*PKPdf **PKPdf 01 02 18.9 +0.6**
BZS Buzias 123.55 322 ⇓PKIKP **PKPdf 01 02 19.1 +0.6**
BZS Buzias 123.55 322⇓ *i*P **PKPdf 01 02 19.1 +0.6**
NCB Newcomb 123.60 40 PFAKE 01 02 30.0 +11
NCB LR LR
comp=Z,6µm,20.0s
KAVA Kavala 123.67 316 P **PKPdf 01 02 18.4 -0.5**
MORC Moravsky Berou 123.69 328 *e*PKIKP **PKPdf 01 02 19.3 +0.6**
MORC *e* 01 04 01.4
MORC Moravsky Berou 123.69 328 *e*PKPdf **PKPdf 01 02 19.3 +0.6**
MORC *e*PP **PP 01 04 01.4 +0.4**
MORC Moravsky Berou 123.69 328⇓ *i*P **PKPdf 01 02 20.3 +1.6**
VYHS Vyhne 123.70 326 *e*PKIKP **PKPdf 01 02 19.6 +0.9**
VYHS Vyhne 123.70 326 *e*PKP **PKPdf 01 02 19.6 +0.9**
VYHS *e* 01 18 07.1
CBN Corbin 123.73 48 PFAKE 01 02 30.0 +11
CBN LR LR
comp=Z,2µm,20.0s
VTS Vitosha 123.90 318⇑PKIKP **PKPdf 01 02 20.5 +1.0**
VTS Vitosha 123.90 318⇑ *i*P **PKPdf 01 02 20.5 +1.0**
VTS Vitosha 123.90 318 *i* P **PKPdf 01 02 18.9 -0.6**
KRLC Kraliky 123.92 328 *e*PKIKP **PKPdf 01 02 20.0 +0.9**
KRLC Kraliky 123.92 328 *e*PKPdf **PKPdf 01 02 20.0 +0.9**
MMB Musomiste 123.98 317 *i* P **PKPdf 01 02 19.2 -0.3**
NVR Nevrokopi 123.98 316 P **PKPdf 01 02 18.0 -1.5**
DPC Dobruska-Polom 123.99 329 *e*PKIKP **PKPdf 01 02 21.2 +1.9**
DPC MLR MLR
comp=Z,2µm,19.7s
DPC Dobruska-Polom 123.99 329 *e*PKPdf **PKPdf 01 02 21.2 +1.9**
DPC AMS AMS 01 58 30.0
comp=Z,2µm,19.7s
UPC Upice 124.05 329 *e*PKIKP **PKPdf 01 02 21.0 +1.7**
UPC Upice 124.05 329 *e*PKPdf **PKPdf 01 02 21.0 +1.7**
SRS Serrai 124.26 316 P **PKPdf 01 02 17.8 -2.2**
CNNC Cliffs of the 124.32 51 PFAKE 01 02 30.0 +10
CNNC LR LR
comp=Z,5µm,19.0s
VRAC Vranov 124.46 328⇓ *i*P **PKPdf 01 02 21.5 +1.3**
KNT Kendrikon 124.72 316 P **PKPdf 01 02 19.9 -1.0**
PVCC Panska Ves 124.77 330 *e*PKIKP **PKPdf 01 02 18.5 -2.2**
PVCC MLR MLR
comp=Z,3µm,17.4s
PVCC Panska Ves 124.77 330 *e*PKPdf **PKPdf 01 02 18.5 -2.2**
PVCC AMS AMS 02 03 10.0
comp=Z,3µm,17.4s
BRG Berggiesshubel 124.86 330 *e*PKP **PKPdf 01 02 21.0 +0.2**
comp=Z,11nm,1.3s
BRG *e* 01 05 57.2
comp=Z,9.0nm,1.4s
BRG
comp=N,2µm,17.6s
BRG
comp=N,2µm,17.6s
BRG
comp=Z,3µm,19.2s
BRG Berggiesshubel 124.86 330 *e*PKIKP **PKPdf 01 02 21.0 +0.2**
BRG pmax pmax
comp=Z,11nm,1.3s
BRG pmax pmax
comp=Z,9.0nm,1.4s
BRG MLR MLR
comp=N,2µm,17.6s
BRG MLR MLR
comp=Z,3µm,19.2s
BRG Berggiesshubel 124.86 330 *e*PKPdf **PKPdf 01 02 21.7 +0.8**
VAY Valandovo 124.88 317 *i* P **PKPdf 01 02 18.8 -2.3**
LBNH Lisbon 124.94 39 PFAKE 01 02 30.0 +8.8
LBNH LR LR
comp=Z,3µm,19.0s
CLL Collm 125.04 331 *i* PKIKP **PKPdf 01 02 22.4 +1.2**
CLL *e* 01 02 36.0
CLL *e* 01 04 09.0
CLL MLR MLR
comp=Z,2µm,20.7s
CLL Collm 125.04 331 *i* PKPdf **PKPdf 01 02 22.4 +1.2**
CLL *e* 01 02 36.0
CLL *e* 01 02 58.0
CLL *e*PP **PP 01 04 09.0 -0.8**
CLL *e* 01 04 36.0
CLL *e*PSKS 01 14 00.0
CLL *e*PPS PPS 01 15 41.0
CLL *e*(SS) 01 22 00.0
CLL *e*SSS SSS 01 25 43.0
CLL *e* 01 27 36.0
CLL LmH 01 58 00.0
comp=Z,2µm,20.7s
PKSM Moragy 125.04 324⇑PKIKP **PKPdf 01 02 20.4 -0.9**
PKSM Moragy 125.04 324⇑ *i*P **PKPdf 01 02 20.4 -0.9**
PKSM Moragy 125.04 324⇓ *e*PKPdf **PKPdf 01 02 22.0 +0.7**
TREC Trest 125.06 328 *e*PKIKP **PKPdf 01 02 22.4 +1.1**
TREC MLR MLR
comp=Z,2µm,19.7s
TREC Trest 125.06 328 *e*PKPdf **PKPdf 01 02 22.4 +1.1**
TREC AMS AMS 01 58 20.0
comp=Z,2µm,19.7s
PRU Pruhonice 125.12 329 *e*PKIKP **PKPdf 01 02 22.0 +0.6**
PRU *e* 01 14 00.6
PRU *e* 01 20 57.9
PRU MLR MLR
comp=Z,2µm,17.5s
PRU Pruhonice 125.12 329 *e*PKPdf **PKPdf 01 02 22.0 +0.6**
PRU *ex* x 01 14 00.6
PRU *e*PKPPKP **P'P'df 01 20 57.9 +4.8**
PRU AMS AMS 02 02 40.0
comp=Z,2µm,17.5s
PRA Prague 125.12 329 PKPdf **PKPdf 01 02 22.0 +0.6**
PRA AMS AMS 02 03 30.0
SKIA Skiathos 125.13 314 P **PKPdf 01 02 21.1 -0.7**
DIVS Divibare 125.30 321 P **PKPdf 01 02 22.5 +0.5**
SKO Skopje 125.36 318 *e*P **PKPdf 01 02 20.5 -1.6**
SOP Sopron 125.42 326⇓ *e*PKPdf **PKPdf 01 02 22.8 +0.8**
LIT Litokhoron 125.45 315 P **PKPdf 01 02 21.5 -0.9**
CONA Conrad Observa 125.66 327⇓ *i*PKPdf **PKPdf 01 02 22.0 -0.6**
comp=Z,7.9nm,1.5s
CONA Conrad Observa 125.66 327⇓ *i*P **PKPdf 01 02 22.0 -0.6**
LKR Lokris 125.67 314 P **PKPdf 01 02 22.0 -0.8**
BIA Bitola 125.86 317 P **PKPdf 01 02 22.3 -0.9**
BIA Bitola 125.86 317 *e*P **PKPdf 01 02 22.0 -1.2**
TANN Tannenbergstha 125.88 331 *e*PKPdf **PKPdf 01 02 24.1 +1.2**
CLZ Clausthal 125.90 333 *e*PKIKP **PKPdf 01 02 22.8 -0.1**
CLZ Clausthal 125.90 333 *e*PKPdf **PKPdf 01 02 22.8 -0.1**
FNA Florina 125.92 317 P **PKPdf 01 02 22.4 -0.9**
NNA Nana 125.96 110 PFAKE 01 02 40.0 +16
NNA LR LR
comp=Z,1µm,19.0s
GUNZ Gunzen 125.98 331 *e*PKPdf **PKPdf 01 02 23.9 +0.8**
AGG Agios Georgios 126.00 314 P **PKPdf 01 02 23.0 -0.5**
NKC Novy Kostel 126.00 331 *e*PKIKP **PKPdf 01 02 24.1 +1.0**
NKC MLR MLR
comp=Z,2µm,16.9s
NKC Novy Kostel 126.00 331 *e*PKPdf **PKPdf 01 02 24.1 +1.0**
NKC *e*SS SS 01 21 22.9 +8.2
NKC AMS AMS 02 01 50.0
comp=Z,2µm,16.9s
WERN Wernitzgruen 126.00 331 *e*PKPdf **PKPdf 01 02 24.0 +0.9**
KHC Kasperske Hory 126.14 329 *e*PKIKP **PKPdf 01 02 24.1 +0.7**
KHC *e* 01 02 30.6
KHC *e* 01 21 11.0
KHC MLR MLR
comp=Z,2µm,19.3s
KHC Kasperske Hory 126.14 329 *e*PKPdf **PKPdf 01 02 22.8 -0.7**
KHC Kasperske Hory 126.14 329 *e*PKPdf **PKPdf 01 02 24.1 +0.7**
KHC *ex* x 01 02 30.6
KHC *ex* x 01 14 37.6
KHC *e*SS SS 01 21 11.0 -5.6
KHC AMS AMS 02 00 40.0
comp=Z,2µm,19.3s
PHP Peshkopia 126.15 318 P **PKPdf 01 02 23.1 -0.6**
GEC2 GERESS Array S 126.26 329 *e*PKIKP **PKPdf 01 02 24.6 +0.9**
GEC2 GERESS Array S 126.26 329 *e*PKPdf **PKPdf 01 02 24.6 +0.9**
GERES GERESS Array B 126.26 329 PKP **PKPdf 01 02 23.0 -0.7**
GERES GERESS Array B 126.26 329 PKP **PKPdf 01 02 23.0 -0.7**
comp=Z,4.9nm,1.0s,baz=48,slow=2.0,SNR=23
NEST Nestorio 126.31 316 P **PKPdf 01 02 24.3 +0.2**
MANZ Manzenberg 126.33 331 *e*PKPdf **PKPdf 01 02 24.6 +0.8**
BCIP Isla Barro Col 126.38 83 PFAKE 01 02 40.0 +15
BCIP LR LR
comp=Z,1µm,19.0s
EVR Evrytania 126.42 314 P **PKPdf 01 02 25.0 +0.7**
GUR Goura 126.43 313 P **PKPdf 01 02 24.1 -0.3**
WET Wettzell 126.49 329 *e*PKIKP **PKPdf 01 02 24.9 +0.8**
WET Wettzell 126.49 329 *e*PKPdf **PKPdf 01 02 24.9 +0.8**
TIR Tirane 126.69 318 PFAKE 01 02 40.0 +15
TIR LR LR
comp=Z,1µm,20.0s
JAN Janina 126.78 316 P **PKPdf 01 02 25.0 +0.1**
PERS Pernice 126.83 326 *i* PKPdf **PKPdf 01 02 25.2 +0.3**
SOKA Soboth 126.85 326⇑ *i*PKIKP **PKPdf 01 02 24.4 -0.5**
comp=Z,6.8nm,1.1s
SOKA Soboth 126.85 326⇑ *i*P **PKPdf 01 02 24.4 -0.5**
OTAV Otavalo 127.05 95 PFAKE 01 02 40.0 +13
OTAV LR LR
comp=Z,942nm,20.0s
BOJS Bojanci 127.41 324 *i* PKPdf **PKPdf 01 02 26.9 +1.0**
VISS Visnje 127.47 325 *i* PKPdf **PKPdf 01 02 26.9 +0.9**
JAVS Javornik 127.86 326 *i* PKPdf **PKPdf 01 02 27.8 +0.9**
ESK Eskdalemuir 128.10 344 PFAKE 01 02 40.0 +13
ESK LR LR
comp=Z,2µm,19.0s
ABTA Abfaltersbach 128.19 327⇓ *i*PKIKP **PKPdf 01 02 27.3 -0.2**
comp=Z,13nm,1.2s
ABTA Abfaltersbach 128.19 327⇓ *i*P **PKPdf 01 02 27.3 -0.2**
MTDJ Mount Denham 128.25 72 PFAKE 01 02 40.0 +12
MTDJ LR LR
comp=Z,1µm,19.0s
STU Stuttgart 128.56 331 *e*PKIKP **PKPdf 01 02 27.2 -0.8**
STU Stuttgart 128.56 331 *e*PKPdf **PKPdf 01 02 28.0 0.0**
STU Stuttgart 128.56 331 *e*PKPdf **PKPdf 01 02 27.2 -0.8**
FETA Feichten 128.96 328⇓ *i*PKIKP **PKPdf 01 02 28.8 -0.2**
comp=Z,9.1nm,1.2s
FETA Feichten 128.96 328⇓ *i*P **PKPdf 01 02 28.8 -0.2**
BFO Black Forest 129.28 331 PFAKE 01 02 40.0 +11
BFO LR LR
comp=Z,1µm,19.0s
WLF Walferdange 129.33 334 PFAKE 01 02 40.0 +11
WLF LR LR
comp=Z,4µm,19.0s
TIP Timpagrande 129.81 317 *e*PKPdf **PKPdf 01 02 31.0 +0.2**
TIP LR LR
comp=Z,2µm,20.0s
ECH Echery 129.92 332 PFAKE 01 02 40.0 +9.4
ECH LR LR
comp=Z,2µm,19.0s
CUC Castrocucco 130.04 318 PFAKE 01 02 40.0 +8.8
CUC LR LR
comp=Z,1µm,19.0s
TUE Stuetta 130.04 329 *e*PKPdf **PKPdf 01 02 31.0 -0.2**
TUE LR LR
comp=Z,3µm,20.0s
AQU L'Aquila 130.30 322 PFAKE 01 02 40.0 +8.4
AQU LR LR
comp=Z,2µm,20.0s
GTBY Guantanamo Bay 130.31 69 PFAKE 01 02 40.0 +7.9
GTBY LR LR
comp=Z,1µm,19.0s
HINF Hinteralfeld 130.35 332 *e*PKIKP **PKPdf 01 02 31.3 -0.2**
HINF Hinteralfeld 130.35 332 *e*PKIKP **PKPdf 01 02 31.3 -0.2**
HINF Hinteralfeld 130.35 332 *e*PKPdf **PKPdf 01 02 31.3 -0.2**
HAU Haudompre 130.45 332 *e*PKIKP **PKPdf 01 02 31.2 -0.5**
HAU Haudompre 130.45 332 *e*PKIKP **PKPdf 01 02 31.2 -0.5**
HAU Haudompre 130.45 332 *e*PKPdf **PKPdf 01 02 31.2 -0.5**
CEL Celeste 130.85 316 PFAKE 01 02 40.0 +7.2
CEL LR LR
comp=Z,921nm,20.0s
VLC Villacollemand 130.98 326 PFAKE 01 02 40.0 +7.2
VLC LR LR
comp=Z,2µm,20.0s
ROSC El Rosal 131.63 89 PKP **PKPdf 01 02 36.3 +0.9**
ROSC SKPbc **SKPab 01 06 00.7 +2.5**
ROSC El Rosal 131.63 89 PKP **PKPdf 01 02 36.3 +0.9**
comp=Z,4.1nm,0.4s,baz=179,slow=18,SNR=4.0
ROSC SKPbc **SKPab 01 06 00.7 +2.5**
comp=Z,5.7nm,0.4s,baz=181,slow=9.7,SNR=7.9
LPL La Plagne 132.03 329 *e*PKIKP **PKPdf 01 02 35.5 +0.5**
LPL La Plagne 132.03 329 *e*PKIKP **PKPdf 01 02 35.5 +0.5**
LPL La Plagne 132.03 329 *e*PKPdf **PKPdf 01 02 35.5 +0.5**
LPG La Plagne 132.03 329 *e*PKIKP **PKPdf 01 02 35.7 +0.6**
LPG La Plagne 132.03 329 *e*PKIKP **PKPdf 01 02 35.7 +0.6**
LPG La Plagne 132.03 329 *e*PKPdf **PKPdf 01 02 35.7 +0.6**
LPAZ La Paz 132.33 119 PKPpre PKPpre 01 02 32.4
LPAZ *e*PKPdf **PKiKP 01 02 37.6 -0.3**
LPAZ PKP **PKiKP 01 02 38.1 +0.2**
LPAZ SKPbc **SKPab 01 06 04.6 +3.4**
LPAZ La Paz 132.33 119 PKhKP PKPpre 01 02 32.4
comp=Z,0.4nm,0.7s,baz=270,slow=5.1,SNR=2.1
LPAZ PKP **PKiKP 01 02 38.1 +0.2**
comp=Z,1.8nm,0.7s,baz=327,slow=1.1,SNR=7.5
LPAZ SKPbc **SKPab 01 06 04.6 +3.4**
comp=Z,2.5nm,1.0s,baz=259,slow=4.1,SNR=3.4
BNI Bardonecchia 132.38 329 PFAKE 01 02 50.0 +14
BNI LR LR
comp=Z,3µm,20.0s
PGF Pioggiola 132.78 325 *e*PKIKP **PKPdf 01 02 35.1 -1.2**
comp=Z,28nm,1.0s
PGF Pioggiola 132.78 325 *e*PKIKP **PKPdf 01 02 35.1 -1.2**
PGF Pioggiola 132.78 325 *e*PKPdf **PKPdf 01 02 35.1 -1.2**
SBF Sospel 132.79 327 *e*PKIKP **PKPdf 01 02 35.3 -1.0**
SBF Sospel 132.79 327 *e*PKIKP **PKPdf 01 02 35.3 -1.0**
SBF Sospel 132.79 327 *e*PKPdf **PKPdf 01 02 35.3 -1.0**
ORIF Oris-en-Rattie 132.87 329 *e*PKIKP **PKPdf 01 02 37.2 +0.8**
comp=Z,20nm,1.0s
ORIF Oris-en-Rattie 132.87 329 *e*PKIKP **PKPdf 01 02 37.2 +0.8**
ORIF Oris-en-Rattie 132.87 329 *e*PKPdf **PKPdf 01 02 37.2 +0.8**
WDD Wield Dalam 132.96 314 PFAKE 01 02 50.0 +13
WDD LR LR
comp=Z,656nm,21.0s
SSB Saint Sauveur 133.28 331 PFAKE 01 02 50.0 +13
SSB LR LR
comp=Z,1µm,19.0s
TCF Toulx Ste Croi 133.61 333 *e*PKIKP **PKPdf 01 02 37.5 -0.2**
comp=Z,43nm,1.6s
TCF Toulx Ste Croi 133.61 333 *e*PKIKP **PKPdf 01 02 37.5 -0.2**
TCF Toulx Ste Croi 133.61 333 *e*PKPdf **PKPdf 01 02 37.5 -0.2**
LMR La Mourre 133.64 327 *e*PKIKP **PKPdf 01 02 36.5 -1.3**
LMR La Mourre 133.64 327 *e*PKIKP **PKPdf 01 02 36.5 -1.3**
LMR La Mourre 133.64 327 *e*PKPdf **PKPdf 01 02 36.5 -1.3**
GRTK Grand Turk 133.69 66 PFAKE 01 02 50.0 +12
GRTK LR LR
comp=Z,2µm,20.0s
SDDR Presa de Saban 134.02 70 PFAKE 01 02 50.0 +11
SDDR LR LR
comp=Z,3µm,20.0s
VSL Villasalto 134.44 321 PFAKE 01 02 50.0 +11
VSL LR LR
comp=Z,983nm,19.0s
CPUP Villa Florida 135.23 138 PKP **PKPdf 01 02 41.1 -0.2**
CPUP Villa Florida 135.23 138 PKP **PKPdf 01 02 41.1 -0.2**
comp=Z,0.7nm,0.4s,baz=255,slow=1.7,SNR=6.0
BBSR BB Station 135.55 49 PFAKE 01 02 50.0 +8.3
BBSR LR LR
comp=Z,3µm,20.0s
KEST Kesra 136.63 317 PKP **PKPdf 01 02 41.4 -2.3**
KEST Kesra 136.63 317 PKP **PKPdf 01 02 41.4 -2.3**
comp=Z,3.3nm,1.2s,baz=186,slow=11,SNR=4.1
ETSF Etsaut 137.49 332 *e*PKIKP **PKPdf 01 02 43.9 -1.2**
ETSF Etsaut 137.49 332 *e*PKIKP **PKPdf 01 02 43.9 -1.2**
ETSF Etsaut 137.49 332 *e*PKPdf **PKPdf 01 02 43.9 -1.2**
ESDC Sonseca Array 141.60 333 PKP **PKPdf 01 02 50.0 -2.7**
ESDC PP **PP 01 05 54.5 -1.2**
ESDC Sonseca Array 141.60 333 PKP **PKPdf 01 02 50.0 -2.7**
comp=Z,1.1nm,0.8s,baz=23,slow=3.3,SNR=5.3
ESDC PP **PP 01 05 54.5 -1.2**
comp=Z,0.7nm,0.9s,baz=56,slow=7.9,SNR=4.1
POLO Lamas de Olo 141.77 338 *e*PKP **PKPdf 01 02 50.5 -2.5**
MTE Manteigas 142.52 337 PFAKE 01 03 10.0 +16
MTE LR LR
comp=Z,1µm,21.0s
ANWB Willy Bob 143.13 69 PFAKE 01 03 10.0 +14
ANWB LR LR
comp=Z,1µm,21.0s
PMRV Marv??o 143.29 336 *e*PKP PKPbc 01 02 54.1 +1.4
PMRV A A 02 15 46.3
comp=Z,2µm,18.0s
SPB Sao Paulo 143.34 145 PFAKE 01 03 10.0 +14
SPB LR LR
comp=Z,1µm,20.0s
PESTR Estremoz 143.85 336 *e*PKP **PKPdf 01 02 55.9 -0.7**
GRGR Grenville 144.15 78 PFAKE 01 03 10.0 +12
GRGR LR LR
comp=Z,1µm,20.0s
FDF Fort de France 144.29 74 PFAKE 01 03 10.0 +12
FDF LR LR
comp=Z,1µm,19.0s
EVO Evora 144.31 336 *e*PKIKP PKPbc 01 02 55.9 +0.2
comp=Z,66nm,1.4s
EVOP Sao Brissos 144.35 336 *e*PKIKP PKPbc 01 02 55.9 +0.1
EVOP Sao Brissos 144.35 336 *e*PKPdf PKPbc 01 02 55.9 +0.1
LIS Lisbon 144.60 337 *e*P **PKPab 01 02 56.0 -0.5**
LIS AMS AMS 02 11 10.7
comp=E,2µm,20.6s
LIS Lisbon 144.60 337 *e*PKIKP **PKPab 01 02 55.9 -0.5**
PBEJ Beja 144.68 335 *e*PKP **PKPdf 01 02 57.5 -0.5**
PBEJ *ep*PKP **pPKPdf 01 03 09.6 -2.3**
PNCL Nicolau / Gran 144.88 336 *e*PKP **PKPab 01 02 57.3 -0.1**
PCVE Castro Verde 145.08 335 *e*PKP **PKPdf 01 02 59.4 +0.6**
PVAQ Vaqueiros 145.14 334 *e*PKP **PKPdf 01 03 00.0 +1.1**
PVAQ A A 02 13 12.9
comp=E,2µm,20.0s
PTEO Sao Teotonio 145.44 336 *e*PKP **PKPab 01 03 00.7 +1.2**
MORF Marmelete 145.62 335 *e*PKP2 **PKPdf 01 02 58.8 -1.0**
TAM Tamanrasset 145.81 302 *e*PKP2 **PKPdf 01 03 00.8 +0.2**
TAM MLR MLR
comp=Z,1µm,19.0s
TAM Tamanrasset 145.81 302 *e*PKPdf **PKPdf 01 03 00.8 +0.2**
TAM LR LR
comp=Z,1µm,19.0s
BBGH Gun Hill 146.06 76 PFAKE 01 03 10.0 +7.5
BBGH LR LR
comp=Z,2µm,20.0s
RTC Rabat Centre 147.55 330 PFAKE 01 03 10.0 +2.3
RTC LR LR
comp=Z,1µm,20.0s
BDFB Brasilia 148.84 135 PKPbc **PKPdf 01 03 07.3 +1.5**
BDFB Brasilia 148.84 135 PKPbc **PKPdf 01 03 07.3 +1.5**
comp=Z,6.8nm,0.7s,baz=229,slow=1.2,SNR=6.8
CMLA Cha da Macela 148.89 360 PFAKE 01 03 20.0 +7.0
CMLA LR LR
comp=Z,2µm,19.0s
SHEL Horse Pasture 150.16 221 PFAKE 01 03 20.0 +1.2
SHEL LR LR
comp=Z,3µm,19.0s
TOA0 Torodi Ar. Sit 152.19 286 *e*PKPdf **PKPdf 01 03 10.2 -0.6**
TOA0 *e*PKPbc **PKPbc 01 03 16.7 -0.9**
TORD Torodi Ar. Bea 152.19 286 PKP **PKPdf 01 03 10.8 -0.1**
TORD PKPbc **PKPbc 01 03 16.9 -0.7**
TORD Torodi Ar. Bea 152.19 286 PKP **PKPdf 01 03 10.8 -0.1**
comp=Z,5.0nm,1.0s,baz=44,slow=1.7,SNR=17
TORD PKPbc **PKPbc 01 03 16.9 -0.7**
comp=Z,32nm,1.1s,baz=54,slow=1.4,SNR=49
DBIC Dimbokro 159.25 272 PKPab **PKPab 01 03 56.2 -1.5**
DBIC Dimbokro 159.25 272 PKPab **PKPab 01 03 56.2 -1.5**
comp=Z,18nm,1.1s,baz=78,slow=5.4,SNR=7.6
LIC Lamto 159.41 270 *e*PKP2 **PKPab 01 03 56.2 -2.2**
comp=Z,60nm,1.2s
SACV Santiago Islan 171.33 346 PFAKE 01 03 40.0 +10
SACV LR LR
comp=Z,2µm,19.0s

CSEM ***16*** *01:00:59.2, 42°.39N×13°.40E, h10km, MD2.4/19, After ROM*

ROM 16 01:00:59.2±0.1, 42°.39N×13°.40E, h10km±1km, Md2.4/19, Ml1.8/14, Error ellipse: s-maj=1.5km s-min=1.1km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**174**	Pg	Pg	01 01 01.1	0.0
AQU				Sg	Sg	01 01 02.5	0.0
	2µm,0.4s						
AQU	**L'Aquila**	**0.04**	**174**	Pg	Pg	01 01 01.1	0.0
AQU				Sg	Sg	01 01 02.5	0.0
	2µm,0.4s						
CAMP	**Campotosto**	**0.14**	**4**	Pg	Pg	01 01 02.9	+0.3
CAMP				Sg	Sg	01 01 05.6	+0.6
CAMP	**Campotosto**	**0.14**	**4**	Pg	Pg	01 01 02.9	+0.3
CAMP				Sg	Sg	01 01 05.6	+0.6
FAGN	**Fagnano**	**0.19**	**132**	Pg	Pg	01 01 04.2	+0.9
FAGN				Sg	Sg	01 01 08.1	+2.1
	467nm,0.4s						
FAGN	**Fagnano**	**0.19**	**132**	Pg	Pg	01 01 04.2	+0.9
FAGN				Sg	Sg	01 01 08.1	+2.1
	467nm,0.4s						
FIAM	**Fiamignano**	**0.24**	**239**	Pg	Pg	01 01 04.8	+0.5
FIAM				Sg	Sg	01 01 09.1	+1.4
	182nm,0.6s						
FIAM	**Fiamignano**	**0.24**	**239**	Pg	Pg	01 01 04.8	+0.5
FIAM				Sg	Sg	01 01 09.1	+1.4
	182nm,0.6s						
TERO	**Teramo**	**0.28**	**34**	Pg	Pg	01 01 05.2	+0.3
TERO				Sg	Sg	01 01 09.0	+0.3
	161nm,0.4s						
TERO	**Teramo**	**0.28**	**34**	Pg	Pg	01 01 05.2	+0.3
TERO				Sg	Sg	01 01 09.0	+0.3
	161nm,0.4s						
VCEL	**Villa Celiera**	**0.33**	**90**	Pg	Pb	01 01 06.7	-0.7
VCEL				Sg	Sg	01 01 11.1	+0.6
	157nm,0.6s						
VCEL	**Villa Celiera**	**0.33**	**90**	Pg	Pb	01 01 06.7	-0.7
VCEL				Sg	Sg	01 01 11.1	+0.6
	157nm,0.6s						
LNSS	**Leonessa**	**0.34**	**309**	Pg	Pg	01 01 06.6	+0.5
LNSS				Sg	Sb	01 01 12.7	-0.4
	136nm,0.4s						
LNSS	**Leonessa**	**0.34**	**309**	Pg	Pg	01 01 06.6	+0.5
LNSS				Sg	Sb	01 01 12.7	-0.4
	136nm,0.4s						
PTQR	**Pietraquaria**	**0.37**	**179**	Pg	Pg	01 01 07.1	+0.4
PTQR				Sg	Sg	01 01 12.8	+1.1
	10.0nm,0.2s						
PTQR	**Pietraquaria**	**0.37**	**179**	Pg	Pg	01 01 07.1	+0.4
PTQR				Sg	Sg	01 01 12.8	+1.1
	10.0nm,0.2s						
NRCA	**Norcia**	**0.49**	**335**	Pg	Pg	01 01 09.0	+0.2
NRCA				Sg	Sb	01 01 16.5	-0.9
	77nm,0.1s						
NRCA	**Norcia**	**0.49**	**335**	Pg	Pg	01 01 09.0	+0.2
NRCA				Sg	Sb	01 01 16.5	-0.9
	77nm,0.1s						
MNS	**Montasola**	**0.53**	**269**	Pg	Pg	01 01 09.6	0.0
	29nm,0.4s						
MNS	**Montasola**	**0.53**	**269**	Pg	Pg	01 01 09.6	0.0
	29nm,0.4s						
INTR	**Introdacqua**	**0.54**	**135**	Pg	Pg	01 01 10.1	+0.3
INTR				Sg	Sb	01 01 18.7	-0.1
	73nm,0.8s						
INTR	**Introdacqua**	**0.54**	**135**	Pg	Pg	01 01 10.1	+0.3
INTR				Sg	Sb	01 01 18.7	-0.1
	73nm,0.8s						
CERT	**Cerreto**	**0.54**	**215**	Pg	Pg	01 01 09.5	-0.3
	93nm,0.5s						
CERT	**Cerreto**	**0.54**	**215**	Pg	Pg	01 01 09.5	-0.3
	93nm,0.5s						
VVLD	**Villa Vallelon**	**0.55**	**162**	Pg	Pg	01 01 09.9	-0.1
	36nm,0.5s						
VVLD	**Villa Vallelon**	**0.55**	**162**	Pg	Pg	01 01 09.9	-0.1
	36nm,0.5s						
OFFI	**Offida**	**0.58**	**21**	Pg	Pb	01 01 11.8	+0.2
OFFI	**Offida**	**0.58**	**21**	Pg	Pb	01 01 11.8	+0.2
LPEL	**Lama dei Pelig**	**0.68**	**120**	Pg	Pg	01 01 12.6	+0.2
	32nm,0.5s						
LPEL	**Lama dei Pelig**	**0.68**	**120**	Pg	Pg	01 01 12.6	+0.2
	32nm,0.5s						
FDMO	**Fiordimonte**	**0.68**	**341**	Pg	Pg	01 01 12.5	0.0
FDMO				Sg	Sb	01 01 22.9	0.0
	29nm,0.2s						
FDMO	**Fiordimonte**	**0.68**	**341**	Pg	Pg	01 01 12.5	0.0
FDMO				Sg	Sb	01 01 22.9	0.0
	29nm,0.2s						
CESI	**CESI - Serrava**	**0.71**	**330**	Pg	Pg	01 01 12.8	-0.3
	6.0nm,0.6s						
CESI	**CESI - Serrava**	**0.71**	**330**	Pg	Pg	01 01 12.8	-0.3
	6.0nm,0.6s						
SDI	**San Donato**	**0.75**	**156**	Pg	Pg	01 01 13.6	-0.2
	9.0nm,0.3s						
SDI	**San Donato**	**0.75**	**156**	Pg	Pg	01 01 13.6	-0.2
	9.0nm,0.3s						
GUMA	**Gualdo di Mace**	**0.78**	**31**	Pg	Pg	01 01 12.8	-1.5
GUMA	**Gualdo di Mace**	**0.78**	**31**	Pg	Pg	01 01 12.8	-1.5
ASSB	**Assisi San Ben**	**0.85**	**320**	Pg	Pg	01 01 15.7	+0.1
	12nm,0.2s						

ASSB Assisi San Ben 0.85 320 Pg Pg 01 01 15.7 +0.1
12nm,0.2s

ISCJB ***16*** *01:01:50.9±0.6,36.97N±0.04×28.32E±0.04,h19km±7km, Error ellipse: s-maj=6.9km s-min=5.3km az=21.5*
ISK ***16*** *01:01:50.6,37.01N×28.25E,h20km,ML1.9*
CSEM ***16*** *01:01:51.0±0.3,36.97N×28.26E,h15km,ML1.9, Error ellipse: s-maj=7.2km s-min=5.6km az=16.0*
DDA ***16*** *01:01:51.6,36.97N×28.18E,h8km,MD2.5*
ISC 16 01:01:50.5±0.9,36.95N±0.03×28.26E±0.03,h15km±6km, n18,σ0.91/34,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.18**	**6**	PG	**Pg**	**01 01 55.2**	**+0.2**
YER				SG	**Sg**	**01 01 58.3**	**+0.3**
YER	**Yerkesik**	**0.18**	**6**	*i* Pg	**Pg**	**01 01 55.2**	**+0.2**
YER				*i* Sg	**Sg**	**01 01 58.3**	**+0.3**
TURN	**Turunc**	**0.29**	**106**	*i* P	**Pg**	**01 01 55.9**	**-0.7**
TURN				*i* S	**Sg**	**01 01 59.3**	**-1.4**
TURN	**Turunc**	**0.29**	**106**	*i* P	**Pg**	**01 01 55.9**	**-0.7**
TURN				*i* S	**Sg**	**01 01 59.3**	**-1.4**
DALT	**Dalyan (Mudla)**	**0.35**	**121**	*e*PG	**Pb**	**01 01 58.9**	**+0.3**
DALT				*e*SG	**Sb**	**01 02 06.0**	**+2.0**
DALT	**Dalyan (Mudla)**	**0.35**	**121**	*e*Pg	**Pb**	**01 01 58.9**	**+0.3**
DALT				*e*Sg	**Sb**	**01 02 06.0**	**+2.0**
MLSB	**Milas**	**0.52**	**312**	*e*PG	**Pg**	**01 02 01.1**	**+0.3**
MLSB				*e*SG	**Sb**	**01 02 08.5**	**-0.2**
MLSB	**Milas**	**0.52**	**312**	*e*Pg	**Pg**	**01 02 01.1**	**+0.3**
MLSB				*e*Sg	**Sb**	**01 02 08.5**	**-0.2**
DAT	**Datca**	**0.59**	**248**	*e*PG	**Pb**	**01 02 02.8**	**+0.2**
DAT				*e*SG	**Sb**	**01 02 11.8**	**+1.0**
DAT	**Datca**	**0.59**	**248**	*e*Pg	**Pb**	**01 02 02.8**	**+0.2**
DAT				*e*Sg	**Sb**	**01 02 11.8**	**+1.0**
BODT	**Bodrum**	**0.77**	**279**	*e*PG	**Pg**	**01 02 05.4**	**0.0**
BODT				*e*SG	**Sn**	**01 02 17.4**	**-0.8**
BODT	**Bodrum**	**0.77**	**279**	*e*Pg	**Pg**	**01 02 05.4**	**0.0**
BODT				*e*Sg	**Sn**	**01 02 17.4**	**-0.8**
AYDN	**Tasoluk**	**0.77**	**337**	*i* P	**Pb**	**01 02 06.3**	**+0.6**
AYDN				*i* S	**Sb**	**01 02 16.2**	**+0.2**
AYDN	**Tasoluk**	**0.77**	**337**	*i* P	**Pb**	**01 02 06.3**	**+0.6**
AYDN				*i* S	**Sb**	**01 02 16.2**	**+0.2**
DNZL	**Cakiroluk**	**0.97**	**40**	*e*P	**Pn**	**01 02 11.0**	**+1.2**
DNZL	**Cakiroluk**	**0.97**	**40**	*e*P	**Pn**	**01 02 11.0**	**+1.2**
KULA	**Kula-Manisa**	**1.59**	**11**	*e*PN	**Pn**	**01 02 17.4**	**-0.9**
KULA				*e*SN	**Sn**	**01 02 37.5**	**-1.2**
KULA	**Kula-Manisa**	**1.59**	**11**	*e*Pn	**Pn**	**01 02 17.4**	**-0.9**
KULA				*e*Sn	**Sn**	**01 02 37.5**	**-1.2**

IDC 16 01:04:57.5±1.3,17.35N×46.48W,h0km,mb3.7/4, mb1 4.0/4,mb1mx3.5/26,mbtmp3.7/4,Error ellipse: s-maj=39.0km s-min=32.9km az=95.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**39.66**	**214**	P	P	01 12 31.8	-0.4
	1.0nm,0.8s,baz=19,slow=11,SNR=5.8						
TORD	**Torodi Ar. Bea**	**46.58**	**88**	P	P	01 13 27.5	-0.2
	0.5nm,0.8s,baz=271,slow=6.6,SNR=2.4						
YKA	**Yellowknife Ar**	**64.67**	**332**	P	P	01 15 35.7	-1.3
	0.5nm,0.8s,baz=96,slow=7.6,SNR=6.3						
ILAR	**Eielson Array**	**78.82**	**335**	P	P	01 17 03.4	+1.2
	1.5nm,0.8s,baz=72,slow=4.6,SNR=14						

DDA 16 01:05:34.2,37.63N×35.61E,h7km,ML2.7,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.59**	**95**	*e*P	Pg	01 05 44.6	-1.2
ANDN				*i* S	Sg	01 05 51.1	-2.5
GULE	**Gulek**	**0.75**	**242**	*i* P	Pb	01 05 49.7	-0.1
GULE				*i* S	Sb	01 06 01.2	+0.8

IDC ***16*** *01:07:16.9±0.5,12.39N×126.45E,h0km,mb4.3/19, mb1 4.5/21,mb1mx4.4/26,mbtmp4.3/21,ML4.3/2, Error ellipse: s-maj=22.9km s-min=13.0km az=75.0*
MAN ***16*** *01:07:20,12.40N×126.36E,h51km,mb4.9,ML3.8,MS3.9*
ISCJB ***16*** *01:07:21.3±0.3,12.32N±0.04×126.33E±0.04,h41km, mb4.4/33,Error ellipse: s-maj=6.4km s-min=5.4km az=136.7*
NEIC ***16*** *01:07:23.1±1.4,12.32N×126.37E,h42km±13km,mb4.6/13, Error ellipse: s-maj=11.8km s-min=5.3km az=72.0*
ISC 16 01:07:23.0±0.4,12.35N±0.05×126.33E±0.07,h41km,n83, σ0.92/92,mb4.5/33,1C-2D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**1.63**	**276**	*e*P	**Pn**	**01 07 47.5**	**-1.8**
CNP				*e*S	**Sn**	**01 08 10.5**	**+1.4**
PLP	**Palo**	**1.77**	**228**	⇓*e*P	**Pn**	**01 07 49.4**	**-1.8**
PLP				*e*S	**Sn**	**01 08 10.3**	**-2.1**
MSLP	**Maasin**	**2.63**	**213**	*e*P	**Pn**	**01 08 03.4**	**+0.4**
TBP	**Tagbilaran**	**3.58**	**223**	*e*P	**Pn**	**01 08 16.2**	**+0.1**
RCP	**Roxas**	**3.59**	**258**	⇑*e*P	**Pn**	**01 08 16.2**	**0.0**
RCP				*e*S	**Sn**	**01 08 56.7**	**-0.7**
GQP	**Guinayangan**	**4.08**	**293**	⇓*e*P	**Pn**	**01 08 20.2**	**-2.8**
OTRP	**Odiongan**	**4.21**	**271**	*e*P	**Pn**	**01 08 24.2**	**-0.4**
BOAC	**Boac**	**4.51**	**285**	*e*P	**Pn**	**01 08 29.2**	**+0.4**
TGY	**Tagaytay City**	**5.53**	**289**	Pn	**Pn**	**01 08 43.6**	**+0.7**
TGY	**Tagaytay City**	**5.53**	**289**	Pn	**Pn**	**01 08 43.6**	**+0.7**
	38nm,0.3s,baz=199,slow=5.0,SNR=3.1						
LUBP	**Lubang**	**6.08**	**284**	*e*P	**Pn**	**01 08 50.2**	**-0.3**
CAUP	**Cauayan**	**6.31**	**317**	*e*P	**Pn**	**01 08 52.8**	**-0.8**
KAPI	**Kappang**	**18.45**	**201**	*e*P	**Pn**	**01 11 35.6**	**-0.1**
	24nm,0.9s						
KAPI	**Kappang**	**18.45**	**201**	P	**Pn**	**01 11 35.4**	**-0.2**
	0.2nm,0.3s,baz=24,slow=9.3,SNR=16						
KSAR	**Wonju Array Be**	**25.03**	**3**	P	**P**	**01 12 43.6**	**+0.4**
KSRS	**Korea Array**	**25.04**	**3**	P	**P**	**01 12 43.6**	**+0.3**
	6.9nm,0.8s,baz=181,slow=9.9,SNR=17						
CMAR	**Chiang Mai Arr**	**27.07**	**286**	P	**P**	**01 13 02.8**	**+0.9**
CMAR	**Chiang Mai Arr**	**27.07**	**286**	P	**P**	**01 13 02.8**	**+0.9**
	2.5nm,0.8s,baz=95,slow=7.8,SNR=14						
USRK	**Ussuriysk Arra**	**32.11**	**8**	P	**P**	**01 13 43.4**	**-2.9**
	1.9nm,0.8s,baz=178,slow=11,SNR=7.5						
WRAB	**Tennant Creek**	**33.04**	**166**	*e*P	**P**	**01 13 52.8**	**-1.8**
	3.5nm,0.8s						
AS31	**Alice Springs**	**36.55**	**168**	*e*P	**P**	**01 14 24.2**	**-0.8**
ASAR	**Alice Springs**	**36.55**	**168**	P	**P**	**01 14 24.0**	**-1.0**
ASAR				PcP	**PcP**	**01 16 48.2**	**+0.2**
ASAR	**Alice Springs**	**36.55**	**168**	P	**P**	**01 14 24.0**	**-1.0**
	5.3nm,0.8s,baz=350,slow=7.9,SNR=33						
ASAR				PcP	**PcP**	**01 16 48.2**	**+0.2**
	1.6nm,0.5s,baz=338,slow=2.5,SNR=11						
TAPN	**Taplejung**	**39.09**	**298**	*e*P	**P**	**01 14 47.3**	**+0.5**
SONM	**Songino Array**	**39.11**	**339**	P	**P**	**01 14 46.8**	**+0.3**
SONM				PcP	**PcP**	**01 16 54.5**	**-1.1**
SONM	**Songino Array**	**39.11**	**339**	P	**P**	**01 14 46.8**	**+0.3**
	1.3nm,0.7s,baz=151,slow=8.5,SNR=11						
SONM				PcP	**PcP**	**01 16 54.5**	**-1.1**
	0.3nm,0.6s,baz=128,slow=2.4,SNR=2.8						
RAMN	**Ramite**	**39.95**	**297**	*e*P	**P**	**01 14 54.7**	**+0.8**
	24nm,0.8s						
GUN	**Gumba**	**40.80**	**299**	*e*P	**P**	**01 15 01.6**	**+0.5**
	45nm,1.1s						
DMN	**Daman**	**41.39**	**298**	*e*P	**P**	**01 15 06.1**	**+0.2**
DANN	**Dangsing**	**42.72**	**298**	*e*P	**P**	**01 15 16.8**	**+0.1**
	33nm,1.1s						
KOLN	**Koldanda**	**42.73**	**298**	*e*P	**P**	**01 15 17.1**	**+0.4**
	18nm,0.7s						
FORT	**Forrest**	**42.91**	**178**	*e*P	**P**	**01 15 17.8**	**+0.1**
	38nm,0.8s						
PYUN	**Piuthan**	**43.33**	**298**	*e*P	**P**	**01 15 22.0**	**+0.5**
	44nm,0.9s						
STKA	**Stephens Creek**	**46.34**	**162**	*e*P	**P**	**01 15 45.6**	**+0.5**
STKA				PcP	**PcP**	**01 17 20.2**	**+0.4**
STKA	**Stephens Creek**	**46.34**	**162**	P	**P**	**01 15 45.1**	**0.0**
	8.5nm,0.7s,baz=341,slow=8.1,SNR=18						
STKA				PcP	**PcP**	**01 17 20.2**	**+0.4**
	3.1nm,0.6s,baz=349,slow=3.9,SNR=3.8						
PETK	**Petropavlovsk-**	**47.74**	**25**	P	**P**	**01 15 56.2**	**+0.4**
PETK	**Petropavlovsk-**	**47.74**	**25**	P	**P**	**01 15 56.2**	**+0.4**
	8.6nm,1.0s,baz=193,slow=5.8,SNR=4.8						
MK31	**Makanchi Array**	**50.43**	**322**	*e*P	**P**	**01 16 17.1**	**+0.5**
MKAR	**Makanchi Array**	**50.43**	**322**	*e*P	**P**	**01 16 17.6**	**+1.1**
MKAR	**Makanchi Array**	**50.43**	**322**	P	**P**	**01 16 17.0**	**+0.5**
	4.0nm,0.8s,baz=114,slow=8.8,SNR=25						

ZALV	**Zalesovo Beam**	**52.85**	**331**	P	**P**	**01 16 34.1**	**-0.3**
ZALV	**Zalesovo Beam**	**52.85**	**331**	P	**P**	**01 16 34.1**	**-0.3**
	0.8nm,0.6s,baz=116,slow=8.3,SNR=4.2						
KURK	**Kurchatov**	**54.41**	**325**	*e*P	**P**	**01 16 46.5**	**+0.6**
	8.0nm,0.9s						
KBL	**Kabul**	**56.23**	**303**	*e*P	**P**	**01 17 00.1**	**+0.6**
	10nm,0.8s						
KKAR	**Karatay Array**	**56.85**	**314**	*e*P	**P**	**01 17 04.3**	**+0.6**
	2.5nm,0.9s						
BVAR	**Borovoye Array**	**60.01**	**325**	P	**P**	**01 17 25.9**	**+0.5**
BVAR	**Borovoye Array**	**60.01**	**325**	P	**P**	**01 17 25.9**	**+0.5**
	2.6nm,0.8s,baz=107,slow=9.5,SNR=16						
BRVK	**Borovoye**	**60.08**	**325**	*e*P	**P**	**01 17 26.2**	**+0.3**
	5.2nm,0.9s						
ABKAR	**Akbulak array**	**65.36**	**319**	*e*P	**P**	**01 18 01.0**	**-0.1**
	0.6nm,0.6s						
COLD	**Coldfoot**	**76.17**	**23**	*e*P	**P**	**01 19 08.1**	**+1.5**
	4.5nm,1.0s						
KBZ	**Khabaz**	**76.86**	**312**	P	**P**	**01 19 10.8**	**-0.1**
KBZ	**Khabaz**	**76.86**	**312**	P	**P**	**01 19 10.8**	**-0.1**
	4.1nm,0.9s,baz=45,slow=2.9,SNR=6.2						
ILAR	**Eielson Array**	**77.56**	**26**	P	**P**	**01 19 13.8**	**-0.7**
ILAR	**Eielson Array**	**77.56**	**26**	P	**P**	**01 19 13.8**	**-0.7**
	0.5nm,0.8s,baz=246,slow=5.9,SNR=7.4						
CASY	**Casey**	**79.28**	**186**	*e*P	**P**	**01 19 24.7**	**+1.0**
	9.9nm,0.8s						
MALT	**Malatya**	**80.83**	**307**	*e*P	**P**	**01 19 33.3**	**+0.3**
	9.6nm,1.3s						
JOF	**Joensuu**	**81.38**	**333**	*e*p	**P**	**01 19 34.5**	**-0.7**
	2.2nm,0.5s						
ARCES	**ARCESS Array B**	**82.28**	**340**	P	**P**	**01 19 40.5**	**+0.6**
ARCES	**ARCESS Array B**	**82.28**	**340**	P	**P**	**01 19 40.5**	**+0.6**
	10nm,0.8s,baz=83,slow=5.0,SNR=10.0						
KAF	**Kangasniemi**	**83.82**	**332**	*e*p	**P**	**01 19 46.1**	**-1.9**
	4.0nm,0.8s						
FINES	**FINESS Array B**	**84.10**	**332**	P	**P**	**01 19 49.3**	**0.0**
FINES	**FINESS Array B**	**84.10**	**332**	P	**P**	**01 19 49.3**	**0.0**
	6.1nm,0.9s,baz=95,slow=4.2,SNR=10						
BRTR	**Keskin Array B**	**84.27**	**309**	P	**P**	**01 19 50.8**	**-0.2**
BRTR	**Keskin Array B**	**84.27**	**309**	P	**P**	**01 19 50.8**	**-0.2**
	1.0nm,0.8s,baz=111,slow=3.7,SNR=6.2						
AKASG	**Malin Array Be**	**85.00**	**321**	P	**P**	**01 19 53.8**	**-0.3**
AKASG	**Malin Array Be**	**85.00**	**321**	P	**P**	**01 19 53.8**	**-0.3**
	4.7nm,0.8s,baz=64,slow=4.3,SNR=12						
KIEV	**Kiev**	**85.01**	**321**	*e*P	**P**	**01 19 54.1**	**-0.1**
	9.2nm,1.1s						
BUR08	**Bucovina Ar. S**	**88.34**	**318**	*e*P	**P**	**01 20 11.1**	**+0.4**
RES	**Resolute Bay**	**89.45**	**10**	*e*P	**P**	**01 20 15.4**	**+0.2**
	2.4nm,0.6s						
NB2	**NORSAR Subarra**	**90.93**	**334**	P	**P**	**01 20 21.0**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=62,slow=4.6						
NOA	**NORSAR Array B**	**90.93**	**334**	P	**P**	**01 20 21.5**	**-0.9**
NOA	**NORSAR Array B**	**90.93**	**334**	P	**P**	**01 20 21.5**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=63,slow=4.7,SNR=4.7						
YKA	**Yellowknife Ar**	**91.85**	**24**	P	**P**	**01 20 25.9**	**-0.7**
YKA	**Yellowknife Ar**	**91.85**	**24**	P	**P**	**01 20 25.9**	**-0.7**
	comp=Z,0.8nm,1.0s,baz=296,slow=4.3,SNR=9.0						
VNDA	**Vanda**	**91.97**	**173**	P	**P**	**01 20 27.2**	**+0.5**
VNDA	**Vanda**	**91.97**	**173**	P	**P**	**01 20 27.2**	**+0.5**
	comp=Z,1.9nm,0.9s,baz=316,slow=7.7,SNR=9.2						
LENM	**Lemitar**	**111.43**	**46**	*e*Pdif	**Pdif**	**01 21 58.3**	**+2.9**
TXAR	**Lajitas Array**	**116.42**	**48**	PKP	**PKPdf**	**01 26 03.9**	**+0.7**
TXAR	**Lajitas Array**	**116.42**	**48**	PKP	**PKPdf**	**01 26 03.9**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=218,slow=0.6,SNR=5.5						
TORD	**Torodi Ar. Bea**	**119.53**	**293**	PKP	**PKPdf**	**01 26 08.3**	**-1.0**
TORD	**Torodi Ar. Bea**	**119.53**	**293**	PKP	**PKPdf**	**01 26 08.3**	**-1.0**
	comp=Z,0.6nm,0.9s,baz=81,slow=2.1,SNR=3.3						
PLCA	**Paso Flores**	**148.07**	**155**	PKPbc	**PKPbc**	**01 27 05.2**	**+0.6**
PLCA	**Paso Flores**	**148.07**	**155**	PKPbc	**PKPbc**	**01 27 05.2**	**+0.6**
	comp=Z,4.1nm,1.0s,baz=214,slow=2.8,SNR=6.0						

ISCJB ***16*** *01:07:44.4±0.9,50.62N±0.10×157.1E±0.2,h122km±8km, mb3.2/4, Error ellipse: s-maj=20.9km s-min=9.5km az=136.0*
KRSC ***16*** *01:07:44.1±0.8,50.51N×157.64E,h76km±84km,ML3.9*
IDC ***16*** *01:07:49.4±6.9,51.13N×157.10E,h145km±32km,mb2.9/4, mb1 3.3/6,mb1mx3.0/26,mbtmp3.0/6,MS3.2/1,Ms1 3.2/1, ms1mx3.2/10,Error ellipse: s-maj=95.6km s-min=34.4km az=15.0*
ISC 16 01:07:45.5±1.2,50.7N±0.1×157.1E±0.1,h126km±9km,n16, σ1.9/40/21,mb3.1/4,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.60**	**268**	P	Pn	01 08 03.8	-0.8
SKR				S	**Sn**	**01 08 17.7**	**-1.4**
PAU	**Pauzhetka**	**0.78**	**348**	P	**Pn**	**01 08 05.9**	**-0.1**
PAU				S	**Sn**	**01 08 21.8**	**+0.3**
MTVR	**Mutnovka**	**1.91**	**21**	P	**Pn**	**01 08 18.3**	**+0.1**
MTVR				S	**Sn**	**01 08 43.5**	**+0.2**
RUS	**Russkaya**	**1.95**	**27**	P	**Pn**	**01 08 18.6**	**+0.1**
RUS				S	**Sn**	**01 08 43.4**	**-0.5**
PETK	**Petropavlovsk-**	**2.44**	**9**	P	**Pn**	**01 08 24.7**	**+0.1**
	0.9nm,0.3s,baz=173,slow=11,SNR=6.3						
PETK				LR	LR	01 09 27.0	
	comp=Z,549nm,21.7s,baz=254,slow=48						
UGLR	**Uglovaya**	**2.73**	**23**	P	**Pn**	**01 08 29.6**	**+1.1**
UGLR				S	**Sn**	**01 09 03.5**	**+1.8**
AVH	**Avacha**	**2.77**	**21**	P	**Pn**	**01 08 31.2**	**+2.3**
SDLR	**Sedlovina**	**2.81**	**23**	P	**Pn**	**01 08 30.3**	**+0.8**
SPN	**Mys Shipunski**	**3.02**	**36**	S	**Sn**	**01 09 06.5**	**-1.5**
MKZ	**Mys Kozlova**	**4.79**	**35**	P	**Pn**	**01 08 55.1**	**-0.4**
MKZ				S	**Sn**	**01 09 46.7**	**-3.3**
KMNR	**Kamenistaya**	**5.41**	**19**	P	Pn	01 09 07.1	+3.2
FX1	**Attu Island--F**	**10.21**	**71**	P	**Pn**	**01 10 09.8**	**+1.3**
	0.8nm,0.3s,baz=207,slow=14,SNR=7.0						
FX1				S	**Sn**	**01 12 01.3**	**+0.3**
	1.1nm,0.3s,baz=180,slow=20,SNR=6.1						
ILAR	**Eielson Array**	**31.84**	**42**	P	**P**	**01 13 55.9**	**-2.0**
	0.2nm,0.6s,baz=266,slow=8.0,SNR=3.6						
YKA	**Yellowknife Ar**	**46.20**	**40**	P	**P**	**01 15 57.7**	**+0.5**
	0.2nm,0.6s,baz=295,slow=7.4,SNR=3.4						
PDAR	**Pinedale Array**	**60.36**	**58**	P	**P**	**01 17 41.9**	**+0.7**
	0.5nm,0.8s,baz=315,slow=0.6,SNR=3.9						
TXAR	**Lajitas Array**	**73.33**	**64**	P	**P**	**01 19 03.9**	**+0.4**
	0.3nm,0.7s,baz=321,slow=3.2,SNR=3.9						

CASC 16 01:09:43.8±7.9,10.42N×84.48W,h75km±39km,MD3.5, 1C-3D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGA2	**Cerro Gallo 2**	**0.40**	**177**	⇓*e*P	Pn	01 09 56.2	-0.3
CGA2				*e*P		01 09 56.4	
PTEN	**Parque Tenorio**	**0.58**	**301**	*i* P	Pn	01 09 58.8	+0.9
PTEN				*i* S	Sn	01 10 10.5	+2.1
SJS	**Escuela Geolog**	**0.64**	**138**	*i* P	Pn	01 09 59.1	+0.5
SJS				⇓*e*P		01 09 59.2	
SJS				*e*S	Sn	01 10 11.6	+2.0
SJS				*e*S		01 10 11.9	
LAJ	**Bijagual**	**0.66**	**147**	*e*P	Pn	01 09 58.6	-0.4
LAJ				⇓*e*P		01 09 58.6	
LAJ				*e*S	Sn	01 10 11.3	+1.2
COLC	**Colonia**	**0.75**	**289**	*i* P	Pn	01 10 00.5	+0.8
A494	**Palo Verde**	**0.85**	**265**	*i* P	Pn	01 10 00.3	-0.5
A494				*i* S	Sn	01 10 12.9	-0.6
GPS2	**Hotel Rinc˜‡n**	**0.92**	**291**	*i* P	Pn	01 10 02.8	+1.1
A495	**El Viejo**	**0.96**	**269**	*i* P	Pn	01 10 01.5	-0.6
A490	**San Lazaro**	**0.97**	**262**	*i* P	Pn	01 10 01.6	-0.6
A490				*i* S	Sn	01 10 14.6	-1.4
GB1A	**Borinquen Arri**	**0.98**	**294**	*i* S	Sn	01 10 17.1	+0.6
GBS3	**Finca Las Im˜¡**	**1.02**	**291**	*i* P	Pn	01 10 02.9	0.0
GBS3				*i* S	Sn	01 10 16.9	-0.2
QCR	**Quepos**	**1.03**	**162**	⇑*e*P	Pn	01 10 02.3	-0.7
QCR				*e*P		01 10 02.4	
QCR				*e*S	Sn	01 10 16.6	-0.7
QCR				*e*S		01 10 17.4	
GBS2	**Las Lilas**	**1.04**	**294**	*i* P	Pn	01 10 03.4	+0.2
GBS2				*i* S	Sn	01 10 17.9	+0.3
NY14	**Universidad de**	**1.06**	**283**	*i* P	Pn	01 10 03.4	+0.1
BUS	**Buena Vista**	**1.11**	**140**	*e*P	Pn	01 10 04.5	-0.2
BUS				*e*P		01 10 04.5	
BUS				*e*S	Sn	01 10 19.9	-0.2
BUS				*e*S		01 10 20.1	
ACR	**Cerro Adams**	**2.18**	**143**	*e*P	Pn	01 10 17.0	-1.2
ACR				*e*P		01 10 17.1	
ACR				*e*S	Sn	01 10 42.0	-2.2
ACR				*e*S		01 10 43.6	
BRU2	**Volcan**	**2.39**	**132**	*e*P	Pn	01 10 21.3	+0.2
BRU2				*e*S	Sn	01 10 49.5	-0.2
TBS2		**2.42**	**132**	*e*P	Pn	01 10 22.6	+1.2
TBS2				*e*S	Sn	01 10 50.3	0.0
BRU	**Baru**	**2.48**	**130**	*e*P	Pn	01 10 23.6	+0.9
BRU				*e*S	Sn	01 10 53.0	+0.6
PTP	**Ponta Puerca**	**19.85**	**65**	*e*P	x	01 10 27.1	
PTP				*e*S	x	01 10 52.6	

IDC 16 01:22:32.9±3.6,0.19N×123.69E,h144km±36km,mb3.3/7, mb1 3.4/9,mb1mx3.3/23,mbtmp3.3/9,Error ellipse: s-maj=32.2km s-min=17.4km az=72.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.50**	**217**	P	Pn	01 24 05.0	-1.1
	3.0nm,0.3s,baz=21,slow=4.4,SNR=14						
FITZ	**Fitzroy Crossi**	**18.28**	**174**	P	P	01 26 34.7	-1.0
	0.1nm,0.3s,baz=0.0,slow=10,SNR=4.5						
ASAR	**Alice Springs**	**25.71**	**158**	P	P	01 27 51.3	+1.3
	0.2nm,0.3s,baz=338,slow=9.3,SNR=3.8						
CMAR	**Chiang Mai Arr**	**30.34**	**308**	P	P	01 28 32.5	+1.3
	0.3nm,0.5s,baz=148,slow=6.9,SNR=3.7						
MJAR	**Matsushiro Arr**	**38.60**	**19**	P	P	01 29 41.2	-0.8
	2.2nm,0.7s,baz=197,slow=9.6,SNR=4.6						
USRK	**Ussuriysk Arra**	**44.44**	**9**	P	P	01 30 29.6	+0.2
	1.2nm,0.6s,baz=187,slow=7.2,SNR=6.0						
SONM	**Songino Array**	**49.78**	**345**	P	P	01 31 11.0	0.0
	0.5nm,0.7s,baz=159,slow=8.0,SNR=4.8						
MKAR	**Makanchi Array**	**58.82**	**328**	P	P	01 32 16.4	+0.2
	1.4nm,0.4s,baz=124,slow=8.6,SNR=24						
MKAR				PcP	PcP	01 33 03.0	-1.3
	0.4nm,0.5s,baz=143,slow=3.4,SNR=4.5						
ZALV	**Zalesovo Beam**	**62.43**	**335**	P	P	01 32 39.8	-0.7
	0.2nm,0.3s,baz=132,slow=8.0,SNR=2.8						
TORD	**Torodi Ar. Bea**	**121.02**	**285**	PKP	PKPdf	01 41 08.0	-1.5
	0.4nm,0.7s,baz=96,slow=0.1,SNR=4.5						

NSSP ***16*** *01:27:02.6,41.30N×46.63E,h10km,Ms2.8*
TIF ***16*** *01:27:05.6,40.98N×47.80E,h17km±2km*
ISC 16 01:27:00.9±4.0,41.5N±0.2×47.0E±0.2,h10km,n6,σ2.6/67/9, 4C-2D,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGRG	**David-gareji**	**1.23**	**270**	P	**Sn**	**01 27 39.9**	**-1.0**
MTKZ	**Martakert**	**1.28**	**186**	⇓*i*P	**Pb**	**01 27 25.5**	**+0.4**
MTKZ				⇑*i*S	**Sb**	**01 27 41.7**	**+0.2**
VADZ	**Vardenis**	**1.61**	**217**	*e*P	**Pn**	**01 27 29.0**	**-0.6**
VADZ				*e*S	**Sn**	**01 27 48.0**	**-2.6**
STKZ		**1.67**	**187**	⇑*i*P	Pn	01 27 28.1	-2.2
STKZ				⇑*i*S	**Sn**	**01 27 47.8**	**-3.9**
TBLG	**Delisi**	**1.72**	**279**	P	**Sn**	**01 27 51.1**	**-1.9**
GRS	**Goris**	**2.04**	**195**	⇑*i*P	**Pb**	**01 27 41.0**	**+3.0**
GRS				⇓*i*S	**Sb**	**01 28 06.0**	**+2.6**

ISCJB ***16*** *01:28:27.7±0.5,38.24N±0.02×27.27E±0.05,h3km±6km, Error ellipse: s-maj=6.5km s-min=3.7km az=163.6*
DDA ***16*** *01:28:27.6,38.24N×27.24E,h5km,MD2.4*
ISK ***16*** *01:28:27.0,38.25N×27.25E,h6km,MD2.5*
CSEM ***16*** *01:28:28.0±0.2,38.24N×27.26E,h8km,MD2.5,Error ellipse: s-maj=5.7km s-min=3.3km az=79.0*
ISC 16 01:28:27.8±1.0,38.26N±0.02×27.27E±0.03,h4km±9km, n28,σ0.48/48,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZM	**Izmir**	**0.14**	**359**	PG	**Pg**	**01 28 30.5**	**-0.1**
IZM				SG	**Sg**	**01 28 32.8**	**+0.4**
IZM	**Izmir**	**0.14**	**359**	*i* Pg	**Pg**	**01 28 30.5**	**-0.1**
IZM				*i* Sg	**Sg**	**01 28 32.8**	**+0.4**
BLCB	**Balcova**	**0.22**	**305**	*e*PG	**Pg**	**01 28 31.6**	**+0.4**
BLCB				*e*SG	**Sg**	**01 28 35.1**	**+0.3

NRCA				Sg	Sg	01 51 06.8	+0.6	
	2µm,0.1s							
VCEL	**Villa Celiera**	**0.41**	**108**	Pg	Pg	01 51 03.0	+0.4	
VCEL				Sg	Sb	01 51 10.1	-0.2	
	243nm,0.5s							
VCEL	**Villa Celiera**	**0.41**	**108**	Pg	Pg	01 51 03.0	+0.4	
VCEL				Sg	Sb	01 51 10.1	-0.2	
	243nm,0.5s							
MNS	**Montasola**	**0.49**	**254**	Pg	Pg	01 51 04.0	-0.1	
MNS				Sg	Sb	01 51 11.6	-0.9	
	254nm,0.2s							
MNS	**Montasola**	**0.49**	**254**	Pg	Pg	01 51 04.0	-0.1	
MNS				Sg	Sb	01 51 11.6	-0.9	
	254nm,0.2s							
OFFI	**Offida**	**0.49**	**33**	Pg	Pb	01 51 04.8	-0.4	
OFFI	**Offida**	**0.49**	**33**	Pg	Pb	01 51 04.8	-0.4	
PTQR	**Pietraquaria**	**0.50**	**173**	Pg	Pg	01 51 04.2	-0.2	
	20nm,0.3s							
PTQR	**Pietraquaria**	**0.50**	**173**	Pg	Pg	01 51 04.2	-0.2	
	20nm,0.3s							
TRTR	**Tortoreto Alta**	**0.52**	**57**	Pg	Pb	01 51 05.7	0.0	
	524nm,0.3s							
TRTR	**Tortoreto Alta**	**0.52**	**57**	Pg	Pb	01 51 05.7	0.0	
	524nm,0.3s							
FDMO	**Fiordimonte**	**0.54**	**342**	Pg	Pg	01 51 04.8	-0.2	
FDMO				Sg	Sb	01 51 13.3	-0.7	
	218nm,0.2s							
FDMO	**Fiordimonte**	**0.54**	**342**	Pg	Pg	01 51 04.8	-0.2	
FDMO				Sg	Sb	01 51 13.3	-0.7	
	218nm,0.2s							
CESX	**Cesi**	**0.55**	**279**	Pg	Pg	01 51 05.1	-0.1	
CESX				Sg	Sg	01 51 13.1	+0.6	
	175nm,0.2s							
CESX	**Cesi**	**0.55**	**279**	Pg	Pg	01 51 05.1	-0.1	
CESX				Sg	Sg	01 51 13.1	+0.6	
	175nm,0.2s							
CESI	**CESI - Serrava**	**0.57**	**328**	Pg	Pg	01 51 05.4	-0.2	
CESI				Sg	Sb	01 51 14.5	-0.4	
	100nm,0.3s							
CESI	**CESI - Serrava**	**0.57**	**328**	Pg	Pg	01 51 05.4	-0.2	
CESI				Sg	Sb	01 51 14.5	-0.4	
	100nm,0.3s							
CERT	**Cerreto**	**0.62**	**204**	Pg	Pg	01 51 06.2	-0.4	
	162nm,0.5s							
CERT	**Cerreto**	**0.62**	**204**	Pg	Pg	01 51 06.2	-0.4	
	162nm,0.5s							
MTCE	**Montecelio**	**0.66**	**221**	Pg	Pg	01 51 06.7	-0.5	
	102nm,0.5s							
MTCE	**Montecelio**	**0.66**	**221**	Pg	Pg	01 51 06.7	-0.5	
	102nm,0.5s							
INTR	**Introdacqua**	**0.67**	**139**	Pg	Pg	01 51 07.0	-0.5	
INTR				Sg	Sg	01 51 16.8	+0.4	
	135nm,0.4s							
INTR	**Introdacqua**	**0.67**	**139**	Pg	Pg	01 51 07.0	-0.5	
INTR				Sg	Sg	01 51 16.8	+0.4	
	135nm,0.4s							
VVLD	**Villa Vallelon**	**0.69**	**161**	Pg	Pb	01 51 08.4	-0.2	
	130nm,0.6s							
VVLD	**Villa Vallelon**	**0.69**	**161**	Pg	Pb	01 51 08.4	-0.2	
	130nm,0.6s							
GUMA	**Gualdo di Mace**	**0.71**	**40**	Pg	Pg	01 51 05.2	-2.9	
GUMA				Sg	Sg	01 51 13.7	-3.8	
	973nm,0.2s							
ASSB	**Assisi San Ben**	**0.71**	**317**	Pg	Pg	01 51 08.0	-0.3	
	80nm,0.2s							
ASSB	**Assisi San Ben**	**0.71**	**317**	Pg	Pg	01 51 08.0	-0.3	
	80nm,0.2s							
GUAR	**Guarcino**	**0.73**	**180**	Pg	Pb	01 51 09.2	0.0	
	84nm,0.5s							
GUAR	**Guarcino**	**0.73**	**180**	Pg	Pb	01 51 09.2	0.0	
	84nm,0.5s							
SNTG	**Esanatoglia**	**0.78**	**339**	Pg	Pg	01 51 09.0	-0.6	
	61nm,0.2s							
SNTG	**Esanatoglia**	**0.78**	**339**	Pg	Pg	01 51 09.0	-0.6	
	61nm,0.2s							
LPEL	**Lama dei Pelig**	**0.80**	**126**	Pg	Pg	01 51 09.4	-0.5	
	112nm,0.2s							
LPEL	**Lama dei Pelig**	**0.80**	**126**	Pg	Pg	01 51 09.4	-0.5	
	112nm,0.2s							
CAFR	**Castel Frentan**	**0.82**	**111**	Pg	Pg	01 51 09.9	-0.3	
CAFR	**Castel Frentan**	**0.82**	**111**	Pg	Pg	01 51 09.9	-0.3	
RMP	**Rome, Mte Porz**	**0.84**	**213**	Pg	Pg	01 51 10.3	-0.4	
	89nm,0.5s							
RMP	**Rome, Mte Porz**	**0.84**	**213**	Pg	Pg	01 51 10.3	-0.4	
	89nm,0.5s							
CING	**Cingoli**	**0.86**	**354**	Pg	Pg	01 51 10.3	-0.7	
	161nm,0.2s							
CING	**Cingoli**	**0.86**	**354**	Pg	Pg	01 51 10.3	-0.7	
	161nm,0.2s							
RDP	**Rocca di Papa**	**0.89**	**211**	Pg	Pg	01 51 11.6	0.0	
	161nm,0.5s							
RDP	**Rocca di Papa**	**0.89**	**211**	Pg	Pg	01 51 11.6	0.0	
	161nm,0.5s							
MURB	**Monte Urbino**	**0.94**	**322**	Pg	Pg	01 51 12.2	-0.5	
	183nm,0.2s							
MURB	**Monte Urbino**	**0.94**	**322**	Pg	Pg	01 51 12.2	-0.5	
	183nm,0.2s							
GIUL	**Giuliano Di Ro**	**0.96**	**183**	Pg	Pb	01 51 13.4	+0.1	
GIUL	**Giuliano Di Ro**	**0.96**	**183**	Pg	Pb	01 51 13.4	+0.1	
MGAB	**Montegabbione**	**0.97**	**294**	Pg	Pg	01 51 12.8	-0.4	
	124nm,0.6s							
MGAB	**Montegabbione**	**0.97**	**294**	Pg	Pg	01 51 12.8	-0.4	
	124nm,0.6s							
ARVD	**Arcevia**	**1.01**	**344**	Pg	Pg	01 51 13.1	-0.9	
	63nm,0.3s							
ARVD	**Arcevia**	**1.01**	**344**	Pg	Pg	01 51 13.1	-0.9	
	63nm,0.3s							
AOI	**Ancona**	**1.05**	**11**	Pg	Pg	01 51 14.1	-0.6	
	100nm,0.7s							
AOI	**Ancona**	**1.05**	**11**	Pg	Pg	01 51 14.1	-0.6	
	100nm,0.7s							
TOLF	**Tolfa**	**1.08**	**245**	Pg	Pb	01 51 14.4	-0.8	
	49nm,0.5s							
TOLF	**Tolfa**	**1.08**	**245**	Pg	Pb	01 51 14.4	-0.8	
	49nm,0.5s							
SACS	**San Casciano d**	**1.09**	**288**	Pg	Pg	01 51 15.2	-0.2	
	37nm,0.8s							
LATE	**Laterza**	**1.12**	**275**	Pg	Pb	01 51 15.7	-0.3	
	62nm,0.4s							
LATE	**Laterza**	**1.12**	**275**	Pg	Pb	01 51 15.7	-0.3	
	62nm,0.4s							
PIEI	**Pieia**	**1.17**	**331**	Pg	Pb	01 51 16.1	-0.6	
	38nm,0.4s							
PIEI	**Pieia**	**1.17**	**331**	Pg	Pb	01 51 16.1	-0.6	
	38nm,0.4s							
BADI	**Badiali**	**1.26**	**322**	Pg	Pb	01 51 18.3	0.0	
	64nm,0.7s							
BADI	**Badiali**	**1.26**	**322**	Pg	Pb	01 51 18.3	0.0	
	64nm,0.7s							
CAFI	**Castiglion Fio**	**1.28**	**310**	Pg	Pb	01 51 18.7	+0.1	
	25nm,0.5s							
CAFI	**Castiglion Fio**	**1.28**	**310**	Pg	Pb	01 51 18.7	+0.1	
	25nm,0.5s							
PARC	**Parchiule**	**1.38**	**325**	Pg	Pb	01 51 20.2	-0.1	
PARC	**Parchiule**	**1.38**	**325**	Pg	Pb	01 51 20.2	-0.1	
NVLJ	**Novalja**	**2.33**	**28**	*e*Pn	Pn	01 51 33.0	+0.2	
NVLJ				Sn	Sn	01 52 02.1	+0.7	
NVLJ	**Novalja**	**2.33**	**28**	*e*Pn	Pn	01 51 32.9	+0.1	
NVLJ				Sn	Sn	01 52 02.1	+0.6	
STON	**Ston**	**3.25**	**82**	*e*Pn	Pn	01 51 48.2	+2.8	
STON				Sn	Sn	01 52 25.6	+1.5	
STON	**Ston**	**3.25**	**82**	*e*Pn	Pn	01 51 48.2	+2.8	
STON				Sn	Sn	01 52 25.5	+1.4	

IDC 16 01:52:28.3±4.1, 3°24S×99°96E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/23, mbtmp3.6/4, Error ellipse: s-maj=181.6km s-min=28.1km az=57.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**38.57**	**125**	P	P	01 59 53.2	0.0
	0.3nm,0.4s,baz=300,slow=8.4,SNR=5.3						
SONM	**Songino Array**	**51.17**	**6**	P	P	02 01 33.3	-0.1
	0.6nm,0.6s,baz=191,slow=9.4,SNR=5.7						
MKAR	**Makanchi Array**	**52.20**	**345**	P	P	02 01 41.4	+0.4
	0.6nm,0.6s,baz=157,slow=8.7,SNR=6.3						
ZALV	**Zalesovo Beam**	**58.37**	**350**	P	P	02 02 24.9	-0.4
	0.3nm,0.4s,baz=167,slow=8.3,SNR=2.2						
TXAR	**Lajitas Array**	**145.70**	**38**	PKPbc	PKPdf	02 12 08.9	-0.8
	0.4nm,0.6s,baz=198,slow=0.5,SNR=8.3						

*ISCJB **16** 01:53:38.5±0.7, 40°02N±0°03×23°53E±0°06, h7km±6km, Error ellipse: s-maj=7.9km s-min=4.4km az=170.4*

*CSEM **16** 01:53:38.7±0.3, 40°02N×23°52E, h10km, ML1.6/3, Error ellipse: s-maj=9.5km s-min=7.2km az=93.0*

*THE **16** 01:53:39.6, 40°02N×23°60E, h2km±22km, ML1.6/3, Error ellipse: s-maj=22.4km s-min=0.4km az=271.0*

*ATH **16** 01:53:39.8, 40°07N×23°42E, h26km±1km, MD2.8/5*

ISC 16 01:53:39.0±1.0, 40°00N±0°02×23°55E±0°03, h7km±10km, n26, σ0=952/35, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.12**	**126**	P	**Pg**	**01 53 41.5**	**-0.1**
PAIG				S	**Sg**	**01 53 43.2**	**-0.2**
PAIG	**Paliouri**	**0.12**	**126**	P	**Pg**	**01 53 41.5**	**-0.1**
PLG	**Polygyros**	**0.38**	**348**	P	**Pg**	**01 53 46.5**	**0.0**
PLG				S	**Sg**	**01 53 51.9**	**+0.3**
PLG	**Polygyros**	**0.38**	**348**	*e*PB	**Pg**	**01 53 46.5**	**0.0**
PLG				*e*SB	**Sg**	**01 53 51.8**	**+0.2**
PLG	**Polygyros**	**0.38**	**348**	P	**Pg**	**01 53 46.5**	**0.0**
PLG				S	**Sg**	**01 53 51.9**	**+0.3**
OUR	**Ouranopolis**	**0.47**	**44**	P	**Pg**	**01 53 47.8**	**-0.3**
OUR				S	**Sg**	**01 53 53.8**	**-0.5**
OUR	**Ouranopolis**	**0.47**	**44**	P	**Pg**	**01 53 47.8**	**-0.3**
OUR				S	**Sg**	**01 53 53.8**	**-0.5**
HORT	**Hortiatis**	**0.69**	**330**	P	**Pg**	**01 53 52.7**	**+0.4**
HORT	**Hortiatis**	**0.69**	**330**	P	**Pg**	**01 53 52.7**	**+0.4**
NEO	**Neokhori**	**0.74**	**200**	*e*PN	**Pb**	**01 53 55.0**	**+0.9**
NEO	**Neokhori**	**0.74**	**200**	*e*Pn	**Pb**	**01 53 55.0**	**+0.9**
LIT	**Litokhoron**	**0.82**	**277**	*e*PN	**Pg**	**01 53 54.3**	**-0.5**
LIT	**Litokhoron**	**0.82**	**277**	*e*Pn	**Pg**	**01 53 54.3**	**-0.5**
SOH	**Sokhos**	**0.83**	**350**	*e*PN	**Pg**	**01 53 54.3**	**-0.8**
SOH	**Sokhos**	**0.83**	**350**	*e*Pn	**Pg**	**01 53 54.3**	**-0.8**
AOS	**Alonnisos**	**0.87**	**163**	P	**Pb**	**01 53 56.5**	**+0.2**
AOS				S	**Sb**	**01 54 08.6**	**+0.5**
AOS	**Alonnisos**	**0.87**	**163**	P	**Pb**	**01 53 56.5**	**+0.2**
AOS				S	**Sb**	**01 54 08.6**	**+0.5**
LIA	**Limnos Island**	**1.26**	**94**	P	**Pg**	**01 54 02.7**	**-0.4**
LIA	**Limnos Island**	**1.26**	**94**	P	**Pg**	**01 54 02.7**	**-0.4**
THL	**Klokotos Trika**	**1.26**	**250**	*e*PN	**Pg**	**01 54 02.0**	**-1.2**
THL	**Klokotos Trika**	**1.26**	**250**	*e*Pn	**Pg**	**01 54 02.0**	**-1.2**
AGG	**Agios Georgios**	**1.36**	**224**	*e*PN	**Pb**	**01 54 05.1**	**+0.4**
AGG	**Agios Georgios**	**1.36**	**224**	*e*Pn	**Pb**	**01 54 05.1**	**+0.4**
NVR	**Nevrokopi**	**1.37**	**10**	*e*PN	**Pb**	**01 54 05.1**	**+0.1**
NVR				*e*SN	**Sb**	**01 54 22.5**	**-0.2**
NVR	**Nevrokopi**	**1.37**	**10**	*e*Sn	**Sb**	**01 54 22.5**	**-0.2**
NVR	**Nevrokopi**	**1.37**	**10**	*e*Pn	**Pb**	**01 54 05.1**	**+0.1**

*IDC **16** 01:59:26.2±1.3, 6°67S×102°73E, h0km, mb4.0/11, mb1 4.0/11, mb1mx3.9/24, mbtmp4.0/11, Error ellipse: s-maj=49.5km s-min=16.8km az=54.0*

*ISCJB **16** 01:59:27.0±0.7, 6°86S±0°05×102°56E±0°06, h24km, mb4.0/11, Error ellipse: s-maj=9.0km s-min=6.4km az=137.3*

*DJA **16** 01:59:29.8±1.4, 7°S±8°×10°3E±°, h12km±19km, M4.6/12, mb4.9/3, mB5.3/1, MLv4.5/12, Mw(mB)4.7/1*

ISC 16 01:59:30.0±0.8, 6.71S±0°07×102.72E±0°08, h24km, n25, σ1=26/27, mb4.1/11, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGSI	**Enggano, Bengk**	**1.41**	**342**	P	**Pn**	**01 59 53.6**	**-0.6**
EGSI				S	**Sb**	**02 00 13.1**	**-0.2**
KASI	**Kota Agung**	**2.12**	**57**	P	**Pn**	**02 00 04.8**	**+0.8**
KASI				S	**Sb**	**02 00 31.8**	**-1.9**
LWLI	**Liwa**	**2.14**	**39**	P	**Pn**	**02 00 05.8**	**+1.4**
LWLI				S	**Sb**	**02 00 33.8**	**-0.6**
MNAI	**Manna**	**2.34**	**6**	P	**Pn**	**02 00 08.6**	**+1.6**
BLSI	**Bandar Lampung**	**2.84**	**62**	P	**Pn**	**02 00 15.6**	**+1.7**
CGJI	**Cibinong**	**2.96**	**88**	P	**Pn**	**02 00 15.3**	**-0.2**
KSI	**Kapahiang**	**3.04**	**358**	P	**Pn**	**02 00 17.3**	**+0.7**
DBJI	**Dramaga**	**4.01**	**88**	P	**Pn**	**02 00 31.7**	**+1.7**
CBJI	**Citeko**	**4.12**	**86**	P	Pn	02 00 34.4	+3.0
LEM	**Lembang**	**4.87**	**92**	P	**Pn**	**02 00 44.5**	**+2.6**
CISI	**Cisompet, Garu**	**5.13**	**100**	P	**Pn**	**02 00 44.9**	**-0.5**
	140nm,0.6s,0.7nm						
BJII	**Banjamegara**	**6.97**	**96**	P	**Pn**	**02 01 12.5**	**+1.8**
	43nm,1.1s,2µm0.3nm						
PWJI	**Pagerwojo**	**9.11**	**99**	P	**Pn**	**02 01 41.0**	**+1.0**
FITZ	**Fitzroy Crossi**	**25.05**	**119**	P	**P**	**02 04 53.9**	**+1.2**
	2.6nm,0.8s,baz=291,slow=7.2,SNR=4.0						
CMAR	**Chiang Mai Arr**	**25.28**	**352**	P	**P**	**02 04 55.0**	**+0.4**
	3.5nm,0.6s,baz=182,slow=8.6,SNR=23						
ASAR	**Alice Springs**	**34.37**	**123**	P	**P**	**02 06 13.7**	**-1.8**
	0.2nm,0.4s,baz=299,slow=7.9,SNR=4.4						
STKA	**Stephens Creek**	**44.04**	**130**	P	**P**	**02 07 36.3**	**+0.2**
	2.7nm,1.0s,baz=286,slow=18,SNR=2.1						
KSRS	**Korea Array**	**49.84**	**26**	P	**P**	**02 08 20.5**	**-0.7**
	1.8nm,0.5s,baz=220,slow=7.4,SNR=6.7						
SONM	**Songino Array**	**54.40**	**3**	P	**P**	**02 08 55.3**	**+0.1**
	1.3nm,0.6s,baz=184,slow=8.7,SNR=12						
MKAR	**Makanchi Array**	**56.27**	**343**	P	**P**	**02 09 07.2**	**-1.3**
	0.8nm,0.6s,baz=134,slow=6.9,SNR=6.5						
USRK	**Ussuriysk Arra**	**57.14**	**25**	P	**P**	**02 09 14.7**	**-0.1**
	3.2nm,0.9s,baz=225,slow=7.2,SNR=7.0						
ZALV	**Zalesovo Beam**	**62.28**	**348**	P	**P**	**02 09 49.2**	**-0.7**
	1.1nm,0.4s,baz=159,slow=4.5,SNR=12						
BVAR	**Borovoye Array**	**65.51**	**339**	P	**P**	**02 10 10.3**	**-0.9**
	1.0nm,0.5s,baz=143,slow=9.8,SNR=7.4						
BRTR	**Keskin Array B**	**78.48**	**313**	P	**P**	**02 11 31.1**	**+1.6**
	0.4nm,0.8s,baz=86,slow=6.5,SNR=2.1						
TXAR	**Lajitas Array**	**146.46**	**45**	PKPbc	**PKPbc**	**02 19 10.0**	**0.0**
	0.4nm,0.6s,baz=208,slow=1.7,SNR=3.9						

*IDC **16** 02:36:41.7±0.9, 11°68N×87°06W, h0km, mb4.2/10, mb1 4.3/11, mb1mx4.0/26, mbtmp4.1/11, ML3.3/2, MS3.1/1, Ms1 3.1/1, ms1mx2.8/34, Error ellipse: s-maj=39.1km s-min=14.7km az=53.0*

*CASC **16** 02:36:45.6±5.7, 11°36N×87°35W, h57km±665km, MD4.0, mb4.5(NEIC)*

*ISCJB **16** 02:36:46.1±0.6, 11°46N±0°08×87°26W±0°07, h45km±5km, mb4.3/22, Error ellipse: s-maj=17.3km s-min=3.9km az=37.4*

*NEIC **16** 02:36:47.7±1.1, 11°51N×87°19W, h48km±9km, mb4.5/14, Error ellipse: s-maj=16.3km s-min=7.2km az=47.0*

ISC 16 02:36:47.5±1.3, 11°5N±0°1×87°18W±0°09, h46km±11km, n116, σ0=96/123, mb4.5/22, 28C-29D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBS2	**Las Lilas**	**1.83**	**112**	*i* P	**Pn**	**02 37 16.7**	**+0.1**
GBS2				*i* S	**Sn**	**02 37 40.1**	**+1.5**
GBS3	**Finca Las Im˜¡**	**1.85**	**114**	*i* P	**Pn**	**02 37 15.8**	**-1.0**
BLLM	**Bellamira**	**2.16**	**332**	*e*P	**Pn**	**02 37 20.1**	**-0.9**
CUI	**Cuipilapa**	**2.17**	**114**	*i* P	**Pn**	**02 37 20.4**	**-0.7**
TGUH	**Tegucigalpa,Un**	**2.51**	**358**	*e*Pn	**Pn**	**02 37 27.0**	**+1.2**
JTS	**JuntasAbangare**	**2.52**	**119**	*e*Pn	**Pn**	**02 37 25.7**	**-0.2**
JTS				Sn	**Sn**	**02 37 53.0**	**-2.4**
JTS	**JuntasAbangare**	**2.52**	**119**	Pn	**Pn**	**02 37 25.1**	**-0.8**
	2.3nm,0.3s,baz=314,slow=23,SNR=37						
JTS				Sn	**Sn**	**02 37 53.0**	**-2.4**
	14nm,0.3s,baz=253,slow=22,SNR=10						
JTS				LR	LR	02 38 05.4	
	comp=Z,364nm,19.2s,baz=135,slow=34						
LFRS	**El Faro**	**2.77**	**319**	*i* P	**Pn**	**02 37 28.4**	**-1.0**
LFRS				*e*S	**Sn**	**02 38 00.1**	**-1.7**
LBRS	**Las Brisas**	**2.84**	**321**	*e*P	**Pn**	**02 37 30.7**	**+0.2**
CGA2	**Cerro Gallo 2**	**3.07**	**119**	*e*P	**Pn**	**02 37 34.6**	**+1.1**
SBLS	**San Blas**	**3.30**	**314**	*e*P	**Pn**	**02 37 37.0**	**+0.1**
SBLS				*e*S	**Sn**	**02 38 15.6**	**+0.5**
RTR	**El Retiro**	**3.36**	**315**	*e*P	**Pn**	**02 37 37.0**	**-0.6**
RTR				*e*S	**Sn**	**02 38 15.7**	**-0.7**
LAJ	**Bijagual**	**3.44**	**119**	*e*P	Pn	02 37 35.2	-3.5
RBDL	**Robledal**	**3.54**	**317**	*e*P	**Pn**	**02 37 40.5**	**+0.4**
RBDL				*e*S	**Sn**	**02 38 21.3**	**+0.4**
QCR	**Quepos**	**3.63**	**125**	*e*P	**Pn**	**02 37 43.7**	**+2.5**
BUS	**Buena Vista**	**3.90**	**120**	*e*P	**Pn**	**02 37 47.6**	**+2.3**
ACR	**Cerro Adams**	**4.88**	**126**	*e*P	Pn	02 37 47.6	-11
CMIG	**Matias Romero**	**9.28**	**307**	Pn	**Pn**	**02 38 58.9**	**+0.1**
CMIG	**Matias Romero**	**9.28**	**307**	Pn	**Pn**	**02 38 58.9**	**+0.1**
	0.7nm,0.3s,baz=129,slow=9.9,SNR=15						
SDV	**Santo Domingo**	**16.50**	**98**	*e*Pn	**Pn**	**02 40 35.8**	**-0.2**
	8.3nm,0.8s						
HKT	**Hockley**	**20.01**	**338**	*e*Pn	Pn	02 41 18.1	-0.3
	8.0nm,1.0s						
TIGA	**Tifton**	**20.08**	**9**	⇑P	Pn	02 41 23.0	+3.8
	baz=20						
732A	**Laxson Ranch,**	**20.87**	**327**	⇓P	**P**	**02 41 26.5**	**+0.8**
	baz=21						
632A	**Uvalde**	**21.39**	**329**	⇓P	**P**	**02 41 32.9**	**+1.5**
	baz=22						
LRAL	**Lakeview Retre**	**21.40**	**0**	*e*Pn	**P**	**02 41 33.5**	**+2.1**
	50nm,1.4s						
631A	**Perdido Creek**	**21.73**	**327**	⇓P	**P**	**02 41 36.3**	**+1.3**
	baz=22,SNR=8.0						
532A	**Rocksprings**	**21.96**	**329**	⇓P	**P**	**02 41 38.7**	**+1.2**
	baz=22						
GOGA	**Godfrey**	**22.04**	**8**	*e*P	**P**	**02 41 40.2**	**+2.0**
	21nm,1.0s						
JCT	**Junction City**	**22.19**	**330**	⇓P	**P**	**02 41 41.6**	**+1.7**
	baz=22						
531A	**Rocksprings**	**22.31**	**328**	⇑P	**P**	**02 41 43.0**	**+1.8**
	baz=22						
WHTX	**Lake Whitney**	**22.45**	**337**	⇓P	**P**	**02 41 44.4**	**+1.7**
	baz=23						
530A	**J-C Ranch, Com**	**22.72**	**327**	⇓P	**P**	**02 41 46.3**	**+0.7**
	baz=23						
431A	**Sonora**	**22.76**	**329**	⇓P	**P**	**02 41 46.8**	**+0.7**
	baz=23						
332A	**Millersview**	**22.91**	**331**	⇑P	**P**	**02 41 48.3**	**+0.7**
	baz=23,SNR=5.2						
OXF	**Oxford**	**22.96**	**355**	*e*P	**P**	**02 41 47.5**	**-0.5**
	44nm,1.1s						
628A	**Black Gap, Mar**	**23.09**	**323**	⇓P	**P**	**02 41 49.2**	**-0.2**
	baz=23,SNR=5.4						
430A	**Baggett Ranch,**	**23.16**	**328**	⇓P	**P**	**02 41 50.3**	**+0.1**
	baz=23						
331A	**San Angelo**	**23.18**	**330**	⇓P	**P**	**02 41 50.5**	**+0.2**
	baz=23						
529A	**Stev Forest Ra**	**23.18**	**325**	⇑P	**P**	**02 41 50.2**	**-0.1**
	baz=23						
232A	**Coleman**	**23.29**	**332**	⇑P	**P**	**02 41 51.7**	**+0.4**
	baz=23						
627A	**Terlingua Ranc**	**23.36**	**322**	⇑P	**P**	**02 41 52.2**	**+0.1**
	baz=23						
429A	**Davenport Ranc**	**23.39**	**327**	⇓P	**P**	**02 41 52.5**	**+0.2**
	baz=24						
TXAR	**Lajitas Array**	**23.45**	**321**	P	**P**	**02 41 53.7**	**+0.8**
TXAR				PcP	**PcP**	**02 45 38.4**	**+0.2**
TXAR	**Lajitas Array**	**23.45**	**321**	P	**P**	**02 41 53.7**	**+0.8**
	1.7nm,0.7s,baz=135,slow=10,SNR=25						
TXAR				PcP	**PcP**	**02 45 38.4**	**+0.2**
	0.8nm,0.9s,baz=122,slow=4.6,SNR=3.3						
528A	**Cox Ranch, San**	**23.53**	**324**	⇓P	**P**	**02 41 53.3**	**-0.4**
	baz=24						
SWET	**Sewanee**	**23.60**	**3**	*e*P	**P**	**02 41 55.9**	**+1.7**
	20nm,1.2s						
330A	**Mertzon**	**23.63**	**329**	⇓P	**P**	**02 41 54.8**	**+0.3**
	baz=24						
MIAR	**Mount Ida**	**23.64**	**347**	*e*P	**P**	**02 41 54.4**	**-0.1**
	8.7nm,0.8s						
626A	**Big Bend Ranch**	**23.89**	**321**	⇓P	**P**	**02 41 57.1**	**0.0**
	baz=24						
428A	**Kincaid Ranch,**	**23.90**	**325**	⇑P	**P**	**02 41 57.6**	**+0.5**
	baz=24						
CPCT	**Cooper Cave**	**23.93**	**5**	*e*P	**P**	**02 41 58.9**	**+1.6**
527A	**Woodward Ranch**	**24.00**	**323**	⇓P	**P**	**02 41 58.4**	**+0.2**
	baz=24						
329A	**Wagon Wheel Ra**	**24.11**	**328**	⇓P	**P**	**02 41 58.9**	**-0.1**
	baz=24,SNR=6.7						
TKL	**Tuckaleechee C**	**24.21**	**7**	*e*P	**P**	**02 42 01.0**	**+1.1**
TKL	**Tuckaleechee C**	**24.21**	**7**	P	**P**	**02 42 00.5**	**+0.6**
	12nm,0.8s,baz=187,slow=9.8,SNR=9.9						
526A	**Mary Lane Ranc**	**24.22**	**322**	⇑P	**P**	**02 42 00.7**	**+0.5**
	baz=24						
229A	**Bryant Ranch,**	**24.40**	**329**	⇓P	**P**	**02 42 02.1**	**+0.4**
	baz=24						
Z32A	**Haskell**	**24.43**	**334**	⇑P	**P**	**02 42 03.0**	**+1.2**
	baz=24						
328A	**Wristen Ranch,**	**24.47**	**326**	⇓P	**P**	**02 42 02.9**	**+0.6**
	baz=25						
426A	**McDonald Obser**	**24.63**	**323**	⇓P	**P**	**02 42 04.1**	**+0.1**
	baz=25						
Z31A	**Sharp Cattle R**	**24.72**	**333**	⇑P	**P**	**02 42 05.7**	**+1.2**
	baz=25						
228A	**UT Block 9, Go**	**24.92**	**328**	⇑P	**P**	**02 42 06.9**	**+0.4**
	baz=25						
Y32A	**R-V Farms, Ver**	**25.01**	**335**	⇑P	**P**	**02 42 08.4**	**+1.2**
	baz=25						
326A	**Caldwell Ranch**	**25.07**	**324**	⇓P	**P**	**02 42 08.1**	**+0.3**
	baz=25						
Z30A	**Sanderson Ranc**	**25.14**	**332**	⇓P	**P**	**02 42 09.4**	**+1.0**
	baz=25						
128A	**Castleberry Fa**	**25.27**	**329**

ILAR Eielson Array 66.96 336 P **P** **02 47 35.2 +0.2**
ILAR Eielson Array 66.96 336 P **P** **02 47 35.2 +0.2**
0.5nm,0.6s,baz=154,slow=4.4,SNR=10
SONM Songino Array 119.67 350 PKP **PKPdf** **02 55 33.4 +0.6**
SONM Songino Array 119.67 350 PKP **PKPdf** **02 55 33.4 +0.6**
0.3nm,0.6s,baz=29,slow=3.3,SNR=2.6
CMAR Chiang Mai Arr 149.59 348 PKPbc **PKPbc** **02 56 33.9 +1.0**
CMAR Chiang Mai Arr 149.59 348 PKPbc **PKPbc** **02 56 33.9 +1.0**
2.1nm,0.7s,baz=345,slow=3.8,SNR=16

CSEM ***16*** *02:52:55.9, 42°.59N×13°.33E, h7km, MD1.3/3, After ROM*
ROM 16 02:52:55.9±0.2, 42°.59N×13°.33E, h7km±3km, Md1.3/3, 4C-2D, Error ellipse: s-maj=5.1km s-min=1.2km az=177.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.08**	**136**	⇓*i*Pg	Pg	02 52 58.3	+0.2
CAMP				Sg	Sg	02 52 59.8	+0.2
23nm,0.4s							
CAMP	**Campotosto**	**0.08**	**136**	⇓*i*Pg	Pg	02 52 58.3	+0.2
CAMP				Sg	Sg	02 52 59.8	+0.2
23nm,0.4s							
TERO	**Teramo**	**0.20**	**81**	⇑*i*Pg	Pg	02 53 00.6	+0.5
TERO				Sg	Sg	02 53 04.0	+1.1
TERO	**Teramo**	**0.20**	**81**	⇑*i*Pg	Pg	02 53 00.6	+0.5
TERO				Sg	Sg	02 53 04.0	+1.1
LNSS	**Leonessa**	**0.22**	**273**	⇑*i*Pg	Pg	02 53 00.8	+0.4
LNSS				Sg	Sg	02 53 04.7	+1.2
LNSS	**Leonessa**	**0.22**	**273**	⇑*i*Pg	Pg	02 53 00.8	+0.4
LNSS				Sg	Sg	02 53 04.7	+1.2
NRCA	**Norcia**	**0.29**	**326**	Pg	Pb	02 53 02.7	-0.9
NRCA				Sg	Sb	02 53 07.9	-0.8
NRCA	**Norcia**	**0.29**	**326**	Pg	Pb	02 53 02.7	-0.9
NRCA				Sg	Sb	02 53 07.9	-0.8

BJI ***16*** *03:02:22.3, 30°.70N×50°.00E, h8km, mb4.7/5*
IDC ***16*** *03:02:23.4±0.9, 30°.67N×50°.04E, h0km, mb3.8/20, mb1 4.0/24, mb1mx3.9/35, mbtmp3.8/24, ML3.3/4, MS3.8/4, Ms1 3.8/4, ms1mx3.2/42, Error ellipse: s-maj=21.0km s-min=13.5km az=170.0*
NEIC ***16*** *03:02:26.4, 30°.70N×50°.13E, h17km, mb4.3/11, ML3.9(THR), MN4.1(TEH), After THR.*
MOS ***16*** *03:02:27.0±1.3, 30°.72N×50°.16E, h33km, mb4.5/14, Error ellipse: s-maj=9.9km s-min=6.3km az=110.5*
THR ***16*** *03:02:27.3±0.9, 30°.69N×50°.10E, h29km±7km, ML3.9*
TEH ***16*** *03:02:27.6, 30°.77N×50°.08E, h4km, ML4.1*
CSEM ***16*** *03:02:28.4±0.2, 30°.78N×50°.11E, h20km, mb4.3/13, Error ellipse: s-maj=5.5km s-min=4.3km az=176.0*
ISC 16 03:02:26.3±0.6, 30°.68N±0°.03×50°.03E±0°.03, h18km±2km, n291, σ1$45/303, mb4.2/36, MS4.1/3, 8C-10D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.77**	**324**	*e*Pg	**Pb**	**03 02 59.3**	**+1.0**
SHGR				*e*Sg	**Sg**	**03 03 23.3**	**-0.3**
SHGR	**Shooshtar-Gavs**	**1.77**	**324**	*e*Pg	**Pb**	**03 02 59.0**	**+0.7**
SHGR				*e*Sg	**Sg**	**03 03 23.0**	**-0.6**
SHGR	**Shooshtar-Gavs**	**1.77**	**324**	*e*Pg	**Pb**	**03 02 59.3**	**+1.0**
SHGR				*e*Sg	**Sg**	**03 03 23.0**	**-0.6**
IPIR	**Pirpir**	**2.13**	**20**	*e*Pn	**Pn**	**03 03 02.7**	**+1.4**
IPIR				*e*Sg	**Sb**	**03 03 30.9**	**+0.1**
IPIR				*e*		03 03 35.4	
comp=Z,16μm,0.3s							
IPIR	**Pirpir**	**2.13**	**20**	*e*Pn	**Pn**	**03 03 02.7**	**+1.4**
IPIR				*e*Sg	**Sb**	**03 03 30.9**	**+0.1**
UMR	**Umm Al-Rimmam**	**2.30**	**241**	*e*P	**Pb**	**03 03 08.0**	**+0.8**
UMR	**Umm Al-Rimmam**	**2.30**	**241**	*e*P	**Pb**	**03 03 08.0**	**+0.8**
SHI	**Shiraz**	**2.38**	**115**	*e*		03 03 54.8	
comp=N,28μm,0.3s							
SHI				*e*Pn	**Pb**	**03 03 07.2**	**-1.6**
IGAR	**Gharneh**	**2.43**	**44**	*e*		03 03 43.8	
comp=Z,5μm,0.2s							
IGAR				*e*Pn	**Pn**	**03 03 06.6**	**+1.2**
MIB	**Mutribah**	**2.49**	**250**	*e*P	**Pb**	**03 03 10.2**	**-0.3**
MIB				AML	AML	03 03 53.7	
comp=Z,499nm,0.6s							
MIB	**Mutribah**	**2.49**	**250**	*e*P	**Pb**	**03 03 10.2**	**-0.3**
KBD	**Kabd**	**2.52**	**234**	*e*P	**Pb**	**03 03 11.5**	**+0.4**
KBD				AML	AML	03 03 55.1	
comp=Z,243nm,0.4s							
KBD	**Kabd**	**2.52**	**234**	*e*P	**Pb**	**03 03 11.5**	**+0.4**
QRN	**Al-Qurain**	**2.66**	**224**	*e*P	**Pb**	**03 03 13.0**	**-0.5**
QRN				AML	AML	03 03 51.7	
comp=Z,325nm,0.3s							
RDF	**Al-Radifah**	**2.77**	**232**	*e*P	**Pb**	**03 03 14.9**	**-0.5**
RDF				AML	AML	03 04 03.6	
comp=Z,348nm,0.5s							
RDF	**Al-Radifah**	**2.77**	**232**	*e*P	**Pb**	**03 03 14.9**	**-0.5**
NAY	**Al-Naaiem**	**2.81**	**240**	*e*P	**Pb**	**03 03 15.1**	**-0.8**
NAY				AML	AML	03 04 05.9	
comp=Z,156nm,0.6s							
NAY	**Al-Naaiem**	**2.81**	**240**	*e*P	**Pb**	**03 03 15.1**	**-0.8**
IKLH	**Kolahrood**	**2.94**	**26**	*e*Pn	**Pn**	**03 03 13.7**	**+1.3**
IKLH				*e*		03 04 18.3	
comp=Z,6μm,0.6s							
IKLH	**Kolahrood**	**2.94**	**26**	*e*Pn	**Pn**	**03 03 13.7**	**+1.3**
IZEF	**Zefreh**	**2.95**	**41**	*e*Pn	**Pn**	**03 03 13.9**	**+1.3**
IZEF				*e*		03 04 04.1	
comp=Z,3μm,0.3s							
IZEF	**Zefreh**	**2.95**	**41**	*e*Pn	**Pn**	**03 03 13.9**	**+1.3**
ISRV	**Sarvestan**	**2.97**	**115**	*e*Pn	**Pn**	**03 03 15.0**	**+2.2**
ISRV				*e*		03 04 13.0	
comp=Z,12μm,0.3s							
ISRV	**Sarvestan**	**2.97**	**115**	*e*Pn	**Pn**	**03 03 15.0**	**+2.2**
KHMZ	**Khomeyn**	**3.05**	**359**	*e*Pn	**Pn**	**03 03 16.0**	**+2.1**
KHMZ	**Khomeyn**	**3.05**	**359**	*e*Pn	**Pn**	**03 03 16.0**	**+2.1**
NASN	**Na'in**	**3.17**	**47**	*e*Pn	**Pn**	**03 03 16.9**	**+1.3**
NASN	**Na'in**	**3.17**	**47**	*e*Pn	**Pn**	**03 03 16.0**	**+0.3**
NASN	**Na'in**	**3.17**	**47**	*e*Pn	**Pn**	**03 03 16.9**	**+1.3**
GHIR	**Ghir-Karzin**	**3.51**	**132**	*e*Pn	**Pn**	**03 03 21.7**	**+1.6**
GHIR				Sn	**Sn**	**03 04 01.8**	**+0.6**
GHIR				AML	AML	03 04 28.1	
comp=E,499nm,0.5s							
GHIR				AML	AML	03 04 38.1	
comp=N,443nm,0.7s							
GHIR	**Ghir-Karzin**	**3.51**	**132**	*e*Pn	**Pn**	**03 03 21.0**	**+0.9**
GHIR	**Ghir-Karzin**	**3.51**	**132**	*e*Pn	**Pn**	**03 03 21.7**	**+1.6**
GHVR	**GHOM**	**3.94**	**15**	*e*Pn	**Pn**	**03 03 28.2**	**+2.2**
GHVR				AML	AML	03 04 25.3	
comp=E,119nm,0.7s							
GHVR				AML	AML	03 04 37.3	
comp=N,133nm,0.5s							
GHVR	**GHOM**	**3.94**	**15**	*e*Pn	**Pn**	**03 03 28.2**	**+2.2**
IMEH	**Mehriz**	**4.00**	**79**	*e*Pn	**Pn**	**03 03 28.0**	**+1.1**
IMEH				*e*		03 04 41.3	
comp=Z,5μm,0.7s							
IMEH	**Mehriz**	**4.00**	**79**	*e*Pn	**Pn**	**03 03 28.0**	**+1.1**
ICHK	**Chekchek**	**4.05**	**66**	⇑*e*Pn	**Pn**	**03 03 28.8**	**+1.1**
ICHK				*e*		03 03 32.8	
comp=Z,3μm,0.3s							
ICHK	**Chekchek**	**4.05**	**66**	⇑*e*Pn	**Pn**	**03 03 28.8**	**+1.1**
IVRN	**Varamin**	**4.54**	**18**	⇓*e*Pn	**Pn**	**03 03 35.5**	**+1.3**
IVRN				*e*		03 03 36.1	
comp=Z,2μm,0.2s							
IVRN	**Varamin**	**4.54**	**18**	⇓*e*Pn	**Pn**	**03 03 35.5**	**+1.3**
IR5	**Iran Long-Peri**	**4.55**	**6**	*e*Pn	**Pn**	**03 03 35.2**	**+0.8**
IR5				*e*Sg	**Sn**	**03 04 25.6**	**-1.2**
IR5	**Iran Long-Peri**	**4.55**	**6**	*e*Pn	**Pn**	**03 03 35.2**	**+0.8**
IR5				*e*Sg	**Sn**	**03 04 25.6**	**-1.2**
IGHG	**Ghaleghazi**	**4.67**	**322**	*e*Pn	**Pn**	**03 03 37.5**	**+1.3**
IGHG				*e*		03 05 24.9	
comp=Z,3μm,0.6s							
IGHG	**Ghaleghazi**	**4.67**	**322**	*e*Pn	**Pn**	**03 03 37.5**	**+1.3**
IVIS	**Veis**	**4.69**	**326**	*e*Pn	**Pn**	**03 03 37.7**	**+1.5**
IVIS				*e*		03 04 36.0	
comp=E,1μm,0.2s							
IVIS	**Veis**	**4.69**	**326**	*e*Pn	**Pn**	**03 03 37.7**	**+1.5**
IRAZ	**Razeghan**	**4.72**	**359**	*e*Pn	**Pn**	**03 03 37.7**	**+0.9**
IRAZ				*e*Sg	Sb	03 04 51.8	+6.7
IRAZ				*e*		03 05 00.0	
comp=Z,2μm,0.3s							
IRAZ	**Razeghan**	**4.72**	**359**	*e*Pn	**Pn**	**03 03 37.7**	**+0.9**
IBAF	**Bafgh**	**4.83**	**78**	*e*Pn	**Pn**	**03 03 38.6**	**+0.3**
IBAF				*e*		03 05 04.9	
comp=Z,1μm,0.6s							
IBAF	**Bafgh**	**4.83**	**78**	*e*Pn	**Pn**	**03 03 38.6**	**+0.3**
IR3	**Iran Long-Peri**	**4.86**	**10**	*e*Pn	**Pn**	**03 03 39.8**	**+1.2**
SNGE	**Sanandaj**	**4.95**	**334**	*e*Pn	**Pn**	**03 03 41.4**	**+1.4**
SNGE				Sn	**Sn**	**03 04 37.1**	**+0.3**
SNGE	**Sanandaj**	**4.95**	**334**	*e*Pn	**Pn**	**03 03 41.4**	**+1.4**
IMHD	**Mahdasht**	**5.02**	**6**	*e*Pn	**Pn**	**03 03 41.9**	**+1.0**
IMHD				*e*		03 04 03.7	
comp=Z,566nm,0.1s							
IMHD	**Mahdasht**	**5.02**	**6**	*e*Pn	**Pn**	**03 03 41.9**	**+1.0**
IDHR	**Dehrash**	**5.05**	**324**	*e*Pn	**Pn**	**03 03 42.4**	**+1.0**
IDHR				*e*		03 04 42.5	
comp=Z,5μm,0.2s							
IDHR	**Dehrash**	**5.05**	**324**	*e*Pn	**Pn**	**03 03 42.4**	**+1.0**
DAMV	**Damavand**	**5.20**	**18**	*e*Pn	**Pn**	**03 03 45.0**	**+1.5**
DAMV				AML	AML	03 05 14.0	
comp=N,42nm,0.6s							
DAMV				AML	AML	03 05 15.6	
comp=E,43nm,0.6s							
DAMV	**Damavand**	**5.20**	**18**	*e*Pn	**Pn**	**03 03 44.0**	**+0.5**
DAMV	**Damavand**	**5.20**	**18**	*e*Pn	**Pn**	**03 03 45.0**	**+1.5**
THKV	**Tehran--Karaj**	**5.27**	**8**	*e*Pn	**Pn**	**03 03 46.4**	**+2.0**
THKV				AML	AML	03 05 25.1	
comp=N,52nm,0.6s							
THKV				AML	AML	03 05 32.1	
comp=E,50nm,0.7s							
THKV	**Tehran--Karaj**	**5.27**	**8**	*e*Pn	**Pn**	**03 03 46.0**	**+1.6**
THKV	**Tehran--Karaj**	**5.27**	**8**	*e*Pn	**Pn**	**03 03 46.0**	**+1.6**
ILAS	**Lasjerd**	**5.30**	**27**	*e*Pn	**Pn**	**03 03 45.4**	**+0.6**
ILAS				*e*		03 05 31.7	
comp=Z,850nm,0.4s							
ILAS	**Lasjerd**	**5.30**	**27**	*e*Pn	**Pn**	**03 03 45.4**	**+0.6**
IFIR	**Firoozkooh**	**5.45**	**24**	*e*Pn	**Pn**	**03 03 47.5**	**+0.6**
IFIR				*e*		03 03 53.9	
comp=Z,787nm,0.1s							
IFIR	**Firoozkooh**	**5.45**	**24**	*e*Pn	**Pn**	**03 03 47.5**	**+0.6**
BHD	**Baghdad**	**5.45**	**300**	*ex*	**Pb**	**03 04 00.0**	**-1.0**
BHD				*ex*	x	03 04 13.8	
BHD				*ex*	x	03 04 27.9	
BHD				*ex*	x	03 05 12.0	
BHD				*ex*	x	03 05 33.1	
BHD				*ex*	x	03 05 43.0	
BHD				*ex*	x	03 05 48.8	
IANJ	**Anjilo**	**5.78**	**33**	*e*Pn	**Pn**	**03 03 52.0**	**+0.6**
IANJ				*e*		03 03 54.4	
comp=Z,481nm,0.2s							
IANJ	**Anjilo**	**5.78**	**33**	*e*Pn	**Pn**	**03 03 52.0**	**+0.6**
ISHM	**Shahmirzad**	**5.80**	**27**	*e*Pn	**Pn**	**03 03 51.6**	**-0.1**
ISHM				*e*		03 03 55.0	
comp=Z,1μm,0.2s							
ISHM	**Shahmirzad**	**5.80**	**27**	*e*Pn	**Pn**	**03 03 51.6**	**-0.1**
KRBR	**Kerman**	**5.86**	**95**	*e*Pn	**Pn**	**03 03 53.8**	**+1.3**
KRBR	**Kerman**	**5.86**	**95**	*e*Pn	**Pn**	**03 03 53.0**	**+0.5**
KRBR	**Kerman**	**5.86**	**95**	*e*Pn	**Pn**	**03 03 53.8**	**+1.3**
ZNJK	**Zanjan**	**6.08**	**350**	*e*Pn	**Pn**	**03 03 57.9**	**+2.3**
ZNJK	**Zanjan**	**6.08**	**350**	*e*Pn	**Pn**	**03 03 57.0**	**+1.4**
ZNJK	**Zanjan**	**6.08**	**350**	*e*Pn	**Pn**	**03 03 57.9**	**+2.3**
BNDS	**Bandar-Abbas**	**6.29**	**120**	*e*Pn	**Pn**	**03 03 59.9**	**+1.5**
BNDS	**Bandar-Abbas**	**6.29**	**120**	*e*Pn	**Pn**	**03 03 59.0**	**+0.7**
BNDS	**Bandar-Abbas**	**6.29**	**120**	*e*Pn	**Pn**	**03 03 59.9**	**+1.5**
IBND	**Bandar-abas**	**6.54**	**118**	*e*Pn	**Pn**	**03 04 04.3**	**+2.7**
IBND				*e*		03 05 22.8	
comp=Z,2μm,0.2s							
IBND	**Bandar-abas**	**6.54**	**118**	*e*Pn	**Pn**	**03 04 04.3**	**+2.7**
TABS	**Tabas**	**6.70**	**62**	*e*Pn	**Pn**	**03 04 05.2**	**+1.3**
TABS	**Tabas**	**6.70**	**62**	*e*Pn	**Pn**	**03 04 05.2**	**+1.3**
ITEG	**Tejag**	**7.74**	**71**	*e*Pn	**Pn**	**03 04 19.1**	**+0.8**
ITEG				*e*		03 06 54.2	
comp=Z,665nm,0.6s							
ITEG	**Tejag**	**7.74**	**71**	*e*Pn	**Pn**	**03 04 19.1**	**+0.8**
MRVT	**Maraveh tapeh**	**8.58**	**34**	*e*Pn	**Pn**	**03 04 31.4**	**+1.7**
MRVT	**Maraveh tapeh**	**8.58**	**34**	*e*Pn	**Pn**	**03 04 31.0**	**+1.3**
MRVT	**Maraveh tapeh**	**8.58**	**34**	*e*Pn	**Pn**	**03 04 31.0**	**+1.3**
SHRT	**Shahrakht**	**9.19**	**69**	*e*Pn	**Pn**	**03 04 39.7**	**+1.7**
SHRT	**Shahrakht**	**9.19**	**69**	*e*Pn	**Pn**	**03 04 39.7**	**+1.7**
ZHSF	**Zahedan**	**9.36**	**94**	*e*Pn	**Pn**	**03 04 42.1**	**+1.6**
ZHSF	**Zahedan**	**9.36**	**94**	*e*Pn	**Pn**	**03 04 42.0**	**+1.5**
ZHSF	**Zahedan**	**9.36**	**94**	*e*Pn	**Pn**	**03 04 42.0**	**+1.5**
ASF	**Jabal al Asfar**	**11.32**	**281**	Pn	**Pn**	**03 05 06.2**	**-1.1**
ASF				Sn	**Sn**	**03 07 10.3**	**-3.1**
ASF	**Jabal al Asfar**	**11.32**	**281**	Pn	**Pn**	**03 05 06.2**	**-1.1**
comp=Z,0.1nm,0.3s,baz=166,slow=4.2,SNR=2.8							
ASF				Sn	**Sn**	**03 07 10.3**	**-3.1**
comp=Z,0.6nm,0.3s,baz=151,slow=19,SNR=4.2							
ASF				LR	LR	03 10 19.3	
comp=Z,102nm,19.2s,baz=187,slow=42							
DGRG	**David-gareji**	**11.39**	**342**	P	Pn	03 05 14.2	+6.0
TBLG	**Delisi**	**11.83**	**340**	*e*P	**Pn**	**03 05 13.9**	**-0.2**
TBLG	**Delisi**	**11.83**	**340**	P	**Pn**	**03 05 13.9**	**-0.2**
TBLG	**Delisi**	**11.83**	**340**	P	**Pn**	**03 05 13.9**	**-0.2**
MALT	**Malatya**	**12.23**	**312**	*e*P	**Pn**	**03 05 21.6**	**+2.0**
MALT	**Malatya**	**12.23**	**312**	*e*Pn	**Pn**	**03 05 21.6**	**+2.0**
MALT	**Malatya**	**12.23**	**312**	*e*P	**Pn**	**03 05 21.6**	**+2.0**
MMAI	**Mount Meron Ar**	**12.65**	**284**	Pn	**Pn**	**03 05 23.3**	**-2.2**
MMAI				Sn	**Sn**	**03 07 42.6**	**-3.3**
MMAI	**Mount Meron Ar**	**12.65**	**284**	Pn	**Pn**	**03 05 23.3**	**-2.2**
comp=Z,0.2nm,0.3s,baz=100,slow=16,SNR=2.1							
MMAI				Sn	**Sn**	**03 07 42.6**	**-3.3**
comp=Z,0.8nm,0.3s,baz=88,slow=35,SNR=2.8							
ZEI	**Tsey**	**13.03**	**340**	*e*P	P	03 05 36.8	-4.2
ZEI				pmax	pmax		
comp=Z,6.0nm,1.3s							
EIL	**Elat**	**13.09**	**269**	Pn	**Pn**	**03 05 28.7**	**-2.7**
EIL	**Elat**	**13.09**	**269**	Pn	**Pn**	**03 05 28.7**	**-2.7**
comp=Z,0.1nm,0.3s,baz=90,slow=14,SNR=2.1							
EIL				LR	LR	03 11 28.8	
comp=Z,304nm,18.2s,baz=263,slow=42							
KBZ	**Khabaz**	**14.21**	**338**	P	**Pn**	**03 05 49.5**	**+3.0**
KBZ	**Khabaz**	**14.21**	**338**	Pn	**Pn**	**03 05 49.5**	**+3.0**
KBZ	**Khabaz**	**14.21**	**338**	Pn	**Pn**	**03 05 49.5**	**+3.0**
comp=Z,0.1nm,0.3s,baz=211,slow=7.6,SNR=2.6							
KBZ	**Khabaz**	**14.21**	**338**	Pn	**Pn**	**03 05 49.5**	**+3.0**
KIV	**Kislovodsk**	**14.48**	**338**	*e*P	Pn	03 05 45.9	-4.4
KIV				pmax	pmax		
comp=Z,8.0nm,1.1s							
BR131	**Keskin Array S**	**16.14**	**308**	*e*Pn	**Pn**	**03 06 13.0**	**+0.7**
comp=Z,5.6nm,0.9s							
BRTR	**Keskin Array B**	**16.14**	**308**	Pn	**P**	**03 06 15.5**	**0.0**
BRTR	**Keskin Array B**	**16.14**	**308**	Pn	**P**	**03 06 15.5**	**0.0**
comp=Z,0.1nm,0.3s,baz=128,slow=12,SNR=12							
ABKAR	**Akbulak array**	**20.02**	**19**	*e*P	**P**	**03 06 57.0**	**-1.0**
comp=Z,2.2nm,0.6s							
ABKAR	**Akbulak array**	**20.02**	**19**	*e*P	**P**	**03 06 57.0**	**-1.0**
comp=Z,2.2nm,0.6s							
KKAR	**Karatay Array**	**20.48**	**47**	*e*P	**P**	**03 07 01.9**	**-1.3**
KKAR				pmax	pmax		
comp=Z,2.0nm,0.4s							
KKAR	**Karatay Array**	**20.48**	**47**	*e*P	**P**	**03 07 01.9**	**-1.3**
comp=Z,2.5nm,0.4s							
KKAR	**Karatay Array**	**20.48**	**47**	*e*P	**P**	**03 07 01.9**	**-1.3**
comp=Z,2.5nm,0.4s							
AKTK	**Aktyubinsk**	**20.62**	**15**	P	**P**	**03 07 03.6**	**-1.0**
AKTO	**Aktyubinsk**	**20.62**	**15**	P	**P**	**03 07 03.6**	**-1.0**
AKTO	**Aktyubinsk**	**20.62**	**15**	P	**P**	**03 07 03.6**	**-1.0**
AKTO	**Aktyubinsk**	**20.62**	**15**	P	**P**	**03 07 03.6**	**-1.0**
comp=Z,3.4nm,0.4s,baz=204,slow=11,SNR=7.0							
AKTO	**Aktyubinsk**	**20.62**	**15**	P	**P**	**03 07 03.6**	**-1.0**
VRHR	**Novokhopersk**	**21.34**	**345**	*e*P	**P**	**03 07 11.9**	**-0.3**
VRHR				pmax	pmax		
comp=N,20nm,0.8s							
VRHR				pmax	pmax		
comp=E,10.0nm,0.8s							
VRHR				pmax	pmax		
comp=Z,20nm,0.8s							
VRHR	**Novokhopersk**	**21.34**	**345**	*e*P	**P**	**03 07 11.9**	**-0.3**
VORD	**Divnogorie**	**21.79**	**341**	*e*P	**P**	**03 07 15.6**	**-1.5**
VORD				pmax	pmax		
comp=N,20nm,0.7s							
VORD				pmax	pmax		
comp=E,10.0nm,0.7s							
VORD				pmax	pmax		
comp=Z,10.0nm,0.7s							
VORD	**Divnogorie**	**21.79**	**341**	*e*P	**P**	**03 07 15.6**	**-1.5**
VSR	**Storozhevoye**	**22.05**	**342**	*e*P	**P**	**03 07 20.6**	**+0.7**
VSR				pmax	pmax		
comp=N,10.0nm,0.5s							
VSR				pmax	pmax		
comp=E,9.0nm,0.5s							
VSR				pmax	pmax		
comp=Z,8.0nm,0.5s							
VSR	**Storozhevoye**	**22.05**	**342**	*e*P	**P**	**03 07 20.6**	**+0.7**
CFR	**Carcaliu**	**22.44**	**316**	⇓P	**P**	**03 07 28.0**	**+3.9**
CFR	**Carcaliu**	**22.44**	**316**	⇓*i*P	**P**	**03 07 28.0**	**+3.9**
CFR	**Carcaliu**	**22.44**	**316**	P	**P**	**03 07 28.0**	**+3.9**
AAK	**Ala-Archa**	**22.88**	**52**	*e*P	**P**	**03 07 31.6**	**+2.6**
AAK				pmax	pmax		
comp=Z,11nm,1.5s							
AAK	**Ala-Archa**	**22.88**	**52**	P	**P**	**03 07 30.7**	**+1.7**
AAK	**Ala-Archa**	**22.88**	**52**	P	**P**	**03 07 30.7**	**+1.7**
comp=Z,1.0nm,0.6s,baz=233,slow=16,SNR=3.1							
AAK	**Ala-Archa**	**22.88**	**52**	P	**P**	**03 07 30.7**	**+1.7**
VRI	**Vrincioaia**	**23.64**	**316**	⇑P	P	03 07 42.8	+6.3
VRI	**Vrincioaia**	**23.64**	**316**	⇑*i*P	P	03 07 42.8	+6.3
TKM2	**Tokmak 2**	**23.74**	**52**	*e*P	**P**	**03 07 38.0**	**+0.3**
TKM2	**Tokmak 2**	**23.74**	**52**	*e*P	**P**	**03 07 38.0**	**+0.3**
TKM2	**Tokmak 2**	**23.74**	**52**	*e*P	**P**	**03 07 38.0**	**+0.3**
MLR	**Muntele Rosu**	**23.92**	**315**	P	**P**	**03 07 40.2**	**+0.9**
MLR	**Muntele Rosu**	**23.92**	**315**	⇑P	**P**	**03 07 42.9**	**+3.6**
MLR	**Muntele Rosu**	**23.92**	**315**	P	**P**	**03 07 40.2**	**+0.9**
comp=Z,0.6nm,0.9s,baz=297,slow=17,SNR=3.4							
MLR	**Muntele Rosu**	**23.92**	**315**	P	**P**	**03 07 40.2**	**+0.9**
VOIR		**24.45**	**314**	⇓P	**P**	**03 07 47.2**	**+3.1**
VOIR		**24.45**	**314**	⇓*i*P	**P**	**03 07 47.2**	**+3.1**
VOIR		**24.45**	**314**	P	**P**	**03 07 47.2**	**+3.1**
ARR	**Arges**	**24.67**	**314**	⇓*i*P	**P**	**03 07 47.9**	**+1.8**
ARR	**Arges**	**24.67**	**314**	⇓*i*P	**P**	**03 07 47.9**	**+1.8**
AKASG	**Malin Array Be**	**25.32**	**328**	P	**P**	**03 07 50.1**	**-1.7**
AKASG	**Malin Array Be**	**25.32**	**328**	P	**P**	**03 07 50.1**	**-1.7**
AKASG	**Malin Array Be**	**25.32**	**328**	P	**P**	**03 07 50.1**	**-1.7**
comp=Z,0.4nm,0.3s,baz=134,slow=8.3,SNR=4.3							
BURAR	**Bucovina Array**	**25.46**	**319**	⇑P	**P**	**03 07 54.5**	**+1.3**
BURAR	**Bucovina Array**	**25.46**	**319**	⇑*i*P	**P**	**03 07 54.5**	**+1.3**
BUR08	**Bucovina Ar. S**	**25.48**	**319**	*e*P	**P**	**03 07 54.4**	**+1.0**
BUR08	**Bucovina Ar. S**	**25.48**	**319**	*e*P	**P**	**03 07 54.4**	**+1.0**
OBN	**Obninsk**	**26.25**	**342**	*e*P	**P**	**03 08 00.3**	**+0.2**
OBN				*e*		03 11 26.3	
OBN				pmax	pmax		
comp=Z,10.0nm,1.0s							
OBN				MLR	MLR		
comp=Z,100nm,17.0s							
OBN	**Obninsk**	**26.25**	**342**	*e*P	**P**	**03 08 00.3**	**+0.2**
comp=Z,10.0nm,1.0s							
OBN	**Obninsk**	**26.25**	**342**	*e*PcP	**PcP**	**03 11 26.3**	**0.0**
comp=Z,100nm,17.0s							
DRGR		**26.52**	**315**	⇓P	**P**	**03 08 04.5**	**+1.7**
DRGR		**26.52**	**315**	⇓*i*P	**P**	**03 08 04.5**	**+1.7**
DRGR		**26.52**	**315**	P	**P**	**03 08 04.5**	**+1.7**
GRUS	**Gruza**	**26.64**	**308**	*e*P	**P**	**03 08 06.0**	**+2.1**
BRVK	**Borovoye**	**26.79**	**28**	*e*P	**P**	**03 08 05.1**	**-0.1**
BRVK	**Borovoye**	**26.79**	**28**	*e*P	**P**	**03 08 05.1**	**-0.1**
BRVK	**Borovoye**	**26.79**	**28**	*e*P	**P**	**03 08 05.1**	**-0.1**
BVAR	**Borovoye Array**	**26.81**	**28**	P	**P**	**03 08 05.1**	**-0.2**
BVAR	**Borovoye Array**	**26.81**	**28**	P	**P**	**03 08 05.1**	**-0.2**
BVAR	**Borovoye Array**	**26.81**	**28**	P	**P**	**03 08 05.1**	**-0.2**
comp=Z,3.1nm,0.5s,baz=220,slow=11,SNR=16							
BVAR	**Borovoye Array**	**26.81**	**28**	P	**P**	**03 08 05.1**	**-0.2**
DIVS	**Divibare**	**27.20**	**308**	*e*P	**P**	**03 08 12.1**	**+3.1**
KURBB	**Kurchatov Arra**	**29.12**	**39**	P	**P**	**03 08 26.2**	**+0.3**
comp=Z,1.6nm,0.7s,baz=240,slow=9.3,SNR=11							
KURK	**Kurchatov**	**29.21**	**39**	*e*P	**P**	**03 08 27.0**	**+0.2**
KURK				pmax	pmax		
comp=Z,2.0nm,0.8s							
KURK	**Kurchatov**	**29.21**	**39**	*e*P	**P**	**03 08 24.0**	**-2.8**
com

MTLF	**Montolieu**	**39.71**	**302**	*e*P	**P**	**03 09 59.0**	**+1.4**
TCF	**Toulx Ste Croi**	**39.92**	**307**	*e*P	**P**	**03 10 01.8**	**+2.5**
TCF	**Toulx Ste Croi**	**39.92**	**307**	*e*P	**P**	**03 10 01.8**	**+2.5**
TCF	**Toulx Ste Croi**	**39.92**	**307**	*e*P	**P**	**03 10 01.8**	**+2.5**
TCF	**Toulx Ste Croi**	**39.92**	**307**	*e*P	**P**	**03 10 01.8**	**+2.5**
GTA	**Gaotai**	**41.24**	**64**	*e*P	**P**	**03 10 11.5**	**+1.1**
GTA				pP	**pP**	**03 10 16.4**	**+0.3**
GTA				sP	**sP**	**03 10 19.4**	**+1.0**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ARCES	**ARCESS Array B**	**41.33**	**347**	P	**P**	**03 10 11.4**	**+0.8**
ARCES	**ARCESS Array B**	**41.33**	**347**	P	**P**	**03 10 11.4**	**+0.8**
	comp=Z,5.5nm,1.1s,baz=161,slow=9.5,SNR=4.7						
ARCES	**ARCESS Array B**	**41.33**	**347**	P	**P**	**03 10 11.4**	**+0.8**
SGMF	**Saint Gilles**	**43.33**	**309**	*e*P	**P**	**03 10 29.2**	**+2.1**
SGMF	**Saint Gilles**	**43.33**	**309**	*e*P	**P**	**03 10 29.2**	**+2.1**
SGMF	**Saint Gilles**	**43.33**	**309**	*e*P	**P**	**03 10 29.2**	**+2.1**
SGMF	**Saint Gilles**	**43.33**	**309**	*e*P	**P**	**03 10 29.2**	**+2.1**
ZAK	**Zakamensk**	**43.94**	**48**	*e*P	**P**	**03 10 30.7**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s						
ZAK	**Zakamensk**	**43.94**	**48**	*e*P	**P**	**03 10 30.7**	**-1.5**
	comp=Z,1.0nm,1.6s						
ESDC	**Sonseca Array**	**44.46**	**297**	P	**P**	**03 10 38.3**	**+1.8**
ESDC	**Sonseca Array**	**44.46**	**297**	P	**P**	**03 10 38.3**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=90,slow=5.1,SNR=3.5						
ESDC	**Sonseca Array**	**44.46**	**297**	P	**P**	**03 10 38.3**	**+1.8**
LZH	**Lanzhou**	**44.79**	**68**	*e*P	**P**	**03 10 38.5**	**-0.7**
LZH				pP	**pP**	**03 10 43.0**	**-2.0**
LZH				sP	**sP**	**03 10 45.3**	**-1.9**
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
CMAR	**Chiang Mai Arr**	**45.80**	**94**	P	**P**	**03 10 46.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**45.80**	**94**	P	**P**	**03 10 46.8**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=291,slow=8.2,SNR=7.4						
CMAR	**Chiang Mai Arr**	**45.80**	**94**	P	**P**	**03 10 46.8**	**-0.4**
SONM	**Songino Array**	**45.84**	**51**	P	**P**	**03 10 47.1**	**-0.3**
SONM	**Songino Array**	**45.84**	**51**	P	**P**	**03 10 47.1**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=255,slow=9.1,SNR=5.0						
SONM				LR	LR	03 31 21.5	
	comp=Z,220nm,18.1s,baz=201,slow=38						
SONM	**Songino Array**	**45.84**	**51**	P	**P**	**03 10 47.1**	**-0.3**
TOA0	**Torodi Ar. Sit**	**47.73**	**260**	*e*P	**P**	**03 11 03.9**	**+1.4**
TOA0	**Torodi Ar. Sit**	**47.73**	**260**	*e*P	**P**	**03 11 03.8**	**+1.4**
TORD	**Torodi Ar. Bea**	**47.73**	**260**	P	**P**	**03 11 03.3**	**+0.9**
TORD	**Torodi Ar. Bea**	**47.73**	**260**	P	**P**	**03 11 03.3**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=56,slow=8.8,SNR=20						
TORD	**Torodi Ar. Bea**	**47.73**	**260**	P	**P**	**03 11 03.3**	**+0.9**
XAN	**Xi'an**	**49.27**	**70**	P	**P**	**03 11 13.9**	**-0.2**
XAN				pP	**pP**	**03 11 20.3**	**+0.4**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LBTB	**Lobatse**	**60.12**	**206**	P	**P**	**03 12 31.9**	**-0.9**
LBTB	**Lobatse**	**60.12**	**206**	P	**P**	**03 12 31.9**	**-0.9**
	comp=Z,3.2nm,0.9s,baz=28,slow=17,SNR=3.4						
KSAR	**Wonju Array Be**	**63.15**	**61**	P	**P**	**03 12 52.6**	**-0.6**
KSAR	**Wonju Array Be**	**63.15**	**61**	P	**P**	**03 12 52.6**	**-0.6**
KSRS	**Korea Array**	**63.18**	**61**	P	**P**	**03 12 52.6**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=286,slow=7.3,SNR=3.6						
KSRS	**Korea Array**	**63.18**	**61**	P	**P**	**03 12 52.6**	**-0.7**
	comp=Z,1.0nm,0.6s						
USRK	**Ussuriysk Arra**	**63.94**	**52**	LR	LR	03 45 35.0	
	comp=Z,208nm,18.5s,baz=91,slow=40						
BILL	**Bilibino**	**70.91**	**21**	*e*P	**P**	**03 13 42.7**	**+0.8**
BILL				*e*		03 16 18.9	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BILL	**Bilibino**	**70.91**	**21**	*e*P	**P**	**03 13 42.7**	**+0.8**
	comp=Z,3.0nm,0.9s						
ILAR	**Eielson Array**	**83.95**	**7**	P	**P**	**03 14 54.0**	**-1.0**
ILAR	**Eielson Array**	**83.95**	**7**	P	**P**	**03 14 54.0**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=320,slow=4.1,SNR=7.9						
ILAR	**Eielson Array**	**83.95**	**7**	P	**P**	**03 14 54.0**	**-1.0**
YKA	**Yellowknife Ar**	**86.34**	**353**	P	**P**	**03 15 07.0**	**+0.1**
YKA	**Yellowknife Ar**	**86.34**	**353**	P	**P**	**03 15 07.0**	**+0.1**
	comp=Z,0.6nm,0.9s,baz=7.6,slow=5.1,SNR=14						
YKA	**Yellowknife Ar**	**86.34**	**353**	P	**P**	**03 15 07.0**	**+0.1**

KRSC 16 03:33:57.9±1.2, 52.96N×160.22E, h72km±71km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDLR	**Sedlovina**	**0.87**	**292**	P	Pn	03 34 16.0	+1.0
SDLR				*e*S	Sn	03 34 29.2	+1.5
UGLR	**Uglovaya**	**0.88**	**287**	P	Pn	03 34 16.3	+1.2
UGLR				*e*S	Sn	03 34 29.5	+1.5
SMAR	**Somma**	**0.91**	**290**	P	Pn	03 34 16.6	+1.0
AVH	**Avacha**	**0.94**	**289**	P	Pn	03 34 17.2	+1.3
AVH				*e*S	Sn	03 34 31.0	+1.7
PET	**Petropavlovsk**	**0.95**	**274**	*e*P	Pn	03 34 16.6	+0.8
PET				*e*S	Sn	03 34 30.1	+0.9
KRER	**Koryakskii**	**0.95**	**292**	P	Pn	03 34 17.3	+1.2
KRER				*e*S	Sn	03 34 31.4	+1.7
KOK	**Koryaka**	**1.01**	**290**	*e*P	Pn	03 34 17.8	+1.1
KOK				*e*S	Sn	03 34 32.2	+1.4
RUS	**Russkaya**	**1.17**	**244**	*e*P	Pn	03 34 18.9	+0.4
RUS				*e*S	Sn	03 34 34.2	+0.2
KII	**Karymskiy**	**1.17**	**337**	*e*P	Pn	03 34 19.5	+0.7
KII				*e*S	Sn	03 34 35.2	+0.8
MTVR	**Mutnovka**	**1.33**	**250**	*e*P	Pn	03 34 21.5	+0.7
MTVR				*e*S	Sn	03 34 38.5	+0.4
GRL	**Gorelyy**	**1.37**	**253**	P	Pn	03 34 22.3	+1.0
GRL				*e*S	Sn	03 34 39.9	+1.0
MKZ	**Mys Kozlova**	**1.83**	**29**	*e*P	Pn	03 34 28.2	+0.9
MKZ				*e*S	Sn	03 34 50.3	+0.7
APC	**Apacha**	**1.85**	**270**	*e*P	Pn	03 34 28.3	+0.7
APC				*e*S	Sn	03 34 50.5	+0.4
TUMR	**Tumrok**	**2.33**	**359**	*e*P	Pn	03 34 35.8	+1.7
KMNR	**Kamenistaya**	**2.80**	**0**	*e*P	Pn	03 34 41.9	+1.4
KBTR	**Krutoberegovo**	**3.59**	**24**	*e*P	Pn	03 34 52.1	+1.0
BKI	**Bering**	**4.07**	**54**	S	Sn	03 35 40.5	-3.3

IDC 16 03:37:55.9±2.3, 5.19S×152.86E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.6/19, mbtmp3.9/4, ML2.7/1, MS3.6/1, Ms1 3.6/1, ms1mx3.0/30, Error ellipse: s-maj=140.7km s-min=25.2km az=132.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.03**	**233**	Pn	Pn	03 39 41.6	+1.4
	0.8nm,0.3s,baz=18,slow=20,SNR=1.8						
PMG				Sn	Sn	03 41 01.5	+0.5
	2.6nm,0.3s,baz=3.6,slow=5.1,SNR=5.1						
DZM	**Mont Dzumac**	**21.32**	**143**	LR	LR	03 48 12.2	
	comp=Z,184nm,20.4s,baz=180,slow=29						
ASAR	**Alice Springs**	**25.90**	**223**	P	P	03 43 29.9	+0.1
	2.1nm,0.9s,baz=60,slow=9.0,SNR=16						
FITZ	**Fitzroy Crossi**	**29.52**	**242**	P	P	03 44 01.7	-0.6
	0.8nm,0.4s,baz=63,slow=9.2,SNR=10						
ILAR	**Eielson Array**	**82.50**	**22**	P	P	03 50 20.1	-0.1
	0.2nm,0.8s,baz=255,slow=4.9,SNR=4.5						
TORD	**Torodi Ar. Bea**	**150.48**	**288**	PKPbc	PKPbc	03 57 50.6	-0.1
	0.5nm,0.8s,baz=87,slow=2.8,SNR=3.3						

IDC 16 04:09:56.6±2.6, 3.21S×100.55E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.7/23, mbtmp3.9/5, Error ellipse: s-maj=95.0km s-min=27.2km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**38.11**	**125**	P	P	04 17 17.2	-0.4
	0.8nm,0.6s,baz=298,slow=8.1,SNR=6.7						
SONM	**Songino Array**	**51.09**	**5**	P	P	04 19 01.4	+0.4
	0.5nm,0.5s,baz=189,slow=10,SNR=5.9						
MKAR	**Makanchi Array**	**52.33**	**344**	P	P	04 19 10.1	-0.1
	1.1nm,0.7s,baz=160,slow=8.8,SNR=10						
USRK	**Ussuriysk Arra**	**54.97**	**27**	P	P	04 19 29.1	-0.4
	2.8nm,0.8s,baz=143,slow=42,SNR=3.6						
ZALV	**Zalesovo Beam**	**58.45**	**349**	P	P	04 19 53.1	-0.9
	0.2nm,0.3s,baz=172,slow=3.9,SNR=4.2						
TXAR	**Lajitas Array**	**145.31**	**39**	PKPbc	PKPbc	04 29 37.0	0.0
	0.9nm,0.6s,baz=239,slow=0.7,SNR=20						

CASC 16 04:11:56.8±1.8, 13.36N×90.50W, h21km±6km, MD3.4, ML3.9, 4C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.97**	**61**	⇑*i*P	Pb	04 12 14.7	-0.5
RTR	**El Retiro**	**0.98**	**57**	⇑*i*P	Pb	04 12 15.0	-0.4
RTR				*e*S	Sb	04 12 27.4	-0.7
SNJE	**San Jose**	**1.00**	**60**	⇑*i*P	Pb	04 12 15.2	-0.6
PCG	**Pacaya**	**1.03**	**354**	*e*P	Pn	04 12 16.4	0.0
PCG				*e*S	Sn	04 12 30.8	+0.3
FUG	**Fuego 3**	**1.13**	**343**	*e*P	Pn	04 12 17.1	-0.6
NBG	**Las Nubes**	**1.23**	**7**	*e*P	Pn	04 12 19.0	-0.1
NBG				*e*S	Sb	04 12 36.4	+1.0
BOQS	**Boqueron**	**1.24**	**72**	*e*P	Pn	04 12 19.1	-0.1
BOQS				*e*S	Sn	04 12 35.0	-0.5
FG6		**1.25**	**343**	*e*P	Pn	04 12 18.6	-0.9
FG6				*e*S	Sb	04 12 36.5	+0.4
SNET	**Serv Nac Est T**	**1.27**	**75**	*e*P	Pn	04 12 19.2	-0.2
SNET				AML	AML	04 12 38.2	
	comp=Z,3μm,0.2s						
LFU	**La Fuente**	**1.40**	**74**	*e*P	Pn	04 12 21.5	+0.3
LFU				*e*S	Sb	04 12 40.0	+0.2
LBRS	**Las Brisas**	**1.46**	**75**	*e*P	Pn	04 12 22.1	+0.1
JAT	**Jato**	**1.46**	**311**	*e*P	Pn	04 12 21.9	-0.1
JAT				*e*S	Sn	04 12 39.4	-1.1
MTO2	**Montecristo 2**	**1.51**	**47**	⇑*e*P	Pn	04 12 22.1	-0.8
MRL	**Marmol**	**1.87**	**25**	*e*P	Pn	04 12 28.2	+0.5
MRL				*e*S	Sb	04 12 52.3	-1.3
BLLM	**Bellamira**	**2.20**	**88**	*e*P	Pn	04 12 33.2	+1.0
CAHU	**Cacacuatique**	**2.26**	**79**	*e*P	Pn	04 12 33.5	+0.3

IGQ ***16*** *04:15:03.5, 2.47S×79.62W, h11km±74km, Mb4.5, Ms4.3, Error ellipse: s-maj=3.1km s-min=1.4km az=3.0*

IDC ***16*** *04:15:08.3±2.6, 2.47S×79.36W, h99km±26km, mb3.5/11, mb1 3.8/13, mb1mx3.6/25, mbtmp3.5/13, MS3.0/4, Ms1 3.1/4, ms1mx2.8/25, Error ellipse: s-maj=35.2km s-min=13.4km az=59.0*

ISC 16 04:15:00.7±0.7, 2.50S±0.04×79.77W±0.05, h14km, n71, σ1§43/61, mb3.9/11, 22C-10D, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIOE	**Riobamba**	**1.36**	**57**	⇑P	**Pb**	**04 15 27.2**	**+1.1**
IGUA	**Igualata**	**1.51**	**48**	⇑P	**Pb**	**04 15 30.2**	**+1.4**
MACE	**Macas**	**1.59**	**81**	⇑S	**Sn**	**04 15 48.0**	**-1.0**
BMAS	**Trigal station**	**1.62**	**52**	⇓P	**Pb**	**04 15 31.9**	**+1.2**
BMAS	**Trigal station**	**1.62**	**52**	⇓S	**Sb**	**04 15 51.4**	**+0.2**
BIL2	**Estacion Bilba**	**1.64**	**51**	P	**Pb**	**04 15 32.3**	**+1.5**
BIL2	**Estacion Bilba**	**1.64**	**51**	S	**Sb**	**04 15 52.2**	**+0.7**
ARRY	**Arrayan**	**1.64**	**53**	⇑P	**Pb**	**04 15 31.5**	**+0.5**
BBIL	**Ulba Tungurahu**	**1.65**	**51**	⇓S	**Sb**	**04 15 52.4**	**+0.5**
BBIL	**Ulba Tungurahu**	**1.65**	**51**	⇓P	**Pb**	**04 15 32.6**	**+1.4**
PAT1	**Patacocha**	**1.66**	**53**	⇑P	**Pb**	**04 15 32.2**	**+0.9**
BPAT	**Tungurahua Vol**	**1.66**	**53**	⇑S	**Sn**	**04 15 52.0**	**+0.7**
BPAT	**Tungurahua Vol**	**1.66**	**53**	⇑P	**Pb**	**04 15 32.2**	**+0.8**
JUI6	**Juive**	**1.68**	**51**	⇓S	**Sb**	**04 15 52.9**	**0.0**
JUI6	**Juive**	**1.68**	**51**	⇓P	**Pb**	**04 15 32.9**	**+1.2**
RETU	**Refugio**	**1.68**	**52**	⇑S	**Sb**	**04 15 53.6**	**+0.5**
RETU	**Refugio**	**1.68**	**52**	⇑P	**Pb**	**04 15 33.3**	**+1.5**
ULBA	**Ulba**	**1.71**	**52**	P	**Pb**	**04 15 33.6**	**+1.3**
BULB	**Ulba Tungurahu**	**1.72**	**52**	⇑P	**Pb**	**04 15 33.3**	**+1.0**
BULB	**Ulba Tungurahu**	**1.72**	**52**	⇑S	**Sb**	**04 15 54.2**	**+0.2**
RUN5	**Runtun**	**1.72**	**51**	P	**Pb**	**04 15 33.5**	**+1.1**
BRUN	**Tungurahua Vol**	**1.73**	**52**	⇑S	**Sn**	**04 15 53.0**	**+0.2**
BRUN	**Tungurahua Vol**	**1.73**	**52**	⇑P	**Pb**	**04 15 33.2**	**+0.7**
CHIS	**Cerro-Chispas-**	**1.73**	**326**	⇓P	**Pg**	**04 15 35.7**	**+1.7**
PISA	**Pisayambo**	**1.99**	**44**	P	**Pb**	**04 15 38.0**	**+1.0**
BMOR	**Cotopaxi Volca**	**2.19**	**37**	⇑P	**Pb**	**04 15 41.0**	**+0.5**
CAMI	**Rancho Maria**	**2.21**	**35**	P	**Pb**	**04 15 41.5**	**+0.8**
MOV1	**Cotopaxi Vol s**	**2.22**	**37**	P	**Pb**	**04 15 41.2**	**+0.3**
BNAS	**Cotopaxi Volca**	**2.23**	**35**	⇑P	**Pb**	**04 15 41.9**	**+0.8**
BREF	**Cotopaxi Volca**	**2.25**	**36**	⇑P	**Pb**	**04 15 42.3**	**+0.8**
NAS2	**Nasa**	**2.25**	**35**	P	**Pb**	**04 15 42.8**	**+1.2**
JAMA	**Jama**	**2.27**	**349**	P	**Pb**	**04 15 41.6**	**+0.1**
BTAM	**Cotopaxi Volca**	**2.27**	**37**	⇑P	**Pb**	**04 15 42.0**	**+0.1**
BVC2	**Cotopaxi Volca**	**2.28**	**37**	⇑S	**Sg**	**04 16 13.8**	**-0.3**
BVC2	**Cotopaxi Volca**	**2.28**	**37**	⇑P	**Pb**	**04 15 42.4**	**+0.4**
VC1	**Cotopaxi 1**	**2.29**	**36**	P	**Pb**	**04 15 42.9**	**+0.7**
COV1	**Cotopaxi Volc**	**2.31**	**38**	⇓P	**Pb**	**04 15 42.6**	**0.0**
JUA2	**San Juan 2**	**2.55**	**27**	P	**Pb**	**04 15 47.1**	**+0.5**
TERV	**Terraza Guagua**	**2.59**	**27**	S	**Sb**	**04 16 20.0**	**+0.8**
TERV	**Terraza Guagua**	**2.59**	**27**	P	**Pb**	**04 15 47.7**	**+0.4**
GGP	**Refugio Guagua**	**2.59**	**27**	⇓P	**Pb**	**04 15 47.5**	**+0.2**
ANTI	**Antisana**	**2.59**	**38**	⇑P	Pn	04 15 46.3	+3.5
PINO	**Pino**	**2.60**	**27**	⇓P	**Pb**	**04 15 47.8**	**+0.3**
YANA	**Yana**	**2.65**	**27**	P	**Pb**	**04 15 48.2**	**-0.1**
GOLV	**Golondrinas**	**2.76**	**13**	P	**Pn**	**04 15 47.2**	**+2.5**
OTAV	**Otavalo**	**3.02**	**26**	⇑P	Pn	04 15 52.7	+4.1
CAYA	**Cayambe**	**3.11**	**35**	P	**Pb**	**04 15 54.8**	**-1.4**
COTA	**Cotacachi**	**3.16**	**27**	P	**Pb**	**04 15 57.0**	**0.0**
CHAR	**Charly**	**3.19**	**41**	P	**Pb**	**04 15 55.5**	**-1.9**
CONE	**Cono NE Rev Vo**	**3.22**	**41**	⇑P	**Pb**	**04 15 57.1**	**-0.7**
ATAH	**Atahualpa**	**4.80**	**163**	P	**Pn**	**04 16 16.2**	**+3.2**
	4.1nm,0.3s,baz=11,slow=6.3,SNR=18						
ATAH				S	**Sn**	**04 17 13.5**	**+4.7**
	12nm,0.3s,baz=176,slow=7.9,SNR=4.0						
ROSC	**El Rosal**	**9.11**	**37**	LR	LR	04 21 16.6	
	comp=Z,79nm,18.8s,baz=269,slow=42						
NNA	**Nana**	**9.86**	**163**	P	**Pn**	**04 17 23.1**	**+0.9**
	3.7nm,0.3s,baz=317,slow=12.5,SNR=10.0						
LPAZ	**La Paz**	**17.86**	**141**	P	**Pn**	**04 19 07.4**	**-2.2**
	0.2nm,0.3s,baz=337,slow=10,SNR=6.1						
LPAZ				LR	LR	04 26 29.6	
	comp=Z,36nm,20.1s,baz=46,slow=39						
SIV	**San Ignacio**	**22.77**	**127**	P	**P**	**04 19 60.0**	**-3.1**
	0.6nm,0.5s,baz=324,slow=12,SNR=3.5						
SIV				LR	LR	04 29 32.5	
	comp=Z,49nm,19.2s,slow=38						
TEIG	**Tepich**	**24.08**	**340**	P	**P**	**04 20 16.5**	**+0.6**
	4.8nm,0.5s,baz=7.6,slow=4.4,SNR=12						
CMIG	**Matias Romero**	**24.53**	**323**	P	**P**	**04 20 21.1**	**+1.1**
	3.1nm,0.8s,baz=93,slow=7.8,SNR=5.3						
BDFB	**Brasilia**	**33.89**	**115**	LR	LR	04 37 36.9	
	comp=Z,42nm,18.8s,baz=9.8,slow=40						
PLCA	**Paso Flores**	**38.96**	**169**	P	P	04 22 24.0	-2.5
	0.8nm,0.5s,baz=0.4,slow=12,SNR=6.9						
TXAR	**Lajitas Array**	**39.06**	**326**	P	**P**	**04 22 28.2**	**+0.6**
	0.2nm,0.6s,baz=136,slow=7.5,SNR=3.8						
PDAR	**Pinedale Array**	**52.47**	**333**	P	P	04 24 10.4	-3.1
	0.9nm,0.6s,baz=123,slow=6.6,SNR=3.8						
NVAR	**Mina Array Bea**	**54.06**	**323**	P	**P**	**04 24 24.6**	**-0.7**
	0.5nm,0.4s,baz=164,slow=5.8,SNR=3.9						
YKA	**Yellowknife Ar**	**69.98**	**344**	P	P	04 26 09.2	-2.3
	1.0nm,0.5s,baz=143,slow=6.1,SNR=16						
INK	**Inuvik**	**79.67**	**342**	P	**P**	**04 27 06.0**	**-1.5**
	2.2nm,0.7s,baz=94,slow=4.5,SNR=7.6						
TORD	**Torodi Ar. Bea**	**82.26**	**76**	P	P	04 27 17.3	-5.2
	0.4nm,0.6s,baz=272,slow=5.8,SNR=12						
ILAR	**Eielson Array**	**82.69**	**337**	P	P	04 27 21.4	-2.2
	0.9nm,0.8s,baz=128,slow=4.0,SNR=11						
ZALV	**Zalesovo Beam**	**127.18**	**11**	PKP	PKPdf	04 33 59.9	-4.8
	1.1nm,0.6s,baz=279,slow=2.9,SNR=4.2						
MKAR	**Makanchi Array**	**133.20**	**17**	PKP	**PKPdf**	**04 34 12.8**	**-3.6**
	0.2nm,0.5s,baz=266,slow=4.5,SNR=3.9						
SONM	**Songino Array**	**134.53**	**354**	PKP	**PKPdf**	**04 34 15.8**	**-3.2**
	0.5nm,0.5s,baz=353,slow=3.6,SNR=2.7						
ASAR	**Alice Springs**	**138.16**	**230**	PKP	PKPdf	04 34 21.9	-4.5
	0.5nm,0.8s,baz=106,slow=1.7,SNR=6.3						
FITZ	**Fitzroy Crossi**	**147.67**	**230**	PKPbc	**PKPdf**	**04 34 42.7**	**-0.4**
	2.4nm,0.6s,baz=260,slow=2.2,SNR=6.6						

BJI ***16*** *04:18:29.3, 44.20N×129.20W, h10km, mB5.2/12, mb4.7/13, Ms4.7/7, Ms7 4.5/8*

IDC ***16*** *04:18:29.0±0.8, 44.04N×129.23W, h0km, mb4.1/17, mb1 4.3/25, mb1mx4.2/38, mbtmp4.2/25, ML3.9/8, MS3.9/20, Ms1 3.9/20, ms1mx3.7/45, Error ellipse: s-maj=21.3km s-min=10.4km az=41.0*

ISCJB ***16*** *04:18:31.0±0.2, 44.24N±0.02×129.21W±0.03, h13km, mb4.5/50, MS4.0/16, Error ellipse: s-maj=3.2km s-min=2.5km az=148.7*

NEIC ***16*** *04:18:32.0±0.4, 44.19N×129.27W, h10km, mb4.7/41, Error ellipse: s-maj=7.1km s-min=3.9km az=45.0*

GCMT ***16*** *04:18:32.0±0.3, 43.94N×129.42W, h20km±1km, MW5.0, Moment Tensor Solution. s23,c28; s76,c115; Moment tensor: Scale 10^16 Nm; Mrr-0.16±.18; Mθθ-2.73±.14; Mϕϕ2.89±.13; Mrθ-1.51±.29; Mθϕ-2.62±.11; Mϕr1.00±.26; Best double couple: M0 4.20000×10^16 NP1:ϕ24.00000°, δ65.00000°, λ2.00000°. NP2:ϕ293.00000°, δ88.00000°, λ155.00000°. Principal axes: T 4.4200, Plg18.0000°, Azm246.0000°; N -0.3600, Plg65.0000°, Azm110.0000°; P -4.0600, Plg16.0000°, Azm342.0000°; Data Used: II IC IU G CN.*

ISC 16 04:18:31.8±0.4, 44.07N±0.06×129.29W±0.05, h13km, n585, σ1§31/574, mb4.5/51, MS4.0/17, 187C-192D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.80**	**107**	*e*Pn	Pn	04 19 26.2	-4.0
KEBM				*e*S	**Sn**	**04 20 17.7**	**+3.0**
RNO	**Roman Nose**	**4.01**	**90**	P	**Pn**	**04 19 31.1**	**-1.8**
COR	**Corvallis**	**4.33**	**81**	*e*Pn	**Pn**	**04 19 35.3**	**-1.9**
UMPQ	**Umpqua Communi**	**4.39**	**98**	P	**Pn**	**04 19 36.1**	**-2.1**
KMOR	**Kings Mountain**	**4.41**	**67**	P	**Pn**	**04 19 36.5**	**-2.0**
F03A	**Seaside**	**4.47**	**63**	P	**Pn**	**04 19 37.3**	**-1.9**
HSO	**Harness Mounta**	**4.52**	**95**	P	**Pn**	**04 19 38.7**	**-1.3**
NLO	**Nicolai Mounta**	**4.60**	**62**	P	**Pn**	**04 19 39.8**	**-1.3**
KRMB	**Red Mountain**	**4.71**	**121**	*e*Pn	Pn	04 19 39.5	-3.1
HUMO	**Hull Mountain**	**4.85**	**105**	*e*Pn	**Pn**	**04 19 41.8**	**-2.6**
HUMO				*e*S	**Sn**	**04 20 36.9**	**-3.6**
SSOR	**Sweet Springs**	**4.95**	**79**	P	**Pn**	**04 19 45.4**	**-0.6**
NLWA	**Neilton Lookou**	**5.04**	**47**	*e*Pn	**Pn**	**04 19 44.9**	**-2.2**
NLWA				*e*S	**Sn**	**04 20 43.5**	**-1.7**
RVW	**Rose Valley**	**5.08**	**64**	P	**Pn**	**04 19 46.2**	**-1.4**
KHMM	**Horse Mountain**	**5.21**	**126**	*e*Pn	**Pn**	**04 19 49.0**	**-0.5**
YBH	**Yreka Blue Hor**	**5.37**	**114**	*e*Pn	**Pn**	**04 19 50.4**	**-1.2**
	29nm,0.7s						
YBH				*e*S	**Sn**	**04 20 52.1**	**-1.3**
YBH	**Yreka Blue Hor**	**5.37**	**114**	Pn	**Pn**	**04 19 50.3**	**-1.4**
	1.4nm,0.3s,baz=306,slow=11,SNR=48						
YBH				LR	LR	04 21 07.4	
	comp=Z,210nm,21.7s,baz=298,slow=30						
LON	**Longmire**	**5.91**	**60**	*e*Pn	**Pn**	**04 19 57.5**	**-1.5**
LON				*e*S	**Sn**	**04 21 11.1**	**+4.5**
WDC	**Whiskeytown Da**	**6.10**	**123**	*e*Pn	**Pn**	**04 20 02.0**	**+0.4**
	14nm,0.7s						
PGC	**Sidney**	**6.11**	**39**	*e*Pn	**Pn**	**04 19 59.5**	**-2.2**
	6.0nm,0.6s						
PGC				*e*S	**Sn**	**04 21 06.9**	**-4.4**
KCPM	**Cahto Peak**	**6.11**	**134**	*e*Pn	**Pn**	**04 20 02.6**	**+0.7**
	95nm,1.6s						
HOPS	**Hopland**	**6.89**	**135**	*e*Pn	**Pn**	**04 20 12.0**	**-0.5**
	234nm,1.4s						
MOD	**Modoc**	**6.94**	**105**	*e*Pn	**Pn**	**04 20 15.1**	**+1.9**
HAWA	**Hanford**	**7.27**	**68**	*e*Pn	**Pn**	**04 20 16.9**	**-0.8**
OHCM	**Honcut**	**7.52**	**126**	*e*Pn	**Pn**	**04 20 22.5**	**+1.5**
BEKR	**Beckworth**	**7.87**	**119**	*e*Pn	**Pn**	**04 20 27.9**	**+1.8**
	9.1nm,0.8s						
BBB	**Bella Bella**	**8.16**	**5**	Pn	**Pn**	**04 20 30.1**	**+0.3**
BBB	**Bella Bella**	**8.16**	**5**	Pn	**Pn**	**04 20 30.1**	**+0.3**
	2.8nm,0.3s,baz=187,slow=11,SNR=144						
BBB				LR	LR	04 22 41.8	
	comp=Z,455nm,20.1s,baz=22,slow=31						
WCN

L14A Malta 11.92 94 ⇓P Pn 04 21 22.8 +1.3
baz=12,SNR=12
H15A Lima 11.94 82 ⇑P Pn 04 21 21.8 0.0
baz=12,SNR=26
DLMT Dillon 11.95 78 ℯPn Pn 04 21 23.1 +1.2
E15A Deer Lodge 11.97 73 ⇑P Pn 04 21 21.8 -0.4
baz=12,SNR=6.9
A14A Double T Ranch 11.98 60 ⇑P Pn 04 21 21.0 -1.2
baz=12,SNR=26
G15A Dillon 12.03 79 ⇓P Pn 04 21 24.0 +0.9
baz=12,SNR=19
F15A Butte 12.04 76 ⇑P Pn 04 21 22.8 -0.3
baz=12,SNR=21
MPMC Manual Prospec 12.06 128 ⇑P Pn 04 21 25.8 +2.3
baz=12,SNR=6.1
LRM Limekiln Ridge 12.06 76 ℯPn Pn 04 21 23.4 -0.2
I15A Monteview 12.10 84 ⇑P Pn 04 21 24.8 +0.8
baz=12
D15A Lincoln 12.13 70 ⇓P Pn 04 21 25.5 +1.2
baz=12,SNR=28
FURC Furnace Creek, 12.15 124 ⇓P Pn 04 21 27.9 +3.4
baz=12,SNR=35
C15A Salmond Ranch, 12.19 66 ⇑P Pn 04 21 24.7 -0.5
baz=12,SNR=52
J15A Blackfoot 12.22 87 ⇑P Pn 04 21 27.8 +2.3
baz=12,SNR=36
K15A Arbon 12.28 91 ⇑P Pn 04 21 28.5 +2.1
baz=12,SNR=24
HVU Hansel Valley 12.33 95 ℯPn Pn 04 21 27.7 +0.6
B15A Bradely Ranch, 12.34 64 ⇑P Pn 04 21 26.3 -0.9
baz=12,SNR=28
LRMC Laurel Mountai 12.37 130 ⇓P Pn 04 21 28.9 +1.2
baz=12
A15A Johnson Ranch, 12.41 61 ⇑P Pn 04 21 27.4 -0.7
baz=12,SNR=118
G16A Moss Hill, Enn 12.51 79 ⇓P Pn 04 21 30.2 +0.6
baz=12,SNR=28
L15A Malad City 12.54 94 ⇑P Pn 04 21 30.5 +0.5
baz=12,SNR=19
HRY Holter Researc 12.56 72 ℯPn Pn 04 21 31.0 +0.9
BOZ Bozeman (W) 12.63 77 ℯPn Pn 04 21 31.6 +0.4
BOZ Bozeman (W) 12.63 77 ⇓P Pn 04 21 31.5 +0.3
baz=13,SNR=29
F16A Kennard Place, 12.64 76 ⇑P Pn 04 21 31.6 +0.3
baz=13,SNR=18
E16A East Helena 12.65 73 ⇓P Pn 04 21 30.9 -0.5
baz=13,SNR=9.0
EDW2 Edwards Air Fo 12.66 133 ⇑P Pn 04 21 31.9 +0.3
baz=13,SNR=12
C16A Fuhringer Ranc 12.77 67 ⇑P Pn 04 21 32.5 -0.6
baz=13,SNR=24
D16A Dana Ranch, Ca 12.79 70 ⇓P Pn 04 21 33.3 0.0
baz=13,SNR=28
QLMT Earthquake Lak 12.79 80 ℯPn Pn 04 21 34.4 +1.0
DUG Dugway 12.83 102 ℯPn Pn 04 21 34.3 +0.3
DUG Dugway 12.83 102 ⇓P Pn 04 21 35.4 +1.5
baz=13,SNR=6.8
I16A Newdale 12.83 85 ⇓P Pn 04 21 36.0 +2.0
baz=13,SNR=40
SHOC Shoshone 12.88 125 ⇑P Pn 04 21 37.4 +2.9
baz=13,SNR=22
B16A M & M Farms, S 12.92 64 ⇑P Pn 04 21 34.6 -0.5
baz=13,SNR=7.9
H16A Russell Place, 12.93 81 ⇓P Pn 04 21 36.4 +1.1
baz=13,SNR=48
K16A Soda Springs 12.93 89 ⇑P Pn 04 21 38.0 +2.6
baz=13,SNR=20
GSC Goldstone 12.99 128 ℯPn Pn 04 21 38.7 +2.5
GSC Goldstone 12.99 128 ⇑P Pn 04 21 38.4 +2.2
baz=13,SNR=18
RRI2 Red Ridge 13.03 87 ℯPn Pn 04 21 37.0 +0.3
DCID1 Drake Creek 13.09 86 ℯPn Pn 04 21 40.3 +2.8
A16A West Butte Ran 13.12 62 ⇑P Pn 04 21 37.0 -0.8
baz=13,SNR=47
YMR Madison River 13.13 81 ℯPn Pn 04 21 39.7 +1.6
45nm,1.2s
E17A Martindale 13.21 73 ⇑P Pn 04 21 40.7 +1.6
baz=13,SNR=20
IMW Indian Meadow 13.22 84 ℯPn Pn 04 21 41.4 +1.9
L16A Fish Haven 13.23 93 ⇓P Pn 04 21 40.8 +1.4
baz=13
HWUT Hardware Ranch 13.24 95 ℯPn Pn 04 21 40.2 +0.6
G17A Pierce Place, 13.26 78 ⇓P Pn 04 21 40.5 +0.7
baz=13,SNR=22
TPAW Teton Pass 13.27 86 ℯPn Pn 04 21 42.5 +2.4
M16A Huntsville 13.28 96 ⇓P Pn 04 21 41.0 +0.8
baz=13
F17A Fitzpatrick Pl 13.32 76 ⇓P Pn 04 21 41.3 +0.7
baz=13,SNR=43
MOOW Moose Ponds 13.38 85 ℯPn Pn 04 21 43.5 +2.0
D17A Six Diamond Ra 13.38 70 ⇑P Pn 04 21 41.5 +0.1
baz=13,SNR=62
C17A Wharram Farm, 13.40 68 ⇓P Pn 04 21 41.3 -0.3
baz=13,SNR=36
TUQ Turquoise Moun 13.41 125 ⇑P Pn 04 21 44.0 +2.2
baz=14,SNR=5.9
SNOW Snow King Moun 13.42 86 ℯPn Pn 04 21 44.1 +2.1
K17A Gardner Place, 13.43 89 ⇑P Pn 04 21 43.6 +1.5
baz=13
H17A Grant Village 13.43 82 ⇓P Pn 04 21 45.1 +2.9
baz=13,SNR=17
J17A Brown Place, J 13.46 87 ⇑P Pn 04 21 44.4 +1.8
baz=13,SNR=12
I17A Pilgrim Ck. 13.48 84 ⇑P Pn 04 21 45.5 +2.7
baz=13,SNR=33
B17A L&G Farms, Che 13.49 65 ⇓P Pn 04 21 42.1 -0.7
baz=13,SNR=45
ARUT Antelope Range 13.52 112 ℯPn Pn 04 21 46.2 +2.9
84nm,1.4s
HEC Hector,Ludlow 13.61 128 ⇓P Pn 04 21 46.2 +1.7
baz=14,SNR=6.6
L17A Cokeville 13.61 92 ⇑P Pn 04 21 46.6 +2.0
baz=14,SNR=6.8
JLU Jordanelle 13.65 99 ℯPn Pn 04 21 46.3 +1.1
A17A Triple J Farms 13.69 63 ⇑P Pn 04 21 44.6 -1.0
baz=14,SNR=49
CCUT Cedar City 13.70 113 ℯPn Pn 04 21 48.4 +2.5
MPU Maple Canyon 13.73 101 ℯPn Pn 04 21 50.1 +3.8
DAU Daniels Canyon 13.85 99 ℯPn Pn 04 21 50.5 +2.4
E18A Harlowton 13.86 73 ⇑P Pn 04 21 48.0 0.0
baz=14,SNR=7.5
M17A Scullys Gap (B 13.93 94 ⇓P Pn 04 21 50.2 +1.2
baz=14
N17A Moffit Pass 13.97 97 ⇑P Pn 04 21 51.0 +1.3
baz=14,SNR=14
F18A Big Timber 13.98 76 ⇓P Pn 04 21 50.1 +0.6
baz=14,SNR=11
J18A Kendall Valley 13.99 87 ⇓P Pn 04 21 49.9 +0.1
baz=14,SNR=6.5
D18A Linhart Farms, 13.99 70 ⇓P Pn 04 21 50.1 +0.5
baz=14,SNR=13
MVU Marysvale 13.99 108 ℯPn Pn 04 21 52.3 +2.4
MSU Marysvale 14.01 107 ℯPn Pn 04 21 52.9 +2.8
GMRC Granite Mounta 14.02 127 ⇑P Pn 04 21 51.5 +1.2
baz=14,SNR=6.1
I18A Diamond G Ranc 14.05 85 ⇓P Pn 04 21 53.0 +2.3
baz=14,SNR=6.6
H18A Shoshone NF, C 14.06 81 ⇑P Pn 04 21 52.2 +1.5
baz=14,SNR=15
MURC Murrieta 14.06 134 ⇓P Pn 04 21 51.5 +0.9
baz=14
K18A Toltan Ranch, 14.08 89 ⇑P Pn 04 21 52.9 +1.8
baz=14
G18A Lazy EL Ranch, 14.09 78 ⇑P Pn 04 21 51.9 +0.7
baz=14
EGMT Eagleton 14.13 67 ℯPn Pn 04 21 50.8 -0.7
EGMT Eagleton 14.13 67 ⇓P Pn 04 21 51.1 -0.5
baz=14,SNR=6.9
LDFC Landfair 14.14 125 ℯPn Pn 04 21 53.1 +1.4
B18A Beardsley Farm 14.18 65 ⇑P Pn 04 21 51.2 -1.0
baz=14,SNR=7.4
A18A Metzger Ranch, 14.24 63 ⇑P Pn 04 21 51.6 -1.4
baz=14,SNR=17
L18A Fontenelle, Gr 14.26 92 ⇓P Pn 04 21 54.8 +1.3
baz=14,SNR=22
RLMT Red Lodge 14.31 79 ℯPn Pn 04 21 56.2 +2.0
RLMT Red Lodge 14.31 79 ⇑P Pn 04 21 55.4 +1.2
baz=14,SNR=11
M18A Lyman 14.37 94 ⇓P Pn 04 21 55.9 +0.9
baz=14
DLBC Dease Lake 14.39 358 Pn Pn 04 21 56.6 +1.5
DLBC Dease Lake 14.39 358 Pn Pn 04 21 56.6 +1.5
0.1nm,0.3s,baz=170,slow=12,SNR=8.9
BELC Belle Mtn. Jos 14.40 130 ⇑P Pn 04 21 56.8 +1.4
baz=14,SNR=6.3
BW06 Boulder Array 14.40 88 ℯPn Pn 04 21 57.4 +1.9
BW06 Boulder Array 14.40 88 ⇓P Pn 04 21 55.9 +0.4
baz=14
PDAR Pinedale Array 14.40 88 Pn Pn 04 21 56.8 +1.3
PDAR Pinedale Array 14.40 88 Pn Pn 04 21 56.8 +1.3
0.1nm,0.3s,baz=280,slow=8.9,SNR=22
PDAR LR LR 04 27 32.8
comp=Z,969nm,19.7s,baz=285,slow=38
F19A Roth Farm, Mol 14.52 76 ⇓P Pn 04 21 57.2 +0.3
baz=14,SNR=10
Q16A Castle Valley 14.52 105 ⇑P Pn 04 22 00.2 +3.1
baz=14,SNR=27
H19A Powell 14.54 81 ⇓P Pn 04 21 59.7 +2.4
baz=14,SNR=17
C19A Slack Wire Ran 14.56 68 ⇓P Pn 04 21 57.1 -0.4
baz=14,SNR=47
P17A Butcher Ranch, 14.58 102 ⇓P Pn 04 21 59.7 +1.8
baz=15
I19A Meeteetse 14.60 83 ⇑P Pn 04 22 00.1 +1.9
baz=14,SNR=28
D19A Cripps Ranch, 14.61 71 ⇑P Pn 04 21 58.5 +0.3
baz=14,SNR=29
E19A Rath Farm, Rou 14.64 73 ⇓P Pn 04 21 58.4 -0.1
baz=14,SNR=16
NEE2 Needles Airpor 14.64 124 ⇓P Pn 04 22 00.3 +1.7
baz=15
J19A Crowheart 14.67 86 ⇓P Pn 04 22 00.8 +1.7
baz=15,SNR=10
L19A Farson 14.70 91 ⇑P Pn 04 22 00.3 +0.7
baz=15
B19A Brinkman Farms 14.73 66 ⇑P Pn 04 21 60.0 +0.2
baz=15
IRM Iron Mountain 14.76 127 ⇑P Pn 04 22 02.3 +2.0
baz=15,SNR=6.9
N18A Larsen Ranch, 14.79 95 ⇓P Pn 04 22 00.7 -0.1
baz=15,SNR=9.2
W13A Hualapai Mount 14.86 122 ⇑P Pn 04 22 03.6 +1.9
baz=15,SNR=15
P18A Preston Nutter 14.87 101 ⇑P Pn 04 22 03.5 +1.6
baz=15,SNR=7.7
SRU San Rafael 14.89 103 ℯPn Pn 04 22 04.5 +2.5
SRU San Rafael 14.89 103 ⇑P Pn 04 22 04.0 +1.9
baz=15,SNR=15
K19A Absolon Red Bu 14.90 88 ⇑P Pn 04 22 01.8 -0.5
baz=15
A19A Klindworth Far 14.95 64 ⇓P Pn 04 22 01.3 -1.4
baz=15,SNR=20
BC3 Big Chuckawall 14.96 129 ⇑P Pn 04 22 04.1 +1.2
baz=15,SNR=10
M19A Rock Springs 15.01 93 ⇓P Pn 04 22 03.4 -0.3
baz=15
MONP Monument Peak 15.02 134 ⇓P Pn 04 22 04.7 +0.8
baz=15,SNR=10
U15A North Rim 15.04 115 ⇑P Pn 04 22 06.7 +2.5
baz=15,SNR=35
G20A Bridger 15.05 78 ⇓P Pn 04 22 04.4 +0.3
baz=15,SNR=12
F20A Billings 15.07 76 ⇓P Pn 04 22 03.9 -0.5
baz=15,SNR=6.8
E20A Meyer Farm, Mu 15.09 73 ⇑P Pn 04 22 04.3 -0.3
baz=15,SNR=7.7
D20A Manuel Ranch, 15.11 71 ⇓P Pn 04 22 04.8 -0.1
baz=15,SNR=14
N19A John Jarvie Ra 15.18 95 ⇓P Pn 04 22 05.3 -0.6
baz=15
I20A Wiland 15.23 83 ⇓P Pn 04 22 08.8 +2.2
baz=15,SNR=10
PDMCI Parker Dam,Lak 15.25 125 ⇑P Pn 04 22 08.0 +1.2
baz=15,SNR=15
C20A Veseth Ranch, 15.26 69 ⇑P Pn 04 22 06.6 -0.2
baz=15,SNR=11
H20A Greybull 15.26 81 ⇓P Pn 04 22 08.1 +1.2
baz=15,SNR=25
K20A Yellowstone Ra 15.30 88 ⇑P Pn 04 22 07.8 +0.2
baz=15,SNR=21
O19A Miners Draw (B 15.41 97 ⇑P Pn 04 22 09.7 +0.6
baz=15,SNR=14
Y12C Blythe 15.42 127 ⇑P Pn 04 22 09.9 +1.0
baz=16,SNR=17
L20A Wamsutter 15.46 90 ⇑P Pn 04 22 10.2 +0.5
baz=15,SNR=8.8
A20A Cobblestone Ra 15.47 64 ⇑P Pn 04 22 08.8 -0.8
baz=15,SNR=14
M20A Sweetwater, Wa 15.71 92 ⇓P Pn 04 22 12.5 -0.4
baz=16
GLA Glamis 15.76 129 ℯPn Pn 04 22 13.7 +0.3
45nm,1.4s
GLA Glamis 15.76 129 ⇓P Pn 04 22 14.0 +0.6
baz=16
G21A Lodge Grass 15.76 78 ⇓P Pn 04 22 13.6 +0.2
baz=16
P19A Cripple Cowboy 15.76 99 ⇓P Pn 04 22 14.8 +1.2
baz=16
F21A Absaloka Mine, 15.79 76 ⇓P Pn 04 22 13.2 -0.6
baz=16
J21A Lysite 15.81 85 ⇑P Pn 04 22 15.3 +1.1
baz=16
E21A Keefer Ranch, 15.82 73 ⇑P Pn 04 22 14.4 +0.2
baz=16,SNR=12
Q19A Hogan Spring (15.84 102 ⇑P Pn 04 22 15.8 +1.3
baz=16,SNR=26
SKAG Skagway 15.85 349 ℯPn Pn 04 22 16.1 +1.7
43nm,1.3s
I21A Big Trails, Te 15.85 83 ⇓P Pn 04 22 16.0 +1.3
baz=16,SNR=15
N20A Spence Gulch, 15.85 94 ⇓P Pn 04 22 15.3 +0.6
baz=16,SNR=21
C21A Desert Coulee 15.88 69 ⇓P Pn 04 22 15.3 +0.4
baz=16
D21A La Casta Ranch 15.89 71 ⇑P Pn 04 22 15.0 -0.1
baz=16,SNR=14
S18A Hurst Farm, Bl 15.91 107 ⇑P P 04 22 17.8 -1.4
baz=16,SNR=28
H21A Big Horn, Sher 15.92 80 ⇓P Pn 04 22 16.5 +0.9
baz=16
B21A Ellsworth Farm 16.00 66 ⇓P Pn 04 22 15.5 -0.9
baz=16
K21A Alcova 16.09 87 ⇑P Pn 04 22 17.3 -0.5
baz=16
O20A White River Ci 16.10 97 ⇓P Pn 04 22 18.3 +0.3
baz=16
A21A Bergtoll Ranch 16.14 64 ⇓P Pn 04 22 17.2 -1.0
baz=16
L21A Rawlins 16.17 90 ⇓P Pn 04 22 18.2 -0.6
baz=16,SNR=8.8
WUAZ Wupatki 16.18 116 ℯPn Pn 04 22 21.1 +2.1
100nm,1.4s
WUAZ Wupatki 16.18 116 ⇑P Pn 04 22 20.7 +1.7
baz=16,SNR=17
P20A De Beque 16.24 99 ⇓P Pn 04 22 20.1 +0.5
baz=16,SNR=12
M21A Separation Pea 16.27 91 ⇓P Pn 04 22 20.2 +0.1
baz=16,SNR=21
F22A Rosebud 16.40 76 ⇓P Pn 04 22 21.3 -0.3
baz=16
G22A Birney 16.40 78 ⇓P Pn 04 22 21.3 -0.4
baz=16
N21A Black Mountain 16.41 94 ⇑P Pn 04 22 21.9 -0.1
baz=16,SNR=17
I22A 9 Mile Ranch, 16.41 83 ⇓P Pn 04 22 23.1 +1.2
baz=16,SNR=12
H22A Clearmont 16.42 80 ⇓P Pn 04 22 21.7 -0.2
baz=16
D22A Cohagen 16.45 71 ⇑P Pn 04 22 23.2 +1.0
baz=16,SNR=16
J22A Midwest 16.50 84 ⇓P Pn 04 22 22.3 -0.6
baz=16,SNR=13
Q20A Ridgley Place, 16.52 101 ⇑P Pn 04 22 23.9 +0.5
baz=16,SNR=11
113A Mohawk Valley, 16.56 128 ⇑P Pn 04 22 25.2 +1.5
baz=17,SNR=7.7
E22A Miles City 16.60 74 ⇑P Pn 04 22 23.5 -0.6
baz=16
K22A Casper 16.61 87 ⇑P Pn 04 22 25.4 +1.0
baz=16,SNR=7.9
Z14A Wintersburg 16.61 125 ⇑P Pn 04 22 24.6 +0.3
baz=17
O21A Pagoda 16.63 96 ⇓P Pn 04 22 24.6 -0.1
baz=17
B22A Reddig Ranch S 16.66 67 ⇑P Pn 04 22 24.9 0.0
baz=16,SNR=17
C22A Vida 16.68 69 ⇑P Pn 04 22 24.4 -0.8
baz=17,SNR=15
A22A Carney Farms, 16.80 65 ⇑P Pn 04 22 25.3 -1.3
baz=17,SNR=33
R20A Redvale 16.80 103 ⇑P Pn 04 22 26.9 0.0
baz=17,SNR=32
L22A Ellis Ranch, M 16.83 89 ⇓P Pn 04 22 26.3 -0.9
baz=17
X16A Lo Mia Camp, P 16.83 119 ⇓P Pn 04 22 28.5 +1.3
baz=17,SNR=15
M22A Cedar Creek Ra 16.88 91 ⇓P Pn 04 22 26.3 -1.6
baz=17,SNR=16
P21A Newcastle 16.90 98 ⇓P Pn 04 22 28.2 +0.1
baz=17,SNR=25
S20A Disappointment 16.98 104 ⇑P Pn 04 22 29.7 +0.5
baz=17,SNR=32
F23A Volborg 17.00 76 ⇑P Pn 04 22 28.2 -0.9
baz=17,SNR=40
E23A Ismay 17.04 73 ⇓P Pn 04 22 29.2 -0.5
baz=17,SNR=11
G23A Biddle 17.04 78 ⇓P Pn 04 22 29.5 -0.3
baz=17,SNR=17
Q21A Lamborn Mesa, 17.09 100 ⇑P Pn 04 22 30.6 +0.1
baz=17,SNR=8.8
D23A Lindsay 17.11 71 ⇑P Pn 04 22 30.7 +0.1
baz=17,SNR=27
C23A Lambert 17.16 69 ⇓P Pn 04 22 30.5 -0.7
baz=17,SNR=28
N22A Wattenberg Ran 17.16 93 ⇓P Pn 04 22 31.0 -0.5
baz=17,SNR=15
MVCO Mesa Verde 17.18 106 ℯPn Pn 04 22 32.6 +1.0
676nm,2.5s
MVCO Mesa Verde 17.18 106 ⇓P Pn 04 22 32.7 +1.0
baz=17,SNR=29
K23A Bowen Ranch, D 17.24 86 ⇓P Pn 04 22 31.1 -1.2
baz=17
R21A Cimarron 17.30 102 ⇑P Pn 04 22 33.2 0.0
baz=17,SNR=12
O22A Kremmling 17.31 95 ⇓P Pn 04 22 33.5 +0.2
baz=17,SNR=24
L23A Garrett 17.33 88 ⇓P Pn 04 22 33.3 -0.3
baz=17
B23A Brockton 17.34 67 ⇑P Pn 04 22 32.7 -0.7
baz=17,SNR=16
P22A Eagle 17.36 97 ⇓P Pn 04 22 33.5 -0.4
baz=17
SMCO Snowmass 17.37 99 ℯPn Pn 04 22 33.7 -0.6
53nm,1.5s
S21A Coal Bank Pass 17.45 104 ⇑P P 04 22 37.1 +0.7
baz=17,SNR=40
W18A Petrified Fore 17.49 114 ⇓P P 04 22 37.0 +0.3
baz=18
N23A Red Feather La 17.50 92 ⇓P Pn 04 22 35.8 +0.1
baz=17,SNR=14
Q22A Crested Butte, 17.55 100 ⇓P P 04 22 38.4 +1.0
baz=18,SNR=16
U20A Newcomb 17.60 109 ⇑P P 04 22 38.1 +0.3
baz=18,SNR=9.3
C24A Savage 17.66 70 ⇓P P 04 22 38.7 +0.4
baz=18,SNR=8.8
F24A Ekalaka 17.66 76 ⇓P Pn 04 22 36.0 -1.4
baz=18,SNR=16
H24A Dirks Ranch, A 17.68 79 ⇓P Pn 04 22 36.8 -0.8
baz=18,SNR=34
214A Organ Pipe Nat 17.71 128 ⇑P P 04 22 39.3 +0.4
baz=18
X18A Snowflake 17.71 116 ⇑P P 04 22 40.1 +1.0
baz=18,SNR=9.6
D24A Glendive 17.71 71 ⇓P Pn 04 22 37.7 -0.4
baz=18
G24A Alzada 17.72 77 ⇓P Pn 04 22 37.8 -0.4
baz=18
E24A Baker 17.73 73 ⇑P Pn 04 22 37.7 -0.6
baz=18,SNR=6.3
O23A Lake Granby, G 17.74 94 ⇓P Pn 04 22 38.9 +0.1
baz=18,SNR=18
I24A Kuemmerle Ranc 17.75 82 ⇑P Pn 04 22 38.7 +0.1
baz=18,SNR=9.1
J24A Dixon Ranch, L 17.81 84 ⇑P Pn 04 22 39.4 0.0
baz=18,SNR=9.5
K24A Anderson Ranch 17.83 86 ⇓P Pn 04 22 39.3 -0.3
baz=18
DGMT Dagmar 17.87 67 ℯPn Pn 04 22 38.6 -1.3
331nm,1.8s
DGMT Dagmar 17.87 67 ⇑P Pn 04 22 39.2 -0.7
baz=18,SNR=16
L24A Wheatland 17.91 88 ⇓P Pn 04 22 40.1 -0.5
baz=18
R22A Saguache, Gunn 17.93 101 ⇓P P 04 22 41.7 +0.1
baz=18,SNR=17
V20A Brimhall 17.95 110 ⇓P P 04 22 42.5 +0.8
baz=18,SNR=16
T21A Navajo Lake 17.96 106 ⇓P P 04 22 42.6 +0.7
baz=18,SNR=15
A24A Westby 18.04 65 ⇓P Pn 04 22 41.9 -0.1
baz=18,SNR=30
S22A 4UR Ranch, Cre 18.09 103 ⇓P P 04 22 44.0 +0.6
baz=18
P23A Jefferson 18.11 97 ⇑P Pn 04 22 43.3 +0.1
baz=18,SNR=26
ISCO Idaho Springs 18.11 95 ℯPn Pn 04 22 43.2 -0.1
23nm,1.1s
ISCO Idaho Springs 18.11 95 ⇓P Pn 04 22 43.2 -0.1
baz=18,SNR=12
RSSD Black Hills 18.13 81 ℯPn Pn 04 22 42.9 -0.4
20nm,1.0s
M24A Cheyenne 18.14 90 ⇓P Pn 04 22 43.6 +0.2
baz=18
U21A Nageezi 18.16 107 ⇓P P 04 22 45.4 +1.3
baz=18,SNR=47
N24A Carr 18.29 92 ⇑P P 04 22 46.4 +1.0
baz=18,SNR=6.5
Q23A Hartsel 18.30 98 ⇑P P 04 22 46.2 +0.5
baz=18
W20A Ramah 18.31 112 ⇓P P 04 22 47.8 +2.0
baz=18,SNR=35
O24A Longmont 18.38 94 ⇑P Pn 04 22 46.6 +0.1
baz=18
T22A Edith 18.39 105 ⇓P Pn 04 22 48.3 +1.6
baz=18,SNR=47
V21A Milan 18.51 109 ⇑P Pn 04 22 49.9 +1.8
baz=18,SNR=6.8
K25A Mack Ranch, Ha 18.53 86 ⇑P Pn 04 22 48.7 +0.4
baz=18,SNR=9.4
L25A Engebretsen Ra 18.57 87 ⇓P Pn 04 22 49.2 +0.5
baz=18
R23A Moffat 18.60 100 ⇑P Pn 04 22 49.9 +0.6
baz=19,SNR=15
TUC Tucson 18.65 123 ℯPn Pn 04 22 50.9 +1.2
46nm,1.6s
X20A Quemado 18.65 114 ⇑P Pn 04 22 51.3 +1.5
baz=19,SNR=31
S23A Nye Farm, Mont 18.69 102 ⇑P Pn 04 22 52.7 +2.4
baz=19,SNR=9.6
M25A Palm-Egli Farm 18.70 89 ⇓P Pn 04 22 50.9 +0.6
baz=19
P24A Kohler Place, 18.72 96 ⇓P Pn 04 22 52.0 +1.4
baz=19
Q24A Divide 18.76 97 ⇓P Pn 04 22 51.7 +0.5
baz=19,SNR=17
W21A San Fidel 18.88 111 ⇓P Pn 04 22 54.0 +1.3
baz=19,SNR=6.3
V22A San Miguel Ran 18.95 108 ⇑P Pn 04 22 54.5 +1.1
baz=19,SNR=64
T23A Casias Ranch, 18.98 104 ⇓P Pn 04 22 55.7 +1.8
baz=19,SNR=16
K26A Motz Farm, Whi 19.01 85 ⇓P Pn 04 22 54.1 +0.2
baz=19,SNR=8.8
R24A Sanders Place, 19.09 99 ⇓P Pn 04 22 55.9 +0.7
baz=19
Y20A Horse Springs, 19.12 115 ⇓P Pn 04 22 57.1 +1.6
baz=19,SNR=14
X21A Alamocita Cree 19.18 113 ⇓P Pn 04 22 57.6 +1.3
baz=19,SNR=10
U23A El Rito 19.23 106 ⇑P Pn 04 22 58.1 +1.3
baz=19,SNR=14
P25A Willow Gulch B 19.25 95 ⇑P Pn 04 22 57.3 +0.3
baz=19,SNR=10
M26A McRoberts Ranc 19.35 89 ⇑P Pn 04 22 58.4 +0.2
baz=19
Q25A Bedland, Calha 19.43 97 ⇑P Pn 04 22 59.1 0.0
baz=19,SNR=14
Z20A Nine Sixteen R 19.48 117 ⇑P Pn 04 23 00.5 +0.8
baz=20
Y21A Point of Rocks 19.52 114 ⇓P Pn 04 23 01.4 +1.1
baz=20,SNR=20
V23A Ortiz Mt. (NFS 19.54 107 ⇓P Pn 04 23 01.2 +0.7
baz=20,SNR=20
LAZ Ladron 19.64 112 ℯP Pn 04 23 02.2 +0.5
16nm,1.3s
T24A Torres, Weston 19.66 103 ⇓P Pn 04 23 02.4 +0.4
baz=20,SNR=18
X22A Bernardo 19.66 111 ⇓P Pn 04 23 02.8 +0.8
baz=20
K27A Flueckinger Fa 19.68 85 ⇑P Pn 04 23 02.1 0.0
baz=20,SNR=6.7
R25A Fountain Ranch 19.71 99 ⇓P Pn 04 23 03.0 +0.5
baz=20,SNR=30

ANMO **Albuquerque** 19.79 110 *e*P P 04 23 03.0 +1.1
18nm,1.1s
ANMO **Albuquerque** 19.79 110 P P 04 23 01.9 -0.1
0.1nm,0.3s,baz=309,slow=11,SNR=8.6
ANMO LR LR 04 30 07.1
comp=Z,349nm,21.0s,baz=128,slow=35
S25A **Robets Cordova** 19.82 100 ⇓P Pn 04 23 04.1 +0.3
baz=20,SNR=23
U24A **Moreno Valley** 19.82 104 ⇑P Pn 04 23 05.3 +1.3
baz=20,SNR=19
120A **U Bar Ranch, L** 19.82 119 ⇑P Pn 04 23 04.6 +0.7
baz=20,SNR=23
P26A **Davis Ranch, A** 19.82 94 ⇑P P 04 23 03.3 +1.0
baz=20,SNR=6.8
W23A **Werner Place,** 19.88 109 ⇑P Pn 04 23 04.6 +0.1
baz=20,SNR=20
LENM **Lemitar** 19.89 112 *e*P Pn 04 23 05.1 +0.5
Q26A **Hugo** 19.94 96 ⇓P P 04 23 04.6 +1.1
baz=20
Z21A **St. Cloud Mine** 19.95 115 ⇑P Pn 04 23 05.8 +0.4
baz=20,SNR=17
KDAK **Kodiak Island** 19.95 322 LR LR 04 28 34.1
comp=Z,775nm,22.0s,baz=135,slow=30
N27A **Anderson Farm,** 19.98 90 ⇑P Pn 04 23 05.5 -0.2
baz=20
Y22A **Socorro** 20.03 113 ⇑P Pn 04 23 06.5 +0.1
baz=20,SNR=32
LPM **Los Pinos Moun** 20.03 111 *e*P Pn 04 23 07.3 +0.9
T25A **Trinidad** 20.08 102 ⇓P Pn 04 23 06.9 0.0
baz=20,SNR=29
BNM **Barren Site** 20.13 112 *e*P P 04 23 06.4 +0.7
35nm,1.2s
X23A **Hourglass Bar** 20.18 110 ⇑P P 04 23 07.5 +1.4
baz=20
V24A **Rampart Ranch,** 20.18 106 ⇑P Pn 04 23 07.7 -0.4
baz=20,SNR=20
319A **Douglas** 20.21 122 ⇑P Pn 04 23 08.3 -0.2
baz=20,SNR=8.0
O27A **Beecher Island** 20.23 92 ⇓P P 04 23 07.7 +1.1
baz=20
R26A **Arlington** 20.25 98 ⇓P P 04 23 07.7 +0.9
baz=20,SNR=14
220A **Playas Peak, P** 20.32 120 ⇑P P 04 23 08.7 +1.0
baz=20,SNR=24
YKA **Yellowknife Ar** 20.34 20 P P 04 23 06.4 -1.1
YKA **Yellowknife Ar** 20.34 20 P P 04 23 06.4 -1.1
8.2nm,0.9s,baz=208,slow=10.0,SNR=33
W24A **Lazy 6 Ranch,** 20.36 108 ⇓P P 04 23 09.3 +1.1
baz=20,SNR=43
121A **Cookes Peak, D** 20.37 117 ⇑P Pn 04 23 09.9 -0.5
baz=20,SNR=30
YKW3 **Yellowknife Ar** 20.40 20 *e*P P 04 23 06.9 -1.2
0.5nm,1.1s
U25A **Circle Dot Ran** 20.43 103 ⇓P Pn 04 23 11.2 0.0
baz=20,SNR=52
Z22A **Elephant Butte** 20.45 114 ⇓P P 04 23 08.8 -0.2
baz=20,SNR=5.6
S26A **Kim** 20.52 99 ⇓P P 04 23 10.9 +1.1
baz=20,SNR=9.5
KSCO **Kaye Shedlock'** 20.55 95 ⇓P P 04 23 10.9 +0.8
baz=20
V25A **Rancho No Teng** 20.57 105 ⇑P Pn 04 23 12.4 -0.4
baz=20,SNR=57
FFC **Flin Flon** 20.59 49 *e*P P 04 23 09.7 -0.6
109nm,1.3s
T26A **Comanche Natio** 20.64 101 ⇑P P 04 23 12.4 +1.2
baz=21,SNR=33
Y23A **Lovelace Mesa,** 20.64 111 ⇓P P 04 23 12.0 +0.8
baz=21,SNR=15
320A **Kipp Ranch, An** 20.70 121 ⇓P P 04 23 13.5 +1.7
baz=21,SNR=16
R27A **Eads** 20.72 97 ⇑P P 04 23 12.2 +0.3
baz=21,SNR=19
221A **Mesquite Ranch** 20.72 118 ⇓P Pn 04 23 14.0 -0.4
baz=21,SNR=7.0
122A **Conniff Cattle** 20.77 116 ⇑P Pn 04 23 14.4 -0.6
baz=21
U26A **Atchley Ranch,** 20.90 103 ⇓P P 04 23 14.3 +0.3
baz=21,SNR=18
MDND **Maddock** 20.92 69 ⇓P P 04 23 14.0 0.0
baz=21
Z23A **Rita Site, Whi** 20.93 113 ⇑P P 04 23 15.4 +1.2
baz=21,SNR=5.9
SML **Sawmill** 21.00 334 *e*P P 04 23 14.5 -0.2
14nm,1.2s
W25A **X Bar L Ranch,** 21.01 106 ⇑P P 04 23 16.4 +1.3
baz=21,SNR=9.2
Y24A **Capitan** 21.06 111 ⇓P P 04 23 16.9 +1.2
baz=21,SNR=5.5
PMR **Palmer** 21.09 333 *e*P P 04 23 15.7 +0.1
22nm,1.0s
V26A **Tequesquite Ra** 21.17 104 ⇑P P 04 23 18.4 +1.6
baz=21,SNR=5.7
X25A **Clemmons Ranch** 21.24 108 ⇓P P 04 23 19.3 +1.6
baz=21,SNR=10
T27A **Campo** 21.31 100 ⇓P P 04 23 19.7 +1.4
baz=21
DOT **Dot Lake** 21.36 342 *e*P P 04 23 18.9 +0.4
12nm,0.9s
Z24A **Sheeppen Canyo** 21.46 112 ⇓P P 04 23 21.9 +1.8
baz=22,SNR=35
W26A **Owens Ranch, T** 21.56 106 ⇑P P 04 23 22.8 +1.8
baz=22,SNR=15
Y25A **Mesa, Roswell** 21.57 110 ⇓P P 04 23 22.4 +1.3
baz=22,SNR=10
BRSD **Miller** 21.68 78 ⇓P P 04 23 23.0 +0.9
baz=22
T28A **Walsh** 21.71 99 ⇑P P 04 23 23.5 +0.9
baz=22
124A **Stringfield Ra** 21.79 113 ⇑P P 04 23 24.7 +1.1
baz=22,SNR=29
EGAK **Eagle** 21.79 346 *e*P P 04 23 22.6 -0.5
19nm,1.3s
X26A **CR and CF Fran** 21.82 107 ⇓P P 04 23 24.6 +0.8
baz=22
Z25A **Roswell** 21.93 111 ⇑P P 04 23 25.5 +0.5
baz=22
W27A **Bowe Ranch, En** 22.06 105 ⇓P P 04 23 27.2 +0.9
baz=22
CHGN **Chignik** 22.11 314 *e*P P 04 23 30.7 +4.1
224A **Cornudas Mount** 22.13 115 ⇓P P 04 23 28.6 +1.4
baz=22,SNR=22
Y26A **Elida** 22.16 109 ⇑P P 04 23 28.3 +0.9
baz=22,SNR=6.7
X27A **F and S Farms,** 22.26 106 ⇑P P 04 23 29.4 +0.9
baz=22,SNR=9.1
V28A **Channing** 22.29 103 ⇑P P 04 23 29.8 +1.0
baz=22,SNR=13
125A **Gardner Draw,** 22.34 112 ⇓P P 04 23 30.6 +1.2
baz=22,SNR=29
Z26A **Caprock** 22.43 110 ⇓P P 04 23 30.8 +0.4
baz=22,SNR=6.8
MNTX **Cornudas Mount** 22.46 115 ⇑P P 04 23 30.3 -0.3
baz=22,SNR=7.4
225A **Deer Hill, Car** 22.57 114 ⇓P P 04 23 32.1 +0.2
baz=23,SNR=22
Y27A **Causey** 22.63 108 ⇓P P 04 23 32.6 +0.1
baz=23,SNR=6.6
MCK **McKinley** 22.66 337 *e*P P 04 23 32.5 +0.1
30nm,1.1s
126A **Clayton Basin,** 22.77 111 ⇓P P 04 23 35.2 +1.1
baz=23,SNR=6.1
GDL2 **Guadalupe Moun** 22.82 113 *e*P P 04 23 35.8 +1.3
MSTX **Muleshoe** 22.85 107 ⇓P P 04 23 35.4 +0.6
baz=23
Z27A **Tatum** 22.92 109 ⇑P P 04 23 36.2 +0.7
baz=23,SNR=26
325A **Bean Ranch, Si** 22.94 115 ⇑P P 04 23 36.3 +0.4
baz=23,SNR=15
X28A **Dimmitt** 22.95 105 ⇓P P 04 23 36.6 +0.7
baz=23,SNR=6.7
ILAR **Eielson Array** 22.97 341 P P 04 23 35.2 -0.4
ILAR **Eielson Array** 22.97 341 P P 04 23 35.2 -0.4
16nm,1.1s,baz=154,slow=8.3,SNR=54
ILAR LR LR 04 31 10.6
comp=Z,369nm,21.5s,baz=353,slow=33
226B **Tecolote Peak,** 23.03 113 ⇓P P 04 23 37.1 +0.5
baz=23
PPLA **Purkeypile** 23.03 333 *e*P P 04 23 36.4 0.0
50nm,1.2s
SVW2 **Sparrevohn** 23.10 327 *e*P P 04 23 38.3 +1.2
21nm,1.3s
AMTX **Amarillo** 23.12 104 *e*P P 04 23 39.0 +1.4
AMTX **Amarillo** 23.12 104 ⇑P P 04 23 38.4 +0.9
baz=23
127A **Arkansas Junct** 23.20 111 ⇓P P 04 23 39.4 +0.9
baz=23
Y28A **McKinney Farm,** 23.25 107 ⇑P P 04 23 39.2 +0.3
baz=23,SNR=13
425A **Indio Mountain** 23.32 116 ⇑P P 04 23 40.0 +0.4
baz=23
X29A **Tulia** 23.34 105 ⇑P P 04 23 40.4 +0.6
baz=23
V30A **Spur Ranch, Mi** 23.37 101 ⇑P P 04 23 39.9 -0.1
baz=23
AGMN **Agassiz Nation** 23.42 68 *e*P P 04 23 39.2 -1.2
26nm,0.9s
T31A **Randall Ranch,** 23.46 97 ⇑P P 04 23 40.6 -0.3
baz=23
ECSD **EROS Data Cent** 23.47 79 *e*P P 04 23 40.2 -0.7
48nm,1.0s
Z28A **Tucker Farm, M** 23.50 108 ⇑P P 04 23 41.3 -0.1
baz=24
326A **Caldwell Ranch** 23.63 114 ⇓P P 04 23 43.3 +0.7
baz=24
U31A **Nine Bar Ranch** 23.67 99 ⇓P P 04 23 43.0 -0.1
baz=24
Y29A **Porterfield Fa** 23.67 106 ⇓P P 04 23 43.5 +0.4
baz=24,SNR=10
128A **Castleberry Fa** 23.82 110 ⇓P P 04 23 44.6 0.0
baz=24
X30A **Coker Ranch, T** 23.91 104 ⇑P P 04 23 45.6 +0.3
baz=24,SNR=9.1
V31A **Spring Creek L** 23.96 100 ⇑P P 04 23 46.0 +0.2
baz=24
Z29A **Hungry Hill Ra** 23.99 107 ⇓P P 04 23 46.1 0.0
baz=24,SNR=8.2
426A **McDonald Obser** 24.01 115 ⇑P P 04 23 46.7 +0.2
baz=24,SNR=17
228A **UT Block 9, Go** 24.05 111 ⇑P P 04 23 46.3 -0.4
baz=24
W31A **Holland Ranch,** 24.18 101 ⇑P P 04 23 45.1 -2.7
baz=24
427A **Hayter Ranch,** 24.31 114 ⇓P P 04 23 49.0 0.0
baz=24,SNR=13
328A **Wristen Ranch,** 24.36 112 ⇓P P 04 23 48.6 -0.9
baz=24
Z30A **Sanderson Ranc** 24.37 107 ⇑P P 04 23 48.6 -1.1
baz=24
526A **Mary Lane Ranc** 24.37 117 ⇓P P 04 23 49.9 +0.1
baz=24,SNR=16
INK **Inuvik** 24.40 356 P P 04 23 48.4 -1.0
INK **Inuvik** 24.40 356 P P 04 23 48.4 -1.0
3.6nm,0.8s,baz=180,slow=20
X31A **McDonald Ranch** 24.44 103 ⇑P P 04 23 49.5 -0.7
baz=24
Y31A **Rekieta Farm,** 24.60 104 ⇑P P 04 23 51.8 +0.1
baz=25,SNR=5.9
527A **Woodward Ranch** 24.63 116 ⇓P P 04 23 52.0 0.0
baz=25
229A **Bryant Ranch,** 24.67 110 ⇓P P 04 23 52.6 +0.2
baz=25
626A **Big Bend Ranch** 24.69 118 ⇓P P 04 23 52.5 0.0
baz=25,SNR=24
KSU1 **Kansas State U** 24.85 90 *e*P P 04 23 55.4 +1.6
34nm,0.8s
329A **Wagon Wheel Ra** 24.85 111 ⇓P P 04 23 54.0 0.0
baz=25,SNR=5.8
428A **Kincaid Ranch,** 24.86 113 ⇓P P 04 23 54.7 +0.6
baz=25,SNR=15
130A **Snyder** 24.88 108 ⇓P P 04 23 55.0 +0.8
baz=25,SNR=5.3
Z31A **Sharp Cattle R** 25.04 105 ⇑P P 04 23 55.2 -0.4
baz=25
TXAR **Lajitas Array** 25.13 117 P P 04 23 56.6 +0.1
TXAR **Lajitas Array** 25.13 117 P P 04 23 56.6 +0.1
3.8nm,0.9s,baz=298,slow=6.9,SNR=18
TXAR LR LR 04 33 41.0
comp=Z,203nm,21.2s,baz=275,slow=36
Y32A **R-V Farms, Ver** 25.15 103 ⇓P P 04 23 57.0 +0.4
baz=25,SNR=6.0
528A **Cox Ranch, San** 25.15 115 ⇑P P 04 23 57.3 +0.5
baz=25,SNR=20
230A **Sterling City** 25.20 109 ⇑P P 04 23 57.9 +0.8
baz=25,SNR=6.8
WMOK **Wichita Mounta** 25.23 101 *e*P P 04 23 57.9 +0.6
53nm,1.0s
627A **Terlingua Ranc** 25.23 117 ⇑P P 04 23 57.8 +0.3
baz=25,SNR=7.0
LPIG **La Paz** 25.27 136 LR LR 04 32 35.8
comp=Z,37nm,20.7s,baz=17,slow=34
330A **Mertzon** 25.44 110 ⇓P P 04 23 59.5 +0.1
baz=25,SNR=11
429A **Davenport Ranc** 25.45 113 ⇑P P 04 23 59.4 0.0
baz=25,SNR=19
Z32A **Haskell** 25.50 105 ⇓P P 04 23 59.9 +0.1
baz=26,SNR=14
628A **Black Gap, Mar** 25.53 116 ⇑P P 04 24 00.4 +0.3
baz=26,SNR=4.4
529A **Stev Forest Ra** 25.55 114 ⇓P P 04 24 01.4 +1.0
baz=26,SNR=35
231A **Bronte** 25.71 108 ⇑P P 04 24 01.4 -0.3
baz=26,SNR=5.8
COLD **Coldfoot** 25.77 341 *e*P P 04 24 01.8 -0.1
12nm,1.2s
ABTX **Abilene, Hawle** 25.77 106 ⇓P P 04 24 02.2 -0.1
baz=26
430A **Baggett Ranch,** 25.79 111 ⇑P P 04 24 02.9 +0.4
baz=26,SNR=10
331A **San Angelo** 26.01 110 ⇑P P 04 24 04.5 0.0
baz=26,SNR=12
530A **J-C Ranch, Com** 26.12 113 ⇓P P 04 24 06.0 +0.5
baz=26,SNR=5.8
232A **Coleman** 26.20 108 ⇑P P 04 24 07.3 +1.1
baz=26,SNR=15
431A **Sonora** 26.27 111 ⇓P P 04 24 07.4 +0.5
baz=26,SNR=5.8
EYMN **Ely** 26.36 68 *e*P P 04 24 06.8 -0.7
213nm,2.8s
332A **Millersview** 26.43 109 ⇓P P 04 24 08.5 +0.2
baz=26,SNR=13
531A **Rocksprings** 26.64 112 ⇑P P 04 24 10.2 +0.1
baz=27,SNR=6.4
432A **Menard** 26.70 110 ⇑P P 04 24 11.2 +0.5
baz=27
TUL1 **Tulsa** 26.79 96 ⇓P P 04 24 11.4 0.0
baz=27
JCT **Junction City** 26.94 110 *e*P P 04 24 13.0 +0.1
22nm,1.2s
JCT **Junction City** 26.94 110 ⇑P P 04 24 12.9 +0.1
baz=27,SNR=7.0
532A **Rocksprings** 27.09 111 ⇓P P 04 24 14.4 +0.2
baz=27,SNR=6.8
632A **Uvalde** 27.57 112 ⇑P P 04 24 18.7 +0.2
baz=28
732A **Laxon Ranch,** 27.95 113 ⇓P P 04 24 22.5 +0.7
baz=28
COWI **Conover** 28.22 72 *e*P P 04 24 24.0 -0.2
6.9nm,0.8s
HDIL **Hopedale** 29.58 83 *e*P P 04 24 39.0 +2.6
28nm,1.1s
HKT **Hockley** 29.98 107 *e*P P 04 24 43.5 +3.7
38nm,1.4s
TNA **Tin City** 30.17 329 *e*P P 04 24 42.3 +1.2
11nm,1.0s
SFIN **Scholer Farm** 31.22 82 ⇑P P 04 24 50.0 -0.8
baz=31
OXF **Oxford** 32.04 94 *e*P P 04 24 57.7 -0.3
88nm,1.0s
BLO **Bloomington** 32.08 84 *e*P P 04 25 00.9 +2.6
ACSO **Alum Creek Sta** 34.20 80 *e*P P 04 25 20.1 +3.2
101nm,2.0s
RES **Resolute Bay** 34.28 15 P P 04 25 16.8 -0.4
RES **Resolute Bay** 34.28 15 P P 04 25 16.8 -0.4
3.2nm,0.7s,baz=229,slow=11,SNR=23
LRAL **Lakeview Retre** 34.52 94 P P 04 25 22.1 +2.4
18nm,1.4s
TKL **Tuckaleechee C** 35.55 88 LR LR 04 40 31.2
comp=Z,948nm,19.3s,baz=275,slow=37
ALLY **Alegheny Colle** 35.68 76 *e*P P 04 25 33.2 +3.5
FX1 **Attu Island--F** 38.21 304 LR LR 04 37 37.8
comp=Z,117nm,19.1s,baz=296,slow=30
CMIG **Matias Romero** 39.54 122 P P 04 26 00.9 -1.5
CMIG **Matias Romero** 39.54 122 P P 04 26 00.9 -1.5
11nm,1.1s,baz=315,slow=6.7,SNR=11
SCHQ **Schefferville** 40.70 52 LR LR 04 42 55.6
comp=Z,500nm,20.3s,baz=42,slow=36
SUMG **Summit** 48.87 24 *i* P P 04 27 22.5 +5.5
8.7nm,0.9s
TAOE **Nuku Hiva Isla** 53.59 193 *e*T T 05 25 28.1
363nm,0.3s
PMOR **Pomariorio Ree** 61.19 201 *e*T T 05 34 56.4
31nm,0.2s
OTAV **Otavalo** 62.74 119 *e*P P 04 28 57.6 +0.4
PPT2 **Papeete2** 64.11 202 *e*LQ LQ 04 45 09.3
814nm,28.5s
PPT2 89nm,25.8s *e*LR LR 04 48 01.9
PPT2 7.5nm,0.4s *e*T T 05 38 34.6
PAE **Paea** 64.18 202 *e*T T 05 38 39.9
1.7nm,0.3s
TVO **Taravao** 64.20 201 *e*T T 05 38 42.3
43nm,0.3s
USRK **Ussuriysk Arra** 66.23 309 P P 04 29 18.1 -1.1
1.2nm,0.6s,baz=89,slow=10,SNR=4.3
USRK LR LR 04 57 07.3
comp=Z,92nm,20.5s,baz=308,slow=35
RKT **Rikitea** 67.06 186 *e*T T 05 42 18.7
6.6nm,0.3s
MDJ **Mudanjiang** 67.30 311 P P 04 29 25.8 -0.2
MDJ pP **pP** 04 29 28.9 -1.4
MDJ PP **PP** 04 31 53.5 -0.4
MDJ S **S** 04 38 21.8 +1.1
MDJ ScS **SKSac** 04 39 23.3 +0.2
MDJ pmax pmax
comp=Z,5.0nm,1.8s
MDJ pmax pmax
comp=Z,57nm,5.0s
MDJ LR LR
comp=N,100nm,44.8s
MDJ LR LR
comp=E,110nm,61.2s
MDJ LR LR
comp=Z,64nm,39.4s
TBI **Tubuai** 69.59 200 *e*T T 05 45 25.8
comp=Z,17nm,0.2s
CN2 **Changchun** 70.08 312 *e*P P 04 29 41.9 -1.5
CN2 *es*P **sP** 04 29 48.9 -0.3
NB2 **NORSAR Subarra** 70.44 19 P P 04 29 48.4 +3.0
comp=Z,3.8nm,1.0s,baz=335,slow=5.9
NOA **NORSAR Array B** 70.44 19 P P 04 29 46.8 +1.4
NOA **NORSAR Array B** 70.44 19 P P 04 29 46.8 +1.4
comp=Z,2.8nm,0.8s,baz=333,slow=5.9,SNR=9.2
NOA LR LR 05 01 23.1
comp=Z,40nm,20.2s,baz=335,slow=36
FINES **FINESS Array B** 72.96 12 P P 04 30 00.5 +0.1
FINES **FINESS Array B** 72.96 12 P P 04 30 00.5 +0.1
comp=Z,3.2nm,0.9s,baz=4.2,slow=5.7,SNR=5.2
KSRS **Korea Array** 72.97 306 P P 04 30 01.5 +0.5
comp=Z,1.4nm,0.9s,baz=32,slow=7.2,SNR=2.5
KSAR **Wonju Array Be** 73.00 306 P P 04 30 01.5 +0.3
SONM **Songino Array** 76.20 325 P P 04 30 19.3 -0.4
SONM **Songino Array** 76.20 325 P P 04 30 19.3 -0.4
comp=Z,1.2nm,0.8s,baz=46,slow=6.4,SNR=7.1
SONM LR LR 05 04 15.3
comp=Z,135nm,19.3s,baz=112,slow=36
QUIF **Quistinic** 76.88 34 *e*P P 04 30 29.0 +5.7
QUIF **Quistinic** 76.88 34 *e*P P 04 30 29.0 +5.7
BJI **Beijing** 77.62 314 P P 04 30 27.6 0.0
BJI S **S** 04 40 18.1 -0.7
BJI SS **SS** 04 45 17.1 -0.2
BJI pmax pmax
comp=Z,10.0nm,0.5s
BJI pmax pmax
comp=Z,110nm,5.3s
BJI LR LR
comp=N,130nm,26.3s
BJI LR LR
comp=E,120nm,25.5s
BJI LR LR
comp=Z,46nm,25.6s
ZALV **Zalesovo Beam** 78.09 340 P P 04 30 29.1 -0.9
ZALV **Zalesovo Beam** 78.09 340 P P 04 30 29.1 -0.9
comp=Z,2.2nm,0.7s,baz=13,slow=5.2,SNR=5.1
ZALV LR LR 05 06 05.2
comp=Z,69nm,19.5s,baz=247,slow=37
HHC **Hu-ho-hao-te** 79.32 318 *e*P P 04 30 37.3 +0.1
HHC PcP **PcP** 04 30 46.3 +0.9
HHC PP **PP** 04 33 37.6 +1.2
HHC S **S** 04 40 34.5 -2.8
HHC sS **sS** 04 40 42.5 -1.9
HHC SKS **SKSac** 04 40 47.3 -5.9
HHC ScS **SKKSac** 04 40 55.3 +0.7
HHC SS **SS** 04 45 43.0 -0.1
HHC pmax pmax
comp=Z,29nm,0.7s
HHC pmax pmax
comp=Z,240nm,7.4s
HHC LR LR
comp=N,250nm,18.8s
HHC LR LR
comp=E,210nm,17.9s
HHC LR LR
comp=Z,270nm,17.7s
CLL **Collm** 79.54 23 *e*P P 04 30 39.0 +1.0
CLL LmV 05 07 00.0
comp=Z,100nm,20.3s
BRG **Berggiesshubel** 80.19 23 *e*(P) PcP 04 31 00.1 +11
comp=Z,2.5nm,1.0s
CDF **Champ du Feu** 80.32 28 *e*P P 04 30 47.3 +4.9
comp=Z,9.0nm,0.9s
CDF **Champ du Feu** 80.32 28 *e*P P 04 30 47.3 +4.9
comp=Z,9.0nm,0.9s
BGF **Bois d'Agland** 80.33 31 *e*P P 04 30 47.7 +5.3
comp=Z,21nm,1.2s
BGF **Bois d'Agland** 80.33 31 *e*P P 04 30 47.7 +5.3
comp=Z,21nm,1.2s
HAU **Haudompre** 80.36 28 *e*P P 04 30 47.2 +4.6
HAU **Haudompre** 80.36 28 *e*P P 04 30 47.2 +4.6
HINF **Hinteralfeld** 80.69 28 *e*P P 04 30 49.0 +4.6
comp=Z,5.8nm,0.8s
HINF **Hinteralfeld** 80.69 28 *e*P P 04 30 49.0 +4.6
comp=Z,5.8nm,0.8s
BRVK **Borovoye** 81.80 348 *e*P P 04 30 49.5 -0.6
comp=Z,5.1nm,0.8s
LPAZ **La Paz** 81.91 122 P P 04 30 50.0 -1.9
LPAZ **La Paz** 81.91 122 P P 04 30 50.0 -1.9
comp=Z,2.7nm,0.9s,baz=352,slow=4.7,SNR=9.2
GERES **GERESS Array B** 81.95 24 P P 04 30 50.9 -0.2
GERES **GERESS Array B** 81.95 24 P P 04 30 50.9 -0.2
comp=Z,0.4nm,0.5s,baz=352,slow=6.0,SNR=3.1
GERES LR LR 05 09 26.0
comp=Z,95nm,18.3s,baz=100,slow=37
KURK **Kurchatov** 82.52 343 *e*P P 04 30 53.0 -0.9
comp=Z,11nm,1.3s
LPG **La Plagne** 82.66 29 *e*P P 04 31 01.4 +6.3
comp=Z,11nm,0.8s
LPG **La Plagne** 82.66 29 *e*P P 04 31 01.4 +6.3
comp=Z,11nm,0.8s
VYHS **Vyhne** 83.67 21 *e*P P 04 31 01.2 +1.3
AKASG **Malin Array Be** 83.78 14 P P 04 30 58.6 -1.8
AKASG **Malin Array Be** 83.78 14 P P 04 30 58.6 -1.8
comp=Z,0.9nm,0.5s,baz=341,slow=4.0,SNR=4.8
AKASG LR LR 05 07 35.8
comp=Z,64nm,18.1s,baz=305,slow=35
FRF **La Foret Royal** 84.29 31 *e*P P 04 31 06.9 +3.7
FRF **La Foret Royal** 84.29 31 *e*P P 04 31 06.9 +3.7
MKAR **Makanchi Array** 85.31 339 P P 04 31 06.7 -1.6
MKAR **Makanchi Array** 85.31 339 P P 04 31 06.7 -1.6
comp=Z,0.6nm,0.9s,baz=29,slow=5.3,SNR=4.3
MKAR LR LR 05 11 22.5
comp=Z,86nm,18.8s,baz=83,slow=37
GTA **Gaotai** 85.83 324 *e*P P 04 31 10.8 -0.3
GTA sP **sP** 04 31 16.8 -0.2
GTA pmax pmax
comp=Z,7.0nm,0.6s
SIV **San Ignacio** 86.13 116 P P 04 31 11.9 -0.8
SIV **San Ignacio** 86.13 116 P P 04 31 11.9 -0.8
comp=Z,2.1nm,1.1s,baz=227,slow=7.8,SNR=4.3
WMQ **Urumqi** 86.47 334 P P 04 31 16.9 +2.7
ABKAR **Akbulak array** 86.70 354 *e*P P 04 31 14.1 -0.9
comp=Z,5.6nm,1.0s
DZM **Mont Dzumac** 88.20 237 *e*LR LR 04 59 12.0
comp=Z,205nm,24.2s
CD2 **Chengdu** 91.04 317 P P 04 31 37.3 +1.3
CD2 pP **pP** 04 31 42.1 +1.8
CD2 sP **sP** 04 31 44.3 +2.4
CD2 PP **PP** 04 35 15.0 +3.4
CD2 SKS **SKSac** 04 42 07.1 -0.8
CD2 S **S** 04 42 31.0 -2.4
CD2 sS **ScS** 04 42 38.5 +1.9
CD2 SS **SS** 04 48 36.3 +0.7
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.4s
GYA **Guiyang** 93.13 312 P P 04 31 46.8 +1.0
GYA PP **PP** 04 35 31.0 +2.7
GYA SKS **SKSac** 04 42 18.6 -1.3
GYA S **S** 04 42 48.9 -3.6

GYA				SS	SS	04 49 06.3	+0.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,80nm,5.0s						
GYA				LR	LR		
	comp=N,430nm,20.1s						
GYA				LR	LR		
	comp=E,290nm,21.2s						
GYA				LR	LR		
	comp=Z,370nm,20.4s						
KSH	**Kashi**	**93.72**	**341**	*e*P	**P**	**04 31 48.8**	**+0.5**
KSH				*e*pP	**pP**	**04 31 55.5**	**+2.8**
KSH				*e*sP	**sP**	**04 31 57.6**	**+3.4**
KSH				PP	PP	04 35 37.9	+5.5
KSH				SKS	**SKSac**	**04 42 21.4**	**-1.4**
KSH				S	**S**	**04 42 55.3**	**-2.0**
KSH				SS	**SS**	**04 49 18.0**	**+4.5**
KSH				pmax	pmax		
	comp=Z,100nm,3.1s						
KSH				LR	LR		
	comp=Z,220nm,6.0s						
VNA3	**Neumayer Olymp**	**140.46**	**154**	*e*PKPdf	**PKPdf**	**04 37 56.7**	**-2.6**
VNA2	**Neumayer--Watz**	**141.25**	**154**	*e*PKPdf	**PKPdf**	**04 38 01.5**	**+0.8**
	baz=300,slow=5.0						

GUC 16 04:20:46.3±0.6, 29°90S×71°23W, h54km±17km, ML3.9, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	**0.45**	**126**	*e*P	Pn	04 20 58.4	+0.7
TLL				*i* S	Sn	04 21 07.0	+1.2
LCO	**Las Campanas**	**1.00**	**27**	*i* P	Pn	04 21 05.2	+0.7
LCO				*i* S	Sn	04 21 19.3	+1.3
LCO				AML	AML	04 21 20.2	
	comp=E,3μm,0.3s						
CMCH	**Combarbala**	**1.28**	**171**	*i* P	Pn	04 21 07.7	-0.4
CMCH				*i* S	Sn	04 21 24.3	+0.1
CMCH				AML	AML	04 21 27.2	
	comp=N,3μm,0.7s						
CHNG	**Los Chungos**	**1.99**	**187**	*e*P	Pn	04 21 17.8	+0.3
CHNG				*i* S	Sn	04 21 41.7	+0.5
ROCH	**El Roble**	**3.06**	**177**	*i* P	Pn	04 21 33.6	+1.1
ROCH				AML	AML	04 22 24.9	
	comp=E,308nm,0.6s						
CLCH	**Cerro Calan**	**3.53**	**171**	*e*P	Pn	04 21 39.3	+0.5
CLCH				AML	AML	04 22 39.4	
	comp=E,242nm,0.5s						

CASC ***16*** *04:28:56.2±2.8, 12°.72N×91°.06W, h0km±13km, MD4.0, ML4.1, mb4.3(NEIC)*

ISCJB ***16*** *04:29:00.1±0.4, 13°.14N±0°.05×90°.94W±0°.03, h10km, mb4.5/57, MS3.8/9, Error ellipse: s-maj=7.3km s-min=3.7km az=18.4*

IDC ***16*** *04:29:00.2±0.7, 13°.53N×90°.25W, h0km, mb4.2/18, mb1 4.5/19, mb1mx4.3/30, mbtmp4.2/19, ML3.4/1, MS3.9/8, Ms1 3.9/8, ms1mx3.5/34, Error ellipse: s-maj=27.1km s-min=11.9km az=56.0*

NEIC ***16*** *04:29:08.1±1.3, 13°.26N×90°.66W, h65km±11km, mb4.6/45, Error ellipse: s-maj=14.4km s-min=7.1km az=46.0*

ISC 16 04:28:59.8±2.5, 12°.84N±0°.07×90°.95W±0°.04, h17km±13km, n353, σ1°33/316, mb4.6/57, MS3.8/9, 112C-119D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**1.58**	**12**	*e*P	**Pn**	**04 29 26.2**	**-1.1**
PCG				*e*S	**Sg**	**04 29 53.6**	**+2.7**
FUG	**Fuego 3**	**1.60**	**4**	*e*P	**Pn**	**04 29 26.3**	**-1.2**
JAT	**Jato**	**1.61**	**336**	*e*P	**Pb**	**04 29 27.4**	**-1.8**
JAT				*e*S	**Sg**	**04 29 52.0**	**+0.2**
SBLS	**San Blas**	**1.63**	**52**	*e*P	**Pn**	**04 29 27.9**	**-0.1**
RTR	**El Retiro**	**1.65**	**50**	*e*P	**Pn**	**04 29 28.1**	**-0.1**
SNJE	**San Jose**	**1.66**	**52**	*e*P	**Pn**	**04 29 28.3**	**-0.1**
FG6		**1.71**	**2**	*e*P	**Pn**	**04 29 27.9**	**-1.2**
FG6				*e*S	**Sg**	**04 29 56.7**	**+1.6**
NBG	**Las Nubes**	**1.83**	**19**	*e*P	**Pn**	**04 29 30.3**	**-0.5**
NBG				*e*S	**Sb**	**04 29 59.4**	**+3.5**
BOQS	**Boqueron**	**1.85**	**61**	*e*P	**Pn**	**04 29 31.4**	**+0.3**
SNET	**Serv Nac Est T**	**1.88**	**63**	*e*P	**Pb**	**04 29 32.7**	**-1.0**
SNET				*e*S	**Sn**	**04 29 58.0**	**+3.5**
SNET				AML	AML	04 30 16.8	
	comp=Z,2μm,0.5s						
LFU	**La Fuente**	**2.00**	**63**	*e*P	**Pn**	**04 29 34.0**	**+1.0**
LBRS	**Las Brisas**	**2.06**	**64**	*e*P	**Pn**	**04 29 35.0**	**+1.2**
MTO2	**Montecristo 2**	**2.19**	**45**	*e*P	**Pn**	**04 29 35.8**	**+0.1**
MRL	**Marmol**	**2.53**	**29**	*e*P	**Pn**	**04 29 41.6**	**+1.3**
MRL				*e*S	**Sn**	**04 30 14.7**	**+3.8**
BLLM	**Bellamira**	**2.71**	**77**	*e*P	**Pn**	**04 29 44.3**	**+1.6**
CAHU	**Cacacuatique**	**2.82**	**71**	*e*P	**Pn**	**04 29 45.7**	**+1.3**
CNCH	**Conchagua**	**3.07**	**82**	*e*P	**Pn**	**04 29 49.4**	**+1.7**
TGUH	**Tegucigalpa,Un**	**3.78**	**71**	*e*Pn	**Pn**	**04 29 58.4**	**+1.1**
CMIG	**Matias Romero**	**5.68**	**319**	Pn	**Pn**	**04 30 24.6**	**+1.1**
CMIG				Sn	**Sn**	**04 31 33.2**	**+4.7**
CMIG	**Matias Romero**	**5.68**	**319**	Pn	**Pn**	**04 30 24.6**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=134,slow=11,SNR=19						
CMIG				Sn	**Sn**	**04 31 33.2**	**+4.7**
	comp=Z,4.4nm,0.3s,baz=87,slow=15,SNR=4.1						
JTS	**JuntasAbangare**	**6.40**	**113**	*e*Pn	Pn	04 30 39.7	+6.3
JTS				Lg	Lg	04 32 15.9	
JTS	**JuntasAbangare**	**6.40**	**113**	Pn	Pn	04 30 38.3	+4.9
	comp=Z,0.8nm,0.3s,baz=222,slow=19,SNR=13						
JTS				Lg	Lg	04 32 15.9	
	comp=Z,1.1nm,0.3s,baz=43,slow=20,SNR=4.5						
TEIG	**Tepich**	**7.78**	**19**	Pn	**Pn**	**04 30 51.4**	**-0.9**
TEIG	**Tepich**	**7.78**	**19**	Pn	**Pn**	**04 30 51.4**	**-0.9**
	comp=Z,5.0nm,0.3s,baz=209,slow=12,SNR=27						
HKT	**Hockley**	**17.62**	**346**	*e*P	**P**	**04 33 07.4**	**+2.0**
	comp=Z,24nm,1.4s						
732A	**Laxson Ranch,**	**17.90**	**333**	⇓P	**P**	**04 33 08.5**	**-0.1**
	baz=18						
ROSC	**El Rosal**	**18.23**	**114**	P	P	04 33 19.8	+7.1
ROSC				*e*Pn	Pn	04 33 20.5	+7.9
ROSC	**El Rosal**	**18.23**	**114**	P	P	04 33 19.8	+7.1
	comp=Z,0.3nm,0.3s,baz=181,slow=16,SNR=5.0						
632A	**Uvalde**	**18.50**	**335**	⇑P	**P**	**04 33 14.5**	**-0.8**
	baz=18						
631A	**Perdido Creek**	**18.76**	**333**	⇓P	**Pn**	**04 33 18.0**	**-0.6**
	baz=19						
532A	**Rocksprings**	**19.10**	**336**	⇓P	**Pn**	**04 33 21.7**	**-1.0**
	baz=19						
JCT	**Junction City**	**19.37**	**336**	⇓P	**P**	**04 33 24.5**	**-0.3**
	baz=19						
531A	**Rocksprings**	**19.39**	**334**	⇑P	**Pn**	**04 33 25.1**	**-1.3**
	baz=19						
TIGA	**Tifton**	**19.71**	**19**	⇓P	**P**	**04 33 27.2**	**-1.3**
	baz=19						
432A	**Menard**	**19.72**	**337**	⇓P	**P**	**04 33 27.9**	**-0.8**
	baz=20						
530A	**J-C Ranch, Com**	**19.73**	**332**	⇑P	**Pn**	**04 33 30.7**	**+0.4**
	baz=20,SNR=11						
431A	**Sonora**	**19.87**	**335**	⇓P	**Pn**	**04 33 31.6**	**-0.4**
	baz=20,SNR=12						
628A	**Black Gap, Mar**	**19.93**	**328**	⇓P	**Pn**	**04 33 32.7**	**0.0**
	baz=20,SNR=11						
WHTX	**Lake Whitney**	**19.98**	**344**	⇓P	**P**	**04 33 29.7**	**-1.7**
	baz=20						
529A	**Stev Forest Ra**	**20.12**	**331**	⇑P	Pn	04 33 33.6	-1.4
	baz=20,SNR=9.5						
332A	**Millersview**	**20.15**	**338**	⇑P	**P**	**04 33 32.8**	**-0.6**
	baz=20,SNR=13						
627A	**Terlingua Ranc**	**20.16**	**327**	⇓P	Pn	04 33 35.7	+0.1
	baz=20,SNR=27						
TXAR	**Lajitas Array**	**20.22**	**326**	P	Pn	04 33 36.0	-0.2
TXAR	**Lajitas Array**	**20.22**	**326**	P	Pn	04 33 36.0	-0.2
	comp=Z,10.0nm,0.9s,baz=149,slow=12,SNR=28						
430A	**Baggett Ranch,**	**20.23**	**334**	⇑P	Pn	04 33 35.1	-1.1
	baz=20,SNR=22						
SDV	**Santo Domingo**	**20.33**	**99**	*e*P	Pn	04 33 37.5	-0.3
	comp=Z,11nm,0.8s						
331A	**San Angelo**	**20.35**	**336**	⇓P	**P**	**04 33 35.6**	**+0.1**
	baz=20,SNR=15						
429A	**Davenport Ranc**	**20.38**	**332**	⇓P	Pn	04 33 36.7	-1.4
	baz=20,SNR=14						
LRAL	**Lakeview Retre**	**20.43**	**10**	*e*Pn	Pn	04 33 40.1	+1.7
	comp=Z,38nm,1.4s						
528A	**Cox Ranch, San**	**20.43**	**329**	⇓P	Pn	04 33 37.7	-0.9
	baz=20,SNR=11						
232A	**Coleman**	**20.57**	**339**	⇓P	**P**	**04 33 37.0**	**-1.0**
	baz=20						
626A	**Big Bend Ranch**	**20.65**	**326**	⇓P	Pn	04 33 40.4	-0.8
	baz=20,SNR=22						
330A	**Mertzon**	**20.74**	**335**	⇓P	**P**	**04 33 39.3**	**-0.5**
	baz=21,SNR=13						
527A	**Woodward Ranch**	**20.83**	**328**	⇓P	Pn	04 33 41.7	-1.8
	baz=21						
428A	**Kincaid Ranch,**	**20.84**	**331**	⇓P	**P**	**04 33 41.3**	**+0.4**
	baz=21,SNR=19						
231A	**Bronte**	**20.86**	**337**	⇓P	**P**	**04 33 40.2**	**-0.9**
	baz=21						
526A	**Mary Lane Ranc**	**21.02**	**327**	⇑P	**P**	**04 33 44.8**	**+1.9**
	baz=21,SNR=21						
230A	**Sterling City**	**21.13**	**335**	⇑P	**P**	**04 33 43.4**	**-0.6**
	baz=21						
329A	**Wagon Wheel Ra**	**21.16**	**333**	⇑P	**P**	**04 33 43.8**	**-0.5**
	baz=21,SNR=8.2						
ABTX	**Abilene, Hawle**	**21.24**	**339**	⇑P	**P**	**04 33 43.9**	**-1.3**
	baz=21						
427A	**Hayter Ranch,**	**21.29**	**329**	⇑P	**P**	**04 33 46.4**	**+0.6**
	baz=21,SNR=13						
328A	**Wristen Ranch,**	**21.44**	**331**	⇑P	**P**	**04 33 47.9**	**+0.6**
	baz=21,SNR=38						
426A	**McDonald Obser**	**21.47**	**328**	⇑P	**P**	**04 33 48.9**	**+1.2**
	baz=21,SNR=35						
LPIG	**La Paz**	**21.48**	**304**	LR	LR	04 42 55.9	
	comp=Z,22nm,21.0s,baz=206,slow=39						
229A	**Bryant Ranch,**	**21.49**	**334**	⇑P	**P**	**04 33 47.8**	**-0.1**
	baz=21						
GOGA	**Godfrey**	**21.59**	**17**	*e*P	**P**	**04 33 50.2**	**+1.4**
	comp=Z,14nm,1.0s						
OXF	**Oxford**	**21.62**	**3**	*e*P	**P**	**04 33 50.1**	**+1.0**
	comp=Z,82nm,1.3s						
Z32A	**Haskell**	**21.81**	**340**	⇑P	**P**	**04 33 50.0**	**-1.2**
	baz=22,SNR=12						
UALR	**University of**	**21.87**	**357**	*e*P	**P**	**04 33 51.5**	**-0.3**
	comp=Z,301nm,2.8s						
326A	**Caldwell Ranch**	**21.96**	**329**	⇓P	**P**	**04 33 53.5**	**+0.6**
	baz=22,SNR=53						
228A	**UT Block 9, Go**	**21.96**	**333**	⇑P	**P**	**04 33 52.6**	**-0.3**
	baz=22						
Z31A	**Sharp Cattle R**	**22.05**	**339**	⇓P	**P**	**04 33 51.6**	**-2.2**
	baz=22,SNR=7.6						
425A	**Indio Mountain**	**22.07**	**326**	⇑P	**P**	**04 33 55.0**	**+0.9**
	baz=22						
129A	**Stewart Farms,**	**22.09**	**335**	⇓P	**P**	**04 33 53.5**	**-0.8**
	baz=22						
227A	**Bennet, Jal**	**22.20**	**331**	⇑P	**P**	**04 33 55.2**	**-0.3**
	baz=22,SNR=7.9						
128A	**Castleberry Fa**	**22.34**	**334**	⇓P	**P**	**04 33 56.5**	**-0.6**
	baz=22,SNR=6.6						
Z30A	**Sanderson Ranc**	**22.37**	**337**	⇑P	**P**	**04 33 55.8**	**-1.5**
	baz=22						
Y32A	**R-V Farms, Ver**	**22.44**	**341**	⇑P	**P**	**04 33 56.0**	**-2.0**
	baz=22						
325A	**Bean Ranch, Si**	**22.51**	**327**	⇓P	**P**	**04 33 59.3**	**+0.3**
	baz=22,SNR=21						
Z29A	**Hungry Hill Ra**	**22.57**	**336**	⇓P	**P**	**04 33 58.3**	**-1.2**
	baz=22						
226B	**Tecolote Peak,**	**22.67**	**330**	⇑P	**P**	**04 34 00.7**	**+0.2**
	baz=22,SNR=19						
Y31A	**Rekieta Farm,**	**22.67**	**340**	⇓P	**P**	**04 33 58.4**	**-2.1**
	baz=22,SNR=7.0						
SWET	**Sewanee**	**22.74**	**11**	*e*P	**P**	**04 34 00.3**	**-0.8**
	comp=Z,13nm,0.8s						
127A	**Arkansas Junct**	**22.78**	**332**	⇓P	**P**	**04 34 01.1**	**-0.7**
	baz=23						
324A	**Moseley Ranch,**	**22.84**	**326**	⇓P	**P**	**04 34 02.4**	**0.0**
	baz=23,SNR=25						
GDL2	**Guadalupe Moun**	**22.86**	**330**	*e*P	**P**	**04 34 02.3**	**-0.4**
Z28A	**Tucker Farm, M**	**22.88**	**335**	⇑P	**P**	**04 34 01.3**	**-1.5**
	baz=23						
MNTX	**Cornudas Mount**	**22.99**	**327**	*e*P	**P**	**04 34 03.2**	**-0.6**
	comp=Z,44nm,1.5s						
MNTX	**Cornudas Mount**	**22.99**	**327**	⇓P	**P**	**04 34 03.9**	**+0.1**
	baz=23,SNR=27						
225A	**Deer Hill, Car**	**23.02**	**329**	⇑P	**P**	**04 34 04.6**	**+0.3**
	baz=23,SNR=34						
126A	**Clayton Basin,**	**23.06**	**331**	⇓P	**P**	**04 34 04.2**	**-0.4**
	baz=23						
X31A	**McDonald Ranch**	**23.19**	**341**	⇓P	**P**	**04 34 03.5**	**-2.3**
	baz=23						
Z27A	**Tatum**	**23.25**	**333**	⇑P	**P**	**04 34 05.3**	**-1.3**
	baz=23						
X30A	**Coker Ranch, T**	**23.32**	**339**	⇓P	**P**	**04 34 05.7**	**-1.5**
	baz=23,SNR=5.0						
224A	**Cornudas Mount**	**23.36**	**327**	⇑P	**P**	**04 34 08.0**	**+0.2**
	baz=23,SNR=30						
Y28A	**McKinney Farm,**	**23.36**	**336**	⇓P	**P**	**04 34 06.1**	**-1.5**
	baz=23						
125A	**Gardner Draw,**	**23.38**	**330**	⇓P	**P**	**04 34 07.7**	**-0.2**
	baz=23,SNR=14						
TUL1	**Tua**	**23.38**	**350**	⇑P	**P**	**04 34 03.8**	**-4.0**
	baz=23						
ATAH	**Atahualpa**	**23.44**	**147**	P	P	04 34 15.4	+6.5
ATAH	**Atahualpa**	**23.44**	**147**	P	P	04 34 15.4	+6.5
	comp=Z,4.3nm,0.7s,baz=37,slow=6.3,SNR=3.5						
ATAH				LR	LR	04 41 34.3	
	comp=Z,156nm,21.1s,baz=314,slow=32						
Z26A	**Caprock**	**23.56**	**332**	⇓P	**P**	**04 34 08.9**	**-0.8**
	baz=23,SNR=7.9						
X29A	**Tulia**	**23.62**	**337**	⇑P	**P**	**04 34 08.6**	**-1.7**
	baz=23						
TKL	**Tuckaleechee C**	**23.62**	**15**	*e*P	**P**	**04 34 08.8**	**-1.3**
TKL	**Tuckaleechee C**	**23.62**	**15**	P	**P**	**04 34 06.2**	**-3.9**
	comp=Z,15nm,1.0s,baz=179,slow=9.1,SNR=14						
MSTX	**Muleshoe**	**23.63**	**335**	⇑P	**P**	**04 34 08.8**	**-1.5**
	baz=24						
Y27A	**Causey**	**23.72**	**334**	⇑P	**P**	**04 34 09.9**	**-1.3**
	baz=24						
124A	**Stringfield Ra**	**23.81**	**328**	⇑P	**P**	**04 34 13.1**	**+0.8**
	baz=24,SNR=27						
Z25A	**Roswell**	**23.92**	**331**	⇑P	**P**	**04 34 13.2**	**+0.1**
	baz=24,SNR=12						
Y26A	**Elida**	**24.04**	**333**	⇑P	**P**	**04 34 13.7**	**-0.5**
	baz=24						
W29A	**Amarillo**	**24.20**	**338**	⇑P	**P**	**04 34 13.9**	**-1.8**
	baz=24						
222A	**Williams Famil**	**24.24**	**325**	⇓P	**P**	**04 34 17.9**	**+1.8**
	baz=24						
Z24A	**Sheeppen Canyo**	**24.27**	**330**	⇓P	**P**	**04 34 17.3**	**+0.8**
	baz=24,SNR=18						
Y25A	**Mesa, Roswell**	**24.43**	**331**	⇓P	**P**	**04 34 18.0**	**+0.1**
	baz=24,SNR=11						
320A	**Kipp Ranch, An**	**24.51**	**321**	⇓P	**P**	**04 34 21.5**	**+2.8**
	baz=24						
TZTN	**Tazewell**	**24.52**	**14**	*e*P	**P**	**04 34 18.3**	**-0.2**
	comp=Z,18nm,1.0s						
221A	**Mesquite Ranch**	**24.55**	**324**	⇑P	**P**	**04 34 21.2**	**+2.2**
	baz=24,SNR=6.5						
X26A	**CR and CF Fran**	**24.56**	**334**	⇑P	**P**	**04 34 19.1**	**0.0**
	baz=24						
122A	**Conniff Cattle**	**24.63**	**326**	⇑P	**P**	**04 34 21.1**	**+1.4**
	baz=24						
Z23A	**Rita Site, Whi**	**24.66**	**328**	⇑P	**P**	**04 34 20.6**	**+0.7**
	baz=24						
W27A	**Bowe Ranch, En**	**24.69**	**336**	⇓P	**P**	**04 34 20.2**	**0.0**
	baz=24						
Y24A	**Capitan**	**24.79**	**330**	⇓P	**P**	**04 34 22.0**	**+0.8**
	baz=25,SNR=7.6						
SIUC	**Southern Illin**	**24.82**	**3**	*e*P	**P**	**04 34 20.2**	**-0.9**
	comp=Z,29nm,0.9s						
220A	**Playas Peak, P**	**24.91**	**322**	⇓P	**P**	**04 34 24.5**	**+2.2**
	baz=25,SNR=15						
X25A	**Clemmons Ranch**	**24.92**	**332**	⇓P	**P**	**04 34 22.3**	**0.0**
	baz=25						
121A	**Cookes Peak, D**	**24.94**	**325**	⇓P	**P**	**04 34 25.1**	**+2.5**
	baz=25,SNR=18						
V28A	**Channing**	**24.98**	**338**	⇓P	**P**	**04 34 21.8**	**-1.0**
	baz=25						
319A	**Douglas**	**25.00**	**320**	⇓P	**P**	**04 34 25.9**	**+2.9**
	baz=25						
Z22A	**Elephant Butte**	**25.04**	**327**	⇓P	**P**	**04 34 24.4**	**+1.0**
	baz=25						
Y23A	**Lovelace Mesa,**	**25.10**	**329**	⇑P	**P**	**04 34 25.3**	**+1.3**
	baz=25,SNR=14						
USIN	**University of**	**25.19**	**6**	*e*P	**P**	**04 34 27.2**	**+2.7**
	comp=Z,33nm,1.0s						
X24A	**Lazy VL Ranch,**	**25.31**	**331**	⇑P	**P**	**04 34 26.0**	**+0.2**
	baz=25						
W25A	**X Bar L Ranch,**	**25.41**	**334**	⇓P	**P**	**04 34 27.2**	**+0.5**
	baz=25,SNR=5.5						
120A	**U Bar Ranch, L**	**25.44**	**323**	⇑P	**P**	**04 34 29.6**	**+2.6**
	baz=25,SNR=7.8						
Z21A	**St. Cloud Mine**	**25.46**	**326**	⇓P	**P**	**04 34 29.0**	**+1.8**
	baz=25						
BNM	**Barren Site**	**25.56**	**329**	*e*P	**P**	**04 34 29.9**	**+1.7**
	comp=Z,11nm,1.1s						
Y22A	**Socorro**	**25.56**	**328**	⇑P	**P**	**04 34 29.9**	**+1.7**
	baz=25,SNR=9.5						
V26A	**Tequesquite Ra**	**25.62**	**335**	⇓P	**P**	**04 34 28.6**	**0.0**
	baz=25						
LENM	**Lemitar**	**25.75**	**328**	*e*P	**P**	**04 34 31.9**	**+2.1**
Z20A	**Nine Sixteen R**	**25.83**	**324**	⇓P	**P**	**04 34 33.4**	**+2.8**
	baz=26,SNR=16						
W24A	**Lazy 6 Ranch,**	**25.83**	**332**	⇑P	**P**	**04 34 31.2**	**+0.6**
	baz=26						
Y21A	**Point of Rocks**	**25.99**	**327**	⇑P	**P**	**04 34 34.4**	**+2.2**
	baz=26,SNR=11						
V25A	**Rancho No Teng**	**26.00**	**334**	⇑P	**P**	**04 34 32.2**	**0.0**
	baz=26						
LAZ	**Ladron**	**26.02**	**328**	*e*P	**P**	**04 34 33.7**	**+1.4**
	comp=Z,2.5nm,0.9s						
X22A	**Bernardo**	**26.03**	**329**	⇓P	**P**	**04 34 33.6**	**+1.2**
	baz=26						
ANMO	**Albuquerque**	**26.11**	**330**	P	**P**	**04 34 34.5**	**+1.4**
	comp=Z,70nm,3.0s						
ANMO	**Albuquerque**	**26.11**	**330**	P	**P**	**04 34 34.5**	**+1.4**
	comp=Z,1.2nm,0.6s,baz=160,slow=9.5,SNR=5.9						
U26A	**Atchley Ranch,**	**26.12**	**336**	⇓P	**P**	**04 34 33.4**	**+0.1**
	baz=26,SNR=7.2						
W23A	**Werner Place,**	**26.13**	**331**	⇑P	**P**	**04 34 34.2**	**+0.8**
	baz=26						
Y20A	**Horse Springs,**	**26.30**	**326**	⇓P	**P**	**04 34 37.3**	**+2.4**
	baz=26,SNR=18						
X21A	**Alamocita Cree**	**26.39**	**327**	⇓P	**P**	**04 34 37.6**	**+1.9**
	baz=26,SNR=20						
U25A	**Circle Dot Ran**	**26.40**	**335**	⇓P	**P**	**04 34 35.2**	**-0.6**
	baz=26						
TUC	**Tucson**	**26.57**	**320**	*e*P	**P**	**04 34 39.3**	**+2.1**
	comp=Z,5.4nm,1.0s						
X20A	**Quemado**	**26.84**	**327**	⇑P	**P**	**04 34 42.1**	**+2.4**
	baz=27,SNR=8.5						
U23A	**El Rito**	**27.11**	**332**	⇓P	**P**	**04 34 43.4**	**+1.2**
	baz=27,SNR=7.1						
T24A	**Torres, Weston**	**27.24**	**335**	⇓P	**P**	**04 34 43.8**	**+0.4**
	baz=27						
W20A	**Ramah**	**27.28**	**327**	⇓P	**P**	**04 34 46.1**	**+2.3**
	baz=27,SNR=7.8						
U22A	**Llaves**	**27.45**	**331**	⇓P	**P**	**04 34 46.2**	**+0.9**
	baz=27						
S25A	**Robets Cordova**	**27.50**	**336**	⇑P	**P**	**04 34 45.5**	**-0.1**
	baz=27						
X18A	**Snowflake**	**27.63**	**325**	⇓P	**P**	**04 34 49.2**	**+2.4**
	baz=28						
S24A	**Houchin Ranch,**	**27.79**	**335**	⇓P	**P**	**04 34 48.8**	**+0.5**
	baz=28						
R25A	**Fountain Ranch**	**27.86**	**337**	⇑P	**P**	**04 34 48.8**	**0.0**
	baz=28						
U21A	**Nageezi**	**27.88**	**330**	⇑P	**P**	**04 34 50.2**	**+1.1**
	baz=28						
T21A	**Navajo Lake**	**28.27**	**331**	⇑P	**P**	**04 34 53.9**	**+1.3**
	baz=28						
X16A	**Lo Mia Camp, P**	**28.41**	**323**	⇑P	P	04 34 56.7	+2.9
	baz=28						
Q25A	**Bedland, Calha**	**28.52**	**338**	⇓P	**P**	**04 34 54.2**	**-0.6**
	baz=28						
S22A	**4UR Ranch, Cre**	**28.57**	**333**	⇑P	**P**	**04 34 56.2**	**+0.9**
	baz=28						
MVCO	**Mesa Verde**	**28.91**	**330**	*e*P	P	04 35 01.7	+3.5
	comp=Z,76nm,2.5s						
MVCO	**Mesa Verde**	**28.91**	**330**	⇓P	**P**	**04 34 59.2**	**+0.9**
	baz=29						
S21A	**Coal Bank Pass**	**28.93**	**332**	⇑P	**P**	**04 34 59.3**	**+0.8**
	baz=29						
WUAZ	**Wupatki**	**29.15**	**324**	⇑P	P	04 35 03.1	+2.7
	baz=29						
S20A	**Disappointment**	**29.34**	**331**	⇑P	**P**	**04 35 03.9**	**+1.8**
	baz=29						
P23A	**Jefferson**	**29.53**	**336**	⇓P	**P**	**04 35 04.3**	**+0.4**
	baz=29						
Q22A	**Crested Butte,**	**29.53**	**334**	⇑P	**P**	**04 35 04.7**	**+0.8**
	baz=29						
PDMCI	**Parker Dam,Lak**	**30.00**	**319**	⇓P	P	04 35 11.0	+3.3
	baz=30						
S18A	**Hurst Farm, Bl**	**30.02**	**329**	⇓P	**P**	**04 35 09.2**	**+1.0**
	baz=30						
U15A	**North Rim**	**30.32**	**324**	⇓P	P	04 35 13.2	+2.3
	baz=30,SNR=7.6						
BC3	**Big Chuckawall**	**30.45**	**317**	⇑P	P	04 35 15.6	+3.8
	baz=30						
O22A	**Kremmling**	**30.48**	**336**	⇓P	**P**	**04 35 12.8**	**+0.5**
	baz=30						
IRM	**Iron Mountain**	**30.56**	**318**	⇑P	P	04 35 15.6	+2.9
	baz=30						
GMRC	**Granite Mounta**	**31.27**	**318**	⇑P	P	04 35 22.4	+3.3
	baz=31						
Q16A	**Castle Valley**	**31.56**	**329**	⇓P	**P**	**04 35 22.6**	**+0.9**
	baz=31						
P18A	**Preston Nutter**	**31.66**	**331**	⇑P	**P**	**04 35 23.3**	**+0.7**
	baz=32						
CCUT	**Cedar City**	**31.72**	**325**	*e*P	P	04 35 26.8	+3.7
	comp=Z,11nm,1.3s						
HEC	**Hector,Ludlow**	**31.74**	**318**	⇓P	P	04 35 26.3	+3.2
	baz=32						
N20A	**Spence Gulch,**	**31.75**	**335**	⇑P	**P**	**04 35 23.5**	**+0.1**
	baz=32						
P17A	**Butcher Ranch,**	**31.77**	**330**	⇑P	**P**	**04 35 24.5**	**+1.0**

comp=Z,10nm,0.9s,baz=137,slow=8.2,SNR=31
NVAR PcP PcP 04 38 28.2 +3.8
comp=Z,0.5nm,0.3s,baz=142,slow=4.6,SNR=5.2
NVAR LR LR 04 53 46.3
comp=Z,161nm,18.2s,baz=51,slow=42
I17A Pilgrim Ck. 35.27 335 ⇑P **P 04 35 54.7 +0.8**
baz=35
K14A Jones Ranch, D 35.32 331 ⇓P **P 04 35 55.0 +0.8**
baz=35,SNR=9.7
IMW Indian Meadow 35.40 335 *eP* **P 04 35 57.0 +1.9**
comp=Z,57nm,2.9s
H18A Shoshone NF, C 35.53 337 ⇓P **P 04 35 56.1 -0.2**
baz=35,SNR=9.4
MDND Maddock 35.64 350 ⇑P **P 04 35 55.4 -1.4**
baz=35
RLMT Red Lodge 35.76 338 *eP* **P 04 35 58.9 +0.8**
comp=Z,77nm,2.8s
RLMT Red Lodge 35.76 338 ⇓P **P 04 35 58.1 0.0**
baz=36
D24A Glendive 35.97 344 ⇓P **P 04 35 58.8 -0.9**
baz=36
G18A Lazy EL Ranch, 36.04 337 ⇓P **P 04 36 00.8 +0.3**
baz=36
J14A Carey 36.08 332 ⇑P **P 04 36 01.7 +0.9**
baz=36
H16A Russell Place, 36.18 335 ⇓P **P 04 36 02.3 +0.5**
baz=36
CMB Columbia Colle 36.27 319 *eP* P 04 36 05.2 +2.7
comp=Z,8.9nm,1.0s
J13A Cove Ranch, Pi 36.44 331 ⇑P **P 04 36 05.3 +1.4**
baz=36
G17A Pierce Place, 36.49 336 ⇓P **P 04 36 05.1 +0.8**
baz=36
I14A Mackay 36.51 332 ⇑P **P 04 36 05.8 +1.2**
baz=36
D22A Cohagen 36.52 342 ⇓P **P 04 36 04.5 +0.1**
baz=36
E20A Meyer Farm, Mu 36.55 340 ⇓P **P 04 36 04.6 -0.1**
baz=36
F18A Big Timber 36.59 338 ⇓P **P 04 36 05.5 +0.3**
baz=36
HLID Hailey 36.68 331 *eP* **P 04 36 07.8 +1.8**
comp=Z,43nm,2.3s
HLID Hailey 36.68 331 ⇑P **P 04 36 07.2 +1.2**
baz=36
D21A La Casta Ranch 36.69 342 ⇑P **P 04 36 05.9 0.0**
baz=36
LPAZ La Paz 36.70 141 P P 04 36 10.2 +3.3
LPAZ La Paz 36.70 141 P P 04 36 10.2 +3.3
comp=Z,0.6nm,0.8s,baz=8.0,slow=5.7,SNR=3.9
E19A Rath Farm, Rou 36.74 339 ⇑P **P 04 36 06.4 +0.1**
baz=36
I13A Wildhorse Cree 36.81 332 ⇑P **P 04 36 08.2 +1.1**
baz=37,SNR=9.3
C23A Lambert 36.83 344 ⇓P **P 04 36 06.5 -0.5**
baz=37
G16A Moss Hill, Enn 36.84 335 ⇑P **P 04 36 08.1 +0.8**
baz=37
F17A Fitzpatrick Pl 36.95 337 ⇑P **P 04 36 09.0 +0.8**
baz=37,SNR=7.9
MCMT McKenzie Canyo 36.96 334 *eP* **P 04 36 10.0 +1.6**
comp=Z,6.4nm,0.9s
C22A Vida 36.97 343 ⇓P **P 04 36 07.9 -0.3**
baz=37
H14A Leadore 37.01 333 ⇑P **P 04 36 10.5 +1.6**
baz=37,SNR=6.7
D20A Manuel Ranch, 37.07 340 ⇑P **P 04 36 09.2 +0.1**
baz=37
G15A Dillon 37.07 334 ⇓P **P 04 36 10.7 +1.4**
baz=37,SNR=6.4
BOZ Bozeman (W) 37.11 336 *eP* **P 04 36 09.9 +0.3**
comp=Z,28nm,2.1s
BOZ Bozeman (W) 37.11 336 ⇑P **P 04 36 09.6 0.0**
baz=37
DGMT Dagmar 37.19 345 *eP* **P 04 36 10.4 +0.3**
comp=Z,14nm,1.1s
DGMT Dagmar 37.19 345 ⇑P **P 04 36 09.6 -0.5**
baz=37
I12A Atlanta 37.20 331 ⇑P **P 04 36 11.7 +1.3**
baz=37,SNR=11
F16A Kennard Place, 37.22 336 ⇑P **P 04 36 11.3 +0.8**
baz=37
E18A Harlowton 37.23 338 ⇓P **P 04 36 11.0 +0.4**
baz=37
MFID Camas Ranch 37.25 330 *eP* **P 04 36 12.7 +1.9**
comp=Z,12nm,1.3s
MFID Camas Ranch 37.25 330 ⇑P **P 04 36 12.5 +1.7**
baz=37
DLMT Dillon 37.28 335 *eP* **P 04 36 12.5 +1.5**
comp=Z,18nm,1.6s
BEKR Beckworth 37.35 321 *eP* P 04 36 14.4 +2.6
comp=Z,4.4nm,1.0s
H13A Challis 37.37 332 ⇓P **P 04 36 12.7 +0.8**
baz=37,SNR=16
D19A Cripps Ranch, 37.38 340 ⇓P **P 04 36 12.1 +0.3**
baz=37
B23A Brockton 37.39 345 ⇓P **P 04 36 11.8 0.0**
baz=37
E17A Martinsdale 37.49 337 ⇓P **P 04 36 12.8 0.0**
baz=37
ULM Lac du Bonnet 37.52 355 *eP* **P 04 36 10.2 -2.6**
comp=Z,14nm,0.9s
ULM Lac du Bonnet 37.52 355 P **P 04 36 10.2 -2.6**
comp=Z,19nm,1.0s,baz=172,slow=8.8,SNR=10
G14A Jackson 37.55 334 ⇑P **P 04 36 13.9 +0.5**
baz=37
A24A Westby 37.57 346 ⇑P **P 04 36 13.2 -0.1**
baz=37
LRM Limekiln Ridge 37.59 335 *eP* **P 04 36 14.4 +0.6**
F15A Butte 37.62 335 ⇑P **P 04 36 14.2 +0.2**
baz=37,SNR=8.5
H12A Diamond D Ranc 37.63 332 ⇑P **P 04 36 15.2 +1.1**
baz=38,SNR=9.2
D18A Linhart Farms, 37.73 339 ⇑P **P 04 36 14.8 0.0**
baz=38
G13A Cobalt 37.77 333 ⇓P **P 04 36 15.9 +0.7**
baz=38
E16A East Helena 37.86 337 ⇓P **P 04 36 16.2 +0.3**
baz=38
C19A Slack Wire Ran 37.93 340 ⇑P **P 04 36 16.6 +0.2**
baz=38
D17A Six Diamond Ra 38.01 338 ⇑P **P 04 36 17.1 0.0**
baz=38
E15A Deer Lodge 38.15 336 ⇓P **P 04 36 18.7 +0.3**
baz=38
D16A Dana Ranch, Ca 38.23 337 ⇓P **P 04 36 19.5 +0.5**
baz=38
G12A Big Creek, Yel 38.29 332 ⇑P **P 04 36 20.5 +0.9**
baz=38
F13A Darby 38.36 333 ⇓P **P 04 36 20.4 +0.3**
baz=38,SNR=7.4
EGMT Eagleton 38.42 340 ⇓P **P 04 36 20.4 -0.2**
baz=38
C17A Wharram Farm, 38.44 338 ⇑P **P 04 36 21.1 +0.4**
baz=38
E14A Clinton 38.50 335 ⇑P **P 04 36 21.7 +0.4**
baz=38
A20A Cobblestone Ra 38.59 342 ⇓P **P 04 36 21.6 -0.3**
baz=38
D15A Lincoln 38.61 336 ⇓P **P 04 36 22.6 +0.3**
baz=38
F12A Elk City 38.74 333 ⇓P **P 04 36 24.0 +0.7**
baz=39,SNR=22
B18A Beardsley Farm 38.75 340 ⇓P **P 04 36 23.0 -0.3**
baz=38
CHMT Chamberlain Mo 38.80 335 *eP* **P 04 36 24.0 +0.1**
comp=Z,2.6nm,0.9s
E13A Victor 38.81 334 ⇓P **P 04 36 24.3 +0.5**
baz=39,SNR=13
A19A Klindworth Far 38.88 341 ⇑P **P 04 36 23.7 -0.7**
baz=39
C16A Fuhringer Ranc 38.94 338 ⇓P **P 04 36 24.8 -0.2**
baz=39,SNR=8.7
MSO Missoula 39.01 335 ⇓P **P 04 36 26.1 +0.5**
baz=39
B17A L&G Farms, Che 39.01 339 ⇓P **P 04 36 25.4 -0.1**
baz=39
BMO Blue Mountains 39.03 330 *eP* **P 04 36 25.9 +0.2**
comp=Z,7.0nm,1.1s
D14A Greenough 39.03 335 ⇑P **P 04 36 25.9 +0.1**
baz=39
SLMT Seeley Lake 39.16 336 *eP* **P 04 36 26.7 -0.2**
comp=Z,1.9nm,0.7s
A18A Metzger Ranch, 39.23 340 ⇑P **P 04 36 27.2 0.0**
baz=39,SNR=5.7
C15A Salmond Ranch, 39.24 337 ⇓P **P 04 36 27.9 +0.3**
baz=39,SNR=6.2
D13A Huson 39.44 335 ⇑P **P 04 36 29.3 +0.2**
baz=39,SNR=6.1
B16A M & M Farms, S 39.44 338 ⇑P **P 04 36 29.4 +0.3**
baz=39
A17A Triple J Farms 39.53 340 ⇑P **P 04 36 29.7 -0.2**
baz=39,SNR=7.1
B15A Bradely Ranch, 39.67 337 ⇓P **P 04 36 30.7 -0.3**
baz=40
D12A Red Ives Fores 39.78 334 ⇑P **P 04 36 32.2 +0.2**
baz=40
C13A Hot Springs 39.95 335 ⇓P **P 04 36 33.8 +0.4**
baz=40
BSMT Bassoo Peak 40.17 335 *eP* **P 04 36 35.4 +0.1**
A15A Johnson Ranch, 40.28 338 ⇑P **P 04 36 36.0 -0.1**
baz=40,SNR=7.4
C12B Naegeli Ranch, 40.35 334 ⇓P **P 04 36 37.6 +0.9**
baz=40
B13A Whitefish 40.46 336 ⇑P **P 04 36 37.4 -0.2**
baz=40,SNR=5.1
A14A Double T Ranch 40.54 337 ⇑P **P 04 36 38.6 +0.3**
baz=40,SNR=12
C11A Tepee Creek (N 40.78 334 ⇑P **P 04 36 40.5 +0.3**
baz=41,SNR=8.0
A13A Flathead Natio 40.89 336 ⇓P **P 04 36 41.6 +0.5**
baz=41
B12A Libby 40.99 335 ⇑P **P 04 36 42.8 +0.9**
baz=41
SIV San Ignacio 41.16 133 P P 04 36 46.1 +2.4
SIV San Ignacio 41.16 133 P P 04 36 46.1 +2.4
comp=Z,3.7nm,0.8s,baz=326,slow=9.8,SNR=12
A12A Yaak River Ran 41.38 335 ⇓P **P 04 36 45.7 +0.6**
baz=41
NEW Newport 41.48 334 P P **04 36 45.4 -0.5**
NEW Newport 41.48 334 ⇓P **P 04 36 46.2 +0.2**
baz=41
NEW Newport 41.48 334 P P **04 36 45.4 -0.5**
comp=Z,1.7nm,0.6s,baz=112,slow=11,SNR=4.9
FFC Flin Flon 42.68 351 *eP* **P 04 36 54.5 -1.1**
comp=Z,25nm,1.4s
SCHQ Schefferville 45.96 19 P P 04 37 18.2 -3.6
SCHQ Schefferville 45.96 19 P P 04 37 18.2 -3.6
comp=Z,12nm,0.9s,baz=226,slow=7.5,SNR=16
SCHQ LR LR 04 57 21.9
comp=Z,310nm,19.2s,baz=239,slow=38
CFAA Coronel Fontan 49.27 154 P P 04 37 52.5 +4.7
CFAA Coronel Fontan 49.27 154 P P 04 37 52.5 +4.7
comp=Z,0.2nm,0.6s,baz=334,slow=8.8,SNR=4.9
CPUP Vila Florida 50.84 140 LR LR 05 01 08.5
comp=Z,80nm,19.2s,baz=176,slow=38
BDFB Brasilia 51.04 122 LR LR 05 00 56.9
comp=Z,113nm,18.2s,baz=232,slow=38
YKA Yellowknife Ar 52.38 346 P P **04 38 09.6 -1.3**
YKA PcP **PcP 04 39 22.9 +1.3**
YKA Yellowknife Ar 52.38 346 P P **04 38 09.5 -1.3**
comp=Z,2.2nm,0.8s,baz=146,slow=7.8,SNR=28
YKA PcP **PcP 04 39 22.9 +1.3**
comp=Z,0.5nm,0.7s,baz=147,slow=3.6,SNR=4.1
DLBC Dease Lake 54.12 336 P P **04 38 23.6 -0.3**
DLBC Dease Lake 54.12 336 P P **04 38 23.6 -0.3**
comp=Z,6.6nm,1.1s,baz=153,slow=7.8,SNR=4.9
PLCA Paso Flores 56.55 161 LR LR 04 59 15.3
comp=Z,68nm,18.3s,baz=357,slow=32
RES Resolute Bay 61.87 359 *eP* **P 04 39 15.7 -2.1**
comp=Z,5.0nm,0.7s
RES Resolute Bay 61.87 359 P P **04 39 15.8 -2.0**
comp=Z,4.6nm,0.7s,baz=187,slow=11,SNR=34
ILAR Eielson Array 64.30 337 P P **04 39 34.1 0.0**
ILAR Eielson Array 64.30 337 P P **04 39 34.1 0.0**
comp=Z,5.1nm,1.1s,baz=129,slow=4.3,SNR=22
PPT Papeete 65.28 244 LR LR 05 01 44.3
comp=Z,113nm,21.3s,baz=156,slow=30
SUMG Summit 67.08 15 *eP* **P 04 39 50.6 -1.8**
comp=Z,8.7nm,1.0s
ESDC Sonseca Array 79.63 52 P P **04 41 04.8 -1.9**
ESDC Sonseca Array 79.63 52 P P **04 41 04.8 -1.9**
comp=Z,0.3nm,0.3s,baz=294,slow=9.5,SNR=5.2
BILL Bilibino 82.91 338 *eP* **P 04 41 24.7 +1.3**
comp=Z,6.3nm,1.0s
DBIC Dimbokro 84.75 84 P P **04 41 32.6 -1.2**
DBIC Dimbokro 84.75 84 P P **04 41 32.6 -1.2**
comp=Z,4.1nm,0.7s,baz=212,slow=5.5,SNR=8.2
TORD Torodi Ar. Bea 89.65 77 P P **04 41 56.8 -0.9**
TORD Torodi Ar. Bea 89.65 77 P P **04 41 56.8 -0.9**
comp=Z,0.7nm,0.8s,baz=298,slow=4.1,SNR=3.6
TORD LR LR 05 19 24.4
comp=Z,211nm,20.6s,baz=295,slow=34
FITZ Fitzroy Crossi 144.39 257 PKPbc PKPdf 04 48 41.2 +5.1
FITZ Fitzroy Crossi 144.39 257 PKPbc PKPdf 04 48 41.2 +5.1
comp=Z,1.2nm,0.6s,baz=8.7,slow=4.1,SNR=5.1
CMAR Chiang Mai Arr 147.41 342 PKPbc **PKPab 04 48 45.5 -0.1**
CMAR Chiang Mai Arr 147.41 342 PKPbc **PKPab 04 48 45.5 -0.1**
comp=Z,1.6nm,0.7s,baz=336,slow=3.7,SNR=16
KAPI Kappang 148.72 282 *e*PKPbc **PKPbc 04 48 47.8 +0.4**
KAPI *e*PKPab **PKPab 04 48 52.6 +1.6**

CSEM ***16*** *04:29:12.3, 42°.29N×13°.50E, h9km, MD2.1/4, After ROM*
ROM 16 04:29:12.3±0.1, 42°.29N×13°.50E, h9km±1km, Md2.1/4, Ml1.5/2, Error ellipse: s-maj=2.6km s-min=1.4km az=58.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.07**	**113**	Pg	Pg	04 29 14.9	+0.4
FAGN				Sg	Sg	04 29 16.2	+0.1
	669nm,0.5s						
FAGN	**Fagnano**	**0.07**	**113**	Pg	Pg	04 29 14.9	+0.4
FAGN				Sg	Sg	04 29 16.2	+0.1
	669nm,0.5s						
AQU	**L'Aquila**	**0.09**	**311**	Pg	Pg	04 29 15.3	+0.5
AQU				Sg	Sg	04 29 17.3	+0.7
	264nm,0.3s						
AQU	**L'Aquila**	**0.09**	**311**	Pg	Pg	04 29 15.3	+0.5
AQU				Sg	Sg	04 29 17.3	+0.7
	264nm,0.3s						
VCEL	**Villa Celiera**	**0.27**	**68**	Pg	Pb	04 29 19.4	-0.2
	34nm,0.5s						
VCEL	**Villa Celiera**	**0.27**	**68**	Pg	Pb	04 29 19.4	-0.2
	34nm,0.5s						
PTQR	**Pietraquaria**	**0.28**	**195**	Pg	Pb	04 29 19.0	-0.6
PTQR				Sg	Sb	04 29 23.5	-1.0
	3.0nm,0.2s						
PTQR	**Pietraquaria**	**0.28**	**195**	Pg	Pb	04 29 19.0	-0.6
PTQR				Sg	Sb	04 29 23.5	-1.0
	3.0nm,0.2s						
NRCA	**Norcia**	**0.61**	**332**	Pg	Pg	04 29 24.2	-0.1
NRCA				Sg	Sg	04 29 33.1	+0.7
	3.0nm,0.2s						
NRCA	**Norcia**	**0.61**	**332**	Pg	Pg	04 29 24.2	-0.1
NRCA				Sg	Sg	04 29 33.1	+0.7
	3.0nm,0.2s						

ISK ***16*** *04:42:43.6, 39°.02N×41°.83E, h5km, MD3.3*
DDA ***16*** *04:42:44.9, 39°.06N×41°.92E, h7km, MD2.8*
CSEM ***16*** *04:42:45.3±0.3, 39°.02N×41°.80E, h2km, MD3.3, Error ellipse: s-maj=7.6km s-min=6.2km az=50.0*
ISC 16 04:42:44.6±1.2, 38°.99N±0°.02×41°.84E±0°.02, h3km±12km, n38, σ1°33/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRTB	**Varto-Mus**	**0.35**	**300**	*e*PG	**Pg**	**04 42 51.4**	**+0.1**
VRTB	**Varto-Mus**	**0.35**	**300**	*e*Pg	**Pg**	**04 42 51.4**	**+0.1**
TATV	**Tatvan**	**0.58**	**145**	*i* P	**Pg**	**04 42 56.3**	**+0.5**
TATV				*i* S	**Sb**	**04 43 06.1**	**-0.2**
TATV	**Tatvan**	**0.58**	**145**	*i* P	**Pg**	**04 42 56.3**	**+0.5**
TATV				*i* S	**Sb**	**04 43 06.1**	**-0.2**
BTMT	**Batman**	**0.84**	**199**	*e*PG	**Pn**	**04 43 03.2**	**-0.2**
BTMT	**Batman**	**0.84**	**199**	*e*Pg	**Pn**	**04 43 03.2**	**-0.2**
TUTA	**Tutak**	**0.86**	**61**	*i* P	**Pg**	**04 42 59.3**	**-1.8**
TUTA				*i* S	**Sg**	**04 43 12.3**	**0.0**
TUTA	**Tutak**	**0.86**	**61**	*i* P	**Pg**	**04 42 59.3**	**-1.8**
TUTA				*i* S	**Sg**	**04 43 12.3**	**0.0**
BNGB	**Bing¯¶l**	**0.91**	**271**	*e*PG	**Pg**	**04 43 01.3**	**-0.7**
BNGB				*e*SG	**Sn**	**04 43 15.8**	**-2.2**
EZM	**Erzurum**	**0.99**	**338**	*e*PG	**Pg**	**04 43 02.6**	**-0.9**
BINT	**Bingol**	**1.06**	**264**	*e*Sg	**Sg**	**04 43 15.9**	**-2.9**
BEST	**Besiri**	**1.18**	**203**	*i* P	**Pg**	**04 43 08.7**	**+1.4**
BEST				*i* S	**Sn**	**04 43 27.3**	**+2.6**
KOPT	**Kop Dagi**	**1.46**	**315**	*i* P	**Pb**	**04 43 12.2**	**-0.5**
KOPT	**Kop Dagi**	**1.46**	**315**	*i* P	**Pb**	**04 43 12.2**	**-0.5**
ERZN	**Erzincan**	**1.75**	**291**	*e*PN	**Pn**	**04 43 15.2**	**-0.8**
MARD	**Mardin**	**1.87**	**207**	*e*P	**Pn**	04 43 10.9	-6.8
MARD				*i* S	**Sg**	**04 43 45.7**	**+1.0**
DDEM	**Demirkent**	**1.90**	**358**	*i* S	**Sg**	**04 43 51.1**	**+5.3**
DDEM				*i* P	**Pb**	**04 43 19.9**	**-0.1**
DDEM	**Demirkent**	**1.90**	**358**	*e*PN	**Pb**	**04 43 20.2**	**-0.1**
PTK	**Pertek**	**1.91**	**268**	*e*PN	**Pb**	**04 43 20.2**	**-0.1**
PTK	**Pertek**	**1.91**	**268**	*e*Pn	**Pb**	**04 43 20.2**	**-0.1**
BAYT	**Ayd¯–ntepe-Bay**	**1.92**	**317**	*e*PN	**Pn**	**04 43 18.3**	**-0.1**
BAYT	**Ayd¯–ntepe-Bay**	**1.92**	**317**	*e*Pn	**Pn**	**04 43 18.3**	**-0.1**
DBAD	**Bademkaya**	**2.03**	**357**	*i* P	**Pb**	**04 43 22.0**	**-0.2**
DBAD	**Bademkaya**	**2.03**	**357**	*i* P	**Pb**	**04 43 22.0**	**-0.2**
SVRC	**Sivrice-ELAZID**	**2.08**	**254**	*e*PN	**Pn**	**04 43 20.5**	**0.0**
SVRC	**Sivrice-ELAZID**	**2.08**	**254**	*e*Pn	**Pn**	**04 43 20.5**	**0.0**
CUKT	**Cukurca**	**2.23**	**141**	*e*PN	**Pb**	**04 43 23.7**	**-1.8**
CUKT	**Cukurca**	**2.23**	**141**	*e*Pn	**Pb**	**04 43 23.7**	**-1.8**
GUMT	**Gumushane**	**2.34**	**310**	*e*PN	**Pn**	**04 43 24.0**	**-0.1**
GUMT	**Gumushane**	**2.34**	**310**	*e*Pn	**Pn**	**04 43 24.0**	**-0.1**
BCA	**Borcka**	**2.46**	**356**	*e*PN	**Pn**	**04 43 26.5**	**+0.9**
BCA	**Borcka**	**2.46**	**356**	*e*Pn	**Pn**	**04 43 26.5**	**+0.9**
GNI	**Garni**	**2.52**	**62**	*e*PN	**Pn**	**04 43 27.9**	**+1.3**
GNI	**Garni**	**2.52**	**62**	*e*Pn	**Pn**	**04 43 27.9**	**+1.3**
ILIC	**ilic-Erzincan**	**2.59**	**281**	*e*PN	**Pn**	**04 43 27.6**	**+0.1**
ILIC	**ilic-Erzincan**	**2.59**	**281**	*e*Pn	**Pn**	**04 43 27.6**	**+0.1**
MALT	**Malatya**	**2.76**	**257**	*e*PN	**Pn**	**04 43 30.6**	**+0.8**
MALT	**Malatya**	**2.76**	**257**	*e*Pn	**Pn**	**04 43 30.6**	**+0.8**

NEIC ***16*** *05:00:44.7, 19°.33N×65°.08W, h55km, MD3.5(RSPR), After RSPR.*
RSPR 16 05:00:44.7, 19°.33N×65°.08W, h55km±18km, MD3.5/13, 25C-20D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STVI	**Saint Thomas**	**0.98**	**173**	⇓*e*P	Pn	05 01 01.0	-1.2
STVI	**Saint Thomas**	**0.98**	**173**	*e*S	Sn	05 01 14.1	-1.1
STVI	**Saint Thomas**	**0.98**	**173**	⇓*e*P	Pn	05 01 01.0	-1.2
STVI				*e*S	Sn	05 01 14.1	-1.1
STVI	**Saint Thomas**	**0.98**	**173**	⇓*e*P	Pn	05 01 01.2	-1.1
STVI				*e*S	Sn	05 01 14.1	-1.1
TBVI	**Tortola**	**1.01**	**154**	⇓*i*P	Pn	05 01 02.4	-0.3
TBVI				*e*S	Sn	05 01 14.7	-1.2
TBVI	**Tortola**	**1.01**	**154**	⇓*i*P	Pn	05 01 02.4	-0.3
TBVI				*e*S	Sn	05 01 14.7	-1.2
TBVI	**Tortola**	**1.01**	**154**	⇓*i*P	Pn	05 01 02.4	-0.3
TBVI				*e*S	Sn	05 01 14.7	-1.2
CBYP	**Canovanas**	**1.28**	**215**	⇑*e*P	Pn	05 01 04.8	-1.7
CBYP	**Canovanas**	**1.28**	**215**	⇑*e*P	Pn	05 01 04.8	-1.7
CBYP	**Canovanas**	**1.28**	**215**	⇑*e*P	Pn	05 01 04.8	-1.7
MTP	**Monte Pirata**	**1.30**	**200**	*e*S	Sn	05 01 22.4	-0.6
MTP	**Monte Pirata**	**1.30**	**200**	⇓*e*P	Pn	05 01 05.8	-0.8
MTP	**Monte Pirata**	**1.30**	**200**	⇓*e*P	Pn	05 01 05.8	-0.8
MTP				*e*S	Sn	05 01 22.4	-0.6
MTP	**Monte Pirata**	**1.30**	**200**	⇓*e*P	Pn	05 01 05.8	-0.8
MTP				*e*S	Sn	05 01 22.4	-0.6
HUMP	**Col San Antoni**	**1.39**	**212**	*e*S	Sn	05 01 24.4	-0.5
HUMP	**Col San Antoni**	**1.39**	**212**	⇑*e*P	Pn	05 01 06.4	-1.3
HUMP	**Col San Antoni**	**1.39**	**212**	⇑*e*P	Pn	05 01 06.4	-1.3
HUMP				*e*S	Sn	05 01 24.4	-0.5
HUMP	**Col San Antoni**	**1.39**	**212**	⇑*e*P	Pn	05 01 06.4	-1.3
HUMP				*e*S	Sn	05 01 24.4	-0.5
CPD	**Cerro la Pandu**	**1.51**	**212**	⇑*e*P	Pn	05 01 08.2	-1.3
CPD	**Cerro la Pandu**	**1.51**	**212**	⇑*e*P	Pn	05 01 08.2	-1.3
CPD	**Cerro la Pandu**	**1.51**	**212**	⇑*e*P	Pn	05 01 08.2	-1.3
SJG	**San Juan**	**1.58**	**220**	*e*S	Sn	05 01 29.2	-0.4
SJG	**San Juan**	**1.58**	**220**	⇑*e*P	Pn	05 01 08.9	-1.4
SJG	**San Juan**	**1.58**	**220**	⇑*i*P	Pn	05 01 09.0	-1.3
SJG	**San Juan**	**1.58**	**220**	⇑*e*P	Pn	05 01 08.9	-1.4
SJG				*e*S	Sn	05 01 29.2	-0.4
SJG	**San Juan**	**1.58**	**220**	⇑*e*P	Pn	05 01 08.9	-1.4
SJG	**San Juan**	**1.58**	**220**	⇑*i*P	Pn	05 01 09.2	-1.1
SJG				*e*S	Sn	05 01 29.2	-0.4
CDVI	**St. Croix**	**1.60**	**169**	*e*Pn	Pn	05 01 11.3	+0.7
CDVI				*e*Sn	Sn	05 01 33.5	+3.4
AOPR	**Arecibo Observ**	**1.86**	**239**	⇓*i*P	Pn	05 01 13.3	-0.9
AOPR	**Arecibo Observ**	**1.86**	**239**	⇓*i*P	Pn	05 01 13.3	-0.9
AOPR	**Arecibo Observ**	**1.86**	**239**	⇓*i*P	Pn	05 01 13.3	-0.9
CELP	**Cerrillos**	**1.89**	**229**	⇑*i*P	Pn	05 01 13.9	-0.7
CELP	**Cerrillos**	**1.89**	**229**	*i* Pu	Pn	05 01 13.9	-0.7
CELP	**Cerrillos**	**1.89**	**229**	⇑*i*P	Pn	05 01 13.9	-0.7
OBIP	**Obispado Ponce**	**1.93**	**229**	⇓*e*P	Pn	05 01 14.6	-0.6
OBIP	**Obispado Ponce**	**1.93**	**229**	*e*S	Sn	05 01 38.0	-0.2
OBIP	**Obispado Ponce**	**1.93**	**229**	⇓*e*P	Pn	05 01 14.6	-0.6
OBIP				*e*S	Sn	05 01 38.0	-0.2
OBIP	**Obispado Ponce**	**1.93**	**229**	⇓*e*P	Pn	05 01 14.6	-0.6
OBIP				*e*S	Sn	05 01 38.0	-0.2
LRS	**Lares**	**1.96**	**239**	⇑*e*P	Pn	05 01 14.9	-0.7
LRS	**Lares**	**1.96**	**239**	⇑*e*P	Pn	05 01 14.9	-0.7
LRS	**Lares**	**1.96**	**239**	⇑*e*P	Pn	05 01 14.9	-0.7
AGPR	**Aguadilla, PR**	**2.10**	**246**	⇓*e*P	Pn	05 01 16.9	-0.6
AGPR	**Aguadilla, PR**	**2.10**	**246**	⇓*e*P	Pn	05 01 16.9	-0.6
AGPR	**Aguadilla, PR**	**2.10**	**246**	⇓*e*P	Pn	05 01 16.9	-0.6
GBPR	**Guanica, Bosqu**	**2.17**	**232**	⇑*e*P	Pn	05 01 18.2	-0.2
GBPR	**Guanica, Bosqu**	**2.17**	**232**	⇑*e*P	Pn	05 01 18.2	-0.2
GBPR	**Guanica, Bosqu**	**2.17**	**232**	⇑*e*P	Pn	05 01 18.2	-0.2
LSP	**Las Mesas**	**2.22**	**239**	⇑*e*P	Pn	05 01 18.7	-0.4
LSP	**Las Mesas**	**2.22**	**239**	⇑*e*P	Pn	05 01 18.7	-0.4
LSP	**Las Mesas**	**2.22**	**239**	⇑*e*P	Pn	05 01 18.7	-0.4
CRPR	**Cabo Rojo, PR**	**2.33**	**236**	⇑*e*P	Pn	05 01 19.7	-0.8
CRPR	**Cabo Rojo, PR**	**2.33**	**236**	⇑*e*P	Pn	05 01 19.7	-0.8
CRPR	**Cabo Rojo, PR**	**2.33**	**236**	⇑*e*P	Pn	05 01 19.7	-0.8
LZG	**Guadaloupe-1**	**4.47**	**135**	*e*P	Pn	05 01 51.3	+1.4
SDDR	**Presa de Saban**	**5.88**	**268**	*e*Pn	Pn	05 02 10.4	+1.1
	12nm,0.5s						
SDDR				*e*Sn	Sn	05 03 17.9	+2.6

BJI ***16*** *05:05:58.8, 58°.70N×137°.60W, h10km, mB5.0/21, mb5.0/32, Ms4.9/17, Ms7 4.6/18*
ISCJB ***16*** *05:06:00.9±0.7, 58°.84N±0°.02×137°.70W±0°.03, h2km±4km, mb4.6/122, MS4.2/16, Error ellipse: s-maj=3.7km s-min=1.7km az=39.2*
IDC ***16*** *05:06:02.2±0.4, 58°.83N×137°.72W, h0km, mb4.5/32, mb1 4.5/39, mb1mx4.5/40, mbtmp4.5/39, ML4.1/7, MS3.9/13, Ms1 3.9/13, ms1mx3.6/52, Error ellipse: s-maj=10.5km s-min=6.1km az=39.0*
NEIC ***16*** *05:06:04.3±1.0, 58°.85N×137°.68W, h12km±6km, mb4.7/96, ML4.5(AEIC), ML4.8(PMR), MW4.5(USGS), MW4.5(PGC), Error ellipse: s-maj=4.1km s-min=1.9km az=221.0*
NEIC Felt [II] at Gustavus, Haines, Juneau and Skagway. Also felt at Auke Bay and Elfin Cove. Felt at Whitehorse, Yukon Territory, Canada.
PGC ***16*** *05:06:05.9±1.7, 58°.87N×137°.37W, h5km, ML4.9/4, Mw4.5, 125km west of Haines, Ak Southeastern Alaska*
ISC 16 05:06:04.5±0.3, 58°.74N±0°.03×137°.66W±0°.03, h17km±1km, n625, σ1°28/683, mb4.7/123, MS4.0/16, 143C-168D, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNL	**Peninsula**	**1.29**	**317**	P	**Pn**	**05 06 25.9**	**-1.9**
PNL				S	**Sn**	**05 06 44.3**	**-0.3**
YKU2	**Yakutat**	**1.29**	**308**	P	**Pn**	**05 06 26.5**	**-1.2**
SKAG	**Skagway**	**1.40**	**58**	P	**Pn**	**05 06 28.0**	**-1.2**
SKAG				S	**Sn**	**05 06 45.9**	**-1.4**
BESE	**Bessie Mountai**	**1.48**	**95**	P	**Pn**	**05 06 28.6**	**-1.6**
BESE				S	**Sn**	**05 06 48.2**	**-0.9**
HYT	**Haines Junctio**	**2.09**	**2**	Pn	**Pn**	**05 06 38.3**	**-0.5**
HYT				Sg	**Sn**	**05 07 05.3**	**+0.8**
HYT	**Haines Junctio**	**2.09**	**2**	⇑Pn	**Pn**	**05 06 38.3**	**-0.5**
HYT

DLBC Lg Lg 05 08 05.6
458nm,0.3s,baz=159,slow=25,SNR=11
DLBC LR LR 05 08 59.6
comp=Z,2µm,18.2s,baz=260,slow=44
CRAG Craig 4.11 141 *e*Pn **Pn 05 07 06.0 -0.4**
CRAG *e*Sg **Sg 05 08 13.7 -2.5**
BMRM Bremner River 4.15 305 P **Pn 05 07 06.9 -0.1**
EYAK Cordova Ski Ar 4.49 297 P **Pn 05 07 11.3 -0.2**
DIV Divide 4.73 304 *e*Pn **Pn 05 08 09.0 -0.4**
DIV *e*Sn **Sn 05 08 09.0 -0.4**
BCA3 Beaver Creek A 4.78 337 P **Pn 05 07 15.8 +0.1**
KLU Klutina 4.97 307 P **Pn 05 07 17.9 -0.4**
VLZ Valdez 4.98 302 P **Pn 05 07 18.0 -0.3**
MENT Mentasta 5.15 327 P **Pn 05 07 21.3 +0.6**
HARP HAARP 5.21 318 P **Pn 05 07 22.3 +0.7**
DAWY Dawson 5.41 352 P **Pn 05 07 24.5 +0.3**
DAWY Dawson 5.41 352 ⇓Pn **Pn 05 07 25.1 +0.9**
DAWY ⇓Sn **Sn 05 08 26.9 +0.8**
NDB Naden 5.47 149 Pn **Pn 05 07 23.8 -1.3**
NDB Naden 5.47 149 ⇓Pn **Pn 05 07 23.8 -1.3**
PAX Paxson 5.70 321 P **Pn 05 07 28.8 +0.4**
DOT Dot Lake 5.81 331 *e*Pn **Pn 05 07 29.7 -0.1**
DOT Sg **Sg 05 09 08.6 -2.3**
RUBB Prince Rupert 6.03 134 Pn **Pn 05 07 32.8 +0.1**
RUBB Sg **Sg 05 09 13.5 -4.2**
RUBB Prince Rupert 6.03 134 ⇑Pn **Pn 05 07 32.8 +0.1**
RUBB ⇑Sg **Sg 05 09 13.5 -4.2**
SML Sawmill 6.13 305 P **Pn 05 07 34.7 +0.5**
SEW Seward 6.17 288 *e*Pn **Pn 05 07 32.3 -2.3**
SEW *e*Sn **Sn 05 08 44.3 -0.5**
DIB Dawson Inlet, 6.27 150 ⇓Pn **Pn 05 07 35.0 -1.0**
DIB Sn **Sn 05 08 43.6 -3.5**
DIB Dawson Inlet, 6.27 150 ⇓Pn **Pn 05 07 35.0 -1.0**
DIB ⇑Sn **Sn 05 08 43.6 -3.5**
EGAK Eagle 6.28 346 *e*Pn **Pn 05 07 36.4 +0.2**
EGAK *e*Sn **Sn 05 08 43.2 -4.2**
PMR Palmer 6.40 301 P **Pn 05 07 38.1 +0.3**
DDM Donnelly Dome 6.42 325 P **Pn 05 07 38.6 +0.4**
DHY Denali Highway 6.43 317 P **Pn 05 07 38.9 +0.6**
MOBC Moresby Island 6.46 148 ⇓Pn **Pn 05 07 40.6 +2.0**
MOBC Sn **Sn 05 08 50.8 -1.1**
MOBC Moresby Island 6.46 148 ⇓Pn **Pn 05 07 40.6 +2.0**
MOBC ⇓Sn **Sn 05 08 50.8 -1.1**
SLKM Skilak Lake 6.61 291 P **Pn 05 07 39.3 -1.5**
BRLK Bradley Lake 6.86 284 P **Pn 05 07 43.9 -0.3**
BNB Barry Inlet 7.02 149 Pn **Pn 05 07 45.7 -0.8**
BNB S **Sb 05 09 02.8 -3.1**
BNB Barry Inlet 7.02 149 ⇑Pn **Pn 05 07 45.7 -0.8**
BNB ⇑Sn **Sn 05 09 02.8 -3.1**
RND Reindeer 7.16 316 P **Pn 05 07 49.2 +0.9**
MCK McKinley 7.39 317 *e*Pn **Pn 05 07 50.9 -0.5**
MCK *e*Sg Sg 05 09 53.7 -7.4
IL1 Eielson Array 7.46 328 P **Pn 05 07 51.5 -0.9**
ILAR Eielson Array 7.46 328 Pn **Pn 05 07 51.0 -1.4**
ILAR Lg Lg 05 09 56.1
ILAR Eielson Array 7.46 328 Pn **Pn 05 07 51.0 -1.4**
2.0nm,0.3s,baz=151,slow=10,SNR=196
ILAR Lg Lg 05 09 56.1
2.1nm,0.3s,baz=120,slow=27,SNR=4.1
WRH Wood River Hil 7.59 324 P **Pn 05 07 54.7 +0.5**
STLK Strandline Lak 7.60 297 P **Pn 05 07 54.4 +0.1**
FNBB Fort Nelson 7.61 83 ⇓Pn **Pn 05 07 54.1 -0.3**
FNBB Sg Sb 05 09 58.3 +12
FNBB Fort Nelson 7.61 83 ⇓Pn **Pn 05 07 54.1 -0.3**
FNBB ⇓Sg Sb 05 09 58.3 +12
SPU Mount Spurr 7.63 295 P **Pn 05 07 54.5 -0.2**
CCB Clear Creek Bu 7.63 325 P **Pn 05 07 53.0 -1.7**
TRF Thorofare Moun 7.72 313 P **Pn 05 07 55.8 -0.3**
COLA College 7.81 326 P **Pn 05 07 57.3 +0.2**
KDAK Kodiak Island 7.93 269 P **Pn 05 07 57.3 -1.5**
KDAK Kodiak Island 7.93 269 Pn **Pn 05 07 57.4 -1.4**
2.3nm,0.3s,baz=109,slow=12,SNR=57
KDAK Sn **Sn 05 09 32.0 +4.0**
2.1nm,0.3s,baz=288,slow=19,SNR=2.8
KDAK LR LR 05 11 08.7
comp=Z,866nm,18.8s,baz=82,slow=39
NEA Nenana 7.98 322 P **Pn 05 07 59.7 +0.3**
MDM Murphy Dome 7.98 326 P **Pn 05 07 59.6 0.0**
OPT Oil Point 8.05 283 P **Pn 05 07 59.3 -1.2**
PPLA Purkeypile 8.22 307 P **Pn 05 08 02.4 -0.6**
OHAK Old Harbor 8.44 266 P **Pn 05 08 04.4 -1.4**
FSB Fort Saint Jam 8.50 114 ⇓Pn Pn 05 08 10.0 +3.3
FSB Fort Saint Jam 8.50 114 ⇓Pn Pn 05 08 10.0 +3.3
BBB Bella Bella 8.51 136 Pn **Pn 05 08 07.3 +0.5**
BBB Sn **Sn 05 09 43.9 +1.6**
BBB Lg Lg 05 10 34.5
BBB Bella Bella 8.51 136 ⇓Pn **Pn 05 08 07.2 +0.5**
BBB ⇓Sn **Sn 05 09 42.9 +0.5**
BBB ⇓Sg 05 10 29.1
BBB Bella Bella 8.51 136 Pn **Pn 05 08 07.3 +0.5**
1.1nm,0.3s,baz=317,slow=14,SNR=13
BBB Sn **Sn 05 09 43.9 +1.6**
3.4nm,0.3s,baz=127,slow=18,SNR=6.2
BBB Lg Lg 05 10 34.5
0.9nm,0.3s,baz=65,slow=23,SNR=4.7
MLY Manley 8.81 321 P **Pn 05 08 11.1 +0.2**
KABR Katmai Barrier 9.10 274 P **Pn 05 08 14.6 -0.3**
BM3 Burnt Mountain 9.25 343 P **Pn 05 08 16.9 -0.1**
SVW2 Sparrevohn 9.30 292 *e*Pn **Pn 05 08 14.4 -3.2**
ALRB Anaheim Lake 9.45 126 ⇓Pn **Pn 05 08 22.4 +2.6**
UBRB Upper Baezaeko 9.62 122 ⇑Pn **Pn 05 08 24.0 +1.9**
INK Inuvik 9.78 9 Pn **Pn 05 08 22.9 -1.1**
INK Lg 05 11 10.6
INK Inuvik 9.78 9 ⇑Pn **Pn 05 08 23.9 -0.1**
INK Inuvik 9.78 9 Pn **Pn 05 08 22.9 -1.1**
0.8nm,0.3s,baz=193,slow=13,SNR=51
INK Lg Lg 05 11 10.6
2.4nm,0.3s,baz=96,slow=31,SNR=6.4
INK LR LR 05 12 50.0
comp=Z,456nm,19.2s,baz=232,slow=42
COLD Coldfoot 10.22 332 *e*Pn **Pn 05 08 31.6 +1.4**
CLSB Cack Lake 10.40 119 ⇓Pn **Pn 05 08 34.1 +1.5**
GALN Gameti Lake 11.10 52 Pn **Pn 05 08 40.7 -1.5**
GALN Gameti Lake 11.10 52 ⇑Pn **Pn 05 08 40.7 -1.5**
CHGN Chignik 11.41 267 *e*Pn **Pn 05 08 46.3 -0.2**
CHGN *e*Sn **Sn 05 10 50.8 -2.6**
CTLN Castor Lake 11.74 52 Pn **Pn 05 08 49.3 -1.6**
CTLN Castor Lake 11.74 52 ⇓Pn **Pn 05 08 49.3 -1.6**
YKA Yellowknife Ar 11.90 62 Pn **Pn 05 08 50.3 -2.8**
YKA Sn Sn 05 10 57.4 -7.9
YKA Lg Lg 05 12 14.8
YKA Yellowknife Ar 11.90 62 Pn **Pn 05 08 50.3 -2.8**
1.1nm,0.3s,baz=263,slow=13,SNR=84
YKA Sn Sn 05 10 57.4 -7.9
0.8nm,0.3s,baz=256,slow=22,SNR=4.0
YKA Lg Lg 05 12 14.8
0.4nm,0.3s,baz=263,slow=28,SNR=6.2
YKW3 Yellowknife Ar 11.90 62 *e*Pn **Pn 05 08 51.2 -1.9**
0.3nm,0.7s
YKW3 *e*Sg 05 12 12.8
YKW3 Yellowknife Ar 11.90 62 ⇑Pn **Pn 05 08 51.1 -2.1**
ILKN Indian Lake 12.04 53 ⇑Pn **Pn 05 08 52.8 -2.3**
ILKN Indian Lake 12.04 53 ⇑Pn **Pn 05 08 52.8 -2.3**
NLWA Neilton Lookou 14.03 138 *e*Pn **Pn 05 09 24.0 +1.7**
HDW Hoodsport 14.10 136 P **P 05 09 33.2 +2.3**
LON Longmire 15.32 135 *e*P **P 05 09 43.3 -1.1**
38nm,1.0s
WPW White Pass 15.46 134 P **P 05 09 49.4 +3.3**
TNA Tin City 15.57 309 *e*Pn **Pn 05 09 41.9 -0.9**
10nm,0.8s
FL2 Flat Top 2 15.59 137 P **P 05 09 50.5 +2.9**
NEW Newport 16.03 122 *e*P **P 05 09 52.3 0.0**
22nm,1.0s
NEW Lg Lg 05 14 32.2
NEW Newport 16.03 122 ⇑P **P 05 09 52.3 0.0**
baz=16,SNR=14
NEW Newport 16.03 122 Pn **Pn 05 09 49.6 +0.7**
0.2nm,0.3s,baz=324,slow=10,SNR=17
NEW Lg Lg 05 14 32.2
0.2nm,0.3s,baz=233,slow=20,SNR=5.3
NEW LR LR 05 16 24.1
comp=Z,267nm,20.6s,baz=313,slow=39
A12A Yaak River Ran 16.20 118 ⇓P **P 05 09 54.6 +0.3**
baz=16
B12A Libby 16.57 119 ⇓P **P 05 09 59.1 +0.9**
baz=16
UNV Unalaska Valle 16.66 265 *e*Pn **Pn 05 09 57.3 +0.4**
46nm,0.7s
C11A Tepee Creek (N 16.73 121 ⇓P **P 05 10 00.0 -0.1**
baz=17
A13A Flathead Natio 16.78 116 ⇑P **P 05 10 01.2 +0.5**
baz=17
WALA Waterton Lakes 16.93 115 *e*P **P 05 10 04.5 +2.1**
0.6nm,1.1s
B13A Whitefish 17.15 117 ⇑P **P 05 10 05.7 +1.0**
baz=17
C12B Naegeli Ranch, 17.18 120 ⇑P **P 05 10 05.4 +0.3**
baz=17
A14A Double T Ranch 17.22 114 ⇑P **P 05 10 06.2 +0.6**
baz=17,SNR=8.3
BROR Big Rock Looko 17.24 141 P **P 05 10 08.0 +2.3**
BSMT Bassoo Peak 17.39 119 *e*Pn **P 05 10 08.3 +0.8**
A15A Johnson Ranch, 17.55 113 ⇑P **P 05 10 09.9 +0.7**
baz=17,SNR=13
C13A Hot Springs 17.61 119 ⇓P **P 05 10 11.1 +1.3**
baz=18
B14A Marquette Ranc 17.72 115 ⇑P **P 05 10 12.0 +0.9**
baz=18
D12A Red Ives Fores 17.73 122 ⇓P **P 05 10 12.3 +1.2**
baz=18
C14A Swan Lake 17.93 117 ⇓P **P 05 10 14.8 +1.5**
baz=18
SWMT Swartz Lake 18.00 118 *e*P **P 05 10 16.2 +2.0**
B15A Bradely Ranch, 18.09 114 ⇓P **P 05 10 16.3 +1.2**
baz=18,SNR=9.9
D13A Huson 18.10 120 ⇓P **P 05 10 16.6 +1.4**
baz=18,SNR=16
A16A West Butte Ran 18.12 111 ⇓P **P 05 10 16.6 +1.1**
baz=18,SNR=7.1
SLMT Seeley Lake 18.43 118 *e*P **Pn 05 10 20.8 +1.8**
B16A M & M Farms, S 18.43 113 ⇓P **Pn 05 10 19.6 +0.6**
baz=18,SNR=8.7
C15A Salmond Ranch, 18.45 116 ⇓P **Pn 05 10 20.4 +1.1**
baz=18,SNR=13
MSO Missoula 18.53 120 *e*P **Pn 05 10 22.3 +2.1**
8.9nm,1.1s
MSO Missoula 18.53 120 ⇓P **Pn 05 10 21.5 +1.3**
baz=18,SNR=12
D14A Greenough 18.54 118 ⇓P **Pn 05 10 21.7 +1.4**
baz=18,SNR=16
A17A Triple J Farms 18.56 110 ⇑P **Pn 05 10 20.8 +0.3**
baz=18,SNR=13
HUMO Hull Mountain 18.57 144 *e*P **Pn 05 10 23.1 +2.5**
9.4nm,0.8s
BMO Blue Mountains 18.64 129 *e*P **Pn 05 10 23.3 +1.7**
12nm,0.9s
E13A Victor 18.71 121 ⇓P **Pn 05 10 22.8 +0.3**
baz=19,SNR=9.5
F12A Elly 18.77 124 ⇑P **Pn 05 10 23.9 +0.7**
baz=19,SNR=12
CHMT Chamberlain Mo 18.78 118 *e*P **Pn 05 10 24.9 +1.6**
B17A L&G Farms, Che 18.95 112 ⇓P **Pn 05 10 25.4 +0.1**
baz=19,SNR=12
A18A Metzger Ranch, 19.00 109 ⇑P **Pn 05 10 25.7 -0.1**
baz=19
D15A Lincoln 19.03 117 ⇑P **Pn 05 10 26.9 +0.6**
baz=19,SNR=15
E14A Clinton 19.05 120 ⇓P **Pn 05 10 27.0 +0.5**
baz=19,SNR=10
F13A Darby 19.15 122 ⇑P **Pn 05 10 28.4 +0.6**
baz=19,SNR=19
G12A Big Creek, Yel 19.24 125 ⇑P **Pn 05 10 29.4 +0.5**
baz=19
B18A Beardsley Farm 19.38 110 ⇓P **P 05 10 29.9 +0.7**
baz=19
E15A Deer Lodge 19.43 118 ⇓P **Pn 05 10 30.8 -0.3**
baz=19,SNR=16
C17A Wigram Farm, 19.43 113 ⇓P **Pn 05 10 30.9 -0.2**
baz=19,SNR=12
YBH Yreka Blue Hor 19.45 145 *e*P **Pn 05 10 33.0 +1.7**
7.9nm,0.9s
YBH Yreka Blue Hor 19.45 145 P **Pn 05 10 31.5 +0.2**
0.1nm,0.3s,baz=331,slow=5.0,SNR=9.5
YBH LR LR 05 16 55.2
comp=Z,312nm,19.9s,baz=333,slow=33
D16A Dana Ranch, Ca 19.49 116 ⇑P **P 05 10 31.2 +0.7**
baz=19
A19A Klindworth Far 19.54 108 ⇑P **Pn 05 10 31.8 -0.4**
baz=19,SNR=14
F14A Wisdom 19.56 121 ⇑P **Pn 05 10 32.7 0.0**
baz=19,SNR=7.2
HRY Holter Researc 19.59 117 *e*P **Pn 05 10 33.4 +0.4**
14nm,0.7s
EGMT Eagleton 19.65 111 *e*P **Pn 05 10 33.3 -0.3**
23nm,0.8s
EGMT Eagleton 19.65 111 ⇓P **Pn 05 10 33.2 -0.4**
baz=20,SNR=13
G13A Cobalt 19.74 124 ⇑P **Pn 05 10 34.4 -0.4**
baz=20,SNR=22
B19A Brinkman Farms 19.75 109 ⇓P **P 05 10 34.1 +0.8**
baz=20
E16A East Helena 19.79 117 ⇑P **Pn 05 10 35.1 -0.3**
baz=20,SNR=11
D17A Six Diamond Ra 19.81 114 ⇑P **P 05 10 34.8 +0.8**
baz=20,SNR=7.3
FFC Flin Flon 19.82 86 *e*P **P 05 10 33.6 -0.3**
16nm,0.8s
F15A Butte 19.94 119 ⇑P **Pn 05 10 36.7 -0.4**
baz=20,SNR=18
G14A Jackson 19.96 122 ⇑P **Pn 05 10 37.1 -0.4**
baz=20
LRM Limekiln Ridge 19.97 119 *e*P **Pn 05 10 37.6 0.0**
A20A Cobblestone Ra 19.98 107 ⇓P **Pn 05 10 36.8 -0.6**
baz=20,SNR=18
MOD Modoc 20.07 140 *e*P Pn 05 10 39.6 +0.9
92nm,1.7s
H13A Challis 20.15 124 ⇑P Pn 05 10 39.3 -0.4
baz=20,SNR=23
WVOR Wild Horse Val 20.18 136 *e*P Pn 05 10 40.6 +0.5
20nm,0.9s
C19A Slack Wire Ran 20.19 111 ⇓P Pn 05 10 39.2 -0.8
baz=20,SNR=35
D18A Linhart Farms, 20.20 113 ⇓P Pn 05 10 39.5 -0.7
baz=20,SNR=21
E17A Martinsdale 20.23 116 ⇑P Pn 05 10 39.9 -0.8
baz=20,SNR=18
DLMT Dillon 20.25 120 *e*P Pn 05 10 41.0 0.0
14nm,0.9s
F16A Kennard Place, 20.38 118 ⇑P **P 05 10 41.1 +1.0**
baz=20,SNR=8.7
A21A Bergtoll Ranch 20.40 105 ⇑P **P 05 10 41.4 +1.0**
baz=20
I12A Atlanta 20.40 127 ⇓P Pn 05 10 42.3 -0.4
baz=20,SNR=34
MFID Camas Ranch 20.43 129 *e*P Pn 05 10 42.5 -0.5
13nm,0.9s
MFID Camas Ranch 20.43 129 ⇓P Pn 05 10 42.7 -0.3
baz=20,SNR=12
G15A Dillon 20.45 121 ⇑P Pn 05 10 42.4 -0.9
baz=20,SNR=15
BOZ Bozeman (W) 20.48 118 *e*P Pn 05 10 43.3 -0.2
7.6nm,0.8s
BOZ Bozman (W) 20.48 118 ⇑P Pn 05 10 42.7 -0.8
baz=20,SNR=16
H14A Leadore 20.50 123 ⇑P Pn 05 10 43.0 -0.8
baz=20,SNR=19
WDC Whiskeytown Da 20.56 146 *e*P Pn 05 10 44.7 +0.5
32nm,1.0s
MCMT McKenzie Canyo 20.56 122 *e*P Pn 05 10 44.6 0.0
E18A Harlowton 20.60 114 ⇓P Pn 05 10 44.0 -1.0
baz=20,SNR=10
D19A Cripps Ranch, 20.67 111 ⇑P Pn 05 10 44.8 -0.9
baz=20,SNR=17
G16A Moss Hill, Enn 20.72 119 ⇓P **P 05 10 45.2 +1.3**
baz=21,SNR=9.7
C20A Veseth Ranch, 20.72 109 ⇓P Pn 05 10 45.1 -1.1
baz=20,SNR=11
B21A Ellsworth Farm 20.73 106 ⇑P **P 05 10 44.9 +1.0**
baz=20
F17A Fitzpatrick Pl 20.73 116 ⇓P **P 05 10 45.3 +1.3**
baz=21,SNR=26
I13A Wildhorse Cree 20.73 125 ⇓P **P 05 10 45.5 +1.3**
baz=21,SNR=23
H15A Lima 20.81 122 ⇓P Pn 05 10 46.6 -1.0
baz=21,SNR=21
HLID Hailey 20.89 126 *e*P Pn 05 10 47.7 -0.8
9.9nm,1.0s
HLID Hailey 20.89 126 ⇑P Pn 05 10 47.4 -1.1
baz=21,SNR=15
A22A Carney Farms, 20.91 104 ⇓P Pn 05 10 47.2 -1.3
baz=21,SNR=9.3
I14A Mackay 21.01 124 ⇑P **P 05 10 48.2 +1.1**
baz=21
D20A Manuel Ranch, 21.08 111 ⇑P **P 05 10 49.3 +1.5**
baz=21,SNR=28
C21A Desert Coulee 21.09 108 ⇑P **P 05 10 49.3 +1.5**
baz=21
J13A Cove Ranch, Pi 21.13 126 ⇓P **P 05 10 50.2 +1.8**
baz=21,SNR=15
G17A Pierce Place, 21.13 118 ⇑P **P 05 10 49.9 +1.5**
baz=21,SNR=6.2
F18A Big Timber 21.18 115 ⇓P **P 05 10 50.2 +1.4**
baz=21,SNR=5.9
QLMT Earthquake Lak 21.19 120 *e*P **P 05 10 50.6 +1.5**
E19A Rath Farm, Rou 21.21 113 ⇑P **P 05 10 50.4 +1.2**
baz=21,SNR=15
GCMT Greycliff 21.28 115 *e*P **P 05 10 51.9 +1.9**
B22A Reddig Ranch S 21.32 105 ⇑P **P 05 10 51.8 +1.5**
baz=21,SNR=10
I15A Monteview 21.37 123 ⇑P **P 05 10 52.3 +1.4**
baz=21
H16A Russell Place, 21.37 119 ⇓P **P 05 10 52.7 +1.6**
baz=21,SNR=12
A23A Redstone 21.46 103 ⇑P **P 05 10 53.1 +1.4**
baz=21
J14A Carey 21.47 125 ⇓P **P 05 10 54.0 +2.0**
baz=21,SNR=16
E20A Meyer Farm, Mu 21.50 112 ⇑P **P 05 10 53.5 +1.3**
baz=21,SNR=10
YMR Madison River 21.53 119 *e*P **P 05 10 54.8 +2.1**
35nm,1.0s
F19A Roth Farm, Mol 21.58 114 ⇑P **P 05 10 54.7 +1.6**
baz=21,SNR=39
D21A La Casta Ranch 21.66 109 ⇑P **P 05 10 55.2 +1.3**
baz=22,SNR=13
G18A Lazy EL Ranch, 21.68 116 ⇓P **P 05 10 55.6 +1.3**
baz=22
B23A Brockton 21.72 104 ⇑P **P 05 10 55.8 +1.2**
baz=22,SNR=11
C22A Vida 21.75 106 ⇓P **P 05 10 55.7 +0.9**
baz=22,SNR=8.6
LKWY Lake 21.87 118 *e*P **P 05 10 59.0 +2.7**
18nm,0.9s
J15A Blackfoot 21.87 124 ⇓P **P 05 10 57.9 +1.5**
baz=22
BEKR Beckworth 21.88 142 *e*P **P 05 10 58.2 +1.7**
10nm,1.0s
I16A Newdale 21.91 121 ⇑P **P 05 10 58.8 +2.1**
baz=22,SNR=14
H17A Grant Village 21.92 119 ⇓P **P 05 10 59.5 +2.6**
baz=22,SNR=16
A24A Westby 21.93 102 ⇓P **P 05 10 57.7 +1.0**
baz=22,SNR=10
RLMT Red Lodge 21.97 116 *e*P **P 05 10 58.6 +1.2**
21nm,1.1s
RLMT Red Lodge 21.97 116 ⇓P **P 05 10 59.1 +1.7**
baz=22,SNR=17
E21A Keefer Ranch, 21.99 110 ⇓P **P 05 10 58.7 +1.3**
baz=22,SNR=5.9
F20A Billings 22.00 113 ⇑P **P 05 10 58.9 +1.3**
baz=22
D22A Cohagen 22.00 108 ⇓P **P 05 10 58.8 +1.1**
baz=22
C23A Lambert 22.06 105 ⇑P **P 05 10 58.7 +0.5**
baz=22,SNR=13
H18A Shoshone NF, C 22.12 117 ⇑P **P 05 11 00.0 +0.9**
baz=22,SNR=14
DGMT Dagmar 22.12 103 *e*P **P 05 11 00.2 +1.4**
29nm,1.1s
DGMT Dagmar 22.12 103 ⇑P **P 05 10 59.3 +0.5**
baz=22
IMW Indian Meadow 22.14 120 *e*P **P 05 11 01.3 +2.0**
79nm,1.5s
K14A Jones Ranch, D 22.25 126 ⇑P **P 05 11 02.3 +1.9**
baz=22,SNR=8.8
DCID1 Drake Creek 22.27 121 *e*P **P 05 11 03.1 +2.5**
74nm,1.2s
I17A Pilgrim Ck. 22.28 120 ⇑P **P 05 11 03.2 +2.4**
baz=22,SNR=17
MOOW Moose Ponds 22.34 120 *e*P **P 05 11 03.5 +2.0**
17nm,1.0s
G20A Bridger 22.39 114 ⇑P **P 05 11 03.0 +1.1**
baz=22,SNR=15
RRI2 Red Ridge 22.40 122 *e*P **P 05 11 03.6 +1.5**
24nm,1.5s
K15A Arbon 22.41 125 ⇑P **P 05 11 03.6 +1.5**
baz=22
RES Resolute Bay 22.43 28 P **P 05 11 01.7 -0.2**
0.8nm,0.3s
RES Resolute Bay 22.43 28 P **P 05 11 01.7 -0.2**
16nm,0.9s,baz=248,slow=12,SNR=35
RES LR LR 05 20 22.6
comp=Z,864nm,18.3s,baz=281,slow=38
H19A Powell 22.44 116 ⇑P **P 05 11 03.3 +0.9**
baz=22,SNR=8.2
BMN Battle Mountai 22.45 136 *e*P **P 05 11 05.6 +3.1**
8.6nm,0.9s
TPAW Teton Pass 22.45 121 *e*P **P 05 11 04.9 +2.2**
43nm,1.3s
D23A Lindsay 22.47 107 ⇓P **P 05 11 03.5 +0.8**
baz=22,SNR=11
LOHW Long Hollow 22.51 120 *e*P **P 05 11 05.5 +2.2**
13nm,0.9s
SNOW Snow King Moun 22.56 121 *e*P **P 05 11 05.2 +1.4**
8.6nm,0.8s
SNOW *e*PcP **PcP 05 14 57.8 +1.0**
WCN Washoe City 22.59 142 *e*P **P 05 11 05.6 +1.6**
15nm,1.2s
E22A Miles City 22.61 109 ⇑P **P 05 11 05.3 +1.1**
baz=22,SNR=8.0
J17A Brown Place, J 22.66 121 ⇑P **P 05 11 07.0 +2.1**
baz=22,SNR=8.2
I18A Diamond G Ranc 22.80 119 ⇓P **P 05 11 07.8 +1.4**
baz=23,SNR=11
G21A Lodge Grass 22.87 113 ⇑P **P 05 11 08.1 +1.1**
baz=23
E23A Ismay 22.89 108 ⇓P **P 05 11 08.0 +1.0**
baz=23
I19A Meeteetse 22.92 117 ⇓P **P 05 11 08.8 +1.2**
baz=23,SNR=7.5
ELK Elko 22.92 132 *e*P **P 05 11 09.6 +2.0**
ELK Elko 22.92 132 P **P 05 11 08.9 +1.2**
6.8nm,0.8s,baz=311,slow=9.4,SNR=29
ELK LR LR 05 21 08.8
comp=Z,278nm,19.1s,baz=193,slow=39
F22A Rosebud 22.93 111 ⇓P **P 05 11 08.5 +1.0**
baz=23
D24A Glendive 22.95 106 ⇑P **P 05 11 09.3 +1.6**
baz=23,SNR=17
L15A Malad City 23.02 126 ⇓P **P 05 11 10.2 +1.6**
baz=23
HVU Hansel Valley 23.05 126 *e*P **P 05 11 11.3 +2.5**
39nm,1.5s
K17A Gardner Place, 23.05 122 ⇓P **P 05 11 10.3 +1.4**
baz=23
J18A Kendall Valley 23.09 120 ⇑P **P 05 11 10.8 +1.4**
baz=23,SNR=16
G22A Birney 23.32 112 ⇑P **P 05 11 12.4 +0.9**
baz=23,SNR=5.6
E24A Baker 23.34 107 ⇑P **P 05 11 13.3 +1.6**
baz=23
F23A Volborg 23.39 110 ⇑P **P 05 11 12.8 +0.7**
baz=23,SNR=7.6
H21A Big Horn, Sher 23.39 114 ⇑P **P 05 11 13.2 +0.9**
baz=23,SNR=7.1
J19A Crowheart 23.49 119 ⇑P **P 05 11 14.8 +1.5**
baz=23
K18A Toltan Ranch, 23.54 121 ⇓P **P 05 11 14.9 +1.2**
baz=23
CMB Columbia Colle 23.55 144 *e*P **P 05 11 15.4 +1.7**
12nm,1.2s
BW06 Boulder Array 23.65 120 *e*P **P 05 11 15.4 +0.5**
28nm,1.7s
BW06 Boulder Array 23.65 120 ⇓P **P 05 11 16.0 +1.1**
baz=24,SNR=5.4
PDAR Pinedale Array 23.65 120 P **P 05 11 15.8 +0.8**
PDAR PcP **PcP 05 14 58.3 -0.7**
PDAR Pinedale Array 23.65 120 P **P 05 11 15.8 +0.8**
3.2nm,0.8s,baz=332,slow=6.5,SNR=17
PDAR PcP **PcP 05 14 58.3 -0.7**
1.0nm,0.7s,baz=0.3,slow=0.5,SNR=3.7
HWUT Hardware Ranch 23.70 125 *e*P **P 05 11 17.2 +1.9**
10nm,0.9s
G23A Biddle 23.77 111 ⇑P **P 05 11 16.6 +0.7**
baz=24
F24A Ekalaka 23.77 108 ⇑P **P 05 11 17.1 +1.1**
baz=24,SNR=12
NVAR Mina Array Bea 23.86 140 P **P 05 11 18.3 +1.4**
NVAR PcP **PcP 05 15 00.6 +1.1**
NVAR Mina Array Bea 23.86 140 P **P 05 11 18.3 +1.4**
8.3nm,0.8s,baz=317,slow=8.7,SNR=34
NVAR PcP **PcP 05 15 00.6 +1.1**
1.1nm,0.5s,baz=0.0,slow=3.0,SNR=4.1
NVAR LR LR 05 19 52.4
comp=Z,266nm,20.9s,baz=14,slow=35
J20A Shoshoni 23.87 117 ⇑P **P 05 11 18.8 +1.9**
baz=24,SNR=5.8
I21A Big Trails, Te 23.89 115 ⇓P **P 05 11 18.0 +0.9**

baz=24,SNR=8.6
NV11 **Mina Array Sit** 23.90 140 *e*P P 05 11 18.9 +1.6
M16A **Huntsville** 23.91 125 ⇓P P 05 11 18.5 +1.1
baz=24
K19A **Absolon Red Bu** 23.93 119 ⇓P P 05 11 18.5 +1.0
baz=24
L18A **Fontenelle, Gr** 24.11 122 ⇑P P 05 11 20.2 +1.0
baz=24
I22A **9 Mile Ranch,** 24.21 114 ⇓P P 05 11 20.9 +0.8
baz=24,SNR=7.1
K20A **Yellowstone Ra** 24.29 119 ⇓P P 05 11 21.2 +0.3
baz=24
DUG **Dugway** 24.36 129 *e*P P 05 11 22.7 +1.3
21nm,1.1s
DUG **Dugway** 24.36 129 ⇑P P 05 11 23.0 +1.5
baz=24,SNR=17
H24A **Dirks Ranch, A** 24.51 110 ⇑P P 05 11 23.5 +0.8
baz=24
J22A **Midwest** 24.57 115 ⇓P P 05 11 24.6 +1.2
baz=24
JLU **Jordanelle** 24.58 126 *e*P P 05 11 25.7 +2.1
6.1nm,0.9s
L20A **Wamsutter** 24.80 120 ⇓P P 05 11 26.3 +0.7
baz=25
K21A **Alcova** 24.81 117 ⇓P P 05 11 26.3 +0.7
baz=25,SNR=9.4
DAU **Daniels Canyon** 24.82 126 *e*P P 05 11 26.3 +0.5
9.1nm,1.0s
M19A **Rock Springs** 24.84 121 ⇓P P 05 11 27.0 +1.1
baz=25
R11A **Troy Canyon, C** 24.88 135 ⇑P P 05 11 27.5 +1.3
baz=25,SNR=29
J23A **Dilts Ranch, B** 25.02 114 ⇑P P 05 11 28.6 +1.2
baz=25
N18A **Larsen Ranch,** 25.04 123 ⇓P P 05 11 29.1 +1.4
baz=25
I24A **Kuemmerle Ranc** 25.12 112 ⇓P P 05 11 29.2 +0.8
baz=25
K22A **Casper** 25.14 116 ⇑P P 05 11 29.6 +1.1
baz=25,SNR=5.7
L21A **Rawlins** 25.28 118 ⇑P P 05 11 30.6 +0.7
baz=25,SNR=6.0
M20A **Sweetwater, Wa** 25.28 120 ⇓P P 05 11 30.5 +0.6
baz=25
N19A **John Jarvie Ra** 25.32 122 ⇑P P 05 11 30.7 +0.5
baz=25
ULM **Lac du Bonnet** 25.33 91 *e*P P 05 11 30.4 +0.4
12nm,1.0s
ULM **Lac du Bonnet** 25.33 91 P P 05 11 30.4 +0.4
9.4nm,0.9s,baz=304,slow=9.2,SNR=7.2
ULM LR LR 05 22 09.6
comp=Z,433nm,18.7s,baz=305,slow=38
GRAC **Grapevine Rang** 25.46 140 ⇑P P 05 11 33.0 +1.7
baz=25
K23A **Bowen Ranch, D** 25.48 115 ⇓P P 05 11 32.3 +0.7
baz=25,SNR=7.6
RCTC **Rector, Farmer** 25.49 144 ⇑P P 05 11 33.2 +1.7
baz=26
J24A **Dixon Ranch, L** 25.50 113 ⇓P P 05 11 32.8 +1.0
baz=25,SNR=5.9
M21A **Separation Pea** 25.56 119 ⇓P P 05 11 33.4 +0.9
baz=25
N20A **Spence Gulch,** 25.78 121 ⇑P P 05 11 35.3 +0.8
baz=26,SNR=18
BILL **Bilibino** 25.83 314 *e*P P 05 11 34.6 +0.3
14nm,1.0s
K24A **Anderson Ranch** 25.89 114 ⇓P P 05 11 36.3 +0.9
baz=26
P18A **Preston Nutter** 25.90 126 ⇑P P 05 11 36.9 +1.2
baz=26,SNR=7.6
L23A **Garrett** 25.94 116 ⇑P P 05 11 36.4 +0.5
baz=26
MVU **Marysvale** 26.04 130 *e*P P 05 11 38.6 +1.8
10nm,0.9s
MVU *e*PcP PcP 05 15 05.9 +1.6
MSU **Marysvale** 26.05 130 *e*P P 05 11 39.0 +2.2
M22A **Cedar Creek Ra** 26.08 118 ⇓P P 05 11 37.8 +0.6
baz=26,SNR=12
Q16A **Castle Valley** 26.11 128 ⇑P P 05 11 38.1 +0.6
baz=26
N21A **Black Mountain** 26.17 120 ⇑P P 05 11 38.7 +0.7
baz=26,SNR=6.8
ARUT **Antelope Range** 26.18 133 *e*P P 05 11 39.8 +1.7
SRU **San Rafael** 26.22 127 ⇓P P 05 11 39.6 +1.2
baz=26,SNR=5.7
MPMC **Manual Prospec** 26.28 141 ⇓P P 05 11 40.4 +1.5
baz=26,SNR=5.5
ISA **Isabella** 26.32 143 ⇑P P 05 11 40.3 +1.1
baz=26
O20A **White River Ci** 26.35 122 ⇓P P 05 11 40.4 +0.8
baz=26
P19A **Cripple Cowboy** 26.44 124 ⇑P P 05 11 41.1 +0.7
baz=26
AGMN **Agassiz Nation** 26.52 95 *e*P P 05 11 41.1 +0.2
15nm,1.0s
N22A **Wattenberg Ran** 26.62 119 ⇓P P 05 11 43.1 +1.0
baz=26
O21A **Pagoda** 26.63 121 ⇑P P 05 11 43.0 +0.8
baz=26
PHWY **Pilot Hill** 26.68 117 *e*P P 05 11 41.0 -1.7
37nm,1.3s
K26A **Motz Farm, Whi** 26.69 112 ⇑P P 05 11 43.1 +0.6
baz=26
N23A **Red Feather La** 26.78 118 ⇓P P 05 11 43.9 +0.4
baz=27
M24A **Cheyenne** 26.85 116 ⇑P P 05 11 45.0 +0.9
baz=27
Q19A **Hogan Spring (** 26.88 125 ⇑P P 05 11 45.1 +0.8
baz=27
O22A **Kremmling** 27.09 120 ⇓P P 05 11 47.3 +1.0
baz=27,SNR=9.6
K27A **Flueckinger Fa** 27.15 111 ⇓P P 05 11 47.1 +0.5
baz=27,SNR=12
GSC **Goldstone** 27.19 140 *e*P P 05 11 48.9 +1.9
138nm,2.6s
GSC **Goldstone** 27.19 140 ⇓P P 05 11 47.2 +0.1
baz=27
Q20A **Ridgley Place,** 27.30 124 ⇓P P 05 11 47.7 -0.4
baz=27
O23A **Lake Granby, G** 27.34 119 ⇑P P 05 11 48.6 0.0
baz=27
P22A **Eagle** 27.45 121 ⇓P P 05 11 49.1 -0.4
baz=27
L27A **T5 Ranch, Ells** 27.58 112 ⇓P P 05 11 50.0 -0.5
baz=27
SMCO **Snowmass** 27.70 121 *e*P P 05 11 53.8 +1.9
76nm,2.8s
ISCO **Idaho Springs** 27.81 119 *e*P P 05 11 54.3 +1.6
11nm,1.3s
ISCO **Idaho Springs** 27.81 119 ⇓P P 05 11 53.4 +0.6
baz=28,SNR=5.3
U15A **North Rim** 27.81 132 ⇓P P 05 11 52.8 0.0
baz=28
R20A **Redvale** 27.90 125 ⇓P P 05 11 54.4 +0.8
baz=28,SNR=6.2
Q22A **Crested Butte,** 27.98 122 ⇓P P 05 11 53.9 -0.5
baz=28
P23A **Jefferson** 28.05 120 ⇓P P 05 11 54.8 -0.2
baz=28
GMRC **Granite Mounta** 28.05 139 ⇑P P 05 11 55.0 +0.2
baz=28
R21A **Cimarron** 28.11 123 ⇓P P 05 11 55.0 -0.5
baz=28
W13A **Hualapai Mount** 28.39 136 ⇓P P 05 11 57.7 -0.2
baz=28
R22A **Saguache, Gunn** 28.57 122 ⇑P P 05 11 59.3 -0.3
baz=28
S22A **4UR Ranch, Cre** 28.94 123 ⇑P P 05 12 02.5 -0.4
baz=29
WUAZ **Wupatki** 28.97 132 *e*P P 05 12 04.5 +1.5
8.6nm,1.1s
WUAZ **Wupatki** 28.97 132 ⇓P P 05 12 03.1 +0.2
baz=29
EYMN **Ely** 29.02 91 *e*P P 05 12 03.6 +0.4
29nm,1.4s
ECSD **EROS Data Cent** 29.20 103 *e*P P 05 12 05.1 +0.2
14nm,1.0s
U20A **Newcomb** 29.38 127 ⇓P P 05 12 06.8 +0.2
baz=29
T22A **Edith** 29.52 124 ⇓P P 05 12 08.2 +0.2
baz=29
V20A **Brimhall** 29.89 127 ⇓P P 05 12 11.4 +0.2
baz=30
X16A **Lo Mia Camp, P** 29.91 133 ⇓P P 05 12 11.8 +0.4
baz=30
SPMN **St. Paul** 30.12 97 ⇓P P 05 12 13.1 +0.1
baz=30
BGNE **Belgrade** 30.13 108 ⇑P P 05 12 12.8 -0.3
baz=30,SNR=7.2
Z14A **Wintersburg** 30.29 136 ⇑P P 05 12 14.8 +0.3
baz=30
X18A **Snowflake** 30.39 131 ⇓P P 05 12 15.2 -0.4
baz=30,SNR=8.0
U23A **El Rito** 30.41 124 ⇓P P 05 12 15.5 -0.3
baz=30,SNR=7.0
V22A **San Miguel Ran** 30.45 125 ⇓P P 05 12 16.0 -0.2
baz=30
W20A **Ramah** 30.46 128 ⇓P P 05 12 15.8 -0.5
baz=30,SNR=7.3
113A **Mohawk Valley,** 30.54 138 ⇑P P 05 12 17.2 +0.5
baz=30
S26A **Kim** 30.55 119 ⇓P P 05 12 17.1 +0.2
baz=30
T26A **Comanche Natio** 30.86 119 ⇓P P 05 12 19.6 -0.1
baz=31
U25A **Circle Dot Ran** 31.13 121 ⇑P P 05 12 23.5 +1.3
baz=31,SNR=6.5
V24A **Rampart Ranch,** 31.32 123 ⇓P P 05 12 24.6 +0.8
baz=31
X21A **Alamocita Cree** 31.34 128 ⇑P P 05 12 25.4 +1.4
baz=31,SNR=8.7
T27A **Campo** 31.35 118 ⇑P P 05 12 24.6 +0.6
baz=31
W23A **Werner Place,** 31.41 125 ⇑P P 05 12 25.1 +0.5
baz=31
U26A **Atchley Ranch,** 31.43 120 ⇑P P 05 12 26.1 +1.3
baz=31,SNR=11
COWI **Conover** 31.44 92 *e*P P 05 12 25.0 +0.4
99nm,2.6s
V25A **Rancho No Teng** 31.51 122 ⇑P P 05 12 25.9 +0.4
baz=31
Y20A **Horse Springs,** 31.56 129 ⇓P P 05 12 26.4 +0.4
baz=32
214A **Organ Pipe Nat** 31.61 137 ⇓P P 05 12 26.5 +0.3
baz=32
X22A **Bernardo** 31.61 127 ⇑P P 05 12 27.1 +0.8
baz=32
LAZ **Ladron** 31.64 127 *e*P P 05 12 28.1 +1.4
Y21A **Point of Rocks** 31.76 128 ⇓P P 05 12 28.8 +1.0
baz=32
V26A **Tequesquite Ra** 31.91 121 ⇑P P 05 12 30.7 +1.7
baz=32,SNR=12
TUC **Tucson** 32.03 134 *e*P P 05 12 32.1 +2.1
5.2nm,0.8s
BNM **Barren Site** 32.08 126 *e*P P 05 12 32.7 +2.2
W25A **X Bar L Ranch,** 32.10 122 ⇓P P 05 12 31.2 +0.6
baz=32
Y22A **Socorro** 32.12 127 ⇓P P 05 12 32.0 +1.2
baz=32
Z20A **Nine Sixteen R** 32.17 130 ⇓P P 05 12 32.5 +1.3
baz=32
Y23A **Lovelace Mesa,** 32.50 126 ⇓P P 05 12 34.9 +0.6
baz=32
W26A **Owens Ranch, T** 32.51 122 ⇑P P 05 12 35.5 +1.2
baz=32
X25A **Clemmons Ranch** 32.59 123 ⇓P P 05 12 35.6 +0.6
baz=32
KSU1 **Kansas State U** 32.65 109 *e*P P 05 12 36.3 +1.0
37nm,0.9s
120A **U Bar Ranch, L** 32.65 131 ⇑P P 05 12 36.4 +0.9
baz=33
V28A **Channing** 32.66 119 ⇓P P 05 12 36.0 +0.6
baz=32
T31A **Randall Ranch,** 32.74 115 ⇓P P 05 12 36.5 +0.3
baz=33
Y24A **Capitan** 32.77 125 ⇓P P 05 12 38.3 +1.7
baz=33,SNR=5.1
V29A **Stinnett** 32.88 118 ⇑P P 05 12 38.1 +0.7
baz=33
X26A **CR and CF Fran** 32.95 122 ⇑P P 05 12 38.8 +0.7
baz=33
121A **Cookes Peak, D** 33.00 129 ⇓P P 05 12 39.6 +1.0
baz=33
Z23A **Rita Site, Whi** 33.01 127 ⇓P P 05 12 39.7 +1.1
baz=33
Y25A **Mesa, Roswell** 33.09 124 ⇓P P 05 12 40.9 +1.5
baz=33,SNR=7.1
X27A **F and S Farms,** 33.18 121 ⇑P P 05 12 40.7 +0.6
baz=33
220A **Playas Peak, P** 33.26 131 ⇑P P 05 12 42.5 +1.7
baz=33,SNR=5.6
Z24A **Sheeppen Canyo** 33.31 125 ⇓P P 05 12 42.8 +1.5
baz=33,SNR=7.1
319A **Douglas** 33.44 132 ⇑P P 05 12 43.3 +1.0
baz=33
AMTX **Amarillo** 33.62 119 *e*P P 05 12 45.5 +1.6
7.6nm,0.7s
AMTX **Amarillo** 33.62 119 ⇓P P 05 12 44.8 +1.0
baz=34
Z25A **Roswell** 33.63 125 ⇑P P 05 12 45.6 +1.6
baz=34,SNR=7.3
X28A **Dimmitt** 33.69 120 ⇑P P 05 12 45.1 +0.6
baz=34
V31A **Spring Creek L** 33.74 116 ⇑P P 05 12 45.5 +0.7
baz=34
Y27A **Causey** 33.80 122 ⇓P P 05 12 47.0 +1.6
baz=34,SNR=5.6
124A **Stringfield Ra** 33.82 126 ⇓P P 05 12 47.3 +1.6
baz=34,SNR=5.7
MSTX **Muleshoe** 33.90 122 ⇑P P 05 12 46.7 +0.4
baz=34
Z26A **Caprock** 33.96 124 ⇑P P 05 12 47.5 +0.7
baz=34
X29A **Tulia** 33.98 120 ⇑P P 05 12 47.1 +0.1
baz=34
W31A **Holland Ranch,** 34.17 117 ⇓P P 05 12 48.9 +0.4
baz=34
125A **Gardner Draw,** 34.19 125 ⇓P P 05 12 50.3 +1.4
baz=34,SNR=8.1
Z27A **Tatum** 34.26 123 ⇓P P 05 12 50.4 +1.0
baz=34,SNR=6.2
224A **Cornudas Mount** 34.33 127 ⇑P P 05 12 50.3 +0.2
baz=34
X30A **Coker Ranch, T** 34.35 119 ⇓P P 05 12 50.4 +0.3
baz=34
Y29A **Porterfield Fa** 34.48 120 ⇑P P 05 12 51.8 +0.5
baz=34
225A **Deer Hill, Car** 34.59 126 ⇓P P 05 12 53.2 +0.8
baz=34
X31A **McDonald Ranch** 34.61 117 ⇓P P 05 12 53.5 +1.1
baz=34,SNR=6.1
GDL2 **Guadalupe Moun** 34.71 125 *e*P P 05 12 54.9 +1.5
23nm,1.2s
MNTX **Cornudas Mount** 34.72 127 *e*P P 05 12 54.7 +1.4
42nm,3.0s
MNTX **Cornudas Mount** 34.72 127 ⇓P P 05 12 54.5 +1.2
baz=35
226B **Tecolote Peak,** 34.90 125 ⇑P P 05 12 55.6 +0.6
baz=35
Z29A **Hungry Hill Ra** 34.97 121 ⇓P P 05 12 56.3 +0.8
baz=35,SNR=7.7
WMOK **Wichita Mounta** 35.08 116 *e*P P 05 12 57.5 +1.0
8.8nm,0.8s
128A **Castleberry Fa** 35.16 122 ⇑P P 05 12 57.4 +0.2
baz=35
HDIL **Hopedale** 35.25 99 *e*P P 05 12 58.3 +0.5
46nm,1.4s
PETK **Petropavlovsk-** 35.37 290 P P 05 12 59.4 +0.7
PETK **Petropavlovsk-** 35.37 290 P P 05 12 59.4 +0.7
3.8nm,0.8s,baz=65,slow=11,SNR=2.6
Y32A **R-V Farms, Ver** 35.38 117 ⇑P P 05 12 59.1 +0.2
baz=35
228A **UT Block 9, Go** 35.55 123 ⇓P P 05 13 01.0 +0.4
baz=35
TUL1 **Tulsa** 35.56 111 ⇑P P 05 13 01.2 +0.7
baz=35,SNR=7.8
425A **Indio Mountain** 35.68 127 ⇑P P 05 13 02.2 +0.5
baz=36
Z32A **Haskell** 35.94 118 ⇑P P 05 13 03.7 -0.1
baz=36
426A **McDonald Obser** 36.18 126 ⇓P P 05 13 06.2 +0.1
baz=36
427A **Hayter Ranch,** 36.29 125 ⇑P P 05 13 07.1 +0.2
baz=36
329A **Wagon Wheel Ra** 36.35 123 ⇑P P 05 13 07.8 +0.3
baz=36
230A **Sterling City** 36.40 121 ⇓P P 05 13 07.7 0.0
baz=36
SFIN **Scholer Farm** 36.52 97 ⇓P P 05 13 08.7 0.0
baz=36
526A **Mary Lane Ranc** 36.68 127 ⇓P P 05 13 11.4 +1.1
baz=37,SNR=5.6
231A **Bronte** 36.71 120 ⇓P P 05 13 10.5 +0.1
baz=37
330A **Mertzon** 36.78 122 ⇑P P 05 13 11.5 +0.5
baz=37
TIXI **Tiksi** 36.93 328 *e*P P 05 13 11.6 -0.2
4.7nm,0.8s
TIXI *e*PcP PcP 05 15 31.8 -0.8
232A **Coleman** 37.05 120 ⇑P P 05 13 13.8 +0.4
baz=37
626A **Big Bend Ranch** 37.11 127 ⇓P P 05 13 14.4 +0.6
baz=37
429A **Davenport Ranc** 37.13 123 ⇓P P 05 13 14.7 +0.6
baz=37
528A **Cox Ranch, San** 37.15 125 ⇓P P 05 13 15.2 +1.0
baz=37
430A **Baggett Ranch,** 37.28 122 ⇓P P 05 13 15.9 +0.6
baz=37
SCHQ **Schefferville** 37.34 64 P P 05 13 15.7 +0.2
SCHQ **Schefferville** 37.34 64 P P 05 13 15.7 +0.2
11nm,1.0s,baz=311,slow=9.7,SNR=7.6
SIUC **Southern Illin** 37.43 102 *e*P P 05 13 16.6 +0.2
21nm,1.1s
332A **Millersview** 37.44 120 ⇑P P 05 13 17.3 +0.7
baz=37
TXAR **Lajitas Array** 37.50 127 P P 05 13 18.7 +1.5
TXAR PcP PcP 05 15 35.3 +0.1
TXAR **Lajitas Array** 37.50 127 P P 05 13 18.7 +1.5
0.8nm,0.7s,baz=331,slow=7.2,SNR=12
TXAR PcP PcP 05 15 35.3 +0.1
1.5nm,1.0s,baz=285,slow=2.5,SNR=6.6
627A **Terlingua Ranc** 37.51 126 ⇑P P 05 13 18.1 +0.8
baz=37
431A **Sonora** 37.65 122 ⇓P P 05 13 19.0 +0.6
baz=38,SNR=6.3
628A **Black Gap, Mar** 37.69 126 ⇓P P 05 13 19.7 +0.9
baz=38
BLO **Bloomington** 37.71 98 *e*P P 05 13 17.2 -1.6
9.5nm,0.7s
BLO *e*PP PP 05 14 43.1 -1.6
MIAR **Mount Ida** 37.74 110 *e*P P 05 13 19.9 +0.8
23nm,1.1s
MIAR *e*PcP PcP 05 15 35.8 0.0
SUMG **Summit** 37.95 29 *e*P P 05 13 20.9 -0.1
SUMG *e*pP pP 05 13 32.9 +6.7
SUMG **Summit** 37.95 29 *i* P P 05 13 21.4 +0.5
5.9nm,1.0s
SUMG *i* 05 13 33.1
WHTX **Lake Whitney** 37.97 117 ⇑P P 05 13 21.3 +0.2
baz=38
USIN **University of** 38.03 101 *e*P P 05 13 21.9 +0.4
51nm,0.9s
531A **Rocksprings** 38.12 122 ⇑P P 05 13 22.4 0.0
baz=38
532A **Rocksprings** 38.43 121 ⇓P P 05 13 25.5 +0.5
baz=38,SNR=8.2
631A **Perdido Creek** 38.75 123 ⇓P P 05 13 27.4 -0.3
baz=39
ACSO **Alum Creek Sta** 38.76 94 *e*P P 05 13 28.1 +0.5
16nm,1.1s
632A **Uvalde** 39.02 122 ⇓P P 05 13 29.8 -0.1
baz=39
WVT **Waverly** 39.36 103 *e*P P 05 13 32.9 +0.3
154nm,2.8s
WVT *e*PcP PcP 05 15 40.8 +0.1
DAG **Danmarks Havn** 39.45 18 *i* P P 05 13 32.5 -0.5
3.6nm,0.9s
732A **Laxson Ranch,** 39.61 123 ⇓P P 05 13 34.6 -0.1
baz=40
OXF **Oxford** 39.83 106 *e*P P 05 13 36.4 -0.1
33nm,0.9s
OXF *e*PcP PcP 05 15 42.2 -0.1
BINY **Binghamton** 40.98 86 *e*P P 05 13 47.6 +1.5
328nm,2.7s
SSPA **Standing Stone** 41.12 89 *e*P P 05 13 48.2 +1.0
21nm,1.2s
KMSC **Kings Mountain** 43.46 97 ⇑P P 05 14 06.0 -0.3
baz=43
TIGA **Tifton** 45.22 103 ⇓P P 05 14 20.1 -0.3
baz=45
ERM **Erimo** 50.06 287 *e*P P 05 14 58.9 +1.0
186nm,0.7s
ERM *e*ScP ScP 05 20 07.3 -4.6
ARCES **ARCESS Array B** 51.45 7 P P 05 15 08.5 +0.5
ARCES **ARCESS Array B** 51.45 7 P P 05 15 08.5 +0.5
6.7nm,1.0s,baz=345,slow=7.5,SNR=4.8
CMIG **Matias Romero** 52.03 125 P P 05 15 14.1 +1.2
CMIG **Matias Romero** 52.03 125 P P 05 15 14.1 +1.2
7.7nm,0.8s,baz=320,slow=9.4,SNR=12
TEIG **Tepich** 52.26 116 P P 05 15 15.4 +0.8
TEIG **Tepich** 52.26 116 P P 05 15 15.4 +0.8
22nm,0.7s,baz=315,slow=5.7,SNR=12
TEIG LR LR 05 37 44.1
comp=Z,61nm,20.0s,baz=144,slow=36
USRK **Ussuriysk Arra** 53.80 297 P P 05 15 25.4 -0.3
1.8nm,0.5s,baz=47,slow=8.7,SNR=4.2
USRK LR LR 05 39 33.2
comp=Z,99nm,18.5s,baz=192,slow=37
MDJ **Mudanjiang** 54.59 299 P P 05 15 27.9 -3.6
MDJ S S 05 23 04.5 -5.4
MDJ pmax pmax
comp=Z,9.0nm,2.4s
MDJ pmax pmax
comp=Z,80nm,7.1s
MDJ LR LR
comp=N,180nm,56.9s
MDJ LR LR
comp=E,130nm,54.7s
MDJ LR LR
comp=Z,90nm,24.1s
MJAR **Matsushiro Arr** 56.72 287 P P 05 15 47.1 +0.2
MJAR **Matsushiro Arr** 56.72 287 P P 05 15 47.1 +0.2
comp=Z,2.7nm,0.6s,baz=19,slow=4.6,SNR=7.3
MAT **Matsushiro** 56.72 287 P P 05 15 47.7 +0.8
CN2 **Changchun** 57.10 301 *e*P P 05 15 48.8 -0.6
CN2 *e*PP PP 05 17 56.6 +0.7
CN2 *e*S S 05 23 41.3 -2.0
CN2 *e*SS SS 05 27 29.9 -1.5
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,200nm,10.0s
CN2 LR LR
comp=N,500nm,17.0s
CN2 LR LR
comp=E,300nm,17.0s
CN2 LR LR
comp=Z,300nm,19.0s
NB2 **NORSAR Subarra** 58.12 17 P P 05 15 55.5 -0.9
comp=Z,1.0nm,0.6s,baz=343,slow=7.4
NOA **NORSAR Array B** 58.12 17 P P 05 15 55.5 -0.9
NOA **NORSAR Array B** 58.12 17 P P 05 15 55.5 -0.9
comp=Z,1.5nm,0.8s,baz=345,slow=6.9,SNR=7.9
NOA LR LR 05 41 35.2
comp=Z,105nm,20.4s,baz=345,slow=37
FINES **FINESS Array B** 59.48 9 P P 05 16 04.5 -1.4
FINES **FINESS Array B** 59.48 9 P P 05 16 04.4 -1.4
comp=Z,1.1nm,0.6s,baz=357,slow=21,SNR=4.1
KSRS **Korea Array** 61.01 295 P P 05 16 17.6 +1.0
comp=Z,6.0nm,0.7s,baz=35,slow=7.1,SNR=12
KSAR **Wonju Array Be** 61.03 295 P P 05 16 17.6 +0.8
ULN **Ulaanbaatar** 61.26 316 *e*P P 05 16 19.0 +0.6
comp=Z,15nm,0.9s
SONM **Songino Array** 61.52 316 P P 05 16 21.4 +1.2
SONM **Songino Array** 61.52 316 P P 05 16 21.4 +1.2
comp=Z,8.8nm,0.8s,baz=34,slow=10.0,SNR=47
ZAA0 **Zalesovo Array** 62.55 333 *e*P P 05 16 26.0 -0.8
ZALV **Zalesovo Beam** 62.55 333 P P 05 16 26.3 -0.4
ZALV **Zalesovo Beam** 62.55 333 P P 05 16 26.3 -0.4
comp=Z,6.8nm,0.8s,baz=16,slow=6.4,SNR=34
JNU **Nakatsue** 63.07 290 P P 05 16 30.9 +0.3
JNU **Nakatsue** 63.07 290 P P 05 16 30.9 +0.3
comp=Z,7.7nm,0.8s,baz=58,slow=19,SNR=2.9
BJI **Beijing** 64.19 305 P P 05 16 34.4 -3.4
BJI S S 05 25 11.0 -3.1
BJI SS SS 05 29 20.8 -1.8
BJI pmax pmax
comp=Z,8.0nm,0.5s
BJI pmax pmax
comp=Z,150nm,5.7s
BJI LR LR
comp=N,190nm,15.0s
BJI LR LR
comp=E,290nm,17.4s
BJI LR LR
comp=Z,86nm,23.9s
SJG **San Juan** 65.11 96 LR LR 05 42 50.8
comp=Z,53nm,21.3s,baz=342,slow=34
HHC **Hu-ho-hao-te** 65.44 309 *e*P P 05 16 46.5 +0.4
HHC PcP PcP 05 17 19.3 +1.3
HHC PP PP 05 19 12.1 +2.5

HHC					ScP		05 21 19.5		
HHC					PcS		05 21 21.8		
HHC					S	**S**	**05 25 28.1**	**-1.6**	
HHC					sS	**sS**	**05 25 34.6**	**-4.2**	
HHC					ScS	**SKSac**	**05 26 36.8**	**-3.6**	
HHC					SS	**SS**	**05 29 41.8**	**-0.4**	
HHC					pmax	pmax			
	comp=Z,28nm,0.7s								
HHC					pmax	pmax			
	comp=Z,130nm,6.8s								
HHC					LR	LR			
	comp=N,450nm,16.7s								
HHC					LR	LR			
	comp=E,420nm,16.6s								
HHC					LR	LR			
	comp=Z,650nm,16.6s								
BRVK	**Borovoye**	**66.28**	**342**	*e*P	**P**		**05 16 51.0**	**-0.2**	
	comp=Z,42nm,1.8s								
ROSF	**Rostrenen**	**66.91**	**31**	*e*P	**P**		**05 16 56.1**	**+0.8**	
ROSF	**Rostrenen**	**66.91**	**31**	*e*P	**P**		**05 16 56.1**	**+0.8**	
KURK	**Kurchatov**	**66.96**	**336**	*e*P	**P**		**05 16 54.2**	**-1.3**	
	comp=Z,8.6nm,0.9s								
KURBB	**Kurchatov Arra**	**67.06**	**336**	P	**P**		**05 16 55.5**	**-0.7**	
	comp=Z,6.0nm,0.7s,baz=25,slow=6.0,SNR=23								
BAIF	**Baives**	**67.17**	**26**	*e*P	**P**		**05 16 57.7**	**+0.8**	
BAIF	**Baives**	**67.17**	**26**	*e*P	**P**		**05 16 57.7**	**+0.8**	
SGMF	**Saint Gilles**	**67.18**	**31**	*e*P	**P**		**05 16 56.8**	**-0.2**	
SGMF	**Saint Gilles**	**67.18**	**31**	*e*P	**P**		**05 16 56.8**	**-0.2**	
GIVF	**Givet**	**67.26**	**25**	*e*P	**P**		**05 16 57.4**	**-0.1**	
GIVF	**Givet**	**67.26**	**25**	*e*P	**P**		**05 16 57.4**	**-0.1**	
DPC	**Dobruska-Polom**	**69.21**	**17**	*e*P	**P**		**05 17 09.9**	**+0.2**	
	comp=Z,8.6nm,1.1s								
MFF	**Saint Martin d**	**69.34**	**30**	*e*P	**P**		**05 17 10.7**	**+0.2**	
	comp=Z,12nm,1.0s								
MFF	**Saint Martin d**	**69.34**	**30**	*e*P	**P**		**05 17 10.7**	**+0.2**	
	comp=Z,12nm,1.0s								
CDF	**Champ du Feu**	**69.39**	**24**	*e*P	**P**		**05 17 11.1**	**+0.1**	
CDF	**Champ du Feu**	**69.39**	**24**	*e*P	**P**		**05 17 11.1**	**+0.1**	
HAU	**Haudompre**	**69.58**	**25**	*e*P	**P**		**05 17 11.9**	**-0.1**	
HAU	**Haudompre**	**69.58**	**25**	*e*P	**P**		**05 17 11.9**	**-0.1**	
LOR	**Lormes**	**69.71**	**27**	*e*P	**P**		**05 17 12.7**	**-0.1**	
LOR	**Lormes**	**69.71**	**27**	*e*P	**P**		**05 17 12.7**	**-0.1**	
MK31	**Makanchi Array**	**69.80**	**332**	*e*P	**P**		**05 17 12.5**	**-0.9**	
MKAR	**Makanchi Array**	**69.80**	**332**	P	**P**		**05 17 12.5**	**-0.9**	
MKAR	**Makanchi Array**	**69.80**	**332**	P	**P**		**05 17 12.5**	**-0.9**	
	comp=Z,2.4nm,0.6s,baz=39,slow=7.0,SNR=14								
SSF	**Saint Saulge**	**69.82**	**27**	*e*P	**P**		**05 17 13.4**	**-0.1**	
	comp=Z,19nm,1.1s								
SSF	**Saint Saulge**	**69.82**	**27**	*e*P	**P**		**05 17 13.4**	**-0.1**	
	comp=Z,19nm,1.1s								
HINF	**Hinteralfeld**	**69.87**	**25**	*e*P	**P**		**05 17 13.7**	**-0.1**	
HINF	**Hinteralfeld**	**69.87**	**25**	*e*P	**P**		**05 17 13.7**	**-0.1**	
AVF	**Avril sur Loir**	**70.03**	**27**	*e*P	**P**		**05 17 14.5**	**-0.3**	
	comp=Z,11nm,1.0s								
AVF	**Avril sur Loir**	**70.03**	**27**	*e*P	**P**		**05 17 14.5**	**-0.3**	
	comp=Z,11nm,1.0s								
BGF	**Bois d'Agland**	**70.13**	**28**	*e*P	**P**		**05 17 15.1**	**-0.3**	
	comp=Z,12nm,0.9s								
BGF	**Bois d'Agland**	**70.13**	**28**	*e*P	**P**		**05 17 15.1**	**-0.3**	
	comp=Z,12nm,0.9s								
TCF	**Toulx Ste Croi**	**70.22**	**28**	*e*P	**P**		**05 17 15.8**	**-0.3**	
TCF	**Toulx Ste Croi**	**70.22**	**28**	*e*P	**P**		**05 17 15.8**	**-0.3**	
GERES	**GERESS Array B**	**70.23**	**20**	P	**P**		**05 17 15.5**	**-0.6**	
GERES	**GERESS Array B**	**70.23**	**20**	P	**P**		**05 17 15.5**	**-0.6**	
	comp=Z,0.3nm,0.3s,baz=336,slow=6.2,SNR=5.9								
SMF	**Signal de Mont**	**70.29**	**27**	*e*P	**P**		**05 17 16.8**	**+0.4**	
SMF	**Signal de Mont**	**70.29**	**27**	*e*P	**P**		**05 17 16.8**	**+0.4**	
AKASG	**Malin Array Be**	**70.39**	**9**	P	**P**		**05 17 16.3**	**-0.6**	
AKASG	**Malin Array Be**	**70.39**	**9**	P	**P**		**05 17 16.3**	**-0.6**	
	comp=Z,1.8nm,0.4s,baz=353,slow=6.0,SNR=14								
KIEV	**Kiev**	**70.40**	**9**	*e*P	**P**		**05 17 15.7**	**-1.3**	
	comp=Z,11nm,1.0s								
AK01	**Malin Array Si**	**70.40**	**9**	*e*P	**P**		**05 17 16.2**	**-0.8**	
AK02	**Malin Array Si**	**70.43**	**9**	*e*P	**P**		**05 17 16.2**	**-1.0**	
CABF	**La Chapelle**	**70.84**	**26**	*e*P	**P**		**05 17 20.0**	**+0.1**	
	comp=Z,9.9nm,0.7s								
CABF	**La Chapelle**	**70.84**	**26**	*e*P	**P**		**05 17 20.0**	**+0.1**	
	comp=Z,9.9nm,0.7s								
WMQ	**Urumqi**	**71.12**	**327**	P	**P**		**05 17 24.0**	**+2.4**	
WMQ				sP	**sP**		**05 17 31.0**	**+1.7**	
WMQ				PcP	**PcP**		**05 17 45.0**	**+3.3**	
WMQ				PP	PP		05 20 04.0	+5.3	
WMQ				S	**S**		**05 26 39.0**	**+1.8**	
WMQ				sS	**sS**		**05 26 46.0**	**-0.5**	
WMQ				ScS	**SKKSac**		**05 27 24.0**	**+0.6**	
WMQ				SS	**SS**		**05 31 14.0**	**+4.4**	
WMQ				pmax	pmax				
	comp=Z,14nm,1.0s								
WMQ				pmax	pmax				
	comp=Z,85nm,8.0s								
WMQ				LR	LR				
	comp=N,550nm,18.0s								
WMQ				LR	LR				
	comp=E,420nm,18.0s								
WMQ				LR	LR				
	comp=Z,400nm,18.0s								
GTA	**Gaotai**	**71.19**	**316**	*e*P	**P**		**05 17 22.8**	**+0.6**	
GTA				pP	**pP**		**05 17 29.3**	**+1.5**	
GTA				sP	**sP**		**05 17 32.3**	**+2.4**	
GTA				S	**S**		**05 26 39.3**	**+1.0**	
GTA				sS	**sS**		**05 26 46.9**	**-0.6**	
GTA				SKS	**SKSac**		**05 27 21.6**	**-2.5**	
GTA				SS	**SS**		**05 31 15.8**	**+4.8**	
GTA				pmax	pmax				
	comp=Z,10.0nm,1.0s								
GTA				pmax	pmax				
	comp=Z,100nm,4.7s								
GTA				LR	LR				
	comp=N,230nm,20.4s								
GTA				LR	LR				
	comp=E,380nm,20.9s								
GTA				LR	LR				
	comp=Z,280nm,19.5s								
CRVS	**Cervenica-Dubn**	**71.36**	**14**	*e*P	**P**		**05 17 23.1**	**+0.2**	
WTTA	**Wattenberg**	**71.37**	**22**	⇑*i*pP	**P**		**05 17 24.4**	**+1.2**	
	comp=Z,5.1nm,0.6s								
WTTA	**Wattenberg**	**71.37**	**22**	⇑*i*P	**P**		**05 17 24.4**	**+1.2**	
	comp=Z,5.1nm,0.6s								
VYHS	**Vyhne**	**71.39**	**16**	*e*P	**P**		**05 17 22.1**	**-1.0**	
ABKAR	**Akbulak array**	**71.40**	**348**	*e*P	**P**		**05 17 22.8**	**-0.3**	
FETA	**Feichten**	**71.43**	**22**	⇓*i*pP	**P**		**05 17 24.6**	**+1.1**	
	comp=Z,6.5nm,1.1s								
FETA	**Feichten**	**71.43**	**22**	⇓*i*P	**P**		**05 17 24.6**	**+1.1**	
	comp=Z,6.5nm,1.1s								
CAF	**Calviac**	**71.46**	**29**	*e*P	**P**		**05 17 23.3**	**-0.3**	
	comp=Z,21nm,1.1s								
CAF	**Calviac**	**71.46**	**29**	*e*P	**P**		**05 17 23.3**	**-0.3**	
	comp=Z,21nm,1.1s								
KBA	**Koelnbreinsper**	**71.87**	**20**	⇑*i*pP	**P**		**05 17 26.6**	**+0.4**	
	comp=Z,8.4nm,0.9s								
KBA	**Koelnbreinsper**	**71.87**	**20**	⇑*i*P	**P**		**05 17 26.6**	**+0.4**	
	comp=Z,8.4nm,0.9s								
LPL	**La Plagne**	**72.02**	**25**	*e*P	**P**		**05 17 28.7**	**+1.5**	
LPL	**La Plagne**	**72.02**	**25**	*e*P	**P**		**05 17 28.7**	**+1.5**	
LPG	**La Plagne**	**72.04**	**25**	*e*P	**P**		**05 17 29.2**	**+1.8**	
	comp=Z,19nm,1.4s								
LPG	**La Plagne**	**72.04**	**25**	*e*P	**P**		**05 17 29.2**	**+1.8**	
	comp=Z,19nm,1.4s								
ROSC	**El Rosal**	**72.24**	**111**	P	**P**		**05 17 29.4**	**+0.4**	
ROSC	**El Rosal**	**72.24**	**111**	P	**P**		**05 17 29.4**	**+0.4**	
	comp=Z,3.1nm,0.8s,baz=179,slow=15,SNR=4.1								
XAN	**Xi'an**	**72.34**	**307**	P	**P**		**05 17 28.3**	**-0.8**	
XAN				pP	**pP**		**05 17 34.6**	**-0.1**	
XAN				pmax	pmax				
	comp=Z,2.0nm,1.2s								
SOKA	**Soboth**	**72.56**	**19**	⇑*i*P	**P**		**05 17 30.0**	**-0.2**	
	comp=Z,7.3nm,1.3s								
SOKA	**Soboth**	**72.56**	**19**	⇑*i*P	**P**		**05 17 30.0**	**-0.2**	
	comp=Z,7.3nm,1.3s								
LZH	**Lanzhou**	**72.61**	**312**	⇓P	**P**		**05 17 31.8**	**+1.0**	
LZH				pP	**pP**		**05 17 36.6**	**+0.2**	
LZH				sP	**sP**		**05 17 38.9**	**+0.4**	
LZH				S	**S**		**05 26 56.3**	**+1.6**	
LZH				sS	**SKiKP**		**05 27 05.3**	**+1.4**	
LZH				SS	**SS**		**05 31 32.5**	**-0.4**	
LZH				pmax	pmax				
	comp=Z,41nm,1.4s								
LZH				pmax	pmax				
	comp=Z,100nm,4.0s								
LZH				LR	LR				
	comp=N,240nm,13.0s								
LZH				LR	LR				
	comp=E,200nm,13.8s								
LZH				LR	LR				
	comp=Z,320nm,15.2s								
OBKA	**Obir**	**72.63**	**20**	⇑*i*pP	**P**		**05 17 31.4**	**+0.8**	
	comp=Z,9.6nm,1.1s								
OBKA	**Obir**	**72.63**	**20**	⇑*i*P	**P**		**05 17 31.4**	**+0.8**	
	comp=Z,9.6nm,1.1s								
ETSF	**Etsaut**	**72.66**	**32**	*e*P	**P**		**05 17 31.6**	**+0.7**	
	comp=Z,14nm,0.9s								
ETSF	**Etsaut**	**72.66**	**32**	*e*P	**P**		**05 17 31.6**	**+0.7**	
	comp=Z,14nm,0.9s								
LASF	**Ste Croix**	**72.70**	**28**	*e*P	**P**		**05 17 30.7**	**-0.3**	
LASF	**Ste Croix**	**72.70**	**28**	*e*P	**P**		**05 17 30.7**	**-0.3**	
EPF	**Esparros**	**72.78**	**31**	*e*P	**P**		**05 17 31.1**	**-0.4**	
	comp=Z,19nm,1.2s								
EPF	**Esparros**	**72.78**	**31**	*e*P	**P**		**05 17 31.1**	**-0.4**	
	comp=Z,19nm,1.2s								
MTLF	**Montolieu**	**72.98**	**29**	*e*P	**P**		**05 17 33.3**	**+0.6**	
	comp=Z,7.5nm,0.8s								
MTLF	**Montolieu**	**72.98**	**29**	*e*P	**P**		**05 17 33.3**	**+0.6**	
	comp=Z,7.5nm,0.8s								
WHN	**Wuhan**	**72.99**	**301**	*e*P	**P**		**05 17 32.9**	**0.0**	
EVOP	**Sao Brissos**	**74.40**	**39**	⇑*i*P	**P**		**05 17 40.8**	**-0.2**	
	comp=Z,24nm,1.0s								
EVO	**Evora**	**74.43**	**39**	⇑*i*P	**P**		**05 17 40.8**	**-0.4**	
	comp=Z,24nm,1.0s								
ESDC	**Sonseca Array**	**74.66**	**35**	P	**P**		**05 17 43.1**	**+0.5**	
ESDC	**Sonseca Array**	**74.66**	**35**	P	**P**		**05 17 43.1**	**+0.5**	
	comp=Z,5.0nm,0.8s,baz=333,slow=5.8,SNR=19								
AAK	**Ala-Archa**	**75.52**	**336**	*e*P	**P**		**05 17 47.9**	**+0.2**	
	comp=Z,15nm,1.2s								
EKS2	**Erkin-Say**	**75.64**	**337**	*e*P	**P**		**05 17 49.1**	**+0.7**	
	comp=Z,44nm,1.4s								
KKAR	**Karatay Array**	**75.86**	**339**	*e*P	**P**		**05 17 49.6**	**+0.1**	
CD2	**Chengdu**	**77.19**	**309**	P	**P**		**05 17 57.8**	**+0.6**	
CD2				pP	**pP**		**05 18 02.5**	**-0.3**	
CD2				sP	**sP**		**05 18 04.8**	**-0.1**	
CD2				PP	**PP**		**05 20 52.4**	**+1.9**	
CD2				S	**S**		**05 27 44.9**	**-0.8**	
CD2				sS	**sS**		**05 27 52.0**	**-3.0**	
CD2				SKS	**SKSac**		**05 28 05.3**	**-3.7**	
CD2				SS	**SS**		**05 32 44.4**	**+2.0**	
CD2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
CD2				pmax	pmax				
	comp=Z,80nm,5.6s								
KBZ	**Khabaz**	**77.89**	**360**	P	**P**		**05 18 01.7**	**+0.9**	
KBZ	**Khabaz**	**77.89**	**360**	P	**P**		**05 18 01.7**	**+0.9**	
	comp=Z,6.1nm,0.8s,baz=335,slow=5.2,SNR=8.7								
KSH	**Kashi**	**78.17**	**334**	*e*P	**P**		**05 18 05.6**	**+3.0**	
KSH				pP	**pP**		**05 18 09.1**	**+0.8**	
KSH				sP	**sP**		**05 18 11.9**	**+1.5**	
KSH				PP	PP		05 21 04.0	+5.5	
KSH				S	**S**		**05 27 57.8**	**+1.6**	
KSH				sS	**sS**		**05 28 07.4**	**+1.8**	
KSH				SKS	**SKSac**		**05 28 12.6**	**-3.5**	
KSH				ScS	**ScS**		**05 28 21.8**	**+0.1**	
KSH				SS	SS		05 33 04.3	+7.5	
KSH				pmax	pmax				
	comp=Z,10.0nm,0.7s								
KSH				LR	LR				
	comp=Z,340nm,12.3s								
CUC	**Castrocucco**	**79.17**	**20**	*e*P	**P**		**05 18 07.0**	**-1.0**	
	comp=Z,11nm,1.0s								
GYA	**Guiyang**	**79.89**	**305**	*e*P	**P**		**05 18 10.9**	**-1.3**	
GYA				pmax	pmax				
	comp=Z,10.0nm,1.0s								
TIP	**Timpagrande**	**80.14**	**20**	*e*P	**P**		**05 18 12.4**	**-0.9**	
	comp=Z,15nm,1.2s								
ATAH	**Atahualpa**	**80.84**	**120**	P	**P**		**05 18 19.0**	**+1.3**	
ATAH	**Atahualpa**	**80.84**	**120**	P	**P**		**05 18 19.0**	**+1.3**	
	comp=Z,7.9nm,1.0s,baz=17,slow=20,SNR=4.1								
BR131	**Keskin Array S**	**81.62**	**7**	*e*P	**P**		**05 18 20.9**	**-0.5**	
	comp=Z,2.8nm,0.9s								
BRTR	**Keskin Array B**	**81.62**	**7**	P	**P**		**05 18 21.1**	**-0.2**	
BRTR	**Keskin Array B**	**81.62**	**7**	P	**P**		**05 18 21.1**	**-0.2**	
	comp=Z,3.7nm,0.9s,baz=350,slow=2.9,SNR=11								
KEST	**Kesra**	**81.94**	**27**	P	**P**		**05 18 23.1**	**+0.1**	
KEST	**Kesra**	**81.94**	**27**	P	**P**		**05 18 23.1**	**+0.1**	
	comp=Z,3.1nm,0.9s,baz=287,slow=6.7,SNR=7.3								
MALT	**Malatya**	**83.25**	**3**	*e*P	**P**		**05 18 30.8**	**+1.0**	
KBL	**Kabul**	**84.43**	**338**	*e*P	**P**		**05 18 35.0**	**-1.0**	
CMMT	**Chiang Mai**	**89.91**	**308**	P	**P**		**05 19 03.3**	**+0.8**	
	comp=Z,7.9nm,0.9s								
CHTO	**Chiang Mai**	**89.91**	**308**	*e*P	**P**		**05 19 01.7**	**-0.8**	
CHTO	**Chiang Mai**	**89.91**	**308**	P	**P**		**05 19 02.8**	**+0.3**	
CM31	**Chiang Mai Arr**	**90.22**	**308**	*e*P	**P**		**05 19 03.8**	**-0.2**	
	comp=Z,3.7nm,0.6s								
CMAR	**Chiang Mai Arr**	**90.22**	**308**	P	**P**		**05 19 04.5**	**+0.5**	
CMAR	**Chiang Mai Arr**	**90.22**	**308**	P	**P**		**05 19 04.5**	**+0.5**	
	comp=Z,9.6nm,0.8s,baz=4.7,slow=5.2,SNR=63								
LPAZ	**La Paz**	**93.59**	**116**	P	**P**		**05 19 19.0**	**-1.2**	
LPAZ	**La Paz**	**93.59**	**116**	P	**P**		**05 19 19.0**	**-1.2**	
	comp=Z,1.4nm,0.8s,baz=333,slow=5.4,SNR=6.0								
SIV	**San Ignacio**	**96.73**	**110**	P	**P**		**05 19 33.0**	**-0.8**	
SIV	**San Ignacio**	**96.73**	**110**	P	**P**		**05 19 33.0**	**-0.8**	
	comp=Z,1.0nm,0.6s,baz=349,slow=3.3,SNR=3.9								
VNA3	**Neumayer Olymp**	**155.68**	**142**	*e*P	PKPdf		05 26 02.8	+7.3	
VNA3	**Neumayer Olymp**	**155.68**	**142**	*e*PKP	**PKPab**		**05 26 22.6**	**+0.6**	
VNA2	**Neumayer--Watz**	**156.44**	**141**	*e*P	PKPdf		05 26 05.7	+9.3	
VNA2	**Neumayer--Watz**	**156.44**	**141**	*e*PKP	**PKPab**		**05 26 25.8**	**+0.5**	

NEIC 16 05:10:12.7,58°.79N×137°.61W,h6km,ML3.5(AEIC)**, After AEIC., Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PNL	**Peninsula**	**1.28**	**315**	P		P	Pn	05 10 37.0	-0.1
PNL				S		S	Sn	05 10 54.2	-0.3
YKU2	**Yakutat**	**1.29**	**305**	P		P	Pg	05 10 37.9	+0.6
SKAG	**Skagway**	**1.36**	**59**	P		Pg	Pg	05 10 39.2	+0.6
SKAG				S		S	Sn	05 10 56.9	+0.5
BESE	**Bessie Mountai**	**1.45**	**97**	P		Pg	Pg	05 10 40.5	-0.1
BESE				S		S	Sg	05 10 59.4	-0.1
HYT	**Haines Junctio**	**2.05**	**1**	P		P	Pb	05 10 49.5	-0.9
SAMH	**Samovar Hills**	**2.11**	**311**	P		P	Pb	05 10 50.2	-1.2
SIT	**Sitka**	**2.12**	**144**	P		P	Pb	05 10 50.5	-0.9
SIT				S		S	Sg	05 11 20.0	-0.7
WHY	**Whitehorse**	**2.33**	**35**	P		P	Pb	05 10 53.8	-1.4
BARN	**Barnard Glacie**	**3.06**	**320**	P		P	Pn	05 11 03.3	+1.5

NIED ***16*** *05:11:00,45°.90N×152°.30E,h35km,Mw4.1 Best double couple: M₀1.36000×10¹⁵ NP1:φs337.00000°,δ63.00000°, λ55.00000°. NP2:φs214.00000°,δ43.00000°,λ138.00000°.*
SKHL ***16*** *05:11:12.7±0.9, 45°.80N×152°.34E,h39km±5km,mb4.9/3*
JMA ***16*** *05:11:12.8±0.7, 45°.90N×152°.30E, h30km,M4.9*
ISCJB ***16*** *05:11:12.2±0.5, 45°.71N±0°.08×152°.15E±0°.08, h48km, mb4.2/25, Error ellipse: s-maj=13.3km s-min=3.3km az=146.7*
MOS ***16*** *05:11:13.7±1.1, 45°.83N×152°.15E, h58km, mb4.9/9, Error ellipse: s-maj=11.7km s-min=9.3km az=58.0*
NEIC ***16*** *05:11:15.7±0.8, 46°.32N×151°.84E, h42km±8km, mb4.6/8, Error ellipse: s-maj=16.7km s-min=6.3km az=154.0*
IDC ***16*** *05:11:16.5±2.8, 46°.36N×151°.77E, h52km±24km, mb3.7/14, mb1 3.9/19, mb1mx3.8/28, mbtmp3.8/19, ML3.9/4, Error ellipse: s-maj=34.9km s-min=14.5km az=168.0*

ISC 16 05:11:13.6±0.7, 45°.82N±0°.09×152°.10E±0°.07, h48km, n114, σ 1.9 70/125, mb4.3/25, 3C-4D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.03**	**260**	PN		PN	**Pn**	**05 12 00.5**	**+1.6**
KUR				*e*S		S	**Sn**	**05 12 37.0**	**+3.0**
KUR				pmax	pmax				
	comp=Z,940nm,1.0s								
KUR				pmax	pmax				
	comp=N,160nm,0.3s								
KUR				smax	smax				
	comp=N,1μm,0.5s								
KUR				smax	smax				
	comp=E,870nm,0.8s								
KUR	**Kuril'sk**	**3.03**	**260**	*e*P		**Pn**	**05 12 00.5**	**+1.6**	
KUR				*e*S		**Sn**	**05 12 37.0**	**+3.0**	
KUR				A		A	05 12 47.5		
	comp=E,1μm,0.7s								
KUR				A		A	05 12 47.5		
	comp=E,870nm,0.7s								
YUK	**Yuzh-Kuril'sk**	**4.77**	**250**	*d*PN		**Pn**	**05 12 25.8**	**+2.9**	
YUK				*e*S		**Sn**	**05 13 19.9**	**+3.1**	
YUK				pmax	pmax				
	comp=Z,216nm,0.4s								
YUK				pmax	pmax				
	comp=E,80nm,0.4s								
YUK				pmax	pmax				
	comp=N,74nm,0.4s								
YUK				smax	smax				
	comp=N,91nm,0.5s								
YUK				smax	smax				
	comp=E,295nm,0.5s								
YUK	**Yuzh-Kuril'sk**	**4.77**	**250**	⇓*i*P		**Pn**		**05 12 25.8**	**+2.9**
YUK				AMB	AMB			05 12 29.2	
	comp=E,70nm,0.4s								
YUK				AMB	AMB			05 12 29.2	
	comp=E,80nm,0.5s								
YUK				AMB	AMB			05 12 29.2	
	comp=E,220nm,0.5s								
YUK				*i* sP		**sPb**		**05 12 44.8**	**-3.4**
YUK				*e*S		**Sn**		**05 13 20.0**	**+3.1**
YUK				A	A			05 13 39.8	
	comp=E,90nm,0.5s								
YUK				A	A			05 13 39.8	
	comp=E,300nm,0.5s								
NEM2	**Nemuro 2**	**5.16**	**244**	P		**Pn**		**05 12 29.3**	**+1.2**
NEM2				*e*S		**Sn**		**05 13 25.9**	**-0.4**
SKR	**Severo-Kuril's**	**5.56**	**27**	*e*PN		**Pn**		**05 12 33.2**	**-0.4**
SKR				pmax	pmax				
	comp=Z,60nm,0.5s								
SKR	**Severo-Kuril's**	**5.56**	**27**	*e*P		**Pn**		**05 12 33.2**	**-0.4**
SKR				AMB	AMB			05 12 37.0	
	comp=Z,60nm,0.5s								
SKR				*e*S		**Sn**		**05 13 31.0**	**-5.1**
SKR				A	A			05 13 57.0	
	comp=Z,30nm,0.5s								
SKR				A	A			05 13 57.0	
	comp=Z,150nm,0.5s								
SKR				A	A			05 13 57.0	
	comp=Z,60nm,0.5s								
JNK	**Nakash**	**5.71**	**250**	P		**Pn**		**05 12 38.1**	**+2.3**
JNK				*e*S		**Sn**		**05 13 41.3**	**+1.3**
JAK	**Akkeshi**	**6.00**	**245**	P		**Pn**		**05 12 40.8**	**+1.0**
JAK				*e*S		**Sn**		**05 13 46.4**	**-0.7**
JTKR	**Abashiri--Toko**	**6.10**	**255**	P		Pn		05 12 44.6	+3.5
JAR	**Ashorobuto**	**6.46**	**250**	P		**Pn**		**05 12 49.0**	**+3.0**
JAR				*e*S		**Sn**		**05 14 00.6**	**+2.2**
YSS	**Yuzh-Sakhalins**	**6.56**	**283**	⇑*i*PN		Pn		05 12 51.0	+3.6
YSS	**Yuzh-Sakhalins**	**6.56**	**283**	⇑*i*P		Pn		05 12 51.0	+3.6
JOB	**Onbets**	**6.60**	**247**	P		**Pn**		**05 12 49.7**	**+1.8**
JOB				*e*S		**Sn**		**05 14 01.7**	**-0.1**
ASAJ	**Asahikawa**	**6.95**	**259**	P		**Pn**		**05 12 55.0**	**+2.3**
ASAJ	**Asahikawa**	**6.95**	**259**	P		Pn		05 12 57.3	+4.6
ASAJ	**Asahikawa**	**6.95**	**259**	P		**Pn**		**05 12 55.0**	**+2.3**
	comp=Z,2.4nm,0.3s,baz=174,slow=19,SNR=4.9								
JCH	**Churui**	**7.04**	**246**	P		**Pn**		**05 12 55.8**	**+1.8**
JCH				*e*S		**Sn**		**05 14 11.2**	**-1.5**
JEM	**Erimo**	**7.49**	**243**	P		**Pn**		**05 13 02.8**	**+2.7**
JEM				*e*S		**Sn**		**05 14 23.7**	**+0.1**
ERM	**Erimo**	**7.49**	**243**	*e*PN		**Pn**		**05 13 03.3**	**+3.2**
ERM	**Erimo**	**7.49**	**243**	*e*Pn		**Pn**		**05 13 03.3**	**+3.2**
JNBK	**Urakawa-nobuka**	**7.60**	**246**	P		**Pn**		**05 13 02.5**	**+0.8**
JNBK				*e*S		**Sn**		**05 14 24.8**	**-1.6**
JBT2	**Biratori 2**	**7.61**	**250**	P		**Pn**		**05 13 04.4**	**+2.6**
PETK	**Petropavlovsk-**	**8.15**	**25**	*e*PN		Pn		05 13 14.0	+4.8
PETK				pmax	pmax				
	comp=Z,1.0nm,0.3s								
PETK	**Petropavlovsk-**	**8.15**	**25**	P		**Pn**		**05 13 06.5**	**-2.7**
PETK	**Petropavlovsk-**	**8.15**	**25**	P		**Pn**		**05 13 06.5**	**-2.7**
	comp=Z,1.0nm,0.3s,baz=246,slow=26,SNR=4.3								
JKB	**Kayabe**	**8.91**	**248**	P		**Pn**		**05 13 20.1**	**+0.6**
JKB				*e*S		**Sn**		**05 14 54.6**	**-3.8**
JYM2	**Yakumo 2**	**9.23**	**251**	P		**Pn**		**05 13 25.2**	**+1.3**
JANG	**Nango**	**9.46**	**239**	P		**Pn**		**05 13 25.7**	**-1.4**
JANG				*e*S		Sn		05 15 04.9	-7.1
JTM	**Tenmabayashi**	**9.48**	**242**	P		**Pn**		**05 13 28.2**	**+0.8**
JSR	**Shiriuchi**	**9.48**	**247**	P		**Pn**		**05 13 28.7**	**+1.3**
JTH	**Tanohata**	**9.53**	**236**	P		**Pn**		**05 13 27.5**	**-0.6**
JOSM	**Okushiri--Mats**

KHC	Kasperske Hory	78.76	334	*e*P		P	05 23 11.4	+0.6
	comp=Z,6.0nm,0.9s							
KHC	Kasperske Hory	78.76	334	*e*P		P	05 23 11.0	+0.2
GERES	GERESS Array B	78.98	333	P		P	05 23 11.6	-0.4
GERES	GERESS Array B	78.98	333	P		P	05 23 11.6	-0.4
	comp=Z,0.9nm,0.5s,baz=35,slow=4.9,SNR=9.4							
CDF	Champ du Feu	81.24	337	*e*P		P	05 23 25.2	+0.9
	comp=Z,3.0nm,0.5s							
CDF	Champ du Feu	81.24	337	*e*P		P	05 23 25.2	+0.9
CDF				pmax	pmax			
	comp=Z,3.0nm,0.5s							
CDF	Champ du Feu	81.24	337	*e*P		P	05 23 25.2	+0.9
	comp=Z,3.0nm,0.5s							
PAGF	Fort de Pagny	81.53	338	*e*P		P	05 23 26.2	+0.6
	comp=Z,5.2nm,0.7s							
PAGF	Fort de Pagny	81.53	338	*e*P		P	05 23 26.2	+0.6
	comp=Z,5.2nm,0.7s							
HAU	Haudompre	81.87	338	*e*P		P	05 23 28.3	+0.8
HAU	Haudompre	81.87	338	*e*P		P	05 23 28.3	+0.8
HAU	Haudompre	81.87	338	*e*P		P	05 23 28.3	+0.8
HINF	Hinteralfeld	81.90	337	*e*P		P	05 23 27.6	-0.1
HINF	Hinteralfeld	81.90	337	*e*P		P	05 23 27.6	-0.1
HINF	Hinteralfeld	81.90	337	*e*P		P	05 23 27.6	-0.1
CABF	La Chapelle	83.22	337	*e*P		P	05 23 34.9	+0.3
	comp=Z,10nm,1.0s							
CABF	La Chapelle	83.22	337	*e*P		P	05 23 34.9	+0.3
CABF				pmax	pmax			
	comp=Z,10.0nm,1.0s							
CABF	La Chapelle	83.22	337	*e*P		P	05 23 34.9	+0.3
	comp=Z,10nm,1.0s							
SSF	Saint Saulge	83.47	339	*e*P		P	05 23 36.1	+0.3
AVF	Avril sur Loir	83.77	339	*e*P		P	05 23 37.6	+0.3
	comp=Z,3.4nm,0.5s							
SMF	Signal de Mont	83.78	339	*e*P		P	05 23 37.7	+0.3
	comp=Z,24nm,1.1s							
SMF	Signal de Mont	83.78	339	*e*P		P	05 23 37.7	+0.3
SMF				pmax	pmax			
	comp=Z,24nm,1.1s							
SMF	Signal de Mont	83.78	339	*e*P		P	05 23 37.7	+0.3
	comp=Z,24nm,1.1s							
LPL	La Plagne	84.05	336	*e*P		P	05 23 39.7	+0.6
	comp=Z,3.7nm,0.5s							
LPL	La Plagne	84.05	336	*e*P		P	05 23 39.7	+0.6
LPL				pmax	pmax			
	comp=Z,4.0nm,0.5s							
LPL	La Plagne	84.05	336	*e*P		P	05 23 39.7	+0.6
	comp=Z,3.7nm,0.5s							
LPG	La Plagne	84.06	336	*e*P		P	05 23 39.4	+0.2
	comp=Z,4.3nm,0.7s							
LPG	La Plagne	84.06	336	*e*P		P	05 23 39.4	+0.2
LPG				pmax	pmax			
	comp=Z,4.0nm,0.7s							
LPG	La Plagne	84.06	336	*e*P		P	05 23 39.4	+0.2
	comp=Z,4.3nm,0.7s							
TCF	Toulx Ste Croi	84.52	340	*e*P		P	05 23 42.5	+1.3
VIVF	Saint-Julien-l	85.22	337	*e*P		P	05 23 46.5	+1.8
RJF	Les Rejaudoux	85.61	340	*e*P		P	05 23 46.9	+0.3

ISCJB **16** *05:16:21.0±0.4,45˚.75N×0˚.06×152˚.11E±0˚.06,h48km, mb4.4/34,Error ellipse: s-maj=9.7km s-min=2.9km az=146.4*

JMA **16** *05:16:21.6±0.6,45˚.86N×152˚.32E,h30km,M5.0*

SKHL **16** *05:16:22.4±0.5,45˚.96N×152˚.28E,h52km±4km,mb5.2/4, Ms4.0/1*

MOS **16** *05:16:23.1±1.2,46˚.14N×152˚.01E,h53km,mb4.9/10,Error ellipse: s-maj=10.5km s-min=8.0km az=60.9*

BJI **16** *05:16:24.5,45˚.80N×151˚.90E,h70km,mB4.6/2,mb4.2/5, Ms4.2/1,Ms7 4.0/1*

NEIC **16** *05:16:25.5±0.8,46˚.19N×151˚.97E,h58km±7km,mb4.7/7, Error ellipse: s-maj=10.9km s-min=5.3km az=151.0*

IDC **16** *05:16:26.2±2.5,46˚.26N×151˚.87E,h61km±22km,mb3.9/16, mb1 4.1/22,mb1mx4.0/30,mbtmp3.9/22,ML3.9/5,MS3.2/4, Ms1 3.2/4,ms1mx3.0/46,Error ellipse: s-maj=24.0km s-min=12.5km az=162.0*

ISC 16 05:16:22.7±0.5,**45˚.80N**±0˚.07×**152˚.14E**±0˚.06,**h48**km,**n137,** σ1$**44**/151,**mb4.3**/34,**6C-5D**,**East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.06**	**261**	*e*PN		**Pn**	**05 17 09.8**	**+1.4**
KUR				*e*S		**Sn**	**05 17 45.0**	**+1.2**
KUR				pmax	pmax			
	comp=Z,380nm,0.5s							
KUR				pmax	pmax			
	comp=N,180nm,0.3s							
KUR				pmax	pmax			
	comp=E,110nm,0.3s							
KUR				smax	smax			
	comp=N,1μm,0.5s							
KUR				smax	smax			
	comp=E,530nm,0.5s							
KUR	**Kuril'sk**	**3.06**	**261**	*e*P		**Pn**	**05 17 09.8**	**+1.4**
KUR				AMB	AMB	05 17 10.5		
	comp=E,180nm,0.3s							
KUR				AMB	AMB	05 17 10.5		
	comp=E,110nm,0.3s							
KUR				AMB	AMB	05 17 10.5		
	comp=E,380nm,0.5s							
KUR				*e*S		**Sn**	**05 17 45.0**	**+1.2**
KUR				A		A	05 17 50.5	
	comp=E,1μm,0.5s							
KUR				A		A	05 17 50.5	
	comp=E,530nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**4.80**	**251**	*d* iPN		**Pn**	**05 17 34.6**	**+2.3**
YUK				*i* S		**Sn**	**05 18 28.8**	**+2.2**
YUK				pmax	pmax			
	comp=N,38nm,0.2s							
YUK				pmax	pmax			
	comp=E,103nm,0.2s							
YUK				pmax	pmax			
	comp=Z,307nm,0.2s							
YUK				smax	smax			
	comp=E,78nm,0.2s							
YUK				smax	smax			
	comp=N,313nm,0.2s							
YUK	**Yuzh-Kuril'sk**	**4.80**	**251**	⇓*i*P		**Pn**	**05 17 34.7**	**+2.4**
YUK				AMB	AMB	05 17 37.8		
	comp=N,40nm,0.2s							
YUK				AMB	AMB	05 17 37.8		
	comp=N,100nm,0.2s							
YUK				AMB	AMB	05 17 37.8		
	comp=N,310nm,0.2s							
YUK				*i* S		**Sn**	**05 18 28.8**	**+2.2**
YUK				A		A	05 18 35.8	
	comp=N,310nm,0.2s							
YUK				A		A	05 18 35.8	
	comp=N,80nm,0.2s							
NEM2	**Nemuro 2**	**5.18**	**244**	P		**Pn**	**05 17 38.0**	**+0.5**
NEM2				*e*S		**Sn**	**05 18 34.6**	**-1.3**
SKR	**Severo-Kuril's**	**5.56**	**27**	*e*PN		**Pn**	**05 17 40.4**	**-2.3**
SKR				pmax	pmax			
	comp=E,60nm,0.5s							
SKR				pmax	pmax			
	comp=Z,80nm,0.5s							
SKR	**Severo-Kuril's**	**5.56**	**27**	*e*P		**Pn**	**05 17 40.4**	**-2.3**
SKR				AMB	AMB	05 17 45.0		
	comp=Z,60nm,0.5s							
SKR				AMB	AMB	05 17 45.0		
	comp=Z,80nm,0.5s							
SKR				*e*S		**Sn**	**05 18 39.3**	**-5.9**
SKR				A		A	05 19 03.0	
	comp=Z,170nm,0.5s							
SKR				A		A	05 19 03.0	
	comp=Z,200nm,0.5s							
SKR				A		A	05 19 03.0	
	comp=Z,50nm,0.5s							
JNK	**Nakash**	**5.74**	**250**	P		**Pn**	**05 17 47.0**	**+1.8**
JNK				*e*S		**Sn**	**05 18 50.6**	**+0.9**
JAK	**Akkeshi**	**6.03**	**245**	P		**Pn**	**05 17 49.7**	**+0.5**
JAK				*e*S		**Sn**	**05 18 54.9**	**-1.9**
JTKR	**Abashiri--Toko**	**6.13**	**256**	P		**Pn**	**05 17 53.5**	**+2.9**
JAR	**Ashorobuto**	**6.49**	**250**	P		**Pn**	**05 17 57.6**	**+2.1**
JAR				*e*S		**Sn**	**05 19 10.0**	**+1.9**
YSS	**Yuzh-Sakhalins**	**6.59**	**283**	⇑*i* PN		**Pn**	**05 17 59.4**	**+2.5**
YSS				pmax	pmax			
	comp=Z,50nm,0.9s							
YSS	**Yuzh-Sakhalins**	**6.59**	**283**	⇑*i*P		**Pn**	**05 17 59.4**	**+2.5**
YSS				AMB	AMB	05 18 00.4		
	comp=Z,50nm,0.9s							
YSS				*e*S		**Sn**	**05 19 09.7**	**-1.0**
JOB	**Onbets**	**6.62**	**247**	P		**Pn**	**05 17 58.6**	**+1.3**
JOB				*e*S		**Sn**	**05 19 10.3**	**-1.1**
JKK2	**Kamakawa 2**	**6.95**	**257**	P		Pn	05 18 05.2	+3.3
ASAJ	**Asahikawa**	**6.98**	**259**	*e*Pn		**Pn**	**05 18 04.7**	**+2.5**
	comp=Z,46nm,1.1s							
ASAJ	**Asahikawa**	**6.98**	**259**	P		Pn	05 18 06.0	+3.8
ASAJ	**Asahikawa**	**6.98**	**259**	P		**Pn**	**05 18 05.2**	**+2.9**
	comp=Z,6.8nm,0.3s,baz=122,slow=13,SNR=12							
ASAJ				LR		LR	05 20 42.7	
	comp=Z,313nm,19.8s,baz=162,slow=37							
JCH	**Churui**	**7.07**	**246**	P		**Pn**	**05 18 04.3**	**+0.9**
JCH				*e*S		**Sn**	**05 19 19.4**	**-3.0**
JEM	**Erimo**	**7.51**	**243**	P		**Pn**	**05 18 11.5**	**+2.0**
JEM				*e*S		**Sn**	**05 19 32.6**	**-0.6**
ERM	**Erimo**	**7.51**	**243**	*i* PN		**Pn**	**05 18 12.0**	**+2.5**
ERM	**Erimo**	**7.51**	**243**	*e*Pn		**Pn**	**05 18 09.0**	**-0.5**
	comp=Z,96nm,0.7s							
ERM				*e*Sn		**Sn**	**05 19 33.1**	**-0.1**
JNBK	**Urakawa-nobuka**	**7.62**	**246**	P		**Pn**	**05 18 11.3**	**+0.2**
JNBK				*e*S		**Sn**	**05 19 34.1**	**-2.0**
PETK	**Petropavlovsk-**	**8.16**	**24**	*e*PN		Pn	05 18 22.8	+4.5
PETK				pmax	pmax			
	comp=Z,1.0nm,0.3s							
PETK	**Petropavlovsk-**	**8.16**	**24**	P		**Pn**	**05 18 17.3**	**-1.0**
PETK	**Petropavlovsk-**	**8.16**	**24**	P		**Pn**	**05 18 17.3**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=179,slow=14,SNR=5.3							
PETK				LR		LR	05 21 22.3	
	comp=Z,92nm,21.9s,baz=321,slow=38							
JKB	**Kayabe**	**8.93**	**248**	P		**Pn**	**05 18 29.1**	**+0.2**
JKB				*e*S		**Sn**	**05 20 03.3**	**-4.8**
JYM2	**Yakumo 2**	**9.25**	**251**	P		**Pn**	**05 18 34.0**	**+0.6**
JANG	**Nango**	**9.48**	**239**	P		**Pn**	**05 18 34.6**	**-1.9**
JANG				*e*S		Sn	05 20 14.9	-6.6
JTM	**Tenmabayashi**	**9.50**	**242**	P		**Pn**	**05 18 36.3**	**-0.5**
JTM				*e*S		Sn	05 20 15.4	-6.7
JTH	**Tanohata**	**9.55**	**236**	P		**Pn**	**05 18 35.3**	**-2.2**
JTH				*e*S		Sn	05 20 15.4	-7.9
JOSM	**Okushiri--Mats**	**9.86**	**252**	P		**Pn**	**05 18 41.6**	**-0.1**
OFUJ	**Ofunato**	**10.24**	**233**	P		**Pn**	**05 18 45.5**	**-1.4**
OFUJ				*e*S		Sn	05 20 33.5	-6.8
NKL	**Nikolayevsk**	**10.46**	**319**	*e*P		**Pn**	**05 18 46.8**	**-3.0**
NKL				AMB	AMB	05 18 48.1		
	comp=Z,70nm,1.5s							
NKL				*e*L		L	05 22 07.0	
NKL				AMS	AMS	05 23 28.0		
	comp=Z,500nm,16.0s							
JRG	**Rokugo**	**10.62**	**237**	P		**Pn**	**05 18 51.4**	**-0.7**
JIO	**Ouri**	**10.86**	**231**	P		**Pn**	**05 18 54.2**	**-1.2**
JIO				*e*S		Sn	05 20 46.8	-8.6
MJAR	**Matsushiro Arr**	**13.97**	**233**	P		**P**	**05 19 42.8**	**-1.8**
MJAR	**Matsushiro Arr**	**13.97**	**233**	P		**P**	**05 19 42.8**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=29,slow=14,SNR=4.3							
MJAR				LR		LR	05 26 02.9	
	comp=Z,46nm,18.2s,baz=35,slow=41							
KLR	**Kul'dur**	**14.19**	**291**	*e*P		**Pn**	**05 19 42.6**	**+1.9**
USRK	**Ussuriysk Arra**	**14.34**	**271**	P		**Pn**	**05 19 43.9**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=89,slow=17,SNR=3.4							
USRK				LR		LR	05 25 27.3	
	comp=Z,140nm,18.4s,baz=26,slow=38							
FX1	**Attu Island--F**	**15.39**	**55**	P		**Pn**	**05 19 56.2**	**-0.2**
FX1				S		Sn	05 22 32.6	-13
FX1	**Attu Island--F**	**15.39**	**55**	P		**Pn**	**05 19 56.2**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=314,slow=21,SNR=9.6							
FX1				S		Sn	05 22 32.6	-13
	comp=Z,1.5nm,0.3s,baz=60,slow=20,SNR=6.4							
KSRS	**Korea Array**	**19.88**	**254**	P		**Pn**	**05 20 51.5**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=62,slow=11,SNR=6.6							
KSAR	**Wonju Array Be**	**19.91**	**254**	P		**Pn**	**05 20 51.5**	**-0.6**
YAK	**Yakutsk**	**20.77**	**329**	*e*P		Pn	05 21 02.2	+0.1
YAK				pmax	pmax			
	comp=Z,53nm,1.1s							
YAK				pmax	pmax			
	comp=E,19nm,1.2s							
YAK				pmax	pmax			
	comp=N,20nm,1.0s							
BILL	**Bilibino**	**23.47**	**13**	*e*P		**P**	**05 21 26.1**	**-1.4**
BILL				pmax	pmax			
	comp=Z,3.0nm,0.6s							
BILL	**Bilibino**	**23.47**	**13**	*e*P		**P**	**05 21 26.1**	**-1.4**
	comp=Z,3.0nm,0.6s							
ILAR	**Eielson Array**	**37.71**	**38**	P		**P**	**05 23 33.1**	**0.0**
ILAR	**Eielson Array**	**37.71**	**38**	P		**P**	**05 23 33.1**	**0.0**
	comp=Z,0.9nm,0.9s,baz=258,slow=6.6,SNR=8.3							
ZALV	**Zalesovo Beam**	**42.62**	**306**	PcP		**PcP**	**05 26 05.2**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=95,slow=3.3,SNR=8.2							
MKAR	**Makanchi Array**	**46.78**	**298**	P		**P**	**05 24 46.4**	**-0.8**
MKAR							05 26 19.9	
MKAR	**Makanchi Array**	**46.78**	**298**	P		**P**	**05 24 46.4**	**-0.8**
MKAR				PcP		**PcP**	**05 26 19.9**	**+0.2**
MKAR	**Makanchi Array**	**46.78**	**298**	P		**P**	**05 24 46.4**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=73,slow=6.6,SNR=7.2							
MKAR				PcP		**PcP**	**05 26 19.9**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=66,slow=3.9,SNR=6.0							
KURK	**Kurchatov**	**47.33**	**304**	*i* P		**P**	**05 24 49.7**	**-1.6**
KURK				pmax	pmax			
	comp=Z,6.0nm,2.7s							
CMAR	**Chiang Mai Arr**	**51.49**	**256**	P		**P**	**05 25 25.6**	**+2.1**
CMAR	**Chiang Mai Arr**	**51.49**	**256**	P		**P**	**05 25 25.6**	**+2.1**
	comp=Z,1.1nm,0.5s,baz=33,slow=7.9,SNR=13							
RES	**Resolute Bay**	**51.95**	**18**	P		**P**	**05 25 25.8**	**-0.3**
RES	**Resolute Bay**	**51.95**	**18**	P		**P**	**05 25 25.8**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=0.2,slow=7.1,SNR=5.6							
YKA	**Yellowknife Ar**	**52.09**	**36**	P		**P**	**05 25 27.8**	**+0.5**
YKA	**Yellowknife Ar**	**52.09**	**36**	P		**P**	**05 25 27.8**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=297,slow=7.0,SNR=24							
ABKAR	**Akbulak array**	**58.51**	**310**	*e*P		**P**	**05 26 13.4**	**-0.3**
	comp=Z,0.5nm,0.4s							
ARCES	**ARCESS Array B**	**58.52**	**341**	P		**P**	**05 26 13.1**	**-0.4**
ARCES	**ARCESS Array B**	**58.52**	**341**	P		**P**	**05 26 13.1**	**-0.4**
	comp=Z,4.8nm,1.0s,baz=39,slow=7.0,SNR=8.8							
COEN	**Coen**	**60.03**	**190**	P		**P**	**05 26 24.8**	**+0.4**
	baz=1.6,SNR=18							
WVOR	**Wild Horse Val**	**60.83**	**58**	*e*P		**P**	**05 26 30.2**	**+0.3**
WVOR				pmax	pmax			
	comp=Z,12nm,0.5s							
WVOR	**Wild Horse Val**	**60.83**	**58**	*e*P		**P**	**05 26 30.2**	**+0.3**
	comp=Z,12nm,0.5s							
SUMG	**Summit**	**61.69**	**4**	*i* P		**P**	**05 26 35.5**	**-0.1**
SUMG				pmax	pmax			
	comp=Z,8.0nm,0.9s							
SUMG	**Summit**	**61.69**	**4**	*i* P		**P**	**05 26 35.5**	**-0.1**
	comp=Z,7.5nm,0.9s							
JOF	**Joensuu**	**61.88**	**334**	*e*P		**P**	**05 26 34.9**	**-1.6**
JOF				pmax	pmax			
	comp=Z,1.0nm,0.5s							
JOF	**Joensuu**	**61.88**	**334**	*e*p		**P**	**05 26 34.9**	**-1.6**
	comp=Z,1.1nm,0.5s							
FFC	**Flin Flon**	**61.90**	**39**	*i* P		**P**	**05 26 39.1**	**+2.3**
NVAR	**Mina Array Bea**	**63.47**	**61**	P		**P**	**05 26 49.7**	**+1.9**
NVAR	**Mina Array Bea**	**63.47**	**61**	P		**P**	**05 26 49.7**	**+1.9**
	comp=Z,1.9nm,0.7s,baz=284,slow=7.9,SNR=7.3							
ELK	**Elko**	**63.88**	**58**	P		**P**	**05 26 52.3**	**+1.8**
ELK	**Elko**	**63.88**	**58**	P		**P**	**05 26 52.3**	**+1.8**
	comp=Z,1.2nm,0.8s,baz=310,slow=5.9,SNR=6.1							
SCO	**Scoresbysund**	**63.95**	**358**	*i* P		**P**	**05 26 50.0**	**-0.1**
SCO				pmax	pmax			
	comp=Z,3.0nm,1.0s							
SCO	**Scoresbysund**	**63.95**	**358**	*i* P		**P**	**05 26 50.0**	**-0.1**
	comp=Z,2.6nm,1.0s							
FINES	**FINESS Array B**	**64.61**	**335**	P		**P**	**05 26 52.9**	**-1.7**
FINES	**FINESS Array B**	**64.61**	**335**	P		**P**	**05 26 52.9**	**-1.7**
	comp=Z,1.9nm,0.4s,baz=37,slow=6.9,SNR=20							
OBN	**Obninsk**	**65.71**	**325**	*e*P		**P**	**05 27 00.3**	**-1.5**
OBN				pmax	pmax			
	comp=Z,4.0nm,0.8s							
PDAR	**Pinedale Array**	**65.85**	**53**	P		**P**	**05 27 05.0**	**+1.8**
PDAR	**Pinedale Array**	**65.85**	**53**	P		**P**	**05 27 05.0**	**+1.8**
	comp=Z,2.3nm,0.8s,baz=303,slow=1.6,SNR=20							
NB2	**NORSAR Subarra**	**68.90**	**341**	P		**P**	**05 27 20.5**	**-1.5**
	comp=Z,1.3nm,0.5s,baz=28,slow=6.2							
NOA	**NORSAR Array B**	**68.90**	**341**	P		**P**	**05 27 20.9**	**-1.1**
NOA	**NORSAR Array B**	**68.90**	**341**	P		**P**	**05 27 20.9**	**-1.1**
	comp=Z,1.8nm,0.5s,baz=28,slow=6.3,SNR=17							
AKASG	**Malin Array Be**	**71.95**	**326**	*e*P		**P**	**05 27 39.7**	**-1.0**
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.3s							
AKASG	**Malin Array Be**	**71.95**	**326**	P		**P**	**05 27 39.0**	**-1.7**
AKASG	**Malin Array Be**	**71.95**	**326**	P		**P**	**05 27 39.0**	**-1.7**
	comp=Z,1.9nm,0.3s,baz=37,slow=6.3,SNR=10							
AK01	**Malin Array Si**	**71.97**	**326**	*e*P		**P**	**05 27 39.9**	**-0.9**
AK02	**Malin Array Si**	**72.00**	**326**	*e*P		**P**	**05 27 39.4**	**-1.5**
SCHQ	**Schefferville**	**74.44**	**22**	P		**P**	**05 27 55.3**	**0.0**
SCHQ	**Schefferville**	**74.44**	**22**	P		**P**	**05 27 55.3**	**0.0**
	comp=Z,2.5nm,0.7s,baz=257,slow=10,SNR=7.0							
BURAR	**Bucovina Array**	**76.00**	**326**	⇑*i*P		**P**	**05 28 04.6**	**0.0**
TESR		**76.33**	**325**	⇓*i*P		**P**	**05 28 06.1**	**-0.2**
TRPA	**Tarpa**	**76.59**	**328**	⇑*i*P		**P**	**05 28 07.3**	**-0.5**
MORC	**Moravsky Berou**	**76.96**	**332**	*e*P		**P**	**05 28 10.1**	**+0.2**
MORC				pmax	pmax			
	comp=Z,7.0nm,1.1s							
MORC	**Moravsky Berou**	**76.96**	**332**	*e*P		**P**	**05 28 10.1**	**+0.2**
	comp=Z,6.6nm,1.1s							
CLL	**Collm**	**77.04**	**335**	⇓*i*P		**P**	**05 28 09.9**	**-0.3**
CLL				pmax	pmax			
	comp=Z,13nm,1.2s							
CLL	**Collm**	**77.04**	**335**	⇓*i*P		**P**	**05 28 09.9**	**-0.3**
	comp=Z,13nm,1.2s							
MALT	**Malatya**	**77.30**	**312**	⇑P		**P**	**05 28 13.4**	**+1.3**
MALT	**Malatya**	**77.30**	**312**	⇑*i*P		**P**	**05 28 13.4**	**+1.3**
TXAR	**Lajitas Array**	**78.55**	**60**	P		**P**	**05 28 20.8**	**+1.7**
TXAR	**Lajitas Array**	**78.55**	**60**	P		**P**	**05 28 20.8**	**+1.7**
	comp=Z,1.5nm,0.6s,baz=298,slow=4.7,SNR=24							
BRTR	**Keskin Array B**	**78.61**	**316**	P		**P**	**05 28 19.6**	**+0.2**
BRTR	**Keskin Array B**	**78.61**	**316**	P		**P**	**05 28 19.6**	**+0.2**
	comp=Z,3.4nm,0.9s,baz=86,slow=5.3,SNR=7.4							
KHC	**Kasperske Hory**	**78.79**	**334**	*e*P		**P**	**05 28 20.4**	**+0.3**
KHC	**Kasperske Hory**	**78.79**	**334**	*e*P		**P**	**05 28 20.1**	**0.0**
	comp=Z,9.6nm,1.0s							
KHC	**Kasperske Hory**	**78.79**	**334**	*e*P		**P**	**05 28 20.4**	**+0.3**
GERES	**GERESS Array B**	**79.00**	**333**	P		**P**	**05 28 20.9**	**-0.4**
GERES	**GERESS Array B**	**79.00**	**333**	P		**P**	**05 28 20.9**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=35,slow=4.9,SNR=13							
CDF	**Champ du Feu**	**81.27**	**337**	*e*P		**P**	**05 28 33.4**	**-0.1**
	comp=Z,12nm,0.8s							
CDF	**Champ du Feu**	**81.27**	**337**	*e*P		**P**	**05 28 33.4**	**-0.1**
CDF				pmax	pmax			
	comp=Z,12nm,0.8s							
CDF	**Champ du Feu**	**81.27**	**337**	*e*P		**P**	**05 28 33.4**	**-0.1**
	comp=Z,12nm,0.8s							
PAGF	**Fort de Pagny**	**81.55**	**338**	*e*P		**P**	**05 28 35.2**	**+0.3**
	comp=Z,8.6nm,1.0s							
MEZF	**Maizieres J'vi**	**81.77**	**339**	*e*P		**P**	**05 28 36.3**	**+0.3**
HAU	**Haudompre**	**81.89**	**338**	*e*P		**P**	**05 28 36.5**	**-0.2**
HINF	**Hinteralfeld**	**81.93**	**337**	*e*P		**P**	**05 28 36.6**	**-0.3**
FLN	**La Foliniere**	**82.83**	**342**	*e*P		**P**	**05 28 41.4**	**-0.1**
LDF	**La Druitiere**	**82.91**	**342**	*e*P		**P**	**05 28 41.9**	**-0.1**
	comp=Z,12nm,0.9s							
LOR	**Lormes**	**83.22**	**339**	*e*P		**P**	**05 28 43.7**	**+0.1**
	comp=Z,4.9nm,0.4s							
GRR	**Gorron**	**83.27**	**342**	*e*P		**P**	**05 28 43.8**	**0.0**
SSF	**Saint Saulge**	**83.50**	**339**	*e*P		**P**	**05 28 45.3**	**+0.2**
	comp=Z,8.1nm,0.8s							
AVF	**Avril sur Loir**	**83.79**	**339**	*e*P		**P**	**05 28 46.8**	**+0.3**
	comp=Z,10nm,0.9s							
SMF	**Signal de Mont**	**83.80**	**339**	*e*P		**P**	**05 28 47.0**	**+0.4**
	comp=Z,49nm,1.2s							
SMF	**Signal de Mont**	**83.80**	**339**	*e*P		**P**	**05 28 47.0**	**+0.4**
SMF				pmax	pmax			
	comp=Z,49nm,1.2s							
SMF	**Signal de Mont**	**83.80**	**339**	*e*P		**P**	**05 28 47.0**	**+0.4**
	comp=Z,49nm,1.2s							
LPL	**La Plagne**	**84.07**	**336**	*e*P		**P**	**05 28 47.2**	**-1.1**
LPG	**La Plagne**	**84.08**	**336**	*e*P		**P**	**05 28 47.5**	**-0.9**
BGF	**Bois d'Agland**	**84.14**	**339**	*e*P		**P**	**05 28 48.3**	**0.0**
TCF	**Toulx Ste Croi**	**84.54**	**340**	*e*P		**P**	**05 28 50.1**	**-0.3**
MFF	**Saint Martin d**	**84.80**	**341**	*e*P		**P**	**05 28 51.7**	**0.0**
CFAA	**Coronel Fontan**	**145.83**	**80**	PKPbc		**PKPab**	**05 35 57.6**	**+0.7**
CFAA	**Coronel Fontan**	**145.83**	**80**	PKPbc		**PKPab**	**05 35 57.6**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=261,slow=5.9,SNR=4.0							
PLCA	**Paso Flores**	**148.78**	**96**	PKPbc		**PKPbc**	**05 36 06.0**	**+1.6**
PLCA	**Paso Flores**	**148.78**	**96**	PKPbc		**PKPbc**	**05 36 06.0**	**+1.6**
	comp=Z,1.7nm,0.6s,baz=337,slow=1.7,SNR=3.3							
CPUP	**Villa Florida**	**149.52**	**61**	PKPbc		**PKPbc**	**05 36 07.0**	**+0.5**
CPUP	**Villa Florida**	**149.52**	**61**	PKPbc		**PKPbc**	**05 36 07.0**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=260,slow=14,SNR=3.2							

BJI **16** *05:17:12.6,12˚.96S×64˚.74E,h10km,mB5.2/33,mb5.0/44, Ms5.0/36,Ms7 4.7/36*

ISCJB **16** *05:17:17.8±1.6,12˚.42S±0˚.04×65˚.27E±0˚.04,h11km

BOSA Boshof 40.50 240 P **P** **05 24 58.9 +0.1**
comp=Z,12nm,0.8s,baz=91,slow=7.3,SNR=18
BOSA LR LR 05 39 36.9
comp=Z,1µm,18.7s,baz=70,slow=33
GRM Grahamstown 40.93 233 *eP* **P** **05 25 03.6 +1.4**
GRM AMB AMB 05 25 05.7
comp=Z,56nm,5.5s
SOE Somerset East 41.46 234 *eP* **P** **05 25 07.8 +1.1**
SOE AMB AMB 05 25 10.0
comp=Z,56nm,1.9s
BUFB Buffelsbos 42.60 233 *eP* **P** **05 25 16.7 +0.9**
BUFB AMB AMB 05 25 19.0
comp=Z,86nm,3.3s
KOLN Koldanda 43.80 24 *eP* **PP** **05 27 12.0 +4.0**
comp=Z,16nm,0.7s
PYUN Piuthan 43.86 23 *eP* **PP** **05 27 12.3 +3.7**
comp=Z,53nm,1.0s
UPI Upington 43.87 242 *eP* **P** **05 25 26.2 0.0**
DMN Daman 44.28 26 *eP* **PP** **05 27 14.2 +1.1**
RAMN Ramite 44.36 28 *eP* **PP** **05 27 15.1 +1.1**
PKI Pulchoki 44.37 26 *eP* **PP** **05 27 14.7 +0.5**
DANN Dangsing 44.38 24 *eP* **PP** **05 27 14.1 -0.2**
comp=Z,29nm,0.8s
SUR Sutherland 45.19 237 *eP* **P** **05 25 36.6 -0.3**
comp=Z,38nm,1.3s
SUR Sutherland 45.19 237 LR LR 05 42 59.3
comp=Z,914nm,18.2s,baz=69,slow=34
CM31 Chiang Mai Arr 45.29 48 *eP* **P** **05 25 37.9 +0.3**
comp=Z,2.2nm,0.6s
CM31 *e*PcP **PcP** **05 27 18.3 +1.0**
CMAR Chiang Mai Arr 45.29 48 P **P** **05 25 36.9 -0.7**
CMAR PcP **PcP** **05 27 18.1 +0.7**
CMAR Chiang Mai Arr 45.29 48 P **P** **05 25 36.9 -0.7**
comp=Z,4.2nm,0.7s,baz=241,slow=9.5,SNR=34
CMAR PcP **PcP** **05 27 18.1 +0.7**
comp=Z,1.5nm,0.4s,baz=239,slow=5.1,SNR=5.7
CMAR LR LR 05 41 39.0
comp=Z,380nm,20.5s,baz=230,slow=32
CHTO Chiang Mai 45.52 47 *eP* **P** **05 25 38.6 -0.8**
CHTO pmax pmax
comp=Z,6.0nm,0.8s
CHTO Chiang Mai 45.52 47 *eP* **P** **05 25 38.5 -0.8**
comp=Z,5.5nm,0.8s
CVNA Calvinia 45.82 238 *eP* **P** **05 25 42.8 +1.0**
CVNA AMB AMB 05 25 44.6
comp=Z,54nm,2.0s
SHL Shillong 45.88 34 *ex* **P** **05 25 43.0 +0.6**
TSUM Tsumeb 46.20 255 ⇓*iP* **P** **05 25 45.6 +0.6**
ELIM Elim 46.66 234 *eP* **P** **05 25 47.5 -0.8**
KBL Kabul 46.91 4 *eP* **P** **05 25 51.0 +0.7**
KBL *e* 05 27 24.1
KBL pmax pmax
comp=Z,28nm,1.3s
KBL Kabul 46.91 4 *eP* **P** **05 25 51.0 +0.7**
comp=Z,28nm,1.3s
KBL *e*PcP **PcP** **05 27 24.1 +1.2**
LSA Lhasa 48.83 30 P **P** **05 26 06.5 +0.9**
KMI Kunming 52.30 44 P P 05 26 35.3 +3.7
KMI pP pP 05 26 38.3 +1.5
KMI PP PP 05 28 36.4 +6.0
KMI S **S** **05 33 58.4 +1.7**
KMI SS **SS** **05 37 34.6 -0.2**
KMI pmax pmax
comp=Z,14nm,0.5s
KMI pmax pmax
comp=Z,71nm,5.3s
KMI LR LR
comp=N,220nm,14.7s
KMI LR LR
comp=E,420nm,17.4s
KMI LR LR
comp=Z,350nm,27.9s
KSH Kashi 52.70 10 P **P** **05 26 31.1 -3.1**
KSH pP **pP** **05 26 36.8 -2.5**
KSH sP **sP** **05 26 38.1 -3.2**
KSH PcP **PcP** **05 27 42.3 -1.6**
KSH PP **PP** **05 28 31.4 -2.2**
KSH ScP **ScP** **05 31 37.3 -3.4**
KSH PcS **PcS** **05 31 38.8 -3.7**
KSH S **S** **05 33 57.5 -4.0**
KSH sS **sS** **05 34 06.1 -3.8**
KSH ScS **ScS** **05 36 17.3 -6.3**
KSH SS **SS** **05 37 34.1 -6.3**
KSH pmax pmax
comp=Z,120nm,1.0s
KSH LR LR
comp=N,260nm,5.9s
KSH LR LR
comp=E,230nm,4.6s
KSH LR LR
comp=Z,280nm,7.0s
MMAI Mount Meron Ar 53.46 329 LR LR 05 48 11.3
comp=Z,203nm,18.3s,baz=210,slow=35
QIZ Qiongzhong 53.98 55 P **P** **05 26 43.8 -0.1**
QIZ pP **pP** **05 26 46.5 -2.5**
QIZ sP **sP** **05 26 48.1 -2.9**
QIZ S **S** **05 34 20.3 +0.9**
QIZ LR LR
comp=N,350nm,24.0s
QIZ LR LR
comp=E,230nm,19.5s
QIZ LR LR
comp=Z,410nm,23.6s
KAPI Kappang 54.32 87 *eP* **P** **05 26 44.9 -1.5**
comp=Z,24nm,1.0s
KAPI Kappang 54.32 87 P **P** **05 26 45.3 -1.1**
SNR=6.1
KAPI Kappang 54.32 87 P **P** **05 26 45.9 -0.5**
comp=Z,126nm,0.9s,SNR=5.2
KAPI Kappang 54.32 87 P **P** **05 26 45.1 -1.3**
comp=Z,27nm,1.1s
MAW Mawson 55.08 181 LR LR 05 44 51.7
comp=Z,475nm,19.5s,baz=306,slow=30
AAK Ala-Archa 55.51 8⇑*iP* **P** **05 26 53.7 -1.0**
AAK pmax pmax
comp=Z,42nm,1.7s
AAK Ala-Archa 55.51 8 *eP* **P** **05 26 54.8 +0.1**
comp=Z,15nm,1.4s
AAK *e*PcP **PcP** **05 27 54.4 -0.2**
KK31 Karatay Array 55.53 5 *iP* **P** **05 26 53.9 -0.8**
KK31 pmax pmax
comp=Z,2.0nm,0.9s
KKAR Karatay Array 55.53 5 *eP* **P** **05 26 54.9 +0.2**
KKAR pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 55.53 5 *eP* **P** **05 26 54.9 +0.2**
comp=Z,1.7nm,0.7s
GNI Garni 55.72 341 P **P** **05 26 58.0 +1.8**
SNR=7.8
GNI Garni 55.72 341 LR LR 05 48 24.7
comp=Z,151nm,20.2s,baz=107,slow=34
GYA Guiyang 55.87 46 P **P** **05 26 56.4 -1.1**
GYA PP **PP** **05 29 05.4 +3.0**
GYA ScP **ScP** **05 31 56.0 +1.0**
GYA S **S** **05 34 45.8 +1.1**
GYA SS **SS** **05 38 33.3 +2.4**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,5.2s
GYA LR LR
comp=N,530nm,20.8s
GYA LR LR
comp=E,490nm,21.0s
GYA LR LR
comp=Z,570nm,20.6s
CD2 Chengdu 56.85 40 P **P** **05 27 04.8 +0.4**
CD2 pP pP 05 27 14.9 +5.3
CD2 sP sP 05 27 18.8 +7.2
CD2 PcP **PcP** **05 28 00.0 0.0**
CD2 PP **PP** **05 29 12.8 +1.8**
CD2 PcS **PcS** **05 31 59.3 -1.6**
CD2 S **S** **05 34 54.3 -3.2**
CD2 sS **sS** **05 35 10.9 +4.9**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,140nm,6.3s
CD2 LR LR
comp=N,580nm,19.1s
CD2 LR LR
comp=E,630nm,24.0s
CD2 LR LR
comp=Z,480nm,19.1s
ZEI Tsey 58.36 342 *eP* **P** **05 27 15.1 +0.1**
ZEI pmax pmax
comp=Z,15nm,1.6s
SYO Syowa Base 58.82 190⇑*eX* **P** **05 27 14.6 -3.0**
SYO Syowa Base 58.82 190⇑*ep*P pP 05 27 21.0 -1.8
KBZ Khabaz 59.54 341 P **P** **05 27 23.6 +0.7**
KBZ Khabaz 59.54 341 P **P** **05 27 23.6 +0.7**
KBZ Khabaz 59.54 341 P **P** **05 27 23.6 +0.7**
comp=Z,1.8nm,0.3s,baz=161,slow=8.5,SNR=5.9
KBZ LR LR 05 51 42.8
comp=Z,154nm,18.4s,baz=331,slow=35
WMQ Urumqi 59.67 19 P **P** **05 27 25.0 +1.1**
WMQ sP **sP** **05 27 32.0 +1.0**
WMQ PcP **PcP** **05 28 12.0 +1.2**
WMQ PP **PP** **05 29 38.0 +2.2**
WMQ ScP **ScP** **05 32 11.0 -0.3**
WMQ S **S** **05 35 33.0 -0.8**
WMQ ScS **ScS** **05 37 11.0 -2.7**
WMQ SS **SS** **05 39 30.0 0.0**
WMQ pmax pmax
comp=Z,14nm,1.0s
WMQ pmax pmax
comp=Z,54nm,6.0s
WMQ LR LR
comp=N,420nm,18.0s
WMQ LR LR
comp=E,330nm,18.0s
WMQ LR LR
comp=Z,400nm,18.0s
BRTR Keskin Array B 59.68 332 P **P** **05 27 24.8 +0.7**
BRTR Keskin Array B 59.68 332 P **P** **05 27 24.8 +0.7**
comp=Z,1.7nm,0.9s,baz=152,slow=5.5,SNR=9.0
BRTR LR LR 05 53 15.5
comp=Z,105nm,18.0s,baz=320,slow=36
LZH Lanzhou 60.52 36 *eP* **P** **05 27 30.3 +0.3**
LZH pP **pP** **05 27 39.0 +3.8**
LZH sP **sP** **05 27 41.8 +4.6**
LZH PP PP 05 29 50.1 +6.4
LZH S **S** **05 35 48.8 +3.5**
LZH sS **sS** **05 35 55.1 +1.2**
LZH pmax pmax
comp=Z,21nm,1.0s
LZH pmax pmax
comp=Z,120nm,4.0s
LZH LR LR
comp=N,510nm,17.4s
LZH LR LR
comp=E,290nm,15.3s
LZH LR LR
comp=Z,630nm,18.2s
GTA Gaotai 60.85 30 *eP* **P** **05 27 31.8 -0.4**
GTA pP **pP** **05 27 37.4 0.0**
GTA sP **sP** **05 27 40.6 +1.2**
GTA PcP **PcP** **05 28 16.8 +1.0**
GTA PP **PP** **05 29 46.3 -0.2**
GTA S **S** **05 35 43.5 -5.9**
GTA pmax pmax
comp=Z,21nm,0.9s
GTA pmax pmax
comp=Z,200nm,5.2s
GTA LR LR
comp=N,330nm,18.0s
GTA LR LR
comp=E,600nm,18.5s
GTA LR LR
comp=Z,610nm,18.0s
MK31 Makanchi Array 60.96 13 *i*P **P** **05 27 31.1 -1.5**
MK31 pmax pmax
comp=Z,2.0nm,0.4s
MK31 Makanchi Array 60.96 13 *eP* **P** **05 27 31.6 -1.0**
MKAR Makanchi Array 60.96 13 *eP* **P** **05 27 32.1 -0.5**
MKAR 05 28 15.8
MKAR Makanchi Array 60.96 13 *eP* **P** **05 27 32.1 -0.5**
MKAR PcP **PcP** **05 28 15.8 -0.1**
MKAR Makanchi Array 60.96 13 P **P** **05 27 31.7 -0.9**
comp=Z,1.3nm,0.5s,baz=207,slow=8.7,SNR=18
MKAR PcP **PcP** **05 28 15.8 -0.1**
comp=Z,4.5nm,0.9s,baz=217,slow=5.9,SNR=7.6
MKAR LR LR 05 54 31.7
comp=Z,264nm,18.5s,baz=189,slow=37
AB31 Akbulak array 61.65 356 *iP* **P** **05 27 36.2 -0.9**
AB31 pmax pmax
comp=Z,24nm,0.9s
ABKAR Akbulak array 61.65 356 *eP* **P** **05 27 36.6 -0.5**
comp=Z,4.1nm,0.6s
CASY Casey 61.68 161 *eP* **P** **05 27 37.6 +0.4**
comp=Z,46nm,1.5s
XAN Xi'an 62.18 40 P **P** **05 27 40.1 -1.0**
XAN pP **pP** **05 27 45.9 -0.5**
XAN ScS **SKSac** **05 37 28.8 -4.1**
XAN pmax pmax
comp=Z,6.0nm,1.2s
XAN pmax pmax
comp=Z,26nm,4.1s
XAN LR LR
comp=N,190nm,19.5s
XAN LR LR
comp=E,100nm,20.5s
XAN LR LR
comp=Z,100nm,19.5s
AKTO Aktyubinsk 62.97 355 LR LR 05 54 00.5
comp=Z,137nm,18.2s,baz=311,slow=35
WHN Wuhan 63.72 47 P **P** **05 27 52.3 +0.9**
WHN S **S** **05 36 25.9 +0.4**
WHN LR LR
comp=N,450nm,14.4s
WHN LR LR
comp=E,610nm,13.2s
WHN LR LR
comp=Z,1µm,18.5s
SIM Simferopol' 63.74 336 *eP* **P** **05 27 52.0 +0.8**
SIM *e*S **S** **05 36 23.0 -2.2**
SIM pmax pmax
comp=Z,16nm,1.3s
KURBB Kurchatov Arra 63.91 9 PcP **PcP** **05 28 27.5 -0.2**
comp=Z,2.7nm,1.0s,baz=204,slow=5.3,SNR=7.0
KURBB LR LR 05 53 48.3
comp=Z,243nm,21.2s,baz=215,slow=34
KURK Kurchatov 64.02 9*d iP* **P** **05 27 52.2 -0.7**
KURK pmax pmax
comp=Z,21nm,1.8s
KURK Kurchatov 64.02 9 PcP **PcP** **05 28 27.5 -0.6**
KURK Kurchatov 64.02 9 P **P** **05 27 52.9 0.0**
SNR=5.3
KURK Kurchatov 64.02 9 P **P** **05 27 52.2 -0.7**
comp=Z,52nm,1.0s,SNR=6.0
VOSK Vostochnaya 65.13 4 P **P** **05 27 59.3 -0.9**
VOSK pmax pmax
comp=Z,3.0nm,1.1s
BVA0 Borovoye Array 65.40 3 *iP* **P** **05 28 01.6 -0.3**
BVA0 pmax pmax
comp=Z,3.0nm,1.3s
BVAR Borovoye Array 65.40 3 LR LR 05 54 52.5
comp=Z,141nm,21.4s,baz=124,slow=34
YULB Yu-li 65.42 57 *eP* **P** **05 28 04.4 +1.8**
comp=Z,14nm,0.9s
BRVK Borovoye 65.42 3*d iP* **P** **05 28 01.4 -0.6**
BRVK pmax pmax
comp=Z,18nm,1.2s
BRVK Borovoye 65.42 3 *eP* **P** **05 28 01.5 -0.5**
comp=Z,21nm,1.3s
BRVK Borovoye 65.42 3 P **P** **05 28 02.6 +0.5**
SNR=5.5
KDU Kakadu 65.45 98 P **P** **05 28 03.5 +0.5**
baz=8.9,SNR=6.0
ASAR Alice Springs 65.71 110 P **P** **05 28 04.5 -0.2**
ASAR Alice Springs 65.71 110 P **P** **05 28 04.5 -0.2**
comp=Z,5.5nm,0.7s,baz=273,slow=6.2,SNR=50
ASAR LR LR 05 53 48.9
comp=Z,448nm,18.9s,baz=278,slow=33
AS31 Alice Springs 65.71 110 *eP* **P** **05 28 04.2 -0.5**
TIRR Tirgusor 65.80 332 *eP* **P** **05 28 04.0 -0.6**
comp=Z,160nm,2.2s
TIRR Tirgusor 65.80 332 ⇓*iP* **P** **05 28 04.0 -0.6**
WRAB Tennant Creek 66.41 106 *eP* **P** **05 28 09.3 +0.1**
WRAB pmax pmax
comp=Z,14nm,0.8s
WRAB Tennant Creek 66.41 106 *eP* **P** **05 28 09.3 +0.1**
comp=Z,14nm,0.8s
WRAB Tennant Creek 66.41 106 P **P** **05 28 09.5 +0.3**
comp=Z,109nm,0.7s,SNR=8.8
CFR Carcaliu 66.48 332⇓*iP* **P** **05 28 08.2 -0.7**
VRHR Novokhopersk 66.57 344 *eP* **P** **05 28 09.6 +0.2**
VRHR pmax pmax
comp=N,30nm,1.0s
VRHR pmax pmax
comp=E,10.0nm,1.0s
VRHR pmax pmax
comp=Z,30nm,1.0s
VTS Vitosha 66.99 328⇓*iP* **P** **05 28 12.6 +0.1**
VTS Vitosha 66.99 328⇓*iP* **P** **05 28 12.6 +0.1**
VORD Divnogorie 67.11 343 *eP* **P** **05 28 11.6 -1.3**
VORD pmax pmax
comp=Z,30nm,0.9s
VORD pmax pmax
comp=N,40nm,1.2s
VORD pmax pmax
comp=E,20nm,0.8s
VSR Storozhevoye 67.37 343 *eP* **P** **05 28 13.7 -0.8**
VSR pmax pmax
comp=Z,30nm,1.2s
VSR pmax pmax
comp=N,40nm,1.0s
VSR pmax pmax
comp=E,20nm,1.2s
KIS Kishinev 67.58 334 *eP* **P** **05 28 15.0 -1.0**
KIS LRM MLR 06 07 20.0
comp=E,300nm,19.0s
VRI Vrincioaia 67.64 332⇑*iP* **P** **05 28 17.1 +0.7**
PLOR Plostina 67.67 332⇓*iP* **P** **05 28 16.7 +0.1**
MLR Muntele Rosu 67.73 331⇓*iP* P 05 28 13.6 -3.5
NJ2 Nanjing 67.77 48 *eP* **P** **05 28 16.3 -1.2**
NJ2 pP **pP** **05 28 20.1 -2.6**
NJ2 sP **sP** **05 28 24.5 -0.2**
NJ2 S **S** **05 37 18.5 +3.6**
NJ2 sS **sS** **05 37 24.0 +0.4**
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 pmax pmax
comp=Z,120nm,6.3s
NJ2 LR LR
comp=N,400nm,22.3s
NJ2 LR LR
comp=E,460nm,26.8s
NJ2 LR LR
comp=Z,410nm,23.2s
TORD Torodi Ar. Bea 67.95 290 P **P** **05 28 18.4 -0.5**
TORD Torodi Ar. Bea 67.95 290 P **P** **05 28 18.4 -0.5**
comp=Z,4.7nm,1.1s,baz=116,slow=3.4,SNR=20
TORD LR LR 05 55 19.5
comp=Z,300nm,21.1s,baz=95,slow=34
VOIR 68.11 331⇓*iP* P 05 28 15.3 -4.2
TAM Tamanrasset 68.17 301 *eP* **P** **05 28 22.3 +1.9**
TAM pmax pmax
comp=Z,5.0nm,1.4s
TAM Tamanrasset 68.17 301 *eP* **P** **05 28 22.3 +1.9**
comp=Z,4.8nm,1.4s
HHC Hu-ho-hao-te 68.19 36 *eP* **P** **05 28 21.9 +1.8**
HHC PcP **PcP** **05 28 47.3 +1.4**
HHC PP **PP** **05 30 54.9 +4.1**
HHC ScP 05 32 49.4
HHC PcS 05 32 51.4
HHC S **S** **05 37 21.0 +1.1**
HHC sS **sS** **05 37 28.5 -0.1**
HHC ScS **SKSac** **05 38 17.4 -0.9**
HHC SS **SS** **05 41 45.8 +2.5**
HHC pmax pmax
comp=Z,32nm,0.7s
HHC pmax pmax
comp=Z,390nm,6.8s
HHC LR LR
comp=N,380nm,16.6s
HHC LR LR
comp=E,470nm,16.1s
HHC LR LR
comp=Z,340nm,16.5s
ZAA0 Zalesovo Array 68.25 12 *eP* **P** **05 28 19.0 -1.0**
ZALV Zalesovo Beam 68.25 12 P **P** **05 28 19.1 -0.9**
ZALV Zalesovo Beam 68.25 12 P **P** **05 28 19.1 -0.9**
ZALV Zalesovo Beam 68.25 12 P **P** **05 28 19.1 -0.9**
comp=Z,14nm,1.2s,baz=223,slow=6.1,SNR=25
ZALV LR LR 05 57 05.4
comp=Z,199nm,19.6s,baz=341,slow=35
ARR Arges 68.26 330⇑*iP* **P** **05 28 17.6 -2.8**
CEL Celeste 68.37 320 *eP* **P** **05 28 21.1 -0.1**
comp=Z,59nm,2.0s
NVS Novosibirsk 68.78 11 *eP* **P** **05 28 22.5 -0.8**
NVS *e* 05 37 26.1
NVS pmax pmax
comp=Z,63nm,2.0s
NVS pmax pmax
comp=N,25nm,1.7s
ARU Arti 68.89 356*c iP* **P** **05 28 24.1 +0.2**
ARU 05 30 53.2
ARU S **S** **05 37 28.5 +1.2**
ARU pmax pmax
comp=Z,49nm,1.7s
SSE Sheshan 68.99 50 P **P** **05 28 25.3 +0.2**
SSE S **S** **05 37 29.1 -0.4**
SSE pmax pmax
comp=Z,27nm,0.8s
SSE pmax pmax
comp=Z,74nm,5.1s
SSE LR LR
comp=N,210nm,25.9s
SSE LR LR
comp=E,54nm,26.3s
SSE LR LR
comp=Z,270nm,26.5s
SVE Sverdlovsk 69.16 357 *eP* **P** **05 28 26.0 +0.4**
SVE pmax pmax
comp=Z,41nm,1.5s
CUC Castrocucco 69.47 321 *eP* **P** **05 28 26.9 -1.2**
BUR08 Bucovina Ar. S 69.67 332 *eP* **P** **05 28 29.7 +0.5**
DRGR 70.21 330⇑*iP* **P** **05 28 33.4 +0.9**
DRGR 70.21 330⇑*iP* **P** **05 28 33.4 +0.9**
AK02 Malin Array Si 70.30 337 *eP* **P** **05 28 31.6 -1.2**
AK01 Malin Array Si 70.33 337 *eP* **P** **05 28 31.9 -1.0**
AK01 *e*PcP **PcP** **05 28 54.8 +0.4**
AKASG Malin Array Be 70.33 337 P **P** **05 28 31.8 -1.2**
AKASG Malin Array Be 70.33 337 P **P** **05 28 31.8 -1.2**
AKASG Malin Array Be 70.33 337 P **P** **05 28 31.8 -1.2**
comp=Z,12nm,0.9s,baz=140,slow=5.1,SNR=23
KIEV Kiev 70.33 337 *eP* **P** **05 28 31.8 -1.1**
KIEV pmax pmax
comp=Z,22nm,1.0s
KIEV Kiev 70.33 337 *eP* **P** **05 28 31.8 -1.1**
comp=Z,22nm,1.0s
SONM Songino Array 70.33 28 P **P** **05 28 32.9 -0.4**
SONM Songino Array 70.33 28 P **P** **05 28 32.9 -0.4**
comp=Z,7.0nm,1.0s,baz=223,slow=6.1,SNR=29
SONM LR LR 05 58 27.9
comp=Z,798nm,19.6s,baz=260,slow=35
BJI Beijing 70.45 39 P **P** **05 28 34.5 +0.6**
BJI S **S** **05 37 49.1 +2.8**
BJI SS **SS** **05 42 21.6 +3.8**
BJI pmax pmax
comp=Z,17nm,0.7s
BJI pmax pmax
comp=Z,220nm,4.1s
BJI LR LR
comp=N,120nm,27.4s
BJI LR LR
comp=E,160nm,29.6s
BJI LR LR
comp=Z,170nm,28.8s
ULN Ulaanbaatar 70.66 28 *eP* **P** **05 28 35.8 +0.5**
comp=Z,74nm,2.6s
ULN Ulaanbaatar 70.66 28 P **P** **05 28 35.1 -0.1**
SNR=6.0
ULN Ulaanbaatar 70.66 28 P **P** **05 28 35.7 +0.5**
ZAK Zakamensk 70.90 25 *eP* P 05 28 32.3 -4.3
ZAK pmax pmax
comp=Z,4.0nm,1.5s
KEST Kesra 71.29 315 LR LR 06 03 23.0
comp=Z,84nm,19.1s,baz=348,slow=39
SNAA Sanae 71.38 198 *eP* **P** **05 28 39.5 +0.2**
SNAA Sanae 71.38 198 *eP* **P** **05 28 39.1 -0.1**
comp=Z,92nm,2.6s
OBN Obninsk 71.55 343⇓*iP* **P** **05 28 40.5 +0.3**
OBN *e* 05 31 19.3
OBN *e*SS SS 05 42 34.9 +0.8
OBN pmax pmax
comp=Z,82nm,1.4s
UZH Uzhgorod 71.72 332 *eP* **P** **05 28 41.7 +0.2**
UZH *e* 05 28 43.7
UZH *e* 05 28 51.7
LVV L'vov 71.80 333 *eP* **P** **05 28 42.1 +0.2**
MOS Moscow 71.80 344 *eP* **P** **05 28 40.0 -1.8**
MOS pmax pmax
comp=Z,139nm,1.3s
PKSM Moragy 71.85 328⇑*iP* **P** **05 28 42.1 -0.2**

PKSM Moragy 71.85 328⇑ iP P 05 28 42.1 -0.2
KOLS Kolonicke sedl 71.95 332 eP P 05 28 43.6 +0.7
KOLS pmax pmax
comp=Z,21nm,1.3s
KOLS Kolonicke sedl 71.95 332 eP P 05 28 43.6 +0.7
STKA Stephens Creek 72.02 120 P P 05 28 43.4 -0.4
STKA Stephens Creek 72.02 120 P P 05 28 43.4 -0.4
comp=Z,5.2nm,1.0s,baz=291,slow=4.6,SNR=4.0
STKA LR LR 05 54 25.9
comp=Z,395nm,20.0s,baz=106,slow=31
TLY Talaya 72.04 24 eP P 05 28 43.3 -0.1
TLY e 05 28 56.1
TLY eS S 05 37 57.6 -6.9
TLY pmax pmax
comp=Z,9.0nm,1.6s
SOKR Solikamsk 72.13 356 c iP P 05 28 44.6 +1.0
SOKR pmax pmax
comp=Z,20nm,0.9s
DBIC Dimbokro 72.20 281 P P 05 28 44.6 -0.4
DBIC Dimbokro 72.20 281 P P 05 28 44.6 -0.4
comp=Z,13nm,1.0s,baz=97,slow=8.3,SNR=8.0
DBIC LR LR 05 57 24.4
comp=Z,380nm,21.1s,baz=90,slow=33
LIC Lamto 72.25 281 eP P 05 28 44.8 -0.6
comp=Z,47nm,1.1s,baz=104
LIC eR
comp=Z,482nm,23.0s
LIC Lamto 72.25 281 eP P 05 28 44.8 -0.6
comp=Z,47nm,1.1s
KWP Kalwaria Pacla 72.25 333 ⇓P P 05 28 45.5 +0.8
KWP Kalwaria Pacla 72.25 333 ⇓iP P 05 28 45.5 +0.8
KWP Kalwaria Pacla 72.25 333 eP P 05 28 45.1 +0.4
CRVS Cervenica-Dubn 72.30 331 eP P 05 28 45.0 0.0
CRVS e 05 28 55.6
CRVS pmax pmax
comp=Z,22nm,1.6s
CRVS Cervenica-Dubn 72.30 331 eP P 05 28 45.0 0.0
CRVS e 05 28 55.6
VNA2 Neumayer--Watz 72.61 199 eP P 05 28 47.1 +0.5
VNA2 Neumayer--Watz 72.61 199 eS S 05 38 10.2 -0.3
VYHS Vyhne 73.28 330 eP P 05 28 51.1 +0.3
VYHS pmax pmax
comp=Z,13nm,1.2s
VYHS Vyhne 73.28 330 eP P 05 28 51.1 +0.3
VNA3 Neumayer Olymp 73.40 199 eP P 05 28 51.9 +0.6
VNA3 Neumayer Olymp 73.40 199 eS S 05 38 16.2 -3.4
OJC Ojcow 74.00 332 eP P 05 28 54.5 -0.5
OJC Ojcow 74.00 332 eP P 05 28 54.5 -0.5
ARSA Arzberg 74.16 327⇑ iP P 05 28 55.4 -0.6
comp=Z,24nm,1.3s
ARSA Arzberg 74.16 327⇑ iP P 05 28 55.4 -0.6
comp=Z,24nm,1.3s
CONA Conrad Observa 74.41 328⇑ iP P 05 28 56.8 -0.8
comp=Z,24nm,1.3s
CONA Conrad Observa 74.41 328⇑ iP P 05 28 56.8 -0.8
comp=Z,24nm,1.3s
MORC Moravsky Berou 74.77 330 ⇑P P 05 28 59.4 -0.1
MORC Moravsky Berou 74.77 330 eP P 05 28 58.6 -0.9
comp=Z,17nm,1.1s
MORC Moravsky Berou 74.77 330⇑ iP P 05 28 59.4 -0.1
MOA Molln 75.19 327⇓ iP P 05 29 01.4 -0.6
comp=Z,34nm,1.3s
MOA Molln 75.19 327⇓ iP P 05 29 01.4 -0.6
comp=Z,34nm,1.3s
KBA Koelnbreinsper 75.22 326⇑ iP P 05 29 02.8 +0.5
KBA pmax pmax
comp=Z,15nm,1.3s
KBA Koelnbreinsper 75.22 326⇑ iP P 05 29 02.8 +0.5
comp=Z,15nm,1.3s
KBA Koelnbreinsper 75.22 326⇑ iP P 05 29 02.8 +0.5
comp=Z,15nm,1.3s
KRLC Kraliky 75.34 330 eP P 05 29 02.7 -0.1
KRLC Kraliky 75.34 330 eP P 05 29 02.7 -0.1
ABTA Abfaltersbach 75.47 326⇑ iP P 05 29 03.3 -0.4
comp=Z,31nm,1.3s
ABTA Abfaltersbach 75.47 326⇑ iP P 05 29 03.3 -0.4
comp=Z,31nm,1.3s
TREC Trest 75.47 329 eP P 05 29 03.7 +0.1
TREC Trest 75.47 329 eP P 05 29 03.7 +0.1
DPC Dobruska-Polom 75.74 330 eP P 05 29 05.4 +0.3
DPC Dobruska-Polom 75.74 330 eP P 05 29 04.7 -0.4
comp=Z,20nm,1.3s
DPC Dobruska-Polom 75.74 330 eP P 05 29 05.4 +0.3
UPC Upice 76.00 330 eP P 05 29 07.0 +0.5
UPC Upice 76.00 330 eP P 05 29 07.0 +0.5
KSP Ksiaz 76.08 330 eP P 05 29 07.2 +0.2
KSP Ksiaz 76.08 330 eP P 05 29 07.8 +0.8
GERES GERESS Array B 76.11 328 P P 05 29 06.3 -1.0
GERES GERESS Array B 76.11 328 P P 05 29 06.3 -1.0
comp=Z,4.0nm,0.9s,baz=130,slow=5.4,SNR=17
WTTA Wattenberg 76.26 326⇓ iP P 05 29 07.0 -1.3
WTTA pmax pmax
comp=Z,33nm,1.1s
WTTA Wattenberg 76.26 326⇓ iP P 05 29 07.0 -1.3
comp=Z,33nm,1.1s
WTTA Wattenberg 76.26 326⇓ iP P 05 29 07.0 -1.3
comp=Z,33nm,1.1s
KHC Kasperske Hory 76.35 328 eP P 05 29 08.6 0.0
KHC e 05 29 17.7
KHC pmax pmax
comp=Z,16nm,1.2s
KHC Kasperske Hory 76.35 328 eP P 05 29 08.6 0.0
comp=Z,16nm,1.2s
KHC ePcP PcP 05 29 17.7 -2.7
KHC Kasperske Hory 76.35 328 eP P 05 29 07.7 -0.9
KHC ex x 05 29 16.9
PRU Pruhonice 76.39 329 eP P 05 29 08.4 -0.3
PRU MLR MLR
comp=Z,100nm,20.3s
PRU Pruhonice 76.39 329 eP P 05 29 08.4 -0.3
PRU AMS AMS 05 49 50.0
comp=Z,100nm,20.3s
MOTA Moosalm 76.60 325⇓ iP P 05 29 09.2 -1.0
MOTA pmax pmax
comp=Z,18nm,0.9s
MOTA Moosalm 76.60 325⇓ iP P 05 29 09.2 -1.0
comp=Z,18nm,0.9s
MOTA Moosalm 76.60 325⇓ iP P 05 29 09.2 -1.0
comp=Z,18nm,0.9s
FETA Feichten 76.62 325⇑ iP P 05 29 10.1 -0.2
comp=Z,18nm,1.1s
FETA Feichten 76.62 325⇑ iP P 05 29 10.1 -0.2
comp=Z,18nm,1.1s
FUORN Ofenpass-Fuorn 76.66 325 eP P 05 29 10.1 -0.6
comp=Z,19nm,1.3s
PVCC Panska Ves 76.72 330 eP P 05 29 10.9 +0.3
PVCC Panska Ves 76.72 330 eP P 05 29 10.9 +0.3
SBF Sospel 76.81 321 eP P 05 29 10.5 -0.9
SBF Sospel 76.81 321 eP P 05 29 10.5 -0.9
SBF Sospel 76.81 321 eP P 05 29 10.5 -0.9
KSAR Wonju Array Be 76.88 47 P P 05 29 11.6 -0.3
KSRS Korea Array 76.92 47 P P 05 29 11.6 -0.4
comp=Z,6.8nm,1.0s,baz=244,slow=6.4,SNR=12
KSRS LR LR 06 02 27.0
comp=Z,313nm,20.3s,baz=238,slow=35
TUE Stuetta 77.09 324 eP P 05 29 12.2 -0.8
comp=Z,11nm,1.0s
LMR La Mourre 77.11 320 eP P 05 29 12.8 -0.1
comp=Z,146nm,1.6s
LMR La Mourre 77.11 320 eP P 05 29 12.8 -0.1
LMR pmax pmax
comp=Z,146nm,1.6s
LMR La Mourre 77.11 320 eP P 05 29 12.8 -0.1
comp=Z,146nm,1.6s
BRG Berggiesshubel 77.24 330 eP P 05 29 14.6 +1.1
comp=Z,32nm,1.2s
BRG e 05 29 25.2
comp=Z,13nm,1.2s
BRG Berggiesshubel 77.24 330 eP P 05 29 14.6 +1.1
BRG e 05 29 25.2
BRG pmax pmax
comp=Z,32nm,1.3s
BRG pmax pmax
comp=Z,13nm,1.2s
DAVA Damuels 77.25 325⇑ iP P 05 29 12.2 -1.7
comp=Z,18nm,1.0s
DAVA Damuels 77.25 325⇑ iP P 05 29 12.2 -1.7
comp=Z,18nm,1.0s
CTAO Charters Tower 77.50 108 eP P 05 29 15.7 0.0
CTAO Charters Tower 77.50 108 eP P 05 29 15.7 0.0
QSPA South Pole Qui 77.58 180 eP P 05 29 15.9 +0.5
comp=Z,36nm,1.3s
NKC Novy Kostel 77.60 328 eP P 05 29 16.7 +1.1
NKC e 05 29 24.7
NKC Novy Kostel 77.60 328 eP P 05 29 16.7 +1.1
NKC ePCP PcP 05 29 24.7 -1.1
MBDF Montbardon 77.67 322 eP P 05 29 16.6 +0.3
comp=Z,17nm,0.7s
MBDF Montbardon 77.67 322 eP P 05 29 16.6 +0.3
MBDF pmax pmax
comp=Z,17nm,0.7s
MBDF Montbardon 77.67 322 eP P 05 29 16.6 +0.3
comp=Z,17nm,0.7s
CLL Collm 77.98 330⇑ iP P 05 29 18.9 +1.3
CLL pmax pmax
comp=Z,55nm,1.7s
CLL Collm 77.98 330⇑ iP P 05 29 18.9 +1.3
comp=Z,55nm,1.7s
SMRF Simiane la Rot 78.02 320 eP P 05 29 17.7 -0.4
SMRF Simiane la Rot 78.02 320 eP P 05 29 17.7 -0.4
LPG La Plagne 78.09 322 eP P 05 29 17.7 -1.1
LPG La Plagne 78.09 322 eP P 05 29 17.7 -1.1
LPG La Plagne 78.09 322 eP P 05 29 17.7 -1.1
LPL La Plagne 78.11 322 eP P 05 29 17.9 -0.9
comp=Z,22nm,1.2s
LPL La Plagne 78.11 322 eP P 05 29 17.9 -0.9
LPL pmax pmax
comp=Z,22nm,1.2s
LPL La Plagne 78.11 322 eP P 05 29 17.9 -0.9
comp=Z,22nm,1.2s
SENIN Lac Senin/Sane 78.22 323 eP P 05 29 19.3 -0.1
comp=Z,13nm,0.8s
CN2 Changchun 78.29 40 eP P 05 29 17.8 -1.7
CN2 ePP PP 05 32 17.4 +0.6
CN2 eS S 05 39 12.3 -1.8
CN2 eSS SS 05 44 18.0 +0.9
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,3.0s
ORIF Oris-en-Rattie 78.31 321 eP P 05 29 19.6 -0.2
comp=Z,24nm,1.0s
ORIF Oris-en-Rattie 78.31 321 eP P 05 29 19.6 -0.2
ORIF pmax pmax
comp=Z,24nm,1.0s
ORIF Oris-en-Rattie 78.31 321 eP P 05 29 19.6 -0.2
comp=Z,24nm,1.0s
RUE Rusdorf 78.33 331 eP P 05 29 20.8 +1.3
comp=Z,65nm,1.6s
VIVF Saint-Julien-l 79.02 321 eP P 05 29 23.7 +0.1
comp=Z,33nm,1.0s
VIVF Saint-Julien-l 79.02 321 eP P 05 29 23.7 +0.1
VIVF pmax pmax
comp=Z,33nm,1.0s
VIVF Saint-Julien-l 79.02 321 eP P 05 29 23.7 +0.1
comp=Z,33nm,1.0s
CABF La Chapelle 79.06 323 eP P 05 29 23.8 -0.1
comp=Z,19nm,1.0s
CABF La Chapelle 79.06 323 eP P 05 29 23.8 -0.1
CABF pmax pmax
comp=Z,19nm,1.0s
CABF La Chapelle 79.06 323 eP P 05 29 23.8 -0.1
comp=Z,19nm,1.0s
LASF Ste Croix 79.14 320 eP P 05 29 24.6 +0.3
comp=Z,35nm,1.2s
LASF Ste Croix 79.14 320 eP P 05 29 24.6 +0.3
comp=Z,35nm,1.2s
TMCR Tamitsa 79.19 348 eP P 05 29 23.7 -0.3
TMCR pmax pmax
comp=Z,57nm,1.4s
HINF Hinteralfeld 79.25 324 eP P 05 29 24.1 -0.7
HINF Hinteralfeld 79.25 324 eP P 05 29 24.1 -0.7
HINF Hinteralfeld 79.25 324 eP P 05 29 24.1 -0.7
SSB Saint Sauveur 79.31 321 eP P 05 29 25.4 +0.2
SSB e 05 29 33.3
SSB pmax pmax
comp=Z,17nm,1.0s
SSB Saint Sauveur 79.31 321 eP P 05 29 25.4 +0.2
comp=Z,17nm,1.0s
SSB ePcP PcP 05 29 33.3 -0.1
VNDA Vanda 79.33 167 P P 05 29 25.0 +0.3
VNDA Vanda 79.33 167 P P 05 29 25.0 +0.3
comp=Z,2.6nm,0.8s,baz=273,slow=4.2,SNR=9.0
VNDA LR LR 05 59 47.8
comp=Z,292nm,21.9s,baz=259,slow=32
CDF Champ du Feu 79.33 325 eP P 05 29 24.8 -0.5
CDF Champ du Feu 79.33 325 eP P 05 29 24.8 -0.5
CDF Champ du Feu 79.33 325 eP P 05 29 24.8 -0.5
JOF Joensuu 79.64 345 eP P 05 29 25.7 -0.8
JOF pmax pmax
comp=Z,24nm,0.7s
JOF Joensuu 79.64 345 ep P 05 29 25.7 -0.8
comp=Z,24nm,0.7s
HAU Haudompre 79.64 324 eP P 05 29 26.3 -0.6
comp=Z,18nm,0.9s
HAU Haudompre 79.64 324 eP P 05 29 26.3 -0.6
HAU pmax pmax
comp=Z,18nm,0.9s
HAU Haudompre 79.64 324 eP P 05 29 26.3 -0.6
comp=Z,18nm,0.9s
MTLF Montolieu 79.84 319 eP P 05 29 28.3 +0.2
comp=Z,54nm,1.2s
MTLF Montolieu 79.84 319 eP P 05 29 28.3 +0.2
MTLF pmax pmax
comp=Z,54nm,1.2s
MTLF Montolieu 79.84 319 eP P 05 29 28.3 +0.2
comp=Z,54nm,1.2s
FINES FINESS Array B 79.89 342 P P 05 29 27.7 -0.2
FINES FINESS Array B 79.89 342 P P 05 29 27.7 -0.2
comp=Z,9.7nm,0.8s,baz=108,slow=6.2,SNR=17
PAGF Fort de Pagny 80.29 324 eP P 05 29 30.2 -0.1
comp=Z,10nm,1.1s
PAGF Fort de Pagny 80.29 324 eP P 05 29 30.2 -0.1
comp=Z,10nm,1.1s
KAF Kangasniemi 80.35 343 eP P 05 29 28.9 -1.4
KAF pmax pmax
comp=Z,16nm,0.7s
KAF Kangasniemi 80.35 343 ep P 05 29 28.9 -1.4
comp=Z,16nm,0.7s
MDT Midelt 80.36 307 LR LR 06 04 54.9
comp=Z,431nm,19.8s,baz=232,slow=36
SMF Signal de Mont 80.42 322 eP P 05 29 30.6 -0.5
comp=Z,24nm,1.1s
SMF Signal de Mont 80.42 322 eP P 05 29 30.6 -0.5
SMF pmax pmax
comp=Z,24nm,1.1s
SMF Signal de Mont 80.42 322 eP P 05 29 30.6 -0.5
comp=Z,24nm,1.1s
MEZF Maizieres J'vi 80.64 324 eP P 05 29 32.3 +0.1
MEZF Maizieres J'vi 80.64 324 eP P 05 29 32.3 +0.1
CAF Calviac 80.68 320 eP P 05 29 32.9 +0.3
comp=Z,31nm,1.2s
CAF Calviac 80.68 320 eP P 05 29 32.9 +0.3
CAF pmax pmax
comp=Z,31nm,1.2s
CAF Calviac 80.68 320 eP P 05 29 32.9 +0.3
comp=Z,31nm,1.2s
LOR Lormes 80.71 323 eP P 05 29 32.5 -0.2
comp=Z,21nm,1.0s
LOR Lormes 80.71 323 eP P 05 29 32.5 -0.2
comp=Z,21nm,1.0s
AVF Avril sur Loir 80.78 322 eP P 05 29 32.6 -0.4
AVF Avril sur Loir 80.78 322 eP P 05 29 32.6 -0.4
AVF Avril sur Loir 80.78 322 eP P 05 29 32.6 -0.4
SSF Saint Saulge 80.82 322 eP P 05 29 33.1 -0.2
comp=Z,34nm,1.1s
SSF Saint Saulge 80.82 322 eP P 05 29 33.1 -0.2
SSF pmax pmax
comp=Z,34nm,1.1s
SSF Saint Saulge 80.82 322 eP P 05 29 33.1 -0.2
comp=Z,34nm,1.1s
EPF Esparros 80.92 318 eP P 05 29 33.9 0.0
comp=Z,10nm,0.9s
EPF Esparros 80.92 318 eP P 05 29 33.9 0.0
EPF pmax pmax
comp=Z,10.0nm,0.9s
EPF Esparros 80.92 318 eP P 05 29 33.9 0.0
comp=Z,10nm,0.9s
BGF Bois d'Agland 80.97 322 eP P 05 29 34.5 +0.4
comp=Z,89nm,1.3s
BGF Bois d'Agland 80.97 322 eP P 05 29 34.5 +0.4
BGF pmax pmax
comp=Z,89nm,1.3s
BGF Bois d'Agland 80.97 322 eP P 05 29 34.5 +0.4
comp=Z,89nm,1.3s
RJF Les Rejaudoux 81.20 320 eP P 05 29 35.7 +0.4
comp=Z,50nm,1.1s
RJF Les Rejaudoux 81.20 320 eP P 05 29 35.7 +0.4
RJF pmax pmax
comp=Z,50nm,1.1s
RJF Les Rejaudoux 81.20 320 eP P 05 29 35.7 +0.4
comp=Z,50nm,1.1s
TCF Toulx Ste Croi 81.23 321 eP P 05 29 35.6 +0.1
comp=Z,9.3nm,0.9s
TCF Toulx Ste Croi 81.23 321 eP P 05 29 35.6 +0.1
TCF pmax pmax
comp=Z,9.0nm,0.9s
TCF Toulx Ste Croi 81.23 321 eP P 05 29 35.6 +0.1
comp=Z,9.3nm,0.9s
MDJ Mudanjiang 81.29 41 P P 05 29 35.9 +0.1
MDJ pP pP 05 29 39.8 -1.4
MDJ PP PP 05 32 40.3 -1.5
MDJ S S 05 39 46.0 +0.1
MDJ SS SS 05 45 06.8 +4.7
MDJ pmax pmax
comp=Z,12nm,1.1s
MDJ pmax pmax
comp=Z,120nm,5.3s
MDJ LR LR
comp=N,130nm,38.0s
MDJ LR LR
comp=E,76nm,38.0s
MDJ LR LR
comp=Z,190nm,21.5s
ETSF Etsaut 81.45 317 eP P 05 29 37.3 +0.5
comp=Z,23nm,1.0s
ETSF Etsaut 81.45 317 eP P 05 29 37.3 +0.5
ETSF pmax pmax
comp=Z,23nm,1.0s
ETSF Etsaut 81.45 317 eP P 05 29 37.3 +0.5
comp=Z,23nm,1.0s
BCLA Clavier 81.49 326 P P 05 29 37.8 +1.0
comp=Z,10.0nm,1.3s
LFF La Frestale 81.52 320 eP P 05 29 37.4 +0.4
comp=Z,55nm,1.1s
LFF La Frestale 81.52 320 eP P 05 29 37.4 +0.4
LFF pmax pmax
comp=Z,55nm,1.1s
LFF La Frestale 81.52 320 eP P 05 29 37.4 +0.4
comp=Z,55nm,1.1s
GIVF Givet 81.59 326 eP P 05 29 37.5 +0.2
comp=Z,63nm,1.2s
GIVF Givet 81.59 326 eP P 05 29 37.5 +0.2
GIVF pmax pmax
comp=Z,63nm,1.2s
GIVF Givet 81.59 326 eP P 05 29 37.5 +0.2
comp=Z,63nm,1.2s
BAIF Baives 81.91 325 eP P 05 29 39.4 +0.5
comp=Z,100nm,1.4s
BAIF Baives 81.91 325 eP P 05 29 39.4 +0.5
BAIF pmax pmax
comp=Z,100nm,1.4s
BAIF Baives 81.91 325 eP P 05 29 39.4 +0.5
comp=Z,100nm,1.4s
SJPF Ste Jean 81.99 317 eP P 05 29 40.0 +0.5
comp=Z,50nm,1.2s
SJPF Ste Jean 81.99 317 eP P 05 29 40.0 +0.5
SJPF pmax pmax
comp=Z,50nm,1.2s
SJPF Ste Jean 81.99 317 eP P 05 29 40.0 +0.5
comp=Z,50nm,1.2s
VLA Vladivostok 82.13 43⇑ eP P 05 29 38.9 -1.4
VLA e 05 29 43.9
VLA pmax pmax
comp=Z,33nm,0.9s
ESDC Sonseca Array 82.46 313 P P 05 29 42.3 +0.1
ESDC Sonseca Array 82.46 313 P P 05 29 42.3 +0.1
comp=Z,4.7nm,0.8s,baz=102,slow=4.3,SNR=19
USRK Ussuriysk Arra 82.66 42 P P 05 29 42.0 -0.9
comp=Z,3.4nm,0.8s,baz=205,slow=3.2,SNR=6.1
USRK LR LR 06 06 03.2
comp=Z,183nm,19.7s,baz=61,slow=35
PAB San Pablo 82.69 313 eP P 05 29 43.6 +0.2
PAB pmax pmax
comp=Z,16nm,1.1s
PAB San Pablo 82.69 313 eP P 05 29 43.6 +0.2
comp=Z,16nm,1.1s
MFF Saint Martin d 82.82 321 eP P 05 29 43.9 +0.1
comp=Z,39nm,1.3s
MFF Saint Martin d 82.82 321 eP P 05 29 43.9 +0.1
MFF pmax pmax
comp=Z,39nm,1.3s
MFF Saint Martin d 82.82 321 eP P 05 29 43.9 +0.1
comp=Z,39nm,1.3s
LDF La Druitiere 83.70 323 eP P 05 29 48.2 -0.1
comp=Z,46nm,1.1s
LDF La Druitiere 83.70 323 eP P 05 29 48.2 -0.1
LDF pmax pmax
comp=Z,46nm,1.1s
LDF La Druitiere 83.70 323 eP P 05 29 48.2 -0.1
comp=Z,46nm,1.1s
FLN La Foliniere 83.99 323 eP P 05 29 49.8 +0.1
comp=Z,44nm,1.2s
FLN La Foliniere 83.99 323 eP P 05 29 49.8 +0.1
FLN pmax pmax
comp=Z,44nm,1.2s
FLN La Foliniere 83.99 323 eP P 05 29 49.8 +0.1
comp=Z,44nm,1.2s
GRR Gorron 84.05 322 eP P 05 29 50.0 0.0
comp=Z,41nm,1.3s
GRR Gorron 84.05 322 eP P 05 29 50.0 0.0
GRR pmax pmax
comp=Z,41nm,1.3s
GRR Gorron 84.05 322 eP P 05 29 50.0 0.0
comp=Z,41nm,1.3s
MAT Matsushiro 84.10 51 P P 05 29 50.3 -0.3
MAT S S 05 40 17.6 +2.7
MJAR Matsushiro Arr 84.10 51 P P 05 29 50.9 +0.3
MJAR Matsushiro Arr 84.10 51 P P 05 29 50.9 +0.3
comp=Z,5.6nm,0.8s,baz=246,slow=5.8,SNR=16
MJAR LR LR 06 05 20.9
comp=Z,146nm,20.9s,baz=295,slow=34
NB2 NORSAR Subarra 84.74 337 P P 05 29 53.1 -0.3
comp=Z,12nm,1.2s,baz=127,slow=5.1
NOA NORSAR Array B 84.74 337 P P 05 29 53.2 -0.1
NOA NORSAR Array B 84.74 337 P P 05 29 53.2 -0.1
comp=Z,4.3nm,0.8s,baz=117,slow=5.0,SNR=8.5
EVO Evora 84.97 311 eP P 05 29 54.7 -0.3
comp=Z,122nm,1.7s
EVO eR
comp=Z,258nm,19.0s
EVOP Sao Brissos 85.06 311 eP P 05 29 54.7 -0.7
EVOP pmax pmax
comp=Z,122nm,1.7s
EVOP Sao Brissos 85.06 311 eP P 05 29 54.7 -0.7
comp=Z,122nm,1.7s
BBTS Babate 85.33 286 LR LR 06 06 26.7
comp=Z,284nm,18.6s,baz=107,slow=35
HABR Khabarovsk 86.34 39 eP P 05 29 59.1 -2.4
HABR ePPP PPP 05 35 13.3
HABR e 05 40 39.6
HABR eSS SS 05 46 12.5 -4.1
HABR eSSS SSS 05 49 43.8
HABR pmax pmax
comp=N,99nm,1.5s
HABR pmax pmax
comp=Z,156nm,1.5s
HABR pmax pmax
comp=E,89nm,1.5s
HABR MLR MLR
comp=Z,595nm,17.0s
ARCES ARCESS Array B 86.38 347 P P 05 30 01.6 +0.3
ARCES ARCESS Array B 86.38 347 P P 05 30 01.6 +0.3
comp=Z,18nm,0.8s,baz=133,slow=5.3,SNR=30
ARCES LR LR 06 08 12.9
comp=Z,85nm,21.2s,baz=239,slow=35
YUK Yuzh-Kuril'sk 91.96 45 P P 05 30 28.9 +0.7
YUK S SKSac 05 40 59.5 -1.1
YUK MLR MLR
comp=N,530nm,20.0s
YUK MLR MLR
comp=E,367nm,20.0s
YUK MLR MLR
comp=Z,393nm,20.0s
DZM Mont Dzumac 95.51 114 eLR LR 06 01 35.1
comp=Z,392nm,25.6s
JMIC Jan Mayen 96.51 342 LR LR 06 16 02.4
comp=Z,105nm,19.4s,baz=279,slow=36
BILL Bilibino 105.63 23 eP Pdif 05 31 30.3 +1.0
BILL e 05 42 51.0
BILL ePS PS 05 45 09.7 +1.7
BILL eSS SS 05 50 48.2 -0.6
BILL pmax pmax
comp=Z,3.0nm,0.7s
ILAR Eielson Array 123.28 16 PKP PKPdf 05 36 15.1 -0.9
ILAR Eielson Array 123.28 16 PKP PKPdf 05 36 15.1 -0.9
comp=Z,2.5nm,1.0s,baz=308,slow=2.7,SNR=19

LPAZ	La Paz	125.73	239	*e*PKPdf	PKPdf	05	36	20.4	-2.6
LPAZ				PKP	PKPdf	05	36	20.5	-2.4
LPAZ	La Paz	125.73	239	PKP	PKPdf	05	36	20.5	-2.4
	comp=Z,3.4nm,0.3s,baz=183,slow=3.6,SNR=44								
YKA	Yellowknife Ar	130.07	360	PKP	PKPdf	05	36	28.4	-0.6
YKA				PP	PP	05	38	39.1	-1.7
YKA	Yellowknife Ar	130.07	360	PKP	PKPdf	05	36	28.4	-0.6
	comp=Z,2.2nm,0.8s,baz=352,slow=2.3,SNR=25								
YKA				PP	PP	05	38	39.1	-1.7
	comp=Z,0.7nm,0.9s,baz=1.2,slow=7.1,SNR=6.8								
PPT2	Papeete2	134.46	130	*e*LR	LR	06	19	37.0	
	comp=Z,103nm,25.2s								
ROSC	El Rosal	139.35	263	PKP	PKPdf	05	36	48.7	+0.4
ROSC	El Rosal	139.35	263	PKP	PKPdf	05	36	48.7	+0.4
	comp=Z,3.1nm,0.7s,baz=323,slow=3.7,SNR=5.6								
RKT	Rikitea	139.46	151	*e*T	T	08	11	51.9	
	comp=Z,1.6nm,0.2s								
OTAV	Otavalo	141.98	254	*e*PKPdf	PKPdf	05	36	53.2	+0.1
DGMT	Dagmar	143.06	348	*e*PKPdf	PKPbc	05	36	51.8	+1.5
DGMT	Dagmar	143.06	348	⇑PKPdf	PKPbc	05	36	51.8	+1.5
	baz=143								
SFIN	Scholer Farm	143.07	324	⇓PKPdf	PKPbc	05	36	51.9	+1.3
	baz=143								
B22A	Reddig Ranch S	143.56	350	⇓PKPdf	PKPbc	05	36	52.9	+1.2
	baz=143								
A15A	Johnson Ranch,	143.58	358	⇑PKPdf	PKPbc	05	36	52.8	+1.0
	baz=143								
B21A	Ellsworth Farm	143.59	351	⇓PKPdf	PKPbc	05	36	52.8	+1.0
	baz=143								
A14A	Double T Ranch	143.61	358	⇑PKPdf	PKPbc	05	36	53.0	+1.0
	baz=144								
A13A	Flathead Natio	143.66	360	⇓PKPdf	PKPbc	05	36	53.3	+1.2
	baz=144								
B19A	Brinkman Farms	143.82	353	⇓PKPdf	PKPbc	05	36	53.7	+1.2
	baz=144								
C23A	Lambert	143.89	349	⇓PKPdf	PKPbc	05	36	53.8	+1.1
	baz=144								
B18A	Beardsley Farm	143.96	354	⇓PKPdf	PKPbc	05	36	53.9	+0.9
	baz=144								
C22A	Vida	144.07	350	⇓PKPdf	PKPbc	05	36	54.0	+0.8
	baz=144								
B16A	M & M Farms, S	144.09	357	⇑PKPdf	PKPbc	05	36	54.0	+0.6
	baz=144								
B12A	Libby	144.12	1	⇑PKPdf	PKPbc	05	36	54.2	+0.8
	baz=144								
B17A	L&G Farms, Che	144.15	355	⇓PKPdf	PKPbc	05	36	54.2	+0.7
	baz=144								
C21A	Desert Coulee	144.19	351	⇑PKPdf	PKPbc	05	36	54.6	+0.9
	baz=144								
B14A	Marquette Ranc	144.22	358	⇑PKPdf	PKPbc	05	36	54.4	+0.6
	baz=144								
B13A	Whitefish	144.22	360	⇓PKPdf	PKPdf	05	36	54.7	-0.9
	baz=144								
B15A	Bradely Ranch,	144.24	357	⇑PKPdf	PKPbc	05	36	54.5	+0.6
	baz=144								
NEW	Newport	144.28	3	⇓PKPdf	PKPbc	05	36	54.7	+0.7
	baz=144								
EGMT	Eagleton	144.33	354	⇓PKPdf	PKPbc	05	36	54.7	+0.6
	baz=144								
D24A	Glendive	144.38	348	⇑PKPdf	PKPdf	05	36	55.1	-0.8
	baz=144								
C20A	Veseth Ranch,	144.43	352	⇓PKPdf	PKPbc	05	36	55.1	+0.6
	baz=144								
D23A	Lindsay	144.50	349	⇑PKPdf	PKPbc	05	36	55.3	+0.7
	baz=144								
C19A	Slack Wire Ran	144.54	353	⇓PKPdf	PKPbc	05	36	55.4	+0.6
	baz=144								
BLMT	Blacktail Moun	144.59	360	*e*PKPdf	PKPdf	05	36	55.9	-0.6
D22A	Cohagen	144.70	350	⇓PKPdf	PKPbc	05	36	55.4	+0.2
	baz=145								
C11A	Tepee Creek (N	144.74	2	⇓PKPdf	PKPbc	05	36	55.6	+0.2
	baz=145								
BSMT	Bassoo Peak	144.75	0	*e*PKPdf	PKPbc	05	36	55.6	0.0
C15A	Salmond Ranch,	144.78	357	⇑PKPdf	PKPab	05	36	55.6	0.0
	baz=145								
C17A	Wharram Farm,	144.81	355	⇑PKPdf	PKPab	05	36	55.6	0.0
	baz=145								
C14A	Swan Lake	144.82	359	⇓PKPdf	PKPab	05	36	55.6	0.0
	baz=145								
C12B	Naegeli Ranch,	144.88	1	⇓PKPdf	PKPbc	05	36	56.1	+0.2
	baz=145								
E24A	Baker	144.91	347	⇑PKPdf	PKPbc	05	36	56.3	+0.3
	baz=145								
D21A	La Casta Ranch	144.92	351	⇓PKPdf	PKPbc	05	36	56.0	0.0
	baz=145								
C13A	Hot Springs	144.92	360	⇑PKPdf	PKPab	05	36	55.9	-0.1
	baz=145								
OD2	Odessa Site #2	145.05	5	P	PKPab	05	36	56.5	+0.1
D20A	Manuel Ranch,	145.06	352	⇑PKPdf	PKPbc	05	36	56.4	-0.1
	baz=145								
D19A	Cripps Ranch,	145.08	353	⇑PKPdf	PKPbc	05	36	56.5	-0.1
	baz=145								
SWMT	Swartz Lake	145.08	359	*e*PKPdf	PKPab	05	36	56.9	+0.3
D18A	Linhart Farms,	145.15	354	⇑PKPdf	PKPbc	05	36	56.7	-0.1
	baz=145								
ECSD	EROS Data Cent	145.16	337	*e*PKPbc	PKPbc	05	36	56.3	-0.5
E23A	Ismay	145.17	349	⇓PKPdf	PKPbc	05	36	56.8	0.0
	baz=145								
SCIA	State Center	145.19	331	*e*PKPbc	PKPab	05	36	57.1	+0.1
D17A	Six Diamond Ra	145.28	355	⇑PKPdf	PKPbc	05	36	57.2	-0.1
	baz=145								
LON	Longmire	145.34	9	*e*PKIKP	PKPdf	05	36	57.7	+0.1
LON	Longmire	145.34	9	*e*PKPbc	PKPdf	05	36	57.7	+0.1
SLMT	Seeley Lake	145.34	358	*e*PKPbc	PKPab	05	36	57.6	0.0
E22A	Miles City	145.35	349	⇑PKPdf	PKPbc	05	36	57.3	-0.1
	baz=145								
BMW	Boistfort Moun	145.38	10	PKIKP	PKPdf	05	36	58.3	+0.6
BMW	Boistfort Moun	145.38	10	P	PKPdf	05	36	58.3	+0.6
BRSD	Miller	145.39	340	⇑PKPdf	PKPbc	05	36	57.4	-0.1
	baz=145								
WPW	White Pass	145.43	8	P	PKPab	05	36	58.3	+0.4
E21A	Keefer Ranch,	145.44	351	⇓PKPdf	PKPdf	05	36	57.8	0.0
	baz=145								
D16A	Dana Ranch, Ca	145.46	356	⇑PKPdf	PKPbc	05	36	57.7	-0.1
	baz=145								
SWET	Sewanee	145.47	316	*e*PKPbc	PKPbc	05	36	57.9	-0.2
D14A	Greenough	145.50	358	⇑PKPdf	PKPdf	05	36	57.6	-0.4
	baz=145								
D13A	Huson	145.50	360	⇓PKPab	PKPdf	05	36	57.7	-0.2
	baz=145								
D15A	Lincoln	145.50	357	⇓PKPab	PKPdf	05	36	57.8	-0.2
	baz=145								
D12A	Red Ives Fores	145.54	1	⇓PKPab	PKPdf	05	36	57.9	-0.1
	baz=145								
F24A	Ekalaka	145.62	347	⇑PKPab	PKPab	05	36	58.5	-0.1
	baz=146								
E20A	Meyer Farm, Mu	145.63	352	⇑PKPab	PKPbc	05	36	58.5	+0.1
	baz=146								
TIGA	Tifton	145.66	308	⇓PKPab	PKPdf	05	36	58.5	0.0
	baz=146								
CHMT	Chamberlain Mo	145.66	358	*e*PKPdf	PKPbc	05	36	58.6	0.0
TDL	Tradedollar La	145.67	9	P	PKPab	05	36	59.0	+0.2
E19A	Rath Farm, Rou	145.76	353	⇑PKPab	PKPab	05	36	59.0	-0.2
	baz=146								
MSO	Missoula	145.76	359	*e*PKPdf	PKPbc	05	36	58.6	-0.2
MSO	Missoula	145.76	359	⇓PKPab	PKPbc	05	36	59.0	+0.2
	baz=146								
E18A	Harlowton	145.79	354	⇓PKPab	PKPbc	05	36	59.0	+0.1
	baz=146								
HRY	Holter Researc	145.80	356	*e*PKPdf	PKPbc	05	36	59.0	+0.1
F23A	Volborg	145.93	348	⇑PKPab	PKPbc	05	36	59.3	0.0
	baz=146								
ASR	Mount Adams--S	145.95	8	P	PKPab	05	36	59.7	-0.2
E16A	East Helena	145.97	356	⇑PKPab	PKPab	05	36	59.7	-0.2
	baz=146								
HAWA	Hanford	145.97	6	*e*PKPdf	PKPbc	05	36	59.4	+0.1
E17A	Martinsdale	145.98	355	⇓PKPab	PKPab	05	36	59.9	-0.1
	baz=146								
F22A	Rosebud	146.04	349	⇓PKPab	PKPab	05	36	59.9	-0.2
	baz=146								
G24A	Alzada	146.10	347	⇓PKPab	PKPbc	05	36	60.0	+0.1
	baz=146								
E15A	Deer Lodge	146.13	357	⇑PKPab	PKPbc	05	37	00.2	+0.3
	baz=146								
F21A	Absaloka Mine,	146.15	350	⇓PKPab	PKPbc	05	37	00.3	+0.3
	baz=146								
E13A	Victor	146.15	359	⇓PKPab	PKPbc	05	37	00.3	+0.3
	baz=146								
E14A	Clinton	146.17	358	⇓PKPab	PKPbc	05	37	00.4	+0.3
	baz=146								
F20A	Billings	146.32	352	⇑PKPab	PKPbc	05	37	00.9	+0.3
	baz=146								
F19A	Roth Farm, Mol	146.38	353	⇑PKPab	PKPbc	05	37	01.0	+0.3
	baz=146								
F18A	Big Timber	146.42	354	⇓PKPab	PKPbc	05	37	01.0	+0.2
	baz=146								
G23A	Biddle	146.43	348	⇑PKPab	PKPbc	05	37	00.8	-0.1
	baz=146								
F17A	Fitzpatrick Pl	146.51	355	⇑PKPab	PKPbc	05	37	01.2	+0.1
	baz=146								
GCMT	Greycliff	146.53	354	*e*PKPbc	PKPab	05	37	02.0	-0.1
G22A	Birney	146.59	349	⇓PKPab	PKPbc	05	37	01.5	+0.1
	baz=146								
LCCM	Lewis and Clar	146.67	356	P	PKPab	05	37	02.5	-0.2
H24A	Dirks Ranch, A	146.68	347	⇑PKPab	PKPbc	05	37	01.4	-0.2
	baz=146								
F15A	Butte	146.70	357	⇑PKPab	PKPbc	05	37	01.8	0.0
	baz=146								
F16A	Kennard Place,	146.71	356	⇓PKPab	PKPbc	05	37	02.0	+0.3
	baz=147								
LRM	Limekiln Ridge	146.72	357	*e*PKPbc	PKPab	05	37	02.6	-0.4
G21A	Lodge Grass	146.74	350	⇓PKPab	PKPbc	05	37	02.0	+0.2
	baz=147								
F14A	Wisdom	146.77	358	⇑PKPab	PKPbc	05	37	02.2	+0.3
	baz=147								
F13A	Darby	146.81	359	⇑PKPab	PKPbc	05	37	02.3	+0.3
	baz=147								
BOZ	Bozeman (W)	146.84	356	*e*PKP2	PKPdf	05	37	00.9	+0.6
BOZ	Bozeman (W)	146.84	356	*e*PKPdf	PKPdf	05	37	00.9	+0.6
BOZ				*e*PKPbc	PKPab	05	37	03.4	0.0
RLMT	Red Lodge	147.14	353	*e*PKPbc	PKPbc	05	37	03.6	+0.6
DLMT	Dillon	147.19	357	*e*PKPdf	PKPdf	05	37	01.2	+0.3
DLMT				*e*PKPbc	PKPbc	05	37	03.3	+0.2
LRAL	Lakeview Retre	147.40	313	*e*PKPdf	PKPdf	05	37	02.2	+0.8
QLMT	Earthquake Lak	147.64	356	*e*PKPdf	PKPdf	05	37	02.5	+0.7
QLMT				*e*PKPbc	PKiKP	05	37	05.5	-1.0
BMO	Blue Mountains	147.68	3	*e*PKIKP	PKPdf	05	37	02.1	+0.5
BMO				*e*		05	37	04.7	
BMO	Blue Mountains	147.68	3	*e*PKPdf	PKPdf	05	37	02.1	+0.5
BMO				*e*PKPbc	PKPbc	05	37	04.7	+0.3
VIPM	Ingram Point	147.70	8	PKP2	PKPbc	05	37	03.5	-1.1
VIPM	Ingram Point	147.70	8	P	PKPbc	05	37	03.5	-1.1
MCMT	McKenzie Canyo	147.73	357	*e*PKPbc	PKPbc	05	37	05.7	+1.0
LKWY	Lake	147.81	354	*e*PKP2	PKPbc	05	37	05.4	+0.4
LKWY	Lake	147.81	354	*e*PKPdf	PKPbc	05	37	05.3	+0.4
OXF	Oxford	148.20	318	*e*PKIKP	PKPdf	05	37	03.3	+0.6
OXF	Oxford	148.20	318	*e*PKPdf	PKPdf	05	37	03.3	+0.6
IMW	Indian Meadow	148.53	355	*e*PKPbc	PKPab	05	37	08.6	-1.6
J21A	Lysite	148.61	350	⇑PKiKP	PKPbc	05	37	07.5	+0.5
	baz=148								
KEBM	Edson Butte	148.61	14	*e*PKPbc	PKPbc	05	37	08.5	+1.6
MOOW	Moose Ponds	148.66	354	*e*PKPbc	PKPbc	05	37	08.6	+1.4
K24A	Anderson Ranch	148.66	346	⇑PKiKP	PKPbc	05	37	07.8	+0.7
	baz=148								
I13A	Wildhorse Cree	148.68	359	⇓PKiKP	PKiKP	05	37	08.2	-0.5
	baz=148								
J20A	Shoshoni	148.71	351	⇑PKiKP	PKiKP	05	37	08.1	-0.6
	baz=149								
LOHW	Long Hollow	148.78	354	*e*PKPdf	PKPdf	05	37	05.1	+1.4
LOHW				*e*PKPbc	PKiKP	05	37	08.5	-0.5
I12A	Atlanta	148.80	1	⇓PKiKP	PKiKP	05	37	08.5	-0.5
	baz=149								
K23A	Bowen Ranch, D	148.82	347	⇓PKiKP	PKPbc	05	37	08.2	+0.6
	baz=149								
L26A	Unerwood Farm	148.85	343	⇓PKiKP	PKiKP	05	37	08.4	-0.6
	baz=149								
DCID1	Drake Creek	148.85	355	*e*PKPdf	PKPdf	05	37	03.6	-0.2
TPAW	Teton Pass	148.93	355	*e*PKPdf	PKPdf	05	37	04.4	+0.4
TPAW				*e*PKPbc	PKiKP	05	37	09.4	+0.1
J19A	Crowheart	148.94	352	⇑PKiKP	PKiKP	05	37	08.6	-0.7
	baz=149								
SNOW	Snow King Moun	148.94	354	*e*PKPdf	PKPdf	05	37	05.6	+1.6
SNOW				*e*PKPbc	PKiKP	05	37	09.1	-0.2
L25A	Engebretsen Ra	148.98	344	⇓PKiKP	PKiKP	05	37	08.7	-0.6
	baz=149								
KSU1	Kansas State U	148.98	332	*e*PKPdf	PKPdf	05	37	04.3	+0.5
KSU1				*e*PKPbc	PKPbc	05	37	07.4	-0.5
KSU1				*e*PKPab	PKPab	05	37	12.2	+0.3
HLID	Hailey	149.04	359	*e*PKPbc	PKPbc	05	37	09.8	+1.7
HLID	Hailey	149.04	359	⇑PKiKP	PKiKP	05	37	08.8	-0.7
	baz=149								
J17A	Brown Place, J	149.04	354	⇓PKiKP	PKiKP	05	37	09.0	-0.4
	baz=149								
K22A	Casper	149.11	348	⇓PKiKP	PKPbc	05	37	08.7	+0.4
	baz=149								
RRI2	Red Ridge	149.11	355	*e*PKPbc	PKPab	05	37	10.8	-1.8
J18A	Kendall Valley	149.11	353	⇑PKiKP	PKPbc	05	37	08.9	+0.5
	baz=149								
J15A	Blackfoot	149.13	357	⇑PKiKP	PKiKP	05	37	09.3	-0.3
	baz=149								
HUMO	Hull Mountain	149.16	12	*e*PKPbc	PKPbc	05	37	09.3	+1.1
MFID	Camas Ranch	149.17	1	*e*PKPdf	PKPdf	05	37	05.8	+1.7
MFID				*e*PKPbc	PKiKP	05	37	09.5	-0.1
MFID	Camas Ranch	149.17	1	⇑PKiKP	PKiKP	05	37	09.3	-0.3
	baz=149								
J13A	Cove Ranch, Pi	149.20	359	⇑PKiKP	PKiKP	05	37	09.5	-0.2
	baz=149								
J14A	Carey	149.26	358	⇓PKiKP	PKiKP	05	37	09.6	-0.3
	baz=149								
K21A	Alcova	149.26	349	⇓PKiKP	PKPbc	05	37	09.2	+0.5
	baz=149								
L24A	Wheatland	149.33	346	⇑PKiKP	PKiKP	05	37	09.6	-0.4
	baz=149								
K19A	Absolon Red Bu	149.34	351	⇓PKiKP	PKPbc	05	37	09.2	+0.3
	baz=149								
M26A	McRoberts Ranc	149.39	343	⇓PKiKP	PKiKP	05	37	09.6	-0.5
	baz=149								
K20A	Yellowstone Ra	149.43	351	⇑PKiKP	PKPbc	05	37	09.4	+0.3
	baz=149								
L23A	Garrett	149.44	347	⇓PKiKP	PKPbc	05	37	09.7	+0.5
	baz=149								
BW06	Boulder Array	149.50	352	⇓PKiKP	PKPbc	05	37	09.8	+0.4
	baz=149								
PDAR	Pinedale Array	149.50	352	PKP	PKPdf	05	37	05.2	+0.4
PDAR				PKPbc	PKPbc	05	37	09.4	+0.1
PDAR	Pinedale Array	149.50	352	PKP	PKPdf	05	37	05.2	+0.4
	comp=Z,10nm,0.8s,baz=207,slow=1.7,SNR=17								
PDAR				PKPbc	PKPbc	05	37	09.4	+0.1
	comp=Z,12nm,0.9s,baz=77,slow=1.9,SNR=50								
K16A	Soda Springs	149.64	355	⇓PKiKP	PKiKP	05	37	10.7	0.0
	baz=150								
K17A	Gardner Place,	149.66	354	⇓PKiKP	PKiKP	05	37	10.7	-0.1
	baz=150								
M25A	Palm-Egli Farm	149.68	344	⇑PKiKP	PKiKP	05	37	10.7	0.0
	baz=150								
K18A	Toltan Ranch,	149.68	353	⇓PKiKP	PKiKP	05	37	10.6	-0.2
	baz=150								
L22A	Ellis Ranch, M	149.68	348	⇓PKiKP	PKiKP	05	37	10.8	0.0
	baz=150								
N27A	Anderson Farm,	149.81	341	⇑PKiKP	PKiKP	05	37	10.7	-0.3
	baz=150								
M24A	Cheyenne	149.85	345	⇓PKiKP	PKiKP	05	37	10.9	-0.3
	baz=150								
K15A	Arbon	149.85	357	⇓PKiKP	PKiKP	05	37	10.9	-0.2
	baz=150								
UALR	University of	149.90	321	*e*PKPbc	PKPbc	05	37	10.1	-0.1
L21A	Rawlins	149.93	349	⇑PKiKP	PKiKP	05	37	11.0	-0.3
	baz=150								
WVOR	Wild Horse Val	149.98	6	*e*PKP2	PKPbc	05	37	11.6	+1.2
WVOR	Wild Horse Val	149.98	6	*e*PKPbc	PKPbc	05	37	11.6	+1.2
K14A	Jones Ranch, D	150.02	358	⇓PKiKP	PKiKP	05	37	11.4	0.0
	baz=150								
YBH	Yreka Blue Hor	150.05	12	*e*PKPdf	PKPdf	05	37	06.7	+1.1
YBH				*e*PKPbc	PKiKP	05	37	11.9	+0.4
YBH				*e*PKPab	PKPab	05	37	16.7	+0.4
L20A	Wamsutter	150.06	350	⇓PKiKP	PKPbc	05	37	10.8	+0.1
	baz=150								
M23A	Laramie	150.06	346	⇑PKiKP	PKPbc	05	37	10.9	+0.2
	baz=150								
L19A	Farson	150.12	352	⇓PKiKP	PKPbc	05	37	10.6	-0.3
	baz=150								
PHWY	Pilot Hill	150.16	346	*e*PKPbc	PKPbc	05	37	11.6	+0.5
PHWY				*e*PKPab	PKPab	05	37	17.6	+0.6
M21A	Separation Pea	150.28	349	⇑PKiKP	PKPbc	05	37	11.4	0.0
	baz=150								
MOD	Modoc	150.30	8	*e*PKPdf	PKPdf	05	37	07.2	+1.1
MOD				*e*PKPbc	PKiKP	05	37	12.9	+0.8
MOD				*e*PKPab	PKPab	05	37	18.4	+1.1
M22A	Cedar Creek Ra	150.32	348	⇓PKiKP	PKPbc	05	37	11.3	-0.1
	baz=150								
O27A	Beecher Island	150.35	341	⇑PKiKP	PKPbc	05	37	10.9	-0.5
	baz=150								
L18A	Fontenelle, Gr	150.38	353	⇑PKiKP	PKPbc	05	37	11.6	+0.1
	baz=150								
N24A	Carr	150.46	345	⇑PKiKP	PKPbc	05	37	11.7	0.0
	baz=150								
L15A	Malad City	150.52	356	⇑PKiKP	PKPbc	05	37	11.9	+0.1
	baz=150								
L14A	Malta	150.53	358	⇑PKiKP	PKPbc	05	37	11.7	0.0
	baz=150								
M20A	Sweetwater, Wa	150.54	350	⇓PKiKP	PKPbc	05	37	12.0	+0.1
	baz=150								
N23A	Red Feather La	150.66	346	⇑PKiKP	PKPbc	05	37	12.4	+0.1
	baz=150								
M19A	Rock Springs	150.68	351	⇓PKiKP	PKPbc	05	37	12.4	+0.2
	baz=150								
HVU	Hansel Valley	150.77	357	*e*PKIKP	PKPdf	05	37	06.5	-0.3
HVU				*e*		05	37	12.4	
HVU	Hansel Valley	150.77	357	*e*PKPdf	PKPdf	05	37	06.5	-0.3
HVU				*e*PKPbc	PKPbc	05	37	12.4	0.0
HVU				*e*PKPab	PKPab	05	37	20.8	+1.5
MIAR	Mount Ida	150.80	322	*e*PKIKP	PKPdf	05	37	07.7	+0.8
MIAR				*e*		05	37	14.2	
MIAR	Mount Ida	150.80	322	*e*PKPdf	PKPdf	05	37	07.7	+0.8
MIAR				*e*PKPbc	PKiKP	05	37	14.2	+1.1
MIAR				*e*PKPab	PKPab	05	37	20.4	+1.0
HWUT	Hardware Ranch	150.86	355	*e*PKPdf	PKPdf	05	37	06.2	-0.8
HWUT				*e*PKPbc	PKPbc	05	37	12.8	+0.2
HWUT				*e*PKPab	PKPab	05	37	21.3	+1.6
N22A	Wattenberg Ran	150.86	347	⇑PKiKP	PKPbc	05	37	13.0	+0.2
	baz=151								
M18A	Lyman	150.88	353	⇑PKiKP	PKPbc	05	37	12.5	-0.2
	baz=151								
M17A	Scullys Gap (B	150.90	354	⇓PKiKP	PKPbc	05	37	12.4	-0.3
	baz=151								
TUL1	Tulsa	151.07	327	⇓PKiKP	PKPbc	05	37	12.9	-0.1
	baz=151								
N21A	Black Mountain	151.12	349	⇓PKiKP	PKPbc	05	37	13.6	+0.3
	baz=151								
M16A	Huntsville	151.15	355	⇓PKiKP	PKiKP	05	37	13.6	-0.2
	baz=151								
O24A	Longmont	151.18	344	⇑PKiKP	PKiKP	05	37	13.8	-0.1
	baz=151								
N20A	Spence Gulch,	151.19	350	⇓PKiKP	PKiKP	05	37	13.9	-0.1
	baz=151								
WDC	Whiskeytown Da	151.19	12	*e*PKIKP	PKPdf	05	37	07.4	+0.1
WDC				*e*		05	37	13.4	
WDC	Whiskeytown Da	151.19	12	*e*PKPdf	PKPdf	05	37	07.4	+0.1
WDC				*e*PKPbc	PKPbc	05	37	13.4	+0.2
WDC				*e*PKPab	PKPab	05	37	21.6	+0.7
P26A	Davis Ranch, A	151.20	341	⇓PKiKP	PKiKP	05	37	13.8	-0.2
	baz=151								
N18A	Larsen Ranch,	151.27	352	⇑PKiKP	PKPbc	05	37	13.8	+0.2
	baz=151								
N19A	John Jarvie Ra	151.28	351	⇑PKiKP	PKPbc	05	37	13.8	+0.2
	baz=151								
O23A	Lake Granby, G	151.30	346

S23A	Nye Farm, Mont	153.69	344	⇓PKPab	PKPab	05 37 31.9	+0.1
	baz=154						
W31A	Holland Ranch,	153.71	332	⇑PKiKP	PKiKP	05 37 19.2	+0.1
	baz=154						
T25A	Trinidad	153.75	341	⇓PKiKP	PKiKP	05 37 19.4	0.0
	baz=154						
R20A	Redvale	153.78	349	⇓PKPab	PKPab	05 37 32.9	+0.9
	baz=154						
S22A	4UR Ranch, Cre	153.86	346	⇑PKPab	PKPab	05 37 33.2	+0.7
	baz=154						
NVAR	Mina Array Bea	153.97	6	PKPbc	PKPbc	05 37 21.1	+1.4
NVAR	Mina Array Bea	153.97	6	PKPbc	PKPbc	05 37 21.1	+1.4
	comp=Z,9.3nm,0.8s,baz=296,slow=1.6,SNR=17						
MSU	Marysvale	153.98	355	*e*PKiKP	PKPbc	05 37 21.5	+1.7
MSU	Marysvale	153.98	355	*e*PKPbc	PKPbc	05 37 21.5	+1.7
MSU				*e*PKPab	PKPab	05 37 35.1	+2.2
NV11	Mina Array Sit	153.99	6	*e*PKPdf	PKPdf	05 37 11.4	-0.2
NV11				*e*PKPbc	PKiKP	05 37 21.0	+1.3
NV11				*e*PP	PP	05 41 05.9	-0.2
T24A	Torres, Weston	154.01	342	⇑PKPab	PKPab	05 37 33.4	+0.2
	baz=154						
S20A	Disappointment	154.12	348	⇑PKPab	PKPab	05 37 34.4	+0.8
	baz=154						
S21A	Coal Bank Pass	154.16	347	⇑PKPab	PKPab	05 37 34.2	+0.4
	baz=154						
X31A	McDonald Ranch	154.18	331	⇑PKPab	PKPab	05 37 34.2	+0.5
	baz=154						
U26A	Atchley Ranch,	154.21	339	⇑PKPab	PKPab	05 37 33.9	0.0
	baz=154						
V28A	Channing	154.21	336	⇓PKPab	PKPab	05 37 34.1	+0.3
	baz=154						
R11A	Troy Canyon, C	154.24	1	⇑PKPab	PKPab	05 37 34.2	+0.3
	baz=154						
T23A	Casias Ranch,	154.33	344	⇓PKPab	PKPab	05 37 34.9	+0.4
	baz=154						
U25A	Circle Dot Ran	154.43	340	⇓PKiKP	PKiKP	05 37 21.4	+0.6
	baz=154						
Y32A	R-V Farms, Ver	154.43	329	⇓PKPab	PKPab	05 37 35.3	+0.6
	baz=154						
W29A	Amraillo	154.52	334	⇑PKiKP	PKPbc	05 37 20.7	-0.1
	baz=154						
S18A	Hurst Farm, Bl	154.54	351	⇑PKPab	PKPab	05 37 35.4	+0.1
	baz=154						
T22A	Edith	154.58	345	⇑PKPab	PKPab	05 37 36.5	+1.0
	baz=154						
AMTX	Amarillo	154.74	334	⇑PKPab	PKPab	05 37 35.9	-0.2
	baz=155						
MVCO	Mesa Verde	154.75	348	⇓PKPab	PKPab	05 37 36.5	+0.2
	baz=155						
T21A	Navajo Lake	154.75	346	⇑PKPab	PKPab	05 37 36.9	+0.7
	baz=155						
X30A	Coker Ranch, T	154.75	332	⇓PKPab	PKPab	05 37 36.1	0.0
	baz=155						
V26A	Tequesquite Ra	154.76	339	⇑PKPab	PKPab	05 37 36.2	0.0
	baz=155						
Y31A	Rekieta Farm,	154.86	331	⇑PKPab	PKPab	05 37 36.6	0.0
	baz=155						
WHTX	Lake Whitney	154.90	323	⇑PKPab	PKPab	05 37 36.3	-0.5
	baz=155						
Z32A	Haskell	155.00	328	⇑PKPab	PKPab	05 37 37.2	0.0
	baz=155						
U23A	El Rito	155.03	343	⇑PKPab	PKPab	05 37 37.6	+0.2
	baz=155						
W27A	Bowe Ranch, En	155.14	337	⇓PKPab	PKPab	05 37 38.2	+0.3
	baz=155						
U22A	Llaves	155.17	345	⇑PKPab	PKPab	05 37 38.8	+0.8
	baz=155						
U21A	Nageezi	155.32	346	⇑PKPab	PKPab	05 37 39.4	+0.8
	baz=155						
V24A	Rampart Ranch,	155.32	341	⇓PKPab	PKPab	05 37 37.7	-1.0
	baz=155						
Z31A	Sharp Cattle R	155.33	330	⇓PKPab	PKPab	05 37 38.3	-0.3
	baz=155						
W26A	Owens Ranch, T	155.39	338	⇑PKPab	PKPab	05 37 39.1	+0.2
	baz=155						
GRAC	Grapevine Rang	155.48	5	⇑PKPab	PKPab	05 37 39.5	+0.4
	baz=155						
W25A	X Bar L Ranch,	155.52	339	⇑PKPab	PKPab	05 37 39.8	+0.3
	baz=155						
U20A	Newcomb	155.56	348	⇓PKPab	PKPab	05 37 40.0	+0.4
	baz=155						
Y29A	Porterfield Fa	155.60	333	⇓PKPab	PKPab	05 37 39.6	-0.3
	baz=156						
V22A	San Miguel Ran	155.62	344	⇓PKPab	PKPab	05 37 40.9	+0.9
	baz=156						
ABTX	Abilene, Hawle	155.63	328	⇑PKPab	PKPab	05 37 40.1	+0.2
	baz=156						
Z30A	Sanderson Ranc	155.83	331	⇓PKPab	PKPab	05 37 40.5	-0.2
	baz=156						
X26A	CR and CF Fran	155.88	337	⇑PKPab	PKPab	05 37 41.0	-0.1
	baz=156						
FURC	Furnace Creek,	156.05	4	⇑PKPab	PKPab	05 37 42.1	+0.7
	baz=156						
U15A	North Rim	156.06	355	⇓PKPab	PKPab	05 37 42.5	+0.6
	baz=156						
V20A	Brimhall	156.10	347	⇑PKPab	PKPab	05 37 42.6	+0.6
	baz=156						
W23A	Werner Place,	156.11	342	⇑PKPab	PKPab	05 37 42.3	+0.2
	baz=156						
Z29A	Hungry Hill Ra	156.12	332	⇓PKPab	PKPab	05 37 42.4	+0.4
	baz=156						
232A	Coleman	156.20	327	⇑PKPab	PKPab	05 37 42.6	+0.2
	baz=156						
X25A	Clemmons Ranch	156.21	339	⇓PKPab	PKPab	05 37 42.5	+0.1
	baz=156						
Y27A	Causey	156.22	335	⇓PKPab	PKPab	05 37 42.4	0.0
	baz=156						
Z28A	Tucker Farm, M	156.40	333	⇑PKPab	PKPab	05 37 43.2	-0.1
	baz=156						
MPMC	Manual Prospec	156.40	6	⇑PKPab	PKPab	05 37 43.5	+0.2
	baz=156						
231A	Bronte	156.52	328	⇑PKPab	PKPab	05 37 43.8	+0.1
	baz=156						
332A	Millersview	156.64	326	⇑PKPab	PKPab	05 37 44.7	+0.4
	baz=156						
SHOC	Shoshone	156.65	3	⇓PKPab	PKPab	05 37 44.5	+0.4
	baz=156						
Z27A	Tatum	156.73	335	⇑PKPab	PKPab	05 37 44.9	+0.2
	baz=157						
W20A	Ramah	156.76	347	⇑PKPab	PKPab	05 37 45.2	+0.3
	baz=157						
Y25A	Mesa, Roswell	156.77	338	⇑PKPab	PKPab	05 37 44.8	-0.1
	baz=157						
SMMC	Simmler	156.79	11	⇓PKPab	PKPab	05 37 45.4	+0.7
	baz=157						
WUAZ	Wupatki	156.87	353	*e*PKPdf	PKPdf	05 37 17.2	+1.5
WUAZ	Wupatki	156.87	353	⇑PKPab	PKPab	05 37 46.5	+1.2
	baz=157						
230A	Sterling City	156.96	329	⇑PKPab	PKPab	05 37 45.9	+0.2
	baz=157						
432A	Menard	157.06	325	⇓PKPab	PKPab	05 37 46.4	+0.3
	baz=157						
331A	San Angelo	157.07	327	⇓PKPab	PKPab	05 37 46.3	+0.2
	baz=157						
Z26A	Caprock	157.08	336	⇑PKPab	PKPab	05 37 46.4	+0.2
	baz=157						
TUQ	Turquoise Moun	157.13	2	⇑PKPab	PKPab	05 37 46.9	+0.6
	baz=157						
BNM	Barren Site	157.20	342	*e*PKPdf	PKPdf	05 37 16.9	+0.6
Y23A	Lovelace Mesa,	157.22	341	⇑PKPab	PKPab	05 37 47.2	+0.4
	baz=157						
PKM	Peak Mountain	157.23	11	⇓PKPab	PKPab	05 37 47.1	+0.3
	baz=157						
X21A	Alamocita Cree	157.24	345	⇑PKPab	PKPab	05 37 47.7	+0.8
	baz=157						
X20A	Quemado	157.32	346	⇓PKPab	PKPab	05 37 48.0	+0.7
	baz=157						
Z25A	Roswell	157.35	338	⇑PKPab	PKPab	05 37 47.8	+0.4
	baz=157						
JCT	Junction City	157.36	325	⇓PKPab	PKPab	05 37 47.4	0.0
	baz=157						
330A	Mertzon	157.38	328	⇓PKPab	PKPab	05 37 47.6	+0.1
	baz=157						
W13A	Hualapai Mount	157.47	358	⇓PKPab	PKPab	05 37 48.2	+0.3
	baz=157						
Y22A	Socorro	157.49	343	⇑PKPab	PKPab	05 37 48.5	+0.5
	baz=157						
EDW2	Edwards Air Fo	157.52	7	⇑PKPab	PKPab	05 37 48.5	+0.6
	baz=157						
Z24A	Sheeppen Canyo	157.54	339	⇓PKPab	PKPab	05 37 48.7	+0.4
	baz=157						
X18A	Snowflake	157.62	349	⇓PKPab	PKPab	05 37 49.3	+0.8
	baz=158						
126A	Clayton Basin,	157.64	336	⇓PKPab	PKPab	05 37 48.4	-0.2
	baz=158						
431A	Sonora	157.65	326	⇓PKPab	PKPab	05 37 48.8	+0.1
	baz=158						
532A	Rocksprings	157.68	324	⇓PKPab	PKPab	05 37 48.9	0.0
	baz=158						
329A	Wagon Wheel Ra	157.72	330	⇓PKPab	PKPab	05 37 48.9	0.0
	baz=158						
GMRC	Granite Mounta	157.79	2	⇓PKPab	PKPab	05 37 48.9	-0.3
	baz=158						
125A	Gardner Draw,	157.88	337	⇓PKPab	PKPab	05 37 49.3	-0.4
	baz=158						
Z23A	Rita Site, Whi	157.90	341	⇓PKPab	PKPab	05 37 50.0	+0.3
	baz=158						
430A	Baggett Ranch,	157.91	328	⇑PKPab	PKPab	05 37 50.1	+0.3
	baz=158						
X16A	Lo Mia Camp, P	157.96	353	⇑PKPab	PKPab	05 37 50.6	+0.6
	baz=158						
531A	Rocksprings	158.02	325	⇑PKPab	PKPab	05 37 50.8	+0.5
	baz=158						
632A	Uvalde	158.07	323	⇑PKPab	PKPab	05 37 50.7	+0.2
	baz=158						
226B	Tecolote Peak,	158.20	335	⇓PKPab	PKPab	05 37 51.8	+0.7
	baz=158						
Z21A	St. Cloud Mine	158.28	344	⇑PKPab	PKPab	05 37 52.4	+0.9
	baz=158						
530A	J-C Ranch, Com	158.46	327	⇓PKPab	PKPab	05 37 52.9	+0.7
	baz=158						
BELC	Belle Mtn. Jos	158.56	3	⇑PKPab	PKPab	05 37 53.1	+0.6
	baz=158						
631A	Perdida Creek	158.60	324	⇓PKPab	PKPab	05 37 52.9	+0.1
	baz=158						
Z20A	Nine Sixteen R	158.71	346	⇑PKPab	PKPab	05 37 53.8	+0.5
	baz=159						
427A	Hayter Ranch,	158.92	332	⇑PKPab	PKPab	05 37 54.2	0.0
	baz=159						
529A	Stev Forest Ra	158.94	328	⇓PKPab	PKPab	05 37 54.5	+0.2
	baz=159						
MNTX	Cornudas Mount	159.02	337	⇓PKPab	PKPab	05 37 54.5	+0.1
	baz=159						
121A	Cookes Peak, D	159.04	343	⇑PKPab	PKPab	05 37 55.2	+0.5
	baz=159						
325A	Bean Ranch, Si	159.15	336	⇓PKPab	PKPab	05 37 55.4	+0.1
	baz=159						
528A	Cox Ranch, San	159.20	330	⇓PKPab	PKPab	05 37 55.3	-0.1
	baz=159						
120A	U Bar Ranch, L	159.25	345	⇓PKPab	PKPab	05 37 56.1	+0.5
	baz=159						
324A	Moseley Ranch,	159.28	337	⇑PKPab	PKPab	05 37 56.0	+0.2
	baz=159						
426A	McDonald Obser	159.36	333	⇑PKPab	PKPab	05 37 56.3	0.0
	baz=159						
527A	Woodward Ranch	159.61	331	⇓PKPab	PKPab	05 37 57.2	0.0
	baz=160						
113A	Mohawk Valley,	159.79	358	⇑PKPab	PKPab	05 37 58.3	+0.6
	baz=160						
628A	Black Gap, Mar	159.80	329	⇓PKPab	PKPab	05 37 58.5	+0.5
	baz=160						
526A	Mary Lane Ranc	159.90	332	⇓PKPab	PKPab	05 37 58.6	+0.1
	baz=160						
627A	Terlingua Ranc	160.08	330	⇓PKPab	PKPab	05 37 59.1	-0.2
	baz=160						
CMIG	Matias Romero	160.24	286	PKP	PKPdf	05 37 19.9	-0.1
CMIG	Matias Romero	160.24	286	PKP	PKPdf	05 37 19.9	-0.1
	comp=Z,3.3nm,0.9s,baz=40,slow=2.7,SNR=5.4						
TXAR	Lajitas Array	160.31	330	PKP	PKPdf	05 37 20.3	+0.4
TXAR				PKPab	PKPab	05 37 59.9	-0.4
TXAR	Lajitas Array	160.31	330	PKP	PKPdf	05 37 20.3	+0.4
	comp=Z,1.7nm,1.1s,baz=90,slow=1.3,SNR=11						
TXAR				PKPab	PKPab	05 37 59.9	-0.4
	comp=Z,3.5nm,0.9s,baz=60,slow=3.1,SNR=21						
626A	Big Bend Ranch	160.35	331	⇑PKPab	PKPab	05 38 00.3	-0.1
	baz=160						
320A	Kipp Ranch, An	160.38	344	⇓PKPab	PKPab	05 38 01.1	+0.6
	baz=160						

DJA 16 05:18:36.9±0.7, 0°S±6°×12°4E±°, h62km±12km, M3.8/5, MLv3.8/5, Southern Moluccas Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.62	355	P	Pn	05 18 51.0	+0.6
KMSI				S	Sn	05 19 02.8	+2.6
LUWI	Luwuk	1.61	232	P	Pn	05 19 02.6	-0.5
LUWI				S	Sn	05 19 25.1	+2.3
MNI	Manado	1.69	28	P	Pn	05 19 06.2	+2.0
MRSI	Marisa	2.16	284	P	Pn	05 19 09.8	-0.8
LBMI	Labuha	3.51	100	P	Pn	05 19 28.3	-0.7

*ISCJB **16** 05:22:32.6±1.1, 19°.55S±0°.07×68°.99W±0°.08, h96km±11km, mb4.3/7, Error ellipse: s-maj=14.9km s-min=9.4km az=143.5*
*NEIC **16** 05:22:35.5±0.6, 19°.60S×69°.01W, mb4.4/4, Error ellipse: s-maj=13.3km s-min=10.4km az=65.0*
*IDC **16** 05:22:36.1±0.9, 19°.57S×68°.92W, h114km±6km, mb4.2/6, mb1 4.3/9, mb1mx3.9/22, mbtmp4.2/9, MS3.1/1, Ms1 3.1/1, ms1mx2.4/31, Error ellipse: s-maj=21.6km s-min=20.0km az=150.0*
ISC 16 05:22:35.5±0.7, 19°.60S±0°.08×68°.99W±0°.09, h110km±6km, h110km:pP-P, n34, σ1§11/40, mb4.4/7, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.40	14	P	Pn	05 23 28.4	+1.1
LPAZ	La Paz	3.40	14	P	Pn	05 23 28.4	+1.1
	21nm,0.3s,baz=188,slow=7.8,SNR=396						
ARE	Arequipa	3.92	322	*e*P	Pn	05 23 31.0	-3.2
ARE				*i* S	Sn	05 24 16.0	-3.5
SIV	San Ignacio	8.35	66	P	Pn	05 24 32.8	-1.0
SIV	San Ignacio	8.35	66	P	Pn	05 24 32.8	-1.0
	14nm,0.3s,baz=270,slow=10,SNR=403						
CFAA	Coronel Fontan	11.97	177	P	Pn	05 25 20.6	-2.0
CFAA	Coronel Fontan	11.97	177	P	Pn	05 25 20.6	-2.0
	0.0nm,0.3s,baz=346,slow=14,SNR=6.9						
CPUP	Villa Florida	12.65	124	P	Pn	05 25 31.4	-0.2
CPUP	Villa Florida	12.65	124	P	Pn	05 25 31.4	-0.2
	1.5nm,0.3s,baz=290,slow=12,SNR=14						
BDFB	Brasilia	20.37	82	P	P	05 27 03.5	-0.2
BDFB	Brasilia	20.37	82	P	P	05 27 03.5	-0.2
	3.3nm,0.5s,baz=32,slow=10,SNR=3.1						
PLCA	Paso Flores	21.11	183	*e*P	P	05 27 11.9	+0.7
	12nm,0.9s						
PLCA	Paso Flores	21.11	183	P	P	05 27 12.2	+0.9
	10nm,0.9s,baz=354,slow=11,SNR=28						
OTAV	Otavalo	21.79	334	*e*P	P	05 27 19.1	0.0
	3.0nm,0.8s						
JTS	JuntasAbangare	33.61	331	LR	LR	05 43 04.3	
	comp=Z,32nm,21.4s,baz=76,slow=36						
RCBR	Riachuelo	34.97	71	P	P	05 29 17.9	+0.5
RCBR	Riachuelo	34.97	71	P	P	05 29 17.9	+0.5
	5.8nm,0.7s,baz=214,slow=4.4,SNR=5.2						
VNA3	Neumayer Olymp	61.89	162	*e*P	P	05 32 44.9	+2.0
VNA2	Neumayer--Watz	62.46	161	*e*P	P	05 32 48.2	+1.5
	baz=307,slow=6.7						
SNAA	Sanae	64.09	161	*e*P	P	05 32 59.1	+1.6
DBIC	Dimbokro	68.28	74	*e*P	P	05 33 24.9	-0.2
	8.9nm,0.7s						
DBIC	Dimbokro	68.28	74	P	P	05 33 24.8	-0.3
	12nm,0.8s,baz=230,slow=6.3,SNR=14						
TOA0	Torodi Ar. Sit	76.80	71	*e*P	P	05 34 14.4	-1.1
TOA0				*e*pP	pP	05 34 44.2	+0.6
TORD	Torodi Ar. Bea	76.80	71	P	P	05 34 14.6	-1.0
TORD				pP	pP	05 34 44.6	+1.0
TORD	Torodi Ar. Bea	76.80	71	P	P	05 34 14.6	-1.0
	2.8nm,0.4s,baz=253,slow=5.4,SNR=68						
TORD				pP	pP	05 34 44.6	+1.0
	2.5nm,0.6s,baz=251,slow=5.1,SNR=5.0						
WVOR	Wild Horse Val	76.84	325	*e*P	P	05 34 15.8	+0.4
	9.2nm,0.8s						
YKA	Yellowknife Ar	89.38	341	P	P	05 35 18.9	-0.2
YKA				pP	pP	05 35 48.2	+0.3
YKA	Yellowknife Ar	89.38	341	P	P	05 35 18.9	-0.2
	2.3nm,0.8s,baz=135,slow=4.7,SNR=52						
YKA				pP	pP	05 35 48.2	+0.3
	0.7nm,0.5s,baz=132,slow=4.7,SNR=5.0						
ASAR	Alice Springs	131.54	208	PKP	PKPdf	05 41 36.2	+0.2
ASAR	Alice Springs	131.54	208	PKP	PKPdf	05 41 36.2	+0.2
	0.5nm,0.4s,baz=130,slow=1.8,SNR=8.7						
MJAR	Matsushiro Arr	150.81	311	PKPbc	PKPbc	05 42 15.5	+0.2
MJAR	Matsushiro Arr	150.81	311	PKPbc	PKPbc	05 42 15.5	+0.2
	0.6nm,0.3s,baz=107,slow=1.2,SNR=4.2						
SONM	Songino Array	151.59	7	PKPbc	PKPbc	05 42 17.3	+0.4
SONM				pPKPbc	pPKPbc	05 42 47.7	+0.8
SONM	Songino Array	151.59	7	PKPbc	PKPbc	05 42 17.3	+0.4
	1.2nm,0.4s,baz=334,slow=0.7,SNR=8.5						
SONM				pPKPbc	pPKPbc	05 42 47.7	+0.8
	1.0nm,0.7s,baz=347,slow=1.3,SNR=3.8						

*ROM **16** 05:44:54.4±0.1, 42°.30N×13°.42E, h10km, Ml3.4/34, Error ellipse: s-maj=1.1km s-min=0.9km az=62.0*
*CSEM **16** 05:44:54.7±0.1, 42°.31N×13°.41E, h2km, ML4.0/11, Error ellipse: s-maj=2.6km s-min=2.0km az=66.0*
*ISCJB **16** 05:44:54.2±0.2, 42°.31N±0°.02×13°.42E±0°.02, h11km±2km, mb3.3/1, Error ellipse: s-maj=3.1km s-min=2.5km az=158.7*
*IDC **16** 05:44:55.0±1.4, 42°.50N×13°.28E, h0km, mb3.5/2, mb1 3.6/6, mb1mx3.4/29, mbtmp3.5/6, ML3.2/4, MS2.9/1, Ms1 2.9/1, ms1mx2.3/42, Error ellipse: s-maj=22.2km s-min=14.8km az=96.0*
*PRU **16** 05:44:56.1, 42°.37N×13°.30E, h0km*
*LDG **16** 05:44:58.1±1.4, 42°.43N×13°.29E, h2km, Ml3.2/4, Error ellipse: s-maj=30.7km s-min=12.0km az=104.0*
ISC 16 05:44:55.3±0.7, 42°.33N±0°.02×13°.44E±0°.02, h13km±4km, n118, σ1§35/149, 7C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	L'Aquila	0.04	313	⇓*i*Pg	Pg	05 44 57.0	-0.7
AQU				Sg	Sg	05 44 58.4	-1.0
	21µm,0.5s						
AQU	L'Aquila	0.04	313	⇓*i*Pg	Pg	05 44 57.0	-0.7
AQU				Sg	Sg	05 44 58.4	-1.0
	21µm,0.5s						
FAGN	Fagnano	0.13	120	Pg	Pg	05 44 58.1	-0.5
FAGN				Sg	Sg	05 45 00.8	-0.2
	119µm,0.5s						
FAGN	Fagnano	0.13	120	Pg	Pg	05 44 58.1	-0.5
FAGN				Sg	Sg	05 45 00.8	-0.2
	119µm,0.5s						
CAMP	Campotosto	0.21	354	⇑*i*Pg	Pg	05 44 59.6	-0.3
CAMP				Sg	Sg	05 45 03.3	+0.2
	4µm,0.5s						
CAMP	Campotosto	0.21	354	⇑*i*Pg	Pg	05 44 59.6	-0.3
CAMP				Sg	Sg	05 45 03.3	+0.2
	4µm,0.5s						
FIAM	Fiamignano	0.24	255	⇑*i*Pg	Pg	05 45 00.0	-0.5
FIAM				Sg	Sg	05 45 03.8	-0.3
	9µm,0.8s						
FIAM	Fiamignano	0.24	255	⇑*i*Pg	Pg	05 45 00.0	-0.5
FIAM				Sg	Sg	05 45 03.8	-0.3
	9µm,0.8s						
VCEL	Villa Celiera	0.31	78	Pg	Pg	05 45 01.2	-0.4
VCEL				Sg	Sb	05 45 07.0	-0.7
	11µm,0.7s						
VCEL	Villa Celiera	0.31	78	Pg	Pg	05 45 01.2	-0.4
VCEL				Sg	Sb	05 45 07.0	-0.7
	11µm,0.7s						
PTQR	Pietraquaria	0.31	185	⇑*i*Pg	Pg	05 45 00.8	-0.8
PTQR				Sg	Sg	05 45 05.1	-0.8
PTQR	Pietraquaria	0.31	185	⇑*i*Pg	Pg	05 45 00.8	-0.8
PTQR				Sg	Sg	05 45 05.1	-0.8
TERO	Teramo	0.32	23	Pg	Pg	05 45 01.2	-0.6
TERO				Sg	Sb	05 45 07.3	-0.7
	4µm,0.3s						
TERO	Teramo	0.32	23	Pg	Pg	05 45 01.2	-0.6
TERO				Sg	Sb	05 45 07.3	-0.7
	4µm,0.3s						
LNSS	Leonessa	0.40	313	Pg	Pg	05 45 02.8	-0.5
LNSS				Sg	Sb	05 45 10.1	-0.3
	3µm,0.5s						
LNSS	Leonessa	0.40	313	Pg	Pg	05 45 02.8	-0.5
INTR	Introdacqua	0.47	132	Pg	Pg	05 45 03.8	-0.8
INTR				Sg	Sg	05 45 11.1	+0.2
	4µm,0.5s						
INTR	Introdacqua	0.47	132	Pg	Pg	05 45 03.8	-0.8
INTR				Sg	Sg	05 45 11.1	+0.2
	4µm,0.5s						
VVLD	Villa Vallelon	0.48	163	Pg	Pg	05 45 03.6	-1.1
VVLD				Sg	Sg	05 45 09.8	-1.3
	2µm,0.6s						
VVLD	Villa Vallelon	0.48	163	Pg	Pg	05 45 03.6	-1.1
VVLD				Sg	Sg	05 45 09.8	-1.3
	2µm,0.6s						
CERT	Cerreto	0.51	222	Pg	Pg	05 45 04.1	-1.2
	5µm,0.7s						
CERT	Cerreto	0.51	222	Pg	Pg	05 45 04.1	-1.2
	5µm,0.7s						
GUAR	Guarcino	0.54	190	Pg	Pg	05 45 04.6	-1.3
	1µm,0.4s						
GUAR	Guarcino	0.54	190	Pg	Pg	05 45 04.6	-1.3
	1µm,0.4s						
NRCA	Norcia	0.56	335	Pg	Pg	05 45 05.6	-0.6
NRCA				Sg	Sb	05 45 14.4	-0.5
	1µm,0.2s						
NRCA	Norcia	0.56	335	Pg	Pg	05 45 05.6	-0.6
NRCA				Sg	Sb	05 45 14.4	-0.5
	1µm,0.2s						
MNS	Montasola	0.56	276	Pg	Pg	05 45 05.1	-1.2
	1µm,0.6s						
MNS	Montasola	0.56	276	Pg	Pg	05 45 05.1	-1.2
	1µm,0.6s						
TRTR	Tortoreto Alta	0.59	36	Pg	Pb	05 45 07.6	+0.1
	6µm,0.6s						
TRTR	Tortoreto Alta	0.59	36	Pg	Pb	05 45 07.6	+0.1
	6µm,0.6s						
MTCE	Montecelio	0.60	239	Pg	Pg	05 45 05.9	-1.1
	1µm,0.5s						
MTCE	Montecelio	0.60	239	Pg	Pg	05 45 05.9	-1.1
	1µm,0.5s						
LPEL	Lama dei Pelig	0.62	117	Pg	Pg	05 45 06.2	-1.2
LPEL				Sg	Sb	05 45 16.4	-0.3
	2µm,0.5s						
LPEL	Lama dei Pelig	0.62	117	Pg	Pg	05 45 06.2	-1.2
LPEL				Sg	Sb	05 45 16.4	-0.3
	2µm,0.5s						
OFFI	Offida	0.63	17	Pg	Pb	05 45 07.9	-0.3
	7µm,0.6s						
OFFI	Offida	0.63	17	Pg	Pb	05 45 07.9	-0.3
	7µm,0.6s						
POFI	Posta Fibre

CING	**Cingoli**	**1.06**	**350**	Pg		**Pg**	**05 45 14.6**	**-1.1**
	570nm,0.6s							
VAGA	**Valle Agricola**	**1.09**	**147**	Pg		**Pg**	**05 45 15.4**	**-0.9**
	447nm,0.5s							
VAGA	**Valle Agricola**	**1.09**	**147**	Pg		**Pg**	**05 45 15.4**	**-0.9**
	447nm,0.5s							
MGAB	**Montegabbione**	**1.14**	**301**	Pg		**Pg**	**05 45 16.4**	**-0.8**
MGAB	**Montegabbione**	**1.14**	**301**	Pg		**Pg**	**05 45 16.4**	**-0.8**
MURB	**Monte Urbino**	**1.15**	**325**	Pg		**Pg**	**05 45 16.4**	**-1.0**
	968nm,0.5s							
MURB	**Monte Urbino**	**1.15**	**325**	Pg		**Pg**	**05 45 16.4**	**-1.0**
	968nm,0.5s							
ARVD	**Arcevia**	**1.22**	**343**	Pg		**Pb**	**05 45 17.6**	**-0.7**
	467nm,0.9s							
ARVD	**Arcevia**	**1.22**	**343**	Pg		**Pb**	**05 45 17.6**	**-0.7**
	467nm,0.9s							
AOI	**Ancona**	**1.23**	**6**	Pg		**Pn**	**05 45 18.2**	**+0.1**
	535nm,0.6s							
AOI	**Ancona**	**1.23**	**6**	Pg		**Pn**	**05 45 18.2**	**+0.1**
	535nm,0.6s							
PIEI	**Pieia**	**1.38**	**332**	Pg		**Pn**	**05 45 20.3**	**+0.1**
	333nm,0.9s							
PIEI	**Pieia**	**1.38**	**332**	Pg		**Pn**	**05 45 20.3**	**+0.1**
	333nm,0.9s							
FSSB	**Fossombrone**	**1.44**	**341**	Pg		**Pn**	**05 45 21.6**	**+0.4**
FSSB	**Fossombrone**	**1.44**	**341**	Pg		**Pn**	**05 45 21.6**	**+0.4**
CAFI	**Castiglion Fio**	**1.47**	**313**	Pg		**Pb**	**05 45 22.4**	**-0.1**
	232nm,0.7s							
CAFI	**Castiglion Fio**	**1.47**	**313**	Pg		**Pb**	**05 45 22.4**	**-0.1**
	232nm,0.7s							
NVLJ	**Novalja**	**2.46**	**25**	*e*Pn		**Pn**	**05 45 36.5**	**+1.3**
NVLJ				Sn		**Sb**	**05 46 08.3**	**-1.4**
NVLJ	**Novalja**	**2.46**	**25**	*e*Pn		**Pn**	**05 45 36.4**	**+1.3**
NVLJ				Sn		**Sb**	**05 46 08.2**	**-1.4**
MAIM	**Mastiano**	**2.67**	**307**	P		**Pn**	**05 45 38.2**	**+0.2**
PGF	**Pioggiola**	**3.29**	**275**	*e*Pn		**Pn**	**05 45 47.7**	**+1.1**
PGF				*e*Sn		**Sn**	**05 46 27.9**	**+2.2**
	11nm,0.5s							
PGF	**Pioggiola**	**3.29**	**275**	*e*Pn		**Pn**	**05 45 47.7**	**+1.1**
PGF				*e*Sn		**Sn**	**05 46 27.9**	**+2.2**
	5.5nm,0.5s							
VOY	**Vojsko**	**3.71**	**5**	*e*Pn		Pn	05 45 56.0	+3.6
VOY				*e*			05 46 08.8	
VOY				*e*Sn		**Sn**	**05 46 38.5**	**+2.4**
VOY	**Vojsko**	**3.71**	**5**	*e*Pn		Pn	05 45 56.0	+3.6
VOY				*e*Sn		**Sn**	**05 46 38.5**	**+2.4**
ABTA	**Abfaltersbach**	**4.46**	**352**	⇑*i*Pn		**Pn**	**05 46 04.4**	**+1.7**
ABTA	**Abfaltersbach**	**4.46**	**352**	Pn		**Pn**	**05 46 04.4**	**+1.7**
SBF	**Sospel**	**4.65**	**291**	*e*Pn		**Pn**	**05 46 06.2**	**+0.9**
SBF	**Sospel**	**4.65**	**291**	*e*Pn		**Pn**	**05 46 06.2**	**+0.9**
DAVOX	**Davos/Dischmat**	**5.12**	**331**	Pn		**Pn**	**05 46 12.5**	**+0.7**
	0.3nm,0.3s,baz=162,slow=19,SNR=3.5							
DAVOX				LR		LR	05 48 33.1	
	comp=Z,120nm,18.6s,baz=269,slow=44							
FRF	**La Foret Royal**	**5.13**	**286**	*e*Pn		**Pn**	**05 46 12.4**	**+0.6**
FRF	**La Foret Royal**	**5.13**	**286**	*e*Pn		**Pn**	**05 46 12.4**	**+0.6**
LMR	**La Mourre**	**5.19**	**283**	*e*Pn		**Pn**	**05 46 12.9**	**+0.3**
LMR	**La Mourre**	**5.19**	**283**	*e*Pn		**Pn**	**05 46 12.9**	**+0.3**
MBDF	**Montbardon**	**5.41**	**299**	*e*P		**Pn**	**05 46 18.2**	**+2.5**
MBDF	**Montbardon**	**5.41**	**299**	*e*P		**Pn**	**05 46 18.2**	**+2.5**
LPG	**La Plagne**	**5.77**	**306**	*e*P		Pn	05 46 24.1	+3.2
LPL	**La Plagne**	**5.79**	**306**	*e*P		**Pn**	**05 46 24.3**	**+3.2**
SMRF	**Simiane la Rot**	**5.98**	**289**	*e*P		**Pn**	**05 46 25.5**	**+2.0**
SMRF	**Simiane la Rot**	**5.98**	**289**	*e*P		**Pn**	**05 46 25.5**	**+2.0**
GERES	**GERESS Array B**	**6.52**	**2**	Pn		**Pn**	**05 46 30.0**	**-0.9**
	0.4nm,0.3s,baz=181,slow=12,SNR=7.1							
GERES				Sn		**Sn**	**05 47 42.7**	**-2.5**
	0.7nm,0.3s,baz=194,slow=33,SNR=7.8							
KHC	**Kasperske Hory**	**6.80**	**1**	*e*PN		**Pn**	**05 46 35.4**	**+0.6**
KHC				*ex*		x	05 46 43.5	
KHC				*e*SN		**Sn**	**05 47 49.2**	**-2.9**
KHC	**Kasperske Hory**	**6.80**	**1**	Pn		**Pn**	**05 46 35.4**	**+0.6**
HINF	**Hinteralfeld**	**7.20**	**322**	*e*Pn		**Pn**	**05 46 40.2**	**0.0**
HINF				*e*Sn		**Sn**	**05 47 56.6**	**-5.2**
	7.7nm,0.6s							
HINF	**Hinteralfeld**	**7.20**	**322**	*e*Pn		**Pn**	**05 46 40.2**	**0.0**
VYHS	**Vyhne**	**7.24**	**30**	*e*PN		**Pn**	**05 46 43.3**	**+2.6**
VYHS				*e*SN		**Sn**	**05 48 00.8**	**-2.0**
VYHS	**Vyhne**	**7.24**	**30**	*e*Pn		**Pn**	**05 46 43.3**	**+2.6**
KEST	**Kesra**	**7.32**	**207**	Pn		Pn	05 46 46.0	+4.1
	0.4nm,0.3s,baz=261,slow=2.7,SNR=12							
CDF	**Champ du Feu**	**7.47**	**327**	*e*Pn		**Pn**	**05 46 43.9**	**0.0**
CDF				*e*Sn		**Sn**	**05 48 03.6**	**-4.9**
	2.0nm,0.3s							
CDF	**Champ du Feu**	**7.47**	**327**	*e*Pn		**Pn**	**05 46 43.9**	**0.0**
HAU	**Haudompre**	**7.57**	**321**	*e*Pn		**Pn**	**05 46 45.6**	**+0.4**
HAU				*e*Sn		Sn	05 48 04.2	-6.6
	7.7nm,0.7s							
HAU	**Haudompre**	**7.57**	**321**	*e*Pn		**Pn**	**05 46 45.6**	**+0.4**
CLL	**Collm**	**8.99**	**358**	Lm		MLR	05 48 00.0	
	comp=Z,100nm,19.2s							
MLR	**Muntele Rosu**	**9.56**	**66**	Pn		**Pn**	**05 47 15.8**	**+3.1**
	comp=Z,0.1nm,0.3s,baz=133,slow=21,SNR=8.7							
FINES	**FINESS Array B**	**20.60**	**17**	P		**P**	**05 49 33.8**	**0.0**
	comp=Z,2.6nm,0.8s,baz=202,slow=9.5,SNR=6.5							
TORD	**Torodi Ar. Bea**	**30.81**	**203**	P		**P**	**05 51 12.7**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=14,slow=11,SNR=3.6							

IDC 16 05:49:32.5±6.7, 28°85N×70°14E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/28, mbtmp3.5/4, Error ellipse: s-maj=303.0km s-min=75.5km az=123.0, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**20.28**	**25**	P	P	05 54 09.6	-0.2
	0.9nm,0.6s,baz=214,slow=12,SNR=5.8						
KURBB	**Kurchatov Arra**	**22.66**	**14**	P	P	05 54 34.4	-0.8
	0.2nm,0.6s,baz=188,slow=14,SNR=4.6						
ZALV	**Zalesovo Beam**	**27.28**	**19**	P	P	05 55 19.2	+0.8
	0.6nm,0.4s,baz=199,slow=8.5,SNR=3.0						
YKA	**Yellowknife Ar**	**88.90**	**2**	P	P	06 02 28.2	-0.3
	0.1nm,0.5s,baz=350,slow=4.9,SNR=4.7						

WEL 16 06:01:45.3±0.2, 38°66S×178°59E, h35km±4km, ML3.6/4, 1C-3D, Error ellipse: s-maj=2.2km s-min=0.9km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGZ	**Carnagh Statio**	**0.35**	**300**	⇑PN	Pn	06 01 53.3	-0.5
CNGZ				SN	Sn	06 02 00.4	+0.4
PRGZ	**Paritu Road**	**0.61**	**245**	⇓PN	Pn	06 01 57.0	-0.6
PRGZ				SN	Sn	06 02 06.1	-0.2
PUZ	**Puketiti**	**0.65**	**336**	PN	Pn	06 01 57.7	-0.3
PUZ				SN	Sn	06 02 06.6	-0.4
MHGZ	**Mahia Peninsul**	**0.72**	**227**	⇓PN	Pn	06 01 59.0	0.0
KNZ	**Kokohu**	**0.80**	**243**	PN	Pn	06 01 59.5	-0.5
KNZ				SN	Sn	06 02 10.4	-0.3
MWZ	**Matawai**	**0.90**	**291**	PN	Pn	06 02 01.2	-0.2
MWZ				SN	Sn	06 02 12.7	-0.6
NMHZ	**Naumai**	**1.46**	**252**	PN	Pn	06 02 09.1	-0.2
CKHZ	**Cape Kidnapper**	**1.54**	**229**	PN	Pn	06 02 09.8	-0.4
BKZ	**Black Stump Fm**	**1.71**	**252**	PN	Pn	06 02 12.5	-0.1
KAHZ	**Kahuranaki**	**1.75**	**229**	PN	Pn	06 02 13.1	0.0
PXZ	**Pawanui**	**1.92**	**244**	PN	Pn	06 02 14.4	-1.0
BHHZ	**Black Hill Sta**	**2.13**	**246**	PN	Pn	06 02 16.9	-1.6
PNHZ	**Pukenui**	**2.24**	**235**	PN	Pn	06 02 19.1	-0.8
WNVZ	**Wahianoa**	**2.43**	**253**	PN	Pn	06 02 22.7	+0.1
WPVZ	**Whakapapa**	**2.44**	**256**	PN	Pn	06 02 22.8	+0.1
FWVZ	**Far West T-bar**	**2.44**	**255**	⇓PN	Pn	06 02 23.0	+0.1
TRVZ	**Turoa**	**2.46**	**254**	PN	Pn	06 02 23.1	0.0
TSZ	**Takapari Road**	**2.47**	**235**	PN	Pn	06 02 21.7	-1.4
BFZ	**Birch Farm**	**2.71**	**221**	PN	Pn	06 02 24.3	-2.0
MRZ	**Mangatainoka R**	**3.06**	**228**	PN	Pn	06 02 29.9	-1.3

IDC 16 06:10:34.6±3.0, 27°50S×66°62E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.6/23, mbtmp3.8/4, Error ellipse: s-maj=91.7km s-min=45.3km az=49.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**55.40**	**38**	P	P	06 20 11.1	+0.3
	0.3nm,0.4s,baz=232,slow=7.4,SNR=3.9						
ASAR	**Alice Springs**	**60.15**	**103**	P	P	06 20 44.4	0.0
	0.5nm,0.7s,baz=245,slow=6.9,SNR=4.2						
MKAR	**Makanchi Array**	**75.30**	**11**	P	P	06 22 18.6	-0.7
	0.4nm,0.7s,baz=222,slow=7.8,SNR=3.1						
ZALV	**Zalesovo Beam**	**82.63**	**11**	P	P	06 22 59.3	0.0
	1.2nm,0.5s,baz=207,slow=4.5,SNR=6.0						
YKA	**Yellowknife Ar**	**145.00**	**1**	PKPbc	PKPbc	06 30 12.2	-0.2
	1.4nm,0.6s,baz=344,slow=3.6,SNR=41						

*ISCJB **16** 06:13:16.3±0.8, 39°.13N±0°.03×24°.23E±0°.03, h12km±5km, Error ellipse: s-maj=5.0km s-min=3.5km az=139.8*
*CSEM **16** 06:13:16.6±0.1, 39°.15N×24°.22E, h15km, ML2.5/5, Error ellipse: s-maj=3.5km s-min=2.6km az=136.0*
*ATH **16** 06:13:16.8, 39°.13N×24°.23E, h37km±2km, ML2.8*
*THE **16** 06:13:17.0, 39°.16N×24°.20E, h11km±1km, ML2.5/5, Error ellipse: s-maj=1.7km s-min=0.6km az=286.0*

ISC 16 06:13:16.3±1.0, 39°.15N±0°.03×24°.25E±0°.02, h12km±8km, n59, σ0s41/82, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOS	**Alonnisos**	**0.29**	**274**	P	**Pg**	**06 13 22.3**	**+0.1**
AOS				S	**Sg**	**06 13 26.4**	**+0.2**
AOS	**Alonnisos**	**0.29**	**274**	P	**Pg**	**06 13 22.3**	**+0.1**
AOS				S	**Sg**	**06 13 26.4**	**+0.2**
SKIA	**Skiathos**	**0.61**	**272**	P	**Pg**	**06 13 27.7**	**-0.5**
SKIA				S	**Sb**	**06 13 37.1**	**-0.3**
SKIA	**Skiathos**	**0.61**	**272**	P	**Pg**	**06 13 27.7**	**-0.5**
SKIA				S	**Sb**	**06 13 37.1**	**-0.3**
MRKA	**Markates**	**0.68**	**229**	P	**Pg**	**06 13 29.4**	**-0.2**
MRKA				S	**Sg**	**06 13 38.6**	**+0.1**
MRKA	**Markates**	**0.68**	**229**	P	**Pg**	**06 13 29.4**	**-0.2**
MRKA				S	**Sg**	**06 13 38.6**	**+0.1**
NEO	**Neokhori**	**0.81**	**281**	*e*PN	**Pb**	**06 13 32.9**	**+0.5**
NEO				*e*SN	**Sb**	**06 13 43.6**	**+0.3**
NEO	**Neokhori**	**0.81**	**281**	*e*Pn	**Pb**	**06 13 32.9**	**+0.5**
NEO				*e*Sn	**Sb**	**06 13 43.6**	**+0.3**
XOR	**Xorichti**	**0.85**	**285**	P	**Pg**	**06 13 32.8**	**+0.1**
XOR				S	**Sg**	**06 13 43.7**	**-0.1**
XOR	**Xorichti**	**0.85**	**285**	P	**Pg**	**06 13 32.8**	**+0.1**
XOR				S	**Sg**	**06 13 43.7**	**-0.1**
SMIA	**Simia**	**0.85**	**252**	P	**Pg**	**06 13 32.9**	**+0.1**
SMIA				S	**Sg**	**06 13 44.2**	**+0.2**
SMIA	**Simia**	**0.85**	**252**	P	**Pg**	**06 13 32.9**	**+0.1**
SMIA				S	**Sg**	**06 13 44.2**	**+0.2**
PAIG	**Paliouri**	**0.89**	**331**	P	**Pg**	**06 13 33.7**	**+0.2**
PAIG				S	**Sb**	**06 13 46.1**	**+0.6**
PAIG	**Paliouri**	**0.89**	**331**	P	**Pg**	**06 13 33.7**	**+0.2**
PAIG				S	**Sb**	**06 13 46.1**	**+0.6**
LIA	**Limnos Island**	**1.04**	**44**	P	**Pn**	**06 13 37.1**	**+0.5**
LIA				S	**Sn**	**06 13 51.4**	**+0.4**
LIA	**Limnos Island**	**1.04**	**44**	*e*PN	**Pn**	**06 13 37.3**	**+0.7**
LIA				*e*SN	**Sn**	**06 13 51.5**	**+0.4**
LIA	**Limnos Island**	**1.04**	**44**	P	**Pn**	**06 13 37.1**	**+0.5**
LIA				*e*Sn	**Sn**	**06 13 51.5**	**+0.4**
ATAL	**Atalanti**	**1.06**	**245**	P	**Pb**	**06 13 36.4**	**-0.2**
ATAL				S	**Sn**	**06 13 51.6**	**-0.1**
ATAL	**Atalanti**	**1.06**	**245**	P	**Pb**	**06 13 36.4**	**-0.2**
ATAL				S	**Sn**	**06 13 51.6**	**-0.1**
LKR	**Lokris**	**1.10**	**243**	*e*PN	**Pb**	**06 13 36.9**	**-0.3**
LKR				*e*SN	**Sg**	**06 13 51.6**	**-0.1**
LKR	**Lokris**	**1.10**	**243**	*e*Pn	**Pb**	**06 13 36.9**	**-0.3**
LKR				*e*Sn	**Sg**	**06 13 51.6**	**-0.1**
PTL	**Penteli**	**1.14**	**195**	P	**Pb**	**06 13 38.1**	**+0.1**
PTL	**Penteli**	**1.14**	**195**	*e*PN	**Pn**	**06 13 38.2**	**+0.1**
PTL	**Penteli**	**1.14**	**195**	*e*Pn	**Pn**	**06 13 38.2**	**+0.1**
OUR	**Ouranopolis**	**1.20**	**350**	P	**Pn**	**06 13 38.8**	**-0.1**
OUR				S	**Sn**	**06 13 54.9**	**-0.2**
OUR	**Ouranopolis**	**1.20**	**350**	P	**Pn**	**06 13 38.8**	**-0.1**
OUR				S	**Sn**	**06 13 54.9**	**-0.2**
ATH	**Athens Observa**	**1.25**	**200**	*e*PN	**Pn**	**06 13 39.5**	**0.0**
ATH	**Athens Observa**	**1.25**	**200**	*e*Pn	**Pn**	**06 13 39.5**	**0.0**
SIGR	**SIGRI**	**1.25**	**87**	P	**Pg**	**06 13 40.5**	**+0.2**
SIGR	**SIGRI**	**1.25**	**87**	P	**Pg**	**06 13 40.5**	**+0.2**
AGG	**Agios Georgios**	**1.50**	**266**	P	**Pn**	**06 13 42.8**	**-0.2**
AGG	**Agios Georgios**	**1.50**	**266**	*e*PN	**Pn**	**06 13 42.8**	**-0.2**
AGG	**Agios Georgios**	**1.50**	**266**	P	**Pn**	**06 13 42.8**	**-0.2**
LTK	**Loutraki**	**1.51**	**222**	*e*PN	**Pn**	**06 13 43.3**	**+0.1**
LTK	**Loutraki**	**1.51**	**222**	*e*Pn	**Pn**	**06 13 43.3**	**+0.1**
SMTH	**Samothraki Isl**	**1.65**	**36**	*e*PN	**Pn**	**06 13 45.0**	**-0.1**
SMTH	**Samothraki Isl**	**1.65**	**36**	*e*Pn	**Pn**	**06 13 45.0**	**-0.1**
LIT	**Litokhoron**	**1.66**	**305**	*e*PN	**Pn**	**06 13 44.9**	**-0.3**
LIT	**Litokhoron**	**1.66**	**305**	*e*Pn	**Pn**	**06 13 44.9**	**-0.3**
THL	**Klokotos Trika**	**1.78**	**284**	*e*PN	**Pn**	**06 13 47.0**	**+0.1**
THL	**Klokotos Trika**	**1.78**	**284**	*e*Pn	**Pn**	**06 13 47.0**	**+0.1**
SOH	**Sokhos**	**1.80**	**338**	*e*PN	**Pn**	**06 13 47.5**	**+0.2**
SOH	**Sokhos**	**1.80**	**338**	*e*Pn	**Pn**	**06 13 47.5**	**+0.2**
DID	**Didima**	**1.82**	**206**	P	**Pn**	**06 13 47.4**	**-0.1**
DID	**Didima**	**1.82**	**206**	*e*PN	**Pn**	**06 13 47.4**	**-0.1**
DID	**Didima**	**1.82**	**206**	P	**Pn**	**06 13 47.4**	**-0.1**
TRIZ	**Trizonia**	**1.87**	**246**	*e*PB	**Pn**	**06 13 48.3**	**+0.2**
TRIZ	**Trizonia**	**1.87**	**246**	*e*Pb	**Pn**	**06 13 48.3**	**+0.2**
GUR	**Goura**	**1.93**	**232**	*e*PN	**Pn**	**06 13 48.9**	**-0.1**
GUR	**Goura**	**1.93**	**232**	*e*Pn	**Pn**	**06 13 48.9**	**-0.1**
KLV	**Kalavryta, Ach**	**1.98**	**237**	*e*PB	**Pn**	**06 13 50.0**	**+0.3**
KLV	**Kalavryta, Ach**	**1.98**	**237**	*e*Pn	**Pn**	**06 13 50.0**	**+0.3**
PSA1	**Psathopyrgos**	**2.02**	**247**	*e*PN	**Pn**	**06 13 48.4**	**-1.8**
ALN	**Alexandroupoli**	**2.22**	**38**	*e*PB	**Pb**	**06 13 55.1**	**-1.3**
ALN	**Alexandroupoli**	**2.22**	**38**	*e*Pb	**Pb**	**06 13 55.1**	**-1.3**
VLX	**Vlachokerasia**	**2.31**	**220**	*e*PB	**Pn**	**06 13 55.0**	**+0.8**
VLX	**Vlachokerasia**	**2.31**	**220**	*e*Pb	**Pn**	**06 13 55.0**	**+0.8**
APE	**Apeiranthos**	**2.31**	**154**	*e*PN	**Pn**	**06 13 54.2**	**0.0**
APE	**Apeiranthos**	**2.31**	**154**	*e*Pn	**Pn**	**06 13 54.2**	**0.0**

*CSEM **16** 06:30:34.6±0.3, 37°.62N×35°.60E, h2km, ML2.0, Error ellipse: s-maj=6.6km s-min=3.5km az=166.0*
*ISCJB **16** 06:30:35.1±1.6, 37°.58N±0°.07×35°.62E±0°.07, h3km±10km, Error ellipse: s-maj=12.7km s-min=6.7km az=146.7*
*DDA **16** 06:30:35.8, 37°.55N×35°.69E, h7km, MD2.7*
*ISK **16** 06:30:35.6, 37°.51N×35°.65E, h5km, ML2.0*

ISC 16 06:30:35.6±1.4, 37°.56N±0°.07×35°.69E±0°.04, h13km±8km, n10, σ0s55/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.13**	**126**	*e*PG	**Pb**	**06 30 39.4**	**-0.6**
KOZT				*e*SG	**Sg**	**06 30 41.6**	**+0.2**
KOZT	**Kozan**	**0.13**	**126**	*e*Pg	**Pb**	**06 30 39.4**	**-0.6**
KOZT				*e*Sg	**Sg**	**06 30 41.7**	**+0.2**
ANDN	**Andirin**	**0.52**	**88**	*i* P	**Pb**	**06 30 45.8**	**-0.8**
ANDN				*i* S	**Sb**	**06 30 54.7**	**+0.6**
ANDN	**Andirin**	**0.52**	**88**	*i* P	**Pb**	**06 30 45.8**	**-0.8**
ANDN				*i* S	**Sb**	**06 30 54.7**	**+0.6**
CEYT	**Ceyhan**	**0.55**	**175**	*e*PG	**Pg**	**06 30 46.4**	**0.0**
CEYT				*e*SG	**Sb**	**06 30 54.7**	**-0.1**
CEYT	**Ceyhan**	**0.55**	**175**	*e*Pg	**Pg**	**06 30 46.4**	**0.0**
CEYT				*e*Sg	**Sb**	**06 30 54.7**	**-0.1**
AYKD	**Aykdinkavak**	**0.90**	**99**	*i* P	**Pb**	**06 30 52.3**	**-0.7**
AYKD				*i* S	**Sn**	**06 31 07.4**	**+0.6**
SARI	**SarD1z-Kayseri**	**1.02**	**34**	*e*PN	Pg	06 30 57.5	+2.2
MERS	**Mersin**	**1.16**	**234**	*e*PN	**Pg**	**06 30 57.9**	**0.0**
MERS				*e*SN	**Sg**	**06 31 13.6**	**+0.5**
MERS	**Mersin**	**1.16**	**234**	*e*Pn	**Pg**	**06 30 57.9**	**0.0**
MERS				*e*Sn	**Sg**	**06 31 13.6**	**+0.5**

*ATH **16** 06:49:50.5, 40°.77N×21°.06E, h34km±6km, MD3.2/7*
*THE **16** 06:49:51.4, 40°.48N×20°.85E, h1km±5km, ML2.6/3, Error ellipse: s-maj=6.1km s-min=1.0km az=258.0*
*ISCJB **16** 06:49:52.6±0.9, 40°.49N±0°.04×20°.96E±0°.07, h11km±4km, Error ellipse: s-maj=8.7km s-min=5.8km az=14.5*
*CSEM **16** 06:49:52.6±0.4, 40°.48N×21°.01E, h5km, ML2.6/3, Error ellipse: s-maj=9.6km s-min=5.9km az=112.0*

ISC 16 06:49:52.0±1.1, 40°.52N±0°.03×20°.98E±0°.04, h7km±7km, n26, σ0s94/39, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEST	**Nestorio**	**0.12**	**152**	P	**Pg**	**06 49 54.6**	**0.0**
NEST				S	**Sg**	**06 49 56.8**	**+0.4**
NEST	**Nestorio**	**0.12**	**152**	P	**Pg**	**06 49 54.6**	**0.0**
NEST				S	**Sg**	**06 49 56.8**	**+0.4**
FNA	**Florina**	**0.41**	**49**	P	**Pb**	**06 50 00.9**	**-0.7**
FNA				S	**Sb**	**06 50 08.7**	**+0.7**
FNA	**Florina**	**0.41**	**49**	P	**Pb**	**06 50 00.9**	**-0.7**
BIA	**Bitola**	**0.57**	**28**	P	**Pb**	**06 50 03.5**	**-0.8**
BIA				S	**Sb**	**06 50 12.5**	**-0.2**
BIA	**Bitola**	**0.57**	**28**	*i* Pg	**Pb**	**06 50 03.7**	**-0.6**
BIA				*i* Sg	**Sb**	**06 50 13.2**	**+0.6**
BIA	**Bitola**	**0.57**	**28**	*i* Pg	**Pb**	**06 50 03.7**	**-0.6**
BIA				S	**Sb**	**06 50 12.5**	**-0.2**
BIA				*i* Sg	**Sb**	**06 50 13.2**	**+0.6**
KZN	**Kozani**	**0.64**	**109**	P	**Pb**	**06 50 04.8**	**-0.8**
KZN				S	**Sn**	**06 50 16.2**	**-1.9**
KZN	**Kozani**	**0.64**	**109**	*e*PN	**Pb**	**06 50 05.0**	**-0.6**
KZN				*e*SN	**Sb**	**06 50 15.6**	**+0.8**
KZN	**Kozani**	**0.64**	**109**	P	**Pb**	**06 50 04.8**	**-0.8**
KZN				*e*Sn	**Sb**	**06 50 15.6**	**+0.8**
GRG	**Griva**	**1.17**	**67**	P	**Pg**	**06 50 15.1**	**+0.7**
GRG				S	**Sn**	**06 50 33.6**	**+2.5**
GRG	**Griva**	**1.17**	**67**	P	**Pg**	**06 50 15.1**	**+0.7**
KEK	**Kerkira**	**1.21**	**229**	*e*PB	**Pg**	**06 50 15.7**	**+0.5**
KEK	**Kerkira**	**1.21**	**229**	*e*Pb	**Pg**	**06 50 15.7**	**+0.5**
LIT	**Litokhoron**	**1.23**	**109**	P	**Pg**	**06 50 16.6**	**+1.0**
LIT	**Litokhoron**	**1.23**	**109**	*e*PN	**Pn**	**06 50 14.2**	**-1.4**
LIT	**Litokhoron**	**1.23**	**109**	*e*Pn	**Pn**	**06 50 14.3**	**-1.4**
LIT	**Litokhoron**	**1.23**	**109**	P	**Pg**	**06 50 16.6**	**+1.0**
THL	**Klokotos Trika**	**1.24**	**140**	*e*PN	**Pn**	**06 50 14.3**	**-1.5**
THL				*e*SN	**Sn**	**06 50 33.8**	**+1.1**
THL	**Klokotos Trika**	**1.24**	**140**	*e*Pn	**Pn**	**06 50 14.3**	**-1.5**
THL				*e*Sn	**Sn**	**06 50 33.8**	**+1.1**
EVR	**Evrytania**	**1.72**	**158**	*e*PB	**Pg**	**06 50 24.7**	**-0.3**
EVR	**Evrytania**	**1.72**	**158**	*e*Pb	**Pg**	**06 50 24.7**	**-0.3**
LKD2	**Lefkada island**	**1.74**	**188**	*e*PN	**Pb**	**06 50 24.4**	**+0.1**
LKD2	**Lefkada island**	**1.74**	**188**	*e*Pn	**Pb**	**06 50 24.4**	**+0.1**
AGG	**Agios Georgios**	**1.82**	**145**	*e*PN	**Pn**	**06 50 23.6**	**-0.2**
AGG	**Agios Georgios**	**1.82**	**145**	*e*Pn	**Pn**	**06 50 23.6**	**-0.2**

*CSEM **16** 06:53:20.4, 39°.70N×29°.47E, h7km, MD2.9, After DDA*

DDA 16 06:53:20.4, 39°.70N×29°.47E, h7km, MD2.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.61**	**179**	*i* P	Pg	06 53 31.6	-0.8
GDZ				*i* S	Sb	06 53 41.6	-1.0
GDZ	**Gediz**	**0.61**	**179**	*i* P	Pg	06 53 31.6	-0.8
GDZ				*i* S	Sg	06 53 41.6	+1.0
DURS	**Dursunbey**	**0.77**	**263**	*i* P	Pg	06 53 34.8	-0.6
DURS				*i* S	Sb	06 53 46.8	-0.4
DURS	**Dursunbey**	**0.77**	**263**	*i* P	Pg	06 53 34.8	-0.6
DURS				*i* S	Sb	06 53 46.8	-0.3
DEMI	**Demirci**	**0.88**	**222**	*i* P	Pb	06 53 38.1	-0.1
DEMI				*i* S	Sn	06 53 52.9	+0.4
DEMI	**Demirci**	**0.88**	**222**	*i* P	Pb	06 53 38.1	0.0
DEMI				*i* S	Sn	06 53 52.9	+0.5
SEYT	**Eskypehyr**	**1.08**	**99**	*i* P	Pg	06 53 41.4	0.0
SEYT				*i* S	Sn	06 53 59.8	+2.2
SEYT	**Eskypehyr**	**1.08**	**99**	*i* P	Pg	06 53 41.4	0.0
SEYT				*i* S	Sn	06 53 59.8	+2.2
BALY	**Balya**	**1.43**	**272**	*i* P	Pg	06 53 47.6	-0.2
BALY				*i* S	Sg	06 54 08.2	+1.9
**BAL

MAT	**Matsushiro**	**1.43 290**	P		**Pn**	**07 19 37.9**	**+0.2**
MAT			S		**Sn**	**07 19 54.5**	**-0.9**
JHJ	**Hachijo jima 2**	**2.93 182**	P		**Pn**	**07 19 58.3**	**+0.2**
	72nm,0.3s,baz=318,slow=13,SNR=31						
JHJ			S		**Sn**	**07 20 31.1**	**-0.9**
	71nm,0.3s,baz=39,slow=23,SNR=11						
JNU	**Nakatsue**	**7.97 251**	LR		LR	07 23 26.2	
	comp=Z,41nm,18.1s,baz=298,slow=32						
KSRS	**Korea Array**	**9.70 282**	P		**Pn**	**07 21 33.1**	**+2.3**
	0.3nm,0.3s,baz=79,slow=19,SNR=3.3						
KSRS			LR		LR	07 25 10.6	
	comp=Z,84nm,21.2s,baz=158,slow=37						
USRK	**Ussuriysk Arra**	**10.12 326**	P		**Pn**	**07 21 38.9**	**+2.2**
	0.2nm,0.3s,baz=129,slow=15,SNR=7.1						
USRK			LR		LR	07 25 16.5	
	comp=Z,49nm,18.9s,baz=291,slow=36						
CMAR	**Chiang Mai Arr**	**40.05 255**	P		**P**	**07 26 42.7**	**-1.9**
	1.4nm,0.6s,baz=70,slow=7,SNR=5.2						
ZALV	**Zalesovo Beam**	**41.67 313**	P		**P**	**07 26 57.1**	**-0.3**
	3.1nm,0.6s,baz=93,slow=6.5,SNR=6.9						
MKAR	**Makanchi Array**	**43.60 303**	P		**P**	**07 27 12.5**	**-0.7**
	0.8nm,0.6s,baz=89,slow=9.2,SNR=5.6						
KURBB	**Kurchatov Arra**	**45.64 309**	P		**P**	**07 27 28.9**	**-0.5**
	2.0nm,0.4s,baz=85,slow=8.1,SNR=18						
AAK	**Ala-Archa**	**49.87 299**	P		**P**	**07 28 01.1**	**-1.4**
	1.6nm,0.8s,baz=110,slow=5.0,SNR=4.6						
AAK			LR		LR	07 48 58.2	
	comp=Z,23nm,20.3s,baz=72,slow=36						
BVAR	**Borovoye Array**	**50.32 313**	P		**P**	**07 28 05.1**	**-0.5**
	0.6nm,0.6s,baz=85,slow=9.1,SNR=4.0						
ILAR	**Eielson Array**	**50.98 32**	P		**P**	**07 28 11.1**	**+0.8**
	0.6nm,0.8s,baz=278,slow=8.9,SNR=5.7						
INK	**Inuvik**	**55.82 27**	P		**P**	**07 28 45.9**	**+0.2**
	0.4nm,0.6s,baz=327,slow=7.7,SNR=4.1						
AKTO	**Aktyubinsk**	**58.41 312**	P		**P**	**07 29 05.2**	**+0.9**
	1.6nm,0.9s,baz=34,slow=10,SNR=4.0						
ASAR	**Alice Springs**	**59.66 186**	P		**P**	**07 29 13.1**	**-0.2**
	0.3nm,0.7s,baz=8.8,slow=7.8,SNR=4.0						
YKA	**Yellowknife Ar**	**65.27 30**	P		**P**	**07 29 50.7**	**+0.5**
	0.4nm,0.8s,baz=300,slow=6.6,SNR=7.2						
FINES	**FINESS Array B**	**69.10 332**	P		**P**	**07 30 13.8**	**-0.7**
	2.4nm,0.9s,baz=126,slow=14,SNR=3.9						
KBZ	**Khabaz**	**70.59 310**	P		**P**	**07 30 24.4**	**+0.4**
	0.9nm,0.3s,baz=354,slow=7.7,SNR=3.6						
NOA	**NORSAR Array B**	**74.60 337**	LR		LR	08 10 04.3	
	comp=Z,14nm,19.1s,baz=30,slow=41						
NVAR	**Mina Array Bea**	**76.57 52**	P		**P**	**07 30 59.7**	**+0.2**
	0.9nm,0.7s,baz=240,slow=2.9,SNR=4.3						

NOU ***16*** *08:06:16.8±1.5, 15°.05S×168°.85E, h30km±999km, MD3.6, ML4.3*
ISCJB ***16*** *08:06:23.5±0.9, 15°.10S±0°.06×167°.3E±0°.2, h150km, mb3.8/5, Error ellipse: s-maj=31.4km s-min=7.9km az=1.1*
IDC ***16*** *08:06:23.4±5.7, 15°.14S×167°.47E, h140km±57km, mb3.7/5, mb1 3.8/6, mb1mx3.6/19, mbtmp3.7/6, MS2.9/1, Ms1 2.9/1, ms1mx2.3/32, Error ellipse: s-maj=53.4km s-min=30.4km az=143.0*

ISC 16 08:06:24.3±1.0, 15°.13S±0°.08×167°.5E±0°.2, h150km, n14, σ0s94/14, mb3.8/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.97 188**		*eP*	**Pn**	**08 08 04.1**	**0.0**
DZM				*eS*	**Sn**	**08 09 22.5**	**+0.2**
DZM				AMP		08 09 27.6	
	comp=Z,424nm,1.7s						
DZM	**Mont Dzumac**	**6.97 188**		P	**Pn**	**08 08 03.3**	**-0.8**
	comp=Z,5.7nm,0.3s,baz=19,slow=14,SNR=47						
DZM				S	**Sn**	**08 09 21.0**	**-1.4**
	comp=Z,2.2nm,0.3s,baz=142,slow=19,SNR=6.6						
NOUC	**Port Laguerre**	**7.02 189**		*eS*	**Sn**	**08 09 25.4**	**+2.0**
PLUM	**Mont Dore**	**7.15 186**		*eS*	**Sn**	**08 09 27.0**	**+0.5**
HNR	**Honiara**	**9.28 307**		LR	LR	08 11 42.4	
	comp=Z,75nm,20.2s,baz=327,slow=34						
STKA	**Stephens Creek**	**26.89 230**		P	**P**	**08 12 09.9**	**+0.8**
	comp=Z,6.1nm,0.6s,baz=38,slow=8.0,SNR=16						
ASAR	**Alice Springs**	**32.72 250**		P	**P**	**08 12 42.0**	**-0.9**
	comp=Z,2.9nm,0.8s,baz=83,slow=9.0,SNR=32						
SONM	**Songino Array**	**82.93 324**		P	**P**	**08 18 33.1**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=152,slow=6.5,SNR=3.3						
ILAR	**Eielson Array**	**86.84 18**		P	**P**	**08 18 51.8**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=239,slow=4.3,SNR=4.2						
VNA3	**Neumayer Olymp**	**93.82 181**		*eP*	**P**	**08 19 23.8**	**-0.3**
VNA2	**Neumayer--Watz**	**94.09 182**		*eP*	**P**	**08 19 25.3**	**0.0**
	baz=197,slow=4.5						
MKAR	**Makanchi Array**	**97.63 316**		P	Pdif	08 19 42.1	+0.2
	comp=Z,0.4nm,0.7s,baz=105,slow=6.0,SNR=4.8						
ARCES	**ARCESS Array B**	**120.69 345**		PKP	**PKPdf**	**08 24 57.2**	**-0.6**
	comp=Z,4.6nm,0.9s,baz=64,slow=2.8,SNR=6.8						
TORD	**Torodi Ar. Bea**	**166.07 264**		PKP	**PKPdf**	**08 26 12.1**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=102,slow=0.8,SNR=3.4						

IDC ***16*** *08:14:54.5±6.5, 30°.14S×179°.07W, h333km±68km, mb2.9/2, mb1 3.3/3, mb1mx3.1/17, mbtmp3.1/3, Error ellipse: s-maj=73.4km s-min=33.0km az=170.0*

ISC 16 08:14:54.0±1.3, 30°.06S±0°.09×179°.6W±0°.3, h300km, n39, σ1s59/41, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**7.68 193**		PN	**Pn**	**08 16 46.2**	**+2.7**
MXZ				SN	**S**	**08 18 13.7**	**+1.4**
PUZ	**Puketiti**	**8.19 192**		PN	**Pn**	**08 16 50.3**	**+0.6**
PUZ				SN	**S**	**08 18 22.9**	**-0.8**
EDRZ	**Edgecumbe**	**8.58 200**		SN	**S**	**08 18 28.3**	**-4.4**
MWZ	**Matawai**	**8.59 195**		PN	**Pn**	**08 16 53.9**	**-0.8**
MWZ				SN	**S**	**08 18 31.9**	**-0.9**
CNGZ	**Carnagh Statio**	**8.60 192**		PN	**P**	**08 16 59.2**	**-0.7**
CNGZ				SN	**S**	**08 18 34.8**	**+1.9**
URZ	**Urewera**	**8.62 198**		P	**Pn**	**08 16 57.1**	**+2.0**
	1.8nm,0.3s,baz=282,slow=3.2,SNR=36						
URZ				S	**S**	**08 18 35.7**	**+2.3**
	10nm,0.3s,baz=258,slow=24,SNR=15						
KNZ	**Kokohu**	**9.22 193**		PN	**Pn**	**08 17 03.4**	**+1.1**
BKZ	**Black Stump Fm**	**9.64 198**		PN	Pn	08 17 02.2	-5.3
MCHZ	**McNeill Hill**	**9.84 197**		PN	**P**	**08 17 12.3**	**-1.5**
FWVZ	**Far West T-bar**	**10.00 202**		PN	**Pn**	**08 17 14.4**	**+2.2**
TRVZ	**Turoa**	**10.04 202**		PN	**Pn**	**08 17 15.0**	**+2.2**
WNVZ	**Wahianoa**	**10.05 202**		PN	**Pn**	**08 17 15.1**	**+2.3**
BHHZ	**Black Hill Sta**	**10.06 200**		PN	**Pn**	**08 17 12.2**	**-0.6**
KAHZ	**Kahuranaki**	**10.13 196**		PN	**Pn**	**08 17 15.4**	**+1.7**
PXZ	**Pawanui**	**10.36 195**		PN	**Pn**	**08 17 15.6**	**-0.8**
PNHZ	**Pukenui**	**10.41 198**		PN	**Pn**	**08 17 18.0**	**+0.9**
TSZ	**Takapari Road**	**10.62 199**		PN	**Pn**	**08 17 18.9**	**-0.6**
PRHZ	**Porangahau**	**10.64 196**		PN	**Pn**	**08 17 21.0**	**+1.2**
DVHZ	**Dannevirke**	**10.78 198**		PN	**Pn**	**08 17 22.0**	**+0.4**
PRWZ	**Pori Road**	**11.07 198**		PN	**Pn**	**08 17 26.3**	**+1.2**
BFZ	**Birch Farm**	**11.12 197**		PN	**Pn**	**08 17 27.1**	**+1.4**
MRZ	**Mangatainoka R**	**11.28 199**		PN	**Pn**	**08 17 26.7**	**-1.0**
TIWZ	**Tintock**	**11.30 198**		PN	**Pn**	**08 17 28.1**	**+0.1**
HOWZ	**Holdsworth Sta**	**11.52 199**		PN	**Pn**	**08 17 30.1**	**-0.5**
OGWZ	**Otaki Gorge**	**11.54 200**		PN	**Pn**	**08 17 29.8**	**-1.0**
TMWZ	**Te Maipa**	**11.61 197**		PN	**Pn**	**08 17 32.1**	**+0.3**
KIW	**Kapiti Island**	**11.66 201**		PN	**Pn**	**08 17 32.9**	**+0.6**
MTW	**Mount Morrison**	**11.77 198**		PN	**Pn**	**08 17 33.3**	**-0.2**
CAW	**Cannon Point**	**11.84 200**		PN	**Pn**	**08 17 34.5**	**0.0**
TCW	**Tory Channel**	**12.19 202**		PN	**Pn**	**08 17 39.1**	**+0.5**
PLWZ	**Palliser**	**12.22 199**		PN	**Pn**	**08 17 38.4**	**-0.6**
ASAR	**Alice Springs**	**41.74 267**		P	**P**	**08 22 15.6**	**+1.0**
	0.3nm,0.5s,baz=101,slow=6.7,SNR=7.6						
ASAR				PcP	**PcP**	**08 24 05.0**	**+0.2**
	0.5nm,1.0s,baz=118,slow=4.4,SNR=4.5						
NVAR	**Mina Array Bea**	**88.94 44**		P	P	08 27 11.2	-3.8
	0.8nm,0.5s,baz=221,slow=9.5,SNR=4.1						
MKAR	**Makanchi Array**	**116.50 311**		PKP	**PKPdf**	**08 32 58.5**	**-3.5**
	0.2nm,0.5s,baz=92,slow=0.4,SNR=3.0						
ARCES	**ARCESS Array B**	**137.96 347**		PKhKP	PKPpre	08 33 30.3	
	5.4nm,1.0s,baz=34,slow=3.4,SNR=3.4						
FINES	**FINESS Array B**	**144.34 339**		PKP	PKPbc	08 33 48.9	-4.1
	3.2nm,0.3s,baz=48,slow=4.3,SNR=37						
NB2	**NORSAR Subarra**	**148.19 350**		PKP	**PKPdf**	**08 34 00.2**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=15,slow=2.8						
NOA	**NORSAR Array B**	**148.19 350**		PKPbc	**PKPdf**	**08 34 00.2**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=17,slow=4.3,SNR=4.6						
AKASG	**Malin Array Be**	**150.19 322**		PKPbc	**PKPdf**	**08 34 06.1**	**+2.4**
	comp=Z,0.7nm,0.4s,baz=60,slow=3.2,SNR=3.9						

KRSC 16 08:20:01.4±1.3, 51°.37N×160°.74E, h10km±10km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**1.74 309**		P	Pn	08 20 32.0	+0.3
RUS				S	Sn	08 20 54.3	+0.4
MTVR	**Mutnovka**	**1.94 306**		P	Pn	08 20 35.0	+0.4
MTVR				S	Sn	08 20 59.5	+0.4
PET	**Petropavlovsk**	**2.10 323**		S	Sn	08 21 02.1	-0.5
SDLR	**Sedlovina**	**2.23 330**		P	Pn	08 20 39.5	+1.0
AVH	**Avacha**	**2.26 328**		P	Pn	08 20 40.0	+1.1
SKR	**Severo-Kuril's**	**3.00 259**		S	Sn	08 21 26.3	+1.4

NNC ***16*** *08:20:27.3±6.4, 40°.44N×78°.10E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=57.7km s-min=43.0km az=176.0*

ISC 16 08:20:23.9±5.5, 40°.1N±0°.4×78°.2E±0°.2, h23km, n9, σ2s02/9, 2C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**2.63 326**		P	**Pb**	**08 21 08.9**	**-1.7**
	SNR=57						
KZA	**Kyzart**	**3.01 313**		P	**Pb**	**08 21 14.5**	**-2.6**
	SNR=25						
TKM2	**Tokmak 2**	**3.46 326**		⇓Pn	**Pn**	**08 21 19.4**	**+2.8**
	15nm,0.4s						
TKM2				⇑Lg	Lg	08 22 08.1	
	24nm,0.6s						
TKM2	**Tokmak 2**	**3.46 326**		P	**Pb**	**08 21 24.5**	**-0.2**
	SNR=8.3						
KBK	**Karagaybulak**	**3.57 317**		P	**Pb**	**08 21 24.8**	**-1.6**
	SNR=5.8						
AAK	**Ala-Archa**	**3.80 314**		P	**Pb**	**08 21 28.5**	**-1.8**
	SNR=8.4						
USP	**Osgenovka**	**4.24 320**		P	**Pb**	**08 21 36.9**	**-0.9**
	SNR=23						
KK31	**Karatay Array**	**6.53 300**		⇓Pg	**Pb**	**08 22 16.0**	**-0.7**
	0.9nm,0.6s,baz=112,slow=16,SNR=9.4						
KK31				⇓Lg	Lg	08 23 40.3	
	1.9nm,0.5s,baz=111,slow=27,SNR=5.1						
MK31	**Makanchi Array**	**7.34 22**		⇓Pn	**Pn**	**08 22 10.1**	**+0.5**
	0.2nm,0.3s,baz=192,slow=13,SNR=4.3						
MK31				⇑Lg	Lg	08 24 09.5	
	2.3nm,0.9s,baz=201,slow=22,SNR=4.1						

TAP ***16*** *08:23:08.0, 24°.84N×121°.98E, h3km, ML3.6, C*
IDC ***16*** *08:23:23.1±8.0, 24°.68N×121°.10E, h121km±77km, mb3.2/4, mb1 3.3/5, mb1mx3.0/25, mbtmp3.3/5, Error ellipse: s-maj=58.9km s-min=25.0km az=69.0*

ISC 16 08:23:08.7±1.1, 24°.82N±0°.02×122°.01E±0°.03, h5km±8km, n43, σ0s76/56, mb3.4/4, 2C-5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.18 354**		⇓*i*P	**Pg**	**08 23 12.4**	**0.0**
	baz=2.0						
TWB1				S	**Sg**	**08 23 14.8**	**0.0**
	baz=2.0						
TWC	**Suao**	**0.26 214**		⇑*i*P	**Pg**	**08 23 13.9**	**+0.2**
	baz=208						
TWC				*e*S	**Sg**	**08 23 17.3**	**+0.1**
	baz=208						
NWF	**Wu-fen Shan**	**0.32 320**		⇓*i*P	**Pg**	**08 23 15.2**	**+0.2**
	baz=320						
NWF				*i* S	**Sg**	**08 23 20.3**	**+1.0**
	baz=320						
TWE	**Neicheng**	**0.33 252**		*i* P	**Pg**	**08 23 15.0**	**0.0**
	baz=246						
TWE				S	**Sg**	**08 23 19.7**	**+0.3**
	baz=246						
ENTT	**Nioudou**	**0.44 246**		P	**Pg**	**08 23 17.4**	**+0.1**
	baz=241						
ENTT				*e*S	**Sg**	**08 23 23.9**	**+0.8**
	baz=241						
ENA	**Banau**	**0.46 212**		*e*P	**Pg**	**08 23 17.7**	**0.0**
	baz=208						
ENA				*e*S	**Sg**	**08 23 24.2**	**+0.5**
	baz=208						
TAP1	**Taipei**	**0.49 296**		P	**Pb**	**08 23 18.6**	**-1.2**
	baz=293						
TAP1				*e*S	**Sg**	**08 23 24.6**	**+0.1**
	baz=293						
TAP	**Taipei**	**0.50 295**		*e*P	**Pg**	**08 23 18.6**	**+0.2**
	baz=293						
TAP				*e*S	**Sg**	**08 23 25.4**	**+0.3**
	baz=293						
TWY	**Chenhua**	**0.58 321**		⇓P	**Pb**	**08 23 20.5**	**-1.0**
	baz=320						
TWS1	**Kuangyinshan**	**0.60 297**		P	**Pb**	**08 23 21.4**	**-0.4**
	baz=297						
NSK	**Sanguang**	**0.61 256**		⇓P	**Pg**	**08 23 20.0**	**-0.5**
	baz=253						
NSK				*e*S	**Sg**	**08 23 27.1**	**-1.3**
	baz=253						
NNS	**Nan Shan**	**0.69 237**		*e*P	**Pg**	**08 23 21.6**	**-0.5**
	baz=234						
NNS				*e*S	**Sg**	**08 23 31.6**	**+0.5**
	baz=234						
NCU	**National Centr**	**0.76 281**		*e*P	**Pb**	**08 23 24.5**	**0.0**
	baz=266						
NCU				*e*S	**Sb**	**08 23 35.3**	**+0.2**
	baz=266						
PCYT	**Pengchaiyu**	**0.80**	**4**	⇓*e*P	**Pb**	**08 23 24.8**	**-0.5**
	baz=7.0						
TWD	**Chiawan**	**0.83 207**		P	**Pg**	**08 23 24.4**	**-0.2**
	baz=196						
TWD				*e*S	**Sg**	**08 23 35.2**	**-0.3**
	baz=196						
NSTT	**Nanjuang**	**0.94 258**		*e*P	**Pg**	**08 23 26.3**	**-0.4**
	baz=256						
NSTT				*e*S	**Sn**	**08 23 41.0**	**-1.4**
	baz=256						
HSN	**Hsinchu**	**0.94 269**		*e*P	**Pn**	**08 23 27.6**	**-1.1**
	baz=281						
TWT	**Tachien**	**0.95 233**		*e*P	**Pb**	**08 23 27.4**	**-0.4**
	baz=222						
WHF	**Hehuan Shan**	**0.96 225**		*e*P	**Pg**	**08 23 26.4**	**-0.7**
	baz=223						
YOJ	**Yonaguni jima**	**0.98 111**		*e*P	**Pg**	**08 23 27.1**	**-0.5**
	baz=113						
YOJ				*e*S	**Sg**	**08 23 40.2**	**-0.1**
	baz=113						
ESL	**Shilin**	**1.13 208**		*e*P	**Pg**	**08 23 29.5**	**-1.4**
	baz=206						
NSY	**Sanyi**	**1.21 251**		*e*P	**Pg**	**08 23 32.6**	**+0.7**
	baz=249						
TWQ1	**Liyutan**	**1.22 247**		*e*P	**Pg**	**08 23 33.0**	**+0.8**
	baz=246						
SMLT	**Sun Moon Lake**	**1.38 227**		*e*P	**Pb**	**08 23 34.9**	**-0.2**
	baz=234						
TCU	**Taichung**	**1.39 241**		*e*P	**Pg**	**08 23 36.2**	**+0.9**
	baz=240						
TYC	**Yuchr**	**1.39 229**		*e*P	**Pb**	**08 23 35.0**	**-0.3**
	baz=227						
EHY	**Hungye**	**1.45 206**		*e*P	**Pn**	**08 23 35.1**	**-0.6**
	baz=205						
WNT	**Mingjian**	**1.53 232**		*e*P	**Pg**	**08 23 38.8**	**+0.7**
	baz=224						
TWF1	**Yuli**	**1.60 204**		*e*P	**Pb**	**08 23 38.3**	**-0.6**
	baz=215						
CHN5	**Tsauling**	**1.72 225**		*e*P	**Pb**	**08 23 41.1**	**+0.1**
	baz=214						
CHN4	**Tsaushan**	**1.96 222**		*e*P	**Pb**	**08 23 45.1**	**+0.2**
	baz=208						
WTP	**Ta-pu**	**2.02 219**		⇑*e*P	**Pb**	**08 23 46.3**	**+0.2**
	baz=204						
TWK	**Hsinying**	**2.08 222**		*e*P	**Pb**	**08 23 46.9**	**-0.2**
	baz=222						
CHN1	**Nanshi**	**2.12 220**		*e*P	**Pb**	**08 23 47.0**	**-0.7**
	baz=221						
ECL	**Taimali**	**2.42 204**		*e*P	**Pn**	**08 23 49.0**	**+0.1**
	baz=192						
EAST	**Anshuo**	**2.65 204**		*e*P	**Pn**	**08 23 52.5**	**+0.3**
	baz=193						
SCZT	**Fangliau**	**2.75 208**		*e*P	**Pb**	**08 23 57.3**	**-1.2**
	baz=211						
QZH	**Quanzhou**	**3.10 273**		*e*Pn	Pn	08 23 49.5	-8.9
QZH				Sn	**Sn**	**08 24 34.4**	**-1.6**
QZH				smax	smax		
	comp=N,280nm,0.6s						
QZH				smax	smax		
	comp=E,310nm,1.1s						
QZH				LR	LR		
	comp=N,2μm,6.5s						
QZH				LR	LR		
	comp=E,1μm,7.8s						
QZH				LR	LR		
	comp=Z,1μm,8.0s						
KSRS	**Korea Array**	**13.57 20**		P	P	08 26 36.0	+5.0

	comp=Z,0.1nm,0.3s,baz=197,slow=11,SNR=6.2						
SONM	**Songino Array**	**26.09 336**		P	**P**	**08 28 43.4**	**-0.1**
	comp=Z,2.6nm,1.0s,baz=151,slow=7.0,SNR=9.6						
ZALV	**Zalesovo Beam**	**40.12 326**		P	**P**	**08 30 44.2**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=110,slow=7.8,SNR=5.4						
ASAR	**Alice Springs**	**49.56 166**		P	**P**	**08 32 02.4**	**+1.4**
	comp=Z,0.2nm,0.7s,baz=348,slow=8.5,SNR=4.3						
YKA	**Yellowknife Ar**	**82.09 23**		P	**P**	**08 35 32.2**	**+2.2**
	comp=Z,0.1nm,0.4s,baz=309,slow=4.4,SNR=3.6						

NIED ***16*** *08:23:00,25°.00N×121°.90E, h5km, Mw4.5 Best double couple: M0 5.71000×10^15 NP1:φs272.00000°, δ77.00000°, λ-82.00000°. NP2:φs60.00000°, δ15.00000°, λ-171.00000°.*
ISCJB ***16*** *08:23:34.5±0.5, 24°.82N±0°.02×122°.02E±0°.03, h0km±3km, mb3.7/7, Error ellipse: s-maj=4.1km s-min=3.2km az=0.5*
TAP ***16*** *08:23:34.1, 24°.84N×122°.00E, h12km, ML4.1, B*
IDC ***16*** *08:23:51.8±5.1, 24°.75N×121°.48E, h170km±52km, mb3.2/7, mb1 3.3/8, mb1mx3.2/25, mbtmp3.2/8, Error ellipse: s-maj=23.8km s-min=19.1km az=97.0*

ISC 16 08:23:35.2±0.7, 24°.82N±0°.02×122°.01E±0°.03, h20km±2km, n57, σ1s24/78, mb3.7/7, 2C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.19 354**		*i* P	**Pg**	**08 23 38.3**	**-1.8**
	baz=350						
TWB1				S	**Sg**	**08 23 40.9**	**-2.5**
	baz=350						
ILA	**Ilan**	**0.25 257**		*e*P	**Pg**	**08 23 39.4**	**-1.6**
	baz=244						
ILA				S	**Sg**	**08 23 43.9**	**-1.1**
	baz=244						
TWC	**Suao**	**0.26 215**		⇑*i*P	**Pg**	**08 23 39.9**	**-1.3**
	baz=213						
TWC				S	**Sg**	**08 23 43.4**	**-1.9**
	baz=213						
NWF	**Wu-fen Shan**	**0.32 320**		⇓P	**Pb**	**08 23 41.3**	**-1.0**
	baz=313						
NWF				*i* S	**Sb**	**08 23 46.3**	**-0.9**
	baz=313						
TWE	**Neicheng**	**0.33 252**		P	**Pg**	**08 23 41.0**	**-1.3**
	baz=241						
TWE				S	**Sg**	**08 23 45.6**	**-1.5**
	baz=241						
ENTT	**Nioudou**	**0.44 246**		*e*P	**Pb**	**08 23 43.5**	**-0.9**
	baz=244						
ENTT				*e*S	**Sb**	**08 23 49.6**	**-1.1**
	baz=244						
ENA	**Nanau**	**0.46 212**		*e*P	**Pb**	**08 23 44.5**	**-0.2**
	baz=216						
ENA				*e*S	**Sg**	**08 23 50.1**	**-1.0**
	baz=216						
TAP1	**Taipei**	**0.49 296**		P	**Pb**	**08 23 44.6**	**-0.6**
	baz=287						
TAP1				*e*S	**Sb**	**08 23 50.8**	**-1.1**
	baz=287						
TAP	**Taipei**	**0.51 295**		*e*P	**Pb**	**08 23 44.8**	**-0.7**
	baz=287						
TAP				S	**Sb**	**08 23 51.5**	**-0.8**
	baz=287						
EHP	**Heping Village**	**0.57 206**		*e*P	**Pb**	**08 23 46.8**	**+0.4**
	baz=198						
EHP				*e*S	**Sb**	**08 23 54.5**	**+0.5**
	baz=198						
TWY	**Chenhua**	**0.58 320**		P	**Pb**	**08 23 46.2**	**-0.5**
	baz=318						
TWS1	**Kuangyinshan**	**0.60 297**		P	**Pb**	**08 23 47.1**	**+0.1**
	baz=295						
TWS1				*e*S	**Sb**	**08 23 55.2**	**+0.1**
	baz=295						
NSK	**Sanguang**	**0.61 256**		⇓P	**Pg**	**08 23 46.2**	**-1.2**
	baz=264						
NSK				*e*S	**Sg**	**08 23 53.0**	**-2.7**
	baz=264						
NNS	**Nan Shan**	**0.69 237**		*e*P	**Pb**	**08 23 48.1**	**-0.6**
	baz=237						
NNS				*e*S	**Sg**	**08 23 56.9**	**-1.4**
	baz=237						
NCU	**National Centr**	**0.76 281**		*e*P	**Pn**	**08 23 49.9**	**-0.9**
	baz=279						
NCU				S	**Sn**	**08 24 00.5**	**-1.3**
	baz=279						
TWD	**Chiawan**	**0.83 207**		*e*P	**Pb**	**08 23 50.5**	**-0.5**
	baz=209						
TWD				*e*S	**Sg**	**08 24 01.3**	**-1.2**
	baz=209						
HWA	**Hwalien**	**0.92 204**		*e*P	**Pn**	**08 23 53.0**	**0.0**
	baz=205						
NSTT	**Nanjuang**	**0.94 258**		*e*P	**Pn**	**08 23 53.1**	**-0.2**
	baz=258						
NSTT				*e*S	**Sn**	**08 24 06.0**	**-0.1**
	baz=258						
HSN	**Hsinchu**	**0.95 269**		*e*P	**Pn**	**08 23 52.8**	**-0.6**
	baz=285						
HSN				*e*S	**Sn**	**08 24 06.2**	**-0.1**
	baz=285						
TWT	**Tachien**	**0.95 233**		*e*P	**Pn**	**08 23 53.1**	**-0.4**
	baz=230						
WHF	**Hehuan Shan**	**0.96 225**		*e*P	**Pg**	**08 23 52.8**	**-1.2**
	baz=227						
WHF				*e*S	**Sg**	**08 24 05.5**	**-1.2**
	baz=227						
YOJ	**Yonaguni jima**	**0.98 111**		*e*P	**Pn**	**08 23 53.8**	**0.0**
	baz=115						
YOJ				*e*S	**Sn**	**08 24 07.0**	**-0.1**
	baz=115						
ESL	**Shilin**	**1.14 208**		*e*P	**Pb**	**08 23 55.4**	**-0.7**
	baz=210					

	comp=N,80nm,0.8s					
NJ2				smax	smax	
	comp=E,90nm,1.0s					
NJ2				LR	LR	
	comp=N,540nm,9.3s					
NJ2				LR	LR	
	comp=E,540nm,11.7s					
NJ2				LR	LR	
	comp=Z,740nm,10.5s					
KSRS	**Korea Array**	**13.56 20**		P	P	08 27 01.7 +6.3
	comp=Z,0.2nm,0.3s,baz=197,slow=12,SNR=8.5					
LZH	**Lanzhou**	**19.23 310**	*eP*		**Pn**	**08 28 03.3 +3.9**
LZH				pP	pP	08 28 07.5 +3.5
LZH				sP	sP	08 28 10.5 +4.0
LZH				pmax	pmax	
	comp=Z,17nm,1.0s					
USRK	**Ussuriysk Arra**	**20.98 20**		P	Pn	08 28 23.2 +3.5
	comp=Z,1.5nm,0.7s,baz=224,slow=11,SNR=3.6					
CMAR	**Chiang Mai Arr**	**22.34 258**		P	**P**	**08 28 31.4 -0.6**
	comp=Z,0.2nm,0.3s,baz=61,slow=7.7,SNR=2.6					
GTA	**Gaotai**	**23.68 313**	*eP*		**P**	**08 28 47.5 +1.8**
GTA				pP	**pP**	**08 28 53.3 +1.7**
GTA				sP	**sP**	**08 28 55.8 +1.7**
GTA				pmax	pmax	
	comp=Z,4.0nm,1.3s					
SONM	**Songino Array**	**26.09 336**		P	**P**	**08 29 08.4 +0.8**
	comp=Z,5.4nm,1.0s,baz=153,slow=7.2,SNR=16					
MKAR	**Makanchi Array**	**38.41 315**		P	**P**	**08 30 53.9 -1.5**
	comp=Z,1.4nm,0.8s,baz=106,slow=11,SNR=5.0					
ZALV	**Zalesovo Beam**	**40.13 326**		P	**P**	**08 31 08.9 -0.6**
	comp=Z,2.7nm,0.8s,baz=110,slow=6.8,SNR=8.5					
ASAR	**Alice Springs**	**49.56 166**		P	**P**	**08 32 25.6 +0.7**
	comp=Z,0.6nm,0.8s,baz=338,slow=6.5,SNR=5.7					
YKA	**Yellowknife Ar**	**82.09 23**		P	**P**	**08 35 54.7 +0.7**
	comp=Z,0.5nm,0.8s,baz=315,slow=5.0,SNR=6.8					

TAP 16 08:24:20.7,24.84N×122.00E,h8km,ML3.5,3D,C, Taiwan region

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.17 356**	⇓*iP*	Pg	08 24 24.8	+0.6
	baz=358					
TWB1			*i* S	Sg	08 24 27.3	+0.8
	baz=358					
ILA	**Ilan**	**0.24 252**	*eP*	Pg	08 24 26.6	+1.1
	baz=252					
ILA			*eS*	Sg	08 24 30.3	+1.5
	baz=252					
TWC	**Suao**	**0.27 211**	P	Pg	08 24 26.4	+0.3
	baz=210					
TWC			*eS*	Sg	08 24 29.7	+0.1
	baz=210					
NWF	**Wu-fen Shan**	**0.30 319**	⇓*iP*	Pb	08 24 27.8	-0.8
	baz=305					
NWF			*i* S	Sb	08 24 32.5	-1.4
	baz=305					
TWE	**Neicheng**	**0.33 249**	*i* P	Pg	08 24 27.6	+0.5
	baz=248					
TWE			S	Sg	08 24 32.1	+0.7
	baz=248					
ENTT	**Nioudou**	**0.44 243**	P	Pg	08 24 29.9	+0.5
	baz=243					
ENTT			*eS*	Sg	08 24 36.1	+0.8
	baz=243					
ENA	**Nanau**	**0.47 210**	*eP*	Pb	08 24 30.8	-0.6
	baz=216					
ENA			*eS*	Sg	08 24 37.0	+0.8
	baz=216					
TAP1	**Taipei**	**0.48 295**	*eP*	Pb	08 24 31.1	-0.3
	baz=293					
TAP1			*eS*	Sb	08 24 37.8	-0.8
	baz=293					
TAP	**Taipei**	**0.49 294**	*eP*	Pb	08 24 31.1	-0.5
	baz=293					
TAP			*eS*	Sb	08 24 38.0	-1.0
	baz=293					
TWY	**Chenhua**	**0.57 320**	⇓*eP*	Pb	08 24 32.7	-0.2
	baz=319					
TWS1	**Kuangyinshan**	**0.59 296**	*eP*	Pb	08 24 33.7	+0.4
	baz=296					
NSK	**Sanguang**	**0.61 254**	*eP*	Pg	08 24 32.3	-0.2
	baz=254					
NSK			*eS*	Sg	08 24 39.6	-1.0
	baz=254					
NNS	**Nan Shan**	**0.70 235**	*eP*	Pg	08 24 34.8	+0.5
	baz=235					
NNS			*eS*	Sg	08 24 43.3	-0.3
	baz=235					
NCU	**National Centr**	**0.75 280**	*eP*	Pb	08 24 36.2	+0.1
	baz=279					
NCU			*eS*	Sb	08 24 47.0	+0.5
	baz=279					
TWD	**Chiawan**	**0.84 206**	*eP*	Pg	08 24 37.1	+0.2
	baz=198					
TWD			*eS*	Sg	08 24 47.9	0.0
	baz=198					
NSTT	**Nanjuang**	**0.93 257**	*eP*	Pb	08 24 39.6	+0.4
	baz=257					
NSTT			*eS*	Sb	08 24 52.5	+0.7
	baz=257					
WHF	**Hehuan Shan**	**0.96 224**	*eP*	Pg	08 24 39.8	0.0
	baz=225					
YOJ	**Yonaguni jima**	**0.99 112**	*eP*	Pg	08 24 39.8	0.0
	baz=114					
YOJ			*eS*	Sg	08 24 51.6	-1.1
	baz=114					
NSY	**Sanyi**	**1.21 250**	*eP*	Pn	08 24 44.8	+0.8
	baz=269					
TYC	**Yuchr**	**1.40 228**	*eP*	Pn	08 24 46.8	+0.2
	baz=220					

IDC 16 08:25:45.7±3.1,2.66S×101.05E,h0km,mb3.5/5, mb1 3.6/5,mb1mx3.5/23,mbtmp3.5/5,Error ellipse: s-maj=137.9km s-min=25.0km az=59.0,Southern Sumatera

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.09 354**	P	P	08 30 33.3	+1.5
	0.3nm,0.3s,baz=180,slow=9.7,SNR=4.3					
ASAR	**Alice Springs**	**38.02 126**	P	P	08 33 06.1	+0.1
	0.5nm,0.7s,baz=301,slow=7.5,SNR=2.9					
SONM	**Songino Array**	**50.50 5**	P	P	08 34 44.7	-1.1
	0.7nm,0.6s,baz=182,slow=8.1,SNR=3.5					
MKAR	**Makanchi Array**	**51.95 344**	P	P	08 34 56.2	-0.2
	0.9nm,0.7s,baz=157,slow=7.5,SNR=7.7					
ZALV	**Zalesovo Beam**	**58.01 349**	P	P	08 35 40.3	+0.1
	0.4nm,0.6s,baz=150,slow=6.1,SNR=3.2					
TXAR	**Lajitas Array**	**144.57 39**	PKP	PKPbc	08 45 24.3	+0.5
	0.9nm,0.7s,baz=298,slow=1.9,SNR=11					

TAP 16 08:32:22.8,24.83N×122.00E,h6km±1km,ML3.5,1C-2D, C,Taiwan

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.18 357**	⇓*iP*	Pg	08 32 27.1	+0.7
	baz=357					
TWB1			*i* S	Sg	08 32 29.8	+1.0
	baz=357					
TWC	**Suao**	**0.26 212**	⇑*iP*	Pg	08 32 28.5	+0.6
	baz=212					
TWC			*eS*	Sg	08 32 32.0	+0.7
	baz=212					
NWF	**Wu-fen Shan**	**0.31 320**	⇓*iP*	Pb	08 32 30.1	-0.9
	baz=306					
NWF			*i* S	Sb	08 32 35.2	-1.2
	baz=306					
TWE	**Neicheng**	**0.32 250**	P	Pg	08 32 29.7	+0.6
	baz=249					
TWE			*i* S	Sg	08 32 34.1	+0.7
	baz=249					
ENTT	**Nioudou**	**0.44 244**	*i* P	Pg	08 32 32.1	+0.8
	baz=244					
ENTT			*eS*	Sb	08 32 39.4	-0.4
	baz=244					
ENA	**Nanau**	**0.47 210**	*eP*	Pg	08 32 32.6	+0.8
	baz=217					
ENA			*eS*	Sg	08 32 39.2	+1.3
	baz=217					
TAP1	**Taipei**	**0.48 296**	P	Pb	08 32 33.2	-0.5
	baz=294					
TAP1			S	Sb	08 32 40.3	-0.7
	baz=294					
TAP	**Taipei**	**0.49 295**	*eP*	Pn	08 32 35.2	-1.2
	baz=294					
TAP			*eS*	Sb	08 32 40.6	-0.8
	baz=294					
TWY	**Chenhua**	**0.57 321**	*i* P	Pb	08 32 35.2	0.0
	baz=320					
TWS1	**Kuangyinshan**	**0.59 297**	*eP*	Pb	08 32 35.3	-0.3
	baz=297					
NSK	**Sanguang**	**0.60 255**	P	Pg	08 32 34.6	0.0
	baz=255					
NSK			*eS*	Sg	08 32 43.1	+0.6
	baz=255					
NNS	**Nan Shan**	**0.69 236**	P	Pg	08 32 36.6	+0.3
	baz=236					
NNS			*eS*	Sg	08 32 45.9	+0.5
	baz=236					
NCU	**National Centr**	**0.75 281**	*eP*	Pb	08 32 38.3	0.0
	baz=280					
NCU			*eS*	Sn	08 32 50.5	-1.2
	baz=280					
TWD	**Chiawan**	**0.83 206**	P	Pg	08 32 39.2	+0.4
	baz=198					
TWD			*eS*	Sg	08 32 50.0	+0.3
	baz=198					
NSTT	**Nanjuang**	**0.93 258**	*eP*	Pb	08 32 41.5	+0.1
	baz=258					
NSTT			*eS*	Sn	08 32 55.4	-0.7
	baz=258					
HSN	**Hsinchu**	**0.94 268**	*eP*	Pb	08 32 41.5	+0.1
	baz=270					
TWT	**Tachien**	**0.95 233**	*eP*	Pb	08 32 41.8	0.0
	baz=227					
TWT			*eS*	Sb	08 32 55.4	+0.6
	baz=227					
WHF	**Hehuan Shan**	**0.96 225**	*eP*	Pg	08 32 41.2	-0.6
	baz=225					
WHF			*eS*	Sg	08 32 55.0	+0.5
	baz=225					
ESL	**Shilin**	**1.14 207**	*eP*	Pg	08 32 43.0	-1.7
	baz=208					
NSY	**Sanyi**	**1.20 250**	*eP*	Pb	08 32 46.0	0.0
	baz=270					
TWQ1	**Liyutan**	**1.22 247**	*eP*	Pn	08 32 47.0	+0.6
	baz=248					
TWQ1			*eS*	Sn	08 33 05.2	+2.0
	baz=248					
SMLT	**Sun Moon Lake**	**1.38 227**	*eP*	Pn	08 32 48.9	+0.1
	baz=217					
TCU	**Taichung**	**1.39 241**	*eP*	Pg	08 32 51.8	+2.4
	baz=261					
TYC	**Yuchr**	**1.39 229**	*eP*	Pg	08 32 49.7	+0.2
	baz=220					
EHY	**Hungye**	**1.46 205**	*eP*	Pn	08 32 49.5	-0.2
	baz=208					
WNT	**Mingjian**	**1.53 232**	*eP*	Pg	08 32 53.1	+1.0
	baz=223					
TWF1	**Yuli**	**1.61 204**	*eP*	Pb	08 32 52.9	-0.1
	baz=216					
CHN5	**Tsauling**	**1.72 225**	*eP*	Pg	08 32 55.5	-0.4
	baz=228					
CHN5			*eS*	Sg	08 33 21.2	+2.8
	baz=228					
CHKT	**Chengkung**	**1.82 199**	*eP*	Pb	08 32 55.7	-0.8
	baz=217					
ELDTW	**Lidau**	**1.86 209**	*eP*	Pn	08 32 56.1	+0.6
	baz=212					
CHN4	**Tsaushan**	**1.96 221**	*eP*	Pb	08 32 58.7	-0.2
	baz=227					
CHN4			*eS*	Sg	08 33 27.9	+2.2
	baz=227					
WTP	**Ta-pu**	**2.02 219**	*eP*	Pb	08 32 59.2	-0.9
	baz=223					
TWK	**Hsinying**	**2.08 222**	*eP*	Pb	08 33 00.2	-0.9
	baz=225					
CHN1	**Nanshi**	**2.12 220**	*eP*	Pn	08 33 00.1	+1.2
	baz=224					
TWG	**Pinlang**	**2.17 203**	*eP*	Pb	08 33 01.9	-0.8
	baz=207					
ECL	**Taimali**	**2.42 204**	*eP*	Pb	08 33 05.2	-1.6
	baz=195					
SCZT	**Fangliau**	**2.76 208**	*eP*	Pb	08 33 10.2	-2.3
	baz=212					

TAP 16 08:33:31.4,24.33N×122.00E,h13km,ML3.6,C
IDC 16 08:33:32.7±1.6,24.33N×120.76E,h0km,mb3.7/3, mb1 3.8/4,mb1mx3.4/25,mbtmp3.7/4,ML3.5/1,MS3.4/2, Ms1 3.4/2,ms1mx2.6/36,Error ellipse: s-maj=80.9km s-min=27.0km az=72.0

ISC 16 08:33:31.3±1.2,24.80N±0.02×122.03E±0.06,h9km±8km, n42,σ1§23/55,mb3.6/3,1C-4D,Taiwan region

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.21 349**	⇓*iP*	Pg	**08 33 35.7**	**+0.1**
	baz=350					
TWB1			*eS*	Sg	**08 33 38.5**	**-0.1**
	baz=350					
TWC	**Suao**	**0.25 222**	⇑*iP*	Pg	**08 33 37.0**	**+0.6**
	baz=218					
TWC			S	Sg	**08 33 40.6**	**+0.8**
	baz=218					
TWE	**Neicheng**	**0.34 257**	P	Pb	**08 33 38.2**	**-1.4**
	baz=241					
TWE			*eS*	Sb	**08 33 42.7**	**-2.5**
	baz=241					
NWF	**Wu-fen Shan**	**0.35 320**	⇓*iP*	Pb	**08 33 38.6**	**-1.3**
	baz=313					
NWF			*i* S	Sb	**08 33 43.7**	**-2.0**
	baz=313					
ENTT	**Nioudou**	**0.45 250**	P	Pb	**08 33 40.4**	**-1.1**
	baz=245					
ENTT			*eS*	Sb	**08 33 47.2**	**-1.2**
	baz=245					
ENA	**Nanau**	**0.46 216**	*eP*	Pb	**08 33 40.8**	**-0.8**
	baz=216					
ENA			*eS*	Sb	**08 33 48.1**	**-0.4**
	baz=216					
TAP1	**Taipei**	**0.52 297**	P	Pb	**08 33 41.8**	**-0.8**
	baz=288					
TAP1			S	Sb	**08 33 48.9**	**-1.5**
	baz=288					
TAP	**Taipei**	**0.54 297**	*eP*	Pb	**08 33 42.0**	**-0.9**
	baz=288					
TAP			*eS*	Sb	**08 33 48.8**	**-2.0**
	baz=288					
TWY	**Chenhua**	**0.62 320**	⇓*iP*	Pb	**08 33 43.8**	**-0.5**
	baz=320					
NSK	**Sanguang**	**0.63 259**	*i* P	Pb	**08 33 43.2**	**-1.3**
	baz=263					
NSK			*eS*	Sb	**08 33 53.2**	**-0.2**
	baz=263					
TWS1	**Kuangyinshan**	**0.63 298**	⇓*iP*	Pb	**08 33 44.5**	**-0.1**
	baz=296					
TWS1			*eS*	Sb	**08 33 54.0**	**+0.3**
	baz=296					
NNS	**Nan Shan**	**0.70 239**	*eP*	Pb	**08 33 45.1**	**-0.6**
	baz=237					
NNS			*eS*	Sb	**08 33 55.8**	**+0.2**
	baz=237					
NCU	**National Centr**	**0.79 283**	*eP*	Pn	**08 33 47.9**	**-0.8**
	baz=280					
NCU			*eS*	Sn	**08 33 58.5**	**-2.1**
	baz=280					
TWD	**Chiawan**	**0.82 209**	P	Pn	**08 33 47.8**	**-1.2**
	baz=209					
TWD			*eS*	Sb	**08 33 58.8**	**-0.1**
	baz=209					
NSTT	**Nanjuang**	**0.95 260**	*eP*	Pn	**08 33 50.2**	**-0.7**
	baz=259					
NSTT			*eS*	Sn	**08 34 04.3**	**-0.3**
	baz=259					
WHF	**Hehuan Shan**	**0.96 227**	*eP*	Pb	**08 33 49.8**	**-0.6**
	baz=227					
WHF			*eS*	Sn	**08 34 04.1**	**-1.3**
	baz=227					
HSN	**Hsinchu**	**0.97 270**	*eP*	Pn	**08 33 50.2**	**-1.0**
	baz=282					
ESL	**Shilin**	**1.12 209**	*eP*	Pn	**08 33 52.7**	**-0.6**
	baz=209					
NSY	**Sanyi**	**1.22 252**	*eP*	Pn	**08 33 55.5**	**+0.8**
	baz=252					
NSY			*eS*	Sn	**08 34 12.9**	**+1.6**
	baz=252					
TWQ1	**Liyutan**	**1.23 249**	*eP*	Pn	**08 33 55.8**	**+1.0**
	baz=264					
SMLT	**Sun Moon Lake**	**1.38 229**	*eP*	Pg	**08 33 57.8**	**0.0**
	baz=220					
TYC	**Yuchr**	**1.39 231**	*eP*	Pg	**08 33 58.1**	**0.0**
	baz=223					
TCU	**Taichung**	**1.40 243**	*eP*	Pg	08 34 00.3	+2.2
	baz=261					
EHY	**Hungye**	**1.44 207**	*eP*	Pg	**08 33 58.2**	**-0.8**
	baz=207					
WNT	**Mingjian**	**1.53 234**	*eP*	Pg	**08 34 01.4**	**+0.6**
	baz=234					
TWF1	**Yuli**	**1.59 205**	*eP*	Pg	**08 34 00.6**	**-1.2**
	baz=215					
CHN5	**Tsauling**	**1.72 226**	*eP*	Pg	**08 34 04.5**	**+0.2**
	baz=229					
CHN5			*eS*	Sg	**08 34 29.6**	**+2.9**
	baz=229					
CHKT	**Chengkung**	**1.80 200**	*eP*	Pg	**08 34 05.1**	**-0.8**
	baz=183					
CHN4	**Tsaushan**	**1.95 223**	*eP*	Pg	**08 34 07.4**	**-1.4**
	baz=223					
WTP	**Ta-pu**	**2.02 220**	*eP*	Pg	**08 34 08.4**	**-1.6**
	baz=221					
TWK	**Hsinying**	**2.08 223**	*eP*	Pb	**08 34 08.4**	**-0.9**
	baz=223					
CHN1	**Nanshi**	**2.12 221**	*eP*	Pb	**08 34 09.1**	**-0.8**
	baz=222					
TWG	**Pinlang**	**2.16 204**	*eP*	Pg	**08 34 11.4**	**-1.3**
	baz=205					
ECL	**Taimali**	**2.40 204**	*eP*	Pb	**08 34 13.5**	**-1.3**
	baz=193					
EAST	**Anshuo**	**2.64 205**	*eP*	Pb	**08 34 17.6**	**-1.2**
	baz=194					
SCZT	**Fangliau**	**2.74 208**	*eP*	Pb	**08 34 18.3**	**-2.3**
	baz=210					
KSRS	**Korea Array**	**13.58 20**	Pn	P	08 36 59.0	+5.7
	0.2nm,0.3s,baz=200,slow=13,SNR=5.8					
ASAJ	**Asahikawa**	**25.54 36**	LR	LR	08 49 43.9	
	comp=Z,79nm,18.4s,baz=152,slow=36					
SONM	**Songino Array**	**26.12 336**	P	**P**	**08 39 07.3**	**+1.6**
	3.2nm,1.1s,baz=148,slow=8.5,SNR=7.5					
ZALV	**Zalesovo Beam**	**40.16 326**	P	**P**	**08 41 08.8**	**+1.2**
	0.4nm,0.3s,baz=111,slow=8.0,SNR=3.0					
AAK	**Ala-Archa**	**42.75 307**	LR	LR	09 02 09.3	
	comp=Z,60nm,19.7s,baz=297,slow=41					
ASAR	**Alice Springs**	**49.53 166**	P	**P**	**08 42 24.2**	**+1.5**
	0.4nm,0.6s,baz=347,slow=7.2,SNR=4.4					

ISCJB 16 08:42:04.0±0.7,24.81N±0.03×122.06E±0.04,h4km±8km, Error ellipse: s-maj=6.8km s-min=5.0km az=27.7
JMA 16 08:42:04.3±0.1,24.80N×121.90E,h40km,M2.6
TAP 16 08:42:04.1,24.83N×122.01E,h10km±1km,ML3.2,C

ISC 16 08:42:04.2±1.1,24.84N±0.03×122.00E±0.04,h16km±8km, n23,σ0§66/30,Taiwan region

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.17 356**	*i* P	**Pb**	**08 42 08.3**	**-0.7**
	baz=346					
TWB1			*i* S	**Sg**	**08 42 11.1**	**-0.3**
	baz=346					
TWC	**Suao**	**0.27 211**	*eP*	**Pb**	**08 42 09.9**	**-0.7**
	baz=215					
TWC			*eS*	**Sg**	**08 42 13.1**	**-0.9**
	baz=215					
NWF	**Wu-fen Shan**	**0.31 319**	*eP*	**Pb**	**08 42 11.2**	**-0.2**
	baz=308					
NWF			S	**Sb**	**08 42 16.3**	**+0.1**
	baz=308					
TWE	**Neicheng**	**0.33 249**	*i* P	**Pb**	**08 42 11.1**	**-0.5**
	baz=250					
TWE			*eS*	**Sb**	**08 42 15.6**	**-1.0**
	baz=250					
ENTT	**Nioudou**	**0.44 244**	*eP*	**Pb**	**08 42 13.2**	**-0.4**
	baz=245					
ENA	**Nanau**	**0.47 210**	*eP*	**Pb**	**08 42 14.0**	**-0.2**
	baz=213					
TAP1	**Taipei**	**0.48 295**	*eP*	**Pb**	**08 42 14.6**	**+0.4**
	baz=293					
TWY	**Chenhua**	**0.57 320**	*eP*	**Pn**	**08 42 16.5**	**-1.1**
	baz=311					
TWS1	**Kuangyinshan**	**0.59 296**	*eP*	**Pn**	**08 42 17.0**	**-0.9**
	baz=296					
NSK	**Sanguang**	**0.61 255**	*eP*	**Pb**	**08 42 16.6**	**+0.2**
	baz=263					
NNS	**Nan Shan**	**0.69 235**	*eP*	**Pb**	**08 42 17.9**	**-0.1**
	baz=237					
NCU	**National Centr**	**0.75 280**	*eP*	**Pn**	**08 42 20.8**	**+0.6**
	baz=272					
PCYT	**Pengchaiyu**	**0.79 5**	*eP*	**Pn**	**08 42 20.6**	**-0.1**
	baz=2.0					
TWD	**Chiawan**	**0.84 206**	*eP*	**Pn**	**08 42 20.6**	**-0.8**
	baz=201					
NSTT	**Nanjuang**	**0.93 257**	*eP*	**Pn**	**08 42 23.5**	**+0.9**
	baz=250					
TWT	**Tachien**	**0.95 232**	*eP*	**Pn**	**08 42 23.4**	**+0.4**
	baz=228					
WHF	**Hehuan Shan**	**0.96 224**	*eP*	**Pn**	**08 42 23.0**	**-0.4**
	baz=226					
YOJ	**Yonaguni jima**	**0.99 112**	P	**Pn**	**08 42 23.1**	**-0.4**
YOJ			S	**Sn**	**08 42 36.7**	**-0.4**
TWQ1	**Liyutan**	**1.22 247**	*eP*	**Pg**	**08 42 29.0**	**+1.2**
	baz=248					
IRIF	**Iriomote-Funau**	**1.65 107**	S	**Sn**	**08 42 53.8**	**+0.4**
HATJ	**Hateruma jima**	**1.82 115**	S	**Sn**	**08 42 57.8**	**+0.2**
JKRS	**Kuro-shima**	**1.92 108**	P	**Pn**	**08 42 36.6**	**+0.3**
JKRS			S	**Sn**	**08 43 00.2**	**0.0**
JIJ	**Ishigaki jima**	**2.01 103**	P	**Pn**	**08 42 37.9**	**+0.5**
JIJ			S	**Sn**	**08 43 03.1**	**+0.9**

ISCJB 16 08:55:18.2±0.5,5.41S±0.10×68.68E±0.06,h13km, mb4.2/13,MS3.7/16,Error ellipse: s-maj=14.0km s-min=8.0km az=6.5
IDC 16 08:55:18.2±0.8,5.42S×68.61E,h0km,mb4.1/10, mb1 4.2/10,mb1mx4.0/26,mbtmp4.1/10,MS3.7/16, Ms1 3.7/16,ms1mx3.5/31,Error ellipse: s-maj=24.4km s-min=20.6km az=41.0
NEIC 16 08:55:20.0±0.4,5.42S×68.74E±0.07,h10km,mb4.4/3,Error ellipse: s-maj=11.6km s-min=8.4km az=206.0

ISC 16 08:55:20.0±0.6,5.5S±0.1×68.74E±0.07,h13km,n47, σ1§10/38,mb4.3/13,MS3.7/16,Chagos Archipelago region

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**4.15 117**	*ePn*	**Pn**	**08 56 23.0**	**-0.1**
DGAR			*eSn*	**Sn**	**08 57 09.2**	**-2.2**
MSEY	**Mahe Island**	**13.23 273**	*ePn*	**Pn**	**08 58 29.2**	**+1.3**
	20nm,0.6s					
MSEY			*eSn*	**Sn**	**09 00 54.1**	**-0.9**
OPO	**Ambohidratompo**	**24.71 236**	LR	LR	09 08 11.3	
	comp=Z,300nm,21.6s,baz=168,slow=31					
ATD	**Arta Tunnel**	**30.82 303**	LR	LR	09 12 03.1	
	comp=Z,87nm,18.8s,baz=149,slow=33					
PSI	**Prapat**	**31.26 75**	LR	LR	09 12 04.2	
	comp=Z,211nm,20.5s,baz=12,slow=32					
KMBO	**Kilima Mbogo**	**31.73 277**	LR	LR	09 11 31.0	
	comp=Z,169nm,21.3s,baz=97,slow=31					
CMAR	**Chiang Mai Arr**	**38.13 51**	P	**P**	**09 02 40.3**	**+1.1**
CMAR	**Chiang Mai Arr**	**38.13 51**	P	**P**	**09 02 40.3**	**+1.1**
	3.1nm,0.7s,baz=245,slow=9.5,SNR=17					
CMAR			LR	LR	09 16 14.4	
	comp=Z,62nm,19.4s,baz=15,slow=33					
BOSA	**Boshof**	**47.12 236**	P	**P**	**09 03 52.1**	**-0.2**
BOSA	**Boshof**	**47.12 236**	P	**P**	**09 03 52.1**	**-0.2**
	1.6nm,0.9s,baz=98,slow=7.1,SNR=2.5					
MK31	**Makanchi Array**	**53.44 12**	*eP*	**P**	**09 04 39.1**	**-0.6**
MKAR	**Makanchi Array**	**53.44 12**	P	**P**	**09 04 39.0**	**-0.7**
MKAR	**Makanchi Array**	**53.44 12**	P	**P**	**09 04 39.0**	**-0.7**
	1.2nm,0.8s,baz=193,slow=7.6,SNR=9.4					
MKAR			LR	LR	09 24 57.2	
	comp=Z,35nm,20.4s,baz=172,slow=33					
KBZ	**Khabaz**	**54.28 337**	P	**P**	**09 04 45.2**	**-0.6**
KBZ	**Khabaz**	**54.28 337**	P	**P**	**09 04 45.2**	**-0.6**
	2.9nm,0.8s,baz=143,slow=5.6,SNR=4.5					
KBZ			LR	LR	09 27 03.0	
	comp=Z,22nm,19.5s,baz=9.7,slow=35					
ABKAR	**Akbulak array**	**55.07 353**	*eP*	**P**	**09 04 51.9**	**+0.4**
	1.4nm,0.7s					
BRTR	**Keskin Array B**	**55.43 327**	P	**P**	**09 04 54.6**	**+0.1**
BRTR	**Keskin Array B**	**55.43 327**	P	**P**	**09 04 54.7**	**+0.1**
	0.8nm,0.8s,baz=141,slow=7.4,SNR=3.1					
KURK	**Kurchatov**	**56.64 8**	*eP*	**P**	**09 05 02.3**	**-0.4**
	3.4nm,0.9s					
FITZ	**Fitzroy Crossi**	**56.87 108**	P	**P**	**09 05 06.6**	**+1.6**
FITZ	**Fitzroy Crossi**	**56.87 108**	P	**P**	**09 05 06.6**	**+1.6**

3.2nm,0.9s,baz=246,slow=4.0,SNR=6.0
ZAA0 Zalesovo Array 60.76 11 *e*P **P 09 05 30.4 -0.9**
ZALV Zalesovo Beam 60.76 11 P **P 09 05 30.2 -1.2**
ZALV Zalesovo Beam 60.76 11 P **P 09 05 30.2 -1.2**
3.8nm,0.8s,baz=197,slow=7.9,SNR=12
ZALV LR LR 09 31 29.4
comp=Z,29nm,19.0s,baz=78,slow=36
SONM Songino Array 62.58 28 P **P 09 05 44.8 +0.8**
SONM Songino Array 62.58 28 P **P 09 05 44.8 +0.8**
1.8nm,0.8s,baz=212,slow=6.4,SNR=6.9
ASAR Alice Springs 65.08 113 P **P 09 06 01.9 +1.1**
ASAR Alice Springs 65.08 113 P **P 09 06 01.9 +1.1**
2.2nm,0.7s,baz=278,slow=6.2,SNR=36
ASAR LR LR 09 29 56.6
comp=Z,143nm,21.1s,baz=339,slow=32
WRAB Tennant Creek 65.23 109 *e*P **P 09 06 03.3 +1.5**
7.0nm,0.8s
AKASG Malin Array Be 65.50 334 P **P 09 06 02.7 -0.2**
AKASG Malin Array Be 65.50 334 P **P 09 06 02.7 -0.2**
0.2nm,0.3s,baz=148,slow=6.1,SNR=2.2
TORD Torodi Ar. Bea 69.11 286 LR LR 09 32 54.0
comp=Z,73nm,20.8s,baz=230,slow=33
KSRS Korea Array 69.63 47 LR LR 09 36 24.2
comp=Z,45nm,20.1s,baz=224,slow=35
STKA Stephens Creek 72.56 122 LR LR 09 35 07.4
comp=Z,121nm,18.1s,baz=24,slow=33
DBIC Dimbokro 74.44 278 LR LR 09 38 00.8
comp=Z,49nm,19.6s,baz=263,slow=34
FINES FINESS Array B 74.45 340 LR LR 09 39 56.5
comp=Z,38nm,19.4s,baz=316,slow=36
NOA NORSAR Array B 79.81 335 LR LR 09 45 38.9
comp=Z,16nm,19.3s,baz=270,slow=38
ARCES ARCESS Array B 80.45 346 LR LR 09 44 03.4
comp=Z,43nm,18.4s,baz=195,slow=36
YKA Yellowknife Ar 123.08 2 PKP **PKPdf 09 14 15.4 -0.6**
YKA Yellowknife Ar 123.08 2 PKP **PKPdf 09 14 15.4 -0.6**
0.2nm,0.8s,baz=350,slow=1.8,SNR=5.1
PDAR Pinedale Array 142.86 358 PKP **PKPdf 09 14 54.1 0.0**
PDAR Pinedale Array 142.86 358 PKP **PKPdf 09 14 54.1 0.0**
0.7nm,1.1s,baz=51,slow=4.7,SNR=3.0
SMCO Snowmass 146.26 354 *e*PKPbc **PKPab 09 15 02.0 0.0**
NVAR Mina Array Bea 146.61 10 PKPbc **PKPbc 09 15 02.1 0.0**
NVAR Mina Array Bea 146.61 10 PKPbc **PKPbc 09 15 02.1 0.0**
1.1nm,0.6s,baz=333,slow=4.1,SNR=4.2
TXAR Lajitas Array 155.24 344 PKPbc PKPdf 09 15 23.4 +9.4
TXAR PKPab **PKPab 09 15 36.0 -2.7**
TXAR Lajitas Array 155.24 344 PKPbc PKPdf 09 15 23.4 +9.4
0.1nm,0.7s,baz=84,slow=4.1,SNR=2.2
TXAR PKPab **PKPab 09 15 36.0 -2.7**
0.3nm,0.8s,baz=29,slow=2.9,SNR=3.7

ATH ***16*** *08:58:19.5, 40.80N×20.30E, h11km±3km, MD3.4/9*
TIR ***16*** *08:58:19.9, 40.67N×20.38E, h1km, ML2.9*
SKO ***16*** *08:58:20.8, 40.74N×20.24E, h0km, M2.4, ML2.8*
THE ***16*** *08:58:20.4, 40.74N×20.31E, h0km±4km, ML2.8/5, Error ellipse: s-maj=4.9km s-min=0.9km az=304.0*
PDG ***16*** *08:58:21.2±0.6, 40.70N×20.36E, h5km±1km, ML2.8/7, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
CSEM ***16*** *08:58:21.1±0.1, 40.65N×20.35E, h2km, ML2.8/5, Error ellipse: s-maj=4.1km s-min=2.6km az=63.0*
BEO ***16*** *08:58:22.8±0.9, 40.75N×20.38E, h0km, ML2.6/5*
ISC 16 08:58:21.1±1.1, 40.69N±0.02×20.36E±0.02, h4km±8km, n75, σ1§08/119, 7C-6D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NEST	**Nestorio**	**0.59**	**117**	P		**Pg**		**08 58 32.2**	**-0.3**
NEST				S		**Sb**		**08 58 42.2**	**-0.6**
NEST	**Nestorio**	**0.59**	**117**	P		**Pg**		**08 58 32.2**	**-0.3**
NEST				S		**Sb**		**08 58 42.2**	**-0.6**
TIR	**Tirane**	**0.76**	**331**	*i* PG		**Pg**		**08 58 35.5**	**-0.1**
TIR	**Tirane**	**0.76**	**331**	*e*Pg		**Pg**		**08 58 35.2**	**-0.4**
TIR	**Tirane**	**0.76**	**331**	*e*Pg		**Pg**		**08 58 35.2**	**-0.4**
FNA	**Florina**	**0.78**	**83**	P		**Pg**		**08 58 35.7**	**-0.3**
FNA				S		**Sb**		**08 58 48.2**	**+0.1**
FNA	**Florina**	**0.78**	**83**	P		**Pg**		**08 58 35.7**	**-0.3**
FNA				S		**Sb**		**08 58 48.2**	**+0.1**
BIA	**Bitola**	**0.80**	**65**	P		**Pg**		**08 58 35.4**	**-1.1**
BIA				S		**Sb**		**08 58 48.4**	**-0.4**
BIA	**Bitola**	**0.80**	**65**	⇓*i*Pg		**Pg**		**08 58 35.3**	**-1.1**
BIA				*e*Sg		**Sb**		**08 58 48.4**	**-0.4**
BIA	**Bitola**	**0.80**	**65**	⇓*i*Pg		**Pg**		**08 58 35.3**	**-1.2**
BIA				S		**Sb**		**08 58 48.4**	**-0.4**
KEK	**Kerkira**	**1.06**	**204**	P		**Pg**		**08 58 40.5**	**-1.0**
KEK	**Kerkira**	**1.06**	**204**	*e*PB		**Pg**		**08 58 41.3**	**-0.2**
KEK				*e*SB		**Sn**		**08 58 57.4**	**-0.5**
KEK	**Kerkira**	**1.06**	**204**	P		**Pg**		**08 58 40.5**	**-1.0**
KEK	**Kerkira**	**1.06**	**204**	*e*Pb		**Pg**		**08 58 41.3**	**-0.2**
KEK				*e*Sn		**Sn**		**08 58 57.4**	**-0.5**
JAN	**Janina**	**1.10**	**160**	P		**Pb**		**08 58 42.1**	**-0.5**
JAN				S		**Sn**		**08 58 59.0**	**+0.2**
JAN	**Janina**	**1.10**	**160**	*e*PN		**Pb**		**08 58 42.1**	**-0.5**
JAN	**Janina**	**1.10**	**160**	P		**Pb**		**08 58 42.1**	**-0.5**
JAN				S		**Sn**		**08 58 59.0**	**+0.2**
KZN	**Kozani**	**1.14**	**109**	P		**Pb**		**08 58 42.7**	**-0.6**
KZN				S		**Sn**		**08 59 00.0**	**0.0**
KZN	**Kozani**	**1.14**	**109**	*e*PB		**Pb**		**08 58 42.8**	**-0.6**
KZN	**Kozani**	**1.14**	**109**	*e*Pn		**Pb**		**08 58 42.8**	**-0.6**
KZN				S		**Sn**		**08 59 00.0**	**0.0**
IGT	**Igoumenitsa**	**1.15**	**181**	P		**Pb**		**08 58 43.5**	**-0.1**
IGT				S		**Sn**		**08 59 01.3**	**+1.1**
IGT	**Igoumenitsa**	**1.15**	**181**	P		**Pb**		**08 58 43.5**	**-0.1**
IGT				S		**Sn**		**08 59 01.3**	**+1.1**
PUK	**Puka**	**1.40**	**346**	*i* PG		**Pg**		**08 58 48.0**	**+0.1**
PUK				*i* SG		**Sg**		**08 59 09.5**	**+3.5**
PUK	**Puka**	**1.40**	**346**	*i* Pg		**Pg**		**08 58 48.0**	**+0.1**
PUK				*i* Sg		**Sg**		**08 59 09.5**	**+3.5**
SKO	**Skopje**	**1.52**	**32**	*e*Pn		**Pg**		**08 58 49.7**	**-0.5**
SKO				*e*Sn		**Sg**		**08 59 09.3**	**-0.6**
SKO				*e*Lg		Lg		08 59 09.8	
	comp=N,136nm,0.4s								
SKO				*e*Lg		Lg		08 59 09.9	
	comp=E,92nm,0.5s								
SKO	**Skopje**	**1.52**	**32**	*e*Pn		**Pg**		**08 58 50.2**	**0.0**
SKO				*e*Sn		Sn		08 59 01.8	-7.4
SKO				*e*Lg		Lg		08 59 10.3	
	comp=E,92nm,0.5s								
ULC	**Ulcinj**	**1.53**	**327**	⇑*i*Pg		**Pb**		**08 58 49.2**	**-0.7**
ULC				*e*Sg		**Sg**		**08 59 12.5**	**+2.4**
ULC	**Ulcinj**	**1.53**	**327**	⇑*i*Pg		**Pb**		**08 58 49.2**	**-0.7**
ULC				*e*Sg		**Sg**		**08 59 12.5**	**+2.4**
GRG	**Griva**	**1.57**	**80**	P		**Pb**		**08 58 49.2**	**-0.6**
GRG	**Griva**	**1.57**	**80**	P		**Pn**		**08 58 49.2**	**-0.6**
BCI	**Bajram Curri**	**1.69**	**353**	*i* PG		**Pg**		**08 58 53.4**	**-0.1**
BCI	**Bajram Curri**	**1.69**	**353**	*i* Pg		**Pg**		**08 58 53.4**	**-0.1**
THL	**Klokotos Trika**	**1.69**	**131**	*e*PG		**Pb**		**08 58 53.0**	**+0.2**
THL	**Klokotos Trika**	**1.69**	**131**	*e*Pb		**Pb**		**08 58 53.0**	**+0.2**
LIT	**Litokhoron**	**1.73**	**109**	*e*PN		**Pn**		**08 58 52.2**	**+0.3**
LIT	**Litokhoron**	**1.73**	**109**	*e*Pn		**Pn**		**08 58 52.2**	**+0.3**
VAY	**Valandovo**	**1.79**	**69**	*e*Pn		**Pb**		**08 58 54.1**	**-0.2**
VAY				*e*Sn		**Sg**		**08 59 19.3**	**+0.8**
VAY				*e*Lg		Lg		08 59 19.6	
	comp=E,71nm,0.8s								
VAY				*e*Lg		Lg		08 59 20.0	
	comp=N,120nm,1.1s								
VAY	**Valandovo**	**1.79**	**69**	*e*Pn		**Pb**		**08 58 54.6**	**+0.2**
VAY				*e*Sn		**Sg**		**08 59 19.8**	**+1.2**
VAY				*e*Lg		Lg		08 59 20.4	
	comp=N,120nm,1.1s								
LKD2	**Lefkada island**	**1.91**	**173**	*e*PB		**Pn**		**08 58 54.3**	**-0.1**
LKD2	**Lefkada island**	**1.91**	**173**	*e*Pn		**Pn**		**08 58 54.3**	**-0.1**
PDG	**Podgorica**	**1.93**	**335**	*e*Pn		**Pb**		**08 58 55.5**	**-1.2**
PDG				*e*Sn		**Sb**		**08 59 20.9**	**-0.2**
PDG	**Podgorica**	**1.93**	**335**	*e*Pn		**Pb**		**08 58 55.5**	**-1.2**
PDG				*e*Sn		**Sb**		**08 59 20.9**	**-0.2**
PVY	**Plav**	**1.93**	**351**	*e*Pn		**Pb**		**08 58 56.1**	**-0.8**
PVY				*e*Sn		**Sg**		**08 59 22.8**	**-0.3**
PVY	**Plav**	**1.93**	**351**	*e*Pn		**Pb**		**08 58 56.1**	**-0.8**
PVY				*e*Sn		**Sg**		**08 59 22.8**	**-0.3**
TTG	**Podgorica**	**1.93**	**335**	⇑*i*Pn		**Pb**		**08 58 56.2**	**-0.5**
TTG				*e*Sn		**Sg**		**08 59 22.8**	**-0.2**
EVR	**Evrytania**	**2.09**	**147**	*e*PN		**Pb**		**08 58 58.6**	**-1.0**
EVR	**Evrytania**	**2.09**	**147**	*e*Pb		**Pb**		**08 58 58.6**	**-1.0**
BEY	**Berane**	**2.21**	**351**	⇑*i*Pn		**Pb**		**08 59 00.0**	**-1.6**
BEY				*e*Sn		**Sb**		**08 59 29.7**	**+0.3**
IVA	**Berane**	**2.21**	**351**	⇑*i*Pn		**Pb**		**08 59 00.0**	**-1.6**
IVA				*e*Sn		**Sb**		**08 59 29.7**	**+0.3**
HCY	**Herceg Novi**	**2.25**	**322**	⇓*i*Pn		**Pn**		**08 58 59.4**	**+0.4**
HCY				*e*Sn		**Sb**		**08 59 29.9**	**-0.4**
HCY	**Herceg Novi**	**2.25**	**322**	⇓*i*Pn		**Pn**		**08 58 59.4**	**+0.4**
HCY				*e*Sn		**Sb**		**08 59 29.9**	**-0.4**
AGG	**Agios Georgios**	**2.25**	**137**	*e*PN		**Pb**		**08 59 00.9**	**-1.4**
AGG	**Agios Georgios**	**2.25**	**137**	*e*Pb		**Pb**		**08 59 00.9**	**-1.4**
SOH	**Sokhos**	**2.28**	**86**	*e*PN		**Pn**		**08 59 00.2**	**+0.8**
SOH	**Sokhos**	**2.28**	**86**	*e*Pn		**Pn**		**08 59 00.3**	**+0.8**
NKY	**Niksic**	**2.36**	**335**	*e*Pn		**Pb**		**08 59 01.8**	**-2.3**
NKY				*e*Sn		**Sb**		**08 59 32.9**	**-0.7**
NKY	**Niksic**	**2.36**	**335**	*e*Pn		**Pb**		**08 59 01.8**	**-2.3**
NKY				*e*Sn		**Sb**		**08 59 32.9**	**-0.7**
BARS	**Barje**	**2.39**	**27**	*e*Pn		**Pb**		**08 59 02.4**	**-2.2**
BARS				*e*Sn		**Sn**		**08 59 31.0**	**+0.3**
BARS	**Barje**	**2.39**	**27**	*e*Pn		**Pb**		**08 59 02.4**	**-2.2**
BARS				*e*Sn		**Sn**		**08 59 31.0**	**+0.3**
SELS	**Selova**	**2.59**	**12**	*e*Pn		**Pb**		**08 59 05.7**	**-2.4**
BRY	**Bratogost**	**2.60**	**329**	⇓*i*Pn		**Pn**		**08 59 04.4**	**+0.5**
BRY				*e*Sn		**Sb**		**08 59 38.8**	**-1.7**
BRY	**Bratogost**	**2.60**	**329**	⇓*i*Pn		**Pn**		**08 59 04.4**	**+0.5**
BRY				*e*Sn		**Sb**		**08 59 38.8**	**-1.7**
UPM	**Unac-Piva**	**2.74**	**337**	⇑*i*Pn		**Pn**		**08 59 06.3**	**+0.4**
UPM				*e*Sn		**Sb**		**08 59 42.2**	**-2.4**
UPM	**Unac-Piva**	**2.74**	**337**	⇑*i*Pn		**Pn**		**08 59 06.3**	**+0.4**
UPM				*e*Sn		**Sb**		**08 59 42.2**	**-2.4**
VTS	**Vitosha**	**2.86**	**47**	*e*Pn		**Pn**		**08 59 09.1**	**+1.5**
VTS	**Vitosha**	**2.86**	**47**	*e*Pn		**Pn**		**08 59 09.1**	**+1.5**
IVAS	**Ivanjica**	**2.89**	**357**	*e*Pn		Pb		08 59 09.8	-3.4
IVAS				*e*Sn		**Sn**		**08 59 43.3**	**+0.2**
IVAS	**Ivanjica**	**2.89**	**357**	*e*Pn		Pb		08 59 09.8	-3.4
IVAS				*e*Sn		**Sn**		**08 59 43.3**	**+0.2**
ZAPS	**Zavoj**	**3.09**	**33**	*e*Pn		**Pn**		**08 59 11.2**	**+0.6**
ZAPS				*e*Sn		**Sn**		**08 59 49.1**	**+1.1**
GRUS	**Gruza**	**3.21**	**5**	*e*Pn		**Pn**		**08 59 12.8**	**+0.6**
GRUS				*e*Sn		**Sn**		**08 59 51.5**	**+0.6**
GRUS	**Gruza**	**3.21**	**5**	*e*Pn		**Pn**		**08 59 12.8**	**+0.6**
GRUS				*e*Sn		**Sn**		**08 59 51.5**	**+0.6**
BBLS	**Lazići**	**3.25**	**348**	*e*Pn		**Pn**		**08 59 14.0**	**+1.1**
BBLS				*e*Sn		**Sn**		**08 59 53.0**	**+0.9**
BBLS	**Lazići**	**3.25**	**348**	*e*Pn		**Pn**		**08 59 14.0**	**+1.1**
BBLS				*e*Sn		**Sn**		**08 59 53.0**	**+0.9**
DIVS	**Divibare**	**3.42**	**356**	*e*Pn		**Pn**		**08 59 16.7**	**+1.5**
DIVS	**Divibare**	**3.42**	**356**	*e*Pn		**Pn**		**08 59 16.7**	**+1.5**

IDC 16 09:08:13.5±1.6, 42.04N×121.62E, h0km, mb3.2/3, mb1 3.4/4, mb1mx3.2/24, mbtmp3.1/4, ML3.0/1, Error ellipse: s-maj=40.5km s-min=20.7km az=40.0, Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**6.68**	**131**	Pn		Pn		09 09 53.5	+0.7
	0.3nm,0.3s,baz=317,slow=14,SNR=3.3								
KSRS				Pg		Pb		09 10 15.8	+5.3
	0.4nm,0.3s,baz=317,slow=17,SNR=3.7								
KSRS				Lg		Lg		09 11 43.9	
	1.6nm,0.3s,baz=311,slow=29,SNR=8.8								
USRK	**Ussuriysk Arra**	**7.90**	**71**	Lg		Lg		09 12 22.7	
	0.5nm,0.3s,baz=263,slow=28,SNR=6.6								
SONM	**Songino Array**	**12.24**	**303**	Lg		Lg		09 14 51.4	
	0.1nm,0.3s,baz=93,slow=25,SNR=3.8								
MKAR	**Makanchi Array**	**28.28**	**293**	P		P		09 14 08.6	+0.2
	0.2nm,0.5s,baz=96,slow=10,SNR=3.0								
ILAR	**Eielson Array**	**53.53**	**32**	P		P		09 17 35.9	+0.4
	0.2nm,0.7s,baz=293,slow=6.2,SNR=4.5								
YKA	**Yellowknife Ar**	**66.51**	**25**	P		P		09 19 03.9	-0.7
	0.1nm,0.7s,baz=316,slow=6.8,SNR=5.1								

ISCJB ***16*** *09:15:25.8±1.7, 40.92N±0.03×138.39E±0.04, h25km±16km, mb3.6/2, Error ellipse: s-maj=5.7km s-min=4.6km az=38.1*
JMA ***16*** *09:15:25.4±0.2, 40.96N×138.31E, h38km, M3.7*
IDC ***16*** *09:15:30.9±2.0, 40.88N×138.22E, h49km±27km, mb3.3/2, mb1 3.5/6, mb1mx3.2/28, mbtmp3.3/6, ML2.7/4, Error ellipse: s-maj=34.7km s-min=28.0km az=124.0*
ISC 16 09:15:25.7±2.7, 40.94N±0.04×138.49E±0.05, h7km±17km, n21, σ1§20/25, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIW	**Iwasaki**	**1.20**	**106**	P		Pg		09 15 48.2	-0.5
JIW				S		**Sg**		**09 16 04.5**	**+0.2**
JOSM	**Okushiri--Mats**	**1.36**	**33**	P		Pn		09 15 49.1	-1.9
JOSM				S		**Sb**		**09 16 05.7**	**-3.3**
JOG2	**Oga 2**	**1.43**	**135**	P		Pn		09 15 51.3	-0.6
JOG2				*e*S		**Sn**		**09 16 10.4**	**-0.5**
JSI2	**Shiura 2**	**1.46**	**85**	P		Pn		09 15 51.9	-0.4
JSI2				*e*S		**Sn**		**09 16 10.3**	**-1.4**
JSR	**Shiriuchi**	**1.57**	**67**	P		**Pn**		**09 15 54.1**	**+0.2**
JSR				S		**Sn**		**09 16 14.1**	**-0.3**
JAH	**Hinai**	**1.80**	**114**	P		**Pn**		**09 15 57.3**	**+0.3**
JAH				S		**Sn**		**09 16 20.3**	**+0.3**
JYM2	**Yakumo 2**	**1.84**	**49**	P		**Pn**		**09 15 57.2**	**-0.4**
JOT	**Ohata**	**1.98**	**76**	*e*S		**Sn**		**09 16 24.3**	**-0.3**
JKB	**Kayabe**	**2.13**	**63**	P		**Pn**		**09 16 02.1**	**+0.5**
JANG	**Nango**	**2.37**	**103**	*e*S		**Sn**		**09 16 34.5**	**+0.3**
JYK	**Kaneyama**	**2.48**	**144**	P		Pn		09 16 05.8	-0.6
JYK				S		**Sn**		**09 16 36.2**	**-0.6**
JAW	**Awa shima**	**2.55**	**166**	P		Pn		09 16 06.1	-1.2
JAW				S		**Sn**		**09 16 36.7**	**-1.8**
JOM	**Ohasama**	**2.60**	**123**	P		**Pn**		**09 16 08.8**	**+0.8**
JMK	**Ichinoseki**	**2.89**	**133**	P		**Pn**		**09 16 12.1**	**+0.1**
JMK				*e*S		**Sn**		**09 16 46.9**	**0.0**
JSD	**Sado**	**2.90**	**184**	P		Pn		09 16 10.7	-1.5
JSD				S		Sn		09 16 43.8	-3.5
ASAJ	**Asahikawa**	**4.39**	**42**	P		Pn		09 16 39.0	+6.3
	0.3nm,0.3s,baz=218,slow=18,SNR=2.4								
ASAJ				S		**Sn**		**09 17 26.0**	**+2.0**
	0.4nm,0.3s,baz=87,slow=18,SNR=2.7								
MJAR	**Matsushiro Arr**	**4.39**	**183**	P		**Pn**		**09 16 33.4**	**+0.7**
	0.5nm,0.3s,baz=13,slow=14,SNR=6.5								
MJAR				S		**Sn**		**09 17 22.3**	**-1.9**
	1.5nm,0.3s,baz=350,slow=26,SNR=11								
USRK	**Ussuriysk Arra**	**5.80**	**306**	P		**Pn**		**09 16 50.8**	**-1.1**
	0.4nm,0.3s,baz=110,slow=14,SNR=6.6								
USRK				S		Sn		09 17 51.5	-7.1
	0.0nm,0.3s,baz=122,slow=18,SNR=2.3								
KSRS	**Korea Array**	**8.91**	**250**	P		**Pn**		**09 17 36.0**	**+1.3**
	0.5nm,0.3s,baz=62,slow=14,SNR=6.6								
KSRS				S		**Sn**		**09 19 15.0**	**-0.3**
	0.5nm,0.3s,baz=65,slow=23,SNR=4.1								
ILAR	**Eielson Array**	**47.48**	**34**	P		**P**		**09 24 01.2**	**+0.4**
	0.8nm,1.1s,baz=296,slow=8.0,SNR=6.3								
PDAR	**Pinedale Array**	**76.52**	**45**	P		**P**		**09 27 17.5**	**+0.9**
	0.4nm,0.5s,baz=333,slow=1.0,SNR=5.0								

IDC 16 09:29:12.9±1.3, 12.03N×86.73W, h0km, mb3.4/5, mb1 3.6/7, mb1mx3.5/25, mbtmp3.4/7, ML3.0/2, MS2.9/1, Ms1 2.9/1, ms1mx2.2/25, Error ellipse: s-maj=94.3km s-min=16.5km az=50.0, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**2.45**	**135**	Pn		Pn		09 29 55.9	+1.6
	1.6nm,0.3s,baz=321,slow=21,SNR=19								
JTS				Sn		Sn		09 30 24.6	-0.4
	10nm,0.3s,baz=270,slow=20,SNR=6.8								
CMIG	**Matias Romero**	**9.36**	**303**	Pn		Pn		09 31 28.8	-0.5
	0.3nm,0.3s,baz=122,slow=9.5,SNR=5.1								
ROSC	**El Rosal**	**14.18**	**119**	LR		LR		09 38 49.0	
	comp=Z,43nm,18.1s,baz=90,slow=41								
TXAR	**Lajitas Array**	**23.35**	**320**	P		P		09 34 23.6	+0.4
	0.5nm,0.6s,baz=140,slow=11,SNR=9.7								
PDAR	**Pinedale Array**	**36.48**	**331**	P		P		09 36 21.2	+1.1
	0.3nm,0.5s,baz=130,slow=11,SNR=3.1								
SIV	**San Ignacio**	**37.67**	**137**	P		P		09 36 30.0	-0.3
	1.0nm,0.5s,baz=328,slow=10,SNR=5.0								
YKA	**Yellowknife Ar**	**54.21**	**344**	P		P		09 38 39.9	-0.2
	0.3nm,0.7s,baz=136,slow=8.1,SNR=10								
ILAR	**Eielson Array**	**66.69**	**336**	P		P		09 40 04.8	-0.7
	0.1nm,0.5s,baz=147,slow=4.9,SNR=4.5								
CMAR	**Chiang Mai Arr**	**149.22**	**349**	PKPbc		PKPbc		09 49 03.0	-1.4
	0.6nm,0.5s,baz=330,slow=3.1,SNR=3.2								

NIED ***16*** *09:36:00, 27.00N×129.90E, h8km, Mw3.8 Best double couple: M0 4.75000×10^14 NP1:φ=228.00000°, δ72.00000°, λ117.00000°. NP2:φ=349.00000°, δ32.00000°, λ35.00000°.*
JMA 16 09:36:33.9±0.1, 26.98N×129.92E, h42km, M3.6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.18**	**313**	P		Pn		09 36 54.4	+0.5
JTK				S		Sn		09 37 09.0	+0.2
JZK	**Kikaishima**	**1.33**	**2**	P		Pn		09 36 57.0	+1.0
JZK				S		Sn		09 37 14.7	+2.2
JAMN	**Amaminishikomi**	**1.42**	**332**	P		Pn		09 36 57.5	+0.3
JAMN				S		Sn		09 37 14.6	-0.1
JAM	**Amami Oshima**	**1.45**	**349**	P		Pn		09 36 58.2	+0.5
JAM				S		Sn		09 37 15.6	+0.1
JOW	**Kunigami**	**1.48**	**265**	P		Pn		09 36 58.9	+0.9
JOW				S		Sn		09 37 17.3	+1.1
JMZ	**Minamidaito 2**	**1.64**	**134**	P		Pn		09 37 01.1	+0.8
JMZ				S		Sn		09 37 20.6	+0.4
JIH	**Iheya**	**1.74**	**272**	P		Pn		09 37 02.6	+0.9
JIH				S		Sn		09 37 24.3	+1.6
JJT2	**Tamagusuku 2**	**2.12**	**247**	P		Pn		09 37 08.0	+1.2
JJT2				S		Sn		09 37 33.8	+1.9
JAGN	**Aguni-jima**	**2.42**	**261**	P		Pn		09 37 12.0	+1.0
JAGN				S		Sn		09 37 39.6	+0.1
JNN	**Nakanoshima**	**2.85**	**359**	S		Sn		09 37 49.8	-0.2
JKE	**Kume jima 2**	**2.88**	**258**	P		Pn		09 37 17.6	+0.3
JKE				S		Sn		09 37 51.3	+0.6

ISCJB ***16*** *09:59:06.2±0.5, 56.52N±0.02×13.39E±0.04, h9km±4km, mb2.8/1, Error ellipse: s-maj=3.7km s-min=3.0km az=32.3*
CSEM ***16*** *09:59:06.5±0.1, 56.50N×13.44E, h2km, ML2.8, Error ellipse: s-maj=2.2km s-min=1.8km az=106.0*
IDC ***16*** *09:59:07.8±0.9, 56.53N×13.21E, h0km, mb3.2/1, mb1 3.4/7, mb1mx3.2/32, mbtmp3.3/7, ML3.3/6, Error ellipse: s-maj=17.5km s-min=8.1km az=87.0*
HEL ***16*** *09:59:07.7±0.1, 56.51N×13.43E, h10km, ML3.1, ML2.8(UPP), ML2.8(BER)*
UPP ***16*** *09:59:07.4, 56.51N×13.42E, h11km, ML2.8*
BER ***16*** *09:59:08.4±2.5, 56.51N×13.39E, h12km±38km, MD3.2, ML2.8, ML2.7(NAO)*
NAO ***16*** *09:59:12.8±3.4, 56.80N×13.50E, h9km±15km, ML2.7*
ISC 16 09:59:06.9±0.9, 56.52N±0.02×13.37E±0.02, h12km±7km, n103, σ1§29/134, 10C-9D, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DEL	**Delary**	**0.28**	**100**	⇑*i*P		**Pg**		**09 59 12.3**	**-0.4**
DEL				*i* S		**Sg**		**09 59 15.7**	**-1.0**
DEL	**Delary**	**0.28**	**100**	⇑P		**Pg**		**09 59 12.4**	**-0.4**
DEL				S		**Sg**		**09 59 15.6**	**-1.0**
BJUU	**Bjuv**	**0.48**	**203**	⇓P		**Pg**		**09 59 16.6**	**+0.2**
BJUU				S		**Sg**		**09 59 22.9**	**+0.1**
FABU	**Falkenberg**	**0.60**	**324**	⇓*i*P		**Pg**		**09 59 19.0**	**+0.4**
FABU				*i* S		**Sg**		**09 59 27.3**	**+0.8**
FABU	**Falkenberg**	**0.60**	**324**	⇓P		**Pg**		**09 59 19.0**	**+0.4**
FABU				S		**Sg**		**09 59 27.3**	**+0.8**
GID	**Gilleleje**	**0.77**	**240**	⇑*i*P		**Pg**		**09 59 21.8**	**+0.1**
	SNR=66								
GID				*i* S		**Sg**		**09 59 32.2**	**+0.4**
	221nm,0.3s,SNR=66								
GNOU	**Gnosjoe**	**0.80**	**15**	⇓*i*P		**Pg**		**09 59 22.2**	**-0.3**
GNOU				*i* S		**Sg**		**09 59 32.5**	**-0.4**
GNOU	**Gnosjoe**	**0.80**	**15**	P		**Pg**		**09 59 22.1**	**-0.3**
GNOU				S		**Sg**		**09 59 32.5**	**-0.4**
LUNU	**Lund**	**0.89**	**177**	⇓P		**Pg**		**09 59 23.4**	**-0.6**
LUNU				S		**Sg**		**09 59 33.5**	**-0.6**
VXJU	**Vaexsjoe**	**0.96**	**64**	⇑*e*P		**Pg**		**09 59 24.4**	**-0

	comp=Z,33nm,0.4s								
SNART	**Snartemo**	**3.79**	**301**	*e*P		**Pn**	**10 00 03.6**	**-1.5**
SNART				*e*S		**Sn**	**10 00 46.4**	**-3.2**
SNART				AML		AML	10 01 15.5	
	comp=Z,33nm,0.4s								
NRTU	**Norrtaelje**	**4.22**	**39**	*e*P		**Pn**	**10 00 11.8**	**+0.8**
NRTU	**Norrtaelje**	**4.22**	**39**	P		**Pn**	**10 00 11.8**	**+0.8**
FLYU	**Flymyra**	**4.33**	**31**	*e*P		**Pn**	**10 00 12.7**	**+0.2**
FLYU	**Flymyra**	**4.33**	**31**	P		**Pn**	**10 00 12.7**	**+0.2**
NB2	**NORSAR Subarra**	**4.67**	**347**	Pn		**Pn**	**10 00 17.3**	**+0.1**
	baz=164,slow=14								
NB2				Pg		**Pb**	**10 00 29.1**	**+0.4**
	baz=163,slow=18								
NB2				Lg		Lg	10 01 29.6		
	baz=168,slow=28								
NB2	**NORSAR Subarra**	**4.67**	**347**	Pn		**Pn**	**10 00 17.3**	**+0.1**
	baz=164,slow=13,SNR=3.2								
NB2				Lg		Lg	10 01 29.6		
	baz=168,slow=27,SNR=5.6								
NOA	**NORSAR Array B**	**4.67**	**347**	Pn		**Pn**	**10 00 17.1**	**0.0**
	comp=Z,0.6nm,0.3s,baz=165,slow=12,SNR=10								
NOA				Pg		**Pb**	**10 00 28.9**	**+0.3**
	comp=Z,1.6nm,0.3s,baz=170,slow=15,SNR=19								
NOA				Sn		**Sn**	**10 01 08.6**	**-2.7**
	comp=Z,1.6nm,0.3s,baz=188,slow=14,SNR=6.7								
NOA				Lg		Lg	10 01 25.6		
	comp=Z,4.0nm,0.3s,baz=197,slow=17,SNR=8.5								
BLS5	**Blasjo**	**4.69**	**311**	*e*P		**Pn**	**10 00 17.9**	**+0.4**
BLS5				*e*S		**Sn**	**10 01 09.6**	**-2.1**
BLS5				AML		AML	10 01 36.6		
	comp=Z,49nm,0.5s								
BLS5	**Blasjo**	**4.69**	**311**	*e*P		**Pn**	**10 00 17.9**	**+0.4**
BLS5				*e*S		**Sn**	**10 01 09.6**	**-2.1**
BLS5				AML		AML	10 01 36.6		
	comp=Z,49nm,0.5s								
BLS5	**Blasjo**	**4.69**	**311**	*e*P		**Pn**	**10 00 17.9**	**+0.4**
	SNR=53								
BLS5				*e*S		**Sn**	**10 01 09.6**	**-2.1**
	comp=Z,49nm,0.5s,SNR=53								
AAL	**Aland**	**5.06**	**41**	*e*SG		**Sb**	**10 01 39.5**	**+3.4**
KMY	**Karmoy**	**5.11**	**305**	*e*S		**Sn**	**10 01 17.6**	**-4.3**
KMY	**Karmoy**	**5.11**	**305**	*e*S		**Sn**	**10 01 17.6**	**-4.3**
BRG	**Berggiesshubel**	**5.67**	**176**	SG		Sn	10 01 30.2	-5.6
	comp=Z,4.8nm,0.3s								
EGD	**Espegrend**	**5.70**	**315**	*e*		Sn	10 01 30.7	-5.7
EGD	**Espegrend**	**5.70**	**315**	*e*		Sn	10 01 30.7	-5.7
MTSE	**Matsula**	**6.03**	**64**	*e*P		**Pn**	**10 00 35.1**	**-0.6**
MTSE				*e*S		Sn	10 01 39.7	-4.9
MTSE	**Matsula**	**6.03**	**64**	P		**Pn**	**10 00 35.1**	**-0.6**
RAF	**Rauma**	**6.28**	**41**	*e*P		**Pn**	**10 00 39.7**	**+0.5**
RAF				*e*S		**Sn**	**10 01 46.9**	**-3.9**
RAF				*e*SG		Sb	10 02 19.3	+8.3
RAF				MSG			10 02 24.4		
	comp=Z,15nm,0.3s								
RAF	**Rauma**	**6.28**	**41**	P		**Pn**	**10 00 39.7**	**+0.5**
MEF	**Metsahovi**	**6.88**	**53**	*e*P		**Pn**	**10 00 47.5**	**0.0**
MEF				*e*S		Sn	10 01 60.0	-5.6
MEF	**Metsahovi**	**6.88**	**53**	P		**Pn**	**10 00 47.4**	**0.0**
PVF	**Pernaja**	**7.68**	**53**	*e*S		Sn	10 02 18.7	-6.5
PVF				*e*SG		Sb	10 03 01.6	+10
PVF				MSG			10 03 06.8		
	comp=Z,16nm,0.4s								
GERES	**GERESS Array B**	**7.69**	**178**	Pn		**Pn**	**10 01 01.0**	**+2.3**
	comp=Z,0.2nm,0.3s,baz=357,slow=15,SNR=3.0								
GERES				Lg		Lg	10 03 08.9		
	comp=Z,0.1nm,0.3s,baz=358,slow=28,SNR=3.7								
VAF	**Ylistaro**	**8.04**	**32**	*e*P		**Pn**	**10 01 05.3**	**+1.9**
VAF				*e*S		**Sn**	**10 02 31.1**	**-3.0**
VAF				*e*SG		Sb	10 03 14.8	+13
VAF				MSG			10 03 18.5		
	comp=Z,11nm,0.4s								
VAF	**Ylistaro**	**8.04**	**32**	P		**Pn**	**10 01 05.3**	**+1.9**
KEF	**Keuruu**	**8.16**	**41**	*e*S		Sn	10 02 31.2	-5.7
KEF				*e*SG		Sb	10 03 16.6	+12
FIA0	**FINESS Array S**	**8.21**	**48**	Pn		**Pn**	**10 01 06.2**	**+0.5**
	baz=241,slow=11								
FIA0				Sn		Sn	10 02 32.4	-5.7	
	baz=239,slow=22								
FIA0				Lg		Lg	10 03 17.0		
	baz=246,slow=28								
FIA0	**FINESS Array S**	**8.21**	**48**	*e*P		**Pn**	**10 01 06.1**	**+0.5**
FIA0				*e*S		Sn	10 02 33.2	-5.0
FIA0				*e*SG		Sb	10 03 18.3	+12
FIA0				MSG			10 03 24.1		
	comp=Z,16nm,0.4s								
FIA0	**FINESS Array S**	**8.21**	**48**	Pn		**Pn**	**10 01 06.2**	**+0.5**
	baz=241,slow=11,SNR=5.8								
FIA0				Lg		Lg	10 03 17.0		
	baz=246,slow=25,SNR=8.7								
FINES	**FINESS Array B**	**8.21**	**48**	Pn		**Pn**	**10 01 06.1**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=243,slow=12,SNR=12								
FINES				Sn		Sn	10 02 32.4	-5.7	
	comp=Z,1.7nm,0.3s,baz=245,slow=20,SNR=10.0								
FINES				Lg		Lg	10 03 21.4		
	comp=Z,3.0nm,0.3s,baz=242,slow=27,SNR=12								
EKA	**Eskdalemuir Ar**	**9.35**	**270**	Pn		**Pn**	**10 01 21.0**	**-0.3**
	baz=84,slow=14,SNR=5.8								
AKASG	**Malin Array Be**	**11.06**	**115**	Lg		Lg	10 04 52.2		
	comp=Z,1.0nm,0.3s,baz=323,slow=27,SNR=3.8								
ARA0	**ARCESS Array S**	**14.13**	**18**	Pn		Pn	10 02 23.2	-3.3	
	baz=204,slow=14								
ARA0				Sn		Sn	10 04 49.5	-14	
	baz=205,slow=22								
ARCES	**ARCESS Array B**	**14.13**	**18**	Pn		Pn	10 02 23.2	-3.3	
	comp=Z,0.1nm,0.3s,baz=203,slow=13,SNR=5.9								
ARCES				Lg		Lg	10 06 26.2		
	comp=Z,0.2nm,0.3s,baz=202,slow=26,SNR=3.9								
MKAR	**Makanchi Array**	**42.12**	**73**	P		P	10 07 02.4	+3.7	
	comp=Z,0.1nm,0.4s,baz=311,slow=6.6,SNR=3.0								

IDC 16 10:02:02.8±1.8,5°10S×143°58E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/18, mbtmp3.7/6, Error ellipse: s-maj=64.4km s-min=25.9km az=113.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**20.68**	**206**	P	P	10 06 44.0	-0.6
	1.8nm,0.7s,baz=31,slow=9.6,SNR=20						
FITZ	**Fitzroy Crossi**	**21.78**	**232**	P	P	10 06 56.9	+0.4
	0.9nm,0.7s,baz=65,slow=17,SNR=2.8						
MKAR	**Makanchi Array**	**74.66**	**321**	P	P	10 13 43.8	-0.5
	0.4nm,0.7s,baz=103,slow=6.4,SNR=4.0						
ZALV	**Zalesovo Beam**	**76.46**	**329**	P	P	10 13 54.7	+0.3
	0.2nm,0.3s,baz=108,slow=4.7,SNR=2.1						
BVAR	**Borovoye Array**	**84.05**	**324**	P	P	10 14 36.1	+0.7
	0.8nm,0.5s,baz=108,slow=4.8,SNR=5.8						
ILAR	**Eielson Array**	**86.02**	**24**	P	P	10 14 44.5	-0.5
	0.3nm,0.7s,baz=250,slow=4.9,SNR=8.5						

WEL 16 10:02:58.9±0.2,38°26S×177°73E, h45km±2km, ML3.5/4, 4C-2D, Error ellipse: s-maj=1.3km s-min=1.1km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**0.18**	**244**	⇓PN	Pn	10 03 05.8	-0.9
MWZ				SN	Sn	10 03 11.5	-0.7
CNGZ	**Carnagh Statio**	**0.44**	**122**	PN	Pn	10 03 09.3	+0.2
CNGZ				SN	Sn	10 03 17.1	+0.7
PUZ	**Puketiti**	**0.45**	**66**	PN	Pn	10 03 08.8	-0.5
PUZ				SN	Sn	10 03 17.4	+0.7
URZ	**Urewera**	**0.49**	**269**	PN	Pn	10 03 09.3	-0.5
URZ				SN	Sn	10 03 18.0	+0.5
PRGZ	**Paritu Road**	**0.68**	**170**	PN	Pn	10 03 11.7	-0.6
PRGZ				SN	Sn	10 03 20.7	-1.2
KNZ	**Kokohu**	**0.77**	**183**	PN	Pn	10 03 12.7	-0.6
KNZ				SN	Sn	10 03 24.2	+0.4
MXZ	**Matakaoa Point**	**0.83**	**33**	PN	Pn	10 03 14.7	+0.5
MXZ				SN	Sn	10 03 25.4	+0.1
MARZ	**Manawahe**	**0.88**	**288**	PN	Pn	10 03 14.4	-0.5
MHGZ	**Mahia Peninsul**	**0.91**	**171**	PN	Pn	10 03 14.9	-0.4
RRRZ	**Republican Roa**	**0.96**	**265**	PN	Pn	10 03 15.8	-0.2
TARZ	**Mount Tarawera**	**0.97**	**271**	⇑PN	Pn	10 03 16.3	0.0
OPRZ	**Ohinepanea**	**1.02**	**293**	⇑PN	Pn	10 03 15.9	-0.8
PRRZ	**Plateau Road**	**1.08**	**257**	PN	Pn	10 03 17.4	-0.2
NMHZ	**Naumai**	**1.11**	**220**	PN	Pn	10 03 18.7	+0.5
TGRZ	**Tauranga**	**1.28**	**294**	PN	Pn	10 03 19.5	-0.8
BKZ	**Black Stump Fm**	**1.33**	**226**	⇓PN	Pn	10 03 21.0	-0.2
MCHZ	**McNeill Hill**	**1.44**	**214**	PN	Pn	10 03 22.5	0.0
CKHZ	**Cape Kidnapper**	**1.49**	**200**	PN	Pn	10 03 22.4	-0.9
KAHZ	**Kahuranaki**	**1.68**	**203**	PN	Pn	10 03 25.0	-0.8
BHHZ	**Black Hill Sta**	**1.79**	**226**	PN	Pn	10 03 27.2	-0.3
KRVZ	**Karewarewa**	**1.84**	**242**	PN	Pn	10 03 27.8	-0.4
PXZ	**Pawanui**	**1.90**	**201**	PN	Pn	10 03 27.1	-1.7
FWVZ	**Far West T-bar**	**1.98**	**239**	⇑PN	Pn	10 03 29.7	-0.5
WNVZ	**Wahianoa**	**1.98**	**237**	PN	Pn	10 03 30.0	-0.2
TRVZ	**Turoa**	**2.00**	**238**	PN	Pn	10 03 30.0	-0.5
PNHZ	**Pukenui**	**2.04**	**215**	PN	Pn	10 03 29.4	-1.4
PRHZ	**Porangahau**	**2.18**	**203**	PN	Pn	10 03 30.9	-1.9
TSZ	**Takapari Road**	**2.27**	**217**	PN	Pn	10 03 32.2	-1.8
MKAZ	**Moumakai**	**2.33**	**299**	PN	Pn	10 03 34.0	-0.8
WAZ	**Wanganui**	**2.61**	**234**	⇑PN	Pn	10 03 39.2	+0.5
BFZ	**Birch Farm**	**2.68**	**205**	PN	Pn	10 03 37.2	-2.4

MEX 16 10:42:15.5±0.3,17°38N×101°49W, h28km±6km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.23**	**7**	*i* P	Pb	10 42 20.7	-1.3
ZIIG				*i* S	Sb	10 42 24.8	-1.5
CAIG	**El Cayaco**	**1.22**	**105**	*i* P	Pn	10 42 34.3	-2.3
CAIG				*i* S	Sn	10 42 49.0	-3.2
ARIG	**Puente Sto Nin**	**1.42**	**50**	*i* P	Pn	10 42 37.2	-2.2
ARIG				*i* S	Sn	10 42 54.0	-3.2
YAIG	**Yautepec**	**2.74**	**57**	*i* P	Pn	10 42 57.2	-0.6
YAIG				*i* S	Sn	10 43 25.8	-4.4

ISCJB ***16*** *10:45:50.0±0.9, 37°.63N±0°.06×35°.49E±0°.05, h12km, Error ellipse: s-maj=9.1km s-min=5.2km az=9.2*
CSEM ***16*** *10:45:49.7±0.5, 37°.64N×35°.51E, h10km, ML1.8, Error ellipse: s-maj=12.6km s-min=6.7km az=28.0*
ISK ***16*** *10:45:49.0, 37°.67N×35°.64E, h22km, ML1.8*
DDA ***16*** *10:45:50.9, 37°.44N×35°.54E, h7km, MD2.7*
ISC 16 10:45:49.8±1.1,37°.63N±0°.07×35°.49E±0°.03, h12km, n9, σ0°48/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.31**	**119**	*e*PG	**Pg**	**10 45 55.4**	**-0.7**
KOZT				*e*SG	**Sg**	**10 45 59.9**	**-0.3**
KOZT	**Kozan**	**0.31**	**119**	*e*Pg	**Pg**	**10 45 55.4**	**-0.7**
KOZT				*e*Sg	**Sg**	**10 45 59.9**	**-0.3**
CEYT	**Ceyhan**	**0.66**	**161**	*e*PG	**Pg**	**10 46 02.5**	**0.0**
CEYT				*e*SG	**Sb**	**10 46 12.7**	**+0.5**
CEYT	**Ceyhan**	**0.66**	**161**	*e*Pg	**Pg**	**10 46 02.5**	**0.0**
CEYT				*e*Sg	**Sb**	**10 46 12.7**	**+0.5**
GULE	**Gulek**	**0.67**	**239**	*i* P	**Pg**	**10 46 02.2**	**-0.5**
GULE				*i* S	**Sb**	**10 46 12.8**	**+0.1**
GULE	**Gulek**	**0.67**	**239**	*i* P	**Pg**	**10 46 02.2**	**-0.5**
GULE				*i* S	**Sb**	**10 46 12.8**	**+0.1**
NIG	**Nigde**	**0.84**	**305**	*e*PG	**Pb**	**10 46 07.0**	**+0.5**
NIG	**Nigde**	**0.84**	**305**	*e*Pg	**Pb**	**10 46 07.0**	**+0.5**
AYKD	**Aykdinkavak**	**1.07**	**101**	*i* P	**Pg**	**10 46 10.6**	**+0.2**
AYKD				*i* S	**Sn**	**10 46 25.0**	**-0.5**

CSEM ***16*** *11:03:20.9±0.7, 36°.36N×21°.62E, h2km, ML2.7/3, Error ellipse: s-maj=11.3km s-min=5.7km az=53.0*
ATH ***16*** *11:03:21.9, 36°.41N×21°.68E, h5km, MD3.4/12*
THE 16 11:03:22.9, 36°.42N×21°.73E, h0km±6km, ML2.7/3, Error ellipse: s-maj=7.2km s-min=1.2km az=217.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.48**	**1**	P	Pg	11 03 31.8	-0.3
PYL				S	Sg	11 03 39.1	+0.7
PYL	**PYLOS**	**0.48**	**1**	*e*PB	Pg	11 03 31.7	-0.4
PYL				*e*SB	Sg	11 03 38.9	+0.5
PYL	**PYLOS**	**0.48**	**1**	*e*Pb	Pg	11 03 31.7	-0.4
PYL				S	Sg	11 03 39.1	+0.7
DYR	**Agios Nikonas**	**0.59**	**54**	P	Pg	11 03 33.6	-0.8
DYR				S	Sg	11 03 43.6	+1.4
DYR	**Agios Nikonas**	**0.59**	**54**	*e*PG	Pg	11 03 33.6	-0.8
DYR				*e*SB	Sg	11 03 43.4	+1.2
DYR	**Agios Nikonas**	**0.59**	**54**	P	Pg	11 03 33.6	-0.8
DYR				S	Sg	11 03 43.6	+1.4
ITM	**Ithomi**	**0.78**	**12**	P	Pg	11 03 37.5	-0.4
ITM				S	Sg	11 03 49.0	+0.9
ITM	**Ithomi**	**0.78**	**12**	*e*PB	Pg	11 03 37.5	-0.4
ITM				*e*SB	Sg	11 03 49.1	+1.0
ITM	**Ithomi**	**0.78**	**12**	P	Pg	11 03 37.5	-0.4
ITM				S	Sg	11 03 49.0	+0.9
VLI	**Veliai**	**1.02**	**72**	P	Pg	11 03 42.3	-0.1
VLI				S	Sb	11 03 56.7	-0.6
VLI	**Veliai**	**1.02**	**72**	*e*PB	Pg	11 03 42.3	-0.1
VLI	**Veliai**	**1.02**	**72**	P	Pg	11 03 42.3	-0.1
VLI				S	Sb	11 03 56.7	-0.6
KYTH	**Kithira**	**1.06**	**97**	P	Pg	11 03 43.4	+0.1
KYTH	**Kithira**	**1.06**	**97**	*e*PB	Pg	11 03 43.6	+0.3
KYTH	**Kithira**	**1.06**	**97**	P	Pg	11 03 43.4	+0.1
VLX	**Vlachokerasia**	**1.08**	**28**	P	Pg	11 03 43.0	-0.9
VLX				S	Sb	11 03 59.3	-0.3
VLX	**Vlachokerasia**	**1.08**	**28**	*e*PB	Pg	11 03 43.1	-0.8
VLX	**Vlachokerasia**	**1.08**	**28**	P	Pg	11 03 43.0	-0.9
VLX				S	Sb	11 03 59.3	-0.3
AMT	**Artemida-Makis**	**1.11**	**359**	P	Pg	11 03 43.5	-0.9
AMT				S	Sn	11 04 01.2	-0.8
AMT	**Artemida-Makis**	**1.11**	**359**	*e*PB	Pg	11 03 43.7	-0.7
AMT				*e*SB	Sb	11 04 00.0	-0.3
AMT	**Artemida-Makis**	**1.11**	**359**	*e*Pb	Pg	11 03 43.7	-0.7
AMT				*e*Sb	Sb	11 04 00.0	-0.3
AMT				S	Sn	11 04 01.2	-0.8
GUR	**Goura**	**1.59**	**18**	P	Pn	11 03 51.6	-0.9
GUR	**Goura**	**1.59**	**18**	*e*PG	Pn	11 03 51.8	-0.7
GUR	**Goura**	**1.59**	**18**	P	Pn	11 03 51.6	-0.9
DID	**Didima**	**1.62**	**47**	P	Pn	11 03 52.9	0.0
DID	**Didima**	**1.62**	**47**	*e*PG	Pn	11 03 52.9	0.0
DID	**Didima**	**1.62**	**47**	P	Pn	11 03 52.9	0.0
KLV	**Kalavryta, Ach**	**1.66**	**11**	*e*PG	Pn	11 03 53.0	-0.4
LTK	**Loutraki**	**1.88**	**31**	*e*PG	Pb	11 03 57.4	-0.8
LTK	**Loutraki**	**1.88**	**31**	*e*Pg	Pb	11 03 57.4	-0.8
EFP	**Efpalio**	**2.01**	**4**	*e*PG	Pb	11 03 59.8	-0.6
EFP	**Efpalio**	**2.01**	**4**	*e*Pg	Pb	11 03 59.8	-0.6

ISCJB ***16*** *11:04:13.5±0.5, 38°.45N±0°.03×29°.75E±0°.04, h11km±4km, Error ellipse: s-maj=5.6km s-min=4.6km az=20.9*
CSEM ***16*** *11:04:13.6±0.1, 38°.45N×29°.74E, h10km, MD2.8, Error ellipse: s-maj=3.6km s-min=3.2km az=31.0*
ISK ***16*** *11:04:13.4, 38°.47N×29°.73E, h17km, MD2.8*
DDA ***16*** *11:04:13.7, 38°.46N×29°.69E, h15km, MD2.8*
ISC 16 11:04:13.9±0.9,38°.46N±0°.02×29°.72E±0°.03, h14km±7km, n46, σ0°66/57, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHAL	**Karahalli**	**0.20**	**242**	*i* P	**Pg**	**11 04 18.2**	**-0.3**
KHAL				*i* S	**Sg**	**11 04 21.1**	**-0.5**
KHAL	**Karahalli**	**0.20**	**242**	*i* P	**Pg**	**11 04 18.2**	**-0.3**
KHAL				*i* S	**Sg**	**11 04 21.1**	**-0.5**
KHL	**Karahalli**	**0.21**	**227**	*e*PG	**Pg**	**11 04 18.4**	**-0.2**
KHL				*e*SG	**Sg**	**11 04 23.0**	**+1.2**
KHL	**Karahalli**	**0.21**	**227**	*e*Pg	**Pg**	**11 04 18.4**	**-0.2**
KHL				*e*Sg	**Sg**	**11 04 23.0**	**+1.2**
GDZ	**Gediz**	**0.65**	**344**	*i* P	**Pg**	**11 04 26.7**	**0.0**
GDZ	**Gediz**	**0.65**	**344**	*i* P	**Pg**	**11 04 26.7**	**0.0**
SHUT	**Suhut-Afyon**	**0.66**	**82**	*e*PG	**Pg**	**11 04 26.6**	**-0.2**
SHUT	**Suhut-Afyon**	**0.66**	**82**	*e*Pg	**Pg**	**11 04 26.6**	**-0.2**
ALT	**Altintas**	**0.67**	**27**	*e*PG	**Pg**	**11 04 26.5**	**-0.4**
ALT	**Altintas**	**0.67**	**27**	*e*Pg	**Pg**	**11 04 26.5**	**-0.4**
KULA	**Kula-Manisa**	**0.83**	**274**	*e*PG	**Pb**	**11 04 30.6**	**+0.4**
KULA	**Kula-Manisa**	**0.83**	**274**	*e*Pg	**Pb**	**11 04 30.6**	**+0.4**
DENT	**Denizli**	**0.89**	**217**	*e*PG	**Pg**	**11 04 30.6**	**-0.5**
ISP	**Isparta**	**0.90**	**135**	*e*PG	**Pb**	**11 04 31.6**	**+0.2**
ISP	**Isparta**	**0.90**	**135**	*e*Pg	**Pb**	**11 04 31.6**	**+0.2**
DNZL	**Cakiroluk**	**0.94**	**215**	*i* P	**Pg**	**11 04 31.2**	**-0.8**
DNZL				*i* S	**Sn**	**11 04 48.2**	**+2.4**
DNZL	**Cakiroluk**	**0.94**	**215**	*i* P	**Pg**	**11 04 31.2**	**-0.8**
DEMI	**Demirci**	**0.97**	**307**	*i* P	**Pn**	**11 04 33.1**	**-0.2**
DEMI				*i* S	**Sg**	**11 04 45.1**	**-0.3**
DEMI	**Demirci**	**0.97**	**307**	*i* P	**Pn**	**11 04 33.1**	**-0.2**
DEMI				*i* S	**Sg**	**11 04 45.1**	**-0.3**
TVSB	**Tavsanli**	**1.00**	**349**	*e*PG	**Pb**	**11 04 32.5**	**-0.7**
TVSB	**Tavsanli**	**1.00**	**349**	*e*Pg	**Pb**	**11 04 32.5**	**-0.7**
BCK	**Bucak**	**1.22**	**145**	*e*PN	**Pn**	**11 04 36.2**	**-0.4**
BCK	**Bucak**	**1.22**	**145**	*e*Pn	**Pn**	**11 04 36.2**	**-0.4**
GOLH	**Golhisar**	**1.23**	**186**	*i* P	**Pn**	**11 04 35.9**	**-0.9**
GOLH	**Golhisar**	**1.23**	**186**	*i* P	**Pn**	**11 04 35.9**	**-0.9**
SEYT	**Eskypehyr**	**1.38**	**40**	*i* P	**Pn**	**11 04 39.1**	**+0.3**
SEYT	**Eskypehyr**	**1.38**	**40**	*i* P	**Pn**	**11 04 39.1**	**+0.3**
DST	**Dursunbey**	**1.42**	**323**	*e*PN	**Pn**	**11 04 39.6**	**+0.2**
DST	**Dursunbey**	**1.42**	**323**	*e*Pn	**Pn**	**11 04 39.6**	**+0.2**
DURS	**Dursunbey**	**1.49**	**320**	*i* P	**Pb**	**11 04 41.7**	**+0.2**
DURS				*i* S	**Sg**	**11 05 02.3**	**+0.3**
DURS	**Dursunbey**	**1.49**	**320**	*i* P	**Pb**	**11 04 41.7**	**+0.2**
DURS				*i* S	**Sg**	**11 05 02.3**	**+0.3**
SVRH	**Sivrihisar-ESK**	**1.72**	**55**	*e*PN	**Pn**	**11 04 43.3**	**-0.2**
ELL	**Elmali**	**1.72**	**175**	*e*PN	**Pn**	**11 04 43.1**	**-0.5**
KIZT	**Kizilcal**	**1.74**	**76**	*e*PN	**Pn**	**11 04 43.9**	**0.0**
KIZT	**Kizilcal**	**1.74**	**76**	*e*Pn	**Pn**	**11 04 43.9**	**0.0**
YER	**Yerkesik**	**1.75**	**221**	*e*PN	**Pn**	**11 04 43.3**	**-0.5**
YER	**Yerkesik**	**1.75**	**221**	*e*Pn	**Pn**	**11 04 43.3**	**-0.6**
BALY	**Balya**	**2.07**	**309**	*i* P	**Pb**	**11 04 50.0**	**-1.3**
BALY				*i* S	**Sn**	**11 05 13.9**	**-0.1**
BALY	**Balya**	**2.07**	**309**	*i* P	**Pb**	**11 04 50.0**	**-1.3**
BALY				*i* S	**Sn**	**11 05 13.9**	**-0.1**
LADK	**Ladik-KONYA**	**2.10**	**96**	*e*PN	**Pn**	**11 04 48.9**	**+0.1**
LADK	**Ladik-KONYA**	**2.10**	**96**	*e*Pn	**Pn**	**11 04 48.9**	**+0.1**
KONT	**Konya--Tatoy**	**2.15**	**103**	*e*PN	**Pn**	**11 04 49.1**	**-0.2**
KONT	**Konya--Tatoy**	**2.15**	**103**	*e*Pn	**Pn**	**11 04 49.2**	**-0.2**
GONE	**Gonen-Balikesi**	**2.23**	**316**	*e*PN	**Pn**	**11 04 50.5**	**0.0**
GONE	**Gonen-Balikesi**	**2.23**	**316**	*e*Pn	**Pn**	**11 04 50.5**	**0.0**
BOZC	**Bozcaada**	**3.16**	**297**	*i* P	**Pn**	**11 05 05.0**	**+1.7**

ISCJB ***16*** *11:17:49.4±0.9, 61°.08N±0°.04×28°.94E±0°.09, h0km, Error ellipse: s-maj=6.7km s-min=4.4km az=35.6*
HEL ***16*** *11:17:50.2±0.9, 60°.88N×29°.24E, h0km, ML1.9, Explosion*
NAO ***16*** *11:17:52.9±1.8, 60°.89N×28°.87E, ML2.2*
BER ***16*** *11:17:52.8±2.7, 60°.86N×28°.90E, h0km, ML2.2(NAO), Suspected explosion*
CSEM ***16*** *11:17:53.5±0.5, 60°.98N×28°.64E, h2km, ML1.9, Error ellipse: s-maj=9.3km s-min=5.7km az=108.0, Mining explosion.*
IDC ***16*** *11:17:53.0±1.8, 60°.94N×28°.92E, h0km, mb1 3.3/3, mb1mx3.0/27, mbtmp3.2/3, ML3.0/3, Error ellipse: s-maj=15.9km s-min=11.1km az=161.0*
ISC 16 11:17:51.8±1.3,60°.94N±0°.05×28°.82E±0°.06, h0km, n34, σ1°29/48, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**0.74**	**238**	PG	**Pg**	**11 18 06.7**	**+0.8**
VJF				SG	**Sb**	**11 18 18.6**	**+0.4**
VJF				RG	Rg	11 18 22.1	
VJF	**Virojoki**	**0.74**	**238**	Pg	**Pg**	**11 18 06.7**	**+0.8**
VJF				Sg	**Sb**	**11 18 18.5**	**+0.4**
FIA0	**FINESS Array S**	**1.42**	**292**	Pg	**Pn**	**11 18 18.6**	**-0.2**
	baz=110,slow=18						
FIA0				Lg	Lg	11 18 39.2	
	baz=103,slow=37						
FIA0				Rg	Rg	11 18 46.8	
	baz=115,slow=37						
FIA0	**FINESS Array S**	**1.42**	**292**	Pg	**Pn**	**11 18 18.6**	**-0.2**
	baz=110,slow=18						
FIA0				Lg	Lg	11 18 39.2	
	baz=103,slow=37						
FIA0				Rg	Rg	11 18 46.8	
	baz=115,slow=37						
FIA0	**FINESS Array S**	**1.42**	**292**	PG	**Pn**	**11 18 18.3**	**-0.5**
	baz=113						
FIA0				SG	Sn	11 18 45.1	+6.9
FIA0				RG	Rg	11 18 47.6	
FIA0	**FINESS Array S**	**1.42**	**292**	Pg	**Pn**	**11 18 18.6**	**-0.2**
	baz=110,slow=16,SNR=3.0						
FIA0				Lg

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVSB	**Tavsanli**	**0.24**	**180**	*e*PG	**Pg**	**11 18 21.9**	**-0.3**
TVSB				*e*SG	**Sg**	**11 18 25.9**	**+0.4**
TVSB	**Tavsanli**	**0.24**	**180**	*e*Pg	**Pg**	**11 18 21.9**	**-0.3**
TVSB				*e*Sg	**Sg**	**11 18 25.9**	**+0.4**
ORLT	**Orhaneli**	**0.56**	**309**	*e*PG	**Pg**	**11 18 28.2**	**-0.1**
ORLT				*e*SG	**Sg**	**11 18 35.6**	**+0.1**
ORLT	**Orhaneli**	**0.56**	**309**	*e*Pg	**Pg**	**11 18 28.2**	**-0.1**
ORLT				*e*Sg	**Sg**	**11 18 35.7**	**+0.1**
DST	**Dursunbey**	**0.66**	**263**	*e*PG	**Pg**	**11 18 30.1**	**0.0**
DST	**Dursunbey**	**0.66**	**263**	*e*Pg	**Pg**	**11 18 30.1**	**0.0**
DURS	**Dursunbey**	**0.77**	**264**	*i* P	**Pg**	**11 18 31.9**	**-0.3**
DURS				*i* S	**Sg**	**11 18 42.7**	**+0.5**
DURS	**Dursunbey**	**0.77**	**264**	*i* P	**Pg**	**11 18 31.9**	**-0.3**
DURS				*i* S	**Sg**	**11 18 42.7**	**+0.5**
GEMT	**Gemlik**	**0.77**	**344**	*e*PG	**Pg**	**11 18 32.2**	**-0.1**
GEMT	**Gemlik**	**0.77**	**344**	*e*Pg	**Pg**	**11 18 32.2**	**-0.1**
MDNY	**Mudanya-Bursa**	**0.81**	**327**	*e*PG	**Pb**	**11 18 33.3**	**-0.7**
MDNY	**Mudanya-Bursa**	**0.81**	**327**	*e*Pg	**Pb**	**11 18 33.3**	**-0.7**
ALT	**Altintas**	**0.81**	**141**	*e*PG	**Pg**	**11 18 33.0**	**-0.1**
ALT	**Altintas**	**0.81**	**141**	*e*Pg	**Pg**	**11 18 33.0**	**-0.1**
DEMI	**Demirci**	**0.87**	**222**	*i* P	**Pg**	**11 18 33.9**	**-0.2**
DEMI				*i* S	**Sb**	**11 18 47.0**	**+0.1**
DEMI	**Demirci**	**0.87**	**222**	*i* P	**Pg**	**11 18 33.9**	**-0.2**
DEMI				*i* S	**Sb**	**11 18 47.0**	**+0.1**
YLV	**Yalova**	**0.88**	**356**	*e*PG	**Pg**	**11 18 34.1**	**-0.2**
YLV	**Yalova**	**0.88**	**356**	*e*Pg	**Pg**	**11 18 34.1**	**-0.2**
ARMT	**Armutlu**	**0.99**	**332**	*e*PG	**Pg**	**11 18 35.6**	**-0.7**
ARMT	**Armutlu**	**0.99**	**332**	*e*Pg	**Pg**	**11 18 35.7**	**-0.7**
KCTX	**Karacabey (Bur**	**1.02**	**304**	*e*PG	**Pg**	**11 18 36.5**	**-0.7**
KCTX	**Karacabey (Bur**	**1.02**	**304**	*e*Pg	**Pg**	**11 18 36.5**	**-0.7**
SEYT	**Eskypehyr**	**1.09**	**99**	*i* P	**Pg**	**11 18 38.2**	**-0.1**
SEYT				*i* S	**Sn**	**11 18 55.3**	**+0.5**
SEYT	**Eskypehyr**	**1.09**	**99**	*i* P	**Pg**	**11 18 38.2**	**-0.1**
SEYT				*i* S	**Sn**	**11 18 55.3**	**+0.5**
GULT	**Gulveren**	**1.10**	**47**	*e*PN	**Pn**	**11 18 39.4**	**-0.1**
GULT	**Gulveren**	**1.10**	**47**	*e*Pn	**Pn**	**11 18 39.4**	**-0.1**
BUY	**Buyukada**	**1.19**	**347**	*i* P	**Pb**	**11 18 40.3**	**-0.2**
BUY	**Buyukada**	**1.19**	**347**	*i* P	**Pb**	**11 18 40.3**	**-0.2**
BALB	**Balikesir**	**1.22**	**268**	*e*PN	**Pb**	**11 18 40.7**	**-0.3**
BALB	**Balikesir**	**1.22**	**268**	*e*Pn	**Pb**	**11 18 40.7**	**-0.3**
KHL	**Karahalli**	**1.37**	**178**	*e*PN	**Pn**	**11 18 43.1**	**-0.2**
KHL	**Karahalli**	**1.37**	**178**	*e*Pn	**Pn**	**11 18 43.1**	**-0.2**
GONE	**Gonen-Balikesi**	**1.41**	**285**	*e*PN	**Pn**	**11 18 43.3**	**-0.4**
GONE	**Gonen-Balikesi**	**1.41**	**285**	*e*Pn	**Pn**	**11 18 43.3**	**-0.4**
SHUT	**Suhut-Afyon**	**1.42**	**143**	*e*PN	**Pn**	**11 18 43.3**	**-0.7**
SHUT	**Suhut-Afyon**	**1.42**	**143**	*e*Pn	**Pn**	**11 18 43.3**	**-0.7**
BALY	**Balya**	**1.42**	**273**	*i* P	**Pn**	**11 18 43.8**	**-0.1**
BALY				*i* S	**Sg**	**11 19 04.2**	**+1.1**
BALY	**Balya**	**1.42**	**273**	*i* P	**Pn**	**11 18 43.8**	**-0.1**
BALY				*i* S	**Sg**	**11 19 04.2**	**+1.1**
MDUB	**Mudurnu**	**1.54**	**59**	*e*PN	**Pn**	**11 18 45.7**	**0.0**
MDUB	**Mudurnu**	**1.54**	**59**	*e*Pn	**Pn**	**11 18 45.7**	**0.0**
MRMT	**Marmara Adasi**	**1.69**	**303**	*e*PN	**Pn**	**11 18 48.0**	**+0.3**
MRMT	**Marmara Adasi**	**1.69**	**303**	*e*Pn	**Pn**	**11 18 48.0**	**+0.3**
MFT	**Murefte**	**2.00**	**304**	*e*PN	**Pn**	**11 18 51.9**	**0.0**
MFT	**Murefte**	**2.00**	**304**	*e*Pn	**Pn**	**11 18 51.9**	**0.0**
SART	**Tekirdag**	**2.01**	**300**	*i* P	**Pg**	**11 18 55.5**	**-0.5**
SART				*i* S	**Sg**	**11 19 23.8**	**+1.7**
SART	**Tekirdag**	**2.01**	**300**	*i* P	**Pg**	**11 18 55.5**	**-0.5**
RKY	**Sarkoy-Tekirda**	**2.01**	**300**	*e*PN	**Pn**	**11 18 52.1**	**0.0**
RKY	**Sarkoy-Tekirda**	**2.01**	**300**	*e*Pn	**Pn**	**11 18 52.1**	**0.0**

IDC 16 11:30:31.9±3.5, 6°45S×155°21E, h209km±35km, mb3.5/9, mb1 3.7/12, mb1mx3.5/21, mbtmp3.6/12, Error ellipse: s-maj=21.0km s-min=20.6km az=175.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.50**	**249**	P	Pn	11 32 31.0	-0.7
	5.0nm,0.3s,baz=21,slow=4.2,SNR=17						
PMG				S	S	11 34 07.4	-0.1
	1.2nm,0.3s,baz=352,slow=10,SNR=3.2						
CTA	**Charters Tower**	**16.11**	**212**	P	Pn	11 34 08.3	+1.1
	0.4nm,0.3s,baz=29,slow=13,SNR=5.8						
DZM	**Mont Dzumac**	**18.95**	**146**	P	P	11 34 37.6	0.0
	1.1nm,0.3s,baz=269,slow=19,SNR=11						
ASAR	**Alice Springs**	**26.70**	**228**	P	P	11 35 51.7	-0.4
	0.7nm,0.4s,baz=59,slow=9.1,SNR=12						
PETK	**Petropavlovsk-**	**59.36**	**2**	P	P	11 40 12.3	+0.3
	4.4nm,0.6s,baz=162,slow=8.1,SNR=9.3						
CMAR	**Chiang Mai Arr**	**60.75**	**295**	P	P	11 40 22.5	+0.4
	1.1nm,0.6s,baz=123,slow=5.5,SNR=8.7						
SONM	**Songino Array**	**69.00**	**327**	P	P	11 41 15.4	+0.5
	0.9nm,0.4s,baz=143,slow=5.7,SNR=22						
ILAR	**Eielson Array**	**82.79**	**21**	P	P	11 42 31.5	-0.8
	0.5nm,0.6s,baz=244,slow=5.4,SNR=13						
MKAR	**Makanchi Array**	**83.14**	**319**	P	P	11 42 34.4	-0.1
	1.5nm,0.8s,baz=102,slow=6.2,SNR=17						
ZALV	**Zalesovo Beam**	**83.85**	**326**	P	P	11 42 36.8	-1.1
	0.7nm,0.4s,baz=104,slow=6.0,SNR=7.0						
KURBB	**Kurchatov Arra**	**86.57**	**322**	P	P	11 42 50.3	-1.1
	0.2nm,0.4s,baz=110,slow=4.0,SNR=3.4						
YKA	**Yellowknife Ar**	**95.75**	**28**	P	P	11 43 34.4	+0.6
	0.7nm,0.8s,baz=265,slow=4.6,SNR=15						
TORD	**Torodi Ar. Bea**	**153.09**	**286**	PKPbc	PKPbc	11 50 05.8	+0.1
	0.2nm,0.4s,baz=70,slow=1.1,SNR=4.6						
TORD				PKPab	PKPab	11 50 17.9	-0.2
	0.2nm,0.4s,baz=72,slow=4.1,SNR=3.5						

*ISCJB **16** 11:39:38.0±0.5, 39°46N±0°03×28°13E±0°04, h0km, Error ellipse: s-maj=5.6km s-min=3.4km az=40.1*
*CSEM **16** 11:39:38.2±0.3, 39°49N×28°15E, h1km, MD2.7, Error ellipse: s-maj=8.6km s-min=5.2km az=39.0*
*ISK **16** 11:39:38.2, 39°48N×28°20E, h20km, MD2.7*
*DDA **16** 11:39:38.8, 39°46N×28°15E, h7km, MD2.7*
ISC 16 11:39:38.2±0.9, 39°50N±0°03×28°18E±0°02, h0km, n33, σ1°07/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.25**	**65**	*i* P	**Pg**	**11 39 44.5**	**+1.5**
DURS				*i* S	**Sb**	**11 39 50.0**	**-0.7**
DURS	**Dursunbey**	**0.25**	**65**	*i* P	**Pg**	**11 39 44.5**	**+1.5**
DURS				*i* S	**Sb**	**11 39 50.0**	**-0.7**
BALB	**Balikesir**	**0.27**	**302**	*e*PG	**Pg**	**11 39 44.9**	**+1.5**
BALB				*e*SG	**Sb**	**11 39 50.6**	**-0.6**
BALB	**Balikesir**	**0.27**	**302**	*e*Pg	**Pg**	**11 39 44.9**	**+1.5**
BALB				*e*Sg	**Sb**	**11 39 50.6**	**-0.6**
DST	**Dursunbey**	**0.36**	**72**	*e*PG	**Pg**	**11 39 46.2**	**+1.2**
DST	**Dursunbey**	**0.36**	**72**	*e*Pg	**Pg**	**11 39 46.2**	**+1.2**
BALY	**Balya**	**0.50**	**300**	*i* P	**Pg**	**11 39 48.4**	**+0.7**
BALY				*i* S	**Sg**	**11 39 56.4**	**+2.3**
BALY	**Balya**	**0.50**	**300**	*i* P	**Pg**	**11 39 48.4**	**+0.7**
BALY				*i* S	**Sg**	**11 39 56.4**	**+2.3**
DEMI	**Demirci**	**0.61**	**137**	*i* P	**Pg**	**11 39 50.9**	**+1.0**
DEMI				*i* S	**Sg**	**11 39 59.0**	**+1.1**
DEMI	**Demirci**	**0.61**	**137**	*i* P	**Pg**	**11 39 50.9**	**+1.0**
DEMI				*i* S	**Sg**	**11 39 59.0**	**+1.1**
GONE	**Gonen-Balikesi**	**0.67**	**326**	*e*PG	**Pg**	**11 39 51.9**	**+0.9**
GONE	**Gonen-Balikesi**	**0.67**	**326**	*e*Pg	**Pg**	**11 39 51.9**	**+0.9**
TVSB	**Tavsanli**	**0.99**	**92**	*e*PG	**Pg**	**11 39 58.3**	**+1.1**
TVSB	**Tavsanli**	**0.99**	**92**	*e*Pg	**Pg**	**11 39 58.3**	**+1.1**
MDNY	**Mudanya-Bursa**	**1.03**	**32**	*e*PG	**Pg**	**11 39 58.2**	**+0.3**
MDNY	**Mudanya-Bursa**	**1.03**	**32**	*e*Pg	**Pg**	**11 39 58.2**	**+0.3**
MANT	**Manisa**	**1.04**	**164**	*i* P	**Pg**	**11 39 58.3**	**+0.1**
MANT				*i* S	**Sg**	**11 40 11.7**	**-0.1**
MANT	**Manisa**	**1.04**	**164**	*i* P	**Pg**	**11 39 58.3**	**+0.1**
MANT				*i* S	**Sg**	**11 40 11.7**	**-0.1**
KULA	**Kula-Manisa**	**1.05**	**159**	*e*PG	**Pg**	**11 39 57.9**	**-0.4**
KULA	**Kula-Manisa**	**1.05**	**159**	*e*Pg	**Pg**	**11 39 57.9**	**-0.4**
GDZ	**Gediz**	**1.09**	**111**	*i* P	**Pg**	**11 40 00.1**	**+1.1**
GDZ				*i* S	**Sb**	**11 40 15.1**	**+0.3**
GDZ	**Gediz**	**1.09**	**111**	*i* P	**Pg**	**11 40 00.1**	**+1.1**
GDZ				*i* S	**Sb**	**11 40 15.1**	**+0.3**
KRBG	**Karabiga-Canak**	**1.12**	**323**	*e*PN	**Pg**	**11 39 59.6**	**-0.2**
KRBG	**Karabiga-Canak**	**1.12**	**323**	*e*Pn	**Pg**	**11 39 59.6**	**-0.2**
ARMT	**Armutlu**	**1.19**	**26**	*e*PN	**Pg**	**11 40 00.5**	**-0.5**
ARMT	**Armutlu**	**1.19**	**26**	*e*Pn	**Pg**	**11 40 00.5**	**-0.5**
GEMT	**Gemlik**	**1.22**	**39**	*e*PN	**Pg**	**11 40 00.7**	**-0.8**
GEMT	**Gemlik**	**1.22**	**39**	*e*Pn	**Pg**	**11 40 00.7**	**-0.8**
LPK	**Lapseki**	**1.40**	**309**	*e*PN	**Pn**	**11 40 02.8**	**-2.2**
LPK	**Lapseki**	**1.40**	**309**	*e*Pn	**Pn**	**11 40 02.8**	**-2.2**
GELI	**Tayfur-Gelibol**	**1.59**	**305**	*e*PN	**Pn**	**11 40 06.9**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.59**	**305**	*e*Pn	**Pn**	**11 40 06.9**	**-0.7**
BOZC	**Bozcaada**	**1.68**	**283**	*i* P	**Pn**	**11 40 08.3**	**-0.5**

*TAP **16** 11:40:48.0, 24°.83N×122°.00E, h8km, ML3.5, D*
*JMA **16** 11:40:48.2±0.6, 25°.11N×122°.15E, h0km, M2.8*
ISC 16 11:40:48.0±0.9, 24°87N±0°02×122°05E±0°02, h11km±7km, n41, σ0°81/69, 2C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.15**	**338**	*i*⇓P	**Pg**	**11 40 51.9**	**+0.4**
TWB1				S	**Sg**	**11 40 55.2**	**+1.3**
ILA	**Ilan**	**0.29**	**249**	*e*P	**Pg**	**11 40 53.2**	**-0.7**
	baz=252						
ILA				*e*S	**Sg**	**11 40 57.7**	**-0.2**
	baz=252						
NWF	**Wu-fen Shan**	**0.32**	**310**	P	**Pb**	**11 40 54.9**	**-0.8**
	baz=320						
NWF				*i* S	**Sb**	**11 40 59.9**	**-0.9**
	baz=320						
TWC	**Suao**	**0.32**	**215**	*e*P	**Pg**	**11 40 53.5**	**-0.8**
	baz=208						
TWC				*e*S	**Sg**	**11 40 58.1**	**-0.5**
	baz=208						
TWE	**Neicheng**	**0.38**	**247**⇑	*i*P	**Pg**	**11 40 54.7**	**-0.8**
	baz=248						
TWE				S	**Sg**	**11 41 00.1**	**-0.4**
	baz=248						
ENTT	**Nioudou**	**0.49**	**243**	⇓P	**Pg**	**11 40 56.8**	**-0.8**
	baz=243						
ENTT				*e*S	**Sb**	**11 41 04.7**	**-1.2**
	baz=243						
TAP1	**Taipei**	**0.51**	**290**	*e*P	**Pb**	**11 40 58.5**	**-0.4**
	baz=295						
TAP1				*e*S	**Sb**	**11 41 05.1**	**-1.1**
	baz=295						
ENA	**Nanau**	**0.52**	**213**	*e*P	**Pb**	**11 40 58.4**	**-0.7**
	baz=208						
ENA				*e*S	**Sg**	**11 41 05.7**	**+0.6**
	baz=208						
TAP	**Taipei**	**0.52**	**289**	*e*P	**Pb**	**11 40 58.6**	**-0.4**
	baz=295						
TAP				*e*S	**Sb**	**11 41 05.6**	**-1.0**
	baz=295						
TWY	**Chenhua**	**0.57**	**315**	P	**Pb**	**11 41 00.0**	**0.0**
	baz=321						
TWY				*e*S	**Sb**	**11 41 08.9**	**+0.7**
	baz=321						
TWS1	**Kuangyinshan**	**0.62**	**292**	*e*P	**Pb**	**11 41 00.7**	**0.0**
	baz=297						
TWS1				*e*S	**Sb**	**11 41 09.7**	**+0.2**
	baz=297						
NSK	**Sanguang**	**0.66**	**253**	⇑P	**Pg**	**11 40 59.6**	**-1.1**
	baz=254						
NSK				*e*S	**Sg**	**11 41 08.5**	**-0.9**
	baz=254						
NNS	**Nan Shan**	**0.75**	**235**	*e*P	**Pg**	**11 41 01.6**	**-0.8**
	baz=234						
NNS				*e*S	**Sg**	**11 41 12.4**	**+0.1**
	baz=234						
PCYT	**Pengchaiyu**	**0.76**	**1**	P	**Pn**	**11 41 04.4**	**-0.2**
	baz=5.0						
PCYT				*e*S	**Sn**	**11 41 16.2**	**+0.2**
	baz=5.0						
NCU	**National Centr**	**0.79**	**278**	*e*P	**Pb**	**11 41 03.4**	**-0.3**
	baz=280						
NCU				*e*S	**Sb**	**11 41 14.1**	**-0.3**
	baz=280						
TWD	**Chiawan**	**0.89**	**208**	*e*P	**Pb**	**11 41 04.8**	**-0.6**
	baz=205						
TWD				*e*S	**Sg**	**11 41 15.7**	**-1.0**
	baz=205						
YOJ	**Yonaguni jima**	**0.96**	**115**	P	**Pn**	**11 41 07.8**	**+0.4**
YOJ				*e*S	**Sn**	**11 41 21.8**	**+0.8**
NSTT	**Nanjuang**	**0.98**	**256**	*e*P	**Pb**	**11 41 06.7**	**-0.3**
	baz=257						
NSTT				*e*S	**Sb**	**11 41 20.8**	**+0.9**
	baz=257						
HSN	**Hsinchu**	**0.98**	**266**	*e*P	**Pb**	**11 41 06.8**	**-0.2**
	baz=269						
HSN				*e*S	**Sb**	**11 41 20.5**	**+0.6**
	baz=269						
TWT	**Tachien**	**1.00**	**233**	*e*P	**Pb**	**11 41 07.0**	**-0.5**
	baz=232						
TWT				*e*S	**Sb**	**11 41 21.8**	**+1.1**
	baz=232						
WHF	**Hehuan Shan**	**1.01**	**225**	*e*P	**Pg**	**11 41 06.8**	**-0.8**
	baz=223						
WHF				*e*S	**Sg**	**11 41 20.7**	**-0.2**
	baz=223						
ESL	**Shilin**	**1.19**	**208**	*e*P	**Pg**	**11 41 10.2**	**-0.7**
	baz=206						
ESL				*e*S	**Sb**	**11 41 26.4**	**+0.5**
	baz=206						
NSY	**Sanyi**	**1.26**	**249**	*e*P	**Pn**	**11 41 11.6**	**+0.1**
	baz=249						
NSY				*e*S	**Sn**	**11 41 29.4**	**+1.0**
	baz=249						
TWQ1	**Liyutan**	**1.27**	**246**	*e*P	**Pn**	**11 41 11.8**	**+0.1**
	baz=246						
TWQ1				*e*S	**Sn**	**11 41 29.8**	**+1.1**
	baz=246						
SMLT	**Sun Moon Lake**	**1.44**	**227**	*e*P	**Pg**	**11 41 14.7**	**-0.9**
	baz=226						
TCU	**Taichung**	**1.44**	**240**	*e*P	**Pg**	**11 41 14.9**	**-0.8**
	baz=240						
TYC	**Yuchr**	**1.45**	**229**	*e*P	**Pb**	**11 41 14.7**	**-0.2**
	baz=227						
TYC				*e*S	**Sb**	**11 41 33.9**	**+0.5**
	baz=227						
EHY	**Hungye**	**1.51**	**206**	*e*P	**Pb**	**11 41 16.0**	**+0.1**
	baz=204						
EHY				*e*S	**Sb**	**11 41 36.1**	**+0.9**
	baz=204						
IRIF	**Iriomote-Funau**	**1.62**	**109**	P	**Pg**	**11 41 18.6**	**-0.5**
IRIF				*e*S	**Sg**	**11 41 38.9**	**-1.2**
TWF1	**Yuli**	**1.66**	**205**	*e*P	**Pb**	**11 41 18.3**	**-0.2**
	baz=203						
TWF1				*e*S	**Sn**	**11 41 39.4**	**+1.2**
	baz=203						
CHN5	**Tsauling**	**1.78**	**225**	*e*P	**Pb**	**11 41 20.5**	**-0.1**
	baz=224						
HATJ	**Hateruma jima**	**1.79**	**116**	P	**Pg**	**11 41 21.7**	**-0.7**
JKRS	**Kuro-shima**	**1.89**	**109**	P	**Pb**	**11 41 21.6**	**-0.9**
ELDTW	**Lidau**	**1.92**	**210**	*e*P	**Pb**	**11 41 22.8**	**-0.2**
	baz=208						
JIJ	**Ishigaki jima**	**1.97**	**104**	P	**Pb**	**11 41 23.4**	**-0.4**
CHN4	**Tsaushan**	**2.01**	**222**	*e*P	**Pn**	**11 41 22.6**	**+0.8**
	baz=220						
WTP	**Ta-pu**	**2.08**	**219**	*e*P	**Pb**	**11 41 24.9**	**-0.8**
	baz=218						
TWK	**Hsinying**	**2.14**	**222**	*e*P	**Pb**	**11 41 25.2**	**-1.5**
	baz=221						
CHN1	**Nanshi**	**2.18**	**220**	*e*P	**Pb**	**11 41 25.9**	**-1.5**
	baz=219						
TWG	**Pinlang**	**2.23**	**204**	*e*P	**Pn**	**11 41 26.0**	**+1.2**
	baz=202						
EAST	**Anshuo**	**2.71**	**204**	*e*P	**Pn**	**11 41 33.8**	**+2.3**
	baz=203						

*ISCJB **16** 11:42:59.7±0.9, 51°.43N±0°.04×16°.15E±0°.04, h0km, Error ellipse: s-maj=6.3km s-min=3.2km az=18.4*
*CSEM **16** 11:43:00.7±0.4, 51°.45N×16°.16E, h2km, ML3.0/7, Error ellipse: s-maj=6.7km s-min=3.8km az=179.0*
*IPEC **16** 11:43:00.2±0.3, 51°.51N×16°.24E, h0km, ML2.2/3, Error ellipse: s-maj=3.3km s-min=1.7km az=67.0*
*WAR **16** 11:43:01.5, 51°.47N×16°.10E*
*PRU **16** 11:43:02.4, 51°.41N×16°.14E, h0km*
ISC 16 11:43:01.8±1.3, 51°43N±0°06×16°14E±0°03, h0km, n24, σ0°71/43, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.60**	**170**	*i* Pg	**Pg**	**11 43 13.4**	**+0.2**
KSP				*e*Sg	**Sg**	**11 43 20.9**	**0.0**
KSP				*e*		11 43 25.5	
KSP	**Ksiaz**	**0.60**	**170**	*e*Pg	**Pg**	**11 43 13.3**	**+0.1**
	baz=357						
KSP				*e*Sg	**Sg**	**11 43 20.9**	**0.0**
UPC	**Upice**	**0.93**	**185**	*e*PG	**Pg**	**11 43 19.5**	**0.0**
DPC	**Dobruska-Polom**	**1.09**	**174**	*e*PG	**Pg**	**11 43 22.2**	**-0.4**
DPC				*e*SG	**Sg**	**11 43 36.3**	**-0.4**
	comp=Z,22nm,0.5s						
DPC	**Dobruska-Polom**	**1.09**	**174**	*e*Pg	**Pg**	**11 43 22.1**	**-0.5**
	baz=357						
DPC				Sg	**Sg**	**11 43 36.3**	**-0.4**
	22nm,0.5s						
PVCC	**Panska Ves**	**1.34**	**228**	*e*PG	**Pg**	**11 43 27.3**	**-0.2**
PVCC				*e*SG	**Sn**	**11 43 46.2**	**-0.1**
PVCC	**Panska Ves**	**1.34**	**228**	Pg	**Pg**	**11 43 27.3**	**-0.2**
PVCC				Sg	**Sn**	**11 43 46.2**	**-0.1**
KRLC	**Kraliky**	**1.42**	**163**	*e*PG	**Pn**	**11 43 28.1**	**-0.7**
KRLC				*e*SG	**Sg**	**11 43 47.1**	**-0.2**
KRLC	**Kraliky**	**1.42**	**163**	Pg	**Pn**	**11 43 28.1**	**-0.7**
KRLC				Sg	**Sg**	**11 43 47.1**	**-0.2**
BRG	**Berggiesshubel**	**1.49**	**249**	PG	**Pn**	**11 43 29.5**	**-0.3**
BRG				SG	**Sn**	**11 43 50.0**	**+0.1**
	23nm,0.7s						
PRU	**Pruhonice**	**1.77**	**216**	*e*PG	**Pn**	**11 43 34.0**	**+0.4**
PRU				*e*SG	**Sb**	**11 43 57.9**	**+0.2**
	comp=Z,30nm,0.7s						
PRU	**Pruhonice**	**1.77**	**216**	Pg	**Pn**	**11 43 34.0**	**+0.4**
PRU				Sg	**Sb**	**11 43 57.9**	**+0.2**
	30nm,0.7s						
MORC	**Moravsky Berou**	**1.88**	**151**	*e*Pn	**Pn**	**11 43 34.1**	**-1.1**
	baz=335						
MORC				*e*Sg	**Sb**	**11 44 00.7**	**-0.4**
	11nm,0.4s,baz=335						
CLL	**Collm**	**1.97**	**268**	*i* Pg	**Pb**	**11 43 37.9**	**-0.5**
CLL				*e*		11 43 41.0	
CLL				*e*Sg	**Sg**	**11 44 05.0**	**0.0**
	comp=Z,14nm,0.7s						
VRAC	**Vranov**	**2.15**	**172**	*e*Pn	**Pn**	**11 43 38.5**	**-0.3**
	baz=354						
VRAC				*e*Sg	**Sb**	**11 44 09.5**	**+0.9**
	comp=Z,11nm,0.5s,baz=354						
KRUC	**Moravsky**	**2.38**	**176**	*e*Pn	**Pn**	**11 43 41.5**	**-0.5**
	baz=358						
KRUC				*e*Sg	**Sg**	**11 44 17.1**	**-1.0**
	comp=Z,17nm,0.7s,baz=358						
OJC	**Ojcow**	**2.62**	**116**	*e*Pg	**Pb**	**11 43 50.2**	**+0.6**
OJC				*e*Sg	**Sg**	**11 44 25.7**	**-0.2**
OJC	**Ojcow**	**2.62**	**116**	*e*Pg	**Pb**	**11 43 50.2**	**+0.6**
OJC				*e*Sg	**Sg**	**11 44 25.7**	**-0.2**
NKC	**Novy Kostel**	**2.63**	**244**	*e*SG	**Sg**	**11 44 27.4**	**+1.2**
	comp=Z,15nm,0.5s						
NKC	**Novy Kostel**	**2.63**	**244**	Sg	**Sg**	**11 44 27.4**	**+1.2**
	comp=Z,15nm,0.5s						
KHC	**Kasperske Hory**	**2.83**	**216**	*e*PN	**Pn**	**11 43 47.3**	**-0.9**
KHC				*e*PG	**Pb**	**11 43 53.8**	**+0.7**
KHC				*e*SG	**Sg**	**11 44 31.4**	**-1.2**
	comp=Z,9.1nm,0.5s						
KHC	**Kasperske Hory**	**2.83**	**216**	Pn	**Pn**	**11 43 47.3**	**-0.9**
VYHS	**Vyhne**	**3.42**	**148**	*e*SG	**Sg**	**11 44 53.3**	**+1.8**
VYHS	**Vyhne**	**3.42**	**148**	*e*Sg	**Sg**	**11 44 53.3**	**+1.8**

IDC 16 11:52:57.0±4.5, 7°82N×72°60W, h0km, mb3.2/2, mb1 3.7/3, mb1mx3.4/23, mbtmp3.4/3, Error ellipse: s-maj=116.1km s-min=35.2km az=100.0, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**3.41**	**210**	Pn	Pn	11 53 51.8	-0.1
	15nm,0.3s,baz=360,slow=1.8,SNR=29						
ROSC				Sn	Sn	11 54 21.4	-12
	28nm,0.3s,baz=180,slow=10.0,SNR=14						
TXAR	**Lajitas Array**	**36.20**	**310**	P	P	12 00 01.7	-0.1
	0.3nm,0.9s,baz=116,slow=10,SNR=3.7						
YKA	**Yellowknife Ar**	**62.52**	**339**	P	P	12 03 22.2	0.0
	0.2nm,0.6s,baz=130,slow=7.0,SNR=5.9						

*TAP **16** 12:02:00.8, 24°.83N×122°.01E, h7km, ML3.7, C*
*JMA **16** 12:02:01.9±0.3, 24°.99N×122°.03E, h43km, M3.2*
ISC 16 12:02:01.1±0.9, 24°87N±0°02×122°03E±0°02, h12km±5km, n50, σ0°85/86, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.14**	**344**	*i* P	**Pb**	**12 02 05.0**	**-0.7**
	baz=356						
TWB1				*i* S	**Sb**	**12 02 07.9**	**+0.8**
	baz=356						
ILA	**Ilan**	**0.28**	**248**	P	**Pg**	**12 02 06.5**	**-0.4**
	baz=255						
ILA				S	**Sg**	**12 02 10.7**	**0.0**
	baz=255						
NWF	**Wu-fen Shan**	**0.30**	**311**	*i* P	**Pb**	**12 02 08.0**	**-0.5**
	baz=306						
NWF				*i* S	**Sb**	**12 02 13.2**	**-0.2**
	baz=306						
TWC	**Suao**	**0.31**	**213**	*i* P	**Pg**	**12 02 06.6**	**-0.8**
	baz=213						
TWC				*i* S	**Sg**	**12 02 09

	baz=248							
TWQ1				*e*S		**Sg**	**12 02 43.6**	**+1.9**
	baz=248							
SMLT	**Sun Moon Lake**	**1.43**	**227**	*e*P		**Pg**	**12 02 29.1**	**+0.7**
	baz=229							
TCU	**Taichung**	**1.43**	**240**	*e*P		**Pg**	**12 02 28.7**	**+0.2**
	baz=242							
TCU				*e*S		**Sg**	**12 02 48.2**	**+1.1**
	baz=242							
TYC	**Yuchr**	**1.44**	**228**	*e*P		**Pb**	**12 02 28.2**	**+0.4**
	baz=220							
EHY	**Hungye**	**1.50**	**206**	*e*P		**Pn**	**12 02 28.3**	**+0.4**
	baz=213							
EHY				*e*S		**Sn**	**12 02 48.1**	**+0.7**
	baz=213							
WNT	**Mingjian**	**1.58**	**231**	*e*P		**Pg**	**12 02 31.5**	**+0.2**
	baz=221							
WNT				*e*S		**Sg**	**12 02 53.0**	**+1.2**
	baz=221							
IRIF	**Iriomote-Funau**	**1.64**	**109**	P		**Pn**	**12 02 29.5**	**-0.1**
IRIF				S		**Sn**	**12 02 49.9**	**-0.7**
TWF1	**Yuli**	**1.65**	**204**	*e*P		**Pb**	**12 02 31.1**	**-0.4**
	baz=218							
TWF1				*e*S		**Sn**	**12 02 52.1**	**+1.0**
	baz=218							
CHN5	**Tsauling**	**1.77**	**225**	*e*P		**Pb**	**12 02 33.7**	**+0.2**
	baz=228							
CHN5				*e*S		**Sg**	**12 02 57.8**	**-0.3**
	baz=228							
HATJ	**Hateruma jima**	**1.81**	**116**	P		**Pn**	**12 02 32.5**	**+0.5**
HATJ				S		**Sn**	**12 02 54.4**	**-0.5**
CHKT	**Chengkung**	**1.86**	**199**	*e*P		**Pn**	**12 02 33.5**	**+0.7**
	baz=219							
CHKT				*e*S		**Sn**	**12 02 56.9**	**+0.6**
	baz=219							
JKRS	**Kuro-shima**	**1.91**	**109**	P		**Pn**	**12 02 33.6**	**+0.2**
JKRS				S		**Sn**	**12 02 57.3**	**0.0**
ELDTW	**Lidau**	**1.91**	**209**	*e*P		**Pb**	**12 02 35.2**	**-0.8**
	baz=212							
JIJ	**Ishigaki jima**	**1.99**	**104**	P		**Pn**	**12 02 34.0**	**-0.5**
JIJ				S		**Sn**	**12 02 58.6**	**-0.7**
CHN4	**Tsaushan**	**2.00**	**221**	*e*P		**Pb**	**12 02 37.5**	**+0.1**
	baz=225							
CHY	**Chiayi**	**2.00**	**227**	*e*P		**Pb**	**12 02 37.3**	**-0.2**
	baz=248							
WTP	**Ta-pu**	**2.07**	**219**	*e*P		**Pb**	**12 02 39.0**	**+0.3**
	baz=223							
TWK	**Hsinying**	**2.13**	**222**	*e*P		**Pb**	**12 02 39.8**	**+0.1**
	baz=226							
CHN1	**Nanshi**	**2.17**	**220**	*e*P		**Pb**	**12 02 39.8**	**-0.5**
	baz=212							
CHN1				*e*S		**Sb**	**12 03 08.9**	**+1.8**
	baz=212							
TWG	**Pinlang**	**2.22**	**203**	*e*P		**Pb**	**12 02 40.0**	**-1.2**
	baz=207							
CHN3	**Shinhua**	**2.35**	**221**	*e*P		**Pb**	**12 02 43.4**	**+0.1**
	baz=225							
JTJ	**Tarama**	**2.44**	**95**	P		**Pn**	**12 02 41.6**	**+0.9**
ECL	**Taimali**	**2.47**	**204**	*e*P		**Pn**	**12 02 42.6**	**+1.5**
	baz=198							
ECL				*e*S		**Sn**	**12 03 11.7**	**+0.5**
	baz=198							
TWM1	**Shoushan**	**2.51**	**216**	*e*P		**Pb**	**12 02 45.4**	**-0.8**
	baz=221							
EAST	**Anshuo**	**2.70**	**204**	*e*P		**Pn**	**12 02 47.0**	**+2.6**
	baz=197							
SCZT	**Fangliau**	**2.80**	**208**	*e*P		**Pb**	**12 02 49.6**	**-1.5**
	baz=212							

CSEM ***16*** *12:03:25.8,38.68N×21.79E,h17km,ML1.4/3, After THE*
THE 16 12:03:25.8,38.68N×21.79E,h17km±1km,ML1.4/3,Error ellipse: s-maj=2.2km s-min=0.4km az=69.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.24**	**4**	P	**Pg**	12 03 31.0	-0.4
EVR				S	Sg	12 03 35.4	+0.2
EVR	**Evrytania**	**0.24**	**4**	P	Pg	12 03 31.0	-0.4
EVR				S	Sg	12 03 35.4	+0.2
EFP	**Efpalio**	**0.27**	**160**	P	Pg	12 03 31.5	-0.2
EFP				S	Sg	12 03 36.1	+0.3
EFP	**Efpalio**	**0.27**	**160**	P	Pg	12 03 31.5	-0.2
EFP				S	Sg	12 03 36.1	+0.3
TRIZ	**Trizonia**	**0.39**	**144**	P	Pg	12 03 33.5	-0.2
TRIZ				S	Sb	12 03 39.8	0.0
TRIZ	**Trizonia**	**0.39**	**144**	P	Pg	12 03 33.5	-0.2
TRIZ				S	Sb	12 03 39.8	0.0
KALE	**Kalithea**	**0.40**	**136**	P	Pg	12 03 33.8	-0.3
KALE				S	Sb	12 03 40.1	-0.3
KALE	**Kalithea**	**0.40**	**136**	P	Pg	12 03 33.8	-0.3
KALE				S	Sb	12 03 40.1	-0.3
LAKA	**Lakka**	**0.46**	**161**	P	Pg	12 03 35.3	+0.1
LAKA	**Lakka**	**0.46**	**161**	P	Pg	12 03 35.3	+0.1
AGG	**Agios Georgios**	**0.54**	**51**	P	Pb	12 03 37.3	+0.3
AGG	**Agios Georgios**	**0.54**	**51**	P	Pb	12 03 37.3	+0.3

ISCJB ***16*** *12:04:07.8±0.7,39.76N±0.03×21.96E±0.09,h8km±6km, Error ellipse: s-maj=11.5km s-min=4.2km az=171.9*
CSEM ***16*** *12:04:07.8±0.3,39.75N×21.94E,h10km,MD2.9, Error ellipse: s-maj=9.7km s-min=3.4km az=83.0*
ATH ***16*** *12:04:07.9,39.74N×21.91E,h8km,MD2.9/4*
THE ***16*** *12:04:08.1,39.75N×21.95E,h12km±3km,ML1.7/3, Error ellipse: s-maj=3.5km s-min=0.6km az=156.0*
ISC 16 12:04:07.4±1.0,39.74N±0.03×21.95E±0.05,h17km±6km, n14,σ0.38/31,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THL	**Klokotos Trika**	**0.19**	**164**	P	**Pg**	**12 04 12.0**	**0.0**
THL				S	**Sg**	**12 04 15.4**	**+0.3**
THL	**Klokotos Trika**	**0.19**	**164**	*e*PG	**Pg**	**12 04 12.1**	**+0.1**
THL				*e*SG	**Sg**	**12 04 14.8**	**-0.3**
THL	**Klokotos Trika**	**0.19**	**164**	*e*Pg	**Pg**	**12 04 12.1**	**0.0**
THL				*e*Sg	**Sg**	**12 04 14.8**	**-0.3**
THL				S	**Sg**	**12 04 15.4**	**+0.3**
LIT	**Litokhoron**	**0.55**	**49**	P	**Pg**	**12 04 18.1**	**-0.3**
LIT				S	**Sb**	**12 04 27.0**	**+0.7**
LIT	**Litokhoron**	**0.55**	**49**	*e*PB	**Pb**	**12 04 18.3**	**-0.3**
LIT				*e*SB	**Sb**	**12 04 27.0**	**+0.7**
LIT	**Litokhoron**	**0.55**	**49**	*e*Pb	**Pb**	**12 04 18.3**	**-0.3**
LIT				S	**Sb**	**12 04 27.0**	**+0.7**
KZN	**Kozani**	**0.58**	**347**	P	**Pb**	**12 04 19.1**	**-0.1**
KZN				S	**Sb**	**12 04 27.8**	**+0.6**
KZN	**Kozani**	**0.58**	**347**	*e*PB	**Pb**	**12 04 18.9**	**-0.3**
KZN				*e*SB	**Sb**	**12 04 27.4**	**+0.2**
KZN	**Kozani**	**0.58**	**347**	P	**Pb**	**12 04 19.1**	**-0.1**
KZN				*e*Sb	**Sb**	**12 04 27.4**	**+0.2**
KZN				S	**Sb**	**12 04 27.8**	**+0.6**
MAKR	**Makrakomi, Fth**	**0.74**	**169**	P	**Pb**	**12 04 21.8**	**-0.2**
MAKR				S	**Sn**	**12 04 33.7**	**-0.4**
MAKR	**Makrakomi, Fth**	**0.74**	**169**	P	**Pb**	**12 04 21.8**	**-0.2**
MAKR				S	**Sn**	**12 04 33.7**	**-0.4**
AGG	**Agios Georgios**	**0.78**	**157**	P	**Pb**	**12 04 22.5**	**-0.1**
AGG				S	**Sn**	**12 04 35.0**	**0.0**
AGG	**Agios Georgios**	**0.78**	**157**	*e*PG	**Pb**	**12 04 22.5**	**-0.1**
AGG				*e*SB	**Sn**	**12 04 34.7**	**-0.3**
AGG	**Agios Georgios**	**0.78**	**157**	P	**Pb**	**12 04 22.5**	**-0.1**
AGG				*e*Sb	**Sn**	**12 04 34.7**	**-0.3**
AGG				S	**Sn**	**12 04 35.0**	**0.0**

MAN 16 12:08:15,13.22N×124.77E,h33km,mb4.5,ML3.4,MS3.3, 2C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.72**	**188**	*e*P	Pb	12 08 30.2	+1.1
AUQP	**San Andres**	**2.04**	**273**	*e*P	Pn	12 08 48.2	+1.2
PLP	**Palo**	**2.06**	**174⇑**	*e*P	Pb	12 08 50.4	-1.3
PLP				*e*S	Sb	12 09 15.6	-1.4
GQP	**Guinayangan**	**2.36**	**287⇓**	*e*P	Pn	12 08 52.7	+1.3
GQP				*e*S	Sn	12 09 20.0	+0.8
RCP	**Roxas**	**2.58**	**230⇑**	*e*P	Pn	12 08 57.1	+2.6
BOAC	**Boac**	**2.85**	**275**	*e*P	Pb	12 09 03.6	-1.7
CUYO	**Cuyo Island**	**4.36**	**238**	*e*P	Pn	12 09 17.5	-1.5

AUST ***16*** *12:18:59.1,5.10S×155.61E,h35km*
NEIC ***16*** *12:19:09.0±0.5,5.99S×154.58E,h10km,mb4.5/2, Error ellipse: s-maj=12.0km s-min=11.0km az=110.0*
ISCJB ***16*** *12:19:12.2±1.9,6.15S±0.08×154.55E±0.06,h46km±17km, mb4.0/15,MS3.5/8, Error ellipse: s-maj=13.2km s-min=9.5km az=177.7*
IDC ***16*** *12:19:12.9±0.7,6.12S×154.57E,h39km±5km,mb3.8/14, mb1 4.1/17,mb1mx4.0/23,mbtmp3.9/17,ML4.2/4,MS3.5/10, Ms1 3.5/10,ms1mx3.2/33,Error ellipse: s-maj=18.3km s-min=13.9km az=85.0*
ISC 16 12:19:13.5±0.7,6.14S±0.08×154.62E±0.07,h44km±6km, h44km:pP-P,n63,σ0.89/71,mb4.0/15,MS3.5/8, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.21**	**122**	Pn	**Pn**	**12 20 44.2**	**+1.5**
HNR	**Honiara**	**6.21**	**122**	Pn	**Pn**	**12 20 44.2**	**+1.5**
	3.8nm,0.3s,baz=44,slow=1.4,SNR=2.2						
PMG	**Port Moresby**	**8.07**	**246**	Pn	**Pn**	**12 21 08.6**	**+0.4**
PMG				Sn	**Sn**	**12 22 38.7**	**+0.6**
PMG	**Port Moresby**	**8.07**	**246**	Pn	**Pn**	**12 21 08.6**	**+0.4**
	12nm,0.3s,baz=53,slow=9.3,SNR=62						
PMG				Sn	**Sn**	**12 22 38.7**	**+0.6**
	8.7nm,0.3s,baz=168,slow=22,SNR=7.4						
COEN	**Coen**	**13.68**	**235**	*e*Pn	**Pn**	**12 22 25.5**	**+0.5**
COEN	**Coen**	**13.68**	**235**	P	**P**	**12 22 33.7**	**+1.0**
	baz=15,SNR=7.1						
CTA	**Charters Tower**	**16.07**	**210**	Pn	**P**	**12 22 58.2**	**-1.1**
CTA	**Charters Tower**	**16.07**	**210**	Pn	**P**	**12 22 58.2**	**-1.1**
	0.9nm,0.3s,baz=34,slow=13,SNR=19						
CTA				LR	LR	12 28 13.6	
	comp=Z,72nm,19.2s,baz=45,slow=34						
DZM	**Mont Dzumac**	**19.53**	**145**	P	**Pn**	**12 23 39.2**	**+0.1**
DZM	**Mont Dzumac**	**19.53**	**145**	P	**Pn**	**12 23 39.2**	**+0.1**
	1.6nm,0.3s,baz=229,slow=21,SNR=14						
DZM				LR	LR	12 30 15.2	
	comp=Z,124nm,18.7s,baz=278,slow=34						
QIS	**Mount Isa**	**20.43**	**224**	P	Pn	12 23 49.6	-0.1
	baz=22,SNR=5.4						
RMQ	**Roma**	**20.99**	**195**	P	**P**	**12 23 54.5**	**+1.2**
	baz=22,SNR=9.2						
QLP	**Quilpie**	**22.61**	**205**	P	**P**	**12 24 09.8**	**-0.7**
	baz=24,SNR=8.8						
KDU	**Kakadu**	**22.78**	**252**	P	**P**	**12 24 10.3**	**-2.2**
	baz=24,SNR=5.7						
WRAB	**Tennant Creek**	**23.99**	**233**	*e*P	**P**	**12 24 22.6**	**-1.7**
	18nm,0.9s						
MTN	**Manton Dam**	**24.09**	**252**	P	**P**	**12 24 24.3**	**-0.8**
	baz=25,SNR=4.1						
ASAR	**Alice Springs**	**26.47**	**227**	P	**P**	**12 24 45.3**	**-1.4**
ASAR				pP	**pP**	**12 24 57.6**	**-0.8**
ASAR				PcP	**PcP**	**12 28 11.3**	**+0.1**
ASAR				ScP	**ScP**	**12 31 48.0**	**+0.3**
ASAR	**Alice Springs**	**26.47**	**227**	P	**P**	**12 24 45.3**	**-1.4**
	2.4nm,0.6s,baz=57,slow=9.0,SNR=74						
ASAR				pP	**pP**	**12 24 57.6**	**-0.8**
	1.3nm,0.4s,baz=56,slow=9.1,SNR=6.5						
ASAR				PcP	**PcP**	**12 28 11.3**	**+0.1**
	1.4nm,0.7s,baz=67,slow=2.9,SNR=9.7						
ASAR				ScP	**ScP**	**12 31 48.0**	**+0.3**
	0.4nm,0.7s,baz=46,slow=4.0,SNR=6.2						
ASAR				LR	LR	12 34 18.4	
	comp=Z,151nm,18.7s,baz=145,slow=34						
STKA	**Stephens Creek**	**28.35**	**204**	P	**P**	**12 25 02.2**	**-1.2**
STKA				pP	**pP**	**12 25 15.1**	**-0.2**
STKA	**Stephens Creek**	**28.35**	**204**	P	**P**	**12 25 02.2**	**-1.2**
	1.7nm,0.8s,baz=25,slow=14,SNR=2.2						
STKA				pP	**pP**	**12 25 15.1**	**-0.2**
	2.2nm,0.7s,baz=56,slow=16,SNR=2.2						
STKA				LR	LR	12 36 05.0	
	comp=Z,183nm,19.1s,baz=24,slow=36						
FITZ	**Fitzroy Crossi**	**30.66**	**245**	LR	LR	12 37 49.4	
	comp=Z,115nm,19.8s,baz=9.0,slow=36						
FITZ	**Fitzroy Crossi**	**30.66**	**245**	P	**P**	**12 25 22.6**	**-1.5**
	baz=32,SNR=15						
DAV	**Davao City (W)**	**31.80**	**294**	LR	LR	12 35 54.7	
	comp=Z,109nm,21.1s,baz=352,slow=32						
AFI	**Afiamalu**	**33.95**	**106**	LR	LR	12 37 32.9	
	comp=Z,102nm,20.5s,baz=99,slow=32						
WSI	**Waingapu**	**34.16**	**262**	S	**S**	**12 31 21.9**	**+3.5**
	baz=35,SNR=5.3						
PCI	**Palu**	**35.09**	**277**	S	S	12 31 18.9	-14
	baz=36,SNR=5.4						
URZ	**Urewera**	**37.93**	**151**	*e*P	**P**	**12 26 26.9**	**+0.2**
	4.3nm,0.5s						
URZ	**Urewera**	**37.93**	**151**	P	**P**	**12 26 27.1**	**+0.4**
	4.6nm,0.6s,baz=19,slow=8.4,SNR=8.7						
JHJ	**Hachijo jima 2**	**41.51**	**341**	LR	LR	12 43 58.0	
	comp=Z,44nm,18.4s,baz=108,slow=36						
JNU	**Nakatsue**	**45.08**	**332**	P	**P**	**12 27 24.9**	**-0.5**
JNU	**Nakatsue**	**45.08**	**332**	P	**P**	**12 27 24.9**	**-0.5**
	5.4nm,0.8s,baz=134,slow=8.9,SNR=3.7						
JNU				LR	LR	12 45 07.7	
	comp=Z,20nm,19.0s,baz=241,slow=34						
KSRS	**Korea Array**	**50.01**	**332**	P	**P**	**12 28 03.4**	**-0.2**
	1.3nm,0.9s,baz=132,slow=7.2,SNR=4.4						
KSAR	**Wonju Array Be**	**50.02**	**332**	P	**P**	**12 28 03.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**60.08**	**295**	P	**P**	**12 29 17.6**	**+0.9**
CMAR	**Chiang Mai Arr**	**60.08**	**295**	P	**P**	**12 29 17.6**	**+0.9**
	1.1nm,0.8s,baz=109,slow=4.9,SNR=6.8						
CMAR				LR	LR	12 52 32.3	
	comp=Z,35nm,19.7s,baz=346,slow=33						
SONM	**Songino Array**	**68.42**	**327**	P	**P**	**12 30 11.3**	**+0.4**
SONM				pP	**pP**	**12 30 24.0**	**+0.2**
SONM	**Songino Array**	**68.42**	**327**	P	**P**	**12 30 11.3**	**+0.4**
	0.6nm,0.8s,baz=132,slow=6.5,SNR=6.2						
SONM				pP	**pP**	**12 30 24.0**	**+0.2**
	5.1nm,1.1s,baz=151,slow=8.9,SNR=13						
TAPN	**Taplejung**	**72.64**	**301**	*e*P	**P**	**12 30 38.2**	**+0.9**
GUN	**Gumba**	**74.36**	**301**	*e*P	**P**	**12 30 48.3**	**+0.9**
	39nm,0.8s						
PKI	**Pulchoki**	**74.67**	**301**	*e*P	**P**	**12 30 49.6**	**+0.4**
KKN	**Kakani**	**74.83**	**301**	*e*P	**P**	**12 30 50.6**	**+0.5**
DMN	**Daman**	**74.94**	**301**	*e*P	**P**	**12 30 51.6**	**+0.9**
KOLN	**Koldanda**	**76.27**	**300**	*e*P	**P**	**12 30 58.6**	**+0.3**
	29nm,0.7s						
DANN	**Dangsing**	**76.28**	**301**	*e*P	**P**	**12 30 58.5**	**+0.1**
	27nm,0.7s						
PYUN	**Piuthan**	**76.87**	**301**	*e*P	**P**	**12 31 01.2**	**-0.5**
	48nm,0.9s						
MKAR	**Makanchi Array**	**82.52**	**319**	P	**P**	**12 31 31.3**	**-0.4**
MKAR	**Makanchi Array**	**82.52**	**319**	P	**P**	**12 31 31.3**	**-0.4**
	0.6nm,0.6s,baz=100,slow=6.0,SNR=6.2						
ILAR	**Eielson Array**	**82.72**	**22**	P	**P**	**12 31 31.7**	**-0.6**
ILAR	**Eielson Array**	**82.72**	**22**	P	**P**	**12 31 31.7**	**-0.6**
	0.9nm,0.8s,baz=247,slow=5.5,SNR=12						
ZALV	**Zalesovo Beam**	**83.26**	**326**	P	**P**	**12 31 34.4**	**-0.9**
ZALV	**Zalesovo Beam**	**83.26**	**326**	P	**P**	**12 31 34.4**	**-0.9**
	0.5nm,0.6s,baz=123,slow=5.2,SNR=3.5						
KURK	**Kurchatov**	**85.93**	**322**	P	**P**	**12 31 48.5**	**-0.3**
KURBB	**Kurchatov Arra**	**85.96**	**322**	P	**P**	**12 31 48.6**	**-0.4**
	0.2nm,0.4s,baz=96,slow=4.5,SNR=3.6						
NVAR	**Mina Array Bea**	**91.49**	**52**	P	**P**	**12 32 16.0**	**+0.1**
NVAR	**Mina Array Bea**	**91.49**	**52**	P	**P**	**12 32 16.0**	**+0.1**
	2.4nm,0.8s,baz=278,slow=2.6,SNR=7.4						
YKA	**Yellowknife Ar**	**95.76**	**28**	P	**P**	**12 32 34.7**	**+0.1**
YKA	**Yellowknife Ar**	**95.76**	**28**	P	**P**	**12 32 34.7**	**+0.1**
	0.8nm,1.1s,baz=268,slow=4.7,SNR=5.4						
PDAR	**Pinedale Array**	**98.41**	**48**	P	**P**	**12 32 47.4**	**0.0**
PDAR	**Pinedale Array**	**98.41**	**48**	P	**P**	**12 32 47.4**	**0.0**
	0.5nm,0.8s,baz=256,slow=2.7,SNR=4.8						
BOSA	**Boshof**	**120.25**	**232**	PKP	**PKPdf**	**12 38 00.2**	**-0.5**
BOSA	**Boshof**	**120.25**	**232**	PKP	**PKPdf**	**12 38 00.2**	**-0.5**
	2.6nm,0.8s,baz=153,slow=4.5,SNR=5.7						
TORD	**Torodi Ar. Bea**	**152.43**	**287**	PKPbc	**PKPbc**	**12 39 05.1**	**-0.8**
TORD				pPKPbc	**PKPab**	**12 39 16.3**	**+0.1**
TORD	**Torodi Ar. Bea**	**152.43**	**287**	PKPbc	**PKPbc**	**12 39 05.1**	**-0.8**
	2.1nm,0.5s,baz=72,slow=2.1,SNR=21						
TORD				pPKPbc	**PKPab**	**12 39 16.3**	**+0.1**
	2.8nm,0.7s,baz=72,slow=4.0,SNR=10.0						

TAP ***16*** *12:24:48.7,24.83N×122.00E,h9km,ML3.7,C*
JMA ***16*** *12:24:49.7±0.2,24.90N×122.01E,h37km,M3.4*
ISC 16 12:24:48.7±1.0,24.87N±0.02×122.01E±0.02,h14km±7km, n52,σ0.82/89,9C-2D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.14**	**353⇓**	*i*P	**Pb**	**12 24 52.9**	**-0.2**
	baz=358						
TWB1				S	**Sb**	**12 24 55.7**	**-0.3**
	baz=358						
ILA	**Ilan**	**0.26**	**246**	*e*P	**Pg**	**12 24 54.0**	**-0.1**
	baz=254						
ILA				*e*S	**Sg**	**12 24 58.2**	**+0.4**
	baz=254						
NWF	**Wu-fen Shan**	**0.29**	**314**	⇓P	**Pb**	**12 24 55.9**	**+0.2**
	baz=310						
NWF				*i* S	**Sb**	**12 25 00.9**	**+0.5**
	baz=310						
TWC	**Suao**	**0.30**	**209⇑**	*i*P	**Pg**	**12 24 54.3**	**-0.5**
	baz=212						
TWC				S	**Sg**	**12 24 57.6**	**-1.4**
	baz=212						
TWE	**Neicheng**	**0.34**	**244⇑**	*i*P	**Pg**	**12 24 55.5**	**-0.2**
	baz=249						
TWE				*e*S	**Sg**	**12 25 00.0**	**-0.4**
	baz=249						
ENTT	**Nioudou**	**0.46**	**240**	⇑P	**Pg**	**12 24 57.4**	**-0.4**
	baz=245						
ENTT				*e*S	**Sb**	**12 25 04.9**	**-0.5**
	baz=245						
TAP1	**Taipei**	**0.47**	**291**	P	**Pb**	**12 24 59.3**	**+0.6**
	baz=286						
TAP1				S	**Sb**	**12 25 05.9**	**+0.3**
	baz=286						
TAP	**Taipei**	**0.49**	**290**	*e*P	**Pb**	**12 24 59.3**	**+0.3**
	baz=286						
TAP				*e*S	**Sb**	**12 25 05.7**	**-0.3**
	baz=286						
ENA	**Nanau**	**0.50**	**209**	*e*P	**Pg**	**12 24 57.9**	**-0.7**
	baz=217						
ENA				*e*S	**Sg**	**12 25 05.2**	**-0.1**
	baz=217						
TWY	**Chenhua**	**0.55**	**318**	⇑P	**Pn**	**12 25 01.0**	**-1.1**
	baz=309						
TWY				S	**Sn**	**12 25 09.8**	**-1.2**
	baz=309						
TWS1	**Kuangyinshan**	**0.58**	**293**	⇑P	**Pn**	**12 25 01.7**	**-0.8**
	baz=296						
TWS1				*e*S	**Sn**	**12 25 10.1**	**-1.8**
	baz=296						
NSK	**Sanguang**	**0.62**	**252⇑**	*i*P	**Pg**	**12 25 00.4**	**-0.4**
	baz=255						
NSK				*e*S	**Sb**	**12 25 10.2**	**+0.2**
	baz=255						
NNS	**Nan Shan**	**0.72**	**234**	*e*P	**Pg**	**12 25 01.8**	**-0.9**
	baz=236						
NNS				*e*S	**Sb**	**12 25 13.3**	**+0.5**
	baz=236						
NCU	**National Centr**	**0.75**	**278**	*e*P	**Pn**	**12 25 04.7**	**-0.2**
	baz=280						
NCU				*e*S	**Sn**	**12 25 15.0**	**-1.1**
	baz=280						
PCYT	**Pengchaiyu**	**0.76**	**4**	⇑P	**Pn**	**12 25 05.4**	**+0.4**
	baz=3.0						
TWD	**Chiawan**	**0.87**	**206**	*e*P	**Pb**	**12 25 05.0**	**-0.6**
	baz=200						
TWD				*e*S	**Sb**	**12 25 15.5**	**-1.6**
	baz=200						
HSN	**Hsinchu**	**0.95**	**266**	*e*P	**Pn**	**12 25 07.5**	**-0.1**
	baz=287						
HSN				*e*S	**Sn**	**12 25 20.8**	**-0.1**
	baz=287						
NSTT	**Nanjuang**	**0.95**	**256**	*e*P	**Pg**	**12 25 07.0**	**+0.1**
	baz=258						
NSTT				*e*S	**Sn**	**12 25 21.1**	**+0.3**
	baz=258						
HWA	**Hwalien**	**0.96**	**203**	*e*P	**Pn**	**12 25 07.7**	**0.0**
	baz=204						
TWT	**Tachien**	**0.97**	**231**	⇑P	**Pg**	**12 25 07.7**	**+0.2**
	baz=229						
TWT				S	**Sg**	**12 25 21.3**	**+0.9**
	baz=229						
WHF	**Hehuan Shan**	**0.99**	**223**	*e*P	**Pb**	**12 25 06.6**	**-1.2**
	baz=226						
WHF				*e*S	**Sb**	**12 25 19.5**	**-1.4**
	baz=226						
YOJ	**Yonaguni jima**	**1.00**	**114⇑**	*i*P	**Pb**	**12 25 07.8**	**0.0**
	baz=113						
YOJ				*e*S	**Sb**	**12 25 20.9**	**+0.1**
	baz=113						
YOJ	**Yonaguni jima**	**1.00**	**114**	P	**Pb**	**12 25 07.7**	**0.0**
YOJ				S	**Sb**	**12 25 20.6**	**-0.2**
ESL	**Shilin**	**1.18**	**207**	*e*P	**Pn**	**12 25 09.7**	**-1.0**
	baz=209						
ESL				*e*S	**Sb**	**12 25 25.8**	**-0.1**
	baz=209						
NSY	**Sanyi**	**1.22**	**249**	*e*P	**Pg**	**12 25 12.6**	**+0.4**
	baz=251						
NSY				*e*S	**Sg**	**12 25 29.9**	**+1.8**
	baz=251						
TWQ1	**Liyutan**	**1.24**	**245**	*e*P	**Pg**	**12 25 13.2**	**+0.6**
	baz=248						
TWQ1				*e*S	**Sg**	**12 25 29.5**	**+0.8**
	baz=248						
SMLT	**Sun Moon Lake**	**1.41**	**226**	*e*P	**Pb**	**12 25 14.6**	**-0.2**
	baz=220						
SMLT				*e*S	**Sg**	**12 25 34.6**	**+0.5**
	baz=220						
TCU	**Taichung**	**1.41**	**240**	*e*P	**Pg**	**12 25 16.1**	**+0.3**
	baz=242						
TCU				*e*S	**Sg**	**12 25 34.4**	**+0.3**
	baz=242						
TYC	**Yuchr**	**1.42**	**228**	P	**Pb**	**12 25 15.0**	**0.0**
	baz=223						
TYC				*e*S	**Sb**	**12 25 33.5**	**+0.5**
	baz=223						
EHY	**Hungye**	**1.50**	**205**	*e*P	**Pg**	**12 25 17.2**	**-0.2**
	baz=219						
EHY				*e*S	**Sb**	**12 25 35.9**	**+0.8**
	baz=219						
WNT	**Mingjian**	**1.56**	**231**	*e*P	**Pg**	**12 25 18.6**	**0.0**
	baz=222						
WNT				*e*S	**Sg**	**12 25 40.0**	**+1.1**
	baz=222						
TWF1	**Yuli**	**1.65**	**203**	*e*P	**Pb**	**12 25 18.4**	**-0.4**
	baz=217						
TWF1				*e*S	**Sb**	**12 25 39.5**	**+0.1**
	baz=217						
IRIF	**Iriomote-Funau

ASAR	**Alice Springs**	**45.55**	**254**	P	P	12 35 57.1	+0.1
	1.1nm,0.5s,baz=90,slow=7.8,SNR=21							
ILAR	**Eielson Array**	**85.07**	**13**	P	P	12 40 12.3	0.0
	0.3nm,0.9s,baz=224,slow=5.3,SNR=4.2							

IDC ***16*** *12:34:51.9±1.6, 7.11S×129.24E, h0km, mb3.7/4, mb1 3.9/7, mb1mx3.8/20, mbtmp3.8/7, ML4.0/3, Error ellipse: s-maj=77.9km s-min=23.7km az=75.0*
AUST ***16*** *12:35:03.8, 7.48S×129.04E, h100km*
ISC 16 12:35:04.1±0.8, 7°65S±0.06×129°22E±0.09, h131km, n14, σ2§75/16, mb3.5/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**4.03**	**60**	P		P	Pn	12 36 07.3	+3.1
	baz=4.1,SNR=8.1								
TLE				S			**Sn**	**12 36 49.2**	**-1.7**
	baz=4.1,SNR=3.1								
MTN	**Manton Dam**	**5.49**	**160**	P		P	Pn	12 36 28.2	+4.4
	baz=5.7,SNR=11								
MTN				S			**Sn**	**12 37 29.2**	**+3.2**
	baz=5.7,SNR=9.2								
KDU	**Kakadu**	**5.94**	**148**	P		P	Pn	12 36 33.5	+3.7
	baz=6.2,SNR=20								
KDU				S			**Sn**	**12 37 39.4**	**+2.6**
	baz=6.2,SNR=5.1								
SWI	**Sorong**	**7.04**	**17**	P		**P**	**Pn**	**12 36 45.0**	**+0.3**
	baz=7.0,SNR=4.3								
FITZ	**Fitzroy Crossi**	**10.96**	**198**	Pn		**P**	**Pn**	**12 37 37.3**	**+0.1**
	2.2nm,0.3s,baz=20,slow=11,SNR=74								
FITZ				Sn			**Sn**	**12 39 33.5**	**-4.6**
	2.1nm,0.3s,baz=32,slow=19,SNR=6.8								
FITZ	**Fitzroy Crossi**	**10.96**	**198**	P		**P**	**Pn**	**12 37 37.3**	**+0.1**
	baz=11,SNR=74								
MMPI	**Merauke**	**11.08**	**95**	P		**P**	**P**	**12 37 47.0**	**-1.1**
	baz=11,SNR=3.7								
PCI	**Palu**	**11.51**	**305**	P		P	Pn	12 37 30.1	-14
	baz=11,SNR=20								
PCI				S			Sn	12 39 30.0	-21
	baz=11,SNR=12								
WRA	**Warramunga Arr**	**13.19**	**158**	Pn		**P**	**Pn**	**12 38 07.3**	**+0.9**
	0.7nm,0.3s,baz=333,slow=13,SNR=27								
WRA				Sn			**Sn**	**12 40 27.1**	**-5.0**
	1.8nm,0.3s,baz=333,slow=22,SNR=12								
ASAR	**Alice Springs**	**16.55**	**165**	P		**P**	**P**	**12 38 52.2**	**+3.3**
	0.2nm,0.3s,baz=340,slow=9.1,SNR=21								
ASAR				S			**Sn**	**12 41 48.9**	**-4.1**
	0.3nm,0.3s,baz=342,slow=24,SNR=6.9								
CMAR	**Chiang Mai Arr**	**39.56**	**311**	P		**P**	**P**	**12 42 22.5**	**-0.2**
	0.5nm,0.7s,baz=123,slow=6.6,SNR=4.5								
SONM	**Songino Array**	**58.81**	**342**	P		**P**	**P**	**12 44 50.1**	**+1.3**
	0.2nm,0.7s,baz=141,slow=7.4,SNR=3.0								
MKAR	**Makanchi Array**	**68.35**	**327**	P		**P**	**P**	**12 45 52.2**	**+0.9**
	1.2nm,0.6s,baz=127,slow=7.8,SNR=18								
ZALV	**Zalesovo Beam**	**71.82**	**334**	P		**P**	**P**	**12 46 12.4**	**+0.1**
	0.5nm,0.4s,baz=130,slow=4.5,SNR=4.3								

IDC 16 12:51:19.7±1.5, 6°66S×154°62E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.8/20, mbtmp3.8/9, ML3.0/1, Error ellipse: s-maj=51.7km s-min=20.0km az=119.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.88**	**249**	Pn		Pn	Pn	12 53 17.5	+1.8
	1.2nm,0.3s,baz=85,slow=11,SNR=5.5								
PMG				Sn			Sn	12 54 41.9	-3.7
	0.3nm,0.3s,baz=24,slow=19,SNR=2.1								
WRA	**Warramunga Arr**	**23.70**	**234**	P		P	P	12 56 32.6	-0.9
	3.2nm,1.0s,baz=55,slow=8.5,SNR=20								
ASAR	**Alice Springs**	**26.12**	**227**	P		P	P	12 56 55.4	-0.3
	0.6nm,0.6s,baz=57,slow=9.0,SNR=12								
STKA	**Stephens Creek**	**27.88**	**204**	P		P	P	12 57 12.8	+1.4
	0.9nm,0.6s,baz=21,slow=13,SNR=3.7								
FITZ	**Fitzroy Crossi**	**30.45**	**245**	P		P	P	12 57 33.4	-1.0
	0.9nm,0.5s,baz=56,slow=7.9,SNR=9.6								
SONM	**Songino Array**	**68.86**	**327**	P		P	P	13 02 26.8	+0.4
	0.3nm,0.6s,baz=122,slow=7.0,SNR=3.4								
MKAR	**Makanchi Array**	**82.91**	**319**	P		P	P	13 03 47.2	+0.6
	0.7nm,0.8s,baz=108,slow=4.7,SNR=4.0								
ILAR	**Eielson Array**	**83.20**	**22**	P		P	P	13 03 46.9	-0.7
	0.3nm,0.7s,baz=262,slow=5.2,SNR=3.8								
ZALV	**Zalesovo Beam**	**83.70**	**326**	P		P	P	13 03 50.4	0.0
	0.4nm,0.4s,baz=97,slow=7.4,SNR=2.7								
TORD	**Torodi Ar. Bea**	**152.58**	**286**	PKPbc		PKPbc	PKPbc	13 11 19.4	+0.1
	0.3nm,0.5s,baz=47,slow=1.9,SNR=8.1								

NSSC ***16*** *12:57:01.5±1.9, 36.29N×35.70E, h0km±7km, MD2.5, ML3.3*
ISK ***16*** *12:57:03.4, 36.08N×35.80E, h19km, ML3.5*
DDA ***16*** *12:57:03.1, 36.07N×35.82E, h32km, ML3.9*
CSEM ***16*** *12:57:04.3±0.1, 36.12N×35.79E, h10km, Mw3.4, Error ellipse: s-maj=2.4km s-min=2.1km az=129.0*
ISCJB ***16*** *12:57:04.1±0.5, 36.09N±0.02×35.78E±0.02, h14km±4km, Error ellipse: s-maj=3.1km s-min=2.6km az=26.9*
NIC ***16*** *12:57:04.2±0.2, 36.33N×35.73E, h15km, mb4.0, ML3.7, MW3.4*
ISC 16 12:57:04.2±1.1, 36°12N±0.02×35°80E±0.02, h9km±9km, n118, σ0§73/171, 16C-5D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YAYL	**Yayladag**	**0.26**	**108**	*i* P		**Pg**		**12 57 10.0**	**+0.6**
YAYL				*i* S		**Sb**		**12 57 14.9**	**-0.9**
YAYL	**Yayladag**	**0.26**	**108**	*i* P		**Pg**		**12 57 10.0**	**+0.6**
YAYL				*i* S		**Sb**		**12 57 14.9**	**-0.9**
BTCH	**Batrach**	**0.54**	**98↑**	*e*P		**Pb**		**12 57 15.7**	**-0.1**
BTCH				*e*S		**Sb**		**12 57 23.8**	**+0.1**
BTCH				AML		AML		12 57 25.1	
	comp=E,5μm,0.4s								
BTCH				AML		AML		12 57 27.0	
	comp=N,3μm,0.4s								
BTCH	**Batrach**	**0.54**	**98↑**	*e*P		**Pb**		**12 57 15.7**	**-0.1**
BTCH				*e*S		**Sb**		**12 57 23.9**	**+0.1**
BTCH				AML		AML		12 57 25.1	
	comp=E,5μm,0.4s								
BTCH				AML		AML		12 57 27.0	
	comp=N,3μm,0.4s								
BTCH	**Batrach**	**0.54**	**98↑**	*e*P		**Pb**		**12 57 15.7**	**-0.1**
BTCH				*e*S		**Sb**		**12 57 23.4**	**-0.4**
BTCH	**Batrach**	**0.54**	**98↑**	*e*P		**Pb**		**12 57 15.7**	**-0.1**
	SNR=75								
BTCH				*e*S		**Sb**		**12 57 23.4**	**-0.4**
	SNR=59								
KRTS	**Karatas**	**0.57**	**323**	*e*PG		**Pb**		**12 57 16.4**	**-0.1**
KRTS				*e*SG		**Sb**		**12 57 24.4**	**-0.2**
KRTS	**Karatas**	**0.57**	**323**	*e*Pg		**Pb**		**12 57 16.4**	**-0.1**
KRTS				*e*Sg		**Sb**		**12 57 24.5**	**-0.2**
SLNF	**Slenfeh**	**0.62**	**147↑**	*e*P		**Pg**		**12 57 16.2**	**0.0**
SLNF				AML		AML		12 57 27.7	
	comp=N,11μm,0.4s								
SLNF				AML		AML		12 57 27.9	
	comp=E,12μm,0.4s								
SLNF	**Slenfeh**	**0.62**	**147↑**	*e*P		**Pg**		**12 57 16.2**	**0.0**
SLNF				AML		AML		12 57 27.7	
	comp=N,11μm,0.4s								
SLNF				AML		AML		12 57 27.9	
	comp=E,12μm,0.4s								
SLNF	**Slenfeh**	**0.62**	**147↑**	*e*P		**Pg**		**12 57 16.2**	**0.0**
	SNR=75								
KUZU	**Kuzuini**	**1.22**	**57**	*i* P		**Pn**		**12 57 27.2**	**-0.3**
KUZU				*i* S		**Sn**		**12 57 44.2**	**0.0**
KUZU	**Kuzuini**	**1.22**	**57**	*i* P		**Pn**		**12 57 27.2**	**-0.3**
KUZU				*i* S		**Sn**		**12 57 44.2**	**0.0**
MERS	**Mersin**	**1.28**	**306**	*e*PN		**Pn**		**12 57 26.2**	**-2.1**
MERS				*e*SN		**Sb**		**12 57 44.6**	**-0.4**
MERS	**Mersin**	**1.28**	**306**	*e*Pn		**Pn**		**12 57 26.2**	**-2.1**
MERS				*e*Sn		**Sb**		**12 57 44.6**	**-0.4**
KOZT	**Kozan**	**1.36**	**1**	*e*PN		**Pb**		**12 57 29.6**	**-0.4**
KOZT	**Kozan**	**1.36**	**1**	*e*Pn		**Pb**		**12 57 29.6**	**-0.4**
GULE	**Gulek**	**1.43**	**325**	*i* P		**Pn**		**12 57 30.1**	**-0.5**
GULE				*i* S		**Sg**		**12 57 51.8**	**+1.6**
GULE	**Gulek**	**1.43**	**325**	*i* P		**Pn**		**12 57 30.1**	**-0.5**
ANDN	**Andirin**	**1.53**	**16**	*i* P		**Pb**		**12 57 32.4**	**-0.4**
ANDN				*i* S		**Sg**		**12 57 53.1**	**-0.2**
ANDN	**Andirin**	**1.53**	**16**	*i* P		**Pb**		**12 57 32.4**	**-0.4**
ANDN				*i* S		**Sg**		**12 57 53.1**	**-0.2**
AYKD	**Aykdinkavak**	**1.53**	**32**	*i* P		**Pb**		**12 57 32.1**	**-0.6**
AYKD				*i* S		**Sn**		**12 57 51.4**	**-0.4**
GAZ	**Gaziantep**	**1.55**	**47**	*e*PN		**Pn**		**12 57 31.2**	**-0.9**
GAZ	**Gaziantep**	**1.55**	**47**	*e*Pn		**Pn**		**12 57 31.2**	**-0.9**
SLMH	**Al Salmeh**	**1.72**	**86↓**	*e*P		**Pn**		**12 57 34.1**	**-0.3**
SLMH				*e*S		**Sg**		**12 57 59.3**	**-0.2**
SLMH				AML		AML		12 58 03.1	
	comp=N,577nm,0.2s								
SLMH				AML		AML		12 58 10.6	
	comp=E,1μm,0.7s								
SLMH	**Al Salmeh**	**1.72**	**86↑**	*e*P		**Pn**		**12 57 33.9**	**-0.5**
SLMH				*e*S		**Sg**		**12 57 59.4**	**-0.2**
SLMH				AML		AML		12 58 03.1	
	comp=N,577nm,0.2s								
SLMH				AML		AML		12 58 10.6	
	comp=E,1μm,0.7s								
SLMH	**Al Salmeh**	**1.72**	**86**	*e*P		**Pn**		**12 57 34.0**	**-0.5**
SLMH				*e*S		**Sb**		**12 57 57.5**	**-0.3**
SLMH				AML		AML		12 58 00.7	
	comp=Z,1μm,0.4s								
SLMH				AML		AML		12 58 03.1	
	comp=N,577nm,0.2s								
SLMH				AML		AML		12 58 10.5	
	comp=E,1μm,0.7s								
SLMH	**Al Salmeh**	**1.72**	**86↓**	*e*P		**Pn**		**12 57 34.1**	**-0.3**
	SNR=45								
SLMH				*e*S		**Sb**		**12 57 57.5**	**-0.3**
	comp=E,1μm,0.7s,SNR=40								
PHNC	**Paralimni**	**1.82**	**233**	P		**Pn**		**12 57 35.7**	**0.0**
	comp=E,8.8nm,0.9s								
PHNC				S			**Sb**	**12 57 59.9**	**-0.7**
PHNC	**Paralimni**	**1.82**	**233**	P		**Pn**		**12 57 35.7**	**0.0**
	comp=E,8.8nm,0.9s								
PHNC				S			**Sb**	**12 57 59.9**	**-0.7**
HWQ	**Hawqa**	**1.84**	**176**	*e*P		**Pn**		**12 57 35.7**	**-0.4**
HWQ	**Hawqa**	**1.84**	**176**	*e*P		**Pn**		**12 57 35.7**	**-0.4**
GZT	**Gaziantep**	**1.88**	**48**	*i* P		**Pn**		**12 57 36.2**	**-0.5**
GZT				*i* S		**Sb**		**12 58 02.7**	**+0.2**
JHLN	**Al Jahlan**	**2.19**	**101↓**	*e*P		**Pn**		**12 57 40.5**	**-0.3**
JHLN				*e*S		**Sn**		**12 58 08.3**	**+0.3**
JHLN				AML		AML		12 58 14.9	
	comp=N,1μm,0.4s								
JHLN				AML		AML		12 58 15.6	
	comp=E,800nm,0.7s								
JHLN	**Al Jahlan**	**2.19**	**101↑**	*e*P		**Pn**		**12 57 40.3**	**-0.5**
JHLN				*e*S		**Sn**		**12 58 08.5**	**+0.5**
JHLN				AML		AML		12 58 14.9	
	comp=N,1μm,0.4s								
JHLN				AML		AML		12 58 15.6	
	comp=E,800nm,0.7s								
JHLN	**Al Jahlan**	**2.19**	**101↓**	*e*P		**Pn**		**12 57 40.4**	**-0.3**
JHLN				*e*S		**Sn**		**12 58 08.4**	**+0.3**
JHLN				AML		AML		12 58 14.8	
	comp=N,1μm,0.4s								
JHLN				AML		AML		12 58 15.5	
	comp=E,800nm,0.7s								
JHLN	**Al Jahlan**	**2.19**	**101↓**	*e*P		**Pn**		**12 57 40.5**	**-0.3**
	SNR=45								
JHLN				*e*S		**Sn**		**12 58 08.4**	**+0.4**
	comp=E,800nm,0.7s,SNR=40								
AKIN	**Ak¨–nc¨–lar- K**	**2.20**	**241**	*e*PN		**Pn**		**12 57 39.7**	**-1.3**
AKIN	**Ak¨–nc¨–lar- K**	**2.20**	**241**	*e*Pn		**Pn**		**12 57 39.7**	**-1.3**
NIG	**Nigde**	**2.21**	**335**	*e*PN		**Pn**		**12 57 40.4**	**-0.9**
NIG	**Nigde**	**2.21**	**335**	*e*Pn		**Pn**		**12 57 40.4**	**-0.9**
BHL	**Bhannes**	**2.21**	**183**	*e*P		**Pn**		**12 57 40.6**	**-0.6**
BHL	**Bhannes**	**2.21**	**183**	*e*P		**Pn**		**12 57 40.6**	**-0.6**
MAMC	**Mammari**	**2.31**	**247**	P		**Pn**		**12 57 41.8**	**-0.6**
MAMC	**Mammari**	**2.31**	**247**	P		**Pn**		**12 57 41.8**	**-0.6**
CSS	**Prodhromos**	**2.32**	**241**	P		**Pn**		**12 57 42.8**	**+0.2**
	comp=E,3.5nm,0.9s								
CSS				S			**Sn**	**12 58 12.0**	**+0.7**
CSS	**Prodhromos**	**2.32**	**241**	*e*PN		**Pn**		**12 57 41.4**	**-1.3**
CSS	**Prodhromos**	**2.32**	**241**	*e*Pn		**Pn**		**12 57 41.4**	**-1.3**
CSS	**Prodhromos**	**2.32**	**241**	P		**Pn**		**12 57 42.8**	**+0.2**
	comp=E,3.5nm,0.9s								
CSS				S			**Sn**	**12 58 12.0**	**+0.7**
CSS				Sn			**Sb**	**12 58 15.2**	**+0.1**
SARI	**SarD1z-Kayseri**	**2.34**	**12**	*e*PN		**Pn**		**12 57 42.5**	**-0.6**
ERMK	**Ermenek**	**2.39**	**284**	*i* P		**Pn**		**12 57 44.7**	**+0.9**
ERMK				*i* S		**Sb**		**12 58 16.8**	**-0.5**
ERMK	**Ermenek**	**2.39**	**284**	*i* P		**Pn**		**12 57 44.7**	**+0.9**
ATAB	**Bozova**	**2.41**	**55**	*i* P		**Pn**		**12 57 43.6**	**-0.4**
ATAB				*i* S		**Sg**		**12 58 20.5**	**-1.3**
ATAB	**Bozova**	**2.41**	**55**	*i* P		**Pn**		**12 57 43.6**	**-0.4**
AKDN	**Akdeniz- K¨–br**	**2.45**	**251**	*e*PN		**Pn**		**12 57 43.5**	**-0.8**
AKDN	**Akdeniz- K¨–br**	**2.45**	**251**	*e*Pn		**Pn**		**12 57 43.5**	**-0.8**
LEF	**Lefka**	**2.57**	**248**	*e*PN		**Pn**		**12 57 46.0**	**-0.1**
LEF	**Lefka**	**2.57**	**248**	*e*Pn		**Pn**		**12 57 46.0**	**-0.1**
QASN	**Qassioun**	**2.60**	**171**	*e*P		**Pn**		**12 57 48.1**	**+1.5**
QASN				*e*S		**Sb**		**12 58 22.3**	**-1.0**
QASN				AML		AML		12 58 31.4	
	comp=N,581nm,0.6s								
QASN				AML		AML		12 58 34.6	
	comp=E,196nm,0.5s								
QASN	**Qassioun**	**2.60**	**171**	*e*P		**Pn**		**12 57 48.1**	**+1.5**
	SNR=45								
QASN				*e*S		**Sb**		**12 58 22.3**	**-1.0**
	comp=E,196nm,0.5s,SNR=40								
KSRV	**Kasrt alli**	**2.61**	**95**	*e*P		**Pn**		**12 57 46.7**	**+0.2**
KSRV				*e*S		**Sb**		**12 58 24.2**	**+1.0**
KSRV				AMB		AMB		12 58 28.0	
KSRV				AML		AML		12 58 35.5	
	comp=E,144nm,0.4s								
KSRV	**Kasrt alli**	**2.61**	**95**	*e*P		**Pn**		**12 57 44.8**	**-1.7**
KSRV				*e*S		**Sb**		**12 58 24.6**	**+1.3**
KSRV				AMB		AMB		12 58 28.0	
KSRV				AML		AML		12 58 35.5	
	comp=E,144nm,0.4s								
KSRV	**Kasrt alli**	**2.61**	**95**	*e*P		**Pn**		**12 57 47.6**	**+1.1**
KSRV				*e*S		**Sb**		**12 58 22.9**	**-0.4**
KSRV				AML		AML		12 58 30.0	
	comp=N,321nm,0.4s								
KSRV				AML		AML		12 58 37.4	
	comp=E,144nm,0.4s								
KSRV	**Kasrt alli**	**2.61**	**95**	*e*P		**Pn**		**12 57 46.7**	**+0.2**
	SNR=45								
KSRV				*e*S		**Sb**		**12 58 22.9**	**-0.4**
	comp=E,144nm,0.4s,SNR=40								
RCY	**Rachaya**	**2.61**	**179**	*e*P		**Pn**		**12 57 46.6**	**-0.2**
BRBR	**Barbar**	**2.70**	**177↑**	*e*P		**Pn**		**12 57 48.6**	**+0.6**
BRBR				*e*S		**Sn**		**12 58 22.8**	**+1.9**
BRBR				AML		AML		12 58 32.8	
	comp=N,110nm,0.5s								
BRBR				AML		AML		12 58 43.0	
	comp=E,133nm,0.6s								
BRBR	**Barbar**	**2.70**	**177↑**	*e*P		**Pn**		**12 57 48.6**	**+0.6**
	SNR=45								
BRBR				*e*S		**Sn**		**12 58 22.8**	**+1.9**
	comp=E,133nm,0.6s,SNR=40								
AKCD	**Akcadag**	**2.76**	**37**	*i* P		**Pn**		**12 57 49.4**	**+0.6**
AKCD				*i* S		**Sg**		**12 58 30.4**	**-2.4**
AKCD	**Akcadag**	**2.76**	**37**	*i* P		**Pn**		**12 57 49.4**	**+0.6**
URFA	**Urfa**	**2.76**	**60**	*e*PN		**Pn**		**12 57 48.0**	**-0.8**
URFA	**Urfa**	**2.76**	**60**	*e*Pn		**Pn**		**12 57 48.0**	**-0.8**
SULT	**Sultanhani-AKS**	**2.77**	**319**	*e*PN		**Pn**		**12 57 48.7**	**-0.2**
SULT	**Sultanhani-AKS**	**2.77**	**319**	*e*Pn		**Pn**		**12 57 48.7**	**-0.2**
ALFC	**Alevga**	**2.78**	**251**	P		**Pn**		**12 57 47.9**	**-1.1**
	comp=E,4.4nm,0.3s								
ALFC				S			**Sn**	**12 58 22.5**	**-0.2**
ALFC	**Alevga**	**2.78**	**251**	P		**Pn**		**12 57 47.9**	**-1.1**
	comp=E,4.4nm,0.3s								
ALFC				S			**Sn**	**12 58 22.5**	**-0.2**
DARE	**Darende-Malaty**	**2.79**	**28**	*e*PN		**Pn**		**12 57 48.9**	**-0.4**
TOTH	**TOTAH**	**2.79**	**169↑**	*e*P		**Pn**		**12 57 48.7**	**-0.5**
TOTH				*e*S		**Sn**		**12 58 22.8**	**-0.3**
TOTH				AML		AML		12 58 39.0	
	comp=N,161nm,0.4s								
TOTH				AML		AML		12 58 42.1	
	comp=E,88nm,0.7s								
TOTH	**TOTAH**	**2.79**	**169↑**	*e*P		**Pn**		**12 57 48.7**	**-0.5**
TOTH				*e*S		**Sn**		**12 58 22.6**	**-0.5**
TOTH				AML		AML		12 58 39.0	
	comp=N,161nm,0.4s								
TOTH				AML		AML		12 58 42.1	
	comp=E,88nm,0.7s								
TOTH	**TOTAH**	**2.79**	**169**	*e*P		**Pn**		**12 57 50.6**	**+1.4**
TOTH				AML		AML		12 58 40.9	
	comp=N,161nm,0.4s								
TOTH				AML		AML		12 58 43.9	
	comp=E,88nm,0.7s								
TOTH	**TOTAH**	**2.79**	**169↑**	*e*P		**Pn**		**12 57 48.7**	**-0.5**
	SNR=45								
TOTH				*e*S		**Sn**		**12 58 22.8**	**-0.3**
	comp=E,88nm,0.7s,SNR=40								
GAZI	**Gazipasa**	**2.82**	**273**	*i* P		**Pn**		**12 57 50.1**	**+0.5**
GAZI				*i* S		**Sn**		**12 58 23.8**	**0.0**
GAZI	**Gazipasa**	**2.82**	**273**	*i* P		**Pn**		**12 57 50.1**	**+0.5**
GAZI				*i* S		**Sn**		**12 58 23.7**	**0.0**
KSDI	**Kefar Szold**	**2.92**	**182**	Pn		**Pn**		**12 57 50.6**	**-0.2**
KSDI							Sn	**12 58 24.4**	**-1.6**
MALT	**Malatya**	**3.03**	**43**	*e*PN		**Pn**		**12 57 52.2**	**-0.3**
MALT	**Malatya**	**3.03**	**43**	Pn		**Pn**		**12 57 52.6**	**+0.1**
MYA	**Malatya**	**3.04**	**43**	*e*PN		**Pn**		**12 57 52.4**	**-0.2**
MYA	**Malatya**	**3.04**	**43**	*e*Pn		**Pn**		**12 57 52.4**	**-0.2**
HNTI	**Hanita**	**3.07**	**190**	Pn		**Pn**		**12 57 52.9**	**0.0**
HNTI							**Sn**	**12 58 29.3**	**-0.5**
MMA0	**Mount Meron ar**	**3.11**	**186**	Pn		**Pn**		**12 57 53.3**	**-0.2**
MMA0							**Sn**	**12 58 29.1**	**-1.8**
KSHT	**Keshet**	**3.12**	**180**	Pn		**Pn**		**12 57 54.2**	**+0.5**
BLGI	**Bet Lehem HaGe**	**3.41**	**189**	Pn		**Pn**		**12 57 57.5**	**-0.1**
LADK	**Ladik-KONYA**	**3.45**	**308**	*e*PN		**Pn**		**12 57 58.2**	**0.0**
LADK	**Ladik-KONYA**	**3.45**	**308**	*e*Pn		**Pn**		**12 57 58.2**	**0.0**
ELZG	**Elazig**	**3.48**	**46**	*i* P		**Pn**		**12 57 58.7**	**0.0**
ELZG	**Elazig**	**3.48**	**46**	*i* P		**Pn**		**12 57 58.7**	**0.0**
SFNV	**Sufian**	**3.50**	**84↑**	*e*P		**Pn**		**12 57 58.2**	**-0.7**
SFNV	**Sufian**	**3.50**	**84↑**	*e*P		**Pn**		**12 57 58.2**	**-0.7**
	SNR=45								
YOZ	**Yozgat**	**3.54**	**354**	*e*PN		**Pn**		**12 57 59.9**	**+0.4**
YOZ	**Yozgat**	**3.54**	**354**	*e*Pn		**Pn**		**12 57 59.9**	**+0.4**
OFRI	**'Ofer**	**3.55**	**191**	Pn		**Pn**		**12 57 59.8**	**+0.2**
SVRC	**Sivrice-ELAZID**	**3.59**	**50**	*e*PN		**Pn**		**12 58 00.5**	**+0.2**
SVRC	**Sivrice-ELAZID**	**3.59**	**50**	*e*Pn		**Pn**		**12 58 00.5**	**+0.2**
MMLI	**Mount Malkishu**	**3.68**	**185**	Pn		**Pn**		**12 58 02.0**	**+0.6**
MMLI							**Sn**	**12 58 44.0**	**-0.9**
HMDT	**Nahal Hemdat**	**3.86**	**183**	Pn		**Pn**		**12 58 03.9**	**+0.1**
SLTI	**Sal'it**	**3.92**	**190**	Pn		**Pn**		**12 58 05.2**	**+0.6**
SLTI							**Sn**	**12 58 50.3**	**-0.4**
PTK	**Pertek**	**3.98**	**45**	*e*PN		**Pn**		**12 58 05.8**	**+0.2**
PTK	**Pertek**	**3.98**	**45**	*e*Pn		**Pn**		**12 58 05.8**	**+0.2**
ILIC	**ilic-Erzincan**	**3.99**	**32**	*e*PN		**Pn**		**12 58 05.9**	**+0.2**
ILIC	**ilic-Erzincan**	**3.99**	**32**	*e*Pn		**Pn**		**12 58 05.9**	**+0.2**
KIZT	**Kizilcal**	**4.17**	**313**	*e*PN		**Pn**		**12 58 08.3**	**+0.2**
KIZT	**Kizilcal**	**4.17**	**313**	*e*Pn		**Pn**		**12 58 08.3**	**+0.2**
EZC	**Erzincan**	**4.59**	**37**	*e*Pn		**Pn**		**12 58 14.6**	**+0.7**
ERZN	**Erzincan**	**4.65**	**41**	*e*PN		**Pn**		**12 58 14.6**	**-0.2**
YTIR	**Yattir**	**4.77**	**187**	Pn		**Pn**		**12 58 17.6**	**+1.2**
RTMI	**Retamim**	**5.13**	**191**	Pn		**Pn**		**12 58 21.9**	**+0.6**
RTMI							**Sn**	**12 59 20.2**	**-0.5**
BHD	**Baghdad**	**7.61**	**109**	*ex*		Pb		12 59 12.9	-3.5
BHD				*ex*		x		13 00 50.9	
KOLS	**Kolonicke sedl**	**16.20**	**326**	*e*P		**P**		**13 00 57.2**	**+2.0**
VYHS	**Vyhne**	**17.57**	**320**	*e*P		**P**		**13 01 10.9**	**+0.5**

ISCJB ***16*** *13:14:17.4±0.6, 26.97N±0.05×55.71E±0.06, h14km, Error ellipse: s-maj=8.9km s-min=5.0km az=135.6*
CSEM ***16*** *13:14:17.7±0.2, 26.91N×55.88E, h2km, ML3.1, Error ellipse: s-maj=6.2km s-min=3.6km az=78.0*
OMAN ***16*** *13:14:17.9±99.0, 26.93N×56.09E, h4km, Error ellipse: s-maj=70.2km s-min=15.2km az=39.0*
KISR ***16*** *13:14:18.4±0.5, 27.13N×55.35E, h34km±969km, ML3.4*
ISC 16 13:14:17.8±0.9, 26°92N±0.05×55°84E±0.07, h14km, n16, σ1§60/20, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.56**	**31**	*e*Pg		**Pg**		**13 14 28.1**	**-0.8**
BANOM	**Banah**	**1.07**	**157**	P		**Pb**		**13 14 37.5**	**-0.6**

σ1852/108, **mb4.5**/26, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSI	**Tuntungan**	**1.41**	**90**	P	**Pn**	**13 33 38.1**	**+1.5**
TSI				S	**Sn**	**13 33 56.2**	**+1.7**
PSI	**Prapat**	**1.90**	**111**	P	**Pn**	**13 33 44.6**	**+1.4**
PSI				S	**Sn**	**13 34 05.6**	**-0.8**
PSI	**Prapat**	**1.90**	**111**	P	**Pn**	**13 33 45.0**	**+1.7**
PSI	**Prapat**	**1.90**	**111**	P	**Pn**	**13 33 44.6**	**+1.4**
	58nm,0.3s,baz=292,slow=12,SNR=190						
PSI				S	**Sn**	**13 34 05.6**	**-0.8**
	88nm,0.3s,baz=310,slow=16,SNR=12						
BSI	**Banda Aceh**	**2.71**	**317**	P	Pn	13 33 57.8	+3.6
MNSI	**Mandailing Nat**	**3.62**	**138**	P	**Pn**	**13 34 07.3**	**+0.8**
KULM	**Kulim**	**3.91**	**63**	*e*Pn	**Pn**	**13 34 11.8**	**+1.3**
KULM				*e*Sn	**Sn**	**13 34 53.2**	**-2.0**
KULM	**Kulim**	**3.91**	**63**	P	**Pn**	**13 34 11.7**	**+1.3**
KULM	**Kulim**	**3.91**	**63**	P	**Pn**	**13 34 11.5**	**+1.0**
IPM	**Ipoh**	**3.98**	**76**	*e*Pn	**Pn**	**13 34 12.2**	**+0.7**
IPM				*e*Sn	**Sn**	**13 34 55.4**	**-1.6**
IPM	**Ipoh**	**3.98**	**76**	P	**Pn**	**13 34 12.1**	**+0.7**
IPM	**Ipoh**	**3.98**	**76**	P	**Pn**	**13 34 12.3**	**+0.8**
FRIM	**Kepong**	**4.47**	**93**	P	**Pn**	**13 34 18.7**	**+0.6**
KTGM	**Kuala Trenggan**	**6.23**	**73**	P	**Pn**	**13 34 43.8**	**+1.6**
KGM	**Kluang**	**6.33**	**103**	P	**Pn**	**13 34 44.8**	**+1.3**
MYKOM	**Kota Tinggi**	**6.90**	**104**	P	**Pn**	**13 34 51.6**	**+0.2**
CHBT	**CHBT**	**10.52**	**29**	P	Pn	13 35 46.0	+5.2
	35nm,1.1s,2μm						
UBPT	**Khong Chiam**	**14.29**	**34**	P	**P**	**13 36 38.1**	**+1.4**
	26nm,1.1s						
CMAR	**Chiang Mai Arr**	**14.97**	**7**	P	**Pn**	**13 36 42.8**	**+2.4**
CMAR	**Chiang Mai Arr**	**14.97**	**7**	P	**Pn**	**13 36 42.8**	**+2.4**
	3.5nm,0.3s,baz=197,slow=11,SNR=118						
CHTO	**Chiang Mai**	**15.32**	**6**	*e*Pn	**Pn**	**13 36 47.0**	**+2.0**
	11nm,0.5s						
CHTO	**Chiang Mai**	**15.32**	**6**	P	**P**	**13 36 48.7**	**+0.5**
CMMT	**Chiang Mai**	**15.32**	**6**	P	**P**	**13 36 49.1**	**+0.9**
	15nm,0.5s,344nm						
MYLDM	**Lahad Datu**	**21.35**	**85**	P	**P**	**13 37 58.4**	**+4.1**
KAPI	**Kappang**	**24.11**	**110**	P	**P**	**13 38 19.9**	**-2.1**
KAPI	**Kappang**	**24.11**	**110**	P	**P**	**13 38 19.9**	**-2.1**
	11nm,0.6s,baz=297,slow=4.5,SNR=5.7						
ODAN	**Odare**	**25.04**	**339**	*e*P	**P**	**13 38 30.9**	**+0.3**
TAPN	**Taplejung**	**25.38**	**340**	*e*P	**P**	**13 38 33.3**	**-0.5**
	14nm,0.7s						
RAMN	**Ramite**	**25.41**	**338**	*e*P	**P**	**13 38 34.2**	**+0.2**
	10nm,0.4s						
GUN	**Gumba**	**26.55**	**337**	*e*P	**P**	**13 38 43.8**	**-0.6**
	12nm,0.3s						
KOLN	**Koldanda**	**27.38**	**333**	*e*P	**P**	**13 38 51.2**	**-0.6**
	9.6nm,0.3s						
DANN	**Dangsing**	**27.81**	**334**	*e*P	**P**	**13 38 56.0**	**+0.3**
	9.6nm,0.3s						
PYUN	**Piuthan**	**27.94**	**333**	*e*P	**P**	**13 38 57.3**	**+0.5**
	8.6nm,0.3s						
XAN	**Xi'an**	**32.30**	**18**	P	**P**	**13 39 32.9**	**-2.1**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GTA	**Gaotai**	**35.83**	**4**	*e*P	**P**	**13 40 05.4**	**-0.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**39.38**	**17**	*e*P	**P**	**13 40 35.6**	**0.0**
HHC				S	**S**	**13 46 30.8**	**-1.2**
NWAO	**Narrogin (SRO)**	**40.92**	**154**	P	**P**	**13 40 48.5**	**+0.2**
NWAO	**Narrogin (SRO)**	**40.92**	**154**	P	**P**	**13 40 48.5**	**+0.2**
	comp=Z,7.2nm,0.4s,baz=323,slow=9.8,SNR=11						
KZA	**Kyzart**	**43.12**	**336**	P	**P**	**13 41 07.5**	**+1.0**
	SNR=9.5						
WRA	**Warramunga Arr**	**43.32**	**124**	P	**P**	**13 41 06.4**	**-1.6**
WRA				pP	**pP**	**13 41 28.2**	**+2.4**
WRA				ScP	**ScP**	**13 46 38.0**	**-3.0**
WRA	**Warramunga Arr**	**43.32**	**124**	P	**P**	**13 41 06.4**	**-1.6**
	comp=Z,6.6nm,0.5s,baz=302,slow=9.3,SNR=133						
WRA				pP	**pP**	**13 41 28.2**	**+2.4**
	comp=Z,3.9nm,0.7s,baz=303,slow=9.0,SNR=6.4						
WRA				ScP	**ScP**	**13 46 38.0**	**-3.0**
	comp=Z,0.7nm,0.9s,baz=315,slow=3.5,SNR=5.1						
TKM2	**Tokmak 2**	**43.69**	**337**	*e*P	**P**	**13 41 10.1**	**-0.8**
	comp=Z,6.2nm,0.6s						
TKM2	**Tokmak 2**	**43.69**	**337**	P	**P**	**13 41 10.6**	**-0.3**
	SNR=11						
KBK	**Karagaybulak**	**43.72**	**336**	P	**P**	**13 41 12.8**	**+1.7**
	SNR=16						
AML	**Almayashu**	**43.81**	**335**	P	**P**	**13 41 12.9**	**+0.8**
	SNR=6.9						
AAK	**Ala-Archa**	**43.89**	**336**	*e*P	**P**	**13 41 12.2**	**-0.3**
	comp=Z,0.8nm,0.8s						
AAK				*e*pP	**pP**	**13 41 32.4**	**+2.1**
AAK				*e*sP	**sP**	**13 41 43.3**	**+4.7**
KSAR	**Wonju Array Be**	**43.98**	**36**	P	**P**	**13 41 11.4**	**-1.6**
KSRS	**Korea Array**	**44.01**	**36**	P	**P**	**13 41 11.4**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=226,slow=7.9,SNR=2.9						
EKS2	**Erkin-Say**	**44.21**	**335**	*e*P	**P**	**13 41 14.9**	**0.0**
	comp=Z,7.9nm,0.6s						
EKS2	**Erkin-Say**	**44.21**	**335**	P	**P**	**13 41 15.8**	**+0.8**
	SNR=8.4						
USP	**Ospenovka**	**44.41**	**336**	P	**P**	**13 41 16.3**	**-0.2**
	SNR=21						
ASAR	**Alice Springs**	**44.84**	**129**	P	**P**	**13 41 18.4**	**-1.7**
ASAR				pP	**pP**	**13 41 40.1**	**+2.1**
ASAR	**Alice Springs**	**44.84**	**129**	P	**P**	**13 41 18.4**	**-1.7**
	comp=Z,1.4nm,0.5s,baz=301,slow=7.7,SNR=58						
ASAR				pP	**pP**	**13 41 40.1**	**+2.1**
	comp=Z,1.2nm,0.8s,baz=301,slow=8.0,SNR=4.6						
SONM	**Songino Array**	**44.88**	**9**	P	**P**	**13 41 19.3**	**-0.9**
SONM				PcP	**PcP**	**13 43 00.1**	**-0.6**
SONM				ScP	**ScP**	**13 46 44.5**	**-2.5**
SONM	**Songino Array**	**44.88**	**9**	P	**P**	**13 41 19.3**	**-0.9**
	comp=Z,2.0nm,0.3s,baz=191,slow=9.2,SNR=31						
SONM				PcP	**PcP**	**13 43 00.1**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=201,slow=3.5,SNR=6.3						
SONM				ScP	**ScP**	**13 46 44.5**	**-2.5**
	comp=Z,0.3nm,0.6s,baz=197,slow=4.0,SNR=3.7						
MKAR	**Makanchi Array**	**45.01**	**346**	P	**P**	**13 41 20.1**	**-1.1**
MKAR	**Makanchi Array**	**45.01**	**346**	P	**P**	**13 41 20.1**	**-1.1**
	comp=Z,2.6nm,0.4s,baz=158,slow=8.9,SNR=67						
KKAR	**Karatay Array**	**45.99**	**333**	*e*P	**P**	**13 41 27.9**	**-1.0**
KKAR				*e*pP	**pP**	**13 41 49.5**	**+2.6**
KURBB	**Kurchatov Arra**	**49.51**	**344**	P	**P**	**13 41 55.5**	**-0.6**
	comp=Z,1.7nm,0.3s,baz=165,slow=7.1,SNR=19						
KURK	**Kurchatov**	**49.57**	**345**	*e*P	P	13 41 54.1	-2.4
	comp=Z,4.6nm,0.4s						
KURK				*e*PcP	**PcP**	**13 43 18.2**	**+1.0**
ZALV	**Zalesovo Beam**	**51.29**	**351**	P	**P**	**13 42 08.4**	**-1.0**
ZALV	**Zalesovo Beam**	**51.29**	**351**	P	**P**	**13 42 08.4**	**-1.0**
	comp=Z,6.7nm,0.4s,baz=172,slow=7.2,SNR=43						
BVAR	**Borovoye Array**	**54.08**	**340**	P	**P**	**13 42 28.9**	**-1.1**
BVAR	**Borovoye Array**	**54.08**	**340**	P	**P**	**13 42 28.9**	**-1.1**
	comp=Z,4.7nm,0.7s,baz=140,slow=8.8,SNR=29						
BRVK	**Borovoye**	**54.14**	**340**	*e*P	**P**	**13 42 29.5**	**-1.0**
	comp=Z,3.3nm,0.7s						
STKA	**Stephens Creek**	**54.94**	**133**	P	**P**	**13 42 35.5**	**-1.1**
STKA				pP	**pP**	**13 42 56.9**	**+1.8**
STKA	**Stephens Creek**	**54.94**	**133**	P	**P**	**13 42 35.5**	**-1.1**
	comp=Z,4.5nm,0.6s,baz=312,slow=9.4,SNR=19						
STKA				pP	**pP**	**13 42 56.9**	**+1.8**
	comp=Z,2.6nm,0.5s,baz=307,slow=10,SNR=2.0						
ABKAR	**Akbulak array**	**55.48**	**331**	*e*P	**P**	**13 42 39.6**	**-0.5**
BHD	**Baghdad**	**57.38**	**308**	*ex*	**P**	**13 42 53.0**	**-1.0**
BHD				*ex*	**S**	**13 50 46.0**	**+0.4**
BRTR	**Keskin Array B**	**67.55**	**312**	P	**P**	**13 44 00.8**	**-1.1**
BRTR	**Keskin Array B**	**67.55**	**312**	P	**P**	**13 44 00.8**	**-1.1**
	comp=Z,1.0nm,0.3s,baz=128,slow=7.6,SNR=7.7						
AKASG	**Malin Array Be**	**73.42**	**322**	P	**P**	**13 44 35.8**	**-1.5**
AKASG	**Malin Array Be**	**73.42**	**322**	P	**P**	**13 44 35.7**	**-1.5**
	comp=Z,1.0nm,0.4s,baz=99,slow=6.0,SNR=8.3						
LBTB	**Lobatse**	**74.87**	**243**	P	**P**	**13 44 46.6**	**+0.2**
LBTB	**Lobatse**	**74.87**	**243**	P	**P**	**13 44 46.6**	**+0.2**
	comp=Z,1.7nm,0.4s,baz=89,slow=4.9,SNR=3.2						
JOF	**Joensuu**	**76.06**	**335**	*ep*	**P**	**13 44 52.0**	**-0.3**
	comp=Z,3.8nm,0.6s						
KOLS	**Kolonicke sedl**	**77.45**	**319**	*e*P	**P**	**13 45 02.0**	**+1.6**
FINES	**FINESS Array B**	**77.95**	**332**	P	**P**	**13 45 02.4**	**-0.5**
FINES	**FINESS Array B**	**77.95**	**332**	P	**P**	**13 45 02.4**	**-0.5**
	comp=Z,1.9nm,0.4s,baz=104,slow=5.9,SNR=23						
CRVS	**Cervenica-Dubn**	**77.97**	**319**	*e*P	**P**	**13 45 05.3**	**+1.9**
KAF	**Kangasniemi**	**78.02**	**333**	*ep*	**P**	**13 45 02.5**	**-0.8**
	comp=Z,4.2nm,0.6s						
VYHS	**Vyhne**	**79.64**	**319**	*e*P	**P**	**13 45 14.4**	**+1.9**
ARCES	**ARCESS Array B**	**80.37**	**340**	P	**P**	**13 45 15.7**	**-0.3**
ARCES	**ARCESS Array B**	**80.37**	**340**	P	**P**	**13 45 15.7**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=99,slow=5.6,SNR=25						
NOA	**NORSAR Array B**	**84.99**	**331**	P	**P**	**13 45 39.2**	**-0.9**
NOA	**NORSAR Array B**	**84.99**	**331**	P	**P**	**13 45 39.2**	**-0.9**
	comp=Z,1.0nm,0.9s,baz=94,slow=5.4,SNR=3.0						
CPUP	**Villa Florida**	**146.63**	**225**	PKPbc	**PKPdf**	**13 52 47.5**	**+2.1**
CPUP				pPKPbc	pPKPbc	13 53 11.9	+4.5
CPUP	**Villa Florida**	**146.63**	**225**	PKPbc	**PKPdf**	**13 52 47.5**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=158,slow=4.0,SNR=4.1						
CPUP				pPKPbc	pPKPbc	13 53 11.9	+4.5
	comp=Z,0.6nm,0.5s,baz=180,slow=6.1,SNR=1.6						

CSEM ***16*** *13:33:21.8±0.9,36.14N×21.82E,h5km,MD3.5,Error ellipse: s-maj=16.4km s-min=9.0km az=35.0*
ATH ***16*** *13:33:23.4,36.20N×21.90E,h5km,MD3.5/10*
THE ***16*** *13:33:23.0,36.18N×21.85E,h0km±2km,ML2.5/2,Error ellipse: s-maj=3.3km s-min=0.7km az=208.0*
ISC 16 13:33:21.8±2.6, 36.14N±0.09×21.78E±0.07, h5km±14km, n34,σ0.44/47, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.75**	**357**	P	**Pg**	**13 33 36.4**	**+0.1**
PYL				S	**Sb**	**13 33 47.7**	**-0.3**
PYL	**PYLOS**	**0.75**	**357**	*e*PB	**Pg**	**13 33 36.3**	**0.0**
PYL				*e*SB	**Sb**	**13 33 48.2**	**+0.2**
PYL	**PYLOS**	**0.75**	**357**	*e*Pb	**Pg**	**13 33 36.3**	**0.0**
PYL				S	**Sb**	**13 33 47.7**	**-0.3**
PYL				*e*Sb	**Sb**	**13 33 48.2**	**+0.2**
DYR	**Agios Nikonas**	**0.76**	**35**	P	**Pg**	**13 33 36.2**	**-0.3**
DYR				S	**Sg**	**13 33 46.8**	**+0.4**
DYR	**Agios Nikonas**	**0.76**	**35**	*e*PB	**Pg**	**13 33 36.4**	**-0.1**
DYR				*e*SB	**Sg**	**13 33 46.4**	**0.0**
DYR	**Agios Nikonas**	**0.76**	**35**	*e*Pb	**Pg**	**13 33 36.4**	**-0.1**
DYR				*e*Sb	**Sg**	**13 33 46.4**	**0.0**
DYR				S	**Sg**	**13 33 46.8**	**+0.4**
KYTH	**Kithira**	**1.02**	**82**	P	**Pg**	**13 33 41.3**	**-0.1**
KYTH	**Kithira**	**1.02**	**82**	*e*PB	**Pg**	**13 33 41.3**	**-0.1**
KYTH	**Kithira**	**1.02**	**82**	P	**Pg**	**13 33 41.3**	**-0.1**
ITM	**Ithomi**	**1.04**	**6**	P	**Pb**	**13 33 42.2**	**-0.2**
ITM				S	**Sb**	**13 33 56.9**	**+0.5**
ITM	**Ithomi**	**1.04**	**6**	*e*PG	**Pg**	**13 33 41.8**	**0.0**
ITM				*e*SB	**Sb**	**13 33 56.7**	**+0.3**
ITM	**Ithomi**	**1.04**	**6**	*e*Pg	**Pg**	**13 33 41.8**	**0.0**
ITM	**Ithomi**	**1.04**	**6**	P	**Pb**	**13 33 42.2**	**-0.2**
ITM				*e*Sb	**Sb**	**13 33 56.7**	**+0.3**
VLI	**Veliai**	**1.09**	**58**	P	**Pg**	**13 33 42.7**	**-0.1**
VLI				S	**Sb**	**13 33 57.6**	**-0.2**
VLI	**Veliai**	**1.09**	**58**	*e*PB	**Pg**	**13 33 42.5**	**-0.3**
VLI	**Veliai**	**1.09**	**58**	*e*Pb	**Pg**	**13 33 42.5**	**-0.3**
VLI				S	**Sb**	**13 33 57.6**	**-0.2**
VLX	**Vlachokerasia**	**1.32**	**21**	P	**Pg**	**13 33 46.6**	**-0.5**
VLX	**Vlachokerasia**	**1.32**	**21**	*e*PN	**Pg**	**13 33 45.8**	**-1.3**
VLX	**Vlachokerasia**	**1.32**	**21**	*e*Pn	**Pg**	**13 33 45.8**	**-1.3**
VLX	**Vlachokerasia**	**1.32**	**21**	P	**Pg**	**13 33 46.6**	**-0.5**
AMT	**Artemida-Makis**	**1.39**	**358**	P	**Pb**	**13 33 48.3**	**0.0**
AMT	**Artemida-Makis**	**1.39**	**358**	P	**Pb**	**13 33 48.3**	**0.0**
DID	**Didima**	**1.79**	**40**	P	**Pn**	**13 33 53.9**	**+0.5**
DID	**Didima**	**1.79**	**40**	*e*PG	**Pb**	**13 33 55.1**	**-0.1**
DID	**Didima**	**1.79**	**40**	P	**Pn**	**13 33 53.9**	**+0.5**
DID	**Didima**	**1.79**	**40**	*e*Pg	**Pb**	**13 33 55.1**	**-0.1**
GUR	**Goura**	**1.85**	**14**	P	**Pn**	**13 33 53.6**	**-0.6**
GUR	**Goura**	**1.85**	**14**	*e*PN	**Pb**	**13 33 56.8**	**+0.7**
GUR	**Goura**	**1.85**	**14**	P	**Pn**	**13 33 53.6**	**-0.6**
GUR	**Goura**	**1.85**	**14**	*e*Pn	**Pb**	**13 33 56.8**	**+0.7**
KLV	**Kalavryta, Ach**	**1.92**	**9**	*e*PN	**Pg**	**13 33 58.9**	**+0.2**
KLV	**Kalavryta, Ach**	**1.92**	**9**	*e*Pn	**Pg**	**13 33 58.9**	**+0.2**
LAKA	**Lakka**	**2.10**	**4**	*e*PG	**Pg**	**13 34 01.6**	**-0.5**
LAKA	**Lakka**	**2.10**	**4**	*e*Pg	**Pg**	**13 34 01.6**	**-0.5**

IDC 16 13:35:18.6±8.5, 18.09S×177.75W, h384km, 88km, mb3.3/8, mb1 3.6/8, mb1mx3.3/19, mbtmp3.3/8, Error ellipse: s-maj=49.1km s-min=23.5km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.09**	**242**	P	P	13 42 11.1	+0.5
	3.4nm,0.8s,baz=94,slow=12,SNR=9.7						
WRA	**Warramunga Arr**	**45.22**	**260**	P	P	13 42 58.4	-1.2
	1.0nm,0.5s,baz=96,slow=6.8,SNR=8.5						
WRA				PcP	PcP	13 44 31.4	-0.9
	0.3nm,0.3s,baz=100,slow=3.3,SNR=4.0						
ASAR	**Alice Springs**	**45.35**	**254**	P	P	13 43 00.3	-0.2
	6.2nm,0.6s,baz=89,slow=8.4,SNR=67						
ASAR				PcP	PcP	13 44 31.8	-0.9
	0.5nm,0.5s,baz=104,slow=3.9,SNR=4.7						
MJAR	**Matsushiro Arr**	**68.43**	**323**	P	P	13 45 40.6	+0.3
	0.8nm,0.8s,baz=132,slow=7.3,SNR=4.1						
NVAR	**Mina Array Bea**	**79.12**	**44**	P	P	13 46 42.2	+0.2
	0.3nm,0.3s,baz=222,slow=7.7,SNR=2.4						
TXAR	**Lajitas Array**	**85.56**	**57**	P	P	13 47 15.4	+0.4
	0.7nm,0.7s,baz=230,slow=4.2,SNR=8.9						
ILAR	**Eielson Array**	**85.92**	**13**	P	P	13 47 14.4	-1.4
	0.2nm,0.4s,baz=218,slow=5.7,SNR=6.6						
CMAR	**Chiang Mai Arr**	**89.54**	**289**	P	P	13 47 35.6	+1.7
	0.6nm,0.7s,baz=102,slow=1.5,SNR=6.6						

CSEM ***16*** *13:39:59.8±0.3,36.11N×21.79E,h2km,MD3.5,Error ellipse: s-maj=6.1km s-min=3.4km az=27.0*
ATH ***16*** *13:40:01.1,36.19N×21.85E,h19km±2km,MD3.5/6*
THE ***16*** *13:40:01.6,36.19N×21.85E,h2km±3km,ML1.8/2,Error ellipse: s-maj=3.6km s-min=0.7km az=209.0*
ISC 16 13:39:60.0±2.8, 36.13N±0.10×21.79E±0.07, h3km±15km, n22,σ0.30/29, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.76**	**357**	P	**Pg**	**13 40 14.7**	**+0.1**
PYL	**PYLOS**	**0.76**	**357**	P	**Pg**	**13 40 14.7**	**+0.1**
DYR	**Agios Nikonas**	**0.77**	**35**	P	**Pg**	**13 40 14.7**	**0.0**
DYR				S	**Sg**	**13 40 24.5**	**-0.2**
DYR	**Agios Nikonas**	**0.77**	**35**	*e*PN	**Pg**	**13 40 15.1**	**+0.4**
DYR				*e*SN	**Sg**	**13 40 24.4**	**-0.2**
DYR	**Agios Nikonas**	**0.77**	**35**	P	**Pg**	**13 40 14.7**	**0.0**
DYR	**Agios Nikonas**	**0.77**	**35**	*e*Pn	**Pg**	**13 40 15.1**	**+0.4**
DYR				S	**Sg**	**13 40 24.5**	**-0.2**
KYTH	**Kithira**	**1.02**	**81**	P	**Pg**	**13 40 19.4**	**-0.1**
KYTH	**Kithira**	**1.02**	**81**	*e*PN	**Pg**	**13 40 19.5**	**-0.1**
KYTH	**Kithira**	**1.02**	**81**	P	**Pg**	**13 40 19.4**	**-0.1**
ITM	**Ithomi**	**1.05**	**6**	P	**Pg**	**13 40 20.2**	**+0.1**
ITM				S	**Sb**	**13 40 34.6**	**-0.4**
ITM	**Ithomi**	**1.05**	**6**	*e*PN	**Pg**	**13 40 20.2**	**+0.1**
ITM	**Ithomi**	**1.05**	**6**	P	**Pg**	**13 40 20.2**	**+0.1**
ITM				S	**Sb**	**13 40 34.6**	**-0.4**
VLI	**Veliai**	**1.09**	**57**	P	**Pg**	**13 40 21.1**	**+0.1**
VLI				S	**Sb**	**13 40 36.0**	**-0.2**
VLI	**Veliai**	**1.09**	**57**	P	**Pg**	**13 40 21.1**	**+0.1**
VLI				S	**Sb**	**13 40 36.0**	**-0.2**
AMT	**Artemida-Makis**	**1.40**	**357**	P	**Pn**	**13 40 26.5**	**+0.1**
AMT	**Artemida-Makis**	**1.40**	**357**	*e*PN	**Pn**	**13 40 26.2**	**-0.2**
AMT	**Artemida-Makis**	**1.40**	**357**	*e*Pn	**Pn**	**13 40 26.2**	**-0.2**
AMT	**Artemida-Makis**	**1.40**	**357**	P	**Pn**	**13 40 26.5**	**+0.1**
DID	**Didima**	**1.80**	**40**	*e*PN	**Pn**	**13 40 32.1**	**+0.2**
DID	**Didima**	**1.80**	**40**	*e*Pn	**Pn**	**13 40 32.1**	**+0.2**
KLV	**Kalavryta, Ach**	**1.93**	**8**	*e*PN	**Pn**	**13 40 34.5**	**+0.7**
KLV	**Kalavryta, Ach**	**1.93**	**8**	*e*Pn	**Pn**	**13 40 34.5**	**+0.7**

IDC 16 13:55:31.1±5.4, 5.53S×147.40E, h180km±51km, mb3.4/2, mb1 3.6/4, mb1mx3.1/19, mbtmp3.4/4, Error ellipse: s-maj=74.6km s-min=44.6km az=129.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.86**	**184**	P	Pn	13 56 31.6	+1.2
	3.2nm,0.3s,baz=5.2,slow=11,SNR=24						
PMG				S	Sn	13 57 17.1	+0.2
	8.7nm,0.3s,baz=159,slow=22,SNR=18						
WRA	**Warramunga Arr**	**19.15**	**220**	P	P	13 59 41.2	+0.3
	0.8nm,0.3s,baz=48,slow=11,SNR=56						
ASAR	**Alice Springs**	**22.23**	**214**	P	P	14 00 13.6	+0.3
	1.8nm,0.7s,baz=45,slow=9.4,SNR=42						
FITZ	**Fitzroy Crossi**	**24.65**	**238**	P	P	14 00 35.3	-0.1
	1.9nm,0.5s,baz=57,slow=10.0,SNR=18						
TORD	**Torodi Ar. Bea**	**145.36**	**285**	PKPbc	PKPdf	14 14 47.3	-1.3
	0.7nm,1.0s,baz=84,slow=3.9,SNR=3.3						

IDC 16 14:01:38.5±1.8, 3.07S×126.82E, h0km, mb3.5/2, mb1 3.6/4, mb1mx3.4/23, mbtmp3.4/4, ML3.2/2, Error ellipse: s-maj=111.6km s-min=24.2km az=68.0, Buru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.99**	**184**	Pn	Pn	14 05 13.8	+2.0
	0.1nm,0.3s,baz=4.7,slow=14,SNR=3.4						
WRA	**Warramunga Arr**	**18.31**	**157**	P	Pn	14 05 53.0	-1.1
	0.1nm,0.3s,baz=334,slow=11,SNR=10						
ASAR	**Alice Springs**	**21.59**	**162**	P	P	14 06 29.4	-0.7
	1.9nm,0.7s,baz=343,slow=12,SNR=31						
MKAR	**Makanchi Array**	**63.22**	**327**	P	P	14 12 09.1	+0.3
	0.2nm,0.5s,baz=130,slow=7.3,SNR=4.1						

CSEM ***16*** *14:19:19.5±0.1,42.51N×13.38E,h10km,ML3.2/13,Error ellipse: s-maj=2.7km s-min=2.0km az=65.0*
ROM 16 14:19:19.2±0.1, 42.50N×13.39E, h9km, Md2.7/25, Ml2.6/22, Error ellipse: s-maj=1.1km s-min=0.8km az=72.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.04**	**25**	Pg	Pg	14 19 21.7	+0.5
CAMP				Sg	Sg	14 19 22.9	+0.2
	3μm,0.3s						
CAMP	**Campotosto**	**0.04**	**25**	Pg	Pg	14 19 21.7	+0.5
CAMP				Sg	Sg	14 19 22.9	+0.2
	3μm,0.3s						
AQU	**L'Aquila**	**0.14**	**175**	Pg	Pg	14 19 23.3	+0.8
AQU				Sg	Sg	14 19 25.9	+1.2
	3μm,0.9s						
AQU	**L'Aquila**	**0.14**	**175**	Pg	Pg	14 19 23.3	+0.8
AQU				Sg	Sg	14 19 25.9	+1.2
	3μm,0.9s						
TERO	**Teramo**	**0.20**	**52**	Pg	Pg	14 19 24.0	+0.5
TERO				Sg	Sg	14 19 27.2	+0.7
	2μm,0.3s						
TERO	**Teramo**	**0.20**	**52**	Pg	Pg	14 19 24.0	+0.5
TERO				Sg	Sg	14 19 27.2	+0.7
	2μm,0.3s						
FAGN	**Fagnano**	**0.28**	**147**	Pg	Pg	14 19 25.4	+0.6
FAGN				Sg	Sb	14 19 30.1	-1.1
	2μm,0.4s						
FAGN	**Fagnano**	**0.28**	**147**	Pg	Pg	14 19 25.4	+0.6
FAGN				Sg	Sb	14 19 30.1	-1.1
	2μm,0.4s						
LNSS	**Leonessa**	**0.28**	**292**	Pg	Pg	14 19 25.5	+0.6
LNSS				Sg	Sb	14 19 30.4	-1.0
	954nm,0.1s						
LNSS	**Leonessa**	**0.28**	**292**	Pg	Pg	14 19 25.5	+0.6
LNSS				Sg	Sb	14 19 30.4	-1.0
	954nm,0.1s						
FIAM	**Fiamignano**	**0.30**	**221**	Pg	Pg	14 19 25.9	+0.5
FIAM				Sg	Sb	14 19 31.0	-1.1
	447nm,0.5s						
FIAM	**Fiamignano**	**0.30**	**221**	Pg	Pg	14 19 25.9	+0.5
FIAM				Sg	Sb	14 19 31.0	-1.1
	447nm,0.5s						
VCEL	**Villa Celiera**	**0.35**	**107**	Pg	Pg	14 19 26.5	+0.1
	1μm,0.5s						
VCEL	**Villa Celiera**	**0.35**	**107**	Pg	Pg	14 19 26.5	+0.1
	1μm,0.5s						
NRCA	**Norcia**	**0.39**	**329**	Pg	Pg	14 19 27.3	+0.3
NRCA				Sg	Sb	14 19 33.5	-1.1
	1μm,0.1s						
NRCA	**Norcia**	**0.39**	**329**	Pg	Pg	14 19 27.3	+0.3
NRCA				Sg	Sb	14 19 33.5	-1.1
	1μm,0.1s						
PTQR	**Pietraquaria**	**0.48**	**

mb1 4.5/35,mb1mx4.5/41,mbtmp4.5/35,ML5.0/7,MS3.5/9, Ms1 3.6/9,ms1mx3.2/61,Error ellipse: s-maj=12.8km s-min=11.1km az=165.0

ISCJB ***16*** *14:25:28.4±0.4,34°.15N±0°.01×25°.10E±0°.01,h16km±3km, mb4.6/85,MS3.6/11,Error ellipse: s-maj=2.6km s-min=1.7km az=34.8*

MOS ***16*** *14:25:30.9±1.2,34°.20N×25°.07E,h34km,mb4.8/48,Error ellipse: s-maj=5.1km s-min=3.2km az=103.5*

BEO ***16*** *14:25:30.0±1.1,33°.76N×22°.09E,h0km*

ATH ***16*** *14:25:32.1,34°.33N×25°.05E,h36km±2km,MD3.9/46, ML4.1*

CSEM ***16*** *14:25:32.2±0.1,34°.20N×25°.10E,h30km,mb4.7/48,Ms4.0, Mw4.1,Error ellipse: s-maj=2.8km s-min=1.7km az=35.0*

NEIC ***16*** *14:25:32.2,34°.33N×25°.05E,h36km, mb4.6/55,After ATH.*

THE ***16*** *14:25:34.2,34°.45N×25°.02E,h4km±1km,ML3.9/2,Error ellipse: s-maj=1.4km s-min=0.9km az=10.0*

HLW ***16*** *14:25:36.0,33°.96N×25°.42E,h33km±46km,Md4.1,Ml4.2*

NIC ***16*** *14:25:39.0±0.4,34°.90N×25°.69E,h25km,mb4.8,ML4.3, MW3.8*

PDG ***16*** *14:25:39.1±0.2,34°.62N×24°.13E,h8km±8km,ML4.4/5, Error ellipse: s-maj=8.6km s-min=6.1km az=90.0*

NSSC ***16*** *14:26:01.2±2.4,34°.55N×27°.97E,h38km±999km,ML3.4*

ISC 16 14:25:31.1±0.3,34°.17N±0°.03×25°.09E±0°.03,h21km±2km, n936,σ1§12/895,mb4.7/85,MS3.6/11,42C-16D,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.87**	**345**	P	**Pb**	**14 25 46.0**	**-1.4**
SIVA				S	**Sb**	**14 25 55.2**	**-3.5**
SIVA	**Sivas**	**0.87**	**345**	*e*PN	**Pb**	**14 25 46.1**	**-1.4**
SIVA				*e*SN	**Sb**	**14 25 57.7**	**-1.0**
SIVA	**Sivas**	**0.87**	**345**	*e*Pn	**Pb**	**14 25 46.1**	**-1.4**
SIVA				*e*Sn	**Sb**	**14 25 57.7**	**-1.0**
LAST	**Lasithi**	**1.04**	**18**	*e*PN	**Pb**	**14 25 49.2**	**-1.2**
LAST	**Lasithi**	**1.04**	**18**	*e*Pn	**Pb**	**14 25 49.2**	**-1.2**
GVD	**Gavdhos**	**1.06**	**309**	*e*Pn	**Pb**	**14 25 49.5**	**-1.2**
GVD				*e*Sn	**Sb**	**14 26 01.7**	**-2.4**
GVD	**Gavdhos**	**1.06**	**309**	*e*PB	**Pb**	**14 25 49.7**	**-1.0**
GVD				*e*SN	**Sb**	**14 26 03.8**	**-0.3**
GVD	**Gavdhos**	**1.06**	**309**	*e*Pb	**Pb**	**14 25 49.7**	**-1.0**
GVD				*e*Sn	**Sb**	**14 26 03.8**	**-0.3**
IDI	**Anoyia**	**1.12**	**352**	P	**Pn**	**14 25 50.1**	**-1.5**
IDI				S	**Sb**	**14 26 03.3**	**-2.7**
IDI	**Anoyia**	**1.12**	**352**	*e*Pg	**Pn**	**14 25 50.1**	**-1.5**
IDI	**Anoyia**	**1.12**	**352**	*e*PB	**Pn**	**14 25 50.1**	**-1.5**
IDI				*e*SN	**Sb**	**14 26 04.4**	**-1.6**
IDI	**Anoyia**	**1.12**	**352**	P	**Pn**	**14 25 50.1**	**-1.5**
IDI				*e*Sn	**Sb**	**14 26 04.4**	**-1.6**
NPS	**Neapolis**	**1.17**	**22**	P	**Pn**	**14 25 52.0**	**-0.2**
NPS				S	**Sb**	**14 26 06.0**	**-1.3**
NPS	**Neapolis**	**1.17**	**22**	*e*PN	**Pn**	**14 25 51.5**	**-0.7**
NPS	**Neapolis**	**1.17**	**22**	*e*Pn	**Pn**	**14 25 51.5**	**-0.7**
NPS	**Neapolis**	**1.17**	**22**	P	**Pn**	**14 25 52.0**	**-0.2**
NPS				S	**Sb**	**14 26 06.0**	**-1.3**
ZKR	**Zakros**	**1.32**	**45**	*e*PB	**Pn**	**14 25 54.3**	**0.0**
ZKR				*e*SN	**Sn**	**14 26 11.0**	**-0.3**
ZKR	**Zakros**	**1.32**	**45**	*e*Pb	**Pn**	**14 25 54.3**	**0.0**
ZKR				*e*Sn	**Sn**	**14 26 11.0**	**-0.3**
VAM	**Vamos**	**1.43**	**330**	P	**Pn**	**14 25 55.7**	**0.0**
VAM				S	**Sn**	**14 26 12.7**	**-1.2**
VAM	**Vamos**	**1.43**	**330**	*e*PN	**Pn**	**14 25 55.8**	**0.0**
VAM				*e*SN	**Sn**	**14 26 12.0**	**-1.9**
VAM	**Vamos**	**1.43**	**330**	*e*Pn	**Pn**	**14 25 55.8**	**0.0**
VAM				*e*Sn	**Sn**	**14 26 12.0**	**-1.9**
VAM				S		14 26 12.7	
KARN	**Karanos**	**1.56**	**322**	*e*PN	**Pn**	**14 25 57.9**	**+0.4**
KARN	**Karanos**	**1.56**	**322**	*e*Pn	**Pn**	**14 25 57.9**	**+0.4**
KARP	**Karpathos**	**2.19**	**51**	*e*PB	**Pb**	**14 26 09.4**	**-0.6**
KARP	**Karpathos**	**2.19**	**51**	*e*Pb	**Pb**	**14 26 09.4**	**-0.6**
THR6	**Thira Island,**	**2.19**	**7**	P	**Pn**	**14 26 06.7**	**+0.5**
THR6	**Thira Island,**	**2.19**	**7**	P	**Pn**	**14 26 06.7**	**+0.5**
SANT	**Santorini**	**2.21**	**8**	P	Pn	14 26 07.5	+0.9
SANT	**Santorini**	**2.21**	**8**	*e*Pn	**Pn**	**14 26 06.8**	**+0.2**
SANT	**Santorini**	**2.21**	**8**	*e*Pn	**Pn**	**14 26 06.8**	**+0.2**
SANT	**Santorini**	**2.21**	**8**	P	Pn	14 26 07.5	+0.9
THR1	**Thera Island**	**2.21**	**8**	P	Pn	14 26 07.4	+0.8
THR1	**Thera Island**	**2.21**	**8**	P	Pn	14 26 07.4	+0.8
THR3	**Thira Island,**	**2.25**	**7**	P	Pn	14 26 07.8	+0.8
THR3	**Thira Island,**	**2.25**	**7**	P	Pn	14 26 07.8	+0.8
THR2	**Thira Island,**	**2.29**	**7**	P	**Pn**	**14 26 08.3**	**+0.8**
THR2	**Thira Island,**	**2.29**	**7**	P	**Pn**	**14 26 08.3**	**+0.8**
LTBQ	**Tobruq**	**2.33**	**205**	*i* P	**Pb**	**14 26 10.7**	**-1.6**
	SNR=46						
LTBQ				*e*S	**Sn**	**14 26 32.9**	**-3.2**
	SNR=46						
KYTH	**Kithira**	**2.69**	**322**	P	Pn	14 26 14.2	+1.1
KYTH	**Kithira**	**2.69**	**322**	*e*PN	**Pn**	**14 26 13.7**	**+0.6**
KYTH	**Kithira**	**2.69**	**322**	*e*Pn	**Pn**	**14 26 13.7**	**+0.6**
KYTH	**Kithira**	**2.69**	**322**	P	Pn	14 26 14.2	+1.1
APE	**Apeiranthos**	**2.91**	**7**	*e*PN	**Pn**	**14 26 16.2**	**0.0**
APE	**Apeiranthos**	**2.91**	**7**	P	**Pn**	**14 26 16.2**	**0.0**
APE				S	**Sn**	**14 26 49.8**	**-0.7**
APE	**Apeiranthos**	**2.91**	**7**	*e*PN	**Pn**	**14 26 16.4**	**+0.2**
APE	**Apeiranthos**	**2.91**	**7**	P	**Pn**	**14 26 16.2**	**0.0**
APE				S	**Sn**	**14 26 49.8**	**-0.7**
VLI	**Veliai**	**3.08**	**326**	P	**Pn**	**14 26 19.1**	**+0.6**
VLI				S	**Sn**	**14 26 53.8**	**-1.0**
VLI	**Veliai**	**3.08**	**326**	P	**Pn**	**14 26 19.1**	**+0.6**
VLI				S	**Sn**	**14 26 53.8**	**-1.0**
ARG	**Arkhangelos**	**3.22**	**50**	P	Pn	14 26 22.4	+2.1
ARG	**Arkhangelos**	**3.22**	**50**	*e*PN	Pn	14 26 22.4	+2.1
ARG	**Arkhangelos**	**3.22**	**50**	P	Pn	14 26 22.4	+2.1
DAT	**Datca**	**3.26**	**38**	*e*PN	**Pn**	**14 26 21.2**	**+0.2**
BODT	**Bodrum**	**3.40**	**32**	*e*PN	**Pn**	**14 26 23.0**	**0.0**
DYR	**Agios Nikonas**	**3.42**	**320**	P	Pn	14 26 24.2	+1.0
DYR	**Agios Nikonas**	**3.42**	**320**	*e*PN	**Pn**	**14 26 23.3**	**+0.1**
DYR	**Agios Nikonas**	**3.42**	**320**	*e*Pn	**Pn**	**14 26 23.3**	**+0.1**
DYR	**Agios Nikonas**	**3.42**	**320**	P	Pn	14 26 24.2	+1.0
HMAT	**Matruh**	**3.51**	**151**	P	**Pn**	**14 26 24.8**	**+0.4**
	baz=153						
HMAT				AMP		14 27 00.0	
	comp=N,450μm,0.5s,logA/T=6.0,baz=153						
HMAT	**Matruh**	**3.51**	**151**	P	**Pn**	**14 26 24.8**	**+0.4**
DID	**Didima**	**3.65**	**336**	P	**Pn**	**14 26 26.5**	**+0.2**
DID	**Didima**	**3.65**	**336**	*e*PN	**Pn**	**14 26 25.9**	**-0.4**
DID	**Didima**	**3.65**	**336**	*e*Pn	**Pn**	**14 26 25.9**	**-0.4**
DID	**Didima**	**3.65**	**336**	P	**Pn**	**14 26 26.5**	**+0.2**
NAIG	**Nisos Aigina**	**3.80**	**341**	*e*PN	**Pn**	**14 26 28.8**	**+0.4**
NAIG	**Nisos Aigina**	**3.80**	**341**	*e*Pn	**Pn**	**14 26 28.8**	**+0.4**
MLSB	**Milas**	**3.81**	**34**	*e*PN	**Pn**	**14 26 28.7**	**+0.2**
PYL	**PYLOS**	**3.85**	**316**	*e*PN	**Pn**	**14 26 27.9**	**-1.1**
PYL	**PYLOS**	**3.85**	**316**	*e*Pn	**Pn**	**14 26 27.9**	**-1.1**
VLX	**Vlachokerasia**	**3.87**	**326**	P	Pn	14 26 30.5	+1.0
VLX	**Vlachokerasia**	**3.87**	**326**	*e*PN	Pn	14 26 30.5	+1.0
VLX	**Vlachokerasia**	**3.87**	**326**	P	Pn	14 26 30.5	+1.0
DALT	**Dalyan (Mudla)**	**3.89**	**47**	*e*PN	**Pn**	**14 26 29.8**	**+0.3**
TURN	**Turunc**	**3.93**	**46**	*i* P	**Pn**	**14 26 27.1**	**-3.1**
TURN	**Turunc**	**3.93**	**46**	*i* P	**Pn**	**14 26 27.1**	**-3.1**
YER	**Yerkesik**	**3.94**	**40**	*e*PN	**Pn**	**14 26 30.6**	**+0.3**
ATH	**Athens Observa**	**3.95**	**344**	*e*PN	**Pn**	**14 26 30.3**	**-0.1**
ATH	**Athens Observa**	**3.95**	**344**	*e*Pn	**Pn**	**14 26 30.3**	**-0.1**
ITM	**Ithomi**	**3.95**	**320**	P	**Pn**	**14 26 31.3**	**+0.9**
ITM	**Ithomi**	**3.95**	**320**	*e*PN	**Pn**	**14 26 30.6**	**+0.2**
ITM	**Ithomi**	**3.95**	**320**	*e*Pn	**Pn**	**14 26 30.6**	**+0.2**
ITM	**Ithomi**	**3.95**	**320**	P	**Pn**	**14 26 31.3**	**+0.9**
PTL	**Penteli**	**3.99**	**346**	P	**Pn**	**14 26 31.2**	**+0.2**
PTL	**Penteli**	**3.99**	**346**	*e*PN	**Pn**	**14 26 31.3**	**+0.2**
PTL	**Penteli**	**3.99**	**346**	P	**Pn**	**14 26 31.2**	**+0.2**
FETY	**Fethiye**	**4.08**	**52**	*e*PN	**Pn**	**14 26 32.8**	**+0.5**
AYDN	**Tasoluk**	**4.15**	**32**	*i* P	Pn	14 26 35.0	+1.8
AYDN	**Tasoluk**	**4.15**	**32**	*i* P	Pn	14 26 35.0	+1.8
KSL	**Kastellorizon**	**4.18**	**61**	*e*PN	**Pn**	**14 26 34.8**	**+1.3**
LTK	**Loutraki**	**4.21**	**337**	P	**Pn**	**14 26 34.0**	**0.0**
LTK	**Loutraki**	**4.21**	**337**	*e*PN	**Pn**	**14 26 33.8**	**-0.2**
LTK	**Loutraki**	**4.21**	**337**	P	**Pn**	**14 26 34.0**	**0.0**
AKAS	**Kas**	**4.23**	**60**	*i* P	**Pn**	**14 26 35.3**	**+0.9**
AKAS	**Kas**	**4.23**	**60**	*i* P	**Pn**	**14 26 35.3**	**+0.9**
CHOS	**Chios island**	**4.28**	**10**	*e*PN	Pn	14 26 35.8	+0.8
CHOS	**Chios island**	**4.28**	**10**	*e*Pn	Pn	14 26 35.8	+0.8
AMT	**Artemida-Makis**	**4.33**	**322**	P	Pn	14 26 37.0	+1.3
AMT	**Artemida-Makis**	**4.33**	**322**	*e*PN	**Pn**	**14 26 35.7**	**0.0**
AMT	**Artemida-Makis**	**4.33**	**322**	*e*Pn	**Pn**	**14 26 35.7**	**0.0**
AMT	**Artemida-Makis**	**4.33**	**322**	P	Pn	14 26 37.0	+1.3
GUR	**Goura**	**4.36**	**330**	P	**Pn**	**14 26 36.6**	**+0.4**
GUR	**Goura**	**4.36**	**330**	*e*PN	Pn	14 26 37.1	+0.9
GUR	**Goura**	**4.36**	**330**	P	**Pn**	**14 26 36.6**	**+0.4**
GUR	**Goura**	**4.36**	**330**	*e*Pn	Pn	14 26 37.1	+0.9
BLCB	**Balcova**	**4.49**	**20**	*e*PN	**Pn**	**14 26 38.2**	**+0.3**
KLV	**Kalavryta, Ach**	**4.53**	**329**	*e*PN	**Pn**	**14 26 38.5**	**0.0**
KLV	**Kalavryta, Ach**	**4.53**	**329**	*e*Pn	**Pn**	**14 26 38.5**	**0.0**
IZM	**Izmir**	**4.57**	**22**	*e*PN	**Pn**	**14 26 39.5**	**+0.6**
GLHS	**Glhisar (BURDU**	**4.66**	**49**	*e*P	**Pn**	**14 26 41.1**	**+0.8**
MRKA	**Markates**	**4.68**	**345**	P	**Pn**	**14 26 40.8**	**+0.3**
MRKA	**Markates**	**4.68**	**345**	P	**Pn**	**14 26 40.8**	**+0.3**
ELL	**Elmali**	**4.70**	**56**	*e*P	**Pn**	**14 26 41.4**	**+0.6**
DSF	**Desfina**	**4.71**	**335**	P	Pn	14 26 42.0	+1.1
DSF	**Desfina**	**4.71**	**335**	P	Pn	14 26 42.0	+1.1
GOLH	**Golhisar**	**4.75**	**49**	*i* P	**Pn**	**14 26 43.0**	**+1.4**
GOLH	**Golhisar**	**4.75**	**49**	*i* P	**Pn**	**14 26 43.0**	**+1.4**
DNZL	**Cakiroluk**	**4.76**	**41**	*i* P	**Pn**	**14 26 42.6**	**+0.9**
DNZL	**Cakiroluk**	**4.76**	**41**	*i* P	**Pn**	**14 26 42.6**	**+0.9**
LAKA	**Lakka**	**4.77**	**329**	*e*PN	**Pn**	**14 26 42.5**	**+0.8**
LAKA	**Lakka**	**4.77**	**329**	*e*Pn	**Pn**	**14 26 42.5**	**+0.8**
LKR	**Lokris**	**4.77**	**340**	P	**Pn**	**14 26 41.9**	**+0.2**
LKR	**Lokris**	**4.77**	**340**	*e*PN	**Pn**	**14 26 41.5**	**-0.2**
LKR	**Lokris**	**4.77**	**340**	*e*Pn	**Pn**	**14 26 41.5**	**-0.2**
LKR	**Lokris**	**4.77**	**340**	P	**Pn**	**14 26 41.9**	**+0.2**
DENT	**Denizli**	**4.80**	**41**	*e*P	**Pn**	**14 26 42.5**	**+0.4**
KALE	**Kalithea**	**4.83**	**331**	*e*PN	**Pn**	**14 26 43.1**	**+0.5**
KALE	**Kalithea**	**4.83**	**331**	*e*Pn	**Pn**	**14 26 43.1**	**+0.5**
TRIZ	**Trizonia**	**4.84**	**331**	*e*PN	**Pn**	**14 26 43.2**	**+0.6**
TRIZ	**Trizonia**	**4.84**	**331**	*e*Pn	**Pn**	**14 26 43.2**	**+0.6**
RLS	**Riolos of Patr**	**4.86**	**324**	*e*PN	Pn	14 26 45.0	+2.1
RLS	**Riolos of Patr**	**4.86**	**324**	*e*Pn	Pn	14 26 45.0	+2.1
SWA2		**4.93**	**176**	P	**Pn**	**14 26 45.0**	**+1.2**
	baz=179						
SWA2				AMP		14 27 00.0	
	comp=E,1180μm,0.4s,logA/T=6.5,baz=179						
SWA2				S	Sn	14 27 36.8	-3.4
	baz=179						
SWA2		**4.93**	**176**	P	**Pn**	**14 26 45.0**	**+1.2**
SWA2				S	Sn	14 27 36.8	-3.4
EFP	**Efpalio**	**4.96**	**330**	*e*PN	**Pn**	**14 26 44.4**	**+0.1**
EFP	**Efpalio**	**4.96**	**330**	*e*Pn	**Pn**	**14 26 44.4**	**+0.1**
SIGR	**SIGRI**	**5.07**	**7**	P	**Pn**	**14 26 46.0**	**+0.3**
SIGR	**SIGRI**	**5.07**	**7**	P	**Pn**	**14 26 46.0**	**+0.3**
AOS	**Alonnisos**	**5.08**	**349**	P	**Pn**	**14 26 46.1**	**+0.2**
AOS	**Alonnisos**	**5.08**	**349**	*e*PN	**Pn**	**14 26 46.1**	**+0.2**
AOS	**Alonnisos**	**5.08**	**349**	P	**Pn**	**14 26 46.1**	**+0.2**
KORT	**Korkueli**	**5.13**	**55**	*i* P	**Pn**	**14 26 48.6**	**+1.8**
KORT	**Korkueli**	**5.13**	**55**	*i* P	**Pn**	**14 26 48.6**	**+1.8**
MANT	**Manisa**	**5.14**	**32**	*i* P	Pn	14 26 48.3	+1.3
MANT	**Manisa**	**5.14**	**32**	*i* P	Pn	14 26 48.3	+1.3
PRK	**Paraskevi**	**5.15**	**10**	*e*PN	**Pn**	**14 26 47.6**	**+0.7**
PRK	**Paraskevi**	**5.15**	**10**	*e*Pn	**Pn**	**14 26 47.6**	**+0.7**
AKHS	**Akhisar**	**5.18**	**24**	*i* P	**Pn**	**14 26 48.2**	**+0.8**
AKHS	**Akhisar**	**5.18**	**24**	*i* P	**Pn**	**14 26 48.2**	**+0.8**
AKS	**Akhisar**	**5.18**	**24**	*e*P	**Pn**	**14 26 47.9**	**+0.5**
KULA	**Kula-Manisa**	**5.20**	**33**	*e*P	**Pn**	**14 26 47.9**	**+0.1**
LJBD	**Adjabya**	**5.25**	**233**	*i* P	**Pn**	**14 26 49.7**	**+1.4**
	SNR=45						
ANTB	**Antalya**	**5.29**	**57**	*e*P	**Pn**	**14 26 49.5**	**+0.6**
AGG	**Agios Georgios**	**5.32**	**336**	P	Pn	14 26 50.3	+1.0
AGG	**Agios Georgios**	**5.32**	**336**	*e*PN	Pn	14 26 50.6	+1.3
AGG	**Agios Georgios**	**5.32**	**336**	P	Pn	14 26 50.3	+1.0
AGG	**Agios Georgios**	**5.32**	**336**	*e*Pn	Pn	14 26 50.6	+1.3
NEO	**Neokhori**	**5.34**	**344**	*e*PN	**Pn**	**14 26 49.9**	**+0.4**
NEO	**Neokhori**	**5.34**	**344**	*e*Pn	**Pn**	**14 26 49.9**	**+0.4**
XOR	**Xorichti**	**5.40**	**344**	P	**Pn**	**14 26 50.8**	**+0.4**
XOR	**Xorichti**	**5.40**	**344**	P	**Pn**	**14 26 50.8**	**+0.4**
VLS	**Valsamata**	**5.40**	**319**	*e*PN	Pn	14 26 51.8	+1.4
VLS	**Valsamata**	**5.40**	**319**	*e*Pn	Pn	14 26 51.8	+1.4
EVR	**Evrytania**	**5.42**	**332**	P	Pn	14 26 53.1	+2.4
EVR	**Evrytania**	**5.42**	**332**	*e*PN	Pn	14 26 52.4	+1.7
EVR	**Evrytania**	**5.42**	**332**	*e*Pn	Pn	14 26 52.4	+1.7
EVR	**Evrytania**	**5.42**	**332**	P	Pn	14 26 53.1	+2.4
KHL	**Karahalli**	**5.48**	**40**	*e*P	**Pn**	**14 26 51.4**	**-0.1**
BCK	**Bucak**	**5.54**	**52**	*e*P	**Pn**	**14 26 52.7**	**+0.3**
DEMI	**Demirci**	**5.67**	**30**	*i* P	Pn	14 26 55.5	+1.4
DEMI	**Demirci**	**5.67**	**30**	*i* P	Pn	14 26 55.5	+1.4
LIA	**Limnos Island**	**5.71**	**1**	*e*PN	**Pn**	**14 26 54.8**	**+0.2**
LIA	**Limnos Island**	**5.71**	**1**	*e*Pn	**Pn**	**14 26 54.8**	**+0.2**
ISP	**Isparta**	**5.72**	**49**	*e*P	**Pn**	**14 26 54.9**	**+0.1**
ISP	**Isparta**	**5.72**	**49**	*e*P	**Pn**	**14 26 54.4**	**-0.4**
ISP	**Isparta**	**5.72**	**49**	*e*Pn	**Pn**	**14 26 54.4**	**-0.4**
ISP	**Isparta**	**5.72**	**49**	*e*P	**Pn**	**14 26 54.4**	**-0.4**
LKD2	**Lefkada island**	**5.82**	**324**	P	Pn	14 26 57.4	+1.2
LKD2	**Lefkada island**	**5.82**	**324**	*e*PN	Pn	14 26 57.4	+1.2
LKD2	**Lefkada island**	**5.82**	**324**	P	Pn	14 26 57.4	+1.2
BALY	**Balya**	**5.91**	**19**	*i* P	**Pn**	**14 26 57.2**	**-0.2**
BALY	**Balya**	**5.91**	**19**	*i* P	**Pn**	**14 26 57.2**	**-0.2**
THL	**Klokotos Trika**	**5.92**	**336**	*e*PN	**Pn**	**14 26 58.0**	**+0.6**
THL	**Klokotos Trika**	**5.92**	**336**	*e*Pn	**Pn**	**14 26 58.0**	**+0.6**
LUJL	**Ujela**	**5.98**	**214**	*i* P	**Pn**	**14 26 58.9**	**+0.5**
	SNR=45						
PPCY	**Paphos**	**6.03**	**81**	P	**Pn**	**14 26 59.4**	**+0.4**
PPCY				S	**Sn**	**14 28 01.7**	**-5.7**
PPCY	**Paphos**	**6.03**	**81**	P	**Pn**	**14 26 59.4**	**+0.4**
AKMC	**Akamas**	**6.04**	**80**	⇑P	**Pn**	**14 26 58.5**	**-0.6**
AKMC	**Akamas**	**6.04**	**80**	⇑P	**Pn**	**14 26 58.5**	**-0.6**
GDZ	**Gediz**	**6.04**	**35**	*i* P	**Pn**	**14 27 00.5**	**+1.2**
GDZ	**Gediz**	**6.04**	**35**	*i* P	**Pn**	**14 27 00.5**	**+1.2**
DURS	**Dursunbey**	**6.06**	**26**	*i* P	**Pn**	**14 27 00.4**	**+0.9**
DURS	**Dursunbey**	**6.06**	**26**	*i* P	**Pn**	**14 27 00.4**	**+0.9**
DST	**Dursunbey**	**6.11**	**27**	*e*P	**Pn**	**14 27 00.2**	**0.0**
SHUT	**Suhut-Afyon**	**6.21**	**44**	*e*P	**Pn**	**14 27 01.6**	**0.0**
GONE	**Gonen-Balikesi**	**6.22**	**19**	*e*P	**Pn**	**14 27 01.5**	**0.0**
GAZI	**Gazipasa**	**6.27**	**69**	*i* P	**Pn**	**14 27 02.1**	**-0.2**
GAZI	**Gazipasa**	**6.27**	**69**	*i* P	**Pn**	**14 27 02.1**	**-0.2**
LIT	**Litokhoron**	**6.27**	**341**	*e*PN	**Pn**	**14 27 02.7**	**+0.4**
LIT	**Litokhoron**	**6.27**	**341**	*e*Pn	**Pn**	**14 27 02.7**	**+0.4**
ALFC	**Alevga**	**6.27**	**79**	P	**Pn**	**14 27 01.4**	**-0.9**
	comp=E,21nm,0.2s						
ALFC				S	**Sn**	**14 28 07.7**	**-5.6**
ALFC	**Alevga**	**6.27**	**79**	P	**Pn**	**14 27 01.4**	**-0.9**
	comp=E,21nm,0.2s						
GELI	**Tayfur-Gelibol**	**6.31**	**10**	*e*P	**Pn**	**14 27 02.6**	**-0.2**
PLG	**Polygyros**	**6.33**	**349**	*e*PN	Pn	14 27 03.9	+0.8
PLG	**Polygyros**	**6.33**	**349**	*e*Pn	Pn	14 27 03.9	+0.8
TVSB	**Tavsanli**	**6.33**	**32**	*e*P	**Pn**	**14 27 03.2**	**0.0**
ALT	**Altintas**	**6.33**	**38**	*e*P	**Pn**	**14 27 02.9**	**-0.3**
LPK	**Lapseki**	**6.33**	**12**	*e*P	**Pn**	**14 27 02.6**	**-0.4**
JAN	**Janina**	**6.44**	**329**	*e*PN	**Pn**	**14 27 04.8**	**+0.2**
JAN	**Janina**	**6.44**	**329**	*e*Pn	**Pn**	**14 27 04.8**	**+0.2**
KRBG	**Karabiga-Canak**	**6.45**	**15**	*e*P	**Pn**	**14 27 04.5**	**-0.2**
SZAC	**Souni-Zanaja**	**6.47**	**83**	⇓P	**Pn**	**14 27 05.6**	**+0.6**
SZAC	**Souni-Zanaja**	**6.47**	**83**	⇓P	**Pn**	**14 27 05.6**	**+0.6**
LEF	**Lefka**	**6.50**	**79**	*e*P	**Pn**	**14 27 05.1**	**-0.4**
HNAT	**Natroun**	**6.53**	**132**	P	**Pn**	**14 27 05.2**	**-0.6**
	baz=132						
HNAT	**Natroun**	**6.53**	**132**	P	**Pn**	**14 27 05.2**	**-0.6**
AKDN	**Akdeniz- K¯–br**	**6.59**	**78**	*e*P	**Pn**	**14 27 07.4**	**+0.8**
KCTX	**Karacabey (Bur**	**6.62**	**22**	*e*P	**Pn**	**14 27 06.4**	**-0.6**
RKY	**Sarkoy-Tekirda**	**6.71**	**14**	*e*P	**Pn**	**14 27 07.5**	**-0.9**
MRMT	**Marmara Adasi**	**6.72**	**17**	*e*P	**Pn**	**14 27 08.3**	**-0.2**
SQR		**6.72**	**128**	P	**Pn**	**14 27 07.9**	**-0.7**
	baz=128						
SQR		**6.72**	**128**	P	**Pn**	**14 27 07.9**	**-0.7**
ALN	**Alexandroupoli**	**6.75**	**6**	*e*PN	**Pn**	**14 27 09.1**	**+0.2**
ALN	**Alexandroupoli**	**6.75**	**6**	*e*Pn	**Pn**	**14 27 09.1**	**+0.2**
MAMC	**Mammari**	**6.77**	**79**	P	**Pn**	**14 27 09.1**	**-0.1**
MAMC	**Mammari**	**6.77**	**79**	P	**Pn**	**14 27 09.1**	**-0.1**
SOH	**Sokhos**	**6.78**	**349**	*e*PN	Pn	14 27 10.0	+0.7
SOH	**Sokhos**	**6.78**	**349**	*e*Pn	Pn	14 27 10.0	+0.7
MFT	**Murefte**	**6.83**	**14**	*e*P	**Pn**	**14 27 10.1**	**+0.1**
CSS	**Prodhromos**	**6.85**	**81**	P	**Pn**	**14 27 09.7**	**-0.5**
	comp=E,7.1nm,0.3s						
CSS				S	**Sn**	**14 28 21.9**	**-5.6**
CSS	**Prodhromos**	**6.85**	**81**	*e*P	**Pn**	**14 27 11.2**	**+0.9**
CSS	**Prodhromos**	**6.85**	**81**	*e*Pn	**Pn**	**14 27 09.6**	**-0.7**
CSS	**Prodhromos**	**6.85**	**81**	Pn	**Pn**	**14 27 09.8**	**-0.5**
ERMK	**Ermenek**	**6.85**	**67**	*i* P	**Pn**	**14 27 12.0**	**+1.5**
ERMK	**Ermenek**	**6.85**	**67**	*i* P	**Pn**	**14 27 12.0**	**+1.5**
AKIN	**Ak¯–nc¯–lar- K**	**6.96**	**81**	*e*P	**Pn**	**14 27 12.1**	**+0.3**
KONT	**Konya--Tatoy**	**6.99**	**55**	*e*P	**Pn**	**14 27 12.3**	**+0.1**
LFK	**Lefkose**	**7.04**	**79**	*e*P	**Pn**	**14 27 13.1**	**+0.2**
ESKT	**Eskisehir**	**7.06**	**39**	*e*P	**Pn**	**14 27 12.6**	**-0.6**
CAVI	**Cavuskoy**	**7.11**	**31**	*e*P	**Pn**	**14 27 13.1**	**-0.7**
KOT	**Kottamia**	**7.12**	**125**	P	**Pn**	**14 27 14.2**	**+0.1**
	baz=124						
KOT				AMP		14 28 00.0	
	comp=E,240μm,0.4s,logA/T=5.8,baz=124						
KOT				S	Sn	14 28 28.0	-6.3
	baz=124						
KOT	**Kottamia**	**7.12**	**125**	P	**Pn**	**14 27 14.1**	**+0.1**
LADK	**Ladik-KONYA**	**7.12**	**54**	*e*P	**Pn**	**14 27 14.2**	**+0.1**
HSAF	**As Saff**	**7.13**	**128**	P	**Pn**	**14 27 14.2**	**0.0**
	baz=128						
HSAF	**As Saff**	**7.13**	**128**	P	**Pn**	**14 27 14.2**	**0.0**
YLV	**Yalova**	**7.24**	**27**	*e*P	**Pn**	**14 27 14.9**	**-0.7**
GLL	**Jalalah**	**7.26**	**127**	P	**Pn**	**14 27 15.1**	**-0.8**
	baz=127						
GLL	**Jalalah**	**7.26**	**127**	P	**Pn**	**14 27 15.1**	**-0.8**
HHAG	**Hagoal**	**7.29**	**123**	P	**Pn**	**14 27 16.4**	**+0.1**
	baz=123						
HHAG				AMP		14 28 00.0	
	comp=E,160μm,0.5s,logA/T=5.5,baz=123						
HHAG	**Hagoal**	**7.29**	**123**	P	**Pn**	**14 27 16.4**	**+0.1**
SVRH	**Sivrihisar-ESK**	**7.37**	**43**	*e*P	**Pn**	**14 27 17.2**	**-0.3**
HBNS	**Bani Suwayf**	**7.38**	**133**	P	**Pn**	**14 27 17.0**	**-0.5**
	baz=133						
HBNS	**Bani Suw

HDHB Dhahab 9.79 121 P Pn 14 27 50.8 +0.3
baz=121
HDHB Dhahab 9.79 121 P Pn 14 27 50.8 +0.3
SALA Sala 9.84 95 eP Pn 14 27 50.7 -0.8
SALA eS Sn 14 29 08.6 -33
SALA AML AML 14 29 47.9
comp=N,81nm,0.6s
SALA AML AML 14 29 56.9
comp=E,7.2nm,0.5s
GTR Jabal at Tayr 9.85 150 P Pn 14 27 51.8 +0.3
baz=150
GTR Jabal at Tayr 9.85 150 P Pn 14 27 51.8 +0.3
HHRG Al Ghardaqah 10.06 131 P Pn 14 27 55.6 +1.2
baz=131
HHRG Al Ghardaqah 10.06 131 P Pn 14 27 55.6 +1.2
ASF Jabal al Asfar 10.10 98 Pn Pn 14 27 55.6 +0.7
ASF Sn Sn 14 29 43.2 -4.5
ASF Jabal al Asfar 10.10 98 Pn Pn 14 27 55.6 +0.7
comp=E,2.5nm,0.3s,baz=150,slow=8.3,SNR=11
ASF Sn Sn 14 29 43.2 -4.5
comp=E,2.6nm,0.3s,baz=293,slow=15,SNR=2.7
BRY Bratogost 10.11 331 ePn Pn 14 27 56.3 +1.3
BRY eSn Sn 14 29 38.0 -10
BRY Bratogost 10.11 331 ePn Pn 14 27 56.3 +1.3
LKFR Kufra 10.11 190 i P Pn 14 27 55.8 +0.7
SNR=43
IVAS Ivanjica 10.14 339 ePn Pn 14 27 51.9 -3.5
IVAS eSn Sn 14 29 39.5 -9.0
UPM Unac-Piva 10.22 334⇑ iPn Pn 14 27 57.5 +0.8
UPM eSn Sn 14 29 42.3 -8.4
UPM Unac-Piva 10.22 334⇑ iPn Pn 14 27 57.5 +0.8
GRUS Gruza 10.28 342 ePn Pn 14 27 55.8 -1.4
GRUS eSn Sn 14 29 45.3 -6.4
ZALF Zalf 10.30 94 eP Pn 14 27 56.1 -1.5
ZALF eS Sn 14 29 19.7 -33
ZALF AML AML 14 30 08.6
comp=N,234nm,0.4s
ZALF AML AML 14 30 12.8
comp=E,26nm,0.5s
HDK2 Wahat Dakhilah 10.38 160 P Pn 14 27 58.8 0.0
baz=161
HDK2 Wahat Dakhilah 10.38 160 P Pn 14 27 58.8 0.0
STON Ston 10.43 329 ePn Pn 14 27 55.4 -3.9
STON Sn Sn 14 29 41.8 -14
BBLS Lazići 10.63 337 ePn Pn 14 27 57.9 -4.3
BBLS eSn Sn 14 29 49.2 -11
DIVS Divibare 10.67 340 ePn Pn 14 27 58.9 -3.7
DIVS eSn Sn 14 29 51.2 -10
ISR Istrita 10.99 5⇑ P Pn 14 28 17.5 +10
ISR Istrita 10.99 5⇑ iP Pn 14 28 17.5 +10
ARR Arges 11.19 358⇓ iP Pn 14 28 25.5 +16
CFR Carcaliu 11.24 11 ⇓P Pn 14 28 14.3 +4.0
MLR Muntele Rosu 11.32 3 Pn Pn 14 28 10.9 -0.7
MLR Muntele Rosu 11.32 3 Pn Pn 14 28 10.9 -0.7
comp=E,0.1nm,0.3s,baz=97,slow=19,SNR=2.7
MLR Muntele Rosu 11.32 3 P Pn 14 28 10.9 -0.7
MALT Malatya 11.54 65 eP Pn 14 28 13.2 -1.4
MALT pmax pmax
comp=Z,12nm,0.5s
MALT Malatya 11.54 65 ePn Pn 14 28 13.2 -1.4
comp=Z,12nm,0.5s
MALT Malatya 11.54 65 ⇓iP Pn 14 28 14.0 -0.5
MALT Malatya 11.54 65 eP Pn 14 28 13.2 -1.4
comp=Z,12nm,0.5s
MALT Malatya 11.54 65 Pn Pn 14 28 14.1 -0.5
PLOR Plostina 11.72 5 ⇓P Pn 14 28 26.5 +9.4
PLOR Plostina 11.72 5⇓ iP Pn 14 28 26.5 +9.4
SIM Simferopol' 12.81 30 P P 14 28 47.0 +4.4
SIM pmax pmax
comp=Z,13nm,1.0s
SIM MLR MLR
comp=Z,300nm,16.7s
PKSM Moragy 12.99 340⇑ P P 14 28 44.1 -0.6
PKSM Moragy 12.99 340⇑ iP P 14 28 44.0 -0.6
KEST Kesra 13.01 281 Pn Pn 14 28 35.4 +0.7
KEST Kesra 13.01 281 Pn Pn 14 28 35.4 +0.7
comp=Z,0.1nm,0.3s,baz=40,slow=16,SNR=3.3
KEST Kesra 13.01 281 Pn Pn 14 28 35.4 +0.7
NVLJ Novalja 13.03 326 ePn Pn 14 28 32.2 -2.6
NVLJ Sn Sn 14 30 45.6 -13
BUR08 Bucovina Ar. S 13.46 0 ePn Pn 14 28 37.9 -2.8
ANN Anapa 14.25 38 eP P 14 28 57.9 -0.7
ANN pmax pmax
comp=Z,61nm,1.4s
ANN Anapa 14.25 38 eP P 14 28 57.9 -0.7
comp=Z,61nm,1.4s
UZH Uzhgorod 14.59 353 eP Pn 14 28 57.6 +1.4
VOY Vojsko 14.60 328 ePn Pn 14 28 54.1 -2.2
VOY e 14 29 02.3
VOY eSn Sn 14 31 25.8 -12
DBAD Bademkaya 14.82 58 i P Pn 14 29 00.3 +0.8
KOLS Kolonicke sedl 14.89 353 eP Pn 14 28 57.1 -3.2
KOLS Kolonicke sedl 14.89 353 ePN Pn 14 28 57.1 -3.2
KOLS Kolonicke sedl 14.89 353 eP P 14 29 07.8 +2.0
CRVS Cervenica-Dubn 14.96 351 eP Pn 14 29 02.0 +0.8
CRVS Cervenica-Dubn 14.96 351 ePN Pn 14 29 02.0 +0.8
CRVS Cervenica-Dubn 14.96 351 eP P 14 29 08.4 +1.8
CRVS Cervenica-Dubn 14.96 351 ePn Pn 14 29 02.0 +0.8
DAGI Agillar 15.00 58 i P Pn 14 29 02.6 +0.7
VYHS Vyhne 15.05 344 eP Pn 14 29 02.7 +0.4
VYHS Vyhne 15.05 344 ePN Pn 14 29 02.7 +0.4
VYHS epP pP 14 29 13.4 -0.1
VYHS Vyhne 15.05 344 ePn Pn 14 29 02.7 +0.4
PGF Pioggiola 15.12 308 eP Pn 14 29 02.7 -0.7
comp=Z,98nm,0.9s
PGF Pioggiola 15.12 308 eP Pn 14 29 02.7 -0.7
PGF pmax pmax
comp=Z,98nm,0.9s
PGF Pioggiola 15.12 308 eP Pn 14 29 02.7 -0.7
comp=Z,98nm,0.9s
KBA Koelnbreinsper 15.65 329⇑ iP P 14 29 13.4 -1.0
KBA pmax pmax
comp=Z,9.0nm,0.7s
KBA Koelnbreinsper 15.65 329⇑ iP P 14 29 13.4 -1.0
comp=Z,8.9nm,0.7s
KBA Koelnbreinsper 15.65 329⇑ iP P 14 29 13.4 -1.0
comp=Z,8.9nm,0.7s
KBA Koelnbreinsper 15.65 329⇑ iP P 14 29 13.4 -1.0
comp=Z,8.9nm,0.7s
ABTA Abfaltersbach 15.76 327⇑ iP P 14 29 16.3 +0.7
comp=Z,23nm,0.6s
ABTA Abfaltersbach 15.76 327⇑ iP P 14 29 16.3 +0.7
comp=Z,23nm,0.6s
ABTA Abfaltersbach 15.76 327⇑ iP P 14 29 16.3 +0.7
comp=Z,23nm,0.6s
AKH Akhalkalaki 16.23 58 P Pn 14 29 18.8 +0.9
AKH Akhalkalaki 16.23 58 P Pn 14 29 18.8 +0.9
VRAC Vranov 16.38 340 Pn Pn 14 29 20.7 +1.2
VRAC Vranov 16.38 340⇓ iP P 14 29 22.5 +0.2
VRAC Vranov 16.38 340 Pn Pn 14 29 20.7 +1.2
comp=Z,1.4nm,0.3s,baz=141,slow=8.7,SNR=11
VRAC Vranov 16.38 340 P Pn 14 29 20.7 +1.2
WTTA Wattenberg 16.55 326⇑ iP P 14 29 24.2 -0.2
WTTA pmax pmax
comp=Z,11nm,0.6s
WTTA Wattenberg 16.55 326⇑ iP P 14 29 24.2 -0.2
comp=Z,10nm,0.6s
WTTA Wattenberg 16.55 326⇑ iP P 14 29 24.2 -0.2
comp=Z,10nm,0.6s
WTTA Wattenberg 16.55 326⇑ iP P 14 29 24.2 -0.2
comp=Z,10nm,0.6s
MORC Moravsky Berou 16.55 343 eP Pn 14 29 21.7 -0.1
MORC pmax pmax
comp=Z,5.0nm,0.8s
MORC Moravsky Berou 16.55 343 ePn Pn 14 29 21.7 -0.1
comp=Z,5.0nm,0.8s
MORC Moravsky Berou 16.55 343⇑ iP P 14 29 25.2 +0.9
MORC Moravsky Berou 16.55 343 ePn Pn 14 29 21.7 -0.1
comp=Z,5.0nm,0.8s
ONI Oni 16.65 54 P Pn 14 29 24.1 +1.0
ONI Oni 16.65 54 P Pn 14 29 24.1 +1.0
TREC Trest 16.70 338 AMS AMS 14 37 00.0
comp=Z,100nm,10.6s
AK02 Malin Array Si 16.75 9 ePn Pn 14 29 21.6 -2.6
AK02 Malin Array Si 16.75 9 ePn Pn 14 29 21.6 -2.6
GNI Garni 16.75 63 Pn P 14 29 26.6 -0.1
GNI Garni 16.75 63 P P 14 29 27.5 +0.9
SNR=6.2
GNI Garni 16.75 63 Pn P 14 29 26.5 -0.1
comp=Z,1.5nm,0.3s,baz=301,slow=5.1,SNR=11
GNI LR LR 14 37 24.9
comp=Z,445nm,19.2s,baz=72,slow=43
GNI Garni 16.75 63 i P P 14 29 26.5 -0.1
comp=Z,407nm,17.0s

SBF Sospel 16.75 310 eP Pn 14 29 23.6 -0.8
comp=Z,37nm,0.7s
SBF Sospel 16.75 310 eP Pn 14 29 23.6 -0.8
SBF pmax pmax
comp=Z,37nm,0.7s
SBF Sospel 16.75 310 eP Pn 14 29 23.6 -0.8
comp=Z,37nm,0.7s
KIV Kislovodsk 16.77 49 eP Pn 14 29 23.2 -1.4
KIV pmax pmax
comp=Z,77nm,1.1s
KIV MLR MLR
comp=Z,115nm,13.0s
AK01 Malin Array Si 16.78 9 ePn Pn 14 29 21.0 -3.6
KIEV Kiev 16.78 9 eP Pn 14 29 24.7 0.0
KIEV pmax pmax
comp=Z,35nm,0.9s
KIEV Kiev 16.78 9 ePn Pn 14 29 24.6 0.0
comp=Z,35nm,0.9s
KIEV Kiev 16.78 9 ePn Pn 14 29 24.6 0.0
comp=Z,35nm,0.9s
AKASG Malin Array Be 16.79 9 P Pn 14 29 24.2 -0.6
AKASG 14 32 33.6
AKASG Malin Array Be 16.79 9 Pn Pn 14 29 24.2 -0.6
AKASG Sn Sn 14 32 33.6 +3.1
AKASG Malin Array Be 16.79 9 Pn Pn 14 29 24.2 -0.6
comp=Z,7.3nm,0.3s,baz=199,slow=10,SNR=45
AKASG Sn Sn 14 32 33.6 +3.1
baz=196,slow=22,SNR=6.3
AKASG Malin Array Be 16.79 9 P Pn 14 29 24.2 -0.6
KBZ Khabaz 16.79 50 P P 14 29 26.2 -0.7
KBZ Khabaz 16.79 50 Pn P 14 29 26.2 -0.7
KBZ Khabaz 16.79 50 Pn P 14 29 26.2 -0.7
comp=Z,1.9nm,0.3s,baz=238,slow=9.8,SNR=41
KBZ Khabaz 16.79 50 P P 14 29 26.2 -0.7
FETA Feichten 16.80 324⇑ iP P 14 29 26.7 -0.5
comp=Z,8.8nm,0.8s
FETA Feichten 16.80 324⇑ iP P 14 29 26.7 -0.5
comp=Z,8.8nm,0.8s
FETA Feichten 16.80 324⇑ iP P 14 29 26.7 -0.5
comp=Z,8.8nm,0.8s
GOR Gori 16.86 57 P P 14 29 31.4 +3.6
KZR Kazreti 16.87 59 P Pn 14 29 25.6 -0.3
KZR Kazreti 16.87 59 P Pn 14 29 25.6 -0.3
GEC2 GERESS Array S 16.93 333 eP P 14 29 27.6 -0.9
GEC2 pmax pmax
comp=Z,13nm,0.6s
GEC2 GERESS Array S 16.93 333 eP P 14 29 27.6 -0.9
comp=Z,13nm,0.6s
GEC2 GERESS Array S 16.93 333 eP P 14 29 27.6 -0.9
comp=Z,13nm,0.6s
GERES GERESS Array B 16.93 333 Pn Pn 14 29 27.0 +0.4
GERES PcP PcP 14 34 12.6 0.0
GERES GERESS Array B 16.93 333 Pn Pn 14 29 27.0 +0.4
comp=Z,3.5nm,0.3s,baz=149,slow=10,SNR=73
GERES PcP PcP 14 34 12.6 0.0
comp=Z,0.2nm,0.3s,baz=151,slow=2.2,SNR=3.9
GERES GERESS Array B 16.93 333 P Pn 14 29 27.0 +0.4
ZEI Tsey 17.02 54 eP P 14 29 29.0 -0.7
ZEI pmax pmax
comp=Z,65nm,1.1s
ZEI Tsey 17.02 54 eP P 14 29 29.0 -0.7
comp=Z,65nm,1.1s
DAVOX Davos/Dischmat 17.06 322 Pn P 14 29 30.1 +0.1
DAVOX Davos/Dischmat 17.06 322 Pn P 14 29 30.1 +0.1
comp=Z,0.5nm,0.3s,baz=173,slow=16,SNR=5.8
DAVOX Davos/Dischmat 17.06 322 P P 14 29 30.1 +0.1
FRF La Foret Royal 17.12 309 eP Pn 14 29 28.3 -0.6
FRF La Foret Royal 17.12 309 eP Pn 14 29 28.3 -0.6
FRF La Foret Royal 17.12 309 eP Pn 14 29 28.3 -0.6
FRF La Foret Royal 17.12 309 eP Pn 14 29 28.3 -0.6
TUE Stuetta 17.13 320 ePn Pn 14 29 29.3 0.0
comp=Z,21nm,1.2s
TUE Stuetta 17.13 320 ePn Pn 14 29 29.3 0.0
comp=Z,21nm,1.2s
KHC Kasperske Hory 17.21 334 eP P 14 29 32.0 +0.5
KHC MLR MLR
comp=Z,300nm,13.4s
KHC Kasperske Hory 17.21 334 eP P 14 29 32.0 +0.5
KHC Kasperske Hory 17.21 334 eP P 14 29 32.0 +0.5
KHC epP pP 14 29 37.0 -0.5
KHC ex x 14 30 18.5
KHC AMS AMS 14 37 00.0
comp=Z,300nm,13.4s
KHC Kasperske Hory 17.21 334 eP P 14 29 32.0 +0.5
comp=Z,300nm,13.4s
TBLG Delisi 17.22 58 eP P 14 29 31.2 -0.4
TBLG Delisi 17.22 58 P P 14 29 31.3 -0.4
TBLG Delisi 17.22 58 eP P 14 29 31.2 -0.4
DPC Dobruska-Polom 17.40 341 eP Pn 14 29 32.3 -0.1
DPC pmax pmax
comp=Z,10.0nm,0.8s
DPC Dobruska-Polom 17.40 341 eP P 14 29 33.5 -0.1
DPC Dobruska-Polom 17.40 341 ePn Pn 14 29 32.3 -0.1
comp=Z,10.0nm,0.8s
DPC Dobruska-Polom 17.40 341 eP P 14 29 33.5 -0.1
DPC Dobruska-Polom 17.40 341 ePn Pn 14 29 32.3 -0.1
comp=Z,10.0nm,0.8s
DPC Dobruska-Polom 17.40 341 eP P 14 29 33.5 -0.1
WET Wettzell 17.48 332 eP P 14 29 35.0 +0.5
WET pmax pmax
comp=Z,11nm,0.7s
WET Wettzell 17.48 332 eP P 14 29 35.0 +0.5
comp=Z,11nm,0.7s
WET Wettzell 17.48 332 eP P 14 29 35.0 +0.5
comp=Z,11nm,0.7s
DGRG David-gareji 17.58 60 P P 14 29 36.6 +0.9
DGRG David-gareji 17.58 60 P P 14 29 36.6 +0.9
MBDF Montbardon 17.60 312 eP Pn 14 29 34.4 -0.7
comp=Z,18nm,0.7s
MBDF Montbardon 17.60 312 eP Pn 14 29 34.4 -0.7
MBDF pmax pmax
comp=Z,18nm,0.7s
MBDF Montbardon 17.60 312 eP Pn 14 29 34.4 -0.7
comp=Z,18nm,0.7s
MBDF Montbardon 17.60 312 eP Pn 14 29 34.4 -0.7
comp=Z,8.9nm,0.7s
PRU Pruhonice 17.60 337 eP P 14 29 41.0 +5.2
PRU MLR MLR
comp=Z,100nm,15.6s
PRU Pruhonice 17.60 337 epP P 14 29 41.0 +5.2
PRU AMS AMS 14 38 00.0
comp=Z,100nm,15.6s
UPC Upice 17.62 341 eP P 14 29 35.7 -0.3
UPC Upice 17.62 341 eP P 14 29 35.7 -0.3
UPC Upice 17.62 341 eP P 14 29 35.7 -0.3
SMRF Simiane la Rot 18.00 309 eP P 14 29 40.2 -0.1
SMRF Simiane la Rot 18.00 309 eP P 14 29 40.2 -0.1
SMRF Simiane la Rot 18.00 309 eP P 14 29 40.2 -0.1
LPG La Plagne 18.01 314 eP Pn 14 29 39.8 -0.5
comp=Z,8.6nm,0.5s
LPG La Plagne 18.01 314 eP Pn 14 29 39.8 -0.5
LPG pmax pmax
comp=Z,9.0nm,0.5s
LPG La Plagne 18.01 314 eP Pn 14 29 39.8 -0.5
comp=Z,8.6nm,0.5s
LPG La Plagne 18.01 314 eP Pn 14 29 39.8 -0.5
comp=Z,4.3nm,0.5s
LPL La Plagne 18.04 314 eP Pn 14 29 40.1 -0.4
comp=Z,9.0nm,0.5s
LPL La Plagne 18.04 314 eP Pn 14 29 40.1 -0.4
LPL pmax pmax
comp=Z,9.0nm,0.5s
LPL La Plagne 18.04 314 eP Pn 14 29 40.1 -0.4
comp=Z,9.0nm,0.5s
LPL La Plagne 18.04 314 eP Pn 14 29 40.1 -0.4
comp=Z,4.5nm,0.5s
ORIF Oris-en-Rattie 18.24 312 eP P 14 29 43.3 +0.3
ORIF eR
comp=Z,135nm,19.0s
ORIF Oris-en-Rattie 18.24 312 eP P 14 29 43.3 +0.3
ORIF Oris-en-Rattie 18.24 312 eP P 14 29 43.3 +0.3
ORIF Oris-en-Rattie 18.24 312 eP P 14 29 43.3 +0.3
ROTZ Rotzenmuhle 18.25 333 eP Pn 14 29 42.6 -0.2
comp=Z,4.0nm,0.7s
MANZ Manzenberg 18.46 333 eP P 14 29 45.0 -0.3
comp=Z,6.0nm,0.8s
NKC Novy Kostel 18.54 334 eP P 14 29 45.9 -0.2
NKC MLR MLR
comp=Z,300nm,7.4s
NKC Novy Kostel 18.54 334 eP P 14 29 45.9 -0.2
NKC AMS AMS 14 38 00.0
comp=Z,300nm,7.4s
NKC Novy Kostel 18.54 334 eP P 14 29 45.9 -0.2
comp=Z,300nm,7.4s
BRG Berggiesshubel 18.56 337 eP P 14 29 45.8 -0.6

comp=Z,4.2nm,0.7s
BRG Berggiesshubel 18.56 337 eP P 14 29 45.8 -0.6
BRG pmax pmax
comp=Z,4.0nm,0.7s
BRG Berggiesshubel 18.56 337 eP P 14 29 46.1 -0.3
BRG Berggiesshubel 18.56 337 eP P 14 29 45.8 -0.6
comp=Z,4.0nm,0.7s
GRFO Grafenberg 18.57 331 eP P 14 29 35.1 -11
GRFO Grafenberg 18.57 331 ePn P 14 29 35.1 -11
TANN Tannenbergstha 18.68 334 eP Pn 14 29 48.1 -0.1
comp=Z,16nm,0.9s
GUNZ Gunzen 18.68 334 eP Pn 14 29 48.4 +0.2
WERD Werda 18.76 334 eP P 14 29 48.3 -0.3
BFO Black Forest 18.88 324 eP Pn 14 29 52.1 +1.5
BFO pmax pmax
comp=Z,7.0nm,0.8s
BFO Black Forest 18.88 324 eP Pn 14 29 52.1 +1.5
comp=Z,7.0nm,0.8s
BFO Black Forest 18.88 324 eP Pn 14 29 52.1 +1.5
comp=Z,7.0nm,0.8s
VIVF Saint-Julien-l 18.97 310 eP P 14 29 50.6 -0.3
comp=Z,13nm,0.7s
VIVF Saint-Julien-l 18.97 310 eP P 14 29 50.6 -0.3
VIVF pmax pmax
comp=Z,13nm,0.7s
VIVF Saint-Julien-l 18.97 310 eP P 14 29 50.6 -0.3
comp=Z,13nm,0.7s
VIVF Saint-Julien-l 18.97 310 eP P 14 29 50.6 -0.3
comp=Z,6.3nm,0.7s
CABF La Chapelle 19.01 316 eP P 14 29 50.8 -0.6
comp=Z,26nm,0.8s
CABF La Chapelle 19.01 316 eP P 14 29 50.8 -0.6
CABF pmax pmax
comp=Z,26nm,0.8s
CABF La Chapelle 19.01 316 eP P 14 29 50.8 -0.6
comp=Z,26nm,0.8s
CABF La Chapelle 19.01 316 eP P 14 29 50.8 -0.6
comp=Z,13nm,0.8s
LASF Ste Croix 19.16 307 eP P 14 29 51.7 -1.3
comp=Z,7nm,1.0s
LASF Ste Croix 19.16 307 eP P 14 29 51.7 -1.3
comp=Z,27nm,1.0s
LASF Ste Croix 19.16 307 eP P 14 29 51.7 -1.3
comp=Z,14nm,1.0s
MOX Moxa 19.18 333 eP P 14 29 53.4 +0.2
MOX pmax pmax
comp=Z,8.0nm,0.8s
MOX Moxa 19.18 333 eP P 14 29 53.4 +0.2
comp=Z,8.0nm,0.8s
MOX Moxa 19.18 333 eP P 14 29 53.4 +0.2
comp=Z,8.0nm,0.8s
CLL Collm 19.24 337 i P P 14 29 54.1 +0.3
CLL pmax pmax
comp=Z,12nm,1.0s
CLL Collm 19.24 337 eP P 14 29 53.8 0.0
comp=Z,13nm,0.9s
CLL Collm 19.24 337 i (P) P 14 29 54.1 +0.3
comp=Z,12nm,1.0s
CLL i 14 29 57.9
CLL i (PP) 14 30 00.5
CLL i 14 30 25.3
CLL ePcP PcP 14 34 16.0 -0.2
CLL Collm 19.24 337 i P P 14 29 54.1 +0.3
comp=Z,12nm,1.0s
HINF Hinteralfeld 19.30 320 eP Pn 14 29 56.2 +0.5
comp=Z,13nm,0.6s
HINF Hinteralfeld 19.30 320 eP Pn 14 29 56.2 +0.5
HINF pmax pmax
comp=Z,13nm,0.6s
HINF Hinteralfeld 19.30 320 eP Pn 14 29 56.2 +0.5
comp=Z,13nm,0.6s
HINF Hinteralfeld 19.30 320 eP Pn 14 29 56.2 +0.5
comp=Z,6.3nm,0.6s
MIB Mutribah 19.36 97 eP Pn 14 29 56.6 +0.1
MIB AMb AMB 14 29 59.2
comp=Z,93nm,0.5s
MIB Mutribah 19.36 97 eP Pn 14 29 56.6 +0.1
comp=Z,93nm,0.5s
CDF Champ du Feu 19.46 322 eP P 14 29 55.8 -0.6
comp=Z,28nm,0.8s
CDF Champ du Feu 19.46 322 eP P 14 29 55.8 -0.6
CDF pmax pmax
comp=Z,29nm,0.8s
CDF Champ du Feu 19.46 322 eP P 14 29 55.8 -0.6
comp=Z,28nm,0.8s
CDF Champ du Feu 19.46 322 eP P 14 29 55.8 -0.6
comp=Z,14nm,0.8s
NAY Al-Naaiem 19.47 99 eP Pn 14 29 58.1 +0.3
NAY AMb AMB 14 30 02.7
comp=Z,37nm,0.7s
NAY Al-Naaiem 19.47 99 eP Pn 14 29 58.1 +0.3
comp=Z,37nm,0.7s
MAK Makhachkala 19.56 57 eP P 14 29 56.9 -0.4
MAK S S 14 33 36.2 -0.9
MAK pmax pmax
comp=Z,160nm,0.6s
MAK Makhachkala 19.56 57 eP P 14 29 56.9 -0.4
comp=Z,160nm,0.6s
MAK S S 14 33 36.2 -0.9
HAU Haudompre 19.69 320 eP P 14 29 58.6 -0.1
comp=Z,22nm,0.7s
HAU eR
comp=Z,108nm,21.2s
HAU Haudompre 19.69 320 eP P 14 29 58.6 -0.1
HAU pmax pmax
comp=Z,22nm,0.7s
HAU Haudompre 19.69 320 eP P 14 29 58.6 -0.1
comp=Z,22nm,0.7s
HAU Haudompre 19.69 320 eP P 14 29 58.6 -0.1
comp=Z,11nm,0.7s
VORD Divnogorie 19.72 27 eP P 14 29 57.6 -1.4
VORD pmax pmax
comp=Z,20nm,0.9s
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
VORD Divnogorie 19.72 27 eP P 14 29 57.6 -1.4
comp=E,20nm,0.9s
UMR Umm Al-Rimmam 19.75 97 eP Pn 14 30 00.7 -0.5
UMR AMb AMB 14 30 03.7
comp=Z,105nm,0.4s
UMR Umm Al-Rimmam 19.75 97 eP Pn 14 30 00.7 -0.5
comp=Z,105nm,0.4s
VSR Storozhevoye 19.87 27 eP P 14 29 59.5 -1.1
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR pmax pmax
comp=E,10.0nm,1.1s
VSR Storozhevoye 19.87 27 eP P 14 29 59.5 -1.1
SUW Suwalki 19.88 357 eP P 14 30 00.5 -0.2
SUW Suwalki 19.88 357 eP P 14 30 00.5 -0.2
SUW Suwalki 19.88 357 eP P 14 30 00.9 +0.2
SUW Suwalki 19.88 357 eP P 14 30 00.5 -0.2
UBBA Unterbreizbach 19.94 331 eP P 14 30 01.8 +0.4
comp=Z,2.0nm,0.9s
MTLF Montolieu 20.00 304 eP P 14 30 02.3 +0.2
comp=Z,17nm,1.0s
MTLF Montolieu 20.00 304 eP P 14 30 02.3 +0.2
MTLF pmax pmax
comp=Z,17nm,1.0s
MTLF Montolieu 20.00 304 eP P 14 30 02.3 +0.2
comp=Z,17nm,1.0s
MTLF Montolieu 20.00 304 eP P 14 30 02.3 +0.2
comp=Z,8.6nm,1.0s
TNS Taunus Mts 20.15 328 eP P 14 30 04.0 +0.2
TNS pmax pmax
comp=Z,10.0nm,0.7s
TNS Taunus Mts 20.15 328 eP P 14 30 04.0 +0.2
comp=Z,10.0nm,0.7s
TNS Taunus Mts 20.15 328 eP P 14 30 04.0 +0.2
comp=Z,10.0nm,0.7s
SMF Signal de Mont 20.34 314 eP P 14 30 05.2 -0.7
comp=Z,17nm,0.7s
SMF Signal de Mont 20.34 314 eP P 14 30 05.2 -0.7
SMF pmax pmax
comp=Z,17nm,0.7s
SMF Signal de Mont 20.34 314 eP P 14 30 05.2 -0.7
comp=Z,17nm,0.7s
SMF Signal de Mont 20.34 314 eP P 14 30 05.2 -0.7
comp=Z,8.4nm,0.7s
PAGF Fort de Pagny 20.35 321 eP Pn 14 30 08.8 +0.7
comp=Z,14nm,0.8s
PAGF Fort de Pagny 20.35 321 eP Pn 14 30 08.8 +0.7
comp=Z,14nm,0.8s

SFTF	**Sexfontaines**	**20.51**	**319**	*e*P		Pn	14 30 09.2	-0.7
	comp=Z,23nm,0.7s								
SFTF	**Sexfontaines**	**20.51**	**319**	*e*P		Pn	14 30 09.2	-0.7
	comp=Z,23nm,0.7s								
SFTF	**Sexfontaines**	**20.51**	**319**	*e*P		Pn	14 30 09.2	-0.7
	comp=Z,12nm,0.7s								
TAM	**Tamanrasset**	**20.56**	**242**	*e*P		**P**	**14 30 08.3**	**-0.3**	
TAM					pmax	pmax			
	comp=Z,8.0nm,0.8s								
TAM	**Tamanrasset**	**20.56**	**242**	*e*P		**P**	**14 30 08.3**	**-0.3**	
	comp=Z,7.9nm,0.8s								
TAM	**Tamanrasset**	**20.56**	**242**	*e*P		**P**	**14 30 08.3**	**-0.3**	
	comp=Z,7.8nm,0.8s								
CLZ	**Clausthal**	**20.61**	**333**	*e*P		**P**	**14 30 08.4**	**-0.3**	
CLZ					pmax	pmax			
	comp=Z,10.0nm,0.8s								
CLZ	**Clausthal**	**20.61**	**333**	*e*P		**P**	**14 30 08.4**	**-0.3**	
	comp=Z,10.0nm,0.8s								
CLZ	**Clausthal**	**20.61**	**333**	*e*P		**P**	**14 30 08.4**	**-0.3**	
	comp=Z,10.0nm,0.8s								
LOR	**Lormes**	**20.65**	**316**	*e*P		**P**	**14 30 08.9**	**-0.3**	
	comp=Z,17nm,0.7s								
LOR				*e*R					
	comp=Z,112nm,21.9s								
LOR	**Lormes**	**20.65**	**316**	*e*P		**P**	**14 30 08.9**	**-0.3**	
	comp=Z,17nm,0.7s								
LOR	**Lormes**	**20.65**	**316**	*e*P		**P**	**14 30 08.9**	**-0.3**	
	comp=Z,8.6nm,0.7s								
CAF	**Calviac**	**20.68**	**308**	*e*P		**P**	**14 30 09.5**	**-0.1**	
	comp=Z,12nm,0.7s								
CAF	**Calviac**	**20.68**	**308**	*e*P		**P**	**14 30 09.5**	**-0.1**	
CAF					pmax	pmax			
	comp=Z,12nm,0.7s								
CAF	**Calviac**	**20.68**	**308**	*e*P		**P**	**14 30 09.5**	**-0.1**	
	comp=Z,12nm,0.7s								
CAF	**Calviac**	**20.68**	**308**	*e*P		**P**	**14 30 09.5**	**-0.1**	
	comp=Z,5.9nm,0.7s								
MEZF	**Maizieres J'vi**	**20.68**	**320**	*e*P		Pn	14 30 11.1	-0.8	
	comp=Z,38nm,0.6s								
MEZF	**Maizieres J'vi**	**20.68**	**320**	*e*P		Pn	14 30 11.1	-0.8	
	comp=Z,38nm,0.6s								
MEZF	**Maizieres J'vi**	**20.68**	**320**	*e*P		Pn	14 30 11.1	-0.8	
	comp=Z,19nm,0.6s								
AVF	**Avril sur Loir**	**20.70**	**314**	*e*P		**P**	**14 30 09.9**	**+0.1**	
	comp=Z,11nm,0.6s								
AVF	**Avril sur Loir**	**20.70**	**314**	*e*P		**P**	**14 30 09.9**	**+0.1**	
AVF					pmax	pmax			
	comp=Z,11nm,0.6s								
AVF	**Avril sur Loir**	**20.70**	**314**	*e*P		**P**	**14 30 09.9**	**+0.1**	
	comp=Z,11nm,0.6s								
AVF	**Avril sur Loir**	**20.70**	**314**	*e*P		**P**	**14 30 09.9**	**+0.1**	
	comp=Z,5.6nm,0.6s								
SSF	**Saint Saulge**	**20.75**	**315**	*e*P		**P**	**14 30 09.9**	**-0.4**	
	comp=Z,18nm,0.9s								
SSF	**Saint Saulge**	**20.75**	**315**	*e*P		**P**	**14 30 09.9**	**-0.4**	
SSF					pmax	pmax			
	comp=Z,18nm,0.9s								
SSF	**Saint Saulge**	**20.75**	**315**	*e*P		**P**	**14 30 09.9**	**-0.4**	
	comp=Z,18nm,0.9s								
SSF	**Saint Saulge**	**20.75**	**315**	*e*P		**P**	**14 30 09.9**	**-0.4**	
	comp=Z,9.1nm,0.9s								
VRHR	**Novokhopersk**	**20.75**	**30**	*e*P		**P**	**14 30 10.5**	**+0.3**	
VRHR				*e*S		**S**	**14 33 57.9**	**-2.9**	
VRHR					pmax	pmax			
	comp=N,20nm,0.6s								
VRHR					pmax	pmax			
	comp=E,10.0nm,0.6s								
VRHR					pmax	pmax			
	comp=Z,40nm,0.6s								
VRHR					smax	smax			
	comp=N,40nm,0.9s								
VRHR					smax	smax			
	comp=E,6.0nm,0.3s								
VRHR					smax	smax			
	comp=Z,9.0nm,0.3s								
VRHR	**Novokhopersk**	**20.75**	**30**	*e*P		**P**	**14 30 10.5**	**+0.3**	
VRHR				*e*S		**S**	**14 33 57.9**	**-2.9**	
	comp=Z,40nm,0.9s								
NACGM	**Naroch**	**20.76**	**3**	*e*		**P**	**14 30 07.0**	**-3.2**	
WLF	**Walferdange**	**20.84**	**324**	P		Pn	14 30 14.4	+0.7	
	comp=Z,20nm,1.2s								
WLF	**Walferdange**	**20.84**	**324**	*e*P		**P**	**14 30 08.6**	**-2.6**	
WLF					pmax	pmax			
	comp=Z,35nm,1.1s								
WLF	**Walferdange**	**20.84**	**324**	*e*P		Pn	14 30 14.5	+0.8	
	comp=Z,23nm,1.0s								
WLF	**Walferdange**	**20.84**	**324**	*e*P		**P**	**14 30 08.6**	**-2.6**	
	comp=Z,35nm,1.1s								
BGF	**Bois d'Agland**	**20.90**	**313**	*e*P		**P**	**14 30 11.7**	**-0.2**	
	comp=Z,32nm,0.6s								
BGF	**Bois d'Agland**	**20.90**	**313**	*e*P		**P**	**14 30 11.7**	**-0.2**	
BGF					pmax	pmax			
	comp=Z,32nm,0.6s								
BGF	**Bois d'Agland**	**20.90**	**313**	*e*P		**P**	**14 30 11.7**	**-0.2**	
	comp=Z,32nm,0.6s								
BGF	**Bois d'Agland**	**20.90**	**313**	*e*P		**P**	**14 30 11.7**	**-0.2**	
	comp=Z,16nm,0.6s								
TCF	**Toulx Ste Croi**	**21.16**	**312**	*e*P		**P**	**14 30 13.6**	**-1.2**	
	comp=Z,27nm,1.0s								
TCF	**Toulx Ste Croi**	**21.16**	**312**	*e*P		**P**	**14 30 13.6**	**-1.2**	
TCF					pmax	pmax			
	comp=Z,27nm,1.0s								
TCF	**Toulx Ste Croi**	**21.16**	**312**	*e*P		**P**	**14 30 13.6**	**-1.2**	
	comp=Z,27nm,1.0s								
TCF	**Toulx Ste Croi**	**21.16**	**312**	*e*P		**P**	**14 30 13.6**	**-1.2**	
	comp=Z,14nm,1.0s								
RJF	**Les Rejaudoux**	**21.18**	**309**	*e*P		**P**	**14 30 14.9**	**-0.1**	
	comp=Z,30nm,0.8s								
RJF				*e*R					
	comp=Z,93nm,18.2s								
RJF	**Les Rejaudoux**	**21.18**	**309**	*e*P		**P**	**14 30 14.9**	**-0.1**	
RJF					pmax	pmax			
	comp=Z,30nm,0.8s								
RJF	**Les Rejaudoux**	**21.18**	**309**	*e*P		**P**	**14 30 14.9**	**-0.1**	
	comp=Z,30nm,0.8s								
RJF	**Les Rejaudoux**	**21.18**	**309**	*e*P		**P**	**14 30 14.9**	**-0.1**	
	comp=Z,15nm,0.8s								
EPF	**Esparros**	**21.20**	**302**	*e*P		**P**	**14 30 15.6**	**+0.3**	
	comp=Z,19nm,0.9s								
EPF	**Esparros**	**21.20**	**302**	*e*P		**P**	**14 30 15.6**	**+0.3**	
EPF					pmax	pmax			
	comp=Z,19nm,0.9s								
EPF	**Esparros**	**21.20**	**302**	*e*P		**P**	**14 30 15.6**	**+0.3**	
	comp=Z,19nm,0.9s								
EPF	**Esparros**	**21.20**	**302**	*e*P		**P**	**14 30 15.6**	**+0.3**	
	comp=Z,9.4nm,0.9s								
NRDL	**Niedersach Rie**	**21.23**	**334**	*e*P		**P**	**14 30 14.8**	**-0.5**	
	comp=Z,15nm,0.9s								
MEM	**Membach**	**21.54**	**325**	P		**P**	**14 30 19.2**	**+0.5**	
	comp=Z,16nm,1.0s								
LFF	**La Frestale**	**21.55**	**307**	*e*P		**P**	**14 30 19.2**	**+0.3**	
LFF	**La Frestale**	**21.55**	**307**	*e*P		**P**	**14 30 19.2**	**+0.3**	
LFF	**La Frestale**	**21.55**	**307**	*e*P		**P**	**14 30 19.2**	**+0.3**	
LFF	**La Frestale**	**21.55**	**307**	*e*P		**P**	**14 30 19.2**	**+0.3**	
BCLA	**Clavier**	**21.75**	**324**	P		**P**	**14 30 21.3**	**+0.3**	
	comp=Z,11nm,2.3s								
GIVF	**Givet**	**21.78**	**323**	*e*P		**P**	**14 30 21.2**	**-0.1**	
	comp=Z,31nm,0.8s								
GIVF	**Givet**	**21.78**	**323**	*e*P		**P**	**14 30 21.2**	**-0.1**	
GIVF					pmax	pmax			
	comp=Z,31nm,0.8s								
GIVF	**Givet**	**21.78**	**323**	*e*P		**P**	**14 30 21.2**	**-0.1**	
	comp=Z,31nm,0.8s								
GIVF	**Givet**	**21.78**	**323**	*e*P		**P**	**14 30 21.2**	**-0.1**	
	comp=Z,16nm,0.8s								
ETSF	**Etsaut**	**21.80**	**301**	*e*P		**P**	**14 30 21.9**	**+0.1**	
	comp=Z,13nm,0.6s								
ETSF	**Etsaut**	**21.80**	**301**	*e*P		**P**	**14 30 21.9**	**+0.1**	
ETSF					pmax	pmax			
	comp=Z,13nm,0.6s								
ETSF	**Etsaut**	**21.80**	**301**	*e*P		**P**	**14 30 21.9**	**+0.1**	
	comp=Z,13nm,0.6s								
ETSF	**Etsaut**	**21.80**	**301**	*e*P		**P**	**14 30 21.9**	**+0.1**	
	comp=Z,6.4nm,0.6s								
DOU	**Dourbes**	**21.89**	**323**	P		**P**	**14 30 22.7**	**+0.2**	
	comp=Z,6.8nm,0.9s								
BAIF	**Baives**	**22.06**	**322**	*e*P		**P**	**14 30 24.5**	**+0.2**	
	comp=Z,44nm,1.1s								
BAIF	**Baives**	**22.06**	**322**	*e*P		**P**	**14 30 24.5**	**+0.2**	
BAIF					pmax	pmax			
	comp=Z,44nm,1.1s								
BAIF	**Baives**	**22.06**	**322**	*e*P		**P**	**14 30 24.5**	**+0.2**	
	comp=Z,44nm,1.1s								
BAIF	**Baives**	**22.06**	**322**	*e*P		**P**	**14 30 24.5**	**+0.2**	
	comp=Z,22nm,1.1s								
BSD	**Bornholm Skovb**	**22.11**	**344**	*i*P		**P**	**14 30 22.4**	**-2.3**	
BSD					pmax	pmax			
	comp=Z,2.0nm,0.2s								
BSD	**Bornholm Skovb**	**22.11**	**344**	*i*P		**P**	**14 30 22.4**	**-2.3**	
	comp=Z,2.3nm,0.2s								
BSD	**Bornholm Skovb**	**22.11**	**344**	*i*P		**P**	**14 30 22.4**	**-2.3**	
	comp=Z,2.0nm,0.2s								
SJPF	**Ste Jean**	**22.33**	**301**	*e*P		**P**	**14 30 27.7**	**+0.3**	
	comp=Z,26nm,1.0s								
SJPF	**Ste Jean**	**22.33**	**301**	*e*P		**P**	**14 30 27.7**	**+0.3**	
SJPF					pmax	pmax			
	comp=Z,26nm,1.0s								
SJPF	**Ste Jean**	**22.33**	**301**	*e*P		**P**	**14 30 27.7**	**+0.3**	
	comp=Z,26nm,1.0s								
SJPF	**Ste Jean**	**22.33**	**301**	*e*P		**P**	**14 30 27.7**	**+0.3**	
	comp=Z,13nm,1.0s								
BSEG	**Bad Segeberg**	**22.34**	**337**	*e*P		**P**	**14 30 25.2**	**-2.1**	
BSEG					pmax	pmax			
	comp=Z,28nm,0.7s								
BSEG	**Bad Segeberg**	**22.34**	**337**	*e*P		**P**	**14 30 25.2**	**-2.1**	
	comp=Z,28nm,0.7s								
BSEG	**Bad Segeberg**	**22.34**	**337**	*e*P		**P**	**14 30 25.2**	**-2.1**	
	comp=Z,28nm,0.7s								
OBN	**Obninsk**	**22.42**	**17**	⇓*e*P		**P**	**14 30 29.9**	**+1.8**	
OBN				*e*			14 30 49.4		
OBN				*e*S		**S**	**14 34 27.4**	**-5.6**	
OBN					pmax	pmax			
	comp=Z,37nm,1.1s								
OBN					MLR	MLR			
	comp=Z,100nm,16.0s								
OBN	**Obninsk**	**22.42**	**17**	*e*P		**P**	**14 30 29.9**	**+1.8**	
	comp=Z,37nm,1.1s								
SARR	**Saratov**	**22.59**	**34**	*c*P		**P**	**14 30 27.5**	**-2.4**	
SARR				*i*S		**S**	**14 34 29.8**	**-6.4**	
SARR					pmax	pmax			
	comp=Z,62nm,0.8s								
SARR	**Saratov**	**22.59**	**34**	P		**P**	**14 30 27.5**	**-2.4**	
	comp=Z,62nm,0.8s								
MFF	**Saint Martin d**	**22.77**	**311**	*e*P		**P**	**14 30 32.4**	**+0.5**	
	comp=Z,20nm,0.6s								
MFF	**Saint Martin d**	**22.77**	**311**	*e*P		**P**	**14 30 32.4**	**+0.5**	
MFF					pmax	pmax			
	comp=Z,20nm,0.6s								
MFF	**Saint Martin d**	**22.77**	**311**	*e*P		**P**	**14 30 32.4**	**+0.5**	
	comp=Z,20nm,0.6s								
MFF	**Saint Martin d**	**22.77**	**311**	*e*P		**P**	**14 30 32.4**	**+0.5**	
	comp=Z,9.9nm,0.6s								
MOS	**Moscow**	**23.25**	**18**	*e*P		P	14 30 27.1	-10	
MOS				*e*			14 34 41.4		
LDF	**La Druitiere**	**23.63**	**315**	*e*P		**P**	**14 30 39.3**	**-1.3**	
	comp=Z,34nm,0.9s								
LDF	**La Druitiere**	**23.63**	**315**	*e*P		**P**	**14 30 39.3**	**-1.3**	
LDF					pmax	pmax			
	comp=Z,34nm,0.9s								
LDF	**La Druitiere**	**23.63**	**315**	*e*P		**P**	**14 30 39.3**	**-1.3**	
	comp=Z,34nm,0.9s								
LDF	**La Druitiere**	**23.63**	**315**	*e*P		**P**	**14 30 39.3**	**-1.3**	
	comp=Z,17nm,0.9s								
ESDC	**Sonseca Array**	**23.80**	**292**	P		**P**	**14 30 42.0**	**-0.5**	
ESDC	**Sonseca Array**	**23.80**	**292**	P		**P**	**14 30 42.0**	**-0.5**	
	comp=Z,7.3nm,0.8s,baz=84,slow=9.4,SNR=30								
ESDC	**Sonseca Array**	**23.80**	**292**	P		**P**	**14 30 42.0**	**-0.5**	
FLN	**La Foliniere**	**23.92**	**315**	*e*P		**P**	**14 30 42.7**	**-0.7**	
	comp=Z,36nm,0.8s								
FLN				*e*R					
	comp=Z,88nm,22.8s								
FLN	**La Foliniere**	**23.92**	**315**	*e*P		**P**	**14 30 42.7**	**-0.7**	
FLN					pmax	pmax			
	comp=Z,36nm,0.8s								
FLN	**La Foliniere**	**23.92**	**315**	*e*P		**P**	**14 30 42.7**	**-0.7**	
	comp=Z,36nm,0.8s								
FLN	**La Foliniere**	**23.92**	**315**	*e*P		**P**	**14 30 42.7**	**-0.7**	
	comp=Z,18nm,0.8s								
GRR	**Gorron**	**23.97**	**314**	*e*P		**P**	**14 30 43.1**	**-0.7**	
	comp=Z,24nm,0.6s								
GRR	**Gorron**	**23.97**	**314**	*e*P		**P**	**14 30 43.1**	**-0.7**	
GRR					pmax	pmax			
	comp=Z,24nm,0.6s								
GRR	**Gorron**	**23.97**	**314**	*e*P		**P**	**14 30 43.1**	**-0.7**	
	comp=Z,24nm,0.6s								
GRR	**Gorron**	**23.97**	**314**	*e*P		**P**	**14 30 43.1**	**-0.7**	
	comp=Z,12nm,0.6s								
MDT	**Midelt**	**24.77**	**275**	P		**P**	**14 30 52.0**	**+0.6**	
MDT	**Midelt**	**24.77**	**275**	P		**P**	**14 30 52.0**	**+0.6**	
	comp=Z,8.4nm,0.8s,baz=93,slow=12,SNR=6.2								
MDT	**Midelt**	**24.77**	**275**	P		**P**	**14 30 52.0**	**+0.6**	
SGMF	**Saint Gilles**	**24.94**	**313**	*e*P		**P**	**14 30 52.9**	**+0.2**	
	comp=Z,66nm,0.9s								
SGMF	**Saint Gilles**	**24.94**	**313**	*e*P		**P**	**14 30 52.9**	**+0.2**	
SGMF					pmax	pmax			
	comp=Z,66nm,0.9s								
SGMF	**Saint Gilles**	**24.94**	**313**	*e*P		**P**	**14 30 52.9**	**+0.2**	
	comp=Z,66nm,0.9s								
SGMF	**Saint Gilles**	**24.94**	**313**	*e*P		**P**	**14 30 52.9**	**+0.2**	
	comp=Z,33nm,0.9s								
QUIF	**Quistinic**	**25.18**	**312**	*e*P		**P**	**14 30 54.6**	**-0.2**	
	comp=Z,44nm,0.5s								
QUIF	**Quistinic**	**25.18**	**312**	*e*P		**P**	**14 30 54.6**	**-0.2**	
QUIF					pmax	pmax			
	comp=Z,44nm,0.5s								
QUIF	**Quistinic**	**25.18**	**312**	*e*P		**P**	**14 30 54.6**	**-0.2**	
	comp=Z,44nm,0.5s								
QUIF	**Quistinic**	**25.18**	**312**	*e*P		**P**	**14 30 54.6**	**-0.2**	
	comp=Z,22nm,0.5s								
PBRG	**Braganca**	**26.11**	**296**	*e*P		**P**	**14 31 04.8**	**+1.4**	
PBRG	**Braganca**	**26.11**	**296**	*e*P		**P**	**14 31 04.8**	**+1.4**	
MVO	**Moncorvo**	**26.26**	**295**	*e*P		**P**	**14 31 06.2**	**+1.4**	
	comp=Z,40nm,0.9s								
MVO	**Moncorvo**	**26.26**	**295**	*e*P		**P**	**14 31 06.2**	**+1.4**	
	comp=Z,40nm,0.9s								
PMRV	**Marv??o**	**26.44**	**291**	*e*P		**P**	**14 31 08.0**	**+1.6**	
	comp=Z,37nm,1.5s								
PMRV	**Marv??o**	**26.44**	**291**	*e*P		**P**	**14 31 08.0**	**+1.6**	
	comp=Z,37nm,1.5s								
PESTR	**Estremoz**	**26.59**	**290**	*e*P		**P**	**14 31 09.8**	**+2.0**	
PESTR	**Estremoz**	**26.59**	**290**	*e*P		**P**	**14 31 09.8**	**+2.0**	
PVAQ	**Vaqueiros**	**26.73**	**286**	*e*P		**P**	**14 31 09.1**	**+0.1**	
PVAQ	**Vaqueiros**	**26.73**	**286**	*e*P		**P**	**14 31 09.1**	**+0.1**	
PBEJ	**Beja**	**26.82**	**288**	*e*P		**P**	**14 31 12.4**	**+2.6**	
PVIS	**Viseu**	**26.88**	**294**	*e*P		**P**	**14 31 12.3**	**+1.9**	
PVIS	**Viseu**	**26.88**	**294**	*e*P		**P**	**14 31 12.3**	**+1.9**	
PBDV	**Barranco-do-Ve**	**26.91**	**286**	*e*P		**P**	**14 31 10.8**	**+0.1**	
	comp=Z,77nm,1.5s								
PBDV	**Barranco-do-Ve**	**26.91**	**286**	*e*P		**P**	**14 31 10.8**	**+0.1**	
	comp=Z,77nm,1.5s								
EVO	**Evora**	**26.92**	**289**	⇑*i*P		**P**	**14 31 10.9**	**+0.1**	
	comp=Z,51nm,1.3s								
EVO				*e*R					
	comp=Z,82nm,21.0s								
EVOP	**Sao Brissos**	**27.01**	**289**	⇑*i*P		**P**	**14 31 10.9**	**-0.6**	
EVOP					pmax	pmax			
	comp=Z,51nm,1.3s								
EVOP	**Sao Brissos**	**27.01**	**289**	⇑*i*P		**P**	**14 31 10.9**	**-0.6**	
	comp=Z,51nm,1.3s								
EVOP	**Sao Brissos**	**27.01**	**289**	⇑*i*P		**P**	**14 31 10.9**	**-0.6**	
	comp=Z,26nm,1.3s								
HFS	**Hagfors**	**27.02**	**347**	P		**P**	**14 31 09.7**	**-1.7**	
HFS	**Hagfors**	**27.02**	**347**	P		**P**	**14 31 09.7**	**-1.7**	
	comp=Z,2.9nm,0.5s,baz=166,slow=11,SNR=21								
HFS	**Hagfors**	**27.02**	**347**	P		**P**	**14 31 09.7**	**-1.7**	
FINES	**FINESS Array B**	**27.29**	**1**	P		**P**	**14 31 11.6**	**-2.2**	
FINES				PcP		**PcP**	**14 34 34.5**	**+1.7**	
FINES	**FINESS Array B**	**27.29**	**1**	P		**P**	**14 31 11.5**	**-2.2**	
	comp=Z,1.9nm,0.3s,baz=160,slow=10.0,SNR=18								
FINES				PcP		**PcP**	**14 34 34.5**	**+1.7**	
	comp=Z,0.8nm,0.4s,baz=111,slow=1.9,SNR=4.1								
FINES				LR		LR	14 42 48.9		
	comp=Z,81nm,21.1s,baz=157,slow=38								
FINES	**FINESS Array B**	**27.29**	**1**	P		**P**	**14 31 11.6**	**-2.2**	
FINES	**FINESS Array B**	**27.29**	**1**	PcP		**PcP**	**14 34 34.5**	**+1.7**	
	comp=Z,81nm,21.1s								
KAF	**Kangasniemi**	**27.97**	**1**	*e*P		**P**	**14 31 18.9**	**-0.9**	
KAF					pmax	pmax			
	comp=Z,4.0nm,0.8s								
KAF	**Kangasniemi**	**27.97**	**1**	*e*p		**P**	**14 31 18.9**	**-0.9**	
	comp=Z,4.0nm,0.8s								
KAF	**Kangasniemi**	**27.97**	**1**	*e*P		**P**	**14 31 18.9**	**-0.9**	
	comp=Z,4.0nm,0.8s								
NAZ	**Nazwa, Dubai**	**28.04**	**101**	P		**P**	**14 31 22.9**	**+2.0**	
	SNR=6.2								
NAZ	**Nazwa, Dubai**	**28.04**	**101**	P		**P**	**14 31 22.8**	**+2.0**	
FAQ	**Al Faqa, Dubai**	**28.09**	**101**	P		**P**	**14 31 22.8**	**+1.5**	
BANOM	**Banah**	**28.16**	**99**	P		**P**	**14 31 23.4**	**+1.4**	
	SNR=8.3								
NAO01	**NORSAR Array S**	**28.23**	**345**	*e*P		P	14 31 17.4	-4.7	
	comp=Z,4.0nm,0.4s								
NB2	**NORSAR Subarra**	**28.34**	**346**	P		**P**	**14 31 21.4**	**-1.8**	
	comp=Z,1.5nm,0.6s,baz=156,slow=9.3								
NB2	**NORSAR Subarra**	**28.34**	**346**	P		**P**	**14 31 21.4**	**-1.8**	
	comp=Z,1.5nm,0.6s,baz=156,slow=9.0,SNR=2.9								
NOA	**NORSAR Array B**	**28.34**	**346**	P		**P**	**14 31 22.0**	**-1.2**	
NOA	**NORSAR Array B**	**28.34**	**346**	P		**P**	**14 31 22.0**	**-1.2**	
	comp=Z,2.3nm,0.7s,baz=153,slow=8.5,SNR=20								
NOA					LR	LR	14 44 29.0		
	comp=Z,25nm,18.8s,baz=180,slow=40								
NOA	**NORSAR Array B**	**28.34**	**346**	P		**P**	**14 31 22.0**	**-1.2**	
HATD	**Hatta, Dubai**	**28.49**	**101**	P		**P**	**14 31 26.5**	**+1.6**	
	SNR=12								
HATD	**Hatta, Dubai**	**28.49**	**101**	P		**P**	**14 31 26.4**	**+1.5**	
ASHO	**Ashiyiah**	**28.49**	**101**	⇓P		**P**	**14 31 26.7**	**+1.7**	
ASHO	**Ashiyiah**	**28.49**	**101**	P		**P**	**14 31 26.3**	**+1.3**	
	SNR=8.2								
EKA	**Eskdalemuir Ar**	**28.81**	**326**	P		**P**	**14 31 27.2**	**-0.2**	
EKA	**Eskdalemuir Ar**	**28.81**	**326**	P		**P**	**14 31 27.2**	**-0.2**	
	comp=Z,2.2nm,0.5s,baz=132,slow=8.9,SNR=7.4								
EKA	**Eskdalemuir Ar**	**28.81**	**326**	P		**P**	**14 31 27.2**	**-0.2**	
AKTK	**Aktyubinsk**	**28.97**	**46**	*i*P		**P**	**14 31 27.9**	**-1.0**	
	comp=Z,1.0nm,0.3s								
AKTO	**Aktyubinsk**	**28.97**	**46**	*i*P		**P**	**14 31 27.9**	**-1.0**	
AKTO					pmax	pmax			
	comp=Z,1.0nm,0.3s								
AKTO	**Aktyubinsk**	**28.97**	**46**	P		**P**	**14 31 28.5**	**-0.4**	
AKTO	**Aktyubinsk**	**28.97**	**46**	P		**P**	**14 31 28.5**	**-0.4**	
	comp=Z,2.9nm,0.4s,baz=254,slow=7.8,SNR=9.3								
AKTO	**Aktyubinsk**	**28.97**	**46**	P		**P**	**14 31 28.5**	**-0.4**	
JOF	**Joensuu**	**29.03**	**6**	*e*P		**P**	**14 31 27.0**	**-2.3**	
JOF					pmax	pmax			
	comp=Z,3.0nm,0.4s								
JOF	**Joensuu**	**29.03**	**6**	*e*p		**P**	**14 31 27.0**	**-2.3**	
	comp=Z,2.7nm,0.4s								
JOF	**Joensuu**	**29.03**	**6**	*e*P		**P**	**14 31 27.0**	**-2.3**	
	comp=Z,3.0nm,0.4s								
ARQ	**Araqi**	**29.49**	**103**	⇑P		**P**	**14 31 35.6**	**+1.8**	
ARQ	**Araqi**	**29.49**	**103**	P		**P**	**14 31 35.6**	**+1.8**	
AB31	**Akbulak array**	**29.76**	**49**	*i*P		**P**	**14 31 36.8**	**+0.9**	
AB31					pmax	pmax			
	comp=Z,3.0nm,0.3s								
AB31	**Akbulak array**	**29.76**	**49**	*i*P		**P**	**14 31 36.8**	**+0.9**	
	comp=Z,3.0nm,0.3s								
ABKAR	**Akbulak array**	**29.76**	**49**	*e*P		**P**	**14 31 33.3**	**-2.6**	
	comp=Z,2.5nm,0.3s								
ABKAR	**Akbulak array**	**29.76**	**49**	*e*P		**P**	**14 31 33.3**	**-2.6**	
	comp=Z,2.5nm,0.3s								
TOA0	**Torodi Ar. Sit**	**29.82**	**231**	*e*P		**P**	**14 31 36.0**	**-0.7**	
TOA0	**Torodi Ar. Sit**	**29.82**	**231**	*e*P		**P**	**14 31 36.0**	**-0.7**	
TORD	**Torodi Ar. Bea**	**29.82**	**231**	P		**P**	**14 31 37.5**	**+0.8**	
TORD	**Torodi Ar. Bea**	**29.82**	**231**	P		**P**	**14 31 37.5**	**+0.8**	
	comp=Z,25nm,0.6s,baz=33,slow=8.6,SNR=275								
TORD					LR	LR	14 44 35.8		
	comp=Z,205nm,20.6s,baz=25,slow=38								
TORD	**Torodi Ar. Bea**	**29.82**	**231**	P		**P**	**14 31 37.5**	**+0.8**	
BSY	**Bisya**	**30.32**	**104**	P		**P**	**14 31 43.5**	**+2.3**	
	SNR=5.6								
BSYO	**Bisya**	**30.36**	**104**	P		**P**	**14 31 43.5**	**+2.0**	
	SNR=5.6								
SMDO	**Samad**	**30.86**	**102**	P		**P**	**14 31 47.9**	**+1.9**	
	SNR=7.1								
SMDO	**Samad**	**30.86**	**102**	P		**P**	**14 31 47.9**	**+1.9**	
	SNR=7.1								
JMDO	**Jabal Madar**	**31.23**	**103**	P		**P**	**14 31 50.4**	**+1.2**	
	SNR=9.5								
JMDO	**Jabal Madar**	**31.23**	**103**	P		**P**	**14 31 50.4**	**+1.2**	
	SNR=9.5								
WBK	**Wadi Bani Khal**	**31.82**	**102**	⇑P		**P**	**14 31 55.4**	**+1.0**	
WBK	**Wadi Bani Khal**	**31.82**	**102**	P		**P**	**14 31 55.4**	**+1.0**	
ARU	**Arti**	**31.89**	**35**	*d*iP		**P**	**14 31 53.8**	**-0.8**	
ARU							14 32 57.3		
ARU					S	S	14 37 06.2	+2.1	
ARU					SS	**SnSn**	**14 38 49.4**	**-3.3**	
ARU					pmax	pmax			
	comp=Z,11nm,0.6s								
ARU	**Arti**	**31.89**	**35**	*i*P		**P**	**14 31 53.8**	**-0.8**	
	comp=Z,11nm,0.6s							

TKM2	**Tokmak 2**	**39.94**	**62**	*e*P		**P**	**14 33 04.5**	**+0.5**
	comp=Z,13nm,0.7s								
TKM2	**Tokmak 2**	**39.94**	**62**	P		**P**	**14 33 04.9**	**+0.8**
	SNR=26								
TKM2	**Tokmak 2**	**39.94**	**62**	*e*P		**P**	**14 33 04.5**	**+0.5**
	comp=Z,13nm,0.7s								
ULHL	**Ulahol**	**40.48**	**63**	P		**P**	**14 33 10.1**	**+1.6**
	SNR=12								
KSH	**Kashi**	**40.63**	**67**⇑	*i*P		**P**	**14 33 08.9**	**-0.7**
KSH					pmax	pmax			
	comp=Z,12nm,0.5s								
KURK	**Kurchatov**	**41.85**	**50**	*c iP*		**P**	**14 33 19.4**	**+0.1**
KURK					pmax	pmax			
	comp=Z,12nm,0.6s								
KURK					MLR	MLR			
	comp=Z,67nm,21.0s								
KURK	**Kurchatov**	**41.85**	**50**	*e*P		**P**	**14 33 19.5**	**+0.1**
	comp=Z,14nm,0.7s								
KURK	**Kurchatov**	**41.85**	**50**	P		**P**	**14 33 20.1**	**+0.8**
	SNR=5.7								
KURK	**Kurchatov**	**41.85**	**50**	*i* P		**P**	**14 33 19.4**	**+0.1**
	comp=Z,67nm,21.0s								
SCO	**Scoresbysund**	**44.23**	**339**	*i* P		P	14 33 39.6	+1.3
SCO					pmax	pmax			
	comp=Z,5.0nm,0.8s								
SCO	**Scoresbysund**	**44.23**	**339**	*i* P		P	14 33 39.6	+1.3
	comp=Z,4.7nm,0.8s								
SCO	**Scoresbysund**	**44.23**	**339**	*i* P		P	14 33 39.6	+1.3
	comp=Z,5.0nm,0.8s								
SPITS	**Spitsbergen Ar**	**44.27**	**357**	P		**P**	**14 33 37.9**	**-0.7**
SPITS	**Spitsbergen Ar**	**44.27**	**357**	P		**P**	**14 33 37.9**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=133,slow=16,SNR=15								
SPITS					LR	LR	14 53 45.9		
	comp=Z,69nm,20.4s,baz=180,slow=38								
SPITS	**Spitsbergen Ar**	**44.27**	**357**	P		**P**	**14 33 37.9**	**-0.7**
MK31	**Makanchi Array**	**44.37**	**56**	*i* P		**P**	**14 33 40.4**	**+0.5**
MK31					pmax	pmax			
	comp=Z,33nm,0.8s								
MK31	**Makanchi Array**	**44.37**	**56**	*e*P		**P**	**14 33 40.5**	**+0.7**
MK31	**Makanchi Array**	**44.37**	**56**	*i* P		**P**	**14 33 40.4**	**+0.5**
	comp=Z,33nm,0.8s								
MKAR	**Makanchi Array**	**44.37**	**56**	P		**P**	**14 33 40.5**	**+0.6**
MKAR							14 35 22.7		
MKAR	**Makanchi Array**	**44.37**	**56**	P		**P**	**14 33 40.5**	**+0.6**
MKAR					PP	**PP**	**14 35 22.7**	**-0.7**
MKAR	**Makanchi Array**	**44.37**	**56**	P		**P**	**14 33 40.5**	**+0.6**
	comp=Z,16nm,0.6s,baz=278,slow=6.6,SNR=170								
MKAR					PP	**PP**	**14 35 22.7**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=287,slow=10,SNR=2.1								
MKAR	**Makanchi Array**	**44.37**	**56**	P		**P**	**14 33 40.5**	**+0.6**
NVS	**Novosibirsk**	**44.83**	**44**⇑	*i*P		**P**	**14 33 43.8**	**+0.5**
NVS					*e*S	**S**	**14 40 17.2**	**-2.2**
NVS					pmax	pmax			
	comp=N,3.0nm,0.5s								
NVS					pmax	pmax			
	comp=Z,15nm,0.5s								
NVS					pmax	pmax			
	comp=E,8.0nm,0.7s								
NVS					smax	smax			
	comp=N,15nm,2.0s								
NVS					smax	smax			
	comp=E,5.0nm,1.5s								
NVS	**Novosibirsk**	**44.83**	**44**	*i* P		**P**	**14 33 43.8**	**+0.5**
KBS	**Kingsbay**	**45.20**	**356**⇑	*e*P		**P**	**14 33 45.5**	**-0.4**
KBS					pmax	pmax			
	comp=Z,35nm,2.5s								
KBS					MLR	MLR			
	comp=Z,80nm,23.0s								
KBS	**Kingsbay**	**45.20**	**356**	*e*P		**P**	**14 33 45.5**	**-0.4**
	comp=Z,80nm,23.0s								
ZALV	**Zalesovo Beam**	**45.73**	**45**	P		**P**	**14 33 50.1**	**-0.4**
ZALV	**Zalesovo Beam**	**45.73**	**45**	P		**P**	**14 33 50.1**	**-0.4**
ZALV	**Zalesovo Beam**	**45.73**	**45**	P		**P**	**14 33 50.1**	**-0.4**
	comp=Z,24nm,0.4s,baz=269,slow=8.6,SNR=128								
ZALV	**Zalesovo Beam**	**45.73**	**45**	P		**P**	**14 33 50.1**	**-0.4**
WMQ	**Urumqi**	**48.56**	**59**	P		**P**	**14 34 13.6**	**+0.8**
WMQ					pmax	pmax			
	comp=Z,24nm,1.0s								
PYUN	**Piuthan**	**49.37**	**80**	*e*P		**P**	**14 34 20.2**	**+0.8**
	comp=Z,69nm,0.9s								
DANN	**Dangsing**	**49.91**	**80**	*e*P		**P**	**14 34 24.8**	**+1.2**
	comp=Z,106nm,0.8s								
KOLN	**Koldanda**	**50.00**	**81**	*e*P		**P**	**14 34 24.7**	**+0.5**
	comp=Z,29nm,1.0s								
DMN	**Daman**	**51.29**	**80**	*e*P		**P**	**14 34 34.7**	**+0.7**
KKN	**Kakani**	**51.36**	**80**	*e*P		**P**	**14 34 34.9**	**+0.4**
	comp=Z,27nm,0.6s								
PKIN	**Phulchoki**	**51.54**	**80**	*e*P		**P**	**14 34 36.3**	**+0.4**
	comp=Z,15nm,0.6s								
PKI	**Pulchoki**	**51.55**	**80**	*e*P		**P**	**14 34 36.4**	**+0.4**
	comp=Z,46nm,0.9s								
GUN	**Gumba**	**51.80**	**79**	*e*P		**P**	**14 34 38.4**	**+0.5**
RAMN	**Ramite**	**52.77**	**80**	*e*P		**P**	**14 34 44.7**	**-0.3**
TAPN	**Taplejung**	**53.52**	**79**	*e*P		**P**	**14 34 50.7**	**+0.1**
	comp=Z,25nm,0.9s								
MOY	**Mondy**	**55.72**	**47**	*e*P		P	14 35 07.6	+1.6
MOY	**Mondy**	**55.72**	**47**	*e*P		P	14 35 07.6	+1.6
ZAK	**Zakamensk**	**57.45**	**48**⇑	*i*P		**P**	**14 35 19.4**	**+1.1**
ZAK					pmax	pmax			
	comp=Z,9.0nm,1.0s								
ZAK	**Zakamensk**	**57.45**	**48**	*i* P		**P**	**14 35 19.4**	**+1.1**
	comp=Z,9.0nm,1.0s								
GTA	**Gaotai**	**58.48**	**61**	⇑P		**P**	**14 35 26.8**	**+1.0**
GTA					pP	**pP**	**14 35 31.9**	**-0.7**
GTA					sP	sP	14 35 35.0	-0.2
GTA					pmax	pmax			
	comp=Z,11nm,0.9s								
SONM	**Songino Array**	**60.16**	**50**	P		**P**	**14 35 38.2**	**+1.0**
SONM	**Songino Array**	**60.16**	**50**	P		**P**	**14 35 38.2**	**+1.0**
	comp=Z,9.0nm,0.7s,baz=287,slow=7.4,SNR=52								
SONM	**Songino Array**	**60.16**	**50**	P		**P**	**14 35 38.2**	**+1.0**
ULN	**Ulaanbaatar**	**60.57**	**50**	P		**P**	**14 35 41.2**	**+1.2**
	SNR=5.7								
ULN	**Ulaanbaatar**	**60.57**	**50**	P		**P**	**14 35 41.2**	**+1.2**
	SNR=5.7								
BOSA	**Boshof**	**62.45**	**180**	*e*P		**P**	**14 35 51.1**	**-1.6**
	comp=Z,43nm,1.2s								
BOSA	**Boshof**	**62.45**	**180**	P		**P**	**14 35 54.5**	**+1.8**
	comp=Z,9.2nm,1.0s,baz=347,slow=5.6,SNR=7.8								
BOSA	**Boshof**	**62.45**	**180**	*e*P		**P**	**14 35 51.1**	**-1.6**
	comp=Z,43nm,1.2s								
LZH	**Lanzhou**	**62.69**	**63**	*e*P		**P**	**14 35 56.0**	**+1.4**
LZH					pP	**pP**	**14 36 02.0**	**+0.6**
LZH					sP	**sP**	**14 36 04.1**	**+0.1**
LZH					pmax	pmax			
	comp=Z,15nm,1.4s								
SCHQ	**Schefferville**	**63.90**	**320**	P		**P**	**14 36 02.0**	**0.0**
SCHQ	**Schefferville**	**63.90**	**320**	P		**P**	**14 36 02.0**	**0.0**
	comp=Z,5.3nm,0.6s,baz=61,slow=4.6,SNR=20								
SCHQ	**Schefferville**	**63.90**	**320**	P		**P**	**14 36 02.0**	**0.0**
HHC	**Hu-ho-hao-te**	**66.24**	**56**	*e*P		**P**	**14 36 18.4**	**+0.8**
HHC					PcP	**PcP**	**14 36 49.5**	**+1.8**
HHC					PP	**PP**	**14 38 45.8**	**+2.6**
HHC					ScP		14 40 50.3		
HHC					PcS		14 40 51.8		
HHC					S	**S**	**14 45 05.3**	**-0.4**
HHC					ScS	**SKSac**	**14 46 10.6**	**-2.2**
HHC					SS	**SS**	**14 49 21.6**	**+0.3**
HHC					pmax	pmax			
	comp=Z,60nm,0.6s								
HHC					pmax	pmax			
	comp=Z,210nm,6.9s								
HHC					LR	LR			
	comp=N,210nm,16.9s								
HHC					LR	LR			
	comp=E,280nm,16.1s								
HHC					LR	LR			
	comp=Z,180nm,16.9s								
CMAR	**Chiang Mai Arr**	**66.75**	**83**	P		**P**	**14 36 21.2**	**+0.1**
CMAR	**Chiang Mai Arr**	**66.75**	**83**	P		**P**	**14 36 21.2**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=298,slow=8.1,SNR=18								
CMAR	**Chiang Mai Arr**	**66.75**	**83**	P		**P**	**14 36 21.2**	**+0.1**
YAK	**Yakutsk**	**66.76**	**30**	*e*P		**P**	**14 36 18.7**	**-1.7**
YAK					pmax	pmax			
	comp=Z,7.0nm,0.9s								
YAK	**Yakutsk**	**66.76**	**30**	*e*P		**P**	**14 36 18.7**	**-1.7**
	comp=Z,7.0nm,0.9s								
XAN	**Xi'an**	**67.33**	**63**	P		**P**	**14 36 25.0**	**+0.4**
XAN					pP	**pP**	**14 36 30.3**	**-1.2**
XAN					pmax	pmax			
	comp=Z,3.0nm,0.8s								
BILL	**Bilibino**	**74.03**	**14**	*e*P		**P**	**14 37 05.1**	**+0.3**
BILL				*e*			14 37 16.4		
BILL					pmax	pmax			
	comp=Z,7.0nm,1.0s								
BILL	**Bilibino**	**74.03**	**14**	*e*P		**P**	**14 37 05.1**	**+0.3**
	comp=Z,7.0nm,1.0s								
KLR	**Kul'dur**	**74.55**	**41**	*e*P		**P**	**14 37 05.8**	**-2.3**
KLR	**Kul'dur**	**74.55**	**41**	*e*P		**P**	**14 37 05.8**	**-2.3**
SADO	**Sadowa**	**75.68**	**315**	P		**P**	**14 37 15.7**	**+1.0**
SADO	**Sadowa**	**75.68**	**315**	P		**P**	**14 37 15.7**	**+1.0**
	comp=Z,2.8nm,0.5s,baz=314,slow=0.7,SNR=4.1								
SADO	**Sadowa**	**75.68**	**315**	P		**P**	**14 37 15.7**	**+1.0**
USRK	**Ussuriysk Arra**	**77.59**	**45**	P		**P**	**14 37 25.5**	**0.0**
	comp=Z,5.4nm,0.6s,baz=311,slow=5.3,SNR=12								
YKA	**Yellowknife Ar**	**78.36**	**342**	P		**P**	**14 37 29.2**	**-0.3**
YKA	**Yellowknife Ar**	**78.36**	**342**	P		**P**	**14 37 29.2**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=35,slow=5.6,SNR=9.1								
YKA	**Yellowknife Ar**	**78.36**	**342**	P		**P**	**14 37 29.2**	**-0.3**
KSAR	**Wonju Array Be**	**78.91**	**52**	P		**P**	**14 37 33.7**	**+0.7**
KSAR	**Wonju Array Be**	**78.91**	**52**	P		**P**	**14 37 33.7**	**+0.7**
KSRS	**Korea Array**	**78.93**	**52**	P		**P**	**14 37 33.7**	**+0.7**
	comp=Z,4.6nm,0.6s,baz=301,slow=4.9,SNR=16								
KSRS	**Korea Array**	**78.93**	**52**	P		**P**	**14 37 33.7**	**+0.7**
	comp=Z,5.0nm,0.6s								
ILAR	**Eielson Array**	**81.18**	**357**	P		**P**	**14 37 45.1**	**+0.4**
ILAR					PKKPbc	**PKKPbc**	**14 56 19.8**	**-1.0**
ILAR	**Eielson Array**	**81.18**	**357**	P		**P**	**14 37 45.1**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=353,slow=4.1,SNR=10								
ILAR					PKKPbc	**PKKPbc**	**14 56 19.8**	**-1.0**
	comp=Z,0.5nm,0.9s,baz=232,slow=5.5,SNR=4.7								
ILAR	**Eielson Array**	**81.18**	**357**	P		**P**	**14 37 45.1**	**+0.4**
ASAJ	**Asahikawa**	**83.57**	**40**	P		**P**	**14 37 58.0**	**+0.4**
ASAJ	**Asahikawa**	**83.57**	**40**	P		**P**	**14 37 58.0**	**+0.4**
	comp=Z,9.3nm,0.9s,baz=266,slow=23,SNR=4.0								
ASAJ	**Asahikawa**	**83.57**	**40**	P		**P**	**14 37 58.0**	**+0.4**
JKA	**Kamikawa-asahi**	**83.57**	**40**	P		**P**	**14 37 58.0**	**+0.4**
	comp=Z,9.0nm,1.0s								
MJAR	**Matsushiro Arr**	**86.03**	**48**	P		**P**	**14 38 10.3**	**+0.1**
MJAR	**Matsushiro Arr**	**86.03**	**48**	P		**P**	**14 38 10.3**	**+0.1**
	comp=Z,4.3nm,0.9s,baz=299,slow=5.1,SNR=10.0								
MJAR	**Matsushiro Arr**	**86.03**	**48**	P		**P**	**14 38 10.3**	**+0.1**
PDAR	**Pinedale Array**	**92.91**	**328**	P		**P**	**14 38 42.1**	**-0.7**
PDAR	**Pinedale Array**	**92.91**	**328**	P		**P**	**14 38 42.1**	**-0.7**
	comp=Z,0.7nm,1.0s,baz=72,slow=2.9,SNR=3.2								
PDAR	**Pinedale Array**	**92.91**	**328**	P		**P**	**14 38 42.1**	**-0.7**
PLCA	**Paso Flores**	**115.17**	**237**	PKP		**PKPdf**	**14 44 09.8**	**-0.8**
PLCA	**Paso Flores**	**115.17**	**237**	PKP		**PKPdf**	**14 44 09.8**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=343,slow=13,SNR=5.4								
WRA	**Warramunga Arr**	**116.54**	**97**	PKP		**PKPdf**	**14 44 13.4**	**-0.4**
WRA	**Warramunga Arr**	**116.54**	**97**	PKP		**PKPdf**	**14 44 13.4**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=317,slow=1.3,SNR=9.3								
ASAR	**Alice Springs**	**117.93**	**101**	PKP		**PKPdf**	**14 44 15.2**	**-1.2**
ASAR	**Alice Springs**	**117.93**	**101**	PKP		**PKPdf**	**14 44 15.2**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=326,slow=2.0,SNR=8.7								

CASC 16 14:38:22.6±2.8, 12°.21N×91°.01W, h35km±128km, MD3.7, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	**2.10**	**40**	*e*P	Pn	14 38 55.7	0.0
SBLS				*e*S	Sn	14 39 22.1	+1.2
JAT	**Jato**	**2.18**	**344**	*e*P	Pn	14 38 56.9	+0.4
JAT				*e*S	Sn	14 39 23.0	+0.8
FUG	**Fuego 3**	**2.23**	**4**	*e*P	Pn	14 38 56.2	-1.1
FUG				*e*S	Sn	14 39 25.7	+1.9
BOQS	**Boqueron**	**2.26**	**48**	*e*P	Pn	14 38 60.0	+2.2
RBDL	**Robledal**	**2.28**	**34**	*e*P	Pn	14 38 57.9	-0.2
FG6		**2.34**	**3**	*e*P	Pn	14 38 58.6	-0.4
NBG	**Las Nubes**	**2.45**	**15**	*e*P	Pn	14 39 00.7	+0.2
MRL	**Marmol**	**3.11**	**24**	*e*P	Pn	14 39 11.0	+1.6
MRL				*e*S	Sn	14 39 48.3	+2.7

NIED ***16*** *14:39:00, 46°.00N×151°.30E, h35km, Mw4.3 Best double couple: M0 3.50000×10^15 NP1:φs58.00000°, δ46.00000°, λ83.00000°. NP2:φs249.00000°, δ45.00000°, λ97.00000°.*

ISCJB ***16*** *14:39:28.9±0.6, 45°.86N±0°.04×151°.40E±0°.05, h56km±5km, mb4.5/55, MS4.1/4, Error ellipse: s-maj=7.8km s-min=4.3km az=150.3*

MOS ***16*** *14:39:29.7±0.8, 45°.97N×151°.37E, h60km, mb4.9/16, Error ellipse: s-maj=9.8km s-min=6.8km az=77.3*

NEIC ***16*** *14:39:30.6±0.3, 46°.03N×151°.28E, mb4.8/20, Error ellipse: s-maj=8.6km s-min=4.8km az=154.0*

JMA ***16*** *14:39:30.5±0.7, 45°.96N×151°.33E, h30km, M4.7*

IDC ***16*** *14:39:30.6±0.5, 46°.01N×151°.33E, h53km±4km, mb4.0/20, mb1 4.1/25, mb1mx4.0/34, mbtmp4.0/25, MS3.1/4, Ms1 3.1/4, ms1mx2.8/62, Error ellipse: s-maj=15.1km s-min=10.3km az=133.0*

SKHL ***16*** *14:39:31.1±1.3, 46°.03N×151°.47E, h53km±8km, mb4.8/5, msh5.3/1*

BJI ***16*** *14:39:34.1, 46°.31N×151°.27E, h89km, mB4.8/15, mb4.6/27, Ms4.5/9, Ms7 4.4/8*

ISC 16 14:39:31.2±0.4, 45°.77N±0°.05×151°.47E±0°.04, h66km±3km, h66km:pP-P, n214, σ1°.49/265, mb4.5/55, 4C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.59**	**259**	*e*PN	**Pn**	**14 40 10.5**	**-0.2**
KUR				*e*S	**Sn**	**14 40 39.0**	**-2.0**
KUR				pmax	pmax		
	comp=Z,640nm,0.9s						
KUR				pmax	pmax		
	comp=N,320nm,0.8s						
KUR				pmax	pmax		
	comp=E,220nm,0.8s						
KUR				smax	smax		
	comp=N,2μm,0.5s						
KUR				smax	smax		
	comp=E,2μm,0.5s						
KUR				smax	smax		
	comp=N,8μm,3.0s						
KUR				smax	smax		
	comp=E,6μm,0.6s						
KUR	**Kuril'sk**	**2.59**	**259**	*e*P	**Pn**	**14 40 10.5**	**-0.2**
KUR				AMB	AMB	14 40 29.2	
	comp=E,320nm,0.8s						
KUR				AMB	AMB	14 40 29.2	
	comp=E,220nm,0.8s						
KUR				AMB	AMB	14 40 29.2	
	comp=E,400nm,0.9s						
KUR				*e*S	**Sn**	**14 40 39.0**	**-2.0**
KUR				A	A	14 40 43.5	
	comp=E,2μm,0.5s						
KUR				A	A	14 40 43.5	
	comp=E,2μm,0.5s						
KUR				A	A	14 40 55.0	
	comp=E,8μm,3.0s						
YUK	**Yuzh-Kuril'sk**	**4.34**	**248**	*c* iPN	**Pn**	**14 40 35.6**	**+0.9**
YUK				*i* S	**Sn**	**14 41 24.5**	**+0.6**
YUK				pmax	pmax		
	comp=N,22nm,0.2s						
YUK				pmax	pmax		
	comp=E,15nm,0.2s						
YUK				pmax	pmax		
	comp=Z,47nm,0.2s						
YUK				smax	smax		
	comp=E,395nm,0.6s						
YUK				smax	smax		
	comp=N,88nm,0.2s						
YUK				MLR	MLR		
	comp=Z,101nm,14.0s						
YUK	**Yuzh-Kuril'sk**	**4.34**	**248**⇑	*i*P	**Pn**	**14 40 35.6**	**+0.9**
YUK				AMB	AMB	14 40 43.8	
	comp=Z,20nm,0.1s						
YUK				AMB	AMB	14 40 43.8	
	comp=Z,50nm,0.1s						
YUK				*i* S	**Sn**	**14 41 24.6**	**+0.6**
NEM2	**Nemuro 2**	**4.74**	**242**	P	**Pn**	**14 40 39.1**	**-1.1**
NEM2				*e*S	**Sn**	**14 41 30.2**	**-3.6**
JRA	**Rausu**	**4.87**	**250**	P	**Pn**	**14 40 42.9**	**+1.0**
JRA				*e*S	**Sn**	**14 41 36.6**	**-0.2**
JNK	**Nakash**	**5.28**	**248**	P	**Pn**	**14 40 48.0**	**+0.4**
JNK				*e*S	**Sn**	**14 41 45.8**	**-1.3**
JAK	**Akkeshi**	**5.59**	**243**	P	**Pn**	**14 40 50.7**	**-1.0**
JAK				*e*S	**Sn**	**14 41 50.7**	**-3.8**
JTKR	**Abashiri--Toko**	**5.66**	**254**	P	**Pn**	**14 40 53.7**	**+1.0**
SKR	**Severo-Kuril's**	**5.82**	**31**	*e*PN	Pn	14 40 50.9	-3.9
SKR				*e*		14 41 55.0	
SKR				pmax	pmax		
	comp=N,130nm,0.4s						
SKR				pmax	pmax		
	comp=Z,160nm,0.4s						
SKR	**Severo-Kuril's**	**5.82**	**31**	*e*P	Pn	14 40 50.9	-3.9
SKR				AMB	AMB	14 40 52.6	
	comp=Z,130nm,0.4s						
SKR				AMB	AMB	14 40 52.6	
	comp=Z,160nm,0.4s						
JAR	**Ashorobuto**	**6.03**	**249**	P	**Pn**	**14 40 58.4**	**+0.6**
JAR				*e*S	**Sn**	**14 42 05.2**	**-0.2**
YSS	**Yuzh-Sakhalins**	**6.14**	**284**	*e*PN	**Pn**	**14 41 00.0**	**+0.7**
YSS				*e*S	**Sn**	**14 42 07.2**	**-0.9**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				smax	smax		
	comp=N,30nm,0.9s						
YSS				smax	smax		
	comp=E,20nm,0.9s						
YSS	**Yuzh-Sakhalins**	**6.14**	**284**	*e*P	**Pn**	**14 41 00.0**	**+0.7**
YSS				AMB	AMB	14 41 01.8	
	comp=E,20nm,0.6s						
YSS				*e*S	**Sn**	**14 42 07.2**	**-0.9**
YSS				A	A	14 42 08.7	
	comp=E,30nm,0.9s						
YSS				A	A	14 42 08.7	
	comp=E,20nm,0.9s						
JOB	**Onbets**	**6.18**	**245**	P	**Pn**	**14 40 59.6**	**-0.2**
JOB				*e*S	**Sn**	**14 42 06.0**	**-2.9**
JKK2	**Kamakawa 2**	**6.48**	**256**	P	**Pn**	**14 41 05.7**	**+1.7**
ASAJ	**Asahikawa**	**6.51**	**258**	P	**Pn**	**14 41 03.9**	**-0.4**
ASAJ	**Asahikawa**	**6.51**	**258**	P	**Pn**	**14 41 03.9**	**-0.4**
	comp=E,1.3nm,0.3s,baz=82,slow=17,SNR=9.7						
JCH	**Churui**	**6.62**	**244**	P	**Pn**	**14 41 04.9**	**-1.0**
JCH				*e*S	**Sn**	**14 42 16.6**	**-3.3**
JFR	**Furan**	**6.86**	**251**	P	**Pn**	**14 41 09.8**	**+0.6**
ERM	**Erimo**	**7.08**	**241**⇑	*e*PN	**Pn**	**14 41 13.2**	**+1.1**
JEM	**Erimo**	**7.08**	**241**	P	**Pn**	**14 41 12.7**	**+0.6**
JEM				*e*S	**Sn**	**14 42 28.0**	**-3.0**
JNBK	**Urakawa-nobuka**	**7.18**	**244**	P	**Pn**	**14 41 12.2**	**-1.3**
JNBK				*e*S	**Sn**	**14 42 30.3**	**-3.3**
JBT2	**Biratori 2**	**7.18**	**249**	P	**Pn**	**14 41 13.1**	**-0.5**
TYV	**Tymovskoe**	**7.77**	**314**	*e*P	**Pn**	**14 41 21.0**	**-0.5**
TYV				AMB	AMB	14 41 22.0	
	comp=E,18nm,0.8s						
TYV				AMB	AMB	14 41 22.0	
	comp=E,22nm,0.8s						
TYV				AMB	AMB	14 41 22.0	
	comp=E,31nm,0.8s						
TYV				*e*S	**Sn**	**14 42 46.8**	**-1.2**
TYV				A	A	14 42 47.2	
	comp=E,11nm,0.8s						
TYV				A	A	14 42 47.2	
	comp=E,24nm,0.8s						
JNB	**Noboribetsu**	**8.20**	**250**	P	**Pn**	**14 41 26.7**	**-0.7**
PETK	**Petropavlovsk-**	**8.39**	**27**	PN	**Pn**	**14 41 28.8**	**-1.2**
PETK	**Petropavlovsk-**	**8.39**	**27**	P	**Pn**	**14 41 28.8**	**-1.2**
PETK	**Petropavlovsk-**	**8.39**	**27**	P	**Pn**	**14 41 28.8**	**-1.2**
	comp=E,1.4nm,0.3s,baz=182,slow=14,SNR=14						
PETK				LR	LR	14 44 40.2	
	comp=E,100nm,21.4s,baz=351,slow=38						
JKB	**Kayabe**	**8.48**	**246**	P	**Pn**	**14 41 30.0**	**-1.3**
JKB				*e*S	Sn	14 42 59.4	-6.0
JYM2	**Yakumo 2**	**8.80**	**249**	P	**Pn**	**14 41 34.6**	**-1.0**
JANG	**Nango**	**9.06**	**237**	P	**Pn**	**14 41 36.1**	**-3.1**
JANG				*e*S	Sn	14 43 10.5	-9.1
JSR	**Shiriuchi**	**9.06**	**246**	P	**Pn**	**14 41 37.7**	**-1.5**
JTM	**Tenmabayashi**	**9.07**	**240**	P	**Pn**	**14 41 37.7**	**-1.6**
JTM				*e*S	Sn	14 43 11.5	-8.3
JTH	**Tanohata**	**9.14**	**234**	*e*S	Sn	14 43 10.9	-11
JOSM	**Okushiri--Mats**	**9.40**	**251**	P	**Pn**	**14 41 42.8**	**-1.1**
OFUJ	**Ofunato**	**9.85**	**231**	P	**Pn**	**14 41 47.3**	**-2.7**
JRG	**Rokugo**	**10.21**	**235**	P	**Pn**	**14 41 52.1**	**-2.8**
JIO	**Ouri**	**10.48**	**229**	P	**Pn**	**14 41 55.8**	**-2.7**
JIO				*e*S	Sn	14 43 43.8	-10
HABR	**Khabarovsk**	**11.51**	**289**	*e*PN	Pn	14 42 32.0	+19
HABR				pmax	pmax		
	comp=E,39nm,3.0s						
HABR				pmax	pmax		
	comp=Z,33nm,2.0s						
HABR				pmax	pmax		
	comp=N,27nm,2.0s						
HABR				MLR	MLR		
	comp=Z,103nm,17.0s						
MJAR	**Matsushiro Arr**	**13.57**	**232**	P	**P**	**14 42 46.6**	**-0.9**
MJAR	**Matsushiro Arr**	**13.57**	**232**	P	**P**	**14 42 46.6**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=35,slow=8.4,SNR=9.5						
MAJO	**Matsushiro**	**13.58**	**232**	*e*P	**P**	**14 42 47.8**	**+0.3**
MAJO	**Matsushiro**	**13.58**	**232**	*e*Pn	**P**	**14 42 47.8**	**+0.3**
MAT	**Matsushiro**	**13.58**	**232**	P	**P**	**14 42 48.5**	**+1.0**
KLR	**Kul'dur**	**13.77**	**292**	*e*P	**Pn**	**14 42 41.6**	**-1.5**
USRK	**Ussuriysk Arra**	**13.87**	**270**	P	**Pn**	**14 42 44.0**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=91,slow=16,SNR=3.4						
USRK				LR	LR	14 48 17.7	
	comp=Z,96nm,18.9s,baz=160,slow=38						
MDJ	**Mudanjiang**	**15.46**	**274**	P	**Pn**	**14 43 06.5**	**+1.3**
MDJ				S	**Sn**	**14 45 55.1**	**-0.3**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,47nm,4.9s						

comp=Z,490nm,15.6s
COLD Coldfoot 36.78 34 *e*P **P 14 46 31.8 -0.2**
comp=Z,3.8nm,1.0s
MCK McKinley 37.14 39 *e*P **P 14 46 35.7 +0.6**
MCK pmax pmax
comp=Z,45nm,2.0s
MCK McKinley 37.14 39 *e*P **P 14 46 35.7 +0.6**
comp=Z,45nm,2.0s
COLA College 37.61 38 *e*P **P 14 46 39.4 +0.3**
COLA pmax pmax
comp=Z,12nm,0.7s
COLA College 37.61 38 *e*P **P 14 46 39.4 +0.3**
comp=Z,12nm,0.7s
GTA Gaotai 38.00 279 *e*P P 14 46 46.3 +3.5
GTA pP pP 14 47 04.3 +5.2
GTA sP sP 14 47 15.8 +9.0
GTA PcP **PcP 14 48 58.8 +1.7**
GTA pmax pmax
comp=Z,3.0nm,0.5s
ILAR Eielson Array 38.03 38 P P **14 46 42.2 -0.4**
ILAR Eielson Array 38.03 38 P P **14 46 42.2 -0.4**
comp=Z,1.5nm,0.5s,baz=262,slow=6.9,SNR=25
CD2 Chengdu 39.66 265 P P **14 46 58.0 +1.3**
CD2 pP **pP 14 47 17.5 +4.5**
CD2 sP sP 14 47 27.3 +6.6
CD2 PP **PnPn 14 48 34.3 +1.9**
CD2 S **S 14 52 53.9 -1.3**
CD2 sS sS 14 53 27.6 +4.6
CD2 SS **SS 14 55 44.8 -7.7**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.4s
GYA Guiyang 40.38 257 P P 14 47 06.3 +3.5
GYA pP pP 14 47 26.0 +6.8
GYA sP sP 14 47 36.3 +9.4
GYA PP **PnPn 14 48 43.8 +2.7**
GYA ScP **ScP 14 52 50.0 +1.8**
GYA S **S 14 53 07.4 +1.1**
GYA sS sS 14 53 42.9 +8.7
GYA SS **SS 14 56 03.8 -3.4**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,110nm,4.8s
GYA LR LR
comp=N,480nm,17.8s
GYA LR LR
comp=E,410nm,18.0s
GYA LR LR
comp=Z,470nm,17.6s
EGAK Eagle 40.48 38 *e*P **P 14 47 00.6 -2.4**
comp=Z,7.3nm,1.0s
ZALV Zalesovo Beam 42.26 306 PcP **PcP 14 49 10.6 +0.2**
ZALV Zalesovo Beam 42.26 306 PcP **PcP 14 49 10.6 +0.2**
comp=Z,1.7nm,0.7s,baz=56,slow=3.2,SNR=5.5
KMI Kunming 43.94 259 P P 14 47 38.8 +6.9
KMI pmax pmax
comp=Z,8.0nm,1.0s
WMQ Urumqi 44.22 291 P P **14 47 36.3 +2.6**
WMQ pmax pmax
comp=Z,11nm,1.0s
DAV Davao City (W) 44.58 218 *e*P P 14 47 43.9 +7.1
comp=Z,522nm,0.4s
MK31 Makanchi Array 46.38 297 *e*P **P 14 47 48.9 -1.8**
MK31 Makanchi Array 46.38 297 *e*P **P 14 47 48.9 -1.8**
MKAR Makanchi Array 46.38 297 P P **14 47 50.6 -0.2**
MKAR 14 49 24.8
MKAR Makanchi Array 46.38 297 P P **14 47 50.6 -0.2**
MKAR PcP **PcP 14 49 24.8 +0.1**
MKAR Makanchi Array 46.38 297 P P **14 47 50.6 -0.2**
comp=Z,1.3nm,0.6s,baz=70,slow=7.4,SNR=18
MKAR PcP **PcP 14 49 24.8 +0.1**
comp=Z,0.7nm,0.6s,baz=57,slow=4.5,SNR=5.1
CHTO Chiang Mai 50.78 256 *e*P **P 14 48 26.1 +1.3**
CHTO pmax pmax
comp=Z,4.0nm,0.7s
CHTO Chiang Mai 50.78 256 *e*P **P 14 48 26.1 +1.3**
comp=Z,4.4nm,0.7s
CMAR Chiang Mai Arr 51.02 256 P P **14 48 27.9 +1.2**
CMAR pP **pP 14 48 40.9 -2.7**
CMAR Chiang Mai Arr 51.02 256 P P **14 48 27.9 +1.2**
comp=Z,2.4nm,0.8s,baz=39,slow=7.4,SNR=20
CMAR pP **pP 14 48 40.9 -2.7**
comp=Z,1.2nm,0.8s,baz=41,slow=8.8,SNR=5.0
RES Resolute Bay 52.12 18 P P **14 48 33.1 -0.9**
RES Resolute Bay 52.12 18 P P **14 48 33.1 -0.9**
comp=Z,1.2nm,0.6s,baz=342,slow=8.4,SNR=7.4
YKA Yellowknife Ar 52.39 36 P P **14 48 36.3 +0.1**
YKA pP **pP 14 48 51.0 -2.3**
YKA Yellowknife Ar 52.39 36 P P **14 48 36.3 +0.1**
comp=Z,2.0nm,0.7s,baz=297,slow=7.0,SNR=28
YKA pP **pP 14 48 51.0 -2.3**
comp=Z,1.9nm,0.7s,baz=297,slow=6.8,SNR=14
TAPN Taplejung 53.01 273 *e*P **P 14 48 42.0 +0.3**
comp=Z,6.8nm,0.5s
AAK Ala-Archa 53.24 296⇑ *e*P **P 14 48 44.7 +1.7**
AAK pmax pmax
comp=Z,2.0nm,0.7s
AAK Ala-Archa 53.24 296 *e*P **P 14 48 43.5 +0.5**
comp=Z,0.3nm,0.8s
KSH Kashi 53.97 292 *e*P **P 14 48 50.9 +2.6**
KSH pP pP 14 49 10.4 +5.0
KSH PcP **PcP 14 49 54.8 +2.0**
KSH PP **PP 14 50 54.1 +4.2**
KSH ScP **ScP 14 53 45.8 +0.9**
KSH PcS **PcS 14 53 53.4 +1.1**
KSH S **S 14 56 17.4 -1.7**
KSH ScS **ScS 14 58 29.8 -1.8**
KSH SS **SS 15 00 01.5 +0.9**
KSH pmax pmax
comp=Z,2.0nm,0.3s
KSH pmax pmax
comp=Z,120nm,3.1s
KSH LR LR
comp=N,190nm,5.2s
KSH LR LR
comp=E,180nm,4.8s
KSH LR LR
comp=Z,170nm,6.3s
RAMN Ramite 54.03 273 *e*P **P 14 48 49.2 +0.1**
comp=Z,26nm,0.7s
KKN Kakani 54.44 275 *e*P **P 14 48 52.6 +0.6**
comp=Z,11nm,0.5s
PKIN Phulchoki 54.48 275 *e*P **P 14 48 53.1 +0.7**
DMN Daman 54.67 275 *e*P **P 14 48 54.0 +0.3**
DANN Dangsing 55.15 276 *e*P **P 14 48 57.7 +0.5**
comp=Z,16nm,0.5s
KOLN Koldanda 55.62 276 *e*P **P 14 49 00.8 +0.3**
comp=Z,8.8nm,0.6s
PYUN Piuthan 55.84 277 *e*P **P 14 49 02.3 +0.2**
comp=Z,47nm,1.0s
ABKAR Akbulak array 58.17 310 *e*P **P 14 49 16.6 -1.4**
ARCES ARCESS Array B 58.40 340 P P **14 49 18.6 -0.6**
ARCES PcP **PcP 14 50 09.0 -0.4**
ARCES ARCESS Array B 58.40 340 P P **14 49 18.6 -0.6**
comp=Z,5.9nm,1.0s,baz=37,slow=8.0,SNR=3.3
ARCES PcP **PcP 14 50 09.0 -0.4**
comp=Z,3.2nm,0.9s,baz=125,slow=4.5,SNR=4.0
AKTO Aktyubinsk 58.52 312 P P **14 49 19.7 -0.7**
AKTO Aktyubinsk 58.52 312 P P **14 49 19.7 -0.7**
AKTO Aktyubinsk 58.52 312 P P **14 49 19.7 -0.7**
comp=Z,0.7nm,0.5s,baz=63,slow=11,SNR=4.8
MOD Modoc 60.57 59 *e*P **P 14 49 34.9 +0.1**
comp=Z,67nm,2.9s
SLMT Seeley Lake 61.26 51 *e*P **P 14 49 40.4 +0.9**
MSO Missoula 61.27 51 *e*P **P 14 49 40.8 +1.3**
comp=Z,2.4nm,0.8s
SUMG Summit 61.75 3 *e*P **P 14 49 41.8 -0.8**
SUMG pmax pmax
comp=Z,20nm,1.3s
SUMG Summit 61.75 3 *e*P **P 14 49 41.8 -0.8**
comp=Z,20nm,1.3s
FFC Flin Flon 62.22 39 *i* P **P 14 49 46.6 +1.0**
FFC Flin Flon 62.22 39 *e*P **P 14 49 46.2 +0.7**
comp=Z,5.0nm,0.9s
FINES FINESS Array B 64.43 334 P P **14 49 58.6 -1.4**
FINES PcP **PcP 14 50 33.1 -0.7**
FINES FINESS Array B 64.43 334 P P **14 49 58.6 -1.4**
comp=Z,1.9nm,0.4s,baz=37,slow=6.6,SNR=12
FINES PcP **PcP 14 50 33.1 -0.7**
comp=Z,1.3nm,0.8s,baz=64,slow=6.3,SNR=4.1
TPAW Teton Pass 65.00 53 *e*P **P 14 50 06.8 +2.3**
comp=Z,65nm,2.8s
LOHW Long Hollow 65.12 52 *e*P **P 14 50 06.8 +1.6**
comp=Z,11nm,1.6s
OBN Obninsk 65.46 325 *e*P **P 14 50 05.9 -0.9**
OBN *e* 14 52 28.5
OBN pmax pmax
comp=Z,5.0nm,0.8s
PDAR Pinedale Array 66.25 53 P P **14 50 13.1 +0.6**
PDAR pP **pP 14 50 26.0 -4.0**
PDAR Pinedale Array 66.25 53 P P **14 50 13.1 +0.6**
comp=Z,1.5nm,0.8s,baz=267,slow=2.4,SNR=12
PDAR pP **pP 14 50 26.0 -4.0**
comp=Z,0.5nm,0.8s,baz=308,slow=3.6,SNR=3.3
WRA Warramunga Arr 67.22 197 P P **14 50 19.6 +1.2**
WRA pP **pP 14 50 34.6 -1.5**
WRA Warramunga Arr 67.22 197 P P **14 50 19.6 +1.2**
comp=Z,3.9nm,0.8s,baz=16,slow=6.8,SNR=28
WRA pP **pP 14 50 34.6 -1.5**
comp=Z,1.3nm,0.7s,baz=15,slow=6.4,SNR=5.6
FITZ Fitzroy Crossi 67.75 207 P P **14 50 23.8 +2.1**
FITZ Fitzroy Crossi 67.75 207 P P **14 50 23.8 +2.1**
comp=Z,0.6nm,0.5s,baz=81,slow=7.1,SNR=4.7
NB2 NORSAR Subarra 68.78 340 P P **14 50 26.4 -1.4**
comp=Z,1.2nm,0.5s,baz=28,slow=6.5
NOA NORSAR Array B 68.78 340 P P **14 50 26.5 -1.4**
NOA NORSAR Array B 68.78 340 P P **14 50 26.5 -1.4**
comp=Z,1.3nm,0.6s,baz=27,slow=6.3,SNR=13
HFS Hagfors 68.97 339 P P **14 50 27.4 -1.5**
HFS Hagfors 68.97 339 P P **14 50 27.4 -1.5**
comp=Z,4.4nm,0.5s,baz=41,slow=4.7,SNR=23
ASAR Alice Springs 70.93 197 P P **14 50 43.6 +2.3**
ASAR pP **pP 14 50 58.5 -0.6**
ASAR Alice Springs 70.93 197 P P **14 50 43.6 +2.3**
comp=Z,2.1nm,0.8s,baz=11,slow=5.7,SNR=37
ASAR pP **pP 14 50 58.5 -0.6**
comp=Z,0.7nm,0.8s,baz=11,slow=5.7,SNR=3.9
AKASG Malin Array Be 71.72 325 P P **14 50 44.2 -1.7**
AKASG Malin Array Be 71.72 325 P P **14 50 44.2 -1.7**
AKASG Malin Array Be 71.72 325 P P **14 50 44.2 -1.7**
comp=Z,1.4nm,0.3s,baz=36,slow=6.2,SNR=5.2
SCHQ Schefferville 74.65 22 P P **14 51 02.9 -0.2**
SCHQ Schefferville 74.65 22 P P **14 51 02.9 -0.2**
comp=Z,2.0nm,0.5s,baz=328,slow=6.6,SNR=9.6
BUR08 Bucovina Ar. S 75.75 326 *e*P **P 14 51 07.7 -1.9**
KOLS Kolonicke sedl 75.81 328 *e*P **P 14 51 09.6 -0.2**
KOLS pmax pmax
comp=Z,3.0nm,1.1s
KOLS Kolonicke sedl 75.81 328 *e*P **P 14 51 09.6 -0.2**
CRVS Cervenica-Dubn 76.13 329 *e*P **P 14 51 10.6 -1.1**
CRVS pmax pmax
comp=Z,4.0nm,1.3s
CRVS Cervenica-Dubn 76.13 329 *e*P **P 14 51 10.6 -1.1**
CLL Collm 76.87 335 *i* P **P 14 51 14.5 -1.3**
CLL pmax pmax
comp=Z,5.0nm,0.6s
CLL Collm 76.87 335 *i* P **P 14 51 14.5 -1.3**
comp=Z,5.0nm,0.6s
EKA Eskdalemuir Ar 77.01 345 P P **14 51 15.6 -0.9**
EKA Eskdalemuir Ar 77.01 345 P P **14 51 15.6 -0.9**
comp=Z,1.1nm,0.3s,baz=21,slow=5.1,SNR=4.8
VYHS Vyhne 77.41 330 *e*P **P 14 51 18.4 -0.5**
VYHS pmax pmax
comp=Z,11nm,2.1s
VYHS Vyhne 77.41 330 *e*P **P 14 51 18.4 -0.5**
GERES GERESS Array B 78.82 333 P P **14 51 26.1 -0.8**
GERES GERESS Array B 78.82 333 P P **14 51 26.1 -0.8**
comp=Z,1.1nm,0.4s,baz=30,slow=6.2,SNR=5.0
TXAR Lajitas Array 78.97 59 P P **14 51 28.8 +0.8**
TXAR pP **pP 14 51 43.8 -2.2**
TXAR Lajitas Array 78.97 59 P P **14 51 28.8 +0.8**
comp=Z,1.3nm,0.7s,baz=294,slow=4.7,SNR=14
TXAR pP **pP 14 51 43.8 -2.2**
comp=Z,1.0nm,0.7s,baz=280,slow=3.6,SNR=4.7
BAIF Baives 80.41 339 *e*P **P 14 51 34.7 -0.6**
BAIF Baives 80.41 339 *e*P **P 14 51 34.7 -0.6**
BAIF Baives 80.41 339 *e*P **P 14 51 34.7 -0.6**
PAGF Fort de Pagny 81.41 338 *e*P **P 14 51 40.3 -0.3**
comp=Z,2.6nm,0.6s
PAGF Fort de Pagny 81.41 338 *e*P **P 14 51 40.3 -0.3**
comp=Z,2.6nm,0.6s
SFTF Sexfontaines 81.91 338 *e*P **P 14 51 42.6 -0.7**
comp=Z,8.9nm,0.4s
SFTF Sexfontaines 81.91 338 *e*P **P 14 51 42.6 -0.7**
comp=Z,8.9nm,0.4s
MMAI Mount Meron Ar 82.59 310 P P **14 51 47.5 +0.3**
MMAI Mount Meron Ar 82.59 310 P P **14 51 47.5 +0.3**
comp=Z,0.8nm,0.4s,baz=51,slow=11,SNR=4.7
FLN La Foliniere 82.72 342 *e*P **P 14 51 46.8 -0.7**
FLN La Foliniere 82.72 342 *e*P **P 14 51 46.8 -0.7**
FLN La Foliniere 82.72 342 *e*P **P 14 51 46.8 -0.7**
LDF La Druitiere 82.80 341 *e*P **P 14 51 47.0 -0.9**
LDF La Druitiere 82.80 341 *e*P **P 14 51 47.0 -0.9**
LDF La Druitiere 82.80 341 *e*P **P 14 51 47.0 -0.9**
LOR Lormes 83.08 338 *e*P **P 14 51 48.6 -0.8**
comp=Z,3.2nm,0.4s
LOR Lormes 83.08 338 *e*P **P 14 51 48.6 -0.8**
comp=Z,3.2nm,0.4s
GRR Gorron 83.15 342 *e*P **P 14 51 49.2 -0.5**
comp=Z,11nm,0.5s
GRR Gorron 83.15 342 *e*P **P 14 51 49.2 -0.5**
GRR pmax pmax
comp=Z,11nm,0.5s
GRR Gorron 83.15 342 *e*P **P 14 51 49.2 -0.5**
comp=Z,11nm,0.5s
SSF Saint Saulge 83.36 339 *e*P **P 14 51 50.3 -0.5**
SSF Saint Saulge 83.36 339 *e*P **P 14 51 50.3 -0.5**
SSF Saint Saulge 83.36 339 *e*P **P 14 51 50.3 -0.5**
AVF Avril sur Loir 83.65 339 *e*P **P 14 51 51.8 -0.5**
AVF Avril sur Loir 83.65 339 *e*P **P 14 51 51.8 -0.5**
AVF Avril sur Loir 83.65 339 *e*P **P 14 51 51.8 -0.5**
SMF Signal de Mont 83.66 338 *e*P **P 14 51 51.8 -0.6**
comp=Z,7.5nm,0.8s
SMF Signal de Mont 83.66 338 *e*P **P 14 51 51.8 -0.6**
SMF pmax pmax
comp=Z,8.0nm,0.8s
SMF Signal de Mont 83.66 338 *e*P **P 14 51 51.8 -0.6**
comp=Z,7.5nm,0.8s
LPL La Plagne 83.91 336 *e*P **P 14 51 53.8 -0.2**
LPL La Plagne 83.91 336 *e*P **P 14 51 53.8 -0.2**
LPL La Plagne 83.91 336 *e*P **P 14 51 53.8 -0.2**
LPG La Plagne 83.92 336 *e*P **P 14 51 54.0 -0.1**
comp=Z,5.7nm,0.7s
LPG La Plagne 83.92 336 *e*P **P 14 51 54.0 -0.1**
LPG pmax pmax
comp=Z,6.0nm,0.7s
LPG La Plagne 83.92 336 *e*P **P 14 51 54.0 -0.1**
comp=Z,5.7nm,0.7s
TCF Toulx Ste Croi 84.41 339 *e*P **P 14 51 55.9 -0.3**
TCF Toulx Ste Croi 84.41 339 *e*P **P 14 51 55.9 -0.3**
TCF Toulx Ste Croi 84.41 339 *e*P **P 14 51 55.9 -0.3**
MFF Saint Martin d 84.68 341 *e*P **P 14 51 57.2 -0.3**
MFF Saint Martin d 84.68 341 *e*P **P 14 51 57.2 -0.3**
MFF Saint Martin d 84.68 341 *e*P **P 14 51 57.2 -0.3**
ORIF Oris-en-Rattie 84.70 336 *e*P **P 14 51 57.7 -0.1**
comp=Z,7.1nm,0.6s
ORIF Oris-en-Rattie 84.70 336 *e*P **P 14 51 57.7 -0.1**
ORIF pmax pmax
comp=Z,7.0nm,0.6s
ORIF Oris-en-Rattie 84.70 336 *e*P **P 14 51 57.7 -0.1**
comp=Z,7.1nm,0.6s
ORIF Oris-en-Rattie 84.70 336 *e*Pn **P 14 51 58.0 +0.2**
ORIF Oris-en-Rattie 84.70 336 *e*Pn **P 14 51 58.0 +0.2**
CAF Calviac 85.72 339 *e*P **P 14 52 03.1 +0.3**
comp=Z,5.7nm,0.7s
CAF Calviac 85.72 339 *e*P **P 14 52 03.1 +0.3**
CAF pmax pmax
comp=Z,6.0nm,0.7s
CAF Calviac 85.72 339 *e*P **P 14 52 03.1 +0.3**
comp=Z,5.7nm,0.7s
QSPA South Pole Qui 135.50 180 PKP **PKPdf 14 58 43.5 +1.0**
QSPA South Pole Qui 135.50 180 PKP **PKPdf 14 58 43.4 +1.0**
comp=Z,1.1nm,1.0s,baz=198,slow=6.2,SNR=7.1
BDFB Brasilia 145.80 35 PKPbc **PKPab 14 59 03.7 0.0**
BDFB Brasilia 145.80 35 PKPbc **PKPab 14 59 03.7 0.0**
comp=Z,2.4nm,0.5s,baz=22,slow=4.3,SNR=3.6
CFAA Coronel Fontan 146.30 79 PKPbc **PKPbc 14 59 04.6 +0.3**
CFAA Coronel Fontan 146.30 79 PKPbc **PKPbc 14 59 04.6 +0.3**
comp=Z,0.5nm,0.5s,baz=243,slow=0.7,SNR=6.0
PLCA Paso Flores 149.25 96 PKPbc **PKPbc 14 59 13.1 +1.2**
PLCA Paso Flores 149.25 96 PKPbc **PKPbc 14 59 13.1 +1.2**
comp=Z,2.3nm,0.6s,baz=248,slow=4.2,SNR=8.9
CPUP Villa Florida 149.95 60 PKPbc **PKPbc 14 59 14.4 +0.5**
CPUP Villa Florida 149.95 60 PKPbc **PKPbc 14 59 14.4 +0.5**
comp=Z,0.5nm,0.4s,baz=301,slow=3.3,SNR=6.2
SNAA Sanae 151.29 197 *e*PKP **PKPbc 14 59 16.6 +0.8**
VNA2 Neumayer--Watz 152.76 195 *e*PKP **PKPbc 14 59 20.3 +1.2**
VNA3 Neumayer Olymp 152.88 193 *e*PKP **PKPbc 14 59 20.2 +0.8**

*CSEM **16** 14:49:44.8±0.2, 37.22N×38.38E, h2km, MD3.1, Error ellipse: s-maj=5.2km s-min=5.0km az=169.0*
*ISK **16** 14:49:44.4, 37.24N×38.74E, h2km, MD3.1*
*DDA **16** 14:49:44.5, 37.20N×38.77E, h24km, MD3.1*
*NSSC **16** 14:49:47.0±1.1, 37.09N×38.93E, h6km±10km, MD1.3, ML3.1*

ISC 16 14:49:43.9±1.0, 37.16N±0.02×38.79E±0.02, h6km±9km, n55, σ0.81/88, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.28**	**5**	PG		**Pg**		**14 49 49.6**	**+0.2**
URFA				SG		**Sg**		**14 49 53.8**	**+0.7**
URFA	**Urfa**	**0.28**	**5**	*i* Pg		**Pg**		**14 49 49.6**	**+0.2**
URFA				*i* Sg		**Sg**		**14 49 53.8**	**+0.7**
ATAB	**Bozova**	**0.50**	**308**	*i* P		**Pb**		**14 49 54.2**	**-1.0**
ATAB				*i* S		**Sg**		**14 50 00.6**	**+0.5**
ATAB	**Bozova**	**0.50**	**308**	*i* P		**Pb**		**14 49 54.2**	**-1.0**
ATAB				*i* S		**Sg**		**14 50 00.6**	**+0.5**
GZT	**Gaziantep**	**1.00**	**281**	*i* P		**Pg**		**14 50 03.2**	**+0.1**
GZT				*i* S		**Sn**		**14 50 18.9**	**-0.2**
MALT	**Malatya**	**1.18**	**346**	PN		**Pg**		**14 50 06.2**	**-0.4**
MALT				SN		**Sb**		**14 50 22.3**	**-0.1**
MALT	**Malatya**	**1.18**	**346**	*i* Pn		**Pg**		**14 50 06.2**	**-0.4**
MALT				*i* Sn		**Sb**		**14 50 22.3**	**-0.1**
MYA	**Malataya**	**1.20**	**346**	*e*PN		**Pg**		**14 50 06.5**	**-0.4**
MYA	**Malataya**	**1.20**	**346**	*e*Pn		**Pg**		**14 50 06.5**	**-0.4**
GAZ	**Gaziantep**	**1.26**	**271**	*e*PN		**Pb**		**14 50 08.1**	**-0.1**
GAZ	**Gaziantep**	**1.26**	**271**	*e*Pn		**Pb**		**14 50 08.1**	**-0.1**
MNKR	**ALMNKUR**	**1.28**	**162**	*e*P		**Pb**		**14 50 09.0**	**+0.6**
MNKR				*e*S		**Sg**		**14 50 24.8**	**-0.2**
MNKR				AML		AML		14 50 27.8	
	comp=Z,363nm,0.1s								
MNKR	**ALMNKUR**	**1.28**	**162**	*e*P		**Pb**		**14 50 09.0**	**+0.6**
	SNR=61								
MNKR				*e*S		**Sg**		**14 50 24.8**	**-0.2**
	comp=Z,363nm,0.1s,SNR=62								
SVRC	**Sivrice-ELAZID**	**1.28**	**18**	*e*PN		**Pg**		**14 50 08.0**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.28**	**18**	*e*Pn		**Pg**		**14 50 08.0**	**-0.5**
SFNV	**Sufian**	**1.29**	**125**	*e*P		**Pn**		**14 50 07.8**	**-0.8**
SFNV				*e*S		**Sg**		**14 50 24.3**	**-1.2**
SFNV				AML		AML		14 50 29.2	
	comp=Z,379nm,0.3s								
SFNV	**Sufian**	**1.29**	**125**	*e*P		**Pn**		**14 50 07.8**	**-0.8**
	SNR=61								
SFNV				*e*S		**Sg**		**14 50 24.3**	**-1.2**
	comp=Z,379nm,0.3s,SNR=62								
DIYA	**Diyarbakir**	**1.30**	**54**	*i* P		**Pb**		**14 50 09.3**	**+0.5**
DIYA				*i* S		**Sn**		**14 50 26.8**	**+0.4**
DIYA	**Diyarbakir**	**1.30**	**54**	*i* P		**Pb**		**14 50 09.3**	**+0.5**
DIYA				*i* S		**Sn**		**14 50 26.8**	**+0.4**
AKCD	**Akcadag**	**1.32**	**329**	*i* P		**Pb**		**14 50 09.5**	**+0.3**
AKCD				*i* S		**Sn**		**14 50 26.9**	**-0.2**
AKCD	**Akcadag**	**1.32**	**329**	*i* P		**Pb**		**14 50 09.5**	**+0.3**
AKCD				*i* S		**Sn**		**14 50 26.9**	**-0.2**
ELZG	**Elazig**	**1.34**	**6**	*i* P		**Pn**		**14 50 08.8**	**-0.6**
ELZG				*i* S		**Sn**		**14 50 28.1**	**+0.6**
ELZG	**Elazig**	**1.34**	**6**	*i* P		**Pn**		**14 50 08.8**	**-0.6**
ELZG				*i* S		**Sn**		**14 50 28.1**	**+0.6**
DIY	**Diyarbakir**	**1.35**	**57**	*e*PN		**Pg**		**14 50 10.6**	**+0.7**
DIY	**Diyarbakir**	**1.35**	**57**	*e*Pn		**Pg**		**14 50 10.6**	**+0.7**
KBSD	**Kabsdagh**	**1.41**	**96**	*e*P		**Pg**		**14 50 11.2**	**+0.3**
KBSD				*e*S		**Sb**		**14 50 27.6**	**-1.3**
KBSD				AML		AML		14 50 31.1	
	comp=Z,451nm,0.5s								
KBSD	**Kabsdagh**	**1.41**	**96**	*e*P		**Pg**		**14 50 11.2**	**+0.3**
	SNR=61								
KBSD				*e*S		**Sb**		**14 50 27.6**	**-1.3**
	comp=Z,451nm,0.5s,SNR=62								
KUZU	**Kuzuini**	**1.43**	**255**	*i* P		**Pn**		**14 50 10.8**	**+0.3**
KUZU				*i* S		**Sb**		**14 50 29.2**	**-0.3**
KUZU	**Kuzuini**	**1.43**	**255**	*i* P		**Pn**		**14 50 10.8**	**+0.3**
KUZU				*i* S		**Sb**		**14 50 29.2**	**-0.3**
MARD	**Mardin**	**1.59**	**84**	*i* P		**Pn**		**14 50 13.5**	**+0.8**
MARD				*i* S		**Sb**		**14 50 34.8**	**+0.6**
AYKD	**Aykdinkavak**	**1.60**	**280**	*i* P		**Pn**		**14 50 11.5**	**-1.3**
AYKD				*i* S		**Sg**		**14 50 35.7**	**+0.2**
DARE	**Darende-Malaty**	**1.75**	**324**	*e*PN		**Pb**		**14 50 15.5**	**-0.9**
ANDN	**Andirin**	**1.99**	**283**	*i* P		**Pb**		**14 50 21.1**	**+0.5**
ANDN				*i* S		**Sg**		**14 50 47.7**	**-0.3**
ANDN	**Andirin**	**1.99**	**283**	*i* P		**Pb**		**14 50 21.1**	**+0.5**
ANDN				*i* S		**Sg**		**14 50 47.7**	**-0.3**
BEST	**Besiri**	**2.10**	**69**	*i* P		**Pb**		**14 50 23.9**	**-0.2**
BEST				*i* S		**Sb**		**14 50 48.0**	**-0.7**
COBT	**Iskenderun**	**2.13**	**253**	*i* P		**Pb**		**14 50 23.9**	**+0.8**
COBT				*i* S		**Sn**		**14 50 47.8**	**+0.7**
COBT	**Iskenderun**	**2.13**	**253**	*i* P		**Pb**		**14 50 23.9**	**+0.8**
COBT				*i* S		**Sn**		**14 50 47.8**	**+0.7**
BTCH	**Batrach**	**2.19**	**240**	*e*P		**Pg**		**14 50 25.1**	**-0.7**
BTCH				*e*S		**Sb**		**14 50 52.4**	**+1.1**
BTCH				AML		AML		14 50 58.4	
	comp=N,500nm,0.5s								
BTCH				AML		AML		14 50 59.8	
	comp=E,201nm,0.4s								
BTCH	**Batrach**	**2.19**	**240**	*e*P		**Pg**		**14 50 25.1**	**-0.7**
	SNR=47								
BTCH				*e*S		**Sb**		**14 50 52.4**	**+1.1**
	comp=E,201nm,0.4s,SNR=49								
SARI	**SarD1z-Kayseri**	**2.25**	**304**	*e*PN		**Pb**		**14 50 23.8**	**-1.4**
ILIC	**ilic-Erzincan**	**2.29**	**356**	*e*PN		**Pb**		**14 50 24.0**	**-1.8**
ILIC	**ilic-Erzincan**	**2.29**	**356**	*e*Pn		**Pb**		**14 50 24.0**	**-1.8**
BTMT	**Batman**	**2.37**	**64**	*e*PN		**Pn**		**14 50 23.9**	**+0.6**
BTMT	**Batman**	**2.37**	**64**	*e*Pn		**Pn**		**14 50 24.0**	**+0.6**
KOZT	**Kozan**	**2.38**	**279**	*e*PN		**Pb**		**14 50 26.1**	**-1.2**
KOZT	**Kozan**	**2.38**	**279**	*e*Pn		**Pb**		**14 50 26.1**	**-1.2**
YAYL	**Yayladag**	**2.44**	**243**	*i* P		**Pb**		**14 50 28.8**	**+0.6**
YAYL				*i* S		**Sb**		**14 50 59.2**	**+0.7**
YAYL	**Yayladag**	**2.44**	**243**	*i* P		**Pb**		**14 50 28.8**	**+0.6**
YAYL				*i* S		**Sb**		**14 50 59.2**	**+0.7**
ERZN	**Erzincan**	**2.53**	**17**	*e*PN		**Pn**		**14 50 27.3**	**+1.7**
SLNF	**Slenfeh**	**2.60**	**234**	*e*P		**Pb**		**14 50 30.4**	**-0.6**
SLNF				*e*S		**Sb**		**14 51 02.0**	**-1.2**
SLNF				AML		AML		14 51 13.1	
	comp=E,75nm,0.5s								
SLNF				AML		AML		14 51 13.5	
	comp=N,313nm,0.4s								
SLNF	**Slenfeh**	**2.60**	**234**	*e*P		**Pb**		**14 50 30.4**	**-0.6**
	SNR=47								
SLNF				*e*S		**Sb**		**14 51 02.0**	**-1.2**
	comp=N,313nm,0.4s,SNR=49								
EZC	**Erzincan**	**2.62**	**9**	*e*Pn		**Pn**		**14 50 27.3**	**+0.4**
BNN	**Bunyan**	**2.87**	**307**	*e*PN		**Pn**		**14 50 32.5**	**+2.1**
BNN	**Bunyan**	**2.87**	**307**	*e*Pn		**Pn**		**14 50 32.5**	**+2.1**
BHD	**Baghdad**	**6.00**	**129**	*ex*		Pn		14 51 06.0	-7.2
BHD				*ex*		x		14 52 11.0	

*CSEM **16** 14:50:09.9, 42.55N×13.29E, h10km, MD1.8/7, After ROM*
ROM 16 14:50:09.9±0.1, 42.55N×13.29E, h10km±1km, Md1.8/7, Ml1.8/3,2C, Error ellipse: s-maj=2.7km s-min=1.4km az=16.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.09**	**96**	Pg		Pg		14 50 12.9	+0.3
CAMP				Sg		Sg		14 50 14.9	+0.4
	226nm,0.3s								
CAMP	**Campotosto**	**0.09**	**96**	Pg		Pg		14 50 12.9	+0.3
CAMP				Sg		Sg		14 50 14.9	+0.4
	226nm,0.3s								
LNSS	**Leonessa**	**0.20**	**287**	Pg		Pg		14 50 14.6	+0.4
LNSS				Sg		Sg		14 50 18.3	+1.1
	201nm,0.2s								
LNSS	**Leonessa**	**0.20**	**287**	Pg		Pg		14 50 14.6	+0.4
LNSS				Sg		Sg		14 50 18.3	+1.1
	201nm,0.2s								
TERO	**Teramo**	**0.24**	**71**⇑	*i*Pg		Pg		14 50 15.2	+0.2
TERO				Sg		Sg		14 50 19.0	+0.6
	133nm,0.1s								
TERO	**Teramo**	**0.24**	**71**⇑	*i*Pg		Pg		14 50 15.2	+0.2
TERO				Sg		Sg		14 50 19.0	+0.6
	133nm,0.1s								
NRCA	**Norcia**	**0.32**

VCEL			Sg	Sb	14 50 26.4	0.0
MNS	**Montasola**	**0.48 251**	Pg	Pg	14 50 19.2	-0.2
MNS			Sg	Sg	14 50 26.7	+0.9
MNS	**Montasola**	**0.48 251**	Pg	Pg	14 50 19.2	-0.2
MNS			Sg	Sg	14 50 26.7	+0.9
FDMO	**Fiordimonte**	**0.51 343**	Pg	Pg	14 50 20.3	+0.3
FDMO			Sg	Sb	14 50 28.4	-0.2
FDMO	**Fiordimonte**	**0.51 343**	Pg	Pg	14 50 20.3	+0.3
FDMO			Sg	Sb	14 50 28.4	-0.2

CSEM ***16*** *14:50:58.7, 42˚.13N×9˚.69E, h2km, ML2.4/8, After LDG*
LDG 16 14:50:58.7±0.2, 42˚.03N×9˚.76E, h15km, Md2.5/1, Ml2.4/8, Error ellipse: s-maj=5.0km s-min=3.6km az=41.0, Corsica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PGF	**Pioggiola**	**0.77**	**313**	*e*Pg			Pg	14 51 13.5	-0.3
PGF				*e*Sg			Sb	14 51 24.2	-0.1
	55nm,0.4s								
PGF	**Pioggiola**	**0.77**	**313**	*e*Pn			Pg	14 51 13.5	-0.3
PGF				*e*Sn			Sb	14 51 24.2	-0.1
	28nm,0.4s								
SBF	**Sospel**	**2.50**	**318**	*e*Pn			Pn	14 51 37.3	-1.7
SBF				*e*Sn			Sn	14 52 05.4	-3.9
	3.3nm,0.2s								
SBF	**Sospel**	**2.50**	**318**	*e*Pn			Pn	14 51 37.3	-1.7
SBF				*e*Sn			Sn	14 52 05.4	-3.9
	1.6nm,0.2s								
LMR	**La Mourre**	**2.73**	**300**	*e*Pn			Pn	14 51 40.4	-1.6
LMR				*e*Sn			Sn	14 52 10.4	-4.3
	4.1nm,0.3s								
LMR	**La Mourre**	**2.73**	**300**	*e*Pn			Pn	14 51 40.4	-1.6
LMR				*e*Sn			Sn	14 52 10.4	-4.3
	2.0nm,0.3s								
FRF	**La Foret Royal**	**2.76**	**305**	*e*Pn			Pn	14 51 41.0	-1.4
FRF				*e*Sn			Sn	14 52 11.7	-3.7
	5.0nm,0.4s								
FRF	**La Foret Royal**	**2.76**	**305**	*e*Pn			Pn	14 51 41.0	-1.4
FRF				*e*Sn			Sn	14 52 11.7	-3.7
	2.5nm,0.4s								
MBDF	**Montbardon**	**3.47**	**322**	*e*Pn			Pn	14 51 50.5	-1.8
MBDF				*e*Sn			Sn	14 52 28.6	-4.6
	0.8nm,0.2s								
MBDF	**Montbardon**	**3.47**	**322**	*e*Pn			Pn	14 51 50.5	-1.8
MBDF				*e*Sn			Sn	14 52 28.6	-4.6
	0.4nm,0.2s								
SMRF	**Simiane la Rot**	**3.63**	**304**	*e*Pn			Pn	14 51 52.7	-1.8
SMRF				*e*Sn			Sn	14 52 32.8	-4.4
	1.0nm,0.2s								
SMRF	**Simiane la Rot**	**3.63**	**304**	*e*Pn			Pn	14 51 52.7	-1.8
SMRF				*e*Sn			Sn	14 52 32.8	-4.4
	0.5nm,0.2s								
ORIF	**Oris-en-Rattie**	**4.04**	**317**	*e*Sn			Sn	14 52 42.1	-5.1
	3.1nm,0.5s								
ORIF	**Oris-en-Rattie**	**4.04**	**317**	*e*Sn			Sn	14 52 42.1	-5.1
	1.5nm,0.5s								
LPG	**La Plagne**	**4.09**	**329**	*e*Pn			Pn	14 51 59.1	-2.0
LPG				*e*Sn			Sn	14 52 43.8	-5.2
	0.9nm,0.3s								
LPG	**La Plagne**	**4.09**	**329**	*e*Pn			Pn	14 51 59.1	-2.0
LPG				*e*Sn			Sn	14 52 43.8	-5.2
	0.4nm,0.3s								
LPL	**La Plagne**	**4.12**	**329**	*e*Pn			Pn	14 51 59.3	-2.1
LPL				*e*Sn			Sn	14 52 44.1	-5.3
	2.7nm,0.3s								
LPL	**La Plagne**	**4.12**	**329**	*e*Pn			Pn	14 51 59.3	-2.1
LPL				*e*Sn			Sn	14 52 44.1	-5.3
	1.4nm,0.3s								

IDC ***16*** *14:57:02.8±0.2, 60˚.17S×26˚.96W, h0km, mb5.7/31, mb1 5.7/31, mb1mx5.7/32, mbtmp5.6/31, MS6.7/31, Ms1 6.7/31, ms1mx6.6/36, Error ellipse: s-maj=9.9km s-min=7.3km az=45.0*

ISCJB ***16*** *14:57:03.4±0.2, 60˚.28S±0˚.04×26˚.97W±0˚.06, h10km, mb6.0/83, MS6.8/194, Error ellipse: s-maj=5.4km s-min=4.2km az=23.4*

BJI ***16*** *14:57:04.2, 60˚.20S×26˚.80W, h20km, mB6.6/27, Ms7.0/60, Ms7 6.8/55*

NEIC ***16*** *14:57:06.2±0.1, 60˚.20S×26˚.86W, h20km, mb6.2/38, ME6.8, MS6.8/101, MW6.7, MW6.6, MW6.7(USGS), Error ellipse: s-maj=7.1km s-min=5.6km az=44.0 Broadband fault plane solution: P waves. NP1:ϕs10.00000°, δ70.00000°, λ65.00000°. NP2:ϕs244.00000°, δ32.00000°, λ139.00000°. Principal axes: T Plg58.0000°, Azm246.0000°; N Plg0.0000°, Azm0.0000°; P Plg21.0000°, Azm119.0000°; Moment Tensor Solution. s48 Moment tensor: Scale 10¹⁸ Nm; Mrr6.41; Mθθ0.11; Mϕϕ-6.52; Mrθ1.00; Mrϕ-2.57; Mθϕ5.53; Best double couple: M₀8.90000×10¹⁸ NP1:ϕs13.00000°, δ65.00000°, λ84.00000°. NP2:ϕs206.00000°, δ26.00000°, λ102.00000°. Principal axes: T 8.4500, Plg69.0000°, Azm270.0000°; N 0.9100, Plg5.0000°, Azm15.0000°; P -9.3600, Plg19.0000°, Azm107.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

MOS ***16*** *14:57:07.9±1.4, 60˚.30S×27˚.10W, h33km, mb6.2/39, MS6.8/51 Error ellipse: s-maj=20.7km s-min=9.8km az=96.4*

DJA ***16*** *14:57:15.2±2.7, 61˚.5S±12˚×2˚.6W±1˚.8, h50km±19km, M6.4/34, mb5.7/34, mB6.7/31, Mw(mB)6.6/31, Mwp6.1/11*

GCMT ***16*** *14:57:16.2±0.1, 60˚.71S×26˚.55W, h24km, MW6.7, Moment Tensor Solution. s117,c299; s99,c240; Moment tensor: Scale 10¹⁹Nm; Mrr1.06±.01; Mθθ-0.24±.01; Mϕϕ-0.82±.01; Mrθ0.10±.01; Mθϕ-0.62; Mϕr0.64±.01; Best double couple: M₀1.30000×10¹⁹ NP1:ϕs226.00000°, δ33.00000°, λ113.00000°. NP2: ϕs20.00000°, δ60.00000°, λ76.00000°. Principal axes: T 1.2700, Plg71.0000°, Azm258.0000°; N 0.0900, Plg12.0000°, Azm27.0000°; P -1.3600, Plg14.0000°, Azm120.0000°; Data Used: II IU CN IC G. LP body wave period 50 sec. Mantle waves from 112 sta. Surface waves: sta=118, comp=281, per= 50.*

ISC 16 14:57:06.2±0.5, 60˚.29S±0˚.03×27˚.03W±0˚.03, h18km±2km, n1312, σ1ˢ93/1546, mb6.0/80, MS6.8/196, 232C-236D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.91**	**151**	*e*Pn			Pn	15 00 05.1	-3.4
VNA1	**Neumayer--Stat**	**12.91**	**151**	*e*Sn			Sn	15 02 23.4	-8.1
VNA1	**Neumayer--Stat**	**12.91**	**151**	*e*ScS			ScS	15 12 59.6	+10
VNA3	**Neumayer Olymp**	**13.02**	**155**	*e*Pn			Pn	15 00 06.1	-4.0
VNA3	**Neumayer Olymp**	**13.02**	**155**	*e*pPn			**Pn**	**15 00 10.6**	**+0.5**
VNA3	**Neumayer Olymp**	**13.02**	**155**	*e*Sn			Sn	15 02 21.3	-13
VNA3	**Neumayer Olymp**	**13.02**	**155**	*e*ScS			ScS	15 12 49.5	-0.4
VNA2	**Neumayer--Watz**	**13.31**	**151**	*e*Pn			Pn	15 00 09.2	-4.8
VNA2	**Neumayer--Watz**	**13.31**	**151**	*e*pPn			**Pn**	**15 00 15.2**	**+1.2**
VNA2	**Neumayer--Watz**	**13.31**	**151**	*e*Sn			Sn	15 02 28.0	-13
VNA2	**Neumayer--Watz**	**13.31**	**151**	*e*ScS			ScS	15 12 53.3	+2.7
SNAA	**Sanae**	**14.91**	**150**	*e*Pn			**Pn**	**15 00 32.8**	**-3.1**
SNAA	**Sanae**	**14.91**	**150**	*e*Sn			Sn	15 03 07.7	-13
SNAA	**Sanae**	**14.91**	**150**	*e*P			Pn	15 00 31.7	-4.2
SNAA	**Sanae**	**14.91**	**150**	*e*Pn			Pn	15 00 32.6	-3.3
PMSA	**Palmer Station**	**17.47**	**239**	P			**P**	**15 01 12.0**	**+2.3**
	2μm,1.3s								
PMSA				S			**S**	**15 04 29.4**	**-0.8**
PMSA				PcP			**PcP**	**15 05 49.8**	**+1.5**
PMSA				ScP			**ScP**	**15 09 22.9**	**+0.8**
PMSA				ScS			**ScS**	**15 13 04.8**	**+3.1**
PMSA	**Palmer Station**	**17.47**	**239**	P			**P**	**15 01 12.0**	**+2.3**
	8.2nm,0.3s,baz=84,slow=15,SNR=18								
PMSA				S			**S**	**15 04 29.4**	**-0.8**
	2.4nm,0.3s,baz=19,slow=22,SNR=2.1								
PMSA				PcP			**PcP**	**15 05 49.8**	**+1.5**
	1.6nm,0.3s,baz=359,slow=3.3,SNR=3.7								
PMSA				LR			LR	15 07 01.5	
	comp=Z,297μm,19.8s,baz=88,slow=34								
PMSA				ScP			**ScP**	**15 09 22.9**	**+0.8**
	5.4nm,0.3s,baz=30,slow=1.7,SNR=16								
PMSA				ScS			**ScS**	**15 13 04.8**	**+3.1**
	baz=217,slow=21,SNR=1.1								
EFI	**East Falkland**	**19.22**	**283**	*e*P			**Pn**	**15 01 30.7**	**+0.7**
EFI	**East Falkland**	**19.22**	**283**	*e*Pn			**Pn**	**15 01 30.5**	**+0.5**
	1μm,0.9s								
USHA	**Ushuaia**	**22.57**	**266**	P			**P**	**15 02 07.7**	**+2.5**
USHA				PcP			**PcP**	**15 05 59.0**	**+1.2**
USHA				S			Sn	15 06 21.7	-3.5
USHA				ScP			**ScP**	**15 09 34.6**	**+0.5**
USHA	**Ushuaia**	**22.57**	**266**	P			**P**	**15 02 07.7**	**+2.5**
	355nm,1.0s,baz=106,slow=11,SNR=23								
USHA				PcP			**PcP**	**15 05 59.0**	**+1.2**
	27nm,0.8s,baz=88,slow=3.6,SNR=4.0								
USHA				S			Sn	15 06 21.7	-3.5
	14nm,0.9s,baz=270,slow=15,SNR=1.4								
USHA				LR			LR	15 08 43.0	
	comp=Z,439μm,21.8s,baz=104,slow=31								
USHA				ScP			**ScP**	**15 09 34.6**	**+0.5**
	75nm,0.9s,baz=308,slow=1.7,SNR=12								
SYO	**Syowa Base**	**28.35**	**136**	*i*P			**PP**	**15 03 56.2**	**-6.2**
SYO	**Syowa Base**	**28.35**	**136**	*i*P			**PP**	**15 03 59.2**	**-3.2**
QSPA	**South Pole Qui**	**29.95**	**180**	P			**P**	**15 03 13.5**	**+0.4**
QSPA				ScP			**ScP**	**15 09 59.7**	**+3.8**
QSPA	**South Pole Qui**	**29.95**	**180**	P			**P**	**15 03 13.5**	**+0.4**
	269nm,1.0s,baz=200,slow=4.6,SNR=99								
QSPA				ScP			**ScP**	**15 09 59.7**	**+3.8**
	103nm,1.0s,baz=206,slow=4.7,SNR=5.2								
QSPA				LR			LR	15 15 10.0	
	comp=Z,148μm,19.4s,baz=191,slow=36								
COYC	**Coyhaique**	**30.19**	**279**	*i*P			**P**	**15 03 15.8**	**+0.7**
TRQA	**Tornquist**	**31.28**	**299**	*e*P			**P**	**15 03 25.1**	**+0.2**
	697nm,1.5s								
LPA	**La Plata**	**32.30**	**308**	*c i*P			**P**	**15 03 35.0**	**+1.2**
LPA				sP			**sP**	**15 03 44.0**	**+2.6**
LPA				PP			**PnPn**	**15 04 40.0**	**-0.2**
LPA				PPP			PPP	15 04 53.0	
LPA				S			**S**	**15 08 48.0**	**+1.6**
LPA				PPS			PPS	15 09 02.0	
LPA				PcS			**PcS**	**15 10 06.0**	**-0.4**
LPA				SS			**SnSn**	**15 10 44.0**	**+5.6**
LPA				SS(2)				15 11 08.0	
LPA									
	comp=Z,156μm,20.0s								
PLCA	**Paso Flores**	**33.06**	**286**	P			**P**	**15 03 40.4**	**-0.2**
	comp=Z,59nm,0.9s								
PLCA				PcP			**PcP**	**15 06 24.8**	**+1.2**
PLCA				S			**S**	**15 09 02.3**	**+3.9**
PLCA				ScP			**ScP**	**15 10 05.3**	**-1.3**
PLCA	**Paso Flores**	**33.06**	**286**	P			**P**	**15 03 40.4**	**-0.2**
	comp=Z,56nm,0.8s,baz=143,slow=8.4,SNR=87								
PLCA				PcP			**PcP**	**15 06 24.8**	**+1.2**
	comp=Z,48nm,0.7s,baz=142,slow=2.3,SNR=7.2								
PLCA				S			**S**	**15 09 02.3**	**+3.9**
	comp=Z,4.7nm,1.0s,baz=264,slow=17,SNR=1.4								
PLCA				ScP			**ScP**	**15 10 05.3**	**-1.3**
	comp=Z,21nm,0.9s,baz=121,slow=3.6,SNR=6.4								
PLCA				LR			LR	15 16 49.1	
	comp=Z,190μm,18.3s,baz=136,slow=36								
MAW	**Mawson**	**36.75**	**140**	P			**P**	**15 04 12.3**	**+0.4**
MAW				PcP			**PcP**	**15 06 34.6**	**+0.9**
MAW	**Mawson**	**36.75**	**140**	P			**P**	**15 04 12.3**	**+0.4**
	comp=Z,465nm,1.2s,baz=234,slow=7.1,SNR=7.9								
MAW				PcP			**PcP**	**15 06 34.6**	**+0.9**
	comp=Z,23nm,0.7s,baz=233,slow=5.1,SNR=3.3								
MAW				LR			LR	15 17 54.2	
	comp=Z,133μm,19.4s,baz=239,slow=34								
CCHI	**Chillan**	**37.06**	**289**	*i*P			**P**	**15 04 15.4**	**+0.4**
LMEL	**Las Melosas**	**38.46**	**294**	*i*P			**P**	**15 04 27.2**	**+0.2**
CLCH	**Cerro Calan**	**38.99**	**294**	*i*P			**P**	**15 04 31.9**	**+0.6**
PEL	**Peldehue**	**39.27**	**294**	*i*P			**P**	**15 04 33.2**	**-0.4**
SPB	**Sao Paulo**	**39.34**	**330**	*e*P			**P**	**15 04 34.3**	**+0.1**
	comp=Z,2μm,1.7s								
SPB				LR			LR		
	comp=Z,93μm,22.0s								
CAM4	**Nova Friburgo**	**39.45**	**337**	*i*P			**P**	**15 04 35.6**	**+0.2**
CAM4				*i*				15 04 40.5	
CAM4				*i*				15 04 41.6	
CAM4				*i*				15 04 44.7	
CAM4				*i*				15 04 48.1	
CAM4				*i*				15 04 53.3	
CAM4				*i*				15 05 01.0	
CAM4				*i*				15 05 09.0	
CAM4				*i*				15 05 16.6	
CAM4				*i*				15 05 24.3	
CAM4				*i*				15 05 57.2	
CFAA	**Coronel Fontan**	**39.47**	**298**	P			**P**	**15 04 34.9**	**-0.5**
CFAA				PcP			**PcP**	**15 06 42.5**	**-0.4**
CFAA				ScP			**ScP**	**15 10 29.0**	**-1.3**
CFAA				ScS			**ScS**	**15 14 38.3**	**-4.2**
CFAA	**Coronel Fontan**	**39.47**	**298**	P			**P**	**15 04 34.9**	**-0.5**
	comp=Z,37nm,0.6s,baz=160,slow=8.3,SNR=180								
CFAA				PcP			**PcP**	**15 06 42.5**	**-0.4**
	comp=Z,17nm,0.7s,baz=144,slow=3.3,SNR=7.1								
CFAA				ScP			**ScP**	**15 10 29.0**	**-1.3**
	comp=Z,6.6nm,0.8s,baz=154,slow=1.4,SNR=9.0								
CFAA				ScS			**ScS**	**15 14 38.3**	**-4.2**
	comp=Z,0.5nm,0.8s,baz=256,slow=22,SNR=6.2								
CFAA				LR			LR	15 21 04.0	
	comp=Z,17μm,18.9s,baz=139,slow=36								
ELIM	**Elim**	**39.51**	**71**	*e*P			**P**	**15 04 33.3**	**-2.3**
ROCH	**El Roble**	**39.56**	**294**	*i*P			**P**	**15 04 36.3**	**0.0**
CPUP	**Villa Florida**	**39.78**	**315**	P			**P**	**15 04 37.4**	**-0.5**
CPUP				ScP			**ScP**	**15 10 30.7**	**-0.8**
CPUP	**Villa Florida**	**39.78**	**315**	P			**P**	**15 04 37.4**	**-0.5**
	comp=Z,60nm,0.4s,baz=141,slow=7.6,SNR=168								
CPUP				ScP			**ScP**	**15 10 30.7**	**-0.8**
	comp=Z,72nm,1.0s,baz=118,slow=3.6,SNR=6.0								
CPUP				LR			LR	15 19 52.2	
	comp=Z,128μm,20.1s,baz=152,slow=34								
CER	**Ceres**	**40.31**	**69**	*e*P			**P**	**15 04 42.6**	**+0.3**
CER				AMB			AMB	15 04 57.8	
	comp=Z,73nm,4.2s								
CMCH	**Combarbala**	**41.07**	**295**	*e*P			**P**	**15 04 48.8**	**+0.1**
TLL	**Tololo Astrono**	**41.84**	**296**	*i*P			**P**	**15 04 54.8**	**-0.3**
SUR	**Sutherland**	**41.84**	**70**	*e*P			**P**	**15 04 55.4**	**+0.4**
SUR				AMB			AMB	15 05 05.8	
	comp=Z,191nm,4.7s								
SUR	**Sutherland**	**41.84**	**70**	*e*P			**P**	**15 04 52.6**	**-2.5**
	comp=Z,130nm,0.9s								
SUR				ScP			**ScP**	**15 10 41.0**	**+1.2**
SUR	**Sutherland**	**41.84**	**70**	P			**P**	**15 04 55.5**	**+0.5**
	comp=Z,19nm,0.6s,baz=179,slow=7.6,SNR=11								
SUR				ScP			**ScP**	**15 10 41.0**	**+1.2**
	comp=Z,21nm,0.9s,baz=204,slow=8.1,SNR=3.9								
SUR				LR			LR	15 18 36.7	
	comp=Z,86μm,19.3s,baz=212,slow=31								
SBA	**Scott Base**	**41.85**	**184**	*e*P			**P**	**15 04 55.9**	**+1.5**
SBA				pmax			pmax		
	comp=Z,619nm,1.6s								
SBA	**Scott Base**	**41.85**	**184**	*e*P			**P**	**15 04 55.9**	**+1.5**
	comp=Z,619nm,1.6s								
CVNA	**Calvinia**	**42.10**	**68**	*e*P			**P**	**15 04 58.2**	**+1.2**
CVNA				AMB			AMB	15 05 15.8	
	comp=Z,337nm,1.1s								
BUFB	**Buffelsbos**	**42.25**	**76**	*i*P			**P**	**15 04 58.9**	**+0.7**
BUFB				AMB			AMB	15 05 13.4	
	comp=Z,274nm,1.3s								
VNDA	**Vanda**	**42.33**	**183**	*e*P			**P**	**15 04 59.1**	**+0.8**
	comp=Z,225nm,1.1s								
VNDA				PcP			**PcP**	**15 06 52.6**	**+1.2**
VNDA				ScP			**ScP**	**15 10 42.2**	**+1.4**
VNDA	**Vanda**	**42.33**	**183**	P			**P**	**15 04 59.4**	**+1.0**
	comp=Z,117nm,0.9s,baz=187,slow=6.9,SNR=85								
VNDA				PcP			**PcP**	**15 06 52.6**	**+1.2**
	comp=Z,60nm,1.0s,baz=240,slow=3.4,SNR=3.3								
VNDA				ScP			**ScP**	**15 10 42.2**	**+1.4**
	comp=Z,12nm,0.8s,baz=242,slow=2.6,SNR=3.8								
KOMG	**Komaggas**	**42.48**	**64**	*e*P			P	15 05 05.0	+4.9
KOMG				AMB			AMB	15 05 10.0	
	comp=Z,266nm,1.9s								
LCO	**Las Campanas**	**42.78**	**297**	*e*P			**P**	**15 05 02.7**	**-0.1**
	comp=Z,605nm,1.1s								
LCO	**Las Campanas**	**42.78**	**297**	*i*P			**P**	**15 05 02.1**	**-0.8**
GRM	**Grahamstown**	**43.79**	**77**	*i*P			**P**	**15 05 11.0**	**+0.3**
GRM				AMB			AMB	15 05 28.1	
	comp=Z,272nm,1.6s								
SOE	**Somerset East**	**43.82**	**75**	*e*P			**P**	**15 05 11.4**	**+0.4**
SOE				AMB			AMB	15 05 26.0	
	comp=Z,226nm,1.2s								
UPI	**Upington**	**45.42**	**67**	*e*P			**P**	**15 05 22.3**	**-1.5**
UPI				AMB			AMB	15 05 31.2	
	comp=Z,294nm,2.0s								
MIR	**Mirnyy**	**45.99**	**151**	*i*P			**P**	**15 05 28.0**	**+0.3**
MIR				*i*				15 05 33.0	
MIR				*i*				15 07 10.0	
MIR				*e*S			S	15 12 04.0	-7.3
MIR				MLR			MLR		
	comp=N,118μm,20.0s								
MIR				MLR			MLR		
	comp=E,128μm,20.0s								
MIR				MLR			MLR		
	comp=Z,267μm,20.0s								
SHEL	**Horse Pasture**	**46.89**	**29**	*e*P			**P**	**15 05 35.8**	**+0.4**
SHEL				pmax			pmax		
	comp=Z,851nm,1.1s								
SHEL				MLR			MLR		
	comp=Z,116μm,21.0s								
SHEL	**Horse Pasture**	**46.89**	**29**	*e*P			**P**	**15 05 35.8**	**+0.4**
	comp=Z,851nm,1.1s								
SHEL				LR			LR		
	comp=Z,116μm,21.0s								
BOSA	**Boshof**	**47.08**	**72**	*i*P			**P**	**15 05 35.9**	**-1.0**
BOSA				AMB			AMB	15 05 45.6	
	comp=Z,253nm,1.6s								
BOSA	**Boshof**	**47.08**	**72**	P			**P**	**15 05 36.5**	**-0.3**
BOSA				ScP			**ScP**	**15 11 00.1**	**-1.1**
BOSA				S			**S**	**15 12 29.1**	**+1.1**
BOSA				ScS			**ScS**	**15 12 32.8**	**+2.5**
BOSA	**Boshof**	**47.08**	**72**	P			**P**	**15 05 36.5**	**-0.3**
	comp=Z,26nm,0.9s,baz=210,slow=7.5,SNR=23								
BOSA				ScP			**ScP**	**15 11 00.1**	**-1.1**
	comp=Z,12nm,0.9s,baz=183,slow=4.6,SNR=3.8								
BOSA				S			**S**	**15 12 29.1**	**+1.1**
	comp=Z,7.7nm,1.0s,baz=353,slow=15,SNR=1.8								
BOSA				ScS			**ScS**	**15 12 32.8**	**+2.5**
	comp=Z,2.1nm,0.8s,baz=330,slow=18,SNR=1.9								
BOSA				LR			LR	15 21 28.8	
	comp=Z,68μm,20.5s,baz=99,slow=31								
BDFB	**Brasilia**	**47.12**	**332**	P			**P**	**15 05 37.4**	**+0.1**
BDFB				S			**S**	**15 12 30.3**	**+1.5**
BDFB	**Brasilia**	**47.12**	**332**	P			**P**	**15 05 37.4**	**+0.1**
	comp=Z,166nm,1.0s,baz=144,slow=5.4,SNR=26								
BDFB				S			**S**	**15 12 30.3**	**+1.5**
	comp=Z,15nm,1.0s,baz=171,slow=27,SNR=1.1								
KSD	**Kokstad**	**47.47**	**77**	*e*P			**P**	**15 05 40.9**	**+1.0**
KSD				AMB			AMB	15 05 55.9	
	comp=Z,336nm,5.9s								
SWZ	**Schweizer**	**48.32**	**71**	*i*P			**P**	**15 05 45.7**	**-0.9**
SWZ				AMB			AMB	15 06 03.6	
	comp=Z,386nm,1.1s								
SEK	**Senekal**	**48.45**	**74**	*e*P			**P**	**15 05 48.1**	**+0.6**
SEK				AMB			AMB	15 06 03.7	
	comp=Z,303nm,1.3s								
PRYS	**Parys**	**49.49**	**73**	*i*P			**P**	**15 05 54.9**	**-0.7**
PRYS				AMB			AMB	15 06 04.0	
	comp=Z,292nm,1.9s								
KSR	**Koster**	**50.18**	**71**	*e*P			**P**	**15 06 00.4**	**-0.4**
KSR				AMB			AMB	15 06 16.6	
	comp=Z,202nm,4.1s								
LBTB	**Lobatse**	**50.28**	**70**	*i*P			**P**	**15 06 01.2**	**-0.3**
LBTB				AMB			AMB	15 06 18.8	
	comp=Z,313nm,1.3s								
LBTB	**Lobatse**	**50.28**	**70**	*e*P			**P**	**15 06 00.7**	**-0.9**
	comp=Z,414nm,1.3s								
LBTB				ScP			**ScP**	**15 11 14.6**	**-0.3**
LBTB				S			**S**	**15 13 15.7**	**+2.4**
LBTB				ScS			**ScS**	**15 15 55.6**	**+3.8**
LBTB	**Lobatse**	**50.28**	**70**	ScP			**ScP**	**15 11 14.6**	**-0.3**
	comp=Z,42nm,1.0s,baz=222,slow=5.5,SNR=4.0								
LBTB				S			**S**	**15 13 15.7**	**+2.4**
	comp=Z,9.0nm,1.0s,baz=247,slow=4.1,SNR=2.0								
LBTB				ScS			**ScS**	**15 15 55.6**	**+3.8**
	comp=Z,4.5nm,1.1s,baz=342,slow=20,SNR=7.1								
LBTB				LR			LR	15 24 00.8	
	comp=Z,103μm,18.6s,baz=221,slow=32								
ERPM	**east rand prop**	**50.41**	**73**	*e*P			**P**	**15 06 03.0**	**+0.5**
ERPM				AMB			AMB	15 06 20.4	
	comp=Z,289nm,1.2s								
SIV	**San Ignacio**	**50.62**	**316**	P			**P**	**15 06 02.8**	**-1.3**
SIV				ScP			**ScP**	**15 11 15.0**	**-1.3**
SIV				S			**S**	**15 13 12.0**	**-5.9**
SIV	**San Ignacio**	**50.62**	**316**	P			**P**	**15 06 02.8**	**-1.3**
	comp=Z,190nm,0.7s,baz=177,slow=7.8,SNR=165								
SIV				ScP			**ScP**	**15 11 15.0**	**-1.3**
	comp=Z,37nm,0.9s,baz=164,slow=7.4,SNR=4.3								
SIV				S			**S**	**15 13 12.0**	**-5.9**
	comp=Z,6.6nm,1.0s,baz=65,slow=23,SNR=1.0								
SIV				LR			LR	15 27 59.7	
	comp=Z,86μm,18.3s,slow=37								
SLR	**Silverton**	**50.94**	**73**	*e*P			**P**	**15 06 06.3**	**-0.2**
SLR				AMB			AMB	15 06 23.5	
	comp=Z,323nm,1.5s								
POGA	**Pongola**	**51.17**	**77**	*e*P			**P**	**15 06 08.4**	**+0.3**
POGA				AMB			AMB	15 06 24.4	
	comp=Z,256nm,5.7s								
TSUM	**Tsumeb**	**51.78**	**58**	*i*P			**P**	**15 06 12.9**	**+0.1**
TSUM	**Tsumeb**	**51.78**	**58**	S			**S**	**15 13 37.5**	**+3.4**
	comp=Z,1.5nm,0.5s,baz=319,slow=20,SNR=6.2								
TSUM				LR			LR	15 23 57.1	
	comp=Z,105μm,19.2s,baz=215,slow=31								
**P

comp=Z,52µm,19.0s
LIC Lamto 68.54 24 *e*P P **15 08 07.2 -0.3**
comp=Z,223nm,0.7s,baz=197
LIC Lamto 68.54 24 *e*P P **15 08 07.2 -0.3**
comp=Z,223nm,0.7s
DBIC Dimbokro 69.01 24 *e*P P **15 08 10.0 -0.4**
DBIC Dimbokro 69.01 24 P P **15 08 09.8 -0.6**
DBIC S S **15 17 14.2 -0.2**
DBIC ScS **ScS** **15 18 15.6 +5.6**
DBIC P'P' 15 36 19.8
DBIC Dimbokro 69.01 24 P P **15 08 09.8 -0.6**
comp=Z,28nm,0.7s,baz=174,slow=7.1,SNR=28
DBIC S S **15 17 14.2 -0.2**
comp=Z,11nm,1.2s,baz=275,slow=23,SNR=8.4
DBIC ScS **ScS** **15 18 15.6 +5.6**
comp=Z,4.1nm,1.0s,baz=66,slow=22,SNR=1.3
DBIC LR LR 15 31 46.5
comp=Z,46µm,19.6s,baz=176,slow=30
DBIC PKPPKP **P'P'df** **15 36 19.8 +3.0**
comp=Z,17nm,1.1s,baz=336,slow=6.4,SNR=7.5
MRIV Mauritius Mete 69.90 96 *e*P P **15 08 15.7 -0.4**
OTAV Otavalo 72.12 305 *e*P P **15 08 29.6 -0.5**
comp=Z,232nm,1.4s
OTAV LR LR
comp=Z,47µm,22.0s
ODZ Otahua Downs 74.03 193 *e*P P 15 08 44.2 +3.8
MBAR Mbarara 74.05 62 *e*P P **15 08 41.8 +0.7**
ROSC El Rosal 74.71 311 *e*P P **15 08 45.0 -0.2**
ROSC El Rosal 74.71 311 P P **15 08 44.7 -0.5**
comp=Z,121nm,0.7s,baz=180,slow=3.7,SNR=34
ROSC S S **15 18 26.2 +5.5**
comp=Z,8.4nm,0.3s,baz=180,slow=2.2,SNR=3.1
ROSC LR LR 15 44 22.5
comp=Z,55µm,18.8s,baz=90,slow=38
LBZ Lake Benmore 74.73 193 PN P **15 08 44.4 -0.1**
RPZ Rata Peaks 75.30 193 P P **15 08 48.5 +0.7**
RPZ Rata Peaks 75.30 193 P P **15 08 48.5 +0.7**
comp=Z,78nm,1.0s,baz=199,slow=8.0,SNR=9.4
TPP Pointe-a-Pierr 75.52 325 *e* P **15 08 50.3 +1.0**
TBH Brigand Hill 75.57 325 *e* P **15 08 49.9 +0.3**
LTZ Lake Taylor 76.07 195 PN P **15 08 50.6 -1.7**
TPR Prospect 76.15 326 *e* P **15 08 54.4 +1.5**
TOSP Speyside 76.19 326 *e* P **15 08 51.9 -1.2**
KHZ Kahutara 76.27 196 *e*P P **15 08 53.9 +0.5**
comp=Z,169nm,1.2s
KMBO Kilima Mbogo 76.52 68 *e*P P 15 08 59.6 +4.2
KMBO Kilima Mbogo 76.52 68 P P 15 09 02.3 +6.9
SNR=34
KMBO Kilima Mbogo 76.52 68 P P 15 08 59.4 +4.0
comp=Z,12nm,1.2s,baz=219,slow=6.3,SNR=13
KMBO S S 15 18 58.9 +18
comp=Z,0.5nm,0.3s,baz=342,slow=23,SNR=6.2
KMBO PKPPKP **P'P'df** **15 36 05.6 -2.4**
comp=Z,2.0nm,1.0s,baz=90,slow=6.1,SNR=2.9
KMBO LR LR 15 39 04.8
comp=Z,113µm,21.0s,baz=185,slow=33
TORD Torodi Ar. Bea 76.73 29 P P **15 08 56.0 -0.1**
TORD S S **15 18 41.2 -0.9**
TORD P'P' 15 36 05.2
TORD Torodi Ar. Bea 76.73 29 P P **15 08 56.0 -0.1**
comp=Z,88nm,0.7s,baz=198,slow=5.3,SNR=128
TORD S S **15 18 41.2 -0.9**
comp=Z,17nm,1.2s,baz=200,slow=7.8,SNR=7.8
TORD PKPPKP **P'P'df** **15 36 05.2 +1.5**
comp=Z,1.5nm,1.1s,baz=72,slow=0.2,SNR=3.6
TORD LR LR 15 38 01.6
comp=Z,56µm,19.1s,baz=190,slow=32
THZ Tophouse 77.00 195 PN P **15 08 55.8 -1.8**
TAU Tasmania Unive 77.06 176 *e*P P **15 08 57.4 -0.4**
TAU pmax pmax
comp=Z,255nm,1.2s
TAU MLR MLR
comp=Z,47µm,20.0s
TAU Tasmania Unive 77.06 176 *e*P P **15 08 57.4 -0.4**
comp=Z,255nm,1.2s
TAU LR LR
comp=Z,47µm,20.0s
SDV Santo Domingo 77.09 316 *e*P P **15 08 57.2 -1.3**
comp=Z,597nm,0.8s
SNZO South Karori 77.19 197 *e*P P **15 09 00.8 +2.3**
comp=Z,221nm,1.0s
GRGR Grenville 77.30 325 *e*P P **15 08 56.3 -3.1**
comp=Z,508nm,1.1s
GRGR LR LR
comp=Z,46µm,19.0s
NNZ Nelson 77.47 196 PN P **15 08 58.1 -2.0**
BBGH Gun Hill 77.69 328 PFAKE 15 09 10.0 +8.5
BBGH LR LR
comp=Z,49µm,19.0s
MRZ Mangatainoka R 77.70 197 PN P **15 09 01.2 -0.2**
SVB Belmont 78.27 326 *e* P **15 09 03.0 -1.8**
MCLT Moule a Chique 78.60 326 *e* P **15 09 05.0 -1.6**
RKT Rikitea 78.62 243 *e*P P **15 09 08.8 +2.0**
comp=Z,183nm,1.1s
RKT Rikitea 78.62 243 *e*PP PP 15 12 03.4 -0.9
comp=Z,5µm,26.8s
RKT *e*S S **15 19 04.5 +1.8**
comp=Z,37µm,29.2s
RKT *e*LQ LQ 15 30 17.1
comp=Z,55µm,32.0s
RKT *e*LR LR 15 33 37.4
comp=Z,67µm,28.5s,baz=153
TRVZ Turoa 79.04 198 PN P **15 09 09.4 +0.2**
FWVZ Far West T-bar 79.08 198 PN P **15 09 09.9 +0.5**
FDF Fort de France 79.64 327 *e*P P **15 09 10.7 -1.6**
FDF pmax pmax
comp=Z,1µm,1.5s
FDF MLR MLR
comp=Z,29µm,22.0s
FDF Fort de France 79.64 327 *e*P P **15 09 10.7 -1.6**
comp=Z,1µm,1.5s
FDF LR LR
comp=Z,29µm,22.0s
FDF Fort de France 79.64 327 *e*P P **15 09 10.8 -1.6**
MWZ Matawai 79.67 199 PN P **15 09 11.2 -1.2**
URZ Urewera 79.81 199 *e*P P **15 09 13.6 +0.5**
URZ Urewera 79.81 199 P P **15 09 14.3 +1.2**
comp=Z,91nm,1.1s,baz=139,slow=1.7,SNR=19
URZ S S **15 19 19.2 +4.2**
comp=Z,14nm,1.2s,baz=5.9,slow=16,SNR=1.6
URZ LR LR 15 43 35.8
comp=Z,26µm,18.3s,baz=174,slow=35
HIZ Hauiti 79.92 197 PN P **15 09 15.6 +2.0**
DLPL La Plaine 80.23 327 *e* P **15 09 16.0 +0.5**
TOZ Tahuroa Road 80.59 198 PN P **15 09 16.4 -0.8**
BCIP Isla Barro Col 80.79 307 *e*P P **15 09 17.4 -1.1**
comp=Z,539nm,1.5s
BCIP LR LR
comp=Z,25µm,19.0s
MGG Marie-Galante 80.81 327 *e*P P **15 09 19.6 +1.1**
TBG Guadaloupe-3 80.84 326 *e*P P **15 09 18.6 0.0**
PHG Guadaloupe-2 80.99 326 *e*P P **15 09 21.1 +1.4**
DOG Dongo Capester 81.00 326 *e*P P **15 09 19.4 -0.2**
LZG Guadaloupe-1 81.15 326 *e*P P **15 09 19.2 -1.1**
MSEY Mahe Island 82.25 86 *e*P P **15 09 26.1 -0.3**
comp=Z,163nm,1.5s
MSEY LR LR
comp=Z,93nm,20.0s
MSEY Mahe Island 82.25 86 P P 15 09 35.7 +9.3
SNR=9.7
WCZ Waipu Caves 82.52 197 PN P **15 09 26.5 -1.0**
NWAO Narrogin (SRO) 82.59 150 *e*P P **15 09 28.6 +0.7**
NWAO Narrogin (SRO) 82.59 150 P P **15 09 26.6 -1.3**
comp=Z,24nm,0.9s,baz=209,slow=5.9,SNR=8.4
NWAO S S **15 19 49.3 +5.3**
comp=Z,14nm,1.2s,baz=331,slow=6.7,SNR=2.2
ANWB Willy Bob 82.61 327 *e*P P **15 09 27.1 -0.8**
comp=Z,180nm,0.7s
ANWB LR LR
comp=Z,30µm,22.0s
OUZ Omahuta 83.33 197 *e*P P **15 09 31.7 0.0**
comp=Z,356nm,1.4s
OUZ Omahuta 83.33 197 PN P **15 09 31.4 -0.4**
JTS JuntasAbangare 83.89 303 *e*P P **15 09 33.7 -1.1**
JTS PP PP **15 12 44.2 -4.2**
JTS JuntasAbangare 83.89 303 P P **15 09 33.5 -1.2**
comp=Z,84nm,0.8s,baz=48,slow=1.9,SNR=48
JTS PP PP **15 12 44.2 -4.2**
comp=Z,17nm,1.0s,baz=276,slow=3.8,SNR=3.7
JTS S S **15 19 54.1 -3.3**
comp=Z,1.3nm,0.3s,baz=310,slow=21,SNR=5.8
JTS LR LR 15 42 23.0
comp=Z,6µm,21.8s,baz=157,slow=32
SJG San Juan 84.28 323 *e*P P **15 09 34.5 -2.0**
comp=Z,106nm,1.2s
SJG PP PP **15 12 49.3 -2.3**
SJG San Juan 84.28 323 P P **15 09 34.5 -2.0**
comp=Z,23nm,0.3s,baz=335,slow=17,SNR=11
SJG PP PP **15 12 49.3 -2.3**
comp=Z,23nm,0.6s,baz=198,slow=3.2,SNR=2.6
SJG LR LR 15 44 50.4
comp=Z,20µm,21.7s,baz=37,slow=34
TBI Tubuai 84.48 231 *e*P P **15 09 39.2 +1.4**
comp=Z,1µm,1.3s
TBI Tubuai 84.48 231 *e*PP PP 15 12 52.3 -0.2
comp=Z,3µm,26.2s
TBI *e*S S **15 20 04.9 +1.6**
comp=Z,54µm,26.0s
TBI *e*LQ LQ 15 32 36.9
comp=Z,57µm,32.0s
TBI *e*LR LR 15 36 22.5
comp=Z,38µm,22.0s,baz=154
CAN Canberra 84.68 177 *e*P P 15 09 35.2 -3.5
CAN Canberra 84.68 177 *e*P P 15 09 35.2 -3.5
BBOO Buckleboo 86.20 166 *e*P P **15 09 47.8 +1.5**
comp=Z,3µm,1.3s
SDDR Presa de Saban 86.72 319 *e*P P **15 09 47.2 -1.6**
comp=Z,113nm,0.9s
SDDR LR LR
comp=Z,31µm,20.0s
TAM Tamanrasset 86.93 30 *e*P P **15 09 49.9 0.0**
TAM pmax pmax
comp=Z,121nm,1.4s
TAM MLR MLR
comp=Z,44µm,20.0s
TAM Tamanrasset 86.93 30 *e*P P **15 09 49.9 0.0**
comp=Z,121nm,1.4s
TAM LR LR
comp=Z,44µm,20.0s
FORT Forrest 86.98 159 *e*P P **15 09 49.5 -0.6**
YHJ Yallahs 87.50 314 *i* P P **15 09 53.1 +0.5**
PCJ Portland Cotta 87.61 313 *i* P P **15 09 54.2 +1.2**
STKA Stephens Creek 87.70 170 *e*P P **15 09 53.2 -0.4**
comp=Z,24nm,1.1s
STKA S **SKSac** **15 20 17.9 -2.7**
STKA Stephens Creek 87.70 170 P P **15 09 53.1 -0.4**
comp=Z,61nm,0.9s,baz=171,slow=6.3,SNR=20
STKA S **SKSac** **15 20 17.9 -2.7**
comp=Z,1.5nm,0.9s,baz=290,slow=24,SNR=1.4
STKA LR LR 15 48 25.0
comp=Z,63µm,18.2s,baz=180,slow=35
HOJ Hope 87.70 313 *i* P P **15 09 54.0 +0.5**
GWJ Greenwich 87.76 313 *i* P P **15 09 55.1 +1.1**
STH Stony Hill 87.79 313 *i* P P **15 09 53.9 -0.1**
MCJ Malvern 87.97 313 *i* P P **15 09 56.4 +1.5**
BNJ Bonny Gate 88.07 313 *i* P P **15 09 55.8 +0.5**
MTDJ Mount Denham 88.19 313 *e*P P **15 09 57.0 +1.0**
comp=Z,156nm,0.8s
MTDJ LR LR
comp=Z,50µm,21.0s
BBJ Bamboo Saint A 88.24 313 *i* P P **15 09 57.2 +1.1**
TGUH Tegucigalpa,Un 88.24 303 *e*P P **15 09 56.0 -0.1**
comp=Z,374nm,1.4s
TGUH LR LR
comp=Z,28µm,21.0s
DGAR Diego Garcia 88.30 102 PFAKE 15 10 10.0 +13
DGAR LR LR
comp=Z,59µm,20.0s
DESE Dese 88.42 64 *e*P P 15 10 03.5 +6.0
DESE *e*S S 15 20 35.5 -6.8
MASC Masc 88.82 316 *e*P P **15 09 58.9 +0.1**
GTBY Guantanamo Bay 88.89 316 *e*P P **15 09 58.1 -1.0**
comp=Z,85nm,0.9s
GTBY LR LR
comp=Z,40µm,19.0s
GRTK Grand Turk 89.03 320 *e*P P **15 10 01.0 +1.3**
comp=Z,2µm,2.0s
GRTK LR LR
comp=Z,25µm,21.0s
RCC Rio Carpintero 89.16 315 *e*P P **15 09 59.7 -0.6**
TVO Taravao 89.42 234 *e*P P **15 10 02.9 +1.0**
comp=Z,343nm,1.2s
MOAC Moa 89.52 316 *e*P P **15 10 02.7 +0.7**
ARMA Armidale 89.62 179 *e*P P **15 10 02.3 -0.5**
LMGC Las Mercedes 89.69 314 *e*P P **15 10 02.9 +0.1**
PPT2 Papeete2 89.72 234 *e*PP PP 15 13 30.1 -4.8
comp=Z,5µm,26.0s
PPT2 *e*S S **15 20 54.0 -0.2**
comp=Z,39µm,25.8s
PPT2 *e*SS SS **15 26 55.2 +5.3**
comp=Z,13µm,25.5s
PPT2 *e*LQ LQ 15 34 12.6
comp=Z,41µm,30.5s
PPT2 *e*LR LR 15 38 41.8
comp=Z,37µm,20.2s,baz=158
PPT Papeete 89.74 234 LR LR 15 43 25.4
comp=Z,50µm,18.1s,baz=147,slow=31
RAR Rarotonga 90.20 223 P P **15 10 06.4 +1.0**
RAR Rarotonga 90.20 223 P P **15 10 06.4 +1.0**
comp=Z,50nm,0.9s,baz=170,slow=9.4,SNR=3.4
RAR LR LR 15 43 03.0
comp=Z,22µm,21.0s,baz=182,slow=31
PMOR Pomariorio Ree 91.37 236 *e*P P **15 10 09.9 -1.0**
comp=Z,240nm,1.2s
MGV Manicaragua 92.64 312 *e*P P **15 10 16.7 +0.2**
FUL Funchal 92.97 9 *e*P P 15 10 22.4 +4.7
PMOZ Porto Moniz, M 93.12 8 *e*SKSac **SKSac** **15 20 57.7 +6.3**
PMOZ *e*S ScS 15 21 42.5 +17
PMOZ *e*LR LR 15 40 38.1
comp=Z,23µm,18.0s
TEIG Tepich 94.19 304 P P **15 10 22.1 -1.5**
TEIG PP PP **15 14 05.8 -4.9**
TEIG Tepich 94.19 304 P P **15 10 22.1 -1.5**
comp=Z,232nm,0.7s,baz=168,slow=1.2,SNR=80
TEIG PP PP **15 14 05.8 -4.9**
comp=Z,32nm,1.0s,baz=114,slow=5.7,SNR=3.7
TEIG LR LR 15 52 01.7
comp=Z,16µm,21.2s,baz=122,slow=35
CMIG Matias Romero 94.22 297 P P **15 10 22.5 -1.4**
CMIG PP PP **15 14 08.9 -2.1**
CMIG Matias Romero 94.22 297 P P **15 10 22.5 -1.4**
comp=Z,34nm,0.8s,baz=134,slow=3.5,SNR=68
CMIG PP PP **15 14 08.9 -2.1**
comp=Z,5.8nm,0.9s,baz=144,slow=6.8,SNR=2.5
SOR Soroa 94.40 310 *e*P P **15 10 24.7 +0.1**
EIDS Eidsvold 94.64 178 *e*P P **15 10 24.7 -1.2**
comp=Z,51nm,1.4s
ASAR Alice Springs 94.91 163 P P **15 10 25.6 -1.7**
ASAR PP PP **15 14 14.2 -1.1**
ASAR PKiKP **PKiKP** **15 15 10.2 +1.2**
ASAR S **SKSac** **15 20 50.1 -2.9**
ASAR PKKPbc **PKKPbc** **15 27 20.1 +0.2**
ASAR SKKPbc **SKKPbc** **15 30 57.3 +3.5**
ASAR P'P' 15 35 28.9
ASAR Alice Springs 94.91 163 P P **15 10 25.6 -1.7**
comp=Z,25nm,0.9s,baz=184,slow=3.6,SNR=76
ASAR PP PP **15 14 14.2 -1.1**
comp=Z,2.6nm,0.9s,baz=185,slow=6.5,SNR=3.0
ASAR PKiKP **PKiKP** **15 15 10.2 +1.2**
comp=Z,2.6nm,0.9s,baz=171,slow=1.2,SNR=5.9
ASAR S **SKSac** **15 20 59.1 -2.9**
comp=Z,1.0nm,1.0s,baz=176,slow=5.9,SNR=1.6
ASAR PKKPbc **PKKPbc** **15 27 20.1 +0.2**
comp=Z,2.5nm,0.7s,baz=12,slow=2.2,SNR=11
ASAR SKKPbc **SKKPbc** **15 30 57.3 +3.5**
comp=Z,1.2nm,0.8s,baz=12,slow=2.0,SNR=4.5
ASAR PKPPKP P'P'df 15 35 28.9 -12
comp=Z,1.4nm,0.9s,baz=6.3,slow=2.5,SNR=5.8
ASAR LR LR 15 50 20.0
comp=Z,115µm,20.1s,baz=182,slow=34
COCO West Island 95.13 125 PFAKE 15 10 40.0 +12
COCO LR LR
comp=Z,26µm,19.0s
RTC Rabat Centre 95.39 17 PFAKE 15 10 40.0 +11
RTC LR LR
comp=Z,67µm,19.0s
PSMN Pico do Norte, 96.95 2 *e*P P **15 10 36.6 +0.7**
comp=Z,88nm,1.5s
PSMN *e*LQ LQ 15 37 22.2
PSMN *e*LR LR 15 41 54.1
comp=Z,8µm,20.8s
DZM Mont Dzumac 97.20 193 *e*P Pdif 15 10 40.0 +2.1
comp=Z,80nm,1.1s
DZM Mont Dzumac 97.20 193 *e*PP PP 15 14 28.5 -4.6
comp=Z,3µm,25.2s
DZM *e*S S **15 21 56.9 -3.6**
comp=Z,28µm,26.6s
DZM *e*SS SS **15 28 39.9 +3.7**
comp=Z,17µm,29.8s
DZM *e*LR LR 15 42 20.8
comp=Z,37µm,22.3s
DZM Mont Dzumac 97.20 193 P P **15 10 36.4 -1.3**
comp=Z,9.1nm,1.0s,baz=75,slow=19,SNR=2.0
BBSR BB Station 97.37 329 PFAKE 15 10 50.0 +12
BBSR LR LR
comp=Z,23µm,21.0s
CMLA Cha da Macela 97.71 1 *e*P Pdif 15 10 42.8 +3.5
comp=Z,134nm,1.6s
CMLA *e*LQ LQ 15 37 33.7
CMLA *e*LR LR 15 42 06.8
comp=Z,7µm,21.3s
CMLA Cha da Macela 97.71 1 PFAKE 15 10 50.0 +11
CMLA LR LR
comp=Z,18µm,19.0s
PSET Sete Cidades 97.77 1 *e*P P **15 10 36.6 -3.0**
comp=Z,240nm,0.9s
PSET *e*LQ LQ 15 37 33.7
PSET *e*LR LR 15 42 10.2
comp=Z,8µm,18.9s
MORF Marmelete 98.42 15 *e*P Pdif 15 10 45.3 +2.7
MORF Marmelete 98.42 15 *e*P P **15 10 41.2 -1.3**
MORF *e* 15 14 42.6
MORF *e*S **SKSac** **15 21 19.1 +0.1**
PBDV Barranco-do-Ve 98.44 15 *e*P Pdif 15 10 46.8 +4.1
PVAQ Vaqueiros 98.63 15 *e*P Pdif 15 10 46.4 +3.0
PVAQ Vaqueiros 98.63 15 *e*PP PP 15 14 45.3 +0.3
PVAQ *e*SKSac **SKSac** **15 21 20.1 +0.2**
PVAQ *e*S **ScS** **15 22 17.3 +6.0**
PVAQ *e*LQ LQ 15 38 29.1
PVAQ *e*LR LR 15 43 17.8
comp=Z,28µm,20.0s
WRA Warramunga Arr 98.63 162 P P **15 10 42.2 -1.9**
WRA PP PP **15 14 41.4 -2.6**
WRA PKiKP **PKiKP** **15 15 16.6 +1.1**
WRA S **SKSac** **15 21 19.3 -2.1**
WRA PKKPbc **PKKPbc** **15 27 09.2 -0.7**
WRA PKKPab PKKPdf 15 27 41.7 +30
WRA SKKPbc **SKKPbc** **15 30 49.7 +4.9**
WRA P'P' 15 35 19.8
WRA Warramunga Arr 98.63 162 P P **15 10 42.2 -1.9**
comp=Z,12nm,0.9s,baz=193,slow=3.4,SNR=26
WRA PP PP **15 14 41.4 -2.6**
comp=Z,5.5nm,1.0s,baz=193,slow=6.5,SNR=3.2
WRA PKiKP **PKiKP** **15 15 16.6 +1.1**
comp=Z,5.1nm,1.0s,baz=226,slow=1.4,SNR=8.6
WRA S **SKSac** **15 21 19.3 -2.1**
comp=Z,1.4nm,0.9s,baz=194,slow=3.9,SNR=2.9
WRA PKKPbc **PKKPbc** **15 27 09.2 -0.7**
comp=Z,2.6nm,0.7s,baz=347,slow=2.9,SNR=8.5
WRA PKKPab PKKPdf 15 27 41.7 +30
comp=Z,4.1nm,0.9s,baz=9.3,slow=4.8,SNR=6.3
WRA SKKPbc **SKKPbc** **15 30 49.7 +4.9**
comp=Z,2.0nm,0.9s,baz=357,slow=2.8,SNR=8.6
WRA PKKPKP P'P'df 15 35 19.8 -13
comp=Z,0.5nm,0.7s,baz=10,slow=2.0,SNR=5.2
WRA LR LR 15 52 04.9
comp=Z,101µm,21.4s,baz=195,slow=33
WRAB Tennant Creek 98.64 162 *e*P P **15 10 42.8 -1.4**
WRAB pmax pmax
comp=Z,88nm,1.5s
WRAB Tennant Creek 98.64 162 *e*P P **15 10 42.8 -1.4**
comp=Z,88nm,1.5s
ROSA Rosais 98.66 359 *e*P Pdif 15 10 47.0 +3.5
comp=Z,261nm,1.0s
ROSA *e*LR LR 15 41 57.6
comp=Z,12µm,21.0s
FITZ Fitzroy Crossi 98.81 154 *e*P P **15 10 44.5 -0.4**
comp=Z,10.0nm,0.9s
FITZ PP PP **15 14 45.0 -0.4**
FITZ PKKPbc **PKKPdf** **15 27 10.7 -0.5**
FITZ Fitzroy Crossi 98.81 154 P P **15 10 44.7 -0.2**
comp=Z,5.3nm,0.9s,baz=182,slow=6.3,SNR=10
FITZ PP PP **15 14 45.0 -0.4**
comp=Z,5.0nm,1.0s,baz=120,slow=4.2,SNR=3.1
FITZ PKKPbc **PKKPdf** **15 27 10.7 -0.5**
comp=Z,2.2nm,0.9s,baz=11,slow=5.2,SNR=3.6
PCVE Castro Verde 98.81 15 *e*P Pdif 15 10 46.1 +1.8
PGRA Graciosa 98.97 359 *e*P P **15 10 47.0 +2.1**
comp=Z,301nm,1.1s
PGRA *e*LQ LQ 15 37 42.9
PGRA *e*LR LR 15 42 17.1
comp=Z,12µm,20.8s
MESJ Messejana 99.00 15 *e*P Pdif 15 10 44.6 -0.4
MESJ *e*PP **PP** **15 14 46.6 -1.1**
MESJ *e*S **SKSac** **15 21 22.1 +0.3**
MESJ AMS AMS 15 53 44.8
comp=Z,32µm,18.9s
MESJ Messejana 99.00 15 *e*PP PP 15 14 46.6 -1.1
MESJ *e*S **SKSac** **15 21 22.1 +0.3**
MESJ A A 15 53 44.8
comp=Z,32µm,18.9s
MESJ Messejana 99.00 15 *e*P Pdif 15 10 44.5 -0.5
MESJ *e* 15 14 46.6
MESJ *e*S **SKSac** **15 21 22.0 +0.3**
PNCL Nicolau / Gran 99.22 15 *e*P **Pdif** **15 10 47.3 +1.3**
PBEJ Beja 99.22 15 *e*P **Pdif** **15 10 50.1 +4.0**
PBAR Barrancos 99.48 16 *e*P **Pdif** **15 10 51.0 +3.8**
MSVF Nonsavu 99.64 204 PFAKE 15 11 00.0 +11
MSVF LR LR
comp=Z,28µm,22.0s
EVO Evora 99.70 15 *e*P **Pdif** **15 10 50.7 +2.5**
CTA Charters Tower 99.73 174 P **Pdif** **15 10 48.0 -1.0**
CTA PP **PP** **15 14 50.2 -2.1**
CTA Charters Tower 99.73 174 P **Pdif** **15 10 48.0 -1.0**
comp=Z,12nm,1.0s,baz=250,slow=3.7,SNR=7.7
CTA PP **PP** **15 14 50.2 -2.1**
comp=Z,3.3nm,0.6s,baz=169,slow=11,SNR=3.2
CTA LR LR 15 57 27.7
comp=Z,19µm,18.3s,baz=291,slow=36
LIS Lisbon 99.74 14 *e*P **Pdif** **15 10 48.0 -0.3**
LIS *e*PP **PP** **15 14 51.9 -1.5**
LIS *e*S **SKSac** **15 21 25.5 +0.1**
LIS AMS AMS 15 53 57.0
comp=Z,41µm,17.6s
LIS Lisbon 99.74 14 *e*PP PP 15 14 51.9 -1.5
LIS *e*S **SKSac** **15 21 25.5 +0.1**
LIS A A 15 53 57.0
comp=Z,41µm,17.6s
LIS Lisbon 99.74 14 *e*P **Pdif** **15 10 48.0 -0.3**
LIS *e* 15 14 51.9
LIS *e*S **SKSac** **15 21 25.4 +0.1**
PESTR Estremoz 100.09 15 *e*P **Pdif** **15 10 52.8 +2.9**
PMTG Montargil 100.21 15 *e*P **Pdif** **15 10 51.9 +1.5**
KEST Kesra 100.24 29 *e*Pdif **Pdif** **15 10 50.1 -0.7**
KEST PP **PP** **15 14 59.0 +1.6**
KEST Kesra 100.24 29 P **Pdif** **15 10 53.3 +2.6**
comp=Z,1.1nm,1.0s,baz=240,slow=7.0,SNR=3.3
KEST PP **PP** **15 14 59.0 +1.6**
comp=Z,2.1nm,0.9s,baz=317,slow=23,SNR=3.6
KEST S **SKSac** **15 21 29.9 +1.6**
comp=Z,1.1nm,0.9s,baz=180,slow=23,SNR=1.8
PMRV Marv??o 100.67 15 *e*P **Pdif** **15 10 53.0 +0.5**
PMRV Marv??o 100.67 15 *e*PP PP 15 15 00.1 -0.4
PMRV *e*SKSac **SKSac** **15 21 29.0 -1.0**
PMRV *e*Sdif **Sdif** **15 22 35.2 +6.9**
PMRV *e*SS **SS** **15 29 28.7 +2.3**
PMRV *e*LQ LQ 15 39 17.8
PMRV *e*LR LR 15 44 36.7
comp=Z,38µm,18.0s
ESDC Sonseca Array 101.40 18 P **Pdif** **15 10 57.9 +2.1**
ESDC PKiKP **PKiKP** **15 15 17.6 -2.1**
ESDC PKKPbc **PKKPbc** **15 27 06.5 +3.2**
ESDC Sonseca Array 101.40 18 P **Pdif** **15 10 57.9 +2.1**
comp=Z,0.6nm,0.4s,baz=196,slow=2.4,SNR=3.2
ESDC PKiKP **PKiKP** **15 15 17.6 -2.1**
comp=Z,0.7nm,0.5s,baz=176,slow=5.6,SNR=3.0
ESDC PKKPbc **PKKPbc** **15 27 06.5 +3.2**
comp=Z,1.6nm,0.7s,baz=343,slow=2.9,SNR=4.9
MTE Manteigas 101.60 15 *e*P **Pdif** **15 10 57.8 +1.1**
MTE Manteigas 101.60 15 *e*PP PP 15 15 08.1 +0.5
MTE *e*SKSac **SKSac** **15 21 34.3 -0.2**
MTE *e*Sdif **Sdif** **15 22 44.8 +8.7**
MTE *e*SS **SS** **15 29 41.3 +1.8**
MTE *e*LQ LQ 15 40 04.8
MTE *e*LR LR 15 45 25.6
comp=Z,29µm,18.0s
MTE Manteigas 101.60 15 PFAKE 15 11 10.0 +13
MTE LR LR
comp=Z,29µm,19.0s
MVO Moncorvo 102.42 15 *e*P **Pdif** **15 11 02.8 +2.5**
MVO Moncorvo 102.42 15 *e*PP PP 15 15 14.2 +0.4
MVO *e*SKSac **SKSac** **15 21 39.0 +0.6**
MVO *e*Sdif Sdif 15 22 57.2 +14
MVO *e*LQ LQ 15 39 58.8
MVO *e*LR LR 15 45 31.7

comp=Z,47µm,18.0s
POLO Lamas de Olo 102.53 15 *e*P **Pdif** 15 11 03.0 +2.2
NHSC New Hope 102.75 316 PFAKE 15 11 10.0 +8.2
NHSC LR LR
comp=Z,21µm,19.0s
EIL Elat 102.91 52 *e*P **Pdif** 15 11 05.9 +3.2
PGAV Gavieira, Arco 103.05 14 *e*P **Pdif** 15 11 06.2 +3.1
PGAV Gavieira, Arco 103.05 14 *e*PP PP 15 15 18.6 +0.1
PGAV *e*SKSac **SKSac** 15 21 40.6 -0.8
PGAV *e*Sdif **Sdif** 15 22 57.3 +9.1
PGAV *e*SS **SS** 15 30 02.2 +2.6
PGAV *e*LQ LQ 15 39 34.0
PGAV *e*LR LR 15 47 55.6
comp=Z,36µm,22.0s
PBRG Braganca 103.09 15 *e*P **Pdif** 15 11 04.6 +1.4
BRAL Brewton 103.35 310 PFAKE 15 11 20.0 +15
BRAL LR LR
comp=Z,20µm,20.0s
CNNC Cliffs of the 103.93 319 PFAKE 15 11 20.0 +13
CNNC LR LR
comp=Z,13µm,20.0s
SIVA Sivas 104.05 42 *e*P Pdif 15 10 54.8 -13
KARN Karanos 104.10 41 *e*P **Pdif** 15 11 16.1 +8.2
VAM Vamos 104.20 41 *e*P **Pdif** 15 11 12.5 +4.2
CEL Celeste 104.33 34 PFAKE 15 11 20.0 +11
CEL LR LR
comp=Z,22µm,19.0s
LAST Lasithi 104.40 42 *e*P **Pdif** 15 11 11.2 +1.9
PYL PYLOS 104.78 39 *e*P **Pdif** 15 11 07.0 -3.8
KMSC Kings Mountain 104.99 316 ⇓PKiKP **PKiKP** 15 15 27.5 +1.1
baz=105
VLI Veliai 104.99 40 *e*P **Pdif** 15 11 13.3 +1.5
ITM Ithomi 105.10 39 *e*P **Pdif** 15 11 18.3 +6.1
LRAL Lakeview Retre 105.13 311 PFAKE 15 15 40.0
LRAL LR LR
comp=Z,41µm,20.0s
TIP Timpagrande 105.43 34 PFAKE 15 15 40.0
TIP LR LR
comp=Z,35µm,19.0s
VLS Valsamata 105.61 37 *e*P **Pdif** 15 11 18.5 +4.0
VBMS Vicksburg 105.76 308 PFAKE 15 15 40.0
VBMS LR LR
comp=Z,15µm,20.0s
RLS Riolos of Patr 105.77 38 *e*P **Pdif** 15 11 15.2 +0.1
DID Didima 105.81 39 *e*P **Pdif** 15 11 16.8 +1.4
GUR Goura 105.92 39 *e*P **Pdif** 15 11 21.3 +5.3
CUC Castrocucco 105.93 33 PFAKE 15 15 40.0
CUC LR LR
comp=Z,13µm,19.0s
APE Apeiranthos 106.15 41 *e*P **Pdif** 15 11 17.1 +0.1
LTK Loutraki 106.20 39 *e*P **Pdif** 15 11 15.9 -1.2
TKL Tuckaleechee C 106.31 315 *e*PKPdf **PKiKP** 15 15 26.4 -2.5
TKL PP **PP** 15 15 41.1 -1.5
TKL Tuckaleechee C 106.31 315 PKiKP **PKiKP** 15 15 25.8 -3.1
comp=Z,16nm,1.0s,baz=164,slow=7.4,SNR=5.7
TKL PP **PP** 15 15 41.1 -1.5
comp=Z,30nm,0.8s,baz=157,slow=8.1,SNR=10
CPCT Cooper Cave 106.39 314 *e*PKPdf **PKiKP** 15 15 27.5 -1.5
ATH Athens Observa 106.39 40 *e*P **Pdif** 15 11 24.5 +6.6
CBN Corbin 106.47 321 PFAKE 15 15 40.0
CBN LR LR
comp=Z,24µm,22.0s
PTL Penteli 106.51 40 *e*P **Pdif** 15 11 22.7 +4.2
BLA Blacksburg 106.56 318 *e*PKPdf **PKiKP** 15 15 30.9 +1.5
BLA LR LR
comp=Z,19µm,21.0s
732A Laxson Ranch, 106.64 299 ⇑PKiKP **PKiKP** 15 15 30.8 +1.1
baz=107
EVR Evrytania 106.66 38 *e*P **Pdif** 15 11 24.4 +5.2
SWET Sewanee 106.69 313 *e*PKPdf **PKiKP** 15 15 28.5 -1.1
LKR Lokris 106.78 39 *e*P **Pdif** 15 11 23.6 +3.9
KEK Kerkira 106.79 36 *e*P **Pdif** 15 11 21.3 +1.6
AGG Agios Georgios 106.92 38 *e*P **Pdif** 15 11 18.6 -1.7
CSS Prodhromos 107.00 48 PFAKE 15 15 40.0
CSS LR LR
comp=Z,25µm,19.0s
CSS Prodhromos 107.00 48 *e*P **Pdif** 15 11 25.0 +4.3
632A Uvalde 107.23 299 ⇑PKiKP **PKiKP** 15 15 31.8 +1.0
baz=108
PLAL Pickwick Lake 107.27 311 PFAKE 15 15 40.0
PLAL LR LR
comp=Z,37µm,21.0s
GCAM G?zelcaml? 107.29 42 *i* P **PP** 15 15 48.8 -1.0
THL Klokotos Trika 107.32 38 *e*P **Pdif** 15 11 24.5 +2.5
OXF Oxford 107.36 310 *e*PKPdf **PKiKP** 15 15 28.6 -2.2
OXF LR LR
comp=Z,23µm,22.0s
AYDN Tasoluk 107.47 43 *i* P **PP** 15 15 50.2 -1.0
631A Perdido Creek 107.49 299 ⇓PKiKP **PKiKP** 15 15 32.3 +1.0
baz=108
AQU L'Aquila 107.52 30 PFAKE 15 15 40.0
AQU LR LR
comp=Z,50µm,20.0s
CHOS Chios island 107.52 41 *e*P **Pdif** 15 11 28.4 +5.3
GAZI Gazipasa 107.75 47 *i* P **PP** 15 15 53.9 +0.7
532A Rocksprings 107.82 300 ⇓PKiKP **PKiKP** 15 15 32.9 +1.0
baz=108
532A ⇑SKSac **SKSac** 15 22 04.3 +1.0
baz=108
532A ⇑SKSac **SKSac** 15 22 04.3 +1.0
baz=108
532A ⇑SKSac **SKSac** 15 22 04.3 +1.0
baz=108
DNZL Cakiroluk 107.90 44 *i* P **PP** 15 15 56.2 +1.6
KZN Kozani 107.92 37 *e*P **Pdif** 15 11 29.4 +4.6
LIT Litokhoron 107.95 38 *e*P **Pdif** 15 11 28.5 +3.6
JCT Junction City 108.08 300 PFAKE 15 15 40.0
JCT LR LR
comp=Z,9µm,20.0s
JCT Junction City 108.08 300 ⇑PKiKP **PKiKP** 15 15 33.4 +1.0
baz=108
531A Rocksprings 108.13 299 ⇑PKiKP **PKiKP** 15 15 33.5 +1.0
baz=108
TIR Tirane 108.32 35 PFAKE 15 15 40.0
TIR LR LR
comp=Z,24µm,20.0s
SSB Saint Sauveur 108.32 23 PFAKE 15 15 40.0
SSB LR LR
comp=Z,50µm,20.0s
PRK Paraskevi 108.37 41 *e*P **Pdif** 15 11 31.5 +4.8
432A Menard 108.41 300 ⇓PKiKP **PKiKP** 15 15 34.0 +1.0
baz=109
530A J-C Ranch, Com 108.46 298 ⇑PKiKP **PKiKP** 15 15 34.2 +1.1
baz=109
PLG Polygyros 108.50 38 *e*P **Pdif** 15 11 32.2 +4.9
ISP Isparta 108.53 45 PFAKE 15 15 40.0
ISP LR LR
comp=Z,15µm,20.0s
ISP Isparta 108.53 45 ⇓*i*P **PP** 15 15 56.2 -2.8
BNI Bardonecchia 108.53 25 PFAKE 15 15 40.0
BNI LR LR
comp=Z,77µm,20.0s
AKHS Akhisar 108.55 42 *i* P **PP** 15 15 56.2 -2.9
628A Black Gap, Mar 108.57 297 ⇑PKiKP **PKiKP** 15 15 34.3 +1.0
baz=109
431A Sonora 108.60 299 ⇓PKiKP **PKiKP** 15 15 34.5 +1.1
baz=109
LIA Limnos Island 108.61 40 *e*P **Pdif** 15 11 32.0 +4.3
627A Terlingua Ranc 108.77 296 ⇓PKiKP **PKiKP** 15 15 34.7 +0.9
baz=109
TXAR Lajitas Array 108.79 296 Pdif **Pdif** 15 11 28.9 -0.1
TXAR PKiKP **PKiKP** 15 15 32.9 -0.9
TXAR PP **PP** 15 15 59.8 -1.2
TXAR PKKPbc PKKPab 15 26 47.4 -5.2
TXAR PKKP **PKKPdf** 15 26 52.2 -3.2
TXAR Lajitas Array 108.79 296 Pdiff **Pdif** 15 11 28.9 -0.1
comp=Z,0.3nm,0.7s,baz=154,slow=13,SNR=3.0
TXAR PKiKP **PKiKP** 15 15 32.9 -0.9
comp=Z,2.1nm,0.8s,baz=158,slow=4.3,SNR=7.8
TXAR PP **PP** 15 15 59.8 -1.2
comp=Z,3.8nm,0.9s,baz=156,slow=5.9,SNR=4.4
TXAR PKKPbc PKKPab 15 26 47.4 -5.2
comp=Z,1.6nm,0.8s,baz=263,slow=0.8,SNR=7.4
TXAR PKKP **PKKPdf** 15 26 52.2 -3.2
comp=Z,3.8nm,1.0s,baz=318,slow=1.7,SNR=8.6
529A Stev Forest Ra 108.83 298 ⇓PKiKP **PKiKP** 15 15 35.0 +1.2
baz=109
332A Millersview 108.83 300 ⇑PKiKP **PKiKP** 15 15 34.8 +1.1
baz=109
BOZC Bozcaada 108.84 41 *i* P **PP** 15 15 59.1 -2.0
SOH Sokhos 108.88 38 *e*P **Pdif** 15 11 35.1 +6.1
430A Baggett Ranch, 108.96 299 ⇑PKiKP **PKiKP** 15 15 34.8 +0.8
baz=109
LPG La Plagne 108.98 24 *e*P Pdif 15 11 42.5 +13
comp=Z,18nm,0.9s
LPL La Plagne 108.99 24 *e*P Pdif 15 11 42.5 +13
comp=Z,14nm,0.8s
DEMI Demirci 109.00 43 *i* P **PP** 15 16 02.8 +0.4
MIAR Mount Ida 109.01 307 PFAKE 15 15 50.0
MIAR LR LR
comp=Z,20µm,22.0s
331A San Angelo 109.06 300 ⇑PKiKP **PKiKP** 15 15 35.2 +1.1
baz=109
528A Cox Ranch, San 109.11 297 ⇑PKiKP **PKiKP** 15 15 35.3 +0.9
baz=109
429A Davenport Ranc 109.11 298 ⇑PKiKP **PKiKP** 15 15 35.3 +1.0
baz=109
626A Big Bend Ranch 109.19 296 ⇑PKiKP **PKiKP** 15 15 35.6 +1.0
baz=109
232A Coleman 109.22 301 ⇑PKiKP **PKiKP** 15 15 35.7 +1.2
baz=110
BALY Balya 109.26 42 *i* P **PP** 15 16 03.5 -0.7
GDZ Gediz 109.31 43 *i* P **PP** 15 16 00.6 -4.1
DURS Dursunbey 109.42 42 *i* P PP 15 15 58.4 -7.1
527A Woodward Ranch 109.46 297 ⇓PKiKP **PKiKP** 15 15 35.8 +0.7
baz=110
330A Mertzon 109.47 299 ⇑PKiKP **PKiKP** 15 15 35.7 +0.7
baz=110
BOLV Bolvadin 109.48 45 *i* P **PP** 15 16 02.8 -3.2
NVR Nevrokopi 109.52 38 *e*P **Pdif** 15 11 33.6 +1.8
PSI Prapat 109.53 121 PKKPbc PKKPbc 15 26 39.2 +1.7
PSI Prapat 109.53 121 P **PKKPbc** 15 26 42.2 +4.7
comp=Z,0.8nmcomp=Z,161nm,0.9s
PSI Prapat 109.53 121 PKKPbc PKKPbc 15 26 39.2 +1.7
comp=Z,12nm,0.7s,baz=5.3,slow=9.6,SNR=6.0
428A Kincaid Ranch, 109.55 298 ⇑PKiKP **PKiKP** 15 15 35.8 +0.7
baz=110
231A Bronte 109.55 300 ⇓PKiKP **PKiKP** 15 15 35.9 +0.8
baz=110
526A Mary Lane Ranc 109.60 296 ⇑PKiKP **PKiKP** 15 15 35.0 -0.4
baz=110
MMB Musomiste 109.69 38 *i* P **PP** 15 16 04.0 -3.4
BINY Binghamton 109.71 323 PFAKE 15 15 50.0
BINY LR LR
comp=Z,20µm,21.0s
KDHN Kadinhani 109.72 46 *i* P **PP** 15 16 05.0 -2.6
KKB Krupnik 109.75 38 *i* P **PP** 15 16 09.6 +1.9
ALN Alexandroupoli 109.79 40 *e*P **Pdif** 15 11 37.3 +4.3
230A Sterling City 109.85 300 ⇓PKiKP **PKiKP** 15 15 36.4 +0.7
baz=110
ABTX Abilene, Hawle 109.85 301 ⇓PKiKP **PKiKP** 15 15 36.3 +0.7
baz=110
BHD Baghdad 109.90 58 *ex* **Pdif** 15 11 37.0 +3.4
BHD *i* x x 15 15 41.5
BHD *i* x x 15 16 12.7
BHD *i* x x 15 18 20.0
BHD *i* x x 15 22 12.5
BHD *i* x x 15 22 52.0
BHD *i* x x 15 23 59.0
BHD *i* x x 15 25 44.0
BHD *i* x x 15 26 04.0
427A Hayter Ranch, 109.97 297 ⇑PKiKP **PKiKP** 15 15 36.8 +0.9
baz=110
KUZU Kuzuini 110.01 50 *i* P **PP** 15 16 09.5 -0.3
HNH Hanover 110.04 327 *e*PKPdf **PKiKP** 15 15 33.7 -1.8
RZN Rozhen 110.09 39 *i* P PP 15 16 05.0 -5.4
426A McDonald Obser 110.09 297 ⇑PKiKP **PKiKP** 15 15 37.2 +0.8
baz=110
ACSO Alum Creek Sta 110.14 317 *e*PKPdf **PKiKP** 15 15 34.9 -0.9
ACSO LR LR
comp=Z,16µm,22.0s
328A Wristen Ranch, 110.16 298 ⇓PKiKP **PKiKP** 15 15 37.1 +0.8
baz=110
131A Roby 110.22 301 ⇑PKiKP **PKiKP** 15 15 37.3 +1.0
baz=110
229A Bryant Ranch, 110.22 299 ⇑PKiKP **PKiKP** 15 15 37.6 +1.2
baz=110
KDZ Kurdzhali 110.28 39 *i* P **PP** 15 16 07.6 -3.9
BORA Eskisehir 110.35 44 *i* P **PP** 15 16 07.2 -4.9
Z32A Haskell 110.37 302 ⇓PKiKP **PKiKP** 15 15 37.8 +1.3
baz=111
PMG Port Moresby 110.38 174 Pdif **Pdif** 15 11 40.7 +4.3
PMG Port Moresby 110.38 174 Pdiff **Pdif** 15 11 40.7 +4.3
comp=Z,18nm,1.2s,baz=268,slow=11,SNR=4.0
LBNH Lisbon 110.44 327 PFAKE 15 15 50.0
LBNH LR LR
comp=Z,28µm,21.0s
VTS Vitosha 110.45 37 *i* P **PP** 15 16 10.0 -3.0
TUE Stuetta 110.45 26 *e*PKPdf **PKiKP** 15 15 37.1 +0.6
TUE LR LR
comp=Z,20µm,20.0s
PLD Plovdiv 110.47 39 *i* P **PP** 15 16 12.2 -0.7
425A Indio Mountain 110.62 296 ⇑PKiKP **PKiKP** 15 15 38.3 +1.0
baz=111
326A Caldwell Ranch 110.62 297 ⇓PKiKP **PKiKP** 15 15 37.9 +0.7
baz=111
Z31A Sharp Cattle R 110.67 301 ⇑PKiKP **PKiKP** 15 15 37.9 +0.7
baz=111
228A UT Block 9, Go 110.69 299 ⇑PKiKP **PKiKP** 15 15 38.1 +0.8
baz=111
BUY Buyukada 110.76 42 *i* P **PP** 15 16 12.4 -2.6
ELBA Catalca 110.80 42 *i* P **PP** 15 16 14.6 -0.7
NCB Newcomb 110.83 325 PFAKE 15 15 50.0
NCB LR LR
comp=Z,31µm,22.0s
ERPA Erie 110.86 321 PFAKE 15 15 50.0
ERPA LR LR
comp=Z,14µm,21.0s
DAVOX Davos/Dischmat 110.86 26 PKKPbc PKKPbc 15 26 45.0 +11
comp=Z,8.5nm,0.8s,baz=13,slow=10,SNR=5.4
BOJS Bojanci 110.93 30 *e*P **Pdif** 15 11 41.4 +3.5
Y32A R-V Farms, Ver 110.95 302 ⇓PKiKP **PKiKP** 15 15 38.5 +0.9
baz=111
BBAL Bala 110.98 46 *i* P **PP** 15 16 15.4 -1.5
Z30A Sanderson Ranc 111.06 300 ⇓PKiKP **PKiKP** 15 15 39.0 +1.1
baz=111
128A Castleberry Fa 111.08 299 ⇓PKiKP **PKiKP** 15 15 38.8 +0.8
baz=111
ATAB Bozova 111.09 51 *i* P **PP** 15 16 17.6 +0.1
TUL1 Tulsa 111.09 306 ⇑PKiKP **PKiKP** 15 15 39.2 +1.4
baz=111
325A Bean Ranch, Si 111.11 296 ⇑PKiKP **PKiKP** 15 15 39.0 +0.8
baz=111
ANTO Ankara 111.16 46 ⇑*i*P **PP** 15 16 19.3 +1.3
Y31A Rekieta Farm, 111.27 301 ⇓PKiKP **PKiKP** 15 15 39.5 +1.3
baz=112
FETA Feichten 111.28 27 ⇑*i*PKiKP **PKiKP** 15 15 42.2 +4.2
comp=Z,13nm,1.4s
FETA Feichten 111.28 27 ⇑*i*P **PKiKP** 15 15 42.2 +4.2
Z29A Hungry Hill Ra 111.28 300 ⇑PKiKP **PKiKP** 15 15 39.7 +1.3
baz=112
POO Poona 111.29 90 *e*P **PKiKP** 15 15 38.2 -0.6
POO AMB AMB 15 16 32.5
comp=Z,59nm,1.2s
POO *ex* x 15 20 19.0
POO *ex* x 15 33 48.0
POO *ex* x 15 36 14.0
POO *i* x 15 39 56.0
WMOK Wichita Mounta 111.31 303 PFAKE 15 15 50.0
WMOK LR LR
comp=Z,13µm,21.0s
BR131 Keskin Array S 111.33 46 *e*PKPdf **PKiKP** 15 15 37.8 -0.6
BRTR Keskin Array B 111.33 46 Pdif **Pdif** 15 11 42.3 +2.2
BRTR PKiKP **PKiKP** 15 15 37.5 -0.8
BRTR Keskin Array B 111.33 46 Pdiff **Pdif** 15 11 42.3 +2.2
comp=Z,0.2nm,0.3s,baz=218,slow=9.0,SNR=2.2
BRTR PKiKP **PKiKP** 15 15 37.5 -0.8
comp=Z,2.9nm,1.0s,baz=174,slow=4.9,SNR=4.4
BRTR PP **PP** 15 16 19.8 +0.5
comp=Z,5.4nm,1.1s,baz=179,slow=8.6,SNR=3.7
BRTR PKKPbc **PKKPbc** 15 26 33.5 +1.1
comp=Z,1.4nm,0.9s,baz=55,slow=3.1,SNR=3.9
BRTR SKKPbc SKKPbc 15 30 19.1 +2.3
comp=Z,1.5nm,0.7s,baz=120,slow=4.0,SNR=4.0
DAVA Damuels 111.34 26 ⇑*i*PKiKP **PKiKP** 15 15 38.8 +0.6
comp=Z,27nm,1.1s
DAVA Damuels 111.34 26 ⇑*i*P **PKiKP** 15 15 38.8 +0.6
226B Tecolote Peak, 111.35 297 ⇓PKiKP **PKiKP** 15 15 39.7 +1.1
baz=112
324A Moseley Ranch, 111.40 296 ⇓PKiKP **PKiKP** 15 15 39.7 +0.9
baz=112
PINB Pinarbasi 111.42 49 *i* P **PP** 15 16 22.0 +1.9
Y30A Stafford Cattl 111.47 301 ⇑PKiKP **PKiKP** 15 15 39.9 +1.2
baz=112
CDAG Cicekdag 111.51 47 *i* P **PP** 15 16 19.1 -1.5
LONY Lake Ozonia 111.52 325 PFAKE 15 15 50.0
LONY LR LR
comp=Z,30µm,22.0s
MNTX Cornudas Mount 111.57 296 *e*PKPdf **PKiKP** 15 15 37.0 -1.8
MNTX Cornudas Mount 111.57 296 ⇑PKiKP **PKiKP** 15 15 39.8 +0.9
baz=112
AKCD Akcadag 111.67 50 *i* P **PP** 15 16 22.0 +0.3
SFIN Scholer Farm 111.69 315 ⇑PKiKP **PKiKP** 15 15 39.9 +1.1
baz=112
X31A McDonald Ranch 111.72 302 ⇑PKiKP **PKiKP** 15 15 40.0 +0.9
baz=112
126A Clayton Basin, 111.77 298 ⇓PKiKP **PKiKP** 15 15 39.9 +0.6
baz=112
Y29A Porterfield Fa 111.78 300 ⇑PKiKP **PKiKP** 15 15 40.3 +1.0
baz=112
MALT Malatya 111.87 50 ⇓PKiKP **PKiKP** 15 15 41.9 +2.6
MALT Malatya 111.87 50 PFAKE 15 15 50.0
MALT LR LR
comp=Z,43µm,19.0s
MALT Malatya 111.87 50 ⇓*i*P **PKiKP** 15 15 41.9 +2.6
SZH Strazhica 111.90 39 *i* P PP 15 16 13.7 -9.5
MARD Mardin 111.92 53 *i* P **PP** 15 16 26.5 +2.9
IPM Ipoh 111.93 122 *e*PKPdf **PKiKP** 15 15 37.9 -2.3
IPM Ipoh 111.93 122 P **PKKPbc** 15 26 34.1 +4.5
comp=Z,1.0nmcomp=Z,225nm,0.8s
X30A Coker Ranch, T 111.94 301 ⇓PKiKP **PKiKP** 15 15 40.5 +1.0
baz=112
224A Cornudas Mount 111.95 296 ⇓PKiKP **PKiKP** 15 15 40.6 +0.8
baz=112
Z27A Tatum 111.99 299 ⇓PKiKP **PKiKP** 15 15 40.7 +0.9
baz=112
BFO Black Forest 112.00 25 PFAKE 15 15 50.0
BFO LR LR
comp=Z,63µm,20.0s
125A Gardner Draw, 112.06 297 ⇑PKiKP **PKiKP** 15 15 40.9 +1.0
baz=112
W31A Holland Ranch, 112.18 302 ⇓PKiKP **PKiKP** 15 15 41.3 +1.3
baz=112
AAM Ann Arbor 112.22 318 PFAKE 15 15 50.0
AAM LR LR
comp=Z,17µm,20.0s
Z26A Caprock 112.29 298 ⇑PKiKP **PKiKP** 15 15 41.4 +1.1
baz=112
X29A Tulia 112.30 301 ⇑PKiKP **PKiKP** 15 15 41.1 +0.8
baz=113
MSTX Muleshoe 112.35 299 ⇑PKiKP **PKiKP** 15 15 41.4 +1.0
baz=113
Y27A Causey 112.45 299 ⇓PKiKP **PKiKP** 15 15 41.4 +0.7
baz=113
124A Stringfield Ra 112.45 297 ⇑PKiKP **PKiKP** 15 15 41.6 +0.8
baz=113
PKSM Moragy 112.47 33 *e*PKiKP **PKiKP** 15 15 43.9 +3.9
KULM Kulim 112.50 121 PFAKE 15 15 50.0
KULM LR LR
comp=Z,31µm,19.0s
KULM Kulim 112.50 121 P **PKKPbc** 15 26 32.6 +4.9
ILGA Ilgaz 112.53 46 *i* P **PP** 15 16 28.7 +0.7
Z25A Roswell 112.62 298 ⇓PKiKP **PKiKP** 15 15 41.6 +0.6
baz=113
HDIL Hopedale 112.64 313 PFAKE 15 15 50.0
HDIL LR LR
comp=Z,21µm,19.0s
V31A Spring Creek L 112.64 303 ⇓PKiKP **PKiKP** 15 15 41.6 +0.8
baz=113
AMTX Amarillo 112.66 301 *e*PKPdf **PKiKP** 15 15 40.5 -0.4
AMTX LR LR
comp=Z,18µm,20.0s
AMTX Amarillo 112.66 301 ⇓PKiKP **PKiKP** 15 15 41.9 +0.9
baz=113
HYB Hyderabad 112.69 95 *i* Pdiff **Pdif** 15 11 52.0 +5.5
HYB *e*PKP **PKiKP** 15 15 39.5 -1.9
HYB *e*PP **PP** 15 16 28.0 -0.9
HYB *e*SKS **SKSac** 15 22 20.0 -4.0
HYB *e*SKKS SKKSac 15 23 22.0 -8.1
HYB LR LR 15 58 00.0
comp=Z,28nm,16.0s
HYB Hyderabad 112.69 95 *e*P **PKiKP** 15 15 40.0 -1.4
320A Kipp Ranch, An 112.69 293 ⇓PKiKP **PKiKP** 15 15 41.9 +0.7
baz=113
SIRN S¨¨rnak 112.73 54 *i* P PP 15 16 38.3 +9.0
Y26A Elida 112.77 299 ⇑PKiKP **PKiKP** 15 15 42.0 +0.7
baz=113
W29A Amraillo 112.85 301 ⇑PKiKP **PKiKP** 15 15 42.3 +1.0
baz=113
KSM Kuching 112.85 133 PFAKE 15 15 50.0
KSM LR LR
comp=Z,22µm,20.0s
SADO Sadowa 113.00 322 PKiKP **PKiKP** 15 15 41.1 0.0
SADO PP **PP** 15 16 28.8 -2.2
SADO Sadowa 113.00 322 PKiKP **PKiKP** 15 15 41.1 0.0
comp=Z,6.9nm,0.7s,baz=141,slow=3.1,SNR=6.7
SADO PP **PP** 15 16 28.8 -2.2
comp=Z,18nm,0.9s,baz=186,slow=5.1,SNR=7.4
319A Douglas 113.07 293 ⇓PKiKP **PKiKP** 15 15 42.9 +1.1
baz=113
122A Conniff Cattle 113.14 295 ⇓PKiKP **PKiKP** 15 15 42.8 +0.8
baz=113
220A Playas Peak, P 113.17 294 ⇑PKiKP **PKiKP** 15 15 42.8 +0.7
baz=113
LOT Lotru 113.22 36 ⇑*i*P **PKiKP** 15 15 40.6 -1.1
Z23A Rita Site, Whi 113.28 296 ⇑PKiKP **PKiKP** 15 15 43.0 +0.8
baz=114
SOP Sopron 113.29 30 *e*PKiKP **PKiKP** 15 15 44.1 +2.5
X26A CR and CF Fran 113.30 299 ⇑PKiKP **PKiKP** 15 15 43.1 +0.8
baz=114
121A Cookes Peak, D 113.36 295 ⇑PKiKP **PKiKP** 15 15 43.2 +0.7
baz=114
ARR Arges 113.40 37 ⇓*i*P **PKiKP** 15 15 42.9 +0.9
W27A Bowe Ranch, En 113.41 300 ⇓PKiKP **PKiKP** 15 15 43.3 +0.9
baz=114
Y24A Capitan 113.48 297 ⇓PKiKP **PKiKP** 15 15 43.4 +0.7
baz=114
Z22A Elephant Butte 113.60 296 ⇓PKiKP **PKiKP** 15 15 43.7 +0.9
baz=114
X25A Clemmons Ranch 113.65 298 ⇑PKiKP **PKiKP** 15 15 43.9 +0.9
baz=114
GERES GERESS Array B 113.68 28 PKiKP **PKiKP** 15 15 42.3 -0.1
GERES PP **PP** 15 16 36.8 +0.9
GERES SKP 15 19 16.0
GERES PKKPbc **PKKPab** 15 26 29.9 +0.3
GERES GERESS Array B 113.68 28 PKiKP **PKiKP** 15 15 42.3 -0.1
comp=Z,2.7nm,0.8s,baz=209,slow=4.4,SNR=11
GERES PP **PP** 15 16 36.8 +0.9
comp=Z,4.2nm,0.9s,baz=218,slow=5.8,SNR=3.6
GERES SKP 15 19 16.0
comp=Z,5.1nm,0.9s,baz=187,slow=1.1,SNR=7.0
GERES PKKPbc **PKKPab** 15 26 29.9 +0.3
comp=Z,1.2nm,0.7s,baz=28,slow=3.2,SNR=5.4
T31A Randall Ranch, 113.70 304 ⇑PKiKP **PKiKP** 15 15 43.7 +0.9
baz=114
W26A Owens Ranch, T 113.73 299 ⇓PKiKP **PKiKP** 15 15 44.4 +1.3
baz=114
120A U Bar Ranch, L 113.75 294 ⇑PKiKP **PKiKP** 15 15 44.1 +0.9
baz=114
ISR Istrita 113.76 38 ⇓PKIKP PKiKP 15 15 47.9 +5.3
ISR Istrita 113.76 38 ⇓*i*P PKiKP 15 15 47.9 +5.3
Y23A Lovelace Mesa, 113.76 297 ⇑PKiKP **PKiKP** 15 15 44.1 +0.9
baz=114
GRFO Grafenberg 113.91 26 *e*PKIKP **PKiKP** 15 15 38.6 -4.1
GRFO Grafenberg 113.91 26 *e*PKPdf **PKiKP** 15 15 38.6 -4.1
MLR Muntele Rosu 113.91 38 ⇑*i*P **PKiKP** 15 15 43.5 +0.5
KHC Kasperske Hory 113.92 28 *e*P **Pdif** 15 11 54.6 +3.4
KHC *e* 15 16 38.1
KHC *e* 15 19 10.6
KHC MLR MLR
comp=Z,20µm,17.5s
KHC Kasperske Hory 113.92 28 *e*PDIFF **Pdif** 15 11 54.6 +3.4
KHC *ex* x 15 15 23.3
KHC *e*PKP **PKiKP** 15 15 46.1 +3.3
KHC *e*PP **PP** 15 16 38.1 +0.6
KHC *e*SKP 15 19 10.6
KHC *e*SKKS 15 23 35.6
KHC *e*XS **Sdif** 15 24 27.0 +8.6
KHC *e*PKIKP **PKKPab** 15 26 26.4 -2.0
KHC AMS AMS 16 04 20.0
comp=Z,20µm,17.5s
Z21A St. Cloud Mine 113.96 295 ⇑PKiKP **PKiKP** 15 15 44.5 +0.9
baz=114
DRGR 114.13 35 ⇑PKIKP PKPdf 15 15 45.9 +2.6
DRGR 114.13 35 ⇑*i*P PKPdf 15 15 45.9 +2.6
W25A X Bar L Ranch, 114.14 299 ⇓PKiKP **PKiKP** 15 15 44.8 +1.0
baz=114
KOPT Kop Dagi 114.15 51 *i* P **PP** 15 16 42.0 +2.4
KSU1 Kansas State U 114.17 307 PFAKE 15 15 50.0 +6.4
KSU1 LR LR
comp=Z,33µm,21.0s
Y22A Socorro 114.17 296 ⇓PKiKP **PKiKP** 15 15 45.0 +1.0
baz=114
BNM Barren Site 114.20 297 *e*PKPdf PKPdf 15 15 41.5 -2.6

Z20A	**Nine Sixteen R**	**114.21**	**294**	⇓PKiKP	**PKiKP**	**15 15 45.0**	**+1.0**
	baz=114								
CFR	**Carcaliu**	**114.31**	**40**	⇓PKiKP	PKPdf	15 15 47.7	+4.1
CFR	**Carcaliu**	**114.31**	**40**	⇓*i*P	PKPdf	15 15 47.7	+4.1
V26A	**Tequesquite Ra**	**114.34**	**300**	⇓PKiKP	**PKiKP**	**15 15 45.1**	**+0.9**
	baz=115								
X23A	**Hourglass Bar**	**114.37**	**297**	⇓PKiKP	**PKiKP**	**15 15 45.1**	**+0.7**
	baz=115								
PSZ	**Piszkesteto**	**114.38**	**33**	*e*PKiKP	PKPdf	15 15 42.6	-1.1
PSZ				MLR	MLR		
	comp=Z,20μm,19.0s						
PSZ	**Piszkesteto**	**114.38**	**33**	*e*PKPdf	PKPdf	15 15 42.6	-1.2
PSZ				LR	LR		
	comp=Z,20μm,19.0s						
PSZ	**Piszkesteto**	**114.38**	**33**	⇓*i*P	PKPdf	15 15 47.8	+4.1
PSZ	**Piszkesteto**	**114.38**	**33**	*e*PKPdf	PKPdf	15 15 43.0	-0.7
PLOR	**Plostina**	**114.45**	**38**	⇓PKiKP	PKPdf	15 15 45.7	+1.8
PLOR	**Plostina**	**114.45**	**38**	⇓*i*P	PKPdf	15 15 45.7	+1.8
VRI	**Vrincioaia**	**114.49**	**38**	⇑PKiKP	PKPdf	15 15 44.3	+0.3
VRI	**Vrincioaia**	**114.49**	**38**	⇑*i*P	PKPdf	15 15 44.3	+0.3
TREC	**Trest**	**114.52**	**29**	AMS	AMS	16 05 10.0	
	comp=Z,19μm,16.6s						
Y21A	**Point of Rocks**	**114.55**	**296**	⇓PKiKP	**PKiKP**	**15 15 45.9**	**+1.1**
	baz=115								
W24A	**Lazy 6 Ranch,**	**114.55**	**298**	⇓PKiKP	**PKiKP**	**15 15 45.5**	**+0.8**
	baz=115								
PBA	**Port Blair**	**114.61**	**111**	*ex*	PP	15 16 36.1	-6.1
VYHS	**Vyhne**	**114.62**	**32**	*i* P	**Pdif**	**15 11 58.2**	**+3.9**
VYHS				*e*		15 15 44.1	
VYHS				*e*		15 16 43.3	
VYHS				*e*	**SKSac**	**15 22 29.9**	**-0.2**
VYHS				*e*SS	**SS**	**15 32 33.6**	**-1.6**
VYHS	**Vyhne**	**114.62**	**32**	PDIF	**Pdif**	**15 11 58.2**	**+3.9**
VYHS	**Vyhne**	**114.62**	**32**	*e*PKP	PKPdf	15 15 44.1	0.0
VYHS				*e*PP	**PP**	**15 16 43.3**	**+0.8**
VYHS	**Vyhne**	**114.62**	**32**	⇑*e*SKSp	**SKSac**	**15 22 29.9**	**-0.2**
VYHS				*e*		15 23 40.5	
VYHS				*e*SP	SP	15 26 29.7	+12
VYHS				*e*SS	**SS**	**15 32 33.6**	**-1.6**
X22A	**Bernardo**	**114.67**	**297**	⇓PKiKP	**PKiKP**	**15 15 45.3**	**+0.4**
	baz=115								
NKC	**Novy Kostel**	**114.69**	**27**	*e*P	**Pdif**	**15 11 57.3**	**+2.7**
NKC				*e*		15 15 45.0	
NKC				*e*		15 19 20.1	
NKC				*e*		15 22 29.9	
NKC				*e*		15 26 24.1	
NKC				MLR	MLR		
	comp=Z,21μm,18.9s						
NKC	**Novy Kostel**	**114.69**	**27**	*e*PDIFF	**Pdif**	**15 11 57.3**	**+2.7**
NKC				*e*PKP	**PKiKP**	**15 15 45.0**	**+0.8**
NKC				*e*SKP		15 19 20.1	
NKC				*e*SKS	**SKSac**	**15 22 29.9**	**-0.4**
NKC				*e*XS	Sdif	15 24 36.2	+11
NKC				*e*PKKP	**PKKPab**	**15 26 24.1**	**-0.8**
NKC				AMS	AMS	16 01 10.0	
	comp=Z,21μm,18.9s						
V25A	**Rancho No Teng**	**114.74**	**299**	⇑PKiKP	**PKiKP**	**15 15 45.8**	**+0.8**
	baz=115								
T28A	**Walsh**	**114.74**	**302**	⇓PKiKP	**PKiKP**	**15 15 45.3**	**+0.5**
	baz=115								
ANMO	**Albuquerque**	**114.79**	**297**	*e*PKPdf	PKPdf	15 15 44.1	-1.1
ANMO				*e*PKPdf	**PKiKP**	**15 15 44.5**	**-0.7**
ANMO				PP	**PP**	**15 16 39.6**	**-4.4**
ANMO				SKP		15 19 19.6	
ANMO				PKKPab	**PKKPab**	**15 26 25.1**	**-1.2**
ANMO				LR	LR		
	comp=Z,32μm,20.0s						
ANMO	**Albuquerque**	**114.79**	**297**	PKP	PKPdf	15 15 46.9	+1.7
	comp=Z,4.9nm,1.0s,baz=185,slow=7.9,SNR=7.6						
ANMO				PP	**PP**	**15 16 39.6**	**-4.4**
	comp=Z,16nm,1.0s,baz=150,slow=6.6,SNR=7.3						
ANMO				SKP		15 19 19.6	
	comp=Z,3.6nm,1.0s,baz=172,slow=7.1,SNR=2.8						
ANMO				PKKPab	**PKKPab**	**15 26 25.1**	**-1.2**
	comp=Z,1.4nm,0.6s,baz=22,slow=3.2,SNR=2.9						
VRAC	**Vranov**	**114.81**	**30**	⇓*i*P	PKPdf	15 15 44.0	-0.4
U26A	**Atchley Ranch,**	**114.83**	**300**	⇑PKiKP	**PKiKP**	**15 15 46.0**	**+0.8**
	baz=115								
W23A	**Werner Place,**	**114.84**	**298**	⇑PKiKP	**PKiKP**	**15 15 46.2**	**+1.0**
	baz=115								
V24A	**Rampart Ranch,**	**114.93**	**299**	⇓PKiKP	**PKiKP**	**15 15 46.1**	**+0.6**
	baz=115								
PRU	**Pruhonice**	**114.94**	**28**	*e*P	**Pdif**	**15 11 59.3**	**+3.7**
PRU				*e*		15 15 45.7	
PRU				*e*		15 16 43.0	
PRU				*e*		15 19 20.0	
PRU				*e*		15 22 27.6	
PRU				*e*		15 26 22.1	
PRU				MLR	MLR		
	comp=Z,20μm,17.6s						
PRU	**Pruhonice**	**114.94**	**28**	*e*PDIFF	**Pdif**	**15 11 59.3**	**+3.7**
PRU				*e*PKP	**PKiKP**	**15 15 45.7**	**+1.0**
PRU				*e*PP	**PP**	**15 16 43.0**	**-1.7**
PRU				*e*SKP		15 19 20.0	
PRU				*e*SKS	**SKSac**	**15 22 27.6**	**-3.6**
PRU				*e*SKKS	**SKKSac**	**15 23 43.1**	**-0.7**
PRU				*e*XS		15 24 38.1	
PRU				*e*PKKP	**PKKPab**	**15 26 22.1**	**-1.7**
PRU				AMS	AMS	16 03 20.0	
	comp=Z,20μm,17.6s						
T27A	**Campo**	**114.95**	**301**	⇓PKiKP	**PKiKP**	**15 15 46.4**	**+1.1**
	baz=115								
X21A	**Alamocita Cree**	**114.97**	**296**	⇓PKiKP	**PKiKP**	**15 15 46.5**	**+0.9**
	baz=115								
PRA	**Prague**	**114.99**	**28**	PKP	PKPdf	15 15 49.0	+4.3
PRA				PP	**PP**	**15 16 44.0**	**-1.1**
PRA				PKKP	PKKPdf	15 26 35.0	-9.4
DYDN	**Diyadin**	**115.00**	**54**	*i* P	**PP**	**15 16 47.9**	**+2.3**
TESR		**115.04**	**38**	⇓*i*P	**PKPdf**	**15 15 48.2**	**+3.2**
U25A	**Circle Dot Ran**	**115.12**	**300**	⇑PKiKP	**PKiKP**	**15 15 46.9**	**+1.2**
	baz=115								
BMR	**Baia Mare**	**115.16**	**35**	⇓PKiKP	PKPdf	15 15 52.0	+6.9
BMR	**Baia Mare**	**115.16**	**35**	⇓*i*P	PKPdf	15 15 52.0	+6.9
214A	**Organ Pipe Nat**	**115.19**	**290**	⇑PKiKP	**PKiKP**	**15 15 47.1**	**+1.3**
	baz=115								
SCIA	**State Center**	**115.27**	**311**	PFAKE		15 16 00.0	+14
SCIA				LR	LR		
	comp=Z,27μm,20.0s						
TRPA	**Tarpa**	**115.30**	**34**	⇑*i*P	**PKPdf**	**15 15 49.5**	**+4.1**
TRPA	**Tarpa**	**115.30**	**34**	*e*PKPdf	**PKPdf**	**15 15 46.4**	**+1.0**
VIS	**Vishakhapatnam**	**115.31**	**99**	*e*P	**PKPdf**	**15 15 44.2**	**-2.2**
VIS				AMS	AMS	16 16 47.9	
	comp=Z,8μm,13.9s						
V23A	**Ortiz Mt. (NFS**	**115.34**	**298**	⇓PKiKP	**PKiKP**	**15 15 47.2**	**+1.0**
	baz=116								
X20A	**Quemado**	**115.37**	**295**	⇓PKiKP	**PKiKP**	**15 15 46.9**	**+0.6**
	baz=116								
DDEM	**Demirkent**	**115.39**	**51**	*i* P	**PKPdf**	**15 15 46.6**	**+0.6**
T26A	**Comanche Natio**	**115.42**	**301**	⇑PKiKP	**PKiKP**	**15 15 47.4**	**+1.1**
	baz=116								
PVCC	**Panska Ves**	**115.45**	**28**	*e*P	**Pdif**	**15 12 03.1**	**+5.2**
PVCC				*e*		15 15 45.9	
PVCC				*e*		15 19 22.8	
PVCC				*e*		15 22 30.9	
PVCC				*e*		15 26 21.5	
PVCC				MLR	MLR		
	comp=Z,30μm,19.2s						
PVCC	**Panska Ves**	**115.45**	**28**	*e*PDIFF	**Pdif**	**15 12 03.1**	**+5.2**
PVCC				*e*PKP	**PKiKP**	**15 15 45.9**	**+0.3**
PVCC				*e*SKP		15 19 22.8	
PVCC				*e*SKS	**SKSac**	**15 22 30.9**	**-2.2**
PVCC				*e*SKKS	**SKKSac**	**15 23 48.1**	**+0.9**
PVCC				*e*PKKP	**PKKPab**	**15 26 21.5**	**-0.1**
PVCC				AMS	AMS	16 01 10.0	
	comp=Z,30μm,19.2s						
DBAD	**Bademkaya**	**115.47**	**51**	*i* P	**PKPdf**	**15 15 47.3**	**+1.2**
MORC	**Moravsky Berou**	**115.48**	**30**	⇓PKiKP	PKPdf	15 15 52.7	+6.9
MORC	**Moravsky Berou**	**115.48**	**30**	*e*PKPdf	**PKPdf**	**15 15 45.5**	**-0.3**
MORC	**Moravsky Berou**	**115.48**	**30**	⇑*i*P	PKPdf	15 15 52.7	+6.9
BURAR	**Bucovina Array**	**115.60**	**36**	⇑*i*P	**PKPdf**	**15 15 47.7**	**+1.5**
DAGI	**Agillar**	**115.61**	**51**	*i* P	**PKPdf**	**15 15 51.0**	**+4.6**
BUR08	**Bucovina Ar. S**	**115.62**	**36**	*e*PKPdf	**PKPdf**	**15 15 45.3**	**-0.9**
BRG	**Berggiesshubel**	**115.63**	**27**	PDIF	**Pdif**	**15 12 01.0**	**+2.3**
BRG	**Berggiesshubel**	**115.63**	**27**	*e*PKP	**PKPdf**	**15 15 46.7**	**+0.7**
	comp=Z,49nm,1.7s						
BRG				*e*PP	**PP**	**15 16 46.5**	**-3.0**
	comp=Z,53nm,2.0s						
BRG				*e*		15 19 09.0	
BRG				SKS	**SKSac**	**15 22 29.0**	**-4.7**
BRG				SDIF	**Sdif**	**15 24 38.0**	**+5.5**
BRG				SS	**SS**	**15 32 42.0**	**-6.3**
BRG							
	comp=N,14μm,17.5s						
BRG							
	comp=E,16μm,18.5s						
BRG							
	comp=Z,22μm,16.6s						
BRG	**Berggiesshubel**	**115.63**	**27**	*e*PKIKP	**PKPdf**	**15 15 46.7**	**+0.7**
BRG						15 22 29.0	
BRG				SS	SS	15 32 42.0	-6.3
BRG				pmax	pmax		
	comp=Z,49nm,1.7s						
BRG				MLR	MLR		
	comp=N,14μm,17.5s						
BRG				MLR	MLR		
	comp=E,16μm,18.5s						
BRG				MLR	MLR		
	comp=Z,22μm,16.6s						
UZH	**Uzhgorod**	**115.68**	**34**	*c i*P	**Pdif**	**15 12 00.2**	**+1.2**
UZH				*e*		15 15 48.0	
UZH				*e*		15 16 51.2	
UZH				*e*PPP	PPP	15 19 21.2	
UZH				*e*		15 22 28.4	
UZH				*e*PS	**PS**	**15 26 29.8**	**+0.3**
UZH				*e*SS	SS	15 32 56.4	+7.4
UZH				MLR	MLR		
	comp=N,10μm,18.0s						
UZH				MLR	MLR		
	comp=E,6μm,18.0s						
UZH				MLR	MLR		
	comp=Z,6μm,18.0s						
OKC	**Ostrava-Krasne**	**115.69**	**31**	*e*P	**Pdif**	**15 12 02.7**	**+3.8**
OKC				*e*		15 16 51.0	
OKC				*e*		15 22 30.2	
OKC				*e*		15 26 23.8	
OKC				*e*SS	SS	15 32 46.0	-3.0
OKC				MLR	MLR		
	comp=Z,17μm,20.4s						
OKC	**Ostrava-Krasne**	**115.69**	**31**	*e*PDIFF	**Pdif**	**15 12 02.7**	**+3.8**
OKC				*e*PKP	**PKiKP**	**15 15 50.2**	**+4.1**
OKC				*e*PP	**PP**	**15 16 51.0**	**+1.1**
OKC				*e*SKS	**SKSac**	**15 22 30.2**	**-3.8**
OKC				*e*SKKS	**SKKSac**	**15 23 50.7**	**+1.9**
OKC				*e*PKKP	**PKKPab**	**15 26 23.8**	**+3.2**
OKC				*e*SS	**SS**	**15 32 46.0**	**-3.0**
OKC				AMS	AMS	16 01 10.0	
	comp=Z,17μm,20.4s						
CRVS	**Cervenica-Dubn**	**115.70**	**33**	*i* P	**Pdif**	**15 12 01.9**	**+2.8**
CRVS				*e*		15 15 45.5	
CRVS				*e*		15 16 50.7	
CRVS				*e*		15 22 33.5	
CRVS				*e*		15 26 24.4	
CRVS				*e*SS	SS	15 32 51.0	+1.6
CRVS				MLR	MLR		
	comp=Z,8μm,14.2s						
CRVS	**Cervenica-Dubn**	**115.70**	**33**	PDIF	**Pdif**	**15 12 01.9**	**+2.8**
CRVS	**Cervenica-Dubn**	**115.70**	**33**	*e*PKP	**PKPdf**	**15 15 45.5**	**-0.7**
CRVS				*e*PP	**PP**	**15 16 50.7**	**+0.6**
CRVS	**Cervenica-Dubn**	**115.70**	**33**	⇑*e*SKSp		15 22 33.5	
CRVS				*e*		15 23 45.2	
CRVS				*e*SP	SP	15 26 24.4	-3.4
CRVS				*e*SS	**SS**	**15 32 51.0**	**+1.7**
DPC	**Dobruska-Polom**	**115.70**	**29**	*e*P	**Pdif**	**15 12 02.9**	**+3.8**
DPC				*e*		15 15 47.3	
DPC				*e*		15 19 21.5	
DPC				*e*		15 22 26.9	
DPC				*e*		15 26 21.1	
DPC				MLR	MLR		
	comp=Z,28μm,18.6s						
DPC	**Dobruska-Polom**	**115.70**	**29**	*e*PDIFF	**Pdif**	**15 12 02.9**	**+3.8**
DPC				*e*PKP	**PKiKP**	**15 15 47.3**	**+1.1**
DPC				*e*PP	**PP**	**15 16 46.2**	**-3.9**
DPC				*e*SKP		15 19 21.5	
DPC				*e*SKS	SKSac	15 22 26.9	-7.3
DPC				*e*SKKS	**SKKSac**	**15 23 49.8**	**+0.8**
DPC				*e*XS		15 24 41.8	
DPC				*e*PKKP	**PKKPab**	**15 26 21.1**	**+0.5**
DPC				AMS	AMS	16 02 10.0	
	comp=Z,28μm,18.6s						
ARTV	**Artvin**	**115.71**	**51**	*i* P	**PP**	**15 16 50.1**	**-0.4**
T25A	**Trinidad**	**115.74**	**300**	⇓PKiKP	**PKiKP**	**15 15 47.8**	**+0.8**
	baz=116								
DBOC	**Borcka**	**115.74**	**51**	*i* P	**PKPdf**	**15 15 48.8**	**+2.2**
S26A	**Kim**	**115.74**	**301**	⇑PKiKP	**PKiKP**	**15 15 47.9**	**+1.1**
	baz=116								
UPC	**Upice**	**115.78**	**29**	*e*PKIKP	**PKPdf**	**15 15 47.1**	**+0.8**
UPC				*e*		15 16 58.0	
UPC				*e*		15 19 23.3	
UPC	**Upice**	**115.78**	**29**	*e*PKP	**PKPdf**	**15 15 47.1**	**+0.8**
UPC				*e*PP	PP	15 16 58.0	+7.4
UPC				*e*SKP		15 19 23.3	
V22A	**San Miguel Ran**	**115.81**	**297**	⇑PKiKP	**PKiKP**	**15 15 48.1**	**+1.0**
	baz=116								
CLL	**Collm**	**115.82**	**27**	*e*P	**Pdif**	**15 12 05.0**	**+5.5**
CLL				*e*		15 15 47.0	
CLL				*e*		15 16 59.0	
CLL				*e*		15 22 37.0	
CLL				pmax	pmax		
	comp=Z,40nm,1.6s						
CLL				MLR	MLR		
	comp=Z,27μm,20.0s						
CLL	**Collm**	**115.82**	**27**	*e*pPdif	**Pdif**	**15 12 05.0**	**+5.5**
CLL				*e*PKiKP	**PKiKP**	**15 15 47.0**	**+0.7**
	comp=Z,40nm,1.6s						
CLL				*e*PP	PP	15 16 59.0	+8.1
CLL				*e*		15 17 15.0	
CLL				*i* PPP	PPP	15 19 21.2	
	comp=Z,19nm,1.0s						
CLL				*e*SKSac	**SKSac**	**15 22 37.0**	**+2.6**
CLL				*e*SKKSac	**SKKSac**	**15 23 52.0**	**+2.4**
CLL				*e*sSdiff	**sSdif**	**15 24 45.0**	**+1.2**
CLL				*e*PKKPbc	**PKKPbc**	**15 26 18.0**	**+0.8**
CLL				*i* PKKPab	**PKKPab**	**15 26 21.8**	**+1.9**
	comp=Z,9.0nm,0.7s						
CLL				*e*pPKKPab		15 26 30.0	
CLL				*e*PS	**PS**	**15 26 31.0**	**+0.3**
CLL				*e*sPS		15 26 39.0	
CLL				*e*(PPS)		15 27 32.0	
CLL				*e*		15 29 00.0	
CLL				*e*SKKPbc	**SKKPbc**	**15 30 05.0**	**+1.0**
CLL				*e*SKKPdf	**SKKPdf**	**15 30 18.0**	**+0.6**
CLL				*e*SS	SS	15 32 59.0	+8.2
CLL				*e*SKKSacre		15 33 51.0	
CLL				*e*SSS	SSS	15 37 06.0	
CLL				*e*PPPPrev		15 38 06.0	
CLL				*e*		15 39 24.0	
CLL				*e*SSSS		15 40 30.0	
CLL				LmV		16 01 00.0	
	comp=Z,27μm,20.0s						
CLL				LmH		16 02 00.0	
	comp=N,18μm,20.2s						
CLL				LmH		16 02 00.0	
	comp=E,19μm,19.6s						
U23A	**El Rito**	**115.84**	**298**	⇓PKiKP	**PKiKP**	**15 15 48.3**	**+1.1**
	baz=116								
W20A	**Ramah**	**115.86**	**296**	⇑PKiKP	**PKiKP**	**15 15 48.2**	**+0.9**
	baz=116								
RAC	**Raciborz**	**115.92**	**31**	*e*P	**Pdif**	**15 12 03.6**	**+3.6**
RAC				*e*		15 16 52.9	
GNI	**Garni**	**115.94**	**54**	PKP	**PKPdf**	**15 15 47.1**	**0.0**
GNI				PP	**PP**	**15 16 53.0**	**+0.9**
GNI	**Garni**	**115.94**	**54**	PKPdf	**PKPdf**	**15 15 49.6**	**+2.5**
	SNR=6.1								
GNI	**Garni**	**115.94**	**54**	PKP	**PKPdf**	**15 15 47.1**	**0.0**
	comp=E,2.2nm,0.4s,baz=36,slow=13,SNR=3.4						
GNI				PP	**PP**	**15 16 52.9**	**+0.9**
	comp=E,4.0nm,0.5s,baz=14,slow=22,SNR=4.2						
KOLS	**Kolonicke sedl**	**115.95**	**34**	*i* P	**Pdif**	**15 12 05.8**	**+5.6**
KOLS				*e*		15 15 47.0	
KOLS				*e*		15 16 52.0	
KOLS				*e*		15 22 36.1	
KOLS				*e*SS	SS	15 32 55.1	+2.5
KOLS				MLR	MLR		
	comp=Z,10μm,16.4s						
KOLS	**Kolonicke sedl**	**115.95**	**34**	PDIF	**Pdif**	**15 12 05.8**	**+5.6**
KOLS	**Kolonicke sedl**	**115.95**	**34**	*e*PKP	**PKPdf**	**15 15 47.0**	**+0.3**
KOLS				*e*PP	**PP**	**15 16 52.0**	**+0.1**
KOLS	**Kolonicke sedl**	**115.95**	**34**	⇑*e*SKSp	**SKSac**	**15 22 36.1**	**+1.0**
KOLS				*e*		15 23 51.7	
KOLS				*e*SP	**SP**	**15 26 20.8**	**-9.2**
KOLS				*e*SS	**SS**	**15 32 55.1**	**+2.5**
T24A	**Torres, Weston**	**115.96**	**300**	⇑PKiKP	**PKiKP**	**15 15 48.1**	**+0.6**
	baz=116								
X18A	**Snowflake**	**116.01**	**294**	⇑PKiKP	**PKiKP**	**15 15 48.5**	**+1.0**
	baz=116								
R27A	**Eads**	**116.02**	**302**	⇓PKiKP	**PKiKP**	**15 15 48.3**	**+1.0**
	baz=116								
DGPR	**DIGLIPUR**	**116.02**	**110**	*e*P	**PKPdf**	**15 15 48.5**	**+0.6**
V21A	**Milan**	**116.04**	**297**	⇓PKiKP	**PKiKP**	**15 15 48.8**	**+1.2**
	baz=116								
SIM	**Simferopol'**	**116.09**	**44**	*i* P	**Pdif**	**15 12 06.0**	**+5.1**
SIM				*e*		15 16 52.0	
SIM				*e*		15 22 35.0	
SIM				*e*PPS	PPS	15 27 49.0	
NGP	**Nagpur**	**116.09**	**93**	*e*P	**PKPdf**	**15 15 49.2**	**+1.4**
NGP				*ex*	x	15 34 14.5	
KIS	**Kishinev**	**116.15**	**39**	*e*P	**Pdif**	**15 12 06.0**	**+4.9**
KIS				*e*		15 15 46.0	
KIS				*e*PPP	PPP	15 19 18.0	
KIS				*e*		15 22 34.0	
KIS				*i* PS	**PS**	**15 26 36.0**	**+2.2**
KIS				*i* PPS	PPS	15 27 50.0	
KIS				*i* SS	SS	15 32 50.0	-5.2
KIS				pmax	pmax		
	comp=Z,900nm,13.0s						
KIS				pmax	pmax		
	comp=Z,3μm,8.0s						
KIS	**Kishinev**	**116.15**	**39**	*e*P	**Pdif**	**15 12 06.0**	**+4.9**
	comp=Z,900nm,13.0s						
KIS	**Kishinev**	**116.15**	**39**	*e*PKP	**PKPdf**	**15 15 46.0**	**-1.1**
KIS	**Kishinev**	**116.15**	**39**	*i* PP	PP	15 16 46.0	-7.2
	comp=Z,3μm,8.0s						
KIS	**Kishinev**	**116.15**	**39**	*e*PPP	PPP	15 19 18.0	
KIS				*e*SKS	**SKSac**	**15 22 34.0**	**-1.9**
KIS				*i* SKKS	**SKKSac**	**15 23 50.0**	**-2.0**
KIS				*i* S	Sdif	15 24 54.0	+17
KIS	**Kishinev**	**116.15**	**39**	*i* PS	PS	15 26 36.0	+2.2
KIS	**Kishinev**	**116.15**	**39**	*i* PPS	PPS	15 27 50.0	
KIS				*i* SS	SS	15 32 50.0	-5.2
KIS				*i* SSS	SSS	15 36 44.0	
KIS				LRM	MLR	16 10 08.0	
	comp=Z,18μm,18.0s						
KSP	**Ksiaz**	**116.15**	**29**	*i* PKIKP	**PKPdf**	**15 15 49.0**	**+2.0**
KSP				*e*		15 16 54.0	
KSP				*e*		15 22 33.0	
KSP				*e*SP	SP	15 26 31.0	-0.8
KSP				MLR	MLR		
	comp=Z,51μm,19.1s						
KSP	**Ksiaz**	**116.15**	**29**	*e*PKiKP	**PKiKP**	**15 15 49.2**	**+2.2**
KSP				*e*PP	**PP**	**15 16 53.9**	**+0.7**
KSP				*e*SKSac	**SKSac**	**15 22 36.6**	**+0.9**
KSP				*e*SKKSac	**SKKSac**	**15 23 49.4**	**-2.5**
KSP				*e*Sdiff	Sdif	15 24 48.5	+12
KSP				*e*PKKP	**PKKPab**	**15 26 19.7**	**+1.1**
KSP				*e*		15 32 41.9	
KSP				*e*SS	SS	15 33 02.5	+7.3
KSP				LMZ	LR	16 02 38.2	
U22A	**Llaves**	**116.17**	**298**	⇑PKiKP	**PKiKP**	**15 15 48.7**	**+0.9**
	baz=116								
S25A	**Robets Cordova**	**116.19**	**300**	⇓PKiKP	**PKiKP**	**15 15 48.6**	**+0.9**
	baz=116								
R26A	**Arlington**	**116.31**	**301**	⇓PKiKP	**PKiKP**	**15 15 49.0**	**+1.1**
	baz=117								
T23A	**Casias Ranch,**	**116.36**	**299**	⇓PKiKP	**PKiKP**	**15 15 49.3**	**+1.1**
	baz=117								
V20A	**Brimhall**	**116.40**	**296**	⇑PKiKP	**PKiKP**	**15 15 49.1**	**+0.9**
	baz=117								
W18A	**Petrified Fore**	**116.41**	**295**	⇓PKiKP	**PKiKP**	**15 15 49.1**	**+0.9**
	baz=117								
Z14A	**Wintersburg**	**116.42**	**291**	⇑PKiKP	**PKiKP**	**15 15 49.1**	**+1.0**
	baz=117								
OJC	**Ojcow**	**116.46**	**32**	*i* PKIKP	**PKPdf**	**15 15 49.4**	**+1.8**
OJC				*e*		15 16 56.1	
OJC				*e*		15 22 35.3	
OJC				*e*SS	SS	15 33 01.1	+1.9
OJC	**Ojcow**	**116.46**	**32**	*e*Pdiff	**Pdif**	**15 12 07.3**	**+4.9**
OJC				*e*PKiKP	**PKPdf**	**15 15 49.4**	**+1.8**
OJC				*e*PP	**PP**	**15 16 56.1**	**+0.7**
OJC				*e*SKSac	**SKSac**	**15 22 35.3**	**-1.6**
OJC				*e*SKKSac	**SKKSac**	**15 23 55.4**	**+1.4**
OJC				*e*SS	**SS**	**15 33 01.1**	**+1.9**
OJC				L	L	16 01 20.9	
	comp=Z,19μm,21.4s						
S24A	**Houchin Ranch,**	**116.51**	**300**	⇑PKiKP	**PKiKP**	**15 15 49.5**	**+0.9**
	baz=117								
AKH	**Akhalkalaki**	**116.51**	**52**	P	**PKPdf**	**15 15 48.1**	**-0.1**
R25A	**Fountain Ranch**	**116.53**	**301**	⇓PKiKP	**PKiKP**	**15 15 49.3**	**+0.9**
	baz=117								
KSCO	**Kaye Shedlock'**	**116.56**	**302**	⇑PKiKP	**PKiKP**	**15 15 49.8**	**+1.4**
	baz=117								
U21A	**Nageezi**	**116.57**	**297**	⇑PKiKP	**PKiKP**	**15 15 49.6**	**+1.0**
	baz=117								
X16A	**Lo Mia Camp, P**	**116.60**	**293**	⇑PKiKP	**PKiKP**	**15 15 49.8**	**+1.2**
	baz=117								
KWP	**Kalwaria Pacla**	**116.71**	**34**	*e*PKPdf	**PKPdf**	**15 15 46.7**	**-1.4**
KWP				LR	LR		
	comp=Z,25μm,19.0s						
KWP	**Kalwaria Pacla**	**116.71**	**34**	⇑*i*P	**PKPdf**	**15 15 49.3**	**+1.2**
KWP	**Kalwaria Pacla**	**116.71**	**34**	*e*PKP	**PKPdf**	**15 15 46.9**	**-1.2**
KWP				*e*PKiKP	**PKPdf**	**15 15 49.2**	**+1.2**
KWP				*e*PP	**PP**	**15 16 57.8**	**+0.7**
KWP				*e*SKSac	**SKSac**	**15 22 40.6**	**+2.7**
KWP				*e*SKKSac	**SKKSac**	**15 23 53.8**	**-1.9**
KWP				*e*Sdiff	Sdif	15 25 07.0	+25
KWP				*e*PKKP	**PKKPab**	**15 26 20.9**	**+4.6**
KWP				*e*SS	**SS**	**15 33 05.6**	**+3.1**
KWP

TBLG S PP 15 17 09.1 +7.8
DGRG David-gareji 117.30 54 P PKPdf 15 15 45.0 -4.6
DGRG S PP 15 17 06.5 +5.1
S22A 4UR Ranch, Cre 117.30 299 ⇑PKiKP PKiKP 15 15 51.0 +0.9
baz=118
DVTC Desert V Tower 117.31 288 ⇑PKiKP PKiKP 15 15 51.2 +1.2
baz=118
P26A Davis Ranch, A 117.32 302 ⇓PKiKP PKiKP 15 15 50.7 +0.9
baz=118
SWSC Sam W. Stewart 117.40 289 ⇑PKiKP PKiKP 15 15 51.4 +1.4
baz=118
COWI Conover 117.43 316 ePKPdf PKPdf 15 15 48.1 -1.5
COWI LR LR
comp=Z,16µm,22.0s
Y12C Blythe 117.47 290 ⇓PKiKP PKiKP 15 15 51.0 +0.9
baz=118
WUAZ Wupatki 117.48 294 ePKPdf PKPdf 15 15 49.8 -0.5
WUAZ LR LR
comp=Z,19µm,19.0s
WUAZ Wupatki 117.48 294 ⇓PKiKP PKiKP 15 15 50.9 +0.6
baz=118
O27A Beecher Island 117.48 303 ⇓PKiKP PKiKP 15 15 51.2 +1.2
baz=118
ONI Oni 117.50 52 P PKPdf 15 15 48.2 -1.7
ONI S PP 15 17 11.9 +9.1
Q24A Divide 117.59 301 ⇓PKiKP PKiKP 15 15 51.4 +0.8
baz=118
MVCO Mesa Verde 117.59 297 ePKPdf PKPdf 15 15 49.4 -1.1
MVCO LR LR
comp=Z,28µm,20.0s
MVCO Mesa Verde 117.59 297 ⇓PKiKP PKiKP 15 15 51.5 +1.0
baz=118
BAR Barrett 117.60 288 ePKPdf PKPdf 15 15 51.0 +0.6
P25A Willow Gulch B 117.63 302 ⇑PKiKP PKiKP 15 15 51.8 +1.4
baz=118
S21A Coal Bank Pass 117.65 298 ⇑PKiKP PKiKP 15 15 51.6 +0.9
baz=118
MONP Monument Peak 117.66 288 ⇓PKiKP PKiKP 15 15 51.8 +1.0
baz=118
R22A Saguache, Gunn 117.67 299 ⇑PKiKP PKiKP 15 15 51.7 +0.9
baz=118
PDMCI Parker Dam,Lak 117.75 291 ⇑PKiKP PKiKP 15 15 51.7 +1.1
baz=118
ZEI Tsey 117.83 52 i PKiKP PKPdf 15 15 52.6 +1.8
ZEI e 15 17 12.8
ZEI e 15 22 45.5
ZEI eSS SS 15 33 35.1 +17
ZEI pmax pmax
comp=Z,18nm,1.2s
Q23A Hartsel 117.83 300 ⇑PKiKP PKiKP 15 15 51.7 +0.6
baz=118
BC3 Big Chuckawall 117.83 289 ⇓PKiKP PKiKP 15 15 51.9 +1.0
baz=118
O26A Horse Wrangler 117.88 303 ⇑PKiKP PKiKP 15 15 51.7 +0.8
baz=118
OGNE Ogallala 117.93 304 ePKPdf PKPdf 15 15 50.9 +0.1
OGNE LR LR
comp=Z,24µm,20.0s
OGNE Ogallala 117.93 304 ⇓PKiKP PKiKP 15 15 51.8 +0.9
baz=118
SPMN St. Paul 117.97 313 ⇑PKiKP PKiKP 15 15 52.0 +1.3
baz=118
N27A Anderson Farm, 118.02 304 ⇑PKiKP PKiKP 15 15 52.1 +0.9
baz=118
S20A Disappointment 118.04 298 ⇓PKiKP PKiKP 15 15 52.1 +0.6
baz=118
IRM Iron Mountain 118.11 290 ⇑PKiKP PKiKP 15 15 52.2 +0.9
baz=118
O25A Wiggins 118.11 302 ⇓PKiKP PKiKP 15 15 52.2 +0.9
baz=118
ECSD EROS Data Cent 118.12 310 ePKPdf PKPdf 15 15 49.9 -1.1
ECSD LR LR
comp=Z,26µm,22.0s
R21A Cimarron 118.13 298 ⇓PKiKP PKiKP 15 15 52.6 +1.0
baz=118
BEL Belsk 118.19 31 ePKP PKPdf 15 15 53.0 +2.2
BEL ePKiKP PKiKP 15 15 55.9 +5.0
BEL ePP PP 15 17 03.7 -3.7
BEL eSKKSac SKKSac 15 24 06.8 +1.4
BEL eSdiff Sdif 15 25 12.3 +19
BEL ePKKP PKKPab 15 26 22.3 +13
BEL eSP SP 15 26 54.7 +4.5
BEL eSS SS 15 33 23.2 +1.5
BEL LMZ LR 16 00 25.9
P23A Jefferson 118.22 300 ⇑PKiKP PKiKP 15 15 53.1 +1.2
baz=118
JBP Jabalpur 118.25 93 ⇓ix PKPdf 15 15 55.4 +3.5
JBP eS SKSac 15 22 43.6 -1.1
KBZ Khabaz 118.25 51 PKiKP PKPdf 15 15 50.8 -0.4
KBZ 15 17 07.4
KBZ Khabaz 118.25 51 PKP PKPdf 15 15 50.8 -0.4
KBZ PP PP 15 17 07.4 -0.5
KBZ SKP 15 19 25.1
KBZ Khabaz 118.25 51 PKP PKPdf 15 15 50.8 -0.4
comp=Z,5.9nm,0.7s,baz=69,slow=2.9,SNR=10.0
KBZ PP PP 15 17 07.4 -0.5
comp=Z,4.9nm,0.9s,baz=198,slow=13,SNR=2.3
KBZ SKP 15 19 25.1
comp=Z,11nm,0.8s,baz=209,slow=3.2,SNR=6.3
Q22A Crested Butte, 118.26 299 ⇓PKiKP PKiKP 15 15 53.1 +1.2
baz=118
PFO Pinyon Flat Ob 118.27 289 PFAKE 15 16 00.0 +8.2
PFO LR LR
comp=Z,29µm,20.0s
PFO Pinyon Flat Ob 118.27 289 ⇑PKiKP PKiKP 15 15 53.1 +1.3
baz=118
W13A Hualapai Mount 118.29 292 ⇓PKiKP PKiKP 15 15 53.1 +1.2
baz=118
N26A Koester Ranch, 118.33 303 ⇓PKiKP PKiKP 15 15 52.6 +0.9
baz=119
R20A Redvale 118.35 298 ⇓PKiKP PKiKP 15 15 53.2 +1.2
baz=119
KIV Kislovodsk 118.36 50 i P Pdif 15 12 11.8 +0.7
KIV i 15 15 51.1
KIV e 15 17 09.0
KIV e 15 22 44.2
KIV ePS PS 15 26 55.6 +1.4
KIV eSS SS 15 33 30.0 +5.7
KIV eSSS SSS 15 37 52.3
KIV pmax pmax
comp=Z,53nm,1.1s
BELC Belle Mtn. Jos 118.37 289 ⇑PKiKP PKiKP 15 15 53.1 +1.0
baz=119
PV01 Paradox Valley 118.39 298 ePKPdf PKPdf 15 15 51.4 -0.6
ISCO Idaho Springs 118.48 301 ePKiKP PKPdf 15 15 52.7 +0.5
ISCO MLR MLR
comp=Z,15µm,20.0s
ISCO Idaho Springs 118.48 301 ePKPdf PKPdf 15 15 52.7 +0.5
ISCO LR LR
comp=Z,15µm,20.0s
ISCO Idaho Springs 118.48 301 i PKiKP PKiKP 15 15 53.3 +1.1
baz=119
O24A Longmont 118.52 301 ⇑PKiKP PKiKP 15 15 53.1 +1.0
baz=119
Q21A Lamborn Mesa, 118.53 299 ⇓PKiKP PKiKP 15 15 53.5 +1.3
baz=119
SMCO Snowmass 118.55 299 ePKPdf PKPdf 15 15 53.0 +0.5
M27A Reverse DX Ran 118.56 304 ⇑PKiKP PKiKP 15 15 53.6 +1.5
baz=119
MURC Murrieta 118.61 288 ⇓PKiKP PKiKP 15 15 53.7 +1.4
baz=119
GKP Gorka Klasztor 118.62 29 ePKP PKPdf 15 15 52.7 +1.1
GKP ePKiKP PKiKP 15 15 54.5 +2.9
GKP ePP PP 15 17 11.1 +0.8
GKP eSKSac SKSac 15 22 43.7 -0.9
GKP eSKKSac SKKSac 15 24 07.1 -1.0
GKP eSdiff Sdif 15 25 11.8 +15
GKP eSS SS 15 33 28.6 +1.5
GKP LMZ LR 16 00 28.4
U15A North Rim 118.65 294 ⇓PKiKP PKiKP 15 15 53.4 +0.7
baz=119
S18A Hurst Farm, Bl 118.65 296 ⇓PKiKP PKiKP 15 15 53.7 +1.0
baz=119
N25A Grover 118.68 303 ⇑PKiKP PKiKP 15 15 53.1 +0.6
baz=119
SCI San Clemente I 118.74 287 ⇑PKiKP PKiKP 15 15 53.8 +1.2
baz=119
PV04 Paradox Valley 118.75 297 ePKPdf PKPdf 15 15 53.0 +0.3
P22A Eagle 118.80 300 ⇓PKiKP PKiKP 15 15 54.0 +1.1
baz=119
M26A McRoberts Ranc 118.83 304 ⇑PKiKP PKiKP 15 15 53.7 +1.0
baz=119
GMRC Granite Mounta 118.85 290 ⇑PKiKP PKiKP 15 15 53.9 +1.0
baz=119
Q20A Ridgley Place, 118.94 298 ⇓PKiKP PKiKP 15 15 53.9 +0.9
baz=119
O23A Lake Granby, G 118.95 301 ⇑PKiKP PKiKP 15 15 54.2 +1.1
baz=119
BBRC Big Bear Solar 119.02 289 ⇓PKiKP PKiKP 15 15 54.2 +0.8
baz=119
CIS Catalina Islan 119.02 287 ⇑PKiKP PKPdf 15 15 52.3 -0.9
baz=119
N24A Carr 119.02 302 ⇓PKiKP PKiKP 15 15 54.4 +1.3
baz=119
P21A Newcastle 119.05 299 ⇓PKiKP PKiKP 15 15 54.2 +0.9
baz=119
SCHQ Schefferville 119.07 335 ePKPdf PKPdf 15 15 51.0 -1.4
SCHQ PKP PKPdf 15 15 51.3 -1.2
SCHQ PP PP 15 17 11.7 -1.7
SCHQ SKP 15 19 25.4
SCHQ Schefferville 119.07 335 PKP PKPdf 15 15 51.3 -1.2
comp=Z,28nm,0.6s,baz=63,slow=1.3,SNR=38
SCHQ PP PP 15 17 11.7 -1.7
comp=Z,8.5nm,0.9s,baz=184,slow=8.1,SNR=1.9
SCHQ SKP 15 19 25.4
comp=Z,17nm,0.7s,baz=95,slow=1.3,SNR=9.4
M25A Palm-Egli Farm 119.18 303 ⇑PKiKP PKiKP 15 15 54.8 +1.4
baz=120
O22A Kremmling 119.18 300 ⇓PKiKP PKiKP 15 15 54.4 +0.7
baz=120
KKM Kota Kinabalu 119.18 137 PFAKE 15 16 10.0 +16
KKM LR LR
comp=Z,24µm,19.0s
HEC Hector,Ludlow 119.21 290 ⇓PKiKP PKiKP 15 15 54.4 +0.8
baz=120
FMP Fort Macarthur 119.22 287 ⇑PKiKP PKPdf 15 15 52.8 -0.6
baz=120
L26A Underwood Farm 119.28 304 ⇓PKiKP PKiKP 15 15 54.4 +0.9
baz=120
BFSC Mount Baldy Ra 119.35 288 ⇑PKiKP PKiKP 15 15 55.0 +1.1
baz=120
Q19A Hogan Spring (119.37 298 ⇓PKiKP PKiKP 15 15 55.0 +1.2
baz=120
MAK Makhachkala 119.42 54 i P Pdif 15 12 20.1 +4.4
MAK e 15 17 19.4
MAK ePPP PPP 15 19 56.1
MAK e 15 22 49.2
MAK e 15 23 06.3
MAK e 15 33 44.3
MAK eSSS SSS 15 38 01.9
MAK pmax pmax
comp=Z,342nm,1.4s
MAK MLR MLR
comp=Z,43µm,17.0s
MAK MLR MLR
comp=N,21µm,15.0s
P20A De Beque 119.44 299 ⇑PKiKP PKiKP 15 15 55.2 +1.2
baz=120
K27A Flueckinger Fa 119.48 305 ⇓PKiKP PKiKP 15 15 55.0 +1.1
baz=120
TUQ Turquoise Moun 119.51 290 ⇓PKiKP PKiKP 15 15 55.4 +1.2
baz=120
N23A Red Feather La 119.53 301 ⇓PKiKP PKiKP 15 15 55.1 +0.9
baz=120
M24A Cheyenne 119.53 302 ⇑PKiKP PKiKP 15 15 55.4 +1.2
baz=120
AKASG Malin Array Be 119.55 37 PKiKP PKPdf 15 15 52.2 -1.3
AKASG 15 17 15.6
AKASG Malin Array Be 119.55 37 PKP PKPdf 15 15 52.2 -1.3
AKASG PP PP 15 17 15.6 -1.2
AKASG SKP 15 19 28.0
AKASG PKKPbc PKKPab 15 26 06.2 +2.2
AKASG Malin Array Be 119.55 37 PKP PKPdf 15 15 52.2 -1.3
comp=N,3.2nm,0.4s,baz=233,slow=1.9,SNR=20
AKASG PP PP 15 17 15.6 -1.2
comp=N,1.1nm,0.4s,baz=206,slow=6.6,SNR=4.6
AKASG SKP 15 19 28.0
comp=N,10nm,0.8s,baz=234,slow=1.8,SNR=6.5
AKASG PKKPbc PKKPab 15 26 06.2 +2.2
comp=N,0.9nm,0.4s,baz=28,slow=5.0,SNR=4.1
BRSD Miller 119.63 308 ⇑PKiKP PKiKP 15 15 54.9 +0.9
baz=120
PHWY Pilot Hill 119.66 302 ePKPdf PKPdf 15 15 52.7 -1.8
N22A Wattenberg Ran 119.67 301 ⇓PKiKP PKiKP 15 15 55.5 +1.0
baz=120
DECC Green Verdugo 119.68 288 ⇓PKiKP PKiKP 15 15 55.5 +1.0
baz=120
L25A Engebretsen Ra 119.74 303 ⇑PKiKP PKiKP 15 15 55.7 +1.2
baz=120
BSD Bornholm Skovb 119.79 26 i PKiKP PKPdf 15 15 54.2 +0.4
BSD MLR MLR
comp=Z,16µm,18.0s
BSD Bornholm Skovb 119.79 26 i P PKPdf 15 15 54.2 +0.4
BSD
comp=Z,16µm,18.0s
COP Copenhagen 119.79 25 i PKiKP PKPdf 15 15 56.2 +2.5
COP i 15 17 21.4
COP MLR MLR
comp=Z,9µm,20.0s
COP Copenhagen 119.79 25 i P PKPdf 15 15 56.2 +2.5
COP i 15 17 21.4
COP i 15 27 19.9
COP
comp=Z,9µm,20.0s
P19A Cripple Cowboy 119.80 298 ⇓PKiKP PKiKP 15 15 55.5 +0.8
baz=120
GSC Goldstone 119.82 289 ePKiKP PKPdf 15 15 54.9 +0.2
GSC Goldstone 119.82 289 ePKPdf PKPdf 15 15 54.9 +0.2
GSC Goldstone 119.82 289 ⇓PKiKP PKiKP 15 15 56.1 +1.3
baz=120
EYMN Ely 119.84 316 ePKPdf PKPdf 15 15 52.4 -1.8
EYMN LR LR
comp=Z,17µm,21.0s
K26A Motz Farm, Whi 119.87 304 ⇑PKiKP PKiKP 15 15 55.8 +1.2
baz=120
MUD Monsted U'grnd 119.87 22 ⇑i PKiKP PKPdf 15 15 55.7 +1.8
MUD i 15 17 16.0
MUD pmax pmax
comp=Z,21nm,1.0s
MUD MLR MLR
comp=Z,11µm,21.0s
MUD Monsted U'grnd 119.87 22 ⇑i P PKPdf 15 15 55.7 +1.8
comp=Z,21nm,1.0s
MUD i 15 17 16.0
MUD i 15 27 17.8
MUD
comp=Z,11µm,20.0s
O20A White River Ci 119.89 299 ⇓PKiKP PKiKP 15 15 56.0 +1.1
baz=120
M23A Laramie 119.91 302 ⇑PKiKP PKiKP 15 15 56.0 +1.1
baz=120
EDW2 Edwards Air Fo 120.03 288 ⇓PKiKP PKiKP 15 15 55.9 +0.8
baz=120
L24A Wheatland 120.05 303 ⇑PKiKP PKiKP 15 15 56.0 +1.0
baz=120
SRU San Rafael 120.06 297 ePKiKP PKPdf 15 15 55.3 +0.2
SRU San Rafael 120.06 297 ePKPdf PKPdf 15 15 55.3 +0.2
SRU San Rafael 120.06 297 ⇑PKiKP PKiKP 15 15 56.0 +0.8
baz=120
CCUT Cedar City 120.06 294 ePKPdf PKPdf 15 15 54.6 -0.6
SHOC Shoshone 120.06 290 ⇑PKiKP PKiKP 15 15 56.3 +1.2
baz=120
K25A Mack Ranch, Ha 120.08 304 ⇓PKiKP PKiKP 15 15 56.3 +1.2
baz=120
BSC Santa Cruz Isl 120.09 286 ⇑PKiKP PKiKP 15 15 56.1 +0.9
baz=120
N21A Black Mountain 120.09 300 ⇓PKiKP PKiKP 15 15 56.3 +1.0
baz=120
OSI Osito Adit 120.16 288 PKiKP PKiKP 15 15 56.5 +1.1
baz=120
Q16A Castle Valley 120.19 296 ⇑PKiKP PKiKP 15 15 56.5 +1.0
baz=120
M22A Cedar Creek Ra 120.23 301 ⇑PKiKP PKiKP 15 15 56.7 +1.1
baz=120
ARUT Antelope Range 120.29 294 ePKiKP PKPdf 15 15 55.8 +0.2
ARUT Antelope Range 120.29 294 ePKPdf PKPdf 15 15 55.8 +0.2
MSU Marysvale 120.31 295 ePKiKP PKPdf 15 15 55.8 +0.1
MSU Marysvale 120.31 295 ePKPdf PKPdf 15 15 55.8 +0.1
MVU Marysvale 120.32 295 ePKKPdf PKPdf 15 15 55.7 -0.1
P18A Preston Nutter 120.36 297 ⇓PKiKP PKiKP 15 15 56.5 +0.5
baz=121
LRMC Laurel Mountai 120.38 289 ⇓PKiKP PKiKP 15 15 56.9 +1.0
baz=121
O19A Miners Draw (B 120.41 299 ⇑PKiKP PKiKP 15 15 56.9 +1.1
baz=121
L23A Garrett 120.43 302 ⇓PKiKP PKiKP 15 15 56.8 +0.8
baz=121
P17A Butcher Ranch, 120.45 297 ⇑PKiKP PKiKP 15 15 56.8 +0.8
baz=121
N20A Spence Gulch, 120.48 300 ⇓PKiKP PKiKP 15 15 57.2 +1.1
baz=121
TMUT Trail Mountain 120.51 296 ePKPdf PKPdf 15 15 56.2 0.0
K24A Anderson Ranch 120.56 303 ⇑PKiKP PKiKP 15 15 57.3 +1.3
baz=121
ARVC Arvin 120.63 288 ⇓PKiKP PKiKP 15 15 57.4 +1.2
baz=121
L22A Ellis Ranch, M 120.67 302 ⇓PKiKP PKiKP 15 15 57.4 +1.1
baz=121
M21A Separation Pea 120.72 301 ⇓PKiKP PKiKP 15 15 57.3 +0.8
baz=121
MPMC Manual Prospec 120.76 289 ⇓PKiKP PKiKP 15 15 57.4 +0.7
baz=121
SUW Suwalki 120.78 32 ePKiKP PKPdf 15 15 55.1 -0.7
SUW Suwalki 120.78 32 ePKPdf PKPdf 15 15 55.1 -0.7
SUW Suwalki 120.78 32 ePKP PKPdf 15 15 54.9 -0.8
SUW ePKiKP PKiKP 15 15 56.2 +0.4
SUW ePP PP 15 17 24.8 -0.4
SUW eSKSac SKSac 15 22 51.4 -0.7
SUW eSKKSac SKKSac 15 24 20.3 -2.0
SUW ePKKP PKKPbc 15 26 01.9 +2.6
SUW eSP SP 15 27 00.7 -13
SUW eSS SS 15 33 51.6 -3.4
SUW LMZ LR 16 05 41.8
FURC Furnace Creek, 120.80 290 ⇓PKiKP PKiKP 15 15 57.7 +1.3
baz=121
ISA Isabella 120.90 288 ePKiKP PKPdf 15 15 56.3 -0.4
ISA Isabella 120.90 288 ePKPdf PKPdf 15 15 56.3 -0.4
ISA Isabella 120.90 288 ⇓PKiKP PKiKP 15 15 57.9 +1.1
baz=121
PKM Peak Mountain 120.91 287 ⇓PKiKP PKiKP 15 15 57.7 +0.7
baz=121
N19A John Jarvie Ra 120.92 299 ⇓PKiKP PKiKP 15 15 58.0 +1.2
baz=121
K23A Bowen Ranch, D 120.93 303 ⇑PKiKP PKiKP 15 15 57.5 +0.7
baz=121
M20A Sweetwater, Wa 120.98 300 ⇓PKiKP PKiKP 15 15 57.7 +0.7
baz=121
L21A Rawlins 121.02 301 ⇑PKiKP PKiKP 15 15 57.5 +0.5
baz=121
N18A Larsen Ranch, 121.21 299 ⇑PKiKP PKiKP 15 15 57.9 +0.5
baz=122
K22A Casper 121.22 302 ⇓PKiKP PKPdf 15 15 57.1 -0.2
baz=122
MPU Maple Canyon 121.29 297 ePKPdf PKPdf 15 15 56.9 -0.6
SNART Snartemo 121.30 20 eP PKPdf 15 15 55.0 -1.6
VES Vestal, Richgr 121.33 288 ⇓PKiKP PKPdf 15 15 56.5 -0.9
baz=122
CWC Cottonwood Cre 121.34 289 ⇓PKiKP PKiKP 15 15 58.3 +0.5
baz=122
M19A Rock Springs 121.41 299 ⇑PKiKP PKiKP 15 15 58.4 +0.6
baz=122
I24A Kuemmerle Ranc 121.42 304 ⇑PKiKP PKiKP 15 15 58.4 +0.8
baz=122
DAU Daniels Canyon 121.44 297 ePKiKP PKPdf 15 15 58.8 +0.9
DAU Daniels Canyon 121.44 297 ePKPdf PKPdf 15 15 58.8 +0.9
NDI New Delhi 121.45 87 eP PKPdf 15 15 56.0 -1.9
HOMB Homborsund 121.46 21 eP PKPdf 15 15 57.2 +0.3
GRAC Grapevine Rang 121.46 290 ⇑PKiKP PKiKP 15 15 59.0 +1.1
baz=122
L20A Wamsutter 121.47 300 ⇓PKiKP PKiKP 15 15 58.6 +0.7
baz=122
K21A Alcova 121.51 301 ⇑PKiKP PKiKP 15 15 58.6 +0.6
baz=122
JLU Jordanelle 121.68 297 ePKPdf PKPdf 15 15 58.0 -0.3
N17A Moffit Pass 121.69 298 ⇓PKiKP PKiKP 15 15 59.4 +0.9
baz=122
AGMN Agassiz Nation 121.69 313 ePKPdf PKPdf 15 15 56.0 -1.7
AGMN LR LR
comp=Z,27µm,22.0s
R11A Troy Canyon, C 121.73 292 ⇑PKiKP PKiKP 15 15 59.2 +0.7
baz=122
M18A Lyman 121.75 299 ⇓PKiKP PKiKP 15 15 59.0 +0.5
baz=122
J22A Midwest 121.83 303 ⇓PKiKP PKPdf 15 15 57.5 -0.8
baz=122
I23A Meade Ranch, G 121.85 304 ⇓PKiKP PKPdf 15 15 57.6 -0.8
baz=122
CAL Calcutta 121.85 100 ex PKPdf 15 16 09.6 +11
CAL ex x 15 16 09.6
CAL ex x 15 23 05.6
DUG Dugway 121.96 296 ePKiKP PKPdf 15 15 58.4 -0.3
DUG MLR MLR
comp=Z,21µm,20.0s
DUG Dugway 121.96 296 ePKPdf PKPdf 15 15 58.4 -0.3
DUG LR LR
comp=Z,21µm,20.0s
DUG Dugway 121.96 296 ⇑PKiKP PKiKP 15 15 59.1 +0.2
baz=122
L19A Farson 121.98 300 ⇑PKiKP PKiKP 15 15 59.0 +0.1
baz=122
K20A Yellowstone Ra 122.00 301 ⇓PKiKP PKiKP 15 15 59.0 +0.1
baz=122
M17A Scullys Gap (B 122.05 298 ⇓PKiKP PKPdf 15 15 58.4 -0.5
baz=122
H24A Dirks Ranch, A 122.12 305 ⇑PKiKP PKPdf 15 15 58.8 0.0
baz=122
L18A Fontenelle, Gr 122.14 299 ⇓PKiKP PKPdf 15 15 58.3 -0.8
baz=122
J21A Lysite 122.18 302 ⇑PKiKP PKPdf 15 15 58.5 -0.6
baz=122
BLS5 Blasjo 122.20 19 eP PKPdf 15 15 58.7 +0.4
KBL Kabul 122.20 76 ePKiKP PKPdf 15 15 58.9 -0.5
KBL Kabul 122.20 76 ePKPdf PKPdf 15 15 58.9 -0.5
I22A 9 Mile Ranch, 122.22 303 ⇓PKiKP PKPdf 15 15 57.4 -1.7
baz=122
TPH Tonopah 122.26 291 PFAKE 15 16 10.0 +11
TPH LR LR
comp=Z,19µm,22.0s
H23A Clabaugh Cattl 122.31 304 ⇓PKiKP PKiKP 15 15 59.9 +0.6
baz=123
K19A Absolon Red Bu 122.35 300 ⇓PKiKP PKiKP 15 16 00.2 +0.6
baz=123
J20A Shoshoni 122.45 301 ⇓PKiKP PKiKP 15 15 59.6 0.0
baz=123
MNK Minsk 122.48 34 ePKiKP PKPdf 15 15 57.0 -2.0
MNK e 15 17 39.0
MNK e 15 22 55.0
MNK MLR MLR
comp=N,28µm,20.0s
MNK MLR MLR
comp=E,32µm,19.0s
MNK MLR MLR
comp=Z,54µm,19.0s
I21A Big Trails, Te 122.49 302 ⇓PKiKP PKiKP 15 16 00.6 +0.8
baz=123
MICGM Minsk 122.50 34 ePKP PKPdf 15 15 57.0 -2.0
G24A Alzada 122.54 305 ⇑PKiKP PKiKP 15 16 00.6 +0.8
baz=123
NACGM Naroch 122.54 34 ePKP PKPdf 15 15 56.0 -3.1
HWUT Hardware Ranch 122.55 298 ePKPdf PKPdf 15 15 59.0 -0.9
BW06 Boulder Array 122.61 300 PFAKE 15 16 10.0 +10
BW06 LR LR
comp=Z,31µm,19.0s
BW06 Boulder Array 122.61 300 ⇑PKiKP PKPdf 15 15 58.8 -1.2
baz=123
PDAR Pinedale Array 122.61 300 PKP PKPdf 15 15 58.6 -1.4
PDAR PP PP 15 17 40.7 +2.5
PDAR PKKPbc PKKPbc 15 26 02.2 +10
PDAR Pinedale Array 122.61 300 PKhKP PKPpre 15 15 46.0
comp=Z,1.9nm,0.6s,baz=119,slow=3.4,SNR=10
PDAR PKP PKPdf 15 15 58.6 -1.4
comp=Z,12nm,0.7s,baz=131,slow=4.5,SNR=25
PDAR PP PP 15 17 40.7 +2.5
comp=Z,12nm,1.1s,baz=167,slow=7.2,SNR=3.9
PDAR PKKPbc PKKPbc 15 26 02.2 +10
comp=Z,1.2nm,0.9s,baz=132,slow=2.2,SNR=3.6
L17A Cokeville 122.64 299 ⇑PKiKP PKiKP 15 16 00.4 +0.2
baz=123
MLAC Mammoth Lakes 122.66 290 ⇑PKiKP PKPdf 15 15 59.8 -0.5
baz=123
ODD1 Odda 122.69 19 eP PKPdf 15 15 59.6 +0.4
ODD1 ePP PP 15 17 38.6 +0.5
ODD1 AMS AMS 16 06 22.8
comp=Z,41µm,96.9s
MDND Maddock 122.71 310 ⇓PKiKP PKiKP 15 16 00.7 +0.8
baz=123
K18A Toltan Ranch, 122.72 299 ⇑PKiKP PKiKP 15 16 00.7 +0.3
baz=123
H22A Clearmont 122.73 303 ⇓PKiKP PKiKP 15 16 00.4 +0.2
baz=123
IIGN Ignalina 122.79 33 eP PKPdf 15 15 59.9 +0.3
IIGN AMB AMB 15 16 05.9
comp=Z,25nm,1.6s
J19A Crowheart 122.80 301 ⇓PKiKP PKPdf 15 16 00.1 -0.2
baz=123
CTBH Cotabato--PC H 122.80 145 ⇑i P PKPdf 15 16 01.5 +0.5
EGD Espegrend 122.80 18 eP PKPdf 15 15 59.7 +0.3

L16A	**Fish Haven**	**122.82**	**298**	⇓PKiKP	**PKPdf**	**15 16 00.3**	**-0.1**
	baz=123						
G23A	**Biddle**	**122.83**	**305**	⇓PKiKP	**PKiKP**	**15 16 00.3**	**-0.1**
	baz=123						
BER	**Bergen**	**122.93**	**18**	*e*P	**PKPdf**	**15 15 58.6**	**-1.0**
BER				*e*SS	SS	15 34 21.9	-0.2
BER				AMS	AMS	16 06 23.1	
	comp=Z,16μm,18.4s						
KONO	**Kongsberg**	**122.95**	**21**	*e*P	**PKPdf**	**15 16 00.1**	**+0.4**
KONO				*e*PP	**PP**	**15 17 38.0**	**-1.9**
KONO				AMS	AMS	16 06 04.7	
	comp=Z,13μm,18.8s						
ISAL	**Salakas**	**122.96**	**33**	*e*P	**PKPdf**	**15 16 00.1**	**+0.3**
ISAL				AMB	AMB	15 16 06.0	
	comp=Z,29nm,1.2s						
I20A	**Worland**	**122.96**	**302**	⇓PKiKP	**PKiKP**	**15 16 00.6**	**-0.1**
	baz=123						
RUND	**Rundenannen**	**122.96**	**18**	*e*P	**PKPdf**	**15 16 00.7**	**+0.9**
F24A	**Ekalaka**	**122.97**	**306**	⇑PKiKP	**PKiKP**	**15 16 00.9**	**+0.3**
	baz=123						
ASK	**Askoy**	**123.00**	**18**	*e*P	**PKPdf**	**15 16 01.7**	**+1.9**
VORD	**Divnogorie**	**123.04**	**44**	*i* PKiKP	**PKPdf**	**15 16 00.4**	**+0.2**
VORD				*e*		15 17 40.1	
VORD				*e*		15 22 54.4	
VORD				*e*SP	SP	15 27 34.3	+0.6
VORD				*e*SS	**SS**	**15 34 18.8**	**-5.1**
VORD				pmax	pmax		
	comp=Z,40nm,0.9s						
VORD				pmax	pmax		
	comp=N,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=N,20nm,0.9s						
VORD				pmax	pmax		
	comp=Z,80nm,0.9s						
VORD				pmax	pmax		
	comp=E,30nm,1.4s						
VORD				pmax	pmax		
	comp=Z,420nm,3.2s						
VORD				pmax	pmax		
	comp=N,270nm,2.8s						
VORD				pmax	pmax		
	comp=E,540nm,7.1s						
VORD				MLR	MLR		
	comp=Z,13μm,19.0s						
VORD				MLR	MLR		
	comp=N,3μm,12.0s						
VORD				MLR	MLR		
	comp=E,6μm,18.0s						
H21A	**Big Horn, Sher**	**123.05**	**303**	⇓PKiKP	**PKPdf**	**15 16 00.7**	**+0.1**
	baz=123						
NVAR	**Mina Array Bea**	**123.05**	**290**	PKP	**PKPdf**	**15 16 01.5**	**+0.5**
NVAR				PP	**PP**	**15 17 39.8**	**-1.4**
NVAR				PKKPbc	**PKKPab**	**15 25 53.8**	**+3.1**
NVAR	**Mina Array Bea**	**123.05**	**290**	PKP	**PKPdf**	**15 16 01.5**	**+0.5**
	comp=E,22nm,0.7s,baz=134,slow=3.0,SNR=31						
NVAR				PP	**PP**	**15 17 39.8**	**-1.4**
	comp=E,5.5nm,0.9s,baz=161,slow=5.7,SNR=2.9						
NVAR				PKKPbc	**PKKPab**	**15 25 53.8**	**+3.1**
	comp=E,0.6nm,0.3s,baz=310,slow=5.6,SNR=2.6						
IZAR	**Zarasai**	**123.15**	**33**	*e*P	**PKPdf**	**15 16 00.6**	**+0.3**
IZAR				AMB	AMB	15 16 07.7	
	comp=Z,34nm,1.2s						
PAGZ	**Pagadian**	**123.15**	**144**	*e*P	**PKPdf**	**15 16 01.9**	**+0.3**
J18A	**Kendall Valley**	**123.17**	**300**	⇑PKiKP	**PKiKP**	**15 16 01.3**	**0.0**
	baz=123						
K17A	**Gardner Place,**	**123.19**	**299**	⇓PKiKP	**PKiKP**	**15 16 01.4**	**+0.1**
	baz=124						
SAO	**San Andreas Ge**	**123.20**	**287**	*e*PKiKP	**PKPdf**	**15 16 02.5**	**+1.5**
SAO	**San Andreas Ge**	**123.20**	**287**	*e*PKPdf	**PKPdf**	**15 16 02.5**	**+1.5**
VSR	**Storozhevoye**	**123.21**	**43**	*i* PKiKP	**PKPdf**	**15 16 00.7**	**+0.2**
VSR				*e*		15 17 42.0	
VSR				*e*		15 22 53.5	
VSR				*e*SP	SP	15 27 40.1	+5.0
VSR				*e*SS	**SS**	**15 34 29.3**	**+3.3**
VSR				pmax	pmax		
	comp=Z,70nm,1.1s						
VSR				pmax	pmax		
	comp=N,10.0nm,0.9s						
VSR				pmax	pmax		
	comp=E,10.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,190nm,1.3s						
VSR				pmax	pmax		
	comp=N,50nm,1.6s						
VSR				pmax	pmax		
	comp=E,20nm,1.0s						
VSR				pmax	pmax		
	comp=Z,730nm,3.6s						
VSR				pmax	pmax		
	comp=N,270nm,3.0s						
VSR				pmax	pmax		
	comp=E,340nm,4.6s						
VSR				MLR	MLR		
	comp=Z,15μm,20.0s						
VSR				MLR	MLR		
	comp=N,2μm,17.0s						
VSR				MLR	MLR		
	comp=E,8μm,16.0s						
DDI	**Dehra Dun**	**123.21**	**86**	*ex*	**PKPdf**	**15 15 57.3**	**-4.0**
DDI				*ex*	x	15 19 35.0	
G22A	**Birney**	**123.22**	**304**	⇓PKiKP	**PKiKP**	**15 16 01.1**	**0.0**
	baz=124						
HVU	**Hansel Valley**	**123.22**	**297**	*e*PKiKP	**PKPdf**	**15 16 00.4**	**-0.7**
HVU	**Hansel Valley**	**123.22**	**297**	*e*PKPdf	**PKPdf**	**15 16 00.4**	**-0.7**
L15A	**Malad City**	**123.23**	**297**	⇑PKiKP	**PKiKP**	**15 16 01.8**	**+0.4**
	baz=124						
AHID	**Auburn Hatcher**	**123.28**	**299**	PFAKE		15 16 10.0	+8.8
AHID				LR	LR		
	comp=Z,24μm,19.0s						
ULM	**Lac du Bonnet**	**123.33**	**314**	PKP	**PKPdf**	**15 15 59.2**	**-1.6**
ULM				PP	PP	15 17 35.0	-7.6
ULM				PKKPbc	**PKKPbc**	**15 25 52.1**	**+2.7**
ULM				SKKPbc	SKKPbc	15 29 49.8	+11
ULM	**Lac du Bonnet**	**123.33**	**314**	PKP	**PKPdf**	**15 15 59.2**	**-1.6**
	comp=Z,42nm,0.7s,baz=58,slow=0.3,SNR=26						
ULM				PP	PP	15 17 35.0	-7.6
	comp=Z,28nm,1.0s,baz=145,slow=8.3,SNR=2.8						
ULM				PKKPbc	**PKKPbc**	**15 25 52.1**	**+2.7**
	comp=Z,3.2nm,0.5s,baz=73,slow=3.5,SNR=2.9						
ULM				SKKPbc	SKKPbc	15 29 49.8	+11
	comp=Z,2.7nm,0.5s,baz=300,slow=6.7,SNR=3.3						
I19A	**Meeteetse**	**123.39**	**301**	⇓PKiKP	**PKiKP**	**15 16 01.7**	**+0.1**
	baz=124						
CM31	**Chiang Mai Arr**	**123.41**	**113**	*e*PKPdf	**PKPdf**	**15 16 01.9**	**-0.1**
CMAR	**Chiang Mai Arr**	**123.41**	**113**	PKP	**PKPdf**	**15 16 01.4**	**-0.5**
CMAR				SKP		15 19 38.8	
CMAR				PKKPbc	**PKKPab**	**15 25 51.8**	**+0.5**
CMAR				SKKPbc	SKKPbc	15 29 35.0	-0.3
CMAR				SKKP		15 29 57.3	
CMAR	**Chiang Mai Arr**	**123.41**	**113**	PKP	**PKPdf**	**15 16 01.4**	**-0.5**
	comp=Z,31nm,0.8s,baz=228,slow=3.6,SNR=50						
CMAR				SKP		15 19 38.8	
	comp=Z,7.6nm,1.0s,baz=232,slow=4.3,SNR=4.5						
CMAR				PKKPbc	**PKKPab**	**15 25 51.8**	**+0.5**
	comp=Z,5.7nm,1.1s,baz=0.1,slow=3.9,SNR=12						
CMAR				SKKPbc	SKKPbc	15 29 35.0	-0.3
	comp=Z,3.4nm,1.0s,baz=5.4,slow=5.6,SNR=5.1						
CMAR				SKKP		15 29 57.3	
	comp=Z,4.0nm,1.1s,baz=4.3,slow=3.8,SNR=4.5						
SMLA	**Simla**	**123.42**	**85**	*e*P	**PKPdf**	**15 16 00.3**	**-1.3**
I18A	**Diamond G Ranc**	**123.48**	**300**	⇓PKiKP	**PKiKP**	**15 16 02.0**	**+0.1**
	baz=124						
SUE	**Sulen**	**123.48**	**18**	*e*P	PKPdf	15 16 12.9	+12
SUE				*e*PP	**PP**	**15 17 42.4**	**-0.9**
E24A	**Baker**	**123.50**	**306**	⇑PKiKP	**PKiKP**	**15 16 01.8**	**+0.2**
	baz=124						
ELK	**Elko**	**123.50**	**294**	*e*PKPdf	**PKPdf**	**15 16 01.7**	**0.0**
ELK				PP	**PP**	**15 17 44.1**	**-0.1**
ELK				SKP		15 19 36.3	
ELK	**Elko**	**123.50**	**294**	PP	PP	15 17 44.1	-0.1
	comp=Z,4.6nm,0.8s,baz=135,slow=6.0,SNR=2.2						
ELK				SKP		15 19 36.3	
	comp=Z,7.4nm,0.9s,baz=147,slow=3.2,SNR=4.0						
NIL	**Nilore**	**123.53**	**80**	PFAKE		15 16 10.0	+8.2
NIL				LR	LR		
	comp=Z,26nm,21.0s						
K16A	**Soda Springs**	**123.55**	**299**	⇓PKiKP	**PKiKP**	**15 16 02.2**	**+0.2**
	baz=124						
J17A	**Brown Place, J**	**123.59**	**300**	⇓PKiKP	**PKiKP**	**15 16 02.2**	**+0.1**
	baz=124						
G21A	**Lodge Grass**	**123.60**	**303**	⇑PKiKP	**PKiKP**	**15 16 02.1**	**+0.2**
	baz=124						
L14A	**Malta**	**123.64**	**297**	⇑PKiKP	**PKiKP**	**15 16 02.1**	**0.0**
	baz=124						
VOR	**Voronezh**	**123.65**	**43**	PKiKP	**PKPdf**	**15 16 05.0**	**+3.7**
VOR				pmax	pmax		
	comp=Z,250nm,1.6s						
REDW	**Red Top Meadow**	**123.65**	**299**	*e*PKPdf	**PKPdf**	**15 16 02.3**	**+0.3**
BUKP	**Musuan**	**123.66**	**146**	*e*P	**PKPdf**	**15 16 03.4**	**+0.8**
F22A	**Rosebud**	**123.66**	**304**	⇓PKiKP	**PKiKP**	**15 16 02.1**	**+0.1**
	baz=124						
SNOW	**Snow King Moun**	**123.69**	**300**	*e*PKPdf	**PKPdf**	**15 16 01.6**	**-0.5**
CMB	**Columbia Colle**	**123.72**	**289**	*e*PKiKP	**PKPdf**	**15 16 02.2**	**+0.2**
CMB	**Columbia Colle**	**123.72**	**289**	*e*PKPdf	**PKPdf**	**15 16 02.2**	**+0.2**
CHTO	**Chiang Mai**	**123.72**	**113**	PKPdf	**PKPdf**	**15 16 02.7**	**+0.1**
	SNR=28						
LOHW	**Long Hollow**	**123.75**	**300**	*e*PKPdf	**PKPdf**	**15 16 01.5**	**-0.6**
TPAW	**Teton Pass**	**123.80**	**299**	*e*PKPdf	**PKPdf**	**15 16 02.1**	**-0.2**
HYA	**Hoyanger**	**123.81**	**19**	*e*P	**PKPdf**	**15 16 01.3**	**0.0**
K15A	**Arbon**	**123.84**	**298**	⇑PKiKP	**PKPdf**	**15 16 02.3**	**0.0**
	baz=124						
RRI2	**Red Ridge**	**123.84**	**299**	*e*PKPdf	**PKPdf**	**15 16 01.9**	**-0.5**
PYUN	**Piuthan**	**123.84**	**92**	*e*P	**PKPdf**	**15 16 01.8**	**-1.0**
	comp=Z,143nm,0.8s						
E23A	**Ismay**	**123.85**	**305**	⇓PKiKP	**PKiKP**	**15 16 02.2**	**0.0**
	baz=124						
KOLN	**Koldanda**	**123.88**	**93**	*e*P	**PKPdf**	**15 16 01.9**	**-1.0**
	comp=Z,85nm,0.6s						
H19A	**Powell**	**123.90**	**302**	⇓PKiKP	**PKPdf**	**15 16 02.4**	**+0.1**
	baz=124						
DHRM	**DHARAMSHALA**	**123.90**	**83**	*e*P	**PKPdf**	**15 16 02.4**	**-0.4**
MOOW	**Moose Ponds**	**123.92**	**300**	*e*PKPdf	**PKPdf**	**15 16 01.9**	**-0.6**
VRHR	**Novokhopersk**	**123.96**	**45**	*e*PKiKP	**PKPdf**	**15 16 01.7**	**-0.2**
VRHR				*e*		15 17 49.6	
VRHR				*e*SP	SP	15 27 46.0	+4.2
VRHR				pmax	pmax		
	comp=N,10.0nm,0.7s						
VRHR				pmax	pmax		
	comp=E,20nm,0.7s						
VRHR				pmax	pmax		
	comp=Z,90nm,0.7s						
VRHR				pmax	pmax		
	comp=Z,170nm,1.1s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,30nm,0.6s						
VRHR				pmax	pmax		
	comp=N,200nm,2.6s						
VRHR				pmax	pmax		
	comp=E,110nm,2.6s						
VRHR				pmax	pmax		
	comp=Z,380nm,2.6s						
I17A	**Pilgrim Ck.**	**123.98**	**300**	⇓PKiKP	**PKiKP**	**15 16 02.8**	**-0.1**
	baz=124						
DCID1	**Drake Creek**	**123.98**	**299**	*e*PKPdf	**PKPdf**	**15 16 03.0**	**+0.5**
K14A	**Jones Ranch, D**	**124.02**	**297**	⇑PKiKP	**PKiKP**	**15 16 03.0**	**+0.2**
	baz=124						
G20A	**Bridger**	**124.02**	**303**	⇓PKiKP	**PKiKP**	**15 16 03.0**	**+0.2**
	baz=124						
E22A	**Miles City**	**124.06**	**305**	⇑PKiKP	**PKiKP**	**15 16 02.8**	**+0.1**
	baz=124						
IMW	**Indian Meadow**	**124.12**	**300**	*e*PKPdf	**PKPdf**	**15 16 02.8**	**-0.1**
BMN	**Battle Mountai**	**124.16**	**293**	*e*PKiKP	**PKPdf**	**15 16 03.1**	**+0.2**
BMN				MLR	MLR		
	comp=Z,19μm,19.0s						
BMN	**Battle Mountai**	**124.16**	**293**	*e*PKPdf	**PKPdf**	**15 16 03.1**	**+0.2**
BMN				LR	LR		
	comp=Z,19μm,19.0s						
H18A	**Shoshone NF, C**	**124.20**	**301**	⇑PKiKP	**PKiKP**	**15 16 03.4**	**+0.1**
	baz=124						
NAO01	**NORSAR Array S**	**124.30**	**21**	*e*PKPdf	**PKPdf**	**15 16 02.0**	**-0.3**
C24A	**Savage**	**124.33**	**307**	⇓PKiKP	**PKiKP**	**15 16 03.1**	**0.0**
	baz=125						
I16A	**Newdale**	**124.34**	**299**	⇑PKiKP	**PKiKP**	**15 16 03.5**	**0.0**
	baz=125						
D23A	**Lindsay**	**124.36**	**306**	⇑PKiKP	**PKiKP**	**15 16 03.2**	**0.0**
	baz=125						
H17A	**Grant Village**	**124.36**	**300**	⇓PKiKP	**PKiKP**	**15 16 03.5**	**-0.1**
	baz=125						
J15A	**Blackfoot**	**124.37**	**298**	⇑PKiKP	**PKiKP**	**15 16 03.7**	**+0.2**
	baz=125						
RLMT	**Red Lodge**	**124.38**	**302**	*e*PKPdf	**PKPdf**	**15 16 03.1**	**-0.2**
RLMT				LR	LR		
	comp=Z,35μm,20.0s						
RLMT	**Red Lodge**	**124.38**	**302**	⇓PKiKP	**PKiKP**	**15 16 03.9**	**+0.3**
	baz=125						
LKWY	**Lake**	**124.42**	**301**	*e*PKiKP	**PKPdf**	**15 16 03.6**	**+0.2**
LKWY				MLR	MLR		
	comp=Z,43μm,19.0s						
LKWY	**Lake**	**124.42**	**301**	*e*PKPdf	**PKPdf**	**15 16 03.6**	**+0.2**
LKWY				LR	LR		
	comp=Z,43μm,19.0s						
WCN	**Washoe City**	**124.43**	**290**	*e*PKiKP	**PKPdf**	**15 16 04.1**	**+0.6**
WCN	**Washoe City**	**124.43**	**290**	*e*PKPdf	**PKPdf**	**15 16 04.1**	**+0.6**
DANN	**Dangsing**	**124.43**	**92**	*e*P	**PKPdf**	**15 16 02.9**	**-1.1**
	comp=Z,140nm,0.7s						
F20A	**Billings**	**124.46**	**303**	⇑PKiKP	**PKiKP**	**15 16 03.8**	**+0.2**
	baz=125						
DMN	**Daman**	**124.49**	**94**	*e*P	**PKPdf**	**15 16 03.7**	**-0.4**
	comp=Z,102nm,0.8s						
NB2	**NORSAR Subarra**	**124.55**	**21**	PKPdf	**PKPdf**	**15 16 02.0**	**-0.9**
	baz=202,slow=1.9						
NB2	**NORSAR Subarra**	**124.55**	**21**	PKPdf	**PKPdf**	**15 16 02.0**	**-0.9**
	comp=Z,62nm,1.0s,baz=202,slow=1.9						
NOA	**NORSAR Array B**	**124.55**	**21**	PKP	**PKPdf**	**15 16 01.9**	**-0.9**
NOA				SKPbc	SKiKP	15 19 14.7	-23
NOA				SKP		15 19 38.0	
NOA				PKKPbc	**PKKPbc**	**15 25 44.5**	**-0.4**
NOA	**NORSAR Array B**	**124.55**	**21**	PKP	**PKPdf**	**15 16 01.9**	**-0.9**
	comp=Z,42nm,0.9s,baz=197,slow=1.7,SNR=61						
NOA				SKPbc	SKiKP	15 19 14.7	-23
	comp=Z,3.1nm,0.8s,baz=191,slow=3.0,SNR=4.4						
NOA				SKP		15 19 38.0	
	comp=Z,26nm,1.0s,baz=193,slow=1.7,SNR=9.7						
NOA				PKKPbc	**PKKPbc**	**15 25 44.5**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=26,slow=3.1,SNR=7.1						
E21A	**Keefer Ranch,**	**124.61**	**304**	⇑PKiKP	**PKiKP**	**15 16 04.2**	**+0.4**
	baz=125						
PKIN	**Phulchoki**	**124.61**	**94**	*e*P	**PKPdf**	**15 16 03.9**	**-0.5**
	comp=Z,46nm,0.7s						
PKI	**Pulchoki**	**124.61**	**94**	*e*P	**PKPdf**	**15 16 03.4**	**-1.0**
	comp=Z,93nm,0.7s						
G18A	**Lazy EL Ranch,**	**124.67**	**302**	⇓PKiKP	**PKiKP**	**15 16 04.2**	**+0.1**
	baz=125						
RAMN	**Ramite**	**124.69**	**96**	*e*P	**PKPdf**	**15 16 04.2**	**-0.3**
	comp=Z,157nm,0.6s						
KKN	**Kakani**	**124.73**	**94**	*e*P	**PKPdf**	**15 16 04.0**	**-0.5**
	comp=Z,87nm,0.8s						
D22A	**Cohagen**	**124.73**	**305**	⇓PKiKP	**PKiKP**	**15 16 04.1**	**+0.1**
	baz=125						
YMR	**Madison River**	**124.75**	**300**	*e*PKPdf	**PKPdf**	**15 16 04.1**	**+0.1**
J14A	**Carey**	**124.79**	**298**	⇓PKiKP	**PKiKP**	**15 16 04.4**	**0.0**
	baz=125						
BORG	**Borgarnes**	**124.80**	**3**	*e*PKPdf	**PKPdf**	**15 16 02.8**	**-0.3**
BORG				LR	LR		
	comp=Z,34μm,20.0s						
F19A	**Roth Farm, Mol**	**124.83**	**303**	⇓PKiKP	**PKiKP**	**15 16 04.4**	**+0.1**
	baz=125						
C23A	**Lambert**	**124.85**	**306**	⇑PKiKP	**PKiKP**	**15 16 04.5**	**+0.4**
	baz=125						
I15A	**Monteview**	**124.87**	**299**	⇓PKiKP	**PKiKP**	**15 16 04.7**	**+0.2**
	baz=125						
H16A	**Russell Place,**	**124.90**	**300**	⇓PKiKP	**PKiKP**	**15 16 04.9**	**+0.3**
	baz=125						
D21A	**La Casta Ranch**	**125.00**	**305**	⇑PKiKP	**PKPdf**	**15 16 04.4**	**+0.2**
	baz=125						
DGMT	**Dagmar**	**125.00**	**308**	*e*PKPdf	**PKPdf**	**15 16 03.7**	**-0.4**
DGMT				LR	LR		
	comp=Z,26μm,20.0s						
DGMT	**Dagmar**	**125.00**	**308**	⇑PKiKP	**PKiKP**	**15 16 04.4**	**0.0**
	baz=125						
ODAN	**Odare**	**125.00**	**97**	*e*P	**PKPdf**	**15 16 04.3**	**-0.8**
	comp=Z,246nm,1.0s						
E20A	**Meyer Farm, Mu**	**125.01**	**304**	⇑PKiKP	**PKPdf**	**15 16 04.3**	**+0.1**
	baz=125						
QLMT	**Earthquake Lak**	**125.08**	**300**	*e*PKPdf	**PKPdf**	**15 16 04.9**	**+0.2**
GCMT	**Greycliff**	**125.09**	**302**	*e*PKPdf	**PKPdf**	**15 16 04.1**	**-0.4**
C22A	**Vida**	**125.09**	**306**	⇑PKiKP	**PKiKP**	**15 16 04.6**	**-0.1**
	baz=125						
GUN	**Gumba**	**125.12**	**95**	*e*P	**PKPdf**	**15 16 04.9**	**-0.5**
	comp=Z,73nm,0.5s						
J13A	**Cove Ranch, Pi**	**125.14**	**297**	⇓PKiKP	**PKPdf**	**15 16 04.7**	**0.0**
	baz=125						
BEKR	**Beckworth**	**125.16**	**290**	*e*PKPdf	**PKPdf**	**15 16 05.1**	**+0.2**
F18A	**Big Timber**	**125.20**	**302**	⇓PKiKP	**PKiKP**	**15 16 05.0**	**-0.1**
	baz=126						
I14A	**Mackay**	**125.24**	**298**	⇑PKiKP	**PKPdf**	**15 16 05.1**	**+0.1**
	baz=126						
E19A	**Rath Farm, Rou**	**125.25**	**303**	⇓PKiKP	**PKiKP**	**15 16 05.1**	**0.0**
	baz=126						
CUYO	**Cuyo Island**	**125.27**	**140**	*e*P	**PKPdf**	**15 16 05.8**	**+0.1**
A24A	**Westby**	**125.29**	**308**	⇓PKiKP	**PKiKP**	**15 16 05.3**	**+0.3**
	baz=126						
B23A	**Brockton**	**125.31**	**307**	⇑PKiKP	**PKiKP**	**15 16 05.3**	**+0.2**
	baz=126						
MOL	**Molde**	**125.35**	**19**	*e*P	**PKPdf**	**15 16 03.0**	**-1.3**
MOL				*e*PP	**PP**	**15 17 54.8**	**-1.0**
HLID	**Hailey**	**125.37**	**297**	*e*PKPdf	**PKPdf**	**15 16 05.1**	**-0.1**
HLID				LR	LR		
	comp=Z,21μm,20.0s						
HLID	**Hailey**	**125.37**	**297**	⇑PKiKP	**PKiKP**	**15 16 05.7**	**+0.1**
	baz=126						
H15A	**Lima**	**125.43**	**299**	⇓PKiKP	**PKiKP**	**15 16 05.6**	**-0.1**
	baz=126						
D20A	**Manuel Ranch,**	**125.48**	**304**	⇑PKiKP	**PKiKP**	**15 16 06.1**	**+0.6**
	baz=126						
I13A	**Wildhorse Cree**	**125.52**	**298**	⇓PKiKP	**PKiKP**	**15 16 05.9**	**0.0**
	baz=126						
G16A	**Moss Hill, Enn**	**125.55**	**300**	⇓PKiKP	**PKiKP**	**15 16 06.0**	**+0.2**
	baz=126						
TAPN	**Taplejung**	**125.57**	**97**	*e*P	**PKPdf**	**15 16 05.0**	**-1.2**
	comp=Z,417nm,1.8s						
B22A	**Reddig Ranch S**	**125.58**	**306**	⇑PKiKP	**PKiKP**	**15 16 06.1**	**+0.5**
	baz=126						
F17A	**Fitzpatrick Pl**	**125.60**	**301**	⇑PKiKP	**PKiKP**	**15 16 06.2**	**+0.3**
	baz=126						
OBN	**Obninsk**	**125.62**	**39**	⇑*i*PKiKP	**PKPdf**	**15 16 05.5**	**+0.5**
OBN				*e*		15 17 56.7	
OBN				*e*		15 23 08.9	
OBN				*e*SS	SS	15 34 59.6	+3.3
OBN				pmax	pmax		
	comp=Z,329nm,2.5s						
OBN				MLR	MLR		
	comp=Z,18μm,19.0s						
C21A	**Desert Coulee**	**125.64**	**305**	⇓PKiKP	**PKiKP**	**15 16 06.0**	**+0.3**
	baz=126						
MCMT	**McKenzie Canyo**	**125.69**	**299**	*e*PKPdf	**PKPdf**	**15 16 04.7**	**-1.1**
H14A	**Leadore**	**125.75**	**299**	⇓PKiKP	**PKiKP**	**15 16 06.6**	**+0.4**
	baz=126						
G15A	**Dillon**	**125.80**	**300**	⇑PKiKP	**PKiKP**	**15 16 06.5**	**+0.2**
	baz=126						
BOZ	**Bozeman (W)**	**125.81**	**301**	*e*PKiKP	**PKPdf**	**15 16 05.7**	**-0.2**
BOZ				MLR	MLR		
	comp=Z,20μm,19.0s						
BOZ	**Bozeman (W)**	**125.81**	**301**	*e*PKPdf	**PKPdf**	**15 16 05.7**	**-0.2**
BOZ				LR	LR		
	comp=Z,20μm,19.0s						
BOZ	**Bozeman (W)**	**125.81**	**301**	⇑PKiKP	**PKiKP**	**15 16 06.7**	**+0.3**
	baz=126						
E18A	**Harlowton**	**125.81**	**302**	⇑PKiKP	**PKiKP**	**15 16 06.2**	**0.0**
	baz=126						
D19A	**Cripps Ranch,**	**125.85**	**304**	⇑PKiKP	**PKiKP**	**15 16 06.6**	**+0.4**
	baz=126						
I12A	**Atlanta**	**125.88**	**297**	⇓PKiKP	**PKiKP**	**15 16 07.0**	**+0.4**
	baz=126						
MFID	**Camas Ranch**	**125.89**	**296**	*e*PKPdf	**PKPdf**	**15 16 06.2**	**+0.1**
MFID	**Camas Ranch**	**125.89**	**296**	⇑PKiKP	**PKiKP**	**15 16 06.9**	**+0.4**
	baz=126						
F16A	**Kennard Place,**	**125.92**	**301**	⇑PKiKP	**PKiKP**	**15 16 06.6**	**+0.1**
	baz=126						
C20A	**Veseth Ranch,**	**125.93**	**305**	⇓PKiKP	**PKPdf**	**15 16 06.1**	**+0.2**
	baz=126						
DLMT	**Dillon**	**126.00**	**300**	*e*PKPdf	**PKPdf**	**15 16 06.3**	**0.0**
B21A	**Ellsworth Farm**	**126.09**	**306**	⇓PKiKP	**PKiKP**	**15 16 06.6**	**-0.1**
	baz=126						
H13A	**Challis**	**126.09**	**298**	⇓PKiKP	**PKPdf**	**15 16 06.7**	**+0.2**
	baz=126						
A22A	**Carney Farms,**	**126.10**	**307**	⇓PKiKP	**PKiKP**	**15 16 06.7**	**+0.1**
	baz=126						
E17A	**Martinsdale**	**126.12**	**302**	⇓PKiKP	**PKiKP**	**15 16 07.0**	**0.0**
	baz=126						
SHL	**Shillong**	**126.14**	**102**	⇓*i*P	**PKPdf**	**15 16 08.0**	**+0.8**
SHL				*ex*	x	15 19 35.5	
SHL				*e*S	**SKSac**	**15 23 12.0**	**+0.6**
SHL				*ex*	x	15 24 53.0	
D18A	**Linhart Farms,**	**126.26**	**303**	⇑PKiKP	**PKiKP**	**15 16 07.0**	**-0.1**
	baz=126						
G14A	**Jackson**	**126.28**	**299**	⇓PKiKP	**PKPdf**	**15 16 07.0**	**+0.1**
	baz=126						
LRM	**Limekiln Ridge**	**126.30**	**300**	*e*PKPdf	**PKPdf**	**15 16 06.8**	**-0.2**
F15A	**Butte**	**126.33**	**300**	⇓PKiKP	**PKPdf**	**15 16 07.2**	**+0.2**
	baz=127						
H12A	**Diamond D Ranc**	**126.35**	**297**	⇑PKiKP	**PKiKP**	**15 16 07.7**	**+0.2**
	baz=127						
C19A	**Slack Wire Ran**	**126.37**	**304**	⇑PKiKP	**PKiKP**	**15 16 07.3**	**0.0**
	baz=127						
WVOR	**Wild Horse Val**	**126.39**	**293**	*e*PKiKP	**PKPdf**	**15 16 07.2**	**+0.1**
WVOR				MLR	MLR		
	comp=Z,16μm,19.0s						
WVOR	**Wild Horse Val**	**126.39**	**293**	*e

comp=Z,6.8nm,1.0s,baz=0.0,slow=8.1,SNR=1.8
FRB SKP 15 19 41.6
comp=Z,25nm,0.8s,baz=48,slow=2.1,SNR=6.2
HOG Hogback Mounta 127.66 291 P **PKPdf 15 16 10.9 +1.3**
BMO Blue Mountains 127.68 296 *e*PKIKP **PKPdf 15 16 09.9 +0.5**
BMO MLR MLR
comp=Z,17µm,19.0s
BMO Blue Mountains 127.68 296 *e*PKPdf **PKPdf 15 16 09.9 +0.5**
BMO LR LR
comp=Z,17µm,19.0s
LUBP Lubang 127.72 138 *e*P **PKPdf 15 16 10.2 -0.1**
PUL Pulkovo 127.72 33 *i* PKIKP **PKPdf 15 16 10.4 +1.6**
PUL MLR MLR
comp=Z,20µm,17.0s
YBH Yreka Blue Hor 127.73 290 *e*PKPdf **PKPdf 15 16 09.1 -0.6**
YBH PP **PP 15 18 15.4 +3.2**
YBH Yreka Blue Hor 127.73 290 PP PP 15 18 15.4 +3.2
comp=Z,7.7nm,1.0s,baz=118,slow=6.5,SNR=2.9
MSO Missoula 127.73 300 *e*PKPdf **PKPdf 15 16 09.1 -0.4**
MSO LR LR
comp=Z,22µm,19.0s
MSO Missoula 127.73 300 ⇑PKiKP **PKPdf 15 16 09.8 +0.3**
baz=128
D14A Greenough 127.74 300 ⇓PKiKP **PKPdf 15 16 09.7 +0.1**
baz=128
SLMT Seeley Lake 127.86 301 *e*PKPdf **PKPdf 15 16 09.4 -0.4**
C15A Salmond Ranch, 127.90 302 ⇑PKiKP **PKPdf 15 16 10.1 +0.2**
baz=128
NSS Namsos 127.91 20 *e*P **PKPdf 15 16 07.4 -1.7**
NSS *e*PP **PP 15 18 11.1 -1.7**
A17A Triple J Farms 128.01 304 ⇓PKiKP **PKiKP 15 16 10.3 -0.2**
baz=128
B16A M & M Farms, S 128.01 303 ⇑PKiKP **PKPdf 15 16 09.9 -0.1**
baz=128
FINES FINESS Array B 128.08 29 PKP **PKPdf 15 16 09.2 -0.3**
FINES SKPbc SKiKP 15 19 26.6 -18
FINES SKP 15 19 42.8
FINES SKKPbc **SKKPbc 15 29 18.1 -5.4**
FINES FINESS Array B 128.08 29 PKP **PKPdf 15 16 09.2 -0.3**
comp=Z,82nm,0.8s,baz=126,slow=1.9,SNR=71
FINES SKPbc SKiKP 15 19 26.6 -18
comp=Z,44nm,0.9s,baz=181,slow=1.5,SNR=9.5
FINES SKP 15 19 42.8
comp=Z,18nm,0.7s,baz=152,slow=1.4,SNR=5.6
FINES SKKPbc **SKKPbc 15 29 18.1 -5.4**
comp=Z,6.6nm,1.1s,baz=0.0,slow=5.7,SNR=4.8
FIA1 FINESS Array S 128.08 29 *e*PKPdf **PKPdf 15 16 09.1 -0.4**
D13A Huson 128.16 300 ⇑PKiKP **PKPdf 15 16 10.3 0.0**
baz=128
SFJD Kangerlussuaq 128.16 348 PKP **PKPdf 15 16 09.2 -0.3**
SFJD SKPbc SKiKP 15 19 27.6 -17
SFJD Kangerlussuaq 128.16 348 *i* P **PKPdf 15 16 10.3 +0.8**
comp=Z,55nm,0.9s
SFJD
comp=Z,17µm,18.0s
SFJD Kangerlussuaq 128.16 348 PKP **PKPdf 15 16 09.2 -0.3**
comp=Z,62nm,0.8s,baz=178,slow=2.0,SNR=14
SFJD SKPbc SKiKP 15 19 27.6 -17
comp=Z,12nm,0.8s,baz=126,slow=5.7,SNR=4.3
SWMT Swartz Lake 128.28 300 *e*PKPdf **PKPdf 15 16 09.6 -0.9**
TGY Tagaytay City 128.29 139 PKP **PKPdf 15 16 11.3 -0.1**
TGY Tagaytay City 128.29 139 PKP **PKPdf 15 16 11.3 -0.1**
comp=Z,83nm,0.4s,baz=302,slow=9.5,SNR=2.0
B15A Bradely Ranch, 128.29 302 ⇑PKiKP **PKPdf 15 16 10.5 0.0**
baz=129
A16A West Butte Ran 128.38 303 ⇑PKiKP **PKPdf 15 16 10.8 +0.1**
baz=129
D12A Red Ives Fores 128.52 299 ⇓PKiKP **PKPdf 15 16 11.0 +0.1**
baz=129
HUMO Hull Mountain 128.52 290 *e*PKPdf **PKPdf 15 16 11.0 -0.1**
YBMT Yellow Bay 128.56 301 *e*PKPdf **PKPdf 15 16 09.1 -2.0**
JTMT Jette 128.59 300 *e*PKPdf **PKPdf 15 16 11.2 0.0**
B14A Marquette Ranc 128.63 302 ⇑PKiKP **PKPdf 15 16 11.3 +0.1**
baz=129
C13A Hot Springs 128.66 300 ⇑PKiKP **PKPdf 15 16 11.4 +0.2**
baz=129
QIZ Qiongzhong 128.68 124 PKP **PKPdf 15 16 11.3 -0.7**
QIZ PP **PP 15 18 17.6 -0.4**
QIZ SS SS 15 35 35.9 +1.6
QIZ LR LR
comp=N,14µm,20.1s
QIZ LR LR
comp=Z,24µm,20.7s
KAF Kangasniemi 128.71 29 *e*PKIKP **PKPdf 15 16 09.2 -1.5**
KAF Kangasniemi 128.71 29 *e*pkp **PKPdf 15 16 09.2 -1.5**
KBO Bosley Butte 128.81 289 *e*PKPdf **PKPdf 15 16 11.7 0.0**
BLMT Blacktail Moun 128.83 301 *e*PKPdf **PKPdf 15 16 11.6 -0.1**
A15A Johnson Ranch, 128.88 302 ⇑PKiKP **PKPdf 15 16 11.6 0.0**
baz=129
BSMT Bassoo Peak 128.89 300 *e*PKPdf **PKPdf 15 16 11.4 -0.4**
VIPM Ingram Point 128.91 293 PKIKP **PKPdf 15 16 12.6 +0.7**
VIPM Ingram Point 128.91 293 P **PKPdf 15 16 12.6 +0.7**
C12B Naegeli Ranch, 129.07 300 ⇓PKiKP **PKPdf 15 16 12.0 0.0**
baz=129
FFC Flin Flon 129.14 314 *e*PKIKP **PKPdf 15 16 11.8 0.0**
FFC MLR MLR
comp=Z,18µm,20.0s
FFC Flin Flon 129.14 314 *e*PKPdf **PKPdf 15 16 11.8 0.0**
FFC LR LR
comp=Z,18µm,20.0s
B13A Whitefish 129.15 301 ⇓PKiKP **PKPdf 15 16 12.1 0.0**
baz=129
A14A Double T Ranch 129.17 302 ⇓PKiKP **PKPdf 15 16 12.3 +0.1**
baz=129
LSA Lhasa 129.21 98 PKP **PKPdf 15 16 14.0 +0.7**
LSA LR LR
comp=N,12µm,34.4s
LSA LR LR
comp=E,11µm,26.4s
LSA LR LR
comp=Z,24µm,31.7s
WALA Waterton Lakes 129.44 302 *e*PKPdf **PKPdf 15 16 12.8 +0.1**
KSH Kashi 129.51 78 PKP **PKPdf 15 16 12.3 -0.9**
KSH PP **PP 15 18 22.5 -1.4**
KSH PKS **PKSdf 15 19 46.4 -3.3**
KSH SKS **SKSdf 15 23 19.4 -4.2**
KSH SKKS SKKSac 15 25 11.0 -8.1
KSH SS **SS 15 35 41.3 -4.0**
KSH AMB AMB
comp=Z,1µm,4.7s
KSH LR LR
comp=N,4µm,13.3s
KSH LR LR
comp=E,7µm,17.3s
KSH LR LR
comp=Z,12µm,19.7s
C11A Tepee Creek (N 129.51 299 ⇑PKiKP **PKPdf 15 16 12.9 +0.1**
baz=130
A13A Flathead Natio 129.56 301 ⇑PKiKP **PKPdf 15 16 13.2 +0.3**
baz=130
ABKAR Akbulak array 129.63 58 *e*PKPdf **PKPdf 15 16 11.3 -1.5**
KK31 Karatay Array 129.66 71*c* *i* PKIKP **PKPdf 15 16 12.3 -0.9**
KK31 pmax pmax
comp=Z,97nm,1.3s
KKAR Karatay Array 129.66 71 *e*PKIKP **PKPdf 15 16 12.2 -1.0**
KKAR Karatay Array 129.66 71 *e*PKPdf **PKPdf 15 16 12.2 -1.0**
B12A Libby 129.71 300 ⇓PKiKP **PKiKP 15 16 13.6 -0.3**
baz=130
AKTO Aktyubinsk 129.72 56 PKIKP **PKPdf 15 16 12.9 -0.1**
AKTO 15 18 25.7
AKTO Aktyubinsk 129.72 56 PKP **PKPdf 15 16 12.9 -0.1**
AKTO PP **PP 15 18 25.7 +0.7**
AKTO SKPbc SKPab 15 19 33.1 -0.3
AKTO SKP 15 19 43.8
AKTO SKKPbc **SKKPbc 15 29 16.3 -0.4**
AKTO Aktyubinsk 129.72 56 PKP **PKPdf 15 16 12.9 -0.1**
comp=Z,27nm,0.8s,baz=153,slow=4.4
AKTO PP **PP 15 18 25.7 +0.7**
comp=Z,4.2nm,0.8s,baz=248,slow=3.7,SNR=3.5
AKTO SKPbc SKPab 15 19 33.1 -0.3
comp=Z,26nm,0.8s,baz=172,slow=2.7,SNR=7.0
AKTO SKP 15 19 43.8
comp=Z,46nm,0.9s,baz=194,slow=7.7,SNR=6.5
AKTO SKKPbc **SKKPbc 15 29 16.3 -0.4**
comp=Z,4.5nm,1.0s,baz=56,slow=8.3,SNR=4.3
STOK Stokkvaagen 129.74 20 *e*P **PKPdf 15 16 12.0 -0.5**
STOK *e*PP **PP 15 18 22.8 -2.0**
STOK AMS AMS 16 10 23.2
comp=Z,31µm,21.6s
FLOS Flostrand 129.81 20 *e*P **PKPdf 15 16 12.7 +0.1**
FLOS AMB AMB 15 16 24.6
comp=Z,434nm,1.3s
HAWA Hanford 129.86 296 *e*PKPdf **PKPdf 15 16 13.3 -0.1**
HAWA LR LR
comp=Z,27µm,19.0s
KONS Konsvik 129.91 20 *e*P **PKPdf 15 16 08.5 -4.3**
BALP Baler 130.03 139 *e*P **PKPdf 15 16 17.1 +2.4**
A12A Yaak River Ran 130.09 300 ⇓PKiKP **PKPdf 15 16 14.3 +0.4**
baz=130
NEW Newport 130.22 299 *e*PKPdf **PKPdf 15 16 13.7 -0.4**
NEW PP PP 15 18 19.8 -8.5
NEW SKPbc **SKPab 15 19 33.9 -1.8**
NEW LR LR
comp=Z,27µm,19.0s
NEW Newport 130.22 299 ⇓PKiKP **PKPdf 15 16 14.4 +0.4**
baz=130
NEW Newport 130.22 299 PKP **PKPdf 15 16 13.8 -0.4**
comp=Z,6.0nm,0.7s,baz=135,slow=4.3,SNR=2.9
NEW PP PP 15 18 19.8 -8.5
comp=Z,7.4nm,1.1s,baz=59,slow=5.3,SNR=2.3
NEW SKPbc **SKPab 15 19 33.9 -1.8**
comp=Z,83nm,0.9s,baz=145,slow=2.9,SNR=18
AML Almayashu 130.43 74 P **PKPdf 15 16 16.5 +1.3**
SNR=21
SCO Scoresbysund 130.53 2⇑ *i* PKIKP **PKPdf 15 16 15.4 +1.5**
SCO *i* 15 18 27.2
SCO pmax pmax
comp=Z,28nm,1.1s
SCO MLR MLR
comp=Z,22µm,18.0s
SCO Scoresbysund 130.53 2⇑ *i* P **PKPdf 15 16 15.4 +1.5**
comp=Z,28nm,1.1s
SCO *i* 15 18 27.2
SCO *i* 15 19 35.8
SCO *i* 15 19 47.5
comp=Z,22µm,17.0s
ASR Mount Adams--S 130.61 294 P **PKPdf 15 16 16.8 +1.8**
JOF Joensuu 130.64 31 *e*PKIKP **PKPdf 15 16 15.2 +0.9**
JOF Joensuu 130.64 31 *e*pkp **PKPdf 15 16 15.2 +0.9**
EKS2 Erkin-Say 130.87 73 *e*PKIKP **PKPdf 15 16 15.3 -0.3**
EKS2 MLR MLR
comp=Z,32µm,20.0s
EKS2 Erkin-Say 130.87 73 *e*PKPdf **PKPdf 15 16 15.3 -0.3**
EKS2 LR LR
comp=Z,32µm,20.0s
EKS2 Erkin-Say 130.87 73 P **PKPdf 15 16 15.4 -0.3**
SNR=23
KMI Kunming 130.92 113 Pdif **Pdif 15 13 06.0 -1.7**
KMI PKP **PKPdf 15 16 15.6 -0.8**
KMI sPKP 15 16 25.3
KMI PP **PP 15 18 35.9 +2.9**
KMI PKS **PKSdf 15 19 50.3 -2.9**
KMI SKS **SKSdf 15 23 24.9 -2.1**
KMI SKKS **SKKSac 15 25 26.4 -2.2**
KMI SS **SS 15 36 02.3 -0.2**
KMI AMB AMB
comp=Z,7µm,10.1s
KMI LR LR
comp=N,7µm,21.5s
KMI LR LR
comp=E,14µm,22.4s
KMI LR LR
comp=Z,16µm,23.3s
KZA Kyzart 131.13 75 P **PKPdf 15 16 14.3 -2.2**
SNR=17
LON Longmire 131.16 294 *e*PKIKP **PKPdf 15 16 16.5 +0.6**
LON Longmire 131.16 294 *e*PKPdf **PKPdf 15 16 16.5 +0.6**
AAK Ala-Archa 131.19 74 *e*PKIKP **PKPdf 15 16 15.3 -1.0**
AAK 15 18 39.2
AAK Ala-Archa 131.19 74 *e*PKPdf **PKPdf 15 16 15.3 -1.0**
AAK PKP **PKPdf 15 16 16.1 -0.2**
AAK PP **PP 15 18 39.2 +4.4**
AAK SKPbc **SKPab 15 19 40.9 +0.6**
AAK Ala-Archa 131.19 74 PKPdf **PKPdf 15 16 18.5 +2.2**
SNR=28
AAK Ala-Archa 131.19 74 PKhKP PKPpre 15 16 05.8
comp=Z,0.8nm,0.5s,baz=128,slow=9.3,SNR=4.2
AAK PKP **PKPdf 15 16 16.1 -0.2**
comp=Z,25nm,0.8s,baz=196,slow=4.6,SNR=43
AAK PP **PP 15 18 39.2 +4.4**
comp=Z,12nm,1.1s,baz=212,slow=9.7,SNR=6.7
AAK SKPbc **SKPab 15 19 40.9 +0.6**
comp=Z,39nm,0.9s,baz=200,slow=7.1,SNR=11
FRU Bishkek 131.40 74 *e*PKIKP **PKPdf 15 16 18.0 +1.5**
FRU *e* 15 18 41.0
FRU pmax pmax
comp=Z,2µm,4.6s
FRU pmax pmax
comp=Z,860nm,3.0s
KBK Karagaybulak 131.43 74 P **PKPdf 15 16 16.0 -0.7**
SNR=16
STEI Steigen 131.57 20 *e*P **PKPdf 15 16 17.2 +1.3**
CHMS Chumysh 131.59 74 P **PKPdf 15 16 16.7 -0.2**
SNR=7.9
JMIC Jan Mayen 131.63 8 *e*P **PKPdf 15 16 17.1 +1.1**
JMIC AMS AMS 16 13 32.2
comp=Z,16µm,16.8s
JMIC Jan Mayen 131.63 8 SKPbc **SKPab 15 19 41.6 +0.7**
JMIC Jan Mayen 131.63 8 SKPbc **SKPab 15 19 41.6 +0.7**
comp=Z,332nm,1.1s,baz=140,slow=11,SNR=5.0
USP Ospenovka 131.68 73 P **PKPdf 15 16 16.3 -0.7**
SNR=11
TKM2 Tokmak 2 131.94 74 *e*PKIKP **PKPdf 15 16 17.1 -0.6**
TKM2 MLR MLR
comp=Z,42µm,21.0s
TKM2 Tokmak 2 131.94 74 *e*PKPdf **PKPdf 15 16 17.1 -0.6**
TKM2 LR LR
comp=Z,42µm,21.0s
TKM2 Tokmak 2 131.94 74 P **PKPdf 15 16 18.1 +0.3**
SNR=15
NLWA Neilton Lookou 132.57 294 *e*PKPdf **PKPdf 15 16 20.2 +1.7**
NLWA LR LR
comp=Z,15µm,19.0s
SUMG Summit 132.82 355 *e*PKIKP **PKPdf 15 16 18.5 -0.3**
SUMG Summit 132.82 355⇑ *i* PKIKP **PKPdf 15 16 19.8 +1.1**
SUMG *i* 15 18 44.1
SUMG pmax pmax
comp=Z,57nm,0.9s
SUMG MLR MLR
comp=Z,21µm,17.0s
SUMG Summit 132.82 355 *e*PKPdf **PKPdf 15 16 18.5 -0.3**
SUMG Summit 132.82 355⇑ *i* P **PKPdf 15 16 19.8 +1.1**
comp=Z,57nm,0.9s
SUMG *i* 15 18 44.1
SUMG *i* 15 19 43.2
SUMG *i* 15 19 51.7
comp=Z,21µm,17.0s
PGC Sidney 133.31 295 *e*PKPdf **PKPdf 15 16 21.2 +1.4**
HKC Hong Kong Obse 133.37 127 Pkpdf **PKiKP 15 16 26.0 +4.0**
TMCR Tamitsa 133.42 33 *e*PKIKP **PKPdf 15 16 21.9 +2.4**
TMCR pmax pmax
comp=Z,124nm,1.5s
TRO Tromso 133.71 20 *e*P PKPdf 15 16 09.4 -11
TRO *e*PP **PP 15 18 48.5 -1.8**
TRO AMS AMS 16 12 05.0
comp=Z,37µm,19.6s
GZH Guangzhou 133.74 126 Pdif Pdif 15 13 31.3 +11
GZH PKIKP PKPdf 15 16 14.6 -6.9
GZH PP PP 15 18 57.8 +7.2
GZH SS SS 15 37 04.1 +28
GZH LR LR
comp=N,17µm,17.5s
GZH LR LR
comp=E,9µm,18.1s
GZH LR LR
comp=Z,32µm,17.8s
GYA Guiyang 133.85 116 Pdif **Pdif 15 13 19.8 -0.7**
GYA PKP **PKiKP 15 16 23.8 +0.7**
GYA PP **PP 15 18 55.6 +4.0**
GYA PKS PKSdf 15 19 50.0 -8.3
GYA SKKS 15 25 44.3
GYA SS **SS 15 36 39.5 +1.7**
GYA AMB AMB
comp=Z,2µm,13.5s
GYA LR LR
comp=N,10µm,21.8s
GYA LR LR
comp=E,3µm,21.8s
GYA LR LR
comp=Z,9µm,25.8s
KTK1 Kautokeino 133.96 23 *e*P PKPdf 15 16 11.4 -9.0
KTK1 *e*PP **PP 15 18 47.6 -4.4**
KTK1 AMS AMS 16 08 23.8
comp=Z,29µm,23.3s
ARU Arti 134.40 51 *i* PKIKP **PKPdf 15 16 20.8 -0.8**
ARU PPP PPP 15 21 53.1
ARU MLR MLR
comp=Z,13µm,20.0s
ARCES ARCESS Array B 134.84 23 PKP **PKPdf 15 16 22.0 -0.1**
ARCES SKPbc **SKPbc 15 19 49.8 -1.4**
ARCES ARCESS Array B 134.84 23 PKhKP PKPpre 15 16 08.4
comp=Z,6.9nm,0.6s,baz=213,slow=3.0,SNR=16
ARCES PKP **PKPdf 15 16 22.0 -0.1**
comp=Z,65nm,0.9s,baz=273,slow=2.1,SNR=27
ARCES SKPbc **SKPbc 15 19 49.8 -1.4**
comp=Z,113nm,0.7s,baz=255,slow=2.4,SNR=40
AREO ARCESS Array S 134.84 23 *e*PKPdf **PKPdf 15 16 21.8 -0.3**
APA Apatity 134.94 28⇓ *i* PKIKP **PKPdf 15 16 19.0 -3.3**
APA *i* 15 19 00.0
APA *i* 15 23 34.0
APA *i* PS **PS 15 29 14.0 -4.8**
APA *i* SS SS 15 36 48.0 -2.4
APA MLR MLR
comp=Z,23µm,19.0s
KEV Kevo 135.32 24 *e*PKHKP PKPpre 15 16 11.8
KEV Kevo 135.32 24 PFAKE 15 16 30.0 +7.1
KEV LR LR
comp=Z,23µm,20.0s
KEV Kevo 135.32 24 *e*pkp PKPpre 15 16 11.8
SVE Sverdlovsk 135.49 52 *i* PKIKP **PKPdf 15 16 23.6 -0.1**
SVE *e* 15 19 01.0
SVE *e*PS **PS 15 29 20.7 -3.0**
SVE pmax pmax
comp=Z,114nm,1.6s
SVE pmax pmax
comp=Z,3µm,12.5s
SVE MLR MLR
comp=Z,33µm,24.0s
LVZ Lovozero 135.49 28⇑ *i* PKIKP **PKPdf 15 16 25.6 +2.2**
LVZ pmax pmax
comp=Z,128nm,1.7s
SOKR Solikamsk 135.98 47*c* *i* PKIKP **PKPdf 15 16 25.8 +1.4**
SOKR 15 19 06.8
SOKR SS SS 15 36 58.6 -4.4
SOKR pmax pmax
comp=Z,210nm,3.5s
ZRNK Zerenda 136.22 60 PKHKP PKPpre 15 16 12.9
ZRNK pmax pmax
comp=Z,46nm,1.2s
CD2 Chengdu 136.29 110 PKP **PKPdf 15 16 27.3 +1.2**
CD2 PP **PP 15 19 11.6 +4.6**
CD2 PKS **PKSdf 15 20 02.1 -0.3**
CD2 SKS **SKSdf 15 23 35.3 -0.6**
CD2 SKKS **SKKSac 15 26 01.5 +0.9**
CD2 SS **SS 15 37 10.8 +3.6**
CD2 LR LR
comp=N,16µm,18.1s
CD2 LR LR
comp=E,14µm,18.6s
CD2 LR LR
comp=Z,17µm,19.8s
TWG Pinlang 136.44 135 *e*PKPdf **PKPdf 15 16 26.7 +0.1**
TPUB Ta-pu 136.72 134 *e*PKPdf **PKPdf 15 16 26.8 -0.2**
BRVK Borovoye 136.85 61 *e*PKIKP **PKPdf 15 16 25.4 -0.9**
BRVK Borovoye 136.85 61 *e*PKPdf **PKPdf 15 16 25.4 -0.9**
BRVK Borovoye 136.85 61 PKPdf **PKPdf 15 16 25.7 -0.6**
SNR=17
BVA0 Borovoye Array 136.88 61 PKHKP PKPpre 15 16 14.3
BVA0 pmax pmax
comp=Z,10.0nm,1.3s
BVAR Borovoye Array 136.88 61 PKHKP PKPpre 15 16 13.7
BVAR 15 16 26.5
BVAR 15 19 15.3
BVAR pmax pmax
comp=Z,8.0nm,0.8s
BVAR pmax pmax
comp=Z,23nm,0.8s
BVAR pmax pmax
comp=Z,6.0nm,1.0s
BVAR pmax pmax
comp=N,122nm,0.8s
BVAR Borovoye Array 136.88 61 PKIKP **PKPdf 15 16 26.5 +0.1**
BVAR 15 19 15.3
BVAR Borovoye Array 136.88 61 PKP **PKPdf 15 16 26.5 +0.1**
BVAR PP **PP 15 19 15.3 +4.6**
BVAR SKPbc **SKPbc 15 19 57.0 -1.0**
BVAR Borovoye Array 136.88 61 PKhKP PKPpre 15 16 13.7
comp=N,8.0nm,0.8s,baz=223,slow=2.9,SNR=23
BVAR PKP **PKPdf 15 16 26.5 +0.1**
comp=N,23nm,0.8s,baz=261,slow=1.8,SNR=18
BVAR PP **PP 15 19 15.3 +4.6**
comp=N,5.8nm,1.0s,baz=198,slow=4.2,SNR=3.3
BVAR SKPbc **SKPbc 15 19 57.0 -1.0**
comp=N,122nm,0.8s,baz=225,slow=2.5,SNR=32
DAG Danmarks Havn 136.91 3 *i* PKIKP **PKPdf 15 16 22.4 -3.4**
DAG *i* 15 19 09.5
DAG MLR MLR
comp=Z,15µm,19.0s
DAG Danmarks Havn 136.91 3 *i* P **PKPdf 15 16 22.4 -3.4**
DAG *i* 15 19 09.5
DAG *i* 15 19 55.8
DAG
comp=Z,14µm,18.0s
VOSK Vostochnaya 136.93 62 PKHKP PKPpre 15 16 13.3
VOSK pmax pmax
comp=Z,71nm,1.2s
SSLB Suanglung 137.28 134 *e*PKPdf **PKPdf 15 16 29.9 +1.8**
QZH Quanzhou 137.47 131 Pdif **Pdif 15 13 46.3 +10**
QZH *i* PKPbc PKPdf 15 16 19.3 -9.1
QZH PP **PP 15 19 18.0 +4.0**
QZH PKS PKSdf 15 19 59.0 -5.6
QZH SKKS 15 26 04.0
QZH SS SS 15 37 44.0 +23
QZH LR LR
comp=N,19µm,17.9s
QZH LR LR
comp=E,10µm,18.1s
QZH LR LR
comp=Z,31µm,12.0s
BBB Bella Bella 137.92 296 PKP **PKPdf 15 16 29.5 +1.3**
BBB Bella Bella 137.92 296 PKP **PKPdf 15 16 29.5 +1.3**
comp=Z,22nm,0.7s,baz=188,slow=3.3,SNR=7.3
BJO Bjornoya 137.95 17 *e*P **PKPdf 15 16 27.6 -0.1**
MK31 Makanchi Array 138.01 76 PKHKP PKPpre 15 16 19.4
MK31 pmax pmax
comp=Z,55nm,1.0s
MK31 Makanchi Array 138.01 76 *e*PKPdf **PKPdf 15 16 28.6 -0.1**
MKAR Makanchi Array 138.01 76 PKHKP PKPpre 15 16 19.4
MKAR 15 16 30.1
MKAR pmax pmax
comp=Z,5.0nm,0.7s
MKAR pmax pmax
comp=Z,25nm,0.9s
MKAR pmax pmax
comp=N,48nm,0.9s
MKAR Makanchi Array 138.01 76 PKP **PKPdf 15 16 30.1 +1.4**
MKAR SKP 15 20 00.7
MKAR Makanchi Array 138.01 76 PKhKP PKPpre 15 16 19.4
comp=N,4.8nm,0.7s,baz=235,slow=2.7,SNR=36
MKAR PKP **PKPdf 15 16 30.1 +1.4**
comp=N,25nm,0.8s,baz=234,slow=2.6,SNR=22
MKAR SKP 15 20 00.7
comp=N,48nm,0.9s,baz=246,slow=2.7,SNR=18
WMQ Urumqi 138.51 83 PKP **PKPdf 15 16 25.0 -4.8**
WMQ PP **PP 15 19 19.0 -2.0**
WMQ PKS PKSdf 15 20 00.0 -5.8
WMQ SKS **SKSdf 15 23 34.0 -5.1**
WMQ SKKS **SKKSac 15 26 10.0 -3.3**
WMQ SS **SS 15 37 30.0 -3.8**
WMQ AMB AMB
comp=Z,7µm,13.0s
WMQ LR LR
comp=N,25µm,26.0s
WMQ LR LR
comp=E,20µm,25.0s
WMQ LR LR
comp=Z,22µm,26.0s
KURBB Kurchatov Arra 138.90 69 PKhKP PKPpre 15 16 20.9
comp=Z,6.9nm,0.7s,baz=235,slow=3.7,SNR=34
KURBB PP PP 15 19 28.9 +5.7
comp=Z,5.1nm,1.1s,baz=235,slow=5.6,SNR=4.2
KURBB SKP 15 20 04.8
comp=Z,22nm,0.8s,baz=226,slow=3.4,SNR=17
KURK Kurchatov 139.00 69 PKHKP PKPpre 15 16 20.9
KURK 15 19 28.9
KURK pmax pmax
comp=Z,7.0nm,0.7s
KURK pmax pmax
comp=Z,5.0nm,1.1s
KURK pmax pmax
comp=N,22nm,0.9s
KURK Kurchatov 139.00 69 PKPdf PKPpre 15 16 23.7
SNR=28

YKA	**Yellowknife Ar**	**139.30**	**315**		PKP	**PKPdf**	**15 16 28.8**	**-1.8**
YKA					PP	**PP**	**15 19 21.9**	**-3.6**
YKA					SKP		15 20 04.5	
YKA					SKKPbc	SKKPbc	15 28 23.1	-18
YKA					SKKPab	SKKPbc	15 28 54.6	+13
YKA	**Yellowknife Ar**	**139.30**	**315**		PKhKP	PKPpre	15 16 17.2	
	comp=N,2.7nm,0.5s,baz=121,slow=4.2,SNR=28							
YKA					PKP	**PKPdf**	**15 16 28.7**	**-1.8**
	comp=N,30nm,0.7s,baz=135,slow=2.4,SNR=46							
YKA					PP	**PP**	**15 19 21.9**	**-3.6**
	comp=N,30nm,0.8s,baz=125,slow=6.6,SNR=15							
YKA					SKP		15 20 04.5	
	comp=N,6.9nm,0.6s,baz=133,slow=2.9,SNR=8.8							
YKA					SKKPbc	SKKPbc	15 28 23.0	-18
	comp=N,4.2nm,1.1s,baz=324,slow=5.8,SNR=5.9							
YKA					SKKPab	SKKPbc	15 28 54.6	+13
	comp=N,2.7nm,1.0s,baz=311,slow=4.0,SNR=4.2							
LZH	**Lanzhou**	**140.58**	**105**	⇑	PKP	**PKPdf**	**15 16 34.3**	**+0.3**
LZH					PP	PP	15 19 40.0	+6.2
LZH					PKS	**PKSdf**	**15 20 09.3**	**-0.7**
LZH					SKKS		15 26 20.3	
LZH					AMB	AMB		
	comp=Z,2μm,6.8s							
LZH					LR	LR		
	comp=N,11μm,19.0s							
LZH					LR	LR		
	comp=E,16μm,19.8s							
LZH					LR	LR		
	comp=Z,15μm,20.9s							
SPA0	**Spitsbergen Ar**	**140.70**	**13**	*e*	PP	PKPpre	15 16 26.9	
SPITS	**Spitsbergen Ar**	**140.70**	**13**		PKP	**PKPdf**	**15 16 29.1**	**-3.6**
SPITS	**Spitsbergen Ar**	**140.70**	**13**		PKhKP	PKPpre	15 16 26.2	
	comp=Z,3.3nm,0.3s,baz=132,slow=9.6,SNR=47							
SPITS					PKP	**PKPdf**	**15 16 29.1**	**-3.6**
	comp=Z,16nm,0.6s,baz=140,slow=12,SNR=49							
SPITS					SKP		15 20 08.7	
	comp=Z,99nm,0.9s,baz=270,slow=9.1,SNR=18							
WHN	**Wuhan**	**140.74**	**122**		PKP	**PKPdf**	**15 16 29.4**	**-4.8**
WHN					LR	LR		
	comp=N,50μm,19.4s							
WHN					LR	LR		
	comp=E,20μm,17.9s							
WHN					LR	LR		
	comp=Z,58μm,22.0s							
KBS	**Kingsbay**	**140.88**	**11**	*e*	PP	PKPdf	15 16 24.9	-8.1
KBS					AMB	AMB	15 16 39.4	
	comp=Z,228nm,1.6s							
KBS				*e*	SS	SS	15 37 49.0	-11
KBS					AMS	AMS	16 14 35.2	
	comp=Z,20μm,18.2s							
KBS	**Kingsbay**	**140.88**	**11**	*d*	iPKIKP	**PKPdf**	**15 16 34.8**	**+1.8**
GTA	**Gaotai**	**141.23**	**98**	*e*	PKP	PKPdf	15 16 28.9	-6.1
GTA					sPKP		15 16 40.9	
GTA					PP	**PP**	**15 19 33.3**	**-4.5**
GTA					PKS	PKSdf	15 20 03.6	-7.3
GTA					SKS	SKSdf	15 23 34.3	-10
GTA					SKKS	**SKKSac**	**15 26 23.9**	**-5.7**
GTA					SS	**SS**	**15 38 02.8**	**-3.0**
GTA					AMB	AMB		
	comp=Z,10μm,12.8s							
GTA					LR	LR		
	comp=N,14μm,21.9s							
GTA					LR	LR		
	comp=E,10μm,26.1s							
GTA					LR	LR		
	comp=Z,17μm,23.8s							
XAN	**Xi'an**	**141.30**	**113**		PKP	PKPdf	15 16 27.8	-7.4
XAN					PP	PP	15 19 44.5	+6.5
XAN					PKS	**PKSdf**	**15 20 06.8**	**-4.3**
XAN					SKS	**SKSdf**	**15 23 42.4**	**-1.7**
XAN					SKKS	**SKKSac**	**15 26 26.6**	**-3.4**
XAN					AMB	AMB		
	comp=Z,1μm,15.4s							
XAN					LR	LR		
	comp=N,10μm,20.5s							
XAN					LR	LR		
	comp=E,3μm,21.6s							
XAN					LR	LR		
	comp=Z,5μm,20.5s							
RES	**Resolute Bay**	**141.82**	**337**		PKP	**PKPdf**	**15 16 31.4**	**-3.4**
RES				*e*	PKPdf	**PKiKP**	**15 16 34.7**	**-2.9**
RES					SKP		15 20 10.3	
RES	**Resolute Bay**	**141.82**	**337**		PKhKP	PKPpre	15 16 27.7	
	comp=Z,22nm,0.8s,baz=154,slow=5.4,SNR=47							
RES					PKP	**PKPdf**	**15 16 31.4**	**-3.4**
	comp=Z,34nm,0.8s,baz=147,slow=4.4,SNR=25							
RES					SKP		15 20 10.3	
	comp=Z,61nm,0.9s,baz=123,slow=4.7,SNR=13							
JOW	**Kunigami**	**142.53**	**142**	*e*	PKPdf	**PKPdf**	**15 16 37.5**	**0.0**
WRAK	**Wrangell Islan**	**142.56**	**298**	*e*	PKPdf	**PKPdf**	**15 16 34.5**	**-2.0**
WRAK					LR	LR		
	comp=Z,18μm,21.0s							
DLBC	**Dease Lake**	**142.79**	**302**		PKPpre	PKPpre	15 16 32.6	
DLBC	**Dease Lake**	**142.79**	**302**		PKhKP	PKPpre	15 16 32.6	
	comp=Z,46nm,0.8s,baz=162,slow=1.7,SNR=29							
NVS	**Novosibirsk**	**143.81**	**67**	⇓	*i* PKIKP	PKPbc	15 16 36.5	-0.1
NVS					pmax	pmax		
	comp=N,230nm,1.6s							
NVS					pmax	pmax		
	comp=E,245nm,1.6s							
NVS					pmax	pmax		
	comp=Z,704nm,1.6s							
NJ2	**Nanjing**	**143.91**	**126**	*e*	PKP	PKPab	15 16 37.0	0.0
NJ2					pPKP	**PKiKP**	**15 16 43.9**	**+0.6**
NJ2					sPKP		15 16 45.6	
NJ2					SKS	**SKSdf**	**15 23 44.5**	**-3.6**
NJ2					SKKS	**SKKSac**	**15 26 43.0**	**-2.0**
NJ2					AMB	AMB		
	comp=Z,6μm,9.2s							
NJ2					LR	LR		
	comp=N,16μm,19.1s							
NJ2					LR	LR		
	comp=E,10μm,20.8s							
NJ2					LR	LR		
	comp=Z,17μm,17.2s							
SSE	**Sheshan**	**143.99**	**130**		PKP	PKPbc	15 16 38.6	+0.8
SSE					AMB	AMB		
	comp=Z,5μm,13.2s							
SSE					LR	LR		
	comp=N,12μm,18.6s							
SSE					LR	LR		
	comp=E,5μm,18.8s							
SSE					LR	LR		
	comp=Z,14μm,17.1s							
ZAA0	**Zalesovo Array**	**144.00**	**69**	*e*	PKPdf	**PKPdf**	**15 16 39.6**	**+0.4**
ZALV	**Zalesovo Beam**	**144.00**	**69**		PKHKP	PKPpre	15 16 35.7	
ZALV	**Zalesovo Beam**	**144.00**	**69**		PKP	PKPab	15 16 35.6	-1.0
ZALV					SKP		15 20 14.2	
ZALV	**Zalesovo Beam**	**144.00**	**69**		PKP	PKPab	15 16 35.6	-1.0
	comp=Z,28nm,0.4s,baz=231,slow=2.9,SNR=64							
ZALV					SKP		15 20 14.2	
	comp=Z,32nm,0.8s,baz=242,slow=3.1,SNR=11							
SKAG	**Skagway**	**145.63**	**301**	*e*	PKPdf	**PKPdf**	**15 16 41.6**	**-0.2**
TIY	**Taiyuan**	**145.94**	**113**	*e*	PKPbc	**PKPdf**	**15 16 43.1**	**-0.1**
TIY					PP	**PP**	**15 20 03.9**	**-2.0**
TIY					AMB	AMB		
	comp=Z,5μm,12.7s							
TIY					LR	LR		
	comp=N,11μm,16.9s							
TIY					LR	LR		
	comp=E,3μm,16.6s							
TIY					LR	LR		
	comp=Z,10μm,18.5s							
TIA	**Tai'an**	**146.78**	**120**		PKPbc	**PKPdf**	**15 16 45.3**	**+0.7**
TIA					SS	SS	15 39 11.3	+2.4
TIA					LR	LR		
	comp=N,14μm,18.6s							
TIA					LR	LR		
	comp=E,13μm,17.6s							
TIA					LR	LR		
	comp=Z,17μm,17.6s							
BTO	**Baotou**	**147.12**	**107**	*e*	PKPbc	**PKPdf**	**15 16 45.3**	**+0.2**
PNL	**Peninsula**	**147.49**	**299**	*e*	PKPbc	**PKPbc**	**15 16 47.2**	**-0.4**
HHC	**Hu-ho-hao-te**	**148.04**	**109**	*e*	PKPbc	**PKPdf**	**15 16 46.9**	**+0.2**
HHC					PKS	**PP**	**15 20 20.0**	**+1.7**
HHC					PP	PP	15 20 21.3	+3.0
HHC					SKS	**SKSdf**	**15 23 54.6**	**+0.6**
HHC					SKKS	**SKKSac**	**15 27 09.8**	**+1.5**
HHC					SS	**SS**	**15 39 25.1**	**+1.6**
HHC					AMB	AMB		
	comp=Z,11μm,9.0s							
HHC					LR	LR		
	comp=N,13μm,21.3s							
HHC					LR	LR		
	comp=E,11μm,20.3s							
HHC					LR	LR		
	comp=Z,11μm,20.6s							
INK	**Inuvik**	**149.04**	**316**		PKP	**PKPdf**	**15 16 44.6**	**-2.6**
INK					PKPbc	**PKPbc**	**15 16 49.8**	**-1.6**
INK					SKP		15 20 20.9	
INK	**Inuvik**	**149.04**	**316**		PKP	**PKPdf**	**15 16 44.6**	**-2.6**
	comp=Z,12nm,0.7s,baz=105,slow=1.2,SNR=35							
INK					PKPbc	**PKPbc**	**15 16 49.8**	**-1.6**
	comp=Z,242nm,0.6s,baz=99,slow=4.1,SNR=113							
INK					SKP		15 20 20.9	
	comp=Z,17nm,1.0s,baz=121,slow=2.9,SNR=3.6							
JNU	**Nakatsue**	**149.19**	**142**		PKPbc	**PKPdf**	**15 16 50.5**	**+1.8**
JNU	**Nakatsue**	**149.19**	**142**		PKPbc	**PKPdf**	**15 16 50.5**	**+1.8**
	comp=Z,40nm,0.8s,baz=132,slow=0.9,SNR=7.9							
BJI	**Beijing**	**149.53**	**115**		PKPbc	**PKPdf**	**15 16 48.8**	**-0.1**
BJI					PP	**PP**	**15 20 26.4**	**-0.3**
BJI					SS	SS	15 39 40.4	+0.6
BJI					LR	LR		
	comp=N,6μm,24.2s							
BJI					LR	LR		
	comp=E,6μm,23.4s							
BJI					LR	LR		
	comp=Z,11μm,33.4s							
BMRM	**Bremner River**	**150.39**	**299**	*e*	PKPdf	**PKPdf**	**15 16 47.8**	**-1.9**
BMRM					ePKPbc	**PKiKP**	**15 16 55.7**	**-0.1**
MOY	**Mondy**	**150.40**	**83**	*e*	PKIKP	**PKPdf**	**15 16 49.5**	**-0.6**
EGAK	**Eagle**	**150.54**	**307**	*e*	PKPbc	**PKPbc**	**15 16 55.2**	**0.0**
EGAK					LR	LR		
	comp=Z,23μm,20.0s							
SONM	**Songino Array**	**150.63**	**94**		PKP	**PKPdf**	**15 16 49.7**	**-0.9**
SONM					PKPbc	**PKPbc**	**15 16 56.1**	**0.0**
SONM	**Songino Array**	**150.63**	**94**		PKP	**PKPdf**	**15 16 49.7**	**-0.9**
	comp=Z,65nm,0.8s,baz=213,slow=2.4,SNR=27							
SONM					PKPbc	**PKPbc**	**15 16 56.1**	**0.0**
	comp=Z,103nm,0.5s,baz=215,slow=2.3,SNR=69							
MENT	**Mentasta**	**150.86**	**303**	*e*	PKPbc	**PKPbc**	**15 16 55.8**	**-0.2**
DL2	**Dalian**	**150.96**	**123**		PKPbc	**PKPdf**	**15 16 50.9**	**-0.3**
DL2					PP	**PP**	**15 20 37.6**	**+2.7**
DL2					SKKS		15 27 21.9	
DL2					AMB	AMB		
	comp=Z,5μm,14.0s							
DL2					LR	LR		
	comp=E,29μm,21.4s							
DL2					LR	LR		
	comp=Z,68μm,36.7s							
DIV	**Divide**	**150.97**	**299**	*e*	PKPbc	**PKPbc**	**15 16 56.2**	**-0.2**
ULN	**Ulaanbaatar**	**150.98**	**94**		PKPdf	**PKPdf**	**15 16 50.7**	**-0.5**
SNR=86								
DOT	**Dot Lake**	**151.28**	**304**	*e*	PKPbc	**PKPbc**	**15 16 56.9**	**-0.1**
JHJ	**Hachijo jima 2**	**151.47**	**156**		PKP	**PKPdf**	**15 16 51.4**	**-0.8**
	comp=Z,89nm,0.9s,baz=40,slow=7.9,SNR=2.5							
JHJ					PKPbc	**PKiKP**	**15 16 59.5**	**+0.7**
	comp=Z,237nm,0.8s,baz=136,slow=6.9,SNR=9.5							
PAX	**Paxson**	**151.60**	**302**	*e*	PKIKP	**PKPbc**	**15 16 57.2**	**-0.7**
PAX				*e*			15 17 07.1	
PAX	**Paxson**	**151.60**	**302**	*e*	PKPbc	**PKPbc**	**15 16 57.2**	**-0.7**
PAX				*e*	PKPab	**PKPab**	**15 17 07.1**	**+0.4**
INCN	**Inchon**	**151.71**	**132**		PKPdf	**PKPdf**	**15 16 53.9**	**+1.4**
SNR=12								
TLY	**Talaya**	**151.72**	**85**	*e*	PKIKP	**PKPdf**	**15 16 50.4**	**-1.6**
TLY				*e*			15 20 40.5	
TLY					pmax	pmax		
	comp=Z,110nm,1.2s							
TLY					MLR	MLR		
	comp=Z,16μm,19.0s							
KSAR	**Wonju Array Be**	**152.13**	**134**		PKP	**PKPdf**	**15 16 52.7**	**-0.3**
KSAR					PKPbc	**PKPbc**	**15 16 59.6**	**-0.1**
KSRS	**Korea Array**	**152.16**	**134**		PKP	**PKPdf**	**15 16 52.7**	**-0.3**
	comp=Z,8.3nm,1.0s,baz=216,slow=1.4,SNR=21							
KSRS					PKPbc	**PKPbc**	**15 16 59.6**	**-0.1**
	comp=Z,21nm,0.7s,baz=204,slow=2.0,SNR=29							
SEW	**Seward**	**152.16**	**295**	*e*	PKPbc	**PKPbc**	**15 16 58.2**	**-0.8**
IRK	**Irkutsk**	**152.37**	**85**	⇓	*i* PKIKP	**PKPdf**	**15 16 51.9**	**-1.0**
IRK				*e*			15 20 47.7	
IRK					pmax	pmax		
	comp=Z,598nm,2.0s							
SML	**Sawmill**	**152.37**	**299**	*e*	PKIKP	**PKPbc**	**15 16 59.5**	**-0.1**
SML	**Sawmill**	**152.37**	**299**	*e*	PKPbc	**PKPbc**	**15 16 59.5**	**-0.1**
KDAK	**Kodiak Island**	**152.54**	**289**		PKP	**PKPdf**	**15 16 51.1**	**-1.8**
KDAK					PKPbc	**PKPbc**	**15 16 59.0**	**-0.9**
KDAK				*e*	PKPbc	**PKiKP**	**15 17 00.4**	**+0.2**
KDAK				*e*	PKPab	**PKPab**	**15 17 09.9**	**-0.6**
KDAK	**Kodiak Island**	**152.54**	**289**		PKP	**PKPdf**	**15 16 51.1**	**-1.8**
	comp=Z,26nm,1.0s,baz=340,slow=1.7,SNR=5.2							
KDAK					PKPbc	**PKPbc**	**15 16 59.0**	**-0.9**
	comp=Z,306nm,0.7s,baz=200,slow=1.9,SNR=59							
OHAK	**Old Harbor**	**152.60**	**288**	*e*	PKPbc	**PKPbc**	**15 17 00.2**	**+0.1**
OHAK				*e*	PKPab	**PKPab**	**15 17 11.4**	**+0.6**
PMR	**Palmer**	**152.64**	**298**	*e*	PKIKP	**PKPbc**	**15 17 00.0**	**0.0**
PMR	**Palmer**	**152.64**	**298**	*e*	PKPbc	**PKPbc**	**15 17 00.0**	**0.0**
ILAR	**Eielson Array**	**152.84**	**305**		PKP	**PKPdf**	**15 16 50.2**	**-3.1**
ILAR					PKPbc	**PKPbc**	**15 16 59.4**	**-1.1**
ILAR	**Eielson Array**	**152.84**	**305**		PKP	**PKPdf**	**15 16 50.2**	**-3.1**
	comp=Z,15nm,1.0s,baz=189,slow=0.7,SNR=47							
ILAR					PKPbc	**PKPbc**	**15 16 59.4**	**-1.1**
	comp=Z,92nm,0.6s,baz=149,slow=1.6,SNR=147							
MCK	**McKinley**	**153.34**	**303**	*e*	PKIKP	**PKPbc**	**15 17 01.4**	**-0.2**
MCK	**McKinley**	**153.34**	**303**	*e*	PKPbc	**PKPbc**	**15 17 01.4**	**-0.2**
TRF	**Thorofare Moun**	**153.81**	**302**	*e*	PKPbc	**PKPbc**	**15 17 02.8**	**0.0**
SNY	**Shenyang**	**154.22**	**122**	⇑	PKPbc	**PKPdf**	**15 16 56.8**	**+0.9**
SNY					PP	**PP**	**15 20 57.4**	**+4.0**
SNY					SS	SS	15 40 27.8	-3.6
SNY					AMB	AMB		
	comp=Z,5μm,12.0s							
SNY					LR	LR		
	comp=N,6μm,20.4s							
SNY					LR	LR		
	comp=E,4μm,19.6s							
SNY					LR	LR		
	comp=Z,5μm,28.8s							
MAT	**Matsushiro**	**154.42**	**152**		PKP	**PKPdf**	**15 16 54.7**	**-1.7**
MJAR	**Matsushiro Arr**	**154.42**	**152**		PKP	**PKPdf**	**15 16 55.2**	**-1.3**
MJAR					PKPbc	**PKiKP**	**15 17 06.7**	**+1.9**
MJAR					SKP		15 20 33.1	
MJAR					PP	**PP**	**15 20 51.1**	**-3.2**
MJAR	**Matsushiro Arr**	**154.42**	**152**		PKP	**PKPdf**	**15 16 55.2**	**-1.3**
	comp=Z,6.0nm,0.9s,baz=214,slow=3.2,SNR=15							
MJAR					PKPbc	**PKiKP**	**15 17 06.7**	**+1.9**
	comp=Z,9.7nm,0.7s,baz=192,slow=2.7,SNR=15							
MJAR					SKP		15 20 33.1	
	comp=Z,1.7nm,0.9s,baz=241,slow=4.0,SNR=2.5							
MJAR					PP	**PP**	**15 20 51.1**	**-3.2**
	comp=Z,3.0nm,1.1s,baz=183,slow=1.6,SNR=3.3							
PPLA	**Purkeypile**	**154.45**	**300**	*e*	PKPbc	**PKPbc**	**15 17 05.1**	**+0.9**
COLD	**Coldfoot**	**154.80**	**310**	*e*	PKPbc	**PKPbc**	**15 17 04.6**	**0.0**
SDPT	**Sand Point**	**155.15**	**279**	*e*	PKPbc	PKPdf	15 17 05.3	+8.6
CN2	**Changchun**	**156.63**	**123**	*e*	PKP	**PKPdf**	**15 16 58.4**	**-0.7**
CN2					SKS	**SKSdf**	**15 24 03.1**	**-0.8**
CN2					SKKS	**SKKSac**	**15 27 56.3**	**+1.7**
CN2				*e*	SS	**SS**	**15 40 58.8**	**+1.4**
CN2					AMB	AMB		
	comp=Z,5μm,18.0s							
CN2					LR	LR		
	comp=N,3μm,25.0s							
CN2					LR	LR		
	comp=E,4μm,25.0s							
CN2					LR	LR		
	comp=Z,7μm,27.0s							
CIT	**Chita**	**156.86**	**93**	*e*	PKIKP	**PKPdf**	**15 16 57.9**	**-1.3**
CIT					pmax	pmax		
	comp=Z,391nm,3.8s							
AKUT	**Akutan**	**157.14**	**273**	*e*	PKPdf	**PKPdf**	**15 16 56.4**	**-3.0**
VLA	**Vladivostok**	**158.58**	**134**	*c*	*i* PKIKP	**PKPdf**	**15 17 00.9**	**-0.6**
MDJ	**Mudanjiang**	**158.99**	**128**		PKP	**PKPdf**	**15 17 01.4**	**-0.6**
MDJ					pPKP	**pPKPdf**	**15 17 09.5**	**+1.5**
MDJ					PP	**PP**	**15 21 21.1**	**+1.3**
MDJ					SS	SS	15 41 24.6	+2.1
MDJ					AMB	AMB		
	comp=Z,3μm,20.3s							
MDJ					LR	LR		
	comp=N,7μm,45.0s							
MDJ					LR	LR		
	comp=E,4μm,50.8s							
MDJ					LR	LR		
	comp=Z,17μm,24.7s							
USRK	**Ussuriysk Arra**	**159.55**	**133**		PKP	**PKPdf**	**15 17 01.9**	**-0.8**
	comp=Z,4.7nm,0.9s,baz=112,slow=2.1,SNR=6.2							
USRK					PKPab	**PKPab**	**15 17 41.2**	**+0.2**
	comp=Z,10nm,0.9s,baz=214,slow=1.9,SNR=6.5							
TNA	**Tin City**	**161.68**	**303**	*e*	PKPdf	**PKPdf**	**15 17 02.3**	**-2.0**
ASAJ	**Asahikawa**	**162.64**	**154**		PKP	**PKPdf**	**15 17 06.6**	**+0.6**
ASAJ	**Asahikawa**	**162.64**	**154**		PKP	**PKPdf**	**15 17 06.6**	**+0.6**
	comp=Z,9.7nm,0.7s,baz=15,slow=16,SNR=4.6							
YUK	**Yuzh-Kuril'sk**	**163.16**	**162**	*c*	*i* PKIKP	**PKPdf**	**15 17 06.6**	**+0.1**
YUK					*e*		15 21 40.1	
YUK					*i*		15 24 13.3	
YUK					*i* SS	SS	15 42 00.0	-5.6
YUK					*i* SSS	SSS	15 48 28.4	
KLR	**Kul'dur**	**163.58**	**123**	*e*	PKIKP	**PKPdf**	**15 17 02.8**	**-3.9**
KLR				*e*	PS	**PP**	**15 21 42.4**	**-2.0**
KLR					pmax	pmax		
	comp=Z,830nm,3.0s							
KLR					pmax	pmax		
	comp=Z,16μm,12.0s							
HABR	**Khabarovsk**	**164.29**	**131**	*c*	*i* PKIKP	**PKPdf**	**15 17 07.7**	**+0.4**
HABR				*e*			15 18 01.3	
HABR				*e*			15 21 47.5	
HABR				*e*			15 24 12.4	
HABR				*e*	SS	SS	15 42 18.6	+0.9
HABR				*e*	SSS	SSS	15 48 41.0	
HABR					pmax	pmax		
	comp=Z,73nm,1.7s							
CLNS	**Chul'man**	**165.01**	**91**	*e*	PKIKP	**PKPdf**	**15 17 06.2**	**-1.6**
CLNS					pmax	pmax		
	comp=E,7.0nm,1.6s							
CLNS					pmax	pmax		
	comp=N,10.0nm,1.5s							
CLNS					pmax	pmax		
	comp=Z,26nm,1.0s							
YSS	**Yuzh-Sakhalins**	**165.36**	**151**	⇑	*i* PKIKP	**PKPdf**	**15 17 09.4**	**+1.1**
YSS				*i*			15 17 18.6	
YSS				*e*			15 21 51.0	
YSS				*e*	SS	SS	15 42 23.0	-5.3
YSS				*e*			15 48 57.0	
YSS					pmax	pmax		
	comp=Z,300nm,1.8s							
YSS					pmax	pmax		
	comp=Z,9μm,11.0s							
FX1	**Attu Island--F**	**166.67**	**245**		PKP	**PKPdf**	**15 17 07.5**	**-1.7**
FX1					PKPab	**PKPab**	**15 18 12.2**	**+0.1**
FX1	**Attu Island--F**	**166.67**	**245**		PKP	**PKPdf**	**15 17 07.5**	**-1.7**
	comp=Z,12nm,0.8s,baz=267,slow=17,SNR=5.6							
FX1					PKPab	**PKPab**	**15 18 12.2**	**+0.1**
	comp=Z,16nm,0.7s,baz=337,slow=5.2,SNR=7.8							
YAK	**Yakutsk**	**168.64**	**71**	*e*	PKP2	**PKPab**	**15 18 18.4**	**-2.1**
YAK				*e*			15 22 07.8	
YAK				*e*	PPP	PPP	15 26 22.4	
YAK					pmax	pmax		
	comp=N,235nm,10.4s							
YAK					pmax	pmax		
	comp=Z,2μm,12.8s							
YAK					pmax	pmax		
	comp=E,1μm,13.1s							
SKR	**Severo-Kuril's**	**170.21**	**192**	*i*	PKIKP	PKPdf	15 17 06.0	-5.6
SKR				*e*			15 22 18.0	
SKR				*e*	SS	SS	15 43 16.0	-0.8
SKR					pmax	pmax		
	comp=N,5μm,12.0s							
SKR					pmax	pmax		
	comp=Z,11μm,12.0s							
SKR					pmax	pmax		
	comp=N,5μm,14.0s							
SKR					pmax	pmax		
	comp=Z,11μm,14.0s							
SKR					MLR	MLR		
	comp=N,13μm,20.0s							
SKR					MLR	MLR		
	comp=E,11μm,20.0s							
SKR					MLR	MLR		
	comp=Z,19μm,20.0s							
BILL	**Bilibino**	**170.32**	**329**	*c*	*i* PKIKP	**PKPdf**	**15 17 06.9**	**-4.3**
BILL				*e*			15 22 19.8	
BILL					pmax	pmax		
	comp=Z,110nm,1.1s							
BILL	**Bilibino**	**170.32**	**329**	*e*	PKPdf	**PKPdf**	**15 17 06.0**	**-5.1**
PEA0B	**Petropavlovsk-**	**172.35**	**202**	*e*	PKPdf	**PKPdf**	**15 17 08.8**	**-3.8**
PETK	**Petropavlovsk-**	**172.35**	**202**		PKIKP	**PKPdf**	**15 17 13.0**	**+0.3**
PETK							15 18 37.6	
PETK	**Petropavlovsk-**	**172.35**	**202**		PKP	**PKPdf**	**15 17 13.0**	**+0.3**
PETK					PKPab	**PKPab**	**15 18 37.6**	**+0.4**
PETK	**Petropavlovsk-**	**172.35**	**202**		PKP	**PKPdf**	**15 17 13.0**	**+0.3**
	comp=Z,70nm,1.2s,baz=116,slow=3.4,SNR=8.4							
PETK					PKPab	**PKPab**	**15 18 37.6**	**+0.4**
	comp=Z,38nm,0.8s,baz=149,slow=7.9,SNR=10							
SEY	**Seymchan**	**177.33**		6⇑	*e* PKIKP	**PKPdf**	**15 17 10.7**	**-3.1**

*IDC **16** 15:03:37.8±0.4, 60.°33S×27.°11W, h0km, mb4.9/16, mb1 4.9/16, mb1mx4.8/22, mbtmp4.9/16, Error ellipse: s-maj=18.5km s-min=15.1km az=38.0*
*ISCJB **16** 15:03:38.7±0.4, 60.°46S±0.°07×27.°0W±0.°2, h19km, mb4.8/17, Error ellipse: s-maj=12.4km s-min=7.5km az=141.7*
*NEIC **16** 15:03:40.7±1.9, 60.°38S×26.°92W, h20km±11km, mb5.0/4, Error ellipse: s-maj=10.4km s-min=7.7km az=218.0*

ISC 16 15:03:40.6±0.3, 60.°44S±0.°07×26.°85W±0.°08, h19km, n112,
σ1§39/117, mb4.9/17, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**12.73**	**151**	*e*	Pn	**Pn**	**15 06 40.8**	**+0.6**
VNA1	**Neumayer--Stat**	**12.73**	**151**	*e*	Sn	**Sn**	**15 08 55.8**	**-5.4**
VNA3	**Neumayer Olymp**	**12.85**	**155**	*e*	Pn	**Pn**	**15 06 41.9**	**+0.1**
VNA3	**Neumayer Olymp**	**12.85**	**155**	*e*	Sn	**Sn**	**15 08 58.9**	**-5.2**
VNA2	**Neumayer--Watz**	**13.13**	**151**	*e*	Pn	**Pn**	**15 06 45.4**	**-0.3**
baz=298,slow=17								
VNA2	**Neumayer--Watz**	**13.13**	**151**	*e*	Sn	Sn	15 09 02.8	-8.2
baz=298,slow=17								
SNAA	**Sanae**	**14.73**	**150**	*e*	Pn	**Pn**	**15 07 07.3**	**-0.3**
SNAA	**Sanae**	**14.73**	**150**	*e*	Sn

	5.5nm,0.8s,baz=182,slow=4.1,SNR=6.4								
ASAR					PKKPbc	**PKKPbc**	**15 33 55.5**	**+1.0**
	0.4nm,0.8s,baz=22,slow=2.5,SNR=5.3								
WRA	**Warramunga Arr**	**98.46**	**162**		P	**P**	**15 17 16.8**	**-0.7**
WRA					PKKPbc	**PKKPdf**	**15 33 45.8**	**-0.2**
WRA	**Warramunga Arr**	**98.46**	**162**		P	**P**	**15 17 16.8**	**-0.7**
	3.7nm,1.0s,baz=194,slow=2.9,SNR=4.2								
WRA					PKKPbc	**PKKPdf**	**15 33 45.8**	**-0.2**
	0.5nm,0.7s,baz=358,slow=3.1,SNR=4.9								
KBZ	**Khabaz**	**118.28**	**51**		PKP	**PKPdf**	**15 22 26.0**	**+0.6**
KBZ	**Khabaz**	**118.28**	**51**		PKP	**PKPdf**	**15 22 26.0**	**+0.6**
	1.1nm,0.4s,baz=101,slow=5.2,SNR=3.5								
PDAR	**Pinedale Array**	**122.77**	**300**		PKP	**PKPdf**	**15 22 33.6**	**-0.8**
PDAR	**Pinedale Array**	**122.77**	**300**		PKP	**PKPdf**	**15 22 33.6**	**-0.8**
	1.0nm,0.5s,baz=116,slow=4.1,SNR=2.3								
CMAR	**Chiang Mai Arr**	**123.27**	**113**		PKP	**PKPdf**	**15 22 36.6**	**+0.8**
CMAR	**Chiang Mai Arr**	**123.27**	**113**		PKP	**PKPdf**	**15 22 36.6**	**+0.8**
	3.1nm,0.9s,baz=233,slow=3.2,SNR=5.6								
ULM	**Lac du Bonnet**	**123.50**	**314**		PKP	**PKPdf**	**15 22 34.5**	**-0.7**
ULM	**Lac du Bonnet**	**123.50**	**314**		PKP	**PKPdf**	**15 22 34.5**	**-0.7**
	2.1nm,0.5s,baz=117,slow=4.5,SNR=2.9								
HFS	**Hagfors**	**124.28**	**23**		PKP	**PKPdf**	**15 22 35.9**	**-0.5**
HFS	**Hagfors**	**124.28**	**23**		PKP	**PKPdf**	**15 22 35.9**	**-0.5**
	1.6nm,0.5s,baz=222,slow=1.9,SNR=4.2								
NB2	**NORSAR Subarra**	**124.66**	**21**		PKPdf	**PKPdf**	**15 22 37.1**	**0.0**
	comp=Z,2.8nm,0.8s,baz=202,slow=1.9								
NOA	**NORSAR Array B**	**124.66**	**21**		PKP	**PKPdf**	**15 22 37.6**	**+0.4**
NOA	**NORSAR Array B**	**124.66**	**21**		PKP	**PKPdf**	**15 22 37.6**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=194,slow=1.8,SNR=5.9								
FRB	**Frobisher Bay**	**127.82**	**338**		PKP	**PKPdf**	**15 22 42.8**	**-0.2**
FRB	**Frobisher Bay**	**127.82**	**338**		PKP	**PKPdf**	**15 22 42.8**	**-0.2**
	comp=Z,5.5nm,0.6s,baz=151,slow=3.1,SNR=6.3								
FINES	**FINES Array B**	**128.17**	**29**		PKP	**PKPdf**	**15 22 44.0**	**+0.3**
FINES					SKPbc	SKiKP	15 26 00.2	-19
FINES					SKP		15 26 20.1	
FINES	**FINES Array B**	**128.17**	**29**		PKP	**PKPdf**	**15 22 44.0**	**+0.3**
	comp=Z,7.6nm,0.6s,baz=183,slow=1.2,SNR=9.6								
FINES					SKPbc	SKiKP	15 26 00.2	-19
	comp=Z,1.0nm,0.5s,baz=203,slow=3.5,SNR=5.4								
FINES					SKP		15 26 20.1		
	comp=Z,1.3nm,0.6s,baz=191,slow=1.9,SNR=3.8								
AKTO	**Aktyubinsk**	**129.74**	**56**		PKP	**PKPdf**	**15 22 47.3**	**+0.2**
AKTO	**Aktyubinsk**	**129.74**	**56**		PKP	**PKPdf**	**15 22 47.3**	**+0.2**
	comp=Z,5.0nm,0.8s,baz=239,slow=5.9,SNR=1.9								
NEW	**Newport**	**130.37**	**299**		SKPbc	**SKPab**	**15 26 09.8**	**-0.5**
NEW	**Newport**	**130.37**	**299**		SKPbc	**SKPab**	**15 26 09.8**	**-0.5**
	comp=Z,5.7nm,0.6s,baz=284,slow=5.1,SNR=5.2								
AML	**Almayashu**	**130.38**	**74**		P	**Pdif**	**15 19 36.2**	**-3.0**
	SNR=17								
EKS2	**Erkin-Say**	**130.83**	**73**		P	**Pdif**	**15 19 41.7**	**+0.9**
	SNR=15								
KZA	**Kyzart**	**131.09**	**75**		P	**Pdif**	**15 19 43.3**	**+1.0**
	SNR=15								
AAK	**Ala-Archa**	**131.15**	**74**		PKP	**PKPdf**	**15 22 51.9**	**+1.6**
AAK	**Ala-Archa**	**131.15**	**74**		PKP	**PKPdf**	**15 22 51.9**	**+1.6**
	comp=Z,2.1nm,0.6s,baz=221,slow=20,SNR=6.4								
KBK	**Karagaybulak**	**131.38**	**74**		P	**Pdif**	**15 19 41.0**	**-2.3**
	SNR=12								
CHMS	**Chumysh**	**131.55**	**74**		P	**Pdif**	**15 19 40.9**	**-3.0**
	SNR=17								
USP	**Ospenovka**	**131.63**	**73**		P	**Pdif**	**15 19 41.1**	**-3.1**
	SNR=18								
ULHL	**Ulahol**	**131.69**	**76**		P	**Pdif**	**15 19 45.1**	**+0.3**
	SNR=8.3								
TKM2	**Tokmak 2**	**131.89**	**74**		P	**Pdif**	**15 19 46.0**	**+0.4**
	SNR=7.2								
ARCES	**ARCESS Array B**	**134.95**	**23**		PKP	**PKPdf**	**15 22 56.8**	**+0.3**
ARCES					SKPbc	**SKPbc**	**15 26 24.6**	**-0.8**
ARCES	**ARCESS Array B**	**134.95**	**23**		PKP	**PKPdf**	**15 22 56.8**	**+0.3**
	comp=Z,3.3nm,0.6s,baz=230,slow=1.8,SNR=9.8								
ARCES					SKPbc	**SKPbc**	**15 26 24.6**	**-0.8**
	comp=Z,6.2nm,0.8s,baz=199,slow=3.1,SNR=12								
BVAR	**Borovoye Array**	**136.87**	**61**		PKP	**PKPdf**	**15 23 02.6**	**+2.2**
BVAR					SKPbc	**SKPbc**	**15 26 32.7**	**+0.8**
BVAR	**Borovoye Array**	**136.87**	**61**		PKP	**PKPdf**	**15 23 02.6**	**+2.2**
	comp=Z,1.9nm,0.6s,baz=253,slow=0.8,SNR=3.9								
BVAR					SKPbc	**SKPbc**	**15 26 32.7**	**+0.8**
	comp=Z,2.5nm,0.8s,baz=222,slow=2.0,SNR=4.5								
MKAR	**Makanchi Array**	**137.96**	**76**		PKPpre	PKPpre	15 22 54.9		
MKAR					PKP	**PKiKP**	**15 23 05.1**	**+0.3**
MKAR	**Makanchi Array**	**137.96**	**76**		PKhKP	PKPpre	15 22 54.9		
	comp=Z,1.3nm,0.7s,baz=299,slow=1.5,SNR=2.5								
MKAR					PKP	**PKiKP**	**15 23 05.1**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=200,slow=0.9,SNR=3.4								
KURBB	**Kurchatov Arra**	**138.87**	**69**		PKhKP	PKPpre	15 22 58.5		
	comp=Z,0.9nm,0.6s,baz=235,slow=3.7,SNR=3.7								
KURK	**Kurchatov**	**138.98**	**69**		PKPpre	PKPpre	15 22 58.5		
YKA	**Yellowknife Ar**	**139.48**	**314**		PKP	**PKPdf**	**15 23 04.7**	**-0.2**
YKA					PP	**PP**	**15 25 56.6**	**-4.1**
YKA					SKPbc	**SKPbc**	**15 26 37.8**	**-1.1**
YKA	**Yellowknife Ar**	**139.48**	**314**		PKP	**PKPdf**	**15 23 04.7**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=131,slow=2.4,SNR=8.9								
YKA					PP	**PP**	**15 25 56.6**	**-4.1**
	comp=Z,1.3nm,0.9s,baz=122,slow=6.7,SNR=4.3								
YKA					SKPbc	**SKPbc**	**15 26 37.8**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=133,slow=3.2,SNR=5.3								
SPITS	**Spitsbergen Ar**	**140.83**	**13**		PKPpre	PKPpre	15 23 01.6		
SPITS					PKP	**PKiKP**	**15 23 08.8**	**-0.9**
SPITS	**Spitsbergen Ar**	**140.83**	**13**		PKhKP	PKPpre	15 23 01.6		
	comp=Z,2.6nm,0.5s,baz=140,slow=12,SNR=8.5								
SPITS					PKP	**PKiKP**	**15 23 08.8**	**-0.9**
	comp=Z,2.5nm,0.5s,baz=144,slow=17,SNR=6.3								
DLBC	**Dease Lake**	**142.94**	**302**		PKPpre	PKPpre	15 23 06.3		
DLBC	**Dease Lake**	**142.94**	**302**		PKPbc	PKPpre	15 23 06.3		
	comp=Z,1.6nm,0.4s,baz=121,slow=5.9,SNR=3.9								
ZAA0	**Zalesovo Array**	**143.97**	**69**	*e*PKPdf		PKPab	15 23 10.7	+0.1	
ZALV	**Zalesovo Beam**	**143.97**	**69**		PKP	PKPbc	15 23 11.1	-0.1	
ZALV	**Zalesovo Beam**	**143.97**	**69**		PKP	PKPbc	15 23 11.1	-0.1	
	comp=Z,3.7nm,0.4s,baz=223,slow=3.8,SNR=21								
SKAG	**Skagway**	**145.78**	**301**	*e*PKPdf		**PKPdf**	**15 23 16.4**	**+0.2**	
JNU	**Nakatsue**	**149.02**	**142**		PKPbc	**PKPbc**	**15 23 27.5**	**+0.9**	
JNU	**Nakatsue**	**149.02**	**142**		PKPbc	**PKPbc**	**15 23 27.5**	**+0.9**	
	comp=Z,12nm,0.9s,baz=327,slow=1.6,SNR=4.6								
INK	**Inuvik**	**149.21**	**316**		PKPbc	**PKPbc**	**15 23 25.0**	**-0.9**	
INK	**Inuvik**	**149.21**	**316**		PKPbc	**PKPbc**	**15 23 25.0**	**-0.9**	
	comp=Z,16nm,0.7s,baz=58,slow=4.0,SNR=16								
SONM	**Songino Array**	**150.53**	**94**		PKPbc	**PKPbc**	**15 23 30.7**	**+0.7**	
SONM	**Songino Array**	**150.53**	**94**		PKPbc	**PKPbc**	**15 23 30.7**	**+0.7**	
	comp=Z,10nm,0.6s,baz=222,slow=2.4,SNR=11								
KSAR	**Wonju Array Be**	**151.96**	**134**		PKPbc	**PKPbc**	**15 23 33.8**	**+0.4**	
KSRS	**Korea Array**	**151.98**	**134**		PKPbc	**PKPbc**	**15 23 33.8**	**+0.3**	
	comp=Z,6.6nm,0.9s,baz=182,slow=2.0,SNR=12								
SEW	**Seward**	**152.30**	**295**	*e*PKPbc		**PKPbc**	**15 23 32.9**	**-0.5**	
KDAK	**Kodiak Island**	**152.68**	**289**		PKPbc	**PKPbc**	**15 23 34.4**	**0.0**	
KDAK	**Kodiak Island**	**152.68**	**289**		PKPbc	**PKPbc**	**15 23 34.4**	**0.0**	
	comp=Z,8.5nm,0.4s,baz=13,slow=3.9,SNR=14								
ILAR	**Eielson Array**	**153.00**	**305**		PKPbc	**PKPbc**	**15 23 34.5**	**-0.4**	
ILAR	**Eielson Array**	**153.00**	**305**		PKPbc	**PKPbc**	**15 23 34.5**	**-0.4**	
	comp=Z,8.5nm,0.7s,baz=167,slow=1.9,SNR=12								
MJAR	**Matsushiro Arr**	**154.24**	**151**		PKPbc	**PKPbc**	**15 23 39.5**	**+1.0**	
MJAR					PKPab	**PKPab**	**15 23 53.3**	**+0.8**	
MJAR	**Matsushiro Arr**	**154.24**	**151**		PKPbc	**PKPbc**	**15 23 39.5**	**+1.0**	
	comp=Z,3.8nm,0.9s,baz=181,slow=3.3,SNR=5.3								
MJAR					PKPab	**PKPab**	**15 23 53.3**	**+0.8**	
	comp=Z,3.9nm,0.8s,baz=184,slow=4.7,SNR=5.5								

IDC 16 15:04:20.0±3.3, 5°.61S×151°.05E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.4/19, mbtmp3.3/4, ML2.0/1, Error ellipse: s-maj=111.7km s-min=44.0km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.39**	**225**	Pn	Pn	15 05 43.5	+1.7
	0.3nm,0.3s,baz=41,slow=11,SNR=3.0						
PMG				Sn	Sn	15 06 41.0	-3.6
	0.8nm,0.3s,baz=220,slow=19,SNR=1.3						
WRA	**Warramunga Arr**	**21.61**	**227**	P	P	15 09 11.5	-0.3
	0.4nm,0.7s,baz=53,slow=10,SNR=7.5						
ASAR	**Alice Springs**	**24.39**	**221**	P	P	15 09 40.2	-0.1
	0.3nm,0.8s,baz=57,slow=9.4,SNR=11						
FITZ	**Fitzroy Crossi**	**27.74**	**241**	P	P	15 10 10.4	-0.2
	1.8nm,1.0s,baz=45,slow=10.0,SNR=2.6						
TORD	**Torodi Ar. Bea**	**148.87**	**286**	PKPbc	PKPbc	15 24 10.3	-0.6
	0.8nm,0.6s,baz=63,slow=2.7,SNR=5.8						

*CSEM **16** 15:13:05.6, 42°.55N×13°.28E, h10km, MD1.7/6, After ROM*
ROM 16 15:13:05.6±0.2, 42°.55N×13°.28E, h10km±1km, Md1.7/6, Ml1.5/4, Error ellipse: s-maj=4.1km s-min=1.5km az=14.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.09**	**99**	Pg	Pg	15 13 08.8	+0.6
CAMP				Pg	Pg	15 13 08.8	+0.6
	91nm,0.3s						
CAMP				Sg	Sg	15 13 11.0	+0.9
	91nm,0.3s						
LNSS	**Leonessa**	**0.19**	**286**	Pg	Pg	15 13 10.1	+0.4
LNSS				Sg	Sg	15 13 13.4	+0.9
	272nm,0.2s						
LNSS	**Leonessa**	**0.19**	**286**	Pg	Pg	15 13 10.1	+0.4
LNSS				Sg	Sg	15 13 13.4	+0.9
	272nm,0.2s						
TERO	**Teramo**	**0.25**	**73**	Pg	Pg	15 13 11.1	+0.4
TERO				Sg	Sg	15 13 15.2	+1.0
	41nm,0.1s						
TERO	**Teramo**	**0.25**	**73**	Pg	Pg	15 13 11.1	+0.4
TERO				Sg	Sg	15 13 15.2	+1.0
	41nm,0.1s						
NRCA	**Norcia**	**0.31**	**336**	Pg	Pg	15 13 12.3	+0.4
NRCA				Sg	Sb	15 13 17.5	-1.2
	59nm,0.1s						
NRCA	**Norcia**	**0.31**	**336**	Pg	Pg	15 13 12.3	+0.4
NRCA				Sg	Sb	15 13 17.5	-1.2
	59nm,0.1s						
VCEL	**Villa Celiera**	**0.44**	**110**	Pg	Pg	15 13 14.2	-0.2
VCEL				Sg	Sb	15 13 21.6	-0.9
VCEL	**Villa Celiera**	**0.44**	**110**	Pg	Pg	15 13 14.2	-0.2
VCEL				Sg	Sb	15 13 21.6	-0.9
FDMO	**Fiordimonte**	**0.51**	**343**	Pg	Pb	15 13 16.7	0.0
FDMO				Sg	Sb	15 13 24.3	0.0
FDMO	**Fiordimonte**	**0.51**	**343**	Pg	Pb	15 13 16.7	0.0
FDMO				Sg	Sb	15 13 24.3	0.0

*IDC **16** 15:13:16.9±0.5, 60°.27S×27°.08W, h0km, mb4.4/12, mb1 4.5/12, mb1mx4.3/21, mbtmp4.4/12, Error ellipse: s-maj=21.2km s-min=16.6km az=33.0*
*NEIC **16** 15:13:18.2±0.3, 60°.24S×26°.94W, h10km, mb5.0/6, Error ellipse: s-maj=13.9km s-min=10.3km az=57.0*
*ISCJB **16** 15:13:19.1±0.5, 60°.38S±0°.08×26°.9W±0°.2, h26km, mb4.5/15, Error ellipse: s-maj=15.4km s-min=9.2km az=149.2*
ISC 16 15:13:20.8±0.4, 60°.27S±0°.09×26°.89W±0°.10, h26km, n67, σ1§23/67, mb4.5/14, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**12.89**	**151**	*e*Pn	**Pn**	**15 16 19.6**	**-2.4**
VNA3	**Neumayer Olymp**	**13.01**	**155**	*e*Pn	**Pn**	**15 16 21.3**	**-2.4**
VNA2	**Neumayer--Watz**	**13.29**	**151**	*e*Pn	**Pn**	**15 16 24.7**	**-2.8**
SNAA	**Sanae**	**14.89**	**150**	*e*Pn	**Pn**	**15 16 47.9**	**-1.4**
SNAA	**Sanae**	**14.89**	**150**	Pn	**Pn**	**15 16 48.2**	**-1.1**
PMSA	**Palmer Station**	**17.54**	**239**	P	**P**	**15 17 26.9**	**+3.0**
PMSA	**Palmer Station**	**17.54**	**239**	P	**P**	**15 17 26.9**	**+3.0**
	3.1nm,0.3s,baz=116,slow=14,SNR=10						
QSPA	**South Pole Qui**	**29.96**	**180**	P	**P**	**15 19 27.9**	**+1.2**
QSPA	**South Pole Qui**	**29.96**	**180**	P	**P**	**15 19 27.8**	**+1.2**
	6.6nm,0.9s,baz=209,slow=7.2,SNR=4.2						
CFAA	**Coronel Fontan**	**39.52**	**298**	P	**P**	**15 20 48.8**	**-0.4**
CFAA				PcP	**PcP**	**15 22 55.8**	**-0.5**
CFAA	**Coronel Fontan**	**39.52**	**298**	P	**P**	**15 20 48.8**	**-0.4**
	0.4nm,0.4s,baz=151,slow=11,SNR=8.3						
CFAA				PcP	**PcP**	**15 22 55.8**	**-0.5**
	0.3nm,0.4s,baz=103,slow=5.4,SNR=4.1						
CPUP	**Villa Florida**	**39.82**	**315**	P	**P**	**15 20 51.9**	**+0.2**
CPUP	**Villa Florida**	**39.82**	**315**	P	**P**	**15 20 51.9**	**+0.2**
	2.8nm,0.5s,baz=150,slow=6.5,SNR=11						
VNDA	**Vanda**	**42.35**	**183**	*e*P	**P**	**15 21 12.8**	**+0.9**
	4.3nm,1.0s						
VNDA	**Vanda**	**42.35**	**183**	P	**P**	**15 21 13.3**	**+1.4**
	2.8nm,0.9s,baz=185,slow=5.7,SNR=7.0						
SHEL	**Horse Pasture**	**46.84**	**28**	P	P	15 21 45.4	-3.0
	182nm,1.2s						
BOSA	**Boshof**	**47.01**	**72**	*e*P	**P**	**15 21 49.4**	**-0.4**
	16nm,1.4s						
BOSA	**Boshof**	**47.01**	**72**	P	**P**	**15 21 50.5**	**+0.7**
	4.8nm,1.0s,baz=197,slow=7.1,SNR=4.4						
LBTB	**Lobatse**	**50.22**	**69**	P	**P**	**15 22 15.8**	**+1.4**
LBTB	**Lobatse**	**50.22**	**69**	P	**P**	**15 22 15.8**	**+1.4**
	1.2nm,0.5s,baz=209,slow=10,SNR=2.3						
SIV	**San Ignacio**	**50.66**	**316**	P	**P**	**15 22 17.5**	**-0.3**
SIV	**San Ignacio**	**50.66**	**316**	P	**P**	**15 22 17.5**	**-0.3**
	3.4nm,0.5s,baz=191,slow=8.8,SNR=22						
TSUM	**Tsumeb**	**51.72**	**58**	P	**P**	**15 22 27.3**	**+1.5**
TSUM	**Tsumeb**	**51.72**	**58**	P	**P**	**15 22 27.3**	**+1.5**
	1.6nm,0.6s,baz=156,slow=11,SNR=3.9						
LPAZ	**La Paz**	**53.02**	**308**	*e*P	**P**	**15 22 36.0**	**0.0**
	5.0nm,0.6s						
LPAZ				PcP	**PcP**	**15 23 44.4**	**0.0**
LPAZ	**La Paz**	**53.02**	**308**	P	**P**	**15 22 36.3**	**+0.3**
	4.7nm,0.6s,baz=145,slow=4.3,SNR=28						
LPAZ				PcP	**PcP**	**15 23 44.4**	**0.0**
	0.7nm,0.4s,baz=124,slow=3.6,SNR=2.4						
OTAV	**Otavalo**	**72.17**	**305**	P	**P**	**15 24 43.9**	**+0.2**
	5.2nm,1.0s						
TOA0	**Torodi Ar. Sit**	**76.68**	**29**	*e*P	**P**	**15 25 09.9**	**+0.7**
TORD	**Torodi Ar. Bea**	**76.68**	**29**	P	**P**	**15 25 10.2**	**+1.0**
TORD	**Torodi Ar. Bea**	**76.68**	**29**	P	**P**	**15 25 10.2**	**+1.0**
	2.1nm,0.5s,baz=200,slow=6.2,SNR=35						
TEIG	**Tepich**	**94.23**	**304**	P	**P**	**15 26 36.6**	**-0.6**
TEIG	**Tepich**	**94.23**	**304**	P	**P**	**15 26 36.6**	**-0.6**
	5.8nm,0.6s,baz=41,slow=11,SNR=3.3						
ASAR	**Alice Springs**	**94.90**	**162**	P	**P**	**15 26 39.9**	**-0.7**
ASAR	**Alice Springs**	**94.90**	**162**	P	**P**	**15 26 39.9**	**-0.7**
	1.7nm,0.9s,baz=187,slow=4.2,SNR=7.3						
WRAB	**Tennant Creek**	**98.64**	**162**	P	Pdif	15 26 58.2	+0.7
	6.4nm,1.0s						
PDAR	**Pinedale Array**	**122.66**	**300**	PKP	**PKPdf**	**15 32 12.5**	**-0.9**
PDAR	**Pinedale Array**	**122.66**	**300**	PKP	**PKPdf**	**15 32 12.5**	**-0.9**
	0.4nm,0.5s,baz=122,slow=6.2,SNR=6.7						
CMAR	**Chiang Mai Arr**	**123.35**	**113**	PKP	**PKPdf**	**15 32 15.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**123.35**	**113**	PKP	**PKPdf**	**15 32 15.4**	**+0.3**
	0.5nm,0.7s,baz=242,slow=1.9,SNR=3.6						
NOA	**NORSAR Array B**	**124.51**	**21**	PKP	**PKPdf**	**15 32 15.7**	**-0.4**
NOA	**NORSAR Array B**	**124.51**	**21**	PKP	**PKPdf**	**15 32 15.7**	**-0.4**
	0.7nm,0.9s,baz=283,slow=1.5,SNR=3.0						
FRB	**Frobisher Bay**	**127.66**	**338**	PKP	**PKPdf**	**15 32 20.7**	**-1.2**
FRB	**Frobisher Bay**	**127.66**	**338**	PKP	**PKPdf**	**15 32 20.7**	**-1.2**
	1.7nm,0.2s,baz=138,slow=7.0,SNR=3.9						
FINES	**FINESS Array B**	**128.03**	**29**	PKP	**PKPdf**	**15 32 22.6**	**-0.1**
FINES	**FINESS Array B**	**128.03**	**29**	PKP	**PKPdf**	**15 32 22.6**	**-0.1**
	2.0nm,0.6s,baz=154,slow=2.0,SNR=11						
ARCES	**ARCESS Array B**	**134.80**	**23**	PKP	**PKPdf**	**15 32 35.5**	**+0.2**
ARCES	**ARCESS Array B**	**134.80**	**23**	PKP	**PKPdf**	**15 32 35.5**	**+0.2**
	2.8nm,0.8s,baz=239,slow=2.1,SNR=5.4						
BVAR	**Borovoye Array**	**136.81**	**61**	PKP	**PKPdf**	**15 32 41.4**	**+1.9**
BVAR				PP	PP	15 35 12.0	-12
BVAR	**Borovoye Array**	**136.81**	**61**	PKP	**PKPdf**	**15 32 41.4**	**+1.9**
	2.2nm,1.0s,baz=8.5,slow=3.0,SNR=3.8						
BVAR				PP	PP	15 35 12.0	-12
	1.4nm,0.9s,baz=207,slow=0.3,SNR=5.0						
YKA	**Yellowknife Ar**	**139.34**	**315**	PKP	**PKPdf**	**15 32 43.5**	**-0.3**
YKA				PP	**PP**	**15 35 35.9**	**-3.2**
YKA	**Yellowknife Ar**	**139.34**	**315**	PKP	**PKPdf**	**15 32 43.5**	**-0.3**
	0.8nm,0.5s,baz=128,slow=2.3,SNR=12						
YKA				PP	**PP**	**15 35 35.9**	**-3.2**
	0.5nm,0.9s,baz=128,slow=6.4,SNR=5.7						
SPITS	**Spitsbergen Ar**	**140.67**	**13**	PKPpre	PKPpre	15 32 40.6	
SPITS	**Spitsbergen Ar**	**140.67**	**13**	PKhKP	PKPpre	15 32 40.6	
	4.5nm,1.0s,baz=140,slow=10,SNR=4.7						
RES	**Resolute Bay**	**141.83**	**337**	PKPpre	PKPpre	15 32 43.3	
RES	**Resolute Bay**	**141.83**	**337**	PKhKP	PKPpre	15 32 43.3	
	0.5nm,0.8s,baz=166,slow=8.3,SNR=3.1						
ZALV	**Zalesovo Beam**	**143.93**	**69**	PKP	**PKPab**	**15 32 49.9**	**+0.2**
ZALV	**Zalesovo Beam**	**143.93**	**69**	PKP	**PKPab**	**15 32 49.9**	**+0.2**
	0.8nm,0.4s,baz=222,slow=3.4,SNR=7.6						
INK	**Inuvik**	**149.07**	**316**	PKPbc	**PKPbc**	**15 33 04.0**	**-0.8**
INK	**Inuvik**	**149.07**	**316**	PKPbc	**PKPbc**	**15 33 04.0**	**-0.8**
	4.5nm,0.7s,baz=64,slow=3.3,SNR=28						
SONM	**Songino Array**	**150.56**	**94**	PKPbc	**PKPbc**	**15 33 08.6**	**-0.6**
SONM	**Songino Array**	**150.56**	**94**	PKPbc	**PKPbc**	**15 33 08.6**	**-0.6**
	3.5nm,0.9s,baz=211,slow=2.0,SNR=5.7						
KSAR	**Wonju Array Be**	**152.09**	**134**	PKPbc	**PKPbc**	**15 33 13.5**	**+0.6**
KSRS	**Korea Array**	**152.12**	**134**	PKPbc	**PKPbc**	**15 33 13.5**	**+0.5**
	1.1nm,0.8s,baz=186,slow=2.4,SNR=4.7						
KDAK	**Kodiak Island**	**152.60**	**289**	PKPbc	**PKPbc**	**15 33 12.9**	**-0.5**
KDAK	**Kodiak Island**	**152.60**	**289**	PKPbc	**PKPbc**	**15 33 12.9**	**-0.5**
	5.8nm,0.4s,baz=359,slow=18,SNR=7.8						
ILAR	**Eielson Array**	**152.88**	**305**	PKPbc	**PKPbc**	**15 33 13.2**	**-0.6**
ILAR	**Eielson Array**	**152.88**	**305**	PKPbc	**PKPbc**	**15 33 13.2**	**-0.6**
	2.2nm,0.7s,baz=147,slow=4.7,SNR=33						

*CSEM **16** 15:18:53.1±1.0, 36°.06N×21°.77E, h8km, MD3.5, Error ellipse: s-maj=19.3km s-min=12.0km az=28.0*

*THE **16** 15:18:53.3, 36°.08N±21°.76E, h0km±1km, ML2.2/2, Error ellipse: s-maj=2.4km s-min=0.9km az=192.0*
*ATH **16** 15:18:53.6, 36°.11N×21°.79E, h16km±3km, MD3.5/10*
ISC 16 15:18:52.2±2.7, 36°.04N±0°.10×21°.73E±0°.07, h4km±12km, n33, σ0§44/47, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.85**	**1**	P	**Pg**	**15 19 08.6**	**0.0**
PYL	**PYLOS**	**0.85**	**1**	*e*Pn	**Pg**	**15 19 08.3**	**-0.3**
PYL				*e*Sn	**Sg**	**15 19 19.0**	**-0.6**
PYL	**PYLOS**	**0.85**	**1**	*e*Pb	**Pg**	**15 19 08.3**	**-0.3**
PYL	**PYLOS**	**0.85**	**1**	P	**Pg**	**15 19 08.6**	**0.0**
DYR	**Agios Nikonas**	**0.87**	**34**	P	**Pg**	**15 19 09.1**	**+0.2**
DYR				S	**Sg**	**15 19 20.6**	**+0.4**
DYR	**Agios Nikonas**	**0.87**	**34**	*e*Pn	**Pg**	**15 19 09.1**	**+0.2**
DYR				*e*Sn	**Sg**	**15 19 20.2**	**0.0**
DYR	**Agios Nikonas**	**0.87**	**34**	P	**Pg**	**15 19 09.1**	**+0.2**
DYR				S	**Sg**	**15 19 20.6**	**+0.4**
KYTH	**Kithira**	**1.09**	**77**	P	**Pg**	**15 19 13.1**	**+0.1**
KYTH	**Kithira**	**1.09**	**77**	*e*Pn	**Pg**	**15 19 13.2**	**+0.2**
KYTH	**Kithira**	**1.09**	**77**	*e*Pn	**Pg**	**15 19 13.2**	**+0.2**
ITM	**Ithomi**	**1.15**	**8**	P	**Pg**	**15 19 14.0**	**-0.2**
ITM				S	**Sb**	**15 19 30.5**	**+0.6**
ITM	**Ithomi**	**1.15**	**8**	*e*Pn	**Pg**	**15 19 13.9**	**-0.2**
ITM				*e*Sn	**Sg**	**15 19 28.9**	**-0.2**
ITM	**Ithomi**	**1.15**	**8**	P	**Pg**	**15 19 14.0**	**-0.2**
ITM				*e*Sn	**Sg**	**15 19 28.9**	**-0.2**
VLI	**Veliai**	**1.19**	**55**	P	**Pg**

VCEL	**Villa Celiera**	**0.44**	**111**	Pg	**Pg**	**16 11 46.7**	**-0.4**
VCEL				Sg	**Sb**	**16 11 54.1**	**-0.7**
	2µm,0.5s						
VCEL	**Villa Celiera**	**0.44**	**111**	Pg	**Pg**	**16 11 46.7**	**-0.4**
VCEL				Sg	**Sb**	**16 11 54.1**	**-0.7**
	2µm,0.5s						
MNS	**Montasola**	**0.48**	**249**	Pg	**Pg**	**16 11 47.2**	**-0.5**
MNS				Sg	**Sg**	**16 11 54.6**	**+0.5**
	1µm,0.5s						
MNS	**Montasola**	**0.48**	**249**	Pg	**Pg**	**16 11 47.2**	**-0.5**
MNS				Sg	**Sg**	**16 11 54.6**	**+0.5**
	1µm,0.5s						
OFFI	**Offida**	**0.48**	**38**	Pg	**Pg**	**16 11 48.2**	**+0.4**
	4µm,0.4s						
OFFI	**Offida**	**0.48**	**38**	Pg	**Pg**	**16 11 48.2**	**+0.4**
	4µm,0.4s						
FDMO	**Fiordimonte**	**0.50**	**343**	Pg	**Pg**	**16 11 47.8**	**-0.4**
FDMO				Sg	**Sb**	**16 11 55.9**	**-0.5**
	380nm,0.2s						
FDMO	**Fiordimonte**	**0.50**	**343**	Pg	**Pg**	**16 11 47.8**	**-0.4**
FDMO				Sg	**Sb**	**16 11 55.9**	**-0.5**
	380nm,0.2s						
CESX	**Cesi**	**0.52**	**276**	Pg	**Pg**	**16 11 47.8**	**-0.8**
CESX	**Cesi**	**0.52**	**276**	Pg	**Pg**	**16 11 47.8**	**-0.8**
CESI	**CESI - Serrava**	**0.53**	**328**	Pg	**Pg**	**16 11 48.4**	**-0.3**
CESI				Sg	**Sg**	**16 11 56.6**	**+0.9**
	156nm,0.4s						
CESI	**CESI - Serrava**	**0.53**	**328**	Pg	**Pg**	**16 11 48.4**	**-0.3**
CESI				Sg	**Sg**	**16 11 56.6**	**+0.9**
	156nm,0.4s						
TRTR	**Tortoreto Alta**	**0.53**	**61**	Pg	**Pb**	**16 11 49.2**	**-0.3**
	2µm,0.5s						
TRTR	**Tortoreto Alta**	**0.53**	**61**	Pg	**Pb**	**16 11 49.2**	**-0.3**
	2µm,0.5s						
PTQR	**Pietraquaria**	**0.54**	**171**	Pg	**Pg**	**16 11 48.0**	**-0.9**
	58nm,0.2s						
PTQR	**Pietraquaria**	**0.54**	**171**	Pg	**Pg**	**16 11 48.0**	**-0.9**
	58nm,0.2s						
CERT	**Cerreto**	**0.65**	**200**	Pg	**Pg**	**16 11 49.8**	**-1.1**
	1µm,0.6s						
CERT	**Cerreto**	**0.65**	**200**	Pg	**Pg**	**16 11 49.8**	**-1.1**
	1µm,0.6s						
ASSB	**Assisi San Ben**	**0.67**	**317**	Pg	**Pg**	**16 11 50.7**	**-0.6**
	373nm,0.3s						
ASSB	**Assisi San Ben**	**0.67**	**317**	Pg	**Pg**	**16 11 50.7**	**-0.6**
	373nm,0.3s						
GUMA	**Gualdo di Mace**	**0.70**	**43**	Pg	Pg	16 11 48.3	-3.6
GUMA				Sg	**Sg**	**16 11 56.4**	**-4.6**
	3µm,0.4s						
INTR	**Introdacqua**	**0.71**	**140**	Pg	**Pg**	**16 11 50.9**	**-1.3**
	1µm,0.9s						
INTR	**Introdacqua**	**0.71**	**140**	Pg	**Pg**	**16 11 50.9**	**-1.3**
	1µm,0.9s						
VVLD	**Villa Vallelon**	**0.73**	**160**	Pg	**Pg**	**16 11 52.1**	**-0.4**
	467nm,0.5s						
VVLD	**Villa Vallelon**	**0.73**	**160**	Pg	**Pg**	**16 11 52.1**	**-0.4**
	467nm,0.5s						
SNTG	**Esanatoglia**	**0.74**	**340**	Pg	**Pg**	**16 11 52.3**	**-0.4**
SNTG	**Esanatoglia**	**0.74**	**340**	Pg	**Pg**	**16 11 52.3**	**-0.4**
GUAR	**Guarcino**	**0.76**	**178**	Pg	**Pg**	**16 11 52.9**	**-0.2**
	460nm,0.9s						
GUAR	**Guarcino**	**0.76**	**178**	Pg	**Pg**	**16 11 52.9**	**-0.2**
	460nm,0.9s						
CING	**Cingoli**	**0.82**	**355**	Pg	**Pg**	**16 11 53.5**	**-0.7**
	295nm,0.4s						
CING	**Cingoli**	**0.82**	**355**	Pg	**Pg**	**16 11 53.5**	**-0.7**
	295nm,0.4s						
LPEL	**Lama dei Pelig**	**0.84**	**127**	Pg	**Pg**	**16 11 53.2**	**-1.4**
	439nm,0.2s						
LPEL	**Lama dei Pelig**	**0.84**	**127**	Pg	**Pg**	**16 11 53.2**	**-1.4**
	439nm,0.2s						
ARVD	**Arcevia**	**0.97**	**345**	Pg	**Pg**	**16 11 55.9**	**-1.2**
	175nm,0.7s						
ARVD	**Arcevia**	**0.97**	**345**	Pg	**Pg**	**16 11 55.9**	**-1.2**
	175nm,0.7s						
GIUL	**Giuliano Di Ro**	**1.00**	**181**	Pg	**Pb**	**16 11 56.8**	**-0.8**
	138nm,0.6s						
GIUL	**Giuliano Di Ro**	**1.00**	**181**	Pg	**Pb**	**16 11 56.8**	**-0.8**
	138nm,0.6s						
AOI	**Ancona**	**1.02**	**13**	Pg	**Pb**	**16 11 57.3**	**-0.7**
	196nm,0.5s						
AOI	**Ancona**	**1.02**	**13**	Pg	**Pb**	**16 11 57.3**	**-0.7**
	196nm,0.5s						
SACS	**San Casciano d**	**1.05**	**287**	Pg	**Pb**	**16 11 58.2**	**-0.4**
	237nm,0.9s						
PIEI	**Pieia**	**1.12**	**331**	Pg	**Pb**	**16 11 59.8**	**+0.1**
PIEI	**Pieia**	**1.12**	**331**	Pg	**Pb**	**16 11 59.8**	**+0.1**
CAFI	**Castiglion Fio**	**1.24**	**309**	Pg	**Pn**	**16 12 01.2**	**-0.3**
CAFI	**Castiglion Fio**	**1.24**	**309**	Pg	**Pn**	**16 12 01.2**	**-0.3**
MS1	**Monte Sant'Ang**	**2.15**	**12**	*e*Pn	**Pb**	**16 12 17.5**	**+0.2**
NVLJ	**Novalja**	**2.31**	**29**	*e*Pn	**Pn**	**16 12 16.3**	**+0.1**
NVLJ				Sn	**Sn**	**16 12 45.5**	**+0.9**
NVLJ	**Novalja**	**2.31**	**29**	*e*Pn	**Pn**	**16 12 16.3**	**+0.1**
NVLJ				Sn	**Sn**	**16 12 45.5**	**+0.9**
STON	**Ston**	**3.27**	**83**	*e*Pn	**Pn**	**16 12 32.4**	**+3.0**
STON				Sn	**Sn**	**16 13 08.8**	**+0.6**
STON	**Ston**	**3.27**	**83**	*e*Pn	**Pn**	**16 12 32.3**	**+3.0**
STON				Sn	**Sn**	**16 13 08.7**	**+0.6**
BOJS	**Bojanci**	**3.27**	**25**	*i* Pn	**Pn**	**16 12 30.3**	**+0.9**
BOJS				*i* Sn	**Sn**	**16 13 10.7**	**+2.5**
BOJS	**Bojanci**	**3.27**	**25**	*i* Pn	**Pn**	**16 12 30.3**	**+0.9**
BOJS				*i* Sn	**Sn**	**16 13 10.7**	**+2.5**
JAVS	**Javornik**	**3.38**	**9**	*i* Pn	**Pn**	**16 12 32.4**	**+1.4**
JAVS				*i* Sn	**Sn**	**16 13 12.6**	**+1.4**
JAVS	**Javornik**	**3.38**	**9**	Pn	**Pn**	**16 12 32.4**	**+1.4**
JAVS				*i* Sn	**Sn**	**16 13 12.6**	**+1.4**
ABTA	**Abfaltersbach**	**4.23**	**353**	⇓*i* Pn	**Pn**	**16 12 42.8**	**+0.2**
ABTA	**Abfaltersbach**	**4.23**	**353**	Pn	**Pn**	**16 12 42.8**	**+0.2**
KHC	**Kasperske Hory**	**6.58**	**2**	*e*SN	**Sn**	**16 14 27.5**	**-2.3**
KHC	**Kasperske Hory**	**6.58**	**2**	Sn	**Sn**	**16 14 27.5**	**-2.3**

IDC 16 16:12:13.3±1.8, 3°31'S×126°42'E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.4/22, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=161.7km s-min=25.5km az=65.0, Buru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.25**	**156**	P	Pn	16 16 28.1	-0.1
	0.1nm,0.3s,baz=334,slow=12,SNR=7.3						
ASAR	**Alice Springs**	**21.49**	**161**	P	P	16 17 03.4	-0.5
	1.6nm,0.7s,baz=338,slow=11,SNR=28						
MKAR	**Makanchi Array**	**63.22**	**328**	P	P	16 22 43.7	+0.2
	0.1nm,0.5s,baz=118,slow=6.8,SNR=3.1						

IDC 16 16:14:13.4±2.2, 5°81'S×130°33'E, h0km, mb3.2/1, mb1 3.2/4, mb1mx3.2/19, mbtmp3.1/4, ML2.8/2, Error ellipse: s-maj=82.3km s-min=29.3km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.05**	**200**	Pn	Pn	16 17 20.3	+0.1
	0.1nm,0.3s,baz=30,slow=9.1,SNR=9.3						
FITZ				Sn	Sn	16 19 33.7	-12
	0.1nm,0.3s,baz=18,slow=20,SNR=3.8						
WRA	**Warramunga Arr**	**14.58**	**165**	Pn	Pn	16 17 41.5	+0.3
	0.0nm,0.3s,baz=345,slow=14,SNR=2.6						
WRA				Sn	Sn	16 20 10.3	-13
	0.1nm,0.3s,baz=342,slow=21,SNR=9.1						
ASAR	**Alice Springs**	**18.09**	**169**	P	Pn	16 18 25.9	-0.4
	baz=347,slow=9.8,SNR=2.6						
MKAR	**Makanchi Array**	**67.42**	**326**	P	P	16 25 10.8	0.0
	0.1nm,0.4s,baz=111,slow=7.9,SNR=4.3						

*DDA **16** 16:17:54.5, 37°.85N×27°.54E, h7km, MD2.9*
*ISK **16** 16:17:54.7, 37°.88N×27°.50E, h5km, MD3.0*
*CSEM **16** 16:17:55.2±0.2, 37°.86N×27°.54E, h2km, MD2.9, Error ellipse: s-maj=5.2km s-min=3.7km az=66.0*
ISC 16 16:17:55.0±1.0, 37°.86N±0°.02×27°.54E±0°.02, h4km±10km, n44, σ0°49/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.29**	**236**	*i* P	**Pg**	**16 18 00.3**	**-0.2**
GCAM				*i* S	**Sg**	**16 18 04.3**	**-0.1**
GCAM	**G?zelcaml?**	**0.29**	**236**	*i* P	**Pg**	**16 18 00.3**	**-0.2**
GCAM				*i* S	**Sg**	**16 18 04.3**	**-0.1**
AYDN	**Tasoluk**	**0.34**	**126**	*i* P	**Pg**	**16 18 01.6**	**+0.1**
AYDN				*i* S	**Sg**	**16 18 05.9**	**0.0**
AYDN	**Tasoluk**	**0.34**	**126**	*i* P	**Pg**	**16 18 01.6**	**+0.1**
AYDN				*i* S	**Sg**	**16 18 05.9**	**0.0**
IZM	**Izmir**	**0.58**	**338**	*e*PG	**Pg**	**16 18 06.2**	**+0.1**
IZM				*e*SG	**Sg**	**16 18 14.0**	**+0.4**
IZM	**Izmir**	**0.58**	**338**	*e*Pg	**Pg**	**16 18 06.2**	**+0.1**
IZM				*e*Sg	**Sg**	**16 18 14.0**	**+0.4**
MLSB	**Milas**	**0.60**	**161**	*e*PG	**Pg**	**16 18 06.1**	**-0.3**
MLSB				*e*SG	**Sb**	**16 18 16.5**	**-0.2**
MLSB	**Milas**	**0.60**	**161**	*e*Pg	**Pg**	**16 18 06.1**	**-0.3**
MLSB				*e*Sg	**Sb**	**16 18 16.5**	**-0.2**
BLCB	**Balcova**	**0.65**	**323**	*e*PG	**Pg**	**16 18 07.8**	**+0.3**
BLCB				*e*SG	**Sg**	**16 18 16.1**	**+0.1**
BLCB	**Balcova**	**0.65**	**323**	*e*Pg	**Pg**	**16 18 07.8**	**+0.3**
BLCB				*e*Sg	**Sg**	**16 18 16.1**	**+0.1**
BODT	**Bodrum**	**0.82**	**193**	*e*PG	**Pg**	**16 18 10.8**	**+0.2**
BODT	**Bodrum**	**0.82**	**193**	*e*Pg	**Pg**	**16 18 10.8**	**+0.2**
URLA	**Izmir**	**0.89**	**304**	*i* P	**Pn**	**16 18 14.2**	**-0.1**
URLA				*i* S	**Sb**	**16 18 25.5**	**+0.2**
URLA	**Izmir**	**0.89**	**304**	*i* P	**Pn**	**16 18 14.2**	**-0.1**
URLA				*i* S	**Sb**	**16 18 25.5**	**+0.2**
YER	**Yerkesik**	**0.94**	**140**	*e*PG	**Pb**	**16 18 13.9**	**+0.1**
YER	**Yerkesik**	**0.94**	**140**	*e*Pg	**Pb**	**16 18 13.9**	**+0.1**
AKS	**Akhisar**	**1.04**	**12**	*e*PG	**Pg**	**16 18 14.8**	**-0.1**
AKS	**Akhisar**	**1.04**	**12**	*e*Pg	**Pg**	**16 18 14.8**	**-0.1**
KULA	**Kula-Manisa**	**1.10**	**53**	*e*PN	**Pg**	**16 18 15.4**	**-0.7**
KULA	**Kula-Manisa**	**1.10**	**53**	*e*Pn	**Pg**	**16 18 15.4**	**-0.7**
DAT	**Datca**	**1.13**	**178**	*e*PN	**Pb**	**16 18 17.1**	**0.0**
DAT	**Datca**	**1.13**	**178**	*e*Pn	**Pb**	**16 18 17.1**	**0.0**
DENT	**Denizli**	**1.19**	**95**	*e*PN	**Pn**	**16 18 18.7**	**+0.3**
DENT	**Denizli**	**1.19**	**95**	*e*Pn	**Pn**	**16 18 18.7**	**+0.3**
DALT	**Dalyan (Mudla)**	**1.40**	**141**	*e*PN	**Pg**	**16 18 21.9**	**+0.1**
DALT	**Dalyan (Mudla)**	**1.40**	**141**	*e*Pn	**Pg**	**16 18 21.9**	**+0.1**
KHAL	**Karahalli**	**1.62**	**71**	*i* P	**Pg**	**16 18 26.7**	**+0.6**
KHAL				*i* S	**Sn**	**16 18 45.4**	**-0.5**
KHAL	**Karahalli**	**1.62**	**71**	*i* P	**Pg**	**16 18 26.7**	**+0.6**
KHAL				*i* S	**Sn**	**16 18 45.4**	**-0.5**
KHL	**Karahalli**	**1.63**	**73**	*e*PN	**Pb**	**16 18 25.9**	**+0.2**
KHL	**Karahalli**	**1.63**	**73**	*e*Pn	**Pb**	**16 18 25.9**	**+0.2**
GLHS	**Glhisar (BURDU**	**1.71**	**114**	*e*PN	**Pb**	**16 18 26.7**	**-0.3**
GLHS	**Glhisar (BURDU**	**1.71**	**114**	*e*Pn	**Pb**	**16 18 26.7**	**-0.3**
APE	**Apeiranthos**	**1.78**	**244**	*e*PN	**Pn**	**16 18 26.9**	**+0.3**
APE	**Apeiranthos**	**1.78**	**244**	*e*Pn	**Pn**	**16 18 26.9**	**+0.3**
BALY	**Balya**	**1.88**	**2**	*i* P	**Pn**	**16 18 27.1**	**-0.8**
BALY				*i* S	**Sb**	**16 18 54.4**	**+0.7**
BALY	**Balya**	**1.88**	**2**	*i* P	**Pn**	**16 18 27.1**	**-0.8**
BALY				*i* S	**Sb**	**16 18 54.4**	**+0.7**
DST	**Dursunbey**	**1.94**	**26**	*e*PN	**Pn**	**16 18 29.6**	**+0.9**
DST	**Dursunbey**	**1.94**	**26**	*e*Pn	**Pn**	**16 18 29.6**	**+0.9**
GONE	**Gonen-Balikesi**	**2.19**	**3**	*e*PN	**Pn**	**16 18 32.8**	**+0.8**
GONE	**Gonen-Balikesi**	**2.19**	**3**	*e*Pn	**Pn**	**16 18 32.8**	**+0.8**
TVSB	**Tavsanli**	**2.19**	**43**	*e*PN	**Pb**	**16 18 33.7**	**-1.4**
TVSB	**Tavsanli**	**2.19**	**43**	*e*Pn	**Pb**	**16 18 33.7**	**-1.4**
KCTX	**Karacabey (Bur**	**2.48**	**15**	*e*PN	**Pn**	**16 18 36.5**	**+0.3**
KCTX	**Karacabey (Bur**	**2.48**	**15**	*e*Pn	**Pn**	**16 18 36.5**	**+0.3**

*ISCJB **16** 16:20:44.9±0.9, 6°.7N±0°.1×128°.3E±0°.3, h10km, mb3.5/7, Error ellipse: s-maj=40.2km s-min=12.3km az=156.3*
*IDC **16** 16:20:45.5±1.1, 6°.54N×127°.61E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.6/24, mbtmp3.6/7, Error ellipse: s-maj=85.2km s-min=17.9km az=76.0*
ISC 16 16:20:47.1±1.0, 6°.6N±0°.1×128°.1E±0°.1, h10km, n10, σ1°65/10, mb3.7/7, 1C-1D, East of Philippine Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**3.91**	**280**	⇑*i* P	**Pg**	**16 22 01.1**	**-0.9**
TBP	**Tagbilaran**	**5.25**	**307**	*e*P	**Pb**	**16 22 20.6**	**+1.6**
LLP	**Lapu-Lapu**	**5.56**	**313**	⇓*e*P	**Pn**	**16 22 11.2**	**+1.1**
LLP				*e*S	Pg	16 22 45.8	+12
FITZ	**Fitzroy Crossi**	**24.61**	**186**	P	**P**	**16 26 05.9**	**-1.9**
	0.4nm,0.3s,baz=3.9,slow=11,SNR=3.7						
WRA	**Warramunga Arr**	**27.02**	**167**	P	**P**	**16 26 31.4**	**+1.8**
	1.3nm,0.4s,baz=345,slow=10,SNR=20						
ASAR	**Alice Springs**	**30.55**	**170**	P	**P**	**16 27 01.3**	**+0.2**
	0.2nm,0.5s,baz=351,slow=7.3,SNR=5.6						
KSRS	**Korea Array**	**30.77**	**360**	P	**P**	**16 27 02.1**	**-0.6**
	1.3nm,0.7s,baz=186,slow=9.4,SNR=6.0						
STKA	**Stephens Creek**	**40.31**	**162**	P	**P**	**16 28 26.3**	**+1.5**
	1.6nm,0.8s,baz=344,slow=7.4,SNR=2.9						
MKAR	**Makanchi Array**	**56.09**	**324**	P	**P**	**16 30 25.4**	**-1.2**
	0.2nm,0.8s,baz=125,slow=7.6,SNR=3.0						
ZALV	**Zalesovo Beam**	**58.75**	**332**	P	**P**	**16 30 43.4**	**-1.8**
	0.3nm,0.4s,baz=130,slow=7.4,SNR=3.3						

NNC 16 16:39:54.6±13.0, 37°.71N×71°.21E, h0km, mb3.6, mpv3.3, 2C-4D, Error ellipse: s-maj=107.2km s-min=76.8km az=171.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.42**	**355**	⇑Pn	Pn	16 41 19.0	+2.4
	1.4nm,0.3s,baz=177,slow=14,SNR=30						
KK31				⇓Sn	Sn	16 42 21.7	+2.0
	1.3nm,0.3s,baz=184,slow=24,SNR=8.3						
TKM2	**Tokmak 2**	**6.19**	**31**	⇓Pn	Pn	16 41 26.2	-1.3
	2.3nm,0.8s						
TKM2				⇑Sn	Sn	16 42 37.3	-1.9
	0.7nm,0.4s						
AB31	**Akbulak array**	**14.13**	**328**	⇓P	Pn	16 43 14.3	-1.6
	0.5nm,0.5s						
AKTO	**Aktyubinsk**	**15.84**	**328**	⇓P	Pn	16 43 40.1	+1.3
	0.2nm,0.5s						

IDC 16 16:57:30.5±2.0, 24°.05S×67°.03W, h164km±20km, mb3.4/1, mb1 3.4/5, mb1mx3.3/19, mbtmp3.3/5, Error ellipse: s-maj=31.4km s-min=17.8km az=105.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**7.61**	**188**	P	Pn	16 59 18.2	-0.5
	0.0nm,0.3s,baz=6.1,slow=17,SNR=5.1						
LPAZ	**La Paz**	**7.79**	**352**	P	Pn	16 59 23.2	+1.3
	0.5nm,0.3s,baz=152,slow=3.7,SNR=3.3						
LPAZ				S	Sn	17 00 48.0	-1.6
	0.2nm,0.3s,baz=348,slow=13,SNR=2.1						
SIV	**San Ignacio**	**9.77**	**36**	P	Pn	16 59 47.2	-0.2
	0.8nm,0.3s,baz=228,slow=14,SNR=9.1						
PLCA	**Paso Flores**	**16.90**	**189**	P	Pn	17 01 17.3	-0.1
	0.1nm,0.3s,baz=343,slow=18,SNR=3.1						
BDFB	**Brasilia**	**19.72**	**68**	P	P	17 01 48.0	+0.2
	1.3nm,0.3s,baz=238,slow=11,SNR=16						
TORD	**Torodi Ar. Bea**	**76.61**	**69**	P	P	17 09 03.1	-0.3
	0.6nm,0.5s,baz=264,slow=6.3,SNR=9.5						
ASAR	**Alice Springs**	**128.41**	**205**	PKP	PKPdf	17 16 17.8	-0.6
	0.2nm,0.6s,baz=147,slow=1.9,SNR=3.9						
WRA	**Warramunga Arr**	**131.57**	**207**	PKP	PKPdf	17 16 23.9	-0.6
	0.1nm,0.4s,baz=155,slow=1.9,SNR=7.4						
MKAR	**Makanchi Array**	**146.57**	**40**	PKPbc	PKPbc	17 16 52.8	+0.2
	0.2nm,0.7s,baz=353,slow=4.5,SNR=2.4						

*BUG **16** 17:06:51.6, 51°.54N×6°.56E, h1km, ML1.9*
BUG Felt in Kamp-Lintfort.
*CSEM **16** 17:06:52.5±0.2, 51°.49N×6°.62E, h2km, ML2.0, Error ellipse: s-maj=5.9km s-min=3.8km az=115.0*
*BNS **16** 17:06:52.1±1.3, 51°.52N×6°.57E, h1km±23km, ML2.0*
BGR 16 17:06:53.2±0.4, 51°.49N×6°.58E, h1km, ML2.2/6, Error ellipse: s-maj=5.6km s-min=3.3km az=120.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRHE	**Rheinberg**	**0.03**	**354**	Pg	Pg	17 06 52.5	-1.3
BRHE				Sg	Sg	17 06 53.4	-0.7
BRHE	**Rheinberg**	**0.03**	**354**	Pg	Pg	17 06 52.5	-1.3
BRHE				Sg	Sg	17 06 53.4	-0.7
LAUG	**Laupendahl**	**0.27**	**121**	*e*Pg	Pg	17 06 57.5	-0.9
LAUG	**Laupendahl**	**0.27**	**121**	Pg	Pg	17 06 57.5	-0.8
BUG	**Bochum--Univer**	**0.44**	**96**	*e*Pg	Pg	17 07 01.1	-0.5
BUG				Sg	Sg	17 07 07.9	+0.7
WTSB	**Winterswijk**	**0.50**	**16**	*e*Pg	Pg	17 07 02.7	-0.1
WTSB				*e*Sg	Sg	17 07 09.1	-0.1
WTSB	**Winterswijk**	**0.50**	**16**	*e*Pg	Pg	17 07 02.0	-0.7
	1.4nm,0.1s						
WTSB				*e*Sg	Sg	17 07 08.0	-1.2
WTSB	**Winterswijk**	**0.50**	**16**	Pg	Pg	17 07 02.7	-0.1
WTSB				Sg	Sg	17 07 09.1	-0.1
HOBG	**Hohbusch**	**0.69**	**136**	*e*Pg	Pg	17 07 06.2	-0.4
HOBG	**Hohbusch**	**0.69**	**136**	Pg	Pg	17 07 06.2	-0.3
HGN	**Heimansgroeve**	**0.83**	**210**	*e*Pg	Pb	17 07 09.8	-0.6
HGN				*e*Sg	Sg	17 07 19.8	-0.1
HGN	**Heimansgroeve**	**0.83**	**210**	*e*Pn	Pg	17 07 08.4	-0.7
	1.4nm,0.2s						
HGN				*e*Pg	Pb	17 07 09.8	-0.6
	13nm,0.2s						
HGN				*e*Sn	Sg	17 07 19.7	-0.2
HGN				*e*Sg	Sb	17 07 21.2	-0.9
HGN	**Heimansgroeve**	**0.83**	**210**	*e*Pn	Pg	17 07 08.4	-0.7
	1.4nm,0.2s						
DREG	**Dreilaegerbach**	**0.85**	**195**	*e*Pg	Pg	17 07 08.8	-0.8
DREG				*e*Sg	Sg	17 07 20.9	+0.2
DREG	**Dreilaegerbach**	**0.85**	**195**	Pg	Pg	17 07 08.8	-0.8
DREG				Sg	Sg	17 07 20.9	+0.2
KLL	**Kalltalsperre**	**0.86**	**191**	*e*Pg	Pg	17 07 09.6	-0.1
KLL	**Kalltalsperre**	**0.86**	**191**	Pg	Pg	17 07 09.6	-0.1
STB	**Steinbach**	**0.91**	**169**	*e*Pg	Pg	17 07 10.5	-0.2
STB				*e*Sg	Sg	17 07 23.4	+0.9
	34nm,0.3s						
STB	**Steinbach**	**0.91**	**169**	Pg	Pg	17 07 10.5	-0.2
STB				Sg	Sg	17 07 23.4	+0.9
	34nm,0.3s						
MEM	**Membach**	**0.95**	**202**	P	Pg	17 07 10.8	-0.6
MEM	**Membach**	**0.95**	**202**	P	Pg	17 07 10.8	-0.6
IBBN	**Ibbenburen**	**1.10**	**41**	*e*Sg	Sg	17 07 29.1	+0.5
IBBN	**Ibbenburen**	**1.10**	**41**	Sg	Sg	17 07 29.1	+0.6
HILG	**Hillesheim**	**1.20**	**177**	*e*Pg	Pg	17 07 15.2	-1.0
HILG	**Hillesheim**	**1.20**	**177**	Pg	Pg	17 07 15.2	-1.0
KOE	**Koeppel**	**1.29**	**145**	*e*Pg	Pg	17 07 16.2	-1.8
KOE	**Koeppel**	**1.29**	**145**	Pg	Pg	17 07 16.2	-1.8
BCLA	**Clavier**	**1.34**	**217**	P	Pg	17 07 18.0	-0.8
BCLA	**Clavier**	**1.34**	**217**	P	Pg	17 07 18.0	-0.9
BGG	**Burgeitz**	**1.37**	**159**	*e*Pg	Pn	17 07 17.8	-1.7
BGG	**Burgeitz**	**1.37**	**159**	Pg	Pn	17 07 17.8	-1.6
TNS	**Taunus Mts**	**1.74**	**136**	*e*Pn	Pn	17 07 24.1	-0.5
TNS	**Taunus Mts**	**1.74**	**136**	Pn	Pn	17 07 24.1	-0.5
WLF	**Walferdange**	**1.85**	**189**	P	Pb	17 07 26.9	-0.8
WLF	**Walferdange**	**1.85**	**189**	*e*Pg	Pb	17 07 27.0	-0.7
WLF				*e*Sg	Sn	17 07 50.1	+0.2
WLF	**Walferdange**	**1.85**	**189**	Pg	Pb	17 07 27.0	-0.7
WLF				Sg	Sn	17 07 50.1	+0.1
DOU	**Dourbes**	**1.88**	**223**	P	Pn	17 07 23.1	-3.3
DOU	**Dourbes**	**1.88**	**223**	P	Pn	17 07 23.1	-3.3
CLZ	**Clausthal**	**2.39**	**80**	*e*Pg	Pb	17 07 36.5	-0.6
CLZ				*e*Sg	Sb	17 08 08.4	+1.3
CLZ	**Clausthal**	**2.39**	**80**	Pg	Pb	17 07 36.5	-0.6
CLZ				Sg	Sb	17 08 08.4	+1.3

BGR 16 17:12:15.5±0.5, 53°.35N×6°.62E, h1km, ML2.5/3, Error ellipse: s-maj=8.9km s-min=4.4km az=118.0, The Netherlands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HLG	**Helgoland**	**1.12**	**41**	*e*Sg	Sb	17 12 52.5	-0.3
IBBN	**Ibbenburen**	**1.25**	**146**	*e*Pg	Pg	17 12 38.5	-0.9
IBBN				*e*Sg	Sg	17 12 55.7	0.0
WTSB	**Winterswijk**	**1.39**	**175**	*e*Pn	Pn	17 12 40.3	-1.6
WTSB				*e*Pg	Pg	17 12 41.9	-0.2
WTSB				*e*Sg	Sg	17 12 58.5	-1.6
WTSB	**Winterswijk**	**1.39**	**175**	*e*Pg	Pn	17 12 39.7	-2.3
	1.5nm,0.1s						
WTSB				*e*Sg	Sg	17 12 57.9	-2.1
BUG	**Bochum--Univer**	**1.95**	**168**	*e*Sg	Sg	17 13 19.3	+1.2
HGN	**Heimansgroeve**	**2.62**	**190**	*e*Pn	Pn	17 12 57.2	-1.7
HGN				*e*Sn	Sn	17 13 29.1	-2.3
HGN				*e*Sg	Sg	17 13 39.0	-0.7
HGN	**Heimansgroeve**	**2.62**	**190**	*e*Pg	Pn	17 12 57.2	-1.8
	3.1nm,0.1s						
HGN				*e*Sg	Sn	17 13 29.1	-2.3
DREG	**Dreilaeger

MNMC				*i* S		Sn	17 43 53.6	+2.5	
MNMC				AML		AML	17 43 56.1		
	comp=N,396µm,0.9s								
PSGC	**Pisagua**	**0.36**	**231**	*e*P		**Pn**	**17 43 42.6**	**-0.4**	
PSGC				*i* S		Sn	17 43 51.0	-0.4	
PSGC	**Pisagua**	**0.36**	**231**	*e*P		**Pn**	**17 43 42.6**	**-0.4**	
PSGC				*i* S		Sn	17 43 51.0	-0.4	
PSGC				AML		AML	17 43 51.8		
	comp=E,343µm,0.4s								
PB11	**Plate Boundary**	**0.42**	**158**	⇓*i*P		**Pn**	**17 43 44.0**	**+0.4**	
PB11				*e*S		Sn	17 43 53.9	+1.5	
PB11				AML		AML	17 43 54.7		
	comp=N,1157µm,0.5s								
HMBC	**Humberston**	**0.91**	**184**	⇓*e*P		**Pn**	**17 43 48.7**	**-0.2**	
HMBC				*e*S		Sn	17 44 01.7	0.0	
HMBC	**Humberston**	**0.91**	**184**	⇓*e*P		**Pn**	**17 43 48.7**	**-0.2**	
HMBC				*e*S		Sn	17 44 01.7	0.0	
HMBC				AML		AML	17 44 03.6		
	comp=E,110µm,0.3s								
ARCH	**Arica**	**0.98**	**333**	⇓*e*P		**Pn**	**17 43 49.9**	**+0.3**	
ARCH				*i* S		Sn	17 44 03.8	+0.8	
ARCH	**Arica**	**0.98**	**333**	⇓*e*P		**Pn**	**17 43 49.9**	**+0.3**	
ARCH				*i* S		Sn	17 44 03.8	+0.8	
ARCH				AML		AML	17 44 05.5		
	comp=N,145µm,0.4s								
PB01	**Plate Boundary**	**1.70**	**169**	⇓*e*P		**Pn**	**17 43 59.5**	**+0.3**	
PB01				*e*S		Sn	17 44 21.1	+1.1	
PB01				AML		AML	17 44 26.5		
	comp=E,33µm,0.3s								
PB07	**Plate Boundary**	**2.35**	**181**	*e*P		**Pn**	**17 44 08.3**	**+0.3**	
PB07				AML		AML	17 44 43.6		
	comp=E,60µm,0.6s								
PB09	**Plate Boundary**	**2.48**	**167**	*e*P		**Pn**	**17 44 10.5**	**+0.7**	
PB09				*e*S		Sn	17 44 41.4	+2.4	
PB09				AML		AML	17 44 52.0		
	comp=E,117µm,0.7s								
MACH	**Maria Elena**	**2.82**	**179**	*e*P		**Pn**	**17 44 15.2**	**+0.8**	
MACH	**Maria Elena**	**2.82**	**179**	*e*P		**Pn**	**17 44 15.2**	**+0.8**	
PB04	**Plate Boundary**	**2.90**	**174**	*e*P		**Pn**	**17 44 16.7**	**+1.4**	
PB04				AML		AML	17 45 02.1		
	comp=N,18µm,1.1s								
ARE	**Arequipa**	**3.30**	**331**	⇓*i*P		**Pn**	**17 44 20.2**	**-0.8**	
ARE				*e*S		Sn	17 44 58.0	-1.2	
LVC	**Limon Verde**	**3.34**	**165**	⇓*e*P		**Pn**	**17 44 23.1**	**+1.5**	
LVC	**Limon Verde**	**3.34**	**165**	⇓*e*P		**Pn**	**17 44 23.1**	**+1.5**	
LPAZ	**La Paz**	**3.46**	**28**	*e*Pn		Pn	17 44 27.5	+4.0	
LPAZ				P			17 44 27.9		
LPAZ	**La Paz**	**3.46**	**28**	P		Pn	17 44 27.9	+4.4	
	comp=N,95nm,0.3s,baz=220,slow=5.9,SNR=515								
MECH	**Mejillones**	**3.77**	**189**	P		**Pn**	**17 44 26.9**	**-0.2**	
MECH	**Mejillones**	**3.77**	**189**	*e*P		**Pn**	**17 44 26.9**	**-0.2**	
CEN1	**Los Morros**	**4.02**	**185**	P		**Pn**	**17 44 30.7**	**0.0**	
CEN1	**Los Morros**	**4.02**	**185**	*e*P		**Pn**	**17 44 30.7**	**0.0**	
ANCH	**Antofagasta**	**4.33**	**187**	P		**Pn**	**17 44 33.4**	**-1.4**	
ANCH	**Antofagasta**	**4.33**	**187**	*e*P		**Pn**	**17 44 33.4**	**-1.4**	
SIV	**San Ignacio**	**8.99**	**69**	P		**Pn**	**17 45 37.9**	**-0.7**	
SIV	**San Ignacio**	**8.99**	**69**	P		**Pn**	**17 45 37.9**	**-0.7**	
	comp=N,89nm,0.3s,baz=265,slow=12,SNR=967								
NNA	**Nana**	**9.97**	**316**	*e*Pn		**Pn**	**17 45 50.7**	**-1.4**	
	comp=N,45nm,0.7s								
NNA				P			17 45 51.0		
NNA				S		Sn	17 47 35.6	-6.9	
NNA				*e*Sn		Sn	17 47 42.7	+0.1	
NNA	**Nana**	**9.97**	**316**	P		**Pn**	**17 45 51.0**	**-1.1**	
	comp=N,4.7nm,0.3s,baz=153,slow=4.5,SNR=7.9								
NNA				S		Sn	17 47 35.6	-6.9	
	comp=N,4.1nm,0.3s,baz=221,slow=20,SNR=2.1								
CFAA	**Coronel Fontan**	**12.27**	**174**	P		**Pn**	**17 46 20.8**	**-2.7**	
CFAA				S		Sn	17 48 30.1	-8.4	
CFAA	**Coronel Fontan**	**12.27**	**174**	P		**Pn**	**17 46 20.8**	**-2.7**	
	comp=N,0.2nm,0.3s,baz=352,slow=14,SNR=7.3								
CFAA				S		Sn	17 48 30.1	-8.4	
	comp=N,0.1nm,0.3s,baz=349,slow=19,SNR=2.1								
CPUP	**Villa Florida**	**13.44**	**123**	P		**Pn**	**17 46 38.1**	**-1.1**	
CPUP	**Villa Florida**	**13.44**	**123**	P		**Pn**	**17 46 38.1**	**-1.1**	
	comp=N,4.2nm,0.3s,baz=287,slow=12,SNR=26								
ATAH	**Atahualpa**	**14.74**	**324**	P		**Pn**	**17 46 57.7**	**+1.0**	
ATAH	**Atahualpa**	**14.74**	**324**	P		**Pn**	**17 46 57.7**	**+1.0**	
	comp=N,0.5nm,0.3s,baz=128,slow=12,SNR=3.5								
BDFB	**Brasilia**	**21.12**	**83**	P		**P**	**17 48 09.8**	**-1.2**	
BDFB	**Brasilia**	**21.12**	**83**	P		**P**	**17 48 09.8**	**-1.2**	
	comp=N,30nm,0.5s,baz=259,slow=10,SNR=38								
BDFB				LR		LR	17 56 11.4		
	comp=N,1µm,19.4s,baz=20,slow=36								
OTAV	**Otavalo**	**21.24**	**336**	*e*P		**P**	**17 48 14.1**	**+1.5**	
	comp=N,11nm,0.6s								
SPB	**Sao Paulo**	**21.25**	**105**	*e*Pn		**P**	**17 48 11.1**	**-1.1**	
	comp=N,15nm,0.4s								
PLCA	**Paso Flores**	**21.31**	**182**	*e*P		**P**	**17 48 13.0**	**+0.3**	
	comp=N,16nm,0.6s								
PLCA	**Paso Flores**	**21.31**	**182**	P		**P**	**17 48 12.9**	**+0.3**	
	comp=N,16nm,0.7s,baz=1.1,slow=10,SNR=34								
CELP	**Cerrillos**	**37.34**	**5**	*e*P		**P**	**17 50 35.9**	**-1.7**	
TIGA	**Tifton**	**52.21**	**345**	⇑P		**P**	**17 52 34.4**	**-1.2**	
	baz=52								
KMSC	**Kings Mountain**	**55.30**	**349**	⇑P		**P**	**17 52 56.6**	**-1.5**	
	baz=56								
732A	**Laxson Ranch,**	**55.99**	**328**	⇓P		**P**	**17 53 02.8**	**-0.3**	
	baz=56,SNR=9.0								
TKL	**Tuckaleechee C**	**56.30**	**346**	P		**P**	**17 53 04.1**	**-1.2**	
TKL				*e*P		P	17 53 04.4	-0.8	
TKL	**Tuckaleechee C**	**56.30**	**346**	P		**P**	**17 53 04.1**	**-1.2**	
	comp=N,8.1nm,0.7s,baz=172,slow=10,SNR=7.6								
SWET	**Sewanee**	**56.40**	**344**	*e*P		**P**	**17 53 04.9**	**-1.1**	
	comp=N,13nm,0.8s								
632A	**Uvalde**	**56.53**	**329**	⇓P		**P**	**17 53 06.5**	**-0.5**	
	baz=57,SNR=8.9								
631A	**Perdido Creek**	**56.85**	**328**	⇑P		**P**	**17 53 08.6**	**-0.7**	
	baz=57,SNR=11								
532A	**Rocksprings**	**57.10**	**329**	⇑P		**P**	**17 53 10.7**	**-0.4**	
	baz=57,SNR=9.6								
JCT	**Junction City**	**57.34**	**329**	*e*P		**P**	**17 53 11.8**	**-0.9**	
	comp=N,13nm,0.9s								
JCT	**Junction City**	**57.34**	**329**	⇓P		**P**	**17 53 12.4**	**-0.4**	
	baz=58								
531A	**Rocksprings**	**57.45**	**328**	⇑P		**P**	**17 53 13.4**	**-0.1**	
	baz=58,SNR=13								
WHTX	**Lake Whitney**	**57.52**	**332**	⇓P		**P**	**17 53 13.9**	**-0.1**	
	baz=58								
432A	**Menard**	**57.66**	**329**	⇓P		**P**	**17 53 14.5**	**-0.5**	
	baz=58,SNR=9.2								
530A	**J-C Ranch, Com**	**57.83**	**328**	⇑P		**P**	**17 53 15.8**	**-0.5**	
	baz=58,SNR=12								
431A	**Sonora**	**57.90**	**329**	⇑P		**P**	**17 53 16.2**	**-0.5**	
	baz=58,SNR=9.6								
332A	**Millersview**	**58.06**	**330**	⇓P		**P**	**17 53 17.3**	**-0.5**	
	baz=58,SNR=11								
628A	**Black Gap, Mar**	**58.10**	**326**	⇓P		**P**	**17 53 18.3**	**+0.1**	
	baz=58,SNR=21								
MIAR	**Mount Ida**	**58.18**	**337**	*e*P		**P**	**17 53 17.8**	**-0.7**	
	comp=N,50nm,1.3s								
529A	**Stev Forest Ra**	**58.26**	**327**	⇓P		**P**	**17 53 19.3**	**0.0**	
	baz=58,SNR=30								
430A	**Baggett Ranch,**	**58.30**	**328**	⇓P		**P**	**17 53 19.0**	**-0.5**	
	baz=59,SNR=12								
331A	**San Angelo**	**58.33**	**329**	⇑P		**P**	**17 53 19.0**	**-0.7**	
	baz=59								
627A	**Terlingua Ranc**	**58.34**	**325**	⇑P		**P**	**17 53 19.7**	**-0.2**	
	baz=59,SNR=8.3								
TXAR	**Lajitas Array**	**58.40**	**325**	P		**P**	**17 53 20.0**	**-0.3**	
TXAR	**Lajitas Array**	**58.40**	**325**	P		**P**	**17 53 20.0**	**-0.3**	
	comp=N,1.8nm,0.6s,baz=149,slow=8.2,SNR=17								
232A	**Coleman**	**58.43**	**330**	⇑P		**P**	**17 53 19.8**	**-0.6**	
	baz=59,SNR=14								
429A	**Davenport Ranc**	**58.49**	**328**	⇑P		**P**	**17 53 20.5**	**-0.4**	
	baz=59,SNR=14								
528A	**Cox Ranch, San**	**58.58**	**326**	⇓P		**P**	**17 53 21.3**	**-0.3**	
	baz=59,SNR=11								
330A	**Mertzon**	**58.77**	**329**	⇓P		**P**	**17 53 22.0**	**-0.8**	
	baz=59,SNR=6.4								
231A	**Bronte**	**58.79**	**330**	⇓P		**P**	**17 53 22.0**	**-0.9**	
	baz=59								
626A	**Big Bend Ranch**	**58.82**	**325**	⇓P		**P**	**17 53 23.4**	**+0.2**	
	baz=59,SNR=14								
428A	**Kincaid Ranch,**	**58.98**	**327**	⇑P		**P**	**17 53 24.2**	**-0.1**	
	baz=59,SNR=7.2								
527A	**Woodward Ranch**	**59.01**	**326**	⇓P		**P**	**17 53 24.2**	**-0.3**	
	baz=59,SNR=11								
ABTX	**Abilene, Hawle**	**59.05**	**331**	⇑P		**P**	**17 53 24.1**	**-0.6**	
	baz=59,SNR=6.0								
230A	**Sterling City**	**59.13**	**329**	⇓P		**P**	**17 53 24.5**	**-0.8**	
	baz=59								
526A	**Mary Lane Ranc**	**59.19**	**325**	⇓P		**P**	**17 53 25.9**	**0.0**	
	baz=60,SNR=19								
329A	**Wagon Wheel Ra**	**59.23**	**328**	⇑P		**P**	**17 53 25.6**	**-0.5**	
	baz=60,SNR=13								
131A	**Roby**	**59.43**	**330**	⇑P		**P**	**17 53 26.9**	**-0.4**	
	baz=60,SNR=6.9								
427A	**Hayter Ranch,**	**59.45**	**326**	⇑P		**P**	**17 53 27.5**	**-0.1**	
	baz=60,SNR=8.5								
229A	**Bryant Ranch,**	**59.54**	**329**	⇓P		**P**	**17 53 27.6**	**-0.5**	
	baz=60								
Z32A	**Haskell**	**59.54**	**331**	⇓P		**P**	**17 53 27.7**	**-0.3**	
	baz=60								
328A	**Wristen Ranch,**	**59.57**	**327**	⇓P		**P**	**17 53 27.8**	**-0.5**	
	baz=60,SNR=18								
426A	**McDonald Obser**	**59.64**	**326**	⇓P		**P**	**17 53 28.3**	**-0.7**	
	baz=60,SNR=6.5								
SIUC	**Southern Illin**	**59.64**	**342**	*e*P		**P**	**17 53 27.7**	**-0.8**	
	comp=N,68nm,1.2s								
130A	**Snyder**	**59.64**	**330**	⇓P		**P**	**17 53 28.2**	**-0.6**	
	baz=60,SNR=6.8								
Z31A	**Sharp Cattle R**	**59.85**	**331**	⇓P		**P**	**17 53 29.9**	**-0.3**	
	baz=60,SNR=12								
327A	**Balmorhea Ranc**	**59.91**	**327**	⇑P		**P**	**17 53 30.2**	**-0.4**	
	baz=60								
228A	**UT Block 9, Go**	**60.05**	**328**	⇓P		**P**	**17 53 31.0**	**-0.6**	
	baz=60,SNR=5.7								
Y32A	**R-V Farms, Ver**	**60.11**	**332**	⇓P		**P**	**17 53 31.1**	**-0.8**	
	baz=60								
326A	**Caldwell Ranch**	**60.12**	**326**	⇑P		**P**	**17 53 31.8**	**-0.3**	
	baz=60,SNR=12								
TUL1	**Tulsa**	**60.23**	**336**	⇓P		**P**	**17 53 31.9**	**-0.8**	
	baz=60								
425A	**Indio Mountain**	**60.24**	**325**	⇑P		**P**	**17 53 32.7**	**-0.4**	
	baz=60,SNR=25								
FVM	**French Village**	**60.24**	**341**	*e*P		**P**	**17 53 32.1**	**-0.6**	
	comp=N,18nm,0.7s								
Z30A	**Sanderson Ranc**	**60.29**	**330**	⇓P		**P**	**17 53 32.5**	**-0.7**	
	baz=61,SNR=18								
227A	**Bennet, Jal**	**60.32**	**327**	⇑P		**P**	**17 53 32.7**	**-0.8**	
	baz=61								
128A	**Castleberry Fa**	**60.40**	**328**	⇓P		**P**	**17 53 33.4**	**-0.7**	
	baz=61								
Y31A	**Rekieta Farm,**	**60.45**	**331**	⇓P		**P**	**17 53 33.8**	**-0.4**	
	baz=61,SNR=5.9								
Z29A	**Hungry Hill Ra**	**60.54**	**329**	⇓P		**P**	**17 53 33.8**	**-1.2**	
	baz=61,SNR=6.1								
Y30A	**Stafford Cattl**	**60.67**	**330**	⇑P		**P**	**17 53 35.4**	**-0.4**	
	baz=61								
325A	**Bean Ranch, Si**	**60.69**	**326**	⇓P		**P**	**17 53 35.6**	**-0.5**	
	baz=61,SNR=43								
226B	**Tecolote Peak,**	**60.82**	**327**	⇑P		**P**	**17 53 37.3**	**+0.4**	
	baz=61,SNR=22								
X31A	**McDonald Ranch**	**60.88**	**332**	⇑P		**P**	**17 53 36.6**	**-0.5**	
	baz=61,SNR=10								
127A	**Arkansas Junct**	**60.88**	**328**	⇓P		**P**	**17 53 36.6**	**-0.7**	
	baz=61								
Z28A	**Tucker Farm, M**	**60.90**	**329**	⇓P		**P**	**17 53 36.4**	**-1.0**	
	baz=61,SNR=7.0								
Y29A	**Porterfield Fa**	**61.02**	**330**	⇓P		**P**	**17 53 37.5**	**-0.7**	
	baz=61								
324A	**Moseley Ranch,**	**61.02**	**325**	⇓P		**P**	**17 53 37.5**	**-0.8**	
	baz=61,SNR=26								
X30A	**Coker Ranch, T**	**61.13**	**331**	⇑P		**P**	**17 53 38.2**	**-0.7**	
	baz=61								
225A	**Deer Hill, Car**	**61.19**	**326**	⇓P		**P**	**17 53 39.1**	**-0.4**	
	baz=62,SNR=14								
126A	**Clayton Basin,**	**61.20**	**327**	⇑P		**P**	**17 53 39.4**	**0.0**	
	baz=62,SNR=10								
Z27A	**Tatum**	**61.32**	**328**	⇑P		**P**	**17 53 39.3**	**-1.0**	
	baz=62,SNR=20								
W31A	**Holland Ranch,**	**61.33**	**332**	⇑P		**P**	**17 53 39.0**	**-1.2**	
	baz=62								
Y28A	**McKinney Farm,**	**61.33**	**329**	⇓P		**P**	**17 53 39.5**	**-0.8**	
	baz=62								
X29A	**Tulia**	**61.51**	**330**	⇓P		**P**	**17 53 40.5**	**-1.0**	
	baz=62								
224A	**Cornudas Mount**	**61.53**	**326**	⇓P		**P**	**17 53 41.1**	**-0.7**	
	baz=62,SNR=24								
125A	**Gardner Draw,**	**61.53**	**327**	⇑P		**P**	**17 53 41.2**	**-0.6**	
	baz=62,SNR=10.0								
SFIN	**Scholer Farm**	**61.58**	**345**	⇑P		**P**	**17 53 40.0**	**-1.7**	
	baz=62,SNR=7.5								
MSTX	**Muleshoe**	**61.63**	**329**	⇑P		**P**	**17 53 41.4**	**-0.9**	
	baz=62,SNR=19								
Z26A	**Caprock**	**61.67**	**328**	⇑P		**P**	**17 53 42.0**	**-0.6**	
	baz=62,SNR=15								
Y27A	**Causey**	**61.76**	**329**	⇑P		**P**	**17 53 42.3**	**-1.0**	
	baz=62,SNR=10								
V31A	**Spring Creek L**	**61.78**	**333**	⇑P		**P**	**17 53 43.0**	**-0.2**	
	baz=62								
X28A	**Dimmitt**	**61.81**	**330**	⇓P		**P**	**17 53 43.2**	**-0.3**	
	baz=62								
AMTX	**Amarillo**	**61.86**	**331**	⇑P		**P**	**17 53 43.6**	**-0.3**	
	baz=62								
ERPA	**Erie**	**61.89**	**351**	*e*P		**P**	**17 53 43.9**	**+0.1**	
	comp=N,27nm,0.6s								
124A	**Stringfield Ra**	**61.98**	**326**	⇑P		**P**	**17 53 44.4**	**-0.4**	
	baz=62,SNR=12								
W29A	**Amraillo**	**62.04**	**331**	⇑P		**P**	**17 53 44.7**	**-0.4**	
	baz=62								
Z25A	**Roswell**	**62.05**	**327**	⇓P		**P**	**17 53 44.5**	**-0.7**	
	baz=62,SNR=8.4								
Y26A	**Elida**	**62.11**	**328**	⇓P		**P**	**17 53 45.1**	**-0.6**	
	baz=62								
V30A	**Spur Ranch, Mi**	**62.14**	**332**	⇑P		**P**	**17 53 46.2**	**+0.5**	
	baz=62								
HDIL	**Hopedale**	**62.31**	**343**	*e*P		**P**	**17 53 45.2**	**-1.4**	
	comp=N,26nm,0.9s								
X27A	**F and S Farms,**	**62.34**	**329**	⇓P		**P**	**17 53 47.2**	**+0.1**	
	baz=63								
VNA3	**Neumayer Olymp**	**62.36**	**162**	*e*P		**P**	**17 53 47.8**	**+1.1**	
W28A	**Vega**	**62.41**	**330**	⇓P		**P**	**17 53 47.6**	**0.0**	
	baz=63								
Z24A	**Sheeppen Canyo**	**62.43**	**327**	⇑P		**P**	**17 53 47.3**	**-0.6**	
	baz=63,SNR=12								
Y25A	**Mesa, Roswell**	**62.55**	**328**	⇑P		**P**	**17 53 47.6**	**-1.0**	
	baz=63,SNR=10								
VNA1	**Neumayer--Stat**	**62.57**	**161**	*e*P		**P**	**17 53 49.8**	**+1.8**	
X26A	**CR and CF Fran**	**62.61**	**329**	⇓P		**P**	**17 53 48.3**	**-0.6**	
	baz=63,SNR=16								
320A	**Kipp Ranch, An**	**62.62**	**323**	⇓P		**P**	**17 53 49.4**	**+0.2**	
	baz=63								
W27A	**Bowe Ranch, En**	**62.66**	**330**	⇑P		**P**	**17 53 48.4**	**-0.8**	
	baz=63,SNR=5.7								
U30A	**WK&E Inc. Balk**	**62.77**	**332**	⇑P		**P**	**17 53 49.8**	**-0.1**	
	baz=63								
122A	**Conniff Cattle**	**62.80**	**325**	⇑P		**P**	**17 53 50.7**	**+0.4**	
	baz=63								
T31A	**Randall Ranch,**	**62.82**	**333**	⇑P		**P**	**17 53 49.8**	**-0.4**	
	baz=63,SNR=5.9								
V28A	**Channing**	**62.83**	**331**	⇓P		**P**	**17 53 50.6**	**+0.2**	
	baz=63								
Z23A	**Rita Site, Whi**	**62.83**	**326**	⇑P		**P**	**17 53 50.8**	**+0.4**	
	baz=63								
Y24A	**Capitan**	**62.93**	**327**	⇓P		**P**	**17 53 51.9**	**+0.7**	
	baz=63								
VNA2	**Neumayer--Watz**	**62.94**	**161**	*e*P		**P**	**17 53 51.7**	**+1.2**	
	baz=301,slow=8.7								
X25A	**Clemmons Ranch**	**63.01**	**328**	⇓P		**P**	**17 53 51.7**	**0.0**	
	baz=63								
W26A	**Owens Ranch, T**	**63.02**	**329**	⇑P		**P**	**17 53 51.5**	**-0.2**	
	baz=63								
319A	**Douglas**	**63.08**	**322**	⇓P		**P**	**17 53 52.9**	**+0.7**	
	baz=63,SNR=8.9								
121A	**Cookes Peak, D**	**63.10**	**324**	⇑P		**P**	**17 53 52.7**	**+0.4**	
	baz=63,SNR=7.7								
Z22A	**Elephant Butte**	**63.21**	**325**	⇓P		**P**	**17 53 53.5**	**+0.6**	
	baz=64,SNR=6.9								
Y23A	**Lovelace Mesa,**	**63.25**	**327**	⇑P		**P**	**17 53 53.4**	**+0.1**	
	baz=64								
X24A	**Lazy VL Ranch,**	**63.43**	**328**	⇓P		**P**	**17 53 54.5**	**0.0**	
	baz=64								
W25A	**X Bar L Ranch,**	**63.46**	**329**	⇓P		**P**	**17 53 54.1**	**-0.5**	
	baz=64,SNR=7.8								
T29A	**Hugoton**	**63.57**	**332**	⇓P		**P**	**17 53 55.0**	**-0.2**	
	baz=64								
120A	**U Bar Ranch, L**	**63.59**	**324**	⇓P		**P**	**17 53 56.0**	**+0.5**	
	baz=64								
V26A	**Tequesquite Ra**	**63.60**	**330**	⇑P		**P**	**17 53 55.2**	**-0.3**	
	baz=64,SNR=11								
Z21A	**St. Cloud Mine**	**63.63**	**325**	⇑P		**P**	**17 53 56.3**	**+0.4**	
	baz=64								
U27A	**Thompson Grove**	**63.65**	**331**	⇓P		**P**	**17 53 55.9**	**+0.1**	
	baz=64								
BNM	**Barren Site**	**63.72**	**326**	*e*P		**P**	**17 53 57.1**	**+0.7**	
	comp=N,14nm,1.2s								
Y22A	**Socorro**	**63.73**	**326**	⇓P		**P**	**17 53 57.0**	**+0.6**	
	baz=64,SNR=6.6								
LONY	**Lake Ozonia**	**63.82**	**356**	*e*P		**P**	**17 53 56.6**	**+0.1**	
	comp=N,12nm,0.7s								
X23A	**Hourglass Bar**	**63.83**	**327**	⇑P		**P**	**17 53 57.2**	**+0.1**	
	baz=64								
LPM	**Los Pinos Moun**	**63.85**	**326**	*e*P		**P**	**17 53 57.2**	**0.0**	
	comp=N,7.0nm,0.7s								
T28A	**Walsh**	**63.91**	**332**	⇓P		**P**	**17 53 56.8**	**-0.6**	
	baz=64,SNR=5.4								
W24A	**Lazy 6 Ranch,**	**63.93**	**328**	⇓P		**P**	**17 53 57.5**	**-0.2**	
	baz=64,SNR=6.2								
FRNY	**Flat Rock**	**63.98**	**357**	*e*P		**P**	**17 53 57.8**	**+0.2**	
	comp=N,5.3nm,0.8s								
Z20A	**Nine Sixteen R**	**63.99**	**324**	⇑P		**P**	**17 53 58.8**	**+0.7**	
	baz=64,SNR=16								
V25A	**Rancho No Teng**	**64.03**	**329**	⇓P		**P**	**17 53 58.1**	**-0.3**	
	baz=64,SNR=10								
U26A	**Atchley Ranch,**	**64.06**	**330**	⇑P		**P**	**17 53 58.4**	**-0.2**	
	baz=64,SNR=8.0								
T27A	**Campo**	**64.13**	**331**	⇓P		**P**	**17 53 58.9**	**0.0**	
	baz=64								
Y21A	**Point of Rocks**	**64.17**	**326**	⇑P		**P**	**17 54 00.3**	**+1.0**	
	baz=64,SNR=14								
X22A	**Bernardo**	**64.20**	**326**	⇓P		**P**	**17 54 00.9**	**+1.4**	
	baz=64								
ANMO	**Albuquerque**	**64.25**	**327**	P		**P**	**17 54 00.1**	**+0.3**	
ANMO	**Albuquerque**	**64.25**	**327**	P		**P**	**17 54 00.1**	**+0.3**	
	comp=N,4.5nm,0.7s,baz=135,slow=5.8,SNR=13								
W23A	**Werner Place,**	**64.26**	**327**	⇑P		**P**	**17 54 00.3**	**+0.3**	
	baz=65								
V24A	**Rampart Ranch,**	**64.27**	**328**	⇓P		**P**	**17 53 59.8**	**-0.2**	
	baz=65,SNR=8.4								
U25A	**Circle Dot Ran**	**64.38**	**329**	⇑P		**P**	**17 54 00.5**	**-0.2**	
	baz=65,SNR=15								
SADO	**Sadowa**	**64.39**	**353**	P		**P**	**17 53 60.0**	**-0.3**	
SADO				pP		**pP**	**17 54 17.3**	**-0.8**	
SADO	**Sadowa**	**64.39**	**353**	P		**P**	**17 53 60.0**	**-0.3**	
	comp=N,8.1nm,0.6s,baz=190,slow=6.2,SNR=8.8								
SADO				pP		**pP**	**17 54 17.3**	**-0.8**	
	comp=N,6.1nm,0.6s,baz=159,slow=8.2,SNR=3.5								
Y20A	**Horse Springs,**	**64.47**	**325**	⇑P		**P**	**17 54 02.2**	**+0.8**	
	baz=65,SNR=14								
X21A	**Alamocita Cree**	**64.56**	**326**	⇑P		**P**	**17 54 02.7**	**+0.7**	
	baz=65,SNR=13								
SNAA	**Sanae**	**64.57**	**161**	*e*P		**P**	**17 54 02.0**	**+0.7**	
SNAA	**Sanae**	**64.57**	**161**	*e*P		**P**	**17 54 01.3**	**0.0**	
	comp=N,15nm,0.8s								
T26A	**Comanche Natio**	**64.62**	**331**	⇑P		**P**	**17 54 02.3**	**+0.1**	
	baz=65,SNR=8.4								
V23A	**Ortiz Mt. (NFS**	**64.74**	**328**	⇑P		**P**	**17 54 03.5**	**+0.5**	
	baz=65,SNR=8.1								
S26A	**Kim**	**64.93**	**331**	⇑P		**P**	**17 54 04.1**	**-0.1**	
	baz=65,SNR=22								
T25A	**Trinidad**	**64.98**	**330**	⇓P		**P**	**17 54 05.4**	**+0.8**	
	baz=65,SNR=7.5								
W21A	**San Fidel**	**65.00**	**326**	⇑P		**P**	**17 54 05.6**	**+0.8**	
	baz=65								
X20A	**Quemado**	**65.01**	**325**	⇑P		**P**	**17 54 06.0**	**+1.2**	
	baz=65,SNR=15								
R27A	**Eads**	**65.17**	**332**	⇓P		**P**	**17 54 05.8**	**+0.1**	
	baz=66								
T24A	**Torres, Weston**	**65.23**	**329**

O23A	Lake Granby, G	68.14	331	⇑P		P	17 54 25.2	+0.4		
	baz=68,SNR=9.0									
N24A	Carr	68.17	332	⇓P		P	17 54 25.8	+1.0		
	baz=68									
S18A	Hurst Farm, Bl	68.18	327	⇓P		P	17 54 25.6	+0.5		
	baz=68,SNR=22									
P21A	Newcastle	68.32	329	⇓P		P	17 54 26.6	+0.8		
	baz=69									
BC3	Big Chuckawall	68.36	320	⇑P		P	17 54 27.0	+0.9		
	baz=69,SNR=7.8									
O22A	Kremmling	68.40	330	⇓P		P	17 54 26.5	+0.1		
	baz=69,SNR=11									
MONP	Monument Peak	68.43	319	⇑P		P	17 54 27.9	+1.3		
	baz=69									
W13A	Hualapai Mount	68.43	322	⇑P		P	17 54 27.9	+1.2		
	baz=69,SNR=12									
BAR	Barrett	68.44	319	*eP*		P	17 54 27.8	+1.3		
	comp=N,4.5nm,0.6s									
U15A	North Rim	68.48	324	⇓P		P	17 54 28.2	+1.2		
	baz=69,SNR=30									
IRM	Iron Mountain	68.52	321	⇓P		P	17 54 28.0	+1.0		
	baz=69,SNR=9.7									
K27A	Flueckinger Fa	68.61	335	⇑P		P	17 54 28.1	+0.7		
	baz=69									
LIC	Lamto	68.64	75	*eP*		P	17 54 28.7	+0.6		
	comp=N,35nm,0.9s,baz=244									
LIC				*ep*P		pP	17 54 45.3	-0.8		
LIC	Lamto	68.64	75	*eP*		P	17 54 28.7	+0.6		
	comp=N,35nm,0.9s									
LIC				*ep*P		pP	17 54 45.3	-0.8		
M24A	Cheyenne	68.67	332	⇓P		P	17 54 28.7	+0.8		
	baz=69,SNR=7.4									
N23A	Red Feather La	68.70	331	⇓P		P	17 54 28.8	+0.6		
	baz=69									
Q19A	Hogan Spring (	68.77	328	⇓P		P	17 54 29.2	+0.7		
	baz=69,SNR=6.9									
BRSD	Miller	68.86	338	⇓P		P	17 54 30.0	+1.2		
	baz=69									
L25A	Engebretsen Ra	68.86	333	⇑P		P	17 54 29.6	+0.5		
	baz=69									
N22A	Wattenberg Ran	68.86	331	⇓P		P	17 54 30.1	+0.8		
	baz=69									
BELC	Belle Mtn. Jos	68.92	320	⇑P		P	17 54 30.6	+1.0		
	baz=69									
PFO	Pinyon Flat Ob	68.94	319	⇓P		P	17 54 30.7	+1.1		
	baz=69									
DBIC	Dimbokro	68.97	75	*eP*		P	17 54 29.2	-0.9		
	comp=N,37nm,0.9s									
DBIC				*ep*P		pP	17 54 46.5	-1.7		
DBIC				pP		pP	17 54 47.9	-0.3		
DBIC	Dimbokro	68.97	75	P		P	17 54 29.2	-0.9		
	comp=N,5.4nm,0.4s,baz=219,slow=7.5,SNR=14									
DBIC				pP		pP	17 54 47.9	-0.3		
	comp=N,32nm,0.8s,baz=228,slow=5.7,SNR=12									
K26A	Motz Farm, Whi	68.99	334	⇓P		P	17 54 30.9	+1.2		
	baz=69									
M23A	Laramie	69.06	332	⇑P		P	17 54 30.7	+0.3		
	baz=69,SNR=9.3									
P19A	Cripple Cowboy	69.15	329	⇓P		P	17 54 31.4	+0.4		
	baz=69,SNR=16									
O20A	White River Ci	69.18	329	⇑P		P	17 54 32.3	+1.2		
	baz=70									
GMRC	Granite Mounta	69.25	321	⇓P		P	17 54 33.1	+1.5		
	baz=70,SNR=11									
N21A	Black Mountain	69.32	330	⇓P		P	17 54 32.9	+0.9		
	baz=70									
SRU	San Rafael	69.53	327	*eP*		P	17 54 33.7	+0.5		
	comp=N,261nm,0.6s									
SRU	San Rafael	69.53	327	⇑P		P	17 54 33.8	+0.5		
	baz=70,SNR=8.4									
HEC	Hector,Ludlow	69.69	320	⇓P		P	17 54 35.8	+1.6		
	baz=70									
K24A	Anderson Ranch	69.69	333	⇑P		P	17 54 35.0	+0.9		
	baz=70									
Q16A	Castle Valley	69.72	327	⇓P		P	17 54 35.1	+0.7		
	baz=70,SNR=5.9									
O19A	Miners Draw (B	69.73	329	⇓P		P	17 54 35.0	+0.6		
	baz=70,SNR=9.8									
N20A	Spence Gulch,	69.73	330	⇑P		P	17 54 34.7	+0.2		
	baz=70,SNR=5.1									
EYMN	Ely	69.77	345	*eP*		P	17 54 33.3	-1.0		
	comp=N,3.9nm,0.6s									
L22A	Ellis Ranch, M	69.83	332	⇑P		P	17 54 36.1	+0.9		
	baz=70									
CCUT	Cedar City	69.89	324	*eP*		P	17 54 37.1	+1.5		
	comp=N,28nm,0.9s									
P17A	Butcher Ranch,	69.91	327	⇓P		P	17 54 36.0	+0.4		
	baz=70,SNR=6.1									
M21A	Separation Pea	69.92	331	⇓P		P	17 54 36.1	+0.4		
	baz=70,SNR=6.5									
MSU	Marysvale	69.94	326	*eP*		P	17 54 37.0	+1.1		
	comp=N,20nm,0.8s									
MVU	Marysvale	69.96	326	*eP*		P	17 54 37.1	+1.1		
	comp=N,46nm,1.3s									
ARUT	Antelope Range	70.10	324	*eP*		P	17 54 38.3	+1.5		
	comp=N,23nm,0.7s									
L21A	Rawlins	70.20	331	⇑P		P	17 54 37.3	-0.1		
	baz=70,SNR=13									
M20A	Sweetwater, Wa	70.21	330	⇑P		P	17 54 37.9	+0.4		
	baz=70									
N19A	John Jarvie Ra	70.22	329	⇑P		P	17 54 37.6	+0.1		
	baz=70,SNR=7.2									
GSC	Goldstone	70.29	321	⇓P		P	17 54 39.3	+1.3		
	baz=71,SNR=5.8									
MWC	Mount Wilson	70.33	319	*eP*		P	17 54 39.8	+1.5		
	comp=N,35nm,1.2s									
K22A	Casper	70.37	332	⇓P		P	17 54 39.1	+0.7		
	baz=71									
SHOC	Shoshone	70.39	321	⇓P		P	17 54 39.0	+0.6		
	baz=71									
N18A	Larsen Ranch,	70.52	329	⇓P		P	17 54 40.6	+1.3		
	baz=71									
I24A	Kuemmerle Ranc	70.54	334	⇓P		P	17 54 40.1	+0.8		
	baz=71									
K21A	Alcova	70.68	332	⇓P		P	17 54 40.7	+0.5		
	baz=71,SNR=12									
L20A	Wamsutter	70.68	331	⇓P		P	17 54 40.6	+0.3		
	baz=71,SNR=7.3									
EDW2	Edwards Air Fo	70.73	320	⇓P		P	17 54 41.6	+1.0		
	baz=71									
MPU	Maple Canyon	70.77	327	*eP*		P	17 54 41.9	+1.0		
	comp=N,12nm,1.1s									
DAU	Daniels Canyon	70.88	328	*eP*		P	17 54 42.8	+1.1		
	comp=N,39nm,1.3s									
BLG	Laguna Peak	70.89	318	⇑P		P	17 54 42.6	+1.2		
	baz=71									
LRMC	Laurel Mountai	70.94	320	⇑P		P	17 54 42.5	+0.5		
	baz=71									
J22A	Midwest	70.96	333	⇓P		P	17 54 42.0	+0.1		
	baz=71,SNR=5.6									
N17A	Moffit Pass	71.06	328	⇑P		P	17 54 43.8	+1.1		
	baz=71,SNR=32									
JLU	Jordanelle	71.12	328	*eP*		P	17 54 43.8	+0.8		
	comp=N,12nm,0.9s									
FURC	Furnace Creek,	71.12	321	⇓P		P	17 54 44.1	+1.3		
	baz=71									
K20A	Yellowstone Ra	71.19	331	⇓P		P	17 54 43.2	-0.2		
	baz=72,SNR=11									
MPMC	Manual Prospec	71.22	321	⇓P		P	17 54 44.5	+0.8		
	baz=72,SNR=7.3									
L19A	Farson	71.23	330	⇓P		P	17 54 43.9	+0.3		
	baz=72,SNR=6.0									
H24A	Dirks Ranch, A	71.24	335	⇓P		P	17 54 43.7	+0.2		
	baz=72									
I22A	9 Mile Ranch,	71.35	333	⇓P		P	17 54 44.5	+0.3		
	baz=72									
M17A	Scullys Gap (B	71.38	329	⇑P		P	17 54 45.1	+0.5		
	baz=72									
L18A	Fontenelle, Gr	71.42	329	⇓P		P	17 54 45.6	+0.8		
	baz=72									
DUG	Dugway	71.51	327	*eP*		P	17 54 45.9	+0.6		
	comp=N,31nm,1.4s									
DUG	Dugway	71.51	327	⇓P		P	17 54 46.1	+0.8		
	baz=72,SNR=14									
ISA	Isabella	71.54	320	*eP*		P	17 54 46.8	+1.3		
	comp=N,11nm,0.8s									
ISA	Isabella	71.54	320	⇑P		P	17 54 46.9	+1.4		
	baz=72,SNR=10									
K19A	Absolon Red Bu	71.56	331	⇓P		P	17 54 45.1	-0.4		
	baz=72,SNR=7.2									
J20A	Shoshoni	71.62	332	⇓P		P	17 54 46.8	+0.9		
	baz=72									
I21A	Big Trails, Te	71.64	332	⇓P		P	17 54 45.7	-0.3		
	baz=72,SNR=12									
R11A	Troy Canyon, C	71.69	324	⇑P		P	17 54 47.7	+1.2		
	baz=72,SNR=18									
BW06	Boulder Array	71.84	330	⇓P		P	17 54 48.2	+0.9		
	baz=72									
PDAR	Pinedale Array	71.84	330	P		P	17 54 47.1	-0.2		
PDAR	Pinedale Array	71.84	330	P		P	17 54 47.1	-0.2		
	comp=N,3.3nm,0.7s,baz=151,slow=6.8,SNR=13									
PKM	Peak Mountain	71.87	319	⇓P		P	17 54 48.8	+1.2		
	baz=72									
L17A	Cokeville	71.96	329	⇓P		P	17 54 48.2	+0.2		
	baz=72									
K18A	Toltan Ranch,	71.97	330	⇑P		P	17 54 48.9	+0.8		
	baz=72									
J19A	Crowheart	71.99	331	⇑P		P	17 54 48.1	-0.1		
	baz=72,SNR=8.6									
VES	Vestal, Richgr	72.03	320	⇑P		P	17 54 49.3	+1.0		
	baz=72									
MDND	Maddock	72.04	339	⇑P		P	17 54 48.5	+0.3		
	baz=72									
F24A	Ekalaka	72.10	335	⇓P		P	17 54 48.6	0.0		
	baz=72,SNR=8.6									
I20A	Worland	72.11	332	⇑P		P	17 54 49.3	+0.6		
	baz=72									
L16A	Fish Haven	72.17	329	⇑P		P	17 54 49.1	-0.1		
	baz=72,SNR=10.0									
J18A	Kendall Valley	72.40	330	⇑P		P	17 54 50.7	+0.1		
	baz=73,SNR=16									
I19A	Meeteetse	72.57	331	⇑P		P	17 54 51.8	+0.2		
	baz=73,SNR=6.6									
AHID	Auburn Hatcher	72.57	329	*eP*		P	17 54 52.2	+0.6		
	comp=N,7.3nm,0.6s									
L15A	Malad City	72.63	328	⇑P		P	17 54 52.0	+0.1		
	baz=73,SNR=24									
E24A	Baker	72.64	336	⇑P		P	17 54 52.2	+0.4		
	baz=73,SNR=9.1									
HVU	Hansel Valley	72.66	328	*eP*		P	17 54 52.2	0.0		
	comp=N,5.6nm,0.6s									
I18A	Diamond G Ranc	72.68	331	⇑P		P	17 54 52.8	+0.5		
	baz=73,SNR=10									
G21A	Lodge Grass	72.73	333	⇓P		P	17 54 52.5	+0.1		
	baz=73									
F22A	Rosebud	72.78	334	⇑P		P	17 54 52.8	+0.1		
	baz=73									
J17A	Brown Place, J	72.84	330	⇓P		P	17 54 53.7	+0.4		
	baz=73									
K16A	Soda Springs	72.86	329	⇓P		P	17 54 53.9	+0.5		
	baz=73,SNR=17									
E23A	Ismay	72.98	335	⇑P		P	17 54 53.9	+0.2		
	baz=73									
ULM	Lac du Bonnet	73.03	343	P		P	17 54 52.8	-1.2		
ULM	Lac du Bonnet	73.03	343	P		P	17 54 52.8	-1.2		
	comp=N,8.1nm,0.6s,baz=158,slow=6.6,SNR=11									
H19A	Powell	73.06	332	⇓P		P	17 54 54.9	+0.5		
	baz=73									
L14A	Malta	73.08	328	⇑P		P	17 54 54.9	+0.3		
	baz=73,SNR=5.3									
RRI2	Red Ridge	73.12	330	*eP*		P	17 54 55.2	+0.3		
	comp=N,11nm,0.7s									
MOOW	Moose Ponds	73.15	330	*eP*		P	17 54 54.2	-0.9		
	comp=N,7.9nm,1.1s									
G20A	Bridger	73.15	333	⇓P		P	17 54 54.9	-0.1		
	baz=74									
ELK	Elko	73.19	326	P		P	17 54 55.4	0.0		
ELK	Elko	73.19	326	P		P	17 54 55.4	0.0		
	comp=N,4.1nm,0.7s,baz=111,slow=4.6,SNR=16									
I17A	Pilgrim Ck.	73.20	330	⇑P		P	17 54 56.1	+0.7		
	baz=74,SNR=8.5									
K15A	Arbon	73.21	329	⇑P		P	17 54 55.7	+0.3		
	baz=74,SNR=7.4									
NVAR	Mina Array Bea	73.29	322	P		P	17 54 57.1	+1.1		
NVAR	Mina Array Bea	73.29	322	P		P	17 54 57.1	+1.1		
	comp=N,4.5nm,0.6s,baz=145,slow=5.1,SNR=18									
IMW	Indian Meadow	73.36	330	*eP*		P	17 54 56.7	+0.3		
	comp=N,8.4nm,0.7s									
H18A	Shoshone NF, C	73.37	332	⇑P		P	17 54 56.4	+0.1		
	baz=74,SNR=19									
K14A	Jones Ranch, D	73.43	328	⇑P		P	17 54 56.9	+0.3		
	baz=74,SNR=5.2									
C24A	Savage	73.49	336	⇓P		P	17 54 57.4	+0.7		
	baz=74									
D23A	Lindsay	73.49	336	⇑P		P	17 54 57.2	+0.4		
	baz=74,SNR=7.4									
RLMT	Red Lodge	73.54	332	*eP*		P	17 54 57.5	+0.2		
	comp=N,16nm,0.9s									
RLMT	Red Lodge	73.54	332	⇑P		P	17 54 58.0	+0.7		
	baz=74,SNR=10									
H17A	Grant Village	73.57	331	⇓P		P	17 54 59.1	+1.5		
	baz=74,SNR=9.7									
F20A	Billings	73.58	333	⇓P		P	17 54 57.9	+0.5		
	baz=74									
I16A	Newdale	73.60	330	⇓P		P	17 54 58.4	+0.7		
	baz=74									
LKWY	Lake	73.62	331	*eP*		P	17 54 59.4	+1.6		
	comp=N,10.0nm,0.8s									
J15A	Blackfoot	73.69	329	⇑P		P	17 54 59.0	+0.8		
	baz=74,SNR=5.2									
E21A	Keefer Ranch,	73.73	334	⇓P		P	17 54 59.0	+0.8		
	baz=74									
G18A	Lazy EL Ranch,	73.82	332	⇑P		P	17 54 59.1	+0.2		
	baz=74,SNR=18									
D22A	Cohagen	73.86	335	⇓P		P	17 54 59.4	+0.4		
	baz=74,SNR=7.6									
SCHQ	Schefferville	73.94	2	P		P	17 54 58.4	-0.8		
SCHQ	Schefferville	73.94	2	P		P	17 54 58.4	-0.8		
	comp=N,8.4nm,0.7s,baz=189,slow=5.2,SNR=13									
YMR	Madison River	73.95	331	*eP*		P	17 55 01.2	+1.4		
	comp=N,60nm,1.7s									
F19A	Roth Farm, Mol	73.97	333	⇓P		P	17 54 59.9	+0.2		
	baz=74,SNR=11									
C23A	Lambert	74.00	336	⇓P		P	17 55 00.4	+0.7		
	baz=74									
H16A	Russell Place,	74.11	331	⇓P		P	17 55 01.5	+0.8		
	baz=74,SNR=15									
D21A	La Casta Ranch	74.11	335	⇓P		P	17 55 01.2	+0.8		
	baz=74									
E20A	Meyer Farm, Mu	74.13	334	⇓P		P	17 55 01.1	+0.6		
	baz=74,SNR=5.8									
I15A	Monteview	74.17	329	⇑P		P	17 55 02.3	+1.4		
	baz=74									
J14A	Carey	74.17	328	⇓P		P	17 55 02.0	+1.1		
	baz=74,SNR=8.7									
DGMT	Dagmar	74.18	337	⇑P		P	17 55 01.3	+0.6		
	baz=74									
C22A	Vida	74.22	336	⇓P		P	17 55 01.7	+0.7		
	baz=74									
GCMT	Greycliff	74.23	332	*eP*		P	17 55 01.2	-0.1		
	comp=N,4.1nm,0.5s									
QLMT	Earthquake Lak	74.29	331	*eP*		P	17 55 03.2	+1.5		
	comp=N,1.0nm,0.6s									
F18A	Big Timber	74.34	332	⇓P		P	17 55 02.6	+0.7		
	baz=75,SNR=23									
E19A	Rath Farm, Rou	74.38	333	⇓P		P	17 55 02.5	+0.5		
	baz=75,SNR=23									
B23A	Brockton	74.47	337	⇑P		P	17 55 03.4	+0.9		
	baz=75									
A24A	Westby	74.49	337	⇓P		P	17 55 03.5	+0.9		
	baz=75									
J13A	Cove Ranch, Pi	74.55	328	⇓P		P	17 55 04.1	+0.9		
	baz=75,SNR=6.2									
I14A	Mackay	74.58	329	⇑P		P	17 55 04.8	+1.4		
	baz=75,SNR=11									
D20A	Manuel Ranch,	74.60	334	⇑P		P	17 55 03.4	+0.1		
	baz=75,SNR=8.3									
H15A	Lima	74.70	330	⇓P		P	17 55 04.7	+0.6		
	baz=75									
B22A	Reddig Ranch S	74.72	336	⇓P		P	17 55 04.7	+0.8		
	baz=75									
F17A	Fitzpatrick Pl	74.76	332	⇑P		P	17 55 05.1	+0.8		
	baz=75,SNR=8.5									
G16A	Moss Hill, Enn	74.77	331	⇑P		P	17 55 05.0	+0.6		
	baz=75									
C21A	Desert Coulee	74.77	335	⇓P		P	17 55 04.8	+0.5		
	baz=75									
HLID	Hailey	74.79	328	*eP*		P	17 55 05.5	+0.9		
	comp=N,9.9nm,0.7s									
HLID	Hailey	74.79	328	⇑P		P	17 55 06.0	+1.5		
	baz=75,SNR=22									
I13A	Wildhorse Cree	74.90	328	⇓P		P	17 55 06.2	+0.9		
	baz=75,SNR=18									
E18A	Harlowton	74.95	333	⇑P		P	17 55 05.8	+0.4		
	baz=75,SNR=7.4									
MCMT	McKenzie Canyo	74.96	330	*eP*		P	17 55 07.0	+1.3		
	comp=N,3.7nm,0.6s									
BOZ	Bozeman (W)	75.00	331	⇓P		P	17 55 06.0	+0.2		
	baz=75,SNR=8.6									
G15A	Dillon	75.04	330	⇑P		P	17 55 06.6	+0.6		
	baz=75,SNR=5.8									
C20A	Veseth Ranch,	75.05	334	⇑P		P	17 55 05.8	0.0		
	baz=75									
H14A	Leadore	75.05	329	⇑P		P	17 55 07.0	+0.9		
	baz=75,SNR=7.6									
F16A	Kennard Place,	75.11	331	⇑P		P	17 55 07.1	+0.8		
	baz=75									
B21A	Ellsworth Farm	75.22	335	⇓P		P	17 55 07.1	+0.3		
	baz=76									
DLMT	Dillon	75.24	330	*eP*		P	17 55 07.7	+0.6		
	comp=N,7.9nm,0.8s									
A22A	Carney Farms,	75.26	336	⇓P		P	17 55 07.8	+0.8		
	baz=76									
E17A	Martinsdale	75.28	332	⇓P		P	17 55 07.7	+0.3		
	baz=76,SNR=8.4									
I12A	Atlanta	75.32	328	⇓P		P	17 55 08.7	+1.1		
	baz=76									
D18A	Linhart Farms,	75.39	333	⇓P		P	17 55 08.7	+0.8		
	baz=76									
MFID	Camas Ranch	75.40	327	*eP*		P	17 55 09.0	+1.0		
	comp=N,34nm,1.4s									
MFID	Camas Ranch	75.40	327	⇓P		P	17 55 09.0	+1.0		
	baz=76,SNR=8.2									
H13A	Challis	75.44	329	⇓P		P	17 55 09.3	+1.0		
	baz=76,SNR=17									
BEKR	Beckworth	75.44	322	*eP*		P	17 55 09.4	+1.0		
	comp=N,15nm,1.6s									
C19A	Slack Wire Ran	75.49	334	⇓P		P	17 55 08.7	+0.3		
	baz=76,SNR=6.0									
F15A	Butte	75.55	331	⇓P		P	17 55 09.6	+0.6		
	baz=76,SNR=5.7									
G14A	Jackson	75.56	330	⇑P		P	17 55 09.5	+0.5		
	baz=76,SNR=8.7									
A21A	Bergtoll Ranch	75.64	336	⇓P		P	17 55 10.1	+0.9		
	baz=76									
E16A	East Helena	75.70	332	⇑P		P	17 55 10.1	+0.4		
	baz=76									
H12A	Diamond D Ranc	75.72	329	⇑P		P	17 55 10.8	+0.9		
	baz=76,SNR=15									
D17A	Six Diamond Ra	75.74	333	⇑P		P	17 55 10.3	+0.4		
	baz=76,SNR=9.8									
G13A	Cobalt	75.81	329	⇓P		P	17 55 11.5	+1.1		
	baz=76,SNR=44									
HRY	Holter Researc	75.90	332	*eP*		P	17 55 11.7	+0.9		
	comp=N,3.6nm,0.7s									
F14A	Wisdom	75.93	330	⇓P		P	17 55 12.2	+1.1		
	baz=76									
A20A	Cobblestone Ra	75.94	335	⇑P		P	17 55 11.6	+0.7		
	baz=76									
EGMT	Eagleton	76.01	334	⇓P		P	17 55 12.0	+0.6		
	baz=76									
B19A	Brinkman Farms	76.02	334	⇓P		P	17 55 11.6	+0.3		
	baz=76,SNR=8.7									
D16A	Dana Ranch, Ca	76.02	332	⇑P		P	17 55 12.3	+0.8		
	baz=76,SNR=12									
C17A	Wharram Farm,	76.14	333	⇑P		P	17 55 12.2	0.0		
	baz=76,SNR=6.4									
WVOR	Wild Horse Val	76.19	325	*eP*		P	17 55 13.1	+0.5		
	comp=N,6.4nm,1.3s									
A19A	Klindworth Far	76.31	335	⇓P		P	17 55 13.3	+0.2		
	baz=77,SNR=5.3									
B18A	Beardsley Farm	76.31	334	⇑P		P	17 55 13.5	+0.4		
	baz=77,SNR=7.9									
F13A	Darby	76.37	330	⇓P		P	17 55 14.4	+0.9		
	baz=77,SNR=36									
E14A	Clinton	76.44	331	⇑P		P	17 55 14.8	+0.8		
	baz=77,SNR=10									
D15A	Lincoln	76.46	332	⇓P		P	17 55 14.7	+0.7		
	baz=77,SNR=7.5									
B17A	L&G Farms, Che	76.66	333	⇓P		P	17 55 15.4	+0.4		
	baz=77									
C16A	Fuhringer Ranc	76.69	332	⇓P		P	17 55 15.7	+0.4		
	baz=77									
A18A	Metzger Ranch,	76.75	334	⇑P		P	17 55 15.4	-0.1		
	baz=77,SNR=5.9									
E13A	Victor	76.78	330	⇑P		P	17 55 16.4	+0.6		
	baz=77,SNR=9.2									
F12A	Elk City	76.79	329	⇑P		P	17 55 16.5	+0.6		
	baz=77,SNR=13									
D14A	Greenough	76.94	331	⇓P		P	17 55 17.4	+0.7		
	baz=77									
MSO	Missoula	76.95	331	⇑P		P	17 55 17.5	+0.7		
	baz=77,SNR=5.5									
C15A	Salmond Ranch,	77.05	332	⇑P		P	17 55 18.0	+0.7		
	baz=77,SNR=9.8									
A17A	Triple J Farms	77.13	334	⇓P		P	17 55 17.9	+0.2		
	baz=77,SNR=7.7									
B16A	M & M Farms, S	77.14	333	⇓P		P	17 55 18.4	+0.6		
	baz=77									
BMO	Blue Mountains	77.17	327	*eP*		P	17 55 18.3	+0.3		
	comp=N,6.5nm,0.6s									
D13A	Huson	77.39	331	⇑P		P	17 55 19.7	+0.5		
	baz=78,SNR=14									
B15A	Bradely Ranch,	77.44	332	⇓P		P	17 55 19.2	-0.2		
	baz=78,SNR=13									
TOA0	Torodi Ar. Sit	77.46	71	*eP*		P	17 55 18.9	-1.2		
TORD	Torodi Ar. Bea	77.46	71	P		P	17 55 18.9	-1.3		
TORD				S		S	18 05 04.2	-2.0

ETSF	**Etsaut**	**88.73**	**43**	*e*P		**P**	**17 56 17.7**	**-0.1**
ETSF	**Etsaut**	**88.73**	**43**	*e*P		**P**	**17 56 17.7**	**-0.1**
YKA	**Yellowknife Ar**	**88.90**	**341**	P		**P**	**17 56 17.6**	**-0.4**
YKA				pP		**pP**	**17 56 37.4**	**+0.7**
YKA	**Yellowknife Ar**	**88.90**	**341**	P		**P**	**17 56 17.5**	**-0.4**
	comp=N,10nm,0.7s,baz=135,slow=4.9,SNR=215							
YKA				pP		**pP**	**17 56 37.3**	**+0.7**
	comp=N,2.6nm,0.4s,baz=133,slow=4.7,SNR=4.9							
YKW3	**Yellowknife Ar**	**88.95**	**341**	*e*P		**P**	**17 56 17.6**	**-0.6**
	comp=N,0.1nm,0.6s							
YKW3				*e*pP		**pP**	**17 56 37.0**	**+0.1**
LFF	**La Frestale**	**90.51**	**42**	*e*P		**P**	**17 56 25.6**	**-0.3**
LFF				*e*pP		**pP**	**17 56 44.4**	**-0.3**
LFF	**La Frestale**	**90.51**	**42**	*e*P		**P**	**17 56 25.6**	**-0.3**
LFF				*e*pP		**pP**	**17 56 44.4**	**-0.3**
RJF	**Les Rejaudoux**	**91.17**	**42**	*e*P		**P**	**17 56 28.6**	**-0.4**
RJF	**Les Rejaudoux**	**91.17**	**42**	*e*P		**P**	**17 56 28.6**	**-0.4**
CAF	**Calviac**	**91.34**	**42**	*e*P		**P**	**17 56 29.8**	**0.0**
CAF	**Calviac**	**91.34**	**42**	*e*P		**P**	**17 56 29.8**	**0.0**
BORG	**Borgarnes**	**91.68**	**19**	P		**P**	**17 56 31.9**	**+1.0**
BORG	**Borgarnes**	**91.68**	**19**	P		**P**	**17 56 31.9**	**+1.0**
	comp=N,11nm,0.9s,baz=179,slow=1.8,SNR=8.8							
DLBC	**Dease Lake**	**91.92**	**333**	P		**P**	**17 56 32.5**	**+0.3**
DLBC	**Dease Lake**	**91.92**	**333**	P		**P**	**17 56 32.5**	**+0.3**
	comp=N,4.5nm,0.9s,baz=143,slow=13,SNR=5.2							
BGF	**Bois d'Agland**	**92.55**	**41**	*e*P		**P**	**17 56 35.1**	**-0.2**
	comp=N,11nm,0.9s							
BGF	**Bois d'Agland**	**92.55**	**41**	*e*P		**P**	**17 56 35.1**	**-0.2**
	comp=N,11nm,0.9s							
SMF	**Signal de Mont**	**93.21**	**41**	*e*P		**P**	**17 56 38.0**	**-0.4**
SMF				*e*pP		**pP**	**17 56 56.8**	**-0.4**
SMF	**Signal de Mont**	**93.21**	**41**	*e*P		**P**	**17 56 38.0**	**-0.4**
SMF				*e*pP		**pP**	**17 56 56.8**	**-0.4**
KBZ	**Khabaz**	**119.43**	**50**	PKP		**PKPdf**	**18 02 13.5**	**+0.2**
KBZ				pPKP		**pPKPdf**	**18 02 33.6**	**+0.8**
KBZ	**Khabaz**	**119.43**	**50**	PKP		**PKPdf**	**18 02 13.5**	**+0.2**
	comp=N,3.2nm,0.8s,baz=305,slow=1.6,SNR=5.6							
KBZ				pPKP		**pPKPdf**	**18 02 33.6**	**+0.8**
	comp=N,3.4nm,0.9s,baz=278,slow=3.5,SNR=3.7							
STKA	**Stephens Creek**	**120.81**	**211**	PKP		**PKPdf**	**18 02 16.4**	**-0.1**
STKA	**Stephens Creek**	**120.81**	**211**	PKP		**PKPdf**	**18 02 16.4**	**-0.1**
	comp=N,1.6nm,0.7s,baz=131,slow=8.8,SNR=6.1							
NWAO	**Narrogin (SRO)**	**127.57**	**187**	PKP		**PKPdf**	**18 02 29.3**	**-0.1**
NWAO	**Narrogin (SRO)**	**127.57**	**187**	PKP		**PKPdf**	**18 02 29.3**	**-0.1**
	comp=N,6.0nm,0.7s,baz=178,slow=4.1							
AKTO	**Aktyubinsk**	**128.59**	**40**	PKP		**PKPdf**	**18 02 31.2**	**+0.5**
AKTO				pPKP		**pPKPdf**	**18 02 50.8**	**+0.6**
AKTO	**Aktyubinsk**	**128.59**	**40**	PKP		**PKPdf**	**18 02 31.2**	**+0.5**
	comp=N,2.2nm,0.7s,baz=40,slow=4.1,SNR=12							
AKTO				pPKP		**pPKPdf**	**18 02 50.8**	**+0.6**
	comp=N,2.1nm,0.9s,baz=310,slow=4.0,SNR=5.0							
ABKAR	**Akbulak array**	**130.14**	**41**	*e*PKPdf		**PKPdf**	**18 02 34.2**	**+0.6**
PETK	**Petropavlovsk-**	**130.34**	**324**	PKP		**PKPdf**	**18 02 35.6**	**+1.6**
PETK	**Petropavlovsk-**	**130.34**	**324**	PKP		**PKPdf**	**18 02 35.6**	**+1.6**
	comp=N,1.4nm,0.5s,baz=95,slow=1.9,SNR=4.9							
AS31	**Alice Springs**	**131.37**	**209**	*e*PKPdf		**PKPdf**	**18 02 35.8**	**-1.2**
ASAR	**Alice Springs**	**131.37**	**209**	PKP		**PKPdf**	**18 02 36.1**	**-0.8**
ASAR				pPKP		**pPKPdf**	**18 02 57.8**	**+1.3**
ASAR				PKKP		**PKKPdf**	**18 12 32.7**	**-1.1**
ASAR	**Alice Springs**	**131.37**	**209**	PKP		**PKPdf**	**18 02 36.1**	**-0.8**
	comp=N,1.5nm,0.5s,baz=130,slow=1.8,SNR=23							
ASAR				pPKP		**pPKPdf**	**18 02 57.8**	**+1.3**
	comp=N,1.1nm,0.4s,baz=125,slow=1.5,SNR=5.2							
ASAR				PKKP		**PKKPdf**	**18 12 32.7**	**-1.1**
	comp=N,0.3nm,0.7s,baz=349,slow=2.5,SNR=4.1							
WRA	**Warramunga Arr**	**134.32**	**213**	PKPpre	PKPpre		18 02 30.2	
WRA				PKP		**PKPdf**	**18 02 42.3**	**-0.2**
WRA				pPKP	pPKPdf		18 03 02.6	+0.6
WRA	**Warramunga Arr**	**134.32**	**213**	PKhKP	PKPpre		18 02 30.2	
	comp=N,0.3nm,0.5s,baz=127,slow=3.1,SNR=13							
WRA				PKP		**PKPdf**	**18 02 42.3**	**-0.2**
	comp=N,3.5nm,0.7s,baz=154,slow=1.6,SNR=38							
WRA				pPKP	pPKPdf		18 03 02.6	+0.6
	comp=N,1.9nm,0.4s,baz=139,slow=1.7,SNR=7.1							
WRAB	**Tennant Creek**	**134.32**	**213**	*e*PKPdf		**PKPdf**	**18 02 42.5**	**0.0**
KKAR	**Karatay Array**	**139.18**	**46**	*e*PKPdf		**PKPdf**	**18 02 50.9**	**+0.1**
ZAA0	**Zalesovo Array**	**140.37**	**23**	*e*PKPdf		**PKPdf**	**18 02 53.1**	**+0.6**
ZALV	**Zalesovo Beam**	**140.37**	**23**	PKPpre	PKPpre		18 02 47.8	
ZALV				PKP		**PKPdf**	**18 02 53.0**	**+0.4**
ZALV				pPKP	pPKPdf		18 03 13.1	+1.0
ZALV	**Zalesovo Beam**	**140.37**	**23**	PKhKP	PKPpre		18 02 47.8	
	comp=N,6.7nm,0.6s,baz=305,slow=2.0,SNR=23							
ZALV				PKP		**PKPdf**	**18 02 53.0**	**+0.4**
	comp=N,7.8nm,0.6s,baz=305,slow=2.1,SNR=30							
ZALV				pPKP	pPKPdf		18 03 13.1	+1.0
	comp=N,4.1nm,0.5s,baz=307,slow=2.7,SNR=4.3							
EKS2	**Erkin-Say**	**141.54**	**45**	*e*PKPdf		**PKPdf**	**18 02 56.3**	**+1.0**
TKM2	**Tokmak 2**	**142.62**	**43**	*e*PKPpre	PKPpre		18 02 55.2	
MKAR	**Makanchi Array**	**144.37**	**33**	PKP	PKPbc		18 02 58.5	-0.1
MKAR				pPKP	pPKPdf		18 03 18.8	-0.7
MKAR	**Makanchi Array**	**144.37**	**33**	PKP	PKPbc		18 02 58.5	-0.1
	comp=N,2.2nm,0.6s,baz=326,slow=4.0,SNR=38							
MKAR				pPKP	pPKPdf		18 03 18.8	-0.7
	comp=N,1.2nm,0.5s,baz=305,slow=4.3,SNR=4.8							
KSH	**Kashi**	**144.38**	**48**	*e*PKP		**PKPab**	**18 02 58.5**	**-0.1**
KSH				PP		**PP**	**18 06 16.1**	**-0.3**
KSH				PKS		**PKSdf**	**18 06 32.0**	**-4.1**
KSH				SKS		**SKSdf**	**18 10 02.0**	**-2.1**
KSH				SKKS		**SKKSac**	**18 13 01.3**	**-1.9**
KSH				SS		**SS**	**18 24 54.8**	**-2.9**
KSH				AMB	AMB			
	comp=Z,170nm,4.4s							
KSH				LR	LR			
	comp=Z,230nm,5.5s							
WMQ	**Urumqi**	**149.19**	**33**	P		**PKPbc**	**18 03 14.0**	**+1.5**
WMQ				pmax	pmax			
	comp=Z,20nm,1.0s							
WMQ	**Urumqi**	**149.19**	**33**	PKPbc	PKPdf		**18 03 08.8**	**+0.6**
USRK	**Ussuriysk Arra**	**149.25**	**328**	PKPbc	PKPbc		**18 03 12.9**	**+0.4**
	comp=Z,6.3nm,0.7s,baz=18,slow=2.4,SNR=19							
USRK				pPKPbc	**pPKPbc**		**18 03 32.0**	**+0.1**
	comp=Z,5.9nm,0.8s,baz=45,slow=2.5,SNR=5.5							
MJAR	**Matsushiro Arr**	**150.06**	**311**	PKPbc	PKPbc		**18 03 14.8**	**0.0**
MJAR				pPKPbc	**pPKPbc**		**18 03 34.4**	**+0.2**
MJAR	**Matsushiro Arr**	**150.06**	**311**	PKPbc	PKPbc		**18 03 14.8**	**0.0**
	comp=Z,12nm,0.6s,baz=94,slow=0.6,SNR=66							
MJAR				pPKPbc	**pPKPbc**		**18 03 34.4**	**+0.2**
	comp=Z,4.3nm,0.7s,baz=87,slow=0.9,SNR=3.7							
MAJO	**Matsushiro**	**150.06**	**311**	*e*PKPbc	PKPbc		**18 03 15.0**	**+0.2**
MAT	**Matsushiro**	**150.06**	**311**	PKP	PKPbc		**18 03 14.3**	**-0.5**
MDJ	**Mudanjiang**	**150.07**	**332**	PKPbc	PKPbc		**18 03 14.1**	**-0.4**
MDJ				PP	**PP**		**18 06 51.0**	**+2.1**
MDJ				AMB	AMB			
	comp=Z,230nm,16.2s							
SONM	**Songino Array**	**151.44**	**5**	PKPbc	PKPbc		**18 03 18.4**	**+0.6**
SONM				pPKPbc	**pPKPbc**		**18 03 37.7**	**+0.4**
SONM	**Songino Array**	**151.44**	**5**	PKPbc	PKPbc		**18 03 18.4**	**+0.6**
	comp=Z,12nm,0.6s,baz=356,slow=2.6,SNR=12							
SONM				pPKPbc	**pPKPbc**		**18 03 37.7**	**+0.4**
	comp=Z,5.0nm,0.5s,baz=1.3,slow=6.3,SNR=3.3							
KSRS	**Korea Array**	**156.23**	**323**	PKP	PKPdf		**18 03 16.7**	**-1.9**
	comp=Z,1.3nm,0.7s,baz=42,slow=2.2,SNR=6.8							
KSRS				PKPab	**PKPab**		**18 03 46.9**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=51,slow=3.6,SNR=7.7							
KSAR	**Wonju Array Be**	**156.26**	**323**	PKP	PKPdf		**18 03 16.7**	**-2.0**
KSAR				PKPab	**PKPab**		**18 03 46.9**	**+0.1**
GTA	**Gaotai**	**158.11**	**22**	*e*PKP	PKPdf		**18 03 22.3**	**+1.2**
GTA				pPKP	**pPKPdf**		**18 03 39.8**	**-0.9**
GTA				PP	**PP**		**18 07 36.8**	**+2.8**
HHC	**Hu-ho-hao-te**	**158.55**	**357**	*e*PKP	PKPdf		**18 03 21.6**	**0.0**
HHC				PKS	**PKSdf**		**18 06 54.3**	**-1.0**
HHC				PP	**PP**		**18 07 39.9**	**+3.8**
HHC				SKS	**SKSdf**		**18 10 22.4**	**+0.8**
HHC				SKKS	**SKKSac**		**18 14 22.8**	**+2.6**
HHC				SS	**SS**		**18 27 35.3**	**+3.5**
HHC				AMB	AMB			
	comp=Z,800nm,9.1s							
HHC				LR	LR			
	comp=N,200nm,21.4s							
HHC				LR	LR			
	comp=E,240nm,20.6s							
HHC				LR	LR			
	comp=Z,240nm,21.1s							
PSI	**Prapat**	**160.20**	**145**	PKPab	PKPab		**18 04 04.1**	**-0.5**
PSI	**Prapat**	**160.20**	**145**	PKPab	PKPab		**18 04 04.1**	**-0.5**
	comp=Z,6.1nm,0.6s,baz=249,slow=2.2,SNR=4.8							
LZH	**Lanzhou**	**162.43**	**17**	*e*PKP	PKPdf		**18 03 26.6**	**+0.5**
XAN	**Xi'an**	**165.34**	**4**	PKP	PKPdf		**18 03 28.9**	**+0.3**
CD2	**Chengdu**	**167.12**	**26**	PKP	PKPdf		**18 03 29.4**	**-0.7**
CD2				PKPab	**PKPab**		**18 04 34.9**	**+0.4**
CD2				PKS	**PKSdf**		**18 07 00.6**	**-2.3**
CD2				PP	**PP**		**18 08 23.9**	**+2.1**
CD2				SKS	**SKSdf**		**18 10 28.0**	**-0.5**
CD2				SKKS	**SKKSac**		**18 15 05.8**	**+1.6**
CD2				SS	**SS**		**18 29 02.3**	**+1.1**
CD2				AMB	AMB			
	comp=Z,180nm,6.4s							
CMAR	**Chiang Mai Arr**	**169.33**	**93**	PKP	PKPdf		**18 03 31.6**	**-0.2**
CMAR				pPKP	**pPKPdf**		**18 03 52.3**	**+0.8**
CMAR				PKPab	**PKPab**		**18 04 44.1**	**-0.6**
CMAR				pPKPab	**pPKPab**		**18 05 02.3**	**-1.3**
CMAR	**Chiang Mai Arr**	**169.33**	**93**	PKP	PKPdf		**18 03 31.6**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=268,slow=3.0,SNR=5.3							
CMAR				pPKP	**pPKPdf**		**18 03 52.3**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=284,slow=3.6,SNR=2.9							
CMAR				PKPab	**PKPab**		**18 04 44.1**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=260,slow=5.6,SNR=8.0							
CMAR				pPKPab	**pPKPab**		**18 05 02.3**	**-1.3**
	comp=Z,1.2nm,0.9s,baz=247,slow=5.5,SNR=5.4							
GYA	**Guiyang**	**172.23**	**24**	PKP	PKPdf		**18 03 33.8**	**+0.4**
GYA				PKPab	**PKPab**		**18 04 57.9**	**+0.6**
GYA				PKS	**PKSdf**		**18 07 03.8**	**-2.1**
GYA				PP	**PP**		**18 08 49.6**	**+2.1**
GYA				AMB	AMB			
	comp=Z,90nm,7.9s							

CSEM ***16*** *17:44:06.2, 45°.57N×26°.60E, h118km, MD3.0/7, After BUC*

BUC 16 17:44:06.2±1.4, 45°.57N×26°.60E, h118km±12km, MD3.0/7, 30C-12D, Error ellipse: s-maj=9.7km s-min=7.9km az=356.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PLOR	**Plostina**	**0.28**	**7**	⇑*i*P		Pn	17 44 23.0	0.0
PLOR	**Plostina**	**0.28**	**7**	⇑*i*P		Pn	17 44 23.0	0.0
PLOR				*i* S		Sn	17 44 35.5	-0.1
PLOR	**Plostina**	**0.28**	**7**	⇑*i*P		Pn	17 44 23.0	0.0
PLOR				*i* S		Sn	17 44 35.5	-0.1
VRI	**Vrincioaia**	**0.31**	**17**	⇑*i*P		Pn	17 44 23.3	+0.3
VRI	**Vrincioaia**	**0.31**	**17**	⇑*i*P		Pn	17 44 23.3	+0.3
VRI				*i* S		Sn	17 44 35.7	0.0
VRI	**Vrincioaia**	**0.31**	**17**	⇑*i*P		Pn	17 44 23.3	+0.3
VRI				*i* S		Sn	17 44 35.7	0.0
ODB	**Odobesti**	**0.38**	**58**	⇓*i*P		Pn	17 44 24.4	+1.1
ODB	**Odobesti**	**0.38**	**58**	⇓*i*P		Pn	17 44 24.4	+1.1
ODB	**Odobesti**	**0.38**	**58**	⇓*i*P		Pn	17 44 24.4	+1.1
ISR	**Istrita**	**0.46**	**185**	⇓*i*P		Pn	17 44 24.5	+0.7
ISR				S		Sn	17 44 38.9	+1.9
ISR	**Istrita**	**0.46**	**185**	⇓*i*P		Pn	17 44 24.5	+0.7
ISR				*i* S		Sn	17 44 38.9	+1.9
ISR	**Istrita**	**0.46**	**185**	⇓*i*P		Pn	17 44 24.5	+0.7
ISR				*i* S		Sn	17 44 38.9	+1.9
MLR	**Muntele Rosu**	**0.47**	**260**	⇑*i*P		Pn	17 44 24.1	+0.2
MLR	**Muntele Rosu**	**0.47**	**260**	⇑*i*P		Pn	17 44 24.1	+0.2
MLR				*i* S		Sn	17 44 36.8	-0.5
MLR	**Muntele Rosu**	**0.47**	**260**	⇑*i*P		Pn	17 44 24.1	+0.2
MLR				*i* S		Sn	17 44 36.8	-0.5
PETR		**0.47**	**71**	⇑*i*P		Pn	17 44 24.5	+0.8
PETR				S		Sn	17 44 37.6	+0.6
PETR		**0.47**	**71**	⇑*i*P		Pn	17 44 24.5	+0.8
PETR				*i* S		Sn	17 44 37.6	+0.6
PETR		**0.47**	**71**	⇑*i*P		Pn	17 44 24.5	+0.8
PETR				*i* S		Sn	17 44 37.6	+0.6
SECR		**0.66**	**215**	⇑*i*P		Pn	17 44 25.8	+0.7
SECR		**0.66**	**215**	⇑*i*P		Pn	17 44 25.8	+0.7
SECR				*i* S		Sn	17 44 40.2	+0.9
SECR		**0.66**	**215**	⇑*i*P		Pn	17 44 25.8	+0.7
SECR				*i* S		Sn	17 44 40.2	+0.9
SULR		**0.93**	**195**	S		Sn	17 44 41.4	-1.9
SULR		**0.93**	**195**	*i* S		Sn	17 44 41.4	-1.9
SULR		**0.93**	**195**	*i* S		Sn	17 44 41.4	-1.9
DOPR	**Dopca**	**0.93**	**295**	⇑*i*P		Pn	17 44 27.4	-0.1
DOPR	**Dopca**	**0.93**	**295**	⇑*i*P		Pn	17 44 27.4	-0.1
DOPR				*i* S		Sn	17 44 43.1	-0.5
DOPR	**Dopca**	**0.93**	**295**	⇑*i*P		Pn	17 44 27.4	-0.1
DOPR				*i* S		Sn	17 44 43.1	-0.5
TESR		**0.94**	**2**	⇑*i*P		Pn	17 44 27.5	0.0
TESR		**0.94**	**2**	⇑*i*P		Pn	17 44 27.5	0.0
TESR		**0.94**	**2**	⇑*i*P		Pn	17 44 27.5	0.0
AMRR	**Amara**	**1.10**	**151**	⇑*i*P		Pn	17 44 30.0	+1.0
AMRR				S		Sn	17 44 46.7	+0.4
AMRR	**Amara**	**1.10**	**151**	⇑*i*P		Pn	17 44 30.0	+1.0
AMRR				*i* S		Sn	17 44 46.7	+0.4
AMRR	**Amara**	**1.10**	**151**	⇑*i*P		Pn	17 44 30.0	+1.0
AMRR				*i* S		Sn	17 44 46.7	+0.4
VOIR		**1.10**	**263**	⇓*i*P		Pn	17 44 29.7	+0.5
VOIR		**1.10**	**263**	⇓*i*P		Pn	17 44 29.7	+0.5
VOIR				*i* S		Sn	17 44 45.7	-0.9
VOIR		**1.10**	**263**	⇓*i*P		Pn	17 44 29.7	+0.5
VOIR				*i* S		Sn	17 44 45.7	-0.9
CFR	**Carcaliu**	**1.15**	**110**	⇓*i*P		Pn	17 44 29.8	+0.2
CFR	**Carcaliu**	**1.15**	**110**	⇓*i*P		Pn	17 44 29.8	+0.2
CFR				*i* S		Sn	17 44 46.3	-1.1
CFR	**Carcaliu**	**1.15**	**110**	⇓*i*P		Pn	17 44 29.8	+0.2
CFR				*i* S		Sn	17 44 46.3	-1.1
CIOR	**Ciorogarla**	**1.23**	**205**	S		Sn	17 44 48.7	-0.2
CIOR	**Ciorogarla**	**1.23**	**205**	*i* S		Sn	17 44 48.7	-0.2
CIOR	**Ciorogarla**	**1.23**	**205**	*i* S		Sn	17 44 48.7	-0.2
LEOM	**Leova**	**1.46**	**51**	S		Sn	17 44 52.5	-0.9
LEOM	**Leova**	**1.46**	**51**	*i* S		Sn	17 44 52.5	-0.9
LEOM	**Leova**	**1.46**	**51**	*i* S		Sn	17 44 52.5	-0.9
HUMR	**Humele**	**1.55**	**228**	S		Sn	17 44 54.5	-0.9
HUMR	**Humele**	**1.55**	**228**	*i* S		Sn	17 44 54.5	-0.9
HUMR	**Humele**	**1.55**	**228**	*i* S		Sn	17 44 54.5	-0.9
TLCR		**1.61**	**103**	S		Sn	17 44 55.7	-0.8
TLCR		**1.61**	**103**	*i* S		Sn	17 44 55.7	-0.8
TLCR		**1.61**	**103**	*i* S		Sn	17 44 55.7	-0.8
TIRR	**Tirgusor**	**1.70**	**130**	⇑*i*P		Pn	17 44 36.3	+0.4
TIRR	**Tirgusor**	**1.70**	**130**	⇑*i*P		Pn	17 44 36.3	+0.4
TIRR				*i* S		Sn	17 44 57.8	-0.7
TIRR	**Tirgusor**	**1.70**	**130**	⇑*i*P		Pn	17 44 36.3	+0.4
TIRR				*i* S		Sn	17 44 57.8	-0.7
BURAR	**Bucovina Array**	**2.25**	**335**	⇑*i*P		Pn	17 44 44.0	+1.1
BURAR	**Bucovina Array**	**2.25**	**335**	⇑*i*P		Pn	17 44 44.0	+1.1
BURAR	**Bucovina Array**	**2.25**	**335**	⇑*i*P		Pn	17 44 44.0	+1.1

FUNV 16 17:45:04.3, 6°.15N×73°.43W, h35km, MW3.5, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CAPV	**Capacho**	**2.03**	**33**	⇑*e*P		Pn	17 45 36.6	+0.2
CAPV				*e*S		Sn	17 45 57.9	-2.9
SOCV	**Socops**	**3.32**	**50**	*e*P		Pn	17 45 52.3	-1.5
SOCV				*e*S		Sn	17 46 28.9	-3.2
VIGV	**El Vigia**	**3.37**	**37**	*e*P		Pn	17 45 53.2	-1.3
VIGV				*e*S		Sn	17 46 29.4	-3.9
QARV	**Quebrada Arrib**	**4.95**	**35**	*e*P		Pn	17 46 14.8	-1.6
QARV				*e*S		Sn	17 47 07.3	-5.2
SANV	**Sanarito**	**5.09**	**49**	*e*P		Pn	17 46 16.4	-2.0
SANV				*e*S		Sn	17 47 10.1	-6.1
CURV	**Curarigua**	**5.15**	**42**	*e*P		Pn	17 47 17.2	-1.9
CURV				*e*S		Sn	17 47 11.6	-5.9
SIQV	**Siquisique**	**5.73**	**38**	*e*P		Pn	17 46 24.9	-2.1
SIQV				*e*S		Sn	17 47 24.7	-6.9
BAUV	**El Baul**	**6.02**	**62**	*e*P		Pn	17 46 28.8	-2.1

WEL 16 17:48:30.5±0.5, 36°.87S×177°.73E, h128km±5km, ML3.5/14, 2C, Error ellipse: s-maj=7.3km s-min=5.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.83**	**146**	PN		Pn	17 48 51.4	-0.3
MXZ				SN		Sn	17 49 07.5	-0.3
PUZ	**Puketiti**	**1.27**	**161**	PN		Pn	17 48 56.5	+0.5
PUZ				SN		Sn	17 49 15.0	-0.4
MWZ	**Matawai**	**1.47**	**186**	⇑PN		Pn	17 48 58.2	+0.1
MWZ				SN		Sn	17 49 20.0	+0.7
URZ	**Urewera**	**1.47**	**199**	PN		Pn	17 48 58.4	+0.3
CNGZ	**Carnagh Statio**	**1.66**	**167**	PN		Pn	17 49 00.7	+0.4
CNGZ				SN		Sn	17 49 21.2	-1.8
KNZ	**Kokohu**	**2.15**	**181**	PN		Pn	17 49 05.5	-0.6
MHGZ	**Mahia Peninsul**	**2.29**	**176**	PN		Pn	17 49 07.4	-0.4
NMHZ	**Naumai**	**2.34**	**198**	⇑PN		Pn	17 49 09.3	+0.6
BKZ	**Black Stump Fm**	**2.49**	**203**	PN		Pn	17 49 10.5	0.0
MCHZ	**McNeill Hill**	**2.69**	**197**	PN		Pn	17 49 13.0	-0.1
BHHZ	**Black Hill Sta**	**2.92**	**206**	PN		Pn	17 49 15.6	-0.5
FWVZ	**Far West T-bar**	**2.94**	**215**	PN		Pn	17 49 16.8	+0.3
TRVZ	**Turoa**	**2.97**	**215**	PN		Pn	17 49 17.0	0.0
WNVZ	**Wahianoa**	**2.97**	**214**	PN		Pn	17 49 16.8	-0.1
KAHZ	**Kahuranaki**	**3.00**	**193**	PN		Pn	17 49 16.1	-1.0
PXZ	**Pawanui**	**3.23**	**192**	PN		Pn	17 49 18.1	-1.8
PNHZ	**Pukenui**	**3.27**	**201**	PN		Pn	17 49 19.3	-1.3
WPHZ	**Waipukurau**	**3.35**	**197**	PN		Pn	17 49 20.0	-1.6
TSZ	**Takapari Road**	**3.47**	**203**	PN		Pn	17 49 21.5	-1.7
PRHZ	**Porangahau**	**3.50**	**194**	PN		Pn	17 49 21.7	-1.9
DVHZ	**Dannevirke**	**3.64**	**199**	PN		Pn	17 49 23.4	-2.0
POWZ	**Post Office Ro**	**3.84**	**203**	PN		Pn	17 49 26.1	-1.9
BFZ	**Birch Farm**	**3.98**	**196**	PN		Pn	17 49 27.3	-2.6
MRZ	**Mangatainoka R**	**4.14**	**203**	PN		Pn	17 49 29.4	-2.6
TIWZ	**Tintock**	**4.16**	**200**	PN		Pn	17 49 29.8	-2.6
HOWZ	**Holdsworth Sta**	**4.38**	**203**	PN		Pn	17 49 32.1	-3.1
OGWZ	**Otaki Gorge**	**4.42**	**206**	PN		Pn	17 49 33.3	-2.5
TMWZ	**Te Maipa**	**4.47**	**198**	PN		Pn	17 49 33.3	-3.1
KIW	**Kapiti Island**	**4.55**	**208**	PN		Pn	17 49 34.7	-2.8
MTW	**Mount Morrison**	**4.62**	**201**	PN		Pn	17 49 34.9	-3.5
CAW	**Cannon Point**	**4.71**	**205**	PN		Pn	17 49 36.4	-3.2
SNZO	**South Karori**	**5.02**	**207**	PN		Pn	17 49 40.3	-3.4
TCW	**Tory Channel**	**5.10**	**211**	PN		Pn	17 49 41.7	-3.2
QRZ	**Quartz Range**	**5.66**	**224**	PN		Pn	17 49 49.9	-2.5

MOS ***16*** *17:49:29.3±1.2, 42°.61N×13°.27E, h10km, mb4.0/10, Error ellipse: s-maj=7.3km s-min=4.5km az=89.2*
IDC ***16*** *17:49:29.3±1.2, 42°.60N×13°.49E, h0km, mb3.6/7, mb1 3.8/14, mb1mx3.7/33, mbtmp3.7/14, ML3.7/7, Error ellipse: s-maj=21.5km s-min=13.7km az=85.0*
ISCJB ***16*** *17:49:29.9±0.2, 42°.57N±0°.01×13°.27E±0°.01, h13km±1km, mb3.9/13, Error ellipse: s-maj=2.3km s-min=1.5km az=31.0*
BEO ***16*** *17:49:29.8±1.0, 42°.32N×13°.25E, h0km, ML4.1/6*
LDG ***16*** *17:49:30.2±0.1, 42°.59N×13°.38E, h2km, Ml3.7/11, Error ellipse: s-maj=3.7km s-min=2.2km az=41.0*
CSEM ***16*** *17:49:30.6±0.1, 42°.58N×13°.27E, h2km, mb4.1/9, ML4.4/11, Error ellipse: s-maj=2.4km s-min=1.6km az=31.0*
ROM ***16*** *17:49:30.1±0.1, 42°.54N×13°.29E, h12km, Ml4.1/31, Error ellipse: s-maj=0.7km s-

PTQR	Pietraquaria	0.54	171		Pg		Pg	17 49 40.4	-1.2	SOKA	Soboth	4.31	16	⇓*i*Pn		Pn	17 50 36.5	-0.4	GERES					S		Sn	17 52 14.1	-2.1
PTQR	Pietraquaria	0.54	171		Pg		Pg	17 49 40.4	-1.2	SOKA	Soboth	4.31	16		Pn		Pn	17 50 36.5	-0.4		comp=Z,16nm,0.3s								
CERT	Cerreto	0.65	201		Pg		Pg	17 49 42.2	-1.5	PDG	Podgorica	4.41	90	⇑*i*Pn		Pn	17 50 38.8	+0.6	FNA	Florina	6.31	104		P		Pn	17 51 04.7	+0.4
	12µm,0.6s									PDG				*e*Sn		Sn	17 51 29.8	+0.2	FNA	Florina	6.31	104		P		Pn	17 51 04.7	+0.4
CERT	Cerreto	0.65	201		Pg		Pg	17 49 42.2	-1.5	TTG	Podgorica	4.41	90	⇑*i*Pn		Pn	17 50 38.8	+0.6	BBS	Basel-Blauen	6.39	322		P		Pn	17 51 05.4	-0.1
	12µm,0.6s									TTG				*e*Sn		Sn	17 51 29.8	+0.2	BBS	Basel-Blauen	6.39	322		P		Pn	17 51 05.4	-0.1
MTCE	Montecelio	0.67	218		Pg		Pg	17 49 42.5	-1.6	SAOF	Saorge	4.43	291		P		Pn	17 50 38.7	+0.3	BBS	Basel-Blauen	6.39	322		P		Pn	17 51 05.4	-0.1
	5µm,0.6s									SAOF	Saorge	4.43	291		P		Pn	17 50 38.7	+0.3	BBS	Basel-Blauen	6.39	322		P		Pn	17 51 05.4	-0.1
MTCE	Montecelio	0.67	218		Pg		Pg	17 49 42.5	-1.6	SAOF	Saorge	4.43	291		P		Pn	17 50 38.7	+0.3	BOLS	Boljevac	6.46	76	*e*Pn			Pn	17 51 05.2	-1.1
	5µm,0.6s									SAOF	Saorge	4.43	291		P		Pn	17 50 38.7	+0.3	BOLS	Boljevac	6.46	76	*e*Pn			Pn	17 51 05.2	-1.1
ASSB	Assisi San Ben	0.68	317		Pg		Pg	17 49 43.1	-1.1	ULC	Ulcinj	4.46	96	⇑*i*Pn		Pn	17 50 39.4	+0.5	CABF	La Chapelle	6.55	311	*e*Pn			Pn	17 51 08.7	+1.1
	4µm,0.3s									ULC				*e*Sn		Sn	17 51 30.6	-0.2	CABF	La Chapelle	6.55	311	*e*Pn			Pn	17 51 08.7	+1.1
ASSB	Assisi San Ben	0.68	317		Pg		Pg	17 49 43.1	-1.1	ULC	Ulcinj	4.46	96	⇑*i*Pn		Pn	17 50 39.4	+0.5	KHC	Kasperske Hory	6.58	2	*e*P			Pn	17 51 07.7	-0.3
	4µm,0.3s									ULC				*e*Sn		Sn	17 51 30.6	-0.2	KHC				*e*				17 52 19.7	
GUMA	Gualdo di Mace	0.70	43		Pg		Pg	17 49 40.7	-3.9	SBF	Sospel	4.48	289	*e*Pn		Pn	17 50 39.1	0.0	KHC	Kasperske Hory	6.58	2	*e*P			Pn	17 51 06.9	-1.1
GUMA					Sg		Sg	17 49 49.1	-4.6	SBF				*e*Sn		Sn	17 51 29.4	-1.9	KHC	Kasperske Hory	6.58	2	*e*PN			Pn	17 51 07.7	-0.3
	39µm,0.4s										comp=Z,56nm,0.8s								KHC				*ex*				x	17 51 19.5	
INTR	Introdacqua	0.71	140		Pg		Pg	17 49 43.2	-1.6	SBF	Sospel	4.48	289	*e*Pn		Pn	17 50 39.1	0.0	KHC				*e*PG			Pg	17 51 33.0	-4.1
	12µm,1.0s									SBF				*e*Sn		Sn	17 51 29.4	-1.9	KHC				*e*SN			Sn	17 52 19.7	-3.4
INTR	Introdacqua	0.71	140		Pg		Pg	17 49 43.2	-1.6		comp=Z,28nm,0.8s								KHC	Kasperske Hory	6.58	2	*e*P			Pn	17 51 06.9	-1.1
	12µm,1.0s									REVF	Revere	4.49	287		P		Pn	17 50 39.8	+0.4	KHC	Kasperske Hory	6.58	2	Pn			Pn	17 51 07.7	-0.3
VVLD	Villa Vallelon	0.72	160		Pg		Pg	17 49 44.1	-1.1	REVF	Revere	4.49	287		P		Pn	17 50 39.8	+0.4	LOMF	Lomont	6.63	319		P		Pn	17 51 08.8	0.0
	5µm,0.5s									AUTN	L'Aution	4.52	291		P		Pn	17 50 40.3	+0.5	LOMF					S		Sn	17 52 19.5	-5.0
VVLD	Villa Vallelon	0.72	160		Pg		Pg	17 49 44.1	-1.1	AUTN	L'Aution	4.52	291		P		Pn	17 50 40.3	+0.5	LOMF	Lomont	6.63	319		P		Pn	17 51 08.8	0.0
	5µm,0.5s									KBA	Koelnbreinsper	4.53	0	⇓*i*Pn		Pn	17 50 39.7	-0.2	LOMF					S		Sn	17 52 19.5	-5.0
SNTG	Esanatoglia	0.75	340		Pg		Pg	17 49 44.3	-1.3		SNR=42								LOMF	Lomont	6.63	319		P		Pn	17 51 08.8	0.0
SNTG	Esanatoglia	0.75	340		Pg		Pg	17 49 44.3	-1.3	KBA	Koelnbreinsper	4.53	0	Pn		Pn	17 50 39.7	-0.2	LOMF					S		Sn	17 52 19.5	-5.0
GUAR	Guarcino	0.76	179		Pg		Pg	17 49 44.3	-1.5		SNR=42								LOMF	Lomont	6.63	319		P		Pn	17 51 08.8	0.0
	3µm,0.5s									PLE	Pljevlja	4.54	78	⇑*i*Pn		Pn	17 50 41.2	+1.1	LOMF					S		Sn	17 52 19.5	-5.0
GUAR	Guarcino	0.76	179		Pg		Pg	17 49 44.3	-1.5	PLE				*e*Sn		Sn	17 51 34.0	+0.9	LOMF	Lomont	6.63	319		P		Pn	17 51 08.8	0.0
	3µm,0.5s									PLE	Pljevlja	4.54	78	⇑*i*Pn		Pn	17 50 41.2	+1.1	LOMF					S		Sn	17 52 19.5	-5.0
CING	Cingoli	0.82	355		Pg		Pg	17 49 45.8	-1.3	PLE				*e*Sn		Sn	17 51 34.0	+0.9	VIVF	Saint-Julien-l	6.66	293	*e*Pn			Pn	17 51 10.5	+1.5
	3µm,0.3s									TOUF	Mont Tournerai	4.65	290		P		Pn	17 50 42.2	+0.6	VIVF	Saint-Julien-l	6.66	293	*e*Pn			Pn	17 51 10.5	+1.5
CING	Cingoli	0.82	355		Pg		Pg	17 49 45.8	-1.3	TOUF	Mont Tournerai	4.65	290		P		Pn	17 50 42.2	+0.6	BZS	Buzias	6.73	60	⇑*i*P			Pn	17 51 10.5	+0.5
	3µm,0.3s									BBLS	Lazići	4.66	72	*e*Pn		Pn	17 50 42.7	+1.1	BZS	Buzias	6.73	60	⇑*i*P			Pn	17 51 10.5	+0.5
CAFR	Castel Frentan	0.85	112		Pg		Pg	17 49 46.1	-1.4		SNR=18								BZS	Buzias	6.73	60	P			Pn	17 51 10.5	+0.5
	6µm,0.6s									BBLS				*e*Sn		Sn	17 51 36.9	+1.1	LKD2	Lefkada island	6.74	121	P			Pn	17 51 12.0	+1.7
CAFR	Castel Frentan	0.85	112		Pg		Pg	17 49 46.1	-1.4	BBLS	Lazići	4.66	72	*e*Pn		Pn	17 50 42.7	+1.1	LKD2	Lefkada island	6.74	121	P			Pn	17 51 12.0	+1.7
	6µm,0.6s									BBLS				*e*Sn		Sn	17 51 36.9	+1.1	BFO	Black Forest	6.75	331	*e*P			Pn	17 51 07.6	-2.7
RMP	Rome, Mte Porz	0.86	211		Pg		Pg	17 49 45.8	-1.9	CEL	Celeste	4.73	154	*e*P		Pn	17 50 43.7	+1.1	BFO	Black Forest	6.75	331	*e*P			Pn	17 51 07.6	-2.7
	6µm,0.6s									CEL	Celeste	4.73	154	*e*P		Pn	17 50 43.7	+1.1	MOF	Molkenrain	6.85	323	P			Pn	17 51 10.4	-1.4
RMP	Rome, Mte Porz	0.86	211		Pg		Pg	17 49 45.8	-1.9	FETA	Feichten	4.83	339	⇑*i*Pn		Pn	17 50 44.4	+0.4	MOF	Molkenrain	6.85	323	P			Pn	17 51 10.4	-1.4
	6µm,0.6s										SNR=18								MOF	Molkenrain	6.85	323	P			Pn	17 51 10.4	-1.4
RDP	Rocca di Papa	0.90	208		Pg		Pg	17 49 46.7	-1.8	FETA	Feichten	4.83	339	Pn		Pn	17 50 44.4	+0.4	MOF	Molkenrain	6.85	323	P			Pn	17 51 10.4	-1.4
	11µm,0.6s										SNR=18								ZAPS	Zavoj	6.90	81	*e*Pn			Pn	17 51 12.6	+0.2
RDP	Rocca di Papa	0.90	208		Pg		Pg	17 49 46.7	-1.8	TUE	Stuetta	4.83	326	*e*P		Pn	17 50 44.0	-0.1	ZAPS				*e*Sn			Sn	17 52 28.6	-2.3
	11µm,0.6s									TUE	Stuetta	4.83	326	*e*P		Pn	17 50 44.0	-0.1	HINF	Hinteralfeld	6.95	321	*e*Pn			Pn	17 51 12.9	-0.2
MURB	Monte Urbino	0.91	322		Pg		Pg	17 49 47.5	-1.1	CALN	Calern	4.83	287	P		Pn	17 50 43.9	-0.2	HINF				*e*Sn			Sn	17 52 29.7	-2.6
	6µm,0.4s									CALN	Calern	4.83	287	P		Pn	17 50 43.9	-0.2		comp=Z,26nm,0.5s								
MURB	Monte Urbino	0.91	322		Pg		Pg	17 49 47.5	-1.1	WTTA	Wattenberg	4.85	347	⇑*i*Pn		Pn	17 50 45.5	+1.1	HINF	Hinteralfeld	6.95	321	*e*Pn			Pn	17 51 12.9	-0.2
	6µm,0.4s										SNR=17								GRG	Griva	7.00	100	P			Pn	17 51 14.3	+0.6
ARVD	Arcevia	0.98	345		Pg		Pg	17 49 48.5	-1.5	WTTA	Wattenberg	4.85	347	Pn		Pn	17 50 45.5	+1.1	GRG	Griva	7.00	100	P			Pn	17 51 14.3	+0.6
	3µm,0.8s										SNR=17								LASF	Ste Croix	7.05	286	*e*Pn			Pn	17 51 14.2	-0.2
ARVD	Arcevia	0.98	345		Pg		Pg	17 49 48.5	-1.5	BEY	Berane	4.88	84	⇑*i*Pn		Pn	17 50 45.9	+1.3	LASF	Ste Croix	7.05	286	*e*Pn			Pn	17 51 14.2	-0.2
	3µm,0.8s									BEY				*e*Sn		Sn	17 51 41.8	+0.6	VLS	Valsamata	7.08	126	P			Pn	17 51 16.2	+1.3
AOI	Ancona	1.02	13		Pg		Pg	17 49 49.5	-1.3	IVA	Berane	4.88	84	⇑*i*Pn		Pn	17 50 45.9	+1.3	VLS	Valsamata	7.08	126	P			Pn	17 51 16.2	+1.3
	3µm,0.7s									IVA				*e*Sn		Sn	17 51 41.8	+0.6	VYHS	Vyhne	7.10	31	*e*P			Pn	17 51 15.6	+0.5
AOI	Ancona	1.02	13		Pg		Pg	17 49 49.5	-1.3	DAVOX	Davos/Dischmat	4.88	331	Pn		Pn	17 50 46.1	+1.3	VYHS				*e*				17 52 31.3	
	3µm,0.7s										comp=Z,4.6nm,0.3s,baz=160,slow=16,SNR=30								VYHS	Vyhne	7.10	31	*e*PN			Pn	17 51 15.6	+0.5
SACS	San Casciano d	1.06	287		Pg		Pg	17 49 50.1	-1.4	DAVOX					Sn		Sn	17 51 42.3	+1.0	VYHS				*e*SN			Sn	17 52 31.3	-4.6
	4µm,0.9s										comp=Z,5.9nm,0.3s,baz=272,slow=11,SNR=5.8								VYHS	Vyhne	7.10	31	*e*P			Pn	17 51 15.6	+0.5
RNI2	Rionero Sannit	1.06	143		Pg		Pg	17 49 50.1	-1.5	DAVOX	Davos/Dischmat	4.88	331	P		Pn	17 50 46.1	+1.3	ECH	Echery	7.12	325	*e*P			Pn	17 51 14.0	-1.4
RNI2	Rionero Sannit	1.06	143		Pg		Pg	17 49 50.1	-1.5		comp=Z,5.0nm,0.3s								ECH					S		Sn	17 52 33.3	-3.0
CERA	Filignano	1.10	150		Pg		Pg	17 49 50.1	-2.2	DAVOX					S		Sn	17 51 42.3	+1.0	ECH	Echery	7.12	325	*e*Pn			Pn	17 51 14.0	-1.4
	3µm,0.7s										comp=Z,6.0nm,0.3s								ECH					S		Sn	17 52 33.3	-3.0
CERA	Filignano	1.10	150		Pg		Pg	17 49 50.1	-2.2	PVY	Plav	4.92	87	⇑*i*Pn		Pn	17 50 46.7	+1.3	ECH				*e*SN			Sn	17 52 33.7	-2.6
	3µm,0.7s									PVY				*e*Sn		Sn	17 51 43.1	+0.7	ECH	Echery	7.12	325	P			Pn	17 51 14.0	-0.8
LATE	Laterza	1.10	274		Pg		Pg	17 49 50.7	-1.6	WATA	Walderalm	4.93	346	⇑*i*Pn		Pn	17 50 47.2	+1.7	ECH					S		Sn	17 52 33.3	-3.0
LATE	Laterza	1.10	274		Pg		Pg	17 49 50.7	-1.6		SNR=11								ECH	Echery	7.12	325	*e*Pn			Pn	17 51 14.0	-1.4
MIDA	Miranda	1.16	141		Pg		Pb	17 49 50.6	-2.8	WATA				⇑*i*Sn		Sn	17 51 46.4	+3.7	ECH	Echery	7.12	325	P			Pn	17 51 14.6	-0.8
	1µm,0.6s									WATA	Walderalm	4.93	346	Pn		Pn	17 50 47.2	+1.7	VRAC	Vranov	7.14	18	Pn			Pn	17 51 15.1	-0.5
BADI	Badiali	1.23	322		Pg		Pn	17 49 53.1	-1.3		SNR=11									comp=Z,0.5nm,0.3s,baz=194,slow=14,SNR=1.8								
	2µm,0.5s									WATA				Sn		Sn	17 51 46.4	+3.7	VRAC					Sn		Sn	17 52 33.9	-2.8
BADI	Badiali	1.23	322		Pg		Pn	17 49 53.1	-1.3	TEKS	Tekeris	4.95	64	*e*Pn		Sn	17 50 46.8	+1.2		comp=Z,1.0nm,0.3s,baz=285,slow=20,SNR=2.5								
	2µm,0.5s									TEKS	Tekeris	4.95	64	*e*Pn		Pn	17 50 46.8	+1.2	VRAC	Vranov	7.14	18	*e*Pn			Pn	17 51 14.8	-0.8
PARC	Parchiule	1.34	325		Pg		Pn	17 49 55.6	-0.4	ARSA	Arzberg	4.96	18	⇑*i*Pn		Pn	17 50 45.1	-0.6	VRAC	Vranov	7.14	18	P			Pn	17 51 15.1	-0.5
	2µm,0.7s										SNR=10									comp=Z,1.0nm,0.3s								
PARC	Parchiule	1.34	325		Pg		Pn	17 49 55.6	-0.4	ARSA	Arzberg	4.96	18	Pn		Pn	17 50 45.1	-0.6	CDF	Champ du Feu	7.22	326	*e*Pn			Pn	17 51 15.7	-1.2
	2µm,0.7s										SNR=10								CDF					*e*Sn		Sn	17 52 36.6	-2.4
PESA	Pesaro	1.43	347		Pg		Pn	17 49 57.3	+0.2	FRF	La Foret Royal	4.97	284	*e*Pn		Pn	17 50 45.4	-0.5		comp=Z,16nm,0.3s								
	3µm,0.6s									FRF				*e*Sn		Sn	17 51 40.4	-3.0	CDF	Champ du Feu	7.22	326	*e*Pn			Pn	17 51 15.7	-1.2
PESA	Pesaro	1.43	347		Pg		Pn	17 49 57.3	+0.2		comp=Z,23nm,0.7s								THL	Klokotos Trika	7.24	111	P			Pn	17 51 18.8	+1.8
	3µm,0.6s									FRF	La Foret Royal	4.97	284	*e*Pn		Pn	17 50 45.4	-0.5	THL	Klokotos Trika	7.24	111	P			Pn	17 51 18.8	+1.8
CRE	Caprese Michel	1.45	318		Pg		Pn	17 49 56.8	-0.8		comp=Z,11nm,0.7s								KFL	Anninata	7.24	125	P			Pn	17 51 19.2	+2.1
CRE	Caprese Michel	1.45	318		Pg		Pn	17 49 56.8	-0.8	MOTA	Moosalm	5.04	343	⇓*i*Pn		Pn	17 50 48.6	+1.7	KFL	Anninata	7.24	125	P			Pn	17 51 19.2	+2.1
MAON	Monte Argentar	1.60	266		Pg		Pn	17 49 58.4	-1.2		SNR=17								KNT	Kendrikon	7.31	98	P			Pn	17 51 18.8	+0.8
MS1	Monte Sant'Ang	2.15	112		ePn		Pb	17 50 08.9	-1.3	MOTA				⇑*i*Sn		Sn	17 51 48.6	+3.4	KNT	Kendrikon	7.31	98	P			Pn	17 51 18.8	+0.8
NVLJ	Novalja	2.31	29	*i* Pn			Pn	17 50 08.7	-0.6	MOTA	Moosalm	5.04	343	Pn		Pn	17 50 48.6	+1.7	VTS	Vitosha	7.32	86	P			Pn	17 51 19.2	+0.9
NVLJ					Sn		Sn	17 50 38.1	+0.3		SNR=17								VTS	Vitosha	7.32	86	⇓P			Pn	17 51 19.6	+1.3
NVLJ	Novalja	2.31	29	*i* Pn			Pn	17 50 38.7	-0.6	MOTA				Sn		Sn	17 51 48.6	+3.4	VTS	Vitosha	7.32	86	⇓*i*P			Pn	17 51 19.5	+1.3
NVLJ					Sn		Sn	17 50 38.1	+0.3	MOTA	Moosalm	5.04	343	Pn		Pn	17 50 48.6	+1.7	VTS	Vitosha	7.32	86	P			Pn	17 51 19.6	+1.3
MAIM	Mastiano	2.46	305		P		Pn	17 50 12.2	+0.9		SNR=17								HAU	Haudompre	7.33	320	*e*Pn			Pn	17 51 17.4	-0.8
CRDM	Cardoso	2.52	307		P		Pn	17 50 10.6	-1.7	MOTA				Sn		Sn	17 51 48.6	+3.4	HAU				*e*Sn			Sn	17 52 37.4	-4.0
VLC	Villacollemand	2.66	308		*e*P		Pn	17 50 13.8	-0.3	LMR	La Mourre	5.04	281	*e*Pn		Pn	17 50 45.9	-0.9		comp=Z,39nm,0.5s								
VLC	Villacollemand	2.66	308		*e*P		Pn	17 50 13.8	-0.3	LMR	La Mourre	5.04	281	*e*Pn		Pn	17 50 45.9	-0.9	HAU	Haudompre	7.33	320	*e*Pn			Pn	17 51 17.4	-0.8
CDT	Castel del Mon	2.67	122		*e*Pn		Pn	17 50 15.2	+0.9	TIR	Tirane	5.05	102	P		Pn	17 50 47.7	+0.8	LIT	Litokhoron	7.34	106	P			Pn	17 51 19.4	+0.9
CDT					*e*Sn		Sn	17 50 48.1	+1.4	TIR	Tirane	5.05	102	*e*P		Pn	17 50 46.9	0.0	LIT	Litokhoron	7.34	106	P			Pn	17 51 19.4	+0.9
SKDS	Skadanscina	3.04	10	*i* Pn			Pn	17 50 18.5	-0.8	TIR	Tirane	5.05	102	*e*P		Pn	17 50 46.9	0.0	EVR	Evrytania	7.42	116	P			Pn	17 51 21.8	+2.2
SKDS					*e*Sn		Sn	17 50 56.1	+0.3	TIR	Tirane	5.05	102	*e*P		Pn	17 50 46.9	0.0	EVR	Evrytania	7.42	116	P			Pn	17 51 21.8	+2.2
SKDS										DIVS	Divibare	5.13	70	P		Pn	17 50 48.5	+0.4	KEST	Kesra	7.47	206	*e*P			Pn	17 51 23.7	+3.4
	comp=Z,84nm,0.2s									DIVS	Divibare	5.13	70	*e*Pn		Pn	17 50 48.3	+0.2	KEST	Kesra	7.47	206	Pn			Pn	17 51 20.5	+0.2
SKDS	Skadanscina	3.04	10	Pn			Pn	17 50 18.5	-0.8	DIVS				*e*Sn		Sn	17 51 48.4	+1.0		comp=Z,0.7nm,0.3s,baz=68,slow=5.4,SNR=6.7								
SKDS					*e*Sn		Sn	17 50 56.1	+0.3	DIVS	Divibare	5.13	70	P		Pn	17 50 48.5	+0.4	KEST	Kesra	7.47	206	*e*P			Pn	17 51 23.7	+3.4
	comp=Z,84nm,0.2s									DIVS				*e*Sn		Sn	17 51 48.4	+1.0	LANF	Langenberg	7.48	331	P			Pn	17 51 22.2	+1.8
BAI	Bari	3.05	117	*e*Pn			Pn	17 50 20.0	+0.6	MBDF	Montbardon	5.21	297	*e*P		Pn	17 50 50.6	+1.4	LANF	Langenberg	7.48	331	P			Pn	17 51 22.2	+1.8
BAI				*e*Sn			Sn	17 50 56.9	+1.0	MBDF	Montbardon	5.21	297	*e*P		Pn	17 50 50.6	+1.4	LANF	Langenberg	7.48	331	P			Pn	17 51 22.2	+1.8
CODM	Codolo	3.11	307	P			Pn	17 50 19.0	-1.3	RETA	Reutte	5.25	341	⇑*i*Pn		Pn	17 50 51.6	+1.8	LANF	Langenberg	7.48	331	P			Pn	17 51 22.2	+1.8
PGF	Pioggiola	3.17	271	*e*Pn			Pn	17 50 20.9	-0.3		SNR=8.6								LANF	Langenberg	7.48	331	P			Pn	17 51 22.2	+1.8
PGF				*e*Sn			Sn	17 51 00.9	+1.7	RETA	Reutte	5.25	341	Pn		Pn	17 50 51.6	+1.8	PRU	Pruhonice	7.49	6	*e*P			Pn	17 51 20.0	-0.4
	comp=Z,56nm,0.7s										SNR=8.6								PRU				*e*				17 52 41.7	
PGF	Pioggiola	3.17	271	*e*Pn			Pn	17 50 20.9	-0.3	DAVA	Damuels	5.32	334	⇓*i*Pn		Pn	17 50 52.3	+1.5	PRU	Pruhonice	7.49	6	*e*PN			Pn	17 51 20.0	-0.4
PGF				*e*Sn			Sn	17 51 00.9	+1.7		SNR=12								PRU				*e*SN			Sn	17 52 41.7	-3.6
	comp=Z,28nm,0.7s									DAVA	Damuels	5.32	334	Pn		Pn	17 50 52.3	+1.5	PRU	Pruhonice	7.49	6	Pn			Pn	17 51 20.0	-0.4
GBRS	Gornja Briga	3.17	20	*i* Pn			Pn	17 50 21.0	-0.2		SNR=12								MAKR	Makrakomi, Fth	7.58	115	P			Pn	17 51 24.5	+2.7
CUC	Castrocucco	3.19	143	*e*P			Pn	17 50 23.1	+1.7	MOA	Molln	5.34	7	*i* Pn		Pn	17 50 51.0	0.0	MAKR	Makrakomi, Fth	7.58	115	P			Pn	17 51 24.5	+2.7
CUC	Castrocucco	3.19	143	*e*P			Pn	17 50 23.1	+1.7		SNR=12								THEF	They Montfort	7.65	320	P			Pn	17 51 21.5	-1.2
STON	Ston	3.27	83	*i* Pn			Pn	17 50 22.3	-0.1	MOA	Molln	5.34	7	Pn		Pn	17 50 51.0	0.0	THEF	They Montfort	7.65	320	P			Pn	17 51 21.5	-1.2
STON					Sn		Sn	17 51 00.5	-0.8		SNR=12								THEF	They Montfort	7.65	320	P			Pn	17 51 21.5	-1.2
STON	Ston	3.27	83	*i* Pn			Pn	17 50 22.3	-0.1	PHP	Peshkopia	5.39	97	P		Pn	17 50 53.3	+1.6	THEF	They Montfort	7.65	320	P			Pn	17 51 21.5	-1.2
STON					Sn		Sn	17 51 00.4	-0.8	PHP	Peshkopia	5.39	97	P		Pn	17 50 53.3	+1.6	NKC	Novy Kostel	7.70	356	*e*P			Pn	17 51 22.8	-0.6
BOJS	Bojanci	3.27	25	*i* Pn			Pn	17 50 22.7	+0.2	BNI	Bardonecchia	5.40	300	*e*P		Pn	17 50 52.9	+1.1	NKC				*e*				17 52 46.4	
BOJS	Bojanci	3.27	25	*i* Pn			Pn	17 50 22.7	+0.2	BNI	Bardonecchia	5.40	300	*e*P		Pn	17 50 52.9	+1.1	NKC	Novy Kostel	7.70	356	*e*PN			Pn	17 51 22.8	-0.6
VOY	Vojsko	3.50	7	*e*Pn			Pn	17 50 24.8	-1.0	BNI	Bardonecchia	5.40	300	*e*P		Pn	17 50 52.9	+1.1	NKC				*e*SN			Sn	17 52 46.4	-4.3
VOY				*e*				17 50 26.8		LPG	La Plagne	5.56	304	*e*P		Pn	17 50 56.6	+2.4	NKC	Novy Kostel	7.70	356	Pn			Pn	17 51 22.8	-0.6
VOY				*e*Sn			Sn	17 51 04.2	-3.2	LPG				*e*Sn		Sn	17 51 56.3	-2.0	AGG	Agios Georgios	7.71	114	P			Pn	17 51 25.8	+2.3
VOY				*e*				17 51 06.5			comp=Z,19nm,0.6s								AGG	Agios Georgios	7.71	114	P			Pn	17 51 25.8	+2.3
VOY	Vojsko	3.50	7	*e*Pn			Pn	17 50 24.8	-1.0	LPG	La Plagne	5.56	304	*e*P		Pn	17 50 56.6	+2.4	SOH	Sokhos	7.73	100	P			Pn	17 51 25.0	+1.2
VOY				*e*Sn			Sn	17 51 04.2	-3.2	LPG				*e*Sn		Sn	17 51 56.3	-2.0	SOH	Sokhos	7.73	100	P			Pn	17 51 25.0	+1.2
PDKS	Podkum	3.71	19	*i* Pn			Pn	17 50 28.6	0.0		comp=Z,9.6nm,0.6s								LBL	Lubilhac	7.73	294	P			Pn	17 51 26.1	+2.2
PDKS	Podkum	3.71	19	*i* Pn			Pn	17 50 28.6	0.0	LPL	La Plagne	5.58	304	*e*P		Pn	17 50 57.0	+2.6	LBL	Lubilhac	7.73	294	P			Pn	17 51 26.1	+2.2
HCY	Herceg Novi	3.85	90	⇓*i*Pn			Pn	17 50 30.6	+0.1	LPL				*e*Sn		Sn	17 51 55.5	-3.2	LBL	Lubilhac	7.73	294	P			Pn	17 51 23.7	-0.2
HCY				*e*Sn			Sn	17 51 16.4	+0.6		comp=Z,11nm,0.4s								LBL

XOR	**Xorichti**	**8.14**	**110**	P		**Pn**	**17 51 30.2**	**+0.8**
XOR	**Xorichti**	**8.14**	**110**	P		**Pn**	**17 51 30.2**	**+0.8**
MTLF	**Montolieu**	**8.16**	**279**	*e*Pn		**Pn**	**17 51 28.7**	**-1.0**
MTLF	**Montolieu**	**8.16**	**279**	*e*Pn		**Pn**	**17 51 28.7**	**-1.0**
UPC	**Upice**	**8.17**	**12**	*e*P		**Pn**	**17 51 29.0**	**-0.8**
UPC				*e*			17 52 57.8	
UPC	**Upice**	**8.17**	**12**	*e*PN		**Pn**	**17 51 29.0**	**-0.8**
UPC				*e*SN		**Sn**	**17 52 57.8**	**-4.4**
UPC	**Upice**	**8.17**	**12**	Pn		**Pn**	**17 51 29.0**	**-0.8**
LOR	**Lormes**	**8.19**	**308**	*e*Pn		**Pn**	**17 51 30.1**	**+0.1**
LOR				*e*Sn		**Sn**	**17 52 59.5**	**-3.0**
	comp=Z,10nm,0.5s							
LOR	**Lormes**	**8.19**	**308**	*e*Pn		**Pn**	**17 51 30.1**	**+0.1**
PAIG	**Paliouri**	**8.26**	**105**	P		**Pn**	**17 51 32.2**	**+1.2**
PAIG	**Paliouri**	**8.26**	**105**	P		**Pn**	**17 51 32.2**	**+1.2**
SSF	**Saint Saulge**	**8.29**	**306**	*e*Pn		**Pn**	**17 51 31.5**	**+0.1**
SSF	**Saint Saulge**	**8.29**	**306**	*e*Pn		**Pn**	**17 51 31.5**	**+0.1**
MEZF	**Maizieres J'vi**	**8.29**	**319**	*e*Pn		**Pn**	**17 51 32.0**	**+0.6**
MEZF	**Maizieres J'vi**	**8.29**	**319**	*e*Pn		**Pn**	**17 51 32.0**	**+0.6**
GUR	**Goura**	**8.31**	**121**	P		**Pn**	**17 51 34.3**	**+2.4**
GUR	**Goura**	**8.31**	**121**	P		**Pn**	**17 51 34.3**	**+2.4**
BRG	**Berggiesshubel**	**8.34**	**3**	*e*(P)		**Pn**	**17 51 32.1**	**+0.1**
BRG	**Berggiesshubel**	**8.34**	**3**	SN		Sn	17 52 57.6	-8.5
BRG				*e*			17 54 09.3	
	comp=Z,17nm,1.2s							
BRG	**Berggiesshubel**	**8.34**	**3**	*e*P		**Pn**	**17 51 32.1**	**+0.1**
BRG							17 52 57.6	
BRG				pmax		pmax		
	comp=Z,17nm,1.2s							
BRG	**Berggiesshubel**	**8.34**	**3**	*e*P		**Pn**	**17 51 32.1**	**+0.1**
CAF	**Calviac**	**8.47**	**290**	*e*P		**Pn**	**17 51 34.8**	**+0.9**
CAF	**Calviac**	**8.47**	**290**	*e*P		**Pn**	**17 51 34.8**	**+0.9**
CRVS	**Cervenica-Dubn**	**8.54**	**39**	*e*P		**Pn**	**17 51 33.0**	**-1.8**
CRVS	**Cervenica-Dubn**	**8.54**	**39**	*e*PN		**Pn**	**17 51 33.0**	**-1.8**
CRVS				*e*SN		Sn	17 52 58.7	-13
CRVS	**Cervenica-Dubn**	**8.54**	**39**	*e*P		**Pn**	**17 51 33.0**	**-1.8**
PYL	**PYLOS**	**8.62**	**128**	P		**Pn**	**17 51 38.3**	**+2.3**
PYL	**PYLOS**	**8.62**	**128**	P		**Pn**	**17 51 38.3**	**+2.3**
ARR	**Arges**	**8.65**	**67**	⇓*i*P		**Pn**	**17 51 39.3**	**+2.9**
ARR	**Arges**	**8.65**	**67**	⇓*i*P		**Pn**	**17 51 39.3**	**+2.9**
MRKA	**Markates**	**8.72**	**113**	P		**Pn**	**17 51 38.8**	**+1.4**
MRKA	**Markates**	**8.72**	**113**	P		**Pn**	**17 51 38.8**	**+1.4**
CLL	**Collm**	**8.76**	**359**	*e*P		**Pn**	**17 51 41.0**	**+3.2**
CLL				*e*			17 53 08.0	
CLL	**Collm**	**8.76**	**359**	*e*Pn		**Pn**	**17 51 41.0**	**+3.2**
CLL				*e*Sn		Sn	17 53 08.0	-8.6
CLL				*e*Sg		Sg	17 54 21.0	+8.9
RJF	**Les Rejaudoux**	**8.93**	**292**	*e*P		**Pn**	**17 51 41.5**	**+1.3**
RJF	**Les Rejaudoux**	**8.93**	**292**	*e*P		**Pn**	**17 51 41.5**	**+1.3**
KOLS	**Kolonicke sedl**	**8.95**	**41**	*e*SN		Sn	17 53 07.3	-14
VOIR		**8.95**	**67**	⇑*i*P		**Pn**	**17 51 40.1**	**-0.5**
VOIR		**8.95**	**67**	⇑*i*P		**Pn**	**17 51 40.1**	**-0.5**
DID	**Didima**	**9.14**	**120**	P		**Pn**	**17 51 44.8**	**+1.7**
DID	**Didima**	**9.14**	**120**	P		**Pn**	**17 51 44.8**	**+1.7**
GIVF	**Givet**	**9.55**	**325**	*e*Pn		**Pn**	**17 51 50.0**	**+1.3**
GIVF				*e*Sn		**Sn**	**17 53 31.0**	**-5.0**
	comp=Z,2.9nm,0.2s							
GIVF	**Givet**	**9.55**	**325**	*e*Pn		**Pn**	**17 51 50.0**	**+1.3**
MLR	**Muntele Rosu**	**9.58**	**68**	⇓*i*P		**Pn**	**17 51 51.3**	**+2.1**
MLR	**Muntele Rosu**	**9.58**	**68**	Pn		**Pn**	**17 51 51.0**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=260,slow=6.1,SNR=9.1							
MLR	**Muntele Rosu**	**9.58**	**68**	P		**Pn**	**17 51 51.3**	**+2.1**
KWP	**Kalwaria Pacla**	**9.63**	**39**	⇑P		Pn	17 51 54.9	+5.1
KWP	**Kalwaria Pacla**	**9.63**	**39**	⇑*i*P		Pn	17 51 54.9	+5.1
KWP	**Kalwaria Pacla**	**9.63**	**39**	*e*P		Pn	17 51 54.8	+5.0
BAIF	**Baives**	**9.78**	**323**	*e*Pn		**Pn**	**17 51 52.3**	**+0.4**
BAIF	**Baives**	**9.78**	**323**	*e*Pn		**Pn**	**17 51 52.3**	**+0.4**
KYTH	**Kithira**	**9.80**	**127**	P		Pn	17 51 55.9	+3.7
BURAR	**Bucovina Array**	**9.83**	**55**	⇑*i*P		**Pn**	**17 51 55.4**	**+2.7**
BURAR	**Bucovina Array**	**9.83**	**55**	⇑*i*P		**Pn**	**17 51 55.4**	**+2.7**
BUR08	**Bucovina Ar. S**	**9.84**	**55**	*e*Pn		**Pn**	**17 51 52.2**	**-0.5**
BUR08	**Bucovina Ar. S**	**9.84**	**55**	*e*Pn		**Pn**	**17 51 52.2**	**-0.5**
PLOR	**Plostina**	**10.14**	**66**	⇓P		**Pn**	**17 51 58.8**	**+1.9**
PLOR	**Plostina**	**10.14**	**66**	⇓*i*P		**Pn**	**17 51 58.8**	**+1.9**
PLOR	**Plostina**	**10.14**	**66**	P		**Pn**	**17 51 58.8**	**+1.9**
VRI	**Vrincioaia**	**10.20**	**66**	⇑P		**Pn**	**17 51 58.0**	**+0.4**
VRI	**Vrincioaia**	**10.20**	**66**	⇑*i*P		**Pn**	**17 51 58.0**	**+0.4**
VRI	**Vrincioaia**	**10.20**	**66**	P		**Pn**	**17 51 58.0**	**+0.4**
AKASG	**Malin Array Be**	**13.63**	**48**	P		**Pn**	**17 52 41.4**	**-3.0**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.3s							
AKASG	**Malin Array Be**	**13.63**	**48**	Pn		**Pn**	**17 52 41.4**	**-3.0**
	comp=Z,0.5nm,0.3s,baz=239,slow=11,SNR=3.5							
BR131	**Keskin Array S**	**15.59**	**94**	*e*P		**P**	**17 53 13.9**	**-1.4**
	comp=Z,1.6nm,0.8s							
BR131	**Keskin Array S**	**15.59**	**94**	*e*P		**P**	**17 53 13.9**	**-1.4**
	comp=Z,1.6nm,0.8s							
BRTR	**Keskin Array B**	**15.59**	**94**	Pn		**Pn**	**17 53 11.8**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=291,slow=10,SNR=3.1							
HFS	**Hagfors**	**17.61**	**1**	P		**Pn**	**17 53 35.7**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=181,slow=8.6,SNR=3.1							
HFS	**Hagfors**	**17.61**	**1**	P		**Pn**	**17 53 35.7**	**-0.7**
NB2	**NORSAR Subarra**	**18.56**	**357**	P		**Pn**	**17 53 48.3**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=175,slow=11							
NB2	**NORSAR Subarra**	**18.56**	**357**	P		**Pn**	**17 53 48.3**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=175,slow=11,SNR=5.6							
NOA	**NORSAR Array B**	**18.56**	**357**	P		**P**	**17 53 47.8**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=175,slow=11,SNR=5.9							
NOA	**NORSAR Array B**	**18.56**	**357**	P		**P**	**17 53 47.8**	**-0.1**
OBN	**Obninsk**	**19.70**	**42**	*e*P		**P**	**17 54 00.0**	**-0.4**
OBN				pmax		pmax		
	comp=Z,4.0nm,0.7s							
OBN	**Obninsk**	**19.70**	**42**	*e*P		**P**	**17 54 00.0**	**-0.4**
	comp=Z,4.0nm,0.7s							
FINES	**FINESS Array B**	**20.42**	**18**	P		**P**	**17 54 07.2**	**-1.0**
	comp=Z,2.1nm,0.6s,baz=206,slow=8.6,SNR=9.8							
FINES	**FINESS Array B**	**20.42**	**18**	P		**P**	**17 54 07.2**	**-1.0**
	comp=Z,2.0nm,0.6s							
KAF	**Kangasniemi**	**21.06**	**17**	*e*P		**P**	**17 54 11.7**	**-3.5**
KAF				pmax		pmax		
	comp=Z,2.0nm,0.5s							
KAF	**Kangasniemi**	**21.06**	**17**	*e*p		**P**	**17 54 11.7**	**-3.5**
	comp=Z,1.7nm,0.5s							
VRHR	**Novokhopersk**	**21.08**	**56**	*e*P		**P**	**17 54 18.4**	**+3.0**
VRHR				pmax		pmax		
	comp=N,10.0nm,0.8s							
VRHR				pmax		pmax		
	comp=Z,10.0nm,0.8s							
VRHR				pmax		pmax		
	comp=E,6.0nm,0.4s							
VRHR	**Novokhopersk**	**21.08**	**56**	*e*P		**P**	**17 54 18.4**	**+3.0**
KBZ	**Khabaz**	**21.59**	**77**	P		**P**	**17 54 20.7**	**-0.2**
KBZ				pmax		pmax		
	comp=Z,4.0nm,0.9s							
KBZ	**Khabaz**	**21.59**	**77**	P		**P**	**17 54 20.7**	**-0.2**
	comp=Z,4.1nm,0.9s,baz=270,slow=12,SNR=3.7							
KBZ	**Khabaz**	**21.59**	**77**	P		**P**	**17 54 20.7**	**-0.2**
	comp=Z,4.0nm,0.9s							
JOF	**Joensuu**	**22.97**	**21**	*e*P		**P**	**17 54 33.7**	**-1.8**
JOF				pmax		pmax		
	comp=Z,2.0nm,0.7s							
JOF	**Joensuu**	**22.97**	**21**	*e*p		**P**	**17 54 33.7**	**-1.8**
	comp=Z,2.0nm,0.7s							
JOF	**Joensuu**	**22.97**	**21**	*e*P		**P**	**17 54 33.7**	**-1.8**
	comp=Z,2.0nm,0.7s							
BHD	**Baghdad**	**26.10**	**100**	*ex*		**P**	**17 55 07.3**	**+2.2**
BHD				*ex*		**S**	**17 59 41.0**	**+4.6**
BHD	**Baghdad**	**26.10**	**100**	*e*P		**P**	**17 55 07.3**	**+2.2**
ARU	**Arti**	**31.88**	**48**	*c i*P		**P**	**17 55 56.5**	**+0.2**
ARU							17 56 57.8	
ARU				S		**S**	**18 01 07.2**	**+0.3**
ARU				pmax		pmax		
	comp=Z,7.0nm,0.7s							
ARU	**Arti**	**31.88**	**48**	*i* P		**P**	**17 55 56.5**	**+0.2**
	comp=Z,7.0nm,0.7s							
BRVK	**Borovoye**	**38.72**	**54**	*i* P		**P**	**17 56 58.1**	**+2.9**
BRVK				pmax		pmax		
	comp=Z,7.0nm,2.4s							
BRVK	**Borovoye**	**38.72**	**54**	*i* P		**P**	**17 56 58.1**	**+2.9**
	comp=Z,7.0nm,2.4s							
KKAR	**Karatay Array**	**41.26**	**69**	*e*P		**P**	**17 57 18.6**	**+2.2**
KKAR				pmax		pmax		
	comp=Z,2.0nm,0.8s							
KKAR	**Karatay Array**	**41.26**	**69**	*e*P		**P**	**17 57 18.6**	**+2.2**
	comp=Z,1.6nm,0.8s							
KKAR	**Karatay Array**	**41.26**	**69**	*e*P		**P**	**17 57 18.5**	**+2.2**
	comp=Z,1.6nm,0.8s							
ZALV	**Zalesovo Beam**	**47.01**	**50**	P		**P**	**17 58 00.0**	**-2.3**
ZALV	**Zalesovo Beam**	**47.01**	**50**	P		**P**	**17 58 00.0**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=295,slow=8.6,SNR=2.0							
MKAR	**Makanchi Array**	**47.81**	**60**	P		**P**	**17 58 07.3**	**-1.4**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**47.81**	**60**	P		**P**	**17 58 07.3**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=293,slow=6.1,SNR=10							
MKAR	**Makanchi Array**	**47.81**	**60**	P		**P**	**17 58 07.3**	**-1.4**
	comp=Z,1.0nm,0.6s							
TLY	**Talaya**	**58.37**	**47**	*e*P		P	17 59 30.8	+4.4
YKA	**Yellowknife Ar**	**67.29**	**337**	P		**P**	**18 00 25.4**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=43,slow=6.0,SNR=11							
YKA	**Yellowknife Ar**	**67.29**	**337**	P		**P**	**18 00 25.4**	**-0.2**
	comp=Z,1.0nm,0.7s							
BILL	**Bilibino**	**67.87**	**11**	*e*P		**P**	**18 00 30.8**	**+1.6**
BILL				pmax		pmax		
	comp=Z,11nm,0.9s							
BILL	**Bilibino**	**67.87**	**11**	*e*P		**P**	**18 00 30.8**	**+1.6**
	comp=Z,11nm,0.9s							
ILAR	**Eielson Array**	**71.89**	**351**	P		**P**	**18 00 53.3**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=21,slow=5.8,SNR=3.8							
ILAR	**Eielson Array**	**71.89**	**351**	P		**P**	**18 00 53.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**74.62**	**79**	P		**P**	**18 01 09.2**	**-1.7**
	comp=Z,0.7nm,0.8s,baz=316,slow=7.0,SNR=6.8							
CMAR	**Chiang Mai Arr**	**74.62**	**79**	P		**P**	**18 01 09.2**	**-1.7**
	comp=Z,1.0nm,0.8s							

*ISCJB **16** 17:55:30.2±0.4, 33°.25N±0°.02×116°.43W±0°.02, h7km±3km, Error ellipse: s-maj=3.3km s-min=2.5km az=151.9*
*ECX **16** 17:55:31.5±0.7, 33°.25N×116°.44W, h4km, MD3.9, ML4.0, MW4.0*
*NEIC **16** 17:55:31.1, 33°.25N×116°.44W, h4km, ML3.9(PAS), After PAS.*
NEIC Felt [IV] at Borrego Springs, [III] at Ranchita and San Diego and [II] at Escondido, Julian, Ramona and Temecula. Also felt at Aguanga, Anaheim, Buena Park, Coronado, Fallbrook, Hemet, Huntington Beach, Indio, La Jolla, Long Beach, Los Alamitos, Orange, Pine Valley, Riverside, San Marcos, Santa Ana, Valley Center, Warner Springs and Winchester.

ISC 16 17:55:30.6±1.0, 33°.25N±0°.02×116°.42W±0°.02, h8km±9km, n48, σ0°73/62, 16C-30D, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRD	**Ford Ranch**	**0.29**	**329**	⇓*i*P	**Pg**	**17 55 36.6**	**+0.2**
MONP	**Monument Peak**	**0.35**	**179**	⇓P	**Pg**	**17 55 37.7**	**0.0**
	baz=0.4						
MONP	**Monument Peak**	**0.35**	**179**	⇓*i*P	**Pg**	**17 55 37.9**	**+0.2**
PFO	**Pinyon Flat Ob**	**0.36**	**356**	*e*P	**Pg**	**17 55 37.5**	**-0.4**
PFO	**Pinyon Flat Ob**	**0.36**	**356**	⇑P	**Pg**	**17 55 37.5**	**-0.4**
	baz=0.4						
PFO				⇓S	**Sg**	**17 55 42.6**	**0.0**
	baz=0.4						
PLM	**Palomar**	**0.38**	**287**	⇑*i*P	**Pg**	**17 55 38.5**	**+0.3**
DPP	**Dos Picos Cty**	**0.50**	**241**	⇑*i*P	**Pg**	**17 55 40.4**	**+0.1**
EML	**El Monte Cty P**	**0.50**	**225**	⇑*i*P	**Pg**	**17 55 40.5**	**+0.1**
CRR	**Carrizo Plain**	**0.52**	**133**	⇓*i*P	**Pg**	**17 55 41.1**	**+0.3**
BAR	**Barrett**	**0.60**	**200**	*e*P	**Pg**	**17 55 41.9**	**-0.3**
BAR	**Barrett**	**0.60**	**200**	⇓*i*P	**Pg**	**17 55 42.2**	**-0.1**
SWSC	**Sam W. Stewart**	**0.61**	**120**	⇓P	**Pg**	**17 55 42.5**	**+0.1**
	baz=0.6						
SWSC				⇑S	**Sg**	**17 55 50.8**	**+0.5**
	baz=0.6						
DVTC	**Desert V Tower**	**0.65**	**155**	⇓P	**Pg**	**17 55 43.3**	**+0.2**
	baz=0.7						
DVTC				⇑S	**Sg**	**17 55 51.7**	**+0.1**
	baz=0.7						
109C	**Camp Elliot, M**	**0.67**	**238**	⇓P	**Pg**	**17 55 43.5**	**-0.2**
	baz=0.7						
109C				⇓S	**Sg**	**17 55 52.2**	**-0.2**
	baz=0.7						
RMX	**La Rumorosa**	**0.70**	**156**	⇓*e*P	**Pg**	**17 55 44.2**	**-0.1**
RMX				*e*S	**Sg**	**17 55 53.6**	**+0.2**
RMX				⇑*e*		17 55 54.0	
	comp=E,4μm,0.1s						
SND	**San Diego**	**0.72**	**229**	⇑*i*P	Pg	17 55 37.8	-6.8
MURC	**Murrieta**	**0.74**	**299**	⇓P	**Pg**	**17 55 44.7**	**-0.2**
	baz=0.7						
MURC				⇑S	**Sg**	**17 55 54.4**	**-0.1**
	baz=0.7						
BELC	**Belle Mtn. Jos**	**0.83**	**25**	⇑P	**Pg**	**17 55 46.6**	**-0.1**
	baz=0.8						
BELC				⇑S	**Sg**	**17 55 57.4**	**-0.1**
	baz=0.8						
BC3	**Big Chuckawall**	**0.91**	**63**	⇓P	**Pg**	**17 55 48.0**	**-0.2**
	baz=0.9						
BC3				⇓S	**Sg**	**17 55 59.8**	**-0.1**
	baz=0.9						
CBX	**Cerro Bola**	**0.95**	**192**	⇓*e*P	**Pg**	**17 55 48.4**	**-0.5**
CBX				*e*S	**Sg**	**17 56 01.1**	**-0.2**
CBX				*e*		17 56 03.2	
	comp=N,6μm,0.3s						
BBRC	**Big Bear Solar**	**1.10**	**338**	⇓P	**Pg**	**17 55 51.3**	**-0.4**
	baz=1.1						
BBRC				⇓S	**Sg**	**17 56 05.5**	**-0.5**
	baz=1.1						
CPBX	**Cerro Prieto**	**1.25**	**131**	*e*S	**Sb**	**17 56 10.9**	**+0.1**
GLA	**Glamis**	**1.35**	**98**	*e*P	**Pn**	**17 55 53.8**	**-2.1**
GLA	**Glamis**	**1.35**	**98**	⇓P	**Pn**	**17 55 54.0**	**-1.9**
	baz=1.4						
RDX	**Rancho Dawling**	**1.38**	**163**	⇓*e*P	**Pn**	**17 55 55.6**	**-0.7**
RDX				*e*S	**Sb**	**17 56 13.8**	**-0.7**
RDX				⇓*e*		17 56 21.2	
	comp=E,2μm,0.8s						
IRM	**Iron Mountain**	**1.40**	**49**	⇓P	**Pn**	**17 55 55.3**	**-1.2**
	baz=1.4						
BFSC	**Mount Baldy Ra**	**1.43**	**314**	⇓Pb	**Pn**	**17 55 56.6**	**-0.4**
	baz=1.4						
BFSC				⇓S	**Sn**	**17 56 14.8**	**-1.3**
	baz=1.4						
PBX	**Punta Banda**	**1.52**	**190**	⇓*e*P	**Pn**	**17 55 58.2**	**0.0**
PBX				*e*S	**Sn**	**17 56 18.2**	**+0.1**
ECNX	**Esteban Cantu**	**1.59**	**185**	⇓*e*P	**Pb**	**17 55 59.4**	**-0.9**
ECNX				⇓*e*P	Pn	17 55 55.8	-3.3
ECNX				*e*S	Sn	17 56 13.8	-6.2
ECNX				*e*S	**Sb**	**17 56 20.3**	**-0.3**
FMP	**Fort Macarthur**	**1.63**	**287**	⇓Pb	**Pn**	**17 55 59.4**	**-0.3**
	baz=1.6						
CIS	**Catalina Islan**	**1.67**	**276**	⇓Pb	**Pn**	**17 56 00.5**	**+0.4**
	baz=1.7						
Y12C	**Blythe**	**1.67**	**72**	⇑P	**Pn**	**17 55 58.8**	**-1.4**
	baz=1.7						
MWC	**Mount Wilson**	**1.68**	**306**	*e*P	**Pn**	**17 55 59.8**	**-0.7**
RRX	**Edison Barstow**	**1.70**	**344**	⇑Sb	**Sb**	**17 56 24.4**	**+0.7**
	baz=1.7						
PASC	**Pasadena Art C**	**1.73**	**303**	*e*P	**Pn**	**17 56 01.1**	**0.0**
SCI	**San Clemente I**	**1.80**	**262**	⇓S	**Sn**	**17 56 24.2**	**-0.8**
	baz=1.8						
DECC	**Green Verdugo**	**1.88**	**303**	⇑Pb	**Pb**	**17 56 04.3**	**-0.9**
	baz=1.9						
DECC				⇑Sb	**Sb**	**17 56 29.2**	**+0.3**
	baz=1.9						
GSC	**Goldstone**	**2.08**	**351**	*e*P	**Pn**	**17 56 05.8**	**-0.1**
EDW2	**Edwards Air Fo**	**2.08**	**322**	⇓Sb	**Sb**	**17 56 35.4**	**+0.6**
	baz=2.1						
LDFC	**Landfair**	**2.13**	**30**	*e*P	**Pn**	**17 56 06.6**	**0.0**
NEE2	**Needles Airpor**	**2.13**	**44**	⇑Sb	**Sb**	**17 56 37.1**	**+0.9**
	baz=2.1						
SPX	**San Pedro Mart**	**2.34**	**159**	*e*PN	**Pn**	**17 56 10.9**	**+1.2**
OSI	**Osito Adit**	**2.35**	**306**	*e*P	**Pn**	**17 56 09.6**	**0.0**
ISA	**Isabella**	**2.95**	**325**	*e*P	**Pn**	**17 56 18.7**	**+0.9**
WUAZ	**Wupatki**	**4.75**	**60**	*e*P	**Pn**	**17 56 44.4**	**+1.7**
CCUT	**Cedar City**	**4.97**	**29**	*e*P	**Pn**	**17 56 45.2**	**-0.6**
ARUT	**Antelope Range**	**5.14**	**27**	*e*P	**Pn**	**17 56 49.4**	**+1.2**
	comp=E,5.3nm,0.5s						
WMOK	**Wichita Mounta**	**14.71**	**79**	*e*P	**Pn**	**17 59 00.8**	**+1.7**
	comp=E,3.0nm,0.6s						

IDC 16 18:00:40.9±1.6, 25°.25S×73°.74E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.6/25, mbtmp3.9/4, Error ellipse: s-maj=46.0km s-min=34.7km az=110.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**54.38**	**102**	P	P	18 10 09.9	0.0
	1.1nm,0.7s,baz=255,slow=6.5,SNR=21						
ASAR				PcP	PcP	18 11 12.9	-0.9
	0.6nm,0.9s,baz=243,slow=4.1,SNR=3.8						
WRA	**Warramunga Arr**	**55.80**	**98**	P	P	18 10 20.3	+0.1
	1.0nm,0.7s,baz=255,slow=7.6,SNR=7.3						
QSPA	**South Pole Qui**	**64.87**	**180**	P	P	18 11 21.8	+0.1
	4.3nm,0.6s,baz=273,slow=1.0,SNR=32						
MKAR	**Makanchi Array**	**72.12**	**6**	P	P	18 12 07.2	+0.2
	0.4nm,1.0s,baz=191,slow=5.9,SNR=2.7						

PRE 16 18:04:31.1±3.5, 26°.41S×27°.47E, h2km, ML3.3, 1C-1D, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLOF	**Kloof**	**0.14**	**63**	*e*P	Pg	18 04 34.7	+0.7
KLOF				*e*S	Sg	18 04 36.1	0.0
KLOF				AML	AML	18 04 36.4	
	comp=Z,8μm,0.4s						
PRYS	**Parys**	**0.52**	**191**	*e*P	Pg	18 04 41.5	+0.1
PRYS				*e*S	Sg	18 04 47.8	-0.5
PRYS				AML	AML	18 04 53.4	
	comp=Z,425nm,0.5s						
ERPM	**east rand prop**	**0.69**	**84**	*e*P	Pg	18 04 44.8	+0.1
ERPM				*e*S	Sg	18 04 52.7	-1.2
ERPM				AML	AML	18 04 53.6	
	comp=Z,294nm,0.4s						
KSR	**Koster**	**0.76**	**317**	*e*P	Pg	18 04 45.9	0.0
KSR				*e*S	Sg	18 04 55.2	-0.8
KSR				AML	AML	18 04 55.8	
	comp=Z,446nm,0.7s						
SLR	**Silverton**	**0.99**	**47**	*e*P	Pg	18 04 50.2	-0.2
SLR				*e*S	Sg	18 05 02.0	-1.4
SLR				AML	AML	18 05 07.8	
	comp=Z,254nm,0.2s						
SEK	**Senekal**	**1.91**	**176**	*e*P	Pb	18 05 06.2	-0.7
SEK				*e*S	Sn	18 05 29.8	+0.1
SEK				AML	AML	18 05 31.6	
	comp=Z,218nm,0.3s						
SWZ	**Schweizer**	**2.06**	**248**	*e*P	Pn	18 05 07.1	+0.1
SWZ				*e*S	Sb	18 05 35.2	-0.5
SWZ				AML	AML	18 05 36.1	
	comp=Z,252nm,0.6s						
LBTB	**Lobatse**	**2.19**	**309**	⇓*i*P	Pn	18 05 09.8	+1.1
LBTB				*e*S	Sn	18 05 37.9	+1.4
LBTB				AML	AML	18 05 40.4	
	comp=Z,275nm,0.2s						
BOSA	**Boshof**	**2.95**	**221**	⇑*i*P	Pn	18 05 19.1	0.0
BOSA				*e*S	Sn	18 05 55.9	+0.7
BOSA				AML	AML	18 06 06.0	
	comp=Z,36nm,0.6s						
POGA	**Pongola**	**3.82**	**105**	*e*P	Pn	18 05 32.3	+1.3
POGA				*e*S	Sn	18 06 16.7	+0.2
POGA				AML	AML	18 06 33.7	
	comp=Z,76nm,0.7s						
CNG	**Changalane**	**4.23**	**89**	*e*P	Pn	18 05 39.3	+2.6
CNG				*e*S	Sn	18 06 23.2	-3.5
KSD	**Kokstad**	**4.46**	**158**	*e*P	Pn	18 05 41.0	+1.1
KSD				*e*S	Sn	18 06 28.9	-3.6
KSD				AML	AML	18 06 53.0	
	comp=Z,64nm,0.5s						
MSNA	**Messina**	**4.67**	**30**	*e*P	Pn	18 05 40.4	-2.3
MSNA				*e*S	Sn	18 06 35.8	-1.9
MSNA				AML	AML	18 06 56.0	
	comp=Z,23nm,0.3s						
UPI	**Upington**	**5.86**	**249**	*e*P	Pn	18 05 59.2	+0.1
UPI				*e*S	Sn	18 07 03.6	-3.4
UPI				AML	AML	18 07 38.0	
	comp=Z,21nm,0.5s						
BLWY	**Bulawayo**	**6.33**	**10**	*i* P	Pn	18 06 05.0	-0.7
BLWY				*i*		18 06 05.5	
	baz=196,slow=8.6						
BLWY				*i* S	Sn	18 07 11.2	-7.6
SOE	**Somerset East**	**6.49**	**194**	*e*S	Sn	18 07 18.3	-4.3
SOE				AML	AML	18 07 56.6	
	comp=Z,14nm,0.5s						
BUFB	**Buffelsbos**	**8.06**	**196**	*e*S	Sn	18 08 00.1	-0.9
BUFB				AML	AML	18 08 44.3	
	comp=Z,9.7nm,0.5s						
SUR	**Sutherland**	**8.31**	**223**	*e*P	Pn	18 06 34.2	+1.3
SUR				*e*

SND	**San Diego**	**0.71**	**228**	⇓*iP*	Pg		18 16 18.7	-6.8
RMX	**La Rumorosa**	**0.71**	**154**	⇓*eP*	**Pg**		**18 16 25.3**	**-0.2**
RMX				*eS*	**Sg**		**18 16 34.7**	**0.0**
RMX				⇑*e*			18 16 35.3	
	comp=N,433nm,0.2s							
CBX	**Cerro Bola**	**0.95**	**191**	⇓*eP*	**Pg**		**18 16 29.6**	**-0.5**
CBX				*eS*	**Sg**		**18 16 42.5**	**+0.1**
CBX				⇑*e*			18 16 44.2	
	comp=N,413nm,0.4s							
GLA	**Glamis**	**1.37**	**98**	*ePn*	Pn		18 16 34.3	-3.6
RDX	**Rancho Dawling**	**1.38**	**162**	*eP*	**Pn**		**18 16 36.8**	**-1.4**
RDX				*eS*	**Sg**		**18 16 54.9**	**-1.4**
RDX				*e*			18 16 57.5	
	comp=E,230nm,0.6s							
PBX	**Punta Banda**	**1.52**	**189**	*eP*	**Pn**		**18 16 38.7**	**-1.2**
PBX				⇑*e*			18 17 02.5	
	comp=N,137nm,0.8s							
ECNX	**Esteban Cantu**	**1.59**	**185**	⇓*eP*	**Pn**		**18 16 40.4**	**-0.6**
MWC	**Mount Wilson**	**1.66**	**306**	*ePn*	**Pn**		**18 16 41.5**	**-0.6**
MWC				*eSn*	**Sn**		**18 17 03.0**	**-0.9**
PASC	**Pasadena Art C**	**1.72**	**303**	*ePn*	**Pn**		**18 16 41.6**	**-1.1**
PASC				*eSn*	**Sn**		**18 17 04.1**	**-1.0**
GSC	**Goldstone**	**2.07**	**352**	*ePn*	**Pb**		**18 16 49.8**	**-0.4**
LDFC	**Landfair**	**2.14**	**31**	*ePg*	**Pg**		**18 16 52.6**	**-0.2**
SPX	**San Pedro Mart**	**2.35**	**159**	*ePN*	**Pn**		**18 16 53.8**	**+2.2**
SPX				*eS*	**Sn**		**18 17 22.7**	**+1.6**
ISA	**Isabella**	**2.94**	**326**	*ePg*	**Pb**		**18 17 06.0**	**+1.1**
ISA				*eS*	**Sb**		**18 17 42.5**	**+1.2**

*ISCJB **16** 18:17:52.2±0.3, 42°.54N×0°.02×13°.28E±0°.03, h13km±3km, Error ellipse: s-maj=3.5km s-min=2.8km az=142.8*
*CSEM **16** 18:17:52.4±0.1, 42°.55N×13°.27E, h10km, ML3.5/12, Error ellipse: s-maj=2.1km s-min=1.6km az=70.0*
*ROM **16** 18:17:52.3±0.1, 42°.54N×13°.29E, h10km, Md2.9/27, Ml2.9/27, Error ellipse: s-maj=1.0km s-min=0.8km az=52.0*
ISC 16 18:17:52.7±0.8, **42°.56N**±0°.02×**13°.29E**±0°.02, **h13**km±5km, **n74**, σ0**84**/104, **1C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.09**	**105**	Pg	**Pg**	**18 17 55.3**	**-0.3**
CAMP				Sg	**Sg**	**18 17 57.2**	**-0.6**
	6µm,0.8s						
CAMP	**Campotosto**	**0.09**	**105**	Pg	**Pg**	**18 17 55.3**	**-0.3**
CAMP				Sg	**Sg**	**18 17 57.2**	**-0.6**
	6µm,0.8s						
LNSS	**Leonessa**	**0.19**	**284**	Pg	**Pg**	**18 17 57.0**	**-0.1**
LNSS				Sg	**Sg**	**18 18 00.4**	**+0.3**
	19µm,0.2s						
LNSS	**Leonessa**	**0.19**	**284**	Pg	**Pg**	**18 17 57.0**	**-0.1**
LNSS				Sg	**Sg**	**18 18 00.4**	**+0.3**
	19µm,0.2s						
AQU	**L'Aquila**	**0.22**	**159**	Pg	**Pg**	**18 17 57.4**	**-0.1**
AQU				Sg	**Sg**	**18 18 00.9**	**+0.2**
	1µm,0.5s						
AQU	**L'Aquila**	**0.22**	**159**	Pg	**Pg**	**18 17 57.4**	**-0.1**
AQU				Sg	**Sg**	**18 18 00.9**	**+0.2**
	1µm,0.5s						
TERO	**Teramo**	**0.24**	**74**	Pg	**Pg**	**18 17 57.5**	**-0.3**
TERO				Sg	**Sg**	**18 18 01.3**	**0.0**
	3µm,0.4s						
TERO	**Teramo**	**0.24**	**74**	Pg	**Pg**	**18 17 57.5**	**-0.3**
TERO				Sg	**Sg**	**18 18 01.3**	**0.0**
	3µm,0.4s						
NRCA	**Norcia**	**0.30**	**334**	Pg	**Pg**	**18 17 58.9**	**-0.1**
NRCA				Sg	**Sg**	**18 18 03.8**	**+0.5**
	4µm,0.1s						
NRCA	**Norcia**	**0.30**	**334**	Pg	**Pg**	**18 17 58.9**	**-0.1**
NRCA				Sg	**Sg**	**18 18 03.8**	**+0.5**
	4µm,0.1s						
FIAM	**Fiamignano**	**0.32**	**204**	Pg	**Pg**	**18 17 59.0**	**-0.2**
FIAM				Sg	**Sg**	**18 18 03.9**	**+0.3**
	848nm,0.4s						
FIAM	**Fiamignano**	**0.32**	**204**	Pg	**Pg**	**18 17 59.0**	**-0.2**
FIAM				Sg	**Sg**	**18 18 03.9**	**+0.3**
	848nm,0.4s						
FAGN	**Fagnano**	**0.36**	**144**	Pg	**Pg**	**18 17 59.9**	**-0.1**
FAGN				Sg	**Sg**	**18 18 05.6**	**+0.7**
	2µm,0.5s						
FAGN	**Fagnano**	**0.36**	**144**	Pg	**Pg**	**18 17 59.9**	**-0.1**
FAGN				Sg	**Sg**	**18 18 05.6**	**+0.7**
	2µm,0.5s						
VCEL	**Villa Celiera**	**0.44**	**112**	Pg	**Pg**	**18 18 01.2**	**-0.2**
VCEL				Sg	**Sb**	**18 18 08.7**	**-0.2**
	2µm,0.5s						
VCEL	**Villa Celiera**	**0.44**	**112**	Pg	**Pg**	**18 18 01.2**	**-0.2**
VCEL				Sg	**Sb**	**18 18 08.7**	**-0.2**
	2µm,0.5s						
OFFI	**Offida**	**0.47**	**37**	Pg	**Pb**	**18 18 02.8**	**-0.1**
	3µm,0.3s						
OFFI	**Offida**	**0.47**	**37**	Pg	**Pb**	**18 18 02.8**	**-0.1**
	3µm,0.3s						
MNS	**Montasola**	**0.49**	**249**	Pg	**Pg**	**18 18 01.8**	**-0.5**
MNS				Sg	**Sg**	**18 18 09.5**	**+0.8**
	1µm,0.4s						
MNS	**Montasola**	**0.49**	**249**	Pg	**Pg**	**18 18 01.8**	**-0.5**
MNS				Sg	**Sg**	**18 18 09.5**	**+0.8**
	1µm,0.4s						
FDMO	**Fiordimonte**	**0.50**	**342**	Pg	**Pg**	**18 18 02.5**	**-0.1**
FDMO				Sg	**Sb**	**18 18 10.5**	**-0.2**
	398nm,0.2s						
FDMO	**Fiordimonte**	**0.50**	**342**	Pg	**Pg**	**18 18 02.5**	**-0.1**
FDMO				Sg	**Sb**	**18 18 10.5**	**-0.2**
	398nm,0.2s						
TRTR	**Tortoreto Alta**	**0.52**	**61**	Pg	**Pb**	**18 18 03.8**	**+0.1**
	2µm,0.6s						
TRTR	**Tortoreto Alta**	**0.52**	**61**	Pg	**Pb**	**18 18 03.8**	**+0.1**
	2µm,0.6s						
CESX	**Cesi**	**0.53**	**276**	Pg	**Pg**	**18 18 02.5**	**-0.6**
CESX				Sg	**Sg**	**18 18 10.6**	**+0.5**
	698nm,0.2s						
CESX	**Cesi**	**0.53**	**276**	Pg	**Pg**	**18 18 02.5**	**-0.6**
CESX				Sg	**Sg**	**18 18 10.6**	**+0.5**
	698nm,0.2s						
CESI	**CESI - Serrava**	**0.53**	**327**	Pg	**Pg**	**18 18 03.0**	**-0.1**
CESI				Sg	**Sb**	**18 18 11.4**	**-0.2**
	145nm,0.2s						
CESI	**CESI - Serrava**	**0.53**	**327**	Pg	**Pg**	**18 18 03.0**	**-0.1**
CESI				Sg	**Sb**	**18 18 11.4**	**-0.2**
	145nm,0.2s						
PTQR	**Pietraquaria**	**0.54**	**172**	Pg	**Pg**	**18 18 02.7**	**-0.6**
	39nm,0.3s						
PTQR	**Pietraquaria**	**0.54**	**172**	Pg	**Pg**	**18 18 02.7**	**-0.6**
	39nm,0.3s						
CERT	**Cerreto**	**0.65**	**201**	Pg	**Pg**	**18 18 04.4**	**-1.0**
	747nm,0.5s						
CERT	**Cerreto**	**0.65**	**201**	Pg	**Pg**	**18 18 04.4**	**-1.0**
	747nm,0.5s						
ASSB	**Assisi San Ben**	**0.67**	**316**	Pg	**Pg**	**18 18 05.1**	**-0.7**
	418nm,0.6s						
ASSB	**Assisi San Ben**	**0.67**	**316**	Pg	**Pg**	**18 18 05.1**	**-0.7**
	418nm,0.6s						
MTCE	**Montecelio**	**0.67**	**218**	Pg	**Pg**	**18 18 04.7**	**-1.1**
	368nm,0.6s						
MTCE	**Montecelio**	**0.67**	**218**	Pg	**Pg**	**18 18 04.7**	**-1.1**
	368nm,0.6s						
GUMA	**Gualdo di Mace**	**0.69**	**43**	Pg	Pg	18 18 02.7	-3.4
GUMA				Sg	**Sg**	**18 18 11.2**	**-4.0**
	3µm,0.4s						
INTR	**Introdacqua**	**0.71**	**140**	Pg	**Pg**	**18 18 05.5**	**-1.0**
	844nm,1.0s						
INTR	**Introdacqua**	**0.71**	**140**	Pg	**Pg**	**18 18 05.5**	**-1.0**
	844nm,1.0s						
VVLD	**Villa Vallelon**	**0.73**	**160**	Pg	**Pg**	**18 18 06.7**	**-0.1**
	416nm,0.7s						
VVLD	**Villa Vallelon**	**0.73**	**160**	Pg	**Pg**	**18 18 06.7**	**-0.1**
	416nm,0.7s						
SNTG	**Esanatoglia**	**0.74**	**340**	Pg	**Pg**	**18 18 06.8**	**-0.3**
	101nm,0.2s						
SNTG	**Esanatoglia**	**0.74**	**340**	Pg	**Pg**	**18 18 06.8**	**-0.3**
	101nm,0.2s						
GUAR	**Guarcino**	**0.76**	**179**	Pg	**Pg**	**18 18 07.5**	**0.0**
	237nm,0.7s						
GUAR	**Guarcino**	**0.76**	**179**	Pg	**Pg**	**18 18 07.5**	**0.0**
	237nm,0.7s						
CING	**Cingoli**	**0.82**	**355**	Pg	**Pg**	**18 18 08.0**	**-0.6**
	276nm,0.2s						
CING	**Cingoli**	**0.82**	**355**	Pg	**Pg**	**18 18 08.0**	**-0.6**
	276nm,0.2s						
LPEL	**Lama dei Pelig**	**0.83**	**127**	Pg	**Pg**	**18 18 07.8**	**-1.0**
	255nm,0.6s						
LPEL	**Lama dei Pelig**	**0.83**	**127**	Pg	**Pg**	**18 18 07.8**	**-1.0**
	255nm,0.6s						
MURB	**Monte Urbino**	**0.90**	**322**	Pg	**Pg**	**18 18 09.7**	**-0.5**
	652nm,0.3s						
MURB	**Monte Urbino**	**0.90**	**322**	Pg	**Pg**	**18 18 09.7**	**-0.5**
	652nm,0.3s						
SDI	**San Donato**	**0.93**	**155**	Pg	**Pg**	**18 18 09.9**	**-0.8**
	58nm,0.4s						
SDI	**San Donato**	**0.93**	**155**	Pg	**Pg**	**18 18 09.9**	**-0.8**
	58nm,0.4s						
ARVD	**Arcevia**	**0.97**	**345**	Pg	**Pb**	**18 18 10.8**	**-0.7**
	176nm,0.6s						
ARVD	**Arcevia**	**0.97**	**345**	Pg	**Pb**	**18 18 10.8**	**-0.7**
	176nm,0.6s						
GIUL	**Giuliano Di Ro**	**1.00**	**182**	Pg	**Pb**	**18 18 11.6**	**-0.3**
	105nm,0.5s						
GIUL	**Giuliano Di Ro**	**1.00**	**182**	Pg	**Pb**	**18 18 11.6**	**-0.3**
	105nm,0.5s						
AOI	**Ancona**	**1.02**	**13**	Pg	**Pb**	**18 18 11.8**	**-0.4**
	164nm,0.3s						
AOI	**Ancona**	**1.02**	**13**	Pg	**Pb**	**18 18 11.8**	**-0.4**
	164nm,0.3s						
SACS	**San Casciano d**	**1.06**	**286**	Pg	**Pb**	**18 18 12.5**	**-0.5**
	232nm,1.0s						
TOLF	**Tolfa**	**1.08**	**243**	Pg	**Pb**	**18 18 12.2**	**-1.0**
TOLF	**Tolfa**	**1.08**	**243**	Pg	**Pb**	**18 18 12.2**	**-1.0**
FSSB	**Fossombrone**	**1.20**	**342**	Pg	**Pn**	**18 18 14.8**	**-0.4**
	345nm,0.4s						
FSSB	**Fossombrone**	**1.20**	**342**	Pg	**Pn**	**18 18 14.8**	**-0.4**
	345nm,0.4s						
NVLJ	**Novalja**	**2.31**	**29**	*ePn*	**Pn**	**18 18 30.7**	**+0.2**
NVLJ				Sn	**Sn**	**18 19 00.1**	**+1.4**
NVLJ	**Novalja**	**2.31**	**29**	*ePn*	**Pn**	**18 18 30.6**	**+0.2**
NVLJ				Sn	**Sn**	**18 19 00.1**	**+1.4**
SKDS	**Skadanscina**	**3.03**	**10**	*i* Pn	**Pn**	**18 18 41.2**	**+0.8**
SKDS				*i* Sn	**Sn**	**18 19 19.0**	**+2.4**
SKDS	**Skadanscina**	**3.03**	**10**	Pn	**Pn**	**18 18 41.2**	**+0.8**
SKDS				*i* Sn	**Sn**	**18 19 19.0**	**+2.4**
BOJS	**Bojanci**	**3.27**	**25**	*i* Pn	**Pn**	**18 18 45.0**	**+1.4**
BOJS				*i* Sn	**Sn**	**18 19 23.9**	**+1.6**
BOJS	**Bojanci**	**3.27**	**25**	*i* Pn	**Pn**	**18 18 45.0**	**+1.4**
BOJS				*i* Sn	**Sn**	**18 19 23.9**	**+1.6**
ABTA	**Abfaltersbach**	**4.23**	**353**	*i* Pn	**Pn**	**18 18 57.2**	**+0.3**
ABTA	**Abfaltersbach**	**4.23**	**353**	Pn	**Pn**	**18 18 57.2**	**+0.3**
KHC	**Kasperske Hory**	**6.58**	**2**	*ePN*	Pn	18 19 33.0	+3.9
KHC				*ex*	x	18 19 40.0	
KHC				*eSN*	**Sn**	**18 20 42.2**	**-1.8**
KHC	**Kasperske Hory**	**6.58**	**2**	Sn	**Sn**	**18 20 42.2**	**-1.8**

*IGIL **16** 18:22:51.4, 43°.18N×15°.21W, h10km, ML2.5*
*MDD **16** 18:22:52.0±2.3, 43°.04N×14°.84W, h0km, mb4.4/5, Error ellipse: s-maj=21.0km s-min=15.4km az=103.0, PRXIMO*
*INMG **16** 18:22:54.2±0.7, 43°.19N×15°.22W, h10km, Error ellipse: s-maj=5.3km s-min=3.2km az=94.0*
*CSEM **16** 18:22:57.1±0.3, 42°.85N×14°.37W, h10km, mb4.4/5, Error ellipse: s-maj=5.8km s-min=4.2km az=98.0*
ISC 16 18:22:53.6±3.5, **42°.93N**±0°.08×**14°.6W**±0°.2, **h10**km, **n71**, σ1**23**/133, **North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMAZ	**Mazaricos**	**4.13**	**88**	P	**Pn**	**18 23 57.1**	**+0.3**
	0.7nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**18 24 44.4**	**-0.8**
	1.7nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**4.13**	**88**	P	**Pn**	**18 23 57.1**	**+0.3**
	0.7nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**18 24 44.4**	**-0.8**
	1.7nm,0.1s,SNR=7.9						
PGAV	**Gavieira, Arco**	**4.79**	**99**	*ePn*	**Pn**	**18 24 07.0**	**+1.2**
PGAV				*eSn*	**Sn**	**18 25 01.4**	**0.0**
PGAV	**Gavieira, Arco**	**4.79**	**99**	*ePn*	**Pn**	**18 24 07.0**	**+1.2**
PGAV				*eSn*	**Sn**	**18 25 01.4**	**0.0**
PCAB	**Cabril**	**5.03**	**102**	*ePn*	**Pn**	**18 24 10.9**	**+1.8**
PCAB				*eSn*	**Sn**	**18 25 07.8**	**+0.5**
PCAB	**Cabril**	**5.03**	**102**	P	**Pn**	**18 24 10.9**	**+1.8**
PCAB				S	**Sn**	**18 25 07.8**	**+0.5**
PCAB	**Cabril**	**5.03**	**102**	P	**Pn**	**18 24 10.9**	**+1.8**
PCAB				S	**Sn**	**18 25 07.8**	**+0.5**
POLO	**Lamas de Olo**	**5.30**	**105**	*ePn*	**Pn**	**18 24 14.4**	**+1.6**
POLO				*eSn*	**Sn**	**18 25 14.5**	**+0.5**
POLO	**Lamas de Olo**	**5.30**	**105**	*ePn*	**Pn**	**18 24 14.4**	**+1.6**
POLO				*eSn*	**Sn**	**18 25 14.5**	**+0.5**
EPON	**Pontenova**	**5.47**	**83**	P	**Pn**	**18 24 15.7**	**+0.6**
	1.8nm,0.1s,SNR=7.9						
EPON				S	**Sn**	**18 25 16.6**	**-1.6**
	0.8nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**5.47**	**83**	P	**Pn**	**18 24 15.7**	**+0.6**
	1.8nm,0.1s,SNR=7.9						
EPON				S	**Sn**	**18 25 16.6**	**-1.6**
	0.8nm,0.1s,SNR=7.9						
PVIS	**Viseu**	**5.48**	**112**	*ePn*	**Pn**	**18 24 16.4**	**+1.1**
PVIS	**Viseu**	**5.48**	**112**	P	**Pn**	**18 24 16.4**	**+1.1**
PVIS	**Viseu**	**5.48**	**112**	P	**Pn**	**18 24 16.4**	**+1.1**
PMAFR	**Mafra**	**5.66**	**133**	*ePn*	**Pn**	**18 24 18.7**	**+1.0**
PMAFR				*eSn*	**Sn**	**18 25 21.9**	**-0.8**
PMAFR	**Mafra**	**5.66**	**133**	P	**Pn**	**18 24 18.7**	**+1.0**
	5.9nm,0.1s,SNR=7.8						
PMAFR				S	**Sn**	**18 25 21.6**	**-1.1**
	1.1nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**5.66**	**133**	P	**Pn**	**18 24 18.7**	**+1.0**
	5.9nm,0.1s,SNR=7.8						
PMAFR				S	**Sn**	**18 25 21.6**	**-1.1**
	1.1nm,0.1s,SNR=7.9						
PMAFR				*eSn*	**Sn**	**18 25 21.9**	**-0.8**
ECAL	**Calabor**	**5.91**	**97**	P	**Pn**	**18 24 22.6**	**+1.4**
	1.4nm,0.1s,SNR=6.6						
ECAL				S	**Sn**	**18 25 28.5**	**-0.5**
	0.6nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**5.91**	**97**	P	**Pn**	**18 24 22.6**	**+1.4**
	1.4nm,0.1s,SNR=6.6						
ECAL				S	**Sn**	**18 25 28.5**	**-0.5**
	0.6nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.91**	**105**	*ePn*	**Pn**	**18 24 22.1**	**+0.9**
MVO				*eSn*	**Sn**	**18 25 27.3**	**-1.8**
MVO	**Moncorvo**	**5.91**	**105**	P	**Pn**	**18 24 22.1**	**+0.9**
	2.1nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**18 25 27.5**	**-1.6**
	0.8nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.91**	**105**	P	**Pn**	**18 24 22.1**	**+0.9**
	2.1nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**18 25 27.5**	**-1.6**
	0.8nm,0.2s,SNR=7.9						
PMTG	**Montargil**	**6.18**	**126**	*eSn*	**Sn**	**18 25 35.8**	**+0.3**
PMTG	**Montargil**	**6.18**	**126**	*eSn*	**Sn**	**18 25 35.8**	**+0.3**
PMRV	**Marv??o**	**6.47**	**120**	*ePn*	**Pn**	**18 24 29.5**	**+0.6**
PMRV				*eSn*	**Sn**	**18 25 42.3**	**-0.4**
PMRV	**Marv??o**	**6.47**	**120**	P	**Pn**	**18 24 29.5**	**+0.6**
PMRV				S	**Sn**	**18 25 42.3**	**-0.4**
PMRV	**Marv??o**	**6.47**	**120**	P	**Pn**	**18 24 29.5**	**+0.6**
PMRV				S	**Sn**	**18 25 42.3**	**-0.4**
PNCL	**Nicolau / Gran**	**6.68**	**134**	*ePn*	**Pn**	**18 24 32.4**	**+0.7**
PNCL				*eSn*	**Sn**	**18 25 46.3**	**-1.5**
PNCL	**Nicolau / Gran**	**6.68**	**134**	*ePn*	**Pn**	**18 24 32.4**	**+0.7**
PNCL				*eSn*	**Sn**	**18 25 46.3**	**-1.5**
PESTR	**Estremoz**	**6.69**	**125**	*ePn*	**Pn**	**18 24 32.7**	**+0.9**
PESTR				*eSn*	**Sn**	**18 25 47.2**	**-0.9**
PESTR	**Estremoz**	**6.69**	**125**	P	**Pn**	**18 24 32.7**	**+0.9**
PESTR				S	**Sn**	**18 25 47.2**	**-0.9**
PESTR	**Estremoz**	**6.69**	**125**	P	**Pn**	**18 24 32.7**	**+0.9**
PESTR				S	**Sn**	**18 25 47.2**	**-0.9**
EARI	**Arriondas**	**6.89**	**84**	P	**Pn**	**18 24 35.1**	**+0.5**
	0.3nm,0.1s,SNR=7.9						
EARI				S	**Sn**	**18 25 50.7**	**-2.4**
	0.4nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**6.89**	**84**	P	**Pn**	**18 24 35.1**	**+0.5**
	0.3nm,0.1s,SNR=7.9						
EARI				S	**Sn**	**18 25 50.7**	**-2.4**
	0.4nm,0.2s,SNR=7.9						
PTEO	**Sao Teotonio**	**7.01**	**138**	*ePn*	**Pn**	**18 24 37.3**	**+1.0**
PTEO				*eSn*	**Sn**	**18 25 55.0**	**-1.0**
PTEO	**Sao Teotonio**	**7.01**	**138**	P	**Pn**	**18 24 37.3**	**+1.0**
PTEO				S	**Sn**	**18 25 55.0**	**-1.0**
PTEO	**Sao Teotonio**	**7.01**	**138**	P	**Pn**	**18 24 37.3**	**+1.0**
PTEO				S	**Sn**	**18 25 55.0**	**-1.0**
EPLA	**Plasencia**	**7.01**	**111**	P	**Pn**	**18 24 37.8**	**+1.5**
	0.5nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**7.01**	**111**	P	**Pn**	**18 24 37.8**	**+1.5**
	0.5nm,0.1s,SNR=7.9						
MESJ	**Messejana**	**7.04**	**134**	*eP*	**Pn**	**18 24 37.9**	**+1.2**
MESJ				*eS*	**Sn**	**18 25 56.1**	**-0.7**
MESJ				AML	AML	18 25 58.0	
	comp=N,2.1nm,0.3s						
MESJ	**Messejana**	**7.04**	**134**	*ePn*	**Pn**	**18 24 37.9**	**+1.2**
MESJ				*eSn*	**Sn**	**18 25 56.1**	**-0.7**
MESJ	**Messejana**	**7.04**	**134**	P	**Pn**	**18 24 37.9**	**+1.2**
MESJ				S	**Sn**	**18 25 56.1**	**-0.7**
MORF	**Marmelete**	**7.24**	**139**	*ePn*	**Pn**	**18 24 40.6**	**+1.2**
MORF				*eSn*	**Sn**	**18 25 59.9**	**-1.7**
MORF				A	A	18 26 04.3	
	comp=N,3.2nm,0.2s						
MORF	**Marmelete**	**7.24**	**139**	P	**Pn**	**18 24 40.0**	**+0.6**
MORF				S	**Sn**	**18 26 00.7**	**-0.9**
MORF	**Marmelete**	**7.24**	**139**	P	**Pn**	**18 24 40.0**	**+0.6**
MORF	**Marmelete**	**7.24**	**139**	*ePn*	**Pn**	**18 24 40.6**	**+1.2**
MORF				*eSn*	**Sn**	**18 25 59.9**	**-1.7**
	comp=N,3.2nm,0.2s						
MORF				S	**Sn**	**18 26 00.7**	**-0.9**
PFVI	**Vila Bisbo**	**7.29**	**141**	S	**Sn**	**18 26 00.6**	**-2.3**
	comp=N,2.0nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**7.29**	**141**	S	**Sn**	**18 26 00.6**	**-2.3**
	comp=N,2.0nm,0.2s,SNR=7.9						
PFVI				*eSn*	**Sn**	**18 26 01.0**	**-1.9**
PCVE	**Castro Verde**	**7.29**	**134**	*ePn*	**Pn**	**18 24 41.3**	**+1.2**
PCVE				*eSn*	**Sn**	**18 26 01.4**	**-1.6**
PCVE	**Castro Verde**	**7.29**	**134**	P	**Pn**	**18 24 41.3**	**+1.2**
PCVE				S	**Sn**	**18 26 01.4**	**-1.6**
PCVE	**Castro Verde**	**7.29**	**134**	P	**Pn**	**18 24 41.3**	**+1.2**
PCVE				S	**Sn**	**18 26 01.4**	**-1.6**
PBAR	**Barrancos**	**7.47**	**127**	*ePn*	**Pn**	**18 24 43.9**	**+1.4**
PBAR				*eSn*	**Sn**	**18 26 06.0**	**-1.2**
PBAR	**Barrancos**	**7.47**	**127**	P	**Pn**	**18 24 43.9**	**+1.4**
PBAR				S	**Sn**	**18 26 06.0**	**-1.2**
PBAR	**Barrancos**	**7.47**	**127**	P	**Pn**	**18 24 43.9**	**+1.4**
PBAR				S	**Sn**	**18 26 06.0**	**-1.2**
PVAQ	**Vaqueiros**	**7.63**	**134**	*ePn*	**Pn**	**18 24 46.0**	**+1.2**
PVAQ				*eSn*	**Sn**	**18 26 09.5**	**-1.8**
PVAQ	**Vaqueiros**	**7.63**	**134**	P	**Pn**	**18 24 46.0**	**+1.2**
PVAQ				S	**Sn**	**18 26 09.5**	**-1.8**
PVAQ	**Vaqueiros**	**7.63**	**134**	P	**Pn**	**18 24 46.0**	**+1.2**
PVAQ				S	**Sn**	**18 26 09.5**	**-1.8**
PBDV	**Barranco-do-Ve**	**7.64**	**136**	*ePn*	**Pn**	**18 24 46.6**	**+1.6**
PBDV				*eSn*	**Sn**	**18 26 10.4**	**-1.2**
PBDV	**Barranco-do-Ve**	**7.64**	**136**	P	**Pn**	**18 24 46.6**	**+1.6**
PBDV				S	**Sn**	**18 26 10.4**	**-1.2**
PBDV	**Barranco-do-Ve**	**7.64**	**136**	P	**Pn**	**18 24 46.6**	**+1.6**
PBDV				S	**Sn**	**18 26 10.4**	**-1.2**
EGRO	**El Granado**	**7.66**	**132**	P	**Pn**	**18 24 46.4**	**+1.2**
	comp=N,0.8nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**18 26 10.9**	**-1.1**
	comp=N,0.7nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**7.66**	**132**	P	**Pn**	**18 24 46.4**	**+1.2**
	comp=N,0.8nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**18 26 10.9**	**-1.1**
	comp=N,0.7nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**7.95**	**128**	P	**Pn**	**18 24 50.5**	**+1.3**
	comp=N,0.9nm,0.2s,SNR=6.7						
EMIN				S	**Sn**	**18 26 18.1**	**-1.2**
	comp=N,0.4nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**7.95**	**128**	P	**Pn**	**18 24 50.5**	**+1.3**
	comp=N,0.9nm,0.2s,SNR=6.7						
EMIN				S	**Sn**	**18 26 18.1**	**-1.2**
	comp=N,0.4nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**8.14**	**103**	P	**Pn**	**18 24 53.9**	**+2.0**
	comp=N,1.5nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**8.14**	**103**	P	**Pn**	**18 24 53.9**	**+2.0**
	comp=N,1.5nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**8.19**	**84**	P	**Pn**	**18 24 53.3**	**+1.0**
	comp=N,0.2nm,0.2s,SNR=4.0						
ELAN				S	**Sn**	**18 26 23.6**	**-1.3**
	comp=N,0.6nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**8.19**	**84**	P	**Pn**	**18 24 53.3**	**+1.0**
	comp=N,0.2nm,0.2s,SNR=4.0						
ELAN				S	**Sn**	**18 26 23.6**	**-1.3**
	comp=N,0.6nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**8.99**	**119**	P	**Pn**	**18 25 04.0**	**+0.5**
	comp=N,0.6nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**18 26 43.8**	**-1.0**
	comp=N,0.3nm,0.1s,SNR=7.9						
**E

NDR				⇑S		Sn	18 28 56.0	+4.9
GALA	**Gala**	**0.94**	**78**	⇑P		Pn	18 28 41.5	+1.9
GALA				⇑S		Sn	18 28 55.8	+2.9
GLBA	**Clilabad** SNR=117	**1.07**	**204**	⇑P		Pg	18 28 40.1	-1.2
GLBA				⇑S		Sn	18 28 58.1	+1.8
QUBA	**Quba, Azerbaij** SNR=19	**1.18**	**343**	⇓P		Pg	18 28 43.5	+0.1
QUBA				⇑S		Sn	18 29 01.1	+2.1
BRDA	**Brd** SNR=28	**1.36**	**272**	⇑P		Pb	18 28 46.1	+0.1
LKRN	**Lenkeran, Azer**	**1.52**	**185**	⇓S		Sb	18 29 08.0	0.0
SEKA	**Sheki** SNR=65	**1.66**	**307**	⇓P		Pn	18 28 49.7	+0.1
SEKA				⇓S		Sg	18 29 15.0	+1.0
GANJ	**Ganja** SNR=15	**2.05**	**283**	⇓P		Pn	18 28 54.2	-0.8
GANJ				⇓S		Sn	18 29 22.0	+1.4
NAX	**Nakhchivan**	**2.87**	**250**	⇑P		Pn	18 29 07.6	+1.4
DGRG	**David-gareji**	**2.98**	**295**	P		Pn	18 29 08.2	+0.5
DGRG				S		Sg	18 30 00.2	+3.9
GNI	**Garni** 2.5nm,0.3s,baz=79,slow=1.3,SNR=7.1	**3.23**	**270**	Pn		Pn	18 29 12.5	+1.2
GNI				Pg		Pg	18 29 22.9	+0.4
	5.0nm,0.3s,baz=49,slow=4.5,SNR=39							
GNI				LR		LR	18 30 50.7	
	comp=Z,201nm,19.0s,baz=51,slow=46							
TBLG	**Delisi**	**3.53**	**297**	P		Pn	18 29 15.5	+0.2
TBLG				S		Sg	18 30 12.7	-1.2
GOR	**Gori**	**4.06**	**297**	P		Sn	18 30 11.4	+1.3
AKH	**Akhalkalaki**	**4.31**	**288**	P		Pb	18 29 38.2	+1.8
AKH				S		Sg	18 30 37.0	-2.0
ONI	**Oni**	**4.76**	**302**	P		Pn	18 29 32.9	+0.6
ONI				S		Sn	18 30 31.0	+3.6
KBZ	**Khabaz** 0.1nm,0.3s,baz=152,slow=17,SNR=2.3	**5.71**	**310**	Pn		Pn	18 29 48.9	+3.7
BVAR	**Borovoye Array** 0.2nm,0.3s,baz=243,slow=9.7,SNR=5.1	**19.41**	**42**	P		P	18 32 43.1	-3.4
KURBB	**Kurchatov Arra** 0.3nm,0.7s,baz=258,slow=12,SNR=2.3	**23.07**	**53**	P		P	18 33 24.0	-1.8
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=268,slow=7.9,SNR=5.1	**24.92**	**64**	P		P	18 33 40.1	-3.4
FINES	**FINESS Array B** 2.5nm,1.0s,baz=130,slow=8.0,SNR=3.7	**25.43**	**334**	P		P	18 33 45.9	-1.9

IDC 16 18:47:26.6±1.0, 48°66S×116°71W, h0km, mb3.9/6, mb1 4.1/6, mb1mx4.0/16, mbtmp3.9/6, MS4.3/8, Ms1 4.3/8, ms1mx4.1/25, Error ellipse: s-maj=44.5km s-min=25.5km az=130.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USHA	**Ushuaia**	**30.01**	**120**	LR	LR	19 01 22.2	
	comp=Z,716nm,20.1s,baz=9.3,slow=28						
PMSA	**Palmer Station**	**31.92**	**140**	LR	LR	19 02 42.7	
	comp=Z,820nm,18.1s,baz=192,slow=29						
PLCA	**Paso Flores**	**33.32**	**94**	LR	LR	19 03 51.3	
	comp=Z,357nm,19.2s,baz=98,slow=30						
PPT	**Papeete**	**40.91**	**308**	LR	LR	19 07 28.0	
	comp=Z,504nm,21.3s,baz=170,slow=29						
VNDA	**Vanda**	**41.22**	**199**	P	P	18 55 12.7	+0.1
	0.9nm,0.8s,baz=104,slow=6.0,SNR=5.4						
QSPA	**South Pole Qui**	**41.54**	**180**	P	P	18 55 16.5	+0.9
	4.8nm,1.0s,baz=93,slow=7.4,SNR=6.9						
CPUP	**Villa Florida**	**50.70**	**86**	LR	LR	19 13 46.4	
	comp=Z,332nm,21.2s,baz=209,slow=31						
LPAZ	**La Paz**	**50.95**	**68**	P	P	18 56 30.6	-0.1
	0.4nm,0.4s,baz=223,slow=4.8,SNR=3.8						
LPAZ				LR	LR	19 12 53.5	
	comp=Z,206nm,20.4s,baz=147,slow=30						
MAW	**Mawson**	**64.06**	**180**	LR	LR	19 23 30.3	
	comp=Z,327nm,21.0s,baz=146,slow=34						
STKA	**Stephens Creek**	**73.80**	**240**	LR	LR	19 26 38.6	
	comp=Z,230nm,18.1s,baz=208,slow=32						
ASAR	**Alice Springs**	**84.43**	**240**	P	P	19 00 00.5	-0.7
	1.6nm,0.9s,baz=136,slow=4.0,SNR=11						
WRA	**Warramunga Arr**	**87.06**	**243**	P	P	19 00 13.7	-0.6
	0.5nm,0.8s,baz=143,slow=4.4,SNR=3.5						
PDAR	**Pinedale Array**	**91.27**	**5**	P	P	19 00 34.9	+1.4
	0.6nm,1.1s,baz=154,slow=4.8,SNR=2.5						
GERES	**GERESS Array B**	**147.77**	**71**	PKPbc	PKPbc	19 07 12.7	+0.1
	1.7nm,0.9s,baz=242,slow=2.9,SNR=9.0						
BRG	**Berggiesshubel** 4.9nm,1.0s	**148.52**	**67**	*e*P	PKPab	19 07 17.1	-0.8
BRTR	**Keskin Array B** 0.8nm,0.9s,baz=217,slow=6.9,SNR=3.3	**157.06**	**102**	PKPab	PKPab	19 07 51.8	-2.6

BGS 16 18:48:01.0±0.8, 49°55N×0°87W, h5km, ML2.3, France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JDG	**Jersey Dam (Ga**	**0.84**	**246**	*e*P	Pg	18 48 16.7	-0.5
JDG	**Jersey Dam (Ga**	**0.84**	**246**	P	Pg	18 48 16.7	-0.5
JDG	**Jersey Dam (Ga**	**0.84**	**246**	*e*P	Pg	18 48 16.7	-0.5
JDC	**Jersey Dam (Cr**	**0.85**	**245**	*e*P	Pg	18 48 16.8	-0.5
JDC	**Jersey Dam (Cr**	**0.85**	**245**	P	Pg	18 48 16.8	-0.5
JDC	**Jersey Dam (Cr**	**0.85**	**245**	*e*P	Pg	18 48 16.8	-0.5
JSA	**Saint Aubin**	**0.92**	**247**	*e*P	Pg	18 48 18.0	-0.6
JSA				*e*S	Sg	18 48 30.2	-0.4
JSA				AML	AML	18 48 37.3	
	comp=E,26nm,0.3s						
JSA				AML	AML	18 48 42.1	
	comp=N,36nm,0.5s						
JSA	**Saint Aubin**	**0.92**	**247**	P	Pg	18 48 18.0	-0.6
JSA				S	Sg	18 48 30.2	-0.4
JSA				AML	AML	18 48 37.3	
	comp=N,26nm,0.3s						
JSA				AML	AML	18 48 42.1	
	comp=N,36nm,0.5s						
WOL	**Wolverton**	**1.78**	**353**	*e*P	Pn	18 48 31.9	-0.6
WOL				AML	AML	18 49 03.1	
	comp=N,21nm,0.3s						
WOL				AML	AML	18 49 06.7	
	comp=E,24nm,0.6s						
WOL	**Wolverton**	**1.78**	**353**	P	Pn	18 48 31.9	-0.6
WOL				AML	AML	18 49 03.1	
	comp=E,21nm,0.3s						
WOL				AML	AML	18 49 06.7	
	comp=E,24nm,0.6s						
WOL	**Wolverton**	**1.78**	**353**	*e*P	Pn	18 48 31.9	-0.6
WOL				AML	AML	18 49 03.1	
	comp=N,21nm,0.3s						
WOL				AML	AML	18 49 06.7	
	comp=E,24nm,0.6s						
ELSH	**Elham, Standar**	**2.05**	**38**	*e*P	Pn	18 48 34.9	-1.3
ELSH				AML	AML	18 49 17.4	
	comp=E,30nm,0.4s						
ELSH				AML	AML	18 49 26.7	
	comp=N,23nm,0.6s						
ELSH	**Elham, Standar**	**2.05**	**38**	P	Pn	18 48 34.9	-1.3
ELSH				AML	AML	18 49 17.4	
	comp=N,30nm,0.4s						
ELSH				AML	AML	18 49 26.7	
	comp=N,23nm,0.6s						
ELSH	**Elham, Standar**	**2.05**	**38**	*e*P	Pn	18 48 34.9	-1.3
ELSH				AML	AML	18 49 17.4	
	comp=E,30nm,0.4s						
ELSH				AML	AML	18 49 26.7	
	comp=N,23nm,0.6s						
SWN1	**Swindon**	**2.05**	**344**	*e*P	Pn	18 48 35.6	-0.6
SWN1				AML	AML	18 49 17.8	
	comp=N,34nm,0.7s						
SWN1				AML	AML	18 49 25.3	
	comp=E,34nm,0.7s						
SWN1	**Swindon**	**2.05**	**344**	P	Pn	18 48 35.6	-0.6
SWN1				AML	AML	18 49 17.8	
	comp=E,34nm,0.7s						
SWN1				AML	AML	18 49 25.3	
	comp=E,34nm,0.7s						
SWN1	**Swindon**	**2.05**	**344**	*e*P	Pn	18 48 35.6	-0.6
SWN1				AML	AML	18 49 17.8	
	comp=N,34nm,0.7s						
SWN1				AML	AML	18 49 25.3	
	comp=E,34nm,0.7s						
DYA	**Yadsworthy**	**2.16**	**295**	*e*P	Pn	18 48 36.7	-1.0
DYA				AML	AML	18 49 18.3	
	comp=N,17nm,0.3s						
DYA				AML	AML	18 49 18.9	
	comp=N,18nm,0.3s						
DYA	**Yadsworthy**	**2.16**	**295**	*e*P	Pn	18 48 36.7	-1.0
DYA				AML	AML	18 49 18.3	
	comp=E,17nm,0.3s						
DYA				AML	AML	18 49 18.9	
	comp=N,18nm,0.3s						
SKP1	**Kophill**	**2.18**	**1**	*e*P	Pn	18 48 37.0	-0.9
SKP1	**Kophill**	**2.18**	**1**	P	Pn	18 48 37.0	-0.9
SKP1	**Kophill**	**2.18**	**1**	*e*P	Pn	18 48 37.0	-0.9
HEX	**Exmoor**	**2.42**	**310**	*e*P	Pn	18 48 39.9	-1.3
HEX	**Exmoor**	**2.42**	**310**	P	Pn	18 48 39.9	-1.3
HEX	**Exmoor**	**2.42**	**310**	*e*P	Pn	18 48 39.9	-1.3
SSW	**Stow on the Wo**	**2.50**	**346**	*e*P	Pn	18 48 42.1	-0.3
SSW	**Stow on the Wo**	**2.50**	**346**	P	Pn	18 48 42.1	-0.3
SSW	**Stow on the Wo**	**2.50**	**346**	*e*P	Pn	18 48 42.1	-0.3
HTL	**Hartland**	**2.73**	**303**	*e*P	Pn	18 48 44.5	-1.0
HTL				AML	AML	18 49 39.9	
	comp=N,17nm,0.4s						
HTL				AML	AML	18 49 48.5	
	comp=E,11nm,0.5s						
HTL	**Hartland**	**2.73**	**303**	P	Pn	18 48 44.5	-1.0
HTL				AML	AML	18 49 39.9	
	comp=E,17nm,0.4s						
HTL				AML	AML	18 49 48.5	
	comp=E,11nm,0.5s						
HTL	**Hartland**	**2.73**	**303**	*e*P	Pn	18 48 44.5	-1.0
HTL				AML	AML	18 49 39.9	
	comp=N,17nm,0.4s						
HTL				AML	AML	18 49 48.5	
	comp=E,11nm,0.5s						
MCH1	**Michaelchurch**	**2.80**	**332**	*e*P	Pn	18 48 45.4	-1.0
MCH1				AML	AML	18 49 32.2	
	comp=E,11nm,0.6s						
MCH1				AML	AML	18 49 34.8	
	comp=N,16nm,0.6s						
MCH1	**Michaelchurch**	**2.80**	**332**	P	Pn	18 48 45.4	-1.0
MCH1				AML	AML	18 49 32.2	
	comp=N,11nm,0.6s						
MCH1				AML	AML	18 49 34.8	
	comp=N,16nm,0.6s						
MCH1	**Michaelchurch**	**2.80**	**332**	*e*P	Pn	18 48 45.4	-1.0
MCH1				AML	AML	18 49 32.2	
	comp=E,11nm,0.6s						
MCH1				AML	AML	18 49 34.8	
	comp=N,16nm,0.6s						
HLM1	**Long Mynd**	**3.23**	**338**	*e*P	Pn	18 48 51.6	-0.8
HLM1				AML	AML	18 49 47.1	
	comp=E,5.4nm,0.6s						
HLM1				AML	AML	18 49 54.6	
	comp=N,5.8nm,0.6s						
HLM1	**Long Mynd**	**3.23**	**338**	P	Pn	18 48 51.6	-0.8
HLM1				AML	AML	18 49 47.1	
	comp=N,5.4nm,0.6s						
HLM1				AML	AML	18 49 54.6	
	comp=N,5.8nm,0.6s						
HLM1	**Long Mynd**	**3.23**	**338**	*e*P	Pn	18 48 51.6	-0.8
HLM1				AML	AML	18 49 47.1	
	comp=E,5.4nm,0.6s						
HLM1				AML	AML	18 49 54.6	
	comp=N,5.8nm,0.6s						
LHO	**Holmfirth**	**4.05**	**352**	*e*P	Pn	18 49 02.1	-1.6
LHO	**Holmfirth**	**4.05**	**352**	P	Pn	18 49 02.1	-1.6
LHO	**Holmfirth**	**4.05**	**352**	*e*P	Pn	18 49 02.1	-1.6
YRE	**Yr Eifl**	**4.10**	**328**	*e*P	Pn	18 49 03.5	-0.8
YRE	**Yr Eifl**	**4.10**	**328**	P	Pn	18 49 03.5	-0.8
YRE	**Yr Eifl**	**4.10**	**328**	*e*P	Pn	18 49 03.5	-0.8
WLF1	**Llynfaes**	**4.35**	**331**	*e*P	Pn	18 49 06.9	-0.7
WLF1	**Llynfaes**	**4.35**	**331**	P	Pn	18 49 06.9	-0.7
WLF1	**Llynfaes**	**4.35**	**331**	*e*P	Pn	18 49 06.9	-0.7

*ISK **16** 18:53:52.8, 40.33N×25.77E, h12km, MD2.7*
*ISCJB **16** 18:53:53.2±1.3, 40.35N±0.04×25.76E±0.08, h10km±5km, Error ellipse: s-maj=10.6km s-min=5.9km az=5.7*
*CSEM **16** 18:53:53.2±0.3, 40.34N×25.74E, h12km, MD2.7, Error ellipse: s-maj=6.1km s-min=4.4km az=88.0*
*DDA **16** 18:53:54.7, 40.32N×25.95E, h7km, MD2.7*
ISC 16 18:53:53.6±1.6, 40.32N±0.04×25.77E±0.07, h14km±10km, n22, σ0.946/35, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENEZ	**Enez**	**0.51**	**35**	*e*PG	Pg	18 54 03.2	-0.3
ENEZ				*e*SG	Sg	18 54 10.7	+0.4
ENEZ	**Enez**	**0.51**	**35**	*e*Pg	Pg	18 54 03.3	-0.3
ENEZ				*e*Sg	Sg	18 54 10.7	+0.4
BOZC	**Bozcaada**	**0.53**	**156**	*i* P	Pb	18 54 04.7	+0.1
BOZC				*i* S	Sb	18 54 11.9	-0.2
GELI	**Tayfur-Gelibol**	**0.54**	**82**	*e*PG	Pg	18 54 04.1	-0.1
GELI				*e*SG	Sg	18 54 11.8	+0.3
GELI	**Tayfur-Gelibol**	**0.54**	**82**	*e*Pg	Pg	18 54 04.1	-0.1
GELI				*e*Sg	Sg	18 54 11.8	+0.3
LPK	**Lapseki**	**0.76**	**86**	*e*PG	Pg	18 54 08.0	-0.3
LPK				*e*SG	Sb	18 54 18.9	+0.1
LPK	**Lapseki**	**0.76**	**86**	*e*Pg	Pg	18 54 08.0	-0.3
LPK				*e*Sg	Sb	18 54 18.9	+0.1
KRBG	**Karabiga-Canak**	**1.17**	**86**	*e*PN	Pn	18 54 15.2	-0.3
KRBG	**Karabiga-Canak**	**1.17**	**86**	*e*Pn	Pn	18 54 15.2	-0.3
AYVA	**Ayvalik**	**1.23**	**145**	*i* P	Pb	18 54 17.0	+0.3
AYVA				*i* S	Sg	18 54 33.8	+0.4
AYVA	**Ayvalik**	**1.23**	**145**	*i* P	Pb	18 54 17.0	+0.3
MFT	**Murefte**	**1.24**	**68**	*e*PN	Pn	18 54 16.6	0.0
MFT				*e*SN	Sg	18 54 34.2	+0.6
MFT	**Murefte**	**1.24**	**68**	*e*Pn	Pn	18 54 16.6	0.0
MFT				*e*Sn	Sg	18 54 34.2	+0.6
MRMT	**Marmara Adasi**	**1.42**	**78**	*e*PN	Pn	18 54 18.8	-0.3
MRMT	**Marmara Adasi**	**1.42**	**78**	*e*Pn	Pn	18 54 18.8	-0.3
GONE	**Gonen-Balikesi**	**1.49**	**100**	*e*PN	Pb	18 54 21.0	-0.1
GONE	**Gonen-Balikesi**	**1.49**	**100**	*e*Pn	Pb	18 54 21.0	-0.1
BALY	**Balya**	**1.53**	**112**	*i* P	Pn	18 54 21.0	+0.4
BALY				*i* S	Sn	18 54 40.4	0.0
BALY	**Balya**	**1.53**	**112**	*i* P	Pn	18 54 21.0	+0.4
BALY				*i* S	Sn	18 54 40.4	0.0
EDRB	**Edirne**	**1.69**	**25**	*e*PN	Pn	18 54 22.4	-0.3
EDRB	**Edirne**	**1.69**	**25**	*e*Pn	Pn	18 54 22.4	-0.3
DURS	**Dursunbey**	**2.20**	**108**	*i* P	Sn	18 54 57.5	+0.6
DURS				*i* S	Sg	18 55 02.4	-1.8

IGQ 16 18:57:54.9, 0.62N×79.94W, h9km±59km, Mb4.1, Ms3.9, 5C-10D, Error ellipse: s-maj=6.8km s-min=1.9km az=3.3, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLV	**Golondrinas**	**0.90**	**117**	⇓P	Pn	18 58 13.4	-0.5
JAMA	**Jama**	**0.91**	**197**	S	Sg	18 58 24.3	-0.4
JAMA	**Jama**	**0.91**	**197**	P	Pg	18 58 11.9	-0.7
OTAV	**Otavalo**	**1.54**	**104**	⇓P	Pb	18 58 23.9	-0.4
OTAV	**Otavalo**	**1.54**	**104**	⇓S	Sg	18 58 45.4	0.0
PINO	**Pino**	**1.54**	**120**	⇓P	Pb	18 58 24.0	-0.5
TERV	**Terraza Guagua**	**1.55**	**121**	P	Pb	18 58 24.1	-0.5
YANA	**Yana**	**1.55**	**118**	P	Pb	18 58 24.0	-0.5
GGP	**Refugio Guagua**	**1.56**	**120**	P	Pn	18 58 24.0	+0.4
JUA2	**San Juan 2**	**1.57**	**122**	P	Pb	18 58 24.4	-0.4
COTA	**Cotacachi**	**1.63**	**100**	⇑S	Sg	18 58 51.5	+3.0
COTA	**Cotacachi**	**1.63**	**100**	⇑P	Pb	18 58 25.7	-0.2
PITA	**Cotopaxi Volc**	**1.91**	**128**	P	Pb	18 58 30.1	-0.5
CAMI	**Rancho Maria**	**1.93**	**132**	P	Pg	18 58 32.5	-0.1
NAS2	**Nasa**	**1.94**	**130**	P	Pb	18 58 31.2	+0.1
BNAS	**Cotopaxi Volca**	**1.94**	**131**	⇓P	Pb	18 58 30.6	-0.7
BREF	**Cotopaxi Volca**	**1.97**	**130**	⇑P	Pb	18 58 31.5	-0.4
VC1	**Cotopaxi 1**	**1.98**	**129**	P	Pb	18 58 31.4	-0.6
BMOR	**Cotopaxi Volca**	**2.00**	**132**	P	Pb	18 58 31.3	-0.9
MOV1	**Cotopaxi Vol s**	**2.00**	**131**	P	Pb	18 58 32.5	+0.1
BTAM	**Cotopaxi Volca**	**2.01**	**130**	⇓P	Pb	18 58 31.9	-0.6
CAYA	**Cayambe**	**2.02**	**106**	P	Pb	18 58 33.1	+0.4
COV1	**Cotopaxi Volc**	**2.04**	**129**	P	Pn	18 58 30.9	+0.5
ANTI	**Antisana**	**2.07**	**121**	⇑P	Pb	18 58 33.1	-0.4
ANTI	**Antisana**	**2.07**	**121**	⇑S	Sg	18 59 04.8	+1.9
PISA	**Pisayambo**	**2.28**	**137**	P	Pb	18 58 36.3	-0.7
CHAR	**Charly**	**2.38**	**107**	P	Pb	18 58 39.7	+1.1
LAV4	**Lava4-Reventad**	**2.42**	**107**	P	Pg	18 58 40.5	-1.3
BRUN	**Tungurahua Vol**	**2.54**	**143**	P	Pb	18 58 39.7	-1.5
BULB	**Ulba Tungurahu**	**2.55**	**143**	⇓P	Pb	18 58 40.2	-1.3
BULB	**Ulba Tungurahu**	**2.55**	**143**	⇓S	Sb	18 59 14.3	+0.9
ARRY	**Arrayan**	**2.58**	**145**	⇓S	Sb	18 59 13.0	-1.2
ARRY	**Arrayan**	**2.58**	**145**	⇓P	Pb	18 58 40.3	-1.7

*IDC **16** 19:07:57.9±1.6, 36.15N×69.23E, h0km, mb3.7/10, mb1 4.0/15, mb1mx3.8/33, mbtmp3.9/15, ML4.1/5, MS3.2/1, Ms1 3.2/1, ms1mx2.9/48, Error ellipse: s-maj=32.8km s-min=15.0km az=143.0*
*ISCJB **16** 19:08:03.1±0.4, 36.38N±0.03×69.19E±0.05, h48km, mb3.6/9, Error ellipse: s-maj=6.6km s-min=3.9km az=154.7*
*NNC **16** 19:08:08.1±4.2, 36.58N×69.15E, h104km±54km, mb3.5, mpv4.3, Error ellipse: s-maj=32.7km s-min=27.5km az=172.0*
ISC 16 19:08:04.3±0.6, 36.27N±0.06×69.34E±0.06, h48km, n51, σ1.995/53, mb3.6/9, 5C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.22**	**138**	P	Pn	19 08 58.9	+6.4
CEP				S	Sn	19 09 47.0	+17
THW	**Thamme Wali**	**3.99**	**150**	P	Pn	19 09 07.4	+4.4
CHCP	**Chirah Chowk**	**4.14**	**128**	P	Pn	19 09 11.6	+6.6
SARP	**Sargodha**	**5.14**	**147**	P	Pn	**19 09 20.7**	**+2.0**
AML	**Almayashu** SNR=188	**6.76**	**29**	P	Pn	**19 09 42.5**	**+1.2**
KK31	**Karatay Array** 4.4nm,0.3s,baz=187,slow=11,SNR=279	**6.89**	**7**	⇑P	Pn	**19 09 43.1**	**+0.4**
KK31				⇑S	Sn	**19 10 57.4**	**-2.2**
	12nm,0.3s,baz=193,slow=23,SNR=6.0						
UCH	**Uchtor** SNR=14	**7.18**	**32**	P	Pn	**19 09 48.8**	**+1.8**
EKS2	**Erkin-Say** SNR=32	**7.25**	**27**	P	Pn	**19 09 49.1**	**+1.4**
KZA	**Kyzart** SNR=15	**7.40**	**37**	P	Pn	**19 09 52.9**	**+3.0**
AAK	**Ala-Archa** 14nm,0.3s,baz=170,slow=4.0,SNR=176	**7.50**	**30**	Pn	Pn	**19 09 53.1**	**+1.9**
AAK				Sn	Sn	**19 11 17.2**	**+2.2**
	3.4nm,0.3s,baz=312,slow=23,SNR=11						
AAK				LR	LR	19 13 36.6	
	comp=Z,183nm,19.0s,baz=132,slow=44						
KBK	**Karagaybulak** SNR=42	**7.71**	**32**	P	Pn	**19 09 56.3**	**+2.1**
CHMS	**Chumysh** SNR=42	**7.91**	**30**	P	Pn	**19 09 58.1**	**+1.4**
ULHL	**Ulahol** SNR=43	**8.02**	**40**	P	Pn	**19 10 00.7**	**+2.3**
USP	**Ospenovka** SNR=36	**8.04**	**28**	P	Pn	**19 09 59.3**	**+0.8**
TKM2	**Tokmak 2** 15nm,0.5s	**8.21**	**34**	⇓P	Pn	**19 10 02.2**	**+1.3**
TKM2				⇓S	Sn	**19 11 31.3**	**-1.2**
	18nm,0.8s						
TKM2	**Tokmak 2** SNR=18	**8.21**	**34**	P	Pn	**19 10 02.5**	**+1.5**
SMLA	**Simla**	**8.29**	**126**	*i* P	Pn	19 10 06.5	+4.7
SMLA				*i* S	Sn	19 11 42.5	+8.3
SMLA				⇓		19 11 44.2	
	comp=E,340nm,0.3s						
SMLA						19 11 45.6	
	comp=N,357nm,0.2s						
DDI	**Dehra Dun**	**9.39**	**127**	*ex*	x	19 10 59.0	
DDI				*e*S	Sn	19 12 09.0	+7.7
KHET	**Khetri**	**9.83**	**144**	*ex*	x	19 10 16.3	
KHET				*e*S	**Sn**	**19 12 09.7**	**-2.3**
KHET				AML	AML	19 13 29.2	
	comp=E,131nm,0.1s						
KHET				AML	AML	19 13 29.4	
	comp=N,108nm,0.1s						
AYAN	**Aya Nagar**	**10.17**	**138**	*e*P	Pn	**19 10 28.7**	**+1.1**
AYAN				*e*S	**Sn**	**19 12 19.7**	**-0.5**
AYAN				AML	AML	19 12 44.0	
	comp=Z,22nm,0.8s						
AGRA	**Agra**	**11.60**	**139**	*e*P	Pn	**19 10 48.4**	**+1.2**
AGRA				*e*S	**Sn**	**19 12 54.0**	**-1.2**
AGRA				AML	AML	19 14 35.8	
	comp=N,51nm,0.1s						
AGRA				AML	AML	19 14 35.9	
	comp=E,60nm,0.5s						
PYUN	**Piuthan**	**14.13**	**121**	*e*Pn	Pn	**19 11 22.7**	**+0.9**
PYUN				*e*Sn	**Sn**	**19 13 52.6**	**-4.6**
	comp=E,35nm,0.6s						
MKAR	**Makanchi Array** comp=E,0.2nm,0.3s,baz=228,slow=14,SNR=18	**14.29**	**39**	Pn	Pn	**19 11 22.5**	**-1.2**
DANN	**Dangsing**	**14.51**	**119**	*e*Pn	Pn	**19 11 28.1**	**+1.0**
DANN				*e*Sn	**Sn**	**19 14 02.6**	**-4.1**
	comp=E,16nm,0.6s						
AB31	**Akbulak array** comp=E,4.9nm,0.3s,baz=152,slow=13,SNR=164	**14.69**	**335**	⇓P	Pn	19 11 24.0	-4.9
KOLN	**Koldanda**	**14.75**	**121**	*e*Pn	Pn	**19 11 31.3**	**+1.1**
KURBB	**Kurchatov Arra** comp=E,0.1nm,0.3s,baz=215,slow=13,SNR=9.3	**15.81**	**22**	Pn	Pn	**19 11 40.1**	**-3.3**
DMN	**Daman**	**15.91**	**118**	*e*Pn	**P**	**19 11 46.5**	**+1.3**
DMN				*e*Sn	**Sn**	**19 14 36.6**	**-4.0**
	comp=E,31nm,1.0s						
KKN	**Kakani**	**15.93**	**118**	*e*Pn	**P**	**19 11 47.5**	**-0.8**
PKIN	**Phulchoki**	**16.13**	**118**	*e*Pn	**P**	**19 11 50.1**	**-0.5**
GUN	**Gumba**	**16.29**	**116**	*e*Pn	**P**	**19 11 51.7**	**-0.7**
AKTO	**Aktyubinsk** comp=E,1.4nm,0.7s	**16.36**	**334**	⇓P	Pn	**19 11 47.9**	**-2.5**
AKTO	**Aktyubinsk** comp=E,1.1nm,0.3s,baz=140,slow=14,SNR=34	**16.36**	**334**	Pn	Pn	**19 11 47.7**	**-2.7**
AKTO				Sn	Sn	19 14 37.3	-14
	comp=E,0.3nm,0.3s,baz=282,slow=20,SNR=3.3						
VOSK	**Vostochnaya** comp=E,2.0nm,0.5s	**16.50**	**4**	⇑P	Pn	**19 11 49.8**	**-2.4**
ZRNK	**Zerenda** comp=E,0.9nm,0.4s	**16.68**	**359**	⇑P	Pn	**19 11 52.6**	**-1.9**
BVA0	**Borovoye Array** comp=E,0.3nm,0.6s,baz=171,slow=13,SNR=27	**16.77**	**2**	⇑P	Pn	**19 11 53.4**	**-2.2**
BVAR	**Borovoye Array** comp=E,0.7nm,0.3s,baz=171,slow=13,SNR=16	**16.77**	**2**	Pn	Pn	**19 11 53.0**	**-2.6**
BVAR				Sn	Sn	19 14 50.0	-11
	comp=E,0.4nm,0.3s,baz=173,slow=24,SNR=3.2						
RAMN	**Ramite**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.26**	**34**	PN	**Pb**	**19 15 43.6**	**-0.9**
BKI				S	**Sb**	**19 15 48.0**	**-0.7**
BKI	**Bering**	**0.26**	**34**	*eP*	**Pb**	**19 15 43.6**	**-0.9**
BKI				*i* S	**Sb**	**19 15 48.0**	**-0.7**
KBTR	**Krutoberegovo**	**2.05**	**308**	PN	Pn	19 16 08.5	-2.8
KBTR	**Krutoberegovo**	**2.05**	**308**	P	Pn	19 16 08.5	-2.8
KBTR				*i* S	**Sn**	**19 16 32.0**	**-4.2**
MKZ	**Mys Kozlova**	**2.35**	**261**	PN	**Pn**	**19 16 14.0**	**-1.5**
MKZ				S	**Sn**	**19 16 40.6**	**-3.0**
MKZ	**Mys Kozlova**	**2.35**	**261**	P	**Pn**	**19 16 14.0**	**-1.5**
MKZ				*i* S	**Sn**	**19 16 40.6**	**-3.0**
SMKR	**Semkarok**	**2.88**	**305**	*eP*	**Pn**	**19 16 23.3**	**+0.4**
SMKR				*i* S	**Sn**	**19 16 56.9**	**+0.1**
ZLN	**Zelenaya**	**2.98**	**292**	*eP*	**Pn**	**19 16 24.5**	**+0.3**
ZLN				*i* S	**Sn**	**19 17 00.0**	**+0.7**
BDR	**Baidarnaya**	**3.00**	**304**	*eP*	**Pn**	**19 16 24.2**	**-0.3**
BDR				*i* S	**Sn**	**19 16 59.4**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**3.01**	**290**	*eP*	**Pn**	**19 16 25.1**	**+0.4**
BZGR				*i* S	**Sn**	**19 16 59.8**	**-0.3**
CIRR	**Tsirk**	**3.04**	**294**	*eP*	**Pn**	**19 16 25.5**	**+0.4**
LGNR	**Loginova**	**3.06**	**293**	*eP*	**Pn**	**19 16 25.9**	**+0.4**
LGNR				*i* S	**Sn**	**19 17 01.8**	**+0.3**
SRKR	**Sorokina**	**3.06**	**305**	*eP*	**Pn**	**19 16 25.0**	**-0.3**
SRKR				*i* S	**Sn**	**19 17 00.5**	**-0.8**
BZMR	**Bezymyannaya**	**3.12**	**290**	*eP*	**Pn**	**19 16 26.9**	**+0.6**
BZMR				*i* S	**Sn**	**19 17 02.9**	**0.0**
BZWR	**Bezymyannyi-We**	**3.13**	**290**	*eP*	**Pn**	**19 16 26.5**	**+0.2**
BZWR				*i* S	**Sn**	**19 17 02.7**	**-0.4**
KLY	**Klyuchi**	**3.16**	**297**	PN	**Pn**	**19 16 25.2**	**-1.4**
KLY				S	**Sn**	**19 17 00.4**	**-3.2**
KLY	**Klyuchi**	**3.16**	**297**	*eP*	**Pn**	**19 16 25.2**	**-1.4**
KLY				*i* S	**Sn**	**19 17 00.4**	**-3.2**
KRSR	**Krestovskiy**	**3.17**	**295**	*eP*	**Pn**	**19 16 26.1**	**-0.8**
KRSR				*i* S	**Sn**	**19 17 03.2**	**-0.8**
KIRR	**Kirishev**	**3.21**	**290**	*eP*	**Pn**	**19 16 28.0**	**+0.6**
KIRR				*i* S	**Sn**	**19 17 05.5**	**+0.5**
TUMR	**Tumrok**	**3.21**	**278**	*eP*	**Pn**	**19 16 26.5**	**-1.0**
TUMR				*i* S	**Sn**	**19 17 02.7**	**-2.4**
KMNR	**Kamenistaya**	**3.22**	**286**	*eP*	**Pn**	**19 16 27.8**	**+0.2**
KMNR				*i* S	**Sn**	**19 17 05.2**	**0.0**
KPT	**Kopyto**	**3.28**	**290**	*eP*	**Pn**	**19 16 28.8**	**+0.5**
KPT				*i* S	**Sn**	**19 17 06.5**	**-0.1**
KOZR	**Kozyr**	**3.48**	**290**	PN	**Pn**	**19 16 32.2**	**+1.2**
KOZR				S	**Sn**	**19 17 12.4**	**+0.9**
KOZ	**Kozyrevsk**	**3.49**	**290**	*eP*	**Pn**	**19 16 32.2**	**+1.0**
KOZ				*i* S	**Sn**	**19 17 12.4**	**+0.6**
SRDR	**Sredinnyy**	**3.65**	**294**	*eP*	**Pn**	**19 16 34.1**	**+0.7**
SRDR				*i* S	**Sn**	**19 17 15.7**	**-0.1**
KII	**Karymskiy**	**3.78**	**258**	*eP*	**Pn**	**19 16 34.8**	**-0.4**
KII				*i* S	**Sn**	**19 17 16.9**	**-2.0**
ESO	**Esso**	**4.10**	**286**	PN	**Pn**	**19 16 39.4**	**-0.2**
ESO	**Esso**	**4.10**	**286**	*eP*	**Pn**	**19 16 39.4**	**-0.2**
ESO				*i* S	**Sn**	**19 17 24.7**	**-2.2**
SDLR	**Sedlovina**	**4.37**	**250**	*eP*	**Pn**	**19 16 42.7**	**-0.7**
SDLR				*i* S	**Sn**	**19 17 30.4**	**-3.2**
SMAR	**Somma**	**4.42**	**250**	*eP*	**Pn**	**19 16 44.0**	**-0.2**
SMAR				*i* S	**Sn**	**19 17 32.8**	**-2.2**
KRER	**Koryakskii**	**4.43**	**250**	*eP*	**Pn**	**19 16 44.1**	**-0.2**
KRER				*i* S	**Sn**	**19 17 32.6**	**-2.6**
UGLR	**Uglovaya**	**4.43**	**249**	*eP*	**Pn**	**19 16 44.0**	**-0.2**
UGLR				*i* S	**Sn**	**19 17 32.1**	**-3.0**
AVH	**Avacha**	**4.46**	**250**	*eP*	**Pn**	**19 16 44.5**	**0.0**
AVH				*i* S	**Sn**	**19 17 34.0**	**-1.6**
KOK	**Koryaka**	**4.50**	**251**	P	**Pn**	**19 16 45.1**	**0.0**
KOK				*i* S	**Sn**	**19 17 34.5**	**-2.2**
PET	**Petropavlovsk**	**4.61**	**248**	⇓*e*PN	**Pn**	**19 16 45.9**	**-0.6**
PET				*e*S	**Sn**	**19 17 35.0**	**-4.3**
PET	comp=Z,355nm,0.3s			pmax	pmax		
PET	comp=E,2μm,0.5s			smax	smax		
PET	comp=N,2μm,0.5s			smax	smax		
PET	comp=Z,8μm,17.0s			MLR	MLR		
PET	**Petropavlovsk**	**4.61**	**248**	*eP*	**Pn**	**19 16 45.9**	**-0.6**
PET				*i* S	**Sn**	**19 17 35.6**	**-3.7**
INSR	**Institute**	**4.62**	**248**	*eP*	**Pn**	**19 16 45.9**	**-0.7**
INSR				*i* S	**Sn**	**19 17 36.6**	**-2.9**
FX1	**Attu Island--F**	**4.88**	**113**	*e*Pn	**Pn**	**19 16 48.9**	**-1.4**
FX1	**Attu Island--F**	**4.88**	**113**	LR	LR	19 18 31.6	
	comp=Z,2μm,21.2s,baz=315,slow=36						
RUS	**Russkaya**	**4.99**	**242**	PN	**Pn**	**19 16 51.3**	**-0.4**
RUS	**Russkaya**	**4.99**	**242**	*eP*	**Pn**	**19 16 51.3**	**-0.4**
RUS				*i* S	**Sn**	**19 17 44.4**	**-4.2**
PEA0B	**Petropavlovsk-**	**5.09**	**252**	*e*Pn	**Pn**	**19 16 53.0**	**-0.1**
PETK	**Petropavlovsk-**	**5.09**	**252**	PN	**Pn**	**19 16 52.9**	**-0.2**
PETK	**Petropavlovsk-**	**5.09**	**252**	Pn	**Pn**	**19 16 52.9**	**-0.2**
PETK	**Petropavlovsk-**	**5.09**	**252**	Pn	**Pn**	**19 16 52.9**	**-0.2**
	comp=Z,64nm,0.3s,baz=69,slow=16,SNR=676						
PETK				LR	LR	19 18 56.8	
	comp=Z,4μm,21.2s,baz=81,slow=40						
MTVR	**Mutnovka**	**5.13**	**244**	*eP*	**Pn**	**19 16 53.7**	**-0.1**
MTVR				*i* S	**Sn**	**19 17 48.5**	**-3.8**
GRL	**Gorelyy**	**5.15**	**245**	*eP*	**Pn**	**19 16 54.2**	**+0.1**
GRL				*i* S	**Sn**	**19 17 49.7**	**-3.1**
PALN	**Palana**	**5.17**	**325**	P	**Pn**	**19 16 54.4**	**+0.2**
PALN				*i* S	**Sn**	**19 17 50.8**	**-2.3**
APC	**Apacha**	**5.46**	**251**	*eP*	**Pn**	**19 16 59.2**	**+1.0**
APC				*i* S	**Sn**	**19 17 59.0**	**-1.3**
TILK	**Tilichiki**	**5.48**	**2**	*eP*	**Pn**	**19 16 57.9**	**-0.5**
TILK				*e*S	**Sn**	**19 17 56.3**	**-4.3**
MIPR	**Malaya Ipel'ka**	**5.98**	**247**	*eP*	**Pn**	**19 17 06.4**	**+1.0**
PAU	**Pauzhetka**	**6.41**	**240**	PN	**Pn**	**19 17 11.1**	**-0.1**
PAU	**Pauzhetka**	**6.41**	**240**	*eP*	**Pn**	**19 17 11.1**	**-0.1**
PAU				*e*S	**Sn**	**19 18 20.1**	**-3.4**
SKR	**Severo-Kuril's**	**7.24**	**237**	*e*PN	Pn	19 17 19.5	-3.1
SKR	comp=N,110nm,0.5s			pmax	pmax		
SKR	comp=E,220nm,0.5s			pmax	pmax		
SKR	comp=Z,230nm,0.5s			MLR	MLR		
SKR	comp=N,6μm,16.0s			MLR	MLR		
SKR	comp=E,6μm,16.0s			MLR	MLR		
SKR	**Severo-Kuril's**	**7.24**	**237**	P	**Pn**	**19 17 22.8**	**+0.2**
AMKA	**Amchitka**	**8.92**	**108**	*e*Pn	**Pn**	**19 17 47.4**	**+1.7**
	comp=Z,118nm,0.8s						
SEY	**Seymchan**	**10.51**	**325**	⇑*e*PN	Pn	19 18 10.6	+3.3
BILL	**Bilibino**	**13.10**	**1**	*c i*PN	**Pn**	**19 18 45.2**	**+2.5**
BILL				*e*SS	S	19 21 21.7	-11
BILL	comp=Z,11nm,0.5s			pmax	pmax		
BILL	comp=Z,4μm,18.0s			MLR	MLR		
UNV	**Unalaska Valle**	**16.17**	**83**	*e*Pn	**P**	**19 19 26.0**	**-0.9**
	comp=E,99nm,0.7s						
YSS	**Yuzh-Sakhalins**	**16.49**	**250**	⇓*e*P	P	19 19 40.0	+10
YSS	comp=Z,80nm,1.3s			pmax	pmax		
YSS	comp=Z,2μm,19.0s			MLR	MLR		
YSS	comp=N,4μm,16.0s			MLR	MLR		
YSS	comp=E,3μm,18.0s			MLR	MLR		
AKUT	**Akutan**	**16.51**	**81**	*e*Pn	**P**	**19 19 29.6**	**-1.0**
	comp=E,288nm,0.7s						
TNA	**Tin City**	**16.67**	**40**	*e*P	**P**	**19 19 31.8**	**-0.4**
	comp=E,315nm,1.7s						
YUK	**Yuzh-Kuril'sk**	**16.86**	**238**	⇑*i*P	**Pn**	**19 19 31.0**	**-1.6**
YUK				*i* S	**Sn**	**19 22 37.2**	**-1.9**
YUK	comp=E,23nm,0.5s			pmax	pmax		
YUK	comp=N,51nm,0.5s			pmax	pmax		
YUK	comp=Z,86nm,0.5s			pmax	pmax		
YUK	comp=Z,538nm,3.6s			pmax	pmax		
YUK	comp=N,1μm,17.0s			MLR	MLR		
YUK	comp=E,521nm,17.0s			MLR	MLR		
YUK	comp=Z,1μm,17.0s			MLR	MLR		
ASAJ	**Asahikawa**	**18.44**	**243**	*e*P	**Pn**	**19 19 54.1**	**+2.0**
	comp=Z,34nm,1.0s						
ASAJ	**Asahikawa**	**18.44**	**243**	P	**Pn**	**19 19 52.9**	**+0.8**
	comp=Z,2.8nm,0.3s,baz=66,slow=12,SNR=20						
ASAJ				LR	LR	19 26 49.7	
	comp=Z,2μm,18.7s,baz=51,slow=37						
SDPT	**Sand Point**	**19.21**	**75**	*e*P	**P**	**19 19 57.1**	**-3.2**
	comp=Z,101nm,0.7s						
ERM	**Erimo**	**19.68**	**238**	*i* P	**P**	**19 20 05.2**	**-0.4**
ERM	**Erimo**	**19.68**	**238**	*e*P	**P**	**19 20 05.0**	**-0.7**
	comp=Z,31nm,0.6s						
ERM	**Erimo**	**19.68**	**238**	Pn	**Pn**	**19 20 08.9**	**+1.7**
	comp=Z,229nm,0.3s,SNR=8.4						
YAK	**Yakutsk**	**19.88**	**305**	*e*P	**P**	**19 20 07.6**	**0.0**
YAK				*e*S	**S**	**19 23 51.2**	**+1.2**
YAK	comp=Z,38nm,1.2s			pmax	pmax		
YAK	comp=E,42nm,1.5s			pmax	pmax		
YAK	comp=N,12nm,1.2s			pmax	pmax		
YAK	comp=N,45nm,1.5s			pmax	pmax		
YAK	comp=Z,275nm,2.9s			pmax	pmax		
YAK	comp=E,205nm,2.3s			pmax	pmax		
YAK	comp=N,213nm,3.0s			smax	smax		
YAK	comp=E,49nm,1.8s			smax	smax		
YAK	comp=E,552nm,15.0s			MLR	MLR		
YAK	comp=Z,644nm,14.0s			MLR	MLR		
HABR	**Khabarovsk**	**19.97**	**264**	*e*P	**P**	**19 20 07.1**	**-1.6**
HABR				*e*S	**S**	**19 23 51.4**	**-0.6**
HABR	comp=Z,73nm,2.8s			pmax	pmax		
HABR	comp=Z,2μm,20.0s			MLR	MLR		
CHGN	**Chignik**	**20.14**	**71**	*e*P	**P**	**19 20 09.2**	**-1.4**
KLR	**Kul'dur**	**21.49**	**269**	*e*P	**P**	**19 20 22.7**	**-2.5**
CLNS	**Chul'man**	**22.72**	**292**	*e*P	**P**	**19 20 38.8**	**+0.5**
CLNS	comp=Z,26nm,1.3s			pmax	pmax		
CLNS	comp=E,9.0nm,0.8s			pmax	pmax		
CLNS	comp=N,15nm,1.0s			MLR	MLR		
CLNS	comp=Z,835nm,14.0s			MLR	MLR		
CLNS	comp=N,546nm,13.0s			MLR	MLR		
CLNS	comp=E,385nm,10.0s			MLR	MLR		
OHAK	**Old Harbor**	**22.73**	**67**	*e*P	**P**	**19 20 35.0**	**-3.3**
	comp=E,98nm,0.8s						
PPLA	**Purkeypile**	**22.73**	**53**	*e*P	**P**	**19 20 38.4**	**0.0**
	comp=E,264nm,1.6s						
TIXI	**Tiksi**	**22.89**	**331**	*i* P	**P**	**19 20 39.7**	**-0.2**
TIXI	comp=Z,35nm,2.5s			pmax	pmax		
TIXI	comp=Z,1μm,16.0s			MLR	MLR		
KDAK	**Kodiak Island**	**22.99**	**66**	P	**P**	**19 20 39.5**	**-1.5**
KDAK	**Kodiak Island**	**22.99**	**66**	P	**P**	**19 20 39.0**	**-2.0**
	comp=Z,987nm,0.6s,SNR=49						
KDAK	**Kodiak Island**	**22.99**	**66**	P	**P**	**19 20 39.5**	**-1.5**
	comp=Z,117nm,0.6s,baz=290,slow=6.8,SNR=107						
TRF	**Thorofare Moun**	**23.60**	**51**	*e*P	**P**	**19 20 46.0**	**-1.3**
	comp=Z,122nm,1.1s						
COLD	**Coldfoot**	**23.95**	**42**	*e*P	**P**	**19 20 49.5**	**-0.8**
	comp=Z,81nm,1.0s						
USRK	**Ussuriysk Arra**	**24.14**	**257**	P	**P**	**19 20 51.5**	**-0.8**
	comp=Z,2.1nm,0.8s,baz=51,slow=10,SNR=3.3						
USRK				LR	LR	19 30 32.5	
	comp=Z,1μm,19.8s,baz=52,slow=37						
MCK	**McKinley**	**24.20**	**51**	*e*P	**P**	**19 20 51.3**	**-1.5**
MCK	comp=Z,154nm,1.3s			pmax	pmax		
MCK	**McKinley**	**24.20**	**51**	*e*P	**P**	**19 20 51.3**	**-1.5**
	comp=Z,154nm,1.3s						
PMR	**Palmer**	**24.20**	**56**	*e*P	**P**	**19 20 50.6**	**-2.2**
PMR	comp=Z,37nm,0.6s			pmax	pmax		
PMR	**Palmer**	**24.20**	**56**	*e*P	**P**	**19 20 50.6**	**-2.2**
	comp=Z,37nm,0.6s						
SEW	**Seward**	**24.21**	**59**	*e*P	**P**	**19 20 50.9**	**-2.0**
	comp=Z,53nm,0.6s						
SML	**Sawmill**	**24.56**	**55**	*e*P	**P**	**19 20 55.4**	**-0.8**
SML	comp=Z,24nm,0.8s			pmax	pmax		
SML	**Sawmill**	**24.56**	**55**	*e*P	**P**	**19 20 55.4**	**-0.8**
	comp=Z,24nm,0.8s						
COLA	**College**	**24.69**	**48**	*e*P	**P**	**19 20 56.6**	**-0.5**
COLA	comp=Z,57nm,0.7s			pmax	pmax		
COLA	**College**	**24.69**	**48**	*e*P	**P**	**19 20 56.6**	**-0.5**
	comp=Z,57nm,0.7s						
ILAR	**Eielson Array**	**25.10**	**48**	P	**P**	**19 20 59.8**	**-1.1**
ILAR	**Eielson Array**	**25.10**	**48**	P	**P**	**19 20 59.8**	**-1.1**
	comp=Z,54nm,0.7s,baz=254,slow=8.7,SNR=307						
ILAR				LR	LR	19 31 12.3	
	comp=Z,933nm,21.1s,baz=271,slow=37						
MDJ	**Mudanjiang**	**25.25**	**261**	P	**P**	**19 21 02.3**	**-0.1**
MDJ				S	**S**	**19 25 27.9**	**+1.4**
MDJ				SS	SnSn	19 26 29.4	+12
MDJ	comp=Z,16nm,1.7s			pmax	pmax		
MDJ	comp=Z,300nm,9.9s			pmax	pmax		
MDJ	comp=N,910nm,20.5s			LR	LR		
MDJ	comp=E,670nm,21.5s			LR	LR		
MDJ	comp=Z,1μm,17.6s			LR	LR		
PAX	**Paxson**	**25.80**	**52**	*e*P	**P**	**19 21 06.1**	**-1.2**
PAX	comp=Z,38nm,0.7s			pmax	pmax		
PAX	**Paxson**	**25.80**	**52**	*e*P	**P**	**19 21 06.1**	**-1.2**
	comp=Z,38nm,0.7s						
DIV	**Divide**	**25.86**	**56**	*e*P	**P**	**19 21 06.8**	**-1.1**
	comp=Z,33nm,0.6s						
MAJO	**Matsushiro**	**26.35**	**237**	*e*P	**P**	**19 21 12.8**	**+0.3**
MAJO	comp=Z,157nm,1.1s			pmax	pmax		
MAJO	**Matsushiro**	**26.35**	**237**	*e*P	**P**	**19 21 12.8**	**+0.3**
	comp=Z,157nm,1.1s						
MAT	**Matsushiro**	**26.35**	**237**	P	**P**	**19 21 12.9**	**+0.4**
MAT				S	**S**	**19 25 50.9**	**+6.8**
MJAR	**Matsushiro Arr**	**26.35**	**237**	P	**P**	**19 21 13.0**	**+0.6**
MJAR	**Matsushiro Arr**	**26.35**	**237**	P	**P**	**19 21 13.0**	**+0.6**
	comp=Z,9.3nm,1.0s,baz=20,slow=7.4,SNR=18						
DOT	**Dot Lake**	**26.38**	**51**	*e*P	**P**	**19 21 10.5**	**-2.0**
	comp=Z,126nm,1.4s						
BMRM	**Bremner River**	**26.45**	**57**	*e*P	**P**	**19 21 12.4**	**-0.8**
	comp=Z,46nm,0.6s						
MENT	**Mentasta**	**26.59**	**52**	*e*P	**P**	**19 21 13.1**	**-1.4**
EGAK	**Eagle**	**27.55**	**48**	*e*P	**P**	**19 21 21.2**	**-1.8**
	comp=Z,40nm,0.8s						
CN2	**Changchun**	**28.11**	**263**	*e*P	**P**	**19 21 27.5**	**-0.7**
CN2				*e*sP	**sP**	**19 21 36.3**	**-1.4**
CN2				*e*PP	**PnPn**	**19 22 17.4**	**+1.5**
CN2				*e*S	**S**	**19 26 09.3**	**-2.4**
CN2	comp=Z,10.0nm,1.9s			pmax	pmax		
CN2	comp=Z,200nm,4.0s			pmax	pmax		
CN2	comp=N,1μm,13.0s			LR	LR		
CN2	comp=E,1μm,13.0s			LR	LR		
CN2	comp=Z,1μm,13.0s			LR	LR		
JHJ	**Hachijo jima 2**	**28.44**	**230**	LR	LR	19 33 14.5	
	comp=Z,198nm,18.6s,baz=7.1,slow=37						
PNL	**Peninsula**	**29.26**	**58**	*e*P	**P**	**19 21 37.7**	**-0.6**
	comp=Z,22nm,0.7s						
INK	**Inuvik**	**30.31**	**40**	P	**P**	**19 21 47.5**	**+0.1**
INK	**Inuvik**	**30.31**	**40**	P	**P**	**19 21 47.5**	**+0.1**
	comp=Z,27nm,0.5s,baz=289,slow=6.8,SNR=155						
SNY	**Shenyang**	**30.42**	**262**	⇓P	**P**	**19 21 48.8**	**+0.2**
SNY				S	**S**	**19 26 50.5**	**+2.5**
SNY	comp=Z,15nm,2.1s			pmax	pmax		
SNY	comp=Z,420nm,4.7s			pmax	pmax		
SNY	comp=N,1μm,15.1s			LR	LR		
SNY	comp=E,1μm,17.5s			LR	LR		
SNY	comp=Z,2μm,18.0s			LR	LR		
CIT	**Chita**	**30.57**	**286**	*e*P	**P**	**19 21 51.1**	**+1.1**
CIT				*e*		19 21 58.2	
CIT				*e*		19 22 03.5	
CIT				*e*		19 22 57.1	
KSRS	**Korea Array**	**30.99**	**251**	P	**P**	**19 21 54.9**	**+1.2**
	comp=Z,4.6nm,1.0s,baz=42,slow=8.2,SNR=15						
KSRS				LR	LR	19 33 58.1	
	comp=Z,931nm,19.7s,baz=46,slow=36						
KSAR	**Wonju Array Be**	**31.02**	**251**	P	**P**	**19 21 54.9**	**+0.9**
SKAG	**Skagway**	**31.30**	**57**	*e*P	**P**	**19 21 56.9**	**+0.6**
	comp=Z,32nm,1.2s						
DL2	**Dalian**	**33.48**	**260**	P	P	19 22 21.9	+6.4
DL2				S	S	19 27 47.9	+12
DL2	comp=Z,47nm,1.1s			pmax	pmax		
DL2	comp=Z,210nm,6.3s			pmax	pmax		
DL2	comp=N,2μm,19.7s			LR	LR		
DL2	comp=E,1μm,20.7s			LR	LR		
DL2	comp=Z,2μm,19.0s			LR	LR		
WRAK	**Wrangell Islan**	**33.89**	**62**	*e*P	**P**	**19 22 20.4**	**+1.5**
	comp=Z,33nm,0.9s						
DLBC	**Dease Lake**	**34.24**	**57**	*e*P	**P**	**19 22 23.2**	**+1.2**
IRK	**Irkutsk**	**35.52**	**292**	*e*P	**P**	**19 22 33.0**	**-0.1**
IRK	comp=Z,35nm,2.9s			pmax	pmax		
BJI	**Beijing**	**35.83**	**266**	P	**P**	**19 22 36.6**	**+0.8**
BJI				S	**S**	**19 28 14.3**	**+2.4**
BJI	comp=Z,10.0nm,0.6s			pmax	pmax		
BJI	comp=Z,170nm,4.7s			pmax	pmax		
BJI	comp=N,1μm,15.9s			LR	LR		
BJI	comp=E,1μm,15.9s			LR	LR		
BJI	comp=Z,850nm,22.4s			LR	LR		
ULN	**Ulaanbaatar**	**36.29**	**284**	*e*P	**P**	**19 22 40.8**	**+0.9**
	comp=Z,14nm,1.0s						
SONM	**Songino Array**	**36.68**	**284**	P	**P**	**19 22 44.3**	**+1.1**
SONM	**Songino Array**	**36.68**	**284**	P	**P**	**19 22 44.3**	**+1.1**
	comp=Z,6.5nm,0.8s,baz=56,slow=8.5,SNR=7.5						
ZAK	**Zakamensk**	**37.01**	**289**	⇑*i*P	**P**	**19 22 47.0**	**+1.0**
ZAK				*e*		19 25 07.6	
ZAK	comp=Z,7.0nm,1.2s			pmax	pmax		
MOY	**Mondy**	**37.57**	**293**	*e*P	**P**	**19 22 52.6**	**+1.9**
MOY	comp=Z,37nm,1.7s			pmax	pmax		
HHC	**Hu-ho-hao-te**	**37.95**	**271**	*e*P	**P**	**19 22 54.8**	**+0.7**
HHC				PP	**PnPn**	**19 24 24.5**	**+2.4**
HHC				PcP	**PcP**	**19 25 12.3**	**+2.8**
HHC				S	**S**	**19 28 44.3**	**-0.3**
HHC				ScP	**ScP**	**19 28 57.6**	**+2.2**
HHC				PcS	**PcS**	**19 28 59.3**	**+0.9**
HHC				ScS	**ScS**	**19 33 04.6**	**0.0**
HHC	comp=Z,32nm,0.6s			pmax	pmax		
HHC	comp=Z,400nm,6.0s			pmax	pmax		
HHC	comp=N,2μm,14.6s			LR	LR		
HHC	comp=E,2μm,14.0s			LR	LR		
HHC	comp=Z,2μm,13.0s			LR	LR		
BBB	**Bella Bella**	**38.06**	**66**	LR	LR	19 37 41.3	
	comp=Z,1μm,18.7s,baz=136,slow=35						
BTO	**Baotou**	**39.00**	**272**	*e*P	**P**	**19 23 03.1**	**+0.2**
YKW3	**Yellowknife Ar**	**39.45**	**46**	*e*P	**P**	**19 23 06.0**	**-0.3**
	comp=Z,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**39.49**	**46**	P	**P**	**19 23 06.4**	**-0.1**
YKA				ScP	**ScP**	**19 29 01.0**	**+0.3**
YKA	**Yellowknife Ar**	**39.49**	**46**	P	**P**	**19 23 06.4**	**-0.1**
	comp=Z,18nm,0.5s,baz=297,slow=8.1,SNR=200						
YKA				ScP	**ScP**	**19 29 01.0**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=303,slow=3.8,SNR=5.7						
KRAR	**Krasnoyarsk**	**39.50**	**302**	*i* P	**P**	**19 23 08.6**	**+1.9**
KRAR	comp=Z,32nm,2.2s			pmax	pmax		
KRAR	comp=Z,796nm,14.0s			MLR	MLR		
NJ2	**Nanjing**	**39.99**	**255**	*e*P	**P**	**19 23 11.8**	**+0.8**
NJ2				pP	**pP**	**19 23 16.1**	**-1.8**
NJ2				sP	**sP**	**19 23 17.8**	**-2.8**
NJ2				S	**S**	**19 29 16.0**	**+1.0**
NJ2				sS	**sS**	**19 29 31.0**	**+4.6**
NJ2	comp=Z,10.0nm,0.8s			pmax	pmax		
NJ2	comp=Z,190nm,5.8s			pmax	pmax		
NJ2	comp=N,820nm,18.0s			LR	LR		
NJ2	comp=E,890nm,14.7s			LR	LR		
NJ2	comp=Z,650nm,18.1s			LR	LR		
RES	**Resolute Bay**	**40.28**	**24**	*e*P	**P**	**19 23 12.2**	**-0.8**
	comp=Z,11nm,1.1s						
RES	**Resolute Bay**	**40.28**	**24**	LR	LR	19 43 51.3	
	comp=Z,383nm,18.6s,baz=271,slow=42						
ALE	**Alert**	**40.57**	**9**	P	**P**	**19 23 14.9**	**-0.4**
	comp=Z,40nm,1.6s,SNR=5.7						
NLWA	**Neilton Lookou**	**43.04**	**70**	*e*P	**P**	**19 23 36.8**	**+0.9**
	comp=Z,14nm,0.7s						
JCW	**Jim Creek**	**43.59**	**68**	P	**P**	**19 23 40.8**	**+0.4**
RPW	**Rockport**	**43.66**	**67**	P	**P**	**19 23 41.0**	**+0.1**
BMW	**Boistfort Moun**	**43.95**	**70**	P	**P**	**19 23 43.9**	**+0.6**
BMW	**Boistfort Moun**	**43.95**	**70**	P	**P**	**19 23 43.9**	**+0.6**
XAN	**Xi'an**	**44.16**	**266**	P	**P**	**19 23 44.4**	**-0.7**
XAN				pP	**pP**	**19 23 52.8**	**+0.7**
XAN				S	S	19 30 09.3	-7.5
XAN	comp=Z,2.0nm,1.7s			pmax	pmax		
XAN	comp=Z,19nm,4.0s			pmax	pmax		
XAN	comp=N,740nm,16.4s			LR	LR		
XAN	comp=E,430nm,17.4s			LR	LR		
XAN	comp=Z,380nm,17.4s			LR	LR		
GUMO	**Guam**	**44.40**	**210**	LR	LR	19 40 56.5	
	comp=Z,374nm,18.2s,baz=254,slow=34						
ZAA0	**Zalesovo Array**	**44.52**	**304**	*e*P	**P**	**19 23 46.8**	**-0.9**
ZALV	**Zalesovo Beam**	**44.52**	**304**	P	**P**	**19 23 46.8**	**-0.8**
ZALV	**Zalesovo Beam**	**44.52**	**304**	P	**P**	**19 23 46.8**	**-0.8**
ZALV	**Zalesovo Beam**	**44.52**	**304**	P	**P**	**19 23 46.8**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=57,slow=6.6,SNR=6.9						
ZALV				LR	LR	19 44 37.8	
	comp=Z,471nm,18.4s,baz=53,slow=39						
LON	**Longmire**	**44.54**	**69**	*e*P	**P**	**19 23 47.8**	**-0.3**
LON	comp=Z,6.0nm,0.5s			pmax	pmax		
LON	**Longmire**	**44.54**	**69**	*e*P	**P**	**19 23 47.8**	**-0.3**
	comp=Z,6.1nm,0.5s						
WPW	**White Pass**	**44.72**	**69**	P	**P**	**19 23 49.7**	**+0.2**
NVS	**Novosibirsk**	**44.74**	**305**	*e*P	**P**	**19 23 49.2**	**-0.2**
NVS				*e*S	**S**	**19 30 27.5**	**+2.8**
NVS	comp=N,23nm,1.6s			pmax	pmax		
NVS	comp=E,49nm,1.6s			pmax	pmax		
NVS	comp=Z,70nm,1.6s			pmax	pmax		
NVS	comp=N,7.0nm,1.8s			smax	smax		
NVS	comp=E,38nm,2.6s			smax	smax		
WTV	**Waterville**	**44.95**	**67**	P	**P**	**19 23 51.2**	**0.0**
LZH	**Lanzhou**	**

LZH				sS	**sS**	19 30 50.0	+0.3			
LZH				SS	**ScS**	19 33 51.6	-0.1			
LZH				pmax	pmax					
	comp=Z,37nm,1.4s									
LZH				pmax	pmax					
	comp=Z,220nm,4.8s									
LZH				LR	LR					
	comp=N,870nm,13.6s									
LZH				LR	LR					
	comp=E,750nm,14.3s									
LZH				LR	LR					
	comp=Z,1µm,14.9s									
VFP	**Flag Point**	45.63	71	P	**P**	19 23 57.0	+0.2			
GTA	**Gaotai**	45.65	279	*eP*	**P**	19 23 58.3	+1.3			
GTA				pP	**pP**	19 24 03.9	-0.1			
GTA				sP	**sP**	19 24 07.1	+0.4			
GTA				PP	**PP**	19 25 45.4	+1.6			
GTA				S	**S**	19 30 40.8	+2.4			
GTA				sS	**sS**	19 30 50.3	+0.4			
GTA				SS	**ScS**	19 33 56.1	+4.5			
GTA				pmax	pmax					
	comp=Z,6.0nm,0.7s									
GTA				pmax	pmax					
	comp=Z,310nm,4.7s									
GTA				LR	LR					
	comp=N,1µm,15.2s									
GTA				LR	LR					
	comp=E,1µm,11.9s									
GTA				LR	LR					
	comp=Z,1µm,12.8s									
QZH	**Quanzhou**	45.68	248	⇑*i*P	P	19 24 04.3	+7.1			
QZH				S	S	19 30 49.0	+10			
QZH				LR	LR					
	comp=Z,710nm,21.3s									
OD2	**Odessa Site #2**	45.80	67	P	**P**	19 23 57.6	-0.4			
HAWA	**Hanford**	45.99	68	*eP*	**P**	19 23 59.1	-0.4			
	comp=Z,16nm,1.2s									
NEW	**Newport**	46.08	65	*eP*	**P**	19 23 59.9	-0.3			
	comp=Z,7.2nm,0.6s									
NEW	**Newport**	46.08	65	⇑P	**P**	19 23 59.9	-0.3			
	baz=46,SNR=12									
NEW	**Newport**	46.08	65	LR	LR	19 45 07.6				
	comp=Z,645nm,18.6s,baz=304,slow=38									
A12A	**Yaak River Ran**	46.42	63	⇑P	**P**	19 24 03.1	+0.2			
	baz=46									
HUMO	**Hull Mountain**	46.57	74	*eP*	**P**	19 24 04.5	+0.5			
	comp=Z,10nm,1.0s									
B12A	**Libby**	46.75	64	⇑P	**P**	19 24 05.9	+0.5			
	baz=46									
KRMB	**Red Mountain**	46.76	76	*eP*	**P**	19 24 06.3	+0.7			
	comp=Z,48nm,1.7s									
A13A	**Flathead Natio**	47.06	62	⇑P	**P**	19 24 07.9	0.0			
	baz=47									
WALA	**Waterton Lakes**	47.24	62	*eP*	**P**	19 24 09.1	-0.2			
	comp=Z,1.3nm,0.7s									
YBH	**Yreka Blue Hor**	47.29	75	*eP*	**P**	19 24 10.6	+0.8			
	comp=Z,9.8nm,0.6s									
YBH	**Yreka Blue Hor**	47.29	75	LR	LR	19 42 09.3				
	comp=Z,524nm,18.0s,baz=302,slow=34									
C12B	**Naegeli Ranch,**	47.29	64	⇑P	**P**	19 24 09.8	+0.1			
	baz=47									
B13A	**Whitefish**	47.39	63	⇑P	**P**	19 24 10.2	-0.2			
	baz=47,SNR=20									
A14A	**Double T Ranch**	47.54	62	⇓P	**P**	19 24 11.1	-0.6			
	baz=47,SNR=19									
BSMT	**Bassoo Peak**	47.56	64	*eP*	**P**	19 24 12.0	+0.1			
	comp=Z,38nm,0.7s									
BLMT	**Blacktail Moun**	47.67	63	*eP*	**P**	19 24 12.8	0.0			
	comp=Z,34nm,1.0s									
D12A	**Red Ives Fores**	47.78	65	⇓P	**P**	19 24 12.9	-0.6			
	baz=48									
C13A	**Hot Springs**	47.78	64	⇓P	**P**	19 24 13.4	-0.1			
	baz=48,SNR=14									
JTMT	**Jette**	47.89	64	*eP*	**P**	19 24 14.3	-0.1			
	comp=Z,40nm,0.7s									
A15A	**Johnson Ranch,**	47.89	61	⇓P	**P**	19 24 13.5	-0.9			
	baz=48,SNR=12									
YBMT	**Yellow Bay**	47.95	63	*eP*	**P**	19 24 14.7	-0.2			
	comp=Z,22nm,0.7s									
B14A	**Marquette Ranc**	48.01	62	⇓P	**P**	19 24 14.8	-0.6			
	baz=48,SNR=16									
C14A	**Swan Lake**	48.15	63	⇓P	**P**	19 24 16.3	-0.1			
	baz=48									
WDC	**Whiskeytown Da**	48.16	76	*eP*	**P**	19 24 16.7	+0.3			
WDC				pmax	pmax					
	comp=Z,15nm,1.0s									
WDC	**Whiskeytown Da**	48.16	76	*eP*	**P**	19 24 16.7	+0.3			
	comp=Z,15nm,1.0s									
BMO	**Blue Mountains**	48.18	68	*eP*	**P**	19 24 16.4	-0.3			
	comp=Z,5.8nm,0.6s									
SWMT	**Swartz Lake**	48.19	64	*eP*	**P**	19 24 16.5	-0.2			
	comp=Z,16nm,1.0s									
D13A	**Huson**	48.22	64	⇓P	**P**	19 24 16.5	-0.5			
	baz=48,SNR=10									
B15A	**Bradely Ranch,**	48.40	62	⇑P	**P**	19 24 17.6	-0.8			
	baz=48,SNR=12									
DAG	**Danmarks Havn**	48.48	1	*i* P	**P**	19 24 17.3	-1.1			
DAG	**Danmarks Havn**	48.48	1	*i* P	**P**	19 24 17.3	-1.1			
DAG				*i*		19 24 34.8				
MOD	**Modoc**	48.51	73	*eP*	**P**	19 24 19.4	+0.1			
	comp=Z,38nm,0.6s									
SLMT	**Seeley Lake**	48.62	64	*eP*	**P**	19 24 19.6	-0.5			
	comp=Z,9.2nm,0.7s									
MSO	**Missoula**	48.66	64	*eP*	**P**	19 24 19.9	-0.5			
	comp=Z,4.3nm,0.7s									
MSO	**Missoula**	48.66	64	⇑P	**P**	19 24 19.9	-0.5			
	baz=48,SNR=7.4									
F12A	**Elk City**	48.67	66	⇓P	**P**	19 24 20.3	-0.2			
	baz=48,SNR=24									
D14A	**Greenough**	48.72	64	⇓P	**P**	19 24 20.4	-0.4			
	baz=48,SNR=27									
C15A	**Salmond Ranch,**	48.73	63	⇑P	**P**	19 24 20.9	0.0			
	baz=48,SNR=23									
B16A	**M & M Farms, S**	48.77	61	⇑P	**P**	19 24 20.3	-0.9			
	baz=48,SNR=7.6									
E13A	**Victor**	48.78	65	⇓P	**P**	19 24 20.8	-0.5			
	baz=49									
A17A	**Triple J Farms**	48.93	60	⇑P	**P**	19 24 21.7	-0.7			
	baz=49,SNR=19									
CHMT	**Chamberlain Mo**	48.96	64	*eP*	**P**	19 24 21.9	-0.8			
	comp=Z,6.2nm,0.9s									
G12A	**Big Creek, Yel**	49.05	67	⇓P	**P**	19 24 23.1	-0.4			
	baz=49									
WVOR	**Wild Horse Val**	49.07	72	*eP*	**P**	19 24 23.4	-0.2			
WVOR				pmax	pmax					
	comp=Z,9.0nm,0.7s									
WVOR	**Wild Horse Val**	49.07	72	*eP*	**P**	19 24 23.4	-0.2			
	comp=Z,8.7nm,0.7s									
F13A	**Darby**	49.14	66	⇓P	**P**	19 24 23.5	-0.6			
	baz=49,SNR=15									
C16A	**Fuhringer Ranc**	49.15	62	⇑P	**P**	19 24 23.6	-0.5			
	baz=49,SNR=21									
E14A	**Clinton**	49.16	65	⇑P	**P**	19 24 23.9	-0.4			
	baz=49,SNR=9.7									
D15A	**Lincoln**	49.25	63	⇑P	**P**	19 24 24.6	-0.3			
	baz=49,SNR=12									
FFC	**Flin Flon**	49.29	50	*i* P	**P**	19 24 24.8	-0.1			
FFC	**Flin Flon**	49.29	50	*eP*	**P**	19 24 24.4	-0.5			
	comp=Z,14nm,0.7s									
FFC	**Flin Flon**	49.29	50	P	**P**	19 24 24.4	-0.5			
	comp=Z,138nm,0.6s,SNR=11									
B17A	**L&G Farms, Che**	49.31	61	⇓P	**P**	19 24 24.8	-0.5			
	baz=49,SNR=6.5									
A18A	**Metzger Ranch,**	49.38	60	⇓P	**P**	19 24 25.0	-0.7			
	baz=49,SNR=16									
CD2	**Chengdu**	49.41	267	P	**P**	19 24 26.8	+0.5			
CD2				pP	**pP**	19 24 32.5	-0.8			
CD2				sP	**sP**	19 24 35.4	-0.6			
CD2				PcP	**PcP**	19 25 49.6	+1.3			
CD2				PP	**PP**	19 26 21.1	+0.9			
CD2				PcS	**PcS**	19 29 44.8	-0.2			
CD2				S	**S**	19 31 31.0	-0.9			
CD2				ScS	**ScS**	19 34 14.8	-1.8			
CD2				SS	**SS**	19 34 58.4	-5.0			
CD2				pmax	pmax					
	comp=Z,30nm,0.5s									
CD2				pmax	pmax					
	comp=Z,120nm,5.1s									
CD2				LR	LR					
	comp=N,1µm,21.5s									
CD2				LR	LR					
	comp=E,850nm,19.6s									
CD2				LR	LR					
	comp=Z,1µm,17.6s									
WMQ	**Urumqi**	49.42	291	P	**P**	19 24 27.0	+0.8			
WMQ				sP	**sP**	19 24 36.0	0.0			
WMQ				PcP	**PcP**	19 25 49.0	+0.8			
WMQ				PP	**PP**	19 26 22.0	+1.9			
WMQ				ScP	**ScP**	19 29 43.0	+1.2			
WMQ				S	**S**	19 31 32.0	+0.2			
WMQ				sS	**sS**	19 31 42.0	-1.4			
WMQ				ScS	**ScS**	19 34 15.0	-1.3			
WMQ				SS	**SS**	19 35 00.0	-3.1			
WMQ				pmax	pmax					
	comp=Z,26nm,1.0s									
WMQ				pmax	pmax					
	comp=Z,280nm,5.0s									
WMQ				LR	LR					
	comp=N,3µm,16.0s									
WMQ				LR	LR					
	comp=E,2µm,16.0s									
WMQ				LR	LR					
	comp=Z,2µm,16.0s									
KURK	**Kurchatov**	49.50	303	*c iP*	**P**	19 24 26.3	-0.3			
KURK				pmax	pmax					
	comp=Z,22nm,1.2s									
KURK				MLR	MLR					
	comp=Z,1µm,19.0s									
KURK	**Kurchatov**	49.50	303	*eP*	**P**	19 24 26.2	-0.3			
	comp=Z,61nm,1.1s									
KURK	**Kurchatov**	49.50	303	P	**P**	19 24 26.0	-0.6			
	comp=Z,153nm,0.6s,SNR=19									
KURBB	**Kurchatov Arra**	49.61	303	P	**P**	19 24 27.2	-0.1			
	comp=Z,9.8nm,0.5s,baz=55,slow=8.0,SNR=82									
F14A	**Wisdom**	49.63	65	⇓P	**P**	19 24 27.2	-0.6			
	baz=49									
G13A	**Cobalt**	49.65	66	⇓P	**P**	19 24 27.5	-0.5			
	baz=49,SNR=28									
H12A	**Diamond D Ranc**	49.69	67	⇓P	**P**	19 24 27.4	-0.9			
	baz=50									
B18A	**Beardsley Farm**	49.76	60	⇑P	**P**	19 24 28.2	-0.4			
	baz=50,SNR=20									
D16A	**Dana Ranch, Ca**	49.76	63	⇓P	**P**	19 24 28.5	-0.3			
	baz=50,SNR=18									
C17A	**Wharram Farm,**	49.76	62	⇓P	**P**	19 24 28.0	-0.8			
	baz=50,SNR=40									
HRY	**Holter Researc**	49.83	63	*eP*	**P**	19 24 29.3	0.0			
	comp=Z,15nm,0.5s									
BEKR	**Beckworth**	49.86	75	*eP*	**P**	19 24 29.9	+0.1			
	comp=Z,9.2nm,1.2s									
A19A	**Klindworth Far**	49.92	59	⇓P	**P**	19 24 29.3	-0.6			
	baz=50,SNR=20									
MFID	**Camas Ranch**	49.93	69	*eP*	**P**	19 24 29.8	-0.4			
	comp=Z,7.6nm,0.6s									
MFID	**Camas Ranch**	49.93	69	⇑P	**P**	19 24 29.5	-0.6			
	baz=50,SNR=9.5									
H13A	**Challis**	49.99	67	⇓P	**P**	19 24 30.0	-0.6			
	baz=50,SNR=17									
EGMT	**Eagleton**	50.01	61	*eP*	**P**	19 24 29.7	-0.9			
	comp=Z,10nm,0.6s									
EGMT	**Eagleton**	50.01	61	⇓P	**P**	19 24 29.9	-0.7			
	baz=50,SNR=13									
E16A	**East Helena**	50.02	63	⇓P	**P**	19 24 30.9	+0.1			
	baz=50,SNR=14									
I12A	**Atlanta**	50.05	68	⇑P	**P**	19 24 30.4	-0.6			
	baz=50									
F15A	**Butte**	50.06	64	⇓P	**P**	19 24 30.7	-0.5			
	baz=50,SNR=16									
LRM	**Limekiln Ridge**	50.10	64	*eP*	**P**	19 24 30.7	-0.8			
	comp=Z,44nm,0.6s									
D17A	**Six Diamond Ra**	50.12	62	⇓P	**P**	19 24 31.2	-0.4			
	baz=50,SNR=22									
B19A	**Brinkman Farms**	50.13	60	⇓P	**P**	19 24 31.0	-0.5			
	baz=50,SNR=16									
MK31	**Makanchi Array**	50.27	297	*eP*	**P**	19 24 31.5	-1.1			
MK31	**Makanchi Array**	50.27	297	*eP*	**P**	19 24 31.5	-1.1			
MKAR	**Makanchi Array**	50.27	297	P	**P**	19 24 31.9	-0.7			
MKAR	**Makanchi Array**	50.27	297	P	**P**	19 24 31.9	-0.7			
MKAR	**Makanchi Array**	50.27	297	P	**P**	19 24 31.9	-0.7			
	comp=Z,3.0nm,0.6s,baz=51,slow=7.3,SNR=45									
MKAR				LR	LR	19 46 55.0				
	comp=Z,428nm,18.3s,baz=35,slow=37									
DLMT	**Dillon**	50.33	65	*eP*	**P**	19 24 32.2	-1.0			
	comp=Z,8.2nm,0.7s									
A20A	**Cobblestone Ra**	50.35	59	⇓P	**P**	19 24 33.1	-0.1			
	baz=50,SNR=11									
H14A	**Leadore**	50.43	66	⇓P	**P**	19 24 33.1	-0.9			
	baz=50,SNR=12									
E17A	**Martinsdale**	50.49	63	⇑P	**P**	19 24 34.6	+0.2			
	baz=50,SNR=34									
I13A	**Wildhorse Cree**	50.51	67	⇓P	**P**	19 24 34.4	-0.2			
	baz=50,SNR=33									
G15A	**Dillon**	50.52	65	⇑P	**P**	19 24 34.1	-0.6			
	baz=50,SNR=19									
D18A	**Linhart Farms,**	50.54	62	⇑P	**P**	19 24 34.5	-0.2			
	baz=50,SNR=7.5									
F16A	**Kennard Place,**	50.55	64	⇑P	**P**	19 24 34.3	-0.5			
	baz=50,SNR=7.1									
C19A	**Slack Wire Ran**	50.56	61	⇑P	**P**	19 24 34.7	0.0			
	baz=50,SNR=29									
MCMT	**McKenzie Canyo**	50.56	66	P	**P**	19 24 34.5	-0.5			
HLID	**Hailey**	50.59	68	*eP*	**P**	19 24 34.9	-0.3			
	comp=Z,5.0nm,0.6s									
HLID	**Hailey**	50.59	68	⇑P	**P**	19 24 34.8	-0.3			
	baz=50,SNR=13									
WCN	**Washoe City**	50.59	75	*eP*	**P**	19 24 35.6	+0.3			
WCN				pmax	pmax					
	comp=Z,19nm,0.9s									
WCN	**Washoe City**	50.59	75	*eP*	**P**	19 24 35.5	+0.3			
	comp=Z,20nm,0.9s									
BOZ	**Bozeman (W)**	50.64	64	*eP*	**P**	19 24 35.3	-0.2			
BOZ				pmax	pmax					
	comp=Z,23nm,1.3s									
BOZ	**Bozeman (W)**	50.64	64	*eP*	**P**	19 24 35.3	-0.2			
	comp=Z,23nm,1.3s									
BOZ	**Bozeman (W)**	50.64	64	⇑P	**P**	19 24 35.7	+0.1			
	baz=50,SNR=12									
A21A	**Bergtoll Ranch**	50.77	58	⇑P	**P**	19 24 36.0	-0.3			
	baz=50									
H15A	**Lima**	50.81	66	⇑P	**P**	19 24 36.1	-0.8			
	baz=51,SNR=5.6									
J13A	**Cove Ranch, Pi**	50.83	68	⇑P	**P**	19 24 36.9	-0.1			
	baz=51,SNR=9.6									
G16A	**Moss Hill, Enn**	50.84	65	⇑P	**P**	19 24 36.8	-0.2			
	baz=51,SNR=35									
I14A	**Mackay**	50.85	67	⇓P	**P**	19 24 37.0	-0.2			
	baz=51,SNR=18									
E18A	**Harlowton**	50.91	62	⇓P	**P**	19 24 37.9	+0.4			
	baz=51,SNR=23									
F17A	**Fitzpatrick Pl**	50.97	63	⇓P	**P**	19 24 38.0	0.0			
	baz=51,SNR=10									
D19A	**Cripps Ranch,**	51.03	61	⇑P	**P**	19 24 38.0	-0.3			
	baz=51,SNR=19									
C20A	**Veseth Ranch,**	51.10	60	⇓P	**P**	19 24 38.9	+0.1			
	baz=51,SNR=18									
B21A	**Ellsworth Farm**	51.10	59	⇓P	**P**	19 24 38.3	-0.5			
	baz=51,SNR=5.6									
GYA	**Guiyang**	51.11	261	⇑*i*P	**P**	19 24 39.6	+0.4			
GYA				PP	**PP**	19 26 37.8	+2.0			
GYA				ScP	**ScP**	19 29 49.8	+0.4			
GYA				S	**S**	19 31 55.0	-0.7			
GYA				SS	**SS**	19 35 27.8	-2.9			
GYA				pmax	pmax					
	comp=Z,20nm,0.8s									
GYA				pmax	pmax					
	comp=Z,130nm,5.0s									
GYA				LR	LR					
	comp=N,640nm,18.4s									
GYA				LR	LR					
	comp=E,570nm,19.0s									
GYA				LR	LR					
	comp=Z,690nm,18.6s									
CMB	**Columbia Colle**	51.12	77	*eP*	**P**	19 24 39.1	0.0			
CMB				pmax	pmax					
	comp=Z,6.0nm,0.6s									
CMB	**Columbia Colle**	51.12	77	*eP*	**P**	19 24 39.1	0.0			
	comp=Z,6.2nm,0.6s									
BMN	**Battle Mountai**	51.21	73	*eP*	**P**	19 24 39.9	0.0			
BMN				pmax	pmax					
	comp=Z,11nm,0.6s									
BMN	**Battle Mountai**	51.21	73	*eP*	**P**	19 24 39.9	0.0			
	comp=Z,11nm,0.6s									
A22A	**Carney Farms,**	51.26	58	⇓P	**P**	19 24 39.9	-0.2			
	baz=51,SNR=8.1									
QLMT	**Earthquake Lak**	51.30	65	*eP*	**P**	19 24 40.6	+0.1			
	comp=Z,1.2nm,0.7s									
I15A	**Monteview**	51.31	66	⇓P	**P**	19 24 40.6	0.0			
	baz=51									
G17A	**Pierce Place,**	51.33	64	⇓P	**P**	19 24 40.7	0.0			
	baz=51									
D20A	**Manuel Ranch,**	51.45	61	⇓P	**P**	19 24 41.6	+0.1			
	baz=51,SNR=17									
F18A	**Big Timber**	51.45	63	⇑P	**P**	19 24 41.8	+0.3			
	baz=51,SNR=22									
C21A	**Desert Coulee**	51.47	59	⇓P	**P**	19 24 41.6	0.0			
	baz=51,SNR=6.6									
H16A	**Russell Place,**	51.48	65	⇓P	**P**	19 24 41.8	-0.1			
	baz=51,SNR=24									
E19A	**Rath Farm, Rou**	51.55	62	⇑P	**P**	19 24 42.2	0.0			
	baz=51,SNR=8.7									
GCMT	**Greycliff**	51.56	63	*eP*	**P**	19 24 42.5	+0.2			
	comp=Z,7.3nm,0.6s									
SUMG	**Summit**	51.62	9	*i* P	**P**	19 24 42.3	-0.5			
SUMG				pmax	pmax					
	comp=Z,8.0nm,0.9s									
SUMG	**Summit**	51.62	9	*eP*	**P**	19 24 42.0	-0.8			
	comp=Z,30nm,1.2s									
SUMG	**Summit**	51.62	9	*i* P	**P**	19 24 42.3	-0.5			
	comp=Z,8.2nm,0.9s									
YMR	**Madison River**	51.65	65	*eP*	**P**	19 24 43.2	0.0			
	comp=Z,36nm,1.0s									
B22A	**Reddig Ranch S**	51.69	58	⇑P	**P**	19 24 43.1	-0.2			
	baz=52,SNR=6.8									
J15A	**Blackfoot**	51.75	67	⇓P	**P**	19 24 44.1	+0.3			
	baz=52,SNR=5.9									
BVAR	**Borovoye Array**	51.76	310	P	**P**	19 24 43.4	-0.2			
BVAR	**Borovoye Array**	51.76	310	P	**P**	19 24 43.4	-0.2			
BVAR	**Borovoye Array**	51.76	310	P	**P**	19 24 43.4	-0.2			
	comp=Z,6.8nm,0.9s,baz=55,slow=7.2,SNR=26									
BRVK	**Borovoye**	51.78	310	⇑*eP*	**P**	19 24 43.9	+0.1			
BRVK				pmax	pmax					
	comp=Z,29nm,1.7s									
BRVK				MLR	MLR					
	comp=Z,976nm,17.0s									
BRVK	**Borovoye**	51.78	310	*eP*	**P**	19 24 43.1	-0.7			
	comp=Z,38nm,1.1s									
BRVK	**Borovoye**	51.78	310	P	**P**	19 24 43.3	-0.5			
	comp=Z,131nm,0.7s,SNR=10									
A23A	**Redstone**	51.79	57	⇑P	**P**	19 24 43.6	-0.3			
	baz=52									
E20A	**Meyer Farm, Mu**	51.85	61	⇑P	**P**	19 24 44.7	+0.2			
	baz=52,SNR=17									
F19A	**Roth Farm, Mol**	51.88	62	⇓P	**P**	19 24 44.8	0.0			
	baz=52,SNR=13									
I16A	**Newdale**	51.92	66	⇑P	**P**	19 24 45.5	+0.4			
	baz=52,SNR=7.8									
G18A	**Lazy EL Ranch,**	51.93	63	⇓P	**P**	19 24 44.6	-0.6			
	baz=52,SNR=5.9									
K14A	**Jones Ranch, D**	51.94	68	⇓P	**P**	19 24 46.1	+0.8			
	baz=52,SNR=28									
NVAR	**Mina Array Bea**	52.01	75	P	**P**	19 24 46.6	+0.7			
NVAR	**Mina Array Bea**	52.01	75	P	**P**	19 24 46.6	+0.7			
	comp=Z,21nm,0.6s,baz=305,slow=7.9,SNR=120									
NVAR				LR	LR	19 45 04.8				
	comp=Z,358nm,20.0s,baz=231,slow=34									
LKWY	**Lake**	52.02	64	*eP*	**P**	19 24 47.4	+1.4			
LKWY				pmax	pmax					
	comp=Z,10.0nm,0.6s									
LKWY	**Lake**	52.02	64	*eP*	**P**	19 24 47.4	+1.4			
	comp=Z,9.9nm,0.6s									
KEV	**Kevo**	52.02	343	*eP*	**P**	19 24 42.4	-2.9			
KEV				pmax	pmax					
	comp=Z,3.0nm,0.6s									
KEV	**Kevo**	52.02	343	*ep*	**P**	19 24 42.4	-2.9			
	comp=Z,2.7nm,0.6s									
D21A	**La Casta Ranch**	52.04	60	⇑P	**P**	19 24 46.0	+0.1			
	baz=52									
H17A	**Grant Village**	52.04	65	⇑P	**P**	19 24 47.6	+1.4			
	baz=52,SNR=16									
B23A	**Brocton**	52.07	58	⇑P	**P**	19 24 45.6	-0.5			
	baz=52,SNR=9.6									
ELK	**Elko**	52.08	71	*eP*	**P**	19 24 46.4	0.0			
ELK	**Elko**	52.08	71	LR	LR	19 43 12.6				
	comp=Z,221nm,20.8s,baz=42,slow=32									
NV11	**Mina Array Sit**	52.09	75	*eP*	**P**	19 24 46.7	+0.3			
C22A	**Vida**	52.13	59	⇓P	**P**	19 24 46.2	-0.3			
	baz=52									
K15A	**Arbon**	52.19	67	⇓P	**P**	19 24 48.0	+0.9			
	baz=52,SNR=15									
IMW	**Indian Meadow**	52.20	65	*eP*	**P**	19 24 47.5	+0.1			
	comp=Z,16nm,0.8s									
RLMT	**Red Lodge**	52.22	63	*eP*	**P**	19 24 47.7	+0.3			
	comp=Z,39nm,0.8s									
RLMT	**Red Lodge**	52.22

I20A	**Worland**	**53.62**	**64**	⇓P		**P**	**19 24 57.9**	**+0.3**
	baz=53,SNR=8.6							
J19A	**Crowheart**	**53.62**	**65**	⇑P		**P**	**19 24 58.0**	**+0.3**
	baz=53,SNR=17							
M16A	**Huntsville**	**53.63**	**68**	⇓P		**P**	**19 24 57.8**	**0.0**
	baz=53							
G22A	**Birney**	**53.67**	**61**	⇑P		**P**	**19 24 58.3**	**+0.3**
	baz=53,SNR=6.5							
PKM	**Peak Mountain**	**53.68**	**79**	⇑P		**P**	**19 24 58.6**	**+0.4**
	baz=54							
H21A	**Big Horn, Sher**	**53.70**	**62**	⇓P		**P**	**19 24 58.3**	**0.0**
	baz=54,SNR=7.6							
BW06	**Boulder Array**	**53.70**	**65**	⇓P		**P**	**19 24 58.5**	**+0.1**
	baz=54,SNR=21							
PDAR	**Pinedale Array**	**53.71**	**65**	P		**P**	**19 24 58.5**	**0.0**
PDAR	**Pinedale Array**	**53.71**	**65**	P		**P**	**19 24 58.5**	**0.0**
	comp=Z,11nm,0.8s,baz=326,slow=2.5,SNR=84							
E24A	**Baker**	**53.72**	**59**	⇓P		**P**	**19 24 58.2**	**0.0**
	baz=54							
DUG	**Dugway**	**53.78**	**70**	*e*P		**P**	**19 24 59.1**	**+0.2**
DUG				pmax		pmax		
	comp=Z,6.0nm,0.6s							
DUG	**Dugway**	**53.78**	**70**	*e*P		**P**	**19 24 59.0**	**+0.2**
	comp=Z,5.8nm,0.6s							
DUG	**Dugway**	**53.78**	**70**	⇑P		**P**	**19 24 59.2**	**+0.2**
	baz=54,SNR=10							
ISA	**Isabella**	**53.88**	**78**	*e*P		**P**	**19 24 56.9**	**-2.7**
ISA				pmax		pmax		
	comp=Z,6.0nm,0.6s							
ISA	**Isabella**	**53.88**	**78**	*e*P		**P**	**19 24 56.9**	**-2.7**
	comp=Z,6.3nm,0.6s							
ISA	**Isabella**	**53.88**	**78**	⇑P		**P**	**19 24 59.1**	**-0.5**
	baz=54,SNR=5.5							
M17A	**Scullys Gap (B**	**54.03**	**67**	⇑P		**P**	**19 25 00.8**	**0.0**
	baz=54,SNR=13							
K19A	**Absolon Red Bu**	**54.04**	**65**	⇑P		**P**	**19 25 00.4**	**-0.4**
	baz=54,SNR=15							
L18A	**Fontenelle, Gr**	**54.05**	**67**	⇑P		**P**	**19 25 01.1**	**+0.2**
	baz=54,SNR=7.0							
J20A	**Shoshoni**	**54.06**	**64**	⇓P		**P**	**19 25 01.3**	**+0.4**
	baz=54,SNR=18							
H22A	**Clearmont**	**54.08**	**62**	⇑P		**P**	**19 25 01.1**	**+0.1**
	baz=54							
G23A	**Biddle**	**54.14**	**61**	⇑P		**P**	**19 25 01.2**	**-0.2**
	baz=54							
I21A	**Big Trails, Te**	**54.15**	**63**	⇓P		**P**	**19 25 01.4**	**-0.2**
	baz=54,SNR=8.8							
F24A	**Ekalaka**	**54.16**	**60**	⇑P		**P**	**19 25 01.4**	**-0.1**
	baz=54,SNR=9.3							
ARU	**Arti**	**54.19**	**319**	*c i*P		**P**	**19 25 01.4**	**-0.1**
ARU				PPP		PPP	19 28 13.1	
ARU				S		**S**	**19 32 39.3**	**+2.5**
ARU				SS		**SS**	**19 36 15.5**	**-2.4**
ARU				pmax		pmax		
	comp=Z,22nm,2.5s							
ARU				MLR		MLR		
	comp=Z,724nm,17.0s							
JLU	**Jordanelle**	**54.23**	**69**	*e*P		**P**	**19 25 02.5**	**+0.2**
	comp=Z,3.0nm,0.4s							
L19A	**Farson**	**54.28**	**66**	⇓P		**P**	**19 25 02.4**	**-0.2**
	baz=54,SNR=8.2							
N17A	**Moffit Pass**	**54.32**	**68**	⇑P		**P**	**19 25 03.2**	**+0.3**
	baz=54							
KMI	**Kunming**	**54.38**	**263**	P		**P**	**19 25 03.5**	**0.0**
KMI				pP		**pP**	**19 25 10.6**	**0.0**
KMI				PcP		**PcP**	**19 26 08.3**	**+1.1**
KMI				PP		**PP**	**19 27 04.3**	**-1.2**
KMI				S		**S**	**19 32 39.1**	**-1.5**
KMI				pmax		pmax		
	comp=Z,25nm,1.2s							
KMI				pmax		pmax		
	comp=Z,180nm,5.6s							
KMI				LR		LR		
	comp=N,710nm,22.6s							
KMI				LR		LR		
	comp=E,450nm,19.8s							
KMI				LR		LR		
	comp=Z,600nm,17.8s							
M18A	**Lyman**	**54.38**	**67**	⇓P		**P**	**19 25 03.4**	**+0.1**
	baz=54							
FRB	**Frobisher Bay**	**54.39**	**26**	LR		LR	19 51 57.5	
	comp=Z,399nm,19.3s,baz=46,slow=40							
J21A	**Lysite**	**54.40**	**64**	⇑P		**P**	**19 25 03.5**	**+0.1**
	baz=54,SNR=8.7							
K20A	**Yellowstone Ra**	**54.42**	**65**	⇓P		**P**	**19 25 03.0**	**-0.6**
	baz=54,SNR=8.9							
DAU	**Daniels Canyon**	**54.47**	**69**	*e*P		**P**	**19 25 04.6**	**+0.5**
DAU				pmax		pmax		
	comp=Z,11nm,0.6s							
DAU	**Daniels Canyon**	**54.47**	**69**	*e*P		**P**	**19 25 04.6**	**+0.5**
	comp=Z,11nm,0.6s							
OSI	**Osito Adit**	**54.50**	**79**	*e*P		**P**	**19 25 04.4**	**+0.3**
	comp=Z,21nm,0.6s							
OSI	**Osito Adit**	**54.50**	**79**	⇓P		**P**	**19 25 04.5**	**+0.3**
	baz=54							
I22A	**9 Mile Ranch,**	**54.51**	**63**	⇑P		**P**	**19 25 04.3**	**+0.2**
	baz=54,SNR=21							
G24A	**Alzada**	**54.53**	**60**	⇓P		**P**	**19 25 04.1**	**-0.2**
	baz=54							
MPU	**Maple Canyon**	**54.55**	**69**	*e*P		**P**	**19 25 05.2**	**+0.6**
	comp=Z,10nm,0.6s							
H23A	**Clabaugh Cattl**	**54.58**	**61**	⇓P		**P**	**19 25 04.5**	**-0.2**
	baz=54							
EDW2	**Edwards Air Fo**	**54.72**	**78**	⇓P		**P**	**19 25 05.9**	**+0.2**
	baz=55,SNR=7.8							
M19A	**Rock Springs**	**54.81**	**66**	⇓P		**P**	**19 25 06.3**	**-0.2**
	baz=55							
J22A	**Midwest**	**54.85**	**63**	⇑P		**P**	**19 25 06.6**	**-0.1**
	baz=55,SNR=8.1							
H24A	**Dirks Ranch, A**	**54.88**	**61**	⇑P		**P**	**19 25 06.5**	**-0.3**
	baz=55,SNR=12							
L20A	**Wamsutter**	**54.88**	**65**	⇓P		**P**	**19 25 06.8**	**-0.1**
	baz=55,SNR=18							
N18A	**Larsen Ranch,**	**54.91**	**67**	⇓P		**P**	**19 25 07.1**	**-0.1**
	baz=55,SNR=7.5							
DECC	**Green Verdugo**	**54.99**	**79**	⇓P		**P**	**19 25 08.1**	**+0.5**
	baz=55							
K21A	**Alcova**	**55.00**	**64**	⇑P		**P**	**19 25 07.4**	**-0.4**
	baz=55,SNR=12							
ULM	**Lac du Bonnet**	**55.08**	**51**	P		**P**	**19 25 07.9**	**-0.1**
ULM	**Lac du Bonnet**	**55.08**	**51**	P		**P**	**19 25 07.9**	**-0.1**
	comp=Z,17nm,0.6s,baz=314,slow=7.1,SNR=20							
ULM				LR		LR	19 49 33.3	
	comp=Z,1μm,19.9s,baz=83,slow=37							
MDND	**Maddock**	**55.08**	**55**	⇓P		**P**	**19 25 08.3**	**+0.2**
	baz=55							
PASC	**Pasadena Art C**	**55.13**	**79**	*e*P		**P**	**19 25 08.4**	**-0.2**
	comp=Z,18nm,0.8s							
MWC	**Mount Wilson**	**55.16**	**79**	*e*P		**P**	**19 25 09.2**	**+0.1**
MWC				pmax		pmax		
	comp=Z,12nm,0.7s							
MWC	**Mount Wilson**	**55.16**	**79**	*e*P		**P**	**19 25 09.2**	**+0.1**
	comp=Z,12nm,0.7s							
N19A	**John Jarvie Ra**	**55.23**	**67**	⇑P		**P**	**19 25 09.3**	**-0.1**
	baz=55,SNR=14							
TMUT	**Trail Mountain**	**55.29**	**70**	*e*P		**P**	**19 25 10.5**	**+0.4**
	comp=Z,42nm,0.6s							
SFJD	**Kangerlussuaq**	**55.32**	**16**	LR		LR	19 49 14.8	
	comp=Z,301nm,19.2s,baz=327,slow=37							
M20A	**Sweetwater, Wa**	**55.33**	**66**	⇑P		**P**	**19 25 10.5**	**+0.2**
	baz=55,SNR=15							
K22A	**Casper**	**55.37**	**64**	⇑P		**P**	**19 25 10.2**	**-0.2**
	baz=55							
BFSC	**Mount Baldy Ra**	**55.38**	**78**	⇓P		**P**	**19 25 10.6**	**0.0**
	baz=55,SNR=6.1							
P17A	**Butcher Ranch,**	**55.41**	**69**	⇓P		**P**	**19 25 11.4**	**+0.6**
	baz=55,SNR=18							
L21A	**Rawlins**	**55.42**	**65**	⇑P		**P**	**19 25 10.8**	**-0.1**
	baz=55,SNR=6.5							
I24A	**Kuemmerle Ranc**	**55.47**	**61**	⇓P		**P**	**19 25 11.0**	**-0.1**
	baz=55							
CIS	**Catalina Islan**	**55.57**	**80**	⇓P		**P**	**19 25 12.0**	**+0.3**
	baz=55							
Q16A	**Castle Valley**	**55.58**	**70**	⇓P		**P**	**19 25 12.7**	**+0.7**
	baz=55,SNR=23							
RSSD	**Black Hills**	**55.58**	**61**	*e*P		**P**	**19 25 11.7**	**-0.3**
RSSD				pmax		pmax		
	comp=Z,18nm,0.6s							
RSSD	**Black Hills**	**55.58**	**61**	*e*P		**P**	**19 25 11.7**	**-0.3**
	comp=Z,18nm,0.6s							
M21A	**Separation Pea**	**55.68**	**65**	⇑P		**P**	**19 25 12.6**	**-0.1**
	baz=56,SNR=11							
O19A	**Miners Draw (B**	**55.69**	**67**	⇓P		**P**	**19 25 13.0**	**+0.3**
	baz=56,SNR=17							
K23A	**Bowen Ranch, D**	**55.76**	**63**	⇑P		**P**	**19 25 12.9**	**-0.3**
	baz=56,SNR=5.2							
N20A	**Spence Gulch,**	**55.76**	**66**	⇓P		**P**	**19 25 14.2**	**+0.9**
	baz=56,SNR=32							
SRU	**San Rafael**	**55.79**	**69**	*e*P		**P**	**19 25 13.8**	**+0.3**
SRU	**San Rafael**	**55.79**	**69**	*e*P		**P**	**19 25 13.8**	**+0.3**
	comp=Z,2μm,0.6s							
SRU	**San Rafael**	**55.79**	**69**	⇑P		**P**	**19 25 14.1**	**+0.6**
	baz=56,SNR=109							
J24A	**Dixon Ranch, L**	**55.83**	**62**	⇑P		**P**	**19 25 13.5**	**-0.2**
	baz=56							
L22A	**Ellis Ranch, M**	**55.86**	**64**	⇓P		**P**	**19 25 14.6**	**+0.6**
	baz=56,SNR=11							
MURC	**Murrieta**	**56.10**	**79**	⇓P		**P**	**19 25 15.9**	**+0.3**
	baz=56							
L23A	**Garrett**	**56.18**	**64**	⇑P		**P**	**19 25 16.1**	**-0.2**
	baz=56,SNR=30							
N21A	**Black Mountain**	**56.20**	**66**	⇓P		**P**	**19 25 16.7**	**+0.2**
	baz=56,SNR=24							
M22A	**Cedar Creek Ra**	**56.22**	**65**	⇑P		**P**	**19 25 16.5**	**-0.2**
	baz=56,SNR=9.3							
P19A	**Cripple Cowboy**	**56.24**	**68**	⇓P		**P**	**19 25 17.1**	**+0.3**
	baz=56,SNR=30							
O20A	**White River Ci**	**56.27**	**67**	⇓P		**P**	**19 25 17.2**	**+0.3**
	baz=56,SNR=17							
BELC	**Belle Mtn. Jos**	**56.49**	**77**	⇓P		**P**	**19 25 18.6**	**+0.1**
	baz=56							
AGMN	**Agassiz Nation**	**56.50**	**52**	*e*P		**P**	**19 25 17.9**	**-0.2**
	comp=Z,20nm,0.8s							
PFO	**Pinyon Flat Ob**	**56.52**	**78**	*e*P		**P**	**19 25 18.1**	**-0.7**
	comp=Z,7.6nm,0.7s							
PFO	**Pinyon Flat Ob**	**56.52**	**78**	⇓P		**P**	**19 25 18.7**	**0.0**
	baz=56							
Q19A	**Hogan Spring (**	**56.58**	**69**	⇓P		**P**	**19 25 19.2**	**+0.1**
	baz=56,SNR=71							
O21A	**Pagoda**	**56.62**	**66**	⇓P		**P**	**19 25 20.1**	**+0.5**
	baz=56							
M23A	**Laramie**	**56.63**	**64**	⇑P		**P**	**19 25 19.7**	**+0.1**
	baz=56							
P20A	**De Beque**	**56.65**	**67**	⇑P		**P**	**19 25 19.7**	**0.0**
	baz=56							
N22A	**Wattenberg Ran**	**56.73**	**65**	⇓P		**P**	**19 25 21.0**	**+0.7**
	baz=56,SNR=15							
K25A	**Mack Ranch, Ha**	**56.75**	**62**	⇑P		**P**	**19 25 20.4**	**+0.1**
	baz=56							
N23A	**Red Feather La**	**56.93**	**65**	⇓P		**P**	**19 25 22.2**	**+0.5**
	baz=57,SNR=19							
FRU	**Bishkek**	**56.94**	**299**	*e*P		P	19 25 28.0	+6.5
FRU				*e*			19 25 36.0	
MONP	**Monument Peak**	**57.07**	**79**	⇑P		**P**	**19 25 23.0**	**+0.3**
	baz=57							
M24A	**Cheyenne**	**57.10**	**64**	⇓P		**P**	**19 25 23.6**	**+0.8**
	baz=57							
Q20A	**Ridgley Place,**	**57.10**	**68**	⇑P		**P**	**19 25 22.7**	**-0.2**
	baz=57,SNR=12							
S18A	**Hurst Farm, Bl**	**57.11**	**70**	⇓P		**P**	**19 25 23.2**	**+0.1**
	baz=57,SNR=32							
P21A	**Newcastle**	**57.14**	**67**	⇑P		**P**	**19 25 23.7**	**+0.5**
	baz=57,SNR=6.2							
O22A	**Kremmling**	**57.15**	**66**	⇑P		**P**	**19 25 23.7**	**+0.3**
	baz=57							
AAK	**Ala-Archa**	**57.15**	**299**	⇑*e*P		**P**	**19 25 22.9**	**-0.2**
AAK				pmax		pmax		
	comp=Z,10.0nm,0.8s							
AAK				MLR		MLR		
	comp=Z,932nm,14.0s							
AAK	**Ala-Archa**	**57.15**	**299**	*e*P		**P**	**19 25 22.5**	**-0.6**
	comp=Z,28nm,1.1s							
AAK	**Ala-Archa**	**57.15**	**299**	P		**P**	**19 25 23.5**	**+0.4**
	comp=Z,66nm,0.8s,SNR=5.2							
JOF	**Joensuu**	**57.18**	**337**	*e*P		**P**	**19 25 21.5**	**-1.3**
JOF				pmax		pmax		
	comp=Z,4.0nm,0.6s							
JOF	**Joensuu**	**57.18**	**337**	*e*p		**P**	**19 25 21.5**	**-1.3**
	comp=Z,3.6nm,0.6s							
PV04	**Paradox Valley**	**57.18**	**69**	*e*P		**P**	**19 25 23.7**	**+0.3**
PDMCI	**Parker Dam,Lak**	**57.31**	**76**	⇑P		**P**	**19 25 24.9**	**+0.7**
	baz=57							
DVTC	**Desert V Tower**	**57.42**	**78**	⇓P		**P**	**19 25 25.4**	**+0.3**
	baz=57							
O23A	**Lake Granby, G**	**57.44**	**65**	⇑P		**P**	**19 25 26.7**	**+1.3**
	baz=57,SNR=30							
P22A	**Eagle**	**57.45**	**66**	⇑P		**P**	**19 25 25.8**	**+0.5**
	baz=57,SNR=6.7							
EKS2	**Erkin-Say**	**57.49**	**299**	*e*P		**P**	**19 25 25.0**	**-0.5**
EKS2				pmax		pmax		
	comp=Z,38nm,1.3s							
EKS2	**Erkin-Say**	**57.49**	**299**	*e*P		**P**	**19 25 25.0**	**-0.5**
	comp=Z,38nm,1.3s							
K27A	**Flueckinger Fa**	**57.52**	**61**	⇑P		**P**	**19 25 26.0**	**+0.4**
	baz=57							
M25A	**Palm-Egli Farm**	**57.52**	**63**	⇓P		**P**	**19 25 26.4**	**+0.7**
	baz=57							
N24A	**Carr**	**57.53**	**64**	⇑P		**P**	**19 25 27.1**	**+1.2**
	baz=57							
PV01	**Paradox Valley**	**57.55**	**69**	*e*P		**P**	**19 25 26.2**	**+0.1**
	comp=Z,740nm,0.6s							
LSA	**Lhasa**	**57.57**	**276**	P		**P**	**19 25 26.8**	**+0.2**
Q21A	**Laborn Mesa,**	**57.57**	**67**	⇓P		**P**	**19 25 26.6**	**+0.4**
	baz=57,SNR=8.9							
L26A	**Underwood Farm**	**57.58**	**62**	⇓P		**P**	**19 25 26.4**	**+0.4**
	baz=57							
R20A	**Redvale**	**57.61**	**69**	⇑P		**P**	**19 25 27.0**	**+0.5**
	baz=57							
SMCO	**Snowmass**	**57.64**	**67**	*e*P		**P**	**19 25 27.2**	**+0.3**
	comp=Z,11nm,0.7s							
GLA	**Glamis**	**57.85**	**77**	*e*P		**P**	**19 25 28.2**	**+0.2**
GLA				pmax		pmax		
	comp=Z,17nm,0.6s							
GLA	**Glamis**	**57.85**	**77**	*e*P		**P**	**19 25 28.2**	**+0.2**
	comp=Z,16nm,0.6s							
GLA	**Glamis**	**57.85**	**77**	⇓P		**P**	**19 25 28.2**	**+0.2**
	baz=58,SNR=9.1							
S20A	**Disappointment**	**57.89**	**69**	⇑P		**P**	**19 25 28.6**	**+0.1**
	baz=58,SNR=16							
ISCO	**Idaho Springs**	**57.90**	**65**	*e*P		**P**	**19 25 29.5**	**+0.9**
ISCO				pmax		pmax		
	comp=Z,41nm,1.3s							
ISCO	**Idaho Springs**	**57.90**	**65**	*e*P		**P**	**19 25 29.4**	**+0.9**
	comp=Z,41nm,1.3s							
ISCO	**Idaho Springs**	**57.90**	**65**	⇓P		**P**	**19 25 29.6**	**+0.9**
	baz=58,SNR=14							
Q22A	**Crested Butte,**	**57.91**	**67**	⇓P		**P**	**19 25 29.3**	**+0.6**
	baz=58,SNR=18							
R21A	**Cimarron**	**57.93**	**68**	⇓P		**P**	**19 25 29.4**	**+0.6**
	baz=58,SNR=18							
P23A	**Jefferson**	**58.10**	**66**	⇓P		**P**	**19 25 31.3**	**+1.3**
	baz=58,SNR=13							
MVCO	**Mesa Verde**	**58.27**	**69**	*e*P		**P**	**19 25 31.2**	**+0.1**
	comp=Z,8.4nm,0.6s							
MVCO	**Mesa Verde**	**58.27**	**69**	⇑P		**P**	**19 25 31.3**	**+0.1**
	baz=58,SNR=6.0							
M27A	**Reverse DX Ran**	**58.30**	**62**	⇓P		**P**	**19 25 31.9**	**+0.8**
	baz=58,SNR=5.0							
S21A	**Coal Bank Pass**	**58.32**	**69**	⇓P		**P**	**19 25 32.4**	**+0.9**
	baz=58,SNR=34							
N26A	**Koester Ranch,**	**58.39**	**63**	⇑P		**P**	**19 25 32.5**	**+0.8**
	baz=58							
Q23A	**Hartsel**	**58.44**	**66**	⇑P		**P**	**19 25 33.4**	**+1.0**
	baz=58,SNR=10							
R22A	**Saguache, Gunn**	**58.45**	**67**	⇑P		**P**	**19 25 33.3**	**+0.7**
	baz=58							
KSH	**Kashi**	**58.67**	**295**	*e*P		P	19 25 37.3	+3.5
KSH				pP		pP	19 25 42.9	+2.0
KSH				sP		sP	19 25 46.1	+2.4
KSH				PcP		**PcP**	**19 26 25.0**	**+1.4**
KSH				PP		PP	19 27 49.1	+5.8
KSH				ScP		**ScP**	**19 30 25.3**	**+2.9**
KSH				S		**S**	**19 33 42.0**	**+5.1**
KSH				ScS		**ScS**	**19 35 22.4**	**+0.3**
KSH				SS		**SS**	**19 37 35.5**	**+6.2**
KSH				pmax		pmax		
	comp=Z,4.0nm,0.9s							
KSH				pmax		pmax		
	comp=Z,140nm,2.6s							
KSH				LR		LR		
	comp=N,420nm,11.7s							
KSH				LR		LR		
	comp=E,660nm,11.7s							
KSH				LR		LR		
	comp=Z,430nm,8.3s							
EYMN	**Ely**	**58.72**	**50**	*e*P		**P**	**19 25 33.2**	**-0.6**
	comp=Z,19nm,0.6s							
X16A	**Lo Mia Camp, P**	**58.72**	**74**	⇑P		**P**	**19 25 35.0**	**+0.7**
	baz=58							
N27A	**Anderson Farm,**	**58.76**	**63**	⇓P		**P**	**19 25 34.9**	**+0.6**
	baz=58,SNR=7.4							
Q24A	**Divide**	**58.76**	**66**	⇑P		**P**	**19 25 35.1**	**+0.5**
	baz=58							
S22A	**4UR Ranch, Cre**	**58.77**	**68**	⇑P		**P**	**19 25 35.5**	**+0.8**
	baz=59,SNR=24							
P25A	**Willow Gulch B**	**58.87**	**65**	⇑P		**P**	**19 25 36.4**	**+1.2**
	baz=59,SNR=6.7							
U20A	**Newcomb**	**58.87**	**70**	⇓P		**P**	**19 25 36.0**	**+0.8**
	baz=59							
OGNE	**Ogallala**	**58.91**	**62**	⇑P		**P**	**19 25 35.8**	**+0.4**
	baz=59							
AKTO	**Aktyubinsk**	**58.92**	**315**	P		**P**	**19 25 33.8**	**-1.4**
AKTO	**Aktyubinsk**	**58.92**	**315**	P		**P**	**19 25 33.8**	**-1.4**
AKTO	**Aktyubinsk**	**58.92**	**315**	P		**P**	**19 25 33.8**	**-1.4**
	comp=Z,1.3nm,0.4s,baz=33,slow=8.6,SNR=9.7							
T21A	**Navajo Lake**	**58.95**	**69**	⇑P		**P**	**19 25 36.4**	**+0.5**
	baz=59							
KAF	**Kangasniemi**	**58.97**	**339**	*e*P		**P**	**19 25 33.7**	**-1.6**
KAF				pmax		pmax		
	comp=Z,3.0nm,0.5s							
KAF	**Kangasniemi**	**58.97**	**339**	*e*p		**P**	**19 25 33.7**	**-1.6**
	comp=Z,3.4nm,0.5s							
R23A	**Moffat**	**58.97**	**67**	⇓P		**P**	**19 25 36.6**	**+0.5**
	baz=59							
P26A	**Davis Ranch, A**	**59.26**	**64**	⇑P		**P**	**19 25 38.5**	**+0.6**
	baz=59,SNR=6.9							
Q25A	**Bedland, Calha**	**59.27**	**65**	⇑P		**P**	**19 25 38.6**	**+0.5**
	baz=59,SNR=10							
T22A	**Edith**	**59.27**	**68**	⇑P		**P**	**19 25 39.0**	**+0.9**
	baz=59							
U21A	**Nageezi**	**59.30**	**69**	⇓P		**P**	**19 25 39.1**	**+0.8**
	baz=59							
R24A	**Sanders Place,**	**59.32**	**66**	⇓P		**P**	**19 25 39.2**	**+0.8**
	baz=59,SNR=7.1							
V20A	**Brimhall**	**59.33**	**70**	⇑P		**P**	**19 25 38.6**	**+0.1**
	baz=59							
X18A	**Snowflake**	**59.46**	**73**	⇑P		**P**	**19 25 40.2**	**+0.8**
	baz=59,SNR=12							
ECSD	**EROS Data Cent**	**59.52**	**56**	*e*P		**P**	**19 25 38.5**	**-0.9**
	comp=Z,5.7nm,0.7s							
FINES	**FINESS Array B**	**59.62**	**339**	P		**P**	**19 25 38.3**	**-1.5**
FINES	**FINESS Array B**	**59.62**	**339**	P		**P**	**19 25 38.3**	**-1.5**
	comp=Z,3.0nm,0.7s,baz=25,slow=9.1,SNR=16							
FINES				LR		LR	19 53 46.1	
	comp=Z,433nm,18.2s,baz=245,slow=38							
Q26A	**Hugo**	**59.64**	**65**	⇓P		**P**	**19 25 41.2**	**+0.7**
	baz=59							
S24A	**Houchin Ranch,**	**59.71**	**67**	⇑P		**P**	**19 25 41.8**	**+0.6**
	baz=60							
T23A	**Casias Ranch,**	**59.72**	**68**	⇑P		**P**	**19 25 41.8**	**+0.6**
	baz=60							
U22A	**Llaves**	**59.77**	**69**	⇓P		**P**	**19 25 42.2**	**+0.7**
	baz=60							
V21A	**Milan**	**59.77**	**70**	⇓P		**P**	**19 25 42.0**	**+0.4**
	baz=60,SNR=5.6							
214A	**Organ Pipe Nat**	**59.79**	**77**	⇑P		**P**	**19 25 41.7**	**+0.1**
	baz=60,SNR=6.7							
W20A	**Ramah**	**59.81**	**71**	⇓P		**P**	**19 25 42.2**	**+0.4**
	baz=60,SNR=9.6							
R25A	**Fountain Ranch**	**59.82**	**66**	⇑P		**P**	**19 25 42.3**	**+0.5**
	baz=60,SNR=6.2							
KSCO	**Kaye Shedlock'**	**60.04**	**64**	⇓P		**P**	**19 25 43.7**	**+0.4**
	baz=60							
V22A	**San Miguel Ran**	**60.09**	**69**	⇑P		**P**	**19 25 44.0**	**+0.3**
	baz=60							
S25A	**Robets Cordova**	**60.10**	**66**	⇓P		**P**	**19 25 44.3**	**+0.5**
	baz=60							
R26A	**Arlington**	**60.14**	**65**	⇑P		**P**	**19 25 44.2**	**+0.2**
	baz=60,SNR=8.9							
U23A	**El Rito**	**60.16**	**68**	⇓P		**P**	**19 25 44.9**	**+0.7**
	baz=60							
SPMN	**St. Paul**	**60.19**	**53**	⇓P		**P**	**19 25 44.1**	**+0.1**
	baz=60							
T24A	**Torres, Weston**	**60.21**	**67**	⇑P		**P**	**19 25 45.7**	**+1.0**
	baz=60,SNR=5.3							
X20A	**Quemado**	**60.25**	**71**	⇓P		**P**	**19 25 45.9**	**+1.0**
	baz=60,SNR=26							
SHL	**Shillong**	**60.29**	**273**	*e*P		**P**	**19 25 45.5**	**+0.3**
R27A	**Eads**	**60.49**	**65**	⇓P		**P**	**19 25 46.7**	**+0.4**
	baz=60,SNR=5.1							
T25A	**Trinidad**	**60.51**	**67**	⇓P		**P**	**19 25 46.8**	**+0.2**
	baz=60,SNR=5.5							
S26A	**Kim**	**60.64**	**66**	⇓P		**P**	**19 25 47.7**	**+0.3**
	baz=60							
TUC	**Tucson**	**60.66**	**75**	*e*P		**P**	**19 25 47.8**	**+0.3**
TUC	**Tucson**	**60.66**	**75**	*e*P		**P**	**19 25 47.8**	**+0.3**
	comp=Z,0.6nm,0.7s							
X21A	**Alamocita Cree**	**60.71**	**71**	⇓P		**P**	**19 25 49.1**	**+1.1**
	baz=60,SNR=52							
W22A	**Albuquerque**	**60.74**	**70**	⇑P		**P**	**19 25 49.3**	**+1.1**
	baz=60							
Y20A	**Horse Springs,**	**60.79**	**72**	⇑P		**P**	**19 25 49.6**	**+1.0**
	baz=61,SNR=10							
T26A	**Comanche Natio**	**60.91**	**66**	⇓P		**P**	**19 25 48.9**	**-0.4**
	baz=61,SNR=7.6							
ANMO	**Albuquerque**	**61.05**	**70**	*e*P		**P**	**19 25 50.7**	**+0.4**
	comp=Z,5.4nm,0.6s							
W23A	**Werner Place,**	**61.06**	**69**	⇑P		**P**	**19 25 50.6**	**+0.2**
	baz=61							
U25A	**Circle Dot Ran**	**61.06**	**67**	⇓P		**P**	**19 25 50.8**	**+0.4**
	baz=61							
X22A	**Bernardo**	**61.09**	**70**	⇓P		**P**	**19 25 51.3**	**+0.8**
	baz=61							
LAZ	**Ladron**	**61.09**	**71**	*e*P		**P**	**19 25 50.7**	**+0.1**
	comp=Z,2.4nm,0.6s							
Y21A	**Point of Rocks**	**61.10**	**71**	⇑P		**P**	**19 25 51.2**	**

KKN Kakani 62.37 280 *e*P P 19 25 59.0 -0.3
comp=Z,75nm,0.9s
SCHQ Schefferville 62.37 31 *e*P P 19 25 57.3 -1.3
comp=Z,11nm,0.6s
SCHQ Schefferville 62.37 31 P P 19 25 57.2 -1.4
comp=Z,8.9nm,0.5s,baz=340,slow=5.3,SNR=39
SCHQ LR LR 19 56 51.0
comp=Z,287nm,18.4s,baz=305,slow=40
Y24A Capitan 62.38 70 ⇓P P 19 25 59.8 +0.6
baz=62,SNR=26
SWI Sorong 62.43 220 P P 19 25 59.5 +0.1
comp=Z,37nm,1.3s,comp=Z,758nm
122A Conniff Cattle 62.45 72 ⇓P P 19 25 59.8 +0.1
baz=62
PKI Pulchoki 62.46 279 *e*P P 19 25 59.6 -0.4
comp=Z,88nm,0.8s
PKIN Phulchoki 62.46 279 *e*P P 19 26 00.1 +0.1
SCIA State Center 62.53 56 *e*P P 19 25 59.6 -0.3
comp=Z,58nm,0.5s
NB2 NORSAR Subarra 62.56 346 P P 19 25 58.4 -1.5
comp=Z,7.8nm,0.8s,baz=18,slow=6.9
NOA NORSAR Array B 62.56 346 P P 19 25 58.8 -1.1
NOA NORSAR Array B 62.56 346 P P 19 25 58.8 -1.1
comp=Z,2.6nm,0.6s,baz=17,slow=6.8,SNR=17
NOA LR LR 19 53 27.0
comp=Z,189nm,19.9s,baz=10.0,slow=36
DMN Daman 62.60 280 *e*P P 19 26 00.9 0.0
comp=Z,90nm,1.1s
V28A Channing 62.71 66 ⇓P P 19 26 01.6 +0.3
baz=62
X26A CR and CF Fran 62.78 68 ⇓P P 19 26 01.9 +0.1
baz=63,SNR=8.3
Y25A Mesa, Roswell 62.78 69 ⇓P P 19 26 02.0 +0.2
baz=63,SNR=30
W27A Bowe Ranch, En 62.78 67 ⇓P P 19 26 02.2 +0.3
baz=63
DANN Dangsing 62.80 281 *e*P P 19 26 01.9 -0.3
comp=Z,149nm,0.9s
222A Williams Famil 62.85 72 ⇑P P 19 26 02.4 +0.1
baz=63
Z24A Sheeppen Canyo 62.87 70 ⇑P P 19 26 02.8 +0.3
baz=63
X27A F and S Farms, 63.08 68 ⇓P P 19 26 04.2 +0.3
baz=63
W28A Vega 63.09 67 ⇓P P 19 26 04.0 +0.1
baz=63
Y26A Elida 63.25 69 ⇑P P 19 26 05.6 +0.6
baz=63
Z25A Roswell 63.26 70 ⇓P P 19 26 05.0 0.0
baz=63
124A Stringfield Ra 63.30 71 ⇓P P 19 26 05.5 0.0
baz=63
PYUN Piuthan 63.43 282 *e*P P 19 26 05.7 -0.6
comp=Z,244nm,1.0s
Y27A Causey 63.63 68 ⇑P P 19 26 07.8 +0.4
baz=63
AMTX Amarillo 63.66 66 ⇓P P 19 26 07.6 0.0
baz=63
Z26A Caprock 63.66 69 ⇓P P 19 26 07.8 +0.1
baz=64,SNR=17
224A Cornudas Mount 63.74 71 ⇑P P 19 26 08.5 +0.3
baz=64,SNR=15
125A Gardner Draw, 63.76 70 ⇑P P 19 26 08.6 +0.3
baz=64,SNR=11
MSTX Muleshoe 63.77 68 ⇓P P 19 26 08.5 +0.1
baz=64
FAKI Fak Fak 63.97 218 P P 19 26 10.5 +0.8
Z27A Tatum 64.04 69 ⇑P P 19 26 09.8 -0.4
baz=64,SNR=5.8
225A Deer Hill, Car 64.09 71 ⇓P P 19 26 11.0 +0.4
baz=64
126A Clayton Basin, 64.12 70 ⇑P P 19 26 10.7 +0.1
baz=64
324A Moseley Ranch, 64.24 72 ⇑P P 19 26 11.5 -0.1
baz=64
W31A Holland Ranch, 64.33 65 ⇑P P 19 26 11.9 -0.1
baz=64
HNR Honiara 64.36 186 LR LR 19 49 25.2
comp=Z,582nm,20.8s,baz=355,slow=32
X30A Coker Ranch, T 64.42 66 ⇑P P 19 26 12.3 -0.2
baz=64
127A Arkansas Junct 64.45 69 ⇑P P 19 26 12.9 0.0
baz=64
226B Tecolote Peak, 64.47 70 ⇓P P 19 26 13.0 0.0
baz=64,SNR=7.9
DDI Dehra Dun 64.48 287 *ex* P 19 26 09.5 -3.5
VRHR Novokhopersk 64.50 325 *e*P P 19 26 09.6 -3.1
VRHR pmax pmax
comp=N,2.0nm,0.6s
VRHR pmax pmax
comp=E,7.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s
Z28A Tucker Farm, M 64.50 68 ⇓P P 19 26 13.3 +0.2
baz=64
325A Bean Ranch, Si 64.58 71 ⇑P P 19 26 13.8 0.0
baz=64
X31A McDonald Ranch 64.74 65 ⇑P P 19 26 14.5 -0.2
baz=64
Z29A Hungry Hill Ra 64.89 68 ⇓P P 19 26 15.4 -0.3
baz=65,SNR=5.8
ISAL Salakas 64.95 336 *e*P P 19 26 07.3 -8.3
128A Castleberry Fa 64.96 69 ⇓P P 19 26 16.2 +0.1
baz=65
425A Indio Mountain 65.02 72 ⇑P P 19 26 16.7 +0.1
baz=65,SNR=10
Y31A Rekieta Farm, 65.11 66 ⇑P P 19 26 16.0 -1.0
baz=65
IIGN Ignalina 65.13 336 *e*P P 19 26 15.7 -1.1
326A Caldwell Ranch 65.16 71 ⇓P P 19 26 17.6 +0.1
baz=65
Z30A Sanderson Ranc 65.17 67 ⇓P P 19 26 17.1 -0.4
baz=65,SNR=11
VSR Storozhevoye 65.20 326 *e*P P 19 26 31.9 +15
VSR pmax pmax
comp=Z,20nm,0.9s
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.9s
129A Stewart Farms, 65.29 68 ⇓P P 19 26 18.1 -0.2
baz=65
WMOK Wichita Mounta 65.29 64 *e*P P 19 26 17.5 -0.7
WMOK pmax pmax
comp=Z,8.0nm,0.6s
WMOK Wichita Mounta 65.29 64 *e*P P 19 26 17.5 -0.7
comp=Z,7.9nm,0.6s
228A UT Block 9, Go 65.29 69 ⇓P P 19 26 18.2 -0.2
baz=65
VORD Divnogorie 65.37 326 *e*P P 19 26 32.5 +14
VORD pmax pmax
comp=N,10.0nm,1.3s
VORD pmax pmax
comp=Z,10.0nm,1.3s
VORD pmax pmax
comp=E,9.0nm,0.8s
Y32A R-V Farms, Ver 65.51 65 ⇓P P 19 26 19.2 -0.4
baz=65
426A McDonald Obser 65.63 71 ⇓P P 19 26 20.4 -0.2
baz=65
Z31A Sharp Cattle R 65.67 66 ⇑P P 19 26 19.9 -0.8
baz=66,SNR=6.0
328A Wristen Ranch, 65.74 70 ⇓P P 19 26 21.1 -0.1
baz=66
130A Snyder 65.79 68 ⇑P P 19 26 21.2 -0.3
baz=66
427A Hayter Ranch, 65.83 70 ⇓P P 19 26 21.5 -0.4
baz=66
TUL1 Tulsa 65.91 62 ⇑P P 19 26 21.3 -0.8
baz=66
PMG Port Moresby 66.02 200 P P 19 26 22.7 -0.2
PMG Port Moresby 66.02 200 P P 19 26 22.7 -0.2
comp=E,6.2nm,0.6s,baz=226,slow=16,SNR=4.0
Z32A Haskell 66.03 66 ⇓P P 19 26 22.5 -0.5
baz=66
131A Roby 66.04 67 ⇓P P 19 26 23.2 +0.1
baz=66
KBL Kabul 66.05 296 *e*P P 19 26 21.5 -1.8
KBL pmax pmax
comp=Z,29nm,1.0s
KBL Kabul 66.05 296 *e*P P 19 26 21.5 -1.8
comp=Z,29nm,1.0s
526A Mary Lane Ranc 66.07 72 ⇑P P 19 26 23.6 +0.2
baz=66,SNR=5.4
329A Wagon Wheel Ra 66.11 69 ⇓P P 19 26 23.3 -0.3
baz=66,SNR=9.0
230A Sterling City 66.26 68 ⇑P P 19 26 24.9 +0.4
baz=66
527A Woodward Ranch 66.26 71 ⇓P P 19 26 24.4 -0.3
baz=66,SNR=6.7
428A Kincaid Ranch, 66.32 70 ⇑P P 19 26 25.4 +0.5
baz=66,SNR=26
626A Big Bend Ranch 66.44 72 ⇓P P 19 26 26.1 +0.3
baz=66
ABTX Abilene, Hawle 66.47 67 ⇑P P 19 26 25.7 -0.1
baz=66
SFIN Scholer Farm 66.59 53 ⇓P P 19 26 25.3 -1.1
baz=66
330A Mertzon 66.60 68 ⇓P P 19 26 26.5 -0.2
baz=66
231A Bronte 66.65 67 ⇓P P 19 26 26.0 -1.0
baz=66
528A Cox Ranch, San 66.70 71 ⇓P P 19 26 27.7 +0.3
baz=66,SNR=7.3
429A Davenport Ranc 66.82 70 ⇓P P 19 26 27.5 -0.6
baz=67,SNR=5.2
TXAR Lajitas Array 66.86 72 P P 19 26 28.5 +0.1
TXAR Lajitas Array 66.86 72 P P 19 26 28.5 +0.1
comp=Z,11nm,0.6s,baz=301,slow=4.6,SNR=104
627A Terlingua Ranc 66.92 71 ⇓P P 19 26 28.8 -0.1
baz=67,SNR=12
FVM French Village 66.93 56 *e*P P 19 26 27.5 -1.2
FVM pmax pmax
comp=Z,35nm,0.6s
FVM French Village 66.93 56 *e*P P 19 26 27.4 -1.2
comp=Z,36nm,0.6s
529A Stev Forest Ra 67.04 70 ⇓P P 19 26 29.3 -0.2
baz=67,SNR=12
232A Coleman 67.04 67 ⇑P P 19 26 28.8 -0.7
baz=67,SNR=7.8
430A Baggett Ranch, 67.05 69 ⇓P P 19 26 29.0 -0.6
baz=67,SNR=10
331A San Angelo 67.08 68 ⇑P P 19 26 29.1 -0.6
baz=67,SNR=6.9
628A Black Gap, Mar 67.17 71 ⇑P P 19 26 30.2 -0.1
baz=67,SNR=8.8
332A Millersview 67.39 67 ⇓P P 19 26 31.1 -0.6
baz=67,SNR=5.3
OLIL Olney 67.44 54 *e*P P 19 26 30.6 -1.2
comp=Z,10nm,0.5s
431A Sonora 67.47 69 ⇓P P 19 26 31.7 -0.5
baz=67,SNR=7.1
530A J-C Ranch, Com 67.50 69 ⇓P P 19 26 32.1 -0.3
baz=67,SNR=12
432A Menard 67.76 68 ⇓P P 19 26 33.8 -0.2
baz=68
531A Rocksprings 67.91 69 ⇓P P 19 26 34.7 -0.3
baz=68
JCT Junction City 68.06 68 *e*P P 19 26 34.7 -1.2
JCT pmax pmax
comp=Z,8.0nm,0.7s
JCT Junction City 68.06 68 *e*P P 19 26 34.7 -1.2
comp=Z,8.1nm,0.7s
JCT Junction City 68.06 68 ⇑P P 19 26 35.6 -0.3
baz=68
WHTX Lake Whitney 68.12 65 ⇑P P 19 26 35.7 -0.6
baz=68
532A Rocksprings 68.28 68 ⇑P P 19 26 36.8 -0.6
baz=68
631A Perdido Creek 68.48 69 ⇓P P 19 26 37.9 -0.7
baz=68,SNR=8.7
ACSO Alum Creek Sta 68.56 50 *e*P P 19 26 37.9 -1.0
comp=Z,8.9nm,0.6s
AKASG Malin Array Be 68.60 332 P P 19 26 38.0 -0.9
AKASG Malin Array Be 68.60 332 P P 19 26 38.0 -0.9
AKASG Malin Array Be 68.60 332 P P 19 26 38.0 -0.9
comp=Z,2.6nm,0.6s,baz=28,slow=6.9,SNR=3.0
AKASG LR LR 20 00 26.1
comp=Z,645nm,18.5s,baz=25,slow=39
WCI Wyandotte Cave 68.69 54 *e*P P 19 26 38.7 -1.0
WCI pmax pmax
comp=Z,18nm,0.6s
WCI Wyandotte Cave 68.69 54 *e*P P 19 26 38.7 -1.0
comp=Z,18nm,0.6s
632A Uvalde 68.83 69 ⇑P P 19 26 40.4 -0.4
baz=69
732A Laxson Ranch, 69.34 69 ⇑P P 19 26 44.0 +0.1
baz=69,SNR=7.6
WVT Waverly 69.66 56 *e*P P 19 26 45.1 -0.6
WVT pmax pmax
comp=Z,26nm,0.6s
WVT Waverly 69.66 56 *e*P P 19 26 45.1 -0.6
comp=Z,26nm,0.6s
KIV Kislovodsk 70.22 320 *e*P P 19 26 48.7 -0.5
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV MLR MLR
comp=Z,388nm,19.0s
KBZ Khabaz 70.34 320 P P 19 26 50.2 +0.4
KBZ Khabaz 70.34 320 P P 19 26 50.1 +0.4
KBZ Khabaz 70.34 320 P P 19 26 50.1 +0.4
comp=Z,4.4nm,0.9s,baz=150,slow=1.1,SNR=6.5
KBZ LR LR 20 02 25.5
comp=Z,599nm,18.2s,baz=169,slow=40
ZEI Tsey 70.78 318 *e*P P 19 26 48.4 -4.4
ZEI pmax pmax
comp=Z,19nm,1.5s
AFI Afiamalu 71.23 157 LR LR 19 51 27.7
comp=Z,262nm,20.1s,baz=308,slow=30
KWP Kalwaria Pacla 71.24 336 ⇑P P 19 26 55.2 0.0
KWP Kalwaria Pacla 71.24 336 ⇑*i*P P 19 26 55.2 0.0
KWP Kalwaria Pacla 71.24 336 *e*P P 19 26 55.1 -0.1
SWET Sewanee 71.30 55 *e*P P 19 26 54.4 -1.4
comp=Z,31nm,0.6s
OJC Ojcow 71.36 338 *e*P P 19 26 57.1 +1.2
OJC Ojcow 71.36 338 *e*P P 19 26 57.1 +1.2
KSP Ksiaz 71.49 340 *e*P P 19 27 03.4 +6.7
CLL Collm 71.66 342 *e*P P 19 26 57.0 -0.7
CLL *e* 19 27 03.0
CLL *e*S **S** 19 36 13.0 -2.5
CLL pmax pmax
comp=Z,10.0nm,1.4s
CLL MLR MLR
comp=Z,300nm,19.1s
CLL Collm 71.66 342 *e*P P 19 26 57.0 -0.7
comp=Z,10.0nm,1.4s
CLL *e* 19 27 03.0
comp=Z,32nm,1.9s
CLL *e*(pP) **pP** 19 27 10.0 +5.1
CLL *i* 19 27 21.0
CLL *e*S **S** 19 36 13.0 -2.5
CLL LmH 20 00 00.0
comp=N,300nm,19.3s
CLL LmH 20 00 00.0
comp=E,100nm,20.1s
CLL LmV 20 02 00.0
comp=N,200nm,20.7s
CLL LmV 20 02 00.0
comp=E,200nm,18.1s
CLL LmV 20 02 00.0
comp=Z,300nm,19.1s
CPCT Cooper Cave 71.77 54 *e*P P 19 26 57.6 -1.0
UPC Upice 71.87 340 *e*P P 19 26 58.8 -0.2
UPC Upice 71.87 340 *e*P P 19 26 58.8 -0.2
BRG Berggiesshubel 71.91 342 *e*P P 19 27 00.1 +0.9
comp=Z,4.8nm,1.0s
BRG *e* 19 27 11.6
comp=Z,11nm,1.3s
BRG
comp=N,340nm,15.3s
BRG
comp=E,290nm,14.4s
BRG
comp=Z,386nm,14.9s
BRG Berggiesshubel 71.91 342 *e*P P 19 27 00.1 +0.9
BRG *e* 19 27 11.6
BRG pmax pmax
comp=Z,5.0nm,1.0s
BRG MLR MLR
comp=N,340nm,15.3s
BRG MLR MLR
comp=E,290nm,14.4s
BRG MLR MLR
comp=Z,386nm,14.9s
DPC Dobruska-Polom 71.96 340 *e*P P 19 27 00.6 +1.0
DPC *e* 19 27 24.4
DPC MLR MLR
comp=Z,400nm,17.2s
DPC Dobruska-Polom 71.96 340 *e*P P 19 27 00.6 +1.0
DPC *ex* x 19 27 24.4
DPC AMS AMS 20 02 50.0
comp=Z,400nm,17.2s
KOLS Kolonicke sedl 72.00 336 *e*P P 19 27 00.5 +0.7
KOLS Kolonicke sedl 72.00 336 *e*P P 19 27 00.5 +0.7
OKC Ostrava-Krasne 72.07 339 *e*P P 19 27 03.7 +3.5
OKC *e* 19 27 25.0
OKC MLR MLR
comp=Z,400nm,17.9s
OKC Ostrava-Krasne 72.07 339 *e*P P 19 27 03.7 +3.5
OKC *ex* x 19 27 25.0
OKC AMS AMS 20 04 30.0
comp=Z,400nm,17.9s
PVCC Panska Ves 72.12 341 AMS AMS 20 03 00.0
comp=Z,700nm,16.0s
CRVS Cervenica-Dubn 72.22 336 *e*P P 19 27 04.2 +3.1
CRVS Cervenica-Dubn 72.22 336 *e*P P 19 27 04.2 +3.1
MORC Moravsky Berou 72.25 339 *e*P P 19 27 01.5 +0.1
MORC pmax pmax
comp=Z,16nm,1.3s
MORC Moravsky Berou 72.25 339 *e*P P 19 27 01.5 +0.1
comp=Z,16nm,1.3s
MORC Moravsky Berou 72.25 339 ⇑*i*P P 19 27 04.0 +2.7
UZH Uzhgorod 72.27 335 *e*P P 19 27 01.4 0.0
UZH *e* 19 27 10.6
UZH *e* 19 27 16.0
BUR08 Bucovina Ar. S 72.46 333 *e*P P 19 27 02.4 -0.3
BURAR Bucovina Array 72.49 333 ⇑*i*P P 19 27 03.5 +0.7
LRAL Lakeview Retre 72.57 57 *e*P P 19 27 01.9 -1.5
comp=Z,25nm,0.6s
PRU Pruhonice 72.64 341 *e*P P 19 27 05.0 +1.4
PRU *e* 19 27 27.0
PRU MLR MLR
comp=Z,600nm,16.6s
PRU Pruhonice 72.64 341 *e*P P 19 27 05.0 +1.4
PRU *ex* x 19 27 27.0
PRU AMS AMS 20 03 20.0
comp=Z,600nm,16.6s
TRPA Tarpa 72.68 335 ⇑*i*P P 19 27 04.3 +0.5
NKC Novy Kostel 72.79 342 *e*P P 19 27 11.4 +6.9
NKC *e* 19 27 29.0
NKC MLR MLR
comp=Z,300nm,19.7s
NKC Novy Kostel 72.79 342 *e*P P 19 27 11.4 +6.9
NKC *ex* x 19 27 29.0
NKC AMS AMS 20 02 00.0
comp=Z,300nm,19.7s
VRAC Vranov 72.89 339 ⇓*i*P P 19 27 05.5 +0.4
TREC Trest 73.13 340 AMS AMS 20 03 10.0
comp=Z,400nm,13.9s
VYHS Vyhne 73.19 338 *e*P P 19 27 08.9 +2.0
VYHS *e* 19 29 51.4
VYHS Vyhne 73.19 338 *e*P P 19 27 08.9 +2.0
VYHS *e*PP **PP** 19 29 51.4 +2.1
KMSC Kings Mountain 73.49 52 ⇓P P 19 27 07.8 -1.0
baz=73
KHC Kasperske Hory 73.65 341 *e*P P 19 27 12.6 +3.0
KHC *e* 19 27 26.0
KHC MLR MLR
comp=Z,400nm,15.5s
KHC Kasperske Hory 73.65 341 *e*P P 19 27 10.7 +1.1
comp=Z,16nm,1.2s
KHC Kasperske Hory 73.65 341 *e*P P 19 27 12.6 +3.0
KHC *e*PCP **PcP** 19 27 26.0 +0.6
KHC *ex* x 19 27 34.4
KHC AMS AMS 20 04 10.0
comp=Z,400nm,15.5s
VRI Vrincioaia 73.69 331 ⇓*i*P P 19 27 01.3 -8.6
PLOR Plostina 73.73 332 ⇑P P 19 27 09.4 -0.7
PLOR Plostina 73.73 332 ⇑*i*P P 19 27 09.4 -0.7
GERES GERESS Array B 73.90 341 P P 19 27 10.3 -0.9
GERES GERESS Array B 73.90 341 P P 19 27 10.3 -0.9
comp=Z,1.3nm,0.6s,baz=35,slow=4.9,SNR=9.0
GERES LR LR 20 03 05.3
comp=Z,298nm,19.1s,baz=159,slow=39
CFR Carcaliu 73.93 330 ⇑P P 19 27 10.6 -0.6
CFR Carcaliu 73.93 330 ⇑*i*P P 19 27 10.6 -0.6
GIVF Givet 74.06 347 *e*P P 19 27 12.6 +0.6
GIVF Givet 74.06 347 *e*P P 19 27 12.6 +0.6
GIVF Givet 74.06 347 *e*P P 19 27 12.6 +0.6
BAIF Baives 74.18 348 *e*P P 19 27 13.2 +0.6
BAIF Baives 74.18 348 *e*P P 19 27 13.2 +0.6
BAIF Baives 74.18 348 *e*P P 19 27 13.2 +0.6
MLR Muntele Rosu 74.25 332 ⇑*i*P P 19 27 13.4 +0.1
ARR Arges 74.72 333 ⇓*i*P P 19 27 17.9 +1.9
BZS Buzias 75.26 335 ⇑P P 19 27 20.8 +1.9
BZS Buzias 75.26 335 ⇑*i*P P 19 27 20.8 +1.9
CDF Champ du Feu 75.38 345 *e*P P 19 27 20.5 +0.7
CDF Champ du Feu 75.38 345 *e*P P 19 27 20.5 +0.7
CDF Champ du Feu 75.38 345 *e*P P 19 27 20.5 +0.7
PAGF Fort de Pagny 75.46 346 *e*P P 19 27 19.7 -0.4
comp=Z,3.3nm,0.7s
PAGF Fort de Pagny 75.46 346 *e*P P 19 27 19.7 -0.4
comp=Z,2.3nm,0.6s
TIGA Tifton 75.52 56 ⇓P P 19 27 20.0 -0.7
baz=75
MEZF Maizieres J'vi 75.61 347 *e*P P 19 27 21.9 +1.0
MEZF Maizieres J'vi 75.61 347 *e*P P 19 27 21.9 +1.0
KBA Koelnbreinsper 75.66 341 ⇑*i*P P 19 27 21.5 0.0
KBA pmax pmax
comp=Z,42nm,1.2s
KBA Koelnbreinsper 75.66 341 ⇑*i*P P 19 27 21.5 0.0
comp=Z,42nm,1.2s
KBA Koelnbreinsper 75.66 341 ⇑*i*P P 19 27 21.5 0.0
comp=Z,42nm,1.2s
SOKA Soboth 75.72 340 ⇑*i*P P 19 27 22.2 +0.5
comp=Z,9.0nm,1.0s
SOKA Soboth 75.72 340 ⇑*i*P P 19 27 22.2 +0.5
comp=Z,9.0nm,1.0s
PERS Pernice 75.74 340 *i*P P 19 27 26.7 +4.9
SFTF Sexfontaines 75.90 347 *e*P P 19 27 22.6 0.0
comp=Z,11nm,0.6s
SFTF Sexfontaines 75.90 347 *e*P P 19 27 22.6 0.0
comp=Z,11nm,0.6s
HAU Haudompre 75.92 346 *e*P P 19 27 23.2 +0.5
HAU *e*R
comp=Z,269nm,19.2s
HAU Haudompre 75.92 346 *e*P P 19 27 23.2 +0.5
HAU Haudompre 75.92 346 *e*P P 19 27 23.2 +0.5
FLN La Foliniere 75.97 351 *e*P P 19 27 21.9 -1.1
FLN *e*R
comp=Z,247nm,21.2s
FLN La Foliniere 75.97 351 *e*P P 19 27 21.9 -1.1
FLN La Foliniere 75.97 351 *e*P P 19 27 21.9 -1.1
HINF Hinteralfeld 76.03 345 *e*P P 19 27 23.7 +0.3
HINF Hinteralfeld 76.03 345 *e*P P 19 27 23.7 +0.3
HINF Hinteralfeld 76.03 345 *e*P P 19 27 23.7 +0.3
LDF La Druitiere 76.10 350 *e*P P 19 27 22.6 -1.1
LDF La Druitiere 76.10 350 *e*P P 19 27 22.6 -1.1
LDF La Druitiere 76.10 350 *e*P P 19 27 22.6 -1.1
GRR Gorron 76.38 351 *e*P P 19 27 23.8 -1.5
GRR Gorron 76.38 351 *e*P P 19 27 23.8 -1.5
GRR Gorron 76.38 351 *e*P P 19 27 23.8 -1.5
CTA Charters Tower 76.61 199 P P 19 27 26.0 -0.8
CTA Charters Tower 76.61 199 P P 19 27 26.0 -0.8
comp=Z,1.8nm,0.6s,baz=16,slow=4.8,SNR=5.1
MALT Malatya 76.71 320 ⇑P P 19 27 30.4 +2.9
MALT Malatya 76.71 320 ⇑*i*P P 19 27 30.4 +2.9
DZM Mont Dzumac 76.75 179 LR LR 19 59 28.1
comp=Z,226nm,18.7s,baz=264,slow=34
BOJS Bojanci 76.80 339 *i*P P 19 27 28.6 +0.8
LOR Lormes 76.97 347 *e*P P 19 27 27.7 -1.0
comp=Z,10nm,0.9s
LOR *e*R
comp=Z,267nm,19.5s
LOR Lormes 76.97 347 *e*P P 19 27 27.7 -1.0
comp=Z,10nm,0.9s
BR131 Keskin Array S 77.15 324 *e*P P 19 27 29.4 -0.7
comp=Z,4.3nm,0.8s
BRTR Keskin Array B 77.15 324 P P 19 27 29.1 -1.0
BRTR Keskin Array B 77.15 324 P P 19 27 29.1 -1.0
comp=Z,1.4nm,0.8s,baz=46,slow=5.3,SNR=5.6
SSF Saint Saulge 77.22 348 *e*P P 19 27 30.5 +0.4
comp=Z,6.8nm,0.8s
SSF Saint Saulge 77.22 348 *e*P P 19 27 30.5 +0.4
SSF pmax pmax
comp=Z,7.0nm,0.8s
SSF Saint Saulge 77.22 348 *e*P P 19 27 30.5 +0.4
comp=Z,6.8nm,0.8s
CABF La Chapelle 77.32 346 *e*P P 19 27 29.5 -1.3
comp=Z,4.2nm,0.6s
CABF La Chapelle 77.32 346 *e*P P 19 27 29.5 -1.3
CABF pmax pmax
comp=Z,4.0nm,0.6s
CABF La Chapelle 77.32 346 *e*P P 19 27 29.5 -1.3
comp=Z,4.2nm,0.6s
AVF Avril sur Loir 77.50 348 *e*P P 19 27 31.1 -0.5
comp=Z,5.0nm,0.6s
AVF Avril sur Loir 77.50 348 *e*P P 19 27 31.1 -0.5

AVF				pmax	pmax			
	comp=Z,5.0nm,0.6s							
AVF	**Avril sur Loir**	**77.50**	**348**	*eP*	**P**	**19**	**27**	**31.1 -0.5**
	comp=Z,5.0nm,0.6s							
SMF	**Signal de Mont**	**77.58**	**347**	*eP*	**P**	**19**	**27**	**32.5 +0.4**
	comp=Z,10.0nm,0.7s							
SMF	**Signal de Mont**	**77.58**	**347**	*eP*	**P**	**19**	**27**	**32.5 +0.4**
SMF				pmax	pmax			
	comp=Z,10.0nm,0.7s							
SMF	**Signal de Mont**	**77.58**	**347**	*eP*	**P**	**19**	**27**	**32.5 +0.4**
	comp=Z,10.0nm,0.7s							
VTS	**Vitosha**	**77.68**	**333**	‖P	**P**	**19**	**27**	**32.2 -0.7**
VTS	**Vitosha**	**77.68**	**333**	‖*i*P	**P**	**19**	**27**	**32.2 -0.7**
BGF	**Bois d'Agland**	**77.79**	**348**	*eP*	**P**	**19**	**27**	**33.8 +0.5**
	comp=Z,4.3nm,0.5s							
BGF	**Bois d'Agland**	**77.79**	**348**	*eP*	**P**	**19**	**27**	**33.8 +0.5**
BGF				pmax	pmax			
	comp=Z,4.0nm,0.5s							
BGF	**Bois d'Agland**	**77.79**	**348**	*eP*	**P**	**19**	**27**	**33.8 +0.5**
	comp=Z,4.3nm,0.5s							
TCF	**Toulx Ste Croi**	**78.13**	**348**	*eP*	**P**	**19**	**27**	**34.5 -0.7**
	comp=Z,6.6nm,0.7s							
TCF	**Toulx Ste Croi**	**78.13**	**348**	*eP*	**P**	**19**	**27**	**34.5 -0.7**
TCF				pmax	pmax			
	comp=Z,7.0nm,0.7s							
TCF	**Toulx Ste Croi**	**78.13**	**348**	*eP*	**P**	**19**	**27**	**34.5 -0.7**
	comp=Z,6.6nm,0.7s							
LPL	**La Plagne**	**78.29**	**345**	*eP*	**P**	**19**	**27**	**35.4 -1.0**
	comp=Z,22nm,1.1s							
LPL	**La Plagne**	**78.29**	**345**	*eP*	**P**	**19**	**27**	**35.4 -1.0**
LPL				pmax	pmax			
	comp=Z,23nm,1.1s							
LPL	**La Plagne**	**78.29**	**345**	*eP*	**P**	**19**	**27**	**35.4 -1.0**
	comp=Z,22nm,1.1s							
LPG	**La Plagne**	**78.31**	**345**	*eP*	**P**	**19**	**27**	**35.5 -1.0**
	comp=Z,63nm,1.4s							
LPG	**La Plagne**	**78.31**	**345**	*eP*	**P**	**19**	**27**	**35.5 -1.0**
LPG				pmax	pmax			
	comp=Z,63nm,1.4s							
LPG	**La Plagne**	**78.31**	**345**	*eP*	**P**	**19**	**27**	**35.5 -1.0**
	comp=Z,63nm,1.4s							
ORIF	**Oris-en-Rattie**	**79.00**	**346**	*eP*	**P**	**19**	**27**	**39.6 -0.5**
	comp=Z,44nm,1.4s							
ORIF				*eR*				
	comp=Z,348nm,19.5s							
ORIF	**Oris-en-Rattie**	**79.00**	**346**	*eP*	**P**	**19**	**27**	**39.6 -0.5**
ORIF				pmax	pmax			
	comp=Z,44nm,1.4s							
ORIF	**Oris-en-Rattie**	**79.00**	**346**	*eP*	**P**	**19**	**27**	**39.6 -0.5**
	comp=Z,44nm,1.4s							
MBDF	**Montbardon**	**79.06**	**345**	*eP*	**P**	**19**	**27**	**39.9 -0.6**
MBDF	**Montbardon**	**79.06**	**345**	*eP*	**P**	**19**	**27**	**39.9 -0.6**
MBDF	**Montbardon**	**79.06**	**345**	*eP*	**P**	**19**	**27**	**39.9 -0.6**
WRA	**Warramunga Arr**	**79.29**	**210**	P	**P**	**19**	**27**	**40.9 -0.8**
WRA	**Warramunga Arr**	**79.29**	**210**	P	**P**	**19**	**27**	**40.9 -0.8**
	comp=Z,7.3nm,1.0s,baz=24,slow=6.0,SNR=20							
CAF	**Calviac**	**79.49**	**348**	*eP*	**P**	**19**	**27**	**41.9 -0.8**
CAF	**Calviac**	**79.49**	**348**	*eP*	**P**	**19**	**27**	**41.9 -0.8**
CAF	**Calviac**	**79.49**	**348**	*eP*	**P**	**19**	**27**	**41.9 -0.8**
PMOR	**Pomariorio Ree**	**79.98**	**135**	*eT*	T	20	55	03.5
	comp=Z,3.1nm,0.2s							
MIB	**Mutribah**	**80.44**	**309**	*eP*	P	19	27	44.5 -3.5
MIB				AMb	AMB	19	28	05.3
	comp=Z,50nm,0.9s							
NAY	**Al-Naaiem**	**80.96**	**309**	*eP*	**P**	**19**	**27**	**48.0 -2.8**
NAY				AMb	AMB	19	28	07.9
	comp=Z,25nm,1.0s							
MTLF	**Montolieu**	**81.04**	**348**	*eP*	**P**	**19**	**27**	**49.2 -1.8**
	comp=Z,14nm,1.1s							
MTLF	**Montolieu**	**81.04**	**348**	*eP*	**P**	**19**	**27**	**49.2 -1.8**
MTLF				pmax	pmax			
	comp=Z,14nm,1.1s							
MTLF	**Montolieu**	**81.04**	**348**	*eP*	**P**	**19**	**27**	**49.2 -1.8**
	comp=Z,14nm,1.1s							
RDF	**Al-Radifah**	**81.10**	**309**	*eP*	**P**	**19**	**27**	**48.7 -2.8**
RDF				AMb	AMB	19	28	09.5
	comp=Z,97nm,1.1s							
EPF	**Esparros**	**81.56**	**349**	*eP*	**P**	**19**	**27**	**53.1 -0.8**
	comp=Z,3.8nm,0.6s							
EPF	**Esparros**	**81.56**	**349**	*eP*	**P**	**19**	**27**	**53.1 -0.8**
EPF				pmax	pmax			
	comp=Z,4.0nm,0.6s							
EPF	**Esparros**	**81.56**	**349**	*eP*	**P**	**19**	**27**	**53.1 -0.8**
	comp=Z,3.8nm,0.6s							
PPT	**Papeete**	**81.63**	**137**	LR	LR	20	00	41.0
	comp=Z,415nm,18.6s,baz=5.9,slow=33							
PPT2	**Papeete2**	**81.65**	**137**	*e*LR	LR	19	53	12.8
	comp=Z,595nm,26.0s,baz=328							
ETSF	**Etsaut**	**81.78**	**350**	*eP*	**P**	**19**	**27**	**54.4 -0.7**
	comp=Z,6.0nm,0.5s							
ETSF	**Etsaut**	**81.78**	**350**	*eP*	**P**	**19**	**27**	**54.4 -0.7**
ETSF				pmax	pmax			
	comp=Z,6.0nm,0.5s							
ETSF	**Etsaut**	**81.78**	**350**	*eP*	**P**	**19**	**27**	**54.4 -0.7**
	comp=Z,6.0nm,0.5s							
TIP	**Timpagrande**	**82.51**	**336**	*eP*	**P**	**19**	**27**	**59.6 +0.7**
	comp=Z,21nm,1.4s							
AS31	**Alice Springs**	**82.94**	**209**	*eP*	**P**	**19**	**28**	**00.1 -1.0**
ASAR	**Alice Springs**	**82.95**	**209**	P	**P**	**19**	**28**	**00.9 -0.2**
ASAR	**Alice Springs**	**82.95**	**209**	P	**P**	**19**	**28**	**00.9 -0.2**
	comp=Z,4.5nm,0.6s,baz=16,slow=5.6,SNR=86							
ESDC	**Sonseca Array**	**85.29**	**352**	P	**P**	**19**	**28**	**12.8 -0.3**
ESDC	**Sonseca Array**	**85.29**	**352**	P	**P**	**19**	**28**	**12.8 -0.3**
	comp=Z,1.7nm,0.6s,baz=358,slow=5.5,SNR=13							
TBI	**Tubuai**	**86.93**	**140**	*e*LR	LR	19	55	39.1
	comp=Z,199nm,24.8s							
STKA	**Stephens Creek**	**88.97**	**200**	P	**P**	**19**	**28**	**29.8 -0.8**
STKA	**Stephens Creek**	**88.97**	**200**	P	**P**	**19**	**28**	**29.8 -0.8**
	comp=Z,3.4nm,0.7s,baz=315,slow=8.4,SNR=11							
QSPA	**South Pole Qui**	**144.74**	**180**	PKP	**PKPab**	**19**	**35**	**08.8 -1.8**
QSPA	**South Pole Qui**	**144.74**	**180**	PKP	**PKPab**	**19**	**35**	**08.8 -1.8**
	comp=Z,7.8nm,0.5s,baz=351,slow=0.7,SNR=122							

*ISCJB **16** 19:19:26.8±0.4,37.84N±0.02×29.08E±0.04, h8km±4km, Error ellipse: s-maj=5.6km s-min=3.5km az=5.5*
*CSEM **16** 19:19:26.8±0.1,37.84N×29.08E, h8km, MD2.9, Error ellipse: s-maj=3.9km s-min=2.5km az=92.0*
*DDA **16** 19:19:26.2,37.83N×29.08E, h16km, MD2.9*
*ISK **16** 19:19:26.6,37.83N×29.09E, h7km, MD2.7*

ISC 16 19:19:26.6±0.9, 37.85N±0.02×29.06E±0.03, h8km±6km, n38, σ0985/54, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DENT	**Denizli**	**0.10**	**193**	PG		**Pg**	**19 19 29.2**	**+0.2**
DENT				SG		**Sg**	**19 19 30.8**	**+0.1**
DENT	**Denizli**	**0.10**	**193**	*i* Pg		**Pg**	**19 19 29.2**	**+0.2**
DENT				*i* Sg		**Sg**	**19 19 30.8**	**+0.1**
DNZL	**Cakiroluk**	**0.16**	**184**	*i* P		**Pg**	**19 19 30.3**	**+0.2**
DNZL				*i* S		**Sg**	**19 19 32.9**	**+0.4**
DNZL	**Cakiroluk**	**0.16**	**184**	*i* P		**Pg**	**19 19 30.3**	**+0.2**
KHL	**Karahalli**	**0.59**	**38**	*e*Pg		**Pg**	**19 19 38.7**	**+0.5**
KHL				*e*SG		**Sb**	**19 19 47.4**	**-0.6**
KHL	**Karahalli**	**0.59**	**38**	*e*Pg		**Pg**	**19 19 38.7**	**+0.5**
KHL				*e*Sg		**Sb**	**19 19 47.4**	**-0.6**
KHAL	**Karahalli**	**0.62**	**33**	*i* P		**Pg**	**19 19 38.0**	**-0.7**
KHAL				*i* S		**Sg**	**19 19 47.5**	**+0.8**
KHAL	**Karahalli**	**0.62**	**33**	*i* P		**Pg**	**19 19 38.0**	**-0.7**
KHAL				*i* S		**Sg**	**19 19 47.5**	**+0.8**
GOLH	**Golhisar**	**0.73**	**147**	*i* P		**Pg**	**19 19 40.0**	**-0.7**
GOLH				*i* S		**Sb**	**19 19 51.9**	**0.0**
GOLH	**Golhisar**	**0.73**	**147**	*i* P		**Pg**	**19 19 40.0**	**-0.7**
GOLH				*i* S		**Sb**	**19 19 51.9**	**0.0**
KULA	**Kula-Manisa**	**0.73**	**335**	*e*PG		**Pg**	**19 19 41.4**	**+0.6**
KULA				*e*SG		**Sb**	**19 19 53.0**	**+1.0**
KULA	**Kula-Manisa**	**0.73**	**335**	*e*Pg		**Pg**	**19 19 41.4**	**+0.6**
KULA				*e*Sg		**Sb**	**19 19 53.0**	**+1.0**
MANT	**Manisa**	**0.75**	**328**	*i* P		**Pg**	**19 19 40.6**	**-0.6**
MANT				*i* S		**Sb**	**19 19 52.8**	**+0.2**
MANT	**Manisa**	**0.75**	**328**	*i* P		**Pg**	**19 19 40.6**	**-0.6**
MANT				*i* S		**Sb**	**19 19 52.8**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.78**	**153**	*e*PG		**Pb**	**19 19 41.6**	**-0.8**
GLHS	**Glhisar (BURDU**	**0.78**	**153**	*e*Pg		**Pb**	**19 19 41.7**	**-0.8**
YER	**Yerkesik**	**0.95**	**221**	*e*PG		**Pn**	**19 19 45.6**	**-0.7**
YER	**Yerkesik**	**0.95**	**221**	*e*Pg		**Pn**	**19 19 45.6**	**-0.7**
AYDN	**Tasoluk**	**0.96**	**259**	*i* P		**Pn**	**19 19 46.0**	**-0.5**
AYDN				*i* S		**Sg**	**19 19 57.6**	**+0.2**
AYDN	**Tasoluk**	**0.96**	**259**	*i* P		**Pn**	**19 19 46.0**	**-0.5**
AYDN				*i* S		**Sg**	**19 19 57.6**	**+0.2**
TURN	**Turunc**	**1.04**	**201**	*i* P		Pg	19 19 42.4	-4.3
TURN				*i* S		**Sn**	**19 20 05.4**	**+3.1**
TURN	**Turunc**	**1.04**	**201**	*i* P		Pg	19 19 42.4	-4.3
DALT	**Dalyan (Mudla)**	**1.13**	**197**	*e*PN		**Pn**	**19 19 48.5**	**-0.3**
DALT	**Dalyan (Mudla)**	**1.13**	**197**	*e*Pn		**Pn**	**19 19 48.5**	**-0.3**
FETY	**Fethiye**	**1.22**	**179**	*e*PN		**Pg**	**19 19 50.5**	**+0.5**
FETY	**Fethiye**	**1.22**	**179**	*e*Pn		**Pg**	**19 19 50.5**	**+0.5**
DEMI	**Demirci**	**1.22**	**347**	*i* P		**Pn**	**19 19 50.2**	**+0.1**
DEMI				*i* S		**Sn**	**19 20 06.8**	**-0.1**
DEMI	**Demirci**	**1.22**	**347**	*i* P		**Pn**	**19 19 50.2**	**+0.1**
DEMI				*i* S		**Sn**	**19 20 06.8**	**-0.1**
GDZ	**Gediz**	**1.28**	**15**	*i* P		**Pn**	**19 19 50.6**	**-0.4**
GDZ	**Gediz**	**1.28**	**15**	*i* P		**Pn**	**19 19 50.6**	**-0.4**
ELL	**Elmali**	**1.29**	**148**	*e*PN		**Pg**	**19 19 51.3**	**-0.2**
ELL	**Elmali**	**1.29**	**148**	*e*Pn		**Pg**	**19 19 51.3**	**-0.2**
AKHS	**Akhisar**	**1.42**	**317**	*i* P		**Pn**	**19 19 50.2**	**-2.6**
AKHS	**Akhisar**	**1.42**	**317**	*i* P		**Pn**	**19 19 50.2**	**-2.6**
ALT	**Altintas**	**1.46**	**34**	*e*PN		**Pb**	**19 19 53.9**	**-0.2**
ALT	**Altintas**	**1.46**	**34**	*e*Pn		**Pb**	**19 19 53.9**	**-0.2**
TVSB	**Tavsanli**	**1.63**	**11**	*e*PN		**Pn**	**19 19 56.4**	**+0.7**
TVSB	**Tavsanli**	**1.63**	**11**	*e*Pn		**Pn**	**19 19 56.4**	**+0.7**

*ISCJB **16** 19:30:19.7±0.5,37.83N±0.02×29.10E±0.05, h7km±6km, Error ellipse: s-maj=6.9km s-min=3.9km az=9.4*
*CSEM **16** 19:30:19.5±0.2,37.82N×29.12E, h8km, MD2.7, Error ellipse: s-maj=4.8km s-min=3.1km az=96.0*
*ISK **16** 19:30:19.0,37.82N×29.09E, h14km, MD2.7*
*DDA **16** 19:30:19.6,37.84N×29.09E, h7km, MD2.7*

ISC 16 19:30:20.0±1.1, 37.84N±0.02×29.09E±0.03, h4km±10km, n22, σ1909/37, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DENT	**Denizli**	**0.10**	**209**	PG		**Pg**	**19 30 22.1**	**+0.1**
DENT	**Denizli**	**0.10**	**209**	*i* Pg		**Pg**	**19 30 22.1**	**+0.1**
DNZL	**Cakiroluk**	**0.15**	**194**	*i* P		**Pg**	**19 30 23.0**	**-0.1**
DNZL				*i* S		**Sg**	**19 30 25.6**	**+0.5**
DNZL	**Cakiroluk**	**0.15**	**194**	*i* P		**Pg**	**19 30 23.0**	**-0.1**
DNZL				*i* S		**Sg**	**19 30 25.6**	**+0.5**
KHL	**Karahalli**	**0.59**	**35**	*e*PG		**Pg**	**19 30 31.6**	**+0.3**
KHL				*e*SG		**Sg**	**19 30 40.4**	**+1.3**
KHL	**Karahalli**	**0.59**	**35**	*e*Pg		**Pg**	**19 30 31.6**	**+0.3**
KHL				*e*Sg		**Sg**	**19 30 40.4**	**+1.3**
KHAL	**Karahalli**	**0.62**	**31**	*i* P		**Pg**	**19 30 30.6**	**-1.3**
KHAL				*i* S		**Sg**	**19 30 40.5**	**+0.6**
KHAL	**Karahalli**	**0.62**	**31**	*i* P		**Pg**	**19 30 30.6**	**-1.3**
KHAL				*i* S		**Sg**	**19 30 40.5**	**+0.6**
GOLH	**Golhisar**	**0.71**	**148**	*i* P		**Pg**	**19 30 32.7**	**-0.9**
GOLH				*i* S		**Sb**	**19 30 44.5**	**-0.6**
GOLH	**Golhisar**	**0.71**	**148**	*i* P		**Pg**	**19 30 32.7**	**-0.9**
GOLH				*i* S		**Sb**	**19 30 44.5**	**-0.6**
GLHS	**Glhisar (BURDU**	**0.76**	**155**	*e*PG		**Pg**	**19 30 33.8**	**-0.7**
GLHS	**Glhisar (BURDU**	**0.76**	**155**	*e*Pg		**Pg**	**19 30 33.8**	**-0.7**
KULA	**Kula-Manisa**	**0.76**	**333**	*e*PG		**Pg**	**19 30 34.1**	**-0.4**
KULA				*e*SG		**Sb**	**19 30 45.9**	**-0.6**
KULA	**Kula-Manisa**	**0.76**	**333**	*e*Pg		**Pg**	**19 30 34.1**	**-0.4**
KULA				*e*Sg		**Sb**	**19 30 45.9**	**-0.6**
AYDN	**Tasoluk**	**0.98**	**260**	*i* P		**Pg**	**19 30 38.5**	**-0.3**
AYDN				*i* S		**Sg**	**19 30 50.9**	**-0.6**
AYDN	**Tasoluk**	**0.98**	**260**	*i* P		**Pg**	**19 30 38.5**	**-0.3**
AYDN				*i* S		**Sg**	**19 30 50.9**	**-0.6**
TURN	**Turunc**	**1.04**	**202**	*i* P		**Pb**	**19 30 40.2**	**-0.4**
TURN				*i* S		**Sn**	**19 31 01.0**	**+4.6**
TURN	**Turunc**	**1.04**	**202**	*i* P		**Pb**	**19 30 40.2**	**-0.4**
FETY	**Fethiye**	**1.20**	**180**	*e*PN		**Pg**	**19 30 41.7**	**-1.3**
FETY	**Fethiye**	**1.20**	**180**	*e*Pn		**Pg**	**19 30 41.7**	**-1.3**
DEMI	**Demirci**	**1.24**	**346**	*i* P		**Pg**	**19 30 43.8**	**+0.1**
DEMI				*i* S		**Sn**	**19 31 01.0**	**-0.4**
DEMI	**Demirci**	**1.24**	**346**	*i* P		**Pg**	**19 30 43.8**	**+0.1**
DEMI				*i* S		**Sn**	**19 31 01.0**	**-0.4**

IDC 16 19:34:24.2±8.6, 20.90S×66.86W, h220km±59km, mb3.1/2, mb1 3.1/3, mb1mx2.9/18, mbtmp2.9/3, MS2.8/1, Ms1 2.9/1, ms1mx2.7/6, Error ellipse: s-maj=107.9km s-min=49.7km az=27.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LPAZ	**La Paz**	**4.74**	**345**	P		Pn	19 35 36.6	-0.2
	0.4nm,0.3s,baz=151,slow=4.7,SNR=10.0							
LPAZ				S		S	19 36 34.2	+0.3
	0.2nm,0.3s,baz=3.5,slow=20,SNR=3.5							
LPAZ				LR		LR	19 37 16.1	
	comp=Z,103nm,18.4s,baz=41,slow=36							
TORD	**Torodi Ar. Bea**	**75.35**	**70**	P		P	19 45 44.1	+0.1
	0.3nm,0.4s,baz=259,slow=5.4,SNR=6.6							
YKA	**Yellowknife Ar**	**91.27**	**340**	P		P	19 47 04.1	+0.1
	0.2nm,0.5s,baz=129,slow=4.6,SNR=5.2							
MKAR	**Makanchi Array**	**144.02**	**37**	PKP		PKPbc	19 53 32.5	+0.5
	0.5nm,0.9s,baz=311,slow=2.5,SNR=5.2							

*IDC **16** 19:36:43.3±0.5,60.22S×26.84W, h0km, mb4.5/10, mb1 4.6/11, mb1mx4.5/17, mbtmp4.5/11, MS4.2/6, Ms1 4.1/6, ms1mx3.9/21, Error ellipse: s-maj=24.5km s-min=15.9km az=64.0*
*ISCJB **16** 19:36:44.2±0.5,60.40S±0.09×26.9W±0.2, h19km, mb4.5/12, MS4.2/4, Error ellipse: s-maj=20.0km s-min=8.5km az=148.4*
*NEIC **16** 19:36:45.1±5.0,60.28S×26.95W, h13km±30km, mb4.9/5, Error ellipse: s-maj=15.7km s-min=9.4km az=52.0*

ISC 16 19:36:45.9±0.4, 60.52S±0.09×26.6W±0.1, h19km, n77, σ2811/67, mb4.6/12, MS4.2/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VNA1	**Neumayer--Stat**	**12.59**	**151**	*e*Pn		Pn	19 39 47.2	+3.5
VNA1	**Neumayer--Stat**	**12.59**	**151**	*e*Sn		**Sn**	**19 41 59.1**	**-4.0**
VNA3	**Neumayer Olymp**	**12.71**	**155**	*e*Pn		**Pn**	**19 39 47.6**	**+2.3**
VNA3	**Neumayer Olymp**	**12.71**	**155**	*e*Sn		**Sn**	**19 42 00.7**	**-5.4**
VNA2	**Neumayer--Watz**	**12.99**	**151**	*e*Pn		**Pn**	**19 39 51.7**	**+2.6**
	baz=299,slow=17							
VNA2	**Neumayer--Watz**	**12.99**	**151**	*e*Sn		**Sn**	**19 42 08.6**	**-4.3**
	baz=299,slow=17							
SNAA	**Sanae**	**14.59**	**150**	*e*Pn		**Pn**	**19 40 13.7**	**+2.7**
SNAA	**Sanae**	**14.59**	**150**	*e*Sn		**Sn**	**19 42 47.8**	**-4.2**
SNAA	**Sanae**	**14.59**	**150**	Pn		**Pn**	**19 40 13.4**	**+2.3**
SNAA				Sn		**Sn**	**19 42 46.8**	**-5.2**
SNAA	**Sanae**	**14.59**	**150**	Pn		**Pn**	**19 40 13.4**	**+2.3**
SNAA				Sn		**Sn**	**19 42 46.8**	**-5.2**
SNAA				LR		LR	19 44 33.2	
	comp=Z,397nm,19.4s,slow=32							
PMSA	**Palmer Station**	**17.55**	**240**	P		**P**	**19 40 54.3**	**+4.2**
PMSA	**Palmer Station**	**17.55**	**240**	P		**P**	**19 40 54.3**	**+4.2**
	2.2nm,0.3s,baz=70,slow=11,SNR=6.6							
PMSA				LR		LR	19 46 46.3	
	comp=Z,809nm,19.0s,baz=163,slow=34							
QSPA	**South Pole Qui**	**29.72**	**180**	*e*P		P	19 42 54.2	+3.7
	36nm,1.3s							
QSPA	**South Pole Qui**	**29.72**	**180**	P		P	19 42 54.8	+4.4
	9.1nm,0.9s,baz=199,slow=5.1,SNR=25							
QSPA				LR		LR	19 54 29.6	
	comp=Z,795nm,20.4s,baz=198,slow=36							
PLCA	**Paso Flores**	**33.35**	**286**	P		**P**	**19 43 22.1**	**-0.4**
PLCA	**Paso Flores**	**33.35**	**286**	P		**P**	**19 43 22.1**	**-0.4**
	0.6nm,0.3s,baz=230,slow=5.7,SNR=3.4							
PLCA				LR		LR	19 56 39.0	
	comp=Z,468nm,18.6s,baz=299,slow=36							
CPUP	**Villa Florida**	**40.11**	**315**	P		**P**	**19 44 17.8**	**-2.3**
CPUP	**Villa Florida**	**40.11**	**315**	P		**P**	**19 44 17.8**	**-2.3**
	1.3nm,0.4s,baz=146,slow=7.0,SNR=11							
VNDA	**Vanda**	**42.11**	**183**	*e*P		P	19 44 39.7	+3.7
	5.6nm,0.8s							
VNDA	**Vanda**	**42.11**	**183**	P		P	19 44 39.7	+3.7
	6.4nm,0.9s,baz=186,slow=6.6,SNR=29							
VNDA				LR		LR	19 59 37.5	
	comp=Z,251nm,20.5s,baz=204,slow=32							
BOSA	**Boshof**	**46.93**	**71**	P		**P**	**19 45 16.5**	**+1.4**
BOSA	**Boshof**	**46.93**	**71**	P		**P**	**19 45 16.5**	**+1.4**
	5.6nm,1.0s,baz=241,slow=8.6,SNR=4.9							
BDFB	**Brasilia**	**47.44**	**331**	P		**P**	**19 45 18.6**	**-0.6**
BDFB	**Brasilia**	**47.44**	**331**	P		**P**	**19 45 18.6**	**-0.6**
	1.9nm,0.4s,baz=148,slow=11,SNR=3.8							
BDFB				LR		LR	20 02 16.9	
	comp=Z,164nm,20.6s,baz=322,slow=33							
LPAZ	**La Paz**	**53.30**	**307**	*e*P		**P**	**19 46 01.8**	**-2.3**
	4.8nm,0.7s							
LPAZ	**La Paz**	**53.30**	**307**	P		**P**	**19 46 02.4**	**-1.7**
	3.7nm,0.5s,baz=156,slow=5.5,SNR=24							
SAML	**Samuel**	**58.23**	**316**	*e*P		P	19 46 35.3	-3.4
	17nm,1.0s							
OTAV	**Otavalo**	**72.44**	**304**	*e*P		**P**	**19 48 08.6**	**-2.8**
	7.6nm,0.9s							
TORD	**Torodi Ar. Sit**	**76.82**	**28**	*e*P		**P**	**19 48 36.7**	**+0.6**
TORD	**Torodi Ar. Bea**	**76.82**	**28**	P		**P**	**19 48 36.4**	**+0.3**
TORD	**Torodi Ar. Bea**	**76.82**	**28**	P		**P**	**19 48 36.4**	**+0.3**
	2.7nm,0.5s,baz=199,slow=6.1,SNR=39							
STKA	**Stephens Creek**	**87.43**	**170**	P		**P**	**19 49 33.2**	**+1.5**
STKA	**Stephens Creek**	**87.43**	**170**	P		**P**	**19 49 33.2**	**+1.5**
	5.9nm,0.9s,baz=186,slow=6.6,SNR=8.0							
ASAR	**Alice Springs**	**94.62**	**162**	P		**P**	**19 50 06.3**	**+0.9**
ASAR	**Alice Springs**	**94.62**	**162**	P		**P**	**19 50 06.3**	**+0.9**
	2.2nm,0.8s,baz=190,slow=3.9,SNR=17							
SCHQ	**Schefferville**	**119.38**	**335**	PKP		**PKPdf**	**19 55 31.7**	**-0.8**
SCHQ	**Schefferville**	**119.38**	**335**	PKP		**PKPdf**	**19 55 31.7**	**-0.8**
	2.2nm,0.7s,baz=315,slow=19,SNR=4.5							
NACGM	**Naroch**	**122.61**	**33**	*e*LR		LR	19 56 21.0	
CMAR	**Chiang Mai Arr**	**123.10**	**113**	PKP		**PKPdf**	**19 55 42.3**	**+1.5**
CMAR	**Chiang Mai Arr**	**123.10**	**113**	PKP		**PKPdf**	**19 55 42.3**	**+1.5**
	1.8nm,0.9s,baz=239,slow=3.7,SNR=9.5							
NB2	**NORSAR Subarra**	**124.67**	**21**	PKPdf		**PKPdf**	**19 55 42.1**	**-0.4**
	comp=Z,2.6nm,1.0s,baz=202,slow=1.9							
NOA	**NORSAR Array B**	**124.67**	**21**	PKP		**PKPdf**	**19 55 42.4**	**0.0**
NOA	**NORSAR Array B**	**124.67**	**21**	PKP		**PKPdf**	**19 55 42.4**	**0.0**
	comp=Z,1.7nm,1.0s,baz=202,slow=1.9,SNR=4.0							
FRB	**Frobisher Bay**	**127.95**	**338**	PKP		**PKPdf**	**19 55 46.8**	**-1.7**
FRB	**Frobisher Bay**	**127.95**	**338**	PKP		**PKPdf**	**19 55 46.8**	**-1.7**
	comp=Z,2.8nm,0.6s,baz=125,slow=3.4,SNR=6.2							
FINES	**FINESS Array B**	**128.17**	**29**	PKP		**PKPdf**	**19 55 49.5**	**+0.4**
FINES	**FINESS Array B**	**128.17**	**29**	PKP		**PKPdf**	**19 55 49.5**	**+0.4**
	comp=Z,6.1nm,0.9s,baz=228,slow=3.4,SNR=8.6							
ABKAR	**Akbulak array**	**129.55**	**58**	*e*P		**PKPdf**	**19 55 52.4**	**+0.3**
AAK	**Ala-Archa**	**131.03**	**74**	*e*P		**PKPdf**	**19 55 56.0**	**+0.6**
ARCES	**ARCESS Array B**	**134.96**	**23**	PKP		**PKPdf**	**19 56 02.6**	**+0.9**
ARCES	**ARCESS Array B**	**134.96**	**23**	PKP		**PKPdf**	**19 56 02.6**	**+0.9**
	comp=Z,4.5nm,0.9s,baz=29,slow=2.8,SNR=5.1							
MK31	**Makanchi Array**	**137.84**	**76**	*e*P		**PKPdf**	**19 56 08.6**	**+0.8**
MKAR	**Makanchi Array**	**137.84**	**76**	PKPpre		PKPpre	19 56 02.7	
MKAR	**Makanchi Array**	**137.84**	**76**	PKhKP		PKPpre	19 56 02.7	
	comp=Z,1.3nm,1.0s,baz=243,slow=5.3,SNR=4.4							
YKA	**Yellowknife Ar**	**139.63**	**314**	PKPpre		PKPpre	19 55 60.0	
YKA				PKP		**PKPdf**	**19 56 09.4**	**-1.1**
YKA	**Yellowknife Ar**	**139.63**	**314**	PKhKP		PKPpre	19 55 59.9	
	comp=Z,0.1nm,0.3s,baz=132,slow=3.4,SNR=3.8							
YKA				PKP		**PKPdf**	**19 56 09.4**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=130,slow=2.0,SNR=16							
ZAA0	**Zalesovo Array**	**143.86**	**69**	*e*P		PKPbc

comp=Z,860nm,1.4s,SNR=15
KAPI Kappang 19.49 96 P P 19 59 51.7 -1.6
comp=Z,3.7nm,0.3s,baz=280,slow=8.6,SNR=31
MYLDM Lahad Datu 20.07 65 P P 20 00 00.4 +0.7
CM31 Chiang Mai Arr 21.71 357 *eP* **P 20 00 15.0 -2.3**
comp=Z,16nm,0.7s
CMAR Chiang Mai Arr 21.71 357 P P 20 00 14.9 -2.4
CMAR PcP **PcP 20 04 19.5 +1.7**
CMAR Chiang Mai Arr 21.71 357 P P 20 00 14.9 -2.4
comp=Z,12nm,0.7s,baz=185,slow=9.9,SNR=76
CMAR PcP **PcP 20 04 19.5 +1.7**
comp=Z,2.0nm,0.7s,baz=210,slow=3.3,SNR=5.6
CMAR LR LR 20 10 21.3
comp=Z,6μm,18.7s,baz=185,slow=41
CHTO Chiang Mai 22.06 357 *eP* **P 20 00 18.3 -2.8**
CHTO pmax pmax
comp=Z,8.0nm,0.7s
CHTO Chiang Mai 22.06 357 *eP* **P 20 00 18.3 -2.8**
comp=Z,7.7nm,0.7s
QIZ Qiongzhong 24.14 23 P P 20 00 40.4 -1.7
QIZ S S 20 05 05.9 +7.8
QIZ LR LR
comp=N,5μm,15.7s
QIZ LR LR
comp=Z,6μm,15.2s
CTBH Cotabato--PC H 26.12 66 ⇓*iP* **P 20 00 59.9 -0.3**
VIS Vishakhapatnam 26.80 322 *eP* **P 20 01 05.2 -0.9**
VIS AMB AMB 20 01 33.5
comp=Z,43nm,5.8s
TGY Tagaytay City 26.83 49 P P 20 01 06.0 -0.7
TGY Tagaytay City 26.83 49 P P 20 01 06.0 -0.7
comp=Z,84nm,0.4s,baz=163,slow=2.4,SNR=4.8
KMI Kunming 28.40 5 P P 20 01 20.9 +0.2
KMI pP **pP 20 01 30.4 0.0**
KMI sP **sP 20 01 34.1 -0.3**
KMI S **S 20 06 03.3 -2.6**
KMI pmax pmax
comp=Z,14nm,0.6s
KMI pmax pmax
comp=Z,410nm,11.2s
KMI LR LR
comp=N,5μm,13.6s
KMI LR LR
comp=E,3μm,13.1s
KMI LR LR
comp=Z,6μm,13.6s
FITZ Fitzroy Crossi 28.84 122 *eP* **P 20 01 23.6 -0.8**
comp=Z,0.4nm,0.3s
FITZ Fitzroy Crossi 28.84 122 P P 20 01 24.0 -0.5
comp=Z,6.9nm,0.7s,baz=321,slow=6.0,SNR=16
FITZ Fitzroy Crossi 28.84 122 P P 20 01 23.9 -0.6
baz=29,SNR=11
MEEK Meekatharra 29.06 145 P P 20 01 29.3 +2.9
baz=29,SNR=8.5
SHL Shillong 29.88 345 *eP* **P 20 01 35.0 +1.2**
GYA Guiyang 30.27 11 ⇑*iP* **P 20 01 38.1 +0.9**
GYA pP **pP 20 01 50.3 +3.5**
GYA sP **sP 20 01 54.8 +4.0**
GYA PP **PnPn 20 02 39.8 +4.0**
GYA S **S 20 06 37.0 +2.0**
GYA ScP **ScP 20 08 16.8 -0.7**
GYA SS **SnSn 20 08 17.9 +6.9**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,4.9s
GYA LR LR
comp=N,740nm,17.4s
GYA LR LR
comp=E,670nm,18.0s
GYA LR LR
comp=Z,890nm,17.6s
BOK Bokaro 30.41 333 *eP* **P 20 01 37.8 -0.5**
BOK AMB AMB 20 01 47.1
comp=Z,34nm,2.9s
SWI Sorong 31.05 86 P P 20 01 43.4 -0.8
baz=31,SNR=4.0
MTN Manton Dam 31.93 109 P P 20 01 49.5 -2.4
baz=32,SNR=5.6
TLE Tual 32.43 95 P P 20 01 55.8 -0.5
baz=32,SNR=3.0
ODAN Odare 32.51 338 *eP* **P 20 01 58.1 +1.0**
comp=Z,49nm,0.6s
TAPN Taplejung 32.84 339 *eP* **P 20 02 01.4 +1.4**
comp=Z,103nm,0.8s
RAMN Ramite 32.89 337 *eP* **P 20 02 01.8 +1.4**
comp=Z,25nm,0.5s
QZH Quanzhou 33.27 31 ⇑*iP* **P 20 02 02.8 -0.6**
QZH S **S 20 07 27.3 +5.6**
QZH LR LR
comp=N,4μm,13.0s
QZH LR LR
comp=E,10μm,15.3s
QZH LR LR
comp=Z,8μm,19.4s
NWAO Narrogin (SRO) 33.43 154 LR LR 20 15 05.6
comp=Z,5μm,20.2s,baz=333,slow=35
PKIN Phulchoki 33.93 336 *eP* **P 20 02 11.6 +2.1**
LSA Lhasa 34.01 346 P P 20 02 12.3 +2.0
LSA pmax pmax
comp=Z,20nm,1.2s
GUN Gumba 34.03 337 *eP* **P 20 02 11.7 +1.2**
comp=Z,98nm,0.5s
DMN Daman 34.08 336 *eP* **P 20 02 12.1 +1.3**
KKN Kakani 34.17 336 *eP* **P 20 02 12.1 +0.6**
comp=Z,38nm,0.7s
CD2 Chengdu 34.23 5 P P 20 02 12.9 +1.1
CD2 pP **pP 20 02 23.0 +1.6**
CD2 sP **sP 20 02 27.1 +1.6**
CD2 PP **PP 20 03 29.0 -0.7**
CD2 PcP **PcP 20 04 48.3 +0.2**
CD2 S **S 20 07 37.5 +1.0**
CD2 sS **sS 20 07 54.3 +1.8**
CD2 PcS **PcS 20 08 33.6 -0.8**
CD2 SS **SnSn 20 09 48.8 +1.8**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,540nm,5.8s
CD2 LR LR
comp=N,6μm,17.6s
CD2 LR LR
comp=E,6μm,13.7s
CD2 LR LR
comp=Z,7μm,17.6s
KOLN Koldanda 34.87 334 *eP* **P 20 02 19.4 +1.9**
comp=Z,52nm,0.7s
DANN Dangsing 35.30 334 *eP* **P 20 02 22.0 +0.7**
comp=Z,50nm,0.5s
PYUN Piuthan 35.42 333 *eP* **P 20 02 23.1 +0.8**
comp=Z,50nm,0.8s
WHN Wuhan 36.28 21 P P 20 02 28.6 -0.8
WHN S S 20 08 16.8 +8.9
WHN LR LR
comp=N,17μm,15.2s
WHN LR LR
comp=E,6μm,12.6s
WHN LR LR
comp=Z,22μm,14.2s
WRA Warramunga Arr 37.08 119 P P 20 02 36.1 -0.3
WRA Warramunga Arr 37.08 119 P P 20 02 36.1 -0.3
comp=Z,395nm,1.1s,baz=308,slow=9.2,SNR=4.3
WRAB Tennant Creek 37.09 119 *eP* **P 20 02 35.2 -1.3**
WRAB pmax pmax
comp=Z,19nm,0.6s
WRAB Tennant Creek 37.09 119 *eP* **P 20 02 35.2 -1.3**
comp=Z,19nm,0.6s
WRAB Tennant Creek 37.09 119 P P 20 02 35.9 -0.6
comp=Z,230nm,0.4s,SNR=11
XAN Xi'an 38.07 12 P P 20 02 43.0 -1.6
XAN pP **pP 20 02 50.3 -4.0**
XAN S **S 20 08 39.6 +4.4**
XAN pmax pmax
comp=Z,25nm,0.6s
XAN pmax pmax
comp=Z,97nm,7.2s
XAN LR LR
comp=N,4μm,14.4s
XAN LR LR
comp=E,2μm,15.4s
XAN LR LR
comp=Z,2μm,15.4s
AS31 Alice Springs 38.24 125 *eP* **P 20 02 45.5 -0.8**
ASAR Alice Springs 38.24 125 P P 20 02 45.8 -0.4
ASAR S **S 20 08 39.5 +1.3**
ASAR Alice Springs 38.24 125 P P 20 02 45.8 -0.4
comp=Z,9.4nm,0.4s,baz=298,slow=7.7,SNR=130
ASAR S **S 20 08 39.5 +1.3**
comp=Z,5.5nm,1.1s,baz=295,slow=15,SNR=7.4
ASAR LR LR 20 19 51.4
comp=Z,3μm,20.9s,baz=291,slow=38
LZH Lanzhou 39.37 5 ⇑*iP* **P 20 02 55.3 -0.3**
LZH pP **pP 20 03 05.3 -0.1**
LZH sP **sP 20 03 09.1 -0.3**
LZH PP **PnPn 20 04 36.0 +6.7**
LZH PcP **PcP 20 05 03.0 -0.6**
LZH S **S 20 08 57.1 +2.1**
LZH sS **sS 20 09 13.5 +2.3**
LZH SS **SS 20 11 49.0 -0.8**
LZH pmax pmax
comp=Z,72nm,1.0s
LZH pmax pmax
comp=Z,350nm,4.8s
LZH LR LR
comp=N,4μm,15.2s
LZH LR LR
comp=E,5μm,14.9s
LZH LR LR
comp=Z,7μm,17.2s
NJ2 Nanjing 39.38 25 *eP* **P 20 02 56.3 +0.8**
NJ2 pP **pP 20 03 07.3 +2.0**
NJ2 sP **sP 20 03 10.6 +1.3**
NJ2 PP **PnPn 20 04 28.5 -0.8**
NJ2 S **S 20 08 59.0 +4.1**
NJ2 sS **sS 20 09 08.5 -2.5**
NJ2 pmax pmax
comp=Z,20nm,1.0s
NJ2 pmax pmax
comp=Z,440nm,9.5s
NJ2 LR LR
comp=N,6μm,16.8s
NJ2 LR LR
comp=E,3μm,14.5s
NJ2 LR LR
comp=Z,7μm,16.0s
SSE Sheshan 39.63 29 P P 20 02 55.8 -1.8
SSE sP **sP 20 03 07.4 -4.0**
SSE PP **PnPn 20 04 32.6 +0.3**
SSE S **S 20 09 03.8 +5.2**
SSE pmax pmax
comp=Z,24nm,0.8s
SSE pmax pmax
comp=Z,320nm,5.0s
SSE LR LR
comp=N,2μm,20.8s
SSE LR LR
comp=E,980nm,20.9s
SSE LR LR
comp=Z,2μm,15.5s
DDI Dehra Dun 39.65 329 *eP* **P 20 02 55.0 -2.9**
JOW Kunigami 40.39 40 *eP* **P 20 03 03.9 -0.1**
SMLA Simla 40.76 329 *eP* **P 20 03 07.3 +0.4**
SMLA AMB AMB 20 03 09.9
comp=Z,36nm,0.4s
QIS Mount Isa 41.93 117 P P 20 03 16.1 -0.8
baz=42,SNR=25
QIS S **S 20 09 30.8 -2.6**
baz=42,SNR=8.3
DHRM DHARAMSHALA 42.09 329 *eP* **P 20 03 18.1 -0.2**
DHRM AMB AMB 20 03 29.8
comp=Z,43nm,1.6s
TIY Taiyuan 42.38 14 *eP* **P 20 03 19.8 -0.5**
TIY pP **pP 20 03 29.3 -0.9**
TIY sP **sP 20 03 35.8 +1.6**
TIY S **S 20 09 43.6 +4.0**
TIY pmax pmax
comp=Z,410nm,6.4s
TIY LR LR
comp=N,6μm,15.0s
TIY LR LR
comp=E,3μm,12.9s
TIY LR LR
comp=Z,5μm,14.9s
GTA Gaotai 42.55 359 ⇑*iP* **P 20 03 21.8 +0.1**
GTA pP **pP 20 03 32.4 +0.8**
GTA sP **sP 20 03 36.3 +0.7**
GTA PcP **PcP 20 05 15.3 +1.4**
GTA S **S 20 09 41.8 -0.4**
GTA sS **sS 20 09 58.5 +0.1**
GTA ScS **ScS 20 13 19.5 -1.5**
GTA pmax pmax
comp=Z,12nm,0.7s
GTA pmax pmax
comp=Z,420nm,7.1s
GTA LR LR
comp=N,3μm,15.2s
GTA LR LR
comp=E,5μm,16.2s
GTA LR LR
comp=Z,3μm,14.7s
BTO Baotou 44.64 11 *eP* **P 20 03 37.6 -0.9**
HHC Hu-ho-hao-te 45.18 12 *eP* **P 20 03 43.1 +0.3**
HHC PcP **PcP 20 05 22.6 -0.1**
HHC PP **PP 20 05 29.3 +0.4**
HHC ScP **ScP 20 09 12.1 -0.9**
HHC PcS **PcS 20 09 15.3 -1.3**
HHC S **S 20 10 20.3 -0.1**
HHC sS **sS 20 10 37.3 +0.5**
HHC ScS **ScS 20 13 34.8 -2.6**
HHC SS SS 20 13 35.8 -8.0
HHC pmax pmax
comp=Z,97nm,1.0s
HHC pmax pmax
comp=Z,1μm,6.5s
HHC LR LR
comp=N,2μm,16.5s
HHC LR LR
comp=E,2μm,15.8s
HHC LR LR
comp=Z,2μm,16.3s
BJI Beijing 45.58 17 P P 20 03 45.6 -0.2
BJI S **S 20 10 26.8 +0.9**
BJI pmax pmax
comp=Z,23nm,0.7s
BJI pmax pmax
comp=Z,450nm,4.5s
BJI LR LR
comp=N,8μm,17.2s
BJI LR LR
comp=E,3μm,19.4s
BJI LR LR
comp=E,4μm,18.6s
JNU Nakatsue 46.40 36 *eP* **P 20 03 51.5 -1.0**
comp=E,26nm,1.1s
JNU Nakatsue 46.40 36 P P 20 03 51.8 -0.7
comp=E,28nm,0.9s,baz=166,slow=3.4,SNR=11
DL2 Dalian 46.43 23 P P 20 03 51.9 -0.6
DL2 S **S 20 10 34.3 -4.0**
DL2 pmax pmax
comp=Z,29nm,2.0s
DL2 pmax pmax
comp=Z,500nm,5.5s
DL2 LR LR
comp=N,5μm,16.5s
DL2 LR LR
comp=E,2μm,14.7s
DL2 LR LR
comp=Z,7μm,15.5s
PMG Port Moresby 46.94 100 P P 20 03 56.7 -0.2
PMG Port Moresby 46.94 100 P P 20 03 56.7 -0.2
comp=Z,7.4nm,0.8s,baz=218,slow=10.0,SNR=3.4
CTA Charters Tower 47.78 114 P P 20 04 03.9 +0.4
CTA Charters Tower 47.78 114 P P 20 04 03.9 +0.4
comp=Z,11nm,0.6s,baz=284,slow=9.4,SNR=18
CTAO Charters Tower 47.78 114 *eP* **P 20 04 03.6 +0.1**
CTAO pmax pmax
comp=Z,19nm,0.8s
CTAO Charters Tower 47.78 114 *eP* **P 20 04 03.6 +0.1**
comp=Z,19nm,0.8s
QLP Quilpie 47.98 123 P P 20 04 05.8 +0.9
baz=48,SNR=11
KSAR Wonju Array Be 48.01 30 P P 20 04 04.5 -0.4
KSRS Korea Array 48.03 30 P P 20 04 04.5 -0.6
comp=Z,6.1nm,0.6s,baz=226,slow=8.1,SNR=31
KSRS LR LR 20 26 35.1
comp=Z,2μm,18.2s,baz=185,slow=39
STKA Stephens Creek 48.05 131 *eP* **P 20 04 05.7 +0.4**
comp=Z,5.0nm,0.9s
STKA Stephens Creek 48.05 131 P P 20 04 06.0 +0.7
comp=Z,8.5nm,0.7s,baz=305,slow=7.1,SNR=24
STKA Stephens Creek 48.05 131 P P 20 04 06.1 +0.7
baz=48,SNR=15
KSH Kashi 48.16 335 *eP* **P 20 04 05.1 -1.1**
KSH pP **pP 20 04 14.8 -1.4**
KSH sP **sP 20 04 20.8 +0.6**
KSH PcP **PcP 20 05 33.3 0.0**
KSH PP **PP 20 05 57.6 -1.2**
KSH ScP **ScP 20 09 22.8 -2.8**
KSH PcS **PcS 20 09 27.5 -1.7**
KSH S **S 20 11 00.0 -3.3**
KSH sS **sS 20 11 17.4 -2.3**
KSH ScS **ScS 20 13 55.1 -2.0**
KSH SS SS 20 14 24.8 -8.2
KSH pmax pmax
comp=Z,15nm,0.8s
KSH pmax pmax
comp=Z,290nm,2.8s
KSH LR LR
comp=N,220nm,6.1s
KSH LR LR
comp=E,470nm,10.5s
KSH LR LR
comp=Z,350nm,8.3s
WMQ Urumqi 48.30 348 P P 20 04 08.0 +0.9
WMQ pP **pP 20 04 18.0 +0.9**
WMQ sP **sP 20 04 22.0 +0.9**
WMQ PcP **PcP 20 05 35.0 +1.4**
WMQ PP **PP 20 06 00.0 +0.1**
WMQ ScP **ScP 20 09 25.0 -1.0**
WMQ S **S 20 11 06.0 +1.1**
WMQ sS **sS 20 11 22.0 +0.6**
WMQ ScS **ScS 20 13 56.0 -1.7**
WMQ SS **SS 20 14 30.0 -4.9**
WMQ pmax pmax
comp=Z,71nm,1.0s
WMQ pmax pmax
comp=Z,540nm,5.0s
WMQ LR LR
comp=N,2μm,16.0s
WMQ LR LR
comp=E,2μm,16.0s
WMQ LR LR
comp=Z,2μm,16.0s
ULHL Ulahol 50.35 337 P P 20 04 23.8 +0.8
SNR=7.3
KZA Kyzart 50.60 336 P P 20 04 27.8 +2.6
SNR=5.7
CMSA Cobar Meteorol 51.05 129 P P 20 04 29.1 +0.8
baz=51,SNR=43
TKM2 Tokmak 2 51.17 337 *eP* **P 20 04 29.4 +0.2**
TKM2 pmax pmax
comp=Z,29nm,0.8s
TKM2 Tokmak 2 51.17 337 *eP* **P 20 04 29.4 +0.2**
comp=Z,29nm,0.8s
TKM2 Tokmak 2 51.17 337 P P 20 04 29.8 +0.6
SNR=42
KBK Karagaybulak 51.21 336 P P 20 04 31.2 +1.8
SNR=13
SONM Songino Array 51.25 5 P P 20 04 30.6 +1.0
SONM PcP **PcP 20 05 45.0 +0.5**
SONM Songino Array 51.25 5 P P 20 04 30.6 +1.0
comp=Z,36nm,0.7s,baz=187,slow=8.8,SNR=44
SONM PcP **PcP 20 05 45.0 +0.5**
comp=Z,5.2nm,0.6s,baz=165,slow=3.6,SNR=1.9
AML Almayashu 51.30 335 P P 20 04 30.9 +0.5
SNR=22
ULN Ulaanbaatar 51.34 6 *eP* **P 20 04 30.7 +0.4**
comp=Z,24nm,0.7s
AAK Ala-Archa 51.38 336 ⇑*eP* **P 20 04 31.7 +1.0**
AAK pmax pmax
comp=Z,88nm,2.5s
AAK MLR MLR
comp=Z,4μm,19.0s
AAK Ala-Archa 51.38 336 *eP* **P 20 04 30.8 +0.1**
comp=Z,45nm,1.6s
AAK Ala-Archa 51.38 336 P P 20 04 31.2 +0.5
comp=Z,39nm,1.3s,SNR=5.3
FRU Bishkek 51.49 336 *eP* **P 20 04 32.0 +0.6**
CHMS Chumysh 51.58 336 P P 20 04 32.6 +0.7
SNR=9.3
EKS2 Erkin-Say 51.70 335 *eP* **P 20 04 33.7 +0.7**
EKS2 pmax pmax
comp=Z,29nm,0.9s
EKS2 Erkin-Say 51.70 335 *eP* **P 20 04 33.7 +0.7**
comp=Z,29nm,0.9s
EKS2 Erkin-Say 51.70 335 P P 20 04 34.0 +1.0
SNR=47
RMQ Roma 51.76 121 P P 20 04 36.0 +2.3
baz=52,SNR=4.3
USP Ospenovka 51.90 336 P P 20 04 35.0 +0.5
SNR=18
CN2 Changchun 52.10 23 *eP* **P 20 04 34.8 -1.0**
CN2 *ep*P **pP 20 04 44.8 -1.1**
CN2 *eP*P **PP 20 06 34.4 0.0**
CN2 *eS* **S 20 11 56.8 -0.9**
CN2 pmax pmax
comp=Z,50nm,0.7s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,3μm,14.0s
CN2 LR LR
comp=E,3μm,14.0s
CN2 LR LR
comp=Z,4μm,15.0s
MK31 Makanchi Array 52.40 344 *eP* **P 20 04 37.9 -0.1**
MK31 Makanchi Array 52.40 344 *eP* **P 20 04 37.9 -0.1**
MKAR Makanchi Array 52.40 344 P P 20 04 38.1 +0.1
MKAR Makanchi Array 52.40 344 P P 20 04 38.1 +0.1
MKAR Makanchi Array 52.40 344 P P 20 04 38.1 +0.1
comp=Z,37nm,0.6s,baz=147,slow=7.9,SNR=467
MKAR LR LR 20 31 46.2
comp=Z,902nm,19.3s,baz=162,slow=42
MAJO Matsushiro 53.14 38 *eP* **P 20 04 43.2 -0.5**
MAJO pmax pmax
comp=Z,11nm,1.0s
MAJO Matsushiro 53.14 38 *eP* **P 20 04 43.2 -0.5**
comp=Z,11nm,1.0s
MAT Matsushiro 53.14 38 P P 20 04 41.4 -2.3
MAT S **S 20 12 13.2 +0.9**
MJAR Matsushiro Arr 53.15 38 P P 20 04 42.0 -1.7
MJAR Matsushiro Arr 53.15 38 P P 20 04 42.0 -1.7
comp=Z,3.4nm,0.7s,baz=212,slow=7.7,SNR=17
EIDS Eidsvold 53.45 119 *eP* **P 20 04 45.4 -0.7**
comp=Z,11nm,0.8s
EIDS Eidsvold 53.45 119 P P 20 04 48.4 +2.3
baz=54,SNR=5.6
KKAR Karatay Array 53.48 333 *eP* **P 20 04 45.8 -0.3**
KKAR pmax pmax
comp=Z,3.0nm,0.6s
KKAR Karatay Array 53.48 333 *eP* **P 20 04 45.8 -0.3**
comp=Z,3.4nm,0.6s
ZAK Zakamensk 53.58 2 ⇓*iP* **P 20 04 46.3 -0.5**
ZAK pmax pmax
comp=Z,7.0nm,2.0s
YNG Young 54.24 131 P P 20 04 51.8 -0.1
baz=54,SNR=7.8
VLA Vladivostok 54.34 28 ⇑*iP* **P 20 04 51.0 -1.3**
VLA *e* 20 05 53.3
VLA *e* 20 06 52.6
VLA *eS* **S 20 12 25.9 -2.2**
VLA pmax pmax
comp=Z,13nm,0.7s
MDJ Mudanjiang 54.47 25 P P 20 04 52.8 -0.4
MDJ pP **pP 20 05 00.0 -3.4**
MDJ sP **sP 20 05 04.3 -3.0**
MDJ PP **PP 20 06 54.6 -1.2**
MDJ S **S 20 12 31.9 +2.0**
MDJ SS **SS 20 16 17.3 +4.4**
MDJ pmax pmax
comp=Z,8.0nm,1.3s
MDJ pmax pmax
comp=Z,310nm,14.6s
MDJ LR LR
comp=N,1μm,21.8s
MDJ LR LR
comp=E,1μm,21.8s
MDJ LR LR
comp=Z,2μm,19.2s
MOY Mondy 54.81 1 *eP* **P 20 04 56.8 +1.1**
MOY pmax pmax
comp=Z,48nm,2.8s
TLY Talaya 54.89 3 *eP* **P 20 04 56.2 0.0**
TLY *e* 20 05 07.2
TLY *e* 20 06 54.4
TLY *eS* S 20 12 26.2 -9.2
TLY pmax pmax

comp=Z,21nm,1.7s
TLY MLR MLR

comp=Z,2µm,16.0s
TLY Talaya 54.89 3 P **P** **20 04 56.0 -0.2**
comp=Z,87nm,0.7s,SNR=5.1
USRK Ussuriysk Arra 55.22 27 P **P** **20 04 58.3 -0.3**
comp=Z,40nm,0.6s,baz=223,slow=6.0,SNR=126
USRK LR LR 20 30 49.6

comp=Z,3µm,18.7s,baz=215,slow=39
ARMA Armidale 55.40 125 P P 20 05 07.0 +6.6
baz=55,SNR=4.3
IRK Irkutsk 55.49 3 *eP* **P** **20 05 02.2 +1.7**
IRK pmax pmax

comp=Z,56nm,2.5s
CIT Chita 56.30 10 *eP* **P** **20 05 06.8 +0.4**
CIT *e* 20 05 19.8
CIT pmax pmax

comp=Z,850nm,1.5s
KURK Kurchatov 56.97 344*c iP* **P** **20 05 10.9 -0.2**
KURK pmax pmax

comp=Z,68nm,1.7s
KURK MLR MLR

comp=Z,2µm,20.0s
KURK Kurchatov 56.97 344 *eP* **P** **20 05 10.8 -0.3**
comp=Z,29nm,0.8s
KURK Kurchatov 56.97 344 P **P** **20 05 11.9 +0.8**
comp=Z,249nm,0.8s,SNR=16
ZAA0 Zalesovo Array 58.54 349 *eP* **P** **20 05 21.4 -0.5**
ZALV Zalesovo Beam 58.54 349 P **P** **20 05 22.1 +0.1**
ZALV Zalesovo Beam 58.54 349 P **P** **20 05 22.1 +0.1**
ZALV Zalesovo Beam 58.54 349 P **P** **20 05 22.1 +0.1**
comp=Z,30nm,0.7s,baz=180,slow=5.2,SNR=184
ZALV LR LR 20 33 20.0

comp=Z,1µm,21.2s,baz=170,slow=39
KLR Kul'dur 59.04 24 *eP* P 20 05 21.8 -3.8
KLR *eS* S 20 13 40.0 +10
KLR pmax pmax

comp=E,35nm,1.8s
KLR pmax pmax

comp=Z,85nm,1.8s
KLR MLR MLR

comp=Z,14µm,13.5s
KRAR Krasnoyarsk 59.47 355⇓ *eP* **P** **20 05 28.8 +0.4**
KRAR pmax pmax

comp=Z,20nm,0.8s
KRAR MLR MLR

comp=Z,1µm,17.0s
HNR Honiara 59.54 99 *eP* **P** **20 05 28.0 -1.7**
comp=Z,89nm,1.1s
HNR Honiara 59.54 99 P **P** **20 05 29.0 -0.7**
comp=Z,31nm,0.5s,baz=195,slow=5.0,SNR=10
NVS Novosibirsk 59.68 349⇑ *iP* **P** **20 05 28.6 -1.3**
NVS pmax pmax

comp=N,31nm,2.1s
NVS pmax pmax

comp=Z,57nm,2.1s
NVS pmax pmax

comp=E,18nm,1.5s
HABR Khabarovsk 59.84 26 *eP* **P** **20 05 29.0 -2.1**
HABR *SP **sP** **20 05 42.9 -2.3**
HABR *e* 20 06 15.1
HABR 20 07 40.6
HABR *e*PPP PPP 20 09 03.0
HABR *eS* **S** **20 13 38.7 -1.7**
HABR *e**SS **sS** **20 13 55.7 -1.5**
HABR *e* 20 15 16.5
HABR *e*SS **SS** **20 17 36.2 -0.9**
HABR pmax pmax

comp=E,43nm,2.0s
HABR pmax pmax

comp=Z,49nm,1.6s
HABR pmax pmax

comp=N,25nm,1.6s
HABR MLR MLR

comp=Z,3µm,19.0s
ASAJ Asahikawa 60.56 34 P **P** **20 05 36.2 +0.1**
ASAJ Asahikawa 60.56 34 P **P** **20 05 36.2 +0.1**
comp=Z,5.3nm,0.4s,baz=246,slow=14,SNR=18
BVAR Borovoye Array 61.54 340 P **P** **20 05 42.3 -0.3**
BVAR Borovoye Array 61.54 340 P **P** **20 05 42.3 -0.3**
BVAR Borovoye Array 61.54 340 P **P** **20 05 42.3 -0.3**
comp=Z,11nm,0.7s,baz=143,slow=9.0,SNR=96
BRVK Borovoye 61.60 340*ceP* **P** **20 05 42.7 -0.3**
BRVK pmax pmax

comp=Z,24nm,1.7s
BRVK MLR MLR

comp=Z,2µm,23.0s
BRVK Borovoye 61.60 340 *eP* **P** **20 05 41.9 -1.2**
comp=Z,9.6nm,0.8s
BRVK Borovoye 61.60 340 P **P** **20 05 42.6 -0.4**
comp=Z,71nm,0.9s,SNR=13
YUK Yuzh-Kuril'sk 62.37 36*d iP* **P** **20 05 47.1 -1.2**
YUK PPP PPP 20 09 30.6
YUK *eS* **S** **20 14 12.5 -0.3**
YUK *eSS **SS** **20 18 11.8 -5.2**
YUK pmax pmax

comp=Z,129nm,5.3s
YUK MLR MLR

comp=N,603nm,18.0s
YUK MLR MLR

comp=Z,788nm,18.0s
YUK MLR MLR

comp=E,469nm,18.0s
YSS Yuzh-Sakhalins 62.47 31⇑ *eP* **P** **20 05 49.1 +0.1**
YSS *e**SP **sP** **20 06 05.0 +1.9**
YSS *eS* **S** **20 14 10.0 -4.0**
YSS *e*PPS PPS 20 14 40.0
YSS pmax pmax

comp=Z,80nm,1.5s
YSS MLR MLR

comp=E,600nm,15.0s
YSS MLR MLR

comp=Z,1µm,15.0s
ABKAR Akbulak array 62.95 332 *eP* **P** **20 05 51.6 -0.5**
comp=Z,21nm,0.7s
KMBO Kilima Mbogo 63.01 270 LR LR 20 29 33.2
comp=Z,878nm,19.4s,baz=274,slow=32
CLNS Chul'man 63.23 15 *eP* P 20 05 42.6 -11
CLNS pmax pmax

comp=Z,12nm,1.2s
CLNS pmax pmax

comp=N,7.0nm,0.9s
CLNS pmax pmax

comp=E,5.0nm,1.1s
CLNS MLR MLR

comp=Z,4µm,15.0s
CLNS MLR MLR

comp=E,2µm,15.0s
CLNS MLR MLR

comp=N,3µm,15.0s
CLNS MLR MLR

comp=E,927nm,14.0s
CLNS MLR MLR

comp=Z,2µm,15.0s
CLNS MLR MLR

comp=N,1µm,15.0s
MAK Makhachkala 66.18 320 *eP* P 20 06 08.6 -4.7
MAK *e*PPP PPP 20 10 15.0
MAK *i* S **S** **20 14 58.3 -1.7**
MAK pmax pmax

comp=Z,36nm,0.5s
DZM Mont Dzumac 66.67 112 *eS* **S** **20 15 10.0 +3.0**
comp=Z,1µm,26.2s
DZM *e*LR LR 20 26 26.4

comp=Z,2µm,22.1s
GNI Garni 66.69 317 *eP* **P** **20 06 17.3 +0.3**
comp=Z,22nm,1.3s
DGRG David-gareji 66.85 318 P **P** **20 06 19.4 +1.6**
DGRG *S* **S** **20 15 09.2 +0.9**
TBLG Delisi 67.40 318 *eP* **P** **20 06 22.0 +0.8**
TBLG *eS* **S** **20 15 14.2 -0.7**
TBLG Delisi 67.40 318 P **P** **20 06 22.0 +0.8**
TBLG S **S** **20 15 14.2 -0.7**
GOR Gori 67.94 318 P **P** **20 06 26.2 +1.6**
SVE Sverdlovsk 68.03 338⇑ *iP* **P** **20 06 25.4 +0.6**
SVE *e* 20 08 51.0
SVE *eS* **S** **20 15 21.3 -0.5**
SVE *eSS **SS** **20 19 42.1 -2.5**
SVE pmax pmax

comp=Z,32nm,1.7s
SVE MLR MLR

comp=Z,2µm,21.0s
AKH Akhalkalaki 68.10 317 P **P** **20 06 27.3 +1.4**
AKH *S* **S** **20 15 23.2 -0.4**
ZEI Tsey 68.43 319 *eP* **P** **20 06 28.8 +0.9**
ZEI pmax pmax

comp=Z,10.0nm,0.9s
ARU Arti 68.55 337*c iP* **P** **20 06 27.9 -0.2**
ARU 20 08 58.8
ARU PPP PPP 20 10 41.1
ARU S **S** **20 15 28.8 +0.8**
ARU SS **SS** **20 19 52.4 -0.3**
ARU pmax pmax

comp=Z,4.0nm,0.6s
ARU MLR MLR

comp=Z,1µm,21.0s
ONI Oni 68.64 318 P **P** **20 06 28.8 -0.2**
ONI S **S** **20 15 30.7 +0.9**
YAK Yakutsk 68.97 14*c iP* **P** **20 06 28.9 -1.7**
YAK pmax pmax

comp=Z,30nm,1.1s
YAK MLR MLR

comp=E,2µm,18.0s
YAK MLR MLR

comp=N,4µm,19.0s
YAK MLR MLR

comp=Z,5µm,16.0s
MAW Mawson 69.06 194 LR LR 20 29 31.3
comp=Z,2µm,19.0s,baz=20,slow=30
KBZ Khabaz 69.51 319 P **P** **20 06 35.4 +1.1**
KBZ Khabaz 69.51 319 P **P** **20 06 35.4 +1.1**
KBZ Khabaz 69.51 319 P **P** **20 06 35.4 +1.1**
comp=Z,6.6nm,0.8s,baz=118,slow=5.5,SNR=16
KIV Kislovodsk 69.74 319 *eP* **P** **20 06 37.3 +1.4**
KIV *e* 20 07 00.1
KIV *eS* **S** **20 15 44.3 +1.5**
KIV *eSS **SS** **20 20 17.5 +5.7**
KIV pmax pmax

comp=Z,12nm,1.1s
KIV MLR MLR

comp=Z,443nm,19.0s
MALT Malatya 70.45 313 *eP* **P** **20 06 41.1 +0.7**
MALT pmax pmax

comp=Z,13nm,1.3s
MALT Malatya 70.45 313 *eP* **P** **20 06 41.1 +0.7**
comp=Z,13nm,1.3s
EIL Elat 70.49 303 P **P** **20 06 42.4 +1.7**
baz=71,SNR=3.9
SOKR Solikamsk 71.41 338*c iP* **P** **20 06 46.8 +1.2**
SOKR S **S** **20 16 04.3 +2.9**
SOKR pmax pmax

comp=Z,20nm,0.7s
SOKR MLR MLR

comp=Z,1µm,21.0s
ANN Anapa 73.53 319 *eP* **P** **20 06 58.0 -0.5**
ANN *e**PP **pP** **20 07 10.1 +1.2**
ANN *e* 20 09 41.5
ANN *eS* **SKiKP** **20 16 28.8 +2.0**
ANN *eSS **SS** **20 21 08.6 -0.9**
ANN pmax pmax

comp=Z,65nm,1.6s
VRHR Novokhopersk 73.60 326 *eP* **P** **20 06 58.5 -0.3**
VRHR pmax pmax

comp=N,7.0nm,0.8s
VRHR pmax pmax

comp=E,10.0nm,0.8s
VRHR pmax pmax

comp=Z,30nm,0.8s
PETK Petropavlovsk- 73.87 32 P **P** **20 06 59.7 -0.7**
PETK Petropavlovsk- 73.87 32 P **P** **20 06 59.7 -0.7**
PETK Petropavlovsk- 73.87 32 P **P** **20 06 59.7 -0.7**
comp=Z,4.6nm,0.8s,baz=0,slow=17,SNR=6.9
PETK LR LR 20 40 50.1

comp=Z,406nm,21.3s,baz=251,slow=37
BR131 Keskin Array S 74.44 313 *eP* **P** **20 07 03.9 -0.3**
comp=Z,3.3nm,0.6s
BRTR Keskin Array B 74.44 313 P **P** **20 07 04.1 -0.1**
BRTR Keskin Array B 74.44 313 P **P** **20 07 04.1 -0.1**
comp=Z,5.3nm,0.8s,baz=132,slow=7.3,SNR=26
BRTR LR LR 20 42 26.4

comp=Z,508nm,21.1s,baz=279,slow=38
VORD Divnogorie 74.86 325 *eP* **P** **20 07 06.1 0.0**
VORD pmax pmax

comp=Z,10.0nm,0.6s
VORD pmax pmax

comp=N,20nm,0.4s
VORD pmax pmax

comp=E,90nm,1.5s
VSR Storozhevoye 75.04 325 *eP* **P** **20 07 06.6 -0.6**
VSR pmax pmax

comp=N,9.0nm,0.7s
VSR pmax pmax

comp=Z,20nm,0.7s
VSR pmax pmax

comp=E,20nm,0.8s
BOSA Boshof 75.26 241 P **P** **20 07 09.8 +0.6**
BOSA Boshof 75.26 241 P **P** **20 07 09.8 +0.6**
comp=E,4.1nm,0.9s,baz=122,slow=6.9,SNR=6.1
BOSA LR LR 20 36 52.2

comp=E,802nm,18.1s,baz=81,slow=33
SEY Seymchan 76.76 22 *iP* **P** **20 07 16.0 -0.8**
MOS Moscow 77.79 329 *eP* **P** **20 07 20.0 -2.7**
OBN Obninsk 78.08 328⇓ *eP* **P** **20 07 24.5 +0.2**
OBN *e* 20 07 33.0
OBN *eS* **S** **20 17 14.9 -1.1**
OBN *eSS **SS** **20 22 20.3 +2.2**
OBN pmax pmax

comp=Z,43nm,1.7s
CFR Carcaliu 79.89 317 ⇓*P* **P** **20 07 34.9 +0.4**
CFR Carcaliu 79.89 317 ⇓*iP* **P** **20 07 34.9 +0.4**
AKASG Malin Array Be 80.72 322 P **P** **20 07 38.7 -0.1**
AKASG Malin Array Be 80.72 322 P **P** **20 07 38.7 -0.1**
AKASG Malin Array Be 80.72 322 P **P** **20 07 38.7 -0.1**
comp=Z,1.6nm,0.6s,baz=81,slow=5.7,SNR=5.9
VNDA Vanda 80.79 169 P **P** **20 07 40.5 +1.8**
VNDA Vanda 80.79 169 P **P** **20 07 40.5 +1.8**
comp=Z,1.0nm,0.8s,baz=297,slow=5.1,SNR=5.4
VNDA LR LR 20 38 44.6

comp=Z,694nm,19.6s,baz=308,slow=32
VRI Vrincioaia 81.03 317 ⇓*P* **P** **20 07 42.3 +1.7**
VRI Vrincioaia 81.03 317 ⇓*iP* **P** **20 07 42.3 +1.7**
PLOR Plostina 81.08 317 ⇑*P* **P** **20 07 42.5 +1.6**
PLOR Plostina 81.08 317 ⇑*iP* **P** **20 07 42.5 +1.6**
TESR 81.24 318 ⇓*iP* **P** **20 07 43.1 +1.4**
TMCR Tamitsa 81.28 337 *eP* **P** **20 07 41.5 0.0**
TMCR pmax pmax

comp=Z,24nm,0.7s
MLR Muntele Rosu 81.47 317 ⇓*iP* **P** **20 07 44.2 +1.1**
ARR Arges 82.34 316 ⇓*iP* **P** **20 07 48.2 +0.6**
BURAR Bucovina Array 82.45 319 ⇓*iP* **P** **20 07 50.1 +1.9**
BUR08 Bucovina Ar. S 82.47 319 *eP* **P** **20 07 49.6 +1.3**
VTS Vitosha 82.78 313 ⇓*P* **P** **20 07 50.7 +0.6**
VTS Vitosha 82.78 313 ⇓*iP* **P** **20 07 50.7 +0.6**
NACGM Naroch 83.32 326 *e* **P** **20 07 50.0 -2.4**
JOF Joensuu 83.55 335 *eP* **P** **20 07 52.8 -0.6**
JOF pmax pmax

comp=Z,5.0nm,0.7s
JOF Joensuu 83.55 335 *ep* **P** **20 07 52.8 -0.6**
comp=Z,5.3nm,0.7s
BILL Bilibino 84.31 20 *i P* **P** **20 07 58.3 +1.1**
BILL *e**PP **pP** **20 08 07.6 -0.2**
BILL *eSS SS 20 23 50.0 -0.5
BILL pmax pmax

comp=Z,10.0nm,1.4s
TRPA Tarpa 84.33 319 ⇓*iP* **P** **20 07 59.2 +1.5**
UZH Uzhgorod 84.58 319 *eP* **P** **20 07 57.8 -1.2**
UZH *e* 20 08 05.0
KOLS Kolonicke sedl 84.66 320 *eP* **P** **20 08 00.9 +1.5**
KOLS pmax pmax

comp=Z,13nm,1.1s
KOLS Kolonicke sedl 84.66 320 *eP* **P** **20 08 00.9 +1.5**
SUW Suwalki 85.14 325 *eP* **P** **20 08 01.4 -0.2**
SUW pmax pmax

comp=Z,30nm,0.9s
SUW Suwalki 85.14 325 *eP* **P** **20 08 01.4 -0.2**
comp=Z,30nm,0.9s
SUW Suwalki 85.14 325 *eP* **P** **20 08 02.2 +0.6**
CRVS Cervenica-Dubn 85.17 319 *eP* **P** **20 08 03.1 +1.1**
CRVS pmax pmax

comp=Z,38nm,2.4s
CRVS Cervenica-Dubn 85.17 319 *eP* **P** **20 08 03.1 +1.1**
FINES FINESS Array B 85.43 332 P **P** **20 08 03.2 +0.3**
FINES FINESS Array B 85.43 332 P **P** **20 08 03.2 +0.3**
comp=Z,2.9nm,0.8s,baz=92,slow=5.2,SNR=16
FINES LR LR 20 53 53.0

comp=Z,852nm,18.9s,baz=108,slow=41
KAF Kangasniemi 85.51 333 *eP* **P** **20 08 03.3 0.0**
KAF pmax pmax

comp=Z,5.0nm,0.7s
KAF Kangasniemi 85.51 333 *ep* **P** **20 08 03.3 0.0**
comp=Z,5.4nm,0.7s

PSZ Piszkesteto 86.03 318 ⇓*P* **P** **20 08 07.4 +1.1**
PSZ Piszkesteto 86.03 318 ⇓*iP* **P** **20 08 07.4 +1.1**
VYHS Vyhne 86.82 319 *eP* **P** **20 08 12.3 +2.2**
VYHS pmax pmax

comp=Z,10.0nm,1.9s
VYHS Vyhne 86.82 319 *eP* **P** **20 08 12.3 +2.2**
KEV Kevo 87.39 341 *eP* **P** **20 08 10.5 -1.9**
KEV pmax pmax

comp=Z,5.0nm,0.7s
KEV Kevo 87.39 341 *ep* **P** **20 08 10.5 -1.9**
comp=Z,4.5nm,0.7s
OKC Ostrava-Krasne 87.47 320 *eP* **P** **20 08 16.0 +2.8**
OKC MLR MLR

comp=Z,400nm,17.8s
OKC Ostrava-Krasne 87.47 320 *eP* **P** **20 08 16.0 +2.8**
OKC *ex* x 20 19 09.4
OKC AMS AMS 21 00 30.0

comp=Z,400nm,17.8s
ARCES ARCESS Array B 87.83 340 P **P** **20 08 15.1 +0.6**
ARCES ARCESS Array B 87.83 340 P **P** **20 08 15.1 +0.6**
comp=Z,4.5nm,0.6s,baz=100,slow=4.2,SNR=11
ARCES LR LR 20 51 57.1

comp=Z,1µm,20.2s,baz=106,slow=39
MORC Moravsky Berou 87.84 320 ⇓*P* **P** **20 08 16.6 +1.5**
MORC Moravsky Berou 87.84 320 ⇓*iP* **P** **20 08 16.6 +1.5**
DPC Dobruska-Polom 88.70 320 *eP* **P** **20 08 20.9 +1.8**
DPC *eS* **S** **20 19 05.6 +1.9**
DPC MLR MLR

comp=Z,600nm,19.6s
DPC Dobruska-Polom 88.70 320 *eP* **P** **20 08 20.9 +1.8**
DPC *eS* **S** **20 19 05.6 +1.9**
DPC AMS AMS 20 57 50.0

comp=Z,600nm,19.6s
UPC Upice 88.91 321 *eP* **P** **20 08 22.5 +2.4**
UPC Upice 88.91 321 *eP* **P** **20 08 22.5 +2.4**
TREC Trest 89.12 319 AMS AMS 20 55 00.0
comp=Z,400nm,19.2s
PRU Pruhonice 89.80 320 *eS* **S** **20 19 11.2 -2.7**
PRU AMS AMS 20 56 40.0

comp=Z,600nm,20.4s
GERES GERESS Array B 90.24 319 P **P** **20 08 27.2 +0.7**
GERES GERESS Array B 90.24 319 P **P** **20 08 27.2 +0.7**
comp=Z,1.3nm,0.7s,baz=87,slow=5.5,SNR=12
BRG Berggiesshubel 90.26 321 *eP* P 20 08 29.6 +3.3
comp=Z,3.9nm,0.9s
BRG Berggiesshubel 90.26 321 *eP* P 20 08 29.6 +3.3
BRG pmax pmax

comp=Z,4.0nm,0.9s
KHC Kasperske Hory 90.35 319 *eP* **P** **20 08 26.5 -0.4**
KHC *eS* **S** **20 19 20.2 +1.0**
KHC MLR MLR

comp=Z,500nm,20.2s
KHC Kasperske Hory 90.35 319 *eP* **P** **20 08 26.5 -0.4**
KHC *eS* **S** **20 19 20.2 +1.0**
KHC AMS AMS 20 55 20.0

comp=Z,500nm,20.2s
CLL Collm 90.89 321 *e*SKKSac S 20 19 17.0 -6.9
CLL *eS* **ScS** **20 19 27.0 -0.1**
CLL *eSS SS 20 25 12.0 -15
CLL *e*SSSS 20 32 17.0
CLL LmV 20 56 00.0

comp=Z,500nm,21.0s
NB2 NORSAR Subarra 92.45 331 P **P** **20 08 36.6 +0.3**
comp=Z,4.5nm,1.2s,baz=94,slow=5.1
NOA NORSAR Array B 92.45 331 P **P** **20 08 37.0 +0.7**
NOA NORSAR Array B 92.45 331 P **P** **20 08 37.0 +0.7**
comp=Z,1.2nm,0.8s,baz=93,slow=4.7,SNR=3.9
NOA LR LR 20 56 01.4

comp=Z,445nm,20.9s,baz=75,slow=39
KEST Kesra 92.69 305 LR LR 20 53 11.5
comp=Z,313nm,19.3s,baz=353,slow=37
TORD Torodi Ar. Bea 99.11 283 LR LR 20 47 53.0
comp=Z,700nm,21.4s,baz=65,slow=32
ILAR Eielson Array 102.62 24 PP PP 20 13 34.5 -0.9
comp=Z,0.4nm,0.8s,baz=298,slow=10,SNR=4.3
TBI Tubuai 107.14 116 *e*SS SS 20 29 19.1 +3.0
comp=Z,466nm,26.8s
TBI *e*LR LR 20 45 04.6

comp=Z,1µm,23.0s
PPT2 Papeete2 108.08 110 *e*LR LR 20 45 38.7
comp=Z,872nm,24.2s
YKA Yellowknife Ar 115.57 17 PKP **PKPdf** **20 14 05.5 -1.8**
YKA Yellowknife Ar 115.57 17 PKP **PKPdf** **20 14 05.5 -1.8**
comp=Z,0.4nm,0.7s,baz=336,slow=1.7,SNR=4.7
RKT Rikitea 120.08 119 *e*LR LR 20 51 12.2
comp=Z,1µm,27.0s
B13A Whitefish 126.17 28 ⇑*P* **PKPdf** **20 14 28.6 +0.4**
baz=126
D13A Huson 127.07 29 ⇑*P* **PKPdf** **20 14 30.1 +0.1**
baz=127
B15A Bradely Ranch, 127.09 27 ⇑*P* **PKPdf** **20 14 30.1 +0.1**
baz=127
B16A M & M Farms, S 127.40 26 ⇑*P* **PKPdf** **20 14 30.6 0.0**
baz=127
A17A Triple J Farms 127.44 25 ⇑*P* **PKPdf** **20 14 30.7 0.0**
baz=127
C15A Salmond Ranch, 127.46 27 ⇑*P* **PKPdf** **20 14 30.8 0.0**
baz=127
MSO Missoula 127.51 29 ⇑*P* **PKPdf** **20 14 31.0 +0.1**
baz=127
D14A Greenough 127.54 29 ⇑*P* **PKPdf** **20 14 31.0 0.0**
baz=127
E13A Victor 127.66 30 ⇑*P* **PKPdf** **20 14 31.5 +0.3**
baz=128
G12A Big Creek, Yel 127.99 32 ⇑*P* **PKPdf** **20 14 32.4 +0.4**
baz=128
NVAR Mina Array Bea 130.45 40 PKP **PKPdf** **20 14 38.4 +1.5**
NVAR Mina Array Bea 130.45 40 PKP **PKPdf** **20 14 38.4 +1.5**
comp=Z,1.0nm,0.6s,baz=274,slow=2.6,SNR=7.0
ELK Elko 130.92 36 PKP **PKPdf** **20 14 39.6 +1.8**
ELK Elko 130.92 36 PKP **PKPdf** **20 14 39.6 +1.8**
comp=Z,0.7nm,0.5s,baz=331,slow=2.7,SNR=4.5
226B Tecolote Peak, 143.34 36 ⇑*P* PKPbc 20 14 58.8 +1.1
baz=143
325A Bean Ranch, Si 143.35 38 ⇓*P* PKPbc 20 14 59.1 +1.1
baz=143
BDFB Brasilia 143.39 238 PKP **PKPdf** **20 15 02.1 +0.9**
BDFB Brasilia 143.39 238 PKP **PKPdf** **20 15 02.1 +0.9**
comp=Z,1.1nm,0.4s,baz=143,slow=5.1,SNR=3.4
CPUP Villa Florida 143.40 215 PKP **PKPdf** **20 14 59.8 -1.0**
CPUP Villa Florida 143.40 215 PKP **PKPdf** **20 14 59.8 -1.0**
comp=Z,1.6nm,0.7s,baz=212,slow=2.4,SNR=7.9
X31A McDonald Ranch 143.62 29 ⇑*P* PKPbc 20 14 58.7 +0.3
baz=144
425A Indio Mountain 143.75 38 ⇑*P* PKPbc 20 14 59.5 +0.5
baz=144,SNR=8.3
326A Caldwell Ranch 143.99 37 ⇓*P* PKPbc 20 15 00.1 +0.3
baz=144,SNR=7.4
Y31A Rekieta Farm, 144.02 30 ⇓*P* **PKPab** **20 14 59.3 +0.2**
baz=144
WMOK Wichita Mounta 144.09 27 *e*PKIKP **PKPab** **20 14 59.2 -0.2**
WMOK Wichita Mounta 144.09 27 *e*PKPdf **PKPab** **20 14 59.2 -0.2**
Z30A Sanderson Ranc 144.11 31 ⇓*P* PKPbc 20 15 00.2 +0.2
baz=144,SNR=6.5
TUL1 Tulsa 144.35 23 ⇓*P* PKPbc 20 15 00.6 0.0
baz=144,SNR=5.6
Y32A R-V Farms, Ver 144.39 29 ⇑*P* **PKPab** **20 15 00.4 0.0**
baz=144
426A McDonald Obser 144.42 38 ⇓*P* PKPbc 20 15 01.7 +0.5
baz=144,SNR=12
Z31A Sharp Cattle R 144.59 30 ⇓*P* PKPbc 20 15 01.7 +0.2
baz=144,SNR=16
328A Wristen Ranch, 144.63 35 ⇑*P* PKPbc 20 15 02.2 +0.5
baz=144,SNR=14
427A Hayter Ranch, 144.67 37 ⇑*P* PKPbc 20 15 02.2 +0.3
baz=144,SNR=9.8
SIUC Southern Illin 144.71 13 *e*PKPdf **PKPab** **20 15 01.4 -0.1**
130A Snyder 144.74 32 ⇓*P* PKPbc 20 15 02.0 0.0
baz=145
229A Bryant Ranch, 144.76 34 ⇑*P* PKPbc 20 15 02.5 +0.4
baz=145
WCI Wyandotte Cave 144.77 9 *e*PKIKP **PKPab** **20 15 01.4 -0.3**
WCI Wyandotte Cave 144.77 9 *e*PKPdf **PKPab** **20 15 01.4 -0.3**
526A Mary Lane Ranc 144.81 38 ⇓*P* PKPbc 20 15 02.7 +0.3
baz=145,SNR=12
Z32A Haskell 144.93 30 ⇑*P* PKPbc 20 15 02.8 +0.3
baz=145,SNR=6.4
131A Roby 144.98 31 ⇓*P* PKPbc 20 15 02.9 +0.2
baz=145,SNR=5.4
329A Wagon Wheel Ra 145.03 34 ⇓*P* **PKPab** **20 15 03.0 0.0**
baz=145,SNR=15
527A Woodward Ranch 145.05 38 ⇑*P* **PKPdf** **20 15 04.1 +0.3**
baz=145,SNR=57
626A Big Bend Ranch 145.14 39 ⇓*P* **PKPdf** **20 15 04.2 +0.3**
baz=145,SNR=25
428A Kincaid Ranch, 145.19 36 ⇑*P* **PKPdf** **20 15 04.5 +0.6**

baz=145,SNR=50
230A Sterling City 145.21 33 ⇑P **PKPdf 20 15 04.0 +0.1**
baz=145,SNR=27
ABTX Abilene, Hawle 145.40 30 ⇑P **PKPdf 20 15 04.2 0.0**
baz=145
528A Cox Ranch, San 145.53 37 ⇓P **PKPab 20 15 05.3 +0.3**
baz=145,SNR=18
330A Mertzon 145.54 34 ⇑P **PKPbc 20 15 04.6 +0.1**
baz=145,SNR=14
PARMO **Parma 145.58 14** *e*PKPdf **PKPab 20 15 04.7 0.0**
TXAR Lajitas Array 145.58 39 PKPbc **PKPab 20 15 05.7 +0.6**
TXAR Lajitas Array 145.58 39 PKPbc **PKPab 20 15 05.7 +0.6**
comp=Z,27nm,0.6s,baz=306,slow=1.1,SNR=216
231A Bronte 145.59 32 ⇓P **PKPdf 20 15 04.6 +0.1**
baz=145,SNR=11
627A Terlingua Ranc 145.67 38 ⇑P **PKPab 20 15 06.0 +0.5**
baz=146,SNR=34
429A Davenport Ranc 145.72 35 ⇓P **PKPab 20 15 05.4 -0.1**
baz=146,SNR=10
529A Stev Forest Ra 145.90 36 ⇑P **PKPab 20 15 06.3 0.0**
baz=146,SNR=18
628A Black Gap, Mar 145.96 38 ⇑P **PKPab 20 15 06.5 0.0**
baz=146,SNR=25
430A Baggett Ranch, 145.97 34 ⇑P **PKPab 20 15 06.4 -0.1**
baz=146
232A Coleman 145.98 31 ⇑P **PKPab 20 15 06.4 -0.1**
baz=146,SNR=18
331A San Angelo 146.02 33 ⇓P **PKPbc 20 15 06.3 +0.3**
baz=146,SNR=10.0
332A Millersview 146.33 32 ⇑P **PKPbc 20 15 07.4 +0.4**
baz=146,SNR=22
MIAR Mount Ida 146.39 21 *e*PKP2 **PKPbc 20 15 06.4 -0.6**
MIAR Mount Ida 146.39 21 *e*PKPdf **PKPbc 20 15 06.4 -0.6**
530A J-C Ranch, Com 146.40 35 ⇓P **PKPbc 20 15 07.6 +0.3**
baz=146,SNR=31
431A Sonora 146.41 34 ⇓P **PKPbc 20 15 07.3 0.0**
baz=146,SNR=8.5
WVT Waverly 146.53 12 *e*PKP2 **PKPbc 20 15 07.1 -0.2**
WVT Waverly 146.53 12 *e*PKPbc **PKPbc 20 15 07.1 -0.2**
432A Menard 146.70 33 ⇓P **PKPbc 20 15 08.1 0.0**
baz=147,SNR=8.5
TZTN Tazewell 146.78 6 *e*PKPbc **PKPdf 20 15 07.1 +0.7**
531A Rocksprings 146.83 34 ⇓P **PKPbc 20 15 08.5 0.0**
baz=147,SNR=13
WHTX Lake Whitney 146.99 28 ⇑P **PKPbc 20 15 08.8 0.0**
baz=147
JCT Junction City 147.00 33 *e*PKP2 **PKPbc 20 15 08.2 -0.8**
JCT Junction City 147.00 33 *e*PKPbc **PKPbc 20 15 08.2 -0.8**
JCT Junction City 147.00 33 ⇑P **PKPbc 20 15 09.4 +0.4**
baz=147,SNR=25
532A Rocksprings 147.22 34 ⇑P **PKPbc 20 15 09.9 +0.2**
baz=147,SNR=6.8
631A Perdido Creek 147.38 35 ⇑P **PKPbc 20 15 10.3 +0.3**
baz=147
TKL Tuckaleechee C 147.63 6 *e*PKPdf **PKPdf 20 15 08.6 +0.8**
CPCT Cooper Cave 147.75 7 *e*PKPbc **PKPbc 20 15 10.7 -0.1**
632A Uvalde 147.76 34 ⇑P **PKPbc 20 15 11.6 +0.5**
baz=148
SWET Sewanee 147.77 10 *e*PKPbc **PKPbc 20 15 10.3 -0.7**
732A Laxson Ranch, 148.24 35 ⇑P **PKPbc 20 15 12.3 0.0**
baz=148
KMSC Kings Mountain 148.33 3 ⇑P **PKPbc 20 15 12.3 -0.1**
baz=148

MEX 16 20:18:19.8±0.9, 15°.79N×94°.08W, h89km±24km, MD4.2, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**1.51**	**329**	*i* P	Pn	20 18 45.0	-0.7
CMIG				*i* S	Sn	20 19 03.5	-1.8
CCIG	**Comitan**	**1.93**	**75**	*i* P	Pn	20 18 49.3	-2.0
CCIG				*i* S	Sn	20 19 13.9	-1.3
THIG		**1.95**	**116**	*i* P	Pn	20 18 49.3	-2.0
THIG				*i* S	Sn	20 19 14.3	-1.0
HUIG	**Huatulco**	**1.96**	**270**	*i* P	Pn	20 18 50.7	-0.7
HUIG				*i* S	Sn	20 19 13.4	-2.2
VHO	**Vista Hermosa**	**2.85**	**297**	*i* P	Pn	20 19 03.1	-0.5
VHO				*i* S	Sn	20 19 36.0	-1.4
PNIG	**Pinotepa**	**3.94**	**279**	*i* P	Pn	20 19 17.8	-0.3
PNIG				*i* S	Sn	20 20 02.2	-1.1

*CSEM **16** 20:24:01.9±0.4, 37°.73N×29°.11E, h24km±2km, MD2.7, Error ellipse: s-maj=8.9km s-min=5.5km az=158.0*
*ISK **16** 20:24:02.6, 37°.81N×29°.09E, h18km, MD2.7*
*DDA **16** 20:24:03.9, 37°.83N×29°.10E, h7km, MD2.7*
ISC 16 20:24:03.5±1.1, 37°.86N±0°.06×29°.13E±0°.08, h7km±22km, n8, σ0°.30/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.13**	**217**	*e*PG	**Pg**	**20 24 06.3**	**0.0**
DENT	**Denizli**	**0.13**	**217**	*e*Pg	**Pg**	**20 24 06.3**	**0.0**
DNZL	**Cakiroluk**	**0.18**	**202**	*i* P	**Pg**	**20 24 07.3**	**0.0**
DNZL				*i* S	**Sg**	**20 24 09.9**	**+0.1**
DNZL	**Cakiroluk**	**0.18**	**202**	*i* P	**Pg**	**20 24 07.3**	**0.0**
DNZL				*i* S	**Sg**	**20 24 09.9**	**+0.1**
KHL	**Karahalli**	**0.56**	**33**	*e*PG	**Pb**	**20 24 15.3**	**-0.4**
KHL				*e*SG	**Sb**	**20 24 24.4**	**+0.5**
KHL	**Karahalli**	**0.56**	**33**	*e*Pg	**Pb**	**20 24 15.3**	**-0.4**
KHL				*e*Sg	**Sb**	**20 24 24.4**	**+0.5**
KULA	**Kula-Manisa**	**0.75**	**331**	*e*PG	**Pg**	**20 24 18.1**	**0.0**
KULA				*e*SG	**Sb**	**20 24 29.8**	**+0.2**
KULA	**Kula-Manisa**	**0.75**	**331**	*e*Pg	**Pg**	**20 24 18.1**	**0.0**
KULA				*e*Sg	**Sb**	**20 24 29.8**	**+0.2**

IDC 16 20:29:28.2±1.5, 27°.88S×66°.52W, h147km±15km, mb3.5/4, mb1 3.4/8, mb1mx3.3/21, mbtmp3.4/8, Error ellipse: s-maj=32.1km s-min=13.9km az=114.0, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**4.00**	**201**	P	Pn	20 30 30.1	+1.6
	3.8nm,0.3s,baz=21,slow=13,SNR=120						
CFAA				S	Sn	20 31 14.7	-0.6
	15nm,0.3s,baz=209,slow=16,SNR=21						
CPUP	**Villa Florida**	**8.34**	**81**	P	Pn	20 31 27.4	+1.3
	0.6nm,0.3s,baz=246,slow=11,SNR=7.8						
LPAZ	**La Paz**	**11.63**	**352**	P	Pn	20 32 10.1	-0.6
	0.4nm,0.3s,baz=161,slow=5.8,SNR=8.3						
SIV	**San Ignacio**	**12.86**	**24**	P	Pn	20 32 26.1	+0.2
	0.2nm,0.3s,baz=216,slow=13,SNR=7.1						
BDFB	**Brasilia**	**21.03**	**58**	P	P	20 34 00.7	0.0
	1.5nm,0.3s,baz=211,slow=8.2,SNR=4.1						
SNAA	**Sanae**	**55.57**	**160**	P	P	20 38 48.6	+0.6
	0.3nm,0.5s,baz=259,slow=10.0						
DBIC	**Dimbokro**	**68.67**	**70**	P	P	20 40 15.2	-1.0
	1.2nm,0.3s,baz=206,slow=13,SNR=5.4						
TORD	**Torodi Ar. Bea**	**77.59**	**68**	P	P	20 41 07.8	-0.7
	1.6nm,0.7s,baz=276,slow=7.5,SNR=16						
ZALV	**Zalesovo Beam**	**146.55**	**31**	PKPbc	PKPbc	20 48 51.8	-0.1
	0.5nm,0.3s,baz=328,slow=3.0,SNR=2.4						
MKAR	**Makanchi Array**	**149.12**	**44**	PKPbc	PKPbc	20 48 59.2	+0.1
	0.5nm,0.6s,baz=308,slow=2.7,SNR=5.2						

IDC 16 20:35:27.3±2.8, 19°.57S×70°.39W, h84km±24km, mb3.8/7, mb1 4.0/10, mb1mx3.8/22, mbtmp3.8/10, MS3.3/3, Ms1 3.3/3, ms1mx3.2/30, Error ellipse: s-maj=28.5km s-min=16.6km az=94.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.91**	**34**	P	Pn	20 36 26.6	+0.8
	1.9nm,0.3s,baz=207,slow=7.2,SNR=40						
LPAZ				LR	LR	20 38 09.4	
	comp=Z,734nm,18.9s,baz=219,slow=42						
SIV	**San Ignacio**	**9.56**	**70**	P	Pn	20 37 40.4	-1.9
	1.9nm,0.3s,baz=266,slow=11,SNR=32						
SIV				LR	LR	20 41 55.5	
	comp=Z,491nm,19.5s,slow=41						
CFAA	**Coronel Fontan**	**12.14**	**171**	P	Pn	20 38 17.5	+0.2
	0.1nm,0.3s,baz=311,slow=9.3,SNR=3.2						
CFAA				S	S	20 40 49.1	-4.9
	0.1nm,0.3s,baz=207,slow=18,SNR=3.0						
CFAA				LR	LR	20 43 20.0	
	comp=Z,22nm,20.1s,baz=149,slow=39						
CPUP	**Villa Florida**	**13.78**	**122**	P	Pn	20 38 39.9	+0.9
	0.4nm,0.3s,baz=287,slow=12,SNR=9.5						
PLCA	**Paso Flores**	**21.09**	**180**	P	P	20 40 05.5	+0.4
	4.2nm,0.8s,baz=1.6,slow=13,SNR=6.5						
BDFB	**Brasilia**	**21.68**	**83**	P	P	20 40 11.5	0.0
	2.3nm,0.6s,baz=243,slow=16,SNR=4.4						
USHA	**Ushuaia**	**35.23**	**178**	P	P	20 42 12.4	-1.0
	12nm,1.0s,baz=247,slow=3.1,SNR=3.6						
SNAA	**Sanae**	**64.55**	**161**	P	P	20 45 55.4	+0.2
	1.2nm,0.9s,baz=201,slow=12						
PDAR	**Pinedale Array**	**71.75**	**331**	P	P	20 46 40.7	-0.1
	0.3nm,0.5s,baz=156,slow=4.6,SNR=2.7						
TORD	**Torodi Ar. Bea**	**78.03**	**71**	P	P	20 47 17.4	+0.1
	4.7nm,0.7s,baz=255,slow=5.0,SNR=23						
YKA	**Yellowknife Ar**	**88.92**	**341**	P	P	20 48 11.8	-0.1
	2.1nm,0.6s,baz=134,slow=4.7,SNR=50						
MKAR	**Makanchi Array**	**144.84**	**33**	PKP	PKPdf	20 54 54.7	+0.1
	4.3nm,0.7s,baz=320,slow=3.5,SNR=14						

IDC 16 20:41:37.9±1.1, 6°.29S×148°.12E, h0km, mb4.0/6, mb1 4.2/7, mb1mx3.9/18, mbtmp4.0/7, ML5.3/1, Error ellipse: s-maj=45.5km s-min=16.5km az=106.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.24**	**197**	Pn	Pn	20 42 31.8	+1.8
	12nm,0.3s,baz=30,slow=4.8,SNR=25						
PMG				Sn	Sn	20 43 10.9	+1.6
	23nm,0.3s,baz=293,slow=18,SNR=6.2						
WRA	**Warramunga Arr**	**19.06**	**223**	P	P	20 46 01.2	-0.8
	10nm,0.3s,baz=50,slow=11,SNR=2.3						
ASAR	**Alice Springs**	**22.03**	**217**	P	P	20 46 33.9	-0.4
	5.0nm,0.5s,baz=54,slow=8.7,SNR=75						
FITZ	**Fitzroy Crossi**	**24.87**	**240**	P	P	20 47 02.1	-0.4
	6.1nm,0.5s,baz=59,slow=7.9,SNR=45						
STKA	**Stephens Creek**	**26.18**	**193**	P	P	20 47 14.2	0.0
	2.7nm,0.4s,baz=23,slow=6.3,SNR=14						
MJAR	**Matsushiro Arr**	**43.60**	**348**	P	P	20 49 44.3	+0.3
	0.9nm,0.7s,baz=165,slow=6.4,SNR=3.4						
USRK	**Usuriysk Arra**	**52.32**	**345**	P	P	20 50 51.9	+0.6
	0.9nm,0.7s,baz=178,slow=9.4,SNR=4.4						
ILAR	**Eielson Array**	**85.31**	**23**	P	P	20 54 15.1	-1.4
	0.2nm,0.6s,baz=262,slow=4.1,SNR=4.5						
TORD	**Torodi Ar. Bea**	**146.24**	**284**	PKPbc	PKPdf	21 01 20.8	+0.4
	3.5nm,0.5s,baz=67,slow=4.0,SNR=58						
BDFB	**Brasilia**	**152.98**	**144**	PKPbc	PKPbc	21 01 38.8	+0.3
	2.5nm,0.4s,baz=296,slow=1.3,SNR=3.5						

*IDC **16** 20:42:27.2±0.6, 3°.24S×100°.40E, h0km, mb4.7/20, mb1 4.8/21, mb1mx4.7/28, mbtmp4.7/21, ML4.0/2, MS4.3/1, Ms1 4.5/1, ms1mx3.3/40, Error ellipse: s-maj=18.3km s-min=12.7km az=53.0*
*DJA **16** 20:42:28.8±2.2, 3°.5S×100°.52E, h37km, mB5.2/29, mb5.0/49, Ms5.0/36, Ms7 4.7/36*
*BJI **16** 20:42:30.2±1.0, 3°.26S±0°.03×100°.39E±0°.04, h32km±7km, mb4.9/57, MS4.6/13, Error ellipse: s-maj=7.2km s-min=4.2km az=138.5*
*NEIC **16** 20:42:30.6±0.3, 3°.24S×100°.41E, mb4.9/18, Error ellipse: s-maj=8.4km s-min=5.2km az=51.0*
*AUST **16** 20:42:31.0±0.4, 3°.44S×100°.20E, h35km, Error ellipse: s-maj=1.3km s-min=0.7km az=239.0*
ISC 16 20:42:30.9±0.4, 3°.40S±0°.04×100°.29E±0°.05, h31km±2km, h30km:pP-P, n314, σ1s39/330, mb4.9/57, MS4.6/13, 55C-54D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**1.75**	**42**	P	**Pn**	**20 42 58.3**	**-0.9**
KSI	**Kapahiang**	**2.31**	**96**	P	**Pn**	**20 43 07.5**	**+0.5**
SISI	**Saibi**	**2.38**	**330**	P	**Pn**	**20 43 06.7**	**-1.2**
PDSI	**Padang**	**2.47**	**4**	P	**Pn**	**20 43 08.0**	**-1.2**
MNAI	**Manna**	**2.83**	**110**	P	**Pn**	**20 43 14.2**	**+0.2**
PPI	**Padang Panjang**	**2.92**	**2**	P	**Pn**	**20 43 15.2**	**-0.1**
PPI	**Padang Panjang**	**2.92**	**2**	P	**Pn**	**20 43 14.9**	**-0.4**
	baz=3.0,SNR=23						
RGRI	**Rengat**	**3.65**	**34**	P	**Pn**	**20 43 25.3**	**-0.1**
BKNI	**Bangkinang**	**3.77**	**11**	P	**Pn**	**20 43 26.9**	**-0.1**
LWLI	**Liwa**	**4.09**	**113**	P	**Pn**	**20 43 32.2**	**+0.7**
MNSI	**Mandailing Nat**	**4.22**	**350**	P	**Pn**	**20 43 31.6**	**-1.6**
KASI	**Kota Agung**	**4.70**	**117**	P	**Pn**	**20 43 40.5**	**+0.7**
BLSI	**Bandar Lampung**	**5.32**	**112**	P	Pn	20 43 52.6	+4.3
	214nm,0.6s,1.1nm						
GSI	**Gunungsitoli**	**5.40**	**330**	P	**Pn**	**20 43 48.9**	**-0.5**
	170nm,0.7s,3μm1.8nm						
GSI	**Gunungsitoli**	**5.40**	**330**	P	**Pn**	**20 43 47.9**	**-1.5**
	baz=5.4,SNR=8.7						
PPBI	**Pangkal Pinang**	**5.97**	**78**	P	Pn	20 44 00.5	+3.3
	34nm,1.5s,0.3nm						
KGM	**Kluang**	**6.17**	**29**	P	**Pn**	**20 43 59.5**	**-0.5**
CGJI	**Cibinong**	**6.26**	**121**	P	**Pn**	**20 44 00.4**	**-0.8**
	139nm,0.7s,2μm0.6nm						
MYKOM	**Kota Tinggi**	**6.26**	**35**	P	**Pn**	**20 44 01.0**	**-0.2**
MYKOM	**Kota Tinggi**	**6.26**	**35**	P	**Pn**	**20 44 00.9**	**-0.4**
	79nm,1.5s,0.8nm						
PSI	**Prapat**	**6.30**	**347**	Pn	**Pn**	**20 43 59.2**	**-2.8**
PSI	**Prapat**	**6.30**	**347**	P	**Pn**	**20 43 59.8**	**-2.2**
	151nm,1.3s,2μm						
PSI	**Prapat**	**6.30**	**347**	Pn	**Pn**	**20 43 59.2**	**-2.8**
	1.1nm,0.3s,baz=188,slow=12,SNR=7.7						
PSI	**Prapat**	**6.30**	**347**	P	**Pn**	**20 44 02.3**	**+0.3**
	baz=6.3,SNR=5.0						
FRIM	**Kepong**	**6.72**	**11**	P	**Pn**	**20 44 07.4**	**-0.2**
TSI	**Tuntungan**	**7.06**	**346**	P	**Pn**	**20 44 12.2**	**-0.1**
	209nm,1.1s,2μm						
DBJI	**Dramaga**	**7.16**	**116**	P	**Pn**	**20 44 14.9**	**+1.3**
	144nm,1.4s,5μm1.0nm						
CBJI	**Citeko**	**7.19**	**115**	P	Pn	20 44 17.8	+3.7
	522nm,0.8s,7μm1.8nm						
IPM	**Ipoh**	**7.86**	**5**	*e*P	**Pn**	**20 44 23.5**	**+0.3**
	73nm,0.8s						
IPM	**Ipoh**	**7.86**	**5**	P	**Pn**	**20 44 23.7**	**+0.5**
IPM	**Ipoh**	**7.86**	**5**	P	**Pn**	**20 44 24.3**	**+1.1**
	29nm,0.9s,1μm0.4nm						
LEM	**Lembang**	**8.05**	**115**	P	**Pn**	**20 44 29.0**	**+2.9**
	163nm,0.8s,0.7nm						
LEM	**Lembang**	**8.05**	**115**	P	**Pn**	**20 44 28.5**	**+2.4**
	baz=8.1,SNR=5.2						
CISI	**Cisompet, Garu**	**8.55**	**119**	P	**Pn**	**20 44 31.4**	**-1.4**
	288nm,0.5s,4μm1.1nm						
XMI	**Christmas Isla**	**8.82**	**143**	S	Sn	20 46 04.1	-11
	baz=8.9,SNR=4.9						
XMIS	**Christmas Isla**	**8.82**	**143**	S	Sn	20 46 02.9	-12
	baz=8.9,SNR=7.2						
KTGM	**Kuala Trenggan**	**9.12**	**18**	P	**Pn**	**20 44 40.9**	**+0.4**
COCO	**West Island**	**9.38**	**201**	*e*Pn	**Pn**	**20 44 43.3**	**-0.8**
	110nm,0.6s						
TGJI	**Tegal**	**9.45**	**112**	P	**Pn**	**20 44 47.8**	**+2.8**
	75nm,0.8s						
KSM	**Kuching**	**11.12**	**64**	*e*Pn	**Pn**	**20 45 08.2**	**+0.2**
	12nm,1.2s						
KSM	**Kuching**	**11.12**	**64**	P	**Pn**	**20 45 07.8**	**-0.1**
UGM	**Wanagama**	**11.13**	**114**	P	**Pn**	**20 45 07.0**	**-1.1**
	baz=11,SNR=7.0						
SJI	**Sawahan**	**12.21**	**111**	P	Pn	20 45 26.4	+3.5
	49nm,1.3s,1μm						
SBUM	**Sibu**	**13.26**	**64**	P	**Pn**	**20 45 36.7**	**-0.6**
SBUM	**Sibu**	**13.26**	**64**	P	**Pn**	**20 45 40.2**	**+2.9**
	34nm,1.4s,792nm						
BTM	**Bintulu**	**14.37**	**63**	P	**Pn**	**20 45 51.8**	**-0.6**
BBKI	**Banjar Baru**	**14.53**	**91**	P	**P**	**20 46 01.2**	**+0.4**
CHBT	**CHBT**	**16.17**	**7**	P	**P**	**20 46 19.7**	**+0.7**
	25nm,1.3s						
SMKI	**Samarinda**	**17.16**	**81**	P	**P**	**20 46 33.3**	**+3.3**
	72nm,1.1s						
KKM	**Kota Kinabalu**	**18.46**	**60**	P	**P**	**20 46 44.1**	**-0.4**
KKM	**Kota Kinabalu**	**18.46**	**60**	P	**Pn**	**20 46 44.7**	**0.0**
	baz=19,SNR=3.6						
SDKM	**Sandakan**	**19.12**	**62**	P	**P**	**20 46 52.1**	**+0.4**
TSM	**Tawau**	**19.16**	**67**	P	**P**	**20 46 52.3**	**+0.2**
UBPT	**Khong Chiam**	**19.25**	**15**	P	**P**	**20 46 51.6**	**-1.4**
	32nm,1.3s						
KDM	**Kudat**	**19.43**	**58**	P	**P**	**20 46 54.8**	**-0.2**
KAPI	**Kappang**	**19.48**	**95**	*e*P	**P**	**20 46 54.5**	**-1.0**
	122nm,1.2s						
KAPI	**Kappang**	**19.48**	**95**	P	**P**	**20 46 54.6**	**-1.0**
	1.3nm,0.3s,baz=274,slow=9.5,SNR=18						
TTSI	**Tana Toraja**	**19.50**	**90**	P	**Pn**	**20 46 57.5**	**+0.3**
	46nm,1.4s,954nm						
TTSI	**Tana Toraja**	**19.50**	**90**	P	Pn	20 47 09.2	+12
	46nm,1.4s,954nm						
PCI	**Palu**	**19.69**	**83**	P	Pn	20 47 14.7	+15
	baz=20,SNR=18						
BKSI	**Bulukumba**	**19.87**	**96**	P	**P**	**20 46 59.4**	**-0.4**
	153nm,1.0s,1μm						

MYLDM **Lahad Datu 20.09 65** P **P 20 47 02.0 -0.2**
WSI Waingapu 20.82 108 P Pn 20 47 18.0 +5.2
baz=21,SNR=4.7
CM31 Chiang Mai Arr 21.76 357 *e*P **P 20 47 18.1 -2.1**
22nm,0.9s
CMAR Chiang Mai Arr 21.76 357 P **P 20 47 18.1 -2.0**
CMAR PcP **PcP 20 51 22.2 +1.9**
CMAR Chiang Mai Arr 21.76 357 P **P 20 47 18.1 -2.0**
24nm,1.0s,baz=186,slow=9.6,SNR=54
CMAR PcP **PcP 20 51 22.2 +1.9**
2.1nm,0.9s,baz=214,slow=3.4,SNR=7.0
CMAR LR LR 20 57 24.0
comp=Z,710nm,18.9s,baz=175,slow=42
MRSI Marisa 21.98 80 P **P 20 47 23.1 +0.5**
51nm,1.1s
CMMT Chiang Mai 22.11 357 P **P 20 47 22.9 -1.0**
20nm,1.1s
CHTO Chiang Mai 22.11 357 *e*P **P 20 47 21.8 -2.2**
19nm,1.0s
CHTO Chiang Mai 22.11 357 P **P 20 47 22.4 -1.6**
12nm,1.3s
LUWI Luwuk 22.59 85 P **P 20 47 30.9 +1.8**
QIZ Qiongzhong 24.19 23 P **P 20 47 42.3 -2.5**
QIZ S **S 20 52 02.0 +0.7**
QIZ pmax pmax
comp=Z,310nm,8.0s
QIZ LR LR
comp=N,2μm,13.9s
QIZ LR LR
comp=E,1μm,12.8s
QIZ LR LR
comp=Z,3μm,13.4s
TGY Tagaytay City 26.86 49 P **P 20 48 08.9 -0.3**
TGY Tagaytay City 26.86 49 P **P 20 48 08.9 -0.3**
comp=Z,71nm,0.5s,baz=66,slow=4.2,SNR=3.9
KMI Kunming 28.45 5 P **P 20 48 24.0 +0.5**
KMI pP **pP 20 48 34.5 +2.1**
KMI S **S 20 53 09.9 +0.7**
KMI pmax pmax
comp=Z,17nm,1.3s
KMI LR LR
comp=N,850nm,12.9s
KMI LR LR
comp=E,400nm,10.9s
KMI LR LR
comp=Z,880nm,13.4s
IMP Imphal 28.68 348 *e*P **P 20 48 23.0 -2.4**
FITZ Fitzroy Crossi 28.81 122 *e*P **P 20 48 26.1 -0.5**
comp=Z,14nm,0.9s
FITZ Fitzroy Crossi 28.81 122 P **P 20 48 26.6 0.0**
comp=Z,7.3nm,0.9s,baz=263,slow=3.8,SNR=5.5
FITZ Fitzroy Crossi 28.81 122 P **P 20 48 26.8 +0.2**
baz=29,SNR=5.7
MEEK Meekatharra 29.02 145 P **P 20 48 28.5 +0.1**
baz=29,SNR=8.7
SHL Shillong 29.92 345 *ex* P **20 48 38.0 +1.5**
GYA Guiyang 30.31 11 ⇑*i*P **P 20 48 38.9 -1.0**
GYA pP **pP 20 48 52.8 +4.0**
GYA sP sP 20 48 58.9 +6.3
GYA PP **PnPn 20 49 42.8 +4.1**
GYA S **S 20 53 39.0 +0.7**
GYA sS **sS 20 53 56.5 +3.5**
GYA ScP **ScP 20 55 19.3 -1.0**
GYA SS **SnSn 20 55 21.8 +7.4**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,540nm,17.6s
GYA LR LR
comp=E,570nm,18.2s
GYA LR LR
comp=Z,790nm,17.9s
KLBR Kellerberrin 32.51 152 P **P 20 48 56.2 -2.9**
baz=33,SNR=8.2
ODAN Odare 32.56 338 *e*P **P 20 49 01.1 +1.3**
comp=Z,64nm,0.9s
TAPN Taplejung 32.89 339 *e*P **P 20 49 04.2 +1.4**
comp=Z,112nm,1.0s
RAMN Ramite 32.94 337 *e*P **P 20 49 04.6 +1.4**
comp=Z,46nm,1.0s
KDU Kakadu 33.14 108 S **S 20 54 17.4 -5.2**
baz=33,SNR=3.4
LSA Lhasa 34.05 346 P **P 20 49 14.0 +0.9**
LSA pmax pmax
comp=Z,30nm,1.2s
GUN Gumba 34.08 337 *e*P **P 20 49 14.3 +1.1**
DMN Daman 34.12 336 *e*P **P 20 49 14.2 +0.7**
KKN Kakani 34.21 336 *e*P **P 20 49 15.1 +0.9**
comp=Z,47nm,1.0s
KOLN Koldanda 34.91 334 *e*P **P 20 49 21.4 +1.1**
comp=Z,38nm,0.8s
DANN Dangsing 35.34 334 *e*P **P 20 49 25.0 +0.9**
comp=Z,117nm,1.1s
PYUN Piuthan 35.47 333 *e*P **P 20 49 26.0 +1.0**
comp=Z,127nm,1.2s
WHN Wuhan 36.32 21 P **P 20 49 31.8 -0.3**
WHN *e*S **S 20 55 08.5 -2.7**
WHN LR LR
comp=Z,3μm,13.8s
WRAB Tennant Creek 37.06 119 *e*P **P 20 49 37.6 -0.9**
comp=Z,5.6nm,0.5s
LGTI Lohaghat 37.89 331 *ex* P 20 49 50.1 +4.7
XAN Xi'an 38.11 12 P **P 20 49 45.8 -1.5**
XAN S S 20 55 29.8 -8.7
XAN pmax pmax
comp=Z,19nm,0.8s
XAN pmax pmax
comp=Z,48nm,8.0s
XAN LR LR
comp=N,450nm,15.4s
XAN LR LR
comp=Z,280nm,15.4s
ASAR Alice Springs 38.21 125 P **P 20 49 49.0 +0.7**
ASAR Alice Springs 38.21 125 P **P 20 49 49.0 +0.7**
comp=Z,9.2nm,0.5s,baz=300,slow=8.0,SNR=64
AS31 Alice Springs 38.21 125 *e*P **P 20 49 48.4 +0.1**
LZH Lanzhou 39.42 5 ⇑P **P 20 49 58.3 0.0**
LZH pP **pP 20 50 07.3 -0.1**
LZH sP **sP 20 50 11.0 -0.1**
LZH PP **PnPn 20 51 31.6 -0.6**
LZH S **S 20 56 01.0 +2.7**
LZH sS **sS 20 56 16.4 +3.1**
LZH pmax pmax
comp=Z,52nm,1.2s
LZH pmax pmax
comp=Z,220nm,5.0s
LZH LR LR
comp=N,2μm,14.9s
LZH LR LR
comp=E,2μm,14.0s
LZH LR LR
comp=Z,3μm,17.5s
GTA Gaotai 42.60 359 ⇑P **P 20 50 24.4 0.0**
GTA pP **pP 20 50 31.0 -2.6**
GTA PcP **PcP 20 52 16.1 -0.3**
GTA S **S 20 56 41.9 -3.5**
GTA pmax pmax
comp=Z,20nm,1.2s
GTA pmax pmax
comp=Z,120nm,5.2s
GTA LR LR
comp=N,390nm,14.2s
GTA LR LR
comp=E,670nm,16.2s
GTA LR LR
comp=Z,450nm,19.0s
BTO Baotou 44.69 11 *e*P **P 20 50 40.6 -0.6**
HHC Hu-ho-hao-te 45.22 12 *e*P **P 20 50 46.3 +0.8**
HHC PcP **PcP 20 52 25.9 +0.6**
HHC PP **PP 20 52 32.9 +1.2**
HHC ScP **ScP 20 56 14.8 -1.1**
HHC PcS **PcS 20 56 19.0 -0.2**
HHC S **S 20 57 24.0 +0.3**
HHC sS **sS 20 57 39.8 +1.0**
HHC SS **ScS 21 00 38.4 -2.0**
HHC pmax pmax
comp=Z,91nm,0.9s
HHC pmax pmax
comp=Z,750nm,6.4s
HHC LR LR
comp=N,830nm,16.5s
HHC LR LR
comp=E,930nm,16.4s
HHC LR LR

comp=Z,1µm,16.2s
BJI Beijing 45.62 17 P P 20 50 48.4 -0.1
BJI S S 20 57 31.8 +2.7
BJI pmax pmax
comp=Z,32nm,1.2s
BJI pmax pmax
comp=Z,99nm,3.6s
BJI LR LR
comp=N,900nm,17.6s
BJI LR LR
comp=E,560nm,20.2s
BJI LR LR
comp=Z,650nm,18.6s
JNU Nakatsue 46.44 36 *e*P **P 20 50 53.5 -1.6**
comp=Z,41nm,1.2s
JNU Nakatsue 46.44 36 P **P 20 50 53.5 -1.6**
comp=Z,49nm,1.0s,baz=179,slow=3.2,SNR=14
CTA Charters Tower 47.76 114 P **P 20 51 05.8 +0.2**
CTA Charters Tower 47.76 114 P **P 20 51 05.8 +0.2**
comp=Z,5.2nm,0.6s,baz=282,slow=8.6,SNR=7.2
CTAO Charters Tower 47.76 114 *e*P **P 20 51 05.2 -0.5**
comp=Z,23nm,1.2s
KBL Kabul 47.83 325 *e*P **P 20 51 06.9 +0.7**
comp=Z,10nm,1.1s
QLP Quilpie 47.95 123 P **P 20 51 08.6 +1.6**
baz=48,SNR=6.7
STKA Stephens Creek 48.02 131 P **P 20 51 08.5 +1.1**
STKA Stephens Creek 48.02 131 P **P 20 51 08.5 +1.1**
comp=Z,5.7nm,0.7s,baz=315,slow=7.5,SNR=15
STKA Stephens Creek 48.02 131 P **P 20 51 08.9 +1.4**
baz=48,SNR=10.0
KSAR Wonju Array Be 48.05 30 P **P 20 51 06.7 -0.8**
KSRS Korea Array 48.07 30 P **P 20 51 06.7 -1.0**
comp=Z,32nm,1.1s,baz=219,slow=8.2,SNR=56
KSH Kashi 48.21 335⇑ *i*P **P 20 51 08.0 -0.9**
KSH pP **pP 20 51 18.3 +0.1**
KSH sP **sP 20 51 22.3 +0.5**
KSH PcP **PcP 20 52 36.3 +0.4**
KSH PP **PP 20 53 00.6 -1.0**
KSH ScP **ScP 20 56 25.9 -2.6**
KSH PcS **PcS 20 56 30.0 -1.8**
KSH S **S 20 58 03.8 -2.7**
KSH sS **sS 20 58 21.3 -0.4**
KSH ScS **ScS 21 00 55.4 -4.6**
KSH SS SS 21 01 27.8 -8.5
KSH pmax pmax
comp=Z,3.0nm,0.5s
KSH LR LR
comp=N,480nm,5.0s
KSH LR LR
comp=E,780nm,5.7s
KSH LR LR
comp=Z,480nm,6.6s
WMQ Urumqi 48.35 348 P **P 20 51 11.0 +1.1**
WMQ pmax pmax
comp=Z,20nm,1.0s
SNY Shenyang 49.74 23⇑P **P 20 51 18.8 -1.7**
SNY pmax pmax
comp=Z,13nm,1.1s
SNY pmax pmax
comp=Z,280nm,12.0s
SNY LR LR
comp=N,190nm,17.3s
SNY LR LR
comp=E,210nm,16.9s
SNY LR LR
comp=Z,200nm,16.5s
ULHL Ulahol 50.40 337 P **P 20 51 27.0 +1.3**
SNR=8.4
KZA Kyzart 50.65 336 P **P 20 51 29.4 +1.6**
SNR=9.8
CMSA Cobar Meteorol 51.02 129 P **P 20 51 32.2 +1.8**
baz=51,SNR=11
TKM2 Tokmak 2 51.22 337 *e*P **P 20 51 32.7 +0.8**
comp=Z,1µm,0.6s
TKM2 Tokmak 2 51.22 337 P **P 20 51 32.9 +1.0**
SNR=41
KBK Karagaybulak 51.26 336 P **P 20 51 33.5 +1.3**
SNR=13
SONM Songino Array 51.30 5 P **P 20 51 33.0 +0.7**
SONM Songino Array 51.30 5 P **P 20 51 33.0 +0.7**
comp=Z,36nm,0.8s,baz=188,slow=8.2,SNR=44
AML Almayashu 51.34 335 P **P 20 51 34.5 +1.4**
SNR=12
ULN Ulaanbaatar 51.39 6 *e*P **P 20 51 33.2 +0.2**
comp=Z,2.2nm,0.8s
ULN *e*pP **pP 20 51 40.3 -2.0**
CHMS Chumysh 51.62 336 P **P 20 51 35.7 +1.0**
SNR=8.6
EKS2 Erkin-Say 51.74 335 *e*P **P 20 51 36.4 +0.6**
comp=Z,23nm,0.9s
EKS2 Erkin-Say 51.74 335 P **P 20 51 36.9 +1.1**
SNR=33
USP Ospenovka 51.95 336 P **P 20 51 37.9 +0.7**
SNR=15
CN2 Changchun 52.15 23 *e*P **P 20 51 36.6 -1.9**
CN2 *e*PP **PP 20 53 36.4 -0.7**
CN2 *e*S **S 20 58 58.8 -2.1**
CN2 pmax pmax
comp=Z,50nm,1.0s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,17.0s
CN2 LR LR
comp=E,400nm,17.0s
CN2 LR LR
comp=Z,400nm,18.0s
MK31 Makanchi Array 52.44 344 *e*P **P 20 51 41.1 +0.4**
MK31 *e*pP **pP 20 51 47.2 -2.8**
MKAR Makanchi Array 52.44 344 P **P 20 51 41.0 +0.3**
MKAR Makanchi Array 52.44 344 P **P 20 51 41.0 +0.3**
comp=Z,32nm,0.7s,baz=147,slow=8.0,SNR=301
MAJO Matsushiro 53.18 38 *e*P **P 20 51 44.4 -1.9**
comp=Z,4.8nm,0.8s
MAT Matsushiro 53.18 38 P **P 20 51 44.2 -2.1**
MJAR Matsushiro Arr 53.18 38 P **P 20 51 44.9 -1.5**
MJAR Matsushiro Arr 53.18 38 P **P 20 51 44.9 -1.5**
comp=Z,11nm,1.1s,baz=220,slow=8.6,SNR=22
KKAR Karatay Array 53.52 333 *e*P **P 20 51 47.8 -1.0**
comp=Z,1.8nm,0.6s
MDJ Mudanjiang 54.51 25 P **P 20 51 55.0 -0.9**
MDJ pP **pP 20 52 02.8 -2.5**
MDJ S **S 20 59 33.0 0.0**
MDJ pmax pmax
comp=Z,12nm,1.0s
MDJ LR LR
comp=N,570nm,22.2s
MDJ LR LR
comp=E,550nm,23.9s
MDJ LR LR
comp=Z,900nm,18.8s
USRK Ussuriysk Arra 55.25 27 P **P 20 52 01.1 -0.1**
comp=Z,39nm,0.8s,baz=223,slow=5.9,SNR=106
KURK Kurchatov 57.02 344 *e*P **P 20 52 13.8 +0.1**
comp=Z,43nm,1.0s
ZAA0 Zalesovo Array 58.58 349 *e*P **P 20 52 24.6 -0.1**
ZALV Zalesovo Beam 58.58 349 P **P 20 52 24.6 -0.1**
ZALV Zalesovo Beam 58.58 349 P **P 20 52 24.6 -0.1**
comp=Z,35nm,0.9s,baz=163,slow=5.4,SNR=151
RDF Al-Radifah 59.90 306 *e*P **P 20 52 35.7 +1.3**
RDF AMb AMB 20 52 44.2
comp=Z,37nm,1.1s
NAY Al-Naaiem 60.27 306 *e*P **P 20 52 37.5 +0.6**
NAY AMb AMB 20 52 48.0
comp=Z,20nm,1.3s
MIB Mutribah 60.42 307 *e*P **P 20 52 38.5 +0.7**
MIB AMb AMB 20 52 53.5
comp=Z,30nm,1.1s
BRVK Borovoye 61.65 340 *e*P **P 20 52 45.2 -0.6**
comp=Z,11nm,0.9s
LHI Lord Howe Isla 61.80 124 P P 20 52 43.2 -4.0
baz=62,SNR=3.8
ABKAR Akbulak array 63.00 332 *e*P **P 20 52 54.5 -0.3**
comp=Z,45nm,1.0s
ABKAR *e*pP **pP 20 53 02.1 -2.3**
GNI Garni 66.73 317 *e*P **P 20 53 19.7 +0.1**
comp=Z,17nm,1.3s
KBZ Khabaz 69.55 319 P **P 20 53 38.2 +1.3**
KBZ Khabaz 69.55 319 P **P 20 53 38.2 +1.3**
comp=Z,7.1nm,0.9s,baz=121,slow=5.2,SNR=11
MALT Malatya 70.49 313 *e*P **P 20 53 42.3 -0.7**
comp=Z,12nm,1.1s
EIL Elat 70.52 303 P P 20 53 52.9 +10
baz=70,SNR=5.4
BRTR Keskin Array B 74.47 313 P **P 20 54 06.9 +0.1**
comp=Z,4.8nm,0.9s,baz=128,slow=7.6,SNR=22
BOSA Boshof 75.24 241 P **P 20 54 13.5 +2.0**
BOSA Boshof 75.24 241 P **P 20 54 13.5 +2.0**
comp=Z,1.8nm,0.8s,baz=154,slow=2.5,SNR=3.5
VNDA Vanda 80.75 169 P **P 20 54 43.0 +2.1**
VNDA Vanda 80.75 169 P **P 20 54 43.0 +2.1**
comp=Z,1.2nm,0.9s,baz=329,slow=4.3,SNR=4.9
AKASG Malin Array Be 80.76 322 P **P 20 54 41.2 -0.2**
AKASG Malin Array Be 80.76 322 P **P 20 54 41.2 -0.2**
comp=Z,0.2nm,0.3s,baz=103,slow=5.4,SNR=5.2
VRI Vrincioaia 81.07 317⇑ *i*P **P 20 54 45.0 +1.8**
TESR 81.28 318⇑ *i*P **P 20 54 45.2 +0.9**
MLR Muntele Rosu 81.51 317⇑ *i*P **P 20 54 47.1 +1.4**
BURAR Bucovina Array 82.49 319⇑ *i*P **P 20 54 52.3 +1.5**
BUR08 Bucovina Ar. S 82.51 319 *e*P **P 20 54 52.1 +1.2**
VTS Vitosha 82.81 313⇑ *i*P **P 20 54 53.5 +0.9**
JOF Joensuu 83.59 335 *e*p **P 20 54 55.5 -0.5**
comp=Z,4.3nm,0.8s
BZS Buzias 84.51 316⇓ *i*P **P 20 55 02.5 +1.4**
KWP Kalwaria Pacla 84.56 320⇑ *i*P **P 20 55 02.8 +1.6**
KWP Kalwaria Pacla 84.56 320 *e*P **P 20 55 02.5 +1.3**
KOLS Kolonicke sedl 84.69 320 *e*P **P 20 55 03.5 +1.6**
KOLS *e*pP **pP 20 55 11.6 -0.1**
SUW Suwalki 85.18 325 *e*P **P 20 55 04.9 +0.7**
comp=Z,52nm,1.0s
SUW Suwalki 85.18 325 *e*P **P 20 55 04.8 +0.6**
CRVS Cervenica-Dubn 85.22 319 *e*P **P 20 55 05.2 +0.6**
FINES FINESS Array B 85.47 332 P **P 20 55 06.6 +1.1**
FINES FINESS Array B 85.47 332 P **P 20 55 06.6 +1.1**
comp=Z,3.6nm,0.8s,baz=114,slow=4.7,SNR=15
KAF Kangasniemi 85.55 333 *ep* **P 20 55 05.6 -0.3**
comp=Z,3.2nm,0.9s
VYHS Vyhne 86.86 319 *e*pP pP 20 55 21.8 -0.7
OKC Ostrava-Krasne 87.50 320 *e*P **P 20 55 17.3 +1.5**
OKC *e*pP **pP 20 55 25.2 -0.4**
ARCES ARCESS Array B 87.88 340 P **P 20 55 16.9 -0.3**
ARCES ARCESS Array B 87.88 340 P **P 20 55 16.9 -0.3**
comp=Z,6.0nm,0.9s,baz=74,slow=4.3,SNR=5.6
DPC Dobruska-Polom 88.74 320 *e*P **P 20 55 23.0 +1.3**
DPC *e*pP **pP 20 55 31.2 -0.3**
UPC Upice 88.95 321 *e*P **P 20 55 25.0 +2.4**
PRU Pruhonice 89.84 320 *e*pP pP 20 55 34.9 -1.7
PVCC Panska Ves 89.87 320 *e*pP pP 20 55 36.0 -0.8
GERES GERESS Array B 90.28 319 P **P 20 55 30.0 +1.0**
GERES GERESS Array B 90.28 319 P **P 20 55 30.0 +1.0**
comp=Z,1.2nm,0.8s,baz=86,slow=4.1,SNR=12
BRG Berggiesshubel 90.30 321 *e*P **P 20 55 29.2 +0.2**
comp=Z,3.7nm,1.1s
KHC Kasperske Hory 90.39 319 *e*pP pP 20 55 39.9 +0.6
CLL Collm 90.92 321 *e*P **P 20 55 31.0 -0.8**
CLL *e*sP **sP 20 55 41.0 -4.2**
YKA Yellowknife Ar 115.61 17 PKP **PKPdf 21 01 09.4 -0.4**
YKA Yellowknife Ar 115.61 17 PKP **PKPdf 21 01 09.4 -0.4**
comp=Z,0.1nm,0.5s,baz=312,slow=1.9,SNR=3.7
B13A Whitefish 126.21 28⇓P **PKPdf 21 01 30.6 -0.1**
baz=126
C13A Hot Springs 126.65 29⇓P **PKPdf 21 01 31.5 0.0**
baz=126
D13A Huson 127.11 29⇓P **PKPdf 21 01 33.0 +0.5**
baz=127
B15A Bradely Ranch, 127.13 27⇓P **PKPdf 21 01 33.1 +0.5**
baz=127
B16A M & M Farms, S 127.44 26⇓P **PKPdf 21 01 33.6 +0.6**
baz=127
A17A Triple J Farms 127.48 25⇑P **PKPdf 21 01 33.8 +0.7**
baz=127
C15A Salmond Ranch, 127.50 28⇓P **PKPdf 21 01 34.0 +0.7**
baz=127
B17A L&G Farms, Che 127.93 26⇑P **PKPdf 21 01 34.8 +0.8**
baz=128
G12A Big Creek, Yel 128.03 32⇑P **PKPdf 21 01 34.9 +0.5**
baz=128
E14A Clinton 128.06 29⇓P **PKPdf 21 01 35.1 +0.6**
baz=128
D15A Lincoln 128.08 28⇑P **PKPdf 21 01 35.1 +0.7**
baz=128
A19A Klindworth Far 128.31 24⇓P **PKPdf 21 01 35.1 +0.4**
baz=128
C17A Wharram Farm, 128.44 26⇓P **PKPdf 21 01 35.7 +0.6**
baz=128
D16A Dana Ranch, Ca 128.54 27⇑P **PKPdf 21 01 36.0 +0.7**
baz=128
EGMT Eagleton 128.59 25⇑P **PKPdf 21 01 35.7 +0.4**
baz=128
H12A Diamond D Ranc 128.67 32⇓P **PKPdf 21 01 36.6 +0.9**
baz=128
A20A Cobblestone Ra 128.67 24⇓P **PKPdf 21 01 36.1 +0.7**
baz=128
D17A Six Diamond Ra 128.84 27⇓P **PKPdf 21 01 36.5 +0.7**
baz=128
H13A Challis 128.97 31⇓P **PKPdf 21 01 37.1 +0.8**
baz=129
I12A Atlanta 129.03 33⇑P **PKPdf 21 01 37.2 +0.8**
baz=129
C19A Slack Wire Ran 129.11 25⇑P **PKPdf 21 01 37.7 +1.4**
baz=129
H14A Leadore 129.39 31⇑P **PKPdf 21 01 38.2 +1.1**
baz=129
G15A Dillon 129.45 30⇓P **PKPdf 21 01 38.6 +1.4**
baz=129
I13A Wildhorse Cree 129.49 32⇓P **PKPdf 21 01 38.7 +1.4**
baz=129
BOZ Bozeman (W) 129.52 29⇓P **PKPdf 21 01 38.6 +1.3**
baz=129
HLID Hailey 129.57 32⇓P **PKPdf 21 01 38.3 +0.9**
baz=129
C20A Veseth Ranch, 129.57 25⇓P **PKPdf 21 01 38.4 +1.3**
baz=129
E18A Harlowton 129.63 27⇑P **PKPdf 21 01 38.4 +1.0**
baz=129
G16A Moss Hill, Enn 129.74 29⇑P **PKPdf 21 01 38.7 +1.1**
baz=129
F17A Fitzpatrick Pl 129.79 28⇑P **PKPdf 21 01 39.3 +1.6**
baz=130
J13A Cove Ranch, Pi 129.81 32⇓P **PKPdf 21 01 39.3 +1.4**
baz=130
E19A Rath Farm, Rou 130.21 26⇓P **PKPdf 21 01 39.1 +0.7**
baz=130
F18A Big Timber 130.22 27⇑P **PKPdf 21 01 39.6 +1.1**
baz=130
H16A Russell Place, 130.39 29⇑P **PKPdf 21 01 40.0 +1.0**
baz=130
NVAR Mina Array Bea 130.48 40 PKP **PKPdf 21 01 40.5 +1.1**
NVAR Mina Array Bea 130.48 40 PKP **PKPdf 21 01 40.5 +1.1**
comp=Z,1.6nm,1.0s,baz=330,slow=2.2,SNR=4.1
D21A La Casta Ranch 130.50 24⇑P **PKPdf 21 01 40.3 +1.3**
baz=130
D22A Cohagen 130.76 24⇑P **PKPdf 21 01 40.6 +1.2**
baz=130
H19A Powell 131.49 28⇓P **PKPdf 21 01 41.8 +0.8**
baz=131
E24A Baker 131.98 23⇓P **PKPdf 21 01 42.4 +0.7**
baz=132
R11A Troy Canyon, C 132.25 38⇓P **PKPdf 21 01 43.8 +1.1**
baz=132
BLG Laguna Peak 132.32 45⇓P **PKPdf 21 01 42.9 +0.1**
baz=132
I20A Worland 132.44 28⇑P **PKPdf 21 01 43.9 +1.1**
baz=132
RSSD Black Hills 134.10 24 *e*PKPdf **PKPdf 21 01 47.7 +1.7**
MSU Marysvale 134.21 36 *e*PKPdf **PKPdf 21 01 47.8 +1.4**
PFO Pinyon Flat Ob 134.43 44⇑P **PKPdf 21 01 47.7 +0.9**
Q16A Castle Valley 134.51 35⇓P **PKPdf 21 01 48.3 +1.4**
baz=134
MONP Monument Peak 134.84 45⇓P **PKPdf 21 01 48.7 +0.9**
baz=135
BC3 Big Chuckawall 135.09 44⇑P **PKPdf 21 01 49.1 +1.1**
baz=135
P19A Cripple Cowboy 135.22 32⇑P **PKPdf 21 01 49.1 +0.9**
baz=135
Q19A Hogan Spring (135.56 33⇑P **PKPdf 21 01 50.1 +1.4**
baz=135
GLA Glamis 135.87 44⇓P **PKPdf 21 01 50.5 +1.1**
baz=136
S18A Hurst Farm, Bl 136.03 35⇑P **PKPdf 21 01 51.3 +1.4**
baz=136
N24A Carr 136.38 28⇓P **PKPdf 21 01 51.5 +1.2**
baz=136
S21A Coal Bank Pass 137.29 33⇓P **PKPdf 21 01 53.4 +1.2**
baz=137
Z27A Tatum 143.01 34⇑P PKPbc 21 01 59.5 +0.2
baz=143
324A Moseley Ranch, 143.03 38⇓P PKPbc 21 01 59.8 +0.4
baz=143
CPUP Villa Florida 143.36 215 PKP **PKPdf 21 02 05.3 +2.2**
CPUP Villa Florida 143.36 215 PKP **PKPdf 21 02 05.3 +2.2**
comp=Z,0.3nm,0.3s,baz=352,slow=2.0,SNR=2.5
325A Bean Ranch, Si 143.39 38⇓P PKPbc 21 02 01.2 +0.7
baz=143,SNR=6.9
X31A McDonald Ranch 143.66 29⇑P PKPbc 21 02 01.0 +0.1
baz=143
425A Indio Mountain 143.79 38⇓P **PKPdf 21 02 03.2 -0.8**
baz=144,SNR=7.4
Z29A Hungry Hill Ra 143.87 32⇓P PKPbc 21 02 02.1 +0.4
baz=144
326A Caldwell Ranch 144.03 37⇑P PKPbc 21 02 02.8 +0.6
baz=144,SNR=6.6
Y31A Rekieta Farm, 144.06 30⇑P PKPbc 21 02 02.3 +0.1
baz=144
228A UT Block 9, Go 144.25 34⇑P PKPbc 21 02 03.1 +0.2
baz=144
TUL1 Tulsa 144.39 23⇑P PKPbc 21 02 02.9 -0.2
baz=144
Y32A R-V Farms, Ver 144.43 29⇑P PKPbc 21 02 03.4 +0.1
baz=144
426A McDonald Obser 144.46 38⇑P **PKPdf 21 02 05.3 0.0**
baz=144,SNR=11
Z31A Sharp Cattle R 144.63 30⇑P PKPbc 21 02 03.9 -0.1
baz=144
328A Wristen Ranch, 144.67 35⇑P PKPbc 21 02 04.6 +0.4
baz=144,SNR=9.3
427A Hayter Ranch, 144.71 37⇓P **PKPdf 21 02 05.0 -0.5**
baz=144,SNR=8.4
130A Snyder 144.78 32⇓P PKPbc 21 02 05.0 +0.5
baz=144
229A Bryant Ranch, 144.80 34⇓P PKPbc 21 02 05.1 +0.5
baz=144
WCI Wyandotte Cave 144.81 9 *e*PKPpre PKPpre 21 02 03.9
526A Mary Lane Ranc 144.84 38⇑P **PKPdf 21 02 06.4 +0.5**
baz=145,SNR=17
Z32A Haskell 144.97 30⇓P PKPbc 21 02 05.1 0.0
baz=145
131A Roby 145.02 31⇓P **PKPdf 21 02 05.6 -0.3**
baz=145
329A Wagon Wheel Ra 145.06 34⇓P **PKPdf 21 02 06.0 -0.1**
baz=145,SNR=18
527A Woodward Ranch1 45.08 38⇓P **PKPdf 21 02 06.5 +0.3**
baz=145
626A Big Bend Ranch 145.17 39⇓P **PKPdf 21 02 07.3 +0.9**
baz=145,SNR=55
428A Kincaid Ranch, 145.22 36⇑P **PKPdf 21 02 07.4 +1.0**
baz=145,SNR=40
230A Sterling City 145.24 33⇑P **PKPdf 21 02 06.4 0.0**
baz=145,SNR=26
ABTX Abilene, Hawle 145.44 30⇓P **PKPab 21 02 07.1 +0.3**
baz=145
528A Cox Ranch, San 145.57 37⇓P **PKPab 21 02 08.2 +0.8**
baz=145,SNR=31
330A Mertzon 145.58 34⇑P **PKPab 21 02 07.4 0.0**
baz=145,SNR=14
TXAR Lajitas Array 145.61 39 PKPbc **PKPab 21 02 08.4 +0.8**
TXAR Lajitas Array 145.61 39 PKPbc **PKPab 21 02 08.4 +0.8**
comp=Z,24nm,0.7s,baz=286,slow=1.0,SNR=119
231A Bronte 145.63 32⇓P **PKPab 21 02 07.4 -0.1**
baz=145,SNR=8.3
627A Terlingua Ranc 145.71 38⇓P **PKPab 21 02 09.1 +1.1**
baz=145,SNR=79
429A Davenport Ranc 145.76 35⇑P **PKPbc 21 02 07.8 +0.1**
baz=146,SNR=7.2
529A Stev Forest Ra 145.93 36⇓P **PKPab 21 02 09.1 +0.4**
baz=146,SNR=21
628A Black Gap, Mar 145.99 38⇓P **PKPab 21 02 09.3 +0.3**
baz=146,SNR=30
430A Baggett Ranch, 146.01 34⇑P **PKPab 21 02 08.7 -0.3**
baz=146,SNR=6.3
232A Coleman 146.02 31⇓P **PKPab 21 02 08.9 -0.1**
baz=146,SNR=11
331A San Angelo 146.06 33⇑P **PKPbc 21 02 08.8 +0.2**
baz=146,SNR=8.1
GNAR Gosnell 146.22 15 *e*PKPbc **PKPab 21 02 10.0 +0.5**
332A Millersview 146.37 32⇑P **PKPbc 21 02 09.4 -0.1**
baz=146,SNR=25
530A J-C Ranch, Com 146.43 35⇑P **PKPbc 21 02 10.1 +0.3**
baz=146,SNR=19
MIAR Mount Ida 146.43 21 *e*PKPdf **PKPdf 21 02 08.9 +0.6**
431A Sonora 146.44 34⇓P **PKPbc 21 02 10.1 +0.3**
baz=146,SNR=7.8
432A Menard 146.74 33⇑P **PKPbc 21 02 10.4 -0.2**
baz=146,SNR=9.5
TZTN Tazewell 146.82 6 *e*PKPdf **PKPbc 21 02 10.2 -0.4**
WHTX Lake Whitney 147.03 28⇑P **PKPbc 21 02 11.4 +0.1**
baz=147
JCT Junction City 147.04 33 *e*PKPdf **PKPbc 21 02 11.0 -0.5**
JCT Junction City 147.04 33⇓P **PKPbc 21 02 11.5 +0.1**
baz=147,SNR=19
532A Rocksprings 147.25 34⇑P **PKPbc 21 02 11.9 -0.2**
baz=147,SNR=6.6
631A Perdido Creek 147.42 35⇓P **PKPbc 21 02 12.7 +0.2**
baz=147
OXF Oxford 147.75 15 *e*PKPdf **PKPdf 21 02 11.6 +1.1**
CPCT Cooper Cave 147.79 7 *e*PKPbc **PKPbc 21 02 12.9 -0.4**
632A Uvalde 147.80 34⇓P **PKPbc 21 02 14.5 +0.9**
baz=148
732A Laxson Ranch, 148.28 35⇓P **PKPbc 21 02 15.1 +0.3**
baz=148
OTAV Otavalo 176.62 202 *e*PKPdf **PKPdf 21 02 41.2 +1.2**

*ISCJB **16** 20:43:31.4±0.9, 60.7°S±0.1°×26.7°W±0.3, h10km, mb4.0/4, Error ellipse: s-maj=22.7km s-min=10.2km az=143.7*
*IDC **16** 20:43:32.7±1.4, 60.56°S×26.94°W, h0km, mb4.1/4, mb1 4.4/6, mb1mx4.0/18, mbtmp4.2/6, ML6.0/1, Error ellipse: s-maj=38.9km s-min=30.3km az=10.0*
ISC 16 20:43:32.6±0.9, 60.9°S±0.1°×26.8°W±0.2, h10km, n16,
σ1°38/12, mb4.0/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.34**	**150**		*e*Pn	Pn	20 46 35.6	+7.6
VNA1	**Neumayer--Stat**	**12.34**	**150**		*e*Sn	Sn	20 48 39.6	-5.7
VNA3	**Neumayer Olymp**	**12.44**	**154**		*e*Pn	Pn	20 46 35.8	+6.4
VNA3	**Neumayer Olymp**	**12.44**	**154**		*e*Sn	**Sn**	**20 48 46.7**	**-1.2**
VNA2	**Neumayer--Watz** baz=316,slev=15	**12.73**	**150**		*e*Pn	Pn	20 46 39.7	+6.3
VNA2	**Neumayer--Watz** baz=316,slev=15	**12.73**	**150**		*e*Sn	**Sn**	**20 48 53.6**	**-1.5**
SNAA	**Sanae**	**14.34**	**149**		*e*Pn	**P**	**20 47 01.9**	**-0.7**
SNAA	**Sanae**	**14.34**	**149**		*e*Sn	**Sn**	**20 49 37.5**	**+3.1**
SNAA	**Sanae** baz=301,slow=15	**14.34**	**149**		Pn	**P**	**20 47 01.8**	**-0.7**
PMSA	**Palmer Station** 4.6nm,0.3s,baz=61,slow=9.6,SNR=10.0	**17.28**	**241**		P	**P**	**20 47 35.9**	**+0.8**
CFAA	**Coronel Fontan** 0.5nm,0.6s,baz=176,slow=6.5,SNR=8.6	**39.85**	**298**		P	**P**	**20 51 06.0**	**-0.1**
CPUP	**Villa Florida** 1.3nm,0.4s,baz=137,slow=8.3,SNR=9.0	**40.28**	**315**		P	**P**	**20 51 08.8**	**-0.8**
LPAZ	**La Paz** 3.4nm,0.5s,baz=88,slow=7.7,SNR=21	**53.43**	**308**		P	**P**	**20 52 53.1**	**-0.1**
TORD	**Torodi Ar. Bea** 0.8nm,0.5s,baz=199,slow=6.2,SNR=15	**77.19**	**28**		P	**P**	**20 55 26.8**	**+0.5**
YKA	**Yellowknife Ar** 0.3nm,0.7s,baz=135,slow=2.3,SNR=5.7	**139.80**	**314**		PKP	**PKPdf**	**21 02 59.1**	**0.0**
ILAR	**Eielson Array** 0.6nm,0.6s,baz=148,slow=5.0,SNR=8.5	**153.28**	**304**		PKPbc	**PKPbc**	**21 03 30.1**	**+1.0**

*ISK **16** 20:51:36.3, 37.79°N×29.12°E, h18km, MD2.8*
*CSEM **16** 20:51:37.0±0.3, 37.81°N×29.13°E, h15km, MD2.8, Error ellipse: s-maj=10.8km s-min=6.5km az=105.0*
*DDA **16** 20:51:38.8, 37.83°N×29.13°E, h8km, MD2.6*
ISC 16 20:51:38.0±1.6, 37.90°N±0.05°×29.2°E±0.1, h2km±24km, n8,
σ2°00/14, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.18**	**216**		PG	**Pg**	**20 51 40.2**	**-1.3**
DENT					SG	**Sg**	**20 51 42.6**	**-1.3**
DENT	**Denizli**	**0.18**	**216**	*i*	Pg	**Pg**	**20 51 40.2**	**-1.3**
DENT				*i*	Sg	**Sg**	**20 51 42.6**	**-1.3**
DNZL	**Cakiroluk**	**0.23**	**205**	*i*	P	**Pg**	**20 51 42.0**	**-0.5**
DNZL				*i*	S	**Sg**	**20 51 49.5**	**+4.0**
DNZL	**Cakiroluk**	**0.23**	**205**	*i*	P	**Pg**	**20 51 42.0**	**-0.5**
DNZL				*i*	S	**Sg**	**20 51 49.5**	**+4.0**
KHL	**Karahalli**	**0.51**	**33**	*e*	PG	**Pb**	**20 51 49.0**	**-0.7**
KHL	**Karahalli**	**0.51**	**33**	*e*	Pg	**Pb**	**20 51 49.0**	**-0.7**
KULA	**Kula-Manisa**	**0.73**	**327**	*e*	PG	**Pg**	**20 51 52.1**	**0.0**
KULA				*e*	SG	**Sb**	**20 52 04.3**	**+0.2**
KULA	**Kula-Manisa**	**0.73**	**327**	*e*	Pg	**Pg**	**20 51 52.1**	**0.0**
KULA				*e*	Sg	**Sb**	**20 52 04.3**	**+0.2**

BJI **16** *20:51:40.6,3˝.63S×100˝.58E,h32km,mB5.3/40,mb5.3/57, Ms5.2/53,Ms7 5.0/50*

ISCJB **16** *20:51:44.6±0.4,3˝.28S±0˝.02×100˝.44E±0˝.03,h41km±3km, mb5.2/105,MS4.9/37,Error ellipse: s-maj=5.2km s-min=3.1km az=137.1*

MOS **16** *20:51:44.2±1.1,3˝.10S×100˝.59E,h33km,mb5.4/43, MS4.9/8,Error ellipse: s-maj=9.9km s-min=5.2km az=111.4*

AUST **16** *20:51:44.3±1.0,3˝.33S×100˝.29E,h26km,Error ellipse: s-maj=1.1km s-min=0.6km az=234.0*

IDC **16** *20:51:45.5±2.5,3˝.29S×100˝.46E,h43km±17km,mb4.7/25, mb1 4.8/26,mb1mx4.8/28,mbtmp4.8/26,ML4.8/1,MS4.7/12, Ms1 4.7/12,ms1mx4.3/45,Error ellipse: s-maj=15.3km s-min=9.3km az=44.0*

DJA **16** *20:51:45.9±0.3,3˝.5±2˝×10˝.0E±˚,h42km,M5.2/26, mB5.5/13,mb5.2/26,MLv5.5/19,Mw(mB)5.0/13*

NEIC **16** *20:51:46.4±1.4,3˝.22S×100˝.46E,h41km±11km,mb5.0/31, Error ellipse: s-maj=10.2km s-min=4.8km az=50.0*

ISC 16 20:51:45.3±0.3,3˚24S±0˚.03×100˚41E±0˚.04,h33km±1km, h33km:pP-P,n606,σ1s39/650,mb5.2/105,MS4.9/37, 136C-104D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**1.55**	**43**	P	**Pb**	**20 52 12.4**	**-1.1**
MASI	**Maura Aman, Be**	**1.83**	**87**	P	**Pn**	**20 52 15.6**	**+1.1**
MASI				S	**Sb**	**20 52 41.6**	**+0.9**
KSI	**Kapahiang**	**2.22**	**101**	P	**Pn**	**20 52 19.8**	**0.0**
PDSI	**Padang**	**2.32**	**1**	P	**Pn**	**20 52 21.9**	**+0.7**
PDSI				S	**Sn**	**20 52 51.3**	**+2.8**
SISI	**Saibi**	**2.32**	**325**	P	**Pn**	**20 52 20.7**	**-0.4**
PPI	**Padang Panjang**	**2.77**	**360**	P	**Pn**	**20 52 28.2**	**+0.9**
PPI				S	**Sb**	**20 53 04.9**	**-2.7**
PPI	**Padang Panjang** baz=2.9,SNR=35	**2.77**	**360**	P	**Pn**	**20 52 28.6**	**+1.3**
MNAI	**Manna**	**2.77**	**114**	P	**Pn**	**20 52 27.8**	**+0.4**
EGSI	**Enggano, Bengk**	**2.80**	**138**	P	**Pn**	**20 52 26.5**	**-1.3**
RGRI	**Rengat**	**3.46**	**34**	P	**Pn**	**20 52 38.6**	**+1.8**
BKNI	**Bangkinang**	**3.60**	**10**	P	**Pn**	**20 52 40.6**	**+1.8**
LWLI	**Liwa**	**4.04**	**116**	P	**Pn**	**20 52 45.2**	**+0.2**
MNSI	**Mandailing Nat**	**4.10**	**348**	P	**Pn**	**20 52 45.4**	**-0.2**
KASI	**Kota Agung**	**4.66**	**119**	P	**Pn**	**20 52 53.1**	**-0.3**
BLSI	**Bandar Lampung** 361nm,0.8s,5μm1.3nm	**5.26**	**114**	P	**Pn**	**20 53 02.6**	**+0.9**
GSI	**Gunungsitoli** 293nm,0.6s,6μm3.8nm	**5.33**	**328**	P	**Pn**	**20 53 01.5**	**-1.1**
GSI	293nm,0.6s,6μm3.8nm			S	**Sn**	**20 54 04.9**	**+1.9**
GSI	**Gunungsitoli** baz=5.4,SNR=11	**5.33**	**328**	P	**Pn**	**20 53 01.6**	**-1.0**
PPBI	**Pangkal Pinang** 96nm,1.1s,1μm0.8nm	**5.82**	**80**	P	**Pn**	**20 53 10.8**	**+1.5**
KGM	**Kluang**	**5.98**	**29**	P	**Pn**	**20 53 13.6**	**+2.0**
MYKOM	**Kota Tinggi**	**6.07**	**35**	P	**Pn**	**20 53 14.6**	**+1.9**
MYKOM	**Kota Tinggi**	**6.07**	**35**	P	**Pn**	**20 53 14.9**	**+2.1**
MYKOM	**Kota Tinggi** 317nm,1.0s,2μm1.5nm	**6.07**	**35**	P	**Pn**	**20 53 14.3**	**+1.6**
PSI	**Prapat**	**6.18**	**346**	Pn	Pn	20 53 10.3	-4.2
PSI	**Prapat** 279nm,1.2s,3μm0.9nm	**6.18**	**346**	P	**Pn**	**20 53 14.6**	**+0.1**
PSI	**Prapat** 0.6nm,0.3s,baz=139,slow=10,SNR=7.6	**6.18**	**346**	Pn	Pn	20 53 10.3	-4.2
PSI	comp=Z,14μm,19.3s,baz=148,slow=45			LR	LR	20 56 23.7	
PSI	**Prapat** baz=6.2,SNR=8.0	**6.18**	**346**	P	**Pn**	**20 53 14.5**	**+0.1**
CGJI	**Cibinong** 326nm,0.9s,4μm1.2nm	**6.24**	**123**	P	**Pn**	**20 53 12.4**	**-2.7**
SBJI	**Serang**	**6.38**	**117**	P	Pb	20 53 28.8	-6.7
FRIM	**Kepong**	**6.55**	**11**	P	**Pn**	**20 53 21.0**	**+1.6**
TSI	**Tuntungan** 614nm,1.0s,5μm2.2nm	**6.95**	**345**	P	**Pn**	**20 53 26.3**	**+1.5**
DBJI	**Dramaga** 220nm,0.9s,3μm1.4nm	**7.12**	**118**	P	**Pn**	**20 53 26.9**	**-0.3**
CBJI	**Citeko** 950nm,0.8s,9μm3.1nm	**7.15**	**116**	P	**Pn**	**20 53 30.5**	**+2.9**
KCSI	**Kotacane, Aceh**	**7.22**	**339**	P	Pn	20 53 33.2	+4.6
IPM	**Ipoh** 135nm,0.9s	**7.70**	**5**	*eP*	**Pn**	**20 53 36.9**	**+1.8**
IPM	**Ipoh**	**7.70**	**5**	P	**Pn**	**20 53 36.6**	**+1.4**
IPM	**Ipoh** 161nm,1.0s,0.6nm	**7.70**	**5**	P	**Pn**	**20 53 37.3**	**+2.2**
LEM	**Lembang** 302nm,0.9s,3μm	**8.01**	**117**	P	**Pn**	**20 53 40.9**	**+1.3**
LEM	**Lembang** baz=8.1,SNR=14	**8.01**	**117**	P	**Pn**	**20 53 41.2**	**+1.6**
MLSI	**Meulaboh, Aceh**	**8.47**	**332**	P	Pn	20 53 49.1	+3.4
CISI	**Cisompet, Garu** 484nm,0.7s,6μm	**8.53**	**120**	P	**Pn**	**20 53 44.3**	**-2.3**
XMI	**Christmas Isla** baz=8.9,SNR=3.6	**8.87**	**144**	S	Sn	20 55 20.4	-10
KTGM	**Kuala Trenggan**	**8.94**	**18**	P	**Pn**	**20 53 53.3**	**+1.2**
TGJI	**Tegal** 154nm,0.8s	**9.39**	**113**	P	**Pn**	**20 54 00.1**	**+1.7**
COCO	**West Island**	**9.57**	**202**	*eP*	Pn	20 53 55.5	-5.3
COCO	comp=Z,568nm,0.6s			pmax	pmax		
COCO	**West Island** comp=Z,568nm,0.6s	**9.57**	**202**	*eP*	Pn	20 53 55.5	-5.3
COCO	**West Island** comp=Z,496nm,1.1s	**9.57**	**202**	P	Pn	20 53 57.1	-3.7
CLJI	**Cilicap**	**9.65**	**118**	P	**Pn**	**20 54 03.8**	**+1.9**
BSI	**Banda Aceh** comp=Z,59nm,0.9s	**10.07**	**330**	P	**Pn**	**20 54 10.2**	**+2.4**
BJII	**Banjamegara** comp=Z,61nm,1.5s	**10.11**	**114**	P	**Pn**	**20 54 09.9**	**+1.6**
KSM	**Kuching** comp=Z,49nm,1.0s	**10.95**	**65**	*eP*	**Pn**	**20 54 22.2**	**+2.5**
KSM	**Kuching**	**10.95**	**65**	P	Pn	20 54 24.3	+4.7
KSM	**Kuching** comp=Z,29nm,1.0s	**10.95**	**65**	P	Pn	20 54 24.4	+4.7
KSM	**Kuching** baz=11,SNR=5.2	**10.95**	**65**	P	Pn	20 54 23.3	+3.5
UGM	**Wanagama** baz=11,SNR=14	**11.08**	**115**	P	**Pn**	**20 54 20.4**	**-1.2**
PBKI	**Pangkalan Bun**	**11.26**	**88**	P	**Pn**	**20 54 26.8**	**+2.8**
SJI	**Sawahan** comp=Z,96nm,0.8s	**12.15**	**112**	P	**Pn**	**20 54 35.7**	**-0.6**
PWJI	**Pagerwojo**	**12.29**	**113**	P	Pn	20 54 34.7	-3.4
SBUM	**Sibu**	**13.09**	**65**	P	Pn	20 54 52.9	+3.9
SBUM	**Sibu** comp=Z,58nm,1.0s,comp=Z,1μm	**13.09**	**65**	P	Pn	20 54 52.7	+3.7
BLJI	**Banyuglugur** comp=Z,62nm,0.8s	**13.86**	**109**	P	**P**	**20 55 05.7**	**-1.7**
KMMI	**Kalianget** comp=Z,98nm,1.2s	**14.02**	**106**	P	**Pn**	**20 55 02.3**	**+0.6**
BTM	**Bintulu**	**14.19**	**63**	P	**Pn**	**20 55 06.9**	**+2.8**
BBKI	**Banjar Baru**	**14.41**	**91**	P	**P**	**20 55 13.0**	**-0.5**
KBKI	**Kotabaru** comp=Z,48nm,1.2s	**15.73**	**91**	P	**P**	**20 55 30.6**	**+2.4**
KHKI	**Kahang-Kahang** comp=Z,42nm,0.7s	**15.95**	**109**	P	**P**	**20 55 31.3**	**+0.7**
CHBT	**CHBT** comp=Z,41nm,1.1s	**16.00**	**7**	P	**P**	**20 55 32.8**	**+1.6**
SMKI	**Samarinda** comp=Z,163nm,0.8s,comp=Z,6μm	**17.02**	**81**	P	**P**	**20 55 44.7**	**+2.2**
KKM	**Kota Kinabalu** comp=Z,87nm,0.8s	**18.28**	**60**	*eP*	**P**	**20 55 52.3**	**-4.3**
KKM	**Kota Kinabalu**	**18.28**	**60**	P	**Pn**	**20 55 57.9**	**+1.2**
KKM	**Kota Kinabalu** baz=18,SNR=9.8	**18.28**	**60**	P	**Pn**	**20 55 57.7**	**+1.1**
SDKM	**Sandakan**	**18.95**	**62**	P	**Pn**	**20 56 05.4**	**+0.7**
TSM	**Tawau**	**18.99**	**67**	P	**Pn**	**20 56 06.2**	**+1.1**
UBPT	**Khong Chiam**	**19.07**	**15**	P	**P**	**20 56 04.9**	**-0.2**
KDM	**Kudat**	**19.25**	**58**	P	**Pn**	**20 56 08.1**	**-0.2**
KAPI	**Kappang**	**19.37**	**96**	*eP*	**P**	**20 56 07.4**	**-1.1**
KAPI	**Kappang** comp=Z,867nm,1.1s,SNR=23	**19.37**	**96**	Pn	**P**	**20 56 07.8**	**-0.7**
KAPI	**Kappang** comp=Z,2.8nm,0.3s,baz=267,slow=9.6,SNR=34	**19.37**	**96**	P	**P**	**20 56 08.3**	**-0.2**
PCI	**Palu** baz=20,SNR=3.8	**19.55**	**84**	S	S	20 59 22.4	-27
MYLDM	**Lahad Datu**	**19.91**	**65**	P	**P**	**20 56 15.1**	**+0.7**
CM31	**Chiang Mai Arr** comp=Z,36nm,0.8s	**21.61**	**356**	*eP*	**P**	**20 56 31.3**	**-1.4**
CMAR	**Chiang Mai Arr**	**21.61**	**356**	P	**P**	**20 56 31.5**	**-1.2**
CMAR				PcP	**PcP**	**21 00 35.1**	**+1.1**
CMAR				ScP	**ScP**	**21 04 10.6**	**+1.8**
CMAR	**Chiang Mai Arr** comp=Z,21nm,0.8s,baz=186,slow=9.6,SNR=78	**21.61**	**356**	P	**P**	**20 56 31.5**	**-1.2**
CMAR	comp=Z,4.3nm,0.9s,baz=212,slow=3.5,SNR=8.1			PcP	**PcP**	**21 00 35.1**	**+1.1**
CMAR	comp=Z,1.8nm,1.1s,baz=212,slow=3.2,SNR=4.7			ScP	**ScP**	**21 04 10.6**	**+1.8**
CMAR	comp=Z,3μm,19.0s,baz=9.5,slow=41			LR	LR	21 06 37.8	
CHTO	**Chiang Mai**	**21.96**	**356**	*eP*	**P**	**20 56 34.7**	**-1.8**
CHTO	**Chiang Mai**	**21.96**	**356**	*eP*	**P**	**20 56 34.6**	**-1.8**
PAGZ	**Pagadian**	**25.43**	**64**	*eP*	**P**	**20 57 11.1**	**+0.9**
MBWA	**Marble Bar**	**25.89**	**135**	*eP*	**P**	**20 57 16.1**	**+1.7**
CTBH	**Cotabato--PC H**	**25.96**	**66**	*iP*	**P**	**20 57 15.4**	**+0.3**
TGY	**Tagaytay City**	**26.67**	**49**	P	**P**	**20 57 21.8**	**+0.3**
TGY	**Tagaytay City** comp=Z,130nm,0.3s,baz=244,slow=2.2,SNR=9.8	**26.67**	**49**	P	**P**	**20 57 21.8**	**+0.3**
BUKP	**Musuan**	**26.96**	**66**	*eP*	**P**	**20 57 24.5**	**+0.3**
KMI	**Kunming**	**28.29**	**4**	P	**P**	**20 57 37.3**	**+1.2**
KMI				pP	**pP**	**20 57 47.9**	**+2.3**
KMI				PP	**PnPn**	**20 58 27.3**	**+1.9**
KMI				S	**S**	**21 02 19.4**	**-1.1**
KMI				sS	**sS**	**21 02 38.1**	**+1.9**
KMI	comp=Z,37nm,1.1s			pmax	pmax		
KMI	comp=Z,200nm,7.1s			pmax	pmax		
KMI	comp=N,2μm,15.1s			LR	LR		
KMI	comp=E,1μm,12.7s			LR	LR		
KMI	comp=Z,2μm,13.3s			LR	LR		
IMP	**Imphal**	**28.56**	**348**	*ex*	P	20 57 35.0	-3.4
FITZ	**Fitzroy Crossi** comp=Z,32nm,1.0s	**28.79**	**123**	*eP*	**P**	**20 57 39.5**	**-0.9**
FITZ	**Fitzroy Crossi** comp=Z,15nm,0.9s,baz=287,slow=5.4,SNR=23	**28.79**	**123**	P	**P**	**20 57 39.9**	**-0.6**
FITZ	**Fitzroy Crossi** baz=29,SNR=44	**28.79**	**123**	P	**P**	**20 57 39.7**	**-0.7**
MEEK	**Meekatharra** baz=29,SNR=5.7	**29.07**	**145**	P	**P**	**20 57 44.0**	**+1.1**
SHL	**Shillong**	**29.81**	**344**	*eP*	P	20 57 56.8	+7.2
GYA	**Guiyang**	**30.14**	**11**	*iP*	**P**	**20 57 52.3**	**-0.1**
GYA				pP	**pP**	**20 58 03.4**	**+1.5**
GYA				sP	**sP**	**20 58 09.6**	**+3.7**
GYA				PP	**PnPn**	**20 58 53.3**	**+2.8**
GYA				S	**S**	**21 02 49.8**	**+0.4**
GYA				sS	**sS**	**21 03 05.6**	**+0.4**
GYA				SS	**SnSn**	**21 04 27.9**	**+3.6**
GYA				ScP	**ScP**	**21 04 33.0**	**-0.5**
GYA	comp=Z,30nm,0.8s			pmax	pmax		
GYA	comp=Z,120nm,4.9s			pmax	pmax		
GYA	comp=N,620nm,17.4s			LR	LR		
GYA	comp=E,550nm,18.1s			LR	LR		
GYA	comp=Z,640nm,17.8s			LR	LR		
MTN	**Manton Dam** baz=32,SNR=11	**31.84**	**109**	P	**P**	**20 58 05.4**	**-2.1**
ODAN	**Odare** comp=Z,66nm,0.7s	**32.46**	**338**	*eP*	**P**	**20 58 14.7**	**+1.7**
TAPN	**Taplejung** comp=Z,190nm,0.9s	**32.79**	**339**	*eP*	**P**	**20 58 18.0**	**+2.0**
RAMN	**Ramite** comp=Z,63nm,0.7s	**32.85**	**337**	*eP*	**P**	**20 58 18.2**	**+1.8**
KDU	**Kadadu** baz=33,SNR=5.6	**33.07**	**108**	P	**P**	**20 58 15.5**	**-2.7**
QZH	**Quanzhou**	**33.12**	**31**	*eP*	**P**	**20 58 19.0**	**+0.5**
QZH				*eS*	**S**	**21 03 34.0**	**-1.7**
QZH	comp=N,2μm,14.8s			LR	LR		
QZH	comp=E,4μm,14.6s			LR	LR		
QZH	comp=Z,8μm,19.4s			LR	LR		
NWAO	**Narrogin (SRO)**	**33.47**	**154**	P	**P**	**20 58 21.4**	**-0.2**
NWAO	**Narrogin (SRO)** comp=Z,10.0nm,1.0s,baz=304,slow=2.3,SNR=3.6	**33.47**	**154**	P	**P**	**20 58 21.4**	**-0.2**
SSLB	**Suanglung**	**33.50**	**36**	*eP*	**P**	**20 58 21.3**	**-0.6**
PKI	**Pulchoki** comp=Z,20nm,0.5s	**33.88**	**336**	*eP*	**P**	**20 58 26.6**	**+1.1**
PKIN	**Phulchoki** comp=Z,18nm,0.6s	**33.89**	**336**	*eP*	**P**	**20 58 26.7**	**+1.2**
LSA	**Lhasa**	**33.94**	**345**	P	P	20 58 29.5	+3.4
LSA	comp=Z,50nm,1.1s			pmax	pmax		
GUN	**Gumba** comp=Z,198nm,0.7s	**33.99**	**337**	*eP*	**P**	**20 58 28.1**	**+1.6**
DMN	**Daman**	**34.04**	**335**	*eP*	**P**	**20 58 28.0**	**+1.2**
CD2	**Chengdu**	**34.11**	**5**	P	**P**	**20 58 27.6**	**+0.5**
CD2				pP	**pP**	**20 58 37.8**	**+1.1**
CD2				sP	**sP**	**20 58 41.8**	**+1.1**
CD2				PP	**PnPn**	**20 59 42.5**	**+1.1**
CD2				PcP	**PcP**	**21 01 04.5**	**+0.4**
CD2				S	**S**	**21 03 50.4**	**-0.7**
CD2				sS	**sS**	**21 04 07.1**	**+0.2**
CD2				PcS	**PcS**	**21 04 49.6**	**-0.8**
CD2				SS	**SnSn**	**21 05 59.8**	**-0.8**
CD2	comp=Z,60nm,0.6s			pmax	pmax		
CD2	comp=Z,430nm,5.6s			pmax	pmax		
CD2	comp=N,2μm,16.2s			LR	LR		
CD2	comp=E,3μm,23.5s			LR	LR		
CD2	comp=Z,2μm,18.2s			LR	LR		
KKN	**Kakani** comp=Z,84nm,0.8s	**34.12**	**336**	*eP*	**P**	**20 58 28.6**	**+1.1**
KMBL	**Kambalda** baz=35,SNR=7.3	**34.52**	**146**	P	**P**	**20 58 31.3**	**+0.6**
KOLN	**Koldanda** comp=Z,89nm,0.9s	**34.83**	**333**	*eP*	**P**	**20 58 35.1**	**+1.5**
DANN	**Dangsing** comp=Z,115nm,0.6s	**35.26**	**334**	*eP*	**P**	**20 58 38.6**	**+1.2**
PYUN	**Piuthan** comp=Z,189nm,1.1s	**35.39**	**333**	*eP*	**P**	**20 58 39.8**	**+1.4**
WHN	**Wuhan**	**36.14**	**21**	P	**P**	**20 58 45.3**	**+0.8**
WHN	**Wuhan**	**36.14**	**21**	P	**P**	**20 58 45.4**	**+0.9**
WHN				S	S	21 04 31.3	+9.1
WHN	comp=N,6μm,14.9s			LR	LR		
WHN	comp=E,2μm,10.2s			LR	LR		
WHN	comp=Z,9μm,15.0s			LR	LR		
WRA	**Warramunga Arr**	**37.02**	**119**	P	**P**	**20 58 51.8**	**-0.5**
WRA				S	**S**	**21 04 33.7**	**-2.4**
WRA	**Warramunga Arr** comp=Z,48nm,0.5s,baz=308,slow=8.8,SNR=2.2	**37.02**	**119**	P	**P**	**20 58 51.8**	**-0.5**
WRA	comp=Z,36nm,0.4s,baz=294,slow=15,SNR=1.7			S	**S**	**21 04 33.7**	**-2.4**
WRAB	**Tennant Creek**	**37.03**	**119**	*eP*	**P**	**20 58 51.4**	**-1.0**
WRAB	comp=Z,12nm,0.5s			pmax	pmax		
WRAB	**Tennant Creek** comp=Z,12nm,0.5s	**37.03**	**119**	*eP*	**P**	**20 58 51.4**	**-1.0**
WRAB	**Tennant Creek** comp=Z,154nm,0.4s,SNR=34	**37.03**	**119**	P	**P**	**20 58 51.2**	**-1.2**
PTH	**Pithoragarh**	**37.92**	**331**	*ex*	**P**	**20 59 01.3**	**+1.4**
XAN	**Xi'an**	**37.94**	**12**	P	**P**	**20 58 59.5**	**-0.4**
XAN				pP	**pP**	**20 59 06.4**	**-3.1**
XAN				S	**S**	**21 04 47.1**	**-2.6**
XAN	comp=Z,45nm,0.8s			pmax	pmax		
XAN	comp=Z,60nm,6.2s			pmax	pmax		
XAN	comp=N,1μm,14.4s			LR	LR		
XAN	comp=E,610nm,14.4s			LR	LR		
XAN	comp=Z,890nm,15.4s			LR	LR		
ASAR	**Alice Springs**	**38.20**	**125**	P	**P**	**20 59 02.1**	**-0.2**
ASAR				S	**S**	**21 04 53.9**	**-0.1**
ASAR	**Alice Springs** comp=Z,23nm,0.7s,baz=300,slow=8.0,SNR=170	**38.20**	**125**	P	**P**	**20 59 02.1**	**-0.2**
ASAR	comp=Z,5.0nm,1.0s,baz=296,slow=14,SNR=9.3			S	**S**	**21 04 53.9**	**-0.1**
ASAR	comp=Z,1μm,21.0s,baz=290,slow=39			LR	LR	21 16 17.3	
AS31	**Alice Springs**	**38.20**	**125**	*eP*	**P**	**20 59 01.9**	**-0.4**
NJ2	**Nanjing**	**39.23**	**25**	*eP*	**P**	**20 59 11.0**	**+0.3**
NJ2				pP	**pP**	**20 59 20.0**	**-0.3**
NJ2				sP	**sP**	**20 59 24.0**	**-0.3**
NJ2				PP	**PP**	**21 00 41.0**	**-0.1**
NJ2				S	**S**	**21 05 10.0**	**+0.9**
NJ2				sS	**sS**	**21 05 25.0**	**0.0**
NJ2	comp=Z,20nm,1.0s			pmax	pmax		
NJ2	comp=Z,440nm,8.5s			pmax	pmax		
NJ2	comp=N,6μm,16.8s			LR	LR		
NJ2	comp=E,3μm,14.5s			LR	LR		
NJ2	comp=Z,7μm,16.0s			LR	LR		
LZH	**Lanzhou**	**39.26**	**4**	*iP*	**P**	**20 59 11.8**	**+0.8**
LZH				pP	**pP**	**20 59 21.4**	**+0.7**
LZH				sP	**sP**	**20 59 25.5**	**+0.8**
LZH				PP	**PnPn**	**21 00 46.8**	**+2.4**
LZH				S	**S**	**21 05 10.8**	**+1.1**
LZH				sS	**sS**	**21 05 26.3**	**+0.6**
LZH				SS	**SS**	**21 07 58.4**	**-5.5**
LZH	comp=Z,48nm,1.0s			pmax	pmax		
LZH	comp=Z,350nm,4.8s			pmax	pmax		
LZH	comp=N,1μm,14.1s			LR	LR		
LZH	comp=E,1μm,12.9s			LR	LR		
LZH	comp=Z,2μm,15.6s			LR	LR		
SSE	**Sheshan**	**39.48**	**29**	P	**P**	**20 59 14.3**	**+1.6**
SSE				S	**S**	**21 05 13.6**	**+0.8**
SSE	comp=Z,48nm,0.8s			pmax	pmax		
SSE	comp=Z,160nm,3.5s			pmax	pmax		
SSE	comp=N,850nm,18.7s			LR	LR		
SSE	comp=E,1μm,19.3s			LR	LR		
SSE	comp=Z,2μm,14.8s			LR	LR		
QIS	**Mount Isa** baz=42,SNR=11	**41.87**	**117**	P	**P**	**20 59 32.3**	**-0.5**
QIS	baz=42,SNR=6.1			S	**S**	**21 05 47.3**	**-1.5**
GTA	**Gaotai**	**42.45**	**359**	*iP*	**P**	**20 59 38.3**	**+1.0**
GTA				pP	**pP**	**20 59 44.6**	**-2.4**
GTA				sP	**sP**	**20 59 47.4**	**-3.5**
GTA				PcP	**PcP**	**21 01 31.3**	**+1.4**
GTA				S	**S**	**21 05 56.0**	**-1.1**
GTA	comp=Z,32nm,1.2s			pmax	pmax		
GTA	comp=Z,310nm,4.8s			pmax	pmax		
GTA	comp=N,1μm,15.2s			LR	LR		
GTA	comp=E,2μm,17.6s			LR	LR		
GTA	comp=Z,1μm,15.2s			LR	LR		
BTO	**Baotou**	**44.52**	**10**	*eP*	**P**	**20 59 54.1**	**+0.2**
HHC	**Hu-ho-hao-te**	**45.05**	**12**	*eP*	**P**	**20 59 59.8**	**+1.6**
HHC				PcP	**PcP**	**21 01 40.8**	**+2.1**
HHC				PP	**PP**	**21 01 45.9**	**+2.0**
HHC				ScP	**ScP**	**21 05 28.9**	**-0.1**
HHC				PcS	**PcS**	**21 05 33.0**	**+0.5**
HHC				S	**S**	**21 06 35.0**	**0.0**
HHC				sS	**sS**	**21 06 53.1**	**+2.0**
HHC				SS	**ScS**	**21 09 48.8**	**-4.2**
HHC				ScS	**SS**	**21 09 51.9**	**-6.0**
HHC	comp=Z,160nm,1.2s			pmax	pmax		
HHC	comp=Z,720nm,6.3s			pmax	pmax		
HHC	comp=N,3μm,15.8s			LR	LR		
HHC	comp=E,2μm,15.1s			LR	LR		
HHC	comp=Z,2μm,15.9s			LR	LR		
BJI	**Beijing**	**45.44**	**17**	P	**P**	**21 00 01.8**	**+0.7**
BJI				S	**S**	**21 06 41.8**	**+1.4**
BJI	comp=Z,64nm,0.8s			pmax	pmax		
BJI	comp=N,1μm,16.0s			LR	LR		
BJI	comp=E,500nm,17.9s			LR	LR		
BJI	comp=Z,650nm,17.5s			LR	LR		
JNU	**Nakatsue** comp=Z,50nm,1.0s	**46.24**	**36**	*eP*	**P**	**21 00 07.4**	**-0.3**
JNU	**Nakatsue** comp=Z,110nm,1.0s,baz=185,slow=3.6,SNR=32	**46.24**	**36**	P	**P**	**21 00 07.8**	**+0.1**
JNU	comp=Z,730nm,19.3s,baz=16,slow=37			LR	LR	21 20 08.4	
PMG	**Port Moresby** comp=Z,9.9nm,0.6s	**46.83**	**100**	*eP*	**P**	**21 00 10.8**	**-1.7**
CTAO	**Charters Tower** comp=Z,18nm,0.9s	**47.71**	**114**	*eP*	**P**	**21 00 18.4**	**-0.9**
CTAO				pmax	pmax		
CTAO	**Charters Tower** comp=Z,18nm,0.9s	**47.71**	**114**	*eP*	**P**	**21 00 18.4**	**-0.9**
KBL	**Kabul**	**47.78**	**325**	*eP*	**P**	**21 00 20.4**	**+0.6**
KBL	comp=Z,13nm,0.8s			pmax	pmax		
KBL	**Kabul** comp=Z,13nm,0.8s	**47.78**	**325**	*eP*	**P**	**21 00 20.4**	**+0.6**
KSAR	**Wonju Array Be**	**47.85**	**30**	P	**P**	**21 00 20.6**	**+0.5**
KSRS	**Korea Array** comp=Z,81nm,1.2s,baz=221,slow=8.0,SNR=108	**47.88**	**30**	P	**P**	**21 00 20.6**	**+0.3**
KSRS	comp=Z,599nm,18.1s,baz=244,slow=39			LR	LR	21 22 51.9	
QLP	**Quilpie** baz=48,SNR=7.3	**47.93**	**123**	P	**P**	**21 00 21.6**	**+0.7**
STKA	**Stephens Creek** comp=Z,5.5nm,0.9s	**48.02**	**131**	*eP*	**P**	**21 00 21.7**	**+0.1**
STKA	**Stephens Creek** comp=Z,10nm,0.6s,baz=299,slow=8.5,SNR=35	**48.02**	**131**	P	**P**	**21 00 21.9**	**+0.4**
STKA	comp=Z,1μm,21.6s,baz=296,slow=38			LR	LR	21 22 07.5	
STKA	**Stephens Creek** baz=48,SNR=20	**48.02**	**131**	P	**P**	**21 00 22.0**	**+0.4**
KSH	**Kashi**	**48.12**	**335**	*iP*	**P**	**21 00 21.8**	**-0.5**
KSH				pP	**pP**	**21 00 32.3**	**+0.1**
KSH				sP	**sP**	**21 00 36.1**	**0.0**
KSH				PcP	**PcP**	**21 01 49.6**	**0.0**
KSH				PP	**PP**	**21 02 13.9**	**-0.9**
KSH				ScP	**ScP**	**21 05 39.5**	**-2.4**
KSH				PcS	**PcS**	**21 05 44.3**	**-1.1**
KSH				S	**S**	**21 07 18.9**	**-0.2**
KSH				sS	**sS**	**21 07 35.4**	**0.0**
KSH				ScS	**ScS**	**21 10 09.6**	**-3.6**
KSH				SS	SS	21 10 41.4	-7.4
KSH	comp=Z,9.0nm,0.8s			pmax	pmax		
KSH	comp=N,220nm,4.4s			LR	LR		
KSH	comp=E,280nm,6.5s			LR	LR		
KSH	comp=Z,280nm,6.5s			LR	LR		
WMQ	**Urumqi**	**48.23**	**348**	P	**P**	**21 00 25.0**	**+2.1**
WMQ				pP	**pP**	**21 00 35.0**	**+2.2**
WMQ				sP	**sP**	**21 00 39.0**	**+2.3**
WMQ				PcP	**PcP**	**21 01 53.0**	**+3.2**
WMQ				PP	**PP**	**21 02 16.0**	**+0.4**
WMQ				ScP	**ScP**	**21 05 43.0**	**+0.9**
WMQ				S	**S**	**21 07 20.0**	**-0.3**
WMQ				sS	**sS**	**21 07 37.0**	**+0.5**
WMQ				ScS	**ScS**	**21 10 13.0**	**-0.6**
WMQ				SS	**SS**	**21 10 44.0**	**-6.1**
WMQ	comp=Z,89nm,1.0s			pmax	pmax		
WMQ	comp=Z,430nm,5.0s			pmax	pmax		
WMQ	comp=N,680nm,16.0s			LR	LR		
WMQ	comp=E,720nm,16.0s			LR	LR		
WMQ	comp=Z,680nm,16.0s			LR	LR		
SNY	**Shenyang**	**49.56**	**23**	*iP*	**P**	**21 00 32.3**	**-0.8**
SNY				S	S	21 07 46.3	+7.4

SNY pmax pmax
comp=Z,21nm,1.3s
SNY pmax pmax
comp=Z,170nm,3.9s
SNY LR LR
comp=N,270nm,18.7s
SNY LR LR
comp=E,490nm,21.0s
SNY LR LR
comp=Z,420nm,23.6s
ULHL Ulahol 50.30 337 P P 21 00 40.3 +1.2
SNR=14
KZA Kyzart 50.56 336 P P 21 00 42.6 +1.4
SNR=14
CMSA Cobar Meteorol 51.02 129 P P 21 00 45.1 +0.7
baz=51,SNR=29
TKM2 Tokmak 2 51.13 337 *eP* **P 21 00 46.1 +0.8**
TKM2 Tokmak 2 51.13 337 *eP* **P 21 00 46.1 +0.8**
TKM2 Tokmak 2 51.13 337 P **P 21 00 46.5 +1.2**
SNR=63
SONM Songino Array 51.13 5 P **P 21 00 46.7 +1.6**
SONM PcP **PcP 21 02 01.4 +1.0**
SONM Songino Array 51.13 5 P **P 21 00 46.7 +1.6**
comp=Z,76nm,0.7s,baz=189,slow=8.6,SNR=85
SONM PcP **PcP 21 02 01.4 +1.0**
comp=Z,9.7nm,0.6s,baz=191,slow=3.3,SNR=3.3
KBK Karagaybulak 51.17 336 P **P 21 00 47.3 +1.8**
SNR=25
ULN Ulaanbaatar 51.23 6 *eP* **P 21 00 47.1 +1.3**
comp=Z,92nm,1.0s
ULN *e* 21 00 54.2
AML Almayashu 51.26 335 P **P 21 00 47.6 +1.1**
SNR=26
AAK Ala-Archa 51.33 336*c iP* **P 21 00 48.1 +1.3**
AAK pmax pmax
comp=Z,25nm,0.8s
AAK MLR MLR
comp=Z,2μm,19.0s
AAK Ala-Archa 51.33 336 *eP* **P 21 00 47.8 +1.0**
comp=Z,16nm,1.0s
AAK Ala-Archa 51.33 336 P **P 21 00 48.4 +1.7**
SNR=13
AAK Ala-Archa 51.33 336 P **P 21 00 48.0 +1.3**
comp=Z,62nm,1.3s,SNR=11
FRU Bishkek 51.45 336 *eP* **P 21 00 48.0 +0.6**
CHMS Chumysh 51.53 336 P **P 21 00 49.0 +0.9**
SNR=14
EKS2 Erkin-Say 51.66 335 *eP* **P 21 00 50.5 +1.4**
EKS2 pmax pmax
comp=Z,34nm,0.8s
EKS2 Erkin-Say 51.66 335 *eP* **P 21 00 50.5 +1.4**
comp=Z,34nm,0.8s
EKS2 Erkin-Say 51.66 335 P **P 21 00 50.7 +1.6**
SNR=63
RMQ Roma 51.71 121 P **P 21 00 52.0 +2.4**
baz=52,SNR=5.2
USP Ospenovka 51.86 336 P **P 21 00 51.2 +0.7**
SNR=32
CN2 Changchun 51.96 23 *eP* **P 21 00 50.5 -0.7**
CN2 *es*P **sP 21 01 04.3 -0.7**
CN2 *e*PP **PP 21 02 49.0 -0.5**
CN2 *e*S **S 21 08 09.0 -3.2**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,2μm,14.0s
CN2 LR LR
comp=E,1μm,14.0s
CN2 LR LR
comp=Z,1μm,15.0s
MK31 Makanchi Array 52.33 344*ce*P **P 21 00 54.4 +0.5**
MK31 pmax pmax
comp=Z,45nm,0.6s
MKAR Makanchi Array 52.33 344*ce*P **P 21 00 54.7 +0.8**
MKAR pmax pmax
comp=Z,54nm,0.6s
MKAR Makanchi Array 52.33 344 P **P 21 00 54.8 +0.8**
MKAR Makanchi Array 52.33 344 P **P 21 00 54.8 +0.8**
comp=Z,54nm,0.6s,baz=146,slow=7.8,SNR=626
MAJO Matsushiro 52.98 38 *eP* **P 21 00 58.0 -1.0**
MAJO pmax pmax
comp=Z,16nm,0.9s
MAJO Matsushiro 52.98 38 *eP* **P 21 00 58.0 -1.0**
comp=Z,16nm,0.9s
MAT Matsushiro 52.98 38 P **P 21 00 58.1 -0.8**
MAT S **S 21 08 24.0 -2.5**
MJAR Matsushiro Arr 52.98 38 P **P 21 00 58.2 -0.7**
MJAR Matsushiro Arr 52.98 38 P **P 21 00 58.2 -0.7**
comp=Z,18nm,0.9s,baz=222,slow=8.6,SNR=46
EIDS Eidsvold 53.39 119 *eP* **P 21 01 02.2 +0.1**
comp=Z,20nm,1.0s
EIDS Eidsvold 53.39 119 P **P 21 01 04.9 +2.8**
baz=54,SNR=4.2
KK31 Karatay Array 53.44 333*ce*P **P 21 01 02.2 0.0**
KK31 pmax pmax
comp=Z,3.0nm,0.5s
KKAR Karatay Array 53.44 333 *eP* **P 21 01 02.0 -0.2**
KKAR pmax pmax
comp=Z,4.0nm,0.6s
KKAR Karatay Array 53.44 333 *eP* **P 21 01 01.9 -0.2**
comp=Z,3.6nm,0.6s
ZAK Zakamensk 53.47 2⇓*iP* **P 21 01 02.5 +0.1**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
VLA Vladivostok 54.19 28⇓*eP* **P 21 01 05.8 -1.8**
VLA *e*S **S 21 08 41.5 -1.0**
VLA pmax pmax
comp=Z,38nm,0.9s
YNG Young 54.21 131 P **P 21 01 09.3 +1.2**
baz=54,SNR=4.9
MDJ Mudanjiang 54.32 25 P **P 21 01 09.0 +0.4**
MDJ pP **pP 21 01 16.3 -2.2**
MDJ PP **PP 21 03 11.3 +0.5**
MDJ S **S 21 08 42.8 -1.5**
MDJ pmax pmax
comp=Z,27nm,1.1s
MDJ LR LR
comp=N,660nm,24.0s
MDJ LR LR
comp=E,670nm,24.9s
MDJ LR LR
comp=Z,750nm,20.4s
MOY Mondy 54.70 0 *eP* **P 21 01 12.2 +0.9**
TLY Talaya 54.78 2 *eP* **P 21 01 11.4 -0.4**
TLY *e* 21 01 24.4
TLY pmax pmax
comp=Z,20nm,1.0s
USRK Ussuriysk Arra 55.06 27 P **P 21 01 14.4 +0.5**
comp=Z,90nm,0.7s,baz=223,slow=6.2,SNR=5.4
USRK LR LR 21 27 06.0
comp=Z,1μm,18.7s,baz=216,slow=38
CAN Canberra 55.08 132 *eP* **P 21 01 14.0 -0.4**
CAN *e* 21 01 21.2
CAN pmax pmax
comp=Z,15nm,1.0s
CAN Canberra 55.08 132 *eP* **P 21 01 14.0 -0.4**
comp=Z,15nm,1.0s
CAN *e* 21 01 21.2
ARMA Armidale 55.35 125 *eP* **P 21 01 18.0 +1.5**
comp=Z,13nm,0.9s
ARMA Armidale 55.35 125 P **P 21 01 18.1 +1.7**
baz=55,SNR=7.3
IRK Irkutsk 55.38 3 *eP* **P 21 01 16.8 +0.7**
IRK pmax pmax
comp=Z,47nm,2.3s
ABKT Ailbek 56.66 320 P **P 21 01 25.7 +0.1**
comp=Z,120nm,1.4s,SNR=5.4
KURK Kurchatov 56.91 344*c iP* **P 21 01 27.6 +0.6**
KURK pmax pmax
comp=Z,83nm,1.0s
KURK Kurchatov 56.91 344 *eP* **P 21 01 27.4 +0.4**
comp=Z,64nm,0.9s
KURK Kurchatov 56.91 344 P **P 21 01 27.7 +0.7**
comp=Z,439nm,0.8s,SNR=59
ZALV Zalesovo Beam 58.46 349 P **P 21 01 38.3 +0.5**
ZALV Zalesovo Beam 58.46 349 P **P 21 01 38.3 +0.5**
ZALV Zalesovo Beam 58.46 349 P **P 21 01 38.3 +0.5**
comp=Z,68nm,0.9s,baz=163,slow=5.7,SNR=228
KLR Kul'dur 58.90 23⇓*iP* **P 21 01 39.8 -1.2**
KLR pmax pmax
comp=E,28nm,1.2s
KLR pmax pmax
comp=Z,66nm,1.2s
KLR MLR MLR
comp=Z,5μm,12.5s
KRAR Krasnoyarsk 59.38 355*c iP* **P 21 01 44.9 +0.7**
KRAR pmax pmax
comp=Z,87nm,1.7s
HNR Honiara 59.43 99 *eP* **P 21 01 43.9 -1.5**
comp=Z,124nm,0.9s
NVS Novosibirsk 59.61 349⇑*iP* **P 21 01 45.5 -0.3**
NVS *eS* **S 21 09 48.0 -5.6**
NVS pmax pmax
comp=Z,33nm,1.2s
NVS pmax pmax
comp=N,17nm,1.0s
NVS pmax pmax
comp=E,12nm,1.0s
NVS pmax pmax
comp=Z,17nm,1.9s
NVS pmax pmax
comp=N,3.0nm,1.0s
NVS pmax pmax
comp=E,4.0nm,1.0s
NVS smax smax
comp=N,13nm,1.9s
NVS smax smax
comp=E,55nm,3.0s
HABR Khabarovsk 59.69 26 *eP* **P 21 01 45.4 -1.1**
HABR *e**PP **pP 21 01 54.5 -2.0**
HABR *e**SP **sP 21 01 58.6 -1.8**
HABR *e* 21 03 56.3
HABR *e*PPP PPP 21 05 18.3
HABR *e*S **S 21 09 54.2 -0.7**
HABR *e* 21 10 07.3
HABR *e**SS **sS 21 10 11.7 +0.2**
HABR *e* 21 11 32.0
HABR *e*SS **SS 21 13 51.2 0.0**
HABR pmax pmax
comp=Z,51nm,1.6s
HABR pmax pmax
comp=N,17nm,1.1s
HABR pmax pmax
comp=E,61nm,2.2s
HABR MLR MLR
comp=Z,1μm,19.0s
KBD Kabd 59.89 306 *eP* **P 21 01 48.5 +0.3**
RDF Al-Radifah 59.91 306 *eP* **P 21 01 49.0 +0.6**
RDF AMb AMB 21 01 59.7
comp=Z,64nm,1.1s
NAY Al-Naaiem 60.28 306 *eP* **P 21 01 51.0 0.0**
NAY AMb AMB 21 02 02.2
comp=Z,21nm,0.9s
MIB Mutribah 60.42 307 *eP* **P 21 01 52.6 +0.7**
MIB AMb AMB 21 02 00.7
comp=Z,68nm,1.1s
BRVK Borovoye 61.55 340 *eP* **P 21 01 58.6 -0.5**
BRVK pmax pmax
comp=Z,9.0nm,0.6s
BRVK Borovoye 61.55 340 *eP* **P 21 01 58.5 -0.5**
comp=Z,9.0nm,0.6s
BRVK Borovoye 61.55 340 P **P 21 01 59.2 +0.1**
comp=Z,137nm,0.5s,SNR=8.0
YUK Yuzh-Kuril'sk 62.21 36*d iP* **P 21 02 02.7 -1.0**
YUK *i* 21 04 22.6
YUK *i* PPP PPP 21 05 51.0
YUK *i* S S 21 10 33.9 +6.7
YUK MLR MLR
comp=Z,508nm,19.0s
YSS Yuzh-Sakhalins 62.32 31⇑*iP* **P 21 02 05.3 +1.0**
YSS *e* 21 02 12.1
YSS pmax pmax
comp=Z,60nm,1.0s
YSS MLR MLR
comp=Z,600nm,15.0s
AB31 Akbulak array 62.92 331*ce*P **P 21 02 08.0 -0.3**
AB31 pmax pmax
comp=Z,36nm,0.6s
ABKAR Akbulak array 62.92 331 *eP* **P 21 02 08.1 -0.3**
comp=Z,31nm,0.6s
KMBO Kilima Mbogo 63.14 270 P **P 21 02 11.2 +0.3**
KMBO Kilima Mbogo 63.14 270 P **P 21 02 11.2 +0.3**
comp=Z,2.8nm,0.9s,baz=44,slow=10.0,SNR=5.0
KMBO LR LR 21 23 34.3
comp=Z,365nm,21.6s,baz=98,slow=30
AKTO Aktyubinsk 64.64 332 *iP* **P 21 02 18.3 -1.4**
AKTO pmax pmax
comp=Z,4.0nm,1.2s
HAKT HAKKARI 66.33 314 *iP* **P 21 02 31.9 +0.7**
DZM Mont Dzumac 66.60 113 *e*LR LR 21 22 37.7
comp=Z,658nm,22.4s
DZM Mont Dzumac 66.60 113 P **P 21 02 32.2 -0.8**
DZM Mont Dzumac 66.60 113 P **P 21 02 32.2 -0.8**
comp=Z,10nm,0.9s,baz=271,slow=16,SNR=2.4
GNI Garni 66.70 316 *eP* **P 21 02 33.8 +0.4**
comp=Z,3.5nm,0.9s
DGRG David-gareji 66.86 318 P **P 21 02 35.8 +1.6**
DYDN Diyadin 67.17 315 *iP* **P 21 02 37.7 +1.2**
TBLG Delisi 67.41 318 *eP* **P 21 02 38.7 +1.1**
TBLG Delisi 67.41 318 P **P 21 02 38.8 +1.1**
KZR Kazreti 67.47 318 P **P 21 02 46.4 +8.3**
GOR Gori 67.94 318 P **P 21 02 42.0 +1.0**
SVE Sverdlovsk 67.98 338⇓*iP* **P 21 02 41.5 +0.6**
SVE pmax pmax
comp=Z,47nm,1.1s
SVE MLR MLR
comp=Z,773nm,22.0s
AKH Akhalkalaki 68.11 317 P **P 21 02 43.5 +1.2**
MARD Mardin 68.38 312 *iP* **P 21 02 45.0 +1.0**
ZEI Tsey 68.43 319 *eP* **P 21 02 45.4 +1.0**
ZEI *e* 21 02 53.1
ZEI pmax pmax
comp=Z,13nm,1.0s
ARU Arti 68.50 337*c iP* **P 21 02 44.2 0.0**
ARU 21 03 08.4
ARU 21 05 11.8
ARU S **S 21 11 45.4 +1.5**
ARU SS **SS 21 16 06.3 -2.1**
ARU pmax pmax
comp=Z,26nm,1.0s
ARU Arti 68.50 337 P **P 21 02 44.8 +0.6**
comp=Z,131nm,1.3s,SNR=9.3
ONI Oni 68.65 318 P **P 21 02 46.6 +1.1**
YAK Yakutsk 68.83 14*c iP* **P 21 02 45.5 -0.6**
YAK pmax pmax
comp=Z,105nm,1.1s
YAK pmax pmax
comp=N,30nm,1.3s
YAK pmax pmax
comp=E,17nm,1.0s
YAK MLR MLR
comp=Z,2μm,16.0s
YAK MLR MLR
comp=E,843nm,20.0s
YAK MLR MLR
comp=N,1μm,15.0s
DAGI Agillar 69.05 316 *iP* **P 21 02 48.0 -0.1**
DBAD Bademkaya 69.17 316 *iP* **P 21 02 49.5 +0.7**
MAW Mawson 69.19 194 LR LR 21 25 47.5
comp=N,854nm,21.1s,baz=319,slow=30
KBZ Khabaz 69.51 319 P **P 21 02 51.2 +0.5**
KBZ Khabaz 69.51 319 P **P 21 02 51.2 +0.5**
KBZ Khabaz 69.51 319 P **P 21 02 51.2 +0.5**
comp=N,11nm,0.9s,baz=131,slow=5.4,SNR=16
KIV Kislovodsk 69.75 319 *eP* **P 21 02 52.8 +0.5**
KIV *e* 21 03 16.5
KIV *eS* **S 21 12 00.3 +1.0**
KIV pmax pmax
comp=Z,39nm,1.1s
KIV MLR MLR
comp=Z,650nm,19.0s
MALT Malatya 70.47 313 *eP* **P 21 02 57.7 +0.7**
MALT pmax pmax
comp=Z,23nm,1.0s
MALT Malatya 70.47 313 *eP* **P 21 02 57.6 +0.7**
comp=Z,24nm,1.0s
EIL Elat 70.53 303 P **P 21 02 58.8 +1.4**
baz=70,SNR=4.6
KELT Kelkit 70.54 315 *iP* **P 21 02 55.2 -2.2**
KEMA Kemaliye 70.77 314 *iP* **P 21 02 59.5 +0.8**
GZT Gaziantep 70.78 311 *iP* **P 21 02 59.7 +0.8**
SUSE Susehri 71.31 314 *iP* **P 21 03 03.3 +1.2**
SOKR Solikamsk 71.36 338*c iP* **P 21 03 02.5 +0.8**
SOKR pmax pmax
comp=Z,40nm,1.0s
ANN Anapa 73.53 319 *eP* **P 21 03 13.2 -1.7**
ANN *e**PP **pP 21 03 23.0 -2.2**
ANN *e*S **S 21 12 42.9 +0.2**
ANN pmax pmax
comp=Z,38nm,1.4s
VRHR Novokhopersk 73.58 326 *eP* **P 21 03 14.7 -0.4**
VRHR *e**PP **pP 21 03 21.9 -3.5**
VRHR pmax pmax
comp=Z,50nm,0.9s
VRHR pmax pmax
comp=N,4.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.4s
PETK Petropavlovsk- 73.71 32 P **P 21 03 15.3 -0.6**
PETK Petropavlovsk- 73.71 32 P **P 21 03 15.2 -0.6**
PETK Petropavlovsk- 73.71 32 P **P 21 03 15.2 -0.6**
comp=E,8.6nm,0.7s,baz=198,slow=4.2,SNR=3.8
PETK LR LR 21 36 55.6
comp=E,199nm,20.0s,baz=277,slow=37
CDAG Cicekdag 73.89 313 *iP* **P 21 03 18.2 +0.8**
BR131 Keskin Array S 74.46 313 *eP* **P 21 03 19.9 -0.9**
comp=E,10nm,0.7s
BRTR Keskin Array B 74.46 313 P **P 21 03 20.1 -0.6**
BRTR Keskin Array B 74.46 313 P **P 21 03 20.1 -0.6**
comp=E,5.2nm,0.7s,baz=130,slow=7.1,SNR=31
VORD Divnogorie 74.85 325 *eP* **P 21 03 21.4 -1.1**
VORD *e**PP **pP 21 03 29.0 -3.8**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,20nm,0.9s
VSR Storozhevoye 75.03 325 *eP* **P 21 03 22.3 -1.2**
VSR *e**PP **pP 21 03 30.2 -3.6**
VSR pmax pmax
comp=Z,30nm,0.7s
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,20nm,0.9s
KDHN Kadinhani 75.24 311 *iP* **P 21 03 24.6 -0.6**
BOSA Boshof 75.42 241 P **P 21 03 26.6 +0.1**
BOSA Boshof 75.42 241 P **P 21 03 26.6 +0.1**
comp=E,6.4nm,1.1s,baz=78,slow=7.1,SNR=4.8
BOSA LR LR 21 29 30.6
comp=E,422nm,20.6s,baz=128,slow=30
SIM Simferopol' 75.79 318 *eP* P 21 03 35.0 +6.9
SIM pmax pmax
comp=Z,23nm,1.3s
BOLV Bolvadin 76.17 311 *iP* **P 21 03 30.6 +0.1**
SEY Seymchan 76.62 22⇑*eP* **P 21 03 32.8 +0.4**
BORA Eskisehir 76.86 312 *iP* **P 21 03 34.1 -0.2**
TIXI Tiksi 77.01 9*c iP* **P 21 03 33.8 -0.6**
TIXI pmax pmax
comp=Z,29nm,1.0s
TIXI MLR MLR
comp=Z,1μm,23.0s
MOS Moscow 77.77 329 *eP* **P 21 03 38.4 -0.6**
MOS *e* 21 03 44.2
MOS *e* 21 03 57.3
MOS pmax pmax
comp=Z,50nm,1.0s
DEMI Demirci 77.94 311 *iP* **P 21 03 41.7 +1.3**
OBN Obninsk 78.06 328*c iP* **P 21 03 41.0 +0.4**
OBN *e* 21 03 47.6
OBN *e* 21 06 38.2
OBN *e*SS SS 21 18 36.1 +1.9
OBN pmax pmax
comp=Z,63nm,1.7s
OBN MLR MLR
comp=Z,300nm,21.0s
BALY Balya 78.93 311 *iP* **P 21 03 45.8 -0.1**
CFR Carcaliu 79.91 317⇓*iP* **P 21 03 51.3 +0.4**
CFR Carcaliu 79.91 317⇓*iP* **P 21 03 51.3 +0.4**
KIS Kishinev 79.93 319 *eP* P 21 03 58.0 +6.9
KIS Kishinev 79.93 319 *eP* P 21 03 58.0 +6.9
AK02 Malin Array Si 80.71 322 *eP* **P 21 03 54.5 -0.7**
AKASG Malin Array Be 80.71 322 P **P 21 03 55.1 -0.1**
AKASG Malin Array Be 80.71 322 P **P 21 03 55.1 -0.1**
AKASG Malin Array Be 80.71 322 P **P 21 03 55.1 -0.1**
comp=Z,2.2nm,0.6s,baz=84,slow=5.1,SNR=9.2
AK01 Malin Array Si 80.72 322 *eP* **P 21 03 54.2 -1.0**
KIEV Kiev 80.72 322 *eP* **P 21 03 54.1 -1.1**
KIEV pmax pmax
comp=Z,22nm,1.3s
KIEV Kiev 80.72 322 *eP* **P 21 03 54.1 -1.1**
comp=Z,22nm,1.3s
VNDA Vanda 80.87 169 *eP* **P 21 03 56.1 +0.5**
comp=Z,7.7nm,1.0s
VNDA Vanda 80.87 169 P **P 21 03 55.4 -0.2**
comp=Z,3.9nm,1.0s,baz=286,slow=4.8,SNR=15
VNDA LR LR 21 34 39.3
comp=Z,315nm,20.4s,baz=308,slow=32
VRI Vrincioaia 81.04 317⇑*iP* **P 21 03 58.3 +1.2**
VRI Vrincioaia 81.04 317⇑*iP* **P 21 03 58.3 +1.2**
TMCR Tamitsa 81.24 337 *eP* **P 21 03 58.0 +0.4**
TMCR pmax pmax
comp=Z,52nm,1.0s
TESR 81.25 318⇓*iP* **P 21 03 59.1 +1.0**
MLR Muntele Rosu 81.48 317⇑*iP* **P 21 04 00.0 +0.4**
ARR Arges 82.35 316⇑*iP* **P 21 04 04.3 +0.2**
BURAR Bucovina Array 82.46 319⇑*iP* **P 21 04 05.9 +1.3**
BUR08 Bucovina Ar. S 82.48 319 *eP* **P 21 04 05.6 +0.9**
BUR08 *e* 21 04 13.2
VTS Vitosha 82.80 313⇑*iP* **P 21 04 06.3 -0.3**
VTS Vitosha 82.80 313⇑*iP* **P 21 04 06.3 -0.3**
PUL Pulkovo 82.90 331⇑*eP* **P 21 04 08.1 +1.6**
PUL pmax pmax
comp=Z,70nm,0.6s
NACGM Naroch 83.30 326 *e* **P 21 04 07.0 -1.7**
JOF Joensuu 83.51 335 *eP* P 21 04 04.0 -5.6
JOF pmax pmax
comp=Z,1.0nm,0.4s
JOF Joensuu 83.51 335 *ep* P 21 04 04.0 -5.6
comp=Z,1.0nm,0.4s
LVV L'vov 83.72 321 *eP* P 21 04 18.8 +7.9
DRGR 83.95 318⇑*iP* **P 21 04 13.7 +1.4**
DRGR 83.95 318⇑*iP* **P 21 04 13.7 +1.4**
BILL Bilibino 84.17 20 *iP* **P 21 04 12.7 -0.2**
BILL *e* 21 04 22.5
BILL pmax pmax
comp=Z,6.0nm,0.9s
BILL Bilibino 84.17 20 *eP* **P 21 04 12.4 -0.5**
comp=Z,4.3nm,0.6s
TRPA Tarpa 84.33 319⇑*iP* **P 21 04 15.2 +1.1**
KWP Kalwaria Pacla 84.52 320⇓*iP* P 21 04 23.3 +8.3
KWP Kalwaria Pacla 84.52 320⇓*iP* P 21 04 23.3 +8.3
KWP Kalwaria Pacla 84.52 320 *eP* P 21 04 23.4 +8.4
UZH Uzhgorod 84.59 319 *eP* P 21 04 23.0 +7.6
KOLS Kolonicke sedl 84.66 320 *eP* **P 21 04 17.2 +1.4**
KOLS pmax pmax
comp=Z,17nm,1.0s
KOLS Kolonicke sedl 84.66 320 *eP* **P 21 04 17.2 +1.4**
KOLS *ep*P **pP 21 04 25.0 -1.2**
SUW Suwalki 85.13 325 *eP* **P 21 04 18.2 +0.2**
SUW *e* 21 04 25.8
SUW pmax pmax
comp=Z,98nm,1.0s
SUW Suwalki 85.13 325 *eP* **P 21 04 18.2 +0.2**
comp=Z,98nm,1.0s
SUW *e* 21 04 25.8
SUW Suwalki 85.13 325 *eP* **P 21 04 18.4 +0.4**
CRVS Cervenica-Dubn 85.18 319 *eP* **P 21 04 18.7 +0.3**
CRVS *ep*P **pP 21 04 26.1 -2.8**
FIA1 FINESS Array S 85.39 332 *eP* **P 21 04 19.4 +0.2**
FINES FINESS Array B 85.40 332 P **P 21 04 19.8 +0.6**
FINES FINESS Array B 85.40 332 P **P 21 04 19.8 +0.6**
comp=Z,6.9nm,0.9s,baz=99,slow=5.5,SNR=23
KAF Kangasniemi 85.47 333 *eP* **P 21 04 19.6 +0.1**
KAF pmax pmax
comp=Z,7.0nm,0.8s
KAF Kangasniemi 85.47 333 *ep* **P 21 04 19.6 +0.1**
comp=Z,6.5nm,0.8s
VYHS Vyhne 86.83 319 *eP* **P 21 04 27.4 +0.8**
VYHS *e* 21 04 34.8
VYHS pmax pmax
comp=Z,35nm,3.0s
VYHS Vyhne 86.83 319 *eP* **P 21 04 27.4 +0.8**
VYHS *ep*P **pP 21 04 34.8 -2.2**
TIP Timpagrande 87.11 309 *eP* **P 21 04 27.8 -0.4**
comp=Z,16nm,1.0s
OKC Ostrava-Krasne 87.47 320 *eP* pP 21 04 38.0 -2.1
OKC Ostrava-Krasne 87.47 320 *eP* pP 21 04 38.0 -2.1
ARCES ARCESS Array B 87.77 340 P **P 21 04 30.5 -0.1**
ARCES ARCESS Array B 87.77 340 P **P 21 04 30.5 -0.1**
comp=Z,12nm,0.9s,baz=91,slow=4.9,SNR=9.5
MORC Moravsky Berou 87.85 320⇓*P* pP 21 04 40.0 -2.0

MORC	Moravsky Berou	87.85	320	eP		P	21 04 30.9	-0.6	
	comp=Z,7.8nm,0.9s								
MORC	Moravsky Berou	87.85	320	⇓iP		pP	21 04 40.0	-2.0	
DPC	Dobruska-Polom	88.70	320	eP		P	21 04 36.9	+1.4	
DPC				e			21 04 44.4		
DPC	Dobruska-Polom	88.70	320	eP		P	21 04 36.9	+1.4	
DPC				epP		pP	21 04 44.4	-1.6	
ARSA	Arzberg	88.88	317	⇑ipP		pP	21 04 44.7	-2.3	
	comp=Z,16nm,1.6s								
UPC	Upice	88.91	321	eP		P	21 04 37.7	+1.2	
UPC				e			21 04 45.5		
UPC	Upice	88.91	321	eP		P	21 04 37.7	+1.2	
UPC				epP		pP	21 04 45.5	-1.5	
SOKA	Soboth	89.16	317	⇑ipP		pP	21 04 46.3	-2.0	
	comp=Z,18nm,1.2s								
PRU	Pruhonice	89.80	320	eP		P	21 04 41.3	+0.7	
PRU				e			21 04 49.2		
PRU	Pruhonice	89.80	320	eP		P	21 04 41.3	+0.7	
PRU				epP		pP	21 04 49.2	-1.9	
PVCC	Panska Ves	89.83	320	eP		P	21 04 42.1	+1.4	
PVCC				e			21 04 49.8		
PVCC	Panska Ves	89.83	320	eP		P	21 04 42.1	+1.4	
PVCC				epP		pP	21 04 49.8	-1.5	
GERES	GERESS Array B	90.25	319	P		P	21 04 44.0	+1.2	
GERES	GERESS Array B	90.25	319	P		P	21 04 44.0	+1.2	
	comp=Z,3.1nm,0.9s,baz=84,slow=4.2,SNR=17								
BRG	Berggiesshubel	90.26	321	eP		P	21 04 44.1	+1.4	
	comp=Z,5.4nm,1.0s								
BRG	Berggiesshubel	90.26	321	eP		P	21 04 44.1	+1.4	
BRG				pmax		pmax			
	comp=Z,5.0nm,1.0s								
KHC	Kasperske Hory	90.35	319	eP		pP	21 04 51.4	-2.4	
KHC	Kasperske Hory	90.35	319	epP		pP	21 04 51.4	-2.4	
CLL	Collm	90.88	321	eP		P	21 04 44.0	-1.6	
CLL				e			21 04 54.0		
CLL				eS		S	21 15 39.0	-1.3	
CLL	Collm	90.88	321	eP		P	21 04 44.0	-1.6	
CLL				e			21 04 54.0		
CLL				eS		S	21 15 39.0	-1.3	
CLL				eSSSS			21 28 57.0		
NKC	Novy Kostel	91.16	320	eP		P	21 04 48.4	+1.4	
NKC				e			21 04 56.5		
NKC	Novy Kostel	91.16	320	eP		P	21 04 48.4	+1.4	
NKC				epP		pP	21 04 56.5	-1.0	
WTTA	Wattenberg	91.52	317	⇑ipP		pP	21 04 56.7	-2.8	
	comp=Z,14nm,1.0s								
NB2	NORSAR Subarra	92.42	331	P		P	21 04 52.0	-0.6	
	baz=93,slow=4.6								
NB2	NORSAR Subarra	92.42	331	P		P	21 04 52.0	-0.6	
	comp=Z,4.6nm,0.8s,baz=93,slow=4.6								
NOA	NORSAR Array B	92.42	331	P		P	21 04 53.0	+0.4	
NOA	NORSAR Array B	92.42	331	P		P	21 04 53.0	+0.4	
	comp=Z,2.5nm,0.9s,baz=95,slow=5.0,SNR=6.0								
DAVA	Damuels	92.72	317	⇑iPcP		PcP	21 04 55.2	+0.1	
	comp=Z,12nm,1.0s								
DAVA	Damuels	92.72	317	⇑iP		PcP	21 04 55.2	+0.1	
	comp=Z,12nm,1.0s								
KEST	Kesra	92.74	305	P		P	21 04 55.5	+0.8	
KEST	Kesra	92.74	305	P		P	21 04 55.7	+1.0	
	comp=Z,1.4nm,1.0s,baz=7.1,slow=12,SNR=3.8								
TBI	Tubuai	107.08	115	eLR		LR	21 41 20.6		
	comp=Z,469nm,23.0s								
PPT2	Papeete2	108.00	110	eLR		LR	21 42 03.7		
	comp=Z,314nm,25.0s								
YKA	Yellowknife Ar	115.43	17	PKP		PKPdf	21 10 21.8	-1.6	
YKA	Yellowknife Ar	115.43	17	PKP		PKPdf	21 10 21.8	-1.6	
	comp=Z,0.9nm,0.8s,baz=325,slow=2.2,SNR=13								
RKT	Rikitea	120.02	119	eLR		LR	21 47 28.7		
	comp=Z,389nm,26.0s								
HUMO	Hull Mountain	125.01	38	eP		PKPdf	21 10 43.5	+1.0	
KHMM	Horse Mountain	125.45	40	eP		PKPdf	21 10 43.7	+0.1	
C11A	Tepee Creek (N	125.53	30	⇑P		PKPdf	21 10 43.9	+0.5	
	baz=125								
FFC	Flin Flon	125.54	16	iPKIKP		PKPdf	21 10 43.7	+0.6	
A13A	Flathead Natio	125.64	28	⇑P		PKPdf	21 10 44.3	+0.6	
	baz=126								
B13A	Whitefish	126.02	28	⇑P		PKPdf	21 10 44.6	+0.2	
	baz=126								
A14A	Double T Ranch	126.07	27	⇓P		PKPdf	21 10 44.3	-0.3	
	baz=126								
BSMT	Bassoo Peak	126.23	29	eP		PKPdf	21 10 45.0	0.0	
A15A	Johnson Ranch,	126.38	27	⇓P		PKPdf	21 10 45.0	-0.1	
	baz=126								
C13A	Hot Springs	126.45	29	⇓P		PKPdf	21 10 45.4	+0.2	
	baz=126								
D12A	Red Ives Fores	126.51	30	⇓P		PKPdf	21 10 44.8	-0.6	
	baz=126								
C14A	Swan Lake	126.79	28	⇑P		PKPdf	21 10 46.1	+0.3	
	baz=127								
D13A	Huson	126.92	29	⇑P		PKPdf	21 10 46.3	+0.2	
	baz=127								
B15A	Bradely Ranch,	126.94	27	⇑P		PKPdf	21 10 46.0	-0.2	
	baz=127								
B16A	M & M Farms, S	127.25	26	⇑P		PKPdf	21 10 46.5	-0.2	
	baz=127								
A17A	Triple J Farms	127.29	25	⇑P		PKPdf	21 10 47.0	+0.2	
	baz=127								
C15A	Salmond Ranch,	127.31	28	⇑P		PKPdf	21 10 47.2	+0.2	
	baz=127								
MSO	Missoula	127.36	29	⇓P		PKPdf	21 10 46.9	-0.2	
	baz=127								
F12A	Elk City	127.45	31	⇑P		PKPdf	21 10 47.4	+0.2	
	baz=127								
E13A	Victor	127.51	30	⇓P		PKPdf	21 10 47.0	-0.4	
	baz=127								
SCHQ	Schefferville	127.53	351	PKP		PKPdf	21 10 46.9	-0.1	
SCHQ	Schefferville	127.53	351	PKP		PKPdf	21 10 46.9	-0.1	
	comp=Z,8.1nm,1.1s,baz=25,slow=7.1,SNR=3.8								
C16A	Fuhringer Ranc	127.69	27	⇑P		PKPdf	21 10 47.0	-0.6	
	baz=128								
B17A	L&G Farms, Che	127.74	26	⇑P		PKPdf	21 10 47.3	-0.3	
	baz=128								
G12A	Big Creek, Yel	127.83	32	⇓P		PKPdf	21 10 47.9	-0.1	
	baz=128								
E14A	Clinton	127.87	29	⇑P		PKPdf	21 10 48.0	-0.1	
	baz=128								
D15A	Lincoln	127.89	28	⇓P		PKPdf	21 10 48.4	+0.3	
	baz=128								
F13A	Darby	127.89	30	⇓P		PKPdf	21 10 48.2	0.0	
	baz=128								
B18A	Beardsley Farm	128.10	25	⇑P		PKPdf	21 10 47.9	-0.4	
	baz=128								
A19A	Klindworth Far	128.12	24	⇓P		PKPdf	21 10 48.9	+0.5	
	baz=128								
C17A	Wharram Farm,	128.25	26	⇑P		PKPdf	21 10 48.7	0.0	
	baz=128								
D16A	Dana Ranch, Ca	128.35	27	⇑P		PKPdf	21 10 48.8	-0.2	
	baz=128								
EGMT	Eagleton	128.40	25	⇓P		PKPdf	21 10 49.2	+0.3	
	baz=128								
B19A	Brinkman Farms	128.41	25	⇑P		PKPdf	21 10 49.5	+0.6	
	baz=128								
G13A	Cobalt	128.43	31	⇓P		PKPdf	21 10 49.7	+0.5	
	baz=128								
H12A	Diamond D Ranc	128.47	32	⇓P		PKPdf	21 10 48.8	-0.5	
	baz=128								
D17A	Six Diamond Ra	128.65	27	⇓P		PKPdf	21 10 50.2	+0.7	
	baz=128								
E16A	East Helena	128.66	28	⇓P		PKPdf	21 10 49.8	+0.3	
	baz=128								
MFID	Camas Ranch	128.70	34	⇓P		PKPdf	21 10 49.5	-0.2	
	baz=129								
H13A	Challis	128.78	31	⇓P		PKPdf	21 10 50.5	+0.7	
	baz=129								
I12A	Atlanta	128.83	33	⇑P		PKPdf	21 10 50.3	+0.3	
	baz=129								
C19A	Slack Wire Ran	128.92	25	⇓P		PKPdf	21 10 51.2	+1.3	
	baz=129								
A22A	Carney Farms,	129.18	22	⇓P		PKPdf	21 10 52.0	+1.6	
	baz=129								
H14A	Leadore	129.20	31	⇑P		PKPdf	21 10 52.1	+1.3	
	baz=129								
G15A	Dillon	129.25	30	⇑P		PKPdf	21 10 51.9	+1.1	
	baz=129								
I13A	Wildhorse Cree	129.29	32	⇑P		PKPdf	21 10 52.5	+1.6	
	baz=129								
BOZ	Bozeman (W)	129.33	29	⇑P		PKPdf	21 10 52.5	+1.6	
	baz=129								
HLID	Hailey	129.38	32	⇓P		PKPdf	21 10 52.3	+1.3	
	baz=129								
C20A	Veseth Ranch,	129.38	25	⇓P		PKPdf	21 10 52.5	+1.7	
	baz=129								
G16A	Moss Hill, Enn	129.54	29	⇓P		PKPdf	21 10 52.9	+1.6	
	baz=129								
F17A	Fitzpatrick Pl	129.59	28	⇓P		PKPdf	21 10 52.6	+1.3	
	baz=129								
J13A	Cove Ranch, Pi	129.61	32	⇑P		PKPdf	21 10 52.8	+1.3	
	baz=130								
F18A	Big Timber	130.03	27	⇓P		PKPdf	21 10 53.3	+1.2	
	baz=130								
H16A	Russell Place,	130.20	29	⇓P		PKPdf	21 10 54.8	+2.2	
	baz=130								
NVAR	Mina Array Bea	130.29	40	PKP		PKPdf	21 10 54.7	+1.7	
NVAR	Mina Array Bea	130.29	40	PKP		PKPdf	21 10 54.7	+1.7	
	comp=Z,1.5nm,0.7s,baz=326,slow=2.1,SNR=8.4								
D21A	La Casta Ranch	130.31	24	⇓P		PKPdf	21 10 54.2	+1.6	
	baz=130								
J15A	Blackfoot	130.53	31	⇓P		PKPdf	21 10 55.2	+2.0	
	baz=130								
D22A	Cohagen	130.57	24	⇓P		PKPdf	21 10 54.8	+1.8	
	baz=130								
RLMT	Red Lodge	130.83	28	⇑P		PKPdf	21 10 55.2	+1.4	
	baz=131								
D23A	Lindsay	130.94	23	⇓P		PKPdf	21 10 55.4	+1.7	
	baz=131								
ULM	Lac du Bonnet	131.17	14	PKP		PKPdf	21 10 54.2	+0.2	
ULM	Lac du Bonnet	131.17	14	PKP		PKPdf	21 10 54.2	+0.2	
	comp=Z,1.7nm,0.5s,baz=356,slow=3.4,SNR=5.1								
G20A	Bridger	131.24	27	⇑P		PKPdf	21 10 55.8	+1.3	
	baz=131								
H19A	Powell	131.30	28	⇑P		PKPdf	21 10 56.4	+1.8	
	baz=131								
K16A	Soda Springs	131.37	31	⇑P		PKPdf	21 10 56.0	+1.1	
	baz=131								
L15A	Malad City	131.53	33	⇑P		PKPdf	21 10 55.7	+0.5	
	baz=131								
BSC	Santa Cruz Isl	131.78	46	⇑P		PKPdf	21 10 59.2	+3.5	
	baz=132								
E24A	Baker	131.80	23	⇑P		PKPdf	21 10 57.1	+1.7	
	baz=132								
I20A	Worland	132.25	28	⇑P		PKPdf	21 10 56.9	+0.5	
	baz=132								
J19A	Crowheart	132.33	29	⇑P		PKPdf	21 10 57.4	+0.7	
	baz=132								
LRMC	Laurel Mountai	132.36	43	⇓P		PKPdf	21 10 58.7	+1.9	
	baz=132								
PDAR	Pinedale Array	132.45	30	PKP		PKPdf	21 10 57.8	+0.8	
PDAR	Pinedale Array	132.45	30	PKP		PKPdf	21 10 57.8	+0.8	
	comp=Z,0.6nm,0.6s,baz=179,slow=0.3,SNR=5.2								
G23A	Biddle	132.47	25	⇑P		PKPdf	21 10 58.0	+1.3	
	baz=132								
EDW2	Edwards Air Fo	132.48	44	⇓P		PKPdf	21 10 59.0	+1.9	
	baz=132								
DUG	Dugway	132.52	35	⇑P		PKPdf	21 10 58.0	+0.9	
	baz=132								
H22A	Clearmont	132.55	26	⇓P		PKPdf	21 10 58.5	+1.6	
	baz=132								
J20A	Shoshoni	132.73	28	⇓P		PKPdf	21 10 58.4	+1.0	
	baz=133								
I21A	Big Trails, Te	132.74	27	⇑P		PKPdf	21 10 58.4	+1.0	
	baz=133								
K19A	Absolon Red Bu	132.76	29	⇓P		PKPdf	21 10 58.1	+0.6	
	baz=133								
L18A	Fontenelle, Gr	132.82	31	⇓P		PKPdf	21 10 58.6	+0.9	
	baz=133								
L19A	Farson	133.04	30	⇓P		PKPdf	21 10 58.8	+0.7	
	baz=133								
I22A	9 Mile Ranch,	133.04	27	⇑P		PKPdf	21 10 59.0	+1.0	
	baz=133								
H24A	Dirks Ranch, A	133.19	24	⇓P		PKPdf	21 10 58.5	+0.4	
	baz=133								
K21A	Alcova	133.67	28	⇑P		PKPdf	21 11 00.6	+1.4	
	baz=134								
GMRC	Granite Mounta	134.12	42	⇑P		PKPdf	21 11 02.0	+1.7	
	baz=134								
P17A	Butcher Ranch,	134.18	34	⇑P		PKPdf	21 11 01.8	+1.6	
	baz=134								
PFO	Pinyon Flat Ob	134.23	44	⇑P		PKPdf	21 11 02.0	+1.6	
	baz=134								
K23A	Bowen Ranch, D	134.33	27	⇑P		PKPdf	21 11 00.4	0.0	
	baz=134								
P18A	Preston Nutter	134.35	33	⇑P		PKPdf	21 11 01.6	+0.9	
	baz=134								
M21A	Separation Pea	134.40	29	⇓P		PKPdf	21 11 01.0	+0.3	
	baz=134								
N20A	Spence Gulch,	134.53	31	⇑P		PKPdf	21 11 01.5	+0.6	
	baz=134								
L23A	Garrett	134.80	27	⇓P		PKPdf	21 11 02.1	+0.7	
	baz=135								
IRM	Iron Mountain	134.82	43	⇓P		PKPdf	21 11 03.8	+2.4	
	baz=135								
BC3	Big Chuckawall	134.90	44	⇓P		PKPdf	21 11 03.8	+2.1	
	baz=135								
M22A	Cedar Creek Ra	134.93	29	⇑P		PKPdf	21 11 02.6	+0.8	
	baz=135								
N21A	Black Mountain	134.96	30	⇓P		PKPdf	21 11 02.8	+1.1	
	baz=135								
P19A	Cripple Cowboy	135.03	32	⇓P		PKPdf	21 11 02.6	+0.7	
	baz=135								
O20A	White River Ci	135.06	31	⇑P		PKPdf	21 11 02.8	+0.8	
	baz=135								
SWSC	Sam W. Stewart	135.06	45	⇑P		PKPdf	21 11 03.6	+1.8	
	baz=135								
Q19A	Hogan Spring (	135.36	33	⇓P		PKPdf	21 11 03.4	+1.0	
	baz=135								
K26A	Motz Farm, Whi	135.44	25	⇑P		PKPdf	21 11 04.0	+1.6	
	baz=135								
N22A	Wattenberg Ran	135.46	29	⇓P		PKPdf	21 11 04.1	+1.4	
	baz=135								
N23A	Red Feather La	135.63	29	⇑P		PKPdf	21 11 04.4	+1.3	
	baz=136								
GLA	Glamis	135.67	44	⇓P		PKPdf	21 11 04.1	+1.1	
	baz=136								
M24A	Cheyenne	135.71	27	⇓P		PKPdf	21 11 04.5	+1.5	
	baz=136								
O22A	Kremmling	135.90	30	⇓P		PKPdf	21 11 05.3	+1.6	
	baz=136								
O23A	Lake Granby, G	136.17	29	⇓P		PKPdf	21 11 05.7	+1.6	
	baz=136								
WUAZ	Wupatki	136.46	39	⇓P		PKPdf	21 11 06.3	+1.7	
	baz=136								
ISCO	Idaho Springs	136.64	29	⇑P		PKPdf	21 11 06.0	+0.9	
	baz=136								
S20A	Disappointment	136.66	34	⇑P		PKPdf	21 11 06.5	+1.5	
	baz=136								
R21A	Cimarron	136.71	33	⇑P		PKPdf	21 11 06.6	+1.5	
	baz=137								
MVCO	Mesa Verde	137.02	34	⇓P		PKPdf	21 11 07.2	+1.5	
	baz=137								
S21A	Coal Bank Pass	137.09	33	⇓P		PKPdf	21 11 07.1	+1.1	
	baz=137								
X16A	Lo Mia Camp, P	137.12	40	⇓P		PKPdf	21 11 08.4	+2.5	
	baz=137								
S22A	4UR Ranch, Cre	137.56	33	⇓P		PKPdf	21 11 08.3	+1.5	
	baz=137								
P25A	Willow Gulch B	137.56	28	⇓P		PKPdf	21 11 07.8	+1.3	
	baz=137								
U20A	Newcomb	137.59	35	⇑P		PKPdf	21 11 07.9	+1.1	
	baz=137								
W18A	Petrified Fore	137.73	38	⇓P		PKPdf	21 11 08.8	+1.8	
	baz=138								
P26A	Davis Ranch, A	137.91	28	⇓P		PKPdf	21 11 08.3	+1.1	
	baz=138								
V20A	Brimhall	138.03	36	⇓P		PKPdf	21 11 09.1	+1.5	
	baz=138								
U21A	Nageezi	138.05	35	⇑P		PKPdf	21 11 08.4	+0.7	
	baz=138								
W20A	Ramah	138.47	37	⇓P		PKPdf	21 11 10.6	+2.2	
	baz=138								
T24A	Torres, Weston	139.00	32	⇑P		PKPdf	21 11 11.0	+1.6	
	baz=139								
T25A	Trinidad	139.28	31	⇑P		PKPdf	21 11 11.5	+1.6	
	baz=139								
X21A	Alamocita Cree	139.36	37	⇓P		PKPdf	21 11 11.9	+1.8	
	baz=139								
Z20A	Nine Sixteen R	139.77	39	⇓P		PKPdf	21 11 12.5	+1.7	
	baz=140								
V24A	Rampart Ranch,	139.89	33	⇑P		PKPdf	21 11 11.8	+0.8	
	baz=140								
120A	U Bar Ranch, L	140.11	40	⇑P		PKPdf	21 11 13.5	+2.1	
	baz=140								
V25A	Rancho No Teng	140.16	32	⇓P		PKPdf	21 11 13.0	+1.5	
	baz=140								
T28A	Walsh	140.44	29	⇑P		PKPdf	21 11 13.4	+1.6	
	baz=140								
319A	Douglas	140.44	42	⇑P		PKPdf	21 11 14.8	+2.9	
	baz=140								
220A	Playas Peak, P	140.60	40	⇓P		PKPdf	21 11 14.7	+2.4	
	baz=140								
V26A	Tequesquite Ra	140.63	32	⇑P		PKPdf	21 11 14.1	+1.9	
	baz=140								
U27A	Thompson Grove	140.64	30	⇓P		PKPdf	21 11 14.6	+2.4	
	baz=140								
121A	Cookes Peak, D	140.66	39	⇑P		PKPdf	21 11 15.1	+2.6	
	baz=140								
W25A	X Bar L Ranch,	140.71	33	⇑P		PKPdf	21 11 14.9	+2.5	
	baz=140								
Y23A	Lovelace Mesa,	140.75	36	⇓P		PKPdf	21 11 14.3	+1.7	
	baz=141								
X25A	Clemmons Ranch	141.11	34	⇓P		PKPdf	21 11 15.3	+2.1	
	baz=141								
Y24A	Capitan	141.11	35	⇑P		PKPdf	21 11 15.1	+1.8	
	baz=141								
X26A	CR and CF Fran	141.56	33	⇑P		PKPdf	21 11 16.5	+2.6	
	baz=141								
W27A	Bowe Ranch, En	141.57	32	⇓P		PKPdf	21 11 15.9	+2.0	
	baz=141								
Z24A	Sheeppen Canyo	141.58	36	⇑P		PKPdf	21 11 16.1	+2.1	
	baz=141								
U30A	WK&E Inc. Balk	141.61	28	⇑P		PKPdf	21 11 16.3	+2.4	
	baz=141								
124A	Stringfield Ra	141.97	37	⇑P		PKPdf	21 11 11.5	-3.3	
	baz=142								
Z25A	Roswell	141.99	35	⇓P		PKPdf	21 11 11.5	-3.2	
	baz=142								
125A	Gardner Draw,	142.47	36	⇑P		PKPdf	21 11 12.8	-2.7	
	baz=142								
MSTX	Muleshoe	142.56	33	⇑P		PKPdf	21 11 12.8	-2.9	
	baz=142								
V31A	Spring Creek L	142.60	28	⇓P		PKPdf	21 11 12.3	-3.3	
	baz=142								
X29A	Tulia	142.76	31	⇑P		PKPdf	21 11 13.0	-3.0	
	baz=143								
Z27A	Tatum	142.81	34	⇑P		PKPdf	21 11 12.9	-3.3	
	baz=143,SNR=5.3								
324A	Moseley Ranch,	142.83	38	⇑P		PKPdf	21 11 13.5	-2.8	
	baz=143								
226B	Tecolote Peak,	143.18	36	⇑P		PKPbc	21 11 14.2	+0.4	
	baz=143								
325A	Bean Ranch, Si	143.19	38	⇑P		PKPbc	21 11 14.5	+0.6	
	baz=143								
X31A	McDonald Ranch	143.47	29	⇑P		PKPbc	21 11 14.6	+0.2	
	baz=143,SNR=9.0								
BDFB	Brasilia	143.56	238	PKP		PKPdf	21 11 18.8	+0.9	
BDFB	Brasilia	143.56	238	PKP		PKPdf	21 11 18.8	+0.9	
	comp=Z,2.3nm,0.7s,baz=195,slow=12,SNR=2.7								
CPUP	Villa Florida	143.56	215	PKP		PKPbc	21 11 15.8	+1.0	
CPUP	Villa Florida	143.56	215	PKP		PKPbc	21 11 15.8	+1.0	
	comp=Z,0.8nm,0.5s,baz=102,slow=3.3,SNR=6.8								
425A	Indio Mountain	143.59	38	⇑P		PKPbc	21 11 16.0	+1.0	
	baz=143,SNR=14								
Y30A	Stafford Cattl	143.62	31	⇑P		PKPbc	21 11 15.5	+0.6	
	baz=143								
Z29A	Hungry Hill Ra	143.68	32	⇑P		PKPbc	21 11 15.4	+0.3	
	baz=144								
128A	Castleberry Fa	143.74	34	⇑P		PKPbc	21 11 15.4	+0.1	
	baz=144								
326A	Caldwell Ranch	143.83	37	⇓P		PKPbc	21 11 16.4	+0.8	
	baz=144,SNR=8.1								
Y31A	Rekieta Farm,	143.87	30	⇑P		PKPbc	21 11 15.9	+0.3	
	baz=144								
WMOK	Wichita Mounta	143.94	27	ePKIKP		PKPab	21 11 15.2	0.0	
WMOK	Wichita Mounta	143.94	27	ePKPpre		PKPab	21 11 15.2	0.0	
Z30A	Sanderson Ranc	143.96	32	⇑P		PKPbc	21 11 16.0	+0.1	
	baz=144,SNR=5.7								
228A	UT Block 9, Go	144.06	34	⇓P		PKPab	21 11 15.7	-0.1	
	baz=144								
129A	Stewart Farms,	144.07	33	⇓P		PKPbc	21 11 16.7	+0.4	
	baz=144,SNR=6.7								
TUL1	Tulsa	144.21	23	⇑P		PKPbc	21 11 16.5	0.0	
	baz=144,SNR=7.4								
Y32A	R-V Farms, Ver	144.23	29	⇓P		PKPbc	21 11 16.6	-0.1	
	baz=144,SNR=8.4								
426A	McDonald Obser	144.26	38	⇓P		PKPdf	21 11 18.1	-0.8	
	baz=144,SNR=34								
Z31A	Sharp Cattle R	144.44	30	⇓P		PKPbc	21 11 17.7	+0.3	
	baz=144,SNR=24								
328A	Wristen Ranch,	144.47	35	⇑P		PKPbc	21 11 18.0	+0.4	
	baz=144,SNR=20								
427A	Hayter Ranch,	144.51	37	⇓P		PKPdf	21 11 18.8	-0.4	
	baz=144,SNR=16								
SIUC	Southern Illin	144.57	13	ePKPdf		PKPbc	21 11 17.6	0.0	
130A	Snyder	144.58	32	⇑P		PKPbc	21 11 18.4	+0.5	
	baz=144,SNR=5.4								
229A	Bryant Ranch,	144.60	34	⇑P		PKPbc	21 11 18.6	+0.6	
	baz=144,SNR=10								
526A	Mary Lane Ranc	144.65	38	⇑P		PKPdf	21 11 19.5	0.0	
	baz=144,SNR=47								
USIN	University of	144.66	11	ePKPdf		PKPab	21 11 17.7	0.0	
Z32A	Haskell	144.78	30	⇑P		PKPbc	21 11 18.6	+0.2	
	baz=145,SNR=18								
131A	Roby	144.82	31	⇓P		PKPbc	21 11 19.1	+0.5	
	baz=145,SNR=5.1								
329A	Wagon Wheel Ra	144.87	34	⇑P		PK

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DNZL	**Cakiroluk**	**0.16**	**202**	*i* P	Pg	21 01 52.8	-0.4
DNZL				*i* S	Sg	21 01 56.5	+0.9

CSEM **16** *21:01:53.4, 38.37N×38.85E, h10km, MD2.5, After ISK*
ISK **16** *21:01:53.4, 38.37N×38.85E, h10km, MD2.5*
DDA **16** *21:01:54.6, 38.34N×38.82E, h6km, MD2.2*
ISC 16 21:01:53.3±1.2, 38.35N±0.08×38.86E±0.04, h15km±11km, n14, σ0.42/21, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.18**	**35**	*i* P	**Pb**	**21 01 58.5**	**+0.1**
ELZG				*i* S	**Sb**	**21 02 01.4**	**-0.4**
MALT	**Malatya**	**0.34**	**264**	PG	**Pb**	**21 02 01.0**	**-0.2**
MALT				*e*SG	**Sb**	**21 02 06.3**	**-0.1**
MALT	**Malatya**	**0.34**	**264**	*i* Pg	**Pb**	**21 02 01.0**	**-0.2**
MALT				*e*Sg	**Sb**	**21 02 06.3**	**-0.1**
MYA	**Malataya**	**0.34**	**266**	PG	**Pg**	**21 02 00.4**	**0.0**
MYA				*e*SG	**Sg**	**21 02 05.2**	**0.0**
MYA	**Malataya**	**0.34**	**266**	*i* Pg	**Pg**	**21 02 00.4**	**0.0**
MYA				*e*Sg	**Sg**	**21 02 05.2**	**0.0**
SVRC	**Sivrice-ELAZID**	**0.35**	**86**	*e*PG	**Pg**	**21 02 00.7**	**0.0**
SVRC	**Sivrice-ELAZID**	**0.35**	**86**	*e*Pg	**Pg**	**21 02 00.7**	**0.0**
PTK	**Pertek**	**0.68**	**38**	*e*PG	**Pg**	**21 02 06.5**	**-0.3**
PTK				*e*SG	**Sb**	**21 02 17.0**	**+0.6**
PTK	**Pertek**	**0.68**	**38**	*e*Pg	**Pg**	**21 02 06.5**	**-0.3**
PTK				*e*Sg	**Sb**	**21 02 17.0**	**+0.6**
ERZM	**Erzurum**	**2.49**	**51**	*i* P	**Pg**	**21 02 41.6**	**+0.4**
DDEM	**Demirkent**	**3.38**	**40**	*i* P	**Pg**	**21 02 57.0**	**-1.1**
DBOC	**Borcka**	**3.69**	**35**	*i* P	**Pb**	**21 02 58.2**	**0.0**
BBAL	**Bala**	**4.62**	**287**	*i* P	**Pg**	**21 03 21.9**	**0.0**
BALT	**Daday**	**5.27**	**309**	*i* P	**Pb**	**21 03 25.9**	**+0.6**

NNC **16** *21:07:05.5±2.1, 42.41N×80.69E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=25.5km s-min=10.2km az=156.0*
ISC 16 21:06:53.9±7.2, 41.3N±0.5×81.5E±0.3, h17km, n12, σ0.85/11, 3C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDC	**Almaty**	**3.87**	**301**	⇑Pn	**Pn**	**21 07 53.3**	**+0.5**
	15nn,0.3s						
KNDC				⇑Lg	Lg	21 08 35.6	
	59nn,0.5s						
ULHL	**Ulahol**	**4.05**	**285**	P	**Pn**	**21 07 56.1**	**+0.8**
	SNR=18						
TKM2	**Tokmak 2**	**4.68**	**292**	⇓Pn	**Pn**	**21 08 04.5**	**+0.5**
	6.0nn,0.5s						
TKM2				⇑Lg	Lg	21 09 07.7	
	36nn,0.5s						
TKM2	**Tokmak 2**	**4.68**	**292**	P	**Pn**	**21 08 04.6**	**+0.6**
	SNR=15						
KZA	**Kyzart**	**4.75**	**281**	P	**Pb**	**21 08 15.8**	**-1.2**
	SNR=20						
KBK	**Karagaybulak**	**5.07**	**287**	P	**Pn**	**21 08 10.5**	**+1.1**
	SNR=24						
CHMS	**Chumysh**	**5.30**	**291**	P	**Pb**	**21 08 26.0**	**-0.1**
	SNR=5.3						
UCH	**Uchtor**	**5.32**	**282**	P	**Pb**	**21 08 25.7**	**-0.9**
	SNR=7.7						
MK31	**Makanchi Array**	**5.50**	**6**	⇓Pn	**Pn**	**21 08 15.3**	**+0.3**
	0.9nn,0.2s,baz=202,slow=13,SNR=84						
MK31				⇓Lg	Lg	21 09 28.7	
	13nn,0.6s,baz=192,slow=30,SNR=4.9						
AML	**Almayashu**	**5.91**	**280**	P	**Pb**	**21 08 36.1**	**-0.6**
	SNR=23						
EKS2	**Erkin-Say**	**5.92**	**286**	P	**Pb**	**21 08 36.3**	**-0.5**
	SNR=10						
KK31	**Karatay Array**	**8.36**	**286**	⇓Pg	Pb	21 09 21.6	+3.4
	1.1nn,0.5s,baz=94,slow=16,SNR=15						
KK31				⇓Lg	Lg	21 11 04.4	
	3.2nn,0.6s,baz=97,slow=28,SNR=3.5						

IDC 16 21:12:15.5±1.6, 32.27N×104.42E, h0km, mb3.5/1, mb1 3.6/2, mb1mx3.2/25, mbtmp3.3/2, ML3.5/1, Error ellipse: s-maj=78.8km s-min=27.6km az=54.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.61**	**201**	Pn	Pn	21 15 43.0	-0.7
	0.1nn,0.3s,baz=8.0,slow=9.0,SNR=5.8						
MKAR	**Makanchi Array**	**22.29**	**317**	P	P	21 17 14.3	-0.1
	0.2nn,0.6s,baz=104,slow=9.8,SNR=3.1						
WRA	**Warramunga Arr**	**59.30**	**147**	P		21 22 19.0	-0.2
	108nn,0.4s,baz=340,slow=7.7,SNR=2.1						
ASAR	**Alice Springs**	**62.35**	**149**	P	P	21 22 40.3	+0.3
	0.2nn,0.3s,baz=335,slow=6.5,SNR=4.2						

BGS **16** *21:27:22.5±2.0, 30.99N×73.02E, h10km, mb5.2, MS5.1*
BJI **16** *21:27:49.6, 34.34N×69.97E, h5km, mB5.3/33, mb5.1/58, ML5.3/2, Ms5.0/59, Ms7 4.8/51*
NNC **16** *21:27:50.3±3.3, 34.16N×69.81E, h0km, mb5.4, mpv5.9, Error ellipse: s-maj=36.4km s-min=32.1km az=150.0*
ISCJB **16** *21:27:50.1±0.6, 34.17N±0.02×70.08E±0.01, h8km±3km, mb5.3/287, MS4.8/91, Error ellipse: s-maj=3.0km s-min=2.0km az=16.0*
IDC **16** *21:27:50.5±0.3, 34.22N×70.11E, h0km, mb5.1/39, mb1 5.2/44, mb1mx5.2/45, mbtmp5.1/44, ML4.6/4, MS4.7/31, Ms1 4.7/31, ms1mx4.6/41, Error ellipse: s-maj=9.6km s-min=7.8km az=37.0*
NEIC **16** *21:27:51.3±1.3, 34.19N×70.08E, h6km±7km, mb5.4/104, Error ellipse: s-maj=4.5km s-min=3.0km az=196.0*
NEIC At least 19 people killed, 51 injured, more than 200 homes destroyed and some livestock killed in Nangarhar. Felt [V] at Jalalabad and [III] at Kabul. Also felt at Fayzabad, Nurestan, Qarah Bagh, Panjab and Zarghun Shahr. Felt at Bhakkar, Chitral, Islamabad and Rawalpindi, Pakistan.
SZGRF **16** *21:27:51.2, 34.08N×70.30E, h10km, mb5.7, MS4.7, Southeastern Afghanistan*
GCMT **16** *21:27:52.9±0.2, 34.14N×70.11E, h12km, MW5.2, Moment Tensor Solution. s42,c65; s81,c148; Moment tensor: Scale 10^16Nm; Mrr5.50±.24; Mθθ-3.72±.18; Mφφ-1.78±.17; Mrθ3.50±.54; Mrφ-4.18±.14; Mθφ1.36±.52; Best double couple: Mo7.30000×10^16 NP1:φ218.00000°, δ31.00000°, λ69.00000°. NP2:φ63.00000°, δ61.00000°, λ103.00000°. Principal axes: T 6.6800, Plg71.0000°, Azm1.0000°; N 1.3200, Plg11.0000°, Azm236.0000°; P -8.0000, Plg15.0000°, Azm143.0000°; Data Used: ll lU G CN IC.*
DJA **16** *21:27:53.4±0.4, 34°N±7°×7°0E±7°, h10km, M5.0/7, mB5.6/6, mb5.2/7, MLv4.9/1, Mw(mB)5.1/6*
MOS **16** *21:27:54.5±0.9, 34.23N×70.11E, h40km, mb5.6/102, MS4.8/30, Error ellipse: s-maj=5.3km s-min=2.9km az=126.9*
ISC 16 21:27:53.1±0.4, 34.19N±0.03×70.08E±0.02, h16km±2km, h16km:pP-P, n1050, σ1.49/1220, mb5.4/287, MS4.9/93, 88C-64D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**0.92**	**292**	*e*P	Pb	21 28 06.6	-4.2
KBL				*e*		21 28 18.1	
KBL	**Kabul**	**0.92**	**292**	*e*Pg	Pb	21 28 06.6	-4.2
KBL				*e*Sg	**Sb**	**21 28 18.1**	**-4.8**
CEP	**Cherat**	**1.57**	**103**	⇓P	**Pb**	**21 28 21.5**	**-0.3**
CEP				S	**Sg**	**21 28 49.0**	**+5.3**
THW	**Thamme Wali**	**1.97**	**135**	⇓P	**Pb**	**21 28 28.1**	**-0.8**
NIL	**Nilore**	**2.70**	**101**	*e*Pn	**Pb**	**21 28 41.8**	**+0.8**
NIL				*e*Sn	**Sb**	**21 29 11.4**	**-2.4**
CHCP	**Chirah Chowk**	**2.70**	**100**	P	**Pb**	**21 28 39.2**	**-1.9**
SARP	**Sargodha**	**3.14**	**135**	P	**Pn**	**21 28 43.4**	**+1.4**
JMU	**Jammu**	**4.29**	**109**	*e*P	**Pn**	**21 29 00.0**	**+2.3**
JMU				*ex*	**Sn**	**21 29 50.0**	**+2.5**
QUE	**Quetta**	**4.79**	**214**	*e*P	**Pn**	**21 29 07.0**	**+2.2**
QUE				*e*S	**Sn**	**21 30 05.0**	**+4.9**
QUE	**Quetta**	**4.79**	**214**	*e*P	**Pn**	**21 29 07.0**	**+2.2**
QUE				*e*S	**Sn**	**21 30 05.0**	**+4.9**
THN	**Thein Dam**	**5.04**	**109**	*e*P	**Pn**	**21 29 08.3**	**+0.3**
THN				*ex*	**Sn**	**21 30 10.0**	**+4.2**
DHRM	**DHARAMSHALA**	**5.56**	**109**	*e*P	**Pn**	**21 29 17.7**	**+2.2**
DHRM				*e*S	**Sn**	**21 30 22.1**	**+2.9**
DHRM				AML	AML	21 30 24.6	
	comp=E,7μm,0.6s						
DHRM				AML	AML	21 30 24.9	
	comp=N,5μm,0.6s						
BHK	**Bhakra**	**6.01**	**116**	*e*P	**Pn**	**21 29 24.4**	**+3.0**
BHK				*ex*	**Sn**	**21 30 35.2**	**+5.2**
SDNR	**Sundarnagar**	**6.39**	**113**	*e*P	**Pn**	**21 29 28.5**	**+1.8**
SDNR				*ex*	Sn	21 30 31.5	-7.8
SMLA	**Simla**	**6.71**	**115**	*i* P	**Pn**	**21 29 33.4**	**+2.3**
SMLA				*e*S	**Sn**	**21 30 48.0**	**+0.9**
SMLA				AML	AML	21 30 50.3	
	comp=E,2μm,0.3s						
SMLA				AML	AML	21 30 50.8	
	comp=N,4μm,0.3s						
KSH	**Kashi**	**7.11**	**40**	Pn	Pn	**21 29 35.1**	**-1.5**
KSH				Sn	**Sn**	**21 30 53.3**	**-3.8**
KSH				smax	smax		
	comp=N,1μm,1.0s						
KSH				smax	smax		
	comp=E,2μm,1.3s						
DDI	**Dehra Dun**	**7.78**	**118**	*e*P	**Pn**	**21 29 46.9**	**+1.2**
DDI				*ex*	x	21 32 18.0	
NDI	**New Delhi**	**8.21**	**130**	*e*P	**Pn**	**21 29 50.0**	**-1.5**
NDI				*e*S	**Sn**	**21 31 19.0**	**-4.9**
AML	**Almayashu**	**8.42**	**19**	*i* P	**Pn**	**21 29 57.8**	**+3.0**
AML	**Almayashu**	**8.42**	**19**	P	**Pn**	**21 29 57.8**	**+3.0**
	SNR=83						
AJM	**Ajmer**	**8.64**	**152**	*e*P	**Pn**	**21 29 56.0**	**-1.5**
AJM				*ex*	**Sn**	**21 31 34.0**	**-0.7**
UCH	**Uchtor**	**8.75**	**22**	*i* P	Pn	21 30 03.7	+4.4
UCH	**Uchtor**	**8.75**	**22**	P	Pn	21 30 03.7	+4.4
	SNR=30						
KZA	**Kyzart**	**8.86**	**26**	*i* P	**Pn**	**21 30 02.3**	**+1.5**
KZA	**Kyzart**	**8.86**	**26**	P	**Pn**	**21 30 02.3**	**+1.5**
	SNR=53						
KK31	**Karatay Array**	**8.90**	**2**	⇓Pn	**Pn**	**21 30 02.5**	**+1.4**
	comp=E,447nn,0.9s,baz=188,slow=13,SNR=2541						
KK31				⇓Sn	**Sn**	**21 31 43.0**	**+2.0**
	comp=E,470nn,0.8s,baz=190,slow=22,SNR=6.6						
KKAR	**Karatay Array**	**8.90**	**2**	*e*P	**Pn**	**21 30 02.2**	**+1.1**
KKAR				*e*		21 31 39.7	
KKAR				pmax	pmax		
	comp=Z,252nn,0.6s						
KKAR	**Karatay Array**	**8.90**	**2**	*e*Pn	**Pn**	**21 30 02.2**	**+1.1**
	comp=Z,252nn,0.6s						
KKAR				*e*Sn	**Sn**	**21 31 39.7**	**-1.3**
EKS2	**Erkin-Say**	**8.94**	**18**	*e*P	**Pn**	**21 30 03.7**	**+2.1**
EKS2				*e*		21 31 41.0	
EKS2	**Erkin-Say**	**8.94**	**18**	*e*Pn	**Pn**	**21 30 03.7**	**+2.1**
EKS2				*e*Sn	**Sn**	**21 31 41.0**	**-1.1**
EKS2	**Erkin-Say**	**8.94**	**18**	P	**Pn**	**21 30 04.8**	**+3.1**
	SNR=16						
AAK	**Ala-Archa**	**9.11**	**21**	P	**Pn**	**21 30 05.7**	**+1.7**
AAK						21 31 48.9	
AAK				pmax	pmax		
	comp=Z,8.0nm,0.3s						
AAK				smax	smax		
	comp=N,6.0nm,0.3s						
AAK	**Ala-Archa**	**9.11**	**21**	*e*Pn	**Pn**	**21 30 05.8**	**+1.7**
AAK				*e*Sn	**Sn**	**21 31 43.6**	**-2.7**
AAK	**Ala-Archa**	**9.11**	**21**	P	**Pn**	**21 30 06.7**	**+2.7**
	SNR=135						
AAK	**Ala-Archa**	**9.11**	**21**	P	**Pn**	**21 30 06.2**	**+2.2**
	SNR=154						
AAK	**Ala-Archa**	**9.11**	**21**	Pn	**Pn**	**21 30 06.0**	**+2.0**
	comp=N,2μm,1.0s						
AAK	**Ala-Archa**	**9.11**	**21**	Pn	**Pn**	**21 30 05.7**	**+1.7**
	comp=N,7.7nm,0.3s,baz=182,slow=6.7,SNR=101						
AAK				Sn	**Sn**	**21 31 48.9**	**+2.6**
	comp=N,5.8nm,0.3s,baz=219,slow=7.2,SNR=4.5						
KBK	**Karagaybulak**	**9.27**	**23**	*i* P	**Pn**	**21 30 08.5**	**+2.2**
KBK	**Karagaybulak**	**9.27**	**23**	P	**Pn**	**21 30 08.5**	**+2.2**
	SNR=111						
FRU	**Bishkek**	**9.33**	**21**	*e*P	**Pn**	**21 30 09.0**	**+2.1**
FRU				*i* S	**Sn**	**21 31 52.0**	**+0.5**
FRU				pmax	pmax		
	comp=Z,590nm,1.8s						
FRU				smax	smax		
	comp=E,1μm,1.8s						
ULHL	**Ulahol**	**9.39**	**29**	*i* P	**Pn**	**21 30 09.7**	**+1.8**
ULHL	**Ulahol**	**9.39**	**29**	P	**Pn**	**21 30 09.7**	**+1.8**
	SNR=40						
CHMS	**Chumysh**	**9.52**	**21**	*i* P	**Pn**	**21 30 12.4**	**+2.9**
CHMS	**Chumysh**	**9.52**	**21**	P	**Pn**	**21 30 12.4**	**+2.9**
	SNR=171						
USP	**Ospenovka**	**9.70**	**20**	*i* P	**Pn**	**21 30 14.7**	**+2.8**
USP	**Ospenovka**	**9.70**	**20**	P	**Pn**	**21 30 14.7**	**+2.8**
	SNR=12						
TKM2	**Tokmak 2**	**9.72**	**25**	⇓Pn	**Pn**	**21 30 13.8**	**+1.3**
	comp=E,143nn,0.8s						
TKM2	**Tokmak 2**	**9.72**	**25**	*i* P	**Pn**	**21 30 13.7**	**+1.3**
TKM2	**Tokmak 2**	**9.72**	**25**	*e*Pn	**Pn**	**21 30 13.9**	**+1.4**
TKM2	**Tokmak 2**	**9.72**	**25**	P	**Pn**	**21 30 13.8**	**+1.3**
	SNR=124						
PTH	**Pithoragarh**	**9.79**	**115**	*e*P	**Pn**	**21 30 13.9**	**+0.6**
PTH				*ex*	x	21 32 01.8	
LGTI	**Lohaghat**	**9.86**	**116**	*ex*	**Pn**	**21 30 16.5**	**+2.4**
LGTI				*ex*	x	21 32 05.8	
ABKT	**Ailbek**	**10.37**	**294**	Pn	**Pn**	**21 30 21.0**	**-0.2**
	comp=E,674nn,0.7s,SNR=37						
KNDC	**Almaty**	**10.49**	**29**	⇓Pn	**Pn**	**21 30 24.8**	**+2.0**
	comp=E,251nn,1.1s						
BHJ	**Bhuj**	**10.90**	**182**	*ex*	**Pn**	**21 30 27.1**	**-1.4**
PYUN	**Piuthan**	**12.61**	**115**	*e*P	**Pn**	**21 30 50.3**	**-1.8**
	comp=E,339nn,0.4s						
BHPL	**Bhopal**	**12.67**	**148**	*e*P	**Pn**	**21 30 50.5**	**-2.2**
DANN	**Dangsing**	**13.07**	**113**	*e*P	**Pn**	**21 30 56.8**	**-1.6**
	comp=E,267nn,0.6s						
KOLN	**Koldanda**	**13.25**	**115**	*e*P	**Pn**	**21 30 58.7**	**-2.0**
	comp=E,156nn,0.4s						
JBP	**Jabalpur**	**14.00**	**139**	⇓*i*x	**Pn**	**21 31 08.1**	**-2.7**
JBP				*ex*	x	21 33 36.7	
DMN	**Daman**	**14.47**	**113**	*e*P	**Pn**	**21 31 14.6**	**-2.9**
	comp=E,309nn,0.6s						
KKN	**Kakani**	**14.51**	**112**	*e*P	Pn	21 31 14.8	-3.2
	comp=E,510nn,0.8s						
PKIN	**Phulchoki**	**14.71**	**113**	*e*P	**Pn**	**21 31 17.6**	**-3.2**
	comp=E,300nn,0.4s						
PKI	**Pulchoki**	**14.72**	**113**	*e*P	Pn	21 31 17.4	-3.6
	comp=E,393nn,0.6s						
AKL	**Akola**	**14.78**	**154**	⇓*i*P	**Pn**	**21 31 19.0**	**-2.4**
AKL				*i* x	x	21 33 56.0	
GUN	**Gumba**	**14.92**	**111**	*e*P	Pn	21 31 19.6	-4.1
WBK	**Wadi Bani Khal**	**15.11**	**223**	P	**Pn**	**21 31 24.7**	**-1.2**
	SNR=20						
NGP	**Nagpur**	**15.22**	**146**	*ex*	Pn	21 31 22.5	-5.0
NGP				*ex*	x	21 34 05.0	
HATD	**Hatta, Dubai**	**15.30**	**236**	P	**Pn**	**21 31 26.1**	**-2.3**
	SNR=21						
SMDO	**Samad**	**15.30**	**227**	P	**Pn**	**21 31 28.5**	**0.0**
	SNR=14						
HOQ	**Hoqain**	**15.37**	**230**	P	**Pn**	**21 31 27.8**	**-1.6**
	SNR=17						
ASHO	**Ashiyiah**	**15.44**	**236**	P	**Pn**	**21 31 29.6**	**-0.7**
	SNR=62						
NAZ	**Nazwa, Dubai**	**15.52**	**238**	P	**P**	**21 31 35.0**	**-0.7**
	SNR=13						
MK31	**Makanchi Array**	**15.62**	**33**	⇑P	**Pn**	**21 31 31.8**	**-0.8**
	comp=E,73nn,0.7s,baz=210,slow=10,SNR=40						
MKAR	**Makanchi Array**	**15.62**	**33**	P	**Pn**	**21 31 30.9**	**-1.7**
MKAR	**Makanchi Array**	**15.62**	**33**	Pn	**Pn**	**21 31 30.9**	**-1.7**
MKAR				PKiKP	**PKiKP**	**21 44 26.6**	**-1.1**
MKAR	**Makanchi Array**	**15.62**	**33**	Pn	**Pn**	**21 31 30.9**	**-1.7**
	comp=E,1.0nn,0.3s,baz=216,slow=14,SNR=60						
MKAR				LR	LR	21 38 17.1	
	comp=E,1μm,18.2s,baz=225,slow=40						
MKAR				PKiKP	**PKiKP**	**21 44 26.6**	**-1.1**
	comp=E,0.1nn,0.3s,baz=211,slow=1.4,SNR=4.0						
JMDO	**Jabal Madar**	**15.79**	**225**	P	**Pn**	**21 31 35.0**	**+0.1**
	SNR=25						
RAMN	**Ramite**	**15.95**	**112**	*e*P	**Pn**	**21 31 33.1**	**-4.0**
	comp=E,188nn,0.5s						
POO	**Poona**	**15.96**	**167**	*e*P	**Pn**	**21 31 34.6**	**-2.5**
ARQ	**Araqi**	**16.05**	**231**	P	**Pn**	**21 31 39.5**	**+1.3**
	SNR=27						
BSY	**Bisya**	**16.05**	**228**	P	**Pn**	**21 31 39.4**	**+1.1**
	SNR=45						
ODAN	**Odare**	**16.60**	**111**	*e*P	**Pn**	**21 31 42.5**	**-2.9**
	comp=E,151nn,0.6s						
TAPN	**Taplejung**	**16.61**	**109**	*e*P	**Pn**	**21 31 42.0**	**-3.6**
	comp=E,261nn,0.8s						
WMQ	**Urumqi**	**16.70**	**50**	P	**Pn**	**21 31 45.0**	**-1.5**
WMQ				sP	**sP**	**21 31 52.0**	**-3.4**
WMQ				PP	**PnPn**	**21 31 59.0**	**+3.2**
WMQ				S	**Sn**	**21 34 51.0**	**-0.6**
WMQ				SS	**SnSn**	**21 35 10.0**	**+5.3**
WMQ				PcP	**PcP**	**21 36 35.0**	**-0.2**
WMQ				pmax	pmax		
	comp=Z,140nn,1.0s						
WMQ				pmax	pmax		
	comp=Z,780nn,3.0s						
WMQ				LR	LR		
	comp=N,2μm,8.0s						
WMQ				LR	LR		
	comp=E,2μm,8.0s						
WMQ				LR	LR		
	comp=Z,1μm,8.0s						
LATR	**Latur**	**16.75**	**158**	*ex*	**Pn**	**21 31 42.5**	**-4.5**
AB31	**Akbulak array**	**16.82**	**337**	⇑P	**Pn**	**21 31 46.6**	**-1.2**
	comp=Z,116nn,0.8s,baz=144,slow=12,SNR=869						
ABKAR	**Akbulak array**	**16.82**	**337**	*e*Pn	**Pn**	**21 31 46.0**	**-1.7**
	comp=Z,116nn,0.7s						
KAD	**Karad**	**17.21**	**167**	*e*P	**Pn**	**21 31 50.2**	**-2.8**
KAD				*ex*	x	21 35 31.0	
BOK	**Bokaro**	**17.26**	**123**	*ex*	**Pn**	**21 31 48.9**	**-4.6**
KURBB	**Kurchatov Arra**	**17.55**	**18**	P	**Pn**	**21 31 56.1**	**-0.8**
	comp=Z,0.9nn,0.3s,baz=207,slow=9.6,SNR=106						
KURBB				LR	LR	21 38 58.8	
	comp=Z,2μm,20.7s,baz=210,slow=38						
KURBB				PKiKP	**PKiKP**	**21 44 26.5**	**-1.7**
	comp=Z,0.0nm,0.3s,baz=232,slow=0.7,SNR=6.9						
KURK	**Kurchatov**	**17.65**	**18**	*d* iP	**Pn**	**21 31 55.1**	**-3.1**
KURK				pmax	pmax		
	comp=Z,114nn,1.7s						
KURK				MLR	MLR		
	comp=Z,2μm,15.0s						
KURK	**Kurchatov**	**17.65**	**18**	*e*Pn	**Pn**	**21 31 55.6**	**-2.6**
	comp=Z,81nn,0.9s						
KURK				PKiKP	**PKiKP**	**21 44 26.5**	**-1.7**
KURK	**Kurchatov**	**17.65**	**18**	P	**Pn**	**21 31 56.1**	**-2.1**
	SNR=64						
KURK	**Kurchatov**	**17.65**	**18**	Pn	**Pn**	**21 31 56.3**	**-1.9**
	comp=Z,485nn,0.8s,SNR=11						
LKRN	**Lenkeran, Azer**	**17.71**	**291**	P	**P**	**21 32 01.1**	**+1.3**
	SNR=9.9						
LKRN	**Lenkeran, Azer**	**17.71**	**291**	Pn	**P**	**21 32 01.1**	**+1.3**
	SNR=9.9						
GLBA	**Clilabad**	**18.09**	**292**	P	**P**	**21 32 03.9**	**0.0**
	SNR=43						
GLBA	**Clilabad**	**18.09**	**292**	Pn	**P**	**21 32 03.9**	**0.0**
	SNR=43						
SIZA	**Siyzn**	**18.10**	**298**	P	**P**	**21 32 05.9**	**+1.7**
	SNR=5.9						
SIZA	**Siyzn**	**18.10**	**298**	Pn	**P**	**21 32 05.9**	**+1.7**
	SNR=5.9						
PQL	**Pirkuli**	**18.25**	**297**	P	**P**	**21 32 06.9**	**+1.0**
	SNR=13						
PQL	**Pirkuli**	**18.25**	**297**	Pn	**P**	**21 32 06.9**	**+1.0**
	SNR=13						
HYB	**Hyderabad**	**18.35**	**153**	P	**P**	**21 32 03.0**	**-4.0**
HYB	**Hyderabad**	**18.35**	**153**	P	**P**	**21 32 03.0**	**-4.0**
HYB				S	**S**	**21 35 40.0**	**+3.6**
HYB	**Hyderabad**	**18.35**	**153**	*i* P	**P**	**21 32 03.0**	**-4.0**
HYB				*e*S	**S**	**21 35 40.0**	**+3.6**
LSA	**Lhasa**	**18.43**	**98**	P	**P**	**21 32 06.9**	**-1.4**
LSA				S	**Sn**	**21 35 28.4**	**-5.8**
LSA				LR	LR		
	comp=N,3μm,24.8s						
LSA				LR	LR		
	comp=E,2μm,22.0s						
QUBA	**Quba, Azerbaij**	**18.47**	**299**	P	**Pn**	**21 32 09.9**	**+1.5**
	SNR=12						
QUBA	**Quba, Azerbaij**	**18.47**	**299**	P	**Pn**	**21 32 09.9**	**+1.5**
	SNR=12						
AKTO	**Aktyubinsk**	**18.48**	**335**	P	**P**	**21 32 07.3**	**-0.9**
	comp=E,46nn,0.9s						
AKTO	**Aktyubinsk**	**18.48**	**335**	P	**P**	**21 32 07.7**	**-0.5**
AKTO	**Aktyubinsk**	**18.48**	**335**	P	**P**	**21 32 07.7**	**-0.5**
AKTO	**Aktyubinsk**	**18.48**	**335**	P	**P**	**21 32 07.7**	**-0.5**
	baz=148,slow=14						
AKTO				LR	LR	21 40 23.1	
	comp=E,3μm,21.6s,baz=330,slow=41						
VOSK	**Vostochnaya**	**18.54**	**2**	⇑P	**P**	**21 32 06.4**	**-2.4**
	comp=E,174nn,0.9s						
IML	**Ismayili**	**18.56**	**297**	P	**Pn**	**21 32 09.6**	**+0.1**
	SNR=26						
IML	**Ismayili**	**18.56**	**297**	P	**Pn**	**21 32 09.6**	**+0.1**
	SNR=26						
ZRNK	**Zerenda**	**18.77**	**358**	⇓P	**P**	**21 32 10.7**	**-0.7**
	comp=E,84nn,0.7s						
BVA0	**Borovoye Array**	**18.83**	**1**	⇓P	**P**	**21 32 11.6**	**-0.4**
	comp=E,15nn,0.8s,baz=168,slow=11,SNR=468						
BVAR	**Borovoye Array**	**18.83**	**1**	P	**P**	**21 32 10.9**	**-1.1**
BVAR				S	**Sn**	**21 35 42.7**	**-0.1**
BVAR	**Borovoye Array**	**18.83**	**1**	P	**P**	**21 32 10.9**	**-1.1**
BVAR				S	**Sn**	**21 35 42.7**	**-0.1**
BVAR	**Borovoye Array**	**18.83**	**1**	P	**P**	**21 32 10.9**	**-1.1**
	comp=E,3.6nn,0.3s,baz=167,slow=12,SNR=158						
BVAR				S	**Sn**	**21 35 42.7**	**-0.1**
	comp=E,0.7nn,0.3s,baz=179,slow=26,SNR=3.0						
BVAR				LR	LR	21 40 16.3	
	comp=E,5μm,21.1s,baz=183,slow=40						
BRVK	**Borovoye**	**18.86**	**0**	*c iP*	**P**	**21 32 11.2**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,106nn,0.7s						
BRVK				MLR	MLR		
	comp=Z,5μm,20.0s						
BRVK	**Borovoye**	**18.86**	**0**	*e*P	**P**	**21 32 11.3**	**-1.0**
	comp=Z,584nn,1.8s						
BRVK				*e*Sn	**Sn**	**21 35 39.7**	**-3.8**
BRVK	**Borovoye**	**18.86**	**0**	P	**P**	**21 32 11.7**	**-0.7**
	SNR=97						
**B

comp=Z,73nm,0.7s,baz=218,slow=10,SNR=146
ZALV LR LR 21 42 24.0
comp=Z,1μm,18.8s,baz=212,slow=39
TUTA Tutak 22.40 291 *i* P **P 21 32 51.3 +0.2**
ONI Oni 22.42 300 P **P 21 32 52.7 +1.6**
ABTO Aybut 22.52 226 P **P 21 32 51.9 -0.4**
SNR=41
NVS Novosibirsk 22.60 20⇓*i* P **P 21 32 51.4 -1.4**
NVS *i* S **S 21 36 57.1 -2.6**
NVS pmax pmax
comp=Z,141nm,1.2s
NVS pmax pmax
comp=N,134nm,1.6s
NVS pmax pmax
comp=E,22nm,0.6s
NVS smax smax
comp=N,251nm,2.2s
NVS smax smax
comp=E,133nm,2.2s
SIRN S¨¨rnak 22.63 286 *i* P **P 21 32 56.2 +2.8**
IMP Imphal 22.74 108 *e*P **P 21 32 54.0 -0.7**
IMP *e*S **S 21 37 03.0 +0.2**
KBZ Khabaz 23.09 302 P **P 21 32 57.8 -0.2**
KBZ Khabaz 23.09 302 P **P 21 32 57.8 -0.2**
KBZ Khabaz 23.09 302 P **P 21 32 57.8 -0.2**
comp=E,47nm,0.9s,baz=109,slow=7.5,SNR=48
HOMI Horasan 23.16 293 *i* P **P 21 33 03.3 +4.3**
DAGI Agillar 23.27 295 *i* P **P 21 33 02.4 +2.4**
ARTV Artvin 23.28 296 *i* P **P 21 33 01.9 +1.6**
KIV Kislovodsk 23.30 303 *e*P **P 21 32 59.8 -0.5**
KIV *e*S **S 21 37 14.3 +2.2**
KIV pmax pmax
comp=Z,64nm,4.2s
KIV pmax pmax
comp=Z,154nm,1.0s
DDEM Demirkent 23.37 295 *i* P **P 21 33 03.0 +2.0**
DBAD Bademkaya 23.43 295 *i* P **P 21 33 03.5 +1.9**
DBOC Borcka 23.50 296 *i* P **P 21 33 03.4 +1.2**
SVE Sverdlovsk 23.54 347⇓*i* P **P 21 33 03.2 +0.8**
SVE *e*S **S 21 37 15.6 +0.1**
SVE pmax pmax
comp=Z,199nm,1.6s
SVE MLR MLR
comp=Z,11μm,16.0s
ERZM Erzurum 23.56 292 *i* P **P 21 33 05.4 +2.3**
ARU Arti 23.60 344*d i* P **P 21 33 02.7 -0.3**
ARU PPP PPP 21 33 38.2
ARU S **S 21 37 19.5 +2.9**
ARU SS **SnSn 21 37 55.9 +2.2**
ARU SSS SSS 21 38 12.6
ARU pmax pmax
comp=Z,331nm,1.7s
ARU MLR MLR
comp=Z,5μm,17.0s
ARU Arti 23.60 344 P **P 21 33 02.4 -0.6**
comp=Z,843nm,0.8s,SNR=66
MARD Mardin 23.94 286 *i* P **P 21 33 06.8 +0.2**
KOPT Kop Dagi 24.23 293 *i* P **P 21 33 11.7 +2.3**
GTA Gaotai 24.32 69 P **P 21 33 12.5 +2.4**
GTA pP **pP 21 33 18.0 +3.0**
GTA sP **sP 21 33 20.4 +3.4**
GTA S **S 21 37 34.5 +5.9**
GTA pmax pmax
comp=Z,140nm,1.5s
GTA pmax pmax
comp=Z,850nm,7.6s
GTA LR LR
comp=N,1μm,13.3s
GTA LR LR
comp=E,940nm,18.1s
GTA LR LR
comp=Z,1μm,13.8s
DIYA Diyarbakir 24.45 287 *i* P **P 21 33 12.2 +1.0**
SARR Saratov 24.84 321*de*P **P 21 33 14.8 +0.3**
SARR pmax pmax
comp=Z,175nm,0.7s
MACK Trabzon 24.87 295 *i* P **P 21 33 13.3 -1.6**
KELT Kelkit 25.19 293 *i* P **P 21 33 19.6 +1.5**
SOC Sochi 25.30 301 *e*P **P 21 33 18.0 -0.8**
SOC *e*S **S 21 37 45.2 +1.1**
SOC *e*SS **SnSn 21 38 36.1 +0.6**
SOC pmax pmax
comp=Z,49nm,0.8s
ELZG Elazig 25.34 289 *i* P **P 21 33 20.6 +1.1**
KEMA Kemaliye 25.74 291 *i* P **P 21 33 24.6 +1.7**
MALT Malatya 25.78 288 *e*P **P 21 33 24.2 +0.8**
MALT pmax pmax
comp=Z,146nm,1.1s
MALT Malatya 25.78 288 *e*P **P 21 33 24.2 +0.8**
comp=Z,146nm,1.1s
MALT Malatya 25.78 288 *e*P **P 21 33 24.0 +0.6**
SUSE Susehri 26.00 293 *i* P **P 21 33 26.8 +1.4**
GZT Gaziantep 26.50 286 *i* P **P 21 33 30.8 +1.0**
VRHR Novokhopersk 26.66 318 *e*P **P 21 33 31.5 +0.5**
VRHR *e*S **S 21 38 07.1 +1.8**
VRHR pmax pmax
comp=N,9.0nm,0.8s
VRHR pmax pmax
comp=E,20nm,0.8s
VRHR pmax pmax
comp=Z,50nm,0.8s
VRHR smax smax
comp=N,90nm,1.3s
VRHR smax smax
comp=Z,10.0nm,0.6s
VRHR smax smax
comp=E,60nm,1.3s
VRHR MLR MLR
comp=N,420nm,15.0s
VRHR MLR MLR
comp=E,1μm,15.0s
VRHR MLR MLR
comp=Z,2μm,15.0s
SOKR Solíkamsk 26.86 345*d i* P **P 21 33 33.4 +0.8**
SOKR pmax pmax
comp=Z,110nm,1.5s
SOKR MLR MLR
comp=Z,4μm,16.0s
KRAR Krasnoyarsk 26.88 29 *i* P **P 21 33 33.6 +0.7**
KRAR pmax pmax
comp=Z,54nm,1.5s
KRAR MLR MLR
comp=Z,733nm,18.0s
KUZU Kuzuini 26.92 285 *i* P **P 21 33 34.3 +0.7**
ANN Anapa 27.16 303*c i* P **P 21 33 35.4 -0.1**
ANN *e* 21 34 17.5
ANN *e* 21 36 55.4
ANN *e*S **S 21 38 15.9 +2.5**
ANN *e*SS **SnSn 21 39 26.6 +5.9**
ANN pmax pmax
comp=Z,83nm,0.8s
ANN MLR MLR
comp=E,3μm,21.0s
ANN MLR MLR
comp=Z,3μm,21.0s
ANN MLR MLR
comp=N,883nm,10.0s
TOKA Tokat 27.32 293 *i* P **P 21 33 37.6 +0.4**
MUKL Al Mukalla 27.33 229 *e*P **P 21 33 38.4 +1.0**
PINB Pinarbasi 27.36 289 *i* P **P 21 33 39.1 +1.3**
LZH Lanzhou 27.60 76 ⇑P **P 21 33 40.8 +0.9**
LZH pP **pP 21 33 46.1 +1.3**
LZH sP **sP 21 33 49.4 +2.6**
LZH PP **PnPn 21 34 27.4 +2.3**
LZH S S 21 38 29.4 +8.5
LZH SS **SnSn 21 39 35.6 +3.5**
LZH pmax pmax
comp=Z,100nm,1.4s
LZH pmax pmax
comp=Z,380nm,7.4s
LZH LR LR
comp=N,990nm,11.0s
LZH LR LR
comp=E,920nm,13.2s
LZH LR LR
comp=Z,2μm,13.9s
ASF Jabal al Asfar 27.77 275 P **P 21 33 42.4 +1.0**
ASF Jabal al Asfar 27.77 275 P **P 21 33 42.4 +1.0**
comp=Z,18nm,0.9s,baz=320,slow=3.2,SNR=19
ASF LR LR 21 46 29.8
comp=Z,2μm,18.2s,baz=303,slow=40
VORD Divnogorie 27.91 316 *e*P **P 21 33 43.1 +0.9**
VORD pmax pmax
comp=Z,110nm,1.4s
VORD pmax pmax
comp=N,90nm,0.9s
VORD pmax pmax
comp=E,130nm,0.9s
VSR Storozhevoye 28.09 317 *e*P **P 21 33 44.6 +0.8**
VSR pmax pmax
comp=Z,80nm,0.9s
VSR pmax pmax
comp=N,50nm,1.2s
VSR pmax pmax
comp=E,130nm,1.1s
VSR MLR MLR
comp=Z,2μm,17.0s
VSR MLR MLR
comp=N,740nm,13.0s
VSR MLR MLR
comp=E,1μm,16.0s
MOY Mondy 28.29 42 *e*P **P 21 33 47.2 +1.4**
MOY pmax pmax
comp=Z,72nm,2.4s
VOR Voronezh 28.30 318 *e*P **P 21 33 46.0 +0.3**
VOR pmax pmax
comp=Z,250nm,1.6s
CD2 Chengdu 28.51 87 P **P 21 33 49.8 +2.0**
CD2 pP **pP 21 33 54.1 +1.3**
CD2 sP **sP 21 33 56.8 +2.0**
CD2 PP **PnPn 21 34 41.4 +4.0**
CD2 PcP **PcP 21 37 02.0 +2.6**
CD2 S **S 21 38 36.0 +1.0**
CD2 sS **sS 21 38 42.5 -0.7**
CD2 SS **SnSn 21 40 00.5 +6.5**
CD2 PcS **PcS 21 40 43.1 +1.2**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,210nm,5.1s
CD2 LR LR
comp=N,3μm,19.1s
CD2 LR LR
comp=E,2μm,14.2s
CD2 LR LR
comp=Z,3μm,15.2s
AVNT Avonos 28.57 290 *i* P **P 21 33 48.9 +0.4**
CTKT Corum 28.62 293 *i* P **P 21 33 49.6 +0.7**
GULE Gulek 28.72 286 *i* P **P 21 33 51.0 +1.2**
MMAI Mount Meron Ar 28.82 278 P **P 21 33 50.9 +0.3**
MMAI PcP **PcP 21 37 01.4 +1.2**
MMAI Mount Meron Ar 28.82 278 P **P 21 33 50.9 +0.3**
comp=Z,27nm,1.0s,baz=69,slow=15,SNR=14
MMAI PcP **PcP 21 37 01.4 +1.2**
comp=Z,3.0nm,0.5s,baz=74,slow=7.1,SNR=6.2
MMAI LR LR 21 46 50.6
comp=Z,2μm,19.7s,baz=70,slow=40
CDAG Cicekdag 28.93 291 *i* P **P 21 33 52.0 +0.4**
ZAK Zakamensk 29.10 46⇑*i* P **P 21 33 53.7 +0.7**
ZAK *e* 21 37 01.6
ZAK pmax pmax
comp=Z,19nm,1.0s
ILGA Ilgaz 29.45 294 *i* P **P 21 33 57.5 +1.2**
BR131 Keskin Array S 29.50 292 *e*P **P 21 33 56.5 -0.2**
comp=Z,48nm,0.9s
BR131 *e*PcP **PcP 21 37 02.2 +0.4**
BRTR Keskin Array B 29.50 292 P **P 21 33 56.8 +0.1**
BRTR PcP **PcP 21 37 02.6 +0.8**
BRTR Keskin Array B 29.50 292 P **P 21 33 56.8 +0.1**
comp=Z,49nm,0.9s,baz=104,slow=8.1,SNR=111
BRTR PcP **PcP 21 37 02.6 +0.8**
comp=Z,2.9nm,0.7s,baz=158,slow=3.3,SNR=5.1
SIM Simferopol' **29.51 302***d i* P **P 21 33 57.0 +0.5**
SIM *e*S **S 21 38 56.0 +5.6**
SIM pmax pmax
comp=Z,45nm,0.9s
ELDT Eldivan 29.66 293 *i* P **P 21 33 58.4 +0.3**
KMI Kunming 29.69 99 P **P 21 34 00.4 +1.8**
KMI pP **pP 21 34 03.0 -0.5**
KMI sP **sP 21 34 04.3 -1.2**
KMI PP **PnPn 21 34 56.5 +2.8**
KMI S **S 21 38 54.0 0.0**
KMI SS **SnSn 21 40 26.9 +3.7**
KMI pmax pmax
comp=Z,12nm,0.8s
KMI pmax pmax
comp=Z,270nm,4.6s
KMI LR LR
comp=N,1μm,12.4s
KMI LR LR
comp=E,2μm,18.4s
KMI LR LR
comp=Z,3μm,21.3s
BALT Daday 29.71 295 *i* P **P 21 33 59.5 +0.9**
TLY Talaya 29.80 44 *e*P **P 21 33 59.8 +0.7**
TLY pmax pmax
comp=Z,9.0nm,0.9s
TLY MLR MLR
comp=Z,254nm,14.0s
BBAL Bala 29.90 291 *i* P **P 21 34 00.3 +0.1**
CHTO Chiang Mai 29.90 113 *e*P **P 21 34 00.3 +0.1**
CHTO pmax pmax
comp=Z,204nm,2.3s
CHTO Chiang Mai 29.90 113 *e*P **P 21 34 00.3 +0.1**
comp=Z,204nm,2.3s
CHTO Chiang Mai 29.90 113 P **P 21 34 01.5 +1.3**
SNR=18
CHTO Chiang Mai 29.90 113 P **P 21 34 01.0 +0.8**
comp=Z,33nm,1.9s,comp=Z,612nm
CMMT Chiang Mai 29.90 113 P **P 21 34 01.4 +1.1**
comp=Z,29nm,1.8s,comp=Z,622nm
EIL Elat 30.05 271 P **P 21 34 01.7 +0.2**
EIL Elat 30.05 271 *e*P **P 21 34 01.4 -0.1**
EIL Elat 30.05 271 P **P 21 34 01.7 +0.2**
comp=Z,72nm,1.1s,baz=63,slow=2.7,SNR=28
CM31 Chiang Mai Arr 30.11 114 *e*P **P 21 34 02.1 0.0**
comp=Z,39nm,1.1s
CMAR Chiang Mai Arr 30.11 114 P **P 21 34 02.5 +0.3**
CMAR PcP **PcP 21 37 05.1 +1.5**
CMAR PKiKP **PKiKP 21 44 35.6 -0.1**
CMAR Chiang Mai Arr 30.11 114 P **P 21 34 02.5 +0.3**
comp=Z,14nm,1.0s,baz=303,slow=8.9,SNR=40
CMAR PcP **PcP 21 37 05.1 +1.5**
comp=Z,2.0nm,0.8s,baz=286,slow=3.9,SNR=4.3
CMAR PKiKP **PKiKP 21 44 35.6 -0.1**
comp=Z,0.6nm,0.8s,baz=268,slow=1.0,SNR=5.4
CMAR LR LR 21 49 04.2
comp=Z,1μm,19.1s,baz=304,slow=42
ANTO Ankara 30.14 292 *e*P **P 21 34 02.9 +0.6**
ANTO *e* 21 37 03.4
ANTO pmax pmax
comp=Z,44nm,1.2s
ANTO Ankara 30.14 292 *e*P **P 21 34 02.9 +0.6**
comp=Z,44nm,1.2s
ANTO *e*PcP **PcP 21 37 03.4 0.0**
ANTO Ankara 30.14 292 P **P 21 34 03.4 +1.1**
SNR=8.5
CSS Prodhromos 30.16 282 *e*P **P 21 34 05.6 +3.2**
comp=Z,25nm,1.0s
SONM Songino Array 30.31 52 P **P 21 34 04.8 +1.1**
SONM Songino Array 30.31 52 P **P 21 34 04.8 +1.1**
comp=Z,14nm,0.8s,baz=260,slow=9.0,SNR=14
SONM LR LR 21 47 37.4
comp=Z,497nm,21.3s,baz=85,slow=39
IRK Irkutsk 30.38 43 *e*P **P 21 34 05.0 +0.8**
IRK *e* 21 37 03.2
IRK pmax pmax
comp=Z,65nm,2.2s
KDHN Kadinhani 30.73 289 *i* P **P 21 34 06.8 -0.8**
ULN Ulaanbaatar 30.75 52 *e*P **P 21 34 08.3 +0.7**
comp=Z,27nm,1.1s
ULN Ulaanbaatar 30.75 52 P **P 21 34 08.7 +1.1**
SNR=19
ULN Ulaanbaatar 30.75 52 P **P 21 34 08.2 +0.6**
comp=Z,24nm,2.0s
MOS Moscow 31.03 324 *e*P P 21 34 06.2 -3.6
MOS *e* 21 35 06.3
MOS pmax pmax
comp=Z,89nm,1.3s
MOS MLR MLR
comp=E,2μm,12.0s
MOS MLR MLR
comp=Z,3μm,12.0s
MOS MLR MLR
comp=N,800nm,11.0s
OBN Obninsk 31.25 322⇑*e*P **P 21 34 12.0 +0.3**
OBN *e**PP pP 21 34 23.6 +6.9
OBN *e* 21 35 22.6
OBN pmax pmax
comp=Z,130nm,1.7s
OBN MLR MLR
comp=Z,4μm,22.0s
OBN Obninsk 31.25 322 P **P 21 34 11.1 -0.6**
comp=Z,385nm,0.6s,SNR=7.1
TRBA At Turbah 31.46 235 *e*P P 21 34 10.0 -4.3
SEYT Eskypehyr 31.66 291 *i* P **P 21 34 15.5 -0.2**
XAN Xi'an 32.03 79 P **P 21 34 19.8 +0.8**
XAN pP **pP 21 34 26.6 +2.7**
XAN S **S 21 39 27.6 -2.6**
XAN pmax pmax
comp=Z,8.0nm,1.4s
XAN LR LR
comp=N,1μm,17.4s
XAN LR LR
comp=Z,380nm,17.4s
BTO Baotou 32.17 67 *e*P **P 21 34 21.3 +1.1**
BTO pmax pmax
comp=Z,19nm,1.8s
KORT Korkueli 32.26 287 *i* P **P 21 34 20.6 -0.5**
GYA Guiyang 32.38 94⇑*i* P **P 21 34 23.5 +1.3**
GYA PP **PnPn 21 35 29.8 +0.9**
GYA PcP **PcP 21 37 11.0 +1.3**
GYA S **S 21 39 35.6 -0.3**
GYA ScP **ScP 21 40 53.8 +1.0**
GYA SS **SnSn 21 41 29.0 +0.5**
GYA pmax pmax
comp=Z,40nm,0.8s
GYA pmax pmax
comp=Z,140nm,4.8s
GYA LR LR
comp=N,1μm,15.8s
GYA LR LR
comp=E,830nm,13.7s
GYA LR LR
comp=Z,950nm,14.3s
GDZ Gediz 32.74 291 *i* P **P 21 34 25.4 +0.1**
KHAL Karahalli 32.79 289 *i* P **P 21 34 25.3 -0.4**
GOLH Golhisar 32.86 287 *i* P **P 21 34 27.0 +0.7**
AKAS Kas 32.96 285 *i* P **P 21 34 24.7 -2.5**
TLCR 33.26 302 ⇑P **P 21 34 30.1 +0.6**
TLCR 33.26 302⇑*i* P **P 21 34 30.1 +0.6**
HHC Hu-ho-hao-te 33.33 66 *e*P **P 21 34 32.3 +1.9**
HHC PP **PP 21 35 44.1 -1.6**
HHC PcP **PcP 21 37 14.3 +2.2**
HHC S **S 21 39 51.4 +0.9**
HHC sS **sS 21 39 58.0 -0.7**
HHC ScP **ScP 21 40 56.6 +0.8**
HHC PcS **PcS 21 40 59.3 +1.6**
HHC SS **SnSn 21 41 53.6 +2.3**
HHC ScS **ScS 21 44 56.8 +0.2**
HHC pmax pmax
comp=Z,54nm,1.0s
HHC pmax pmax
comp=Z,360nm,5.6s
HHC LR LR
comp=N,1μm,11.0s
HHC LR LR
comp=E,1μm,12.6s
HHC LR LR
comp=Z,1μm,12.7s
DEMI Demirci 33.34 291 *i* P **P 21 34 29.9 -0.5**
KIS Kishinev 33.45 305⇓*i* P **P 21 34 30.0 -1.2**
KIS *e* 21 35 40.0
KIS *e* 21 36 02.0
KIS pmax pmax
comp=Z,500nm,1.6s
KIS pmax pmax
comp=Z,500nm,2.0s
KIS MLR MLR
comp=Z,2μm,15.0s
KIS MLR MLR
comp=E,2μm,16.0s
KIS MLR MLR
comp=Z,2μm,16.0s
KIS Kishinev 33.45 305⇓*i* P **P 21 34 30.0 -1.2**
comp=Z,500nm,2.0s
KIS *e*S S 21 40 03.0 +11
KIS LRM MLR 21 51 18.0
comp=Z,2μm,16.0s
DURS Dursunbey 33.48 292 *i* P **P 21 34 29.9 -1.8**
MANT Manisa 33.51 290 *i* P **P 21 34 31.4 -0.7**
PSN Preselentsi 33.63 299 *e*P **P 21 34 33.9 +1.1**
TURN Turunc 33.67 287 *i* P **P 21 34 35.2 +2.0**
CFR Carcaliu 33.74 302 ⇓P **P 21 34 34.0 +0.3**
CFR Carcaliu 33.74 302⇓*i* P **P 21 34 34.0 +0.3**
LEOM Leova 33.78 304 P **P 21 34 34.9 +0.9**
AKASG Malin Array Be 33.86 312 P **P 21 34 34.6 -0.1**
AKASG 21 35 51.5
AKASG Malin Array Be 33.86 312 P **P 21 34 34.6 -0.1**
AKASG PP **PP 21 35 51.5 +0.2**
AKASG ScP **ScP 21 40 59.0 +1.8**
AKASG Malin Array Be 33.86 312 P **P 21 34 34.6 -0.1**
comp=Z,98nm,0.9s,baz=91,slow=7.4,SNR=138
AKASG PP **PP 21 35 51.5 +0.2**
comp=Z,17nm,1.0s,baz=102,slow=11,SNR=4.9
AKASG ScP **ScP 21 40 59.0 +1.8**
comp=Z,0.3nm,0.2s,baz=85,slow=2.2,SNR=5.3
AKASG LR LR 21 50 34.5
comp=Z,2μm,21.1s,baz=105,slow=40
AK02 Malin Array Si 33.86 312 *e*P **P 21 34 34.3 -0.4**
AK01 Malin Array Si 33.86 312 *e*P **P 21 34 34.3 -0.4**
AK01 *e*PP **PP 21 35 52.5 +1.2**
KIEV Kiev 33.87 312 *e*P **P 21 34 33.8 -0.9**
KIEV *e* 21 35 51.8
KIEV pmax pmax
comp=Z,121nm,1.0s
KIEV Kiev 33.87 312 *e*P **P 21 34 33.8 -0.9**
comp=Z,121nm,1.0s
KIEV *e*PP **PP 21 35 51.8 +0.5**
AKHS Akhisar 34.05 290 *i* P **P 21 34 36.4 -0.1**
BALY Balya 34.13 292 *i* P **P 21 34 37.4 +0.1**
PRD Provadia 34.19 298 *e*P **P 21 34 38.2 +0.6**
IAS Iasi 34.33 305 P **P 21 34 40.3 +1.5**
VRI Vrincioaia 34.78 303 ⇑P **P 21 34 44.3 +1.5**
VRI Vrincioaia 34.78 303⇑*i* P **P 21 34 44.3 +1.5**
PLOR Plostina 34.83 303 ⇓P **P 21 34 44.7 +1.5**
PLOR Plostina 34.83 303⇓*i* P **P 21 34 44.7 +1.5**
ISR Istrita 34.86 301⇑*i* P **P 21 34 41.3 -2.2**
TESR 34.88 304⇑*i* P **P 21 34 44.3 +0.7**
KARP Karpathos 35.03 285 *e*P **P 21 34 44.4 -0.7**
URLA Izmir 35.06 290 *i* P **P 21 34 44.0 -1.3**
PRK Paraskevi 35.21 291 *e*P **P 21 34 46.2 -0.3**
PRAR RASCA 35.25 305⇓*i* P **P 21 34 47.6 +0.8**
ALN Alexandroupoli 35.25 294 *e*P **P 21 34 45.9 -1.0**
SZH Strazhica 35.26 298 *i* P **P 21 34 47.1 +0.2**
MLR Muntele Rosu 35.30 302 P **P 21 34 49.1 +1.7**
MLR Muntele Rosu 35.30 302⇑*i* P **P 21 34 49.3 +1.9**
MLR Muntele Rosu 35.30 302 P **P 21 34 49.1 +1.7**
comp=Z,27nm,0.8s,baz=98,slow=2.7,SNR=130
BOZC Bozcaada 35.33 292 *i* P **P 21 34 46.7 -0.8**
CHOS Chios island 35.48 290 *e*P P 21 34 45.0 -3.9
MICGM Minsk 35.65 318 *e*P **P 21 34 49.0 -1.1**
MNK Minsk 35.68 318 *e*P **P 21 34 49.0 -1.3**
DOPR Dopca 35.72 303⇑*i* P **P 21 34 52.4 +1.6**
CIT Chita 35.76 47 *e*P **P 21 34 52.0 +0.9**
CIT *e* 21 34 59.9
TMCR Tamitsa 35.84 337 *e*P **P 21 34 50.6 -0.9**
TMCR pmax pmax
comp=Z,201nm,1.3s
ZKR Zakros 35.87 284 *e*P **P 21 34 51.8 -0.5**
VOIR 35.93 302 ⇓P **P 21 34 53.4 +0.7**
VOIR 35.93 302⇓*i* P **P 21 34 53.3 +0.6**
BURAR Bucovina Array 35.96 306⇓*i* P **P 21 34 53.8 +0.8**
BUR08 Bucovina Ar. S 35.97 306 *e*P **P 21 34 53.4 +0.3**
LIA Limnos Island 35.99 292 *e*P **P 21 34 51.2 -2.0**
APE Apeiranthos 36.07 288 ⇓P **P 21 34 52.8 -1.2**
APE Apeiranthos 36.07 288⇓*i* P **P 21 34 52.8 -1.2**
APE Apeiranthos 36.07 288 *e*P **P 21 34 53.1 -0.9**
RZN Rozhen 36.21 296 *i* P **P 21 34 55.1 -0.2**
ARR Arges 36.22 302⇑*i* P **P 21 34 56.6 +1.4**
CHBT CHBT 36.23 118 P **P 21 34 56.8 +1.3**
SANT Santorini 36.24 287 *e*P **P 21 34 56.0 +0.5**
comp=Z,203nm,1.2s
NPS Neapolis 36.33 285 *e*P **P 21 34 55.7 -0.5**
NACGM Naroch 36.38 318 *e*P P 21 34 53.0 -3.3
PUL Pulkovo 36.40 327⇓*e*P **P 21 34 58.4 +2.0**
PUL pmax pmax
comp=Z,98nm,1.0s
PUL MLR MLR
comp=Z,4μm,19.0s
LAST Lasithi 36.46 285 *e*P **P 21 34 56.8 -0.6**
IIGN Ignalina 36.81 319 *e*P **P 21 35 00.6 +0.5**
IIGN AMB AMB 21 35 03.0

comp=Z,38nm,0.7s
LOT Lotru 36.83 302⇓ *i*P **P 21 35 01.4 +0.9**
MPEP Malo Peshtene 36.86 298 *i* P **P 21 35 01.7 +1.1**
NVR Nevrokopi 36.87 295 *e*P **P 21 35 00.9 +0.1**
BJI Beijing 36.90 67 P **P 21 35 03.1 +2.2**
BJI S **S 21 40 46.5 +1.4**
BJI pmax pmax
comp=Z,38nm,1.1s
BJI pmax pmax
comp=Z,200nm,3.5s
BJI LR LR
comp=N,840nm,15.3s
BJI LR LR
comp=E,590nm,16.1s
BJI LR LR
comp=Z,400nm,26.6s
IDI Anoyia 36.90 285 *e*P **P 21 34 59.9 -1.2**
comp=Z,72nm,1.1s
IDI Anoyia 36.90 285 *e*P **P 21 35 00.9 -0.3**
IZAR Zarasai 36.92 319 *e*P **P 21 35 01.3 +0.4**
IZAR AMB AMB 21 35 03.7
comp=Z,26nm,1.0s
ISAL Salakas 36.93 319 *e*P **P 21 35 01.5 +0.5**
ISAL AMB AMB 21 35 03.9
comp=Z,24nm,2.1s
LVV L'vov 36.98 309 *e*P **P 21 35 02.9 +1.4**
LVV *e* 21 36 28.2
LVV *e*S **S 21 40 48.0 +1.9**
LVV MLR MLR
comp=E,600nm,14.0s
LVV MLR MLR
comp=Z,600nm,14.0s
LVV MLR MLR
comp=N,600nm,13.0s
SIVA Sivas 37.02 284 *e*P **P 21 35 00.5 -1.6**
BMR Baia Mare 37.12 306⇑P **P 21 35 04.2 +1.4**
BMR Baia Mare 37.12 306⇑*i*P **P 21 35 04.2 +1.4**
PTL Penteli 37.23 290 *e*P **P 21 35 03.6 -0.3**
PLG Polygyros 37.27 293 *e*P **P 21 35 03.8 -0.4**
VTS Vitosha 37.28 297⇑P **P 21 35 04.7 +0.3**
VTS Vitosha 37.28 297⇑*i*P **P 21 35 04.7 +0.3**
VTS Vitosha 37.28 297 *i* P **P 21 35 04.0 -0.4**
SOH Sokhos 37.30 294 *e*P **P 21 35 04.5 +0.1**
WHN Wuhan 37.35 83 P **P 21 35 04.3 -0.6**
WHN S **S 21 40 49.8 -2.4**
WHN pmax pmax
comp=Z,680nm,1.9s
WHN LR LR
comp=N,1μm,10.9s
WHN LR LR
comp=E,1μm,10.9s
WHN LR LR
comp=Z,3μm,18.3s
ATH Athens Observa 37.36 290 *e*P **P 21 35 04.2 -0.7**
KKB Krupnik 37.41 296 *i* P **P 21 35 05.0 -0.4**
VAM Vamos 37.43 285 *e*P **P 21 35 04.9 -0.7**
DEV Deva 37.45 303⇑P **P 21 35 07.0 +1.4**
DEV Deva 37.45 303⇑*i*P **P 21 35 07.0 +1.4**
JOF Joensuu 37.52 332 *e*P **P 21 35 05.2 -0.7**
JOF pmax pmax
comp=Z,56nm,0.6s
JOF Joensuu 37.52 332 *e*p **P 21 35 05.2 -0.7**
comp=Z,56nm,0.6s
GZR Gura Zlata 37.53 302⇑P **P 21 35 06.7 +0.3**
GZR Gura Zlata 37.53 302⇑*i*P **P 21 35 06.7 +0.3**
NEO Neokhori 37.56 292 *e*P **P 21 35 05.7 -0.9**
NAIG Nisos Aigina 37.57 289 *e*P **P 21 35 06.2 -0.5**
DRGR 37.61 304⇑P **P 21 35 08.0 +1.0**
DRGR 37.61 304⇑*i*P **P 21 35 08.0 +1.0**
GVD Gavdhos 37.64 284 *e*P **P 21 35 07.5 +0.1**
comp=Z,267nm,0.9s
GVD Gavdhos 37.64 284 *e*P **P 21 35 06.2 -1.1**
TRPA Tarpa 37.80 306⇓*i*P **P 21 35 09.7 +1.3**
TRPA Tarpa 37.80 306⇓*e*P **P 21 35 10.6 +2.2**
DID Didima 37.81 289 *e*P P 21 35 03.7 -5.1
KWP Kalwaria Pacla 37.81 309 *e*P **P 21 35 09.3 +0.7**
KWP pmax pmax
comp=Z,233nm,1.0s
KWP Kalwaria Pacla 37.81 309 *e*P **P 21 35 09.3 +0.7**
comp=Z,233nm,1.0s
KWP Kalwaria Pacla 37.81 309 *e*P **P 21 35 09.5 +0.9**
KWP *e*S **S 21 40 57.7 -1.1**
KWP LMZ LR 21 49 48.7
LKR Lokris 37.82 291 *e*P **P 21 35 07.2 -1.6**
LTK Loutraki 37.94 290 *e*P **P 21 35 07.3 -2.5**
UZH Uzhgorod 37.99 307 *e*P **P 21 35 10.2 +0.1**
UZH *e* 21 37 25.0
UZH *e*S **S 21 40 59.8 -1.7**
UZH *e*SSS SSS 21 44 04.2
KOLS Kolonicke sedl 38.03 308 *e*P **P 21 35 11.1 +0.6**
KOLS pmax pmax
comp=Z,50nm,1.1s
KOLS Kolonicke sedl 38.03 308 *e*P **P 21 35 11.1 +0.6**
KOLS *e*PP **PnPn 21 36 38.9 +0.2**
KOLS *e*S S 21 41 15.9 +14
VLI Veliai 38.18 288 *e*P P 21 35 08.5 -3.4
KYTH Kithira 38.19 287 *e*P **P 21 35 10.6 -1.4**
SUW Suwalki 38.20 316 *e*P **P 21 35 11.2 -0.6**
SUW *e* 21 36 39.4
SUW pmax pmax
comp=Z,76nm,0.9s
SUW Suwalki 38.20 316 *e*P **P 21 35 11.2 -0.6**
comp=Z,76nm,0.9s
SUW *e*PP **PP 21 36 39.4 +0.3**
SUW Suwalki 38.20 316 *e*P **P 21 35 11.9 +0.1**
SUW *e*PP **PP 21 36 38.0 -1.0**
SUW LMZ LR 21 53 41.0
AGG Agios Georgios 38.28 291 *e*P **P 21 35 10.0 -2.8**
BZS Buzias 38.35 302⇑P **P 21 35 14.1 +0.9**
BZS Buzias 38.35 302⇑*i*P **P 21 35 14.1 +0.9**
QIZ Qiongzhong 38.37 103 P **P 21 35 14.1 +0.5**
QIZ S **S 21 41 09.3 +1.5**
QIZ LR LR
comp=N,570nm,13.0s
QIZ LR LR
comp=E,280nm,19.2s
QIZ LR LR
comp=Z,900nm,16.2s
GUR Goura 38.44 290 *e*P **P 21 35 16.2 +2.0**
THL Klokotos Trika 38.45 292 *e*P P 21 35 12.3 -1.8
VLX Vlachokerasia 38.50 289 *e*P P 21 35 09.1 -5.6
KZN Kozani 38.55 294 *e*P **P 21 35 15.3 +0.3**
CRVS Cervenica-Dubn 38.56 307 *e*P **P 21 35 14.6 -0.4**
CRVS pmax pmax
comp=Z,102nm,1.6s
CRVS Cervenica-Dubn 38.56 307 *e*P **P 21 35 14.6 -0.4**
CRVS *e*PP **PP 21 36 43.9 +0.8**
CRVS *e*S **S 21 41 09.2 -1.0**
EVR Evrytania 38.70 291 *e*P **P 21 35 15.2 -1.1**
ITM Ithomi 38.89 289 *e*P **P 21 35 16.0 -1.9**
FIA1 FINESS Array S 39.00 328 *e*P **P 21 35 17.9 -0.6**
FIA1 *e*PP **PP 21 36 47.2 -0.5**
FIA1 *e*PcP **PcP 21 37 28.9 +0.5**
FINES FINESS Array B 39.00 328 P **P 21 35 18.1 -0.4**
FINES PP **PP 21 36 47.0 -0.8**
FINES PcP **PcP 21 37 29.3 +0.9**
FINES FINESS Array B 39.00 328 P **P 21 35 18.1 -0.4**
comp=Z,33nm,0.7s,baz=110,slow=11,SNR=96
FINES PP **PP 21 36 47.0 -0.8**
comp=Z,20nm,0.9s,baz=110,slow=17,SNR=7.8
FINES PcP **PcP 21 37 29.3 +0.9**
comp=Z,9.0nm,0.6s,baz=107,slow=3.9,SNR=5.1
FINES LR LR 21 53 03.8
comp=Z,4μm,18.3s,baz=109,slow=39
PYL PYLOS 39.09 288 *e*P **P 21 35 18.0 -1.5**
RLS Riolos of Patr 39.10 290 *e*P **P 21 35 17.8 -1.8**
KAF Kangasniemi 39.18 329 *e*P **P 21 35 18.8 -1.1**
KAF pmax pmax
comp=Z,16nm,0.6s
KAF Kangasniemi 39.18 329 *e*p **P 21 35 18.8 -1.1**
comp=Z,16nm,0.6s
BEL Belsk 39.27 312 *e*P **P 21 35 22.0 +1.2**
BEL *e*PP **PP 21 36 50.5 -0.3**
BEL LMZ LR 21 53 13.5
JAN Janina 39.33 293 *e*P **P 21 35 21.7 +0.2**
LVZ Lovozero 39.34 340⇑*e*P **P 21 35 22.7 +1.5**
LVZ pmax pmax
comp=Z,123nm,1.7s
LVZ MLR MLR
comp=Z,3μm,16.0s
NIE Niedzica 39.35 308⇑P **P 21 35 23.2 +1.6**
NIE Niedzica 39.35 308 *e*P **P 21 35 23.2 +1.6**
APA Apatity 39.49 339⇓*i*P **P 21 35 23.2 +0.8**
APA pmax pmax
comp=Z,6.0nm,0.8s
APA MLR MLR
comp=Z,5μm,12.0s
PSZ Piszkesteto 39.56 306 *e*P **P 21 35 24.1 +0.7**
PSZ *e* 21 36 57.1
PSZ Piszkesteto 39.56 306 *e*P **P 21 35 24.1 +0.7**
PSZ *e*PP **PnPn 21 36 57.0 -0.1**
PSZ Piszkesteto 39.56 306⇓*i*P **P 21 35 24.6 +1.2**
PSZ Piszkesteto 39.56 306⇓*e*P **P 21 35 24.9 +1.5**
PKSN Nyarlorinc 39.56 304 *e*P **P 21 35 26.1 +2.8**
OJC Ojcow 39.73 309 *e*P **P 21 35 25.0 +0.3**
OJC *e*S **S 21 41 33.0 +5.2**
OJC MLR MLR
comp=Z,1μm,14.2s
OJC Ojcow 39.73 309 *e*P **P 21 35 25.6 +0.8**
comp=Z,135nm,1.2s
OJC Ojcow 39.73 309 *e*P **P 21 35 25.0 +0.3**
OJC *e*pP **pP 21 35 29.2 -0.6**
OJC *e*S **S 21 41 33.0 +5.2**
OJC L L 21 56 06.0
comp=Z,1μm,14.2s
VLS Valsamata 39.76 290 *e*P **P 21 35 22.3 -2.8**
TIR Tirane 39.87 296 *e*P **P 21 35 25.7 -0.2**
TIR pmax pmax
comp=Z,43nm,1.2s
TIR Tirane 39.87 296 *e*P **P 21 35 25.6 -0.2**
comp=Z,43nm,1.2s
TIR Tirane 39.87 296 *e*P **P 21 35 25.2 -0.7**
PKS2 Kecel 40.01 304⇑*e*P **P 21 35 29.4 +2.3**
PKS7 Kunszentmiklos 40.05 304⇑*e*P **P 21 35 29.5 +2.2**
KEK Kerkira 40.13 293 *e*P **P 21 35 26.8 -1.3**
BUD Budapest 40.14 305⇓*e*P **P 21 35 30.1 +2.0**
VYHS Vyhne 40.28 307 *e*P **P 21 35 29.9 +0.6**
VYHS pmax pmax
comp=Z,48nm,1.6s
VYHS Vyhne 40.28 307 *e*P **P 21 35 29.9 +0.6**
VYHS *e*PP **PnPn 21 37 04.4 -1.2**
VYHS *e*S S 21 41 45.4 +9.4
PKSM Moragy 40.41 303⇓*e*P **P 21 35 32.0 +1.6**
PKSG 40.57 305 *e*P **P 21 35 33.3 +1.6**
NJ2 Nanjing 40.60 79 *e*P **P 21 35 32.8 +0.7**
NJ2 S **S 21 41 40.5 -0.6**
NJ2 pmax pmax
comp=Z,50nm,1.2s
NJ2 pmax pmax
comp=Z,170nm,8.2s
NJ2 LR LR
comp=N,680nm,13.8s
NJ2 LR LR
comp=E,810nm,14.0s
NJ2 LR LR
comp=Z,1μm,21.3s
PKS9 Tamasi 40.66 304 *e*P **P 21 35 34.5 +2.1**
OKC Ostrava-Krasne 40.78 309 *e*P **P 21 35 34.1 +0.8**
OKC *e* 21 37 12.1
OKC MLR MLR
comp=Z,700nm,11.9s
OKC Ostrava-Krasne 40.78 309⇑*e*P **P 21 35 34.1 +0.8**
OKC *e*PP **PnPn 21 37 12.1 +0.7**
OKC AMS AMS 21 56 40.0
comp=Z,700nm,11.9s
PKST T"'s 40.81 305 *e*P **P 21 35 35.4 +1.7**
MORC Moravsky Berou 41.17 309⇑P **P 21 35 37.6 +0.9**
MORC Moravsky Berou 41.17 309 *e*P **P 21 35 37.6 +0.9**
comp=Z,125nm,1.1s
MORC *e*PP **PP 21 37 09.8 -1.7**
MORC Moravsky Berou 41.17 309⇑*i*P **P 21 35 37.5 +0.9**
PSI Prapat 41.21 133 P **P 21 35 36.9 -0.5**
PSI Prapat 41.21 133 P **P 21 35 36.9 -0.5**
comp=Z,76nm,0.6s,baz=316,slow=7.2,SNR=54
PSI LR LR 21 54 21.1
comp=Z,2μm,19.2s,baz=305,slow=38
PSI Prapat 41.21 133 S **P 21 35 37.2 -0.2**
baz=23,SNR=12
SMOL Smolenice 41.22 307 *e*P **P 21 35 39.2 +2.2**
SMOL *e* 21 37 19.8
SMOL Smolenice 41.22 307 *e*P **P 21 35 39.2 +2.2**
SMOL *e*PP **PnPn 21 37 19.8 +3.2**
IPM Ipoh 41.23 129 *e*P **P 21 35 37.4 0.0**
comp=Z,116nm,1.1s
IPM Ipoh 41.23 129 P **P 21 35 38.3 +0.9**
DL2 Dalian 41.23 68 P **P 21 35 38.6 +1.4**
DL2 S **S 21 41 53.9 +3.6**
DL2 pmax pmax
comp=Z,13nm,1.7s
DL2 pmax pmax
comp=Z,210nm,3.0s
DL2 LR LR
comp=N,980nm,16.5s
DL2 LR LR
comp=Z,640nm,15.1s
GKP Gorka Klasztor 41.58 314 *e*P **P 21 35 40.8 +0.9**
GKP *e*PP **PnPn 21 37 19.1 -1.6**
GKP LMZ LR 21 53 43.2
BEHE Becsehely 41.70 304⇑*e*P **P 21 35 42.1 +1.1**
VRAC Vranov 41.77 308 P **P 21 35 42.3 +0.7**
VRAC Vranov 41.77 308⇑*i*P **P 21 35 42.6 +1.0**
VRAC Vranov 41.77 308 P **P 21 35 42.3 +0.7**
comp=Z,20nm,0.9s,baz=96,slow=8.2,SNR=34
SOP Sopron 41.81 305⇓*e*P **P 21 35 42.8 +1.0**
DPC Dobruska-Polom 41.97 309⇑*i*P **P 21 35 44.5 +1.3**
DPC *e* 21 37 26.6
DPC MLR MLR
comp=Z,900nm,12.1s
DPC Dobruska-Polom 41.97 309 *e*P **P 21 35 44.4 +1.3**
comp=Z,104nm,0.9s
DPC Dobruska-Polom 41.97 309⇑*i*P **P 21 35 44.5 +1.3**
DPC *e*PP **PnPn 21 37 26.6 +1.2**
DPC AMS AMS 21 57 30.0
comp=Z,900nm,12.1s
KTGM Kuala Trenggan 41.98 126 P **P 21 35 44.5 +0.9**
KSP Ksiaz 42.00 310 *e*P **P 21 35 44.0 +0.6**
KSP *e* 21 37 19.5
KSP MLR MLR
comp=Z,2μm,16.7s
KSP Ksiaz 42.00 310 *e*P **P 21 35 43.7 +0.3**
KSP *e*PP **PP 21 37 19.6 -0.9**
KSP LMZ LR 21 52 45.7
KOGS Kog 42.06 304 *i* P **P 21 35 44.2 +0.3**
UPC Upice 42.17 310⇑*i*P **P 21 35 45.8 +1.0**
UPC Upice 42.17 310⇑*i*P **P 21 35 45.8 +1.0**
SNY Shenyang 42.26 63⇑P **P 21 35 46.1 +0.5**
SNY pmax pmax
comp=Z,33nm,1.9s
SNY pmax pmax
comp=Z,200nm,3.5s
SNY LR LR
comp=N,380nm,16.2s
SNY LR LR
comp=E,770nm,14.2s
SNY LR LR
comp=Z,880nm,14.4s
CONA Conrad Observa 42.27 306⇓*i*pP **P 21 35 46.2 +0.5**
comp=Z,73nm,1.3s
CONA Conrad Observa 42.27 306⇓*i*P **P 21 35 46.2 +0.5**
comp=Z,73nm,1.3s
TREC Trest 42.50 308 *e*P **P 21 35 48.7 +1.2**
TREC MLR MLR
comp=Z,1μm,14.6s
TREC Trest 42.50 308⇑*e*P **P 21 35 48.7 +1.2**
TREC AMS AMS 21 57 10.0
comp=Z,1μm,14.6s
ARSA Arzberg 42.52 305⇑*i*pP **P 21 35 48.1 +0.4**
comp=Z,46nm,1.2s
ARSA Arzberg 42.52 305⇑*i*P **P 21 35 48.1 +0.4**
comp=Z,46nm,1.2s
TIP Timpagrande 42.54 293 *e*P **P 21 35 47.2 -0.8**
comp=Z,75nm,1.2s
FRIM Kepong 42.55 129 P **P 21 35 49.7 +1.4**
KEV Kevo 42.68 339 *e*P **P 21 35 48.6 0.0**
KEV pmax pmax
comp=Z,60nm,0.8s
KEV Kevo 42.68 339 *e*P **P 21 35 48.6 0.0**
comp=Z,60nm,0.8s
KEV Kevo 42.68 339 *e*p **P 21 35 47.7 -0.9**
comp=Z,33nm,0.6s
SSE Sheshan 42.79 79 P **P 21 35 52.3 +2.3**
SSE S **S 21 42 19.4 +5.9**
SSE pmax pmax
comp=Z,60nm,0.8s
SSE LR LR
comp=N,1μm,22.1s
SSE LR LR
comp=E,140nm,22.1s
SSE LR LR
comp=Z,730nm,19.3s
QZH Quanzhou 42.86 89 *e*P **P 21 35 51.8 +1.1**
QZH *e*S **S 21 42 13.3 -1.3**
QZH LR LR
comp=N,650nm,11.9s
QZH LR LR
comp=E,2μm,13.0s
QZH LR LR
comp=Z,3μm,14.2s
SOKA Soboth 42.89 304⇓*i*pP **P 21 35 51.0 +0.2**
comp=Z,77nm,1.3s
SOKA Soboth 42.89 304⇓*i*P **P 21 35 51.0 +0.2**
comp=Z,77nm,1.3s
ARCES ARCESS Array B 43.00 339 P **P 21 35 51.1 -0.1**
ARCES ARCESS Array B 43.00 339 P **P 21 35 51.1 -0.1**
comp=Z,75nm,0.7s,baz=108,slow=4.0,SNR=133
ARCES LR LR 21 54 59.4
comp=Z,3μm,20.1s,baz=127,slow=38
ARE0 ARCESS Array S 43.00 339 *e*P **P 21 35 51.1 -0.2**
PVCC Panska Ves 43.09 310 *e*P **P 21 35 53.6 +1.3**
PVCC *e* 21 37 33.9
PVCC MLR MLR
comp=Z,1μm,18.3s
PVCC Panska Ves 43.09 310⇑*e*P **P 21 35 53.6 +1.3**
PVCC *e*PP **PP 21 37 33.9 +1.6**
PVCC AMS AMS 21 57 20.0
comp=Z,1μm,18.3s
CUC Castrocucco 43.11 294 *e*P **P 21 35 52.5 -0.1**
comp=Z,156nm,0.9s
CUC Castrocucco 43.11 294 *e*P **P 21 35 52.9 +0.3**
PRU Pruhonice 43.11 309⇑*i*P **P 21 35 53.4 +1.0**
PRU *e* 21 37 35.4
PRU *e*S **S 21 42 23.6 +5.8**
PRU *e*SS **SnSn 21 45 43.1 -3.7**
PRU MLR MLR
comp=Z,800nm,12.3s
PRU Pruhonice 43.11 309⇑*i*P **P 21 35 53.4 +1.0**
PRU *e*PP **PP 21 37 35.4 +3.0**
PRU *e*S **S 21 42 23.6 +5.8**
PRU *e*SS **SnSn 21 45 43.1 -3.7**
PRU AMS AMS 21 58 10.0
comp=Z,800nm,12.3s
PRA Prague 43.18 309 ⇑P **P 21 35 54.0 +1.0**
PRA PP **PP 21 37 37.0 +3.8**
OBKA Obir 43.23 304⇑*i*pP **P 21 35 54.1 +0.5**
comp=Z,62nm,1.6s
OBKA Obir 43.23 304⇑*i*P **P 21 35 54.1 +0.5**
comp=Z,62nm,1.6s
MOA Molln 43.35 306⇑*i*pP **P 21 35 54.7 +0.3**
comp=Z,85nm,1.1s
MOA Molln 43.35 306⇑*i*P **P 21 35 54.7 +0.3**
comp=Z,85nm,1.1s
CN2 Changchun 43.38 60 *e*P **P 21 35 54.6 0.0**
CN2 *e*PP **PP 21 37 37.8 +2.4**
CN2 *e*S **S 21 42 23.5 +1.7**
CN2 *e*SS **SS 21 45 30.0 -5.5**
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,400nm,13.0s
CN2 LR LR
comp=E,400nm,13.0s
CN2 LR LR
comp=Z,700nm,14.0s
CEL Celeste 43.38 292 *e*P **P 21 35 53.1 -1.7**
comp=Z,105nm,1.4s
CEL *e*PcP **PcP 21 37 42.3 -0.9**
CEL Celeste 43.38 292 *e*P **P 21 35 54.2 -0.6**
KTK1 Kautokeino 43.44 338 *e*P **P 21 35 54.5 -0.3**
KTK1 AMB AMB 21 35 55.6
comp=Z,316nm,1.6s
KTK1 AMS AMS 21 55 05.5
comp=Z,7μm,14.0s
BRG Berggiesshubel 43.49 310 *i* P **P 21 35 56.4 +0.9**
comp=Z,109nm,1.2s
BRG PP **PP 21 37 37.4 +0.8**
comp=Z,38nm,1.6s
BRG S **S 21 42 28.0 +4.6**
BRG SS **SS 21 45 42.0 +4.4**
BRG
comp=N,869nm,11.6s
BRG
comp=E,2μm,13.3s
BRG
comp=Z,2μm,14.3s
BRG Berggiesshubel 43.49 310 *i* P **P 21 35 56.4 +0.9**
BRG 21 37 37.4
BRG S **S 21 42 28.0 +4.6**
BRG pmax pmax
comp=Z,109nm,1.2s
BRG pmax pmax
comp=Z,38nm,1.6s
BRG MLR MLR
comp=N,869nm,11.6s
BRG MLR MLR
comp=E,2μm,13.3s
BRG MLR MLR
comp=Z,2μm,14.3s
BRG Berggiesshubel 43.49 310 *e*P **P 21 35 56.7 +1.2**
comp=Z,109nm,1.2s
RUE Ruedersdorf 43.62 312 *e*P **P 21 35 56.9 +0.4**
comp=Z,100nm,1.0s
RUE *e*PP **PP 21 37 38.8 +0.9**
RUE Ruedersdorf 43.62 312 *e*P **P 21 35 56.6 +0.1**
comp=Z,73nm,1.0s
GEC2 GERESS Array S 43.68 307 *e*P **P 21 35 57.8 +0.6**
GEC2 *e* 21 37 41.0
GEC2 pmax pmax
comp=Z,56nm,1.2s
GEC2 GERESS Array S 43.68 307 *e*P **P 21 35 57.8 +0.6**
comp=Z,56nm,1.2s
GEC2 *e*PP **PP 21 37 41.0 +2.3**
GEC2 GERESS Array S 43.68 307 *e*P **P 21 35 57.9 +0.6**
GEC2 *e*PcP **PP 21 37 40.6 +1.9**
GERES GERESS Array B 43.68 307 P **P 21 35 56.7 -0.4**
GERES PP **PcP 21 37 41.6 -2.5**
GERES GERESS Array B 43.68 307 P **P 21 35 56.7 -0.4**
comp=Z,10.0nm,0.8s,baz=92,slow=7.1,SNR=51
GERES PP **PcP 21 37 41.6 -2.5**
comp=Z,10.0nm,1.0s,baz=88,slow=8.4,SNR=11
KHC Kasperske Hory 43.75 308 *e*P **P 21 35 57.9 +0.2**
KHC *e* 21 37 41.5
KHC *e*S **S 21 42 30.9 +3.6**
KHC *e*SS **SS 21 45 46.5 +3.7**
KHC MLR MLR
comp=Z,1μm,14.4s
KHC Kasperske Hory 43.75 308 *e*P **P 21 35 57.6 -0.1**
comp=Z,23nm,1.1s
KHC *e*PcP **PcP 21 37 42.1 -2.2**
KHC Kasperske Hory 43.75 308⇑*e*P **P 21 35 57.9 +0.2**
KHC *e*x x 21 36 20.0
KHC *e*PP **PP 21 37 41.5 +2.1**
KHC *e*S **S 21 42 30.9 +3.6**
KHC *e*SS **SS 21 45 46.5 +3.7**
KHC AMS AMS 21 57 50.0
comp=Z,1μm,14.4s
MYKA Terra Mystica 43.85 304⇑*i*pP **P 21 35 58.7 +0.2**
comp=Z,38nm,1.1s
MYKA Terra Mystica 43.85 304⇑*i*P **P 21 35 58.7 +0.2**
comp=Z,38nm,1.1s
FBE Freiberg 43.87 310 *e*P **P 21 36 00.0 +1.5**
comp=Z,142nm,1.3s
KBA Koelnbreinsper 44.02 305⇑*i*P **P 21 36 00.2 +0.2**
KBA pmax pmax
comp=Z,37nm,0.7s
KBA Koelnbreinsper 44.02 305⇑*i*pP **P 21 36 00.2 +0.2**
comp=Z,37nm,0.7s
KBA Koelnbreinsper 44.02 305⇑*i*P **P 21 36 00.2 +0.2**
comp=Z,37nm,0.7s
CLL Collm 44.09 311⇓*i*P **P 21 36 01.0 +0.7**
CLL *e* 21 37 41.0
CLL *e*S S 21 42 40.0 +8.0
CLL pmax pmax
comp=Z,84nm,1.4s
CLL Collm 44.09 311 *e*P **P 21 36 00.9 +0.7**
comp=Z,84nm,1.4s
CLL Collm 44.09 311⇓*i*P **P 21 36 01.0 +0.7**
comp=Z,84nm,1.4s
CLL *e* 21 36 36.0
CLL *e*PP **PP 21 37 41.0 -1.9**
CLL *e*(pPP) 21 37 44.0

CLL *e* 21 37 49.0
CLL *e* 21 41 58.0
CLL *eS* S 21 42 40.0 +8.0
CLL *e* 21 44 48.0
CLL *eSS* **ScS** **21 45 54.0 -4.1**
WET **Wettzell** **44.21 308** *eP* **P** **21 36 01.6 +0.3**
WET *e* 21 37 45.8
WET pmax pmax
comp=Z,59nm,2.0s
WET **Wettzell** **44.21 308** *eP* **P** **21 36 01.6 +0.3**
comp=Z,59nm,2.0s
WET *ePP* **PcP** **21 37 45.8 0.0**
RJOB **Jochberg** **44.34 306** *eP* **P** **21 36 02.8 +0.3**
comp=Z,58nm,1.4s
HFS **Hagfors** **44.44 323** P **P** **21 36 02.6 -0.3**
HFS PP **PP** **21 37 47.6 +1.1**
HFS **Hagfors** **44.44 323** P **P** **21 36 02.6 -0.3**
comp=Z,16nm,0.5s,baz=99,slow=9.2,SNR=60
HFS PP **PP** **21 37 47.6 +1.1**
comp=Z,11nm,0.8s,baz=97,slow=12,SNR=5.5
HFS LR LR 21 55 57.7
comp=Z,2µm,20.7s,baz=98,slow=38
TANN **Tannenbergstha** **44.44 310** *eP* **P** **21 36 04.4 +1.2**
comp=Z,93nm,1.4s
NKC **Novy Kostel** **44.45 309** *eP* **P** **21 36 04.7 +1.4**
NKC **Novy Kostel** **44.45 309**⇑ *eP* **P** **21 36 04.7 +1.4**
WERN **Wernitzgruen** **44.50 309** *eP* **P** **21 36 05.0 +1.4**
comp=Z,135nm,1.8s
AQU **L'Aquila** **44.52 298** *eP* **P** **21 36 05.3 +1.4**
comp=Z,69nm,1.0s
GUNZ **Gunzen** **44.52 309** *eP* **P** **21 36 05.1 +1.3**
comp=Z,102nm,1.4s
WERD **Werda** **44.54 310** *eP* **P** **21 36 05.1 +1.2**
comp=Z,88nm,1.3s
KGM **Kluang** **44.57 129** P **P** **21 36 05.9 +1.4**
COP **Copenhagen** **44.58 317** *i P* **P** **21 36 05.5 +1.4**
COP pmax pmax
comp=Z,22nm,1.0s
COP MLR MLR
comp=Z,800nm,18.0s
COP **Copenhagen** **44.58 317** *i P* **P** **21 36 05.5 +1.4**
comp=Z,22nm,1.0s
COP
comp=Z,800nm,17.0s
ABTA **Abfaltersbach** **44.61 304**⇓ *iP* **P** **21 36 04.2 -0.4**
comp=Z,25nm,1.0s
ABTA **Abfaltersbach** **44.61 304**⇓ *iP* **P** **21 36 04.2 -0.4**
comp=Z,25nm,1.0s
ROTZ **Rotzenmuhle** **44.62 309** *eP* **P** **21 36 06.3 +1.7**
comp=Z,212nm,1.6s
PLN **Plauen** **44.63 310** *eP* **P** **21 36 05.8 +1.1**
comp=Z,381nm,1.3s
MANZ **Manzenberg** **44.68 309** *eP* **P** **21 36 06.8 +1.7**
comp=Z,226nm,1.5s
NEUB **Neuenburg** **44.86 311** *eP* **P** **21 36 07.4 +1.0**
comp=Z,180nm,1.5s
MOX **Moxa** **44.97 310** *eP* **P** **21 36 08.6 +1.2**
MOX pmax pmax
comp=Z,192nm,1.5s
MOX **Moxa** **44.97 310** *eP* **P** **21 36 08.6 +1.2**
comp=Z,192nm,1.5s
WDD **Wield Dalam** **45.00 289** *eP* **P** **21 36 07.0 -0.7**
comp=Z,104nm,0.8s
WDD **Wield Dalam** **45.00 289** *eP* **P** **21 36 06.2 -1.5**
TRO **Tromso** **45.09 337** *eP* **P** **21 36 08.4 +0.5**
MYKOM **Kota Tinggi** **45.09 128** P **P** **21 36 10.0 +1.4**
WTTA **Wattenberg** **45.16 305**⇓ *iP* **P** **21 36 08.5 -0.7**
WTTA pmax pmax
comp=Z,68nm,1.2s
WTTA **Wattenberg** **45.16 305**⇓ *iP* **P** **21 36 08.5 -0.7**
comp=Z,68nm,1.2s
WTTA **Wattenberg** **45.16 305**⇓ *iP* **P** **21 36 08.5 -0.7**
comp=Z,68nm,1.2s
WATA **Walderalm** **45.20 305**⇑ *iP* **P** **21 36 08.6 -0.8**
WATA pmax pmax
comp=Z,24nm,1.0s
WATA **Walderalm** **45.20 305**⇑ *iP* **P** **21 36 08.6 -0.8**
comp=Z,24nm,1.0s
WATA **Walderalm** **45.20 305**⇑ *iP* **P** **21 36 08.6 -0.8**
comp=Z,24nm,1.0s
GRF **Grafenberg Arr** **45.27 309** *eP* **P** **21 36 11.5 +1.8**
GRF pmax pmax
comp=Z,175nm,1.3s
GRF MLR MLR
comp=Z,700nm,18.2s
GRF **Grafenberg Arr** **45.27 309** *eP* **P** **21 36 11.5 +1.8**
comp=Z,175nm,1.3s
GRF *eL* L 21 58 12.3
comp=Z,736nm,18.2s
GRFO **Grafenberg** **45.27 309** *eP* **P** **21 36 10.3 +0.6**
GRFO pmax pmax
comp=Z,457nm,2.0s
GRFO **Grafenberg** **45.27 309** *eP* **P** **21 36 10.3 +0.6**
comp=Z,457nm,2.0s
SSLB **Suanglung** **45.30 89** *eP* **P** **21 36 10.6 +0.3**
comp=Z,51nm,1.1s
FUR **Furstenfeldbru** **45.33 306** *eP* **P** **21 36 10.8 +0.5**
FUR pmax pmax
comp=Z,224nm,1.9s
FUR **Furstenfeldbru** **45.33 306** *eP* **P** **21 36 10.8 +0.5**
comp=Z,224nm,1.9s
INCN **Inchon** **45.38 69** *eP* **P** **21 36 11.8 +1.0**
comp=Z,224nm,1.9s
INCN **Inchon** **45.38 69** P **P** **21 36 12.2 +1.3**
SNR=7.5
MOR8 **Moi Rana** **45.47 332** *eP* **P** **21 36 11.4 +0.3**
MOR8 AMB AMB 21 36 12.8
comp=Z,75nm,0.7s
MOTA **Moosalm** **45.52 305**⇑ *iP* **P** **21 36 10.9 -1.0**
MOTA pmax pmax
comp=Z,27nm,0.6s
MOTA **Moosalm** **45.52 305**⇑ *iP* **P** **21 36 10.9 -1.0**
comp=Z,27nm,0.6s
MOTA **Moosalm** **45.52 305**⇑ *iP* **P** **21 36 10.9 -1.0**
comp=Z,27nm,0.6s
NC602 **NORSAR Array S** **45.59 324** *eP* **P** **21 36 11.4 -0.7**
NACB **Ninganchiao** **45.66 88** *eP* **P** **21 36 14.3 +1.1**
comp=Z,142nm,1.4s
STEI **Steigen** **45.71 334** *eP* **P** **21 36 14.2 +1.3**
STEI AMB AMB 21 36 15.6
comp=Z,99nm,1.3s
CLZ **Clausthal** **45.72 312** *eP* **P** **21 36 14.3 +1.0**
CLZ pmax pmax
comp=Z,211nm,1.6s
CLZ **Clausthal** **45.72 312** *eP* **P** **21 36 14.3 +1.0**
comp=Z,211nm,1.6s
RETA **Reutte** **45.73 305**⇓ *iP* **P** **21 36 12.9 -0.7**
comp=Z,25nm,0.9s
RETA **Reutte** **45.73 305**⇓ *iP* **P** **21 36 12.8 -0.7**
comp=Z,25nm,0.9s
BSEG **Bad Segeberg** **45.73 314** *eP* **P** **21 36 14.4 +1.1**
BSEG pmax pmax
comp=Z,241nm,1.5s
BSEG **Bad Segeberg** **45.73 314** *eP* **P** **21 36 14.4 +1.1**
comp=Z,241nm,1.5s
YULB **Yu-li** **45.75 90** *eP* **P** **21 36 15.5 +1.6**
comp=Z,76nm,1.3s
NB2 **NORSAR Subarra** **45.79 324** P **P** **21 36 12.7 -1.0**
baz=101,slow=7.9
NB2 **NORSAR Subarra** **45.79 324** P **P** **21 36 12.7 -1.0**
comp=Z,62nm,1.4s,baz=101,slow=7.9
NOA **NORSAR Array B** **45.79 324** P **P** **21 36 12.7 -1.0**
NOA PP **PP** **21 37 60.0 -0.9**
NOA **NORSAR Array B** **45.79 324** P **P** **21 36 12.7 -1.0**
comp=Z,7.9nm,0.5s,baz=100,slow=7.9,SNR=36
NOA PP **PP** **21 37 60.0 -0.9**
comp=Z,6.2nm,0.8s,baz=95,slow=9.9,SNR=5.4
NOA LR LR 21 58 43.4
comp=Z,2µm,18.0s,baz=95,slow=40
FETA **Feichten** **45.80 305**⇑ *iP* **P** **21 36 13.4 -0.8**
comp=Z,44nm,1.0s
FETA **Feichten** **45.80 305**⇑ *iP* **P** **21 36 13.4 -0.8**
comp=Z,44nm,1.0s
TWG **Pinlang** **45.81 90** *eP* **P** **21 36 15.5 +1.2**
comp=Z,603nm,1.4s
NRDL **Niedersach Rie** **45.87 312** *eP* **P** **21 36 15.4 +1.1**
comp=Z,102nm,1.3s
NRDL *ePP* **PP** **21 38 02.7 +1.0**
UBBA **Unterbreizbach** **45.99 310** *eP* **P** **21 36 16.2 +0.9**
comp=Z,152nm,1.8s
STOK **Stokkvaagen** **46.07 332** *eP* **P** **21 36 17.3 +1.5**
STOK AMB AMB 21 36 21.6
comp=Z,106nm,1.6s
KONS **Konsvik** **46.08 332** *eP* **P** **21 36 14.2 -1.6**
KONS AMB AMB 21 36 17.4
comp=Z,101nm,1.6s

FUORN **Ofenpass-Fuorn** **46.16 304** *eP* **P** **21 36 17.1 -0.1**
comp=Z,35nm,1.0s
MDJ **Mudanjiang** **46.22 58** P **P** **21 36 17.8 +0.5**
MDJ PcP **PcP** **21 37 53.3 +0.5**
MDJ ScP **ScP** **21 41 46.9 +1.5**
MDJ S **S** **21 43 04.4 +1.3**
MDJ pmax pmax
comp=Z,25nm,2.2s
MDJ LR LR
comp=N,310nm,28.8s
MDJ LR LR
comp=Z,360nm,25.0s
YAK **Yakutsk** **46.29 34** *eP* **P** **21 36 16.1 -1.4**
YAK *e* 21 38 05.5
YAK *eS* **S** **21 42 59.1 -4.4**
YAK *e* 21 46 00.1
YAK pmax pmax
comp=E,12nm,1.9s
YAK pmax pmax
comp=Z,27nm,0.8s
YAK pmax pmax
comp=Z,80nm,1.9s
YAK smax smax
comp=N,284nm,3.9s
YAK smax smax
comp=E,134nm,2.0s
DAVA **Damuels** **46.35 305**⇓ *iP* **P** **21 36 17.8 -0.7**
comp=E,90nm,0.9s
DAVA **Damuels** **46.35 305**⇓ *iP* **P** **21 36 17.8 -0.7**
comp=E,90nm,0.9s
KSAR **Wonju Array Be** **46.36 69** P **P** **21 36 18.9 +0.4**
KSAR PcP **PcP** **21 37 53.6 +0.2**
KSRS **Korea Array** **46.39 69** P **P** **21 36 18.9 +0.2**
comp=E,20nm,0.9s,baz=274,slow=7.1,SNR=51
KSRS PcP **PcP** **21 37 53.6 +0.2**
comp=E,5.1nm,0.7s,baz=288,slow=3.3,SNR=5.3
KSRS LR LR 21 58 60.0
comp=E,383nm,21.5s,baz=40,slow=40
DAVOX **Davos/Dischmat** **46.41 305** P **P** **21 36 18.7 -0.3**
DAVOX **Davos/Dischmat** **46.41 305** P **P** **21 36 18.7 -0.3**
comp=E,15nm,0.8s,baz=101,slow=6.6,SNR=20
KONO **Kongsberg** **46.42 322** *eP* **P** **21 36 17.9 -0.8**
KONO AMB AMB 21 36 23.2
comp=Z,33nm,1.4s
KONO AMS AMS 21 57 26.0
comp=Z,3µm,15.1s
KONO **Kongsberg** **46.42 322** *eP* **P** **21 36 17.0 -1.7**
KONO *e* 21 38 05.2
KONO pmax pmax
comp=Z,43nm,1.4s
KONO **Kongsberg** **46.42 322** *eP* **P** **21 36 17.0 -1.7**
comp=Z,43nm,1.4s
KONO *ePP* **PP** **21 38 05.2 -2.4**
MUD **Monsted U'grnd** **46.44 318** *i P* **P** **21 36 20.3 +1.5**
MUD pmax pmax
comp=Z,7.0nm,0.9s
MUD **Monsted U'grnd** **46.44 318** *i P* **P** **21 36 20.3 +1.5**
comp=Z,7.4nm,0.8s
TBLU **Trondheim** **46.57 327** AMS AMS 21 57 05.1
comp=Z,4µm,12.9s
STU **Stuttgart** **46.66 307** *eP* **P** **21 36 21.5 +0.8**
STU pmax pmax
comp=Z,247nm,1.6s
STU **Stuttgart** **46.66 307** *eP* **P** **21 36 21.4 +0.8**
comp=Z,210nm,1.6s
STU **Stuttgart** **46.66 307** *eP* **P** **21 36 21.5 +0.8**
comp=Z,247nm,1.6s
KMBO **Kilima Mbogo** **46.72 228** *eP* **P** **21 36 22.4 +0.5**
KMBO **Kilima Mbogo** **46.72 228** *eP* **P** **21 36 22.4 +0.5**
comp=Z,34nm,0.9s
KMBO *ePP* **PP** **21 38 14.0 +2.1**
KMBO **Kilima Mbogo** **46.72 228** P **P** **21 36 23.2 +1.3**
SNR=9.5
KMBO **Kilima Mbogo** **46.72 228** P **P** **21 36 22.4 +0.5**
comp=Z,24nm,0.7s,baz=30,slow=11,SNR=38
KMBO LR LR 21 57 10.1
comp=Z,280nm,18.9s,baz=92,slow=38
TUE **Stuetta** **46.81 304** *eP* **P** **21 36 22.2 +0.1**
comp=Z,157nm,2.0s
TUE *ePP* **PP** **21 38 13.9 +1.7**
TOD **Tromm** **46.84 309** *eP* **P** **21 36 23.4 +1.3**
TOD **Tromm** **46.84 309** *eP* **P** **21 36 23.4 +1.3**
SPAK **Spaichingen-Ko** **47.00 306** *eP* **P** **21 36 23.9 +0.4**
KLR **Kul'dur** **47.14 52** *eP* P 21 36 20.8 -3.6
KLR pmax pmax
comp=E,35nm,1.8s
KLR pmax pmax
comp=Z,50nm,1.8s
BFO **Black Forest** **47.28 307** *eP* **P** **21 36 25.5 -0.1**
BFO pmax pmax
comp=Z,15nm,1.0s
BFO **Black Forest** **47.28 307** *eP* **P** **21 36 25.5 -0.1**
comp=Z,36nm,1.5s
BFO **Black Forest** **47.28 307** *eP* **P** **21 36 25.5 -0.1**
comp=Z,15nm,1.0s
BFO **Black Forest** **47.28 307** P **P** **21 36 26.3 +0.7**
comp=Z,72nm,0.8s,SNR=5.7
IBBN **Ibbenburen** **47.31 312** *eP* **P** **21 36 26.7 +1.0**
comp=Z,231nm,1.5s
KTD **Kalmit** **47.33 308** *eP* **P** **21 36 27.1 +1.1**
KTD **Kalmit** **47.33 308** *eP* **P** **21 36 27.1 +1.1**
FELD **Feldberg im Sc** **47.55 306** *eP* **P** **21 36 27.8 0.0**
LANF **Langenberg** **47.55 308** *eP* **P** **21 36 28.6 +0.9**
LANF **Langenberg** **47.55 308** *eP* **P** **21 36 28.6 +0.9**
LANF **Langenberg** **47.55 308** *eP* **P** **21 36 28.6 +0.9**
SNART **Snartemo** **47.57 321** *eP* **P** **21 36 26.2 -1.5**
SNART AMB AMB 21 36 29.0
comp=Z,39nm,1.2s
ABH **Alteburg** **47.63 309** *eP* **P** **21 36 29.7 +1.4**
BUG **Bochum--Univer** **47.67 311** *eP* **P** **21 36 29.5 +1.0**
comp=Z,64nm,0.7s
PGF **Pioggiola** **47.69 299** *eP* **P** **21 36 27.8 -1.2**
comp=Z,98nm,0.9s
PGF **Pioggiola** **47.69 299** *eP* **P** **21 36 27.8 -1.2**
PGF pmax pmax
comp=Z,98nm,0.9s
PGF **Pioggiola** **47.69 299** *eP* **P** **21 36 27.8 -1.2**
comp=Z,98nm,0.9s
LIBD **Limburg** **47.78 307** *eP* **P** **21 36 29.9 +0.5**
LIBD **Limburg** **47.78 307** *eP* **P** **21 36 29.9 +0.5**
BBS **Basel-Blauen** **47.93 306** *eP* **P** **21 36 30.1 -0.6**
BBS **Basel-Blauen** **47.93 306** *eP* **P** **21 36 30.1 -0.6**
ODD1 **Odda** **47.94 323** *eP* **P** **21 36 31.1 +0.5**
ODD1 AMB AMB 21 36 34.1
comp=Z,57nm,1.6s
RUP **Ruppelstein** **47.96 309** *eP* **P** **21 36 31.4 +0.5**
RUP **Ruppelstein** **47.96 309** *eP* **P** **21 36 31.4 +0.5**
CDF **Champ du Feu** **47.96 307** *eP* **P** **21 36 30.7 -0.3**
comp=Z,31nm,0.9s
CDF **Champ du Feu** **47.96 307** *eP* **P** **21 36 30.7 -0.3**
CDF pmax pmax
comp=Z,31nm,0.9s
CDF **Champ du Feu** **47.96 307** *eP* **P** **21 36 30.7 -0.3**
comp=Z,31nm,0.9s
USRK **Ussuriysk Arra** **47.99 59** P **P** **21 36 31.4 +0.3**
comp=Z,5.8nm,0.7s,baz=281,slow=7.5,SNR=22
USRK LR LR 21 58 18.3
comp=Z,615nm,20.1s,baz=264,slow=38
BLS5 **Blasjo** **48.01 322** *eP* **P** **21 36 32.9 +1.8**
ECH **Echery** **48.07 307** *eP* **P** **21 36 32.2 +0.5**
ECH pmax pmax
comp=Z,13nm,0.8s
ECH **Echery** **48.07 307** *eP* **P** **21 36 32.1 +0.5**
comp=Z,13nm,0.8s
ECH **Echery** **48.07 307** *eP* **P** **21 36 31.9 +0.2**
VLA **Vladivostok** **48.12 60**⇑ *eP* **P** **21 36 30.5 -1.6**
VLA *e* 21 37 58.2
VLA *e* 21 38 22.9
VLA S **S** **21 43 29.9 -0.2**
VLA pmax pmax
comp=Z,27nm,0.6s
MOF **Molkenrain** **48.13 306** *eP* **P** **21 36 32.7 +0.4**
MOF **Molkenrain** **48.13 306** *eP* **P** **21 36 32.7 +0.4**
MOF **Molkenrain** **48.13 306** *eP* **P** **21 36 32.7 +0.4**
SENIN **Lac Senin/Sane** **48.23 304** *eP* **P** **21 36 32.8 -0.5**
comp=Z,53nm,0.7s
HINF **Hinteralfeld** **48.32 306** *eP* **P** **21 36 33.1 -0.6**
HINF **Hinteralfeld** **48.32 306** *eP* **P** **21 36 33.1 -0.6**
HINF **Hinteralfeld** **48.32 306** *eP* **P** **21 36 33.1 -0.6**
LOMF **Lomont** **48.40 306** *eP* **P** **21 36 34.5 +0.1**
LOMF **Lomont** **48.40 306** *eP* **P** **21 36 34.5 +0.1**
LOMF **Lomont** **48.40 306** *eP* **P** **21 36 34.5 +0.1**
SAOF **Saorge** **48.45 301** *eP* **P** **21 36 34.7 -0.1**
SAOF **Saorge** **48.45 301** *eP* **P** **21 36 34.7 -0.1**
SAOF **Saorge** **48.45 301** *eP* **P** **21 36 34.7 -0.1**

MEM **Membach** **48.54 310** P **P** **21 36 34.6 -0.7**
AUTN **L'Aution** **48.54 301** *eP* **P** **21 36 36.0 +0.3**
AUTN **L'Aution** **48.54 301** *eP* **P** **21 36 36.0 +0.3**
AUTN **L'Aution** **48.54 301** *eP* **P** **21 36 36.0 +0.3**
WLF **Walferdange** **48.55 309** P **P** **21 36 36.4 +1.0**
comp=Z,92nm,1.8s
WLF PP **PP** **21 38 32.2 +4.2**
WLF **Walferdange** **48.55 309** *eP* **P** **21 36 36.0 +0.6**
WLF *e* 21 38 31.6
WLF pmax pmax
comp=Z,160nm,1.4s
WLF **Walferdange** **48.55 309** *eP* **P** **21 36 36.8 +1.4**
comp=Z,375nm,2.0s
WLF **Walferdange** **48.55 309** *eP* **P** **21 36 36.0 +0.6**
comp=Z,160nm,1.4s
WLF *ePP* **PP** **21 38 31.6 +3.6**
SBF **Sospel** **48.56 301** *eP* **P** **21 36 35.0 -0.6**
comp=Z,71nm,0.8s
SBF **Sospel** **48.56 301** *eP* **P** **21 36 35.0 -0.6**
SBF pmax pmax
comp=Z,71nm,0.8s
SBF **Sospel** **48.56 301** *eP* **P** **21 36 35.0 -0.6**
comp=Z,71nm,0.8s
RUND **Rundenannen** **48.59 323** *eP* **P** **21 36 34.4 -1.1**
RUND AMB AMB 21 36 40.0
comp=Z,76nm,1.5s
BER **Bergen** **48.61 323** *eP* **P** **21 36 33.8 -1.8**
BER AMB AMB 21 36 39.6
comp=Z,41nm,1.3s
BER AMS AMS 21 58 32.5
comp=Z,3µm,11.7s
HAU **Haudompre** **48.63 307** *eP* **P** **21 36 35.8 -0.3**
comp=Z,51nm,0.8s
HAU *eR*
comp=Z,513nm,19.2s
HAU **Haudompre** **48.63 307** *eP* **P** **21 36 35.8 -0.3**
HAU pmax pmax
comp=Z,51nm,0.8s
HAU **Haudompre** **48.63 307** *eP* **P** **21 36 35.8 -0.3**
comp=Z,51nm,0.8s
EGD **Espegrend** **48.66 323** *eP* **P** **21 36 34.1 -1.9**
EGD AMB AMB 21 36 36.8
comp=Z,72nm,1.4s
TOUF **Mont Tournerai** **48.67 301** *eP* **P** **21 36 37.0 +0.4**
TOUF **Mont Tournerai** **48.67 301** *eP* **P** **21 36 37.0 +0.4**
TOUF **Mont Tournerai** **48.67 301** *eP* **P** **21 36 37.0 +0.4**
ASK **Askoy** **48.68 323** *eP* **P** **21 36 35.0 -1.1**
ASK AMB AMB 21 36 52.1
comp=Z,114nm,2.1s
LPG **La Plagne** **48.75 303** *eP* **P** **21 36 37.0 -0.3**
comp=Z,76nm,0.8s
LPG **La Plagne** **48.75 303** *eP* **P** **21 36 37.0 -0.3**
LPG pmax pmax
comp=Z,77nm,0.8s
LPG **La Plagne** **48.75 303** *eP* **P** **21 36 37.0 -0.3**
comp=Z,76nm,0.8s
LPL **La Plagne** **48.76 303** *eP* **P** **21 36 37.0 -0.3**
comp=Z,67nm,0.8s
LPL **La Plagne** **48.76 303** *eP* **P** **21 36 37.0 -0.3**
LPL pmax pmax
comp=Z,67nm,0.8s
LPL **La Plagne** **48.76 303** *eP* **P** **21 36 37.0 -0.3**
comp=Z,67nm,0.8s
RSL **Roselend** **48.80 304** *eP* **P** **21 36 38.7 +1.1**
RSL **Roselend** **48.80 304** *eP* **P** **21 36 38.7 +1.1**
RSL **Roselend** **48.80 304** *eP* **P** **21 36 38.7 +1.1**
THEF **They Montfort** **48.84 307** *eP* **P** **21 36 38.4 +0.7**
THEF **They Montfort** **48.84 307** *eP* **P** **21 36 38.4 +0.7**
THEF **They Montfort** **48.84 307** *eP* **P** **21 36 38.4 +0.7**
MBDF **Montbardon** **48.87 302** *eP* **P** **21 36 36.5 -1.6**
comp=Z,73nm,0.9s
MBDF **Montbardon** **48.87 302** *eP* **P** **21 36 36.5 -1.6**
MBDF pmax pmax
comp=Z,73nm,0.9s
MBDF **Montbardon** **48.87 302** *eP* **P** **21 36 36.5 -1.6**
comp=Z,73nm,0.9s
BNI **Bardonecchia** **48.88 303** *eP* **P** **21 36 37.7 -0.4**
BNI pmax pmax
comp=Z,90nm,1.6s
BNI **Bardonecchia** **48.88 303** *eP* **P** **21 36 37.7 -0.4**
comp=Z,90nm,1.6s
SURF **Saint Ours** **48.89 302** *eP* **P** **21 36 38.7 +0.4**
SURF **Saint Ours** **48.89 302** *eP* **P** **21 36 38.7 +0.4**
PAGF **Fort de Pagny** **48.97 307** *eP* **P** **21 36 39.0 +0.4**
comp=Z,120nm,1.7s
PAGF **Fort de Pagny** **48.97 307** *eP* **P** **21 36 39.0 +0.4**
comp=Z,120nm,1.7s
CALN **Calern** **48.97 301** *eP* **P** **21 36 38.8 -0.1**
CALN **Calern** **48.97 301** *eP* **P** **21 36 38.8 -0.1**
CALN **Calern** **48.97 301** *eP* **P** **21 36 38.8 -0.1**
BCLA **Clavier** **49.01 310** P **P** **21 36 39.3 +0.5**
comp=Z,27nm,2.3s
CABF **La Chapelle** **49.02 305** *eP* **P** **21 36 39.1 0.0**
comp=Z,100nm,1.0s
CABF **La Chapelle** **49.02 305** *eP* **P** **21 36 39.1 0.0**
CABF pmax pmax
comp=Z,101nm,1.0s
CABF **La Chapelle** **49.02 305** *eP* **P** **21 36 39.1 0.0**
comp=Z,100nm,1.0s
KEST **Kesra** **49.08 290** *eP* **P** **21 36 40.3 +0.5**
KEST **Kesra** **49.08 290** P **P** **21 36 39.9 +0.1**
comp=Z,8.9nm,0.9s,baz=290,slow=2.3,SNR=27
KEST LR LR 22 03 24.8
comp=Z,112nm,18.7s,baz=178,slow=44
FRF **La Foret Royal** **49.18 301** *eP* **P** **21 36 39.2 -1.1**
FRF **La Foret Royal** **49.18 301** *eP* **P** **21 36 39.2 -1.1**
FRF **La Foret Royal** **49.18 301** *eP* **P** **21 36 39.2 -1.1**
GDM **Grand'Maison** **49.24 303** *eP* **P** **21 36 40.7 -0.2**
GDM **Grand'Maison** **49.24 303** *eP* **P** **21 36 40.7 -0.2**
GIVF **Givet** **49.35 310** *eP* **P** **21 36 42.2 +0.7**
comp=Z,691nm,1.8s
GIVF **Givet** **49.35 310** *eP* **P** **21 36 42.2 +0.7**
GIVF pmax pmax
comp=Z,691nm,1.8s
GIVF **Givet** **49.35 310** *eP* **P** **21 36 42.2 +0.7**
comp=Z,691nm,1.8s
HABR **Khabarovsk** **49.39 53** *eP* **P** **21 36 40.6 -1.2**
HABR 21 38 02.7
HABR 21 38 34.6
HABR *ePPP* PPP 21 39 26.4
HABR *e* 21 46 32.5
HABR *eSSS* SSS 21 48 39.6
HABR pmax pmax
comp=N,28nm,1.6s
HABR pmax pmax
comp=E,54nm,2.0s
HABR pmax pmax
comp=Z,80nm,2.0s
HABR MLR MLR
comp=Z,581nm,16.0s
MEZF **Maizieres J'vi** **49.42 307** *eP* **P** **21 36 42.5 +0.5**
comp=Z,64nm,0.9s,baz=84
MEZF **Maizieres J'vi** **49.42 307** *eP* **P** **21 36 42.5 +0.5**
comp=Z,64nm,0.9s
ORIF **Oris-en-Rattie** **49.46 303** *eP* **P** **21 36 42.8 +0.3**
ORIF *eR*
comp=Z,814nm,21.9s
ORIF **Oris-en-Rattie** **49.46 303** *eP* **P** **21 36 42.8 +0.3**
ORIF **Oris-en-Rattie** **49.46 303** *eP* **P** **21 36 42.8 +0.3**
OG35 **Corcelles** **49.47 304** *eP* **P** **21 36 42.8 +0.3**
SFTF **Sexfontaines** **49.47 307** *eP* **P** **21 36 42.4 -0.1**
comp=Z,350nm,1.7s,baz=76
SFTF **Sexfontaines** **49.47 307** *eP* **P** **21 36 42.4 -0.1**
comp=Z,350nm,1.7s
GRN **Grenoble** **49.49 303** *eP* **P** **21 36 42.3 -0.5**
GRN **Grenoble** **49.49 303** *eP* **P** **21 36 42.3 -0.5**
GRN **Grenoble** **49.49 303** *eP* **P** **21 36 42.3 -0.5**
DOU **Dourbes** **49.50 310** P **P** **21 36 43.3 +0.7**
comp=Z,64nm,2.0s
UCC **Uccle** **49.56 311** P **P** **21 36 45.0 +2.0**
SPITS **Spitsbergen Ar** **49.57 347** P **P** **21 36 43.1 +0.4**
SPITS **Spitsbergen Ar** **49.57 347** P **P** **21 36 43.1 +0.4**
comp=Z,16nm,0.6s,baz=108,slow=15,SNR=25
SPITS LR LR 22 01 54.2
comp=Z,2µm,18.2s,baz=95,slow=41
SNF **Seneffe** **49.64 310** P **P** **21 36 44.7 +1.0**
comp=Z,82nm,2.0s
KSM **Kuching** **49.69 122** *eP* **P** **21 36 45.2 +0.7**
comp=Z,110nm,1.4s
KSM *ePcP* **PcP** **21 38 05.1 -0.6**
KSM **Kuching** **49.69 122** P **P** **21 36 45.6 +1.0**
BAIF **Baives** **49.75 310** *eP* **P** **21 36 45.1 +0.6**
comp=Z,445nm,1.5s
BAIF **Baives** **49.75 310** *eP* **P** **21 36 45.1 +0.6**
BAIF pmax pmax

comp=Z,445nm,1.5s
BAIF Baives 49.75 310 *e*P **P 21 36 45.1 +0.6**
comp=Z,445nm,1.5s
SMRF Simiane la Rot 49.86 302 *e*P **P 21 36 44.9 -0.6**
SMRF Simiane la Rot 49.86 302 *e*P **P 21 36 44.9 -0.6**
JNU Nakatsue 49.94 73 *e*P **P 21 36 47.6 +1.3**
comp=Z,27nm,1.1s
JNU Nakatsue 49.94 73 P **P 21 36 46.9 +0.6**
comp=Z,30nm,0.8s,baz=276,slow=3.1,SNR=14
JOW Kunigami 50.10 82 *e*P **P 21 36 47.1 -0.5**
comp=Z,17nm,0.8s
VIVF Saint-Julien-I 50.31 303 *e*P **P 21 36 48.5 -0.4**
VIVF Saint-Julien-I 50.31 303 *e*P **P 21 36 48.5 -0.4**
VIVF Saint-Julien-I 50.31 303 *e*P **P 21 36 48.5 -0.4**
SSB Saint Sauveur 50.32 303 *e*P **P 21 36 48.3 -0.7**
SSB pmax pmax
comp=Z,23nm,0.8s
SSB Saint Sauveur 50.32 303 *e*P **P 21 36 48.3 -0.7**
comp=Z,23nm,0.8s
SSB Saint Sauveur 50.32 303 *e*P **P 21 36 49.5 +0.5**
SBUM Sibu 50.37 119 P **P 21 36 51.3 +1.7**
LOR Lormes 50.41 306 *e*P **P 21 36 49.1 -0.5**
LOR *e*R
comp=Z,561nm,19.5s
LOR Lormes 50.41 306 *e*P **P 21 36 49.1 -0.5**
BTM Bintulu 50.49 118 P **P 21 36 52.2 +1.7**
SMF Signal de Mont 50.54 305 *e*P **P 21 36 50.3 -0.3**
comp=Z,114nm,0.9s
SMF Signal de Mont 50.54 305 *e*P **P 21 36 50.3 -0.3**
SMF pmax pmax
comp=Z,114nm,0.9s
SMF Signal de Mont 50.54 305 *e*P **P 21 36 50.3 -0.3**
comp=Z,114nm,0.9s
SSF Saint Saulge 50.69 306 *e*P **P 21 36 51.3 -0.4**
comp=Z,45nm,1.0s
SSF Saint Saulge 50.69 306 *e*P **P 21 36 51.3 -0.4**
SSF pmax pmax
comp=Z,45nm,1.0s
SSF Saint Saulge 50.69 306 *e*P **P 21 36 51.3 -0.4**
comp=Z,45nm,1.0s
KBS Kingsbay 50.70 348 *e*P **P 21 36 52.5 +1.2**
KBS AMS AMS 22 02 31.5
comp=Z,2µm,15.7s
KBS Kingsbay 50.70 348⇑ *e*P **P 21 36 51.6 +0.3**
KBS pmax pmax
comp=Z,66nm,1.0s
KBS MLR MLR
comp=Z,2µm,16.0s
KBS Kingsbay 50.70 348 *e*P **P 21 36 52.3 +1.0**
comp=Z,78nm,1.2s
AVF Avril sur Loir 50.84 306 *e*P **P 21 36 52.4 -0.4**
comp=Z,109nm,1.1s
AVF Avril sur Loir 50.84 306 *e*P **P 21 36 52.4 -0.4**
AVF pmax pmax
comp=Z,109nm,1.1s
AVF Avril sur Loir 50.84 306 *e*P **P 21 36 52.4 -0.4**
comp=Z,109nm,1.1s
KDM Kudat 50.90 111 P **P 21 36 54.9 +1.2**
KKM Kota Kinabalu 50.97 113 *e*P **P 21 36 56.3 +2.0**
comp=Z,160nm,1.3s
KKM Kota Kinabalu 50.97 113 P **P 21 36 55.8 +1.5**
LASF Ste Croix 51.05 302 *e*P **P 21 36 54.1 -0.4**
comp=Z,84nm,1.1s
LASF Ste Croix 51.05 302 *e*P **P 21 36 54.1 -0.4**
comp=Z,84nm,1.1s
AGO Saint Agoulin 51.13 305 *e*P **P 21 36 55.6 +0.5**
AGO Saint Agoulin 51.13 305 *e*P **P 21 36 55.6 +0.5**
LBL Lubilhac 51.22 304 *e*P **P 21 36 55.6 -0.3**
LBL Lubilhac 51.22 304 *e*P **P 21 36 55.6 -0.3**
LBL Lubilhac 51.22 304 *e*P **P 21 36 55.6 -0.3**
BGF Bois d'Agland 51.23 305 *e*P **P 21 36 55.3 -0.5**
comp=Z,118nm,1.5s
BGF Bois d'Agland 51.23 305 *e*P **P 21 36 55.3 -0.5**
BGF pmax pmax
comp=Z,119nm,1.5s
BGF Bois d'Agland 51.23 305 *e*P **P 21 36 55.3 -0.5**
comp=Z,118nm,1.5s
HYF Humbligny 51.23 306 *e*P **P 21 36 55.9 +0.1**
HYF Humbligny 51.23 306 *e*P **P 21 36 55.9 +0.1**
PYM Petit Puy Mans 51.28 304 *e*P **P 21 36 57.0 +0.7**
PYM Petit Puy Mans 51.28 304 *e*P **P 21 36 57.0 +0.7**
PYM Petit Puy Mans 51.28 304 *e*P **P 21 36 57.0 +0.7**
ELSH Elham, Standar 51.53 311 *e*P **P 21 36 57.7 -0.3**
ELSH AMB AMB 21 37 00.3
comp=Z,176nm,2.4s
ELSH AMS AMS 22 03 30.4
comp=Z,890nm,12.1s
ELSH Elham, Standar 51.53 311 P **P 21 36 57.7 -0.3**
ELSH AMB AMB 21 37 00.3
comp=Z,176nm,2.4s
ELSH AMS AMS 22 03 30.4
comp=Z,890nm,12.1s
TCF Toulx Ste Croi 51.71 305 *e*P **P 21 36 59.4 0.0**
comp=Z,99nm,1.2s
TCF Toulx Ste Croi 51.71 305 *e*P **P 21 36 59.4 0.0**
TCF pmax pmax
comp=Z,99nm,1.3s
TCF Toulx Ste Croi 51.71 305 *e*P **P 21 36 59.4 0.0**
comp=Z,99nm,1.3s
LRW Lerwick 51.86 323 AMS AMS 22 00 53.1
comp=Z,2µm,19.5s
SDKM Sandakan 51.98 112 P **P 21 37 03.0 +1.2**
CAF Calviac 52.11 303 *e*P **P 21 37 02.5 +0.1**
comp=Z,50nm,1.0s
CAF Calviac 52.11 303 *e*P **P 21 37 02.5 +0.1**
CAF pmax pmax
comp=Z,50nm,1.0s
CAF Calviac 52.11 303 *e*P **P 21 37 02.5 +0.1**
comp=Z,50nm,1.0s
MTLF Montolieu 52.37 301 *e*P **P 21 37 03.8 -0.6**
comp=Z,24nm,1.0s
MTLF Montolieu 52.37 301 *e*P **P 21 37 03.8 -0.6**
MTLF pmax pmax
comp=Z,24nm,1.0s
MTLF Montolieu 52.37 301 *e*P **P 21 37 03.8 -0.6**
comp=Z,24nm,1.0s
RJF Les Rejaudoux 52.40 304 *e*P **P 21 37 04.7 +0.2**
comp=Z,75nm,1.2s
RJF *e*R
comp=Z,480nm,22.0s
RJF Les Rejaudoux 52.40 304 *e*P **P 21 37 04.7 +0.2**
RJF pmax pmax
comp=Z,75nm,1.2s
RJF Les Rejaudoux 52.40 304 *e*P **P 21 37 04.7 +0.2**
comp=Z,75nm,1.2s
SKP1 Kophill 52.64 312 *e*P **P 21 37 05.8 -0.4**
SKP1 Kophill 52.64 312 P **P 21 37 05.8 -0.4**
LDF La Druitiere 52.79 308 *e*P **P 21 37 06.9 -0.5**
comp=Z,46nm,0.7s
LDF La Druitiere 52.79 308 *e*P **P 21 37 06.9 -0.5**
LDF pmax pmax
comp=Z,46nm,0.6s
LDF La Druitiere 52.79 308 *e*P **P 21 37 06.9 -0.5**
comp=Z,46nm,0.6s
LHO Holmfirth 52.97 315 *e*P **P 21 37 08.4 -0.2**
LHO Holmfirth 52.97 315 P **P 21 37 08.4 -0.2**
FLN La Foliniere 52.99 309 *e*P **P 21 37 08.3 -0.5**
comp=Z,32nm,0.6s,baz=72
FLN *e*R
comp=Z,696nm,22.8s
FLN La Foliniere 52.99 309 *e*P **P 21 37 08.3 -0.5**
FLN pmax pmax
comp=Z,32nm,0.6s
FLN La Foliniere 52.99 309 *e*P **P 21 37 08.3 -0.5**
comp=Z,32nm,0.6s
LFF La Frestale 53.02 304 *e*P **P 21 37 09.0 -0.1**
comp=Z,24nm,0.6s
LFF La Frestale 53.02 304 *e*P **P 21 37 09.0 -0.1**
LFF pmax pmax
comp=Z,24nm,0.6s
LFF La Frestale 53.02 304 *e*P **P 21 37 09.0 -0.1**
comp=Z,24nm,0.6s
MCD Coleburn Disti 53.17 320 *e*P **P 21 37 09.7 -0.3**
MCD Coleburn Disti 53.17 320 P **P 21 37 09.7 -0.3**
MFF Saint Martin d 53.23 306 *e*P **P 21 37 10.0 -0.7**
MFF Saint Martin d 53.23 306 *e*P **P 21 37 10.0 -0.7**
MFF Saint Martin d 53.23 306 *e*P **P 21 37 10.0 -0.7**
MYLDM Lahad Datu 53.27 112 P **P 21 37 12.6 +1.3**
GRR Gorron 53.31 308 *e*P **P 21 37 10.6 -0.6**
comp=Z,66nm,0.9s
GRR Gorron 53.31 308 *e*P **P 21 37 10.6 -0.6**
GRR pmax pmax
comp=Z,66nm,0.9s
GRR Gorron 53.31 308 *e*P **P 21 37 10.6 -0.6**
comp=Z,66nm,0.9s
TSM Tawau 53.35 113 P **P 21 37 12.5 +0.6**

EDI Edinburgh 53.36 318 AMS AMS 22 04 10.1
comp=Z,1µm,14.7s
EKA Eskdalemuir Ar 53.44 317 P **P 21 37 11.6 -0.4**
EKA Eskdalemuir Ar 53.44 317 P **P 21 37 11.6 -0.4**
comp=Z,27nm,0.9s,baz=93,slow=7.6,SNR=21
ECK Cauldkaine Hil 53.44 317 *e*P **P 21 37 11.3 -0.8**
ECK Cauldkaine Hil 53.44 317 P **P 21 37 11.3 -0.8**
ESK Eskdalemuir 53.47 317 *e*P **P 21 37 10.8 -1.4**
ESK AMB AMB 21 37 13.8
comp=Z,49nm,3.4s
ESK AMS AMS 22 04 07.1
comp=Z,1µm,13.0s
ESK Eskdalemuir 53.47 317 P **P 21 37 10.8 -1.4**
ESK AMB AMB 21 37 13.8
comp=Z,49nm,3.4s
ESK AMS AMS 22 04 07.1
comp=Z,1µm,13.0s
ESK Eskdalemuir 53.47 317 *e*P **P 21 37 13.2 +1.0**
ESK pmax pmax
comp=Z,51nm,1.2s
ESK Eskdalemuir 53.47 317 *e*P **P 21 37 13.2 +1.0**
comp=Z,51nm,1.2s
ESK Eskdalemuir 53.47 317 P **P 21 37 12.9 +0.7**
comp=Z,201nm,0.9s,SNR=8.2
KESW Keswick, Cumbr 53.52 316 AMS AMS 22 04 10.3
comp=Z,1µm,12.4s
MVH1 Achvaich 53.62 320 *e*P **P 21 37 12.4 -1.0**
MVH1 Achvaich 53.62 320 P **P 21 37 12.4 -1.0**
EPF Esparros 53.78 302 *e*P **P 21 37 13.4 -1.4**
comp=Z,25nm,1.1s
EPF Esparros 53.78 302 *e*P **P 21 37 13.4 -1.4**
EPF pmax pmax
comp=Z,25nm,1.1s
EPF Esparros 53.78 302 *e*P **P 21 37 13.4 -1.4**
comp=Z,25nm,1.1s
FOEL Foel Wylfa 53.88 314 AMS AMS 22 04 17.7
comp=Z,1µm,15.7s
MCH1 Michaelchurch 53.92 313 *e*P **P 21 37 14.1 -1.6**
MCH1 AMB AMB 21 37 17.1
comp=Z,99nm,2.6s
MCH1 AMS AMS 22 04 31.1
comp=Z,789nm,13.2s
MCH1 Michaelchurch 53.92 313 P **P 21 37 14.1 -1.6**
MCH1 AMB AMB 21 37 17.1
comp=Z,99nm,2.6s
MCH1 AMS AMS 22 04 31.1
comp=Z,789nm,13.2s
EAB Aberfoyle 53.96 318 *e*P **P 21 37 15.3 -0.6**
EAB Aberfoyle 53.96 318 P **P 21 37 15.3 -0.6**
JSA Saint Aubin 53.98 309 *e*P **P 21 37 14.0 -2.1**
JSA AMB AMB 21 37 18.1
comp=Z,64nm,1.6s
JSA AMS AMS 22 05 21.0
comp=Z,1µm,14.4s
JSA Saint Aubin 53.98 309 P **P 21 37 14.0 -2.1**
JSA AMB AMB 21 37 18.1
comp=Z,64nm,1.6s
JSA AMS AMS 22 05 21.0
comp=Z,1µm,14.4s
WPM1 Penmaenmawr 54.22 315 *e*P **P 21 37 17.3 -0.5**
WPM1 Penmaenmawr 54.22 315 P **P 21 37 17.3 -0.5**
KAC Achnashellach 54.28 320 *e*P **P 21 37 17.4 -0.7**
KAC Achnashellach 54.28 320 P **P 21 37 17.4 -0.7**
GAL1 Galloway 54.40 317 AMS AMS 22 03 32.1
comp=Z,1µm,16.7s
SGMF Saint Gilles 54.45 308 *e*P **P 21 37 19.4 -0.1**
SGMF Saint Gilles 54.45 308 *e*P **P 21 37 19.4 -0.1**
SGMF Saint Gilles 54.45 308 *e*P **P 21 37 19.4 -0.1**
ETSF Etsaut 54.45 302 *e*P **P 21 37 19.2 -0.6**
comp=Z,27nm,0.8s
ETSF Etsaut 54.45 302 *e*P **P 21 37 19.2 -0.6**
ETSF pmax pmax
comp=Z,27nm,0.8s
ETSF Etsaut 54.45 302 *e*P **P 21 37 19.2 -0.6**
comp=Z,27nm,0.8s
SOFL Sornfelli, Far 54.48 326 AMS AMS 22 03 08.4
comp=Z,2µm,15.6s
KPL Plockton 54.49 320 AMS AMS 22 03 07.0
comp=Z,2µm,17.1s
WLF1 Llynfaes 54.51 315 AMS AMS 22 05 37.3
comp=Z,846nm,15.6s
MAJO Matsushiro 54.53 67 *e*P **P 21 37 19.9 -0.5**
MAJO pmax pmax
comp=Z,35nm,1.0s
MAJO Matsushiro 54.53 67 *e*P **P 21 37 19.9 -0.5**
comp=Z,35nm,1.0s
MAT Matsushiro 54.53 67 P **P 21 37 19.9 -0.4**
MJAR Matsushiro Arr 54.53 67 P **P 21 37 20.8 +0.4**
MJAR Matsushiro Arr 54.53 67 P **P 21 37 20.8 +0.4**
comp=Z,16nm,0.9s,baz=287,slow=11,SNR=42
MJAR LR LR 22 02 38.3
comp=Z,254nm,21.4s,baz=285,slow=38
YRE Yr Eifl 54.59 314 *e*P **P 21 37 19.9 -0.6**
YRE Yr Eifl 54.59 314 P **P 21 37 19.9 -0.6**
HEX Exmoor 54.60 312 *e*P **P 21 37 20.0 -0.6**
HEX Exmoor 54.60 312 P **P 21 37 20.0 -0.6**
YRC Rhoscolyn 54.62 315 *e*P **P 21 37 19.7 -1.0**
YRC Rhoscolyn 54.62 315 P **P 21 37 19.7 -1.0**
YSS Yuzh-Sakhalins 54.79 53⇑ *e*P **P 21 37 23.7 +1.7**
YSS MLR MLR
comp=E,400nm,15.0s
DYA Yadsworthy 54.82 311 AMS AMS 22 05 01.8
comp=Z,1µm,19.4s
SJPF Ste Jean 54.86 302 *e*P **P 21 37 22.2 -0.4**
comp=Z,9.8nm,0.8s
SJPF Ste Jean 54.86 302 *e*P **P 21 37 22.2 -0.4**
SJPF pmax pmax
comp=Z,10.0nm,0.8s
SJPF Ste Jean 54.86 302 *e*P **P 21 37 22.2 -0.4**
comp=Z,9.8nm,0.8s
ROSF Rostrenen 54.89 309 *e*P **P 21 37 22.3 -0.4**
comp=Z,188nm,1.3s
ROSF Rostrenen 54.89 309 *e*P **P 21 37 22.3 -0.4**
ROSF pmax pmax
comp=Z,188nm,1.3s
ROSF Rostrenen 54.89 309 *e*P **P 21 37 22.3 -0.4**
comp=Z,188nm,1.3s
QUIF Quistinic 54.92 308 *e*P **P 21 37 22.2 -0.7**
comp=Z,263nm,1.7s
QUIF Quistinic 54.92 308 *e*P **P 21 37 22.2 -0.7**
QUIF pmax pmax
comp=Z,263nm,1.7s
QUIF Quistinic 54.92 308 *e*P **P 21 37 22.2 -0.7**
comp=Z,263nm,1.7s
DLF Lyons Farm 55.76 315 *e*P **P 21 37 28.0 -0.9**
DAG Danmarks Havn 56.73 344 *i*P **P 21 37 35.2 -0.3**
DAG pmax pmax
comp=Z,10.0nm,0.9s
DAG Danmarks Havn 56.73 344 *i*P **P 21 37 35.2 -0.3**
comp=Z,12nm,0.9s
SEY Seymchan 56.76 33⇑ *e*P **P 21 37 36.1 +0.2**
TAM Tamanrasset 57.03 277 *e*P **P 21 37 37.1 -1.6**
TAM *e* 21 39 40.0
TAM pmax pmax
comp=Z,18nm,1.2s
TAM Tamanrasset 57.03 277 *e*P **P 21 37 37.1 -1.6**
comp=Z,18nm,1.2s
TAM ePP PP 21 39 40.0 -5.3
DAV Davao City (W) 57.70 105 P **P 21 37 43.6 +0.4**
DAV Davao City (W) 57.70 105 P **P 21 37 46.2 +3.0**
SNR=8.0
DAV Davao City (W) 57.70 105 P **P 21 37 43.6 +0.4**
comp=Z,124nm,0.4s,baz=270,slow=4.8,SNR=6.9
DAV LR LR 22 06 08.8
comp=Z,381nm,20.1s,baz=251,slow=40
YUK Yuzh-Kuril'sk 57.70 56 P **P 21 37 40.2 -2.7**
YUK *e*S **S 21 45 38.5 -2.3**
YUK MLR MLR
comp=N,303nm,20.0s
YUK MLR MLR
comp=Z,502nm,20.0s
ESDC Sonseca Array 57.88 299 P **P 21 37 43.3 -1.0**
ESDC Sonseca Array 57.88 299 P **P 21 37 43.3 -1.0**
comp=Z,3.5nm,0.6s,baz=63,slow=7.8,SNR=22
ESDC LR LR 22 05 54.1
comp=Z,233nm,19.3s,baz=35,slow=39
ESLA Sonseca Array 57.88 299 *e*P **P 21 37 41.5 -2.9**
comp=Z,11nm,1.4s
PAB San Pablo 58.21 299 *e*P **P 21 37 45.9 -0.7**
PAB pmax pmax
comp=Z,110nm,2.2s
PAB San Pablo 58.21 299 *e*P **P 21 37 45.9 -0.7**
comp=Z,110nm,2.2s
VAL Valentia 58.29 314 *e*P P 21 37 43.5 -3.3
SCO Scoresbysund 58.87 337 *i*P **P 21 37 51.1 +0.5**
SCO pmax pmax
comp=Z,5.0nm,0.9s
SCO Scoresbysund 58.87 337 *i*P **P 21 37 51.1 +0.5**
comp=Z,4.8nm,0.9s
PBRG Braganca 59.15 302 *e*P **P 21 37 53.4 +0.3**
comp=Z,54nm,1.9s
MVO Moncorvo 59.57 301 *e*P **P 21 37 55.8 -0.2**
comp=Z,45nm,1.9s
POLO Lamas de Olo 60.04 302 *e*P **P 21 37 59.1 -0.2**
PGAV Gavieira, Arco 60.16 303 *e*P **P 21 38 00.6 +0.5**
MTE Manteigas 60.21 301 *e*P **P 21 38 02.0 +1.6**
comp=Z,67nm,1.6s
BORG Borgarnes 60.22 330 P **P 21 38 01.9 +1.9**
BORG Borgarnes 60.22 330 P **P 21 38 01.9 +1.9**
comp=Z,9.2nm,0.7s,baz=109,slow=1.5,SNR=5.8
PVIS Viseu 60.34 301 *e*P **P 21 38 01.4 +0.1**
comp=Z,81nm,1.6s
PCBR Castelo Branco 60.36 300 *e*P **P 21 38 02.1 +0.7**
comp=Z,36nm,2.0s
PMRV Marv??o 60.45 300 *e*P **P 21 38 02.6 +0.6**
comp=Z,48nm,1.6s
KAPI Kappang 60.94 120 *e*P **P 21 38 04.0 -1.6**
comp=Z,24nm,1.1s
KAPI Kappang 60.94 120 P **P 21 38 03.1 -2.4**
comp=Z,9.9nm,0.7s,baz=279,slow=10,SNR=5.0
BILL Bilibino 61.01 25⇓ *e*P **P 21 38 05.2 -0.1**
BILL *e* 21 38 47.3
BILL *e* 21 40 16.0
BILL *e*SS SS 21 50 26.4 +4.6
BILL pmax pmax
comp=Z,35nm,1.8s
BILL MLR MLR
comp=Z,700nm,19.0s
PTOM Tomar 61.11 300 *e*P **P 21 38 08.2 +1.7**
comp=Z,64nm,1.6s
EVO Evora 61.23 299 *e*P **P 21 38 06.7 -0.7**
EVO *e*R
comp=Z,328nm,19.5s
EVO Evora 61.23 299 *e*P **P 21 38 06.5 -0.9**
comp=Z,42nm,1.4s
ALE Alert 61.24 354 P **P 21 38 07.0 +0.3**
comp=Z,51nm,1.2s,SNR=9.1
EVOP Sao Brissos 61.32 299 *e*P **P 21 38 06.7 -1.2**
EVOP Sao Brissos 61.32 299 *e*P **P 21 38 06.7 -1.2**
PETK Petropavlovsk- 62.16 43 LR LR 22 06 26.8
comp=Z,295nm,20.3s,baz=294,slow=37
SUMG Summit 63.00 341 *e*P **P 21 38 18.8 -0.3**
SUMG *e* 21 40 38.1
SUMG pmax pmax
comp=Z,177nm,1.9s
SUMG Summit 63.00 341 *e*P **P 21 38 18.8 -0.3**
comp=Z,177nm,1.9s
SUMG ePP **PP 21 40 38.1 +0.9**
SUMG Summit 63.00 341 *i*P **P 21 38 19.5 +0.4**
comp=Z,17nm,0.8s
LSZ Lusaka 63.31 226 *e*P **P 21 38 21.6 0.0**
LSZ Lusaka 63.31 226 *e*P **P 21 38 21.4 -0.2**
comp=Z,30nm,1.4s
LSZ Lusaka 63.31 226 P **P 21 38 22.2 +0.6**
SNR=6.9
TOA0 Torodi Ar. Sit 64.92 269 *e*P **P 21 38 29.3 -2.8**
TORD Torodi Ar. Bea 64.92 269 P **P 21 38 29.6 -2.5**
TORD Torodi Ar. Bea 64.92 269 P **P 21 38 29.6 -2.5**
comp=Z,16nm,0.8s,baz=52,slow=6.0,SNR=83
MSNA Messina 67.92 220 *e*P **P 21 38 52.0 +0.9**
MSNA AMB AMB 21 38 52.7
comp=Z,38nm,1.9s
SFJD Kangerlussuaq 69.63 339 *i*P **P 21 39 02.1 +0.9**
comp=Z,9.1nm,1.0s
FX1 Attu Island--F 70.66 39 *e*P **P 21 39 05.5 -2.2**
TNA Tin City 70.98 22 *e*P **P 21 39 09.8 +0.3**
comp=Z,13nm,0.9s
POGA Pongola 71.25 216 *e*P P 21 39 07.9 -3.6
POGA AMB AMB 21 39 11.5
comp=Z,42nm,1.9s
SLR Silverton 71.59 219 *e*P **P 21 39 12.4 -1.4**
SLR AMB AMB 21 39 15.1
comp=Z,52nm,1.7s
ERPM east rand prop 72.10 219 *e*P **P 21 39 15.6 -1.4**
ERPM AMB AMB 21 39 16.6
comp=Z,48nm,2.0s
KSR Koster 72.42 220 *e*P **P 21 39 18.6 -0.2**
KSR AMB AMB 21 39 19.0
comp=Z,14nm,2.0s
KLOF Kloof 72.44 219 *e*P **P 21 39 19.5 +0.5**
KLOF AMB AMB 21 39 20.1
comp=Z,45nm,0.9s
LBTB Lobatse 72.46 222⇑ *i*P **P 21 39 19.0 0.0**
LBTB AMB AMB 21 39 20.5
comp=Z,82nm,1.0s
LBTB Lobatse 72.46 222 *e*P **P 21 39 18.8 -0.2**
comp=Z,68nm,0.8s
MBWA Marble Bar 72.53 132 *e*P **P 21 39 19.1 -0.2**
comp=Z,122nm,1.8s
TSUM Tsumeb 72.90 232 *e*P **P 21 39 21.4 -0.3**
TSUM AMB AMB 21 39 22.8
comp=Z,606nm,1.7s
TSUM Tsumeb 72.90 232 *e*P **P 21 39 21.1 -0.7**
comp=Z,17nm,1.3s
PRYS Parys 73.03 219 *e*P **P 21 39 21.1 -1.3**
PRYS AMB AMB 21 39 23.1
comp=Z,43nm,1.4s
DBIC Dimbokro 73.82 267 *e*P **P 21 39 24.1 -3.2**
DBIC Dimbokro 73.82 267 P **P 21 39 25.3 -2.0**
DBIC Dimbokro 73.82 267 P **P 21 39 25.3 -2.0**
comp=Z,6.5nm,0.6s,baz=48,slow=7.9,SNR=10.0
DBIC LR LR 22 16 12.4
comp=Z,760nm,18.8s,baz=139,slow=39
SEK Senekal 74.03 218 *e*P **P 21 39 28.0 -0.2**
SEK AMB AMB 21 39 29.2
comp=Z,55nm,1.0s
FITZ Fitzroy Crossi 74.15 125 *e*P **P 21 39 28.8 -0.2**
comp=Z,38nm,1.1s
FITZ Fitzroy Crossi 74.15 125 P **P 21 39 28.8 -0.2**
comp=Z,17nm,0.7s,baz=329,slow=5.7,SNR=38
LIC Lamto 74.21 267 *e*P **P 21 39 27.4 -2.1**
comp=Z,26nm,0.8s
LIC *e*R
comp=Z,1µm,19.5s
LIC Lamto 74.21 267 *e*P **P 21 39 27.4 -2.1**
comp=Z,26nm,0.8s
SWZ Schweizer 74.32 221 *e*P **P 21 39 29.3 -0.7**
SWZ AMB AMB 21 39 30.9
comp=Z,72nm,1.1s
COLD Coldfoot 74.39 15 *e*P **P 21 39 28.8 -1.0**
comp=Z,345nm,2.4s
BOSA Boshof 75.50 220⇓ *i*P **P 21 39 36.4 -0.3**
BOSA AMB AMB 21 39 37.6
comp=Z,65nm,0.9s
BOSA Boshof 75.50 220 *e*P **P 21 39 36.4 -0.3**
comp=Z,53nm,0.8s
BOSA Boshof 75.50 220 P **P 21 39 36.5 -0.3**
comp=Z,42nm,0.7s,baz=40,slow=5.6,SNR=75
BOSA LR LR 22 11 57.0
comp=Z,430nm,18.2s,baz=19,slow=35
COLA College 76.90 16 *e*P **P 21 39 43.9 -0.2**
COLA pmax pmax
comp=Z,39nm,0.8s
COLA College 76.90 16 *e*P **P 21 39 43.9 -0.2**
comp=Z,39nm,0.8s
ILAR Eielson Array 77.20 15 P **P 21 39 44.2 -1.6**
ILAR PKKPbc **PKKPbc 21 58 51.0 -1.5**
ILAR Eielson Array 77.20 15 P **P 21 39 44.2 -1.6**
comp=Z,10.0nm,1.0s,baz=333,slow=3.9,SNR=66
ILAR PKKPbc **PKKPbc 21 58 51.0 -1.5**
comp=Z,0.3nm,0.6s,baz=186,slow=3.2,SNR=5.0
ILAR LR LR 22 19 28.4
comp=Z,303nm,18.1s,baz=136,slow=40
PPLA Purkeypile 77.51 18 *e*P **P 21 39 47.0 -0.8**
comp=Z,258nm,2.6s
TRF Thorofare Moun 77.53 17 *e*P **P 21 39 45.7 -2.3**
comp=Z,99nm,2.2s
TRF ePP **PP 21 42 40.0 -2.1**
MCK McKinley 77.62 17 *e*P **P 21 39 47.0 -1.2**
MCK *e* 21 42 43.7
MCK pmax pmax
comp=Z,152nm,2.2s
MCK McKinley 77.62 17 *e*P **P 21 39 47.0 -1.2**
comp=Z,152nm,2.2s
MCK ePP **PP 21 42 43.7 +1.1**
SVW2 Sparrevohn 78.03 21 *e*P **P 21 39 50.6 +0.1**
comp=Z,26nm,1.4s
EGAK Eagle 78.36 13 *e*P **P 21 39 51.5 -0.7**
comp=Z,142nm,2.0s
DOT Dot Lake 78.79 15 *e*P **P 21 39 54.0 -0.7**
comp=Z,279nm,2.2s
PAX Paxson 79.08 16 *e*P **P 21 39 55.0 -1.4**

PAX					pmax		pmax		
	comp=Z,29nm,1.0s								
PAX	**Paxson**	**79.08**	**16**	*eP*		**P**		**21 39 55.0**	**-1.4**
	comp=Z,29nm,1.0s								
RSO	**Redoubt South**	**79.36**	**20**	*eP*		**P**		**21 39 58.0**	**-0.1**
	comp=Z,282nm,0.6s								
PMR	**Palmer**	**79.39**	**18**	*eP*		**P**		**21 39 56.5**	**-1.4**
PMR					pmax		pmax		
	comp=Z,163nm,2.2s								
PMR	**Palmer**	**79.39**	**18**	*eP*		**P**		**21 39 56.5**	**-1.4**
	comp=Z,163nm,2.2s								
SML	**Sawmill**	**79.41**	**17**	*eP*		**P**		**21 39 56.9**	**-1.3**
SML					pmax		pmax		
	comp=Z,12nm,0.8s								
SML	**Sawmill**	**79.41**	**17**	*eP*		**P**		**21 39 56.9**	**-1.3**
	comp=Z,12nm,0.8s								
MENT	**Mentasta**	**79.49**	**15**	*eP*		**P**		**21 39 57.4**	**-1.1**
NWAO	**Narrogin (SRO)**	**80.13**	**141**		LR	LR		22 13 36.3	
	comp=Z,538nm,21.6s,baz=130,slow=34								
BUFB	**Buffelsbos**	**80.17**	**217**	*eP*		**P**		**21 40 03.3**	**+0.8**
BUFB					AMB	AMB		21 40 07.1	
	comp=Z,69nm,4.7s								
DIV	**Divide**	**80.62**	**17**	*eP*		**P**		**21 40 03.6**	**-1.1**
	comp=Z,15nm,0.8s								
SUR	**Sutherland**	**80.82**	**220**	*eP*		**P**		**21 40 05.9**	**-0.3**
SUR					AMB	AMB		21 40 07.2	
	comp=Z,20nm,1.8s								
SUR	**Sutherland**	**80.82**	**220**	*eP*		**P**		**21 40 06.9**	**+0.7**
	comp=Z,29nm,0.8s								
SUR	**Sutherland**	**80.82**	**220**	P		**P**		**21 40 07.9**	**+1.7**
	comp=Z,236nm,0.8s,SNR=7.5								
BMRM	**Bremner River**	**81.03**	**16**	*eP*		**P**		**21 40 06.1**	**-0.9**
	comp=Z,27nm,1.1s								
WRA	**Warramunga Arr**	**81.43**	**121**	P		**P**		**21 40 09.1**	**-0.5**
WRA				ScS		**S**		**21 50 20.2**	**-0.2**
WRA				PKKPbc		**PKKPbc**		**21 58 43.8**	**+0.6**
WRA	**Warramunga Arr**	**81.43**	**121**	P		**P**		**21 40 09.1**	**-0.5**
	comp=Z,43nm,0.7s,baz=323,slow=5.1,SNR=302								
WRA				ScS		**S**		**21 50 20.2**	**-0.2**
	comp=Z,4.1nm,1.2s,baz=314,slow=12,SNR=7.6								
WRA				PKKPbc		**PKKPbc**		**21 58 43.8**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=130,slow=2.2,SNR=12								
WRAB	**Tennant Creek**	**81.44**	**121**	*eP*		**P**		**21 40 09.2**	**-0.4**
WRAB					pmax	pmax			
	comp=Z,72nm,0.8s								
WRAB	**Tennant Creek**	**81.44**	**121**	*eP*		**P**		**21 40 09.2**	**-0.4**
	comp=Z,72nm,0.8s								
WRAB	**Tennant Creek**	**81.44**	**121**	P		**P**		**21 40 09.0**	**-0.6**
	comp=Z,487nm,0.7s,SNR=45								
KDAK	**Kodiak Island**	**81.62**	**22**	P		**P**		**21 40 10.0**	**0.0**
	comp=Z,160nm,1.2s,SNR=5.6								
OHAK	**Old Harbor**	**81.86**	**22**	*eP*		**P**		**21 40 10.8**	**-0.5**
	comp=Z,180nm,1.8s								
CER	**Ceres**	**82.39**	**221**	*eP*		**P**		**21 40 12.8**	**-1.5**
CER					AMB	AMB		21 40 17.4	
	comp=Z,22nm,6.2s								
YKW3	**Yellowknife Ar**	**83.51**	**2**	*eP*		**P**		**21 40 18.3**	**-1.5**
	comp=Z,0.7nm,1.2s								
AS31	**Alice Springs**	**83.57**	**124**	*eP*		**P**		**21 40 20.1**	**-0.6**
ASAR	**Alice Springs**	**83.57**	**124**	P		**P**		**21 40 20.2**	**-0.5**
ASAR				ScS		**S**		**21 50 43.0**	**+0.7**
ASAR				PKKPbc		**PKKPbc**		**21 58 39.0**	**+0.5**
ASAR				P'P'				22 06 47.4	
ASAR	**Alice Springs**	**83.57**	**124**	P		**P**		**21 40 20.2**	**-0.5**
	comp=Z,25nm,0.8s,baz=316,slow=5.4,SNR=176								
ASAR				ScS		**S**		**21 50 43.0**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=310,slow=9.7,SNR=6.5								
ASAR				PKKPbc		**PKKPbc**		**21 58 39.0**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=122,slow=2.8,SNR=16								
ASAR				PKPPKP		**P'P'df**		22 06 47.4	+5.9
	comp=Z,0.2nm,0.5s,baz=153,slow=2.4,SNR=4.5								
ASAR				LR		LR		22 23 08.2	
	comp=Z,197nm,19.0s,baz=300,slow=40								
YKA	**Yellowknife Ar**	**83.58**	**2**	P		**P**		**21 40 19.2**	**-0.9**
YKA				PKKPbc		**PKKPbc**		**21 58 35.9**	**-2.3**
YKA				P'P'				22 06 45.3	
YKA	**Yellowknife Ar**	**83.58**	**2**	P		**P**		**21 40 19.2**	**-0.9**
	comp=Z,8.7nm,0.6s,baz=350,slow=5.3,SNR=126								
YKA				PKKPbc		**PKKPbc**		**21 58 35.9**	**-2.3**
	comp=Z,0.3nm,0.7s,baz=170,slow=2.2,SNR=5.8								
YKA				PKPPKP		**P'P'df**		**22 06 45.3**	**-4.2**
	comp=Z,0.1nm,0.7s,baz=167,slow=2.5,SNR=4.2								
SCHQ	**Schefferville**	**83.91**	**337**	*eP*		**P**		**21 40 21.6**	**-0.4**
	comp=Z,110nm,1.8s								
SCHQ	**Schefferville**	**83.91**	**337**	P		**P**		**21 40 21.1**	**-0.9**
	comp=Z,5.3nm,0.6s,baz=28,slow=6.4,SNR=11								
SCHQ					LR	LR		22 17 07.6	
	comp=Z,707nm,20.7s,baz=220,slow=35								
FORT	**Forrest**	**84.64**	**133**	*eP*		**P**		**21 40 25.1**	**-0.8**
	comp=Z,27nm,0.6s								
PMG	**Port Moresby**	**84.72**	**105**	*eP*		**P**		**21 40 27.3**	**+0.6**
	comp=Z,23nm,0.9s								
PMG	**Port Moresby**	**84.72**	**105**	P		**P**		**21 40 27.1**	**+0.4**
	comp=Z,20nm,0.9s,baz=336,slow=14,SNR=4.8								
DLBC	**Dease Lake**	**86.20**	**10**	*eP*		**P**		**21 40 33.1**	**-0.4**
CTA	**Charters Tower**	**90.28**	**114**	P		**P**		**21 40 52.6**	**-0.8**
CTA	**Charters Tower**	**90.28**	**114**	P		**P**		**21 40 52.6**	**-0.8**
	comp=Z,14nm,0.7s,baz=308,slow=4.2,SNR=16								
CTAO	**Charters Tower**	**90.28**	**114**	*eP*		**P**		**21 40 52.2**	**-1.2**
CTAO					pmax	pmax			
	comp=Z,20nm,1.0s								
CTAO	**Charters Tower**	**90.28**	**114**	*eP*		**P**		**21 40 52.2**	**-1.2**
	comp=Z,20nm,1.0s								
FFC	**Flin Flon**	**91.18**	**355**	*i* P		**P**		**21 40 57.1**	**0.0**
FFC	**Flin Flon**	**91.18**	**355**	*eP*		**P**		**21 40 56.4**	**-0.7**
	comp=Z,26nm,1.4s								
FFC	**Flin Flon**	**91.18**	**355**	P		**P**		**21 40 56.5**	**-0.6**
	comp=Z,63nm,1.4s,SNR=6.4								
STKA	**Stephens Creek**	**94.04**	**126**	P		**P**		**21 41 09.5**	**-1.0**
STKA				PP		**PP**		**21 44 57.2**	**0.0**
STKA	**Stephens Creek**	**94.04**	**126**	P		**P**		**21 41 09.5**	**-1.0**
	comp=Z,4.9nm,0.7s,baz=300,slow=4.7,SNR=10								
STKA					PP		**PP**		**21 44 57.2**	**0.0**
	comp=Z,1.2nm,0.7s,baz=306,slow=6.6,SNR=5.8								
STKA					LR	LR		22 24 31.8	
	comp=Z,319nm,21.2s,baz=112,slow=36								
ULM	**Lac du Bonnet**	**95.01**	**351**	P		**P**		**21 41 14.2**	**-0.6**
ULM	**Lac du Bonnet**	**95.01**	**351**	P		**P**		**21 41 14.2**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=125,slow=2.4,SNR=3.5								
EYMN	**Ely**	**96.58**	**348**	*eP*		**P**		**21 41 21.1**	**-0.9**
	comp=Z,117nm,2.8s								
A15A	**Johnson Ranch,**	**97.16**	**2**	⇓P		**P**		**21 41 24.0**	**-0.8**
	baz=97								
A16A	**West Butte Ran**	**97.22**	**1**	⇓P		**P**		**21 41 24.3**	**-0.8**
	baz=97								
A17A	**Triple J Farms**	**97.23**	**1**	⇑P		**P**		**21 41 24.4**	**-0.6**
	baz=97								
B19A	**Brinkman Farms**	**97.72**	**359**	⇑P		**P**		**21 41 26.9**	**-0.3**
	baz=97								
B20A	**Solberg Farm,**	**97.72**	**359**	⇑P		**P**		**21 41 26.5**	**-0.8**
	baz=97								
B14A	**Marquette Ranc**	**97.76**	**2**	⇑P		**P**		**21 41 26.8**	**-0.7**
	baz=97								
B18A	**Beardsley Farm**	**97.78**	**360**	⇓P		**P**		**21 41 26.8**	**-0.7**
	baz=97								
B15A	**Bradely Ranch,**	**97.83**	**2**	⇓P		**P**		**21 41 26.6**	**-1.2**
	baz=98								
BSMT	**Bassoo Peak**	**98.21**	**3**	*eP*		**P**		**21 41 29.3**	**-0.4**
	comp=Z,9.2nm,1.4s								
C15A	**Salmond Ranch,**	**98.37**	**2**	⇑P		**P**		**21 41 29.3**	**-1.0**
	baz=98								
D17A	**Six Diamond Ra**	**99.02**	**1**	⇑P		**Pdif**		**21 41 32.1**	**-1.2**
	baz=99								
PDAR	**Pinedale Array**	**103.41**	**360**	PKiKP		**PKiKP**		**21 46 12.1**	**+0.3**
PDAR	**Pinedale Array**	**103.41**	**360**	PKiKP		**PKiKP**		**21 46 12.1**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=77,slow=2.7,SNR=6.5								
NVAR	**Mina Array Bea**	**107.33**	**7**	PKiKP		**PKiKP**		**21 46 20.9**	**+1.8**
NVAR				PKKPbc		**PKKPbc**		**21 57 34.5**	**-0.3**
NVAR	**Mina Array Bea**	**107.33**	**7**	PKiKP		**PKiKP**		**21 46 20.9**	**+1.8**
	comp=Z,3.0nm,0.7s,baz=320,slow=1.7,SNR=19								
NVAR				PKKPbc		**PKKPbc**		**21 57 34.5**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=187,slow=6.0,SNR=4.7								
Z31A	**Sharp Cattle R**	**112.22**	**351**	⇓P		**PKiKP**		**21 46 27.9**	**-0.4**
	baz=112								
DRV	**Dumont d'Urvil**	**113.57**	**156**	Pdif		**Pdif**		**21 42 37.0**	**+0.1**
226B	**Tecolote Peak,**	**113.86**	**355**	⇑P		**PKiKP**		**21 46 31.3**	**-0.2**
	baz=114								
330A	**Mertzon**	**114.23**	**352**	⇑P		PKPdf		21 46 31.8	-0.4
	baz=114								
532A	**Rocksprings**	**115.33**	**350**	⇑P		**PKPdf**		**21 46 33.8**	**-0.5**
	baz=115								
531A	**Rocksprings**	**115.38**	**351**	⇑P		**PKPdf**		**21 46 33.8**	**-0.6**
	baz=115								
530A	**J-C Ranch, Com**	**115.49**	**352**	⇓P		**PKPdf**		**21 46 33.8**	**-0.9**
	baz=115								
529A	**Stev Forest Ra**	**115.62**	**353**	⇓P		**PKPdf**		**21 46 34.4**	**-0.5**
	baz=115								
628A	**Black Gap, Mar**	**116.32**	**353**	⇑P		**PKPdf**		**21 46 36.2**	**-0.1**
	baz=116								
626A	**Big Bend Ranch**	**116.36**	**354**	⇑P		**PKPdf**		**21 46 36.1**	**-0.3**
	baz=116								
627A	**Terlingua Ranc**	**116.40**	**354**	⇑P		**PKPdf**		**21 46 34.6**	**-1.9**
	baz=116								
TXAR	**Lajitas Array**	**116.54**	**354**	PKP		**PKPdf**		**21 46 37.5**	**+0.8**
TXAR				PKKPbc		**PKKPbc**		**21 57 04.8**	**+0.8**
TXAR	**Lajitas Array**	**116.54**	**354**	PKP		**PKPdf**		**21 46 37.5**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=158,slow=1.3,SNR=6.6								
TXAR				PKKPbc		**PKKPbc**		**21 57 04.8**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=168,slow=6.4,SNR=8.8								
SNAA	**Sanae**	**116.97**	**200**	*eP*		**PKPdf**		**21 46 36.5**	**+0.4**
SNAA	**Sanae**	**116.97**	**200**	*e*PKPdf		**PKPdf**		**21 46 35.7**	**-0.3**
VNA2	**Neumayer--Watz**	**117.98**	**201**	*eP*		**PKPdf**		**21 46 38.2**	**+0.3**
	baz=9.9,slow=4.4								
VNA1	**Neumayer--Stat**	**118.14**	**202**	*eP*		**PKPdf**		**21 46 39.5**	**+1.3**
VNA3	**Neumayer Olymp**	**118.79**	**201**	*eP*		**PKPdf**		**21 46 39.5**	**0.0**
SDV	**Santo Domingo**	**123.23**	**312**	*e*PKPdf		**PKPdf**		**21 46 49.9**	**-0.2**
VNDA	**Vanda**	**123.48**	**165**	PKP		**PKPdf**		**21 46 47.5**	**-0.8**
VNDA				*e*PKPdf		**PKiKP**		**21 46 47.8**	**-0.8**
VNDA	**Vanda**	**123.48**	**165**	PKP		**PKPdf**		**21 46 47.5**	**-0.8**
	comp=Z,3.2nm,0.7s,baz=294,slow=4.4,SNR=23								
TGUH	**Tegucigalpa,Un**	**127.40**	**332**	*e*PKPdf		**PKPdf**		**21 46 59.0**	**+1.3**
SAML	**Samuel**	**130.37**	**289**	*e*PKPdf		**PKPdf**		**21 47 03.5**	**+0.1**
CPUP	**Villa Florida**	**134.32**	**265**	PKP		**PKPdf**		**21 47 09.5**	**-1.0**
CPUP	**Villa Florida**	**134.32**	**265**	PKP		**PKPdf**		**21 47 09.5**	**-1.0**
	comp=Z,3.7nm,0.6s,baz=61,slow=3.0,SNR=15								
OTAV	**Otavalo**	**134.80**	**313**	*e*PKPdf		**PKPdf**		**21 47 13.8**	**+1.5**
LPAZ	**La Paz**	**138.54**	**285**	*e*PKPdf		**PKPdf**		**21 47 18.5**	**-0.8**
LPAZ				PKP		**PKPdf**		**21 47 19.1**	**-0.2**
LPAZ	**La Paz**	**138.54**	**285**	PKP		**PKPdf**		**21 47 19.1**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=46,slow=1.8,SNR=11								
TRQA	**Tornquist**	**141.42**	**250**	*e*PKPdf		**PKPdf**		**21 47 19.7**	**-3.5**
LVC	**Limon Verde**	**142.35**	**277**	*e*PKPdf		**PKPdf**		**21 47 27.0**	**+1.3**
LCO	**Las Campanas**	**146.34**	**268**	*e*PKPdf		**PKPdf**		**21 47 31.9**	**-0.6**
PLCA	**Paso Flores**	**148.27**	**246**	*e*PKPdf		**PKPdf**		**21 47 36.7**	**+1.7**
PLCA				PKKP		**PKKPdf**		**21 56 30.8**	**+1.1**
PLCA	**Paso Flores**	**148.27**	**246**	PKPbc		**PKPdf**		**21 47 36.7**	**+1.7**
	comp=Z,14nm,1.0s,baz=90,slow=2.5,SNR=16								
PLCA				PKKP		**PKKPdf**		**21 56 30.8**	**+1.1**
	comp=Z,1.6nm,0.5s,baz=313,slow=7.8,SNR=2.8								

*CSEM **16** 21:37:46.2,42.44N×13.39E,h10km,MD1.8/9,After ROM*
ROM 16 21:37:46.2±0.1,42.44N×13.39E,h10km±1km,Md1.8/9,Ml1.6/5,Error ellipse: s-maj=2.1km s-min=1.3km az=78.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.08**	**174**	Pg	Pg	21 37 48.8	+0.1
AQU				Sg	Sg	21 37 50.7	+0.2
AQU	**L'Aquila**	**0.08**	**174**	Pg	Pg	21 37 48.8	+0.1
AQU				Sg	Sg	21 37 50.7	+0.2
AQU	**L'Aquila**	**0.08**	**174**	*e*PcP	Pg	21 37 48.4	-0.3
CAMP	**Campotosto**	**0.10**	**8**	Pg	Pg	21 37 49.7	+0.6
CAMP				Sg	Sg	21 37 51.9	+0.7
	173nm,0.5s						
CAMP	**Campotosto**	**0.10**	**8**	Pg	Pg	21 37 49.7	+0.6
CAMP				Sg	Sg	21 37 51.9	+0.7
	173nm,0.5s						
FAGN	**Fagnano**	**0.22**	**140**	Pg	Pg	21 37 51.4	+0.5
FAGN				Sg	Sg	21 37 55.2	+1.1
FAGN	**Fagnano**	**0.22**	**140**	Pg	Pg	21 37 51.4	+0.5
FAGN				Sg	Sg	21 37 55.2	+1.1
TERO	**Teramo**	**0.24**	**40**	Pg	Pg	21 37 51.8	+0.4
TERO				Sg	Sg	21 37 55.9	+1.1
	97nm,0.1s						
TERO	**Teramo**	**0.24**	**40**	Pg	Pg	21 37 51.8	+0.4
TERO				Sg	Sg	21 37 55.9	+1.1
	97nm,0.1s						
FIAM	**Fiamignano**	**0.26**	**231**	Pg	Pb	21 37 52.9	-0.2
	33nm,0.4s						
FIAM	**Fiamignano**	**0.26**	**231**	Pg	Pb	21 37 52.9	-0.2
	33nm,0.4s						
LNSS	**Leonessa**	**0.31**	**303**	Pg	Pg	21 37 52.8	+0.2
LNSS				Sg	Sg	21 37 57.5	+0.6
	66nm,0.3s						
LNSS	**Leonessa**	**0.31**	**303**	Pg	Pg	21 37 52.8	+0.2
LNSS				Sg	Sg	21 37 57.5	+0.6
	66nm,0.3s						
VCEL	**Villa Celiera**	**0.34**	**97**	Pg	Pb	21 37 54.2	-0.2
VCEL	**Villa Celiera**	**0.34**	**97**	Pg	Pb	21 37 54.2	-0.2
PTQR	**Pietraquaria**	**0.41**	**179**	Pg	Pb	21 37 55.3	-0.4
	4.0nm,0.5s						
PTQR	**Pietraquaria**	**0.41**	**179**	Pg	Pb	21 37 55.3	-0.4
	4.0nm,0.5s						
NRCA	**Norcia**	**0.45**	**333**	Pg	Pg	21 37 55.3	+0.2
NRCA				Sg	Sg	21 38 02.1	+0.9
	46nm,0.1s						
NRCA	**Norcia**	**0.45**	**333**	Pg	Pg	21 37 55.3	+0.2
NRCA				Sg	Sg	21 38 02.1	+0.9
	46nm,0.1s						

IDC 16 21:38:14.6±3.6,11.51S×166.27E,h0km,mb4.0/4,mb1 4.2/4,mb1mx3.8/19,mbtmp3.9/4,Error ellipse: s-maj=193.5km s-min=25.2km az=142.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.81**	**251**	P	P	21 44 41.2	-0.1
	49nm,0.4s,baz=82,slow=9.3,SNR=3.6						
ASAR	**Alice Springs**	**33.05**	**244**	P	P	21 44 52.3	+0.1
	0.5nm,0.5s,baz=70,slow=9.3,SNR=3.4						
FITZ	**Fitzroy Crossi**	**39.76**	**256**	P	P	21 45 49.4	-0.1
	2.8nm,0.6s,baz=112,slow=8.2,SNR=6.7						
ILAR	**Eielson Array**	**83.79**	**18**	P	P	21 50 45.0	-0.5
	0.8nm,0.5s,baz=237,slow=5.0,SNR=15						
YKA	**Yellowknife Ar**	**95.15**	**27**	P	P	21 51 40.3	+0.8
	0.1nm,0.4s,baz=256,slow=4.4,SNR=4.2						

*ISK **16** 21:54:50.4,37.83N×29.12E,h16km,MD2.7*
*ISCJB **16** 21:54:51.4±0.6,37.84N±0.03×29.09E±0.05,h9km±7km,Error ellipse: s-maj=7.1km s-min=4.5km az=13.2*
*CSEM **16** 21:54:51.6±0.1,37.85N×29.08E,h2km,MD2.7,Error ellipse: s-maj=3.6km s-min=2.7km az=108.0*
*DDA **16** 21:54:51.6,37.83N×29.08E,h7km,MD2.7*
ISC 16 21:54:51.4±1.1,37.84N±0.03×29.09E±0.03,h9km±9km,n14,σ0932/26,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.10**	**207**	PG	**Pg**	21 54 54.0	**+0.1**
DENT	**Denizli**	**0.10**	**207**	*i* Pg	**Pg**	21 54 54.0	**+0.1**
DNZL	**Cakiroluk**	**0.16**	**192**	*i* P	**Pg**	21 54 54.8	**-0.1**
DNZL				*i* S	**Sg**	21 54 57.2	**-0.1**
DNZL	**Cakiroluk**	**0.16**	**192**	*i* P	**Pg**	21 54 54.8	**-0.1**
DNZL				*i* S	**Sg**	21 54 57.2	**-0.1**
KHL	**Karahalli**	**0.59**	**35**	*e*PG	**Pg**	21 55 02.6	**-0.2**
KHL				*e*SG	**Sg**	21 55 11.2	**+0.6**
KHL	**Karahalli**	**0.59**	**35**	*e*Pg	**Pg**	21 55 02.6	**-0.2**
KHL				*e*Sg	**Sg**	21 55 11.2	**+0.6**
KHAL	**Karahalli**	**0.61**	**31**	*i* P	**Pg**	21 55 03.6	**+0.2**
KHAL				*i* S	**Sb**	21 55 12.5	**-0.7**
KHAL	**Karahalli**	**0.61**	**31**	*i* P	**Pg**	21 55 03.6	**+0.2**
KHAL				*i* S	**Sb**	21 55 12.5	**-0.7**
GOLH	**Golhisar**	**0.71**	**148**	*i* P	**Pg**	21 55 05.4	**+0.3**
GOLH				*i* S	**Sb**	21 55 15.7	**-0.2**
GOLH	**Golhisar**	**0.71**	**148**	*i* P	**Pg**	21 55 05.4	**+0.3**
GOLH				*i* S	**Sb**	21 55 15.7	**-0.2**
KULA	**Kula-Manisa**	**0.75**	**333**	*e*PG	**Pg**	21 55 05.7	**-0.2**
KULA				*e*SG	**Sb**	21 55 17.3	**+0.3**
KULA	**Kula-Manisa**	**0.75**	**333**	*e*Pg	**Pg**	21 55 05.7	**-0.2**
KULA				*e*Sg	**Sb**	21 55 17.3	**+0.3**
AYDN	**Tasoluk**	**0.98**	**260**	*i* P	**Pg**	21 55 10.3	**+0.1**
AYDN				*i* S	**Sg**	21 55 22.9	**0.0**
AYDN	**Tasoluk**	**0.98**	**260**	*i* P	**Pg**	21 55 10.3	**+0.1**
AYDN				*i* S	**Sg**	21 55 22.9	**0.0**

IDC 16 22:04:47.0±1.2,19.65N×144.82E,h0km,mb3.7/4,mb1 4.0/4,mb1mx3.5/25,mbtmp3.7/4,Error ellipse: s-maj=95.4km s-min=28.9km az=108.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.67**	**195**	P	P	22 12 29.1	-0.1
	1.0nm,0.6s,baz=12,slow=8.8,SNR=6.7						
ILAR	**Eielson Array**	**63.16**	**27**	P	P	22 15 16.8	+0.3
	0.5nm,0.9s,baz=253,slow=6.3,SNR=4.6						
YKA	**Yellowknife Ar**	**77.54**	**28**	P	P	22 16 43.9	-0.6
	0.2nm,0.5s,baz=288,slow=5.3,SNR=4.3						
FINES	**FINESS Array B**	**85.67**	**335**	P	P	22 17 27.8	+0.3
	2.2nm,1.1s,baz=38,slow=7.0,SNR=4.3						

*IDC **16** 22:34:17.6±1.0,5.64N×126.61E,h0km,mb4.0/9,mb1 4.1/9,mb1mx3.8/24,mbtmp4.0/9,Error ellipse: s-maj=98.6km s-min=16.1km az=70.0*
*ISCJB **16** 22:34:25.8±0.7,5.6N±0.1×126.7E±0.2,h83km,mb3.9/9,Error ellipse: s-maj=28.5km s-min=8.4km az=153.7*
*MAN **16** 22:34:29,5.96N×126.63E,h44km,mb4.7,ML3.6,MS3.6*
*AUST **16** 22:37:02.0±0.0,9.13S×125.99E,h423km,Error ellipse: s-maj=2.0km s-min=1.4km az=226.0*
ISC 16 22:34:27.0±0.8,5.8N±0.1×126.8E±0.2,h83km,n19,σ2811/20,mb3.9/9,2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.30**	**335**	*eP*	**Pn**	**22 34 47.9**	**-2.1**
MATI				*eS*	**Sn**	**22 35 02.2**	**-5.0**
DAV	**Davao City (W)**	**1.79**	**317**	Pn	Pn	22 34 52.6	-3.6
	123nm,0.3s,baz=268,slow=2.2,SNR=15						
DAV				Sn	Sn	22 35 26.3	+7.9
	129nm,0.3s,baz=93,slow=18,SNR=7.0						
GSPH	**General Santos**	**1.88**	**280**	*eP*	Pn	22 34 50.2	-7.4
BUKP	**Musuan**	**2.73**	**321**	*eP*	**Pn**	**22 35 08.9**	**0.0**
CTBH	**Cotabato--PC H**	**2.93**	**300**	*i*P	**Pn**	**22 35 11.2**	**-0.3**
PAGZ	**Pagadian**	**3.99**	**302**	*eP*	**Pn**	**22 35 25.6**	**-0.3**
MTN	**Manton Dam**	**18.98**	**167**	P	**P**	**22 38 38.0**	**-3.9**
	baz=6.3,SNR=4.0						
FITZ	**Fitzroy Crossi**	**23.74**	**183**	P	**P**	**22 39 30.0**	**-1.8**
	1.4nm,0.5s,baz=14,slow=8.4,SNR=9.2						
COEN	**Coen**	**25.45**	**140**	S	S	22 43 55.5	-13
	baz=18,SNR=15						
WRA	**Warramunga Arr**	**26.59**	**164**	P	**P**	**22 39 57.7**	**0.0**
	2.1nm,0.6s,baz=343,slow=10,SNR=12						
WRA				PcP	**PcP**	**22 43 21.6**	**+1.3**
	0.4nm,0.9s,baz=353,slow=2.1,SNR=2.0						
ASAR	**Alice Springs**	**30.06**	**167**	P	**P**	**22 40 29.6**	**+1.1**
	0.4nm,0.6s,baz=342,slow=7.9,SNR=4.4						
ASAR				PcP	**PcP**	**22 43 30.2**	**+1.4**
	0.2nm,0.3s,baz=357,slow=1.9,SNR=4.5						
MEEK	**Meekatharra**	**33.17**	**193**	P	**P**	**22 40 54.2**	**-1.7**
	baz=19,SNR=6.9						
STKA	**Stephens Creek**	**39.99**	**160**	P	**P**	**22 41 52.5**	**-1.2**
	3.4nm,0.9s,baz=328,slow=13,SNR=2.9						
MKAR	**Makanchi Array**	**55.95**	**324**	P	**P**	**22 43 58.4**	**+1.7**
	1.0nm,0.5s,baz=115,slow=7.3,SNR=25						
MKAR				PcP	**PcP**	**22 44 56.5**	**+2.2**
	0.4nm,0.6s,baz=116,slow=4.3,SNR=3.8						
ZALV	**Zalesovo Beam**	**58.83**	**332**	P	**P**	**22 44 17.6**	**+0.8**
	0.4nm,0.4s,baz=142,slow=7.3,SNR=4.7						
ARCES	**ARCESS Array B**	**88.58**	**340**	P	**P**	**22 47 12.2**	**+1.9**
	7.9nm,1.1s,baz=88,slow=5.8,SNR=8.4						
BRTR	**Keskin Array B**	**88.80**	**310**	P	**P**	**22 47 12.7**	**+0.5**
	0.5nm,0.7s,baz=73,slow=5.0,SNR=3.4						
FINES	**FINESS Array B**	**90.09**	**332**	P	**P**	**22 47 19.4**	**+1.8**
	0.8n

comp=E,0.3nm,0.3s,baz=121,slow=9.3,SNR=4.5
BVAR Borovoye Array 32.45 320 P **P** 22 58 50.0 **-1.0**
comp=E,0.2nm,0.4s,baz=95,slow=11,SNR=2.7
ARCES ARCESS Array B 56.52 335 P **P** 23 02 01.9 **-0.9**
comp=E,6.3nm,0.9s,baz=84,slow=8.3,SNR=5.3
FINES FINESS Array B 57.09 326 P **P** 23 02 05.3 **-1.5**
comp=E,0.9nm,0.7s,baz=91,slow=9.7,SNR=5.3
AKASG Malin Array Be 57.27 313 P **P** 23 02 05.9 **-2.4**
comp=E,0.7nm,0.5s,baz=64,slow=7.4,SNR=3.4
WRA Warramunga Ar 58.98 148 P **P** 23 02 20.8 **+0.1**
comp=E,1.3nm,0.8s,baz=338,slow=7.4,SNR=8.7
ASAR Alice Springs 62.07 150 P **P** 23 02 40.0 **-1.7**
comp=E,0.6nm,0.4s,baz=329,slow=7.2,SNR=6.0
YKA Yellowknife Ar 80.16 18 P **P** 23 04 30.8 **0.0**
comp=E,0.1nm,0.5s,baz=326,slow=4.6,SNR=3.8

IDC 16 22:54:20.0±2.9, 3°37S×100°27E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/25, mbtmp3.7/7, Error ellipse: s-maj=120.9km s-min=21.2km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.73**	**357**	P		P	P	22 59 12.2	-0.8
	0.7nm,0.8s,baz=180,slow=9.6,SNR=3.0								
WRA	**Warramunga Arr**	**37.08**	**119**	P		P	P	23 01 32.4	0.0
	0.3nm,0.3s,baz=304,slow=8.4,SNR=4.0								
ASAR	**Alice Springs**	**38.24**	**125**	P		P	P	23 01 41.9	-0.3
	0.2nm,0.3s,baz=300,slow=7.4,SNR=4.3								
SONM	**Songino Array**	**51.27**	**5**	P		P	P	23 03 25.9	+0.1
	0.5nm,0.3s,baz=187,slow=7.1,SNR=3.6								
MKAR	**Makanchi Array**	**52.41**	**344**	P		P	P	23 03 34.9	+0.7
	1.2nm,0.7s,baz=150,slow=7.8,SNR=17								
ZALV	**Zalesovo Beam**	**58.55**	**349**	P		P	P	23 04 18.2	0.0
	0.4nm,0.3s,baz=165,slow=6.0,SNR=6.0								
BVAR	**Borovoye Array**	**61.55**	**340**	P		P	P	23 04 37.9	-1.0
	0.6nm,0.8s,baz=141,slow=7.4,SNR=3.6								

IDC 16 22:55:13.5±4.1, 3°53S×100°07E, h0km, mb3.9/4, mb1 3.9/4, mb1mx3.5/24, mbtmp3.9/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/46, Error ellipse: s-maj=176.2km s-min=27.2km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**		**6.39**	**350**	LR	LR	LR	22 59 29.1	
	comp=Z,108nm,18.1s,baz=27,slow=41								
ASAR	**Alice Springs**		**38.32**	**125**	P		P	23 02 36.2	-0.1
	0.6nm,0.5s,baz=296,slow=7.8,SNR=3.2								
SONM	**Songino Array**		**51.45**	**5**	P		P	23 04 20.7	+0.1
	1.2nm,0.6s,baz=188,slow=9.6,SNR=2.8								
MKAR	**Makanchi Array**		**52.51**	**345**	P		P	23 04 28.8	+0.3
	0.8nm,0.5s,baz=147,slow=7.9,SNR=9.2								
ZALV	**Zalesovo Beam**		**58.67**	**350**	P		P	23 05 11.9	-0.8
	0.8nm,0.7s,baz=178,slow=7.2,SNR=3.6								

IDC 16 23:06:48.2±1.1, 3°35S×100°27E, h0km, mb4.1/15, mb1 4.2/16, mb1mx4.1/28, mbtmp4.1/16, ML4.1/1, Error ellipse: s-maj=38.9km s-min=14.2km az=51.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**19.50**	**96**	P		P	P	23 11 16.4	-0.8
	0.6nm,0.3s,baz=219,slow=11,SNR=3.5								
CMAR	**Chiang Mai Arr**	**21.71**	**357**	P		P	P	23 11 41.0	-0.1
	1.4nm,0.8s,baz=185,slow=9.1,SNR=9.0								
FITZ	**Fitzroy Crossi**	**28.85**	**122**	P		P	P	23 12 49.5	+0.8
	0.8nm,0.5s,baz=315,slow=7.1,SNR=1.7								
WRA	**Warramunga Arr**	**37.09**	**119**	P		P	P	23 14 00.1	-0.6
	0.9nm,0.4s,baz=307,slow=8.6,SNR=6.6								
ASAR	**Alice Springs**	**38.25**	**125**	P		P	P	23 14 10.2	-0.3
	2.2nm,0.4s,baz=298,slow=7.5,SNR=24								
KSRS	**Korea Array**	**48.04**	**30**	P		P	P	23 15 29.1	-0.4
	1.0nm,0.5s,baz=228,slow=6.4,SNR=7.5								
STKA	**Stephens Creek**	**48.06**	**131**	P		P	P	23 15 29.7	-0.1
	1.8nm,0.8s,baz=310,slow=10,SNR=3.4								
SONM	**Songino Array**	**51.26**	**5**	P		P	P	23 15 54.7	+0.7
	2.9nm,0.5s,baz=189,slow=9.0,SNR=9.7								
MKAR	**Makanchi Array**	**52.40**	**344**	P		P	P	23 16 03.0	+0.6
	4.1nm,0.7s,baz=156,slow=8.6,SNR=58								
USRK	**Uusuriysk Arra**	**55.22**	**27**	P		P	P	23 16 22.6	-0.5
	3.0nm,0.7s,baz=140,slow=42,SNR=7.5								
KURBB	**Kurchatov Arra**	**56.91**	**344**	P		P	P	23 16 34.7	-0.3
	0.4nm,0.4s,baz=162,slow=6.7,SNR=11								
ZALV	**Zalesovo Beam**	**58.54**	**349**	P		P	P	23 16 45.9	-0.5
	4.2nm,0.9s,baz=163,slow=5.4,SNR=18								
BVAR	**Borovoye Array**	**61.54**	**340**	P		P	P	23 17 06.3	-0.8
	0.9nm,0.4s,baz=141,slow=5.5,SNR=11								
BRTR	**Keskin Array B**	**74.43**	**313**	P		P	P	23 18 28.2	-0.5
	0.2nm,0.6s,baz=150,slow=6.1,SNR=3.7								
FINES	**FINESS Array B**	**85.43**	**332**	P		P	P	23 19 28.0	+0.5
	1.3nm,0.9s,baz=90,slow=4.2,SNR=4.5								
ARCES	**ARCESS Array B**	**87.83**	**340**	P		P	P	23 19 39.3	+0.2
	3.4nm,1.0s,baz=98,slow=4.6,SNR=2.4								
TXAR	**Lajitas Array**	**145.59**	**39**	PKPbc		PKPbc	PKPbc	23 26 29.7	+0.1
	2.3nm,0.5s,baz=300,slow=1.8,SNR=22								

IDC 16 23:17:06.2±4.7, 21°60N×143°12E, h318km±47km, mb3.2/12, mb1 3.4/13, mb1mx3.3/28, mbtmp3.2/13, Error ellipse: s-maj=20.9km s-min=13.6km az=87.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**15.49**	**345**	P		P	P	23 20 28.0	+0.3
	0.5nm,0.3s,baz=150,slow=12,SNR=3.0								
KSRS	**Korea Array**	**20.55**	**324**	P		P	P	23 21 21.2	-0.3
	1.9nm,0.5s,baz=147,slow=8.8,SNR=8.7								
CMAR	**Chiang Mai Arr**	**41.52**	**274**	P		P	P	23 24 24.1	+0.5
	0.6nm,0.6s,baz=91,slow=6.0,SNR=5.2								
WRA	**Warramunga Arr**	**42.17**	**192**	P		P	P	23 24 28.4	-0.3
	0.6nm,0.4s,baz=17,slow=9.6,SNR=3.6								
ASAR	**Alice Springs**	**45.88**	**192**	P		P	P	23 24 57.7	-0.2
	0.1nm,0.3s,baz=10.0,slow=7.9,SNR=3.9								
ZALV	**Zalesovo Beam**	**54.25**	**322**	P		P	P	23 25 59.8	-0.1
	0.7nm,0.5s,baz=124,slow=7.8,SNR=5.6								
ZALV						PcP	PcP	23 26 58.6	-1.0
	0.8nm,0.5s,baz=112,slow=4.3,SNR=5.5								
MKAR	**Makanchi Array**	**54.72**	**313**	P		P	P	23 26 03.6	+0.2
	0.5nm,0.6s,baz=98,slow=6.4,SNR=10								
MKAR						PcP	PcP	23 27 01.7	0.0
	0.3nm,0.4s,baz=78,slow=4.3,SNR=5.1								
KURBB	**Kurchatov Arra**	**57.55**	**317**	P		P	P	23 26 22.9	-0.3
	1.9nm,0.5s,baz=95,slow=7.5,SNR=17								
ILAR	**Eielson Array**	**62.15**	**27**	P		P	P	23 26 53.3	-0.7
	0.7nm,0.6s,baz=257,slow=5.5,SNR=8.8								
YKA	**Yellowknife Ar**	**76.56**	**28**	P		P	P	23 28 22.1	+0.4
	1.0nm,0.6s,baz=291,slow=5.8,SNR=20								
ARCES	**ARCESS Array B**	**78.99**	**341**	P		P	P	23 28 35.4	+0.5
	3.5nm,0.7s,baz=61,slow=7.3,SNR=9.2								
FINES	**FINESS Array B**	**83.24**	**334**	P		P	P	23 28 56.5	-0.8
	2.0nm,0.5s,baz=60,slow=5.5,SNR=18								
NVAR	**Mina Array Bea**	**83.25**	**51**	P		P	P	23 28 59.1	+1.0
	0.2nm,0.3s,baz=282,slow=6.3,SNR=4.5								

*ISCJB **16** 23:42:50.0±0.8, 34°.10N±0°.02×70°.11E±0°.02, h1km±4km, mb4.9/200, MS4.2/45, Error ellipse: s-maj=3.4km s-min=2.3km az=19.1*

*BJI **16** 23:42:51.2, 34°.40N×69°.93E, h5km, mB4.9/27, mb4.8/46, ML4.9/2, Ms4.6/40, Ms7 4.2/32*

*NEIC **16** 23:42:51.9±1.4, 34°.11N×70°.06E, h4km±8km, mb5.1/98, Error ellipse: s-maj=5.3km s-min=3.8km az=189.0*

NEIC Casualties and damage are included with the event at 21:27 UTC. Felt [V] at Jalalabad. Also felt at Kabul and Mazar-e Sharif. Felt at Islamabad and Kohat, Pakistan.

*IDC **16** 23:42:51.4±0.4, 34°.17N×70°.07E, h0km, mb4.8/32, mb1 4.9/37, mb1mx4.9/39, mbtmp4.8/37, ML4.6/5, MS4.1/27, Ms1 4.1/27, ms1mx3.9/39, Error ellipse: s-maj=12.1km s-min=9.9km az=177.0*

*MOS **16** 23:42:54.9±1.1, 34°.15N×70°.11E, h33km, mb5.2/83, MS4.2/14, Error ellipse: s-maj=5.7km s-min=3.5km az=125.0*

*DJA **16** 23:42:54.3±0.4, 34°N±11°×7°0E°, h10km, M4.8/8, mB5.3/1, mb4.8/8, Mw(mB)4.7/1*

*NNC **16** 23:42:56.8±2.9, 34°.10N×69°.90E, h51km±26km, mb4.7, mpv5.2, Error ellipse: s-maj=27.3km s-min=20.9km az=60.0*

*SZGRF **16** 23:42:57.0, 34°.70N×70°.11E, h33km, mb5.1, MS3.9, Southeastern Afghanistan*

ISC 16 23:42:54.2±0.4, 34°.14N±0°.03×70°.03E±0°.02, h16km±2km, h16km:pP-P,n591,σ1s43/659, mb5.0/198, MS4.2/46, 47C-34D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBL	**Kabul**		**0.91**	**296**	*e*P		Pb	23 43 08.0	-3.8
KBL					*e*			23 43 26.4	
KBL	**Kabul**		**0.91**	**296**	*e*Pg		Pb	23 43 08.0	-3.8
KBL					*e*Sn		**Sn**	**23 43 26.4**	**+0.9**
CEP	**Cherat**		**1.59**	**101**	⇓P		**Pn**	**23 43 22.5**	**+0.6**
CEP					S		**Sg**	**23 43 48.0**	**+2.5**
THW	**Thamme Wali**		**1.96**	**133**	⇓P		**Pb**	**23 43 29.4**	**-0.2**
NIL	**Nilore**		**2.72**	**99**	*e*Pn		**Pb**	**23 43 43.0**	**+0.5**
NIL					*e*Sn		**Sb**	**23 44 13.2**	**-2.5**
CHCP	**Chirah Chowk**		**2.73**	**99**	⇓P		**Pb**	**23 43 40.4**	**-2.3**
SARP	**Sargodha**		**3.13**	**134**	P		**Pn**	**23 43 44.5**	**+1.6**
JMU	**Jammu**		**4.31**	**108**	*e*P		**Pn**	**23 44 01.0**	**+1.9**
JMU					*ex*		**Sn**	**23 44 50.0**	**+1.0**
QUE	**Quetta**		**4.73**	**214**	*e*P		**Pn**	**23 44 08.0**	**+2.9**
QUE					*e*S		Sb	23 45 07.0	-6.6
QUE	**Quetta**		**4.73**	**214**	*e*P		**Pn**	**23 44 08.0**	**+2.9**
QUE					*e*S		Sb	23 45 07.0	-6.6
THN	**Thein Dam**		**5.05**	**108**	*e*P		**Pn**	**23 44 09.5**	**+0.2**
THN					*e*S		**Sn**	**23 45 11.0**	**+3.6**
DHRM	**DHARAMSHALA**		**5.58**	**108**	*e*P		**Pn**	**23 44 18.3**	**+1.5**
DHRM					*e*S		**Sn**	**23 45 21.8**	**+1.1**
DHRM						AML	AML	23 45 25.1	
	comp=E,5μm,0.5s								
DHRM						AML	AML	23 45 26.0	
	comp=N,4μm,0.5s								
BHK	**Bhakra**		**6.02**	**115**	*e*P		**Pn**	**23 44 24.6**	**+1.9**
BHK					*ex*		**Sn**	**23 45 36.8**	**+5.5**
SDNR	**Sundarnagar**		**6.40**	**112**	*e*P		**Pn**	**23 44 29.5**	**+1.6**
SDNR					*e*S		**Sn**	**23 45 41.5**	**+0.8**
SMLA	**Simla**		**6.72**	**115**	*i* P		**Pn**	**23 44 31.2**	**-1.1**
SMLA					*i* S		**Sn**	**23 45 49.3**	**+0.8**
SMLA						AML	AML	23 45 53.1	
	comp=N,2μm,0.2s								
SMLA						AML	AML	23 45 53.5	
	comp=E,2μm,0.4s								
KSH	**Kashi**		**7.17**	**40**	Pn		**Pn**	**23 44 36.1**	**-2.5**
KSH					Sn		Sn	23 45 45.8	-14
KSH						smax	smax		
	comp=N,410nm,0.7s								
KSH						smax	smax		
	comp=E,400nm,0.8s								
DDI	**Dehra Dun**		**7.79**	**117**	*e*P		**Pn**	**23 44 46.5**	**-0.5**
DDI					*e*P		**Pn**	**23 44 48.0**	**+1.0**
DDI					*e*S		**Sn**	**23 46 13.6**	**-1.2**
DDI						AML	AML	23 46 20.2	
	comp=N,3μm,0.3s								
DDI						AML	AML	23 46 21.7	
	comp=E,2μm,0.7s								
DDI					*ex*		x	23 47 11.0	
AML	**Almayashu**		**8.48**	**19**	P		**Pn**	**23 44 58.6**	**+1.9**
	SNR=70								
UCH	**Uchtor**		**8.81**	**22**	P		Pn	23 45 05.9	+4.6
	SNR=11								
KZA	**Kyzart**		**8.93**	**26**	P		**Pn**	**23 45 04.0**	**+1.2**
	SNR=48								
KK31	**Karatay Array**		**8.96**	**2**	Pn		**Pn**	**23 45 04.0**	**+1.1**
KK31	comp=E,41nm,0.4s,baz=192,slow=13,SNR=1164				⇑Sn		**Sn**	**23 46 44.7**	**+1.2**
	comp=E,29nm,0.4s,baz=187,slow=21,SNR=5.5								
EKS2	**Erkin-Say**		**9.00**	**18**	*e*P		**Pn**	**23 45 04.7**	**+1.1**
EKS2					*e*			23 46 43.5	
EKS2	**Erkin-Say**		**9.00**	**18**	*e*Pn		**Pn**	**23 45 04.7**	**+1.1**
EKS2					*e*Sn		**Sn**	**23 46 43.5**	**-1.1**
EKS2	**Erkin-Say**		**9.00**	**18**	P		**Pn**	**23 45 05.7**	**+2.1**
	SNR=78								
AAK	**Ala-Archa**		**9.17**	**21**	P		**Pn**	**23 45 07.3**	**+1.3**
AAK								23 46 50.3	
AAK						pmax	pmax		
	comp=Z,11nm,0.3s								
AAK						smax	smax		
	comp=N,3.0nm,0.3s								
AAK						MLR	MLR		
	comp=Z,536nm,19.5s								
AAK	**Ala-Archa**		**9.17**	**21**	*e*Pn		**Pn**	**23 45 07.7**	**+1.7**
	comp=Z,53nm,0.5s								
AAK					*e*Sn		**Sn**	**23 46 49.4**	**+0.4**
AAK	**Ala-Archa**		**9.17**	**21**	P		**Pn**	**23 45 09.1**	**+3.1**
	SNR=52								
AAK	**Ala-Archa**		**9.17**	**21**	Pn		**Pn**	**23 45 07.0**	**+1.0**
	comp=Z,490nm,0.4s,SNR=38								
AAK	**Ala-Archa**		**9.17**	**21**	Pn		**Pn**	**23 45 07.3**	**+1.3**
	comp=Z,11nm,0.3s,baz=198,slow=11,SNR=126								
AAK					Sn		**Sn**	**23 46 50.3**	**+1.3**
	comp=Z,2.5nm,0.3s,baz=330,slow=20,SNR=3.6								
AAK					LR		LR	23 49 00.2	
	comp=Z,536nm,19.5s,baz=204,slow=40								
KBK	**Karagaybulak**		**9.34**	**23**	P		**Pn**	**23 45 10.8**	**+2.5**
	SNR=39								
FRU	**Bishkek**		**9.39**	**21**	*e*P		**Pn**	**23 45 11.0**	**+2.1**
FRU					*e*S		**Sn**	**23 46 56.0**	**+1.8**
FRU						pmax	pmax		
	comp=Z,170nm,1.6s								
FRU						smax	smax		
	comp=N,520nm,1.8s								
ULHL	**Ulahol**		**9.45**	**29**	P		**Pn**	**23 45 11.2**	**+1.4**
	SNR=20								
CHMS	**Chumysh**		**9.58**	**21**	P		**Pn**	**23 45 13.8**	**+2.2**
	SNR=32								
USP	**Ospenovka**		**9.76**	**20**	P		**Pn**	**23 45 15.7**	**+1.8**
	SNR=17								
TKM2	**Tokmak 2**		**9.79**	**25**	⇓Pn		**Pn**	**23 45 16.2**	**+1.7**
	comp=N,92nm,1.0s								
TKM2	**Tokmak 2**		**9.79**	**25**	*e*P		**Pn**	**23 45 15.6**	**+1.1**
TKM2						pmax	pmax		
	comp=Z,91nm,0.9s								
TKM2	**Tokmak 2**		**9.79**	**25**	*e*Pn		**Pn**	**23 45 15.6**	**+1.1**
	comp=Z,91nm,0.9s								
TKM2	**Tokmak 2**		**9.79**	**25**	P		**Pn**	**23 45 15.7**	**+1.2**
	SNR=31								
PTH	**Pithoragarh**		**9.79**	**115**	*e*P		**Pn**	**23 45 13.9**	**-0.7**
PTH					*e*S		**Sn**	**23 47 02.6**	**-1.7**
LGTI	**Lohaghat**		**9.87**	**116**	*ex*		**Pn**	**23 45 16.5**	**+1.1**
LGTI					*ex*		x	23 47 06.2	
ABKT	**Ailbek**		**10.36**	**295**	Pn		**Pn**	**23 45 23.8**	**+1.6**
	comp=Z,248nm,0.6s,SNR=16								
KNDC	**Almaty**		**10.55**	**29**	⇑Pn		**Pn**	**23 45 27.0**	**+2.1**
PYUN	**Piuthan**		**12.62**	**115**	*e*P		**Pn**	**23 45 51.4**	**-1.9**
	comp=Z,322nm,0.4s								
BHPL	**Bhopal**		**12.64**	**147**	*e*P		**Pn**	**23 45 51.3**	**-2.2**
BHPL					*ex*		x	23 47 56.6	
DANN	**Dangsing**		**13.08**	**112**	*e*P		**Pn**	**23 45 57.6**	**-2.1**
	comp=Z,122nm,0.4s								
KOLN	**Koldanda**		**13.26**	**115**	*e*P		**Pn**	**23 45 59.8**	**-2.2**
	comp=Z,157nm,0.5s								
JBP	**Jabalpur**		**13.98**	**139**	⇑eP		Pn	23 46 08.3	-3.4
JBP					⇑*ex*		x	23 48 43.6	
DMN	**Daman**		**14.48**	**113**	*e*P		Pn	23 46 15.2	-3.6
	comp=Z,129nm,0.4s								
KKN	**Kakani**		**14.52**	**112**	*e*P		Pn	23 46 15.8	-3.6
	comp=Z,164nm,0.6s								
PKIN	**Phulchoki**		**14.72**	**112**	*e*P		Pn	23 46 18.2	-3.9
	comp=Z,112nm,0.3s								
PKI	**Pulchoki**		**14.73**	**112**	*e*P		Pn	23 46 18.4	-3.9
	comp=Z,136nm,0.5s								
AKL	**Akola**		**14.74**	**153**	*ex*		**Pn**	**23 46 20.4**	**-1.8**
AKL					*i* x		x	23 48 57.6	
GUN	**Gumba**		**14.93**	**110**	*e*P		Pn	23 46 21.4	-3.6
	comp=Z,96nm,0.5s								
NGP	**Nagpur**		**15.20**	**146**	*e*P		**Pn**	**23 46 23.6**	**-4.6**
NGP					*ex*		x	23 49 06.1	
SMDO	**Samad**		**15.24**	**227**	P		**P**	**23 46 36.4**	**+2.6**
	SNR=7.4								
SMDO	**Samad**		**15.24**	**227**	P		**Pn**	**23 46 28.6**	**-0.3**
	SNR=9.3								
HOQ	**Hoqain**		**15.31**	**230**	P		**P**	**23 46 36.9**	**+2.4**
	SNR=5.5								
HOQ	**Hoqain**		**15.31**	**230**	P		**Pn**	**23 46 28.2**	**-1.5**
	SNR=9.3								
ASHO	**Ashiyiah**		**15.38**	**236**	P		**Pn**	**23 46 32.6**	**+1.9**
	SNR=27								
NAZ	**Nazwa, Dubai**		**15.46**	**238**	P		**P**	**23 46 35.8**	**-0.3**
	SNR=6.2								
NAZ	**Nazwa, Dubai**		**15.46**	**238**	P		**Pn**	**23 46 32.9**	**+1.2**
	SNR=7.0								
MK31	**Makanchi Array**		**15.68**	**33**	⇑P		**Pn**	**23 46 33.5**	**-1.0**
	comp=Z,14nm,0.6s,baz=225,slow=9.1,SNR=294								
MKAR	**Makanchi Array**		**15.68**	**33**	P		**Pn**	**23 46 33.6**	**-0.9**
MKAR						pmax	pmax		
	comp=Z,1.0nm,0.3s								
MKAR						MLR	MLR		
	comp=Z,125nm,18.7s								
MKAR	**Makanchi Array**		**15.68**	**33**	*e*Pn		**Pn**	**23 46 33.7**	**-0.9**
MKAR	**Makanchi Array**		**15.68**	**33**	Pn		**Pn**	**23 46 33.6**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=213,slow=14,SNR=37								
MKAR						LR	LR	23 52 03.7	
	comp=Z,125nm,18.6s,baz=224,slow=35								
JMDO	**Jabal Madar**		**15.73**	**225**	P		**Pn**	**23 46 36.5**	**+1.2**
	SNR=12								
JMDO	**Jabal Madar**		**15.73**	**225**	P		**Pn**	**23 46 35.6**	**+0.4**
	SNR=27								
RAMN	**Ramite**		**15.96**	**112**	*e*P		**Pn**	**23 46 34.4**	**-4.0**
	comp=Z,225nm,0.7s								
ARQ	**Araqi**		**15.99**	**231**	P		**P**	**23 46 40.8**	**-1.2**
	SNR=10								
BSY	**Bisya**		**15.99**	**228**	P		**Pn**	**23 46 39.9**	**+1.3**
	SNR=27								
ODAN	**Odare**		**16.61**	**111**	*e*P		**Pn**	**23 46 43.0**	**-3.7**
	comp=Z,88nm,0.5s								
TAPN	**Taplejung**		**16.62**	**109**	*e*P		**Pn**	**23 46 43.1**	**-3.8**
	comp=Z,72nm,0.5s								
LATR	**Latur**		**16.71**	**158**	*e*P		**Pn**	**23 46 43.6**	**-4.1**
LATR					*ex*		x	23 49 39.1	
WMQ	**Urumqi**		**16.76**	**50**	P		**Pn**	**23 46 48.6**	**+0.2**
WMQ					sP		**sP**	**23 46 55.6**	**-1.6**
WMQ					PP		**PnPn**	**23 47 03.0**	**+5.2**
WMQ					S		**Sn**	**23 49 54.6**	**+0.4**
WMQ					SS		**SnSn**	**23 50 14.0**	**+6.6**
WMQ					PcP		**PcP**	**23 51 39.0**	**+2.6**
WMQ						pmax	pmax		
	comp=Z,45nm,0.8s								
WMQ						pmax	pmax		
	comp=Z,260nm,3.0s								
WMQ						LR	LR		
	comp=N,680nm,7.0s								
WMQ						LR	LR		
	comp=E,640nm,7.0s								
WMQ						LR	LR		
	comp=Z,410nm,7.0s								
AB31	**Akbulak array**		**16.85**	**337**	⇑P		**Pn**	**23 46 48.5**	**-0.8**
	comp=Z,13nm,0.4s,baz=145,slow=13,SNR=352								
ABKAR	**Akbulak array**		**16.85**	**337**	*e*Pn		**Pn**	**23 46 48.5**	**-0.9**
ABKAR					*e*Sn		**Sn**	**23 49 53.9**	**-2.3**
BOK	**Bokaro**		**17.26**	**123**	*e*P		**Pn**	**23 46 51.9**	**-2.7**
BOK					*ex*		x	23 49 54.6	
KURBB	**Kurchatov Arra**		**17.61**	**18**	P		**Pn**	**23 46 56.6**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=207,slow=11,SNR=31								
KURBB						LR	LR	23 54 00.1	
	comp=Z,260nm,20.4s,baz=215,slow=38								
KURK	**Kurchatov**		**17.71**	**18**	P		**Pn**	**23 46 56.6**	**-3.5**
KURK						MLR	MLR		
	comp=Z,260nm,20.4s								
KURK	**Kurchatov**		**17.71**	**18**	*e*Pn		**Pn**	**23 46 57.9**	**-2.2**
	comp=Z,26nm,0.9s								
KURK	**Kurchatov**		**17.71**	**18**	P		**P**	**23 47 01.0**	**+0.1**
	SNR=14								
KURK	**Kurchatov**		**17.71**	**18**	Pn		**Pn**	**23 46 58.7**	**-1.4**
	comp=Z,90nm,0.6s,SNR=7.4								
HYB	**Hyderabad**		**18.32**	**153**	P		**Pn**	**23 47 05.0**	**-2.8**
HYB					S		**S**	**23 50 36.5**	**-0.3**
HYB	**Hyderabad**		**18.32**	**153**	P		**Pn**	**23 47 05.0**	**-2.8**
HYB					S		**S**	**23 50 36.5**	**-0.3**
HYB	**Hyderabad**		**18.32**	**153**	*i* P		**Pn**	**23 47 05.0**	**-2.8**
HYB					*e*S		**S**	**23 50 36.5**	**-0.3**
LSA	**Lhasa**		**18.46**	**98**	P		**P**	**23 47 09.5**	**-0.2**
LSA					S		**Sn**	**23 50 37.3**	**+1.3**
LSA						LR	LR		
	comp=N,790nm,19.9s								
LSA						LR	LR		
	comp=E,960nm,16.6s								
AKTO	**Aktyubinsk**		**18.51**	**335**	⇓P		**P**	**23 47 08.5**	**-1.2**
	comp=E,12nm,0.8s								
AKTO	**Aktyubinsk**		**18.51**	**335**	P		**P**	**23 47 09.3**	**-0.4**
AKTO	**Aktyubinsk**		**18.51**	**335**	P		**P**	**23 47 09.3**	**-0.4**
AKTO	**Aktyubinsk**		**18.51**	**335**	P		**P**	**23 47 09.3**	**-0.4**
	comp=E,2.8nm,0.3s,baz=140,slow=9.9,SNR=96								
VOSK	**Vostochnaya**		**18.59**	**2**	⇓P		**P**	**23 47 10.4**	**-0.1**
	comp=E,48nm,0.8s								
ZRNK	**Zerenda**		**18.82**	**358**	⇑P		**P**	**23 47 12.6**	**-0.4**
	comp=E,39nm,0.9s								
BVA0	**Borovoye Array**		**18.88**	**1**	P		**P**	**23 47 13.4**	**-0.3**
	comp=E,4.3nm,0.8s,baz=172,slow=13,SNR=213								
BVAR	**Borovoye Array**		**18.88**	**1**	P		**P**	**23 47 13.7**	**0.0**
BVAR	**Borovoye Array**

KIV **Kislovodsk** 23.30 303 *e*P **P** 23 48 02.3 +0.9
KIV *e*S **S** 23 52 15.6 +2.3
KIV pmax pmax
comp=Z,39nm,1.0s
KIV MLR MLR
comp=Z,366nm,15.0s
SVE Sverdlovsk 23.58 347 *e*P **P** 23 48 04.5 +0.6
SVE *e*S **S** 23 52 20.6 +3.2
SVE pmax pmax
comp=Z,84nm,1.4s
SVE MLR MLR
comp=Z,2μm,16.0s
ARU Arti 23.64 344 *c i*P **P** 23 48 04.4 -0.1
ARU PPP PPP 23 48 40.5
ARU S **S** 23 52 20.7 +2.3
ARU SS **SnSn** 23 52 57.4 +1.6
ARU pmax pmax
comp=Z,31nm,1.0s
ARU MLR MLR
comp=Z,722nm,16.0s
ARU Arti 23.64 344 P **P** 23 48 04.0 -0.5
comp=Z,196nm,0.8s,SNR=17
GTA Gaotai 24.37 69 *e*P **P** 23 48 13.3 +1.6
GTA pP **pP** 23 48 16.8 +0.2
GTA sP **sP** 23 48 18.8 +0.1
GTA PP PnPn 23 48 51.1 +9.2
GTA S **S** 23 52 35.4 +4.8
GTA sS **sS** 23 52 40.8 +2.2
GTA pmax pmax
comp=Z,47nm,0.9s
GTA pmax pmax
comp=Z,180nm,4.3s
GTA LR LR
comp=N,430nm,20.4s
GTA LR LR
comp=E,230nm,17.1s
GTA LR LR
comp=Z,230nm,13.3s
MALT Malatya 25.77 288 ⇑P **P** 23 48 25.9 +1.6
MALT Malatya 25.77 288 *e*P **P** 23 48 25.8 +1.4
comp=Z,16nm,0.7s
MALT Malatya 25.77 288 ⇑*i*P **P** 23 48 25.9 +1.6
VRHR Novokhopersk 26.67 318 *e*P **P** 23 48 33.6 +1.4
VRHR pmax pmax
comp=N,7.0nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRHR pmax pmax
comp=Z,10.0nm,0.8s
SOKR Solikamsk 26.90 345 *e*P **P** 23 48 31.7 -2.4
SOKR pmax pmax
comp=Z,10.0nm,1.2s
SOKR MLR MLR
comp=Z,610nm,15.0s
KRAR Krasnoyarsk 26.94 29 *i* P **P** 23 48 36.1 +1.5
KRAR pmax pmax
comp=Z,35nm,0.5s
MUKL Al Mukalla 27.27 229 *e*P **P** 23 48 39.4 +1.5
LZH Lanzhou 27.65 76 ⇑P **P** 23 48 44.3 +2.9
LZH pP **pP** 23 48 48.5 +2.2
LZH sP **sP** 23 48 51.1 +2.7
LZH PP PnPn 23 49 35.4 +8.5
LZH S **S** 23 53 24.3 +1.5
LZH sS **sS** 23 53 32.8 +1.9
LZH pmax pmax
comp=Z,34nm,1.2s
LZH pmax pmax
comp=Z,130nm,6.8s
LZH LR LR
comp=N,410nm,12.6s
LZH LR LR
comp=E,350nm,9.8s
LZH LR LR
comp=Z,600nm,13.0s
ASF Jabal al Asfar 27.75 275 P **P** 23 48 42.7 +0.4
ASF Jabal al Asfar 27.75 275 P **P** 23 48 42.7 +0.4
comp=Z,2.5nm,0.6s,baz=266,slow=6.6,SNR=3.6
ASF LR LR 00 01 22.1
comp=Z,230nm,21.3s,baz=129,slow=40
VORD Divnogorie 27.93 316 *e*P **P** 23 48 45.3 +1.8
VORD pmax pmax
comp=Z,20nm,1.1s
VORD pmax pmax
comp=N,20nm,0.9s
VORD pmax pmax
comp=E,30nm,0.9s
VSR Storozhevoye 28.11 317 *e*P **P** 23 48 46.2 +1.1
VSR pmax pmax
comp=Z,20nm,1.1s
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,40nm,1.1s
MOY Mondy 28.35 42 *e*P **P** 23 48 48.8 +1.3
CD2 Chengdu 28.54 87 P **P** 23 48 50.0 +0.7
CD2 pP **pP** 23 48 54.3 +0.1
CD2 sP **sP** 23 48 57.0 +0.7
CD2 PP **PnPn** 23 49 41.3 +2.3
CD2 PcP **PcP** 23 52 02.5 +1.9
CD2 S **S** 23 53 36.3 -0.4
CD2 sS **sS** 23 53 42.4 -2.5
CD2 SS **SnSn** 23 55 00.3 +4.2
CD2 pmax pmax
comp=Z,10.0nm,0.4s
CD2 pmax pmax
comp=Z,120nm,5.0s
CD2 LR LR
comp=N,330nm,12.7s
CD2 LR LR
comp=E,790nm,16.2s
CD2 LR LR
comp=Z,640nm,13.7s
MMAI Mount Meron Ar 28.80 278 P **P** 23 48 52.6 +1.0
MMAI PcP **PcP** 23 52 02.6 +1.4
MMAI Mount Meron Ar 28.80 278 P **P** 23 48 52.6 +1.0
comp=Z,5.4nm,0.6s,baz=66,slow=12,SNR=8.8
MMAI PcP **PcP** 23 52 02.6 +1.4
comp=Z,3.2nm,0.8s,baz=64,slow=6.7,SNR=4.3
MMAI LR LR 00 02 01.0
comp=Z,469nm,18.2s,baz=90,slow=40
ZAK Zakamensk 29.16 46 ⇑*i*P **P** 23 48 54.9 +0.2
ZAK *e* 23 51 57.8
ZAK pmax pmax
comp=Z,5.0nm,1.5s
BR131 Keskin Array S 29.48 292 *e*P **P** 23 48 58.1 +0.3
comp=Z,9.8nm,0.8s
BR131 *e*PcP **PcP** 23 52 02.1 -0.8
BRTR Keskin Array B 29.48 292 P **P** 23 48 58.0 +0.3
BRTR PcP **PcP** 23 52 02.2 -0.8
BRTR Keskin Array B 29.48 292 P **P** 23 48 58.0 +0.3
comp=Z,13nm,0.8s,baz=110,slow=8.9,SNR=40
BRTR PcP **PcP** 23 52 02.2 -0.8
comp=Z,1.8nm,0.8s,baz=144,slow=4.6,SNR=4.4
BRTR LR LR 00 02 39.4
comp=Z,191nm,20.9s,baz=232,slow=40
SIM Simferopol' 29.50 302 *e*P **P** 23 49 00.0 +2.4
KMI Kunming 29.71 99 P **P** 23 49 02.9 +3.0
KMI PP **PP** 23 50 03.0 -4.0
KMI S **S** 23 53 59.5 +4.0
KMI pmax pmax
comp=Z,14nm,0.9s
KMI LR LR
comp=N,320nm,15.7s
KMI LR LR
comp=E,400nm,19.1s
KMI LR LR
comp=Z,620nm,21.8s
TLY Talaya 29.86 44 *e*P **P** 23 49 01.3 +0.5
TLY pmax pmax
comp=Z,3.0nm,0.9s
TLY MLR MLR
comp=Z,105nm,15.0s
CHTO Chiang Mai 29.91 113 *e*P **P** 23 49 01.7 +0.2
CHTO pmax pmax
comp=Z,13nm,1.0s
CHTO Chiang Mai 29.91 113 *e*P **P** 23 49 01.7 +0.2
comp=Z,13nm,1.0s
CHTO Chiang Mai 29.91 113 P **P** 23 48 58.6 -2.9
comp=Z,18nm,1.1s
CMMT Chiang Mai 29.91 113 P **P** 23 49 01.8 +0.3
comp=Z,16nm,1.1s,comp=Z,372nm
EIL Elat 30.02 271 P **P** 23 49 02.8 +0.4
EIL Elat 30.02 271 P **P** 23 49 02.8 +0.4
comp=Z,20nm,0.9s,baz=72,slow=4.9,SNR=12
EIL LR LR 00 03 01.6
comp=Z,745nm,19.2s,baz=79,slow=40
CMAR Chiang Mai Arr 30.12 114 P **P** 23 49 03.9 +0.6
CMAR Chiang Mai Arr 30.12 114 P **P** 23 49 03.9 +0.6
comp=Z,4.5nm,0.7s,baz=302,slow=8.3,SNR=25
CMAR LR LR 00 04 04.8
comp=Z,272nm,19.1s,baz=309,slow=42
SONM Songino Array 30.36 52 P **P** 23 49 05.8 +0.4
SONM Songino Array 30.36 52 P **P** 23 49 05.8 +0.4
comp=Z,7.4nm,0.9s,baz=253,slow=9.6,SNR=14
ULN Ulaanbaatar 30.80 52 *e*P **P** 23 49 08.7 -0.6
comp=Z,4.6nm,0.8s
ULN *e*PcP **PcP** 23 52 06.1 -0.1
ULN Ulaanbaatar 30.80 52 P **P** 23 49 08.7 -0.6
comp=Z,7.6nm,1.6s
OBN Obninsk 31.27 322 ⇓*e*P **P** 23 49 14.3 +1.3
OBN *e*SS SS 23 56 06.7 -26
OBN pmax pmax
comp=Z,50nm,2.5s
OBN MLR MLR
comp=Z,600nm,19.0s
XAN Xi'an 32.07 79 P **P** 23 49 21.0 +0.5
XAN S **S** 23 54 29.8 -2.2
XAN pmax pmax
comp=Z,2.0nm,0.9s
XAN pmax pmax
comp=Z,23nm,5.5s
XAN LR LR
comp=N,130nm,15.0s
XAN LR LR
comp=Z,93nm,17.8s
GYA Guiyang 32.41 94 ⇑*i*P **P** 23 49 24.4 +0.8
GYA PP **PnPn** 23 50 32.1 +1.6
GYA PcP **PcP** 23 52 11.8 +0.9
GYA S **S** 23 54 38.8 +1.3
GYA ScP **ScP** 23 55 55.6 +1.6
GYA SS **SnSn** 23 56 32.0 +1.6
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,560nm,16.8s
GYA LR LR
comp=E,530nm,17.7s
GYA LR LR
comp=Z,650nm,16.3s
HHC Hu-ho-hao-te 33.38 66 *e*P **P** 23 49 30.4 -1.6
HHC PP **PnPn** 23 50 41.5 -1.2
HHC PcP **PcP** 23 52 12.8 -0.6
HHC S **S** 23 54 51.4 -1.0
HHC ScP **ScP** 23 55 56.6 -0.5
HHC SS **SnSn** 23 56 51.5 -2.2
HHC ScS **ScS** 23 59 56.5 -1.5
HHC pmax pmax
comp=Z,49nm,0.6s
HHC LR LR
comp=N,480nm,13.7s
HHC LR LR
comp=E,440nm,12.9s
HHC LR LR
comp=Z,400nm,12.0s
CFR Carcaliu 33.74 302 ⇓P **P** 23 49 35.7 +0.9
CFR Carcaliu 33.74 302 ⇓*i*P **P** 23 49 35.7 +0.9
LEOM Leova 33.78 304 ⇓P **P** 23 49 36.0 +0.8
LEOM Leova 33.78 304 ⇓*i*P **P** 23 49 36.0 +0.8
AKASG Malin Array Be 33.87 312 P **P** 23 49 36.0 +0.1
AKASG Malin Array Be 33.87 312 P **P** 23 49 36.0 +0.1
AKASG Malin Array Be 33.87 312 P **P** 23 49 36.0 +0.1
comp=Z,29nm,0.8s,baz=92,slow=7.3,SNR=55
AKASG LR LR 00 05 56.7
comp=Z,359nm,19.1s,baz=110,slow=41
AK02 Malin Array Si 33.87 312 *e*P **P** 23 49 35.9 0.0
AK01 Malin Array Si 33.87 312 *e*P **P** 23 49 35.8 -0.1
KIEV Kiev 33.88 312 *e*P **P** 23 49 36.0 0.0
KIEV pmax pmax
comp=Z,29nm,0.9s
KIEV Kiev 33.88 312 *e*P **P** 23 49 36.0 0.0
comp=Z,30nm,0.9s
VRI Vrincioaia 34.78 303 ⇓P **P** 23 49 45.4 +1.5
VRI Vrincioaia 34.78 303 ⇓*i*P **P** 23 49 45.4 +1.5
PLOR Plostina 34.83 303 ⇓P **P** 23 49 46.2 +1.8
PLOR Plostina 34.83 303 ⇓*i*P **P** 23 49 46.2 +1.8
TESR 34.88 304 ⇑*i*P **P** 23 49 45.5 +0.7
MLR Muntele Rosu 35.30 302 ⇓*i*P **P** 23 49 50.4 +1.8
DOPR Dopca 35.72 303 ⇑*i*P **P** 23 49 53.6 +1.6
TMCR Tamitsa 35.87 337 *e*P P 23 49 49.7 -3.3
TMCR pmax pmax
comp=Z,20nm,0.4s
BURAR Bucovina Array 35.96 306 ⇑*i*P **P** 23 49 54.8 +0.7
BUR08 Bucovina Ar. S 35.97 306 *e*P **P** 23 49 55.0 +0.7
APE Apeiranthos 36.06 288 ⇓P **P** 23 49 55.1 0.0
APE Apeiranthos 36.06 288 ⇓*i*P **P** 23 49 55.0 0.0
ARR Arges 36.22 302 ⇓*i*P **P** 23 49 57.3 +0.9
NACGM Naroch 36.40 318 *e* **P** 23 49 57.0 -0.6
LOT Lotru 36.83 302 ⇓*i*P **P** 23 50 02.8 +1.2
IDI Anoyia 36.88 285 *e*P **P** 23 50 01.5 -0.7
comp=Z,116nm,1.6s
LVV L'vov 36.99 309 *e*P **P** 23 50 03.4 +0.7
UBPT Khong Chiam 37.01 112 P **P** 23 50 02.4 -0.9
comp=Z,19nm,1.7s
BMR Baia Mare 37.12 306 ⇓P **P** 23 50 05.9 +2.0
BMR Baia Mare 37.12 306 ⇓*i*P **P** 23 50 05.8 +1.9
WHN Wuhan 37.40 82 P **P** 23 50 07.8 +1.4
GZR Gura Zlata 37.53 302 ⇑P **P** 23 50 08.8 +1.3
GZR Gura Zlata 37.53 302 ⇑*i*P **P** 23 50 08.8 +1.3
JOF Joensuu 37.55 332 *e*P **P** 23 50 06.4 -0.9
JOF pmax pmax
comp=Z,23nm,0.9s
JOF Joensuu 37.55 332 *e*p **P** 23 50 06.4 -0.9
comp=Z,23nm,0.9s
DRGR 37.61 304 ⇑P **P** 23 50 09.3 +1.1
DRGR 37.61 304 ⇑*i*P **P** 23 50 09.3 +1.1
TRPA Tarpa 37.80 306 ⇑*i*P **P** 23 50 11.4 +1.8
TRPA Tarpa 37.80 306 ⇓*e*P **P** 23 50 11.3 +1.7
KWP Kalwaria Pacla 37.82 309 ⇓P **P** 23 50 11.1 +1.3
KWP Kalwaria Pacla 37.82 309 *e*P **P** 23 50 10.7 +0.9
comp=Z,90nm,0.9s
KWP Kalwaria Pacla 37.82 309 ⇓*i*P **P** 23 50 11.1 +1.3
KWP Kalwaria Pacla 37.82 309 *e*P **P** 23 50 11.0 +1.3
KWP *e* 23 50 12.8
UZH Uzhgorod 38.00 307 *c i*P **P** 23 50 14.0 +2.7
UZH *e* 23 50 19.0
UZH *e* 23 50 26.8
KOLS Kolonicke sedl 38.03 308 *e*P **P** 23 50 13.2 +1.5
KOLS pmax pmax
comp=Z,10.0nm,1.0s
KOLS Kolonicke sedl 38.03 308 *e*P **P** 23 50 13.2 +1.5
KOLS *e*PP **PnPn** 23 51 42.0 +2.1
SUW Suwalki 38.21 316 *e*P **P** 23 50 13.6 +0.6
SUW *e* 23 51 38.8
SUW pmax pmax
comp=Z,29nm,0.8s
SUW Suwalki 38.21 316 *e*P **P** 23 50 13.6 +0.6
comp=Z,29nm,0.8s
SUW *e*PP **PP** 23 51 38.8 -1.5
SUW Suwalki 38.21 316 *e*P **P** 23 50 13.8 +0.8
SUW *e* 23 50 14.9
FURI Furi 38.21 236 *e*P **P** 23 50 16.7 +2.8
comp=Z,68nm,1.9s
BZS Buzias 38.34 302 ⇑P **P** 23 50 15.7 +1.4
BZS Buzias 38.34 302 ⇑*i*P **P** 23 50 15.7 +1.4
CRVS Cervenica-Dubn 38.57 307 *e*P **P** 23 50 19.0 +2.9
CRVS pmax pmax
comp=Z,14nm,1.3s
CRVS Cervenica-Dubn 38.57 307 *e*P **P** 23 50 19.0 +2.9
CRVS *e*PP **PnPn** 23 51 45.5 -0.8
FINES FINESS Array B 39.03 328 P **P** 23 50 19.6 -0.2
FINES PcP **PcP** 23 52 30.1 +0.4
FINES FINESS Array B 39.03 328 P **P** 23 50 19.6 -0.2
comp=Z,12nm,0.9s,baz=124,slow=9.2,SNR=22
FINES PcP **PcP** 23 52 30.1 +0.4
comp=Z,2.8nm,0.6s,baz=126,slow=3.8,SNR=4.3
FINES LR LR 00 08 05.9
comp=Z,717nm,18.8s,baz=258,slow=39
KAF Kangasniemi 39.21 329 *e*P **P** 23 50 20.4 -0.9
KAF pmax pmax
comp=Z,4.0nm,0.7s
KAF Kangasniemi 39.21 329 *e*p **P** 23 50 20.4 -0.9
comp=Z,4.2nm,0.7s
NIE Niedzica 39.35 308 *e*P **P** 23 50 24.8 +2.1
NIE Niedzica 39.35 308 *e*P **P** 23 50 24.8 +2.1
APA Apatity 39.53 339 ⇑*i*P **P** 23 50 26.0 +2.1
APA MLR MLR
comp=Z,1μm,12.0s
PSZ Piszkesteto 39.56 306 *e*P **P** 23 50 25.4 +0.8
PSZ pmax pmax
comp=Z,23nm,1.3s
PSZ Piszkesteto 39.56 306 *e*P **P** 23 50 25.4 +0.8
comp=Z,23nm,1.3s
PSZ Piszkesteto 39.56 306 ⇓*e*P **P** 23 50 26.0 +1.5
OJC Ojcow 39.74 309 *e*P **P** 23 50 26.9 +1.0
OJC Ojcow 39.74 309 *e*P **P** 23 50 26.9 +1.0
comp=Z,30nm,1.0s
OJC Ojcow 39.74 309 *e*P **P** 23 50 26.9 +1.0
VYHS Vyhne 40.28 307 *e*P **P** 23 50 32.3 +1.8
VYHS pmax pmax
comp=Z,5.0nm,1.1s
VYHS Vyhne 40.28 307 *e*P **P** 23 50 32.3 +1.8
VYHS *e*PP **PnPn** 23 52 07.7 +0.9
PKSM Moragy 40.41 303 ⇓*e*P **P** 23 50 32.7 +1.2
NJ2 Nanjing 40.65 79 *e*P **P** 23 50 33.6 0.0
NJ2 pmax pmax
comp=Z,20nm,0.6s
OKC Ostrava-Krasne 40.78 309 *e*P **P** 23 50 35.4 +0.9
OKC Ostrava-Krasne 40.78 309 *e*P **P** 23 50 35.4 +0.9
MORC Moravsky Berou 41.17 309 ⇑P **P** 23 50 39.0 +1.2
MORC Moravsky Berou 41.17 309 *e*P **P** 23 50 39.0 +1.2
comp=Z,35nm,1.0s
MORC Moravsky Berou 41.17 309 ⇑*i*P **P** 23 50 39.0 +1.2
IPM Ipoh 41.22 129 *e*P **P** 23 50 38.2 -0.2
comp=Z,27nm,0.8s
IPM Ipoh 41.22 129 P **P** 23 50 37.8 -0.7
SMOL Smolenice 41.22 307 *e*P **P** 23 50 41.0 +2.8
SMOL Smolenice 41.22 307 *e*P **P** 23 50 41.0 +2.8
GKP Gorka Klasztor 41.59 314 *e*P **P** 23 50 40.8 -0.3
GKP *e* 23 50 43.8
VRAC Vranov 41.78 308 ⇑*i*P **P** 23 50 43.8 +1.0
SOP Sopron 41.81 305 ⇓*e*P **P** 23 50 44.1 +1.1
DPC Dobruska-Polom 41.98 309 *e*P **P** 23 50 45.9 +1.5
DPC Dobruska-Polom 41.98 309 *e*P **P** 23 50 45.9 +1.5
comp=Z,52nm,0.9s
DPC Dobruska-Polom 41.98 309 *e*P **P** 23 50 45.9 +1.5
KSP Ksiaz 42.01 310 *e*P **P** 23 50 45.4 +0.8
KSP Ksiaz 42.01 310 *e*P **P** 23 50 45.5 +0.8
KSP *e* 23 50 48.2
UPC Upice 42.18 310 *e*P **P** 23 50 47.6 +1.6
UPC Upice 42.18 310 *e*P **P** 23 50 47.6 +1.6
CONA Conrad Observa 42.27 306 ⇑*i*sP **P** 23 50 47.5 +0.6
comp=Z,11nm,0.9s
CONA Conrad Observa 42.27 306 ⇑*i*P **P** 23 50 47.5 +0.6
comp=Z,11nm,0.9s
SNY Shenyang 42.31 63 ⇑P **P** 23 50 48.3 +1.1
SNY pmax pmax
comp=Z,18nm,1.2s
SNY pmax pmax
comp=Z,250nm,5.4s
SNY LR LR
comp=N,140nm,12.0s
SNY LR LR
comp=E,310nm,14.6s
SNY LR LR
comp=Z,65nm,5.1s
KEV Kevo 42.71 340 *e*P **P** 23 50 50.5 +0.5
KEV pmax pmax
comp=Z,11nm,0.8s
KEV Kevo 42.71 340 *e*P **P** 23 50 51.3 +1.3
comp=Z,755nm,2.7s
KEV Kevo 42.71 340 *e*p **P** 23 50 50.5 +0.5
comp=Z,11nm,0.8s
SOKA Soboth 42.89 304 ⇑*i*sP **P** 23 50 52.7 +0.8
comp=Z,12nm,0.9s
SOKA Soboth 42.89 304 ⇑*i*P **P** 23 50 52.7 +0.8
comp=Z,12nm,0.9s
ARCES ARCESS Array B 43.04 339 P **P** 23 50 52.4 -0.3
ARCES ARCESS Array B 43.04 339 P **P** 23 50 52.4 -0.3
comp=Z,22nm,0.8s,baz=119,slow=9.4,SNR=27
ARCES LR LR 00 10 01.4
comp=Z,527nm,21.6s,baz=301,slow=38
CUC Castrocucco 43.10 294 *e*P **P** 23 50 53.7 0.0
comp=Z,33nm,0.8s
PVCC Panska Ves 43.10 310 *e*P **P** 23 50 54.5 +1.0
PVCC Panska Ves 43.10 310 *e*P **P** 23 50 54.5 +1.0
PRU Pruhonice 43.12 309 *e*P **P** 23 50 54.7 +1.1
PRU Pruhonice 43.12 309 *e*P **P** 23 50 54.7 +1.1
MOA Molln 43.35 306 ⇑*i*sP sP 23 50 56.1 -6.5
comp=Z,20nm,0.8s
MOA Molln 43.35 306 ⇑*i*P sP 23 50 56.1 -6.5
comp=Z,20nm,0.8s
CEL Celeste 43.37 292 *e*P **P** 23 50 55.8 -0.1
comp=Z,30nm,1.5s
CN2 Changchun 43.43 60 *e*P **P** 23 50 57.9 +1.7
CN2 pmax pmax
comp=Z,10.0nm,0.8s
BRG Berggiesshubel 43.50 310 *e*P **P** 23 50 57.9 +1.2
comp=Z,31nm,1.0s
BRG *e* 23 52 45.8
comp=Z,13nm,1.5s
BRG S **S** 23 57 19.0 -5.7
BRG
comp=N,181nm,12.9s
BRG
comp=E,274nm,15.1s
BRG
comp=Z,480nm,18.7s
BRG Berggiesshubel 43.50 310 *e*P **P** 23 50 57.9 +1.2
BRG *e* 23 52 45.8
BRG S **S** 23 57 19.0 -5.7
BRG pmax pmax
comp=Z,31nm,1.0s
BRG pmax pmax
comp=Z,13nm,1.5s
BRG MLR MLR
comp=N,181nm,12.9s
BRG MLR MLR
comp=E,274nm,15.1s
BRG MLR MLR
comp=Z,480nm,18.7s
BRG Berggiesshubel 43.50 310 *e*P **P** 23 50 57.9 +1.2
comp=Z,31nm,1.0s
GEC2 GERESS Array S 43.69 307 *e*P **P** 23 50 59.5 +1.1
GEC2 pmax pmax
comp=Z,16nm,1.1s
GEC2 GERESS Array S 43.69 307 *e*P **P** 23 50 59.5 +1.1
comp=Z,16nm,1.1s
GERES GERESS Array B 43.69 307 P **P** 23 50 58.6 +0.2
GERES PcP **PcP** 23 52 44.2 -1.1
GERES GERESS Array B 43.69 307 P **P** 23 50 58.6 +0.2
comp=Z,9.5nm,1.0s,baz=89,slow=9.2,SNR=25
GERES PcP **PcP** 23 52 44.2 -1.1
comp=Z,1.5nm,0.7s,baz=67,slow=5.4,SNR=4.3
GERES LR LR 00 10 09.2
comp=Z,126nm,21.1s,baz=275,slow=38
KHC Kasperske Hory 43.76 308 *e*P **P** 23 50 58.1 -0.8
KHC *e* 23 52 43.7
KHC pmax pmax
comp=Z,5.0nm,0.9s
KHC Kasperske Hory 43.76 308 *e*P **P** 23 50 58.1 -0.8
comp=Z,4.6nm,0.9s
KHC *e*PcP **PcP** 23 52 43.7 -1.7
KHC Kasperske Hory 43.76 308 *e*P **P** 23 50 59.5 +0.6
KHC *e*x x 23 52 00.0
FBE Freiberg 43.87 310 *e*P **P** 23 51 01.0 +1.3
comp=Z,32nm,1.0s
CLL Collm 44.09 311 *i* P **P** 23 51 02.3 +0.8
CLL pmax pmax
comp=Z,16nm,1.1s
CLL Collm 44.09 311 *e*P **P** 23 51 02.2 +0.8
comp=Z,16nm,1.1s
CLL Collm 44.09 311 *i* P **P** 23 51 02.3 +0.8
comp=Z,16nm,1.1s
CLL *e* 23 51 16.0
CLL *e*PP **PcP** 23 52 47.0 +0.5
CLL *e*SS SS 00 00 54.0 +3.5
RJOB Jochberg 44.35 306 *e*P **P** 23 51 05.4 +1.8
comp=Z,12nm,0.9s
TANN Tannenbergstha 44.45 310 *e*P **P** 23 51 05.7 +1.3
comp=Z,14nm,1.0s
NKC Novy Kostel 44.46 309 *e*P **P** 23 51 05.2 +0.7
NKC Novy Kostel 44.46 309 *e*P **P** 23 51 05.2 +0.7
HFS Hagfors 44.46 324 P **P** 23 51 04.1 -0.2
HFS Hagfors 44.46 324 P **P** 23 51 04.1 -0.2
comp=Z,17nm,0.7s,baz=105,slow=9.1,SNR=39
WERN Wernitzgruen 44.51 309 *e*P **P** 23 51 06.0 +1.2
comp=Z,10.0nm,0.9s
AQU L'Aquila 44.51 298 *e*P **P** 23 51 04.4 -0.6
comp=Z,44nm,0.8s
GUNZ Gunzen 44.53 309 *e*P **P** 23 51 06.1 +1.1
comp=Z,19nm,1.0s
WERD Werda 44.55 310 *e*P **P** 23 51 06.4 +1.3

ABTA Abfaltersbach 44.61 304⇑ *is*P P 23 51 06.3 +0.5
comp=Z,14nm,0.9s
ABTA Abfaltersbach 44.61 304⇑ *i*P P 23 51 06.3 +0.5
comp=Z,14nm,0.9s
ROTZ Rotzenmuhle 44.63 309 *e*P P 23 51 07.4 +1.6
comp=Z,25nm,1.0s
PLN Plauen 44.64 310 *e*P P 23 51 06.8 +0.9
comp=Z,103nm,1.1s
MANZ Manzenberg 44.69 309 *e*P P 23 51 07.2 +0.9
comp=Z,33nm,1.1s
NEUB Neuenburg 44.87 311 *e*P P 23 51 07.8 +0.2
comp=Z,42nm,1.0s
MOX Moxa 44.98 310 *e*P P 23 51 09.6 +1.0
MOX pmax pmax
comp=Z,29nm,1.2s
MOX Moxa 44.98 310 *e*P P 23 51 09.6 +1.0
comp=Z,29nm,1.2s
WTTA Wattenberg 45.17 305⇓ *i*P P 23 51 09.9 -0.4
WTTA pmax pmax
comp=Z,21nm,1.1s
WTTA Wattenberg 45.17 305⇓ *i*pP P 23 51 09.9 -0.4
comp=Z,21nm,1.1s
WTTA Wattenberg 45.17 305⇓ *i*P P 23 51 09.9 -0.4
comp=Z,21nm,1.1s
GRF Grafenberg Arr 45.27 309 *e*P P 23 51 12.6 +1.7
GRF pmax pmax
comp=Z,34nm,0.9s
GRF MLR MLR
comp=Z,200nm,21.9s
GRF Grafenberg Arr 45.27 309 *e*P P 23 51 12.6 +1.7
comp=Z,34nm,0.9s
GRF Grafenberg Arr 45.27 309 *e*L L 00 14 17.4
comp=Z,172nm,21.9s
MOTA Moosalm 45.52 305⇑ *i*P P 23 51 12.1 -1.0
MOTA pmax pmax
comp=Z,20nm,0.8s
MOTA Moosalm 45.52 305⇑ *i*P P 23 51 12.1 -1.0
comp=Z,20nm,0.8s
MOTA Moosalm 45.52 305⇑ *i*P P 23 51 12.1 -1.0
comp=Z,20nm,0.8s
CLZ Clausthal 45.73 312 *e*P P 23 51 15.4 +0.9
CLZ pmax pmax
comp=Z,30nm,1.2s
CLZ Clausthal 45.73 312 *e*P P 23 51 15.4 +0.9
comp=Z,30nm,1.2s
BSEG Bad Segeberg 45.75 315 *e*P P 23 51 14.9 +0.4
BSEG pmax pmax
comp=Z,33nm,1.0s
BSEG Bad Segeberg 45.75 315 *e*P P 23 51 14.9 +0.4
comp=Z,33nm,1.0s
FETA Feichten 45.81 305⇑ *i*pP P 23 51 14.8 -0.6
comp=Z,21nm,1.0s
FETA Feichten 45.81 305⇑ *i*P P 23 51 14.8 -0.6
comp=Z,21nm,1.0s
NB2 NORSAR Subarra 45.81 325 P P 23 51 14.1 -1.0
comp=Z,11nm,0.7s,baz=100,slow=7.9
NOA NORSAR Array B 45.81 325 P P 23 51 14.4 -0.7
NOA NORSAR Array B 45.81 325 P P 23 51 14.4 -0.7
comp=Z,12nm,0.8s,baz=99,slow=8.0,SNR=9.0
NOA LR LR 00 12 02.8
comp=Z,472nm,18.4s,baz=105,slow=38
NRDL Niedersach Rie 45.88 313 *e*P P 23 51 16.5 +1.0
comp=Z,19nm,1.0s
FUORN Ofenpass-Fuorn 46.17 304 *e*P P 23 51 18.8 +0.4
comp=Z,6.0nm,0.8s
MDJ Mudanjiang 46.28 58 P P 23 51 18.0 -0.9
MDJ pmax pmax
comp=Z,6.0nm,1.4s
MDJ pmax pmax
comp=Z,53nm,5.8s
MDJ LR LR
comp=N,94nm,27.4s
YAK Yakutsk 46.35 34 *e*P P 23 51 17.4 -1.8
YAK *e**PP pP 23 51 26.6 +2.3
YAK *e* 23 52 48.2
YAK *e* 23 53 02.3
YAK *e*S S 23 58 02.3 -3.3
YAK *e* 00 01 11.7
YAK pmax pmax
comp=Z,16nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=E,95nm,2.5s
YAK pmax pmax
comp=Z,173nm,3.3s
YAK pmax pmax
comp=N,33nm,3.2s
YAK smax smax
comp=N,147nm,3.3s
YAK smax smax
comp=E,47nm,3.1s
YAK MLR MLR
comp=Z,178nm,17.0s
YAK MLR MLR
comp=N,91nm,20.0s
DAVA Damuels 46.35 305⇑ *i*pP P 23 51 19.3 -0.3
comp=N,40nm,1.0s
DAVA Damuels 46.35 305⇑ *i*P P 23 51 19.3 -0.3
comp=N,40nm,1.0s
KSAR Wonju Array Be 46.41 68 P P 23 51 20.1 +0.1
VLC Villacollemand 46.41 301 *e*P P 23 51 19.0 -1.0
comp=N,126nm,1.9s
KSRS Korea Array 46.44 68 P P 23 51 20.1 -0.1
comp=N,8.1nm,0.8s,baz=274,slow=6.7,SNR=19
MUD Monsted U'grnd 46.46 318 *e*P P 23 51 24.7 +4.6
MUD pmax pmax
comp=Z,7.0nm,0.9s
MUD Monsted U'grnd 46.46 318 *i* P P 23 51 24.7 +4.6
comp=Z,7.1nm,0.9s
KMBO Kilima Mbogo 46.66 228 *e*P P 23 51 20.9 -1.6
comp=Z,14nm,0.9s
KMBO Kilima Mbogo 46.66 228 P P 23 51 23.7 +1.2
comp=Z,13nm,0.8s,baz=30,slow=11,SNR=32
KMBO LR LR 00 14 50.7
comp=Z,107nm,19.5s,baz=98,slow=41
STU Stuttgart 46.66 307 *e*P P 23 51 21.9 0.0
STU pmax pmax
comp=Z,12nm,0.9s
STU Stuttgart 46.66 307 *e*P P 23 51 22.6 +0.7
STU Stuttgart 46.66 307 *e*P P 23 51 21.9 0.0
comp=Z,12nm,0.9s
TUE Stuetta 46.81 304 *e*P P 23 51 22.9 -0.5
comp=Z,5.1nm,0.7s
KLR Kul'dur 47.20 52 *e*P P 23 51 23.2 -2.8
BFO Black Forest 47.28 307 *e*P P 23 51 25.9 -0.8
BFO pmax pmax
comp=Z,7.0nm,1.1s
BFO Black Forest 47.28 307 *e*P P 23 51 25.9 -0.8
comp=Z,7.4nm,1.1s
IBBN Ibbenburen 47.33 312 *e*P P 23 51 28.2 +1.2
comp=Z,54nm,1.1s
BUG Bochum--Univer 47.68 311 *e*P P 23 51 30.6 +0.9
comp=Z,36nm,1.2s
PGF Pioggiola 47.69 299 *e*P P 23 51 29.1 -1.0
comp=Z,45nm,1.0s
PGF Pioggiola 47.69 299 *e*P P 23 51 29.1 -1.0
PGF pmax pmax
comp=Z,45nm,1.0s
PGF Pioggiola 47.69 299 *e*P P 23 51 29.1 -1.0
comp=Z,45nm,1.0s
CDF Champ du Feu 47.97 307 *e*P P 23 51 32.6 +0.4
comp=Z,9.4nm,0.9s
CDF Champ du Feu 47.97 307 *e*P P 23 51 32.6 +0.4
CDF pmax pmax
comp=Z,9.0nm,0.9s
CDF Champ du Feu 47.97 307 *e*P P 23 51 32.6 +0.4
comp=Z,9.4nm,0.9s
USRK Ussuriysk Arra 48.05 59 P P 23 51 33.1 +0.4
comp=Z,3.0nm,0.8s,baz=342,slow=4.4,SNR=5.0
USRK LR LR 00 13 19.7
comp=Z,142nm,20.6s,baz=304,slow=38
VSL Villasalto 48.06 295 *e*P P 23 51 32.4 -0.5
comp=Z,418nm,0.4s
ECH Echery 48.07 307 *e*P P 23 51 31.2 -1.7
ECH pmax pmax
comp=Z,4.0nm,0.9s
ECH Echery 48.07 307 *e*P P 23 51 31.1 -1.7
comp=Z,4.4nm,0.9s
SENIN Lac Senin/Sane 48.23 304 *e*P P 23 51 33.5 -0.9
comp=Z,18nm,0.7s
TIXI Tiksi 48.25 21⇓ *e*P P 23 51 32.5 -1.4
TIXI pmax pmax
comp=Z,12nm,1.6s
TIXI MLR MLR
comp=Z,192nm,28.0s

HINF Hinteralfeld 48.33 306 *e*P P 23 51 34.3 -0.6
comp=Z,14nm,0.9s
HINF Hinteralfeld 48.33 306 *e*P P 23 51 34.3 -0.6
HINF pmax pmax
comp=Z,14nm,0.9s
HINF Hinteralfeld 48.33 306 *e*P P 23 51 34.3 -0.6
comp=Z,14nm,0.9s
MEM Membach 48.55 310 P P 23 51 37.5 +1.0
comp=Z,9.1nm,1.0s
WLF Walferdange 48.56 309 P P 23 51 37.8 +1.2
comp=Z,17nm,1.1s
WLF Walferdange 48.56 309 *e*P P 23 51 37.3 +0.7
WLF pmax pmax
comp=Z,20nm,0.9s
WLF Walferdange 48.56 309 *e*P P 23 51 37.8 +1.2
comp=Z,28nm,1.1s
WLF Walferdange 48.56 309 *e*P P 23 51 37.3 +0.7
comp=Z,20nm,0.9s
SBF Sospel 48.56 301 *e*P P 23 51 36.0 -0.8
comp=Z,43nm,0.9s
SBF Sospel 48.56 301 *e*P P 23 51 36.0 -0.8
SBF pmax pmax
comp=Z,43nm,0.9s
SBF Sospel 48.56 301 *e*P P 23 51 36.0 -0.8
comp=Z,43nm,0.9s
HAU Haudompre 48.64 307 *e*P P 23 51 37.1 -0.1
comp=Z,18nm,0.9s
HAU *e*R
comp=Z,88nm,20.2s
HAU Haudompre 48.64 307 *e*P P 23 51 37.1 -0.1
HAU pmax pmax
comp=Z,18nm,0.9s
HAU Haudompre 48.64 307 *e*P P 23 51 37.1 -0.1
comp=Z,18nm,0.9s
LPG La Plagne 48.75 303 *e*P P 23 51 38.3 -0.2
comp=Z,30nm,0.8s
LPG La Plagne 48.75 303 *e*P P 23 51 38.3 -0.2
LPG pmax pmax
comp=Z,30nm,0.8s
LPG La Plagne 48.75 303 *e*P P 23 51 38.3 -0.2
comp=Z,30nm,0.8s
LPL La Plagne 48.76 303 *e*P P 23 51 38.2 -0.2
comp=Z,14nm,0.5s
LPL La Plagne 48.76 303 *e*P P 23 51 38.2 -0.2
LPL pmax pmax
comp=Z,14nm,0.5s
LPL La Plagne 48.76 303 *e*P P 23 51 38.2 -0.2
comp=Z,14nm,0.5s
MBDF Montbardon 48.87 302 *e*P P 23 51 37.3 -1.9
comp=Z,22nm,0.8s
MBDF Montbardon 48.87 302 *e*P P 23 51 37.3 -1.9
MBDF pmax pmax
comp=Z,23nm,0.8s
MBDF Montbardon 48.87 302 *e*P P 23 51 37.3 -1.9
comp=Z,22nm,0.8s
BNI Bardonecchia 48.88 303 *e*P P 23 51 41.4 +2.1
BNI pmax pmax
comp=Z,20nm,1.4s
BNI Bardonecchia 48.88 303 *e*P P 23 51 41.4 +2.1
comp=Z,20nm,1.4s
PAGF Fort de Pagny 48.97 307 *e*P P 23 51 40.2 +0.4
comp=Z,18nm,1.3s
PAGF Fort de Pagny 48.97 307 *e*P P 23 51 40.2 +0.4
comp=Z,18nm,1.3s
BCLA Clavier 49.02 310 P P 23 51 40.8 +0.8
comp=Z,11nm,1.9s
CABF La Chapelle 49.02 305 *e*P P 23 51 40.5 +0.2
comp=Z,44nm,1.0s
CABF La Chapelle 49.02 305 *e*P P 23 51 40.5 +0.2
CABF pmax pmax
comp=Z,44nm,1.0s
CABF La Chapelle 49.02 305 *e*P P 23 51 40.5 +0.2
comp=Z,44nm,1.0s
KEST Kesra 49.07 290 *e*P P 23 51 40.8 0.0
KEST Kesra 49.07 290 P P 23 51 41.2 +0.4
comp=Z,6.7nm,0.9s,baz=303,slow=2.8,SNR=18
FRF La Foret Royal 49.18 301 *e*P P 23 51 40.5 -0.9
FRF La Foret Royal 49.18 301 *e*P P 23 51 40.5 -0.9
FRF La Foret Royal 49.18 301 *e*P P 23 51 40.5 -0.9
LMR La Mourre 49.32 301 *e*P P 23 51 42.4 -0.1
comp=Z,23nm,1.0s
LMR La Mourre 49.32 301 *e*P P 23 51 42.4 -0.1
LMR pmax pmax
comp=Z,23nm,1.0s
LMR La Mourre 49.32 301 *e*P P 23 51 42.4 -0.1
comp=Z,23nm,1.0s
GIVF Givet 49.36 310 *e*P P 23 51 43.7 +1.0
comp=Z,29nm,1.1s
GIVF Givet 49.36 310 *e*P P 23 51 43.7 +1.0
GIVF pmax pmax
comp=Z,29nm,1.1s
GIVF Givet 49.36 310 *e*P P 23 51 43.7 +1.0
comp=Z,29nm,1.1s
MEZF Maizieres J'vi 49.42 307 *e*P P 23 51 43.7 +0.5
comp=Z,25nm,0.8s
MEZF Maizieres J'vi 49.42 307 *e*P P 23 51 43.7 +0.5
comp=Z,25nm,0.8s
HABR Khabarovsk 49.45 53 P P 23 51 42.8 -0.6
HABR 23 53 04.6
HABR *e*S S 23 58 50.9 +1.0
HABR *e**SS sS 23 58 53.7 -4.6
HABR *e* 00 01 35.2
HABR *e*SSS SSS 00 03 42.2
HABR pmax pmax
comp=N,32nm,1.4s
HABR pmax pmax
comp=Z,58nm,1.4s
HABR pmax pmax
comp=E,21nm,0.9s
HABR MLR MLR
comp=Z,495nm,21.0s
ORIF Oris-en-Rattie 49.46 303 *e*P P 23 51 44.0 +0.3
ORIF *e*R
comp=Z,157nm,22.3s
ORIF Oris-en-Rattie 49.46 303 *e*P P 23 51 44.0 +0.3
ORIF Oris-en-Rattie 49.46 303 *e*P P 23 51 44.0 +0.3
SFTF Sexfontaines 49.48 307 *e*P P 23 51 43.8 +0.2
comp=Z,28nm,0.9s
SFTF Sexfontaines 49.48 307 *e*P P 23 51 43.8 +0.2
comp=Z,28nm,0.9s
DOU Does 49.51 310 P P 23 51 44.8 +1.0
comp=Z,9.9nm,1.5s
SNF Seneffe 49.65 310 P P 23 51 47.4 +2.5
comp=Z,12nm,1.1s
KSM Kuching 49.69 122 *e*P P 23 51 46.2 +0.6
comp=Z,14nm,0.8s
BAIF Baives 49.76 310 *e*P P 23 51 46.7 +1.0
comp=Z,63nm,1.0s
BAIF Baives 49.76 310 *e*P P 23 51 46.7 +1.0
BAIF pmax pmax
comp=Z,63nm,1.0s
BAIF Baives 49.76 310 *e*P P 23 51 46.7 +1.0
comp=Z,63nm,1.0s
SMRF Simiane la Rot 49.86 302 *e*P P 23 51 46.5 -0.1
comp=Z,94nm,1.6s
SMRF Simiane la Rot 49.86 302 *e*P P 23 51 46.5 -0.1
comp=Z,94nm,1.6s
VIVF Saint-Julien-l 50.31 303 *e*P P 23 51 49.9 -0.2
comp=Z,15nm,0.8s
VIVF Saint-Julien-l 50.31 303 *e*P P 23 51 49.9 -0.2
VIVF pmax pmax
comp=Z,15nm,0.8s
VIVF Saint-Julien-l 50.31 303 *e*P P 23 51 49.9 -0.2
comp=Z,15nm,0.8s
SSB Saint Sauveur 50.32 303 *e*P P 23 51 49.6 -0.5
SSB pmax pmax
comp=Z,6.0nm,0.8s
SSB Saint Sauveur 50.32 303 *e*P P 23 51 49.6 -0.5
comp=Z,6.5nm,0.8s
LOR Lormes 50.41 306 *e*P P 23 51 50.3 -0.5
comp=Z,4.0nm,0.6s
LOR *e*R
comp=Z,153nm,19.0s
LOR Lormes 50.41 306 *e*P P 23 51 50.3 -0.5
comp=Z,4.0nm,0.6s
SMF Signal de Mont 50.54 305 *e*P P 23 51 51.6 -0.1
comp=Z,31nm,0.8s
SMF Signal de Mont 50.54 305 *e*P P 23 51 51.6 -0.1
SMF pmax pmax
comp=Z,31nm,0.8s
SMF Signal de Mont 50.54 305 *e*P P 23 51 51.6 -0.1
comp=Z,31nm,0.8s
SSF Saint Saulge 50.69 306 *e*P P 23 51 52.6 -0.3
comp=Z,15nm,0.9s
SSF Saint Saulge 50.69 306 *e*P P 23 51 52.6 -0.3
SSF pmax pmax
comp=Z,15nm,0.9s

SSF Saint Saulge 50.69 306 *e*P P 23 51 52.6 -0.3
comp=Z,15nm,0.9s
KBS Kingsbay 50.74 348⇑ *e*P P 23 51 54.6 +1.8
KBS pmax pmax
comp=Z,49nm,2.5s
KBS MLR MLR
comp=Z,328nm,16.0s
AVF Avril sur Loir 50.84 306 *e*P P 23 51 53.8 -0.2
comp=Z,32nm,1.1s
AVF Avril sur Loir 50.84 306 *e*P P 23 51 53.8 -0.2
AVF pmax pmax
comp=Z,32nm,1.1s
AVF Avril sur Loir 50.84 306 *e*P P 23 51 53.8 -0.2
comp=Z,32nm,1.1s
KKM Kota Kinabalu 50.98 113 *e*P P 23 51 56.6 +1.1
comp=Z,56nm,1.2s
LASF Ste Croix 51.05 302 *e*P P 23 51 55.6 0.0
comp=Z,18nm,1.0s
LASF Ste Croix 51.05 302 *e*P P 23 51 55.6 0.0
comp=Z,18nm,1.0s
BGF Bois d'Agland 51.23 305 *e*P P 23 51 56.7 -0.2
comp=Z,22nm,1.0s
BGF Bois d'Agland 51.23 305 *e*P P 23 51 56.7 -0.2
BGF pmax pmax
comp=Z,22nm,1.0s
BGF Bois d'Agland 51.23 305 *e*P P 23 51 56.7 -0.2
comp=Z,22nm,1.0s
HYF Humbligny 51.23 306 *e*P P 23 51 57.2 +0.3
HYF Humbligny 51.23 306 *e*P P 23 51 57.2 +0.3
TCF Toulx Ste Croi 51.71 305 *e*P P 23 52 00.8 +0.2
comp=Z,22nm,0.9s
TCF Toulx Ste Croi 51.71 305 *e*P P 23 52 00.8 +0.2
TCF pmax pmax
comp=Z,22nm,0.9s
TCF Toulx Ste Croi 51.71 305 *e*P P 23 52 00.8 +0.2
comp=Z,22nm,0.9s
CAF Calviac 52.11 303 *e*P P 23 52 03.6 0.0
comp=Z,9.3nm,0.8s
CAF Calviac 52.11 303 *e*P P 23 52 03.6 0.0
CAF pmax pmax
comp=Z,9.0nm,0.8s
CAF Calviac 52.11 303 *e*P P 23 52 03.6 0.0
comp=Z,9.3nm,0.8s
MTLF Montolieu 52.37 301 *e*P P 23 52 05.2 -0.3
comp=Z,8.6nm,0.9s
MTLF Montolieu 52.37 301 *e*P P 23 52 05.2 -0.3
MTLF pmax pmax
comp=Z,9.0nm,0.9s
MTLF Montolieu 52.37 301 *e*P P 23 52 05.2 -0.3
comp=Z,8.6nm,0.9s
LDF La Druitiere 52.79 308 *e*P P 23 52 08.2 -0.3
comp=Z,15nm,0.5s
LDF La Druitiere 52.79 308 *e*P P 23 52 08.2 -0.3
LDF pmax pmax
comp=Z,15nm,0.5s
LDF La Druitiere 52.79 308 *e*P P 23 52 08.2 -0.3
comp=Z,15nm,0.5s
FLN La Foliniere 52.99 309 *e*P P 23 52 09.7 -0.3
comp=Z,14nm,0.7s
FLN *e*R
comp=Z,187nm,23.0s
FLN La Foliniere 52.99 309 *e*P P 23 52 09.7 -0.3
FLN pmax pmax
comp=Z,14nm,0.7s
FLN La Foliniere 52.99 309 *e*P P 23 52 09.7 -0.3
comp=Z,14nm,0.7s
LFF La Frestale 53.02 304 *e*P P 23 52 10.3 0.0
comp=Z,24nm,0.9s
LFF La Frestale 53.02 304 *e*P P 23 52 10.3 0.0
LFF pmax pmax
comp=Z,24nm,0.9s
LFF La Frestale 53.02 304 *e*P P 23 52 10.3 0.0
comp=Z,24nm,0.9s
MFF Saint Martin d 53.24 306 *e*P P 23 52 11.3 -0.5
comp=Z,8.0nm,0.7s
MFF Saint Martin d 53.24 306 *e*P P 23 52 11.3 -0.5
MFF pmax pmax
comp=Z,8.0nm,0.7s
MFF Saint Martin d 53.24 306 *e*P P 23 52 11.3 -0.5
comp=Z,8.0nm,0.7s
GRR Gorron 53.32 308 *e*P P 23 52 12.0 -0.4
comp=Z,36nm,1.0s
GRR Gorron 53.32 308 *e*P P 23 52 12.0 -0.4
GRR pmax pmax
comp=Z,36nm,1.0s
GRR Gorron 53.32 308 *e*P P 23 52 12.0 -0.4
comp=Z,36nm,1.0s
EPF Esparros 53.78 302 *e*P P 23 52 15.7 -0.3
comp=Z,6.4nm,0.8s
EPF Esparros 53.78 302 *e*P P 23 52 15.7 -0.3
EPF pmax pmax
comp=Z,6.0nm,0.8s
EPF Esparros 53.78 302 *e*P P 23 52 15.7 -0.3
comp=Z,6.4nm,0.8s
ETSF Etsaut 54.45 302 *e*P P 23 52 20.6 -0.3
comp=Z,13nm,0.8s
ETSF Etsaut 54.45 302 *e*P P 23 52 20.6 -0.3
ETSF pmax pmax
comp=Z,13nm,0.8s
ETSF Etsaut 54.45 302 *e*P P 23 52 20.6 -0.3
comp=Z,13nm,0.8s
SGMF Saint Gilles 54.45 308 *e*P P 23 52 20.6 -0.1
comp=Z,22nm,0.8s
SGMF Saint Gilles 54.45 308 *e*P P 23 52 20.6 -0.1
SGMF pmax pmax
comp=Z,22nm,0.8s
SGMF Saint Gilles 54.45 308 *e*P P 23 52 20.6 -0.1
comp=Z,22nm,0.8s
MAJO Matsushiro 54.58 67 *e*P P 23 52 21.7 -0.2
MAJO pmax pmax
comp=Z,12nm,0.8s
MAJO Matsushiro 54.58 67 *e*P P 23 52 21.6 -0.2
comp=Z,12nm,0.8s
MAT Matsushiro 54.58 67 P P 23 52 21.4 -0.5
MJAR Matsushiro Arr 54.59 67 P P 23 52 21.5 -0.4
MJAR Matsushiro Arr 54.59 67 P P 23 52 21.5 -0.4
comp=Z,7.5nm,0.8s,baz=286,slow=10,SNR=14
SJPF Ste Jean 54.86 302 *e*P P 23 52 23.6 -0.2
SJPF Ste Jean 54.86 302 *e*P P 23 52 23.6 -0.2
SJPF Ste Jean 54.86 302 *e*P P 23 52 23.6 -0.2
ROSF Rostrenen 54.90 309 *e*P P 23 52 23.7 -0.2
comp=Z,64nm,1.0s
ROSF Rostrenen 54.90 309 *e*P P 23 52 23.7 -0.2
ROSF pmax pmax
comp=Z,64nm,1.0s
ROSF Rostrenen 54.90 309 *e*P P 23 52 23.7 -0.2
comp=Z,64nm,1.0s
QUIF Quistinic 54.93 308 *e*P P 23 52 24.4 +0.3
comp=Z,86nm,1.3s
QUIF Quistinic 54.93 308 *e*P P 23 52 24.4 +0.3
QUIF pmax pmax
comp=Z,86nm,1.3s
QUIF Quistinic 54.93 308 *e*P P 23 52 24.4 +0.3
comp=Z,86nm,1.3s
DAG Danmarks Havn 56.77 344 *i* P P 23 52 36.1 -0.8
DAG pmax pmax
comp=Z,8.0nm,0.9s
DAG Danmarks Havn 56.77 344 *i* P P 23 52 36.1 -0.8
comp=Z,9.5nm,0.9s
SEY Seymchan 56.82 33 *i* P P 23 52 38.5 +1.0
TAM Tamanrasset 57.01 277 *e*P P 23 52 38.6 -1.0
TAM pmax pmax
comp=Z,3.0nm,0.6s
TAM Tamanrasset 57.01 277 *e*P P 23 52 38.6 -1.0
comp=Z,3.0nm,0.6s
ESDC Sonseca Array 57.88 299 P P 23 52 43.6 -1.8
ESDC Sonseca Array 57.88 299 P P 23 52 43.6 -1.8
comp=Z,2.8nm,0.7s,baz=63,slow=7.4,SNR=21
SCO Scoresbysund 58.90 337 *i* P P 23 52 53.4 +1.4
SCO pmax pmax
comp=Z,3.0nm,0.9s
SCO Scoresbysund 58.90 337 *i* P P 23 52 53.4 +1.4
comp=Z,3.1nm,0.8s
BILL Bilibino 61.07 25⇓ *e*P P 23 53 06.6 -0.3
BILL *e* 23 53 51.9
BILL pmax pmax
comp=Z,13nm,1.6s
BILL MLR MLR
comp=Z,2μm,22.0s
EVO Evora 61.23 299 *e*P P 23 53 07.3 -1.2
comp=Z,28nm,1.2s
EVO *e*R
comp=Z,88nm,20.5s
EVOP Sao Brissos 61.31 299 *e*P P 23 53 07.3 -1.7
EVOP pmax pmax
comp=Z,28nm,1.2s
EVOP Sao Brissos 61.31 299 *e*P P 23 53 07.3 -1.7

comp=Z,28nm,1.2s
SUMG Summit 63.03 341 *e*P **P** **23 53 21.1 +0.6**
SUMG pmax pmax
comp=Z,30nm,1.1s
SUMG Summit 63.03 341 *e*P **P** **23 53 21.1 +0.6**
comp=Z,30nm,1.1s
SUMG Summit 63.03 341 *i* P **P** **23 53 21.3 +0.8**
comp=Z,20nm,1.0s
LSZ Lusaka 63.25 226 *e*P **P** **23 53 21.9 -0.4**
LSZ Lusaka 63.25 226 *e*P **P** **23 53 21.9 -0.4**
comp=Z,6.1nm,1.0s
TOA0 Torodi Ar. Sit 64.88 269 *e*P **P** **23 53 30.8 -2.3**
TORD Torodi Ar. Bea 64.88 269 P **P** **23 53 31.0 -2.0**
TORD Torodi Ar. Bea 64.88 269 P **P** **23 53 31.0 -2.0**
comp=Z,6.7nm,0.8s,baz=49,slow=5.7,SNR=82
TORD LR LR 00 23 40.9
comp=Z,124nm,19.2s,baz=195,slow=38
MSNA Messina 67.85 220 *e*P **P** **23 53 52.5 +0.6**
MSNA AMB AMB 23 53 53.9
comp=Z,18nm,2.2s
SFJD Kangerlussuaq 69.67 339 *i* P **P** **23 54 02.7 +0.2**
comp=Z,9.4nm,0.8s
TNA Tin City 71.04 22 *e*P **P** **23 54 11.0 +0.1**
comp=Z,6.6nm,0.9s
POGA Pongola 71.19 216 *e*P **P** **23 54 11.7 -0.6**
POGA AMB AMB 23 54 12.6
comp=Z,20nm,1.3s
ERPM east rand prop 72.04 219 *e*P **P** **23 54 16.4 -1.3**
ERPM AMB AMB 23 54 18.5
comp=Z,21nm,2.2s
KLOF Kloof 72.38 219 *e*P **P** **23 54 20.4 +0.7**
KLOF AMB AMB 23 54 21.2
comp=Z,15nm,0.8s
LBTB Lobatse 72.40 222↑ *i*P **P** **23 54 20.2 +0.5**
LBTB AMB AMB 23 54 20.8
comp=Z,24nm,0.8s
LBTB Lobatse 72.40 222 *e*P **P** **23 54 20.0 +0.3**
comp=Z,23nm,0.8s
PRYS Parys 72.97 219 *e*P **P** **23 54 22.6 -0.6**
PRYS AMB AMB 23 54 25.1
comp=Z,28nm,4.3s
DBIC Dimbokro 73.79 267 P **P** **23 54 26.4 -1.8**
DBIC Dimbokro 73.79 267 P **P** **23 54 26.4 -1.8**
comp=Z,3.4nm,0.7s,baz=60,slow=8.1,SNR=5.1
DBIC LR LR 00 29 03.5
comp=Z,141nm,18.2s,baz=134,slow=38
SEK Senekal 73.96 218 *e*P **P** **23 54 28.3 -0.7**
SEK AMB AMB 23 54 29.0
comp=Z,20nm,2.0s
FITZ Fitzroy Crossi 74.15 125 *e*P **P** **23 54 29.6 -0.5**
comp=Z,6.7nm,0.8s
LIC Lamto 74.17 267 *e*P **P** **23 54 28.1 -2.4**
comp=Z,18nm,0.7s
LIC *e*R
comp=Z,194nm,22.2s
LIC Lamto 74.17 267 *e*P **P** **23 54 28.1 -2.4**
comp=Z,18nm,0.7s
SWZ Schweizer 74.26 221 *e*P **P** **23 54 29.3 -1.5**
SWZ AMB AMB 23 54 30.4
comp=Z,24nm,1.9s
COLD Coldfoot 74.45 15 *e*P **P** **23 54 30.5 -0.7**
comp=Z,22nm,0.9s
BOSA Boshof 75.43 220 *e*P **P** **23 54 37.2 -0.3**
BOSA AMB AMB 23 54 37.4
comp=Z,33nm,2.1s
BOSA Boshof 75.43 220 *e*P **P** **23 54 37.4 -0.1**
comp=Z,17nm,0.8s
BOSA Boshof 75.43 220 P **P** **23 54 37.4 -0.1**
comp=Z,18nm,0.8s,baz=35,slow=5.7,SNR=41
BOSA LR LR 00 26 09.3
comp=Z,112nm,21.1s,baz=263,slow=34
INK Inuvik 76.35 9 P **P** **23 54 41.6 -0.5**
INK Inuvik 76.35 9 P **P** **23 54 41.6 -0.5**
comp=Z,20nm,0.9s,baz=352,slow=5.6,SNR=63
COLA College 76.96 16 *e*P **P** **23 54 45.1 -0.4**
COLA pmax pmax
comp=Z,43nm,1.0s
COLA College 76.96 16 *e*P **P** **23 54 45.1 -0.4**
comp=Z,44nm,1.0s
ILAR Eielson Array 77.26 15 P **P** **23 54 45.3 -2.0**
ILAR Eielson Array 77.26 15 P **P** **23 54 45.3 -2.0**
comp=Z,11nm,0.9s,baz=314,slow=4.1,SNR=32
ILAR LR LR 00 29 42.0
comp=Z,91nm,21.8s,baz=323,slow=36
PPLA Purkeypile 77.57 18 *e*P **P** **23 54 48.0 -1.3**
comp=Z,132nm,2.8s
TRF Thorofare Moun 77.59 17 *e*P **P** **23 54 48.5 -0.9**
comp=Z,9.4nm,1.0s
MCK McKinley 77.68 17 *e*P **P** **23 54 48.7 -1.0**
MCK pmax pmax
comp=Z,8.0nm,0.6s
MCK McKinley 77.68 17 *e*P **P** **23 54 48.7 -1.0**
comp=Z,7.7nm,0.6s
EGAK Eagle 78.42 13 *e*P **P** **23 54 52.6 -1.1**
comp=Z,8.6nm,1.0s
DOT Dot Lake 78.85 15 *e*P **P** **23 54 54.8 -1.4**
comp=Z,24nm,1.0s
PMR Palmer 79.45 18 *e*P **P** **23 54 59.3 -0.1**
PMR pmax pmax
comp=Z,101nm,2.2s
PMR Palmer 79.45 18 *e*P **P** **23 54 59.3 -0.1**
comp=Z,101nm,2.2s
SML Sawmill 79.47 17 *e*P **P** **23 54 58.9 -0.7**
SML pmax pmax
comp=Z,7.0nm,0.9s
SML Sawmill 79.47 17 *e*P **P** **23 54 58.9 -0.7**
comp=Z,7.1nm,0.9s
SUR Sutherland 80.76 220 P **P** **23 55 07.6 +0.6**
comp=Z,125nm,0.9s,SNR=5.5
WRA Warramunga Arr 81.44 121 P **P** **23 55 10.3 -0.4**
WRA Warramunga Arr 81.44 121 P **P** **23 55 10.3 -0.4**
comp=Z,16nm,0.7s,baz=321,slow=5.0,SNR=116
WRAB Tennant Creek 81.44 121 *e*P **P** **23 55 10.2 -0.5**
WRAB pmax pmax
comp=Z,20nm,0.7s
WRAB Tennant Creek 81.44 121 *e*P **P** **23 55 10.2 -0.5**
comp=Z,20nm,0.7s
WRAB Tennant Creek 81.44 121 P **P** **23 55 10.0 -0.7**
comp=Z,192nm,0.7s,SNR=12
KDAK Kodiak Island 81.68 22 P **P** **23 55 09.8 -1.6**
KDAK Kodiak Island 81.68 22 P **P** **23 55 09.8 -1.6**
comp=Z,29nm,1.0s,baz=326,slow=5.3,SNR=5.9
KDAK LR LR 00 34 11.2
comp=Z,83nm,18.9s,baz=295,slow=38
YKW3 Yellowknife Ar 83.56 2 *e*P **P** **23 55 20.1 -1.1**
comp=Z,0.2nm,0.8s
AS31 Alice Springs 83.57 124 *e*P **P** **23 55 21.2 -0.7**
ASAR Alice Springs 83.57 124 P **P** **23 55 21.4 -0.4**
ASAR Alice Springs 83.57 124 P **P** **23 55 21.4 -0.4**
comp=Z,8.0nm,0.6s,baz=311,slow=5.2,SNR=83
YKA Yellowknife Ar 83.63 2 P **P** **23 55 20.6 -1.0**
YKA Yellowknife Ar 83.63 2 P **P** **23 55 20.5 -1.0**
comp=Z,14nm,0.9s,baz=350,slow=5.3,SNR=80
SCHQ Schefferville 83.95 337 P **P** **23 55 22.7 -0.6**
SCHQ Schefferville 83.95 337 P **P** **23 55 22.7 -0.6**
comp=Z,8.7nm,0.8s,baz=45,slow=8.6,SNR=6.4
SCHQ LR LR 00 31 57.0
comp=Z,192nm,20.7s,baz=29,slow=35
CTA Charters Tower 90.29 114 P **P** **23 55 53.7 -0.9**
CTA Charters Tower 90.29 114 P **P** **23 55 53.7 -0.9**
comp=Z,5.1nm,0.5s,baz=336,slow=6.7,SNR=12
FFC Flin Flon 91.23 355 *i* P **P** **23 56 00.2 +1.7**
STKA Stephens Creek 94.04 126 P **P** **23 56 10.8 -0.9**
STKA Stephens Creek 94.04 126 P **P** **23 56 10.8 -0.9**
comp=Z,1.6nm,0.5s,baz=331,slow=7.2,SNR=8.0
STKA LR LR 00 45 48.3
comp=Z,177nm,19.2s,baz=206,slow=40
ULM Lac du Bonnet 95.06 351 LR LR 00 40 57.2
comp=Z,111nm,18.8s,baz=43,slow=37
PDAR Pinedale Array 103.46 360 PKiKP **PKiKP** **00 01 12.7 -0.4**
PDAR Pinedale Array 103.46 360 PKiKP **PKiKP** **00 01 12.7 -0.4**
comp=Z,0.6nm,0.7s,baz=70,slow=3.0,SNR=4.7
SNAA Sanae 116.91 200 *e*P **PKPdf** **00 01 37.1 0.0**
VNA2 Neumayer--Watz 117.92 201 *e*P **PKPdf** **00 01 39.3 +0.4**
baz=20,slow=4.0
VNA3 Neumayer Olymp 118.73 201 *e*P **PKPdf** **00 01 40.5 0.0**
VNDA Vanda 123.43 165 PKP **PKPdf** **00 01 48.3 -1.1**
VNDA Vanda 123.43 165 PKP **PKPdf** **00 01 48.3 -1.1**
comp=Z,1.2nm,0.7s,baz=294,slow=3.7,SNR=7.5
ROSC El Rosal 128.66 312 PKP **PKPdf** **00 02 03.3 +1.4**
ROSC El Rosal 128.66 312 PKP **PKPdf** **00 02 03.3 +1.4**
comp=Z,16nm,0.7s,baz=1,2,slow=1.6,SNR=9.6
SIV San Ignacio 132.64 280 PKP **PKPdf** **00 02 08.3 -0.5**
SIV San Ignacio 132.64 280 PKP **PKPdf** **00 02 08.3 -0.5**
comp=Z,1.0nm,0.7s,baz=184,slow=5.1,SNR=4.6
CPUP Villa Florida 134.28 265 PKP **PKPdf** **00 02 11.2 -0.3**
CPUP Villa Florida 134.28 265 PKP **PKPdf** **00 02 11.2 -0.3**
comp=Z,1.2nm,0.5s,baz=62,slow=2.0,SNR=7.9
LPAZ La Paz 138.52 285 PKP **PKPdf** **00 02 20.3 -0.1**
LPAZ La Paz 138.52 285 PKP **PKPdf** **00 02 20.3 -0.1**
comp=Z,1.4nm,0.9s,baz=88,slow=2.1,SNR=8.5
CFAA Coronel Fontan 145.03 262 PKPbc **PKPbc** **00 02 29.1 -1.3**
CFAA Coronel Fontan 145.03 262 PKPbc **PKPbc** **00 02 29.1 -1.3**
comp=Z,0.9nm,0.8s,baz=60,slow=1.3,SNR=19
PLCA Paso Flores 148.22 246 *e*PKPbc **PKPbc** **00 02 38.6 -0.8**
PLCA *e*SKPbc **SKPbc** **00 06 14.2 -2.4**
PLCA Paso Flores 148.22 246 PKPbc **PKPbc** **00 02 39.8 +0.4**
comp=Z,7.1nm,0.9s,baz=135,slow=6.1,SNR=9.5

CSEM ***16*** *23:48:01.0,42.°54N×13.°36E,h10km,MD1.5/4,After ROM*
ROM 16 23:48:01.0±0.2, 42.°54N×13.°36E, h10km±2km, Md1.5/4, Ml1.4/3, Error ellipse: s-maj=4.9km s-min=1.8km az=150.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.03**	**94**	Pg	Pg	23 48 03.4	+0.3
CAMP				Sg	Sg	23 48 04.6	+0.1
CAMP	**Campotosto**	**0.03**	**94**	Pg	Pg	23 48 03.4	+0.3
CAMP				Sg	Sg	23 48 04.6	+0.1
TERO	**Teramo**	**0.20**	**64**	Pg	Pg	23 48 05.8	+0.6
TERO				Sg	Sg	23 48 09.2	+1.1
	28nm,0.1s						
TERO	**Teramo**	**0.20**	**64**	Pg	Pg	23 48 05.8	+0.6
TERO				Sg	Sg	23 48 09.2	+1.1
	28nm,0.1s						
LNSS	**Leonessa**	**0.25**	**285**	Pg	Pg	23 48 06.8	+0.5
LNSS				Sg	Sg	23 48 10.7	+0.9
	52nm,0.1s						
LNSS	**Leonessa**	**0.25**	**285**	Pg	Pg	23 48 06.8	+0.5
LNSS				Sg	Sg	23 48 10.7	+0.9
	52nm,0.1s						
NRCA	**Norcia**	**0.35**	**328**	Pg	Pg	23 48 08.6	+0.5
NRCA				Sg	Sb	23 48 14.1	-1.0
	72nm,0.1s						
NRCA	**Norcia**	**0.35**	**328**	Pg	Pg	23 48 08.6	+0.5
NRCA				Sg	Sb	23 48 14.1	-1.0
	72nm,0.1s						

MEX 17 00:03:22.3±0.8, 17.°20N×100.°00W, h49km±10km, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.29**	**240**	*i* P	Pn	00 03 29.4	-1.9
CAIG				*i* S	Sn	00 03 36.1	-1.6
ACX	**Acapulco**	**0.35**	**157**	*i* P	Pn	00 03 30.7	-1.2
ACX				*i* S	Sn	00 03 38.1	-0.6
ARIG	**Puente Sto Nin**	**1.13**	**343**	*i* P	Pn	00 03 39.8	-2.0
ARIG				*e*S	Sn	00 03 54.5	-1.8
ZIIG	**Zihuatanejo**	**1.46**	**287**	*e*P	Pn	00 03 45.3	-0.9
ZIIG				*e*S	Sn	00 04 01.8	-2.4
YAIG	**Yautepec**	**1.88**	**28**	*i* P	Pn	00 03 50.5	-1.8
YAIG				*i* S	Sn	00 04 13.1	-1.9
PNIG	**Pinotepa**	**1.96**	**114**	*i* P	Pn	00 03 52.3	-0.8
PPM	**Popocatepetl**	**2.27**	**35**	*i* P	Pn	00 03 56.2	-1.9
PPM				*i* S	Sn	00 04 23.1	-2.3

IDC 17 00:29:58.9±5.5, 12.°17S×167.°08E, h230km±51km, mb3.6/15, mb1 3.8/16, mb1mx3.7/24, mbtmp3.6/16, Error ellipse: s-maj=21.4km s-min=17.7km az=69.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**19.76**	**276**	P	P	00 34 12.7	+1.0
	baz=84,slow=10,SNR=1.8						
CTA	**Charters Tower**	**21.48**	**246**	P	P	00 34 28.5	-1.3
	3.7nm,0.5s,baz=84,slow=14,SNR=5.8						
STKA	**Stephens Creek**	**30.57**	**226**	P	P	00 35 51.9	+0.7
	0.4nm,0.4s,baz=88,slow=18,SNR=3.1						
RPZ	**Rata Peaks**	**31.62**	**174**	P	P	00 36 00.9	+0.6
	3.5nm,0.4s,baz=69,slow=20,SNR=4.2						
WRA	**Warramunga Arr**	**32.35**	**252**	P	P	00 36 06.4	-0.6
	1.1nm,0.4s,baz=83,slow=9.2,SNR=5.8						
ASAR	**Alice Springs**	**33.48**	**245**	P	P	00 36 16.4	-0.4
	1.7nm,0.8s,baz=74,slow=9.9,SNR=18						
FITZ	**Fitzroy Crossi**	**40.37**	**256**	P	P	00 37 14.2	-0.5
	1.2nm,0.6s,baz=26,slow=1.5,SNR=6.1						
MJAR	**Matushiro Arr**	**55.56**	**332**	P	P	00 39 10.4	-0.2
	1.3nm,0.7s,baz=172,slow=7.5,SNR=5.2						
VNDA	**Vanda**	**65.40**	**181**	P	P	00 40 16.4	0.0
	0.5nm,0.7s,baz=332,slow=5.6,SNR=3.5						
CMAR	**Chiang Mai Arr**	**73.75**	**293**	P	P	00 41 09.0	+0.6
	0.3nm,0.4s,baz=124,slow=4.1,SNR=4.2						
YBH	**Yreka Blue Hor**	**83.75**	**45**	P	P	00 42 03.0	+0.6
	3.5nm,0.8s,baz=208,slow=1.4,SNR=13						
ILAR	**Eielson Array**	**84.16**	**18**	P	P	00 42 03.2	-0.6
	5.6nm,0.6s,baz=246,slow=4.3,SNR=90						
NVAR	**Mina Array Bea**	**85.75**	**49**	P	P	00 42 12.5	-0.1
	1.1nm,0.8s,baz=230,slow=8.0,SNR=6.1						
TXAR	**Lajitas Array**	**95.22**	**61**	P	P	00 42 56.3	-0.6
	0.2nm,0.7s,baz=216,slow=4.0,SNR=3.5						
MKAR	**Makanchi Array**	**95.23**	**317**	P	P	00 42 56.7	+0.3
	1.6nm,0.7s,baz=94,slow=6.7,SNR=21						
YKA	**Yellowknife Ar**	**95.37**	**27**	P	P	00 42 55.2	-1.4
	0.6nm,0.5s,baz=258,slow=4.8,SNR=16						
ARCES	**ARCESS Array B**	**117.74**	**346**	PKP	PKPdf	00 48 16.7	-0.4
	3.2nm,0.7s,baz=89,slow=2.2,SNR=11						
FINES	**FINESS Array B**	**123.28**	**339**	PKP	PKPdf	00 48 27.1	-0.9
	2.5nm,1.0s,baz=343,slow=2.0,SNR=7.6						
KEST	**Kesra**	**149.09**	**323**	PKPbc	PKPbc	00 49 21.2	+0.8
	1.0nm,0.6s,baz=301,slow=2.7,SNR=8.2						
ESDC	**Sonseca Array**	**151.48**	**345**	PKPbc	PKPbc	00 49 25.7	-0.2
	0.3nm,0.5s,baz=10,slow=3.6,SNR=4.9						

IDC 17 00:32:25.4±0.9, 6.°29S×154.°20E, h0km, mb3.8/10, mb1 4.1/11, mb1mx4.0/20, mbtmp3.9/11, ML3.3/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/25, Error ellipse: s-maj=30.0km s-min=19.4km az=124.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.63**	**246**	Pn	Pn	00 34 19.3	+1.4
	2.4nm,0.3s,baz=58,slow=5.7,SNR=7.8						
PMG				Sn	Sn	00 35 46.0	+0.8
	1.4nm,0.3s,baz=76,slow=13,SNR=4.3						
WRA	**Warramunga Arr**	**23.59**	**233**	P	P	00 37 37.1	-0.9
	1.6nm,0.7s,baz=56,slow=9.5,SNR=6.0						
ASAR	**Alice Springs**	**26.07**	**226**	P	P	00 38 00.8	0.0
	0.6nm,0.6s,baz=55,slow=9.1,SNR=4.6						
FITZ	**Fitzroy Crossi**	**30.23**	**245**	P	P	00 38 36.7	-1.4
	2.2nm,0.7s,baz=108,slow=7.8,SNR=6.3						
KSRS	**Korea Array**	**49.95**	**333**	LR	LR	00 59 04.3	
	comp=Z,11nm,19.0s,baz=210,slow=32						
CMAR	**Chiang Mai Arr**	**59.77**	**295**	P	P	00 42 33.2	+0.5
	0.4nm,0.3s,baz=111,slow=4.9,SNR=3.6						
SONM	**Songino Array**	**68.32**	**328**	P	P	00 43 30.4	+1.8
	1.0nm,0.7s,baz=141,slow=7.1,SNR=2.6						
VNDA	**Vanda**	**71.31**	**178**	P	P	00 43 47.5	+1.2
	0.5nm,0.5s,baz=326,slow=10,SNR=5.2						
MKAR	**Makanchi Array**	**82.36**	**319**	P	P	00 44 49.3	0.0
	1.7nm,0.8s,baz=104,slow=5.8,SNR=18						
ILAR	**Eielson Array**	**83.01**	**22**	P	P	00 44 50.4	-1.8
	0.2nm,0.5s,baz=269,slow=4.7,SNR=3.8						
ZALV	**Zalesovo Beam**	**83.16**	**326**	P	P	00 44 52.9	-0.3
	0.7nm,0.4s,baz=116,slow=5.9,SNR=5.5						
NVAR	**Mina Array Bea**	**91.91**	**52**	P	P	00 45 36.8	+0.5
	0.4nm,0.5s,baz=257,slow=5.9,SNR=4.1						
TORD	**Torodi Ar. Bea**	**152.08**	**286**	PKPbc	PKPbc	00 52 22.9	-0.9
	0.6nm,0.6s,baz=73,slow=2.1,SNR=9.6						

IDC ***17*** *00:55:43.4±2.2,51.°13N×178.°22W,h0km,mb3.3/5, mb1 3.8/7,mb1mx3.6/31,mbtmp3.6/7,ML3.2/2,MS3.4/2, Ms1 3.4/2,ms1mx2.7/29, Error ellipse: s-maj=56.1km s-min=12.3km az=3.0*
ISCJB ***17*** *00:55:44.7±1.5,51.°1N±0.°2×178.°26W±0.°07,h23km, mb3.3/5,MS4.1/1, Error ellipse: s-maj=34.2km s-min=6.3km az=0.8*
NEIC ***17*** *00:55:46.4,50.°97N×178.°53W,h15km,ML3.7(AEIC),After AEIC.*
ISC 17 00:55:46.1±1.5, 51.°2N±0.°2×178.°34W±0.°04, h23km, n18, σ1§05/20, mb3.4/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERAA	**Semis' Rag'd T**	**1.42**	**300**	P	**Pb**	**00 56 11.2**	**-0.6**
CEPE	**Semis' Perret**	**1.47**	**302**	P	**Pb**	**00 56 11.9**	**-0.7**
AMKA	**Amchitka**	**1.49**	**277**	P	**Pn**	**00 56 10.8**	**-0.6**
AMKA				S	**Sn**	**00 56 30.0**	**-0.1**
LSSE	**Little Sitkin**	**2.06**	**292**	P	**Pb**	**00 56 21.3**	**-1.4**
LSPA	**Little Sitkin**	**2.06**	**292**	P	**Pn**	**00 56 20.2**	**+0.9**
LSPA				S	**Sb**	**00 56 46.7**	**-1.4**
LSSA	**Little Sitkin**	**2.10**	**292**	P	**Pn**	**00 56 20.5**	**+0.7**
LSNW	**Little Sitkin**	**2.10**	**292**	P	**Pb**	**00 56 21.8**	**-1.7**
KOWE	**Korovin West**	**2.79**	**64**	P	**Pb**	**00 56 33.6**	**-1.6**
KOFP	**Korovin Flat P**	**2.84**	**66**	P	**Pb**	**00 56 34.5**	**-1.7**
FX1	**Attu Island--F**	**5.50**	**291**	Pn	**Pn**	**00 57 06.9**	**+0.4**
	0.8nm,0.3s,baz=126,slow=12,SNR=3.7						
FX1				Sn	**Sn**	**00 58 09.6**	**+0.5**
	0.6nm,0.3s,baz=106,slow=20,SNR=2.8						
PETK	**Petropavlovsk-**	**14.81**	**287**	LR	LR	01 04 37.3	
	comp=Z,38nm,20.2s,baz=5.6,slow=36						
KDAK	**Kodiak Island**	**16.28**	**56**	Pn	**Pn**	**00 59 32.7**	**-0.2**
	0.8nm,0.3s,baz=129,slow=8.2,SNR=9.3						
ILAR	**Eielson Array**	**21.20**	**38**	P	**P**	**01 00 30.6**	**+1.0**
	0.2nm,0.6s,baz=247,slow=9.0,SNR=4.7						
INK	**Inuvik**	**27.43**	**35**	P	**P**	**01 01 29.7**	**+0.1**
	0.3nm,0.3s,baz=268,slow=6.3,SNR=5.1						
YKA	**Yellowknife Ar**	**35.14**	**46**	P	**P**	**01 02 37.5**	**+0.1**
	0.1nm,0.4s,baz=277,slow=9.3,SNR=5.9						
YKA				PcP	**PcP**	**01 05 09.0**	**+0.8**
	0.1nm,0.4s,baz=283,slow=3.3,SNR=5.1						
PDAR	**Pinedale Array**	**46.09**	**72**	P	**P**	**01 04 09.7**	**+1.3**
	0.8nm,0.5s,baz=312,slow=3.5,SNR=12						
MKAR	**Makanchi Array**	**60.36**	**309**	P	**P**	**01 05 53.0**	**0.0**
	0.2nm,0.3s,baz=56,slow=4.6,SNR=5.3						
WRA	**Warramunga Arr**	**82.09**	**224**	LR	LR	01 43 55.8	
	comp=Z,86nm,19.9s,baz=220,slow=35						

IDC ***17*** *00:57:50.8±0.6,60.°14S×26.°75W,h0km,mb4.2/9, mb1 4.4/10,mb1mx4.3/17,mbtmp4.3/10,ML4.8/1,MS3.7/5, Ms1 3.7/5,ms1mx3.4/22, Error ellipse: s-maj=21.9km s-min=18.4km az=53.0*
ISCJB ***17*** *00:57:51.1±0.5,60.°35S±0.°08×26.°7W±0.°2,h19km, mb4.3/14,MS3.7/5, Error ellipse: s-maj=15.1km s-min=7.8km az=143.6*
NEIC ***17*** *00:57:55.9±0.4,60.°14S×26.°91W,h35km,mb4.5/12, Error ellipse: s-maj=14.3km s-min=12.2km az=220.0*
ISC 17 00:57:53.6±0.5, 60.°21S±0.°09×26.°68W±0.°10, h19km, n61, σ1§43/60, mb4.5/14, MS3.6/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.90**	**152**	*e*Pn	**Pn**	**01 00 54.3**	**-1.2**
VNA3	**Neumayer Olymp**	**13.03**	**155**	*e*Pn	**Pn**	**01 00 54.7**	**-2.6**
VNA3	**Neumayer Olymp**	**13.03**	**155**	*e*Sn	Sn	01 03 08.7	-13
VNA2	**Neumayer--Watz**	**13.30**	**152**	*e*Pn	**Pn**	**01 00 59.2**	**-1.8**
	baz=316,slow=15						
SNAA	**Sanae**	**14.90**	**150**	*e*Pn	**Pn**	**01 01 20.4**	**-2.4**
SNAA	**Sanae**	**14.90**	**150**	*e*Pn	**Pn**	**01 01 20.2**	**-2.6**
	7.3nm,0.6s						
PMSA	**Palmer Station**	**17.66**	**239**	*e*Pn	**Pn**	**01 01 56.3**	**-1.8**
	50nm,0.7s						
PMSA	**Palmer Station**	**17.66**	**239**	P	**P**	**01 01 58.1**	**-0.9**
	0.3nm,0.3s,baz=212,slow=12,SNR=2.5						
EFI	**East Falkland**	**19.37**	**282**	*e*Pn	**Pn**	**01 02 22.8**	**+3.8**
	22nm,1.0s						
QSPA	**South Pole Qui**	**30.03**	**180**	*e*P	**P**	**01 04 02.2**	**+1.3**
	3.9nm,1.0s						
QSPA	**South Pole Qui**	**30.03**	**180**	P	**P**	**01 04 02.0**	**+1.1**
	1.1nm,0.7s,baz=36,slow=18,SNR=5.1						
TRQA	**Tornquist**	**31.40**	**299**	*e*P	**P**	**01 04 13.2**	**+0.2**
	1.1nm,0.7s						
PLCA	**Paso Flores**	**33.20**	**286**	*e*P	**P**	**01 04 29.3**	**+0.3**
	2.5nm,0.9s						
PLCA	**Paso Flores**	**33.20**	**286**	P	**P**	**01 04 28.6**	**-0.3**
	1.7nm,0.7s,baz=136,slow=4.9,SNR=6.4						
PLCA				LR	LR	01 18 51.2	
	comp=Z,89nm,18.3s,baz=168,slow=38						
SPB	**Sao Paulo**	**39.36**	**329**	*e*P	**P**	**01 05 19.6**	**-1.9**
	5.0nm,0.3s						
CPUP	**Villa Florida**	**39.85**	**314**	P	**P**	**01 05 25.7**	**+0.2**
CPUP	**Villa Florida**	**39.85**	**314**	P	**P**	**01 05 25.7**	**+0.2**
	13nm,0.7s,baz=137,slow=7.3,SNR=22						
CPUP				LR	LR	01 21 44.1	
	comp=Z,74nm,18.1s,baz=16,slow=36						
VNDA	**Vanda**	**42.42**	**183**	P	**P**	**01 05 47.8**	**+1.5**
VNDA	**Vanda**	**42.42**	**183**	P	**P**	**01 05 47.8**	**+1.5**
	1.6nm,0.8s,baz=192,slow=2.7,SNR=4.6						
LCO	**Las Campanas**	**42.90**	**297**	*e*P	P	01 05 47.9	-3.0
	7.4nm,0.6s						
BOSA	**Boshof**	**46.88**	**71**	*e*P	**P**	**01 06 22.1**	**-0.3**
	3.3nm,0.8s						
BOSA	**Boshof**	**46.88**	**71**	P	**P**	**01 06 23.5**	**+1.0**
	1.9nm,0.9s,baz=240,slow=20,SNR=2.9						
BDFB	**Brasilia**	**47.13**	**331**	P	**P**	**01 06 24.6**	**+0.1**
BDFB	**Brasilia**	**47.13**	**331**	P	**P**	**01 06 24.6**	**+0.1**
	2.9nm,0.8s,baz=138,slow=5.8,SNR=4.2						
LVC	**Limon Verde**	**47.71**	**303**	*e*P	**P**	**01 06 29.1**	**0.0**
	5.4nm,0.5s						
LPAZ	**La Paz**	**53.06**	**307**	*e*P	**P**	**01 07 10.2**	**+0.1**
	5.5nm,0.7s						
LPAZ	**La Paz**	**53.06**	**307**	P	**P**	**01 07 10.7**	**+0.7**
	4.1nm,0.6s,baz=151,slow=7.5,SNR=11						
SAML	**Samuel**	**57.96**	**316**	*e*P	**P**	**01 07 42.9**	**-1.7**
	5.7nm,0.7s						
NNA	**Nana**	**60.54**	**300**	LR	LR	01 32 01.4	
	comp=Z,43nm,20.7s,baz=136,slow=34						
ATAH	**Atahualpa**	**65.55**	**301**	LR	LR	01 33 35.6	
	comp=Z,41nm,18.4s,baz=305,slow=33						
TOA0	**Torodi Ar. Sit**	**76.57**	**28**	*e*P	**P**	**01 09 43.6**	**+1.2**
TORD	**Torodi Ar. Bea**	**76.57**	**28**	P	**P**	**01 09 43.8**	**+1.4**
TORD	**Torodi Ar. Bea**	**76.57**	**28**	P	**P**	**01 09 43.8**	**+1.4**
	6.6nm,0.7s,baz=198,slow=6.1,SNR=81						
STKA	**Stephens Creek**	**87.75**	**170**	LR	LR	01 47 13.0	
	comp=Z,128nm,19.0s,baz=206,slow=34						
ASAR	**Alice Springs**	**94.94**	**162**	P	**P**	**01 11 16.6**	**+2.1**
ASAR	**Alice Springs**	**94.94**	**162**	P	**P**	**01 11 16.6**	**+2.1**
	0.4nm,0.7s,baz=191,slow=3.5,SNR=3.8						
PDAR	**Pinedale Array**	**122.72**	**300**	PKP	**PKPdf**	**01 16 45.9**	**-1.4**
PDAR	**Pinedale Array**	**122.72**	**300**	PKP	**PKPdf**	**01 16 45.9**	**-1.4**
	0.2nm,0.4s,baz=134,slow=3.9,SNR=2.5						
NVAR	**Mina Array Bea**	**123.19**	**290**	PKP	**PKPdf**	**01 16 49.4**	**+1.0**
NVAR	**Mina Array Bea**	**123.19**	**290**	PKP	**PKPdf**	**01

MDD ***17*** *01:09:51.2±1.2,36°.52N×8°.08W,h40km±26km,mb3.8/2, Error ellipse: s-maj=11.3km s-min=7.3km az=15.0, PRXIMO*
IGIL ***17*** *01:09:51.2,36°.54N×8°.12W,h21km,ML1.4*
INMG ***17*** *01:09:51.7±0.8,36°.53N×8°.11W,h31km,ML1.2, Error ellipse: s-maj=4.2km s-min=3.3km az=11.0*
CSEM ***17*** *01:09:51.1±0.3,36°.57N×8°.05W,h40km,ML1.2, Error ellipse: s-maj=5.3km s-min=3.2km az=16.0*

ISC 17 01:09:48.8±1.8,36°.52N±0°.07×8°.05W±0°.03,h24km±13km, n47,σ0°69/86,1C,West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBDV	**Barranco-do-Ve**	**0.73**	**7**	*eP*	**Pn**	**01 10 04.6**	**+0.9**
PBDV				*eS*	**Sn**	**01 10 14.8**	**+0.6**
PBDV	**Barranco-do-Ve**	**0.73**	**7**	P	**Pn**	**01 10 04.6**	**+0.9**
PBDV				S	**Sn**	**01 10 14.8**	**+0.6**
PBDV	**Barranco-do-Ve**	**0.73**	**7**	*eP*	**Sn**	**01 10 04.6**	**+0.9**
PBDV				*eS*	**Sn**	**01 10 14.8**	**+0.6**
PFVI	**Vila Bisbo**	**0.88**	**315**	*eP*	**Pn**	**01 10 06.2**	**+0.5**
PFVI				*eS*	**Sb**	**01 10 16.5**	**-0.2**
PFVI	**Vila Bisbo**	**0.88**	**315**	P	**Pn**	**01 10 06.2**	**+0.5**
	0.3nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**01 10 17.4**	**-0.3**
	7.6nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**0.88**	**315**	*eP*	**Pn**	**01 10 06.2**	**+0.5**
PFVI				S	**Sn**	**01 10 17.4**	**-0.3**
	7.6nm,0.2s,SNR=7.9						
PVAQ	**Vaqueiros**	**0.93**	**16**	*eP*	**Pn**	**01 10 07.0**	**+0.7**
PVAQ				*eS*	**Sn**	**01 10 18.8**	**-0.1**
PVAQ				A	A	01 10 19.3	
	2.5nm,0.3s						
PVAQ	**Vaqueiros**	**0.93**	**16**	P	**Pn**	**01 10 07.0**	**+0.7**
PVAQ				S	**Sn**	**01 10 18.8**	**-0.1**
	2.5nm,0.3s						
PVAQ	**Vaqueiros**	**0.93**	**16**	*eP*	**Pn**	**01 10 07.0**	**+0.7**
PVAQ				S	**Sn**	**01 10 18.8**	**-0.1**
	2.5nm,0.3s						
MORF	**Marmelete**	**0.93**	**329**	*eP*	**Pn**	**01 10 06.5**	**+0.1**
MORF				*eS*	**Sb**	**01 10 18.0**	**-0.2**
MORF				A	A	01 10 19.8	
	9.0nm,0.2s						
MORF	**Marmelete**	**0.93**	**329**	P	**Pn**	**01 10 06.5**	**+0.1**
MORF				S	**Sb**	**01 10 17.9**	**-0.2**
MORF	**Marmelete**	**0.93**	**329**	*eP*	**Pn**	**01 10 06.5**	**+0.1**
MORF				*eS*	**Sb**	**01 10 18.0**	**-0.2**
	9.0nm,0.2s						
EGRO	**El Granado**	**1.11**	**24**	⇑P	**Pb**	**01 10 09.9**	**+0.5**
	1.5nm,0.1s,SNR=18						
EGRO				S	**Sb**	**01 10 23.2**	**-0.2**
	1.8nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.11**	**24**	P	**Pb**	**01 10 09.9**	**+0.5**
	1.5nm,0.1s,SNR=18						
EGRO				S	**Sb**	**01 10 23.2**	**-0.2**
	1.8nm,0.1s,SNR=7.9						
PCVE	**Castro Verde**	**1.11**	**0**	*eP*	**Pb**	**01 10 09.8**	**+0.4**
PCVE				*eS*	**Sb**	**01 10 23.5**	**0.0**
PCVE	**Castro Verde**	**1.11**	**0**	P	**Pb**	**01 10 09.8**	**+0.4**
PCVE				S	**Sb**	**01 10 23.5**	**0.0**
PCVE	**Castro Verde**	**1.11**	**0**	*eP*	**Pb**	**01 10 09.8**	**+0.4**
PCVE				*eS*	**Sb**	**01 10 23.5**	**0.0**
PTEO	**Sao Teotonio**	**1.16**	**332**	*eP*	**Pb**	**01 10 10.2**	**0.0**
PTEO				*eS*	**Sb**	**01 10 24.0**	**-0.9**
PTEO	**Sao Teotonio**	**1.16**	**332**	P	**Pb**	**01 10 10.2**	**0.0**
PTEO				S	**Sb**	**01 10 24.0**	**-0.9**
PTEO	**Sao Teotonio**	**1.16**	**332**	*eP*	**Pb**	**01 10 10.2**	**0.0**
PTEO				*eS*	**Sb**	**01 10 24.0**	**-0.9**
MESJ	**Messejana**	**1.33**	**354**	*eP*	**Pb**	**01 10 12.7**	**-0.3**
MESJ				*eS*	**Sn**	**01 10 28.2**	**-0.7**
MESJ				AML	AML	01 10 29.1	
	comp=N,3.0nm,0.2s						
MESJ	**Messejana**	**1.33**	**354**	*eP*	**Pb**	**01 10 12.7**	**-0.3**
MESJ				*eS*	**Sn**	**01 10 28.2**	**-0.7**
MESJ	**Messejana**	**1.33**	**354**	P	**Pb**	**01 10 12.7**	**-0.3**
MESJ				S	**Sn**	**01 10 28.2**	**-0.7**
MESJ	**Messejana**	**1.33**	**354**	*eP*	**Pb**	**01 10 12.7**	**-0.3**
MESJ				*eS*	**Sn**	**01 10 28.2**	**-0.7**
PNCL	**Nicolau / Gran**	**1.64**	**347**	*eP*	**Pn**	**01 10 16.6**	**+0.5**
PNCL				*eS*	**Sn**	**01 10 35.2**	**-1.3**
EMIN	**Mina Concepcio**	**1.66**	**41**	P	**Pb**	**01 10 18.1**	**-0.6**
	comp=N,0.3nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**01 10 36.1**	**-1.0**
	comp=N,0.8nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.66**	**41**	P	**Pb**	**01 10 18.1**	**-0.6**
	comp=N,0.3nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**01 10 36.1**	**-1.0**
	comp=N,0.8nm,0.1s,SNR=7.9						
ESPR	**Espera**	**1.80**	**78**	P	**Pn**	**01 10 19.2**	**+0.9**
	comp=N,3.2nm,0.2s,SNR=7.9						
ESPR				S	**Sn**	**01 10 40.3**	**0.0**
	comp=N,10nm,0.2s,SNR=7.9						
ESPR	**Espera**	**1.80**	**78**	P	**Pn**	**01 10 19.2**	**+0.9**
	comp=N,3.2nm,0.2s,SNR=7.9						
ESPR				S	**Sn**	**01 10 40.3**	**0.0**
	comp=N,10nm,0.2s,SNR=7.9						
PBAR	**Barrancos**	**1.84**	**26**	*eS*n	**Sn**	**01 10 40.9**	**-0.6**
PBAR	**Barrancos**	**1.84**	**26**	S	**Sn**	**01 10 40.9**	**-0.6**
PBAR	**Barrancos**	**1.84**	**26**	S	**Sn**	**01 10 40.9**	**-0.6**
EVO	**Evora**	**2.01**	**1**	*e*Pn	**Pn**	**01 10 22.0**	**+0.7**
EVO				*e*Sn	**Sn**	**01 10 45.5**	**-0.2**
EVO	**Evora**	**2.01**	**1**	P	**Pn**	**01 10 22.0**	**+0.7**
EVO				S	**Sn**	**01 10 45.5**	**-0.2**
EVO	**Evora**	**2.01**	**1**	P	**Pn**	**01 10 22.0**	**+0.7**
EVO				S	**Sn**	**01 10 45.5**	**-0.2**
PMTG	**Montargil**	**2.55**	**357**	*e*Pn	**Pn**	**01 10 29.3**	**+0.6**
PMTG				*e*Sn	**Sn**	**01 10 58.5**	**-0.5**
PMTG	**Montargil**	**2.55**	**357**	*e*Pn	**Pn**	**01 10 29.3**	**+0.6**
PMTG				*e*Sn	**Sn**	**01 10 58.5**	**-0.5**
PMAFR	**Mafra**	**2.63**	**338**	*e*Pn	**Pn**	**01 10 31.3**	**+1.6**
PMAFR				*e*Sn	**Sn**	**01 11 00.7**	**-0.1**
PMAFR	**Mafra**	**2.63**	**338**	*e*Pn	**Pn**	**01 10 31.3**	**+1.6**
PMAFR				*e*Sn	**Sn**	**01 11 00.7**	**-0.1**
PMRV	**Marv??o**	**2.95**	**10**	*e*Pn	**Pn**	**01 10 35.2**	**+1.0**
PMRV	**Marv??o**	**2.95**	**10**	P	**Pn**	**01 10 35.2**	**+1.0**
PMRV	**Marv??o**	**2.95**	**10**	P	**Pn**	**01 10 35.2**	**+1.0**
PTOM	**Tomar**	**3.11**	**355**	*e*Pn	**Pn**	**01 10 37.1**	**+0.7**
PTOM				*e*Sn	**Sn**	**01 11 12.1**	**-0.7**
PTOM	**Tomar**	**3.11**	**355**	P	**Pn**	**01 10 37.1**	**+0.7**
PTOM				S	**Sn**	**01 11 12.1**	**-0.7**
PTOM	**Tomar**	**3.11**	**355**	P	**Pn**	**01 10 37.1**	**+0.7**
PTOM				S	**Sn**	**01 11 12.1**	**-0.7**
EADA	**Adamuz**	**3.22**	**58**	S	**Sn**	**01 11 13.8**	**-1.7**
	SNR=7.9						
EADA	**Adamuz**	**3.22**	**58**	S	**Sn**	**01 11 13.8**	**-1.7**
	SNR=7.9						

IDC ***17*** *01:11:25.5±2.1,30°.48S×71°.11W,h0km,mb3.7/1, mb1 3.9/3,mb1mx3.6/17,mbtmp3.7/3,ML4.1/2,Error ellipse: s-maj=73.5km s-min=59.4km az=168.0*
ISCJB ***17*** *01:11:34.6±0.8,29°.87S±0°.03×71°.3W±0°.2,h84km±6km, mb3.9/2,Error ellipse: s-maj=24.7km s-min=4.8km az=4.7*
NEIC ***17*** *01:11:35.3,29°.86S×71°.39W,h58km,mb4.2/1, MD4.0(GUC),After GUC.*
NEIC Felt [IV] at Coquimbo.
GUC ***17*** *01:11:35.3±0.6,29°.86S×71°.39W,h58km±17km,MD4.0, ML4.0*

ISC 17 01:11:36.0±1.2,29°.88S±0°.03×71°.3W±0°.1,h73km±10km, n31,σ0°72/42,4C,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLL	**Tololo Astrono**	**0.55**	**122**	⇑*i*P	**Pn**	**01 11 49.7**	**-0.1**
TLL				*i* S	**Sn**	**01 12 00.0**	**0.0**
TLL	**Tololo Astrono**	**0.55**	**122**	⇑*i*P	**Pn**	**01 11 49.7**	**-0.1**
TLL				*i* S	**Sn**	**01 12 00.0**	**0.0**
TLL				AML	AML	01 12 00.6	
	comp=E,14μm,0.4s						
LCO	**Las Campanas**	**1.03**	**33**	*e*P	**Pn**	**01 11 55.1**	**-0.2**
LCO				*i* S	**Sn**	**01 12 09.6**	**0.0**
LCO	**Las Campanas**	**1.03**	**33**	*e*P	**Pn**	**01 11 55.1**	**-0.2**
LCO				*i* S	**Sn**	**01 12 09.6**	**0.0**
LCO				AML	AML	01 12 10.3	
	comp=E,9μm,0.3s						
CMCH	**Combarbala**	**1.33**	**167**	*e*P	**Pn**	**01 11 58.1**	**-0.7**
CMCH				*i* S	**Sn**	**01 12 15.7**	**-0.4**
CMCH	**Combarbala**	**1.33**	**167**	*e*P	**Pn**	**01 11 58.1**	**-0.7**
CMCH				*i* S	**Sn**	**01 12 15.7**	**-0.4**
CMCH				AML	AML	01 12 33.0	
	comp=E,3μm,0.6s						
CHNG	**Los Chungos**	**2.00**	**184**	*i* P	**Pn**	**01 12 07.1**	**-0.6**
CHNG				*i* S	**Sn**	**01 12 31.7**	**-0.2**
CHNG	**Los Chungos**	**2.00**	**184**	*i* P	**Pn**	**01 12 07.1**	**-0.6**
CHNG				*i* S	**Sn**	**01 12 31.7**	**-0.2**
CPCH	**Copiapo**	**2.65**	**19**	⇑*i*P	**Pn**	**01 12 16.3**	**-0.3**
CPCH				*i* S	**Sn**	**01 12 47.1**	**-0.6**
CPCH	**Copiapo**	**2.65**	**19**	⇑*i*P	**Pn**	**01 12 16.3**	**-0.3**
CPCH				*i* S	**Sn**	**01 12 47.1**	**-0.6**
CDCH	**Caldera**	**2.83**	**9**	*e*P	**Pn**	**01 12 18.3**	**-0.7**
CDCH				*i* S	**Sn**	**01 12 51.4**	**-0.7**
CDCH	**Caldera**	**2.83**	**9**	*e*P	**Pn**	**01 12 18.3**	**-0.7**
CDCH				*i* S	**Sn**	**01 12 51.4**	**-0.7**
CDCH				AML	AML	01 13 11.4	
	comp=E,272nm,0.5s						
CLCH	**Cerro Calan**	**3.58**	**169**	*i* P	**Pn**	**01 12 29.6**	**+0.4**
CLCH				*i* S	**Sn**	**01 13 10.3**	**+0.1**
CLCH				AML	AML	01 13 12.5	
	comp=E,356nm,0.2s						
LVC	**Limon Verde**	**7.55**	**17**	*e*Pn	**Pn**	**01 13 21.8**	**-1.9**
	comp=E,8.0nm,0.6s						
TRQA	**Tornquist**	**11.26**	**139**	*e*Pn	**Pn**	**01 14 13.3**	**-0.7**
	comp=E,1.9nm,0.8s						
CPUP	**Villa Florida**	**12.86**	**77**	Pn	Pn	01 14 28.8	-7.1
CPUP	**Villa Florida**	**12.86**	**77**	Pn	Pn	01 14 28.8	-7.1
	comp=E,0.3nm,0.3s,baz=253,slow=17,SNR=1.9						
LPAZ	**La Paz**	**13.84**	**13**	*e*Pn	**Pn**	**01 14 51.0**	**+1.5**
LPAZ	**La Paz**	**13.84**	**13**	Pn	**Pn**	**01 14 51.1**	**+1.6**
	comp=E,0.4nm,0.3s,baz=185,slow=9.4,SNR=13						
SNAA	**Sanae**	**55.19**	**159**	*e*P	**P**	**01 21 00.4**	**-0.5**
	comp=E,2.5nm,0.9s						
TOA0	**Torodi Ar. Sit**	**82.25**	**70**	*e*P	**P**	**01 23 48.5**	**-1.3**
TORD	**Torodi Ar. Bea**	**82.25**	**70**	P	**P**	**01 23 49.4**	**-0.4**
TORD	**Torodi Ar. Bea**	**82.25**	**70**	P	**P**	**01 23 49.4**	**-0.4**
	comp=E,0.4nm,0.5s,baz=235,slow=6.0,SNR=10						
KKAR	**Karatay Array**	**146.90**	**56**	*e*PKPbc	**PKPbc**	**01 31 09.9**	**-0.1**
EKS2	**Erkin-Say**	**149.34**	**56**	*e*PKPbc	**PKPbc**	**01 31 17.7**	**+1.1**
AAK	**Ala-Archa**	**149.86**	**56**	*e*PKPbc	**PKPbc**	**01 31 18.8**	**+0.9**
ZALV	**Zalesovo Beam**	**150.38**	**29**	PKPbc	**PKPbc**	**01 31 19.2**	**+0.7**
ZALV	**Zalesovo Beam**	**150.38**	**29**	PKPbc	**PKPbc**	**01 31 19.2**	**+0.7**
	comp=E,2.7nm,0.5s,baz=311,slow=3.2,SNR=19						
TKM2	**Tokmak 2**	**150.57**	**55**	*e*PKPbc	**PKPbc**	**01 31 20.2**	**+0.6**
MKAR	**Makanchi Array**	**153.48**	**43**	PKPbc	**PKPbc**	**01 31 26.2**	**+0.3**
MKAR	**Makanchi Array**	**153.48**	**43**	PKPbc	**PKPbc**	**01 31 26.2**	**+0.3**
	comp=E,0.3nm,0.7s,baz=266,slow=4.3,SNR=3.5						

ISCJB ***17*** *01:25:26.3±0.5,50°.22N±0°.04×18°.54E±0°.03,h0km,Error ellipse: s-maj=5.6km s-min=2.5km az=6.8*
CSEM ***17*** *01:25:27.8±0.3,50°.22N×18°.55E,h2km,ML2.6/7,Error ellipse: s-maj=7.4km s-min=2.9km az=3.0*
IPEC ***17*** *01:25:27.7±0.2,50°.18N×18°.64E,h3km±2km,ML2.0/3, Error ellipse: s-maj=2.3km s-min=1.1km az=165.0*
PRU ***17*** *01:25:28.9,50°.19N×18°.57E,h0km*

ISC 17 01:25:28.1±0.8,50°.17N±0°.04×18°.60E±0°.02,h0km,n28, σ1s00/47,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.27**	**252**	*e*Sg	**Sb**	**01 25 40.1**	**-1.0**
OKC	**Ostrava-Krasne**	**0.44**	**221**	*e*PG	**Pg**	**01 25 37.4**	**+0.8**
OKC				*e*SG	**Sg**	**01 25 42.0**	**-0.3**
	comp=Z,18nm,0.4s						
OKC	**Ostrava-Krasne**	**0.44**	**221**	*e*Pg	**Pg**	**01 25 36.9**	**+0.3**
	baz=42						
OKC				Sg	**Sg**	**01 25 42.0**	**-0.3**
	18nm,0.4s						
OJC	**Ojcow**	**0.77**	**86**	*e*Pg	**Pg**	**01 25 42.2**	**-0.7**
OJC				*e*Sg	**Sg**	**01 25 52.5**	**-0.4**
OJC	**Ojcow**	**0.77**	**86**	*e*Pg	**Pg**	**01 25 42.0**	**-0.9**
	baz=267						
OJC				*e*Sg	**Sg**	**01 25 52.5**	**-0.4**
MORC	**Moravsky Berou**	**0.79**	**240**	*e*Pg	**Pg**	**01 25 43.3**	**+0.1**
	baz=60						
MORC				*e*Sg	**Sg**	**01 25 53.3**	**-0.1**
	52nm,0.9s,baz=60						
NIE	**Niedzica**	**1.34**	**123**	*e*Pg	**Pg**	**01 25 53.2**	**-0.6**
NIE				*e*Sg	**Sg**	**01 26 11.7**	**+0.5**
NIE	**Niedzica**	**1.34**	**123**	*e*Pg	**Pg**	**01 25 53.2**	**-0.6**
NIE				*e*Sg	**Sg**	**01 26 11.7**	**+0.5**
DPC	**Dobruska-Polom**	**1.47**	**278**	*e*PG	**Pb**	**01 25 55.9**	**-0.5**
DPC				*e*SG	**Sg**	**01 26 14.9**	**-0.5**
	comp=Z,19nm,0.6s						
DPC	**Dobruska-Polom**	**1.47**	**278**	*e*Pn	**Pn**	**01 25 55.3**	**-0.6**
	baz=96						
DPC	**Dobruska-Polom**	**1.47**	**278**	Pg	**Pb**	**01 25 55.9**	**-0.5**
DPC				*e*Sg	**Sg**	**01 26 14.6**	**-0.8**
	baz=96						
VRAC	**Vranov**	**1.56**	**237**	*e*Sg	**Sn**	**01 26 17.5**	**-0.6**
	3nm,0.5s,baz=56						
VYHS	**Vyhne**	**1.69**	**175**	*e*PN	**Pn**	**01 25 58.0**	**-0.8**
VYHS				*e*SN	**Sb**	**01 26 21.9**	**+0.2**
UPC	**Upice**	**1.69**	**282**	*e*SG	**Sg**	**01 26 22.1**	**-0.3**
UPC	**Upice**	**1.69**	**282**	Sg	**Sg**	**01 26 22.1**	**-0.3**
KRUC	**Moravsky**	**1.81**	**233**	*e*Pn	**Pn**	**01 26 00.4**	**-0.2**
	baz=52						
KRUC				*e*Sg	**Sb**	**01 26 24.9**	**-0.5**
	5.3nm,0.6s,baz=52						
CRVS	**Cervenica-Dubn**	**2.26**	**123**	*e*PN	**Pb**	**01 26 09.6**	**-0.1**
CRVS				*e*SN	**Sn**	**01 26 35.8**	**+0.6**
CRVS	**Cervenica-Dubn**	**2.26**	**123**	*e*Pn	**Pb**	**01 26 09.6**	**-0.1**
CRVS				*e*Sn	**Sn**	**01 26 35.8**	**+0.6**
PVCC	**Panska Ves**	**2.61**	**279**	*e*SG	**Sg**	**01 26 50.7**	**-1.1**
	comp=Z,16nm,0.7s						
PVCC	**Panska Ves**	**2.61**	**279**	Sg	**Sg**	**01 26 50.7**	**-1.1**
	16nm,0.7s						
PRU	**Pruhonice**	**2.62**	**268**	*e*PG	**Pb**	**01 26 15.9**	**0.0**
PRU				*e*SG	**Sb**	**01 26 49.7**	**+1.1**
	comp=Z,4.2nm,0.5s						
PRU	**Pruhonice**	**2.62**	**268**	Pg	**Pb**	**01 26 15.9**	**0.0**
PRU				Sg	**Sb**	**01 26 49.7**	**+1.1**
	4.2nm,0.5s						
KOLS	**Kolonicke sedl**	**2.69**	**116**	*e*PN	**Pn**	**01 26 13.1**	**+0.4**
KOLS				*e*PG	**Pg**	**01 26 20.8**	**+1.1**
KOLS				*e*SN	**Sn**	**01 26 47.0**	**+1.0**
KOLS	**Kolonicke sedl**	**2.69**	**116**	*e*Pn	**Pn**	**01 26 13.1**	**+0.4**
BRG	**Berggiesshubel**	**3.05**	**285**	SG	**Sg**	**01 27 05.6**	**-0.6**
	3.3nm,0.5s						
BRG				PG		02 18 56.2	
BRG				SG		02 19 16.8	
	6.3nm,0.2s						
KHC	**Kasperske Hory**	**3.42**	**254**	*e*PG	**Pg**	**01 26 34.0**	**+0.3**
KHC				*e*SG	**Sg**	**01 27 17.1**	**-1.0**
	comp=Z,7.0nm,0.5s						
KHC	**Kasperske Hory**	**3.42**	**254**	Pg	**Pg**	**01 26 34.0**	**+0.3**
KHC				Sg	**Sg**	**01 27 17.1**	**-1.0**
	7.0nm,0.5s						
CLL	**Collm**	**3.73**	**290**	*e*Sn	Sn	01 27 04.0	-7.6
CLL				*e*		01 27 22.0	
CLL				*e*Sg	**Sg**	**01 27 33.0**	**+5.0**
	comp=Z,14nm,1.4s						

CSEM ***17*** *01:26:48.8,34°.86N×23°.15E,h29km,MD3.5,After ATH*

ATH 17 01:26:48.8,34°.86N±23°.15E,h29km±6km,MD3.5/10, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.77**	**91**	*e*PN	Pn	01 27 04.6	+0.9
GVD				*e*SN	Sn	01 27 15.7	+1.3
GVD	**Gavdhos**	**0.77**	**91**	*e*Pn	Pn	01 27 04.6	+0.9
GVD				*e*Sn	Sn	01 27 15.7	+1.3
KARN	**Karanos**	**0.83**	**49**	*e*PN	Pn	01 27 04.6	0.0
KARN				*e*SN	Sn	01 27 17.6	+1.7
KARN	**Karanos**	**0.83**	**49**	*e*Pn	Pn	01 27 04.6	0.0
KARN				*e*Sn	Sn	01 27 17.6	+1.7
VAM	**Vamos**	**1.02**	**57**	*e*PB	Pn	01 27 07.3	+0.1
VAM	**Vamos**	**1.02**	**57**	*e*Pb	Pn	01 27 07.3	+0.1
KYTH	**Kithira**	**1.42**	**356**	*e*PB	Pb	01 27 14.2	-0.5
KYTH	**Kithira**	**1.42**	**356**	*e*Pb	Pb	01 27 14.2	-0.5
IDI	**Anoyia**	**1.49**	**73**	*e*PB	Pn	01 27 14.6	+0.9
IDI	**Anoyia**	**1.49**	**73**	*e*Pb	Pn	01 27 14.6	+0.9
VLI	**Veliai**	**1.86**	**355**	*e*PB	Pb	01 27 21.7	-0.5
VLI	**Veliai**	**1.86**	**355**	*e*Pb	Pb	01 27 21.7	-0.5
LAST	**Lasithi**	**1.94**	**80**	*e*PB	Pb	01 27 21.9	-1.6
LAST	**Lasithi**	**1.94**	**80**	*e*Pb	Pb	01 27 21.9	-1.6
DYR	**Agios Nikonas**	**2.01**	**341**	*e*PB	Pb	01 27 23.7	-1.0
DYR	**Agios Nikonas**	**2.01**	**341**	*e*Pb	Pb	01 27 23.7	-1.0
DID	**Didima**	**2.64**	**1**	*e*PN	Pn	01 27 29.9	+0.4
DID	**Didima**	**2.64**	**1**	*e*Pn	Pn	01 27 29.9	+0.4
AMT	**Artemida-Makis**	**2.91**	**337**	*e*PN	Pn	01 27 36.6	+3.4
AMT	**Artemida-Makis**	**2.91**	**337**	*e*Pn	Pn	01 27 36.6	+3.4

ISCJB ***17*** *01:29:44.9±0.8,14°.07N±0°.08×91°.46W±0°.06,h105km±7km, mb3.4/2,Error ellipse: s-maj=15.8km s-min=6.6km az=32.8*
CASC ***17*** *01:29:44.7±1.8,14°.13N×91°.46W,h101km±11km,MD3.6, ML4.0*
IDC ***17*** *01:29:47.1±1.9,14°.27N×91°.28W,h83km±18km,mb3.0/2, mb1 3.5/5,mb1mx3.2/24,mbtmp3.1/5,Error ellipse: s-maj=25.5km s-min=12.8km az=33.0*

ISC 17 01:29:47.1±1.0,14°.18N±0°.08×91°.40W±0°.06,h96km±8km, n22,σ1s34/29,Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.27**	**301**	*e*P	**Pn**	**01 29 59.4**	**-1.7**
FUG	**Fuego 3**	**0.60**	**64**	*e*P	**Pn**	**01 30 01.7**	**-1.8**
PCG	**Pacaya**	**0.80**	**75**	*e*P	**Pn**	**01 30 04.3**	**-1.1**
PCG				*e*S	**Sn**	**01 30 20.1**	**+1.1**
IXG	**Ixpaco**	**0.92**	**90**	*e*P	**Pn**	**01 30 05.6**	**-0.9**
IXG				*e*S	**Sn**	**01 30 23.1**	**+2.0**
NBG	**Las Nubes**	**1.10**	**68**	*e*P	**Pn**	**01 30 08.2**	**-0.5**
NBG				*e*S	**Sn**	**01 30 26.5**	**+1.7**
RTR	**El Retiro**	**1.73**	**99**	*e*P	**Pn**	**01 30 15.2**	**-1.0**
SBLS	**San Blas**	**1.76**	**101**	*e*P	**Pn**	**01 30 15.6**	**-1.0**
SBLS				*e*S	**Sn**	**01 30 38.4**	**-0.7**
SNJE	**San Jose**	**1.77**	**100**	*e*P	**Pn**	**01 30 15.8**	**-1.0**
MRL	**Marmol**	**1.87**	**62**	*e*P	**Pn**	**01 30 17.9**	**-0.1**
MRL				*e*S	**Sn**	**01 30 42.2**	**+0.5**
MTO2	**Montecristo 2**	**1.99**	**83**	*e*P	**Pn**	**01 30 18.0**	**-1.6**
BOQS	**Boqueron**	**2.10**	**102**	*e*P	**Pn**	**01 30 20.2**	**-0.9**
SNET	**Serv Nac Est T**	**2.16**	**103**	AML	AML	01 30 53.6	
	comp=Z,1μm,0.3s						
LFU	**La Fuente**	**2.26**	**101**	*e*P	**Pn**	**01 30 22.1**	**-0.9**
LFRS	**El Faro**	**2.34**	**103**	*e*P	**Pn**	**01 30 23.4**	**-0.6**
SNVI	**San Vicente**	**2.55**	**103**	*e*P	**Pn**	**01 30 26.6**	**-0.3**
CMIG	**Matias Romero**	**4.43**	**311**	P	**Pn**	**01 30 51.9**	**-0.2**
	comp=Z,2.8nm,0.3s,baz=125,slow=9.3,SNR=26						
CMIG				S	**Sn**	**01 31 42.8**	**+0.2**
	comp=Z,3.7nm,0.3s,baz=75,slow=22,SNR=6.7						
TEIG	**Tepich**	**6.71**	**26**	P	**Pn**	**01 31 22.8**	**-0.2**
	comp=Z,16nm,0.3s,baz=336,slow=0.9,SNR=92						
TEIG				S	**Sn**	**01 32 35.0**	**-3.1**
	comp=Z,4.0nm,0.3s,baz=280,slow=23,SNR=3.7						
JTS	**JuntasAbangare**	**7.39**	**121**	P	**Pn**	**01 31 32.3**	**-0.1**
	comp=Z,1.6nm,0.3s,baz=306,slow=21,SNR=10						
JTS				S	**Sn**	**01 32 53.4**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=243,slow=11,SNR=1.9						
TXAR	**Lajitas Array**	**18.88**	**325**	P	**Pn**	**01 34 02.0**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=149,slow=9.5,SNR=4.7						
NVAR	**Mina Array Bea**	**33.90**	**320**	P	**P**	**01 36 23.9**	**+2.8**
	comp=Z,0.4nm,0.4s,baz=133,slow=9.7,SNR=5.1						
YKA	**Yellowknife Ar**	**50.99**	**346**	P	**P**	**01 38 38.1**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=144,slow=7.6,SNR=5.2						
CMAR	**Chiang Mai Arr**	**146.00**	**342**	PKPbc	**PKPab**	**01 49 16.9**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=336,slow=3.1,SNR=5.3						

IDC ***17*** *01:31:56.2±7.2,51°.16N×179°.10W,h0km,mb3.2/4, mb1 3.7/5,mb1mx3.4/30,mbtmp3.5/5,ML4.1/1,Error ellipse: s-maj=118.0km s-min=79.6km az=71.0*
NEIC ***17*** *01:32:03.3,51°.12N×178°.54W,h2km,ML3.3(AEIC),After AEIC.*

ISC 17 01:32:02.5±1.8,51°.1N±0°.2×178°.56W±0°.05,h23km,n19, σ1s51/19,mb3.2/4,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CERAA	**Semis' Rag'd T**	**1.37**	**308**	P	**Pn**	**01 32 27.2**	**+0.9**
AMKA	**Amchitka**	**1.38**	**283**	P	**Pn**	**01 32 27.5**	**+1.2**
AMKA				S	**Sb**	**01 32 46.1**	**+1.5**
CEPE	**Semis' Perret**	**1.42**	**309**	P	**Pn**	**01 32 27.7**	**+

BCIP	**Isla Barro Col**	**81.04**	**307**	*e*P	**P**	**01 45 42.0**	**+0.5**
	91nm,1.4s						
LOHW	**Long Hollow**	**123.97**	**299**	*e*PKPdf	**PKPdf**	**01 52 24.9**	**+0.6**
FINES	**FINESS Array B**	**128.34**	**29**	PKP	**PKPdf**	**01 52 32.2**	**+0.5**
FINES	**FINESS Array B**	**128.34**	**29**	PKP	**PKPdf**	**01 52 32.2**	**+0.5**
	1.2nm,0.7s,baz=103,slow=3.0,SNR=4.9						
YKA	**Yellowknife Ar**	**139.58**	**314**	PKP	**PKPdf**	**01 52 52.9**	**+0.1**
YKA	**Yellowknife Ar**	**139.58**	**314**	PKP	**PKPdf**	**01 52 52.8**	**+0.1**
	0.2nm,0.5s,baz=128,slow=2.4,SNR=13						
RES	**Resolute Bay**	**142.15**	**336**	*e*PKPdf	**PKPdf**	**01 52 57.2**	**+0.2**
ZALV	**Zalesovo Beam**	**144.06**	**69**	PKP	**PKPdf**	**01 53 02.2**	**+1.2**
ZALV	**Zalesovo Beam**	**144.06**	**69**	PKP	**PKPdf**	**01 53 02.2**	**+1.2**
	0.5nm,0.5s,baz=246,slow=2.9,SNR=3.6						
INK	**Inuvik**	**149.32**	**316**	PKPbc	**PKPbc**	**01 53 13.4**	**-0.4**
INK	**Inuvik**	**149.32**	**316**	PKPbc	**PKPbc**	**01 53 13.4**	**-0.4**
	1.9nm,0.7s,baz=61,slow=2.9,SNR=12						
SONM	**Songino Array**	**150.54**	**94**	PKPab	**PKPab**	**01 53 25.3**	**+0.9**
SONM	**Songino Array**	**150.54**	**94**	PKPab	**PKPab**	**01 53 25.3**	**+0.9**
	1.1nm,0.6s,baz=298,slow=3.2,SNR=4.1						
ILAR	**Eielson Array**	**153.08**	**305**	PKPbc	**PKPbc**	**01 53 22.7**	**0.0**
ILAR	**Eielson Array**	**153.08**	**305**	PKPbc	**PKPbc**	**01 53 22.7**	**0.0**
	0.7nm,0.6s,baz=314,slow=1.3,SNR=18						
MCK	**McKinley**	**153.57**	**302**	*e*PKPbc	**PKPbc**	**01 53 24.2**	**+0.4**

WEL 17 02:06:59.5±0.4, 39°.09S×174°.86E, h222km±3km, ML3.8/8, 8C-8D, Error ellipse: s-maj=2.3km s-min=2.2km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRZ	**Vera Road**	**0.09**	**246**	PN	Pn	02 07 27.6	-0.7
RAEZ	**Rainy Point**	**0.41**	**241**	⇓PN	Pn	02 07 28.8	-0.1
PKVZ	**Pokaka**	**0.43**	**118**	PN	Pn	02 07 28.8	-0.2
PKVZ				SN	S	02 07 51.4	-0.6
TWVZ	**Taurewa**	**0.45**	**88**	PN	Pn	02 07 28.6	-0.5
WPVZ	**Whakapapa**	**0.54**	**103**	PN	Pn	02 07 29.3	-0.1
MTVZ	**Mangateitei**	**0.56**	**122**	PN	Pn	02 07 29.3	-0.1
FWVZ	**Far West T-bar**	**0.56**	**107**	PN	Pn	02 07 29.4	-0.2
WTVZ	**West Tongariro**	**0.57**	**93**	PN	Pn	02 07 29.3	-0.2
WTVZ				SN	S	02 07 51.8	-1.1
TRVZ	**Turoa**	**0.57**	**112**	PN	Pn	02 07 29.5	-0.1
HIZ	**Hauiti**	**0.57**	**359**	⇑PN	Pn	02 07 28.5	-0.9
HIZ				SN	S	02 07 51.2	-1.6
NGZ	**Ngauruhoe**	**0.58**	**99**	PN	Pn	02 07 29.4	-0.2
KRVZ	**Karewarewa**	**0.61**	**91**	PN	Pn	02 07 29.4	-0.3
WNVZ	**Wahianoa**	**0.62**	**113**	PN	Pn	02 07 29.6	+0.1
NEZ	**North Egmont**	**0.62**	**253**	PN	Pn	02 07 54.9	+0.2
OTVZ	**Oturere**	**0.63**	**97**	PN	Pn	02 07 29.8	0.0
DFE	**Dawson Falls**	**0.64**	**248**	PN	Pn	02 07 29.6	-0.1
TUVZ	**Tukino**	**0.64**	**107**	PN	Pn	02 07 29.8	-0.1
WAZ	**Wanganui**	**0.67**	**172**	⇑PN	Pn	02 07 30.2	+0.4
WAZ				SN	S	02 07 53.1	-0.5
PKE	**Pukeiti**	**0.69**	**261**	PN	Pn	02 07 29.8	-0.1
MOVZ	**Moawhango**	**0.76**	**115**	PN	Pn	02 07 29.9	-0.4
MOVZ				SN	S	02 07 52.1	-2.2
NWEZ	**Newall Road**	**0.80**	**256**	PN	Pn	02 07 29.6	-0.8
BHHZ	**Black Hill Sta**	**1.01**	**114**	PN	Pn	02 07 31.2	-0.5
BKZ	**Black Stump Fm**	**1.27**	**94**	⇓PN	Pn	02 07 32.6	-0.8
BKZ				*e*SN	S	02 07 57.5	-2.3
TSZ	**Takapari Road**	**1.29**	**139**	PN	Pn	02 07 33.7	+0.2
PNHZ	**Pukenui**	**1.32**	**129**	PN	Pn	02 07 33.9	+0.1
MCHZ	**McNeill Hill**	**1.47**	**105**	PN	Pn	02 07 35.2	+0.3
NMHZ	**Naumai**	**1.51**	**91**	⇓PN	Pn	02 07 35.4	0.0
WPHZ	**Waipukurau**	**1.56**	**129**	PN	Pn	02 07 35.8	+0.2
DVHZ	**Dannevirke**	**1.57**	**141**	PN	Pn	02 07 35.7	0.0
MRZ	**Mangatainoka R**	**1.67**	**161**	PN	Pn	02 07 36.1	-0.4
MRZ				SN	S	02 08 03.9	-1.6
KAHZ	**Kahuranaki**	**1.71**	**115**	PN	Pn	02 07 37.1	+0.1
OGWZ	**Otaki Gorge**	**1.74**	**172**	PN	Pn	02 07 37.1	-0.1
KIW	**Kapiti Island**	**1.77**	**179**	PN	Pn	02 07 37.1	-0.3
CKHZ	**Cape Kidnapper**	**1.81**	**109**	PN	Pn	02 07 37.9	+0.1
PXZ	**Pawanui**	**1.81**	**122**	⇓PN	Pn	02 07 37.7	-0.1
DUWZ	**D'Urville Isla**	**1.86**	**203**	PN	Pn	02 07 37.8	-0.5
TIWZ	**Tintock**	**1.86**	**155**	PN	Pn	02 07 38.0	-0.3
HOWZ	**Holdsworth Sta**	**1.88**	**165**	⇑PN	Pn	02 07 37.9	-0.6
BFZ	**Birch Farm**	**1.91**	**147**	PN	Pn	02 07 38.3	-0.5
URZ	**Urewera**	**1.94**	**66**	⇓PN	Pn	02 07 36.9	-2.2
URZ				SN	S	02 08 04.5	-5.3
CAW	**Cannon Point**	**2.02**	**176**	⇑PN	Pn	02 07 39.4	-0.5
MTW	**Mount Morrison**	**2.12**	**167**	PN	Pn	02 07 40.1	-0.8
TMWZ	**Te Maipa**	**2.17**	**159**	PN	Pn	02 07 40.6	-0.7
TCW	**Tory Channel**	**2.17**	**192**	PN	Pn	02 07 40.9	-0.3
KNZ	**Kokohu**	**2.19**	**89**	PN	Pn	02 07 40.5	-1.0
MWZ	**Matawai**	**2.22**	**71**	⇓PN	Pn	02 07 40.0	-1.9
SNZO	**South Karori**	**2.22**	**183**	PN	Pn	02 07 41.1	-0.7
BHW	**Baring Head**	**2.32**	**180**	PN	Pn	02 07 41.9	-0.9
PAWZ	**Paruwai Farm**	**2.33**	**170**	⇑PN	Pn	02 07 42.2	-0.8
MSWZ	**Moikau Station**	**2.34**	**173**	⇑PN	Pn	02 07 42.2	-0.8
PRGZ	**Paritu Road**	**2.36**	**87**	PN	Pn	02 07 42.3	-1.0
MHGZ	**Mahia Peninsul**	**2.37**	**93**	PN	Pn	02 07 42.8	-0.6
TRWZ	**Traveller**	**2.39**	**165**	PN	Pn	02 07 42.9	-0.7
NNZ	**Nelson**	**2.41**	**208**	⇑PN	Pn	02 07 42.8	-1.0
TUWZ	**Tuamarina**	**2.44**	**196**	PN	Pn	02 07 43.5	-0.6
QRZ	**Quartz Range**	**2.50**	**225**	PN	Pn	02 07 43.0	-1.7
PLWZ	**Palliser**	**2.50**	**173**	⇑PN	Pn	02 07 43.7	-1.1
CNGZ	**Carnagh Statio**	**2.68**	**78**	PN	Pn	02 07 45.6	-1.2
BSWZ	**Blackbirch Sta**	**2.73**	**196**	PN	Pn	02 07 46.8	-0.4
PUZ	**Puketiti**	**2.85**	**70**	PN	Pn	02 07 46.3	-2.3
THZ	**Tophouse**	**3.06**	**219**	⇓PN	Pn	02 07 49.6	-1.5
KHZ	**Kahutara**	**3.47**	**196**	PN	Pn	02 07 54.4	-1.3
DSZ	**Denniston Nort**	**3.54**	**220**	⇓PN	Pn	02 07 54.3	-2.2
LTZ	**Lake Taylor**	**4.18**	**207**	PN	Pn	02 08 02.1	-2.2
MQZ	**McQueen's Vall**	**4.90**	**199**	PN	Pn	02 08 10.3	-2.9
MQZ				SN	S	02 09 05.7	-5.7
RPZ	**Rata Peaks**	**5.44**	**211**	PN	Pn	02 08 16.8	-3.1

IDC ***17*** *02:08:04.8±0.3, 19°.57S×70°.49W, h0km, mb5.4/27, mb1 5.5/28, mb1mx5.5/29, mbtmp5.4/28, ML5.4/1, MS5.8/38, Ms1 5.8/38, ms1mx5.7/41, Error ellipse: s-maj=14.8km s-min=10.5km az=74.0*

ISCJB ***17*** *02:08:07.3±0.7, 19°.45S±0°.02×70°.50W±0°.02, h22km±4km, mb5.7/332, MS5.8/235, Error ellipse: s-maj=5.0km s-min=2.7km az=43.0*

LDG ***17*** *02:08:08.5±0.5, 18°.96S×70°.00W, h10km, Mb5.7/45, Ms5.9/10, Error ellipse: s-maj=31.5km s-min=9.8km az=51.0*

BJI ***17*** *02:08:08.2, 19°.41S×71°.29W, h25km, mB6.0/29, Ms6.2/51, Ms7 6.1/51*

NEIC ***17*** *02:08:08.7±0.1, 19°.58S×70°.48W, h25km, mb5.8/232, ME5.6, MS5.8/148, MW6.1, MW6.0, ML6.0(GUC), ML5.8(ARE), Error ellipse: s-maj=4.1km s-min=2.6km az=54.0 Broadband fault plane solution: P waves. NP1: φs165.00000°, δ70.00000°, λ90.00000°. NP2: φs345.00000°, δ20.00000°, λ90.00000°. Principal axes: T Plg65.0000°, Azm75.0000°; N Plg0.0000°, Azm0.0000°; P Plg25.0000°, Azm255.0000°; Moment Tensor Solution. s122 Moment tensor: Scale 10¹⁸ Nm; Mrr1.04; Mθθ0.12; Mϕϕ-1.16; Mrθ0.26; Mϕϕ0.24; Mϕr-0.74; Best double couple: M₀1.40000×10¹⁸ NP1:φs357.00000°, δ28.00000°, λ102.00000°. NP2:φs164.00000°, δ63.00000°, λ84.00000°. Principal axes: T 1.2900, Plg71.0000°, Azm59.0000°; N 0.1600, Plg5.0000°, Azm166.0000°; P -1.4400, Plg17.0000°, Azm258.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [V] at Alto Hospicio, Cuya, Huara and Pisagua; [IV] at Arica, Camina, Pica, Pozo Almonte and Putre; [III] at Iquique. Also felt at Tocopilla. Felt [II] at Arequipa, Moquegua and Tacna, Peru.

GUC ***17*** *02:08:08.4±0.5, 19°.68S×70°.68W, h36km±2km, ML6.0*

MOS ***17*** *02:08:10.0±0.9, 19°.25S×70°.52W, h33km, mb6.0/112, MS5.8/72, Error ellipse: s-maj=7.8km s-min=5.1km az=85.6*

DJA ***17*** *02:08:10.8±2.2, 20°.5S±40°×7°.0W±3°.6, h10km, M5.9/9, mB6.5/6, mb5.5/9, Mw(mB)6.2/6*

BGS ***17*** *02:08:11.5±3.3, 19°.22S×69°.89W, h33km, mb5.4, MS5.9*

GCMT ***17*** *02:08:15.0±0.1, 19°.72S×71°.10W, h32km, MW6.1, Moment Tensor Solution. s103,c236; s82,c116; Moment tensor: Scale 10¹⁸Nm; Mrr1.09±.01; Mθθ0.10±.01; Mϕϕ-1.20±.01; Mrθ0.39±.01; Mϕϕ0.31±.01; Mϕr-1.03±.02; Best double couple: M₀1.60000×10¹⁸ NP1:φs355.00000°, δ24.00000°, λ102.00000°. NP2:φs161.00000°, δ67.00000°, λ85.00000°. Principal axes: T 1.5300, Plg68.0000°,*

2009 APR

Azm61.0000°; N 0.1600, Plg5.0000°, Azm164.0000°; P -1.7000, Plg21.0000°, Azm256.0000°; Data Used: II IU CN IC G. Surface waves: sta=106, comp=232, per= 50.

SZGRF ***17*** *02:08:26.5, 19°.07S×65°.27W, h33km, mb5.8, MS5.9, Southern Bolivia*

ISC 17 02:08:09.2±0.5, 19°.58S±0°.02×70°.50W±0°.03, h29km±3km, n1602, σ1942/1687, mb5.8/321, MS5.9/236, 357C-233D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.36**	**93**	*i* P	**Pn**	**02 08 18.8**	**+0.1**
PSGC				*i* S	**Sn**	**02 08 27.0**	**+2.1**
PSGC	**Pisagua**	**0.36**	**93**	*i* P	**Pn**	**02 08 18.8**	**+0.1**
PSGC				*i* S	**Sn**	**02 08 27.0**	**+2.1**
PB11	**Plate Boundary**	**0.82**	**103**	⇓*i*P	**Pb**	**02 08 26.2**	**+1.2**
PB11				*e*S	**Sn**	**02 08 39.4**	**+3.1**
PB11				AML	AML	02 08 46.6	
	comp=E,1175μm,0.8s						
HMBC	**Humberston**	**0.90**	**140**	⇓*e*P	**Pn**	**02 08 25.7**	**-0.4**
HMBC				*e*S	**Sn**	**02 08 38.9**	**+0.6**
HMBC	**Humberston**	**0.90**	**140**	⇓*e*P	**Pn**	**02 08 25.7**	**-0.4**
HMBC				*e*S	**Sn**	**02 08 38.9**	**+0.6**
HMBC				AML	AML	02 08 42.6	
	comp=E,602μm,0.4s						
MNMC	**Miæe Miæ**	**0.97**	**63**	*e*P	**Pb**	**02 08 29.2**	**+1.6**
MNMC				*i* S	**Sb**	**02 08 45.0**	**+4.9**
MNMC				AML	AML	02 08 50.1	
	comp=N,279μm,0.3s						
ARCH	**Arica**	**1.10**	**10**	*e*P	**Pb**	**02 08 29.9**	**+0.2**
ARCH				*e*S	**Sb**	**02 08 46.5**	**+2.8**
ARCH	**Arica**	**1.10**	**10**	*e*P	**Pb**	**02 08 29.9**	**+0.2**
ARCH				*e*S	**Sb**	**02 08 46.5**	**+2.8**
ARCH				AML	AML	02 08 51.8	
	comp=N,822μm,0.5s						
PB01	**Plate Boundary**	**1.74**	**147**	*e*P	**Pn**	**02 08 38.1**	**+0.5**
PB01				*e*S	**Sb**	**02 09 01.3**	**-0.8**
PB01				AML	AML	02 09 09.3	
	comp=N,135μm,0.5s						
PB09	**Plate Boundary**	**2.50**	**152**	*e*P	**Pn**	**02 08 49.1**	**+1.0**
PB09				*e*S	**Sn**	**02 09 20.1**	**+2.2**
PB04	**Plate Boundary**	**2.83**	**161**	AML	AML	02 09 37.1	
	comp=E,76μm,0.7s						
PB06	**Plate Boundary**	**3.23**	**165**	AML	AML	02 09 51.9	
	comp=N,40μm,0.8s						
ARE	**Arequipa**	**3.24**	**343**	*e*P	**Pn**	**02 08 57.0**	**-1.5**
ARE				S	**Sn**	**02 09 38.0**	**+1.7**
ARE	**Arequipa**	**3.24**	**343**	*e*P	**Pn**	**02 08 57.0**	**-1.5**
ARE				S	**Sn**	**02 09 38.0**	**+1.7**
LVC	**Limon Verde**	**3.36**	**154**	*e*Pn	**Pn**	**02 09 00.5**	**+0.4**
LVC				*e*Sn	**Sn**	**02 09 35.6**	**-3.6**
LVC				*e*Sg	**Sb**	**02 09 49.8**	**+0.9**
LPAZ	**La Paz**	**3.98**	**35**	*e*Pn	Pn	02 09 14.3	+5.4
LPAZ				*e*Pg	Pb	02 09 30.9	+11
LPAZ	**La Paz**	**3.98**	**35**	Pn	Pn	02 09 14.3	+5.4
	comp=N,28nm,0.3s,baz=218,slow=6.2,SNR=297						
LPAZ				LR	LR	02 10 58.0	
	comp=N,199μm,18.6s,baz=217,slow=44						
LCO	**Las Campanas**	**9.39**	**181**	*e*Pn	**Pn**	**02 10 20.2**	**-2.7**
LCO				*e*Sn	**Sn**	**02 12 07.2**	**-0.5**
LCO				*e*Lg	Lg	02 12 40.7	
SIV	**San Ignacio**	**9.67**	**70**	Pn	**Pn**	**02 10 28.3**	**+1.7**
SIV	**San Ignacio**	**9.67**	**70**	Pn	**Pn**	**02 10 28.3**	**+1.7**
	comp=N,53nm,0.3s,baz=267,slow=11,SNR=217						
SIV				LR	LR	02 14 43.5	
	comp=N,119μm,19.3s,slow=41						
NNA	**Nana**	**9.71**	**320**	*e*Pn	**Pn**	**02 10 27.1**	**0.0**
NNA				Sn	**Sn**	**02 12 15.9**	**+0.6**
NNA	**Nana**	**9.71**	**320**	Pn	**Pn**	**02 10 27.0**	**-0.1**
	comp=N,418nm,0.4s,SNR=5.8						
NNA	**Nana**	**9.71**	**320**	Pn	**Pn**	**02 10 29.7**	**+2.6**
	comp=N,5.1nm,0.3s,baz=146,slow=16,SNR=9.0						
NNA				Sn	**Sn**	**02 12 15.9**	**+0.6**
	comp=N,20nm,0.3s,baz=222,slow=20,SNR=3.8						
NNA				LR	LR	02 14 30.9	
	comp=N,44μm,18.2s,baz=170,slow=40						
CFAA	**Coronel Fontan**	**12.15**	**171**	Pn	**Pn**	**02 10 57.5**	**-2.9**
CFAA				Sn	**Sn**	**02 13 17.9**	**+2.9**
CFAA	**Coronel Fontan**	**12.15**	**171**	Pn	**Pn**	**02 10 57.5**	**-2.9**
	comp=N,0.1nm,0.3s,baz=346,slow=14,SNR=29						
CFAA				Sn	**Sn**	**02 13 17.9**	**+2.9**
	comp=N,0.8nm,0.3s,baz=331,slow=23,SNR=3.0						
CFAA				LR	LR	02 15 50.7	
	comp=N,7μm,20.7s,baz=338,slow=38						
SAML	**Samuel**	**12.72**	**35**	*e*Pn	**Pn**	**02 11 07.6**	**-0.8**
	comp=N,11nm,0.8s						
SAML				*e*Sn	**Sn**	**02 13 25.9**	**-3.3**
CPUP	**Villa Florida**	**13.86**	**121**	Pn	**Pn**	**02 11 22.3**	**-1.6**
CPUP	**Villa Florida**	**13.86**	**121**	Pn	**Pn**	**02 11 22.3**	**-1.6**
	comp=N,4.5nm,0.3s,baz=285,slow=12,SNR=40						
ATAH	**Atahualpa**	**14.55**	**327**	Pn	**P**	**02 11 37.8**	**-2.2**
ATAH	**Atahualpa**	**14.55**	**327**	Pn	**P**	**02 11 37.8**	**-2.2**
	comp=N,0.3nm,0.3s,baz=148,slow=13,SNR=6.9						
ATAH				LR	LR	02 17 44.4	
	comp=N,41μm,19.3s,baz=356,slow=40						
LPA	**La Plata**	**18.89**	**146**	*e*P	**P**	**02 12 26.0**	**-1.5**
LPA	**La Plata**	**18.89**	**146**	PN	**Pn**	**02 12 32.0**	**+3.8**
LPA				PP	**PnPn**	**02 12 40.0**	**-0.9**
LPA				PPP	PPP	02 12 45.0	
LPA	**La Plata**	**18.89**	**146**	SN	**S**	**02 16 02.0**	**+1.5**
LPA	**La Plata**	**18.89**	**146**	S	S	02 16 12.0	+11
LPA				PS	pS	02 16 23.0	+2.0
LPA				PCP	**PcP**	**02 16 51.0**	**-2.2**
TRQA	**Tornquist**	**19.85**	**160**	*e*P	**P**	**02 12 37.1**	**-0.9**
	comp=N,129nm,1.0s						
TRQA				*e*S	**S**	**02 16 18.4**	**-1.6**
PLCA	**Paso Flores**	**21.08**	**180**	*e*P	**P**	**02 12 51.3**	**0.0**
	comp=N,338nm,1.0s						
PLCA	**Paso Flores**	**21.08**	**180**	P	**P**	**02 12 51.1**	**-0.3**
	comp=N,119nm,0.9s,baz=360,slow=12,SNR=109						
PLCA				LR	LR	02 20 20.3	
	comp=N,18μm,21.6s,baz=0.0,slow=35						
OTAV	**Otavalo**	**21.18**	**337**	*e*P	**P**	**02 12 55.4**	**+2.3**
	comp=N,85nm,1.1s						
OTAV				LR	LR		
	comp=Z,58μm,20.0s						
BDFB	**Brasilia**	**21.78**	**83**	P	**P**	**02 12 58.5**	**-0.6**
BDFB	**Brasilia**	**21.78**	**83**	P	**P**	**02 12 58.5**	**-0.6**
	comp=Z,52nm,0.6s,baz=244,slow=14,SNR=47						
BDFB				LR	LR	02 23 03.7	
	comp=Z,51μm,19.1s,baz=261,slow=41						
SPB	**Sao Paulo**	**21.81**	**105**	*e*P	**P**	**02 12 58.0**	**-1.3**
	comp=Z,265nm,1.0s						
SPB				*e*S	**S**	**02 16 55.1**	**-4.0**
SPB				LR	LR		
	comp=Z,43μm,21.0s						
ROSC	**El Rosal**	**24.57**	**351**	*e*P	**P**	**02 13 28.1**	**+0.8**
ROSC	**El Rosal**	**24.57**	**351**	P	**P**	**02 13 28.3**	**+0.9**
	comp=Z,108nm,0.8s,baz=176,slow=2.3,SNR=34						
ROSC				LR	LR	02 23 58.7	
	comp=Z,30μm,21.7s,baz=270,slow=39						
CAM4	**Nova Friburgo**	**26.22**	**101**	⇓*i*P	P	02 13 36.3	-5.8
CAM4				*i*		02 13 41.7	
CAM4				*i*		02 13 51.6	
CAM4				*i*		02 13 54.1	
CAM4				*i*		02 13 55.9	
CAM4				*i*		02 14 02.1	
CAM4				*i*		02 14 06.3	
CAM4				*i*		02 14 13.6	
CAM4				*i*		02 14 20.7	
CAM4				*i*		02 14 21.0	
CAM4				*i*		02 14 33.0	
CAM4				*i*		02 14 41.8	
CAM4				*i*		02 14 53.1	
CAM4				*i*		02 15 06.0	
PAYG	**Puerto Ayora**	**26.99**	**312**	PFAKE		02 14 00.0	+11
PAYG				LR	LR		
	comp=Z,6μm,19.0s						
SDV	**Santo Domingo**	**28.29**	**360**	*e*P	**P**	**02 14 00.1**	**-0.5**
	comp=Z,160nm,1.0s						
SDV				LR	LR		
	comp=Z,1.0nm,19.0s						
BCIP	**Isla Barro Col**	**30.01**	**341**	*e*P	**P**	**02 14 15.3**	**-0.4**
	comp=Z,220nm,1.4s						
GRGR	**Grenville**	**32.70**	**16**	*e*P	**P**	**02 14 39.5**	**+0.1**
	comp=Z,1μm,0.9s						
GRGR				LR	LR		
	comp=Z,23μm,20.0s						
JTS	**JuntasAbangare**	**32.92**	**333**	*e*P	**P**	**02 14 42.6**	**+1.2**
	comp=Z,53nm,1.1s						
JTS				LR	LR		
	comp=Z,23μm,22.0s						
JTS	**JuntasAbangare**	**32.92**	**333**	P	P	02 14 44.7	+3.3
	comp=Z,161nm,0.8s,SNR=6.5						
JTS	**JuntasAbangare**	**32.92**	**333**	P	**P**	**02 14 42.3**	**+0.9**
	comp=Z,13nm,0.7s,baz=145,slow=5.6,SNR=12						
JTS				LR	LR	02 27 51.9	
	comp=Z,19μm,20.7s,baz=160,slow=36						
EFI	**East Falkland**	**33.49**	**166**	*e*P	**P**	**02 14 45.2**	**-0.7**
EFI				*e*		02 17 26.8	
EFI				pmax	pmax		
	comp=Z,125nm,1.0s						
EFI				MLR	MLR		
	comp=Z,32μm,19.0s						
EFI	**East Falkland**	**33.49**	**166**	*e*P	**P**	**02 14 45.2**	**-0.7**
	comp=Z,125nm,1.0s						
EFI				*e*PcP	**PcP**	**02 17 26.8**	**+0.4**
EFI				LR	LR		
	comp=Z,32μm,19.0s						
EFI	**East Falkland**	**33.49**	**166**	P	**P**	**02 14 45.2**	**-0.7**
	comp=Z,714nm,1.1s,SNR=6.6						
BBGH	**Gun Hill**	**34.26**	**19**	PFAKE		02 15 00.0	+7.0
BBGH				LR	LR		
	comp=Z,44μm,21.0s						
USHA	**Ushuaia**	**35.23**	**178**	P	**P**	**02 15 00.3**	**-0.6**
USHA	**Ushuaia**	**35.23**	**178**	P	**P**	**02 15 00.3**	**-0.6**
	comp=Z,12nm,0.6s,baz=341,slow=5.1,SNR=21						
USHA				LR	LR	02 30 33.9	
	comp=Z,21μm,19.5s,baz=330,slow=38						
FDF	**Fort de France**	**35.32**	**16**	*e*P	**P**	**02 15 00.3**	**-1.8**
FDF				pmax	pmax		
	comp=Z,665nm,1.0s						
FDF				MLR	MLR		
	comp=Z,12μm,19.0s						
FDF	**Fort de France**	**35.32**	**16**	*e*P	**P**	**02 15 00.3**	**-1.8**
	comp=Z,665nm,1.0s						
FDF				LR	LR		
	comp=Z,12μm,19.0s						
FDF	**Fort de France**	**35.32**	**16**	*e*P	**P**	**02 15 00.5**	**-1.7**
RCBR	**Riachuelo**	**36.32**	**73**	*e*P	**P**	**02 15 12.4**	**+1.5**
	comp=Z,201nm,1.0s						
RCBR				LR	LR		
	comp=Z,35μm,21.0s						
RCBR	**Riachuelo**	**36.32**	**73**	P	**P**	**02 15 10.2**	**-0.7**
	comp=Z,124nm,1.0s,baz=238,slow=9.3,SNR=31						
RCBR				LR	LR	02 31 14.7	
	comp=Z,41μm,18.7s,baz=236,slow=38						
RPN	**Rapa Nui**	**36.32**	**251**	LR	LR	02 26 34.3	
	comp=Z,36μm,18.1s,baz=120,slow=30						
TGUH	**Tegucigalpa,Un**	**37.28**	**332**	*e*P	**P**	**02 15 20.5**	**+1.6**
	comp=Z,74nm,0.9s						
TGUH				LR	LR		
	comp=Z,10μm,19.0s						
CRPR	**Cabo Rojo, PR**	**37.50**	**5**	*e*P	**P**	**02 15 19.4**	**-1.3**
	comp=Z,396nm,1.1s						
CDVI	**St. Croix**	**37.52**	**9**	*e*P	**P**	**02 15 20.3**	**-0.6**
	comp=Z,214nm,1.0s						
OBIP	**Obispado Ponce**	**37.58**	**6**	*e*P	**P**	**02 15 20.7**	**-0.7**
	comp=Z,355nm,1.2s						
CELP	**Cerrillos**	**37.62**	**6**	*e*P	**P**	**02 15 20.7**	**-1.0**
CELP				*e*S	**S**	**02 21 10.6**	**+0.9**
CELP				*e*ScP	**ScP**	**02 21 25.2**	**+0.6**
LSP	**Las Mesas**	**37.67**	**5**	*e*P	**P**	**02 15 21.8**	**-0.4**
SJG	**San Juan**	**37.70**	**7**	*e*P	**P**	**02 15 20.4**	**-2.0**
	comp=Z,209nm,1.0s						
SJG				*e*S	**S**	**02 21 08.4**	**-2.5**
SJG	**San Juan**	**37.70**	**7**	P	**P**	**02 15 21.3**	**-1.1**
	comp=Z,157nm,0.9s,baz=211,slow=2.3,SNR=42						
SJG				S	**S**	**02 21 06.0**	**-4.9**
	comp=Z,44nm,1.1s,baz=264,slow=23,SNR=10						
SJG				LR	LR	02 31 53.5	
	comp=Z,13μm,21.2s,baz=205,slow=38						
MTP	**Monte Pirata**	**37.76**	**8**	*e*P	**P**	**02 15 20.5**	**-2.4**
	comp=Z,301nm,1.2s						
MTP				*e*S	**S**	**02 21 07.8**	**-4.0**
HUMP	**Col San Antoni**	**37.77**	**7**	*e*P	**P**	**02 15 21.9**	**-1.0**
LRS	**Lares**	**37.81**	**6**	*e*P	**P**	**02 15 22.2**	**-1.1**
AOPR	**Arecibo Observ**	**37.87**	**6**	*e*P	**P**	**02 15 23.5**	**-0.3**
CBYP	**Canovanas**	**37.89**	**7**	*e*P	**P**	**02 15 21.6**	**-2.5**
	comp=Z,182nm,0.8s						
CBYP				*e*S	**S**	**02 21 08.5**	**-5.5**
ANWB	**Willy Bob**	**37.99**	**14**	PFAKE		02 15 40.0	+15
ANWB				LR	LR		
	comp=Z,20μm,20.0s						
STVI	**Saint Thomas**	**38.09**	**9**	*e*P	**P**	**02 15 25.7**	**0.0**
	comp=Z,246nm,1.4s						
MTDJ	**Mount Denham**	**38.20**	**349**	*e*P	**P**	**02 15 28.1**	**+1.3**
	comp=Z,234nm,1.1s						
MTDJ				LR	LR		
	comp=

SWET Sewanee 56.43 345 eP P 02 17 46.6 -1.7
comp=Z,228nm,1.4s
631A Perdido Creek 56.69 328 ⇓P P 02 17 50.1 -0.1
baz=57,SNR=31
OXF Oxford 56.72 341 eP P 02 17 49.3 -1.0
OXF pmax pmax
comp=Z,210nm,1.1s
OXF MLR MLR
comp=Z,4µm,20.0s
OXF Oxford 56.72 341 eP P 02 17 49.3 -1.0
comp=Z,210nm,1.1s
OXF LR LR
comp=Z,4µm,20.0s
PLAL Pickwick Lake 56.77 343 PFAKE 02 18 00.0 +9.3
PLAL LR LR
comp=Z,5µm,20.0s
532A Rocksprings 56.96 330 ⇓P P 02 17 52.3 +0.1
baz=57,SNR=27
TZTN Tazewell 57.17 348 eP P 02 17 52.5 -1.0
comp=Z,89nm,1.3s
JCT Junction City 57.20 330 eP P 02 17 53.4 -0.5
JCT pmax pmax
comp=Z,42nm,0.9s
JCT MLR MLR
comp=Z,2µm,19.0s
JCT Junction City 57.20 330 eP P 02 17 53.4 -0.5
comp=Z,42nm,0.9s
JCT LR LR
comp=Z,2µm,19.0s
JCT Junction City 57.20 330 ⇓P P 02 17 53.4 -0.5
baz=58,SNR=12
BLA Blacksburg 57.26 351 eP P 02 17 55.1 +1.0
BLA pmax pmax
comp=Z,239nm,1.4s
BLA MLR MLR
comp=Z,10µm,20.0s
BLA Blacksburg 57.26 351 eP P 02 17 55.1 +1.0
comp=Z,239nm,1.4s
BLA LR LR
comp=Z,10µm,20.0s
531A Rocksprings 57.30 329 ⇑P P 02 17 54.6 0.0
baz=58,SNR=37
WHTX Lake Whitney 57.42 333 ⇑P P 02 17 55.0 -0.4
baz=58,SNR=25
SACV Santiago Islan 57.51 57 eP P 02 17 55.3 -1.0
comp=Z,167nm,1.0s
432A Menard 57.53 330 ⇓P P 02 17 56.0 -0.3
baz=58,SNR=25
530A J-C Ranch, Com 57.67 328 ⇓P P 02 17 57.2 -0.1
baz=58,SNR=27
431A Sonora 57.75 329 ⇑P P 02 17 56.7 -1.2
baz=58,SNR=35
WVT Waverly 57.78 343 eP P 02 17 55.5 -2.3
WVT pmax pmax
comp=Z,90nm,1.0s
WVT Waverly 57.78 343 eP P 02 17 55.5 -2.3
comp=Z,90nm,1.0s
CBN Corbin 57.84 354 eP P 02 17 58.6 +0.5
comp=Z,204nm,1.4s
CBN LR LR
comp=Z,7µm,22.0s
628A Black Gap, Mar 57.92 327 ⇓P P 02 17 58.7 -0.3
baz=58,SNR=56
332A Millersview 57.93 330 ⇓P P 02 17 58.9 -0.1
baz=58,SNR=40
332A ⇓S S 02 25 55.0 -2.4
baz=58
332A ⇓S S 02 25 55.0 -2.4
baz=58
332A ⇓S S 02 25 55.0 -2.4
baz=58
RFTA Plano 57.98 334 eP P 02 18 00.2 +1.0
HALT Halls 58.00 342 eP P 02 17 59.0 -0.3
HBAR Harrisburg 58.07 341 eP P 02 18 00.6 +0.8
529A Stev Forest Ra 58.09 328 ⇑P P 02 18 00.3 0.0
baz=58,SNR=48
MIAR Mount Ida 58.13 338 eP P 02 17 59.2 -1.1
MIAR pmax pmax
comp=Z,225nm,1.4s
MIAR MLR MLR
comp=Z,4µm,20.0s
MIAR Mount Ida 58.13 338 eP P 02 17 59.2 -1.1
comp=Z,225nm,1.4s
MIAR LR LR
comp=Z,4µm,20.0s
430A Baggett Ranch, 58.14 329 ⇓P P 02 18 00.3 -0.3
baz=58,SNR=26
627A Terlingua Ranc 58.16 326 ⇓P P 02 18 00.6 -0.2
baz=58
331A San Angelo 58.19 330 ⇓P P 02 18 00.2 -0.6
baz=58,SNR=31
TXAR Lajitas Array 58.21 326 P P 02 17 59.7 -1.4
TXAR P'P' 02 47 38.3
TXAR Lajitas Array 58.21 326 P P 02 17 59.7 -1.4
comp=Z,8.6nm,0.9s,baz=141,slow=6.4,SNR=36
TXAR LR LR 02 40 42.8
comp=Z,4µm,21.9s,baz=310,slow=34
TXAR PKPPKP P'P'df 02 47 38.3 -0.1
comp=Z,0.7nm,1.0s,baz=292,slow=3.9,SNR=4.1
GNAR Gosnell 58.25 341 eP P 02 18 00.9 -0.2
232A Coleman 58.30 331 ⇑P P 02 18 01.2 -0.5
baz=59,SNR=24
GLAT Glass 58.32 342 eP P 02 18 01.1 -0.5
429A Davenport Ranc 58.34 328 ⇑P P 02 18 01.5 -0.4
baz=59,SNR=35
528A Cox Ranch, San 58.41 327 ⇑P P 02 18 01.9 -0.7
baz=59,SNR=6.3
330A Mertzon 58.62 329 ⇑P P 02 18 03.3 -0.6
baz=59,SNR=12
626A Big Bend Ranch 58.63 326 ⇑P P 02 18 04.2 +0.2
baz=59,SNR=53
231A Bronte 58.66 330 ⇓P P 02 18 03.5 -0.6
baz=59,SNR=10.0
428A Kincaid Ranch, 58.81 328 ⇓P P 02 18 05.4 +0.1
baz=59,SNR=9.8
PARMO Parma 58.82 342 eP P 02 18 04.4 -0.7
527A Woodward Ranch 58.83 326 ⇑P P 02 18 04.9 -0.6
baz=59,SNR=27
ABTX Abilene, Hawle 58.92 331 ⇓P P 02 18 05.4 -0.6
baz=59,SNR=21
SDMD Soldier's Deli 58.98 354 eP P 02 18 06.5 +0.3
comp=Z,94nm,1.1s
230A Sterling City 58.99 330 ⇑P P 02 18 05.9 -0.5
baz=59,SNR=7.2
526A Mary Lane Ranc 59.01 326 ⇓P P 02 18 06.5 -0.2
baz=59,SNR=30
329A Wagon Wheel Ra 59.08 329 ⇓P P 02 18 06.9 -0.2
baz=59,SNR=24
427A Hayter Ranch, 59.28 327 ⇑P P 02 18 08.9 +0.4
baz=60,SNR=14
131A Roby 59.30 331 ⇓P P 02 18 08.5 -0.1
baz=60,SNR=13
WCI Wyandotte Cave 59.39 346 eP P 02 18 06.8 -2.2
WCI pmax pmax
comp=Z,110nm,1.1s
WCI Wyandotte Cave 59.39 346 eP P 02 18 06.8 -2.2
comp=Z,110nm,1.1s
229A Bryant Ranch, 59.39 329 ⇑P P 02 18 08.6 -0.7
baz=60,SNR=6.0
328A Wristen Ranch, 59.41 328 ⇑P P 02 18 08.7 -0.7
baz=60,SNR=28
Z32A Haskell 59.42 332 ⇓P P 02 18 09.4 0.0
baz=60,SNR=17
426A McDonald Obser 59.46 326 ⇓P P 02 18 09.9 0.0
baz=60,SNR=19
130A Snyder 59.51 330 ⇓P P 02 18 09.5 -0.5
baz=60,SNR=18
RKT Rikitea 59.72 254 eP P 02 18 14.0 +2.3
RKT eS S 02 26 22.4 +1.3
comp=Z,64nm,1.2s
RKT eLR LR 02 35 53.8
comp=Z,29µm,24.5s
comp=Z,13µm,29.8s,baz=96
Z31A Sharp Cattle R 59.73 331 ⇓P P 02 18 10.9 -0.7
baz=60,SNR=40
327A Balmorhea Ranc 59.74 327 ⇑P P 02 18 11.7 +0.1
baz=60
228A UT Block 9, Go 59.90 329 ⇓P P 02 18 12.1 -0.7
baz=60,SNR=16
326A Caldwell Ranch 59.95 327 ⇓P P 02 18 13.5 +0.4
baz=60,SNR=24
129A Stewart Farms, 59.96 330 ⇓P P 02 18 13.3 +0.1
baz=60,SNR=10
Y32A R-V Farms, Ver 60.00 332 ⇓P P 02 18 13.6 +0.3
baz=60,SNR=16
425A Indio Mountain 60.05 326 ⇑P P 02 18 13.6 -0.3
baz=60,SNR=57
BRNJ Basking Ridge 60.07 356 eP P 02 18 14.9 +1.3

CPNY Central Park 60.15 357 eP P 02 18 14.4 +0.3
comp=Z,81nm,1.1s
Z30A Sanderson Ranc 60.16 331 ⇑P P 02 18 14.1 -0.3
baz=60,SNR=20
227A Bennet, Jal 60.16 328 ⇓P P 02 18 14.8 +0.3
baz=60,SNR=8.6
TUL1 Tulsa 60.16 336 ⇑P P 02 18 13.9 -0.5
baz=60,SNR=45
128A Castleberry Fa 60.25 329 ⇑P P 02 18 15.0 -0.2
baz=60,SNR=14
SSPA Standing Stone 60.30 354 eP P 02 18 15.8 +0.7
comp=Z,266nm,1.6s
Y31A Rekieta Farm, 60.33 332 ⇓P P 02 18 15.6 0.0
baz=61,SNR=27
WMOK Wichita Mounta 60.34 333 eP P 02 18 14.9 -0.8
WMOK pmax pmax
comp=Z,33nm,1.0s
WMOK MLR MLR
comp=Z,4µm,21.0s
WMOK Wichita Mounta 60.34 333 eP P 02 18 14.9 -0.8
comp=Z,33nm,1.0s
WMOK LR LR
comp=Z,4µm,21.0s
PAL Palisades 60.36 357 eP P 02 18 15.2 -0.4
PAL pmax pmax
comp=Z,193nm,1.4s
PAL Palisades 60.36 357 eP P 02 18 15.2 -0.4
comp=Z,193nm,1.4s
Z29A Hungry Hill Ra 60.40 330 ⇑P P 02 18 15.6 -0.6
baz=61,SNR=14
325A Bean Ranch, Si 60.51 326 ⇓P P 02 18 17.3 +0.3
baz=61,SNR=80
Y30A Stafford Cattl 60.54 331 ⇑P P 02 18 16.3 -0.8
baz=61,SNR=7.4
YLE Yale 60.63 358 eP P 02 18 17.6 +0.2
comp=Z,1µm,1.4s
ACSO Alum Creek Sta 60.63 349 eP P 02 18 16.1 -1.4
comp=Z,152nm,1.0s
ACSO LR LR
comp=Z,6µm,22.0s
226B Tecolote Peak, 60.65 327 ⇓P P 02 18 18.1 +0.2
baz=61,SNR=63
127A Arkansas Junct 60.73 328 ⇓P P 02 18 17.7 -0.7
baz=61,SNR=12
Z28A Tucker Farm, M 60.75 330 ⇑P P 02 18 18.0 -0.5
baz=61,SNR=19
X31A McDonald Ranch 60.76 332 ⇑P P 02 18 18.1 -0.5
baz=61,SNR=41
324A Moseley Ranch, 60.83 326 ⇓P P 02 18 18.4 -0.8
baz=61,SNR=17
GDL2 Guadalupe Moun 60.85 327 eP P 02 18 19.1 -0.2
comp=Z,84nm,1.1s
Y29A Porterfield Fa 60.88 330 ⇑P P 02 18 18.8 -0.6
baz=61
MNTX Cornudas Mount 60.98 326 eP P 02 18 18.6 -1.4
comp=Z,45nm,1.2s
MNTX LR LR
comp=Z,4µm,22.0s
MNTX Cornudas Mount 60.98 326 ⇑P P 02 18 19.5 -0.5
baz=61,SNR=51
X30A Coker Ranch, T 61.01 331 ⇓P P 02 18 19.3 -0.9
baz=61
225A Deer Hill, Car 61.01 327 ⇑P P 02 18 20.4 -0.1
baz=61,SNR=34
126A Clayton Basin, 61.03 328 ⇓P P 02 18 20.4 -0.1
baz=61,SNR=29
Z27A Tatum 61.17 329 ⇓P P 02 18 21.0 -0.4
baz=61,SNR=39
BRYW Bryant College 61.19 359 eP P 02 18 21.3 0.0
comp=Z,1µm,1.4s
Y28A McKinney Farm, 61.19 330 ⇓P P 02 18 20.7 -0.9
baz=62
W31A Holland Ranch, 61.22 333 ⇑P P 02 18 21.1 -0.5
baz=62,SNR=9.5
CPRX Cap Rock 61.26 328 eP P 02 18 22.7 +0.6
comp=Z,20nm,0.9s
224A Cornudas Mount 61.35 326 ⇓P P 02 18 22.7 -0.1
baz=62,SNR=47
125A Gardner Draw, 61.36 327 ⇑P P 02 18 22.3 -0.5
baz=62,SNR=12
X29A Tulia 61.38 331 ⇓P P 02 18 22.2 -0.6
baz=62,SNR=7.4
SHEL Horse Pasture 61.46 98 PFAKE 02 18 40.0 +16
SHEL LR LR
comp=Z,17µm,19.0s
W30A Crocket Farms 61.49 332 ⇓P P 02 18 23.0 -0.5
baz=62
MSTX Muleshoe 61.49 330 ⇓P P 02 18 23.1 -0.5
baz=62,SNR=49
Z26A Caprock 61.51 328 ⇓P P 02 18 23.4 -0.3
baz=62,SNR=28
ALLY Alegheny Colle 61.57 352 eP P 02 18 23.4 -0.4
comp=Z,283nm,1.1s
QUA2 Belchertown 61.57 358 eP P 02 18 22.4 -1.4
comp=Z,326nm,1.4s
Y27A Causey 61.61 329 ⇑P P 02 18 24.0 -0.4
baz=62,SNR=32
SFIN Scholer Farm 61.62 346 ⇓P P 02 18 22.9 -1.3
baz=62,SNR=32
WES Weston 61.66 359 eP P 02 18 25.0 +0.6
WES pmax pmax
comp=Z,263nm,1.1s
WES Weston 61.66 359 eP P 02 18 25.0 +0.6
comp=Z,263nm,1.1s
X28A Dimmitt 61.67 330 ⇑P P 02 18 23.8 -1.0
baz=62
V31A Spring Creek L 61.67 333 ⇓P P 02 18 24.6 -0.1
baz=62,SNR=11
BINY Binghamton 61.68 355 eP P 02 18 25.1 +0.6
comp=Z,232nm,1.1s
BINY LR LR
comp=Z,9µm,22.0s
AMTX Amarillo 61.74 331 eP P 02 18 25.2 0.0
comp=Z,41nm,1.0s
AMTX LR LR
comp=Z,4µm,22.0s
AMTX Amarillo 61.74 331 ⇓P P 02 18 24.4 -0.8
baz=62,SNR=6.0
223A Chaparral, Ant 61.77 326 ⇑P P 02 18 25.5 0.0
baz=62
HRV Adam Dziewonsk 61.78 359 eP P 02 18 25.3 +0.1
HRV pmax pmax
comp=Z,182nm,1.0s
HRV Adam Dziewonsk 61.78 359 eP P 02 18 25.3 +0.1
comp=Z,182nm,1.0s
124A Stringfield Ra 61.80 327 ⇓P P 02 18 25.6 -0.3
baz=62,SNR=38
Z25A Roswell 61.89 328 ⇑P P 02 18 26.2 -0.1
baz=62,SNR=19
W29A Amarillo 61.92 331 ⇓P P 02 18 25.6 -0.8
baz=62,SNR=6.3
Y26A Elida 61.96 329 ⇑P P 02 18 26.7 -0.1
baz=62
ERPA Erie 62.01 352 eP P 02 18 26.5 -0.3
comp=Z,317nm,1.1s
ERPA LR LR
comp=Z,10µm,20.0s
V30A Spur Ranch, Mi 62.03 332 ⇑P P 02 18 27.4 +0.2
baz=62,SNR=14
TRY Troy 62.07 357 eP P 02 18 27.6 +0.5
comp=Z,1µm,1.4s
123A Bell Site, Whi 62.17 326 ⇓P P 02 18 28.6 +0.4
baz=62
U31A Nine Bar Ranch 62.18 333 ⇓P P 02 18 27.9 -0.2
baz=62
X27A F and S Farms, 62.20 330 ⇓P P 02 18 28.3 0.0
baz=62,SNR=7.6
222A Williams Famil 62.21 325 ⇑P P 02 18 29.3 +0.8
baz=62,SNR=12
Z24A Sheeppen Canyo 62.26 327 ⇑P P 02 18 28.9 0.0
baz=62,SNR=30
W28A Vega 62.29 331 ⇓P P 02 18 28.9 0.0
baz=63,SNR=12
HDIL Hopedale 62.33 344 eP P 02 18 27.3 -1.6
comp=Z,267nm,1.4s
HDIL LR LR
comp=Z,5µm,20.0s
VNA3 Neumayer Olymp 62.36 161 eP P 02 18 29.6 +0.7
VNA3 Neumayer Olymp 62.36 161 ePcP PcP 02 19 05.5 -2.8
VNA3 Neumayer Olymp 62.36 161 eScS SKSac 02 28 15.5 -3.3
Y25A Mesa, Roswell 62.39 328 ⇑P P 02 18 29.0 -0.7
baz=63,SNR=8.6
320A Kipp Ranch, An 62.41 324 ⇓P P 02 18 30.8 +0.9
baz=63,SNR=12
X26A CR and CF Fran 62.46 329 ⇓P P 02 18 30.0 -0.2
baz=63,SNR=14
V29A Stinnett 62.49 332 ⇑P P 02 18 30.1 -0.2
baz=63

221A Mesquite Ranch 62.51 325 ⇑P P 02 18 31.4 +0.9
baz=63,SNR=6.0
W27A Bowe Ranch, En 62.52 330 ⇑P P 02 18 30.5 0.0
baz=63,SNR=14
VNA1 Neumayer--Stat 62.58 161 eP P 02 18 31.9 +1.6
VNA1 Neumayer--Stat 62.58 161 epP pP 02 18 40.8 +1.6
VNA1 Neumayer--Stat 62.58 161 ePcP PcP 02 19 02.5 -6.6
VNA1 Neumayer--Stat 62.58 161 eScS SKSac 02 28 17.8 -2.5
122A Conniff Cattle 62.62 326 ⇑P P 02 18 32.2 +0.9
baz=63
Z23A Rita Site, Whi 62.65 327 ⇑P P 02 18 32.2 +0.7
baz=63,SNR=17
U30A WK&E Inc. Balk 62.66 333 ⇓P P 02 18 31.0 -0.4
baz=63,SNR=6.6
V28A Channing 62.70 331 ⇓P P 02 18 31.5 -0.2
baz=63,SNR=16
ACCN Adirondack Com 62.72 357 eP P 02 18 31.2 -0.3
comp=Z,220nm,1.4s
T31A Randall Ranch, 62.73 334 ⇑P P 02 18 31.6 -0.2
baz=63,SNR=16
FFD Franklin Falls 62.75 359 eP P 02 18 32.2 +0.6
comp=Z,379nm,1.3s
AAM Ann Arbor 62.76 349 eP P 02 18 30.6 -1.1
AAM pmax pmax
comp=Z,52nm,0.9s
AAM MLR MLR
comp=Z,9µm,20.0s
AAM Ann Arbor 62.76 349 eP P 02 18 30.6 -1.1
comp=Z,52nm,0.9s
AAM LR LR
comp=Z,9µm,20.0s
Y24A Capitan 62.76 328 ⇓P P 02 18 32.2 -0.1
baz=63,SNR=15
220A Playas Peak, P 62.84 324 ⇓P P 02 18 32.9 +0.1
baz=63,SNR=44
X25A Clemmons Ranch 62.86 329 ⇑P P 02 18 32.0 -0.8
baz=63,SNR=27
319A Douglas 62.86 323 ⇑P P 02 18 33.5 +0.6
baz=63,SNR=17
W26A Owens Ranch, T 62.88 330 ⇑P P 02 18 33.0 +0.1
baz=63,SNR=7.7
121A Cookes Peak, D 62.91 325 ⇑P P 02 18 34.1 +0.9
baz=63,SNR=27
VNA2 Neumayer--Watz 62.95 161 eP P 02 18 33.0 +0.2
baz=288,slow=6.7
VNA2 Neumayer--Watz 62.95 161 epP pP 02 18 41.4 -0.3
baz=288,slow=6.7
VNA2 Neumayer--Watz 62.95 161 ePcP PcP 02 19 05.9 -4.7
baz=288,slow=6.7
VNA2 Neumayer--Watz 62.95 161 ePKiKP PKiKP 02 25 16.6 -4.6
baz=288,slow=6.7
VNA2 Neumayer--Watz 62.95 161 eScS SKSac 02 28 19.4 -3.8
baz=288,slow=6.7
V27A Dan Oppiter Fa 62.99 331 ⇓P P 02 18 33.7 +0.1
baz=63,SNR=18
HNH Hanover 62.99 359 eP P 02 18 33.8 +0.5
comp=Z,541nm,1.3s
Z22A Elephant Butte 63.03 326 ⇓P P 02 18 34.5 +0.6
baz=63,SNR=46
T30A Plains 63.05 333 ⇑P P 02 18 34.1 +0.1
baz=63
BBTS Babate 63.06 61 LR LR 02 45 30.1
comp=Z,11µm,18.2s,baz=56,slow=36
Y23A Lovelace Mesa, 63.08 327 ⇑P P 02 18 34.2 -0.2
baz=63,SNR=19
X24A Lazy VL Ranch, 63.27 328 ⇓P P 02 18 35.3 -0.3
baz=64,SNR=13
KSU1 Kansas State U 63.28 337 eP P 02 18 34.7 -0.7
comp=Z,64nm,0.8s
KSU1 LR LR
comp=Z,5µm,19.0s
MDV Middlebury 63.31 358 eP P 02 18 35.3 -0.1
W25A X Bar L Ranch, 63.31 329 ⇑P P 02 18 35.4 -0.4
baz=64,SNR=27
NCB Newcomb 63.33 357 eP P 02 18 35.2 -0.4
comp=Z,222nm,1.3s
NCB LR LR
comp=Z,10µm,21.0s
120A U Bar Ranch, L 63.38 324 ⇑P P 02 18 37.1 +0.8
baz=64
Z21A St. Cloud Mine 63.44 326 ⇑P P 02 18 37.8 +1.0
baz=64,SNR=32
V26A Tequesquite Ra 63.46 330 ⇓P P 02 18 36.2 -0.5
baz=64,SNR=62
T29A Hugoton 63.46 333 ⇑P P 02 18 36.2 -0.5
baz=64,SNR=11
LBNH Lisbon 63.52 359 eP P 02 18 37.6 +0.8
LBNH pmax pmax
comp=Z,226nm,1.1s
LBNH MLR MLR
comp=Z,8µm,22.0s
LBNH Lisbon 63.52 359 eP P 02 18 37.6 +0.8
comp=Z,226nm,1.1s
LBNH LR LR
comp=Z,8µm,22.0s
U27A Thompson Grove 63.53 331 ⇑P P 02 18 36.7 -0.5
baz=64,SNR=12
BNM Barren Site 63.55 327 eP P 02 18 38.2 +0.7
comp=Z,45nm,1.2s
Y22A Socorro 63.56 327 ⇓P P 02 18 37.7 +0.2
baz=64,SNR=30
Y22D IRIS PASSCAL I 63.64 327 ⇓P P 02 18 39.1 +1.1
baz=64
X23A Hourglass Bar 63.66 328 ⇑P P 02 18 38.3 +0.1
baz=64
LPM Los Pinos Moun 63.68 327 eP P 02 18 38.2 -0.1
comp=Z,46nm,1.1s
LENM Lemitar 63.74 327 eP P 02 18 39.4 +0.7
comp=Z,59nm,1.6s
W24A Lazy 6 Ranch, 63.77 329 ⇓P P 02 18 38.9 0.0
baz=64,SNR=14
Z20A Nine Sixteen R 63.79 325 ⇑P P 02 18 39.8 +0.8
baz=64,SNR=26
T28A Walsh 63.79 332 ⇓P P 02 18 38.4 -0.4
baz=64
WVL Waterville 63.84 1 eP P 02 18 38.8 0.0
comp=Z,233nm,1.1s
V25A Rancho No Teng 63.89 330 ⇓P P 02 18 39.4 -0.2
baz=64,SNR=44
U26A Atchley Ranch, 63.93 331 ⇑P P 02 18 39.8 -0.1
baz=64,SNR=53
Y21A Point of Rocks 63.98 326 ⇓P P 02 18 41.4 +1.0
baz=64,SNR=31
LONY Lake Ozonia 64.00 357 eP P 02 18 40.0 +0.1
comp=Z,295nm,1.4s
LONY LR LR
comp=Z,10µm,21.0s
LAZ Ladron 64.01 327 eP P 02 18 40.9 +0.4
comp=Z,75nm,1.6s
T27A Campo 64.01 332 ⇑P P 02 18 40.3 -0.1
baz=64,SNR=38
X22A Bernardo 64.02 327 ⇓P P 02 18 41.5 +1.0
baz=64,SNR=18
EMMW East Machias 64.04 2 eP P 02 18 40.6 +0.4
comp=Z,341nm,1.2s
ANMO Albuquerque 64.08 328 eP P 02 18 40.6 -0.4
comp=Z,189nm,2.0s
ANMO LR LR
comp=Z,3µm,20.0s
W23A Werner Place, 64.10 328 ⇑P P 02 18 40.9 -0.2
baz=64,SNR=7.8
V24A Rampart Ranch, 64.12 329 ⇓P P 02 18 41.0 -0.2
baz=64,SNR=29
FRNY Flat Rock 64.16 358 eP P 02 18 41.1 +0.1
comp=Z,268nm,1.1s
U25A Circle Dot Ran 64.25 330 ⇓P P 02 18 41.8 -0.2
baz=64,SNR=31
Y20A Horse Springs, 64.28 325 ⇓P P 02 18 42.9 +0.6
baz=64,SNR=43
X21A Alamocita Cree 64.38 326 ⇓P P 02 18 44.1 +1.1
baz=65,SNR=44
MSNY Massena 64.39 357 eP P 02 18 42.3 -0.1
comp=Z,2µm,1.0s
W22A Albuquerque 64.39 327 ⇓P P 02 18 44.1 +1.1
baz=65,SNR=6.8
TUC Tucson 64.41 323 eP P 02 18 42.6 -0.4
TUC pmax pmax
comp=Z,5.0nm,1.1s
TUC MLR MLR
comp=Z,5µm,20.0s
TUC Tucson 64.41 323 eP P 02 18 42.6 -0.4
comp=Z,4.8nm,1.1s
TUC LR LR
comp=Z,5µm,20.0s
T26A Comanche Natio 64.50 331 ⇑P P 02 18 44.1 +0.4
baz=65,SNR=46
SNAA Sanae 64.57 161 eP P 02 18 43.3 -0.2
SNAA Sanae 64.57 161 epP pP 02 18 51.9 -0.6

SNAA **Sanae** 64.57 161 *e*ScS SKSac 02 28 29.9 -5.7
SNAA **Sanae** 64.57 161 *e*P P 02 18 43.1 -0.4
SNAA **Sanae** 64.57 161 *e*P P 02 18 42.9 -0.6
comp=Z,178nm,1.1s
V23A **Ortiz Mt. (NFS** 64.58 328 ⇑P P 02 18 45.0 +0.8
baz=65,SNR=46
S27A **Las Animas** 64.61 332 ⇓P P 02 18 44.3 0.0
baz=65
SCIA **State Center** 64.69 341 *e*P P 02 18 43.6 -0.9
comp=Z,150nm,1.0s
SCIA LR LR
comp=Z,3μm,21.0s
S26A **Kim** 64.81 331 ⇑P P 02 18 46.5 +0.9
baz=65,SNR=70
W21A **San Fidel** 64.83 327 ⇓P P 02 18 46.6 +0.8
baz=65
X20A **Quemado** 64.83 326 ⇓P P 02 18 46.9 +1.0
baz=65,SNR=45
T25A **Trinidad** 64.85 330 ⇓P P 02 18 46.3 +0.4
baz=65,SNR=28
U23A **El Rito** 65.05 329 ⇓P P 02 18 48.3 +1.1
baz=65,SNR=26
R27A **Eads** 65.06 332 ⇓P P 02 18 47.0 -0.2
baz=65,SNR=16
V22A **San Miguel Ran** 65.07 328 ⇓P P 02 18 48.4 +0.9
baz=65,SNR=28
T24A **Torres, Weston** 65.09 330 ⇑P P 02 18 48.7 +1.0
baz=65,SNR=18
W20A **Ramah** 65.28 326 ⇑P P 02 18 50.2 +1.4
baz=66,SNR=43
S25A **Robets Cordova** 65.28 331 ⇓P P 02 18 48.9 +0.2
baz=66,SNR=30
214A **Organ Pipe Nat** 65.34 321 ⇓P P 02 18 49.9 +0.8
baz=66,SNR=19
V21A **Milan** 65.36 327 ⇓P P 02 18 50.2 +0.9
baz=66
R26A **Arlington** 65.36 332 ⇓P P 02 18 49.2 0.0
baz=66,SNR=26
GLMI **Grayling** 65.38 349 *e*P P 02 18 47.5 -1.4
comp=Z,254nm,1.1s
GLMI LR LR
comp=Z,8μm,20.0s
U22A **Llaves** 65.41 328 ⇓P P 02 18 50.8 +1.2
baz=66,SNR=40
T23A **Casias Ranch,** 65.53 329 ⇑P P 02 18 50.9 +0.4
baz=66,SNR=16
KSCO **Kaye Shedlock'** 65.59 333 ⇑P P 02 18 50.7 +0.1
baz=66,SNR=8.6
X18A **Snowflake** 65.60 325 ⇑P P 02 18 51.7 +0.9
baz=66,SNR=22
R25A **Fountain Ranch** 65.61 331 ⇓P P 02 18 51.4 +0.6
baz=66,SNR=6.2
S24A **Houchin Ranch,** 65.63 330 ⇑P P 02 18 51.7 +0.6
baz=66,SNR=45
V20A **Brimhall** 65.78 327 ⇑P P 02 18 52.4 +0.4
baz=66,SNR=11
U21A **Nageezi** 65.85 328 ⇑P P 02 18 53.2 +0.7
baz=66,SNR=38
BGNE **Belgrade** 65.87 338 ⇓P P 02 18 52.2 -0.1
baz=66,SNR=15
Q26A **Hugo** 65.91 332 ⇑P P 02 18 53.1 +0.4
baz=66,SNR=6.5
W18A **Petrified Fore** 65.92 325 ⇓P P 02 18 53.5 +0.5
baz=66,SNR=8.9
T22A **Edith** 65.94 329 ⇑P P 02 18 53.8 +0.8
baz=66,SNR=45
S23A **Nye Farm, Mont** 66.05 330 ⇓P P 02 18 55.0 +1.2
baz=66
R24A **Sanders Place,** 66.05 331 ⇑P P 02 18 54.5 +0.8
baz=66,SNR=25
Q25A **Bedland, Calha** 66.22 332 ⇓P P 02 18 54.8 +0.1
baz=66,SNR=14
T21A **Navajo Lake** 66.23 328 ⇑P P 02 18 55.5 +0.6
baz=66,SNR=14
U20A **Newcomb** 66.25 327 ⇑P P 02 18 55.6 +0.6
baz=66,SNR=8.7
X16A **Lo Mia Camp, P** 66.33 324 ⇑P P 02 18 56.8 +1.2
baz=67,SNR=41
P26A **Davis Ranch, A** 66.36 333 ⇑P P 02 18 56.0 +0.4
baz=67,SNR=9.3
R23A **Moffat** 66.36 330 ⇓P P 02 18 56.7 +0.9
baz=67,SNR=42
Z14A **Wintersburg** 66.42 322 ⇑P P 02 18 57.2 +1.3
baz=67,SNR=8.4
S22A **4UR Ranch, Cre** 66.48 329 ⇑P P 02 18 57.3 +0.8
baz=67,SNR=25
O27A **Beecher Island** 66.51 334 ⇓P P 02 18 57.4 +0.9
baz=67,SNR=21
Q24A **Divide** 66.67 331 ⇑P P 02 18 58.3 +0.5
baz=67,SNR=35
P25A **Willow Gulch B** 66.67 332 ⇑P P 02 18 58.5 +0.9
baz=67,SNR=29
R22A **Saguache, Gunn** 66.83 330 ⇑P P 02 18 59.5 +0.7
baz=67,SNR=12
S21A **Coal Bank Pass** 66.88 328 ⇓P P 02 18 59.6 +0.5
baz=67,SNR=35
MVCO **Mesa Verde** 66.88 328 *e*P P 02 18 59.0 -0.1
comp=Z,177nm,1.6s
MVCO LR LR
comp=Z,4μm,21.0s
MVCO **Mesa Verde** 66.88 328 ⇓P P 02 18 59.8 +0.7
baz=67,SNR=31
O26A **Horse Wrangler** 66.91 333 ⇓P P 02 19 00.2 +1.2
baz=67,SNR=5.3
Q23A **Hartsel** 66.93 331 ⇑P P 02 19 00.2 +0.8
baz=67
OGNE **Ogallala** 66.96 335 *e*P P 02 18 59.8 +0.4
comp=Z,240nm,1.5s
OGNE LR LR
comp=Z,3μm,20.0s
OGNE **Ogallala** 66.96 335 ⇓P P 02 19 00.1 +0.8
baz=67,SNR=8.5
P24A **Kohler Place,** 67.00 332 ⇑P P 02 19 01.1 +1.3
baz=67,SNR=10
N27A **Anderson Farm,** 67.05 334 ⇑P P 02 19 00.4 +0.5
baz=67
WUAZ **Wupatki** 67.11 325 *e*P P 02 19 00.8 +0.4
comp=Z,146nm,1.5s
WUAZ LR LR
comp=Z,5μm,20.0s
WUAZ **Wupatki** 67.11 325 ⇑P P 02 19 02.0 +1.5
baz=67
O25A **Wiggins** 67.15 333 ⇑P P 02 19 01.7 +1.2
baz=67,SNR=6.7
S20A **Disappointment** 67.29 328 ⇑P P 02 19 02.9 +1.1
baz=68,SNR=65
P23A **Jefferson** 67.31 331 ⇑P P 02 19 03.4 +1.5
baz=68,SNR=13
GLA **Glamis** 67.31 321 *e*P P 02 19 00.3 -1.4
GLA pmax pmax
comp=Z,127nm,1.6s
GLA **Glamis** 67.31 321 *e*P P 02 19 00.3 -1.4
comp=Z,127nm,1.6s
GLA **Glamis** 67.31 321 ⇑P P 02 19 03.2 +1.6
baz=68,SNR=6.9
R21A **Cimarron** 67.32 329 ⇓P P 02 19 02.5 +0.7
baz=68,SNR=40
N26A **Koester Ranch,** 67.36 334 ⇓P P 02 19 02.8 +1.0
baz=68,SNR=5.4
Q22A **Crested Butte,** 67.40 330 ⇓P P 02 19 03.2 +0.8
baz=68,SNR=28
ECSD **EROS Data Cent** 67.41 340 *e*P P 02 19 00.9 -1.1
comp=Z,247nm,1.5s
ECSD LR LR
comp=Z,5μm,22.0s
COWI **Conover** 67.52 346 *e*P P 02 19 01.3 -1.3
comp=Z,90nm,1.2s
COWI LR LR
comp=Z,8μm,22.0s
ISCO **Idaho Springs** 67.55 331 *e*P P 02 19 03.1 -0.3
ISCO pmax pmax
comp=Z,41nm,1.0s
ISCO MLR MLR
comp=Z,3μm,21.0s
ISCO **Idaho Springs** 67.55 331 *e*P P 02 19 03.1 -0.3
comp=Z,41nm,1.0s
ISCO LR LR
comp=Z,3μm,21.0s
ISCO **Idaho Springs** 67.55 331 ⇑P P 02 19 03.9 +0.6
baz=68,SNR=43
O24A **Longmont** 67.57 332 ⇑P P 02 19 04.2 +0.9
baz=68,SNR=13
R20A **Redvale** 67.58 328 ⇓P P 02 19 04.4 +1.0
baz=68,SNR=20
M27A **Reverse DX Ran** 67.60 335 ⇑P P 02 19 04.2 +0.9
baz=68
SPMN **St. Paul** 67.62 343 ⇓P P 02 19 02.4 -0.8
baz=68,SNR=20

Y12C **Blythe** 67.62 321 ⇓P P 02 19 04.7 +1.2
baz=68,SNR=11
PV01 **Paradox Valley** 67.64 328 *e*P P 02 19 03.8 0.0
comp=Z,8μm,1.4s
SMCO **Snowmass** 67.68 330 *e*P P 02 19 04.3 0.0
comp=Z,37nm,1.0s
Q21A **Lamborn Mesa,** 67.70 329 ⇑P P 02 19 05.3 +1.1
baz=68,SNR=8.3
N25A **Grover** 67.71 333 ⇓P P 02 19 04.9 +0.8
baz=68
PDMCI **Parker Dam,Lak** 67.79 322 ⇑P P 02 19 05.4 +0.8
baz=68
DVTC **Desert V Tower** 67.82 319 ⇓P P 02 19 06.1 +1.2
baz=68,SNR=7.0
SWSC **Sam W. Stewart** 67.82 320 ⇑P P 02 19 06.2 +1.4
baz=68,SNR=8.5
M26A **McRoberts Ranc** 67.86 334 ⇓P P 02 19 05.9 +0.8
baz=68
P22A **Eagle** 67.92 330 ⇑P P 02 19 06.4 +0.9
baz=68,SNR=35
PV04 **Paradox Valley** 68.00 328 *e*P P 02 19 05.4 -0.6
S18A **Hurst Farm, Bl** 68.01 327 ⇑P P 02 19 07.7 +1.5
baz=68,SNR=129
O23A **Lake Granby, G** 68.02 331 ⇑P P 02 19 07.0 +0.7
baz=68,SNR=42
N24A **Carr** 68.06 332 ⇑P P 02 19 07.4 +1.0
baz=68,SNR=12
BC3 **Big Chuckawall** 68.11 321 ⇑P P 02 19 08.0 +1.2
baz=68,SNR=19
Q20A **Ridgley Place,** 68.14 329 ⇓P P 02 19 07.7 +0.8
baz=68,SNR=18
MONP **Monument Peak** 68.17 319 ⇑P P 02 19 08.7 +1.5
baz=68,SNR=10
P21A **Newcastle** 68.18 330 ⇑P P 02 19 08.6 +1.4
baz=68,SNR=44
BAR **Barrett** 68.18 319 *e*P P 02 19 07.6 +0.5
comp=Z,59nm,1.1s
M25A **Palm-Egli Farm** 68.21 333 ⇑P P 02 19 08.2 +0.9
baz=68,SNR=11
W13A **Hualapai Mount** 68.21 323 ⇑P P 02 19 09.0 +1.5
baz=68,SNR=18
O22A **Kremmling** 68.27 331 ⇑P P 02 19 08.2 +0.3
baz=68,SNR=52
IRM **Iron Mountain** 68.28 321 ⇑P P 02 19 09.6 +1.8
baz=68,SNR=24
U15A **North Rim** 68.28 325 ⇑P P 02 19 09.3 +1.3
baz=68,SNR=72
L26A **Underwood Farm** 68.31 334 ⇑P P 02 19 08.6 +0.7
baz=69,SNR=10
NEE2 **Needles Airpor** 68.40 322 ⇓P P 02 19 09.4 +1.0
baz=69
K27A **Flueckinger Fa** 68.53 335 ⇓P P 02 19 10.0 +0.8
baz=69,SNR=15
M24A **Cheyenne** 68.56 333 ⇓P P 02 19 10.5 +1.0
baz=69
N23A **Red Feather La** 68.59 332 ⇓P P 02 19 10.5 +0.7
baz=69,SNR=46
109C **Camp Elliot, M** 68.59 319 ⇓P P 02 19 10.5 +0.8
baz=69
P20A **De Beque** 68.61 329 ⇑P P 02 19 10.8 +0.9
baz=69,SNR=6.5
Q19A **Hogan Spring (** 68.61 328 ⇓P P 02 19 10.9 +1.1
baz=69,SNR=7.9
BELC **Belle Mtn. Jos** 68.68 321 ⇓P P 02 19 12.2 +1.8
baz=69,SNR=13
PFO **Pinyon Flat Ob** 68.68 320 *e*P P 02 19 11.2 +0.8
comp=Z,78nm,1.5s
PFO LR LR
comp=Z,3μm,19.0s
PFO **Pinyon Flat Ob** 68.68 320 P P 02 19 12.0 +1.7
comp=Z,129nm,1.0s,SNR=6.4
PFO **Pinyon Flat Ob** 68.68 320 ⇓P P 02 19 12.1 +1.7
baz=69,SNR=9.8
PHWY **Pilot Hill** 68.70 332 *e*P P 02 19 10.4 -0.2
comp=Z,204nm,1.6s
O21A **Pagoda** 68.74 330 ⇓P P 02 19 11.7 +1.0
baz=69
N22A **Wattenberg Ran** 68.74 331 ⇓P P 02 19 11.7 +1.0
baz=69,SNR=34
L25A **Engebretsen Ra** 68.77 334 ⇓P P 02 19 11.7 +1.0
baz=69,SNR=13
BRSD **Miller** 68.82 339 ⇓P P 02 19 10.3 -0.5
baz=69,SNR=6.5
LDFC **Landfair** 68.90 322 *e*P P 02 19 11.6 -0.1
comp=Z,164nm,1.6s
K26A **Motz Farm, Whi** 68.90 335 ⇓P P 02 19 12.7 +1.1
baz=69,SNR=10
M23A **Laramie** 68.95 332 ⇓P P 02 19 12.7 +0.7
baz=69,SNR=40
P19A **Cripple Cowboy** 69.00 329 ⇓P P 02 19 12.9 +0.6
baz=69,SNR=8.1
GMRC **Granite Mounta** 69.02 321 ⇑P P 02 19 13.8 +1.4
baz=69,SNR=32
O20A **White River Ci** 69.04 330 ⇑P P 02 19 13.4 +0.9
baz=69,SNR=30
L24A **Wheatland** 69.08 333 ⇑P P 02 19 13.5 +0.8
baz=69,SNR=13
K25A **Mack Ranch, Ha** 69.11 334 ⇑P P 02 19 13.9 +1.1
baz=69
MURC **Murrieta** 69.13 319 ⇑P P 02 19 13.9 +0.9
baz=69,SNR=5.9
N21A **Black Mountain** 69.19 331 ⇑P P 02 19 14.5 +1.0
baz=70,SNR=15
M22A **Cedar Creek Ra** 69.29 332 ⇓P P 02 19 14.8 +0.6
baz=70,SNR=19
LIC **Lamto** 69.31 75 *e*P P 02 19 13.2 -1.4
comp=Z,158nm,1.2s,baz=252
LIC *e*R
comp=Z,18μm,21.2s
LIC **Lamto** 69.31 75 *e*P P 02 19 13.2 -1.4
comp=Z,158nm,1.2s
SRU **San Rafael** 69.36 328 *e*P P 02 19 14.7 +0.2
SRU pmax pmax
comp=Z,78nm,1.1s
SRU **San Rafael** 69.36 328 *e*P P 02 19 14.7 +0.2
comp=Z,78nm,1.1s
SRU **San Rafael** 69.36 328 ⇑P P 02 19 15.0 +0.5
baz=70,SNR=54
BBRC **Big Bear Solar** 69.41 320 ⇓P P 02 19 17.0 +1.9
baz=70
HEC **Hector,Ludlow** 69.45 321 ⇑P P 02 19 16.8 +1.8
baz=70,SNR=11
L23A **Garrett** 69.47 333 ⇑P P 02 19 15.6 +0.4
baz=70,SNR=23
Q16A **Castle Valley** 69.55 327 ⇓P P 02 19 16.8 +1.1
baz=70,SNR=34
O19A **Miners Draw (B** 69.59 329 ⇑P P 02 19 16.8 +0.9
baz=70,SNR=33
K24A **Anderson Ranch** 69.59 334 ⇑P P 02 19 17.0 +1.2
baz=70,SNR=15
N20A **Spence Gulch,** 69.60 330 ⇑P P 02 19 16.9 +0.9
baz=70,SNR=47
P18A **Preston Nutter** 69.62 328 ⇑P P 02 19 17.7 +1.5
baz=70
TUQ **Turquoise Moun** 69.63 322 ⇓P P 02 19 17.7 +1.5
baz=70,SNR=8.5
DBIC **Dimbokro** 69.65 75 *e*P P 02 19 15.8 -0.8
DBIC **Dimbokro** 69.65 75 *e*P P 02 19 15.7 -0.9
comp=Z,179nm,1.0s
DBIC **Dimbokro** 69.65 75 P P 02 19 15.9 -0.8
comp=Z,107nm,0.8s,baz=224,slow=6.2,SNR=68
DBIC LR LR 02 48 22.4
comp=Z,11μm,20.8s,baz=229,slow=35
CCUT **Cedar City** 69.69 325 *e*P P 02 19 17.3 +0.6
comp=Z,95nm,1.1s
L22A **Ellis Ranch, M** 69.72 332 ⇓P P 02 19 17.8 +1.1
baz=70,SNR=14
CIS **Catalina Islan** 69.75 319 ⇑P P 02 19 18.3 +1.4
baz=70
P17A **Butcher Ranch,** 69.75 328 ⇓P P 02 19 17.9 +1.0
baz=70,SNR=29
MSU **Marysvale** 69.76 326 *e*P P 02 19 17.3 +0.2
MSU pmax pmax
comp=Z,70nm,1.0s
MSU **Marysvale** 69.76 326 *e*P P 02 19 17.3 +0.2
comp=Z,70nm,1.0s
MVU **Marysvale** 69.78 326 *e*P P 02 19 17.5 +0.3
comp=Z,79nm,1.0s
MVU LR LR
comp=Z,7μm,19.0s
M21A **Separation Pea** 69.80 331 ⇓P P 02 19 18.2 +1.0
baz=70,SNR=35
EYMN **Ely** 69.81 345 *e*P P 02 19 15.6 -1.2
comp=Z,66nm,1.2s
EYMN LR LR
comp=Z,5μm,20.0s
BFSC **Mount Baldy Ra** 69.84 320 ⇑P P 02 19 18.7 +1.2
baz=70,SNR=9.8

TMUT **Trail Mountain** 69.85 327 *e*P P 02 19 17.4 -0.4
comp=Z,27nm,0.9s
FMP **Fort Macarthur** 69.88 319 ⇑P P 02 19 18.8 +1.2
baz=70
RRX **Edison Barstow** 69.88 321 ⇓P P 02 19 19.3 +1.7
baz=70
ARUT **Antelope Range** 69.90 325 *e*P P 02 19 19.0 +1.1
ARUT pmax pmax
comp=Z,227nm,1.4s
ARUT **Antelope Range** 69.90 325 *e*P P 02 19 19.0 +1.1
comp=Z,227nm,1.4s
K23A **Bowen Ranch, D** 69.96 333 ⇑P P 02 19 18.8 +0.7
baz=70,SNR=17
J24A **Dixon Ranch, L** 70.03 334 ⇑P P 02 19 19.3 +0.9
baz=70,SNR=19
GSC **Goldstone** 70.05 321 *e*P P 02 19 19.8 +1.0
GSC pmax pmax
comp=Z,187nm,1.8s
GSC **Goldstone** 70.05 321 *e*P P 02 19 19.8 +1.0
comp=Z,187nm,1.8s
GSC **Goldstone** 70.05 321 ⇑P P 02 19 20.1 +1.3
baz=70,SNR=13
N19A **John Jarvie Ra** 70.08 330 ⇑P P 02 19 18.9 +0.1
baz=70,SNR=46
MWC **Mount Wilson** 70.08 319 *e*P P 02 19 19.6 +0.5
MWC pmax pmax
comp=Z,111nm,1.4s
MWC **Mount Wilson** 70.08 319 *e*P P 02 19 19.6 +0.5
comp=Z,111nm,1.4s
M20A **Sweetwater, Wa** 70.08 331 ⇓P P 02 19 19.5 +0.5
baz=70,SNR=21
L21A **Rawlins** 70.08 332 ⇓P P 02 19 19.5 +0.5
baz=70,SNR=70
PASC **Pasadena Art C** 70.12 319 *e*P P 02 19 20.8 +1.7
comp=Z,137nm,1.5s
SHOC **Shoshone** 70.16 322 ⇑P P 02 19 20.6 +1.2
baz=70,SNR=9.0
ROSA **Rosais** 70.22 34 *e*P P 02 19 19.8 +0.2
comp=Z,299nm,1.3s
PMAN **Manadas** 70.24 34 *e*P P 02 19 21.2 +1.5
comp=Z,351nm,1.3s
DECC **Green Verdugo** 70.26 319 ⇓P P 02 19 21.8 +1.8
baz=70
K22A **Casper** 70.26 333 ⇓P P 02 19 20.6 +0.6
baz=70,SNR=12
N18A **Larsen Ranch,** 70.38 329 ⇑P P 02 19 21.6 +0.9
baz=71,SNR=18
RSSD **Black Hills** 70.43 335 *e*P P 02 19 20.4 -0.6
RSSD pmax pmax
comp=Z,112nm,1.5s
RSSD **Black Hills** 70.43 335 *e*P P 02 19 20.4 -0.6
comp=Z,112nm,1.5s
I24A **Kuemmerle Ranc** 70.45 334 ⇑P P 02 19 22.0 +1.0
baz=71,SNR=19
J23A **Dilts Ranch, B** 70.46 334 ⇓P P 02 19 22.1 +0.9
baz=71
EDW2 **Edwards Air Fo** 70.48 320 ⇓P P 02 19 22.6 +1.3
baz=71,SNR=13
M19A **Rock Springs** 70.54 330 ⇓P P 02 19 22.0 +0.3
baz=71
L20A **Wamsutter** 70.56 331 ⇓P P 02 19 22.7 +0.8
baz=71,SNR=21
K21A **Alcova** 70.57 332 ⇓P P 02 19 22.7 +0.8
baz=71,SNR=55
PGRA **Graciosa** 70.59 34 *e*P P 02 19 22.6 +0.8
comp=Z,401nm,1.3s
QSPA **South Pole Qui** 70.60 180 LR LR 02 51 59.8
comp=Z,3μm,19.3s,baz=8.3,slow=37
MPU **Maple Canyon** 70.61 328 *e*P P 02 19 22.7 +0.5
comp=Z,160nm,1.4s
BLG **Laguna Peak** 70.62 319 ⇑P P 02 19 23.2 +1.0
baz=71
LRMC **Laurel Mountai** 70.70 321 ⇑P P 02 19 23.8 +1.1
baz=71,SNR=12
ADH **Angra Heroismo** 70.71 35 *e*P P 02 19 24.0 +1.4
comp=Z,253nm,1.2s
DAU **Daniels Canyon** 70.72 328 *e*P P 02 19 24.5 +1.5
DAU pmax pmax
comp=Z,207nm,1.6s
DAU **Daniels Canyon** 70.72 328 *e*P P 02 19 24.4 +1.5
comp=Z,208nm,1.6s
PSMN **Pico do Norte,** 70.73 37 *e*P P 02 19 22.4 -0.4
OSI **Osito Adit** 70.75 319 *e*P P 02 19 24.2 +1.3
comp=Z,36nm,0.9s
OSI **Osito Adit** 70.75 319 ⇑P P 02 19 24.0 +1.0
baz=71
J22A **Midwest** 70.86 333 ⇓P P 02 19 23.9 +0.3
baz=71,SNR=65
I23A **Meade Ranch, G** 70.88 334 ⇓P P 02 19 24.0 +0.3
baz=71
FURC **Furnace Creek,** 70.89 322 ⇑P P 02 19 25.4 +1.7
baz=71,SNR=20
BSC **Santa Cruz Isl** 70.90 318 ⇑P P 02 19 24.7 +0.8
baz=71
N17A **Moffit Pass** 70.91 329 ⇓P P 02 19 25.3 +1.1
baz=71,SNR=94
M18A **Lyman** 70.91 330 ⇓P P 02 19 24.7 +0.6
baz=71,SNR=22
PDA **Ponta Delgada** 70.92 36 *e*P P 02 19 25.2 +1.4
comp=Z,342nm,1.3s
PSET **Sete Cidades** 70.94 36 *e*P P 02 19 25.7 +1.7
comp=Z,393nm,1.3s
JLU **Jordanelle** 70.96 328 *e*P P 02 19 24.6 +0.3
comp=Z,189nm,1.4s
MPMC **Manual Prospec** 70.98 321 ⇑P P 02 19 25.8 +1.3
baz=71,SNR=19
CMLA **Cha da Macela** 71.01 36 *e*P P 02 19 25.6 +1.2
comp=Z,393nm,1.3s
CMLA **Cha da Macela** 71.01 36 PFAKE 02 19 40.0 +16
CMLA LR LR
comp=Z,6μm,19.0s
K20A **Yellowstone Ra** 71.07 331 ⇑P P 02 19 25.4 +0.5
baz=71,SNR=41
L19A **Farson** 71.10 330 ⇓P P 02 19 25.8 +0.6
baz=71,SNR=48
ARVC **Arvin** 71.15 320 ⇑P P 02 19 26.6 +1.2
baz=71
H24A **Dirks Ranch, A** 71.16 335 ⇑P P 02 19 25.6 +0.3
baz=71,SNR=43
J21A **Lysite** 71.22 332 ⇑P P 02 19 26.7 +0.8
baz=72,SNR=53
M17A **Scullys Gap (B** 71.24 329 ⇓P P 02 19 26.2 +0.2
baz=72,SNR=17
I22A **9 Mile Ranch,** 71.25 333 ⇑P P 02 19 26.4 +0.4
baz=72,SNR=46
AGMN **Agassiz Nation** 71.28 342 *e*P P 02 19 24.9 -1.0
comp=Z,46nm,0.9s
AGMN LR LR
comp=Z,6μm,19.0s
L18A **Fontenelle, Gr** 71.28 330 ⇑P P 02 19 26.6 +0.4
baz=72,SNR=48
ISA **Isabella** 71.30 320 *e*P P 02 19 27.2 +0.9
ISA pmax pmax
comp=Z,69nm,1.1s
ISA **Isabella** 71.30 320 *e*P P 02 19 27.2 +0.9
comp=Z,68nm,1.1s
ISA **Isabella** 71.30 320 ⇑P P 02 19 28.2 +1.9
baz=72,SNR=28
DUG **Dugway** 71.34 327 *e*P P 02 19 26.7 +0.1
DUG pmax pmax
comp=Z,162nm,1.4s
DUG MLR MLR
comp=Z,4μm,21.0s
DUG **Dugway** 71.34 327 *e*P P 02 19 26.7 +0.1
comp=Z,162nm,1.4s
DUG LR LR
comp=Z,4μm,21.0s
DUG **Dugway** 71.34 327 ⇓P P 02 19 28.1 +1.5
baz=72,SNR=74
H23A **Clabaugh Cattl** 71.35 334 ⇑P P 02 19 27.0 +0.5
baz=72,SNR=6.4
K19A **Absolon Red Bu** 71.43 331 ⇑P P 02 19 27.2 +0.1
baz=72,SNR=42
R11A **Troy Canyon, C** 71.48 324 ⇓P P 02 19 29.0 +1.5
baz=72,SNR=60
J20A **Shoshoni** 71.51 332 ⇓P P 02 19 28.4 +0.9
baz=72,SNR=21
I21A **Big Trails, Te** 71.53 333 ⇑P P 02 19 28.2 +0.5
baz=72,SNR=93
GRAC **Grapevine Rang** 71.55 322 ⇑P P 02 19 29.8 +2.0
baz=72
M16A **Huntsville** 71.58 329 ⇑P P 02 19 28.8 +0.7
baz=72
CWC **Cottonwood Cre** 71.59 321 ⇓P P 02 19 29.5 +1.3
baz=72,SNR=6.0
G24A **Alzada** 71.59 335 ⇑P P 02 19 28.4 +0.5
baz=72,SNR=21
PKM **Peak Mountain** 71.61 319 ⇑P P 02 19 30.0 +1.7

baz=72,SNR=10
BW06 Boulder Array 71.71 331 PFAKE 02 19 40.0 +11
BW06 LR LR
comp=Z,5µm,21.0s
BW06 Boulder Array 71.71 331 ⇓P **P 02 19 29.3 +0.4**
baz=72,SNR=39
PDAR Pinedale Array 71.71 331 P **P 02 19 28.7 -0.2**
PDAR Pinedale Array 71.71 331 P **P 02 19 28.7 -0.2**
comp=Z,16nm,0.9s,baz=141,slow=7.3,SNR=56
PDAR LR LR 02 53 46.5
comp=Z,4µm,18.6s,baz=140,slow=38
H22A Clearmont 71.76 334 ⇓P **P 02 19 29.6 +0.6**
baz=72,SNR=24
HWUT Hardware Ranch 71.77 329 *e*P **P 02 19 28.8 -0.4**
comp=Z,45nm,0.9s
HWUT LR LR
comp=Z,5µm,20.0s
VES Vestal, Richgr 71.78 320 ⇓P **P 02 19 30.4 +1.3**
baz=72,SNR=21
L17A Cokeville 71.81 330 ⇓P **P 02 19 30.1 +0.6**
baz=72
K18A Toltan Ranch, 71.84 330 ⇓P **P 02 19 31.1 +1.5**
baz=72,SNR=46
G23A Biddle 71.87 335 ⇑P **P 02 19 29.7 +0.2**
baz=72,SNR=41
J19A Crowheart 71.87 331 ⇓P **P 02 19 30.3 +0.6**
baz=72,SNR=77
SMMC Simmler 71.99 319 ⇑P **P 02 19 32.0 +1.5**
baz=72,SNR=7.9
I20A Worland 72.00 332 ⇑P **P 02 19 31.3 +0.8**
baz=72,SNR=28
L16A Fish Haven 72.02 329 ⇓P **P 02 19 30.9 +0.2**
baz=72,SNR=48
MDND Maddock 72.02 340 ⇓P **P 02 19 30.7 +0.4**
baz=72,SNR=55
F24A Ekalaka 72.03 336 ⇓P **P 02 19 30.6 +0.1**
baz=72,SNR=55
H21A Big Horn, Sher 72.08 333 ⇓P **P 02 19 31.2 +0.3**
baz=72,SNR=16
TIN Tinemaha 72.09 322 ⇓P **P 02 19 32.6 +1.5**
baz=72
RCTC Rector, Farmer 72.19 320 ⇑P **P 02 19 32.5 +0.9**
baz=72
TPH Tonopah 72.21 323 PFAKE 02 19 40.0 +8.1
TPH LR LR
comp=Z,3µm,20.0s
G22A Birney 72.25 334 ⇓P **P 02 19 32.1 +0.3**
baz=72,SNR=12
J18A Kendall Valley 72.27 331 ⇑P **P 02 19 32.5 +0.2**
baz=72,SNR=76
K17A Gardner Place, 72.34 330 ⇓P **P 02 19 33.2 +0.6**
baz=73,SNR=27
H20A Greybull 72.38 333 ⇓P **P 02 19 32.5 -0.2**
baz=73,SNR=40
I19A Meeteetse 72.45 332 ⇑P **P 02 19 33.7 +0.4**
baz=73,SNR=39
L15A Malad City 72.48 329 ⇑P **P 02 19 33.7 +0.3**
baz=73,SNR=93
HVU Hansel Valley 72.50 328 *e*P **P 02 19 33.6 +0.1**
HVU pmax pmax
comp=Z,66nm,1.0s
HVU Hansel Valley 72.50 328 *e*P **P 02 19 33.6 +0.1**
comp=Z,66nm,1.0s
I18A Diamond G Ranc 72.56 331 ⇓P **P 02 19 34.8 +0.9**
baz=73,SNR=50
E24A Baker 72.57 336 ⇑P **P 02 19 34.7 +1.0**
baz=73,SNR=32
G21A Lodge Grass 72.63 334 ⇑P **P 02 19 34.6 +0.5**
baz=73,SNR=19
F22A Rosebud 72.69 335 ⇓P **P 02 19 34.6 +0.2**
baz=73,SNR=13
TBI Tubuai 72.71 251 *e*S **S 02 29 00.7 +1.7**
comp=Z,13µm,30.8s
TBI *e*LR LR 02 41 54.8
comp=Z,19µm,24.8s,baz=103
J17A Brown Place, J 72.71 330 ⇑P **P 02 19 35.8 +1.0**
baz=73,SNR=56
K16A Soda Springs 72.72 330 ⇓P **P 02 19 36.0 +1.1**
baz=73,SNR=112
REDW Red Top Meadow 72.77 330 *e*P **P 02 19 35.3 +0.1**
comp=Z,2.0nm,1.4s
SNOW Snow King Moun 72.81 330 *e*P **P 02 19 36.0 +0.5**
comp=Z,51nm,1.1s
MLAC Mammoth Lakes 72.84 322 ⇑P **P 02 19 37.3 +1.6**
baz=73
LOHW Long Hollow 72.85 331 *e*P **P 02 19 35.3 -0.3**
comp=Z,115nm,1.5s
PMOZ Porto Moniz, M 72.86 45 *e*P **P 02 19 36.6 +0.8**
comp=Z,155nm,1.5s
PMOZ *e*S **SKiKP 02 29 07.9 +0.4**
PMOZ *e*LR LR 02 43 08.6
comp=Z,4µm,18.0s
E23A Ismay 72.91 336 ⇓P **P 02 19 35.6 0.0**
baz=73,SNR=6.3
TPAW Teton Pass 72.92 330 *e*P **P 02 19 36.2 +0.1**
comp=Z,91nm,1.1s
L14A Malta 72.92 328 ⇓P **P 02 19 36.7 +0.7**
baz=73,SNR=50
H19A Powell 72.95 332 ⇑P **P 02 19 36.7 +0.7**
baz=73,SNR=24
RRI2 Red Ridge 72.98 330 *e*P **P 02 19 36.6 +0.1**
comp=Z,142nm,1.1s
NV11 Mina Array Sit 72.99 323 *e*P **P 02 19 36.8 +0.3**
PMAR Madeira 72.99 45 *e*P **P 02 19 37.5 +0.8**
comp=Z,188nm,1.8s
ELK Elko 73.00 326 *e*P **P 02 19 36.3 -0.3**
comp=Z,72nm,1.4s
MOOW Moose Ponds 73.02 331 *e*P **P 02 19 36.6 -0.1**
comp=Z,86nm,1.5s
G20A Bridger 73.05 333 ⇑P **P 02 19 36.7 +0.1**
baz=73,SNR=28
ULM Lac du Bonnet 73.05 343 P **P 02 19 36.1 -0.3**
ULM Lac du Bonnet 73.05 343 P **P 02 19 36.1 -0.3**
comp=Z,30nm,0.8s,baz=155,slow=5.5,SNR=30
ULM LR LR 02 53 41.1
comp=Z,5µm,21.9s,baz=137,slow=38
K15A Arbon 73.06 329 ⇑P **P 02 19 37.1 +0.3**
baz=73,SNR=24
NVAR Mina Array Bea 73.07 323 P **P 02 19 37.4 +0.3**
NVAR P'P' 02 47 28.1
NVAR Mina Array Bea 73.07 323 P **P 02 19 37.4 +0.3**
comp=Z,17nm,0.9s,baz=144,slow=5.8,SNR=69
NVAR PKPPKP P'P'df 02 47 28.1 +14
comp=Z,0.8nm,0.9s,baz=230,slow=3.7,SNR=3.6
NVAR LR LR 02 53 53.3
comp=Z,2µm,18.2s,baz=239,slow=38
I17A Pilgrim Ck. 73.08 331 ⇓P **P 02 19 38.4 +1.4**
baz=73,SNR=70
F21A Absaloka Mine, 73.08 334 ⇑P **P 02 19 37.7 +0.9**
baz=73,SNR=11
DCID1 Drake Creek 73.11 330 *e*P **P 02 19 38.1 +1.0**
comp=Z,65nm,0.8s
E22A Miles City 73.11 335 ⇓P **P 02 19 36.6 -0.3**
baz=73,SNR=21
IMW Indian Meadow 73.22 331 *e*P **P 02 19 37.4 -0.5**
comp=Z,132nm,1.4s
H18A Shoshone NF, C 73.25 332 ⇓P **P 02 19 38.2 +0.1**
baz=74,SNR=71
K14A Jones Ranch, D 73.27 328 ⇓P **P 02 19 39.0 +0.9**
baz=74,SNR=28
D23A Lindsay 73.43 336 ⇓P **P 02 19 39.8 +1.1**
baz=74,SNR=40
C24A Savage 73.43 337 ⇑P **P 02 19 39.6 +0.9**
baz=74,SNR=22
RLMT Red Lodge 73.43 332 *e*P **P 02 19 38.8 -0.2**
comp=Z,159nm,1.4s
RLMT LR LR
comp=Z,3µm,19.0s
RLMT Red Lodge 73.43 332 ⇑P **P 02 19 39.9 +0.9**
baz=74,SNR=68
H17A Grant Village 73.44 331 ⇓P **P 02 19 40.5 +1.3**
baz=74,SNR=22
I16A Newdale 73.46 330 ⇑P **P 02 19 40.4 +1.2**
baz=74,SNR=29
PMOR Pomariorio Ree 73.47 260 *e*P **P 02 19 40.8 +1.2**
comp=Z,132nm,1.1s
F20A Billings 73.49 334 ⇑P **P 02 19 39.6 +0.4**
baz=74,SNR=24
LKWY Lake 73.50 331 *e*P **P 02 19 40.7 +1.2**
LKWY pmax pmax
comp=Z,70nm,0.9s
LKWY MLR MLR
comp=Z,7µm,21.0s
LKWY Lake 73.50 331 *e*P **P 02 19 40.7 +1.2**
comp=Z,70nm,0.9s
LKWY LR LR
comp=Z,7µm,21.0s
J15A Blackfoot 73.55 329 ⇑P **P 02 19 40.9 +1.2**
baz=74,SNR=16
PMPS Porto Santo 73.58 45 *e*P **P 02 19 41.5 +1.6**
comp=Z,214nm,1.3s
PMPST Porto Santo, M 73.59 45 *e*P **P 02 19 41.5 +1.5**
comp=Z,383nm,1.4s
E21A Keefer Ranch, 73.64 335 ⇓P **P 02 19 41.1 +1.1**
baz=74,SNR=12
G18A Lazy EL Ranch, 73.71 332 ⇑P **P 02 19 41.3 +0.7**
baz=74,SNR=82
D22A Cohagen 73.78 336 ⇓P **P 02 19 42.0 +1.2**
baz=74,SNR=85
YMR Madison River 73.83 331 *e*P **P 02 19 42.4 +1.0**
comp=Z,6.4nm,1.2s
BMN Battle Mountai 73.85 325 *e*P **P 02 19 40.6 -0.9**
BMN pmax pmax
comp=Z,10.0nm,1.0s
BMN MLR MLR
comp=Z,4µm,20.0s
BMN Battle Mountai 73.85 325 *e*P **P 02 19 40.6 -0.9**
comp=Z,10nm,1.0s
BMN LR LR
comp=Z,4µm,20.0s
F19A Roth Farm, Mol 73.87 333 ⇓P **P 02 19 41.6 +0.2**
baz=74,SNR=105
C23A Lambert 73.94 336 ⇓P **P 02 19 42.6 +0.9**
baz=74,SNR=21
TVO Taravao 73.95 257 *e*P **P 02 19 43.4 +0.8**
comp=Z,58nm,1.0s
H16A Russell Place, 73.99 331 ⇑P **P 02 19 43.4 +1.1**
baz=74,SNR=98
J14A Carey 74.02 329 ⇓P **P 02 19 43.8 +1.4**
baz=74
CMB Columbia Colle 74.02 321 *e*P **P 02 19 42.6 +0.2**
CMB pmax pmax
comp=Z,50nm,1.3s
CMB Columbia Colle 74.02 321 *e*P **P 02 19 42.6 +0.2**
comp=Z,50nm,1.3s
I15A Monteview 74.03 330 ⇑P **P 02 19 43.7 +1.2**
baz=74,SNR=11
D21A La Casta Ranch 74.03 335 ⇑P **P 02 19 43.3 +0.9**
baz=74,SNR=51
E20A Meyer Farm, Mu 74.04 334 ⇑P **P 02 19 43.1 +0.7**
baz=74,SNR=49
GCMT Greycliff 74.13 333 *e*P **P 02 19 43.1 +0.1**
comp=Z,76nm,1.1s
DGMT Dagmar 74.13 337 *e*P **P 02 19 43.1 +0.3**
comp=Z,277nm,1.4s
DGMT LR LR
comp=Z,3µm,20.0s
DGMT Dagmar 74.13 337 ⇓P **P 02 19 43.5 +0.7**
baz=74,SNR=26
C22A Vida 74.16 336 ⇑P **P 02 19 43.4 +0.4**
baz=74,SNR=32
QLMT Earthquake Lak 74.17 331 *e*P **P 02 19 44.9 +1.5**
comp=Z,5.6nm,1.2s
SCHQ Schefferville 74.18 2 *e*P **P 02 19 42.0 -0.9**
comp=Z,4.5nm,1.0s
SCHQ Schefferville 74.18 2 P **P 02 19 43.2 +0.3**
comp=Z,64nm,0.9s,baz=171,slow=4.5,SNR=43
SCHQ LR LR 02 54 00.0
comp=Z,5µm,20.6s,baz=188,slow=37
G17A Pierce Place, 74.23 332 ⇑P **P 02 19 45.0 +1.4**
baz=74,SNR=7.6
F18A Big Timber 74.24 333 ⇑P **P 02 19 44.2 +0.6**
baz=74,SNR=80
E19A Rath Farm, Rou 74.28 334 ⇓P **P 02 19 44.3 +0.5**
baz=75,SNR=139
PAE Paea 74.29 257 *e*P **P 02 19 45.7 +1.3**
comp=Z,11nm,1.0s
PPT2 Papeete2 74.31 257 *e*S **S 02 29 17.0 -0.4**
comp=Z,19µm,23.8s
PPT2 *e*LR LR 02 42 40.0
comp=Z,15µm,24.5s,baz=101
PPT Papeete 74.31 257 LR LR 02 44 13.5
comp=Z,4µm,19.7s,baz=69,slow=29
J13A Cove Ranch, Pi 74.39 328 ⇑P **P 02 19 45.5 +0.9**
baz=75,SNR=43
B23A Brockton 74.42 337 ⇓P **P 02 19 45.2 +0.8**
baz=75,SNR=15
I14A Mackay 74.44 329 ⇓P **P 02 19 46.5 +1.6**
baz=75,SNR=71
A24A Westby 74.44 338 ⇑P **P 02 19 45.4 +0.8**
baz=75,SNR=16
WCN Washoe City 74.49 322 *e*P **P 02 19 45.6 +0.2**
WCN pmax pmax
comp=Z,37nm,1.3s
WCN Washoe City 74.49 322 *e*P **P 02 19 45.5 +0.2**
comp=Z,36nm,1.3s
D20A Manuel Ranch, 74.52 334 ⇑P **P 02 19 45.6 +0.4**
baz=75,SNR=64
H15A Lima 74.57 330 ⇑P **P 02 19 46.9 +1.3**
baz=75
HLID Hailey 74.63 328 *e*P **P 02 19 46.7 +0.6**
comp=Z,99nm,1.1s
HLID LR LR
comp=Z,3µm,20.0s
HLID Hailey 74.63 328 ⇑P **P 02 19 47.2 +1.1**
baz=75,SNR=90
G16A Moss Hill, Enn 74.64 331 ⇑P **P 02 19 46.9 +0.8**
baz=75,SNR=36
F17A Fitzpatrick Pl 74.65 332 ⇓P **P 02 19 47.2 +1.1**
baz=75,SNR=65
B22A Reddig Ranch S 74.66 336 ⇑P **P 02 19 46.6 +0.7**
baz=75,SNR=8.8
C21A Desert Coulee 74.69 335 ⇓P **P 02 19 46.8 +0.7**
baz=75,SNR=30
I13A Wildhorse Cree 74.75 329 ⇓P **P 02 19 47.8 +1.1**
baz=75,SNR=73
A23A Redstone 74.79 337 ⇑P **P 02 19 47.8 +1.1**
baz=75
MCMT McKenzie Canyo 74.82 330 *e*P **P 02 19 47.7 +0.5**
comp=Z,173nm,0.6s
E18A Harlowton 74.84 333 ⇑P **P 02 19 48.0 +0.9**
baz=75,SNR=62
D19A Cripps Ranch, 74.88 334 ⇓P **P 02 19 47.8 +0.5**
baz=75,SNR=60
BOZ Bozeman (W) 74.88 331 *e*P **P 02 19 47.1 -0.3**
BOZ pmax pmax
comp=Z,110nm,1.5s
BOZ MLR MLR
comp=Z,3µm,20.0s
BOZ Bozeman (W) 74.88 331 *e*P **P 02 19 47.1 -0.3**
comp=Z,110nm,1.5s
BOZ LR LR
comp=Z,3µm,20.0s
BOZ Bozeman (W) 74.88 331 ⇓P **P 02 19 47.6 +0.2**
baz=75,SNR=77
H14A Leadore 74.91 330 ⇓P **P 02 19 49.1 +1.5**
baz=75,SNR=49
G15A Dillon 74.91 331 ⇓P **P 02 19 48.5 +0.9**
baz=75,SNR=62
C20A Veseth Ranch, 74.96 335 ⇓P **P 02 19 47.9 +0.2**
baz=75,SNR=45
F16A Kennard Place, 74.99 332 ⇑P **P 02 19 48.7 +0.8**
baz=75,SNR=20
DLMT Dillon 75.11 331 *e*P **P 02 19 49.1 +0.3**
comp=Z,125nm,1.4s
B21A Ellsworth Farm 75.15 336 ⇑P **P 02 19 49.6 +0.9**
baz=75,SNR=13
I12A Atlanta 75.16 328 ⇑P **P 02 19 50.4 +1.3**
baz=75,SNR=89
E17A Martinsdale 75.17 332 ⇑P **P 02 19 49.8 +0.7**
baz=75,SNR=63
A22A Carney Farms, 75.20 337 ⇓P **P 02 19 48.9 -0.1**
baz=76,SNR=48
BEKR Beckworth 75.22 323 *e*P **P 02 19 49.6 +0.1**
comp=Z,35nm,1.3s
MFID Camas Ranch 75.23 328 *e*P **P 02 19 49.3 -0.1**
comp=Z,136nm,1.2s
MFID Camas Ranch 75.23 328 ⇑P **P 02 19 50.6 +1.2**
baz=76,SNR=74
D18A Linhart Farms, 75.29 333 ⇑P **P 02 19 50.7 +1.1**
baz=76,SNR=24
H13A Challis 75.29 329 ⇓P **P 02 19 50.8 +1.0**
baz=76,SNR=95
LRM Limekiln Ridge 75.39 331 *e*P **P 02 19 50.3 -0.2**
comp=Z,431nm,1.2s
C19A Slack Wire Ran 75.40 334 ⇑P **P 02 19 51.5 +1.3**
baz=76
G14A Jackson 75.42 330 ⇓P **P 02 19 51.5 +0.9**
baz=76,SNR=36
F15A Butte 75.42 331 ⇑P **P 02 19 51.4 +0.8**
baz=76,SNR=37
B20A Solberg Farm, 75.55 335 ⇓P **P 02 19 51.8 +0.7**
baz=76
H12A Diamond D Ranc 75.57 329 ⇑P **P 02 19 52.4 +1.0**
baz=76,SNR=51
A21A Bergtoll Ranch 75.58 336 ⇑P **P 02 19 52.0 +0.8**
baz=76
E16A East Helena 75.58 332 ⇓P **P 02 19 52.3 +0.9**
baz=76
D17A Six Diamond Ra 75.63 333 ⇓P **P 02 19 52.4 +0.8**
baz=76,SNR=140
G13A Cobalt 75.67 330 ⇑P **P 02 19 53.1 +1.2**
baz=76,SNR=242
HRY Holter Researc 75.79 332 *e*P **P 02 19 53.3 +0.8**
comp=Z,61nm,1.0s
F14A Wisdom 75.80 331 ⇑P **P 02 19 54.0 +1.3**
baz=76,SNR=39
A20A Cobblestone Ra 75.87 336 ⇓P **P 02 19 53.1 +0.2**
baz=76,SNR=56
D16A Dana Ranch, Ca 75.91 332 ⇓P **P 02 19 54.0 +0.8**
baz=76,SNR=106
EGMT Eagleton 75.92 334 *e*P **P 02 19 52.6 -0.6**
comp=Z,210nm,1.4s
EGMT LR LR
comp=Z,3µm,21.0s
EGMT Eagleton 75.92 334 ⇓P **P 02 19 53.4 +0.1**
baz=76,SNR=54
E15A Deer Lodge 75.93 331 ⇑P **P 02 19 54.4 +1.0**
baz=76
B19A Brinkman Farms 75.94 335 ⇑P **P 02 19 53.7 +0.4**
baz=76,SNR=83
WVOR Wild Horse Val 76.00 325 *e*P **P 02 19 53.9 0.0**
WVOR pmax pmax
comp=Z,25nm,1.1s
WVOR MLR MLR
comp=Z,3µm,20.0s
WVOR Wild Horse Val 76.00 325 *e*P **P 02 19 53.9 0.0**
comp=Z,25nm,1.1s
WVOR LR LR
comp=Z,3µm,20.0s
C17A Wharram Farm, 76.04 333 ⇑P **P 02 19 54.3 +0.4**
baz=76,SNR=52
B18A Beardsley Farm 76.22 334 ⇓P **P 02 19 55.6 +0.6**
baz=76,SNR=79
G12A Big Creek, Yel 76.22 329 ⇓P **P 02 19 56.3 +1.1**
baz=76
A19A Klindworth Far 76.23 335 ⇑P **P 02 19 55.6 +0.7**
baz=76,SNR=48
F13A Darby 76.24 330 ⇑P **P 02 19 55.7 +0.6**
baz=76,SNR=169
E14A Clinton 76.31 331 ⇓P **P 02 19 56.2 +0.6**
baz=77,SNR=79
D15A Lincoln 76.35 332 ⇓P **P 02 19 56.4 +0.6**
baz=77,SNR=59
MOD Modoc 76.55 324 *e*P **P 02 19 56.9 -0.1**
comp=Z,57nm,0.8s
B17A L&G Farms, Che 76.57 334 ⇓P **P 02 19 57.1 +0.3**
baz=77,SNR=44
CHMT Chamberlain Mo 76.58 331 *e*P **P 02 19 58.1 +0.9**
comp=Z,34nm,1.3s
C16A Fuhringer Ranc 76.59 333 ⇓P **P 02 19 57.5 +0.4**
baz=77,SNR=83
F12A Elk City 76.65 330 ⇑P **P 02 19 58.5 +1.1**
baz=77,SNR=64
E13A Victor 76.65 331 ⇑P **P 02 19 58.5 +1.0**
baz=77,SNR=74
A18A Metzger Ranch, 76.67 335 ⇑P **P 02 19 57.7 +0.3**
baz=77,SNR=48
D14A Greenough 76.82 331 ⇓P **P 02 19 59.5 +1.1**
baz=77,SNR=33
MSO Missoula 76.83 331 *e*P **P 02 19 59.7 +1.2**
comp=Z,61nm,1.3s
MSO LR LR
comp=Z,2µm,20.0s
MSO Missoula 76.83 331 ⇑P **P 02 19 59.8 +1.4**
baz=77,SNR=44
SLMT Seeley Lake 76.93 332 *e*P **P 02 19 59.3 +0.2**
comp=Z,56nm,1.0s
C15A Salmond Ranch, 76.94 332 ⇑P **P 02 19 60.0 +0.9**
baz=77,SNR=133
WDC Whiskeytown Da 76.94 322 *e*P **P 02 19 56.9 -2.2**
WDC pmax pmax
comp=Z,31nm,1.1s
WDC Whiskeytown Da 76.94 322 *e*P **P 02 19 56.9 -2.2**
comp=Z,30nm,1.1s
KCPM Cahto Peak 76.99 321 *e*P **P 02 20 00.5 +0.9**
comp=Z,17nm,1.0s
BMO Blue Mountains 77.00 328 *e*P **P 02 19 58.9 -0.5**
BMO pmax pmax
comp=Z,71nm,1.0s
BMO MLR MLR
comp=Z,4µm,20.0s
BMO Blue Mountains 77.00 328 *e*P **P 02 19 58.9 -0.5**
comp=Z,71nm,1.0s
BMO LR LR
comp=Z,4µm,20.0s
KIPM Iron Peak 77.00 321 *e*P **P 02 20 01.1 +1.5**
comp=Z,57nm,1.0s
A17A Triple J Farms 77.04 334 ⇓P **P 02 20 00.0 +0.5**
baz=77,SNR=42
B16A M & M Farms, S 77.04 333 ⇑P **P 02 19 59.8 +0.2**
baz=77,SNR=27
D13A Huson 77.26 331 ⇓P **P 02 20 01.9 +1.0**
baz=78,SNR=40
B15A Bradely Ranch, 77.33 333 ⇓P **P 02 20 01.7 +0.4**
baz=78,SNR=85
SWMT Swartz Lake 77.36 331 *e*P **P 02 20 01.8 +0.4**
comp=Z,44nm,1.1s
A16A West Butte Ran 77.41 334 ⇑P **P 02 20 02.5 +0.8**
baz=78
SBA Scott Base 77.43 191 *e*P **P 02 20 03.3 +2.0**
SBA pmax pmax
comp=Z,183nm,1.7s
SBA MLR MLR
comp=Z,3µm,20.0s
SBA Scott Base 77.43 191 *e*P **P 02 20 03.3 +2.0**
comp=Z,183nm,1.7s
SBA LR LR
comp=Z,3µm,20.0s
C14A Swan Lake 77.44 332 ⇓P **P 02 20 02.9 +1.0**
baz=78
YBMT Yellow Bay 77.63 332 *e*P **P 02 20 03.7 +0.7**
comp=Z,29nm,0.8s
D12A Red Ives Fores 77.64 330 ⇓P **P 02 20 03.9 +0.9**
baz=78
JTMT Jette 77.67 331 *e*P **P 02 20 04.1 +0.9**
comp=Z,42nm,1.1s
B14A Marquette Ranc 77.68 332 ⇓P **P 02 20 03.7 +0.5**
baz=78,SNR=55
C13A Hot Springs 77.75 331 ⇑P **P 02 20 04.6 +1.0**
baz=78,SNR=52
YBH Yreka Blue Hor 77.79 323 *e*P **P 02 20 02.6 -1.3**
comp=Z,27nm,1.1s
KHMM Horse Mountain 77.83 322 *e*P **P 02 20 04.3 +0.1**
comp=Z,129nm,1.5s
BLMT Blacktail Moun 77.90 332 *e*P **P 02 20 05.6 +1.1**
comp=Z,139nm,1.4s
A15A Johnson Ranch, 77.91 333 ⇓P **P 02 20 04.8 +0.3**
baz=78,SNR=29
BSMT Bassoo Peak 77.97 331 *e*P **P 02 20 05.2 +0.3**
comp=Z,58nm,1.2s
TOA0 Torodi Ar. Sit 78.14 71 *e*P **P 02 20 05.0 -1.4**
TORD Torodi Ar. Bea 78.14 71 P **P 02 20 05.2 -1.2**
TORD PKKPbc **PKKPbc 02 39 04.9 -0.4**
TORD P'P' 02 47 16.9
TORD Torodi Ar. Bea 78.14 71 P **P 02 20 05.2 -1.2**
comp=Z,173nm,0.9s,baz=252,slow=3.1,SNR=382
TORD PKKPbc **PKKPbc 02 39 04.9 -0.4**
comp=Z,1.9nm,1.2s,baz=10,slow=0.2,SNR=8.0
TORD PKPPKP P'P'df 02 47 16.9 +8.0
comp=Z,1.2nm,1.1s,baz=71,slow=1.4,SNR=4.3
TORD LR LR 02 54 20.4
comp=Z,14µm,18.5s,baz=240,slow=36
C12B Naegeli Ranch, 78.18 331 ⇓P **P 02 20 07.0 +1.1**
baz=78,SNR=6.4
A14A Double T Ranch 78.21 333 ⇑P **P 02 20 06.2 +0.1**
baz=78,SNR=43
B13A Whitefish 78.22 332 ⇓P **P 02 20 06.5 +0.4**
baz=78,SNR=50
KRMB Red Mountain 78.34 322 *e*P **P 02 20 07.9 +0.9**
comp=Z,71nm,1.2s
VNDA Vanda 78.47 190 P **P 02 20 08.2 +1.2**
VNDA Vanda 78.47 190 P **P 02 20 08.2 +1.2**
comp=Z,13nm,0.9s,baz=134,slow=4.7,SNR=46
VNDA LR LR 02 53 12.3
comp=Z,4µm,20.2s,baz=137,slow=34
WALA Waterton Lakes 78.48 333 *e*P **P 02 20 07.6 0.0**
comp=Z,3.3nm,1.0s
HUMO Hull Mountain 78.49 323 *e*P **P 02 20 07.1 -0.6**
comp=Z,34nm,1.3s
A13A Flathead Natio 78.61 332 ⇓P **P 02 20 09.0 +0.6**
baz=79
C11A Tepee Creek (N 78.64 331 ⇑P **P 02 20 08.8 +0.4**
baz=79,SNR=127

FFC Flin Flon 78.75 342 *e*P P 02 20 08.4 -0.4
FFC pmax pmax
comp=Z,60nm,1.4s
FFC MLR MLR
comp=Z,4µm,21.0s
FFC Flin Flon 78.75 342 *e*P P 02 20 08.4 -0.4
comp=Z,60nm,1.4s
FFC LR LR
comp=Z,4µm,21.0s
FFC Flin Flon 78.75 342 P P 02 20 09.8 +1.0
comp=Z,133nm,1.3s,SNR=14
B12A Libby 78.79 331 ⇑P P 02 20 10.2 +0.9
baz=79,SNR=29
KBO Bosley Butte 78.96 322 *e*P P 02 20 11.5 +1.1
comp=Z,142nm,1.4s
A12A Yaak River Ran 79.16 332 ⇓P P 02 20 12.1 +0.8
baz=79,SNR=45
HAWA Hanford 79.20 328 *e*P P 02 20 11.9 +0.5
comp=Z,105nm,1.1s
HAWA LR LR
comp=Z,5µm,19.0s
CER Ceres 79.33 122 *e*P P 02 20 12.7 0.0
CER AMB AMB 02 20 21.7
comp=Z,22nm,2.4s
ELIM Elim 79.34 123 *e*P P 02 20 13.2 +0.5
NEW Newport 79.35 330 *e*P P 02 20 12.1 -0.2
comp=Z,32nm,1.1s
NEW LR LR
comp=Z,4µm,19.0s
NEW Newport 79.35 330 ⇑P P 02 20 12.6 +0.3
baz=80,SNR=19
KEBM Edson Butte 79.44 323 *e*P P 02 20 14.7 +1.7
comp=Z,124nm,1.3s
OD2 Odessa Site #2 79.48 329 P P 02 20 13.3 +0.3
DPW Davenport 79.58 330 P P 02 20 14.6 +1.0
DPW Davenport 79.58 330 P P 02 20 14.6 +1.0
VLL Laurance Lake 79.67 326 P P 02 20 16.2 +2.0
COR Corvallis 79.96 325 *e*P P 02 20 16.4 +0.8
COR pmax pmax
comp=Z,154nm,1.3s
COR Corvallis 79.96 325 *e*P P 02 20 16.4 +0.8
comp=Z,154nm,1.3s
ASR Mount Adams--S 80.08 327 P P 02 20 18.2 +1.7
CVNA Calvinia 80.25 120 *e*P P 02 20 18.5 +0.7
CVNA AMB AMB 02 20 20.4
comp=Z,224nm,1.2s
WPW White Pass 80.42 327 P P 02 20 19.6 +1.3
ETW Entiat 80.43 328 P P 02 20 18.8 +0.5
LON Longmire 80.59 327 *e*P P 02 20 19.4 +0.3
LON pmax pmax
comp=Z,37nm,1.1s
LON Longmire 80.59 327 *e*P P 02 20 19.4 +0.3
comp=Z,37nm,1.1s
RTC Rabat Centre 80.65 49 PFAKE 02 20 30.0 +10
RTC LR LR
comp=Z,8µm,22.0s
SUR Sutherland 80.84 121 *e*P P 02 20 22.5 +1.5
SUR AMB AMB 02 20 23.7
comp=Z,112nm,2.5s
SUR Sutherland 80.84 121 *e*P P 02 20 22.5 +1.5
comp=Z,33nm,0.8s
SUR LR LR
comp=Z,5µm,19.0s
SUR Sutherland 80.84 121 P P 02 20 23.9 +2.8
SNR=5.1
SUR Sutherland 80.84 121 P P 02 20 23.1 +2.0
comp=Z,476nm,1.1s,SNR=6.5
PFVI Vila Bisbo 80.95 45 *e*P P 02 20 22.8 +1.7
comp=Z,34nm,1.5s
MORF Marmelete 81.16 45 *i*P P 02 20 23.8 +1.5
comp=Z,143nm,1.5s
MORF Marmelete 81.16 45 *e*P P 02 20 22.4 +0.1
MORF *e*S S 02 30 32.4 +1.8
PTEO Sao Teotonio 81.24 45 *e*P P 02 20 24.8 +2.1
comp=Z,256nm,1.4s
LIS Lisbon 81.60 44 *e*P P 02 20 24.6 0.0
LIS *e*S S 02 30 36.5 +1.5
LIS AMS AMS 02 54 49.9
comp=Z,7µm,21.3s
LIS Lisbon 81.60 44 *e*P P 02 20 24.5 0.0
LIS *e*S S 02 30 36.4 +1.5
PBDV Barranco-do-Ve 81.61 46 *i*P P 02 20 25.7 +1.0
comp=Z,130nm,1.3s
PMAFR Mafra 81.64 44 *e*P P 02 20 24.0 -0.8
comp=Z,190nm,1.4s
PNCL Nicolau / Gran 81.68 45 *e*P P 02 20 26.6 +1.6
comp=Z,86nm,1.6s
MDT Midelt 81.68 51 P P 02 20 25.8 +0.5
MDT Midelt 81.68 51 P P 02 20 25.8 +0.5
comp=Z,44nm,0.9s,baz=247,slow=4.6,SNR=53
MDT LR LR 02 53 46.8
comp=Z,1µm,20.9s,baz=255,slow=34
PCVE Castro Verde 81.75 45 *i*P P 02 20 26.3 +0.9
comp=Z,64nm,1.6s
PVAQ Vaqueiros 81.84 46 *e*P P 02 20 25.7 -0.2
comp=Z,54nm,1.5s
PVAQ Vaqueiros 81.84 46 *e*PP PP 02 23 30.5 -3.2
PVAQ *e*S S 02 30 44.2 +6.7
PVAQ *e*LQ LQ 02 42 10.3
PVAQ *e*LR LR 02 47 23.3
comp=Z,5µm,18.0s
TSUM Tsumeb 82.03 107 *e*P P 02 20 28.0 +0.5
TSUM AMB AMB 02 20 29.6
comp=Z,5µm,1.2s
PBEJ Beja 82.07 45 *i*P P 02 20 28.7 +1.6
comp=Z,95nm,1.5s
NLWA Neilton Lookou 82.08 327 *e*P P 02 20 26.9 0.0
comp=Z,66nm,1.1s
NLWA LR LR
comp=Z,5µm,20.0s
EVOP Sao Brissos 82.17 45⇑ *i*P P 02 20 28.6 +1.1
EVOP pmax pmax
comp=Z,182nm,1.4s
EVOP Sao Brissos 82.17 45⇑ *i*P P 02 20 28.6 +1.1
comp=Z,182nm,1.4s
EVO Evora 82.25 45⇑ *i*P P 02 20 28.6 +0.6
comp=Z,182nm,1.4s
EVO *e*R
comp=Z,10µm,20.2s
EVO Evora 82.25 45 *i*P P 02 20 28.5 +0.6
comp=Z,75nm,1.8s
PMTG Montargil 82.39 44 *i*P P 02 20 29.3 +0.6
comp=Z,126nm,1.6s
UPI Upington 82.42 117 *e*P P 02 20 30.6 +1.2
UPI AMB AMB 02 20 46.4
comp=Z,152nm,5.0s
RAR Rarotonga 82.47 250 LR LR 02 48 51.2
comp=Z,9µm,18.7s,baz=190,slow=30
PTOM Tomar 82.57 44 *e*P P 02 20 30.9 +1.3
comp=Z,159nm,1.2s
PGC Sidney 82.68 328 *e*P P 02 20 30.5 +0.5
comp=Z,5.0nm,1.0s
PESTR Estremoz 82.70 44 *i*P P 02 20 31.3 +0.9
comp=Z,111nm,1.4s
PBAR Barrancos 82.71 45 *e*P P 02 20 31.8 +1.4
comp=Z,76nm,1.7s
PMRV Marv??o 83.13 44 *i*P P 02 20 32.9 +0.3
comp=Z,63nm,1.4s
PMRV Marv??o 83.13 44 *e*PP PP 02 23 40.8 -3.5
PMRV *e*S S 02 30 57.2 +6.5
PMRV *e*LQ LQ 02 41 50.4
PMRV *e*LR LR 02 48 09.2
comp=Z,7µm,20.0s
PCBR Castelo Branco 83.30 44 *i*P P 02 20 34.1 +0.7
comp=Z,97nm,1.5s
BUFB Buffelsbos 83.42 124 *e*P P 02 20 34.9 +0.6
BUFB AMB AMB 02 20 36.2
comp=Z,112nm,1.3s
PVIS Viseu 83.50 43 *e*P P 02 20 35.4 +0.9
comp=Z,155nm,1.5s
MTE Manteigas 83.55 43 *i*P P 02 20 35.3 +0.5
comp=Z,179nm,1.3s
MTE Manteigas 83.55 43 *e*PP PP 02 23 50.3 +2.6
MTE *e*S S 02 30 54.3 -0.7
MTE *e*LQ LQ 02 42 55.3
MTE *e*LR LR 02 51 13.7
comp=Z,12µm,18.0s
MTE Manteigas 83.55 43 *e*P P 02 20 35.2 +0.4
comp=Z,151nm,1.3s
MTE LR LR
comp=Z,12µm,19.0s
PVRL Vila Real 83.91 42 *i*P P 02 20 37.4 +0.8
comp=Z,156nm,1.5s
POLO Lamas de Olo 83.91 42 *i*P P 02 20 37.9 +1.2
comp=Z,60nm,1.8s
PGAV Gavieira, Arco 83.94 42 *i*P P 02 20 37.1 +0.4
comp=Z,162nm,1.9s
PGAV Gavieira, Arco 83.94 42 *e*PP PP 02 24 02.8 +12
PGAV *e*S S 02 31 07.0 +8.2
PGAV *e*LQ LQ 02 42 51.7
PGAV *e*LR LR 02 50 05.5
comp=Z,14µm,20.0s
PCAB Cabril 83.95 42 *i*P P 02 20 37.8 +1.1
comp=Z,204nm,1.5s
MVO Moncorvo 84.29 43 *i*P P 02 20 38.8 +0.3
comp=Z,216nm,1.5s
MVO *e*S S 02 31 11.1 +8.7
MVO *e*LQ LQ 02 42 57.5
MVO *e*LR LR 02 51 06.1
comp=Z,11µm,20.0s
SOE Somerset East 84.54 123 *e*P P 02 20 40.9 +0.8
SOE AMB AMB 02 20 42.1
comp=Z,160nm,1.5s
PBRG Braganca 84.81 42 *i*P P 02 20 41.5 +0.4
comp=Z,205nm,1.5s
PAB San Pablo 85.21 45 *e*P P 02 20 43.5 +0.3
PAB pmax pmax
comp=Z,103nm,1.0s
PAB MLR MLR
comp=Z,6µm,20.0s
PAB San Pablo 85.21 45 *e*P P 02 20 43.5 +0.3
comp=Z,103nm,1.0s
PAB LR LR
comp=Z,6µm,20.0s
TAM Tamanrasset 85.31 64 *e*P P 02 20 44.4 +0.2
TAM pmax pmax
comp=Z,142nm,1.2s
TAM MLR MLR
comp=Z,16µm,20.0s
TAM Tamanrasset 85.31 64 *e*P P 02 20 44.4 +0.2
comp=Z,142nm,1.2s
TAM LR LR
comp=Z,16µm,20.0s
ESDC Sonseca Array 85.53 45 P P 02 20 45.5 +0.7
ESDC PKKPbc **PKKPbc** 02 38 50.2 +0.5
ESDC Sonseca Array 85.53 45 P P 02 20 45.5 +0.7
comp=Z,34nm,1.0s,baz=246,slow=5.2,SNR=103
ESDC PKKPbc **PKKPbc** 02 38 50.2 +0.5
comp=Z,0.1nm,0.4s,baz=29,slow=3.4,SNR=4.8
ESDC LR LR 02 58 55.9
comp=Z,4µm,18.6s,baz=235,slow=36
ESLA Sonseca Array 85.53 45 *e*P P 02 20 45.4 +0.5
comp=Z,64nm,1.5s
BOSA Boshof 85.67 119 *e*P P 02 20 46.4 +0.4
BOSA AMB AMB 02 20 47.2
comp=Z,99nm,1.9s
BOSA Boshof 85.67 119 *e*P P 02 20 46.0 0.0
comp=Z,68nm,1.2s
BOSA Boshof 85.67 119 P P 02 20 45.3 -0.6
comp=Z,31nm,1.0s,baz=260,slow=5.0,SNR=22
BOSA LR LR 02 56 01.0
comp=Z,12µm,19.6s,baz=254,slow=34
SWZ Schweizer 86.22 117 *e*P P 02 20 48.7 -0.1
SWZ AMB AMB 02 21 05.0
comp=Z,79nm,4.8s
MAW Mawson 86.58 164 P P 02 20 50.3 +0.8
MAW Mawson 86.58 164 P P 02 20 50.3 +0.8
comp=Z,51nm,1.0s,baz=233,slow=5.4,SNR=7.8
MAW LR LR 03 02 39.1
comp=Z,5µm,19.0s,baz=238,slow=38
LBTB Lobatse 87.18 115⇑ *i*P P 02 20 53.9 +0.4
LBTB AMB AMB 02 20 54.9
comp=Z,91nm,1.9s
LBTB Lobatse 87.18 115 *e*P P 02 20 53.6 +0.1
comp=Z,52nm,1.1s
LBTB ePP PP 02 24 13.5 -3.7
LBTB Lobatse 87.18 115 LR LR 02 56 09.1
comp=Z,7µm,21.1s,baz=254,slow=33
SFJD Kangerlussuaq 87.58 8 PFAKE 02 21 10.0 +16
SFJD LR LR
comp=Z,4µm,21.0s
SFJD Kangerlussuaq 87.58 8 *i*P P 02 20 54.2 +0.1
comp=Z,14nm,0.8s
SFJD
comp=Z,2µm,16.0s
ECHA Ech Chlef 87.60 50 P P 02 20 58.0 +3.1
SEK Senekal 87.72 119 *e*P P 02 20 56.2 +0.2
SEK AMB AMB 02 20 57.3
comp=Z,71nm,2.4s
EBNR Beni Rached 87.78 50 P P 02 20 59.0 +3.1
XMAS Kiritimati 87.80 273 PFAKE 02 21 10.0 +14
XMAS LR LR
comp=Z,8µm,19.0s
KSR Koster 87.99 117 *e*P P 02 20 57.5 +0.1
KSR AMB AMB 02 21 29.1
comp=Z,30nm,3.3s
PRYS Parys 88.00 118 *e*P P 02 20 57.2 -0.2
PRYS AMB AMB 02 20 58.3
comp=Z,65nm,2.6s
VAL Valentia 88.40 33 *e*P P 02 20 57.7 -0.6
VAL Valentia 88.40 33⇑ *i*S S 02 31 52.9 +11
VAL Valentia 88.40 33⇓ *i*SS SS 02 37 32.9 +0.4
EMHD Djebel Mahouad 88.78 51 P P 02 21 02.0 +1.3
YKA Yellowknife Ar 88.89 341 P P 02 20 59.1 -1.3
YKA PKKPbc **PKKPbc** 02 38 40.2 -2.2
YKA P'P' 02 46 52.0
YKA Yellowknife Ar 88.89 341 P P 02 20 59.1 -1.3
comp=Z,80nm,0.9s,baz=137,slow=4.2,SNR=59
YKA PKKPbc **PKKPbc** 02 38 40.2 -2.2
comp=Z,0.8nm,0.9s,baz=317,slow=5.5,SNR=7.2
YKA PKPPKP P'P'df 02 46 52.0 +7.7
comp=Z,0.5nm,1.1s,baz=336,slow=2.1,SNR=3.8
ERPM east rand prop 88.94 117 *e*P P 02 21 02.1 +0.2
ERPM AML AML 02 21 03.4
comp=Z,68nm,2.6s
YKW3 Yellowknife Ar 88.95 341 *e*P P 02 20 59.6 -1.0
SJPF Ste Jean 89.00 43⇑ *i*P P 02 21 02.3 +0.9
comp=Z,181nm,1.2s
SJPF Ste Jean 89.00 43⇑ *i*P P 02 21 02.3 +0.9
SJPF pmax pmax
comp=Z,181nm,1.2s
SJPF Ste Jean 89.00 43⇑ *i*P P 02 21 02.3 +0.9
comp=Z,181nm,1.2s
OSSF Osses 89.04 43 *e*P P 02 21 02.1 +0.5
OSSF Osses 89.04 43 *e*P P 02 21 02.1 +0.5
SLR Silverton 89.20 117 *e*P P 02 21 03.8 +0.8
SLR AMB AMB 02 21 04.4
comp=Z,85nm,3.1s
ETSF Etsaut 89.33 44⇑ *i*P P 02 21 03.9 +0.8
comp=Z,90nm,1.3s
ETSF Etsaut 89.33 44⇑ *i*P P 02 21 03.9 +0.8
ETSF pmax pmax
comp=Z,90nm,1.3s
ETSF Etsaut 89.33 44⇑ *i*P P 02 21 03.9 +0.8
comp=Z,90nm,1.3s
REYF Montagne du Re 89.52 44 *e*P P 02 21 05.1 +1.1
REYF Montagne du Re 89.52 44 *e*P P 02 21 05.1 +1.1
VIEF Viey 89.70 44 *e*P P 02 21 05.9 +1.1
VIEF Viey 89.70 44 *e*P P 02 21 05.9 +1.1
BST Brest 89.79 38 *e*P P 02 21 04.2 -0.8
BST Brest 89.79 38 *e*P P 02 21 04.2 -0.8
LABF Labassere 89.81 44 *e*P P 02 21 06.2 +0.9
LABF Labassere 89.81 44 *e*P P 02 21 06.2 +0.9
RESF Ens 89.88 44 *e*P P 02 21 06.6 +0.9
RESF Ens 89.88 44 *e*P P 02 21 06.6 +0.9
EPF Esparros 89.98 44⇑ *i*P P 02 21 06.7 +0.6
comp=Z,48nm,1.1s
EPF Esparros 89.98 44⇑ *i*P P 02 21 06.7 +0.6
EPF pmax pmax
comp=Z,48nm,1.1s
EPF Esparros 89.98 44⇑ *i*P P 02 21 06.7 +0.6
comp=Z,48nm,1.1s
QUIF Quistinic 90.12 38⇑ *i*P P 02 21 06.4 -0.1
comp=Z,135nm,1.2s
QUIF Quistinic 90.12 38⇑ *i*P P 02 21 06.4 -0.1
QUIF pmax pmax
comp=Z,135nm,1.2s
QUIF Quistinic 90.12 38⇑ *i*P P 02 21 06.4 -0.1
comp=Z,135nm,1.2s
MELF Melles 90.18 44 *e*P P 02 21 08.2 +1.1
MELF Melles 90.18 44 *e*P P 02 21 08.2 +1.1
ROSF Rostrenen 90.27 38 *e*P P 02 21 07.2 0.0
comp=Z,278nm,1.3s
ROSF Rostrenen 90.27 38 *e*P P 02 21 07.2 0.0
ROSF pmax pmax
comp=Z,278nm,1.3s
ROSF Rostrenen 90.27 38 *e*P P 02 21 07.2 0.0
comp=Z,278nm,1.3s
MLS Moulis 90.44 44 *e*P P 02 21 09.1 +0.9
MLS Moulis 90.44 44 *e*P P 02 21 09.1 +0.9
SET Setif 90.58 52 P P 02 21 13.0 +3.9
SGMF Saint Gilles 90.64 38⇑ *i*P P 02 21 08.6 -0.3
comp=Z,138nm,1.4s
SGMF Saint Gilles 90.64 38⇑ *i*P P 02 21 08.6 -0.3
SGMF pmax pmax
comp=Z,138nm,1.4s
SGMF Saint Gilles 90.64 38⇑ *i*P P 02 21 08.6 -0.3
comp=Z,138nm,1.4s
HTL Hartland 90.92 35 *e*P P 02 21 08.5 -1.7
HTL AMB AMB 02 21 11.1
comp=Z,80nm,4.9s
HTL AMS AMS 03 02 22.1
comp=Z,4µm,19.0s
HTL Hartland 90.92 35 P P 02 21 08.5 -1.7
HTL AMB AMB 02 21 11.1
comp=Z,80nm,4.9s
HTL AMS AMS 03 02 22.1
comp=Z,4µm,19.0s
DYA Yadsworthy 90.94 36 *e*P P 02 21 09.0 -1.3
DYA AMB AMB 02 21 11.0
comp=Z,115nm,1.7s
DYA AMS AMS 02 57 36.0
comp=Z,5µm,20.9s
DYA Yadsworthy 90.94 36 P P 02 21 09.0 -1.3
DYA AMB AMB 02 21 11.0
comp=Z,115nm,1.7s
DYA AMS AMS 02 57 36.0
comp=Z,5µm,20.9s
CARF Carcanieres 91.00 45 *e*P P 02 21 11.7 +0.8
CARF Carcanieres 91.00 45 *e*P P 02 21 11.7 +0.8
DRV Dumont d'Urvil 91.03 192 PP PP 02 24 27.0 -19
DRV S SKSac 02 31 15.0 -25
DRV SS **SS** **02 38 10.0 +1.5**
DRV L L 02 45 00.0
DRV R 02 51 00.0
DLF Lyons Farm 91.04 33⇑ *i*P P 02 21 10.4 -0.2
LFF La Frestale 91.10 42⇑ *i*P P 02 21 11.4 +0.3
comp=Z,280nm,1.1s
LFF La Frestale 91.10 42⇑ *i*P P 02 21 11.4 +0.3
LFF pmax pmax
comp=Z,280nm,1.1s
LFF La Frestale 91.10 42⇑ *i*P P 02 21 11.4 +0.3
comp=Z,280nm,1.1s
FILF Fillols 91.23 45 *e*P P 02 21 12.2 +0.2
FILF Fillols 91.23 45 *e*P P 02 21 12.2 +0.2
MFF Saint Martin d 91.30 41⇑ *i*P P 02 21 12.2 +0.1
comp=Z,174nm,1.3s
MFF Saint Martin d 91.30 41⇑ *i*P P 02 21 12.2 +0.1
MFF pmax pmax
comp=Z,174nm,1.3s
MFF Saint Martin d 91.30 41⇑ *i*P P 02 21 12.2 +0.1
comp=Z,174nm,1.3s
JSA Saint Aubin 91.32 38 AMB AMB 02 21 02.8
comp=Z,28nm,2.0s
JSA *e*P P 02 21 11.7 -0.4
JSA AMS AMS 02 57 52.0
comp=Z,5µm,20.3s
JSA Saint Aubin 91.32 38 P P 02 21 11.7 -0.4
JSA AMS AMS 02 57 52.0
comp=Z,5µm,20.3s
JSA Saint Aubin 91.32 38 AMB AMB 02 21 02.8
comp=Z,28nm,2.0s
MTLF Montolieu 91.35 44⇑ *i*P P 02 21 12.4 0.0
comp=Z,91nm,1.2s
MTLF Montolieu 91.35 44⇑ *i*P P 02 21 12.4 0.0
MTLF pmax pmax
comp=Z,91nm,1.2s
MTLF Montolieu 91.35 44⇑ *i*P P 02 21 12.4 0.0
comp=Z,91nm,1.2s
POGA Pongola 91.35 120⇑ *i*P P 02 21 13.6 +0.7
POGA AMB AMB 02 21 15.2
comp=Z,58nm,1.5s
CASM Ain Smara 91.41 52 P P 02 21 14.0 +1.1
GRR Gorron 91.70 39⇑ *i*P P 02 21 13.5 -0.4
comp=Z,118nm,1.0s
GRR Gorron 91.70 39⇑ *i*P P 02 21 13.5 -0.4
GRR pmax pmax
comp=Z,118nm,1.0s
GRR Gorron 91.70 39⇑ *i*P P 02 21 13.5 -0.4
comp=Z,118nm,1.0s
WRAK Wrangell Islan 91.70 331 PFAKE 02 21 20.0 +6.4
WRAK LR LR
comp=Z,3µm,20.0s
RJF Les Rejaudoux 91.75 42⇑ *i*P P 02 21 14.2 0.0
comp=Z,201nm,1.3s
RJF *e*R
comp=Z,11µm,22.0s
RJF Les Rejaudoux 91.75 42⇑ *i*P P 02 21 14.2 0.0
RJF pmax pmax
comp=Z,201nm,1.3s
RJF Les Rejaudoux 91.75 42⇑ *i*P P 02 21 14.2 0.0
comp=Z,201nm,1.3s
DLBC Dease Lake 91.82 333 *e*P P 02 21 13.8 -0.5
CAEH `Ain El Ouahch 91.88 52 P P 02 21 15.0 0.0
MSNA Messina 91.92 114 *e*P P 02 21 17.6 +1.9
MSNA AMB AMB 02 21 18.3
comp=Z,86nm,1.6s
CAF Calviac 91.94 43⇑ *i*P P 02 21 15.3 +0.2
comp=Z,118nm,1.3s
CAF Calviac 91.94 43⇑ *i*P P 02 21 15.3 +0.2
CAF pmax pmax
comp=Z,119nm,1.3s
CAF Calviac 91.94 43⇑ *i*P P 02 21 15.3 +0.2
comp=Z,118nm,1.3s
YRC Rhoscolyn 92.02 33 *e*P P 02 21 15.1 -0.1
YRC Rhoscolyn 92.02 33 P P 02 21 15.1 -0.1
BORG Borgarnes 92.09 19 *e*P P 02 21 16.6 +1.3
comp=Z,128nm,1.4s
BORG LR LR
comp=Z,4µm,22.0s
BORG Borgarnes 92.09 19 P P 02 21 17.6 +2.3
comp=Z,314nm,1.1s,SNR=5.7
BORG Borgarnes 92.09 19 P P 02 21 16.6 +1.3
comp=Z,33nm,1.0s,baz=229,slow=3.3,SNR=9.9
FLN La Foliniere 92.10 38⇑ *i*P P 02 21 15.6 -0.1
comp=Z,165nm,1.2s
FLN *e*R
comp=Z,11µm,21.2s
FLN La Foliniere 92.10 38⇑ *i*P P 02 21 15.6 -0.1
FLN pmax pmax
comp=Z,165nm,1.2s
FLN La Foliniere 92.10 38⇑ *i*P P 02 21 15.6 -0.1
comp=Z,165nm,1.2s
WLF1 Llynfaes 92.13 33 *e*P P 02 21 13.5 -2.2
WLF1 AMS AMS 02 56 43.6
comp=Z,4µm,24.0s
WLF1 Llynfaes 92.13 33 P P 02 21 13.5 -2.2
WLF1 AMS AMS 02 56 43.6
comp=Z,4µm,24.0s
ABSA Djebel Ababsia 92.15 52 P P 02 21 17.0 +0.6
MCH1 Michaelchurch 92.22 35 *e*P P 02 21 14.9 -1.2
MCH1 AMB AMB 02 21 16.4
comp=Z,54nm,2.3s
MCH1 AMS AMS 02 58 31.5
comp=Z,3µm,23.7s
MCH1 Michaelchurch 92.22 35 P P 02 21 14.9 -1.2
MCH1 AMB AMB 02 21 16.4
comp=Z,54nm,2.3s
MCH1 AMS AMS 02 58 31.5
comp=Z,3µm,23.7s
WME Myndd Eilian 92.23 33 *e*P P 02 21 15.8 -0.4
WME Myndd Eilian 92.23 33 P P 02 21 15.8 -0.4
LDF La Druitiere 92.23 39⇑ *i*P P 02 21 16.1 -0.2
comp=Z,115nm,1.0s
LDF La Druitiere 92.23 39⇑ *i*P P 02 21 16.1 -0.2
LDF pmax pmax
comp=Z,115nm,1.0s
LDF La Druitiere 92.23 39⇑ *i*P P 02 21 16.1 -0.2
comp=Z,115nm,1.0s
CMAH Djebel Manchou 92.25 52 P P 02 21 17.0 +0.2
WPM1 Penmaenmawr 92.37 33 *e*P P 02 21 16.8 -0.1
WPM1 Penmaenmawr 92.37 33 P P 02 21 16.8 -0.1
FRNF Fournols 92.45 42 *e*P P 02 21 18.0 +0.5
FRNF Fournols 92.45 42 *e*P P 02 21 18.0 +0.5
HLM1 Long Mynd 92.54 34 *e*P P 02 21 17.1 -0.6
HLM1 AMB AMB 02 21 19.4
comp=Z,45nm,2.2s
HLM1 Long Mynd 92.54 34 P P 02 21 17.1 -0.6
HLM1 AMB AMB 02 21 19.4
comp=Z,45nm,2.2s
FOEL Foel Wylfa 92.55 34 *e*P P 02 21 18.1 +0.4
FOEL AMB AMB 02 21 18.5
comp=Z,86nm,1.5s
FOEL AMS AMS 02 58 02.2
comp=Z,4µm,21.7s
FOEL Foel Wylfa 92.55 34 P P 02 21 18.1 +0.4
FOEL AMB AMB 02 21 18.5

comp=Z,86nm,1.5s
FOEL AMS AMS 02 58 02.2
comp=Z,4µm,21.7s
TCF Toulx Ste Croi 92.62 42⇑*i*P P 02 21 18.0 -0.2
comp=Z,109nm,1.5s
TCF Toulx Ste Croi 92.62 42⇑*i*P P 02 21 18.0 -0.2
TCF pmax pmax
comp=Z,109nm,1.5s
TCF Toulx Ste Croi 92.62 42⇑*i*P P 02 21 18.0 -0.2
comp=Z,109nm,1.5s
SWN1 Swindon 92.64 36 *e*P P 02 21 17.1 -1.0
SWN1 AMB AMB 02 21 18.6
comp=Z,64nm,4.0s
SWN1 AMS AMS 02 58 39.7
comp=Z,4µm,19.6s
SWN1 Swindon 92.64 36 P P 02 21 17.1 -1.0
SWN1 AMB AMB 02 21 18.6
comp=Z,64nm,4.0s
SWN1 AMS AMS 02 58 39.7
comp=Z,4µm,19.6s
LASF Ste Croix 92.73 44 *e*P P 02 21 18.2 -0.6
comp=Z,115nm,1.6s
LASF Ste Croix 92.73 44 *e*P P 02 21 18.2 -0.6
comp=Z,115nm,1.6s
GAL1 Galloway 92.77 32 *e*P P 02 21 16.6 -2.0
GAL1 AMB AMB 02 21 19.5
comp=Z,68nm,1.2s
GAL1 AMS AMS 02 59 01.4
comp=Z,4µm,20.3s
GAL1 Galloway 92.77 32 P P 02 21 16.6 -2.0
GAL1 AMB AMB 02 21 19.5
comp=Z,68nm,1.2s
GAL1 AMS AMS 02 59 01.4
comp=Z,4µm,20.3s
LBL Lubilhac 92.83 43 *e*P P 02 21 19.9 +0.6
LBL Lubilhac 92.83 43 *e*P P 02 21 19.9 +0.6
LBL Lubilhac 92.83 43 *e*P P 02 21 19.9 +0.6
WOL Wolverton 92.86 36 *e*P P 02 21 16.2 -3.0
WOL AMB AMB 02 21 25.9
comp=Z,82nm,2.5s
WOL AMS AMS 02 58 56.9
comp=Z,6µm,19.9s
WOL Wolverton 92.86 36 P P 02 21 16.2 -3.0
WOL AMB AMB 02 21 25.9
comp=Z,82nm,2.5s
WOL AMS AMS 02 58 56.9
comp=Z,6µm,19.9s
LSZ Lusaka 92.88 107 *e*P P 02 21 22.6 +2.3
LSZ Lusaka 92.88 107 *e*P P 02 21 19.8 -0.6
comp=Z,16nm,1.1s
LSZ *e*PP PP 02 24 60.0 -2.9
LSZ LR LR
comp=Z,10µm,21.0s
LSZ Lusaka 92.88 107 P P 02 21 23.1 +2.8
SNR=5.7
PYM Petit Puy Mans 92.89 42 *e*P P 02 21 19.7 +0.1
PYM Petit Puy Mans 92.89 42 *e*P P 02 21 19.7 +0.1
PYM Petit Puy Mans 92.89 42 *e*P P 02 21 19.7 +0.1
AGO Saint Agoulin 93.10 42 *e*P P 02 21 20.8 +0.4
AGO Saint Agoulin 93.10 42 *e*P P 02 21 20.8 +0.4
BGF Bois d'Agland 93.13 41⇑*i*P P 02 21 20.5 -0.1
comp=Z,101nm,1.1s
BGF Bois d'Agland 93.13 41⇑*i*P P 02 21 20.5 -0.1
BGF pmax pmax
comp=Z,101nm,1.1s
BGF Bois d'Agland 93.13 41⇑*i*P P 02 21 20.5 -0.1
comp=Z,101nm,1.1s
HYF Humbligny 93.31 41 *e*P P 02 21 21.4 0.0
HYF Humbligny 93.31 41 *e*P P 02 21 21.4 0.0
KEST Kesra 93.35 53 *e*P P 02 21 20.5 -1.4
KEST PP PP 02 25 06.1 -0.3
KEST Kesra 93.35 53 P P 02 21 22.9 +1.0
comp=Z,4.1nm,1.0s,baz=110,slow=4.1,SNR=9.9
KEST PP PP 02 25 06.1 -0.3
comp=Z,1.8nm,0.8s,baz=216,slow=16,SNR=3.8
KEST LR LR 03 07 15.2
comp=Z,3µm,18.6s,baz=204,slow=38
PGBU Glenifferbraes 93.36 31 *e*P P 02 21 18.1 -3.2
PGBU AMB AMB 02 21 21.3
comp=Z,111nm,3.3s
PGBU AMS AMS 02 58 34.6
comp=Z,6µm,20.3s
PGBU Glenifferbraes 93.36 31 P P 02 21 18.1 -3.2
PGBU AMB AMB 02 21 21.3
comp=Z,111nm,3.3s
PGBU AMS AMS 02 58 34.6
comp=Z,6µm,20.3s
KESW Keswick, Cumbr 93.44 33 *e*P P 02 21 20.6 -1.1
KESW AMB AMB 02 21 23.0
comp=Z,58nm,1.0s
KESW AMS AMS 02 59 52.3
comp=Z,4µm,19.7s
KESW Keswick, Cumbr 93.44 33 P P 02 21 20.6 -1.1
KESW AMB AMB 02 21 23.0
comp=Z,58nm,1.0s
KESW AMS AMS 02 59 52.3
comp=Z,4µm,19.7s
AVF Avril sur Loir 93.55 41⇑*i*P P 02 21 22.2 -0.2
comp=Z,96nm,1.5s
AVF Avril sur Loir 93.55 41⇑*i*P P 02 21 22.2 -0.2
AVF pmax pmax
comp=Z,96nm,1.5s
AVF Avril sur Loir 93.55 41⇑*i*P P 02 21 22.2 -0.2
comp=Z,96nm,1.5s
LHO Holmfirth 93.58 34 *e*P P 02 21 22.7 +0.3
LHO Holmfirth 93.58 34 P P 02 21 22.7 +0.3
VIVF Saint-Julien-l 93.59 44⇑*i*P P 02 21 23.3 +0.6
comp=Z,111nm,1.3s
VIVF Saint-Julien-l 93.59 44⇑*i*P P 02 21 23.3 +0.6
VIVF pmax pmax
comp=Z,111nm,1.3s
VIVF Saint-Julien-l 93.59 44⇑*i*P P 02 21 23.3 +0.6
comp=Z,111nm,1.3s
KPL Plockton 93.59 29 *e*P P 02 21 19.6 -2.7
KPL AMB AMB 02 21 29.8
comp=Z,45nm,2.8s
KPL AMS AMS 02 57 54.9
comp=Z,5µm,22.6s
KPL Plockton 93.59 29 P P 02 21 19.6 -2.7
KPL AMB AMB 02 21 29.8
comp=Z,45nm,2.8s
KPL AMS AMS 02 57 54.9
comp=Z,5µm,22.6s
SSB Saint Sauveur 93.68 43 *e*P P 02 21 23.6 +0.4
SSB pmax pmax
comp=Z,71nm,1.4s
SSB MLR MLR
comp=Z,11µm,20.0s
SSB Saint Sauveur 93.68 43 *e*P P 02 21 23.6 +0.4
comp=Z,71nm,1.4s
SSB LR LR
comp=Z,11µm,20.0s
SSB Saint Sauveur 93.68 43 *e*P P 02 21 23.9 +0.8
ESK Eskdalemuir 93.75 32 *e*P P 02 21 23.1 0.0
ESK AMB AMB 02 21 23.9
comp=Z,64nm,1.5s
ESK AMS AMS 02 59 28.9
comp=Z,2µm,20.7s
ESK Eskdalemuir 93.75 32 P P 02 21 23.1 0.0
ESK AMB AMB 02 21 23.9
comp=Z,64nm,1.5s
ESK AMS AMS 02 59 28.9
comp=Z,2µm,20.7s
ESK Eskdalemuir 93.75 32 *e*P P 02 21 23.1 0.0
ESK pmax pmax
comp=Z,20nm,1.1s
ESK MLR MLR
comp=Z,3µm,20.0s
ESK Eskdalemuir 93.75 32 *e*P P 02 21 23.1 0.0
comp=Z,20nm,1.1s
ESK LR LR
comp=Z,3µm,20.0s
SSF Saint Saulge 93.76 41⇑*i*P P 02 21 22.9 -0.5
comp=Z,81nm,1.5s
SSF Saint Saulge 93.76 41⇑*i*P P 02 21 22.9 -0.5
SSF pmax pmax
comp=Z,81nm,1.5s
SSF Saint Saulge 93.76 41⇑*i*P P 02 21 22.9 -0.5
comp=Z,81nm,1.5s
EKA Eskdalemuir Ar 93.78 32 P P 02 21 22.9 -0.4
EKA Eskdalemuir Ar 93.78 32 P P 02 21 22.9 -0.4
comp=Z,21nm,0.9s,baz=235,slow=3.8,SNR=18
SMF Signal de Mont 93.79 42⇑*i*P P 02 21 23.6 0.0
comp=Z,197nm,1.4s
SMF Signal de Mont 93.79 42⇑*i*P P 02 21 23.6 0.0
SMF pmax pmax
comp=Z,197nm,1.4s
SMF Signal de Mont 93.79 42⇑*i*P P 02 21 23.6 0.0
comp=Z,197nm,1.4s
SMRF Simiane la Rot 93.83 45 *e*P P 02 21 23.3 -0.6
comp=Z,87nm,1.6s
SMRF Simiane la Rot 93.83 45 *e*P P 02 21 23.3 -0.6
comp=Z,87nm,1.6s
XAL Allendale 94.02 33 *e*P P 02 21 24.5 +0.1
XAL Allendale 94.02 33 P P 02 21 24.5 +0.1
EDI Edinburgh 94.05 31 *e*P P 02 21 21.8 -2.7
EDI AMB AMB 02 21 27.8
comp=Z,40nm,3.1s
EDI AMS AMS 02 59 04.8
comp=Z,5µm,19.4s
EDI Edinburgh 94.05 31 P P 02 21 21.8 -2.7
EDI AMB AMB 02 21 27.8
comp=Z,40nm,3.1s
EDI AMS AMS 02 59 04.8
comp=Z,5µm,19.4s
LOR Lormes 94.06 41⇑*i*P P 02 21 24.3 -0.5
comp=Z,66nm,1.3s
LOR *e*R
comp=Z,9µm,21.0s
LOR Lormes 94.06 41⇑*i*P P 02 21 24.3 -0.5
comp=Z,66nm,1.3s
ELSH Elham, Standar 94.11 37 AMB AMB 02 21 17.0
comp=Z,55nm,2.5s
ELSH *e*P P 02 21 24.1 -0.8
ELSH AMS AMS 02 59 45.3
comp=Z,6µm,19.6s
ELSH Elham, Standar 94.11 37 P P 02 21 24.1 -0.8
ELSH AMS AMS 02 59 45.3
comp=Z,6µm,19.6s
ELSH Elham, Standar 94.11 37 AMB AMB 02 21 17.0
comp=Z,55nm,2.5s
LMR La Mourre 94.20 45⇑*i*P P 02 21 25.8 +0.3
comp=Z,78nm,1.3s
LMR La Mourre 94.20 45⇑*i*P P 02 21 25.8 +0.3
LMR pmax pmax
comp=Z,78nm,1.3s
LMR La Mourre 94.20 45⇑*i*P P 02 21 25.8 +0.3
comp=Z,78nm,1.3s
MDO Dochfour 94.24 30 *e*P P 02 21 22.5 -2.9
MDO Dochfour 94.24 30 P P 02 21 22.5 -2.9
FRF La Foret Royal 94.38 45⇑*i*P P 02 21 26.8 +0.5
comp=Z,91nm,1.5s
FRF La Foret Royal 94.38 45⇑*i*P P 02 21 26.8 +0.5
FRF pmax pmax
comp=Z,91nm,1.5s
FRF La Foret Royal 94.38 45⇑*i*P P 02 21 26.8 +0.5
comp=Z,91nm,1.5s
CASY Casey 94.40 180 *e*P P 02 21 27.1 +1.0
comp=Z,27nm,0.9s
CASY LR LR
comp=Z,3µm,20.0s
ORIF Oris-en-Rattie 94.40 44⇑*i*P P 02 21 27.4 +0.9
comp=Z,142nm,1.5s
ORIF *e*R
comp=Z,19µm,20.5s
ORIF Oris-en-Rattie 94.40 44⇑*i*P P 02 21 27.4 +0.9
ORIF pmax pmax
comp=Z,142nm,1.5s
ORIF Oris-en-Rattie 94.40 44⇑*i*P P 02 21 27.4 +0.9
comp=Z,142nm,1.5s
SUMG Summit 94.41 9 *e*P P 02 21 26.8 +0.5
SUMG pmax pmax
comp=Z,62nm,1.1s
SUMG Summit 94.41 9 *e*P P 02 21 26.8 +0.5
comp=Z,62nm,1.1s
SUMG Summit 94.41 9 *i*P P 02 21 27.6 +1.3
comp=Z,22nm,0.9s
SUMG
comp=Z,5µm,20.0s
URZ Urewera 94.43 227 LR LR 02 55 21.8
comp=Z,9µm,19.4s,baz=126,slow=30
SNZO South Karori 94.52 223 PFAKE 02 21 40.0 +13
SNZO LR LR
comp=Z,4µm,20.0s
MVH1 Achvaich 94.57 29 *e*P P 02 21 26.7 -0.1
MVH1 Achvaich 94.57 29 P P 02 21 26.7 -0.1
CALN Calern 94.61 45 *e*P P 02 21 28.9 +1.3
CALN Calern 94.61 45 *e*P P 02 21 28.9 +1.3
CALN Calern 94.61 45 *e*P P 02 21 28.9 +1.3
VSL Villasalto 94.75 50 PFAKE 02 21 40.0 +12
VSL LR LR
comp=Z,4µm,19.0s
RAO Raoul Island 94.86 237 PFAKE 02 21 40.0 +11
RAO LR LR
comp=Z,4µm,22.0s
MBDF Montbardon 94.91 44⇑*i*P P 02 21 29.5 +0.5
comp=Z,93nm,1.5s
MBDF Montbardon 94.91 44⇑*i*P P 02 21 29.5 +0.5
MBDF pmax pmax
comp=Z,93nm,1.5s
MBDF Montbardon 94.91 44⇑*i*P P 02 21 29.5 +0.5
comp=Z,93nm,1.5s
REVF Revere 94.93 45 *e*P P 02 21 30.1 +1.2
REVF Revere 94.93 45 *e*P P 02 21 30.1 +1.2
REVF Revere 94.93 45 *e*P P 02 21 30.1 +1.2
TOUF Mont Tournerai 94.95 45 *e*P P 02 21 23.7 -5.5
TOUF Mont Tournerai 94.95 45 *e*P P 02 21 23.7 -5.5
TOUF Mont Tournerai 94.95 45 *e*P P 02 21 23.7 -5.5
BNI Bardonecchia 94.97 44 *e*P P 02 21 30.0 +0.8
BNI pmax pmax
comp=Z,23nm,1.4s
BNI MLR MLR
comp=Z,18µm,20.0s
BNI Bardonecchia 94.97 44 *e*P P 02 21 29.9 +0.8
comp=Z,23nm,1.4s
BNI LR LR
comp=Z,18µm,20.0s
SBF Sospel 95.02 45 *e*P P 02 21 28.6 -0.8
comp=Z,107nm,1.3s
SBF Sospel 95.02 45 *e*P P 02 21 28.6 -0.8
SBF pmax pmax
comp=Z,107nm,1.3s
SBF Sospel 95.02 45 *e*P P 02 21 28.6 -0.8
comp=Z,107nm,1.3s
SAOF Saorge 95.15 45 *e*P P 02 21 28.6 -1.3
SAOF Saorge 95.15 45 *e*P P 02 21 28.6 -1.3
SAOF Saorge 95.15 45 *e*P P 02 21 28.6 -1.3
SFTF Sexfontaines 95.17 41⇑*i*P P 02 21 29.6 -0.3
comp=Z,121nm,1.1s
SFTF Sexfontaines 95.17 41⇑*i*P P 02 21 29.6 -0.3
comp=Z,121nm,1.1s
LPL La Plagne 95.19 44⇑*i*P P 02 21 31.1 +0.8
comp=Z,66nm,1.1s
LPL La Plagne 95.19 44⇑*i*P P 02 21 31.1 +0.8
LPL pmax pmax
comp=Z,66nm,1.1s
LPL La Plagne 95.19 44⇑*i*P P 02 21 31.1 +0.8
comp=Z,66nm,1.1s
LPG La Plagne 95.19 44⇑*i*P P 02 21 31.3 +0.9
comp=Z,106nm,1.3s
LPG La Plagne 95.19 44⇑*i*P P 02 21 31.3 +0.9
LPG pmax pmax
comp=Z,106nm,1.3s
LPG La Plagne 95.19 44⇑*i*P P 02 21 31.3 +0.9
comp=Z,106nm,1.3s
CABF La Chapelle 95.20 42⇑*i*P P 02 21 30.3 +0.2
comp=Z,59nm,1.2s
CABF La Chapelle 95.20 42⇑*i*P P 02 21 30.3 +0.2
CABF pmax pmax
comp=Z,59nm,1.2s
CABF La Chapelle 95.20 42⇑*i*P P 02 21 30.3 +0.2
comp=Z,59nm,1.2s
MEZF Maizieres J'vi 95.30 40⇑*i*P P 02 21 30.4 0.0
comp=Z,83nm,1.1s
MEZF Maizieres J'vi 95.30 40⇑*i*P P 02 21 30.4 0.0
comp=Z,83nm,1.1s
RES Resolute Bay 95.33 354 *e*P P 02 21 30.1 +0.1
comp=Z,8.8nm,1.1s
RES PP PP 02 25 19.1 -1.8
RES Resolute Bay 95.33 354 PP PP 02 25 19.1 -1.8
comp=Z,2.9nm,0.9s,baz=165,slow=1.5,SNR=3.7
BAIF Baives 95.42 39⇑*i*P P 02 21 30.8 -0.1
comp=Z,40nm,1.3s
BAIF Baives 95.42 39⇑*i*P P 02 21 30.8 -0.1
BAIF pmax pmax
comp=Z,40nm,1.3s
BAIF Baives 95.42 39⇑*i*P P 02 21 30.8 -0.1
comp=Z,40nm,1.3s
SOFL Sornfelli, Far 95.51 25 *e*P P 02 21 32.6 +1.5
SOFL AMS AMS 02 59 56.6
comp=Z,6µm,21.4s
SOFL Sornfelli, Far 95.51 25 P P 02 21 32.6 +1.5
SOFL AMS AMS 02 59 56.6
comp=Z,6µm,21.4s
RPZ Rata Peaks 95.52 220 LR LR 02 54 45.7
comp=Z,8µm,20.8s,baz=90,slow=29
SNF Seneffe 95.65 38 P P 02 21 32.2 +0.2
comp=Z,20nm,1.8s
DOU Dourbes 95.66 39 P P 02 21 32.3 +0.2
comp=Z,19nm,1.4s
AFI Afiamalu 95.71 253 LR LR 02 56 46.7
comp=Z,4µm,18.1s,baz=144,slow=30
PAGF Fort de Pagny 95.73 40⇑*i*P P 02 21 32.6 +0.2
comp=Z,35nm,1.1s
PAGF Fort de Pagny 95.73 40⇑*i*P P 02 21 32.6 +0.2
comp=Z,35nm,1.1s
THEF They Montfort 95.76 41 *e*P P 02 21 32.7 +0.1
THEF They Montfort 95.76 41 *e*P P 02 21 32.7 +0.1
THEF They Montfort 95.76 41 *e*P P 02 21 32.7 +0.1
GIVF Givet 95.80 39⇑*i*P P 02 21 32.7 0.0
comp=Z,151nm,1.3s
GIVF Givet 95.80 39⇑*i*P P 02 21 32.7 0.0
GIVF pmax pmax
comp=Z,151nm,1.3s
GIVF Givet 95.80 39⇑*i*P P 02 21 32.7 0.0
comp=Z,151nm,1.3s
UCC Uccle 95.81 38 P P 02 21 32.4 -0.3
HAU Haudompre 95.90 41⇑*i*P P 02 21 32.9 -0.3
comp=Z,52nm,1.1s
HAU *e*R
comp=Z,6µm,20.8s
HAU Haudompre 95.90 41⇑*i*P P 02 21 32.9 -0.3
HAU pmax pmax
comp=Z,53nm,1.1s
HAU Haudompre 95.90 41⇑*i*P P 02 21 32.9 -0.3
comp=Z,52nm,1.1s
LOMF Lomont 95.95 42 *e*P P 02 21 33.6 +0.1
LOMF Lomont 95.95 42 *e*P P 02 21 33.6 +0.1
LOMF Lomont 95.95 42 *e*P P 02 21 33.6 +0.1
SCO Scoresbysund 95.97 15⇑*i*P P 02 21 34.2 +1.2
SCO pmax pmax
comp=Z,5.0nm,0.8s
SCO MLR MLR
comp=Z,3µm,21.0s
SCO Scoresbysund 95.97 15⇑*i*P P 02 21 34.2 +1.2
comp=Z,4.8nm,0.8s
SCO
comp=Z,3µm,20.0s
HINF Hinteralfeld 96.14 41⇑*i*P P 02 21 33.9 -0.5
comp=Z,50nm,1.2s
HINF Hinteralfeld 96.14 41⇑*i*P P 02 21 33.9 -0.5
HINF pmax pmax
comp=Z,50nm,1.2s
HINF Hinteralfeld 96.14 41⇑*i*P P 02 21 33.9 -0.5
comp=Z,50nm,1.2s
BCLA Clavier 96.21 39 P P 02 21 35.1 +0.5
MOF Molkenrain 96.33 41 *e*P P 02 21 35.1 -0.2
MOF Molkenrain 96.33 41 *e*P P 02 21 35.1 -0.2
MOF Molkenrain 96.33 41 *e*P P 02 21 35.1 -0.2
WLF Walferdange 96.42 40 P P 02 21 36.4 +0.8
comp=Z,56nm,1.5s
WLF Walferdange 96.42 40 *e*P P 02 21 36.1 +0.6
WLF pmax pmax
comp=Z,99nm,1.3s
WLF MLR MLR
comp=Z,10µm,21.0s
WLF Walferdange 96.42 40 *e*P P 02 21 36.7 +1.2
comp=Z,103nm,1.3s
WLF Walferdange 96.42 40 *e*P P 02 21 36.1 +0.6
comp=Z,99nm,1.3s
WLF LR LR
comp=Z,10µm,21.0s
BBS Basel-Blauen 96.42 42 *e*P P 02 21 35.6 0.0
BBS Basel-Blauen 96.42 42 *e*P P 02 21 35.6 0.0
ECH Echery 96.48 41 *e*P P 02 21 35.3 -0.6
ECH *e* 02 25 27.4
ECH pmax pmax
comp=Z,46nm,1.2s
ECH MLR MLR
comp=Z,4µm,20.0s
ECH Echery 96.48 41 *e*P P 02 21 35.2 -0.6
comp=Z,46nm,1.2s
ECH *e*PP PP 02 25 27.4 -3.0
ECH LR LR
comp=Z,4µm,20.0s
ECH Echery 96.48 41 *e*P P 02 21 35.8 -0.1
BEBN Eben Emael 96.58 38 P P 02 21 36.9 +0.8
CDF Champ du Feu 96.63 41⇑*i*P P 02 21 36.4 -0.2
comp=Z,85nm,1.2s
CDF Champ du Feu 96.63 41⇑*i*P P 02 21 36.4 -0.2
CDF pmax pmax
comp=Z,85nm,1.2s
CDF Champ du Feu 96.63 41⇑*i*P P 02 21 36.4 -0.2
comp=Z,85nm,1.2s
MEM Membach 96.70 39 P P 02 21 37.1 +0.4
comp=Z,18nm,1.5s
HGN Heimansgroeve 96.71 38 *e*P P 02 21 37.0 +0.2
comp=Z,46nm,1.3s
FELD Feldberg im Sc 96.88 42 *e*P P 02 21 37.9 0.0
RUP Ruppelstein 96.98 40 *e*P P 02 21 38.6 +0.5
RUP Ruppelstein 96.98 40 *e*P P 02 21 38.6 +0.5
LRW Lerwick 97.00 28 AMB AMB 02 21 22.9
comp=Z,85nm,2.6s
LRW *e*P P 02 21 35.1 -2.7
LRW AMS AMS 03 01 44.1
comp=Z,5µm,21.0s
LRW Lerwick 97.00 28 P P 02 21 35.1 -2.7
LRW AMS AMS 03 01 44.1
comp=Z,5µm,21.0s
LRW Lerwick 97.00 28 AMB AMB 02 21 22.9
comp=Z,85nm,2.6s
VLC Villacollemand 97.11 46 PFAKE 02 21 50.0 +11
VLC LR LR
comp=Z,3µm,19.0s
LANF Langenberg 97.17 41 *e*P Pdif 02 21 39.0 0.0
LANF Langenberg 97.17 41 *e*P Pdif 02 21 39.0 0.0
LANF Langenberg 97.17 41 *e*P Pdif 02 21 39.0 0.0
TUE Stuetta 97.23 43 *e*P P 02 21 38.2 -1.4
comp=Z,17nm,1.2s
TUE LR LR
comp=Z,5µm,21.0s
BFO Black Forest 97.25 41 *e*P P 02 21 38.6 -0.8
BFO *e* 02 25 34.1
BFO pmax pmax
comp=Z,12nm,1.1s
BFO MLR MLR
comp=Z,6µm,21.0s
BFO Black Forest 97.25 41 *e*P Pdif 02 21 39.7 +0.2
comp=Z,21nm,1.3s
BFO Black Forest 97.25 41 *e*P P 02 21 38.6 -0.8
comp=Z,12nm,1.1s
BFO *e*PP PP 02 25 34.1 -2.3
BFO LR LR
comp=Z,6µm,21.0s
ABH Alteburg 97.34 40 *e*P Pdif 02 21 39.9 +0.1
WDD Wield Dalam 97.35 55 PFAKE 02 21 50.0 +10
WDD LR LR
comp=Z,5µm,21.0s
SPAK Spaichingen-Ko 97.45 42 *e*P P 02 21 40.3 -0.1
KTD Kalmit 97.46 40 *e*P Pdif 02 21 40.5 +0.1
KTD Kalmit 97.46 40 *e*P Pdif 02 21 40.5 +0.1
WTSB Winterswijk 97.67 38 *e*P Pdif 02 21 41.5 +0.4
comp=Z,70nm,1.2s
DAVOX Davos/Dischmat 97.69 43 P P 02 21 41.0 -0.6
DAVOX Davos/Dischmat 97.69 43 P P 02 21 41.0 -0.6
comp=Z,8.7nm,0.9s,baz=246,slow=3.0,SNR=9.5
BUG Bochum--Univer 97.75 38 *e*P Pdif 02 21 42.5 +1.0
comp=Z,84nm,1.4s
DAVA Damuels 97.86 43⇑*i*PcP Pdif 02 21 42.7 +0.3
comp=Z,25nm,1.1s
DAVA Damuels 97.86 43⇑*i*P Pdif 02 21 42.7 +0.3
comp=Z,25nm,1.1s
STU Stuttgart 97.95 41 *e*P P 02 21 41.6 -0.8
STU pmax pmax
comp=Z,46nm,1.0s
STU Stuttgart 97.95 41 *e*P Pdif 02 21 43.2 +0.7
comp=Z,47nm,1.0s
STU Stuttgart 97.95 41 *e*P P 02 21 41.6 -0.8
comp=Z,46nm,1.0s
TOD Tromm 98.00 40 *e*P P 02 21 42.3 -0.4
TOD Tromm 98.00 40 *e*P P 02 21 42.3 -0.4
FETA Feichten 98.31 43⇑*i*Pdiff P 02 21 43.5 -0.9
comp=Z,23nm,1.2s
FETA Feichten 98.31 43⇑*i*P P 02 21 43.5 -0.9
comp=Z,23nm,1.2s
IBBN Ibbenburen 98.35 37 *e*P Pdif 02 21 45.2 +1.1
comp=Z,61nm,1.2s
RETA Reutte 98.49 43⇑*i*Pdiff P 02 21 45.0 0.0

comp=Z,20nm,1.2s
RETA Reutte 98.49 43⇑ *i*P P 02 21 45.0 0.0
comp=Z,20nm,1.2s
AQU L'Aquila 98.59 48 PFAKE 02 22 00.0 +14
AQU LR LR
comp=Z,9μm,20.0s
MOTA Moosalm 98.66 43⇑ *i*P Pdif 02 21 46.0 +0.1
MOTA pmax pmax
comp=Z,28nm,1.2s
MOTA Moosalm 98.66 43⇑ *i*Pdiff Pdif 02 21 46.0 +0.1
comp=Z,28nm,1.2s
MOTA Moosalm 98.66 43⇑ *i*P Pdif 02 21 46.0 +0.1
comp=Z,28nm,1.2s
WTTA Wattenberg 98.98 43⇑ *i*P P 02 21 46.6 -0.8
WTTA pmax pmax
comp=Z,43nm,1.5s
WTTA Wattenberg 98.98 43⇑ *i*Pdiff P 02 21 46.5 -0.8
comp=Z,43nm,1.5s
WTTA Wattenberg 98.98 43⇑ *i*P P 02 21 46.5 -0.8
comp=Z,43nm,1.5s
FUR Furstenfeldbru 99.05 42 *e*P Pdif 02 21 48.6 +1.2
FUR *e* 02 25 48.5
FUR pmax pmax
comp=Z,33nm,0.9s
FUR Furstenfeldbru 99.05 42 *e*P Pdif 02 21 48.6 +1.2
comp=Z,33nm,0.9s
FUR *e*PP PP **02 25 48.5 -1.6**
CEL Celeste 99.14 53 PFAKE 02 22 00.0 +12
CEL LR LR
comp=Z,3μm,20.0s
UBBA Unterbreizbach 99.14 39 *e*P Pdif 02 21 48.7 +1.1
comp=Z,35nm,1.7s
UBBA *e*PP PP **02 25 49.5 -1.1**
ABTA Abfaltersbach 99.38 44⇑ *i*Pdiff Pdif 02 21 48.0 -1.0
comp=Z,31nm,1.5s
ABTA Abfaltersbach 99.38 44⇑ *i*P Pdif 02 21 48.0 -1.0
comp=Z,31nm,1.5s
GRF Grafenberg Arr 99.51 41 *e*P Pdif 02 21 50.6 +1.2
GRF pmax pmax
comp=Z,32nm,1.1s
GRF Grafenberg Arr 99.51 41 *e*P Pdif 02 21 50.6 +1.2
comp=Z,32nm,1.1s
GRF *e*L L 03 02 55.0
comp=Z,4μm,21.8s
CUC Castrocucco 99.60 51 *e*P Pdif 02 21 48.4 -1.7
comp=Z,26nm,1.4s
CUC *e*PP PP 02 25 46.2 -8.4
CUC LR LR
comp=Z,6μm,20.0s
EGAK Eagle 99.62 336 PFAKE 02 22 00.0 +10
EGAK LR LR
comp=Z,5μm,19.0s
CLZ Clausthal 99.70 38 *e*P Pdif 02 21 51.6 +1.3
CLZ pmax pmax
comp=Z,43nm,1.2s
CLZ Clausthal 99.70 38 *e*P Pdif 02 21 51.6 +1.3
comp=Z,43nm,1.2s
NRDL Niedersach Rie 99.76 38 *e*P Pdif 02 21 52.0 +1.7
comp=Z,35nm,1.3s
RJOB Jochberg 99.88 43 *e*P Pdif 02 21 52.0 +0.8
comp=Z,27nm,1.7s
CADS Cadrg 100.03 45 *i* Pdiff Pdif 02 21 52.3 +0.4
CADS *e*PP PP **02 25 56.1 -1.5**
CADS *e*SKSac **SKSac 02 32 31.9 +3.2**
BER Bergen 100.05 29 *e*P Pdif 02 21 50.1 -1.4
BER *e*PP PP **02 25 56.8 -0.5**
BER *e*SKS 02 32 28.6
BER AMS AMS 03 01 36.5
comp=Z,4μm,24.0s
MOX Moxa 100.05 40 *e*P Pdif 02 21 53.0 +1.2
MOX pmax pmax
comp=Z,16nm,1.2s
MOX Moxa 100.05 40 *e*P Pdif 02 21 53.0 +1.2
comp=Z,16nm,1.2s
TIP Timpagrande 100.05 52 *e*Pdif Pdif 02 21 50.8 -1.4
comp=Z,16nm,1.3s
TIP LR LR
comp=Z,13μm,19.0s
ROTZ Rotzenmuhle 100.14 41 *e*P Pdif 02 21 53.6 +1.4
comp=Z,14nm,1.1s
MANZ Manzenberg 100.15 41 *e*P Pdif 02 21 53.8 +1.5
comp=Z,38nm,1.2s
NEUB Neuenburg 100.33 39 *e*P Pdif 02 21 54.4 +1.4
comp=Z,24nm,1.1s
PLN Plauen 100.33 40 *e*P Pdif 02 21 54.4 +1.3
comp=Z,123nm,1.3s
PLN *e*PP PP **02 25 58.4 -1.4**
BSEG Bad Segeberg 100.35 36 *e*P Pdif 02 21 54.2 +1.2
BSEG *e* 02 25 59.1
BSEG pmax pmax
comp=Z,52nm,1.1s
BSEG Bad Segeberg 100.35 36 *e*P Pdif 02 21 54.2 +1.2
comp=Z,52nm,1.1s
BSEG *e*PP PP **02 25 59.1 -0.7**
WET Wettzell 100.36 42 *e*P Pdif 02 21 54.3 +1.0
WET *e* 02 25 58.2
WET pmax pmax
comp=Z,20nm,1.2s
WET Wettzell 100.36 42 *e*P Pdif 02 21 54.3 +1.0
comp=Z,20nm,1.2s
WET *e*PP PP **02 25 58.2 -1.9**
MBAR Mbarara 100.39 94 *e*P PP 02 26 01.7 +0.6
MBAR Mbarara 100.39 94 PFAKE 02 22 10.0 +16
MBAR LR LR
comp=Z,796nm,20.0s
GUNZ Gunzen 100.40 40 *e*P Pdif 02 21 54.7 +1.3
comp=Z,30nm,1.5s
GUNZ *e*PP PP **02 25 58.7 -1.6**
WERN Wernitzgruen 100.40 40 *e*P Pdif 02 21 55.0 +1.6
comp=Z,22nm,1.1s
WERN *e*PP PP **02 25 58.7 -1.7**
NKC Novy Kostel 100.43 40 *e*P Pdif 02 21 54.7 +1.2
NKC *e* 02 25 58.4
NKC Novy Kostel 100.43 40 *e*PDIFF Pdif 02 21 54.7 +1.2
NKC *e*pP pP 02 22 04.5 +1.6
NKC *e*PP PP **02 25 58.4 -2.1**
NKC *e*SKS 02 32 36.4
LJU Ljubljana 100.49 45 *i* Pdiff Pdif 02 21 54.4 +0.5
LJU *e*PP PP **02 25 59.7 -1.4**
LJU *e*SKSac **SKSac 02 32 34.0 +3.1**
LJU *e* 02 32 49.0
LJU *e* 02 35 05.9
LJU *e* 02 36 04.2
TANN Tannenbergstha 100.50 40 *e*P Pdif 02 21 55.3 +1.4
comp=Z,22nm,1.2s
TANN *e*PP PP **02 25 59.6 -1.5**
MUD Monsted U'grnd 100.56 34 *i* P Pdif 02 21 54.5 +0.6
MUD pmax pmax
comp=Z,19nm,1.1s
MUD MLR MLR
comp=Z,3μm,21.0s
MUD Monsted U'grnd 100.56 34 *i* P Pdif 02 21 54.5 +0.6
comp=Z,19nm,1.0s
MUD
comp=Z,3μm,20.0s
GEC2 GERESS Array S 100.79 42 *e*P Pdif 02 21 56.0 +0.7
GEC2 pmax pmax
comp=Z,16nm,1.3s
GEC2 GERESS Array S 100.79 42 *e*P Pdif 02 21 56.0 +0.7
comp=Z,16nm,1.3s
GERES GERESS Array B 100.79 42 P Pdif 02 21 54.8 -0.5
GERES PKKPbc **PKKPbc 02 38 09.2 -0.8**
GERES GERESS Array B 100.79 42 P Pdif 02 21 54.8 -0.5
comp=Z,3.8nm,0.9s,baz=242,slow=2.9,SNR=22
GERES PKKPbc **PKKPbc 02 38 09.2 -0.8**
comp=Z,0.4nm,0.6s,baz=84,slow=4.2,SNR=3.8
KHC Kasperske Hory 100.80 42 *e*P Pdif 02 21 55.6 +0.4
KHC *e* 02 32 35.1
KHC *e* 02 35 01.0
KHC MLR MLR
comp=Z,4μm,20.4s
KHC Kasperske Hory 100.80 42 *e*PDIFF Pdif 02 21 55.6 +0.4
KHC *e*PP PP 02 25 54.1 -9.3
KHC *e*SKS 02 32 35.1
KHC *e*PS **PS 02 35 01.0 -4.2**
KHC AMS AMS 03 04 00.0
comp=Z,4μm,20.4s
DAG Danmarks Havn 100.95 11 *i* P Pdif 02 21 54.3 -0.9
DAG pmax pmax
comp=Z,3.0nm,1.0s
DAG MLR MLR
comp=Z,4μm,22.0s
DAG Danmarks Havn 100.95 11 *i* P Pdif 02 21 54.3 -0.9
comp=Z,3.1nm,1.0s
DAG

comp=Z,4μm,21.0s
CLL Collm 101.09 39 *i* P Pdif 02 21 56.5 +0.1
CLL *i* 02 26 02.7
CLL *e* 02 32 37.0
CLL pmax pmax
comp=Z,20nm,1.1s
CLL pmax pmax
comp=Z,54nm,1.8s
CLL MLR MLR
comp=Z,10μm,21.0s
CLL Collm 101.09 39 *e*P Pdif 02 21 57.7 +1.3
comp=Z,20nm,1.1s
CLL *e*PP PP **02 26 03.7 -1.8**
CLL Collm 101.09 39 *i* Pdif Pdif 02 21 56.5 +0.1
comp=Z,20nm,1.1s
CLL *e*sPdif sPdif 02 22 07.0 -2.0
CLL *i* PP PP **02 26 02.7 -2.8**
comp=Z,54nm,1.8s
CLL *e*sPP 02 26 18.0
CLL *e*PPP PPP 02 28 30.0
CLL *e*SKSac **SKSac 02 32 37.0 +3.5**
CLL *e*Sdif **Sdif 02 33 39.0 +5.7**
CLL *e*PS **PS 02 35 16.0 +7.9**
CLL *e*PPS PPS 02 36 06.0
CLL *e*SS **SS 02 40 37.0 +3.7**
CLL *e*(SSS) 02 43 54.0
CLL *e*SKKSacre 02 45 30.0
CLL LmV 03 04 00.0
comp=Z,10μm,21.0s
FBE Freiberg 101.19 40 *e*P Pdif 02 21 58.4 +1.6
comp=Z,33nm,1.4s
FBE *e*PP PP **02 26 04.8 -1.4**
BRG Berggiesshubel 101.53 40 *e*P Pdif 02 21 59.2 +0.8
comp=Z,22nm,1.5s
BRG PP PP 02 25 59.0 -10
BRG SKS **SKSac 02 32 39.0 +3.4**
BRG S **Sdif 02 33 41.0 +4.0**
BRG SS **SS 02 40 33.0 -6.5**
BRG *e*PKPPKP P'P'df 02 46 51.3 +29
comp=Z,5.1nm,1.1s
BRG
comp=N,2μm,22.0s
BRG
comp=E,5μm,21.9s
BRG
comp=Z,8μm,21.5s
BRG Berggiesshubel 101.53 40 *e*P Pdif 02 21 59.2 +0.8
BRG 02 32 39.0
BRG S **Sdif 02 33 41.0 +4.0**
BRG SS **SS 02 40 33.0 -6.5**
BRG pmax pmax
comp=Z,23nm,1.5s
BRG pmax pmax
comp=Z,5.0nm,1.2s
BRG MLR MLR
comp=N,2μm,22.0s
BRG MLR MLR
comp=E,5μm,21.9s
BRG MLR MLR
comp=Z,8μm,21.5s
BRG Berggiesshubel 101.53 40 *e*P Pdif 02 21 59.7 +1.3
comp=Z,22nm,1.5s
BRG *e*PP PP **02 26 07.1 -1.7**
PRA Prague 101.60 41 PDIFF Pdif 02 22 00.0 +1.3
PRA PP PP **02 26 08.0 -1.4**
PRA AMS AMS 03 03 30.0
PRU Pruhonice 101.65 41 *e*P Pdif 02 21 59.7 +0.8
PRU *e* 02 32 37.9
PRU *e* 02 35 19.5
PRU MLR MLR
comp=Z,3μm,21.5s
PRU Pruhonice 101.65 41 *e*PDIFF Pdif 02 21 59.7 +0.8
PRU *e*pP pP 02 22 09.2 +0.8
PRU *e*x x 02 25 59.3
PRU *e*SKS 02 32 37.9
PRU *e*PS **PS 02 35 19.5 +5.4**
PRU AMS AMS 03 04 20.0
comp=Z,3μm,21.5s
KOGS Kog 101.76 45 *e*Pdiff Pdif 02 22 00.1 +0.6
KOGS *e*PP PP **02 26 08.4 -2.2**
KOGS *e*SKSac **SKSac 02 32 40.1 +3.2**
KOGS *e* 02 32 55.6
KONO Kongsberg 101.81 31 *e*P Pdif 02 21 58.6 -0.8
KONO *e*PP PP **02 26 09.4 -1.2**
KONO *e*SKS 02 32 38.3
KONO AMS AMS 03 04 19.2
comp=Z,6μm,23.3s
KONO Kongsberg 101.81 31 PFAKE 02 22 10.0 +11
KONO LR LR
comp=Z,7μm,20.0s
PVCC Panska Ves 101.81 41 *e*P Pdif 02 22 00.2 +0.6
PVCC *e* 02 26 08.4
PVCC *e* 02 32 40.9
PVCC MLR MLR
comp=Z,5μm,23.9s
PVCC Panska Ves 101.81 41 *e*PDIFF Pdif 02 22 00.2 +0.6
PVCC *e*PP PP **02 26 08.4 -2.6**
PVCC *e*SKS 02 32 40.9
PVCC AMS AMS 03 02 50.0
comp=Z,5μm,23.9s
ILAR Eielson Array 101.88 335 P Pdif 02 21 58.2 -1.4
ILAR PP PP 02 25 59.8 -11
ILAR Eielson Array 101.88 335 P Pdif 02 21 58.2 -1.4
comp=Z,0.9nm,0.8s,baz=157,slow=3.8,SNR=9.0
ILAR PP PP 02 25 59.8 -11
comp=Z,1.9nm,1.0s,baz=107,slow=5.8,SNR=4.4
TREC Trest 102.04 42 *e*P Pdif 02 22 01.6 +0.9
TREC *e* 02 26 09.9
TREC *e* 02 32 40.2
TREC *e* 02 35 24.0
TREC MLR MLR
comp=Z,3μm,20.5s
TREC Trest 102.04 42 *e*PDIFF Pdif 02 22 01.6 +0.9
TREC *e*pP 02 22 11.7
TREC *e*PP PP **02 26 09.9 -2.8**
TREC *e*SKS 02 32 40.2
TREC *e*PS **PS 02 35 24.0 +5.6**
TREC AMS AMS 03 04 50.0
comp=Z,3μm,20.5s
COP Copenhagen 102.06 35 *i* P Pdif 02 22 01.4 +0.9
COP pmax pmax
comp=Z,19nm,0.9s
COP MLR MLR
comp=Z,1μm,20.0s
COP Copenhagen 102.06 35 *i* P Pdif 02 22 01.4 +0.9
comp=Z,19nm,0.8s
COP
comp=Z,1μm,20.0s
KDAK Kodiak Island 102.22 327 PFAKE 02 22 10.0 +8.8
KDAK LR LR
comp=Z,2μm,20.0s
COLA College 102.30 335 *e*P Pdif 02 22 01.3 -0.1
COLA MLR MLR
comp=Z,3μm,19.0s
COLA College 102.30 335 *e*Pdif Pdif 02 22 01.3 -0.1
COLA LR LR
comp=Z,3μm,19.0s
MCK McKinley 102.37 333 *e*P Pdif 02 22 01.5 -0.4
MCK McKinley 102.37 333 *e*Pdif Pdif 02 22 01.5 -0.4
UPC Upice 102.70 41 *e*P Pdif 02 22 05.0 +1.4
UPC *e* 02 26 13.8
UPC Upice 102.70 41 *e*PDIFF Pdif 02 22 05.0 +1.4
UPC *e*PP PP **02 26 13.8 -3.8**
VRAC Vranov 102.75 42 P Pdif 02 22 04.0 +0.1
VRAC PP PP **02 26 16.9 -1.1**
VRAC Vranov 102.75 42 P Pdif 02 22 04.0 +0.1
comp=Z,2.7nm,0.6s,baz=246,slow=3.4,SNR=5.0
VRAC PP PP **02 26 16.9 -1.1**
comp=Z,6.9nm,1.1s,baz=257,slow=9.1,SNR=6.5
NAO01 NORSAR Array S 102.79 30 *e*Pdif Pdif 02 22 04.7 +1.0
DPC Dobruska-Polom 102.85 41 *e*P Pdif 02 22 05.5 +1.2
DPC *e* 02 26 16.1
DPC *e* 02 32 44.7
DPC *e* 02 35 26.6
DPC MLR MLR
comp=Z,2μm,21.5s
DPC Dobruska-Polom 102.85 41 *e*PDIFF Pdif 02 22 05.5 +1.2
DPC *e*PP PP **02 26 16.1 -2.7**
DPC *e*SKS 02 32 44.7
DPC *e*PS **PS 02 35 26.6 -0.3**
DPC AMS AMS 03 03 00.0
comp=Z,2μm,21.5s
TIR Tirane 102.93 51 PFAKE 02 22 20.0 +15
TIR LR LR

comp=Z,3μm,21.0s
KSP Ksiaz 102.96 41 *e*P Pdif 02 22 05.8 +1.1
KSP *e* 02 26 17.5
KSP *e* 02 32 47.0
KSP *e*SP SP 02 35 29.0 +5.1
KSP *e*PPS PPS 02 36 24.0
KSP *e*SS **SS 02 40 58.0 -1.2**
NB2 NORSAR Subarra 103.00 30 P Pdif 02 22 05.7 +1.0
baz=254,slow=4.0
NB2 NORSAR Subarra 103.00 30 P Pdif 02 22 05.7 +1.0
comp=Z,29nm,1.4s,baz=254,slow=4.0
NOA NORSAR Array B 103.00 30 P Pdif 02 22 04.2 -0.5
NOA PP PP **02 26 17.8 -1.8**
NOA NORSAR Array B 103.00 30 P Pdif 02 22 04.2 -0.5
comp=Z,4.7nm,1.0s,baz=253,slow=4.4,SNR=5.7
NOA PP PP **02 26 17.8 -1.8**
comp=Z,3.2nm,1.1s,baz=250,slow=7.9,SNR=3.7
NC602 NORSAR Array S 103.06 30 *e*P Pdif 02 21 59.7 -5.2
NC602 *e*PP PP **02 26 19.7 -0.3**
NC602 *e*SKS 02 32 44.9
MSVF Nonsavu 103.16 246 PFAKE 02 22 20.0 +13
MSVF LR LR
comp=Z,3μm,20.0s
BSD Bornholm Skovb 103.26 36 *i* P Pdif 02 22 07.2 +1.3
BSD MLR MLR
comp=Z,4μm,22.0s
BSD Bornholm Skovb 103.26 36 *i* P Pdif 02 22 07.2 +1.3
BSD
comp=Z,4μm,21.0s
MORC Moravsky Berou 103.46 42 *e*P Pdif 02 22 07.8 +0.8
MORC pmax pmax
comp=Z,13nm,1.4s
MORC Moravsky Berou 103.46 42 *e*Pdif Pdif 02 22 07.8 +0.8
comp=Z,13nm,1.4s
OKC Ostrava-Krasne 103.86 42 *e*PP PP 02 26 24.1 -2.2
OKC *e*SKS 02 32 52.2
OKC *e*PS **PS 02 35 44.2 +6.7**
OKC AMS AMS 03 06 00.0
comp=Z,3μm,21.0s
HFS Hagfors 103.93 31 PP PP 02 26 23.9 -2.6
HFS Hagfors 103.93 31 PP PP 02 26 23.9 -2.6
comp=Z,29nm,1.1s,baz=225,slow=4.0,SNR=18
VYHS Vyhne 103.97 43 *i* P Pdif 02 22 09.8 +0.5
VYHS *e* 02 26 28.4
VYHS Vyhne 103.97 43 PDIF Pdif 02 22 09.8 +0.5
VYHS *e*PP PP **02 26 28.4 +1.2**
NSS Namsos 104.30 26 AMS AMS 03 03 54.6
comp=Z,1μm,22.7s
PSZ Piszkesteto 104.53 44 PFAKE 02 22 20.0 +8.1
PSZ LR LR
comp=Z,4μm,20.0s
OJC Ojcow 104.98 42 *e*PKiKP PKiKP 02 26 30.6 +2.1
OJC *e*SS SS 02 41 34.9 +7.9
OJC L L 03 06 47.7
comp=Z,3μm,22.6s
CRVS Cervenica-Dubn 105.76 43 *i* P Pdif 02 22 19.0 +1.7
CRVS *e* 02 26 36.0
CRVS Cervenica-Dubn 105.76 43 PDIF Pdif 02 22 19.0 +1.7
CRVS *e*PP PP **02 26 36.0 -4.5**
UZH Uzhgorod 106.25 44 *e*P Pdif 02 22 14.3 -5.1
UZH *i* PS PS **02 35 57.5 -4.9**
UZH *e* 02 36 55.7
UZH MLR MLR
comp=N,1μm,18.0s
UZH MLR MLR
comp=E,2μm,18.0s
UZH MLR MLR
comp=Z,800nm,18.0s
KOLS Kolnicke sedl 106.29 43 *e*PP PP 02 26 42.3 -2.1
KMBO Kilima Mbogo 106.32 97 *e*P PKiKP 02 26 33.9 +1.5
KMBO Kilima Mbogo 106.32 97 *e*PKP PKiKP 02 26 32.0 -0.4
KMBO *e*PP PP **02 26 42.4 -3.1**
KMBO PP PP 02 26 42.8 -2.8
KMBO LR LR
comp=Z,8μm,20.0s
KMBO Kilima Mbogo 106.32 97 PP PP 02 26 42.8 -2.8
comp=Z,1.0nm,0.4s,baz=224,slow=19,SNR=3.2
KWP Kalwaria Pacla 106.70 43 PFAKE 02 26 40.0
KWP LR LR
comp=Z,2μm,20.0s
KBS Kingsbay 107.63 12 *e*P Pdif 02 22 28.1 +3.2
KBS *e*PP PP **02 26 53.0 -0.3**
KBS AMS AMS 03 04 00.1
comp=Z,2μm,30.0s
KBS Kingsbay 107.63 12 PFAKE 02 26 40.0
KBS LR LR
comp=Z,2μm,22.0s
ABPO Ambohimpanom 107.89 118 PFAKE 02 26 50.0
ABPO LR LR
comp=Z,6μm,19.0s
TRO Tromso 107.98 22 *e*P Pdif 02 22 34.0 +7.4
BUR08 Bucovina Ar. S 107.99 45 *e*Pdif Pdif 02 22 27.0 -0.3
MLR Muntele Rosu 108.14 47 PP PP 02 26 54.7 -3.4
MLR Muntele Rosu 108.14 47 PP PP 02 26 54.7 -3.4
comp=Z,4.5nm,1.2s,baz=285,slow=5.7,SNR=7.1
SPA0 Spitsbergen Ar 108.38 13 *e*P Pdif 02 22 32.2 +3.9
SPA0 *e*PP PP **02 26 58.5 -0.4**
TAU Tasmania Unive 108.74 208 PFAKE 02 26 50.0
TAU LR LR
comp=Z,3μm,19.0s
KTK1 Kautokeino 109.45 22 *e*P Pdif 02 22 28.4 -4.8
KTK1 AMS AMS 03 08 04.7
comp=Z,6μm,18.4s
NACGM Naroch 109.94 38 *e*PKP PKiKP 02 26 50.0 +12
FINES FINESS Array B 110.12 31 PP PP 02 27 12.1 +0.3
FINES FINESS Array B 110.12 31 PP PP 02 27 12.1 +0.3
comp=Z,13nm,1.2s,baz=278,slow=5.6,SNR=6.7
ISP Isparta 110.26 56 PFAKE 02 26 50.0
ISP LR LR
comp=Z,3μm,22.0s
ARCES ARCESS Array B 110.28 22 PKKPbc PKKPbc 02 37 39.8 -1.5
ARCES ARCESS Array B 110.28 22 PKKPbc PKKPbc 02 37 39.8 -1.5
comp=Z,1.8nm,0.8s,baz=90,slow=2.4,SNR=4.6
ARE0 ARCESS Array S 110.28 22 *e*P Pdif 02 22 41.3 +4.4
ARE0 *e*PP PP **02 27 12.1 -0.7**
KIS Kishinev 110.33 46 *e*PKIKP PKiKP 02 26 37.0 -1.5
KIS *e* 02 27 15.0
KIS *e*PPP PPP 02 29 40.0
KIS *e* 02 33 12.0
KIS *e*PS **PS 02 36 40.0 -3.8**
KIS *e*PPS PPS 02 37 42.0
KIS MLR MLR
comp=Z,3μm,20.0s
KIS MLR MLR
comp=E,3μm,19.0s
KIS MLR MLR
comp=Z,3μm,20.0s
KIS Kishinev 110.33 46 *e*PKP PKiKP 02 26 37.0 -1.5
KIS Kishinev 110.33 46 *e*PP PP 02 27 15.0 +1.2
KIS Kishinev 110.33 46 *e*PPP PPP 02 29 40.0
KIS *e*SKS **SKSac 02 33 12.0 -3.0**
KIS *e*SKKS SKKSac 02 34 26.0 +11
KIS Kishinev 110.33 46 *e*PS PS 02 36 40.0 -3.8
KIS Kishinev 110.33 46 *e*PPS PPS 02 37 42.0
KIS LRM MLR 03 14 00.0
comp=Z,3μm,20.0s
MNK Minsk 110.51 38 *e*PKIKP PKiKP 02 26 51.0 +12
MNK MLR MLR
comp=Z,12μm,20.0s
MICGM Minsk 110.53 38 *e* PKiKP 02 26 51.0 +12
DZM Mont Dzumac 110.64 236 *e*Pdif Pdif 02 22 38.6 -1.2
comp=Z,149nm,26.1s
DZM Mont Dzumac 110.64 236 *e*PP PP 02 27 17.5 +1.3
comp=Z,667nm,22.7s
DZM *e*Sdif **SKSac 02 33 23.6 +5.8**
comp=Z,3μm,31.9s
DZM *e*SP **SP 02 36 37.1 -6.5**
comp=Z,2μm,28.6s
DZM *e*SS **SS 02 42 43.0 -0.9**
comp=Z,5μm,24.2s
DZM *e*LR LR 02 59 27.8
comp=Z,9μm,17.4s
KEV Kevo 110.81 22 PFAKE 02 26 50.0
KEV LR LR
comp=Z,2μm,20.0s
KIEV Kiev 110.99 42 *e*PKIKP PKiKP 02 26 38.9 -0.7
KIEV MLR MLR
comp=Z,2μm,19.0s
KIEV Kiev 110.99 42 *e*PKP PKiKP 02 26 38.9 -0.7
KIEV *e*PP PP 02 27 12.8 -5.6
KIEV LR LR
comp=Z,2μm,19.0s
AKASG Malin Array Be 111.00 42 P Pdif 02 22 39.7 -0.8
AKASG *i* 02 26 39.2

AKASG 02 27 15.3
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKASG Malin Array Be 111.00 42 Pdif **Pdif 02 22 39.6 -0.8**
AKASG PKiKP **PKiKP 02 26 39.1 -0.5**
AKASG PP **PP 02 27 15.3 -3.2**
AKASG Malin Array Be 111.00 42 Pdiff **Pdif 02 22 39.6 -0.8**
comp=Z,0.3nm,0.3s,baz=329,slow=4.5,SNR=4.1
AKASG PKiKP **PKiKP 02 26 39.1 -0.5**
comp=Z,0.5nm,0.5s,baz=296,slow=3.2,SNR=5.4
AKASG PP **PP 02 27 15.3 -3.2**
comp=Z,3.6nm,0.8s,baz=259,slow=7.2,SNR=7.9
CSS Prodhromos 112.04 59 *e*PKP **PKiKP 02 26 42.2 0.0**
CSS LR LR
comp=Z,4μm,19.0s
ANTO Ankara 112.31 54 PFAKE 02 26 50.0
ANTO LR LR
comp=Z,3μm,19.0s
BR131 Keskin Array S 112.94 54 *e*PKP **PKiKP 02 26 44.0 0.0**
BRTR Keskin Array B 112.94 54 PKiKP **PKiKP 02 26 44.4 +0.5**
BRTR PP **PP 02 27 30.6 -2.3**
BRTR Keskin Array B 112.94 54 PKiKP **PKiKP 02 26 44.4 +0.5**
comp=Z,6.3nm,1.0s,baz=186,slow=4.1,SNR=19
BRTR PP **PP 02 27 30.6 -2.3**
comp=Z,5.1nm,0.9s,baz=234,slow=7.4,SNR=6.4
APA Apatity 113.24 24⇓ *e*P Pdif 02 22 38.0 -12
APA *e* 02 33 58.0
MMAI Mount Meron Ar 113.44 62 PKiKP **PKiKP 02 26 44.9 -0.1**
MMAI Mount Meron Ar 113.44 62 PKiKP **PKiKP 02 26 44.9 -0.1**
comp=Z,2.9nm,0.7s,baz=235,slow=2.9,SNR=4.0
MIDW Midway 113.46 293 PFAKE 02 27 00.0
MIDW LR LR
comp=Z,2μm,21.0s
RER Riviere de l'E 113.63 125 PFAKE 02 27 00.0
RER LR LR
comp=Z,3μm,22.0s
CAN Canberra 113.78 215 PFAKE 02 27 00.0
CAN LR LR
comp=Z,5μm,22.0s
SIM Simferopol' 113.80 49 *i* PKiKP PKiKP 02 26 55.1 +10
SIM 02 27 36.9
SIM PPP PPP 02 30 01.3
SIM MLR MLR
comp=Z,3μm,20.0s
ASF Jabal al Asfar 114.56 63 PKP PKPdf 02 26 47.8 +0.6
ASF Jabal al Asfar 114.56 63 PKP PKPdf 02 26 47.8 +0.6
comp=Z,10nm,0.9s,baz=103,slow=1.7,SNR=10
TARA Tarawa 115.44 262 PFAKE 02 27 00.0 +11
TARA LR LR
comp=Z,3μm,19.0s
OBN Obninsk 115.58 38⇑ *i*PKiKP **PKPdf 02 26 48.1 -0.2**
OBN *e* 02 27 48.4
OBN *e* 02 30 23.2
OBN *e* 02 33 36.2
OBN *i* PS **PS 02 37 35.2 +3.6**
OBN pmax pmax
comp=Z,24nm,1.2s
OBN MLR MLR
comp=Z,6μm,20.0s
ANN Anapa 116.15 49 *i* PKiKP **PKPdf 02 26 49.7 0.0**
ANN *e* 02 27 52.1
ANN *e* 02 33 40.5
ANN *e*SS SS 02 43 56.7 +0.1
ANN pmax pmax
comp=Z,35nm,1.3s
MALT Malatya 116.51 56 *e*PKiKP **PKPdf 02 26 51.1 +0.3**
MALT MLR MLR
comp=Z,3μm,20.0s
MALT Malatya 116.51 56 *e*PKPdf **PKPdf 02 26 51.1 +0.3**
MALT LR LR
comp=Z,3μm,20.0s
VSR Storozhevoye 117.30 42 *i* PKiKP **PKPdf 02 26 51.6 -0.1**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,8.0nm,0.8s
VSR MLR MLR
comp=Z,4μm,17.0s
VSR MLR MLR
comp=N,2μm,19.0s
VSR MLR MLR
comp=E,4μm,26.0s
VORD Divnogorie 117.39 42 *i* PKiKP **PKPdf 02 26 52.1 +0.2**
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=Z,5.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.8s
VORD MLR MLR
comp=Z,3μm,24.0s
VORD MLR MLR
comp=N,3μm,23.0s
VORD MLR MLR
comp=E,3μm,24.0s
SOC Sochi 117.75 50 *e*P **Pdif 02 23 11.4 +0.7**
SOC *i* 02 26 51.1
SOC *e* 02 28 05.0
SOC *e* 02 33 45.4
SOC *e*PS **PS 02 37 54.3 +2.4**
VRHR Novokhopersk 118.85 42 *e*PKiKP **PKPdf 02 26 55.0 +0.3**
VRHR *e*PS **PS 02 38 00.1 -1.4**
VRHR *e*SS SS 02 44 40.6 +9.3
VRHR pmax pmax
comp=N,10.0nm,1.0s
VRHR pmax pmax
comp=Z,10.0nm,1.0s
VRHR pmax pmax
comp=E,2.0nm,0.5s
VRHR pmax pmax
comp=Z,190nm,2.5s
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,140nm,2.5s
VRHR MLR MLR
comp=N,810nm,18.0s
VRHR MLR MLR
comp=E,3μm,18.0s
VRHR MLR MLR
comp=Z,5μm,18.0s
KIV Kislovodsk 119.91 50⇑ *i*PKiKP **PKPdf 02 26 57.5 +0.4**
KIV *e* 02 28 20.7
KIV *i* PS **PS 02 38 12.9 +1.4**
KIV *e*SS SS 02 44 55.6 +10
KIV pmax pmax
comp=Z,26nm,1.3s
KIV MLR MLR
comp=Z,2μm,22.0s
KBZ Khabaz 120.06 50 PKiKP **PKPdf 02 26 58.4 +1.1**
KBZ pmax pmax
comp=Z,21nm,0.9s
KBZ Khabaz 120.06 50 PKP **PKPdf 02 26 58.4 +1.1**
KBZ Khabaz 120.06 50 PKP **PKPdf 02 26 58.4 +1.1**
comp=Z,21nm,0.9s,baz=200,slow=2.2,SNR=39
BILL Bilibino 120.20 339⇑ *i*PKiKP **PKPdf 02 26 57.8 +1.0**
BILL *e*PS **PS 02 38 03.3 -10**
BILL pmax pmax
comp=Z,33nm,2.4s
BILL MLR MLR
comp=Z,2μm,23.0s
STKA Stephens Creek 120.30 212 PKP **PKPdf 02 26 58.6 +0.3**
STKA Stephens Creek 120.30 212 PKP **PKPdf 02 26 58.6 +0.3**
comp=Z,9.0nm,0.8s,baz=72,slow=0.4,SNR=14
ONI Oni 120.49 52 P **PP 02 28 27.4 +1.9**
AKH Akhalkalaki 120.53 53 P **PP 02 28 30.6 +4.7**
ZEI Tsey 120.81 51 *i* PKiKP **PKPdf 02 26 59.8 +0.7**
ZEI pmax pmax
comp=Z,23nm,1.3s
BHD Baghdad 120.95 62 *i* x PP 02 28 23.0 -5.9
BHD *ex* x 02 29 40.5
BHD *i* x x 02 35 10.0
BHD *i* x x 02 35 31.0
GOR Gori 120.98 52 P **PP 02 28 33.8 +5.0**
TBLG Delisi 121.46 53 P **PP 02 28 36.0 +3.9**
GNI Garni 121.48 54 PKP **PKPdf 02 27 00.9 +0.5**
GNI *e*PKPdf **PKiKP 02 27 01.5 +1.0**
GNI LR LR
comp=Z,3μm,20.0s
GNI Garni 121.48 54 PKP **PKPdf 02 27 00.9 +0.5**
comp=Z,13nm,0.8s,baz=1.8,slow=5.3,SNR=13

MSEY Mahe Island 121.68 109 PFAKE 02 27 10.0 +8.6
MSEY LR LR
comp=Z,5μm,20.0s
DGRG David-gareji 121.94 53 P **PP 02 28 34.6 -0.8**
HNR Honiara 122.56 245 PFAKE 02 27 10.0 +7.0
HNR LR LR
comp=Z,2μm,20.0s
NAY Al-Naaiem 123.06 67 *e*P **PKPdf 02 27 03.7 +0.2**
NAY AMb AMB 02 27 04.9
comp=Z,24nm,1.0s
MIB Mutribah 123.19 67 *e*P **PKPdf 02 27 03.8 0.0**
MIB AMb AMB 02 27 06.4
comp=Z,58nm,1.1s
RDF Al-Radifah 123.30 68 *e*P **PKPdf 02 27 04.6 +0.6**
RDF AMb AMB 02 27 06.2
comp=Z,101nm,1.4s
MAK Makhachkala 123.45 51 *e*P **Pdif 02 23 29.7 -6.3**
MAK *i* 02 27 04.0
MAK *e* 02 28 42.7
MAK *e*PPP PPP 02 31 21.5
MAK *e* 02 34 11.4
MAK *e*SS SS 02 45 26.2 -4.5
MAK *e*SSS SSS 02 50 05.2
MAK pmax pmax
comp=Z,155nm,1.4s
UMR Umm Al-Rimmam 123.50 67 *e*P **PKPdf 02 27 04.6 +0.3**
SOKR Solikamsk 125.28 30*d* PKiKP **PKPdf 02 27 08.2 +1.4**
SOKR 02 28 54.5
SOKR PS **PS 02 39 00.3 +2.1**
SOKR SS SS 02 45 56.5 +4.1
SOKR pmax pmax
comp=Z,20nm,1.3s
WAKE Wake Island 126.33 280 PFAKE 02 27 20.0 +10
WAKE LR LR
comp=Z,5μm,19.0s
CTAO Charters Tower 126.60 224 *e*PKiKP **PKPdf 02 27 10.5 -0.2**
CTAO MLR MLR
comp=Z,3μm,22.0s
CTAO Charters Tower 126.60 224 *e*PKPdf **PKPdf 02 27 10.5 -0.2**
CTAO LR LR
comp=Z,3μm,22.0s
TIXI Tiksi 126.71 352⇓ *i*PKiKP **PKPdf 02 27 09.5 +0.3**
TIXI pmax pmax
comp=Z,13nm,1.2s
TIXI MLR MLR
comp=Z,4μm,22.0s
TIXI Tiksi 126.71 352 *e*PKPdf **PKPdf 02 27 08.9 -0.3**
FORT Forrest 126.84 200 *e*PKPdf **PKPdf 02 27 10.4 -0.4**
NWAO Narrogin (SRO) 127.27 188 PFAKE 02 27 20.0 +8.4
NWAO LR LR
comp=Z,3μm,20.0s
ARU Arti 127.38 33 *i* PKiKP **PKPdf 02 27 12.1 +1.2**
ARU 02 29 10.0
ARU 02 34 17.2
ARU SP SP 02 39 04.7 -7.4
ARU PS **PS 02 39 14.1 -2.7**
ARU SS **SS 02 46 14.2 -4.7**
ARU MLR MLR
comp=Z,5μm,20.0s
SEY Seymchan 127.75 337⇑ *i*PKiKP **PKPdf 02 27 12.5 +1.0**
SVE Sverdlovsk 128.26 32 *i* PKiKP **PKPdf 02 27 14.2 +1.6**
SVE *e* 02 29 14.3
SVE *e* 02 39 19.9
SVE pmax pmax
comp=Z,35nm,1.5s
SVE MLR MLR
comp=Z,5μm,21.0s
SVE MLR MLR
comp=E,4μm,21.0s
AKTO Aktyubinsk 129.17 40 PKiKP **PKPdf 02 27 15.0 +0.4**
AKTO pmax pmax
comp=Z,11nm,0.9s
AKTO Aktyubinsk 129.17 40 PKP **PKPdf 02 27 15.0 +0.4**
AKTO Aktyubinsk 129.17 40 PKP **PKPdf 02 27 15.0 +0.4**
comp=Z,11nm,0.9s,baz=302,slow=1.8,SNR=38
PET Petropavlovsk 129.64 324 *e*PKiKP **PKPdf 02 27 19.8 +4.5**
PET *e* 02 29 29.8
PET *e* 02 34 11.9
PET *e*PS **PS 02 39 34.2 -2.4**
PET *e*SS SS 02 46 45.9 -1.1
PET *e*SSS SSS 02 51 29.0
NAZ Nazwa, Dubai 130.16 73 P **PKPdf 02 27 18.5 +1.3**
SNR=5.5
ASHO Ashiyiah 130.49 74 P **PKPdf 02 27 19.1 +1.2**
SNR=7.4
HATD Hatta, Dubai 130.57 74 P **PKPdf 02 27 18.3 +0.2**
SNR=12
AB31 Akbulak array 130.73 41 *i* PKiKP **PKPdf 02 27 19.2 +1.7**
AB31 pmax pmax
comp=Z,56nm,1.1s
ABKAR Akbulak array 130.73 41 *e*PKPdf **PKPdf 02 27 18.9 +1.3**
ASAR Alice Springs 130.87 210 PKPpre PKPpre 02 27 07.3
ASAR PKP **PKPdf 02 27 18.5 -0.2**
ASAR SKPbc **SKPbc 02 30 41.1 +0.1**
ASAR SKP 02 30 56.2
ASAR Alice Springs 130.87 210 PKhKP PKPpre 02 27 07.3
comp=Z,0.6nm,0.6s,baz=124,slow=1.5,SNR=7.1
ASAR PKP **PKPdf 02 27 18.5 -0.2**
comp=Z,20nm,0.7s,baz=147,slow=2.4,SNR=104
ASAR SKPbc **SKPbc 02 30 41.1 +0.1**
comp=Z,8.3nm,1.1s,baz=146,slow=4.3,SNR=6.3
ASAR SKP 02 30 56.2
comp=Z,4.0nm,1.0s,baz=116,slow=4.3,SNR=4.4
AS31 Alice Springs 130.87 210 *e*PKPdf **PKPdf 02 27 18.4 -0.4**
BSY Bisya 131.33 77 P **PKPdf 02 27 20.4 +0.9**
SNR=20
HOQ Hoqain 131.52 75 P **PKPdf 02 27 19.0 -0.9**
SNR=6.7
JMDO Jabal Madar 132.12 77 P **PKPdf 02 27 21.5 +0.5**
SNR=6.9
SMDO Samad 132.14 76 P **PKPdf 02 27 22.2 +1.1**
SNR=27
WBK Wadi Bani Khal 132.94 77 P **PKPdf 02 27 24.1 +1.5**
SNR=16
PMG Port Moresby 133.03 236 PKP **PKPdf 02 27 23.5 +0.5**
PMG *e*PKPdf **PKiKP 02 27 24.3 +0.1**
PMG LR LR
comp=Z,3μm,20.0s
PMG Port Moresby 133.03 236 PKP **PKPdf 02 27 25.5 +2.5**
PMG Port Moresby 133.03 236 PKP **PKPdf 02 27 23.5 +0.5**
comp=Z,18nm,1.0s,baz=255,slow=6.5,SNR=6.5
WRA Warramunga Arr 133.79 213 PKPpre PKPpre 02 27 12.2
WRA PKP **PKPdf 02 27 24.2 -0.1**
WRA SKPbc **SKPbc 02 30 51.4 +0.1**
WRA Warramunga Arr 133.79 213 PKhKP PKPpre 02 27 12.2
comp=Z,2.7nm,1.1s,baz=149,slow=1.4,SNR=5.2
WRA PKP **PKPdf 02 27 24.2 -0.1**
comp=Z,15nm,0.7s,baz=157,slow=1.6,SNR=30
WRA SKPbc **SKPbc 02 30 51.4 +0.1**
comp=Z,19nm,1.1s,baz=143,slow=3.2,SNR=9.5
WRAB Tennant Creek 133.79 213 *e*PKiKP **PKPdf 02 27 23.7 -0.6**
WRAB MLR MLR
comp=Z,4μm,21.0s
WRAB Tennant Creek 133.79 213 *e*PKPdf **PKPdf 02 27 23.7 -0.6**
WRAB *e*SKPbc **SKPbc 02 30 50.7 -0.6**
WRAB LR LR
comp=Z,4μm,21.0s
DGAR Diego Garcia 134.72 123 PFAKE 02 27 40.0 +14
DGAR LR LR
comp=Z,6μm,21.0s
BRVK Borovoye 134.95 33*c* PKiKP **PKPdf 02 27 26.9 +1.5**
BRVK pmax pmax
comp=Z,25nm,1.7s
BRVK MLR MLR
comp=Z,8μm,22.0s
BRVK Borovoye 134.95 33 *e*PKPdf **PKPdf 02 27 25.6 +0.2**
BRVK *e*PP **PP 02 29 56.9 -3.1**
BRVK LR LR
comp=Z,7μm,21.0s
BVA0 Borovoye Array 135.03 33 PKiKP **PKPdf 02 27 26.6 +1.1**
BVA0 pmax pmax
comp=Z,4.0nm,1.2s
BVAR Borovoye Array 135.03 33 PKiKP **PKPdf 02 27 26.6 +1.1**
BVAR pmax pmax
comp=Z,6.0nm,0.8s
BVAR Borovoye Array 135.03 33 PKP **PKPdf 02 27 26.6 +1.1**
BVAR Borovoye Array 135.03 33 PKP **PKPdf 02 27 26.6 +1.1**
comp=Z,6.4nm,0.8s,baz=264,slow=1.5,SNR=28
YAK Yakutsk 135.32 347 *e*PKHKP PKPpre 02 27 16.4
YAK *e*PS PS 02 40 13.0 -12
YAK pmax pmax
comp=Z,154nm,11.5s
YAK pmax pmax
comp=Z,462nm,16.3s

YAK pmax pmax
comp=N,225nm,17.6s
YAK pmax pmax
comp=E,104nm,16.3s
YAK MLR MLR
comp=Z,3μm,25.0s
YAK MLR MLR
comp=N,2μm,19.0s
YAK MLR MLR
comp=E,512nm,22.0s
MBWA Marble Bar 138.29 194 *e*PKPdf **PKPdf 02 27 32.6 0.0**
MBWA LR LR
comp=Z,2μm,20.0s
FITZ Fitzroy Crossi 139.34 204 *e*PKPpre PKPpre 02 27 24.8
FITZ *e*PKPdf **PKPdf 02 27 34.8 +0.2**
FITZ *e*SKP 02 31 08.6
NVS Novosibirsk 139.54 23 *e*PKHKP PKPpre 02 27 26.0
NVS pmax pmax
comp=Z,49nm,1.0s
NVS pmax pmax
comp=E,6.0nm,0.6s
KURK Kurchatov 140.50 31*c i*PKIKP **PKPdf 02 27 36.4 +0.7**
KURK MLR MLR
comp=Z,3μm,21.0s
KURK Kurchatov 140.50 31 *e*PKPpre PKPpre 02 27 29.5
KURK PKPpre PKPpre 02 27 30.0
KURK *e*PKPdf **PKPdf 02 27 36.7 +1.0**
KURK PKP **PKiKP 02 27 37.1 -1.1**
KURK PP **PP 02 30 30.3 -4.1**
KURK LR LR
comp=Z,3μm,22.0s
KURBB Kurchatov Arra 140.51 31 PKhKP PKPpre 02 27 30.0
comp=Z,4.7nm,0.8s,baz=301,slow=3.0,SNR=28
KURBB PKP **PKiKP 02 27 37.1 -1.2**
comp=Z,3.6nm,0.8s,baz=210,slow=31,SNR=22
KURBB PP **PP 02 30 30.3 -4.2**
comp=Z,3.6nm,1.2s,baz=312,slow=7.2,SNR=4.1
ZALV Zalesovo Beam 140.82 23 *i* PKHKP PKPpre 02 27 27.9
ZALV 02 27 37.0
ZALV pmax pmax
comp=Z,8.0nm,0.8s
ZALV pmax pmax
comp=Z,20nm,0.9s
ZALV Zalesovo Beam 140.82 23 PKPpre PKPpre 02 27 27.9
ZALV PKP **PKPdf 02 27 37.0 +0.8**
ZALV Zalesovo Beam 140.82 23 PKhKP PKPpre 02 27 27.9
comp=Z,7.9nm,0.8s,baz=319,slow=4.3,SNR=28
ZALV PKP **PKPdf 02 27 37.0 +0.8**
comp=Z,20nm,0.9s,baz=286,slow=2.4,SNR=20
YUK Yuzh-Kuril'sk 141.11 317 *i* PKHKP PKPpre 02 27 23.9
YUK *i* 02 27 39.1
YUK *i* 02 30 42.3
YUK *i* SS SS 02 48 54.9 -10
YSS Yuzh-Sakhalins 141.52 323 *e*PKHKP PKPpre 02 27 33.0
YSS *e* 02 33 48.0
YSS *e*PPP PPP 02 33 48.0
KRAR Krasnoyarsk 141.54 15 *i* PKIKP **PKPdf 02 27 39.9 +2.5**
EKS2 Erkin-Say 142.15 45 *e*PKIKP **PKPdf 02 27 36.0 -3.1**
EKS2 MLR MLR
comp=Z,3μm,20.0s
EKS2 Erkin-Say 142.15 45 *e*PKPdf **PKPdf 02 27 36.0 -3.1**
EKS2 LR LR
comp=Z,3μm,20.0s
EKS2 Erkin-Say 142.15 45 P **PKPdf 02 27 34.6 -4.5**
SNR=9.2
FRU Bishkek 142.62 44 *e*PKIKP **PKPdf 02 27 38.0 -1.8**
FRU *e* 02 30 48.0
FRU pmax pmax
comp=Z,430nm,3.4s
AAK Ala-Archa 142.63 44 PKIKP **PKPdf 02 27 39.0 -1.0**
AAK pmax pmax
comp=Z,21nm,0.8s
AAK Ala-Archa 142.63 44 PKP **PKPdf 02 27 39.0 -1.0**
AAK LR LR
comp=Z,3μm,22.0s
AAK Ala-Archa 142.63 44 P **PKPdf 02 27 39.6 -0.4**
SNR=16
AAK Ala-Archa 142.63 44 PKP **PKPdf 02 27 39.0 -1.0**
comp=Z,21nm,0.8s,baz=205,slow=2.1,SNR=29
CHMS Chumysh 142.63 44 P **PKPdf 02 27 37.3 -2.5**
SNR=5.9
BHJ Bhuj 142.81 77 *e*P **PKPdf 02 27 38.3 -2.4**
KBK Karagaybulak 142.92 44 P **PKPdf 02 27 39.6 -0.9**
SNR=8.5
TKM2 Tokmak 2 143.22 43 *e*PKIKP PKPbc 02 27 39.6 +1.5
TKM2 MLR MLR
comp=Z,4μm,22.0s
TKM2 Tokmak 2 143.22 43 *e*PKPdf **PKPdf 02 27 39.6 -1.5**
TKM2 LR LR
comp=Z,4μm,22.0s
TKM2 Tokmak 2 143.22 43 P **PKPdf 02 27 40.1 -1.0**
SNR=13
KZA Kyzart 143.38 45 P **PKPdf 02 27 42.1 +0.4**
SNR=6.1
ERM Erimo 143.80 316 *i* PKIKP **PKPdf 02 27 45.1 +3.3**
ERM Erimo 143.80 316 PFAKE 02 27 50.0 +8.2
ERM LR LR
comp=Z,2μm,19.0s
ULHL Ulahol 143.96 44 P **PKPdf 02 27 43.9 +1.5**
SNR=48
HABR Khabarovsk 144.56 330*ce*PKIKP PKPbc 02 27 42.1 +0.5
HABR *i* 02 27 46.6
HABR 02 30 59.0
HABR *e* 02 34 51.5
HABR *e*SS SS 02 49 47.5 +3.6
HABR pmax pmax
comp=E,59nm,2.0s
HABR pmax pmax
comp=N,81nm,2.0s
HABR pmax pmax
comp=Z,265nm,2.0s
MK31 Makanchi Array 144.91 33 *e*PKIKP **PKPab 02 27 42.7 -0.1**
MK31 Makanchi Array 144.91 33 *e*PKPdf **PKPab 02 27 42.7 -0.1**
MKAR Makanchi Array 144.91 33 PKIKP **PKPab 02 27 42.5 -0.3**
MKAR pmax pmax
comp=Z,147nm,0.8s
MKAR Makanchi Array 144.91 33 PKP **PKPab 02 27 42.5 -0.3**
MKAR Makanchi Array 144.91 33 PKP **PKPab 02 27 42.5 -0.3**
comp=Z,147nm,0.8s,baz=330,slow=3.1,SNR=463
KSH Kashi 145.00 48 PKPbc **PKPab 02 27 43.8 +0.3**
KSH pPKP **pPKPdf 02 27 54.3 +0.6**
KSH sPKP 02 27 58.1
KSH PP **PP 02 31 05.1 +2.7**
KSH PKS **PKSdf 02 31 18.5 -1.3**
KSH SKS **SKSdf 02 34 46.8 -4.9**
KSH SKKS **SKKSac 02 37 50.3 -2.8**
KSH SS **SS 02 49 48.8 -1.7**
KSH AMB AMB
comp=Z,1μm,5.0s
KSH LR LR
comp=N,3μm,20.9s
KSH LR LR
comp=E,3μm,19.6s
KSH LR LR
comp=Z,2μm,21.9s
KLR Kul'dur 145.45 334 *e*PKHKP PKPpre 02 27 41.2
KLR *e* 02 43 33.5
KLR pmax pmax
comp=Z,200nm,1.6s
KLR pmax pmax
comp=Z,4μm,12.0s
KLR MLR MLR
comp=E,2μm,21.0s
GUMO Guam 145.63 266 *e*PKPbc **PKPdf 02 27 45.7 0.0**
GUMO LR LR
comp=Z,2μm,19.0s
GUMO Guam 145.63 266 PKPbc **PKPdf 02 27 45.7 0.0**
comp=Z,176nm,0.9s,baz=183,slow=5.8,SNR=8.1
GOA Goa 145.78 91⇓ *e*P **PKPdf 02 27 45.2 -0.8**
GOA ⇑ *e*P **PKPdf 02 27 45.2 -0.8**
GOA ⇓ *e*P **PKPab 02 27 45.4 -1.5**
COCO West Island 146.06 157 PFAKE 02 28 00.0 +12
COCO LR LR
comp=Z,3μm,19.0s
POO Poona 146.32 86⇓ *i*P **PKPdf 02 27 46.0 -0.9**
comp=Z,22nm,1.0s
POO *e*P **PKPbc 02 27 47.2 -1.0**
TRD Trivandrum 146.64 105 *ex* **PKPab 02 27 50.8 +0.5**
BAKI Biak 146.72 235 PKP **PKPab 02 27 52.3 +1.8**
IRK Irkutsk 147.15 6 *e*PKIKP **PKPdf 02 27 47.9 +0.6**
IRK pmax pmax
comp=Z,204nm,3.1s
THN Thein Dam 147.20 60 *e*P **PKPdf 02 27 45.9 -2.0**
THN *ex* x 02 33 34.4
AJM Ajmer 147.27 71 *e*P **PKPdf 02 27 49.0 +0.7**

MOY	**Mondy**	**147.29**	**10**	*e*PKP2	**PKPbc**	**02 27 49.7**	**-0.3**
MOY				pmax	pmax			
	comp=Z,237nm,4.6s							
CIT	**Chita**	**147.47**	**355**	*e*PKP2	**PKPbc**	**02 27 49.6**	**-0.8**
CIT				*e*		02 31 15.8		
CIT				pmax	pmax			
	comp=Z,214nm,1.6s							
TLY	**Talaya**	**147.64**	**7**	*e*PKP2	**PKPbc**	**02 27 49.6**	**-1.2**
TLY				*e*		02 31 12.9		
TLY				*e*SS	SS	02 50 13.1	-5.0	
TLY				pmax	pmax			
	comp=Z,57nm,1.1s							
TLY				MLR	MLR			
	comp=Z,2μm,22.0s							
DHRM	**DHARAMSHALA**	**147.72**	**60**	*e*P	**PKPbc**	**02 27 51.6**	**-0.4**
BHK	**Bhakra**	**148.02**	**62**	*ex*	**PKPbc**	**02 27 52.2**	**-0.3**
FAKI	**Fak Fak**	**148.38**	**227**	PKP	**PKPbc**	**02 27 52.3**	**-1.7**
SMLA	**Simla**	**148.71**	**62**	*e*P	**PKPdf**	**02 27 50.7**	**+0.2**
BNDI	**Bandanaira**	**148.75**	**222**	PKP	**PKPbc**	**02 27 55.4**	**+0.5**
LATR	**Latur**	**148.86**	**87**	*e*P	**PKPdf**	**02 27 48.6**	**-2.4**
ZAK	**Zakamensk**	**148.87**	**8⇑**	*i*PKIKP	**PKPdf**	**02 27 51.9**	**+1.6**
ZAK				pmax	pmax			
	comp=Z,43nm,1.4s							
USRK	**Ussuriysk Arra**	**149.09**	**328**	PKP	**PKPdf**	**02 27 51.2**	**+0.5**
	comp=Z,27nm,0.9s,baz=0.2,slow=1.0,SNR=17							
USRK				PKPbc	**PKiKP**	**02 27 55.6**	**-0.4**	
	comp=Z,27nm,0.9s,baz=32,slow=1.8,SNR=46							
NDI	**New Delhi**	**149.26**	**67**	*e*P	**PKPdf**	**02 27 50.0**	**-1.5**
PALK	**Pallekele**	**149.50**	**110**	*e*PKPdf	**PKPdf**	**02 27 53.6**	**+1.2**
PALK				*e*PKPbc	**PKiKP**	**02 27 58.0**	**+0.1**
AKL	**Akola**	**149.51**	**82**	*e*P	**PKPdf**	**02 27 52.9**	**+0.9**
AKL				AMP		02 28 00.4		
	comp=Z,440nm,1.6s							
AKL				*i* x	x	02 31 11.0		
DDI	**Dehra Dun**	**149.65**	**63**	*e*P	**PKPdf**	**02 27 51.5**	**-0.6**
DDI				*e*P	**PKPbc**	**02 27 52.0**	**-4.8**
DDI				*ex*	x	02 30 13.5		
MJAR	**Matsushiro Arr**	**149.71**	**310**	PKP	**PKPdf**	**02 27 52.2**	**+0.2**
MJAR				PKPbc	**PKiKP**	**02 27 57.3**	**-0.4**
MJAR	**Matsushiro Arr**	**149.71**	**310**	PKP	**PKPdf**	**02 27 52.2**	**+0.2**
	comp=Z,5.8nm,0.8s,baz=240,slow=2.4,SNR=5.3							
MJAR				PKPbc	**PKiKP**	**02 27 57.3**	**-0.4**	
	comp=Z,25nm,0.9s,baz=166,slow=0.8,SNR=40							
MAJO	**Matsushiro**	**149.71**	**310**	*e*PKP2	**PKPbc**	**02 27 56.5**	**-0.2**
MAJO				MLR	MLR			
	comp=Z,4μm,22.0s							
MAJO	**Matsushiro**	**149.71**	**310**	*e*PKPbc	**PKPbc**	**02 27 56.5**	**-0.2**
MAJO				LR	LR			
	comp=Z,4μm,22.0s							
MAT	**Matsushiro**	**149.71**	**310**	PKP	**PKPdf**	**02 27 51.9**	**-0.1**
WMQ	**Urumqi**	**149.71**	**32**	PKPbc	**PKPdf**	**02 27 53.0**	**+1.2**
WMQ				PKS	**PKSdf**	**02 31 27.0**	**+0.3**
WMQ				PP	**PP**	**02 31 34.0**	**+4.6**
WMQ				SKS	**SKSdf**	**02 34 59.0**	**+1.0**
WMQ				SKKS	**SKKSac**	**02 38 24.0**	**+4.9**
WMQ				SS	**SS**	**02 50 48.0**	**+5.5**
WMQ				AMB	AMB			
	comp=Z,830nm,12.0s							
WMQ				LR	LR			
	comp=N,3μm,25.0s							
WMQ				LR	LR			
	comp=E,3μm,25.0s							
WMQ				LR	LR			
	comp=Z,4μm,25.0s							
JHJ	**Hachijo jima 2**	**149.82**	**303**	PKPbc	**PKPbc**	**02 27 57.4**	**+0.4**
	comp=Z,144nm,0.8s,baz=258,slow=10.0,SNR=6.0							
MDJ	**Mudanjiang**	**149.95**	**331**	PKPbc	**PKPdf**	**02 27 52.3**	**+0.2**
MDJ				pPKP	**PKiKP**	**02 27 59.1**	**+1.2**
MDJ				sPKP		02 28 01.6		
MDJ				PP	**PP**	**02 31 31.9**	**+1.3**
MDJ				LR	LR			
	comp=N,2μm,21.2s							
MDJ				LR	LR			
	comp=E,1μm,20.3s							
MDJ				LR	LR			
	comp=Z,3μm,21.6s							
AAI	**Ambon**	**150.46**	**220**	PKP	**PKPdf**	**02 27 54.4**	**+0.6**
SWI	**Sorong**	**150.53**	**229**	PKP	**PKPdf**	**02 27 55.6**	**+1.7**
HYB	**Hyderabad**	**150.59**	**89**	*i* PKP	**PKPdf**	**02 27 54.0**	**+0.1**
	comp=Z,686nm,1.5s							
HYB				*ep*PKP	PKPab	02 28 12.0	+5.8	
HYB				*e*PP	PP	02 31 30.0	-6.1	
HYB				*e*		02 33 36.0		
HYB				*e*SKKS		02 38 24.0		
HYB				*e*		02 38 40.0		
HYB				*e*PPP	PPP	02 41 52.0		
HYB				*e*PPS	PPS	02 44 24.0		
HYB	**Hyderabad**	**150.59**	**89**	*e*P	**PKPdf**	**02 27 52.8**	**-1.1**
IGBI	**Denpasar**	**151.24**	**192**	PKP	**PKPbc**	**02 28 01.6**	**+0.7**
NGP	**Nagpur**	**151.43**	**82**	*ex*	**PP**	**02 31 36.8**	**-4.0**
NGP				*ex*	x	02 43 43.7		
NLAI	**Namlea**	**151.48**	**219**	PKP	**PKPbc**	**02 28 01.7**	**+0.2**
PTH	**Pithoragarh**	**151.65**	**64**	*ex*	**PKPdf**	**02 27 57.3**	**+1.9**
PTH				*ex*	x	02 31 39.1		
SONM	**Songino Array**	**151.70**	**4**	PKP	**PKPdf**	**02 27 55.7**	**+0.9**
SONM				PKPbc	**PKiKP**	**02 28 02.0**	**+0.4**
SONM				PKPab	**PKPab**	**02 28 09.6**	**-0.3**
SONM	**Songino Array**	**151.70**	**4**	PKP	**PKPdf**	**02 27 55.7**	**+0.9**
	comp=Z,13nm,1.3s,baz=270,slow=0.5,SNR=23							
SONM				PKPbc	**PKiKP**	**02 28 02.0**	**+0.4**	
	comp=Z,24nm,0.9s,baz=326,slow=1.1,SNR=41							
SONM				PKPab	**PKPab**	**02 28 09.6**	**-0.3**	
	comp=Z,33nm,0.9s,baz=328,slow=2.3,SNR=18							
ULN	**Ulaanbaatar**	**151.72**	**3**	*e*PKPdf	**PKPdf**	**02 27 55.8**	**+0.9**
ULN				*e*PKPbc	**PKiKP**	**02 28 02.1**	**+0.5**
ULN				*e*PKPab	**PKPab**	**02 28 11.3**	**+1.4**
ULN				*e*PP	**PP**	**02 31 38.9**	**-1.5**
ULN				LR	LR			
	comp=Z,3μm,22.0s							
ULN	**Ulaanbaatar**	**151.72**	**3**	PKP	**PKPdf**	**02 27 56.4**	**+1.5**
SRBI	**Singaraja**	**151.94**	**192**	PKP	**PKPbc**	**02 28 03.1**	**+0.6**
BBSI	**Bau Bau**	**151.96**	**209**	PKP	**PKPab**	**02 28 15.5**	**+3.8**
GMJI	**Gumukmas**	**152.05**	**188**	PKP	**PKPbc**	**02 28 03.8**	**+1.0**
JBP	**Jabalpur**	**152.31**	**77**	*ex*	**PKPbc**	**02 28 04.0**	**+0.9**
CN2	**Changchun**	**152.40**	**335**	*e*PKPbc	**PKPdf**	**02 27 58.0**	**+2.2**
CN2				PP	**PP**	**02 31 41.0**	**-3.5**
CN2				LR	LR			
	comp=N,2μm,23.0s							
CN2				LR	LR			
	comp=E,1μm,23.0s							
CN2				LR	LR			
	comp=Z,3μm,25.0s							
PWJI	**Pagerwojo**	**152.48**	**185**	PKP	**PKPdf**	**02 27 58.5**	**+1.7**
SJI	**Sawahan**	**152.76**	**185**	PKP	**PKPbc**	**02 28 05.0**	**+0.5**
CISI	**Cisompet, Garu**	**152.98**	**176**	PKP	**PKPbc**	**02 28 05.6**	**+0.7**
BKSI	**Bulukumba**	**153.13**	**204**	PKP	**PKPdf**	**02 27 59.1**	**+1.3**
LBMI	**Labuha**	**153.25**	**223**	PKP	**PKPbc**	**02 28 05.3**	**-0.2**
KDI	**Kendari**	**153.29**	**210**	PKP	**PKPbc**	**02 28 06.2**	**+0.7**
KAPI	**Kappang**	**153.56**	**203**	*e*PKPdf	**PKPdf**	**02 27 58.5**	**0.0**
KAPI				PKP	**PKPdf**	**02 27 58.7**	**+0.3**
KAPI				*e*PKPbc	**PKiKP**	**02 28 05.9**	**-0.3**
KAPI				PKPbc	PKPab	02 28 06.2	-12	
KAPI				*e*PKPab	PKPab	02 28 18.7	+0.3	
KAPI				LR	LR			
	comp=Z,2μm,22.0s							
KAPI	**Kappang**	**153.56**	**203**	P	**PKPbc**	**02 28 06.5**	**+0.4**
	SNR=10							
KAPI	**Kappang**	**153.56**	**203**	PKP	**PKPdf**	**02 27 59.2**	**+0.8**
KAPI				PKP	**PKPbc**	**02 28 06.1**	**0.0**
KAPI	**Kappang**	**153.56**	**203**	PKP	**PKPdf**	**02 27 58.7**	**+0.3**
	comp=Z,10nm,0.8s,baz=104,slow=3.1,SNR=6.9							
KAPI				PKPbc	**PKPbc**	**02 28 06.2**	**+0.1**	
	comp=Z,43nm,0.8s,baz=193,slow=3.3,SNR=24							
LEM	**Lembang**	**153.69**	**176**	PKP	**PKPdf**	**02 28 00.8**	**+2.0**
CGJI	**Cibinong**	**153.70**	**171**	PKP	**PKPbc**	**02 28 08.1**	**+1.7**
TGJI	**Tegal**	**153.72**	**179**	PKP	**PKPbc**	**02 28 07.2**	**+0.7**
DBJI	**Dramaga**	**153.89**	**174**	PKP	**PKPbc**	**02 28 08.8**	**+1.9**
PYUN	**Piuthan**	**154.36**	**66**	*e*P	**PKPdf**	**02 28 00.0**	**+0.6**
	comp=Z,505nm,1.3s							
SPSI	**Sidrap Palu**	**154.51**	**204**	PKP	**PKPbc**	**02 28 08.8**	**+0.6**
SNY	**Shenyang**	**154.80**	**335**	⇑PKPbc	**PKPdf**	**02 27 59.3**	**0.0**
SNY				PP	**PP**	**02 31 59.1**	**+1.1**
SNY				AMB	AMB			
	comp=Z,890nm,12.0s							
SNY				LR	LR			
	comp=N,970nm,24.0s							
SNY				LR	LR			
	comp=E,2μm,22.6s							
SNY				LR	LR			
	comp=Z,3μm,22.6s							
DANN	**Dangsing**	**154.95**	**65**	*e*P	**PKPdf**	**02 28 01.5**	**+1.1**
	comp=Z,202nm,0.9s							
KOLN	**Koldanda**	**154.96**	**66**	*e*P	**PKPdf**	**02 28 00.7**	**+0.4**
	comp=Z,37nm,1.0s							
TTSI	**Tana Toraja**	**155.33**	**205**	PKP	PKPdf	02 28 10.3	+9.4	
LUWI	**Luwuk**	**155.72**	**214**	PKP	**PKPdf**	**02 28 03.5**	**+2.1**
KSI	**Kapahiang**	**155.94**	**163**	PKP	**PKPab**	**02 28 31.3**	**+2.7**
KSRS	**Korea Array**	**156.01**	**322**	PKP	**PKPdf**	**02 28 02.2**	**+1.1**
	comp=Z,8.9nm,1.1s,baz=43,slow=0.9,SNR=34							
KSRS				PKPbc	PKPab	02 28 11.4	-17	
	comp=Z,6.3nm,1.0s,baz=46,slow=0.7,SNR=7.7							
KSRS				PKPab	PKPab	02 28 26.8	-1.5	
	comp=Z,4.3nm,0.6s,baz=48,slow=2.7,SNR=7.9							
KSAR	**Wonju Array Be**	**156.04**	**322**	PKP	**PKPdf**	**02 28 02.2**	**+1.1**
KSAR				PKPbc	PKPab	02 28 11.4	-17	
KSAR				PKPab	PKPab	02 28 26.8	-1.7	
DMN	**Daman**	**156.29**	**66**	*e*P	**PKPdf**	**02 28 02.6**	**+0.5**
KKN	**Kakani**	**156.40**	**65**	*e*P	**PKPdf**	**02 28 02.3**	**+0.1**
PKI	**Pulchoki**	**156.56**	**66**	*e*P	**PKPdf**	**02 28 02.7**	**+0.1**
	comp=Z,47nm,1.1s							
INCN	**Inchon**	**156.73**	**324**	PFAKE		02 28 10.0	+7.9	
INCN				LR	LR			
	comp=Z,2μm,21.0s							
GUN	**Gumba**	**156.88**	**65**	*e*P	**PKPdf**	**02 28 03.8**	**+0.8**
PCI	**Palu**	**157.25**	**208**	PKP	PKPdf	02 28 14.1	+11	
BOK	**Bokaro**	**157.67**	**75**	*e*P	**PKPdf**	**02 28 02.8**	**-0.8**
RAMN	**Ramite**	**157.74**	**66**	*e*P	**PKPdf**	**02 28 04.7**	**+0.7**
	comp=Z,130nm,1.2s							
DL2	**Dalian**	**158.07**	**334⇑**	*i*PKP	**PKPdf**	**02 28 03.8**	**+0.1**
DL2				PKPab	**PKPab**	**02 28 37.6**	**+0.5**
DL2				PP	**PP**	**02 32 17.6**	**+1.5**
DL2				LR	LR			
	comp=N,1μm,20.2s							
DL2				LR	LR			
	comp=E,1μm,20.4s							
DL2				LR	LR			
	comp=Z,2μm,18.8s							
PPBI	**Pangkal Pinang**	**158.14**	**171**	PKP	**PKPdf**	**02 28 05.8**	**+1.3**
ODAN	**Odare**	**158.45**	**66**	*e*P	**PKPdf**	**02 28 05.5**	**+0.7**
GTA	**Gaotai**	**158.54**	**21**	⇑PKP	**PKPdf**	**02 28 05.8**	**+1.4**
GTA				pPKP	**pPKPdf**	**02 28 11.4**	**-2.6**
GTA				sPKP		02 28 14.4		
GTA				PKPab	**PKPab**	**02 28 39.3**	**0.0**
GTA				PKS	**PKSdf**	**02 31 37.9**	**-0.3**
GTA				PP	**PP**	**02 32 17.9**	**-0.9**
GTA				SKS	**SKSdf**	**02 35 08.9**	**+0.5**
GTA				SKKS	**SKKSac**	**02 39 06.4**	**-0.4**
GTA				LR	LR			
	comp=N,800nm,26.6s							
GTA				LR	LR			
	comp=E,720nm,28.5s							
GTA				LR	LR			
	comp=Z,1μm,29.9s							
TAPN	**Taplejung**	**158.59**	**65**	*e*P	**PKPdf**	**02 28 05.5**	**+0.4**
	comp=Z,139nm,1.6s							
HHC	**Hu-ho-hao-te**	**158.73**	**356**	*e*PKP	**PKPdf**	**02 28 02.1**	**-2.5**
HHC				pPKP	**pPKPdf**	**02 28 11.4**	**-2.7**
HHC				sPKP		02 28 14.4		
HHC				PKS	PKSdf	02 31 32.4	-5.8	
HHC				SKS	SKSdf	02 35 00.4	-8.0	
HHC				SKKS	**SKKSac**	**02 39 02.0**	**-5.6**
HHC				SS	**SS**	**02 52 19.9**	**+0.4**
HHC				AMB	AMB			
	comp=Z,2μm,10.0s							
HHC				LR	LR			
	comp=N,4μm,20.4s							
HHC				LR	LR			
	comp=E,3μm,19.8s							
HHC				LR	LR			
	comp=Z,7μm,19.8s							
BJI	**Beijing**	**158.82**	**346**	PKP	**PKPdf**	**02 28 04.5**	**0.0**
BJI				SS	SS	02 52 22.8	+2.4	
BJI				LR	LR			
	comp=N,1μm,20.1s							
BJI				LR	LR			
	comp=E,2μm,23.2s							
BJI				LR	LR			
	comp=Z,3μm,25.9s							
MNSI	**Mandailing Nat**	**158.95**	**151**	PKP	**PKPdf**	**02 28 05.9**	**+0.4**
BTO	**Baotou**	**159.04**	**359**	*e*PKP	**PKPdf**	**02 28 05.5**	**+0.6**
CAL	**Calcutta**	**160.03**	**78**	*ex*	**PKPdf**	**02 28 03.1**	**-3.3**
DAV	**Davao City (W)**	**160.04**	**234**	PFAKE		02 28 20.0	+13	
DAV				LR	LR			
	comp=Z,2μm,20.0s							
LSA	**Lhasa**	**160.54**	**55**	PKP	**PKPdf**	**02 28 08.0**	**+0.5**
MYKOM	**Kota Tinggi**	**161.47**	**162**	P	**PKPdf**	**02 28 10.1**	**+1.8**
MYKOM	**Kota Tinggi**	**161.47**	**162**	PKP	**PKPdf**	**02 28 09.4**	**+1.1**
TIY	**Taiyuan**	**161.75**	**353**	*e*PKP	**PKPdf**	**02 28 09.5**	**+1.5**
TIY				PKPab	**PKPab**	**02 28 52.9**	**-0.3**
TIY				PP	**PP**	**02 32 36.3**	**+0.5**
TIY				SS	SS	02 52 47.8	-3.5	
TIY				AMB	AMB			
	comp=Z,860nm,9.9s							
TIY				LR	LR			
	comp=N,2μm,21.8s							
TIY				LR	LR			
	comp=E,1μm,18.6s							
TIY				LR	LR			
	comp=Z,930nm,18.2s							
KSM	**Kuching**	**161.99**	**183**	*e*PKPdf	**PKPdf**	**02 28 09.2**	**+0.4**
KSM				*e*PKPab	**PKPab**	**02 28 54.8**	**+0.1**
KSM				LR	LR			
	comp=Z,2μm,20.0s							
KSM	**Kuching**	**161.99**	**183**	P	**PKPdf**	**02 28 10.7**	**+1.8**
KSM	**Kuching**	**161.99**	**183**	PKP	**PKPdf**	**02 28 10.3**	**+1.5**
TIA	**Tai'an**	**162.13**	**340**	PKP	PKPdf	02 28 03.1	-5.2	
TIA				PP	**PP**	**02 32 36.4**	**-1.5**
TIA				LR	LR			
	comp=N,2μm,23.5s							
TIA				LR	LR			
	comp=E,2μm,23.5s							
TIA				LR	LR			
	comp=Z,3μm,18.6s							
SHL	**Shillong**	**162.68**	**67**	*e*P	**PKPdf**	**02 28 09.5**	**+0.1**
TSM	**Tawau**	**162.75**	**209**	P	**PKPdf**	**02 28 11.6**	**+2.0**
SBUM	**Sibu**	**162.77**	**189**	P	**PKPdf**	**02 28 11.9**	**+2.3**
SBUM	**Sibu**	**162.77**	**189**	PKP	**PKPdf**	**02 28 11.3**	**+1.7**
LZH	**Lanzhou**	**162.82**	**16⇑**	PKP	**PKPdf**	**02 28 10.9**	**+1.7**
LZH				pPKP	**pPKPdf**	**02 28 19.8**	**+1.0**
LZH				PP	**PP**	**02 32 45.3**	**+3.6**
LZH				SKS	**SKSdf**	**02 35 12.8**	**+0.5**
LZH				SKKS	**SKKSac**	**02 39 32.1**	**+3.0**
LZH				SS	**SS**	**02 53 07.5**	**+4.6**
LZH				AMB	AMB			
	comp=Z,1μm,9.8s							
LZH				LR	LR			
	comp=N,2μm,18.1s							
LZH				LR	LR			
	comp=E,4μm,19.5s							
LZH				LR	LR			
	comp=Z,4μm,20.3s							
IPM	**Ipoh**	**162.87**	**150**	*e*PKPdf	**PKPdf**	**02 28 10.2**	**+0.5**
IPM	**Ipoh**	**162.87**	**150**	P	**PKPdf**	**02 28 11.3**	**+1.5**
IPM	**Ipoh**	**162.87**	**150**	PKP	**PKPdf**	**02 28 10.7**	**+1.0**
MYLDM	**Lahad Datu**	**163.21**	**213**	P	**PKPdf**	**02 28 12.9**	**+2.9**
KULM	**Kulim**	**163.39**	**148**	*e*PKPdf	**PKPdf**	**02 28 10.5**	**+0.3**
KULM				*e*PKPab	**PKPab**	**02 29 00.9**	**0.0**
KULM	**Kulim**	**163.39**	**148**	P	**PKPdf**	**02 28 11.8**	**+1.6**
KULM	**Kulim**	**163.39**	**148**	PKP	**PKPdf**	**02 28 11.3**	**+1.1**
SDKM	**Sandakan**	**164.25**	**209**	P	**PKPdf**	**02 28 11.7**	**+0.6**
SSE	**Sheshan**	**164.42**	**320**	*e*PKP	PKPdf	02 28 05.1	-5.5	
SSE				PP	**PP**	**02 32 51.0**	**+0.3**
SSE				SS	SS	02 53 13.8	-6.7	
SSE				AMB	AMB			
	comp=Z,800nm,12.0s							
SSE				LR	LR			
	comp=N,2μm,20.8s							
SSE				LR	LR			
	comp=E,490nm,20.8s							
SSE				LR	LR			
	comp=Z,2μm,22.9s							
NJ2	**Nanjing**	**165.00**	**328**	*e*PKP	**PKPdf**	**02 28 11.4**	**+0.3**
NJ2				pPKP	**pPKPdf**	**02 28 18.0**	**-2.7**
NJ2				sPKP		02 28 20.1		
NJ2				PKPab	**PKPab**	**02 29 06.1**	**-1.5**
NJ2				PP	**PP**	**02 32 54.0**	**+0.6**
NJ2				SKKS		02 39 42.0		
NJ2				LR	LR			
	comp=N,3μm,26.1s							
NJ2				LR	LR			
	comp=E,4μm,26.3s							
NJ2				LR	LR			
	comp=Z,3μm,33.9s							
KKM	**Kota Kinabalu**	**165.04**	**207**	*e*PKPdf	**PKPdf**	**02 28 11.9**	**0.0**
KKM				LR	LR			
	comp=Z,2μm,20.0s							
KKM	**Kota Kinabalu**	**165.04**	**207**	P	**PKPdf**	**02 28 13.9**	**+2.1**
KKM	**Kota Kinabalu**	**165.04**	**207**	PKP	**PKPdf**	**02 28 13.6**	**+1.8**
XAN	**Xi'an**	**165.59**	**2**	PKP	**PKPdf**	**02 28 12.1**	**+0.5**
XAN				pPKP	**pPKPdf**	**02 28 21.5**	**+0.3**
XAN				PP	**PP**	**02 32 55.3**	**-0.6**
XAN				SKS	SKSdf	02 35 06.0	-8.1	
XAN				LR	LR			
	comp=N,1μm,24.6s							
XAN				LR	LR			
	comp=Z,850nm,25.7s							
CD2	**Chengdu**	**167.59**	**24**	PKP	**PKPdf**	**02 28 12.1**	**-1.2**
CD2				pPKP	**pPKPdf**	**02 28 22.9**	**+0.1**
CD2				sPKP		02 28 26.5		
CD2				PKPab	**PKPab**	**02 29 19.8**	**+0.8**
CD2				PKS	**PKSdf**	**02 31 43.3**	**-2.7**
CD2				PP	**PP**	**02 33 09.1**	**+2.5**
CD2				SKS	**SKSdf**	**02 35 13.3**	**-2.1**
CD2				SKKS	**SKKSac**	**02 39 53.8**	**+0.8**
CD2				SS	**SS**	**02 53 53.4**	**+1.7**
CD2				AMB	AMB			
	comp=Z,2μm,8.3s							
CD2				LR	LR			
	comp=N,4μm,19.1s							
CD2				LR	LR			
	comp=E,2μm,20.6s							
CD2				LR	LR			
	comp=Z,4μm,21.1s							
TATO	**Taipei**	**167.67**	**298**	PFAKE		02 28 20.0	+6.6	
TATO				LR	LR			
	comp=Z,2μm,21.0s							
WHN	**Wuhan**	**168.24**	**339**	⇓PKP	**PKPdf**	**02 28 15.3**	**+1.7**
WHN				PP	**PP**	**02 33 07.1**	**-2.6**
WHN				LR	LR			
	comp=N,5μm,21.4s							
WHN				LR	LR			
	comp=E,3μm,16.3s							
WHN				LR	LR			
	comp=Z,7μm,20.7s							
SSLB	**Suanglung**	**168.56**	**293**	*e*PKPdf	**PKPdf**	**02 28 15.2**	**+1.1**
CMAR	**Chiang Mai Arr**	**169.95**	**95**	PKP	**PKPdf**	**02 28 14.9**	**-0.2**
CMAR				PKPab	**PKPab**	**02 29 31.2**	**+1.1**
CMAR				PP	**PP**	**02 33 23.9**	**+3.3**
CMAR	**Chiang Mai Arr**	**169.95**	**95**	PKP	**PKPdf**	**02 28 14.9**	**-0.2**
	comp=Z,6.8nm,0.9s,baz=267,slow=2.0,SNR=38							
CMAR				PKPab	**PKPab**	**02 29 31.2**	**+1.1**	
	comp=Z,13nm,0.9s,baz=251,slow=6.6,SNR=21							
CMAR				PP	**PP**	**02 33 23.9**	**+3.3**	
	comp=Z,5.9nm,1.1s,baz=268,slow=5.7,SNR=5.9							
CHTO	**Chiang Mai**	**170.00**	**93**	*e*PKIKP	**PKPdf**	**02 28 14.9**	**-0.2**
CHTO				*e*		02 29 30.4		
CHTO				*e*		02 33 18.8		
CHTO				MLR	MLR			
	comp=Z,3μm,21.0s							
CHTO	**Chiang Mai**	**170.00**	**93**	*e*PKPdf	**PKPdf**	**02 28 14.9**	**-0.2**
CHTO				*e*PKPab	**PKPab**	**02 29 30.4**	**+0.1**
CHTO				*e*PP	**PP**	**02 33 18.8**	**-2.0**
CHTO				LR	LR			
	comp=Z,3μm,21.0s							
CHTO	**Chiang Mai**	**170.00**	**93**	P	**PKPdf**	**02 28 15.6**	**+0.6**
	SNR=9.6							
CHTO	**Chiang Mai**	**170.00**	**93**	PKP	**PKPdf**	**02 28 15.5**	**+0.4**
CMMT	**Chiang Mai**	**170.00**	**93**	PKP	**PKPdf**	**02 28 16.0**	**+0.9**
QZH	**Quanzhou**	**170.03**	**304**	*i* PKP	**PKPdf**	**02 28 16.1**	**+1.2**
QZH				PKPab	**PKPab**	**02 29 32.8**	**+2.7**
QZH				PP	**PP**	**02 33 19.3**	**-0.8**
QZH				LR	LR			
	comp=N,2μm,15.8s							
QZH				LR	LR			
	comp=E,5μm,20.0s							
QZH				LR	LR			
	comp=Z,5μm,26.0s							
CHBT	**CHBT**	**170.33**	**134**	PKP	**PKPdf**	**02 28 17.3**	**+2.0**
KMI	**Kunming**	**171.66**	**47**	PKP	**PKPdf**	**02 28 17.0**	**+0.9**
KMI				pPKP	**pPKPdf**	**02 28 26.0**	**+0.3**
GYA	**Guiyang**	**172.67**	**20**	*i* PKP	**PKPdf**	**02 28 16.3**	**-0.1**
GYA				PKPab	**PKPab**	**02 29 42.0**	**+0.3**
GYA				PKS	**PKSdf**	**02 31 46.8**	**-2.1**
GYA				PP	**PP**	**02 33 34.3**	**+2.2**
GYA				SKKS		02 40 17.3		
GYA				SS	**SS**	**02 54 42.8**	**+0.8**
GYA				AMB	AMB			
	comp=Z,3μm,8.9s							
GYA				LR	LR			
	comp=N,6μm,25.8s							
GYA				LR	LR			
	comp=E,4μm,26.7s							
GYA				LR	LR			
	comp=Z,6μm,25.3s							
UBPT	**Khong Chiam**	**174.25**	**137**	PKP	**PKPdf**	**02 28 18.2**	**+1.2**
QIZ	**Qiongzhong**	**179.36**	**211**	PKP	**PKPdf**	**02 28 17.3**	**-0.6**
QIZ				PKPab		02 30 13.8		
QIZ				PP	**PP**	**02 34 02.5**	**-1.7**
QIZ				SS	SS	02 55 34.8	-11	
QIZ				LR	LR			
	comp=N,2μm,18.9s							
QIZ				LR	LR			
	comp=E,790nm,17.4s							
QIZ				LR	LR			
	comp=Z,3μm,20.2s							

IDC ***17*** *02:17:50.3±0.6, 19°.49S×70°.45W, h0km, mb4.5/19, mb1 4.7/19, mb1mx4.6/24, mbtmp4.5/19, Error ellipse: s-maj=20.5km s-min=15.6km az=45.0*
NEIC ***17*** *02:17:54.5±0.2, 19°.52S×70°.41W, mb5.0/49, Error ellipse: s-maj=7.4km s-min=4.4km az=65.0*
ISCJB ***17*** *02:17:55.5±0.2, 19°.45S±0°.04×70°.47W±0°.04, h44km, mb4.8/66, Error ellipse: s-maj=6.7km s-min=

17nm,0.9s,baz=24,slow=1.1,SNR=5.4
MTP Monte Pirata 37.73 8 eP P 02 25 06.1 -1.9
24nm,0.9s
LRS Lares 37.78 6 eP P 02 25 07.5 -1.0
CBYP Canovanas 37.87 7 eP P 02 25 07.5 -1.8
35nm,0.9s
CMIG Matias Romero 43.57 325 P P 02 25 56.8 +0.5
CMIG Matias Romero 43.57 325 P P 02 25 56.8 +0.5
2.5nm,0.8s,baz=125,slow=7.2,SNR=5.0
PMSA Palmer Station 45.40 176 eP P 02 26 11.0 +0.7
36nm,1.0s
TKL Tuckaleechee C 56.33 347 P P 02 27 32.6 -0.2
TKL Tuckaleechee C 56.33 347 P P 02 27 32.6 -0.2
6.3nm,0.7s,baz=157,slow=9.3,SNR=4.7
632A Uvalde 56.34 329 ⇑P P 02 27 33.7 +0.6
baz=57
SWET Sewanee 56.40 345 eP P 02 27 32.4 -1.0
531A Rocksprings 57.26 329 ⇑P P 02 27 40.3 +0.7
baz=58
WHTX Lake Whitney 57.38 333 ⇓P P 02 27 40.6 +0.3
baz=58
432A Menard 57.49 330 ⇓P P 02 27 41.3 +0.1
baz=58
530A J-C Ranch, Com 57.63 328 ⇑P P 02 27 42.4 +0.1
baz=58
431A Sonora 57.71 329 ⇑P P 02 27 42.9 +0.1
baz=58
WVT Waverly 57.75 343 eP P 02 27 41.5 -1.4
8.3nm,0.8s
628A Black Gap, Mar 57.88 327 ⇓P P 02 27 43.7 -0.3
baz=58
332A Millersview 57.89 330 ⇓P P 02 27 43.9 -0.1
baz=58
529A Stev Forest Ra 58.05 328 ⇓P P 02 27 45.3 +0.1
baz=58
MIAR Mount Ida 58.09 338 eP P 02 27 44.9 -0.4
10nm,0.8s
430A Baggett Ranch, 58.10 329 ⇑P P 02 27 45.4 -0.2
baz=58
TXAR Lajitas Array 58.17 326 P P 02 27 46.0 -0.1
TXAR Lajitas Array 58.17 326 P P 02 27 46.0 -0.1
1.5nm,0.9s,baz=146,slow=9.1,SNR=5.0
232A Coleman 58.27 331 ⇑P P 02 27 46.1 -0.6
baz=58
429A Davenport Ranc 58.30 328 ⇓P P 02 27 46.7 -0.2
baz=59
626A Big Bend Ranch 58.59 326 ⇑P P 02 27 48.5 -0.6
baz=59
527A Woodward Ranch 58.78 326 ⇓P P 02 27 50.7 +0.2
baz=59
526A Mary Lane Ranc 58.97 326 ⇑P P 02 27 52.2 +0.5
baz=59
131A Roby 59.27 331 ⇓P P 02 27 54.1 +0.5
baz=60
328A Wristen Ranch, 59.37 328 ⇓P P 02 27 55.1 +0.8
baz=60
Z32A Haskell 59.38 332 ⇑P P 02 27 54.0 -0.3
baz=60
130A Snyder 59.47 330 ⇓P P 02 27 55.2 +0.2
baz=60
Z31A Sharp Cattle R 59.69 331 ⇓P P 02 27 56.6 +0.1
baz=60
228A UT Block 9, Go 59.85 329 ⇓P P 02 27 58.2 +0.5
baz=60
Z30A Sanderson Ranc 60.12 331 ⇓P P 02 27 59.6 +0.2
baz=60
TUL1 Tulsa 60.12 336 ⇓P P 02 27 59.7 +0.4
baz=60
Y31A Rekieta Farm, 60.29 332 ⇓P P 02 28 00.4 -0.1
baz=61
325A Bean Ranch, Si 60.47 326 ⇓P P 02 28 02.5 +0.4
baz=61
226B Tecolote Peak, 60.61 327 ⇑P P 02 28 03.9 +1.0
baz=61
127A Arkansas Junct 60.69 328 ⇓P P 02 28 03.8 +0.4
baz=61
X31A McDonald Ranch 60.73 332 ⇓P P 02 28 03.3 -0.2
baz=61
324A Moseley Ranch, 60.79 326 ⇑P P 02 28 03.3 -0.9
baz=61
GDL2 Guadalupe Moun 60.81 327 eP P 02 28 04.7 +0.4
17nm,1.1s
GDL2 epP pP 02 28 11.3 -5.6
126A Clayton Basin, 60.99 328 ⇓P P 02 28 06.0 +0.5
baz=61
BRYW Bryant College 61.17 359 eP P 02 28 07.0 +0.6
132nm,1.3s
224A Cornudas Mount 61.31 326 ⇑P P 02 28 06.9 -0.8
baz=62
125A Gardner Draw, 61.32 327 ⇓P P 02 28 07.6 -0.1
baz=62
MSTX Muleshoe 61.45 330 ⇓P P 02 28 08.8 +0.2
baz=62
SFIN Scholer Farm 61.59 346 ⇑P P 02 28 07.7 -1.5
baz=62
ERPA Erie 61.98 352 eP P 02 28 12.3 +0.4
18nm,1.0s
Z24A Sheeppen Canyo 62.22 327 ⇓P P 02 28 14.1 +0.2
baz=62
V28A Channing 62.66 331 ⇑P P 02 28 17.1 +0.5
baz=63
T31A Randall Ranch, 62.69 334 ⇓P P 02 28 17.4 +0.6
baz=63
220A Playas Peak, P 62.80 324 ⇑P P 02 28 18.2 +0.5
baz=63
319A Douglas 62.82 323 ⇑P P 02 28 18.4 +0.5
baz=63
W26A Owens Ranch, T 62.84 330 ⇓P P 02 28 18.8 +0.9
baz=63
121A Cookes Peak, D 62.87 325 ⇑P P 02 28 19.1 +0.9
baz=63
Z22A Elephant Butte 62.99 326 ⇓P P 02 28 20.1 +1.1
baz=63
X24A Lazy VL Ranch, 63.23 328 ⇑P P 02 28 20.6 0.0
baz=64
W25A X Bar L Ranch, 63.27 329 ⇓P P 02 28 20.9 +0.1
baz=64
MDV Middlebury 63.29 358 eP P 02 28 20.6 +0.2
U26A Atchley Ranch, 63.89 331 ⇓P P 02 28 25.4 +0.4
baz=64
LAZ Ladron 63.97 327 eP P 02 28 26.7 +1.2
4.2nm,1.2s
T27A Campo 63.97 332 ⇓P P 02 28 26.2 +0.8
baz=64
EMMW East Machias 64.01 2 eP P 02 28 25.2 0.0
74nm,1.2s
ANMO Albuquerque 64.05 328 P P 02 28 26.6 +0.6
ANMO Albuquerque 64.05 328 P P 02 28 26.6 +0.6
1.4nm,1.0s,baz=121,slow=8.7,SNR=4.1
U25A Circle Dot Ran 64.20 330 ⇑P P 02 28 27.6 +0.6
baz=64
MSNY Massena 64.36 357 eP P 02 28 27.8 +0.3
189nm,1.0s
SNAA Sanae 64.61 161 eP P 02 28 29.3 +0.3
28nm,1.4s
S26A Kim 64.77 331 ⇑P P 02 28 31.5 +0.9
baz=65
V22A San Miguel Ran 65.03 328 ⇑P P 02 28 33.8 +1.4
baz=65
S25A Robets Cordova 65.24 331 ⇓P P 02 28 34.5 +0.8
baz=66
S24A Houchin Ranch, 65.59 330 ⇑P P 02 28 37.1 +1.1
baz=66
U21A Nageezi 65.81 328 ⇑P P 02 28 38.4 +0.9
baz=66
T22A Edith 65.90 329 ⇓P P 02 28 39.8 +1.8
baz=66
R24A Sanders Place, 66.01 331 ⇓P P 02 28 40.0 +1.3
baz=66
T21A Navajo Lake 66.19 328 ⇓P P 02 28 41.2 +1.3
baz=66
X16A Lo Mia Camp, P 66.29 324 ⇓P P 02 28 41.7 +1.2
baz=67
S22A 4UR Ranch, Cre 66.44 329 ⇑P P 02 28 41.7 +0.2
baz=67
113A Mohawk Valley, 66.44 321 ⇓P P 02 28 42.3 +1.1
baz=67
Q24A Divide 66.63 331 ⇓P P 02 28 43.1 +0.3
baz=67
MVCO Mesa Verde 66.84 328 ⇑P P 02 28 44.7 +0.6
baz=67
S20A Disappointment 67.25 328 ⇑P P 02 28 47.7 +1.0
baz=68
ISCO Idaho Springs 67.51 331 eP P 02 28 48.3 0.0
5.5nm,1.2s
ISCO epP pP 02 28 56.3 -4.8
ISCO Idaho Springs 67.51 331 ⇑P P 02 28 49.1 +0.7
baz=68
R20A Redvale 67.54 328 ⇓P P 02 28 49.5 +1.1
baz=68
SMCO Snowmass 67.64 330 eP P 02 28 50.0 +0.8
5.5nm,0.9s
P22A Eagle 67.88 330 ⇓P P 02 28 51.6 +1.1
baz=68
S18A Hurst Farm, Bl 67.97 327 ⇑P P 02 28 52.5 +1.3
baz=68
U15A North Rim 68.24 325 ⇑P P 02 28 53.4 +0.4
baz=68
M24A Cheyenne 68.53 333 ⇓P P 02 28 55.6 +1.1
baz=69
N23A Red Feather La 68.55 332 ⇓P P 02 28 55.7 +1.0
baz=69
BELC Belle Mtn. Jos 68.64 321 ⇑P P 02 28 56.5 +1.2
baz=69
PFO Pinyon Flat Ob 68.64 320 ⇑P P 02 28 56.4 +1.1
baz=69
N22A Wattenberg Ran 68.70 331 ⇓P P 02 28 56.7 +1.0
baz=69
M23A Laramie 68.92 332 ⇓P P 02 28 57.9 +0.9
baz=69
P19A Cripple Cowboy 68.96 329 ⇑P P 02 28 58.1 +0.8
baz=69
SRU San Rafael 69.32 328 eP P 02 29 00.1 +0.6
4.2nm,0.8s
SRU San Rafael 69.32 328 ⇓P P 02 29 00.5 +1.0
baz=70
HEC Hector,Ludlow 69.41 321 ⇑P P 02 29 01.4 +1.4
baz=70
N20A Spence Gulch, 69.56 330 ⇓P P 02 29 02.1 +1.1
baz=70
P18A Preston Nutter 69.58 328 ⇓P P 02 29 02.3 +1.0
baz=70
CCUT Cedar City 69.65 325 eP P 02 29 03.2 +1.6
14nm,1.3s
DBIC Dimbokro 69.67 75 P P 02 28 59.9 -2.1
DBIC Dimbokro 69.67 75 P P 02 28 59.9 -2.1
10.0nm,0.7s,baz=220,slow=6.7,SNR=7.2
CIS Catalina Islan 69.70 319 ⇑P P 02 29 02.3 +0.5
baz=70
MSU Marysvale 69.72 326 eP P 02 29 03.4 +1.4
12nm,1.3s
MVU Marysvale 69.73 326 eP P 02 29 03.3 +1.1
13nm,1.3s
M21A Separation Pea 69.76 331 ⇓P P 02 29 03.3 +1.1
baz=70
ARUT Antelope Range 69.86 325 eP P 02 29 05.3 +2.5
15nm,1.0s
J24A Dixon Ranch, L 69.99 334 ⇑P P 02 29 04.5 +1.0
baz=70
N19A John Jarvie Ra 70.03 330 ⇓P P 02 29 03.9 +0.1
baz=70
L21A Rawlins 70.05 332 ⇓P P 02 29 04.8 +0.8
baz=70
K22A Casper 70.22 333 ⇑P P 02 29 05.7 +0.7
baz=70
I24A Kuemmerle Ranc 70.41 335 ⇓P P 02 29 07.2 +1.1
baz=71
EDW2 Edwards Air Fo 70.44 320 ⇓P P 02 29 06.9 +0.6
baz=71
K21A Alcova 70.53 332 ⇓P P 02 29 08.0 +1.2
baz=71
DAU Davis Canyon 70.68 328 eP P 02 29 09.5 +1.5
6.6nm,1.2s
J22A Midwest 70.82 333 ⇑P P 02 29 08.7 +0.2
baz=71
N17A Moffit Pass 70.87 329 ⇓P P 02 29 09.8 +0.7
baz=71
M18A Lyman 70.87 330 ⇑P P 02 29 09.3 +0.3
baz=71
JLU Jordanelle 70.92 328 eP P 02 29 10.6 +1.3
12nm,1.1s
MPMC Manual Prospec 70.94 321 ⇑P P 02 29 10.1 +0.6
baz=71
K20A Yellowstone Ra 71.03 331 ⇑P P 02 29 10.1 +0.2
baz=71
L19A Farson 71.06 330 ⇑P P 02 29 10.9 +0.7
baz=71
H24A Dirks Ranch, A 71.12 335 ⇓P P 02 29 10.8 +0.5
baz=71
SBC Santa Barbara 71.20 319 ⇓P P 02 29 10.6 -0.2
baz=72
I22A 9 Mile Ranch, 71.21 333 ⇑P P 02 29 11.3 +0.4
baz=72
L18A Fontenelle, Gr 71.24 330 ⇑P P 02 29 11.8 +0.5
baz=72
ISA Isabella 71.25 320 eP P 02 29 12.9 +1.6
11nm,1.2s
ISA Isabella 71.25 320 ⇓P P 02 29 12.1 +0.8
baz=72
DUG Dugway 71.30 327 eP P 02 29 12.7 +1.1
17nm,1.4s
DUG Dugway 71.30 327 ⇑P P 02 29 12.5 +0.9
baz=72
K19A Absolon Red Bu 71.39 331 ⇑P P 02 29 12.9 +0.8
baz=72
R11A Troy Canyon, C 71.44 324 ⇓P P 02 29 14.1 +1.7
baz=72
I21A Big Trails, Te 71.49 333 ⇑P P 02 29 13.3 +0.6
baz=72
BW06 Boulder Array 71.67 331 ⇑P P 02 29 14.5 +0.7
baz=72
PDAR Pinedale Array 71.67 331 P P 02 29 13.9 +0.1
PDAR Pinedale Array 71.67 331 P P 02 29 13.9 +0.1
2.0nm,1.0s,baz=112,slow=6.7,SNR=6.0
HWUT Hardware Ranch 71.73 329 eP P 02 29 15.0 +0.8
53nm,1.1s
VES Vestal, Richgr 71.74 320 ⇓P P 02 29 15.1 +1.0
baz=72
K18A Toltan Ranch, 71.80 330 ⇓P P 02 29 15.4 +0.8
baz=72
G23A Biddle 71.83 335 ⇓P P 02 29 15.0 +0.5
baz=72
J19A Crowheart 71.83 331 ⇑P P 02 29 14.8 +0.1
baz=72
L16A Fish Haven 71.98 329 ⇓P P 02 29 16.4 +0.7
baz=72
MDND Maddock 71.98 340 ⇓P P 02 29 15.9 +0.6
baz=72
J18A Kendall Valley 72.23 331 ⇓P P 02 29 17.4 +0.2
baz=72
H20A Greybull 72.34 333 ⇑P P 02 29 18.1 +0.5
baz=73
I19A Meeteetse 72.41 332 ⇓P P 02 29 18.6 +0.4
baz=73
L15A Malad City 72.44 329 ⇓P P 02 29 19.0 +0.6
baz=73
I18A Diamond G Ranc 72.52 331 ⇓P P 02 29 19.5 +0.6
baz=73
J17A Brown Place, J 72.67 330 ⇓P P 02 29 20.8 +1.0
baz=73
K16A Soda Springs 72.68 330 ⇓P P 02 29 21.0 +1.2
baz=73
H19A Powell 72.91 332 ⇑P P 02 29 22.0 +0.9
baz=73
MOOW Moose Ponds 72.98 331 eP P 02 29 22.2 +0.6
7.4nm,1.4s
D24A Glendive 73.01 337 ⇓P P 02 29 22.3 +0.9
baz=73
G20A Bridger 73.01 333 ⇑P P 02 29 21.6 -0.1
baz=73
NVAR Mina Array Bea 73.03 323 P P 02 29 21.5 -0.5
NVAR Mina Array Bea 73.03 323 P P 02 29 21.5 -0.5
1.5nm,0.8s,baz=163,slow=5.9,SNR=7.6
I17A Pilgrim Ck. 73.04 331 ⇑P P 02 29 22.9 +1.0
baz=73
IMW Indian Meadow 73.19 331 eP P 02 29 23.9 +0.9
13nm,1.2s
H18A Shoshone NF, C 73.21 332 ⇓P P 02 29 23.6 +0.6
baz=74
K14A Jones Ranch, D 73.23 328 ⇓P P 02 29 23.9 +0.9
baz=74
D23A Lindsay 73.39 336 ⇑P P 02 29 24.8 +1.1
baz=74
RLMT Red Lodge 73.39 332 eP P 02 29 24.6 +0.6
9.3nm,1.1s
RLMT Red Lodge 73.39 332 ⇑P P 02 29 25.0 +1.0
baz=74
I16A Newdale 73.42 330 ⇑P P 02 29 25.5 +1.3
baz=74
LKWY Lake 73.46 331 eP P 02 29 26.4 +2.0
9.1nm,1.0s
J15A Blackfoot 73.51 329 ⇓P P 02 29 25.9 +1.3
baz=74
G18A Lazy EL Ranch, 73.67 332 ⇓P P 02 29 26.9 +1.3
baz=74
D22A Cohagen 73.74 336 ⇑P P 02 29 27.2 +1.4
baz=74
YMR Madison River 73.79 331 eP P 02 29 28.1 +1.8
21nm,1.3s
F19A Roth Farm, Mol 73.83 333 ⇓P P 02 29 27.2 +0.8
baz=74
H16A Russell Place, 73.95 331 ⇑P P 02 29 28.4 +1.1
baz=74
J14A Carey 73.98 329 ⇓P P 02 29 28.6 +1.2
baz=74
D21A La Casta Ranch 74.00 335 ⇑P P 02 29 28.5 +1.2
baz=74
E20A Meyer Farm, Mu 74.00 334 ⇑P P 02 29 28.4 +1.1
baz=74
SCHQ Schefferville 74.15 2 P P 02 29 28.6 +0.6
SCHQ Schefferville 74.15 2 P P 02 29 28.6 +0.6
5.5nm,0.9s,baz=202,slow=8.9,SNR=4.8
F18A Big Timber 74.20 333 ⇓P P 02 29 29.8 +1.2
baz=74
E19A Rath Farm, Rou 74.24 334 ⇓P P 02 29 29.9 +1.1
baz=74
J13A Cove Ranch, Pi 74.35 329 ⇑P P 02 29 30.9 +1.3
baz=75
I14A Mackay 74.39 329 ⇓P P 02 29 31.5 +1.7
baz=75
D20A Manuel Ranch, 74.48 334 ⇑P P 02 29 31.3 +1.2
baz=75
HLID Hailey 74.59 328 eP P 02 29 32.4 +1.4
11nm,1.1s
HLID Hailey 74.59 328 ⇓P P 02 29 32.5 +1.4
baz=75
F17A Fitzpatrick Pl 74.61 332 ⇓P P 02 29 32.4 +1.4
baz=75
I13A Wildhorse Cree 74.71 329 ⇑P P 02 29 33.3 +1.6
baz=75
E18A Harlowton 74.80 333 ⇓P P 02 29 33.4 +1.3
baz=75
D19A Cripps Ranch, 74.84 334 ⇓P P 02 29 33.3 +1.0
baz=75
BOZ Bozeman (W) 74.84 331 eP P 02 29 32.8 +0.5
12nm,1.4s
BOZ Bozeman (W) 74.84 331 ⇑P P 02 29 33.6 +1.2
baz=75
H14A Leadore 74.87 330 ⇓P P 02 29 33.7 +1.1
baz=75
G15A Dillon 74.87 331 ⇑P P 02 29 33.8 +1.2
baz=75
C20A Veseth Ranch, 74.92 335 ⇓P P 02 29 33.4 +0.7
baz=75
I12A Atlanta 75.12 328 ⇑P P 02 29 35.4 +1.4
baz=75
E17A Martinsdale 75.13 332 ⇑P P 02 29 35.4 +1.4
baz=75
A22A Carney Farms, 75.16 337 ⇓P P 02 29 35.7 +1.7
baz=75
MFID Camas Ranch 75.19 328 eP P 02 29 35.2 +0.9
12nm,1.2s
MFID Camas Ranch 75.19 328 ⇑P P 02 29 35.6 +1.2
baz=76
H13A Challis 75.25 329 ⇑P P 02 29 36.0 +1.2
baz=76
G14A Jackson 75.38 330 ⇑P P 02 29 36.6 +1.1
baz=76
B20A Solberg Farm, 75.52 335 ⇑P P 02 29 37.0 +1.0
baz=76
H12A Diamond D Ranc 75.53 329 ⇓P P 02 29 37.5 +1.1
baz=76
E16A East Helena 75.55 332 ⇓P P 02 29 37.7 +1.3
baz=76
D17A Six Diamond Ra 75.59 333 ⇑P P 02 29 37.7 +1.0
baz=76
G13A Cobalt 75.63 330 ⇓P P 02 29 38.4 +1.4
baz=76
F14A Wisdom 75.76 331 ⇓P P 02 29 38.7 +1.0
baz=76
A20A Cobblestone Ra 75.83 336 ⇑P P 02 29 39.1 +1.2
baz=76
D16A Dana Ranch, Ca 75.87 332 ⇓P P 02 29 39.4 +1.2
baz=76
EGMT Eagleton 75.89 334 ⇓P P 02 29 38.7 +0.5
baz=76
B19A Brinkman Farms 75.90 335 ⇑P P 02 29 38.9 +0.7
baz=76
C17A Wharram Farm, 76.00 333 ⇓P P 02 29 39.8 +0.9
baz=76
G12A Big Creek, Yel 76.19 329 ⇓P P 02 29 40.7 +0.6
baz=76
B18A Beardsley Farm 76.19 334 ⇓P P 02 29 41.0 +1.1
baz=76
A19A Klindworth Far 76.19 335 ⇑P P 02 29 40.6 +0.7
baz=76
F13A Darby 76.20 330 ⇑P P 02 29 41.6 +1.5
baz=76
E14A Clinton 76.27 331 ⇑P P 02 29 41.6 +1.1
baz=76
D15A Lincoln 76.31 332 ⇓P P 02 29 41.8 +1.1
baz=77
B17A L&G Farms, Che 76.53 334 ⇓P P 02 29 42.3 +0.5
baz=77
C16A Fuhringer Ranc 76.55 333 ⇓P P 02 29 42.9 +0.9
baz=77
F12A Elk City 76.61 330 ⇑P P 02 29 42.5 0.0
baz=77
E13A Victor 76.61 331 ⇓P P 02 29 43.8 +1.4
baz=77
D14A Greenough 76.78 331 ⇑P P 02 29 43.8 +0.4
baz=77
MSO Missoula 76.79 331 ⇓P P 02 29 44.6 +1.2
baz=77
BMO Blue Mountains 76.96 328 eP P 02 29 45.2 +0.8
10nm,1.1s
A17A Triple J Farms 77.00 334 ⇑P P 02 29 45.4 +0.9
baz=77
D13A Huson 77.22 331 ⇓P P 02 29 47.0 +1.3
baz=78
B15A Bradely Ranch, 77.30 333 ⇑P P 02 29 46.6 +0.4
baz=78
A16A West Butte Ran 77.37 334 ⇓P P 02 29 47.7 +1.1
baz=78
C14A Swan Lake 77.40 332 ⇑P P 02 29 48.0 +1.1
baz=78
D12A Red Ives Fores 77.60 330 ⇑P P 02 29 48.5 +0.6
baz=78
B14A Marquette Ranc 77.64 332 ⇑P P 02 29 48.7 +0.5
baz=78
C13A Hot Springs 77.71 331 ⇑P P 02 29 49.7 +1.2
baz=78
TOA0 Torodi Ar. Sit 78.16 71 eP P 02 29 51.2 -0.4
TOA0 epP PcP 02 30 00.9 -0.2
TORD Torodi Ar. Bea 78.16 71 P P 02 29 51.4 -0.3
TORD Torodi Ar. Bea 78.16 71 P P 02 29 51.4 -0.3
22nm,0.8s,baz=251,slow=4.8,SNR=62
A14A Double T Ranch 78.17 333 ⇑P P 02 29 51.7 +0.6
baz=78
B13A Whitefish 78.18 332 ⇓P P 02 29 51.6 +0.5
baz=78
VNDA Vanda 78.49 190 P P 02 29 53.9 +1.5
VNDA Vanda 78.49 190 P P 02 29 53.9 +1.5
0.7nm,0.8s,baz=323,slow=2.3,SNR=3.7
A13A Flathead Natio 78.57 332 ⇓P P 02 29 53.4 +0.1
baz=79
C11A Tepee Creek (N 78.60 331 ⇑P P 02 29 53.8 +0.4
baz=79
FFC Flin Flon 78.71 342 eP P 02 29 54.0 +0.2
7.1nm,1.1s
SUR Sutherland 80.88 121 eP P 02 30 07.6 +1.2
13nm,0.9s
MDT Midelt 81.69 51 P P 02 30 11.5 +1.0
MDT Midelt 81.69 51 P P 02 30 11.5 +1.0
4.4nm,0.9s,baz=249,slow=6.2,SNR=5.6
TSUM Tsumeb 82.07 108 eP P 02 30 13.4 +0.5
18nm,1.2s
TAM Tamanrasset 85.33 64 eP P 02 30 30.5 +1.1
ESDC Sonseca Array 85.54 45 P P 02 30 31.2 +1.2
ESDC Sonseca Array 85.54 45 P P 02 30 31.2 +1.2
3.1nm,0.9s,baz=243,slow=5.2,SNR=12
BOSA Boshof 85.71 119 eP P 02 30 31.8 +0.4
9.4nm,1.1s
LBTB Lobatse 87.22 115 eP P 02 30 39.4 +0.6
5.3nm,0.9s
LBTB Lobatse 87.22 115 P P 02 30 39.5 +0.8
2.6nm,0.7s,baz=284,slow=9.0,SNR=5.2
YKA Yellowknife Ar 88.86 341 P P 02 30 45.5 +0.1
YKA Yellowknife Ar 88.86 341 P P 02 30 45.4 +0.1
5.7nm,0.6s,baz=134,slow=4.6,SNR=99
YKW3 Yellowknife Ar 88.91 341 eP P 02 30 45.1 -0.6
0.9nm,1.5s
SJPF Ste Jean 89.00 43 eP P 02 30 46.2 -0.4
44nm,1.2s

SJPF	**Ste Jean**	**89.00**	**43**	*e*P		**P**	**02 30 46.2**	**-0.4**
	44nm,1.2s							
EPF	**Esparros**	**89.98**	**44**	*e*P		**P**	**02 30 51.9**	**+0.7**
	48nm,1.8s							
EPF	**Esparros**	**89.98**	**44**	*e*P		**P**	**02 30 51.9**	**+0.7**
	48nm,1.8s							
LFF	**La Frestale**	**91.10**	**42**	*e*P		**P**	**02 30 56.5**	**+0.2**
	72nm,1.3s							
LFF	**La Frestale**	**91.10**	**42**	*e*P		**P**	**02 30 56.5**	**+0.2**
	72nm,1.3s							
MTLF	**Montolieu**	**91.35**	**44**	*e*P		**P**	**02 30 57.4**	**-0.1**
	16nm,1.1s							
MTLF	**Montolieu**	**91.35**	**44**	*e*P		**P**	**02 30 57.4**	**-0.1**
	16nm,1.1s							
GRR	**Gorron**	**91.70**	**39**	*e*P		**P**	**02 30 58.6**	**-0.4**
GRR	**Gorron**	**91.70**	**39**	*e*P		**P**	**02 30 58.6**	**-0.4**
RJF	**Les Rejaudoux**	**91.76**	**42**	*e*P		**P**	**02 30 59.4**	**+0.1**
	41nm,1.5s							
RJF	**Les Rejaudoux**	**91.76**	**42**	*e*P		**P**	**02 30 59.4**	**+0.1**
	41nm,1.5s							
CAF	**Calviac**	**91.94**	**43**	*e*P		**P**	**02 31 00.5**	**+0.3**
CAF	**Calviac**	**91.94**	**43**	*e*P		**P**	**02 31 00.5**	**+0.3**
TCF	**Toulx Ste Croi**	**92.62**	**42**	*e*P		**P**	**02 31 03.3**	**-0.1**
	28nm,1.6s							
TCF	**Toulx Ste Croi**	**92.62**	**42**	*e*P		**P**	**02 31 03.3**	**-0.1**
	28nm,1.6s							
BGF	**Bois d'Agland**	**93.14**	**41**	*e*P		**P**	**02 31 05.6**	**-0.1**
BGF	**Bois d'Agland**	**93.14**	**41**	*e*P		**P**	**02 31 05.6**	**-0.1**
AVF	**Avril sur Loir**	**93.55**	**41**	*e*P		**P**	**02 31 07.6**	**0.0**
AVF	**Avril sur Loir**	**93.55**	**41**	*e*P		**P**	**02 31 07.6**	**0.0**
SMF	**Signal de Mont**	**93.80**	**42**	*e*P		**P**	**02 31 08.8**	**+0.1**
	54nm,1.6s							
SMF	**Signal de Mont**	**93.80**	**42**	*e*P		**P**	**02 31 08.8**	**+0.1**
	54nm,1.6s							
HAU	**Haudompre**	**95.90**	**41**	*e*P		**P**	**02 31 18.1**	**-0.3**
HAU	**Haudompre**	**95.90**	**41**	*e*P		**P**	**02 31 18.1**	**-0.3**
CDF	**Champ du Feu**	**96.63**	**41**	*e*P		**P**	**02 31 21.5**	**-0.3**
CDF	**Champ du Feu**	**96.63**	**41**	*e*P		**P**	**02 31 21.5**	**-0.3**
MALT	**Malatya**	**116.52**	**56**	*e*PKPdf		**PKPdf**	**02 36 37.1**	**+1.2**
BILL	**Bilibino**	**120.16**	**339**	*e*PKPdf		**PKPdf**	**02 36 42.2**	**+0.4**
STKA	**Stephens Creek**	**120.30**	**212**	PKP		**PKPdf**	**02 36 42.9**	**-0.5**
STKA	**Stephens Creek**	**120.30**	**212**	PKP		**PKPdf**	**02 36 42.9**	**-0.5**
	3.0nm,0.9s,baz=187,slow=3.9,SNR=4.2							
ABKAR	**Akbulak array**	**130.73**	**41**	*e*PKPdf		**PKPdf**	**02 37 03.1**	**+0.6**
ABKAR				*ep*PKPdf		**pPKPdf**	**02 37 12.9**	**-3.4**
ASAR	**Alice Springs**	**130.87**	**210**	PKP		**PKPdf**	**02 37 03.5**	**-0.3**
ASAR	**Alice Springs**	**130.87**	**210**	PKP		**PKPdf**	**02 37 03.5**	**-0.3**
	2.3nm,0.9s,baz=126,slow=1.8,SNR=9.1							
WRA	**Warramunga Arr**	**133.79**	**213**	PKP		**PKPdf**	**02 37 09.3**	**0.0**
WRA	**Warramunga Arr**	**133.79**	**213**	PKP		**PKPdf**	**02 37 09.3**	**0.0**
	2.2nm,0.8s,baz=150,slow=1.7,SNR=6.9							
WRAB	**Tennant Creek**	**133.80**	**213**	*e*PKPdf		**PKPdf**	**02 37 09.9**	**+0.5**
KURK	**Kurchatov**	**140.49**	**31**	PKPpre		PKPpre	02 37 14.5	
KURK				PKP		**PKPdf**	**02 37 19.3**	**-1.4**
KURK				*e*PKPdf		**PKiKP**	**02 37 20.5**	**-2.8**
KURBB	**Kurchatov Arra**	**140.51**	**31**	PKhKP		PKPpre	02 37 14.5	
	0.4nm,0.6s,baz=311,slow=2.9,SNR=5.4							
KURBB				PKP		**PKPdf**	**02 37 19.3**	**-1.4**
	1.0nm,0.8s,baz=301,slow=2.6,SNR=5.8							
ZAA0	**Zalesovo Array**	**140.81**	**23**	*e*PKPdf		**PKPdf**	**02 37 22.2**	**+1.0**
ZAA0				*ep*PKPdf		**pPKPdf**	**02 37 32.1**	**-2.8**
ZALV	**Zalesovo Beam**	**140.81**	**23**	PKPpre		PKPpre	02 37 13.4	
ZALV				PKP		**PKPdf**	**02 37 19.1**	**-2.1**
ZALV	**Zalesovo Beam**	**140.81**	**23**	PKhKP		PKPpre	02 37 13.4	
	0.8nm,0.7s,baz=259,slow=2.9,SNR=2.8							
ZALV				PKP		**PKPdf**	**02 37 19.1**	**-2.1**
	1.6nm,0.6s,baz=281,slow=2.3,SNR=4.3							
EKS2	**Erkin-Say**	**142.15**	**45**	*e*PKPdf		**PKPdf**	**02 37 24.1**	**0.0**
AAK	**Ala-Archa**	**142.64**	**44**	*e*PKPdf		**PKPdf**	**02 37 24.1**	**-0.9**
TKM2	**Tokmak 2**	**143.22**	**43**	*e*PKPdf		PKPbc	02 37 23.8	+0.6
MK31	**Makanchi Array**	**144.90**	**33**	*e*PKPdf		**PKPdf**	**02 37 28.4**	**-0.3**
MKAR	**Makanchi Array**	**144.90**	**33**	PKP		**PKPdf**	**02 37 28.7**	**0.0**
MKAR	**Makanchi Array**	**144.90**	**33**	PKP		**PKPdf**	**02 37 28.7**	**0.0**
	15nm,0.7s,baz=323,slow=4.0,SNR=83							
USRK	**Ussuriysk Arra**	**149.05**	**328**	PKPbc		**PKPbc**	**02 37 40.5**	**+0.8**
	2.7nm,0.8s,baz=11,slow=1.0,SNR=4.4							
PALK	**Pallekele**	**149.54**	**110**	*e*PKPbc		**PKPbc**	**02 37 42.9**	**+0.9**
PALK				*e*PKPab		**PKPab**	**02 37 47.0**	**0.0**
DDI	**Dehra Dun**	**149.66**	**63**	*ex*		**PKPdf**	**02 37 35.0**	**-2.2**
MJAR	**Matsushiro Arr**	**149.66**	**310**	PKPbc		**PKPbc**	**02 37 41.5**	**-0.1**
MJAR				PKPab		**PKPab**	**02 37 48.3**	**+1.4**
MJAR	**Matsushiro Arr**	**149.66**	**310**	PKPbc		**PKPbc**	**02 37 41.5**	**-0.1**
	1.4nm,0.7s,baz=328,slow=1.2,SNR=7.6							
MJAR				PKPab		**PKPab**	**02 37 48.3**	**+1.4**
	1.4nm,0.7s,baz=29,slow=1.8,SNR=3.6							
SONM	**Songino Array**	**151.68**	**4**	PKPbc		**PKPbc**	**02 37 46.5**	**+0.3**
SONM				PKPab		**PKPab**	**02 37 54.2**	**-0.7**
SONM	**Songino Array**	**151.68**	**4**	PKPbc		**PKPbc**	**02 37 46.5**	**+0.3**
	3.1nm,0.9s,baz=326,slow=2.8,SNR=6.4							
SONM				PKPab		**PKPab**	**02 37 54.2**	**-0.7**
	1.5nm,0.5s,baz=336,slow=1.0,SNR=4.3							
ULN	**Ulaanbaatar**	**151.69**	**3**	*e*PKPbc		**PKPbc**	**02 37 47.0**	**+0.8**
ULN				*e*PKPab		**PKPab**	**02 37 56.5**	**+1.5**
CMAR	**Chiang Mai Arr**	**169.99**	**95**	PKPab		**PKPab**	**02 39 16.2**	**+0.8**
CMAR	**Chiang Mai Arr**	**169.99**	**95**	PKPab		**PKPab**	**02 39 16.2**	**+0.8**
	1.6nm,0.6s,baz=251,slow=6.2,SNR=6.2							
CHTO	**Chiang Mai**	**170.03**	**92**	*e*PKPab		**PKPab**	**02 39 15.8**	**+0.2**

CSEM ***17*** *02:20:37.6±0.1,42°.30N×13°.45E,h10km,ML3.5/12, Error ellipse: s-maj=1.9km s-min=1.5km az=65.0*

ROM 17 02:20:37.4±0.1,42°.31N×13°.46E,h9km,Ml2.9/32, Error ellipse: s-maj=1.0km s-min=0.8km az=51.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**320**	Pg	Pg	02 20 39.8	+0.3
AQU				Sg	Sg	02 20 41.2	+0.1
	13μm,0.3s						
AQU	**L'Aquila**	**0.06**	**320**	Pg	Pg	02 20 39.8	+0.3
AQU				Sg	Sg	02 20 41.2	+0.1
	13μm,0.3s						
FAGN	**Fagnano**	**0.10**	**112**	Pg	Pg	02 20 40.5	+0.5
FAGN				Sg	Sg	02 20 42.7	+0.8
	27μm,0.6s						
FAGN	**Fagnano**	**0.10**	**112**	Pg	Pg	02 20 40.5	+0.5
FAGN				Sg	Sg	02 20 42.7	+0.8
	27μm,0.6s						
CAMP	**Campotosto**	**0.23**	**351**	Pg	Pg	02 20 42.8	+0.4
CAMP				Sg	Sg	02 20 46.9	+1.2
	1μm,0.6s						
CAMP	**Campotosto**	**0.23**	**351**	Pg	Pg	02 20 42.8	+0.4
CAMP				Sg	Sg	02 20 46.9	+1.2
	1μm,0.6s						
FIAM	**Fiamignano**	**0.26**	**262**	Pg	Pg	02 20 43.5	+0.8
FIAM				Sg	Sb	02 20 47.8	-1.2
	2μm,0.7s						
FIAM	**Fiamignano**	**0.26**	**262**	Pg	Pg	02 20 43.5	+0.8
FIAM				Sg	Sb	02 20 47.8	-1.2
	2μm,0.7s						
PTQR	**Pietraquaria**	**0.29**	**188**	Pg	Pg	02 20 43.9	+0.6
PTQR				Sg	Sb	02 20 48.6	-1.2
PTQR	**Pietraquaria**	**0.29**	**188**	Pg	Pg	02 20 43.9	+0.6
PTQR				Sg	Sb	02 20 48.6	-1.2
VCEL	**Villa Celiera**	**0.30**	**72**	Pg	Pg	02 20 44.1	+0.6
VCEL				Sg	Sb	02 20 49.0	-1.2
	4μm,0.4s						
VCEL	**Villa Celiera**	**0.30**	**72**	Pg	Pg	02 20 44.1	+0.6
VCEL				Sg	Sb	02 20 49.0	-1.2
	4μm,0.4s						
TERO	**Teramo**	**0.34**	**19**	Pg	Pg	02 20 44.3	+0.1
TERO				Sg	Sg	02 20 49.3	+0.6
	2μm,0.3s						
TERO	**Teramo**	**0.34**	**19**	Pg	Pg	02 20 44.3	+0.1
TERO				Sg	Sg	02 20 49.3	+0.6
	2μm,0.3s						
LNSS	**Leonessa**	**0.43**	**314**	Pg	Pg	02 20 46.2	+0.2
LNSS				Sg	Sb	02 20 53.6	-0.4
	2μm,0.6s						
LNSS	**Leonessa**	**0.43**	**314**	Pg	Pg	02 20 46.2	+0.2
LNSS				Sg	Sb	02 20 53.6	-0.4
	2μm,0.6s						
INTR	**Introdacqua**	**0.44**	**131**	Pg	Pg	02 20 46.6	+0.4
INTR				Sg	Sb	02 20 53.7	-0.6
	2μm,0.3s						
INTR	**Introdacqua**	**0.44**	**131**	Pg	Pg	02 20 46.6	+0.4
INTR				Sg	Sb	02 20 53.7	-0.6
	2μm,0.3s						
VVLD	**Villa Vallelon**	**0.45**	**164**	Pg	Pg	02 20 46.6	+0.3
VVLD				Sg	Sg	02 20 53.1	+0.7
	871nm,0.5s						
VVLD	**Villa Vallelon**	**0.45**	**164**	Pg	Pg	02 20 46.6	+0.3
VVLD				Sg	Sg	02 20 53.1	+0.7
	871nm,0.5s						
CERT	**Cerreto**	**0.50**	**225**	Pg	Pg	02 20 47.5	+0.2
	1μm,0.5s						
CERT	**Cerreto**	**0.50**	**225**	Pg	Pg	02 20 47.5	+0.2
	1μm,0.5s						
GUAR	**Guarcino**	**0.52**	**192**	Pg	Pg	02 20 47.7	+0.1
	486nm,0.4s						
GUAR	**Guarcino**	**0.52**	**192**	Pg	Pg	02 20 47.7	+0.1
	486nm,0.4s						
MNS	**Montasola**	**0.58**	**278**	Pg	Pg	02 20 48.7	-0.1
	413nm,0.6s						
MNS	**Montasola**	**0.58**	**278**	Pg	Pg	02 20 48.7	-0.1
	413nm,0.6s						
NRCA	**Norcia**	**0.59**	**335**	Pg	Pg	02 20 48.9	0.0
NRCA				Sg	Sb	02 20 57.8	-0.7
	415nm,0.2s						
NRCA	**Norcia**	**0.59**	**335**	Pg	Pg	02 20 48.9	0.0
NRCA				Sg	Sb	02 20 57.8	-0.7
	415nm,0.2s						
LPEL	**Lama dei Pelig**	**0.60**	**115**	Pg	Pg	02 20 49.1	0.0
LPEL				Sg	Sb	02 20 58.3	-0.4
	966nm,0.6s						
LPEL	**Lama dei Pelig**	**0.60**	**115**	Pg	Pg	02 20 49.1	0.0
LPEL				Sg	Sb	02 20 58.3	-0.4
	966nm,0.6s						
MTCE	**Montecelio**	**0.60**	**242**	Pg	Pg	02 20 49.3	+0.2
	404nm,0.4s						
MTCE	**Montecelio**	**0.60**	**242**	Pg	Pg	02 20 49.3	+0.2
	404nm,0.4s						
TRTR	**Tortoreto Alta**	**0.61**	**34**	Pg	Pb	02 20 50.7	+0.5
TRTR	**Tortoreto Alta**	**0.61**	**34**	Pg	Pb	02 20 50.7	+0.5
POFI	**Posta Fibreno**	**0.62**	**162**	Pg	Pg	02 20 49.2	-0.3
	237nm,0.5s						
POFI	**Posta Fibreno**	**0.62**	**162**	Pg	Pg	02 20 49.2	-0.3
	237nm,0.5s						
SDI	**San Donato**	**0.65**	**156**	Pg	Pg	02 20 50.0	-0.1
	202nm,0.2s						
SDI	**San Donato**	**0.65**	**156**	Pg	Pg	02 20 50.0	-0.1
	202nm,0.2s						
OFFI	**Offida**	**0.65**	**15**	Pg	Pb	02 20 51.1	+0.1
	2μm,0.7s						
OFFI	**Offida**	**0.65**	**15**	Pg	Pb	02 20 51.1	+0.1
	2μm,0.7s						
CAFR	**Castel Frentan**	**0.67**	**96**	Pg	Pb	02 20 51.0	-0.2
	1μm,0.4s						
CAFR	**Castel Frentan**	**0.67**	**96**	Pg	Pb	02 20 51.0	-0.2
	1μm,0.4s						
CESX	**Cesi**	**0.72**	**295**	Pg	Pg	02 20 51.3	0.0
	236nm,0.4s						
CESX	**Cesi**	**0.72**	**295**	Pg	Pg	02 20 51.3	0.0
	236nm,0.4s						
RMP	**Rome, Mte Porz**	**0.75**	**229**	Pg	Pg	02 20 51.7	-0.2
	441nm,0.4s						
RMP	**Rome, Mte Porz**	**0.75**	**229**	Pg	Pg	02 20 51.7	-0.2
	441nm,0.4s						
GIUL	**Giuliano Di Ro**	**0.76**	**192**	Pg	Pg	02 20 52.3	+0.1
	241nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.76**	**192**	Pg	Pg	02 20 52.3	+0.1
	241nm,0.6s						
RDP	**Rocca di Papa**	**0.78**	**226**	Pg	Pg	02 20 52.5	0.0
	928nm,0.5s						
RDP	**Rocca di Papa**	**0.78**	**226**	Pg	Pg	02 20 52.5	0.0
	928nm,0.5s						
FDMO	**Fiordimonte**	**0.78**	**340**	Pg	Pg	02 20 52.1	-0.4
FDMO				Sg	Sb	02 21 04.2	+0.2
	171nm,0.2s						
FDMO	**Fiordimonte**	**0.78**	**340**	Pg	Pg	02 20 52.1	-0.4
FDMO				Sg	Sb	02 21 04.2	+0.2
	171nm,0.2s						
RNI2	**Rionero Sannit**	**0.79**	**139**	Pg	Pg	02 20 53.0	+0.1
	446nm,0.7s						
RNI2	**Rionero Sannit**	**0.79**	**139**	Pg	Pg	02 20 53.0	+0.1
	446nm,0.7s						
MA9	**Marino**	**0.80**	**228**	Pg	Pb	02 20 53.4	-0.1
	373nm,0.5s						
MA9	**Marino**	**0.80**	**228**	Pg	Pb	02 20 53.4	-0.1
	373nm,0.5s						
CESI	**CESI - Serrava**	**0.81**	**330**	Pg	Pg	02 20 52.9	-0.2
	92nm,0.6s						
CESI	**CESI - Serrava**	**0.81**	**330**	Pg	Pg	02 20 52.9	-0.2
	92nm,0.6s						
CERA	**Filignano**	**0.82**	**149**	Pg	Pg	02 20 52.8	-0.5
	370nm,0.5s						
CERA	**Filignano**	**0.82**	**149**	Pg	Pg	02 20 52.8	-0.5
	370nm,0.5s						
GUMA	**Gualdo di Mace**	**0.83**	**25**	Pg	Pg	02 20 52.5	-1.1
	968nm,0.5s						
GUMA	**Gualdo di Mace**	**0.83**	**25**	Pg	Pg	02 20 52.5	-1.1
	968nm,0.5s						
LAV9	**Lanuvio**	**0.84**	**222**	Pg	Pg	02 20 53.8	+0.1
	396nm,0.3s						
LAV9	**Lanuvio**	**0.84**	**222**	Pg	Pg	02 20 53.8	+0.1
	396nm,0.3s						
MIDA	**Miranda**	**0.89**	**138**	Pg	Pg	02 20 53.9	-0.8
	210nm,0.3s						
MIDA	**Miranda**	**0.89**	**138**	Pg	Pg	02 20 53.9	-0.8
	210nm,0.3s						
ASSB	**Assisi San Ben**	**0.94**	**322**	Pg	Pg	02 20 55.2	-0.5
	199nm,0.4s						
ASSB	**Assisi San Ben**	**0.94**	**322**	Pg	Pg	02 20 55.2	-0.5
	199nm,0.4s						
TRIV	**Trivento**	**0.98**	**123**	Pg	Pg	02 20 56.1	-0.2
TRIV	**Trivento**	**0.98**	**123**	Pg	Pg	02 20 56.1	-0.2
VAGA	**Valle Agricola**	**1.06**	**147**	Pg	Pb	02 20 58.1	+0.1
	155nm,0.8s						
VAGA	**Valle Agricola**	**1.06**	**147**	Pg	Pb	02 20 58.1	+0.1
	155nm,0.8s						
CING	**Cingoli**	**1.09**	**350**	Pg	Pg	02 20 57.8	-0.6
CING	**Cingoli**	**1.09**	**350**	Pg	Pg	02 20 57.8	-0.6
TOLF	**Tolfa**	**1.11**	**258**	Pg	Pg	02 20 58.6	-0.2
	106nm,0.8s						
TOLF	**Tolfa**	**1.11**	**258**	Pg	Pg	02 20 58.6	-0.2
	106nm,0.8s						
SGG	**Gregorio Mates**	**1.15**	**143**	Pg	Pb	02 20 59.2	-0.3
	138nm,0.5s						
SGG	**Gregorio Mates**	**1.15**	**143**	Pg	Pb	02 20 59.2	-0.3
	138nm,0.5s						
MGAB	**Montegabbione**	**1.16**	**302**	Pg	Pn	02 20 59.9	0.0
MGAB	**Montegabbione**	**1.16**	**302**	Pg	Pn	02 20 59.9	0.0
NVLJ	**Novalja**	**2.48**	**24**	*i* Pn	Pn	02 21 19.3	+1.4
NVLJ				Sn	Sn	02 21 49.9	+1.6
NVLJ	**Novalja**	**2.48**	**24**	*i* Pn	Pn	02 21 19.3	+1.4
NVLJ				Sn	Sn	02 21 49.9	+1.6

IDC 17 02:21:25.8±2.4,33°.47N×82°.03E,h0km,mb3.3/3, mb1 3.5/5,mb1mx3.3/30,mbtmp3.4/5,ML2.9/2, Error ellipse: s-maj=69.6km s-min=26.8km az=60.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.31**	**1**	Pn	Pn	02 24 34.2	-1.7
	0.1nm,0.3s,baz=184,slow=13,SNR=10						
KURBB	**Kurchatov Arra**	**17.33**	**353**	P	Pn	02 25 29.6	+0.6
	0.0nm,0.3s,baz=174,slow=12,SNR=6.5						
ZALV	**Zalesovo Beam**	**20.56**	**5**	P	P	02 26 06.0	+0.2
	0.5nm,0.5s,baz=182,slow=7.2,SNR=3.0						
CMAR	**Chiang Mai Arr**	**21.28**	**130**	P	P	02 26 13.8	-0.1
	0.8nm,0.4s,baz=304,slow=10,SNR=6.0						
AKTO	**Aktyubinsk**	**24.45**	**321**	P	P	02 26 46.4	+0.2
	0.9nm,0.7s,baz=133,slow=19,SNR=4.0						

IDC 17 02:33:32.1±2.3,20°.46S×70°.76W,h0km,mb3.5/2, mb1 3.6/4,mb1mx3.4/19,mbtmp3.4/4,ML3.5/2, Error ellipse: s-maj=68.5km s-min=46.2km az=166.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.84**	**31**	Pn	Pn	02 34 47.4	+0.3
	0.6nm,0.3s,baz=220,slow=7.6,SNR=17						
SIV	**San Ignacio**	**10.22**	**66**	Pn	Pn	02 35 59.6	-0.6
	0.5nm,0.3s,baz=265,slow=12,SNR=8.1						
TORD	**Torodi Ar. Bea**	**78.65**	**71**	P	P	02 45 36.2	-0.3
	0.4nm,0.7s,baz=258,slow=5.1,SNR=3.9						
YKA	**Yellowknife Ar**	**89.65**	**341**	P	P	02 46 30.5	-0.9
	0.1nm,0.6s,baz=133,slow=4.9,SNR=4.9						
MKAR	**Makanchi Array**	**145.77**	**34**	PKPbc	PKPab	02 53 13.9	+0.4
	0.3nm,0.7s,baz=331,slow=2.8,SNR=4.0						

IDC 17 02:37:51.4±1.5,30°.29S×177°.83W,h0km,mb4.2/3, mb1 4.3/4,mb1mx3.9/19,mbtmp4.1/4,ML4.0/1, Error ellipse: s-maj=43.4km s-min=35.7km az=148.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.99**	**206**	Pn	Pn	02 40 02.8	+0.3
	1.5nm,0.3s,baz=84,slow=21,SNR=6.4						
URZ				Sn	Sn	02 41 39.7	-4.6
	1.6nm,0.3s,baz=244,slow=20,SNR=4.0						
STKA	**Stephens Creek**	**34.65**	**257**	P	P	02 44 43.8	+1.2
	4.2nm,0.7s,baz=100,slow=7.7,SNR=7.5						
ASAR	**Alice Springs**	**43.26**	**267**	P	P	02 45 53.5	-1.5
	0.8nm,0.5s,baz=102,slow=7.5,SNR=12						
WRA	**Warramunga Arr**	**44.24**	**272**	P	P	02 46 02.8	0.0
	3.2nm,0.8s,baz=111,slow=7.9,SNR=10						
FINES	**FINESS Array B**	**145.09**	**340**	PKPbc	PKPbc	02 57 29.4	-0.1
	1.6nm,0.4s,baz=52,slow=4.1,SNR=17						
AKASG	**Malin Array Be**	**151.30**	**323**	PKPbc	PKPbc	02 57 46.0	-0.6
	0.6nm,0.5s,baz=63,slow=2.3,SNR=3.3						
TORD	**Torodi Ar. Bea**	**162.94**	**178**	PKPab	PKPab	02 58 44.6	-0.7
	0.4nm,0.7s,baz=184,slow=4.7,SNR=5.5						

ISK ***17*** *02:43:12.7,36°.81N×29°.28E,h18km,MD2.8*
DDA ***17*** *02:43:13.1,36°.47N×29°.11E,h7km,MD2.7*
CSEM ***17*** *02:43:13.0±0.5,36°.58N×29°.22E,h10km,MD2.8, Error ellipse: s-maj=17.5km s-min=9.6km az=22.0*

ISC 17 02:43:10.4±1.7,36°.74N±0°.08×29°.38E±0°.05,h7km±15km, n18,σ1°61/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.26**	**246**	*e*PG	**Pb**	**02 43 18.2**	**+0.7**
FETY				*e*SG	**Sb**	**02 43 22.7**	**+0.5**
FETY	**Fethiye**	**0.26**	**246**	*e*Pg	**Pb**	**02 43 18.2**	**+0.7**
FETY				*e*Sg	**Sb**	**02 43 22.7**	**+0.5**
ELL	**Elmali**	**0.42**	**89**	*e*PG	**Pn**	**02 43 24.0**	**+0.9**
ELL	**Elmali**	**0.42**	**89**	*e*Pg	**Pn**	**02 43 24.0**	**+0.9**
GOLH	**Golhisar**	**0.51**	**16**	*i* P	Pn	02 43 27.6	+3.3
GOLH				*i* S	Sn	02 43 41.6	+8.2
GOLH	**Golhisar**	**0.51**	**16**	*i* P	Pn	02 43 27.6	+3.3
GOLH				*i* S	Sn	02 43 41.6	+8.2
AKAS	**Kas**	**0.54**	**160**	*i* P	**Pb**	**02 43 22.1**	**-0.2**
AKAS				*i* S	**Sb**	**02 43 29.6**	**-0.6**
AKAS	**Kas**	**0.54**	**160**	*i* P	**Pb**	**02 43 22.1**	**-0.2**
AKAS				*i* S	**Sb**	**02 43 29.6**	**-0.6**
DALT	**Dalyan (Mudla)**	**0.60**	**273**	*e*PG	**Pb**	**02 43 23.3**	**0.0**
DALT				*e*SG	**Sn**	**02 43 32.0**	**-3.4**
DALT	**Dalyan (Mudla)**	**0.60**	**273**	*e*Pg	**Pb**	**02 43 23.3**	**0.0**
DALT				*e*Sg	**Sn**	**02 43 32.0**	**-3.4**
TURN	**Turunc**	**0.64**	**282**	*i* P	**Pn**	**02 43 27.9**	**+2.0**
TURN				*i* S	**Sn**	**02 43 38.8**	**+2.5**
TURN	**Turunc**	**0.64**	**282**	*i* P	**Pn**	**02 43 27.9**	**+2.0**
TURN				*i* S	**Sn**	**02 43 38.7**	**+2.5**
YER	**Yerkesik**	**0.96**	**294**	*e*PG	**Pn**	**02 43 29.2**	**-1.2**
YER	**Yerkesik**	**0.96**	**294**	*e*Pg	**Pn**	**02 43 29.2**	**-1.2**
MLSB	**Milas**	**1.40**	**294**	*e*PN	**Pg**	**02 43 37.1**	**-0.2**
MLSB	**Milas**	**1.40**	**294**	*e*Pn	**Pg**	**02 43 37.1**	**-0.2**
DAT	**Datca**	**1.45**	**270**	*e*PN	**Pb**	**02 43 37.0**	**-0.8**
DAT	**Datca**	**1.45**	**270**	*e*Pn	**Pb**	**02 43 37.0**	**-0.8**

IDC 17 02:45:01.8±1.3,14°.99N×144°.81E,h0km,mb3.8/5, mb1 4.0/5,mb1mx3.7/24,mbtmp3.8/5, Error ellipse: s-maj=43.8km s-min=18.1km az=79.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.39**	**178**	Pn	Pb	02 45 28.8	+0.1
	58nm,0.3s,baz=329,slow=4.2,SNR=14						
GUMO				Sn	Sb	02 45 46.8	-0.2
	95nm,0.3s,baz=129,slow=22,SNR=5.8						
KSRS	**Korea Array**	**26.93**	**329**	P	P	02 50 44.3	-0.4
	1.6nm,0.7s,baz=143,slow=10,SNR=7.3						
CMAR	**Chiang Mai Arr**	**43.98**	**281**	P	P	02 53 11.5	+0.3
	0.8nm,0.4s,baz=70,slow=6.0,SNR=5.5						
MKAR	**Makanchi Array**	**60.45**	**316**	P	P	02 55 13.6	+0.2
	0.4nm,0.6s,baz=90,slow=8.7,SNR=6.7						
ZALV	**Zalesovo Beam**	**60.46**	**324**	P	P	02 55

QSPA	**South Pole Qui**	**84.59**	**180**	P		**P**	**02 59 58.6**	**+0.5**	
	1.4nm,0.8s,baz=324,slow=0.7,SNR=5.5								
ILAR	**Eielson Array**	**85.12**	**23**	P		**P**	**03 00 01.1**	**+0.5**	
ILAR	**Eielson Array**	**85.12**	**23**	P		**P**	**03 00 01.1**	**+0.5**	
	1.1nm,0.7s,baz=255,slow=5.1,SNR=21								
TORD	**Torodi Ar. Bea**	**144.40**	**285**	PKP		PKPbc	03 07 00.0	-0.1	
TORD	**Torodi Ar. Bea**	**144.40**	**285**	PKP		PKPbc	03 07 00.0	-0.1	
	0.4nm,0.8s,baz=79,slow=2.9,SNR=7.0								

*CSEM **17** 02:50:55.1, 42.50N × 13.31E, h15km, MD1.6/4, After ROM*
ROM 17 02:50:55.1 ± 0.3, 42.50N × 13.31E, h15 km ± 6km, Md1.6/4, Ml1.4/2, Error ellipse: s-maj=3.0km s-min=2.7km az=25.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.08**	**65**	Pg	Pg	02 50 59.1	+0.7
CAMP				Sg	Sg	02 51 00.8	+0.2
	90nm,0.3s						
CAMP	**Campotosto**	**0.08**	**65**	Pg	Pg	02 50 59.1	+0.7
CAMP				Sg	Sg	02 51 00.8	+0.2
	90nm,0.3s						
AQU	**L'Aquila**	**0.16**	**155**	Pg	Pb	02 50 59.7	-0.2
AQU				Sg	Sg	02 51 02.0	-0.1
	62nm,0.2s						
AQU	**L'Aquila**	**0.16**	**155**	Pg	Pb	02 50 59.7	-0.2
AQU				Sg	Sg	02 51 02.0	-0.1
	62nm,0.2s						
LNSS	**Leonessa**	**0.22**	**297**	Pg	Pb	02 51 00.7	-0.3
LNSS				Sg	Sg	02 51 04.1	+0.3
LNSS	**Leonessa**	**0.22**	**297**	Pg	Pb	02 51 00.7	-0.3
LNSS				Sg	Sg	02 51 04.1	+0.3
TERO	**Teramo**	**0.25**	**61**	Pg	Pb	02 51 01.2	-0.2
TERO				Sg	Sg	02 51 04.6	+0.2
	41nm,0.2s						
TERO	**Teramo**	**0.25**	**61**	Pg	Pb	02 51 01.2	-0.2
TERO				Sg	Sg	02 51 04.6	+0.2
	41nm,0.2s						
NRCA	**Norcia**	**0.36**	**337**	Pg	Pg	02 51 02.8	+0.1
	5.0nm,0.2s						
NRCA	**Norcia**	**0.36**	**337**	Pg	Pg	02 51 02.8	+0.1
	5.0nm,0.2s						

*CSEM **17** 02:51:43.6, 42.53N × 13.37E, h11km ± 1km, MD1.7/3, After ROM*
ROM 17 02:51:43.6 ± 0.1, 42.53N × 13.37E, h11 km ± 1km, Md1.7/3, Ml1.5/2, Error ellipse: s-maj=2.3km s-min=0.5km az=5.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.03**	**80**	Pg	Pg	02 51 46.1	+0.2
CAMP				Sg	Sg	02 51 47.7	+0.2
	119nm,0.3s						
CAMP	**Campotosto**	**0.03**	**80**	Pg	Pg	02 51 46.1	+0.2
CAMP				Sg	Sg	02 51 47.7	+0.2
	119nm,0.3s						
TERO	**Teramo**	**0.20**	**62**	Pg	Pg	02 51 48.5	+0.5
TERO				Sg	Sg	02 51 51.9	+0.9
TERO	**Teramo**	**0.20**	**62**	Pg	Pg	02 51 48.5	+0.5
TERO				Sg	Sg	02 51 51.9	+0.9
LNSS	**Leonessa**	**0.25**	**287**	Pg	Pg	02 51 49.4	+0.4
LNSS				Sg	Sg	02 51 53.4	+0.8
	45nm,0.3s						
LNSS	**Leonessa**	**0.25**	**287**	Pg	Pg	02 51 49.4	+0.4
LNSS				Sg	Sg	02 51 53.4	+0.8
	45nm,0.3s						
NRCA	**Norcia**	**0.36**	**329**	Pg	Pg	02 51 51.2	+0.3
NRCA				Sg	Sg	02 51 56.7	+1.0
	57nm,0.1s						
NRCA	**Norcia**	**0.36**	**329**	Pg	Pg	02 51 51.2	+0.3
NRCA				Sg	Sg	02 51 56.7	+1.0
	57nm,0.1s						

*ATH **17** 03:11:36.8, 36.11N × 21.81E, h8km ± 2km, MD3.5/11*
*CSEM **17** 03:11:37.2 ± 0.6, 36.16N × 21.80E, h2km, ML2.2/1, Error ellipse: s-maj=10.9km s-min=6.0km az=54.0*
*THE **17** 03:11:38.0, 36.19N × 21.84E, h6km, ML2.2/1, Error ellipse: s-maj=1.2km s-min=0.7km az=45.0*
ISC 17 03:11:36.6 ± 1.8, 36.13N ± 0.06 × 21.82E ± 0.06, h2km ± 11km, n36, σ 0s 57/57, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DYR	**Agios Nikonas**	**0.76**	**33**	P	**Pg**	**03 11 50.9**	**-0.2**
DYR				S	**Sg**	**03 12 01.1**	**+0.2**
DYR	**Agios Nikonas**	**0.76**	**33**	*e*PB	**Pb**	**03 11 52.0**	**-0.5**
DYR				*e*SB	**Sb**	**03 12 02.2**	**-1.1**
DYR	**Agios Nikonas**	**0.76**	**33**	P	**Pg**	**03 11 50.9**	**-0.2**
DYR	**Agios Nikonas**	**0.76**	**33**	*e*Pb	**Pb**	**03 11 52.0**	**-0.5**
DYR				S	**Sg**	**03 12 01.1**	**+0.2**
DYR				*e*Sb	**Sb**	**03 12 02.2**	**-1.1**
PYL	**PYLOS**	**0.77**	**355**	P	**Pg**	**03 11 51.0**	**-0.4**
PYL				S	**Sg**	**03 12 02.1**	**+0.8**
PYL	**PYLOS**	**0.77**	**355**	*e*PB	**Pg**	**03 11 51.0**	**-0.4**
PYL				*e*SB	**Sb**	**03 12 03.3**	**-0.3**
PYL	**PYLOS**	**0.77**	**355**	P	**Pg**	**03 11 51.0**	**-0.4**
PYL				S	**Sg**	**03 12 02.1**	**+0.8**
PYL				*e*Sb	**Sb**	**03 12 03.3**	**-0.3**
KYTH	**Kithira**	**0.99**	**81**	P	**Pg**	**03 11 56.0**	**+0.3**
KYTH	**Kithira**	**0.99**	**81**	*e*PN	**Pg**	**03 11 56.2**	**+0.5**
KYTH	**Kithira**	**0.99**	**81**	P	**Pg**	**03 11 56.0**	**+0.3**
ITM	**Ithomi**	**1.05**	**5**	P	**Pg**	**03 11 56.7**	**0.0**
ITM				S	**Sg**	**03 12 11.1**	**+0.6**
ITM	**Ithomi**	**1.05**	**5**	*e*PG	**Pg**	**03 11 56.8**	**0.0**
ITM				*e*SB	**Sb**	**03 12 11.8**	**0.0**
ITM	**Ithomi**	**1.05**	**5**	*e*Pg	**Pg**	**03 11 56.8**	**0.0**
ITM				S	**Sg**	**03 12 11.1**	**+0.6**
ITM				*e*Sb	**Sb**	**03 12 11.8**	**0.0**
VLI	**Veliai**	**1.08**	**57**	P	**Pg**	**03 11 57.6**	**+0.4**
VLI				S	**Sg**	**03 12 12.6**	**+0.1**
VLI	**Veliai**	**1.08**	**57**	*e*PB	**Pg**	**03 11 57.6**	**+0.4**
VLI				*e*SB	**Sb**	**03 12 12.5**	**+0.1**
VLI	**Veliai**	**1.08**	**57**	P	**Pg**	**03 11 57.6**	**+0.4**
VLI				S	**Sb**	**03 12 12.6**	**+0.1**
VLX	**Vlachokerasia**	**1.32**	**20**	P	**Pn**	**03 12 00.9**	**-1.2**
VLX				S	**Sg**	**03 12 19.1**	**+0.1**
VLX	**Vlachokerasia**	**1.32**	**20**	*e*PN	**Pn**	**03 12 01.0**	**-1.2**
VLX				*e*SB	**Sn**	**03 12 21.4**	**+1.1**
VLX	**Vlachokerasia**	**1.32**	**20**	P	**Pn**	**03 12 00.9**	**-1.2**
VLX				S	**Sg**	**03 12 19.1**	**+0.1**
VLX				*e*Sb	**Sn**	**03 12 21.4**	**+1.1**
AMT	**Artemida-Makis**	**1.40**	**356**	P	**Pn**	**03 12 02.7**	**-0.5**
AMT	**Artemida-Makis**	**1.40**	**356**	*e*PG	**Pn**	**03 12 03.0**	**-0.2**
AMT				*e*SB	**Sn**	**03 12 23.3**	**+1.0**
AMT	**Artemida-Makis**	**1.40**	**356**	P	**Pn**	**03 12 02.7**	**-0.5**
AMT	**Artemida-Makis**	**1.40**	**356**	*e*Pg	**Pn**	**03 12 03.0**	**-0.2**
AMT				*e*Sb	**Sn**	**03 12 23.3**	**+1.0**
DID	**Didima**	**1.78**	**39**	P	**Pb**	**03 12 10.0**	**-0.1**
DID	**Didima**	**1.78**	**39**	*e*PN	**Pb**	**03 12 09.9**	**-0.1**
DID	**Didima**	**1.78**	**39**	*e*Pn	**Pb**	**03 12 09.9**	**-0.1**
GUR	**Goura**	**1.85**	**13**	P	**Pb**	**03 12 10.7**	**-0.5**
GUR	**Goura**	**1.85**	**13**	*e*PG	**Pb**	**03 12 11.6**	**+0.4**
GUR	**Goura**	**1.85**	**13**	P	**Pb**	**03 12 10.7**	**-0.5**
GUR	**Goura**	**1.85**	**13**	*e*Pg	**Pb**	**03 12 11.6**	**+0.4**
KARN	**Karanos**	**1.85**	**112**	P	**Pb**	**03 12 10.9**	**-0.3**
KARN	**Karanos**	**1.85**	**112**	P	**Pb**	**03 12 10.9**	**-0.3**
LTK	**Loutraki**	**2.10**	**26**	*e*PN	**Pb**	**03 12 15.1**	**-0.3**
LTK	**Loutraki**	**2.10**	**26**	*e*Pn	**Pb**	**03 12 15.1**	**-0.3**
EFP	**Efpalio**	**2.29**	**2**	*e*PG	**Pb**	**03 12 19.2**	**+0.5**
EFP	**Efpalio**	**2.29**	**2**	*e*Pg	**Pb**	**03 12 19.2**	**+0.5**

IDC 17 03:17:03.6 ± 12.0, 0.33N × 122.06E, h196 km ± 121km, mb3.1/4, mb1 3.2/6, mb1mx3.0/25, mbtmp3.1/6, Error ellipse: s-maj=171.2km s-min=19.9km az=57.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**5.79**	**203**	P	Pn	03 18 28.3	+0.1
	1.2nm,0.3s,baz=51,slow=12,SNR=5.7						
FITZ	**Fitzroy Crossi**	**18.65**	**169**	P	P	03 21 06.5	-0.5
	0.1nm,0.3s,baz=346,slow=8.3,SNR=2.6						
WRA	**Warramunga Arr**	**23.47**	**150**	P	P	03 21 55.8	0.0
	0.8nm,0.4s,baz=327,slow=11,SNR=6.6						
ASAR	**Alice Springs**	**26.48**	**155**	P	P	03 22 23.5	+0.4
	0.4nm,0.5s,baz=343,slow=14,SNR=11						
STKA	**Stephens Creek**	**36.99**	**152**	P	P	03 23 53.8	-0.6
	1.3nm,0.7s,baz=318,slow=16,SNR=3.1						
MKAR	**Makanchi Array**	**57.84**	**329**	P	P	03 26 34.8	-0.1
	0.3nm,0.5s,baz=122,slow=7.7,SNR=5.1						

*ISCJB **17** 03:20:05.1 ± 0.6, 27.04S ± 0.04 × 69.9W ± 0.1, h101km ± 10km, mb4.1/2, Error ellipse: s-maj=19.9km s-min=7.0km az=178.4*
*IDC **17** 03:20:06.8 ± 1.5, 27.04S × 69.83W, h97km ± 6km, mb4.0/1, mb1 3.6/2, mb1mx3.3/16, mbtmp3.6/2, Error ellipse: s-maj=66.6km s-min=15.0km az=80.0*
*GUC **17** 03:20:07.4 ± 0.4, 27.14S × 70.02W, h96km ± 4km, ML3.9*
*NEIC **17** 03:20:07.4, 27.14S × 70.02W, h96km, mb4.1/1, After GUC.*
ISC 17 03:20:06.4 ± 0.7, 27.02S ± 0.05 × 69.90W ± 0.09, h95km ± 6km, n26, σ 0s 86/40, 2C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**0.53**	**231**	↑*i*P	**Pn**	**03 20 21.9**	**+0.1**
CPCH				*i* S	**Sn**	**03 20 33.3**	**-0.1**
CPCH	**Copiapo**	**0.53**	**231**	↑*i*P	**Pn**	**03 20 21.9**	**+0.1**
CPCH				*i* S	**Sn**	**03 20 33.3**	**-0.1**
CDCH	**Caldera**	**0.83**	**267**	*e*P	**Pn**	**03 20 24.7**	**+0.2**
CDCH				*e*S	**Sn**	**03 20 38.0**	**-0.1**
CDCH	**Caldera**	**0.83**	**267**	*e*P	**Pn**	**03 20 24.7**	**+0.2**
CDCH				*e*S	**Sn**	**03 20 38.0**	**-0.1**
CDCH				AML	AML	03 20 38.8	
	comp=E,6μm,0.2s						
LCO	**Las Campanas**	**2.10**	**200**	*e*P	**Pn**	**03 20 40.6**	**+0.2**
LCO				*e*S	**Sn**	**03 21 05.4**	**-0.8**
LCO	**Las Campanas**	**2.10**	**200**	*e*P	**Pn**	**03 20 40.6**	**+0.2**
LCO				*e*S	**Sn**	**03 21 05.4**	**-0.8**
LCO				AML	AML	03 21 10.1	
	comp=E,737nm,0.2s						
TLL	**Tololo Astrono**	**3.23**	**194**	*e*P	**Pn**	**03 20 55.6**	**+0.3**
TLL				*i* S	**Sn**	**03 21 31.9**	**-1.2**
TLL	**Tololo Astrono**	**3.23**	**194**	*e*P	**Pn**	**03 20 55.6**	**+0.3**
TLL				*i* S	**Sn**	**03 21 31.9**	**-1.2**
TLL				AML	AML	03 21 58.2	
	comp=E,292nm,0.3s						
CMCH	**Combarbala**	**4.25**	**193**	P	Pn	03 21 00.0	-8.9
CMCH				*e*S	**Sn**	**03 21 55.5**	**-1.9**
LVC	**Limon Verde**	**4.48**	**12**	*e*Pn	**Pn**	**03 21 12.0**	**-0.3**
CFAA	**Coronel Fontan**	**4.79**	**163**	P	**Pn**	**03 21 17.3**	**+1.1**
CFAA				S	**Sn**	**03 22 10.4**	**0.0**
CFAA	**Coronel Fontan**	**4.79**	**163**	P	**Pn**	**03 21 17.3**	**+1.1**
	comp=E,0.6nm,0.3s,baz=347,slow=14,SNR=20						
CFAA				S	**Sn**	**03 22 10.4**	**0.0**
	comp=E,2.9nm,0.3s,baz=215,slow=21,SNR=22						
LPAZ	**La Paz**	**10.81**	**9**	*e*Pn	**Pn**	**03 22 38.1**	**-0.7**
LPAZ	**La Paz**	**10.81**	**9**	P	**Pn**	**03 22 36.5**	**-2.3**
	comp=E,1.4nm,0.3s,baz=219,slow=8.7,SNR=28						
TRQA	**Tornquist**	**12.86**	**151**	*e*Pn	**Pn**	**03 23 04.0**	**-1.6**
QSPA	**South Pole Qui**	**63.19**	**180**	*e*P	**P**	**03 30 24.9**	**+0.6**
	comp=E,2.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**80.08**	**70**	P	**P**	**03 32 06.0**	**-0.2**
TORD				pP	**pP**	**03 32 31.9**	**+1.1**
TORD	**Torodi Ar. Bea**	**80.08**	**70**	P	**P**	**03 32 06.0**	**-0.2**
	comp=E,1.9nm,0.6s,baz=256,slow=5.1,SNR=38						
TORD				pP	**pP**	**03 32 31.9**	**+1.1**
	comp=E,0.6nm,0.5s,baz=220,slow=3.8,SNR=4.0						
YKA	**Yellowknife Ar**	**96.08**	**341**	pP	pP	03 33 47.4	-0.4
YKA	**Yellowknife Ar**	**96.08**	**341**	pP	pP	03 33 47.4	-0.4
	comp=E,0.3nm,0.7s,baz=141,slow=4.3,SNR=9.1						
KURK	**Kurchatov**	**146.35**	**37**	PKPbc	**PKPbc**	**03 39 35.4**	**-0.5**
KURK				pPKPbc	pPKPbc	03 40 01.6	-0.2
KURBB	**Kurchatov Arra**	**146.35**	**37**	PKPbc	**PKPdf**	**03 39 35.4**	**+0.9**
	comp=E,0.2nm,0.3s,baz=290,slow=3.3,SNR=4.4						
KURBB				pPKPbc	pPKPbc	03 40 01.6	-0.2
	comp=E,0.2nm,0.3s,baz=314,slow=3.8,SNR=1.6						
ZALV	**Zalesovo Beam**	**147.28**	**28**	PKPbc	**PKPdf**	**03 39 36.7**	**+0.8**
ZALV				pPKPbc	**pPKPbc**	**03 40 03.3**	**-1.1**
ZALV	**Zalesovo Beam**	**147.28**	**28**	PKPbc	**PKPdf**	**03 39 36.7**	**+0.8**
	comp=E,0.9nm,0.4s,baz=304,slow=4.0,SNR=4.9						
ZALV				pPKPbc	**pPKPbc**	**03 40 03.3**	**-1.1**
	comp=E,0.7nm,0.5s,baz=318,slow=4.0,SNR=2.1						
MKAR	**Makanchi Array**	**150.51**	**41**	PKPbc	**PKPbc**	**03 39 47.4**	**+0.5**
MKAR				pPKPbc	**pPKPbc**	**03 40 13.4**	**+0.4**
MKAR	**Makanchi Array**	**150.51**	**41**	PKPbc	**PKPbc**	**03 39 47.4**	**+0.5**
	comp=E,1.0nm,0.7s,baz=318,slow=2.4,SNR=12						
MKAR				pPKPbc	**pPKPbc**	**03 40 13.4**	**+0.4**
	comp=E,0.7nm,0.7s,baz=312,slow=3.6,SNR=6.2						

IDC 17 03:33:12.5 ± 1.1, 15.13N × 144.85E, h0 km, mb3.8/9, mb1 3.9/9, mb1mx3.8/25, mbtmp3.8/9, Error ellipse: s-maj=40.1km s-min=16.2km az=83.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.53**	**179**	Pn	Pn	03 33 40.4	-0.7
	119nm,0.3s,baz=306,slow=3.5,SNR=35						
GUMO				Sn	Sn	03 33 57.5	-4.2
	118nm,0.3s,baz=4.4,slow=1.9,SNR=8.3						
KSRS	**Korea Array**	**26.83**	**329**	P	P	03 38 54.5	-0.1
	2.3nm,0.8s,baz=140,slow=9.3,SNR=8.8						
WRA	**Warramunga Arr**	**36.35**	**197**	P	P	03 40 18.2	-0.3
	0.4nm,0.4s,baz=15,slow=9.5,SNR=3.2						
ASAR	**Alice Springs**	**40.01**	**196**	P	P	03 40 49.9	+0.5
	0.3nm,0.8s,baz=18,slow=13,SNR=3.1						
CMAR	**Chiang Mai Arr**	**43.98**	**281**	P	P	03 41 22.7	+0.7
	0.8nm,0.4s,baz=72,slow=6.2,SNR=6.7						
ZALV	**Zalesovo Beam**	**60.37**	**324**	P	P	03 43 22.7	-0.7
	0.4nm,0.4s,baz=108,slow=9.3,SNR=3.4						
MKAR	**Makanchi Array**	**60.38**	**315**	P	P	03 43 23.2	-0.5
	0.6nm,0.6s,baz=91,slow=9.2,SNR=6.2						
KURBB	**Kurchatov Arra**	**63.45**	**319**	P	P	03 43 44.6	+0.4
	2.8nm,0.8s,baz=101,slow=6.8,SNR=24						
YKA	**Yellowknife Ar**	**81.51**	**27**	P	P	03 45 32.3	+0.7
	0.1nm,0.7s,baz=282,slow=5.5,SNR=3.1						
FINES	**FINESS Array B**	**89.77**	**335**	P	P	03 46 12.0	-0.7
	1.5nm,0.8s,baz=57,slow=5.1,SNR=3.0						

*ISCJB **17** 03:34:18.0 ± 0.4, 29.06S ± 0.03 × 70.51W ± 0.10, h109km ± 4km, mb4.0/6, Error ellipse: s-maj=14.1km s-min=4.9km az=2.2*
*NEIC **17** 03:34:19.0, 29.04S × 70.58W, h102km, mb4.5/4, After GUC.*
NEIC Felt [III] at Chanaral, Copiapo, Coquimbo, Tierra Amarilla and Vallenar; [II] at Diego de Almagro and La Serena.
*GUC **17** 03:34:19.0 ± 0.7, 29.04S × 70.58W, h102km ± 6km, ML4.9*
*IDC **17** 03:34:20.3 ± 0.8, 29.06S × 70.35W, h106km ± 5km, mb3.7/4, mb1 3.8/6, mb1mx3.5/19, mbtmp3.7/6, Error ellipse: s-maj=23.9km s-min=11.7km az=71.0*
ISC 17 03:34:19.3 ± 0.6, 29.04S ± 0.03 × 70.5W ± 0.1, h106 km ± 5km, n29, σ 1s 23/44, mb4.0/6, 8D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.16**	**282**	↓*i*P	**Pn**	**03 34 34.1**	**-0.3**
LCO				*i* S	**Sn**	**03 34 45.3**	**-0.5**
LCO	**Las Campanas**	**0.16**	**282**	↓*i*P	**Pn**	**03 34 34.1**	**-0.3**
LCO				*i* S	**Sn**	**03 34 45.3**	**-0.5**
TLL	**Tololo Astrono**	**1.15**	**192**	↓*i*P	**Pn**	**03 34 42.0**	**0.0**
TLL				*i* S	**Sn**	**03 34 59.1**	**-0.1**
TLL	**Tololo Astrono**	**1.15**	**192**	↓*i*P	**Pn**	**03 34 42.0**	**0.0**
TLL				*i* S	**Sn**	**03 34 59.1**	**-0.1**
TLL				AML	AML	03 35 02.0	
	comp=N,9μm,0.2s						
CPCH	**Copiapo**	**1.69**	**5**	↓*i*P	**Pn**	**03 34 48.2**	**0.0**
CPCH				*i* S	**Sn**	**03 35 09.7**	**-0.5**
CPCH	**Copiapo**	**1.69**	**5**	↓*i*P	**Pn**	**03 34 48.2**	**0.0**
CPCH				*i* S	**Sn**	**03 35 09.7**	**-0.5**
CPCH				AML	AML	03 35 12.2	
	comp=E,33μm,0.1s						
CDCH	**Caldera**	**1.99**	**352**	*i* P	**Pn**	**03 34 51.2**	**-0.7**
CDCH				*i* S	**Sn**	**03 35 15.1**	**-1.8**
CDCH	**Caldera**	**1.99**	**352**	*i* P	**Pn**	**03 34 51.2**	**-0.7**
CDCH				*i* S	**Sn**	**03 35 15.1**	**-1.8**
CMCH	**Combarbala**	**2.16**	**191**	P	**Pn**	**03 34 53.1**	**-1.2**
CMCH	**Combarbala**	**2.16**	**191**	*e*P	**Pn**	**03 34 53.1**	**-1.2**
CMCH				AML	AML	03 35 20.4	
	comp=N,14μm,0.4s						
CHNG	**Los Chungos**	**2.95**	**196**	↓*i*P	**Pn**	**03 35 03.0**	**-1.5**
CHNG				*i* S	**Sn**	**03 35 37.9**	**-1.5**
CHNG	**Los Chungos**	**2.95**	**196**	↓*i*P	**Pn**	**03 35 03.0**	**-1.5**
CHNG				*i* S	**Sn**	**03 35 37.9**	**-1.5**
CFAA	**Coronel Fontan**	**3.23**	**143**	P	**Pn**	**03 35 08.8**	**+0.5**
	comp=N,15nm,0.3s,baz=318,slow=11,SNR=3226						
CFAA				S	**Sn**	**03 35 45.1**	**-1.0**
	comp=N,37nm,0.3s,baz=235,slow=21,SNR=26						
LVC	**Limon Verde**	**6.57**	**13**	*e*Pn	**Pn**	**03 35 50.5**	**-3.1**
	comp=N,87nm,0.6s						
LVC				*e*Sn	**Sn**	**03 37 08.7**	**+1.5**
TRQA	**Tornquist**	**11.46**	**144**	*e*Pn	**Pn**	**03 36 56.9**	**-2.8**
	comp=N,4.1nm,0.6s						
CPUP	**Villa Florida**	**12.00**	**80**	P	Pn	03 37 01.9	-4.9
	comp=N,1.3nm,0.3s,baz=239,slow=12,SNR=24						
LPAZ	**La Paz**	**12.89**	**10**	*e*Pn	**Pn**	**03 37 20.3**	**+1.1**
	comp=N,16nm,0.7s						
LPAZ	**La Paz**	**12.89**	**10**	P	**Pn**	**03 37 16.9**	**-2.3**
	comp=N,0.6nm,0.3s,baz=183,slow=7.8,SNR=37						
SIV	**San Ignacio**	**15.64**	**36**	P	**Pn**	**03 37 52.5**	**-1.4**
	comp=N,0.3nm,0.3s,baz=229,slow=11,SNR=20						
SAML	**Samuel**	**21.15**	**20**	*e*P	**P**	**03 38 57.3**	**+1.4**
	comp=N,20nm,1.5s						
BDFB	**Brasilia**	**24.67**	**62**	pP	pP	03 39 53.3	-0.2
	comp=N,4.2nm,0.9s,baz=220,slow=7.4,SNR=4.6						
USHA	**Ushuaia**	**25.81**	**177**	P	**P**	**03 39 40.6**	**+0.3**
	comp=N,2.9nm,0.6s,baz=27,slow=4.5,SNR=5.9						
QSPA	**South Pole Qui**	**61.18**	**180**	P	**P**	**03 44 23.1**	**+0.6**
	comp=N,0.7nm,0.4s,baz=153,slow=14,SNR=12						
QSPA				pP	**pP**	**03 44 49.2**	**+0.6**
	comp=N,1.9nm,0.7s,baz=132,slow=6.6,SNR=2.9						
QSPA				sP	**sP**	**03 45 00.8**	**+0.6**
	comp=N,2.6nm,0.6s,baz=141,slow=2.0,SNR=4.7						
WMOK	**Wichita Mounta**	**68.83**	**335**	*e*P	**P**	**03 45 11.1**	**-1.1**
	comp=N,2.7nm,0.8s						
VNDA	**Vanda**	**69.20**	**191**	P	**P**	**03 45 15.6**	**+1.6**
	comp=N,0.6nm,0.5s,baz=153,slow=2.3,SNR=5.1						
TOA0	**Torodi Ar. Sit**	**81.30**	**70**	*e*P	**P**	**03 46 24.9**	**+0.7**
TORD	**Torodi Ar. Bea**	**81.30**	**70**	P	**P**	**03 46 24.4**	**+0.1**
	comp=N,1.3nm,0.7s,baz=247,slow=3.9,SNR=22						
TORD				pP	**pP**	**03 46 51.6**	**+0.1**
	comp=N,1.8nm,0.9s,baz=252,slow=4.7,SNR=6.0						
ZALV	**Zalesovo Beam**	**149.31**	**29**	PKPbc	**PKPbc**	**03 53 56.1**	**+0.9**
	comp=N,2.7nm,0.4s,baz=308,slow=3.1,SNR=11						
ZALV				pPKPbc	**pPKPbc**	**03 54 25.6**	**+1.5**
	comp=N,1.3nm,0.4s,baz=306,slow=3.8,SNR=2.8						
MKAR	**Makanchi Array**	**152.39**	**43**	PKPbc	**PKPbc**	**03 54 03.2**	**+0.4**
	comp=N,0.2nm,0.4s,baz=290,slow=1.7,SNR=3.9						
MKAR				pPKPbc	**pPKPbc**	**03 54 31.8**	**+0.2**
	comp=N,0.5nm,0.6s,baz=347,slow=2.8,SNR=3.6						

IDC 17 03:43:05.2 ± 2.1, 20.43S × 70.68W, h0 km, mb3.8/3, mb1 3.9/5, mb1mx3.6/19, mbtmp3.7/5, ML3.7/2, Error ellipse: s-maj=62.9km s-min=36.5km az=1.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.77**	**31**	Pn	Pn	03 44 19.4	+0.2
	1.1nm,0.3s,baz=228,slow=8.2,SNR=18						
SIV	**San Ignacio**	**10.14**	**66**	Pn	Pn	03 45 32.0	-0.2
	0.6nm,0.3s,baz=258,slow=12,SNR=9.9						
BDFB	**Brasilia**	**22.06**	**81**	P	P	03 48 01.6	-0.4
	0.8nm,0.4s,baz=270,slow=7.1,SNR=3.3						
TORD	**Torodi Ar. Bea**	**78.56**	**71**	P	P	03 55 08.8	-0.4
	0.6nm,0.7s,baz=259,slow=4.9,SNR=8.6						
YKA	**Yellowknife Ar**	**89.64**	**341**	P	P	03 56 03.6	-0.8
	0.5nm,0.6s,baz=134,slow=4.7,SNR=26						
MKAR	**Makanchi Array**	**145.70**	**34**	PKPbc	PKPab	04 02 46.7	+0.4
	0.9nm,0.6s,baz=320,slow=4.0,SNR=14						

*ISCJB **17** 03:46:36.9 ± 0.9, 60.8S ± 0.2 × 27.0W ± 0.5, h19km, mb3.5/4, Error ellipse: s-maj=44.8km s-min=12.4km az=146.4*
*IDC **17** 03:46:37.8 ± 1.3, 60.32S × 27.01W, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.6/17, mbtmp3.6/4, Error ellipse: s-maj=40.4km s-min=29.4km az=72.0*
ISC 17 03:46:39.1 ± 1.0, 60.7S ± 0.2 × 27.1W ± 0.3, h19 km, n9, σ 0s 56/7, mb3.5/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**12.65**	**154**	*e*Pn	**Pn**	**03 49 37.4**	**-0.3**
VNA3	**Neumayer Olymp**	**12.65**	**154**	*e*Sn	Sn	03 51 42.4	-15
VNA2	**Neumayer--Watz**	**12.95**	**150**	*e*Pn	**Pn**	**03 49 41.9**	**+0.2**
	baz=310,slow=15						
SNAA	**Sanae**	**14.56**	**149

LPEL	**Lama dei Pelig**	**0.56 111**	Pg	Pg	03 56 31.4	+0.1
LPEL			Sg	Sb	03 56 40.1	-0.4
LPEL	**Lama dei Pelig**	**0.56 111**	Pg	Pg	03 56 31.4	+0.1
LPEL			Sg	Sb	03 56 40.1	-0.4
POFI	**Posta Fibreno**	**0.56 163**	Pg	Pg	03 56 31.8	+0.4
	59nm,0.5s					
POFI	**Posta Fibreno**	**0.56 163**	Pg	Pg	03 56 31.8	+0.4
	59nm,0.5s					
SDI	**San Donato**	**0.59 156**	Pg	Pg	03 56 31.9	-0.1
	55nm,0.2s					
SDI	**San Donato**	**0.59 156**	Pg	Pg	03 56 31.9	-0.1
	55nm,0.2s					
MTCE	**Montecelio**	**0.60 248**	Pg	Pg	03 56 32.0	-0.1
	63nm,0.6s					
MTCE	**Montecelio**	**0.60 248**	Pg	Pg	03 56 32.0	-0.1
	63nm,0.6s					
MNS	**Montasola**	**0.61 283**	Pg	Pg	03 56 32.4	0.0
	71nm,0.4s					
MNS	**Montasola**	**0.61 283**	Pg	Pg	03 56 32.4	0.0
	71nm,0.4s					
NRCA	**Norcia**	**0.65 335**	Pg	Pg	03 56 32.8	-0.2
	30nm,0.4s					
NRCA	**Norcia**	**0.65 335**	Pg	Pg	03 56 32.8	-0.2
	30nm,0.4s					
GIUL	**Giuliano Di Ro**	**0.71 194**	Pg	Pg	03 56 34.4	+0.1
	64nm,1.0s					
GIUL	**Giuliano Di Ro**	**0.71 194**	Pg	Pg	03 56 34.4	+0.1
	64nm,1.0s					
CERA	**Filignano**	**0.76 149**	Pg	Pg	03 56 35.0	-0.2
	78nm,0.4s					
CERA	**Filignano**	**0.76 149**	Pg	Pg	03 56 35.0	-0.2
	78nm,0.4s					
CESX	**Cesi**	**0.76 298**	Pg	Pb	03 56 36.1	+0.2
CESX	**Cesi**	**0.76 298**	Pg	Pb	03 56 36.1	+0.2
MIDA	**Miranda**	**0.83 137**	Pg	Pg	03 56 36.3	-0.3
MIDA	**Miranda**	**0.83 137**	Pg	Pg	03 56 36.3	-0.3
FDMO	**Fiordimonte**	**0.84 339**	Pg	Pg	03 56 36.2	-0.5
FDMO	**Fiordimonte**	**0.84 339**	Pg	Pg	03 56 36.2	-0.5
CESI	**CESI - Serrava**	**0.87 330**	Pg	Pg	03 56 37.3	0.0
	17nm,0.5s					
CESI	**CESI - Serrava**	**0.87 330**	Pg	Pg	03 56 37.3	0.0
	17nm,0.5s					
NVLJ	**Novalja**	**2.52 23** *i*	Pn	Pn	03 57 02.6	+1.2
NVLJ			Sn	Sb	03 57 34.7	-2.2
NVLJ	**Novalja**	**2.52 23** *i*	Pn	Pn	03 57 02.6	+1.2
NVLJ			Sn	Sb	03 57 34.6	-2.3

IDC 17 04:02:06.2±1.4, 14°.89N×145°.26E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/25, mbtmp3.6/4, Error ellipse: s-maj=54.5km s-min=18.1km az=97.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.35**	**196**	Pn	Pb	04 02 33.2	+0.9
	46nm,0.3s,baz=206,slow=3.5,SNR=14						
GUMO				Sn	Sn	04 02 50.7	-0.2
	93nm,0.3s,baz=115,slow=20,SNR=16						
WRA	**Warramunga Arr**	**36.24**	**198**	P	P	04 09 10.6	-0.7
	1.0nm,0.7s,baz=18,slow=9.4,SNR=5.2						
MKAR	**Makanchi Array**	**60.83**	**315**	P	P	04 12 21.7	+1.4
	0.4nm,0.7s,baz=89,slow=8.9,SNR=3.5						
BVAR	**Borovoye Array**	**69.15**	**321**	P	P	04 13 12.5	-1.9
	0.4nm,0.5s,baz=94,slow=9.3,SNR=4.1						
YKA	**Yellowknife Ar**	**81.54**	**28**	P	P	04 14 25.6	+0.1
	0.2nm,0.6s,baz=289,slow=5.1,SNR=4.0						

CSEM 17 04:07:09.4, 40°.80N×27°.76E, h6km, MD2.6, After ISK
ISK 17 04:07:09.4, 40°.80N×27°.76E, h6km, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRMT	**Marmara Adasi**	**0.23**	**212**	*e*Pg	Pg	04 07 14.7	+0.6
MRMT				*e*Sg	Sg	04 07 17.8	+0.5
MRMT	**Marmara Adasi**	**0.23**	**212**	*e*Pg	Pg	04 07 14.7	+0.6
MRMT				*e*Sg	Sg	04 07 17.8	+0.5
MFT	**Murefte**	**0.36**	**268**	*e*PG	Pb	04 07 17.5	-0.9
MFT				*e*SG	Sg	04 07 22.5	+1.0
MFT	**Murefte**	**0.36**	**268**	*e*Pg	Pg	04 07 17.5	+0.9
MFT				*e*Sg	Sg	04 07 22.5	+1.0
RKY	**Sarkoy-Tekirda**	**0.46**	**256**	*e*PG	Pg	04 07 18.9	+0.6
RKY				*e*SG	Sg	04 07 25.1	+0.7
RKY	**Sarkoy-Tekirda**	**0.46**	**256**	*e*Pg	Pg	04 07 18.9	+0.6
RKY				*e*Sg	Sg	04 07 25.1	+0.7
KRBG	**Karabiga-Canak**	**0.54**	**221**	*e*PG	Pg	04 07 20.4	+0.6
KRBG				*e*SG	Sb	04 07 29.0	-0.2
KRBG	**Karabiga-Canak**	**0.54**	**221**	*e*Pg	Pg	04 07 20.4	+0.6
KRBG				*e*Sg	Sb	04 07 29.0	-0.2
KCTX	**Karacabey (Bur**	**0.70**	**139**	*e*PG	Pb	04 07 23.8	-0.3
KCTX				*e*SG	Sg	04 07 32.7	+0.5
KCTX	**Karacabey (Bur**	**0.70**	**139**	*e*Pg	Pb	04 07 23.8	-0.3
KCTX				*e*Sg	Sg	04 07 32.7	+0.6
CTKS	**Kestanelik-??a**	**0.71**	**52**	*e*PG	Pb	04 07 23.7	-0.5
CTKS				*e*SG	Sb	04 07 33.7	-0.6
CTKS	**Kestanelik-??a**	**0.71**	**52**	*e*Pg	Pb	04 07 23.7	-0.5
CTKS				*e*Sg	Sb	04 07 33.7	-0.6
GONE	**Gonen-Balikesi**	**0.76**	**184**	*e*PG	Pb	04 07 25.3	+0.3
GONE	**Gonen-Balikesi**	**0.76**	**184**	*e*Pg	Pb	04 07 25.3	+0.3
CTYL	**Yal??k??y-??at**	**0.78**	**31**	*e*PG	Pg	04 07 24.8	+0.4
CTYL	**Yal??k??y-??at**	**0.78**	**31**	*e*Pg	Pg	04 07 24.8	+0.4

BJI 17 04:09:49.7, 8°.28S×128°.80E, h130km, mB5.3/31, mb5.6/63
AUST 17 04:09:56.8±0.2, 7°.47S×128°.29E, h106km, Error ellipse: s-maj=0.7km s-min=0.5km az=34.0
MOS 17 04:09:56.5±0.9, 7°.33S×128°.21E, h119km, mb5.7/61, Error ellipse: s-maj=8.8km s-min=5.1km az=114.0
NEIC 17 04:09:60.0±0.6, 7°.43S×128°.24E, h144km±4km, mb5.5/74, Error ellipse: s-maj=4.2km s-min=3.0km az=55.0
ISCJB 17 04:10:00.4±0.3, 7°.51S±0°.02×128°.33E±0°.02, h163km±3km, mb5.4/153, Error ellipse: s-maj=3.6km s-min=3.0km az=38.1
BGS 17 04:10:00.4±1.7, 7°.43S×128°.24E, h150km, mb5.5(NEIC)
IDC 17 04:10:00.7±0.8, 7°.43S×128°.27E, h147km±6km, mb5.2/38, mb1 5.1/41, mb1mx5.1/42, mbtmp5.2/41, MS4.5/9, Ms1 4.5/9, ms1mx4.0/38, Error ellipse: s-maj=8.8km s-min=6.5km az=60.0
DJA 17 04:10:01.5±0.2, 8°S±2°×12°8E±°, h145km±4km, M5.4/61, mb5.6/61, mB5.8/55, MLv5.8/10, Mw(mB)5.3/55
GCMT 17 04:10:01.8±0.2, 7°.64S×128°.29E, h153km±1km, MW5.4, Moment Tensor Solution. s65,c90; s1,c1; Moment tensor: Scale 10^17Nm; Mrr1.32±.02; Mθθ-0.65±.03; Mφφ-0.67±.03; Mrθ-0.54±.02; Mrφ0.70±.02; Mθφ-0.28±.03; Best double couple: M0 1.50000×10^17 NP1:φ1 151.00000°, δ40.00000°, λ116.00000°. NP2:φ2 299.00000°, δ54.00000°, λ70.00000°. Principal axes: T 1.4900, Plg72.0000°, Azm156.0000°; N -0.0900, Plg16.0000°, Azm311.0000°; P -1.4000, Plg7.0000°, Azm43.0000°; Data Used: ll IU IC G CN. Surface waves: sta=112, comp=200, per= 50.
TEH 17 04:10:02.3, 7°.51N×128°.25E, h166km, ML5.5
ISC 17 04:09:59.5±0.2, 7°.49S±0°.03×128°.33E±0°.03, h143km±1km, h143km:pP-P, n1417, σ1.930/1584, mb5.5/151, 336C-220D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**3.34**	**28**	P	Pn	04 10 54.5	+3.5
AAI	**Ambon**	**3.78**	**358**	P	Pn	04 11 00.5	+3.7
AAI	**Ambon**	**3.78**	**358**	P	Pn	04 11 01.1	+4.3
	baz=3.8,SNR=40						
NLAI	**Namlea**	**4.39**	**344**	P	Pn	04 11 10.0	+5.2
FAKI	**Fak Fak**	**5.99**	**41**	P	**Pn**	**04 11 26.4**	**+0.3**
	3μm,0.6s,47μm15nm						
FAKI				S	**Sn**	**04 12 33.6**	**-0.1**
	3μm,0.6s,47μm15nm						
MTN	**Manton Dam**	**6.00**	**153**	P	**Pn**	**04 11 25.8**	**-0.3**
	baz=6.1,SNR=1000						
MTN				S	**Sn**	**04 12 30.0**	**-3.9**
	baz=6.1,SNR=8.4						
BBSI	**Bau Bau**	**6.06**	**289**	P	Pn	04 11 30.4	+3.5
	579nm,1.4s,9μm2.0nm						
MMRI	**Maumere**	**6.14**	**259**	P	**Pn**	**04 11 28.9**	**+0.9**
	3μm,1.4s,30μm9.5nm						
KMPI	**Kaimana, Papua**	**6.56**	**55**	P	**Pn**	**04 11 34.4**	**+0.6**
KDU	**Kakadu**	**6.58**	**142**	P	**Pn**	**04 11 33.7**	**-0.3**
	baz=6.6,SNR=1000						
KDU				S	**Sn**	**04 12 43.9**	**-4.1**
	baz=6.6,SNR=10.0						
KDI	**Kendari**	**6.67**	**301**	P	**Pn**	**04 11 38.4**	**+3.2**
	182nm,1.0s,4μm0.8nm						

LBMI	**Labuha**	**6.86**	**353**	P	Pn	04 11 42.2	+4.5
	1μm,1.2s,13μm3.9nm							
BSSI	**Bau Bau, Buton**	**7.90**	**279**	P	**Pn**	**04 11 54.2**	**+2.6**
	788nm,1.4s,10μm							
BASI	**Baing, Sumba**	**8.12**	**250**	P	**Pn**	**04 11 53.8**	**-0.8**
	3μm,1.0s,34μm							
WSI	**Waingapu**	**8.23**	**254**	P	**Pn**	**04 11 55.3**	**-0.8**
	9μm,0.8s,18μm							
WSI	**Waingapu**	**8.23**	**254**	P	**Pn**	**04 11 55.5**	**-0.6**
	baz=8.2,SNR=9.4							
WSI				S	**Sn**	**04 13 24.2**	**-3.4**
	baz=8.2,SNR=4.6							
TNTI	**Ternate**	**8.26**	**353**	P	Pn	04 12 00.4	+3.9
	904nm,1.2s,9μm							
RKPI	**Ransiki, Papua**	**8.32**	**45**	P	**Pn**	**04 11 58.3**	**+1.0**
	6μm,0.9s,65μm							
BKSI	**Bulukumba**	**8.43**	**284**	P	**Pn**	**04 12 01.0**	**+2.2**
	322nm,1.0s,3μm							
LUWI	**Luwuk**	**8.47**	**319**	P	Pn	04 12 05.7	+6.5
	388nm,1.4s,4μm							
SKSI	**Soroako, Sulaw**	**8.53**	**305**	P	Pn	04 12 04.2	+4.0
	298nm,1.0s,3μm							
KAPI	**Kappang**	**8.87**	**286**	P	**Pn**	**04 12 04.5**	**-0.2**
KAPI				S	**Sn**	**04 13 42.6**	**-0.5**
KAPI	**Kappang**	**8.87**	**286**	Pn	**Pn**	**04 12 05.3**	**+0.7**
	SNR=33							
KAPI	**Kappang**	**8.87**	**286**	Pn	**Pn**	**04 12 06.2**	**+1.5**
	859nm,1.2s,SNR=19							
KAPI	**Kappang**	**8.87**	**286**	P	**Pn**	**04 12 06.0**	**+1.3**
	165nm,1.2s,2μm							
KAPI	**Kappang**	**8.87**	**286**	P	**Pn**	**04 12 04.5**	**-0.2**
	5.2nm,0.3s,baz=141,slow=8.7,SNR=38							
KAPI				S	**Sn**	**04 13 42.6**	**-0.5**
	baz=173,slow=20,SNR=2.1							
KMSI	**Cibinong**	**9.11**	**331**	P	Pn	04 12 13.8	+6.0
	883nm,1.2s,10μm							
SPSI	**Siagi Palu**	**9.21**	**292**	P	**Pn**	**04 12 11.5**	**+2.4**
	132nm,1.0s,2μm							
GAMI	**Galela, Maluku**	**9.28**	**357**	P	Pn	04 12 14.7	+4.6
	461nm,0.9s,5μm							
TTSI	**Tana Toraja**	**9.55**	**297**	P	Pn	04 12 18.9	+5.2
	176nm,1.0s,1μm							
SRPI	**Serui, Papua**	**9.66**	**55**	P	**Pn**	**04 12 15.4**	**+0.2**
	1μm,0.5s,14μm							
BAKI	**Biak**	**9.96**	**51**	P	**Pn**	**04 12 20.6**	**+1.4**
	5μm,0.9s,35μm							
MRSI	**Marisa**	**10.16**	**321**	P	Pn	04 12 27.8	+6.0
	158nm,1.3s,3μm							
PCI	**Palu**	**10.70**	**307**	P	Pn	04 12 20.9	-8.1
	baz=11,SNR=7.5							
PCI				S	Sn	04 14 08.6	-19
	baz=11,SNR=12							
FITZ	**Fitzroy Crossi**	**10.87**	**194**	*e*Pn	Pn	04 12 27.7	-3.5
	603nm,0.7s							
FITZ				*e*Sn	Sn	04 14 19.3	-12
FITZ				S		04 14 19.5	
FITZ	**Fitzroy Crossi**	**10.87**	**194**	P	Pn	04 12 27.7	-3.5
	48nm,0.3s,baz=26,slow=9.9,SNR=1351							
FITZ				S	Sn	04 14 19.5	-12
	49nm,0.3s,baz=81,slow=10,SNR=7.8							
FITZ				LR	LR	04 17 34.3	
	comp=Z,3μm,20.8s,baz=8.4,slow=42							
FITZ	**Fitzroy Crossi**	**10.87**	**194**	P	Pn	04 12 27.7	-3.5
	baz=11,SNR=1000							
FITZ				S	Sn	04 14 20.6	-11
	baz=11,SNR=6.9							
WAMI	**Wamena**	**10.94**	**71**	P	Pn	04 12 35.5	+3.4
	3μm,0.8s,29μm							
SMPI	**Sarmi**	**11.70**	**63**	P	**Pn**	**04 12 42.6**	**+0.5**
MMPI	**Merauke**	**11.98**	**95**	P	**Pn**	**04 12 46.4**	**+0.6**
	3μm,0.5s,50μm							
MMPI	**Merauke**	**11.98**	**95**	S	Sn	04 14 51.4	-6.8
	baz=12,SNR=7.6							
KHKI	**Kahang-Kahang**	**12.63**	**265**	P	**Pn**	**04 12 54.7**	**+0.5**
	115nm,0.7s,1μm							
SGKI	**Sangatta, Kali**	**12.73**	**302**	P	P	04 13 04.7	+3.6
KBKI	**Kotabaru**	**12.80**	**288**	P	P	04 13 05.3	+3.5
SRBI	**Singaraja**	**13.01**	**267**	P	**Pn**	**04 13 00.9**	**+1.8**
	109nm,1.4s,2μm							
SMKI	**Samarinda**	**13.11**	**302**	P	P	04 13 10.0	+4.7
IGBI	**Denpasar**	**13.12**	**263**	P	**P**	**04 13 06.1**	**+0.7**
	179nm,0.9s							
JAY	**Jayapura**	**13.28**	**69**	P	**Pn**	**04 13 04.2**	**+1.5**
	361nm,0.7s,14μm							
JAY	**Jayapura**	**13.28**	**69**	P	**Pn**	**04 13 01.9**	**-0.8**
	baz=13,SNR=14							
WRAB	**Tennant Creek**	**13.68**	**155**	*e*P	Pn	04 13 04.4	-3.3
WRAB				pmax	pmax			
	comp=Z,1μm,0.6s							
WRAB	**Tennant Creek**	**13.68**	**155**	*e*Pn	Pn	04 13 04.4	-3.3
	comp=Z,1μm,0.6s							
WRAB				*e*Sn	Sn	04 15 21.7	-18
WRAB	**Tennant Creek**	**13.68**	**155**	Pn	Pn	04 13 04.0	-3.7
	comp=Z,11μm,0.6s							
WRA	**Warramunga Arr**	**13.68**	**155**	P	**Pn**	**04 13 04.7**	**-3.1**
WRA				S	Sn	04 15 25.2	-14
WRA	**Warramunga Arr**	**13.68**	**155**	P	**Pn**	**04 13 04.7**	**-3.1**
	comp=Z,7.0nm,0.3s,baz=330,slow=10,SNR=63							
WRA				S	Sn	04 15 25.2	-14
	comp=Z,55nm,0.3s,baz=330,slow=23,SNR=10							
WRA				LR	LR	04 19 04.0	
	comp=Z,1μm,19.2s,baz=0.0,slow=40							
BYJI	**Banyuwangi**	**13.86**	**266**	P	P	04 13 18.6	+5.0
BBKI	**Banjar Baru**	**14.01**	**286**	P	**P**	**04 13 15.4**	**+0.1**
	comp=Z,679nm,1.1s,comp=Z,6μm							
KMMI	**Kalianget**	**14.25**	**271**	P	**P**	**04 13 20.0**	**+2.0**
	comp=Z,112nm,0.8s,comp=Z,2μm							
BLJI	**Banyuglugur**	**14.61**	**268**	P	**P**	**04 13 21.3**	**-0.6**
	comp=Z,194nm,0.7s,comp=Z,3μm							
DAV	**Davao City (W)**	**14.72**	**349**	P	**P**	**04 13 22.3**	**-0.9**
DAV				S	**S**	**04 16 09.9**	**-2.6**
DAV	**Davao City (W)**	**14.72**	**349**	Pn	P	04 13 27.6	+4.4
	SNR=14							
DAV	**Davao City (W)**	**14.72**	**349**	P	P	04 13 32.7	+10
DAV	**Davao City (W)**	**14.72**	**349**	P	**P**	**04 13 22.3**	**-0.9**
	comp=Z,19nm,0.3s,baz=270,slow=20,SNR=2.7							
DAV				S	**S**	**04 16 09.9**	**-2.6**
	comp=Z,38nm,0.3s,baz=101,slow=19,SNR=1.8							
GMJI	**Gumukmas**	**14.76**	**266**	P	**P**	**04 13 23.1**	**-0.6**
	comp=Z,80nm,0.9s							
CTBH	**Cotabato--PC H**	**15.17**	**344**	*i* P	**P**	**04 13 32.1**	**+4.0**
PLKI	**Palangkaraya**	**15.25**	**289**	P	**P**	**04 13 33.3**	**+4.2**
	comp=Z,2μm,1.0s,comp=Z,15μm							
TSM	**Tawau**	**15.68**	**318**	P	P	04 13 38.7	+4.9
KRKI	**Karangkates**	**15.74**	**267**	P	**P**	**04 13 38.2**	**+3.7**
	comp=Z,412nm,0.5s,comp=Z,44μm							
MBWA	**Manle Bar**	**15.93**	**211**	*e*Pn	**Pn**	**04 13 33.9**	**-1.9**
	comp=Z,326nm,0.9s							
MBWA				*e*Sn	Sn	04 16 17.9	-15
MBWA	**Marble Bar**	**15.93**	**211**	Pn	**Pn**	**04 13 34.6**	**-1.2**
	SNR=21							
COEN	**Coen**	**15.94**	**115**	*e*Pn	**Pn**	**04 13 35.6**	**-0.4**
	comp=Z,2μm,0.6s							
COEN				*e*Sn	Sn	04 16 20.6	-13
COEN	**Coen**	**15.94**	**115**	P	**Pn**	**04 13 35.5**	**-0.4**
	baz=16,SNR=292							
COEN				S	Sn	04 16 19.8	-14
	baz=16,SNR=7.4							
MYLDM	**Lahad Datu**	**15.95**	**322**	P	P	04 13 42.5	+5.6
PWJI	**Pagerwojo**	**16.38**	**267**	P	**Pn**	**04 13 40.4**	**-1.0**
	comp=Z,168nm,0.8s,comp=Z,2μm							
SJI	**Sawahan**	**16.42**	**268**	P	**Pn**	**04 13 41.6**	**-0.3**
	comp=Z,246nm,0.7s,comp=Z,4μm							
ASAR	**Alice Springs**	**16.95**	**162**	P	**P**	**04 13 46.7**	**-1.2**
ASAR				S	S	04 16 45.5	-12
ASAR	**Alice Springs**	**16.95**	**162**	P	**P**	**04 13 46.7**	**-1.2**
	comp=Z,62nm,0.3s,baz=341,slow=10,0,SNR=521							
ASAR				S	S	04 16 45.5	-12
	comp=Z,19nm,0.3s,baz=263,slow=13,SNR=6.1							
QIS	**Mount Isa**	**16.97**	**141**	P	**Pn**	**04 13 48.8**	**+0.3**
	baz=17,SNR=103							
PCJI	**Pacitan**	**17.00**	**266**	P	**P**	**04 13 46.7**	**-1.8**
	comp=Z,277nm,0.7s,comp=Z,3μm							
SDKM	**Sandakan**	**17.13**	**319**	P	**Pn**	**04 13 54.7**	**+4.2**
PBKI	**Pangkalan Bun**	**17.25**	**285**	P	**Pn**	**04 13 55.4**	**+3.4**
	comp=Z,476nm,1.2s,comp=Z,8μm							
UGM	**Wanagama**	**17.65**	**267**	*e*Pn	**P**	**04 13 55.6**	**-0.1**
	comp=Z,759nm,1.8s							
UGM	**Wanagama**	**17.65**	**267**	P	**Pn**	**04 13 57.3**	**+0.6**
	comp=Z,163nm,1.2s							
UGM	**Wanagama**	**17.65**	**267**	P	**P**	**04 13 55.5**	**-0.1**
	baz=18,SNR=5.9							
MSLP	**Maasin**	**17.84**	**349**	*e*P	**Pn**	**04 14 01.4**	**+2.4**
KKM	**Kota Kinabalu**	**18.08**	**318**	*e*P	**Pn**	**04 14 03.9**	**+2.0**
	comp=Z,154nm,0.8s							
KKM	**Kota Kinabalu**	**18.08**	**318**	P	**Pn**	**04 14 04.6**	**+2.7**
KKM	**Kota Kinabalu**	**18.08**	**318**	P	**Pn**	**04 14 03.8**	**+2.0**
	comp=Z,219nm,1.3s,comp=Z,3μm							
KKM	**Kota Kinabalu**	**18.08**	**318**	P	**Pn**	**04 14 03.9**	**+2.0**
	baz=18,SNR=16							
KDM	**Kudat**	**18.34**	**321**	P	**Pn**	**04 14 07.1**	**+2.3**
STKI	**Sintang**	**18.40**	**293**	P	**Pn**	**04 14 06.6**	**+1.0**
	comp=Z,619nm,0.9s,comp=Z,20μm							
BJII	**Banjamegara**	**18.46**	**269**	P	**P**	**04 14 05.2**	**+0.6**
	comp=Z,64nm,1.1s,comp=Z,2μm							
BTM	**Bintulu**	**18.55**	**304**	P	**Pn**	**04 14 09.5**	**+2.1**
PMG	**Port Moresby**	**18.73**	**97**	*e*P	**Pn**	**04 14 08.7**	**-0.7**
	comp=Z,263nm,0.8s							
PMG				S	**S**	**04 17 26.3**	**-6.9**
PMG	**Port Moresby**	**18.73**	**97**	P	**Pn**	**04 14 10.2**	**+0.8**
	comp=Z,382nm,1.1s,comp=Z,3μm							
PMG	**Port Moresby**	**18.73**	**97**	P	**P**	**04 14 07.5**	**+0.2**
	comp=Z,14nm,0.3s,baz=276,slow=6.5,SNR=21							
PMG				S	**S**	**04 17 26.3**	**-6.9**
	comp=Z,0.9nm,0.3s,baz=153,slow=21,SNR=3.6							
PLP	**Palo**	**18.83**	**350**	*i* P	**Pn**	**04 14 10.6**	**0.0**
SBUM	**Sibu**	**18.86**	**301**	P	**Pn**	**04 14 12.5**	**+1.5**
SBUM	**Sibu**	**18.86**	**301**	P	**Pn**	**04 14 11.9**	**+0.9**
	comp=Z,293nm,1.2s,comp=Z,4μm							
GUIM	**Jordan**	**18.88**	**342**	*e*P	**Pn**	**04 14 12.1**	**+0.9**
TGJI	**Tegal**	**19.07**	**271**	P	**P**	**04 14 10.2**	**-0.8**
	comp=Z,80nm,1.2s							
RCP	**Roxas**	**19.72**	**344**	*e*P	**Pn**	**04 14 20.5**	**-0.5**
KSM	**Kuching**	**20.06**	**296**	*e*P	Pn	04 14 23.6	-1.5
	comp=Z,617nm,0.8s							
KSM	**Kuching**	**20.06**	**296**	P	Pn	04 14 24.3	-0.7
KSM	**Kuching**	**20.06**	**296**	P	Pn	04 14 24.8	-0.2
	comp=Z,867nm,1.0s,comp=Z,7μm							
KSM	**Kuching**	**20.06**	**296**	P	Pn	04 14 23.9	-1.1
	baz=20,SNR=22							
KSM				S	**S**	**04 18 04.3**	**+4.7**
	baz=20,SNR=6.2							
GIRL	**Giralia**	**20.27**	**220**	P	Pn	04 14 26.3	-1.2
	baz=20,SNR=37							
CISI	**Cisompet, Garu**	**20.34**	**268**	P	**P**	**04 14 25.4**	**+0.6**
	comp=Z,198nm,0.7s,comp=Z,3μm							
LEM	**Lembang**	**20.56**	**271**	P	**P**	**04 14 27.1**	**-0.2**
	comp=Z,103nm,0.8s,comp=Z,2μm							
OTRP	**Odiongan**	**20.69**	**342**	*e*P	Pn	04 14 32.5	0.0
SJMP	**San Jose**	**21.07**	**340**	*e*P	**P**	**04 14 35.5**	**+2.9**
TPI	**Tanjungpandan**	**21.11**	**282**	P	**P**	**04 14 34.5**	**+1.4**
	comp=Z,41nm,0.9s,comp=Z,587nm							
MEEK	**Meekatharra**	**21.16**	**205**	P	**P**	**04 14 33.8**	**+0.2**
	baz=21,SNR=104							
MEEK				S	**S**	**04 18 18.5**	**-2.3**
	baz=21,SNR=6.8							
CBJI	**Citeko**	**21.34**	**272**	P	**P**	**04 14 33.2**	**-2.4**
	comp=Z,413nm,0.9s,comp=Z,32μm							
PVCP	**Virac**	**21.35**	**349**	*e*P	**P**	**04 14 37.3**	**+1.7**
CTA	**Charters Tower**	**21.42**	**128**	P	**P**	**04 14 38.1**	**+1.8**
CTA				S	**S**	**04 18 22.6**	**-2.9**
CTA	**Charters Tower**	**21.42**	**128**	P	**P**	**04 14 38.1**	**+1.8**
	comp=Z,328nm,0.7s,baz=304,slow=12,SNR=190							
CTA				S	**S**	**04 18 22.6**	**-2.9**
	comp=Z,10nm,0.6s,baz=232,slow=23,SNR=1.7							
CTA				LR	LR	04 24 09.7		
	comp=Z,1μm,18.2s,baz=328,slow=40							
CTAO	**Charters Tower**	**21.42**	**128**	*e*P	**P**	**04 14 37.8**	**+1.5**
CTAO	**Charters Tower**	**21.42**	**128**	*e*P	**P**	**04 14 37.8**	**+1.5**
AUQP	**San Andres**	**21.43**	**345**	*e*P	**P**	**04 14 37.1**	**+0.7**
DBJI	**Dramaga**	**21.44**	**271**	P	**P**	**04 14 36.2**	**-0.4**
	comp=Z,121nm,0.7s							
BOAC	**Boac**	**21.78**	**343**	*e*P	**P**	**04 14 42.1**	**+2.0**
GQP	**Guinayangan**	**22.04**	**345**	*e*P	**P**	**04 14 43.6**	**+0.8**
XMI	**Christmas Isla**	**22.55**	**261**	P	**P**	**04 14 47.7**	**-0.2**
	baz=22,SNR=3.6							
XMIS	**Christmas Isla**	**22.59**	**261**	P	**P**	**04 14 46.1**	**-2.1**
	baz=23,SNR=4.9							
TGY	**Tagaytay City**	**22.67**	**341**	P	**P**	**04 14 50.0**	**+1.0**
TGY	**Tagaytay City**	**22.67**	**341**	P	**P**	**04 14 50.0**	**+1.0**
	comp=Z,614nm,0.5s,baz=169,slow=4.2,SNR=23							
PPBI	**Pangkal Pinang**	**22.73**	**282**	P	**P**	**04 14 51.0**	**+1.4**
	comp=Z,163nm,1.2s,comp=Z,3μm							
FORT	**Forrest**	**23.17**	**181**	*e*P	**P**	**04 14 54.4**	**+0.9**
FORT	**Forrest**	**23.17**	**181**	P	**P**	**04 14 54.4**	**+0.9**
	baz=23,SNR=393			

QIZ Qiongzhong 32.04 326 P P 04 16 04.3 -8.5
QIZ S **S** **04 21 16.5 +2.3**
QIZ sS sS 04 22 06.8 -1.3
QIZ LR LR
comp=N,390nm,14.5s
QIZ LR LR
comp=Z,460nm,15.0s
YNG Young 32.47 148 P **P** **04 16 18.6 +2.2**
baz=33,SNR=489
MGCD Mangrove Creek 33.17 144 P **P** **04 16 25.3 +2.8**
baz=33,SNR=18
CAN Canberra 33.57 149 *e*P **P** **04 16 28.2 +2.2**
CAN pmax pmax
comp=Z,385nm,0.6s
CAN Canberra 33.57 149 *e*P **P** **04 16 28.2 +2.2**
comp=Z,385nm,0.6s
CAN *e*ScP **ScP** **04 22 33.4 -1.3**
QZH Quanzhou 33.60 344⇑ *i*P **P** **04 16 27.1 +0.8**
QZH pmax pmax
comp=Z,220nm,0.9s
TOO Toolangi 33.76 155 P **P** **04 16 30.6 +3.0**
baz=34,SNR=114
CNB Canberra Magne 33.76 148 P **P** **04 16 29.9 +2.3**
baz=34,SNR=81
JOW Kunigami 34.12 360 *e*P **P** **04 16 31.4 +0.7**
comp=Z,99nm,0.9s
MILA Mila 35.00 150 P **P** **04 16 40.9 +2.6**
baz=35,SNR=12
MOO Moorlands 38.59 157 P **P** **04 17 11.3 +2.7**
baz=39,SNR=7.0
CMAR Chiang Mai Arr 38.80 312 P **P** **04 17 11.4 +0.8**
CMAR PcP **PcP** **04 19 19.7 +0.5**
CMAR ScP **ScP** **04 22 54.0 -0.2**
CMAR PKiKP **PKiKP** **04 26 32.5 -0.3**
CMAR Chiang Mai Arr 38.80 312 P **P** **04 17 11.4 +0.8**
comp=Z,24nm,0.8s,baz=144,slow=7.0,SNR=91
CMAR PcP **PcP** **04 19 19.7 +0.5**
comp=Z,15nm,0.8s,baz=165,slow=2.7,SNR=9.8
CMAR ScP **ScP** **04 22 54.0 -0.2**
comp=Z,12nm,0.8s,baz=158,slow=3.2,SNR=16
CMAR PKiKP **PKiKP** **04 26 32.5 -0.3**
comp=Z,0.8nm,0.5s,baz=307,slow=0.5,SNR=4.4
SSE Sheshan 38.97 350⇑ P **P** **04 17 12.6 +0.8**
SSE pmax pmax
comp=Z,130nm,0.8s
SSE pmax pmax
comp=Z,120nm,3.5s
CHTO Chiang Mai 39.02 312 *e*P **P** **04 17 12.8 +0.4**
CHTO *e* 04 19 20.7
CHTO *e* 04 22 54.1
CHTO pmax pmax
comp=Z,99nm,1.3s
CHTO Chiang Mai 39.02 312 *e*P **P** **04 17 12.8 +0.4**
comp=Z,99nm,1.3s
CHTO *e*PcP **PcP** **04 19 20.7 +0.8**
CHTO *e*ScP **ScP** **04 22 54.1 -0.9**
CHTO Chiang Mai 39.02 312 P **P** **04 17 13.4 +1.0**
SNR=29
TAU Tasmania Unive 39.04 158 *e*P **P** **04 17 14.5 +2.2**
TAU pmax pmax
comp=Z,196nm,1.4s
TAU Tasmania Unive 39.04 158 *e*P **P** **04 17 14.5 +2.2**
comp=Z,196nm,1.4s
TAU *e*PP **PP** **04 18 42.0 -2.8**
NOUC Port Laguerre 39.35 116 *e*P **P** **04 17 15.7 +0.5**
DZM Mont Dzumac 39.47 116 *e*P **P** **04 17 17.9 +1.7**
comp=Z,230nm,0.9s
DZM Mont Dzumac 39.47 116 *e*P **P** **04 17 16.5 +0.3**
DZM Mont Dzumac 39.47 116 *e*P **P** **04 17 17.7 +1.5**
comp=Z,105nm,0.8s
DZM Mont Dzumac 39.47 116 P **P** **04 17 17.5 +1.2**
comp=Z,102nm,0.8s,baz=278,slow=7.9,SNR=61
GYA Guiyang 39.76 329⇑ *i*P **P** **04 17 19.3 +0.7**
GYA pP **pP** **04 17 51.4 +1.2**
GYA sP **sP** **04 18 07.6 +1.2**
GYA PP **PnPn** **04 18 57.0 -0.6**
GYA PcP **PcP** **04 19 23.3 +1.1**
GYA ScP **ScP** **04 22 58.9 +1.0**
GYA S **S** **04 23 13.8 +1.7**
GYA sS **sS** **04 24 08.0 +0.9**
GYA ScS **ScS** **04 27 08.8 -2.5**
GYA pmax pmax
comp=Z,40nm,0.8s
GYA pmax pmax
comp=Z,130nm,5.0s
WHN Wuhan 40.12 341⇑ *i*P **P** **04 17 22.9 +1.6**
NJ2 Nanjing 40.34 348 *e*P **P** **04 17 24.1 +1.0**
NJ2 pP **pP** **04 17 54.4 -0.4**
NJ2 sP **sP** **04 18 09.1 -1.9**
NJ2 PP **PP** **04 19 01.4 +2.3**
NJ2 S **S** **04 23 23.5 +3.1**
NJ2 pmax pmax
comp=Z,210nm,0.9s
NJ2 pmax pmax
comp=Z,310nm,6.8s
NJ2 LR LR
comp=N,590nm,21.0s
NJ2 LR LR
comp=E,280nm,23.8s
NJ2 LR LR
comp=Z,290nm,22.5s
JNU Nakatsue 40.46 3 P **P** **04 17 24.0 -0.1**
JNU Nakatsue 40.46 3 P **P** **04 17 24.0 -0.1**
comp=Z,80nm,1.1s,baz=178,slow=4.3,SNR=12
KMI Kunming 40.88 323 P **P** **04 17 29.3 +1.3**
KMI PP **PP** **04 19 07.8 +2.5**
KMI S **S** **04 23 30.8 +1.7**
KMI pmax pmax
comp=Z,54nm,1.5s
KSAR Wonju Array Be 44.70 359 P **P** **04 17 59.2 +1.0**
KSAR PcP **PcP** **04 19 38.4 +0.1**
KSAR ScP **ScP** **04 23 16.5 -0.8**
KSRS Korea Array 44.71 360 P **P** **04 17 59.2 +0.9**
comp=Z,30nm,0.7s,baz=178,slow=11,SNR=99
KSRS PcP **PcP** **04 19 38.4 +0.1**
comp=Z,11nm,0.8s,baz=182,slow=4.1,SNR=7.5
KSRS ScP **ScP** **04 23 16.5 -0.8**
comp=Z,4.9nm,1.0s,baz=173,slow=4.1,SNR=7.4
KSRS LR LR 04 37 36.4
comp=Z,299nm,18.5s,baz=136,slow=37
MJAR Matsushiro Arr 44.77 11 P **P** **04 17 57.8 -1.1**
MJAR ScP **ScP** **04 23 16.9 -0.7**
MJAR Matsushiro Arr 44.77 11 P **P** **04 17 57.8 -1.1**
comp=Z,42nm,0.9s,baz=192,slow=9.5,SNR=52
MJAR ScP **ScP** **04 23 16.9 -0.7**
comp=Z,7.3nm,0.9s,baz=207,slow=6.6,SNR=9.6
MAJO Matsushiro 44.77 11 *e*P **P** **04 17 57.7 -1.2**
MAJO pmax pmax
comp=Z,60nm,0.9s
MAJO Matsushiro 44.77 11 *e*P **P** **04 17 57.7 -1.2**
comp=Z,60nm,0.9s
MAJO *e*ScP **ScP** **04 23 17.0 -0.6**
MAT Matsushiro 44.77 11 P **P** **04 17 57.8 -1.1**
MAT S **S** **04 24 21.0 -4.2**
CD2 Chengdu 44.85 330 P **P** **04 18 00.1 +0.4**
CD2 pP **pP** **04 18 31.3 -0.6**
CD2 sP **sP** **04 18 47.1 -0.9**
CD2 PP **PP** **04 19 47.9 +0.5**
CD2 PcS **PcS** **04 23 32.0 -1.0**
CD2 S **S** **04 24 27.1 +0.5**
CD2 sS **sS** **04 25 21.8 -0.7**
CD2 pmax pmax
comp=Z,80nm,0.9s
CD2 pmax pmax
comp=Z,370nm,11.7s
CD2 LR LR
comp=N,340nm,21.1s
CD2 LR LR
comp=Z,510nm,17.6s
XAN Xi'an 45.21 337 P **P** **04 18 02.1 -0.3**
XAN pP pP 04 18 28.6 -6.1
XAN ScP **ScP** **04 23 20.0 +0.4**
XAN pmax pmax
comp=Z,43nm,0.8s
XAN pmax pmax
comp=Z,34nm,4.3s
XAN LR LR
comp=N,240nm,18.5s
XAN LR LR
comp=E,120nm,22.6s
XAN LR LR
comp=Z,110nm,19.5s
DL2 Dalian 46.58 353 P **P** **04 18 13.4 +0.5**
DL2 pmax pmax
comp=Z,120nm,0.9s
SHL Shillong 48.33 314⇑ *i*P **P** **04 18 26.5 -0.5**
BJI Beijing 48.61 348 P **P** **04 18 28.8 +0.2**
BJI S **S** **04 25 23.4 +3.9**
BJI pmax pmax
comp=Z,230nm,1.0s
BJI pmax pmax
comp=Z,410nm,3.6s
BJI LR LR
comp=N,300nm,19.0s
BJI LR LR
comp=E,240nm,20.1s
BJI LR LR
comp=Z,240nm,23.8s
LZH Lanzhou 49.08 334⇑ P **P** **04 18 33.8 +1.3**
LZH pP **pP** **04 19 06.0 +0.8**
LZH sP **sP** **04 19 21.8 +0.6**
LZH PcP **PcP** **04 19 55.0 +0.9**
LZH PP **PP** **04 20 30.0 +2.4**
LZH ScP **ScP** **04 23 37.0 +1.1**
LZH S **S** **04 25 25.3 -1.4**
LZH sS **sS** **04 26 23.5 +0.1**
LZH pmax pmax
comp=Z,180nm,1.5s
LZH pmax pmax
comp=Z,410nm,5.2s
SNY Shenyang 49.27 355⇑ P **P** **04 18 33.8 +0.2**
SNY pmax pmax
comp=Z,51nm,1.4s
MSVF Nonsavu 49.45 107 *e*P **P** **04 18 37.5 +1.9**
MSVF *e* 04 19 57.7
MSVF pmax pmax
comp=Z,34nm,0.8s
MSVF Nonsavu 49.45 107 *e*P **P** **04 18 37.5 +1.9**
comp=Z,34nm,0.8s
MSVF *e*PcP **PcP** **04 19 57.7 +2.0**
MSVF Nonsavu 49.45 107 P **P** **04 18 38.0 +2.4**
comp=Z,418nm,0.8s,SNR=8.1
PALK Pallekele 49.70 286 *e*P **P** **04 18 36.2 -1.3**
comp=Z,49nm,1.5s
PALK *e*PcP **PcP** **04 19 56.8 +0.1**
VLA Vladivostok 50.47 3⇓ *i*P **P** **04 18 41.6 -1.1**
VLA S **S** **04 25 44.8 -0.6**
VLA pmax pmax
comp=Z,51nm,0.6s
HHC Hu-ho-hao-te 50.51 344⇑ P **P** **04 18 43.8 +0.6**
HHC pP **pP** **04 19 16.1 0.0**
HHC sP **sP** **04 19 32.0 0.0**
HHC PP **PP** **04 20 42.1 +1.6**
HHC S **S** **04 25 46.4 0.0**
HHC sS **sS** **04 26 42.5 -0.8**
HHC pmax pmax
comp=Z,150nm,1.1s
HHC pmax pmax
comp=Z,250nm,5.9s
VIS Vishakhapatnam 51.01 300 *e*P **P** **04 18 46.9 -0.3**
ERM Erimo 51.10 14 *c i*P **P** **04 18 48.4 +1.0**
ERM pmax pmax
comp=Z,23nm,0.6s
ERM Erimo 51.10 14 *e*P **P** **04 18 48.1 +0.8**
comp=Z,27nm,0.6s
ERM Erimo 51.10 14 P **P** **04 18 48.6 +1.2**
comp=Z,284nm,0.5s,SNR=7.5
CN2 Changchun 51.12 357 *e*P **P** **04 18 47.1 -0.4**
CN2 *es*P **sP** **04 19 35.3 -1.1**
CN2 *eS* **S** **04 25 55.6 +1.3**
CN2 SS **SS** **04 29 29.8 -1.9**
CN2 pmax pmax
comp=Z,40nm,0.5s
CN2 LR LR
comp=Z,300nm,20.0s
LSA Lhasa 51.42 318 P **P** **04 18 51.5 +0.9**
USRK Ussuriysk Arra 51.55 3 P **P** **04 18 51.3 +0.5**
comp=Z,51nm,0.6s,baz=184,slow=6.8,SNR=107
USRK ScP **ScP** **04 23 46.0 -0.1**
comp=Z,2.8nm,0.7s,baz=211,slow=2.2,SNR=4.2
MDJ Mudanjiang 51.88 1 P **P** **04 18 53.8 +0.7**
MDJ pmax pmax
comp=Z,46nm,1.1s
RPZ Rata Peaks 51.88 141 *e*P **P** **04 18 55.1 +1.8**
comp=Z,826nm,0.9s
RPZ Rata Peaks 51.88 141 P **P** **04 18 53.9 +0.6**
comp=Z,743nm,0.9s,baz=286,slow=2.3,SNR=246
ODZ Otahua Downs 52.33 143 *e*P **P** **04 18 57.9 +1.3**
comp=Z,67nm,0.8s
ODAN Odare 52.34 312 *e*P **P** **04 18 57.7 +0.5**
comp=Z,200nm,0.6s
TAPN Taplejung 52.39 313 *e*P **P** **04 18 58.2 +0.6**
comp=Z,123nm,0.5s
KHZ Kahutara 52.82 139 *e*P **P** **04 19 01.5 +1.3**
comp=Z,278nm,0.8s
MCQ Macquarie Isla 52.92 158 *e*P **P** **04 19 02.5 +1.8**
MCQ Macquarie Isla 52.92 158 *e*P **P** **04 19 02.5 +1.8**
ASAJ Asahikawa 52.96 13 *e*P **P** **04 19 01.1 0.0**
comp=Z,15nm,0.7s
ASAJ Asahikawa 52.96 13 P **P** **04 19 01.4 +0.3**
comp=Z,24nm,0.4s,baz=233,slow=10,SNR=18
RAMN Ramite 52.97 312 *e*P **P** **04 19 02.4 +0.5**
comp=Z,487nm,0.6s
SNZO South Karori 53.09 137 *e*P **P** **04 19 02.5 +0.3**
comp=Z,137nm,0.8s
URZ Urewera 53.55 133 *e*P **P** **04 19 06.1 +0.5**
comp=Z,42nm,0.6s
URZ Urewera 53.55 133 P **P** **04 19 06.3 +0.7**
comp=Z,35nm,0.6s,baz=313,slow=3.4,SNR=36
GTA Gaotai 53.62 333⇑ *i*P **P** **04 19 07.3 +1.0**
GTA pP **pP** **04 19 37.1 -2.4**
GTA sP **sP** **04 19 52.6 -2.7**
GTA PcP **PcP** **04 20 12.1 +1.2**
GTA ScP **ScP** **04 23 55.9 +0.4**
GTA S **S** **04 26 30.4 +1.5**
GTA ScS **ScS** **04 28 39.3 -2.2**
GTA pmax pmax
comp=Z,80nm,0.7s
GTA pmax pmax
comp=Z,430nm,11.9s
GTA LR LR
comp=N,340nm,17.6s
GTA LR LR
comp=E,310nm,18.5s
GTA LR LR
comp=Z,280nm,17.1s
GUN Gumba 54.04 312 *e*P **P** **04 19 10.0 +0.2**
comp=Z,333nm,0.6s
PKI Pulchoki 54.20 312 *e*P **P** **04 19 10.8 -0.1**
comp=Z,138nm,0.6s
PKIN Phulchoki 54.21 312 *e*P **P** **04 19 11.2 +0.3**
comp=Z,49nm,0.4s
KKN Kakani 54.41 312 *e*P **P** **04 19 12.5 +0.2**
comp=Z,125nm,0.6s
DMN Daman 54.44 312 *e*P **P** **04 19 12.9 +0.3**
comp=Z,139nm,0.6s
HYB Hyderabad 55.05 297 *i* P **P** **04 19 15.0 -1.9**
HYB *es*P **sP** **04 20 06.0 -0.1**
KOLN Koldanda 55.65 311 *e*P **P** **04 19 21.4 +0.2**
comp=Z,254nm,0.7s
YSS Yuzh-Sakhalins 55.70 12 *e*P **P** **04 19 22.0 +1.1**
YSS pmax pmax
comp=Z,60nm,0.5s
DANN Dangsing 55.84 312 *e*P **P** **04 19 22.5 -0.2**
comp=Z,119nm,0.6s
HABR Khabarovsk 56.03 5 P **P** **04 19 22.0 -1.2**
HABR *e* 04 20 18.3
HABR *eS* **S** **04 26 59.9 -0.6**
HABR *eSS* **SS** **04 30 49.4 +0.3**
PYUN Piuthan 56.28 311 *e*P **P** **04 19 26.0 +0.3**
comp=Z,566nm,0.8s
KLR Kul'dur 56.56 3 *e*P **P** **04 19 24.7 -2.3**
KLR pmax pmax
comp=Z,62nm,1.6s
ULN Ulaanbaatar 58.23 343 *e*P **P** **04 19 40.0 +1.0**
comp=Z,98nm,1.0s
ULN *e*ScP **ScP** **04 24 15.1 -0.5**
ULN Ulaanbaatar 58.23 343 P **P** **04 19 40.4 +1.4**
SNR=51
SONM Songino Array 58.40 343 P **P** **04 19 41.1 +1.1**
SONM ScP **ScP** **04 24 14.8 -1.5**
SONM P'P' 04 49 12.4
SONM ⇑ *e* 04 49 27.4
SONM Songino Array 58.40 343 P **P** **04 19 41.1 +1.1**
comp=Z,48nm,0.9s,baz=162,slow=7.5,SNR=183
SONM ScP **ScP** **04 24 14.8 -1.5**
comp=Z,6.1nm,0.9s,baz=153,slow=4.7,SNR=7.3
SONM PKPPKP **P'P'df** **04 49 12.4 -4.1**
comp=Z,1.2nm,1.0s,baz=337,slow=2.7,SNR=6.0
SONM PKP2bc 04 49 27.4
comp=Z,5.1nm,0.9s,baz=310,slow=2.0,SNR=12
AFI Afiamalu 59.08 102 *e*P **P** **04 19 47.4 +2.1**
comp=Z,162nm,1.0s
AFI Afiamalu 59.08 102 P **P** **04 19 46.4 +1.1**
comp=Z,99nm,0.9s,baz=50,slow=1.7,SNR=13
POO Poona 59.62 296 *e*P **P** **04 19 48.0 -0.9**
CASY Casey 59.98 188 *e*P **P** **04 19 51.5 +1.0**
comp=Z,70nm,0.7s
CIT Chita 60.62 350 *e*P **P** **04 19 54.5 -0.6**
NIUE Niue 60.92 108 P **P** **04 20 00.5 +2.7**
baz=61,SNR=4.8
NDI New Delhi 60.98 309 *e*P P 04 19 54.0 -3.9
ZAK Zakamensk 61.60 342⇓ *i*P **P** **04 20 02.4 +0.6**
ZAK pmax pmax
comp=Z,26nm,1.2s
SMLA Simla 62.18 311 *i* P **P** **04 20 06.4 +0.4**
SMLA AMb AMB 04 20 10.4
comp=Z,209nm,0.5s
SMLA *i* S **S** **04 28 16.0 -4.4**
SMLA *i* S S 04 28 16.1 -4.2
TLY Talaya 62.64 343 *e*P **P** **04 20 09.0 +0.4**
TLY pmax pmax
comp=Z,28nm,0.8s
TLY Talaya 62.64 343 P **P** **04 20 10.6 +2.0**
comp=Z,251nm,0.7s,SNR=14
WMQ Urumqi 62.91 328 P **P** **04 20 11.0 +0.3**
WMQ pP **pP** **04 20 44.0 -0.9**
WMQ sP **sP** **04 21 00.0 -0.5**
WMQ PP **PP** **04 22 32.0 +1.1**
WMQ ScP **ScP** **04 24 35.0 -1.4**
WMQ S **S** **04 28 27.0 -2.2**
WMQ sS **sS** **04 29 26.0 -2.4**
WMQ ScS **SKSac** **04 29 46.0 -3.7**
WMQ pmax pmax
comp=Z,130nm,1.1s
WMQ pmax pmax
comp=Z,1μm,6.0s
WMQ LR LR
comp=N,460nm,18.0s
WMQ LR LR
comp=E,350nm,18.0s
WMQ LR LR
comp=Z,260nm,18.0s
IRK Irkutsk 62.96 344 *e*P **P** **04 20 11.5 +0.8**
IRK pmax pmax
comp=Z,158nm,1.0s
MOY Mondy 63.43 341 *e*P **P** **04 20 15.6 +1.6**
MOY pmax pmax
comp=Z,143nm,2.4s
MIR Mirnyy 63.74 195⇑ *i*P **P** **04 20 12.5 -3.1**
MIR *i* 04 20 38.0
MIR *i* 04 20 52.0
MIR pmax pmax
comp=Z,135nm,1.5s
CLNS Chul'man 64.16 358 *e*P **P** **04 20 19.4 +0.9**
CLNS *e* 04 20 49.5
CLNS *e**PP **pP** **04 20 53.2 +0.3**
CLNS *e* 04 22 39.5
CLNS *e*PPP PPP 04 24 10.1
CLNS *eS* **S** **04 28 43.0 -1.1**
CLNS *eSS* **SS** **04 32 55.1 -1.2**
CLNS pmax pmax
comp=Z,32nm,0.8s
CLNS pmax pmax
comp=E,11nm,0.9s
CLNS pmax pmax
comp=N,17nm,0.9s
CLNS pmax pmax
comp=N,9.0nm,1.1s
CLNS pmax pmax
comp=E,12nm,1.1s
CLNS pmax pmax
comp=Z,5.0nm,1.1s
CLNS smax smax
comp=N,81nm,14.4s
CLNS smax smax
comp=E,361nm,15.1s
PEA0B Petropavlovsk- 65.31 19 *e*P **P** **04 20 26.9 +0.9**
PETK Petropavlovsk- 65.31 19 P **P** **04 20 27.1 +1.0**
PETK pmax pmax
comp=Z,90nm,0.8s
PETK Petropavlovsk- 65.31 19 P **P** **04 20 27.1 +1.0**
PETK Petropavlovsk- 65.31 19 P **P** **04 20 27.1 +1.0**
comp=Z,90nm,0.8s,baz=193,slow=6.7,SNR=74
KSH Kashi 67.27 318 P **P** **04 20 39.6 +0.6**
KSH PcP **PcP** **04 21 06.8 +1.1**
KSH pP **pP** **04 21 13.9 +0.3**
KSH sP **sP** **04 21 30.0 +0.9**
KSH PP **PP** **04 23 12.1 +2.9**
KSH ScP 04 24 55.0
KSH PcS 04 25 10.3
KSH S **S** **04 29 23.3 +0.6**
KSH ScS **SKSac** **04 30 21.0 -2.1**
KSH sS **sS** **04 30 22.1 -0.5**
KSH pmax pmax
comp=Z,150nm,1.0s
KSH LR LR
comp=N,230nm,4.0s
KSH LR LR
comp=E,330nm,5.1s
KSH LR LR
comp=Z,250nm,7.8s
MK31 Makanchi Array 67.74 328 *i* P **P** **04 20 41.8 +0.2**
MK31 pmax pmax
comp=Z,40nm,0.6s
MKAR Makanchi Array 67.74 328 P **P** **04 20 42.1 +0.5**
MKAR pmax pmax
comp=Z,48nm,0.7s
MKAR pmax pmax
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 67.74 328 P **P** **04 20 42.1 +0.5**
MKAR P'P' 04 48 55.8
MKAR Makanchi Array 67.74 328 P **P** **04 20 42.1 +0.5**
comp=Z,48nm,0.7s,baz=122,slow=7.9,SNR=203
MKAR PKPPKP P'P'df 04 48 55.8 -6.1
comp=Z,1.2nm,0.9s,baz=296,slow=3.4,SNR=7.6
ULHL Ulahol 68.55 321 P **P** **04 20 47.7 +0.7**
SNR=26
KZA Kyzart 69.08 320 P **P** **04 20 51.8 +1.2**
SNR=11
TKM2 Tokmak 2 69.31 321 *i* P **P** **04 20 52.4 +0.7**
TKM2 Tokmak 2 69.31 321 *e*P **P** **04 20 52.0 +0.2**
comp=Z,25nm,0.6s
TKM2 Tokmak 2 69.31 321 P **P** **04 20 52.5 +0.7**
SNR=56
YAK Yakutsk 69.32 1 *c i*P **P** **04 20 51.1 +0.1**
YAK *e* 04 21 14.0
YAK *e* 04 23 28.3
YAK *eS* **S** **04 29 43.4 -2.4**
YAK *e* 04 30 33.3
YAK pmax pmax
comp=Z,317nm,0.9s
YAK pmax pmax
comp=N,53nm,0.9s
YAK pmax pmax
comp=E,7.0nm,0.9s
YAK pmax pmax
comp=Z,166nm,4.3s
YAK pmax pmax
comp=E,45nm,3.8s
YAK pmax pmax
comp=N,209nm,3.8s
YAK smax smax
comp=E,228nm,1.9s
YAK smax smax
comp=N,146nm,2.0s
KBK Karagaybulak 69.58 321 P **P** **04 20 54.4 +1.1**
SNR=20
KRAR Krasnoyarsk 69.73 340⇑ *e*P **P** **04 20 55.1 +1.4**
KBL Kabul 69.82 311 *e*P **P** **04 20 54.4 -0.6**
KBL pmax pmax
comp=Z,22nm,0.8s
KBL Kabul 69.82 311 *e*P **P** **04 20 54.4 -0.6**
comp=Z,22nm,0.8s
AAK Ala-Archa 69.85 321 *c i*P **P** **04 20 55.8 +0.8**
AAK pmax pmax
comp=Z,208nm,1.5s
AAK Ala-Archa 69.85 321 *e*P **P** **04 20 55.8 +0.8**
comp=Z,37nm,0.8s
AAK ⇑ *e* 04 48 59.4
AAK Ala-Archa 69.85 321 P **P** **04 20 56.2 +1.2**
SNR=26
AAK Ala-Archa 69.85 321 P **P** **04 20 55.0 0.0**
comp=Z,236nm,0.6s,SNR=24
AAK Ala-Archa 69.85 321 P **P** **04 20 55.6 +0.7**

comp=Z,27nm,0.6s,baz=119,slow=5.3,SNR=78
AAK PKP2bc 04 48 59.4
comp=Z,20nm,1.2s,baz=251,slow=1.9,SNR=38
FRU Bishkek 69.88 321 *e*P **P 04 20 55.0 0.0**
FRU pmax pmax
comp=Z,80nm,1.9s
CHMS Chumysh 69.88 321 P **P 04 20 55.4 +0.4**
SNR=9.0
AML Almayashu 70.10 320 P **P 04 20 57.9 +1.1**
SNR=6.5
USP Ospenovka 70.18 321 P **P 04 20 57.5 +0.7**
SNR=31
EKS2 Erkin-Say 70.32 320 *e*P **P 04 20 58.6 +0.8**
EKS2 *e* 04 21 20.6
EKS2 pmax pmax
comp=Z,38nm,0.8s
EKS2 Erkin-Say 70.32 320 *e*P **P 04 20 58.6 +0.8**
comp=Z,38nm,0.8s
EKS2 *e*PcP **PcP 04 21 20.6 +2.1**
EKS2 Erkin-Say 70.32 320 P **P 04 20 58.9 +1.2**
SNR=32
RAR Rarotonga 70.49 110 P **P 04 21 00.3 +1.2**
RAR Rarotonga 70.49 110 P **P 04 21 00.3 +1.2**
comp=Z,54nm,0.9s,baz=247,slow=9.9,SNR=7.4
FX1 Attu Island--F 71.15 27 *e*P **P 04 21 03.3 +0.9**
FX1 Attu Island--F 71.15 27 P **P 04 21 02.9 +0.5**
comp=Z,104nm,0.7s,baz=283,slow=1.2,SNR=35
ZALV Zalesovo Beam 71.30 335 P **P 04 21 03.1 -0.2**
ZALV pmax pmax
comp=Z,116nm,0.7s
ZALV pmax pmax
comp=Z,5.0nm,1.1s
ZALV Zalesovo Beam 71.30 335 P **P 04 21 03.0 -0.2**
ZALV ⇑*e* 04 48 52.9
ZALV Zalesovo Beam 71.30 335 P **P 04 21 03.0 -0.2**
comp=Z,116nm,0.7s,baz=122,slow=4.6,SNR=556
ZALV PKP2bc 04 48 52.9
comp=Z,4.9nm,1.1s,baz=319,slow=5.9,SNR=9.5
KURK Kurchatov 72.08 329*c i*P **P 04 21 08.3 +0.3**
KURK pmax pmax
comp=Z,428nm,1.1s
KURK Kurchatov 72.08 329 *e*P **P 04 21 08.3 +0.3**
comp=Z,252nm,0.8s
KURK *e*S **S 04 30 16.1 -2.1**
KURK Kurchatov 72.08 329 P **P 04 21 08.8 +0.8**
SNR=121
KURK Kurchatov 72.08 329 P **P 04 21 08.6 +0.6**
comp=Z,2µm,0.8s
VNDA Vanda 72.17 173 *e*P **P 04 21 08.9 +0.8**
comp=Z,68nm,0.8s
VNDA Vanda 72.17 173 P **P 04 21 09.1 +0.9**
comp=Z,60nm,0.7s,baz=320,slow=6.5,SNR=332
NVS Novosibirsk 72.58 335⇓*i*P **P 04 21 11.0 +0.1**
NVS *i* *PP **PcP 04 21 32.3 +4.6**
NVS *e*S S 04 30 17.7 -6.1
NVS *e**SS **SKSac 04 30 56.4 -5.8**
NVS pmax pmax
comp=N,42nm,0.6s
NVS pmax pmax
comp=Z,85nm,0.6s
NVS pmax pmax
comp=E,34nm,0.4s
NVS smax smax
comp=N,70nm,1.9s
NVS smax smax
comp=E,55nm,1.1s
SEY Seymchan 72.60 11*c e*P **P 04 21 11.6 +0.8**
KK31 Karatay Array 72.62 319 *i* P **P 04 21 11.2 -0.3**
KK31 pmax pmax
comp=Z,10.0nm,0.5s
KKAR Karatay Array 72.62 319 *e*P **P 04 21 11.3 -0.2**
KKAR pmax pmax
comp=Z,11nm,0.6s
KKAR Karatay Array 72.62 319 *e*P **P 04 21 11.3 -0.2**
comp=Z,11nm,0.6s
SBA Scott Base 73.08 172 *e*P **P 04 21 15.1 +1.6**
SBA pmax pmax
comp=Z,71nm,0.9s
SBA Scott Base 73.08 172 *e*P **P 04 21 15.1 +1.6**
comp=Z,71nm,0.9s
MAW Mawson 73.89 201 P **P 04 21 19.8 +1.4**
MAW Mawson 73.89 201 P **P 04 21 19.8 +1.4**
comp=Z,20nm,0.5s,baz=76,slow=6.3,SNR=14
MAW Mawson 73.89 201 P **P 04 21 20.1 +1.7**
baz=74,SNR=9.4
SMDO Samad 75.06 296 P **P 04 21 26.1 0.0**
SNR=11
BSY Bisya 75.74 296 P **P 04 21 29.4 -0.5**
SNR=7.0
HOQ Hoqain 75.85 297 P **P 04 21 30.3 -0.3**
SNR=9.8
IDAH Dahanechah 76.28 306 *e*P **P 04 21 34.1 +1.0**
ARQ Araqi 76.49 296 P **P 04 21 34.0 -0.2**
SNR=6.7
IKOO Kooshah 76.88 306 *e*P **P 04 21 36.7 +0.2**
VOSK Vostochnaya 77.14 328 P **P 04 21 36.9 -0.3**
VOSK pmax pmax
comp=Z,112nm,0.6s
HATD Hatta, Dubai 77.21 297 P **P 04 21 38.6 +0.4**
SNR=5.3
ITEG Tejag 77.23 306 *e*P **P 04 21 39.0 +0.6**
IMYA Miami 77.26 310 *e*P **P 04 21 38.8 +0.4**
BVA0 Borovoye Array 77.60 328 *i* P **P 04 21 39.3 -0.4**
BVA0 pmax pmax
comp=Z,44nm,1.3s
BVAR Borovoye Array 77.60 328 P **P 04 21 40.0 +0.3**
BVAR pmax pmax
comp=Z,63nm,0.6s
BVAR Borovoye Array 77.60 328 P **P 04 21 40.0 +0.3**
BVAR PKKPbc **PKKPbc 04 40 42.8 -2.2**
BVAR Borovoye Array 77.60 328 P **P 04 21 40.0 +0.3**
comp=Z,63nm,0.6s,baz=129,slow=5.9,SNR=339
BVAR PKKPbc **PKKPbc 04 40 42.8 -2.2**
comp=Z,0.3nm,0.4s,baz=259,slow=3.0,SNR=3.7
BRVK Borovoye 77.67 328*c i*P **P 04 21 40.4 +0.3**
BRVK pmax pmax
comp=Z,167nm,1.0s
BRVK Borovoye 77.67 328 *e*P **P 04 21 40.2 +0.1**
comp=Z,126nm,0.8s
BRVK Borovoye 77.67 328 P **P 04 21 40.8 +0.7**
SNR=50
BRVK Borovoye 77.67 328 P **P 04 21 40.4 +0.3**
comp=Z,977nm,0.9s,SNR=65
IMOG Moghan 77.76 309 *e*P **P 04 21 41.8 +0.4**
IPAY Payeh 78.14 310 *e*P **P 04 21 43.6 +0.2**
ZRNK Zerenda 78.29 328 *i* P **P 04 21 43.2 -0.3**
ZRNK pmax pmax
comp=Z,2.0nm,0.7s
IKRD Kardeh 78.61 310 *e*P **P 04 21 42.8 -3.2**
TIXI Tiksi 78.97 0*c i*P **P 04 21 46.0 -0.9**
TIXI pmax pmax
comp=Z,89nm,0.9s
TIXI Tiksi 78.97 0 *e*P **P 04 21 45.8 -1.1**
comp=Z,72nm,0.6s
ABKT Aibek 79.27 311 P **P 04 21 49.6 +0.3**
comp=Z,118nm,1.4s,SNR=5.1
OPO Ambohidratompo 79.29 253 P **P 04 21 50.6 +0.6**
OPO Ambohidratompo 79.29 253 P **P 04 21 50.6 +0.6**
comp=Z,13nm,0.7s,baz=84,slow=4.7,SNR=12
TBI Tubuai 79.95 112 *e*P **P 04 21 56.0 +2.8**
comp=Z,254nm,0.9s
BILL Bilibino 79.97 14⇑*i*P **P 04 21 52.2 -0.1**
BILL *e* 04 24 53.7
BILL *i* S **S 04 31 42.0 -2.0**
BILL pmax pmax
comp=Z,5.0nm,0.5s
BILL Bilibino 79.97 14 *e*P **P 04 21 52.3 -0.1**
comp=Z,5.5nm,0.5s
PAE Paea 80.27 107 *e*P **P 04 21 57.7 +2.7**
comp=Z,18nm,1.0s
PAE Paea 80.27 107 *e*PcP **PcP 04 22 03.6 +1.8**
comp=Z,17nm,1.0s
PPT2 Papeete2 80.27 107 *e*P **P 04 21 58.1 +2.9**
comp=Z,110nm,1.1s
PPT Papeete 80.28 107 P **P 04 21 57.5 +2.4**
PPT Papeete 80.28 107 P **P 04 21 57.5 +2.4**
comp=Z,96nm,0.9s,baz=310,slow=7.5,SNR=8.3
TIAR Tiarei 80.50 107 *e*P **P 04 21 59.3 +3.0**
comp=Z,107nm,1.0s
TVO Taravao 80.57 107 *e*P **P 04 21 59.6 +2.9**
comp=Z,85nm,0.9s
MEH Mehetia 81.68 107 *e*P **P 04 22 05.1 +2.5**
comp=Z,183nm,1.2s
MEH Mehetia 81.68 107 *e*PcP **PcP 04 22 10.5 +2.5**
comp=Z,165nm,1.2s
IANJ Anjilo 81.80 307 *e*P **P 04 22 02.4 -0.7**

UNV Unalaska Valle 81.81 33 *e*P **P 04 22 03.1 +0.7**
comp=Z,94nm,1.2s
AB31 Akbulak array 81.86 322 *i* P **P 04 22 02.0 -0.8**
AB31 pmax pmax
comp=Z,15nm,0.4s
ABKAR Akbulak array 81.86 322 *e*P **P 04 22 02.6 -0.2**
comp=Z,48nm,0.8s
PMOR Pomariorio Ree 82.12 104 *e*P **P 04 22 07.6 +2.8**
comp=Z,194nm,0.9s
QSPA South Pole Qui 82.49 180 *e*P **P 04 22 06.3 +0.4**
comp=Z,129nm,0.8s
QSPA South Pole Qui 82.49 180 P **P 04 22 06.5 +0.5**
comp=Z,110nm,0.7s,baz=316,slow=1.7,SNR=477
QSPA LR LR 05 01 51.9
comp=Z,436nm,18.4s,baz=337,slow=38
SYO Syowa Base 82.61 201⇓*i*P **P 04 22 05.8 -0.5**
IKLH Kolahrood 83.14 305 *e*P **P 04 22 10.3 +0.2**
SVE Sverdlovsk 84.33 329*d i*P **P 04 22 15.6 +0.3**
SVE pmax pmax
comp=Z,245nm,1.2s
IRAZ Razeghan 84.94 307 *e*P **P 04 22 18.8 -0.3**
ARU Arti 85.25 328*d i*P **P 04 22 19.7 -0.2**
ARU 04 25 40.1
ARU S S 04 32 30.9 -7.1
ARU SS **SS 04 38 11.2 -4.5**
ARU pmax pmax
comp=Z,159nm,1.0s
ARU Arti 85.25 328 P **P 04 22 19.7 -0.2**
comp=Z,987nm,0.6s,SNR=8.8
RDF Al-Radifah 85.58 300 *e*P **P 04 22 21.7 -0.5**
RDF AMb AMB 04 22 26.0
comp=Z,142nm,1.4s
SDPT Sand Point 85.63 33 *e*P **P 04 22 21.8 0.0**
comp=Z,337nm,1.3s
NAY Al-Naaiem 85.91 300 *e*P **P 04 22 22.8 -1.0**
NAY AMb AMB 04 22 25.6
comp=Z,61nm,1.0s
MIB Mutribah 85.93 301 *e*P **P 04 22 23.0 -0.8**
MIB AMb AMB 04 22 25.4
comp=Z,117nm,0.9s
TNA Tin City 86.29 22 *e*P **P 04 22 25.4 +0.6**
comp=Z,8.8nm,0.7s
TNA *e*PP **PP 04 25 46.2 -1.6**
ATD Arta Tunnel 87.08 282 P **P 04 22 30.6 +0.7**
ATD Arta Tunnel 87.08 282 P **P 04 22 30.6 +0.7**
comp=Z,3.2nm,0.3s,baz=271,slow=23,SNR=4.3
SOKR Solikamsk 87.22 331*c i*P **P 04 22 28.4 -1.0**
SOKR pmax pmax
comp=Z,90nm,1.4s
ISRB Sarab 87.23 309 *e*P **P 04 22 30.0 -0.3**
DGRG David-gareji 89.65 312 P **P 04 22 42.5 +1.0**
GNI Garni 89.90 310 *e*P **P 04 22 42.9 +0.1**
comp=Z,21nm,1.2s
OHAK Old Harbor 90.00 32 *e*P **P 04 22 42.6 0.0**
comp=Z,59nm,1.1s
TBLG Delisi 90.17 312 *e*P **P 04 22 44.5 +0.7**
TBLG Delisi 90.17 312 P **P 04 22 44.5 +0.7**
KDAK Kodiak Island 90.50 32 *e*P **P 04 22 45.0 +0.1**
KDAK Kodiak Island 90.50 32 P **P 04 22 45.3 +0.4**
comp=Z,16nm,0.8s,baz=160,slow=6.6,SNR=6.3
KMBO Kilima Mbogo 90.92 269 *e*P **P 04 22 46.7 -1.5**
comp=Z,3.7nm,1.0s
KMBO Kilima Mbogo 90.92 269 P **P 04 22 48.1 -0.1**
comp=Z,3.6nm,0.9s,baz=83,slow=3.0,SNR=6.3
KMBO LR LR 04 59 34.4
comp=Z,136nm,21.8s,baz=93,slow=33
ZEI Tsey 90.96 313 *e*P **P 04 22 47.6 -0.1**
ZEI pmax pmax
comp=Z,24nm,1.3s
RSO Redoubt South 91.03 29 *e*P **P 04 22 46.2 -1.4**
comp=Z,20nm,0.6s
AKH Akhalkalaki 91.04 311 P **P 04 22 47.2 -0.8**
ONI Oni 91.25 313 P **P 04 22 47.9 -1.0**
PPLA Puekeypile 91.85 27 *e*P **P 04 22 50.7 -0.6**
comp=Z,81nm,1.3s
KIV Kislovodsk 92.01 314⇑*i*P **P 04 22 52.4 0.0**
KIV *e*S **SKSac 04 33 13.3 +1.1**
KIV *e*SS SS 04 39 46.6 -8.2
KIV pmax pmax
comp=Z,8.0nm,0.7s
TRF Thorofare Moun 92.80 26 *e*P **P 04 22 53.6 -2.1**
comp=Z,36nm,1.3s
TRF *e*PP **PP 04 26 35.4 -4.4**
PMR Palmer 92.99 28 *e*P **P 04 22 55.2 -1.1**
PMR pmax pmax
comp=Z,46nm,1.1s
PMR Palmer 92.99 28 *e*P **P 04 22 55.2 -1.1**
comp=Z,46nm,1.1s
SML Sawmill 93.40 28 *e*P **P 04 22 57.9 -0.4**
SML pmax pmax
comp=Z,30nm,1.0s
SML Sawmill 93.40 28 *e*P **P 04 22 57.9 -0.4**
comp=Z,30nm,1.0s
MCK McKinley 93.45 26 *e*P **P 04 22 57.4 -1.1**
MCK pmax pmax
comp=Z,74nm,1.2s
MCK McKinley 93.45 26 *e*P **P 04 22 57.4 -1.1**
comp=Z,74nm,1.2s
COLD Coldfoot 93.56 23 *e*P **P 04 22 58.8 -0.1**
comp=Z,6.0nm,0.6s
VRHR Novokhopersk 93.70 321 *e*P **P 04 22 58.0 -1.9**
VRHR pmax pmax
comp=N,6.0nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR pmax pmax
comp=Z,40nm,0.9s
COLA College 94.10 25 *e*P **P 04 23 00.6 -0.8**
COLA pmax pmax
comp=Z,16nm,1.1s
COLA College 94.10 25 *e*P **P 04 23 00.6 -0.8**
comp=Z,16nm,1.1s
ILAR Eielson Array 94.50 25 P **P 04 23 02.0 -1.2**
ILAR PP **PP 04 26 47.8 -5.0**
ILAR PKiKP **PKiKP 04 27 44.9 -0.6**
ILAR PKKPbc **PKKPdf 04 40 02.1 -1.4**
ILAR Eielson Array 94.50 25 P **P 04 23 02.0 -1.2**
comp=Z,8.9nm,0.9s,baz=268,slow=4.0,SNR=58
ILAR PP **PP 04 26 47.8 -5.0**
comp=Z,1.4nm,0.7s,baz=257,slow=7.3,SNR=6.4
ILAR PKiKP **PKiKP 04 27 44.9 -0.6**
comp=Z,1.4nm,0.9s,baz=270,slow=2.0,SNR=4.8
ILAR PKKPbc **PKKPdf 04 40 02.1 -1.4**
comp=Z,4.4nm,0.7s,baz=36,slow=1.7,SNR=35
MALT Malatya 94.51 308⇑*i*P **P 04 23 03.8 -0.2**
MALT Malatya 94.51 308 *e*P **P 04 23 03.7 -0.4**
comp=Z,15nm,1.4s
MALT Malatya 94.51 308⇑*i*P **P 04 23 03.8 -0.2**
DIV Divide 94.52 29 *e*P **P 04 23 03.3 -0.2**
comp=Z,97nm,1.1s
SNAA Sanae 94.80 194 *e*SKSac **SKSac 04 33 23.7 -2.8**
SNAA Sanae 94.80 194 *e*P **P 04 23 06.0 +1.3**
SNAA Sanae 94.80 194 *e*P **P 04 23 05.5 +0.8**
comp=Z,51nm,0.9s
PAX Paxson 94.89 27 *e*P **P 04 23 04.7 -0.5**
PAX pmax pmax
comp=Z,58nm,1.2s
PAX Paxson 94.89 27 *e*P **P 04 23 04.7 -0.5**
comp=Z,58nm,1.2s
BMRM Bremner River 95.07 29 *e*P **P 04 23 05.7 -0.3**
comp=Z,52nm,1.1s
VORD Divnogorie 95.15 321 *e*P **P 04 23 05.1 -1.4**
VORD pmax pmax
comp=Z,60nm,0.8s
VORD pmax pmax
comp=N,40nm,0.6s
VORD pmax pmax
comp=E,70nm,0.4s
VSR Storozhevoye 95.25 321 *e*P **P 04 23 05.4 -1.6**
VSR pmax pmax
comp=Z,30nm,0.8s
VSR pmax pmax
comp=N,5.0nm,0.9s
VSR pmax pmax
comp=E,20nm,0.8s
DOT Dot Lake 95.59 27 *e*P **P 04 23 07.7 -0.7**
comp=E,39nm,1.2s
MENT Mentasta 95.68 27 *e*P **P 04 23 08.5 -0.3**
VNA2 Neumayer--Watz 96.38 193 *e*SKSac **SKSac 04 33 33.9 -0.8**
baz=306,slow=15
VNA2 Neumayer--Watz 96.38 193 *e*P **P 04 23 13.3 +1.5**
baz=306,slow=15
VNA2 Neumayer--Watz 96.38 193 *e*PKiKP **PKiKP 04 27 49.6 +0.9**
baz=306,slow=15
MOS Moscow 96.53 325 *e*P **P 04 23 10.3 -2.3**
MOS *e* 04 27 07.9
MOS pmax pmax
comp=Z,66nm,1.0s
VNA3 Neumayer Olymp 96.65 193 *e*SKSac **SKSac 04 33 35.4 -0.7**
VNA3 Neumayer Olymp 96.65 193 *e*P **P 04 23 14.1 +1.1**
VNA3 Neumayer Olymp 96.65 193 *e*PKiKP **PKiKP 04 27 49.5 +0.3**
VNA1 Neumayer--Stat 96.78 193 *e*P **P 04 23 15.3 +1.8**
TMCR Tamitsa 96.81 334 *e*P P 04 23 08.7 -5.0
TMCR pmax pmax
comp=Z,23nm,0.9s
EGAK Eagle 96.94 26 *e*P **P 04 23 13.7 -0.6**
comp=Z,19nm,1.2s
OBN Obninsk 97.09 325⇓*e*P **P 04 23 13.5 -1.7**
OBN *e**PP **pP 04 23 47.2 -4.6**
OBN *e*S **SKSac 04 33 37.5 -1.2**
OBN *e*PS PS 04 35 51.3 -15
OBN pmax pmax
comp=Z,74nm,1.7s
LSZ Lusaka 97.73 253 *e*P **P 04 23 18.6 -0.6**
comp=Z,10nm,0.6s
LSZ Lusaka 97.73 253 P **P 04 23 18.7 -0.6**
comp=Z,11nm,0.7s,baz=68,slow=6.7,SNR=28
BOSA Boshof 97.79 240 *e*P Pdif 04 23 19.2 0.0
comp=Z,12nm,0.9s
BOSA Boshof 97.79 240 P **P 04 23 18.6 -0.6**
comp=Z,8.4nm,0.8s,baz=85,slow=5.5,SNR=9.8
LBTB Lobatse 98.27 243 *e*P Pdif 04 23 21.6 +0.2
comp=Z,30nm,1.2s
LBTB Lobatse 98.27 243 P Pdif 04 23 21.8 +0.4
comp=Z,17nm,1.0s,baz=121,slow=4.9,SNR=14
BR131 Keskin Array S 98.33 309 *e*P **P 04 23 20.5 -0.9**
BRTR Keskin Array B 98.33 309 P **P 04 23 20.0 -1.4**
BRTR PP **PP 04 27 22.7 -0.5**
BRTR PKKPbc **PKKPbc 04 39 51.2 -2.1**
BRTR Keskin Array B 98.33 309 P **P 04 23 20.0 -1.4**
comp=Z,2.9nm,1.1s,baz=101,slow=6.4,SNR=7.2
BRTR PP **PP 04 27 22.7 -0.5**
comp=Z,1.4nm,0.9s,baz=116,slow=8.4,SNR=3.6
BRTR PKKPbc **PKKPbc 04 39 51.2 -2.1**
comp=Z,1.2nm,0.7s,baz=226,slow=4.4,SNR=6.0
APA Apatity 98.75 337⇓*e*P Pdif 04 23 22.8 +0.4
INK Inuvik 99.93 22 PKiKP **PKiKP 04 27 54.4 -0.5**
INK PKKPbc **PKKPbc 04 39 47.1 -2.5**
INK Inuvik 99.93 22 P **Pdif 04 23 26.4 -1.2**
comp=Z,4.4nm,1.0s,baz=275,slow=6.7,SNR=13
INK PKiKP **PKiKP 04 27 54.4 -0.5**
comp=Z,3.0nm,0.7s,baz=286,slow=7.1,SNR=9.4
INK PKKPbc **PKKPbc 04 39 47.1 -2.5**
comp=Z,6.4nm,0.4s,baz=71,slow=2.3,SNR=58
SUR Sutherland 100.57 235 *e*P **Pdif 04 23 31.8 +0.2**
comp=Z,215nm,2.0s
ARCES ARCESS Array B 101.45 340 P **Pdif 04 23 33.1 -1.3**
ARCES PKiKP **PKiKP 04 27 56.6 -1.0**
ARCES PKKPbc **PKKPbc 04 39 41.2 -4.2**
ARCES ARCESS Array B 101.45 340 P **Pdif 04 23 33.1 -1.3**
comp=Z,5.2nm,0.5s,baz=85,slow=6.4,SNR=36
ARCES PKiKP **PKiKP 04 27 56.6 -1.0**
comp=Z,3.5nm,0.7s,baz=99,slow=2.0,SNR=9.7
ARCES PKKPbc **PKKPbc 04 39 41.2 -4.2**
comp=Z,4.1nm,0.7s,baz=238,slow=2.6,SNR=18
ARE0 ARCESS Array S 101.45 340 *e*Pdif **Pdif 04 23 34.4 -0.1**
AKASG Malin Array Be 101.52 320 P **Pdif 04 23 33.4 -1.7**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 101.52 320 P **Pdif 04 23 33.4 -1.7**
AKASG PKiKP **PKiKP 04 27 57.6 -0.7**
AKASG Malin Array Be 101.52 320 P **Pdif 04 23 33.4 -1.7**
comp=Z,4.8nm,0.7s,baz=73,slow=4.6,SNR=13
AKASG PKiKP **PKiKP 04 27 57.6 -0.7**
comp=Z,1.3nm,0.6s,baz=79,slow=2.5,SNR=4.3
KIEV Kiev 101.53 320 *e*P **Pdif 04 23 34.0 -1.1**
KIEV pmax pmax
comp=Z,2.0nm,0.6s
KIEV Kiev 101.53 320 *e*Pdif **Pdif 04 23 34.0 -1.1**
comp=Z,2.3nm,0.6s
SPITS Spitsbergen Ar 101.72 349 P **Pdif 04 23 34.3 -1.2**
SPITS Spitsbergen Ar 101.72 349 P **Pdif 04 23 34.3 -1.2**
comp=Z,20nm,0.8s,baz=97,slow=12,SNR=51
FINES FINESS Array B 102.39 331 P **Pdif 04 23 37.2 -1.6**
FINES PKiKP **PKiKP 04 28 00.3 +0.8**
FINES SKP 04 31 20.4
FINES PKKPbc **PKKPbc 04 39 40.2 -2.1**
FINES FINESS Array B 102.39 331 P **Pdif 04 23 37.2 -1.6**
comp=Z,3.7nm,0.8s,baz=68,slow=5.1,SNR=9.2
FINES PKiKP **PKiKP 04 28 00.3 +0.8**
comp=Z,2.8nm,0.6s,baz=92,slow=2.6,SNR=11
FINES SKP 04 31 20.4
comp=Z,1.8nm,0.8s,baz=84,slow=5.9,SNR=4.0
FINES PKKPbc **PKKPbc 04 39 40.2 -2.1**
comp=Z,1.3nm,0.9s,baz=341,slow=10,SNR=3.8
DLBC Dease Lake 102.44 32 P **Pdif 04 23 38.8 -0.4**
comp=Z,1.4nm,0.7s,baz=321,slow=0.0,SNR=4.2
CFR Carcaliu 102.45 315⇑*i*P **Pdif 04 23 39.3 -0.1**
CFR Carcaliu 102.45 315⇑*i*P **Pdif 04 23 39.3 -0.1**
IZAR Zarasai 102.95 325 *e*P **Pdif 04 23 40.4 -1.0**
IZAR AMB AMB 04 23 41.5
comp=Z,10nm,0.8s
IIGN Ignalina 103.00 325 *e*P **Pdif 04 23 40.5 -1.1**
IIGN AMB AMB 04 23 42.9
comp=Z,10.0nm,1.0s
ISAL Salakas 103.04 325 *e*P **Pdif 04 23 40.5 -1.2**
ISAL AMB AMB 04 23 42.8
comp=Z,8.8nm,1.0s
VRI Vrincioaia 103.41 315⇑*i*P **Pdif 04 23 44.0 +0.3**
VRI Vrincioaia 103.41 315⇑*i*P **Pdif 04 23 44.0 +0.3**
TESR 103.43 316⇑*i*P **Pdif 04 23 44.0 +0.3**
MLR Muntele Rosu 103.98 315⇑*i*P **Pdif 04 23 46.6 +0.2**
BURAR Bucovina Array 104.33 317⇓*i*P **Pdif 04 23 48.3 +0.5**
BUR08 Bucovina Ar. S 104.34 317 *e*Pdif **Pdif 04 23 48.0 +0.1**
ARR Arges 104.91 315⇑*i*P **Pdif 04 23 50.4 0.0**
KWP Kalwaria Pacla 105.78 319⇑*i*P **Pdif 04 23 54.9 +0.8**
KWP Kalwaria Pacla 105.78 319⇑*i*P **Pdif 04 23 54.8 +0.7**
GVD Gavdhos 105.92 304 *e*PKP **PKiKP 04 28 07.0 +0.2**
KOLS Kolonicke sedl 106.15 319 *e*P **Pdif 04 23 55.6 -0.2**
KOLS Kolonicke sedl 106.15 319 PDIF **Pdif 04 23 55.6 -0.2**
CRVS Cervenica-Dubn 106.69 319 *e*P **Pdif 04 23 58.3 +0.1**
CRVS pmax pmax
comp=Z,22nm,2.1s
CRVS Cervenica-Dubn 106.69 319 PDIF **Pdif 04 23 58.3 +0.1**
PMSA Palmer Station 107.34 174 Pdiff **Pdif 04 23 58.8 -1.9**
comp=Z,33nm,0.5s,baz=346,slow=22,SNR=12
KHMM Horse Mountain 108.42 50 *e*PKP **PKiKP 04 28 12.6 +1.1**
RES Resolute Bay 108.47 11 *e*PKP **PKiKP 04 28 10.4 -0.1**
RES PKKPbc **PKKPbc 04 39 19.4 -4.7**
RES Resolute Bay 108.47 11 Pdiff **Pdif 04 24 04.2 -1.3**
comp=Z,2.6nm,0.9s,baz=321,slow=5.6,SNR=5.6
RES PKiKP **PKiKP 04 28 10.6 +0.1**
comp=Z,5.1nm,0.7s,baz=210,slow=0.5,SNR=10
RES PKKPbc **PKKPbc 04 39 19.4 -4.7**
comp=Z,1.6nm,0.8s,baz=175,slow=7.3,SNR=3.8
HFS Hagfors 108.60 331 PKKPab PKKPab 04 39 35.4 +1.1
HFS Hagfors 108.60 331 PKKPab PKKPab 04 39 35.4 +1.1
comp=Z,4.1nm,0.8s,baz=124,slow=2.1,SNR=6.0
HUMO Hull Mountain 108.80 48 *e*PKP **PKiKP 04 28 13.2 +1.1**
YKW3 Yellowknife Ar 108.89 26 *e*PKP **PKiKP 04 28 11.1 -0.5**
YKA Yellowknife Ar 108.92 26 Pdif **Pdif 04 24 07.0 -0.7**
YKA PKiKP **PKiKP 04 28 11.4 -0.1**
YKA SKP 04 31 32.6
YKA PKKPbc **PKKPbc 04 39 19.1 -3.3**
YKA Yellowknife Ar 108.92 26 Pdiff **Pdif 04 24 07.0 -0.7**
comp=Z,1.3nm,0.8s,baz=292,slow=4.8,SNR=16
YKA PKiKP **PKiKP 04 28 11.4 -0.1**
comp=Z,8.3nm,0.7s,baz=296,slow=1.6,SNR=164
YKA SKP 04 31 32.6
comp=Z,1.1nm,0.7s,baz=280,slow=1.6,SNR=5.6
YKA PKKPbc **PKKPbc 04 39 19.1 -3.3**
comp=Z,8.2nm,0.6s,baz=112,slow=3.4,SNR=106
MORC Moravsky Berou 109.07 320 *e*PKP **PKiKP 04 28 12.1 -0.3**
YBH Yreka Blue Hor 109.09 49 PKiKP **PKiKP 04 28 13.3 +0.6**
YBH Yreka Blue Hor 109.09 49 PKiKP **PKiKP 04 28 13.3 +0.6**
comp=Z,1.0nm,0.6s,baz=109,slow=22,SNR=4.9
NB2 NORSAR Subarra1 109.45 333 PKPdf **PKiKP 04 28 12.1 -0.6**
comp=Z,1.7nm,0.6s,baz=68,slow=1.9
NOA NORSAR Array B 109.45 333 Pdif **Pdif 04 24 08.8 -1.4**
NOA PKiKP **PKiKP 04 28 11.6 -1.2**
NOA PKKPbc **PKKPbc 04 39 20.0 -0.7**
NOA NORSAR Array B 109.45 333 Pdiff **Pdif 04 24 08.8 -1.4**
comp=Z,1.2nm,0.8s,baz=71,slow=4.5,SNR=3.2
NOA PKiKP **PKiKP 04 28 11.6 -1.2**
comp=Z,4.1nm,0.8s,baz=263,slow=3.1,SNR=11
NOA PKKPbc **PKKPbc 04 39 20.0 -0.7**
comp=Z,0.4nm,0.6s,baz=52,slow=2.9,SNR=5.2
NAO01 NORSAR Array S 109.67 333 *e*PKP **PKiKP 04 28 13.2 +0.1**
DPC Dobruska-Polom 109.72 321 *e*PKP **PKiKP 04 28 14.1 +0.5**

	UPC	**Upice**	**109.88**	**321**	*e*PKP	**PKiKP**	**04 28 14.5**	**+0.7**
	TREC	**Trest**	**110.48**	**320**	*e*PKiKP	**PKiKP**	**04 28 15.4**	**+0.4**
	TREC	**Trest**	**110.48**	**320**	*e*PKP	**PKiKP**	**04 28 15.4**	**+0.4**
	HAWA	**Hanford**	**110.62**	**43**	*e*PKP	**PKiKP**	**04 28 16.1**	**+0.8**
	PVCC	**Panska Ves**	**110.77**	**321**	*e*PKiKP	**PKiKP**	**04 28 16.1**	**+0.6**
	PVCC	**Panska Ves**	**110.77**	**321**	*e*PKP	**PKiKP**	**04 28 16.1**	**+0.6**
	MOD	**Modoc**	**110.85**	**48**	*e*PKP	**PKiKP**	**04 28 17.3**	**+1.2**
	PRU	**Pruhonice**	**110.92**	**321**	*e*PKiKP	**PKiKP**	**04 28 15.8**	**0.0**
	PRU	**Pruhonice**	**110.92**	**321**	*e*PKP	**PKiKP**	**04 28 15.8**	**0.0**
	BRG	**Berggiesshubel**	**111.07**	**322**	*e*P	**PKiKP**	**04 28 16.0**	**0.0**
		comp=Z,7.1nm,0.8s						
	BRG				*e*		04 28 23.8	
		comp=Z,5.8nm,1.0s						
	BRG	**Berggiesshubel**	**111.07**	**322**	*e*PKiKP	**PKiKP**	**04 28 16.0**	**0.0**
	BRG				pmax	pmax		
		comp=Z,7.0nm,0.8s						
	BRG				pmax	pmax		
		comp=Z,6.0nm,1.0s						
	BRG	**Berggiesshubel**	**111.07**	**322**	*e*PKiKP	**PKiKP**	**04 28 16.4**	**+0.4**
	BEKR	**Beckworth**	**111.10**	**50**	*e*PKP	**PKiKP**	**04 28 17.3**	**+0.7**
	TIP	**Timpagrande**	**111.39**	**309**	*e*PKP	**PKiKP**	**04 28 17.1**	**0.0**
	FBE	**Freiberg**	**111.42**	**322**	*e*PKiKP	**PKiKP**	**04 28 17.3**	**+0.6**
	CLL	**Collm**	**111.53**	**322**	*i* PKiKP	**PKiKP**	**04 28 16.7**	**-0.2**
	CLL				*e*		04 39 23.0	
	CLL				pmax	pmax		
		comp=Z,10.0nm,0.9s						
	CLL				pmax	pmax		
		comp=Z,7.0nm,0.7s						
	CLL	**Collm**	**111.53**	**322**	*e*PKiKP	**PKiKP**	**04 28 17.0**	**+0.1**
	CLL	**Collm**	**111.53**	**322**	*e*PKPpre	PKPpre	04 28 15.0	
	CLL				*i* PKiKP	**PKiKP**	**04 28 16.7**	**-0.2**
		comp=Z,10.0nm,0.9s						
	CLL				*e*PKKPab	**PKKPab**	**04 39 23.0**	**+1.6**
		comp=Z,7.0nm,0.7s						
	WCN	**Washoe City**	**111.64**	**51**	*e*PKiKP	**PKiKP**	**04 28 17.6**	**-0.1**
	WCN	**Washoe City**	**111.64**	**51**	*e*PKP	**PKiKP**	**04 28 17.6**	**-0.1**
	GEC2	**GERESS Array S**	**111.72**	**320**	*i* PKiKP	**PKiKP**	**04 28 17.6**	**+0.1**
	GEC2	**GERESS Array S**	**111.72**	**320**	*e*PKiKP	**PKiKP**	**04 28 17.6**	**+0.1**
	GERES	**GERESS Array B**	**111.72**	**320**	Pdif	**Pdif**	**04 24 20.9**	**+0.3**
	GERES				PKiKP	**PKiKP**	**04 28 17.3**	**-0.1**
	GERES				SKP		04 31 38.5	
	GERES				PKKPbc	**PKKPbc**	**04 39 11.5**	**-1.5**
	GERES	**GERESS Array B**	**111.72**	**320**	Pdiff	**Pdif**	**04 24 20.9**	**+0.3**
		comp=Z,0.5nm,0.7s,baz=37,slow=5.2,SNR=4.4						
	GERES				PKiKP	**PKiKP**	**04 28 17.3**	**-0.1**
		comp=Z,8.2nm,0.5s,baz=61,slow=2.0,SNR=54						
	GERES				SKP		04 31 38.5	
		comp=Z,1.6nm,0.6s,baz=60,slow=2.3,SNR=7.5						
	GERES				PKKPbc	**PKKPbc**	**04 39 11.5**	**-1.5**
		comp=Z,1.9nm,0.9s,baz=249,slow=3.7,SNR=6.8						
	KHC	**Kasperske Hory**	**111.73**	**320**	*e*PKiKP	**PKiKP**	**04 28 17.3**	**-0.1**
	KHC	**Kasperske Hory**	**111.73**	**320**	*e*PKP	**PKiKP**	**04 28 17.1**	**-0.3**
	KHC	**Kasperske Hory**	**111.73**	**320**	*e*PKP	**PKiKP**	**04 28 17.3**	**-0.1**
	KHC	**Kasperske Hory**	**111.73**	**320**	*e*P	**PKKPbc**	**04 39 11.5**	**-1.4**
	NEW	**Newport**	**111.81**	**41**	*e*PKP	**PKiKP**	**04 28 17.9**	**+0.3**
	NEW	**Newport**	**111.81**	**41**	⇓P	**PKiKP**	**04 28 18.3**	**+0.7**
		baz=112						
	NEW	**Newport**	**111.81**	**41**	PKiKP	**PKiKP**	**04 28 18.2**	**+0.6**
		comp=Z,5.3nm,0.7s,baz=14,slow=1.8,SNR=16						
	SMMC	**Simmler**	**111.96**	**55**	⇓P	**PKiKP**	**04 28 19.7**	**+1.4**
		baz=112						
	WVOR	**Wild Horse Val**	**111.98**	**47**	*e*PKiKP	**PKiKP**	**04 28 19.1**	**+0.9**
	WVOR	**Wild Horse Val**	**111.98**	**47**	*e*PKP	**PKiKP**	**04 28 19.1**	**+0.9**
	PKM	**Peak Mountain**	**112.16**	**55**	⇓P	**PKiKP**	**04 28 20.3**	**+1.4**
		baz=112						
	NKC	**Novy Kostel**	**112.16**	**321**	*e*PKiKP	**PKiKP**	**04 28 17.2**	**-1.0**
	NKC	**Novy Kostel**	**112.16**	**321**	*e*PKP	**PKiKP**	**04 28 17.2**	**-1.0**
	WET	**Wettzell**	**112.18**	**320**	*i* PKiKP	**PKiKP**	**04 28 18.6**	**+0.4**
	WET	**Wettzell**	**112.18**	**320**	*e*PKiKP	**PKiKP**	**04 28 18.6**	**+0.4**
	WERD	**Werda**	**112.19**	**322**	*e*PKiKP	**PKiKP**	**04 28 18.4**	**+0.2**
	WERN	**Wernitzgruen**	**112.19**	**321**	*e*PKiKP	**PKiKP**	**04 28 18.7**	**+0.5**
	GUNZ	**Gunzen**	**112.20**	**322**	*e*PKiKP	**PKiKP**	**04 28 18.7**	**+0.5**
	PLN	**Plauen**	**112.27**	**322**	*e*PKiKP	**PKiKP**	**04 28 18.6**	**+0.3**
	NEUB	**Neuenburg**	**112.30**	**323**	*e*PKiKP	**PKiKP**	**04 28 18.6**	**+0.3**
	MANZ	**Manzenberg**	**112.44**	**321**	*e*PKiKP	**PKiKP**	**04 28 19.2**	**+0.5**
	C11A	**Tepee Creek (N**	**112.48**	**41**	⇓P	**PKiKP**	**04 28 19.5**	**+0.5**
		baz=112,SNR=6.9						
	RJOB	**Jochberg**	**112.58**	**319**	*e*PKiKP	**PKiKP**	**04 28 18.9**	**-0.2**
	A12A	**Yaak River Ran**	**112.59**	**40**	⇑P	**PKiKP**	**04 28 20.3**	**+1.2**
		baz=113						
	VES	**Vestal, Richgr**	**112.64**	**54**	⇓P	**PKiKP**	**04 28 20.3**	**+0.9**
		baz=113						
	B12A	**Libby**	**112.75**	**40**	⇑P	**PKiKP**	**04 28 20.3**	**+1.0**
		baz=113						
	NVAR	**Mina Array Bea**	**112.90**	**52**	Pdif	**Pdif**	**04 24 30.8**	**+4.4**
	NVAR				PKiKP	**PKiKP**	**04 28 20.6**	**+0.4**
	NVAR				SKP		04 31 42.5	
	NVAR				PKKPbc	**PKKPbc**	**04 39 09.6**	**+0.7**
	NVAR				PKKPab	**PKKPab**	**04 39 17.0**	**+1.1**
	NVAR	**Mina Array Bea**	**112.90**	**52**	Pdiff	**Pdif**	**04 24 30.8**	**+4.4**
		comp=Z,1.3nm,0.9s,baz=270,slow=5.9,SNR=3.1						
	NVAR				PKiKP	**PKiKP**	**04 28 20.6**	**+0.4**
		comp=Z,4.0nm,0.7s,baz=260,slow=2.3,SNR=20						
	NVAR				SKP		04 31 42.5	
		comp=Z,1.1nm,0.7s,baz=250,slow=2.4,SNR=4.1						
	NVAR				PKKPbc	**PKKPbc**	**04 39 09.6**	**+0.7**
		comp=Z,2.4nm,0.8s,baz=120,slow=3.2,SNR=11						
	NVAR				PKKPab	**PKKPab**	**04 39 17.0**	**+1.1**
		comp=Z,3.5nm,0.8s,baz=110,slow=5.0,SNR=11						
	ARVC	**Arvin**	**112.94**	**55**	⇑P	**PKiKP**	**04 28 21.6**	**+1.6**
		baz=113						
	CLZ	**Clausthal**	**112.95**	**323**	*i* PKiKP	**PKiKP**	**04 28 20.3**	**+0.7**
	CLZ	**Clausthal**	**112.95**	**323**	*e*PKiKP	**PKiKP**	**04 28 20.3**	**+0.7**
	ABTA	**Abfaltersbach**	**113.01**	**318**	⇑*i*PKiKP	**PKiKP**	**04 28 19.2**	**-0.8**
		comp=Z,9.9nm,0.7s						
	ABTA	**Abfaltersbach**	**113.01**	**318**	⇑*i*P	**PKiKP**	**04 28 19.2**	**-0.8**
	ISA	**Isabella**	**113.16**	**54**	⇓P	**PKiKP**	**04 28 21.8**	**+1.2**
		baz=113						
	D12A	**Red Ives Fores**	**113.27**	**42**	⇓P	**PKiKP**	**04 28 20.6**	**+0.1**
		baz=113,SNR=10						
	CWC	**Cottonwood Cre**	**113.37**	**54**	⇓P	**PKiKP**	**04 28 22.4**	**+1.4**
		baz=113						
	A13A	**Flathead Natio**	**113.38**	**40**	⇑P	**PKiKP**	**04 28 21.5**	**+0.9**
		baz=113						
	BSMT	**Bassoo Peak**	**113.44**	**41**	*e*PKP	**PKiKP**	**04 28 20.8**	**-0.2**
	BSMT				*e*SKPdf	**SKPdf**	**04 31 41.7**	**-1.5**
	FUR	**Furstenfeldbru**	**113.46**	**319**	*i* PKiKP	**PKiKP**	**04 28 20.9**	**+0.2**
	FUR	**Furstenfeldbru**	**113.46**	**319**	*e*PKiKP	**PKiKP**	**04 28 20.9**	**+0.2**
	WTTA	**Wattenberg**	**113.46**	**318**	*i* PKiKP	**PKiKP**	**04 28 20.8**	**-0.1**
	WTTA	**Wattenberg**	**113.46**	**318**	*i* PKiKP	**PKiKP**	**04 28 20.8**	**-0.1**
		comp=Z,44nm,0.5s,SNR=28						
	WTTA	**Wattenberg**	**113.46**	**318**	*i* P	**PKiKP**	**04 28 20.8**	**-0.1**
	WATA	**Walderalm**	**113.48**	**319**	⇓*i*PKiKP	**PKiKP**	**04 28 20.6**	**-0.3**
	WATA	**Walderalm**	**113.48**	**319**	⇓*i*PKiKP	**PKiKP**	**04 28 20.6**	**-0.3**
		comp=Z,13nm,0.6s						
	WATA	**Walderalm**	**113.48**	**319**	⇓*i*P	**PKiKP**	**04 28 20.6**	**-0.3**
	B13A	**Whitefish**	**113.50**	**40**	⇓P	**PKiKP**	**04 28 21.3**	**+0.4**
		baz=114,SNR=9.2						
	C13A	**Hot Springs**	**113.62**	**41**	⇑P	**PKiKP**	**04 28 21.2**	**+0.1**
		baz=114,SNR=9.2						
	EDW2	**Edwards Air Fo**	**113.65**	**55**	⇑P	**PKiKP**	**04 28 22.9**	**+1.3**
		baz=114						
	F12A	**Elk City**	**113.66**	**43**	⇓P	**PKiKP**	**04 28 21.7**	**+0.4**
		baz=114,SNR=7.1						
	WALA	**Waterton Lakes**	**113.66**	**39**	*e*PKP	**PKiKP**	**04 28 21.6**	**+0.4**
	MWC	**Mount Wilson**	**113.68**	**56**	*e*PKiKP	**PKiKP**	**04 28 23.0**	**+1.2**
	MWC	**Mount Wilson**	**113.68**	**56**	*e*PKP	**PKiKP**	**04 28 23.0**	**+1.2**
	G12A	**Big Creek, Yel**	**113.77**	**44**	⇓P	**PKiKP**	**04 28 21.9**	**+0.3**
		baz=114						
	MOTA	**Moosalm**	**113.79**	**319**	⇑*i*PKiKP	**PKiKP**	**04 28 20.8**	**-0.7**
	MOTA	**Moosalm**	**113.79**	**319**	⇑*i*PKPdf	**PKiKP**	**04 28 20.8**	**-0.7**
		comp=Z,15nm,0.5s						
	MOTA	**Moosalm**	**113.79**	**319**	⇑*i*P	**PKiKP**	**04 28 20.8**	**-0.7**
	JTMT	**Jette**	**113.79**	**41**	*e*PKP	**PKiKP**	**04 28 21.3**	**-0.2**
	MFID	**Camas Ranch**	**113.81**	**46**	*e*PKP	**PKiKP**	**04 28 22.8**	**+1.1**
	MFID	**Camas Ranch**	**113.81**	**46**	⇓P	**PKiKP**	**04 28 22.6**	**+1.0**
		baz=114						
	LRMC	**Laurel Mountai**	**113.81**	**55**	⇑P	**PKiKP**	**04 28 23.3**	**+1.4**
		baz=114						
	GRAC	**Grapevine Rang**	**113.85**	**53**	⇓P	**PKiKP**	**04 28 23.7**	**+1.9**
		baz=114						
	D13A	**Huson**	**113.85**	**42**	⇓P	**PKiKP**	**04 28 21.6**	**0.0**
		baz=114,SNR=7.5						
	MPMC	**Manual Prospec**	**113.89**	**54**	⇑P	**PKiKP**	**04 28 23.5**	**+1.3**
		baz=114						
	YBMT	**Yellow Bay**	**113.94**	**41**	*e*PKP	**PKiKP**	**04 28 21.5**	**-0.3**
	A14A	**Double T Ranch**	**114.00**	**39**	⇑P	**PKiKP**	**04 28 22.2**	**+0.4**
		baz=114						
	BFSC	**Mount Baldy Ra**	**114.01**	**56**	⇓P	**PKiKP**	**04 28 23.1**	**+0.7**
		baz=114						
	SWMT	**Swartz Lake**	**114.04**	**41**	*e*PKP	PKPdf	04 28 21.9	-0.1
	FETA	**Feichten**	**114.12**	**318**	⇑*i*PKiKP	PKPdf	04 28 22.1	-0.1
		comp=Z,8.9nm,0.6s,SNR=9.5						
	FETA	**Feichten**	**114.12**	**318**	⇑*i*P	PKPdf	04 28 22.1	-0.1

	C14A	**Swan Lake**	**114.13**	**41**	⇓P	PKPdf	04 28 22.5	+0.4
		baz=114						
	E13A	**Victor**	**114.20**	**42**	⇓P	PKPdf	04 28 22.7	+0.4
		baz=114,SNR=11						
	I12A	**Atlanta**	**114.21**	**45**	⇑P	PKPdf	04 28 23.9	+1.4
		baz=114,SNR=30						
	H12A	**Diamond D Ranc**	**114.23**	**44**	⇑P	PKPdf	04 28 23.4	+0.9
		baz=114,SNR=15						
	MSO	**Missoula**	**114.27**	**42**	*e*PKP	PKPdf	04 28 22.5	+0.1
	MSO	**Missoula**	**114.27**	**42**	⇓P	PKPdf	04 28 22.7	+0.3
		baz=114						
	B14A	**Marquette Ranc**	**114.27**	**40**	⇑P	PKPdf	04 28 22.6	+0.2
		baz=114,SNR=8.8						
	F13A	**Darby**	**114.28**	**43**	⇑P	PKPdf	04 28 22.3	-0.2
		baz=114						
	SCO	**Scoresbysund**	**114.29**	**349**	*i* PKiKP	PKPdf	04 28 21.4	-0.2
	SCO				pmax	pmax		
		comp=Z,4.0nm,0.9s						
	SCO	**Scoresbysund**	**114.29**	**349**	*i* P	PKPdf	04 28 21.4	-0.2
		comp=Z,3.8nm,0.9s						
	FURC	**Furnace Creek,**	**114.33**	**53**	⇓P	PKPdf	04 28 24.2	+1.5
		baz=114						
	A15A	**Johnson Ranch,**	**114.43**	**39**	⇑P	PKPdf	04 28 22.9	+0.3
		baz=114						
	SLMT	**Seeley Lake**	**114.44**	**41**	*e*PKP	PKPdf	04 28 22.6	-0.2
	MURC	**Murrieta**	**114.47**	**57**	⇓P	PKPdf	04 28 24.0	+0.9
		baz=114						
	SUMG	**Summit**	**114.47**	**356**	*i* PKiKP	PKPdf	04 28 23.0	+0.6
	SUMG				pmax	pmax		
		comp=Z,6.0nm,0.7s						
	SUMG	**Summit**	**114.47**	**356**	*i* P	PKPdf	04 28 23.0	+0.6
		comp=Z,6.4nm,0.7s						
	D14A	**Greenough**	**114.48**	**41**	⇓P	PKPdf	04 28 22.9	0.0
		baz=114,SNR=15						
	G13A	**Cobalt**	**114.52**	**44**	⇓P	PKPdf	04 28 23.2	+0.2
		baz=114,SNR=6.5						
	GSC	**Goldstone**	**114.55**	**55**	*e*PKiKP	PKPdf	04 28 24.8	+1.5
	GSC	**Goldstone**	**114.55**	**55**	*e*PKP	PKPdf	04 28 24.8	+1.6
	GSC	**Goldstone**	**114.55**	**55**	⇓P	PKPdf	04 28 25.0	+1.7
		baz=115						
	TOD	**Tromm**	**114.60**	**321**	PKiKP	PKPdf	04 28 22.2	-0.6
	TOD	**Tromm**	**114.60**	**321**	PKP	PKPdf	04 28 22.2	-0.6
	DAVA	**Damuels**	**114.61**	**319**	*i* PKiKP	PKPdf	04 28 23.0	-0.1
		comp=Z,23nm,0.5s,SNR=18						
	DAVA	**Damuels**	**114.61**	**319**	*i* P	PKPdf	04 28 23.0	-0.1
	STU	**Stuttgart**	**114.61**	**321**	*e*PKiKP	PKPdf	04 28 22.4	-0.5
	STU	**Stuttgart**	**114.61**	**321**	*e*PKiKP	**PKiKP**	**04 28 23.0**	**+0.1**
	STU	**Stuttgart**	**114.61**	**321**	*e*PKP	PKPdf	04 28 22.4	-0.4
	109C	**Camp Elliot, M**	**114.64**	**57**	⇓P	PKPdf	04 28 24.4	+1.0
		baz=115						
	H13A	**Challis**	**114.64**	**44**	⇓P	PKPdf	04 28 24.5	+1.2
		baz=115,SNR=43						
	E14A	**Clinton**	**114.67**	**42**	⇓P	PKPdf	04 28 23.5	+0.2
		baz=115,SNR=15						
	CHMT	**Chamberlain Mo**	**114.69**	**42**	*e*PKP	PKPdf	04 28 23.5	+0.1
	B15A	**Bradely Ranch,**	**114.74**	**40**	⇑P	PKPdf	04 28 23.0	-0.3
		baz=115,SNR=13						
	HLID	**Hailey**	**114.78**	**45**	*e*PKP	PKPdf	04 28 24.8	+1.2
	HLID				*e*SKPdf	**SKiKP**	**04 31 46.0**	**+0.1**
	HLID	**Hailey**	**114.78**	**45**	⇑P	PKPdf	04 28 25.2	+1.6
		baz=115						
	ELK	**Elko**	**114.81**	**49**	*e*PKP	PKPdf	04 28 24.5	+0.7
	C15A	**Salmond Ranch,**	**114.87**	**41**	⇓P	PKPdf	04 28 23.7	+0.2
		baz=115,SNR=33						
	SHOC	**Shoshone**	**114.89**	**54**	⇑P	PKPdf	04 28 25.4	+1.5
		baz=115						
	I13A	**Wildhorse Cree**	**114.90**	**45**	⇓P	PKPdf	04 28 25.3	+1.5
		baz=115,SNR=35						
	F14A	**Wisdom**	**114.92**	**43**	⇑P	PKPdf	04 28 24.2	+0.4
		baz=115,SNR=8.6						
	J13A	**Cove Ranch, Pi**	**114.98**	**46**	⇓P	PKPdf	04 28 25.6	+1.7
		baz=115,SNR=32						
	HEC	**Hector,Ludlow**	**115.01**	**55**	⇑P	**PKPdf**	**04 28 25.5**	**+1.3**
		baz=115						
	G14A	**Jackson**	**115.01**	**43**	⇑P	**PKPdf**	**04 28 24.7**	**+0.6**
		baz=115,SNR=7.2						
	R11A	**Troy Canyon, C**	**115.02**	**51**	⇑P	**PKPdf**	**04 28 25.6**	**+1.4**
		baz=115						
	SPAK	**Spaichingen-Ko**	**115.07**	**320**	PKP	**PKPdf**	**04 28 23.3**	**-0.6**
	PFO	**Pinyon Flat Ob**	**115.08**	**56**	⇑P	**PKPdf**	**04 28 25.5**	**+1.1**
		baz=115						
	D15A	**Lincoln**	**115.14**	**41**	⇑P	**PKPdf**	**04 28 24.6**	**+0.5**
		baz=115,SNR=7.9						
	A16A	**West Butte Ran**	**115.15**	**39**	⇑P	**PKPdf**	**04 28 24.3**	**+0.2**
		baz=115						
	TUE	**Stuetta**	**115.19**	**318**	*e*PKP	**PKPdf**	**04 28 23.8**	**-0.6**
	MONP	**Monument Peak**	**115.21**	**57**	⇓P	**PKPdf**	**04 28 26.4**	**+1.6**
		baz=115						
	E15A	**Deer Lodge**	**115.24**	**42**	⇓P	**PKPdf**	**04 28 24.5**	**+0.1**
		baz=115						
	H14A	**Leadore**	**115.24**	**44**	⇓P	**PKPdf**	**04 28 25.6**	**+1.1**
		baz=115,SNR=16						
	TUQ	**Turquoise Moun**	**115.25**	**54**	⇓P	**PKPdf**	**04 28 25.8**	**+1.1**
		baz=115						
	B16A	**M & M Farms, S**	**115.25**	**40**	⇓P	**PKPdf**	**04 28 24.2**	**0.0**
		baz=115,SNR=22						
	BFO	**Black Forest**	**115.29**	**320**	*i* PKiKP	**PKPdf**	**04 28 23.9**	**-0.3**
	BFO	**Black Forest**	**115.29**	**320**	*e*PKiKP	**PKPdf**	**04 28 23.9**	**-0.3**
	LRW	**Lerwick**	**115.33**	**335**	*e*P	**PKPdf**	**04 28 23.9**	**0.0**
	LRW				AMB	AMB	04 28 24.6	
		comp=Z,50nm,0.8s						
	LRW	**Lerwick**	**115.33**	**335**	P	**PKPdf**	**04 28 23.9**	**0.0**
	LRW				AMB	AMB	04 28 24.6	
		comp=Z,50nm,0.8s						
	I14A	**Mackay**	**115.36**	**45**	⇑P	**PKPdf**	**04 28 26.1**	**+1.4**
		baz=115,SNR=25						
	BELC	**Belle Mtn. Jos**	**115.40**	**56**	⇓P	**PKPdf**	**04 28 26.8**	**+1.8**
		baz=115						
	C16A	**Fuhringer Ranc**	**115.41**	**40**	⇓P	**PKPdf**	**04 28 24.8**	**+0.2**
		baz=115,SNR=14						
	LANF	**Langenberg**	**115.42**	**321**	PKiKP	**PKPdf**	**04 28 24.4**	**0.0**
	LANF	**Langenberg**	**115.42**	**321**	PKP	**PKPdf**	**04 28 24.4**	**0.0**
	LANF	**Langenberg**	**115.42**	**321**	PKP	**PKPdf**	**04 28 24.4**	**0.0**
	J14A	**Carey**	**115.47**	**45**	⇓P	**PKPdf**	**04 28 26.7**	**+1.8**
		baz=116						
	F15A	**Butte**	**115.50**	**43**	⇓P	**PKPdf**	**04 28 25.7**	**+0.8**
		baz=116,SNR=9.1						
	DVTC	**Desert V Tower**	**115.50**	**57**	⇓P	**PKPdf**	**04 28 26.6**	**+1.4**
		baz=116						
	LRM	**Limekiln Ridge**	**115.54**	**43**	*e*PKPdf	**PKPdf**	**04 28 25.6**	**+0.5**
	MCMT	**McKenzie Canyo**	**115.54**	**44**	*e*PKPdf	**PKPdf**	**04 28 25.9**	**+0.8**
	MCMT				*e*SKPdf	**SKPdf**	**04 31 47.3**	**-0.1**
	GMRC	**Granite Mounta**	**115.56**	**55**	⇓P	**PKPdf**	**04 28 27.3**	**+2.0**
		baz=116						
	DLMT	**Dillon**	**115.57**	**43**	*e*PKPdf	**PKPdf**	**04 28 25.9**	**+0.9**
	RUP	**Ruppelstein**	**115.64**	**322**	PKiKP	**PKPdf**	**04 28 24.8**	**-0.1**
	RUP	**Ruppelstein**	**115.64**	**322**	PKP	**PKPdf**	**04 28 24.8**	**-0.1**
	FELD	**Feldberg im Sc**	**115.64**	**320**	PKP	**PKPdf**	**04 28 24.4**	**-0.7**
	HRY	**Holter Researc**	**115.69**	**41**	*e*PKPdf	**PKPdf**	**04 28 25.5**	**+0.3**
	G15A	**Dillon**	**115.69**	**43**	⇓P	**PKPdf**	**04 28 26.6**	**+1.3**
		baz=116,SNR=12						
	A17A	**Triple J Farms**	**115.71**	**39**	⇑P	**PKPdf**	**04 28 26.0**	**+0.9**
		baz=116						
	SWSC	**Sam W. Stewart**	**115.72**	**57**	⇑P	**PKPdf**	**04 28 27.2**	**+1.8**
		baz=116						
	H15A	**Lima**	**115.74**	**44**	⇑P	**PKPdf**	**04 28 26.9**	**+1.5**
		baz=116,SNR=8.1						
	D16A	**Dana Ranch, Ca**	**115.78**	**41**	⇓P	**PKPdf**	**04 28 26.1**	**+0.8**
		baz=116,SNR=12						
	B17A	**L&G Farms, Che**	**115.86**	**40**	⇓P	**PKPdf**	**04 28 25.6**	**+0.3**
		baz=116,SNR=12						
	BC3	**Big Chuckawall**	**115.90**	**56**	⇓P	**PKPdf**	**04 28 27.6**	**+1.6**
		baz=116						
	K14A	**Jones Ranch, D**	**115.90**	**46**	⇑P	**PKPdf**	**04 28 27.4**	**+1.7**
		baz=116,SNR=13						
	CDF	**Champ du Feu**	**115.93**	**321**	⇑*i*PKiKP	**PKPdf**	**04 28 24.8**	**-0.7**
		comp=Z,10.0nm,0.7s						
	CDF	**Champ du Feu**	**115.93**	**321**	⇑*i*PKiKP	**PKPdf**	**04 28 24.8**	**-0.7**
	CDF	**Champ du Feu**	**115.93**	**321**	⇑*i*PKPdf	**PKPdf**	**04 28 24.8**	**-0.7**
	LDFC	**Landfair**	**115.96**	**55**	*e*PKPdf	**PKPdf**	**04 28 27.5**	**+1.4**
	L14A	**Malta**	**115.98**	**47**	⇑P	**PKPdf**	**04 28 27.4**	**+1.5**
		baz=116						
	I15A	**Monteview**	**116.02**	**45**	⇑P	**PKPdf**	**04 28 27.3**	**+1.4**
		baz=116,SNR=8.4						
	IRM	**Iron Mountain**	**116.08**	**56**	⇑P	**PKPdf**	**04 28 27.8**	**+1.6**
		baz=116						
	BBS	**Basel-Blauen**	**116.09**	**320**	PKiKP	**PKPdf**	**04 28 25.0**	**-0.8**
	BBS	**Basel-Blauen**	**116.09**	**320**	PKP	**PKPdf**	**04 28 25.0**	**-0.8**
	C17A	**Wharram Farm,**	**116.10**	**40**	⇑P	**PKPdf**	**04 28 26.2**	**+0.3**
		baz=116,SNR=21						
	F16A	**Kennard Place,**	**116.10**	**42**	⇑P	**PKPdf**	**04 28 27.2**	**+1.2**
		baz=116,SNR=29						
	BOZ	**Bozeman (W)**	**116.14**	**43**	*e*PKiKP	**PKPdf**	**04 28 26.6**	**+0.5**
	BOZ	**Bozeman (W)**	**116.14**	**43**	*e*PKPdf	**PKPdf**	**04 28 26.6**	**+0.5**
	BOZ	**Bozeman (W)**	**116.14**	**43**	⇓P	**PKPdf**	**04 28 27.4**	**+1.3**
		baz=116						

	G16A	**Moss Hill, Enn**	**116.14**	**43**	⇓P	**PKPdf**	**04 28 27.3**	**+1.2**
		baz=116,SNR=16						
	MOF	**Molkenrain**	**116.21**	**320**	PKiKP	**PKPdf**	**04 28 25.7**	**-0.4**
	MOF	**Molkenrain**	**116.21**	**320**	PKP	**PKPdf**	**04 28 25.7**	**-0.4**
	MOF	**Molkenrain**	**116.21**	**320**	PKP	**PKPdf**	**04 28 25.7**	**-0.4**
	J15A	**Blackfoot**	**116.21**	**45**	⇑P	**PKPdf**	**04 28 28.5**	**+2.1**
		baz=116,SNR=18						
	A18A	**Metzger Ranch,**	**116.25**	**39**	⇓P	**PKPdf**	**04 28 26.5**	**+0.4**
		baz=116						
	D17A	**Six Diamond Ra**	**116.30**	**41**	⇑P	**PKPdf**	**04 28 26.6**	**+0.2**
		baz=116,SNR=9.9						
	K15A	**Arbon**	**116.33**	**46**	⇓P	**PKPdf**	**04 28 28.4**	**+1.9**
		baz=116,SNR=18						
	USHA	**Ushuaia**	**116.34**	**169**	PKP	**PKPdf**	**04 28 27.1**	**+1.1**
	USHA	**Ushuaia**	**116.34**	**169**	PKP	**PKPdf**	**04 28 27.1**	**+1.1**
		comp=Z,7.5nm,0.5s,baz=172,slow=3.4,SNR=19						
	HVU	**Hansel Valley**	**116.38**	**47**	*e*PKiKP	**PKPdf**	**04 28 27.6**	**+0.9**
	HVU	**Hansel Valley**	**116.38**	**47**	*e*PKPdf	**PKPdf**	**04 28 27.6**	**+0.9**
	HVU				*e*SKPdf	**SKPdf**	**04 31 47.4**	**-1.6**

JLU Jordanelle 117.64 48 ePKPdf PKPdf 04 28 28.2 -1.1
MPU Maple Canyon 117.66 49 ePKPdf PKPdf 04 28 30.2 +1.0
L17A Cokeville 117.67 46 ⇓P PKPdf 04 28 30.4 +1.1
baz=118,SNR=16
H18A Shoshone NF, C 117.76 43 ⇑P PKPdf 04 28 30.3 +0.9
baz=118,SNR=11
E19A Rath Farm, Rou 117.76 41 ⇓P PKPdf 04 28 29.6 +0.5
baz=118,SNR=16
KEST Kesra 117.79 306 ePKPdf PKPdf 04 28 29.7 +0.2
KEST PKP PKPdf 04 28 30.3 +0.8
KEST ePP PP 04 29 40.6 -4.1
KEST PKKPbc PKKPbc 04 38 52.2 +0.5
KEST Kesra 117.79 306 PKP PKPdf 04 28 30.3 +0.8
comp=Z,4.2nm,0.6s,baz=219,slow=1.0,SNR=26
KEST PKKPbc PKKPbc 04 38 52.2 +0.5
comp=Z,1.4nm,0.8s,baz=269,slow=6.9,SNR=5.1
C20A Veseth Ranch, 117.82 39 ⇓P PKPdf 04 28 30.0 +0.9
baz=118
F19A Roth Farm, Mol 117.86 42 ⇑P PKPdf 04 28 30.1 +0.7
baz=118,SNR=7.7
FRF La Foret Royal 117.87 316 iPKIKP PKPdf 04 28 29.2 -0.1
comp=Z,31nm,0.7s
FRF La Foret Royal 117.87 316 ⇑iPKIKP PKPdf 04 28 29.2 -0.1
FRF La Foret Royal 117.87 316 ⇑iPKPdf PKPdf 04 28 29.2 -0.1
RLMT Red Lodge 117.88 43 ePKPdf PKPdf 04 28 30.5 +1.0
RLMT Red Lodge 117.88 43 ⇑P PKPdf 04 28 30.8 +1.2
baz=118
I18A Diamond G Ranc 117.95 44 ⇑P PKPdf 04 28 30.6 +0.9
baz=118,SNR=14
J18A Kendall Valley 117.95 45 ⇑P PKPdf 04 28 30.9 +1.1
baz=118,SNR=25
D20A Manuel Ranch, 117.96 40 ⇓P PKPdf 04 28 30.0 +0.6
baz=118,SNR=17
U15A North Rim 117.96 53 ⇑P PKPdf 04 28 32.1 +2.0
baz=118
ORIF Oris-en-Rattie 117.97 317 ⇑iPKIKP PKPdf 04 28 29.4 -0.2
comp=Z,23nm,0.5s
ORIF Oris-en-Rattie 117.97 317 ⇑iPKIKP PKPdf 04 28 29.4 -0.2
ORIF Oris-en-Rattie 117.97 317 ⇑iPKPdf PKPdf 04 28 29.4 -0.2
M17A Scullys Gap (B 117.99 47 ⇓P PKPdf 04 28 30.7 +0.8
baz=118,SNR=6.4
N17A Moffit Pass 118.01 47 ⇓P PKPdf 04 28 31.6 +1.6
baz=118,SNR=25
A21A Bergtoll Ranch 118.01 38 ⇓P PKPdf 04 28 29.6 +0.1
baz=118
Z14A Wintersburg 118.02 56 ⇑P PKPdf 04 28 31.2 +1.3
baz=118
LMR La Mourre 118.03 315 iPKIKP PKPdf 04 28 29.4 -0.2
comp=Z,17nm,0.8s
LMR La Mourre 118.03 315 ⇑iPKIKP PKPdf 04 28 29.4 -0.2
LMR La Mourre 118.03 315 ⇑iPKPdf PKPdf 04 28 29.4 -0.2
K18A Toltan Ranch, 118.11 45 ⇓P PKPdf 04 28 31.7 +1.6
baz=118,SNR=58
TMUT Trail Mountain 118.15 49 ePKPdf PKPdf 04 28 31.5 +1.2
TMUT eSKPdf SKPdf 04 31 52.6 -0.1
E20A Meyer Farm, Mu 118.17 41 ⇓P PKPdf 04 28 30.5 +0.7
baz=118,SNR=8.6
B21A Ellsworth Farm 118.17 38 ⇑P PKPdf 04 28 30.5 +0.8
baz=118
MDO Dochfour 118.19 333 eP PKPdf 04 28 28.4 -1.0
MDO Dochfour 118.19 333 P PKPdf 04 28 28.4 -1.0
ESY Stoneypath 118.22 331 eP PKPdf 04 28 29.4 -0.1
ESY Stoneypath 118.22 331 P PKPdf 04 28 29.4 -0.1
H19A Powell 118.22 43 ⇑P PKPdf 04 28 31.5 +1.4
baz=118,SNR=13
FFC Flin Flon 118.22 30 ePKIKP PKPdf 04 28 29.8 +0.2
FFC Flin Flon 118.22 30 ePKPdf PKPdf 04 28 29.8 +0.2
Q16A Castle Valley 118.27 50 ⇓P PKPdf 04 28 32.0 +1.6
baz=118
L18A Fontenelle, Gr 118.31 46 ⇓P PKPdf 04 28 31.9 +1.4
baz=118,SNR=44
C21A Desert Coulee 118.35 39 ⇓P PKPdf 04 28 31.1 +1.0
baz=118
214A Organ Pipe Nat 118.36 58 ⇑P PKPdf 04 28 32.0 +1.4
baz=118
F20A Billings 118.40 42 ⇑P PKPdf 04 28 31.2 +0.8
baz=118
BW06 Boulder Array 118.41 45 ⇑P PKPdf 04 28 31.5 +0.8
baz=118
PDAR Pinedale Array 118.41 45 PKP PKPdf 04 28 31.1 +0.5
PDAR SKP 04 31 52.3
PDAR PKKPbc PKKPbc 04 38 49.2 -0.7
PDAR Pinedale Array 118.41 45 PKP PKPdf 04 28 31.1 +0.5
comp=Z,14nm,0.7s,baz=239,slow=1.1,SNR=119
PDAR SKP 04 31 52.3
comp=Z,1.7nm,0.7s,baz=127,slow=0.8,SNR=4.8
PDAR PKKPbc PKKPbc 04 38 49.2 -0.7
comp=Z,9.1nm,0.8s,baz=116,slow=5.5,SNR=21
I19A Meeteetse 118.41 44 ⇓P PKPdf 04 28 31.8 +1.2
baz=118,SNR=9.3
M18A Lyman 118.43 47 ⇑P PKPdf 04 28 31.7 +1.0
baz=118,SNR=8.4
P17A Butcher Ranch, 118.46 49 ⇓P PKPdf 04 28 32.0 +1.2
baz=118
SMRF Simiane la Rot 118.48 316 ePKIKP PKPdf 04 28 30.9 +0.4
comp=Z,39nm,0.8s
SMRF Simiane la Rot 118.48 316 ePKPdf PKPdf 04 28 30.9 +0.4
LOR Lormes 118.49 320 ⇑iPKPdf PKPdf 04 28 30.2 -0.2
comp=Z,17nm,0.6s
LOR Lormes 118.49 320 ⇑iPKPdf PKPdf 04 28 30.2 -0.2
EBL Broad Law 118.50 331 eP PKPdf 04 28 29.1 -1.0
EBL Broad Law 118.50 331 P PKPdf 04 28 29.1 -1.0
G20A Bridger 118.55 42 ⇓P PKPdf 04 28 31.9 +1.2
baz=118,SNR=47
J19A Crowheart 118.61 44 ⇓P PKPdf 04 28 32.2 +1.2
baz=119,SNR=38
A22A Carney Farms, 118.62 38 ⇓P PKPdf 04 28 31.4 +0.7
baz=119
EAU Auchinoon 118.65 331 eP PKPdf 04 28 29.9 -0.5
EAU Auchinoon 118.65 331 P PKPdf 04 28 29.9 -0.5
D21A La Casta Ranch 118.70 40 ⇓P PKPdf 04 28 31.7 +0.8
baz=119
SRU San Rafael 118.71 49 ePKIKP PKPdf 04 28 31.9 +0.6
SRU San Rafael 118.71 49 ePKPdf PKPdf 04 28 31.9 +0.6
SRU eSKPdf SKPdf 04 31 53.2 -0.4
SRU San Rafael 118.71 49 ⇑P PKPdf 04 28 32.3 +0.9
baz=119
SMF Signal de Mont 118.73 320 ⇑iPKIKP PKPdf 04 28 30.5 -0.4
comp=Z,12nm,0.6s
SMF Signal de Mont 118.73 320 ⇑iPKIKP PKPdf 04 28 30.5 -0.4
SMF Signal de Mont 118.73 320 ⇑iPKPdf PKPdf 04 28 30.5 -0.4
L19A Farson 118.75 46 ⇓P PKPdf 04 28 32.6 +1.2
baz=119,SNR=33
P18A Preston Nutter 118.79 49 ⇑P PKPdf 04 28 32.9 +1.3
baz=119
EKA Eskdalemuir Ar 118.79 331 PKKPbc PKKPbc 04 38 44.5 -4.2
EKA Eskdalemuir Ar 118.79 331 PKKPbc PKKPbc 04 38 44.5 -4.2
comp=Z,3.8nm,0.9s,baz=275,slow=9.1,SNR=3.4
SSF Saint Saulge 118.79 320 ⇑iPKIKP PKPdf 04 28 31.0 0.0
comp=Z,46nm,0.6s
SSF Saint Saulge 118.79 320 ⇑iPKIKP PKPdf 04 28 31.0 0.0
SSF Saint Saulge 118.79 320 ⇑iPKPdf PKPdf 04 28 31.0 0.0
KSB Sheil Bridge 118.80 333 eP PKPdf 04 28 29.9 -0.7
KSB Sheil Bridge 118.80 333 P PKPdf 04 28 29.9 -0.7
VIVF Saint-Julien-l 118.81 317 ⇑iPKIKP PKPdf 04 28 31.0 -0.1
comp=Z,36nm,0.9s
VIVF Saint-Julien-l 118.81 317 ⇑iPKIKP PKPdf 04 28 31.0 -0.1
VIVF Saint-Julien-l 118.81 317 ⇑iPKPdf PKPdf 04 28 31.0 -0.1
ESK Eskdalemuir 118.82 331 eP PKPdf 04 28 30.1 -0.7
ESK AMB AMB 04 28 35.5
comp=Z,41nm,2.4s
ESK Eskdalemuir 118.82 331 P PKPdf 04 28 30.1 -0.7
ESK AMB AMB 04 28 35.5
comp=Z,41nm,2.4s
ESK Eskdalemuir 118.82 331 ePKIKP PKPdf 04 28 30.4 -0.3
ESK Eskdalemuir 118.82 331 ePKPdf PKPdf 04 28 30.4 -0.3
KPL Plockton 118.83 334 eP PKPdf 04 28 30.3 -0.4
KPL Plockton 118.83 334 P PKPdf 04 28 30.3 -0.4
E21A Keefer Ranch, 118.84 40 ⇑P PKPdf 04 28 32.2 +1.0
baz=119
N18A Larsen Ranch, 118.84 47 ⇓P PKPdf 04 28 32.4 +0.8
baz=119,SNR=10.0
B22A Reddig Ranch S 118.85 38 ⇓P PKPdf 04 28 32.0 +0.8
baz=119
WUAZ Wupatki 118.88 54 ePKPdf PKPdf 04 28 32.8 +1.1
WUAZ Wupatki 118.88 54 ⇑P PKPdf 04 28 33.5 +1.8
baz=119
EAB Aberfoyle 118.89 332 eP PKPdf 04 28 30.7 -0.1
EAB Aberfoyle 118.89 332 P PKPdf 04 28 30.7 -0.1
K19A Absolon Red Bu 118.89 45 ⇑P PKPdf 04 28 32.4 +0.9
baz=119,SNR=46
H20A Greybull 118.94 43 ⇓P PKPdf 04 28 32.3 +0.8
baz=119,SNR=17
AVF Avril sur Loir 118.99 320 iPKIKP PKPdf 04 28 31.0 -0.3
comp=Z,19nm,0.5s
AVF Avril sur Loir 118.99 320 ⇑iPKIKP PKPdf 04 28 31.0 -0.3
AVF Avril sur Loir 118.99 320 ⇑iPKPdf PKPdf 04 28 31.0 -0.3
I20A Worland 119.03 44 ⇓P PKPdf 04 28 32.8 +1.1
baz=119,SNR=56
X16A Lo Mia Camp, P 119.05 55 ⇑P PKPdf 04 28 33.9 +1.8
baz=119
LHO Holmfirth 119.06 329 eP PKPdf 04 28 31.1 -0.2
LHO Holmfirth 119.06 329 P PKPdf 04 28 31.1 -0.2
F21A Absaloka Mine, 119.06 41 ⇑P PKPdf 04 28 32.5 +0.9
baz=119
M19A Rock Springs 119.07 46 ⇑P PKPdf 04 28 33.2 +1.2
baz=119,SNR=20
C22A Vida 119.14 39 ⇓P PKPdf 04 28 32.5 +0.8
baz=119
KESW Keswick, Cumbr 119.16 330 eP PKPdf 04 28 31.4 0.0
KESW AMB AMB 04 28 35.7
comp=Z,52nm,2.1s
KESW Keswick, Cumbr 119.16 330 P PKPdf 04 28 31.4 0.0
KESW AMB AMB 04 28 35.7
comp=Z,52nm,2.1s
D22A Cohagen 119.18 40 ⇑P PKPdf 04 28 33.3 +1.6
baz=119
G21A Lodge Grass 119.22 42 ⇑P PKPdf 04 28 32.8 +0.8
baz=119,SNR=5.7
N19A John Jarvie Ra 119.23 47 ⇑P PKPdf 04 28 32.7 +0.5
baz=119,SNR=12
J20A Shoshoni 119.26 44 ⇑P PKPdf 04 28 33.4 +1.2
baz=119,SNR=44
HYF Humbligny 119.26 321 ePKIKP PKPdf 04 28 32.1 +0.2
HYF Humbligny 119.26 321 ePKPdf PKPdf 04 28 32.1 +0.2
K20A Yellowstone Ra 119.30 45 ⇑P PKPdf 04 28 33.1 +0.8
baz=119,SNR=25
BGF Bois d'Agland 119.40 320 ⇑iPKIKP PKPdf 04 28 32.4 +0.3
comp=Z,89nm,0.6s
BGF Bois d'Agland 119.40 320 iPKIKP PKPdf 04 28 32.4 +0.3
BGF Bois d'Agland 119.40 320 ⇑iPKPdf PKPdf 04 28 32.4 +0.3
B23A Brockton 119.40 38 ⇓P PKPdf 04 28 33.1 +1.0
baz=119
AGO Saint Agoulin 119.40 319 PKP PKPdf 04 28 32.2 0.0
AGO Saint Agoulin 119.40 319 PKP PKPdf 04 28 32.2 0.0
O19A Miners Draw (B 119.44 48 ⇓P PKPdf 04 28 33.8 +1.1
baz=119,SNR=21
S18A Hurst Farm, Bl 119.47 51 ⇓P PKPdf 04 28 34.2 +1.3
baz=120
L20A Wamsutter 119.50 46 ⇑P PKPdf 04 28 34.1 +1.3
baz=120,SNR=32
H21A Big Horn, Sher 119.54 42 ⇓P PKPdf 04 28 33.5 +0.9
baz=120,SNR=13
C23A Lambert 119.55 39 ⇓P PKPdf 04 28 33.9 +1.4
baz=120
PYM Petit Puy Mans 119.59 319 PKIKP PKPdf 04 28 32.6 0.0
PYM Petit Puy Mans 119.59 319 PKP PKPdf 04 28 32.6 0.0
PYM Petit Puy Mans 119.59 319 PKP PKPdf 04 28 32.6 0.0
E22A Miles City 119.60 40 ⇓P PKPdf 04 28 33.5 +0.9
baz=120
LASF Ste Croix 119.62 317 iPKIKP PKPdf 04 28 32.7 0.0
comp=Z,31nm,0.9s
LASF Ste Croix 119.62 317 ⇑iPKPdf PKPdf 04 28 32.7 0.0
LBL Lubilhac 119.62 318 PKIKP PKPdf 04 28 33.3 +0.6
LBL Lubilhac 119.62 318 PKP PKPdf 04 28 33.3 +0.6
LBL Lubilhac 119.62 318 PKP PKPdf 04 28 33.3 +0.6
F22A Rosebud 119.64 41 ⇓P PKPdf 04 28 33.5 +0.8
baz=120,SNR=12
I21A Big Trails, Te 119.65 43 ⇑P PKPdf 04 28 33.4 +0.5
baz=120,SNR=33
J21A Lysite 119.70 44 ⇑P PKPdf 04 28 34.0 +0.9
baz=120,SNR=27
Q19A Hogan Spring (119.70 49 ⇑P PKPdf 04 28 34.6 +1.5
baz=120,SNR=22
P19A Cripple Cowboy 119.73 48 ⇑P PKPdf 04 28 34.9 +1.6
baz=120
M20A Sweetwater, Wa 119.77 46 ⇓P PKPdf 04 28 34.4 +1.1
baz=120,SNR=15
D23A Lindsay 119.78 39 ⇓P PKPdf 04 28 34.4 +1.4
baz=120
GAL1 Galloway 119.79 331 eP PKPdf 04 28 32.1 -0.5
GAL1 Galloway 119.79 331 P PKPdf 04 28 32.1 -0.5
A24A Westby 119.80 37 ⇓P PKPdf 04 28 33.5 +0.6
baz=120
G22A Birney 119.83 42 ⇓P PKPdf 04 28 34.0 +0.8
baz=120,SNR=6.8
SSW Stow on the Wo 119.83 327 eP PKPdf 04 28 32.9 +0.1
SSW Stow on the Wo 119.83 327 P PKPdf 04 28 32.9 +0.1
DGMT Dagmar 119.88 38 ePKPdf PKPdf 04 28 33.5 +0.4
DGMT Dagmar 119.88 38 ⇑P PKPdf 04 28 34.2 +1.1
baz=120
TCF Toulx Ste Croi 119.91 320 iPKIKP PKPdf 04 28 33.3 +0.1
comp=Z,45nm,0.8s
TCF Toulx Ste Croi 119.91 320 ⇑iPKIKP PKPdf 04 28 33.3 +0.1
TCF Toulx Ste Croi 119.91 320 ⇑iPKPdf PKPdf 04 28 33.3 +0.1
N20A Spence Gulch, 119.91 47 ⇓P PKPdf 04 28 35.4 +1.8
baz=120,SNR=40
E23A Ismay 119.99 40 ⇓P PKPdf 04 28 34.6 +1.3
baz=120
TUC Tucson 120.00 57 ePKIKP PKPdf 04 28 34.9 +1.0
TUC Tucson 120.00 57 ePKPdf PKPdf 04 28 34.9 +1.0
H22A Clearmont 120.01 42 ⇑P PKPdf 04 28 34.2 +0.6
baz=120,SNR=5.8
SWN1 Swindon 120.03 327 eP PKPdf 04 28 32.9 -0.3
SWN1 AMB AMB 04 28 36.2
comp=Z,97nm,2.3s
SWN1 Swindon 120.03 327 P PKPdf 04 28 32.9 -0.3
SWN1 AMB AMB 04 28 36.2
comp=Z,97nm,2.3s
K21A Alcova 120.07 45 ⇓P PKPdf 04 28 34.8 +1.0
baz=120,SNR=52
HLM1 Long Mynd 120.11 328 eP PKPdf 04 28 33.2 -0.2
HLM1 AMB AMB 04 28 37.2
comp=Z,38nm,2.9s
HLM1 Long Mynd 120.11 328 P PKPdf 04 28 33.2 -0.2
HLM1 AMB AMB 04 28 37.2
comp=Z,38nm,2.9s
PV04 Paradox Valley 120.12 50 ePKPdf PKPdf 04 28 34.3 +0.2
C24A Savage 120.13 39 ⇓P PKPdf 04 28 35.0 +1.4
baz=120
O20A White River Ci 120.13 48 ⇓P PKPdf 04 28 35.3 +1.3
baz=120,SNR=70
I22A 9 Mile Ranch, 120.17 43 ⇑P PKPdf 04 28 34.5 +0.6
baz=120,SNR=32
L21A Rawlins 120.20 45 ⇑P PKPdf 04 28 34.9 +0.8
baz=120,SNR=16
P20A De Beque 120.20 48 ⇑P PKPdf 04 28 35.6 +1.4
baz=120,SNR=18
X18A Snowflake 120.23 54 ⇓P PKPdf 04 28 35.8 +1.4
baz=120
WPM1 Penmaenmawr 120.26 329 eP PKPdf 04 28 33.5 -0.1
WPM1 Penmaenmawr 120.26 329 P PKPdf 04 28 33.5 -0.1
W18A Petrified Fore 120.28 54 ⇑P PKPdf 04 28 35.9 +1.5
baz=120
M21A Separation Pea 120.32 46 ⇓P PKPdf 04 28 35.4 +1.0
baz=120,SNR=36
J22A Midwest 120.34 44 ⇓P PKPdf 04 28 34.6 +0.3
baz=120,SNR=129
LDF La Druitiere 120.41 323 ePKIKP PKPdf 04 28 33.9 -0.1
comp=Z,46nm,1.1s
LDF La Druitiere 120.41 323 ePKIKP PKPdf 04 28 33.9 -0.1
LDF La Druitiere 120.41 323 ePKPdf PKPdf 04 28 33.9 -0.1
G23A Biddle 120.43 41 ⇓P PKPdf 04 28 34.7 +0.4
baz=120
Q20A Ridgley Place, 120.43 49 ⇑P PKPdf 04 28 36.3 +1.7
baz=120,SNR=22
MCH1 Michaelchurch 120.44 327 eP PKPdf 04 28 33.0 -1.0
MCH1 AMB AMB 04 28 33.5
comp=Z,53nm,2.1s
MCH1 Michaelchurch 120.44 327 P PKPdf 04 28 33.0 -1.0
MCH1 AMB AMB 04 28 33.5
comp=Z,53nm,2.1s
PV01 Paradox Valley 120.44 50 ePKPdf PKPdf 04 28 35.7 +1.0
N21A Black Mountain 120.47 47 ⇑P PKPdf 04 28 36.3 +1.6
baz=120,SNR=48
WLF1 Llynfaes 120.49 329 eP PKPdf 04 28 33.9 -0.1
WLF1 Llynfaes 120.49 329 P PKPdf 04 28 33.9 -0.1
CAF Calviac 120.52 318 iPKIKP PKPdf 04 28 34.8 +0.4
comp=Z,36nm,0.7s
CAF Calviac 120.52 318 ⇑iPKIKP PKPdf 04 28 34.8 +0.4
CAF Calviac 120.52 318 ⇑iPKPdf PKPdf 04 28 34.8 +0.4
FLN La Foliniere 120.55 323 ePKIKP PKPdf 04 28 34.2 -0.1
comp=Z,9.2nm,0.5s
FLN La Foliniere 120.55 323 ePKIKP PKPdf 04 28 34.2 -0.1
FLN La Foliniere 120.55 323 ePKPdf PKPdf 04 28 34.2 -0.1
K22A Casper 120.57 44 ⇓P PKPdf 04 28 35.4 +0.6
baz=121,SNR=23
R20A Redvale 120.57 50 ⇑P PKPdf 04 28 36.8 +1.8
baz=121,SNR=17
SFJD Kangerlussuaq 120.58 360 ePKPdf PKPdf 04 28 33.2 -0.5
SFJD Kangerlussuaq 120.58 360 iP PKPdf 04 28 33.3 -0.5
comp=Z,19nm,0.7s
E24A Baker 120.59 40 ⇓P PKPdf 04 28 35.7 +1.1
baz=121
O21A Pagoda 120.67 47 ⇓P PKPdf 04 28 36.5 +1.3
baz=121,SNR=11
S20A Disappointment 120.68 50 ⇑P PKPdf 04 28 37.1 +1.9
baz=121,SNR=23
RJF Les Rejaudoux 120.73 319 iPKIKP PKPdf 04 28 35.0 +0.2
comp=Z,64nm,1.4s
RJF Les Rejaudoux 120.73 319 ⇑iPKIKP PKPdf 04 28 35.0 +0.2
RJF Les Rejaudoux 120.73 319 ⇑iPKPdf PKPdf 04 28 35.0 +0.2
MVCO Mesa Verde 120.74 51 ePKPdf PKPdf 04 28 36.5 +1.2
MVCO Mesa Verde 120.74 51 ⇑P PKPdf 04 28 37.1 +1.8
baz=121
F24A Ekalaka 120.79 40 ⇑P PKPdf 04 28 35.5 +0.6
baz=121
I23A Meade Ranch, G 120.84 43 ⇑P PKPdf 04 28 35.8 +0.6
baz=121
L22A Ellis Ranch, M 120.84 45 ⇑P PKPdf 04 28 36.4 +1.1
baz=121,SNR=6.9
P21A Newcastle 120.89 48 ⇓P PKPdf 04 28 37.3 +1.7
baz=121,SNR=10
M22A Cedar Creek Ra 120.93 46 ⇓P PKPdf 04 28 37.0 +1.4
baz=121,SNR=24
U20A Newcomb 120.94 52 ⇓P PKPdf 04 28 37.1 +1.5
baz=121,SNR=6.2
GRR Gorron 120.94 323 ePKIKP PKPdf 04 28 35.1 +0.1
comp=Z,9.9nm,0.6s
GRR Gorron 120.94 323 ePKIKP PKPdf 04 28 35.1 +0.1
GRR Gorron 120.94 323 ePKPdf PKPdf 04 28 35.1 +0.1
J23A Dilts Ranch, B 120.97 43 ⇓P PKPdf 04 28 35.9 +0.4
baz=121,SNR=6.3
MTLF Montolieu 120.99 317 iPKIKP PKPdf 04 28 35.2 -0.1
comp=Z,35nm,0.8s
MTLF Montolieu 120.99 317 ⇑iPKIKP PKPdf 04 28 35.2 -0.1
MTLF Montolieu 120.99 317 ⇑iPKPdf PKPdf 04 28 35.2 -0.1
Q21A Lamborn Mesa, 121.00 49 ⇑P PKPdf 04 28 37.6 +1.9
baz=121,SNR=27
G24A Alzada 121.01 41 ⇓P PKPdf 04 28 35.8 +0.4
baz=121
V20A Brimhall 121.12 53 ⇑P PKPdf 04 28 37.5 +1.4
baz=121
H24A Dirks Ranch, A 121.15 42 ⇓P PKPdf 04 28 36.6 +0.9
baz=121
R21A Cimarron 121.15 49 ⇓P PKPdf 04 28 37.9 +1.8
baz=121,SNR=13
K23A Bowen Ranch, D 121.16 44 ⇑P PKPdf 04 28 35.9 0.0
baz=121,SNR=5.7
S21A Coal Bank Pass 121.16 50 ⇑P PKPdf 04 28 38.4 +2.2
baz=121,SNR=78
N22A Wattenberg Ran 121.22 46 ⇑P PKPdf 04 28 37.8 +1.6
baz=121,SNR=16
W20A Ramah 121.26 53 ⇓P PKPdf 04 28 38.0 +1.6
baz=121
MFF Saint Martin d 121.27 321 iPKIKP PKPdf 04 28 35.7 0.0
comp=Z,56nm,0.6s
MFF Saint Martin d 121.27 321 ⇑iPKIKP PKPdf 04 28 35.7 0.0
MFF Saint Martin d 121.27 321 ⇑iPKPdf PKPdf 04 28 35.7 0.0
L23A Garrett 121.32 45 ⇑P PKPdf 04 28 36.7 +0.4
baz=121,SNR=13
HEX Exmoor 121.34 327 eP PKPdf 04 28 35.5 -0.2
HEX Exmoor 121.34 327 P PKPdf 04 28 35.5 -0.2
JSA Saint Aubin 121.35 324 eP PKPdf 04 28 35.2 -0.5
JSA AMB AMB 04 28 40.9
comp=Z,35nm,1.9s
JSA Saint Aubin 121.35 324 P PKPdf 04 28 35.2 -0.5
JSA AMB AMB 04 28 40.9
comp=Z,35nm,1.9s
SMCO Snowmass 121.35 48 ePKPdf PKPdf 04 28 38.0 +1.3
O22A Kremmling 121.36 47 ⇑P PKPdf 04 28 37.5 +1.0
baz=121,SNR=10
P22A Eagle 121.38 48 ⇑P PKPdf 04 28 38.1 +1.6
baz=121,SNR=29
LFF La Frestale 121.38 319 iPKIKP PKPdf 04 28 36.4 +0.4
comp=Z,50nm,0.8s
LFF La Frestale 121.38 319 ⇑iPKIKP PKPdf 04 28 36.4 +0.4
LFF La Frestale 121.38 319 ⇑iPKPdf PKPdf 04 28 36.4 +0.4
X20A Quemado 121.40 54 ⇑P PKPdf 04 28 38.5 +1.9
baz=121
319A Douglas 121.43 58 ⇓P PKPdf 04 28 38.6 +1.9
baz=122
I24A Kuemmerle Ranc 121.44 43 ⇑P PKPdf 04 28 36.4 +0.1
baz=121,SNR=8.3
Q22A Crested Butte, 121.49 49 ⇑P PKPdf 04 28 38.9 +2.1
baz=122,SNR=46
M23A Laramie 121.53 46 ⇑P PKPdf 04 28 37.5 +0.8
baz=122
T21A Navajo Lake 121.54 51 ⇓P PKPdf 04 28 38.9 +2.1
baz=122,SNR=14
N23A Red Feather La 121.56 46 ⇓P PKPdf 04 28 38.0 +1.2
baz=122,SNR=16
U21A Nageezi 121.60 52 ⇓P PKPdf 04 28 38.9 +1.9
baz=122,SNR=40
J24A Dixon Ranch, L 121.61 43 ⇑P PKPdf 04 28 37.1 +0.5
baz=122,SNR=9.8
Y20A Horse Springs, 121.64 55 ⇑P PKPdf 04 28 38.8 +1.6
baz=122
Z20A Nine Sixteen R 121.64 56 ⇓P PKPdf 04 28 38.9 +1.8
baz=122
RSSD Black Hills 121.73 42 ePKIKP PKPdf 04 28 36.7 -0.3
RSSD Black Hills 121.73 42 ePKPdf PKPdf 04 28 36.7 -0.3
RSSD eSKPdf SKPdf 04 31 58.2 -1.1
120A U Bar Ranch, L 121.73 56 ⇑P PKPdf 04 28 39.3 +2.0
baz=122
HTL Hartland 121.75 327 eP PKPdf 04 28 36.3 -0.1
HTL AMB AMB 04 28 37.9
comp=Z,55nm,2.9s
HTL Hartland 121.75 327 P PKPdf 04 28 36.3 -0.1
HTL AMB AMB 04 28 37.9
comp=Z,55nm,2.9s
PHWY Pilot Hill 121.77 46 ePKPdf PKPdf 04 28 37.6 +0.3
V21A Milan 121.77 52 ⇑P PKPdf 04 28 39.0 +1.6
baz=122,SNR=5.0
R22A Saguache, Gunn 121.79 49 ⇑P PKPdf 04 28 39.9 +2.4
baz=122,SNR=38
O23A Lake Granby, G 121.80 47 ⇑P PKPdf 04 28 38.9 +1.5
baz=122,SNR=31
S22A 4UR Ranch, Cre 121.87 50 ⇓P PKPdf 04 28 39.7 +2.1
baz=122,SNR=47
L24A Wheatland 121.89 45 ⇑P PKPdf 04 28 38.2 +0.9
baz=122
W21A San Fidel 121.94 53 ⇑P PKPdf 04 28 39.4 +1.8
baz=122
220A Playas Peak, P 121.95 57 ⇑P PKPdf 04 28 39.4 +1.7
baz=122
X21A Alamocita Cree 121.99 54 ⇑P PKPdf 04 28 39.8 +2.0
baz=122,SNR=31
SGMF Saint Gilles 122.01 323 iPKIKP PKPdf 04 28 36.9 -0.2
comp=Z,53nm,0.9s
SGMF Saint Gilles 122.01 323 ⇑iPKIKP PKPdf 04 28 36.9 -0.2
SGMF Saint Gilles 122.01 323 ⇑iPKPdf PKPdf 04 28 36.9 -0.2
T22A Edith 122.02 51 ⇓P PKPdf 04 28 39.9 +2.1
baz=122,SNR=19
320A Kipp Ranch, An 122.07 58 ⇑P PKPdf 04 28 40.0 +2.0
baz=122
P23A Jefferson 122.12 48 ⇓P PKPdf 04 28 40.0 +1.9
baz=122,SNR=10
ISCO Idaho Springs 122.16 47 ePKIKP PKPdf 04 28 38.8 +0.7
ISCO Idaho Springs 122.16 47 ePKPdf PKPdf 04 28 38.8 +0.7
ISCO Idaho Springs 122.16 47 ⇑P PKPdf 04 28 39.4 +1.4
baz=122
M24A Cheyenne 122.16 45 ⇓P PKPdf 04 28 38.7 +0.8
baz=122
Y21A Point of Rocks 122.19 54 ⇓P PKPdf 04 28 40.3 +2.1
baz=122,SNR=21
U22A Llaves 122.23 52 ⇑P PKPdf 04 28 40.5 +2.3
baz=122,SNR=30
Q23A Hartsel 122.28 48 ⇓P PKPdf 04 28 40.2 +1.8
baz=122,SNR=30
V22A San Miguel Ran 122.31 52 ⇓P PKPdf 04 28 40.8 +2.4
baz=122,SNR=28
N24A Carr 122.34 46 ⇑P PKPdf 04 28 39.4 +1.2
baz=122,SNR=8.4
Z21A St. Cloud Mine 122.35 55 ⇑P PKPdf 04 28 40.2 +1.7
baz=122,SNR=11
EPF Esparros 122.38 317 ⇑iPKIKP PKPdf 04 28 38.0 -0.1
comp=Z,16nm,0.5s
EPF Esparros 122.38 317 ⇑iPKIKP PKPdf 04 28 38.0 -0.1
EPF Esparros 122.38 317 ⇑iPKPdf PKPdf 04 28 38.0 -0.1
ROSF Rostrenen 122.39 324 ePKIKP PKPdf 04 28 37.6 -0.2
comp=Z,24nm,0.7s
ROSF Rostrenen 122.39 324 ePKIKP PKPdf 04 28 37.6 -0.2
ROSF Rostrenen 122.39 324 ePKPdf PKPdf 04 28 37.6 -0.2
K25A Mack Ranch, Ha 122.41 44 ⇓P PKPdf 04 28 38.7 +0.4
baz=122
121A Cookes Peak, D 122.43 56 ⇓P PKPdf 04 28 40.5 +1.9
baz=122

O24A **Longmont** 122.44 47 ⇑P PKPdf 04 28 39.6 +1.2
baz=122
RESF **Ens** 122.47 317 PKP PKPdf 04 28 39.0 +0.7
RESF **Ens** 122.47 317 PKP PKPdf 04 28 39.0 +0.7
R23A **Moffat** 122.50 49 ⇑P PKPdf 04 28 40.8 +2.1
baz=122,SNR=20
S23A **Nye Farm, Mont** 122.51 50 ⇑P PKPdf 04 28 40.6 +1.9
baz=122
L25A **Engebretsen Ra** 122.52 44 ⇑P PKPdf 04 28 39.4 +0.9
baz=122,SNR=5.4
LAZ **Ladron** 122.52 54 *e*PKPdf PKPdf 04 28 40.1 +1.3
QUIF **Quistinic** 122.53 323 *e*PKIKP PKPdf 04 28 37.9 -0.2
comp=Z,63nm,1.0s
QUIF **Quistinic** 122.53 323 *e*PKIKP PKPdf 04 28 37.9 -0.2
QUIF **Quistinic** 122.53 323 *e*PKPdf PKPdf 04 28 37.9 -0.2
FRB **Frobisher Bay** 122.55 9 PKKPbc PKKPbc 04 38 31.8 -3.0
FRB **Frobisher Bay** 122.55 9 PKKPbc PKKPbc 04 38 31.8 -3.0
comp=Z,3.5nm,0.8s,baz=198,slow=2.8,SNR=7.0
221A **Mesquite Ranch** 122.55 57 ⇓P PKPdf 04 28 40.9 +2.0
baz=123
W22A **Albuquerque** 122.57 53 ⇓P PKPdf 04 28 40.5 +1.6
baz=123
X22A **Bernardo** 122.60 54 ⇓P PKPdf 04 28 41.1 +2.2
baz=123,SNR=15
VIEF **Viey** 122.65 317 PKP PKPdf 04 28 39.2 +0.6
VIEF **Viey** 122.65 317 PKP PKPdf 04 28 39.2 +0.6
T23A **Casias Ranch,** 122.68 51 ⇑P PKPdf 04 28 41.1 +2.0
baz=123,SNR=25
M25A **Palm-Egli Farm** 122.72 45 ⇓P PKPdf 04 28 40.0 +1.1
baz=123
U23A **El Rito** 122.76 51 ⇓P PKPdf 04 28 41.5 +2.2
baz=123,SNR=23
P24A **Kohler Place,** 122.76 47 ⇑P PKPdf 04 28 40.5 +1.4
baz=123
Q24A **Divide** 122.76 48 ⇓P PKPdf 04 28 40.3 +1.1
baz=123,SNR=5.6
Y22A **Socorro** 122.78 54 ⇑P PKPdf 04 28 41.0 +1.8
baz=123,SNR=25
Y22D **IRIS PASSCAL I** 122.78 54 ⇓P PKPdf 04 28 40.7 +1.4
baz=123
K26A **Motz Farm, Whi** 122.85 43 ⇑P PKPdf 04 28 39.6 +0.6
baz=123,SNR=12
REYF **Montagne du Re** 122.86 317 PKP PKPdf 04 28 40.0 +1.0
REYF **Montagne du Re** 122.86 317 PKP PKPdf 04 28 40.0 +1.0
MDND **Maddock** 122.90 37 ⇓P PKPdf 04 28 39.8 +0.9
baz=123
N25A **Grover** 122.91 46 ⇑P PKPdf 04 28 40.1 +0.8
baz=123
ANMO **Albuquerque** 122.93 53 *e*PKPdf PKPdf 04 28 40.6 +1.1
ANMO PKP PKPdf 04 28 40.9 +1.3
ANMO SKPbc SKiKP 04 31 39.4 -23
ANMO SKP 04 32 02.4
ANMO PKKPbc PKKPab 04 38 31.4 -0.6
ANMO **Albuquerque** 122.93 53 PKP PKPdf 04 28 40.9 +1.3
comp=Z,21nm,0.9s,baz=206,slow=1.9,SNR=72
ANMO SKPbc SKiKP 04 31 39.4 -23
comp=Z,1.8nm,0.7s,baz=288,slow=2.4,SNR=4.0
ANMO SKP 04 32 02.4
comp=Z,1.8nm,0.8s,baz=210,slow=2.2,SNR=4.1
ANMO PKKPbc PKKPab 04 38 31.4 -0.6
comp=Z,1.6nm,0.6s,baz=122,slow=7.4,SNR=7.4
V23A **Ortiz Mt. (NFS** 122.93 52 ⇓P PKPdf 04 28 42.2 +2.6
baz=123,SNR=19
Z22A **Elephant Butte** 122.94 55 ⇓P PKPdf 04 28 41.4 +1.8
baz=123,SNR=29
BNM **Barren Site** 122.99 54 *e*PKPdf PKPdf 04 28 41.0 +1.3
R24A **Sanders Place,** 123.03 49 ⇑P PKPdf 04 28 41.2 +1.6
baz=123,SNR=12
122A **Conniff Cattle** 123.04 56 ⇓P PKPdf 04 28 41.9 +2.2
baz=123,SNR=8.3
ETSF **Etsaut** 123.04 317 ⇑*i*PKIKP PKPdf 04 28 40.2 +0.8
comp=Z,30nm,0.7s
ETSF **Etsaut** 123.04 317 ⇑*i*PKIKP PKPdf 04 28 40.2 +0.8
ETSF **Etsaut** 123.04 317 ⇑*i*PKPdf PKPdf 04 28 40.2 +0.8
TAM **Tamanrasset** 123.07 292 *e*PKIKP PKPdf 04 28 40.6 +0.5
TAM **Tamanrasset** 123.07 292 *e*PKPdf PKPdf 04 28 40.6 +0.5
222A **Williams Famil** 123.09 57 ⇓P PKPdf 04 28 41.4 +1.5
baz=123
W23A **Werner Place,** 123.11 53 ⇑P PKPdf 04 28 41.8 +1.9
baz=123,SNR=16
S24A **Houchin Ranch,** 123.13 50 ⇑P PKPdf 04 28 41.7 +1.7
baz=123,SNR=16
O25A **Wiggins** 123.13 47 ⇑P PKPdf 04 28 40.8 +1.1
baz=123,SNR=6.2
L26A **Underwood Farm** 123.17 44 ⇑P PKPdf 04 28 40.3 +0.6
baz=123
X23A **Hourglass Bar** 123.24 53 ⇑P PKPdf 04 28 41.7 +1.5
baz=123,SNR=26
LARF **Larrau** 123.28 317 PKP PKPdf 04 28 40.6 +0.8
LARF **Larrau** 123.28 317 PKP PKPdf 04 28 40.6 +0.8
P25A **Willow Gulch B** 123.30 47 ⇑P PKPdf 04 28 41.6 +1.5
baz=123,SNR=16
M26A **McRoberts Ranc** 123.34 45 ⇑P PKPdf 04 28 41.2 +1.1
baz=123
SJPF **Ste Jean** 123.41 317 *e*PKIKP PKPdf 04 28 40.7 +0.7
comp=Z,57nm,1.0s
SJPF **Ste Jean** 123.41 317 *e*PKIKP PKPdf 04 28 40.7 +0.7
SJPF **Ste Jean** 123.41 317 *e*PKPdf PKPdf 04 28 40.7 +0.7
T24A **Torres, Weston** 123.42 50 ⇓P PKPdf 04 28 42.5 +1.9
baz=123,SNR=15
Q25A **Bedland, Calha** 123.44 48 ⇓P PKPdf 04 28 41.4 +0.9
baz=123,SNR=9.6
K27A **Flueckinger Fa** 123.49 43 ⇑P PKPdf 04 28 40.4 +0.2
baz=124
Y23A **Lovelace Mesa,** 123.51 54 ⇓P PKPdf 04 28 42.1 +1.4
baz=124,SNR=25
N26A **Koester Ranch,** 123.52 45 ⇓P PKPdf 04 28 41.0 +0.6
baz=124
Z23A **Rita Site, Whi** 123.53 55 ⇑P PKPdf 04 28 42.6 +1.9
baz=124,SNR=24
V24A **Rampart Ranch,** 123.65 52 ⇑P PKPdf 04 28 43.2 +2.2
baz=124,SNR=33
123A **Bell Site, Whi** 123.66 56 ⇑P PKPdf 04 28 42.7 +1.8
baz=124
O26A **Horse Wrangler** 123.67 46 ⇓P PKPdf 04 28 41.6 +0.8
baz=124,SNR=7.8
R25A **Fountain Ranch** 123.67 49 ⇓P PKPdf 04 28 42.1 +1.3
baz=124,SNR=30
223A **Chaparral, Ant** 123.67 56 ⇑P PKPdf 04 28 42.5 +1.5
baz=124
W24A **Lazy 6 Ranch,** 123.68 53 ⇑P PKPdf 04 28 42.9 +1.9
baz=124,SNR=38
S25A **Robets Cordova** 123.71 49 ⇑P PKPdf 04 28 42.3 +1.3
baz=124,SNR=31
ULM **Lac du Bonnet** 123.75 33 PKP PKPdf 04 28 40.0 -0.4
ULM **Lac du Bonnet** 123.75 33 PKP PKPdf 04 28 40.0 -0.4
comp=Z,25nm,0.7s,baz=313,slow=2.3,SNR=28
X24A **Lazy VL Ranch,** 123.84 53 ⇑P PKPdf 04 28 42.6 +1.2
baz=124
P26A **Davis Ranch, A** 123.88 47 ⇓P PKPdf 04 28 42.5 +1.3
baz=124,SNR=31
T25A **Trinidad** 123.89 50 ⇓P PKPdf 04 28 43.0 +1.6
baz=124,SNR=27
Q26A **Hugo** 123.98 48 ⇓P PKPdf 04 28 42.8 +1.4
baz=124,SNR=6.7
Y24A **Capitan** 124.01 54 ⇑P PKPdf 04 28 43.1 +1.5
baz=124,SNR=72
N27A **Anderson Farm,** 124.01 45 ⇑P PKPdf 04 28 42.3 +1.0
baz=124,SNR=24
U25A **Circle Dot Ran** 124.12 51 ⇑P PKPdf 04 28 43.4 +1.6
baz=124,SNR=16
V25A **Rancho No Teng** 124.12 52 ⇑P PKPdf 04 28 43.6 +1.8
baz=124,SNR=33
Z24A **Sheeppen Canyo** 124.22 55 ⇑P PKPdf 04 28 44.0 +1.9
baz=124,SNR=59
R26A **Arlington** 124.24 48 ⇓P PKPdf 04 28 43.3 +1.4
baz=124,SNR=22
O27A **Beecher Island** 124.28 46 ⇑P PKPdf 04 28 43.0 +1.1
baz=124,SNR=16
124A **Stringfield Ra** 124.31 55 ⇓P PKPdf 04 28 44.1 +1.8
baz=124,SNR=27
OGNE **Ogallala** 124.31 45 *e*PKPdf PKPdf 04 28 42.0 +0.1
OGNE **Ogallala** 124.31 45 ⇓P PKPdf 04 28 42.8 +0.9
baz=124
224A **Cornudas Mount** 124.40 56 ⇓P PKPdf 04 28 44.0 +1.6
baz=124,SNR=20
W25A **X Bar L Ranch,** 124.43 52 ⇓P PKPdf 04 28 43.8 +1.4
baz=124,SNR=27
S26A **Kim** 124.45 49 ⇓P PKPdf 04 28 43.6 +1.2
baz=124,SNR=26
X25A **Clemmons Ranch** 124.46 53 ⇓P PKPdf 04 28 43.4 +0.9
baz=124,SNR=6.8
T26A **Comanche Natio** 124.50 50 ⇓P PKPdf 04 28 44.3 +1.8
baz=124,SNR=46
324A **Moseley Ranch,** 124.59 57 ⇓P PKPdf 04 28 44.1 +1.3
baz=125,SNR=25
KSCO **Kaye Shedlock'** 124.60 47 ⇑P PKPdf 04 28 43.7 +1.1
baz=125
Y25A **Mesa, Roswell** 124.60 54 ⇑P PKPdf 04 28 44.3 +1.5
baz=125,SNR=22
MNTX **Cornudas Mount** 124.61 57 *e*PKPdf PKPdf 04 28 43.1 +0.5
MNTX **Cornudas Mount** 124.61 57 ⇑P PKPdf 04 28 44.3 +1.7
baz=125
U26A **Atchley Ranch,** 124.63 51 ⇓P PKPdf 04 28 44.2 +1.4
baz=125,SNR=20
R27A **Eads** 124.72 48 ⇑P PKPdf 04 28 44.2 +1.4
baz=125,SNR=16
Z25A **Roswell** 124.76 55 ⇑P PKPdf 04 28 44.7 +1.7
baz=125,SNR=20
V26A **Tequesquite Ra** 124.78 51 ⇑P PKPdf 04 28 44.0 +1.0
baz=125,SNR=19
AGMN **Agassiz Nation** 124.83 35 *e*PKPdf PKPdf 04 28 42.0 -0.5
S27A **Las Animas** 124.86 49 ⇑P PKPdf 04 28 44.6 +1.5
baz=125
BRSD **Miller** 124.90 40 ⇑P PKPdf 04 28 43.1 +0.3
baz=125
125A **Gardner Draw,** 124.97 55 ⇓P PKPdf 04 28 44.8 +1.4
baz=125,SNR=15
225A **Deer Hill, Car** 124.97 56 ⇓P PKPdf 04 28 45.0 +1.4
baz=125,SNR=17
W26A **Owens Ranch, T** 125.01 52 ⇓P PKPdf 04 28 44.8 +1.3
baz=125,SNR=8.5
325A **Bean Ranch, Si** 125.03 57 ⇓P PKPdf 04 28 44.6 +0.9
baz=125,SNR=19
X26A **CR and CF Fran** 125.13 53 ⇑P PKPdf 04 28 44.6 +0.9
baz=125,SNR=15
425A **Indio Mountain** 125.15 58 ⇓P PKPdf 04 28 44.8 +1.0
baz=125,SNR=23
T27A **Campo** 125.19 50 ⇑P PKPdf 04 28 45.0 +1.2
baz=125,SNR=15
Y26A **Elida** 125.30 54 ⇓P PKPdf 04 28 45.0 +0.9
baz=125,SNR=5.2
GDL2 **Guadalupe Moun** 125.32 56 *e*PKPdf PKPdf 04 28 44.9 +0.8
U27A **Thompson Grove** 125.33 50 ⇓P PKPdf 04 28 45.0 +1.0
baz=125,SNR=17
Z26A **Caprock** 125.35 54 ⇑P PKPdf 04 28 44.7 +0.5
baz=125,SNR=6.6
126A **Clayton Basin,** 125.49 55 ⇑P PKPdf 04 28 45.3 +0.9
baz=126,SNR=9.6
226B **Tecolote Peak,** 125.52 56 ⇑P PKPdf 04 28 45.4 +0.9
baz=126,SNR=17
V27A **Dan Oppiter Fa** 125.53 51 ⇓P PKPdf 04 28 45.5 +1.1
baz=126
W27A **Bowe Ranch, En** 125.57 52 ⇓P PKPdf 04 28 45.7 +1.2
baz=126,SNR=13
T28A **Walsh** 125.63 49 ⇓P PKPdf 04 28 45.8 +1.2
baz=126,SNR=41
X27A **F and S Farms,** 125.66 52 ⇑P PKPdf 04 28 45.5 +0.8
baz=126,SNR=7.5
Y27A **Causey** 125.84 53 ⇓P PKPdf 04 28 46.2 +1.2
baz=126,SNR=30
326A **Caldwell Ranch** 125.86 57 ⇓P PKPdf 04 28 45.8 +0.7
baz=126,SNR=16
Z27A **Tatum** 125.96 54 ⇓P PKPdf 04 28 46.2 +0.9
baz=126,SNR=24
426A **McDonald Obser** 125.98 57 ⇓P PKPdf 04 28 46.4 +0.8
baz=126,SNR=5.8
V28A **Channing** 126.00 51 ⇑P PKPdf 04 28 46.6 +1.3
baz=126,SNR=16
127A **Arkansas Junct** 126.02 55 ⇓P PKPdf 04 28 46.2 +0.8
baz=126
526A **Mary Lane Ranc** 126.08 58 ⇓P PKPdf 04 28 46.8 +1.2
baz=126,SNR=30
MSTX **Muleshoe** 126.12 53 ⇓P PKPdf 04 28 46.9 +1.3
baz=126,SNR=18
626A **Big Bend Ranch** 126.16 59 ⇓P PKPdf 04 28 47.0 +1.2
baz=126,SNR=9.9
W28A **Vega** 126.17 52 ⇑P PKPdf 04 28 47.1 +1.4
baz=126,SNR=6.0
T29A **Hugoton** 126.23 49 ⇑P PKPdf 04 28 47.3 +1.6
baz=126,SNR=7.4
227A **Bennet, Jal** 126.25 56 ⇓P PKPdf 04 28 47.3 +1.4
baz=126
X28A **Dimmitt** 126.41 52 ⇑P PKPdf 04 28 47.7 +1.5
baz=126,SNR=14
527A **Woodward Ranch** 126.46 58 ⇓P PKPdf 04 28 47.8 +1.4
baz=126,SNR=38
427A **Hayter Ranch,** 126.46 57 ⇓P PKPdf 04 28 48.1 +1.7
baz=126,SNR=24
V29A **Stinnett** 126.50 51 ⇑P PKPdf 04 28 47.7 +1.5
baz=126,SNR=7.8
Y28A **McKinney Farm,** 126.56 53 ⇑P PKPdf 04 28 48.0 +1.5
baz=127,SNR=16
TXAR **Lajitas Array** 126.60 59 PKPpre PKPpre 04 28 36.5
TXAR PKP **PKiKP** 04 28 47.8 +0.7
TXAR SKPbc SKiKP 04 31 51.2 -19
TXAR PKKPbc **PKKPbc** 04 38 19.9 +1.5
TXAR **Lajitas Array** 126.60 59 PKhKP PKPpre 04 28 36.5
comp=Z,0.5nm,0.7s,baz=238,slow=2.2,SNR=4.7
TXAR PKP **PKiKP** 04 28 47.8 +0.7
comp=Z,7.1nm,0.7s,baz=255,slow=1.6,SNR=50
TXAR SKPbc SKiKP 04 31 51.2 -19
comp=Z,2.9nm,0.7s,baz=255,slow=2.3,SNR=9.3
TXAR PKKPbc **PKKPbc** 04 38 19.9 +1.5
comp=Z,1.3nm,0.9s,baz=117,slow=4.8,SNR=6.7
Z28A **Tucker Farm, M** 126.63 54 ⇓P PKPdf 04 28 47.0 +0.4
baz=127,SNR=5.4
W29A **Amarillo** 126.65 51 ⇑P PKPdf 04 28 47.7 +1.2
baz=127
ESDC **Sonseca Array** 126.68 315 PKP PKPdf 04 28 47.1 +0.7
ESDC SKPbc SKiKP 04 31 51.0 -19
ESDC **Sonseca Array** 126.68 315 PKP PKPdf 04 28 47.1 +0.7
comp=Z,4.3nm,0.7s,baz=19,slow=2.7,SNR=23
ESDC SKPbc SKiKP 04 31 51.0 -19
comp=Z,2.0nm,0.9s,baz=43,slow=3.1,SNR=4.7
AMTX **Amarillo** 126.70 52 ⇑P PKPdf 04 28 48.0 +1.3
baz=127
ECSD **EROS Data Cent** 126.72 40 *e*PKPdf PKPdf 04 28 46.4 +0.1
128A **Castleberry Fa** 126.74 55 ⇓P PKPdf 04 28 47.6 +0.8
baz=127,SNR=7.5
228A **UT Block 9, Go** 126.80 55 ⇓P PKPdf 04 28 47.9 +1.0
baz=127
BGNE **Belgrade** 126.80 43 ⇑P PKPdf 04 28 47.3 +0.8
baz=127
627A **Terlingua Ranc** 126.81 59 ⇑P PKPdf 04 28 48.1 +1.1
baz=127,SNR=20
328A **Wristen Ranch,** 126.81 56 ⇑P PKPdf 04 28 48.0 +1.0
baz=127,SNR=23
X29A **Tulia** 126.82 52 ⇓P PKPdf 04 28 47.8 +0.9
baz=127,SNR=8.0
T30A **Plains** 126.84 49 ⇑P PKPdf 04 28 48.3 +1.5
baz=127,SNR=9.8
U30A **WK&E Inc. Balk** 126.94 49 ⇓P PKPdf 04 28 48.4 +1.4
baz=127,SNR=12
Y29A **Porterfield Fa** 127.03 53 ⇓P PKPdf 04 28 49.2 +1.9
baz=127,SNR=25
428A **Kincaid Ranch,** 127.09 57 ⇓P PKPdf 04 28 49.1 +1.6
baz=127,SNR=16
528A **Cox Ranch, San** 127.14 58 ⇑P PKPdf 04 28 49.1 +1.4
baz=127,SNR=11
V30A **Spur Ranch, Mi** 127.17 50 ⇑P PKPdf 04 28 49.2 +1.7
baz=127
Z29A **Hungry Hill Ra** 127.18 54 ⇑P PKPdf 04 28 48.9 +1.3
baz=127,SNR=22
628A **Black Gap, Mar** 127.22 59 ⇓P PKPdf 04 28 49.1 +1.4
baz=127,SNR=13
129A **Stewart Farms,** 127.24 55 ⇓P PKPdf 04 28 48.9 +1.2
baz=127,SNR=12
TOA0 **Torodi Ar. Sit** 127.27 281 *e*PKPdf PKPdf 04 28 47.4 -0.8
TORD **Torodi Ar. Bea** 127.27 281 PKP PKPdf 04 28 47.8 -0.3
TORD PKKPbc PKKPdf 04 38 15.1 -46
TORD **Torodi Ar. Bea** 127.27 281 PKP PKPdf 04 28 47.8 -0.3
comp=Z,22nm,0.6s,baz=64,slow=1.7,SNR=131
TORD PKKPbc PKKPdf 04 38 15.1 -46
comp=Z,1.3nm,0.9s,baz=283,slow=2.1,SNR=5.2
EYMN **Ely** 127.44 33 *e*PKPdf PKPdf 04 28 47.2 -0.3
W30A **Crocket Farms** 127.46 51 ⇓P PKPdf 04 28 49.5 +1.5
baz=128
T31A **Mandall Ranch,** 127.46 48 ⇑P PKPdf 04 28 49.3 +1.3
baz=127,SNR=6.4
329A **Wagon Wheel Ra** 127.47 56 ⇑P PKPdf 04 28 49.5 +1.3
baz=128,SNR=21
X30A **Coker Ranch, T** 127.47 52 ⇓P PKPdf 04 28 49.8 +1.7
baz=128,SNR=20
229A **Bryant Ranch,** 127.47 55 ⇑P PKPdf 04 28 49.3 +1.2
baz=128,SNR=7.5
U31A **Nine Bar Ranch** 127.60 49 ⇓P PKPdf 04 28 50.0 +1.8
baz=128,SNR=7.0
529A **Stev Forest Ra** 127.63 58 ⇑P PKPdf 04 28 49.6 +1.1
baz=128,SNR=18
Y30A **Stafford Cattl** 127.63 53 ⇑P PKPdf 04 28 50.4 +1.9
baz=128,SNR=17
Z30A **Sanderson Ranc** 127.64 53 ⇑P PKPdf 04 28 49.4 +0.9
baz=128,SNR=9.7
PBRG **Braganca** 127.65 318 *e*PKPdf PKPdf 04 28 48.8 +0.6
429A **Davenport Ranc** 127.77 57 ⇑P PKPdf 04 28 50.2 +1.4
baz=128,SNR=15
V31A **Spring Creek L** 127.82 50 ⇑P PKPdf 04 28 50.7 +2.0
baz=128,SNR=11
W31A **Holland Ranch,** 127.94 51 ⇓P PKPdf 04 28 50.9 +2.0
baz=128,SNR=20
130A **Snyder** 127.97 54 ⇓P PKPdf 04 28 50.2 +1.1
baz=128
230A **Sterling City** 128.06 55 ⇑P PKPdf 04 28 50.7 +1.4
baz=128,SNR=5.2
X31A **McDonald Ranch** 128.11 51 ⇓P PKPdf 04 28 50.9 +1.6
baz=128,SNR=17
Y31A **Rekieta Farm,** 128.11 52 ⇑P PKPdf 04 28 50.3 +1.0
baz=128
MVO **Moncorvo** 128.14 318 *e*PKPdf PKPdf 04 28 50.5 +1.3
MVO *i* P 04 31 56.4
330A **Mertzon** 128.15 56 ⇑P PKPdf 04 28 50.1 +0.7
baz=128,SNR=12
430A **Baggett Ranch,** 128.27 57 ⇓P PKPdf 04 28 51.2 +1.5
baz=128,SNR=29
SPMN **St. Paul** 128.27 36 ⇓P PKPdf 04 28 49.8 +0.6
baz=128
530A **J-C Ranch, Com** 128.36 57 ⇑P PKPdf 04 28 51.5 +1.6
baz=128,SNR=14
Z31A **Sharp Cattle R** 128.41 53 ⇑P PKPdf 04 28 51.2 +1.3
baz=128,SNR=7.9
131A **Roby** 128.41 54 ⇑P PKPdf 04 28 51.1 +1.2
baz=128
PVRL **Vila Real** 128.54 318 *e*PKPdf PKPdf 04 28 51.2 +1.3
POLO **Lamas de Olo** 128.55 318 *e*PKPdf PKPdf 04 28 51.2 +1.2
PGAV **Gavieira, Arco** 128.57 319 *e*PKPdf PKPdf 04 28 51.2 +1.2
231A **Bronte** 128.70 55 ⇑P PKPdf 04 28 51.8 +1.3
baz=129,SNR=13
Y32A **R-V Farms, Ver** 128.74 52 ⇓P PKPdf 04 28 51.4 +1.0
baz=129
331A **San Angelo** 128.79 56 ⇑P PKPdf 04 28 52.1 +1.4
baz=129,SNR=19
431A **Sonora** 128.82 56 ⇑P PKPdf 04 28 51.8 +1.0
baz=129,SNR=16
MTE **Manteigas** 128.84 317 *e*PKPdf PKPdf 04 28 51.6 +1.1
MTE *i* P PP 04 31 58.3 +60
KSU1 **Kansas State U** 128.87 45 *e*PKPdf PKPdf 04 28 50.7 +0.2
KSU1 *e*SKP 04 31 58.3
PVIS **Viseu** 128.93 317 *e*PKPdf PKPdf 04 28 51.6 +0.9
PVIS *i* P PP 04 31 58.9 +60
Z32A **Haskell** 128.94 53 ⇑P PKPdf 04 28 52.2 +1.3
baz=129,SNR=20
PLCA **Paso Flores** 128.96 162 PKPpre PKPpre 04 28 38.2
PLCA *e*PKPdf PKPdf 04 28 51.2 +0.3
PLCA PKP PKiKP 04 28 51.8 +0.3
PLCA **Paso Flores** 128.96 162 PKhKP PKPpre 04 28 38.2
comp=Z,0.6nm,0.3s,baz=340,slow=4.4,SNR=4.6
PLCA PKP **PKiKP** 04 28 51.8 +0.3
comp=Z,27nm,0.9s,baz=203,slow=3.2,SNR=41
WMOK **Wichita Mounta** 129.00 51 *e*PKIKP PKPdf 04 28 51.1 +0.2
WMOK **Wichita Mounta** 129.00 51 *e*PKPdf PKPdf 04 28 51.1 +0.2
531A **Rocksprings** 129.02 57 ⇑P PKPdf 04 28 52.9 +1.7
baz=129,SNR=17
ABTX **Abilene, Hawle** 129.03 54 ⇓P PKPdf 04 28 52.5 +1.4
baz=129,SNR=7.4
PCBR **Castelo Branco** 129.05 316 *e*PKPdf PKPdf 04 28 51.7 +0.9
PCBR *i* P PP 04 31 59.1 +59
PMRV **Marv??o** 129.18 316 *e*PKPdf PKPdf 04 28 52.5 +1.4
PMRV *i* P PP 04 31 59.3 +58
PTO **Porto** 129.19 318 *e*PKPdf PKPdf 04 28 51.8 +0.8
631A **Perdido Creek** 129.20 58 ⇑P PKPdf 04 28 53.0 +1.5
baz=129,SNR=9.6
232A **Coleman** 129.25 55 ⇓P PKPdf 04 28 52.9 +1.4
baz=129,SNR=13
332A **Millersview** 129.33 55 ⇓P PKPdf 04 28 53.2 +1.5
baz=129,SNR=11
432A **Menard** 129.44 56 ⇑P PKPdf 04 28 53.3 +1.4
baz=129,SNR=9.2
JCT **Junction City** 129.55 56 *e*PKIKP PKPdf 04 28 52.6 +0.4
JCT **Junction City** 129.55 56 *e*PKPdf PKPdf 04 28 52.5 +0.4
JCT *e*SKP 04 32 01.1
532A **Rocksprings** 129.56 57 ⇓P PKPdf 04 28 53.5 +1.3
baz=130,SNR=12
PESTR **Estremoz** 129.57 315 *e*PKPdf PKPdf 04 28 52.5 +0.6
PESTR *i* P PP 04 32 00.4 +57
MDT **Midelt** 129.69 307 SKPbc SKPab 04 31 59.5 -1.5
PTOM **Tomar** 129.79 316 *e*PKPdf PKPdf 04 28 52.9 +0.7
PTOM *i* P PP 04 32 00.4 +56
SCIA **State Center** 129.80 40 *e*PKPdf PKPdf 04 28 52.3 +0.1
632A **Uvalde** 129.83 58 ⇓P PKPdf 04 28 54.7 +2.0
baz=130,SNR=21
COWI **Conover** 129.84 33 *e*PKPdf PKPdf 04 28 52.2 0.0
COWI *e*SKP 04 31 59.7
732A **Laxson Ranch,** 129.89 59 ⇓P PKPdf 04 28 54.7 +1.9
baz=130,SNR=11
PMTG **Montargil** 129.92 316 *e*PKPdf PKPdf 04 28 52.7 +0.2
PMTG *i* P PP 04 32 01.9 +56
EVO **Evora** 130.01 315 *e*PKIKP PKPdf 04 28 54.1 +1.4
comp=Z,30nm,0.9s
EVO **Evora** 130.01 315 *e*PKPdf PKPdf 04 28 54.6 +1.9
EVO *i* P PP 04 32 01.4 +55
EVOP **Sao Brissos** 130.09 315 *e*PKIKP PKPdf 04 28 54.1 +1.3
EVOP **Sao Brissos** 130.09 315 *e*PKPdf PKPdf 04 28 54.1 +1.3
PBEJ **Beja** 130.13 314 *e*PKPdf PKPdf 04 28 53.8 +0.8
PBEJ *i* P PP 04 32 01.4 +54
PCVE **Castro Verde** 130.43 314 *e*PKPdf PKPdf 04 28 54.7 +1.2
PCVE *i* P PP 04 32 03.3 +54
PBDV **Barranco-do-Ve** 130.52 313 *e*PKPdf PKPdf 04 28 55.5 +1.7
PBDV *i* P PP 04 32 03.7 +54
PNCL **Nicolau / Gran** 130.56 315 *e*PKPdf PKPdf 04 28 54.3 +0.6
PNCL *i* P PP 04 32 03.5 +54
PMAFR **Mafra** 130.70 316 *e*PKPdf PKPdf 04 28 56.0 +2.0
PTEO **Sao Teotonio** 130.96 314 *e*PKPdf PKPdf 04 28 56.3 +1.8
PTEO *i* P PP 04 32 04.9 +52
WHTX **Lake Whitney** 130.98 54 ⇑P PKPdf 04 28 56.3 +1.6
baz=131
MORF **Marmelete** 131.01 314 *e*PKPdf PKPdf 04 28 55.9 +1.2
MORF *i* P PP 04 32 05.2 +52
PFVI **Vila Bisbo** 131.21 314 *e*PKPdf PKPdf 04 28 55.8 +0.8
RFTA **Plano** 131.24 52 *e*PKPdf PKPdf 04 28 56.5 +1.3
SCHQ **Schefferville** 131.25 12 PKPpre PKPpre 04 28 47.9
SCHQ PKP **PKiKP** 04 28 55.3 -0.3
SCHQ SKPbc **SKPbc** 04 32 04.8 -1.6
SCHQ **Schefferville** 131.25 12 PKhKP PKPpre 04 28 47.9
comp=Z,4.3nm,0.9s,baz=283,slow=14,SNR=5.9
SCHQ PKP **PKiKP** 04 28 55.3 -0.3
comp=Z,20nm,0.8s,baz=358,slow=2.0,SNR=22
SCHQ SKPbc **SKPbc** 04 32 04.8 -1.6
comp=Z,46nm,0.9s,baz=0.4,slow=4.5,SNR=18
HDIL **Hopedale** 133.02 40 *e*PKPdf PKPdf 04 28 59.1 +0.8
HDIL *e*SKPbc **SKPbc** 04 32 11.8 -1.2
MIAR **Mount Ida** 133.02 49 *e*PKIKP PKPdf 04 28 59.7 +1.2
MIAR **Mount Ida** 133.02 49 *e*PKPdf PKPdf 04 28 59.7 +1.2
MIAR *e*SKPbc **SKPbc** 04 32 13.3 -1.1
GLMI **Grayling** 133.09 32 *e*PKPdf PKPdf 04 28 58.8 +0.5
DBIC **Dimbokro** 133.55 272 PKPpre PKPpre 04 28 48.1
DBIC PKP **PKPdf** 04 29 00.3 +0.2
DBIC SKPbc **SKPbc** 04 32 14.5 -1.1
DBIC **Dimbokro** 133.55 272 PKhKP PKPpre 04 28 48.1
comp=Z,2.7nm,0.7s,baz=141,slow=12,SNR=3.6
DBIC PKP **PKPdf** 04 29 00.3 +0.2
comp=Z,19nm,0.5s,baz=76,slow=2.1,SNR=41
DBIC SKPbc **SKPbc** 04 32 14.5 -1.1
comp=Z,10nm,0.6s,baz=95,slow=2.5,SNR=7.2
TRQA **Tornquist** 133.68 169 *e*PKPdf PKPdf 04 29 00.4 +0.7
TRQA *e*SKPbc **SKPbc** 04 32 14.6 -0.8
LIC **Lamto** 133.69 271 ⇑*i*PKIKP PKPdf 04 29 00.2 -0.1
comp=Z,50nm,0.5s
LIC **Lamto** 133.69 271 ⇑*i*PKPdf PKPdf 04 29 00.2 -0.1
SFIN **Scholer Farm** 134.49 38 ⇓P PKPdf 04 29 02.2 +1.1
baz=134
PARMO **Parma** 134.80 44 *e*PKPdf PKPdf 04 29 01.5 -0.3
PARMO *e*SKPbc **SKPbc** 04 32 18.4 -0.6
GNAR **Gosnell** 134.96 45 *e*PKPdf PKPdf 04 29 03.4 +1.3
AAM **Ann Arbor** 135.30 34 *e*PKIKP PKPdf 04 29 02.7 +0.2
AAM **Ann Arbor** 135.30 34 *e*PKPdf PKPdf 04 29 02.7 +0.2
AAM *e*SKPbc **SKPbc** 04 32 19.8 -0.6
SADO **Sadowa** 135.85 28 SKPbc **SKPbc** 04 32 21.1 -1.0
SADO **Sadowa** 135.85 28 SKPbc **SKPbc** 04 32 21.1 -1.0
comp=Z,43nm,0.8s,baz=332,slow=4.5,SNR=36
OXF **Oxford** 136.10 47 *e*PKHKP PKPpre 04 28 55.1
OXF *e* 04 29 04.5
OXF **Oxford** 136.10 47 *e*PKPpre PKPpre 04 28 55.1
OXF *e*PKPdf **PKPdf** 04 29 04.5 +0.3
OXF *e*SKPbc **SKPbc** 04 32 22.2 -0.9
WCI **Wyandotte Cave** 136.26 40 *e*PKHKP PKPpre 04 28 54.0
WCI *e* 04 29 05.2
WCI **Wyandotte Cave** 136.26 40 *e*PKPpre PKPpre 04 28 54.0
WCI *e*PKPdf **PKPdf** 04 29 05.2 +0.7

WCI					*e*SKPbc	**SKPbc**	**04 32 22.2**	**-1.3**
VBMS	**Vicksburg**	**136.33**	**50**		*e*PKPdf	**PKPdf**	**04 29 05.2**	**+0.4**
VBMS					*e*SKPbc	**SKPbc**	**04 32 24.0**	**+0.1**
WVT	**Waverly**	**136.40**	**44**		*e*PKHKP	PKPpre	04 28 56.2	
WVT					*e*		04 29 04.4	
WVT	**Waverly**	**136.40**	**44**		*e*PKPpre	PKPpre	04 28 56.2	
WVT					*e*PKPdf	**PKPdf**	**04 29 04.4**	**-0.3**
WVT					*e*SKPbc	**SKPbc**	**04 32 22.9**	**-1.1**
CMIG	**Matias Romero**	**136.80**	**73**		PKPpre	PKPpre	04 28 57.3	
CMIG					PKP	**PKPdf**	**04 29 05.7**	**-0.3**
CMIG					SKPbc	**SKPbc**	**04 32 26.3**	**+0.6**
CMIG	**Matias Romero**	**136.80**	**73**		PKhKP	PKPpre	04 28 57.3	
	comp=Z,2.0nm,0.6s,baz=295,slow=5.3,SNR=5.0							
CMIG					PKP	**PKPdf**	**04 29 05.7**	**-0.3**
	comp=Z,11nm,0.7s,baz=311,slow=1.9,SNR=19							
CMIG					SKPbc	**SKPbc**	**04 32 26.3**	**+0.6**
	comp=Z,8.2nm,0.9s,baz=283,slow=2.5,SNR=10							
ACSO	**Alum Creek Sta**	**137.04**	**36**		*e*PKPpre	PKPpre	04 28 55.9	
ACSO					*e*PKPdf	**PKPdf**	**04 29 05.8**	**0.0**
ACSO					*e*SKPbc	**SKPbc**	**04 32 24.3**	**-1.5**
ERPA	**Erie**	**137.39**	**31**		*e*PKPdf	**PKPdf**	**04 29 06.5**	**+0.1**
ERPA					*e*SKPbc	**SKPbc**	**04 32 25.3**	**-1.4**
ERPA					*e*SKPab	**SKPab**	**04 32 32.8**	**-1.1**
MSNY	**Massena**	**137.56**	**24**		*e*PKPpre	PKPpre	04 28 58.2	
MSNY					*e*PKPdf	**PKPdf**	**04 29 06.8**	**+0.2**
MSNY					*e*SKPbc	**SKPbc**	**04 32 25.6**	**-1.5**
LONY	**Lake Ozonia**	**137.98**	**25**		*e*PKPpre	PKPpre	04 28 58.6	
LONY					*e*PKPdf	**PKPdf**	**04 29 07.5**	**0.0**
LONY					*e*SKPbc	**SKPbc**	**04 32 26.9**	**-1.5**
CFAA	**Coronel Fontan**	**138.03**	**159**		PKPpre	PKPpre	04 28 58.6	
CFAA					PKP	**PKPdf**	**04 29 08.4**	**+0.4**
CFAA					PP	**PP**	**04 31 56.8**	**+0.6**
CFAA					SKPbc	**SKPbc**	**04 32 28.0**	**-1.0**
CFAA	**Coronel Fontan**	**138.03**	**159**		PKhKP	PKPpre	04 28 58.6	
	comp=Z,0.9nm,0.4s,baz=220,slow=4.5,SNR=22							
CFAA					PKP	**PKPdf**	**04 29 08.4**	**+0.4**
	comp=Z,5.6nm,0.5s,baz=228,slow=2.9,SNR=30							
CFAA					PP	**PP**	**04 31 56.8**	**+0.6**
	comp=Z,1.3nm,1.2s,baz=235,slow=3.1,SNR=5.9							
CFAA					SKPbc	**SKPbc**	**04 32 28.0**	**-1.0**
	baz=218,slow=6.3							
SWET	**Sewanee**	**138.19**	**44**		*e*PKPdf	**PKPdf**	**04 29 07.8**	**-0.4**
SWET					*e*SKPbc	**SKPbc**	**04 32 27.6**	**-1.7**
SWET					*e*SKPab	**SKPab**	**04 32 39.4**	**+1.5**
FRNY	**Flat Rock**	**138.20**	**23**		*e*PKPdf	**PKPdf**	**04 29 07.7**	**-0.2**
FRNY					*e*SKPbc	**SKPbc**	**04 32 27.6**	**-1.3**
LRAL	**Lakeview Retre**	**138.58**	**47**		*e*PKPpre	PKPpre	04 28 59.5	
LRAL					*e*PKPdf	**PKPdf**	**04 29 09.3**	**+0.5**
LRAL					*e*SKPbc	**SKPbc**	**04 32 29.5**	**-0.9**
NCB	**Newcomb**	**138.66**	**25**		*e*PKPpre	PKPpre	04 29 00.1	
NCB					*e*PKPdf	**PKPdf**	**04 29 09.6**	**+0.8**
NCB					*e*SKP		04 32 28.9	
CPCT	**Cooper Cave**	**139.02**	**42**		*e*PKPdf	**PKPdf**	**04 29 09.6**	**0.0**
CPCT					*e*SKP		04 32 30.3	
MDV	**Middlebury**	**139.06**	**24**		*e*PKPpre	PKPpre	04 29 03.8	
MDV					*e*PKPdf	**PKPdf**	**04 29 09.8**	**+0.3**
MDV					*e*SKP		04 32 30.6	
LCO	**Las Campanas**	**139.34**	**154**		*e*PKPpre	PKPpre	04 29 02.3	
LCO					*e*SKP		04 32 31.8	
ACCN	**Adirondack Com**	**139.37**	**25**		*e*PKPdf	**PKPdf**	**04 29 11.3**	**+1.3**
ACCN					*e*SKPdf	**SKPdf**	**04 32 30.9**	**-0.8**
TKL	**Tuckaleechee C**	**139.39**	**42**		PKPpre	PKPpre	04 29 02.2	
TKL					*e*PKPpre	PKPpre	04 29 02.6	
TKL					PKP	**PKPdf**	**04 29 10.7**	**+0.4**
TKL					*e*PKPdf	**PKiKP**	**04 29 10.9**	**-1.8**
TKL					*e*SKP		04 32 31.7	
TKL					SKPbc	**SKPbc**	**04 32 31.9**	**-0.7**
TKL					*e*SKPab	**SKPab**	**04 32 42.5**	**-0.6**
TKL	**Tuckaleechee C**	**139.39**	**42**		PKhKP	PKPpre	04 29 02.2	
	comp=Z,7.1nm,0.7s,baz=176,slow=4.6,SNR=7.0							
TKL					PKP	**PKPdf**	**04 29 10.7**	**+0.4**
	comp=Z,34nm,0.6s,baz=146,slow=3.0,SNR=23							
TKL					SKPbc	**SKPbc**	**04 32 31.9**	**-0.7**
	comp=Z,11nm,0.6s,baz=191,slow=3.1,SNR=9.9							
SSPA	**Standing Stone**	**139.55**	**31**		*e*PKPpre	PKPpre	04 29 01.7	
SSPA					*e*PKPdf	**PKPdf**	**04 29 10.5**	**0.0**
SSPA					*e*SKP		04 32 31.3	
WVL	**Waterville**	**139.88**	**20**		*e*PKPpre	PKPpre	04 29 06.6	
WVL					*e*PKPdf	**PKPdf**	**04 29 11.1**	**+0.2**
WVL					*e*SKPdf	**SKPdf**	**04 32 32.4**	**-0.1**
BLA	**Blacksburg**	**140.54**	**37**		*e*PKHKP	PKPpre	04 29 05.2	
BLA	**Blacksburg**	**140.54**	**37**		*e*PKPpre	PKPpre	04 29 05.2	
BLA					*e*SKPdf	**SKPdf**	**04 32 34.5**	**+0.5**
QUA2	**Belchertown**	**140.83**	**25**		*e*PKPpre	PKPpre	04 29 05.6	
QUA2					*e*PKPdf	**PKPdf**	**04 29 13.4**	**+0.7**
QUA2					*e*SKPdf	**SKPbc**	**04 32 35.8**	**-0.4**
QUA2					*e*SKPab	**SKPab**	**04 32 48.5**	**-0.6**
WES	**Weston**	**141.15**	**23**		*e*PKIKP	**PKPdf**	**04 29 13.6**	**+0.3**
WES	**Weston**	**141.15**	**23**		*e*PKPdf	**PKPdf**	**04 29 13.6**	**+0.3**
WES					*e*SKPdf	**SKPbc**	**04 32 36.9**	**-0.1**
PAL	**Palisades**	**141.19**	**27**		*e*PKHKP	PKPpre	04 29 07.7	
PAL					*e*		04 29 13.6	
PAL	**Palisades**	**141.19**	**27**		*e*PKPpre	PKPpre	04 29 07.7	
PAL					*e*PKPdf	**PKPdf**	**04 29 13.6**	**+0.2**
PAL					*e*SKPbc	**SKPbc**	**04 32 36.0**	**-1.1**
CBN	**Corbin**	**141.60**	**33**		*e*PKPpre	PKPpre	04 29 09.0	
CBN					*e*PKPdf	**PKPdf**	**04 29 15.2**	**+1.1**
JSC	**Jenkinsville**	**141.87**	**41**		*e*PKHKP	PKPpre	04 29 10.2	
JSC					*e*		04 29 14.6	
JSC	**Jenkinsville**	**141.87**	**41**		*e*PKPpre	PKPpre	04 29 10.2	
JSC					*e*PKPdf	**PKPdf**	**04 29 14.6**	**-0.2**
JSC					*e*SKPdf	**SKPbc**	**04 32 38.4**	**-0.7**
JSC					*e*SKPab	**SKPab**	**04 32 54.1**	**0.0**
TEIG	**Tepich**	**142.38**	**67**		PKP	**PKPdf**	**04 29 16.8**	**+0.7**
TEIG					SKPbc	**SKPbc**	**04 32 40.6**	**-0.2**
TEIG	**Tepich**	**142.38**	**67**		PKP	**PKPdf**	**04 29 16.7**	**+0.7**
	comp=Z,13nm,0.8s,baz=20,slow=5.4,SNR=5.9							
TEIG					SKPbc	**SKPbc**	**04 32 40.6**	**-0.2**
	comp=Z,15nm,0.9s,baz=136,slow=2.1,SNR=6.9							
CNNC	**Cliffs of the**	**143.37**	**37**		*e*PKPdf	PKPbc	04 29 14.6	-0.4
TGUH	**Tegucigalpa,Un**	**144.46**	**76**		*e*PKPdf	**PKPdf**	**04 29 19.5**	**-0.3**
BBTS	**Babate**	**144.82**	**285**		PKP	**PKPdf**	**04 29 20.4**	**-0.1**
BBTS	**Babate**	**144.82**	**285**		PKP	**PKPdf**	**04 29 20.4**	**-0.1**
	comp=Z,48nm,0.9s,baz=42,slow=1.5,SNR=9.2							
DWPF	**Disney**	**145.19**	**50**		*e*PKPdf	**PKPab**	**04 29 21.1**	**+0.2**
LVC	**Limon Verde**	**145.65**	**151**		*e*PKPbc	**PKPab**	**04 29 24.2**	**+1.2**
CPUP	**Villa Florida**	**145.94**	**171**		PKPbc	**PKPbc**	**04 29 23.0**	**0.0**
CPUP					SKPbc	**SKPbc**	**04 32 48.4**	**-0.7**
CPUP	**Villa Florida**	**145.94**	**171**		PKPbc	**PKPbc**	**04 29 23.0**	**0.0**
	comp=Z,35nm,0.5s,baz=172,slow=2.1,SNR=230							
CPUP					SKPbc	**SKPbc**	**04 32 48.4**	**-0.7**
	comp=Z,9.6nm,0.8s,baz=131,slow=2.4,SNR=3.3							
JTS	**JuntasAbangare**	**147.01**	**83**		*e*PKPdf	**PKPdf**	**04 29 24.1**	**-0.2**
JTS					PKPbc	**PKPbc**	**04 29 27.2**	**+0.6**
JTS					*e*PKPbc	**PKPab**	**04 29 27.5**	**-0.8**
JTS	**JuntasAbangare**	**147.01**	**83**		PKPbc	**PKPbc**	**04 29 27.2**	**+0.6**
	comp=Z,89nm,0.8s,baz=314,slow=2.7,SNR=54							
NNA	**Nana**	**148.37**	**127**		*e*PKPdf	**PKPdf**	**04 29 27.9**	**+1.3**
NNA					*e*PKPbc	**PKiKP**	**04 29 31.4**	**-0.4**
NNA					PKPbc	**PKPbc**	**04 29 31.5**	**+1.3**
NNA	**Nana**	**148.37**	**127**		PKPbc	**PKPbc**	**04 29 31.5**	**+1.3**
	comp=Z,133nm,0.8s,baz=257,slow=6.0,SNR=44							
SPB	**Sao Paulo**	**148.83**	**188**		*e*PKPbc	**PKPbc**	**04 29 31.9**	**+0.8**
CAM4	**Nova Friburgo**	**149.03**	**197**		*i* P	**PKPbc**	**04 29 32.3**	**+0.4**
CAM4					*i*		04 29 35.2	
CAM4					*i*		04 29 37.4	
CAM4					*i*		04 29 39.6	
CAM4					*i*		04 29 47.2	
CAM4					*i*		04 30 00.7	
CAM4					*i*		04 30 19.8	
CAM4					*i*		04 30 46.0	
ATAH	**Atahualpa**	**149.65**	**118**		PKP	**PKPbc**	**04 29 31.9**	**-2.0**
ATAH					PKPbc	**PKiKP**	**04 29 36.5**	**+1.7**
ATAH	**Atahualpa**	**149.65**	**118**		PKP	**PKPbc**	**04 29 31.9**	**-2.0**
	comp=Z,172nm,0.8s,baz=317,slow=0.3,SNR=14							
ATAH					PKPbc	**PKiKP**	**04 29 36.5**	**+1.7**
	comp=Z,167nm,0.8s,baz=229,slow=1.9,SNR=33							
LPAZ	**La Paz**	**151.30**	**145**		*e*PKPdf	**PKPdf**	**04 29 33.1**	**+1.2**
LPAZ					PKP	**PKPdf**	**04 29 33.2**	**+1.3**
LPAZ					PKPbc	**PKiKP**	**04 29 38.7**	**+0.3**
LPAZ					*e*PKPbc	PKPab	04 29 39.1	-7.2
LPAZ					*e*PKPab	PKPab	04 29 48.2	+1.8
LPAZ					PKPab	PKPab	04 29 48.8	+2.5
LPAZ	**La Paz**	**151.30**	**145**		PKP	**PKPdf**	**04 29 33.2**	**+1.3**
	comp=Z,14nm,1.1s,baz=252,slow=0.6,SNR=27							
LPAZ					PKPbc	**PKiKP**	**04 29 38.7**	**+0.3**
	comp=Z,76nm,0.4s,baz=56,slow=3.3,SNR=242							
LPAZ					PKPab	**PKPab**	**04 29 48.8**	**+2.5**
	comp=Z,132nm,0.8s,baz=198,slow=4.3,SNR=19							
BCIP	**Isla Barro Col**	**152.09**	**85**		*e*PKPbc	**PKPbc**	**04 29 39.2**	**+0.1**
OTAV	**Otavalo**	**152.35**	**104**		*e*PKPdf	**PKPdf**	**04 29 33.9**	**+0.5**
OTAV					*e*PKPbc	**PKiKP**	**04 29 41.2**	**+0.7**
OTAV					*e*PKPab	**PKPab**	**04 29 52.6**	**+1.8**
SIV	**San Ignacio**	**154.88**	**158**		PKP	**PKPdf**	**04 29 37.2**	**+0.9**
SIV					PKPbc	**PKiKP**	**04 29 45.8**	**+0.7**
SIV					PKPab	**PKPab**	**04 30 01.9**	**+1.2**
SIV	**San Ignacio**	**154.88**	**158**		PKP	**PKPdf**	**04 29 37.2**	**+0.9**
	comp=Z,15nm,0.8s,baz=219,slow=1.4,SNR=54							
SIV					PKPbc	**PKiKP**	**04 29 45.8**	**+0.7**
	comp=Z,18nm,0.8s,baz=218,slow=2.8,SNR=18							
SIV					PKPab	**PKPab**	**04 30 01.9**	**+1.2**
	comp=Z,42nm,0.8s,baz=225,slow=5.3,SNR=24							
BDFB	**Brasilia**	**156.74**	**189**		PKP	**PKPdf**	**04 29 39.1**	**+0.2**
BDFB					PKPab	**PKPab**	**04 30 09.4**	**+0.7**
BDFB	**Brasilia**	**156.74**	**189**		PKP	**PKPdf**	**04 29 39.1**	**+0.2**
	comp=Z,12nm,0.8s,baz=165,slow=3.6,SNR=19							
BDFB					PKPab	**PKPab**	**04 30 09.4**	**+0.7**
	comp=Z,18nm,0.9s,baz=116,slow=1.1,SNR=8.3							
ROSC	**El Rosal**	**157.32**	**95**		*e*PKPdf	**PKPdf**	**04 29 40.6**	**+0.5**
ROSC					PKP	**PKPdf**	**04 29 41.0**	**+0.9**
ROSC					PKPab	**PKPab**	**04 30 14.8**	**+2.8**
ROSC					*e*PKPab	PKPab	04 30 15.5	+3.5
ROSC	**El Rosal**	**157.32**	**95**		PKP	**PKPdf**	**04 29 41.0**	**+0.9**
	comp=Z,16nm,0.7s,baz=180,slow=4.7,SNR=16							
ROSC					PKPab	**PKPab**	**04 30 14.8**	**+2.8**
	comp=Z,40nm,0.6s,baz=180,slow=1.9,SNR=19							
RCBR	**Riachuelo**	**159.44**	**230**		*e*PKPab	**PKPab**	**04 30 21.6**	**+1.0**
RCBR	**Riachuelo**	**159.44**	**230**		PKPab	**PKPab**	**04 30 22.6**	**+2.0**
	comp=Z,47nm,0.8s,baz=132,slow=5.0,SNR=25							
SAML	**Samuel**	**160.04**	**145**		*e*PKPdf	**PKPdf**	**04 29 43.5**	**+0.8**
SAML					*e*PKPab	**PKPab**	**04 30 23.6**	**+0.6**
SDV	**Santo Domingo**	**161.18**	**84**		*e*PKPdf	**PKPdf**	**04 29 44.8**	**+0.6**
LRS	**Lares**	**161.74**	**53**		*e*PKPdf	**PKPdf**	**04 29 43.6**	**-0.9**
CELP	**Cerrillos**	**162.07**	**53**		*e*PKPdf	**PKPdf**	**04 29 44.3**	**-0.5**
CELP					*e*PKPab	**PKPab**	**04 30 32.8**	**+0.9**
SJG	**San Juan**	**162.39**	**52**		*e*PKPdf	**PKPdf**	**04 29 44.7**	**-0.4**
SJG					PKP	**PKPdf**	**04 29 45.0**	**-0.1**
SJG					*e*PKPab	**PKPab**	**04 30 33.7**	**+0.4**
SJG	**San Juan**	**162.39**	**52**		PKP	**PKPdf**	**04 29 44.9**	**-0.1**
	comp=Z,39nm,1.0s,baz=38,slow=4.1,SNR=9.2							
SJG					PKPab	**PKPab**	**04 30 33.7**	**+0.4**
	comp=Z,55nm,1.1s,baz=330,slow=3.3,SNR=6.7							

*CSEM **17** 04:21:23.8±0.2, 37.38N×26.98E, h8km, MD2.7, Error ellipse: s-maj=5.4km s-min=3.5km az=64.0*
*DDA **17** 04:21:24.0, 37.39N×27.00E, h7km, MD2.7*

ISK 17 04:21:23.3, 37.39N×26.97E, h9km, MD3.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.38**	**34**	*i*	P	Pg	04 21 31.0	+0.3
GCAM				*i*	S	Sg	04 21 36.6	+0.9
GCAM	**G?zelcaml?**	**0.38**	**34**	*i*	P	Pg	04 21 31.0	+0.3
GCAM				*i*	S	Sg	04 21 36.6	+0.9
BODT	**Bodrum**	**0.43**	**140**	*e*	PG	Pg	04 21 31.6	-0.1
BODT				*e*	SG	Sb	04 21 38.6	-1.0
BODT	**Bodrum**	**0.43**	**140**	*e*	Pg	Pg	04 21 31.6	-0.1
BODT				*e*	Sg	Sb	04 21 38.6	-1.0
BDRM	**Kayabasi**	**0.50**	**130**	*e*	P	Pg	04 20 52.1	-41
BDRM				*e*	S	Sg	04 20 59.3	-40
MLSB	**Milas**	**0.65**	**98**	*e*	PG	Pb	04 21 37.0	+0.1
MLSB	**Milas**	**0.65**	**98**	*e*	Pg	Pb	04 21 37.0	+0.1
AYDN	**Tasoluk**	**0.78**	**69**	*e*	P	Pg	04 21 37.8	-0.6
AYDN				*e*	S	Sg	04 21 48.5	-0.1
AYDN	**Tasoluk**	**0.78**	**69**	*e*	P	Pg	04 21 37.8	-0.6
AYDN				*e*	S	Sg	04 21 48.5	-0.1
BLCB	**Balcova**	**1.00**	**3**	*e*	PG	Pg	04 21 42.2	-0.3
BLCB	**Balcova**	**1.00**	**3**	*e*	Pg	Pg	04 21 42.2	-0.3
URLA	**Izmir**	**1.01**	**343**	*e*	P	Pb	04 21 43.4	+0.3
URLA				*e*	S	Sn	04 21 58.5	+0.3
URLA	**Izmir**	**1.01**	**343**	*e*	P	Pb	04 21 43.4	+0.3
URLA				*e*	S	Sn	04 21 58.5	+0.3
IZM	**Izmir**	**1.03**	**13**	*e*	PG	Pg	04 21 43.4	+0.1
IZM				*e*	SG	Sn	04 21 58.9	+0.1
IZM	**Izmir**	**1.03**	**13**	*e*	Pg	Pb	04 21 43.4	-0.1
IZM				*e*	Sg	Sn	04 21 58.9	+0.2
YER	**Yerkesik**	**1.08**	**103**	*e*	PN	Pn	04 21 44.6	-0.1
YER	**Yerkesik**	**1.08**	**103**	*e*	Pn	Pn	04 21 44.6	-0.1
APE	**Apeiranthos**	**1.19**	**255**	*e*	PN	Pg	04 21 46.8	+0.6
APE	**Apeiranthos**	**1.19**	**255**	*e*	Pn	Pg	04 21 46.8	+0.6
DALT	**Dalyan (Mudla)**	**1.47**	**114**	*e*	PN	Pb	04 21 50.7	-0.2
DALT	**Dalyan (Mudla)**	**1.47**	**114**	*e*	Pn	Pb	04 21 50.7	-0.2
KULA	**Kula-Manisa**	**1.75**	**50**	*e*	PN	Pn	04 21 54.7	+0.7
KULA	**Kula-Manisa**	**1.75**	**50**	*e*	Pn	Pn	04 21 54.7	+0.7
FETY	**Fethiye**	**1.85**	**113**	*e*	PN	Pn	04 21 56.0	+0.7
FETY	**Fethiye**	**1.85**	**113**	*e*	Pn	Pn	04 21 56.0	+0.7
GONE	**Gonen-Balikesi**	**2.71**	**12**	*e*	PN	Pn	04 22 08.3	+1.2
GONE	**Gonen-Balikesi**	**2.71**	**12**	*e*	Pn	Pn	04 22 08.3	+1.2

*ISK **17** 04:34:41.6, 39.28N×27.92E, h8km, MD2.8*
*ISCJB **17** 04:34:42.7±0.6, 39.32N±0.03×27.96E±0.03, h6km±6km, Error ellipse: s-maj=5.4km s-min=4.9km az=22.7*
*CSEM **17** 04:34:42.8±0.2, 39.31N×27.97E, h10km, MD2.8, Error ellipse: s-maj=4.2km s-min=3.8km az=144.0*
*DDA **17** 04:34:42.3, 39.33N×27.96E, h7km, MD2.8*

ISC 17 04:34:42.8±1.0, 39.33N±0.03×27.96E±0.03, h10km±11km, n28, σ0°41/42, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.32**	**349**	*e*	PG	**Pg**	**04 34 49.3**	**+0.1**
BALB				*e*	SG	**Sb**	**04 34 55.2**	**-0.6**
BALB	**Balikesir**	**0.32**	**349**	*e*	Pg	**Pg**	**04 34 49.3**	**+0.1**
BALB				*e*	Sg	**Sb**	**04 34 55.2**	**-0.6**
AKHS	**Akhisar**	**0.46**	**195**	*e*	P	**Pg**	**04 34 50.9**	**-0.9**
AKHS				*e*	S	**Sg**	**04 34 58.3**	**+0.4**
AKHS	**Akhisar**	**0.46**	**195**	*e*	P	**Pg**	**04 34 50.9**	**-0.9**
AKHS				*e*	S	**Sg**	**04 34 58.3**	**+0.4**
DURS	**Dursunbey**	**0.48**	**55**	*e*	P	**Pg**	**04 34 52.5**	**+0.3**
DURS				*e*	S	**Sb**	**04 35 00.2**	**-0.4**
DURS	**Dursunbey**	**0.48**	**55**	*e*	P	**Pg**	**04 34 52.5**	**+0.3**
DURS				*e*	S	**Sb**	**04 35 00.2**	**-0.4**
BALY	**Balya**	**0.49**	**327**	*e*	P	**Pg**	**04 34 52.2**	**-0.2**
BALY				*e*	S	**Sg**	**04 34 58.7**	**-0.2**
BALY	**Balya**	**0.49**	**327**	*e*	P	**Pg**	**04 34 52.2**	**-0.2**
BALY				*e*	S	**Sg**	**04 34 58.7**	**-0.2**
DST	**Dursunbey**	**0.58**	**61**	*e*	PG	**Pg**	**04 34 54.0**	**-0.1**
DST				*e*	SG	**Sb**	**04 35 03.6**	**+0.2**
DST	**Dursunbey**	**0.58**	**61**	*e*	Pg	**Pg**	**04 34 54.0**	**-0.1**
DST				*e*	Sg	**Sb**	**04 35 03.6**	**+0.2**
GONE	**Gonen-Balikesi**	**0.75**	**344**	*e*	PG	**Pg**	**04 34 56.9**	**-0.4**
GONE				*e*	SG	**Sb**	**04 35 08.4**	**+0.1**
GONE	**Gonen-Balikesi**	**0.75**	**344**	*e*	Pg	**Pg**	**04 34 56.9**	**-0.4**
GONE				*e*	Sg	**Sb**	**04 35 08.4**	**+0.1**
KCTX	**Karacabey (Bur**	**0.99**	**18**	*e*	PG	**Pg**	**04 35 01.6**	**-0.2**
KCTX	**Karacabey (Bur**	**0.99**	**18**	*e*	Pg	**Pg**	**04 35 01.6**	**-0.2**
AYVA	**Ayvalik**	**0.99**	**269**	*e*	P	**Pn**	**04 35 02.8**	**+0.1**
AYVA				*e*	S	**Sb**	**04 35 16.0**	**+1.0**
AYVA	**Ayvalik**	**0.99**	**269**	*e*	P	**Pn**	**04 35 02.8**	**+0.1**
AYVA				*e*	S	**Sb**	**04 35 16.0**	**+1.0**
TVSB	**Tavsanli**	**1.17**	**83**	*e*	PN	**Pb**	**04 35 05.3**	**+0.2**
TVSB	**Tavsanli**	**1.17**	**83**	*e*	Pn	**Pb**	**04 35 05.3**	**+0.2**
KRBG	**Karabiga-Canak**	**1.18**	**335**	*e*	PN	**Pg**	**04 35 05.3**	**-0.2**
KRBG	**Karabiga-Canak**	**1.18**	**335**	*e*	Pn	**Pg**	**04 35 05.3**	**-0.2**
MRMT	**Marmara Adasi**	**1.31**	**348**	*e*	PN	**Pn**	**04 35 06.7**	**-0.5**
MRMT	**Marmara Adasi**	**1.31**	**348**	*e*	Pn	**Pn**	**04 35 06.7**	**-0.5**
ARMT	**Armutlu**	**1.42**	**29**	*e*	PN	**Pb**	**04 35 09.5**	**+0.2**
ARMT	**Armutlu**	**1.42**	**29**	*e*	Pn	**Pb**	**04 35 09.5**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.49**	**336**	*e*	PN	**Pb**	**04 35 10.6**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.49**	**336**	*e*	Pn	**Pb**	**04 35 10.6**	**0.0**
GELI	**Tayfur-Gelibol**	**1.57**	**314**	*e*	PN	**Pn**	**04 35 10.8**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.57**	**314**	*e*	Pn	**Pn**	**04 35 10.8**	**+0.1**

*IDC **17** 04:43:17.0±0.6, 15.09N×144.84E, h0km, mb4.0/20, mb1 4.2/20, mb1mx4.1/27, mbtmp4.0/20, MS3.6/5, Ms1 3.6/5, ms1mx3.2/35, Error ellipse: s-maj=24.8km s-min=12.1km az=83.0*
*NEIC **17** 04:43:18.5±0.3, 15.06N×144.84E, h10km, mb4.6/7, Error ellipse: s-maj=14.1km s-min=6.2km az=84.0*
*ISCJB **17** 04:43:20.5±0.4, 15.07N±0.05×144.7E±0.1, h33km, mb4.1/26, MS3.5/5, Error ellipse: s-maj=19.3km s-min=6.1km az=169.9*

ISC 17 04:43:22.5±0.5, 15.04N±0.06×144.8E±0.2, h35km, n50, σ0°85/55, mb4.2/26, MS3.6/5, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.44**	**178**	*e*	P	**Pn**	**04 43 44.4**	**-1.7**
GUMO					Sn	**Sn**	**04 44 04.5**	**+0.6**
GUMO	**Guam**	**1.44**	**178**		Pn	**Pn**	**04 43 44.4**	**-1.7**
	80nm,0.3s,baz=316,slow=5.4,SNR=14							
GUMO					Sn	**Sn**	**04 44 04.4**	**+0.6**
	129nm,0.3s,baz=128,slow=23,SNR=11							
MJAR	**Matsushiro Arr**	**22.21**	**346**		LR	LR	04 54 51.8	
	comp=Z,145nm,21.1s,baz=145,slow=31							
KSRS	**Korea Array**	**26.89**	**329**		P	**P**	**04 48 59.1**	**-1.0**
	1.7nm,0.7s,baz=145,slow=38,SNR=7.7							
KSRS					LR	LR	04 57 53.8	
	comp=Z,68nm,20.0s,baz=254,slow=33							
KSAR	**Wonju Array Be**	**26.90**	**329**		P	**P**	**04 48 59.1**	**-1.1**
HNR	**Honiara**	**28.57**	**147**		LR	LR	04 59 28.9	
	comp=Z,138nm,19.4s,baz=355,slow=34							
COEN	**Coen**	**28.86**	**183**	*e*	P	**P**	**04 49 18.2**	**+0.4**
	54nm,1.1s							
ASAJ	**Asahikawa**	**29.04**	**357**		LR	LR	05 00 14.9	
	comp=Z,150nm,19.6s,baz=96,slow=35							
WRAB	**Tennant Creek**	**36.24**	**197**	*e*	P	**P**	**04 50 21.9**	**-0.5**
	4.9nm,0.8s							
WRA	**Warramunga Arr**	**36.26**	**197**		P	**P**	**04 50 22.4**	**-0.2**
WRA					PcP	**PcP**	**04 52 48.2**	**+0.9**
WRA	**Warramunga Arr**	**36.26**	**197**		P	**P**	**04 50 22.4**	**-0.2**
	4.1nm,0.8s,baz=17,slow=9.7,SNR=20							
WRA					PcP	**PcP**	**04 52 48.2**	**+0.9**
	0.3nm,0.3s,baz=9.8,slow=3.0,SNR=5.6							
ASAR	**Alice Springs**	**39.92**	**196**		P	**P**	**04 50 53.6**	**+0.2**
ASAR					PcP	**PcP**	**04 52 59.8**	**+1.1**
ASAR	**Alice Springs**	**39.92**	**196**		P	**P**	**04 50 53.6**	**+0.2**
	1.1nm,0.8s,baz=20,slow=10,SNR=9.7							
ASAR					PcP	**PcP**	**04 52 59.8**	**+1.1**
	1.0nm,0.9s,baz=16,slow=3.4,SNR=4.3							
CMAR	**Chiang Mai Arr**

	3.5nm,0.9s							
OTAV	**Otavalo**	**72.21**	**305**	*e*P		**P**	**05 03 30.5**	**-0.2**
	2.5nm,0.7s							
KMBO	**Kilima Mbogo**	**76.41**	**68**	LR		LR	05 33 23.8	
	comp=Z,129nm,18.2s,baz=272,slow=32							
TOA0	**Torodi Ar. Sit**	**76.66**	**29**	*e*P		**P**	**05 03 56.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**76.66**	**29**	P		**P**	**05 03 56.2**	**+0.3**
TORD	**Torodi Ar. Bea**	**76.66**	**29**	P		**P**	**05 03 56.2**	**+0.3**
	3.3nm,0.4s,baz=200,slow=6.2,SNR=56							
MBWA	**Marble Bar**	**94.41**	**149**	*e*P		**P**	**05 05 25.2**	**+0.1**
	7.4nm,1.1s							
NOA	**NORSAR Array B**	**124.49**	**21**	PKP		**PKPdf**	**05 11 03.3**	**+0.5**
NOA	**NORSAR Array B**	**124.49**	**21**	PKP		**PKPdf**	**05 11 03.3**	**+0.5**
	0.7nm,0.7s,baz=204,slow=1.9,SNR=3.4							
FRB	**Frobisher Bay**	**127.67**	**338**	PKP		**PKPdf**	**05 11 08.3**	**-0.4**
FRB	**Frobisher Bay**	**127.67**	**338**	PKP		**PKPdf**	**05 11 08.3**	**-0.4**
	1.8nm,0.7s,baz=113,slow=8.3,SNR=5.8							
FINES	**FINESS Array B**	**128.01**	**29**	PKP		**PKPdf**	**05 11 09.4**	**-0.1**
FINES	**FINESS Array B**	**128.01**	**29**	PKP		**PKPdf**	**05 11 09.4**	**-0.1**
	1.2nm,0.6s,baz=222,slow=1.9,SNR=4.4							
ABKAR	**Akbulak array**	**129.52**	**58**	*e*PKPdf		**PKPdf**	**05 11 12.5**	**-0.2**
AKTO	**Aktyubinsk**	**129.62**	**56**	PKP		**PKPdf**	**05 11 13.5**	**+0.5**
AKTO	**Aktyubinsk**	**129.62**	**56**	PKP		**PKPdf**	**05 11 13.5**	**+0.5**
	1.1nm,0.7s,baz=205,slow=3.9,SNR=4.0							
MKAR	**Makanchi Array**	**137.89**	**76**	PKP		**PKPdf**	**05 11 27.9**	**-0.8**
MKAR	**Makanchi Array**	**137.89**	**76**	PKP		**PKPdf**	**05 11 27.9**	**-0.8**
	0.4nm,0.8s,baz=219,slow=0.9,SNR=2.8							
KURK	**Kurchatov**	**138.89**	**69**	*e*PKPdf		**PKPdf**	**05 11 30.4**	**+0.1**
YKA	**Yellowknife Ar**	**139.38**	**315**	PKP		**PKPdf**	**05 11 29.8**	**-0.9**
YKA				PP		**PP**	**05 14 22.3**	**-3.9**
YKA	**Yellowknife Ar**	**139.38**	**315**	PKP		**PKPdf**	**05 11 29.8**	**-0.9**
	0.1nm,0.6s,baz=105,slow=3.3,SNR=3.7							
YKA				PP		**PP**	**05 14 22.3**	**-3.9**
	0.3nm,1.0s,baz=142,slow=3.6,SNR=4.0							
ZALV	**Zalesovo Beam**	**143.88**	**69**	PKP		**PKPdf**	**05 11 39.2**	**+0.1**
ZALV	**Zalesovo Beam**	**143.88**	**69**	PKP		**PKPdf**	**05 11 39.2**	**+0.1**
	0.5nm,0.3s,baz=240,slow=5.4,SNR=4.2							
INK	**Inuvik**	**149.11**	**316**	PKPbc		**PKPbc**	**05 11 51.1**	**-0.6**
INK	**Inuvik**	**149.11**	**316**	PKPbc		**PKPbc**	**05 11 51.1**	**-0.6**
	2.0nm,0.7s,baz=91,slow=3.7,SNR=12							
SONM	**Songino Array**	**150.51**	**94**	PKPbc		**PKPbc**	**05 11 56.2**	**+0.2**
SONM	**Songino Array**	**150.51**	**94**	PKPbc		**PKPbc**	**05 11 56.2**	**+0.2**
	1.7nm,0.7s,baz=207,slow=3.8,SNR=11							
ILAR	**Eielson Array**	**152.92**	**305**	PKPbc		**PKPbc**	**05 12 00.1**	**-0.7**
ILAR	**Eielson Array**	**152.92**	**305**	PKPbc		**PKPbc**	**05 12 00.1**	**-0.7**
	0.8nm,0.7s,baz=137,slow=3.3,SNR=16							
MCK	**McKinley**	**153.43**	**303**	*e*PKPbc		**PKPbc**	**05 12 02.1**	**+0.2**

*ISK **17** 04:53:40.6,39.94N×41.89E,h10km, ML2.1*
*ISCJB **17** 04:53:41.7±0.8,39.96N±0.04×41.86E±0.05,h10km±4km, Error ellipse: s-maj=8.4km s-min=4.9km az=44.1*
*CSEM **17** 04:53:41.2±0.5,39.93N×41.82E,h15km, MD2.8, Error ellipse: s-maj=10.6km s-min=8.8km az=130.0*
*DDA **17** 04:53:42.1,40.04N×41.79E,h2km, MD2.8*
ISC 17 04:53:41.8±0.9, 39.99N±0.03×41.83E±0.03, h9km±7km, n19, σ0969/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOMI	**Horasan**	**0.08**	**48**	*i* Pg	**Pg**	**04 53 44.2**	**0.0**
HOMI				*i* Sg	**Sg**	**04 53 46.2**	**+0.2**
ERZM	**Erzurum**	**0.37**	**256**	*i* P	**Pb**	**04 53 50.4**	**-0.4**
ERZM				*i* S	**Sg**	**04 53 54.5**	**+0.5**
ERZM	**Erzurum**	**0.37**	**256**	*i* P	**Pb**	**04 53 50.4**	**-0.4**
ERZM				*i* S	**Sg**	**04 53 54.5**	**+0.5**
EZM	**Erzurum**	**0.37**	**256**	*e*PG	**Pb**	**04 53 50.1**	**-0.6**
EZM				*e*SG	**Sg**	**04 53 54.8**	**+0.7**
DDEM	**Demirkent**	**0.90**	**356**	*e*P	**Pg**	**04 53 58.9**	**-0.3**
DDEM				*e*S	**Sb**	**04 54 12.5**	**+0.6**
DDEM	**Demirkent**	**0.90**	**356**	*e*P	**Pg**	**04 53 58.9**	**-0.3**
DDEM				*e*S	**Sb**	**04 54 12.5**	**+0.6**
TUTA	**Tutak**	**0.96**	**128**	*e*P	**Pb**	**04 54 00.6**	**-0.3**
TUTA				*e*S	**Sn**	**04 54 16.9**	**+1.1**
TUTA	**Tutak**	**0.96**	**128**	*e*P	**Pb**	**04 54 00.6**	**-0.3**
TUTA				*e*S	**Sn**	**04 54 16.9**	**+1.1**
DBAD	**Bademkaya**	**1.03**	**354**	*e*P	**Pg**	**04 54 01.1**	**-0.5**
DBAD				*e*S	**Sb**	**04 54 16.3**	**+0.7**
DBAD	**Bademkaya**	**1.03**	**354**	*e*P	**Pg**	**04 54 01.1**	**-0.5**
DBAD				*e*S	**Sb**	**04 54 16.3**	**+0.7**
DAGI	**Agillar**	**1.09**	**3**	*e*P	**Pg**	**04 54 02.2**	**-0.5**
DAGI				*e*S	**Sg**	**04 54 17.5**	**+0.7**
ARTV	**Artvin**	**1.19**	**4**	*e*P	**Pb**	**04 54 04.2**	**-0.6**
ARTV				*e*S	**Sb**	**04 54 20.5**	**0.0**
ARTV	**Artvin**	**1.19**	**4**	*e*P	**Pb**	**04 54 04.2**	**-0.6**
ARTV				*e*S	**Sb**	**04 54 20.5**	**0.0**
BNGB	**Bing¯¶ll**	**1.34**	**222**	*e*PN	**Pn**	**04 54 05.3**	**-1.6**
BAYT	**Ayd¯–ntepe-Bay**	**1.35**	**288**	*e*PN	**Pn**	**04 54 07.0**	**-0.1**
BAYT				*e*SN	**Sg**	**04 54 26.5**	**+1.1**
BAYT	**Ayd¯–ntepe-Bay**	**1.35**	**288**	*e*Pn	**Pn**	**04 54 07.0**	**-0.1**
BAYT				*e*Sn	**Sg**	**04 54 26.5**	**+1.1**
BCA	**Borcka**	**1.46**	**354**	*e*PN	**Pn**	**04 54 07.8**	**-0.7**
BCA	**Borcka**	**1.46**	**354**	*e*Pn	**Pn**	**04 54 07.8**	**-0.7**
BINT	**Bingol**	**1.52**	**223**	*e*Pn	Pn	04 54 05.3	-4.1

NEIC 17 04:57:01.5, 33.20N×115.64W, h5km, ML3.8(PAS), After PAS., Southern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLA	**Glamis**	**0.70**	**102**	Pn	Pg	04 57 15.5	+0.5
BAR	**Barrett**	**1.01**	**240**	Pn	Pg	04 57 20.7	-0.2
MWC	**Mount Wilson**	**2.26**	**298**	*e*Pn	Pn	04 57 39.4	-0.3
ISA	**Isabella**	**3.40**	**317**	Pn	Pn	04 57 54.8	-0.4
NV11	**Mina Array Sit**	**5.61**	**339**	*e*Pn	Pn	04 58 26.6	+0.8

*DDA **17** 05:01:31.9,37.83N×29.09E,h11km, MD2.9*
*CSEM **17** 05:01:31.9,37.83N×29.09E,h11km, MD2.9, After DDA*
*ISCJB **17** 05:01:32.2±0.6,37.84N±0.03×29.09E±0.05,h6km±5km, Error ellipse: s-maj=7.0km s-min=4.8km az=1.3*
ISC 17 05:01:31.8±1.0, 37.83N±0.03×29.11E±0.04, h12km±7km, n13, σ0946/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DENT	**Denizli**	**0.10**	**220**	*e*PG	**Pg**	**05 01 34.6**	**-0.1**
DNZL	**Cakiroluk**	**0.15**	**200**	*i* P	**Pg**	**05 01 35.5**	**0.0**
DNZL				*i* S	**Sg**	**05 01 38.0**	**-0.1**
DNZL	**Cakiroluk**	**0.15**	**200**	*i* P	**Pg**	**05 01 35.5**	**0.0**
DNZL				*i* S	**Sg**	**05 01 38.0**	**-0.1**
KHL	**Karahalli**	**0.59**	**33**	*e*PG	**Pg**	**05 01 43.8**	**+0.4**
KHAL	**Karahalli**	**0.62**	**29**	*i* P	**Pg**	**05 01 43.8**	**-0.1**
KHAL				*i* S	**Sb**	**05 01 53.3**	**-0.1**
KHAL	**Karahalli**	**0.62**	**29**	*i* P	**Pg**	**05 01 43.8**	**-0.1**
KHAL				*i* S	**Sb**	**05 01 53.3**	**-0.1**
GOLH	**Golhisar**	**0.69**	**149**	*i* P	**Pg**	**05 01 45.4**	**+0.1**
GOLH				*i* S	**Sn**	**05 01 57.7**	**-0.5**
GOLH	**Golhisar**	**0.69**	**149**	*i* P	**Pg**	**05 01 45.4**	**+0.1**
GOLH				*i* S	**Sn**	**05 01 57.7**	**-0.5**
KULA	**Kula-Manisa**	**0.77**	**333**	*e*PG	**Pg**	**05 01 46.0**	**-0.7**
KULA				*e*SG	**Sb**	**05 01 58.9**	**+1.1**
MANT	**Manisa**	**0.79**	**327**	*i* P	**Pg**	**05 01 47.1**	**-0.1**
MANT				*i* S	**Sb**	**05 01 59.3**	**+0.8**
MANT	**Manisa**	**0.79**	**327**	*i* P	**Pg**	**05 01 47.1**	**-0.1**
MANT				*i* S	**Sb**	**05 01 59.3**	**+0.8**
AYDN	**Tasoluk**	**0.99**	**261**	*i* P	**Pb**	**05 01 51.1**	**+0.1**
AYDN				*i* S	**Sg**	**05 02 03.5**	**-0.4**
AYDN	**Tasoluk**	**0.99**	**261**	*i* P	**Pb**	**05 01 51.1**	**+0.1**
AYDN				*i* S	**Sg**	**05 02 03.5**	**-0.4**

*IDC **17** 05:25:40.8±0.7,15.09N×144.84E,h0km, mb3.9/13, mb1 4.1/13,mb1mx4.0/24, mbtmp3.9/13,MS3.2/7, Ms1 3.2/7,ms1mx3.0/40, Error ellipse: s-maj=28.8km s-min=14.1km az=88.0*
*NEIC **17** 05:25:46.5±1.7,14.97N×144.74E,h39km±16km, mb4.4/8, Error ellipse: s-maj=16.8km s-min=9.7km az=84.0*
ISC 17 05:25:46.0±0.6, 15.00N±0.06×144.8E±0.2, h35km, n44, σ1905/41, mb4.1/22, MS3.1/7, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.40**	**176**	*e*Pn	**Pn**	**05 26 08.4**	**-0.6**
GUMO				Sn	**Sn**	**05 26 26.9**	**+0.5**
GUMO	**Guam**	**1.40**	**176**	Pn	**Pn**	**05 26 08.7**	**-0.3**
	98nm,0.3s,baz=314,slow=4.2,SNR=12						
GUMO				Sn	**Sn**	**05 26 26.8**	**+0.5**
	135nm,0.3s,baz=122,slow=19,SNR=10						
JNU	**Nakatsue**	**22.02**	**327**	P	P	05 30 43.5	+6.1
JNU	**Nakatsue**	**22.02**	**327**	P	P	05 30 43.5	+6.1
	5.9nm,0.9s,baz=346,slow=19,SNR=3.1						
JNU				LR	LR	05 38 09.2	
	comp=Z,33nm,18.9s,baz=234,slow=34						
MJAR	**Matsushiro Arr**	**22.24**	**346**	P	**P**	**05 30 42.8**	**+3.0**
MJAR	**Matsushiro Arr**	**22.24**	**346**	P	**P**	**05 30 42.8**	**+3.0**
	0.6nm,0.3s,baz=170,slow=11,SNR=4.4						
MJAR				LR	LR	05 38 17.5	
	comp=Z,74nm,20.5s,baz=180,slow=34						
KSRS	**Korea Array**	**26.91**	**329**	P	**P**	**05 31 23.5**	**-0.3**
	0.9nm,0.3s,baz=146,slow=8.9,SNR=7.5						
KSRS				LR	LR	05 40 30.0	
	comp=Z,40nm,19.2s,baz=180,slow=33						
KSAR	**Wonju Array Be**	**26.92**	**329**	P	**P**	**05 31 23.5**	**-0.4**
ASAJ	**Asahikawa**	**29.08**	**357**	LR	LR	05 41 03.1	
	comp=Z,106nm,21.4s,baz=101,slow=32						
WRAB	**Tennant Creek**	**36.19**	**197**	*e*P	**P**	**05 32 44.6**	**-0.9**
	7.4nm,1.0s						
WRA	**Warramunga Arr**	**36.21**	**197**	P	**P**	**05 32 46.2**	**+0.5**
WRA	**Warramunga Arr**	**36.21**	**197**	P	**P**	**05 32 46.2**	**+0.5**
	3.8nm,0.8s,baz=16,slow=9.4,SNR=15						
FITZ	**Fitzroy Crossi**	**37.91**	**210**	*e*P	**P**	**05 33 00.2**	**0.0**
	3.7nm,0.9s						
PETK	**Petropavlovsk-**	**39.38**	**12**	LR	LR	05 47 32.1	
	comp=Z,29nm,19.2s,baz=281,slow=33						
ASAR	**Alice Springs**	**39.87**	**196**	P	**P**	**05 33 17.4**	**+0.8**
ASAR	**Alice Springs**	**39.87**	**196**	P	**P**	**05 33 17.4**	**+0.8**
	1.0nm,0.8s,baz=20,slow=10,SNR=9.9						
SONM	**Songino Array**	**45.54**	**324**	P	**P**	**05 34 02.8**	**+0.4**
SONM	**Songino Array**	**45.54**	**324**	P	**P**	**05 34 02.8**	**+0.4**
	0.3nm,0.8s,baz=120,slow=8.5,SNR=3.2						
SONM				LR	LR	05 52 05.4	
	comp=Z,54nm,19.4s,baz=134,slow=35						
STKA	**Stephens Creek**	**46.70**	**184**	P	**P**	**05 34 11.9**	**+0.4**
STKA	**Stephens Creek**	**46.70**	**184**	P	**P**	**05 34 11.9**	**+0.4**
	1.9nm,0.9s,baz=342,slow=13,SNR=2.2						
AFI	**Afiamalu**	**51.70**	**122**	LR	LR	05 55 38.5	
	comp=Z,15nm,18.3s,baz=244,slow=35						
MK31	**Makanchi Array**	**60.42**	**316**	*e*P	**P**	**05 35 51.7**	**-0.3**
MKAR	**Makanchi Array**	**60.42**	**316**	P	**P**	**05 35 52.0**	**-0.1**
MKAR	**Makanchi Array**	**60.42**	**316**	P	**P**	**05 35 52.0**	**-0.1**
	0.9nm,0.8s,baz=95,slow=8.3,SNR=10						
ZALV	**Zalesovo Beam**	**60.44**	**324**	P	**P**	**05 35 51.6**	**-0.4**
ZALV	**Zalesovo Beam**	**60.44**	**324**	P	**P**	**05 35 51.6**	**-0.4**
	0.2nm,0.3s,baz=157,slow=8.0,SNR=3.4						
KURK	**Kurchatov**	**63.46**	**319**	*e*P	**P**	**05 36 11.9**	**-0.4**
	3.6nm,0.8s						
ILAR	**Eielson Array**	**67.34**	**26**	P	**P**	**05 36 35.1**	**-2.2**
ILAR	**Eielson Array**	**67.34**	**26**	P	**P**	**05 36 35.1**	**-2.2**
	0.3nm,0.9s,baz=223,slow=6.1,SNR=5.7						
KKAR	**Karatay Array**	**68.47**	**311**	*e*P	**P**	**05 36 45.2**	**+0.5**
	1.5nm,0.7s						
ABKAR	**Akbulak array**	**75.45**	**318**	*e*P	**P**	**05 37 25.3**	**-1.1**
	1.8nm,0.7s						
YKA	**Yellowknife Ar**	**81.66**	**27**	P	**P**	**05 37 59.9**	**-0.5**
YKA	**Yellowknife Ar**	**81.66**	**27**	P	**P**	**05 37 59.9**	**-0.5**
	0.7nm,0.8s,baz=286,slow=5.3,SNR=10						
BSMT	**Bassoo Peak**	**85.86**	**42**	*e*P	**P**	**05 38 23.3**	**+0.8**
	4.8nm,1.1s						
NVAR	**Mina Array Bea**	**86.12**	**51**	P	**P**	**05 38 24.8**	**+0.8**
NVAR	**Mina Array Bea**	**86.12**	**51**	P	**P**	**05 38 24.8**	**+0.8**
	0.4nm,0.6s,baz=256,slow=7.0,SNR=5.3						
HLID	**Hailey**	**87.43**	**46**	*e*P	**P**	**05 38 31.1**	**+0.8**
	2.6nm,1.1s						
ELK	**Elko**	**87.72**	**48**	*e*P	**P**	**05 38 32.5**	**+0.7**
	2.2nm,0.9s						
ELK	**Elko**	**87.72**	**48**	P	**P**	**05 38 33.1**	**+1.3**
	2.0nm,0.9s,baz=285,slow=6.8,SNR=5.0						
FINES	**FINESS Array B**	**89.85**	**335**	P	**P**	**05 38 41.5**	**+0.5**
FINES	**FINESS Array B**	**89.85**	**335**	P	**P**	**05 38 41.5**	**+0.5**
	1.5nm,0.7s,baz=35,slow=5.1,SNR=3.4						
BRTR	**Keskin Array B**	**96.03**	**314**	P	**P**	**05 39 09.4**	**-0.7**
BRTR	**Keskin Array B**	**96.03**	**314**	P	**P**	**05 39 09.4**	**-0.7**
	0.7nm,0.8s,baz=95,slow=4.2,SNR=3.7						
LCO	**Las Campanas**	**144.43**	**119**	*e*PKPdf	**PKPdf**	**05 45 19.8**	**+0.2**

IDC 17 05:46:55.1±1.1, 14.87N×144.68E, h0km, mb3.7/11, mb1 3.9/11, mb1mx3.8/25, mbtmp3.8/11, MS3.6/14, Ms1 3.6/14, ms1mx3.5/30, Error ellipse: s-maj=38.4km s-min=13.4km az=81.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.28**	**172**	Pn	Pb	05 47 20.2	0.0
	410nm,0.3s,baz=308,slow=3.1,SNR=55						
GUMO				Sn	Sg	05 47 36.2	-0.2
	559nm,0.3s,baz=150,slow=19,SNR=27						
JHJ	**Hachijo jima 2**	**18.71**	**347**	LR	LR	05 57 23.2	
	comp=Z,245nm,18.6s,baz=137,slow=34						
JNU	**Nakatsue**	**22.07**	**326**	LR	LR	05 58 46.6	
	comp=Z,68nm,18.4s,baz=222,slow=32						
MJAR	**Matsushiro Arr**	**22.34**	**346**	P	P	05 51 55.4	+0.7
	2.2nm,0.8s,baz=171,slow=12,SNR=4.5						
KSRS	**Korea Array**	**26.97**	**330**	P	P	05 52 36.9	-1.6
	0.4nm,0.3s,baz=150,slow=11,SNR=5.3						
KSRS				LR	LR	06 02 24.7	
	comp=Z,50nm,18.3s,baz=298,slow=34						
ASAJ	**Asahikawa**	**29.20**	**357**	LR	LR	06 04 08.7	
	comp=Z,106nm,18.1s,baz=99,slow=35						
USRK	**Ussuriysk Arra**	**31.17**	**342**	LR	LR	06 05 38.2	
	comp=Z,98nm,18.2s,baz=130,slow=36						
CTA	**Charters Tower**	**34.77**	**177**	LR	LR	06 06 09.0	
	comp=Z,109nm,21.6s,baz=236,slow=33						
WRA	**Warramunga Arr**	**36.06**	**197**	P	P	05 53 57.9	-0.6
	2.5nm,0.8s,baz=20,slow=9.8,SNR=17						
WRA				LR	LR	06 07 17.6	
	comp=Z,64nm,20.8s,baz=210,slow=34						
FITZ	**Fitzroy Crossi**	**37.76**	**210**	P	P	05 54 12.5	-0.5
	2.5nm,0.7s,baz=69,slow=6.8,SNR=10						
ASAR	**Alice Springs**	**39.72**	**196**	P	P	05 54 29.1	-0.4
	0.7nm,0.6s,baz=20,slow=11,SNR=9.9						
CMAR	**Chiang Mai Arr**	**43.87**	**281**	P	P	05 55 05.0	+1.3
	1.5nm,0.8s,baz=77,slow=6.6,SNR=8.5						
CMAR				LR	LR	06 12 33.4	
	comp=Z,43nm,18.2s,baz=95,slow=35						
SONM	**Songino Array**	**45.59**	**324**	P	P	05 55 16.8	-0.4
	0.2nm,0.6s,baz=125,slow=9.5,SNR=2.6						
SONM				LR	LR	06 14 22.7	
	comp=Z,95nm,18.2s,baz=107,slow=36						
STKA	**Stephens Creek**	**46.57**	**184**	P	P	05 55 25.9	+1.1
	1.2nm,0.7s,baz=332,slow=7.8,SNR=4.5						
MKAR	**Makanchi Array**	**60.45**	**316**	P	P	05 57 06.0	-0.7
	1.0nm,1.0s,baz=92,slow=9.6,SNR=7.7						
ZALV	**Zalesovo Beam**	**60.48**	**324**	P	P	05 57 07.1	+0.4
	0.4nm,0.4s,baz=76,slow=6.1,SNR=3.6						
ZALV				LR	LR	06 22 55.5	
	comp=Z,59nm,18.4s,baz=70,slow=36						
KURBB	**Kurchatov Arra**	**63.53**	**319**	LR	LR	06 25 29.9	
	comp=Z,83nm,19.9s,baz=110,slow=36						
PPT	**Papeete**	**72.40**	**114**	LR	LR	06 23 10.4	
	comp=Z,87nm,20.6s,baz=355,slow=30						
PPT2	**Papeete2**	**72.41**	**114**	*e*LR	LR	06 21 03.7	
	70nm,23.2s						
PPT2	**Papeete2**	**72.41**	**114**	*e*LR	LR	05 58 35.4	
	81nm,24.5s						
PPT2				*e*LR	LR	07 07 14.5	
	96nm,29.8s						
PPT2				*e*LR	LR	07 18 11.1	
	80nm,29.8s						
PMOR	**Pomariorio Ree**	**72.96**	**111**	*e*T	T	07 18 25.4	
	1.6nm,0.2s						
YKA	**Yellowknife Ar**	**81.82**	**27**	P	P	05 59 16.1	+0.3
	0.3nm,0.8s,baz=291,slow=5.5,SNR=5.3						
KBZ	**Khabaz**	**88.14**	**315**	LR	LR	06 43 20.4	
	comp=Z,48nm,20.7s,baz=281,slow=38						
NOA	**NORSAR Array B**	**95.80**	**339**	LR	LR	06 47 30.3	
	comp=Z,33nm,19.2s,baz=270,slow=38						

IDC 17 06:04:16.7±2.1, 20.38S×70.68W, h0km, mb4.0/2, mb1 4.1/4, mb1mx3.7/19, mbtmp3.9/4, ML3.8/2, MS3.0/2, Ms1 3.1/2, ms1mx2.6/31, Error ellipse: s-maj=67.3km s-min=43.2km az=170.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.74**	**31**	Pn	Pn	06 05 29.9	-0.4
	1.5nm,0.3s,baz=197,slow=12,SNR=43						
LPAZ				Sn	Sb	06 06 35.2	-4.4
	0.4nm,0.3s,baz=32,slow=24,SNR=1.7						
LPAZ				LR	LR	06 07 36.5	
	comp=Z,106nm,19.1s,baz=47,slow=42						
SIV	**San Ignacio**	**10.12**	**66**	Pn	Pn	06 06 44.1	+0.7
	0.9nm,0.3s,baz=267,slow=9.4,SNR=14						
PLCA	**Paso Flores**	**20.29**	**180**	LR	LR	06 16 28.6	
	comp=Z,77nm,19.1s,baz=24,slow=36						
TORD	**Torodi Ar. Bea**	**78.55**	**71**	P	P	06 16 19.7	-0.9
	1.0nm,0.8s,baz=252,slow=5.4,SNR=6.7						
YKA	**Yellowknife Ar**	**89.59**	**341**	P	P	06 17 15.1	-0.6
	0.5nm,0.6s,baz=134,slow=4.5,SNR=28						
MKAR	**Makanchi Array**	**145.66**	**34**	PKPbc	PKPab	06 23 58.2	+0.4
	0.8nm,0.5s,baz=312,slow=3.4,SNR=15						

*THE **17** 06:13:41.2, 38.42N×20.38E, h8km±1km, ML3.1/4, Error ellipse: s-maj=2.5km s-min=0.8km az=256.0*
*ATH **17** 06:13:41.1, 38.41N×20.42E, h13km±1km, MD3.5/28*
*CSEM **17** 06:13:41.4±0.3, 38.43N×20.45E, h2km, MD3.5, Error ellipse: s-maj=7.1km s-min=3.8km az=72.0*
ISC 17 06:13:41.9±1.0, 38.42N±0.02×20.46E±0.04, h10km±8km, n77, σ0990/109, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.26**	**157**	P	**Pg**	**06 13 47.1**	**-0.2**
VLS				S	**Sg**	**06 13 51.4**	**+0.5**
VLS	**Valsamata**	**0.26**	**157**	*e*PG	**Pg**	**06 13 47.0**	**-0.2**
VLS				*e*SG	**Sg**	**06 13 51.6**	**+0.7**
VLS	**Valsamata**	**0.26**	**157**	P	**Pg**	**06 13 47.1**	**-0.2**
VLS				S	**Sg**	**06 13 51.4**	**+0.5**
LKD2	**Lefkada island**	**0.40**	**23**	P	**Pg**	**06 13 49.5**	**-0.4**
LKD2				S	**Sg**	**06 13 55.7**	**+0.5**
LKD2	**Lefkada island**	**0.40**	**23**	*e*PB	**Pg**	**06 13 49.5**	**-0.4**
LKD2				*e*SB	**Sg**	**06 13 56.1**	**+0.9**
LKD2	**Lefkada island**	**0.40**	**23**	P	**Pg**	**06 13 49.5**	**-0.4**
LKD2				S	**Sg**	**06 13 55.7**	**+0.5**
LKD2				*e*Sb	**Sg**	**06 13 56.1**	**+0.9**
KFL	**Anninata**	**0.41**	**140**	P	**Pg**	**06 13 49.7**	**-0.2**
KFL				S	**Sg**	**06 13 56.3**	**+1.0**
KFL	**Anninata**	**0.41**	**140**	P	**Pg**	**06 13 49.7**	**-0.2**
KFL				S	**Sg**	**06 13 56.3**	**+1.0**
RLS	**Riolos of Patr**	**0.87**	**114**	P	**Pg**	**06 13 58.5**	**-0.2**
RLS	**Riolos of Patr**	**0.87**	**114**	*e*PB	**Pg**	**06 13 58.2**	**-0.6**
RLS				*e*SB	**Sg**	**06 14 10.0**	**-0.1**
RLS	**Riolos of Patr**	**0.87**	**114**	*e*Pb	**Pg**	**06 13 58.2**	**-0.6**
RLS	**Riolos of Patr**	**0.87**	**114**	P	**Pg**	**06 13 58.5**	**-0.2**
RLS				*e*Sb	**Sg**	**06 14 10.0**	**-0.1**
UPR	**University Cam**	**1.05**	**97**	*e*PN	**Pb**	**06 14 01.9**	**-0.3**
UPR				*e*SB	**Sb**	**06 14 16.3**	**+0.2**
UPR	**University Cam**	**1.05**	**97**	*e*Pn	**Pb**	**06 14 01.9**	**-0.3**
UPR				*e*Sb	**Sb**	**06 14 16.3**	**+0.2**
IGT	**Igoumenitsa**	**1.11**	**355**	P	**Pb**	**06 14 02.0**	**-1.3**
IGT				S	**Sg**	**06 14 18.2**	**+0.3**
IGT	**Igoumenitsa**	**1.11**	**355**	P	**Pb**	**06 14 02.0**	**-1.3**
IGT				S	**Sg**	**06 14 18.2**	**+0.3**
PSA1	**Psathopyrgos**	**1.12**	**94**	*e*PB	**Pb**	**06 14 02.9**	**-0.5**
PSA1				*e*SB	**Sb**	**06 14 17.9**	**-0.2**
EFP	**Efpalio**	**1.14**	**89**	P	**Pb**	**06 14 02.7**	**-0.9**
EFP	**Efpalio**	**1.14**	**89**	*e*PN	**Pb**	**06 14 02.7**	**-0.9**
EFP				*e*SB	**Sg**	**06 14 19.0**	**+0.4**
EFP	**Efpalio**	**1.14**	**89**	P	**Pb**	**06 14 02.7**	**-0.9**
EFP				*e*Sb	**Sg**	**06 14 19.0**	**+0.4**
EVR	**Evrytania**	**1.17**	**64**	P	**Pb**	**06 14 03.1**	**-1.1**
EVR	**Evrytania**	**1.17**	**64**	*e*PN	**Pb**	**06 14 03.1**	**-1.1**
EVR				*e*SB	**Sn**	**06 14 20.4**	**0.0**
**E

σ0≤99/37, **mb4.1**/8, **MS3.6**/3, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.35**	**31**	*e*Pn	**Pn**	**06 18 20.9**	**+0.6**
LPAZ				Sn	Sn	06 19 20.2	+10
LPAZ	**La Paz**	**4.35**	**31**	Pn	**Pn**	**06 18 21.3**	**+1.0**
	3.8nm,0.3s,baz=206,slow=5.2,SNR=74						
LPAZ				Sn	Sn	06 19 20.2	+10
	baz=206,slow=25,SNR=1.9						
LPAZ				LR	LR	06 20 27.8	
	comp=Z,797nm,20.7s,baz=225,slow=44						
SIV	**San Ignacio**	**9.81**	**67**	Pn	**Pn**	**06 19 34.9**	**+0.1**
SIV	**San Ignacio**	**9.81**	**67**	Pn	**Pn**	**06 19 34.9**	**+0.1**
	1.2nm,0.3s,baz=272,slow=10,SNR=41						
SIV				LR	LR	06 23 58.4	
	comp=Z,664nm,18.5s,slow=41						
CFAA	**Coronel Fontan**	**11.69**	**171**	Pn	**Pn**	**06 20 00.1**	**-0.2**
CFAA	**Coronel Fontan**	**11.69**	**171**	Pn	**Pn**	**06 20 00.1**	**-0.2**
	0.0nm,0.3s,baz=299,slow=23,SNR=2.5						
SAML	**Samuel**	**13.09**	**34**	*e*Pn	**Pn**	**06 20 17.4**	**-2.1**
	3.8nm,0.8s						
CPUP	**Villa Florida**	**13.61**	**120**	Pn	**Pn**	**06 20 27.6**	**+1.1**
CPUP	**Villa Florida**	**13.61**	**120**	Pn	**Pn**	**06 20 27.6**	**+1.1**
	0.2nm,0.3s,baz=274,slow=12,SNR=9.1						
CPUP				LR	LR	06 26 43.1	
	comp=Z,218nm,20.2s,baz=72,slow=42						
TRQA	**Tornquist**	**19.41**	**159**	*e*Pn	**Pn**	**06 21 38.7**	**-1.3**
	2.1nm,0.8s						
PLCA	**Paso Flores**	**20.62**	**180**	*e*P	Pn	06 21 57.8	+3.3
	4.9nm,0.9s						
PLCA	**Paso Flores**	**20.62**	**180**	P	Pn	06 21 57.4	+2.9
	4.7nm,1.0s,baz=359,slow=12,SNR=8.1						
OTAV	**Otavalo**	**21.62**	**338**	*e*P	P	06 22 11.1	+8.0
	12nm,1.3s						
BDFB	**Brasilia**	**21.82**	**82**	P	**P**	**06 22 04.8**	**-0.1**
BDFB	**Brasilia**	**21.82**	**82**	P	**P**	**06 22 04.8**	**-0.1**
	4.6nm,0.7s,baz=233,slow=12,SNR=7.7						
BDFB				LR	LR	06 32 09.0	
	comp=Z,204nm,18.4s,baz=99,slow=41						
ROSC	**El Rosal**	**25.03**	**351**	*e*P	**P**	**06 22 37.5**	**+0.8**
ROSC	**El Rosal**	**25.03**	**351**	P	**P**	**06 22 37.4**	**+0.8**
	4.0nm,0.7s,baz=184,slow=1.8,SNR=4.9						
ROSC				LR	LR	06 33 03.7	
	comp=Z,139nm,20.5s,baz=270,slow=38						
RPN	**Rapa Nui**	**36.20**	**251**	LR	LR	06 35 07.0	
	comp=Z,177nm,21.1s,baz=291,slow=30						
WMOK	**Wichita Mounta**	**60.76**	**333**	P	**P**	**06 27 26.4**	**+2.9**
	1.1nm,0.6s						
PDAR	**Pinedale Array**	**72.13**	**331**	P	**P**	**06 28 35.4**	**-0.9**
PDAR	**Pinedale Array**	**72.13**	**331**	P	**P**	**06 28 35.4**	**-0.9**
	0.5nm,0.9s,baz=152,slow=4.1,SNR=3.5						
NVAR	**Mina Array Bea**	**73.45**	**323**	P	**P**	**06 28 44.3**	**+0.1**
NVAR	**Mina Array Bea**	**73.45**	**323**	P	**P**	**06 28 44.3**	**+0.1**
	0.1nm,0.3s,baz=123,slow=7.6,SNR=2.9						
TOA0	**Torodi Ar. Sit**	**78.26**	**71**	*e*P	**P**	**06 29 11.5**	**-0.4**
TORD	**Torodi Ar. Bea**	**78.26**	**71**	P	**P**	**06 29 11.0**	**-0.9**
TORD	**Torodi Ar. Bea**	**78.26**	**71**	P	**P**	**06 29 11.0**	**-0.9**
	4.5nm,0.8s,baz=252,slow=5.3,SNR=20						
YKA	**Yellowknife Ar**	**89.34**	**341**	P	**P**	**06 30 06.3**	**-1.0**
YKA	**Yellowknife Ar**	**89.34**	**341**	P	**P**	**06 30 06.3**	**-1.0**
	2.3nm,0.7s,baz=134,slow=4.7,SNR=82						
ASAR	**Alice Springs**	**130.48**	**210**	PKP	**PKPdf**	**06 36 21.5**	**-1.2**
ASAR	**Alice Springs**	**130.48**	**210**	PKP	**PKPdf**	**06 36 21.5**	**-1.2**
	0.5nm,0.6s,baz=134,slow=1.9,SNR=7.0						
WRA	**Warramunga Arr**	**133.42**	**213**	PKP	**PKPdf**	**06 36 29.5**	**+1.1**
WRA	**Warramunga Arr**	**133.42**	**213**	PKP	**PKPdf**	**06 36 29.5**	**+1.1**
	0.2nm,0.5s,baz=152,slow=1.9,SNR=5.9						
ZALV	**Zalesovo Beam**	**141.23**	**23**	PKP	**PKPdf**	**06 36 41.6**	**0.0**
ZALV	**Zalesovo Beam**	**141.23**	**23**	PKP	**PKPdf**	**06 36 41.6**	**0.0**
	0.6nm,0.5s,baz=273,slow=2.5,SNR=3.7						
MK31	**Makanchi Array**	**145.28**	**34**	*e*PKPdf	**PKPdf**	**06 36 49.3**	**+0.2**
MKAR	**Makanchi Array**	**145.28**	**34**	PKPbc	**PKPdf**	**06 36 49.3**	**+0.3**
MKAR	**Makanchi Array**	**145.28**	**34**	PKPbc	**PKPdf**	**06 36 49.3**	**+0.3**
	5.1nm,0.7s,baz=324,slow=3.8,SNR=71						
SONM	**Songino Array**	**152.16**	**5**	PKPbc	**PKPbc**	**06 37 06.8**	**-0.1**
SONM				PKPab	**PKPab**	**06 37 15.4**	**-1.2**
SONM	**Songino Array**	**152.16**	**5**	PKPbc	**PKPbc**	**06 37 06.8**	**-0.1**
	0.7nm,0.8s,baz=299,slow=2.2,SNR=4.7						
SONM				PKPab	**PKPab**	**06 37 15.4**	**-1.2**
	0.6nm,0.7s,baz=330,slow=3.9,SNR=4.5						

NEIC ***17*** *06:31:05.4±0.2, 18°.21N×145°.67E, mb4.2/21, Error ellipse: s-maj=8.5km s-min=6.0km az=121.0*
IDC ***17*** *06:31:05.4±0.8, 18°.24N×145°.67E, h185km±7km, mb3.8/13, mb1 4.0/13, mb1mx3.8/24, mbtmp3.8/13, Error ellipse: s-maj=15.5km s-min=11.2km az=104.0*

ISC 17 06:31:05.6±0.6, 18°.25N±0°.09×145°.6E±0°.1, h185km±5km, h185km:pP-P, n185, σ0≤70/191, mb4.2/36, 71C-56D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YHNB	**Yeheng**	**23.45**	**290**	*e*P	**P**	**06 35 59.4**	**+0.8**
	15nm,0.5s						
SSLB	**Suanglung**	**23.68**	**288**	*e*P	**P**	**06 36 01.2**	**+0.7**
	26nm,0.6s						
KKM	**Kota Kinabalu**	**31.16**	**251**	*e*P	**P**	**06 37 08.6**	**+1.1**
	20nm,0.6s						
WRAB	**Tennant Creek**	**39.53**	**197**	*e*P	**P**	**06 38 18.0**	**-0.6**
	7.0nm,0.4s						
WRA	**Warramunga Arr**	**39.54**	**197**	P	**P**	**06 38 18.1**	**-0.6**
WRA	**Warramunga Arr**	**39.54**	**197**	P	**P**	**06 38 18.1**	**-0.6**
	4.9nm,0.4s,baz=18,slow=8.4,SNR=64						
FITZ	**Fitzroy Crossi**	**41.13**	**210**	*e*P	**P**	**06 38 31.9**	**+0.2**
	5.5nm,0.5s						
FITZ				*e*pP	**pP**	**06 39 10.5**	**-1.0**
AS31	**Alice Springs**	**43.20**	**196**	*e*P	**P**	**06 38 47.8**	**-0.7**
ASAR	**Alice Springs**	**43.20**	**196**	P	**P**	**06 38 48.2**	**-0.3**
ASAR	**Alice Springs**	**43.20**	**196**	P	**P**	**06 38 48.2**	**-0.3**
	1.9nm,0.6s,baz=24,slow=9.4,SNR=35						
SONM	**Songino Array**	**43.46**	**322**	P	**P**	**06 38 49.8**	**-0.6**
SONM	**Songino Array**	**43.46**	**322**	P	**P**	**06 38 49.8**	**-0.6**
	0.5nm,0.5s,baz=134,slow=6.2,SNR=4.2						
CMAR	**Chiang Mai Arr**	**44.22**	**278**	P	**P**	**06 38 58.4**	**+1.5**
CMAR	**Chiang Mai Arr**	**44.22**	**278**	P	**P**	**06 38 58.4**	**+1.5**
	4.4nm,0.6s,baz=69,slow=7.6,SNR=22						
MBWA	**Marble Bar**	**46.67**	**214**	*e*P	**P**	**06 39 15.3**	**-0.5**
	3.9nm,0.5s						
MBWA				*e*pP	**pP**	**06 39 57.4**	**+0.9**
STKA	**Stephens Creek**	**49.99**	**184**	*e*P	**P**	**06 39 39.9**	**-1.1**
	0.5nm,0.5s						
STKA	**Stephens Creek**	**49.99**	**184**	P	**P**	**06 39 39.8**	**-1.2**
	2.5nm,0.4s,baz=349,slow=6.2,SNR=12						
BILL	**Bilibino**	**51.47**	**10**	*e*P	**P**	**06 39 51.6**	**0.0**
	2.6nm,0.5s						
FORT	**Forrest**	**51.59**	**199**	*e*P	**P**	**06 39 52.8**	**-0.3**
	6.8nm,0.4s						
ZALV	**Zalesovo Beam**	**58.34**	**323**	P	**P**	**06 40 40.6**	**-0.5**
ZALV	**Zalesovo Beam**	**58.34**	**323**	P	**P**	**06 40 40.6**	**-0.5**
	0.7nm,0.3s,baz=104,slow=7.3,SNR=5.9						
MKAR	**Makanchi Array**	**58.73**	**314**	P	**P**	**06 40 43.6**	**-0.4**
MKAR				pP	**pP**	**06 41 26.5**	**-0.1**
MKAR	**Makanchi Array**	**58.73**	**314**	P	**P**	**06 40 43.6**	**-0.4**
	0.7nm,0.3s,baz=85,slow=8.5,SNR=24						
MKAR				pP	**pP**	**06 41 26.5**	**-0.1**
	0.3nm,0.6s,baz=78,slow=6.3,SNR=1.9						
KDAK	**Kodiak Island**	**59.77**	**33**	P	**P**	**06 40 51.5**	**+0.7**
KDAK	**Kodiak Island**	**59.77**	**33**	P	**P**	**06 40 51.5**	**+0.7**
	18nm,1.1s,baz=98,slow=11,SNR=5.9						
ILAR	**Eielson Array**	**64.07**	**26**	P	**P**	**06 41 18.4**	**-1.1**
ILAR	**Eielson Array**	**64.07**	**26**	P	**P**	**06 41 18.4**	**-1.1**
	1.2nm,0.5s,baz=249,slow=6.1,SNR=37						
DOT	**Dot Lake**	**65.07**	**28**	*e*P	**P**	**06 41 25.9**	**-0.1**
	3.5nm,0.9s						
BRVK	**Borovoye**	**66.85**	**321**	*e*P	**P**	**06 41 37.4**	**0.0**
	2.9nm,0.5s						
ABKAR	**Akbulak array**	**73.63**	**317**	*e*P	**P**	**06 42 17.0**	**-1.7**
	1.0nm,0.4s						
YKA	**Yellowknife Ar**	**78.41**	**28**	P	**P**	**06 42 45.1**	**-0.4**
YKA				pP	**pP**	**06 43 29.6**	**-0.7**
YKA	**Yellowknife Ar**	**78.41**	**28**	P	**P**	**06 42 45.1**	**-0.4**
	3.0nm,0.9s,baz=290,slow=5.5,SNR=32						
YKA				pP	**pP**	**06 43 29.6**	**-0.7**
	0.3nm,0.6s,baz=291,slow=5.4,SNR=2.1						
RES	**Resolute Bay**	**79.87**	**14**	*e*P	**P**	**06 42 53.0**	**-0.2**
	1.7nm,0.7s						
NEW	**Newport**	**81.28**	**42**	*e*P	**P**	**06 43 01.9**	**+0.7**
	1.7nm,0.6s						
NEW	**Newport**	**81.28**	**42**	⇑P	**P**	**06 43 02.0**	**+0.7**
	baz=81						
BEKR	**Beckworth**	**81.51**	**51**	*e*P	**P**	**06 43 03.3**	**+0.5**
	3.0nm,1.1s						
CMB	**Columbia Colle**	**82.01**	**53**	*e*P	**P**	**06 43 05.7**	**+0.4**
	2.2nm,0.6s						
CMB				*e*pP	**pP**	**06 43 51.6**	**+1.0**
A13A	**Flathead Natio**	**82.78**	**41**	⇑P	**P**	**06 43 10.1**	**+0.9**
	baz=83						
D12A	**Red Ives Fores**	**82.80**	**43**	⇑P	**P**	**06 43 09.3**	**0.0**
	baz=83						
ARCES	**ARCESS Array B**	**82.90**	**342**	P	**P**	**06 43 08.2**	**-1.0**
ARCES	**ARCESS Array B**	**82.90**	**342**	P	**P**	**06 43 08.2**	**-1.0**
	4.9nm,1.0s,baz=61,slow=7.5,SNR=8.5						
B13A	**Whitefish**	**82.93**	**41**	⇓P	**P**	**06 43 10.9**	**+1.0**
	baz=83						
C13A	**Hot Springs**	**83.09**	**42**	⇓P	**P**	**06 43 11.2**	**+0.4**
	baz=83						
F12A	**Elk City**	**83.29**	**44**	⇑P	**P**	**06 43 13.2**	**+1.3**
	baz=83						
D13A	**Huson**	**83.36**	**43**	⇑P	**P**	**06 43 12.2**	**0.0**
	baz=83						
A14A	**Double T Ranch**	**83.38**	**41**	⇑P	**P**	**06 43 13.2**	**+1.0**
	baz=83						
G12A	**Big Creek, Yel**	**83.44**	**45**	⇑P	**P**	**06 43 13.1**	**+0.4**
	baz=83						
NVAR	**Mina Array Bea**	**83.46**	**52**	P	**P**	**06 43 13.8**	**+0.8**
NVAR				pP	**pP**	**06 43 59.0**	**+0.5**
NVAR	**Mina Array Bea**	**83.46**	**52**	P	**P**	**06 43 13.8**	**+0.8**
	3.1nm,0.5s,baz=272,slow=5.7,SNR=41						
NVAR				pP	**pP**	**06 43 59.0**	**+0.5**
	2.0nm,0.8s,baz=270,slow=5.9,SNR=3.7						
C14A	**Swan Lake**	**83.59**	**42**	⇑P	**P**	**06 43 13.3**	**0.0**
	baz=83						
MFID	**Camas Ranch**	**83.66**	**46**	⇑P	**P**	**06 43 14.4**	**+0.6**
	baz=84						
B14A	**Marquette Ranc**	**83.68**	**41**	⇑P	**P**	**06 43 14.7**	**+0.9**
	baz=84						
E13A	**Victor**	**83.76**	**43**	⇑P	**P**	**06 43 14.8**	**+0.6**
	baz=84						
MSO	**Missoula**	**83.79**	**43**	⇑P	**P**	**06 43 15.2**	**+0.9**
	baz=84						
A15A	**Johnson Ranch,**	**83.81**	**40**	⇓P	**P**	**06 43 14.6**	**+0.2**
	baz=84						
F13A	**Darby**	**83.88**	**44**	⇑P	**P**	**06 43 14.6**	**-0.3**
	baz=84,SNR=5.6						
D14A	**Greenough**	**83.98**	**42**	⇑P	**P**	**06 43 15.5**	**+0.1**
	baz=84						
I12A	**Atlanta**	**84.02**	**46**	⇑P	**P**	**06 43 16.3**	**+0.6**
	baz=84						
B15A	**Bradely Ranch,**	**84.15**	**41**	⇑P	**P**	**06 43 16.3**	**+0.2**
	baz=84,SNR=6.8						
G13A	**Cobalt**	**84.19**	**44**	⇑P	**P**	**06 43 16.7**	**+0.3**
	baz=84,SNR=15						
E14A	**Clinton**	**84.22**	**43**	⇑P	**P**	**06 43 16.7**	**+0.1**
	baz=84						
C15A	**Salmond Ranch,**	**84.31**	**42**	⇓P	**P**	**06 43 17.5**	**+0.6**
	baz=84						
H13A	**Challis**	**84.35**	**45**	⇑P	**P**	**06 43 18.6**	**+1.4**
	baz=84						
A16A	**West Butte Ran**	**84.51**	**40**	⇓P	**P**	**06 43 18.0**	**+0.1**
	baz=84						
HLID	**Hailey**	**84.58**	**46**	*e*P	**P**	**06 43 18.9**	**+0.3**
	1.0nm,0.6s						
HLID	**Hailey**	**84.58**	**46**	⇑P	**P**	**06 43 19.1**	**+0.6**
	baz=84						
B16A	**M & M Farms, S**	**84.64**	**41**	⇓P	**P**	**06 43 18.8**	**+0.2**
	baz=84,SNR=12						
G14A	**Jackson**	**84.65**	**44**	⇑P	**P**	**06 43 19.3**	**+0.4**
	baz=84						
I13A	**Withorse Cree**	**84.67**	**46**	⇓P	**P**	**06 43 20.0**	**+1.0**
	baz=84						
E15A	**Deer Lodge**	**84.77**	**43**	⇓P	**P**	**06 43 19.6**	**+0.3**
	baz=85						
J13A	**Cove Ranch, Pi**	**84.80**	**46**	⇓P	**P**	**06 43 20.0**	**+0.4**
	baz=85						
MPMC	**Manual Prospec**	**84.82**	**54**	⇑P	**P**	**06 43 20.7**	**+0.8**
	baz=85						
C16A	**Fuhringer Ranc**	**84.84**	**41**	⇑P	**P**	**06 43 20.0**	**+0.4**
	baz=85,SNR=7.6						
LRMC	**Laurel Mountai**	**84.85**	**54**	⇓P	**P**	**06 43 20.8**	**+0.8**
	baz=85						
H14A	**Leadore**	**84.93**	**45**	⇑P	**P**	**06 43 20.8**	**+0.6**
	baz=85,SNR=6.0						
ELK	**Elko**	**84.96**	**49**	*e*P	**P**	**06 43 20.5**	**0.0**
A17A	**Triple J Farms**	**85.06**	**40**	⇓P	**P**	**06 43 20.8**	**+0.1**
	baz=85						
F15A	**Butte**	**85.07**	**43**	⇑P	**P**	**06 43 21.0**	**+0.1**
	baz=85,SNR=7.1						
I14A	**Makay**	**85.11**	**45**	⇑P	**P**	**06 43 22.3**	**+1.2**
	baz=85						
HRY	**Holter Researc**	**85.18**	**42**	*e*P	**P**	**06 43 21.8**	**+0.5**
	3.2nm,0.4s						
D16A	**Dana Ranch, Ca**	**85.25**	**42**	⇑P	**P**	**06 43 21.9**	**+0.3**
	baz=85						
B17A	**L&G Farms, Che**	**85.25**	**41**	⇑P	**P**	**06 43 21.9**	**+0.3**
	baz=85,SNR=9.8						
J14A	**Carey**	**85.28**	**46**	⇑P	**P**	**06 43 23.0**	**+1.0**
	baz=85						
G15A	**Dillon**	**85.32**	**44**	⇑P	**P**	**06 43 22.7**	**+0.5**
	baz=85						
E16A	**East Helena**	**85.35**	**43**	⇓P	**P**	**06 43 22.4**	**+0.3**
	baz=85						
H15A	**Lima**	**85.41**	**45**	⇑P	**P**	**06 43 23.5**	**+0.9**
	baz=85						
R11A	**Troy Canyon, C**	**85.51**	**51**	⇑P	**P**	**06 43 23.9**	**+0.7**
	baz=85						
C17A	**Wharram Farm,**	**85.52**	**41**	⇑P	**P**	**06 43 23.0**	**0.0**
	baz=85						
A18A	**Metzger Ranch,**	**85.59**	**40**	⇓P	**P**	**06 43 23.6**	**+0.3**
	baz=85,SNR=5.7						
F16A	**Kennard Place,**	**85.66**	**43**	⇓P	**P**	**06 43 23.9**	**+0.2**
	baz=86,SNR=6.5						
BOZ	**Bozeman (W)**	**85.70**	**43**	⇑P	**P**	**06 43 24.3**	**+0.3**
	baz=86						
G16A	**Moss Hill, Enn**	**85.74**	**44**	⇓P	**P**	**06 43 24.4**	**+0.2**
	baz=86,SNR=8.2						
D17A	**Six Diamond Ra**	**85.75**	**42**	⇓P	**P**	**06 43 24.4**	**+0.2**
	baz=86						
K14A	**Jones Ranch, D**	**85.79**	**47**	⇓P	**P**	**06 43 25.4**	**+1.0**
	baz=86						
B18A	**Beardsley Farm**	**85.84**	**40**	⇓P	**P**	**06 43 24.6**	**+0.1**
	baz=86						
E17A	**Martinsdale**	**85.90**	**42**	⇑P	**P**	**06 43 25.6**	**+0.6**
	baz=86						
J15A	**Blackfoot**	**85.99**	**46**	⇑P	**P**	**06 43 26.8**	**+1.3**
	baz=86						
EGMT	**Eagleton**	**86.00**	**41**	⇑P	**P**	**06 43 25.6**	**+0.3**
	baz=86						
K15A	**Arbon**	**86.18**	**46**	⇓P	**P**	**06 43 27.0**	**+0.6**
	baz=86						
F17A	**Fitzpatrick Pl**	**86.24**	**43**	⇓P	**P**	**06 43 27.0**	**+0.4**
	baz=86						
A19A	**Klindworth Far**	**86.26**	**40**	⇓P	**P**	**06 43 27.0**	**+0.4**
	baz=86						
H16A	**Russell Place,**	**86.31**	**44**	⇓P	**P**	**06 43 27.5**	**+0.5**
	baz=86						
G17A	**Pierce Place,**	**86.41**	**43**	⇓P	**P**	**06 43 28.5**	**+1.0**
	baz=86						
I16A	**Newdale**	**86.46**	**45**	⇑P	**P**	**06 43 29.1**	**+1.3**
	baz=86						
E18A	**Harlowton**	**86.46**	**42**	⇓P	**P**	**06 43 28.2**	**+0.6**
	baz=86						
L15A	**Malad City**	**86.53**	**47**	⇑P	**P**	**06 43 28.6**	**+0.5**
	baz=86						
C19A	**Slack Wire Ran**	**86.55**	**41**	⇑P	**P**	**06 43 28.6**	**+0.6**
	baz=86						
GMRC	**Granite Mounta**	**86.65**	**55**	⇑P	**P**	**06 43 29.9**	**+1.1**
	baz=86						
K16A	**Soda Springs**	**86.78**	**46**	⇓P	**P**	**06 43 30.0**	**+0.6**
	baz=87						
D19A	**Cripps Ranch,**	**86.88**	**41**	⇓P	**P**	**06 43 29.9**	**+0.3**
	baz=87						
DUG	**Dugway**	**86.89**	**49**	*e*P	**P**	**06 43 30.2**	**+0.3**
	2.8nm,0.7s						
DUG	**Dugway**	**86.89**	**49**	⇓P	**P**	**06 43 30.5**	**+0.6**
	baz=87						
B20A	**Solberg Farm,**	**86.90**	**40**	⇓P	**P**	**06 43 29.6**	**0.0**
	baz=87						
L16A	**Fish Haven**	**87.19**	**47**	⇑P	**P**	**06 43 31.9**	**+0.5**
	baz=87						
C20A	**Veseth Ranch,**	**87.20**	**40**	⇓P	**P**	**06 43 31.6**	**+0.5**
	baz=87						
HWUT	**Hardware Ranch**	**87.25**	**47**	*e*P	**P**	**06 43 31.1**	**-0.5**
	4.2nm,1.0s						
FINES	**FINESS Array B**	**87.27**	**335**	P	P	06 43 27.9	-3.1
FINES	**FINESS Array B**	**87.27**	**335**	P	P	06 43 27.9	-3.1
	1.7nm,0.5s,baz=68,slow=4.9,SNR=10						
RLMT	**Red Lodge**	**87.44**	**43**	⇑P	**P**	**06 43 32.9**	**+0.4**
	baz=87						
B21A	**Ellsworth Farm**	**87.51**	**40**	⇑P	**P**	**06 43 32.5**	**0.0**
	baz=87						
J18A	**Kendall Valley**	**87.69**	**45**	⇑P	**P**	**06 43 33.9**	**+0.1**
	baz=88						
C21A	**Desert Coulee**	**87.71**	**40**	⇓P	**P**	**06 43 33.4**	**-0.1**
	baz=88						
H19A	**Powell**	**87.81**	**44**	⇓P	**P**	**06 43 34.5**	**+0.4**
	baz=88						
K18A	**Toltan Ranch,**	**87.90**	**46**	⇓P	**P**	**06 43 35.4**	**+0.7**
	baz=88						
W13A	**Hualapai Mount**	**87.91**	**54**	⇓P	**P**	**06 43 35.9**	**+0.9**
	baz=88						
A22A	**Carney Farms,**	**87.93**	**39**	⇓P	**P**	**06 43 33.9**	**-0.7**
	baz=88						
N17A	**Moffit Pass**	**88.01**	**47**	⇓P	**P**	**06 43 35.8**	**+0.5**
	baz=88						
BW06	**Boulder Array**	**88.18**	**45**	⇓P	**P**	**06 43 36.4**	**+0.4**
	baz=88						
PDAR	**Pinedale Array**	**88.18**	**45**	P	**P**	**06 43 35.6**	**-0.5**
PDAR	**Pinedale Array**	**88.18**	**45**	P	**P**	**06 43 35.6**	**-0.5**
	0.6nm,0.4s,baz=132,slow=0.9,SNR=15						
L18A	**Fontenelle, Gr**	**88.18**	**46**	⇑P	**P**	**06 43 36.7**	**+0.6**
	baz=88						
J19A	**Crowheart**	**88.32**	**45**	⇓P	**P**	**06 43 37.1**	**+0.4**
	baz=88						
Q16A	**Castle Valley**	**88.54**	**49**	⇑P	**P**	**06 43 38.8**	**+1.0**
	baz=88						
L19A	**Farson**	**88.58**	**46**	⇓P	**P**	**06 43 38.7**	**+0.8**
	baz=88						
K19A	**Absolon Red Bu**	**88.64**	**45**	⇓P	**P**	**06 43 37.9**	**-0.2**
	baz=88						
U15A	**North Rim**	**88.64**	**52**	⇑P	**P**	**06 43 39.5**	**+1.0**
	baz=88						
N18A	**Larsen Ranch,**	**88.81**	**47**	⇓P	**P**	**06 43 39.3**	**+0.3**
	baz=89						
C23A	**Lambert**	**88.89**	**40**	⇑P	**P**	**06 43 39.2**	**+0.1**
	baz=89						
SRU	**San Rafael**	**88.93**	**49**	⇓P	**P**	**06 43 39.7**	**+0.1**
	baz=89						
E22A	**Miles City**	**89.01**	**41**	⇓P	**P**	**06 43 39.7**	**+0.1**
	baz=89						
K20A	**Yellowstone Ra**	**89.05**	**45**	⇓P	**P**	**06 43 40.3**	**+0.3**
	baz=89						
H21A	**Big Horn, Sher**	**89.09**	**43**	⇑P	**P**	**06 43 41.3**	**+1.1**
	baz=89						
D23A	**Lindsay**	**89.15**	**40**	⇑P	**P**	**06 43 40.2**	**-0.1**
	baz=89						
O19A	**Miners Draw (B**	**89.46**	**48**	⇑P	**P**	**06 43 42.3**	**+0.2**
	baz=89						
WUAZ	**Wupatki**	**89.67**	**53**	⇓P	**P**	**06 43 43.8**	**+0.7**
	baz=90						
K21A	**Alcova**	**89.79**	**45**	⇑P	**P**	**06 43 43.9**	**+0.3**
	baz=90						
P19A	**Cripple Cowboy**	**89.82**	**48**	⇑P	**P**	**06 43 44.1**	**+0.3**
	baz=90						
214A	**Organ Pipe Nat**	**89.88**	**56**	⇑P	**P**	**06 43 45.2**	**+1.3**
	baz=90						
J22A	**Midwest**	**89.97**	**44**	⇓P	**P**	**06 43 44.4**	**0.0**
	baz=90						
M21A	**Separation Pea**	**90.14**	**46**	⇑P	**P**	**06 43 45.4**	**+0.1**
	baz=90						
O20A	**White River Ci**	**90.14**	**47**	⇑P	**P**	**06 43 45.8**	**+0.5**
	baz=90						
PV10	**Paradox Valley**	**90.28**	**49**	*e*P	**P**	**06 43 46.6**	**+0.6**
	45nm,0.4s						
N21A	**Black Mountain**	**90.39**	**47**	⇑P	**P**	**06 43 47.2**	**+0.7**
	baz=90						
Q20A	**Ridgley Place,**	**90.58**	**49**	⇓P	**P**	**06 43 48.0**	**+0.6**
	baz=90						
PV01	**Paradox Valley**	**90.72**	**49**	*e*P	**P**	**06 43 47.8**	**-0.2**
	227nm,0.6s						
K23A	**Bowen Ranch, D**	**90.82**	**44**	⇓P	**P**	**06 43 48.1**	**-0.2**
	baz=91						
R20A	**Redvale**	**90.83**	**49**	⇑P	**P**	**06 43 49.1**	**+0.5**
	baz=91						
S20A	**Disappointment**	**90.99**	**50**	⇓P	**P**	**06 43 49.5**	**+0.1**
	baz=91						
L23A	**Garrett**	**91.05**	**45**	⇑P	**P**	**06 43 49.5**	**0.0**
	baz=91						
O22A	**Kremmling**	**91.31**	**47**	⇑P	**P**	**06 43 51.0**	**+0.2**
	baz=91						
R21A	**Cimarron**	**91.36**	**49**	⇑P	**P**	**06 43 52.0**	**+1.0**
	baz=91						
P22A	**Eagle**	**91.40**	**47**	⇑P	**P**	**06 43 51.9**	**+0.7**
	baz=91						
N23A	**Red Feather La**	**91.41**	**46**	⇑P	**P**	**06 43 51.6**	**+0.4**
	baz=91						
S21A	**Coal Bank Pass**	**91.47**	**50**	⇑P	**P**	**06 43 52.3**	**+0.7**
	baz

mb1 4.0/4,**mb1mx3.7**/19,**mbtmpp3.8**/4,**ML3.7**/2,**MS2.9**/2,
Ms1 3.0/2,**ms1mx2.6**/29,**Error ellipse: s-maj=59.0km**
s-min=38.2km az=149.0,**Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.86**	**32**	Pn	Pn	06 37 27.5	-0.7
	1.1nm,0.3s,baz=243,slow=6.3,SNR=33						
LPAZ				Sn	Sn	06 38 26.9	+1.2
	0.6nm,0.3s,baz=192,slow=5.0,SNR=3.6						
LPAZ				LR	LR	06 39 08.6	
	comp=Z,108nm,19.2s,baz=91,slow=36						
SIV	**San Ignacio**	**10.28**	**66**	Pn	Pn	06 38 42.0	0.0
	0.6nm,0.3s,baz=280,slow=10,SNR=10						
SIV				LR	LR	06 42 12.1	
	comp=Z,70nm,19.1s,slow=35						
CPUP	**Villa Florida**	**13.72**	**118**	Pn	P	06 39 36.0	-1.9
	0.1nm,0.3s,baz=273,slow=20,SNR=2.2						
TORD	**Torodi Ar. Bea**	**78.71**	**71**	P	P	06 48 18.5	+0.7
	0.9nm,0.9s,baz=248,slow=5.1,SNR=4.2						
YKA	**Yellowknife Ar**	**89.59**	**341**	P	P	06 49 12.5	+0.5
	0.5nm,0.6s,baz=135,slow=4.6,SNR=19						
MKAR	**Makanchi Array**	**145.78**	**34**	PKPbc	PKPdf	06 55 52.1	-1.6
	0.6nm,0.5s,baz=314,slow=2.1,SNR=10						

IDC ***17*** *06:45:35.1±0.9, 14˚.78N×144˚.46E, h0km, mb4.0/12, mb1 4.1/12, mb1mx4.0/25, mbtmp4.0/12, MS3.3/5, Ms1 3.3/5, ms1mx2.9/43, Error ellipse: s-maj=34.2km s-min=13.8km az=80.0*

NEIC ***17*** *06:45:36.5±0.5, 14˚.77N×144˚.46E, h10km, mb4.6/5, Error ellipse: s-maj=21.9km s-min=7.7km az=79.0*

ISCJB ***17*** *06:45:37.4±0.5, 14˚.76N±0˚.07×144˚.4E±0˚.2, h27km, mb4.1/16, MS3.2/4, Error ellipse: s-maj=23.1km s-min=6.8km az=160.7*

ISC 17 06:45:39.0±0.7,**14˚.72N**±0˚.09×**144˚.5E**±0˚.2,**h27**km,**n36,**
σ0s88/36,**mb4.1**/16,**MS3.1**/4,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.19**	**160**	*e*Pn	**Pn**	**06 45 59.4**	**-0.4**
GUMO				Sn	**Sb**	**06 46 15.3**	**-0.6**
GUMO				*e*Sn	**Sn**	**06 46 15.5**	**+0.4**
GUMO	**Guam**	**1.19**	**160**	Pn	**Pn**	**06 45 59.7**	**-0.1**
	229nm,0.3s,baz=312,slow=3.3,SNR=43						
GUMO				Sn	**Sb**	**06 46 15.3**	**-0.6**
	286nm,0.3s,baz=104,slow=21,SNR=28						
JHJ	**Hachijo jima 2**	**18.81**	**348**	LR	LR	06 56 28.0	
	comp=Z,69nm,20.7s,baz=68,slow=35						
MJAR	**Matsushiro Arr**	**22.44**	**347**	P	**P**	**06 50 35.9**	**0.0**
MJAR	**Matsushiro Arr**	**22.44**	**347**	P	**P**	**06 50 35.9**	**0.0**
	0.8nm,0.4s,baz=169,slow=10.0,SNR=5.1						
MJAR				LR	LR	06 58 49.6	
	comp=Z,57nm,18.3s,baz=230,slow=36						
KSRS	**Korea Array**	**26.99**	**330**	P	**P**	**06 51 18.6**	**0.0**
	0.6nm,0.3s,baz=144,slow=9.0,SNR=3.3						
KSRS				LR	LR	07 01 03.2	
	comp=Z,37nm,20.8s,baz=180,slow=34						
KSAR	**Wonju Array Be**	**27.00**	**330**	P	**P**	**06 51 18.6**	**-0.1**
ASAJ	**Asahikawa**	**29.35**	**357**	LR	LR	07 03 30.2	
	comp=Z,60nm,18.8s,baz=141,slow=37						
CTA	**Charters Tower**	**34.63**	**177**	LR	LR	07 06 15.6	
	comp=Z,83nm,19.0s,baz=227,slow=36						
WRAB	**Tennant Creek**	**35.84**	**196**	*e*P	**P**	**06 52 37.5**	**+0.9**
	7.5nm,1.0s						
WRA	**Warramunga Arr**	**35.85**	**196**	P	**P**	**06 52 37.4**	**+0.8**
WRA	**Warramunga Arr**	**35.85**	**196**	P	**P**	**06 52 37.4**	**+0.8**
	2.0nm,0.8s,baz=20,slow=9.7,SNR=8.7						
FITZ	**Fitzroy Crossi**	**37.52**	**210**	*e*P	**P**	**06 52 51.6**	**+0.8**
	2.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**37.52**	**210**	P	**P**	**06 52 51.5**	**+0.6**
	2.6nm,0.7s,baz=62,slow=8.9,SNR=4.1						
ASAR	**Alice Springs**	**39.52**	**195**	P	**P**	**06 53 09.0**	**+1.3**
ASAR	**Alice Springs**	**39.52**	**195**	P	**P**	**06 53 09.0**	**+1.3**
	0.6nm,0.7s,baz=18,slow=13,SNR=7.1						
CMAR	**Chiang Mai Arr**	**43.70**	**281**	P	**P**	**06 53 42.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**43.70**	**281**	P	**P**	**06 53 42.0**	**-0.1**
	1.2nm,0.4s,baz=77,slow=6.4,SNR=14						
STKA	**Stephens Creek**	**46.41**	**183**	P	**P**	**06 54 02.5**	**-0.8**
STKA	**Stephens Creek**	**46.41**	**183**	P	**P**	**06 54 02.5**	**-0.8**
	1.2nm,0.7s,baz=326,slow=7.3,SNR=3.2						
MK31	**Makanchi Array**	**60.41**	**316**	*e*P	**P**	**06 55 46.1**	**0.0**
MKAR	**Makanchi Array**	**60.41**	**316**	P	**P**	**06 55 46.1**	**0.0**
MKAR	**Makanchi Array**	**60.41**	**316**	P	**P**	**06 55 46.1**	**0.0**
	1.4nm,0.8s,baz=94,slow=9.1,SNR=14						
ZALV	**Zalesovo Beam**	**60.48**	**324**	P	**P**	**06 55 45.6**	**-0.8**
ZALV	**Zalesovo Beam**	**60.48**	**324**	P	**P**	**06 55 45.6**	**-0.8**
	0.3nm,0.3s,baz=107,slow=6.3,SNR=5.3						
KURK	**Kurchatov**	**63.47**	**320**	*e*P	**P**	**06 56 05.3**	**-1.3**
	13nm,1.3s						
BRVK	**Borovoye**	**68.87**	**321**	*e*P	**P**	**06 56 41.1**	**-0.1**
	8.6nm,1.3s						
ABKAR	**Akbulak array**	**75.45**	**318**	*e*P	**P**	**06 57 19.9**	**-0.7**
	4.2nm,0.9s						
YKA	**Yellowknife Ar**	**82.05**	**27**	P	**P**	**06 57 57.2**	**+0.6**
YKA	**Yellowknife Ar**	**82.05**	**27**	P	**P**	**06 57 57.2**	**+0.6**
	0.2nm,0.6s,baz=288,slow=4.9,SNR=5.2						
ARCES	**ARCESS Array B**	**85.90**	**342**	P	**P**	**06 58 16.0**	**-0.1**
ARCES	**ARCESS Array B**	**85.90**	**342**	P	**P**	**06 58 16.0**	**-0.1**
	3.6nm,0.8s,baz=55,slow=4.6,SNR=5.9						
FINES	**FINESS Array B**	**89.98**	**335**	P	**P**	**06 58 34.2**	**-1.6**
FINES	**FINESS Array B**	**89.98**	**335**	P	**P**	**06 58 34.2**	**-1.6**
	2.0nm,0.7s,baz=15,slow=7.9,SNR=4.2						
TORD	**Torodi Ar. Bea**	**133.90**	**305**	PKP	**PKPdf**	**07 04 56.6**	**+2.0**
TORD	**Torodi Ar. Bea**	**133.90**	**305**	PKP	**PKPdf**	**07 04 56.6**	**+2.0**
	0.5nm,1.0s,baz=17,slow=2.7,SNR=2.8						

ISCJB ***17*** *06:48:22.7±0.6, 37˚.81N±0˚.03×29˚.13E±0˚.05, h14km±4km, Error ellipse: s-maj=6.7km s-min=5.3km az=169.8*

CSEM ***17*** *06:48:22.4±0.2, 37˚.81N×29˚.12E, h15km, MD2.8, Error ellipse: s-maj=4.9km s-min=3.7km az=86.0*

ISK ***17*** *06:48:22.1, 37˚.81N×29˚.10E, h17km, MD2.8*

DDA ***17*** *06:48:23.1, 37˚.83N×29˚.09E, h7km, MD2.8*

ISC 17 06:48:22.4±0.9,**37˚.83N**±0˚.02×**29˚.10E**±0˚.03,**h13**km±6km,
n28,σ0s73/40,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.09**	**217**	*e*PG	**Pg**	**06 48 25.5**	**0.0**
DENT	**Denizli**	**0.09**	**217**	*e*Pg	**Pg**	**06 48 25.5**	**0.0**
DNZL	**Cakiroluk**	**0.14**	**198**	*i* P	**Pg**	**06 48 26.4**	**+0.2**
DNZL				*i* S	**Sg**	**06 48 28.9**	**+0.1**
DNZL	**Cakiroluk**	**0.14**	**198**	*i* P	**Pg**	**06 48 26.4**	**+0.2**
DNZL				*i* S	**Sg**	**06 48 28.9**	**+0.1**
KHL	**Karahalli**	**0.60**	**34**	*e*PG	**Pb**	**06 48 35.5**	**+0.7**
KHL	**Karahalli**	**0.60**	**34**	*e*Pg	**Pb**	**06 48 35.5**	**+0.7**
KHAL	**Karahalli**	**0.62**	**29**	*i* P	**Pg**	**06 48 34.8**	**+0.1**
KHAL	**Karahalli**	**0.62**	**29**	*i* P	**Pg**	**06 48 34.8**	**+0.1**
GOLH	**Golhisar**	**0.69**	**148**	*i* P	**Pg**	**06 48 36.9**	**+1.0**
GOLH				*i* S	**Sn**	**06 48 48.9**	**+0.3**
GOLH	**Golhisar**	**0.69**	**148**	*i* P	**Pg**	**06 48 36.9**	**+1.0**
GOLH				*i* S	**Sn**	**06 48 48.9**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.74**	**155**	*e*PG	**Pb**	**06 48 36.5**	**-0.7**
GLHS				*e*SG	**Sb**	**06 48 48.0**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.74**	**155**	*e*Pg	**Pb**	**06 48 36.5**	**-0.7**
GLHS				*e*Sg	**Sb**	**06 48 48.0**	**+0.7**
MANT	**Manisa**	**0.79**	**327**	*i* P	**Pg**	**06 48 38.2**	**+0.4**
MANT				*i* S	**Sn**	**06 48 49.6**	**-1.6**
MANT	**Manisa**	**0.79**	**327**	*i* P	**Pg**	**06 48 38.2**	**+0.4**
MANT				*i* S	**Sn**	**06 48 49.6**	**-1.6**
YER	**Yerkesik**	**0.95**	**224**	*e*PG	**Pb**	**06 48 40.5**	**-0.2**
YER	**Yerkesik**	**0.95**	**224**	*e*Pg	**Pb**	**06 48 40.6**	**-0.2**
AYDN	**Tasoluk**	**0.98**	**261**	*i* P	**Pg**	**06 48 42.0**	**+0.5**
AYDN				*i* S	**Sg**	**06 48 54.4**	**+0.1**
AYDN	**Tasoluk**	**0.98**	**261**	*i* P	**Pg**	**06 48 42.0**	**+0.5**
AYDN				*i* S	**Sg**	**06 48 54.4**	**+0.1**
DALT	**Dalyan (Mudla)**	**1.12**	**200**	*e*PN	**Pb**	**06 48 44.3**	**+0.6**
DALT				*e*SN	**Sb**	**06 48 58.9**	**+0.8**
DALT	**Dalyan (Mudla)**	**1.12**	**200**	*e*Pn	**Pb**	**06 48 44.3**	**+0.6**
DALT				*e*Sn	**Sb**	**06 48 58.9**	**+0.8**
FETY	**Fethiye**	**1.19**	**181**	*e*PN	**Pn**	**06 48 43.9**	**-0.9**
FETY	**Fethiye**	**1.19**	**181**	*e*Pn	**Pn**	**06 48 43.9**	**-0.9**
ELL	**Elmali**	**1.25**	**149**	*e*PN	**Pn**	**06 48 44.6**	**-1.2**
ELL	**Elmali**	**1.25**	**149**	*e*Pn	**Pn**	**06 48 44.6**	**-1.2**
SHUT	**Suhut-Afyon**	**1.35**	**57**	*e*PN	**Pn**	**06 48 46.2**	**-0.9**
SHUT	**Suhut-Afyon**	**1.35**	**57**	*e*Pn	**Pn**	**06 48 46.2**	**-0.9**
AKS	**Akhisar**	**1.46**	**316**	*e*PN	**Pn**	**06 48 48.7**	**+0.2**
AKS	**Akhisar**	**1.46**	**316**	*e*Pn	**Pn**	**06 48 48.7**	**+0.2**

BJI ***17*** *07:04:08.6, 14˚.20N×145˚.21E, h10km, mB5.0/31, mb4.8/34, Ms4.6/29, Ms7 4.3/30*

ISCJB ***17*** *07:04:14.8±1.3, 14˚.80N±0˚.04×144˚.50E±0˚.06, h5km±8km, mb4.6/53, MS4.1/38, Error ellipse: s-maj=10.0km s-min=6.3km az=159.7*

IDC ***17*** *07:04:15.4±0.5, 14˚.85N×144˚.53E, h0km, mb4.5/24, mb1 4.6/24, mb1mx4.5/31, mbtmp4.5/24, MS4.1/30, Ms1 4.1/30, ms1mx3.9/45, Error ellipse: s-maj=20.8km s-min=10.6km az=73.0*

NEIC ***17*** *07:04:20.3±3.0, 14˚.82N×144˚.53E, h31km±21km, mb4.7/21, Error ellipse: s-maj=8.8km s-min=5.3km az=78.0*

GCMT ***17*** *07:04:24.0±0.2, 14˚.81N×144˚.29E, h16km, MW5.0, Moment Tensor Solution. s30,c36; s73,c114; Moment tensor: Scale 10^16 Nm; Mrr-3.94±.23; Mθθ1.60±.14; Mφφ2.34±.16; Mrθ1.39±.46; Mrφ0.31±.45; Mθφ2.31±.10; Best double couple: M=4.40000×10^16 NP1:φ=28.00000°, δ=39.00000°, λ=-109.00000°. NP2:φ=232.00000°, δ=54.00000°, λ=-75.00000°. Principal axes: T 4.4700, Plg=8.0000°, Azm=312.0000°; N -0.1900, Plg=12.0000°, Azm=44.0000°; P -4.2800, Plg=76.0000°, Azm=189.0000°; Data Used: ll IU IC CN G.*

ISC 17 07:04:18.0±0.5,**14˚.77N**±0˚.05×**144˚.58E**±0˚.08,**h16**km±2km,
n123,σ1s13/156,**mb4.7**/53,**MS4.2**/40,**1C**,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.21**	**167**	*e*Pn	**Pn**	**07 04 40.1**	**-0.2**
GUMO				*e*Sn	**Sb**	**07 04 53.0**	**-2.9**
GUMO	**Guam**	**1.21**	**167**	Pn	**Pn**	**07 04 39.9**	**-0.4**
	554nm,0.3s,baz=311,slow=4.1,SNR=29						
GUMO				Sn	**Sb**	**07 04 55.7**	**-0.2**
	2μm,0.3s,baz=108,slow=20,SNR=40						
GUMO				LR	LR	07 05 14.8	
	comp=Z,3μm,19.1s,baz=82,slow=46						
JHJ	**Hachijo jima 2**	**18.78**	**347**	LR	LR	07 14 43.3	
	comp=Z,611nm,18.7s,baz=152,slow=34						
JNU	**Nakatsue**	**22.11**	**328**	*e*P	**P**	**07 09 12.6**	**-0.2**
	12nm,1.1s						
JNU	**Nakatsue**	**22.11**	**328**	P	**P**	**07 09 13.1**	**+0.3**
	18nm,1.1s,baz=160,slow=6.0,SNR=4.6						
JNU				LR	LR	07 16 07.2	
	comp=Z,122nm,18.4s,baz=209,slow=32						
MJAR	**Matsushiro Arr**	**22.41**	**346**	P	**P**	**07 09 16.3**	**+0.2**
MJAR	**Matsushiro Arr**	**22.41**	**346**	P	**P**	**07 09 16.3**	**+0.2**
	22nm,1.0s,baz=173,slow=10,SNR=32						
MAJO	**Matsushiro**	**22.42**	**346**	*e*P	**P**	**07 09 17.4**	**+1.3**
	35nm,0.9s						
MAT	**Matsushiro**	**22.42**	**346**	P	**P**	**07 09 17.1**	**+1.0**
MAT				S	**S**	**07 13 25.2**	**+3.4**
PMG	**Port Moresby**	**24.16**	**174**	*e*P	**P**	**07 09 35.3**	**+1.6**
	24nm,1.0s						
PMG	**Port Moresby**	**24.16**	**174**	P	**P**	**07 09 35.2**	**+1.6**
	16nm,0.8s,baz=245,slow=6.6,SNR=5.5						
KSRS	**Korea Array**	**27.01**	**330**	P	**P**	**07 09 59.2**	**-0.1**
	4.2nm,0.9s,baz=144,slow=11,SNR=10						
KSRS				LR	LR	07 20 10.4	
	comp=Z,180nm,19.6s,baz=169,slow=36						
KSAR	**Wonju Array Be**	**27.02**	**330**	P	**P**	**07 09 59.2**	**-0.2**
NJ2	**Nanjing**	**29.09**	**311**	*e*P	**P**	**07 10 18.1**	**0.0**
NJ2				pP	**pP**	**07 10 21.1**	**-1.7**
NJ2				S	**S**	**07 15 10.0**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,190nm,7.3s						
NJ2				LR	LR		
	comp=N,230nm,10.6s						
NJ2				LR	LR		
	comp=E,230nm,17.2s						
NJ2				LR	LR		
	comp=Z,500nm,18.5s						
ASAJ	**Asahikawa**	**29.30**	**357**	LR	LR	07 22 02.8	
	comp=Z,266nm,20.0s,baz=164,slow=36						
USRK	**Ussuriysk Arra**	**31.23**	**342**	P	**P**	**07 10 37.0**	**+0.2**
	comp=Z,4.6nm,0.9s,baz=166,slow=10,SNR=6.4						
SNY	**Shenyang**	**32.51**	**330**	⇑P	P	07 10 37.8	-10
SNY				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CN2	**Changchun**	**33.23**	**334**	*e*P	**P**	**07 10 55.5**	**+1.1**
QIZ	**Qiongzhong**	**33.47**	**282**	P	**P**	**07 10 56.4**	**-0.4**
QIZ				S	**S**	**07 16 18.3**	**+0.1**
QIZ				LR	LR		
	comp=N,270nm,18.7s						
QIZ				LR	LR		
	comp=E,130nm,18.3s						
QIZ				LR	LR		
	comp=Z,310nm,13.8s						
CTA	**Charters Tower**	**34.68**	**177**	LR	LR	07 23 29.2	
	comp=Z,175nm,21.4s,baz=3.0,slow=33						
BJI	**Beijing**	**35.35**	**321**	P	**P**	**07 11 12.5**	**-0.3**
BJI				S	**S**	**07 16 47.6**	**+0.9**
BJI				pmax	pmax		
	comp=Z,14nm,0.6s						
BJI				pmax	pmax		
	comp=Z,170nm,4.8s						
BJI				LR	LR		
	comp=N,240nm,12.2s						
BJI				LR	LR		
	comp=E,120nm,18.7s						
BJI				LR	LR		
	comp=Z,410nm,24.9s						
WRAB	**Tennant Creek**	**35.93**	**197**	*e*P	**P**	**07 11 17.4**	**-0.5**
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**35.94**	**197**	P	**P**	**07 11 17.9**	**-0.1**
WRA				PcP	**PcP**	**07 13 44.7**	**-0.3**
WRA	**Warramunga Arr**	**35.94**	**197**	P	**P**	**07 11 17.9**	**-0.1**
	comp=Z,10nm,1.0s,baz=17,slow=9.5,SNR=17						
WRA				PcP	**PcP**	**07 13 44.7**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=11,slow=3.5,SNR=4.9						
WRA				LR	LR	07 26 36.7	
	comp=Z,140nm,20.3s,baz=25,slow=37						
GYA	**Guiyang**	**37.21**	**294**	P	**P**	**07 11 29.8**	**+0.7**
GYA				PP	**PnPn**	**07 12 56.4**	**+1.9**
GYA				S	**S**	**07 17 15.3**	**-0.5**
GYA				ScP	**ScP**	**07 17 35.9**	**+0.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,90nm,4.9s						
GYA				LR	LR		
	comp=N,460nm,17.8s						
GYA				LR	LR		
	comp=E,430nm,16.7s						
GYA				LR	LR		
	comp=Z,450nm,18.3s						
XAN	**Xi'an**	**37.45**	**307**	P	**P**	**07 11 30.4**	**-0.6**
XAN				pP	**pP**	**07 11 35.4**	**-0.4**
XAN				PP	**PnPn**	**07 12 59.4**	**+2.2**
XAN				S	**S**	**07 17 17.1**	**-2.0**
XAN				pmax	pmax		
	comp=Z,31nm,6.7s						
XAN				LR	LR		
	comp=N,110nm,14.8s						
XAN				LR	LR		
	comp=E,49nm,9.3s						
XAN				LR	LR		
	comp=Z,79nm,14.8s						
FITZ	**Fitzroy Crossi**	**37.63**	**210**	*e*P	**P**	**07 11 32.2**	**-0.3**
	comp=Z,7.2nm,0.9s						
HHC	**Hu-ho-hao-te**	**38.70**	**319**	*e*P	**P**	**07 11 40.1**	**-1.4**
HHC				pP	**pP**	**07 11 44.6**	**-1.7**
HHC				sP	**sP**	**07 11 47.3**	**-0.9**
HHC				PP	**PnPn**	**07 13 13.0**	**+0.7**
HHC				S	**S**	**07 17 36.3**	**-1.6**
HHC				pmax	pmax		
	comp=Z,28nm,0.9s						
HHC				pmax	pmax		
	comp=Z,350nm,5.3s						
HHC				LR	LR		
	comp=N,510nm,15.2s						
HHC				LR	LR		
	comp=E,1μm,15.7s						
HHC				LR	LR		
	comp=Z,580nm,17.2s						
AS31	**Alice Springs**	**39.60**	**195**	*e*P	**P**	**07 11 50.2**	**+1.2**
ASAR	**Alice Springs**	**39.60**	**195**	P	**P**	**07 11 48.7**	**-0.3**
ASAR				PP	**PnPn**	**07 13 22.7**	**-0.5**
ASAR	**Alice Springs**	**39.60**	**195**	P	**P**	**07 11 48.7**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=12,slow=10,SNR=10						
ASAR				PP	**PnPn**	**07 13 22.7**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=18,slow=10.0,SNR=4.9						
ASAR				LR	LR	07 28 50.4	
	comp=Z,108nm,19.8s,baz=12,slow=37						
PETK	**Petropavlovsk-**	**39.63**	**12**	LR	LR	07 29 42.8	
	comp=Z,117nm,18.4s,baz=199,slow=39						
KMI	**Kunming**	**40.51**	**291**	P	**P**	**07 11 56.1**	**-0.8**
KMI				S	**S**	**07 18 05.5**	**-0.3**
KMI				LR	LR		
	comp=N,220nm,13.9s						
KMI				LR	LR		
	comp=E,270nm,15.6s						
KMI				LR	LR		
	comp=Z,270nm,19.4s						
CD2	**Chengdu**	**40.65**	**300**	P	**P**	**07 11 57.8**	**0.0**
CD2				pP	**pP**	**07 12 02.3**	**-0.3**
CD2				sP	**sP**	**07 12 04.8**	**+0.2**
CD2				PP	**PnPn**	**07 13 34.9**	**-0.6**
CD2				PcS	**PcS**	**07 17 49.8**	**-0.6**
CD2				S	**S**	**07 18 07.3**	**-0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
LZH	**Lanzhou**	**42.07**	**308**	*e*P	**P**	**07 12 10.4**	**+0.9**
LZH				pP	**pP**	**07 12 13.5**	**-0.9**
LZH				sP	**sP**	**07 12 15.3**	**-1.0**
LZH				*e*PP	**PP**	**07 13 51.0**	**+4.0**
LZH				*e*S	**S**	**07 18 29.3**	**+0.7**
LZH				pmax	pmax		
	comp=Z,32nm,1.3s						
LZH				pmax	pmax		
	comp=Z,160nm,5.8s						
LZH				LR	LR		
	comp=N,450nm,12.1s						
LZH				LR	LR		
	comp=E,580nm,14.3s						
LZH				LR	LR		
	comp=Z,690nm,16.7s						
DZM	**Mont Dzumac**	**42.43**	**149**	*e*LR	LR	07 23 42.9	
	comp=Z,519nm,29.0s						
DZM	**Mont Dzumac**	**42.43**	**149**	P	**P**	**07 12 14.2**	**+1.8**
DZM	**Mont Dzumac**	**42.43**	**149**	P	**P**	**07 12 14.2**	**+1.8**
	comp=Z,17nm,0.9s,baz=345,slow=16,SNR=5.7						
MBWA	**Marble Bar**	**43.25**	**215**	*e*P	**P**	**07 12 18.9**	**0.0**
	comp=Z,9.0nm,0.8s						
CM31	**Chiang Mai Arr**	**43.80**	**281**	*e*P	**P**	**07 12 24.5**	**+0.9**
	comp=Z,9.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**43.80**	**281**	P	**P**	**07 12 23.5**	**-0.1**
CMAR				PcP	**PcP**	**07 14 11.2**	**+1.0**
CMAR	**Chiang Mai Arr**	**43.80**	**281**	P	**P**	**07 12 23.5**	**-0.1**
	comp=Z,10nm,1.0s,baz=78,slow=6.7,SNR=28						
CMAR				PcP	**PcP**	**07 14 11.2**	**+1.0**
	comp=Z,2.1nm,0.8s,baz=97,slow=1.5,SNR=7.8						
CMAR				LR	LR	07 27 55.6	
	comp=Z,121nm,21.6s,baz=279,slow=32						
SONM	**Songino Array**	**45.61**	**324**	P	**P**	**07 12 36.7**	**-1.1**
SONM				PcP	**PcP**	**07 14 16.5**	**+0.5**
SONM	**Songino Array**	**45.61**	**324**	P	**P**	**07 12 36.7**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=123,slow=11,SNR=8.9						
SONM				PcP	**PcP**	**07 14 16.5**	**+0.5**
	comp=Z,3.5nm,0.9s,baz=152,slow=3.1,SNR=8.2						
SONM				LR	LR	07 31 33.4	
	comp=Z,287nm,18.8s,baz=101,slow=36						
GTA	**Gaotai**	**46.19**	**311**	*e*P	**P**	**07 12 42.9**	**+0.4**
GTA				pP	**pP**	**07 12 46.5**	**-0.9**
GTA				sP	**sP**	**07 12 48.8**	**-0.5**
GTA				PcP	**PcP**	**07 14 19.4**	**+1.2**
GTA				PP	**PP**	**07 14 31.8**	**+0.9**
GTA				ScP	**ScP**	**07 18 10.8**	**-0.3**
GTA				S	**S**	**07 19 29.6**	**+1.2**
GTA				pmax	pmax		
	comp=Z,11nm,1.2s						
GTA				pmax	pmax		
	comp=Z,180nm,5.7s						
GTA				LR	LR		
	comp=N,400nm,26.1s						
GTA				LR	LR		
	comp=E,470nm,21.9s						
GTA				LR	LR		
	comp=Z,300nm,23.3s						
STKA	**Stephens Creek**	**46.47**	**184**	*e*P	**P**	**07 12 45.3**	**+0.9**
	comp=Z,2.0nm,1.2s						
STKA	**Stephens Creek**	**46.47**	**184**	P	**P**	**07 12 45.1**	**+0.6**
	comp=Z,2.5nm,0.7s,baz=338,slow=8.9,SNR=4.8						
STKA				LR	LR	07 30 41.8	
	comp=Z,211nm,19.5s,baz=13,slow=34						
FORT	**Forrest**	**48.00**	**199**	*e*P	**P**	**07 12 59.0**	**+2.6**
	comp=Z,47nm,1.3s						
BBOO	**Buckleboo**	**48.01**	**190**	*e*P	**P**	**07 12 56.5**	**+0.1**
	comp=Z,144nm,0.6s						
LSA	**Lhasa**	**51.22**	**296**	P	**P**	**07 13 21.6**	**-0.1**
AFI	**Afiamalu**	**51.74**	**121**	LR	LR	07 30 21.5	
	comp=Z,218nm,20.0s,baz=283,slow=30						
TAPN	**Taplejung**	**54.12**	**293**	*e*P	**P**	**07 13 42.7**	**-0.4**
	comp=Z,39nm,1.0s						
NWAO	**Narrogin (SRO)**	**54.16**	**208**	LR	LR	07 36 02.1	
	comp=Z,110nm,18.2s,baz=188,slow=35						
ODAN	**Odare**	**54.40**	**293**	*e*P	**P**	**07 13 44.2**	**-0.8**
	comp=Z,27nm,0.9s						
RAMN	**Ramite**	**55.11**	**293**	*e*P	**P**	**07 13 49.8**	**-0.3**
	comp=Z,36nm,1.1s						
GUN	**Gumba**	**55.76**	**294**	*e*P	**P**	**07 13 54.1**	**-0.8**
	comp=Z,58nm,1.0s						
WMQ	**Urumqi**	**56.13**	**313**	P	**P**	**07 13 57.0**	**0.0**
WMQ				sP	**sP**	**07 14 04.0**	**+0.1**
WMQ				PcP	**PcP**	**07 14 55.0**	**+0.1**
WMQ				PP	**PP**	**07 16 03.0**	**+0.9**
WMQ				ScP	**ScP**	**07 18 53.0**	**-0.7**
WMQ				S	**S**	**07 21 43.0**	**-2.6**
WMQ				ScS	**ScS**	**07 23 42.0**	**-3.9**
WMQ				pmax	pmax		
	comp=Z,21nm,1.0s

ILAR	**Eielson Array**	**67.62**	**26**	P		**P**	**07 15 12.1**	**-1.9**
	comp=Z,1.0nm,0.8s,baz=249,slow=4.8,SNR=14							
ILAR				LR		LR	07 44 17.3	
	comp=Z,56nm,18.3s,baz=289,slow=36							
BVAR	**Borovoye Array**	**68.83**	**321**	P		**P**	**07 15 20.6**	**-1.1**
BVAR	**Borovoye Array**	**68.83**	**321**	P		**P**	**07 15 20.6**	**-1.1**
	comp=Z,12nm,0.9s,baz=100,slow=7.7,SNR=36							
BVAR				LR		LR	07 47 18.9	
	comp=Z,203nm,18.5s,baz=213,slow=38							
BRVK	**Borovoye**	**68.90**	**321**	*e*P		**P**	**07 15 21.5**	**-0.6**
	comp=Z,18nm,1.1s							
PPT	**Papeete**	**72.44**	**114**	LR		LR	07 40 02.8	
	comp=Z,203nm,19.8s,baz=340,slow=30							
PPT2	**Papeete2**	**72.45**	**114**	*e*LR		LR	07 37 34.3	
	comp=Z,579nm,32.0s							
TBI	**Tubuai**	**74.79**	**120**	*e*LR		LR	07 38 40.6	
	comp=Z,329nm,29.7s							
DLBC	**Dease Lake**	**75.14**	**33**	*e*P		**P**	**07 15 59.8**	**+0.2**
ABKAR	**Akbulak array**	**75.48**	**318**	*e*P		**P**	**07 16 00.5**	**-1.1**
	comp=Z,10nm,0.9s							
AKTO	**Aktyubinsk**	**76.59**	**319**	P		**P**	**07 16 06.3**	**-1.6**
AKTO	**Aktyubinsk**	**76.59**	**319**	P		**P**	**07 16 06.3**	**-1.6**
	comp=Z,1.1nm,0.4s,baz=87,slow=7.3,SNR=8.2							
YKA	**Yellowknife Ar**	**81.94**	**27**	P		**P**	**07 16 36.4**	**-0.5**
YKA	**Yellowknife Ar**	**81.94**	**27**	P		**P**	**07 16 36.3**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=288,slow=5.5,SNR=32							
RES	**Resolute Bay**	**83.47**	**13**	*e*P		**P**	**07 16 44.2**	**-0.3**
	comp=Z,6.9nm,0.8s							
BMO	**Blue Mountains**	**85.35**	**45**	*e*P		**P**	**07 16 54.6**	**-0.2**
	comp=Z,5.3nm,1.0s							
ARCES	**ARCESS Array B**	**85.88**	**342**	P		**P**	**07 16 56.8**	**0.0**
ARCES	**ARCESS Array B**	**85.88**	**342**	P		**P**	**07 16 56.8**	**0.0**
	comp=Z,17nm,0.8s,baz=39,slow=7.8,SNR=14							
ARCES				LR		LR	08 01 17.3	
	comp=Z,106nm,18.0s,baz=43,slow=40							
BSMT	**Bassoo Peak**	**86.15**	**42**	*e*P		**P**	**07 16 59.4**	**+0.5**
WALA	**Waterton Lakes**	**86.33**	**40**	*e*P		**P**	**07 17 00.2**	**+0.5**
	comp=Z,0.4nm,1.5s							
NVAR	**Mina Array Bea**	**86.40**	**51**	P		**P**	**07 17 00.4**	**+0.1**
NVAR	**Mina Array Bea**	**86.40**	**51**	P		**P**	**07 17 00.4**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=273,slow=4.8,SNR=9.1							
MFID	**Camas Ranch**	**86.78**	**46**	*e*P		**P**	**07 17 02.0**	**0.0**
	comp=Z,9.8nm,1.1s							
RKT	**Rikitea**	**87.20**	**115**	*e*LR		LR	07 44 24.8	
	comp=Z,322nm,26.5s							
HLID	**Hailey**	**87.72**	**46**	*e*P		**P**	**07 17 06.5**	**-0.1**
	comp=Z,5.0nm,1.1s							
GNI	**Garni**	**87.94**	**311**	LR		LR	07 59 51.1	
	comp=Z,86nm,19.5s,baz=193,slow=38							
ELK	**Elko**	**88.00**	**48**	*e*P		**P**	**07 17 08.1**	**0.0**
	comp=Z,3.6nm,0.9s							
KBZ	**Khabaz**	**88.14**	**315**	P		**P**	**07 17 06.4**	**-1.9**
KBZ	**Khabaz**	**88.14**	**315**	P		**P**	**07 17 06.4**	**-1.9**
	comp=Z,1.9nm,0.5s,baz=307,slow=4.4,SNR=5.1							
KBZ				LR		LR	07 57 39.4	
	comp=Z,110nm,21.8s,baz=70,slow=36							
DUG	**Dugway**	**89.93**	**48**	*e*P		**P**	**07 17 17.4**	**+0.3**
	comp=Z,3.6nm,1.2s							
FINES	**FINESS Array B**	**89.98**	**335**	P		**P**	**07 17 15.3**	**-1.2**
FINES	**FINESS Array B**	**89.98**	**335**	P		**P**	**07 17 15.3**	**-1.2**
	comp=Z,6.7nm,0.8s,baz=50,slow=6.0,SNR=13							
FINES				LR		LR	07 56 47.4	
	comp=Z,106nm,21.1s,baz=13,slow=35							
HWUT	**Hardware Ranch**	**90.35**	**47**	*e*P		**P**	**07 17 18.6**	**-0.4**
	comp=Z,3.7nm,1.3s							
VNDA	**Vanda**	**92.66**	**176**	LR		LR	07 58 07.8	
	comp=Z,138nm,19.4s,baz=123,slow=35							
AKASG	**Malin Array Be**	**93.89**	**325**	LR		LR	08 02 30.9	
	comp=Z,156nm,18.7s,baz=75,slow=37							
HFS	**Hagfors**	**95.60**	**338**	LR		LR	08 05 42.8	
	comp=Z,97nm,18.2s,baz=91,slow=39							
NOA	**NORSAR Array B**	**95.85**	**339**	LR		LR	08 04 39.7	
	comp=Z,94nm,19.6s,baz=60,slow=38							
BRTR	**Keskin Array B**	**96.05**	**314**	P		**P**	**07 17 44.2**	**-1.1**
BRTR	**Keskin Array B**	**96.05**	**314**	P		**P**	**07 17 44.2**	**-1.1**
	comp=Z,1.7nm,0.9s,baz=57,slow=4.6,SNR=6.1							
BRTR				LR		LR	08 04 22.0	
	comp=Z,50nm,19.3s,baz=203,slow=38							
ASF	**Jabal al Asfar**	**96.60**	**306**	LR		LR	08 04 18.0	
	comp=Z,62nm,21.9s,baz=217,slow=37							
LPIG	**La Paz**	**97.33**	**63**	LR		LR	07 54 22.3	
	comp=Z,5.7nm,20.3s,baz=218,slow=31							
VNA2	**Neumayer--Watz**	**121.33**	**190**	*e*P		**PKPdf**	**07 23 10.7**	**+0.8**
	baz=166,slow=0.2							
VNA3	**Neumayer Olymp**	**121.44**	**189**	*e*P		**PKPdf**	**07 23 10.5**	**+0.4**
TORD	**Torodi Ar. Bea**	**133.96**	**305**	PKP		**PKPdf**	**07 23 35.2**	**-0.4**
TORD	**Torodi Ar. Bea**	**133.96**	**305**	PKP		**PKPdf**	**07 23 35.2**	**-0.4**
	comp=Z,1.4nm,0.9s,baz=18,slow=0.7,SNR=5.9							
LPAZ	**La Paz**	**148.46**	**97**	*e*PKPbc		**PKPbc**	**07 24 06.0**	**+0.2**
LPAZ	**La Paz**	**148.46**	**97**	PKPbc		**PKPbc**	**07 24 06.5**	**+0.8**
	comp=Z,2.4nm,0.8s,baz=345,slow=4.6,SNR=8.4							
SIV	**San Ignacio**	**155.24**	**96**	PKPab		**PKPab**	**07 24 37.2**	**+0.6**
SIV	**San Ignacio**	**155.24**	**96**	PKPab		**PKPab**	**07 24 37.2**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=298,slow=4.4,SNR=3.8							

IDC ***17*** *07:17:54.1±0.9, 14°.78N×144°.45E, h0km, mb3.8/11, mb1 4.0/11, mb1mx3.8/26, mbtmp3.8/11, MS3.4/1, Ms1 3.4/1, ms1mx2.4/43, Error ellipse: s-maj=35.5km s-min=14.9km az=76.0*

ISCJB ***17*** *07:17:55.8±0.6, 14°.79N±0°.07×144°.4E±0°.2, h22km, mb4.0/15, MS3.3/1, Error ellipse: s-maj=24.8km s-min=7.3km az=161.6*

NEIC ***17*** *07:17:55.5±0.5, 14°.79N×144°.52E, h10km, mb4.6/4, Error ellipse: s-maj=20.0km s-min=7.1km az=81.0*

ISC 17 07:17:57.3±0.8, 14°.75N±0°.09×144°.5E±0°.2, h22km, n27, σ0s59/29, mb4.0/15, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
						Op	ISC	h m s	ISC
GUMO	**Guam**	**1.21**	**163**	*e*Pn		**Pn**	**07 18 18.4**	**-0.4**
GUMO				*e*Sn		**Sn**	**07 18 34.1**	**-0.5**
GUMO	**Guam**	**1.21**	**163**	Pn		**Pn**	**07 18 18.8**	**0.0**
	100nm,0.3s,baz=308,slow=2.4,SNR=17							
GUMO				Sn		**Sb**	**07 18 34.5**	**-0.1**
	191nm,0.3s,baz=104,slow=20,SNR=12							
MJAR	**Matsushiro Arr**	**22.42**	**347**	P		**P**	**07 22 53.7**	**-0.8**
MJAR	**Matsushiro Arr**	**22.42**	**347**	P		**P**	**07 22 53.7**	**-0.8**
	0.6nm,0.3s,baz=166,slow=10,SNR=4.9							
MJAR				LR		LR	07 29 57.3	
	comp=Z,107nm,20.2s,baz=195,slow=32							
WRAB	**Tennant Creek**	**35.89**	**196**	*e*P		**P**	**07 24 57.0**	**+1.0**
	13nm,1.6s							
WRA	**Warramunga Arr**	**35.90**	**196**	P		**P**	**07 24 55.5**	**-0.5**
WRA	**Warramunga Arr**	**35.90**	**196**	P		**P**	**07 24 55.5**	**-0.5**
	0.5nm,0.5s,baz=21,slow=9.8,SNR=8.1							
FITZ	**Fitzroy Crossi**	**37.58**	**210**	*e*P		**P**	**07 25 11.5**	**+1.1**
	4.9nm,1.2s							
ASAR	**Alice Springs**	**39.57**	**195**	P		**P**	**07 25 27.6**	**+0.5**
ASAR	**Alice Springs**	**39.57**	**195**	P		**P**	**07 25 27.6**	**+0.5**
	0.3nm,0.7s,baz=18,slow=12,SNR=3.5							
CMAR	**Chiang Mai Arr**	**43.74**	**281**	P		**P**	**07 26 01.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**43.74**	**281**	P		**P**	**07 26 01.8**	**+0.4**
	1.0nm,0.4s,baz=82,slow=6.7,SNR=8.3							
SONM	**Songino Array**	**45.59**	**324**	P		**P**	**07 26 15.5**	**-0.4**
SONM	**Songino Array**	**45.59**	**324**	P		**P**	**07 26 15.5**	**-0.4**
	0.2nm,0.3s,baz=110,slow=12,SNR=3.4							
MKAR	**Makanchi Array**	**60.42**	**316**	P		**P**	**07 28 05.3**	**+0.1**
MKAR	**Makanchi Array**	**60.42**	**316**	P		**P**	**07 28 05.3**	**+0.1**
	1.1nm,0.8s,baz=92,slow=9.1,SNR=7.8							
ZALV	**Zalesovo Beam**	**60.48**	**324**	P		**P**	**07 28 05.0**	**-0.4**
ZALV	**Zalesovo Beam**	**60.48**	**324**	P		**P**	**07 28 05.0**	**-0.4**
	0.5nm,0.5s,baz=78,slow=7.5,SNR=3.6							
KURK	**Kurchatov**	**63.48**	**320**	*e*P		**P**	**07 28 25.0**	**-0.6**
	7.5nm,1.2s							
KURBB	**Kurchatov Arra**	**63.52**	**319**	P		**P**	**07 28 25.6**	**-0.3**
	3.3nm,0.7s,baz=100,slow=6.9,SNR=34							
BVAR	**Borovoye Array**	**68.81**	**321**	P		**P**	**07 28 59.7**	**-0.1**
BVAR	**Borovoye Array**	**68.81**	**321**	P		**P**	**07 28 59.7**	**-0.1**
	1.9nm,0.6s,baz=99,slow=7.7,SNR=10							
BRVK	**Borovoye**	**68.87**	**321**	*e*P		**P**	**07 29 00.2**	**0.0**
	6.7nm,1.4s							
YKA	**Yellowknife Ar**	**81.99**	**27**	P		**P**	**07 30 16.4**	**+1.0**
YKA	**Yellowknife Ar**	**81.99**	**27**	P		**P**	**07 30 16.4**	**+1.0**
	0.1nm,0.6s,baz=290,slow=5.3,SNR=3.8							
ARCES	**ARCESS Array B**	**85.88**	**342**	P		**P**	**07 30 35.1**	**0.0**
ARCES	**ARCESS Array B**	**85.88**	**342**	P		**P**	**07 30 35.1**	**0.0**
	4.3nm,0.9s,baz=58,slow=9.0,SNR=3.7							

IDC ***17*** *07:22:07.7±2.9, 30°.54S×177°.49W, h0km, mb4.4/4, mb1 4.5/5, mb1mx4.1/20, mbtmp4.3/5, ML3.4/1, Error ellipse: s-maj=60.6km s-min=34.9km az=114.0*

ISCJB ***17*** *07:22:08.2±2.5, 30°.78S±0°.09×177°.1W±0°.4, h33km, mb4.4/4, Error ellipse: s-maj=47.3km s-min=9.6km az=9.4*

ISC 17 07:22:12.4±2.5, 30°.7S×177°.4W±0°.3, h33km, n13, σ2s21/16, mb4.5/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
						Op	ISC	h m s	ISC
PUZ	**Puketiti**	**8.14**	**205**	*e*PN		**Pn**	**07 24 09.0**	**+0.7**
MWZ	**Matawai**	**8.65**	**207**	*e*PN		**Pn**	**07 24 15.7**	**+0.5**
MWZ				*e*SN		**Sn**	**07 25 53.0**	**+1.4**
URZ	**Urewera**	**8.76**	**209**	Pn		**Pn**	**07 24 16.3**	**-0.4**
	0.4nm,0.3s,baz=179,slow=5.0,SNR=8.8							
URZ				Sn		**Sn**	**07 25 58.1**	**+4.0**
	1.2nm,0.3s,baz=208,slow=18,SNR=9.1							
BKZ	**Black Stump Fm**	**9.78**	**209**	*e*PN		**Pn**	**07 24 29.5**	**-1.2**
BKZ				*e*SN		**Sn**	**07 26 21.3**	**+1.9**
MRZ	**Mangatainoka R**	**11.42**	**208**	*e*SN		**Sn**	**07 26 56.4**	**-3.1**
TCW	**Tory Channel**	**12.42**	**210**	*e*SN		**Sn**	**07 27 19.4**	**-4.6**
CTA	**Charters Tower**	**34.32**	**279**	P		**P**	**07 28 56.1**	**0.0**
	4.4nm,0.4s,baz=90,slow=11,SNR=8.8							
STKA	**Stephens Creek**	**34.87**	**257**	P		**P**	**07 29 02.3**	**+1.6**
	4.5nm,0.7s,baz=103,slow=11,SNR=11							
STKA	**Stephens Creek**	**34.87**	**257**	P		**P**	**07 29 02.5**	**+1.8**
	baz=4.2,SNR=7.2							
BBOO	**Buckleboo**	**39.34**	**254**	P		**P**	**07 29 39.4**	**+0.8**
	baz=6.8,SNR=4.9							
ASAR	**Alice Springs**	**43.57**	**267**	P		**P**	**07 30 13.1**	**-0.4**
	0.7nm,0.3s,baz=105,slow=7.5,SNR=26							
WRA	**Warramunga Arr**	**44.59**	**272**	P		**P**	**07 30 20.2**	**-1.4**
	2.0nm,0.3s,baz=111,slow=7.9,SNR=13							
FINES	**FINESS Array B**	**145.61**	**340**	PKPbc		**PKPdf**	**07 41 46.0**	**-0.5**
	1.8nm,0.4s,baz=53,slow=5.1,SNR=9.2							

IDC 17 07:28:03.9±2.3, 20°.27S×70°.75W, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.5/19, mbtmp3.7/4, ML3.9/2, MS2.8/1, Ms1 2.9/1, ms1mx2.3/31, Error ellipse: s-maj=70.9km s-min=43.3km az=169.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
						Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.68**	**33**	Pn		Pn	07 29 16.8	+0.2
	1.4nm,0.3s,baz=238,slow=7.3,SNR=42							
LPAZ				Sn		Sb	07 30 18.8	-6.4
	0.8nm,0.3s,baz=331,slow=7.9,SNR=2.1							
LPAZ				LR		LR	07 31 24.4	
	comp=Z,97nm,18.8s,baz=254,slow=43							
SIV	**San Ignacio**	**10.14**	**67**	Pn		Pn	07 30 30.3	-0.5
	1.3nm,0.3s,baz=270,slow=11,SNR=23							
TORD	**Torodi Ar. Bea**	**78.58**	**71**	P		P	07 40 07.5	-0.4
	0.4nm,0.6s,baz=256,slow=4.3,SNR=4.2							
YKA	**Yellowknife Ar**	**89.47**	**341**	P		P	07 41 01.7	-0.6
	0.2nm,0.5s,baz=134,slow=4.6,SNR=16							
MKAR	**Makanchi Array**	**145.61**	**33**	PKPbc		PKPab	07 47 44.9	+0.1
	0.4nm,0.5s,baz=319,slow=3.5,SNR=6.6							

BJI ***17*** *07:30:57.0, 35°.51N×68°.80E, h72km, mB4.8/20, mb4.6/26, Ms4.3/9, Ms7 4.1/8*

MOS ***17*** *07:31:05.3±1.1, 35°.61N×69°.70E, h88km, mb4.2/23, Error ellipse: s-maj=10.1km s-min=5.5km az=81.0*

ISCJB ***17*** *07:31:05.2±0.2, 35°.59N±0°.02×69°.82E±0°.03, h90km, mb4.3/36, Error ellipse: s-maj=3.6km s-min=2.6km az=158.3*

NEIC ***17*** *07:31:06.4±0.6, 35°.63N×69°.65E, h85km±6km, mb4.5/8, Error ellipse: s-maj=8.2km s-min=5.9km az=118.0*

IDC ***17*** *07:31:08.2±2.1, 35°.73N×69°.68E, h99km±18km, mb3.9/19, mb1 4.1/24, mb1mx4.0/34, mbtmp4.0/24, MS3.5/4, Ms1 3.6/4, ms1mx2.9/52, Error ellipse: s-maj=12.5km s-min=10.2km az=161.0*

NNC ***17*** *07:31:13.1±3.9, 36°.14N×69°.49E, h133km±35km, mb4.0, mpv5.0, Error ellipse: s-maj=29.3km s-min=18.3km az=24.0*

ISC 17 07:31:06.6±0.3, 35°.63N±0°.04×69°.69E±0°.04, h90km, n171, σ1s75/196, mb4.4/37, 12C-13D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
						Op	ISC	h m s	ISC
KBL	**Kabul**	**1.21**	**206**	*e*PN		**Pn**	**07 31 29.2**	**+0.2**
KBL				*e*			07 31 46.8	
KBL	**Kabul**	**1.21**	**206**	*e*Pn		**Pn**	**07 31 29.2**	**+0.2**
KBL				*e*Sn		**Sn**	**07 31 46.8**	**+1.0**
CEP	**Cherat**	**2.57**	**134**	⇑P		**Pn**	**07 31 48.1**	**+1.6**
CEP				S		**Sn**	**07 32 20.0**	**+3.0**
THW	**Thamme Wali**	**3.30**	**148**	P		**Pn**	**07 31 56.6**	**+0.3**
CHCP	**Chirah Chowk**	**3.54**	**123**	P		**Pn**	**07 32 01.4**	**+1.9**
JMU	**Jammu**	**5.20**	**122**	*ex*		x	07 32 52.0	
JMU				*e*S		**Sn**	**07 33 16.0**	**-4.7**
QUE	**Quetta**	**5.90**	**204**	*e*PN		**Pn**	**07 32 29.0**	**-2.7**
QUE	**Quetta**	**5.90**	**204**	*e*P		**Pn**	**07 32 29.0**	**-2.7**
QUE				*e*S		**Sn**	**07 33 34.0**	**-3.9**
THN	**Thein Dam**	**5.93**	**121**	*e*P		**Pn**	**07 32 30.9**	**-1.0**
THN				*e*S		**Sn**	**07 33 36.0**	**-2.5**
KSH	**Kashi**	**6.32**	**50**	P		**Pn**	**07 32 35.9**	**-1.4**
KSH				S		Sn	07 33 38.9	-9.1
BHK	**Bhakra**	**7.01**	**125**	*ex*		Pn	07 32 50.0	+3.3
BHK				*e*S		**Sn**	**07 34 01.8**	**-3.1**
AML	**Almayashu**	**7.20**	**24**	P		**Pn**	**07 32 50.8**	**+1.3**
	SNR=146							
SDNR	**Sundarnagar**	**7.34**	**122**	*e*P		**Pn**	**07 32 51.5**	**+0.4**
SDNR				*e*S		**Sn**	**07 34 08.5**	**-4.4**
KK31	**Karatay Array**	**7.49**	**5**	⇑P		**Pn**	**07 32 53.8**	**+0.7**
	47nm,0.4s,baz=193,slow=10,SNR=781							
KK31				⇓S		**Sn**	**07 34 13.3**	**-3.1**
	34nm,0.6s,baz=192,slow=22,SNR=4.1							
KKAR	**Karatay Array**	**7.49**	**5**	*e*PN		**Pn**	**07 32 53.6**	**+0.5**
KKAR				pmax		pmax		
	comp=Z,80nm,0.4s							
KKAR	**Karatay Array**	**7.49**	**5**	*e*Pn		**Pn**	**07 32 53.6**	**+0.5**
	comp=Z,80nm,0.4s							
KKAR				*e*Sn		**Sn**	**07 34 16.1**	**-0.3**
UCH	**Uchtor**	**7.58**	**28**	P		**Pn**	**07 32 56.9**	**+2.1**
	SNR=18							
SMLA	**Simla**	**7.70**	**124**	*i* P		**Pn**	**07 32 55.6**	**-0.3**
SMLA				*i* S		**Sn**	**07 34 18.5**	**-3.0**
SMLA				*i* S		**Sn**	**07 34 18.6**	**-2.9**
SMLA				⇓			07 34 19.5	
	comp=E,11μm,0.4s							
SMLA				⇓			07 34 20.9	
	comp=N,17μm,0.2s							
EKS2	**Erkin-Say**	**7.70**	**23**	*e*PN		**Pn**	**07 32 57.0**	**+0.9**
EKS2				pmax		pmax		
	comp=Z,56nm,0.8s							
EKS2	**Erkin-Say**	**7.70**	**23**	*e*Pn		**Pn**	**07 32 57.0**	**+0.9**
	comp=Z,56nm,0.8s							
EKS2				*e*Sn		**Sn**	**07 34 20.8**	**-1.0**
EKS2	**Erkin-Say**	**7.70**	**23**	P		**Pn**	**07 32 58.4**	**+2.2**
	SNR=27							
KZA	**Kyzart**	**7.76**	**32**	P		**Pn**	**07 32 58.0**	**+0.8**
	SNR=55							
AAK	**Ala-Archa**	**7.92**	**27**	PN		**Pn**	**07 33 00.4**	**+1.2**
AAK				pmax		pmax		
	comp=Z,14nm,0.3s							
AAK				MLR		MLR		
	comp=Z,267nm,20.4s							
AAK	**Ala-Archa**	**7.92**	**27**	*e*Pn		**Pn**	**07 33 00.2**	**+1.0**
	comp=Z,74nm,0.7s							
AAK				*e*Sn		**Sn**	**07 34 26.9**	**-0.3**
AAK	**Ala-Archa**	**7.92**	**27**	Pn		**Pn**	**07 33 00.8**	**+1.6**
	SNR=46							
AAK	**Ala-Archa**	**7.92**	**27**	P		**Pn**	**07 33 00.4**	**+1.2**
	comp=Z,14nm,0.3s,baz=203,slow=12,SNR=135							
AAK				S		**Sn**	**07 34 26.8**	**-0.4**
	comp=Z,13nm,0.3s,baz=314,slow=21,SNR=14							
AAK				LR		LR	07 36 37.4	
	comp=Z,267nm,20.4s,baz=224,slow=42							
KBK	**Karagaybulak**	**8.12**	**29**	P		**Pn**	**07 33 03.3**	**+1.5**
	SNR=38							
FRU	**Bishkek**	**8.14**	**26**	*e*PN		**Pn**	**07 33 03.0**	**+1.0**
FRU				pmax		pmax		
	comp=Z,150nm,1.8s							
KKR	**Kurukshetra**	**8.24**	**131**	*ex*		x	07 34 27.9	
CHMS	**Chumysh**	**8.34**	**27**	P		**Pn**	**07 33 06.3**	**+1.7**
	SNR=10							
ULHL	**Ulahol**	**8.34**	**36**	P		**Pn**	**07 33 06.6**	**+1.7**
	SNR=15							
USP	**Ospenovka**	**8.48**	**25**	P		**Pn**	**07 33 08.6**	**+1.9**
	SNR=15							
TKM2	**Tokmak 2**	**8.60**	**30**	⇑P		**Pn**	**07 33 09.1**	**+0.6**
	comp=Z,51nm,0.6s							
TKM2				⇑S		**Sn**	**07 34 41.9**	**-1.8**
	comp=Z,56nm,0.8s							
TKM2	**Tokmak 2**	**8.60**	**30**	*e*PN		**Pn**	**07 33 09.0**	**+0.6**
TKM2				pmax		pmax		
	comp=Z,78nm,0.8s							
TKM2	**Tokmak 2**	**8.60**	**30**	*e*Pn		**Pn**	**07 33 09.0**	**+0.6**
	comp=Z,76nm,0.8s							
TKM2				*e*Sn		**Sn**	**07 34 43.6**	**-0.1**
TKM2	**Tokmak 2**	**8.60**	**30**	P		**Pn**	**07 33 09.2**	**+0.9**
	SNR=96							
KHET	**Khetri**	**9.15**	**144**	*e*P		Pn	07 33 11.8	-4.0
NDI	**New Delhi**	**9.41**	**135**	*e*P		Pn	07 33 16.0	-3.4
NDI				*ex*		Sn	07 34 54.0	-9.5
KUDL	**Kundal**	**9.44**	**140**	*e*P		**Pn**	**07 33 17.6**	**-2.0**
KUDL				*ex*		Sn	07 34 56.4	-7.6
KUDL				AML		AML	07 34 59.0	
	comp=Z,150nm,0.0s							
KUDL				AML		AML	07 34 59.3	
	comp=E,212nm,0.7s							
AYAN	**Aya Nagar**	**9.52**	**136**	*e*P		**Pn**	**07 33 19.0**	**-1.8**
AYAN				*ex*		Sn	07 34 59.5	-6.4
SONA	**Sohna**	**9.67**	**137**	*e*P		**Pn**	**07 33 20.7**	**-2.2**
SONA				*ex*		Sn	07 35 01.1	-8.6
AJM	**Ajmer**	**10.06**	**154**	*e*P		**Pn**	**07 33 26.0**	**-2.3**
AJM				*ex*		Sn	07 35 10.0	-9.3
PTH	**Pithoragarh**	**10.75**	**121**	*e*P		**Pn**	**07 33 36.1**	**-1.6**
PTH				*ex*		Sn	07 35 29.6	-6.6
LGTI	**Lohaghat**	**10.83**	**122**	*e*P		**Pn**	**07 33 38.5**	**-0.1**
LGTI				*ex*		Sn	07 35 27.5	-10
AGRA	**Agra**	**10.94**	**138**	*e*P		**Pn**	**07 33 37.2**	**-3.0**
AGRA				*ex*		Sn	07 35 33.4	-7.2
PYUN	**Piuthan**	**13.56**	**120**	*e*P		**Pn**	**07 34 12.6**	**-2.8**
	comp=E,82nm,0.4s							
PYUN				*e*S		Sn	07 36 33.7	-11
DANN	**Dangsing**	**13.96**	**117**	*e*P		Pn	07 34 17.6	-3.1
	comp=E,65nm,0.5s							
DANN				*e*S		Sn	07 36 42.5	-12
KOLN	**Koldanda**	**14.19**	**120**	*e*P		**Pn**	**07 34 21.5**	**-2.1**
	comp=E,37nm,0.5s							
KOLN				*e*S		Sn	07 36 49.4	-11
MK31	**Makanchi Array**	**14.62**	**36**	⇓P		**Pn**	**07 34 28.1**	**-0.7**
	comp=E,16nm,0.8s,baz=219,slow=9.3,SNR=122							
MK31	**Makanchi Array**	**14.62**	**36**	*e*P		**Pn**	**07 34 29.0**	**+0.2**
MK31	**Makanchi Array**	**14.62**	**36**	*e*Pn		**Pn**	**07 34 29.0**	**+0.2**
MKAR	**Makanchi Array**	**14.62**	**36**	P		**Pn**	**07 34 29.2**	**+0.4**
MKAR				S		**Sn**	**07 37 10.4**	**+0.8**
MKAR	**Makanchi Array**	**14.62**	**36**	P		**Pn**	**07 34 29.1**	**+0.4**
MKAR				S		**Sn**	**07 37 10.4**	**+0.8**
MKAR	**Makanchi Array**	**14.62**	**36**	P		**Pn**	**07 34 29.1**	**+0.4**
	comp=E,0.4nm,0.3s,baz=213,slow=8.7,SNR=43							
MKAR				S		**Sn**	**07 37 10.4**	**+0.8**
	comp=E,0.1nm,0.3s,baz=233,slow=36,SNR=2.1							
DMN	**Daman**	**15.36**	**117**	*e*P		**Pn**	**07 34 36.4**	**-2.2**
	comp=E,51nm,0.6s							
DMN				*e*S		Sn	07 37 16.0	-13
AB31	**Akbulak array**	**15.38**	**335**	⇓P		**Pn**	**07 34 36.9**	**-1.5**
	comp=E,6.2nm,0.5s,baz=156,slow=12,SNR=116							
AB31				⇓S		Sn	07 37 17.3	-11
	comp=E,12nm,0.8s,baz=146,slow=24,SNR=5.8							
ABKAR	**Akbulak array**	**15.38**	**335**	*e*P		**Pn**	**07 34 36.9**	**-1.6**
	comp=E,1.1nm,0.3s							
KKN	**Kakani**	**15.39**	**116**	*e*P		**Pn**	**07 34 35.8**	**-3.1**
	comp=E,58nm,0.6s							
KKN				*e*S		Sn	07 37 16.0	-13
PKIN	**Phulchoki**	**15.59**	**117**	*e*P		**Pn**	**07 34 40.2**	**-1.3**
	comp=E,48nm,0.3s							
PKIN				*e*S		Sn	07 37 20.9	-13
PKI	**Pulchoki**	**15.61**

comp=N,2.4nm,0.7s,baz=218,slow=16,SNR=3.4
ZEI Tsey 21.17 297 *e*P **P 07 35 46.5 +1.7**
ZEI pmax pmax
comp=Z,4.0nm,0.7s
NVS Novosibirsk 21.37 22 *e*P **P 07 35 47.5 +1.0**
NVS *i* PPP PPP 07 36 22.3
NVS *e*S **S 07 39 38.3 -0.3**
NVS *i* *SS sS 07 40 25.0 +17
NVS pmax pmax
comp=N,39nm,0.8s
NVS pmax pmax
comp=Z,47nm,0.8s
NVS pmax pmax
comp=E,9.0nm,0.5s
NVS smax smax
comp=N,17nm,1.3s
NVS smax smax
comp=E,10.0nm,1.3s
SHL Shillong 21.53 112 *e*P **P 07 35 51.0 +2.3**
SVE Sverdlovsk 22.07 347⇑*e*P **P 07 35 54.8 +0.9**
SVE pmax pmax
comp=Z,44nm,1.2s
KBZ Khabaz 22.08 300 P P **07 35 55.8 +1.6**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KBZ Khabaz 22.08 300 P **P 07 35 55.8 +1.6**
KBZ Khabaz 22.08 300 P **P 07 35 55.8 +1.6**
comp=Z,4.9nm,0.9s,baz=136,slow=11,SNR=6.3
ARU Arti 22.14 343*d* *i*P **P 07 35 55.2 +0.6**
ARU 07 36 22.0
ARU S **S 07 39 51.5 -1.3**
ARU SS **SnSn 07 40 28.8 +1.1**
ARU pmax pmax
comp=Z,53nm,1.7s
RBK Rabkut 22.70 221 P **P 07 36 01.0 0.0**
SNR=8.0
ABTO Aybut 23.32 223 P **P 07 36 06.6 -0.4**
SNR=15
GTA Gaotai 24.13 72 *e*P **P 07 36 16.6 +2.4**
GTA pmax pmax
comp=Z,19nm,0.8s
GTA pmax pmax
comp=Z,190nm,8.1s
VRHR Novokhopersk 25.39 316 *e*P **P 07 36 24.6 -0.7**
VRHR pmax pmax
comp=Z,20nm,0.3s
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=E,60nm,0.8s
VORD Divnogorie 26.67 315 *e*P **P 07 36 34.5 -2.4**
VORD pmax pmax
comp=Z,6.0nm,0.8s
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,10.0nm,1.3s
VSR Storozhevoye 26.84 315 *e*P P 07 36 30.9 -7.5
VSR pmax pmax
comp=Z,10.0nm,0.9s
VSR pmax pmax
comp=N,7.0nm,0.5s
VSR pmax pmax
comp=E,6.0nm,0.4s
ASF Jabal al Asfar 27.37 272 LR LR 07 49 15.9
comp=E,84nm,18.2s,baz=198,slow=40
LZH Lanzhou 27.60 79 *e*P **P 07 36 47.8 +2.1**
LZH PP **PnPn 07 37 38.8 +2.9**
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,53nm,4.1s
ZAK Zakamensk 28.36 48 *e*P **P 07 36 53.9 +1.8**
ZAK *e* 07 37 16.2
ZAK pmax pmax
comp=Z,2.0nm,1.1s
BR131 Keskin Array S 28.70 289 *e*P **P 07 36 56.8 +1.5**
comp=Z,1.4nm,0.6s
BRTR Keskin Array B 28.70 289 P **P 07 36 56.9 +1.5**
BRTR Keskin Array B 28.70 289 P **P 07 36 56.9 +1.5**
comp=Z,2.3nm,0.8s,baz=96,slow=8.8,SNR=10
SONM Songino Array 29.70 54 P **P 07 37 05.3 +1.2**
SONM Songino Array 29.70 54 P **P 07 37 05.3 +1.2**
comp=Z,3.0nm,0.9s,baz=255,slow=10.0,SNR=20
SONM LR LR 07 49 28.4
comp=Z,94nm,19.3s,baz=283,slow=37
OBN Obninsk 29.93 321⇑*e*P **P 07 36 06.5 +0.7**
OBN *e* 07 38 02.7
OBN *e*S **S 07 42 01.7 +5.2**
OBN pmax pmax
comp=Z,17nm,1.2s
CMAR Chiang Mai Arr 31.00 116 P **P 07 37 18.0 +2.3**
CMAR ScP **ScP 07 43 44.9 +0.5**
CMAR Chiang Mai Arr 31.00 116 P **P 07 37 18.0 +2.3**
comp=Z,0.5nm,0.4s,baz=283,slow=7.2,SNR=3.3
CMAR ScP **ScP 07 43 44.9 +0.5**
comp=Z,1.3nm,0.9s,baz=290,slow=3.9,SNR=5.1
XAN Xi'an 32.10 81 P **pP 07 37 49.8 +4.0**
XAN pP sP 07 37 58.5 +2.2
XAN pmax pmax
comp=Z,2.0nm,1.0s
AKASG Malin Array Be 32.68 310 P **P 07 37 30.5 +0.5**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG Malin Array Be 32.68 310 P **P 07 37 30.5 +0.5**
AKASG Malin Array Be 32.68 310 P **P 07 37 30.5 +0.5**
comp=Z,3.1nm,0.5s,baz=86,slow=7.0,SNR=15
AK02 Malin Array Si 32.68 310 *e*P **P 07 37 30.8 +0.7**
GYA Guiyang 32.81 96 *e*P **P 07 37 31.8 +0.1**
GYA pmax pmax
comp=Z,10.0nm,0.8s
HHC Hu-ho-hao-te 33.06 68 *e*P **P 07 37 31.0 -2.7**
HHC pP **pP 07 37 53.3 -1.0**
HHC sP **sP 07 38 04.8 0.0**
HHC PP **PnPn 07 38 44.6 -1.7**
HHC sS **sS 07 43 19.8 -1.9**
HHC pmax pmax
comp=Z,22nm,0.9s
HHC pmax pmax
comp=Z,220nm,5.5s
HHC LR LR
comp=N,170nm,13.1s
HHC LR LR
comp=E,430nm,12.6s
HHC LR LR
comp=Z,230nm,12.9s
KOLS Kolonicke sedl 36.92 306 *e*P **P 07 38 08.4 +1.8**
KOLS Kolonicke sedl 36.92 306 *e*P **P 07 38 08.4 +1.8**
FINES FINESS Array B 37.62 327 P **P 07 38 12.4 +0.1**
FINES FINESS Array B 37.62 327 P **P 07 38 12.4 +0.1**
comp=Z,1.0nm,0.4s,baz=115,slow=8.6,SNR=7.9
VYHS Vyhne 39.18 305 *e*P **P 07 38 28.5 +2.9**
VYHS Vyhne 39.18 305 *e*P **P 07 38 28.5 +2.9**
NJ2 Nanjing 40.65 80 *e*P **P 07 38 37.3 -0.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
ARCES ARCESS Array B 41.55 338 P **P 07 38 45.5 +0.7**
ARCES ARCESS Array B 41.55 338 P **P 07 38 45.5 +0.7**
comp=Z,1.3nm,0.5s,baz=103,slow=7.3,SNR=10.0
CN2 Changchun 42.95 61 *e*P **P 07 38 56.9 +0.3**
NB2 NORSAR Subarra 44.44 324 P **P 07 39 07.9 -0.4**
comp=Z,3.6nm,0.5s,baz=99,slow=7.9
NOA NORSAR Array B 44.44 324 P **P 07 39 08.0 -0.4**
NOA NORSAR Array B 44.44 324 P **P 07 39 08.0 -0.4**
comp=Z,2.7nm,0.4s,baz=99,slow=7.9,SNR=14
KSAR Wonju Array Be 46.14 70 P **P 07 39 23.1 +1.0**
KSRS Korea Array 46.17 70 P **P 07 39 23.1 +0.8**
comp=Z,1.2nm,0.5s,baz=280,slow=6.6,SNR=7.6
MJAR Matsushiro Arr 54.26 67 P **P 07 40 22.5 -0.9**
MJAR Matsushiro Arr 54.26 67 P **P 07 40 22.5 -0.9**
comp=Z,1.5nm,0.6s,baz=284,slow=10,SNR=6.9
SEY Seymchan 55.73 33*c* *i*P **P 07 40 35.0 +1.5**
BILL Bilibino 59.85 26⇓*e*P **P 07 41 03.2 +0.9**
BILL pmax pmax
comp=Z,30nm,1.8s
LSZ Lusaka 64.09 225 *e*P **P 07 41 31.2 -0.2**
comp=Z,6.0nm,1.3s
TORD Torodi Ar. Bea 64.63 268 P **P 07 41 34.1 -0.9**
TORD Torodi Ar. Bea 64.63 268 P **P 07 41 34.1 -0.9**
comp=Z,5.8nm,0.9s,baz=46,slow=5.7,SNR=25
LBTB Lobatse 73.33 221 *e*P **P 07 42 28.7 +0.1**
comp=Z,13nm,1.5s
INK Inuvik 74.93 9 P **P 07 42 37.8 +0.6**
INK Inuvik 74.93 9 P **P 07 42 37.8 +0.6**
comp=Z,4.3nm,0.8s,baz=4.3,slow=6.6,SNR=24

COLA College 75.60 16 *e*P **P 07 42 41.3 +0.1**
COLA pmax pmax
comp=Z,4.0nm,0.9s
COLA College 75.60 16 *e*P **P 07 42 41.3 +0.1**
comp=Z,4.1nm,0.9s
ILAR Eielson Array 75.90 15 P **P 07 42 42.4 -0.5**
ILAR Eielson Array 75.90 15 P **P 07 42 42.4 -0.5**
comp=Z,2.0nm,0.9s,baz=320,slow=5.0,SNR=17
ILAR LR LR 08 17 44.6
comp=Z,42nm,18.6s,baz=25,slow=37
BOSA Boshof 76.40 219 P **P 07 42 46.5 +0.2**
BOSA Boshof 76.40 219 P **P 07 42 46.5 +0.2**
comp=Z,4.3nm,0.8s,baz=34,slow=7.5,SNR=6.9
YKA Yellowknife Ar 82.15 2 P **P 07 43 16.8 -0.3**
YKA Yellowknife Ar 82.15 2 P **P 07 43 16.8 -0.3**
comp=Z,2.6nm,0.9s,baz=348,slow=5.2,SNR=41
WRA Warramunga Arr 82.44 121 P **P 07 43 19.7 +0.5**
WRA Warramunga Arr 82.44 121 P **P 07 43 19.7 +0.5**
comp=Z,1.6nm,0.9s,baz=324,slow=5.0,SNR=10
ASAR Alice Springs 84.64 124 P **P 07 43 30.8 +0.4**
ASAR Alice Springs 84.64 124 P **P 07 43 30.8 +0.4**
comp=Z,1.1nm,0.9s,baz=331,slow=5.4,SNR=10
FFC Flin Flon 89.72 355 *i* P **P 07 43 55.5 +1.0**
PLCA Paso Flores 148.53 249 PKPbc **PKPbc 07 50 44.0 +1.1**
PLCA Paso Flores 148.53 249 PKPbc **PKPbc 07 50 44.0 +1.1**
comp=Z,1.8nm,0.9s,baz=250,slow=1.2,SNR=4.0

IDC ***17*** *07:39:54.8₅0.8, 14.˙83N×144.˙50E, h0km, mb4.0/13, mb1 4.1/13, mb1mx4.0/26, mbtmp4.0/13, MS3.3/6, Ms1 3.3/6, ms1mx3.0/38, Error ellipse: s-maj=30.2km s-min=14.9km az=79.0*
ISCJB ***17*** *07:39:56.4₅0.5, 14.˙81N₁0.˙06×144.˙4E₅0.˙1, h22km, mb4.1/18, MS3.3/5, Error ellipse: s-maj=21.3km s-min=7.0km az=163.2*
NEIC ***17*** *07:39:56.2₅0.4, 14.˙81N×144.˙49E, h10km, mb4.5/5, Error ellipse: s-maj=15.9km s-min=6.6km az=83.0*
ISC 17 07:39:58.0₅0.6, 14.˙77N₁0.˙08×144.˙5E₅0.˙2, h22km, n37, σ0s60/38, mb4.2/18, MS3.4/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.23**	**163**	*e*Pn	**Pn**	**07 40 19.1**	**-0.8**
GUMO				*e*Sn	**Sb**	**07 40 36.3**	**+0.4**
GUMO	**Guam**	**1.23**	**163**	Pn	**Pn**	**07 40 19.3**	**-0.5**
	160nm,0.3s,baz=314,slow=2.5,SNR=28						
GUMO				Sn	**Sn**	**07 40 35.0**	**-0.7**
	206nm,0.3s,baz=338,slow=22,SNR=23						
JHJ	**Hachijo jima 2**	**18.76**	**348**	LR	LR	07 50 11.9	
	comp=Z,86nm,20.5s,baz=99,slow=33						
MJAR	**Matsushiro Arr**	**22.40**	**347**	P	**P**	**07 44 54.8**	**-0.3**
MJAR	**Matsushiro Arr**	**22.40**	**347**	P	**P**	**07 44 54.8**	**-0.3**
	1.0nm,0.3s,baz=169,slow=11,SNR=4.8						
MJAR				LR	LR	07 52 52.6	
	comp=Z,35nm,18.7s,baz=235,slow=35						
HNR	**Honiara**	**28.51**	**147**	LR	LR	07 56 23.1	
	comp=Z,96nm,18.2s,baz=161,slow=35						
ASAJ	**Asahikawa**	**29.29**	**357**	LR	LR	07 56 49.5	
	comp=Z,41nm,19.4s,baz=186,slow=35						
WRAB	**Tennant Creek**	**35.90**	**196**	*e*P	**P**	**07 46 57.1**	**+0.3**
	4.9nm,0.9s						
WRA	**Warramunga Arr**	**35.91**	**196**	P	**P**	**07 46 57.6**	**+0.7**
WRA	**Warramunga Arr**	**35.91**	**196**	P	**P**	**07 46 57.6**	**+0.7**
	2.5nm,0.8s,baz=16,slow=9.5,SNR=9.1						
FITZ	**Fitzroy Crossi**	**37.59**	**210**	*e*P	**P**	**07 47 11.4**	**+0.3**
	2.4nm,0.7s						
ASAR	**Alice Springs**	**39.58**	**195**	P	**P**	**07 47 28.8**	**+0.8**
ASAR	**Alice Springs**	**39.58**	**195**	P	**P**	**07 47 28.8**	**+0.8**
	0.5nm,0.8s,baz=14,slow=13,SNR=5.5						
CMAR	**Chiang Mai Arr**	**43.73**	**281**	P	**P**	**07 48 02.7**	**+0.7**
CMAR	**Chiang Mai Arr**	**43.73**	**281**	P	**P**	**07 48 02.7**	**+0.7**
	3.4nm,1.0s,baz=76,slow=6.7,SNR=13						
SONM	**Songino Array**	**45.57**	**324**	P	**P**	**07 48 15.7**	**-0.8**
SONM				PcP	**PcP**	**07 49 54.7**	**-0.1**
SONM	**Songino Array**	**45.57**	**324**	P	**P**	**07 48 15.7**	**-0.8**
	0.2nm,0.5s,baz=141,slow=7.3,SNR=4.1						
SONM				PcP	**PcP**	**07 49 54.7**	**-0.1**
	0.6nm,0.9s,baz=128,slow=2.3,SNR=3.9						
SONM				LR	LR	08 06 53.2	
	comp=Z,70nm,19.6s,baz=160,slow=36						
MKAR	**Makanchi Array**	**60.40**	**316**	P	**P**	**07 50 06.0**	**+0.2**
MKAR	**Makanchi Array**	**60.40**	**316**	P	**P**	**07 50 06.0**	**+0.2**
	1.2nm,0.8s,baz=94,slow=9.0,SNR=11						
ZALV	**Zalesovo Beam**	**60.46**	**324**	P	**P**	**07 50 05.4**	**-0.6**
ZALV	**Zalesovo Beam**	**60.46**	**324**	P	**P**	**07 50 05.4**	**-0.6**
	1.2nm,0.8s,baz=89,slow=5.0,SNR=5.7						
ZALV				LR	LR	08 15 13.0	
	comp=Z,36nm,18.4s,baz=110,slow=35						
KURK	**Kurchatov**	**63.46**	**320**	*e*P	**P**	**07 50 25.9**	**-0.3**
	9.8nm,1.2s						
KURBB	**Kurchatov Arra**	**63.50**	**319**	P	**P**	**07 50 26.2**	**-0.2**
	4.6nm,0.7s,baz=99,slow=7.0,SNR=41						
ILAR	**Eielson Array**	**67.66**	**26**	P	**P**	**07 50 53.9**	**+0.7**
ILAR	**Eielson Array**	**67.66**	**26**	P	**P**	**07 50 53.9**	**+0.7**
	0.5nm,1.0s,baz=244,slow=6.1,SNR=4.1						
BVAR	**Borovoye Array**	**68.78**	**321**	P	**P**	**07 51 00.2**	**-0.2**
BVAR	**Borovoye Array**	**68.78**	**321**	P	**P**	**07 51 00.2**	**-0.2**
	2.3nm,0.7s,baz=99,slow=7.7,SNR=14						
BRVK	**Borovoye**	**68.85**	**321**	*e*P	**P**	**07 51 00.6**	**-0.2**
	7.3nm,1.3s						
ABKAR	**Akbulak array**	**75.43**	**318**	*e*P	**P**	**07 51 39.5**	**-0.8**
	3.2nm,0.9s						
YKA	**Yellowknife Ar**	**81.98**	**27**	P	**P**	**07 52 16.6**	**+0.6**
YKA	**Yellowknife Ar**	**81.98**	**27**	P	**P**	**07 52 16.6**	**+0.6**
	0.2nm,0.6s,baz=286,slow=4.9,SNR=6.0						
ARCES	**ARCESS Array B**	**85.86**	**342**	P	**P**	**07 52 35.4**	**-0.4**
ARCES	**ARCESS Array B**	**85.86**	**342**	P	**P**	**07 52 35.4**	**-0.4**
	2.1nm,0.6s,baz=46,slow=5.2,SNR=5.3						
FINES	**FINESS Array B**	**89.95**	**335**	P	**P**	**07 52 54.5**	**-0.9**
FINES	**FINESS Array B**	**89.95**	**335**	P	**P**	**07 52 54.6**	**-0.9**
	1.8nm,0.8s,baz=76,slow=5.9,SNR=3.4						
TORD	**Torodi Ar. Bea**	**133.90**	**305**	PKP	**PKPdf**	**07 59 15.0**	**+0.6**
TORD	**Torodi Ar. Bea**	**133.90**	**305**	PKP	**PKPdf**	**07 59 15.0**	**+0.6**
	0.8nm,1.0s,baz=7.7,slow=2.8,SNR=2.8						

IDC 17 07:58:00.8₅2.7, 12.˙82S×64.˙85E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/25, mbtmp3.7/3, MS3.9/3, Ms1 3.9/3, ms1mx3.1/48, Error ellipse: s-maj=109.4km s-min=37.6km az=48.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**29.70**	**291**	LR	LR	08 13 53.0	
	comp=Z,75nm,21.6s,baz=89,slow=32						
LBTB	**Lobatse**	**38.92**	**246**	LR	LR	08 19 55.1	
	comp=Z,108nm,20.0s,baz=305,slow=34						
ASAR	**Alice Springs**	**65.94**	**110**	P	P	08 08 49.1	-0.2
	1.1nm,1.0s,baz=262,slow=6.8,SNR=8.2						
WRA	**Warramunga Arr**	**66.66**	**106**	P	P	08 08 54.4	+0.4
	0.4nm,0.6s,baz=278,slow=5.3,SNR=4.6						
SONM	**Songino Array**	**70.80**	**28**	P	P	08 09 19.1	-0.2
	0.4nm,0.8s,baz=236,slow=5.7,SNR=3.9						
PDAR	**Pinedale Array**	**149.77**	**352**	PKPbc	PKPbc	08 17 52.1	-1.2
	0.5nm,0.8s,baz=83,slow=4.6,SNR=4.2						
PDAR				PKPab	PKPab	08 17 59.0	+0.5
	0.4nm,0.8s,baz=48,slow=1.3,SNR=3.9						

ISCJB ***17*** *07:59:27.2₅0.3, 51.˙53N₁0.˙02×16.˙07E₅0.˙02, h0km, mb3.3/3, Error ellipse: s-maj=3.0km s-min=2.1km az=10.8*
CSEM ***17*** *07:59:28.7₅0.2, 51.˙54N×16.˙06E, h2km, ML3.8/10, Error ellipse: s-maj=3.3km s-min=2.1km az=14.0*
IPEC ***17*** *07:59:28.0₅0.4, 51.˙59N×16.˙14E, h0km, 2km, ML3.0/3, Error ellipse: s-maj=3.4km s-min=2.3km az=60.0*
BGR ***17*** *07:59:29.3₅0.5, 51.˙56N×16.˙08E, h1km, ML3.1/11, Error ellipse: s-maj=5.6km s-min=2.2km az=18.0*
IDC ***17*** *07:59:29.4₅0.7, 51.˙55N×15.˙84E, h0km, mb3.5/3, mb1 3.6/9, mb1mx3.4/29, mbtmp3.5/9, ML3.3/5, Error ellipse: s-maj=14.5km s-min=6.9km az=106.0*
PRU ***17*** *07:59:29.1, 51.˙55N×16.˙08E, h0km*
WAR ***17*** *07:59:29.9, 51.˙54N×16.˙07E*
VIE ***17*** *07:59:32.2₅0.6, 51.˙28N×16.˙09E, h0km, mb2.9/6, ML3.1/6, Error ellipse: s-maj=4.2km s-min=3.8km az=126.0 67 km WNW of Wroclaw Suspected Mining explosion.*
ISC 17 07:59:27.9₅0.6, 51.˙55N₁0.˙02×16.˙09E₅0.˙02, h0km, n86, σ1s90/151, mb3.4/3, 8C-6D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.72**	**170**	*e*Pg	**Pb**	**07 59 43.2**	**-0.2**
KSP				*e*Sg	**Sb**	**07 59 53.1**	**-0.8**
KSP	**Ksiaz**	**0.72**	**170**	*e*Pg	**Pb**	**07 59 43.1**	**-0.3**
KSP				*e*Sg	**Sb**	**07 59 52.9**	**-1.0**
KSP	**Ksiaz**	**0.72**	**170**	*i*	**Pn**	**07 59 45.6**	**+0.2**
KSP	**Ksiaz**	**0.72**	**170**	*e*Pg	**Pb**	**07 59 42.9**	**-0.5**
	baz=352						
KSP				Sg	**Sb**	**07 59 53.1**	**-0.8**
UPC	**Upice**	**1.05**	**183**	*e*PG	**Pb**	**07 59 49.0**	**0.0**
UPC				*e*SG	**Sg**	**08 00 02.6**	**+1.0**
UPC	**Upice**	**1.05**	**183**	Pg	**Pb**	**07 59 49.0**	**0.0**
UPC				Sg	**Sg**	**08 00 02.6**	**+1.0**
DPC	**Dobruska-Polom**	**1.21**	**173**	*e*Pg	**Pb**	**07 59 52.0**	**+0.1**
DPC				*e*Sg	**Sb**	**08 00 08.2**	**+0.2**
DPC	**Dobruska-Polom**	**1.21**	**173**	*e*PG	**Pb**	**07 59 51.9**	**+0.1**
DPC				*e*SG	**Sg**	**08 00 07.6**	**+0.7**
	comp=Z,92nm,0.3s						
DPC	**Dobruska-Polom**	**1.21**	**173**	Pg	**Pb**	**07 59 51.9**	**+0.1**
DPC				*e*Sg	**Sg**	**08 00 07.3**	**+0.4**
	baz=355						
PVCC	**Panska Ves**	**1.41**	**224**	*e*PG	**Pn**	**07 59 54.9**	**+0.1**
PVCC				*e*SG	**Sb**	**08 00 13.7**	**+0.2**
	comp=Z,382nm,0.4s						
PVCC	**Panska Ves**	**1.41**	**224**	Pg	**Pn**	**07 59 54.9**	**+0.1**
PVCC	**Panska Ves**	**1.41**	**224**	*e*Pn	**Pb**	**07 59 55.4**	**+0.3**
	baz=42						
PVCC				Sg	**Sb**	**08 00 13.7**	**+0.2**
	382nm,0.4s						
BRG	**Berggiesshubel**	**1.51**	**244**	PN	**Pn**	**07 59 55.9**	**-0.3**
BRG				PG	**Pg**	**07 59 57.4**	**+0.5**
BRG				SG	**Sn**	**08 00 17.5**	**+0.8**
	269nm,0.4s						
BRG	**Berggiesshubel**	**1.51**	**244**	*e*Pn	**Pn**	**07 59 56.0**	**-0.3**
BRG				*e*Pg	**Pg**	**07 59 57.7**	**+0.8**
BRG				*e*Sg	**Sn**	**08 00 17.9**	**+1.2**
BRG	**Berggiesshubel**	**1.51**	**244**	Pn	**Pn**	**07 59 56.0**	**-0.3**
KRLC	**Kraliky**	**1.54**	**163**	*e*PG	**Pn**	**07 59 57.2**	**+0.4**
KRLC				*e*SG	**Sn**	**08 00 17.0**	**-0.5**
KRLC	**Kraliky**	**1.54**	**163**	Pg	**Pn**	**07 59 57.2**	**+0.4**
KRLC				Sg	**Sn**	**08 00 17.0**	**-0.5**
FBE	**Freiberg**	**1.83**	**251**	*e*Pg	**Pb**	**08 00 22.2**	**-0.1**
FBE				*e*Sg	**Sg**	**08 00 26.7**	**-0.1**
FBE	**Freiberg**	**1.83**	**251**	Pg	**Pb**	**08 00 22.2**	**-0.1**
FBE				Sg	**Sg**	**08 00 26.7**	**-0.1**
PRU	**Pruhonice**	**1.85**	**213**	*e*PN	**Pn**	**08 00 01.1**	**+0.2**
PRU				*e*PG	**Pb**	**08 00 03.0**	**+0.4**
PRU				*e*SG	**Sg**	**08 00 27.3**	**-0.1**
	comp=Z,84nm,0.5s						
PRU	**Pruhonice**	**1.85**	**213**	Pn	**Pn**	**08 00 01.1**	**+0.2**
PRU	**Pruhonice**	**1.85**	**213**	Pg	**Pb**	**08 00 03.0**	**+0.4**
PRU				Sg	**Sg**	**08 00 27.3**	**-0.1**
	84nm,0.5s						
GKP	**Gorka Klasztor**	**1.86**	**22**	*e*Pg	Pg	08 00 08.6	+5.1
GKP				*e*Sg	**Sg**	**08 00 30.4**	**+2.9**
GKP	**Gorka Klasztor**	**1.86**	**22**	*e*Pg	Pg	08 00 08.6	+5.1
GKP				*e*Sg	**Sg**	**08 00 30.5**	**+2.9**
CLL	**Collm**	**1.95**	**264**	*e*Pn	**Pn**	**08 00 02.0**	**-0.2**
CLL				*e*Pg	**Pg**	**08 00 05.5**	**+0.3**
CLL				*e*Sg	**Sg**	**08 00 30.8**	**+0.2**
CLL	**Collm**	**1.95**	**264**	*i* Pn	**Pn**	**08 00 01.8**	**-0.5**
CLL				*i* Pg	**Pg**	**08 00 05.6**	**+0.3**
CLL				*i*		08 00 08.8	
CLL				*e*Sg	**Sg**	**08 00 31.0**	**+0.5**
	comp=Z,53nm,0.7s						
CLL	**Collm**	**1.95**	**264**	Pn	**Pn**	**08 00 02.0**	**-0.2**
RAC	**Raciborz**	**1.99**	**137**	*e*Pg	**Pg**	**08 00 07.3**	**+1.3**
RAC				*e*Sg	**Sg**	**08 00 34.4**	**+2.7**
MORC	**Moravsky Berou**	**2.00**	**152**	*e*Pn	**Pn**	**08 00 03.5**	**+0.4**
MORC				*e*Sg	**Sg**	**08 00 32.5**	**+0.2**
MORC	**Moravsky Berou**	**2.00**	**152**	⇓*i*P	**Pn**	**08 00 33.4**	**+1.1**
MORC	**Moravsky Berou**	**2.00**	**152**	Pn	**Pn**	**08 00 03.5**	**+0.4**
MORC				Sg	**Sg**	**08 00 32.5**	**+0.2**
OKC	**Ostrava-Krasne**	**2.16**	**142**	*e*Pg	**Pg**	**08 00 09.7**	**+0.4**
OKC				*e*Sg	**Sg**	**08 00 37.2**	**-0.1**
OKC	**Ostrava-Krasne**	**2.16**	**142**	*e*SG	**Sg**	**08 00 36.9**	**-0.4**
	comp=Z,196nm,0.6s						
OKC	**Ostrava-Krasne**	**2.16**	**142**	Pg	**Pg**	**08 00 09.7**	**+0.4**
OKC				Sg	**Sg**	**08 00 37.2**	**-0.1**
VRAC	**Vranov**	**2.27**	**172**⇑	*i*P	**Pn**	**08 00 41.8**	**+0.9**
VRAC	**Vranov**	**2.27**	**172**	Pn	**Pn**	**08 00 07.9**	**+1.1**
	comp=Z,8.1nm,0.3s,baz=336,slow=13,SNR=20						
VRAC				Lg	Lg	08 00 41.5	
	comp=Z,9.9nm,0.3s,baz=68,slow=14,SNR=13						
VRAC	**Vranov**	**2.27**	**172**	*e*Pn	**Pn**	**08 00 07.3**	**+0.6**
VRAC				*e*Sg	**Sg**	**08 00 40.0**	**-0.9**
	comp=Z,82nm,0.6s,baz=353						
TREC	**Trest**	**2.29**	**190**	*e*PN	**Pn**	**08 00 07.8**	**+0.8**
TREC				*e*PG	**Pg**	**08 00 11.9**	**0.0**
TREC	**Trest**	**2.29**	**190**	Pn	**Pn**	**08 00 07.8**	**+0.8**
TREC	**Trest**	**2.29**	**190**	Pg	**Pg**	**08 00 11.9**	**0.0**
KRUC	**Moravsky**	**2.50**	**175**	*e*Pn	**Pn**	**08 00 10.6**	**+0.7**
	baz=356						
KRUC				*e*Sg	**Sg**	**08 00 47.6**	**-0.7**
	comp=Z,89nm,0.9s,baz=356						
TANN	**Tannenbergstha**	**2.56**	**245**	*e*Pn	**Pn**	**08 00 11.1**	**+0.4**
TANN				*e*Pg	**Pg**	**08 00 18.3**	**+1.3**
TANN				*e*Sg	**Sg**	**08 00 50.1**	**-0.1**
TANN	**Tannenbergstha**	**2.56**	**245**	Pn	**Pn**	**08 00 11.1**	**+0.4**
WERD	**Werda**	**2.63**	**247**	*e*Pn	**Pn**	**08 00 12.3**	**+0.5**
WERD				*e*Pg	**Pg**	**08 00 18.3**	**-0.1**
WERD				*e*Sg	**Sg**	**08 00 52.8**	**+0.2**
WERD	**Werda**	**2.63**	**247**	Pn	**Pn**	**08 00 12.3**	**+0.5**
NKC	**Novy Kostel**	**2.66**	**242**	*e*PN	**Pn**	**08 00 12.7**	**+0.6**
NKC				*e*PG	**Pg**	**08 00 19.3**	**+0.4**
NKC				*e*SG	**Sg**	**08 00 54.2**	**+0.9**
	comp=Z,115nm,0.4s						
NKC	**Novy Kostel**	**2.66**	**242**	Pn	**Pn**	**08 00 12.7**	**+0.6**
OJC	**Ojcow**	**2.70**	**118**	*e*Pn	**Pn**	**08 00 12.2**	**-0.4**
OJC				*e*Pg	**Pg**	**08 00 20.0**	**+0.3**
OJC				*e*Sn	**Sn**	**08 00 43.8**	**-2.2**
OJC				*e*Sg	**Sg**	**08 00 56.1**	**+1.4**
OJC	**Ojcow**	**2.70**	**118**	*e*Pn	**Pn**	**08 00 12.2**	**-0.4**
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN	**Pn**	**08 00 16.1**	**+0.6**
KHC				*e*PG	**Pb**	**08 00 22.0**	**+1.3**
KHC				*e*SN	**Sn**	**08 00 51.7**	**+0.5**
KHC				*e*SG	**Sg**	**08 01 00.3**	**-1.1**
	comp=Z,40nm,0.5s						
KHC	**Kasperske Hory**	**2.91**	**215**	Pn	**Pn**	**08 00 16.1**	**+0.6**
KHC	**Kasperske Hory**	**2.91**	**215**	Pg	**Pb**	**08 00 22.0**	**+1.3**
KHC				Sn	**Sn**	**08 00 51.7**	**+0.5**
KHC				Sg	**Sg**	**08 01 00.3**	**-1.1**
	comp=Z,40nm,0.5s						
MOX	**Moxa**	**2.96**	**254**	*e*Pn	**Pn**	**08 00 16.5**	**+0.2**
MOX				*e*Pg	**Pg**	**08 00 25.9**	**+1.2**
MOX				*e*Sg	**Sg**	**08 01 03.7**	**+0.6**
MOX	**Moxa**	**2.96**	**254**	Pn	**Pn**	**08 00 16.5**	**+0.2**
GERES	**GERESS Array B**	**3.12**	**210**	Pn	**Pn**	**08 00 18.7**	**+0.3**
	comp=Z,3.1nm,0.3s,baz=29,slow=13,SNR=41						
GERES				Pg	**Pg**	**08 00 25.2**	**+1.0**
	comp=Z,6.5nm,0.3s,baz=32,slow=17,SNR=27						
GERES				Lg	Lg	08 01 05.9	
	comp=Z,6.9nm,0.3s,baz=38,slow=24,SNR=9.6						
SMOL	**Smolenice**	**3

CRVS	**Cervenica-Dubn**	**4.35**	**126**	*e*Pn	**Pn**	**08 00 34.8 -0.5**
CRVS				*e*Sg	**Sg**	**08 01 48.1 +0.5**
PSZ	**Piszkesteto**	**4.40**	**144**	⇓/*i*P	**Pn**	**08 00 37.4 +1.4**
PSZ	**Piszkesteto**	**4.40**	**144**	⇓/*i*P	**Pn**	**08 00 37.4 +1.4**
KOLS	**Kolonicke sedl**	**4.75**	**121**	*e*PN	**Pn**	**08 00 41.5 +0.7**
KOLS				*e*		08 01 02.7
KOLS	**Kolonicke sedl**	**4.75**	**121**	*e*SG	**Sg**	**08 02 01.9 +1.3**
KOLS	**Kolonicke sedl**	**4.75**	**121**	*e*Pn	**Pn**	**08 00 41.5 +0.7**
KOLS				*e*Sg	**Sg**	**08 02 02.0 +1.3**
KBA	**Koelnbreinsper**	**4.83**	**203**	⇑/*i*Pn	**Pn**	**08 00 43.3 +1.3**
KBA				⇑/*i*Sg	**Sg**	**08 02 02.2 -0.7**
	comp=Z,30nm,0.7s					
KBA	**Koelnbreinsper**	**4.83**	**203**	Pn	**Pn**	**08 00 43.3 +1.3**
KBA				Sg	**Sg**	**08 02 02.2 -0.7**
	comp=Z,30nm,0.7s					
BURAR	**Bucovina Array**	**7.12**	**120**	⇑/*i*P	**Pn**	**08 01 14.6 +1.2**
BURAR	**Bucovina Array**	**7.12**	**120**	⇑/*i*P	**Pn**	**08 01 14.6 +1.2**
AKASG	**Malin Array Be**	**8.31**	**91**	Pn	**Pn**	**08 01 30.8 +1.2**
	comp=Z,2.4nm,0.3s,baz=279,slow=12,SNR=6.1					
HFS	**Hagfors**	**8.71**	**352**	Pn	**Pn**	**08 01 33.8 -1.2**
	comp=Z,0.1nm,0.3s,baz=153,slow=16,SNR=2.9					
FINES	**FINESS Array B**	**11.33**	**25**	Pn	**Pn**	**08 02 09.0 -1.8**
	comp=Z,0.2nm,0.3s,baz=208,slow=12,SNR=6.8					
FINES				Sn	Sn	08 04 10.0 -8.0
	comp=Z,0.4nm,0.3s,baz=206,slow=22,SNR=5.0					
ARCES	**ARCESS Array B**	**18.58**	**10**	Pn	**P**	**08 03 43.0 -3.2**
	comp=Z,0.2nm,0.3s,baz=194,slow=14,SNR=3.7					
AKTO	**Aktyubinsk**	**26.16**	**76**	P	**P**	**08 05 04.7 +1.0**
	comp=Z,0.3nm,0.4s,baz=299,slow=11,SNR=3.6					
TORD	**Torodi Ar. Bea**	**40.04**	**202**	P	**P**	**08 07 05.2 +0.6**
	comp=Z,0.5nm,1.1s,baz=25,slow=7.7,SNR=3.5					
YKA	**Yellowknife Ar**	**59.81**	**336**	P	**P**	**08 09 35.2 +0.8**
	comp=Z,0.3nm,0.6s,baz=30,slow=6.8,SNR=13					

ISCJB ***17*** *08:13:36.2±1.0, 49°.3S±0°.1×106°.2E±0°.4, h10km, mb3.9/6, MS3.9/2, Error ellipse: s-maj=39.8km s-min=16.1km az=19.6*

IDC ***17*** *08:13:36.5±1.0, 49°.31S×106°.11E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.9/17, mbtmp3.9/6, MS3.8/2, Ms1 3.8/2, ms1mx3.0/29, Error ellipse: s-maj=44.6km s-min=18.8km az=107.0*

ISC 17 08:13:38.1±1.0, **49°.3S**±0°.2×**106°.3E**±0°.3, **h10**km, **n15, σ0s62/11, mb3.8/6, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**33.56**	**50**	P	**P**	**08 20 18.0**	**-0.2**
	1.2nm,0.7s,baz=210,slow=8.1,SNR=18						
VNDA	**Vanda**	**35.06**	**162**	P	**P**	**08 20 31.2**	**+0.6**
	3.5nm,0.9s,baz=281,slow=11,SNR=20						
WRA	**Warramunga Arr**	**36.92**	**48**	P	**P**	**08 20 47.4**	**+0.4**
	0.9nm,0.7s,baz=209,slow=7.8,SNR=3.3						
QSPA	**South Pole Qui**	**40.81**	**180**	P	**P**	**08 21 19.1**	**-0.3**
	0.8nm,0.5s,baz=313,slow=3.4,SNR=11						
KAPI	**Kappang**	**45.61**	**19**	LR	LR	08 40 04.6	
	comp=Z,59nm,19.9s,baz=29,slow=35						
SNAA	**Sanae**	**49.49**	**203**	*e*P	**P**	**08 22 28.1**	**0.0**
SNAA	**Sanae**	**49.49**	**203**	*e*	P	08 22 35.2	+7.1
SNAA	**Sanae**	**49.49**	**203**	P	**P**	**08 22 27.2**	**-0.8**
	0.5nm,0.5s,baz=151,slow=11,SNR=15						
VNA2	**Neumayer--Watz**	**51.11**	**203**	*e*P	**P**	**08 22 41.1**	**+0.8**
VNA2	**Neumayer--Watz**	**51.11**	**203**	*e*	P	08 22 47.8	+7.5
CMAR	**Chiang Mai Arr**	**67.78**	**353**	P	**P**	**08 24 36.1**	**+0.2**
	0.7nm,0.5s,baz=184,slow=6.0,SNR=5.7						
PLCA	**Paso Flores**	**90.28**	**182**	LR	LR	09 06 59.0	
	comp=Z,89nm,19.3s,baz=181,slow=36						
NVAR	**Mina Array Bea**	**146.54**	**92**	PKPbc	**PKPab**	**08 33 20.1**	**-0.3**
	1.1nm,0.6s,baz=228,slow=4.9,SNR=11						
TXAR	**Lajitas Array**	**149.74**	**120**	PKPbc	**PKPbc**	**08 33 27.1**	**-0.9**
	0.2nm,0.6s,baz=236,slow=6.1,SNR=2.9						
YKA	**Yellowknife Ar**	**154.09**	**44**	PKPbc	**PKPbc**	**08 33 36.9**	**+0.2**
	0.1nm,0.8s,baz=281,slow=2.2,SNR=2.6						

IDC 17 08:13:44.2±1.0, **14°.81N×144°.53E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/24, mbtmp3.6/7, MS3.2/8, Ms1 3.2/8, ms1mx3.1/28, Error ellipse: s-maj=33.5km s-min=20.0km az=70.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.26**	**165**	Pn	Pn	08 14 09.1	0.0
	132nm,0.3s,baz=292,slow=3.3,SNR=49						
GUMO				Sn	Sg	08 14 24.2	-0.6
	144nm,0.3s,baz=336,slow=20,SNR=28						
JHJ	**Hachijo jima 2**	**18.73**	**347**	LR	LR	08 24 29.3	
	comp=Z,54nm,20.4s,baz=70,slow=34						
MJAR	**Matsushiro Arr**	**22.36**	**347**	P	P	08 18 44.9	+0.9
	1.5nm,0.9s,baz=171,slow=11,SNR=4.4						
MJAR				LR	LR	08 26 11.3	
	comp=Z,67nm,19.8s,baz=200,slow=33						
KSRS	**Korea Array**	**26.95**	**330**	P	P	08 19 26.5	-1.0
	0.4nm,0.3s,baz=150,slow=9.9,SNR=3.3						
KSRS				LR	LR	08 27 58.8	
	comp=Z,19nm,19.7s,baz=145,slow=32						
ASAJ	**Asahikawa**	**29.25**	**357**	LR	LR	08 29 26.7	
	comp=Z,44nm,21.9s,baz=106,slow=32						
USRK	**Ussuriysk Arra**	**31.18**	**342**	LR	LR	08 30 16.4	
	comp=Z,65nm,19.7s,baz=85,slow=32						
PETK	**Petropavlovsk-**	**39.60**	**12**	LR	LR	08 35 39.1	
	comp=Z,22nm,20.1s,baz=353,slow=33						
CMAR	**Chiang Mai Arr**	**43.75**	**281**	P	P	08 21 52.0	+0.2
	1.8nm,0.8s,baz=84,slow=6.9,SNR=12						
SONM	**Songino Array**	**45.55**	**324**	P	P	08 22 05.3	-0.7
	0.4nm,0.8s,baz=126,slow=7.3,SNR=2.9						
SONM				PcP	PcP	08 23 44.8	+0.1
	0.5nm,0.8s,baz=116,slow=3.4,SNR=3.6						
MKAR	**Makanchi Array**	**60.39**	**316**	P	P	08 23 55.4	-0.1
	0.9nm,0.8s,baz=98,slow=8.7,SNR=8.3						
ILAR	**Eielson Array**	**67.61**	**26**	P	P	08 24 43.1	+0.5
	0.4nm,0.9s,baz=249,slow=6.3,SNR=3.7						
BVAR	**Borovoye Array**	**68.77**	**321**	LR	LR	08 55 41.8	
	comp=Z,35nm,20.9s,baz=64,slow=37						
YKA	**Yellowknife Ar**	**81.93**	**27**	P	P	08 26 05.1	-0.5
	0.3nm,0.9s,baz=289,slow=4.9,SNR=6.9						
NOA	**NORSAR Array B**	**95.80**	**339**	LR	LR	09 11 36.0	
	comp=Z,23nm,19.4s,baz=180,slow=36						

IDC 17 08:16:24.3±0.9, **21°.07S×175°.61W, h77km, 7km, mb3.4/6, mb1 3.7/6, mb1mx3.5/21, mbtmp3.4/6, Error ellipse: s-maj=33.7km s-min=21.0km az=151.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.01**	**28**	P	Pn	08 18 15.2	-2.9
	1.0nm,0.3s,baz=251,slow=18,SNR=2.9						
AFI				S	Sn	08 19 40.7	-6.6
	2.2nm,0.3s,baz=270,slow=20,SNR=3.2						
STKA	**Stephens Creek**	**39.56**	**245**	P	P	08 23 49.3	+1.2
	1.3nm,0.5s,baz=104,slow=11,SNR=3.5						
ASAR	**Alice Springs**	**46.56**	**257**	P	P	08 24 44.4	-0.4
	1.5nm,0.7s,baz=100,slow=7.7,SNR=13						
ASAR				pP	pP	08 25 04.4	+0.7
	0.5nm,0.6s,baz=97,slow=7.4,SNR=2.6						
WRA	**Warramunga Arr**	**46.73**	**262**	P	P	08 24 45.0	-1.1
	0.3nm,0.3s,baz=95,slow=8.3,SNR=7.5						
WRA				pP	pP	08 25 05.2	+0.1
	0.5nm,0.6s,baz=100,slow=8.1,SNR=3.2						
QSPA	**South Pole Qui**	**69.00**	**180**	P	P	08 27 21.9	+0.5
	0.5nm,0.6s,baz=131,slow=19,SNR=4.7						
QSPA				pP	pP	08 27 40.2	-1.4
	1.1nm,0.8s,baz=63,slow=4.5,SNR=1.9						
NVAR	**Mina Array Bea**	**79.93**	**42**	P	P	08 28 25.8	+0.6
	0.5nm,0.8s,baz=216,slow=7.6,SNR=3.4						
NVAR				pP	pP	08 28 46.4	+0.6
	0.4nm,0.6s,baz=219,slow=8.2,SNR=3.5						
ILAR	**Eielson Array**	**88.39**	**12**	P	P	08 29 06.2	-1.0
	0.5nm,1.1s,baz=227,slow=6.1,SNR=3.2						

IDC 17 08:21:40.1±3.5, **2°.48S×139°.97E, h0km, mb3.3/3, mb1 3.7/4, mb1mx3.5/18, mbtmp3.5/4, ML3.7/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/18, Error ellipse: s-maj=111.5km s-min=29.8km az=92.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.21**	**197**	P	P	08 25 55.1	+0.2
	0.3nm,0.3s,baz=20,slow=12,SNR=8.6						
CTA	**Charters Tower**	**18.55**	**161**	LR	LR	08 33 35.5	
	comp=Z,80nm,18.3s,baz=120,slow=39						
FITZ	**Fitzroy Crossi**	**20.95**	**221**	P	P	08 26 24.0	-0.8
	0.6nm,0.5s,baz=54,slow=8.7,SNR=2.5						
ASAR	**Alice Springs**	**21.87**	**195**	P	P	08 26 35.0	+0.2
	1.5nm,0.6s,baz=25,slow=10,SNR=17						
USRK	**Ussuriysk Arra**	**47.01**	**352**	LR	LR	08 46 00.5	
	comp=Z,35nm,21.0s,baz=153,slow=31						
MKAR	**Makanchi Array**	**70.38**	**322**	P	P	08 32 56.1	0.0
	0.2nm,0.6s,baz=120,slow=7.3,SNR=3.2						

IDC 17 08:44:56.9±1.3, **20°.03S×70°.68W, h0km, mb3.9/3, mb1 4.1/5, mb1mx3.8/18, mbtmp3.9/5, ML3.9/2, MS2.7/1, Ms1 2.9/1, ms1mx2.3/42, Error ellipse: s-maj=46.6km s-min=33.3km az=162.0, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.44**	**34**	Pn	Pn	08 46 08.2	+1.9
	2.1nm,0.3s,baz=211,slow=6.2,SNR=68						
LPAZ				LR	LR	08 47 50.8	
	comp=Z,96nm,19.9s,baz=189,slow=39						
SIV	**San Ignacio**	**9.98**	**68**	Pn	Pn	08 47 22.1	+0.3
	1.1nm,0.3s,baz=278,slow=10,SNR=20						
BDFB	**Brasilia**	**22.01**	**82**	P	P	08 49 57.9	+4.7
	1.6nm,0.6s,baz=252,slow=15,SNR=4.1						
PDAR	**Pinedale Array**	**72.02**	**331**	P	P	08 56 22.6	-0.3
	0.5nm,0.9s,baz=170,slow=5.5,SNR=2.5						
TORD	**Torodi Ar. Bea**	**78.44**	**71**	P	P	08 56 59.1	-1.1
	1.0nm,0.6s,baz=248,slow=5.5,SNR=9.8						
YKA	**Yellowknife Ar**	**89.26**	**341**	P	P	08 57 53.6	-0.8
	0.8nm,0.6s,baz=134,slow=4.6,SNR=32						
ASAR	**Alice Springs**	**130.40**	**210**	PKP	PKPdf	09 04 10.4	+0.2
	0.2nm,0.5s,baz=116,slow=1.3,SNR=5.3						
WRA	**Warramunga Arr**	**133.32**	**213**	PKP	PKPdf	09 04 16.9	+1.1
	0.3nm,0.7s,baz=146,slow=2.0,SNR=6.3						
MKAR	**Makanchi Array**	**145.37**	**33**	PKPbc	PKPbc	09 04 36.7	0.0
	1.7nm,0.6s,baz=324,slow=3.9,SNR=23						

HEL ***17*** *08:51:04.3±0.7, 59°.32N×27°.10E, h0km, ML2.0, Explosion*
NAO ***17*** *08:51:04.2±2.4, 59°.35N×27°.01E, ML2.4*
CSEM ***17*** *08:51:05.8±0.5, 59°.46N×26°.92E, h2km, ML2.0, Error ellipse: s-maj=9.1km s-min=6.7km az=129.0, Mining explosion.*
IDC ***17*** *08:51:05.3±2.2, 59°.41N×27°.15E, h0km, mb1 3.4/3, mb1mx3.0/27, mbtmp3.2/3, ML2.7/3, Error ellipse: s-maj=19.4km s-min=13.8km az=113.0*
BER ***17*** *08:51:07.8±2.6, 59°.40N×26°.88E, h0km, ML2.4(NAO), Suspected explosion*

ISC 17 08:51:02.3±0.9, **59°.27N**±0°.03×**27°.21E**±0°.04, **h0**km, **n42, σ1s88/55, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VJF	**Virojoki**	**1.28**	**8**	PG	**Pg**	**08 51 26.6**	**-0.2**
VJF				SG	**Sg**	**08 51 43.8**	**+0.3**
VJF				MSG		08 51 43.8	
	comp=Z,7.2nm,0.1s						
VJF				RG	Rg	08 51 47.7	
VJF	**Virojoki**	**1.28**	**8**	Pg	**Pg**	**08 51 26.6**	**-0.2**
VJF				Sg	**Sg**	**08 51 43.8**	**+0.3**
PVF	**Pernaja**	**1.45**	**333**	PG	**Pn**	**08 51 28.4**	**-1.2**
PVF				SG	**Sg**	**08 51 47.4**	**-1.3**
PVF				MSG		08 51 47.4	
	comp=Z,4.7nm,0.2s						
PVF	**Pernaja**	**1.45**	**333**	Pg	**Pn**	**08 51 28.4**	**-1.2**
PVF				Sg	**Sg**	**08 51 47.4**	**-1.3**
MEF	**Metsahovi**	**1.71**	**305**	PG	**Pn**	**08 51 33.9**	**+0.6**
MEF				SG	**Sn**	**08 51 55.1**	**-0.7**
MEF				MSG		08 51 55.1	
	comp=Z,6.1nm,0.2s						
MEF	**Metsahovi**	**1.71**	**305**	Pg	**Pn**	**08 51 33.8**	**+0.6**
MEF	**Metsahovi**	**1.71**	**305**	*e*P	**Pb**	**08 51 34.1**	**-0.4**
	SNR=50						
MEF				*e*S	**Sn**	**08 51 54.8**	**-1.0**
	comp=Z,18nm,0.4s,SNR=50						
MEF				Sg	**Sn**	**08 51 55.1**	**-0.7**
MTSE	**Matsula**	**1.84**	**254**	PN	**Pb**	**08 51 36.3**	**-0.5**
MTSE				SG	**Sn**	**08 51 58.4**	**-0.7**
MTSE	**Matsula**	**1.84**	**254**	Pn	**Pb**	**08 51 36.2**	**-0.5**
FIA0	**FINESS Array S**	**2.25**	**346**	Pn	**Pn**	**08 51 41.5**	**+0.8**
	baz=156,slow=16						
FIA0				Lg	Lg	08 52 12.1	
	baz=162,slow=28						
FIA0				Rg	Rg	08 52 24.5	
	baz=165,slow=37						
FIA0	**FINESS Array S**	**2.25**	**346**	Pn	**Pn**	**08 51 41.5**	**+0.8**
	baz=156,slow=16						
FIA0				Lg	Lg	08 52 12.1	
	baz=162,slow=28						
FIA0				Rg	Rg	08 52 24.5	
	baz=165,slow=37						
FIA0	**FINESS Array S**	**2.25**	**346**	PN	**Pn**	**08 51 41.8**	**+1.1**
	baz=161						
FIA0				SG	**Sb**	**08 52 11.0**	**-1.1**
FIA0				MSG		08 52 11.0	
	comp=Z,14nm,0.6s						
FIA0				RG	Rg	08 52 24.2	
FIA0	**FINESS Array S**	**2.25**	**346**	Pn	**Pn**	**08 51 41.5**	**+0.8**
	baz=156,slow=15,SNR=50						
FIA0				Sg	**Sb**	**08 52 11.0**	**-1.1**
FIA0				Lg	Lg	08 52 12.1	
	baz=162,slow=26,SNR=10.0						
FINES	**FINESS Array B**	**2.25**	**346**	Pn	**Pn**	**08 51 41.5**	**+0.8**
	comp=Z,2.4nm,0.3s,baz=162,slow=15,SNR=51						
FINES				Pg	**Pb**	**08 51 42.8**	**-1.0**
	comp=Z,2.4nm,0.3s,baz=164,slow=16,SNR=52						
FINES				Lg	Lg	08 52 12.1	
	comp=Z,4.9nm,0.3s,baz=162,slow=28,SNR=20						
KAF	**Kangasniemi**	**2.89**	**352**	PN	**Pn**	**08 51 51.2**	**+1.8**
KAF				SG	**Sn**	**08 52 25.8**	**+1.0**
KAF				MSG		08 52 25.8	
	comp=Z,8.1nm,0.4s						
KAF	**Kangasniemi**	**2.89**	**352**	Pn	**Pn**	**08 51 51.2**	**+1.8**
SLIT	**Slitere, Latvi**	**3.06**	**240**	*e*P	**Pb**	**08 51 55.0**	**-2.6**
	SNR=50						
SLIT				*e*S	**Sb**	**08 52 35.0**	**-0.5**
	comp=Z,321nm,0.6s,SNR=50						
KEF	**Keuruu**	**3.12**	**339**	SG	**Sb**	**08 52 37.6**	**+0.4**
KEF				MSG		08 52 37.6	
	comp=Z,9.3nm,0.4s						
KEF	**Keuruu**	**3.12**	**339**	Sg	**Sb**	**08 52 37.6**	**+0.4**
RAF	**Rauma**	**3.24**	**305**	PN	Pn	08 51 56.5	+2.2
	baz=111						
RAF				SG	**Sb**	**08 52 40.1**	**-0.4**
RAF				MSG		08 52 40.1	
	comp=Z,5.2nm,0.4s						
RAF	**Rauma**	**3.24**	**305**	Pn	Pn	08 51 56.4	+2.2
RAF				*e*S	**Sn**	**08 52 34.5**	**+1.0**
	comp=Z,14nm,0.5s,SNR=50						
RAF				Sg	**Sb**	**08 52 40.1**	**-0.4**
SUF	**Sumiainen**	**3.50**	**352**	PN	**Pn**	**08 52 00.0**	**+2.2**
SUF				SG	**Sb**	**08 52 49.5**	**+1.6**
SUF				MSG		08 52 49.5	
	comp=Z,7.4nm,0.4s						
SUF	**Sumiainen**	**3.50**	**352**	Pn	**Pn**	**08 52 00.0**	**+2.2**
SUF				Sg	**Sb**	**08 52 49.5**	**+1.6**
ISAL	**Salakas**	**3.76**	**189**	*e*P	**Sb**	**08 52 59.6**	**+4.2**
AAL	**Aland**	**3.77**	**287**	SG	**Sb**	**08 52 58.4**	**+2.8**
AAL	**Aland**	**3.77**	**287**	Sg	**Sb**	**08 52 58.4**	**+2.8**
IIGN	**Ignalina**	**3.97**	**188**	*e*P	**Sb**	**08 53 03.0**	**+1.5**
JOF	**Joensuu**	**4.17**	**27**	PN	**Pn**	**08 52 09.0**	**+2.0**
	baz=207						
JOF				SG	**Sg**	**08 53 12.6**	**-3.3**
JOF				MSG		08 53 12.6	
	comp=Z,5.3nm,0.4s						
JOF	**Joensuu**	**4.17**	**27**	Pn	**Pn**	**08 52 09.0**	**+2.0**
NACGM	**Naroch**	**4.39**	**183**	*e*	**Sb**	**08 53 12.0**	**-1.6**
HFS	**Hagfors**	**6.89**	**283**	Sn	**Sn**	**08 53 58.7**	**-4.8**
	baz=100,slow=28						
HFS				Lg	Lg	08 54 33.9	
	baz=86,slow=28						
HFS	**Hagfors**	**6.89**	**283**	Sn	**Sn**	**08 53 58.7**	**-4.8**
	baz=100,slow=28						
HFS				Lg	Lg	08 54 33.9	
	baz=86,slow=28						
HFS	**Hagfors**	**6.89**	**283**	Sn	**Sn**	**08 53 58.5**	**-5.0**
	comp=Z,0.4nm,0.3s,baz=105,slow=26,SNR=6.1						
HFS				Lg	Lg	08 54 33.8	
	comp=Z,1.7nm,0.3s,baz=93,slow=30,SNR=12						
HFS	**Hagfors**	**6.89**	**283**	Lg	Lg	08 54 33.8	
	baz=86,slow=26,SNR=15						
NB2	**NORSAR Subarra**	**8.17**	**289**	Lg	Lg	08 55 13.1	
	baz=94,slow=37						
NB2	**NORSAR Subarra**	**8.17**	**289**	Lg	Lg	08 55 13.1	
	baz=94,slow=35,SNR=15						
NB2	**NORSAR Subarra**	**8.17**	**289**	Lg	Lg	08 55 13.1	
	baz=94,slow=35,SNR=15						
NOA	**NORSAR Array B**	**8.17**	**289**	Pn	**Pn**	**08 53 02.3**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=86,slow=12,SNR=2.6						
NOA				Sn	Sn	08 54 27.1	-7.9
	comp=Z,0.3nm,0.3s,baz=3.6,slow=15,SNR=2.7						
NOA				Lg	Lg	08 55 13.7	
	comp=Z,0.6nm,0.3s,baz=172,slow=11,SNR=5.5						
ARA0	**ARCESS Array S**	**10.33**	**357**	Pn	**Pn**	**08 53 30.3**	**-1.2**
	baz=176,slow=14						
ARA0				Sn	Sn	08 55 17.9	-10
	baz=170,slow=22						
ARA0	**ARCESS Array S**	**10.33**	**357**	P	**Pn**	**08 53 30.3**	**-1.2**
	baz=176,slow=14						
ARA0				S	Sn	08 55 17.9	-10
	baz=170,slow=22						
ARA0	**ARCESS Array S**	**10.33**	**357**	P	**Pn**	**08 53 30.3**	**-1.2**
	baz=176,slow=12,SNR=47						
ARCES	**ARCESS Array B**	**10.33**	**357**	Pn	**Pn**	**08 53 30.2**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=171,slow=12,SNR=6.1						

IDC 17 09:00:11.7±1.1, **19°.84S×70°.75W, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.8/17, mbtmp3.8/6, ML4.2/1, MS3.5/6, Ms1 3.5/6, ms1mx3.1/42, Error ellipse: s-maj=36.1km s-min=26.6km az=21.0, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.32**	**36**	Pn	Pn	09 01 23.6	+4.1
	3.2nm,0.3s,baz=229,slow=6.6,SNR=60						
LPAZ				LR	LR	09 03 05.1	
	comp=Z,230nm,19.5s,baz=172,slow=40						
SIV	**San Ignacio**	**9.97**	**69**	Pn	Pn	09 02 37.0	+0.6
	1.0nm,0.3s,baz=274,slow=9.9,SNR=25						
SIV				LR	LR	09 06 59.6	
	comp=Z,162nm,18.8s,slow=41						
CFAA	**Coronel Fontan**	**11.93**	**170**	Pn	Pn	09 03 01.9	-1.3
	0.0nm,0.3s,baz=10.0,slow=17,SNR=3.2						
CPUP	**Villa Florida**	**13.93**	**120**	Pn	Pn	09 03 34.2	+3.8
	0.4nm,0.3s,baz=286,slow=12,SNR=9.6						
PLCA	**Paso Flores**	**20.83**	**180**	P	Pn	09 04 60.0	+2.6
	0.7nm,0.5s,baz=351,slow=18,SNR=5.0						
BDFB	**Brasilia**	**22.04**	**83**	P	P	09 05 08.1	-0.2
	1.8nm,0.6s,baz=241,slow=10,SNR=2.8						
BDFB				LR	LR	09 13 20.3	
	comp=Z,55nm,21.3s,baz=116,slow=36						
ROSC	**El Rosal**	**24.79**	**351**	LR	LR	09 16 21.5	
	comp=Z,92nm,19.1s,baz=90,slow=39						
TXAR	**Lajitas Array**	**58.29**	**326**	P	P	09 10 06.8	-1.7
	0.0nm,0.3s,baz=153,slow=8.1,SNR=2.2						
PDAR	**Pinedale Array**	**71.82**	**331**	P	P	09 11 36.9	+0.4
	0.2nm,0.7s,baz=153,slow=6.1,SNR=2.5						
TORD	**Torodi Ar. Bea**	**78.44**	**71**	P	P	09 12 14.2	-0.8
	1.9nm,0.7s,baz=257,slow=3.7,SNR=11						
YKA	**Yellowknife Ar**	**89.06**	**341**	P	P	09 13 08.3	+0.1
	0.8nm,0.6s,baz=135,slow=4.5,SNR=35						
URZ	**Urewera**	**94.09**	**227**	LR	LR	09 44 50.1	
	comp=Z,100nm,19.2s,baz=143,slow=28						
INK	**Inuvik**	**98.80**	**340**	LR	LR	09 59 38.0	
	comp=Z,71nm,18.6s,baz=11,slow=36						
ASAR	**Alice Springs**	**130.53**	**210**	PKP	PKPdf	09 19 25.6	+0.3
	0.1nm,0.4s,baz=126,slow=1.8,SNR=5.1						
WRA	**Warramunga Arr**	**133.45**	**213**	PKP	PKPdf	09 19 31.0	+0.1
	0.5nm,0.7s,baz=142,slow=1.5,SNR=7.5						
MKAR	**Makanchi Array**	**145.25**	**33**	PKPbc	PKPdf	09 19 51.6	+0.2
	1.4nm,0.5s,baz=318,slow=4.0,SNR=19						

CASC ***17*** *09:03:00.2±3.5, 12°.70N×91°.01W, h0km±16km, MD3.8, ML3.4*
ISCJB ***17*** *09:03:05.5±1.3, 12°.97N±0°.10×91°.03W±0°.07, h44km±12km, mb3.7/4, MS3.0/2, Error ellipse: s-maj=17.7km s-min=7.9km az=27.0*
IDC ***17*** *09:03:10.6±4.8, 13°.80N×90°.39W, h32km±43km, mb3.5/4, mb1 3.7/7, mb1mx3.5/24, mbtmp3.4/7, ML3.5/3, MS3.1/2, Ms1 3.1/2, ms1mx2.5/33, Error ellipse: s-maj=83.7km s-min=21.6km az=36.0*

ISC 17 09:03:07.8±2.2, **13°.0N**±0°.1×**90°.96W**±0°.07, **h42**km±18km, **n26, σ1s20/25, mb3.7/4, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**1.39**	**14**	*e*P	**Pn**	**09 03 29.6**	**-1.3**
PCG				*e*S	Sn	09 03 57.3	+9.1
FUG	**Fuego 3**	**1.41**	**5**	*e*P	**Pn**	**09 03 30.7**	**-0.4**
JAT	**Jato**	**1.43**	**333**	*e*P	**Pn**	**09 03 30.6**	**-0.7**
JAT				*e*S	Sn	09 03 58.1	+9.1
SBLS	**San Blas**	**1.52**	**58**	*e*P	**Pn**	**09 03 31.3**	**-1.4**
RTR	**El Retiro**	**1.53**	**56**	*e*P	**P

LPAZ			S		S		09 15 35.3	+1.1
	64nm,0.3s,baz=30,slow=20,SNR=21							
NNA	**Nana**	**7.32 296**	S		S		09 17 24.8	-2.7
	baz=108,slow=12,SNR=2.0							
SIV	**San Ignacio**	**8.74 96**	P		Pn		09 16 21.7	-0.9
	0.3nm,0.3s,baz=285,slow=13,SNR=40							
SIV			S		S		09 18 07.3	+6.0
	0.4nm,0.3s,baz=227,slow=19,SNR=2.3							
CPUP	**Villa Florida**	**16.22 135**	P		P		09 17 54.7	-0.2
	0.6nm,0.3s,baz=303,slow=9.7,SNR=12							
CFAA	**Coronel Fontan**	**16.32 174**	P		P		09 17 55.5	-0.7
	0.0nm,0.3s,baz=354,slow=15,SNR=4.9							
CFAA			S		S		09 20 45.3	-11
	0.1nm,0.3s,baz=349,slow=5.2,SNR=2.5							
BDFB	**Brasilia**	**21.31 94**	P		P		09 18 49.4	-0.6
	3.0nm,0.3s,baz=254,slow=12,SNR=8.1							
PLCA	**Paso Flores**	**25.34 181**	P		P		09 19 25.5	-1.4
	1.3nm,0.8s,baz=342,slow=12,SNR=5.3							
TEIG	**Tepich**	**39.56 333**	P		P		09 21 30.4	+0.5
	7.5nm,0.7s,baz=135,slow=2.9,SNR=4.7							
CMIG	**Matias Romero**	**40.41 322**	P		P		09 21 36.6	-0.4
	1.8nm,0.6s,baz=150,slow=7.1,SNR=7.7							
TXAR	**Lajitas Array**	**54.94 324**	P		P		09 23 28.4	-0.2
	1.4nm,0.8s,baz=149,slow=7.3,SNR=11							
ANMO	**Albuquerque**	**60.72 326**	P		P		09 24 08.1	-0.7
	1.8nm,0.8s,baz=159,slow=7.1,SNR=7.8							
PDAR	**Pinedale Array**	**68.19 330**	P		P		09 24 57.1	0.0
	1.3nm,0.8s,baz=121,slow=9.2,SNR=21							
DBIC	**Dimbokro**	**68.23 76**	P		P		09 24 56.0	-1.5
	1.4nm,0.4s,baz=211,slow=5.9,SNR=3.9							
ULM	**Lac du Bonnet**	**69.09 343**	P		P		09 25 01.0	-1.1
	2.6nm,0.4s,baz=146,slow=6.3,SNR=3.9							
NVAR	**Mina Array Bea**	**69.94 321**	P		P		09 25 07.5	-0.4
	0.9nm,0.8s,baz=153,slow=6.4,SNR=7.4							
TORD	**Torodi Ar. Bea**	**76.46 72**	P		P		09 25 44.9	-1.3
	1.2nm,0.7s,baz=257,slow=4.6,SNR=7.9							
VNDA	**Vanda**	**82.73 190**	P		P		09 26 18.7	0.0
	0.6nm,0.6s,baz=108,slow=3.2,SNR=3.8							
YKA	**Yellowknife Ar**	**84.98 341**	P		P		09 26 30.0	-0.2
	1.9nm,0.5s,baz=134,slow=4.9,SNR=83							
ASAR	**Alice Springs**	**134.71 212**	PKP		PKPdf		09 33 12.4	-1.0
	0.6nm,0.7s,baz=134,slow=1.8,SNR=9.9							
ZALV	**Zalesovo Beam**	**136.74 21**	PKP		PKPdf		09 33 16.6	+0.5
	2.4nm,0.8s,baz=318,slow=2.0,SNR=11							
ZALV			SKPbc		SKPbc		09 36 29.2	+0.9
	2.0nm,0.9s,baz=297,slow=4.6,SNR=8.5							
WRA	**Warramunga Arr**	**137.52 215**	PKP		PKPdf		09 33 18.2	-0.4
	0.8nm,0.3s,baz=146,slow=1.4,SNR=39							
MKAR	**Makanchi Array**	**141.09 30**	PKP		PKPdf		09 33 24.2	-0.1
	0.1nm,0.4s,baz=318,slow=1.6,SNR=5.1							
MKAR			SKPbc		SKiKP		09 36 42.2	-0.4
	0.6nm,0.8s,baz=296,slow=3.9,SNR=6.9							
USRK	**Ussuriysk Arra**	**145.60 331**	PKPbc		PKPab		09 33 33.4	-0.1
	1.8nm,0.5s,baz=318,slow=1.7,SNR=7.4							
MJAR	**Matsushiro Arr**	**147.09 315**	PKPbc		PKPbc		09 33 37.6	+0.1
	11nm,0.9s,baz=94,slow=1.2,SNR=19							
MAT	**Matsushiro**	**147.09 315**	P		PKPbc		09 33 37.4	-0.1
SONM	**Songino Array**	**147.43 4**	PKPbc		PKPbc		09 33 38.3	+0.1
	0.8nm,0.4s,baz=333,slow=0.3,SNR=12							

*BJI **17** 09:15:46.2, 13.86N× 145.43E, h10km, mB5.0/9, mb4.8/13, Ms4.6/6, Ms7 4.2/6*
*IDC **17** 09:15:55.3±0.6, 14.94N× 144.65E, h0km, mb4.1/17, mb1 4.3/17, mb1mx4.2/26, mbtmp4.1/17, MS3.8/21, Ms1 3.8/21, ms1mx3.6/39, Error ellipse: s-maj=24.3km s-min=13.5km az=80.0*
*DJA **17** 09:15:56.1±2.6, 15.7N× 147.3E× 3.0, h10km, M4.7/8, mB5.3/3, mb4.9/8, MLv4.5/1, Mw(mB)4.8/3*
*NEIC **17** 09:15:56.9±0.4, 14.89N× 144.67E, h10km, mb4.6/9, Error ellipse: s-maj=13.6km s-min=7.0km az=85.0*
*ISCJB **17** 09:15:58.6±0.5, 14.91N±0.04× 144.72E±0.10, h33km, mb4.4/34, MS3.9/23, Error ellipse: s-maj=13.6km s-min=5.9km az=173.5*

ISC 17 09:16:00.3±0.5, 14°85N±0.06× 144°8E±0.1, h35km, n83, σ1s27/77, mb4.5/34, MS3.8/23, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.25**	**176**	Pn	**Pn**	**09 16 21.1**	**-0.3**
GUMO				Sn	**Sn**	**09 16 36.2**	**-0.7**
GUMO	**Guam**	**1.25**	**176**	Pn	**Pn**	**09 16 21.1**	**-0.3**
	331nm,0.3s,baz=315,slow=7.1,SNR=26						
GUMO				Sn	**Sn**	**09 16 36.2**	**-0.7**
	397nm,0.3s,baz=343,slow=19,SNR=12						
JHJ	**Hachijo jima 2**	**18.75**	**347**	LR	LR	09 26 13.9	
	comp=Z,342nm,21.1s,baz=209,slow=33						
DAV	**Davao City (W)**	**20.35**	**250**	LR	LR	09 26 12.8	
	comp=Z,235nm,21.6s,baz=130,slow=30						
SWI	**Sorong**	**20.55**	**222**	P	Pn	09 20 39.6	+1.2
	67nm,1.0s,935nm						
FAKI	**Fak Fak**	**21.57**	**216**	P	**P**	**09 20 48.6**	**+1.5**
	94nm,1.4s,1μm						
MJAR	**Matsushiro Arr**	**22.39**	**346**	P	**P**	**09 20 53.5**	**-2.2**
MJAR	**Matsushiro Arr**	**22.39**	**346**	P	**P**	**09 20 53.5**	**-2.2**
	5.9nm,1.1s,baz=171,slow=10,SNR=10						
MAJO	**Matsushiro**	**22.39**	**346**	*eP*	**P**	**09 20 57.6**	**+1.9**
	22nm,1.3s						
AAI	**Ambon**	**24.68**	**223**	P	**P**	**09 21 19.7**	**+1.5**
	74nm,1.4s,2μm						
LUWI	**Luwuk**	**26.89**	**236**	P	**P**	**09 21 40.8**	**+2.6**
	42nm,1.2s						
KSRS	**Korea Array**	**27.04**	**330**	P	**P**	**09 21 38.3**	**-1.0**
	1.8nm,0.8s,baz=150,slow=11,SNR=6.1						
KSRS				LR	LR	09 31 51.2	
	comp=Z,91nm,18.2s,baz=290,slow=36						
KSAR	**Wonju Array Be**	**27.05**	**329**	P	**P**	**09 21 38.3**	**-1.1**
HNR	**Honiara**	**28.43**	**147**	LR	LR	09 32 14.4	
	comp=Z,223nm,19.9s,baz=292,slow=34						
ASAJ	**Asahikawa**	**29.23**	**357**	LR	LR	09 33 42.6	
	comp=Z,133nm,18.5s,baz=103,slow=37						
USRK	**Ussuriysk Arra**	**31.22**	**342**	LR	LR	09 34 55.3	
	comp=Z,113nm,18.1s,baz=125,slow=37						
SBUM	**Sibu**	**34.39**	**252**	P	**P**	**09 22 45.0**	**+0.5**
	9.3nm,1.8s						
CTA	**Charters Tower**	**34.74**	**178**	LR	LR	09 34 21.0	
	comp=Z,154nm,21.9s,baz=45,slow=32						
WRAB	**Tennant Creek**	**36.05**	**197**	*eP*	**P**	**09 22 58.9**	**+0.3**
	8.3nm,0.9s						
WRA	**Warramunga Arr**	**36.06**	**197**	P	**P**	**09 22 58.9**	**+0.2**
WRA	**Warramunga Arr**	**36.06**	**197**	P	**P**	**09 22 58.9**	**+0.2**
	5.2nm,0.8s,baz=21,slow=9.9,SNR=32						
WRA				LR	LR	09 35 35.2	
	comp=Z,82nm,21.7s,baz=125,slow=33						
KSM	**Kuching**	**36.53**	**252**	*eP*	**P**	**09 23 01.6**	**-1.3**
	10nm,0.8s						
KSM	**Kuching**	**36.53**	**252**	P	**P**	**09 23 02.3**	**-0.6**
	14nm,1.1s						
FITZ	**Fitzroy Crossi**	**37.78**	**211**	*eP*	**P**	**09 23 13.8**	**+0.4**
	13nm,1.3s						
HHC	**Hu-ho-hao-te**	**38.77**	**318**	*eP*	**P**	**09 23 23.8**	**+2.1**
HHC				PP	**PnPn**	**09 24 55.8**	**+2.7**
HHC				S	**S**	**09 29 20.1**	**+3.3**
HHC				ScS	**ScS**	**09 33 30.8**	**+1.5**
HHC				pmax	pmax		
	comp=Z,34nm,0.6s						
HHC				pmax	pmax		
	comp=Z,220nm,6.1s						
HHC				LR	LR		
	comp=N,380nm,16.2s						
HHC				LR	LR		
	comp=E,310nm,15.8s						
HHC				LR	LR		
	comp=Z,270nm,15.6s						
PETK	**Petropavlovsk-**	**39.52**	**12**	LR	LR	09 36 47.5	
	comp=Z,79nm,21.5s,baz=273,slow=32						
ASAR	**Alice Springs**	**39.72**	**196**	P	**P**	**09 23 29.9**	**+0.2**
ASAR	**Alice Springs**	**39.72**	**196**	P	**P**	**09 23 29.9**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=22,slow=10,SNR=12						
LZH	**Lanzhou**	**42.17**	**308**	*eP*	**P**	**09 23 49.8**	**-0.1**
LZH				pP	pP	09 23 52.9	-7.3
LZH				sP	sP	09 23 54.5	-10
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,51nm,5.2s						
LZH				LR	LR		
	comp=N,310nm,14.0s						
LZH				LR	LR		
	comp=E,300nm,15.2s						
LZH				LR	LR		
	comp=Z,360nm,17.0s						
DZM	**Mont Dzumac**	**42.40**	**149**	*e*LR	LR	09 35 42.7	
	comp=Z,218nm,26.9s						
CMAR	**Chiang Mai Arr**	**43.97**	**281**	P	**P**	**09 24 03.6**	**-0.9**
	comp=Z,8.6nm,1.0s,baz=76,slow=6.5,SNR=33						
CMAR				LR	LR	09 39 35.4	
	comp=Z,77nm,19.9s,baz=170,slow=32						
KULM	**Kulim**	**44.39**	**262**	*eP*	**P**	**09 24 08.1**	**+0.2**
	comp=Z,27nm,1.3s						
KULM	**Kulim**	**44.39**	**262**	P	**P**	**09 24 08.9**	**+1.0**
SONM	**Songino Array**	**45.66**	**324**	P	**P**	**09 24 16.8**	**-0.9**
SONM				PcP	**PcP**	**09 25 55.5**	**0.0**
SONM	**Songino Array**	**45.66**	**324**	P	**P**	**09 24 16.8**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=131,slow=8.1,SNR=5.6						
SONM				PcP	**PcP**	**09 25 55.5**	**0.0**
	comp=Z,1.1nm,0.9s,baz=126,slow=2.0,SNR=5.6						
SONM				LR	LR	09 43 14.2	
	comp=Z,129nm,19.0s,baz=98,slow=36						
GTA	**Gaotai**	**46.28**	**311**	*eP*	**P**	**09 24 23.4**	**+0.6**
GTA				pP	**pP**	**09 24 30.6**	**-2.5**
GTA				sP	**sP**	**09 24 35.0**	**-2.3**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,75nm,4.7s						
GTA				LR	LR		
	comp=N,100nm,17.1s						
GTA				LR	LR		
	comp=E,150nm,14.2s						
GTA				LR	LR		
	comp=Z,140nm,22.3s						
TAPN	**Taplejung**	**54.27**	**293**	*eP*	**P**	**09 25 22.6**	**-1.0**
RAMN	**Ramite**	**55.25**	**293**	*eP*	**P**	**09 25 30.3**	**-0.4**
GUN	**Gumba**	**55.90**	**294**	*eP*	**P**	**09 25 34.5**	**-1.0**
	comp=Z,72nm,1.3s						
WMQ	**Urumqi**	**56.21**	**313**	P	**P**	**09 25 39.0**	**+1.9**
WMQ				pmax	pmax		
	comp=Z,22nm,1.0s						
DMN	**Daman**	**56.58**	**293**	*eP*	**P**	**09 25 39.9**	**-0.3**
DANN	**Dangsing**	**57.77**	**294**	*eP*	**P**	**09 25 48.1**	**-0.6**
	comp=Z,46nm,0.9s						
KOLN	**Koldanda**	**57.91**	**294**	*eP*	**P**	**09 25 48.4**	**-1.2**
	comp=Z,18nm,1.0s						
PYUN	**Piuthan**	**58.45**	**294**	*eP*	**P**	**09 25 52.1**	**-1.2**
	comp=Z,87nm,1.3s						
MK31	**Makanchi Array**	**60.53**	**316**	*eP*	**P**	**09 26 07.8**	**+0.6**
MKAR	**Makanchi Array**	**60.53**	**316**	P	**P**	**09 26 06.9**	**-0.2**
MKAR	**Makanchi Array**	**60.53**	**316**	P	**P**	**09 26 06.9**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=92,slow=8.5,SNR=17						
MKAR				LR	LR	09 53 03.3	
	comp=Z,53nm,18.4s,baz=253,slow=37						
ZALV	**Zalesovo Beam**	**60.56**	**324**	P	**P**	**09 26 06.5**	**-0.6**
ZALV	**Zalesovo Beam**	**60.56**	**324**	P	**P**	**09 26 06.5**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=99,slow=6.5,SNR=10						
ZALV				LR	LR	09 52 40.0	
	comp=Z,70nm,19.9s,baz=80,slow=36						
RPZ	**Rata Peaks**	**63.04**	**159**	LR	LR	09 48 22.5	
	comp=Z,176nm,20.0s,baz=349,slow=31						
KURK	**Kurchatov**	**63.57**	**320**	*eP*	**P**	**09 26 27.4**	**0.0**
KURBB	**Kurchatov Arra**	**63.61**	**319**	P	**P**	**09 26 27.6**	**-0.1**
	comp=Z,6.3nm,0.8s,baz=100,slow=6.8,SNR=34						
TKM2	**Tokmak 2**	**64.83**	**311**	*eP*	**P**	**09 26 36.2**	**0.0**
	comp=Z,5.6nm,1.3s						
ILAR	**Eielson Array**	**67.48**	**26**	P	**P**	**09 26 52.4**	**-0.1**
ILAR	**Eielson Array**	**67.48**	**26**	P	**P**	**09 26 52.4**	**-0.1**
	comp=Z,0.7nm,1.1s,baz=261,slow=5.3,SNR=6.3						
KKAR	**Karatay Array**	**68.56**	**311**	*eP*	**P**	**09 26 60.0**	**+0.3**
	comp=Z,0.7nm,0.5s						
BVAR	**Borovoye Array**	**68.89**	**321**	P	**P**	**09 27 00.7**	**-0.8**
BVAR	**Borovoye Array**	**68.89**	**321**	P	**P**	**09 27 00.7**	**-0.8**
	comp=Z,6.0nm,1.0s,baz=98,slow=6.3,SNR=22						
BRVK	**Borovoye**	**68.96**	**321**	*eP*	**P**	**09 27 02.6**	**+0.7**
	comp=Z,14nm,1.2s						
PPT	**Papeete**	**72.30**	**114**	LR	LR	09 51 34.4	
	comp=Z,151nm,21.4s,baz=321,slow=30						
PPT2	**Papeete2**	**72.31**	**114**	*e*LR	LR	09 49 27.9	
	comp=Z,257nm,30.2s						
ABKAR	**Akbulak array**	**75.56**	**318**	*eP*	**P**	**09 27 41.5**	**+0.2**
	comp=Z,2.1nm,0.8s						
YKA	**Yellowknife Ar**	**81.79**	**27**	P	**P**	**09 28 16.4**	**+1.0**
YKA	**Yellowknife Ar**	**81.79**	**27**	P	**P**	**09 28 16.4**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=288,slow=5.1,SNR=8.8						
ARCES	**ARCESS Array B**	**85.87**	**342**	P	**P**	**09 28 34.5**	**-1.7**
ARCES	**ARCESS Array B**	**85.87**	**342**	P	**P**	**09 28 34.5**	**-1.7**
	comp=Z,4.7nm,0.8s,baz=55,slow=4.7,SNR=5.7						
ARCES				LR	LR	10 06 24.2	
	comp=Z,60nm,21.0s,baz=37,slow=35						
NVAR	**Mina Array Bea**	**86.21**	**51**	P	**P**	**09 28 39.5**	**+0.7**
NVAR	**Mina Array Bea**	**86.21**	**51**	P	**P**	**09 28 39.5**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=272,slow=6.2,SNR=2.6						
FINES	**FINESS Array B**	**89.99**	**335**	P	**P**	**09 28 55.1**	**-0.8**
FINES	**FINESS Array B**	**89.99**	**335**	P	**P**	**09 28 55.1**	**-0.8**
	comp=Z,4.0nm,0.8s,baz=66,slow=6.7,SNR=5.4						
FINES				LR	LR	10 08 03.2	
	comp=Z,58nm,19.4s,baz=25,slow=35						
VNDA	**Vanda**	**92.72**	**176**	P	**P**	**09 29 09.9**	**+1.8**
VNDA	**Vanda**	**92.72**	**176**	P	**P**	**09 29 09.9**	**+1.8**
	comp=Z,1.0nm,1.1s,baz=288,slow=4.4,SNR=4.4						
AKASG	**Malin Array Be**	**93.94**	**325**	LR	LR	10 13 08.2	
	comp=Z,69nm,20.5s,baz=55,slow=37						
HFS	**Hagfors**	**95.60**	**338**	LR	LR	10 13 18.5	
	comp=Z,61nm,18.1s,baz=201,slow=36						
NOA	**NORSAR Array B**	**95.85**	**339**	LR	LR	10 13 46.6	
	comp=Z,41nm,20.2s,baz=75,slow=36						
BRTR	**Keskin Array B**	**96.13**	**314**	P	**P**	**09 29 23.9**	**-1.1**
BRTR	**Keskin Array B**	**96.13**	**314**	P	**P**	**09 29 23.9**	**-1.1**
	comp=Z,1.2nm,1.0s,baz=72,slow=4.0,SNR=3.5						
BRTR				LR	LR	10 18 43.8	
	comp=Z,34nm,19.3s,baz=281,slow=39						
SNAA	**Sanae**	**119.99**	**191**	*e*MARIANA	**PP**	**09 36 07.5**	**-3.6**
TORD	**Torodi Ar. Bea**	**134.07**	**305**	PKP	**PKPdf**	**09 35 15.7**	**+0.6**
TORD	**Torodi Ar. Bea**	**134.07**	**305**	PKP	**PKPdf**	**09 35 15.7**	**+0.6**
	comp=Z,0.9nm,1.0s,baz=29,slow=3.3,SNR=2.6						
LPAZ	**La Paz**	**148.29**	**97**	PKPbc	**PKPbc**	**09 35 45.5**	**+1.0**
LPAZ	**La Paz**	**148.29**	**97**	PKPbc	**PKPbc**	**09 35 45.5**	**+1.0**
	comp=Z,1.2nm,0.9s,baz=273,slow=17,SNR=3.9						

*DDA **17** 09:18:10.8, 38.45N× 35.10E, h5km, ML3.9*
*ISK **17** 09:18:10.1, 38.45N× 35.06E, h5km, ML3.7*
*ISCJB **17** 09:18:11.5±0.6, 38.43N±0.02× 35.07E±0.03, h5km±5km, mb3.8/2, MS3.3/1, Error ellipse: s-maj=3.7km s-min=3.3km az=36.2*
*CSEM **17** 09:18:11.8±0.1, 38.44N× 35.06E, h2km, ML3.9, Error ellipse: s-maj=4.2km s-min=3.9km az=55.0*
*IDC **17** 09:18:13.4±1.4, 38.30N× 34.74E, h0km, mb3.6/4, mb1 3.7/7, mb1mx3.4/29, mbtmp3.6/7, ML3.8/2, MS3.3/1, Ms1 3.3/1, ms1mx2.0/42, Error ellipse: s-maj=28.8km s-min=14.0km az=70.0*

ISC 17 09:18:10.7±0.8, 38°45N±0.02× 35°13E±0.02, h5km±8km, n108, σ1s60/102, 2C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AVNT	**Avonos**	**0.39**	**327**	*i* P	**Pb**	**09 18 18.9**	**-1.4**
AVNT				*i* S	**Sb**	**09 18 24.3**	**-2.4**
AVNT	**Avonos**	**0.39**	**327**	*i* P	**Pb**	**09 18 18.9**	**-1.4**
AVNT				*i* S	**Sb**	**09 18 24.3**	**-2.4**
NIG	**Nigde**	**0.53**	**230**	PG	**Pb**	**09 18 21.1**	**-1.6**
NIG	**Nigde**	**0.53**	**230**	*i* Pg	**Pb**	**09 18 21.1**	**-1.6**
BNN	**Bunyan**	**0.69**	**54**	*e*PG	**Pb**	**09 18 24.8**	**-0.5**
BNN				*e*SG	**Sn**	**09 18 37.1**	**-1.4**
BNN	**Bunyan**	**0.69**	**54**	*e*Pg	**Pb**	**09 18 24.8**	**-0.5**
BSTP	**Nigde**	**0.94**	**238**	*i* P	**Pn**	**09 18 29.6**	**-1.1**
BSTP				*i* S	**Sn**	**09 18 43.9**	**-0.8**
PINB	**Pinarbasi**	**1.02**	**77**	*i* P	**Pb**	**09 18 31.2**	**+0.1**
PINB				*i* S	**Sn**	**09 18 50.8**	**+3.8**
PINB	**Pinarbasi**	**1.02**	**77**	*i* P	**Pb**	**09 18 31.2**	**+0.1**
KOZT	**Kozan**	**1.11**	**150**	*e*PN	**Pn**	**09 18 33.0**	**+0.1**
KOZT				*e*SN	**Sn**	**09 18 49.1**	**+0.3**
KOZT	**Kozan**	**1.11**	**150**	*e*Pn	**Pn**	**09 18 33.1**	**+0.1**
KOZT				*e*Sn	**Sn**	**09 18 49.1**	**+0.3**
GULE	**Gulek**	**1.20**	**194**	*i* P	**Pb**	**09 18 32.7**	**-1.3**
GULE	**Gulek**	**1.20**	**194**	*i* P	**Pb**	**09 18 32.7**	**-1.3**
YOZ	**Yozgat**	**1.20**	**7**	*e*PN	**Pg**	**09 18 34.1**	**+0.4**
YOZ	**Yozgat**	**1.20**	**7**	*e*Pn	**Pg**	**09 18 34.1**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.25**	**79**	*e*PG	Pn	09 18 31.4	-3.7
SARI				*e*SG	**Sb**	**09 18 48.0**	**-3.4**
SULT	**Sultanhani-AKS**	**1.29**	**259**	*e*PN	**Pg**	**09 18 35.5**	**0.0**
SULT	**Sultanhani-AKS**	**1.29**	**259**	*e*Pn	**Pg**	**09 18 35.5**	**0.0**
CDAG	**Cicekdag**	**1.31**	**334**	*i* P	**Pg**	**09 18 35.7**	**-0.2**
CDAG				*i* S	**Sg**	**09 18 53.8**	**+0.9**
CDAG	**Cicekdag**	**1.31**	**334**	*i* P	**Pg**	**09 18 35.7**	**-0.2**
CDAG				*i* S	**Sg**	**09 18 53.8**	**+0.9**
KAMT	**Kaman**	**1.44**	**310**	*e*PN	**Pg**	**09 18 38.4**	**+0.2**
CEYT	**Ceyhan**	**1.52**	**161**	*e*PN	**Pg**	**09 18 39.9**	**+0.1**
CEYT	**Ceyhan**	**1.52**	**161**	*e*Pn	**Pg**	**09 18 39.9**	**+0.1**
MERS	**Mersin**	**1.65**	**197**	*e*PN	**Pb**	**09 18 40.4**	**-1.2**
MERS	**Mersin**	**1.65**	**197**	*e*Pn	**Pb**	**09 18 40.4**	**-1.2**
KMRS	**Kahramanmaras**	**1.69**	**123**	*e*PN	**Pg**	**09 18 42.9**	**-0.1**
KMRS	**Kahramanmaras**	**1.69**	**123**	*e*Pn	**Pg**	**09 18 42.9**	**-0.1**
BRTR	**Keskin Array B**	**1.72**	**318**	Pn	**Pg**	**09 18 42.3**	**-1.4**
	9.9nm,0.3s,baz=142,slow=13,SNR=326						
BRTR				Lg	Lg	09 19 06.5	
	39nm,0.3s,baz=135,slow=35,SNR=20						
CORM	**Corum**	**1.77**	**348**	*e*PN	**Pg**	**09 18 43.4**	**-1.2**
CORM	**Corum**	**1.77**	**348**	*e*Pn	**Pg**	**09 18 43.4**	**-1.2**
AFSR	**Afar-Bala (A**	**1.89**	**302**	*e*PN	**Pg**	**09 18 44.9**	**-2.0**
AFSR	**Afar-Bala (A**	**1.89**	**302**	*e*Pn	**Pg**	**09 18 44.9**	**-2.0**
BBAL	**Bala**	**1.91**	**306**	*i* P	**Pg**	**09 18 45.4**	**-1.8**
BBAL				*i* S	**Sg**	**09 19 12.7**	**+0.8**
BBAL	**Bala**	**1.91**	**306**	*i* P	**Pg**	**09 18 45.4**	**-1.8**
GAZ	**Gaziantep**	**2.09**	**127**	*e*PN	**Pb**	**09 18 48.7**	**-0.4**
GAZ	**Gaziantep**	**2.09**	**127**	*e*Pn	**Pb**	**09 18 48.7**	**-0.4**
DARE	**Darende-Malaty**	**2.15**	**76**	*e*PN	**Pn**	**09 18 45.0**	**-2.4**
DARE	**Darende-Malaty**	**2.15**	**76**	*e*Pn	**Pn**	**09 18 45.0**	**-2.4**
CTKT	**Corum**	**2.19**	**353**	*i* P	**Pg**	**09 18 51.4**	**-1.2**
CTKT	**Corum**	**2.19**	**353**	*i* P	**Pg**	**09 18 51.4**	**-1.2**
AKCD	**Akcadag**	**2.20**	**93**	*i* P	**Pg**	**09 18 52.3**	**-0.6**
AKCD	**Akcadag**	**2.20**	**93**	*i* P	**Pg**	**09 18 52.3**	**-0.6**
GZT	**Gaziantep**	**2.21**	**119**	*i* P	**Pb**	**09 18 50.2**	**-1.2**
KONT	**Konya--Tatoy**	**2.24**	**258**	*e*PN	**Pb**	**09 18 49.1**	**-2.5**
KONT	**Konya--Tatoy**	**2.24**	**258**	*e*Pn	**Pb**	**09 18 49.1**	**-2.5**
KUZU	**Kuzuini**	**2.28**	**137**	*i* P	**Pb**	**09 18 51.6**	**-0.8**
KUZU	**Kuzuini**	**2.28**	**137**	*i* P	**Pb**	**09 18 51.6**	**-0.8**
ANTO	**Ankara**	**2.30**	**309**	*e*PN	**Pb**	**09 18 49.9**	**-2.9**
ANTO	**Ankara**	**2.30**	**309**	*e*Pn	**Pb**	**09 18 49.9**	**-2.9**
KDHN	**Kadinhani**	**2.36**	**273**	*i* P	**Pb**	**09 18 51.5**	**-2.4**
KDHN	**Kadinhani**	**2.36**	**273**	*i* P	**Pb**	**09 18 51.5**	**-2.4**
ELDT	**Eldivan**	**2.43**	**328**	*i* P	**Pb**	**09 18 54.3**	**-0.6**
ELDT				*i* S	**Sg**	**09 19 29.1**	**+0.5**
ELDT	**Eldivan**	**2.43**	**328**	*i* P	**Pb**	**09 18 54.3**	**-0.6**
CANT	**Cankiri**	**2.45**	**332**	*e*PN	Pb	09 18 52.0	-3.3
ERMK	**Ermenek**	**2.52**	**225**	*i* P	**Pb**	**09 18 55.2**	**-1.4**
ERMK				*i* S	**Sg**	**09 19 29.9**	**-1.8**
ERMK	**Ermenek**	**2.52**	**225**	*i* P	**Pb**	**09 18 55.2**	**-1.4**
ERBA	**Erbaa**	**2.56**	**29**	*e*P	**Pb**	**09 18 55.6**	**-1.5**
ERBA	**Erbaa**	**2.56**	**29**	*e*P	**Pb**	**09 18 55.6**	**-1.5**
KIZT	**Kizilcal**	**2.58**	**281**	*e*PN	Pb	09 18 53.6	-3.9
KIZT	**Kizilcal**	**2.58**	**281**	*e*Pn	Pb	09 18 53.6	-3.9
RSDY	**Resadiye-TOKAT**	**2.58**	**41**	*e*PN	**Pb**	**09 18 55.1**	**-2.5**
RSDY	**Resadiye-TOKAT**	**2.58**	**41**	*e*Pn	**Pb**	**09 18 55.1**	**-2.5**
MYA	**Malatya**	**2.59**	**92**	*e*PN	**Pb**	**09 18 56.0**	**-1.8**
MYA	**Malataya**	**2.59**	**92**	*e*Pn	**Pb**	**09 18 56.0**	**-1.8**
MALT	**Malatya**	**2.60**	**92**	*e*PN	**Pb**	**09 18 55.5**	**-2.2**
MALT	**Malatya**	**2.60**	**92**	*e*Pn	**Pb**	**09 18 55.6**	**-2.2**
TOS	**Tosya**	**2.72**	**342**	*e*PN	**Pn**	**09 18 56.1**	**+0.9**
TOS	**Tosya**	**2.72**	**342**	*e*Pn	**Pn**	**09 18 56.1**	**+0.9**
KVT	**Kavak**	**2.72**	**15**	*e*PN	**Pn**	**09 18 56.4**	**+1.3**
KVT	**K

SNAA	**Sanae**	**14.85 150**	*e*P	Pn	09 33 32.9	-0.8
CPUP	**Villa Florida**	**39.83 315**	P	P	09 37 37.2	-0.2
	0.9nm,0.5s,baz=139,slow=10.0,SNR=4.8					
LPAZ	**La Paz**	**53.02 308**	P	P	09 39 21.9	+0.1
	0.8nm,0.5s,baz=154,slow=9.2,SNR=5.2					
TORD	**Torodi Ar. Bea**	**76.79 29**	P	P	09 41 55.9	+0.1
	0.3nm,0.4s,baz=198,slow=6.7,SNR=6.5					
YKA	**Yellowknife Ar**	**139.35 315**	PKP	PKPdf	09 49 31.7	+1.7
	0.2nm,0.9s,baz=121,slow=2.8,SNR=3.2					
INK	**Inuvik**	**149.09 316**	PKPbc	PKPbc	09 49 50.4	-0.6
	0.4nm,0.7s,baz=141,slow=4.7,SNR=2.7					
ILAR	**Eielson Array**	**152.88 305**	PKPbc	PKPbc	09 49 59.3	-0.7
	0.2nm,0.6s,baz=91,slow=0.8,SNR=4.2					

IDC 17 09:43:18.9±1.1, 14°.89N×144°.91E, h0km, mb3.3/5, mb1 3.6/5, mb1mx3.4/24, mbtmp3.3/5, MS3.3/1, Ms1 3.3/1, ms1mx2.5/19, Error ellipse: s-maj=51.1km s-min=20.4km az=92.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.30**	**182**	Pn	Pn	09 43 44.7	+0.4
	66nm,0.3s,baz=311,slow=2.7,SNR=14						
GUMO				Sn	Sg	09 44 00.5	-0.2
	96nm,0.3s,baz=108,slow=20,SNR=9.5						
WRA	**Warramunga Arr**	**36.15**	**197**	P	P	09 50 22.8	-0.4
	0.6nm,1.0s,baz=25,slow=9.9,SNR=4.3						
SONM	**Songino Array**	**45.70**	**324**	LR	LR	10 10 08.2	
	comp=Z,30nm,18.8s,baz=350,slow=35						
MKAR	**Makanchi Array**	**60.59**	**316**	P	P	09 53 31.3	-0.3
	0.1nm,0.4s,baz=88,slow=7.5,SNR=2.9						
ZALV	**Zalesovo Beam**	**60.60**	**324**	P	P	09 53 30.9	-0.5
	0.4nm,0.3s,baz=95,slow=6.4,SNR=1.9						
ILAR	**Eielson Array**	**67.38**	**26**	P	P	09 54 15.7	-0.1
	0.5nm,1.1s,baz=248,slow=5.5,SNR=2.8						
YKA	**Yellowknife Ar**	**81.69**	**27**	P	P	09 55 39.8	+0.7
	0.2nm,1.0s,baz=284,slow=4.7,SNR=2.7						

IDC 17 09:56:06.9±2.7, 7°.99S×74°.31W, h146km±31km, mb3.3/6, mb1 3.6/10, mb1mx3.4/24, mbtmp3.4/10, Error ellipse: s-maj=43.8km s-min=15.1km az=38.0, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**4.14**	**282**	P	Pn	09 57 08.6	-0.8
	33nm,0.3s,baz=70,slow=6.0,SNR=277						
ATAH				S	Sn	09 57 55.1	-2.8
	33nm,0.3s,baz=295,slow=5.3,SNR=7.0						
NNA	**Nana**	**4.70**	**212**	P	Pn	09 57 16.5	+0.2
	5.5nm,0.3s,baz=328,slow=5.1,SNR=10						
NNA				S	Sn	09 58 05.7	-4.7
	21nm,0.3s,baz=251,slow=17,SNR=13						
LPAZ	**La Paz**	**10.22**	**144**	P	Pn	09 58 30.9	+0.1
	0.3nm,0.3s,baz=322,slow=7.7,SNR=2.8						
SIV	**San Ignacio**	**15.19**	**123**	P	P	09 59 35.3	-0.3
	0.9nm,0.3s,baz=305,slow=12,SNR=22						
CPUP	**Villa Florida**	**24.36**	**141**	P	P	10 01 11.1	-0.4
	0.8nm,0.3s,baz=320,slow=8.6,SNR=8.7						
TXAR	**Lajitas Array**	**46.65**	**324**	P	P	10 04 21.1	+0.2
	0.2nm,0.6s,baz=148,slow=9.8,SNR=3.7						
TXAR				pP	pP	10 04 54.9	+1.0
	0.1nm,0.5s,baz=150,slow=9.2,SNR=1.5						
DBIC	**Dimbokro**	**70.77**	**80**	P	P	10 07 08.1	+0.1
	4.6nm,0.3s,baz=230,slow=4.0,SNR=9.3						
YKA	**Yellowknife Ar**	**76.79**	**342**	P	P	10 07 41.9	-0.1
	0.2nm,0.4s,baz=143,slow=6.0,SNR=10						
YKA				pP	pP	10 08 16.8	-1.3
	0.3nm,0.6s,baz=151,slow=6.9,SNR=5.1						
TORD	**Torodi Ar. Bea**	**78.34**	**75**	P	P	10 07 51.4	-0.2
	2.5nm,0.7s,baz=262,slow=5.5,SNR=21						
INK	**Inuvik**	**86.54**	**341**	P	P	10 08 33.2	+0.3
	0.4nm,0.8s,baz=151,slow=2.4,SNR=3.5						
ILAR	**Eielson Array**	**89.86**	**336**	P	P	10 08 48.8	0.0
	0.1nm,0.5s,baz=117,slow=3.5,SNR=3.4						
ASAR	**Alice Springs**	**138.17**	**221**	PKP	PKPdf	10 15 15.0	-0.5
	0.5nm,0.8s,baz=134,slow=2.5,SNR=6.6						
WRA	**Warramunga Arr**	**140.44**	**225**	PKP	PKPdf	10 15 19.5	-0.2
	0.6nm,0.4s,baz=127,slow=1.7,SNR=11						

MEX 17 09:59:31.5±0.3, 15°.80N×96°.26W, h43km±3km, MD4.3, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.15**	**102**	*i* P	Pn	09 59 37.4	-1.3
HUIG				*i* S	Sn	09 59 41.9	-1.8
VHO	**Vista Hermosa**	**1.35**	**340**	*i* P	Pn	09 59 52.3	-1.8
VHO				*i* S	Sn	10 00 08.5	-2.5
CMIG	**Matias Romero**	**1.84**	**46**	*e*P	Pn	09 59 58.8	-1.9
CMIG				*e*S	Sn	10 00 21.1	-1.6
PNIG	**Pinotepa**	**1.89**	**288**	*i* P	Pn	10 00 00.1	-1.3
PNIG				*i* S	Sn	10 00 22.0	-2.1
TPIG	**Tehuac#an**	**2.81**	**338**	*i* P	Pn	10 00 13.2	-1.0
TPIG				*e*S	Sn	10 00 45.4	-1.7
TGIG		**3.16**	**72**	*i* P	Pn	10 00 18.1	-0.8
TGIG				*i* S	Sn	10 00 53.7	-1.8
ACX	**Acapulco**	**3.62**	**288**	*i* P	Pn	10 00 24.4	-0.7
ACX				*i* S	Sn	10 01 05.4	-1.2
THIG		**3.95**	**102**	*i* P	Pn	10 00 28.3	-1.3
THIG				*i* S	Sn	10 01 13.6	-1.1
PPM	**Popocatepetl**	**3.96**	**325**	*i* P	Pn	10 00 29.5	-0.9
PPM				*i* P	Pn	10 00 30.1	-0.3
PPM				*e*S	Sn	10 01 15.1	-1.0
PPM				*e*S	Sn	10 01 15.1	-1.0
CCIG	**Comitan**	**3.99**	**83**	*i* P	Pn	10 00 29.3	-1.1
CCIG				*i* S	Sn	10 01 14.6	-1.5

IDC 17 10:02:18.6±3.4, 14°.85N×144°.69E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/24, mbtmp3.5/4, Error ellipse: s-maj=99.8km s-min=21.7km az=68.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.27**	**172**	Pn	Pn	10 02 44.0	+0.4
	105nm,0.3s,baz=320,slow=3.0,SNR=12						
GUMO				Sn	Sg	10 02 59.3	-0.1
	156nm,0.3s,baz=28,slow=22,SNR=16						
WRA	**Warramunga Arr**	**36.05**	**197**	P	P	10 09 21.8	-0.2
	0.4nm,0.6s,baz=20,slow=9.6,SNR=8.8						
ASAR	**Alice Springs**	**39.71**	**196**	P	P	10 09 52.6	-0.4
	0.1nm,0.4s,baz=7.7,slow=11,SNR=3.5						
CMAR	**Chiang Mai Arr**	**43.89**	**281**	P	P	10 10 27.2	-0.1
	1.0nm,0.7s,baz=81,slow=6.4,SNR=6.8						
MKAR	**Makanchi Array**	**60.47**	**316**	P	P	10 12 30.4	0.0
	0.4nm,0.6s,baz=89,slow=8.4,SNR=5.6						

IDC 17 10:05:46.2±0.8, 14°.86N×144°.59E, h0km, mb4.0/14, mb1 4.1/14, mb1mx4.0/26, mbtmp4.0/14, MS3.2/7, Ms1 3.3/7, ms1mx2.9/45, Error ellipse: s-maj=30.8km s-min=14.5km az=79.0

ISCJB 17 10:05:47.9±0.5, 14°.85N±0°.05×144°.5E±0°.1, h22km, mb4.0/19, MS3.2/7, Error ellipse: s-maj=17.3km s-min=5.5km az=163.5

NEIC 17 10:05:47.6±0.3, 14°.83N×144°.60E, h10km, mb4.2/5, Error ellipse: s-maj=11.9km s-min=5.6km az=79.0

ISC 17 10:05:49.5±0.6, 14°.81N±0°.07×144°.6E±0°.1, h22km, n37, σ0s59/41, mb4.1/19, MS3.0/7, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.25**	**167**	*e*Pg	**Pn**	**10 06 11.3**	**-0.3**
GUMO				Pn	**Pn**	**10 06 11.6**	**0.0**
GUMO				Sn	**Sn**	**10 06 26.6**	**-1.1**
GUMO				*e*Sg	**Sb**	**10 06 28.7**	**+0.7**
GUMO	**Guam**	**1.25**	**167**	Pn	**Pn**	**10 06 11.6**	**0.0**
	183nm,0.3s,baz=309,slow=3.4,SNR=23						
GUMO				Sn	**Sn**	**10 06 26.6**	**-1.1**
	297nm,0.3s,baz=38,slow=16,SNR=14						
MJAR	**Matsushiro Arr**	**22.38**	**346**	P	**P**	**10 10 46.8**	**+0.5**
MJAR	**Matsushiro Arr**	**22.38**	**346**	P	**P**	**10 10 46.8**	**+0.5**
	2.7nm,0.9s,baz=171,slow=11,SNR=4.9						
MJAR				LR	LR	10 18 14.0	
	comp=Z,40nm,21.1s,baz=190,slow=34						
KSRS	**Korea Array**	**26.97**	**330**	P	**P**	**10 11 29.9**	**+0.3**
	1.0nm,0.7s,baz=140,slow=9.6,SNR=3.4						
KSRS				LR	LR	10 21 32.3	
	comp=Z,32nm,18.9s,baz=346,slow=35						
KSAR	**Wonju Array Be**	**26.98**	**330**	P	**P**	**10 11 29.9**	**+0.2**
ASAJ	**Asahikawa**	**29.25**	**357**	LR	LR	10 21 42.9	

	comp=Z,40nm,21.6s,baz=147,slow=33					
TARA	**Tarawa**	**31.02**	**113**	*e*P	**P**	**10 12 05.8**	**0.0**
WRAB	**Tennant Creek**	**35.97**	**197**	*e*P	**P**	**10 12 49.8**	**+1.0**
	2.9nm,0.9s						
WRA	**Warramunga Arr**	**35.98**	**197**	P	**P**	**10 12 49.2**	**+0.3**
WRA	**Warramunga Arr**	**35.98**	**197**	P	**P**	**10 12 49.2**	**+0.3**
	1.8nm,0.8s,baz=21,slow=9.8,SNR=15						
FITZ	**Fitzroy Crossi**	**37.66**	**210**	*e*P	**P**	**10 13 03.5**	**+0.3**
	2.0nm,0.7s						
ASAR	**Alice Springs**	**39.64**	**195**	P	**P**	**10 13 20.7**	**+0.8**
ASAR	**Alice Springs**	**39.64**	**195**	P	**P**	**10 13 20.7**	**+0.8**
	0.9nm,0.9s,baz=11,slow=9.4,SNR=6.9						
MBWA	**Marble Bar**	**43.28**	**215**	*e*P	**P**	**10 13 49.7**	**0.0**
	3.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**43.80**	**281**	P	**P**	**10 13 54.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**43.80**	**281**	P	**P**	**10 13 54.3**	**+0.3**
	1.1nm,0.4s,baz=79,slow=6.8,SNR=15						
CMAR				LR	LR	10 31 17.8	
	comp=Z,18nm,18.7s,baz=200,slow=35						
SONM	**Songino Array**	**45.58**	**324**	P	**P**	**10 14 07.1**	**-0.9**
SONM				PcP	**PcP**	**10 15 47.0**	**+0.7**
SONM	**Songino Array**	**45.58**	**324**	P	**P**	**10 14 07.1**	**-0.9**
	0.4nm,0.8s,baz=141,slow=5.5,SNR=3.4						
SONM				PcP	**PcP**	**10 15 47.0**	**+0.7**
	0.4nm,0.6s,baz=127,slow=4.3,SNR=4.5						
SONM				LR	LR	10 32 32.7	
	comp=Z,50nm,18.1s,baz=324,slow=35						
MKAR	**Makanchi Array**	**60.42**	**316**	P	**P**	**10 15 56.5**	**-0.8**
MKAR	**Makanchi Array**	**60.42**	**316**	P	**P**	**10 15 56.5**	**-0.8**
	1.4nm,0.8s,baz=87,slow=8.9,SNR=12						
ZALV	**Zalesovo Beam**	**60.47**	**324**	P	**P**	**10 15 57.7**	**+0.2**
ZALV	**Zalesovo Beam**	**60.47**	**324**	P	**P**	**10 15 57.7**	**+0.2**
	0.9nm,0.6s,baz=104,slow=7.5,SNR=5.5						
ZALV				LR	LR	10 42 16.2	
	comp=Z,34nm,19.5s,baz=292,slow=36						
KURK	**Kurchatov**	**63.48**	**320**	*e*P	**P**	**10 16 17.7**	**0.0**
	12nm,1.2s						
KURBB	**Kurchatov Arra**	**63.52**	**319**	P	**P**	**10 16 18.3**	**+0.2**
	4.8nm,0.6s,baz=102,slow=6.9,SNR=20						
BVAR	**Borovoye Array**	**68.80**	**321**	P	**P**	**10 16 52.5**	**+0.6**
BVAR	**Borovoye Array**	**68.80**	**321**	P	**P**	**10 16 52.5**	**+0.6**
	2.5nm,0.7s,baz=109,slow=8.0,SNR=9.7						
PPT	**Papeete**	**72.46**	**114**	LR	LR	10 43 33.8	
	comp=Z,34nm,18.6s,baz=5.3,slow=31						
ABKAR	**Akbulak array**	**75.45**	**318**	*e*P	**P**	**10 17 31.8**	**0.0**
	1.3nm,0.5s						
YKA	**Yellowknife Ar**	**81.91**	**27**	P	**P**	**10 18 07.4**	**+0.3**
YKA	**Yellowknife Ar**	**81.91**	**27**	P	**P**	**10 18 07.4**	**+0.3**
	0.3nm,0.6s,baz=288,slow=5.0,SNR=6.3						
ARCES	**ARCESS Array B**	**85.84**	**342**	P	**P**	**10 18 26.4**	**-0.7**
ARCES	**ARCESS Array B**	**85.84**	**342**	P	**P**	**10 18 26.4**	**-0.7**
	5.1nm,0.9s,baz=95,slow=6.4,SNR=3.8						
NVAR	**Mina Array Bea**	**86.38**	**51**	P	**P**	**10 18 30.8**	**+0.1**
NVAR	**Mina Array Bea**	**86.38**	**51**	P	**P**	**10 18 30.8**	**+0.1**
	0.3nm,0.6s,baz=310,slow=4.2,SNR=3.2						
FINES	**FINESS Array B**	**89.94**	**335**	P	**P**	**10 18 46.2**	**-0.6**
FINES	**FINESS Array B**	**89.94**	**335**	P	**P**	**10 18 46.2**	**-0.6**
	1.4nm,0.6s,baz=107,slow=4.7,SNR=3.6						

IDC 17 10:11:33.9±2.0, 63°.04N×151°.27W, h106km±20km, mb3.1/4, mb1 3.4/8, mb1mx3.2/28, mbtmp3.2/8, Error ellipse: s-maj=22.2km s-min=18.6km az=111.0

ISCJB 17 10:11:34.0±0.3, 63°.01N±0°.02×151°.01W±0°.06, h128km±3km, mb3.2/4, Error ellipse: s-maj=4.8km s-min=3.5km az=30.7

NEIC 17 10:11:35.2, 62°.99N×151°.02W, h119km, MG3.2(AEIC), After AEIC.

ISC 17 10:11:35.1±0.7, 62°.99N±0°.03×151°.06W±0°.03, h119km±6km, n73, σ1s15/89, mb3.4/4, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPLA	**Purkeypile**	**0.53**	**260**	P	**Pn**	**10 11 53.6**	**+0.4**
PPLA				S	**Sn**	**10 12 08.2**	**+1.2**
TRF	**Thorofare Moun**	**0.58**	**37**	P	**Pn**	**10 11 53.2**	**-0.4**
TRF				S	**Sn**	**10 12 07.6**	**-0.1**
HUR	**Hurricane**	**0.65**	**90**	P	**Pn**	**10 11 54.1**	**+0.1**
CUT	**Chulitna**	**0.69**	**148**	P	**Pn**	**10 11 54.6**	**+0.4**
TRAP	**Trapper Creek**	**0.76**	**150**	P	**Pn**	**10 11 55.2**	**+0.4**
SKT	**Skwentna**	**1.04**	**192**	P	**Pn**	**10 11 57.6**	**+0.2**
SKT				S	**Sn**	**10 12 14.7**	**+0.4**
CHUM	**Lake Minchumin**	**1.06**	**328**	P	**Pn**	**10 11 57.9**	**+0.3**
CHUM				S	**Sn**	**10 12 14.4**	**-0.1**
RND	**Reindeer**	**1.08**	**66**	P	**Pn**	**10 11 58.0**	**+0.1**
RND				S	**Sn**	**10 12 15.1**	**-0.2**
MCK	**McKinley**	**1.21**	**51**	P	**Pn**	**10 11 59.4**	**+0.2**
MCK				S	**Sn**	**10 12 17.2**	**-0.4**
STLK	**Strandline Lak**	**1.54**	**194**	P	**Pn**	**10 12 03.1**	**+0.1**
PMR	**Palmer**	**1.67**	**146**	P	**Pn**	**10 12 04.1**	**-0.2**
DHY	**Denali Highway**	**1.68**	**85**	P	**Pn**	**10 12 04.6**	**-0.1**
DHY				S	**Sn**	**10 12 27.2**	**-0.1**
SML	**Sawmill**	**1.74**	**132**	*e*Pn	**Pn**	**10 12 05.3**	**0.0**
SML				*e*Sn	**Sn**	**10 12 29.8**	**+1.5**
NEA	**Nenana**	**1.82**	**28**	P	**Pn**	**10 12 05.8**	**-0.3**
BGL	**Barrier Glacie**	**1.84**	**200**	P	**Pn**	**10 12 07.3**	**+0.7**
SPU	**Mount Spurr**	**1.87**	**195**	P	**Pn**	**10 12 06.9**	**0.0**
WRH	**Wood River Hil**	**1.99**	**40**	P	**Pn**	**10 12 08.1**	**-0.2**
MLY	**Manley**	**2.06**	**4**	P	**Pn**	**10 12 09.0**	**-0.2**
CCB	**Clear Creek Bu**	**2.20**	**39**	P	**Pn**	**10 12 10.6**	**-0.3**
TTO1	**Tatalina**	**2.27**	**270**	P	**Pn**	**10 12 11.8**	**-0.1**
HDA	**Harding Lake**	**2.31**	**50**	P	**Pn**	**10 12 12.3**	**0.0**
MDM	**Murphy Dome**	**2.34**	**31**	P	**Pn**	**10 12 12.4**	**-0.3**
COLA	**College**	**2.36**	**35**	P	**Pn**	**10 12 12.7**	**-0.2**
DDM	**Donnelly Dome**	**2.47**	**69**	P	**Pn**	**10 12 15.0**	**+0.6**
SLKM	**Skilak Lake**	**2.52**	**171**	P	**Pn**	**10 12 15.7**	**+0.6**
DFR	**Drift River**	**2.53**	**199**	P	**Pn**	**10 12 16.4**	**+1.2**
PAX	**Paxson**	**2.55**	**88**	P	**Pn**	**10 12 15.6**	**+0.1**
IL1	**Eielson Array**	**2.57**	**44**	P	**Pn**	**10 12 15.2**	**-0.5**
ILAR	**Eielson Array**	**2.57**	**44**	P	**Pn**	**10 12 15.2**	**-0.4**
ILAR				S	**Sn**	**10 12 46.4**	**-0.5**
ILAR	**Eielson Array**	**2.57**	**44**	P	**Pn**	**10 12 15.2**	**-0.4**
	13nm,0.3s,baz=225,slow=12,SNR=1143						
ILAR				S	**Sn**	**10 12 46.4**	**-0.5**
	6.2nm,0.3s,baz=220,slow=25,SNR=9.9						
GLM	**Gilmore Dome**	**2.58**	**37**	P	**Pn**	**10 12 15.7**	**-0.1**
RSO	**Redoubt South**	**2.66**	**198**	*e*Pn	**Pn**	**10 12 17.6**	**+0.5**
RSO				*e*Sn	**Sn**	**10 12 51.3**	**+2.0**
HARP	**HAARP**	**2.78**	**99**	P	**Pn**	**10 12 18.9**	**+0.5**
SVW2	**Sparrevohn**	**2.85**	**230**	P	**Pn**	**10 12 19.2**	**-0.2**
VLZ	**Valdez**	**2.90**	**128**	P	**Pn**	**10 12 18.9**	**-1.1**
SEW	**Seward**	**3.00**	**164**	P	**Pn**	**10 12 21.1**	**-0.1**
DIV	**Divide**	**3.11**	**125**	P	**Pn**	**10 12 21.4**	**-1.4**
DOT	**Dot Lake**	**3.22**	**75**	*e*Pn	**Pn**	**10 12 23.8**	**-0.4**
DOT				*e*Sn	**Sn**	**10 13 05.2**	**+3.0**
IM3	**Indian Mountai**	**3.22**	**340**	P	**Pn**	**10 12 23.9**	**-0.3**
MENT	**Mentasta**	**3.35**	**88**	*e*Pn	**Pn**	**10 12 25.6**	**-0.3**
MENT				*e*Sn	**Sn**	**10 13 06.9**	**+1.7**
PRP	**Porcupine Dome**	**3.50**	**41**	P	**Pn**	**10 12 28.2**	**+0.2**
EYAK	**Cordova Ski Ar**	**3.52**	**132**	P	**Pn**	**10 12 27.6**	**-0.4**
BMRM	**Bremner River**	**3.66**	**121**	P	**Pn**	**10 12 28.9**	**-1.1**
AUW	**Augustine West**	**3.81**	**199**	P	**Pn**	**10 12 33.4**	**+1.4**
AUP	**Augustine Pinn**	**3.82**	**199**	P	**Pn**	**10 12 34.4**	**+2.2**
GOAT	**Goat Mountain**	**3.86**	**126**	P	**Pn**	**10 12 31.8**	**-0.9**
VRDI	**Verde Repeater**	**3.99**	**113**	P	**Pn**	**10 12 33.6**	**-0.9**
BCA3	**Beaver Creek A**	**4.22**	**85**	P	**Pn**	**10 12 36.8**	**-0.8**
COLD	**Coldfoot**	**4.27**	**4**	*e*Pn	**Pn**	**10 12 38.1**	**0.0**
COLD				*e*Sn	**Sn**	**10 13 27.0**	**-0.1**
KIAG	**Kiagna River**	**4.60**	**113**	P	**Pn**	**10 12 41.5**	**-1.2**
EGAK	**Eagle**	**4.73**	**63**	*e*Pn	**Pn**	**10 12 43.6**	**-0.6**
BARN	**Barnard Glacie**	**4.83**	**109**	P	**Pn**	**10 12 45.7**	**-0.1**
KAKN	**Katmai Knife C**	**5.10**	**204**	P	**Pn**	**10 12 49.9**	**+0.5**
KCE	**Katmai Mt Cerb**	**5.18**	**205**	P	**Pn**	**10 12 50.5**	**+0.2**
BM3	**Burnt Mountain**	**5.21**	**29**	P	**Pn**	**10 12 50.4**	**-0.4**
KABR	**Katmai Barrier**	**5.24**	**203**	P	**Pn**	**10 12 51.6**	**+0.4**
KDAK	**Kodiak Island**	**5.28**	**189**	P	**Pn**	**10 12 50.2**	**-1.4**
KDAK				S	**Sn**	**10 13 46.8**	**-4.5**
KDAK	**Kodiak Island**	**5.28**	**189**	P	**Pn**	**10 12 50.2**	**-1.4**
	3.3nm,0.3s,baz=24,slow=7.8,SNR=40						
KDAK				S	**Sn**	**10 13 46.8**	**-4.5**
	3.1nm,0.3s,baz=311,slow=19,SNR=14						
DAWY	**Dawson**	**5.33**	**73**	P	**Pn**	**10 12 51.9**	**-0.5**
PNL	**Peninsula**	**6.52**	**115**	P	**Pn**	**10 13 08.4**	**-0.1**
TNA	**Tin City**	**7.77**	**297**	*e*Pn	**Pn**	**10 13 27.0**	**+1.8**
	2.9nm,0.7s						
INK	**Inuvik**	**8.97**	**46**	P	**Pn**	**10 13 39.5**	**-1.9**
INK	**Inuvik**	**8.97**	**46**	P	**Pn**	**10 13 39.5**	**-1.9**
	0.3nm,0.3s,baz=238,slow=16,SNR=19						
YKA	**Yellowknife Ar**	**16.57**	**75**	P	**Pn**	**10 15 19.0**	**-0.9**
YKA	**Yellowknife Ar**	**16.57**	**75**	P	**Pn**	**10 15 19.0**	**-0.9**
	0.1nm,0.3s,baz=286,slow=11,SNR=22						
PDAR	**Pinedale Array**	**31.38**	**110**	P	**P**	**10 17 46.0**	**+1.5**
	0.4nm,0.8s,baz=27,slow=2.4,SNR=3.1						
TXAR	**Lajitas Array**	**45.29**	**115**	P	**P**	**10 19 41.7**	**+1.0**
TXAR	**Lajitas Array**	**45.29**	**115**	P	**P**	**10 19 41.7**	**+1.0**
	0.5nm,0.9s,baz=299,slow=5.8,SNR=4.3						
SONM	**Songino Array**	**53.80**	**305**	P	**P**	**10 20 45.6**	**+0.5**
SONM	**Songino Array**	**53.80**	**305**	P	**P**	**10 20 45.6**	**+0.5**
	0.4nm,0.7s,baz=27,slow=6.6,SNR=4.5						
MKAR	**Makanchi Array**	**62.67**	**322**	P	**P**	**10 21 44.6**	**-2.0**
MKAR	**Makanchi Array**	**62.67**	**322**	P	**P**	**10 21 44.6**	**-2.0**
	0.3nm,0.5s,baz=35,slow=6.1,SNR=3.2						

CSEM 17 10:33:34.2±0.7, 36°.43N×21°.72E, h15km, MD3.0, Error ellipse: s-maj=12.0km s-min=6.9km az=51.0

THE 17 10:33:35.1, 36°.47N×21°.73E, h10km±1km, ML1.9/3, Error ellipse: s-maj=1.7km s-min=0.7km az=51.0

ATH 17 10:33:34.4, 36°.47N×21°.74E, h21km±1km, MD3.0/9, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.42**	**0**	P	Pb	10 33 42.9	-0.2
PYL				S	Sb	10 33 49.6	+0.5
PYL	**PYLOS**	**0.42**	**0**	*e*PB	Pb	10 33 42.9	-0.2
PYL				*e*SB	Sb	10 33 49.9	+0.8
PYL	**PYLOS**	**0.42**	**0**	P	Pb	10 33 42.9	-0.2
PYL				S	Sb	10 33 49.6	+0.5
PYL				*e*Sb	Sn	10 33 49.9	-2.6
DYR	**Agios Nikonas**	**0.56**	**58**	P	Pb	10 33 45.9	+0.2
DYR				S	Sb	10 33 54.0	+0.7
DYR	**Agios Nikonas**	**0.56**	**58**	*e*PN	Pb	10 33 45.7	0.0
DYR				*e*SN	Sb	10 33 53.7	+0.4
DYR	**Agios Nikonas**	**0.56**	**58**	P	Pb	10 33 45.9	+0.2
DYR				*e*Sn	Sb	10 33 53.7	+0.4
DYR				S	Sn	10 33 54.0	-1.9
ITM	**Ithomi**	**0.72**	**12**	P	Pb	10 33 48.9	+0.5
ITM				S	Sn	10 33 59.6	-0.3
ITM	**Ithomi**	**0.72**	**12**	*e*PN	Pb	10 33 48.2	-0.2
ITM				*e*SN	Sn	10 34 00.1	+0.2
ITM	**Ithomi**	**0.72**	**12**	*e*Pn	Pb	10 33 48.2	-0.2
ITM	**Ithomi**	**0.72**	**12**	P	Pb	10 33 48.9	+0.5
ITM				S	Sn	10 33 59.6	-0.3
ITM				*e*Sn	Sb	10 34 00.1	+2.2
VLI	**Veliai**	**0.99**	**75**	*e*PB	Pb	10 33 52.9	0.0
VLI				*e*SN	Sn	10 34 07.7	+1.1
VLI	**Veliai**	**0.99**	**75**	*e*Pb	Pb	10 33 52.9	0.0
VLI				*e*Sn	Sn	10 34 07.7	+1.1
VLX	**Vlachokerasia**	**1.03**	**29**	P	Pn	10 33 54.2	+0.4
VLX	**Vlachokerasia**	**1.03**	**29**	*e*PN	Pn	10 33 54.0	+0.2
VLX				*e*SN	Sn	10 34 09.0	+1.2
VLX	**Vlachokerasia**	**1.03**	**29**	P	Pn	10 33 54.2	+0.4
VLX				*e*Sn	Sn	10 34 09.0	+1.2
AMT	**Artemida-Makis**	**1.06**	**359**	P	Pb	10 33 55.1	+1.0
AMT				S	Sn	10 34 10.2	+1.9
AMT	**Artemida-Makis**	**1.06**	**359**	*e*PN	Pb	10 33 55.2	+1.1
AMT				*e*SN	Sn	10 34 09.2	+0.9
AMT	**Artemida-Makis**	**1.06**	**359**	*e*Pn	Pb	10 33 55.2	+1.1
AMT				*e*Sn	Sn	10 34 09.2	+0.9
AMT				S	Sb	10 34 10.2	+2.6
KYTH	**Kithira**	**1.06**	**100**	P	Pb	10 33 55.1	+1.0
KYTH	**Kithira**	**1.06**	**100**	*e*PN	Pb	10 33 55.0	+0.9
KYTH	**Kithira**	**1.06**	**100**	*e*P

BRBR					*e*S	**Sg**	11 04 15.4	+0.5	
BRBR					AML	AML	11 04 26.2		
	comp=E,12μm,0.3s								
BRBR					AML	AML	11 04 28.1		
	comp=Z,9μm,0.3s								
KSHT	**Keshet**	**0.49**	**138**	Pg	**Pg**	11 04 09.6	-0.1		
BEYL	**Beirut**	**0.53**	**7**	*e*P	**Pg**	11 04 10.7	+0.2		
BEYL	**Beirut**	**0.53**	**7**	*e*P	**Pg**	11 04 10.7	+0.2		
BHL	**Bhannes**	**0.59**	**19**	*e*P	**Pg**	11 04 11.5	-0.2		
BHL					*e*S	**Sg**	11 04 19.4	0.0	
BHL	**Bhannes**	**0.59**	**19**	*e*P	**Pg**	11 04 11.5	-0.2		
BHL					*e*S	**Sg**	11 04 19.4	0.0	
BLGI	**Bet Lehem HaGe**	**0.64**	**198**	Pg	**Pg**	11 04 12.7	+0.1		
BLGI					Sg	**Sb**	11 04 23.0	0.0	
QASN	**Qassioun**	**0.74**	**75**⇑	*e*P	**Pg**	11 04 15.0	+0.5		
QASN					*e*S	**Sg**	11 04 24.6	+0.4	
QASN					AML	AML	11 04 42.5		
	comp=Z,14μm,0.8s								
QASN	**Qassioun**	**0.74**	**75**⇑	*e*P	**Pg**	11 04 15.0	+0.5		
	SNR=91								
QASN					*e*S	**Sg**	11 04 24.6	+0.4	
	comp=Z,14μm,0.8s,SNR=59								
OFRI	**'Ofer**	**0.81**	**207**	Pg	**Pg**	11 04 15.9	+0.1		
OFRI					Sg	**Sb**	11 04 28.6	+0.7	
TCHB	**Talchebab**	**0.82**	**146**⇑	*e*P	**Pg**	11 04 15.7	-0.3		
TCHB					*e*S	**Sg**	11 04 25.1	-1.5	
TCHB					AML	AML	11 04 47.1		
	comp=Z,7μm,0.5s								
TCHB	**Talchebab**	**0.82**	**146**⇑	*e*P	**Pg**	11 04 15.7	-0.3		
	SNR=75								
TCHB					*e*S	**Sg**	11 04 25.1	-1.5	
	comp=Z,7μm,0.5s,SNR=59								
TOTH	**TOTAH**	**0.84**	**89**⇓	*e*P	**Pg**	11 04 16.3	-0.2		
TOTH					*e*S	**Sg**	11 04 25.6	-1.9	
TOTH					AML	AML	11 04 26.7		
	comp=Z,2μm,0.3s								
TOTH	**TOTAH**	**0.84**	**89**⇓	*e*P	**Pg**	11 04 16.3	-0.2		
	SNR=75								
TOTH					*e*S	**Sg**	11 04 25.6	-1.9	
	comp=Z,2μm,0.3s,SNR=59								
MMLI	**Mount Malkishu**	**0.91**	**180**	Pg	**Pg**	11 04 16.9	-0.8		
MMLI					Sg	**Sb**	11 04 31.5	+0.8	
HWQ	**Hawqa**	**1.03**	**25**	*e*P	**Pg**	11 04 19.1	-0.9		
HWQ					*e*S	**Sg**	11 04 32.5	-0.9	
HWQ	**Hawqa**	**1.03**	**25**	*e*P	**Pg**	11 04 19.1	-0.9		
HWQ					*e*S	**Sg**	11 04 32.5	-0.9	
HMDT	**Nahal Hemdat**	**1.09**	**175**	Pg	**Pg**	11 04 12.2	-1.1		
HMDT					Sg	**Sb**	11 04 36.3	+0.3	
SLTI	**Sal'it**	**1.15**	**196**	Pg	**Pg**	11 04 20.9	-1.4		
SLTI					Sg	**Sb**	11 04 37.6	0.0	
SALA	**Sala**	**1.27**	**119**⇓	*e*P	**Pg**	11 04 23.6	-1.1		
SALA					AML	AML	11 04 57.8		
	comp=Z,2μm,0.6s								
SALA	**Sala**	**1.27**	**119**⇓	*e*P	**Pg**	11 04 23.6	-1.1		
	SNR=67								
ZALF	**Zalf**	**1.66**	**104**⇓	*e*P	**Pn**	11 04 29.9	0.0		
ZALF					AML	AML	11 05 02.1		
	comp=N,1μm,0.4s								
ZALF					AML	AML	11 05 14.5		
	comp=Z,786nm,0.5s								
ZALF	**Zalf**	**1.66**	**104**⇓	*e*P	**Pn**	11 04 29.9	0.0		
	SNR=57								
ROOS	**tl_alroos**	**1.76**	**62**⇑	*e*P	**Pb**	11 04 33.3	+0.3		
ROOS	**tl_alroos**	**1.76**	**62**⇑	*e*P	**Pb**	11 04 33.3	+0.3		
	SNR=45								
YTIR	**Yattir**	**1.99**	**188**	Pn	**Pn**	11 04 35.4	+0.8		
PHNC	**Paralimni**	**2.02**	**326**	P	**Pn**	11 04 35.2	+0.4		
	comp=Z,38nm,0.8s								
PHNC					S	**Sn**	11 04 59.5	-0.8	
PHNC	**Paralimni**	**2.02**	**326**	P	**Pn**	11 04 35.2	+0.4		
	comp=Z,38nm,0.8s								
PHNC					S	**Sn**	11 04 59.5	-0.8	
CSS	**Prodhromos**	**2.37**	**314**	⇓P	**Pn**	11 04 40.0	+0.4		
	comp=Z,19nm,0.3s								
CSS					S	**Sn**	11 05 07.4	-1.6	
CSS	**Prodhromos**	**2.37**	**314**	*e*PN	**Pn**	11 04 37.1	-2.5		
CSS	**Prodhromos**	**2.37**	**314**	Pn	**Pn**	11 04 39.5	-0.1		
CSS	**Prodhromos**	**2.37**	**314**	⇓P	**Pn**	11 04 40.0	+0.4		
	comp=Z,19nm,0.3s								
CSS					S	**Sn**	11 05 07.4	-1.6	
RTMI	**Retamim**	**2.37**	**195**	Pn	**Pn**	11 04 40.2	+0.6		
EREN	**Erenkoy**	**2.41**	**335**	*e*PN	**Pn**	11 04 38.7	-1.5		
LFK	**Lefkose**	**2.48**	**322**	*e*PN	**Pn**	11 04 39.4	-1.8		
MAMC	**Mammari**	**2.58**	**316**	P	**Pn**	11 04 43.1	+0.6		
MAMC	**Mammari**	**2.58**	**316**	P	**Pn**	11 04 43.1	+0.6		
KZIT	**Kziot**	**2.58**	**200**	Pn	**Pn**	11 04 42.8	+0.2		
LEF	**Lefka**	**2.74**	**311**	*e*PN	**Pn**	11 04 42.3	-2.5		
ZFRI	**Zfri**	**2.79**	**184**	Pn	**Pn**	11 04 45.1	-0.3		
ALFC	**Alevga**	**2.95**	**308**	⇓P	**Pn**	11 04 48.1	+0.4		
	comp=Z,51nm,0.3s								
ALFC					S	**Sn**	11 05 22.9	-0.6	
ALFC	**Alevga**	**2.95**	**308**	⇓P	**Pn**	11 04 48.1	+0.4		
	comp=Z,51nm,0.3s								
ALFC					S	**Sn**	11 05 22.9	-0.6	
PPCY	**Paphos**	**2.98**	**302**	P	**Pn**	11 04 48.4	+0.4		
PPCY	**Paphos**	**2.98**	**302**	P	**Pn**	11 04 48.4	+0.4		
AKMC	**Akamas**	**3.06**	**304**	P	**Pn**	11 04 49.8	+0.6		
AKMC	**Akamas**	**3.06**	**304**	P	**Pn**	11 04 49.8	+0.6		
KRTS	**Karatas**	**3.22**	**359**	*e*PN	**Pn**	11 04 52.5	+1.2		
COBT	**Iskenderun**	**3.24**	**12**	*i* P	**Pn**	11 04 53.2	+1.4		
COBT	**Iskenderun**	**3.24**	**12**	*i* P	**Pn**	11 04 53.2	+1.4		
KRMI	**Paran Flat**	**3.27**	**191**	Pn	**Pn**	11 04 52.4	+0.3		
AMAG	**Maghara**	**3.29**	**215**	P	**Pn**	11 04 52.4	+0.1		
AMAG					S	**Sn**	11 05 31.5	-0.2	
HRFI	**Mount Harif**	**3.31**	**186**	Pn	**Pn**	11 04 53.1	+0.4		
MBRI	**Mt Berech**	**3.57**	**187**	Pn	**Pn**	11 04 56.4	+0.2		
MERS	**Mersin**	**3.59**	**348**	*e*PN	**Pn**	11 04 56.8	+0.3		
HNKL	**Nakhl**	**3.62**	**200**	P	**Pn**	11 04 57.2	+0.3		
	baz=200								
HNKL					AMP		11 06 00.0		
	comp=N,670μm,0.8s,logA/T=5.9,baz=200								
HNKL	**Nakhl**	**3.62**	**200**	P	**Pn**	11 04 57.2	+0.3		
CEYT	**Ceyhan**	**3.67**	**4**	*e*PN	**Pn**	11 04 59.5	+2.0		
KUZU	**Kuzuini**	**3.68**	**21**	*i* P	**Pn**	11 04 58.9	+1.2		
KUZU	**Kuzuini**	**3.68**	**21**	*i* P	**Pn**	11 04 58.9	+1.2		
GAZI	**Gazipasa**	**3.85**	**319**	*i* P	**Pn**	11 05 00.7	+0.7		
GAZI	**Gazipasa**	**3.85**	**319**	*i* P	**Pn**	11 05 00.7	+0.7		
ERMK	**Ermenek**	**3.88**	**329**	*i* P	**Pn**	11 05 02.6	+2.0		
ERMK	**Ermenek**	**3.88**	**329**	*i* P	**Pn**	11 05 02.6	+2.0		
GAZ	**Gaziantep**	**4.09**	**20**	*e*P	Pn	11 05 07.3	+4.0		
SUZ		**4.13**	**213**	P	**Pn**	11 05 04.2	+0.3		
	baz=213								
SUZ					S	**Sn**	11 05 51.9	-0.7	
	baz=213								
SUZ		**4.13**	**213**	P	**Pn**	11 05 04.2	+0.3		
SUZ					S	**Sn**	11 05 51.8	-0.7	
KOZT	**Kozan**	**4.14**	**4**	*e*PN	**Pn**	11 05 06.9	+2.9		
HBST	**Basata**	**4.16**	**188**	P	**Pn**	11 05 04.9	+0.7		
	baz=189								
HBST	**Basata**	**4.16**	**188**	P	**Pn**	11 05 04.9	+0.7		
GZT	**Gaziantep**	**4.37**	**23**	*i* P	**Pb**	11 05 15.9	-1.6		
HHAG	**Hagoal**	**4.41**	**221**	P	**Pn**	11 05 08.3	+0.5		
	baz=220								
HHAG					S	**Sn**	11 05 59.0	-0.4	
	baz=220								
HHAG					AMP		11 06 00.0		
	comp=E,100μm,0.2s,logA/T=5.7,baz=220								
HHAG	**Hagoal**	**4.41**	**221**	P	**Pn**	11 05 08.3	+0.5		
HHAG					S	**Sn**	11 05 59.0	-0.4	
ZNM		**4.52**	**209**	P	**Pn**	11 05 09.8	+0.6		
	baz=209								
ZNM		**4.52**	**209**	P	**Pn**	11 05 09.8	+0.6		
KOT	**Kottamia**	**4.58**	**223**	P	**Pn**	11 05 10.4	+0.3		
	baz=222								
KOT					AMP		11 06 00.0		
	comp=N,180μm,0.5s,logA/T=5.6,baz=222								
KOT	**Kottamia**	**4.58**	**223**	P	**Pn**	11 05 10.4	+0.3		
HDHB	**Dhahab**	**4.66**	**189**	P	**Pn**	11 05 11.3	+0.2		
	baz=189								
HDHB	**Dhahab**	**4.66**	**189**	P	**Pn**	11 05 11.3	+0.2		
ATAB	**Bozova**	**4.74**	**29**	*i* P	**Pg**	11 05 29.4	-1.6		
ZAF		**4.74**	**212**	P	**Pn**	11 05 12.8	+0.6		
	baz=212								
ZAF		**4.74**	**212**	P	**Pn**	11 05 12.8	+0.6		
NIG	**Nigde**	**4.80**	**352**	*e*P	**Pn**	11 05 14.9	+1.6		
GLL	**Jalalah**	**4.92**	**221**	P	**Pn**	11 05 14.8	+0.1		
	baz=221								
GLL	**Jalalah**	**4.92**	**221**	P	**Pn**	11 05 14.8	+0.1		
HKAT	**Jabal Katrina**	**4.96**	**195**	P	**Pn**	11 05 15.3	-0.2		
	baz=195								
HKAT	**Jabal Katrina**	**4.96**	**195**	P	**Pn**	11 05 15.3	-0.2		
HSAF	**As Saff**	**4.97**	**223**	P	**Pn**	11 05 15.2	-0.2		
	baz=222								
HSAF	**As Saff**	**4.97**	**223**	P	**Pn**	11 05 15.2	-0.2		
SQR		**4.99**	**227**	P	**Pn**	11 05 15.8	+0.1		
	baz=227								
SQR		**4.99**	**227**	P	**Pn**	11 05 15.8	+0.1		
SULT	**Sultanhani-AKS**	**5.08**	**343**	*e*P	**Pn**	11 05 17.9	+0.8		
TR2		**5.16**	**197**	P	**Pn**	11 05 18.0	0.0		
	baz=197								
TR2		**5.16**	**197**	P	**Pn**	11 05 18.0	0.0		
FYM	**Al Fayyum**	**5.22**	**227**	P	**Pn**	11 05 19.3	+0.5		
	baz=226								
FYM					AMP		11 06 00.0		
	comp=N,6432000μm,0.3s,logA/T=10.3,baz=226								
FYM	**Al Fayyum**	**5.22**	**227**	P	**Pn**	11 05 19.3	+0.5		
HMYD	**Mayadein**	**5.30**	**229**	P	**Pn**	11 05 19.4	-0.5		
	baz=229								
HMYD	**Mayadein**	**5.30**	**229**	P	**Pn**	11 05 19.4	-0.5		
AKCD	**Akcadag**	**5.34**	**22**	*i* P	Pb	11 05 29.7	-4.3		
PINB	**Pinarbasi**	**5.38**	**8**	*i* P	**Pn**	11 05 23.4	+2.1		
PINB	**Pinarbasi**	**5.38**	**8**	*i* P	**Pn**	11 05 23.4	+2.1		
SARI	**SarD1z-Kayseri**	**5.42**	**11**	*e*P	**Pn**	11 05 19.9	-1.9		
AVNT	**Avonos**	**5.44**	**355**	*i* P	**Pn**	11 05 23.2	+1.1		
AVNT	**Avonos**	**5.44**	**355**	*i* P	**Pn**	11 05 23.2	+1.1		
BNN	**Bunyan**	**5.51**	**3**	*e*P	**Pn**	11 05 25.7	+2.8		
HNAT	**Natroun**	**5.53**	**229**	P	**Pn**	11 05 23.4	+0.4		
	baz=229								
HNAT	**Natroun**	**5.53**	**229**	P	**Pn**	11 05 23.4	+0.4		
KORT	**Korkueli**	**5.53**	**313**	*i* P	Pn	11 05 26.7	+3.5		
MALT	**Malatya**	**5.53**	**25**	*e*P	Pn	11 05 29.5	+6.4		
MYA	**Malataya**	**5.54**	**25**	*e*P	Pn	11 05 29.2	+5.9		
GRB	**Gharib**	**5.54**	**205**	P	**Pn**	11 05 23.1	-0.2		
	baz=205								
GRB	**Gharib**	**5.54**	**205**	P	**Pn**	11 05 23.1	-0.2		
AKAS	**Kas**	**5.58**	**303**	*i* P	**Pn**	11 05 22.2	-1.8		
AKAS	**Kas**	**5.58**	**303**	*i* P	**Pn**	11 05 22.2	-1.8		
HBNS	**Bani Suwayf**	**5.67**	**221**	P	**Pn**	11 05 25.8	+0.7		
	baz=220								
HBNS	**Bani Suwayf**	**5.67**	**221**	P	**Pn**	11 05 25.8	+0.7		
KDHN	**Kadinhani**	**5.82**	**334**	*i* P	**Pn**	11 05 30.2	+3.1		
KDHN	**Kadinhani**	**5.82**	**334**	*i* P	**Pn**	11 05 30.2	+3.1		
ELZG	**Elazig**	**5.90**	**28**	*i* P	Pb	11 05 36.4	-7.1		
MARD	**Mardin**	**5.90**	**46**	*i* P	Pn	11 05 31.6	+3.3		
SVRC	**Sivrice-ELAZID**	**5.93**	**31**	*e*P	Pn	11 05 35.6	+6.9		
ISP	**Isparta**	**5.99**	**320**	*e*P	**Pn**	11 05 30.2	+0.7		
GOLH	**Golhisar**	**6.17**	**311**	*i* P	**Pn**	11 05 34.4	+2.5		
GOLH	**Golhisar**	**6.17**	**311**	*i* P	**Pn**	11 05 34.4	+2.5		
HHRG	**Al Ghardaqah**	**6.31**	**195**	P	**Pn**	11 05 35.2	+1.3		
	baz=196								
HHRG	**Al Ghardaqah**	**6.31**	**195**	P	**Pn**	11 05 35.2	+1.3		
DALT	**Dalyan (Mudla)**	**6.53**	**303**	*e*P	**Pn**	11 05 36.9	+0.1		
TURN	**Turunc**	**6.60**	**304**	*i* P	Pn	11 05 29.5	-8.3		
DNZL	**Cakiroluk**	**6.77**	**312**	*i* P	**Pn**	11 05 40.0	-0.2		
DNZL	**Cakiroluk**	**6.77**	**312**	*i* P	**Pn**	11 05 40.0	-0.2		
YER	**Yerkesik**	**6.96**	**305**	*e*P	**Pn**	11 05 42.9	+0.2		
MLSB	**Milas**	**7.39**	**304**	*e*P	**Pn**	11 05 48.8	+0.2		
HMAT	**Matruh**	**7.40**	**255**	P	**Pn**	11 05 48.6	-0.2		
	baz=254								
BHD	**Baghdad**	**7.50**	**88**	*ex*	Pn	11 05 53.0	+2.9		
BHD				*ex*	x	11 07 23.8			
BHD				*i* x	x	11 08 01.6			
BHD				*i* x	x	11 08 15.8			
BHD	**Baghdad**	**7.50**	**88**	*e*Pn	**Pn**	11 05 53.0	+2.9		
AYDN	**Tasoluk**	**7.51**	**307**	*i* P	**Pn**	11 05 50.4	+0.1		
AYDN	**Tasoluk**	**7.51**	**307**	*i* P	**Pn**	11 05 50.4	+0.1		
BODT	**Bodrum**	**7.60**	**301**	*e*P	**Pn**	11 05 51.2	-0.4		
APE	**Apeiranthos**	**8.90**	**297**	*e*P	**Pn**	11 06 09.2	-0.2		

IDC ***17*** *11:08:39.1±0.8, 14.˚86N×144.˚52E, h0km, mb3.7/12, mb1 3.9/12, mb1mx3.8/25, mbtmp3.7/12, MS3.2/1, Ms1 3.2/1, ms1mx2.4/46, Error ellipse: s-maj=29.0km s-min=13.8km az=85.0*

ISCJB ***17*** *11:08:40.6±0.6, 14.˚82N±0.˚07×144.˚4E±0.˚1, h22km, mb3.7/12, Error ellipse: s-maj=20.1km s-min=7.4km az=159.6*

ISC 17 11:08:42.2±0.7, 14.˚79N±0.˚09×144.˚5E±0.˚2, h22km, n20, σ1§14/20, mb3.7/12, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.25**	**162**	Pn		**Pn**		**11 09 03.9**	**-0.5**
	152nm,0.3s,baz=323,slow=3.4,SNR=17								
GUMO				Sn		**Sn**		**11 09 19.6**	**-0.9**
	348nm,0.3s,baz=110,slow=20,SNR=19								
GUMO				LR		LR		11 09 19.7	
	comp=Z,814nm,18.6s,baz=52,slow=31								
JHJ	**Hachijo jima 2**	**18.74**	**348**	LR		LR		11 19 08.8	
	comp=Z,82nm,21.6s,baz=49,slow=34								
MJAR	**Matsushiro Arr**	**22.38**	**347**	P		**P**		**11 13 39.6**	**+0.6**
	2.1nm,1.0s,baz=164,slow=10.0,SNR=4.1								
KSRS	**Korea Array**	**26.94**	**330**	P		**P**		**11 14 20.6**	**-1.5**
	1.1nm,0.8s,baz=150,slow=13,SNR=3.1								
WRA	**Warramunga Arr**	**35.92**	**196**	P		**P**		**11 15 41.8**	**+0.6**
	2.2nm,0.9s,baz=21,slow=9.7,SNR=11								
FITZ	**Fitzroy Crossi**	**37.59**	**211**	P		**P**		**11 15 56.4**	**+1.0**
	2.5nm,0.8s,baz=51,slow=8.6,SNR=5.1								
ASAR	**Alice Springs**	**39.59**	**195**	P		**P**		**11 16 13.9**	**+1.8**
	0.6nm,0.7s,baz=17,slow=12,SNR=7.5								
CMAR	**Chiang Mai Arr**	**43.70**	**281**	P		**P**		**11 16 46.8**	**+0.8**
	3.6nm,1.1s,baz=79,slow=6.5,SNR=13								
SONM	**Songino Array**	**45.54**	**324**	P		**P**		**11 17 00.8**	**+0.3**
	0.2nm,0.5s,baz=148,slow=12,SNR=3.4								
SONM				PcP		**PcP**		**11 18 38.8**	**-0.1**
	0.2nm,0.4s,baz=119,slow=1.8,SNR=3.9								
TAPN	**Taplejung**	**54.03**	**293**	*e*P		**P**		**11 18 03.1**	**-2.5**
ODAN	**Odare**	**54.30**	**293**	*e*P		P		11 18 03.3	-4.2
GUN	**Gumba**	**55.66**	**294**	*e*P		**P**		**11 18 16.4**	**-1.1**
	15nm,0.9s								
DANN	**Dangsing**	**57.53**	**294**	*e*P		**P**		**11 18 31.2**	**+0.5**
	24nm,0.9s								
KOLN	**Koldanda**	**57.68**	**294**	*e*P		**P**		**11 18 31.0**	**-0.7**
PYUN	**Piuthan**	**58.22**	**294**	*e*P		**P**		**11 18 35.6**	**+0.2**
	53nm,1.4s								
MKAR	**Makanchi Array**	**60.37**	**316**	P		**P**		**11 18 50.4**	**+0.6**
	0.8nm,0.7s,baz=95,slow=8.6,SNR=6.7								
ZALV	**Zalesovo Beam**	**60.44**	**324**	P		**P**		**11 18 49.9**	**-0.2**
	0.4nm,0.4s,baz=107,slow=5.0,SNR=5.4								
ILAR	**Eielson Array**	**67.66**	**26**	P		**P**		**11 19 37.1**	**-0.2**
	0.3nm,0.8s,baz=261,slow=4.5,SNR=2.5								
YKA	**Yellowknife Ar**	**81.98**	**27**	P		**P**		**11 21 01.6**	**+1.4**
	0.3nm,0.9s,baz=285,slow=5.1,SNR=5.5								
FINES	**FINESS Array B**	**89.92**	**335**	P		**P**		**11 21 37.9**	**-1.6**
	1.3nm,0.8s,baz=46,slow=4.0,SNR=2.5								

ISCJB ***17*** *11:08:51.7±0.5, 33.˚35N±0.˚03×35.˚40E±0.˚04, h8km±4km, Error ellipse: s-maj=5.7km s-min=3.1km az=37.5*

NSSC ***17*** *11:08:51.7±0.9, 33.˚30N×35.˚41E, h0km±10km, ML2.1*

CSEM ***17*** *11:08:52.0±0.2, 33.˚35N×35.˚41E, h10km, ML2.1, Error ellipse: s-maj=4.3km s-min=2.4km az=127.0*

GRAL ***17*** *11:08:52.3±0.3, 33.˚32N×35.˚41E, h4km±3km, MD2.9*

ISC 17 11:08:51.9±1.0, 33.˚34N±0.˚02×35.˚41E±0.˚03, h11km±8km, n26, σ0§47/46, 4C-3D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSDI	**Kefar Szold**	**0.26**	**125**	Pg		**Pg**		**11 08 56.9**	**-0.2**
KSDI				Sg		**Sg**		**11 09 01.1**	**+0.5**
NAQL	**Naqoura**	**0.31**	**226**	*e*P		**Pg**		**11 08 57.7**	**-0.5**
NAQL				*e*S		**Sg**		**11 09 01.7**	**-0.7**
HNTI	**Hanita**	**0.32**	**218**	Pg		**Pb**		**11 08 59.7**	**+0.1**
HNTI				Sg		**Sb**		**11 09 05.1**	**+0.2**
MMA0	**Mount Meron ar**	**0.32**	**181**	Pg		**Pg**		**11 08 58.4**	**+0.1**
MMA0				Sg		**Sb**		**11 09 04.3**	**-0.6**
RCY	**Rachaya**	**0.39**	**66**	*e*P		**Pg**		**11 08 59.4**	**-0.2**
RCY				*e*S		**Sg**		**11 09 05.0**	**+0.1**
BRBR	**Barbar**	**0.46**	**81**⇓	*e*P		**Pg**		**11 09 00.8**	**-0.2**
BRBR				*e*S		**Sg**		**11 09 08.0**	**+0.9**
KSHT	**Keshet**	**0.49**	**136**	Pg		**Pb**		**11 09 02.1**	**-0.5**
BHL	**Bhannes**	**0.60**	**20**	*e*P		**Pg**		**11 09 03.5**	**-0.1**
BHL				*e*S		**Sg**		**11 09 11.8**	**+0.2**
BHL	**Bhannes**	**0.60**	**20**	*e*P		**Pg**		**11 09 03.5**	**-0.1**
BHL				*e*S		**Sg**		**11 09 11.8**	**+0.2**
BLGI	**Bet Lehem HaGe**	**0.63**	**197**	Pg		**Pb**		**11 09 04.7**	**-0.2**
QASN	**Qassioun**	**0.75**	**75**	*e*P		**Pb**		**11 09 06.8**	**-0.3**
QASN				*e*S		**Sb**		**11 09 18.1**	**+0.6**
QASN				AML		AML		11 09 18.8	
	comp=E,111nm,0.2s								
QASN				AML		AML		11 09 19.8	
	comp=N,421nm,0.5s								
QASN	**Qassioun**	**0.75**	**75**	*e*P		**Pb**		**11 09 06.8**	**-0.3**
	SNR=75								
QASN				*e*S		**Sb**		**11 09 18.0**	**+0.6**
	comp=N,421nm,0.5s,SNR=59								
OFRI	**'Ofer**	**0.80**	**207**	Pg		**Pg**		**11 09 07.7**	**+0.4**
OFRI				Sg		**Sn**		**11 09 20.3**	**-0.8**
TCHB	**Talchebab**	**0.82**	**145**⇓	*e*P		**Pg**		**11 09 07.6**	**0.0**
TCHB				*e*S		**Sg**		**11 09 18.2**	**-0.1**
TCHB				AML		AML		11 09 19.0	
	comp=N,80nm,0.2s								
TCHB				AML		AML		11 09 21.4	
	comp=Z,172nm,0.3s								
TCHB	**Talchebab**	**0.82**	**145**⇓	*e*P		**Pg**		**11 09 07.6**	**0.0**
	SNR=75								
TCHB				*e*S		**Sg**		**11 09 18.2**	**-0.1**
	comp=Z,172nm,0.3s,SNR=59								
TOTH	**TOTAH**	**0.85**	**88**⇑	*e*P		**Pg**		**11 09 08.4**	**0.0**
TOTH				*e*S		**Sb**		**11 09 19.9**	**-0.4**
TOTH				AML		AML		11 09 27.6	
	comp=E,40nm,0.2s								
TOTH				AML		AML		11 09 27.9	
	comp=N,37nm,0.3s								
TOTH	**TOTAH**	**0.85**	**88**⇑	*e*P		**Pg**		**11 09 08.4**	**0.0**
	SNR=75								
TOTH				*e*S		**Sb**		**11 09 19.9**	**-0.4**
	comp=N,37nm,0.3s,SNR=59								
MMLI	**Mount Malkishu**	**0.90**	**179**	Pg		**Pg**		**11 09 08.9**	**-0.3**
MMLI				Sg		**Sb**		**11 09 21.8**	**+0.3**
HWQ	**Hawqa**	**1.04**	**25**	*e*P		**Pg**		**11 09 11.3**	**-0.6**
HWQ	**Hawqa**	**1.04**	**25**	*e*P		**Pg**		**11 09 11.3**	**-0.6**
HMDT	**Nahal Hemdat**	**1.09**	**175**	Pg		**Pg**		**11 09 11.8**	**-0.9**
HMDT				Sg		**Sb**		**11 09 27.2**	**+0.3**
SLTI	**Sal'it**	**1.14**	**196**	Pg		**Pg**		**11 09 13.4**	**-0.2**
SLTI				Sg		**Sn**		**11 09 29.3**	**-0.1**
SALA	**Sala**	**1.28**	**119**⇑	*e*P		**Pn**		**11 09 15.6**	**-0.3**
SALA				*e*S		**Sg**		**11 09 33.1**	**+0.1**
SALA				AML		AML		11 09 33.7	
	comp=E,11nm,0.4s								
SALA				AML		AML		11 09 34.1	
	comp=N,54nm,0.2s								
SALA	**Sala**	**1.28**	**119**⇑	*e*P		**Pn**		**11 09 15.6**	**-0.3**
	SNR=57								
SALA				*e*S		**Sg**		**11 09 33.1**	**+0.1**
	comp=N,54nm,0.2s,SNR=49								
YTIR	**Yattir**	**1.98**	**187**	Pn		**Pn**		**11 09 26.5**	**+1.0**
PRNI	**Paran**	**3.00**	**187**	Pn		**Pn**		**11 09 40.6**	**+1.2**

IDC 17 11:19:16.1±1.3, 19.˚32S×177.˚53W, h561km±16km, mb3.0/10, mb1 3.4/12, mb1mx3.2/23, mbtmp3.1/12, Error ellipse: s-maj=18.6km s-min=10.6km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.70**	**47**	P

209nm,1.0s,2µm
MRSI Marisa 26.53 240 P P 11 25 06.7 +1.8
105nm,1.0s,951nm
LUWI Luwuk 26.72 236 P P 11 25 07.1 +0.4
92nm,1.2s
KSRS Korea Array 26.97 330 P P 11 25 07.8 -0.8
3.5nm,0.8s,baz=146,slow=9.4,SNR=14
KSRS LR LR 11 35 30.8
comp=Z,204nm,20.1s,baz=173,slow=36
KSAR Wonju Array Be 26.98 330 P P 11 25 07.8 -0.9
COEN Coen 28.62 183 eP P 11 25 24.7 +1.0
78nm,1.2s
KDI Kendari 28.67 231 P P 11 25 24.4 +0.3
21nm,1.2s
PCI Palu 29.04 240 P P 11 25 30.0 +2.6
154nm,1.4s
NJ2 Nanjing 29.06 311 eP P 11 25 27.0 -0.4
NJ2 pP **pP 11 25 30.5 -1.7**
NJ2 S **S 11 30 18.5 0.0**
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 pmax pmax
comp=Z,220nm,4.2s
NJ2 LR LR
comp=N,380nm,21.1s
NJ2 LR LR
comp=E,220nm,25.7s
NJ2 LR LR
comp=Z,430nm,23.4s
ASAJ Asahikawa 29.25 357 P P 11 25 30.1 +1.2
ASAJ Asahikawa 29.25 357 P P 11 25 30.1 +1.2
comp=Z,13nm,1.1s,baz=238,slow=15,SNR=2.1
ASAJ LR LR 11 37 12.5
comp=Z,279nm,19.8s,baz=284,slow=36
USRK Ussuriysk Arra 31.19 342 P P 11 25 46.6 +0.6
comp=Z,2.1nm,0.7s,baz=162,slow=5.4,SNR=4.0
KAPI Kappang 31.53 233 P P 11 25 48.1 -1.3
KAPI Kappang 31.53 233 P P 11 25 48.1 -1.3
comp=Z,23nm,0.3s,baz=48,slow=16,SNR=4.4
MDJ Mudanjiang 32.32 340 P P 11 25 56.8 +0.8
MDJ pP **pP 11 25 59.8 -0.9**
MDJ sP **sP 11 26 01.3 -1.4**
MDJ S **S 11 31 11.9 +2.7**
MDJ pmax pmax
comp=Z,9.0nm,1.2s
MDJ LR LR
comp=N,250nm,25.0s
MDJ LR LR
comp=E,260nm,23.2s
MDJ LR LR
comp=Z,410nm,23.2s
CN2 Changchun 33.19 334 eP P 11 26 05.3 +1.7
QIZ Qiongzhong 33.47 282 P P 11 26 03.8 -2.6
QIZ S **S 11 31 27.3 -0.4**
QIZ LR LR
comp=N,370nm,16.1s
QIZ LR LR
comp=E,130nm,18.1s
QIZ LR LR
comp=Z,280nm,14.9s
SBUM Sibu 34.21 252 P P 11 26 12.4 -0.5
comp=Z,18nm,1.4s
CTA Charters Tower 34.73 177 LR LR 11 39 02.1
comp=Z,152nm,21.1s,baz=7.8,slow=34
STKI Sintang 35.86 249 P P 11 26 27.2 0.0
comp=Z,37nm,0.9s
WRAB Tennant Creek 35.97 197 eP P 11 26 27.7 -0.3
comp=Z,14nm,0.8s
WRA Warramunga Arr 35.98 197 P P 11 26 27.9 -0.1
WRA Warramunga Arr 35.98 197 P P 11 26 27.9 -0.1
comp=Z,9.8nm,0.8s,baz=23,slow=9.8,SNR=30
WRA LR LR 11 41 21.6
comp=Z,123nm,21.1s,baz=265,slow=37
KSM Kuching 36.35 252 eP P 11 26 28.9 -2.4
comp=Z,33nm,1.2s
KSM Kuching 36.35 252 P P 11 26 29.9 -1.4
comp=Z,25nm,1.2s
KHKI Kahang-Kahang 36.82 233 P P 11 26 34.7 -0.6
comp=Z,127nm,1.1s,comp=Z,1µm
SRBI Singaraja 36.96 234 P P 11 26 37.1 +0.6
comp=Z,56nm,1.0s
GYA Guiyang 37.20 294 P P 11 26 38.9 +0.3
GYA PP **PnPn 11 28 05.4 +1.5**
GYA S **S 11 32 25.0 -0.1**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,490nm,18.8s
GYA LR LR
comp=E,480nm,17.7s
GYA LR LR
comp=Z,460nm,17.3s
XAN Xi'an 37.43 307 P P 11 26 39.5 -0.9
XAN pP **pP 11 26 44.9 -0.3**
XAN PP **PnPn 11 28 09.8 +3.3**
XAN S **S 11 32 25.3 -3.1**
XAN pmax pmax
comp=Z,2.0nm,1.0s
XAN LR LR
comp=N,130nm,16.0s
XAN LR LR
comp=E,77nm,13.3s
XAN LR LR
comp=Z,82nm,13.8s
FITZ Fitzroy Crossi 37.67 210 eP P 11 26 42.2 -0.2
comp=Z,24nm,1.1s
FITZ Fitzroy Crossi 37.67 210 P P 11 26 42.1 -0.3
comp=Z,14nm,0.7s,baz=29,slow=9.0,SNR=46
BYJI Banyuwangi 37.71 235 P P 11 26 45.3 +2.5
comp=Z,256nm,1.3s
HHC Hu-ho-hao-te 38.67 319 eP P 11 26 49.5 -1.3
HHC pP **pP 11 26 54.1 -1.5**
HHC sP **sP 11 26 56.5 -1.0**
HHC PP **PnPn 11 28 22.6 +1.1**
HHC S **S 11 32 45.6 -1.5**
HHC pmax pmax
comp=Z,25nm,0.9s
HHC pmax pmax
comp=Z,230nm,5.6s
HHC LR LR
comp=N,340nm,15.1s
HHC LR LR
comp=E,720nm,16.9s
HHC LR LR
comp=Z,720nm,15.9s
SJI Sawahan 39.51 238 P P 11 26 57.8 -0.3
comp=Z,51nm,1.4s
PETK Petropavlovsk- 39.59 12 LR LR 11 43 36.6
comp=Z,82nm,18.4s,baz=63,slow=37
PWJI Pagerwojo 39.64 237 P P 11 26 58.1 -1.0
comp=Z,76nm,1.1s
ASAR Alice Springs 39.65 195 P P 11 26 59.1 +0.1
ASAR PP **PnPn 11 28 35.5 +2.1**
ASAR Alice Springs 39.65 195 P P 11 26 59.1 +0.1
comp=Z,2.0nm,0.7s,baz=18,slow=13,SNR=22
ASAR PP **PnPn 11 28 35.5 +2.1**
comp=Z,2.0nm,0.8s,baz=21,slow=11,SNR=6.1
ASAR LR LR 11 44 14.5
comp=Z,121nm,18.9s,baz=16,slow=38
KMI Kunming 40.50 291 P P 11 27 06.3 -0.1
KMI S **S 11 33 15.8 +0.6**
KMI pmax pmax
comp=Z,18nm,1.2s
KMI LR LR
comp=N,210nm,17.1s
KMI LR LR
comp=E,150nm,18.4s
KMI LR LR
comp=Z,290nm,18.4s
TPI Tanjungpandan 40.53 247 P P 11 27 06.0 -0.5
comp=Z,44nm,1.1s
UGM Wanagama 40.63 238 eP P 11 27 06.4 -0.9
comp=Z,108nm,1.2s
CD2 Chengdu 40.63 300 P P 11 27 06.8 -0.4
CD2 pP **pP 11 27 11.3 -0.8**
CD2 sP **sP 11 27 13.8 -0.2**
CD2 PP **PnPn 11 28 43.9 -1.0**
CD2 PcS **PcS 11 32 59.1 -0.9**
CD2 S **S 11 33 16.0 -0.7**
CD2 pmax pmax
comp=Z,30nm,0.4s
CD2 pmax pmax
comp=Z,240nm,4.0s
CD2 LR LR
comp=N,600nm,20.1s
CD2 LR LR
comp=E,760nm,25.9s
CD2 LR LR
comp=Z,490nm,20.6s
BJII Banjamegara 40.99 240 P P 11 27 13.0 +2.6
comp=Z,44nm,1.6s
CHBT CHBT 41.05 272 P P 11 27 11.8 +1.0
comp=Z,25nm,1.1s
TGJI Tegal 41.24 241 P P 11 27 12.5 +0.2
comp=Z,40nm,1.1s
LZH Lanzhou 42.05 308 eP P 11 27 19.0 +0.1
LZH pP **pP 11 27 22.3 -1.5**
LZH sP **sP 11 27 23.8 -1.9**
LZH ePP **PP 11 28 59.5 +3.2**
LZH eS **S 11 33 37.0 -0.8**
LZH pmax pmax
comp=Z,29nm,1.2s
LZH pmax pmax
comp=Z,150nm,6.8s
LZH LR LR
comp=N,470nm,14.1s
LZH LR LR
comp=E,530nm,15.0s
LZH LR LR
comp=Z,630nm,16.5s
MYKOM Kota Tinggi 42.23 256 P P 11 27 20.2 -0.3
comp=Z,27nm,1.2s
DZM Mont Dzumac 42.47 149 eS S 11 33 38.8 -5.2
comp=Z,292nm,25.1s
DZM eLR LR 11 39 10.2
comp=Z,592nm,29.2s
DZM Mont Dzumac 42.47 149 P P 11 27 24.9 +2.6
DZM Mont Dzumac 42.47 149 P P 11 27 24.9 +2.6
comp=Z,28nm,0.9s,baz=331,slow=7.9,SNR=14
MBWA Marble Bar 43.29 215 eP P 11 27 28.8 -0.1
comp=Z,15nm,0.8s
CMMT Chiang Mai 43.78 282 P P 11 27 33.1 +0.1
comp=Z,8.3nm,1.3s,comp=Z,544nm
CHTO Chiang Mai 43.78 282 eP P 11 27 32.3 -0.7
comp=Z,5.1nm,0.9s
CHTO Chiang Mai 43.78 282 P P 11 27 32.6 -0.4
comp=Z,9.0nm,1.3s
CMAR Chiang Mai Arr 43.80 281 P P 11 27 32.9 -0.3
CMAR PcP **PcP 11 29 20.6 +0.9**
CMAR Chiang Mai Arr 43.80 281 P P 11 27 32.9 -0.3
comp=Z,18nm,0.9s,baz=78,slow=6.6,SNR=64
CMAR PcP **PcP 11 29 20.6 +0.9**
comp=Z,2.4nm,0.8s,baz=89,slow=1.9,SNR=6.2
IPM Ipoh 44.07 261 eP P 11 27 34.9 -0.5
comp=Z,16nm,0.9s
IPM Ipoh 44.07 261 P P 11 27 35.2 -0.2
comp=Z,23nm,1.0s
KULM Kulim 44.21 262 eP P 11 27 36.6 +0.1
comp=Z,36nm,1.3s
KULM Kulim 44.21 262 P P 11 27 36.7 +0.2
comp=Z,26nm,1.3s
LWLI Liwa 44.74 247 P P 11 27 47.8 +6.9
comp=Z,79nm,0.8s
ULN Ulaanbaatar 45.22 325 P sP 11 27 56.6 +5.5
SONM Songino Array 45.58 324 P P 11 27 46.8 -0.3
SONM PcP **PcP 11 29 25.6 +0.1**
SONM Songino Array 45.58 324 P P 11 27 46.8 -0.3
comp=Z,1.1nm,0.9s,baz=140,slow=8.5,SNR=8.8
SONM PcP **PcP 11 29 25.6 +0.1**
comp=Z,2.4nm,0.8s,baz=151,slow=3.5,SNR=6.1
SONM LR LR 11 46 43.9
comp=Z,355nm,20.0s,baz=78,slow=36
GTA Gaotai 46.16 311 eP P 11 27 52.3 +0.4
GTA pP **pP 11 27 56.4 -0.3**
GTA sP **sP 11 27 58.9 +0.3**
GTA PcP **PcP 11 29 28.1 +0.4**
GTA PP **PP 11 29 41.9 +1.7**
GTA S **S 11 34 38.4 +0.8**
GTA pmax pmax
comp=Z,10.0nm,0.8s
GTA pmax pmax
comp=Z,99nm,4.8s
GTA LR LR
comp=N,430nm,20.4s
GTA LR LR
comp=E,500nm,20.4s
GTA LR LR
comp=Z,310nm,23.8s
STKA Stephens Creek 46.52 184 P P 11 27 54.5 0.0
STKA Stephens Creek 46.52 184 P P 11 27 54.5 0.0
comp=Z,3.4nm,0.6s,baz=326,slow=7.0,SNR=9.4
STKA LR LR 11 49 14.2
comp=Z,154nm,18.1s,baz=194,slow=38
FORT Forrest 48.04 199 eP P 11 28 06.6 +0.3
comp=Z,28nm,0.8s
BBOO Buckleboo 48.06 190 eP P 11 28 06.7 +0.3
comp=Z,177nm,0.6s
SHL Shillong 50.33 291 eP P 11 28 23.5 -0.8
LSA Lhasa 51.20 296 P P 11 28 31.3 +0.1
AFI Afiamalu 51.76 121 LR LR 11 48 54.6
comp=Z,236nm,19.4s,baz=340,slow=34
TAPN Taplejung 54.11 293 eP P 11 28 51.8 -0.8
TAPN Taplejung 54.11 293 eP P 11 28 51.8 -0.8
ODAN Odare 54.39 293 eP P 11 28 54.3 -0.2
ODAN Odare 54.39 293 eP P 11 28 53.9 -0.6
RAMN Ramite 55.09 293 eP P 11 28 58.7 -1.0
RAMN Ramite 55.09 293 eP P 11 28 58.3 -1.4
GUN Gumba 55.74 294 eP P 11 29 03.8 -0.6
comp=Z,107nm,1.2s
GUN Gumba 55.74 294 eP P 11 29 03.6 -0.8
comp=Z,107nm,1.2s
WMQ Urumqi 56.10 313 P P 11 29 06.0 -0.4
WMQ sP **sP 11 29 13.0 -0.2**
WMQ PcP **PcP 11 30 04.0 -0.4**
WMQ PP **PP 11 31 12.0 +0.6**
WMQ ScP **ScP 11 34 02.0 -1.2**
WMQ S **S 11 36 52.0 -2.9**
WMQ ScS **ScS 11 38 51.0 -4.4**
WMQ pmax pmax
comp=Z,18nm,1.0s
WMQ pmax pmax
comp=Z,140nm,5.0s
WMQ LR LR
comp=N,210nm,16.0s
WMQ LR LR
comp=E,250nm,16.0s
WMQ LR LR
comp=Z,250nm,16.0s
PKI Pulchoki 56.16 293 eP P 11 29 06.1 -1.3
PKI Pulchoki 56.16 293 eP P 11 29 06.1 -1.3
PKIN Phulchoki 56.17 293 eP P 11 29 06.9 -0.5
PKIN Phulchoki 56.17 293 eP P 11 29 06.8 -0.6
KKN Kakani 56.27 294 eP P 11 29 07.2 -0.9
KKN Kakani 56.27 294 eP P 11 29 07.4 -0.7
DMN Daman 56.42 293 eP P 11 29 08.2 -1.0
comp=Z,41nm,1.0s
DMN Daman 56.42 293 eP P 11 29 08.4 -0.8
comp=Z,42nm,1.0s
TIXI Tiksi 57.59 354 eP P 11 29 17.2 +0.8
comp=Z,6.4nm,1.1s
DANN Dangsing 57.61 294 eP P 11 29 17.0 -0.7
comp=Z,84nm,0.8s
DANN Dangsing 57.61 294 eP P 11 29 16.8 -0.9
comp=Z,84nm,0.8s
KOLN Koldanda 57.76 294 eP P 11 29 17.5 -1.1
comp=Z,35nm,0.7s
KOLN Koldanda 57.76 294 eP P 11 29 17.5 -1.1
comp=Z,35nm,0.7s
PYUN Piuthan 58.30 294 eP P 11 29 21.1 -1.3
comp=Z,94nm,1.0s
PYUN Piuthan 58.30 294 eP P 11 29 21.0 -1.3
comp=Z,94nm,1.0s
MKAR Makanchi Array 60.42 316 P P 11 29 36.4 -0.1
MKAR Makanchi Array 60.42 316 P P 11 29 36.4 -0.1
comp=Z,4.7nm,0.9s,baz=94,slow=9.0,SNR=31
MKAR LR LR 11 56 41.9
comp=Z,155nm,18.0s,baz=258,slow=37
ZAA0 Zalesovo Array 60.47 324 eP P 11 29 36.1 -0.6
ZALV Zalesovo Beam 60.47 324 P P 11 29 36.1 -0.5
ZALV Zalesovo Beam 60.47 324 P P 11 29 36.1 -0.5
comp=Z,2.3nm,0.8s,baz=94,slow=5.9,SNR=15
ZALV LR LR 11 55 16.1
comp=Z,161nm,19.2s,baz=71,slow=36
URZ Urewera 60.97 151 LR LR 11 53 56.2
comp=Z,207nm,18.7s,baz=331,slow=34
RPZ Rata Peaks 63.08 159 P P 11 29 54.9 +0.6
RPZ Rata Peaks 63.08 159 P P 11 29 54.9 +0.6
comp=Z,5.0nm,0.8s,baz=91,slow=22,SNR=2.0
KURK Kurchatov 63.47 320 eP P 11 29 56.4 -0.5
comp=Z,32nm,1.2s
KURBB Kurchatov Arra 63.52 319 P P 11 29 56.7 -0.5
comp=Z,18nm,0.9s,baz=101,slow=6.8,SNR=92
KURBB LR LR 11 57 59.6
comp=Z,306nm,19.5s,baz=115,slow=36
KSH Kashi 64.28 307 eP P 11 30 05.0 +2.3
KSH epP **pP 11 30 10.0 +2.3**
KSH sP **sP 11 30 12.0 +2.4**
KSH PcP **PcP 11 30 39.0 +1.6**
KSH PP **PP 11 32 27.9 +3.9**
KSH ScP 11 34 39.9
KSH PcS 11 34 41.8
KSH S **S 11 38 40.8 +0.5**
KSH ScS **SKSac 11 39 55.6 -1.0**
KSH pmax pmax
comp=Z,3.0nm,0.3s
KSH pmax pmax
comp=Z,170nm,3.6s
KSH LR LR
comp=N,140nm,5.9s
KSH LR LR
comp=E,190nm,5.4s
KSH LR LR
comp=Z,290nm,8.3s
TKM2 Tokmak 2 64.71 311 eP P 11 30 05.2 -0.4
comp=Z,4.8nm,1.1s
AAK Ala-Archa 65.51 310 eP P 11 30 10.5 -0.2
comp=Z,2.4nm,0.9s
AAK Ala-Archa 65.51 310 P P 11 30 10.2 -0.4
comp=Z,2.1nm,0.8s,baz=112,slow=5.9,SNR=6.6
ILAR Eielson Array 67.58 26 P P 11 30 21.7 -1.6
ILAR Eielson Array 67.58 26 P P 11 30 21.7 -1.6
comp=Z,0.5nm,0.8s,baz=262,slow=4.5,SNR=6.4
ILAR LR LR 11 55 30.9
comp=Z,81nm,19.7s,baz=268,slow=32
BVAR Borovoye Array 68.80 321 P P 11 30 30.7 -0.4
BVAR Borovoye Array 68.80 321 P P 11 30 30.7 -0.4
comp=Z,10nm,0.9s,baz=100,slow=6.3,SNR=24
BVAR LR LR 12 01 24.1
comp=Z,223nm,19.5s,baz=288,slow=37
BRVK Borovoye 68.86 321 eP P 11 30 31.3 -0.2
comp=Z,22nm,1.2s
KBL Kabul 69.95 302 eP P 11 30 38.1 -0.8
comp=Z,14nm,1.2s
PPT Papeete 72.46 114 LR LR 11 55 10.7
comp=Z,187nm,20.1s,baz=323,slow=30
PPT2 Papeete2 72.47 114 eS S 11 40 10.9 -7.3
comp=Z,131nm,27.0s
PPT2 eLR LR 11 52 54.2
comp=Z,598nm,31.0s,baz=294
TBI Tubuai 74.81 120 eLR LR 11 53 50.5
comp=Z,271nm,32.2s
ABKAR Akbulak array 75.45 318 eP P 11 31 10.3 -0.7
comp=Z,10nm,1.0s
AKTO Aktyubinsk 76.56 319 P P 11 31 16.1 -1.2
AKTO Aktyubinsk 76.56 319 P P 11 31 16.1 -1.2
comp=Z,1.7nm,0.7s,baz=85,slow=14,SNR=4.1
AKTO LR LR 12 05 43.6
comp=Z,209nm,18.4s,baz=262,slow=36
YKA Yellowknife Ar 81.90 27 P P 11 31 45.8 -0.5
YKA Yellowknife Ar 81.90 27 P P 11 31 45.7 -0.5
comp=Z,1.6nm,0.9s,baz=287,slow=5.5,SNR=21
BMO Blue Mountains 85.32 45 eP P 11 32 05.2 +0.9
comp=Z,5.4nm,1.0s
ARCES ARCESS Array B 85.84 342 P P 11 32 05.8 -0.5
ARCES ARCESS Array B 85.84 342 P P 11 32 05.8 -0.5
comp=Z,6.8nm,0.8s,baz=60,slow=7.2,SNR=8.1
BSMT Bassoo Peak 86.12 42 eP P 11 32 09.1 +0.7
comp=Z,6.4nm,0.9s
NVAR Mina Array Bea 86.37 51 P P 11 32 10.5 +0.7
NVAR Mina Array Bea 86.37 51 P P 11 32 10.5 +0.7
comp=Z,1.2nm,0.9s,baz=260,slow=6.3,SNR=9.1
YBMT Yellow Bay 86.61 41 eP P 11 32 11.0 +0.3
comp=Z,4.4nm,1.1s
MFID Camas Ranch 86.75 46 eP P 11 32 12.3 +0.8
comp=Z,6.6nm,0.9s
RKT Rikitea 87.21 115 eLR LR 11 59 39.1
comp=Z,339nm,32.2s
HLID Hailey 87.69 46 eP P 11 32 16.8 +0.8
comp=Z,4.0nm,1.0s
ELK Elko 87.97 48 eP P 11 32 18.1 +0.5
comp=Z,4.1nm,0.9s
DUG Dugway 89.90 48 eP P 11 32 26.8 +0.3
comp=Z,1.8nm,0.8s
FINES FINESS Array B 89.94 335 P P 11 32 24.2 -1.8
FINES FINESS Array B 89.94 335 P P 11 32 24.2 -1.8
comp=Z,4.1nm,0.8s,baz=126,slow=3.3,SNR=8.7
BHD Baghdad 90.27 304 ex P 11 32 26.8 -1.4
BHD ex x 11 42 54.3
BHD ex x 11 43 20.8
HWUT Hardware Ranch 90.31 47 eP P 11 32 27.1 -1.4
comp=Z,3.6nm,0.8s
PDAR Pinedale Array 91.30 45 P P 11 32 32.5 -0.6
PDAR Pinedale Array 91.30 45 P P 11 32 32.5 -0.6
comp=Z,0.4nm,0.8s,baz=251,slow=5.6,SNR=3.2
PDAR LR LR 12 05 58.4
comp=Z,74nm,20.6s,baz=149,slow=31
VNDA Vanda 92.70 176 P P 11 32 39.5 +1.1
VNDA Vanda 92.70 176 P P 11 32 39.5 +1.1
comp=Z,1.3nm,1.0s,baz=308,slow=6.0,SNR=4.8
AKASG Malin Array Be 93.86 325 LR LR 12 16 57.3
comp=Z,164nm,19.1s,baz=55,slow=37
BRTR Keskin Array B 96.02 314 P P 11 32 52.8 -2.0
BRTR Keskin Array B 96.02 314 P P 11 32 52.8 -2.0
comp=Z,0.9nm,0.8s,baz=49,slow=3.8,SNR=4.9
ULM Lac du Bonnet 96.39 34 LR LR 12 18 06.7
comp=Z,118nm,18.1s,baz=344,slow=36
WVL Waterville 113.19 26 ePKPdf **PKiKP 11 38 05.2 +0.5**
VNA2 Neumayer--Watz 121.38 190 eP PKPdf 11 38 20.0 +0.4
baz=145,slow=0.7
VNA3 Neumayer Olymp 121.49 189 eP PKPdf 11 38 19.9 0.0
TORD Torodi Ar. Bea 133.94 305 PKP **PKPdf 11 38 42.9 -2.4**
TORD Torodi Ar. Bea 133.94 305 PKP **PKPdf 11 38 42.9 -2.4**
comp=Z,0.6nm,0.8s,baz=20,slow=3.3,SNR=3.7
PLCA Paso Flores 140.02 137 PKP **PKPdf 11 38 57.1 +1.3**
PLCA Paso Flores 140.02 137 PKP **PKPdf 11 38 57.1 +1.3**
comp=Z,3.0nm,1.1s,baz=127,slow=1.2,SNR=3.2
LCO Las Campanas 144.50 119 ePKPdf PKPdf 11 39 04.5 +0.1
LPAZ La Paz 148.47 97 PKPbc **PKPbc 11 39 16.6 +1.2**
LPAZ La Paz 148.47 97 PKPbc **PKPbc 11 39 16.6 +1.2**
comp=Z,1.7nm,0.7s,baz=281,slow=4.8,SNR=6.5

ISCJB ***17*** *11:23:57.1±0.7, 10°.95N±0°.05×62°.31W±0°.04, h89km±9km, Error ellipse: s-maj=9.1km s-min=5.7km az=160.1*
TRN ***17*** *11:23:59.3, 10°.98N×62°.27W, h79km, MD2.8*
FUNV ***17*** *11:23:59.6, 10°.85N×62°.24W, h79km, MW2.6*
ISC 17 11:23:57.6±1.4, 10°.91N±0°.06×62°.30W±0°.04, h91km±11km, **n13,σ1°11/19, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.27**	**164**	*eP*	**Pn**	**11 24 11.2**	**+0.3**
GUIV				*eS*	**Sn**	**11 24 19.6**	**-1.3**
TRN	**Trinidad (W)**	**0.92**	**106**	*eP*	**Pn**	**11 24 17.4**	**+1.0**
TRN				*eS*	**Sn**	**11 24 30.3**	**-0.1**
CRUV	**Carupano**	**0.95**	**256**	*eP*	**Pn**	**11 24 17.4**	**+0.6**
CRUV				*eS*	**Sn**	**11 24 30.6**	**-0.6**
TBH	**Brigand Hill**	**1.28**	**109**	*eP*	**Pn**	**11 24 22.0**	**+1.3**
TBH				*eS*	**Sn**	**11 24 38.9**	**+0.8**
GRW	**Mount Saint Ca**	**1.39**	**27**	*eS*	**Sn**	**11 24 39.4**	**-1.2**
TOSP	**Speyside**	**1.77**	**77**	*eP*	**Pn**	**11 24 27.7**	**+0.9**
TOSP				*eS*	**Sn**	**11 24 48.6**	**-0.5**
PCRV	**Puerto La Cruz**	**2.41**	**253**	*eP*	**Pn**	**11 24 37.0**	**+1.7**
SVB	**Belmont**	**2.56**	**23**	*eS*	**Sn**	**11 25 06.1**	**-1.6**
RIOV	**Rio Grande**	**2.86**	**170**	*eP*	**Pn**	**11 24 42.1**	**+0.8**
GURV	**El Guri**	**3.22**	**194**	*eP*	**Pn**	**11 24 46.5**	**+0.2**
CUPV	**Cœpira**	**3.54**	**256**	*eP*	**Pn**	**11 24 51.9**	**+1.4**
CUPV				*eS*	**Sn**	**11 25 31.2**	**-0.1**
LUEV	**Luepa**	**5.10**	**171**	*eP*	**Pn**	**11 25 10.3**	**-1.5**
BAUV	**El Baul**	**5.99**	**251**	*eP*	**Pn**	**11 25 23.4**	**-0.3**

IDC 17 11:26:59.2±1.7, 12°.71S×65°.06E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/25, mbtmp3.6/4, MS3.8/4, Ms1 3.8/4, ms1mx3.2/36, Error ellipse: s-maj=59.9km s-min=38.7km az=48.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**18.17**	**249**	LR	LR	11 36 42.9	
	comp=Z,276nm,18.8s,baz=171,slow=32						
KMBO	**Kilima Mbogo**	**29.86**	**290**	LR	LR	11 44 25.8	
	comp=Z,96nm,18.9s,baz=97,slow=35						
BOSA	**Boshof**	**40.25**	**241**	LR	LR	11 49 16.3	
	comp=Z,147nm,18.5s,baz=100,slow=33						

CMAR	Chiang Mai Arr	45.56	48	P	P	11 35 20.3	-0.9
	0.2nm,0.3s,baz=232,slow=10,SNR=4.2						
DAV	Davao City (W)	63.26	75	LR	LR	12 04 30.9	
	comp=Z,111nm,19.6s,baz=207,slow=36						
ASAR	Alice Springs	65.78	110	P	P	11 37 46.9	+0.1
	0.3nm,0.7s,baz=284,slow=5.0,SNR=4.6						
WRA	Warramunga Arr	66.48	106	P	P	11 37 51.3	+0.1
	0.8nm,0.9s,baz=269,slow=5.7,SNR=6.4						
SONM	Songino Array	70.61	28	P	P	11 38 17.4	+0.9
	0.2nm,0.4s,baz=232,slow=1.7,SNR=4.1						
YKA	Yellowknife Ar	130.29	360	PKP	PKPdf	11 46 09.7	-1.5
	0.1nm,0.6s,baz=352,slow=2.2,SNR=6.0						
PDAR	Pinedale Array	149.69	352	PKPbc	PKPbc	11 46 51.2	-0.3
	0.7nm,0.7s,baz=84,slow=3.1,SNR=5.1						
NVAR	Mina Array Bea	154.21	6	PKPbc	PKPbc	11 47 02.4	+0.4
	0.7nm,0.7s,baz=317,slow=1.1,SNR=5.9						

*CSEM **17** 11:31:53.3, 60.°67N×25.°08E, h0km, ML1.0, Mining explosion. After HEL*

HEL 17 11:31:53.3±0.1, 60.°67N×25.°08E, h0km, ML1.0, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVF	Pernaja	0.40	107	eP	Pg	11 32 00.5	-0.5
PVF				eS	Sg	11 32 05.6	-0.6
PVF	Pernaja	0.40	107	P	Pg	11 32 00.4	-0.6
PVF				S	Sg	11 32 05.6	-0.6
MEF	Metsahovi	0.57	217	eP	Pg	11 32 03.7	-0.4
MEF				eS	Sg	11 32 10.8	-0.7
MEF	Metsahovi	0.57	217	P	Pg	11 32 03.6	-0.5
MEF				S	Sg	11 32 10.7	-0.7
FIA0	FINESS Array S	0.92	31	eP	Pg	11 32 09.6	-1.3
FIA0				eS	Sg	11 32 21.3	-1.5
FIA0	FINESS Array S	0.92	31	P	Pg	11 32 09.5	-1.4
FIA0				S	Sg	11 32 21.2	-1.5
VJF	Virojoki	1.23	95	eS	Sg	11 32 32.0	-0.7
VJF	Virojoki	1.23	95	S	Sg	11 32 31.9	-0.7
KEF	Keuruu	1.51	356	eP	Pn	11 32 20.7	-0.9
KEF				eS	Sg	11 32 39.4	-2.3
KEF	Keuruu	1.51	356	P	Pn	11 32 20.6	-1.0
KEF				S	Sg	11 32 39.4	-2.4
KAF	Kangasniemi	1.56	22	ep	Sg	11 32 42.2	-1.4
	3.0nm,0.8s						
KAF	Kangasniemi	1.56	22	eP	Pn	11 32 20.9	-1.4
KAF				eS	Sn	11 32 41.9	-1.4
KAF	Kangasniemi	1.56	22	P	Pn	11 32 20.9	-1.4
KAF				S	Sn	11 32 41.9	-1.4
RAF	Rauma	1.66	284	eP	Pn	11 32 22.5	-1.2
RAF				eS	Sn	11 32 44.1	-1.5
RAF	Rauma	1.66	284	P	Pn	11 32 22.4	-1.3
RAF				S	Sn	11 32 44.1	-1.6
SUF	Sumiainen	2.12	13	eSG	Sb	11 32 59.0	-0.5
SUF				MSG		11 33 01.3	
	comp=Z,0.5nm,0.1s						
SUF	Sumiainen	2.12	13	Sg	Sb	11 32 58.9	-0.5

IDC 17 11:42:54.5±1.0, 14.°70N×144.°39E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.6/27, mbtmp3.8/8, Error ellipse: s-maj=38.7km s-min=15.3km az=68.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.20	157	Pn	Pn	11 43 19.0	+0.5
	30nm,0.3s,baz=0.0,slow=18,SNR=3.5						
GUMO				Sn	Sn	11 43 35.0	-0.5
	40nm,0.3s,baz=129,slow=20,SNR=4.2						
MJAR	Matsushiro Arr	22.44	347	P	P	11 47 55.4	+0.2
	0.9nm,0.5s,baz=172,slow=11,SNR=5.8						
WRA	Warramunga Arr	35.81	196	P	P	11 49 55.9	0.0
	0.3nm,0.9s,baz=5.3,slow=9.7,SNR=4.8						
CMAR	Chiang Mai Arr	43.63	281	P	P	11 51 01.6	+0.5
	1.7nm,1.0s,baz=74,slow=6.8,SNR=8.7						
MKAR	Makanchi Array	60.37	316	P	P	11 53 06.0	+0.4
	0.9nm,0.8s,baz=89,slow=9.1,SNR=6.3						
KURBB	Kurchatov Arra	63.48	319	P	P	11 53 26.3	-0.1
	2.8nm,0.7s,baz=100,slow=6.8,SNR=14						
BVAR	Borovoye Array	68.77	321	P	P	11 54 00.4	0.0
	1.4nm,0.6s,baz=91,slow=7.4,SNR=6.6						
AKTO	Aktyubinsk	76.53	319	P	P	11 54 45.7	-0.9
	0.4nm,0.2s,baz=114,slow=10.0,SNR=3.1						
YKA	Yellowknife Ar	82.10	27	P	P	11 55 16.6	-0.1
	0.1nm,0.8s,baz=288,slow=4.9,SNR=3.6						

*IDC **17** 11:43:12.7±1.2, 53.°43N×107.°47E, h0km, mb3.4/4, mb1 3.6/8, mb1mx3.4/31, mbtmp3.5/8, ML3.6/4, MS3.5/2, Ms1 3.5/2, ms1mx2.7/28, Error ellipse: s-maj=24.5km s-min=20.3km az=79.0*
*MOS **17** 11:43:13.9±1.6, 53.°38N×107.°39E, h12km, mb4.5/1, Error ellipse: s-maj=13.5km s-min=8.2km az=70.3*
MOS Felt (II-III) at Khuzhir, Onguryeny, Elantsy, Tyrgan.
*BYKL **17** 11:43:16.0±0.2, 53.°34N×107.°34E, h18km±3km, FELT I=IV MSK at Khujir; III at Onguren and II-III at Yelantsy,Tyrgan*

ISC 17 11:43:13.5±1.1, 53.°35N±0.°02×107.°45E±0.°02, h2km±9km, n62, σ1.°66/102, mb3.4/4, 7C-2D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OGRR	Ongureny	0.31	17	ePG	Pn	11 43 23.9	-1.1
OGRR				e		11 43 29.6	
OGRR				pmax	pmax		
	comp=Z,3μm,0.2s						
OGRR				smax	smax		
	comp=N,15μm,0.1s						
OGRR	Ongureny	0.31	17⇑	iPg	Pn	11 43 23.9	-1.1
OGRR				eSg	Sb	11 43 28.6	+1.4
OGRR				Pmax			
	comp=N,3μm,0.1s						
OGRR				Smax			
	comp=N,9μm,0.2s						
MXMB	Maximikha	0.78	96⇑	iPg	Pn	11 43 32.3	+0.8
MXMB				ePb	Pb	11 43 33.3	+3.5
MXMB				eSg	Sn	11 43 43.5	-0.3
MXMB				max			
	comp=N,663nm,0.1s						
MXMB				Smax			
	comp=N,5μm,0.3s						
TRG	Tyrgan	0.89	229	ePG	Pb	11 43 32.2	+0.6
TRG				e		11 43 43.6	
TRG				pmax	pmax		
	comp=Z,338nm,0.1s						
TRG				smax	smax		
	comp=N,6μm,0.2s						
TRG	Tyrgan	0.89	229⇓	iPg	Pb	11 43 32.2	+0.6
TRG				eSg	Sb	11 43 43.4	-0.4
TRG				eSb	Sn	11 43 46.7	+0.3
TRG				Pmax			
	comp=N,342nm,0.1s						
TRG				max			
	comp=N,5μm,0.2s						
FFNB	Fofonovo	1.37	198⇑	iPg	Pg	11 43 40.3	+0.6
FFNB				eSg	Sn	11 43 58.4	+0.2
FFNB				Pmax			
	comp=N,352nm,0.3s						
FFNB				Smax			
	comp=N,2μm,0.4s						
KAB	Kabansk	1.39	201	ePG	Pg	11 43 41.3	+1.3
KAB				e		11 43 59.4	
KAB				pmax	pmax		
	comp=Z,423nm,0.4s						
KAB				smax	smax		
	comp=N,3μm,0.9s						
KAB	Kabansk	1.39	201⇑	iPg	Pg	11 43 41.3	+1.3
KAB				eSg	Sn	11 43 58.8	+0.1
KAB				Pmax			
	comp=N,419nm,0.4s						
KAB				Smax			
	comp=N,2μm,0.5s						
UUDB	Ulan-Yde	1.49	175⇑	iPg	Pg	11 43 42.7	+0.7
UUDB				eSg	Sg	11 44 02.0	+0.7
UUDB				Pmax			
	comp=N,425nm,0.2s						
UUDB				Smax			
	comp=N,2μm,0.3s						
SYVR	Suvo	1.56	77	ePN	Pg	11 43 44.6	+1.3
SYVR				e		11 44 06.8	
SYVR				pmax	pmax		
	comp=Z,81nm,0.2s						
SYVR				smax	smax		
	comp=N,872nm,0.5s						
SYVR	Suvo	1.56	77⇑	iPg	Pg	11 43 44.2	+0.9
SYVR				eSg	Sg	11 44 05.8	+2.4
SYVR				Pmax			
	comp=N,130nm,0.4s						
SYVR				Smax			
	comp=N,861nm,0.5s						
LSTR	Listvyanka	2.18	228⇓	iPn	Pn	11 43 51.9	+1.2
LSTR				e		11 44 00.3	
LSTR				eSn	Sn	11 44 16.9	-1.3
LSTR				eSg	Sb	11 44 21.3	+0.4
LSTR				Smax			
	comp=N,743nm,0.3s						
IRK	Irkutsk	2.22	241	ePN	Pb	11 43 53.9	-0.4
IRK				e		11 44 22.5	
IRK				pmax	pmax		
	comp=Z,154nm,0.1s						
IRK				smax	smax		
	comp=N,2μm,0.3s						
IRK	Irkutsk	2.22	241	ePn	Pn	11 43 52.5	+1.2
IRK				eSn	Sn	11 44 18.0	-1.3
IRK				eSg	Sb	11 44 22.5	+0.2
YLYR	Ulyunkhan	2.67	54	ePN	Pg	11 44 03.9	-0.7
YLYR				e		11 44 37.7	
YLYR				pmax	pmax		
	comp=Z,45nm,0.2s						
YLYR				smax	smax		
	comp=N,168nm,0.4s						
YLYR	Ulyunkhan	2.67	54⇑	iPn	Pn	11 43 59.7	+2.3
YLYR				ePg	Pg	11 44 05.1	+0.5
YLYR				eSg	Sg	11 44 39.2	0.0
YLYR				Pmax			
	comp=N,44nm,0.2s						
YLYR				Smax			
	comp=N,168nm,0.4s						
NIZ	Nizh Angarsk	2.72	26	ePn	Pn	11 44 00.3	+2.2
NIZ				ePg	Pg	11 44 05.1	-0.5
NIZ				eSn	Sn	11 44 31.5	-0.1
NIZ				eSg	Sg	11 44 40.0	-0.8
NIZ				Pmax			
	comp=N,57nm,0.3s						
NIZ				Smax			
	comp=N,470nm,0.5s						
TLY	Talaya	2.86	236	ePN	Pb	11 44 05.3	+0.1
TLY				e		11 44 41.0	
TLY				pmax	pmax		
	comp=Z,67nm,0.3s						
TLY				smax	smax		
	comp=N,410nm,0.6s						
TLY	Talaya	2.86	236	ePn	Pn	11 44 00.9	+0.8
TLY				ePg	Pb	11 44 05.6	+0.4
TLY				eSn	Sn	11 44 33.5	-1.6
TLY				eSg	Sb	11 44 41.2	+0.6
TLY				Pmax			
	comp=N,33nm,0.2s						
TLY				Smax			
	comp=N,397nm,0.5s						
KMO	Kumora	3.35	39	ePN	Pn	11 44 08.8	+2.0
KMO				e		11 44 16.1	
KMO				e		11 44 58.9	
KMO				pmax	pmax		
	comp=Z,24nm,0.3s						
KMO				smax	smax		
	comp=N,323nm,0.9s						
KMO	Kumora	3.35	39	ePn	Pn	11 44 09.1	+2.3
KMO				ePg	Pb	11 44 15.7	+2.2
KMO				eSg	Sg	11 45 00.4	-0.6
KMO				Pmax			
	comp=N,37nm,0.3s						
KMO				Smax			
	comp=N,323nm,0.9s						
ARS	Arshan	3.38	247	ePN	Pg	11 44 16.3	-1.9
ARS				e		11 44 56.7	
ARS				pmax	pmax		
	comp=Z,135nm,0.3s						
ARS				smax	smax		
	comp=E,1μm,0.4s						
ARS	Arshan	3.38	247	ePn	Pn	11 44 07.7	+0.5
ARS				ePg	Pb	11 44 15.9	+1.9
ARS				e		11 44 21.4	
ARS				eSn	Sn	11 44 45.6	-2.3
ARS				eSg	Sb	11 44 57.3	+1.7
ARS				max			
	comp=E,135nm,0.4s						
ARS				Smax			
	comp=E,1μm,0.5s						
YOA	Uoyan	3.73	40	ePN	Pg	11 44 24.0	-0.9
YOA				e		11 45 12.8	
YOA				pmax	pmax		
	comp=Z,34nm,0.3s						
YOA				smax	smax		
	comp=N,605nm,1.0s						
YOA	Uoyan	3.73	40	ePg	Pg	11 44 24.2	-0.7
YOA				eSg	Sg	11 45 13.1	-0.2
YOA				Pmax			
	comp=N,65nm,0.4s						
YOA				Smax			
	comp=N,601nm,0.7s						
ZAK	Zakamensk	3.94	223	ePN	Pb	11 44 25.6	+2.0
ZAK				e		11 45 15.7	
ZAK				pmax	pmax		
	comp=Z,24nm,1.0s						
ZAK				smax	smax		
	comp=E,121nm,1.1s						
CIT	Chita	3.95	107	ePN	Pb	11 44 25.6	+1.9
CIT	Chita	3.95	107	ePn	Pn	11 44 16.2	+1.2
CIT				eSn	Sn	11 45 00.9	-0.9
CIT				eSg	Sg	11 45 19.5	-0.6
CIT				Smax			
	comp=E,353nm,0.2s						
UKT	Uakit	4.20	57	ePN	Pg	11 44 33.0	-0.9
UKT				e		11 45 25.5	
UKT				pmax	pmax		
	comp=Z,14nm,0.5s						
UKT				smax	smax		
	comp=N,80nm,0.6s						
UKT	Uakit	4.20	57	ePn	Pn	11 44 21.1	+2.6
UKT				ePg	Pg	11 44 33.2	-0.7
UKT				eSg	Sg	11 45 27.3	-0.9
UKT				Pmax			
	comp=N,18nm,0.8s						
UKT				Smax			
	comp=N,80nm,0.5s						
MOY	Mondy	4.29	249	ePN	Pb	11 44 30.5	+1.0
MOY				e		11 45 24.6	
MOY				pmax	pmax		
	comp=Z,101nm,0.5s						
MOY				smax	smax		
	comp=N,248nm,0.8s						
MOY	Mondy	4.29	249	ePn	Pn	11 44 22.0	+2.2
MOY				ePg	Pb	11 44 30.6	+1.0
MOY				e		11 44 38.3	
MOY				eSn	Sn	11 45 09.9	-0.5
MOY				eSg	Sb	11 45 24.7	+3.0
MOY				max			
	comp=N,102nm,0.5s						
MOY				Smax			
	comp=N,248nm,0.8s						
ORL	Orlik	4.69	263	ePN	Pg	11 44 40.9	-2.4
ORL				e		11 45 39.4	
ORL				pmax	pmax		
	comp=Z,31nm,0.4s						
ORL				smax	smax		
	comp=N,150nm,1.1s						
ORL	Orlik	4.69	263	ePn	Pn	11 44 26.1	+0.8
ORL				e		11 44 27.8	
ORL				eSn	Sn	11 45 17.7	-2.6
ORL				eSg	Sg	11 45 39.4	-4.6
ORL				Smax			
	comp=N,132nm,0.5s						
KPC	Khapcheranga	4.77	138	ePN	Pn	11 44 26.7	+0.3
KPC				e		11 44 43.7	
KPC				eS	Sn	11 45 20.0	-2.3
KPC				e		11 45 45.2	
KPC				pmax	pmax		
	comp=Z,21nm,0.3s						
KPC				smax	smax		
	comp=E,106nm,0.7s						
KPC	Khapcheranga	4.77	138	ePn	Pn	11 44 26.7	+0.3
KPC				e		11 44 44.3	
KPC				eSn	Sn	11 45 19.8	-2.5
KPC				eSg	Sg	11 45 44.7	-2.0
KPC				Smax			
	comp=E,106nm,0.7s						
ULN	Ulaanbaatar	5.50	183	i Pn	Pn	11 44 38.1	+1.7
ULN				eSg	Sg	11 46 06.6	-3.3
SONM	Songino Array	5.56	187	Pn	Pn	11 44 39.0	+1.8
	comp=E,4.0nm,0.3s,baz=359,slow=13,SNR=68						
SONM				Pg	Pg	11 44 56.9	-3.1
	comp=E,2.4nm,0.3s,baz=1.7,slow=16,SNR=11						
SONM				Sn	Sn	11 45 38.3	-3.4
	comp=E,4.2nm,0.3s,baz=359,slow=19,SNR=6.4						
SONM				Lg	Lg	11 46 09.8	
	comp=E,8.2nm,0.3s,baz=1.0,slow=30,SNR=9.0						
NLYR	Nelyaty	5.71	53	ePG	Pg	11 45 01.1	-1.6
NLYR				e		11 46 15.9	
NLYR				pmax	pmax		
	comp=Z,12nm,0.7s						
NLYR				smax	smax		
	comp=E,95nm,1.2s						
NLYR	Nelyaty	5.71	53	ePn	Pn	11 44 42.7	+3.5
NLYR				eSg	Sg	11 46 14.3	-2.3
NLYR				Smax			
	comp=E,96nm,1.2s						
BOD	Bodaibo	5.82	37	ePN	Pn	11 44 41.6	+0.9
BOD				e		11 45 00.9	
BOD				e		11 46 16.2	
BOD				pmax	pmax		
	comp=Z,5.0nm,0.4s						
BOD				smax	smax		
	comp=N,67nm,1.5s						
BOD	Bodaibo	5.82	37	ePn	Pn	11 44 42.1	+1.4
BOD				eSg	Sg	11 46 16.5	-3.7
BOD				Smax			
	comp=N,59nm,0.8s						
CRS	Chara	7.15	56	ePG	Pg	11 45 27.6	-2.7
CRS				e		11 46 58.8	
CRS				pmax	pmax		
	comp=Z,28nm,1.2s						
CRS				smax	smax		
	comp=N,58nm,1.1s						
CRS	Chara	7.15	56	ePg	Pg	11 45 27.2	-3.1
CRS				eSg	Sg	11 46 59.3	-3.6
CRS				Smax			
	comp=N,58nm,1.1s						
TUP	Tupik	7.47	77	ePN	Pn	11 45 05.1	+1.7
TUP				e		11 45 30.4	
TUP				e		11 47 08.9	
TUP				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TUP				smax	smax		
	comp=N,60nm,0.7s						
TUP	Tupik	7.47	77	ePn	Pn	11 45 05.1	+1.7
TUP				eSg	Sg	11 47 09.0	-4.2
TUP				Smax			
	comp=N,59nm,0.9s						
KRAR	Krasnoyarsk	8.86	293	ePN	Pn	11 45 24.6	+2.3
ZALV	Zalesovo Beam	13.43	282	P	Pn	11 46 26.2	+1.4
ZALV	Zalesovo Beam	13.43	282	Pn	Pn	11 46 26.2	+1.4
	comp=N,0.1nm,0.3s,baz=66,slow=7.0,SNR=2.9						
MKAR	Makanchi Array	17.37	258	i P	P	11 47 17.7	-0.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	17.37	258	P	Pn	11 47 16.3	-0.5
	comp=Z,0.1nm,0.3s,baz=66,slow=12,SNR=5.1						
KURK	Kurchatov	17.88	273	P	P	11 47 24.2	+0.5
KURBB	Kurchatov Arra	17.96	273	P	P	11 47 24.2	-0.5
	comp=Z,0.1nm,0.3s,baz=66,slow=12,SNR=5.3						
TIXI	Tiksi	20.62	19	eP	P	11 47 53.6	0.0
BVAR	Borovoye Array	22.05	284	P	P	11 48 07.7	-1.5
BVAR	Borovoye Array	22.05	284	P	P	11 48 07.7	-1.5
	comp=Z,1.6nm,0.6s,baz=69,slow=15,SNR=6.6						
BRVK	Borovoye	22.11	284	eP	P	11 48 10.3	+0.6
GNI	Garni	43.55	279	LR	LR	12 13 39.3	
	comp=Z,47nm,20.5s,baz=217,slow=42						
ILAR	Eielson Array	49.18	33	P	P	11 52 01.1	-1.1
	comp=Z,0.3nm,0.7s,baz=310,slow=6.0,SNR=4.3						
KEST	Kesra	66.64	299	LR	LR	12 22 32.7	
	comp=Z,38nm,21.8s,baz=286,slow=35						
WRA	Warramunga Arr	76.61	154	P	P	11 55 04.8	-0.4
	comp=Z,0.2nm,0.6s,baz=344,slow=6.0,SNR=3.4						
ASAR	Alice Springs	80.06	155	P	P	11 55 24.8	+0.4
	comp=Z,0.2nm,0.6s,baz=327,slow=4.1,SNR=4.3						

IDC 17 11:46:13.5±1.1, 14.°79N×144.°57E, h0km, mb3.3/5, mb1 3.6/5, mb1mx3.3/25, mbtmp3.3/5, Error ellipse: s-maj=39.3km s-min=16.8km az=76.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.23	166	Pn	Pn	11 46 38.4	+0.5
	174nm,0.3s,baz=302,slow=2.8,SNR=22						
GUMO				Sn	Sb	11 46 54.2	+0.2
	160nm,0.3s,baz=105,slow=20,SNR=13						
WRA	Warramunga Arr	35.95	197	P	P	11 53 16.1	0.0
	0.4nm,0.8s,baz=18,slow=9.6,SNR=6.3						
ASAR	Alice Springs	39.62	195	P	P	11 53 47.2	+0.1
	0.3nm,0.8s,baz=24,slow=12,SNR=3.7						
CMAR	Chiang Mai Arr	43.79	281	P	P	11 54 21.1	-0.3
	0.5nm,0.7s,baz=69,slow=5.8,SNR=4.9						
KURBB	Kurchatov Arra	63.53	319	P	P	11 56 45.5	-0.2
	1.0nm,0.7s,baz=100,slow=6.7,SNR=7.6						
YKA	Yellowknife Ar	81.93	27	P	P	11 58 34.9	0.0
	0.1nm,0.6s,baz=285,slow=5.0,SNR=2.6						

*DJA **17** 11:50:32.7±2.8, 15°N±20°×14°5E±3°0, h10km, M4.8/7, mB5.2/2, mb5.0/7, MLv4.7/1, Mw(mB)4.6/2*
*BJI **17** 11:50:33.2, 14.°80N×144.°50E, h10km, mB4.9/24, mb4.7/29, Ms4.6/23, Ms7 4.2/21*
*IDC **17** 11:50:33.7±0.5, 14.°87N×144.°43E, h0km, mb4.2/24, mb1 4.3/24, mb1mx4.2/32, mbtmp4.2/24, MS3.9/22, Ms1 3.9/22, ms1mx3.7/38, Error ellipse: s-maj=20.5km s-min=10.9km az=77.0*
*ISCJB **17** 11:50:34.1±1.4, 14.°87N±0.°04×144.°50E±0.°07, h13km±9km, mb4.5/50, MS4.0/30, Error ellipse: s-maj=11.0km s-min=6.3km az=166.5*
*NEIC **17** 11:50:36.5±4.2, 14.°84N×144.°47E, h18km±26km, mb4.8/12, Error ellipse: s-maj=9.9km s-min=6.2km az=76.0*

ISC 17 11:50:36.4±0.5, 14.°83N±0.°05×144.°47E±0.°07, h16km±1km, n104, σ1.°64/141, mb4.7/50, MS4.0/31, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.29	162	ePn	Pn	11 50 58.1	-1.7
GUMO				eSn	Sb	11 51 15.2	-1.5
GUMO	Guam	1.29	162	Pn	Pn	11 50 58.0	-1.7
	236nm,0.3s,baz=290,slow=1.6,SNR=35						
GUMO				Sn	Sb	11 51 13.5	-3.1
	972nm,0.3s,baz=119,slow=19,SNR=54						
SWI	Sorong	20.34	221	P	Pn	11 55 18.1	+3.9
	92nm,1.4s,1μm						
FAKI	Fak Fak	21.39	215	P	P	11 55 25.7	+2.2
	94nm,1.1s						
TNTI	Ternate	21.92	232	P	P	11 55 38.5	+9.3
JNU	Nakatsue	22.00	328	P	P	11 55 29.9	-0.1
JNU	Nakatsue	22.00	328	P	P	11 55 29.9	-0.1
	8.9nm,0.8s,baz=48,slow=1.2,SNR=5.1						
JNU				LR	LR	12 03 31.9	
	comp=Z,69nm,19.5s,baz=216,slow=36						
MJAR	Matsushiro Arr	22.34	347	P	P	11 55 33.4	-0.1
MJAR	Matsushiro Arr	22.34	347	P	P	11 55 33.4	-0.1
	6.6nm,1.0s,baz=173,slow=11,SNR=15						
MJAR				LR	LR	12 03 39.0	
	comp=Z,168nm,18.0s,baz=175,slow=35						
MAJO	Matsushiro	22.34	347	eP	P	11 55 34.8	+1.3
	49nm,1.5s						
MAT	Matsushiro	22.34	347	P	P	11 55 33.2	-0.4
MAT				S	S	11 59 40.8	+2.2
LBMI	Labuha	22.75	229	P	P	11 55 39.6	+1.4
	47nm,1.2s						
AAI	Ambon	24.46	222	P	P	11 55 56.0	+1.2
	74nm,1.5s						
LUWI	Luwuk	26.63	236	P	P	11 56 17.0	+2.5
	59nm,1.2s						
KSRS	Korea Array	26.90	330	P	P	11 56 16.2	-0.4
	2.0nm,0.9s,baz=146,slow=10,SNR=7.1						
KSRS				LR	LR	12 07 29.0	
	comp=Z,120nm,18.1s,baz=170,slow=38						
KSAR	Wonju Array Be	26.91	330	P	P	11 56 16.2	-0.5
NJ2	Nanjing	28.97	311	eP	P	11 56 35.3	0.0
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
ASAJ	Asahikawa	29.24	357	LR	LR	12 06 41.6	
	comp=Z,152nm,21.2s,baz=343,slow=33						
USRK	Ussuriysk Arra	31.14	343	LR	LR	12 09 07.5	
	comp=Z,181nm,18.4s,baz=311,slow=36						
MDJ	Mudanjiang	32.27	340	P	P	11 57 04.6	+0.4
MDJ				pP	pP	11 57 07.9	-1.4

MDJ				sP	**sP**	**11 57 09.3**	**-2.0**	
MDJ				S	**S**	**12 02 20.0**	**+3.0**	
MDJ				sS	**sS**	**12 02 25.3**	**0.0**	
MDJ				ScS	**ScS**	**12 07 35.1**	**+0.7**	
MDJ				pmax	pmax			
	comp=Z,5.0nm,0.5s							
MDJ				pmax	pmax			
	comp=Z,67nm,3.6s							
MDJ				LR	LR			
	comp=N,96nm,25.3s							
MDJ				LR	LR			
	comp=E,110nm,24.4s							
MDJ				LR	LR			
	comp=Z,190nm,25.8s							
CN2	**Changchun**	**33.13**	**334**	*eP*	**P**	**11 57 13.6**	**+1.8**	
QIZ	**Qiongzhong**	**33.35**	**282**	P	**P**	**11 57 14.1**	**0.0**	
QIZ				S	**S**	**12 02 34.6**	**+0.1**	
QIZ				LR	LR			
	comp=N,250nm,17.9s							
QIZ				LR	LR			
	comp=E,110nm,15.0s							
QIZ				LR	LR			
	comp=Z,230nm,14.6s							
WRAB	**Tennant Creek**	**35.95**	**196**	*eP*	**P**	**11 57 36.2**	**-0.2**	
	comp=Z,32nm,1.5s							
WRA	**Warramunga Arr**	**35.96**	**196**	P	**P**	**11 57 36.0**	**-0.6**	
WRA	**Warramunga Arr**	**35.96**	**196**	P	**P**	**11 57 36.0**	**-0.6**	
	comp=Z,5.4nm,0.9s,baz=17,slow=9.3,SNR=19							
KSM	**Kuching**	**36.24**	**252**	*eP*	**P**	**11 57 38.6**	**-0.5**	
	comp=Z,21nm,1.1s							
KSM	**Kuching**	**36.24**	**252**	P	**P**	**11 57 38.6**	**-0.5**	
GYA	**Guiyang**	**37.09**	**294**	P	**P**	**11 57 47.0**	**+0.7**	
GYA				PP	**PnPn**	**11 59 13.3**	**+2.0**	
GYA				PcP	**PcP**	**12 00 07.5**	**+0.7**	
GYA				S	**S**	**12 03 32.8**	**+0.7**	
GYA				ScP	**ScP**	**12 03 53.9**	**+0.5**	
GYA				SS	**SnSn**	**12 06 02.0**	**-4.3**	
GYA				pmax	pmax			
	comp=Z,20nm,0.8s							
GYA				pmax	pmax			
	comp=Z,120nm,4.8s							
GYA				LR	LR			
	comp=N,690nm,17.8s							
GYA				LR	LR			
	comp=E,580nm,18.7s							
GYA				LR	LR			
	comp=Z,660nm,18.3s							
XAN	**Xi'an**	**37.33**	**307**	P	**P**	**11 57 47.5**	**-0.7**	
XAN				pP	**pP**	**11 57 54.9**	**+1.6**	
XAN				S	**S**	**12 03 34.6**	**-0.9**	
XAN				pmax	pmax			
	comp=Z,2.0nm,1.1s							
XAN				pmax	pmax			
	comp=Z,23nm,6.6s							
XAN				LR	LR			
	comp=N,100nm,10.9s							
XAN				LR	LR			
	comp=E,40nm,13.6s							
XAN				LR	LR			
	comp=Z,47nm,13.6s							
FITZ	**Fitzroy Crossi**	**37.62**	**210**	*eP*	**P**	**11 57 50.6**	**-0.1**	
	comp=Z,5.1nm,0.9s							
FITZ	**Fitzroy Crossi**	**37.62**	**210**	P	**P**	**11 57 50.5**	**-0.1**	
	comp=Z,4.7nm,0.8s,baz=30,slow=9.0,SNR=10							
HHC	**Hu-ho-hao-te**	**38.59**	**319**	*eP*	**P**	**11 57 57.3**	**-1.5**	
HHC				pP	**pP**	**11 58 01.8**	**-2.1**	
HHC				sP	**sP**	**11 58 04.3**	**-1.6**	
HHC				PP	**PnPn**	**11 59 29.5**	**+0.3**	
HHC				S	**S**	**12 03 52.4**	**-2.0**	
HHC				sS	**ScP**	**12 04 00.1**	**+1.4**	
HHC				SS	**SnSn**	**12 06 33.6**	**-8.6**	
HHC				pmax	pmax			
	comp=Z,20nm,0.8s							
HHC				pmax	pmax			
	comp=Z,220nm,5.0s							
HHC				LR	LR			
	comp=N,290nm,13.5s							
HHC				LR	LR			
	comp=E,410nm,13.5s							
HHC				LR	LR			
	comp=Z,430nm,15.2s							
PETK	**Petropavlovsk-**	**39.60**	**13**	LR	LR	12 11 47.0		
	comp=Z,91nm,20.0s,baz=198,slow=32							
ASAR	**Alice Springs**	**39.63**	**195**	P	**P**	**11 58 07.3**	**-0.2**	
ASAR	**Alice Springs**	**39.63**	**195**	P	**P**	**11 58 07.3**	**-0.2**	
	comp=Z,1.2nm,0.7s,baz=16,slow=10,SNR=15							
ASAR				LR	LR	12 15 24.0		
	comp=Z,95nm,19.2s,baz=21,slow=38							
CD2	**Chengdu**	**40.53**	**300**	P	**P**	**11 58 15.1**	**+0.1**	
CD2				pP	**pP**	**11 58 24.9**	**+4.7**	
CD2				PP	**PnPn**	**11 59 52.9**	**+0.5**	
CD2				PcP	**PcP**	**12 00 17.3**	**-0.2**	
CD2				PcS	**PcS**	**12 04 06.8**	**-1.4**	
CD2				S	**S**	**12 04 22.6**	**-1.1**	
CD2				sS	sS	12 04 38.8	+6.7	
CD2				SS	**SS**	**12 07 18.5**	**-5.0**	
CD2				pmax	pmax			
	comp=Z,20nm,0.5s							
CD2				pmax	pmax			
	comp=Z,220nm,5.4s							
CD2				LR	LR			
	comp=E,740nm,28.4s							
CD2				LR	LR			
	comp=Z,290nm,16.2s							
LZH	**Lanzhou**	**41.95**	**308**	*eP*	**P**	**11 58 27.0**	**+0.2**	
LZH				pP	**pP**	**11 58 30.3**	**-1.7**	
LZH				PP	**PnPn**	**12 00 07.3**	**-1.8**	
LZH				pmax	pmax			
	comp=Z,23nm,1.3s							
LZH				pmax	pmax			
	comp=Z,75nm,6.4s							
LZH				LR	LR			
	comp=N,450nm,14.3s							
LZH				LR	LR			
	comp=E,510nm,13.7s							
LZH				LR	LR			
	comp=Z,610nm,16.3s							
DZM	**Mont Dzumac**	**42.53**	**149**	*eS*	S	12 04 46.5	-7.0	
	comp=Z,75nm,28.4s							
DZM				eLR	LR	12 10 16.9		
	comp=Z,300nm,29.1s							
DZM	**Mont Dzumac**	**42.53**	**149**	P	**P**	**11 58 32.9**	**+1.4**	
DZM	**Mont Dzumac**	**42.53**	**149**	P	**P**	**11 58 32.9**	**+1.4**	
	comp=Z,16nm,1.0s,baz=349,slow=11,SNR=4.7							
CM31	**Chiang Mai Arr**	**43.68**	**281**	*eP*	**P**	**11 58 41.7**	**+0.8**	
	comp=Z,6.8nm,0.8s							
CMAR	**Chiang Mai Arr**	**43.68**	**281**	P	**P**	**11 58 41.2**	**+0.3**	
CMAR	**Chiang Mai Arr**	**43.68**	**281**	P	**P**	**11 58 41.2**	**+0.3**	
	comp=Z,11nm,1.0s,baz=79,slow=6.5,SNR=48							
CMAR				LR	LR	12 13 35.7		
	comp=Z,103nm,21.5s,baz=160,slow=32							
KULM	**Kulim**	**44.09**	**262**	*eP*	**P**	**11 58 44.5**	**+0.3**	
SONM	**Songino Array**	**45.50**	**324**	P	**P**	**11 58 55.1**	**-0.1**	
SONM				PcP	**PcP**	**12 00 33.8**	**-0.1**	
SONM	**Songino Array**	**45.50**	**324**	P	**P**	**11 58 55.1**	**-0.1**	
	comp=Z,0.5nm,0.8s,baz=135,slow=8.7,SNR=4.5							
SONM				PcP	**PcP**	**12 00 33.8**	**-0.1**	
	comp=Z,1.2nm,0.8s,baz=127,slow=3.9,SNR=5.3							
SONM				LR	LR	12 17 50.9		
	comp=Z,184nm,19.9s,baz=82,slow=36							
GTA	**Gaotai**	**46.07**	**311**	*eP*	**P**	**11 59 00.3**	**+0.5**	
GTA				pP	**pP**	**11 59 03.8**	**-1.2**	
GTA				sP	**sP**	**11 59 06.5**	**-0.5**	
GTA				PcP	**PcP**	**12 00 36.8**	**+0.7**	
GTA				S	**S**	**12 05 45.5**	**+0.6**	
GTA				sS	**sS**	**12 05 54.1**	**+0.7**	
GTA				pmax	pmax			
	comp=Z,10.0nm,1.2s							
GTA				pmax	pmax			
	comp=Z,130nm,3.8s							
GTA				LR	LR			
	comp=N,280nm,22.3s							
GTA				LR	LR			
	comp=E,440nm,21.4s							
GTA				LR	LR			
	comp=Z,170nm,21.4s							
STKA	**Stephens Creek**	**46.52**	**183**	P	**P**	**11 59 03.6**	**+0.5**	
STKA	**Stephens Creek**	**46.52**	**183**	P	**P**	**11 59 03.6**	**+0.5**	
	comp=Z,1.9nm,0.7s,baz=22,slow=10,SNR=5.1							
SHL	**Shillong**	**50.22**	**291**	*eP*	**P**	**11 59 32.0**	**-0.1**	
WMQ	**Urumqi**	**56.01**	**313**	P	**P**	**12 00 15.0**	**+0.6**	
WMQ				sP	**sP**	**12 00 22.0**	**+0.3**	
WMQ				PcP	**PcP**	**12 01 13.0**	**+0.3**	
WMQ				PP	**PP**	**12 02 21.0**	**+1.7**	
WMQ				ScP	**ScP**	**12 05 11.0**	**-0.4**	
WMQ				S	**S**	**12 08 01.0**	**-1.2**	
WMQ				sS	**sS**	**12 08 09.0**	**-1.9**	
WMQ				ScS	**ScS**	**12 10 00.0**	**-3.3**	
WMQ				SS	**SS**	**12 11 47.0**	**-1.3**	
WMQ				pmax	pmax			
	comp=Z,18nm,1.0s							
WMQ				pmax	pmax			
	comp=Z,140nm,5.0s							
WMQ				LR	LR			
	comp=N,210nm,16.0s							
WMQ				LR	LR			
	comp=E,250nm,16.0s							
WMQ				LR	LR			
	comp=Z,250nm,16.0s							
MK31	**Makanchi Array**	**60.34**	**316**	*eP*	**P**	**12 00 44.5**	**-0.1**	
MKAR	**Makanchi Array**	**60.34**	**316**	*eP*	**P**	**12 00 44.6**	**0.0**	
MKAR	**Makanchi Array**	**60.34**	**316**	P	**P**	**12 00 44.6**	**0.0**	
	comp=Z,2.6nm,0.9s,baz=96,slow=8.7,SNR=16							
MKAR				LR	LR	12 27 50.0		
	comp=Z,100nm,18.2s,baz=265,slow=37							
ZALV	**Zalesovo Beam**	**60.40**	**324**	P	**P**	**12 00 43.9**	**-0.9**	
ZALV	**Zalesovo Beam**	**60.40**	**324**	P	**P**	**12 00 43.9**	**-0.9**	
	comp=Z,1.6nm,0.7s,baz=104,slow=6.1,SNR=2.2							
ZALV				LR	LR	12 27 35.1		
	comp=Z,95nm,18.2s,baz=250,slow=37							
KURK	**Kurchatov**	**63.39**	**320**	*eP*	**P**	**12 01 04.6**	**-0.4**	
	comp=Z,36nm,1.3s							
KURBB	**Kurchatov Arra**	**63.43**	**319**	P	**P**	**12 01 04.8**	**-0.5**	
	comp=Z,11nm,1.0s,baz=102,slow=7.9,SNR=35							
KSH	**Kashi**	**64.19**	**307**	*eP*	**P**	**12 01 13.3**	**+2.6**	
KSH				pP	**pP**	**12 01 18.0**	**+2.0**	
KSH				sP	**sP**	**12 01 20.0**	**+2.0**	
KSH				PcP	**PcP**	**12 01 47.0**	**+1.4**	
KSH				PP	**PP**	**12 03 35.9**	**+4.1**	
KSH				ScP		12 05 48.0		
KSH				PcS		12 05 49.9		
KSH				S	**S**	**12 09 49.0**	**+1.4**	
KSH				sS	**sS**	**12 09 57.4**	**+1.0**	
KSH				ScS	**SKSac**	**12 11 03.0**	**-1.4**	
KSH				SS	**SS**	**12 14 01.4**	**+4.5**	
KSH				pmax	pmax			
	comp=Z,5.0nm,0.9s							
KSH				LR	LR			
	comp=N,180nm,8.8s							
KSH				LR	LR			
	comp=E,230nm,4.5s							
KSH				LR	LR			
	comp=Z,200nm,4.2s							
TKM2	**Tokmak 2**	**64.62**	**311**	*eP*	**P**	**12 01 13.8**	**+0.3**	
	comp=Z,6.0nm,1.3s							
AAK	**Ala-Archa**	**65.42**	**310**	P	**P**	**12 01 18.0**	**-0.7**	
AAK	**Ala-Archa**	**65.42**	**310**	P	**P**	**12 01 18.0**	**-0.7**	
	comp=Z,0.5nm,0.3s,baz=99,slow=9.2,SNR=5.0							
ILAR	**Eielson Array**	**67.62**	**26**	P	**P**	**12 01 32.8**	**+0.6**	
ILAR	**Eielson Array**	**67.62**	**26**	P	**P**	**12 01 32.8**	**+0.6**	
	comp=Z,0.3nm,0.6s,baz=242,slow=3.8,SNR=3.8							
ILAR				LR	LR	12 30 12.5		
	comp=Z,58nm,18.8s,baz=274,slow=35							
KKAR	**Karatay Array**	**68.35**	**311**	*eP*	**P**	**12 01 37.0**	**-0.2**	
	comp=Z,0.5nm,0.3s							
BVAR	**Borovoye Array**	**68.72**	**321**	P	**P**	**12 01 38.9**	**-0.4**	
BVAR	**Borovoye Array**	**68.72**	**321**	P	**P**	**12 01 38.9**	**-0.4**	
	comp=Z,8.6nm,1.0s,baz=95,slow=7.4,SNR=25							
BRVK	**Borovoye**	**68.78**	**321**	*eP*	**P**	**12 01 39.7**	**0.0**	
	comp=Z,23nm,1.3s							
KBL	**Kabul**	**69.85**	**302**	*eP*	**P**	**12 01 47.5**	**+0.6**	
	comp=Z,12nm,1.2s							
PPT	**Papeete**	**72.57**	**114**	LR	LR	12 27 29.3		
	comp=Z,128nm,21.9s,baz=333,slow=30							
PPT2	**Papeete2**	**72.58**	**114**	*eLR*	LR	12 23 47.6		
INK	**Inuvik**	**73.38**	**23**	P	**P**	**12 02 07.2**	**0.0**	
INK	**Inuvik**	**73.38**	**23**	P	**P**	**12 02 07.2**	**0.0**	
	comp=Z,0.2nm,0.3s,baz=270,slow=3.0,SNR=2.5							
TBI	**Tubuai**	**74.91**	**120**	*eLR*	LR	12 24 59.7		
	comp=Z,187nm,30.5s							
AKTO	**Aktyubinsk**	**76.48**	**319**	P	**P**	**12 02 23.9**	**-1.6**	
AKTO	**Aktyubinsk**	**76.48**	**319**	P	**P**	**12 02 23.9**	**-1.6**	
	comp=Z,0.7nm,0.3s,baz=71,slow=6.3,SNR=3.8							
YKA	**Yellowknife Ar**	**81.95**	**27**	P	**P**	**12 02 53.8**	**-1.3**	
YKA	**Yellowknife Ar**	**81.95**	**27**	P	**P**	**12 02 53.8**	**-1.3**	
	comp=Z,0.6nm,0.9s,baz=288,slow=5.6,SNR=6.9							
YBH	**Yreka Blue Hor**	**82.36**	**49**	LR	LR	12 30 07.5		
	comp=Z,76nm,21.9s,baz=354,slow=29							
NEW	**Newport**	**84.57**	**42**	LR	LR	12 36 34.9		
	comp=Z,66nm,19.1s,baz=295,slow=33							
ARCES	**ARCESS Array B**	**85.79**	**342**	P	**P**	**12 03 14.0**	**-0.7**	
ARCES	**ARCESS Array B**	**85.79**	**342**	P	**P**	**12 03 14.0**	**-0.7**	
	comp=Z,4.7nm,0.9s,baz=70,slow=7.8,SNR=5.4							
ARCES				LR	LR	12 42 16.5		
	comp=Z,86nm,19.6s,baz=54,slow=36							
BSMT	**Bassoo Peak**	**86.19**	**42**	*eP*	**P**	**12 03 17.5**	**+0.1**	
NVAR	**Mina Array Bea**	**86.46**	**51**	P	**P**	**12 03 18.8**	**-0.2**	
NVAR	**Mina Array Bea**	**86.46**	**51**	P	**P**	**12 03 18.8**	**-0.2**	
	comp=Z,0.4nm,0.7s,baz=234,slow=4.8,SNR=4.3							
MFID	**Camas Ranch**	**86.83**	**46**	*eP*	**P**	**12 03 19.8**	**-0.7**	
	comp=Z,7.0nm,1.2s							
ELK	**Elko**	**88.05**	**48**	LR	LR	12 36 03.5		
	comp=Z,52nm,20.8s,baz=12,slow=31							
HVU	**Hansel Valley**	**89.48**	**47**	*eP*	**P**	**12 03 32.9**	**-0.3**	
	comp=Z,28nm,0.5s							
FINES	**FINESS Array B**	**89.88**	**335**	P	**P**	**12 03 32.3**	**-2.1**	
FINES	**FINESS Array B**	**89.88**	**335**	P	**P**	**12 03 32.3**	**-2.1**	
	comp=Z,3.5nm,1.0s,baz=52,slow=12,SNR=4.5							
FINES				LR	LR	12 48 18.0		
	comp=Z,69nm,18.0s,baz=35,slow=39							
BHD	**Baghdad**	**90.17**	**304**	*ex*	**P**	**12 03 38.3**	**+1.9**	
BHD				*ex*	x	12 14 07.8		
BHD				*ex*	x	12 14 34.0		
PDAR	**Pinedale Array**	**91.37**	**45**	LR	LR	12 43 29.0		
	comp=Z,50nm,18.5s,baz=269,slow=35							
VNDA	**Vanda**	**92.72**	**176**	P	**P**	**12 03 48.7**	**+1.6**	
VNDA	**Vanda**	**92.72**	**176**	P	**P**	**12 03 48.7**	**+1.6**	
	comp=Z,0.8nm,0.9s,baz=341,slow=6.4,SNR=3.5							
VNDA				LR	LR	12 44 49.9		
	comp=Z,91nm,20.6s,baz=124,slow=35							
AKASG	**Malin Array Be**	**93.78**	**325**	LR	LR	12 47 54.4		
	comp=Z,112nm,20.7s,baz=40,slow=37							
RER	**Riviere de l'E**	**94.08**	**249**	*eP*	**P**	**12 03 54.6**	**-0.1**	
	comp=Z,108nm,1.0s							
NOA	**NORSAR Array B**	**95.76**	**339**	LR	LR	12 51 07.5		
	comp=Z,54nm,19.9s,baz=180,slow=38							
BRTR	**Keskin Array B**	**95.93**	**314**	P	**P**	**12 04 00.9**	**-2.1**	
BRTR	**Keskin Array B**	**95.93**	**314**	P	**P**	**12 04 00.9**	**-2.1**	
	comp=Z,0.3nm,0.5s,baz=1.4,slow=4.9,SNR=3.9							
CRVS	**Cervenica-Dubn**	**99.00**	**326**	PDIF	P	12 04 15.1		
TORD	**Torodi Ar. Bea**	**133.84**	**305**	PKP	**PKPdf**	**12 09 52.4**	**-1.3**	
TORD	**Torodi Ar. Bea**	**133.84**	**305**	PKP	**PKPdf**	**12 09 52.4**	**-1.3**	
	comp=Z,0.9nm,1.1s,baz=32,slow=2.2,SNR=3.1							
LPAZ	**La Paz**	**148.58**	**97**	PKPbc	**PKPbc**	**12 10 24.8**	**+0.4**	
LPAZ	**La Paz**	**148.58**	**97**	PKPbc	**PKPbc**	**12 10 24.8**	**+0.4**	
	comp=Z,0.7nm,0.6s,baz=225,slow=4.3,SNR=3.0							

IDC 17 11:59:38.2±3.2, 14.79N×144.66E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/24, mbtmp3.4/3, Error ellipse: s-maj=98.9km s-min=18.9km az=68.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.22**	**170**	Pn	Pn	12 00 03.1	+0.7
	20nm,0.3s,baz=312,slow=12,SNR=4.7						
GUMO				Sn	Sb	12 00 18.9	+0.6
	55nm,0.3s,baz=110,slow=22,SNR=11						
WRA	**Warramunga Arr**	**35.98**	**197**	P	P	12 06 41.2	+0.2
	0.6nm,0.8s,baz=22,slow=9.6,SNR=5.1						
CMAR	**Chiang Mai Arr**	**43.87**	**281**	P	P	12 07 46.4	-0.4
	0.3nm,0.5s,baz=89,slow=7.5,SNR=5.3						
MKAR	**Makanchi Array**	**60.49**	**316**	P	P	12 09 50.0	-0.1
	0.3nm,0.7s,baz=100,slow=6.6,SNR=2.9						

IDC 17 12:01:56.8±0.7, 14.90N×144.65E, h0km, mb3.7/14, mb1 3.9/14, mb1mx3.9/25, mbtmp3.7/14, MS3.3/4, Ms1 3.4/4, ms1mx2.9/44, Error ellipse: s-maj=26.8km s-min=14.9km az=85.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.31**	**171**	Pn	Pb	12 02 22.3	-0.2
	301nm,0.3s,baz=304,slow=1.5,SNR=9.8						
GUMO				Sn	Sg	12 02 37.8	-1.3
	299nm,0.3s,baz=304,slow=22,SNR=12						
JHJ	**Hachijo jima 2**	**18.67**	**347**	LR	LR	12 12 26.9	
	comp=Z,69nm,19.6s,baz=98,slow=34						
MJAR	**Matsushiro Arr**	**22.31**	**346**	P	P	12 06 57.8	+1.7
	2.2nm,0.8s,baz=169,slow=10,SNR=5.4						
MJAR				LR	LR	12 15 04.8		
	comp=Z,48nm,19.9s,baz=190,slow=35						
KSRS	**Korea Array**	**26.93**	**330**	P	P	12 07 39.9	0.0
	1.1nm,0.6s,baz=138,slow=9.7,SNR=4.6						
ASAJ	**Asahikawa**	**29.18**	**357**	LR	LR	12 19 21.1	
	comp=Z,85nm,19.1s,baz=176,slow=36						
WRA	**Warramunga Arr**	**36.07**	**197**	P	P	12 09 00.3	-0.1
	0.6nm,0.5s,baz=23,slow=9.8,SNR=13						
ASAR	**Alice Springs**	**39.74**	**196**	P	P	12 09 31.8	+0.4
	0.2nm,0.5s,baz=9.6,slow=8.7,SNR=5.9						
CMAR	**Chiang Mai Arr**	**43.84**	**281**	P	P	12 10 05.2	+0.1
	0.7nm,0.8s,baz=77,slow=6.6,SNR=6.9						
CMAR				LR	LR	12 26 18.8	
	comp=Z,58nm,20.4s,baz=345,slow=33						
SONM	**Songino Array**	**45.55**	**324**	P	P	12 10 18.4	-0.2
	0.3nm,0.6s,baz=170,slow=7.4,SNR=3.9						
MKAR	**Makanchi Array**	**60.41**	**316**	P	P	12 12 08.4	+0.2
	0.6nm,0.6s,baz=92,slow=8.2,SNR=6.5						
ZALV	**Zalesovo Beam**	**60.45**	**324**	P	P	12 12 08.2	-0.1
	0.5nm,0.5s,baz=100,slow=7.5,SNR=3.8						
ILAR	**Eielson Array**	**67.49**	**26**	P	P	12 12 53.6	-0.9
	0.1nm,0.4s,baz=249,slow=6.2,SNR=3.1						
AKTO	**Aktyubinsk**	**76.54**	**319**	P	P	12 13 47.6	-1.4
	0.3nm,0.3s,baz=63,slow=2.3,SNR=3.7						
YKA	**Yellowknife Ar**	**81.81**	**27**	P	P	12 14 18.4	+0.9
	0.4nm,0.7s,baz=289,slow=5.3,SNR=8.2						
ARCES	**ARCESS Array B**	**85.78**	**342**	P	P	12 14 38.0	+0.2
	2.6nm,0.7s,baz=76,slow=5.1,SNR=5.4						
NVAR	**Mina Array Bea**	**86.28**	**51**	P	P	12 14 41.3	+0.1
	0.2nm,0.6s,baz=270,slow=4.1,SNR=2.4						
FINES	**FINESS Array B**	**89.89**	**335**	P	P	12 14 56.4	-1.2
	1.8nm,0.7s,baz=63,slow=7.0,SNR=3.5						
TORD	**Torodi Ar. Bea**	**133.94**	**305**	PKP	PKPdf	12 21 17.5	+0.4
	0.3nm,0.7s,baz=50,slow=3.3,SNR=2.9						

GUC 17 12:07:21.4±0.5, 32.28S×71.37W, h44km±2km, MD3.5, ML2.7, 3C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROCH	**El Roble**	**0.75**	**156**	↑*iP*	Pn	12 07 36.7	+0.7
ROCH				*iS*	Sn	12 07 47.9	+1.5
PEL	**Peldehue**	**1.03**	**146**	↑*iP*	Pn	12 07 40.5	+1.0
PEL				*iS*	Sn	12 07 54.7	+1.8
PEL				AML	AML	12 07 55.6	
	comp=E,376nm,0.3s						
CMCH	**Combarbala**	**1.15**	**16**	↑*iP*	Pn	12 07 41.7	+0.5
CMCH				*iS*	Sn	12 07 57.9	+2.0
CMCH				AML	AML	12 07 59.5	
	comp=E,216nm,0.6s						
CLCH	**Cerro Calan**	**1.31**	**148**	↓*iP*	Pn	12 07 44.3	+0.9
CLCH				*iS*	Sn	12 08 01.3	+1.5
CLCH				AML	AML	12 08 02.4	
	comp=E,239nm,0.6s						
LMEL	**Las Melosas**	**1.84**	**148**	↓*iP*	Pn	12 07 51.9	+1.1
LMEL				*iS*	Sn	12 08 15.0	+2.0
LMEL				AML	AML	12 08 17.4	
	comp=N,122nm,0.1s						

IDC 17 12:18:11.7±1.0, 14.75N×144.36E, h0km, mb3.5/7, mb1 3.8/7, mb1mx3.6/24, mbtmp3.5/7, MS3.0/2, Ms1 3.0/2, ms1mx2.7/32, Error ellipse: s-maj=36.0km s-min=17.4km az=71.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.25**	**157**	Pn	Pg	12 18 35.6	-0.2
	101nm,0.3s,baz=319,slow=2.3,SNR=16						
GUMO				Sn	Sg	12 18 51.3	-0.7
	229nm,0.3s,baz=107,slow=20,SNR=38						
JHJ	**Hachijo jima 2**	**18.76**	**348**	LR	LR	12 27 39.1	
	comp=Z,40nm,21.1s,baz=62,slow=30						
MJAR	**Matsushiro Arr**	**22.39**	**347**	P	P	12 23 11.9	+0.2
	2.7nm,1.1s,baz=163,slow=9.0,SNR=4.4						
MJAR				LR	LR	12 30 32.4	
	comp=Z,59nm,21.4s,baz=200,slow=33						
WRA	**Warramunga Arr**	**35.85**	**196**	P	P	12 25 13.6	+0.2
	0.9nm,0.8s,baz=17,slow=9.3,SNR=4.1						
CMAR	**Chiang Mai Arr**	**43.59**	**281**	P	P	12 26 19.4	+1.3
	1.5nm,0.7s,baz=82,slow=6.7,SNR=11						
SONM	**Songino Array**	**45.51**	**324**	P	P	12 26 31.1	-1.9
	0.1nm,0.4s,baz=126,slow=7.4,SNR=3.2						
MKAR	**Makanchi Array**	**60.32**	**316**	P	P	12 28 22.2	-0.2
	0.5nm,0.7s,baz=103,slow=10,SNR=4.8						
ZALV	**Zalesovo Beam**	**60.40**	**324**	P	P	12 28 21.6	-1.2
	0.6nm,0.6s,baz=72,slow=9.5,SNR=4.6						
YKA	**Yellowknife Ar**	**82.07**	**27**	P	P	12 30 35.1	+1.4
	0.2nm,0.9s,baz=283,slow=5.5,SNR=3.2						

*NSSC **17** 12:22:22.7±1.5, 33.38N×35.37E, h2km±10km, MD1.2, ML1.7*
*ISCJB **17** 12:22:24.1±0.5, 33.34N±0.02×35.42E±0.04, h9km±4km, Error ellipse: s-maj=5.3km s-min=3.3km az=22.9*
*CSEM **17** 12:22:24.2±0.2, 33.34N×35.43E, h10km, ML2.9, Error ellipse: s-maj=3.6km s-min=2.1km az=118.0*
*GRAL **17** 12:22:25.0±0.3, 33.31N×35.45E, h5km±2km, MD2.9*

ISC 17 12:22:24.8±1.0, 33.33N±0.02×35.45E±0.03, h11km±9km, n26, σ0.74/46, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATL	**Matarih**	**0.18**	**328**	*eP*	**Pg**	**12 22 28.8**	**0.0**
MATL	**Matarih**	**0.18**	**328**	*eP*	**Pg**	**12 22 28.8**	**0.0**
KSDI	**Kefar Szold**	**0.23**	**128**	Pg	**Pg**	**12 22 28.5**	**-1.0**
KSDI				Sg	**Sg**	**12 22 32.7**	**+0.1**

comp=N,34nm,0.3s,SNR=49
ZALF Zalf 1.63 104 *i* P **Pn 12 22 54.1 +0.5**
ZALF *e*S **Sb 12 23 16.5 +0.9**
ZALF Zalf 1.63 104 *i* P **Pn 12 22 54.1 +0.5**
SNR=45
ZALF *e*S **Sb 12 23 16.5 +0.9**
SNR=40

CSEM ***17*** *12:22:35.1, 42˚.30N× 13˚.49E, h9km, After ROM*
ROM 17 12:22:35.1±0.1, 42˚.30N×13˚.49E, h9km, MI2.2/10, Error ellipse: s-maj=1.2km s-min=0.8km az=52.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.07**	**115**	Pg	Pg	12 22 37.9	+0.6
FAGN				Sg	Sg	12 22 39.4	+0.4
	3µm,0.4s						
FAGN	**Fagnano**	**0.07**	**115**	Pg	Pg	12 22 37.9	+0.6
FAGN				Sg	Sg	12 22 39.4	+0.4
	3µm,0.4s						
AQU	**L'Aquila**	**0.09**	**310**	Pg	Pg	12 22 38.1	+0.5
AQU				Sg	Sg	12 22 40.2	+0.9
	2µm,0.2s						
AQU	**L'Aquila**	**0.09**	**310**	Pg	Pg	12 22 38.1	+0.5
AQU				Sg	Sg	12 22 40.2	+0.9
	2µm,0.2s						
CAMP	**Campotosto**	**0.25**	**345**	Pg	Pg	12 22 40.8	+0.5
CAMP				Sg	Sg	12 22 44.7	+0.9
	216nm,0.4s						
CAMP	**Campotosto**	**0.25**	**345**	Pg	Pg	12 22 40.8	+0.5
CAMP				Sg	Sg	12 22 44.7	+0.9
	216nm,0.4s						
VCEL	**Villa Celiera**	**0.28**	**69**	Pg	Pg	12 22 41.5	+0.7
VCEL				Sg	Sg	12 22 45.8	+1.1
	603nm,0.3s						
VCEL	**Villa Celiera**	**0.28**	**69**	Pg	Pg	12 22 41.5	+0.7
VCEL				Sg	Sg	12 22 45.8	+1.1
	603nm,0.3s						
FIAM	**Fiamignano**	**0.28**	**264**	Pg	Pg	12 22 41.5	+0.6
FIAM				Sg	Sg	12 22 46.0	+1.2
	232nm,0.4s						
FIAM	**Fiamignano**	**0.28**	**264**	Pg	Pg	12 22 41.5	+0.6
FIAM				Sg	Sg	12 22 46.0	+1.2
	232nm,0.4s						
PTQR	**Pietraquaria**	**0.28**	**194**	Pg	Pg	12 22 41.5	+0.6
PTQR				Sg	Sg	12 22 46.0	+1.2
	60nm,0.2s						
PTQR	**Pietraquaria**	**0.28**	**194**	Pg	Pg	12 22 41.5	+0.6
PTQR				Sg	Sg	12 22 46.0	+1.2
	60nm,0.2s						
TERO	**Teramo**	**0.34**	**14**	Pg	Pg	12 22 42.2	+0.3
TERO				Sg	Sg	12 22 47.5	+1.1
	238nm,0.2s						
TERO	**Teramo**	**0.34**	**14**	Pg	Pg	12 22 42.2	+0.3
TERO				Sg	Sg	12 22 47.5	+1.1
	238nm,0.2s						
INTR	**Introdacqua**	**0.42**	**133**	Pg	Pg	12 22 43.9	+0.5
INTR				Sg	Sb	12 22 50.5	-0.8
	216nm,0.4s						
INTR	**Introdacqua**	**0.42**	**133**	Pg	Pg	12 22 43.9	+0.5
INTR				Sg	Sb	12 22 50.5	-0.8
	216nm,0.4s						
LNSS	**Leonessa**	**0.45**	**312**	Pg	Pg	12 22 44.5	+0.3
LNSS				Sg	Sb	12 22 52.2	-0.2
	142nm,0.4s						
LNSS	**Leonessa**	**0.45**	**312**	Pg	Pg	12 22 44.5	+0.3
LNSS				Sg	Sb	12 22 52.2	-0.2
	142nm,0.4s						
CERT	**Cerreto**	**0.52**	**228**	Pg	Pg	12 22 45.3	+0.1
	273nm,0.8s						
CERT	**Cerreto**	**0.52**	**228**	Pg	Pg	12 22 45.3	+0.1
	273nm,0.8s						
LPEL	**Lama dei Pelig**	**0.57**	**116**	Pg	Pg	12 22 46.6	+0.3
LPEL				Sg	Sb	12 22 55.3	-0.3
	157nm,0.2s						
LPEL	**Lama dei Pelig**	**0.57**	**116**	Pg	Pg	12 22 46.6	+0.3
LPEL				Sg	Sb	12 22 55.3	-0.3
	157nm,0.2s						
POFI	**Posta Fibreno**	**0.60**	**164**	Pg	Pg	12 22 47.1	+0.2
POFI	**Posta Fibreno**	**0.60**	**164**	Pg	Pg	12 22 47.1	+0.2
NRCA	**Norcia**	**0.60**	**333**	Pg	Pg	12 22 47.0	0.0
NRCA				Sg	Sb	12 22 56.3	-0.4
	32nm,0.4s						
NRCA	**Norcia**	**0.60**	**333**	Pg	Pg	12 22 47.0	0.0
NRCA				Sg	Sb	12 22 56.3	-0.4
	32nm,0.4s						
MNS	**Montasola**	**0.61**	**279**	Pg	Pg	12 22 47.0	0.0
	47nm,0.5s						
MNS	**Montasola**	**0.61**	**279**	Pg	Pg	12 22 47.0	0.0
	47nm,0.5s						
SDI	**San Donato**	**0.63**	**158**	Pg	Pb	12 22 48.1	-0.3
SDI				Sg	Sb	12 22 57.0	-0.4
	66nm,0.4s						
SDI	**San Donato**	**0.63**	**158**	Pg	Pb	12 22 48.1	-0.3
SDI				Sg	Sb	12 22 57.0	-0.4
	66nm,0.4s						
FDMO	**Fiordimonte**	**0.80**	**338**	Pg	Pg	12 22 50.3	-0.3
FDMO				Sg	Sb	12 23 02.5	+0.3
	38nm,0.3s						
FDMO	**Fiordimonte**	**0.80**	**338**	Pg	Pg	12 22 50.3	-0.3
FDMO				Sg	Sb	12 23 02.5	+0.3
	38nm,0.3s						
CESI	**CESI - Serrava**	**0.83**	**329**	Pg	Pg	12 22 51.2	0.0
CESI				Sg	Sb	12 23 03.3	+0.1
CESI	**CESI - Serrava**	**0.83**	**329**	Pg	Pg	12 22 51.2	0.0
CESI				Sg	Sb	12 23 03.3	+0.1

IDC ***17*** *12:22:47.4±0.8, 2˚.50N× 128˚.44E, h173km±7km, mb3.9/19, mb1 4.0/20, mb1mx3.9/28, mbtmp3.9/20, Error ellipse: s-maj=16.9km s-min=8.2km az=80.0*
ISCJB ***17*** *12:22:48.7±0.2, 2˚.44N±0˚.03× 128˚.30E±0˚.03, h200km, mb4.2/29, Error ellipse: s-maj=4.9km s-min=4.0km az=151.2*
AUST ***17*** *12:22:49.1±0.4, 2˚.46N× 128˚.30E, h199km, Error ellipse: s-maj=1.2km s-min=0.8km az=35.0*
NEIC ***17*** *12:22:49.1±1.7, 2˚.48N× 128˚.38E, h189km±17km, mb4.5/13, Error ellipse: s-maj=11.3km s-min=5.4km az=66.0*
DJA ***17*** *12:22:50.4±0.8, 3˚N±10˚× 12˚E±˚, h153km±12km, M4.7/8, mb4.8/6, mB4.9/5, MLv4.9/8, Mw(mB)4.2/5*
ISC 17 12:22:50.0±0.4, 2˚.39N±0˚.05× 128˚.24E±0˚.05, h200km, n118, σ1°38/126, mb4.2/29, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.83**	**209**	P	**Pn**	**12 23 25.4**	**-1.4**
TNTI				S	**Sn**	**12 23 54.1**	**-1.5**
LBMI	**Labuha**	**3.10**	**194**	P	**Pn**	**12 23 41.3**	**+0.4**
MNI	**Manado**	**3.53**	**255**	P	**Pn**	**12 23 44.7**	**-1.3**
MNI				S	**Sn**	**12 24 27.3**	**-2.6**
SWI	**Sorong**	**4.42**	**137**	P	**Pn**	**12 23 56.9**	**-0.2**
SWI	**Sorong**	**4.42**	**137**	P	**Pn**	**12 23 57.0**	**-0.2**
	baz=4.5,SNR=12						
KMSI	**Cibinong**	**4.63**	**247**	P	**Pn**	**12 23 59.0**	**-0.7**
KMSI				S	**Sn**	**12 24 53.9**	**-0.6**
AAI	**Ambon**	**6.04**	**180**	P	**Pn**	**12 24 16.5**	**-1.3**
	baz=6.1,SNR=5.5						
CTBH	**Cotabato--PC H**	**6.23**	**320**	*i* P	Pn	12 24 28.0	+7.7
LUWI	**Luwuk**	**6.45**	**238**	P	**Pn**	**12 24 23.9**	**+0.8**
	171nm,0.9s,3µm1.2nm						
MRSI	**Marisa**	**6.58**	**253**	P	**Pn**	**12 24 25.1**	**+0.3**
	131nm,0.6s,1µm0.6nm						
FAKI	**Fak Fak**	**6.62**	**143**	P	**Pn**	**12 24 25.9**	**+0.5**
	140nm,1.0s,1µm0.5nm						
TTSI	**Tana Toraja**	**10.00**	**237**	P	**Pn**	**12 25 09.3**	**-0.1**
	93nm,0.9s,672nm						
MYLDM	**Lahad Datu**	**10.11**	**286**	P	**Pn**	**12 25 11.0**	**+0.3**
MYLDM	**Lahad Datu**	**10.11**	**286**	P	**Pn**	**12 25 10.8**	**+0.1**
	50nm,1.2s						
TSM	**Tawau**	**10.52**	**281**	P	**Pn**	**12 25 15.1**	**-1.0**
SPSI	**Sidrap Palu**	**10.56**	**233**	P	**Pn**	**12 25 18.7**	**+2.1**
KAPI	**Kappang**	**11.23**	**229**	*e*Pn	**P**	**12 25 28.3**	**-2.8**
	12nm,0.7s						
KAPI				S	**Sn**	**12 27 27.6**	**-2.9**
KAPI				*e*Sn	**S**	**12 27 30.4**	**-0.3**
KAPI	**Kappang**	**11.23**	**229**	P	**Pn**	**12 25 27.4**	**+2.3**
	2.9nm,0.3s,baz=142,slow=7.2,SNR=9.1						
KAPI				S	**Sn**	**12 27 27.6**	**-2.9**
	0.4nm,0.3s,baz=158,slow=18,SNR=3.7						
KDM	**Kudat**	**12.23**	**292**	P	**Pn**	**12 25 36.9**	**-0.9**
KKM	**Kota Kinabalu**	**12.53**	**287**	*e*Pn	**Pn**	**12 25 41.4**	**-0.4**
	45nm,1.1s						
KKM	**Kota Kinabalu**	**12.53**	**287**	P	**Pn**	**12 25 41.5**	**-0.3**
KKM	**Kota Kinabalu**	**12.53**	**287**	P	**Pn**	**12 25 41.4**	**-0.4**
	baz=13,SNR=9.1						
JAY	**Jayapura**	**13.38**	**111**	P	P	12 25 56.4	+1.4
	baz=13,SNR=5.3						
BTM	**Bintulu**	**15.16**	**273**	P	**P**	**12 26 15.9**	**+1.0**
MTN	**Manton Dam**	**15.41**	**169**	P	**P**	**12 26 16.6**	**-0.9**
	baz=16,SNR=16						
KDU	**Kakadu**	**15.56**	**164**	P	**Pn**	**12 26 19.3**	**+0.2**
	baz=16,SNR=19						
SBUM	**Sibu**	**16.01**	**271**	P	**Pn**	**12 26 27.4**	**+2.9**
KSM	**Kuching**	**17.95**	**267**	*e*P	**Pn**	**12 26 47.0**	**-0.5**
	50nm,0.9s						
KSM	**Kuching**	**17.95**	**267**	P	**Pn**	**12 26 48.2**	**+0.6**
KSM	**Kuching**	**17.95**	**267**	P	**Pn**	**12 26 47.6**	**0.0**
	baz=18,SNR=27						
FITZ	**Fitzroy Crossi**	**20.53**	**187**	*e*P	**P**	**12 27 12.9**	**-0.2**
	4.7nm,0.7s						
FITZ	**Fitzroy Crossi**	**20.53**	**187**	P	**P**	**12 27 13.1**	**0.0**
	4.0nm,0.6s,baz=13,slow=7.8,SNR=28						
FITZ	**Fitzroy Crossi**	**20.53**	**187**	P	**P**	**12 27 12.9**	**-0.2**
	baz=21,SNR=9.2						
COEN	**Coen**	**21.98**	**138**	P	**P**	**12 27 27.5**	**-0.6**
	baz=22,SNR=12						
WRAB	**Tennant Creek**	**22.98**	**165**	*e*P	**P**	**12 27 37.5**	**+0.2**
	37nm,0.6s						
WRA	**Warramunga Arr**	**22.99**	**165**	P	**P**	**12 27 37.6**	**+0.2**
WRA	**Warramunga Arr**	**22.99**	**165**	P	**P**	**12 27 37.6**	**+0.2**
	50nm,0.6s,baz=345,slow=10,SNR=206						
MYKOM	**Kota Tinggi**	**24.38**	**269**	P	**P**	**12 27 52.0**	**+1.8**
MBWA	**Marble Bar**	**24.85**	**199**	*e*P	**P**	**12 27 55.9**	**+1.6**
KGM	**Kluang**	**24.91**	**270**	P	**P**	**12 27 58.1**	**+3.2**
KTGM	**Kuala Trenggan**	**25.22**	**277**	P	**P**	**12 28 00.8**	**+3.1**
QIS	**Mount Isa**	**25.38**	**154**	P	**P**	**12 27 59.8**	**+0.7**
	baz=26,SNR=14						
AS31	**Alice Springs**	**26.48**	**168**	*e*P	**P**	**12 28 09.4**	**+0.4**
ASAR	**Alice Springs**	**26.48**	**168**	P	**P**	**12 28 09.4**	**+0.4**
ASAR				PcP	**PcP**	**12 31 29.6**	**+0.9**
ASAR	**Alice Springs**	**26.48**	**168**	P	**P**	**12 28 09.4**	**+0.4**
	7.1nm,0.6s,baz=358,slow=8.6,SNR=90						
ASAR				PcP	**PcP**	**12 31 29.6**	**+0.9**
	3.1nm,0.5s,baz=354,slow=2.0,SNR=17						
IPM	**Ipoh**	**27.25**	**275**	P	**P**	**12 28 18.4**	**+2.5**
CTA	**Charters Tower**	**28.49**	**142**	P	**P**	**12 28 25.4**	**-1.4**
CTA	**Charters Tower**	**28.49**	**142**	P	**P**	**12 28 25.4**	**-1.4**
	4.6nm,0.7s,baz=333,slow=7.7,SNR=4.0						
CTAO	**Charters Tower**	**28.49**	**142**	*e*P	**P**	**12 28 27.7**	**+0.9**
	9.8nm,0.8s						
PSI	**Prapat**	**29.29**	**271**	P	**P**	**12 28 34.4**	**+0.2**
PSI	**Prapat**	**29.29**	**271**	P	**P**	**12 28 34.4**	**+0.2**
	7.5nm,0.9s,baz=3.8,slow=2.8,SNR=4.9						
MEEK	**Meekatharra**	**30.32**	**197**	P	**P**	**12 28 43.1**	**+0.2**
	baz=31,SNR=3.7						
GSI	**Gunungsitoli**	**30.67**	**269**	S	S	12 33 15.9	-18
	baz=31,SNR=10						
QLP	**Quilpie**	**32.69**	**153**	P	**P**	**12 29 03.8**	**+0.2**
	baz=33,SNR=7.0						
CMAR	**Chiang Mai Arr**	**32.85**	**301**	P	P	12 29 07.0	+1.8
CMAR				ScP	**ScP**	**12 35 14.4**	**+3.9**
CMAR	**Chiang Mai Arr**	**32.85**	**301**	P	P	12 29 07.0	+1.8
	5.2nm,0.9s,baz=116,slow=7.1,SNR=21						
CMAR				ScP	**ScP**	**12 35 14.4**	**+3.9**
	1.5nm,0.9s,baz=158,slow=2.9,SNR=8.7						
CHTO	**Chiang Mai**	**33.00**	**302**	*e*P	**P**	**12 29 08.0**	**+1.5**
	5.2nm,0.6s						
MORW	**Morawa**	**33.40**	**200**	P	**P**	**12 29 10.2**	**+0.5**
	baz=34,SNR=4.4						
KMBL	**Kambalda**	**34.11**	**190**	P	**P**	**12 29 16.4**	**+0.5**
	baz=34,SNR=5.3						
KSAR	**Wonju Array Be**	**34.88**	**360**	P	**P**	**12 29 21.7**	**-0.7**
RMQ	**Roma**	**34.89**	**147**	P	**P**	**12 29 22.9**	**+0.3**
	baz=35,SNR=4.1						
KSRS	**Korea Array**	**34.89**	**360**	P	**P**	**12 29 21.7**	**-0.7**
	0.6nm,0.4s,baz=172,slow=9.6,SNR=3.5						
MAT	**Matsushiro**	**35.21**	**14**	P	**P**	**12 29 22.5**	**-2.7**
MJAR	**Matsushiro Arr**	**35.21**	**14**	P	**P**	**12 29 22.7**	**-2.5**
MJAR	**Matsushiro Arr**	**35.21**	**14**	P	**P**	**12 29 22.7**	**-2.5**
	3.3nm,0.5s,baz=192,slow=9.8,SNR=18						
KLBR	**Kellerberrin**	**35.24**	**196**	P	**P**	**12 29 25.9**	**+0.4**
	baz=36,SNR=8.7						
EIDS	**Eidsvold**	**35.38**	**143**	*e*P	**P**	**12 29 26.8**	**0.0**
	18nm,1.1s						
EIDS	**Eidsvold**	**35.38**	**143**	P	**P**	**12 29 26.8**	**0.0**
	baz=36,SNR=3.9						
BBOO	**Buckleboo**	**35.78**	**169**	*e*P	**P**	**12 29 31.1**	**+1.0**
	267nm,0.6s						
BBOO	**Buckleboo**	**35.78**	**169**	P	**P**	**12 29 31.0**	**+0.8**
	baz=36,SNR=33						
XAN	**Xi'an**	**36.29**	**332**	P	**P**	**12 29 34.1**	**-0.4**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STKA	**Stephens Creek**	**36.36**	**161**	P	**P**	**12 29 35.9**	**+0.8**
STKA				PcP	**PcP**	**12 31 55.8**	**+0.6**
STKA	**Stephens Creek**	**36.36**	**161**	P	**P**	**12 29 35.9**	**+0.8**
	comp=Z,21nm,0.6s,baz=336,slow=8.3,SNR=92						
STKA				PcP	**PcP**	**12 31 55.8**	**+0.6**
	comp=Z,2.0nm,0.5s,baz=351,slow=1.8,SNR=4.1						
STKA	**Stephens Creek**	**36.36**	**161**	P	**P**	**12 29 35.9**	**+0.8**
	baz=37,SNR=69						
NWAO	**Narrogin (SRO)**	**36.64**	**196**	P	**P**	**12 29 37.5**	**+0.2**
NWAO	**Narrogin (SRO)**	**36.64**	**196**	P	**P**	**12 29 37.5**	**+0.2**
	comp=Z,7.1nm,0.8s,baz=13,slow=7.4,SNR=3.8						
CMSA	**Cobar Meteorol**	**37.60**	**155**	P	**P**	**12 29 46.4**	**+1.0**
	baz=38,SNR=5.9						
ARMA	**Armidale**	**39.53**	**147**	*e*P	**P**	**12 30 02.8**	**+1.1**
	comp=Z,9.5nm,0.7s						
ARMA	**Armidale**	**39.53**	**147**	P	**P**	**12 30 02.8**	**+1.1**
	baz=40,SNR=13						
ARPS	**Mount Arapiles**	**40.97**	**163**	P	**P**	**12 30 14.8**	**+1.5**
	baz=41,SNR=28						
TOO	**Toolangi**	**42.86**	**160**	P	P	12 30 30.9	+2.3
	baz=43,SNR=6.2						
ASAJ	**Asahikawa**	**43.45**	**15**	P	**P**	**12 30 32.6**	**-0.6**
ASAJ	**Asahikawa**	**43.45**	**15**	P	**P**	**12 30 32.6**	**-0.6**
	comp=Z,6.4nm,0.9s,baz=278,slow=15,SNR=7.0						
GTA	**Gaotai**	**45.02**	**329**	*e*P	**P**	**12 30 46.8**	**+0.9**
GTA				pP	**pP**	**12 31 25.5**	**-3.7**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TAPN	**Taplejung**	**46.02**	**307**	*e*P	**P**	**12 30 54.7**	**+0.5**
	comp=Z,15nm,0.7s						
RAMN	**Ramite**	**46.75**	**305**	*e*P	P	12 31 01.3	+1.5
GUN	**Gumba**	**47.73**	**306**	*e*P	**P**	**12 31 08.5**	**+1.1**
	comp=Z,33nm,0.7s						
PKI	**Pulchoki**	**47.97**	**306**	*e*P	**P**	**12 31 10.5**	**+1.2**
DMN	**Daman**	**48.23**	**306**	*e*P	**P**	**12 31 12.0**	**+0.8**
	comp=Z,25nm,1.0s						
SONM	**Songino Array**	**49.05**	**341**	P	**P**	**12 31 17.0**	**+0.1**
SONM				pP	pP	12 31 54.7	-6.2
SONM				PcP	**PcP**	**12 32 38.5**	**+1.0**
SONM	**Songino Array**	**49.05**	**341**	P	**P**	**12 31 17.0**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=147,slow=8.6,SNR=9.4						
SONM				pP	pP	12 31 54.7	-6.2
	comp=Z,1.0nm,0.7s,baz=150,slow=9.0,SNR=4.4						
SONM				PcP	**PcP**	**12 32 38.5**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=154,slow=4.9,SNR=6.2						
KOLN	**Koldanda**	**49.52**	**305**	*e*P	**P**	**12 31 22.2**	**+1.2**
DANN	**Dangsing**	**49.62**	**306**	*e*P	**P**	**12 31 22.6**	**+0.8**
	comp=Z,26nm,0.7s						
PYUN	**Piuthan**	**50.15**	**305**	*e*P	**P**	**12 31 26.8**	**+1.1**
	comp=Z,15nm,0.6s						
PETK	**Petropavlovsk-**	**56.11**	**21**	P	**P**	**12 32 08.3**	**-0.1**
PETK	**Petropavlovsk-**	**56.11**	**21**	P	**P**	**12 32 08.3**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=176,slow=5.3,SNR=5.1						
MK31	**Makanchi Array**	**59.51**	**325**	*e*P	**P**	**12 32 32.5**	**+0.2**
MKAR	**Makanchi Array**	**59.51**	**325**	P	**P**	**12 32 32.5**	**+0.3**
MKAR				pP	**PcP**	**12 33 13.6**	**-4.0**
MKAR	**Makanchi Array**	**59.51**	**325**	P	**P**	**12 32 32.5**	**+0.3**
	comp=Z,1.9nm,0.5s,baz=120,slow=8.4,SNR=18						
MKAR				pP	**PcP**	**12 33 13.6**	**-4.0**
	comp=Z,2.5nm,0.7s,baz=124,slow=7.7,SNR=3.6						
ZALV	**Zalesovo Beam**	**62.46**	**333**	P	**P**	**12 32 51.4**	**-0.5**
ZALV	**Zalesovo Beam**	**62.46**	**333**	P	**P**	**12 32 51.3**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=109,slow=6.6,SNR=3.3						
FX1	**Attu Island--F**	**62.50**	**29**	*e*P	**P**	**12 32 52.5**	**+0.4**
KURK	**Kurchatov**	**63.67**	**327**	*e*P	**P**	**12 32 60.0**	**0.0**
	comp=Z,2.6nm,0.6s						
TIXI	**Tiksi**	**69.16**	**0**	*e*P	**P**	**12 33 33.5**	**-0.8**
	comp=Z,5.1nm,0.4s						
BVAR	**Borovoye Array**	**69.26**	**327**	P	**P**	**12 33 35.3**	**0.0**
BVAR				pP	pP	12 34 17.0	-5.4
BVAR	**Borovoye Array**	**69.26**	**327**	P	**P**	**12 33 35.3**	**0.0**
	comp=Z,2.0nm,0.8s,baz=125,slow=7.4,SNR=8.8						
BVAR				pP	pP	12 34 17.0	-5.4
	comp=Z,2.6nm,0.8s,baz=114,slow=7.1,SNR=2.8						
BRVK	**Borovoye**	**69.33**	**327**	*e*P	P	12 33 37.6	+1.8
	comp=Z,3.8nm,1.0s						
VNDA	**Vanda**	**81.92**	**173**	P	**P**	**12 34 47.8**	**+1.1**
VNDA	**Vanda**	**81.92**	**173**	P	**P**	**12 34 47.8**	**+1.1**
	comp=Z,3.7nm,0.7s,baz=319,slow=6.1,SNR=24						
COLD	**Coldfoot**	**84.53**	**23**	*e*P	P	12 35 01.2	+1.0
	comp=Z,3.0nm,0.6s						
ILAR	**Eielson Array**	**85.66**	**25**	P	**P**	**12 35 04.5**	**-1.3**
ILAR	**Eielson Array**	**85.66**	**25**	P	**P**	**12 35 04.5**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=251,slow=4.9,SNR=13						
ARCES	**ARCESS Array B**	**92.22**	**340**	P	**P**	**12 35 35.9**	**-0.8**
ARCES	**ARCESS Array B**	**92.22**	**340**	P	**P**	**12 35 35.9**	**-0.8**
	comp=Z,3.8nm,0.8s,baz=65,slow=5.8,SNR=6.7						
YKA	**Yellowknife Ar**	**100.08**	**25**	P	**Pdif**	**12 36 12.2**	**-0.2**
YKA	**Yellowknife Ar**	**100.08**	**25**	P	**Pdif**	**12 36 12.2**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=296,slow=4.3,SNR=7.2						
TORD	**Torodi Ar. Bea**	**124.77**	**288**	PKP	**PKPdf**	**12 41 27.5**	**+0.5**
TORD	**Torodi Ar. Bea**	**124.77**	**288**	PKP	**PKPdf**	**12 41 27.5**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=72,slow=1.6,SNR=13						

IDC 17 12:28:41.0±1.7, 14˚.78N×144˚.60E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.4/25, mbtmp3.7/4, Error ellipse: s-maj=65.4km s-min=17.2km az=72.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.21**	**168**	Pn	Pn	12 29 05.7	+0.6
	43nm,0.3s,baz=72,slow=20,SNR=2.6						
GUMO				Sn	Sn	12 29 21.6	-0.6
	154nm,0.3s,baz=103,slow=20,SNR=11						
MJAR	**Matsushiro Arr**	**22.42**	**346**	P	P	12 33 41.2	-0.1
	1.4nm,0.9s,baz=179,slow=10,SNR=3.9						
CMAR	**Chiang Mai Arr**	**43.82**	**281**	P	P	12 36 49.2	+0.1
	0.5nm,0.5s,baz=76,slow=7.7,SNR=6.1						
MKAR	**Makanchi Array**	**60.47**	**316**	P	P	12 38 52.7	0.0
	0.1nm,0.5s,baz=97,slow=8.1,SNR=4.1						
BVAR	**Borovoye Array**	**68.84**	**321**	P	P	12 39 46.9	-0.4
	1.2nm,0.7s,baz=81,slow=8.9,SNR=6.2						

IDC 17 12:30:06.4±0.9, 14˚.85N×144˚.74E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.5/26, mbtmp3.6/7, Error ellipse: s-maj=32.4km s-min=15.8km az=83.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.26**	**174**	Pn	Pn	12 30 31.8	+0.5
	262nm,0.3s,baz=274,slow=2.4,SNR=9.9						
GUMO				Sn	Sb	12 30 47.9	+0.2
	204nm,0.3s,baz=34,slow=23,SNR=9.0						
WRA	**Warramunga Arr**	**36.05**	**197**	P	P	12 37 10.1	+0.2
	0.5nm,0.6s,baz=20,slow=9.8,SNR=7.8						
CMAR	**Chiang Mai Arr**	**43.93**	**281**	P	P	12 38 15.1	-0.4
	0.6nm,0.6s,baz=79,slow=6.2,SNR=4.6						
MKAR	**Makanchi Array**	**60.50**	**316**	P	P	12 40 18.4	+0.1
	0.3nm,0.5s,baz=94,slow=8.7,SNR=3.0						
KURBB	**Kurchatov Arra**	**63.59**	**319**	P	P	12 40 38.8	-0.2
	0.2nm,0.4s,baz=101,slow=6.9,SNR=7.4						
ILAR	**Eielson Array**	**67.49**	**26**	P	P	12 41 03.7	-0.3
	0.2nm,0.7s,baz=261,slow=4.5,SNR=3.0						
BVAR	**Borovoye Array**	**68.87**	**321**	P	P	12 41 12.7	-0.1
	0.4nm,0.4s,baz=109,slow=8.1,SNR=3.2						
YKA	**Yellowknife Ar**	**81.81**	**27**	P	P	12 42 27.5	+0.4
	0.3nm,0.7s,baz=291,slow=5.3,SNR=5.4						

IDC ***17*** *12:30:57.3±0.8, 14˚.83N× 144˚.64E, h0km, mb4.1/15, mb1 4.2/15, mb1mx4.0/28, mbtmp4.1/15, Error ellipse: s-maj=31.6km s-min=13.3km az=81.0*
NEIC ***17*** *12:30:58.9±0.5, 14˚.83N× 144˚.65E, h10km, mb4.5/5, Error ellipse: s-maj=18.7km s-min=6.9km az=81.0*
ISCJB ***17*** *12:30:59.2±0.6, 14˚.81N±0˚.06× 144˚.5E±0˚.2, h22km, mb4.1/19, Error ellipse: s-maj=25.2km s-min=6.6km az=165.4*
ISC 17 12:31:00.6±0.7, 14˚.79N±0˚.07× 144˚.6E±0˚.2, h22km, n39, σ0°65/44, mb4.2/19, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.21**	**169**	*e*Pn	**Pb**	**12 31 23.0**	**+0.1**
GUMO				*e*Sn	**Sn**	**12 31 37.2**	**-0.8**
GUMO				Sn	**Sn**	**12 31 37.7**	**-0.3**
GUMO	**Guam**	**1.21**	**169**	Pn	**Pn**	**12 31 22.4**	**+0.1**
	122nm,0.3s,baz=27,slow=6.8,SNR=2.8						
GUMO				Sn	**Sn**	**12 31 37.7**

NEIC Felt [II] at T'ai-chung and Taipei. Also felt at Chang-hua, Chu-pei, Hsin-chuang, Hsin-chu, Hua-lien, I-lan, Miao-li, T'ao-yuan and Yung-ho. Recorded [4 TAP] in Hua-lien; [3 TAP] in I-lan; [2 TAP] in Miao-li, Nan-t'ou, T'ai-chung, T'ai-pei and T'ao-yuan; [1 TAP] in Chia-i, Hsin-chu, P'eng-hu, T'ai-nan and T'ai-tung. Recorded [1 JMA] on Iriomote-jima, Ryukyu Islands.

JMA ***17*** *12:37:49.4±0.2,24.1°10N×121.7°2E,h78km±4km,M5.0*

JMA Felt I J1.

IDC ***17*** *12:37:50.4±2.0,23.°88N×121.°75E,h64km±18km,mb4.2/33, mb1 4.3/36,mb1mx4.3/42,mbtmp4.2/36,MS4.0/22, Ms1 4.0/22,ms1mx3.8/39,Error ellipse: s-maj=13.5km s-min=9.1km az=68.0*

DJA ***17*** *12:37:50.7±0.7,24°N±7'×12°2'E±1°2,h51km±9km,M4.8/6, mB5.0/5,mb4.8/6,MLv5.0/1,Mw(mB)4.4/5*

ISC 17 12:37:48.7±0.3,23°.93N±0°.02×121°.75E±0°.02,h40km±2km, h40km:pP-P,n349,σ1§66/457,mb4.7/95,MS4.0/28, 35C-20D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HWA	**Hwalien**	**0.14**	**288**	⇓*i*	P	**Pn**	**12 37 56.2**	**+0.7**
	baz=313							
TWD	**Chiawan**	**0.20**	**316**	⇓*i*	P	**Pn**	**12 37 56.5**	**+0.5**
	baz=336							
TWD				*e*	S	**Sn**	**12 38 02.2**	**+1.1**
	baz=336							
ESF	**Shoufeng Towns**	**0.23**	**254**	*e*	P	**Pn**	**12 37 56.4**	**+0.1**
	baz=268							
ESF				*e*	S	**Sn**	**12 38 01.7**	**+0.2**
	baz=268							
NACB	**Ninganchiao**	**0.28**	**329**	*e*	Pn	**Pn**	**12 37 56.9**	**+0.2**
NACB				*e*	Sn	**Sn**	**12 38 03.6**	**+1.3**
TEGC	**Jichi Village**	**0.30**	**221**	*e*	P	**Pn**	**12 37 57.4**	**+0.5**
	baz=202							
TEGC				*e*	S	**Sn**	**12 38 04.3**	**+1.7**
	baz=202							
ESL	**Shilin**	**0.32**	**248**	⇓	P	**Pn**	**12 37 56.7**	**-0.4**
	baz=254							
EHP	**Heping Village**	**0.37**	**359**		P	**Pn**	**12 37 58.8**	**+0.9**
	baz=17							
EHP				*e*	S	**Sn**	**12 38 06.4**	**+2.2**
	baz=17							
ENA	**Nanau**	**0.49**	**359**	⇓*i*	P	**Pn**	**12 37 60.0**	**+0.6**
	baz=13							
WHF	**Hehuan Shan**	**0.49**	**295**	⇓*i*	P	**Pn**	**12 37 59.3**	**-0.4**
	baz=298							
EHY	**Hungye**	**0.58**	**223**	⇑*i*	P	**Pn**	**12 37 59.5**	**-1.0**
	baz=226							
NNS	**Nan Shan**	**0.61**	**326**	⇑*i*	P	**Pn**	**12 38 01.2**	**+0.2**
	baz=332							
TWT	**Tachien**	**0.61**	**301**	⇑*i*	P	**Pn**	**12 38 01.5**	**+0.3**
	baz=307							
TWC	**Suao**	**0.68**	**8**	⇓*i*	P	**Pn**	**12 38 03.1**	**+1.2**
	baz=21							
YULB	**Yu-li**	**0.68**	**218**	*e*	Pn	**Pn**	**12 38 00.4**	**-1.5**
YULB				*e*	Sn	**Sn**	**12 38 09.5**	**-1.9**
TWF1	**Yuli**	**0.71**	**216**	⇑	P	**Pn**	**12 38 01.3**	**-1.0**
	baz=221							
ENTT	**Nioudou**	**0.72**	**347**	⇑*i*	P	**Pn**	**12 38 03.0**	**+0.6**
	baz=351							
SSLB	**Suanglung**	**0.74**	**259**	*e*	Pn	**Pn**	**12 38 02.0**	**-0.8**
SSLB				*e*	Sn	**Sn**	**12 38 11.9**	**-1.1**
SMLT	**Sun Moon Lake**	**0.78**	**266**	⇑*i*	P	**Pn**	**12 38 03.2**	**-0.1**
	baz=268							
SMLT				*e*	S	**Sn**	**12 38 14.1**	**+0.2**
	baz=268							
TWE	**Neicheng**	**0.79**	**354**	⇑*i*	P	**Pn**	**12 38 04.1**	**+0.8**
	baz=351							
YHNB	**Yeheng**	**0.81**	**335**	*e*	Pn	**Pn**	**12 38 03.5**	**-0.2**
YHNB				*e*	Sn	**Sn**	**12 38 15.6**	**+1.0**
TYC	**Yuchr**	**0.82**	**268**	⇑*i*	P	**Pn**	**12 38 03.5**	**-0.2**
	baz=274							
TYC				*e*	S	**Sn**	**12 38 13.7**	**-0.9**
	baz=274							
NSK	**Sanguang**	**0.82**	**334**	⇑*i*	P	**Pn**	**12 38 04.4**	**+0.6**
	baz=338							
ILA	**Ilan**	**0.83**	**360**	*e*	P	**Pn**	**12 38 05.0**	**+1.1**
	baz=353							
ILA				*e*	S	**Sn**	**12 38 17.3**	**+2.4**
	baz=353							
CHKT	**Chengkung**	**0.90**	**203**	⇑	P	**Pn**	**12 38 04.5**	**-0.4**
	baz=187							
CHKT				*e*	S	**Sn**	**12 38 17.5**	**+0.8**
	baz=187							
ALS	**Alishan**	**0.96**	**244**	⇑*i*	P	**Pn**	**12 38 06.3**	**+0.2**
	baz=239							
ALS				*e*	S	**Sn**	**12 38 18.6**	**-0.1**
	baz=239							
NSTT	**Nanjuang**	**0.97**	**316**	⇑*i*	P	**Pn**	**12 38 07.3**	**+1.4**
	baz=304							
WNT	**Mingjian**	**0.98**	**267**	⇑*i*	P	**Pn**	**12 38 06.9**	**+0.9**
	baz=268							
WNT					S	**Sn**	**12 38 19.4**	**+0.8**
	baz=268							
TWQ1	**Liyutan**	**0.98**	**295**	⇑*i*	P	**Pn**	**12 38 07.0**	**+1.0**
	baz=297							
TWQ1				*e*	S	**Sn**	**12 38 19.4**	**+0.7**
	baz=297							
ELDTW	**Lidau**	**1.00**	**222**	*e*	P	**Pn**	**12 38 05.2**	**-1.2**
	baz=216							
ELDTW				*e*	S	**Sn**	**12 38 18.3**	**-1.0**
	baz=216							
TCU	**Taichung**	**1.01**	**282**	⇑*i*	P	**Pn**	**12 38 07.6**	**+1.3**
	baz=284							
NSY	**Sanyi**	**1.02**	**298**	⇑*i*	P	**Pn**	**12 38 07.7**	**+1.2**
	baz=300							
NSY				*e*	S	**Sn**	**12 38 21.3**	**+1.6**
	baz=300							
CHN5	**Tsauling**	**1.04**	**251**	⇑	P	**Pn**	**12 38 07.3**	**+0.5**
	baz=251							
TATO	**Taipei**	**1.06**	**347**	*e*	Pn	**Pn**	**12 38 07.9**	**+0.8**
TATO				*e*	Sn	**Sn**	**12 38 21.6**	**+0.9**
TWB1	**Santiao Chiao**	**1.09**	**11**		P	**Pn**	**12 38 09.5**	**+2.0**
	baz=16							
TWB1				*e*	S	**Sn**	**12 38 24.8**	**+3.4**
	baz=16							
WGK	**Gukeng**	**1.12**	**257**		P	**Pn**	**12 38 08.7**	**+0.9**
	baz=259							
WGK				*e*	S	**Sn**	**12 38 23.3**	**+1.3**
	baz=259							
TAP1	**Taipei**	**1.12**	**349**	*e*	P	**Pn**	**12 38 08.6**	**+0.8**
	baz=349							
TAP1				*e*	S	**Sn**	**12 38 22.9**	**+0.8**
	baz=349							
HSN	**Hsinchu**	**1.12**	**321**	⇑	eP	**Pn**	**12 38 09.3**	**+1.4**
	baz=324							
HSN				*e*	S	**Sn**	**12 38 23.9**	**+1.8**
	baz=324							
TAP	**Taipei**	**1.12**	**349**	*e*	P	**Pn**	**12 38 08.7**	**+0.8**
	baz=351							
NWF	**Wu-fen Shan**	**1.13**	**1**	*e*	P	**Pn**	**12 38 09.6**	**+1.4**
	baz=352							
NCU	**National Centr**	**1.15**	**334**	⇑*i*	P	**Pn**	**12 38 09.6**	**+1.3**
	baz=334							
NCU				*e*	S	**Sn**	**12 38 25.5**	**+2.6**
	baz=334							
TWS1	**Kuangyinshan**	**1.20**	**345**	⇑*i*	P	**Pn**	**12 38 10.0**	**+1.0**
	baz=354							
TWS1				*e*	S	**Sn**	**12 38 26.3**	**+2.2**
	baz=354							
TPUB	**Ta-pu**	**1.21**	**239**	*e*	Pn	**Pn**	**12 38 09.6**	**+0.5**
TPUB				*e*	Sn	**Sn**	**12 38 23.7**	**-0.6**
CHN4	**Tsaushan**	**1.21**	**242**	⇓*i*	P	**Pn**	**12 38 10.2**	**+1.0**
	baz=235							
CHN4				*e*	S	**Sn**	**12 38 25.6**	**+1.2**
	baz=235							
CHN2	**Minshiung**	**1.24**	**251**	*e*	P	**Pn**	**12 38 10.6**	**+1.1**
	baz=253							
CHN2				*e*	S	**Sn**	**12 38 26.6**	**+1.7**
	baz=253							
WTP	**Ta-pu**	**1.25**	**237**	⇓*i*	P	**Pn**	**12 38 10.6**	**+0.9**
	baz=238							
WTP				*e*	S	**Sn**	**12 38 26.4**	**+1.0**
	baz=238							
YOJ	**Yonaguni jima**	**1.26**	**65**	⇓	P	**Pn**	**12 38 11.5**	**+1.6**
	baz=69							
YOJ				*e*	S	**Sn**	**12 38 28.1**	**+2.5**
	baz=69							
YOJ	**Yonaguni jima**	**1.26**	**65**		P	**Pn**	**12 38 11.4**	**+1.6**
YOJ					S	**Sn**	**12 38 27.7**	**+2.1**
TWG	**Pinlang**	**1.27**	**210**	⇓*i*	P	**Pn**	**12 38 08.6**	**-1.4**
	baz=196							
TWG	**Pinlang**	**1.27**	**210**	*e*	Pn	**Pn**	**12 38 08.4**	**-1.6**
TWG				*e*	Sn	**Sn**	**12 38 24.1**	**-1.7**
CHY	**Chiayi**	**1.29**	**251**		P	**Pn**	**12 38 11.3**	**+1.1**
	baz=252							
CHY				*e*	S	**Sn**	**12 38 27.3**	**+1.0**
	baz=252							
TTN	**Taitung**	**1.30**	**205**	*e*	P	**Pn**	**12 38 10.0**	**-0.3**
	baz=201							
TWK	**Hsinying**	**1.34**	**240**	*e*	P	**Pn**	**12 38 11.4**	**+0.5**
	baz=241							
TWK				*e*	S	**Sn**	**12 38 28.6**	**+1.1**
	baz=241							
TWY	**Chenhua**	**1.34**	**354**	*e*	P	**Pn**	**12 38 11.7**	**+0.7**
	baz=343							
CHN1	**Nanshi**	**1.35**	**237**	⇓*i*	P	**Pn**	**12 38 11.8**	**+0.8**
	baz=239							
CHN1				*e*	S	**Sn**	**12 38 29.2**	**+1.5**
	baz=239							
WTCT	**Ta-ch'eng**	**1.35**	**267**	*e*	P	**Pn**	**12 38 11.8**	**+0.8**
	baz=269							
WTCT				*e*	S	**Sn**	**12 38 29.2**	**+1.5**
	baz=269							
SGST	**Jiashian**	**1.37**	**232**	⇓*e*	P	**Pn**	**12 38 12.6**	**+1.3**
	baz=222							
WSF	**Szhu**	**1.43**	**258**	⇓*i*	P	**Pn**	**12 38 13.2**	**+1.1**
	baz=260							
WSF				*e*	S	**Sn**	**12 38 31.5**	**+1.8**
	baz=260							
ECL	**Taimali**	**1.52**	**209**	*e*	P	**Pn**	**12 38 11.6**	**-1.7**
	baz=197							
CHN8	**Yiju**	**1.53**	**248**	⇓	P	**Pn**	**12 38 14.1**	**+0.6**
	baz=250							
CHN8				*e*	S	**Sn**	**12 38 33.5**	**+1.3**
	baz=250							
CHN3	**Shinhua**	**1.53**	**236**	*e*	P	**Pn**	**12 38 15.2**	**+1.6**
	baz=239							
CHN3				*e*	S	**Sn**	**12 38 35.0**	**+2.8**
	baz=239							
SCLT	**Jiali**	**1.62**	**242**	*e*	P	**Pn**	**12 38 15.5**	**+0.8**
	baz=245							
SCLT				*e*	S	**Sn**	**12 38 36.1**	**+1.8**
	baz=245							
TWM1	**Shoushan**	**1.65**	**228**	*e*	P	**Pn**	**12 38 17.0**	**+1.9**
	baz=228							
TAI1	**Yung-k'ang**	**1.66**	**238**	*e*	P	**Pn**	**12 38 16.5**	**+1.3**
	baz=241							
TAI1				*e*	S	**Sn**	**12 38 36.4**	**+1.1**
	baz=241							
SGLT	**Jiouru**	**1.67**	**224**	*e*	P	Pn	12 38 18.1	+2.7
	baz=227							
SGLT				*e*	S	**Sn**	**12 38 39.6**	**+3.9**
	baz=227							
PCYT	**Pengchaiyu**	**1.71**	**10**	⇓	P	**Pn**	**12 38 17.9**	**+1.9**
	baz=354							
PCYT				*e*	S	**Sn**	**12 38 40.2**	**+3.5**
	baz=354							
EAST	**Anshuo**	**1.75**	**208**	⇓	P	**Pn**	**12 38 15.5**	**-1.1**
	baz=197							
TAW	**Tawu**	**1.76**	**207**	*e*	P	**Pn**	**12 38 15.5**	**-1.1**
	baz=196							
IRIF	**Iriomote-Funau**	**1.85**	**77**		P	**Pn**	**12 38 19.7**	**+1.8**
IRIF				*e*	S	**Sn**	**12 38 42.9**	**+2.8**
SCZT	**Fangliau**	**1.87**	**214**	*e*	P	**Pn**	**12 38 19.6**	**+1.4**
	baz=231							
SCZT				*e*	S	**Sn**	**12 38 42.3**	**+1.7**
	baz=231							
HATJ	**Hateruma jima**	**1.88**	**86**		P	**Pn**	**12 38 20.3**	**+2.0**
HATJ				*e*	S	**Sn**	**12 38 43.6**	**+2.7**
TWP	**Hsiaoliuchiu**	**2.03**	**219**	*e*	P	**Pn**	**12 38 23.1**	**+2.6**
	baz=220							
WDGT	**Dungji**	**2.03**	**251**	⇓	eP	**Pn**	**12 38 20.3**	**-0.1**
	baz=251							
PNG	**Penghu**	**2.04**	**260**	*e*	P	**Pn**	**12 38 20.4**	**-0.2**
	baz=262							
PNG				*e*	S	**Sn**	**12 38 44.0**	**-0.9**
	baz=262							
JKRS	**Kuro-shima**	**2.08**	**81**		P	**Pn**	**12 38 23.3**	**+2.2**
JKRS				*e*	S	**Sn**	**12 38 49.3**	**+3.4**
HEN	**Hengchun**	**2.13**	**206**	*e*	P	**Pn**	**12 38 23.7**	**+1.9**
	baz=193							
HEN				*e*	S	**Sn**	**12 38 49.0**	**+1.9**
	baz=193							
TWK1	**Hengchun**	**2.17**	**204**	*e*	P	**Pn**	**12 38 22.2**	**0.0**
	baz=187							
TWK1				*e*	S	**Sn**	**12 38 50.3**	**+2.5**
	baz=187							
TSEB	**Hengchuen, Pin**	**2.17**	**201**	*e*	P	**Pn**	**12 38 23.1**	**+0.8**
	baz=195							
TSEB				*e*	S	**Sn**	**12 38 50.2**	**+2.2**
	baz=195							
JIJ	**Ishigaki jima**	**2.23**	**78**		P	**Pn**	**12 38 24.6**	**+1.5**
JIJ				*e*	S	**Sn**	**12 38 50.4**	**+1.1**
JTJ	**Tarama**	**2.78**	**75**		P	**Pn**	**12 38 32.5**	**+1.8**
JTJ				*e*	S	**Sn**	**12 39 04.8**	**+1.7**
QZH	**Quanzhou**	**3.05**	**290**	⇓*i*	Pn	**Pn**	**12 38 34.8**	**+0.4**
QZH					Sn	**Sn**	**12 39 07.3**	**-2.4**
QZH					smax	smax		
	comp=N,6μm,0.8s							
QZH					smax	smax		
	comp=E,4μm,0.6s							
QZH					LR	LR		
	comp=E,6μm,7.0s							
QZH					LR	LR		
	comp=Z,6μm,8.9s							
KNM	**Kinmen**	**3.07**	**280**	*e*	P	**Pn**	**12 38 35.8**	**+1.1**
	baz=278							
JMJ	**Miyako jima 2**	**3.35**	**74**	*e*	P	**Pn**	**12 38 40.1**	**+1.6**
	baz=78							
JMJ				*e*	S	**Sn**	**12 39 18.5**	**+1.5**
	baz=78							
JMJ	**Miyako jima 2**	**3.35**	**74**		P	**Pn**	**12 38 40.1**	**+1.6**
JMJ				*e*	S	**Sn**	**12 39 18.9**	**+1.9**
JOGS	**Gusukube**	**3.43**	**75**		P	**Pn**	**12 38 41.6**	**+1.9**
JOGS				*e*	S	**Sn**	**12 39 21.2**	**+2.1**
JKE	**Kume jima 2**	**5.15**	**61**		P	**Pn**	**12 39 04.6**	**+1.4**
JKE				*e*	S	**Sn**	**12 40 03.0**	**+1.6**
JAGN	**Aguni-jima**	**5.63**	**61**		P	**Pn**	**12 39 11.0**	**+1.2**
JAGN				*e*	S	**Sn**	**12 40 13.3**	**0.0**
PIP	**Pasuquin**	**5.68**	**191**	⇑	eP	**Pn**	**12 39 11.9**	**+1.4**
JJT2	**Tamagusuku 2**	**5.87**	**67**		P	**Pn**	**12 39 15.0**	**+1.9**
JJT2				*e*	S	**Sn**	**12 40 18.4**	**-0.7**
ABRA	**Dolores**	**6.33**	**189**	*e*	P	**Pn**	**12 39 21.7**	**+2.2**
JIH	**Iheya**	**6.41**	**60**		P	**Pn**	**12 39 21.2**	**+0.7**
JIH				*e*	S	**Sn**	**12 40 32.5**	**+0.1**
JOW	**Kunigami**	**6.57**	**63**	*e*	P	**Pn**	**12 39 22.8**	**0.0**
	baz=65							
JOW	**Kunigami**	**6.57**	**63**	*e*	Pn	**Pn**	**12 39 22.8**	**0.0**
JOW				*e*	Sn	**Sn**	**12 40 36.6**	**+0.2**
JOW	**Kunigami**	**6.57**	**63**		P	**Pn**	**12 39 22.7**	**0.0**
JOW				*e*	S	**Sn**	**12 40 36.1**	**-0.3**
CAUP	**Cauayan**	**6.96**	**179**	*e*	P	Pn	12 39 31.4	+3.3
SSE	**Sheshan**	**7.15**	**356**	*e*	Pn	**Pn**	**12 39 30.0**	**-0.7**
SSE					Sn	**Sn**	**12 40 47.3**	**-3.4**
SSE					smax	smax		
	comp=N,180nm,1.2s							
SSE					smax	smax		
	comp=E,250nm,1.1s							
SSE					LR	LR		
	comp=Z,390nm,22.4s							
JTK	**Tokunoshima**	**7.53**	**58**		P	**Pn**	**12 39 35.3**	**-0.7**
JTK				*e*	S	**Sn**	**12 40 57.3**	**-2.8**
BOLP	**Bolinao**	**7.71**	**193**	*e*	P	Pn	12 39 41.6	+3.1
JAMN	**Amaminishikomi**	**7.93**	**56**		P	**Pn**	**12 39 40.4**	**-1.1**
JAMN				*e*	S	**Sn**	**12 41 10.0**	**+0.1**
BALP	**Baler**	**8.15**	**181**	*e*	P	**Pn**	**12 39 46.8**	**+2.3**
JAM	**Amami Oshima**	**8.35**	**56**		P	**Pn**	**12 39 46.5**	**-0.6**
JAM				*e*	S	**Sn**	**12 41 15.9**	**-4.2**
NJ2	**Nanjing**	**8.48**	**343**	*e*	P	**Pn**	**12 39 48.4**	**-0.6**
NJ2					S	**Sn**	**12 41 20.8**	**-2.6**
NJ2					pmax	pmax		
	comp=Z,20nm,0.7s							
NJ2					smax	smax		
	comp=N,1μm,0.8s							
NJ2					smax	smax		
	comp=E,1μm,1.1s							
NJ2					LR	LR		
	comp=N,1μm,11.5s							
NJ2					LR	LR		
	comp=E,1μm,13.9s							
NJ2					LR	LR		
	comp=Z,990nm,12.3s							
JMZ	**Minamidaito 2**	**8.80**	**76**		P	Pn	12 39 50.4	-3.0
JMZ				*e*	S	Sn	12 41 23.7	-7.6
WHN	**Wuhan**	**9.31**	**317**	⇓	P	**Pn**	**12 39 59.0**	**-1.3**
WHN					LR	LR		
	comp=N,5μm,6.2s							
WHN					LR	LR		
	comp=E,3μm,6.5s							
WHN					LR	LR		
	comp=Z,3μm,21.0s							
JNN	**Nakanoshima**	**9.34**	**49**		P	**Pn**	**12 40 01.8**	**+1.1**
QIZ	**Qiongzhong**	**12.11**	**249**		P	**Pn**	**12 40 38.3**	**-0.4**
QIZ					S	**Sn**	**12 42 52.3**	**-0.2**
QIZ					LR	LR		
	comp=N,720nm,15.8s							
QIZ					LR	LR		
	comp=Z,670nm,21.0s							
JNU	**Nakatsue**	**12.16**	**39**	*e*	Pn	**Pn**	**12 40 42.2**	**+2.8**
JNU				*e*	Sn	**Sn**	**12 42 55.8**	**+2.0**
JNU	**Nakatsue**	**12.16**	**39**		P	**Pn**	**12 40 42.3**	**+2.8**
	comp=Z,0.5nm,0.3s,baz=216,slow=7.3,SNR=10							
JNU					LR	LR	12 46 26.8	
	comp=Z,660nm,18.5s,baz=218,slow=42							
GYA	**Guiyang**	**13.89**	**284**	⇑*i*	P	**Pn**	**12 41 05.5**	**+2.4**
GYA					pP	**P**	**12 41 11.8**	**+1.2**
GYA					S	**Sn**	**12 43 36.3**	**+0.2**
GYA					SS	**S**	**12 43 53.3**	**-3.4**
GYA					pmax	pmax		
	comp=Z,30nm,0.8s							
GYA					pmax	pmax		
	comp=Z,120nm,4.8s							
GYA					LR	LR		
	comp=N,1μm,5.8s							
GYA					LR	LR		
	comp=E,520nm,5.3s							
GYA					LR	LR		
	comp=Z,550nm,5.8s							
INCN	**Inchon**	**14.14**	**16**		Pn	**Pn**	**12 41 06.9**	**+0.5**
KSAR	**Wonju Array Be**	**14.46**	**20**		P	**Pn**	**12 41 13.6**	**+3.0**
KSRS	**Korea Array**	**14.48**	**20**		P	**Pn**	**12 41 13.6**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=197,slow=12,SNR=4.7							
XAN	**Xi'an**	**15.07**	**315**		P	**Pn**	**12 41 18.4**	**-0.4**
XAN					pP	**P**	**12 41 24.3**	**+0.8**
XAN					S	**Sn**	**12 43 59.0**	**-5.5**
XAN					pmax	pmax		
	comp=Z,5.0nm,1.1s							
XAN					pmax	pmax		
	comp=Z,17nm,4.0s							
XAN					LR	LR		
	comp=N,630nm,6.1s							
XAN					LR	LR		
	comp=E,230nm,6.1s							
XAN					LR	LR		
	comp=Z,280nm,18.5s							
BJI	**Beijing**	**16.73**	**345**		P	**P**	**12 41 41.6**	**-0.3**
BJI					S	**Sn**	**12 44 47.6**	**+2.8**
BJI					pmax	pmax		
	comp=Z,8.0nm,0.4s							
BJI					pmax	pmax		
	comp=Z,84nm,3.5s							
BJI					LR	LR		
	comp=N,350nm,19.3s							
BJI					LR	LR		
	comp=E,620nm,16.6s							
BJI					LR	LR		
	comp=Z,280nm,26.3s							
DAV	**Davao City (W)**	**17.17**	**167**		LR	LR	12 47 55.8	
	comp=Z,266nm,20.1s,baz=15,slow=35							
KMI	**Kunming**	**17.34**	**278**		P	**P**	**12 41 48.8**	**-0.2**
KMI					S	**Sn**	**12 44 58.6**	**-1.6**
KMI					pmax	pmax		
	comp=Z,21nm,0.9s							
KMI					LR	LR		
	comp=N,500nm,6.1s							
KMI					LR	LR		
	comp=E,860nm,10.1s							
KMI					LR	LR		
	comp=Z,880nm,16.5s							
CD2	**Chengdu**	**17.41**	**297**		P	**Pn**	**12 41 48.9**	**+0.3**
CD2					pP	**pP**	**12 41 57.3**	**-2.1**
CD2					PP	**pwP**	**12 42 03.9**	**+4.5**
CD2					S	**Sn**	**12 44 59.0**	**-2.5**
CD2					SS	**SnSn**	**12 45 21.0**	**+5.9**
CD2					pmax	pmax		
	comp=Z,20nm,0.5s							
CD2					pmax	pmax		
	comp=Z,230nm,4.1s							
CD2					LR	LR		
	comp=N,2μm,7.8s							
CD2					LR	LR		
	comp=E,2μm,11.1s							
CD2					LR	LR		
	comp=Z,2μm,10.8s							
SNY	**Shenyang**	**17.91**	**4**	⇑	P	P	12 42 03.4	+8.5
SNY					S	**S**	**12 45 22.3**	**+3.9**
SNY					pmax	pmax		
	comp=Z,10.0nm,0.5s							
SNY					pmax	pmax		
	comp=Z,120nm,4.0s							
SNY					LR	LR		
	comp=E,640nm,16.1s							
SNY					LR	LR		
	comp=Z,470nm,16.8s							
JHJ	**Hachijo jima 2**	**18.28**	**56**		LR	LR	12 49 02.9	
	comp=Z,404nm,18.8s,baz=250,slow=37							
KKM	**Kota Kinabalu**	**18.57**	**198**	*e*	P	**P**	**12 42 01.3**	**-1.1**
	comp=Z,25nm,1.0s							
KKM	**Kota Kinabalu**	**18.57**	**198**		P	**Pn**	**12 42 03.8**	**+0.9**
	comp=Z,28nm,1.4s,comp=Z,340nm							
HHC	**Hu-ho-hao-te**	**18.91**	**336**	*e*	P	**Pn**	**12 42 08.8**	**+1.9**
HHC					PP	**PnPn**	**12 42 26.4**	**+6.5**
HHC					S	**Sn**	**12 45 34.8**	**-2.8**
HHC					SS	SnSn	12 46 02.4	+10
HHC					pmax	pmax		
	comp=Z,70nm,0.9s							
HHC					pmax	pmax		
	comp=Z,650nm,7.7s							
HHC					LR	LR		
	comp=N,740nm,10.2s							
HHC					LR	LR		
	comp=E,650nm,10.4s							
HHC					LR	LR		
	comp=Z,770nm,12.3s							
MAT	**Matsushiro**	**18.94**	**45**		P	**P**	**12 42 03.8**	**-2.5**
MAT					S	**Sn**	**12 45 37.2**	**-1.1**
MJAR	**Matsushiro Arr**	**18.94**	**45**		P	**Pn**	**12 42 07.6**	**+0.3**
MJAR	**Matsushiro Arr**	**18.94**	**45**		P	**Pn**	**12 42 07.6**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=229,slow=10,SNR=9.9							
MJAR					LR	LR	12 49 58.3	
	comp=Z,351nm,21.8s,baz=190,slow=38							
BTO	**Baotou**	**19.32**	**332**	*e*	P	**Pn**	**12 42 11.4**	**-0.5**
LZH	**Lanzhou**	**19.64**	**312**	*e*	P	**Pn**	**12 42 15.9**	**+0.2**
LZH					PP	**PnPn**	**12 42 34.0**	**+4.0**
LZH					S	**S**	**12 45 51.0**	**-2.7**
LZH					pmax	pmax		
	comp=Z,51nm,1.0s							
LZH					pmax	pmax		
	comp=Z,240nm,6.7s							
LZH					LR	LR		
	comp=N,480nm,10.5s							
LZH					LR	LR		
	comp=E,430nm,11.0s							
LZH					LR	LR		
	comp=Z,1μm,16.0s							
CN2	**Changchun**	**20.05**	**8**	*e*	P	**P**	**12 42 18.6**	**+0.3**
CN2				*e*	S	Sn	12 46 03.4	-1.5
CN2					pmax	pmax		
	comp=Z,10.0nm,0.5s							
CN2					pmax	pmax		
	comp=Z,200nm,3.0s							
CN2					LR	LR	

CHTO pmax pmax
comp=Z,39nm,1.0s
CHTO Chiang Mai 21.83 261 *e*P **P 12 42 38.1 +0.3**
comp=Z,39nm,1.0s
CHTO Chiang Mai 21.83 261 P **P 12 42 38.1 +0.3**
comp=Z,50nm,1.3s,comp=Z,536nm
USRK Ussuriysk Arra 21.89 20 P **P 12 42 38.1 0.0**
comp=Z,7.3nm,0.7s,baz=206,slow=11,SNR=14
CM31 Chiang Mai Arr 21.94 260 *e*P **P 12 42 40.4 +1.4**
comp=Z,30nm,1.0s
CMAR Chiang Mai Arr 21.94 260 P **P 12 42 40.0 +1.0**
CMAR PcP **PcP 12 46 36.5 -0.5**
CMAR Chiang Mai Arr 21.94 260 P **P 12 42 40.0 +1.0**
comp=Z,23nm,1.1s,baz=60,slow=8.1,SNR=59
CMAR PcP **PcP 12 46 36.5 -0.5**
comp=Z,1.1nm,0.7s,baz=137,slow=0.1,SNR=5.5
CMAR LR LR 12 51 50.7
comp=Z,376nm,18.5s,baz=85,slow=38
SBUM Sibu 23.26 205 P P 12 42 47.8 -5.0
GTA Gaotai 24.13 315 *e*P **P 12 43 01.3 +0.3**
GTA PP **PnPn 12 43 37.6 +6.2**
GTA S **S 12 47 17.5 +1.3**
GTA pmax pmax
comp=Z,13nm,1.5s
GTA pmax pmax
comp=Z,130nm,7.1s
GTA LR LR
comp=N,320nm,16.2s
GTA LR LR
comp=E,500nm,16.2s
GTA LR LR
comp=Z,580nm,15.7s
KSM Kuching 24.93 208 *e*P **P 12 43 07.5 -0.8**
comp=Z,64nm,1.2s
KSM Kuching 24.93 208 P **P 12 43 07.1 -1.1**
comp=Z,45nm,1.3s,comp=Z,574nm
LBMI Labuha 25.06 166 P **P 12 43 10.4 +1.0**
comp=Z,38nm,1.0s,comp=Z,1µm
ERM Erimo 25.33 39 *e*P **P 12 43 09.7 -2.0**
ERM pmax pmax
comp=Z,29nm,1.7s
ASAJ Asahikawa 26.39 35 *e*P **P 12 43 20.7 -0.6**
comp=Z,12nm,1.3s
ASAJ Asahikawa 26.39 35 P **P 12 43 19.9 -1.4**
comp=Z,3.4nm,0.5s,baz=262,slow=14,SNR=8.8
ASAJ LR LR 12 55 00.2
comp=Z,455nm,19.4s,baz=340,slow=39
KLR Kul'dur 26.45 15 *e*P **P 12 43 18.0 -3.7**
KLR MLR MLR
comp=Z,700nm,11.0s
ULN Ulaanbaatar 26.59 338 *e*P **P 12 43 23.2 -0.1**
comp=Z,23nm,0.7s
ULN Ulaanbaatar 26.59 338 P **P 12 43 22.9 -0.3**
comp=Z,39nm,1.2s,comp=Z,297nm
HABR Khabarovsk 26.66 20 P **P 12 43 20.7 -2.9**
HABR *e**SP sP 12 43 34.5 -4.9
HABR *e*PPP PPP 12 44 10.7
HABR *e*S **S 12 47 54.2 -1.7**
HABR *e**SS **sS 12 48 10.2 -4.1**
HABR *e*SS **SnSn 12 48 59.0 -2.3**
HABR *e* 12 54 12.5
HABR pmax pmax
comp=E,27nm,1.5s
HABR pmax pmax
comp=N,12nm,1.3s
HABR pmax pmax
comp=Z,21nm,1.5s
HABR MLR MLR
comp=Z,134nm,20.0s
SONM Songino Array 26.80 337 P **P 12 43 24.8 -0.3**
SONM Songino Array 26.80 337 P **P 12 43 24.8 -0.3**
comp=Z,15nm,0.8s,baz=154,slow=10,SNR=94
SHL Shillong 27.15 280 *e*P **P 12 43 29.0 +0.5**
KULM Kulim 27.50 231 *e*P **P 12 43 32.2 +0.7**
comp=Z,44nm,1.8s
IPM Ipoh 27.81 229 P **P 12 43 33.8 -0.5**
LSA Lhasa 27.86 289 P **P 12 43 34.3 -0.9**
KAPI Kappang 28.84 184 LR LR 12 55 29.5
comp=Z,152nm,20.1s,baz=265,slow=37
ZAK Zakamensk 30.06 336 *e*P **P 12 43 52.0 -2.0**
ZAK pmax pmax
comp=Z,4.0nm,1.1s
TAPN Taplejung 30.82 284 *e*P **P 12 44 01.8 +0.5**
comp=Z,90nm,1.0s
TLY Talaya 31.00 338 *e*P **P 12 44 00.6 -1.6**
TLY *e*S **S 12 49 05.9 +1.7**
TLY pmax pmax
comp=Z,10.0nm,0.9s
TLY MLR MLR
comp=Z,251nm,18.0s
ODAN Odare 31.12 283 *e*P **P 12 44 04.0 +0.1**
comp=Z,101nm,0.9s
IRK Irkutsk 31.26 339 *e*P **P 12 44 03.7 -0.8**
IRK pmax pmax
comp=Z,50nm,1.2s
RAMN Ramite 31.82 283 *e*P **P 12 44 10.3 +0.2**
comp=Z,125nm,1.0s
MOY Mondy 31.95 335 *e*P **P 12 44 09.8 -0.9**
GUN Gumba 32.43 285 *e*P **P 12 44 15.7 +0.2**
comp=Z,110nm,1.1s
PKI Pulchoki 32.86 284 *e*P **P 12 44 19.0 -0.2**
comp=Z,62nm,1.1s
PKIN Phulchoki 32.87 284 *e*P **P 12 44 18.7 -0.6**
KKN Kakani 32.97 285 *e*P **P 12 44 20.0 0.0**
comp=Z,75nm,1.0s
DMN Daman 33.13 284 *e*P **P 12 44 21.2 -0.3**
comp=Z,78nm,1.0s
WMQ Urumqi 34.20 314 P **P 12 44 31.0 +0.6**
WMQ pP **pP 12 44 41.0 -0.5**
WMQ sP **sP 12 44 45.0 -1.3**
WMQ PP **PnPn 12 45 46.0 +0.8**
WMQ PcP **PcP 12 47 08.0 +1.4**
WMQ S **S 12 49 54.0 -0.3**
WMQ sS **sS 12 50 09.0 -3.8**
WMQ ScP **ScP 12 50 49.0 +0.5**
WMQ SS **SnSn 12 52 03.0 -2.0**
WMQ pmax pmax
comp=Z,13nm,1.0s
WMQ pmax pmax
comp=Z,160nm,5.0s
WMQ LR LR
comp=N,250nm,14.0s
WMQ LR LR
comp=E,300nm,13.0s
WMQ LR LR
comp=Z,320nm,14.0s
DANN Dangsing 34.29 286 *e*P **P 12 44 31.2 -0.5**
comp=Z,85nm,1.0s
KOLN Koldanda 34.45 285 *e*P **P 12 44 33.0 0.0**
comp=Z,53nm,0.9s
PYUN Piuthan 34.98 285 *e*P **P 12 44 37.8 +0.3**
comp=Z,114nm,1.0s
MK31 Makanchi Array 38.88 316*ce*P **P 12 45 09.8 -0.4**
MK31 pmax pmax
comp=Z,15nm,0.7s
MK31 Makanchi Array 38.88 316 *e*P **P 12 45 10.0 -0.2**
MKAR Makanchi Array 38.88 316 P **P 12 45 10.2 0.0**
MKAR 12 47 19.5
MKAR 12 51 01.6
MKAR Makanchi Array 38.88 316 P **P 12 45 10.2 0.0**
MKAR PcP **PcP 12 47 19.5 -1.0**
MKAR ScP **S 12 51 01.6 -3.9**
MKAR Makanchi Array 38.88 316 P **P 12 45 10.2 0.0**
comp=Z,13nm,0.8s,baz=104,slow=10,SNR=51
MKAR PcP **PcP 12 47 19.5 -1.0**
comp=Z,1.9nm,0.7s,baz=86,slow=5.2,SNR=3.9
MKAR ScP **S 12 51 01.6 -3.9**
comp=Z,1.5nm,1.0s,baz=103,slow=5.2,SNR=5.3
MKAR LR LR 13 02 43.7
comp=Z,285nm,18.4s,baz=102,slow=38
PETK Petropavlovsk- 39.78 34 LR LR 13 01 44.7
comp=Z,167nm,19.7s,baz=224,slow=36
NDI New Delhi 40.03 287 *e*P **P 12 45 17.0 -3.0**
ZAA0 Zalesovo Array 40.73 327 *e*P **P 12 45 24.2 -1.2**
ZALV Zalesovo Beam 40.73 327 P **P 12 45 24.3 -1.2**
ZALV 12 47 23.5
ZALV Zalesovo Beam 40.73 327 P **P 12 45 24.3 -1.2**
ZALV PcP **PcP 12 47 23.5 -2.7**
ZALV ScP **ScP 12 51 08.2 -4.5**
ZALV Zalesovo Beam 40.73 327 P **P 12 45 24.3 -1.2**
comp=Z,25nm,0.7s,baz=113,slow=7.9,SNR=119
ZALV PcP **PcP 12 47 23.5 -2.7**
comp=Z,1.4nm,0.6s,baz=123,slow=3.5,SNR=3.6
ZALV ScP **ScP 12 51 08.2 -4.5**
comp=Z,1.2nm,0.8s,baz=107,slow=3.6,SNR=4.8
HYB Hyderabad 40.81 269 *i* P **P 12 45 26.0 -0.6**

PMG Port Moresby 41.41 140 P **P 12 45 29.0 -2.4**
PMG Port Moresby 41.41 140 P **P 12 45 29.0 -2.4**
comp=Z,18nm,0.9s,baz=346,slow=13,SNR=3.1
KSH Kashi 41.47 303 P P 12 45 35.0 +3.1
KSH pP pP 12 45 45.5 +2.3
KSH PP **PnPn 12 47 15.4 +2.4**
KSH PcP **PcP 12 47 33.0 +3.9**
KSH ScP **ScP 12 51 18.9 +2.8**
KSH PcS **PcS 12 51 23.3 +2.8**
KSH S **S 12 51 48.8 +4.1**
KSH sS sS 12 52 06.0 +2.6
KSH SS **SS 12 54 50.0 +0.1**
KSH ScS **ScS 12 55 34.0 +1.5**
KSH pmax pmax
comp=Z,5.0nm,0.5s
KSH LR LR
comp=N,120nm,4.7s
KSH LR LR
comp=E,220nm,5.0s
KSH LR LR
comp=Z,190nm,7.8s
FITZ Fitzroy Crossi 41.95 174 P **P 12 45 33.3 -2.4**
FITZ Fitzroy Crossi 41.95 174 P **P 12 45 33.3 -2.4**
comp=Z,2.6nm,0.9s,baz=348,slow=8.1,SNR=9.1
NVS Novosibirsk 41.99 327⇑ *i*P **P 12 45 34.6 -1.2**
NVS pmax pmax
comp=N,12nm,1.7s
NVS pmax pmax
comp=Z,30nm,1.7s
NVS pmax pmax
comp=E,11nm,1.2s
TKM2 Tokmak 2 42.33 308 *e*P **P 12 45 39.6 +0.7**
TKM2 pmax pmax
comp=Z,15nm,0.8s
TKM2 Tokmak 2 42.33 308 *e*P **P 12 45 39.6 +0.7**
comp=Z,15nm,0.8s
KURK Kurchatov 42.62 320*c i*P **P 12 45 40.2 -0.7**
KURK pmax pmax
comp=Z,23nm,1.2s
KURK Kurchatov 42.62 320 *e*P **P 12 45 40.4 -0.5**
comp=Z,12nm,0.8s
KURK *e*pP **pP 12 45 52.8 +0.6**
KURK *es*P **sP 12 45 58.3 +1.3**
KURBB Kurchatov Arra 42.63 320 P **P 12 45 40.4 -0.6**
comp=Z,5.6nm,1.0s,baz=183,slow=7.6,SNR=15
AAK Ala-Archa 43.07 307*c i*P **P 12 45 44.3 -0.6**
AAK pmax pmax
comp=Z,11nm,1.0s
AAK Ala-Archa 43.07 307 *e*P **P 12 45 45.8 +0.9**
comp=Z,23nm,3.0s
AAK Ala-Archa 43.07 307 P **P 12 45 45.2 +0.3**
comp=Z,3.1nm,0.7s,baz=135,slow=7.1,SNR=8.4
COEN Coen 43.09 149 *e*P **P 12 45 45.8 +0.7**
comp=Z,210nm,1.1s
EKS2 Erkin-Say 43.59 307 *e*P **P 12 45 50.0 +0.9**
EKS2 pmax pmax
comp=Z,7.0nm,1.1s
EKS2 Erkin-Say 43.59 307 *e*P **P 12 45 50.0 +0.9**
comp=Z,7.2nm,1.1s
WRAB Tennant Creek 45.30 163 *e*P **P 12 46 01.4 -1.3**
WRAB pmax pmax
comp=Z,8.0nm,0.8s
WRAB Tennant Creek 45.30 163 *e*P **P 12 46 01.4 -1.3**
comp=Z,7.8nm,0.8s
WRA Warramunga Arr 45.30 163 P **P 12 46 01.2 -1.5**
WRA Warramunga Arr 45.30 163 P **P 12 46 01.2 -1.5**
comp=Z,5.4nm,0.5s,baz=346,slow=8.7,SNR=82
KK31 Karatay Array 46.03 307*ce*P **P 12 46 08.5 +0.1**
KK31 pmax pmax
comp=Z,1.0nm,0.3s
KKAR Karatay Array 46.03 307 *e*P **P 12 46 09.1 +0.7**
KKAR pmax pmax
comp=Z,2.0nm,0.4s
KKAR Karatay Array 46.03 307 *e*P **P 12 46 09.1 +0.7**
comp=Z,1.7nm,0.4s
KBL Kabul 46.74 296 *e*P **P 12 46 14.9 +0.6**
KBL pmax pmax
comp=Z,17nm,1.0s
KBL Kabul 46.74 296 *e*P **P 12 46 14.9 +0.6**
comp=Z,17nm,1.0s
BVAR Borovoye Array 48.19 321 P **P 12 46 24.2 -0.8**
BVAR 12 47 49.5
BVAR Borovoye Array 48.19 321 P **P 12 46 24.2 -0.8**
BVAR PcP **PcP 12 47 49.5 -2.3**
BVAR Borovoye Array 48.19 321 P **P 12 46 24.2 -0.8**
comp=Z,3.3nm,0.5s,baz=113,slow=11,SNR=12
BVAR PcP **PcP 12 47 49.5 -2.3**
comp=Z,3.7nm,0.6s,baz=105,slow=3.8,SNR=5.8
BRVK Borovoye 48.27 321*c i*P **P 12 46 25.1 -0.5**
BRVK pmax pmax
comp=Z,19nm,0.8s
BRVK Borovoye 48.27 321 *e*P **P 12 46 25.4 -0.2**
comp=Z,17nm,0.9s
AS31 Alice Springs 48.77 165 *e*P **P 12 46 29.0 -0.8**
ASAR Alice Springs 48.77 165 P **P 12 46 28.6 -1.2**
ASAR Alice Springs 48.77 165 P **P 12 46 28.6 -1.2**
comp=Z,2.8nm,0.3s,baz=340,slow=7.2,SNR=53
CTA Charters Tower 49.85 149 P **P 12 46 37.6 -0.4**
CTA Charters Tower 49.85 149 P **P 12 46 37.6 -0.4**
comp=Z,4.2nm,0.8s,baz=346,slow=10,SNR=3.6
CTA LR LR 13 04 55.1
comp=Z,174nm,20.0s,baz=323,slow=33
BILL Bilibino 51.74 20⇑ *e*P **P 12 46 50.9 -0.8**
BILL pmax pmax
comp=Z,9.0nm,1.2s
BILL MLR MLR
comp=Z,100nm,17.0s
BILL Bilibino 51.74 20 *e*P **P 12 46 50.7 -1.1**
comp=Z,5.6nm,0.8s
AB31 Akbulak array 53.98 314*ce*P **P 12 47 08.0 -0.6**
AB31 pmax pmax
comp=Z,2.0nm,0.3s
ABKAR Akbulak array 53.98 314 *e*P **P 12 47 08.6 0.0**
comp=Z,7.3nm,0.7s
AKTO Aktyubinsk 55.31 316 P **P 12 47 17.1 -1.1**
AKTO Aktyubinsk 55.31 316 P **P 12 47 17.1 -1.1**
AKTO Aktyubinsk 55.31 316 P **P 12 47 17.1 -1.1**
comp=Z,4.3nm,0.9s,baz=103,slow=11,SNR=10
AKTO LR LR 13 12 39.7
comp=Z,186nm,20.9s,baz=88,slow=38
ARU Arti 55.62 323*c i*P **P 12 47 19.2 -1.1**
ARU 12 49 20.3
ARU S **S 12 55 04.4 +1.2**
ARU pmax pmax
comp=Z,26nm,1.1s
NWAO Narrogin (SRO) 56.71 185 P **P 12 47 27.0 -1.3**
NWAO Narrogin (SRO) 56.71 185 P **P 12 47 27.0 -1.3**
comp=Z,4.7nm,0.7s,baz=12,slow=9.3,SNR=3.0
STKA Stephens Creek 58.65 160 *e*P **P 12 47 40.9 -1.0**
comp=Z,0.6nm,0.5s
STKA Stephens Creek 58.65 160 P **P 12 47 40.9 -1.0**
comp=Z,2.2nm,0.4s,baz=348,slow=4.6,SNR=18
DZM Mont Dzumac 63.09 133 *e*LR LR 13 07 07.7
comp=Z,325nm,23.9s
GNI Garni 65.37 305 LR LR 13 21 06.8
comp=Z,74nm,19.9s,baz=290,slow=40
ZEI Tsey 65.50 308 *e*P **P 12 48 26.7 -1.5**
ZEI pmax pmax
comp=Z,6.0nm,0.8s
MIB Mutribah 65.59 293 *e*P **P 12 48 27.6 -1.2**
MIB AMb AMB 12 48 29.3
comp=Z,18nm,0.8s
RDF Al-Radifah 65.64 292 *e*P **P 12 48 28.3 -0.7**
RDF AMb AMB 12 48 30.0
comp=Z,46nm,0.8s
VRHR Novokhopersk 65.67 317 *e*P **P 12 48 28.1 -0.7**
VRHR pmax pmax
comp=Z,10.0nm,0.9s
VRHR pmax pmax
comp=N,5.0nm,0.8s
VRHR pmax pmax
comp=E,5.0nm,1.4s
NAY Al-Naaiem 65.82 293 *e*P **P 12 48 28.9 -1.3**
NAY AMb AMB 12 48 30.7
comp=Z,13nm,0.8s
KBZ Khabaz 66.04 309 P **P 12 48 31.1 -0.3**
KBZ Khabaz 66.04 309 P **P 12 48 31.1 -0.3**
KBZ Khabaz 66.04 309 P **P 12 48 31.1 -0.3**
comp=Z,3.1nm,0.7s,baz=109,slow=1.9,SNR=8.4
KIV Kislovodsk 66.15 309⇓ *i*P **P 12 48 31.7 -0.5**
KIV *e* 12 50 57.3
KIV *eS* **S 12 57 20.5 +2.4**
KIV *eS* **sS 12 57 36.6 -1.2**
KIV pmax pmax
comp=Z,24nm,1.7s
KIV MLR MLR
comp=Z,100nm,20.0s
VORD Divnogorie 67.14 317 *e*P **P 12 48 37.3 -0.9**
VORD pmax pmax
comp=Z,4.0nm,0.8s
VORD pmax pmax
comp=N,10.0nm,1.2s
VORD pmax pmax
comp=E,7.0nm,0.6s
VSR Storozhevoye 67.18 317 *e*P **P 12 48 35.7 -2.8**
VSR pmax pmax
comp=Z,7.0nm,0.8s
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.6s
PPLA Purkeypile 67.21 30 *e*P **P 12 48 40.2 +1.5**
comp=E,6.8nm,0.6s
COLD Coldfoot 67.44 25 *e*P **P 12 48 40.4 +0.5**
comp=E,3.8nm,0.6s
SPU Mount Spurr 67.52 32 *e*P **P 12 48 41.6 +1.0**
KDAK Kodiak Island 67.81 35 P **P 12 48 42.6 +0.3**
KDAK Kodiak Island 67.81 35 P **P 12 48 42.6 +0.3**
comp=E,12nm,0.6s,baz=326,slow=18,SNR=14
KDAK LR LR 13 19 27.1
comp=E,120nm,18.9s,baz=271,slow=37
TRF Thorofare Moun 67.97 29 *e*P **P 12 48 44.0 +0.4**
comp=E,4.3nm,0.6s
OBN Obninsk 68.02 322⇑ *e*P **P 12 48 42.4 -1.3**
OBN *eS* **S 12 57 40.2 +0.3**
OBN pmax pmax
comp=Z,9.0nm,1.2s
OBN MLR MLR
comp=Z,100nm,14.0s
MCK McKinley 68.52 29 *e*P **P 12 48 47.4 +0.6**
MCK pmax pmax
comp=Z,11nm,0.9s
MCK McKinley 68.52 29 *e*P **P 12 48 47.4 +0.6**
comp=Z,11nm,0.9s
COLA College 68.77 27 *e*P **P 12 48 49.3 +1.1**
COLA pmax pmax
comp=Z,10.0nm,0.6s
COLA College 68.77 27 *e*P **P 12 48 49.3 +1.1**
comp=Z,9.6nm,0.6s
PMR Palmer 68.84 31 *e*P **P 12 48 48.8 +0.1**
PMR pmax pmax
comp=Z,85nm,1.9s
PMR Palmer 68.84 31 *e*P **P 12 48 48.8 +0.1**
comp=Z,85nm,1.9s
SML Sawmill 69.17 31 *e*P **P 12 48 51.8 +1.0**
SML pmax pmax
comp=Z,3.0nm,0.7s
SML Sawmill 69.17 31 *e*P **P 12 48 51.8 +1.0**
comp=Z,2.9nm,0.7s
ILAR Eielson Array 69.20 27 P **P 12 48 50.5 -0.5**
ILAR Eielson Array 69.20 27 P **P 12 48 50.5 -0.5**
comp=Z,2.1nm,0.7s,baz=267,slow=5.6,SNR=63
ILAR LR LR 13 22 26.9
comp=Z,65nm,19.0s,baz=321,slow=39
ARCES ARCESS Array B 69.96 338 P **P 12 48 54.5 -1.1**
ARCES ARCESS Array B 69.96 338 P **P 12 48 54.5 -1.1**
comp=Z,4.4nm,1.0s,baz=77,slow=12,SNR=4.1
MALT Malatya 70.56 304 *e*P **P 12 49 00.5 +0.6**
MALT pmax pmax
comp=Z,8.0nm,0.9s
MALT Malatya 70.56 304 *e*P **P 12 49 00.5 +0.6**
comp=Z,8.2nm,0.9s
DOT Dot Lake 70.66 28 *e*P **P 12 49 00.4 +0.5**
comp=Z,42nm,1.7s
MENT Mentasta 70.99 29 *e*P **P 12 49 03.1 +1.1**
BMRM Bremner River 71.11 31 *e*P **P 12 49 04.1 +1.4**
comp=Z,11nm,0.9s
EGAK Eagle 71.57 27 *e*P **P 12 49 05.6 +0.2**
comp=Z,13nm,0.7s
FINES FINESS Array B 71.92 330 P **P 12 49 06.6 -0.9**
FINES FINESS Array B 71.92 330 P **P 12 49 06.6 -0.9**
comp=Z,6.8nm,1.0s,baz=57,slow=4.3,SNR=12
INK Inuvik 73.26 22 LR LR 13 23 36.9
comp=Z,66nm,21.9s,baz=330,slow=38
AKASG Malin Array Be 73.40 318*ce*P **P 12 49 15.1 -1.4**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 73.40 318 P **P 12 49 14.5 -2.1**
AKASG Malin Array Be 73.40 318 P **P 12 49 14.5 -2.1**
comp=Z,1.0nm,0.5s,baz=63,slow=6.3,SNR=4.6
ASF Jabal al Asfar 73.54 298 P **P 12 49 17.8 0.0**
ASF Jabal al Asfar 73.54 298 P **P 12 49 17.8 0.0**
comp=Z,3.5nm,0.8s,baz=135,slow=7.1,SNR=3.9
BR131 Keskin Array S 73.74 307 *e*P **P 12 49 18.3 -0.6**
comp=Z,1.7nm,0.6s
BRTR Keskin Array B 73.74 307 P **P 12 49 18.4 -0.6**
BRTR Keskin Array B 73.74 307 P **P 12 49 18.4 -0.6**
comp=Z,2.4nm,0.7s,baz=94,slow=5.1,SNR=12
AFI Afiamalu 75.03 113 LR LR 13 19 00.0
comp=Z,122nm,20.1s,baz=164,slow=33
SKAG Skagway 75.97 31 *e*P **P 12 49 32.4 +1.1**
comp=Z,12nm,0.8s
MLR Muntele Rosu 77.19 314 P **P 12 49 38.3 -0.3**
MLR Muntele Rosu 77.19 314 P **P 12 49 38.3 -0.3**
comp=Z,0.8nm,0.6s,baz=167,slow=5.6,SNR=9.3
HFS Hagfors 78.04 331 P **P 12 49 42.1 -0.7**
HFS Hagfors 78.04 331 P **P 12 49 42.1 -0.7**
comp=Z,2.9nm,0.8s,baz=348,slow=6.5,SNR=4.8
KOLS Kolonicke sedl 78.23 318 *e*P P 12 49 49.7 +5.5
KOLS Kolonicke sedl 78.23 318 *e* P P 12 49 49.7 +5.5
NB2 NORSAR Subarra 78.69 332 P **P 12 49 44.4 -2.1**
comp=Z,8.3nm,1.0s,baz=61,slow=5.6
NOA NORSAR Array B 78.69 332 P **P 12 49 44.4 -2.1**
NOA NORSAR Array B 78.69 332 P **P 12 49 44.4 -2.1**
comp=Z,2.0nm,0.8s,baz=60,slow=5.6,SNR=5.2
CRVS Cervenica-Dubn 78.74 319 *e*P **P 12 49 48.7 +1.7**
CRVS Cervenica-Dubn 78.74 319 *e*P **P 12 49 48.7 +1.7**
DLBC Dease Lake 78.89 31 *e*P **P 12 49 48.3 +0.6**
OJC Ojcow 79.20 320 *e*P **P 12 49 48.7 -0.8**
OJC Ojcow 79.20 320 *e*P **P 12 49 48.7 -0.8**
JMIC Jan Mayen 79.20 345 LR LR 13 24 53.6
comp=Z,73nm,20.9s,baz=77,slow=36
VYHS Vyhne 80.49 319 *e*P **P 12 49 55.9 -0.6**
VYHS *e* 12 50 02.1
VYHS *e* 12 50 08.1
VYHS Vyhne 80.49 319 *e*P **P 12 49 55.9 -0.6**
VYHS *e*PCP **PcP 12 50 02.1 -1.3**
VYHS *e*pP **pP 12 50 08.0 -0.7**
VYHS *es*P **sP 12 50 12.7 -0.6**
DPC Dobruska-Polom 81.15 321 *e*P sP 12 50 16.8 0.0
DPC Dobruska-Polom 81.15 321 *e*P sP 12 50 16.8 0.0
VRAC Vranov 81.47 320 LR LR 13 28 47.4
comp=Z,86nm,18.7s,baz=60,slow=38
YKW3 Yellowknife Ar 82.95 23 *e*P **P 12 50 08.9 -0.2**
comp=Z,0.1nm,0.6s
YKA Yellowknife Ar 83.00 23 P **P 12 50 09.0 -0.4**
YKA Yellowknife Ar 83.00 23 P **P 12 50 09.0 -0.4**
comp=Z,6.1nm,0.6s,baz=311,slow=5.0,SNR=197
KHC Kasperske Hory 83.30 321 *e*P sP 12 50 27.3 -0.8
KHC Kasperske Hory 83.30 321 *e*P sP 12 50 27.3 -0.8
GERES GERESS Array B 83.36 321 P **P 12 50 10.8 -0.9**
GERES GERESS Array B 83.36 321 P **P 12 50 10.8 -0.9**
comp=Z,0.8nm,0.6s,baz=35,slow=4.9,SNR=3.9
GERES LR LR 13 35 14.0
comp=Z,107nm,18.7s,baz=342,slow=41
KMBO Kilima Mbogo 85.42 267 *e*P **P 12 50 23.4 +0.4**
comp=Z,14nm,1.4s
KMBO Kilima Mbogo 85.42 267 P **P 12 50 23.1 +0.2**
comp=Z,3.8nm,0.7s,baz=36,slow=8.1,SNR=7.5
DAVOX Davos/Dischmat 86.63 320 LR LR 13 32 57.5
comp=Z,105nm,19.7s,baz=251,slow=38
LPG La Plagne 89.15 320 *e*P **P 12 50 38.6 -1.9**
comp=Z,13nm,0.9s
LPG La Plagne 89.15 320 *e*P **P 12 50 38.6 -1.9**
LPG pmax pmax
comp=Z,13nm,0.9s
LPG La Plagne 89.15 320 *e*P **P 12 50 38.6 -1.9**
comp=Z,13nm,0.9s
LPL La Plagne 89.15 320 *e*P **P 12 50 38.3 -2.1**
LPL La Plagne 89.15 320 *e*P **P 12 50 38.3 -2.1**
LPL La Plagne 89.15 320 *e*P **P 12 50 38.3 -2.1**
LON Longmire 89.27 38 *e*P **P 12 50 41.7 +1.0**
LON pmax pmax
comp=Z,5.0nm,0.9s
LON Longmire 89.27 38 *e*P **P 12 50 41.7 +1.0**
comp=Z,5.2nm,0.9s
MBDF Montbardon 89.57 320 *e*P **P 12 50 39.2 -3.1**
MBDF Montbardon 89.57 320 *e*P **P 12 50 39.2 -3.1**
MBDF Montbardon 89.57 320 *e*P **P 12 50 39.2 -3.1**
LOR Lormes 89.78 323 *e*P **P 12 50 40.5 -2.5**

LOR	**Lormes**	**89.78**	**323**	*e*P	**P**	**12 50 40.5 -2.5**
SMF	**Signal de Mont**	**90.15**	**322**	*e*P	**P**	**12 50 42.5 -2.3**
	comp=Z,18nm,1.0s					
SMF	**Signal de Mont**	**90.15**	**322**	*e*P	**P**	**12 50 42.5 -2.3**
SMF				pmax	pmax	
	comp=Z,18nm,1.0s					
SMF	**Signal de Mont**	**90.15**	**322**	*e*P	**P**	**12 50 42.5 -2.3**
	comp=Z,18nm,1.0s					
AVF	**Avril sur Loir**	**90.34**	**323**	*e*P	**P**	**12 50 43.3 -2.3**
	comp=Z,9.8nm,1.1s					
AVF	**Avril sur Loir**	**90.34**	**323**	*e*P	**P**	**12 50 43.3 -2.3**
AVF				pmax	pmax	
	comp=Z,10.0nm,1.1s					
AVF	**Avril sur Loir**	**90.34**	**323**	*e*P	**P**	**12 50 43.3 -2.3**
	comp=Z,9.8nm,1.1s					
YBH	**Yreka Blue Hor**	**91.59**	**43**	P	**P**	**12 50 52.5 +0.9**
YBH	**Yreka Blue Hor**	**91.59**	**43**	P	**P**	**12 50 52.5 +0.9**
	comp=Z,2.8nm,0.8s,baz=293,slow=3.8,SNR=8.4					
CAF	**Calviac**	**92.18**	**322**	*e*P	**P**	**12 50 52.7 -1.6**
CAF	**Calviac**	**92.18**	**322**	*e*P	**P**	**12 50 52.7 -1.6**
CAF	**Calviac**	**92.18**	**322**	*e*P	**P**	**12 50 52.7 -1.6**
RJF	**Les Rejaudoux**	**92.25**	**322**	*e*P	**P**	**12 50 53.0 -1.6**
	comp=Z,23nm,1.1s					
RJF	**Les Rejaudoux**	**92.25**	**322**	*e*P	**P**	**12 50 53.0 -1.6**
RJF				pmax	pmax	
	comp=Z,23nm,1.1s					
RJF	**Les Rejaudoux**	**92.25**	**322**	*e*P	**P**	**12 50 53.0 -1.6**
	comp=Z,23nm,1.1s					
BSMT	**Bassoo Peak**	**92.39**	**34**	*e*P	**P**	**12 50 56.7 +1.3**
	comp=Z,1.7nm,0.7s					
BMO	**Blue Mountains**	**92.93**	**38**	*e*P	**P**	**12 50 58.5 +0.7**
BMO				pmax	pmax	
	comp=Z,3.0nm,0.8s					
BMO	**Blue Mountains**	**92.93**	**38**	*e*P	**P**	**12 50 58.5 +0.7**
	comp=Z,2.6nm,0.8s					
MOD	**Modoc**	**92.96**	**41**	*e*P	**P**	**12 50 58.8 +0.7**
	comp=Z,12nm,1.1s					
FFC	**Flin Flon**	**93.15**	**24**	*ce*P	**P**	**12 50 58.4 -0.1**
FFC	**Flin Flon**	**93.15**	**24**	*e*P	**P**	**12 50 57.7 -0.8**
	comp=Z,6.1nm,0.9s					
BEKR	**Beckworth**	**94.12**	**43**	*e*P	**P**	**12 51 03.8 +0.3**
	comp=Z,2.0nm,0.9s					
PPT2	**Papeete2**	**95.79**	**107**	*e*LR	LR	13 22 12.7
	comp=Z,180nm,25.8s					
NVAR	**Mina Array Bea**	**96.26**	**43**	P	**P**	**12 51 14.2 +0.8**
NVAR	**Mina Array Bea**	**96.26**	**43**	P	**P**	**12 51 14.2 +0.8**
	comp=Z,0.9nm,0.6s,baz=298,slow=5.2,SNR=5.5					
NVAR				LR	LR	13 36 35.3
	comp=Z,49nm,19.5s,baz=84,slow=37					
ULM	**Lac du Bonnet**	**98.97**	**23**	LR	LR	13 42 57.3
	comp=Z,96nm,19.1s,baz=354,slow=40					

BEO ***17*** *12:39:05.7±1.0,45°.92N×21°.12E,h0km,ML1.4/3*
CSEM ***17*** *12:39:05.3±0.3,45°.89N×21°.10E,h5km,ML1.4,Error ellipse: s-maj=6.1km s-min=3.8km az=154.0*

BUC 17 12:39:06.0±0.6,45°.90N×21°.21E,h5km,MD2.3/2,9C-3D, Error ellipse: s-maj=5.9km s-min=2.6km az=103.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIM	**Timisoara**	**0.16**	**177**	⇑*i*P	Pg	12 39 09.3	+0.1
TIM				S	Sg	12 39 12.5	+1.2
TIM	**Timisoara**	**0.16**	**177**	⇑*i*P	Pg	12 39 09.3	+0.1
TIM				*i* S	Sg	12 39 12.5	+1.2
TIM	**Timisoara**	**0.16**	**177**	⇑*i*P	Pg	12 39 09.3	+0.1
TIM				S	Sg	12 39 12.5	+1.2
BZS	**Buzias**	**0.40**	**134**	⇑*i*P	Pg	12 39 14.1	+0.4
BZS				S	Sg	12 39 20.1	+1.1
BZS	**Buzias**	**0.40**	**134**	⇑*i*P	Pg	12 39 14.1	+0.4
BZS				*i* S	Sg	12 39 20.1	+1.1
BZS	**Buzias**	**0.40**	**134**	*e*Pg	Pg	12 39 14.2	+0.5
BZS				*e*Sg	Sg	12 39 20.1	+1.1
BZS	**Buzias**	**0.40**	**134**	⇑*i*P	Pg	12 39 14.1	+0.4
BZS				S	Sg	12 39 20.1	+1.1
GZR	**Gura Zlata**	**1.21**	**114**	⇑*i*P	Pg	12 39 28.8	-0.5
GZR	**Gura Zlata**	**1.21**	**114**	⇑*i*P	Pg	12 39 28.8	-0.5
GZR				*i* S	Sn	12 39 46.2	-0.3
GZR	**Gura Zlata**	**1.21**	**114**	*e*Pg	Pg	12 39 28.9	-0.4
GZR				*e*Sg	Sn	12 39 46.2	-0.3
GZR	**Gura Zlata**	**1.21**	**114**	⇑*i*P	Pg	12 39 28.8	-0.5
GZR				S	Sn	12 39 46.2	-0.3
FGSL	**Fruska Gora**	**1.23**	**234**	*e*Pg	Pg	12 39 27.3	-2.3
FGSL				*e*Sg	Sg	12 39 43.3	-2.3
FRGS	**Fruska Gora**	**1.23**	**234**	*e*Pg	Pg	12 39 27.3	-2.3
FRGS				*e*Sg	Sg	12 39 43.3	-2.3
DRGR		**1.37**	**49**	⇓*i*P	Pn	12 39 32.1	+0.1
DRGR		**1.37**	**49**	⇓*i*P	Pn	12 39 32.1	+0.1
DRGR				*i* S	Sn	12 39 52.0	+1.4
DRGR		**1.37**	**49**	⇓*i*P	Pn	12 39 32.1	+0.1
DRGR				S	Sn	12 39 52.0	+1.4
LOT	**Lotru**	**1.85**	**103**	S	Sb	12 40 04.1	+0.1
LOT	**Lotru**	**1.85**	**103**	*i* S	Sb	12 40 04.1	+0.1
LOT	**Lotru**	**1.85**	**103**	S	Sb	12 40 04.1	+0.1
GRUS	**Gruza**	**2.04**	**190**	*e*Sg	Sg	12 40 11.5	0.0
GRUS	**Gruza**	**2.04**	**190**	*e*Sg	Sg	12 40 11.5	0.0

AUST ***17*** *12:46:24.3,5°.99S×129°.03E,h200km*
ISCJB ***17*** *12:46:25.5±0.5,5°.95S±0°.05×129°.12E±0°.08,h264km, mb3.4/6,Error ellipse: s-maj=12.5km s-min=5.5km az=155.1*
IDC ***17*** *12:46:33.4±3.9,6°.17S×128°.82E,h342km±43km,mb3.1/6, mb1 3.3/9,mb1mx3.2/22,mbtmp3.2/9,Error ellipse: s-maj=46.0km s-min=11.3km az=69.0*

ISC 17 12:46:26.1±0.7,6°.02S±0°.07×129°.0E±0°.1,h264km,n20, σ1§54/23,mb3.5/6,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**3.71**	**84**	P	**Pn**	**12 47 28.6**	**+1.3**
	baz=3.7,SNR=5.1						
TLE				S	S	12 48 07.9	-8.1
	baz=3.7,SNR=5.3						
SWI	**Sorong**	**5.59**	**24**	P	**Pn**	**12 47 48.0**	**-1.6**
	baz=5.6,SNR=4.9						
SWI				S	S	12 48 47.8	-8.6
	baz=5.6,SNR=9.4						
MTN	**Manton Dam**	**7.09**	**163**	P	**Pn**	**12 48 08.7**	**+0.6**
	baz=7.2,SNR=30						
MTN				S	**S**	**12 49 27.8**	**-2.4**
	baz=7.2,SNR=9.2						
KDU	**Kakadu**	**7.44**	**153**	P	**Pn**	**12 48 12.8**	**+0.3**
	baz=7.5,SNR=47						
KDU				S	**S**	**12 49 36.4**	**-1.8**
	baz=7.5,SNR=5.4						
PCI	**Palu**	**10.48**	**299**	S	**S**	**12 50 48.2**	**-0.3**
	baz=10,SNR=7.6						
FITZ	**Fitzroy Crossi**	**12.45**	**195**	P	**P**	**12 49 17.5**	**+0.5**
	0.4nm,0.3s,baz=36,slow=11,SNR=31						
FITZ	**Fitzroy Crossi**	**12.45**	**195**	P	**P**	**12 49 17.3**	**+0.4**
	baz=13,SNR=5.9						
WRA	**Warramunga Arr**	**14.77**	**160**	P	**Pn**	**12 49 43.5**	**+0.4**
	1.3nm,0.3s,baz=341,slow=11,SNR=33						
WRA				S	**S**	**12 52 23.1**	**-2.6**
	0.4nm,0.3s,baz=341,slow=18,SNR=5.9						
COEN	**Coen**	**16.00**	**121**	P	**Pn**	**12 49 58.0**	**+0.3**
	baz=16,SNR=17						
QIS	**Mount Isa**	**17.72**	**146**	P	**Pn**	**12 50 16.8**	**-1.2**
	baz=18,SNR=14						
ASAR	**Alice Springs**	**18.16**	**166**	P	**Pn**	**12 50 21.8**	**-1.2**
	3.4nm,0.3s,baz=347,slow=12,SNR=122						
ASAR				S	**S**	**12 53 31.4**	**-2.3**
	0.3nm,0.3s,baz=346,slow=21,SNR=15						
UGM	**Wanagama**	**18.46**	**263**	S	S	12 53 26.6	-13
	baz=18,SNR=6.1						
CTA	**Charters Tower**	**21.81**	**131**	P	**P**	**12 50 59.3**	**+2.0**
	2.6nm,0.8s,baz=302,slow=13,SNR=5.4						
STKA	**Stephens Creek**	**28.28**	**157**	P	**P**	**12 51 56.6**	**+1.2**
	2.3nm,0.6s,baz=322,slow=12,SNR=9.3						
STKA	**Stephens Creek**	**28.28**	**157**	P	**P**	**12 51 57.3**	**+1.9**
	baz=28,SNR=9.2						
ARPS	**Mount Arapiles**	**32.77**	**161**	P	**P**	**12 52 37.3**	**+2.6**
	baz=33,SNR=5.7						
SONM	**Songino Array**	**57.22**	**342**	P	**P**	**12 55 45.7**	**-0.5**
	0.3nm,0.6s,baz=160,slow=8.8,SNR=3.0						
MKAR	**Makanchi Array**	**66.89**	**327**	P	**P**	**12 56 50.4**	**+0.3**
	0.5nm,0.6s,baz=108,slow=8.4,SNR=5.9						
ZALV	**Zalesovo Beam**	**70.29**	**334**	P	**P**	**12 57 09.5**	**-1.3**
	0.6nm,0.6s,baz=116,slow=6.8,SNR=3.5						
KURBB	**Kurchatov Arra**	**71.18**	**329**	P	**P**	**12 57 16.4**	**+0.1**
	0.1nm,0.3s,baz=136,slow=5.1,SNR=5.7						

JMA 17 12:49:54.0±0.1,33°.12N×137°.05E,h57km±1km,M3.8,13D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO1	**TONANKAI O.B.S**	**0.55**	**336**	⇓P	Pn	12 50 06.2	+0.3
TTO1				S	Sn	12 50 15.8	+1.2
TTO2	**TONANKAI O.B.S**	**0.61**	**358**	⇓P	Pn	12 50 07.2	+0.5
TTO2				S	Sn	12 50 17.4	+1.5
TK01	**Tokai 1**	**0.79**	**35**	S	Sn	12 50 18.9	-0.7
TTO3	**TONANKAI O.B.S**	**0.80**	**21**	⇓P	Pn	12 50 09.5	+0.4
TTO3				S	Sn	12 50 21.1	+0.9
TTO4	**TONANKAI O.B.S**	**0.97**	**25**	⇓P	Pn	12 50 11.6	+0.3
TTO4				S	Sn	12 50 24.2	+0.2
TK02	**Tokai 2**	**1.01**	**35**	P	Pn	12 50 12.0	+0.2
TK02				S	Sn	12 50 25.4	+0.4
JWZ	**Kozaga**	**1.19**	**290**	⇓P	Pn	12 50 14.6	+0.1
JWZ				S	Sn	12 50 28.9	-0.8
TTO5	**TONANKAI O.B.S**	**1.26**	**26**	⇓P	Pn	12 50 15.6	+0.4
TTO5				S	Sn	12 50 30.9	-0.1
JKN2	**Miekihoku**	**1.29**	**330**	⇓P	Pn	12 50 16.3	+0.5
JKN2				*e*S	Sn	12 50 31.3	-0.8
TK03	**Tokai 3**	**1.29**	**36**	S	Sn	12 50 32.2	+0.3
JIE	**Ise**	**1.30**	**347**	⇓P	Pn	12 50 16.7	+0.8
JIE				S	Sn	12 50 32.6	+0.3
TK04	**Tokai 4**	**1.44**	**28**	P	Pn	12 50 18.3	+0.7
TK04				S	Sn	12 50 35.8	+0.4
JAA	**Atsumi**	**1.51**	**3**	⇓P	Pn	12 50 19.4	+0.7
JAA				S	Sn	12 50 36.8	-0.6
JWM	**Minabe**	**1.59**	**298**	⇓P	Pn	12 50 20.5	+0.6
JWM				S	Sn	12 50 39.2	-0.2
JWY	**Kouya**	**1.64**	**312**	⇓P	Pn	12 50 21.8	+1.2
JWY				S	Sn	12 50 41.1	+0.5
TSUJ	**Tsu 2**	**1.67**	**342**	⇓P	Pn	12 50 21.9	+1.0
TSUJ				S	Sn	12 50 41.2	-0.1
JHE	**Heguri**	**1.91**	**324**	⇓P	Pn	12 50 25.4	+1.3
JHE				S	Sn	12 50 47.9	+0.9
MAT	**Matsushiro**	**3.54**	**15**	P	Pn	12 50 48.8	+2.2
MAT				S	Sn	12 51 28.6	+1.3

IDC 17 12:53:12.5±0.9,14°.88N×144°.81E,h0km,mb3.6/8, mb1 3.9/8,mb1mx3.6/26,mbtmp3.6/8,Error ellipse: s-maj=32.5km s-min=17.8km az=87.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.28**	**178**	Pn	Pn	12 53 37.9	+0.3
	68nm,0.3s,baz=285,slow=4.8,SNR=14						
GUMO				Sn	Sg	12 53 53.4	-0.2
	179nm,0.3s,baz=104,slow=20,SNR=19						
MJAR	**Matsushiro Arr**	**22.37**	**346**	P	P	12 58 13.3	+1.0
	2.3nm,1.0s,baz=174,slow=9.4,SNR=4.1						
WRA	**Warramunga Arr**	**36.10**	**197**	P	P	13 00 16.1	-0.2
	1.3nm,0.9s,baz=18,slow=9.8,SNR=4.8						
CMAR	**Chiang Mai Arr**	**44.00**	**281**	P	P	13 01 22.2	+0.1
	1.9nm,1.1s,baz=73,slow=7.1,SNR=6.6						
MKAR	**Makanchi Array**	**60.54**	**316**	P	P	13 03 24.9	+0.2
	0.4nm,0.8s,baz=108,slow=4.7,SNR=3.4						
KURBB	**Kurchatov Arra**	**63.62**	**319**	P	P	13 03 45.2	0.0
	1.2nm,0.7s,baz=101,slow=6.7,SNR=13						
ILAR	**Eielson Array**	**67.44**	**26**	P	P	13 04 09.8	0.0
	0.3nm,1.0s,baz=242,slow=5.8,SNR=2.2						
BVAR	**Borovoye Array**	**68.89**	**321**	P	P	13 04 17.8	-1.3
	0.6nm,0.6s,baz=97,slow=6.0,SNR=5.0						
YKA	**Yellowknife Ar**	**81.75**	**27**	P	P	13 05 32.8	-0.1
	0.4nm,0.8s,baz=288,slow=5.5,SNR=6.1						

IDC ***17*** *12:59:30.1±0.9,14°.83N×144°.79E,h0km,mb3.9/13, mb1 4.1/13,mb1mx3.9/25,mbtmp3.9/13,MS3.3/9, Ms1 3.3/9,ms1mx3.1/38,Error ellipse: s-maj=35.0km s-min=11.9km az=81.0*
ISCJB ***17*** *12:59:32.0±0.7,14°.87N±0°.06×144°.7E±0°.2,h22km, mb4.0/19,MS3.2/8,Error ellipse: s-maj=27.6km s-min=6.7km az=168.4*
NEIC ***17*** *12:59:32.4±0.6,14°.81N×144°.61E,h10km,mb4.3/5,Error ellipse: s-maj=23.5km s-min=8.7km az=82.0*

ISC 17 12:59:34.1±0.6,14°.78N±0°.07×144°.6E±0°.2,h22km,n39, σ1§01/38,mb4.1/19,MS3.2/8,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.21**	**167**	Pn	**Pn**	**12 59 56.0**	**+0.2**
GUMO				Sn	**Sn**	**13 00 11.5**	**0.0**
GUMO	**Guam**	**1.21**	**167**	Pn	**Pn**	**12 59 56.0**	**+0.2**
	146nm,0.3s,baz=311,slow=3.0,SNR=28						
GUMO				Sn	**Sn**	**13 00 11.5**	**0.0**
	306nm,0.3s,baz=117,slow=22,SNR=29						
JHJ	**Hachijo jima 2**	**18.78**	**347**	LR	LR	13 09 49.0	
	comp=Z,160nm,21.1s,baz=181,slow=33						
JNU	**Nakatsue**	**22.11**	**328**	LR	LR	13 11 09.8	
	comp=Z,48nm,20.7s,baz=232,slow=32						
MJAR	**Matsushiro Arr**	**22.41**	**346**	P	**P**	**13 04 31.8**	**+0.5**
MJAR	**Matsushiro Arr**	**22.41**	**346**	P	**P**	**13 04 31.8**	**+0.5**
	4.3nm,1.0s,baz=171,slow=11,SNR=9.5						
MJAR				LR	LR	13 12 44.5	
	comp=Z,65nm,18.6s,baz=170,slow=36						
KSRS	**Korea Array**	**27.00**	**330**	P	**P**	**13 05 13.1**	**-1.4**
	1.5nm,0.8s,baz=149,slow=9.9,SNR=4.0						
KSRS				LR	LR	13 15 15.0	
	comp=Z,41nm,18.0s,baz=1.6,slow=35						
KSAR	**Wonju Array Be**	**27.01**	**330**	P	**P**	**13 05 13.1**	**-1.5**
HNR	**Honiara**	**28.47**	**147**	LR	LR	13 16 29.6	
	comp=Z,78nm,18.1s,baz=39,slow=36						
ASAJ	**Asahikawa**	**29.29**	**357**	LR	LR	13 17 19.1	
	comp=Z,58nm,18.9s,baz=166,slow=36						
USRK	**Ussuriysk Arra**	**31.23**	**342**	LR	LR	13 16 58.2	
	comp=Z,51nm,18.6s,baz=99,slow=34						
WRAB	**Tennant Creek**	**35.93**	**197**	*e*P	**P**	**13 06 34.3**	**+1.1**
	1.6nm,0.4s						
WRA	**Warramunga Arr**	**35.95**	**197**	P	**P**	**13 06 34.2**	**+1.0**
WRA	**Warramunga Arr**	**35.95**	**197**	P	**P**	**13 06 34.2**	**+1.0**
	2.6nm,1.0s,baz=20,slow=9.9,SNR=14						
FITZ	**Fitzroy Crossi**	**37.63**	**210**	*e*P	**P**	**13 06 48.7**	**+1.1**
	1.4nm,0.7s						
ASAR	**Alice Springs**	**39.61**	**195**	P	**P**	**13 07 04.2**	**0.0**
ASAR	**Alice Springs**	**39.61**	**195**	P	**P**	**13 07 04.2**	**0.0**
	0.4nm,0.7s,baz=20,slow=15,SNR=6.4						
CMAR	**Chiang Mai Arr**	**43.81**	**281**	P	**P**	**13 07 39.2**	**+0.4**
CMAR	**Chiang Mai Arr**	**43.81**	**281**	P	**P**	**13 07 39.2**	**+0.4**
	6.4nm,1.1s,baz=80,slow=6.5,SNR=23						
SONM	**Songino Array**	**45.61**	**324**	P	**P**	**13 07 53.4**	**+0.5**
SONM				PcP	**PcP**	**13 09 30.7**	**-0.3**
SONM	**Songino Array**	**45.61**	**324**	P	**P**	**13 07 53.4**	**+0.5**
	0.2nm,0.4s,baz=124,slow=7.7,SNR=2.8						
SONM				PcP	**PcP**	**13 09 30.7**	**-0.3**
	0.3nm,0.6s,baz=94,slow=4.5,SNR=3.6						
SONM				LR	LR	13 25 36.7	
	comp=Z,50nm,21.9s,baz=72,slow=34						
STKA	**Stephens Creek**	**46.48**	**184**	P	**P**	**13 07 58.2**	**-1.5**
STKA	**Stephens Creek**	**46.48**	**184**	P	**P**	**13 07 58.2**	**-1.5**
	1.2nm,0.8s,baz=0.0,slow=11,SNR=1.8						
MKAR	**Makanchi Array**	**60.45**	**316**	P	**P**	**13 09 42.9**	**+0.6**
MKAR	**Makanchi Array**	**60.45**	**316**	P	**P**	**13 09 42.9**	**+0.6**
	1.9nm,0.9s,baz=88,slow=10,SNR=10						
ZALV	**Zalesovo Beam**	**60.51**	**324**	P	**P**	**13 09 42.0**	**-0.4**
ZALV	**Zalesovo Beam**	**60.51**	**324**	P	**P**	**13 09 42.0**	**-0.4**
	1.1nm,0.7s,baz=96,slow=7.6,SNR=6.9						
ZALV				LR	LR	13 36 14.5	
	comp=Z,42nm,18.3s,baz=68,slow=36						
KURK	**Kurchatov**	**63.51**	**320**	*e*P	**P**	**13 10 02.5**	**-0.1**
	12nm,1.1s						
KURBB	**Kurchatov Arra**	**63.55**	**319**	P	**P**	**13 10 03.0**	**0.0**
	8.8nm,1.0s,baz=99,slow=6.0,SNR=62						
ILAR	**Eielson Array**	**67.62**	**26**	P	**P**	**13 10 27.5**	**-1.4**
ILAR	**Eielson Array**	**67.62**	**26**	P	**P**	**13 10 27.5**	**-1.4**
	0.1nm,0.6s,baz=247,slow=6.6,SNR=3.1						
BVAR	**Borovoye Array**	**68.83**	**321**	P	**P**	**13 10 36.7**	**-0.1**
BVAR	**Borovoye Array**	**68.83**	**321**	P	**P**	**13 10 36.7**	**-0.1**
	5.4nm,1.0s,baz=95,slow=7.4,SNR=18						
BRVK	**Borovoye**	**68.90**	**321**	*e*P	**P**	**13 10 37.6**	**+0.4**
	7.0nm,1.3s						
ABKAR	**Akbulak array**	**75.49**	**318**	*e*P	**P**	**13 11 16.6**	**0.0**
	0.8nm,0.5s						
YKA	**Yellowknife Ar**	**81.94**	**27**	P	**P**	**13 11 54.3**	**+2.5**
YKA	**Yellowknife Ar**	**81.94**	**27**	P	**P**	**13 11 54.3**	**+2.5**
	0.1nm,0.6s,baz=283,slow=4.6,SNR=3.7						
FINES	**FINESS Array B**	**89.98**	**335**	P	**P**	**13 12 30.3**	**-1.4**
FINES	**FINESS Array B**	**89.98**	**335**	P	**P**	**13 12 30.3**	**-1.4**
	2.6nm,0.8s,baz=76,slow=5.9,SNR=4.3						

CSEM ***17*** *13:03:27.0,37°.83N×29°.08E,h7km,MD2.6,After DDA*

DDA 17 13:03:27.0,37°.83N×29°.08E,h7km,MD2.6,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNZL	**Cakiroluk**	**0.14**	**190**	*i* P	Pg	13 03 30.3	-0.1
DNZL				*i* S	Sg	13 03 32.8	+0.3
DNZL	**Cakiroluk**	**0.14**	**190**	*i* P	Pg	13 03 30.3	0.0
DNZL				*i* S	Sg	13 03 32.8	+0.3
KHAL	**Karahalli**	**0.63**	**31**	*i* P	Pg	13 03 38.7	-0.6
KHAL	**Karahalli**	**0.63**	**31**	*i* P	Pg	13 03 38.7	-0.7
GOLH	**Golhisar**	**0.71**	**147**	*i* P	Pg	13 03 40.7	-0.1
GOLH				*i* S	Sb	13 03 51.5	-0.3
GOLH	**Golhisar**	**0.71**	**147**	*i* P	Pg	13 03 40.7	-0.1
GOLH				*i* S	Sb	13 03 51.5	-0.3
MANT	**Manisa**	**0.78**	**328**	*i* P	Pg	13 03 42.1	-0.2
MANT				*i* S	Sg	13 03 52.8	+0.2
MANT	**Manisa**	**0.78**	**328**	*i* P	Pg	13 03 42.1	-0.2
MANT				*i* S	Sg	13 03 52.8	+0.2
AYDN	**Tasoluk**	**0.96**	**260**	*i* P	Pb	13 03 46.6	+0.4
AYDN				*i* S	Sg	13 03 58.3	+0.1
AYDN	**Tasoluk**	**0.96**	**260**	*i* P	Pn	13 03 46.6	-0.4
AYDN				*i* S	Sg	13 03 58.3	0.0
DEMI	**Demirci**	**1.24**	**347**	*i* P	Pn	13 03 50.1	-0.8
DEMI	**Demirci**	**1.24**	**347**	*i* P	Pn	13 03 50.1	-0.8
GDZ	**Gediz**	**1.29**	**14**	*i* P	Pg	13 03 52.3	+0.2
GDZ	**Gediz**	**1.29**	**14**	*i* P	Pg	13 03 52.3	+0.2

ISK ***17*** *13:06:08.9,37°.85N×29°.08E,h5km,MD2.8*
ISCJB ***17*** *13:06:09.2±0.6,37°.84N±0°.03×29°.08E±0°.06,h9km±7km, Error ellipse: s-maj=7.4km s-min=4.8km az=0.9*
CSEM ***17*** *13:06:09.3±0.2,37°.83N×29°.07E,h5km,MD2.5,Error ellipse: s-maj=4.2km s-min=3.1km az=72.0*
DDA ***17*** *13:06:09.0,37°.83N×29°.06E,h7km,MD2.5*

ISC 17 13:06:09.2±1.0,37°.84N±0°.03×29°.07E±0°.03,h10km±8km, n15,σ0§69/27,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.09**	**199**	PG	**Pg**	**13 06 11.5**	**-0.2**
DENT	**Denizli**	**0.09**	**199**	*i* Pg	**Pg**	**13 06 11.5**	**-0.2**
DNZL	**Cakiroluk**	**0.15**	**187**	*i* P	**Pg**	**13 06 12.4**	**-0.3**
DNZL				*i* S	**Sg**	**13 06 15.3**	**+0.2**
DNZL	**Cakiroluk**	**0.15**	**187**	*i* P	**Pg**	**13 06 12.4**	**-0.3**
DNZL				*i* S	**Sg**	**13 06 15.3**	**+0.2**
KHL	**Karahalli**	**0.60**	**36**	*e*PG	**Pg**	**13 06 21.1**	**+0.2**
KHL				*e*SG	**Sg**	**13 06 29.6**	**+0.7**
KHL	**Karahalli**	**0.60**	**36**	*e*Pg	**Pg**	**13 06 21.1**	**+0.2**
KHL				*e*Sg	**Sg**	**13 06 29.6**	**+0.7**
KHAL	**Karahalli**	**0.63**	**32**	*i* P	**Pg**	**13 06 18.6**	**-2.8**
GOLH	**Golhisar**	**0.71**	**147**	*i* P	**Pg**	**13 06 22.8**	**-0.2**
GOLH				*i* S	**Sb**	**13 06 34.0**	**+0.3**
GOLH	**Golhisar**	**0.71**	**147**	*i* P	**Pg**	**13 06 22.8**	**-0.2**
GOLH				*i* S	**Sb**	**13 06 34.0**	**+0.3**
KULA	**Kula-Manisa**	**0.75**	**335**	*e*PG	**Pg**	**13 06 23.8**	**+0.1**
KULA				*e*SG	**Sb**	**13 06 34.5**	**-0.2**
KULA	**Kula-Manisa**	**0.75**	**335**	*e*Pg	**Pg**	**13 06 23.8**	**+0.1**
KULA				*e*Sg	**Sb**	**13 06 34.5**	**-0.2**
MANT	**Manisa**	**0.77**	**328**	*i* P	**Pg**	**13 06 24.0**	**-0.1**
MANT				*i* S	**Sb**	**13 06 36.0**	**+0.7**
MANT	**Manisa**	**0.77**	**328**	*i* P	**Pg**	**13 06 24.0**	**-0.1**
MANT				*i* S	**Sb**	**13 06 36.0**	**+0.7**
AYDN	**Tasoluk**	**0.96**	**260**	*i* P	**Pb**	**13 06 27.9**	**0.0**
AYDN				*i* S	**Sg**	**13 06 39.7**	**-0.5**
AYDN	**Tasoluk**	**0.96**	**260**	*i* P	**Pb**	**13 06 27.9**	**0.0**
AYDN				*i* S	**Sg**	**13 06 39.7**	**-0.5**

IDC ***17*** *13:07:54.8±5.9,35°.83N×71°.36E,h79km±45km,mb3.5/7, mb1 3.5/12,mb1mx3.3/33,mbtmp3.5/12,ML3.7/5,MS2.7/1, Ms1 2.9/1,ms1mx2.2/40,Error ellipse: s-maj=55.6km s-min=33.7km az=150.0*
NNC ***17*** *13:08:04.9±8.6,36°.71N×70°.74E,h104km±146km,mb3.2, mpv4.0,Error ellipse: s-maj=65.4km s-min=47.0km az=16.0*

ISC 17 13:08:03.4±1.6,36°.7N±0°.1×70°.85E±0°.10,h100km,n30, σ1§82/31,mb3.9/6,5C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.96**	**163**	⇓P	Pn

FAGN	**Fagnano**	**0.05**	**71**	Pg	Pg	13 16 29.9	+0.4
FAGN				Sg	Sg	13 16 31.0	+0.2
	3µm,0.3s						
AQU	**L'Aquila**	**0.14**	**318**	Pg	Pg	13 16 31.4	+0.6
AQU				Sg	Sg	13 16 33.8	+0.9
	290nm,0.6s						
AQU	**L'Aquila**	**0.14**	**318**	Pg	Pg	13 16 31.4	+0.6
AQU				Sg	Sg	13 16 33.8	+0.9
	290nm,0.6s						
PTQR	**Pietraquaria**	**0.25**	**202**	Pg	Pg	13 16 33.5	+0.7
PTQR				Sg	Sg	13 16 37.7	+1.5
PTQR	**Pietraquaria**	**0.25**	**202**	Pg	Pg	13 16 33.5	+0.7
PTQR				Sg	Sg	13 16 37.7	+1.5
VCEL	**Villa Celiera**	**0.28**	**58**	Pg	Pg	13 16 34.0	+0.6
VCEL				Sg	Sb	13 16 38.7	-1.3
	141nm,0.3s						
VCEL	**Villa Celiera**	**0.28**	**58**	Pg	Pg	13 16 34.0	+0.6
VCEL				Sg	Sb	13 16 38.7	-1.3
	141nm,0.3s						
VVLD	**Villa Vallelon**	**0.39**	**169**	Pg	Pb	13 16 36.5	-0.4
VVLD				Sg	Sb	13 16 42.2	-0.9
	51nm,0.5s						
VVLD	**Villa Vallelon**	**0.39**	**169**	Pg	Pb	13 16 36.5	-0.4
VVLD				Sg	Sb	13 16 42.2	-0.9
	51nm,0.5s						
LNSS	**Leonessa**	**0.50**	**315**	Pg	Pg	13 16 38.1	+0.5
LNSS	**Leonessa**	**0.50**	**315**	Pg	Pg	13 16 38.1	+0.5
LPEL	**Lama dei Pelig**	**0.53**	**112**	Pg	Pg	13 16 38.4	+0.3
LPEL				Sg	Sb	13 16 46.8	-0.4
	63nm,0.5s						
LPEL	**Lama dei Pelig**	**0.53**	**112**	Pg	Pg	13 16 38.4	+0.3
LPEL				Sg	Sb	13 16 46.8	-0.4
	63nm,0.5s						
SDI	**San Donato**	**0.58**	**158**	Pg	Pg	13 16 39.4	+0.4
SDI				Sg	Sb	13 16 48.7	0.0
	16nm,0.2s						
SDI	**San Donato**	**0.58**	**158**	Pg	Pg	13 16 39.4	+0.4
SDI				Sg	Sb	13 16 48.7	0.0
	16nm,0.2s						
NVLJ	**Novalja**	**2.51**	**23**	*e*Pg	Pg	13 17 29.8	+14
NVLJ				Sg	Sg	13 17 48.6	+0.2
NVLJ	**Novalja**	**2.51**	**23**	Sg	Sg	13 17 48.6	+0.2

*IDC **17** 13:21:39.7±0.6, 14°.86N×144°.66E, h0km, mb4.1/18, mb1 4.2/18, mb1mx4.2/28, mbtmp4.1/18, MS3.6/17, Ms1 3.6/17, ms1mx3.4/44, Error ellipse: s-maj=24.2km s-min=12.2km az=83.0*

*ISCJB **17** 13:21:41.2±0.5, 14°.82N±0°.05×144°.6E±0°.1, h22km, mb4.1/22, MS3.6/16, Error ellipse: s-maj=18.0km s-min=5.3km az=164.8*

*NEIC **17** 13:21:41.1±0.4, 14°.82N×144°.62E, h10km, mb4.6/4, Error ellipse: s-maj=14.7km s-min=7.2km az=84.0*

ISC 17 13:21:42.9±0.5, 14°.79N±0°.07×144°.6E±0°.1, h22km, n56, σ0s81/50, mb4.2/22, MS3.6/16, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
GUMO	**Guam**	**1.22**	**169**	*e*P		**Pn**	**13 22 02.6**	**-2.0**
GUMO				*e*S		**Sn**	**13 22 19.5**	**-0.9**
GUMO	**Guam**	**1.22**	**169**	Pn		**Pn**	**13 22 04.4**	**-0.2**
	206nm,0.3s,baz=274,slow=3.3,SNR=24							
GUMO				Sn		**Sn**	**13 22 20.6**	**+0.2**
	657nm,0.3s,baz=120,slow=20,SNR=42							
JHJ	**Hachijo jima 2**	**18.77**	**347**	LR		LR	13 32 41.7	
	comp=Z,144nm,19.7s,baz=159,slow=35							
JNU	**Nakatsue**	**22.31**	**325**	LR		LR	13 33 45.5	
	comp=Z,27nm,18.1s,baz=52,slow=33							
MJAR	**Matsushiro Arr**	**22.41**	**346**	P		**P**	**13 26 40.4**	**+0.4**
MJAR	**Matsushiro Arr**	**22.41**	**346**	P		**P**	**13 26 40.4**	**+0.4**
	3.2nm,0.8s,baz=168,slow=12,SNR=8.3							
KSRS	**Korea Array**	**27.01**	**330**	P		**P**	**13 27 23.0**	**-0.4**
	0.9nm,0.7s,baz=144,slow=10,SNR=3.8							
KSRS				LR		LR	13 35 30.0	
	comp=Z,70nm,21.6s,baz=49,slow=31							
KSAR	**Wonju Array Be**	**27.02**	**330**	P		**P**	**13 27 23.0**	**-0.5**
HNR	**Honiara**	**28.46**	**147**	LR		LR	13 37 48.1	
	comp=Z,88nm,19.5s,baz=318,slow=34							
ASAJ	**Asahikawa**	**29.28**	**357**	LR		LR	13 39 07.4	
	comp=Z,63nm,20.9s,baz=164,slow=36							
WRAB	**Tennant Creek**	**35.95**	**197**	*e*P		**P**	**13 28 42.8**	**+0.6**
	4.4nm,0.8s							
WRA	**Warramunga Arr**	**35.97**	**197**	P		**P**	**13 28 42.7**	**+0.5**
WRA	**Warramunga Arr**	**35.97**	**197**	P		**P**	**13 28 42.7**	**+0.5**
	2.8nm,0.8s,baz=18,slow=9.4,SNR=14							
KSM	**Kuching**	**36.38**	**252**	*e*P		**P**	**13 28 45.3**	**-0.6**
	7.2nm,1.1s							
FITZ	**Fitzroy Crossi**	**37.66**	**210**	P		**P**	**13 28 57.4**	**+0.8**
FITZ	**Fitzroy Crossi**	**37.66**	**210**	P		**P**	**13 28 57.4**	**+0.8**
	3.4nm,0.7s,baz=27,slow=9.0,SNR=12							
PETK	**Petropavlovsk-**	**39.61**	**12**	LR		LR	13 45 21.4	
	comp=Z,44nm,18.3s,baz=323,slow=36							
ASAR	**Alice Springs**	**39.63**	**196**	P		**P**	**13 29 14.1**	**+0.8**
ASAR	**Alice Springs**	**39.63**	**196**	P		**P**	**13 29 14.1**	**+0.8**
	0.7nm,0.7s,baz=9.9,slow=9.8,SNR=8.5							
DZM	**Mont Dzumac**	**42.42**	**149**	LR		LR	13 43 18.5	
	comp=Z,97nm,20.1s,baz=2.7,slow=31							
CMAR	**Chiang Mai Arr**	**43.84**	**281**	P		**P**	**13 29 47.9**	**0.0**
CMAR					PcP	**PcP**	**13 31 35.4**	**+1.2**
CMAR	**Chiang Mai Arr**	**43.84**	**281**	P		**P**	**13 29 47.9**	**0.0**
	5.0nm,1.0s,baz=78,slow=6.3,SNR=25							
CMAR					PcP	**PcP**	**13 31 35.4**	**+1.2**
	0.8nm,0.6s,baz=58,slow=3.2,SNR=4.8							
CMAR				LR		LR	13 47 25.2	
	comp=Z,84nm,18.5s,baz=173,slow=35							
SONM	**Songino Array**	**45.62**	**324**	P		**P**	**13 30 01.7**	**-0.1**
SONM					PcP	**PcP**	**13 31 40.4**	**+0.5**
SONM	**Songino Array**	**45.62**	**324**	P		**P**	**13 30 01.7**	**-0.1**
	0.5nm,0.9s,baz=116,slow=8.2,SNR=3.4							
SONM					PcP	**PcP**	**13 31 40.4**	**+0.5**
	0.9nm,0.8s,baz=111,slow=4.1,SNR=4.6							
SONM				LR		LR	13 48 27.2	
	comp=Z,80nm,18.0s,baz=254,slow=35							
STKA	**Stephens Creek**	**46.49**	**184**	P		**P**	**13 30 09.1**	**+0.6**
STKA	**Stephens Creek**	**46.49**	**184**	P		**P**	**13 30 09.1**	**+0.6**
	1.4nm,0.7s,baz=344,slow=7.4,SNR=4.1							
PSI	**Prapat**	**46.60**	**260**	LR		LR	13 49 15.5	
	comp=Z,216nm,18.4s,baz=172,slow=36							
AFI	**Afiamalu**	**51.71**	**121**	LR		LR	13 48 24.2	
	comp=Z,124nm,19.9s,baz=154,slow=31							
MK31	**Makanchi Array**	**60.47**	**316**	*e*P		**P**	**13 31 50.4**	**-0.8**
MKAR	**Makanchi Array**	**60.47**	**316**	P		**P**	**13 31 51.7**	**+0.5**
MKAR	**Makanchi Array**	**60.47**	**316**	P		**P**	**13 31 51.7**	**+0.5**
	2.7nm,0.9s,baz=93,slow=8.7,SNR=22							
ZALV	**Zalesovo Beam**	**60.52**	**324**	P		**P**	**13 31 51.1**	**-0.2**
ZALV	**Zalesovo Beam**	**60.52**	**324**	P		**P**	**13 31 51.1**	**-0.2**
	1.4nm,0.7s,baz=104,slow=7.6,SNR=9.4							
ZALV				LR		LR	13 58 34.6	
	comp=Z,41nm,18.6s,baz=71,slow=37							
KURK	**Kurchatov**	**63.52**	**320**	*e*P		**P**	**13 32 10.4**	**-1.1**
	7.7nm,0.8s							
KURBB	**Kurchatov Arra**	**63.56**	**319**	P		**P**	**13 32 12.0**	**+0.2**
	6.5nm,0.7s,baz=101,slow=7.0,SNR=45							
ILAR	**Eielson Array**	**67.59**	**26**	P		**P**	**13 32 36.0**	**-1.7**
ILAR	**Eielson Array**	**67.59**	**26**	P		**P**	**13 32 36.0**	**-1.7**
	0.5nm,0.9s,baz=247,slow=5.0,SNR=5.3							
BVAR	**Borovoye Array**	**68.85**	**321**	P		**P**	**13 32 46.0**	**+0.3**
BVAR	**Borovoye Array**	**68.85**	**321**	P		**P**	**13 32 46.0**	**+0.3**
	4.1nm,0.7s,baz=103,slow=7.4,SNR=23							
BRVK	**Borovoye**	**68.91**	**321**	*e*P		**P**	**13 32 44.8**	**-1.3**
	7.9nm,1.0s							
PPT	**Papeete**	**72.41**	**114**	LR		LR	14 01 34.0	
	comp=Z,42nm,19.5s,baz=325,slow=33							
AKTO	**Aktyubinsk**	**76.61**	**319**	P		**P**	**13 33 31.4**	**-0.5**
AKTO	**Aktyubinsk**	**76.61**	**319**	P		**P**	**13 33 31.4**	**-0.5**
	0.5nm,0.4s,baz=88,slow=12,SNR=5.2							
YKA	**Yellowknife Ar**	**81.91**	**27**	P		**P**	**13 34 00.8**	**+0.3**
YKA	**Yellowknife Ar**	**81.91**	**27**	P		**P**	**13 34 00.8**	**+0.3**
	0.6nm,0.9s,baz=287,slow=4.9,SNR=9.3							
ARCES	**ARCESS Array B**	**85.88**	**342**	P		**P**	**13 34 21.0**	**+0.3**
ARCES	**ARCESS Array B**	**85.88**	**342**	P		**P**	**13 34 21.0**	**+0.3**
	4.4nm,0.7s,baz=66,slow=7.0,SNR=6.3							
ARCES				LR		LR	14 17 42.5	
	comp=Z,49nm,19.1s,baz=46,slow=39							
NVAR	**Mina Array Bea**	**86.36**	**51**	P		**P**	**13 34 24.7**	**+0.6**
NVAR	**Mina Array Bea**	**86.36**	**51**	P		**P**	**13 34 24.7**	**+0.6**
	0.4nm,0.8s,baz=247,slow=6.0,SNR=3.5							
FINES	**FINESS Array B**	**89.98**	**335**	P		**P**	**13 34 39.4**	**-1.1**
FINES	**FINESS Array B**	**89.98**	**335**	P		**P**	**13 34 39.4**	**-1.1**
	4.6nm,0.9s,baz=42,slow=6.5,SNR=6.0							
AKASG	**Malin Array Be**	**93.91**	**325**	LR		LR	14 19 11.4	
	comp=Z,65nm,19.3s,baz=245,slow=37							
NOA	**NORSAR Array B**	**95.85**	**339**	LR		LR	14 20 39.3	
	comp=Z,21nm,21.8s,baz=215,slow=37							
MLR	**Muntele Rosu**	**98.41**	**321**	LR		LR	14 19 40.4	
	comp=Z,14nm,18.9s,baz=94,slow=35							
LPAZ	**La Paz**	**148.42**	**97**	PKPbc		**PKPbc**	**13 41 30.9**	**+1.3**
LPAZ	**La Paz**	**148.42**	**97**	PKPbc		**PKPbc**	**13 41 30.9**	**+1.3**
	0.8nm,0.6s,baz=359,slow=2.5,SNR=4.0							

IDC 17 13:21:58.4±8.5, 2°.39N×127°.18E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/22, mbtmp3.7/4, MS4.0/1, Ms1 4.0/1, ms1mx2.7/35, Error ellipse: s-maj=135.0km s-min=100.0km az=142.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
FITZ	**Fitzroy Crossi**	**20.42**	**184**	P		P	13 26 37.5	+0.2
	0.7nm,0.5s,baz=358,slow=8.6,SNR=8.5							
WRA	**Warramunga Arr**	**23.28**	**163**	P		P	13 27 08.3	+0.3
	2.8nm,0.5s,baz=341,slow=11,SNR=33							
ASAR	**Alice Springs**	**26.72**	**166**	P		P	13 27 39.6	-0.1
	0.3nm,0.6s,baz=350,slow=7.2,SNR=11							
STKA	**Stephens Creek**	**36.73**	**159**	P		P	13 29 07.2	-0.4
	1.8nm,0.6s,baz=353,slow=9.4,SNR=4.2							
RPZ	**Rata Peaks**	**60.42**	**145**	LR		LR	13 58 35.8	
	comp=Z,118nm,18.9s,baz=179,slow=36							

*CSEM **17** 13:32:34.9±0.3, 37°.79N×29°.06E, h13km±2km, MD2.9, Error ellipse: s-maj=8.0km s-min=5.4km az=90.0*

*ISK **17** 13:32:34.3, 37°.81N×29°.02E, h18km, MD2.9*

*ISCJB **17** 13:32:35.0±0.6, 37°.80N±0°.03×29°.06E±0°.07, h12km±5km, Error ellipse: s-maj=8.8km s-min=5.4km az=11.2*

*DDA **17** 13:32:35.3, 37°.84N×29°.09E, h7km, MD2.6*

ISC 17 13:32:34.7±0.9, 37°.80N±0°.04×29°.09E±0°.05, h16km±6km, n18, σ0s49/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
DENT	**Denizli**	**0.07**	**222**	*e*PG		**Pg**	**13 32 37.8**	**0.0**
DENT	**Denizli**	**0.07**	**222**	*e*Pg		**Pg**	**13 32 37.8**	**0.0**
DNZL	**Cakiroluk**	**0.12**	**196**	*i* P		**Pb**	**13 32 38.7**	**0.0**
DNZL				*i* S		**Sg**	**13 32 41.1**	**+0.1**
DNZL	**Cakiroluk**	**0.12**	**196**	*i* P		**Pb**	**13 32 38.7**	**0.0**
DNZL				*i* S		**Sg**	**13 32 41.1**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.72**	**153**	*e*PG		**Pn**	**13 32 50.0**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.72**	**153**	*e*Pg		**Pn**	**13 32 50.0**	**-0.4**
KULA	**Kula-Manisa**	**0.79**	**335**	*e*PG		**Pg**	**13 32 49.5**	**-0.6**
KULA				*e*SG		**Sb**	**13 33 00.8**	**+0.2**
KULA	**Kula-Manisa**	**0.79**	**335**	*e*Pg		**Pg**	**13 32 49.5**	**-0.6**
KULA				*e*Sg		**Sb**	**13 33 00.8**	**+0.2**
YER	**Yerkesik**	**0.93**	**224**	*e*PG		**Pb**	**13 32 51.3**	**-1.1**
YER				*e*SG		**Sg**	**13 33 05.4**	**+0.6**
YER	**Yerkesik**	**0.93**	**224**	*e*Pg		**Pb**	**13 32 51.3**	**-1.1**
YER				*e*Sg		**Sg**	**13 33 05.4**	**+0.6**
AYDN	**Tasoluk**	**0.97**	**262**	*i* P		**Pn**	**13 32 54.1**	**+0.4**
AYDN				*i* S		**Sg**	**13 33 06.2**	**0.0**
AYDN	**Tasoluk**	**0.97**	**262**	*i* P		**Pn**	**13 32 54.1**	**+0.4**
AYDN				*i* S		**Sg**	**13 33 06.2**	**0.0**
DALT	**Dalyan (Mudla)**	**1.09**	**199**	*e*PN		**Pb**	**13 32 54.9**	**-0.3**
DALT	**Dalyan (Mudla)**	**1.09**	**199**	*e*Pn		**Pb**	**13 32 54.9**	**-0.3**
FETY	**Fethiye**	**1.17**	**180**	*e*PN		**Pn**	**13 32 56.4**	**0.0**
FETY	**Fethiye**	**1.17**	**180**	*e*Pn		**Pn**	**13 32 56.4**	**0.0**
GDZ	**Gediz**	**1.32**	**13**	*e*P		**Pg**	**13 33 00.1**	**-0.1**
GDZ				*e*S		**Sn**	**13 33 16.7**	**+0.7**
GDZ	**Gediz**	**1.32**	**13**	*e*P		**Pg**	**13 33 00.1**	**-0.1**
GDZ				*e*S		**Sn**	**13 33 16.7**	**+0.7**

MAN 17 13:45:48, 10°.05N×125°.00E, h12km, mb4.4, ML3.2, MS3.0, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MSLP	**Maasin**	**0.16**	**302**	*e*P		Pb	13 45 54.6	+1.6
MSLP				*e*S		Sg	13 46 03.5	+9.1
PLP	**Palo**	**1.11**	**359**	*e*P		Pb	13 46 09.2	0.0
PLP				*i* S		Sn	13 46 29.6	+4.9
TBP	**Tagbilaran**	**1.18**	**253**	*e*P		Pb	13 46 09.4	-0.9
TBP				*e*S		Sn	13 46 27.9	+1.7

IDC 17 13:51:19.8±1.1, 14°.78N×144°.64E, h0km, mb3.7/10, mb1 3.8/10, mb1mx3.7/26, mbtmp3.7/10, Error ellipse: s-maj=40.9km s-min=13.4km az=77.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
GUMO	**Guam**	**1.21**	**169**	Pn		Pg	13 51 43.0	+0.1
	58nm,0.3s,baz=313,slow=1.5,SNR=10							
GUMO				Sn		Sn	13 52 00.6	-0.4
	109nm,0.3s,baz=131,slow=20,SNR=10							
MJAR	**Matsushiro Arr**	**22.42**	**346**	P		P	13 56 20.5	+0.4
	2.6nm,0.9s,baz=170,slow=12,SNR=6.3							
KSRS	**Korea Array**	**27.03**	**330**	P		P	13 57 03.0	-0.7
	1.1nm,0.8s,baz=136,slow=8.4,SNR=4.3							
WRA	**Warramunga Arr**	**35.96**	**197**	P		P	13 58 23.4	+1.0
	1.1nm,1.0s,baz=22,slow=9.8,SNR=8.5							
ASAR	**Alice Springs**	**39.62**	**196**	P		P	13 58 53.5	+0.1
	0.3nm,0.8s,baz=7.0,slow=9.5,SNR=4.6							
CMAR	**Chiang Mai Arr**	**43.85**	**281**	P		P	13 59 28.7	+0.5
	1.5nm,0.9s,baz=88,slow=6.8,SNR=9.3							
MKAR	**Makanchi Array**	**60.48**	**316**	P		P	14 01 31.9	+0.3
	0.9nm,0.8s,baz=90,slow=7.8,SNR=9.3							
ZALV	**Zalesovo Beam**	**60.53**	**324**	P		P	14 01 30.9	-0.9
	0.4nm,0.5s,baz=99,slow=7.6,SNR=4.5							
KURBB	**Kurchatov Arra**	**63.58**	**319**	P		P	14 01 52.0	-0.2
	2.9nm,0.7s,baz=101,slow=6.7,SNR=25							
BVAR	**Borovoye Array**	**68.86**	**321**	P		P	14 02 25.4	-0.8
	1.4nm,0.6s,baz=80,slow=7.9,SNR=8.3							
YKA	**Yellowknife Ar**	**81.91**	**27**	P		P	14 03 42.2	+1.2
	0.1nm,0.5s,baz=292,slow=5.1,SNR=3.7							

*IDC **17** 13:54:02.7±0.7, 14°.88N×144°.67E, h0km, mb3.8/15, mb1 4.0/15, mb1mx3.9/26, mbtmp3.9/15, MS3.5/10, Ms1 3.5/10, ms1mx3.2/42, Error ellipse: s-maj=27.0km s-min=14.4km az=83.0*

*ISCJB **17** 13:54:04.4±0.5, 14°.82N±0°.06×144°.6E±0°.1, h22km, mb3.9/17, MS3.4/9, Error ellipse: s-maj=21.5km s-min=5.5km az=164.1*

*NEIC **17** 13:54:04.0±0.5, 14°.84N×144°.66E, h10km, mb4.2/2, Error ellipse: s-maj=18.0km s-min=7.6km az=80.0*

ISC 17 13:54:05.9±0.6, 14°.80N±0°.07×144°.6E±0°.2, h22km, n40, σ0s78/38, mb3.9/17, MS3.3/9, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
GUMO	**Guam**	**1.23**	**170**	*e*Pg		**Pn**	**13 54 27.3**	**-0.4**
GUMO				*e*Sg		**Sn**	**13 54 42.5**	**-1.1**
GUMO	**Guam**	**1.23**	**170**	Pn		**Pn**	**13 54 27.6**	**-0.1**
	218nm,0.3s,baz=267,slow=2.9,SNR=17							
GUMO				Sn		**Sn**	**13 54 43.3**	**-0.3**
	232nm,0.3s,baz=358,slow=24,SNR=15							
JHJ	**Hachijo jima 2**	**18.76**	**347**	LR		LR	14 04 30.3	
	comp=Z,144nm,18.4s,baz=242,slow=34							
MJAR	**Matsushiro Arr**	**22.40**	**346**	P		**P**	**13 59 03.1**	**+0.2**
MJAR	**Matsushiro Arr**	**22.40**	**346**	P		**P**	**13 59 03.1**	**+0.2**
	4.9nm,0.9s,baz=173,slow=10.0,SNR=12							
MJAR				LR		LR	14 07 18.2	
	comp=Z,96nm,18.1s,baz=175,slow=36							
MAT	**Matsushiro**	**22.40**	**346**	P		**P**	**13 59 04.5**	**+1.6**
KSRS	**Korea Array**	**27.01**	**330**	P		**P**	**13 59 46.5**	**+0.2**
	1.5nm,0.9s,baz=153,slow=9.6,SNR=5.3							
KSRS				LR		LR	14 10 07.2	
	comp=Z,48nm,20.7s,baz=8.1,slow=36							
KSAR	**Wonju Array Be**	**27.02**	**330**	P		**P**	**13 59 46.5**	**+0.1**
HNR	**Honiara**	**28.46**	**147**	LR		LR	14 09 41.1	
	comp=Z,116nm,19.7s,baz=298,slow=33							
ASAJ	**Asahikawa**	**29.27**	**357**	LR		LR	14 10 11.8	
	comp=Z,64nm,21.7s,baz=186,slow=33							
WRA	**Warramunga Arr**	**35.98**	**197**	P		**P**	**14 01 06.2**	**+0.9**
WRA	**Warramunga Arr**	**35.98**	**197**	P		**P**	**14 01 06.2**	**+0.9**
	1.5nm,0.9s,baz=10,slow=9.5,SNR=13							
ASAR	**Alice Springs**	**39.65**	**196**	P		**P**	**14 01 38.0**	**+1.7**
ASAR	**Alice Springs**	**39.65**	**196**	P		**P**	**14 01 38.0**	**+1.7**
	0.2nm,0.7s,baz=15,slow=8.4,SNR=6.0							
CMAR	**Chiang Mai Arr**	**43.85**	**281**	P		**P**	**14 02 10.8**	**-0.1**
CMAR	**Chiang Mai Arr**	**43.85**	**281**	P		**P**	**14 02 10.8**	**-0.1**
	1.6nm,0.9s,baz=82,slow=6.6,SNR=6.4							
CMAR				LR		LR	14 21 37.3	
	comp=Z,34nm,18.9s,baz=354,slow=38							
SONM	**Songino Array**	**45.62**	**324**	P		**P**	**14 02 24.8**	**+0.1**
SONM					PcP	**PcP**	**14 04 02.8**	**0.0**
SONM	**Songino Array**	**45.62**	**324**	P		**P**	**14 02 24.8**	**+0.1**
	0.3nm,0.8s,baz=159,slow=5.6,SNR=2.7							
SONM					PcP	**PcP**	**14 04 02.8**	**0.0**
	0.7nm,0.9s,baz=132,slow=2.1,SNR=3.7							
SONM				LR		LR	14 20 18.0	
	comp=Z,68nm,18.9s,baz=76,slow=35							
AFI	**Afiamalu**	**51.70**	**121**	LR		LR	14 22 22.5	
	comp=Z,12nm,18.6s,baz=86,slow=33							
NWAO	**Narrogin (SRO)**	**54.21**	**209**	LR		LR	14 27 09.2	
	comp=Z,91nm,18.1s,baz=69,slow=37							
MKAR	**Makanchi Array**	**60.47**	**316**	P		**P**	**14 04 14.2**	**+0.1**
MKAR	**Makanchi Array**	**60.47**	**316**	P		**P**	**14 04 14.2**	**+0.1**
	0.8nm,0.7s,baz=92,slow=8.8,SNR=8.0							
ZALV	**Zalesovo Beam**	**60.52**	**324**	P		**P**	**14 04 14.0**	**-0.2**
ZALV	**Zalesovo Beam**	**60.52**	**324**	P		**P**	**14 04 14.0**	**-0.2**
	0.4nm,0.4s,baz=106,slow=5.1,SNR=4.4							
KURK	**Kurchatov**	**63.52**	**320**	*e*P		**P**	**14 04 33.9**	**-0.6**
	2.6nm,0.7s							
KURBB	**Kurchatov Arra**	**63.56**	**319**	P		**P**	**14 04 34.6**	**-0.1**
	2.9nm,0.7s,baz=101,slow=6.8,SNR=21							
ILAR	**Eielson Array**	**67.57**	**26**	P		**P**	**14 04 59.4**	**-1.1**
ILAR	**Eielson Array**	**67.57**	**26**	P		**P**	**14 04 59.4**	**-1.1**
	0.4nm,0.9s,baz=251,slow=6.0,SNR=3.7							
BVAR	**Borovoye Array**	**68.84**	**321**	P		**P**	**14 05 08.6**	**0.0**
BVAR	**Borovoye Array**	**68.84**	**321**	P		**P**	**14 05 08.6**	**0.0**
	1.4nm,0.6s,baz=95,slow=7.2,SNR=6.9							
ABKAR	**Akbulak array**	**75.50**	**318**	*e*P		**P**	**14 05 47.6**	**-0.9**
	0.3nm,0.3s							
AKTO	**Aktyubinsk**	**76.61**	**319**	LR		LR	14 40 40.8	
	comp=Z,55nm,18.4s,baz=115,slow=36							
YKA	**Yellowknife Ar**	**81.89**	**27**	P		**P**	**14 06 23.9**	**+0.6**
YKA	**Yellowknife Ar**	**81.89**	**27**	P		**P**	**14 06 23.9**	**+0.6**
	0.5nm,0.8s,baz=289,slow=5.6,SNR=9.2							
ARCES	**ARCESS Array B**	**85.87**	**342**	P		**P**	**14 06 43.5**	**-0.2**
ARCES	**ARCESS Array B**	**85.87**	**342**	P		**P**	**14 06 43.5**	**-0.2**
	4.4nm,0.9s,baz=45,slow=3.6,SNR=3.5							
NVAR	**Mina Array Bea**	**86.34**	**51**	P		**P**	**14 06 47.7**	**+0.8**
NVAR	**Mina Array Bea**	**86.34**	**51**	P		**P**	**14 06 47.7**	**+0.8**
	0.6nm,0.8s,baz=281,slow=9.1,SNR=3.5							
FINES	**FINESS Array B**	**89.98**	**335**	P		**P**	**14 07 01.9**	**-1.5**
FINES	**FINESS Array B**	**89.98**	**335**	P		**P**	**14 07 01.9**	**-1.5**
	2.0nm,0.8s,baz=160,slow=23,SNR=2.8							

IDC 17 14:00:37.1±1.1, 14°.62N×144°.77E, h0km, mb3.7/10, mb1 3.9/10, mb1mx3.7/27, mbtmp3.8/10, Error ellipse: s-maj=41.8km s-min=16.0km az=79.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
GUMO	**Guam**	**1.03**	**175**	Pn		Pg	14 00 57.4	+0.4
	41nm,0.3s,baz=96,slow=20,SNR=9.8							
GUMO				Sn		Sn	14 01 19.3	+5.3
	110nm,0.3s,baz=104,slow=21,SNR=15							
JNU	**Nakatsue**	**22.33**	**328**	P		P	14 05 35.8	-0.9
	3.4nm,0.8s,baz=90,slow=18,SNR=2.7							
MJAR	**Matsushiro Arr**	**22.60**	**346**	P		P	14 05 39.8	+0.4
	3.6nm,0.9s,baz=174,slow=10.0,SNR=9.7							
WRA	**Warramunga Arr**	**35.85**	**197**	P		P	14 07 40.6	+1.8
	1.1nm,0.8s,baz=14,slow=9.0,SNR=6.1							
CMAR	**Chiang Mai Arr**	**44.01**	**282**	P		P	14 08 47.0	+0.1
	3.2nm,1.2s,baz=73,slow=6.9,SNR=6.8							
SONM	**Songino Array**	**45.84**	**324**	P		P	14 09 01.6	+0.4
	0.4nm

KULA				*e*SG	**Sb**	14 17 32.0	+0.1	
KULA	**Kula-Manisa**	**0.79**	**334**	*e*Pg	**Pb**	14 17 21.5	+0.2	
KULA				*e*Sg	**Sb**	14 17 32.0	+0.1	
MANT	**Manisa**	**0.81**	**328**	*i* P	**Pg**	14 17 21.2	-0.3	
MANT				*i* S	**Sb**	14 17 33.1	+0.5	
MANT	**Manisa**	**0.81**	**328**	*i* P	**Pg**	14 17 21.2	-0.3	
MANT				*i* S	**Sb**	14 17 33.1	+0.5	
YER	**Yerkesik**	**0.94**	**225**	*e*PG	**Pb**	14 17 23.4	-0.3	
YER	**Yerkesik**	**0.94**	**225**	*e*Pg	**Pb**	14 17 23.4	-0.3	
AYDN	**Tasoluk**	**0.98**	**262**	*i* P	**Pn**	14 17 25.1	0.0	
AYDN				*i* S	**Sb**	14 17 37.1	-0.3	
DALT	**Dalyan (Mudla)**	**1.10**	**200**	*e*PN	**Pb**	14 17 26.4	-0.1	
DALT	**Dalyan (Mudla)**	**1.10**	**200**	*e*Pn	**Pb**	14 17 26.4	-0.1	
FETY	**Fethiye**	**1.17**	**181**	*e*PN	**Pb**	14 17 27.9	+0.2	
FETY	**Fethiye**	**1.17**	**181**	*e*Pn	**Pb**	14 17 27.9	+0.2	
MLSB	**Milas**	**1.17**	**245**	*e*PN	**Pg**	14 17 28.5	+0.2	
MLSB	**Milas**	**1.17**	**245**	*e*Pn	**Pg**	14 17 28.5	+0.2	
BCK	**Bucak**	**1.23**	**106**	*e*PN	**Pb**	14 17 28.7	0.0	
BCK	**Bucak**	**1.23**	**106**	*e*Pn	**Pb**	14 17 28.7	0.0	
ELL	**Elmali**	**1.23**	**149**	*e*PN	**Pb**	14 17 28.9	+0.1	
ELL	**Elmali**	**1.23**	**149**	*e*Pn	**Pb**	14 17 28.9	+0.1	
SHUT	**Suhut-Afyon**	**1.36**	**56**	*e*PN	**Pb**	14 17 31.2	+0.2	
SHUT	**Suhut-Afyon**	**1.36**	**56**	*e*Pn	**Pb**	14 17 31.2	+0.2	
ALT	**Altintas**	**1.48**	**32**	*e*PN	**Pb**	14 17 33.0	0.0	
ALT	**Altintas**	**1.48**	**32**	*e*Pn	**Pb**	14 17 33.0	0.0	
BODT	**Bodrum**	**1.61**	**243**	*e*PN	**Pb**	14 17 34.9	-0.3	
BODT	**Bodrum**	**1.61**	**243**	*e*Pn	**Pb**	14 17 34.9	-0.3	
DAT	**Datca**	**1.63**	**229**	*e*PN	**Pb**	14 17 35.7	+0.2	
DAT	**Datca**	**1.63**	**229**	*e*Pn	**Pb**	14 17 35.7	+0.2	
TVSB	**Tavsanli**	**1.67**	**9**	*e*PN	**Pb**	14 17 36.3	+0.1	
TVSB	**Tavsanli**	**1.67**	**9**	*e*Pn	**Pb**	14 17 36.3	+0.1	

IDC ***17*** *14:17:34.9±1.6, 6°.72S×130°.15E, h0km, mb4.0/2, mb1 4.2/5, mb1mx3.8/20, mbtmp4.0/5, ML4.1/3, Error ellipse: s-maj=72.6km s-min=23.5km az=71.0*

ISCJB ***17*** *14:17:41.7±0.7, 6°.97S±0°.05×130°.27E±0°.08, h100km, mb3.7/2, Error ellipse: s-maj=11.7km s-min=6.6km az=4.1*

DJA ***17*** *14:17:45.2±0.7, 7°.5S±5°×13°.0E±°, h104km±17km, M4.2/5, mb4.3/2, mB4.7/1, MLv4.1/5, Mw(mB)3.9/1*

ISC 17 14:17:45.6±1.2, 6°.75S±0°.09×130°.31E±0°.10, h100km, n9, σ1°37/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**2.25**	**350**	P	**Pn**	**14 18 21.9**	**+0.4**
BNDI				S	**Sn**	**14 18 49.1**	**+0.2**
TLE	**Tual**	**2.65**	**66**	P	**Pn**	**14 18 27.4**	**+0.6**
TLE				S	**Sn**	**14 18 58.1**	**-0.3**
FAKI	**Fak Fak**	**4.27**	**27**	P	**Pn**	**14 18 48.5**	**0.0**
SWI	**Sorong**	**5.92**	**9**	P	**Pn**	**14 19 09.0**	**-1.9**
	26nm,0.7s,734nm0.1nm						
FITZ	**Fitzroy Crossi**	**12.17**	**202**	Pn	Pn	14 20 30.1	-5.6
	1.5nm,0.3s,baz=30,slow=11,SNR=41						
FITZ				Sn	Sn	14 22 35.0	-15
	1.2nm,0.3s,baz=59,slow=16,SNR=6.4						
WRA	**Warramunga Arr**	**13.69**	**164**	Pn	Pn	14 20 50.0	-5.6
	0.9nm,0.3s,baz=345,slow=13,SNR=44						
WRA				Sn	Sn	14 23 11.8	-15
	1.7nm,0.3s,baz=343,slow=21,SNR=14						
ASAR	**Alice Springs**	**17.17**	**169**	P	**Pn**	**14 21 37.4**	**-2.1**
	0.5nm,0.3s,baz=340,slow=8.4,SNR=54						
ASAR				S	Sn	14 24 35.7	-15
	0.2nm,0.3s,baz=350,slow=26,SNR=4.4						
STKA	**Stephens Creek**	**27.13**	**159**	P	**P**	**14 23 20.6**	**+1.1**
	1.6nm,0.8s,baz=331,slow=8.9,SNR=7.0						
MKAR	**Makanchi Array**	**68.19**	**327**	P	**P**	**14 28 36.4**	**+1.1**
	0.7nm,0.5s,baz=120,slow=8.1,SNR=11						

IDC ***17*** *14:18:55.6±0.6, 14°.87N×144°.69E, h0km, mb4.1/19, mb1 4.3/19, mb1mx4.2/28, mbtmp4.1/19, MS3.5/11, Ms1 3.6/11, ms1mx3.3/43, Error ellipse: s-maj=23.5km s-min=12.2km az=82.0*

ISCJB ***17*** *14:18:57.9±0.3, 14°.82N±0°.04×144°.45E±0°.09, h22km, mb4.3/29, MS3.6/13, Error ellipse: s-maj=13.7km s-min=4.9km az=161.8*

BJI ***17*** *14:18:58.1, 14°.71N×144°.63E, h31km, mB4.9/5, mb4.7/9, Ms4.3/2, Ms7 4.0/2*

NEIC ***17*** *14:19:00.5±0.9, 14°.86N×144°.47E, h30km±6km, mb4.7/7, Error ellipse: s-maj=13.0km s-min=7.3km az=79.0*

ISC 17 14:18:59.4±0.5, 14°.81N±0°.06×144°.6E±0°.1, h22km, n69, σ1°11/70, mb4.3/29, MS3.6/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.25**	**167**	*e*Pg	**Pn**	**14 19 20.9**	**-0.6**
GUMO				Sn	**Sn**	**14 19 37.1**	**-0.5**
GUMO				*e*Sg	**Sb**	**14 19 37.4**	**-0.5**
GUMO	**Guam**	**1.25**	**167**	Pn	**Pn**	**14 19 21.1**	**-0.4**
	508nm,0.3s,baz=315,slow=3.8,SNR=76						
GUMO				Sn	**Sn**	**14 19 37.1**	**-0.5**
	593nm,0.3s,baz=105,slow=19,SNR=29						
JNU	**Nakatsue**	**22.07**	**328**	*e*P	**P**	**14 23 49.4**	**-3.6**
	12nm,1.1s						
JNU	**Nakatsue**	**22.07**	**328**	P	**P**	**14 23 52.8**	**-0.2**
	16nm,0.9s,baz=116,slow=1.2,SNR=9.1						
MJAR	**Matsushiro Arr**	**22.38**	**346**	P	**P**	**14 23 55.5**	**-0.7**
MJAR	**Matsushiro Arr**	**22.38**	**346**	P	**P**	**14 23 55.5**	**-0.7**
	7.3nm,0.9s,baz=174,slow=10,SNR=17						
MJAR				LR	LR	14 32 03.9	
	comp=Z,88nm,18.7s,baz=175,slow=35						
MAJO	**Matsushiro**	**22.38**	**346**	*e*P	**P**	**14 23 54.2**	**-2.0**
	46nm,1.7s						
MAT	**Matsushiro**	**22.38**	**346**	P	**P**	**14 23 57.4**	**+1.2**
MAT				S	**S**	**14 28 04.2**	**+3.1**
KSRS	**Korea Array**	**26.97**	**330**	P	**P**	**14 24 38.8**	**-0.7**
	3.1nm,0.9s,baz=146,slow=9.9,SNR=9.7						
KSRS				LR	LR	14 32 46.5	
	comp=Z,106nm,21.1s,baz=160,slow=31						
KSAR	**Wonju Array Be**	**26.98**	**330**	P	**P**	**14 24 38.8**	**-0.8**
HNR	**Honiara**	**28.50**	**147**	LR	LR	14 35 02.7	
	comp=Z,118nm,19.7s,baz=319,slow=34						
ASAJ	**Asahikawa**	**29.26**	**357**	LR	LR	14 34 14.7	
	comp=Z,126nm,21.3s,baz=166,slow=32						
USRK	**Ussuriysk Arra**	**31.19**	**342**	LR	LR	14 37 13.5	
	comp=Z,30nm,20.0s,baz=335,slow=35						
CTA	**Charters Tower**	**34.72**	**177**	LR	LR	14 37 02.3	
	comp=Z,117nm,21.3s,baz=46,slow=31						
WRAB	**Tennant Creek**	**35.96**	**197**	*e*P	**P**	**14 25 58.1**	**-0.6**
WRA	**Warramunga Arr**	**35.97**	**197**	P	**P**	**14 25 59.0**	**+0.2**
WRA	**Warramunga Arr**	**35.97**	**197**	P	**P**	**14 25 59.0**	**+0.2**
	4.3nm,0.8s,baz=17,slow=9.4,SNR=7.9						
FITZ	**Fitzroy Crossi**	**37.65**	**210**	*e*P	**P**	**14 26 12.6**	**-0.5**
FITZ	**Fitzroy Crossi**	**37.65**	**210**	P	**P**	**14 26 13.5**	**+0.4**
	4.4nm,0.8s,baz=38,slow=8.7,SNR=4.3						
HHC	**Hu-ho-hao-te**	**38.67**	**319**	*e*P	**P**	**14 26 23.6**	**+2.0**
HHC				S	**S**	**14 32 18.8**	**+1.5**
HHC				pmax	pmax		
	comp=Z,29nm,0.6s						
HHC				pmax	pmax		
	comp=Z,170nm,5.4s						
HHC				LR	LR		
	comp=N,370nm,14.7s						
HHC				LR	LR		
	comp=E,250nm,14.6s						
HHC				LR	LR		
	comp=Z,280nm,14.9s						
ASAR	**Alice Springs**	**39.63**	**195**	P	**P**	**14 26 29.6**	**-0.2**
ASAR	**Alice Springs**	**39.63**	**195**	P	**P**	**14 26 29.6**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=13,slow=12,SNR=3.5						
ASAR				LR	LR	14 42 55.7	
	comp=Z,96nm,20.1s,baz=25,slow=36						
LZH	**Lanzhou**	**42.04**	**308**	*e*P	**P**	**14 26 49.0**	**-0.7**
LZH				pmax	pmax		
	comp=Z,20nm,1.5s						
DZM	**Mont Dzumac**	**42.46**	**149**	P	**P**	**14 26 56.2**	**+3.0**
DZM	**Mont Dzumac**	**42.46**	**149**	P	**P**	**14 26 56.2**	**+3.0**
	comp=Z,8.1nm,0.8s,baz=328,slow=20,SNR=3.7						
DZM				LR	LR	14 42 21.1	
	comp=Z,81nm,21.3s,baz=24,slow=33						
CMAR	**Chiang Mai Arr**	**43.78**	**281**	P	**P**	**14 27 04.7**	**+0.8**
CMAR	**Chiang Mai Arr**	**43.78**	**281**	P	**P**	**14 27 04.7**	**+0.8**
	comp=Z,4.3nm,0.8s,baz=82,slow=6.5,SNR=27						
CMAR				LR	LR	14 43 10.3	
	comp=Z,50nm,19.0s,baz=348,slow=33						
SONM	**Songino Array**	**45.58**	**324**	P	**P**	**14 27 17.8**	**-0.2**
SONM				PcP	**PcP**	**14 28 56.9**	**+0.6**
SONM	**Songino Array**	**45.58**	**324**	P	**P**	**14 27 17.8**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=135,slow=4.6,SNR=5.6						
SONM				PcP	**PcP**	**14 28 56.9**	**+0.6**
	comp=Z,1.2nm,0.9s,baz=147,slow=3.2,SNR=6.2						

GTA	**Gaotai**	**46.16**	**311**	*e*P	**P**	**14 27 23.6**	**+0.9**
GTA				pP	**pP**	**14 27 28.5**	**-1.0**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,61nm,5.7s						
GTA				LR	LR		
	comp=N,88nm,17.6s						
GTA				LR	LR		
	comp=E,72nm,18.1s						
GTA				LR	LR		
	comp=Z,110nm,19.0s						
STKA	**Stephens Creek**	**46.51**	**183**	P	**P**	**14 27 25.1**	**-0.1**
STKA	**Stephens Creek**	**46.51**	**183**	P	**P**	**14 27 25.1**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=334,slow=12,SNR=5.3						
AFI	**Afiamalu**	**51.76**	**121**	LR	LR	14 44 58.9	
	comp=Z,76nm,21.6s,baz=354,slow=30						
NWAO	**Narrogin (SRO)**	**54.18**	**208**	LR	LR	14 51 28.3	
	comp=Z,85nm,18.5s,baz=14,slow=36						
CHGN	**Chignik**	**59.71**	**33**	*e*pP	pP	14 29 12.1	+2.9
MKAR	**Makanchi Array**	**60.42**	**316**	*e*P	**P**	**14 29 07.0**	**-0.3**
MKAR	**Makanchi Array**	**60.42**	**316**	P	**P**	**14 29 08.0**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=96,slow=8.2,SNR=11						
ZALV	**Zalesovo Beam**	**60.47**	**324**	P	**P**	**14 29 07.7**	**+0.2**
ZALV	**Zalesovo Beam**	**60.47**	**324**	P	**P**	**14 29 07.7**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=102,slow=6.1,SNR=7.0						
KURK	**Kurchatov**	**63.47**	**320**	*e*P	**P**	**14 29 27.0**	**-0.7**
	comp=Z,10nm,1.0s						
ILAR	**Eielson Array**	**67.60**	**26**	P	**P**	**14 29 52.4**	**-1.8**
ILAR	**Eielson Array**	**67.60**	**26**	P	**P**	**14 29 52.4**	**-1.8**
	comp=Z,0.4nm,0.7s,baz=252,slow=5.4,SNR=6.1						
BVAR	**Borovoye Array**	**68.80**	**321**	P	**P**	**14 30 01.6**	**-0.3**
BVAR	**Borovoye Array**	**68.80**	**321**	P	**P**	**14 30 01.6**	**-0.3**
	comp=Z,4.2nm,0.9s,baz=104,slow=4.7,SNR=21						
BRVK	**Borovoye**	**68.86**	**321**	*e*P	**P**	**14 30 01.5**	**-0.8**
ABKAR	**Akbulak array**	**75.45**	**318**	*e*P	**P**	**14 30 42.0**	**+0.2**
AKTO	**Aktyubinsk**	**76.56**	**319**	P	**P**	**14 30 46.7**	**-1.4**
AKTO	**Aktyubinsk**	**76.56**	**319**	P	**P**	**14 30 46.7**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=65,slow=11,SNR=2.9						
YKA	**Yellowknife Ar**	**81.92**	**27**	P	**P**	**14 31 16.7**	**-0.4**
YKA	**Yellowknife Ar**	**81.92**	**27**	P	**P**	**14 31 16.7**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=288,slow=5.5,SNR=16						
BMO	**Blue Mountains**	**85.34**	**45**	*e*P	**P**	**14 31 35.5**	**+0.4**
	comp=Z,72nm,2.8s						
ARCES	**ARCESS Array B**	**85.84**	**342**	P	**P**	**14 31 37.1**	**0.0**
ARCES	**ARCESS Array B**	**85.84**	**342**	P	**P**	**14 31 37.1**	**0.0**
	comp=Z,4.3nm,0.8s,baz=62,slow=5.8,SNR=6.3						
BSMT	**Bassoo Peak**	**86.13**	**42**	*e*P	**P**	**14 31 38.9**	**-0.3**
NVAR	**Mina Array Bea**	**86.39**	**51**	P	**P**	**14 31 40.1**	**-0.5**
NVAR	**Mina Array Bea**	**86.39**	**51**	P	**P**	**14 31 40.1**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=286,slow=4.7,SNR=6.1						
MFID	**Camas Ranch**	**86.77**	**46**	*e*P	**P**	**14 31 43.4**	**+1.1**
	comp=Z,6.4nm,1.1s						
HLID	**Hailey**	**87.70**	**46**	*e*P	**P**	**14 31 46.6**	**-0.3**
	comp=Z,3.5nm,1.1s						
ELK	**Elko**	**87.99**	**48**	*e*P	**P**	**14 31 49.7**	**+1.3**
	comp=Z,2.5nm,0.9s						
FINES	**FINESS Array B**	**89.94**	**335**	P	**P**	**14 31 55.7**	**-1.1**
FINES	**FINESS Array B**	**89.94**	**335**	P	**P**	**14 31 55.7**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=62,slow=5.2,SNR=6.7						
BRTR	**Keskin Array B**	**96.02**	**314**	P	**P**	**14 32 24.9**	**-0.6**
BRTR	**Keskin Array B**	**96.02**	**314**	P	**P**	**14 32 24.9**	**-0.6**
	comp=Z,3.9nm,0.5s,baz=134,slow=4.2,SNR=3.7						
VNA2	**Neumayer--Watz**	**121.37**	**190**	*e*P	**PKPdf**	**14 37 51.3**	**+1.0**
	baz=142,slow=0.2						
VNA3	**Neumayer Olymp**	**121.47**	**189**	*e*P	**PKPdf**	**14 37 51.2**	**+0.6**
TORD	**Torodi Ar. Bea**	**133.94**	**305**	PKP	**PKPdf**	**14 38 15.7**	**-0.3**
TORD	**Torodi Ar. Bea**	**133.94**	**305**	PKP	**PKPdf**	**14 38 15.6**	**-0.3**
	comp=Z,0.7nm,1.0s,baz=16,slow=2.1,SNR=2.8						
LPAZ	**La Paz**	**148.48**	**97**	PKPbc	**PKPbc**	**14 38 46.1**	**-0.1**
LPAZ	**La Paz**	**148.48**	**97**	PKPbc	**PKPbc**	**14 38 46.1**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=344,slow=4.1,SNR=7.5						

IDC 17 14:22:50.9±1.2, 2°.92N×127°.38E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.5/24, mbtmp3.5/6, Error ellipse: s-maj=95.7km s-min=18.1km az=72.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.96**	**185**	P	P	14 27 35.2	-0.5
	0.7nm,0.3s,baz=354,slow=9.2,SNR=4.5						
WRA	**Warramunga Arr**	**23.73**	**164**	P	P	14 28 04.8	-0.2
	1.4nm,0.5s,baz=343,slow=11,SNR=5.7						
ASAR	**Alice Springs**	**27.18**	**167**	P	P	14 28 36.3	-0.1
	0.2nm,0.4s,baz=345,slow=12,SNR=3.8						
STKA	**Stephens Creek**	**37.15**	**160**	P	P	14 30 03.9	+0.3
	1.5nm,0.8s,baz=344,slow=7.4,SNR=2.6						
SONM	**Songino Array**	**48.26**	**341**	P	P	14 31 32.9	-0.9
	0.2nm,0.5s,baz=159,slow=4.5,SNR=3.8						
MKAR	**Makanchi Array**	**58.58**	**325**	P	P	14 32 50.3	+0.7
	0.1nm,0.5s,baz=119,slow=7.5,SNR=4.2						

CSEM ***17*** *14:23:06.8, 38°.30N×22°.60E, h9km, MD2.7, After ATH*

ATH 17 14:23:06.8, 38°.30N×22°.60E, h9km, MD2.7/6, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KALE	**Kalithea**	**0.37**	**284**	*e*PB	Pg	14 23 14.3	0.0
KALE				*e*SB	Sg	14 23 19.6	+0.3
KALE	**Kalithea**	**0.37**	**284**	*e*Pb	Pg	14 23 14.3	0.0
KALE				*e*Sb	Sg	14 23 19.6	+0.3
LTK	**Loutraki**	**0.40**	**134**	*e*PG	Pg	14 23 14.3	-0.4
LTK				*e*SB	Sg	14 23 20.7	+0.7
LTK	**Loutraki**	**0.40**	**134**	*e*Pg	Pg	14 23 14.3	-0.4
LTK				*e*Sb	Sg	14 23 20.7	+0.7
GUR	**Goura**	**0.42**	**209**	*e*PB	Pg	14 23 15.1	0.0
GUR				*e*SB	Sg	14 23 20.5	-0.2
GUR	**Goura**	**0.42**	**209**	*e*Pb	Pg	14 23 15.1	0.0
GUR				*e*Sb	Sg	14 23 20.5	-0.2
EFP	**Efpalio**	**0.56**	**283**	*e*PB	Pg	14 23 17.7	0.0
EFP	**Efpalio**	**0.56**	**283**	*e*Pb	Pg	14 23 17.7	0.0
AGG	**Agios Georgios**	**0.75**	**344**	*e*PG	Pg	14 23 20.9	-0.5
AGG	**Agios Georgios**	**0.75**	**344**	*e*Pg	Pg	14 23 20.9	-0.5
DID	**Didima**	**0.94**	**147**	*e*PN	Pg	14 23 25.1	+0.2
DID	**Didima**	**0.94**	**147**	*e*Pn	Pg	14 23 25.1	+0.2

DDA ***17*** *14:23:38.7, 37°.84N×29°.09E, h7km, MD3.1*

ISK ***17*** *14:23:38.1, 37°.85N×29°.07E, h6km, MD3.0*

CSEM 17 14:23:38.5±0.1, 37°.83N×29°.09E, h5km, MD3.0, Error ellipse: s-maj=2.4km s-min=1.9km az=95.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DENT	**Denizli**	**0.09**	**209**	PG	Pg	14 23 40.7	+0.2
DENT	**Denizli**	**0.09**	**209**	*i* Pg	Pg	14 23 40.7	+0.3
DNZL	**Cakiroluk**	**0.14**	**192**	*i* P	Pg	14 23 41.8	+0.2
DNZL				*i* S	Sg	14 23 44.4	+0.7
DNZL	**Cakiroluk**	**0.14**	**192**	*i* P	Pg	14 23 41.8	+0.2
DNZL				*i* S	Sg	14 23 44.4	+0.7
KHL	**Karahalli**	**0.60**	**35**	*e*PG	Pg	14 23 50.1	-0.1
KHL				*e*SG	Sg	14 23 58.7	+0.5
KHL	**Karahalli**	**0.60**	**35**	*e*Pg	Pg	14 23 50.1	-0.2
KHL				*e*Sg	Sg	14 23 58.7	+0.5
KHAL	**Karahalli**	**0.63**	**31**	*i* P	Pg	14 23 50.2	-0.6
KHAL	**Karahalli**	**0.63**	**31**	*i* P	Pg	14 23 50.2	-0.6
GOLH	**Golhisar**	**0.70**	**147**	*i* P	Pb	14 23 53.2	-0.2
GOLH				*i* S	Sb	14 24 04.0	+0.6
GOLH	**Golhisar**	**0.70**	**147**	*i* P	Pb	14 23 53.2	-0.2
GOLH				*i* S	Sb	14 24 04.0	+0.5
GLHS	**Glhisar (BURDU**	**0.75**	**154**	*e*PG	Pg	14 23 52.7	-0.3
GLHS				*e*SG	Sb	14 24 04.6	-0.2
GLHS	**Glhisar (BURDU**	**0.75**	**154**	*e*Pg	Pg	14 23 52.7	-0.3
GLHS				*e*Sg	Sb	14 24 04.6	-0.2
KULA	**Kula-Manisa**	**0.76**	**334**	*e*PG	Pg	14 23 52.9	-0.4
KULA				*e*SG	Sg	14 24 04.0	+0.7
KULA	**Kula-Manisa**	**0.76**	**334**	*e*Pg	Pg	14 23 52.9	-0.4
KULA				*e*Sg	Sg	14 24 04.0	+0.7
MANT	**Manisa**	**0.78**	**328**	*i* P	Pg	14 23 53.6	-0.3
MANT				*i* S	Sb	14 24 05.8	-0.3
MANT	**Manisa**	**0.78**	**328**	*i* P	Pg	14 23 53.6	-0.2
MANT				*i* S	Sb	14 24 05.8	-0.2
YER	**Yerkesik**	**0.94**	**223**	*e*PG	Pg	14 23 56.3	-0.4
YER	**Yerkesik**	**0.94**	**223**	*e*Pg	Pg	14 23 56.3	-0.4
AYDN	**Tasoluk**	**0.97**	**260**	*i* P	Pb	14 23 57.9	0.0
AYDN				*i* S	Sg	14 24 09.7	-0.2
AYDN	**Tasoluk**	**0.97**	**260**	*i* P	Pb	14 23 57.9	0.0
AYDN				*i* S	Sg	14 24 09.7	-0.2
DALT	**Dalyan (Mudla)**	**1.12**	**199**	*e*PN	Pb	14 24 00.2	-0.1
DALT	**Dalyan (Mudla)**	**1.12**	**199**	*e*Pn	Pb	14 24 00.2	-0.2
ISP	**Isparta**	**1.14**	**90**	*e*PN	Pb	14 24 00.9	+0.1
ISP	**Isparta**	**1.14**	**90**	*e*Pn	Pb	14 24 00.9	+0.1
MLSB	**Milas**	**1.17**	**243**	*e*PN	Pg	14 24 00.9	-0.1
MLSB	**Milas**	**1.17**	**243**	*e*Pn	Pg	14 24 00.9	-0.1
FETY	**Fethiye**	**1.19**	**180**	*e*PN	Pb	14 24 01.7	+0.1
FETY	**Fethiye**	**1.19**	**180**	*e*Pn	Pb	14 24 01.7	+0.1
BCK	**Bucak**	**1.25**	**107**	*e*PN	Pn	14 24 02.8	+0.1
BCK	**Bucak**	**1.25**	**107**	*e*Pn	Pn	14 24 02.8	+0.1
ELL	**Elmali**	**1.26**	**148**	*e*PN	Pn	14 24 03.0	+0.1
ELL	**Elmali**	**1.26**	**148**	*e*Pn	Pn	14 24 03.1	+0.1
SHUT	**Suhut-Afyon**	**1.36**	**58**	*e*PN	Pn	14 24 04.3	0.0
SHUT	**Suhut-Afyon**	**1.36**	**58**	*e*Pn	Pn	14 24 04.3	-0.1
ALT	**Altintas**	**1.47**	**33**	*e*PN	Pn	14 24 05.8	+0.1
ALT	**Altintas**	**1.47**	**33**	*e*Pn	Pn	14 24 05.8	0.0
BODT	**Bodrum**	**1.61**	**242**	*e*PN	Pn	14 24 07.6	0.0
BODT	**Bodrum**	**1.61**	**242**	*e*Pn	Pn	14 24 07.6	0.0
DAT	**Datca**	**1.63**	**228**	*e*PN	Pn	14 24 08.1	+0.1
DAT	**Datca**	**1.63**	**228**	*e*Pn	Pn	14 24 08.1	+0.1
TVSB	**Tavsanli**	**1.65**	**10**	*e*PN	Pn	14 24 08.2	-0.1
TVSB	**Tavsanli**	**1.65**	**10**	*e*Pn	Pn	14 24 08.2	0.0
BLCB	**Balcova**	**1.71**	**290**	*e*PN	Pn	14 24 08.9	0.0
BLCB	**Balcova**	**1.71**	**290**	*e*Pn	Pn	14 24 08.9	0.0
GONE	**Gonen-Balikesi**	**2.47**	**334**	*e*PN	Pn	14 24 19.6	+0.2
GONE	**Gonen-Balikesi**	**2.47**	**334**	*e*Pn	Pn	14 24 19.6	+0.2
KCTX	**Karacabey (Bur**	**2.50**	**347**	*e*PN	Pn	14 24 20.1	+0.3
KCTX	**Karacabey (Bur**	**2.50**	**347**	*e*Pn	Pn	14 24 20.2	+0.3
YLV	**Yalova**	**2.74**	**5**	*e*PN	Pn	14 24 23.5	+0.2
YLV	**Yalova**	**2.74**	**5**	*e*Pn	Pn	14 24 23.5	+0.2

IDC 17 14:30:24.6±1.8, 14°.78N×144°.47E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.4/24, mbtmp3.5/4, Error ellipse: s-maj=59.3km s-min=20.0km az=71.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.25**	**162**	Pn	Pb	14 30 49.0	0.0
	41nm,0.3s,baz=223,slow=22,SNR=6.3						
GUMO				Sn	Sg	14 31 04.5	-0.2
	96nm,0.3s,baz=104,slow=22,SNR=11						
MJAR	**Matsushiro Arr**	**22.38**	**347**	P	P	14 35 25.0	+0.4
	1.5nm,0.8s,baz=170,slow=10.0,SNR=4.8						
WRA	**Warramunga Arr**	**35.91**	**196**	P	P	14 37 27.2	+0.3
	0.5nm,1.0s,baz=19,slow=9.6,SNR=4.0						
CMAR	**Chiang Mai Arr**	**43.70**	**281**	P	P	14 38 31.9	+0.1
	0.5nm,0.5s,baz=86,slow=7.2,SNR=5.6						
MKAR	**Makanchi Array**	**60.37**	**316**	P	P	14 40 35.0	-0.8
	0.4nm,0.5s,baz=89,slow=7.5,SNR=5.2						

JMA 17 14:38:37.7, 31°.99N×130°.26E, h10km±1km, M0.5, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZO	**Okuchi**	**0.32**	**62**	P	Pg	14 38 44.2	-0.1
JZO				S	Sg	14 38 48.6	0.0
JSU	**Suzuyama**	**0.51**	**161**	P	Pg	14 38 47.5	-0.2
**

PDAR	Pinedale Array	14.19	89	Pn	Pn	14 50 53.1	+2.6
	0.0nm,0.3s,baz=278,slow=6.1,SNR=3.7						
SRU	San Rafael	14.74	104	ePn	P	14 51 03.1	-1.1
RSSD	Black Hills	17.89	82	ePn	P	14 51 41.4	+2.4
	35nm,2.5s						
YKA	Yellowknife Ar	20.04	20	P	Pn	14 52 03.0	-0.9
YKA	Yellowknife Ar	20.04	20	P	Pn	14 52 03.0	-0.9
	0.6nm,0.8s,baz=208,slow=11,SNR=6.0						
FFC	Flin Flon	20.28	50	eP	P	14 52 04.6	-0.3
	6.2nm,0.9s						
ILAR	Eielson Array	22.80	340	P	P	14 52 30.8	-1.1
ILAR	Eielson Array	22.80	340	P	P	14 52 30.8	-1.1
	1.3nm,1.1s,baz=154,slow=7.6,SNR=5.8						

NIED ***17*** *14:51:00.46˚10N×152˚10E,h44km,Mw5.5 Best double couple: M0 2.00000×10^17 NP1:φs 1.00000°,δ62.00000°, λ62.00000°. NP2:φs 230.00000°,δ39.00000°,λ132.00000°.*

BJI ***17*** *14:51:53.5,46˚36N×152˚22E,h45km,mB5.6/45,mb5.4/64, Ms5.2/69,Ms7 5.1/62*

DJA ***17*** *14:51:54.3±0.8,46˚N±8˚×15˚2E±1˚4,h10km,M5.4/22, mB5.8/15,mb5.7/22,Mw(mB)5.4/15,Mwp6.6/1*

JMA ***17*** *14:51:55.8±0.6,46˚10N×152˚11E,h30km,M5.7*

JMA Felt I J1.

SKHL ***17*** *14:51:56.6±0.7,46˚03N×152˚25E,h66km±13km,mb6.2/5, mbh5.9/3,Ms5.3/5,msh6.0/4*

MOS ***17*** *14:51:56.5±1.1,46˚16N×151˚72E,h45km,mb5.8/150, MS5.2/49,Error ellipse: s-maj=5.7km s-min=3.8km az=95.5*

TEH ***17*** *14:51:56.9,46˚29N×151˚68E,h40km,ML5.6*

ISCJB ***17*** *14:51:57.2±0.4,46˚20N±0˚02×151˚70E±0˚02,h45km±3km, mb5.5/391,MS5.1/148,Error ellipse: s-maj=3.8km s-min=1.8km az=166.8*

NEIC ***17*** *14:51:58.7±0.1,46˚17N×151˚70E,mb5.5/223,MS5.0/52, MW5.7,MW5.5,Error ellipse: s-maj=4.2km s-min=2.6km az=154.0,Moment Tensor Solution. s80 Moment tensor: Scale 10^17Nm; Mrr1.79; Mθθ-0.73; Mϕϕ-1.06; Mrθ0.76; Mθϕ-0.88; Mrϕ0.78; Best double couple: M0 2.10000×10^17 NP1:φs 42.00000°,δ61.00000°,λ92.00000°. NP2: φs 217.00000°,δ29.00000°,λ86.00000°. Principal axes: T 2.1000, Plg74.0000°, Azm318.0000°; N -0.0100, Plg2.0000°, Azm220.0000°; P -2.0900, Plg15.0000°, Azm130.0000°;*

NEIC Recorded [1 JMA] in eastern Hokkaido.

IDC ***17*** *14:51:59.2±1.6,46.25N×151.61E,h49km±14km,mb5.0/39, mb1 5.1/43,mb1mx5.1/44,mbtmp5.0/43,ML4.7/4,MS4.9/40, Ms1 4.9/40,ms1mx4.8/55 Error ellipse: s-maj=10.6km s-min=7.7km az=138.0*

BGS ***17*** *14:52:01.9±1.7,46˚73N×152˚11E,h50km±999km,mb5.6, MS4.9*

GCMT ***17*** *14:52:01.9±0.1,46˚06N×151˚97E,h50km,MW5.6, Moment Tensor Solution. s99,c196; s33,c34; Moment tensor: Scale 10^17Nm; Mrr2.97±.05; Mθθ-1.43±.03; Mϕϕ-1.54±.04; Mrθ0.59±.03; Mθϕ-1.60±.02; Mϕr1.17±.03; Best double couple: M0 3.30000×10^17 NP1:φs 231.00000°, δ34.00000°,λ102.00000°. NP2:φs 37.00000°,δ57.00000°, λ82.00000°. Principal axes: T 3.2600, Plg77.0000°, Azm282.0000°; N 0.0700, Plg7.0000°, Azm41.0000°; P -3.3400, Plg11.0000°, Azm133.0000°; Data Used: II IU IC G CN. Surface waves: sta=106, comp=225, per= 50.*

SZGRF ***17*** *14:52:07.6,47˚72N×151˚20E,h33km,mb5.6,MS5.3,Kuril Islands, Russia*

ISC 17 14:51:59.3±0.3,46˚20N±0˚03×151˚80E±0˚03,h54km±1km, h54km:pP-P,n1711,σ1s28/1839,mb5.5/391,MS5.0/149, 478C-228D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.92**	**252**	⇓*i*P	**Pn**	**14 52 43.5**	**+0.2**
KUR				*e*S	**Sn**	**14 53 18.2**	**+1.1**
KUR				pmax	pmax		
	comp=N,1μm,0.5s						
KUR				pmax	pmax		
	comp=E,1μm,0.5s						
KUR				pmax	pmax		
	comp=Z,2μm,0.5s						
KUR				pmax	pmax		
	comp=N,7μm,4.0s						
KUR				pmax	pmax		
	comp=E,15μm,4.0s						
KUR				pmax	pmax		
	comp=Z,14μm,4.0s						
KUR				smax	smax		
	comp=N,106μm,5.0s						
KUR				smax	smax		
	comp=E,156μm,5.0s						
KUR				smax	smax		
	comp=N,440nm,0.8s						
KUR				smax	smax		
	comp=E,1μm,0.8s						
KUR	**Kuril'sk**	**2.92**	**252**	⇓*i*P	**Pn**	**14 52 43.5**	**+0.2**
KUR				AMB	AMB	14 52 46.4	
	comp=E,1μm,0.5s						
KUR				AMB	AMB	14 52 46.4	
	comp=E,1μm,0.5s						
KUR				AMB	AMB	14 52 46.4	
	comp=E,2μm,0.5s						
KUR				*e*S	**Sn**	**14 53 18.2**	**+1.1**
KUR				A	A	14 53 33.6	
	comp=E,86μm,5.0s						
KUR				A	A	14 53 33.6	
	comp=E,61μm,5.0s						
KUR				A	A	14 53 33.6	
	comp=E,156μm,5.0s						
KUR				A	A	14 53 33.6	
	comp=E,106μm,5.0s						
KUR				A	A	14 53 56.0	
	comp=E,4μm,0.8s						
KUR				A	A	14 53 56.0	
	comp=E,10μm,0.8s						
YUK	**Yuzh-Kuril'sk**	**4.73**	**245**	*c i*PN	**Pn**	**14 53 08.1**	**+0.1**
YUK				*i* S	**Sn**	**14 54 02.3**	**+0.8**
YUK				pmax	pmax		
	comp=N,585nm,0.6s						
YUK				pmax	pmax		
	comp=E,527nm,0.6s						
YUK				pmax	pmax		
	comp=Z,2μm,0.6s						
YUK				smax	smax		
	comp=N,4μm,0.7s						
YUK				smax	smax		
	comp=E,10μm,0.7s						
YUK				MLR	MLR		
	comp=E,3μm,12.0s						
YUK				MLR	MLR		
	comp=N,7μm,13.0s						
YUK				MLR	MLR		
	comp=Z,6μm,13.0s						
YUK	**Yuzh-Kuril'sk**	**4.73**	**245**	⇑*i*P	**Pn**	**14 53 08.2**	**+0.2**
YUK				AMB	AMB	14 53 16.3	
	comp=Z,585nm,0.7s						
YUK				AMB	AMB	14 53 16.3	
	comp=Z,527nm,0.7s						
YUK				AMB	AMB	14 53 16.3	
	comp=Z,2μm,0.7s						
YUK				*i* S	**Sn**	**14 54 02.4**	**+0.9**
YUK				A	A	14 54 17.9	
	comp=Z,4μm,0.7s						
YUK				A	A	14 54 17.9	
	comp=Z,10μm,0.7s						
YUK				AMS	AMS	14 56 45.5	
	comp=Z,7μm,12.0s						
YUK				AMS	AMS	14 56 45.5	
	comp=Z,3μm,12.0s						
YUK				AMS	AMS	14 56 45.5	
	comp=Z,6μm,12.0s						
NEM2	**Nemuro 2**	**5.16**	**239**	P	**Pn**	**14 53 12.1**	**-1.9**
NEM2				*e*S	**Sn**	**14 54 08.8**	**-3.3**
JRA	**Rausu**	**5.24**	**247**	P	**Pn**	**14 53 16.0**	**+0.9**
JRA				*e*S	**Sn**	**14 54 14.9**	**+0.7**
SKR	**Severo-Kuril's**	**5.32**	**31**	*e*PN	**Pn**	**14 53 14.0**	**-2.2**
SKR				pmax	pmax		
	comp=N,150nm,0.5s						
SKR				pmax	pmax		
	comp=E,140nm,0.5s						
SKR				pmax	pmax		
	comp=Z,550nm,0.5s						
SKR				pmax	pmax		
	comp=Z,2μm,2.0s						
SKR				MLR	MLR		
	comp=N,7μm,12.0s						
SKR				MLR	MLR		
	comp=E,11μm,12.0s						
SKR				MLR	MLR		
	comp=Z,8μm,12.0s						
SKR	**Severo-Kuril's**	**5.32**	**31**	*e*P	**Pn**	**14 53 14.0**	**-2.2**
SKR				AMB	AMB	14 53 17.0	
	comp=Z,150nm,0.5s						
SKR				AMB	AMB	14 53 17.0	
	comp=Z,140nm,0.5s						
SKR				AMB	AMB	14 53 17.0	
	comp=Z,550nm,0.5s						
SKR				AMB	AMB	14 53 21.0	
	comp=Z,2μm,2.0s						
SKR				*e*S	**Sn**	**14 54 13.8**	**-2.3**
SKR				A	A	14 54 24.0	
	comp=Z,5μm,8.0s						
SKR				A	A	14 54 24.0	
	comp=Z,5μm,6.0s						
SKR				A	A	14 54 24.0	
	comp=Z,10μm,6.0s						
SKR				A	A	14 54 24.0	
	comp=Z,5μm,8.0s						
SKR				A	A	14 54 24.0	
	comp=Z,5μm,6.0s						
SKR				A	A	14 54 24.0	
	comp=Z,9μm,6.0s						
SKR				A	A	14 54 40.8	
	comp=Z,1μm,0.5s						
SKR				A	A	14 54 40.8	
	comp=Z,1μm,0.5s						
SKR				A	A	14 54 40.8	
	comp=Z,390nm,0.5s						
JNK	**Nakash**	**5.67**	**245**	P	**Pn**	**14 53 21.1**	**+0.1**
JAK	**Akkeshi**	**6.00**	**240**	P	**Pn**	**14 53 23.7**	**-1.7**
JAK				*e*S	**Sn**	**14 54 29.4**	**-3.3**
JTKR	**Abashiri--Toko**	**6.02**	**251**	⇑P	**Pn**	**14 53 26.8**	**+1.1**
YSS	**Yuzh-Sakhalins**	**6.28**	**280**	⇓*i*PN	Pn	14 53 33.0	+3.7
YSS				*e*S	**Sn**	**14 54 42.0**	**+2.4**
YSS				pmax	pmax		
	comp=Z,740nm,0.6s						
YSS				pmax	pmax		
	comp=E,3μm,4.0s						
YSS				pmax	pmax		
	comp=Z,2μm,4.0s						
YSS				MLR	MLR		
	comp=N,11μm,15.0s						
YSS				MLR	MLR		
	comp=E,13μm,16.0s						
YSS				MLR	MLR		
	comp=Z,15μm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.28**	**280**	⇓*i*P	Pn	14 53 33.0	+3.7
YSS				AMB	AMB	14 53 34.9	
	comp=Z,740nm,0.6s						
YSS				AMB	AMB	14 53 36.0	
	comp=Z,2μm,4.0s						
YSS				AMB	AMB	14 53 36.0	
	comp=Z,3μm,4.0s						
YSS				*e*S	**Sn**	**14 54 42.0**	**+2.4**
YSS				*e*LQ	LQ	14 55 05.0	
YSS				*e*LR	LR	14 55 30.0	
YSS				AMS	AMS	14 55 55.0	
	comp=Z,16μm,16.0s						
YSS				AMS	AMS	14 55 55.0	
	comp=Z,12μm,15.0s						
YSS				AMS	AMS	14 55 55.0	
	comp=Z,10μm,16.0s						
YSS				AMS	AMS	14 55 55.0	
	comp=Z,13μm,16.0s						
YSS				AMS	AMS	14 55 55.0	
	comp=Z,15μm,16.0s						
YSS				AMS	AMS	14 55 55.0	
	comp=Z,11μm,15.0s						
YSS				*e*rx	rx	14 58 13.0	
JMP	**Maruseppu**	**6.36**	**253**	P	**Pn**	**14 53 32.4**	**+1.9**
JAR	**Ashorobuto**	**6.41**	**246**	P	**Pn**	**14 53 31.7**	**+0.6**
JAR				*e*S	**Sn**	**14 54 43.7**	**+0.8**
JOB	**Onbets**	**6.58**	**243**	P	**Pn**	**14 53 32.6**	**-0.8**
JOB				*e*S	**Sn**	**14 54 45.2**	**-1.7**
JSE	**Soyaes**	**6.59**	**262**	P	**Pn**	**14 53 36.4**	**+2.9**
JKK2	**Kamakawa 2**	**6.82**	**253**	P	**Pn**	**14 53 38.6**	**+1.8**
ASAJ	**Asahikawa**	**6.83**	**256**	*e*Pn	**Pn**	**14 53 39.4**	**+2.5**
ASAJ	**Asahikawa**	**6.83**	**256**	P	**Pn**	**14 53 39.4**	**+2.5**
ASAJ	**Asahikawa**	**6.83**	**256**	P	**Pn**	**14 53 39.8**	**+2.9**
	comp=Z,28nm,0.3s,baz=93,slow=14,SNR=184						
ASAJ				S	Sn	14 55 00.8	+7.5
	baz=121,slow=16,SNR=2.2						
ASAJ				LR	LR	14 56 15.4	
	comp=Z,19μm,20.9s,baz=75,slow=38						
JWK2	**Keihoku**	**6.98**	**266**	P	Pn	14 53 43.6	+4.7
JCH	**Churui**	**7.03**	**242**	P	**Pn**	**14 53 37.9**	**-1.6**
JCH				*e*S	**Sn**	**14 54 55.0**	**-3.0**
UGL	**Uglegorsk**	**7.17**	**297**	*e*PN	Pn	14 53 45.5	+4.0
UGL				*e*S	**Sn**	**14 55 06.5**	**+4.9**
UGL				pmax	pmax		
	comp=Z,1μm,0.6s						
UGL				pmax	pmax		
	comp=N,2μm,5.0s						
UGL				pmax	pmax		
	comp=E,600nm,5.0s						
UGL				smax	smax		
	comp=N,462nm,0.5s						
UGL				smax	smax		
	comp=E,1μm,0.6s						
UGL				MLR	MLR		
	comp=N,18μm,20.0s						
UGL				MLR	MLR		
	comp=E,18μm,24.0s						
UGL	**Uglegorsk**	**7.17**	**297**	*e*P	Pn	14 53 45.5	+4.0
UGL				AMB	AMB	14 53 48.0	
	comp=E,2μm,5.0s						
UGL				AMB	AMB	14 53 48.0	
	comp=E,3μm,5.0s						
UGL				AMB	AMB	14 53 48.0	
	comp=E,1μm,0.6s						
UGL				*e*S	**Sn**	**14 55 06.5**	**+4.9**
UGL				A	A	14 55 10.0	
	comp=E,1μm,0.6s						
UGL				A	A	14 55 10.0	
	comp=E,462nm,0.5s						
UGL				AMS	AMS	14 56 12.0	
	comp=E,18μm,24.0s						
UGL				AMS	AMS	14 56 12.0	
	comp=E,18μm,20.0s						
JFR	**Furan**	**7.23**	**248**	⇑P	**Pn**	**14 53 43.1**	**+0.7**
JAB	**Ashibetsu**	**7.32**	**252**	⇑P	**Pn**	**14 53 45.7**	**+2.1**
JEM	**Erimo**	**7.50**	**239**	P	**Pn**	**14 53 45.0**	**-0.9**
JEM				*e*S	**Sn**	**14 55 07.3**	**-2.2**
ERM	**Erimo**	**7.50**	**239**	*d i*PN	**Pn**	**14 53 45.8**	**-0.2**
ERM				pmax	pmax		
	comp=Z,619nm,1.0s						
ERM	**Erimo**	**7.50**	**239**	*e*Pn	**Pn**	**14 53 45.5**	**-0.5**
JHR	**Hokuryu**	**7.55**	**255**	P	**Pn**	**14 53 49.0**	**+2.2**
JBT2	**Biratori 2**	**7.56**	**246**	P	**Pn**	**14 53 42.8**	**-0.7**
JNBK	**Urakawa-nobuka**	**7.59**	**242**	P	**Pn**	**14 53 45.0**	**-2.2**
JNBK				*e*S	**Sn**	**14 55 12.3**	**+0.6**
PEA0B	**Petropavlovsk-**	**7.90**	**27**	*e*Pn	**Pn**	**14 53 51.8**	**+0.4**
PETK	**Petropavlovsk-**	**7.90**	**27**	PN	**Pn**	**14 53 52.8**	**+1.4**
PETK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,7μm,19.4s						
PETK	**Petropavlovsk-**	**7.90**	**27**	P	**Pn**	**14 53 52.8**	**+1.4**
PETK				S	**Sn**	**14 55 16.2**	**-3.1**
PETK	**Petropavlovsk-**	**7.90**	**27**	P	**Pn**	**14 53 52.8**	**+1.4**
	comp=Z,7.2nm,0.3s,baz=171,slow=12,SNR=118						
PETK				S	**Sn**	**14 55 16.2**	**-3.1**
	baz=209,slow=23,SNR=1.7						
PETK				LR	LR	14 56 59.6	
	comp=Z,7μm,19.4s,baz=213,slow=38						
JEW	**Eniwo**	**8.12**	**249**	P	**Pn**	**14 53 55.2**	**+0.7**
PET	**Petropavlovsk**	**8.15**	**31**	*e*PN	**Pn**	**14 53 56.5**	**+1.7**
PET				pmax	pmax		
	comp=Z,100nm,7.4s						
PET				MLR	MLR		
	comp=Z,7μm,19.0s						
PET				MLR	MLR		
	comp=Z,6μm,16.0s						
JSK	**Shakotan**	**8.54**	**255**	P	**Pn**	**14 54 02.5**	**+2.2**
JNB	**Noboribetsu**	**8.57**	**248**	P	**Pn**	**14 53 59.7**	**-0.9**
JNB				*e*S	**Sn**	**14 55 34.0**	**-1.8**
JKB	**Kayabe**	**8.87**	**245**	P	**Pn**	**14 54 02.6**	**-2.2**
JKB				*e*S	Sn	14 55 37.0	-6.2
JSH	**Shimam**	**9.13**	**251**	P	**Pn**	**14 54 08.8**	**+0.5**
JYM2	**Yakumo 2**	**9.17**	**248**	P	**Pn**	**14 54 07.5**	**-1.4**
OKH	**Okha**	**9.31**	**325**	*e*PN	Pn	14 54 14.0	+3.3
OKH				pmax	pmax		
	comp=Z,5μm,4.0s						
OKH				MLR	MLR		
	comp=Z,9μm,15.0s						
OKH	**Okha**	**9.31**	**325**	*e*P	Pn	14 54 14.0	+3.3
OKH				AMB	AMB	14 54 15.5	
	comp=Z,500nm,0.8s						
OKH				AMB	AMB	14 54 16.0	
	comp=Z,5μm,4.0s						
OKH				*e*S	**Sn**	**14 55 58.2**	**+4.3**
OKH				*e*S	**Sn**	**14 55 58.6**	**+4.7**
OKH				A	A	14 56 07.4	
	comp=Z,3μm,8.0s						
OKH				A	A	14 56 07.4	
	comp=Z,5μm,6.0s						
OKH				AMS	AMS	14 57 57.4	
	comp=Z,10μm,18.0s						
OKH				AMS	AMS	14 57 57.4	
	comp=Z,10μm,17.0s						
OKH				AMS	AMS	14 57 57.4	
	comp=Z,9μm,15.0s						
JSR	**Shiriuchi**	**9.45**	**244**	P	**Pn**	**14 54 10.6**	**-2.1**
JSR				*e*S	**Sn**	**14 55 53.6**	**-3.9**
JTM	**Tenmabayashi**	**9.49**	**239**	P	Pn	14 54 09.9	-3.3
JTM				*e*S	Sn	14 55 48.2	-10
JANG	**Nango**	**9.49**	**236**	P	Pn	14 54 08.6	-4.7
JANG				*e*S	Sn	14 55 49.5	-9.0
JTH	**Tanohata**	**9.59**	**233**	P	Pn	14 54 09.3	-5.3
JTH				*e*S	Sn	14 55 47.9	-13
JOSM	**Okushiri--Mats**	**9.77**	**249**	P	**Pn**	**14 54 15.8**	**-1.2**
NKL	**Nikolayevsk**	**10.00**	**318**	⇓*i*P	**Pn**	**14 54 21.0**	**+0.8**
NKL				AMB	AMB	14 54 24.0	
	comp=Z,2μm,6.0s						
NKL				AMB	AMB	14 54 24.0	
	comp=Z,2μm,6.0s						
NKL				AMB	AMB	14 54 24.0	
	comp=Z,3μm,6.0s						
NKL				AMB	AMB	14 54 25.5	
	comp=Z,340nm,1.0s						
NKL				AMB	AMB	14 54 25.5	
	comp=Z,540nm,1.0s						
NKL				A	A	14 56 30.0	
	comp=Z,2μm,10.0s						
NKL				A	A	14 56 30.0	
	comp=Z,2μm,10.0s						
NKL				*e*L	L	14 57 10.0	
NKL				AMS	AMS	14 58 26.0	
	comp=Z,10μm,17.0s						
NKL				AMS	AMS	14 58 26.0	
	comp=Z,6μm,17.0s						
NKL				AMS	AMS	14 58 26.0	
	comp=Z,19μm,17.0s						
OFUJ	**Ofunato**	**10.31**	**230**	P	Pn	14 54 19.7	-4.7
JRG	**Rokugo**	**10.65**	**234**	P	Pn	14 54 25.2	-3.9
TEY	**Ternei**	**10.71**	**269**	*e*P	Pn	14 54 36.0	+6.1
TEY				AMB	AMB	14 54 36.3	
	comp=Z,15nm,0.7s						
TEY				AMB	AMB	14 54 36.3	
	comp=Z,73nm,1.0s						
TEY				AMB	AMB	14 54 36.3	
	comp=Z,2μm,4.4s						
TEY				AMB	AMB	14 54 36.3	
	comp=Z,60nm,0.9s						
TEY				*e*LR	LR	14 57 39.6	
TEY				AMS	AMS	14 58 00.0	
	comp=Z,14μm,24.0s						
TEY				AMS	AMS	14 58 00.0	
	comp=Z,24μm,25.0s						
JOG2	**Oga 2**	**10.80**	**239**	P	**Pn**	**14 54 28.3**	**-2.8**
JIO	**Ouri**	**10.94**	**229**	P	Pn	14 54 28.1	-4.9
JIO				*e*S	Sn	14 56 20.0	-14
HABR	**Khabarovsk**	**11.59**	**287**	*d*ePN	**Pn**	**14 54 39.5**	**-2.4**
HABR				pmax	pmax		
	comp=Z,194nm,1.1s						
HABR				pmax	pmax		
	comp=E,169nm,1.0s						
HABR				pmax	pmax		
	comp=N,56nm,1.7s						
HABR				MLR	MLR		
	comp=N,4μm,18.0s						
HABR				MLR	MLR		
	comp=Z,8μm,18.0s						
HABR				MLR	MLR		
	comp=E,7μm,18.0s						
JYA	**Atsumi**	**11.72**	**234**	P	Pn	14 54 40.0	-3.8
JFK	**Kawauchi**	**12.01**	**227**	P	Pn	14 54 43.9	-3.8
JFK				*e*S	Sn	14 56 46.7	-13
JFY	**Yanaizu**	**12.58**	**230**	P	Pn	14 54 51.0	-4.5
KLR	**Kul'dur**	**13.83**	**290**	*e*P	**Pn**	**14 55 11.2**	**-1.2**
KLR				pmax	pmax		
	comp=E,400nm,2.0s						
KLR				pmax	pmax		
	comp=Z,320nm,2.0s						
KLR				MLR	MLR		
	comp=E,7μm,15.5s						
KLR				MLR	MLR		
	comp=Z,9μm,15.5s						
MJAR	**Matsushiro Arr**	**14.03**	**231**	P	Pn	14 55 11.6	-3.6
MJAR	**Matsushiro Arr**	**14.03**	**231**	P	Pn	14 55 11.6	-3.6
	comp=Z,3.1nm,0.3s,baz=30,slow=13,SNR=211						
MAJO	**Matsushiro**	**14.03**	**231**	*e*P	Pn	14 55 11.3	-3.9
MAJO	**Matsushiro**	**14.03**	**231**	*e*Pn	Pn	14 55 11.2	-3.9
MAT	**Matsushiro**	**14.03**	**231**	P	Pn	14 55 11.0	-4.2
MAT				S	Sn	14 57 55.8	+6.6
MAT	**Matsushiro**	**14.03**	**231**	P	Pn	14 55 11.2	-4.0
USRK	**Ussuriysk Arra**	**14.10**	**269**	P	**Pn**	**14 55 15.8**	**-0.3**
	comp=Z,5.5nm,0.3s,baz=83,slow=9.8,SNR=64						
USRK				LR	LR	15 00 40.7	
	comp=Z,9μm,19.5s,baz=68,slow=37						
VLA	**Vladivostok**	**14.49**	**265**	⇑*i*P	**Pn**	**14 55 20.3**	**-1.0**
VLA				*e*S	**Sn**	**14 57 58.7**	**-1.7**
VLA				pmax	pmax		
	comp=Z,112nm,0.9s						
FX1	**Attu Island--F**	**15.36**	**56**	*e*Pn	**Pn**	**14 55 32.3**	**-0.1**
FX1	**Attu Island--F**	**15.36**	**56**	P	**Pn**	**14 55 32.8**	**+0.3**
	comp=Z,19nm,0.3s,baz=181,slow=7.8,SNR=36						
FX1				S	Sn	14 58 11.8	-10
	comp=Z,6.7nm,0.3s,baz=82,slow=19,SNR=5.5						
FX1				LR	LR	15 00 25.4	
	comp=Z,3μm,21.5s,baz=280,slow=33						
MDJ	**Mudanjiang**	**15.67**	**272**	P	**Pn**	**14 55 35.9**	**-0.6**
MDJ				S	**Sn**	**14 58 25.4**	**-3.6**
MDJ				PcP	**PcP**	**15 00 35.1**	**+0.9**
MDJ				PcS	**PcS**	**15 04 10.5**	**+1.0**
MDJ				ScS	**ScS**	**15 07 43.3**	**+1.3**
MDJ				pmax	pmax		
	comp=Z,90nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,2μm,10.6s						
MDJ				LR	LR		
	comp=N,2μm,14.3s						
MDJ				LR	LR		
	comp=E,5μm,18.2s						
MDJ				LR	LR		
	comp=E,8μm,19.2s						
JHJ	**Hachijo jima 2**	**15.98**	**219**	P	**P**	**14 55 44.6**	**+1.4**
	comp=Z,12nm,0.3s,baz=114,slow=2.8,SNR=8.2						
JHJ				S	Sn	14 58 22.4	-14
	comp=Z,25nm,0.3s,baz=43,slow=19,SNR=5.7						
JHJ				LR	LR	15 01 14.1	
	comp=Z,1μm,18.8s,baz=37,slow=35						
SEY	**Seymchan**	**16.77**	**1**	*e*P	**Pn**	**14 55 50.6**	**+0.4**
ZEA	**Zeya**	**17.43**	**305**	⇑*e*P	**Pn**	**14 55 56.8**	**-1.7**
ZEA				⇑*e*P	**Pn**	**14 55 56.8**	**-1.7**
ZEA				AMB	AMB	14 56 02.0	
	comp=Z,130nm,1.0s						
ZEA				AMB	AMB	14 56 02.0	
	comp=Z,200nm,1.0s						
ZEA				AMB	AMB	14 56 04.0	
	comp=Z,2μm,7.0s						
ZEA				AMB	AMB	14 56 04.0	
	comp=Z,1μm,7.0s						
ZEA				A	A	14 59 28.0	
	comp=Z,2μm,13.0s						
ZEA				A	A	14 59 28.0	
	comp=Z,1μm,13.0s						
CN2	**Changchun**	**18.76**	**272**	*e*P	**P**	**14 56 13.9**	**+0.2**
CN2				*ep*P	**pP**	**14 56 25.3**	**-0.5**
CN2				*es*P	**sP**	**14 56 33.8**	**+1.1**
CN2				*e*S	Sn	14 59 36.3	-7.4
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
CN2				LR	LR		
	comp=N,5μm,18.0s						

CN2 LR LR
comp=E,5µm,18.0s
CN2 LR LR
comp=E,6µm,19.0s
CLNS Chul'man 19.70 312 *e*P **Pn 14 56 30.1 +4.3**
CLNS *e*S **Sn 15 00 07.6 +1.4**
CLNS pmax pmax
comp=Z,57nm,1.3s
CLNS pmax pmax
comp=E,32nm,1.0s
CLNS pmax pmax
comp=N,43nm,0.9s
CLNS smax smax
comp=E,523nm,14.9s
CLNS smax smax
comp=N,813nm,16.4s
CLNS MLR MLR
comp=E,4µm,20.0s
CLNS MLR MLR
comp=E,7µm,21.0s
CLNS MLR MLR
comp=N,5µm,20.0s
KSRS Korea Array 19.77 252 P **P 14 56 24.5 -0.2**
comp=N,7.8nm,0.3s,baz=59,slow=11,SNR=146
KSRS S **Sn 15 00 14.2 +6.2**
baz=60,slow=19,SNR=5.9
KSRS PcP **PcP 15 00 42.1 +1.1**
comp=N,0.1nm,0.3s,baz=328,slow=1.2,SNR=8.9
KSRS LR LR 15 03 12.6
comp=N,4µm,19.1s,baz=58,slow=34
KSAR Wonju Array Be 19.80 252 P **P 14 56 24.5 -0.6**
KSAR S **Sn 15 00 14.2 +5.4**
KSAR PcP **PcP 15 00 42.1 +1.0**
YAK Yakutsk 20.31 329 *e*P **P 14 56 31.4 +1.0**
YAK *e* 14 56 51.3
YAK *e*S Sn 15 00 18.3 -2.3
YAK *e*SS **SnSn 15 00 39.1 +3.4**
YAK *e* 15 00 42.5
YAK *e*SSS SSS 15 00 50.3
YAK *e* 15 07 54.2
YAK pmax pmax
comp=Z,836nm,0.9s
YAK pmax pmax
comp=N,215nm,1.0s
YAK pmax pmax
comp=E,261nm,1.0s
YAK pmax pmax
comp=Z,381nm,1.0s
YAK pmax pmax
comp=N,152nm,0.9s
YAK pmax pmax
comp=E,84nm,0.9s
YAK smax smax
comp=N,448nm,2.5s
YAK smax smax
comp=E,449nm,1.8s
YAK MLR MLR
comp=E,6µm,23.0s
YAK MLR MLR
comp=N,3µm,24.0s
YAK MLR MLR
comp=E,5µm,23.0s
INCN Inchon 20.61 254 *e*P **P 14 56 33.7 -0.2**
comp=E,402nm,0.9s
INCN Inchon 20.61 254 P **P 14 56 34.4 +0.5**
SNR=27
JNU Nakatsue 20.66 238 *e*P **P 14 56 34.0 -0.5**
comp=E,51nm,1.0s
JNU Nakatsue 20.66 238 P **P 14 56 35.2 +0.7**
comp=E,75nm,0.8s,baz=47,slow=7.7,SNR=27
JNU LR LR 15 05 36.7
comp=E,1µm,18.9s,baz=41,slow=40
SNY Shenyang 20.71 268 ⇓P **P 14 56 35.1 +0.2**
SNY S S 15 00 14.8 -8.2
SNY pmax pmax
comp=Z,150nm,0.8s
SNY pmax pmax
comp=Z,350nm,5.4s
SNY LR LR
comp=N,2µm,16.7s
SNY LR LR
comp=E,6µm,16.7s
SNY LR LR
comp=Z,7µm,19.0s
JTSN Tsuno 20.93 235 P Pn 14 56 39.9 -0.6
JFU Fukue jima 2 22.26 241 P **P 14 56 52.5 +0.9**
BILL Bilibino 23.13 14⇑*i*P **P 14 57 00.4 0.0**
BILL *e* 14 57 29.0
BILL *i*S **S 15 01 03.7 -3.7**
BILL pmax pmax
comp=Z,27nm,0.8s
BILL MLR MLR
comp=Z,2µm,19.0s
BILL Bilibino 23.13 14 *e*P **P 14 56 58.5 -1.9**
comp=Z,25nm,0.7s
DL2 Dalian 23.29 263⇑*i*P **P 14 57 01.5 -0.7**
DL2 pP **pP 14 57 13.9 -1.0**
DL2 S **S 15 01 07.4 -3.0**
DL2 pmax pmax
comp=Z,130nm,0.9s
DL2 pmax pmax
comp=Z,1µm,5.3s
DL2 LR LR
comp=N,2µm,18.2s
DL2 LR LR
comp=E,2µm,16.8s
DL2 LR LR
comp=Z,3µm,20.6s
CIT Chita 25.48 297 *e* **P 14 57 21.6 -0.6**
CIT *e* 14 58 16.8
CIT *e* **S 15 01 46.4 +1.0**
BJI Beijing 26.56 269 P **P 14 57 31.0 -1.0**
BJI S **S 15 02 01.1 -1.5**
BJI pmax pmax
comp=Z,30nm,0.8s
BJI pmax pmax
comp=Z,910nm,5.0s
BJI LR LR
comp=N,3µm,16.0s
BJI LR LR
comp=E,6µm,18.3s
BJI LR LR
comp=Z,4µm,19.4s
JOW Kunigami 26.87 232 *e*P **P 14 57 35.1 +0.2**
comp=Z,96nm,0.9s
JOW Kunigami 26.87 232 P **P 14 57 35.6 +0.7**
JIH Iheya 26.88 233 P **P 14 57 35.2 +0.2**
TIA Tai'an 27.74 261 P **P 14 57 42.8 +0.2**
TIA S **S 15 02 22.6 +1.4**
TIA pmax pmax
comp=Z,50nm,1.0s
TIA LR LR
comp=N,2µm,22.5s
TIA LR LR
comp=E,2µm,27.4s
TIA LR LR
comp=Z,3µm,26.4s
TIXI Tiksi 27.74 345 *e*P **P 14 57 42.2 -0.1**
TIXI pmax pmax
comp=Z,13nm,1.2s
TIXI MLR MLR
comp=Z,4µm,22.0s
TIXI Tiksi 27.74 345 *e*P **P 14 57 40.1 -2.1**
comp=Z,22nm,1.0s
TIXI LR LR
comp=Z,4µm,20.0s
SSE Sheshan 28.05 248 ⇑P **P 14 57 46.4 +1.0**
SSE pP **pP 14 57 59.8 +0.7**
SSE sP **sP 14 58 05.4 -0.2**
SSE S **S 15 02 25.3 -0.9**
SSE pmax pmax
comp=Z,31nm,0.8s
SSE pmax pmax
comp=Z,310nm,4.5s
SSE LR LR
comp=N,1µm,18.0s
SSE LR LR
comp=E,1µm,18.0s
SSE LR LR
comp=Z,3µm,19.3s
NJ2 Nanjing 28.97 252 *e*P **P 14 57 54.3 +0.7**
NJ2 pP **pP 14 58 06.1 -1.2**
NJ2 S **S 15 02 37.5 -3.0**
NJ2 pmax pmax
comp=Z,70nm,0.8s
NJ2 pmax pmax
comp=Z,610nm,5.3s
NJ2 LR LR
comp=N,2µm,28.3s
NJ2 LR LR
comp=E,3µm,27.0s
NJ2 LR LR
comp=Z,4µm,28.0s
TNA Tin City 28.99 34 *e*P **P 14 57 53.7 +0.3**
comp=Z,14nm,0.8s
HHC Hu-ho-hao-te 29.43 274 *e*P **P 14 57 57.0 -0.7**
HHC pP **pP 14 58 11.6 +0.2**
HHC sP **sP 14 58 19.0 +1.1**
HHC PP **PnPn 14 58 53.5 -0.1**
HHC S **S 15 02 43.8 -4.1**
HHC pmax pmax
comp=Z,45nm,0.8s
HHC pmax pmax
comp=Z,1µm,7.6s
HHC LR LR
comp=N,4µm,13.5s
HHC LR LR
comp=E,7µm,14.3s
HHC LR LR
comp=Z,8µm,13.2s
WAKE Wake Island 29.51 151 PFAKE 14 58 10.0 +12
WAKE LR LR
comp=Z,4µm,22.0s
MIDW Midway 30.16 116 PFAKE 14 58 20.0 +16
MIDW LR LR
comp=Z,3µm,21.0s
ULN Ulaanbaatar 30.22 290 *e*P **P 14 58 05.0 +0.2**
comp=Z,11nm,0.7s
ULN Ulaanbaatar 30.22 290 P **P 14 58 05.8 +1.1**
comp=Z,17nm,0.8s,comp=Z,284nm
BTO Baotou 30.59 275 *e*P **P 14 58 08.1 +0.1**
BTO LR LR
comp=N,930nm,14.7s
BTO LR LR
comp=E,1µm,18.2s
SONM Songino Array 30.66 290 P **P 14 58 07.4 -1.2**
SONM PcP **PcP 15 01 06.0 +0.6**
SONM Songino Array 30.66 290 P **P 14 58 07.4 -1.2**
comp=E,6.0nm,0.6s,baz=74,slow=7.8,SNR=43
SONM PcP **PcP 15 01 06.0 +0.6**
comp=E,14nm,0.8s,baz=98,slow=1.5,SNR=9.0
SONM LR LR 15 11 31.4
comp=E,4µm,18.5s,baz=74,slow=38
TLY Talaya 31.63 298 *e*P **P 14 58 14.2 -2.7**
TLY *e* 14 59 30.0
TLY *e* 15 01 08.7
TLY *e*S **S 15 03 21.6 -0.3**
TLY *e*SS **SnSn 15 05 15.2 +3.3**
TLY pmax pmax
comp=Z,11nm,0.6s
TLY MLR MLR
comp=Z,5µm,18.0s
TLY Talaya 31.63 298 P **P 14 58 15.2 -1.7**
comp=Z,144nm,0.6s,SNR=11
ZAK Zakamensk 32.09 295⇑*i*P **P 14 58 19.6 -1.5**
ZAK *e* 15 01 09.8
ZAK pmax pmax
comp=Z,9.0nm,1.4s
YHNB Yeheng 32.49 239 *e*P **P 14 58 23.3 -1.5**
comp=Z,45nm,0.8s
WHN Wuhan 32.91 255 P **P 14 58 28.0 -0.3**
WHN S **S 15 03 37.4 -4.8**
WHN LR LR
comp=N,2µm,9.5s
WHN LR LR
comp=E,3µm,12.3s
WHN LR LR
comp=Z,4µm,14.8s
GUMO Guam 33.03 192 LR LR 15 12 10.4
comp=Z,2µm,18.8s,baz=31,slow=37
MOY Mondy 33.25 298 *e*P **P 14 58 33.5 +2.2**
MOY *e* 14 59 45.3
SSLB Suanglung 33.41 239 *e*P **P 14 58 33.9 +1.2**
comp=Z,57nm,0.8s
YULB Yu-li 33.51 238 *e*P **P 14 58 33.0 -0.6**
comp=Z,36nm,0.8s
SVW2 Sparrevohn 33.52 44 *e*P **P 14 58 35.0 +1.7**
comp=Z,10nm,0.9s
TPUB Ta-pu 33.97 238 *e*P **P 14 58 37.2 -0.5**
QZH Quanzhou 33.98 243⇑*i*P **P 14 58 39.6 +2.0**
QZH S **S 15 04 00.0 +1.2**
QZH pmax pmax
comp=Z,210nm,1.0s
QZH LR LR
comp=N,4µm,19.3s
QZH LR LR
comp=E,3µm,16.0s
QZH LR LR
comp=Z,4µm,26.0s
TWG Pinlang 34.08 237 *e*P **P 14 58 37.5 -1.0**
comp=Z,611nm,0.8s
XAN Xi'an 34.56 265 P **P 14 58 42.6 -0.1**
XAN PP **PP 15 00 01.0 -0.7**
XAN ScP **ScP 15 04 57.4 +0.6**
XAN pmax pmax
comp=Z,39nm,0.7s
XAN pmax pmax
comp=Z,130nm,7.8s
XAN LR LR
comp=N,2µm,16.4s
XAN LR LR
comp=E,520nm,17.4s
XAN LR LR
comp=Z,910nm,17.4s
RSO Redoubt South 34.90 45 *e*P **P 14 58 46.7 +1.2**
KDAK Kodiak Island 35.15 50 *e*P **P 14 58 44.7 -2.7**
KDAK Kodiak Island 35.15 50 P **P 14 58 47.2 -0.2**
comp=Z,33nm,0.8s,baz=344,slow=5.2,SNR=14
PPLA Purkeypile 35.18 41 *e*P **P 14 58 49.5 +1.8**
comp=Z,94nm,1.4s
SPU Mount Spurr 35.23 44 *e*P **P 14 58 49.5 +1.3**
TRF Thorofare Moun 36.05 40 *e*P **P 14 58 55.6 +0.3**
COLD Coldfoot 36.29 34 *e*P **P 14 58 58.2 +1.1**
comp=Z,34nm,1.1s
SEW Seward 36.57 46 *e*P **P 14 58 60.0 +0.5**
comp=Z,51nm,1.2s
PMR Palmer 36.62 43 *e*P **P 14 59 01.1 +1.2**
PMR pmax pmax
comp=Z,22nm,1.0s
PMR Palmer 36.62 43 *e*P **P 14 59 01.1 +1.2**
comp=Z,22nm,1.0s
MCK McKinley 36.65 40 *e*P **P 14 59 00.9 +0.6**
MCK pmax pmax
comp=Z,25nm,0.8s
MCK McKinley 36.65 40 *e*P **P 14 59 00.9 +0.6**
comp=Z,25nm,0.8s
SML Sawmill 36.99 43 *e*P **P 14 59 04.2 +1.0**
SML Sawmill 36.99 43 *e*P **P 14 59 04.2 +1.0**
LZH Lanzhou 37.00 272⇑P **P 14 59 04.3 +0.6**
LZH pP **pP 14 59 19.8 +2.2**
LZH sP **sP 14 59 25.8 +1.8**
LZH PP **PnPn 15 00 30.1 +0.8**
LZH S **S 15 04 42.5 -2.8**
LZH sS **sS 15 05 08.5 -0.4**
LZH pmax pmax
comp=Z,200nm,1.1s
LZH pmax pmax
comp=Z,650nm,4.0s
LZH LR LR
comp=N,2µm,14.6s
LZH LR LR
comp=E,4µm,15.3s
LZH LR LR
comp=Z,4µm,17.2s
COLA College 37.13 38 *e*P **P 14 59 05.6 +1.4**
COLA pmax pmax
comp=Z,53nm,0.8s
COLA MLR MLR
comp=Z,1µm,20.0s
COLA College 37.13 38 *e*P **P 14 59 05.6 +1.4**
comp=Z,52nm,0.8s
COLA LR LR
comp=Z,1µm,20.0s
KRAR Krasnoyarsk 37.19 307*d i*P **P 14 59 04.4 -0.4**
KRAR pmax pmax
comp=Z,8.0nm,0.8s
ILAR Eielson Array 37.54 38 P **P 14 59 08.0 +0.2**
ILAR *e* 15 29 26.9
ILAR Eielson Array 37.54 38 P **P 14 59 08.0 +0.2**
comp=Z,6.6nm,0.5s,baz=261,slow=7.3,SNR=121
ILAR LR LR 15 16 34.7
comp=Z,1µm,18.2s,baz=291,slow=39
ILAR P3KPbc 15 29 26.9
comp=Z,0.3nm,0.7s,baz=71,slow=3.2,SNR=5.7
GTA Gaotai 38.16 279 P **P 14 59 13.6 +0.2**
GTA pP **pP 14 59 28.3 +0.9**
GTA sP **sP 14 59 35.3 +1.5**
GTA PP **PnPn 15 00 45.8 +2.5**
GTA PcP **PcP 15 01 28.5 +1.4**
GTA S **S 15 05 00.9 -1.9**
GTA ScP **ScP 15 05 10.6 +0.5**
GTA PcS **PcS 15 05 16.3 0.0**
GTA sS **sS 15 05 27.5 +1.1**
GTA SS **SnSn 15 07 41.0 -9.4**
GTA ScS **ScS 15 09 19.6 -0.2**
GTA pmax pmax
comp=Z,43nm,0.7s
GTA pmax pmax
comp=Z,520nm,7.1s
GTA LR LR
comp=N,2µm,15.7s
GTA LR LR
comp=E,2µm,14.7s
GTA LR LR
comp=Z,2µm,16.6s
PAX Paxson 38.24 41 *e*P **P 14 59 15.2 +1.4**
PAX Paxson 38.24 41 *e*P **P 14 59 15.2 +1.4**
DIV Divide 38.27 44 *e*P **P 14 59 14.6 +0.5**
DOT Dot Lake 38.83 40 *e*P **P 14 59 18.7 +0.1**
comp=Z,34nm,0.7s
BMRM Bremner River 38.86 44 *e*P **P 14 59 20.2 +1.3**
comp=Z,34nm,0.8s
CD2 Chengdu 39.93 265⇑P **P 14 59 28.5 +0.3**
CD2 pP **pP 14 59 42.5 +0.3**
CD2 sP **sP 14 59 49.0 +0.4**
CD2 PP **PnPn 15 01 04.8 +0.4**
CD2 PcP **PcP 15 01 34.0 +1.3**
CD2 PcS **PcS 15 05 23.9 +0.8**
CD2 S **S 15 05 28.0 -1.4**
CD2 ScS **ScS 15 09 29.1 -1.1**
CD2 pmax pmax
comp=Z,430nm,0.8s
CD2 pmax pmax
comp=Z,850nm,4.5s
CD2 LR LR
comp=N,2µm,15.2s
CD2 LR LR
comp=E,2µm,18.1s
CD2 LR LR
comp=Z,2µm,17.6s
EGAK Eagle 39.99 38 *e*P **P 14 59 28.7 +0.5**
comp=Z,34nm,0.8s
EGAK LR LR
comp=Z,962nm,21.0s
GYA Guiyang 40.71 257⇑*i*P **P 14 59 33.9 -0.9**
GYA pP **pP 14 59 48.8 -0.1**
GYA sP **sP 14 59 55.0 -0.2**
GYA PP **PnPn 15 01 13.3 -0.4**
GYA PcP **PcP 15 01 37.6 +2.2**
GYA ScP **ScP 15 05 21.0 +0.9**
GYA S **S 15 05 41.9 +0.7**
GYA pmax pmax
comp=Z,110nm,0.9s
GYA pmax pmax
comp=Z,160nm,5.0s
GYA LR LR
comp=N,840nm,17.7s
GYA LR LR
comp=E,1µm,15.9s
GYA LR LR
comp=Z,2µm,18.7s
TGY Tagaytay City 41.18 229 P **P 14 59 40.1 +1.5**
TGY Tagaytay City 41.18 229 P **P 14 59 40.1 +1.5**
comp=Z,155nm,0.7s,baz=202,slow=2.9,SNR=6.7
ZAA0 Zalesovo Array 42.19 306 *e*P **P** 14 59 43.1 -3.3
ZALV Zalesovo Beam 42.19 306 P **P 14 59 44.5 -2.0**
ZALV 15 01 40.1
ZALV Zalesovo Beam 42.19 306 P **P 14 59 44.5 -2.0**
ZALV PcP **PcP 15 01 40.1 +0.5**
ZALV ScP **ScP 15 05 26.2 +0.9**
ZALV PKiKP **PKiKP 15 08 42.7 -2.0**
ZALV Zalesovo Beam 42.19 306 P **P 14 59 44.5 -2.0**
comp=Z,4.0nm,0.5s,baz=53,slow=6.8,SNR=15
ZALV PcP **PcP 15 01 40.1 +0.5**
comp=Z,44nm,0.8s,baz=70,slow=2.9,SNR=26
ZALV ScP **ScP 15 05 26.2 +0.9**
comp=Z,2.9nm,0.9s,baz=64,slow=3.4,SNR=3.4
ZALV PKiKP **PKiKP 15 08 42.7 -2.0**
comp=Z,1.1nm,0.6s,baz=0.0,slow=0.0,SNR=3.7
ZALV LR LR 15 18 31.0
comp=Z,8µm,18.9s,baz=75,slow=38
INK Inuvik 42.60 32 P **P 14 59 50.9 +1.4**
INK Inuvik 42.60 32 P **P 14 59 50.9 +1.4**
comp=Z,66nm,0.8s,baz=296,slow=7.3,SNR=262
NVS Novosibirsk 42.80 308 *e*P **P 14 59 48.6 -2.7**
NVS *e* 15 01 40.0
NVS *e*S **S 15 06 07.9 -3.4**
NVS *e* 15 09 43.3
NVS pmax pmax
comp=Z,8.0nm,0.8s
NVS pmax pmax
comp=N,3.0nm,0.6s
NVS pmax pmax
comp=E,3.0nm,0.6s
NVS smax smax
comp=E,24nm,2.3s
QIZ Qiongzhong 43.80 246 P **P 14 59 59.3 -0.5**
QIZ sP **sP 15 00 20.3 0.0**
QIZ S **S 15 06 26.9 +0.3**
QIZ pmax pmax
comp=Z,440nm,8.9s
QIZ LR LR
comp=N,870nm,22.1s
QIZ LR LR
comp=E,520nm,24.4s
QIZ LR LR
comp=Z,2µm,23.6s
KMI Kunming 44.25 259 P **P 15 00 04.0 +0.4**
KMI pP **pP 15 00 18.9 +1.0**
KMI sP **sP 15 00 25.5 +1.3**
KMI PP **PcP 15 01 46.1 -1.3**
KMI S **S 15 06 29.1 -4.4**
KMI SS **SS 15 09 46.5 -6.6**
KMI pmax pmax
comp=Z,33nm,0.7s
KMI pmax pmax
comp=Z,780nm,5.8s
KMI LR LR
comp=N,1µm,17.9s
KMI LR LR
comp=E,540nm,16.9s
KMI LR LR
comp=Z,1µm,20.7s
WMQ Urumqi 44.28 291 P **P 15 00 05.0 +1.5**
WMQ PP **PP 15 01 50.0 +2.7**
WMQ ScP **ScP 15 05 35.0 +0.9**
WMQ S **S 15 06 33.0 -0.3**
WMQ sS **sS 15 06 59.0 +1.7**
WMQ SS SS 15 09 42.0 -11
WMQ ScS **ScS 15 09 56.0 -0.6**
WMQ pmax pmax
comp=Z,47nm,0.8s
WMQ pmax pmax
comp=Z,280nm,5.0s
WMQ LR LR
comp=N,3µm,16.0s
WMQ LR LR
comp=E,2µm,16.0s
WMQ LR LR
comp=Z,2µm,16.0s
DAV Davao City (W) 45.06 218 LR LR 15 16 43.2
comp=Z,779nm,21.8s,baz=352,slow=33
CTBH Cotabato--PC H 45.51 220 *i* P **P 15 00 14.3 +0.8**
WRAK Wrangell Islan 46.17 48 PFAKE 15 00 30.0 +12
WRAK LR LR
comp=Z,921nm,20.0s
MK31 Makanchi Array 46.38 297 *e*P **P 15 00 18.6 -1.5**
MK31 Makanchi Array 46.38 297 *e*P **P 15 00 18.6 -1.5**
MKAR Makanchi Array 46.38 297 P **P 15 00 18.7 -1.4**
MKAR 15 01 54.6
MKAR pmax pmax
comp=Z,21nm,0.8s
MKAR MLR MLR
comp=Z,5µm,19.5s
MKAR Makanchi Array 46.38 297 P **P 15 00 18.7 -1.4**
MKAR PcP **PcP 15 01 54.6 +0.4**
MKAR ScP **ScP 15 05 42.6 -0.2**

MKAR Makanchi Array 46.38 297 P **P 15 00 18.7 -1.4**
comp=Z,21nm,0.8s,baz=67,slow=6.8,SNR=73
MKAR PcP **PcP 15 01 54.6 +0.4**
comp=Z,25nm,0.7s,baz=54,slow=2.6,SNR=12
MKAR ScP **ScP 15 05 42.6 -0.2**
comp=Z,2.7nm,0.7s,baz=60,slow=3.6,SNR=4.6
MKAR LR LR 15 20 50.6
comp=Z,5µm,19.5s,baz=63,slow=37
DLBC Dease Lake 46.62 45 P **P 15 00 24.1 +2.2**
DLBC Dease Lake 46.62 45 P **P 15 00 24.1 +2.2**
comp=Z,23nm,0.8s,baz=268,slow=7.3,SNR=28
DLBC LR LR 15 19 24.8
comp=Z,518nm,20.6s,baz=82,slow=35
KURK Kurchatov 46.91 304*c iP* **P 15 00 21.9 -2.2**
KURK pmax pmax
comp=Z,24nm,0.6s
KURK Kurchatov 46.91 304 *e*P **P 15 00 22.0 -2.0**
comp=Z,28nm,0.6s
KURK Kurchatov 46.91 304 P **P 15 00 22.5 -1.5**
SNR=12
KURBB Kurchatov Arra 47.00 303 P **P 15 00 22.8 -2.0**
comp=Z,24nm,0.6s,baz=70,slow=8.5,SNR=30
KIP Kipapa 47.50 104 *e*P **P 15 00 30.8 +1.8**
KIP pmax pmax
comp=Z,65nm,1.7s
TARA Tarawa 48.35 151 PFAKE 15 00 50.0 +14
TARA LR LR
comp=Z,3µm,21.0s
UBPT Khong Chiam 49.36 247 P **P 15 00 45.4 +2.0**
comp=Z,65nm,1.3s
LSA Lhasa 49.39 273 P **P 15 00 46.8 +2.7**
LSA pmax pmax
comp=Z,90nm,0.7s
LSA LR LR
comp=N,720nm,27.0s
LSA LR LR
comp=E,1µm,29.7s
MYLDM Lahad Datu 50.01 226 P **P 15 00 50.3 +2.1**
MYLDM Lahad Datu 50.01 226 P **P 15 00 50.8 +2.5**
comp=E,74nm,1.2s
BBB Bella Bella 50.17 52 LR LR 15 18 18.5
comp=E,492nm,21.4s,baz=289,slow=31
VOSK Vostochnaya 50.32 309 P **P 15 00 47.8 -2.4**
VOSK pmax pmax
comp=Z,26nm,0.7s
ALE Alert 50.38 5 P **P 15 00 50.9 +0.6**
comp=Z,142nm,0.7s,SNR=15
KKM Kota Kinabalu 50.43 229 *e*P **P 15 00 49.8 -1.8**
KKM comp=Z,80nm,1.5s LR LR
comp=Z,754nm,20.0s
KKM Kota Kinabalu 50.43 229 P **P 15 00 53.4 +1.8**
KKM Kota Kinabalu 50.43 229 P **P 15 00 53.6 +2.0**
comp=Z,33nm,1.2s,comp=Z,701nm
BVA0 Borovoye Array 50.50 309 *i* P **P 15 00 49.7 -1.9**
BRVK Borovoye 50.54 309*c iP* **P 15 00 50.2 -1.7**
BRVK pmax pmax
comp=Z,23nm,0.6s
BRVK Borovoye 50.54 309 *e*P **P 15 00 50.5 -1.4**
BRVK LR LR
comp=Z,5µm,20.0s
BRVK Borovoye 50.54 309 P **P 15 00 51.2 -0.7**
SNR=8.1
TSM Tawau 51.08 226 P **P 15 00 57.9 +1.5**
CMMT Chiang Mai 51.10 256 P **P 15 00 57.4 +0.8**
comp=Z,141nm,0.8s,comp=Z,1µm
CHTO Chiang Mai 51.11 256 *e*P **P 15 00 57.3 +0.7**
CHTO MLR MLR
comp=Z,2µm,19.0s
CHTO Chiang Mai 51.11 256 *e*P **P 15 00 57.3 +0.7**
CHTO LR LR
comp=Z,2µm,19.0s
CHTO Chiang Mai 51.11 256 P **P 15 00 57.6 +1.1**
SNR=27
CHTO Chiang Mai 51.11 256 P **P 15 00 56.9 +0.3**
comp=Z,156nm,0.9s,comp=Z,1µm
ZRNK Zerenda 51.28 310 *i* P **P 15 00 55.9 -1.5**
ZRNK pmax pmax
comp=Z,21nm,0.6s
CM31 Chiang Mai Arr 51.36 256 *e*P **P 15 00 58.5 +0.1**
comp=Z,45nm,0.8s
CMAR Chiang Mai Arr 51.36 256 P **P 15 00 59.2 +0.8**
CMAR PcP **PcP 15 02 13.8 +1.2**
CMAR ScP **ScP 15 06 05.4 +1.1**
CMAR Chiang Mai Arr 51.36 256 P **P 15 00 59.2 +0.8**
comp=Z,46nm,0.7s,baz=38,slow=7.2,SNR=159
CMAR PcP **PcP 15 02 13.8 +1.2**
comp=Z,12nm,0.8s,baz=18,slow=3.0,SNR=7.3
CMAR ScP **ScP 15 06 05.4 +1.1**
comp=Z,1.4nm,0.9s,baz=18,slow=5.0,SNR=4.4
CMAR LR LR 15 24 17.6
comp=Z,2µm,18.8s,baz=58,slow=38
SHL Shillong 51.45 268⇑ *i*P **P 15 01 00.0 +0.7**
RES Resolute Bay 51.64 18 *e*P **P 15 00 59.6 -0.2**
comp=Z,19nm,0.9s
YKW3 Yellowknife Ar 51.87 36 *e*P **P 15 01 01.2 -0.5**
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 51.90 36 P **P 15 01 03.0 +1.1**
YKA pP **pP 15 01 15.1 -1.4**
YKA PcP **PcP 15 02 14.7 +0.9**
YKA ⇑*e* 15 31 54.5
YKA P'P'ab P'P'ab 15 32 16.6 -8.7
YKA Yellowknife Ar 51.90 36 P **P 15 01 03.0 +1.1**
comp=Z,44nm,0.8s,baz=298,slow=7.0,SNR=377
YKA pP **pP 15 01 15.0 -1.4**
comp=Z,19nm,0.9s,baz=304,slow=7.1,SNR=5.3
YKA PcP **PcP 15 02 14.7 +0.9**
comp=Z,6.7nm,0.8s,baz=301,slow=3.5,SNR=5.7
YKA PKP2bc 15 31 54.4
comp=Z,0.1nm,0.6s,baz=139,slow=2.5,SNR=3.6
YKA PKP2ab 15 32 16.6
comp=Z,0.2nm,0.8s,baz=122,slow=4.6,SNR=5.0
ULHL Ulahol 52.37 295 P **P 15 01 07.3 +1.3**
SNR=10.0
TKM2 Tokmak 2 52.42 296 *e*P **P 15 01 04.6 -1.7**
TKM2 pmax pmax
comp=Z,14nm,0.6s
TKM2 MLR MLR
comp=Z,4µm,20.0s
TKM2 Tokmak 2 52.42 296 *e*P **P 15 01 04.6 -1.7**
comp=Z,14nm,0.6s
TKM2 LR LR
comp=Z,4µm,20.0s
TKM2 Tokmak 2 52.42 296 P **P 15 01 06.3 0.0**
SNR=30
KBS Kingsbay 52.90 351 *e*P P 15 01 05.4 -3.6
KBS *e*S **S 15 08 35.3 +1.7**
KBS AMS AMS 15 22 48.4
comp=Z,943nm,20.4s
KBS Kingsbay 52.90 351*d iP* **P 15 01 09.8 +0.7**
KBS pmax pmax
comp=Z,24nm,0.7s
KBS Kingsbay 52.90 351 *e*P **P 15 01 08.0 -1.1**
comp=Z,22nm,0.8s
KBS LR LR
comp=Z,1µm,20.0s
USP Ospenovka 52.92 297 P **P 15 01 11.2 +1.4**
SNR=34
KBK Karagaybulak 52.97 296 P **P 15 01 10.4 +0.1**
SNR=13
SPA0 Spitsbergen Ar 52.99 350 *e*P **P 15 01 08.9 -0.9**
FRU Bishkek 53.08 296 *e*P **P 15 01 11.0 0.0**
KZA Kyzart 53.08 295 P **P 15 01 12.2 +0.7**
SNR=48
TAPN Taplejung 53.22 273 *e*P **P 15 01 13.4 +0.9**
comp=Z,223nm,0.9s
AAK Ala-Archa 53.26 296*c iP* **P 15 01 11.7 -0.8**
AAK pmax pmax
comp=Z,57nm,0.9s
AAK Ala-Archa 53.26 296 *e*P **P 15 01 11.9 -0.6**
comp=Z,28nm,0.8s
AAK LR LR
comp=Z,4µm,20.0s
AAK Ala-Archa 53.26 296 P **P 15 01 11.7 -0.8**
SNR=14
AAK Ala-Archa 53.26 296 P **P 15 01 12.3 -0.2**
SNR=48
AAK Ala-Archa 53.26 296 P **P 15 01 11.8 -0.8**
comp=Z,26nm,0.7s,baz=134,slow=5.8,SNR=53
CHBT CHBT 53.26 248 P **P 15 01 13.9 +1.4**
comp=Z,133nm,0.8s,comp=Z,1µm
EKS2 Erkin-Say 53.69 296 *e*P **P 15 01 15.4 -0.2**
EKS2 pmax pmax
comp=Z,41nm,0.7s
EKS2 MLR MLR
comp=Z,5µm,19.0s
EKS2 Erkin-Say 53.69 296 *e*P **P 15 01 15.3 -0.2**
comp=Z,40nm,0.7s
EKS2 LR LR
comp=Z,5µm,19.0s
EKS2 Erkin-Say 53.69 296 P **P 15 01 15.6 0.0**
SNR=72
ODAN Odare 53.75 272 *e*P **P 15 01 16.3 0.0**
comp=Z,136nm,0.8s
SOKR Solikamsk 53.95 321 *e*P **P 15 01 17.4 +0.4**
SOKR pmax pmax
comp=Z,20nm,1.3s
SOKR MLR MLR
comp=Z,4µm,22.0s
KSH Kashi 54.02 292 P P 15 01 21.4 +3.4
KSH pP pP 15 01 36.6 +4.0
KSH PcP **PcP 15 02 24.0 +1.5**
KSH PP **PP 15 03 23.5 +3.9**
KSH ScP **ScP 15 06 15.8 +0.1**
KSH PcS **PcS 15 06 21.4 -0.6**
KSH S **S 15 08 52.3 +2.3**
KSH ScS **ScS 15 11 01.3 -1.2**
KSH SS **SS 15 12 34.1 +2.6**
KSH pmax pmax
comp=Z,3.0nm,0.7s
KSH pmax pmax
comp=Z,360nm,3.7s
KSH LR LR
comp=N,1µm,12.4s
KSH LR LR
comp=E,2µm,9.5s
KSH LR LR
comp=Z,950nm,8.7s
AML Almayashu 54.03 296 P **P 15 01 18.4 0.0**
SNR=47
GUN Gumba 54.14 274 *e*P **P 15 01 20.0 +0.7**
comp=Z,346nm,0.9s
RAMN Ramite 54.24 273 *e*P **P 15 01 20.5 +0.6**
comp=Z,384nm,0.7s
BTM Bintulu 54.48 230 P **P 15 01 21.6 +0.1**
KKN Kakani 54.63 275 *e*P **P 15 01 23.4 +0.7**
comp=Z,390nm,0.7s
PKI Pulchoki 54.68 274 *e*P **P 15 01 23.6 +0.4**
comp=Z,184nm,0.8s
PKIN Phulchoki 54.68 275 *e*P **P 15 01 23.4 +0.2**
comp=Z,115nm,0.7s
ARU Arti 54.80 317*c iP* **P 15 01 21.6 -1.6**
ARU *e* 15 02 24.7
ARU 15 03 23.0
ARU S **S 15 08 59.2 -0.6**
ARU pmax pmax
comp=Z,79nm,1.2s
ARU MLR MLR
comp=Z,3µm,16.0s
ARU Arti 54.80 317 P **P 15 01 22.0 -1.2**
comp=Z,419nm,0.6s,SNR=21
DMN Daman 54.86 275 *e*P **P 15 01 25.4 +0.9**
comp=Z,513nm,0.9s
NLWA Neilton Lookou 54.94 56 *e*P **P 15 01 24.9 +0.4**
comp=Z,35nm,0.9s
NLWA LR LR
comp=Z,974nm,22.0s
DANN Dangsing 55.33 276 *e*P **P 15 01 29.0 +1.1**
comp=Z,655nm,0.8s
KK31 Karatay Array 55.46 298 *i* P **P 15 01 27.3 -1.0**
KK31 pmax pmax
comp=Z,6.0nm,0.5s
KKAR Karatay Array 55.46 298 *e*P **P 15 01 26.3 -2.0**
KKAR pmax pmax
comp=Z,16nm,0.6s
KKAR Karatay Array 55.46 298 *e*P **P 15 01 26.3 -2.0**
comp=Z,16nm,0.6s
PMG Port Moresby 55.51 186 P **P 15 01 29.0 +0.3**
PMG LR LR
comp=Z,875nm,22.0s
PMG Port Moresby 55.51 186 P **P 15 01 29.0 +0.3**
comp=Z,14nm,0.8s,baz=12,slow=5.4,SNR=4.1
SBUM Sibu 55.57 231 P **P 15 01 30.1 +0.8**
SBUM Sibu 55.57 231 P **P 15 01 30.4 +1.1**
comp=Z,23nm,1.1s,comp=Z,571nm
KOLN Koldanda 55.80 276 *e*P **P 15 01 32.0 +0.8**
comp=Z,458nm,0.8s
HNR Honiara 55.86 170 LR LR 15 22 09.2
comp=Z,984nm,20.8s,baz=164,slow=32
CAL Calcutta 55.87 268 *e*P **P 15 01 31.6 +0.1**
CAL *ex* x 15 04 52.0
PYUN Piuthan 56.02 277 *e*P **P 15 01 33.6 +0.9**
comp=Z,936nm,1.0s
LON Longmire 56.47 55 *e*P **P 15 01 35.4 -0.1**
LON pmax pmax
comp=Z,12nm,1.2s
LON Longmire 56.47 55 *e*P **P 15 01 35.4 -0.1**
comp=Z,12nm,1.2s
WPW White Pass 56.64 55 P **P 15 01 38.3 +1.5**
COR Corvallis 56.81 58 *e*P **P 15 01 37.4 -0.4**
COR pmax pmax
comp=Z,140nm,1.4s
COR Corvallis 56.81 58 *e*P **P 15 01 37.4 -0.4**
comp=Z,140nm,1.4s
PTH Pithoragarh 57.03 280 *e*P **P 15 01 40.3 +0.5**
LGTI Lohaghat 57.07 280 *ex* P 15 01 43.5 +3.6
DAG Danmarks Havn 57.15 357 *i* P **P 15 01 39.7 -0.1**
DAG pmax pmax
comp=Z,10.0nm,0.8s
DAG MLR MLR
comp=Z,750nm,15.0s
DAG Danmarks Havn 57.15 357 *i* P **P 15 01 39.7 -0.1**
comp=Z,13nm,0.8s
DAG
comp=Z,750nm,15.0s
H04A Detroit Lake 57.41 58 P **P 15 01 44.0 +1.8**
KSM Kuching 57.42 232 *e*P **P 15 01 41.2 -1.3**
comp=Z,44nm,0.8s
KSM LR LR
comp=Z,622nm,20.0s
KSM Kuching 57.42 232 P **P 15 01 43.6 +1.1**
KSM Kuching 57.42 232 P **P 15 01 43.8 +1.3**
comp=Z,68nm,0.9s,comp=Z,900nm
VFP Flag Point 57.47 57 P **P 15 01 44.6 +1.9**
APA Apatity 57.48 336⇑ *i*P **P 15 01 42.0 -0.2**
APA *e*S **S 15 09 30.0 -5.0**
APA pmax pmax
comp=Z,30nm,0.8s
APA MLR MLR
comp=Z,2µm,14.0s
KEV Kevo 57.55 340 *e*P **P 15 01 42.3 -0.4**
KEV pmax pmax
comp=Z,15nm,0.8s
KEV Kevo 57.55 340 PFAKE 15 02 00.0 +17
KEV LR LR
comp=Z,1µm,20.0s
KEV Kevo 57.55 340 *ep* **P 15 01 42.3 -0.4**
comp=Z,15nm,0.8s
FRIS Frissel Point 57.73 58 P **P 15 01 46.8 +2.2**
OD2 Odessa Site #2 57.85 53 P **P 15 01 46.1 +1.0**
HAWA Hanford 57.96 55 *e*P **P 15 01 44.9 -1.1**
comp=Z,27nm,1.0s
DDI Dehra Dun 58.02 282 *e*P **P 15 01 44.0 -2.7**
DDI *ex* x 15 02 36.0
ARCES ARCESS Array B 58.07 340 P **P 15 01 46.5 +0.2**
ARCES PcP **PcP 15 02 38.1 +0.6**
ARCES ARCESS Array B 58.07 340 P **P 15 01 46.5 +0.2**
comp=Z,20nm,0.8s,baz=61,slow=5.5,SNR=15
ARCES PcP **PcP 15 02 38.1 +0.6**
comp=Z,15nm,0.7s,baz=32,slow=2.8,SNR=6.3
ARCES LR LR 15 32 49.6
comp=Z,1µm,18.5s,baz=30,slow=42
ARE0 ARCESS Array S 58.07 340 *e*P **P 15 01 45.7 -0.7**
AB31 Akbulak array 58.08 310 *i* P **P 15 01 45.6 -1.1**
AB31 pmax pmax
comp=Z,20nm,0.4s
ABKAR Akbulak array 58.08 310 *e*P **P 15 01 45.3 -1.3**
comp=Z,28nm,0.5s
SMLA Simla 58.13 283 *e*P **P 15 01 48.1 +0.8**
SMLA *i* P **P 15 01 48.1 +0.8**
HUMO Hull Mountain 58.14 60 *e*P **P 15 01 48.1 +0.8**
comp=Z,24nm,1.3s
NEW Newport 58.23 52 P **P 15 01 48.6 +0.8**
NEW Newport 58.23 52 ⇓P **P 15 01 48.8 +0.9**
baz=58,SNR=20
NEW Newport 58.23 52 P **P 15 01 48.6 +0.8**
comp=Z,16nm,0.9s,baz=329,slow=5.6,SNR=22
NEW LR LR 15 23 35.1
comp=Z,415nm,21.6s,baz=310,slow=32
KTRM Thompson Ridge 58.30 61 P **P 15 01 50.6 +2.1**
TMCR Tamitsa 58.39 332 *e*P **P 15 01 47.8 -0.8**
TMCR pmax pmax
comp=Z,135nm,1.4s
KAPI Kappang 58.40 218 *e*P **P 15 01 46.8 -2.5**
comp=Z,83nm,1.4s
KAPI LR LR
comp=Z,392nm,21.0s
KAPI Kappang 58.40 218 P **P 15 01 49.2 0.0**
SNR=6.0
KAPI Kappang 58.40 218 P **P 15 01 49.3 0.0**
comp=Z,21nm,0.6s,baz=150,slow=10,SNR=8.3
AKTO Aktyubinsk 58.41 311 *i* P **P 15 01 49.9 +0.9**
VIPM Ingram Point 58.43 57 P **P 15 01 51.4 +2.0**
VIPM Ingram Point 58.43 57 P **P 15 01 51.4 +2.0**
KTGM Kuala Trenggan 58.46 241 P **P 15 01 51.7 +1.9**
A12A Yaak River Ran 58.63 50 ⇓P **P 15 01 52.2 +1.5**
baz=58,SNR=12
KHMM Horse Mountain 58.68 62 *e*P **P 15 01 52.4 +1.1**
comp=Z,56nm,1.2s
YBH Yreka Blue Hor 58.80 61 *e*P **P 15 01 51.8 -0.2**
comp=Z,35nm,1.4s
B12A Libby 58.94 51 ⇓P **P 15 01 54.1 +1.3**
baz=59
C11A Tepee Creek (N 58.95 52 ⇑P **P 15 01 54.3 +1.4**
baz=59,SNR=45
TRO Tromso 59.43 343 *e*P **P 15 01 56.2 +0.4**
TRO AMS AMS 15 25 35.9
comp=Z,1µm,6.8s
C12B Naegeli Ranch, 59.45 52 ⇓P **P 15 01 57.8 +1.4**
baz=59,SNR=11
KIPM Iron Peak 59.47 63 *e*P **P 15 01 58.2 +1.6**
comp=Z,41nm,1.0s
KCPM Cahto Peak 59.48 63 *e*P **P 15 01 57.6 +0.9**
comp=Z,18nm,0.8s
WALA Waterton Lakes 59.49 50 *e*P **P 15 01 56.7 0.0**
comp=Z,1.4nm,1.0s
WDC Whiskeytown Da 59.59 62 *e*P **P 15 01 56.9 -0.4**
WDC pmax pmax
comp=Z,42nm,1.4s
WDC Whiskeytown Da 59.59 62 *e*P **P 15 01 56.9 -0.4**
comp=Z,42nm,1.4s
B13A Whitefish 59.60 50 ⇑P **P 15 01 59.0 +1.6**
baz=59,SNR=40
NDI New Delhi 59.62 281 *e*P **P 15 01 56.0 -1.7**
A14A Double T Ranch 59.80 49 ⇓P **P 15 01 59.8 +1.0**
baz=60,SNR=28
C13A Hot Springs 59.96 51 ⇑P **P 15 02 01.4 +1.6**
baz=60,SNR=21
KULM Kulim 60.02 244 *e*P **P 15 02 00.6 +0.1**
comp=Z,78nm,0.8s
KULM LR LR
comp=Z,258nm,20.0s
KULM Kulim 60.02 244 P **P 15 02 01.5 +1.0**
KULM Kulim 60.02 244 P **P 15 02 01.2 +0.7**
comp=Z,120nm,0.8s,comp=Z,1µmcomp=Z,69µm
BMO Blue Mountains 60.13 55 *e*P **P 15 02 02.0 +0.9**
BMO pmax pmax
comp=Z,33nm,1.1s
BMO Blue Mountains 60.13 55 *e*P **P 15 02 02.0 +0.9**
comp=Z,33nm,1.1s
MOD Modoc 60.15 59 *e*P **P 15 02 02.6 +1.3**
comp=Z,80nm,1.1s
A15A Johnson Ranch, 60.16 49 ⇓P **P 15 02 01.6 +0.4**
baz=60,SNR=24
HOPS Hopland 60.21 63 *e*P **P 15 02 01.0 -0.6**
comp=Z,47nm,1.1s
B14A Marquette Ranc 60.24 50 ⇓P **P 15 02 03.2 +1.4**
baz=60,SNR=32
D13A Huson 60.37 52 ⇓P **P 15 02 03.9 +1.2**
baz=60,SNR=23
COEN Coen 60.38 190 *e*P **P 15 02 01.3 -1.5**
comp=Z,131nm,0.8s
IPM Ipoh 60.42 243 *e*P **P 15 02 00.4 -2.9**
comp=Z,27nm,0.8s
IPM Ipoh 60.42 243 P **P 15 02 04.6 +1.3**
IPM Ipoh 60.42 243 P **P 15 02 04.0 +0.7**
comp=Z,49nm,0.9s
B15A Bradely Ranch, 60.65 50 ⇓P **P 15 02 05.7 +1.1**
baz=60,SNR=19
F12A Elk City 60.74 53 ⇑P **P 15 02 07.0 +1.7**
baz=61,SNR=70
A16A West Butte Ran 60.77 49 ⇑P **P 15 02 06.2 +0.8**
baz=61,SNR=11
MSO Missoula 60.81 52 *e*P **P 15 02 06.2 +0.5**
comp=Z,54nm,1.2s
MSO Missoula 60.81 52 ⇓P **P 15 02 07.1 +1.4**
baz=61,SNR=30
WVOR Wild Horse Val 60.82 58 *e*P **P 15 02 07.1 +1.3**
WVOR pmax pmax
comp=Z,56nm,1.0s
WVOR Wild Horse Val 60.82 58 *e*P **P 15 02 07.1 +1.3**
comp=Z,56nm,1.0s
MYKOM Kota Tinggi 60.84 238 P **P 15 02 08.6 +2.5**
MYKOM Kota Tinggi 60.84 238 P **P 15 02 08.2 +2.1**
comp=Z,55nm,0.9s,comp=Z,600nm
D14A Greenough 60.90 51 ⇓P **P 15 02 07.6 +1.3**
baz=61,SNR=96
E13A Victor 60.91 52 ⇓P **P 15 02 07.7 +1.3**
baz=61,SNR=19
C15A Salmond Ranch, 60.95 50 ⇓P **P 15 02 08.7 +1.9**
baz=61,SNR=79
KGM Kluang 60.97 239 P **P 15 02 08.8 +1.8**
FRIM Kepong 61.02 241 P **P 15 02 07.7 +0.3**
B16A M & M Farms, S 61.04 49 ⇑P **P 15 02 08.1 +0.9**
baz=61,SNR=36
F13A Darby 61.23 53 ⇑P **P 15 02 10.0 +1.4**
baz=61,SNR=31
A17A Triple J Farms 61.24 48 ⇑P **P 15 02 09.4 +0.9**
baz=61,SNR=25
JBP Jabalpur 61.25 274 *ex* P **P 15 02 10.9 +2.0**
SUMG Summit 61.30 4 *e*P **P 15 02 09.4 +0.4**
SUMG pmax pmax
comp=Z,199nm,0.9s
SUMG Summit 61.30 4 *e*P **P 15 02 09.4 +0.4**
comp=Z,199nm,0.9s
SUMG Summit 61.30 4 *i* P **P 15 02 09.7 +0.7**
SUMG
comp=Z,1µm,21.0s
E14A Clinton 61.31 52 ⇑P **P 15 02 10.5 +1.3**
baz=61,SNR=59
BEKR Beckworth 61.35 61 *e*P **P 15 02 10.6 +1.0**
comp=Z,19nm,1.0s
C16A Fuhringer Ranc 61.40 50 ⇑P **P 15 02 11.2 +1.5**
baz=61,SNR=58
JOF Joensuu 61.42 333 *e*P **P 15 02 09.7 +0.3**
JOF pmax pmax
comp=Z,38nm,0.6s
JOF Joensuu 61.42 333 *ep* **P 15 02 09.7 +0.3**
comp=Z,38nm,0.6s
KBL Kabul 61.42 291 *e*P **P 15 02 09.3 -0.9**
KBL pmax pmax
comp=Z,85nm,0.9s
KBL Kabul 61.42 291 *e*P **P 15 02 09.3 -0.9**
comp=Z,85nm,0.9s
D15A Lincoln 61.45 51 ⇑P **P 15 02 11.4 +1.3**
baz=61,SNR=27
B17A L&G Farms, Che 61.59 49 ⇓P **P 15 02 12.2 +1.3**
baz=61,SNR=31
STEI Steigen 61.60 343 *e*P **P 15 02 10.5 -0.1**
A18A Metzger Ranch, 61.69 48 ⇑P **P 15 02 12.5 +0.9**
baz=62,SNR=18
H12A Diamond D Ranc 61.70 54 ⇑P **P 15 02 12.9 +1.1**
baz=62,SNR=36
G13A Cobalt 61.72 53 ⇑P **P 15 02 13.0 +1.1**
baz=62,SNR=86
FFC Flin Flon 61.74 39*ce*P **P 15 02 12.7 +1.0**
FFC Flin Flon 61.74 39 *e*P **P 15 02 11.4 -0.3**
comp=Z,33nm,0.9s
F14A Wisdom 61.75 52 ⇓P **P 15 02 13.5 +1.3**
baz=62
E15A Deer Lodge 61.77 51 ⇓P **P 15 02 13.6 +1.4**
baz=62,SNR=19
MFID Camas Ranch 61.85 56 *e*P **P 15 02 13.4 +0.6**
comp=Z,20nm,0.8s
MFID Camas Ranch 61.85 56 ⇑P **P 15 02 14.4 +1.6**
baz=62,SNR=14
D16A Dana Ranch, Ca 61.98 50 ⇑P **P 15 02 15.3 +1.6**
baz=62,SNR=53
C17A Wharram Farm, 62.02 49 ⇑P **P 15 02 15.0 +1.2**
baz=62,SNR=46
H13A Challis 62.03 54 ⇓P **P 15 02 15.4 +1.3**
baz=62,SNR=65
G14A Jackson 62.05 53 ⇑P **P 15 02 14.9 +0.6**
baz=62,SNR=23
B18A Beardsley Farm 62.06 48 ⇑P **P 15 02 15.5 +1.4**
baz=62,SNR=18
WCN Washoe City 62.06 61 *e*P **P 15 02 13.9 -0.5**
WCN pmax pmax
comp=Z,43nm,1.0s
WCN Washoe City 62.06 61 *e*P **P 15 02 13.9 -0.5**

comp=Z,43nm,1.0s
F15A Butte 62.21 52 ⇑P P 15 02 16.8 +1.5
baz=62,SNR=73
E16A East Helena 62.22 51 ⇑P P 15 02 16.9 +1.6
baz=62,SNR=28
A19A Klindworth Far 62.25 47 ⇑P P 15 02 16.6 +1.3
baz=62,SNR=34
JMIC Jan Mayen 62.26 353 LR LR 15 27 10.1
comp=Z,471nm,21.3s,baz=250,slow=34
EGMT Eagleton 62.30 49 *eP* **P 15 02 15.8 0.0**
EGMT comp=Z,58nm,1.0s LR LR
comp=Z,582nm,20.0s
EGMT Eagleton 62.30 49 ⇑P P 15 02 17.0 +1.3
baz=62,SNR=34
XMAS Kiritimati 62.32 119 PFAKE 15 02 30.0 +14
XMAS LR LR
comp=Z,3μm,21.0s
D17A Six Diamond Ra 62.36 50 ⇓P P 15 02 17.6 +1.4
baz=62,SNR=37
B19A Brinkman Farms 62.45 48 ⇑P P 15 02 18.2 +1.5
baz=62,SNR=61
DLMT Dillon 62.46 52 *eP* **P 15 02 15.2 -1.6**
comp=Z,25nm,1.0s
CMB Columbia Colle 62.46 63 *eP* **P 15 02 17.9 +1.0**
CMB pmax pmax
comp=Z,58nm,1.1s
CMB Columbia Colle 62.46 63 *eP* **P 15 02 17.9 +1.0**
comp=Z,58nm,1.1s
H14A Leadore 62.50 53 ⇑P P 15 02 18.3 +1.1
baz=62,SNR=16
I13A Wildhorse Cree 62.51 54 ⇑P P 15 02 19.0 +1.7
baz=62,SNR=48
HLID Hailey 62.57 55 *eP* **P 15 02 17.5 -0.2**
comp=Z,32nm,1.1s
HLID *ePcP* **PcP 15 02 58.2 +1.9**
HLID Hailey 62.57 55 ⇑P P 15 02 19.4 +1.7
baz=62,SNR=24
G15A Dillon 62.64 52 ⇑P P 15 02 19.4 +1.3
baz=62,SNR=36
A20A Cobblestone Ra 62.70 47 ⇑P P 15 02 19.9 +1.5
baz=62,SNR=28
E17A Martinsdale 62.71 50 ⇓P P 15 02 20.5 +1.9
baz=62,SNR=48
F16A Kennard Place, 62.72 51 ⇑P P 15 02 20.1 +1.5
baz=63,SNR=21
AJM Ajmer 62.78 281 *ex* P 15 02 15.0 -4.1
D18A Linhart Farms, 62.80 49 ⇓P P 15 02 20.7 +1.6
baz=63,SNR=6.1
BOZ Bozeman (W) 62.80 52 *eP* **P 15 02 20.7 +1.5**
BOZ pmax pmax
comp=Z,47nm,1.1s
BOZ MLR MLR
comp=Z,495nm,20.0s
BOZ Bozeman (W) 62.80 52 *eP* **P 15 02 20.7 +1.5**
comp=Z,47nm,1.1s
BOZ LR LR
comp=Z,495nm,20.0s
BOZ Bozeman (W) 62.80 52 ⇓P P 15 02 21.1 +1.9
baz=63,SNR=42
J13A Cove Ranch, Pi 62.80 55 ⇑P P 15 02 21.1 +1.8
baz=63,SNR=25
C19A Slack Wire Ran 62.85 48 ⇓P P 15 02 21.1 +1.8
baz=63,SNR=51
I14A Mackay 62.88 54 ⇑P P 15 02 21.7 +1.9
baz=63,SNR=60
BMN Battle Mountai 62.89 59 *eP* **P 15 02 20.4 +0.5**
BMN pmax pmax
comp=Z,48nm,0.9s
BMN MLR MLR
comp=Z,381nm,20.0s
BMN Battle Mountai 62.89 59 *eP* **P 15 02 20.4 +0.5**
comp=Z,48nm,0.9s
BMN LR LR
comp=Z,381nm,20.0s
H15A Lima 62.90 53 ⇑P P 15 02 20.9 +1.0
baz=63,SNR=8.0
B20A Solberg Farm, 62.93 47 ⇓P P 15 02 21.1 +1.2
baz=63,SNR=33
G16A Moss Hill, Enn 62.97 52 ⇓P P 15 02 21.9 +1.6
baz=63,SNR=123
PSI Prapat 63.02 243 P **P 15 02 21.7 +0.7**
PSI Prapat 63.02 243 P **P 15 02 21.7 +0.7**
comp=Z,51nm,0.8s,baz=16,slow=4.2,SNR=32
A21A Bergtoll Ranch 63.13 46 ⇓P P 15 02 22.9 +1.7
baz=63
E18A Harlowton 63.15 50 ⇑P P 15 02 23.3 +1.9
baz=63,SNR=17
F17A Fitzpatrick Pl 63.17 51 ⇑P P 15 02 23.3 +1.7
baz=63,SNR=25
J14A Carey 63.22 55 ⇑P P 15 02 24.5 +2.5
baz=63,SNR=57
MOR8 Moi Rana 63.27 342 *eP* **P 15 02 20.4 -1.3**
MOR8 AMB AMB 15 02 24.2
comp=Z,54nm,1.1s
D19A Cripps Ranch, 63.31 49 ⇓P P 15 02 23.8 +1.4
baz=63,SNR=20
I15A Monteview 63.38 53 ⇓P P 15 02 24.5 +1.5
baz=63
C20A Veseth Ranch, 63.41 48 ⇓P P 15 02 24.7 +1.7
baz=63,SNR=110
B21A Ellsworth Farm 63.45 47 ⇓P P 15 02 24.6 +1.3
baz=63
NVAR Mina Array Bea 63.49 61 P **P 15 02 25.7 +1.8**
NVAR pP **pP 15 02 40.5 +1.6**
NVAR ⇑*e* 15 31 24.7
NVAR Mina Array Bea 63.49 61 P **P 15 02 25.7 +1.8**
comp=Z,30nm,0.8s,baz=295,slow=6.6,SNR=152
NVAR pP **pP 15 02 40.5 +1.6**
comp=Z,6.3nm,0.6s,baz=299,slow=6.6,SNR=4.8
NVAR LR LR 15 23 42.3
comp=Z,227nm,21.5s,baz=64,slow=30
NVAR PKP2bc 15 31 24.7
comp=Z,1.2nm,1.0s,baz=170,slow=3.9,SNR=5.5
G17A Pierce Place, 63.50 51 ⇑P P 15 02 25.6 +1.9
baz=63
SCO Scoresbysund 63.54 358 ⇑*iP* **P 15 02 24.3 +0.9**
SCO pmax pmax
comp=Z,38nm,1.0s
SCO MLR MLR
comp=Z,760nm,17.0s
SCO Scoresbysund 63.54 358 ⇑*iP* **P 15 02 24.3 +0.9**
comp=Z,38nm,1.0s
SCO
comp=Z,760nm,17.0s
KAF Kangasniemi 63.55 335 *eP* **P 15 02 23.0 -0.6**
KAF pmax pmax
comp=Z,35nm,0.8s
KAF Kangasniemi 63.55 335 *ep* **P 15 02 23.0 -0.6**
comp=Z,35nm,0.8s,baz=37,slow=6.2
NV11 Mina Array Sit 63.58 61 *eP* **P 15 02 24.1 -0.4**
NV11 *ePcP* **PcP 15 03 01.3 +0.8**
H16A Russell Place, 63.61 52 ⇓P P 15 02 26.4 +1.7
baz=63,SNR=41
A22A Carney Farms, 63.64 46 ⇓P P 15 02 25.7 +1.2
baz=64,SNR=102
MLAC Mammoth Lakes 63.67 62 ⇓P P 15 02 27.3 +2.2
baz=64
F18A Big Timber 63.67 50 ⇓P P 15 02 26.7 +1.8
baz=64,SNR=36
D20A Manuel Ranch, 63.74 49 ⇑P P 15 02 27.1 +1.9
baz=64,SNR=53
J15A Blackfoot 63.79 54 ⇑P P 15 02 27.8 +2.1
baz=64,SNR=30
C21A Desert Coulee 63.80 47 ⇑P P 15 02 27.2 +1.6
baz=64
E19A Rath Farm, Rou 63.81 49 ⇑P P 15 02 27.4 +1.7
baz=64,SNR=19
ELK Elko 63.86 58 P **P 15 02 27.9 +1.5**
ELK Elko 63.86 58 P **P 15 02 27.9 +1.5**
comp=Z,17nm,0.8s,baz=312,slow=6.6,SNR=40
K14A Jones Ranch, D 63.91 55 ⇓P P 15 02 28.6 +2.1
baz=64,SNR=20
I16A Newdale 64.01 53 ⇑P P 15 02 29.2 +2.0
baz=64,SNR=19
B22A Reddig Ranch S 64.05 47 ⇑P P 15 02 28.5 +1.3
baz=64,SNR=11
F19A Roth Farm, Mol 64.12 50 ⇓P P 15 02 29.6 +1.7
baz=64,SNR=47
E20A Meyer Farm, Mu 64.13 49 ⇓P P 15 02 29.4 +1.6
baz=64
G18A Lazy EL Ranch, 64.14 51 ⇓P P 15 02 29.0 +1.0
baz=64,SNR=11
FIA1 FINESS Array S 64.14 334 *eP* P 15 02 23.2 -4.3
FINES FINESS Array B 64.14 334 P **P 15 02 26.6 -0.9**
FINES FINESS Array B 64.14 334 P **P 15 02 26.6 -0.9**
comp=Z,61nm,0.8s,baz=38,slow=6.2,SNR=140
FINES LR LR 15 33 09.6
comp=Z,2μm,20.2s,baz=32,slow=39
LKWY Lake 64.17 52 *eP* **P 15 02 28.0 -0.3**
LKWY pmax pmax
comp=Z,41nm,0.9s
LKWY MLR MLR
comp=Z,750nm,20.0s
LKWY Lake 64.17 52 *eP* **P 15 02 28.0 -0.3**
comp=Z,42nm,0.9s
LKWY LR LR
comp=Z,750nm,20.0s
A23A Redstone 64.18 45 ⇓P P 15 02 29.2 +1.1
baz=64
H17A Grant Village 64.18 52 ⇑P P 15 02 31.5 +3.1
baz=64,SNR=30
K15A Arbon 64.19 55 ⇑P P 15 02 30.8 +2.4
baz=64,SNR=35
L14A Malta 64.20 56 ⇓P P 15 02 30.3 +1.9
baz=64,SNR=34
RCTC Rector, Farmer 64.26 64 ⇑P P 15 02 30.1 +1.4
baz=64
IMW Indian Meadow 64.30 53 *eP* **P 15 02 30.1 +0.9**
comp=Z,52nm,1.1s
D21A La Casta Ranch 64.35 48 ⇓P P 15 02 30.8 +1.5
baz=64,SNR=34
DCID1 Drake Creek 64.36 53 *eP* **P 15 02 29.9 +0.4**
comp=Z,60nm,0.9s
MOS Moscow 64.37 325 *eP* **P 15 02 30.1 +1.0**
MOS *e* 15 03 05.4
MOS pmax pmax
comp=Z,31nm,0.9s
MOS MLR MLR
comp=Z,2μm,20.0s
TPH Tonopah 64.38 61 PFAKE 15 02 40.0 +10
TPH LR LR
comp=Z,414nm,22.0s
TIN Tinemaha 64.41 62 ⇑P P 15 02 31.8 +1.9
baz=64
SMMC Simmler 64.42 65 ⇑P P 15 02 31.6 +1.8
baz=64
RLMT Red Lodge 64.42 51 *eP* **P 15 02 30.3 +0.3**
comp=Z,44nm,1.1s
RLMT Red Lodge 64.42 51 ⇑P P 15 02 31.7 +1.8
baz=64,SNR=38
RRI2 Red Ridge 64.44 53 *eP* **P 15 02 31.3 +1.1**
comp=Z,70nm,0.8s
B23A Brockton 64.45 46 ⇑P P 15 02 31.2 +1.3
baz=64,SNR=17
C22A Vida 64.47 47 ⇑P P 15 02 31.0 +1.0
baz=64
I17A Pilgrim Ck. 64.49 53 ⇓P P 15 02 33.0 +2.6
baz=64,SNR=25
H18A Shoshone NF, C 64.50 51 ⇓P P 15 02 32.2 +1.7
baz=64,SNR=30
MOOW Moose Ponds 64.50 53 *eP* **P 15 02 31.0 +0.5**
comp=Z,33nm,1.0s
TPAW Teton Pass 64.56 53 *eP* **P 15 02 32.1 +1.1**
comp=Z,58nm,0.9s
F20A Billings 64.58 50 ⇑P P 15 02 32.1 +1.4
baz=64,SNR=12
K16A Soda Springs 64.62 54 ⇑P P 15 02 33.5 +2.2
baz=64,SNR=53
HVU Hansel Valley 64.63 55 *eP* **P 15 02 30.0 -1.3**
HVU pmax pmax
comp=Z,37nm,0.9s
HVU Hansel Valley 64.63 55 *eP* **P 15 02 30.0 -1.3**
comp=Z,37nm,0.9s
A24A Westby 64.63 45 ⇓P P 15 02 32.1 +1.1
baz=64,SNR=17
VES Vestal, Richgr 64.65 64 ⇑P P 15 02 32.1 +0.8
baz=64
E21A Keefer Ranch, 64.65 49 ⇓P P 15 02 32.9 +1.6
baz=64
LOHW Long Hollow 64.67 53 *eP* **P 15 02 32.1 +0.5**
comp=Z,58nm,1.3s
SNOW Snow King Moun 64.68 53 *eP* **P 15 02 31.4 -0.3**
comp=Z,38nm,1.0s
REDW Red Top Meadow 64.69 53 *eP* **P 15 02 32.9 +1.2**
comp=Z,1.2nm,1.2s
L15A Malad City 64.71 55 ⇑P P 15 02 33.4 +1.6
baz=64,SNR=17
D22A Cohagen 64.72 48 ⇑P P 15 02 32.9 +1.3
baz=64,SNR=22
J17A Brown Place, J 64.77 53 ⇓P P 15 02 34.2 +2.0
baz=65,SNR=20
C23A Lambert 64.79 47 ⇑P P 15 02 33.3 +1.2
baz=65,SNR=19
PKM Peak Mountain 64.80 65 ⇓P P 15 02 34.3 +1.8
baz=65
DGMT Dagmar 64.84 46 *eP* **P 15 02 33.2 +0.8**
comp=Z,30nm,0.5s
DGMT Dagmar 64.84 46 ⇓P P 15 02 33.4 +1.0
baz=65,SNR=20
H19A Powell 64.87 51 ⇓P P 15 02 34.4 +1.7
baz=65,SNR=11
CWC Cottonwood Cre 64.89 63 ⇑P P 15 02 34.4 +1.3
baz=65,SNR=15
G20A Bridger 64.92 50 ⇑P P 15 02 34.1 +1.0
baz=65,SNR=16
AHID Auburn Hatcher 64.94 54 *eP* **P 15 02 32.6 -0.7**
comp=Z,34nm,0.9s
GRAC Grapevine Rang 64.97 62 ⇑P P 15 02 35.3 +1.8
baz=65,SNR=22
I18A Diamond G Ranc 65.05 52 ⇓P P 15 02 36.2 +2.1
baz=65,SNR=32
K17A Gardner Place, 65.05 54 ⇓P P 15 02 35.5 +1.4
baz=65
F21A Absaloka Mine, 65.10 49 ⇓P P 15 02 35.5 +1.3
baz=65
ISA Isabella 65.15 64 *eP* **P 15 02 33.5 -1.1**
ISA pmax pmax
comp=Z,22nm,1.0s
ISA Isabella 65.15 64 *eP* **P 15 02 33.5 -1.1**
comp=Z,22nm,1.0s
ISA Isabella 65.15 64 ⇓P P 15 02 35.1 +0.5
baz=65,SNR=13
R11A Troy Canyon, C 65.19 60 ⇓P P 15 02 36.4 +1.4
baz=65,SNR=72
D23A Lindsay 65.20 47 ⇓P P 15 02 36.2 +1.5
baz=65,SNR=13
OBN Obninsk 65.24 325 ⇓*eP* **P 15 02 34.1 -0.6**
OBN *i* 15 03 06.2
OBN *i* S **S 15 11 14.1 +0.4**
OBN *e*SS SS 15 15 33.5 +7.3
OBN pmax pmax
comp=Z,44nm,0.8s
OBN MLR MLR
comp=Z,2μm,21.0s
J18A Kendall Valley 65.25 53 ⇑P P 15 02 37.0 +1.6
baz=65,SNR=29
ARVC Arvin 65.27 64 ⇓P P 15 02 36.4 +1.1
baz=65
I19A Meteetse 65.28 52 ⇓P P 15 02 37.2 +1.7
baz=65,SNR=24
DAC Darwin (Calif) 65.30 63 PFAKE 15 02 50.0 +14
DAC LR LR
comp=Z,398nm,20.0s
E22A Miles City 65.31 48 ⇓P P 15 02 36.8 +1.3
baz=65,SNR=7.0
C24A Savage 65.35 46 ⇓P P 15 02 37.0 +1.3
baz=65,SNR=6.1
HWUT Hardware Ranch 65.43 55 *eP* **P 15 02 37.5 +1.0**
comp=Z,49nm,1.0s
G21A Lodge Grass 65.45 50 ⇓P P 15 02 37.5 +1.0
baz=65,SNR=8.0
BSC Santa Cruz Isl 65.49 66 ⇓P P 15 02 37.9 +1.1
baz=65
MPMC Manual Prospec 65.50 63 ⇓P P 15 02 38.5 +1.5
baz=65,SNR=37
L17A Cokeville 65.50 54 ⇓P P 15 02 38.5 +1.5
baz=65,SNR=16
H20A Greybull 65.52 51 ⇑P P 15 02 38.0 +1.0
baz=65,SNR=8.6
F22A Rosebud 65.58 49 ⇑P P 15 02 38.6 +1.3
baz=65,SNR=11
E23A Ismay 65.60 48 ⇓P P 15 02 38.8 +1.5
baz=65,SNR=16
K18A Toltan Ranch, 65.62 53 ⇑P P 15 02 39.6 +1.8
baz=66,SNR=32
FURC Furnace Creek, 65.63 62 ⇑P P 15 02 39.2 +1.6
baz=66,SNR=31
DUG Dugway 65.63 57 *eP* **P 15 02 38.0 +0.2**
DUG pmax pmax
comp=Z,45nm,1.0s
DUG Dugway 65.63 57 *eP* **P 15 02 38.0 +0.2**
comp=Z,45nm,1.0s
DUG Dugway 65.63 57 ⇓P P 15 02 39.6 +1.8
baz=66,SNR=35
OSI Osito Adit 65.67 65 *eP* **P 15 02 39.2 +1.2**
comp=Z,52nm,0.8s
OSI Osito Adit 65.67 65 ⇓P P 15 02 39.4 +1.4
baz=66
J19A Crowheart 65.75 52 ⇓P P 15 02 40.3 +1.8
baz=66,SNR=38
LRMC Laurel Mountai 65.75 64 ⇓P P 15 02 39.8 +1.2
baz=66,SNR=20
BLG Laguna Peak 65.78 65 ⇓P P 15 02 39.6 +0.9
baz=66
BW06 Boulder Array 65.80 53 PFAKE 15 02 50.0 +11
BW06 LR LR
comp=Z,585nm,22.0s
BW06 Boulder Array 65.80 53 ⇓P P 15 02 40.1 +1.2
baz=66,SNR=52
PDAR Pinedale Array 65.80 53 P **P 15 02 40.1 +1.2**
PDAR P'P' 15 31 16.1
PDAR Pinedale Array 65.80 53 P **P 15 02 40.1 +1.2**
comp=Z,27nm,0.8s,baz=296,slow=1.8,SNR=178
PDAR PKPPKP **P'P'df 15 31 16.1 -4.1**
comp=Z,1.2nm,1.0s,baz=152,slow=5.8,SNR=5.6
I20A Worland 65.80 51 ⇓P P 15 02 40.6 +1.8
baz=66,SNR=22
SFJD Kangerlussuaq 65.84 9 *eP* **P 15 02 36.8 -1.7**
comp=Z,28nm,0.8s
SFJD Kangerlussuaq 65.84 9 *iP* **P 15 02 38.6 +0.2**
comp=Z,26nm,0.8s
FRB Frobisher Bay 65.86 18 PKPPKP **P'P'df 15 31 16.2 -4.2**
comp=Z,3.3nm,1.0s,baz=49,slow=4.2,SNR=3.5
FRB LR LR 15 36 05.8
comp=Z,1μm,18.4s,baz=332,slow=40
IMYA Miami 65.93 298 *eP* **P 15 02 39.9 +0.1**
H21A Big Horn, Sher 65.94 50 ⇑P P 15 02 41.0 +1.3
baz=66,SNR=33
G22A Birney 65.94 49 ⇓P P 15 02 40.7 +1.1
baz=66,SNR=15
EDW2 Edwards Air Fo 65.95 64 ⇓P P 15 02 41.1 +1.3
baz=66,SNR=30
VRHR Novokhopersk 65.96 320 *eP* **P 15 02 38.1 -1.4**
VRHR pmax pmax
comp=Z,50nm,0.6s
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRHR MLR MLR
comp=N,760nm,15.0s
VRHR MLR MLR
comp=Z,2μm,15.0s
VRHR MLR MLR
comp=E,1μm,16.0s
M17A Scullys Gap (B 66.03 55 ⇑P P 15 02 41.6 +1.2
baz=66,SNR=11
E24A Baker 66.07 47 ⇓P P 15 02 41.3 +0.9
baz=66
L18A Fontenelle, Gr 66.09 54 ⇑P P 15 02 42.1 +1.3
baz=66,SNR=20
HYB Hyderabad 66.10 271 *iP* **P 15 02 40.0 -0.9**
HYB *ep*P **pP 15 02 57.0 +1.1**
HYB *es*P **sP 15 03 01.5 -0.6**
HYB *ePcP* **PcP 15 03 12.0 +1.0**
HYB *eS* **S 15 11 24.0 -1.3**
ABKT Ailbek 66.10 300 P **P 15 02 40.8 +0.1**
comp=E,543nm,0.7s,SNR=17
DECC Green Verdugo 66.15 65 ⇓P P 15 02 42.3 +1.3
baz=66
K19A Absolon Red Bu 66.16 53 ⇓P P 15 02 41.8 +0.6
baz=66,SNR=27
CTA Charters Tower 66.17 186 P **P 15 02 41.0 0.0**
CTA Charters Tower 66.17 186 P **P 15 02 41.0 0.0**
comp=E,17nm,0.9s,baz=3.9,slow=7.9,SNR=12
CTA LR LR 15 28 40.1
comp=E,567nm,20.7s,baz=15,slow=33
CTAO Charters Tower 66.17 186 PFAKE 15 02 50.0 +8.9
CTAO LR LR
comp=Z,716nm,20.0s
J20A Shoshoni 66.22 52 ⇓P P 15 02 43.2 +1.6
baz=66,SNR=37
N17A Moffit Pass 66.28 55 ⇑P P 15 02 43.5 +1.3
baz=66,SNR=61
H22A Clearmont 66.33 50 ⇑P P 15 02 43.1 +1.0
baz=66
MWC Mount Wilson 66.34 65 *eP* **P 15 02 43.3 +0.8**
MWC pmax pmax
comp=Z,47nm,1.3s
MWC Mount Wilson 66.34 65 *eP* **P 15 02 43.3 +0.8**
comp=Z,47nm,1.3s
I21A Big Trails, Te 66.35 51 ⇓P P 15 02 43.6 +1.3
baz=66,SNR=48
L19A Farson 66.35 53 ⇓P P 15 02 43.5 +1.1
baz=66,SNR=16
SHOC Shoshone 66.35 62 ⇓P P 15 02 43.8 +1.5
baz=66
DAU Daniels Canyon 66.39 56 *eP* **P 15 02 44.2 +1.3**
DAU pmax pmax
comp=Z,23nm,0.8s
DAU Daniels Canyon 66.39 56 *eP* **P 15 02 44.2 +1.3**
comp=Z,23nm,0.8s
M18A Lyman 66.40 54 ⇑P P 15 02 43.9 +1.1
baz=66,SNR=15
GSC Goldstone 66.42 63 *eP* **P 15 02 43.3 +0.5**
GSC pmax pmax
comp=Z,34nm,1.0s
GSC Goldstone 66.42 63 *eP* **P 15 02 43.3 +0.5**
comp=Z,34nm,1.0s
GSC Goldstone 66.42 63 ⇑P P 15 02 43.9 +1.1
baz=66,SNR=20
MPU Maple Canyon 66.44 56 *eP* **P 15 02 43.5 +0.5**
comp=Z,36nm,0.7s
F24A Ekalaka 66.48 48 ⇓P P 15 02 44.2 +1.1
baz=66,SNR=20
IPAY Payeh 66.53 299 *eP* **P 15 02 45.3 +1.6**
K20A Yellowstone Ra 66.55 52 ⇓P P 15 02 44.1 +0.5
baz=66,SNR=32
IMOG Moghan 66.55 298 *eP* **P 15 02 45.1 +1.2**
RRX Edison Barstow 66.57 64 ⇓P P 15 02 45.3 +1.6
baz=66
J21A Lysite 66.58 51 ⇑P P 15 02 44.8 +1.0
baz=66,SNR=14
BFSC Mount Baldy Ra 66.58 65 ⇓P P 15 02 44.9 +1.0
baz=66,SNR=11
IAKL Akhelmad 66.58 299 *eP* **P 15 02 44.6 +0.5**
IKRD Kardeh 66.61 299 *eP* **P 15 02 41.2 -3.0**
CIS Catalina Islan 66.65 66 ⇑P P 15 02 45.3 +1.1
baz=66
I22A 9 Mile Ranch, 66.73 50 ⇓P P 15 02 46.2 +1.4
baz=66,SNR=36
ISFR Sfrayin 66.74 300 *eP* **P 15 02 45.7 +0.6**
LATR Latur 66.80 273 *ex* **P 15 02 42.6 -2.7**
ARUT Antelope Range 66.84 59 *eP* **P 15 02 46.2 +0.6**
ARUT pmax pmax
comp=Z,33nm,0.9s
ARUT Antelope Range 66.84 59 *eP* **P 15 02 46.2 +0.6**
comp=Z,33nm,0.9s
G24A Alzada 66.85 48 ⇓P P 15 02 46.0 +0.6
baz=67,SNR=7.8
H23A Clabaugh Cattl 66.85 49 ⇑P P 15 02 46.1 +0.7
baz=67
M19A Rock Springs 66.86 54 ⇑P P 15 02 46.6 +0.8
baz=67,SNR=7.9
TUQ Turquoise Moun 66.87 63 ⇓P P 15 02 47.0 +1.2
baz=67,SNR=32
N18A Larsen Ranch, 66.92 54 ⇓P P 15 02 46.9 +0.8
baz=67,SNR=15
VSR Storozhevoye 66.97 321 *eP* **P 15 02 45.8 -0.1**
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,40nm,0.6s
VSR pmax pmax
comp=N,20nm,0.8s
VSR MLR MLR
comp=Z,4μm,18.0s
VSR MLR MLR
comp=N,2μm,17.0s
VSR MLR MLR
comp=E,2μm,16.0s
L20A Wamsutter 66.98 53 ⇓P P 15 02 47.5 +1.0
baz=67,SNR=22
HEC Hector,Ludlow 67.02 63 ⇑P P 15 02 48.1 +1.5
baz=67,SNR=16
CCUT Cedar City 67.04 59 *eP* **P 15 02 47.2 +0.3**
comp=E,32nm,1.2s
J22A Midwest 67.05 51 ⇑P P 15 02 47.9 +1.0
baz=67,SNR=36
VORD Divnogorie 67.09 321 *eP* **P 15 02 45.3 -1.4**
VORD pmax pmax

comp=N,60nm,0.6s
VORD pmax pmax
comp=E,30nm,0.6s
VORD pmax pmax
comp=Z,30nm,0.6s
VORD MLR MLR
comp=E,2µm,18.0s
VORD MLR MLR
comp=Z,3µm,18.0s
VORD MLR MLR
comp=N,2µm,19.0s
MVU Marysvale 67.09 58 eP P 15 02 45.4 -1.9
comp=N,26nm,1.1s
MSU Marysvale 67.11 58 eP P 15 02 48.4 +1.1
MSU pmax pmax
comp=Z,36nm,1.2s
MSU Marysvale 67.11 58 eP P 15 02 48.4 +1.1
comp=Z,36nm,1.2s
TMUT Trail Mountain 67.16 57 eP P 15 02 47.1 -0.6
comp=Z,21nm,0.7s
TMUT ePcP PcP 15 03 15.6 +0.1
K21A Alcova 67.16 52 ⇑P P 15 02 48.5 +0.9
baz=67,SNR=22
H24A Dirks Ranch, A 67.17 49 ⇓P P 15 02 48.3 +0.8
baz=67,SNR=30
I23A Meade Ranch, G 67.22 50 ⇑P P 15 02 48.6 +0.7
baz=67
N19A John Jarvie Ra 67.26 54 ⇑P P 15 02 49.0 +0.9
baz=67,SNR=14
MURC Murrieta 67.28 65 ⇑P P 15 02 49.3 +1.0
baz=67,SNR=8.8
P17A Butcher Ranch, 67.31 56 ⇓P P 15 02 49.9 +1.4
baz=67,SNR=15
M20A Sweetwater, Wa 67.41 53 ⇑P P 15 02 50.8 +1.6
baz=67,SNR=23
Q16A Castle Valley 67.43 57 ⇓P P 15 02 50.8 +1.4
baz=67,SNR=15
GMRC Granite Mounta 67.47 63 ⇑P P 15 02 50.9 +1.3
baz=67,SNR=30
P18A Preston Nutter 67.49 56 ⇑P P 15 02 51.4 +1.6
baz=67,SNR=22
MDND Maddock 67.51 44 ⇓P P 15 02 50.5 +1.1
baz=67,SNR=10
ULM Lac du Bonnet 67.53 40 P P 15 02 49.8 +0.3
ULM Lac du Bonnet 67.53 40 P P 15 02 49.8 +0.3
comp=Z,25nm,0.7s,baz=311,slow=6.7,SNR=27
ULM LR LR 15 36 16.0
comp=Z,530nm,18.6s,baz=348,slow=39
K22A Casper 67.54 51 ⇓P P 15 02 50.8 +0.9
baz=67,SNR=10
L21A Rawlins 67.55 52 ⇓P P 15 02 51.0 +0.9
baz=67,SNR=14
J23A Dilts Ranch, B 67.56 50 ⇑P P 15 02 50.8 +0.8
baz=67,SNR=6.6
SRU San Rafael 67.68 56 eP P 15 02 50.7 -0.2
SRU pmax pmax
comp=E,66nm,0.9s
SRU San Rafael 67.68 56 eP P 15 02 50.7 -0.2
comp=E,66nm,0.9s
SRU San Rafael 67.68 56 ⇓P P 15 02 52.2 +1.3
baz=68,SNR=42
O19A Miners Draw (B 67.68 55 ⇓P P 15 02 51.8 +0.9
baz=68,SNR=9.8
WRAB Tennant Creek 67.70 198 eP P 15 02 49.9 -0.9
WRAB e 15 03 17.0
WRAB pmax pmax
comp=Z,62nm,0.9s
WRAB Tennant Creek 67.70 198 eP P 15 02 49.9 -0.9
comp=Z,62nm,0.9s
WRAB ePcP PcP 15 03 16.9 -0.4
WRA Warramunga Arr 67.71 198 P P 15 02 50.0 -0.9
WRA P'P' 15 31 13.2
WRA Warramunga Arr 67.71 198 P P 15 02 50.0 -0.9
comp=Z,46nm,0.8s,baz=15,slow=6.7,SNR=160
WRA PKPPKP P'P'df 15 31 13.2 +5.2
comp=Z,2.0nm,0.9s,baz=201,slow=2.6,SNR=13
WRA LR LR 15 34 51.7
comp=Z,306nm,18.5s,baz=30,slow=38
I24A Kuemmerle Ranc 67.74 49 ⇑P P 15 02 51.6 +0.5
baz=68,SNR=12
PFO Pinyon Flat Ob 67.75 64 eP P 15 02 49.8 -1.5
comp=Z,12nm,1.0s
PFO epP pP 15 03 05.4 -1.0
PFO LR LR
comp=Z,767nm,22.0s
PFO Pinyon Flat Ob 67.75 64 ⇑P P 15 02 52.1 +0.8
baz=68,SNR=6.2
BELC Belle Mtn. Jos 67.77 64 ⇑P P 15 02 52.2 +0.7
baz=68,SNR=11
M21A Separation Pea 67.79 53 ⇓P P 15 02 52.3 +0.7
baz=68,SNR=17
N20A Spence Gulch, 67.81 54 ⇑P P 15 02 53.2 +1.4
baz=68,SNR=6.4
RSSD Black Hills 67.87 49 eP P 15 02 52.8 +0.8
RSSD e*PP pP 15 03 05.6 -1.5
RSSD pmax pmax
comp=Z,44nm,1.0s
RSSD Black Hills 67.87 49 eP P 15 02 52.8 +0.8
comp=Z,44nm,1.0s
RSSD epP pP 15 03 05.6 -1.5
MOL Molde 67.87 343 eP P 15 02 51.9 +0.5
MOL AMB AMB 15 02 55.9
comp=Z,46nm,0.9s
MSVF Nonsavu 67.92 153 PFAKE 15 03 00.0 +7.7
MSVF LR LR
comp=Z,2µm,20.0s
K23A Bowen Ranch, D 67.96 51 ⇑P P 15 02 52.9 +0.3
baz=68,SNR=8.5
L22A Ellis Ranch, M 68.01 52 ⇑P P 15 02 54.3 +1.4
baz=68,SNR=18
J24A Dixon Ranch, L 68.08 50 ⇓P P 15 02 53.8 +0.5
baz=68,SNR=8.9
NEE2 Needles Airpor 68.12 62 ⇑P P 15 02 54.5 +1.0
baz=68
IRM Iron Mountain 68.19 63 ⇓P P 15 02 55.3 +1.3
baz=68,SNR=30
P19A Cripple Cowboy 68.21 55 ⇑P P 15 02 55.4 +1.1
baz=68,SNR=24
BAR Barrett 68.22 65 eP P 15 02 53.6 -0.6
comp=Z,21nm,0.9s
AFI Afiamalu 68.24 142 PFAKE 15 03 10.0 +16
AFI LR LR
comp=Z,2µm,19.0s
FITZ Fitzroy Crossi 68.24 207 P P 15 02 54.3 +0.1
FITZ Fitzroy Crossi 68.24 207 P P 15 02 54.3 +0.1
comp=Z,65nm,0.8s,baz=19,slow=4.9,SNR=96
MONP Monument Peak 68.24 65 ⇓P P 15 02 55.5 +1.0
baz=68
N21A Black Mountain 68.28 53 ⇑P P 15 02 55.8 +1.1
baz=68,SNR=8.2
O20A White River Ci 68.29 54 ⇑P P 15 02 55.7 +0.9
baz=68,SNR=22
BC3 Big Chuckawall 68.34 64 ⇓P P 15 02 56.0 +1.0
baz=68,SNR=15
W13A Hualapai Mount 68.35 62 ⇓P P 15 02 56.4 +1.2
baz=68,SNR=12
M22A Cedar Creek Ra 68.35 52 ⇑P P 15 02 56.2 +1.0
baz=68,SNR=33
L23A Garrett 68.36 51 ⇑P P 15 02 55.7 +0.6
baz=68,SNR=17
K24A Anderson Ranch 68.42 50 ⇑P P 15 02 55.3 -0.1
baz=68
U15A North Rim 68.43 60 ⇑P P 15 02 57.4 +1.7
baz=68,SNR=35
IDAH Dahanechah 68.44 295 eP P 15 02 56.3 +0.5
NB2 NORSAR Subarra 68.44 341 P P 15 02 54.6 -0.5
baz=28,slow=6.2
NB2 NORSAR Subarra 68.44 341 P P 15 02 54.6 -0.5
comp=Z,43nm,1.0s,baz=28,slow=6.2
NOA NORSAR Array B 68.44 341 P P 15 02 54.8 -0.4
NOA NORSAR Array B 68.44 341 P P 15 02 54.8 -0.4
comp=Z,24nm,0.7s,baz=29,slow=6.3,SNR=110
NOA LR LR 15 36 53.5
comp=Z,1µm,19.0s,baz=20,slow=39
Q19A Hogan Spring (68.51 56 ⇓P P 15 02 56.8 +0.8
baz=68,SNR=23
IZAR Zarasai 68.58 330 eP P 15 02 56.0 0.0
IZAR AMB AMB 15 02 59.0
comp=Z,16nm,0.9s
DVTC Desert V Tower 68.60 65 ⇓P P 15 02 57.6 +1.1
baz=68,SNR=6.3
SWSC Sam W. Stewart 68.60 64 ⇑P P 15 02 57.2 +0.7
baz=68
POO Poona 68.60 275 ⇑*i*P P 15 02 55.0 -1.7
comp=Z,42nm,0.7s
NC602 NORSAR Array S 68.64 340 eP P 15 02 55.9 -0.4
P20A De Beque 68.64 55 ⇑P P 15 02 57.8 +0.9
baz=68
HFS Hagfors 68.64 339 LR LR 15 35 33.6
comp=Z,2µm,21.3s,baz=28,slow=38
O21A Pagoda 68.67 54 ⇓P P 15 02 58.1 +0.9
baz=68,SNR=6.3
NAO01 NORSAR Array S 68.69 341 eP P 15 02 55.4 -1.3
comp=Z,25nm,0.8s
NAO01 ePcP PcP 15 03 20.4 -0.7
PDMCI Parker Dam,Lak 68.72 62 ⇓P P 15 02 58.5 +1.3
baz=69,SNR=18
MAK Makhachkala 68.73 310 eP P 15 02 52.1 -5.0
MAK e*PP pP 15 03 11.5 -0.7
MAK e*SP sP 15 03 18.3 -0.1
MAK e 15 05 25.9
MAK ePPP PPP 15 07 07.0
MAK eS S 15 11 49.0 -7.2
MAK e*SS sS 15 12 20.9 -0.7
MAK e 15 12 50.4
MAK pmax pmax
comp=Z,29nm,0.4s
ISAL Salakas 68.77 330 eP P 15 02 57.0 -0.1
ISAL AMB AMB 15 03 00.4
comp=Z,19nm,0.9s
M23A Laramie 68.79 52 ⇑P P 15 02 58.6 +0.8
baz=69
L24A Wheatland 68.82 51 ⇓P P 15 02 58.9 +1.0
baz=69
N22A Wattenberg Ran 68.84 53 ⇑P P 15 02 59.7 +1.5
baz=69,SNR=18
Y12C Blythe 68.85 63 ⇑P P 15 02 59.5 +1.4
baz=69,SNR=16
IIGN Ignalina 68.91 330 eP P 15 02 57.9 -0.1
IIGN AMB AMB 15 03 01.3
comp=Z,28nm,0.9s
S18A Hurst Farm, Bl 68.94 57 ⇓P P 15 02 59.8 +0.9
baz=69,SNR=19
AGMN Agassiz Nation 68.94 41 eP P 15 02 57.3 -1.1
comp=Z,29nm,0.9s
N23A Red Feather La 69.06 52 ⇓P P 15 03 00.9 +1.4
baz=69,SNR=19
Q20A Ridgley Place, 69.06 55 ⇓P P 15 03 00.4 +0.9
baz=69,SNR=8.9
NACGM Naroch 69.08 330 eP P 15 02 56.0 -3.1
PV04 Paradox Valley 69.09 56 eP P 15 02 59.6 -0.1
GLA Glamis 69.13 64 eP P 15 02 59.8 -0.1
GLA pmax pmax
comp=Z,43nm,1.0s
GLA Glamis 69.13 64 eP P 15 02 59.8 -0.1
comp=Z,43nm,1.0s
GLA Glamis 69.13 64 ⇑P P 15 03 01.2 +1.3
baz=69,SNR=9.4
P21A Newcastle 69.16 54 ⇓P P 15 03 01.5 +1.3
baz=69,SNR=7.4
O22A Kremmling 69.23 53 ⇑P P 15 03 01.7 +1.1
baz=69,SNR=20
DZM Mont Dzumac 69.24 165 eS S 15 12 11.0 +8.5
comp=Z,939nm,26.9s
DZM eSS SS 15 16 31.7 +1.2
comp=Z,731nm,32.4s
DZM eLQ LQ 15 20 43.1
comp=Z,2µm,32.9s
DZM eLR LR 15 24 06.4
comp=Z,2µm,23.9s
DZM Mont Dzumac 69.24 165 P P 15 03 02.3 +1.8
DZM Mont Dzumac 69.24 165 P P 15 03 02.3 +1.8
comp=Z,8.5nm,1.0s,baz=72,slow=17,SNR=4.0
DZM LR LR 15 26 49.1
comp=Z,1µm,21.2s,baz=15,slow=30
BORG Borgarnes 69.26 357 eP P 15 02 59.4 -0.6
comp=Z,95nm,0.9s
BORG Borgarnes 69.26 357 LR LR 15 30 17.3
comp=Z,504nm,21.5s,baz=12,slow=33
L25A Engebretsen Ra 69.26 50 ⇓P P 15 03 01.6 +0.9
baz=69
M24A Cheyenne 69.28 51 ⇓P P 15 03 02.2 +1.4
baz=69,SNR=9.5
K26A Motz Farm, Whi 69.30 50 ⇑P P 15 03 01.2 +0.3
baz=69
HYA Hoyanger 69.42 343 eP P 15 02 59.3 -1.7
PV01 Paradox Valley 69.46 56 eP P 15 03 03.0 +0.9
comp=Z,4µm,1.1s
PV01 epP pP 15 03 16.3 -0.9
P22A Eagle 69.50 54 ⇓P P 15 03 03.6 +1.4
baz=69
R20A Redvale 69.54 56 ⇑P P 15 03 03.8 +1.3
baz=69,SNR=9.2
O23A Lake Granby, G 69.54 53 ⇓P P 15 03 04.5 +1.8
baz=69,SNR=50
Q21A Lamborn Mesa, 69.56 55 ⇑P P 15 03 04.0 +1.4
baz=69,SNR=24
WUAZ Wupatki 69.59 60 eP P 15 03 03.1 +0.3
comp=Z,33nm,1.0s
WUAZ Wupatki 69.59 60 ⇓P P 15 03 04.5 +1.6
baz=69,SNR=18
IGLO Ghaloghah 69.60 302 eP P 15 03 04.2 +1.3
SMCO Snowmass 69.66 54 eP P 15 03 03.6 +0.1
comp=Z,23nm,0.7s
M25A Palm-Egli Farm 69.71 51 ⇓P P 15 03 05.0 +1.5
baz=70,SNR=8.0
S20A Disappointment 69.79 56 ⇓P P 15 03 05.3 +1.2
baz=70,SNR=23
K27A Flueckinger Fa 69.80 49 ⇑P P 15 03 04.5 +0.6
baz=70
SUE Sulen 69.81 344 eP pP 15 03 17.3 -1.3
L26A Underwood Farm 69.82 50 ⇑P P 15 03 04.7 +0.6
baz=70
IKIA Kiasar 69.89 301 eP P 15 03 05.3 +0.6
R21A Cimarron 69.89 55 ⇑P P 15 03 06.2 +1.4
baz=70,SNR=24
Q22A Crested Butte, 69.91 55 ⇓P P 15 03 06.4 +1.5
baz=70,SNR=41
113A Mohawk Valley, 69.98 63 ⇑P P 15 03 06.1 +1.1
baz=70
ISCO Idaho Springs 70.00 53 eP P 15 03 06.0 +0.6
ISCO pmax pmax
comp=Z,29nm,0.8s
ISCO MLR MLR
comp=Z,687nm,19.0s
ISCO Idaho Springs 70.00 53 eP P 15 03 06.0 +0.6
comp=Z,29nm,0.8s
ISCO LR LR
comp=Z,687nm,19.0s
KONO Kongsberg 70.05 341 eP P 15 03 05.6 +0.6
KONO AMB AMB 15 03 08.2
comp=Z,31nm,0.9s
KONO eS S 15 12 12.0 +0.8
KONO AMS AMS 15 30 48.8
comp=Z,692nm,17.0s
KONO Kongsberg 70.05 341 eP P 15 03 03.3 -1.7
KONO pmax pmax
comp=Z,24nm,0.8s
KONO Kongsberg 70.05 341 eP P 15 03 03.3 -1.7
comp=Z,24nm,0.8s
O24A Longmont 70.07 53 ⇑P P 15 03 07.3 +1.6
baz=70
Z14A Wintersburg 70.09 62 ⇓P P 15 03 06.9 +1.2
baz=70,SNR=6.1
N25A Grover 70.13 52 ⇑P P 15 03 07.2 +1.1
baz=70
MVCO Mesa Verde 70.14 57 eP P 15 03 05.5 -0.7
comp=Z,25nm,0.8s
MVCO LR LR
comp=Z,483nm,21.0s
MVCO Mesa Verde 70.14 57 ⇓P P 15 03 07.5 +1.3
baz=70,SNR=12
P23A Jefferson 70.16 54 ⇑P P 15 03 08.0 +1.5
baz=70,SNR=10
M26A McRoberts Ranc 70.18 50 ⇑P P 15 03 07.8 +1.5
baz=70,SNR=7.8
S21A Coal Bank Pass 70.23 56 ⇑P P 15 03 08.6 +1.7
baz=70,SNR=38
BRSD Miller 70.24 46 ⇓P P 15 03 07.2 +0.7
baz=70
ASK Askoy 70.25 343 eP P 15 03 05.9 -0.2
ASK AMB AMB 15 03 08.6
comp=Z,127nm,1.2s
IANJ Anjilo 70.25 301 eP P 15 03 08.4 +1.4
RUND Rundenannen 70.28 343 eP P 15 03 06.2 -0.2
RUND AMB AMB 15 03 08.9
comp=Z,158nm,0.9s
X16A Lo Mia Camp, P 70.29 61 ⇓P P 15 03 09.0 +1.8
baz=70,SNR=44
BER Bergen 70.31 343 eP P 15 03 06.4 -0.2
BER AMB AMB 15 03 08.8
comp=Z,74nm,0.9s
BER AMS AMS 15 32 16.7
comp=Z,982nm,21.1s
EGD Espegrend 70.44 343 eP P 15 03 06.9 -0.4
EGD AMB AMB 15 03 09.8
comp=Z,85nm,1.1s
R22A Saguache, Gunn 70.44 55 ⇑P P 15 03 10.1 +1.9
baz=70,SNR=17
ODD1 Odda 70.47 342 eP P 15 03 08.4 +0.8
ODD1 AMB AMB 15 03 11.0
comp=Z,54nm,1.0s
IALA Alasht 70.49 302 eP P 15 03 08.3 -0.2
Q23A Hartsel 70.49 54 ⇑P P 15 03 10.0 +1.6
baz=70,SNR=16
KIV Kislovodsk 70.52 314 ⇑*i*P P 15 03 08.9 +0.6
KIV *e* 15 05 46.5
KIV *i*S S 15 12 15.0 -2.4
KIV pmax pmax
comp=Z,76nm,0.7s
KIV MLR MLR
comp=Z,2µm,17.0s
M27A Reverse DX Ran 70.54 50 ⇓P P 15 03 09.8 +1.3
baz=70
KBZ Khabaz 70.58 313 P P 15 03 08.6 +0.1
KBZ pmax pmax
comp=Z,65nm,0.8s
KBZ MLR MLR
comp=Z,4µm,19.1s
KBZ Khabaz 70.58 313 P P 15 03 08.6 +0.1
KBZ Khabaz 70.58 313 P P 15 03 08.6 +0.1
comp=Z,65nm,0.8s,baz=91,slow=3.7,SNR=87
KBZ LR LR 15 38 39.0
comp=Z,4µm,19.1s,baz=48,slow=40
P24A Kohler Place, 70.58 53 ⇑P P 15 03 10.5 +1.6
baz=70
N26A Koester Ranch, 70.59 51 ⇓P P 15 03 10.2 +1.4
baz=70
O25A Wiggins 70.60 52 ⇓P P 15 03 10.2 +1.3
baz=70
IPRN Peran 70.66 302 eP P 15 03 10.0 +0.7
U20A Newcomb 70.69 57 ⇑P P 15 03 10.9 +1.3
baz=70
S22A 4UR Ranch, Cre 70.73 55 ⇓P P 15 03 11.6 +1.7
baz=71,SNR=46
SOFL Sornfelli, Far 70.74 350 eP P 15 03 09.4 +0.2
SOFL AMB AMB 15 03 12.2
comp=Z,139nm,1.1s
SOFL Sornfelli, Far 70.74 350 P P 15 03 09.4 +0.2
SOFL AMB AMB 15 03 12.2
comp=Z,139nm,1.1s
ZEI Tsey 70.75 312 eP P 15 03 08.9 -1.0
ZEI pmax pmax
comp=Z,40nm,0.8s
ZEI MLR MLR
comp=Z,6µm,20.0s
IFIR Firoozkooh 70.82 302 eP P 15 03 12.4 +1.9
Q24A Divide 70.83 54 ⇓P P 15 03 11.7 +1.1
baz=71,SNR=9.3
W18A Petrified Fore 70.84 59 ⇑P P 15 03 12.1 +1.6
baz=71
T21A Navajo Lake 70.84 56 ⇓P P 15 03 12.0 +1.4
baz=71
ILAS Lasjerd 70.88 301 eP P 15 03 12.3 +1.5
DGRG David-gareji 70.92 310 P P 15 03 12.0 +1.2
O26A Horse Wrangler 70.95 52 ⇓P P 15 03 12.1 +1.0
baz=71
N27A Anderson Farm, 70.97 51 ⇑P P 15 03 12.2 +1.1
baz=71,SNR=21
R23A Moffat 70.99 54 ⇓P P 15 03 13.1 +1.6
baz=71,SNR=25
P25A Willow Gulch B 71.00 53 ⇑P P 15 03 12.7 +1.3
baz=71,SNR=20
SUW Suwalki 71.03 331 eP P 15 03 12.6 +1.5
TBLG Delisi 71.06 311 eP P 15 03 12.9 +1.4
TBLG Delisi 71.06 311 P P 15 03 13.0 +1.4
ONI Oni 71.11 312 P P 15 03 13.5 +1.6
X18A Snowflake 71.11 60 ⇓P P 15 03 13.8 +1.6
baz=71,SNR=9.3
V20A Brimhall 71.12 58 ⇑P P 15 03 13.4 +1.2
baz=71,SNR=9.4
214A Organ Pipe Nat 71.12 63 ⇓P P 15 03 13.4 +1.4
baz=71,SNR=10
OGNE Ogallala 71.14 50 eP P 15 03 11.6 -0.5
comp=Z,154nm,0.9s
OGNE Ogallala 71.14 50 ⇑P P 15 03 13.1 +1.0
baz=71,SNR=35
U21A Nageezi 71.16 57 ⇑P P 15 03 13.8 +1.3
baz=71,SNR=13
EYMN Ely 71.17 39 eP P 15 03 11.8 -0.3
comp=Z,48nm,0.9s
EYMN epP pP 15 03 25.8 -1.5
T22A Edith 71.19 56 ⇓P P 15 03 14.3 +1.6
baz=71,SNR=24
S23A Nye Farm, Mont 71.23 55 ⇑P P 15 03 14.6 +1.7
baz=71
EIDS Eidsvold 71.23 181 eP P 15 03 13.2 +0.7
comp=Z,36nm,1.2s
EIDS epP pP 15 03 26.5 -1.2
IDMV Damavand 71.30 302 eP P 15 03 14.3 +0.9
R24A Sanders Place, 71.37 54 ⇑P P 15 03 15.1 +1.4
baz=71,SNR=29
Q25A Bedland, Calha 71.37 53 ⇑P P 15 03 14.7 +1.0
baz=71,SNR=34
AS31 Alice Springs 71.41 197 eP P 15 03 12.1 -1.5
AS31 epP pP 15 03 27.7 -1.1
ASAR Alice Springs 71.41 197 P P 15 03 13.8 +0.2
ASAR P'P' 15 31 07.8
ASAR Alice Springs 71.41 197 P P 15 03 13.8 +0.2
comp=Z,23nm,1.0s,baz=9.7,slow=5.5,SNR=93
ASAR PKPPKP P'P'df 15 31 07.8 +6.2
comp=Z,0.5nm,0.8s,baz=157,slow=2.6,SNR=4.3
ASAR LR LR 15 32 02.9
comp=Z,570nm,21.8s,baz=10,slow=34
P26A Davis Ranch, A 71.41 52 ⇑P P 15 03 14.8 +0.9
baz=71,SNR=9.6
O27A Beecher Island 71.44 51 ⇓P P 15 03 14.8 +0.9
baz=71
AKASG Malin Array Be 71.49 326 P P 15 03 13.2 -0.7
AKASG pmax pmax
comp=Z,43nm,0.6s
AKASG MLR MLR
comp=Z,3µm,20.6s
AKASG Malin Array Be 71.49 326 P P 15 03 13.2 -0.7
AKASG Malin Array Be 71.49 326 P P 15 03 13.2 -0.7
comp=Z,43nm,0.6s,baz=36,slow=6.2,SNR=78
AKASG LR LR 15 37 02.6
comp=Z,3µm,20.6s,baz=40,slow=38
KIEV Kiev 71.50 326 eP P 15 03 12.4 -1.6
KIEV pmax pmax
comp=Z,57nm,0.7s
KIEV Kiev 71.50 326 eP P 15 03 12.4 -1.6
comp=Z,57nm,0.7s
AK01 Malin Array Si 71.50 326 eP P 15 03 13.2 -0.8
AK02 Malin Array Si 71.53 326 eP P 15 03 12.9 -1.2
STAV Stavanger 71.56 342 eP P 15 03 11.3 -2.9
STAV AMB AMB 15 03 13.7
comp=Z,44nm,0.8s
W20A Ramah 71.57 58 ⇓P P 15 03 16.0 +1.1
baz=71,SNR=20
V21A Milan 71.61 57 ⇓P P 15 03 16.4 +1.2
baz=71,SNR=8.2
U22A Llaves 71.66 56 ⇑P P 15 03 16.9 +1.4
baz=72,SNR=10.0
T23A Casias Ranch, 71.68 55 ⇑P P 15 03 17.0 +1.4
baz=72,SNR=8.4
S24A Houchin Ranch, 71.72 55 ⇓P P 15 03 17.3 +1.4
baz=72,SNR=15
LRW Lerwick 71.74 346 ⇑eP P 15 03 15.4 +0.1
LRW AMS AMS 15 37 53.1
comp=Z,664nm,18.2s
LRW Lerwick 71.74 346 P P 15 03 15.4 +0.1
LRW AMS AMS 15 37 53.1
comp=Z,664nm,18.2s
Q26A Hugo 71.77 53 ⇓P P 15 03 16.8 +0.8
baz=72,SNR=9.8
SNART Snartemo 71.78 341 eP P 15 03 14.2 -1.3
SNART AMB AMB 15 03 16.6
comp=Z,60nm,0.7s
IGZV Ghazvin 71.79 304 eP P 15 03 17.6 +1.3
IVRN Varamin 71.88 302 eP P 15 03 17.8 +1.2
R25A Fountain Ranch 71.89 54 ⇓P P 15 03 17.5 +0.7
baz=72,SNR=12
IBAF Bafgh 71.90 297 eP P 15 03 16.7 -0.2
ECSD EROS Data Cent 71.92 45 eP P 15 03 16.2 -0.4
comp=Z,47nm,0.9s
AKH Akhalkalaki 71.94 311 P P 15 03 18.9 +1.9
V22A San Miguel Ran 71.95 57 ⇑P P 15 03 18.5 +1.2
baz=72,SNR=15
IR3 Iran Long-Peri 71.96 303 eP P 15 03 17.8 +0.7

X20A	**Quemado**	**71.97**	**59**	⇑P		**P**	**15 03 19.4**	**+2.0**
	baz=72,SNR=15							
IMHD	**Mahdasht**	**72.02**	**303**	*e*P		**P**	**15 03 18.7**	**+1.2**
U23A	**El Rito**	**72.08**	**56**	⇑P		**P**	**15 03 19.6**	**+1.6**
	baz=72,SNR=9.2							
TUC	**Tucson**	**72.13**	**62**	*e*P		**P**	**15 03 18.0**	**-0.2**
TUC				MLR		MLR		
	comp=Z,408nm,20.0s							
TUC	**Tucson**	**72.13**	**62**	*e*P		**P**	**15 03 18.0**	**-0.2**
	comp=Z,4.5nm,1.0s							
TUC				LR		LR		
	comp=Z,408nm,20.0s							
S25A	**Robets Cordova**	**72.15**	**54**	⇑P		**P**	**15 03 18.8**	**+0.5**
	baz=72							
ICHK	**Chekchek**	**72.16**	**298**	*e*P		**P**	**15 03 19.5**	**+0.9**
GNI	**Garni**	**72.19**	**310**	*e*P		**P**	**15 03 18.0**	**-0.5**
	comp=Z,55nm,0.8s							
GNI	**Garni**	**72.19**	**310**	P		**P**	**15 03 21.1**	**+2.6**
	SNR=14							
KSCO	**Kaye Shedlock'**	**72.19**	**52**	⇓P		**P**	**15 03 19.6**	**+1.1**
	baz=72							
T24A	**Torres, Weston**	**72.21**	**55**	⇓P		**P**	**15 03 20.6**	**+1.7**
	baz=72,SNR=17							
IHRS	**Heris**	**72.23**	**307**	*e*P		**P**	**15 03 19.8**	**+0.9**
ISRB	**Sarab**	**72.24**	**306**	*e*P		**P**	**15 03 19.9**	**+1.0**
R26A	**Arlington**	**72.25**	**53**	⇓P		**P**	**15 03 19.6**	**+0.8**
	baz=72,SNR=17							
SOC	**Sochi**	**72.27**	**315**	*c i*P		**P**	**15 03 18.9**	**+0.2**
SOC				*e**PP		**pP**	**15 03 31.6**	**-2.3**
SOC				*e*			15 05 55.2	
SOC				*e*PPP		PPP	15 07 41.2	
SOC				*e*S		**S**	**15 12 38.1**	**+0.8**
SOC				*e*			15 13 19.9	
SOC				*e*SSS		SSS	15 20 24.9	
SOC				pmax		pmax		
	comp=Z,83nm,0.6s							
SOC				MLR		MLR		
	comp=Z,3μm,18.0s							
X21A	**Alamocita Cree**	**72.46**	**58**	⇑P		**P**	**15 03 22.3**	**+1.9**
	baz=72,SNR=12							
ANN	**Anapa**	**72.47**	**317**	*e*P		**P**	**15 03 19.0**	**-0.8**
ANN				*e**PP		**pP**	**15 03 29.9**	**-5.1**
ANN				*e*PPP		PPP	15 07 48.6	
ANN				*e*S		**S**	**15 12 40.4**	**+0.9**
ANN				pmax		pmax		
	comp=Z,65nm,0.7s							
Y20A	**Horse Springs,**	**72.48**	**59**	⇑P		**P**	**15 03 22.3**	**+1.8**
	baz=72,SNR=20							
V23A	**Ortiz Mt. (NFS**	**72.49**	**57**	⇓P		**P**	**15 03 22.5**	**+2.0**
	baz=72,SNR=7.8							
T25A	**Trinidad**	**72.53**	**54**	⇑P		**P**	**15 03 21.6**	**+1.0**
	baz=72,SNR=29							
R27A	**Eads**	**72.62**	**53**	⇑P		**P**	**15 03 21.6**	**+0.6**
	baz=72,SNR=8.5							
IMEH	**Mehriz**	**72.62**	**297**	*e*P		**P**	**15 03 20.9**	**-0.4**
SPMN	**St. Paul**	**72.63**	**42**	⇓P		**P**	**15 03 21.1**	**+0.3**
	baz=72,SNR=7.6							
IRAZ	**Razeghan**	**72.65**	**303**	*e*P		**P**	**15 03 22.4**	**+1.0**
BSD	**Bornholm Skovb**	**72.69**	**336**	*i* P		**P**	**15 03 21.2**	**+0.3**
BSD				pmax		pmax		
	comp=Z,21nm,0.7s							
BSD				MLR		MLR		
	comp=Z,1μm,20.0s							
BSD	**Bornholm Skovb**	**72.69**	**336**	*i* P		**P**	**15 03 21.2**	**+0.3**
	comp=Z,21nm,0.7s							
BSD								
	comp=Z,1μm,20.0s							
IMRD	**Marand**	**72.69**	**308**	*e*P		**P**	**15 03 22.1**	**+0.6**
S26A	**Kim**	**72.72**	**54**	⇓P		**P**	**15 03 22.1**	**+0.4**
	baz=72,SNR=9.6							
ITBZ	**Tabriz**	**72.79**	**307**	*e*P		**P**	**15 03 23.2**	**+1.1**
Y21A	**Point of Rocks**	**72.83**	**59**	⇓P		**P**	**15 03 24.5**	**+2.0**
	baz=73,SNR=8.0							
BGNE	**Belgrade**	**72.84**	**48**	⇑P		**P**	**15 03 22.6**	**+0.3**
	baz=73							
COP	**Copenhagen**	**72.87**	**337**	*e*P		**P**	**15 03 21.9**	**-0.1**
COP				pmax		pmax		
	comp=Z,28nm,0.8s							
COP				MLR		MLR		
	comp=Z,760nm,20.0s							
COP	**Copenhagen**	**72.87**	**337**	*i* P		**P**	**15 03 21.9**	**-0.1**
	comp=Z,28nm,0.8s							
COP								
	comp=Z,760nm,20.0s							
X22A	**Bernardo**	**72.88**	**58**	⇓P		**P**	**15 03 24.6**	**+1.9**
	baz=73							
ANMO	**Albuquerque**	**72.89**	**57**	P		**P**	**15 03 24.2**	**+1.3**
	comp=Z,42nm,0.8s							
ANMO	**Albuquerque**	**72.89**	**57**	P		**P**	**15 03 24.2**	**+1.3**
	comp=Z,13nm,0.8s,baz=322,slow=7.5,SNR=23							
Z20A	**Nine Sixteen R**	**72.91**	**60**	⇑P		**P**	**15 03 24.4**	**+1.5**
	baz=73,SNR=14							
W23A	**Werner Place,**	**72.92**	**57**	⇑P		**P**	**15 03 24.6**	**+1.6**
	baz=73,SNR=8.7							
T26A	**Comanche Natio**	**72.96**	**54**	⇓P		**P**	**15 03 23.6**	**+0.4**
	baz=73,SNR=32							
IZEF	**Zefreh**	**72.97**	**300**	*e*P		**P**	**15 03 24.1**	**+0.7**
MUD	**Monsted U'grnd**	**73.02**	**339**	*i* P		**P**	**15 03 22.9**	**0.0**
MUD				pmax		pmax		
	comp=Z,28nm,0.7s							
MUD				MLR		MLR		
	comp=Z,1μm,26.0s							
MUD	**Monsted U'grnd**	**73.02**	**339**	*i* P		**P**	**15 03 22.9**	**0.0**
	comp=Z,28nm,0.7s							
MUD								
	comp=Z,1μm,26.0s							
V24A	**Rampart Ranch,**	**73.03**	**56**	⇓P		**P**	**15 03 25.4**	**+1.7**
	baz=73,SNR=14							
U25A	**Circle Dot Ran**	**73.05**	**55**	⇓P		**P**	**15 03 24.7**	**+1.0**
	baz=73,SNR=24							
MBWA	**Marble Bar**	**73.07**	**211**	*e*P		**P**	**15 03 21.9**	**-1.7**
	comp=Z,55nm,0.9s							
MBWA				*e*pP		**pP**	**15 03 36.5**	**-2.3**
MBWA	**Marble Bar**	**73.07**	**211**	P		**P**	**15 03 24.9**	**+1.4**
	SNR=6.6							
IKLH	**Kolahrood**	**73.13**	**301**	*e*P		**P**	**15 03 25.4**	**+1.1**
LENM	**Lemitar**	**73.14**	**58**	*e*P		**P**	**15 03 24.9**	**+0.7**
	comp=Z,14nm,1.2s							
LPM	**Los Pinos Moun**	**73.24**	**58**	*e*P		**P**	**15 03 24.9**	**0.0**
	comp=Z,13nm,1.2s							
LPM				*e*pP		**pP**	**15 03 39.9**	**-0.2**
LLD	**Lille Linde**	**73.24**	**337**	*i* P		**P**	**15 03 24.5**	**+0.3**
LLD				pmax		pmax		
	comp=Z,67nm,0.8s							
LLD	**Lille Linde**	**73.24**	**337**	*i* P		**P**	**15 03 24.5**	**+0.3**
	comp=Z,67nm,0.7s							
120A	**U Bar Ranch, L**	**73.28**	**60**	⇓P		**P**	**15 03 26.8**	**+1.7**
	baz=73,SNR=16							
Y22A	**Socorro**	**73.30**	**58**	⇑P		**P**	**15 03 26.9**	**+1.6**
	baz=73							
W24A	**Lazy 6 Ranch,**	**73.32**	**56**	⇑P		**P**	**15 03 27.0**	**+1.6**
	baz=73,SNR=26							
Z21A	**St. Cloud Mine**	**73.32**	**59**	⇓P		**P**	**15 03 27.4**	**+2.0**
	baz=73							
V25A	**Rancho No Teng**	**73.33**	**56**	⇑P		**P**	**15 03 26.7**	**+1.3**
	baz=73,SNR=12							
BNM	**Barren Site**	**73.35**	**58**	*e*P		**P**	**15 03 26.6**	**+1.0**
	comp=Z,25nm,1.4s							
TRD	**Trivandrum**	**73.42**	**265**	⇓*e*x		pP	15 03 37.4	-3.7
U26A	**Atchley Ranch,**	**73.43**	**55**	⇑P		**P**	**15 03 26.8**	**+0.8**
	baz=73,SNR=7.5							
T27A	**Campo**	**73.53**	**54**	⇓P		**P**	**15 03 27.0**	**+0.5**
	baz=73,SNR=9.8							
GKP	**Gorka Klasztor**	**73.59**	**334**	*e*P		**P**	**15 03 26.6**	**+0.3**
COWI	**Conover**	**73.62**	**39**	*e*P		**P**	**15 03 25.9**	**-0.8**
	comp=Z,22nm,0.8s							
COWI				*e*pP		**pP**	**15 03 39.5**	**-2.5**
BEL	**Belsk**	**73.65**	**331**	*e*P		**P**	**15 03 27.4**	**+0.7**
319A	**Douglas**	**73.70**	**62**	⇑P		**P**	**15 03 29.1**	**+1.5**
	baz=74,SNR=24							
X24A	**Lazy VL Ranch,**	**73.76**	**57**	⇓P		**P**	**15 03 29.6**	**+1.7**
	baz=74,SNR=8.5							
Z22A	**Elephant Butte**	**73.78**	**59**	⇓P		**P**	**15 03 29.4**	**+1.3**
	baz=74,SNR=25							
121A	**Cookes Peak, D**	**73.80**	**60**	⇑P		**P**	**15 03 30.0**	**+1.8**
	baz=74,SNR=18							
T28A	**Walsh**	**73.83**	**53**	⇑P		**P**	**15 03 28.5**	**+0.3**
	baz=74,SNR=11							
V26A	**Tequesquite Ra**	**73.83**	**55**	⇑P		**P**	**15 03 29.0**	**+0.7**
	baz=74,SNR=13							
Y23A	**Lovelace Mesa,**	**73.84**	**58**	⇑P		**P**	**15 03 29.7**	**+1.3**
	baz=74,SNR=16							
W25A	**X Bar L Ranch,**	**73.86**	**56**	⇑P		**P**	**15 03 29.6**	**+1.1**
	baz=74,SNR=23							
SIM	**Simferopol'**	**73.89**	**319**	*e*P		**P**	**15 03 28.9**	**+0.6**
SIM				S		**S**	**15 12 56.3**	**+0.6**
SIM				pmax		pmax		
	comp=Z,64nm,0.7s							
SIM				MLR		MLR		
	comp=Z,2μm,16.0s							
U27A	**Thompson Grove**	**73.93**	**54**	⇓P		**P**	**15 03 29.3**	**+0.4**
	baz=74,SNR=19							
IPIR	**Pirpir**	**73.99**	**301**	*e*P		**P**	**15 03 30.9**	**+1.5**
122A	**Conniff Cattle**	**74.15**	**59**	⇓P		**P**	**15 03 31.9**	**+1.7**
	baz=74							
SCHQ	**Schefferville**	**74.16**	**22**	P		**P**	**15 03 30.4**	**+0.7**
SCHQ	**Schefferville**	**74.16**	**22**	P		**P**	**15 03 30.4**	**+0.7**
	comp=Z,16nm,0.5s,baz=342,slow=5.2,SNR=72							
SCHQ				LR		LR	15 36 48.5	
	comp=Z,720nm,20.9s,baz=154,slow=36							
221A	**Mesquite Ranch**	**74.17**	**60**	⇑P		**P**	**15 03 32.0**	**+1.8**
	baz=74							
LVV	**L'vov**	**74.18**	**328**	*e*P		**P**	**15 03 28.2**	**-1.7**
LVV				*e*S		**S**	**15 12 58.1**	**-0.7**
LVV				MLR		MLR		
	comp=Z,700nm,16.0s							
LVV				MLR		MLR		
	comp=N,500nm,15.0s							
LVV				MLR		MLR		
	comp=E,500nm,15.0s							
320A	**Kipp Ranch, An**	**74.19**	**61**	⇑P		**P**	**15 03 31.9**	**+1.5**
	baz=74,SNR=8.4							
Y24A	**Capitan**	**74.21**	**57**	⇑P		**P**	**15 03 31.7**	**+1.1**
	baz=74,SNR=20							
Z23A	**Rita Site, Whi**	**74.21**	**58**	⇑P		**P**	**15 03 31.9**	**+1.4**
	baz=74,SNR=14							
X25A	**Clemmons Ranch**	**74.23**	**57**	⇓P		**P**	**15 03 32.1**	**+1.5**
	baz=74,SNR=15							
T29A	**Hugoton**	**74.26**	**53**	⇓P		**P**	**15 03 30.6**	**0.0**
	baz=74							
MVH1	**Achvaich**	**74.33**	**347**	⇑*e*P		**P**	**15 03 30.6**	**0.0**
MVH1	**Achvaich**	**74.33**	**347**	P		**P**	**15 03 30.6**	**0.0**
W26A	**Owens Ranch, T**	**74.35**	**56**	⇑P		**P**	**15 03 32.6**	**+1.3**
	baz=74							
V27A	**Dan Oppiter Fa**	**74.40**	**55**	⇑P		**P**	**15 03 32.0**	**+0.5**
	baz=74,SNR=13							
222A	**Williams Famil**	**74.51**	**60**	⇑P		**P**	**15 03 33.6**	**+1.4**
	baz=74							
MCD	**Coleburn Disti**	**74.51**	**346**	⇑*e*P		**P**	**15 03 31.9**	**+0.2**
MCD	**Coleburn Disti**	**74.51**	**346**	P		**P**	**15 03 31.9**	**+0.2**
KIS	**Kishinev**	**74.59**	**323**	*e*P		P	15 03 20.0	-12
KIS				*e*			15 14 05.0	
KIS				MLR		MLR		
	comp=N,2μm,16.0s							
KIS				MLR		MLR		
	comp=Z,3μm,16.0s							
KIS				MLR		MLR		
	comp=Z,2μm,17.0s							
KIS	**Kishinev**	**74.59**	**323**	*e*P		P	15 03 20.0	-12
KIS				*e*S		**SKiKP**	**15 12 50.0**	**-2.8**
KIS				LRM		MLR	15 39 00.0	
	comp=Z,2μm,18.0s							
KIS	**Kishinev**	**74.59**	**323**	⇓*i*P		**P**	**15 03 32.8**	**+0.5**
123A	**Bell Site, Whi**	**74.64**	**59**	⇑P		**P**	**15 03 34.2**	**+1.2**
	baz=74							
Y25A	**Mesa, Roswell**	**74.65**	**57**	⇑P		**P**	**15 03 33.9**	**+0.8**
	baz=74,SNR=13							
Z24A	**Sheeppen Canyo**	**74.67**	**58**	⇓P		**P**	**15 03 34.5**	**+1.2**
	baz=74,SNR=10							
X26A	**CR and CF Fran**	**74.71**	**56**	⇑P		**P**	**15 03 34.4**	**+1.0**
	baz=74,SNR=10							
MME1	**Meikle Cairn**	**74.72**	**346**	⇑*i*P		**P**	**15 03 32.7**	**-0.2**
MME1	**Meikle Cairn**	**74.72**	**346**	P		**P**	**15 03 32.7**	**-0.2**
W27A	**Bowe Ranch, En**	**74.77**	**55**	⇓P		**P**	**15 03 34.5**	**+0.8**
	baz=75,SNR=6.3							
KWP	**Kalwaria Pacla**	**74.82**	**328**	⇓P		**P**	**15 03 34.4**	**+0.8**
KWP	**Kalwaria Pacla**	**74.82**	**328**	*e*P		**P**	**15 03 34.2**	**+0.6**
	comp=Z,158nm,0.9s							
KWP	**Kalwaria Pacla**	**74.82**	**328**	⇓*i*P		**P**	**15 03 34.4**	**+0.8**
KWP	**Kalwaria Pacla**	**74.82**	**328**	*e*P		**P**	**15 03 34.2**	**+0.6**
MDO	**Dochfour**	**74.83**	**347**	⇑*i*P		**P**	**15 03 33.6**	**+0.2**
MDO	**Dochfour**	**74.83**	**347**	P		**P**	**15 03 33.6**	**+0.2**
KAC	**Achnashellach**	**74.92**	**347**	⇑*i*P		**P**	**15 03 34.1**	**+0.1**
KAC	**Achnashellach**	**74.92**	**347**	P		**P**	**15 03 34.1**	**+0.1**
SCIA	**State Center**	**74.94**	**44**	*e*P		**P**	**15 03 34.4**	**0.0**
	comp=Z,82nm,0.9s							
IAS	**Iasi**	**74.95**	**324**	⇑P		**P**	**15 03 34.9**	**+0.6**
IAS	**Iasi**	**74.95**	**324**	⇑*i*P		**P**	**15 03 34.9**	**+0.6**
ISRV	**Sarvestan**	**74.95**	**297**	*e*P		**P**	**15 03 35.8**	**+0.7**
X27A	**F and S Farms,**	**75.05**	**55**	⇑P		**P**	**15 03 36.5**	**+1.2**
	baz=75,SNR=6.3							
U30A	**WK&E Inc. Balk**	**75.06**	**53**	⇑P		**P**	**15 03 35.7**	**+0.3**
	baz=75							
124A	**Stringfield Ra**	**75.07**	**58**	⇓P		**P**	**15 03 36.6**	**+0.9**
	baz=75,SNR=12							
Z25A	**Roswell**	**75.09**	**57**	⇑P		**P**	**15 03 36.6**	**+1.1**
	baz=75							
W28A	**Vega**	**75.12**	**54**	⇑P		**P**	**15 03 36.7**	**+1.0**
	baz=75							
KPL	**Plockton**	**75.12**	**348**	⇑*e*P		**P**	**15 03 35.5**	**+0.3**
KPL				AMB		AMB	15 03 38.1	
	comp=Z,113nm,1.0s							
KPL	**Plockton**	**75.12**	**348**	P		**P**	**15 03 35.5**	**+0.3**
KPL				AMB		AMB	15 03 38.1	
	comp=Z,113nm,1.0s							
Y26A	**Elida**	**75.15**	**56**	⇑P		**P**	**15 03 36.8**	**+0.9**
	baz=75,SNR=5.7							
T31A	**Randall Ranch,**	**75.19**	**52**	⇑P		**P**	**15 03 36.1**	**+0.1**
	baz=75							
IDHR	**Dehrash**	**75.19**	**305**	*e*P		**P**	**15 03 36.3**	**+0.1**
KSB	**Sheil Bridge**	**75.21**	**347**	⇑*i*P		**P**	**15 03 36.1**	**+0.4**
KSB	**Sheil Bridge**	**75.21**	**347**	P		**P**	**15 03 36.1**	**+0.4**
LEOM	**Leova**	**75.24**	**323**	⇑P		**P**	**15 03 36.2**	**+0.2**
LEOM	**Leova**	**75.24**	**323**	⇑*i*P		**P**	**15 03 36.2**	**+0.2**
KSU1	**Kansas State U**	**75.34**	**48**	*e*P		**P**	**15 03 36.0**	**-0.8**
	comp=Z,46nm,0.8s							
KSU1				LR		LR		
	comp=Z,1μm,20.0s							
BANOM	**Banah**	**75.35**	**292**	P		**P**	**15 03 39.5**	**+2.4**
	SNR=6.9							
OJC	**Ojcow**	**75.35**	**330**	*e*P		**P**	**15 03 37.3**	**+0.7**
OJC				*e*			15 03 51.3	
OJC				*e*S		**S**	**15 13 12.3**	**+0.4**
OJC				*e*SS		**SS**	**15 17 58.6**	**-2.9**
OJC				MLR		MLR		
	comp=Z,2μm,20.3s							
OJC	**Ojcow**	**75.35**	**330**	*e*P		**P**	**15 03 37.3**	**+0.7**
OJC				*e*PcP		**pP**	**15 03 51.3**	**-0.6**
OJC				*e*S		**S**	**15 13 12.3**	**+0.4**
OJC				*e*SS		**SS**	**15 17 58.6**	**-2.9**
OJC				L		L	15 40 21.8	
	comp=Z,2μm,20.3s							
224A	**Cornudas Mount**	**75.47**	**59**	⇑P		**P**	**15 03 39.0**	**+1.1**
	baz=75,SNR=16							
BUR08	**Bucovina Ar. S**	**75.52**	**326**	*e*P		**P**	**15 03 38.2**	**+0.4**
Z26A	**Caprock**	**75.53**	**57**	⇓P		**P**	**15 03 39.0**	**+1.0**
	baz=75,SNR=63							
W29A	**Amraillo**	**75.53**	**54**	⇑P		**P**	**15 03 39.3**	**+1.2**
	baz=75							
BURAR	**Bucovina Array**	**75.54**	**326**	P		**P**	**15 03 38.2**	**+0.3**
BURAR	**Bucovina Array**	**75.54**	**326**	⇑*i*P		**P**	**15 03 38.4**	**+0.5**
KOLS	**Kolonicke sedl**	**75.56**	**328**	*e*P		**P**	**15 03 38.6**	**+0.8**
KOLS				pmax		pmax		
	comp=Z,54nm,1.1s							
KOLS	**Kolonicke sedl**	**75.56**	**328**	*e*P		**P**	**15 03 38.6**	**+0.8**
Y27A	**Caseey**	**75.56**	**56**	⇓P		**P**	**15 03 39.2**	**+1.0**
	baz=75,SNR=25							
125A	**Gardner Draw,**	**75.57**	**58**	⇑P		**P**	**15 03 39.4**	**+1.1**
	baz=75,SNR=25							
V30A	**Spur Ranch, Mi**	**75.60**	**53**	⇑P		**P**	**15 03 39.1**	**+0.7**
	baz=75							
ELO	**Logie Almond**	**75.65**	**346**	⇑*e*P		**P**	**15 03 38.4**	**+0.1**
ELO	**Logie Almond**	**75.65**	**346**	P		**P**	**15 03 38.4**	**+0.1**
X28A	**Dimmitt**	**75.66**	**55**	⇑P		**P**	**15 03 39.4**	**+0.6**
	baz=76							
AMTX	**Amarillo**	**75.69**	**54**	*e*P		**P**	**15 03 38.6**	**-0.3**
	comp=Z,79nm,0.9s							
AMTX	**Amarillo**	**75.69**	**54**	⇓P		**P**	**15 03 40.0**	**+1.1**
	baz=76,SNR=38							
MSTX	**Muleshoe**	**75.72**	**56**	⇓P		**P**	**15 03 39.8**	**+0.6**
	baz=76,SNR=20							
UZH	**Uzhgorod**	**75.80**	**328**	*c i*P		**P**	**15 03 38.0**	**-1.2**
UZH				*e*S		**SKSac**	**15 13 47.0**	**+2.3**
UZH				*e*			15 13 47.0	
UZH				MLR		MLR		
	comp=N,1μm,24.0s							
UZH				MLR		MLR		
	comp=E,1μm,24.0s							
UZH				MLR		MLR		
	comp=Z,600nm,24.0s							
MNTX	**Cornudas Mount**	**75.83**	**59**	*e*P		**P**	**15 03 39.5**	**-0.2**
	comp=Z,17nm,1.1s							
MNTX				LR		LR		
	comp=Z,378nm,19.0s							
MNTX	**Cornudas Mount**	**75.83**	**59**	⇓P		**P**	**15 03 40.8**	**+1.1**
	baz=76,SNR=24							
NIE	**Niedzica**	**75.85**	**330**	*e*P		**P**	**15 03 40.8**	**+1.3**
NIE				*e**SP		**sP**	**15 04 02.7**	**+1.8**
NIE	**Niedzica**	**75.85**	**330**	*e*P		**P**	**15 03 40.8**	**+1.3**
NIE				*es*P		**sP**	**15 04 02.7**	**+1.8**
225A	**Deer Hill, Car**	**75.86**	**58**	⇑P		**P**	**15 03 41.1**	**+1.0**
	baz=76,SNR=13							
TESR		**75.87**	**324**	⇑*i*P		**P**	**15 03 40.0**	**+0.4**
CRVS	**Cervenica-Dubn**	**75.88**	**329**	*e*P		**P**	**15 03 39.8**	**+0.1**
CRVS				pmax		pmax		
	comp=Z,38nm,0.8s							
CRVS	**Cervenica-Dubn**	**75.88**	**329**	*e*P		**P**	**15 03 39.8**	**+0.1**
WBK	**Wadi Bani Khal**	**75.92**	**288**	P		**P**	**15 03 42.2**	**+1.9**
	SNR=6.5							
Z27A	**Tatum**	**75.94**	**56**	⇑P		**P**	**15 03 41.3**	**+0.8**
	baz=76,SNR=39							
324A	**Moseley Ranch,**	**75.95**	**59**	⇑P		**P**	**15 03 41.2**	**+0.7**
	baz=76,SNR=9.3							
126A	**Clayton Basin,**	**75.95**	**57**	⇑P		**P**	**15 03 41.2**	**+0.7**
	baz=76							
KSP	**Ksiaz**	**75.98**	**333**	⇑*e*P		**P**	**15 03 40.4**	**+0.2**
KSP				*e*S		**S**	**15 13 16.5**	**-2.2**
KSP				MLR		MLR		
	comp=Z,5μm,20.0s							
KSP	**Ksiaz**	**75.98**	**333**	*e*P		**P**	**15 03 40.6**	**+0.4**
X29A	**Tulia**	**75.99**	**55**	⇓P		**P**	**15 03 41.7**	**+1.1**
	baz=76,SNR=24							
ESY	**Stoneypath**	**76.00**	**345**	⇑*e*P		**P**	**15 03 40.0**	**-0.2**
ESY	**Stoneypath**	**76.00**	**345**	P		**P**	**15 03 40.0**	**-0.2**
EAB	**Aberfoyle**	**76.03**	**347**	⇑*i*P		**P**	**15 03 40.7**	**+0.4**
EAB	**Aberfoyle**	**76.03**	**347**	P		**P**	**15 03 40.7**	**+0.4**
TLCR		**76.04**	**322**	⇑P		**P**	**15 03 41.2**	**+0.6**
TLCR		**76.04**	**322**	⇑*i*P		**P**	**15 03 41.2**	**+0.6**
V31A	**Spring Creek L**	**76.06**	**53**	⇑P		**P**	**15 03 42.2**	**+1.1**
	baz=76,SNR=11							
Y28A	**McKinney Farm,**	**76.07**	**55**	⇓P		**P**	**15 03 41.9**	**+0.7**
	baz=76							
GDL2	**Guadalupe Moun**	**76.07**	**58**	*e*P		**P**	**15 03 41.6**	**+0.4**
	comp=Z,34nm,1.0s							
EDI	**Edinburgh**	**76.09**	**346**	*e*P		**P**	**15 03 40.1**	**-0.6**
EDI				AMB		AMB	15 03 41.8	
	comp=Z,96nm,2.5s							
EDI				AMS		AMS	15 37 56.4	
	comp=Z,496nm,18.7s							
EDI	**Edinburgh**	**76.09**	**346**	P		**P**	**15 03 40.1**	**-0.6**
EDI				AMB		AMB	15 03 41.8	
	comp=Z,96nm,2.5s							
EDI				AMS		AMS	15 37 56.4	
	comp=Z,496nm,18.7s							
W30A	**Crocket Farms**	**76.09**	**54**	⇓P		**P**	**15 03 42.1**	**+0.9**
	baz=76							
TRPA	**Tarpa**	**76.13**	**328**	⇑*i*P		**P**	**15 03 42.1**	**+1.0**
TRPA	**Tarpa**	**76.13**	**328**	⇑*e*		**P**	**15 03 42.1**	**+1.0**
BMR	**Baia Mare**	**76.15**	**327**	⇑P		**P**	**15 03 42.1**	**+0.8**
BMR	**Baia Mare**	**76.15**	**327**	⇑*i*P		**P**	**15 03 42.0**	**+0.8**
EAU	**Auchinoon**	**76.21**	**346**	⇑*e*P		**P**	**15 03 41.7**	**+0.3**
EAU	**Auchinoon**	**76.21**	**346**	P		**P**	**15 03 41.7**	**+0.3**
HATD	**Hatta, Dubai**	**76.22**	**291**	P		**P**	**15 03 42.9**	**+0.8**
	SNR=10.0							
OKC	**Ostrava-Krasne**	**76.24**	**331**	*e*P		**P**	**15 03 42.6**	**+0.9**
OKC				MLR		MLR		
	comp=Z,1μm,21.9s							
OKC	**Ostrava-Krasne**	**76.24**	**331**	⇑*e*P		**P**	**15 03 42.6**	**+0.9**
OKC				AMS		AMS	15 41 50.0	
	comp=Z,1μm,21.9s							
ARMA	**Armidale**	**76.26**	**180**	*e*P		**P**	**15 03 43.2**	**+1.2**
	comp=Z,42nm,0.9s							
PETR		**76.27**	**324**	⇓*i*P		**P**	**15 03 43.8**	**+1.9**
226B	**Tecolote Peak,**	**76.28**	**58**	⇓P		**P**	**15 03 43.4**	**+1.0**
	baz=76,SNR=29							
325A	**Bean Ranch, Si**	**76.31**	**59**	⇑P		**P**	**15 03 43.4**	**+0.8**
	baz=76,SNR=12							
127A	**Arkansas Junct**	**76.32**	**57**	⇑P		**P**	**15 03 43.1**	**+0.5**
	baz=76							
HOQ	**Hoqain**	**76.33**	**290**	P		**P**	**15 03 43.6**	**+0.9**
	SNR=10.0							
CFR	**Carcaliu**	**76.33**	**323**	⇑P		**P**	**15 03 42.7**	**+0.5**
CFR	**Carcaliu**	**76.33**	**323**	⇑*i*P		**P**	**

comp=N,649nm,20.4s
BRG
comp=E,1µm,16.0s
BRG
comp=Z,2µm,17.2s
BRG Berggiesshubel 76.68 334 eP P 15 03 44.4 +0.2
BRG S S 15 13 27.0 +0.6
BRG SS SS 15 18 29.0 +7.5
BRG pmax pmax
comp=Z,18nm,1.0s
BRG MLR MLR
comp=N,649nm,20.4s
BRG MLR MLR
comp=E,1µm,16.0s
BRG MLR MLR
comp=Z,2µm,17.2s
BRG Berggiesshubel 76.68 334 eP P 15 03 44.4 +0.2
comp=Z,18nm,0.9s
425A Indio Mountain 76.72 59 ⇑P P 15 03 46.0 +1.1
baz=77,SNR=28
ECK Cauldkaine Hil 76.79 346⇑eP P 15 03 44.9 +0.2
ECK Cauldkaine Hil 76.79 346 P P 15 03 44.9 +0.2
PVCC Panska Ves 76.79 334 eP P 15 03 45.4 +0.6
PVCC MLR MLR
comp=Z,2µm,19.6s
PVCC Panska Ves 76.79 334⇑eP P 15 03 45.4 +0.6
PVCC AMS AMS 15 40 00.0
comp=Z,2µm,19.6s
FBE Freiberg 76.82 334 eP P 15 03 45.5 +0.6
comp=Z,65nm,1.2s
DOPR Dopca 76.82 325⇑iP P 15 03 47.0 +1.9
X31A McDonald Ranch 76.83 54 ⇓P P 15 03 46.0 +0.7
baz=77,SNR=14
227A Bennet, Jal 76.83 57 ⇑P P 15 03 46.1 +0.6
baz=77
Z29A Hungry Hill Ra 76.85 56 ⇓P P 15 03 46.5 +0.9
baz=77,SNR=19
MALT Malatya 76.85 312 ⇑P P 15 03 47.1 +1.6
MALT Malatya 76.85 312 eP P 15 03 46.4 +0.8
comp=Z,57nm,0.7s
MALT Malatya 76.85 312⇑iP P 15 03 47.1 +1.6
MALT Malatya 76.85 312 eP P 15 03 46.3 +0.8
CLZ Clausthal 76.86 337 eP P 15 03 46.1 +0.9
CLZ pmax pmax
comp=Z,151nm,1.6s
CLZ Clausthal 76.86 337 eP P 15 03 46.1 +0.9
comp=Z,151nm,1.6s
Y30A Stafford Cattl 76.86 55 ⇑P P 15 03 46.3 +0.8
baz=77
128A Castleberry Fa 76.86 57 ⇓P P 15 03 46.4 +0.7
baz=77,SNR=13
XAL Allendale 76.93 345 eP P 15 03 45.5 -0.1
XAL Allendale 76.93 345 P P 15 03 45.5 -0.1
326A Caldwell Ranch 76.93 58 ⇑P P 15 03 47.1 +1.0
baz=77,SNR=9.1
MLR Muntele Rosu 76.98 324⇑iP P 15 03 46.6 +0.5
MLR Muntele Rosu 76.98 324 LR LR 15 39 31.5
comp=Z,425nm,21.9s,baz=35,slow=37
BSY Bisya 76.99 289 P P 15 03 47.5 +1.1
SNR=16
EFOR EFORIE 77.00 322⇑iP P 15 03 47.0 +0.9
ARQ Araqi 77.02 290 P P 15 03 47.6 +1.1
SNR=11
NEUB Neuenburg 77.03 335 eP P 15 03 46.6 +0.5
comp=Z,60nm,0.9s
ISR Istrita 77.04 324 ⇑P P 15 03 47.5 +1.1
ISR Istrita 77.04 324⇑iP P 15 03 47.5 +1.1
MDB Medias 77.07 325 ⇑P P 15 03 47.1 +0.6
MDB Medias 77.07 325⇑iP P 15 03 47.1 +0.6
IBBN Ibbenburen 77.13 338 eP P 15 03 47.2 +0.6
comp=Z,76nm,0.9s
VYHS Vyhne 77.15 330 eP P 15 03 47.9 +1.0
VYHS pmax pmax
comp=Z,33nm,1.1s
VYHS Vyhne 77.15 330 eP P 15 03 47.9 +1.0
Y31A Rekieta Farm, 77.16 54 ⇓P P 15 03 47.7 +0.5
baz=77,SNR=9.2
Z30A Sanderson Ranc 77.16 55 ⇑P P 15 03 48.0 +0.7
baz=77,SNR=35
228A UT Block 9, Go 77.17 57 ⇑P P 15 03 48.0 +0.7
baz=77,SNR=10
DRGR 77.18 327 ⇑P P 15 03 47.7 +0.5
DRGR 77.18 327⇑iP P 15 03 47.7 +0.5
VRAC Vranov 77.21 332⇑iP P 15 03 48.1 +0.9
129A Stewart Farms, 77.22 56 ⇑P P 15 03 48.2 +0.6
baz=77
PRA Prague 77.23 333 ⇑P P 15 03 47.0 -0.3
PSZ Piszkesteto 77.27 329 ⇑P P 15 03 48.4 +0.8
PSZ Piszkesteto 77.27 329 eP P 15 03 45.5 -2.2
comp=Z,68nm,0.9s
PSZ Piszkesteto 77.27 329⇑iP P 15 03 48.4 +0.8
PSZ Piszkesteto 77.27 329⇑eP P 15 03 48.6 +1.0
PRU Pruhonice 77.27 333⇑iP P 15 03 48.3 +0.8
PRU eS S 15 13 28.0 -4.9
PRU MLR MLR
comp=Z,2µm,19.5s
PRU Pruhonice 77.27 333⇑iP P 15 03 48.3 +0.8
PRU eS S 15 13 28.0 -4.9
PRU AMS AMS 15 41 20.0
comp=Z,2µm,19.5s
SECR 77.30 324⇑iP P 15 03 48.8 +1.0
KESW Keswick, Cumbr 77.35 345⇑eP P 15 03 48.4 +0.6
KESW AMB AMB 15 03 51.1
comp=Z,173nm,1.0s
KESW AMS AMS 15 31 57.0
comp=Z,547nm,35.0s
KESW Keswick, Cumbr 77.35 345 P P 15 03 48.4 +0.6
KESW AMB AMB 15 03 51.1
comp=Z,173nm,1.0s
KESW AMS AMS 15 31 57.0
comp=Z,547nm,35.0s
GAL1 Galloway 77.36 346 eP P 15 03 46.9 -0.9
GAL1 AMB AMB 15 03 50.6
comp=Z,81nm,1.0s
GAL1 AMS AMS 15 38 12.0
comp=Z,569nm,19.1s
GAL1 Galloway 77.36 346 P P 15 03 46.9 -0.9
GAL1 AMB AMB 15 03 50.6
comp=Z,81nm,1.0s
GAL1 AMS AMS 15 38 12.0
comp=Z,569nm,19.1s
BHD Baghdad 77.37 305 ex P 15 03 48.2 -0.1
BHD ex x 15 13 30.0
426A McDonald Obser 77.37 59 ⇑P P 15 03 49.2 +0.5
baz=77,SNR=7.2
VOIR 77.39 325 ⇓P P 15 03 49.4 +1.1
VOIR 77.39 325⇓iP P 15 03 49.4 +1.1
WMOK Wichita Mounta 77.41 53 eP P 15 03 48.7 +0.1
WMOK pmax pmax
comp=Z,26nm,0.9s
WMOK MLR MLR
comp=Z,739nm,20.0s
WMOK Wichita Mounta 77.41 53 eP P 15 03 48.7 +0.1
comp=Z,26nm,0.9s
WMOK LR LR
comp=Z,739nm,20.0s
PSN Preselentsi 77.51 322 iP P 15 03 50.1 +1.2
SULR 77.52 324⇓iP P 15 03 47.2 -1.7
TANN Tannenbergstha 77.53 335 eP P 15 03 49.5 +0.5
comp=Z,42nm,1.6s
WERD Werda 77.55 335 eP P 15 03 49.7 +0.6
comp=Z,36nm,1.1s
PLN Plauen 77.56 335 eP P 15 03 49.8 +0.7
comp=Z,168nm,1.2s
MOX Moxa 77.57 335 eP P 15 03 49.7 +0.5
MOX pmax pmax
comp=Z,28nm,0.8s
MOX Moxa 77.57 335 eP P 15 03 49.7 +0.5
comp=Z,28nm,0.8s
328A Wristen Ranch, 77.57 58 ⇓P P 15 03 50.6 +1.0
baz=77,SNR=41
TREC Trest 77.58 332 eP P 15 03 50.1 +0.8
TREC MLR MLR
comp=Z,2µm,18.3s
TREC Trest 77.58 332⇑eP P 15 03 50.1 +0.8
TREC AMS AMS 15 42 00.0
comp=Z,2µm,18.3s
Y32A R-V Farms, Ver 77.59 54 ⇓P P 15 03 50.3 +0.7
baz=77,SNR=14
427A Hayter Ranch, 77.61 58 ⇑P P 15 03 50.7 +0.8
baz=78,SNR=13
ARR Arges 77.61 325⇓iP P 15 03 51.0 +1.4
GUNZ Gunzen 77.61 335 eP P 15 03 50.1 +0.6
comp=Z,46nm,1.0s
WERN Wernitzgruen 77.67 335 eP P 15 03 50.5 +0.7
comp=Z,56nm,0.9s
WTSB Winterswijk 77.69 339 eP P 15 03 50.2 +0.5
comp=Z,53nm,0.7s
NKC Novy Kostel 77.69 335⇑iP P 15 03 50.4 +0.5
NKC e 15 03 56.8
NKC eS S 15 13 32.1 -5.4
NKC eS S 15 13 34.5 -3.0
NKC MLR MLR
comp=Z,2µm,19.9s
NKC Novy Kostel 77.69 335⇑iP P 15 03 50.4 +0.5
NKC ePCP PcP 15 03 56.8 -3.0
NKC ex x 15 13 32.1
NKC eS S 15 13 34.5 -3.0
NKC AMS AMS 15 43 00.0
comp=Z,2µm,19.9s
Z31A Sharp Cattle R 77.70 55 ⇑P P 15 03 50.7 +0.5
baz=78,SNR=18
229A Bryant Ranch, 77.73 57 ⇓P P 15 03 51.4 +0.9
baz=78,SNR=7.8
130A Snyder 77.76 56 ⇓P P 15 03 51.2 +0.6
baz=78
526A Mary Lane Ranc 77.77 59 ⇑P P 15 03 51.9 +1.1
baz=78,SNR=20
DEV Deva 77.86 326 P P 15 03 51.7 +0.8
DEV Deva 77.86 326⇑iP P 15 03 51.5 +0.6
HDIL Hopedale 77.87 43 eP P 15 03 49.9 -1.1
comp=Z,57nm,0.7s
UBBA Unterbreizbach 77.88 336 eP P 15 03 51.1 +0.4
comp=Z,24nm,0.9s
LOT Lotru 77.89 325⇓iP P 15 03 51.4 +0.2
BUD Budapest 77.95 329⇓eP P 15 03 54.7 +3.4
329A Wagon Wheel Ra 77.98 57 ⇓P P 15 03 52.9 +1.0
baz=78,SNR=18
527A Woodward Ranch 78.00 59 ⇑P P 15 03 53.0 +0.9
baz=78,SNR=17
MANZ Manzenberg 78.02 335 eP P 15 03 52.3 +0.6
comp=Z,27nm,0.9s
131A Roby 78.03 55 ⇑P P 15 03 52.9 +0.8
baz=78,SNR=14
BUG Bochum-Univer 78.05 338 eP P 15 03 52.3 +0.5
comp=Z,84nm,1.1s
Z32A Haskell 78.08 54 ⇑P P 15 03 52.8 +0.5
baz=78,SNR=17
626A Big Bend Ranch 78.11 60 ⇑P P 15 03 53.4 +0.7
baz=78,SNR=24
LHO Holmfirth 78.12 344⇑eP P 15 03 52.5 +0.3
LHO Holmfirth 78.12 344 P P 15 03 52.5 +0.3
UMR Umm Al-Rimmam 78.12 300 eP P 15 03 53.0 +0.4
UMR AMb AMB 15 03 55.1
comp=Z,511nm,0.7s
428A Kincaid Ranch, 78.12 58 ⇓P P 15 03 53.7 +1.0
baz=78,SNR=15
BR131 Keskin Array S 78.16 316 eP P 15 03 53.1 +0.2
comp=Z,36nm,0.8s
BRTR Keskin Array B 78.16 316 P P 15 03 53.5 +0.7
BRTR Keskin Array B 78.16 316 P P 15 03 53.5 +0.7
comp=Z,50nm,0.8s,baz=82,slow=4.3,SNR=126
BRTR LR LR 15 44 18.6
comp=Z,1µm,18.3s,baz=17,slow=40
TUL1 Tulsa 78.16 50 ⇑P P 15 03 53.2 +0.5
baz=78
HUMR Humele 78.16 324⇓iP P 15 03 51.0 -1.6
MIB Mutribah 78.17 301 eP P 15 03 53.3 +0.5
MIB AMb AMB 15 03 55.8
comp=Z,553nm,0.8s
ROTZ Rotzenmuhle 78.18 335 eP P 15 03 53.7 +1.1
comp=Z,55nm,0.9s
230A Sterling City 78.19 56 ⇑P P 15 03 53.7 +0.7
baz=78,SNR=9.5
PRD Provadia 78.24 322 iP P 15 03 54.2 +1.2
PKSG 78.25 330⇑eP P 15 03 54.1 +1.1
STKA Stephens Creek 78.26 189 P P 15 03 53.0 0.0
STKA Stephens Creek 78.26 189 P P 15 03 53.0 0.0
comp=Z,18nm,1.0s,baz=349,slow=8.2,SNR=18
PKS7 Kunszentmiklos 78.27 329⇓eP P 15 03 54.6 +1.5
GZR Gura Zlata 78.32 326 ⇓P P 15 03 52.1 -1.4
GZR Gura Zlata 78.32 326⇓iP P 15 03 52.1 -1.4
KHC Kasperske Hory 78.33 333⇑iP P 15 04 54.1 +0.7
KHC e 15 04 10.0
KHC e 15 04 15.5
KHC eS S 15 13 34.1 -10
KHC MLR MLR
comp=Z,2µm,18.4s
KHC Kasperske Hory 78.33 333 eP P 15 03 53.9 +0.4
comp=Z,87nm,0.9s
KHC Kasperske Hory 78.33 333⇑iP P 15 03 54.1 +0.7
KHC epP pP 15 04 10.0 +1.2
KHC esP sP 15 04 15.5 +0.6
KHC ex x 15 13 34.1
KHC AMS AMS 15 42 30.0
comp=Z,2µm,18.4s
AEU East Anglia Un 78.37 342 eP P 15 03 54.2 +0.7
AEU East Anglia Un 78.37 342 P P 15 03 54.2 +0.7
KBD Kabd 78.41 300 eP P 15 03 54.5 +0.3
KBD AMb AMB 15 03 56.8
comp=Z,232nm,0.7s
ANTO Ankara 78.45 317 eP P 15 03 54.0 -0.3
ANTO pmax pmax
comp=Z,95nm,0.8s
ANTO Ankara 78.45 317 eP P 15 03 54.0 -0.3
comp=Z,95nm,0.8s
ANTO Ankara 78.45 317 P P 15 03 55.9 +1.5
SNR=18
528A Cox Ranch, San 78.47 58 ⇓P P 15 03 55.8 +1.2
baz=78,SNR=18
PKST T"s 78.49 330⇑eP P 15 03 55.0 +0.7
ABTX Abilene, Hawle 78.49 55 ⇑P P 15 03 55.3 +0.6
baz=78
330A Mertzon 78.51 57 ⇓P P 15 03 55.3 +0.5
baz=78,SNR=13
PKS6 Bocsa 78.51 329⇓eP P 15 03 55.2 +0.8
WET Wettzell 78.53 334 eP P 15 03 55.6 +1.0
WET pmax pmax
comp=Z,84nm,1.0s
WET Wettzell 78.53 334 eP P 15 03 55.6 +1.0
comp=Z,84nm,1.0s
GRF Grafenberg Arr 78.54 335 eP P 15 03 55.6 +1.0
GRF pmax pmax
comp=Z,126nm,0.7s
GRF Grafenberg Arr 78.54 335 eP P 15 03 55.6 +1.0
comp=Z,126nm,0.7s
GRF L L 15 44 32.4
comp=Z,1µm,18.3s
GEC2 GERESS Array S 78.54 333 eP P 15 03 55.1 +0.4
GEC2 pmax pmax
comp=Z,39nm,1.0s
GEC2 GERESS Array S 78.54 333 eP P 15 03 55.1 +0.4
comp=Z,39nm,1.0s
GERES GERESS Array B 78.54 333 P P 15 03 54.5 -0.2
GERES GERESS Array B 78.54 333 P P 15 03 54.5 -0.2
comp=Z,25nm,0.7s,baz=32,slow=5.2,SNR=54
GERES LR LR 15 43 00.1
comp=Z,2µm,18.0s,baz=185,slow=39
GRFO Grafenberg 78.54 335 eP P 15 03 53.9 -0.7
GRFO pmax pmax
comp=Z,99nm,0.7s
GRFO Grafenberg 78.54 335 eP P 15 03 53.9 -0.7
comp=Z,99nm,0.7s
TXAR Lajitas Array 78.55 60 P P 15 03 56.1 +1.0
TXAR PKKPbc **PKKPbc 15 22 51.4 +3.1**
TXAR Lajitas Array 78.55 60 P P 15 03 56.1 +1.0
comp=Z,22nm,0.7s,baz=298,slow=3.8,SNR=92
TXAR PKKPbc **PKKPbc 15 22 51.4 +3.1**
comp=Z,1.1nm,0.8s,baz=134,slow=5.2,SNR=7.5
BZS Buzias 78.58 327 ⇑P P 15 03 54.7 -0.1
BZS Buzias 78.58 327⇑iP P 15 03 54.7 -0.1
QRN Al-Qurain 78.58 300 eP P 15 03 55.6 +0.4
QRN AMb AMB 15 03 57.8
comp=Z,460nm,0.7s
231A Bronte 78.62 56 ⇑P P 15 03 55.8 +0.5
baz=78,SNR=15
NAY Al-Naaiem 78.63 300 eP P 15 03 55.4 0.0
NAY AMb AMB 15 03 58.3
comp=Z,169nm,0.9s
SOP Sopron 78.63 331⇑eP P 15 03 56.4 +1.3
627A Terlingua Ranc 78.63 59 ⇑P P 15 03 56.3 +0.8
baz=78,SNR=17
CONA Conrad Observa 78.65 332 iP P 15 03 56.4 +1.1
comp=Z,74nm,0.7s,SNR=67
CONA Conrad Observa 78.65 332 iP P 15 03 56.4 +1.1
comp=Z,74nm,0.7s
429A Davenport Ranc 78.66 58 ⇑P P 15 03 56.0 +0.4
baz=78,SNR=7.0
RDF Al-Radifah 78.68 300 eP P 15 03 56.4 +0.7
RDF AMb AMB 15 03 58.7
comp=Z,410nm,0.8s
ZIMR 78.72 323 ⇑P P 15 03 55.4 -0.2
ZIMR 78.72 323⇑iP P 15 03 55.4 -0.2
PKS2 Kecel 78.73 329⇓eP P 15 03 56.6 +1.0
WPM1 Penmaenmawr 78.76 345⇓eP P 15 03 56.0 +0.2
WPM1 Penmaenmawr 78.76 345 P P 15 03 56.0 +0.2
SZH Strazhica 78.81 323 iP P 15 03 56.3 +0.2
529A Stev Forest Ra 78.84 58 ⇓P P 15 03 57.4 +0.8
baz=79,SNR=20
TNS Taunus Mts 78.84 337 eP P 15 03 57.0 +0.7
TNS pmax pmax
comp=Z,82nm,1.0s
TNS Taunus Mts 78.84 337 eP P 15 03 57.0 +0.7
comp=Z,82nm,1.0s
628A Black Gap, Mar 78.91 59 ⇑P P 15 03 57.7 +0.7
baz=79,SNR=9.1
YLL Llanberis 78.92 346 eP P 15 03 56.9 +0.4
YLL Llanberis 78.92 346 P P 15 03 56.9 +0.4
430A Baggett Ranch, 78.93 57 ⇓P P 15 03 57.7 +0.6
baz=79,SNR=19
PKS9 Tamasi 78.98 329⇓eP P 15 03 57.4 +0.4
FOEL Foel Wylfa 78.99 345 eP P 15 03 56.6 -0.4
FOEL AMB AMB 15 04 00.1
comp=Z,92nm,0.8s
FOEL AMS AMS 15 40 45.8
comp=Z,684nm,22.1s
FOEL Foel Wylfa 78.99 345 P P 15 03 56.6 -0.4
FOEL AMB AMB 15 04 00.1
comp=Z,92nm,0.8s
FOEL AMS AMS 15 40 45.8
comp=Z,684nm,22.1s
HGN Heimansgroeve 79.01 339 eP P 15 03 57.1 0.0
comp=Z,69nm,1.0s
331A San Angelo 79.01 56 ⇓P P 15 03 58.0 +0.5
baz=79,SNR=9.7
232A Coleman 79.03 55 ⇑P P 15 03 58.4 +0.7
baz=79,SNR=22
SFIN Scholer Farm 79.03 42 ⇓P P 15 03 57.5 +0.1
baz=79
BEBN Eben Emael 79.04 339 P P 15 03 57.4 +0.1
comp=Z,39nm,1.2s
MEM Membach 79.13 339 P P 15 03 58.3 +0.5
comp=Z,70nm,0.9s
DLF Lyons Farm 79.16 347⇑iP P 15 03 58.4 +0.5
PKSM Moragy 79.17 329 ⇑P P 15 03 58.0 0.0
PKSM Moragy 79.17 329⇑iP P 15 03 58.0 0.0
PKSM Moragy 79.17 329⇑eP P 15 03 58.1 0.0
MOA Molln 79.24 332⇑iP P 15 03 59.0 +0.6
comp=Z,51nm,0.8s,SNR=20
MOA Molln 79.24 332⇑iP P 15 03 59.0 +0.6
comp=Z,51nm,0.8s
HLM1 Long Mynd 79.29 345⇑eP P 15 03 58.8 +0.2
HLM1 AMB AMB 15 04 00.4
comp=Z,66nm,2.1s
HLM1 Long Mynd 79.29 345 P P 15 03 58.8 +0.2
HLM1 AMB AMB 15 04 00.4
comp=Z,66nm,2.1s
TOD Tromm 79.30 337 eP P 15 03 59.2 +0.4
TOD Tromm 79.30 337 eP P 15 03 59.2 +0.4
530A J-C Ranch, Com 79.34 58 ⇓P P 15 04 00.2 +0.9
baz=79,SNR=24
332A Millersview 79.35 56 ⇑P P 15 04 00.2 +0.8
baz=79,SNR=19
ARSA Arzberg 79.35 331⇑iP P 15 03 59.8 +0.7
comp=Z,51nm,1.2s,SNR=20
ARSA Arzberg 79.35 331⇑iP P 15 03 59.8 +0.7
comp=Z,51nm,1.2s
431A Sonora 79.37 57 ⇑P P 15 04 00.0 +0.5
baz=79,SNR=21
ABH Alteburg 79.39 337 eP P 15 03 59.6 +0.3
BCLA Clavier 79.48 339 P P 15 04 00.1 +0.4
comp=Z,52nm,1.5s
FORT Forrest 79.58 201 eP P 15 04 00.3 +0.1
comp=Z,76nm,0.8s
SSW Stow on the Wo 79.62 344⇑eP P 15 04 01.2 +0.9
SSW Stow on the Wo 79.62 344 P P 15 04 01.2 +0.9
MPEP Malo Peshtene 79.64 324 iP P 15 04 01.4 +0.7
SNF Seneffe 79.65 340 P P 15 04 01.2 +0.6
comp=Z,24nm,1.0s
RUP Ruppelstein 79.69 338 eP P 15 04 01.2 +0.3
RUP Ruppelstein 79.69 338 eP P 15 04 01.2 +0.3
432A Menard 79.70 56 ⇑P P 15 04 01.8 +0.5
baz=80,SNR=22
ELSH Elham, Standar 79.78 342 eP P 15 04 01.9 +0.6
ELSH AMB AMB 15 04 02.6
comp=Z,229nm,1.0s
ELSH Elham, Standar 79.78 342 P P 15 04 01.9 +0.6
ELSH AMB AMB 15 04 02.6
comp=Z,229nm,1.0s
531A Rocksprings 79.79 57 ⇓P P 15 04 02.4 +0.7
baz=80,SNR=17
RJOB Jochberg 79.80 333 eP P 15 04 02.6 +1.0
comp=Z,64nm,0.8s
KOGS Kog 79.81 331 iP P 15 04 01.6 +0.1
MCH1 Michaelchurch 79.81 344 eP P 15 04 01.3 -0.1
MCH1 AMB AMB 15 04 03.9
comp=Z,126nm,1.0s
MCH1 AMS AMS 15 33 29.6
comp=Z,625nm,27.8s
MCH1 Michaelchurch 79.81 344 P P 15 04 01.3 -0.1
MCH1 AMB AMB 15 04 03.9
comp=Z,126nm,1.0s
MCH1 AMS AMS 15 33 29.6
comp=Z,625nm,27.8s
FUR Furstenfeldbru 79.89 334 eP P 15 04 02.9 +0.9
FUR pmax pmax
comp=Z,88nm,0.9s
FUR Furstenfeldbru 79.89 334 eP P 15 04 02.9 +0.9
comp=Z,88nm,0.9s
GIVF Givet 79.89 339⇑iP P 15 04 02.2 +0.3
comp=Z,102nm,1.0s
GIVF Givet 79.89 339⇑iP P 15 04 02.2 +0.3
GIVF pmax pmax
comp=Z,102nm,1.0s
GIVF Givet 79.89 339⇑iP P 15 04 02.2 +0.3
comp=Z,102nm,1.0s
BBOO Buckleboo 79.93 193 eP P 15 04 01.7 -0.4
comp=Z,730nm,1.4s
STU Stuttgart 79.95 336 eP P 15 04 02.0 -0.3
STU pmax pmax
comp=Z,74nm,0.8s
STU Stuttgart 79.95 336 eP P 15 04 02.9 +0.6
comp=Z,84nm,0.9s
STU Stuttgart 79.95 336 eP P 15 04 02.0 -0.3
comp=Z,74nm,0.8s
DOU Dourbes 79.96 339 P P 15 04 02.6 +0.4
comp=Z,24nm,1.0s
WLF Walferdange 79.96 338 P P 15 04 03.0 +0.8
comp=Z,12nm,0.9s
WLF Walferdange 79.96 338 eP P 15 04 01.4 -0.9
WLF pmax pmax
comp=Z,27nm,0.8s
WLF Walferdange 79.96 338 eP P 15 04 03.1 +0.8
comp=Z,153nm,2.3s
WLF Walferdange 79.96 338 eP P 15 04 01.4 -0.9
comp=Z,27nm,0.8s
DIM Dimitrovgrad 79.97 322 iP P 15 04 03.5 +1.0
JCT Junction City 79.99 56 eP P 15 04 03.2 +0.4
JCT pmax pmax
comp=Z,43nm,1.1s
JCT Junction City 79.99 56 eP P 15 04 03.2 +0.4
comp=Z,43nm,1.1s
JCT Junction City 79.99 56 ⇓P P 15 04 03.4 +0.6
baz=80,SNR=15
SOKA Soboth 80.02 331⇑iP P 15 04 03.1 +0.4
comp=Z,123nm,1.1s
SOKA Soboth 80.02 331⇑iP P 15 04 03.1 +0.4
comp=Z,123nm,1.1s
PERS Pernice 80.02 331 iP P 15 04 03.2 +0.4
PERS e 15 04 39.4
SWN1 Swindon 80.04 344⇑eP P 15 04 03.6 +0.9
SWN1 AMB AMB 15 04 06.1
comp=Z,268nm,1.5s
SWN1 Swindon 80.04 344 P P 15 04 03.6 +0.9
SWN1 AMB AMB 15 04 06.1
comp=Z,268nm,1.5s
GROS Grobnik 80.05 331 iP P 15 04 03.2 +0.3
BAIF Baives 80.08 339⇑iP P 15 04 03.4 +0.5
comp=Z,114nm,1.1s
BAIF Baives 80.08 339⇑iP P 15 04 03.4 +0.5
BAIF pmax pmax
comp=Z,114nm,1.1s
BAIF Baives 80.08 339⇑iP P 15 04 03.4 +0.5
comp=Z,114nm,1.1s
WOL Wolverton 80.11 343⇑eP P 15 04 03.4 +0.3
WOL AMB AMB 15 04 05.6
comp=Z,188nm,0.8s

WOL **Wolverton** 80.11 343 P P 15 04 03.4 +0.3
WOL AMB AMB 15 04 05.6
comp=Z,188nm,0.8s
PGB **Panagyurishte** 80.13 324 *i* P P 15 04 03.9 +0.5
LANF **Langenberg** 80.15 337 *eP* P 15 04 04.0 +0.7
LANF **Langenberg** 80.15 337 *eP* P 15 04 04.0 +0.7
LANF **Langenberg** 80.15 337 *eP* P 15 04 04.0 +0.7
532A **Rocksprings** 80.19 57 ⇓P P 15 04 04.5 +0.5
baz=80,SNR=22
WHTX **Lake Whitney** 80.19 54 ⇑P P 15 04 04.5 +0.6
baz=80
KBA **Koelnbreinsper** 80.21 333 *i* P P 15 04 04.7 +0.8
KBA pmax pmax
comp=Z,189nm,0.9s
KBA **Koelnbreinsper** 80.21 333 *i* P P 15 04 04.7 +0.8
comp=Z,188nm,0.9s,SNR=61
KBA **Koelnbreinsper** 80.21 333 *i* P P 15 04 04.7 +0.8
comp=Z,188nm,0.9s
OBKA **Obir** 80.32 332⇑ *i* P P 15 04 04.7 +0.3
comp=Z,49nm,0.8s,SNR=15
OBKA **Obir** 80.32 332⇑ *i* P P 15 04 04.7 +0.3
comp=Z,49nm,0.8s
631A **Perdido Creek** 80.33 58 ⇑P P 15 04 05.3 +0.6
baz=80,SNR=8.3
MIAR **Mount Ida** 80.37 50 *eP* P 15 04 02.9 -1.9
MIAR *e**PP pP 15 04 17.8 -2.4
MIAR pmax pmax
comp=Z,42nm,0.9s
MIAR **Mount Ida** 80.37 50 *eP* P 15 04 02.9 -1.9
comp=Z,42nm,0.9s
MIAR *ep*P pP 15 04 17.8 -2.4
DIVS **Divibare** 80.48 327 P P 15 04 05.2 -0.1
VTS **Vitosha** 80.49 324 P P 15 04 05.9 +0.4
VTS **Vitosha** 80.49 324 *i* P P 15 04 06.1 +0.6
MYKA **Terra Mystica** 80.51 332⇑ P P 15 04 05.4 0.0
comp=Z,32nm,0.7s
MYKA **Terra Mystica** 80.51 332⇑ *i* P P 15 04 05.5 0.0
comp=Z,32nm,0.7s
WATA **Walderalm** 80.54 334 *i* P P 15 04 06.5 +0.8
WATA pmax pmax
comp=Z,189nm,1.0s
WATA **Walderalm** 80.54 334 *i* P P 15 04 06.5 +0.8
comp=Z,189nm,1.0s,SNR=36
WATA **Walderalm** 80.54 334 *i* P P 15 04 06.5 +0.8
comp=Z,189nm,1.0s
WTTA **Wattenberg** 80.58 334⇑ *i* P P 15 04 06.9 +1.0
WTTA pmax pmax
comp=Z,122nm,0.7s
WTTA **Wattenberg** 80.58 334⇑ *i* P P 15 04 06.9 +1.0
comp=Z,122nm,0.7s
WTTA **Wattenberg** 80.58 334⇑ *i* P P 15 04 06.9 +1.0
comp=Z,122nm,0.7s
BFO **Black Forest** 80.59 336 *eP* P 15 04 05.1 -0.7
BFO pmax pmax
comp=Z,80nm,0.9s
BFO **Black Forest** 80.59 336 *eP* P 15 04 06.3 +0.5
comp=Z,84nm,0.9s
BFO **Black Forest** 80.59 336 *eP* P 15 04 05.1 -0.7
comp=Z,80nm,0.9s
RETA **Reutte** 80.65 334 *i* P P 15 04 06.9 +0.8
comp=Z,81nm,0.8s,SNR=28
RETA **Reutte** 80.65 334 *i* P P 15 04 06.9 +0.8
comp=Z,81nm,0.8s
SPAK **Spaichingen-Ko** 80.67 336 *eP* P 15 04 06.6 +0.3
MOTA **Moosalm** 80.67 334⇑ *i* P P 15 04 07.2 +0.8
MOTA pmax pmax
comp=Z,152nm,0.8s
MOTA **Moosalm** 80.67 334⇑ *i* P P 15 04 07.2 +0.8
comp=Z,152nm,0.8s,SNR=64
MOTA **Moosalm** 80.67 334⇑ *i* P P 15 04 07.2 +0.8
comp=Z,152nm,0.8s
PARMO **Parma** 80.69 46 *eP* P 15 04 06.9 +0.5
ALN **Alexandroupoli** 80.70 321 P P 15 04 07.0 +0.6
LONY **Lake Ozonia** 80.71 32 *eP* P 15 04 05.3 -1.1
comp=Z,15nm,0.9s
632A **Uvalde** 80.72 57 ⇑P P 15 04 07.4 +0.7
baz=81,SNR=10
ERPA **Erie** 80.73 36 *eP* P 15 04 06.8 +0.3
comp=Z,50nm,0.6s
ERPA LR LR
comp=Z,785nm,20.0s
LJU **Ljubljana** 80.74 331 *i* P P 15 04 06.2 -0.4
ABTA **Abfaltersbach** 80.77 333⇑ *i* P P 15 04 06.7 -0.1
comp=Z,47nm,1.0s,SNR=15
ABTA **Abfaltersbach** 80.77 333⇑ *i* P P 15 04 06.7 -0.1
comp=Z,47nm,1.0s
CDF **Champ du Feu** 80.81 337⇑ *i* P P 15 04 07.3 +0.3
comp=Z,157nm,0.9s
CDF **Champ du Feu** 80.81 337⇑ *i* P P 15 04 07.3 +0.3
CDF pmax pmax
comp=Z,157nm,0.9s
CDF **Champ du Feu** 80.81 337⇑ *i* P P 15 04 07.3 +0.3
comp=Z,157nm,0.9s
CADS **Cadrg** 80.84 332 *i* P P 15 04 06.4 -0.8
HEX **Exmoor** 80.84 345⇑ *i* P P 15 04 07.7 +0.7
HEX **Exmoor** 80.84 345 P P 15 04 07.7 +0.7
LIBD **Limburg** 80.96 337 *eP* P 15 04 08.5 +0.8
LIBD **Limburg** 80.96 337 *eP* P 15 04 08.5 +0.8
BOJS **Bojanci** 80.97 331 *i* P P 15 04 07.9 +0.1
ACSO **Alum Creek Sta** 81.01 39 *eP* P 15 04 07.6 -0.5
comp=Z,34nm,0.7s
ECH **Echery** 81.02 337 *eP* P 15 04 07.9 -0.2
ECH pmax pmax
comp=Z,77nm,0.8s
ECH **Echery** 81.02 337 *eP* P 15 04 07.9 -0.2
comp=Z,77nm,0.8s
ECH **Echery** 81.02 337 *eP* P 15 04 08.3 +0.2
VAL **Valentia** 81.02 349 *eP* P 15 04 08.0 +0.1
HTL **Hartland** 81.04 345⇑ *eP* P 15 04 08.8 +0.8
HTL AMB AMB 15 04 11.4
comp=Z,106nm,1.0s
HTL **Hartland** 81.04 345 P P 15 04 08.8 +0.8
HTL AMB AMB 15 04 11.4
comp=Z,106nm,1.0s
ALLY **Alegheny Colle** 81.05 37 *eP* P 15 04 07.9 -0.4
comp=Z,51nm,0.7s
FETA **Feichten** 81.08 334 *i* P P 15 04 09.3 +0.7
comp=Z,53nm,1.2s,SNR=25
FETA **Feichten** 81.08 334 *i* P P 15 04 09.3 +0.7
comp=Z,53nm,1.2s
PAGF **Fort de Pagny** 81.09 338⇑ *i* P P 15 04 09.3 +0.9
comp=Z,101nm,0.7s
PAGF **Fort de Pagny** 81.09 338⇑ *i* P P 15 04 09.3 +0.9
comp=Z,101nm,0.7s
DAVA **Damuels** 81.09 335⇑ *i* P P 15 04 09.2 +0.6
comp=Z,67nm,0.7s,SNR=32
DAVA **Damuels** 81.09 335⇑ *i* P P 15 04 09.2 +0.6
comp=Z,67nm,0.7s
FELD **Feldberg im Sc** 81.10 336 *eP* P 15 04 08.9 +0.3
MMB **Musomiste** 81.11 323 *i* P P 15 04 09.5 +0.8
WCI **Wyandotte Cave** 81.12 43 *eP* P 15 04 06.9 -1.9
WCI pmax pmax
comp=Z,34nm,0.9s
WCI **Wyandotte Cave** 81.12 43 *eP* P 15 04 06.9 -1.9
comp=Z,34nm,0.9s
ISP **Isparta** 81.15 317 *eP* P 15 04 09.4 +0.3
ISP pmax pmax
comp=Z,52nm,0.8s
ISP **Isparta** 81.15 317 *eP* P 15 04 09.3 +0.3
comp=Z,52nm,0.8s
ISP **Isparta** 81.15 317⇑ *i* P P 15 04 09.9 +0.9
732A **Laxson Ranch,** 81.19 58 ⇓P P 15 04 10.4 +1.1
baz=81,SNR=17
NVR **Nevrokopi** 81.25 323 P P 15 04 09.8 +0.4
NVR **Nevrokopi** 81.25 323 *eP* P 15 04 10.0 +0.6
KAVA **Kavala** 81.27 322 P P 15 04 09.7 +0.2
MEZF **Maizieres J'vi** 81.31 338⇑ *i* P P 15 04 10.3 +0.8
comp=Z,298nm,0.9s
MEZF **Maizieres J'vi** 81.31 338⇑ *i* P P 15 04 10.3 +0.8
comp=Z,298nm,0.9s
THEF **They Montfort** 81.33 338 *eP* P 15 04 10.2 +0.6
THEF **They Montfort** 81.33 338 *eP* P 15 04 10.2 +0.6
THEF **They Montfort** 81.33 338 *eP* P 15 04 10.2 +0.6
MOF **Molkenrain** 81.36 337 *eP* P 15 04 10.0 +0.1
MOF **Molkenrain** 81.36 337 *eP* P 15 04 10.0 +0.1
MOF **Molkenrain** 81.36 337 *eP* P 15 04 10.0 +0.1
PLE **Pljevlja** 81.36 327⇑ *i* P P 15 04 10.8 +0.7
NCB **Newcomb** 81.40 32 *eP* P 15 04 09.3 -0.8
comp=Z,21nm,0.9s
HAU **Haudompre** 81.43 337⇑ *i* P P 15 04 10.5 +0.3
comp=Z,119nm,0.8s
HAU *eR*
comp=Z,2µm,20.5s
HAU **Haudompre** 81.43 337⇑ *i* P P 15 04 10.5 +0.3
HAU pmax pmax
comp=Z,119nm,0.8s
HAU **Haudompre** 81.43 337⇑ *i* P P 15 04 10.5 +0.3
comp=Z,119nm,0.8s
HINF **Hinteralfeld** 81.47 337⇑ *i* P P 15 04 10.5 0.0
comp=Z,77nm,0.8s
HINF **Hinteralfeld** 81.47 337⇑ *i* P P 15 04 10.5 0.0
HINF pmax pmax
comp=Z,77nm,0.8s
HINF **Hinteralfeld** 81.47 337⇑ *i* P P 15 04 10.5 0.0
comp=Z,77nm,0.8s
DYA **Yadsworthy** 81.47 345⇑ *eP* P 15 04 10.7 +0.4
DYA AMB AMB 15 04 13.4
comp=Z,112nm,1.4s
DYA AMS AMS 15 34 14.6
comp=Z,594nm,34.0s
DYA **Yadsworthy** 81.47 345 P P 15 04 10.7 +0.4
DYA AMB AMB 15 04 13.4
comp=Z,112nm,1.4s
DYA AMS AMS 15 34 14.6
comp=Z,594nm,34.0s
IVA **Berane** 81.56 326 *eP* P 15 04 11.4 +0.3
SFTF **Sexfontaines** 81.59 338⇑ *i* P P 15 04 11.6 +0.6
comp=Z,386nm,0.8s
SFTF **Sexfontaines** 81.59 338⇑ *i* P P 15 04 11.6 +0.6
comp=Z,386nm,0.8s
BBS **Basel-Blauen** 81.61 336 *eP* P 15 04 11.8 +0.6
BBS **Basel-Blauen** 81.61 336 *eP* P 15 04 11.8 +0.6
UPM **Unac-Piva** 81.66 327⇑ *i* P P 15 04 11.8 +0.1
SKO **Skopje** 81.72 325 *eP* P 15 04 12.5 +0.6
PVY **Plav** 81.77 326⇑ *i* P P 15 04 12.4 +0.1
KNT **Kendrikon** 81.81 324 P P 15 04 12.7 +0.4
LIA **Limnos Island** 81.89 321 P P 15 04 12.9 +0.2
LIA **Limnos Island** 81.89 321 *eP* P 15 04 12.5 -0.2
LOMF **Lomont** 81.90 337 *eP* P 15 04 13.5 +0.7
LOMF **Lomont** 81.90 337 *eP* P 15 04 13.5 +0.7
LOMF **Lomont** 81.90 337 *eP* P 15 04 13.5 +0.7
PRK **Paraskevi** 81.95 320 *eP* P 15 04 12.6 -0.5
NKY **Niksic** 81.96 327⇑ *i* P P 15 04 12.9 -0.3
TUE **Stuetta** 81.98 335 *eP* P 15 04 13.4 0.0
comp=Z,96nm,0.8s
CSS **Prodhromos** 82.04 313 P P 15 04 14.0 +0.4
CSS **Prodhromos** 82.04 313 *eP* P 15 04 12.7 -0.9
comp=Z,72nm,0.8s
OUR **Ouranopolis** 82.05 322 P P 15 04 13.6 +0.1
BRY **Bratogost** 82.05 327⇑ *i* P P 15 04 13.2 -0.5
WVT **Waverly** 82.06 45 *eP* P 15 04 12.0 -1.7
WVT pmax pmax
comp=Z,28nm,0.9s
WVT **Waverly** 82.06 45 *eP* P 15 04 12.0 -1.7
comp=Z,28nm,0.9s
SIGR **SIGRI** 82.17 321 P P 15 04 14.1 -0.1
TTG **Podgorica** 82.18 327⇑ *i* P P 15 04 14.1 -0.1
KSDI **Kefar Szold** 82.21 311 *eP* P 15 04 15.5 +0.9
PLG **Polygyros** 82.24 323 P P 15 04 14.3 -0.3
PLG **Polygyros** 82.24 323 *eP* P 15 04 14.3 -0.3
HNH **Hanover** 82.32 31 *eP* P 15 04 15.2 +0.2
comp=Z,19nm,0.8s
JSA **Saint Aubin** 82.33 343⇑ *eP* P 15 04 15.2 +0.4
JSA AMB AMB 15 04 18.2
comp=Z,107nm,1.0s
JSA **Saint Aubin** 82.33 343 P P 15 04 15.2 +0.4
JSA AMB AMB 15 04 18.2
comp=Z,107nm,1.0s
PHP **Peshkopia** 82.36 325 P P 15 04 14.8 -0.5
FLN **La Foliniere** 82.38 342⇑ *i* P P 15 04 15.5 +0.4
comp=Z,205nm,1.0s
FLN *eR*
comp=Z,1µm,21.0s
FLN **La Foliniere** 82.38 342⇑ *i* P P 15 04 15.5 +0.4
FLN pmax pmax
comp=Z,205nm,1.0s
FLN **La Foliniere** 82.38 342⇑ *i* P P 15 04 15.5 +0.4
comp=Z,205nm,1.0s
BUM **Brajici-Budva** 82.43 327⇑ *i* P P 15 04 15.5 -0.1
HCY **Herceg Novi** 82.46 327⇑ *i* P P 15 04 14.8 -0.9
LDF **La Druitiere** 82.46 342⇑ *i* P P 15 04 15.9 +0.3
comp=Z,145nm,1.0s
LDF **La Druitiere** 82.46 342⇑ *i* P P 15 04 15.9 +0.3
LDF pmax pmax
comp=Z,145nm,1.0s
LDF **La Druitiere** 82.46 342⇑ *i* P P 15 04 15.9 +0.3
comp=Z,145nm,1.0s
PAIG **Paliouri** 82.51 322 P P 15 04 15.7 -0.3
OXF **Oxford** 82.56 47 *eP* P 15 04 16.2 -0.1
OXF pmax pmax
comp=Z,52nm,0.8s
OXF **Oxford** 82.56 47 *eP* P 15 04 16.1 -0.1
comp=Z,52nm,0.8s
BIA **Bitola** 82.57 325 *eP* P 15 04 15.5 -0.9
PPT **Papeete** 82.58 125 LR LR 15 33 55.8
comp=Z,1µm,19.8s,baz=14,slow=30
ULC **Ulcinj** 82.59 326⇑ *i* P P 15 04 15.7 -0.7
PPT2 **Papeete2** 82.60 125 *eS* S 15 14 35.0 +5.3
comp=Z,1µm,32.2s
PPT2 *eLR* LR 15 30 18.8
comp=Z,3µm,23.0s,baz=323
FNA **Florina** 82.75 324 P P 15 04 17.0 -0.3
CHOS **Chios island** 82.75 320 P P 15 04 17.2 -0.2
LOR **Lormes** 82.76 339⇑ *i* P P 15 04 17.6 +0.4
comp=Z,205nm,0.9s
LOR *eR*
comp=Z,3µm,22.8s
LOR **Lormes** 82.76 339⇑ *i* P P 15 04 17.6 +0.4
comp=Z,205nm,0.9s
CABF **La Chapelle** 82.78 337⇑ *i* P P 15 04 18.0 +0.6
comp=Z,73nm,0.8s
CABF **La Chapelle** 82.78 337⇑ *i* P P 15 04 18.0 +0.6
CABF pmax pmax
comp=Z,73nm,0.8s
CABF **La Chapelle** 82.78 337⇑ *i* P P 15 04 18.0 +0.6
comp=Z,73nm,0.8s
GRR **Gorron** 82.81 342⇑ *i* P P 15 04 18.0 +0.6
comp=Z,265nm,1.0s
GRR **Gorron** 82.81 342⇑ *i* P P 15 04 18.0 +0.6
GRR pmax pmax
comp=Z,265nm,1.0s
GRR **Gorron** 82.81 342⇑ *i* P P 15 04 18.0 +0.6
comp=Z,265nm,1.0s
SSPA **Standing Stone** 82.83 36 *eP* P 15 04 16.9 -0.7
comp=Z,17nm,0.8s
LIT **Litokhoron** 82.87 323 P P 15 04 17.2 -0.7
TIR **Tirane** 82.87 326 *eP* P 15 04 16.9 -0.9
TIR pmax pmax
comp=Z,115nm,0.8s
TIR **Tirane** 82.87 326 *eP* P 15 04 16.9 -0.9
comp=Z,115nm,0.8s
OG01 **Vacheresse** 82.88 336 *eP* P 15 04 18.5 +0.6
OG01 **Vacheresse** 82.88 336 *eP* P 15 04 18.5 +0.6
KZN **Kozani** 82.99 324 *eP* P 15 04 17.7 -0.9
SSF **Saint Saulge** 83.04 339⇑ *i* P P 15 04 19.1 +0.5
comp=Z,122nm,0.9s
SSF **Saint Saulge** 83.04 339⇑ *i* P P 15 04 19.1 +0.5
SSF pmax pmax
comp=Z,122nm,0.9s
SSF **Saint Saulge** 83.04 339⇑ *i* P P 15 04 19.1 +0.5
comp=Z,122nm,0.9s
AOS **Alonnisos** 83.06 322 P P 15 04 18.5 -0.4
HYF **Humbligny** 83.06 339⇑ *i* P P 15 04 19.8 +1.0
HYF **Humbligny** 83.06 339⇑ *i* P P 15 04 19.8 +1.0
XOR **Xorichti** 83.19 322 P P 15 04 18.7 -0.9
NEST **Nestorio** 83.19 324 P P 15 04 19.6 -0.1
NEO **Neokhori** 83.23 322 *eP* P 15 04 18.9 -0.9
SKIA **Skiathos** 83.24 322 P P 15 04 19.1 -0.7
SGMF **Saint Gilles** 83.29 343⇑ *i* P P 15 04 20.4 +0.5
comp=Z,140nm,1.0s
SGMF **Saint Gilles** 83.29 343⇑ *i* P P 15 04 20.4 +0.5
SGMF pmax pmax
comp=Z,140nm,1.0s
SGMF **Saint Gilles** 83.29 343⇑ *i* P P 15 04 20.4 +0.5
comp=Z,140nm,1.0s
AVF **Avril sur Loir** 83.33 339⇑ *i* P P 15 04 20.8 +0.7
comp=Z,200nm,0.9s
AVF **Avril sur Loir** 83.33 339⇑ *i* P P 15 04 20.8 +0.7
AVF pmax pmax
comp=Z,200nm,0.9s
AVF **Avril sur Loir** 83.33 339⇑ *i* P P 15 04 20.8 +0.7
comp=Z,200nm,0.9s
SMF **Signal de Mont** 83.34 338⇑ *i* P P 15 04 20.9 +0.7
comp=Z,397nm,1.0s
SMF **Signal de Mont** 83.34 338⇑ *i* P P 15 04 20.9 +0.7
SMF pmax pmax
comp=Z,397nm,1.0s
SMF **Signal de Mont** 83.34 338⇑ *i* P P 15 04 20.9 +0.7
comp=Z,397nm,1.0s
ROSF **Rostrenen** 83.36 344⇑ *i* P P 15 04 20.9 +0.7
comp=Z,140nm,1.0s
ROSF **Rostrenen** 83.36 344⇑ *i* P P 15 04 20.9 +0.7
ROSF pmax pmax
comp=Z,140nm,1.0s
ROSF **Rostrenen** 83.36 344⇑ *i* P P 15 04 20.9 +0.7
comp=Z,140nm,1.0s
ABTO **Aybut** 83.38 288 P P 15 04 21.3 +0.4
SNR=7.1
THL **Klokotos Trika** 83.52 323 P P 15 04 20.0 -1.2
THL **Klokotos Trika** 83.52 323 *eP* P 15 04 21.7 +0.5
BST **Brest** 83.54 344 *eP* P 15 04 23.0 +1.8
BST **Brest** 83.54 344 *eP* P 15 04 23.0 +1.8
MRKA **Markates** 83.57 322 P P 15 04 21.0 -0.5
SMIA **Simia** 83.59 322 P P 15 04 21.3 -0.3
LPL **La Plagne** 83.61 336⇑ *i* P P 15 04 22.9 +1.0
comp=Z,102nm,0.9s
LPL **La Plagne** 83.61 336⇑ *i* P P 15 04 22.9 +1.0
LPL pmax pmax
comp=Z,102nm,0.9s
LPL **La Plagne** 83.61 336⇑ *i* P P 15 04 22.9 +1.0
comp=Z,102nm,0.9s
LPG **La Plagne** 83.62 336⇑ *i* P P 15 04 23.0 +1.0
comp=Z,120nm,0.8s
LPG **La Plagne** 83.62 336⇑ *i* P P 15 04 23.0 +1.0
LPG pmax pmax
comp=Z,120nm,0.8s
LPG **La Plagne** 83.62 336⇑ *i* P P 15 04 23.0 +1.0
comp=Z,120nm,0.8s
HRV **Adam Dziewonsk** 83.63 31 *eP* P 15 04 22.2 +0.5
HRV *e**PP pP 15 04 34.4 -2.8
HRV pmax pmax
comp=Z,31nm,0.8s
HRV **Adam Dziewonsk** 83.63 31 *eP* P 15 04 22.2 +0.5
comp=Z,31nm,0.8s
HRV *ep*P pP 15 04 34.4 -2.8
BGF **Bois d'Agland** 83.68 339⇑ *i* P P 15 04 22.6 +0.7
comp=Z,58nm,0.6s
BGF **Bois d'Agland** 83.68 339⇑ *i* P P 15 04 22.6 +0.7
BGF pmax pmax
comp=Z,58nm,0.6s
BGF **Bois d'Agland** 83.68 339⇑ *i* P P 15 04 22.6 +0.7
comp=Z,58nm,0.6s
SWET **Sewanee** 83.72 44 *eP* P 15 04 21.6 -0.8
comp=Z,51nm,0.9s
QUIF **Quistinic** 83.74 343 *eP* P 15 04 21.9 -0.3
comp=Z,43nm,0.9s
QUIF **Quistinic** 83.74 343 *eP* P 15 04 21.9 -0.3
QUIF pmax pmax
comp=Z,43nm,0.9s
QUIF **Quistinic** 83.74 343 *eP* P 15 04 21.9 -0.3
comp=Z,43nm,0.9s
VLC **Villacollemand** 83.75 333 *eP* P 15 04 20.9 -1.5
comp=Z,85nm,0.8s
ATAL **Atalanti** 83.83 322 P P 15 04 22.0 -0.8
AGG **Agios Georgios** 83.84 323 P P 15 04 21.7 -1.2
LKR **Lokris** 83.87 322 P P 15 04 22.1 -0.9
LKR **Lokris** 83.87 322 *eP* P 15 04 21.7 -1.3
JAN **Janina** 83.92 324 *eP* P 15 04 23.4 +0.1
PTL **Penteli** 84.00 321 P P 15 04 22.6 -1.2
PTL **Penteli** 84.00 321 *eP* P 15 04 22.5 -1.2
BNI **Bardonecchia** 84.05 336 *eP* P 15 04 24.1 +0.1
BNI pmax pmax
comp=Z,38nm,0.8s
BNI **Bardonecchia** 84.05 336 *eP* P 15 04 24.1 +0.1
comp=Z,38nm,0.8s
GDM **Grand'Maison** 84.07 336 *eP* P 15 04 25.2 +1.1
GDM **Grand'Maison** 84.07 336 *eP* P 15 04 25.2 +1.1
APE **Apeiranthos** 84.08 320 ⇓P P 15 04 22.9 -1.3
APE **Apeiranthos** 84.08 320⇓ *i* P P 15 04 22.9 -1.3
APE **Apeiranthos** 84.08 320 *eP* P 15 04 22.6 -1.6
AGO **Saint Agoulin** 84.08 339 *eP* P 15 04 25.3 +1.3
AGO **Saint Agoulin** 84.08 339 *eP* P 15 04 25.3 +1.3
PAL **Palisades** 84.08 33 *eP* P 15 04 22.8 -1.2
PAL pmax pmax
comp=Z,30nm,0.8s
PAL **Palisades** 84.08 33 *eP* P 15 04 22.8 -1.2
comp=Z,30nm,0.8s
TCF **Toulx Ste Croi** 84.09 339⇑ *i* P P 15 04 24.9 +0.9
comp=Z,133nm,0.9s
TCF **Toulx Ste Croi** 84.09 339⇑ *i* P P 15 04 24.9 +0.9
TCF pmax pmax
comp=Z,133nm,0.9s
TCF **Toulx Ste Croi** 84.09 339⇑ *i* P P 15 04 24.9 +0.9
comp=Z,133nm,0.9s
GRN **Grenoble** 84.14 337 *eP* P 15 04 25.7 +1.3
GRN **Grenoble** 84.14 337 *eP* P 15 04 25.7 +1.3
GRN **Grenoble** 84.14 337 *eP* P 15 04 25.7 +1.3
EVR **Evrytania** 84.15 323 *eP* P 15 04 23.9 -0.7
BRYW **Bryant College** 84.15 31 *eP* P 15 04 24.8 +0.3
comp=Z,47nm,0.8s
CPCT **Cooper Cave** 84.20 43 *eP* P 15 04 24.2 -0.6
IGT **Igoumenitsa** 84.23 324 P P 15 04 24.4 -0.5
DSF **Desfina** 84.27 322 P P 15 04 23.4 -1.8
KEK **Kerkira** 84.29 325 P P 15 04 24.9 -0.2
KEK **Kerkira** 84.29 325 *eP* P 15 04 25.0 -0.2
MBDF **Montbardon** 84.32 336⇑ *i* P P 15 04 25.9 +0.5
comp=Z,74nm,0.8s
MBDF **Montbardon** 84.32 336⇑ *i* P P 15 04 25.9 +0.5
MBDF pmax pmax
comp=Z,75nm,0.8s
MBDF **Montbardon** 84.32 336⇑ *i* P P 15 04 25.9 +0.5
comp=Z,74nm,0.8s
MFF **Saint Martin d** 84.34 341 *eP* P 15 04 25.4 +0.1
comp=Z,71nm,0.9s
MFF **Saint Martin d** 84.34 341 *eP* P 15 04 25.4 +0.1
MFF pmax pmax
comp=Z,71nm,0.9s
MFF **Saint Martin d** 84.34 341 *eP* P 15 04 25.4 +0.1
comp=Z,71nm,0.9s
AQU **L'Aquila** 84.38 330 *eP* P 15 04 25.5 -0.1
comp=Z,99nm,0.9s
AQU **L'Aquila** 84.38 330⇑ *i* P P 15 04 26.3 +0.7
AQU **L'Aquila** 84.38 330 *eP* P 15 04 24.1 -1.5
TKL **Tuckaleechee C** 84.39 42 *eP* P 15 04 25.5 -0.2
ORIF **Oris-en-Rattie** 84.40 336⇑ *i* P P 15 04 26.8 +1.1
comp=Z,207nm,0.7s
ORIF *eR*
comp=Z,2µm,21.0s
ORIF **Oris-en-Rattie** 84.40 336⇑ *i* P P 15 04 26.8 +1.1
ORIF pmax pmax
comp=Z,207nm,0.7s
ORIF **Oris-en-Rattie** 84.40 336⇑ *i* P P 15 04 26.8 +1.1
comp=Z,207nm,0.7s
NAIG **Nisos Aigina** 84.41 321 *eP* P 15 04 24.9 -0.9
LTK **Loutraki** 84.41 322 P P 15 04 24.3 -1.5
LTK **Loutraki** 84.41 322 *eP* P 15 04 24.3 -1.5
SSB **Saint Sauveur** 84.43 337 *eP* P 15 04 26.3 +0.5
SSB pmax pmax
comp=Z,80nm,0.9s
SSB **Saint Sauveur** 84.43 337 *eP* P 15 04 26.3 +0.5
comp=Z,80nm,0.9s
SSB **Saint Sauveur** 84.43 337 *eP* P 15 04 27.0 +1.2
SCTE **Santa Cesarea** 84.51 326 *eP* P 15 04 22.3 -3.9
EFP **Efpalio** 84.52 323 *eP* P 15 04 26.1 -0.2
SURF **Saint Ours** 84.54 336 *eP* P 15 04 27.4 +0.8
SURF **Saint Ours** 84.54 336 *eP* P 15 04 27.4 +0.8
KARP **Karpathos** 84.58 318 *eP* P 15 04 25.7 -1.0
BLA **Blacksburg** 84.63 39 *eP* P 15 04 26.3 -0.7
BLA pmax pmax
comp=Z,43nm,0.9s
BLA **Blacksburg** 84.63 39 *eP* P 15 04 26.3 -0.7
comp=Z,43nm,0.9s
DID **Didima** 84.73 321 P P 15 04 24.8 -2.6
DID **Didima** 84.73 321 *eP* P 15 04 26.1 -1.3
LKD2 **Lefkada island** 84.73 324 P P 15 04 26.6 -0.8
GUR **Goura** 84.75 322 P P 15 04 26.1 -1.5
GUR **Goura** 84.75 322 *eP* P 15 04 26.1 -1.5
SAOF **Saorge** 84.77 335 *eP* P 15 04 27.9 +0.3
SAOF **Saorge** 84.77 335 *eP* P 15 04 27.9 +0.3
SAOF **Saorge** 84.77 335 *eP* P 15 04 27.9 +0.3
VIVF **Saint-Julien-l** 84.78 337⇑ *i* P P 15 04 28.7 +1.1
comp=Z,145nm,0.9s
VIVF **Saint-Julien-l** 84.78 337⇑ *i* P P 15 04 28.7 +1.1
VIVF pmax pmax
comp=Z,145nm,0.9s
VIVF **Saint-Julien-l** 84.78 337⇑ *i* P P 15 04 28.7 +1.1
comp=Z,145nm,0.9s
AUTN **L'Aution** 84.80 335 *eP* P 15 04 28.2 +0.3
AUTN **L'Aution** 84.80 335 *eP* P 15 04 28.2 +0.3
AUTN **L'Aution** 84.80 335 *eP* P 15 04 28.2 +0.3
LBL **Lubilhac** 84.81 338 *eP* P 15 04 29.0 +1.2
LBL **Lubilhac** 84.81 338 *eP* P 15 04 29.0 +1.2
LBL **Lubilhac** 84.81 338 *eP* P 15 04 29.0 +1.2
TOUF **Mont Tournerai** 84.84 335 *eP* P 15 04 28.4 +0.3
TOUF **Mont Tournerai** 84.84 335 *eP* P 15 04 28.4 +0.3

TOUF	Mont Tournerai	84.84	335	eP	P	15 04 28.4	+0.3
FRNF	Fournols	84.84	339	eP	P	15 04 29.3	+1.4
FRNF	Fournols	84.84	339	eP	P	15 04 29.3	+1.4
SBF	Sospel	84.92	335⇑	iP	P	15 04 28.4	+0.1
	comp=Z,157nm,0.9s						
SBF	Sospel	84.92	335⇑	iP	P	15 04 28.4	+0.1
SBF				pmax	pmax		
	comp=Z,157nm,0.9s						
SBF	Sospel	84.92	335⇑	iP	P	15 04 28.4	+0.1
	comp=Z,157nm,0.9s						
LRAL	Lakeview Retre	84.94	46	eP	P	15 04 25.8	-2.7
	comp=Z,14nm,0.8s						
MVIF	Mont Vial	84.97	335	eP	P	15 04 29.0	+0.3
MVIF	Mont Vial	84.97	335	eP	P	15 04 29.0	+0.3
MVIF	Mont Vial	84.97	335	eP	P	15 04 29.0	+0.3
RLS	Riolos of Patr	85.02	323	P	P	15 04 28.7	-0.1
RLS	Riolos of Patr	85.02	323	eP	P	15 04 28.9	+0.1
REVF	Revere	85.05	335	eP	P	15 04 30.0	+1.0
REVF	Revere	85.05	335	eP	P	15 04 30.0	+1.0
REVF	Revere	85.05	335	eP	P	15 04 30.0	+1.0
RJF	Les Rejaudoux	85.18	339	eP	P	15 04 29.6	+0.1
	comp=Z,74nm,1.0s						
RJF				eR			
	comp=Z,3μm,22.5s						
RJF	Les Rejaudoux	85.18	339	eP	P	15 04 29.6	+0.1
RJF				pmax	pmax		
	comp=Z,74nm,1.0s						
RJF	Les Rejaudoux	85.18	339	eP	P	15 04 29.6	+0.1
	comp=Z,74nm,1.0s						
CALN	Calern	85.18	335	eP	P	15 04 30.2	+0.5
CALN	Calern	85.18	335	eP	P	15 04 30.2	+0.5
CALN	Calern	85.18	335	eP	P	15 04 30.2	+0.5
VLX	Vlachokerasia	85.21	322	eP	P	15 04 28.1	-1.9
KFL	Anninata	85.26	323	P	P	15 04 29.3	-0.7
VLS	Valsamata	85.28	323	P	P	15 04 29.3	-0.7
VLS	Valsamata	85.28	323	eP	P	15 04 29.5	-0.7
EIL	Elat	85.33	309	eP	P	15 04 30.4	-0.2
SMRF	Simiane la Rot	85.35	336	eP	P	15 04 30.5	0.0
	comp=Z,117nm,1.4s						
SMRF	Simiane la Rot	85.35	336	eP	P	15 04 30.5	0.0
	comp=Z,117nm,1.4s						
AMT	Artemida-Makis	85.36	322	P	P	15 04 30.1	-0.5
ZKR	Zakros	85.37	318	P	P	15 04 30.9	+0.2
ZKR	Zakros	85.37	318	eP	P	15 04 30.4	-0.3
CAF	Calviac	85.40	339⇑	iP	P	15 04 31.3	+0.6
	comp=Z,114nm,0.9s						
CAF	Calviac	85.40	339⇑	iP	P	15 04 31.3	+0.6
CAF				pmax	pmax		
	comp=Z,114nm,0.9s						
CAF	Calviac	85.40	339⇑	iP	P	15 04 31.3	+0.6
	comp=Z,114nm,0.9s						
FRF	La Foret Royal	85.43	335⇑	iP	P	15 04 31.0	+0.2
	comp=Z,193nm,1.4s						
FRF	La Foret Royal	85.43	335⇑	iP	P	15 04 31.0	+0.2
FRF				pmax	pmax		
	comp=Z,193nm,1.4s						
FRF	La Foret Royal	85.43	335⇑	iP	P	15 04 31.0	+0.2
	comp=Z,193nm,1.4s						
VLI	Velial	85.52	321	P	P	15 04 29.1	-2.3
NPS	Neapolis	85.53	319	P	P	15 04 30.2	-1.3
NPS	Neapolis	85.53	319	eP	P	15 04 30.1	-1.4
ITM	Ithomi	85.56	322	P	P	15 04 31.7	+0.1
ITM	Ithomi	85.56	322	eP	P	15 04 30.5	-1.1
CUC	Castrocucco	85.59	328	eP	P	15 04 30.6	-1.2
	comp=Z,36nm,1.1s						
PGF	Pioggiola	85.64	333⇑	iP	P	15 04 32.2	+0.2
	comp=Z,118nm,1.1s						
PGF	Pioggiola	85.64	333⇑	iP	P	15 04 32.2	+0.2
PGF				pmax	pmax		
	comp=Z,118nm,1.1s						
PGF	Pioggiola	85.64	333⇑	iP	P	15 04 32.2	+0.2
	comp=Z,118nm,1.1s						
LAST	Lasithi	85.67	319	P	P	15 04 31.7	-0.6
LAST	Lasithi	85.67	319	eP	P	15 04 31.4	-0.9
LMR	La Mourre	85.67	335⇑	iP	P	15 04 32.6	+0.6
	comp=Z,223nm,1.0s						
LMR	La Mourre	85.67	335⇑	iP	P	15 04 32.6	+0.6
LMR				pmax	pmax		
	comp=Z,223nm,1.0s						
LMR	La Mourre	85.67	335⇑	iP	P	15 04 32.6	+0.6
	comp=Z,223nm,1.0s						
LFF	La Frestale	85.71	340	eP	P	15 04 32.3	+0.2
	comp=Z,32nm,0.5s						
LFF	La Frestale	85.71	340	eP	P	15 04 32.3	+0.2
LFF				pmax	pmax		
	comp=Z,32nm,0.5s						
LFF	La Frestale	85.71	340	eP	P	15 04 32.3	+0.2
	comp=Z,32nm,0.5s						
LASF	Ste Croix	85.73	337⇑	iP	P	15 04 33.6	+1.3
	comp=Z,119nm,0.9s						
LASF	Ste Croix	85.73	337⇑	iP	P	15 04 33.6	+1.3
	comp=Z,119nm,0.9s						
DYR	Agios Nikonas	85.74	322	P	P	15 04 31.4	-1.1
IDI	Anoyia	85.84	319	P	P	15 04 31.5	-1.6
IDI	Anoyia	85.84	319	eP	P	15 04 31.3	-1.7
	comp=Z,70nm,1.0s						
IDI	Anoyia	85.84	319	eP	P	15 04 30.8	-2.3
KYTH	Kithira	85.84	321	eP	P	15 04 31.6	-1.4
PYL	PYLOS	85.88	322	P	P	15 04 31.9	-1.3
PYL	PYLOS	85.88	322	eP	P	15 04 31.3	-1.9
KMSC	Kings Mountain	85.94	41	⇑P	P	15 04 33.6	+0.1
	baz=86						
TIP	Timpagrande	85.94	327	eP	P	15 04 33.0	-0.5
	comp=Z,128nm,1.1s						
VAM	Vamos	86.05	320	eP	P	15 04 34.2	+0.2
KARN	Karanos	86.18	320	P	P	15 04 33.9	-0.8
BRAL	Brewton	86.53	47	PFAKE		15 04 50.0	+14
BRAL				LR	LR		
	comp=Z,476nm,20.0s						
GVD	Gavdhos	86.58	319	eP	P	15 04 35.9	-0.7
	comp=Z,128nm,0.9s						
GVD	Gavdhos	86.58	319	eP	P	15 04 36.0	-0.7
MTLF	Montolieu	86.84	338⇑	iP	P	15 04 37.9	+0.1
	comp=Z,31nm,0.9s						
MTLF	Montolieu	86.84	338⇑	iP	P	15 04 37.9	+0.1
MTLF				pmax	pmax		
	comp=Z,31nm,0.9s						
MTLF	Montolieu	86.84	338⇑	iP	P	15 04 37.9	+0.1
	comp=Z,31nm,0.9s						
CEL	Celeste	87.08	327	eP	P	15 04 38.5	-0.6
	comp=Z,42nm,0.8s						
TBI	Tubuai	87.27	128	eS	S	15 15 20.0	+4.4
	comp=Z,448nm,26.2s						
TBI				eLR	LR	15 32 16.6	
	comp=Z,2μm,30.8s,baz=321						
CARF	Carcanieres	87.45	338	eP	P	15 04 42.2	+1.3
CARF	Carcanieres	87.45	338	eP	P	15 04 42.2	+1.3
FILF	Fillols	87.48	338	eP	P	15 04 42.5	+1.5
FILF	Fillols	87.48	338	eP	P	15 04 42.5	+1.5
MLS	Moulis	87.48	339	eP	P	15 04 41.2	+0.3
MLS	Moulis	87.48	339	eP	P	15 04 41.2	+0.3
EPF	Esparros	87.60	339⇑	iP	P	15 04 40.0	-1.5
	comp=Z,23nm,0.8s						
EPF	Esparros	87.60	339⇑	iP	P	15 04 40.0	-1.5
EPF				pmax	pmax		
	comp=Z,23nm,0.8s						
EPF	Esparros	87.60	339⇑	iP	P	15 04 40.0	-1.5
	comp=Z,23nm,0.8s						
RESF	Ens	87.81	339	eP	P	15 04 43.2	+0.6
RESF	Ens	87.81	339	eP	P	15 04 43.2	+0.6
SJPF	Ste Jean	87.89	341⇑	iP	P	15 04 42.9	0.0
	comp=Z,31nm,1.2s						
SJPF	Ste Jean	87.89	341⇑	iP	P	15 04 42.9	0.0
SJPF				pmax	pmax		
	comp=Z,31nm,1.2s						
SJPF	Ste Jean	87.89	341⇑	iP	P	15 04 42.9	0.0
	comp=Z,31nm,1.2s						
TIGA	Tifton	87.92	45	⇑P	P	15 04 43.7	+0.6
	baz=88						
ETSF	Etsaut	87.94	340⇑	iP	P	15 04 43.1	-0.1
	comp=Z,28nm,0.7s						
ETSF	Etsaut	87.94	340⇑	iP	P	15 04 43.1	-0.1
ETSF				pmax	pmax		
	comp=Z,28nm,0.7s						
ETSF	Etsaut	87.94	340⇑	iP	P	15 04 43.1	-0.1
	comp=Z,28nm,0.7s						
PBRG	Braganca	90.31	344	eP	P	15 04 53.6	-0.7
	comp=Z,31nm,2.1s						
PGAV	Gavieira, Arco	90.44	345	eLR	LR	15 36 35.9	
	comp=Z,603nm,20.0s						
POLO	Lamas de Olo	90.92	345	eP	P	15 04 56.3	-0.9
	comp=Z,27nm,2.0s						
MVO	Moncorvo	90.98	344	eP	P	15 04 56.8	-0.6
MVO				eLR	LR	15 36 51.9	
	comp=Z,856nm,18.0s						
PVRL	Vila Real	91.00	345	eP	P	15 04 56.8	-0.7
PVIS	Viseu	91.58	345	eP	P	15 04 59.8	-0.4
KEST	Kesra	91.70	330	P	P	15 05 00.6	-0.3
KEST	Kesra	91.70	330	P	P	15 05 00.6	-0.3
	comp=Z,9.4nm,0.9s,baz=302,slow=2.1,SNR=23						
KEST				LR	LR	15 49 47.3	
	comp=Z,489nm,21.2s,baz=358,slow=38						
ESDC	Sonseca Array	91.79	342	P	P	15 05 00.0	-1.2
ESDC	Sonseca Array	91.79	342	P	P	15 05 00.0	-1.2
	comp=Z,1.4nm,0.6s,baz=19,slow=3.0,SNR=11						
ESDC				LR	LR	15 52 16.1	
	comp=Z,682nm,19.5s,baz=10.0,slow=39						
MTE	Manteigas	91.82	344	eP	P	15 05 00.6	-0.7
	comp=Z,28nm,1.0s						
MTE				eLR	LR	15 37 19.7	
	comp=Z,995nm,20.0s						
PCBR	Castelo Branco	92.35	344	eP	P	15 05 04.5	+0.8
	comp=Z,28nm,2.0s						
PMRV	Marv??o	92.73	344	eLR	LR	15 38 07.4	
	comp=Z,896nm,20.0s						
PMTG	Montargil	93.24	345	eP	P	15 05 05.5	-2.3
EVO	Evora	93.72	344⇑	iP	P	15 05 10.5	+0.5
	comp=Z,21nm,1.0s						
EVO				eR			
	comp=Z,1μm,20.8s						
EVOP	Sao Brissos	93.74	344⇑	iP	P	15 05 10.5	+0.4
EVOP				pmax	pmax		
	comp=Z,21nm,1.0s						
EVOP	Sao Brissos	93.74	344⇑	iP	P	15 05 10.5	+0.4
	comp=Z,21nm,1.0s						
PVAQ	Vaqueiros	94.76	344	eLR	LR	15 39 05.8	
	comp=Z,673nm,22.0s						
RKT	Rikitea	95.53	118	eLR	LR	15 35 59.1	
	comp=Z,2μm,32.0s,baz=319						
MSEY	Mahe Island	97.72	271	PFAKE		15 05 40.0	+11
MSEY				LR	LR		
	comp=Z,1μm,19.0s						
GRTK	Grand Turk	102.19	40	PFAKE		15 06 00.0	+12
GRTK				LR	LR		
	comp=Z,621nm,22.0s						
JTS	JuntasAbangare	104.30	58	PFAKE		15 06 10.0	+12
JTS				LR	LR		
	comp=Z,339nm,20.0s						
SDDR	Presa de Saban	104.32	42	PFAKE		15 06 10.0	+12
SDDR				LR	LR		
	comp=Z,644nm,21.0s						
BCIP	Isla Barro Col	108.17	55	PFAKE		15 10 30.0	
BCIP				LR	LR		
	comp=Z,352nm,19.0s						
MBAR	Mbarara	111.46	293	PFAKE		15 10 40.0	
MBAR				LR	LR		
	comp=Z,727nm,20.0s						
DRV	Dumont d'Urvil	112.90	185	PP	PP	15 11 16.0	-2.7
DRV				SKKS		15 20 34.0	
DRV				SS	SS	15 26 54.0	-3.5
ABPO	Ambohimpanom	113.47	267	PFAKE		15 10 40.0	
ABPO				LR	LR		
	comp=Z,514nm,20.0s						
GRGR	Grenville	114.61	36	PFAKE		15 10 50.0	+16
GRGR				LR	LR		
	comp=Z,482nm,20.0s						
TORD	Torodi Ar. Bea	115.08	328	Pdif	Pdif	15 06 48.9	+3.0
TORD				PKP	PKiKP	15 10 34.0	-0.7
TORD				PKKPab	PKKPab	15 21 16.8	-1.6
TORD	Torodi Ar. Bea	115.08	328	Pdiff	Pdif	15 06 48.9	+3.0
	comp=Z,0.5nm,0.6s,baz=15,slow=0.4,SNR=3.5						
TORD				PKP	PKiKP	15 10 34.0	-0.7
	comp=Z,1.9nm,0.5s,baz=10,slow=2.5,SNR=16						
TORD				PKKPab	PKKPab	15 21 16.8	-1.6
	comp=Z,2.1nm,1.0s,baz=232,slow=3.7,SNR=6.0						
ATAH	Atahualpa	122.01	64	PKP	PKPdf	15 10 49.1	+0.6
ATAH	Atahualpa	122.01	64	PKP	PKPdf	15 10 49.1	+0.6
	comp=Z,9.2nm,0.9s,baz=43,slow=4.2,SNR=4.2						
DBIC	Dimbokro	123.39	332	PKP	PKPdf	15 10 50.2	-0.4
DBIC	Dimbokro	123.39	332	PKP	PKPdf	15 10 50.2	-0.4
	comp=Z,20nm,0.8s,baz=36,slow=1.9,SNR=16						
VNDA	Vanda	123.61	177	PKP	PKPdf	15 10 48.5	-0.5
VNDA				PKKPbc	PKKPbc	15 20 39.5	+1.3
VNDA	Vanda	123.61	177	PKP	PKPdf	15 10 48.5	-0.5
	comp=Z,3.7nm,0.7s,baz=315,slow=4.0,SNR=22						
VNDA				PKKPbc	PKKPbc	15 20 39.5	+1.3
	comp=Z,1.8nm,0.8s,baz=150,slow=2.9,SNR=11						
LIC	Lamto	123.87	332	ePKIKP	PKPdf	15 10 50.7	-0.8
	comp=Z,28nm,0.9s						
LIC				eR			
	comp=Z,932nm,23.0s						
LIC	Lamto	123.87	332	ePKPdf	PKPdf	15 10 50.7	-0.8
LSZ	Lusaka	124.02	284	ePKPdf	PKPdf	15 10 52.6	+0.8
NNA	Nana	126.69	66	PKP	PKPdf	15 10 56.6	-0.3
NNA	Nana	126.69	66	PKP	PKPdf	15 10 56.6	-0.3
	comp=Z,8.3nm,0.5s,baz=310,slow=7.0,SNR=6.3						
MAW	Mawson	131.27	211	PKP	PKPdf	15 11 05.9	+2.0
MAW	Mawson	131.27	211	PKP	PKPdf	15 11 05.9	+2.0
	comp=Z,7.5nm,0.9s,baz=35,slow=8.5,SNR=4.4						
TSUM	Tsumeb	133.86	290	ePKPdf	PKPdf	15 11 08.9	-1.5
TSUM				LR	LR		
	comp=Z,920nm,19.0s						
BOSA	Boshof	134.94	274	ePKPdf	PKPdf	15 11 10.9	-1.3
BOSA	Boshof	134.94	274	PKP	PKPdf	15 11 11.1	-1.1
	comp=Z,4.8nm,0.6s,baz=313,slow=1.1,SNR=6.1						
LPAZ	La Paz	135.40	61	PKP	PKPdf	15 11 14.6	+0.6
LPAZ	La Paz	135.40	61	PKP	PKPdf	15 11 14.6	+0.6
	comp=Z,8.1nm,0.8s,baz=26,slow=6.4,SNR=22						
QSPA	South Pole Qui	135.94	180	PFAKE		15 11 20.0	+7.2
QSPA				LR	LR		
	comp=Z,636nm,19.0s						
SIV	San Ignacio	139.29	53	PKP	PKPdf	15 11 20.1	-0.4
SIV	San Ignacio	139.29	53	PKhKP	PKPpre	15 11 12.5	
	comp=Z,1.3nm,0.6s,baz=329,slow=4.6,SNR=7.0						
SIV				PKP	PKPdf	15 11 20.1	-0.4
	comp=Z,7.8nm,0.8s,baz=300,slow=1.2,SNR=11						
SYO	Syowa Base	139.97	211⇑	eP	PKPpre	15 11 10.0	
SYO	Syowa Base	139.97	211⇑	eP	PKPdf	15 11 22.2	+2.2
SUR	Sutherland	140.25	273	PFAKE		15 11 30.0	+8.0
SUR				LR	LR		
	comp=Z,828nm,20.0s						
LCO	Las Campanas	142.72	78	ePKPdf	PKPdf	15 11 27.0	+0.4
BDFB	Brasilia	145.31	35	PKPbc	PKPbc	15 11 31.3	+0.1
BDFB	Brasilia	145.31	35	PKPbc	PKPbc	15 11 31.3	+0.1
	comp=Z,14nm,0.8s,baz=311,slow=2.6,SNR=1.1						
CFAA	Coronel Fontan	145.99	79	PKPbc	PKPdf	15 11 32.1	+0.2
CFAA	Coronel Fontan	145.99	79	PKPbc	PKPdf	15 11 32.1	+0.2
	baz=289,slow=4.0						
PLCA	Paso Flores	149.06	95	ePKPdf	PKPdf	15 11 36.2	-0.6
PLCA				PKPbc	PKPbc	15 11 41.3	+0.3
PLCA	Paso Flores	149.06	95	PKP	PKPdf	15 11 37.1	+0.3
	comp=Z,6.5nm,0.5s,baz=294,slow=1.9,SNR=18						
PLCA				PKPbc	PKPbc	15 11 41.3	+0.3
	comp=Z,36nm,0.8s,baz=245,slow=4.2,SNR=47						
CPUP	Villa Florida	149.53	59	PKP	PKPdf	15 11 37.1	-0.7
CPUP				PKPbc	PKPbc	15 11 42.6	+0.2
CPUP	Villa Florida	149.53	59	PKP	PKPdf	15 11 37.1	-0.7
	comp=Z,0.4nm,0.3s,baz=323,slow=2.4,SNR=5.5						
CPUP				PKPbc	PKPbc	15 11 42.6	+0.2
	comp=Z,21nm,0.8s,baz=324,slow=2.3,SNR=16						
SNAA	Sanae	151.77	197	ePKPdf	PKPdf	15 11 41.3	+1.2
SNAA	Sanae	151.77	197	ePP	PP	15 15 29.6	+1.9
SNAA	Sanae	151.77	197	ePKPdf	PKPdf	15 11 38.6	-1.5
SNAA				ePKPbc	PKPbc	15 11 45.8	-0.7
SPB	Sao Paulo	152.61	41	PFAKE		15 11 50.0	+0.3
SPB				LR	LR		
	comp=Z,489nm,21.0s						
VNA2	Neumayer--Watz	153.24	195	ePKPdf	PKPdf	15 11 43.9	+1.7
VNA2	Neumayer--Watz	153.24	195	ePKP	PKPbc	15 11 51.0	+1.3
VNA2	Neumayer--Watz	153.24	195	eKuril	PKPab	15 12 03.7	+1.9
VNA2	Neumayer--Watz	153.24	195	ePP	PP	15 15 37.1	+1.1
VNA3	Neumayer Olymp	153.36	193	ePKPdf	PKPdf	15 11 44.0	+1.7
VNA3	Neumayer Olymp	153.36	193	ePKP	PKPbc	15 11 50.8	+0.9
VNA3	Neumayer Olymp	153.36	193	eKuril	PKPab	15 12 03.8	+1.5
VNA3	Neumayer Olymp	153.36	193	ePP	PP	15 15 38.7	+2.1
VNA1	Neumayer--Stat	153.63	195	ePKPdf	PKPbc	15 11 51.9	+1.4
VNA1	Neumayer--Stat	153.63	195	eKuril	PKPab	15 12 05.4	+2.0
TRQA	Tornquist	153.81	84	ePKPbc	PKPbc	15 11 51.8	-0.2

IDC 17 14:53:41.2±1.4, 14°.79N×144°.79E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.7/25, mbtmp3.6/4, Error ellipse: s-maj=63.2km s-min=21.0km az=99.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.20	176	Pn	Pn	14 54 06.1	+0.8
	79nm,0.3s,baz=11,slow=1.8,SNR=8.1						
GUMO				Sn	Sb	14 54 21.6	+0.7
	162nm,0.3s,baz=14,slow=23,SNR=21						
WRA	Warramunga Arr	36.02	197	P	P	15 00 44.1	-0.3
	1.0nm,0.8s,baz=21,slow=10.0,SNR=11						
FITZ	Fitzroy Crossi	37.75	211	P	P	15 00 58.8	-0.4
	1.3nm,0.8s,baz=21,slow=13,SNR=4.1						
ASAR	Alice Springs	39.68	196	P	P	15 01 15.7	+0.3
	0.2nm,0.6s,baz=17,slow=13,SNR=4.4						
YKA	Yellowknife Ar	81.83	27	P	P	15 06 01.9	-0.1
	1.0nm,1.0s,baz=294,slow=4.9,SNR=2.6						

IDC 17 14:54:35.7±7.0, 13°.93N×144°.15E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/26, mbtmp3.6/4, Error ellipse: s-maj=130.7km s-min=19.1km az=180.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	0.77	116	Pn	Pn	14 54 53.5	-0.4
	38nm,0.3s,baz=180,slow=20,SNR=3.0						
GUMO				Sn	Sn	14 55 08.0	+1.9
	223nm,0.3s,baz=100,slow=20,SNR=7.9						
WRA	Warramunga Arr	35.02	196	P	P	15 01 29.1	-1.1
	2.3nm,0.8s,baz=20,slow=9.8,SNR=4.8						
FITZ	Fitzroy Crossi	36.69	210	P	P	15 01 44.9	+0.3
	1.5nm,1.0s,baz=13,slow=14,SNR=2.7						
ASAR	Alice Springs	38.69	195	P	P	15 02 01.4	-0.1
	0.3nm,0.7s,baz=13,slow=9.9,SNR=3.0						
STKA	Stephens Creek	45.61	183	P	P	15 02 58.4	+0.5
	0.8nm,0.6s,baz=347,slow=14,SNR=3.3						

IDC 17 15:07:37.9±1.9, 14°.29N×145°.60E, h0km, mb3.2/3, mb1 3.3/3, mb1mx3.2/24, mbtmp3.2/3, Error ellipse: s-maj=46.3km s-min=24.1km az=106.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.00	226	Pn	Pn	15 07 59.1	-0.1
	59nm,0.3s,baz=210,slow=8.2,SNR=4.5						
GUMO				Sn	Sn	15 08 14.8	+0.8
	98nm,0.3s,baz=106,slow=21,SNR=11						
WRA	Warramunga Arr	35.78	198	P	P	15 14 38.6	-0.4
	0.6nm,1.0s,baz=22,slow=9.7,SNR=4.1						
ASAR	Alice Springs	39.42	197	P	P	15 15 10.1	+0.3
	0.3nm,1.0s,baz=11,slow=10,SNR=2.9						
MKAR	Makanchi Array	61.48	316	P	P	15 17 56.5	-0.1
	0.2nm,0.6s,baz=81,slow=8.9,SNR=3.9						

*ISCJB **17** 15:09:38.1±0.7, 38°.80N±0°.03×122°.82W±0°.08, h2km±9km, Error ellipse: s-maj=11.3km s-min=3.5km az=160.1*
*IDC **17** 15:09:39.0±2.3, 38°.67N×122°.93W, h0km, mb1 3.8/4, mb1mx3.3/30, mbtmp3.3/4, ML3.4/5, Error ellipse: s-maj=23.9km s-min=11.2km az=51.0*
*NEIC **17** 15:09:39.6, 38°.82N×122°.80W, h3km, MW3.7(BRK), After NCEDC.*
NEIC Felt at Calistoga, Cloverdale, Cobb, Geyserville, Healdsburg, Middletown and Novato.

ISC 17 15:09:38.9±1.3, 38°.78N±0°.03×122°.87W±0°.05, h1km±12km, n24, σ1°.34/35, Northern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPS	Hopland	0.27	323	ePg	Pg	15 09 44.8	+0.7
HOPS				eSg	Sg	15 09 47.6	-0.1
MCCM	Marconi Confer	0.63	181	ePg	Pb	15 09 52.5	-0.2
MCCM				eSg	Sg	15 10 00.1	+0.9
KCPM	Cahto Peak	1.07	329	ePg	Pb	15 10 00.0	-0.3
KCPM				eSg	Sg	15 10 12.5	-0.7
KIPM	Iron Peak	1.14	335	ePg	Pg	15 10 01.4	0.0
KIPM				eSg	Sg	15 10 13.4	-2.0
SAC	San Andreas	1.24	163	ePg	Pg	15 10 02.8	0.0
SAC				eSg	Sg	15 10 17.9	-0.9
WDC	Whiskeytown Da	1.82	8	ePn	Pn	15 10 10.3	-1.1
WDC				eSn	Sn	15 10 33.1	-2.0
CMB	Columbia Colle	2.08	110	ePn	Pn	15 10 13.5	-1.5
KHMM	Horse Mountain	2.20	343	ePn	Pn	15 10 15.7	-1.0
BEKR	Beckworth	2.23	60	ePn	Pn	15 10 16.7	-0.5
BEKR				eSn	Sn	15 10 43.6	-1.8
SAO	San Andreas Ge	2.30	150	ePn	Pn	15 10 15.1	-2.9
SAO				eSn	Sn	15 10 47.9	+0.9
WCN	Washoe City	2.48	77	ePn	Pn	15 10 19.7	-0.9
WCN				eSn	Sn	15 10 49.7	-1.9
KRMB	Red Mountain	2.86	344	ePn	Pn	15 10 25.6	-0.2
YBH	Yreka Blue Hor	2.95	2	Pn	Pn	15 10 29.0	+1.9
YBH				Lg	Lg	15 11 18.3	
YBH	Yreka Blue Hor	2.95	2	Pn	Pn	15 10 29.0	+1.9
	0.6nm,0.3s,baz=160,slow=8.0,SNR=5.6						
YBH				Lg	Lg	15 11 18.3	
	0.2nm,0.3s,baz=31,slow=15,SNR=2.7						
NVAR	Mina Array Bea	3.59	94	Pn	Pn	15 10 36.3	+0.3
NVAR				Pg	Pb	15 10 42.9	-0.4
NVAR				Lg	Lg	15 11 33.5	
NVAR	Mina Array Bea	3.59	94	Pn	Pn	15 10 36.3	+0.3
	1.0nm,0.3s,baz=270,slow=15,SNR=27						
NVAR				Pg	Pb	15 10 42.9	-0.4
	3.7nm,0.3s,baz=275,slow=15,SNR=43						
NVAR				Lg	Lg	15 11 33.5	
	3.3nm,0.3s,baz=268,slow=33,SNR=3.6						
MOD	Modoc	3.69	31	ePn	Pn	15 10 37.2	0.0
NV11	Mina Array Sit	3.71	94	ePn	Pn	15 10 37.1	-0.3
HUMO	Hull Mountain	3.83	359	ePn	Pn	15 10 38.0	-1.0
ISA	Isabella	4.68	130

ILAR	**Eielson Array**	**85.34**	**23**	P		P		15 34 17.6	+0.3
	0.3nm,0.9s,baz=226,slow=5.9,SNR=3.4								
TORD	**Torodi Ar. Bea**	**145.51**	**284**	PKPbc		PKPdf		15 41 19.6	-0.3
	1.9nm,0.6s,baz=72,slow=4.1,SNR=15								

IDC ***17*** *15:24:35.5±1.4, 26˚.96N×130˚.10E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/25, mbtmp3.7/7, ML3.9/1, Error ellipse: s-maj=68.8km s-min=19.0km az=72.0*

JMA ***17*** *15:24:37.2±0.1, 26˚.99N×129˚.90E, h46km, M3.8*

ISC 17 15:24:35.6±1.7, 27˚.03N±0˚.04×129˚.90E±0˚.04, h8km±11km, n20,σ1§69/32, mb3.7/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JTK	**Tokunoshima**	**1.13**	**312**	P		**Pg**	**15 24 57.5**	**+0.1**
JTK				*e*S		**Sg**	**15 25 10.5**	**-1.7**
JZK	**Kikaishima**	**1.29**	**3**	P		**Pn**	**15 25 00.2**	**+0.3**
JZK				*e*S		**Sg**	**15 25 17.8**	**+0.8**
JAMN	**Amaminishikomi**	**1.37**	**332**	P		**Pn**	**15 25 00.6**	**-0.5**
JAMN				S		**Sb**	**15 25 18.0**	**-1.2**
JAM	**Amami Oshima**	**1.41**	**349**	P		**Pn**	**15 25 01.3**	**-0.2**
JAM				S		**Sb**	**15 25 18.7**	**-1.5**
JOW	**Kunigami**	**1.46**	**263**	P		**Pn**	**15 25 02.1**	**-0.2**
JOW				*e*S		**Sn**	**15 25 20.3**	**-1.4**
JMZ	**Minamidaito 2**	**1.69**	**135**	P		**Pn**	**15 25 04.3**	**-1.1**
JMZ				*e*S		**Sn**	**15 25 24.2**	**-3.0**
JIH	**Iheya**	**1.72**	**271**	P		**Pn**	**15 25 05.8**	**-0.1**
JJT2	**Tamagusuku 2**	**2.12**	**246**	P		**Pn**	**15 25 11.2**	**-0.1**
JJT2				*e*S		**Sn**	**15 25 36.8**	**-1.0**
JAGN	**Aguni-jima**	**2.42**	**260**	P		**Pn**	**15 25 15.0**	**-0.4**
JAGN				*e*S		**Sn**	**15 25 43.0**	**-2.1**
JNN	**Nakanoshima**	**2.81**	**360**	P		**Pn**	**15 25 20.5**	**-0.3**
JNN				*e*S		**Sn**	**15 25 53.0**	**-1.8**
JKE	**Kume jima 2**	**2.87**	**257**	P		**Pn**	**15 25 21.0**	**-0.7**
JKE				*e*S		**Sn**	**15 25 53.5**	**-2.9**
JKC	**Kuchinoerabu**	**3.43**	**4**	P		**Pn**	**15 25 29.6**	**+0.2**
JKC				S		**Sn**	**15 26 07.3**	**-3.0**
JTN	**Tanegashima 3**	**3.74**	**14**	P		**Pn**	**15 25 33.4**	**-0.2**
JTN				S		**Sn**	**15 26 15.9**	**-1.9**
JNU	**Nakatsue**	**6.13**	**8**	Pn		**Pn**	**15 26 07.8**	**+1.2**
	2.8nm,0.3s,baz=354,slow=2.5,SNR=34							
JNU				Sn		**Sn**	**15 27 12.7**	**-4.2**
	1.1nm,0.3s,baz=169,slow=18,SNR=3.8							
SONM	**Songino Array**	**27.73**	**325**	P		**P**	**15 30 26.7**	**+2.0**
	0.2nm,0.4s,baz=144,slow=11,SNR=3.3							
MKAR	**Makanchi Array**	**42.13**	**311**	P		**P**	**15 32 29.8**	**+1.4**
	0.3nm,0.8s,baz=114,slow=9.6,SNR=3.0							
WRA	**Warramunga Arr**	**46.89**	**174**	P		**P**	**15 33 06.7**	**+0.1**
	0.6nm,0.5s,baz=353,slow=8.4,SNR=8.0							
ASAR	**Alice Springs**	**50.54**	**175**	P		**P**	**15 33 35.1**	**+0.5**
	0.5nm,0.4s,baz=4.5,slow=15,SNR=25							
FINES	**FINESS Array B**	**72.91**	**331**	P		**P**	**15 36 07.2**	**+2.2**
	2.5nm,0.9s,baz=76,slow=5.9,SNR=3.8							
BRTR	**Keskin Array B**	**77.72**	**308**	P		P	15 36 37.0	+3.7
	0.6nm,0.9s,baz=106,slow=4.7,SNR=2.8							

CSEM ***17*** *15:29:00.0±0.6, 33˚.34N×35˚.47E, h15km, ML2.6, Error ellipse: s-maj=13.2km s-min=5.9km az=64.0*

NSSC ***17*** *15:29:01.0±1.4, 33˚.33N×35˚.56E, h12km±9km, MD0.9, ML1.2*

GRAL 17 15:28:59.8±0.7, 33˚.25N×35˚.48E, h19km±29km, MD2.6, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RCY	**Rachaya**	**0.39**	**51**	*e*P		Pg	15 29 07.2	-0.9
RCY				*e*S		Sg	15 29 12.7	-1.1
BRBR	**Barbar**	**0.43**	**68**	*e*P		Pg	15 29 07.3	-1.7
BRBR				*e*S		Sg	15 29 12.8	-2.4
BRBR					AML	AML	15 29 15.2	
	comp=E,52nm,0.2s							
BRBR					AML	AML	15 29 15.8	
	comp=N,23nm,0.2s							
BHL	**Bhannes**	**0.67**	**13**	*e*P		Pb	15 29 11.4	-1.5
BHL	**Bhannes**	**0.67**	**13**	*e*P		Pb	15 29 11.4	-1.5
TOTH	**TOTAH**	**0.81**	**82**	*e*P		Pg	15 29 15.7	0.0
TOTH				*e*S		Sg	15 29 26.3	-0.2
TOTH					AML	AML	15 29 33.1	
	comp=E,11nm,0.6s							
TOTH					AML	AML	15 29 34.0	
	comp=N,7.9nm,0.5s							
TOTH	**TOTAH**	**0.81**	**82**	*e*P		Pg	15 29 15.7	0.0
	SNR=92							
TOTH				*e*S		Sg	15 29 26.3	-0.2
	comp=N,7.9nm,0.5s,SNR=96							
HWQ	**Hawqa**	**1.09**	**21**	*e*P		Pn	15 29 19.0	-1.3
HWQ				*e*S		Sb	15 29 33.1	-1.3
HWQ	**Hawqa**	**1.09**	**21**	*e*P		Pn	15 29 19.0	-1.3
HWQ				*e*S		Sb	15 29 33.1	-1.3
SALA	**Sala**	**1.19**	**117**	*e*P		Pg	15 29 22.7	-0.4
SALA				*e*S		Sn	15 29 37.6	+0.2
SALA					AML	AML	15 29 40.9	
	comp=E,3.3nm,0.3s							
SALA					AML	AML	15 29 41.3	
	comp=N,16nm,0.2s							
SALA	**Sala**	**1.19**	**117**	*e*P		Pg	15 29 22.7	-0.4
	SNR=66							
SALA				*e*S		Sn	15 29 37.7	+0.2
	comp=N,16nm,0.2s,SNR=62							
ZALF	**Zalf**	**1.59**	**101**	*e*P		Pb	15 29 29.3	+0.6
ZALF				*e*S		Sn	15 29 47.6	+0.4
ZALF					AML	AML	15 29 52.6	
	comp=E,5.7nm,0.6s							
ZALF					AML	AML	15 29 53.2	
	comp=N,5.1nm,0.5s							
ZALF	**Zalf**	**1.59**	**101**	*e*P		Pb	15 29 29.3	+0.6
	SNR=51							
ZALF				*e*S		Sn	15 29 47.6	+0.4
	comp=N,5.1nm,0.5s,SNR=49							

BJI ***17*** *15:35:54.8, 50˚.09S×125˚.98E, h15km, mB5.4/17, mb5.1/20, Ms5.2/14, Ms7 4.8/15*

IDC ***17*** *15:35:55.7±0.5, 49˚.63S×125˚.84E, h0km, mb4.8/18, mb1 4.9/19, mb1mx4.8/22, mbtmp4.8/19, ML3.8/1, MS4.4/12, Ms1 4.4/12, ms1mx4.1/30, Error ellipse: s-maj=19.5km s-min=12.7km az=95.0*

ISCJB ***17*** *15:35:56.3±0.3, 49˚.59S±0˚.05×126˚.08E±0˚.10, h17km, mb4.8/39, MS4.4/16, Error ellipse: s-maj=9.3km s-min=6.5km az=11.7*

NEIC ***17*** *15:35:56.8±0.3, 49˚.52S×125˚.93E, h10km, mb5.0/18, Error ellipse: s-maj=11.9km s-min=9.2km az=105.0*

GCMT ***17*** *15:35:57.8±0.2, 49˚.60S×125˚.97E, h19km±1km, MW5.3, Moment Tensor Solution. s50,c76; s79,c142; Moment tensor: Scale 10¹⁷Nm; Mrr0.00; Mθθ0.00; Mϕϕ0.00; Mrθ0.00; Mϕr0.00; Mθr0.00; Best double couple: M₀1.00000×10¹⁷ NP1:ϕs284.00000°, δ79.00000°, λ-10.00000°. NP2:ϕs16.00000°, δ80.00000°, λ-168.00000°. Principal axes: T 1.0600, Plg1.0000°, Azm150.0000°; N -0.0800, Plg75.0000°, Azm57.0000°; P -0.9800, Plg15.0000°, Azm240.0000°; Data Used: II IU IC G CN.*

DJA ***17*** *15:36:03.6±3.1, 49˚.S±23˚×12˚.6E±1˚.0, h46km±21km, M5.1/13, mB5.3/3, mb5.2/13, Mw(mB)4.7/3*

ISC 17 15:35:58.1±0.5, 49˚.66S±0˚.06×126˚.04E±0˚.07, h16km±2km, h16km:pP-P, n208,σ1§54/219, mb4.8/39, MS4.5/16, 31C-37D, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TAU	**Tasmania Unive**	**16.16**	**73**	*e*Pn		**Pn**	**15 39 44.6**	**+0.3**
	157nm,1.1s							
TAU	**Tasmania Unive**	**16.16**	**73**	Pn		**Pn**	**15 39 44.9**	**+0.6**
	742nm,1.2s,SNR=7.8							
NWAO	**Narrogin (SRO)**	**17.96**	**335**	*e*Pn		**Pn**	**15 40 02.9**	**-4.1**
	89nm,0.7s							
NWAO	**Narrogin (SRO)**	**17.96**	**335**	P		**Pn**	**15 40 04.5**	**-2.5**
	18nm,0.3s,baz=167,slow=11,SNR=119							
NWAO					LR	LR	15 45 22.3	
	comp=Z,3µm,19.5s,baz=157,slow=32							
BBOO	**Buckleboo**	**18.41**	**28**	*e*Pn		**P**	**15 40 10.5**	**-2.0**
	2µm,1.4s							
CASY	**Casey**	**18.48**	**200**	*e*P		**P**	**15 40 13.1**	**+0.1**
	24nm,0.9s							
FORT	**Forrest**	**18.92**	**5**	*e*P		**P**	**15 40 16.5**	**-1.5**
	181nm,0.7s							
STKA	**Stephens Creek**	**21.24**	**39**	*e*P		**P**	**15 40 41.6**	**-1.7**
	39nm,1.3s							
STKA	**Stephens Creek**	**21.24**	**39**	P		**P**	**15 40 42.4**	**-0.9**
	49nm,0.8s,baz=197,slow=10,SNR=148							
STKA					LR	LR	15 47 38.6	
	comp=Z,601nm,21.6s,baz=206,slow=33							
CAN	**Canberra**	**22.06**	**58**	*e*P		**P**	**15 40 49.5**	**-2.7**
	115nm,1.4s							
ASAR	**Alice Springs**	**26.67**	**16**	P		**P**	**15 41 34.6**	**-1.6**
ASAR	**Alice Springs**	**26.67**	**16**	P		**P**	**15 41 34.6**	**-1.6**
	84nm,0.9s,baz=193,slow=8.5,SNR=1012							
AS31	**Alice Springs**	**26.67**	**16**	*e*P		**P**	**15 41 34.7**	**-1.6**
ARMA	**Armidale**	**27.23**	**55**	*e*P		**P**	**15 41 39.0**	**-2.3**
	41nm,1.0s							
MBWA	**Marble Bar**	**28.88**	**348**	*e*P		**P**	**15 41 53.9**	**-2.0**
	11nm,0.8s							
WRA	**Warramunga Arr**	**30.38**	**16**	P		**P**	**15 42 07.1**	**-2.2**
WRA	**Warramunga Arr**	**30.38**	**16**	P		**P**	**15 42 07.1**	**-2.2**
	11nm,0.8s,baz=194,slow=8.1,SNR=86							
WRA					LR	LR	15 53 54.2	
	comp=Z,507nm,20.3s,baz=205,slow=36							
WRAB	**Tennant Creek**	**30.39**	**16**	*e*P		P	15 42 05.6	-3.8
	25nm,1.0s							
WRAB	**Tennant Creek**	**30.39**	**16**	P		**P**	**15 42 07.2**	**-2.2**
	112nm,0.7s,SNR=9.0							
RPZ	**Rata Peaks**	**31.07**	**96**	P		**P**	**15 42 17.7**	**+2.5**
RPZ	**Rata Peaks**	**31.07**	**96**	P		**P**	**15 42 17.7**	**+2.5**
	16nm,1.0s,baz=292,slow=7.5,SNR=6.4							
VNDA	**Vanda**	**31.07**	**166**	P		**P**	**15 42 14.4**	**-0.5**
	15nm,0.9s,baz=315,slow=9.0,SNR=53							
VNDA					LR	LR	15 53 25.0	
	comp=Z,2µm,21.3s,baz=323,slow=34							
FITZ	**Fitzroy Crossi**	**31.48**	**359**	*e*P		**P**	**15 42 18.1**	**-0.8**
	16nm,0.9s							
FITZ	**Fitzroy Crossi**	**31.48**	**359**	P		**P**	**15 42 18.5**	**-0.4**
	4.9nm,0.9s,baz=184,slow=10,SNR=16							
FITZ					LR	LR	15 53 48.5	
	comp=Z,912nm,18.7s,baz=184,slow=34							
SBA	**Scott Base**	**32.10**	**165**	*e*P		**P**	**15 42 24.2**	**+0.3**
	19nm,1.1s							
CTA	**Charters Tower**	**33.62**	**36**	P		**P**	**15 42 36.7**	**-1.0**
CTA					PcP	**PcP**	**15 45 19.8**	**+2.0**
CTA	**Charters Tower**	**33.62**	**36**	P		**P**	**15 42 36.7**	**-1.0**
	3.5nm,0.6s,baz=230,slow=15,SNR=4.1							
CTA					PcP	**PcP**	**15 45 19.8**	**+2.0**
	4.1nm,0.9s,baz=207,slow=2.3,SNR=3.7							
CTA					LR	LR	15 54 59.9	
	comp=Z,577nm,20.6s,baz=204,slow=34							
MAW	**Mawson**	**35.47**	**216**	LR		LR	15 55 27.3	
	comp=Z,377nm,20.3s,baz=84,slow=33							
URZ	**Urewera**	**37.80**	**92**	P		**P**	**15 43 15.4**	**+2.0**
URZ	**Urewera**	**37.80**	**92**	P		**P**	**15 43 15.4**	**+2.0**
	8.6nm,0.6s,baz=239,slow=4.7,SNR=11							
QSPA	**South Pole Qui**	**40.46**	**180**	P		**P**	**15 43 35.1**	**-0.5**
QSPA					PcP	**PcP**	**15 45 38.0**	**0.0**
QSPA	**South Pole Qui**	**40.46**	**180**	P		**P**	**15 43 35.1**	**-0.5**
	20nm,1.1s,baz=334,slow=3.8,SNR=18							
QSPA					PcP	**PcP**	**15 45 37.9**	**0.0**
	8.1nm,1.0s,baz=308,slow=3.2,SNR=4.7							
DZM	**Mont Dzumac**	**42.01**	**64**	*e*S		S	15 50 13.9	+6.9
	465nm,26.6s							
DZM					*e*LR	LR	15 55 32.2	
	1µm,24.9s							
DZM	**Mont Dzumac**	**42.01**	**64**	P		**P**	**15 43 47.9**	**-0.8**
DZM	**Mont Dzumac**	**42.01**	**64**	P		**P**	**15 43 47.9**	**-0.8**
	15nm,0.9s,baz=158,slow=4.8,SNR=7.2							
PMG	**Port Moresby**	**43.82**	**31**	P		**P**	**15 44 03.1**	**-0.1**
PMG	**Port Moresby**	**43.82**	**31**	P		**P**	**15 44 03.1**	**-0.1**
	17nm,0.7s,baz=232,slow=8.3,SNR=9.3							
KAPI	**Kappang**	**44.81**	**351**	*e*P		**P**	**15 44 10.1**	**-1.0**
	29nm,1.1s							
KAPI	**Kappang**	**44.81**	**351**	P		**P**	**15 44 10.3**	**-0.9**
	19nm,1.0s,baz=195,slow=12,SNR=4.3							
HNR	**Honiara**	**49.01**	**47**	PcP		**PcP**	**15 46 09.3**	**+1.5**
HNR	**Honiara**	**49.01**	**47**	PcP		**PcP**	**15 46 09.3**	**+1.5**
	25nm,0.6s,baz=146,slow=5.0,SNR=4.1							
MSVF	**Nonsavu**	**52.31**	**72**	*e*P		**P**	**15 45 06.9**	**-2.1**
	466nm,3.0s							
KSM	**Kuching**	**52.71**	**340**	*e*P		**P**	**15 45 09.6**	**-2.2**
	14nm,1.1s							
SNAA	**Sanae**	**53.70**	**198**	*e*P		**P**	**15 45 18.8**	**+0.2**
SNAA	**Sanae**	**53.70**	**198**	*e*P		**P**	**15 45 18.0**	**-0.6**
	50nm,0.9s							
SNAA	**Sanae**	**53.70**	**198**	P		**P**	**15 45 18.6**	**0.0**
VNA2	**Neumayer--Watz**	**55.19**	**197**	*e*P		**P**	**15 45 29.7**	**+0.4**
	baz=132,slow=5.6							
VNA3	**Neumayer Olymp**	**55.34**	**196**	*e*P		**P**	**15 45 30.4**	**-0.1**
VNA1	**Neumayer--Stat**	**55.58**	**197**	*e*P		**P**	**15 45 32.7**	**+0.6**
PSI	**Prapat**	**57.26**	**327**	LR		LR	16 09 18.9	
	comp=Z,287nm,19.5s,baz=82,slow=35							
IPM	**Ipoh**	**58.12**	**330**	*e*P		**P**	**15 45 48.2**	**-2.6**
TARA	**Tarawa**	**64.77**	**54**	*e*P		**P**	**15 46 34.9**	**-1.0**
	117nm,0.7s							
TARA					*e*pP	**pP**	**15 46 40.9**	**-0.2**
TBI	**Tubuai**	**69.10**	**102**	*e*LR		LR	16 08 00.5	
	288nm,27.8s							
CM31	**Chiang Mai Arr**	**71.94**	**333**	*e*P		**P**	**15 47 17.8**	**-2.8**
	4.9nm,0.7s							
CMAR	**Chiang Mai Arr**	**71.94**	**333**	P		**P**	**15 47 20.1**	**-0.5**
CMAR	**Chiang Mai Arr**	**71.94**	**333**	P		**P**	**15 47 20.1**	**-0.5**
	5.8nm,0.8s,baz=182,slow=5.0,SNR=26							
CMAR					LR	LR	16 17 23.8	
	comp=Z,352nm,19.4s,baz=353,slow=35							
CHTO	**Chiang Mai**	**72.28**	**333**	*e*P		**P**	**15 47 20.3**	**-2.3**
	11nm,1.3s							
PPT2	**Papeete2**	**73.20**	**97**	*e*LR		LR	16 09 54.2	
	285nm,22.5s							
BOSA	**Boshof**	**75.21**	**243**	P		**P**	**15 47 38.6**	**-1.4**
BOSA	**Boshof**	**75.21**	**243**	P		**P**	**15 47 38.6**	**-1.4**
	2.0nm,0.6s,baz=222,slow=4.9,SNR=4.2							
GYA	**Guiyang**	**77.72**	**342**	P		**P**	**15 47 57.0**	**+3.1**
GYA				PP		**PP**	**15 50 53.4**	**+3.6**
GYA				S		**S**	**15 57 49.0**	**+3.6**
GYA				SKS		**SKSac**	**15 58 05.4**	**-1.3**
GYA				SS		**SS**	**16 02 52.3**	**+6.1**
GYA				pmax		pmax		
	comp=Z,20nm,1.0s							
GYA				pmax		pmax		
	comp=Z,130nm,5.2s							
GYA				LR		LR		
	comp=N,550nm,19.7s							
GYA				LR		LR		
	comp=E,680nm,20.9s							
GYA				LR		LR		
	comp=Z,540nm,19.7s							
RKT	**Rikitea**	**78.27**	**112**	*e*LQ		LQ	16 08 53.5	
	comp=Z,780nm,31.2s							
RKT					*e*LR	LR	16 12 11.3	
	comp=Z,697nm,28.0s							
NJ2	**Nanjing**	**81.60**	**354**	*e*P		**P**	**15 48 17.0**	**+2.3**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.7s							
JNU	**Nakatsue**	**82.53**	**4**	P		**P**	**15 48 19.9**	**+0.3**
JNU	**Nakatsue**	**82.53**	**4**	P		**P**	**15 48 19.9**	**+0.3**
	comp=Z,5.4nm,0.7s,baz=126,slow=3.8,SNR=5.1							
CD2	**Chengdu**	**82.63**	**341**	P		**P**	**15 48 22.3**	**+2.1**
CD2				pP		**pP**	**15 48 27.0**	**+1.4**
CD2				sP		**sP**	**15 48 29.3**	**+1.7**
CD2				PP		**PP**	**15 51 34.5**	**+4.1**
CD2				S		**SKSac**	**15 58 39.6**	**-0.9**
CD2				sS		**sS**	**15 58 46.9**	**+1.3**
CD2				SS		**SS**	**16 04 05.8**	**+6.3**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
CD2				pmax		pmax		
	comp=Z,120nm,5.4s							
CD2				LR		LR		
	comp=Z,290nm,18.6s							
TAPN	**Taplejung**	**83.91**	**326**	*e*P		**P**	**15 48 26.1**	**-1.2**
	comp=Z,20nm,0.8s							
RAMN	**Ramite**	**83.95**	**325**	*e*P		**P**	**15 48 26.7**	**-0.7**
	comp=Z,27nm,0.7s							
XAN	**Xi'an**	**84.71**	**346**	P		**P**	**15 48 30.4**	**-0.4**
XAN				pP		**pP**	**15 48 40.0**	**+3.8**
XAN				S		**S**	**15 58 56.3**	**-1.2**
XAN				pmax		pmax		
	comp=Z,46nm,9.9s							
XAN				LR		LR		
	comp=N,160nm,28.7s							
XAN				LR		LR		
	comp=E,86nm,28.7s							
XAN				LR		LR		
	comp=Z,98nm,31.8s							
PKI	**Pulchoki**	**84.96**	**325**	*e*P		**P**	**15 48 32.0**	**-0.6**
	comp=Z,13nm,0.6s							
PKIN	**Phulchoki**	**84.97**	**325**	*e*P		**P**	**15 48 32.3**	**-0.3**
	comp=Z,11nm,1.0s							
GUN	**Gumba**	**85.09**	**325**	*e*P		**P**	**15 48 32.2**	**-1.1**
	comp=Z,27nm,0.7s							
DMN	**Daman**	**85.11**	**324**	*e*P		**P**	**15 48 31.8**	**-1.5**
KKN	**Kakani**	**85.21**	**325**	*e*P		**P**	**15 48 32.4**	**-1.3**
	comp=Z,19nm,0.7s							
KOLN	**Koldanda**	**85.83**	**323**	*e*P		**P**	**15 48 36.4**	**-0.4**
	comp=Z,20nm,0.7s							
DANN	**Dangsing**	**86.29**	**324**	*e*P		**P**	**15 48 38.7**	**-0.5**
	comp=Z,36nm,0.6s							
PYUN	**Buthan**	**86.37**	**323**	*e*P		**P**	**15 48 39.9**	**+0.5**
	comp=Z,52nm,0.8s							
MJAR	**Matsushiro Arr**	**86.50**	**10**	P		**P**	**15 48 40.9**	**+1.2**
MJAR	**Matsushiro Arr**	**86.50**	**10**	P		**P**	**15 48 40.9**	**+1.2**
	comp=Z,3.8nm,0.8s,baz=192,slow=7.6,SNR=17							
MAJO	**Matsushiro**	**86.50**	**10**	*e*P		**P**	**15 48 38.1**	**-1.5**
	comp=Z,26nm,1.2s							
MAT	**Matsushiro**	**86.50**	**10**	P		**P**	**15 48 41.0**	**+1.3**
KSAR	**Wonju Array Be**	**86.74**	**1**	P		**P**	**15 48 42.4**	**+1.6**
KSRS	**Korea Array**	**86.75**	**2**	P		**P**	**15 48 42.4**	**+1.6**
	comp=Z,2.5nm,0.7s,baz=184,slow=4.5,SNR=10							
LZH	**Lanzhou**	**87.61**	**342**	*e*P		**P**	**15 48 44.5**	**-0.8**
LZH				pP		**pP**	**15 48 49.8**	**-0.9**
LZH				pmax		pmax		
	comp=Z,16nm,1.4s							
KMBO	**Kilima Mbogo**	**88.36**	**270**	LR		LR	16 19 32.4	
	comp=Z,221nm,20.4s,baz=96,slow=30							
PLCA	**Paso Flores**	**88.81**	**167**	P		**P**	**15 48 50.6**	**-0.5**
PLCA	**Paso Flores**	**88.81**	**167**	P		**P**	**15 48 50.6**	**-0.5**
	comp=Z,4.8nm,1.1s,baz=170,slow=5.2,SNR=5.2							
HHC	**Hu-ho-hao-te**	**91.03**	**349**	*e*P		**P**	**15 49 00.0**	**-1.1**
HHC				pP		**pP**	**15 49 04.8**	**-1.7**
HHC				PP		**PP**	**15 52 40.5**	**+2.3**
HHC				SKS		**SKSac**	**15 59 30.9**	**-1.0**
HHC				S		**S**	**15 59 56.1**	**-1.5**
HHC				SS		**SS**	**16 06 05.8**	**+3.4**
HHC				pmax		pmax		
	comp=Z,29nm,1.0s							
HHC				pmax		pmax		
	comp=Z,340nm,5.8s							
HHC				LR		LR		
	comp=N,450nm,18.6s							
HHC				LR		LR		
	comp=E,380nm,18.1s							
HHC				LR		LR		
	comp=Z,380nm,17.5s							
GTA	**Gaotai**	**91.66**	**340**	*e*P		P	15 49 09.5	+5.4
GTA				pP		pP	15 49 14.3	+4.7
GTA				sP		sP	15 49 17.4	+5.9
GTA				pmax		pmax		
	comp=Z,3.0nm,0.8s							
CN2	**Changchun**	**93.08**	**360**	*e*P		**P**	**15 49 11.9**	**+1.5**
USRK	**Ussuriysk Arra**	**93.62**	**4**	P		**P**	**15 49 14.8**	**+1.9**
	comp=Z,1.4nm,0.8s,baz=164,slow=7.9,SNR=2.4							
CFAA	**Coronel Fontan**	**98.10**	**168**	LR		LR	16 34 17.3	
	comp=Z,25nm,19.4s,baz=160,slow=36							
SONM	**Songino Array**	**98.59**	**347**	P		Pdif	15 49 37.4	+1.9
SONM				PP		PP	15 53 45.3	+8.3
SONM	**Songino Array**	**98.59**	**347**	P		Pdif	15 49 37.4	+1.9
	comp=Z,0.3nm,0.9s,baz=166,slow=7.4,SNR=2.3							
SONM				PP		PP	15 53 45.3	+8.3
	comp=Z,0.5nm,0.9s,baz=174,slow=5.4,SNR=3.7							
SONM				LR		LR	16 30 27.2	
	comp=Z,230nm,21.4s,baz=172,slow=33							
WMQ	**Urumqi**	**98.95**	**333**	P		Pdif	15 49 38.0	+0.8
WMQ				sP		sP	15 49 45.0	+0.4
WMQ				PP		**PP**	**15 53 42.0**	**+2.3**
WMQ				SKS		**SKSac**	**16 00 15.0**	**+0.8**
WMQ				S		**S**	**16 01 04.0**	**-2.5**
WMQ				SS		**SS**	**16 07 56.0**	**+1.0**
WMQ				pmax		pmax		
	comp=Z,17nm,1.0s							
WMQ				pmax		pmax		
	comp=Z,88nm,8.0s							
WMQ				LR		LR		
	comp=N,240nm,24.0s							
WMQ				LR		LR		
	comp=E,190nm,24.0s							
WMQ				LR		LR		
	comp=Z,210nm,24.0s							
KSH	**Kashi**	**99.15**	**323**	P		**Pdif**	**15 49 39.0**	**+0.7**
KSH				pP		**pP**	**15 49 44.1**	**+0.4**
KSH				sP		**sP**	**15 49 46.0**	**+0.3**
KSH				PP		**PP**	**15 53 44.1**	**+2.7**
KSH				SKS		**SKSac**	**16 00 16.5**	**+1.0**
KSH				S		**S**	**16 01 06.4**	**-2.2**
KSH				sS		**sS**	**16 01 15.3**	**-2.4**
KSH				SS		**SS**	**16 07 57.6**	**-0.5**
KSH				pmax		pmax		
	comp=Z,2.0nm,0.6s							
KSH				pmax		pmax		
	comp=Z,110nm,4.7s							
KSH				LR		LR		
	comp=N,90nm,6.0s							
KSH				LR		LR		
	comp=E,95nm,5.0s							
KSH				LR		LR		
	comp=Z,79nm,4.4s							
MKAR	**Makanchi Array**	**103.28**	**331**	PP		PP	15 54 14.3	+1.9
	comp=Z,0.8nm,1.0s,baz=153,slow=8.2,SNR=4.1							
ZALV	**Zalesovo Beam**	**108.91**	**336**	PP		PP	15 54 52.7	-1.1
ZALV	**Zalesovo Beam**	**108.91**	**336**	PP		PP	15 54 52.7	-1.1
	comp=Z,0.6nm,0.8s,baz=157,slow=7.8,SNR=3.1							
BRTR	**Keskin Array B**

baz=142
NOA NORSAR Array B 142.82 313 PKP PKPdf 15 55 27.7 -1.8
NOA NORSAR Array B 142.82 313 PKP PKPdf 15 55 27.7 -1.8
comp=Z,0.5nm,0.7s,baz=98,slow=1.5,SNR=2.8
S26A Kim 142.85 90 ⇓PKPdf PKPdf 15 55 28.7 -1.8
baz=143
ESDC Sonseca Array 143.68 273 PKP PKPbc 15 55 30.4 +1.1
ESDC Sonseca Array 143.68 273 PKP PKPbc 15 55 30.4 +1.1
comp=Z,0.5nm,0.4s,baz=111,slow=2.0,SNR=5.2
SJPF Ste Jean 143.68 280 ePKIKP PKPbc 15 55 30.1 +1.0
SJPF Ste Jean 143.68 280 ePKPdf PKPbc 15 55 30.1 +1.0
A17A Triple J Farms 143.75 69 ⇓PKPdf PKPdf 15 55 31.3 -0.3
baz=144
L23A Garrett 143.82 82 ⇑PKPdf PKPbc 15 55 30.9 +1.1
baz=144
E19A Rath Farm, Rou 143.90 74 ⇓PKPdf PKPdf 15 55 31.2 -0.7
baz=144
EGMT Eagleton 143.96 71 ePKPdf PKPbc 15 55 30.8 +1.0
EGMT Eagleton 143.96 71 ⇓PKPdf PKPdf 15 55 31.1 -0.8
baz=144
J22A Midwest 143.97 79 ⇓PKPdf PKPbc 15 55 31.2 +1.0
baz=144
B18A Beardsley Farm 144.09 70 ⇑PKPdf PKPdf 15 55 31.8 -0.4
baz=144
D19A Cripps Ranch, 144.14 72 ⇓PKPdf PKPdf 15 55 31.9 -0.4
baz=144
I22A 9 Mile Ranch, 144.19 79 ⇓PKPdf PKPdf 15 55 32.0 -0.6
baz=144
K23A Bowen Ranch, D 144.19 81 ⇓PKPdf PKPdf 15 55 32.1 -0.6
baz=144
A18A Metzger Ranch, 144.26 69 ⇑PKPdf PKPdf 15 55 32.4 0.0
baz=144
C19A Slack Wire Ran 144.27 71 ⇑PKPdf PKPdf 15 55 32.8 +0.3
baz=144
E20A Meyer Farm, Mu 144.33 74 ⇑PKPdf PKPdf 15 55 33.2 +0.6
baz=144
G21A Lodge Grass 144.35 76 ⇓PKPdf PKPdf 15 55 33.4 +0.6
baz=144
M25A Palm-Egli Farm 144.54 84 ⇓PKPdf PKPdf 15 55 33.3 0.0
baz=145
J23A Dilts Ranch, B 144.55 80 ⇑PKPdf PKPdf 15 55 33.3 0.0
baz=145
D20A Manuel Ranch, 144.57 73 ⇑PKPdf PKPdf 15 55 33.3 +0.3
baz=145
MFF Saint Martin d 144.59 286 ePKIKP PKPdf 15 55 33.2 +0.2
comp=Z,23nm,1.0s
MFF Saint Martin d 144.59 286 ePKPdf PKPdf 15 55 33.2 +0.2
H22A Clearmont 144.60 78 ⇑PKPdf PKPdf 15 55 33.2 0.0
baz=145
B19A Brinkman Farms 144.63 70 ⇑PKPdf PKPdf 15 55 33.6 +0.5
baz=145
C20A Veseth Ranch, 144.91 72 ⇓PKPdf PKPdf 15 55 34.5 +0.9
baz=145
G22A Birney 144.92 77 ⇓PKPdf PKPdf 15 55 34.4 +0.7
baz=145
A19A Klindworth Far 144.93 70 ⇓PKPdf PKPdf 15 55 34.2 +0.6
baz=145
L25A Engebretsen Ra 144.96 83 ⇓PKPdf PKPdf 15 55 34.4 +0.4
baz=145
T31A Randall Ranch, 145.01 93 ⇑PKPdf PKPdf 15 55 34.8 +0.8
baz=145
J24A Dixon Ranch, L 145.09 81 ⇓PKPdf PKPdf 15 55 35.1 +1.0
baz=145
B20A Solberg Farm, 145.19 71 ⇓PKPdf PKPdf 15 55 35.6 +1.6
baz=145
YKA Yellowknife Ar 145.19 45 PKPbc PKPbc 15 55 33.0 -0.1
YKA Yellowknife Ar 145.19 45 PKPbc PKPbc 15 55 33.0 -0.1
comp=Z,14nm,0.8s,baz=266,slow=3.8,SNR=100
N27A Anderson Farm, 145.20 86 ⇑PKPdf PKPdf 15 55 35.7 +1.3
baz=145
K25A Mack Ranch, Ha 145.25 82 ⇓PKPdf PKPdf 15 55 36.1 +1.6
baz=145
D21A La Casta Ranch 145.27 73 ⇓PKPdf PKPdf 15 55 35.0 +0.7
baz=145
I24A Kuemmerle Ranc 145.36 80 ⇓PKPdf PKPab 15 55 35.4 +0.8
baz=146
LDF La Druitiere 145.38 289 ePKIKP PKPab 15 55 34.6 +0.2
comp=Z,19nm,0.6s
LDF La Druitiere 145.38 289 ePKPdf PKPab 15 55 34.6 +0.2
A20A Cobblestone Ra 145.41 70 ⇓PKPdf PKPab 15 55 35.7 +1.1
baz=146
FLN La Foliniere 145.67 289 ePKIKP PKPab 15 55 36.0 +0.5
comp=Z,39nm,1.1s
FLN La Foliniere 145.67 289 ePKPdf PKPab 15 55 36.0 +0.5
EVO Evora 145.68 269 ePKIKP PKPdf 15 55 34.9 -0.2
comp=Z,18nm,0.7s
EVOP Sao Brissos 145.75 269 ePKPdf PKPdf 15 55 34.9 -0.3
GRR Gorron 145.76 289 ePKIKP PKPbc 15 55 35.3 -0.1
GRR Gorron 145.76 289 ePKPdf PKPbc 15 55 35.3 -0.1
D22A Cohagen 145.81 74 ⇑PKPdf PKPab 15 55 36.0 -0.2
baz=146
H24A Dirks Ranch, A 145.81 78 ⇓PKPdf PKPbc 15 55 36.1 +0.2
baz=146
E23A Ismay 146.09 75 ⇑PKiKP PKPab 15 55 38.2 +1.0
baz=146
G24A Alzada 146.16 78 ⇓PKiKP PKiKP 15 55 39.0 -1.0
baz=146
C22A Vida 146.24 73 ⇑PKiKP PKiKP 15 55 39.2 -0.9
baz=146
F24A Ekalaka 146.36 77 ⇑PKiKP PKiKP 15 55 39.7 -0.8
baz=146
B22A Reddig Ranch S 146.38 72 ⇓PKiKP PKiKP 15 55 39.7 -0.7
baz=146
D23A Lindsay 146.43 74 ⇑PKiKP PKiKP 15 55 40.0 -0.5
baz=147
A22A Carney Farms, 146.69 71 ⇓PKiKP PKiKP 15 55 40.6 -0.4
baz=147
C23A Lambert 146.69 73 ⇑PKiKP PKiKP 15 55 40.8 -0.2
baz=147
E24A Baker 146.75 76 ⇑PKiKP PKiKP 15 55 41.2 0.0
baz=147
TUL1 Tulsa 146.81 98 ⇓PKiKP PKiKP 15 55 41.3 -0.3
baz=147
D24A Glendive 146.96 75 ⇑PKiKP PKiKP 15 55 41.5 -0.1
baz=147
C24A Savage 147.06 74 ⇑PKiKP PKiKP 15 55 42.0 +0.2
baz=147
B23A Brockton 147.06 72 ⇑PKiKP PKiKP 15 55 41.9 +0.2
baz=147
DGMT Dagmar 147.56 72 ⇓PKiKP PKPab 15 55 43.5 +0.6
baz=148
A24A Westby 147.84 72 ⇓PKiKP PKPab 15 55 44.2 +0.2
baz=148
BGNE Belgrade 148.35 88 ⇓PKiKP PKiKP 15 55 45.3 +0.7
baz=148
MDND Maddock 150.20 76 ⇓PKiKP PKiKP 15 55 49.0 +0.7
baz=150
TIGA Tifton 151.32 118 ⇑PKiKP PKiKP 15 55 51.1 +0.1
baz=152
ULM Lac du Bonnet 153.28 73 PKPbc PKPbc 15 55 55.0 +0.7
ULM Lac du Bonnet 153.28 73 PKPbc PKPbc 15 55 55.0 +0.7
comp=Z,5.1nm,0.9s,baz=261,slow=1.0,SNR=5.2

IDC 17 15:38:28.9±5.4, **22°26'S×68°17'W, h0**km, **mb4.1/1, mb1 3.7**/2, **mb1mx3.5**/17, **mbtmp3.7**/2, **ML3.2**/1, **MS4.3**/2, **Ms1 4.3**/2, **ms1mx3.4**/27, **Error ellipse: s-maj=161.0km s-min=55.4km az=67.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	5.94	0	Pn	Pn		15 39 58.7	-0.2
	0.3nm,0.3s,baz=183,slow=9.3,SNR=6.5							
JTS	JuntasAbangare	36.29	331	LR	LR		15 59 51.3	
	comp=Z,187nm,21.7s,slow=35							
TORD	Torodi Ar. Bea	76.97	70	P	P		15 50 23.9	0.0
	1.0nm,0.6s,baz=247,slow=5.0,SNR=7.7							
AFI	Afiamalu	96.99	252	LR	LR		16 24 55.8	
	comp=Z,364nm,20.6s,baz=97,slow=29							
MKAR	Makanchi Array	145.83	37	PKPbc	PKPdf		15 58 09.3	-0.3
	0.4nm,0.7s,baz=329,slow=3.5,SNR=4.6							

*IDC **17** 15:44:38.1±0.9, 44°17'N×129°17'W, h0km, mb4.0/12, mb1 4.2/18, mb1mx4.1/34, mbtmp4.0/18, ML3.6/5, MS3.9/13, Ms1 3.9/13, ms1mx3.6/52, Error ellipse: s-maj=25.4km s-min=11.6km az=34.0*
*ISCJB **17** 15:44:39.0±0.3, 44°31'N±0°02'×129°18'W±0°04, h10km, mb4.2/22, MS4.1/9, Error ellipse: s-maj=4.5km s-min=3.2km az=177.3*
*BJI **17** 15:44:39.8, 44°30'N×129°20'W, h10km, mB5.1/4, mb4.9/4, Ms4.8/2, Ms7 4.5/2*
*NEIC **17** 15:44:40.6±0.6, 44°26'N×129°07'W, h10km, mb4.4/16, Error ellipse: s-maj=8.1km s-min=5.1km az=49.0*

ISC 17 15:44:39.6±0.6, **44°17'N**±0°08'×**129°15'W**±0°07, **h10**km, **n435**, σ=1°42'/386, **mb4.3**/22, **MS4.1**/9, **152C-155D, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KEBM	Edson Butte	3.73	109	ePn	Pn		15 45 34.1	-3.2
KBO	Bosley Butte	4.10	117	ePn	Pn		15 45 41.8	-0.6
COR	Corvallis	4.21	82	ePn	Pn		15 45 43.5	-0.3
KMOR	Kings Mountain	4.28	68	P	Pn		15 45 44.7	-0.1
F03A	Seaside	4.33	64	P	Pn		15 45 45.8	+0.3
NLO	Nicolai Mounta	4.46	63	P	Pn		15 45 48.0	+0.6
BMW	Boistfort Moun	4.77	59	P	Pn		15 45 51.1	-0.4
HUMO	Hull Mountain	4.78	107	ePn	Pn		15 45 49.2	-2.4
SSOR	Sweet Springs	4.83	80	P	Pn		15 45 53.8	+1.3
NLWA	Neilton Lookou	4.90	47	ePn	Pn		15 45 50.5	-2.8
RVW	Rose Valley	4.94	64	P	Pn		15 45 54.6	+0.7
H04A	Detroit Lake	5.01	82	P	Pn		15 45 55.5	+0.6
KHMM	Horse Mountain	5.18	128	ePn	Pn		15 45 58.1	+0.7
FL2	Flat Top 2	5.21	65	P	Pn		15 45 58.6	+0.8
MTMW	Mount Mitchell	5.25	67	P	Pn		15 45 59.1	+0.9
YBH	Yreka Blue Hor	5.32	115	Pn	Pn		15 45 58.6	-0.5
YBH				Sn	Sn		15 46 59.4	-1.0
	0.6nm,0.3s,baz=286,slow=11,SNR=8.6							
YBH				Sn	Sn		15 46 59.4	-1.0
	0.2nm,0.3s,baz=3.2,slow=18,SNR=1.9							
TDH	Tom, Dick, Har	5.36	75	P	Pn		15 46 00.9	+1.1
LON	Longmire	5.77	61	ePn	Pn		15 46 05.4	+0.1
PGC	Sidney	5.96	39	ePn	Pn		15 46 07.3	-0.6
	1.8nm,0.6s							
WDC	Whiskeytown Da	6.07	124	ePn	Pn		15 46 10.0	+0.7
	11nm,1.1s							
VIPM	Ingram Point	6.13	84	P	Pn		15 46 11.1	+0.7
MOD	Modoc	6.87	106	ePn	Pn		15 46 22.1	+1.7
HAWA	Hanford	7.14	69	ePn	Pn		15 46 22.9	-1.1
OHCM	Honcut	7.49	128	ePn	Pn		15 46 32.3	+3.4
OHCM				ePg	Pg		15 47 11.4	+8.3
BEKR	Beckworth	7.83	120	ePn	Pn		15 46 37.1	+3.4
BBB	Bella Bella	8.05	5	Pn	Pn		15 46 38.8	+2.3
BBB				Sn	Sb		15 48 21.3	-14
BBB	Bella Bella	8.05	5	Pn	Pn		15 46 38.8	+2.3
	0.7nm,0.3s,baz=188,slow=18,SNR=6.0							
BBB				Sn	Sb		15 48 21.3	-14
	0.3nm,0.3s,baz=159,slow=18,SNR=2.5							
BBB				LR	LR		15 49 14.4	
	comp=Z,484nm,19.0s,baz=270,slow=34							
BMO	Blue Mountains	8.49	81	ePn	Pn		15 46 42.7	0.0
CMB	Columbia Colle	9.02	130	ePn	Pn		15 46 50.6	+0.7
NEW	Newport	9.29	60	ePn	Pn		15 46 51.8	-1.7
NEW	Newport	9.29	60	⇑P	Pn		15 46 53.9	+0.4
	baz=9.2							
NEW	Newport	9.29	60	Pn	Pn		15 46 53.6	+0.1
	0.8nm,0.3s,baz=238,slow=11,SNR=9.8							
NEW				LR	LR		15 50 23.8	
	comp=Z,256nm,21.9s,baz=244,slow=37							
BMN	Battle Mountai	9.59	109	ePn	Pn		15 46 59.0	+1.1
MFID	Camas Ranch	9.67	90	ePn	Pn		15 46 58.3	-0.5
MFID	Camas Ranch	9.67	90	⇓P	Pn		15 47 01.4	+2.6
	baz=9.6							
C11A	Tepee Creek (N	9.69	63	⇓P	Pn		15 46 59.3	+0.3
	baz=9.6,SNR=8.5							
NVAR	Mina Array Bea	9.97	121	Pn	Pn		15 47 05.9	+2.8
NVAR	Mina Array Bea	9.97	121	Pn	Pn		15 47 05.9	+2.8
	0.1nm,0.3s,baz=296,slow=13,SNR=12							
F12A	Elk City	9.98	76	⇑P	Pn		15 47 05.3	+2.3
	baz=9.9,SNR=16							
NV11	Mina Array Sit	10.06	121	ePn	Pn		15 47 04.7	+0.5
H12A	Diamond D Ranc	10.25	83	⇓P	Pn		15 47 10.0	+3.2
	baz=10,SNR=17							
B12A	Libby	10.31	61	⇑P	Pn		15 47 08.9	+1.3
	baz=10							
A12A	Yaak River Ran	10.44	58	⇓P	Pn		15 47 11.1	+1.7
	baz=10							
F13A	Darby	10.62	76	⇓P	Pn		15 47 14.3	+2.4
	baz=10,SNR=26							
BSMT	Basseo Peak	10.64	65	ePn	Pn		15 47 13.2	+1.0
HLID	Hailey	10.66	88	ePn	Pn		15 47 13.6	+1.1
HLID	Hailey	10.66	88	⇑P	Pn		15 47 15.8	+3.3
	baz=11,SNR=52							
G13A	Cobalt	10.67	80	⇑P	Pn		15 47 14.4	+1.7
	baz=11							
H13A	Challis	10.68	83	⇓P	Pn		15 47 15.6	+2.9
	baz=11,SNR=12							
D13A	Huson	10.70	69	⇑P	Pn		15 47 14.4	+1.6
	baz=11							
C13A	Hot Springs	10.74	66	⇑P	Pn		15 47 15.0	+1.5
	baz=11,SNR=23							
E13A	Victor	10.78	73	⇑P	Pn		15 47 15.6	+1.5
	baz=11,SNR=7.3							
I13A	Wildhorse Cree	10.83	86	⇑P	Pn		15 47 17.2	+2.4
	baz=11,SNR=23							
ELK	Elko	10.83	104	ePn	Pn		15 47 16.0	+1.1
ELK	Elko	10.83	104	Pn	Pn		15 47 18.9	+4.0
	0.1nm,0.3s,baz=296,slow=13,SNR=13							
ELK				LR	LR		15 51 30.3	
	comp=Z,288nm,20.8s,baz=107,slow=38							
J13A	Cove Ranch, Pi	10.86	89	⇓P	Pn		15 47 18.0	+2.8
	baz=11,SNR=28							
JTMT	Jette	10.95	66	ePn	Pn		15 47 13.7	-2.7
B13A	Whitefish	10.99	62	⇓P	Pn		15 47 17.6	+0.7
	baz=11,SNR=6.0							
MSO	Missoula	11.00	71	ePn	Pn		15 47 15.2	-1.9
MSO	Missoula	11.00	71	⇓P	Pn		15 47 18.4	+1.3
	baz=11,SNR=7.9							
SWMT	Swartz Lake	11.08	67	ePn	Pn		15 47 16.6	-1.6
YBMT	Yellow Bay	11.15	65	ePn	Pn		15 47 17.4	-1.7
G14A	Jackson	11.22	79	⇓P	Pn		15 47 21.8	+1.6
	baz=11,SNR=18							
E14A	Clinton	11.26	73	⇑P	Pn		15 47 22.3	+1.7
	baz=11,SNR=12							
F14A	Wisdom	11.30	76	⇓P	Pn		15 47 23.2	+2.0
	baz=11							
I14A	Mackay	11.30	86	⇑P	Pn		15 47 25.0	+3.7
	baz=11,SNR=15							
H14A	Leadore	11.30	82	⇑P	Pn		15 47 23.5	+2.2
	baz=11,SNR=15							
D14A	Greenough	11.33	70	⇓P	Pn		15 47 23.4	+1.8
	baz=11,SNR=15							
J14A	Carey	11.34	89	⇓P	Pn		15 47 25.2	+3.4
	baz=11,SNR=43							
SLMT	Seeley Lake	11.37	69	ePn	Pn		15 47 23.1	+0.9
CHMT	Chamberlain Mo	11.48	71	ePn	Pn		15 47 24.9	+1.2
WALA	Waterton Lakes	11.56	60	ePn	Pn		15 47 18.9	-5.7
PKM	Peak Mountain	11.73	139	⇓P	Pn		15 47 31.7	+4.6
	baz=12							
R11A	Troy Canyon, C	11.74	115	⇑P	Pn		15 47 31.2	+3.9
	baz=12							
K14A	Jones Ranch, D	11.74	92	⇓P	Pn		15 47 29.3	+2.1
	baz=12							
B14A	Marquette Ranc	11.76	64	⇑P	Pn		15 47 28.1	+0.7
	baz=12							
ISA	Isabella	11.80	132	ePn	Pn		15 47 30.1	+2.2
ISA	Isabella	11.80	132	⇑P	Pn		15 47 32.5	+4.5
	baz=12							
H15A	Lima	11.82	82	⇓P	Pn		15 47 30.3	+1.9
	baz=12,SNR=12							
L14A	Malta	11.83	95	⇑P	Pn		15 47 30.8	+2.4
	baz=12							
DLMT	Dillon	11.83	78	ePn	Pn		15 47 29.0	+0.6
A14A	Double T Ranch	11.84	61	⇑P	Pn		15 47 30.2	+1.8
	baz=12,SNR=6.6							
E15A	Deer Lodge	11.84	73	⇑P	Pn		15 47 30.1	+1.4
	baz=12							
G15A	Dillon	11.91	79	⇑P	Pn		15 47 31.0	+1.5
	baz=12,SNR=11							
F15A	Butte	11.91	76	⇑P	Pn		15 47 31.2	+1.6
	baz=12,SNR=16							
LRM	Limekiln Ridge	11.94	76	ePn	Pn		15 47 28.0	-2.1
D15A	Lincoln	11.99	70	⇓P	Pn		15 47 32.3	+1.6
	baz=12,SNR=16							
C15A	Salmond Ranch,	12.06	67	⇑P	Pn		15 47 33.1	+1.5
	baz=12,SNR=16							
J15A	Blackfoot	12.11	88	⇓P	Pn		15 47 34.0	+1.7
	baz=12							
FURC	Furnace Creek,	12.12	125	⇑P	Pn		15 47 36.6	+4.3
	baz=12							
K15A	Arbon	12.18	91	⇓P	Pn		15 47 35.1	+1.9
	baz=12							
B15A	Bradely Ranch,	12.20	64	⇓P	Pn		15 47 34.7	+1.2
	baz=12							
A15A	Johnson Ranch,	12.27	61	⇓P	Pn		15 47 35.6	+1.1
	baz=12,SNR=33							
LRMC	Laurel Mountai	12.36	131	⇑P	Pn		15 47 40.3	+4.6
	baz=12							
G16A	Moss Hill, Enn	12.39	79	⇓P	Pn		15 47 38.3	+2.2
	baz=12,SNR=14							
L15A	Malad City	12.45	94	⇓P	Pn		15 47 40.1	+3.2
	baz=12,SNR=9.1							
BOZ	Bozeman (W)	12.51	77	ePn	Pn		15 47 36.9	-0.9
BOZ	Bozeman (W)	12.51	77	⇑P	Pn		15 47 39.8	+2.0
	baz=12,SNR=14							
F16A	Kennard Place,	12.52	76	⇓P	Pn		15 47 39.8	+2.0
	baz=12,SNR=8.1							
E16A	East Helena	12.52	73	⇓P	Pn		15 47 40.3	+2.5
	baz=12,SNR=7.2							
C16A	Fuhringer Ranc	12.63	67	⇑P	Pn		15 47 41.0	+1.6
	baz=12,SNR=9.1							
D16A	Dana Ranch, Ca	12.65	71	⇓P	Pn		15 47 41.5	+1.8
	baz=12,SNR=14							
QLMT	Earthquake Lak	12.67	81	ePn	Pn		15 47 41.2	+1.2
I16A	Newdale	12.72	85	⇓P	Pn		15 47 44.0	+3.4
	baz=13,SNR=25							
DUG	Dugway	12.75	103	⇑P	Pn		15 47 44.0	+3.0
	baz=13							
B16A	M & M Farms, S	12.78	65	⇓P	Pn		15 47 42.6	+1.2
	baz=13,SNR=12							
H16A	Russell Place,	12.81	81	⇓P	Pn		15 47 44.6	+2.7
	baz=13,SNR=30							
K16A	Soda Springs	12.82	90	⇓P	Pn		15 47 44.7	+2.6
	baz=13,SNR=8.8							
RRI2	Red Ridge	12.92	87	ePn	Pn		15 47 45.8	+2.3
GSC	Goldstone	12.98	129	⇓P	Pn		15 47 48.3	+4.3
	baz=13							
DCID1	Drake Creek	12.98	86	ePn	Pn		15 47 44.1	-0.1
A16A	West Butte Ran	12.98	62	⇓P	Pn		15 47 45.4	+1.2
	baz=13,SNR=5.5							
YMR	Madison River	13.01	81	ePn	Pn		15 47 42.8	-1.8
E17A	Martinsdale	13.08	74	⇑P	Pn		15 47 47.3	+1.8
	baz=13							
IMW	Indian Meadow	13.11	85	ePn	Pn		15 47 46.7	+0.6
HWUT	Hardware Ranch	13.15	95	ePn	Pn		15 47 46.1	-0.4
TPAW	Teton Pass	13.16	87	ePn	Pn		15 47 47.3	+0.5
F17A	Fitzpatrick Pl	13.19	76	⇓P	Pn		15 47 49.1	+2.1
	baz=13,SNR=24							
D17A	Six Diamond Ra	13.25	71	⇑P	Pn		15 47 49.6	+1.8
	baz=13							
C17A	Wharram Farm,	13.26	68	⇓P	Pn		15 47 49.6	+1.7
	baz=13,SNR=12							
MOOW	Moose Ponds	13.27	85	ePn	Pn		15 47 49.3	+1.1
SNOW	Snow King Moun	13.31	87	ePn	Pn		15 47 49.8	+1.0
H17A	Grant Village	13.31	83	⇓P	Pn		15 47 53.1	+4.3
	baz=13,SNR=6.4							
B17A	L&Q Farms, Che	13.35	66	⇓P	Pn		15 47 51.0	+1.9
	baz=13							
J17A	Brown Place, J	13.35	87	⇓P	Pn		15 47 53.2	+3.9
	baz=13							
I17A	Pilgrim Ck.	13.37	85	⇓P	Pn		15 47 53.8	+4.3
	baz=13,SNR=15							
TUQ	Turquoise Moun	13.38	126	⇑P	Pn		15 47 53.5	+3.8
	baz=13							
LOHW	Long Hollow	13.39	86	ePn	Pn		15 47 49.1	-0.7
LKWY	Lake	13.42	82	ePn	Pn		15 47 51.3	+1.0
ARUT	Antelope Range	13.46	113	ePn	Pn		15 47 53.2	+2.4
A17A	Triple J Farms	13.55	63	⇓P	Pn		15 47 53.4	+1.5
	baz=13							
HEC	Hector,Ludlow	13.59	129	⇓P	Pn		15 47 55.8	+3.4
	baz=14							
CCUT	Cedar City	13.65	114	ePn	Pn		15 47 54.9	+1.6
E18A	Harlowton	13.73	73	⇓P	Pn		15 47 56.3	+1.9
	baz=14							
M17A	Scullys Gap (B	13.83	95	⇓P	Pn		15 47 58.2	+2.4
	baz=14							
F18A	Big Timber	13.85	76	⇓P	Pn		15 47 58.1	+2.1
	baz=14							
D18A	Linhart Farms,	13.86	71	⇑P	Pn		15 47 58.4	+2.3
	baz=14,SNR=6.1							
N17A	Moffit Pass	13.88	97	⇑P	Pn		15 47 59.0	+2.4
	baz=14,SNR=8.8							
SCI	San Clemente I	13.90	140	⇓P	Pn		15 48 01.0	+4.3
	baz=14							
MVU	Marysvale	13.92	108	ePn	Pn		15 47 57.8	+0.7
MSU	Marysvale	13.94	108	ePn	Pn		15 47 58.9	+1.5
I18A	Diamond G Ranc	13.94	85	⇑P	Pn		15 47 59.5	+2.2
	baz=14							
G18A	Lazy EL Ranch,	13.97	78	⇓P	Pn		15 47 58.8	+1.1
	baz=14,SNR=9.3							
EGMT	Eagleton	13.99	67	ePn	Pn		15 47 56.6	-1.3
EGMT	Eagleton	13.99	67	⇑P	Pn		15 47 59.2	+1.3
	baz=14,SNR=6.7							
GMRC	Granite Mounta	14.00	127	⇑P	Pn		15 48 02.1	+3.9
	baz=14,SNR=5.9							
B18A	Beardsley Farm	14.04	66	⇓P	Pn		15 48 00.2	+1.7
	baz=14,SNR=6.7							
A18A	Metzger Ranch,	14.10	64	⇑P	Pn		15 47 59.9	+0.6
	baz=14							
L18A	Fontenelle, Gr	14.16	92	⇓P	Pn		15 48 02.5	+2.2
	baz=14,SNR=7.9							
RLMT	Red Lodge	14.19	79	⇑P	Pn		15 48 02.4	+1.7
	baz=14,SNR=9.2							
TMUT	Trail Mountain	14.25	104	ePn	P		15 48 06.5	-2.6
M18A	Lyman	14.28	94	⇑P	Pn		15 48 04.0	+2.1
	baz=14							
DLBC	Dease Lake	14.30	358	Pn	P		15 48 08.1	-1.2
DLBC	Dease Lake	14.30	358	Pn	P		15 48 08.1	-1.2
	baz=148,slow=12,SNR=5.0							
DLBC				LR	LR		15 52 51.9	
	comp=Z,559nm,20.7s,baz=166,slow=34							
PDAR	Pinedale Array	14.30	89	Pn	Pn		15 48 05.0	+2.8
PDAR	Pinedale Array	14.30	89	Pn	Pn		15 48 05.0	+2.8
	baz=284,slow=12,SNR=7.9							
PDAR				LR	LR		15 53 32.2	
	comp=Z,349nm,20.9s,baz=357,slow=37							
BELC	Belle Mtn. Jos	14.38	130	⇑P	P		15 48 07.5	-2.9
	baz=14							
F19A	Roth Farm, Mol	14.39	76	⇑P	Pn		15 48 04.9	+1.5
	baz=14							
H19A	Powell	14.42	81	⇓P	Pn		15 48 06.7	+2.9
	baz=14,SNR=8.8							
C19A	Slack Wire Ran	14.42	69	⇑P	Pn		15 48 05.4	+1.6
	baz=14,SNR=21							
Q16A	Castle Valley	14.44	105	⇑P	P		15 48 08.4	-2.7
	baz=14,SNR=11							
D19A	Cripps Ranch,	14.48	71	⇓P	Pn		15 48 06.1	+1.5
	baz=14,SNR=6.3							
I19A	Meeteetse	14.48	84	⇑P	Pn		15 48 07.6	+2.8
	baz=14,SNR=13							
P17A	Butcher Ranch,	14.50	103	⇑P	Pn		15 48 08.0	+3.0
	baz=14							
E19A	Rath Farm, Rou	14.51	74	⇑P	Pn		15 48 06.5	+1.6
	baz=14							
J19A	Crowheart	14.56	87	⇓P	P		15 48 08.9	-3.5
	baz=14,SNR=5.8							
B19A	Brinkman Farms	14.60	66	⇓P	Pn		15 48 07.2	+1.1
	baz=14,SNR=6.8							
L19A	Farson	14.60	91	⇓P	Pn		15 48 08.6	+2.2
	baz

K20A **Yellowstone Ra** 15.20 88 ⇑P Pn 15 48 16.3 +1.9
baz=15,SNR=9.3
B20A **Solberg Farm,** 15.20 66 ⇓P Pn 15 48 14.9 +0.7
baz=15
SWSC **Sam W. Stewart** 15.30 133 ⇓P P 15 48 19.1 -1.3
baz=15
O19A **Miners Draw (B** 15.32 98 ⇓P Pn 15 48 17.7 +1.7
baz=15
A20A **Cobblestone Ra** 15.33 65 ⇑P Pn 15 48 17.5 +1.4
baz=15,SNR=6.1
L20A **Wamsutter** 15.36 91 ⇑P Pn 15 48 18.0 +1.5
baz=15,SNR=6.0
Y12C **Blythe** 15.39 128 ⇑P P 15 48 20.5 -1.0
baz=15,SNR=5.4
M20A **Sweetwater, Wa** 15.61 93 ⇓P Pn 15 48 21.4 +1.6
baz=16,SNR=9.5
P19A **Cripple Cowboy** 15.68 100 ⇑P P 15 48 23.0 -1.9
baz=16
J21A **Lysite** 15.70 85 ⇑P P 15 48 22.9 -2.2
baz=16,SNR=17
N20A **Spence Gulch,** 15.76 95 ⇑P Pn 15 48 23.3 +1.5
baz=16
D21A **La Casta Ranch** 15.76 72 ⇑P Pn 15 48 22.9 +1.3
baz=16
Q19A **Hogan Spring (** 15.76 102 ⇑P P 15 48 24.4 -1.2
baz=16,SNR=12
S18A **Hurst Farm, Bl** 15.84 108 ⇓P P 15 48 25.4 -1.3
baz=16,SNR=6.1
B21A **Ellsworth Farm** 15.86 67 ⇑P Pn 15 48 23.9 +1.1
baz=16
O20A **White River Ci** 16.01 97 ⇑P P 15 48 27.2 -1.4
baz=16,SNR=9.4
L21A **Rawlins** 16.06 90 ⇑P P 15 48 27.9 -1.3
baz=16,SNR=7.6
WUAZ **Wupatki** 16.13 116 *e*Pn Pn 15 48 27.4 +0.8
27nm,1.0s
WUAZ **Wupatki** 16.13 116 ⇑P P 15 48 30.0 +0.1
baz=16,SNR=9.2
M21A **Separation Pea** 16.17 92 ⇓P P 15 48 29.1 -1.2
baz=16,SNR=24
PV04 **Paradox Valley** 16.26 104 *e*Pn Pn 15 48 25.2 -3.0
F22A **Rosebud** 16.27 76 ⇑P Pn 15 48 29.1 +0.9
baz=16
G22A **Birney** 16.28 78 ⇓P P 15 48 29.7 -1.6
baz=16
H22A **Clearmont** 16.30 81 ⇑P P 15 48 30.7 -0.9
baz=16
I22A **9 Mile Ranch,** 16.30 83 ⇓P P 15 48 30.6 -1.0
baz=16
N21A **Black Mountain** 16.31 95 ⇑P P 15 48 30.3 -1.6
baz=16,SNR=6.6
D22A **Cohagen** 16.32 71 ⇑P P 15 48 29.9 -1.9
baz=16
J22A **Midwest** 16.38 85 ⇓P P 15 48 32.9 +0.3
baz=16,SNR=15
Q20A **Ridgley Place,** 16.44 101 ⇓P P 15 48 32.4 -0.9
baz=16
B22A **Reddig Ranch S** 16.52 67 ⇓P P 15 48 32.5 -1.5
baz=16
113A **Mohawk Valley,** 16.54 128 ⇑P P 15 48 35.7 +1.5
baz=16
C22A **Vida** 16.55 69 ⇑P P 15 48 33.1 -1.2
baz=16
PV01 **Paradox Valley** 16.61 104 *e*Pn Pn 15 48 32.6 -0.2
A22A **Carney Farms,** 16.66 65 ⇓P P 15 48 34.1 -1.4
baz=16
R20A **Redvale** 16.72 104 ⇑P P 15 48 36.1 -0.4
baz=17,SNR=7.3
M22A **Cedar Creek Ra** 16.78 92 ⇓P P 15 48 36.0 -1.0
baz=17
X16A **Lo Mia Camp, P** 16.79 119 ⇑P P 15 48 38.3 +1.2
baz=17,SNR=7.9
P21A **Newcastle** 16.81 99 ⇓P P 15 48 36.9 -0.5
baz=17,SNR=6.3
S20A **Disappointment** 16.90 105 ⇓P P 15 48 38.4 -0.1
baz=17,SNR=12
G23A **Biddle** 16.92 78 ⇑P P 15 48 37.5 -0.9
baz=17
D23A **Lindsay** 16.98 71 ⇑P P 15 48 38.7 -0.4
baz=17,SNR=7.5
Q21A **Lamborn Mesa,** 17.00 101 ⇓P P 15 48 38.7 -0.9
baz=17
C23A **Lambert** 17.02 69 ⇑P P 15 48 38.3 -1.2
baz=17
N22A **Wattenberg Ran** 17.06 94 ⇓P P 15 48 39.6 -0.7
baz=17,SNR=13
MVCO **Mesa Verde** 17.11 107 *e*Pn Pn 15 48 37.9 -1.1
43nm,1.1s
MVCO **Mesa Verde** 17.11 107 ⇑P P 15 48 41.0 +0.2
baz=17,SNR=14
O22A **Kremmling** 17.21 96 ⇑P P 15 48 41.8 -0.2
baz=17,SNR=14
R21A **Cimarron** 17.22 102 ⇑P P 15 48 41.3 -0.7
baz=17
L23A **Garrett** 17.23 89 ⇓P P 15 48 41.2 -0.8
baz=17
SMCO **Snowmass** 17.29 99 *e*Pn Pn 15 48 40.6 -0.7
106nm,2.5s
S21A **Coal Bank Pass** 17.38 105 ⇑P P 15 48 44.7 +0.8
baz=17,SNR=12
M23A **Laramie** 17.39 91 ⇑P P 15 48 43.3 -0.5
baz=17
N23A **Red Feather La** 17.40 93 ⇓P P 15 48 43.7 -0.3
baz=17,SNR=16
Q22A **Crested Butte,** 17.46 100 ⇓P Pn 15 48 43.8 +0.3
baz=17
U20A **Newcomb** 17.53 109 ⇑P P 15 48 46.6 +1.2
baz=18,SNR=5.7
F24A **Ekalaka** 17.53 76 ⇓P Pn 15 48 44.1 -0.1
baz=17
H24A **Dirks Ranch, A** 17.56 80 ⇑P P 15 48 45.6 +0.1
baz=17,SNR=9.0
E24A **Baker** 17.60 73 ⇓P P 15 48 45.8 -0.1
baz=18
I24A **Kuemmerle Ranc** 17.63 82 ⇑P P 15 48 46.6 +0.2
baz=18
O23A **Lake Granby, G** 17.65 95 ⇑P P 15 48 47.2 +0.5
baz=18,SNR=5.7
X18A **Snowflake** 17.66 117 ⇓P P 15 48 48.4 +1.6
baz=18
214A **Organ Pipe Nat** 17.69 128 ⇓P P 15 48 49.1 +2.2
baz=18
J24A **Dixon Ranch, L** 17.70 84 ⇓P P 15 48 48.0 +0.9
baz=18,SNR=6.0
K24A **Anderson Ranch** 17.72 86 ⇑P P 15 48 48.1 +0.7
baz=18
DGMT **Dagmar** 17.73 67 ⇑P P 15 48 47.4 0.0
baz=18
R22A **Saguache, Gunn** 17.84 102 ⇓P P 15 48 50.2 +1.3
baz=18,SNR=9.9
V20A **Brimhall** 17.89 111 ⇓P P 15 48 51.5 +2.2
baz=18,SNR=18
T21A **Navajo Lake** 17.89 106 ⇑P P 15 48 50.5 +1.2
baz=18
A24A **Westby** 17.90 66 ⇑P P 15 48 49.5 +0.3
baz=18,SNR=7.4
RSSD **Black Hills** 18.01 81 *e*Pn Pn 15 48 49.6 -0.5
7.8nm,0.9s
S22A **4UR Ranch, Cre** 18.01 103 ⇓P P 15 48 52.0 +1.2
baz=18,SNR=13
ISCO **Idaho Springs** 18.02 96 *e*Pn Pn 15 48 47.8 -2.6
12nm,1.0s
P23A **Jefferson** 18.02 97 ⇑P P 15 48 51.5 +0.6
baz=18
M24A **Cheyenne** 18.03 90 ⇑P P 15 48 51.8 +1.0
baz=18
U21A **Nageezi** 18.09 108 ⇓P P 15 48 53.2 +1.6
baz=18,SNR=34
W20A **Ramah** 18.25 113 ⇓P P 15 48 55.6 +2.2
baz=18,SNR=10
T22A **Edith** 18.31 105 ⇓P P 15 48 56.3 +2.2
baz=18,SNR=27
K25A **Mack Ranch, Ha** 18.42 86 ⇓P P 15 48 56.4 +1.3
baz=18,SNR=5.1
V21A **Milan** 18.44 110 ⇓P Pn 15 48 57.5 +2.0
baz=18
L25A **Engebretsen Ra** 18.46 87 ⇓P Pn 15 48 57.0 +1.4
baz=18
R23A **Moffat** 18.52 101 ⇓P Pn 15 48 58.0 +1.6
baz=18,SNR=12
X20A **Quemado** 18.60 114 ⇓P Pn 15 49 00.1 +2.7
baz=18
TUC **Tucson** 18.62 123 *e*P P 15 48 57.5 +0.3
1.1nm,0.9s
Q24A **Divide** 18.67 98 ⇓P Pn 15 48 60.0 +1.6
baz=19
U22A **Llaves** 18.67 107 ⇑P Pn 15 49 00.4 +2.1
baz=19,SNR=29
W21A **San Fidel** 18.82 111 ⇑P Pn 15 49 01.9 +1.8
baz=19
V22A **San Miguel Ran** 18.88 108 ⇑P Pn 15 49 02.7 +1.9
baz=19,SNR=19
K26A **Motz Farm, Whi** 18.90 85 ⇑P Pn 15 49 01.5 +0.7
baz=19
T23A **Casias Ranch,** 18.91 104 ⇓P Pn 15 49 03.0 +1.8
baz=19
Y20A **Horse Springs,** 19.07 115 ⇑P Pn 15 49 04.8 +1.7
baz=19
X21A **Alamocita Cree** 19.13 113 ⇓P Pn 15 49 05.2 +1.4
baz=19
P25A **Willow Gulch B** 19.16 95 ⇑P Pn 15 49 05.0 +0.9
baz=19
S24A **Houchin Ranch,** 19.20 102 ⇑P Pn 15 49 05.1 +0.4
baz=19,SNR=6.5
M26A **McRoberts Ranc** 19.24 89 ⇓P Pn 15 49 05.4 +0.3
baz=19
Q25A **Bedland, Calha** 19.33 97 ⇑P Pn 15 49 06.6 +0.3
baz=19
Z20A **Nine Sixteen R** 19.43 118 ⇓P Pn 15 49 08.9 +1.5
baz=19
Y21A **Point of Rocks** 19.46 114 ⇓P Pn 15 49 09.1 +1.2
baz=19,SNR=19
V23A **Ortiz Mt. (NFS** 19.47 108 ⇓P Pn 15 49 09.3 +1.4
baz=19
T24A **Torres, Weston** 19.58 103 ⇑P Pn 15 49 10.0 +0.7
baz=20
R25A **Fountain Ranch** 19.63 99 ⇓P Pn 15 49 09.9 +0.1
baz=20
ANMO **Albuquerque** 19.72 110 *e*P Pn 15 49 11.8 +0.8
13nm,1.1s
ANMO Pn Pn 15 49 11.9 +1.0
ANMO **Albuquerque** 19.72 110 Pn Pn 15 49 11.9 +1.0
0.1nm,0.3s,baz=313,slow=10,SNR=9.9
ANMO LR LR 15 57 11.1
comp=Z,403nm,19.9s,baz=31,slow=38
P26A **Davis Ranch, A** 19.73 95 ⇑P Pn 15 49 11.4 +0.4
baz=20,SNR=8.1
S25A **Robets Cordova** 19.74 101 ⇓P Pn 15 49 11.4 +0.3
baz=20,SNR=12
120A **U Bar Ranch, L** 19.78 119 ⇓P Pn 15 49 12.4 +0.8
baz=20
W23A **Werner Place,** 19.81 109 ⇑P Pn 15 49 12.8 +0.8
baz=20,SNR=10
Q26A **Hugo** 19.85 96 ⇓P Pn 15 49 12.5 +0.2
baz=20,SNR=6.5
N27A **Anderson Farm,** 19.88 90 ⇓P Pn 15 49 12.1 -0.6
baz=20
Z21A **St. Cloud Mine** 19.90 116 ⇑P Pn 15 49 13.4 +0.3
baz=20
LPM **Los Pinos Moun** 19.97 112 *e*P Pn 15 49 13.2 -0.6
Y22A **Socorro** 19.97 113 ⇓P Pn 15 49 14.9 +1.1
baz=20,SNR=11
T25A **Trinidad** 20.00 102 ⇓P Pn 15 49 14.4 +0.2
baz=20,SNR=19
BNM **Barren Site** 20.07 112 *e*P P 15 49 13.4 +0.1
11nm,1.1s
V24A **Rampart Ranch,** 20.10 107 ⇓P Pn 15 49 16.3 +0.7
baz=20,SNR=12
X23A **Hourglass Bar** 20.11 111 ⇓P Pn 15 49 15.7 +0.1
baz=20
R26A **Arlington** 20.16 98 ⇑P Pn 15 49 15.9 -0.1
baz=20,SNR=7.6
319A **Douglas** 20.18 123 ⇑P Pn 15 49 16.9 +0.6
baz=20
OGNE **Ogallala** 20.20 90 ⇓P Pn 15 49 15.9 -0.5
baz=20
YKA **Yellowknife Ar** 20.21 20 P P 15 49 14.6 +0.2
YKA PcP PcP 15 53 27.1 -1.0
YKA **Yellowknife Ar** 20.21 20 P P 15 49 14.5 +0.2
9.4nm,1.1s,baz=211,slow=11,SNR=33
YKA PcP PcP 15 53 27.1 -1.0
0.1nm,0.6s,baz=193,slow=0.9,SNR=3.9
YKW3 **Yellowknife Ar** 20.27 20 *e*P P 15 49 14.7 -0.3
220A **Playas Peak, P** 20.28 120 ⇓P Pn 15 49 17.7 +0.2
baz=20,SNR=13
W24A **Lazy 6 Ranch,** 20.29 108 ⇑P Pn 15 49 17.6 -0.1
baz=20,SNR=14
121A **Cookes Peak, D** 20.33 118 ⇓P Pn 15 49 18.8 +0.6
baz=20,SNR=21
U25A **Circle Dot Ran** 20.36 104 ⇑P Pn 15 49 18.1 -0.3
baz=20,SNR=13
Z22A **Elephant Butte** 20.39 115 ⇓P Pn 15 49 19.2 +0.3
baz=20,SNR=17
S26A **Kim** 20.44 100 ⇑P Pn 15 49 18.5 -0.8
baz=20
FFC **Flin Flon** 20.45 49 *e*P P 15 49 16.8 -0.2
19nm,0.9s
KSCO **Kaye Shedlock'** 20.45 95 ⇑P Pn 15 49 18.9 -0.6
baz=20
V25A **Rancho No Teng** 20.50 106 ⇑P Pn 15 49 20.4 +0.2
baz=20,SNR=16
T26A **Comanche Natio** 20.55 101 ⇑P Pn 15 49 20.0 -0.8
baz=20,SNR=7.7
Y23A **Lovelace Mesa,** 20.58 112 ⇓P Pn 15 49 21.1 0.0
baz=20,SNR=6.6
R27A **Eads** 20.63 97 ⇑P Pn 15 49 20.9 -0.6
baz=20,SNR=13
320A **Kipp Ranch, An** 20.67 121 ⇑P Pn 15 49 22.5 +0.5
baz=21
221A **Mesquite Ranch** 20.68 119 ⇑P Pn 15 49 22.4 +0.2
baz=21
122A **Conniff Cattle** 20.72 116 ⇑P Pn 15 49 22.8 +0.1
baz=21
U26A **Atchley Ranch,** 20.82 103 ⇑P Pn 15 49 23.3 -0.7
baz=21,SNR=6.2
Z23A **Rita Site, Whi** 20.87 114 ⇓P Pn 15 49 24.4 0.0
baz=21
Y24A **Capitan** 21.00 111 ⇑P Pn 15 49 25.3 -0.7
baz=21,SNR=6.2
222A **Williams Famil** 21.04 117 ⇓P P 15 49 26.0 +2.2
baz=21
V26A **Tequesquite Ra** 21.10 105 ⇑P P 15 49 26.0 +1.7
baz=21,SNR=7.2
X25A **Clemmons Ranch** 21.18 109 ⇓P P 15 49 27.2 +2.0
baz=21
T27A **Campo** 21.22 100 ⇓P P 15 49 27.3 +1.6
baz=21,SNR=16
Z24A **Sheeppen Canyo** 21.40 112 ⇑P P 15 49 30.0 +2.3
baz=21,SNR=11
T28A **Walsh** 21.63 100 ⇓P P 15 49 31.1 +1.1
baz=22
124A **Stringfield Ra** 21.73 114 ⇑P P 15 49 33.2 +1.9
baz=22,SNR=13
X26A **CR and CF Fran** 21.75 108 ⇑P P 15 49 33.0 +1.7
baz=22,SNR=8.0
SPU **Mount Spurr** 21.78 329 *e*P P 15 49 32.4 +1.1
Z25A **Rowell** 21.87 112 ⇓P P 15 49 34.6 +2.0
baz=22
224A **Cornudas Mount** 22.08 115 ⇓P P 15 49 37.0 +2.1
baz=22,SNR=11
Y26A **Elida** 22.09 109 ⇓P P 15 49 37.0 +2.0
baz=22
X27A **F and S Farms,** 22.18 106 ⇓P P 15 49 37.6 +1.6
baz=22
V28A **Channing** 22.21 103 ⇓P P 15 49 37.7 +1.5
baz=22,SNR=5.9
125A **Gardner Draw,** 22.28 113 ⇓P P 15 49 39.0 +1.9
baz=22,SNR=7.6
Z26A **Caprock** 22.37 111 ⇓P P 15 49 39.9 +2.0
baz=22
MNTX **Cornudas Mount** 22.41 116 ⇓P P 15 49 40.3 +1.9
baz=22,SNR=7.6
324A **Moseley Ranch,** 22.52 116 ⇓P P 15 49 41.2 +1.6
baz=22
225A **Deer Hill, Car** 22.52 114 ⇑P P 15 49 42.0 +2.4
baz=22,SNR=9.3
Y27A **Causey** 22.56 108 ⇑P P 15 49 41.0 +0.9
baz=22
MCK **McKinley** 22.61 337 *e*P P 15 49 39.9 -0.3
9.3nm,0.9s
MSTX **Muleshoe** 22.78 108 ⇑P P 15 49 42.9 +0.5
baz=23
TRF **Thorofare Moun** 22.79 335 *e*P P 15 49 45.2 +3.0
30nm,1.6s
Z27A **Tatum** 22.86 109 ⇑P P 15 49 44.7 +1.5
baz=23,SNR=11
325A **Bean Ranch, Si** 22.89 116 ⇑P P 15 49 45.2 +1.6
baz=23,SNR=7.3
ILAR **Eielson Array** 22.91 340 P P 15 49 43.6 +0.3
ILAR **Eielson Array** 22.91 340 P P 15 49 43.6 +0.3
3.2nm,1.1s,baz=157,slow=7.7,SNR=19
ILAR LR LR 15 57 08.6
comp=Z,167nm,19.4s,baz=174,slow=33
U30A **WK&E Inc. Balk** 22.94 100 ⇓P P 15 49 44.5 +0.6
baz=23
226B **Tecolote Peak,** 22.97 113 ⇑P P 15 49 45.9 +1.6
baz=23,SNR=6.9
PPLA **Purkeypile** 22.99 333 *e*P P 15 49 51.0 +6.7
46nm,1.9s
AMTX **Amarillo** 23.04 104 *e*P P 15 49 46.3 +1.3
18nm,0.9s
AMTX **Amarillo** 23.04 104 ⇓P P 15 49 46.3 +1.3
baz=23,SNR=8.7
Y28A **McKinney Farm,** 23.18 107 ⇑P P 15 49 48.2 +1.7
baz=23
425A **Indio Mountain** 23.27 117 ⇓P P 15 49 49.3 +1.8
baz=23,SNR=6.9
ULM **Lac du Bonnet** 23.27 63 *e*P P 15 49 47.7 +0.5
ULM **Lac du Bonnet** 23.27 63 P P 15 49 47.2 0.0
12nm,0.9s,baz=277,slow=9.2,SNR=11
ULM LR LR 15 58 52.7
comp=Z,228nm,19.9s,baz=80,slow=37
AGMN **Agassiz Nation** 23.28 68 *e*P P 15 49 47.5 +0.2
V30A **Spur Ranch, Mi** 23.29 101 ⇑P P 15 49 48.5 +1.0
baz=23
ECSD **EROS Data Cent** 23.35 80 *e*P P 15 49 48.8 +0.8
9.8nm,0.9s
T31A **Randall Ranch,** 23.37 97 ⇓P P 15 49 49.5 +1.2
baz=23
326A **Caldwell Ranch** 23.57 114 ⇓P P 15 49 51.6 +1.2
baz=24
Y29A **Porterfield Fa** 23.60 106 ⇓P P 15 49 51.8 +1.1
baz=24
128A **Castleberry Fa** 23.76 110 ⇓P P 15 49 53.3 +1.0
baz=24
X30A **Coker Ranch, T** 23.84 104 ⇑P P 15 49 53.4 +0.5
baz=24
Z29A **Hungry Hill Ra** 23.92 108 ⇓P P 15 49 54.5 +0.7
baz=24
426A **McDonald Obser** 23.96 116 ⇓P P 15 49 55.7 +1.4
baz=24,SNR=11
228A **UT Block 9, Go** 23.99 111 ⇑P P 15 49 55.3 +0.8
baz=24
W31A **Holland Ranch,** 24.10 102 ⇓P P 15 49 56.1 +0.7
baz=24
427A **Hayter Ranch,** 24.25 115 ⇑P P 15 49 57.5 +0.6
baz=24
Z30A **Sanderson Ranc** 24.30 107 ⇓P P 15 49 57.5 +0.3
baz=24
INK **Inuvik** 24.30 356 P P 15 49 56.9 +0.1
INK **Inuvik** 24.30 356 P P 15 49 56.9 +0.1
2.0nm,0.9s,baz=171,slow=9.6,SNR=6.8
INK LR LR 15 58 40.0
comp=Z,176nm,20.4s,baz=140,slow=35
328A **Wristen Ranch,** 24.30 113 ⇑P P 15 49 57.8 +0.5
baz=24
526A **Mary Lane Ranc** 24.33 117 ⇑P P 15 49 58.9 +1.2
baz=24,SNR=7.9
X31A **McDonald Ranch** 24.36 103 ⇓P P 15 49 58.9 +1.1
baz=24,SNR=6.1
527A **Woodward Ranch** 24.58 116 ⇓P P 15 50 01.2 +1.3
baz=24,SNR=7.1
626A **Big Bend Ranch** 24.64 118 ⇓P P 15 50 01.7 +1.2
baz=25,SNR=9.1
329A **Wagon Wheel Ra** 24.79 112 ⇑P P 15 50 02.3 +0.6
baz=25
428A **Kincaid Ranch,** 24.80 114 ⇑P P 15 50 03.4 +1.6
baz=25,SNR=8.4
130A **Snyder** 24.81 108 ⇑P P 15 50 02.6 +0.7
baz=25
Z31A **Sharp Cattle R** 24.96 106 ⇑P P 15 50 03.9 +0.7
baz=25
Y32A **R-V Farms, Ver** 25.07 104 ⇓P P 15 50 04.3 +0.1
baz=25
TXAR **Lajitas Array** 25.09 118 P P 15 50 05.1 +0.7
TXAR **Lajitas Array** 25.09 118 P P 15 50 05.1 +0.7
3.7nm,0.9s,baz=303,slow=7.0,SNR=17
528A **Cox Ranch, San** 25.10 115 ⇑P P 15 50 05.6 +1.0
baz=25,SNR=12
230A **Sterling City** 25.13 110 ⇓P P 15 50 04.7 -0.1
baz=25
131A **Roby** 25.16 107 ⇓P P 15 50 05.2 +0.2
baz=25
627A **Terlingua Ranc** 25.19 117 ⇑P P 15 50 05.8 +0.5
baz=25
330A **Mertzon** 25.38 111 ⇑P P 15 50 07.4 +0.4
baz=25
429A **Davenport Ranc** 25.39 113 ⇓P P 15 50 08.1 +1.0
baz=25,SNR=8.8
Z32A **Haskell** 25.43 105 ⇑P P 15 50 08.3 +0.9
baz=25,SNR=9.5
628A **Black Gap, Mar** 25.48 116 ⇑P P 15 50 09.2 +1.3
baz=25,SNR=5.3
529A **Stev Forest Ra** 25.50 114 ⇑P P 15 50 09.6 +1.5
baz=25,SNR=25
231A **Bronte** 25.64 109 ⇑P P 15 50 09.8 +0.4
baz=26
430A **Baggett Ranch,** 25.73 112 ⇓P P 15 50 10.7 +0.5
baz=26
331A **San Angelo** 25.95 110 ⇑P P 15 50 12.9 +0.7
baz=26
530A **J-C Ranch, Com** 26.06 113 ⇓P P 15 50 13.8 +0.6
baz=26
232A **Coleman** 26.13 108 ⇓P P 15 50 14.9 +1.1
baz=26,SNR=7.0
431A **Sonora** 26.21 111 ⇑P P 15 50 14.8 +0.2
baz=26
EYMN **Ely** 26.23 68 *e*P P 15 50 15.8 +1.3
6.0nm,0.9s
332A **Millersview** 26.36 109 ⇓P P 15 50 16.1 +0.2
baz=26
531A **Rocksprings** 26.58 112 ⇑P P 15 50 18.1 +0.2
baz=26
432A **Menard** 26.64 110 ⇓P P 15 50 18.8 +0.3
baz=27
JCT **Junction City** 26.88 111 ⇓P P 15 50 21.0 +0.3
baz=27
532A **Rocksprings** 27.03 111 ⇑P P 15 50 22.0 0.0
baz=27
MIAR **Mount Ida** 28.95 97 *e*P P 15 50 39.4 +0.5
17nm,1.3s
SADO **Sadowa** 35.23 71 P P 15 51 33.7 -0.3
SADO **Sadowa** 35.23 71 P P 15 51 33.7 -0.3
4.5nm,0.9s,baz=301,slow=11,SNR=5.0
SADO LR LR 16 07 03.4
comp=Z,134nm,18.9s,baz=18,slow=38
KMSC **Kings Mountain** 37.45 87 ⇓P P 15 51 52.6 -0.4
baz=37
PETK **Petropavlovsk-** 47.18 308 P P 15 53 11.4 -0.6
PETK **Petropavlovsk-** 47.18 308 P P 15 53 11.4 -0.6
2.2nm,0.8s,baz=82,slow=10.0,SNR=3.6
NOA **NORSAR Array B** 70.31 19 P P 15 55 59.3 +6.4
0.7nm,0.6s,baz=333,slow=5.8,SNR=3.2
FINES **FINESS Array B** 72.84 12 P P 15 56 09.6 +1.6
FINES **FINESS Array B** 72.84 12 P P 15 56 09.6 +1.6
3.2nm,1.0s,baz=55,slow=5.3,SNR=2.7
SONM **Songino Array** 76.18 325 P P 15 56 28.4 +0.5
SONM **Songino Array** 76.18 325 P P 15 56 28.4 +0.5
1.0nm,0.8s,baz=54,slow=3.9,SNR=8.5
ZALV **Zalesovo Beam** 78.03 340 P P 15 56 38.3 +0.3
ZALV **Zalesovo Beam** 78.03 340 P P 15 56 38.3 +0.3
0.5nm,0.5s,baz=35,slow=5.4,SNR=4.2
HHC **Hu-ho-hao-te** 79.31 318 *e*P P 15 56 44.8 -0.7
HHC PcP PcP 15 56 53.1 -0.6
HHC PP PP 15 59 45.8 +1.2
HHC S S 16 06 41.8 -4.1
HHC ScS SKKSac 16 07 03.0 -0.3
HHC SS SS 16 11 49.3 -2.3
HHC pmax pmax
comp=Z,28nm,0.7s
HHC pmax pmax
comp=Z,350nm,6.8s
HHC LR LR
comp=N,150nm,17.5s
HHC LR LR
comp=E,230nm,17.5s
HHC LR LR
comp=Z,200nm,17.3s
LPAZ **La Paz** 81.88 122 P P 15 56 58.9 -1.1
LPAZ **La Paz** 81.88 122 P P 15 56 58.9 -1.1
comp=Z,1.9nm,0.8s,baz=346,slow=5.7,SNR=7.9
MKAR **Makanchi Array** 85.25 339 P P 15 57 16.2 -0.1
MKAR **Makanchi Array** 85.25 339 P P 15 57 16.2 -0.1
comp=Z,0.4nm,0.9s,baz=22,slow=5.7,SNR=2.7
WMQ **Urumqi** 86.43 334 *e*P P 15 57 25.8 +3.5
WMQ pmax pmax
comp=Z,12nm,1.0s
LZH **Lanzhou** 86.77 320 *e*P P 15 57 25.0 +0.8
LZH pP **pP** 15 57 28.3 +0.8
LZH sP **sP** 15 57 29.8 +1.1
LZH *e*PP **PP** 16 00 48.1 +2.3
LZH pmax pmax

comp=Z,15nm,1.5s
LZH pmax pmax
comp=Z,47nm,8.3s
LZH LR LR
comp=N,140nm,17.5s
LZH LR LR
comp=E,130nm,18.3s
LZH LR LR
comp=Z,170nm,19.8s
KBZ Khabaz 92.20 6 LR LR 16 43 43.9
comp=Z,139nm,21.1s,baz=15,slow=38
BDFB Brasilia 94.54 107 LR LR 16 39 55.6
comp=Z,329nm,20.7s,baz=75,slow=35
BRTR Keskin Array B 95.05 13 LR LR 16 43 54.7
comp=Z,71nm,21.8s,baz=131,slow=37

IDC 17 15:46:29.6±1.3, 10°88N×43°38W, h0km, mb3.7/4, mb1 4.0/4, ms1mx3.6/25, mbtmp3.7/4, MS3.7/1, Ms1 3.7/1, ms1mx3.1/35, Error ellipse: s-maj=42.7km s-min=30.5km az=165.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBTS	**Babate**	**26.44**	**79**	LR	LR	15 59 51.2	
	comp=Z,170nm,19.6s,slow=30						
LPAZ	**La Paz**	**36.45**	**223**	P	P	15 53 37.1	-0.2
	1.8nm,0.8s,baz=16,slow=9.4,SNR=6.9						
TORD	**Torodi Ar. Bea**	**44.10**	**82**	P	P	15 54 39.7	-0.4
	0.4nm,0.7s,baz=263,slow=8.0,SNR=4.5						
TXAR	**Lajitas Array**	**58.91**	**298**	P	P	15 56 30.7	-0.3
	0.2nm,0.5s,baz=116,slow=10,SNR=2.3						
ILAR	**Eielson Array**	**85.92**	**335**	P	P	15 59 11.6	+0.2
	0.5nm,1.0s,baz=76,slow=4.7,SNR=4.6						
PSI	**Prapat**	**140.10**	**72**	PKP	PKPdf	16 06 02.6	+1.1
	7.3nm,0.6s,baz=14,slow=4.2,SNR=7.8						

IDC 17 15:57:37.1±0.8, 14°68N×144°35E, h0km, mb3.7/10, mb1 3.8/10, mb1mx3.7/26, mbtmp3.7/10, MS4.2/5, Ms1 4.2/5, ms1mx3.4/45, Error ellipse: s-maj=39.6km s-min=13.7km az=73.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.19**	**155**	Pn	Pn	15 58 02.5	+1.5
	42nm,0.3s,baz=26,slow=18,SNR=4.2						
GUMO				Sn	Sn	15 58 17.5	-0.5
	240nm,0.3s,baz=120,slow=20,SNR=20						
MJAR	**Matsushiro Arr**	**22.46**	**347**	P	P	16 02 38.1	+0.2
	1.1nm,0.5s,baz=168,slow=10.0,SNR=7.0						
WRA	**Warramunga Arr**	**35.78**	**196**	P	P	16 04 37.6	-0.7
	1.1nm,0.9s,baz=23,slow=9.5,SNR=4.0						
ASAR	**Alice Springs**	**39.45**	**195**	P	P	16 05 09.3	0.0
	0.2nm,0.7s,baz=13,slow=11,SNR=2.9						
SONM	**Songino Array**	**45.56**	**325**	P	P	16 05 59.3	+0.4
	0.3nm,0.8s,baz=145,slow=11,SNR=2.7						
SONM				PcP	PcP	16 07 38.0	+0.4
	0.5nm,0.9s,baz=149,slow=3.0,SNR=3.7						
STKA	**Stephens Creek**	**46.36**	**183**	LR	LR	16 26 02.0	
	comp=Z,359nm,18.0s,baz=199,slow=37						
MKAR	**Makanchi Array**	**60.36**	**316**	P	P	16 07 48.3	+0.1
	0.5nm,0.5s,baz=92,slow=8.5,SNR=6.5						
MKAR				LR	LR	16 35 34.3	
	comp=Z,76nm,19.8s,baz=218,slow=38						
ZALV	**Zalesovo Beam**	**60.45**	**324**	P	P	16 07 48.3	-0.3
	0.5nm,0.6s,baz=98,slow=9.1,SNR=3.9						
KURBB	**Kurchatov Arra**	**63.48**	**320**	P	P	16 08 08.9	0.0
	4.6nm,1.0s,baz=99,slow=6.8,SNR=23						
BVAR	**Borovoye Array**	**68.77**	**321**	P	P	16 08 43.2	+0.2
	1.3nm,0.5s,baz=104,slow=7.3,SNR=12						
YKA	**Yellowknife Ar**	**82.13**	**27**	P	P	16 09 59.3	-0.3
	0.1nm,0.4s,baz=286,slow=4.4,SNR=3.1						
FINES	**FINESS Array B**	**89.97**	**335**	P	P	16 10 36.7	-1.6
	1.3nm,0.8s,baz=103,slow=6.1,SNR=3.0						
FINES				LR	LR	16 54 10.3	
	comp=Z,169nm,18.9s,baz=331,slow=38						
HFS	**Hagfors**	**95.60**	**338**	LR	LR	16 52 34.8	
	comp=Z,138nm,18.4s,baz=268,slow=34						
NOA	**NORSAR Array B**	**95.86**	**339**	LR	LR	16 59 13.9	
	comp=Z,48nm,18.5s,baz=105,slow=39						

*NEIC **17** 15:59:35.8±0.3, 4°.91N×125°.17E, h35km, mb4.7/11, Error ellipse: s-maj=11.9km s-min=7.9km az=68.0*
*BJI **17** 15:59:51.2, 4°.30N×125°.63E, h213km, mB4.8/19, mb4.5/21*
*IDC **17** 15:59:56.9±0.7, 4°.68N×125°.34E, h224km±6km, mb4.0/30, mb1 4.0/32, mb1mx4.0/36, mbtmp4.0/32, Error ellipse: s-maj=12.3km s-min=5.9km az=77.0*
*AUST **17** 15:59:56.2±0.2, 4°.63N×125°.38E, h212km, Error ellipse: s-maj=0.9km s-min=0.8km az=249.0*
*ISCJB **17** 15:59:56.4±0.2, 4°.76N±0°.02×125°.52E±0°.03, h230km±2km, mb4.4/64, Error ellipse: s-maj=4.5km s-min=3.1km az=175.1*
*DJA **17** 15:59:58.1±0.3, 5°.N±3°×12°.5E±°, h213km, 3km, M4.5/55, mB5.0/24, mb4.6/55, MLv5.1/7, Mw(mB)4.3/24*

ISC 17 15:59:57.4±0.3, 4.75N±0°.03×125.48E±0°.04, h227km±2km, n230, σ1°34/305, mb4.5/63, 4C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.43**	**338↑**	*eP*	**Pn**	**16 00 31.6**	**-1.7**
GSPH				*eS*	**S**	**16 00 58.3**	**-2.9**
DAV	**Davao City (W)**	**2.31**	**2**	P	**Pn**	**16 00 40.8**	**-0.4**
DAV	**Davao City (W)**	**2.31**	**2**	P	**Pn**	**16 00 40.8**	**-0.4**
	358nm,0.3s,baz=258,slow=3.4,SNR=29						
DAV				S	**S**	**16 01 15.8**	**+0.4**
	303nm,0.3s,baz=146,slow=23,SNR=11						
MATI	**Mati**	**2.32**	**19**	*eP*	**Pn**	**16 00 39.9**	**-1.3**
MATI				*eS*	S	16 01 02.0	-14
DMPH	**Davao City--Mi**	**2.32**	**1↑**	*eP*	**Pn**	**16 00 40.8**	**-0.5**
DMPH				*eS*	**S**	**16 01 13.1**	**-2.5**
CTBH	**Cotabato--PC H**	**2.75**	**334**	*i P*	**Pn**	**16 00 44.9**	**-0.9**
BUKP	**Musuan**	**3.14**	**352**	*eP*	**Pn**	**16 00 49.6**	**-0.6**
MNI	**Manado**	**3.34**	**191**	P	**Pn**	**16 00 51.3**	**-1.2**
PAGZ	**Pagadian**	**3.72**	**326**	*eP*	**Pn**	**16 00 56.0**	**-0.9**
CGP	**Cagayan de Oro**	**3.77**	**348**	*i P*	**Pn**	**16 00 57.2**	**-0.2**
CGP				*i* S	**S**	**16 01 43.2**	**-1.6**
IPIL	**Ipil**	**4.18**	**316**	*eP*	**Pn**	**16 01 02.6**	**+0.1**
BUTP	**Butuan**	**4.20**	**2**	*eP*	**Pn**	**16 01 03.0**	**+0.3**
TNTI	**Ternate**	**4.37**	**154**	P	**Pn**	**16 01 03.1**	**-1.7**
KMSI	**Cibinong**	**4.41**	**200**	P	**Pn**	**16 01 04.8**	**-0.4**
TBP	**Tagbilaran**	**5.17**	**342**	*eP*	**Pn**	**16 01 13.9**	**-0.8**
MSLP	**Maasin**	**5.39**	**353**	*eP*	**Pn**	**16 01 17.2**	**-0.2**
MRSI	**Marisa**	**5.52**	**220**	P	**Pn**	**16 01 18.5**	**-0.6**
	276nm,1.1s,3μm1.1nm						
LBMI	**Labuha**	**5.72**	**159**	P	**Pn**	**16 01 19.7**	**-1.9**
	109nm,0.9s,11μm2.9nm						
OCLP	**Ormoc**	**6.32**	**352**	*eP*	**Pn**	**16 01 30.9**	**+1.7**
PLP	**Palo**	**6.40**	**356↑**	*eP*	**Pn**	**16 01 29.9**	**-0.3**
GUIM	**Jordan**	**6.51**	**334**	*eP*	**Pn**	**16 01 31.2**	**-0.4**
MYLDM	**Lahad Datu**	**6.97**	**274**	P	**Pn**	**16 01 39.4**	**+1.9**
MYLDM	**Lahad Datu**	**6.97**	**274**	P	**Pn**	**16 01 38.9**	**+1.4**
	142nm,1.5s,2μm0.6nm						
TSM	**Tawau**	**7.60**	**267**	P	**Pn**	**16 01 45.6**	**0.0**
PCI	**Palu**	**7.96**	**225**	S	S	16 03 11.4	-9.2
	baz=7.8,SNR=5.3						
SDKM	**Sandakan**	**8.30**	**277**	P	**Pn**	**16 01 55.4**	**+0.8**
AAI	**Ambon**	**8.80**	**162**	P	**Pn**	**16 02 00.3**	**-0.8**
	116nm,0.4s,2μm						
AAI	**Ambon**	**8.80**	**162**	P	**Pn**	**16 01 59.8**	**-1.3**
	baz=8.8,SNR=27						
AAI				S	S	16 03 25.8	-15
	baz=8.8,SNR=4.6						
KDI	**Kendari**	**9.11**	**198**	P	**Pn**	**16 02 03.4**	**-1.5**
	22nm,1.5s,868nm						
PALU	**Palau**	**9.31**	**73**	P	**Pn**	**16 02 08.9**	**+1.4**
	baz=9.4,SNR=3.8						
PALU				S	**S**	**16 03 51.8**	**-0.6**
	baz=9.4,SNR=7.2						
KKM	**Kota Kinabalu**	**9.31**	**278**	P	**Pn**	**16 02 08.1**	**+0.4**
KKM	**Kota Kinabalu**	**9.31**	**278**	P	**Pn**	**16 02 07.7**	**0.0**
	22nm,1.0s						
KKM	**Kota Kinabalu**	**9.31**	**278**	P	**Pn**	**16 02 07.8**	**0.0**
	baz=9.2,SNR=11						
TTSI	**Tana Toraja**	**9.59**	**216**	P	**Pn**	**16 02 11.7**	**+0.6**
	526nm,1.2s,7μm						
SMKI	**Samarinda**	**9.74**	**238**	P	**Pn**	**16 02 15.0**	**+1.9**
	120nm,1.1s						
FAKI	**Fak Fak**	**10.18**	**138**	P	**Pn**	**16 02 18.1**	**-0.6**
	29nm,1.4s						
BNDI	**Bandanaira**	**10.21**	**154**	P	**Pn**	**16 02 20.8**	**+1.7**
	56nm,1.6s						
SPSI	**Sidrap Palu**	**10.37**	**213**	P	**Pn**	**16 02 20.6**	**-0.4**
	62nm,1.2s,924nm						
BBSI	**Bau Bau**	**10.57**	**196**	P	**Pn**	**16 02 25.6**	**+1.9**
	63nm,1.0s						
KAPI	**Kappang**	**11.26**	**211**	P	**Pn**	**16 02 30.9**	**-1.4**
	47nm,0.9s,909nm						
KAPI	**Kappang**	**11.26**	**211**	P	**Pn**	**16 02 30.4**	**-1.9**
	4.8nm,0.3s,baz=28,slow=7.2,SNR=11						
BKSI	**Bulukumba**	**11.34**	**208**	P	**Pn**	**16 02 32.6**	**-0.8**
	61nm,1.2s,668nm						
BAKI	**Biak**	**12.14**	**119**	P	**Pn**	**16 02 44.8**	**+1.3**
	51nm,1.7s						
KBKI	**Kotabaru**	**12.27**	**230**	P	**Pn**	**16 02 45.7**	**+0.7**
	97nm,1.3s,1μm						
BTM	**Bintulu**	**12.46**	**263**	P	**P**	**16 02 49.2**	**-1.4**
TLE	**Tual**	**12.61**	**145**	P	**Pn**	**16 02 50.3**	**+1.1**
	49nm,1.4s						
TLE	**Tual**	**12.61**	**145**	P	**P**	**16 02 54.6**	**+2.4**
	baz=13,SNR=6.1						
BBKI	**Banjar Baru**	**13.40**	**233**	P	**P**	**16 03 03.5**	**+2.5**
SBUM	**Sibu**	**13.43**	**261**	P	**P**	**16 03 01.6**	**+0.2**
SBUM	**Sibu**	**13.43**	**261**	P	**P**	**16 03 01.5**	**+0.2**
	130nm,1.4s,1μm						
MMRI	**Maumere**	**13.68**	**194**	P	**P**	**16 03 04.5**	**+0.4**
	360nm,1.5s,4μm						
STKI	**Sintang**	**14.74**	**252**	P	**P**	**16 03 16.8**	**+0.9**
	51nm,1.1s,16μm						
WSI	**Waingapu**	**15.22**	**200**	P	**P**	**16 03 19.7**	**-1.5**
	130nm,0.7s,3μm						
WSI	**Waingapu**	**15.22**	**200**	P	**P**	**16 03 19.4**	**-1.7**
	baz=15,SNR=4.1						
KSM	**Kuching**	**15.49**	**258**	P	**Pn**	**16 03 25.8**	**+1.2**
KSM	**Kuching**	**15.49**	**258**	P	**Pn**	**16 03 25.4**	**+0.8**
	134nm,1.1s,2μm						
KSM	**Kuching**	**15.49**	**258**	P	**Pn**	**16 03 25.8**	**+1.2**
	baz=15,SNR=79						
BASI	**Baing, Sumba**	**15.65**	**198**	P	**Pn**	**16 03 27.1**	**+0.7**
	120nm,1.0s,2μm						
PBKI	**Pangkalan Bun**	**15.66**	**242**	P	**Pn**	**16 03 27.1**	**+0.5**
	115nm,1.1s,1μm						
KHKI	**Kahang-Kahang**	**16.33**	**217**	P	**Pn**	**16 03 36.4**	**+1.9**
	36nm,1.0s						
SRBI	**Singaraja**	**16.35**	**219**	P	**Pn**	**16 03 34.7**	**-0.1**
	30nm,0.7s						
KMMI	**Kalianget**	**16.41**	**225**	P	**Pn**	**16 03 36.1**	**+0.6**
	93nm,1.1s						
JAY	**Jayapura**	**16.83**	**115**	P	**Pn**	**16 03 40.9**	**+0.3**
	62nm,0.9s						
JAY	**Jayapura**	**16.83**	**115**	P	**Pn**	**16 03 40.9**	**+0.3**
	baz=17,SNR=25						
IGBI	**Denpasar**	**16.96**	**217**	P	**Pn**	**16 03 43.7**	**+1.7**
	51nm,0.5s,30μm						
KRKI	**Karangkates**	**18.25**	**225**	P	**Pn**	**16 03 56.4**	**-0.8**
	209nm,1.4s						
MTN	**Manton Dam**	**18.36**	**162**	P	**P**	**16 03 56.0**	**+0.6**
	baz=18,SNR=64						
SJI	**Sawahan**	**18.46**	**228**	P	**P**	**16 03 57.7**	**+1.0**
	62nm,1.4s,2μm						
PWJI	**Pagerwojo**	**18.63**	**227**	P	**P**	**16 03 59.1**	**+0.7**
	37nm,1.7s						
KDU	**Kakadu**	**18.66**	**158**	P	**P**	**16 03 59.1**	**+0.4**
	baz=19,SNR=48						
KDU				S	**S**	**16 07 19.3**	**+0.1**
	baz=19,SNR=4.0						
PCJI	**Pacitan**	**19.20**	**228**	P	**P**	**16 04 05.8**	**+1.2**
	66nm,1.3s						
TPI	**Tanjungpandan**	**19.31**	**248**	P	**P**	**16 04 05.8**	**+0.1**
	46nm,1.1s,624nm						
UGM	**Wanagama**	**19.51**	**230**	P	**P**	**16 04 09.8**	**+1.9**
	92nm,1.7s						
UGM	**Wanagama**	**19.51**	**230**	S	**S**	**16 07 38.0**	**+1.8**
	baz=19,SNR=3.3						
BJII	**Banjamegara**	**19.79**	**233**	P	**P**	**16 04 12.8**	**+1.9**
	52nm,1.9s						
MMPI	**Merauke**	**19.83**	**131**	P	**Pn**	**16 04 15.0**	**-0.8**
	158nm,1.0s						
PPBI	**Pangkal Pinang**	**20.51**	**251**	P	**P**	**16 04 18.1**	**-0.5**
	18nm,0.8s,572nm						
LEM	**Lembang**	**21.21**	**237**	P	**P**	**16 04 27.4**	**+1.3**
	61nm,2.0s						
CBJI	**Citeko**	**21.66**	**239**	P	**P**	**16 04 32.2**	**+2.0**
	161nm,1.4s						
MYKOM	**Kota Tinggi**	**21.79**	**263**	P	**P**	**16 04 35.1**	**+3.5**
DBJI	**Dramaga**	**21.81**	**239**	P	**P**	**16 04 32.6**	**+0.9**
	63nm,1.8s						
BTDF	**Bukit Timah Da**	**21.93**	**262**	P	**P**	**16 04 33.6**	**+0.7**
	26nm,1.2s,445nm						
KTGM	**Kuala Trenggan**	**22.27**	**272**	P	**P**	**16 04 36.7**	**+0.7**
KGM	**Kluang**	**22.29**	**264**	P	**P**	**16 04 36.8**	**+0.7**
UBPT	**Khong Chiam**	**22.29**	**299**	P	**P**	**16 04 35.9**	**-0.2**
	35nm,1.1s						
FITZ	**Fitzroy Crossi**	**22.70**	**180**	*eP*	**P**	**16 04 39.1**	**-0.8**
FITZ	**Fitzroy Crossi**	**22.70**	**180**	P	**P**	**16 04 39.5**	**-0.4**
	16nm,0.4s,baz=3.6,slow=8.2,SNR=226						
FITZ				S	**S**	**16 08 30.0**	**-1.0**
	9.6nm,1.0s,baz=342,slow=20,SNR=8.2						
FITZ				ScP	**ScP**	**16 11 39.8**	**-0.8**
	3.0nm,0.6s,baz=333,slow=4.5,SNR=3.6						
FITZ	**Fitzroy Crossi**	**22.70**	**180**	P	**P**	**16 04 39.4**	**-0.4**
	baz=23,SNR=136						
FITZ				S	**S**	**16 08 30.7**	**-0.3**
	baz=23,SNR=6.6						
CGJI	**Cibinong**	**22.75**	**240**	P	**P**	**16 04 41.2**	**+0.9**
	24nm,1.5s,812nm						
FRIM	**Kepong**	**23.84**	**267**	P	**P**	**16 04 53.0**	**+2.7**
CHBT	**Chiat**	**24.21**	**291**	P	**P**	**16 04 54.6**	**+1.0**
	22nm,1.1s						
IPM	**Ipoh**	**24.38**	**270**	*eP*	P	16 04 50.0	-5.2
	30nm,1.3s						
IPM	**Ipoh**	**24.38**	**270**	P	**P**	**16 04 55.2**	**0.0**
IPM	**Ipoh**	**24.38**	**270**	P	**P**	**16 04 54.7**	**-0.5**
	17nm,1.0s						
COEN	**Coen**	**25.57**	**137**	P	**P**	**16 05 06.2**	**+0.4**
	baz=26,SNR=9.4						
PMG	**Port Moresby**	**25.78**	**123**	P	**P**	**16 05 08.2**	**+0.4**
PMG	**Port Moresby**	**25.78**	**123**	P	**P**	**16 05 08.2**	**+0.4**
	6.7nm,0.6s,baz=282,slow=14,SNR=7.0						
WRAB	**Tennant Creek**	**26.03**	**161**	*eP*	**P**	**16 05 07.3**	**-2.7**
	5.9nm,0.4s						
WRA	**Warramunga Arr**	**26.03**	**161**	P	**P**	**16 05 09.6**	**-0.4**
WRA				S	**S**	**16 09 20.3**	**-3.6**
WRA	**Warramunga Arr**	**26.03**	**161**	P	**P**	**16 05 09.6**	**-0.4**
	3.4nm,0.4s,baz=334,slow=10,SNR=79						
WRA				S	**S**	**16 09 20.3**	**-3.6**
	2.2nm,0.8s,baz=331,slow=17,SNR=8.6						
MBWA	**Marble Bar**	**26.36**	**192**	*eP*	**P**	**16 05 09.2**	**-3.7**
	68nm,1.7s						
NJ2	**Nanjing**	**27.87**	**348**	*eP*	**P**	**16 05 27.3**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA	**Guiyang**	**28.11**	**322**	P	**P**	**16 05 29.9**	**+1.4**
GYA				pP	**pP**	**16 06 14.3**	**+0.4**
GYA				sP	**sP**	**16 06 40.4**	**+0.1**
GYA				PcP	**PcP**	**16 08 37.6**	**+0.7**
GYA				S	**S**	**16 09 58.3**	**+1.6**
GYA				sS	**sS**	**16 11 16.8**	**-1.4**
GYA				ScP	**ScP**	**16 11 55.6**	**-0.7**
GYA				PcS	**PcS**	**16 12 17.8**	**-1.8**
GYA				ScS	**ScS**	**16 15 47.6**	**-1.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
QIS	**Mount Isa**	**28.72**	**152**	P	**P**	**16 05 35.0**	**+1.2**
	baz=29,SNR=5.9						
CMAR	**Chiang Mai Arr**	**29.29**	**300**	P	**P**	**16 05 39.6**	**+0.6**
	comp=Z,4.3nm,0.8s,baz=113,slow=7.0,SNR=35						
CMAR				PcP	**PcP**	**16 08 39.1**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=119,slow=1.0,SNR=9.3						
CMAR				ScP	**ScP**	**16 11 59.6**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=143,slow=2.1,SNR=21						
GIRL	**Giralia**	**29.36**	**202**	P	**P**	**16 05 39.8**	**+0.3**
	baz=29,SNR=5.0						
AS31	**Alice Springs**	**29.41**	**164**	*eP*	P	16 05 36.6	-3.4
ASAR	**Alice Springs**	**29.41**	**164**	P	**P**	**16 05 39.8**	**-0.2**
ASAR				PcP	**PcP**	**16 08 39.9**	**-0.3**
ASAR				S	**S**	**16 10 16.3**	**-0.7**
ASAR				ScP	**ScP**	**16 12 00.2**	**-0.1**
ASAR	**Alice Springs**	**29.41**	**164**	P	**P**	**16 05 39.8**	**-0.2**
	comp=Z,2.1nm,0.3s,baz=340,slow=6.9,SNR=107						
ASAR				PcP	**PcP**	**16 08 39.9**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=353,slow=1.9,SNR=6.3						
ASAR				S	**S**	**16 10 16.3**	**-0.7**
	comp=Z,1.7nm,0.8s,baz=355,slow=2.1,SNR=7.1						
ASAR				ScP	**ScP**	**16 12 00.2**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=338,slow=2.6,SNR=11						
CMMT	**Chiang Mai**	**29.43**	**301**	P	**P**	**16 05 41.3**	**+1.1**
	comp=Z,10nm,0.9s						
CHTO	**Chiang Mai**	**29.43**	**301**	*eP*	P	16 05 33.4	-6.8
CHTO	**Chiang Mai**	**29.43**	**301**	P	**P**	**16 05 40.8**	**+0.6**
	comp=Z,11nm,0.9s						
MEEK	**Meekatharra**	**31.90**	**192**	P	**P**	**16 06 00.8**	**-1.0**
	baz=32,SNR=13						
CTA	**Charters Tower**	**32.03**	**141**	P	**P**	**16 06 03.9**	**+0.9**
CTA	**Charters Tower**	**32.03**	**141**	P	**P**	**16 06 03.9**	**+0.9**
	comp=Z,3.1nm,0.4s,baz=332,slow=9.1,SNR=6.9						
KSRS	**Korea Array**	**32.63**	**4**	P	**P**	**16 06 08.9**	**+0.9**
	comp=Z,3.7nm,0.8s,baz=183,slow=10.0,SNR=15						
KSRS				PcP	**PcP**	**16 08 48.6**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=196,slow=3.2,SNR=4.6						
CD2	**Chengdu**	**33.09**	**324**	P	**P**	**16 06 13.8**	**+1.6**
CD2				pP	**pP**	**16 06 59.8**	**+1.6**
CD2				sP	**sP**	**16 07 25.1**	**+0.7**
CD2				PP	**PP**	**16 07 34.1**	**+2.0**
CD2				PcP	**PcP**	**16 08 50.9**	**+0.9**
CD2				S	**S**	**16 11 16.3**	**+2.1**
CD2				PcS	**PcS**	**16 12 35.8**	**-0.1**
CD2				sS	**sS**	**16 12 37.3**	**+0.8**
CD2				SS	**SS**	**16 13 36.8**	**-5.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.4s						
CD2				LR	LR		
	comp=Z,300nm,19.0s						
MAT	**Matsushiro**	**33.74**	**19**	P	**P**	**16 06 17.1**	**-0.5**
MAT				S	**S**	**16 11 19.0**	**-4.9**
MJAR	**Matsushiro Arr**	**33.74**	**19**	P	**P**	**16 06 17.4**	**-0.2**
MJAR	**Matsushiro Arr**	**33.74**	**19**	P	**P**	**16 06 17.4**	**-0.2**
	comp=Z,4.6nm,0.8s,baz=196,slow=9.6,SNR=19						
MORW	**Morawa**	**34.82**	**195**	P	**P**	**16 06 26.1**	**-0.8**
	baz=35,SNR=13						
QLP	**Quilpie**	**36.05**	**151**	P	**P**	**16 06 38.2**	**+0.8**
	baz=36,SNR=4.3						
KMBL	**Kambalda**	**36.07**	**185**	P	**P**	**16 06 37.2**	**-0.4**
	baz=36,SNR=20						
BJI	**Beijing**	**36.13**	**348**	P	**P**	**16 06 38.9**	**+1.0**
BJI				S	**S**	**16 12 03.8**	**+3.6**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,73nm,5.0s						
BJI				LR	LR		
	comp=N,180nm,10.5s						
BJI				LR	LR		
	comp=E,130nm,19.0s						
BJI				LR	LR		
	comp=Z,110nm,23.6s						
BLDU	**Ballidu**	**36.15**	**193**	P	**P**	**16 06 37.4**	**-0.8**
	baz=36,SNR=26						
KLBR	**Kellerberrin**	**36.88**	**191**	P	**P**	**16 06 43.6**	**-0.7**
	baz=37,SNR=30						
LZH	**Lanzhou**	**37.01**	**330**	P	**P**	**16 06 48.3**	**+2.7**
LZH				sP	**sP**	**16 08 00.3**	**+1.9**
LZH				PP	**PnPn**	**16 08 22.5**	**+4.0**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,76nm,5.2s						
HNR	**Honiara**	**37.12**	**112**	P	**P**	**16 06 46.1**	**-0.6**
HNR	**Honiara**	**37.12**	**112**	P	**P**	**16 06 46.1**	**-0.6**
	comp=Z,16nm,0.4s,baz=202,slow=5.4,SNR=5.4						
HHC	**Hu-ho-hao-te**	**38.06**	**343**	*eP*	**P**	**16 06 54.6**	**+0.4**
HHC				pP	**pP**	**16 07 41.5**	**+0.2**
HHC				sP	**sP**	**16 08 07.0**	**-0.3**
HHC				PP	**PnPn**	**16 08 31.4**	**+0.6**
HHC				S	**ScP**	**16 12 31.6**	**+1.0**
HHC				sS	**sS**	**16 13 54.6**	**+1.4**
HHC				SS	**SS**	**16 15 25.8**	**-1.6**
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,280nm,6.1s						
NWAO	**Narrogin (SRO)**	**38.27**	**191**	P	**P**	**16 06 54.8**	**-1.2**
NWAO	**Narrogin (SRO)**	**38.27**	**191**	P	**P**	**16 06 54.8**	**-1.2**
	comp=Z,9.1nm,0.4s,baz=16,slow=8.8,SNR=34						
BBOO	**Buckleboo**	**38.68**	**166**	*eP*	**P**	**16 06 59.7**	**+0.4**
	comp=Z,317nm,0.4s						
BBOO	**Buckleboo**	**38.68**	**166**	P	**P**	**16 06 59.8**	**+0.4**
	baz=39,SNR=74						
CN2	**Changchun**	**38.90**	**360**	*eP*	**P**	**16 07 03.9**	**+2.9**
STKA	**Stephens Creek**	**39.52**	**158**	P	**P**	**16 07 07.0**	**+0.7**
	comp=Z,11nm,0.6s						
STKA				PcP	**PcP**	**16 09 07.9**	**-1.3**
STKA				ScP	**ScP**	**16 12 36.1**	**-0.1**
STKA	**Stephens Creek**	**39.52**	**158**	P	**P**	**16 07 07.0**	**+0.7**
	comp=Z,10nm,1.0s,baz=330,slow=7.8,SNR=25						
STKA				PcP	**PcP**	**16 09 07.9**	**-1.3**
	comp=Z,2.0nm,0.5s,baz=342,slow=3.2,SNR=3.0						
STKA				ScP	**ScP**	**16 12 36.1**	**-0.1**
	comp=Z,3.7nm,0.9s,baz=350,slow=6.1,SNR=5.9						
STKA	**Stephens Creek**	**39.52**	**158**	P	**P**	**16 07 07.7**	**+1.3**
	baz=40,SNR=20						
STKA				S	**S**	**16 12 53.2**	**+1.6**
	baz=40,SNR=5.2						
USRK	**Ussuriysk Arra**	**39.71**	**7**	P	**P**	**16 07 08.8**	**+1.1**
	comp=Z,9.6nm,0.8s,baz=185,slow=6.6,SNR=12						
MDJ	**Mudanjiang**	**39.87**	**5**	P	**P**	**16 07 10.3**	**+1.2**
MDJ				pP	**pP**

WMQ				pmax	pmax		
	comp=Z,15nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,250nm,5.0s						
WMQ				LR	LR		
	comp=N,240nm,16.0s						
WMQ				LR	LR		
	comp=E,180nm,16.0s						
WMQ				LR	LR		
	comp=Z,200nm,16.0s						
PETK	**Petropavlovsk-**	**54.98**	**23**	P	**P**		**16 09 06.5 +1.5**
PETK				PcP	**PcP**		**16 10 04.2 +0.4**
PETK	**Petropavlovsk-**	**54.98**	**23**	P	**P**		**16 09 06.5 +1.5**
	comp=Z,8.4nm,0.8s,baz=202,slow=7.3,SNR=11						
PETK				PcP	**PcP**		**16 10 04.3 +0.4**
	comp=Z,4.8nm,0.9s,baz=219,slow=3.7,SNR=11						
MK31	**Makanchi Array**	**56.02**	**325**	*eP*	**P**		**16 09 10.1 -2.5**
MKAR	**Makanchi Array**	**56.02**	**325**	*eP*	**P**		**16 09 12.4 -0.1**
MKAR	**Makanchi Array**	**56.02**	**325**	P	**P**		**16 09 12.5 -0.1**
	comp=Z,5.3nm,0.4s,baz=122,slow=8.6,SNR=47						
MKAR				PcP	**PcP**		**16 10 07.4 -0.6**
	comp=Z,2.4nm,0.5s,baz=121,slow=3.3,SNR=7.7						
MKAR				ScP	**ScP**		**16 13 44.7 -0.7**
	comp=Z,5.5nm,0.7s,baz=120,slow=4.8,SNR=32						
KSH	**Kashi**	**56.45**	**315**	P	**P**		**16 09 17.1 +1.2**
KSH				pP	**pP**		**16 10 07.3 +0.6**
KSH				PcP	**PcP**		**16 10 09.5 -0.6**
KSH				sP	**sP**		**16 10 30.4 -1.3**
KSH				PP	**PP**		**16 11 26.8 +2.6**
KSH				ScP	**ScP**		**16 13 47.4 -0.2**
KSH				PcS	**PcS**		**16 14 09.0 -2.1**
KSH				S	**S**		**16 16 49.8 +0.7**
KSH				sS	**sS**		**16 18 17.3 -0.8**
KSH				ScS	**ScS**		**16 18 40.3 -1.9**
KSH				SS	**SS**		**16 20 42.6 +2.6**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,44nm,3.6s						
KSH				LR	LR		
	comp=N,120nm,4.4s						
KSH				LR	LR		
	comp=E,200nm,4.2s						
KSH				LR	LR		
	comp=Z,420nm,5.7s						
AAK	**Ala-Archa**	**58.77**	**318**	P	**P**		**16 09 32.2 +0.2**
AAK	**Ala-Archa**	**58.77**	**318**	P	**P**		**16 09 32.2 +0.2**
	comp=Z,1.2nm,0.5s,baz=136,slow=6.5,SNR=7.6						
AAK				PcP	**PcP**		**16 10 18.8 -0.4**
	comp=Z,1.6nm,0.5s,baz=103,slow=2.9,SNR=7.9						
ZALV	**Zalesovo Beam**	**59.12**	**333**	P	**P**		**16 09 32.7 -1.4**
ZALV				PcP	**PcP**		**16 10 19.9 -0.2**
ZALV	**Zalesovo Beam**	**59.12**	**333**	P	**P**		**16 09 32.7 -1.4**
	comp=Z,0.9nm,0.4s,baz=120,slow=7.7,SNR=6.8						
ZALV				PcP	**PcP**		**16 10 19.9 -0.2**
	comp=Z,0.4nm,0.4s,baz=123,slow=5.5,SNR=3.0						
EKS2	**Erkin-Say**	**59.26**	**318**	*eP*	P		16 09 32.1 -3.3
	comp=Z,2.7nm,0.6s						
KBL	**Kabul**	**59.92**	**307**	*eP*	P		16 09 36.7 -3.4
	comp=Z,9.1nm,0.7s						
KBL	**Kabul**	**59.92**	**307**	P	**P**		**16 09 40.0 -0.2**
	baz=60,SNR=4.2						
KURBB	**Kurchatov Arra**	**60.22**	**328**	P	**P**		**16 09 40.9 -0.6**
	comp=Z,3.1nm,0.6s,baz=124,slow=7.3,SNR=97						
KURK	**Kurchatov**	**60.22**	**328**	*eP*	**P**		**16 09 39.4 -2.2**
KKAR	**Karatay Array**	**61.64**	**317**	*eP*	P		16 09 48.1 -3.3
FX1	**Attu Island--F**	**61.84**	**31**	P	**P**		**16 09 52.4 0.0**
FX1	**Attu Island--F**	**61.84**	**31**	P	**P**		**16 09 52.4 0.0**
	comp=Z,20nm,0.8s,baz=202,slow=5.4,SNR=3.0						
BVAR	**Borovoye Array**	**65.80**	**327**	P	**P**		**16 10 17.5 -0.6**
BVAR				ScP			16 14 27.5
BVAR	**Borovoye Array**	**65.80**	**327**	P	**P**		**16 10 17.5 -0.6**
	comp=Z,2.2nm,0.8s,baz=108,slow=7.7,SNR=12						
BVAR				ScP			16 14 27.5
	comp=Z,1.0nm,0.8s,baz=92,slow=5.0,SNR=5.0						
BRVK	**Borovoye**	**65.87**	**327**	*eP*	P		16 10 15.0 -3.7
	comp=Z,4.1nm,0.9s						
BRVK				*e*PcP	**PcP**		**16 10 46.9 -0.8**
TIXI	**Tiksi**	**66.85**	**1**	*eP*	**P**		**16 10 24.1 -0.4**
	comp=Z,15nm,1.0s						
BILL	**Bilibino**	**68.90**	**15**	*eP*	**P**		**16 10 35.8 -1.6**
	comp=Z,2.4nm,0.8s						
ABKAR	**Akbulak array**	**70.58**	**321**	*eP*	P		16 10 43.1 -4.8
	comp=Z,3.6nm,0.7s						
ABKAR				*e*PcP	**PcP**		**16 11 07.3 -0.3**
QRN	**Al-Qurain**	**76.83**	**298**	*eP*	**P**		**16 11 23.1 -1.6**
MIB	**Mutribah**	**77.37**	**299**	*eP*	**P**		**16 11 25.8 -1.8**
MIB				AMb	AMB		16 11 27.8
	comp=Z,22nm,0.7s						
NAY	**Al-Naaiem**	**77.44**	**299**	*eP*	**P**		**16 11 25.9 -2.2**
NAY				AMb	AMB		16 11 27.6
	comp=Z,12nm,0.8s						
KBZ	**Khabaz**	**81.38**	**313**	P	**P**		**16 11 48.5 -0.4**
KBZ	**Khabaz**	**81.38**	**313**	P	**P**		**16 11 48.5 -0.4**
	comp=Z,1.0nm,0.7s,baz=91,slow=7.7,SNR=3.2						
KDAK	**Kodiak Island**	**81.70**	**32**	P	**P**		**16 11 51.5 +1.2**
KDAK	**Kodiak Island**	**81.70**	**32**	P	**P**		**16 11 51.5 +1.2**
	comp=Z,7.8nm,0.9s,baz=241,slow=9.2,SNR=5.5						
SPU	**Mount Spurr**	**82.23**	**29**	*eP*	**P**		**16 11 53.4 +0.3**
COLD	**Coldfoot**	**83.45**	**23**	*eP*	**P**		**16 11 57.1 -2.1**
	comp=Z,16nm,0.9s						
MCK	**McKinley**	**83.81**	**27**	*eP*	**P**		**16 11 58.3 -2.8**
SML	**Sawmill**	**84.04**	**28**	*eP*	**P**		**16 12 02.5 +0.2**
	comp=Z,3.4nm,0.9s						
VNDA	**Vanda**	**84.59**	**173**	P	**P**		**16 12 04.0 -0.6**
VNDA	**Vanda**	**84.59**	**173**	P	**P**		**16 12 04.0 -0.6**
	comp=Z,0.6nm,0.6s,baz=326,slow=3.2,SNR=5.4						
ILAR	**Eielson Array**	**84.73**	**25**	P	**P**		**16 12 05.5 -0.2**
ILAR	**Eielson Array**	**84.73**	**25**	P	**P**		**16 12 05.5 -0.2**
	comp=Z,0.7nm,0.5s,baz=251,slow=4.8,SNR=24						
JOF	**Joensuu**	**87.71**	**333**	*ep*	**P**		**16 12 19.7 -0.5**
	comp=Z,4.1nm,0.5s						
BRTR	**Keskin Array B**	**88.42**	**310**	P	**P**		**16 12 22.3 -1.9**
BRTR	**Keskin Array B**	**88.42**	**310**	P	**P**		**16 12 22.3 -1.9**
	comp=Z,2.4nm,0.7s,baz=113,slow=5.1,SNR=14						
ARCES	**ARCESS Array B**	**89.07**	**340**	P	**P**		**16 12 25.7 -0.7**
ARCES	**ARCESS Array B**	**89.07**	**340**	P	**P**		**16 12 25.7 -0.7**
	comp=Z,2.4nm,0.7s,baz=74,slow=6.7,SNR=3.3						
INK	**Inuvik**	**89.68**	**21**	P	**P**		**16 12 29.6 +0.3**
INK	**Inuvik**	**89.68**	**21**	P	**P**		**16 12 29.6 +0.3**
	comp=Z,0.5nm,0.4s,baz=306,slow=7.1,SNR=5.3						
KAF	**Kangasniemi**	**90.12**	**332**	*ep*	**P**		**16 12 32.0 +0.5**
AKASG	**Malin Array Be**	**90.32**	**321**	P	**P**		**16 12 31.9 -0.8**
AKASG	**Malin Array Be**	**90.32**	**321**	P	**P**		**16 12 31.9 -0.8**
	comp=Z,0.6nm,0.3s,baz=68,slow=4.3,SNR=3.5						
FINES	**FINESS Array B**	**90.35**	**332**	P	**P**		**16 12 31.5 -1.1**
FINES	**FINESS Array B**	**90.35**	**332**	P	**P**		**16 12 31.5 -1.1**
	comp=Z,1.6nm,0.5s,baz=90,slow=5.6,SNR=16						
KOLS	**Kolonicke sedl**	**95.07**	**320**	*eP*	**P**		**16 12 52.7 -1.9**
CRVS	**Cervenica-Dubn**	**95.60**	**320**	*eP*	**P**		**16 12 56.0 -1.0**
YKA	**Yellowknife Ar**	**99.09**	**24**	P	**Pdif**		**16 13 12.9 +0.5**
YKA	**Yellowknife Ar**	**99.09**	**24**	P	**Pdif**		**16 13 12.9 +0.5**
	comp=Z,0.6nm,0.8s,baz=304,slow=4.8,SNR=12						
NVAR	**Mina Array Bea**	**107.15**	**48**	PKKPab	PKKPab		16 29 28.9 -2.0
NVAR	**Mina Array Bea**	**107.15**	**48**	PKKPab	PKKPab		16 29 28.9 -2.0
	comp=Z,0.5nm,0.6s,baz=124,slow=4.5,SNR=4.0						
PDAR	**Pinedale Array**	**111.40**	**40**	PKKPab	PKKPab		16 29 09.7 -2.4
PDAR	**Pinedale Array**	**111.40**	**40**	PKKPab	PKKPab		16 29 09.7 -2.4
	comp=Z,0.6nm,0.9s,baz=106,slow=5.7,SNR=4.0						
SCHQ	**Schefferville**	**119.76**	**8**	PKP	**PKPdf**		**16 18 20.7 +0.3**
SCHQ	**Schefferville**	**119.76**	**8**	PKP	**PKPdf**		**16 18 20.7 +0.3**
	comp=Z,2.1nm,0.3s,baz=29,slow=1.5,SNR=14						
TORD	**Torodi Ar. Bea**	**121.42**	**288**	PKP	**PKPdf**		**16 18 24.2 -0.5**
TORD	**Torodi Ar. Bea**	**121.42**	**288**	PKP	**PKPdf**		**16 18 24.2 -0.5**
	comp=Z,3.1nm,0.6s,baz=52,slow=1.8,SNR=21						
TXAR	**Lajitas Array**	**121.95**	**51**	PKP	**PKPdf**		**16 18 25.6 +0.1**
TXAR				PKKPab	**PKKPbc**		**16 28 23.5 -1.0**
TXAR	**Lajitas Array**	**121.95**	**51**	PKP	**PKPdf**		**16 18 25.6 +0.1**
	comp=Z,0.4nm,0.5s,baz=238,slow=1.8,SNR=5.4						
TXAR				PKKPab	**PKKPbc**		**16 28 23.5 -1.0**
	comp=Z,0.3nm,0.5s,baz=104,slow=6.6,SNR=3.6						
DBIC	**Dimbokro**	**129.15**	**282**	PKP	**PKPdf**		**16 18 39.6 +0.1**
DBIC				SKPbc	SKPbc		16 21 39.3 +0.1
DBIC	**Dimbokro**	**129.15**	**282**	PKP	**PKPdf**		**16 18 39.6 +0.1**
	comp=Z,2.4nm,0.6s,baz=326,slow=3.6,SNR=3.4						
DBIC				SKPbc	SKPbc		16 21 39.3 +0.1
	comp=Z,3.7nm,0.6s,baz=135,slow=6.3,SNR=5.2						
PLCA	**Paso Flores**	**141.38**	**160**	SKPbc	**SKPbc**		**16 22 17.8 +0.6**
	comp=Z,1.2nm,0.6s,baz=254,slow=3.1,SNR=6.1						

*IDC **17** 16:05:30.9±0.5, 3°.84N×126°.18E, h0km, mb4.0/19, mb1 4.2/19, mb1mx4.1/28, mbtmp4.0/19, MS4.0/5, Ms1 4.0/5, ms1mx3.3/49, Error ellipse: s-maj=34.0km s-min=10.4km az=74.0*

*ISCJB **17** 16:05:41.9±0.4, 3°.82N±0°.07×126°.1E±0°.1, h100km, mb3.9/20, Error ellipse: s-maj=21.3km s-min=7.2km az=160.9*

ISC 17 16:05:43.7±0.5, 3°.89N±0°.07×126°.1E±0°.2, h100km, n33, σ1s25/34, mb4.0/19, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
GSPH	**General Santos**	**2.46**	**333**	*i*	*i*	P	**Pn**	**16 06 20.8**	**-1.6**
MATI	**Mati**	**3.04**	**3**	*eP*			**Sn**	**16 07 04.7**	**-1.1**
DAV	**Davao City (W)**	**3.20**	**351**	Sn			Sn	16 07 17.1	+7.6
	18nm,0.3s,baz=105,slow=20,SNR=3.6								
DAV					LR		LR	16 07 47.5	
	comp=Z,342nm,18.4s,baz=215,slow=42								
CTBH	**Cotabato--PC H**	**3.78**	**331**	*i*	P		**Pn**	**16 06 40.5**	**+0.5**
BUKP	**Musuan**	**4.09**	**346**	*eP*			**Pn**	**16 06 45.5**	**+1.3**
PAGZ	**Pagadian**	**4.76**	**326**	*eP*			**Pn**	**16 06 53.5**	**+0.3**
IPIL	**Ipil**	**5.21**	**318**	*eP*			**Pn**	**16 06 59.5**	**+0.1**
FITZ	**Fitzroy Crossi**	**21.86**	**181**	P			**P**	**16 10 28.0**	**-0.4**
	11nm,0.6s,baz=16,slow=8.2,SNR=16								
WRA	**Warramunga Arr**	**25.04**	**161**	P			**P**	**16 10 56.7**	**-2.1**
	2.9nm,0.5s,baz=341,slow=10,SNR=10								
WRA					S		**S**	**16 15 21.0**	**+5.2**
	1.2nm,0.8s,baz=347,slow=17,SNR=7.0								
ASAR	**Alice Springs**	**28.43**	**165**	P			**P**	**16 11 27.4**	**-1.8**
	1.2nm,0.5s,baz=343,slow=6.9,SNR=9.5								
ASAR					PcP		**PcP**	**16 14 39.8**	**+0.5**
	0.4nm,0.5s,baz=349,slow=2.8,SNR=5.3								
CMAR	**Chiang Mai Arr**	**30.23**	**301**	P			**P**	**16 11 45.7**	**+0.5**
	0.4nm,0.7s,baz=119,slow=7.3,SNR=3.5								
KSRS	**Korea Array**	**33.45**	**3**	P			**P**	**16 12 12.6**	**-0.5**
	1.1nm,0.5s,baz=182,slow=9.6,SNR=10.0								
NWAO	**Narrogin (SRO)**	**37.56**	**192**	P			**P**	**16 12 47.6**	**-0.8**
	4.6nm,0.4s,baz=304,slow=2.7,SNR=9.0								
STKA	**Stephens Creek**	**38.51**	**159**	P			**P**	**16 12 55.4**	**-1.0**
	1.7nm,0.5s,baz=327,slow=10,SNR=6.4								
STKA					PcP		**PcP**	**16 15 07.3**	**-0.1**
	1.0nm,0.5s,baz=66,slow=3.4,SNR=3.0								
USRK	**Ussuriysk Arra**	**40.48**		P			**P**	**16 13 12.5**	**-0.1**
	0.8nm,0.5s,baz=198,slow=9.2,SNR=4.4								
SONM	**Songino Array**	**46.94**	**342**	P			**P**	**16 14 05.0**	**+0.4**
	0.5nm,0.5s,baz=164,slow=8.2,SNR=5.1								
SONM					PcP		**PcP**	**16 15 36.6**	**+1.1**
	0.6nm,0.8s,baz=179,slow=4.1,SNR=3.9								
MKAR	**Makanchi Array**	**57.05**	**325**	P			**P**	**16 15 19.8**	**+0.3**
	0.7nm,0.4s,baz=126,slow=7.5,SNR=4.1								
MKAR					PcP		**PcP**	**16 16 14.3**	**+1.0**
	2.1nm,0.7s,baz=115,slow=4.3,SNR=8.6								
MKAR					ScP		ScP	16 20 14.7	+11
	0.4nm,1.0s,baz=108,slow=1.8,SNR=3.7								
AAK	**Ala-Archa**	**59.80**	**318**	PcP			**PcP**	**16 16 25.4**	**+0.9**
	0.9nm,0.6s,baz=141,slow=5.7,SNR=5.1								
ZALV	**Zalesovo Beam**	**60.15**	**333**	P			**P**	**16 15 40.2**	**-0.6**
	0.5nm,0.6s,baz=121,slow=7.0,SNR=3.7								
KURBB	**Kurchatov Arra**	**61.26**	**328**	P			**P**	**16 15 48.2**	**0.0**
	0.5nm,0.6s,baz=128,slow=6.3,SNR=11								
BVAR	**Borovoye Array**	**66.83**	**327**	P			**P**	**16 16 24.7**	**0.0**
	0.8nm,0.8s,baz=125,slow=7.2,SNR=5.3								
BVAR					PcP		**PcP**	**16 16 53.0**	**+0.2**
	0.9nm,0.6s,baz=123,slow=5.3,SNR=5.4								
GNI	**Garni**	**80.88**	**310**	LR			LR	16 58 20.4	
	comp=Z,67nm,20.6s,baz=224,slow=39								
VNDA	**Vanda**	**83.67**	**173**	P			**P**	**16 18 00.7**	**-0.1**
	0.6nm,0.5s,baz=335,slow=4.3,SNR=8.1								
MAW	**Mawson**	**83.68**	**200**	LR			LR	16 56 10.7	
	comp=Z,235nm,18.8s,baz=66,slow=36								
ILAR	**Eielson Array**	**85.24**	**25**	P			**P**	**16 18 08.9**	**-0.1**
	0.3nm,0.7s,baz=250,slow=4.6,SNR=5.2								
ASF	**Jabal al Asfar**	**87.26**	**302**	LR			LR	17 01 42.9	
	comp=Z,74nm,18.6s,baz=203,slow=39								
ARCES	**ARCESS Array B**	**90.08**	**340**	P			**P**	**16 18 31.9**	**-0.2**
	5.9nm,1.1s,baz=93,slow=6.6,SNR=5.3								
INK	**Inuvik**	**90.25**	**21**	P			**P**	**16 18 32.9**	**+0.1**
	0.7nm,0.7s,baz=284,slow=5.0,SNR=4.3								
FINES	**FINESS Array B**	**91.39**	**332**	P			**P**	**16 18 38.2**	**-0.1**
	3.1nm,0.5s,baz=43,slow=4.7,SNR=5.4								
QSPA	**South Pole Qui**	**93.79**	**180**	P			**P**	**16 18 49.3**	**-0.1**
	0.6nm,0.7s,baz=180,slow=5.1,SNR=6.6								
MBAR	**Mbarara**	**95.37**	**270**	LR			LR	16 56 51.5	
	comp=Z,180nm,19.5s,baz=144,slow=32								
YKA	**Yellowknife Ar**	**99.62**	**24**	P			**Pdif**	**16 19 16.9**	**+1.2**
	0.2nm,0.5s,baz=297,slow=4.3,SNR=4.0								
TORD	**Torodi Ar. Bea**	**122.25**	**288**	PKP			**PKPdf**	**16 24 28.3**	**+0.3**
	0.5nm,0.7s,baz=59,slow=2.1,SNR=3.1								

*BJI **17** 16:11:54.3, 9°.04S×159°.29E, h520km, mB4.9/26, mb5.0/52*

*ISCJB **17** 16:11:55.7±0.4, 9°.26S±0°.02×158°.87E±0°.02, h522km±4km, mb5.2/166, Error ellipse: s-maj=3.6km s-min=3.1km az=8.7*

*NEIC **17** 16:11:56.2±0.1, 9°.23S×159°.00E, mb4.9/54, Error ellipse: s-maj=5.0km s-min=4.3km az=114.0*

*IDC **17** 16:11:56.4±0.3, 9°.23S×158°.97E, h521km±2km, mb4.6/36, mb1 4.7/39, mb1mx4.6/40, mbtmp4.6/39, Error ellipse: s-maj=7.9km s-min=5.9km az=73.0*

*DJA **17** 16:11:59.3±0.8, 9°S±3°×15°9E±°, h555km±8km, M5.1/100, mb5.5/100, mB5.6/77, Mw(mB)5.1/77*

*GCMT **17** 16:11:59.0±0.3, 9°.29S×158°.95E, h522km±2km, MW5.4, Moment Tensor Solution. s73,c111; Moment tensor: Scale 10^{17}Nm; Mrr-1.16±.05; Mθθ1.41±.08; Mϕϕ-0.25±.09; Mrθ0.55±.10; Mθϕ0.65±.08; Mϕr-0.80±.10; Best double couple: M₀1.80000×10^{17} NP1:ϕ₁42.00000°, δ49.00000°, λ-138.00000°. NP2:ϕ₂81.00000°, δ60.00000°, λ-49.00000°. Principal axes: T 1.6600, Plg6.0000°, Azm344.0000°; N 0.1600, Plg34.0000°, Azm78.0000°; P -1.8300, Plg55.0000°, Azm245.0000°; Data Used: II IU IC G CN.*

*AUST **17** 16:12:01.3, 9°.12S×159°.03E, h600km*

ISC 17 16:11:56.0±0.2, 9°.25S±0°.03×159°.01E±0°.03, h519km±2km, h520km:pP-P, n655, σ1s37/850, mb5.2/166, 75C-65D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
HNR	**Honiara**	**0.94**	**101**	*eP*			**P**	**16 12 59.0**	**-0.1**
HNR				*eS*			**S**	**16 13 49.0**	**-1.2**
HNR	**Honiara**	**0.94**	**101**	P			**P**	**16 12 59.5**	**+0.4**
	736nm,0.3s,baz=201,slow=7.6,SNR=355								
HNR					S		**S**	**16 13 51.7**	**+1.5**
	306nm,0.3s,baz=221,slow=19,SNR=10								
PMG	**Port Moresby**	**11.70**	**268**	P			**P**	**16 14 32.9**	**+1.5**
PMG					S		**S**	**16 16 44.0**	**+4.6**
PMG	**Port Moresby**	**11.70**	**268**	P			**P**	**16 14 33.5**	**+2.1**
	1μm,0.9s,9μm								
PMG	**Port Moresby**	**11.70**	**268**	P			**P**	**16 14 32.9**	**+1.5**
	27nm,0.3s,baz=74,slow=10,SNR=198								
PMG					S		**S**	**16 16 44.0**	**+4.6**
	baz=171,slow=20,SNR=17								
NOUC	**Port Laguerre**	**14.57**	**152**	*eP*			**P**	**16 15 00.4**	**-1.0**
DZM	**Mont Dzumac**	**14.61**	**152**	*eP*			**P**	**16 15 02.5**	**+0.5**
	789nm,1.1s								
DZM					*e*LR		LR	16 18 42.2	
	421nm,22.1s								
DZM	**Mont Dzumac**	**14.61**	**152**	P			**P**	**16 15 02.0**	**+0.1**
DZM					S		**S**	**16 17 33.1**	**-2.3**
DZM	**Mont Dzumac**	**14.61**	**152**	P			**P**	**16 15 02.0**	**+0.1**
	15nm,0.3s,baz=358,slow=11,SNR=140								
DZM					S		**S**	**16 17 33.1**	**-2.3**
	0.4nm,0.3s,baz=135,slow=19,SNR=1.8								
PATS	**Pohnpei**	**15.99**	**357**	P			**P**	**16 15 16.9**	**+0.6**
	baz=16,SNR=10								
COEN	**Coen**	**16.20**	**252**	*eP*			**P**	**16 15 18.6**	**+0.1**
	3μm,0.6s								
COEN	**Coen**	**16.20**	**252**	P			**P**	**16 15 19.0**	**+0.6**
	baz=16,SNR=442								
COEN					S		**S**	**16 18 07.8**	**+3.2**
	baz=16,SNR=7.0								
CTA	**Charters Tower**	**16.37**	**227**	P			**P**	**16 15 20.0**	**-0.1**
CTA	**Charters Tower**	**16.37**	**227**	P			**P**	**16 15 20.0**	**-0.1**
	34nm,0.3s,baz=50,slow=11,SNR=180								
CTAO	**Charters Tower**	**16.37**	**227**	*eP*			**P**	**16 15 20.4**	**+0.3**
	449nm,0.7s								
EIDS	**Eidsvold**	**17.72**	**204**	*eP*			**P**	**16 15 33.5**	**+0.7**
	118nm,0.8s								
EIDS	**Eidsvold**	**17.72**	**204**	P			**P**	**16 15 33.8**	**+1.0**
	baz=18,SNR=59								
EIDS					S		**S**	**16 18 32.8**	**+3.2**
	baz=18,SNR=11								
MMPI	**Merauke**	**18.42**	**271**	P			**P**	**16 15 41.0**	**+1.6**
	420nm,0.8s,5μm								
MMPI	**Merauke**	**18.42**	**271**	P			**P**	**16 15 40.5**	**+1.1**
	baz=18,SNR=4.5								
JAY	**Jayapura**	**19.39**	**289**	P			**P**	**16 15 47.8**	**-0.5**
	312nm,0.9s,4μm								
JAY	**Jayapura**	**19.39**	**289**	P			**P**	**16 15 47.9**	**-0.4**
	baz=19,SNR=118								
JAY					S		**S**	**16 18 56.7**	**-0.5**
	baz=19,SNR=9.3								
RMQ	**Roma**	**19.71**	**208**	P			**P**	**16 15 52.6**	**+1.6**
	baz=20,SNR=248								
RMQ					S		**S**	**16 19 06.0**	**+4.1**
	baz=20,SNR=9.1								
MSVF	**Nonsavu**	**20.33**	**116**	*eP*			**P**	**16 15 55.3**	**-1.5**
	152nm,1.2s								
MSVF	**Nonsavu**	**20.33**	**116**	P			**P**	**16 15 57.0**	**+0.2**
	579nm,1.1s,SNR=19								
QIS	**Mount Isa**	**21.84**	**237**	P			**P**	**16 16 10.5**	**+0.1**
	baz=22,SNR=152								
QIS					S		**S**	**16 19 36.8**	**+0.9**
	baz=22,SNR=5.7								
ARMA	**Armidale**	**22.16**	**197**	*eP*			**P**	**16 16 12.3**	**-1.0**
	61nm,1.1s								
ARMA					*e*ScP		**ScP**	**16 22 41.1**	**+2.8**
ARMA	**Armidale**	**22.16**	**197**	P			**P**	**16 16 14.9**	**+1.7**
	baz=22,SNR=61								
ARMA					S		S	16 19 58.3	+17
	baz=22,SNR=8.8								
QLP	**Quilpie**	**22.21**	**217**	P			**P**	**16 16 14.4**	**+0.9**
	baz=22,SNR=152								
BAKI	**Biak**	**24.16**	**288**	P			**P**	**16 16 31.5**	**+0.4**
	269nm,0.9s,2μm								
MGCD	**Mangrove Creek**	**24.94**	**196**	P			**P**	**16 16 39.7**	**+1.9**
	baz=25,SNR=5.0								
CMSA	**Cobar Meteorol**	**25.40**	**207**	P			**P**	**16 16 42.4**	**+0.5**
	baz=26,SNR=98								
WRAB	**Tennant Creek**	**26.08**	**243**	*eP*			**P**	**16 16 48.3**	**+0.1**
	456nm,0.6s								
WRAB					*e*S		**S**	**16 20 41.0**	**-1.8**
WRAB					*e*ScP		**ScP**	**16 22 50.5**	**+1.2**
WRAB	**Tennant Creek**	**26.08**	**243**	P			**P**	**16 16 48.0**	**-0.1**
	4μm,0.6s								
WRA	**Warramunga Arr**	**26.10**	**243**	P			**P**	**16 16 48.1**	**-0.1**
WRA					PcP		**PcP**	**16 19 59.1**	**+0.3**
WRA					S		**S**	**16 20 41.0**	**-2.1**
WRA					ScP		**ScP**	**16 22 51.3**	**+1.9**
WRA					PKiKP		**PKiKP**	**16 27 35.9**	**-1.5**
WRA	**Warramunga Arr**	**26.10**	**243**	P			**P**	**16 16 48.1**	**-0.1**
	395nm,0.5s,baz=71,slow=9.2,SNR=1549								
WRA					PcP		**PcP**	**16 19 59.1**	**+0.3**
	21nm,0.8s,baz=78,slow=2.0,SNR=7.3								
WRA					S		**S**	**16 20 41.0**	**-2.1**
	34nm,0.8s,baz=70,slow=15,SNR=8.1								
WRA					ScP		**ScP**	**16 22 51.3**	**+1.9**
	27nm,0.9s,baz=68,slow=3.3,SNR=12								
WRA					PKiKP		**PKiKP**	**16 27 35.9**	**-1.5**
	0.8nm,0.6s,baz=315,slow=0.6,SNR=5.9								
KDU	**Kakadu**	**26.27**	**260**	P			**P**	**16 16 49.1**	**-0.7**
	baz=26,SNR=83								
KDU					S		**S**	**16 20 43.5**	**-2.3**
	baz=26,SNR=4.6								
TLE	**Tual**	**26.29**	**276**	P			**P**	**16 16 50.4**	**+0.3**
	180nm,0.9s								
TLE	**Tual**	**26.29**	**276**	P			**P**	**16 16 50.7**	**+0.6**
	baz=26,SNR=3.7								
GUMO	**Guam**	**26.68**	**328**	P			**P**	**16 16 53.3**	**-0.1**
	159nm,0.6s								
GUMO	**Guam**	**26.68**	**328**	P			**P**	**16 16 53.3**	**-0.1**
	143nm,0.5s,baz=146,slow=7.7,SNR=12								
YNG	**Young**	**

CNGZ	Carnagh Statio	33.84	152	*e*PN	P		16 17 55.6	+0.8
KNZ	Kokohu	34.04	154	*e*PN	P		16 17 56.7	+0.3
TSZ	Takapari Road	34.20	157	⇑PN	P		16 17 58.5	+0.6
NNZ	Nelson	34.29	161	PN	P		16 17 59.2	+0.6
KAHZ	Kahuranaki	34.34	155	PN	P		16 17 59.8	+0.7
WPHZ	Waipukurau	34.39	156	*e*PN	P		16 17 59.7	+0.2
OGWZ	Otaki Gorge	34.55	158	PN	P		16 18 01.4	+0.5
MRZ	Mangatainoka R	34.57	158	PN	P		16 18 01.0	0.0
TCW	Tory Channel	34.58	160	PN	P		16 18 02.2	+1.2
THZ	Tophouse	34.63	162	PN	P		16 18 01.9	+0.4
MOO	Moorlands	34.66	195	P	P		16 18 04.1	+2.4
	baz=35,SNR=5.4							
TUWZ	Tuamarina	34.66	160	PN	P		16 18 02.6	+0.9
ANWZ	Angora Road	34.74	156	PN	P		16 18 02.7	+0.3
CAW	Cannon Point	34.77	159	PN	P		16 18 02.9	+0.2
SNZO	South Karori	34.82	159	*e*P	P		16 18 03.0	0.0
	37nm,0.7s							
SNZO	South Karori	34.82	159	PN	P		16 18 03.0	0.0
BFZ	Birch Farm	34.84	157	*e*PN	P		16 18 03.2	-0.1
MTW	Mount Morrison	34.97	158	PN	P		16 18 04.3	0.0
TAU	Tasmania Unive	35.06	195	P	P		16 18 07.0	+2.0
	194nm,1.1s,SNR=8.1							
LTZ	Lake Taylor	35.37	163	PN	P		16 18 08.3	+0.6
KHZ	Kahutara	35.42	161	*e*P	P		16 18 06.5	-1.4
	69nm,0.7s							
KHZ	Kahutara	35.42	161	PN	P		16 18 07.8	-0.2
OXZ	Oxford	35.80	164	PN	P		16 18 11.1	-0.1
RPZ	Rata Peaks	35.91	165	P	P		16 18 12.2	+0.1
	16nm,0.8s							
RPZ	Rata Peaks	35.91	165	P	P		16 18 12.2	+0.1
	51nm,0.8s,baz=335,slow=1.5,SNR=30							
FORT	Forrest	35.91	229	*e*P	P		16 18 12.8	+0.5
	358nm,0.7s							
FORT				*e*S	S		16 23 12.1	-1.3
FORT				*e*ScP	ScP		16 23 22.4	+0.3
FORT	Forrest	35.91	229	P	P		16 18 13.0	+0.7
	baz=36,SNR=156							
KMSI	Cibinong	36.23	284	P	P		16 18 15.1	0.0
	941nm,0.9s,6μm							
BBSI	Bau Bau	36.32	273	P	P		16 18 17.1	+1.2
	214nm,0.8s,2μm							
MMRI	Maumere	36.32	268	P	P		16 18 14.8	-1.2
	675nm,0.8s,5μm							
KDI	Kendari	36.51	276	P	P		16 18 17.3	-0.2
	61nm,1.1s							
LUWI	Luwuk	36.97	281	P	P		16 18 22.1	+0.8
	449nm,1.0s,4μm							
MRSI	Marisa	38.16	283	P	P		16 18 31.2	+0.2
	84nm,0.7s,1μm							
WSI	Waingapu	38.18	266	P	P		16 18 31.8	+0.6
	714nm,0.9s,9μm							
WSI	Waingapu	38.18	266	P	P		16 18 31.1	0.0
	baz=38,SNR=7.0							
WSI				S	S		16 23 44.5	-3.0
	baz=38,SNR=12							
BKSI	Bulukumba	38.76	273	P	P		16 18 35.2	-0.7
	146nm,0.9s,1μm							
KAPI	Kappang	39.16	273	P	P		16 18 38.3	-0.8
	13nm,0.8s							
KAPI				*e*PcP	PcP		16 20 35.1	-0.6
KAPI	Kappang	39.16	273	P	P		16 18 38.7	-0.5
	SNR=16							
KAPI	Kappang	39.16	273	P	P		16 18 38.4	-0.8
	1μm,0.9s,SNR=22							
KAPI	Kappang	39.16	273	P	P		16 18 38.3	-0.8
	263nm,0.9s,2μm							
KAPI	Kappang	39.16	273	P	P		16 18 38.3	-0.8
	186nm,0.8s,baz=100,slow=6.1,SNR=60							
SPSI	Sidrap Palu	39.31	275	P	P		16 18 39.5	-0.9
	133nm,0.9s,1μm							
TTSI	Tana Toraja	39.43	276	P	P		16 18 43.5	+2.2
	93nm,0.7s,713nm							
MBWA	Marble Bar	39.60	248	*e*P	P		16 18 42.4	-0.2
	293nm,1.0s							
MBWA	Marble Bar	39.60	248	P	P		16 18 42.7	+0.1
	SNR=16							
KMBL	Kambalda	40.89	232	P	P		16 18 53.6	+0.7
	baz=41,SNR=172							
KMBL				S	S		16 24 28.0	+1.2
	baz=41,SNR=5.2							
RAR	Rarotonga	41.38	112	P	P		16 18 57.0	+0.1
RAR	Rarotonga	41.38	112	P	P		16 18 57.0	+0.1
	34nm,0.8s,baz=226,slow=8.4,SNR=5.3							
MEEK	Meekatharra	41.92	240	P	P		16 19 01.9	+0.8
	baz=42,SNR=531							
SMKI	Samarinda	42.52	279	P	P		16 19 07.9	+2.0
	318nm,0.8s,3μm							
MYLDM	Lahad Datu	42.85	288	P	P		16 19 10.6	+2.1
MYLDM	Lahad Datu	42.85	288	P	P		16 19 10.1	+1.6
	157nm,0.9s,2μm							
KHKI	Kahang-Kahang	42.88	268	P	P		16 19 07.0	-1.8
	267nm,0.8s,2μm							
KBKI	Kotabaru	42.97	275	P	P		16 19 09.2	-0.2
	80nm,0.9s,1μm							
TSM	Tawau	43.15	286	P	P		16 19 11.3	+0.4
DNP	Denpasar	43.25	267	P	P		16 19 11.3	-0.3
	1μm,0.9s,11μm							
IGBI	Denpasar	43.30	267	P	P		16 19 11.1	-1.0
	616nm,0.8s							
BYJI	Banyuwangi	44.13	268	P	P		16 19 18.3	-0.2
	1μm,0.9s,14μm							
SDKM	Sandakan	44.22	288	P	P		16 19 18.8	-0.5
KLBR	Kellerberrin	44.23	234	P	P		16 19 18.9	-0.1
	baz=44,SNR=41							
BBKI	Banjar Baru	44.24	275	P	P		16 19 19.8	+0.4
	312nm,0.8s,6μm							
BALP	Baler	44.62	304	*e*P	P		16 19 22.0	-0.2
KMMI	Kalianget	44.62	269	P	P		16 19 22.4	+0.1
	119nm,0.9s							
PALP	Palanan	44.63	306⇑	*e*P	P		16 19 22.7	+0.4
BLDU	Ballidu	44.74	236	P	P		16 19 23.3	+0.3
	baz=45,SNR=79							
MORW	Morawa	44.81	238	P	P		16 19 23.8	+0.3
	baz=45,SNR=81							
GIRL	Giralia	44.89	247	P	P		16 19 25.6	+1.4
	baz=45,SNR=30							
BLJI	Banyuglugur	44.92	268	P	P		16 19 23.6	-1.0
	223nm,1.0s,2μm							
KDM	Kudat	44.99	289	P	P		16 19 25.8	+0.6
NWAO	Narrogin (SRO)	45.13	232	*e*P	P		16 19 24.8	-1.1
	69nm,0.8s							
NWAO	Narrogin (SRO)	45.13	232	P	P		16 19 25.9	-0.1
	44nm,0.4s,baz=63,slow=6.9,SNR=127							
KKM	Kota Kinabalu	45.28	288	*e*P	P		16 19 27.6	+0.2
	200nm,0.8s							
KKM				*e*S	S		16 25 26.9	-3.2
KKM	Kota Kinabalu	45.28	288	P	P		16 19 27.7	+0.2
KKM	Kota Kinabalu	45.28	288	P	P		16 19 27.2	-0.2
	268nm,0.9s,2μm							
KKM	Kota Kinabalu	45.28	288	P	P		16 19 27.7	+0.2
	baz=45,SNR=89							
KKM				S	S		16 25 28.9	-1.1
	baz=45,SNR=9.6							
BCPH	Baguio City Da	45.77	304	⇓*i*P	P		16 19 28.8	-2.5
JHJ	Hachijo jima 2	45.94	337	P	P		16 19 31.8	-0.3
	218nm,0.7s,baz=207,slow=19,SNR=7.7							
RKGY	Rocky Gully	45.97	230	P	P		16 19 33.5	+1.1
	baz=46,SNR=44							
KRKI	Karangkates	46.01	268	P	P		16 19 32.2	-0.7
	806nm,0.7s							
BOLP	Bolinao	46.32	303	*e*P	P		16 19 35.6	+0.4
JOW	Kunigami	46.65	321	*e*P	P		16 19 37.3	-0.2
	63nm,1.3s							
PWJI	Pagerwojo	46.66	268	P	P		16 19 36.7	-1.2
	282nm,0.8s,3μm							
SJI	Sawahan	46.73	268	P	P		16 19 37.8	-0.7
	234nm,1.3s,3μm							
PCJI	Pacitan	47.27	267	P	P		16 19 42.0	-0.4
	938nm,0.9s,7μm							
BTM	Bintulu	47.41	283	P	P		16 19 44.5	+0.9
PBKI	Pangkalan Bun	47.49	275	P	P		16 19 45.1	+0.9
	265nm,0.9s,2μm							
UGM	Wanagama	47.94	268	*e*P	P		16 19 46.5	-1.0
	427nm,1.2s							
UGM	Wanagama	47.94	268	P	P		16 19 47.4	-0.1
	312nm,0.9s,4μm							
UGM	Wanagama	47.94	268	P	P		16 19 47.1	-0.4
	baz=48,SNR=16							
SBUM	Sibu	48.05	282	P	P		16 19 49.0	+0.6
SBUM	Sibu	48.05	282	P	P		16 19 48.4	+0.1
	61nm,1.0s,707nm							
SMRI	Semarang	48.10	269	P	P		16 19 48.9	+0.1
	349nm,0.8s,4μm							
YOGI	Yogyakarta	48.17	268	P	P		16 19 49.6	+0.4
	2μm,0.9s,12μm							
STKI	Sintang	48.22	278	P	P		16 19 50.1	+0.5
	129nm,0.9s,5μm							
BJII	Banjamegara	48.80	268	P	P		16 19 54.4	+0.4
	128nm,0.8s,2μm							
YULB	Yu-li	49.12	312	*e*P	P		16 19 54.1	-2.1
NACB	Ninganchiao	49.38	313	*e*P	P		16 19 57.6	-0.4
TGJI	Tegal	49.42	269	P	P		16 19 57.9	-0.7
	156nm,0.9s,2μm							
CLJI	Cilicap	49.44	268	P	P		16 19 57.7	-1.0
	105nm,1.0s,2μm							
TPUB	Ta-pu	49.56	311	*e*P	P		16 19 58.8	-0.6
	115nm,0.9s							
MJAR	Matsushiro Arr	49.57	338	P	P		16 19 58.3	-0.9
MJAR	Matsushiro Arr	49.57	338	P	P		16 19 58.3	-0.9
	40nm,0.7s,baz=171,slow=8.8,SNR=100							
MAJO	Matsushiro	49.57	338	*e*P	P		16 19 58.5	-0.7
	67nm,0.8s							
MAT	Matsushiro	49.57	338	P	P		16 19 58.2	-1.0
MAT				S	S		16 26 23.0	-5.6
SSLB	Suanglung	49.61	312	*e*P	P		16 19 59.3	-0.5
KSM	Kuching	49.67	280	*e*P	P		16 19 59.8	-0.6
	82nm,0.9s							
KSM	Kuching	49.67	280	P	P		16 20 00.1	-0.2
KSM	Kuching	49.67	280	P	P		16 19 59.6	-0.8
	94nm,0.9s,986nm							
KSM	Kuching	49.67	280	P	P		16 20 00.1	-0.2
	baz=50,SNR=80							
YHNB	Yeheng	49.84	313	*e*P	P		16 20 00.9	-0.6
JNU	Nakatsue	49.93	329	*e*P	P		16 20 01.8	-0.1
	24nm,0.9s							
JNU	Nakatsue	49.93	329	P	P		16 20 01.9	-0.1
	52nm,0.8s,baz=116,slow=4.1,SNR=33							
PPT2	Papeete2	50.56	105	*e*S	S		16 26 38.5	-4.3
	173nm,24.0s							
CISI	Cisompet, Garu	50.64	268	P	P		16 20 06.1	-1.5
	211nm,1.0s,2μm							
LEM	Lembang	50.91	269	P	P		16 20 09.4	-0.3
	464nm,0.9s,4μm							
LEM	Lembang	50.91	269	P	P		16 20 09.9	+0.2
	baz=51,SNR=5.7							
TBI	Tubuai	51.14	112	*e*S	S		16 26 48.1	-2.2
	228nm,25.8s							
TPI	Tanjungpandan	51.44	274	P	P		16 20 13.4	+0.1
	86nm,1.0s,1μm							
CBJI	Citeko	51.72	269	P	P		16 20 13.6	-1.7
	471nm,0.9s,7μm							
DBJI	Dramaga	51.80	269	P	P		16 20 14.9	-1.0
	247nm,0.8s,2μm							
QZH	Quanzhou	52.03	312⇑	*i*P	P		16 20 19.3	+2.0
QZH				S	S		16 27 05.3	+3.3
QZH				pmax	pmax			
	comp=Z,140nm,0.8s							
XMI	Christmas Isla	52.50	264	P	P		16 20 21.4	+0.4
	baz=52,SNR=9.1							
XMIS	Christmas Isla	52.53	264	P	P		16 20 21.4	+0.2
	baz=53,SNR=5.6							
CGJI	Cibinong	52.84	269	P	P		16 20 21.6	-1.7
	comp=Z,877nm,0.8s,comp=Z,7μm							
PPBI	Pangkal Pinang	53.03	274	P	P		16 20 24.6	-0.2
	comp=Z,65nm,1.0s,comp=Z,1μm							
ERM	Erimo	53.05	345	*e*P	P		16 20 23.9	-0.3
ERM	Erimo	53.05	345	P	P		16 20 25.7	+1.5
	comp=Z,158nm,0.4s,SNR=5.5							
KASI	Kota Agung	54.15	270	P	P		16 20 30.5	-2.2
	comp=Z,144nm,0.9s							
LWLI	Liwa	54.65	270	P	P		16 20 35.7	-0.6
	comp=Z,187nm,0.9s,comp=Z,2μm							
KSRS	Korea Array	54.83	330	P	P		16 20 37.1	+0.2
	comp=Z,10nm,0.8s,baz=146,slow=7.1,SNR=40							
KSRS				pP	pP		16 22 21.0	+2.8
	comp=Z,2.9nm,0.8s,baz=150,slow=7.1,SNR=3.9							
KSAR	Wonju Array Be	54.84	330	P	P		16 20 37.1	+0.1
KSAR				pP	pP		16 22 21.0	+2.8
ASAJ	Asahikawa	55.16	346	*e*P	P		16 20 40.0	+0.8
ASAJ	Asahikawa	55.16	346	P	P		16 20 39.7	+0.6
	comp=Z,43nm,0.5s,baz=214,slow=8.7,SNR=80							
INCN	Inchon	55.50	329	*e*P	P		16 20 40.8	-0.8
	comp=Z,72nm,1.3s							
INCN	Inchon	55.50	329	P	P		16 20 42.8	+1.1
	SNR=5.4							
MYKOM	Kota Tinggi	56.03	278	P	P		16 20 45.8	0.0
MYKOM	Kota Tinggi	56.03	278	P	P		16 20 45.9	0.0
MYKOM	Kota Tinggi	56.03	278	P	P		16 20 45.7	-0.1
	comp=Z,64nm,0.9s,comp=Z,871nm							
NJ2	Nanjing	56.20	319	*e*P	P		16 20 47.1	+0.5
NJ2				pmax	pmax			
	comp=Z,60nm,1.0s							
KSI	Kapahiang	56.29	272	P	P		16 20 46.1	-1.6
	comp=Z,186nm,0.8s							
KGM	Kluang	56.60	279	P	P		16 20 49.9	+0.2
KGM	Kluang	56.60	279	P	P		16 20 50.0	+0.2
KTGM	Kuala Trenggan	57.54	282	P	P		16 20 56.3	+0.1
KRJI	Kerinci	57.65	273	P	P		16 20 59.1	+2.0
	comp=Z,218nm,0.8s							
UBPT	Khong Chiam	58.38	294	P	P		16 21 02.3	+0.5
	comp=Z,52nm,1.0s							
BKNI	Bangkinang	58.49	276	P	P		16 21 02.8	+0.1
	comp=Z,240nm,1.1s,comp=Z,2μm							
FRIM	Kepong	58.52	280	P	P		16 21 02.6	-0.3
FRIM	Kepong	58.52	280	P	P		16 21 02.6	-0.3
USRK	Ussuriysk Arra	58.56	337	P	P		16 21 02.9	+0.4
	comp=Z,50nm,0.6s,baz=150,slow=6.4,SNR=62							
PPI	Padang Panjang	58.98	275	P	P		16 21 05.2	-0.7
	comp=Z,109nm,0.9s,comp=Z,1μm							
PPI	Padang Panjang	58.98	275	P	P		16 21 05.2	-0.7
	baz=59,SNR=15							
IPM	Ipoh	59.38	281	*e*P	P		16 21 08.2	-0.4
IPM	Ipoh	59.38	281	P	P		16 21 08.6	0.0
IPM	Ipoh	59.38	281	P	P		16 21 08.7	0.0
IPM	Ipoh	59.38	281	P	P		16 21 08.1	-0.6
	comp=Z,149nm,1.0s,comp=Z,2μm							
MDJ	Mudanjiang	59.84	336	P	P		16 21 11.5	+0.4
MDJ				pmax	pmax			
	comp=Z,61nm,1.0s							
MDJ				pmax	pmax			
	comp=Z,130nm,4.1s							
MNSI	Mandailing Nat	60.01	276	P	P		16 21 11.7	-1.2
	comp=Z,237nm,0.8s,comp=Z,2μm							
CHBT	CHBT	60.40	290	P	P		16 21 15.7	+0.4
	comp=Z,98nm,1.0s,comp=Z,1μm							
CN2	Changchun	60.96	333	*e*P	P		16 21 18.6	+0.1
CN2				*e*S	S		16 28 56.8	+0.3
CN2				pmax	pmax			
	comp=Z,70nm,0.7s							
CN2				pmax	pmax			
	comp=Z,200nm,3.0s							
PSI	Prapat	61.06	278	P	P		16 21 18.9	-1.0
PSI	Prapat	61.06	278	P	P		16 21 18.6	-1.3
	comp=Z,76nm,1.1s							
PSI	Prapat	61.06	278	P	P		16 21 18.9	-1.0
	comp=Z,39nm,0.9s,baz=105,slow=5.5,SNR=29							
PSI	Prapat	61.06	278	P	P		16 21 18.8	-1.1
	baz=61,SNR=20							
PSI				S	S		16 28 57.0	-2.1
	baz=61,SNR=3.2							
TSI	Tuntungan	61.55	279	P	P		16 21 22.1	-0.9
	comp=Z,353nm,0.9s,comp=Z,2μm							
GYA	Guiyang	61.98	306⇓	*i*P	P		16 21 25.9	+0.2
GYA				pP	pP		16 23 11.0	+0.6
GYA				sP	sP		16 24 05.6	-0.2
GYA				ScP	ScP		16 25 13.4	+1.2
GYA				PcS	PcS		16 26 04.9	+0.4
GYA				S	S		16 29 11.0	+1.0
GYA				ScS	SKSac		16 30 25.3	-0.8
GYA				pmax	pmax			
	comp=Z,20nm,0.8s							
GYA				pmax	pmax			
	comp=Z,120nm,6.0s							
GSI	Gunungsitoli	62.08	276	P	P		16 21 25.8	-0.7
	comp=Z,267nm,0.9s							
GSI	Gunungsitoli	62.08	276	P	P		16 21 26.2	-0.3
	baz=62,SNR=8.6							
GSI				S	S		16 29 09.2	-2.2
	baz=62,SNR=6.4							
PEA0B	Petropavlovsk-	62.12	359	*e*P	P		16 21 24.1	-1.8
PETK	Petropavlovsk-	62.12	359	P	P		16 21 26.2	+0.3
PETK				pP	pP		16 23 12.1	+1.4
PETK	Petropavlovsk-	62.12	359	P	P		16 21 26.2	+0.3
	comp=Z,59nm,0.8s,baz=161,slow=7.1,SNR=39							
PETK				pP	pP		16 23 12.1	+1.4
	comp=Z,8.9nm,0.8s,baz=188,slow=7.7,SNR=4.4							
FX1	Attu Island--F	63.06	10	*e*P	P		16 21 33.5	+1.6
FX1	Attu Island--F	63.06	10	P	P		16 21 32.7	+0.8
	comp=Z,55nm,0.6s,baz=243,slow=6.8,SNR=18							
LHMI	Lhok Sumawe	63.51	281	P	P		16 21 35.7	0.0
	comp=Z,167nm,1.0s,comp=Z,2μm							
XAN	Xi'an	64.09	315	P	P		16 21 39.0	-0.1
XAN				S	S		16 29 30.1	-5.2
XAN				pmax	pmax			
	comp=Z,23nm,0.8s							
KMI	Kunming	64.57	303	P	P		16 21 43.9	+1.4
KMI				sP	sP		16 24 24.9	+1.5
KMI				S	S		16 29 44.3	+2.6
KMI				pmax	pmax			
	comp=Z,90nm,1.1s							
BSI	Banda Aceh	65.17	280	P	P		16 21 46.4	+0.2
	comp=Z,100nm,0.9s							
CM31	Chiang Mai Arr	65.34	295	*e*P	P		16 21 47.6	+0.4
	comp=Z,88nm,0.9s							
CMAR	Chiang Mai Arr	65.34	295	P	P		16 21 48.1	+0.9
CMAR				pP	pP		16 23 34.4	+1.0
CMAR				S	S		16 29 52.5	+1.9
CMAR				⇑*e*			16 50 24.4	
CMAR	Chiang Mai Arr	65.34	295	P	P		16 21 48.1	+0.9
	comp=Z,59nm,0.8s,baz=123,slow=4.9,SNR=451							
CMAR				pP	pP		16 23 34.3	+1.0
	comp=Z,3.9nm,0.9s,baz=117,slow=4.4,SNR=4.0							
CMAR				S	S		16 29 52.5	+1.9
	comp=Z,0.2nm,0.3s,baz=113,slow=11,SNR=4.3							
CMAR				PKP2bc			16 50 24.4	
	comp=Z,0.4nm,0.7s,baz=284,slow=5.2,SNR=4.3							
CMMT	Chiang Mai	65.45	296	P	P		16 21 48.6	+0.7
	comp=Z,78nm,1.2s,comp=Z,815nm							
CHTO	Chiang Mai	65.46	296	*e*P	P		16 21 48.5	+0.6
	comp=Z,89nm,1.2s							
CHTO	Chiang Mai	65.46	296	P	P		16 21 48.9	+1.0
	SNR=18							
CHTO	Chiang Mai	65.46	296	P	P		16 21 48.1	+0.2
	comp=Z,87nm,1.0s,comp=Z,948nm							
CASY	Casey	65.75	199	*e*P	P		16 21 49.1	+0.3
HHC	Hu-ho-hao-te	66.27	322	*e*P	P		16 21 53.4	+0.7
HHC				pP	pP		16 23 39.8	+0.4
HHC				PP	PP		16 24 30.0	+2.4
HHC				S	S		16 30 01.8	+0.6
HHC				sS	sS		16 33 09.3	-2.4
HHC				SS	SS		16 34 33.8	+3.1
HHC				pmax	pmax			
	comp=Z,65nm,0.9s							
HHC				pmax	pmax			
	comp=Z,270nm,6.5s							
CD2	Chengdu	66.30	310	P	P		16 21 53.4	+0.4
CD2				PcP	PcP		16 22 18.8	+0.6
CD2				pP	pP		16 23 39.8	+0.1
CD2				PP	PP		16 24 29.6	+1.6
CD2				sP	sP		16 24 32.4	-2.1
CD2				ScP			16 25 32.3	
CD2				PcS			16 26 22.3	
CD2				S	S		16 30 02.3	+0.5
CD2				sS	sS		16 33 08.4	-3.8
CD2				SS	SS		16 34 32.9	+1.5
CD2				pmax	pmax			
	comp=Z,150nm,0.8s							
CD2				pmax	pmax			
	comp=Z,320nm,7.2s							
VNDA	Vanda	68.26	179	*e*P	P		16 22 05.3	+1.0
VNDA				pP	pP		16 23 55.4	+3.8
VNDA	Vanda	68.26	179	P	P		16 22 05.2	+1.0
	comp=Z,16nm,0.8s,baz=338,slow=6.6,SNR=72							
VNDA				pP	pP		16 23 55.4	+3.8
	comp=Z,6.8nm,0.9s,baz=340,slow=6.5,SNR=5.6							
SBA	Scott Base	68.70	178	*e*P	P		16 22 09.3	+2.5
	comp=Z,14nm,0.9s							
LZH	Lanzhou	68.71	314	⇓P	P		16 22 09.0	+1.2
LZH				pP	pP		16 23 56.3	+0.8
LZH				sP	sP		16 24 48.5	-1.5
LZH				PP	PP		16 24 51.3	+2.6
LZH				S	S		16 30 31.0	+1.0
LZH				sS	sS		16 33 39.5	-2.7
LZH				SS	SS		16 35 12.3	+3.9
LZH				pmax	pmax			
	comp=Z,71nm,1.1s							
LZH				pmax	pmax			
	comp=Z,190nm,5.7s							
UNV	Unalaska Valle	69.30	21	*e*P	P		16 22 11.6	+0.9
	comp=Z,51nm,0.9s							
ULN	Ulaanbaatar	73.05	326	*e*P	P		16 22 33.9	+0.8
ULN	Ulaanbaatar	73.05	326	P	P		16 22 34.3	+1.2
	SNR=32							
ULN	Ulaanbaatar	73.05	326	P	P		16 22 33.6	+0.5
	comp=Z,67nm,1.3s,comp=Z,698nm							
GTA	Gaotai	73.10	316⇑	*i*P	P		16 22 34.9	+1.3
GTA				PcP	PcP		16 22 48.9	+1.9
GTA				pP	pP		16 24 24.5	+1.5
GTA				sP	sP		16 25 15.3	-1.8
GTA				S	S		16 31 21.0	+1.5
GTA				SKS	SKSac		16 31 48.6	-1.2
GTA				ScS	ScS		16 31 52.4	-0.6
GTA				SS	SS		16 36 19.4	+4.5
GTA				pmax	pmax			
	comp=Z,75nm,1.0s							
GTA				pmax	pmax			
	comp=Z,130nm,5.7s							
SONM	Songino Array	73.39	326	P	P		16 22 35.7	+0.6
SONM				pP	pP		16 24 23.9	-0.7
SONM				S	S		16 31 22.1	-0.2
SONM	Songino Array	73.39	326	P	P		16 22 35.7	+0.6
	comp=Z,50nm,0.7s,baz=141,slow=5.6,SNR=413							
SONM				pP	pP		16 24 23.9	-0.7
	comp=Z,3.1nm,0.8s,baz=126,slow=4.3,SNR=3.1							
SONM				S	S		16 31 22.1	-0.2
	comp=Z,0.2nm,0.4s,baz=54,slow=7.5,SNR=3.5							
SHL	Shillong	73.86	300	⇓*i*P	P		16 22 39.2	+0.9
KDAK	Kodiak Island	77.51	24	P	P		16 22 58.4	+0.8
KDAK	Kodiak Island	77.51	24	P	P		16 22 58.4	+0.8
	comp=Z,19nm,0.9s,baz=270,slow=6.1,SNR=4.9							
TAPN	Taplejung	77.96	301	*e*P	P		16 23 01.4	+0.3

TRF					*e*PcP	PcP	16 23 25.7	+0.2		
PYUN	**Piuthan**	**82.19**	**300**		*e*P	P	16 23 22.6	-0.6		
	comp=Z,530nm,0.9s									
PYUN	**Piuthan**	**82.19**	**300**		*e*P	S	16 32 53.5	-2.3		
	comp=Z,23nm,1.0s									
BMRM	**Bremner River**	**82.69**	**24**		*e*P	P	16 23 23.7	-1.1		
	comp=Z,16nm,0.9s									
MCK	**McKinley**	**82.70**	**21**		*e*P	P	16 23 23.7	-0.9		
	comp=Z,115nm,0.9s									
TIXI	**Tiksi**	**83.17**	**351**		*e*P	P	16 23 25.7	-1.1		
	comp=Z,19nm,0.8s									
WMQ	**Urumqi**	**83.18**	**316**		P	P	16 23 27.0	-0.6		
WMQ					pP	pP	16 25 19.0	-1.7		
WMQ					sP	sP	16 26 09.0	-4.8		
WMQ					PP	PP	16 26 48.0	-0.5		
WMQ					SKS	SKSac	16 32 57.0	-3.1		
WMQ					S	S	16 33 03.0	-1.6		
WMQ					sS	sS	16 36 20.0	-6.2		
WMQ					SS	SS	16 38 45.0	+0.6		
WMQ					pmax	pmax				
	comp=Z,36nm,1.0s									
WMQ					pmax	pmax				
	comp=Z,200nm,6.0s									
PAX	**Paxson**	**83.50**	**22**		*e*P	P	16 23 29.0	+0.3		
	comp=Z,25nm,1.5s									
PAX					*e*pP	pP	16 25 21.4	-0.6		
HYB	**Hyderabad**	**83.76**	**289**		*i* P	P	16 23 30.0	-1.0		
HYB					*e*SKS	S	16 33 08.0	-3.2		
COLA	**College**	**83.77**	**20**		*e*P	P	16 23 29.5	-0.4		
MAW	**Mawson**	**83.86**	**203**		P	P	16 23 31.0	+0.6		
MAW	**Mawson**	**83.86**	**203**		P	P	16 23 31.0	+0.6		
	comp=Z,26nm,0.9s,baz=97,slow=5.8,SNR=10									
ILAR	**Eielson Array**	**84.04**	**20**		P	P	16 23 30.5	-0.8		
ILAR					pP	pP	16 25 25.4	+0.7		
ILAR					PP	PP	16 26 51.5	-3.3		
ILAR					PKKPbc	PKKPbc	16 41 42.0	-3.2		
ILAR	**Eielson Array**	**84.04**	**20**		P	P	16 23 30.5	-0.8		
	comp=Z,7.7nm,0.5s,baz=245,slow=5.1,SNR=114									
ILAR					pP	pP	16 25 25.4	+0.7		
	comp=Z,6.4nm,1.1s,baz=250,slow=5.1,SNR=3.9									
ILAR					PP	PP	16 26 51.5	-3.3		
	comp=Z,2.3nm,1.0s,baz=244,slow=8.0,SNR=5.1									
ILAR					PKKPbc	PKKPbc	16 41 42.0	-3.2		
	comp=Z,1.0nm,0.5s,baz=345,slow=1.8,SNR=27									
DOT	**Dot Lake**	**84.40**	**22**		*e*P	P	16 23 33.2	+0.1		
	comp=Z,45nm,1.0s									
DOT					*e*pP	pP	16 25 27.0	+0.4		
COLD	**Coldfoot**	**84.50**	**18**		*e*P	P	16 23 34.3	+0.8		
	comp=Z,12nm,1.0s									
EGAK	**Eagle**	**86.08**	**22**		*e*P	P	16 23 41.9	+0.7		
KHMM	**Horse Mountain**	**86.50**	**48**		*e*P	P	16 23 47.1	+3.2		
MK31	**Makanchi Array**	**87.72**	**318**		*e*P	P	16 23 48.8	-0.6		
MKAR	**Makanchi Array**	**87.72**	**318**		P	P	16 23 49.1	-0.2		
MKAR					pP	pP	16 25 44.3	+0.3		
MKAR					S	SKSac	16 33 25.5	-2.3		
MKAR					PKKPbc	PKKPbc	16 41 32.9	-2.8		
MKAR	**Makanchi Array**	**87.72**	**318**		P	P	16 23 49.1	-0.2		
	comp=Z,26nm,0.7s,baz=102,slow=6.1,SNR=236									
MKAR					pP	pP	16 25 44.3	+0.3		
	comp=Z,2.4nm,0.8s,baz=110,slow=6.3,SNR=3.6									
MKAR					S	SKSac	16 33 25.5	-2.3		
	comp=Z,1.8nm,0.8s,baz=108,slow=7.2,SNR=12									
MKAR					PKKPbc	PKKPbc	16 41 32.9	-2.8		
	comp=Z,0.5nm,0.7s,baz=276,slow=2.8,SNR=6.5									
OHCM	**Honcut**	**87.78**	**50**		*e*P	P	16 23 52.4	+2.7		
PKM	**Peak Mountain**	**88.07**	**54**	⇓	P	P	16 23 53.6	+2.1		
	baz=88									
ZAA0	**Zalesovo Array**	**88.27**	**325**		*e*P	P	16 23 48.1	-3.6		
ZALV	**Zalesovo Beam**	**88.27**	**325**		P	P	16 23 50.2	-1.5		
ZALV					pP	pP	16 25 49.5	+3.1		
ZALV					PKKPbc	PKKPbc	16 41 33.2	-1.4		
ZALV	**Zalesovo Beam**	**88.27**	**325**		P	P	16 23 50.2	-1.5		
	comp=Z,6.2nm,0.6s,baz=115,slow=4.7,SNR=41									
ZALV					pP	pP	16 25 49.5	+3.1		
	comp=Z,1.5nm,0.5s,baz=114,slow=5.6,SNR=4.6									
ZALV					PKKPbc	PKKPbc	16 41 33.2	-1.4		
	comp=Z,0.5nm,0.5s,baz=305,slow=3.5,SNR=3.9									
CMB	**Columbia Colle**	**88.32**	**51**		*e*P	P	16 23 52.0	-0.5		
	comp=Z,9.7nm,1.0s									
BEKR	**Beckworth**	**88.75**	**49**		*e*P	P	16 23 51.8	-2.8		
	comp=Z,8.4nm,0.9s									
CIS	**Catalina Islan**	**88.91**	**56**	⇓	P	P	16 23 56.7	+1.4		
	baz=89									
WCN	**Washoe City**	**89.08**	**50**		*e*P	P	16 23 56.3	+0.2		
	comp=Z,25nm,0.9s									
MOD	**Modoc**	**89.25**	**47**		*e*P	P	16 23 57.8	+1.0		
	comp=Z,40nm,1.1s									
ISA	**Isabella**	**89.31**	**54**		*e*P	P	16 23 57.4	+0.3		
	comp=Z,7.2nm,1.0s									
ISA	**Isabella**	**89.31**	**54**	⇑	P	P	16 23 58.7	+1.6		
	baz=89									
MWC	**Mount Wilson**	**89.35**	**55**		*e*P	P	16 23 58.3	+0.8		
	comp=Z,20nm,1.0s									
EDW2	**Edwards Air Fo**	**89.54**	**55**	⇓	P	P	16 23 59.9	+1.7		
	baz=90									
BFSC	**Mount Baldy Ra**	**89.68**	**55**	⇓	P	P	16 24 00.5	+1.6		
	baz=90									
CWC	**Cottonwood Cre**	**89.78**	**53**	⇓	P	P	16 24 01.2	+1.9		
	baz=90									
LRMC	**Laurel Mountai**	**89.90**	**54**	⇓	P	P	16 24 01.7	+1.8		
	baz=90									
NVAR	**Mina Array Bea**	**90.01**	**51**		P	P	16 24 00.9	+0.4		
NVAR					pP	pP	16 25 58.7	+3.1		
NVAR					PKKPbc	PKKPbc	16 41 29.7	-0.2		
NVAR					P'P'		16 49 36.8			
NVAR	**Mina Array Bea**	**90.01**	**51**		P	P	16 24 00.9	+0.4		
	comp=Z,14nm,0.9s,baz=239,slow=7.1,SNR=45									
NVAR					pP	pP	16 25 58.7	+3.1		
	comp=Z,4.0nm,1.0s,baz=242,slow=6.9,SNR=8.2									
NVAR					PKKPbc	PKKPbc	16 41 29.7	-0.2		
	comp=Z,0.8nm,0.6s,baz=77,slow=4.0,SNR=7.8									
NVAR					PKPPKP	P'P'df	16 49 36.8	-0.7		
	comp=Z,1.1nm,0.9s,baz=64,slow=4.1,SNR=4.4									
NV11	**Mina Array Sit**	**90.12**	**51**		*e*P	P	16 24 00.7	-0.3		
MPMC	**Manual Prospec**	**90.17**	**54**	⇓	P	P	16 24 03.1	+1.8		
	baz=90									
INK	**Inuvik**	**90.44**	**20**		P	P	16 24 01.2	-0.2		
INK	**Inuvik**	**90.44**	**20**		P	P	16 24 01.2	-0.2		
	comp=Z,11nm,0.9s,baz=218,slow=6.0,SNR=33									
KSH	**Kashi**	**90.50**	**310**	⇓	*i*P	P	16 24 04.0	+1.4		
KSH					pP	pP	16 25 57.9	+0.1		
KSH					sP	sP	16 26 49.0	-1.3		
KSH					PP	PP	16 27 51.0	+4.3		
KSH					SKS	SKSac	16 33 47.1	+2.7		
KSH					S	ScS	16 34 15.0	-0.9		
KSH					sS	sS	16 37 36.1	-3.5		
KSH					SS	SS	16 40 35.3	+4.9		
KSH					pmax	pmax				
	comp=Z,10.0nm,0.8s									
WVOR	**Wild Horse Val**	**90.58**	**47**		*e*P	P	16 24 02.5	-0.4		
	comp=Z,27nm,1.1s									
FURC	**Furnace Creek,**	**90.75**	**53**	⇑	P	P	16 24 05.9	+2.3		
	baz=91									
BELC	**Belle Mtn. Jos**	**90.99**	**56**	⇑	P	P	16 24 06.9	+1.9		
	baz=91									
KURK	**Kurchatov**	**91.06**	**321**		P	P	16 24 04.0	-0.7		
KURK					pP	pP	16 26 02.2	+2.2		
KURK	**Kurchatov**	**91.06**	**321**		P	P	16 24 03.9	-0.9		
	SNR=16									
KURK	**Kurchatov**	**91.06**	**321**		P	P	16 24 03.4	-1.3		
	comp=Z,126nm,1.0s,SNR=18									
KURBB	**Kurchatov Arra**	**91.09**	**321**		P	P	16 24 04.0	-0.8		
	comp=Z,11nm,0.8s,baz=103,slow=4.2,SNR=122									
KURBB					pP	pP	16 26 02.2	+2.0		
	comp=Z,0.8nm,1.0s,baz=105,slow=4.9,SNR=2.2									
BC3	**Big Chuckawall**	**91.37**	**56**	⇑	P	P	16 24 08.2	+1.4		
	baz=91									
GMRC	**Granite Mounta**	**91.40**	**55**	⇑	P	P	16 24 09.0	+2.1		
	baz=92									
TKM2	**Tokmak 2**	**91.44**	**313**		*e*P	P	16 24 04.1	-2.9		
	comp=Z,2.7nm,0.8s									
SYO	**Syowa Base**	**91.48**	**198**	⇑	*e*P	P	16 24 04.6	-1.7		
SYO	**Syowa Base**	**91.48**	**198**	⇓	*e*PcP	P	16 24 06.4	+0.1		
IRM	**Iron Mountain**	**91.71**	**56**	⇓	P	P	16 24 10.6	+2.4		
	baz=92									
BMO	**Blue Mountains**	**92.00**	**45**		*e*P	P	16 24 08.8	-0.5		
	comp=Z,14nm,1.2s									
R11A	**Troy Canyon, C**	**92.09**	**52**	⇓	P	P	16 24 11.8	+1.8		
	baz=92									
AAK	**Ala-Archa**	**92.19**	**313**		P	P	16 24 09.9	-0.4		
AAK	**Ala-Archa**	**92.19**	**313**		P	P	16 24 09.5	-0.9		
	comp=Z,34nm,0.8s,SNR=5.5									
AAK	**Ala-Archa**	**92.19**	**313**		P	P	16 24 09.9	-0.4		
	comp=Z,3.3nm,0.6s,baz=114,slow=5.9,SNR=17									
113A	**Mohawk Valley,**	**92.62**	**57**	⇑	P	P	16 24 14.0	+1.7		
	baz=93									
NEW	**Newport**	**92.77**	**42**	⇓	P	P	16 24 13.4	+0.7		
	baz=93									
MFID	**Camas Ranch**	**92.79**	**47**	⇓	P	P	16 24 14.4	+1.3		
	baz=93									
W13A	**Hualapai Mount**	**92.89**	**55**	⇓	P	P	16 24 14.8	+0.9		
	baz=93									
C11A	**Tepee Creek (N**	**93.27**	**42**	⇑	P	P	16 24 16.5	+1.5		
	baz=93									
F12A	**Elk City**	**93.59**	**44**	⇓	P	P	16 24 17.3	+0.6		
	baz=94									
H12A	**Diamond D Ranc**	**93.67**	**46**	⇓	P	P	16 24 17.5	+0.4		
	baz=94									
D12A	**Red Ives Fores**	**93.73**	**43**	⇑	P	P	16 24 17.9	+0.7		
	baz=94									
HLID	**Hailey**	**93.83**	**47**		*e*P	P	16 24 17.5	-0.4		
	comp=Z,5.0nm,1.0s									
HLID	**Hailey**	**93.83**	**47**	⇑	P	P	16 24 18.7	+0.8		
	baz=94									
J13A	**Cove Ranch, Pi**	**93.97**	**47**	⇑	P	P	16 24 20.0	+1.5		
	baz=94									
I13A	**Wildhorse Cree**	**94.10**	**46**	⇓	P	P	16 24 20.3	+1.2		
	baz=94									
H13A	**Challis**	**94.10**	**46**	⇓	P	P	16 24 20.0	+1.0		
	baz=94									
G13A	**Cobalt**	**94.19**	**45**	⇑	P	P	16 24 20.5	+1.0		
	baz=94									
F13A	**Darby**	**94.23**	**44**	⇑	P	P	16 24 20.1	+0.5		
	baz=94									
B13A	**Whitefish**	**94.53**	**42**	⇑	P	P	16 24 21.9	+1.0		
	baz=95									
I14A	**Mackay**	**94.57**	**46**	⇑	P	P	16 24 22.2	+0.9		
	baz=95									
K14A	**Jones Ranch, D**	**94.57**	**48**	⇑	P	P	16 24 22.7	+1.5		
	baz=95									
H14A	**Leadore**	**94.73**	**46**	⇑	P	P	16 24 22.8	+0.8		
	baz=95									
HVU	**Hansel Valley**	**94.76**	**49**		*e*P	P	16 24 22.3	+0.2		
	comp=Z,14nm,1.0s									
E14A	**Clinton**	**94.90**	**44**	⇓	P	P	16 24 23.8	+1.1		
	baz=95									
K15A	**Arbon**	**95.06**	**48**	⇓	P	P	16 24 24.9	+1.4		
	baz=95									
L15A	**Malad City**	**95.08**	**48**	⇑	P	P	16 24 24.6	+1.0		
	baz=95									
MCMT	**McKenzie Canyo**	**95.13**	**46**		*e*P	P	16 24 21.4	-2.5		
	comp=Z,1.0nm,0.8s									
MCMT					*e*pP	pP	16 26 21.5	+2.1		
KBL	**Kabul**	**95.14**	**304**		*e*P	P	16 24 21.3	-2.8		
	comp=Z,18nm,1.0s									
KKAR	**Karatay Array**	**95.15**	**313**		*e*P	P	16 24 21.6	-2.1		
	comp=Z,2.3nm,0.7s									
H15A	**Lima**	**95.24**	**46**	⇑	P	P	16 24 25.8	+1.5		
	baz=95									
A14A	**Double T Ranch**	**95.31**	**41**	⇓	P	P	16 24 26.2	+1.8		
	baz=95									
B14A	**Marquette Ranc**	**95.32**	**42**	⇓	P	P	16 24 25.4	+0.9		
	baz=95									
DLMT	**Dillon**	**95.38**	**45**		*e*P	P	16 24 24.1	-0.7		
	comp=Z,5.5nm,1.0s									
G15A	**Dillon**	**95.43**	**45**	⇑	P	P	16 24 26.2	+1.1		
	baz=96									
E15A	**Deer Lodge**	**95.49**	**44**	⇑	P	P	16 24 26.6	+1.3		
	baz=96									
F15A	**Butte**	**95.51**	**45**	⇑	P	P	16 24 26.8	+1.3		
	baz=96									
D15A	**Lincoln**	**95.65**	**43**	⇑	P	P	16 24 27.2	+1.2		
	baz=96									
A15A	**Johnson Ranch,**	**95.76**	**41**	⇓	P	P	16 24 27.6	+1.2		
	baz=96									
K16A	**Soda Springs**	**95.77**	**48**	⇑	P	P	16 24 28.2	+1.4		
	baz=96									
G16A	**Moss Hill, Enn**	**95.91**	**45**	⇑	P	P	16 24 28.5	+1.3		
	baz=96									
I16A	**Newdale**	**95.97**	**47**	⇓	P	P	16 24 28.8	+1.2		
	baz=96									
BOZ	**Bozeman (W)**	**96.09**	**45**	⇑	P	P	16 24 29.1	+1.0		
	baz=96									
F16A	**Kennard Place,**	**96.11**	**45**	⇑	P	P	16 24 29.4	+1.3		
	baz=96									
E16A	**East Helena**	**96.16**	**44**	⇑	P	P	16 24 29.5	+1.2		
	baz=96									
H16A	**Russell Place,**	**96.24**	**46**	⇓	P	P	16 24 29.8	+0.9		
	baz=96									
C16A	**Fuhringer Ranc**	**96.27**	**43**	⇓	P	P	16 24 29.8	+1.1		
	baz=96									
D16A	**Dana Ranch, Ca**	**96.31**	**43**	⇑	P	P	16 24 30.3	+1.3		
	baz=96									
IMW	**Indian Meadow**	**96.37**	**47**		*e*P	P	16 24 29.8	+0.3		
	comp=Z,4.1nm,1.0s									
YKA	**Yellowknife Ar**	**96.46**	**28**		P	P	16 24 28.5	-0.5		
YKA					pP	pP	16 26 24.9	+0.1		
YKA					PP	PP	16 28 30.1	-1.7		
YKA					PKKP	PKKPbc	16 41 10.2	-3.6		
YKA	**Yellowknife Ar**	**96.46**	**28**		P	P	16 24 28.5	-0.5		
	comp=Z,5.5nm,0.8s,baz=258,slow=4.6,SNR=64									
YKA					pP	pP	16 26 24.9	+0.1		
	comp=Z,2.2nm,1.0s,baz=257,slow=4.5,SNR=6.7									
YKA					PP	PP	16 28 30.0	-1.7		
	comp=Z,0.7nm,0.9s,baz=260,slow=6.6,SNR=4.4									
YKA					PKKP	PKKPbc	16 41 10.2	-3.6		
	comp=Z,1.7nm,0.7s,baz=75,slow=2.7,SNR=33									
YKW3	**Yellowknife Ar**	**96.46**	**28**		*e*P	P	16 24 28.6	-0.5		
	comp=Z,0.2nm,1.2s									
BVAR	**Borovoye Array**	**96.48**	**323**		P	P	16 24 28.2	-1.2		
BVAR					pP	pP	16 26 26.9	+1.8		
BVAR	**Borovoye Array**	**96.48**	**323**		P	P	16 24 28.3	-1.2		
	comp=Z,6.5nm,0.7s,baz=104,slow=5.0,SNR=48									
BVAR					pP	pP	16 26 26.9	+1.8		
	comp=Z,2.0nm,0.9s,baz=70,slow=3.8,SNR=3.9									
BRVK	**Borovoye**	**96.55**	**323**		*e*P	P	16 24 27.5	-2.2		
	comp=Z,31nm,1.6s									
BRVK	**Borovoye**	**96.55**	**323**		P	P	16 24 28.8	-0.9		
	SNR=5.8									
I17A	**Pilgrim Ck.**	**96.63**	**47**	⇓	Pdiff	P	16 24 31.9	+1.3		
	baz=97									
E17A	**Martinsdale**	**96.72**	**44**	⇑	Pdiff	P	16 24 31.7	+0.9		
	baz=97									
F17A	**Fitzpatrick Pl**	**96.79**	**45**	⇑	Pdiff	P	16 24 32.2	+1.0		
	baz=97									
C17A	**Wharram Farm,**	**96.91**	**43**	⇑	Pdiff	P	16 24 32.2	+0.6		
	baz=97									
D17A	**Six Diamond Ra**	**96.91**	**43**	⇑	Pdiff	P	16 24 32.2	+0.5		
	baz=97									
J18A	**Kendall Valley**	**96.96**	**47**	⇓	Pdiff	P	16 24 32.7	+0.6		
	baz=97									
A17A	**Triple J Farms**	**97.08**	**42**	⇑	Pdiff	Pdif	16 24 33.5	+1.1		
	baz=97									
I18A	**Diamond G Ranc**	**97.16**	**47**	⇑	Pdiff	Pdif	16 24 33.9	+0.9		
	baz=97									
PDAR	**Pinedale Array**	**97.25**	**48**		P	P	16 24 34.0	+0.6		
PDAR					pP	pP	16 26 31.1	+1.9		
PDAR					PKKPbc	PKKPbc	16 41 09.4	-1.9		
PDAR	**Pinedale Array**	**97.25**	**48**		P	P	16 24 34.0	+0.6		
	comp=Z,1.9nm,0.8s,baz=220,slow=2.1,SNR=16									
PDAR					pP	pP	16 26 31.1	+1.9		
	comp=Z,1.1nm,0.9s,baz=194,slow=1.9,SNR=4.4									
PDAR					PKKPbc	PKKPbc	16 41 09.4	-1.9		
	comp=Z,0.9nm,1.0s,baz=106,slow=2.0,SNR=4.4									
H18A	**Shoshone NF, C**	**97.36**	**46**	⇓	Pdiff	P	16 24 34.6	+0.7		
	baz=97									
E18A	**Harlowton**	**97.37**	**44**	⇓	Pdiff	P	16 24 35.1	+1.4		
F18A	**Big Timber**	**97.45**	**45**	⇓	Pdiff	P	16 24 35.0	+0.9		
	baz=98									
G18A	**Lazy EL Ranch,**	**97.50**	**45**	⇑	Pdiff	P	16 24 35.6	+1.2		
	baz=98									
EGMT	**Eagleton**	**97.62**	**43**	⇑	Pdiff	P	16 24 35.6	+0.8		
	baz=98									
B18A	**Beardsley Farm**	**97.64**	**42**	⇑	Pdiff	P	16 24 35.9	+1.1		
	baz=98									
RLMT	**Ledge**	**97.69**	**46**	⇑	Pdiff	P	16 24 36.0	+0.7		
	baz=98									
K19A	**Absolon Red Bu**	**97.78**	**48**	⇓	Pdiff	P	16 24 36.8	+1.1		
	baz=98									
I19A	**Meeteetse**	**97.78**	**47**	⇓	Pdiff	P	16 24 36.8	+1.1		
	baz=98									
H19A	**Powell**	**97.84**	**46**	⇓	Pdiff	P	16 24 37.2	+1.3		
	baz=98									
F19A	**Rath Farm, Mol**	**97.98**	**45**	⇑	Pdiff	P	16 24 37.8	+1.4		
	baz=98									
C19A	**Slack Wire Ran**	**98.07**	**43**	⇑	Pdiff	P	16 24 37.7	+0.9		
	baz=98									
D19A	**Cripps Ranch,**	**98.14**	**44**	⇓	Pdiff	P	16 24 38.1	+1.0		
	baz=98									
E19A	**Rath Farm, Rou**	**98.14**	**44**	⇑	Pdiff	P	16 24 38.5	+1.4		
	baz=98									
B19A	**Brinkman Farms**	**98.20**	**42**	⇓	Pdiff	P	16 24 38.0	+0.7		
	baz=98									
SNAA	**Sanae**	**98.36**	**186**		*e*Pdiff	P	16 24 37.7	+0.1		
SNAA	**Sanae**	**98.36**	**186**		*e*PKiKP	PKiKP	16 29 05.9	-0.5		
SNAA	**Sanae**	**98.36**	**186**		P	P	16 24 38.2	+0.6		
SNAA	**Sanae**	**98.36**	**186**		P	P	16 24 38.2	+0.6		
	comp=Z,0.9nm,0.6s,baz=207,slow=5.6,SNR=16									
A19A	**Klindworth Far**	**98.37**	**42**	⇓	Pdiff	P	16 24 38.9	+0.8		
	baz=98									
E20A	**Meyer Farm, Mu**	**98.60**	**44**	⇓	Pdiff	P	16 24 40.3	+1.1		
	baz=99									
C20A	**Veseth Ranch,**	**98.77**	**43**	⇓	Pdiff	P	16 24 41.0	+1.1		
	baz=99									
J21A	**Lysite**	**98.84**	**47**	⇓	Pdiff	P	16 24 41.6	+1.1		
	baz=99									
I21A	**Big Trails, Te**	**98.99**	**47**	⇑	Pdiff	P	16 24 42.0	+0.9		
	baz=99									
G21A	**Lodge Grass**	**99.15**	**46**	⇑	Pdiff	Pdif	16 24 43.0	+1.3		
	baz=99									
VNA3	**Neumayer Olymp**	**99.33**	**184**		*e*Pdiff	Pdif	16 24 40.7	-1.1		
VNA3	**Neumayer Olymp**	**99.33**	**184**		*e*PKiKP	PKiKP	16 29 09.0	+0.9		
VNA2	**Neumayer--Watz**	**99.48**	**184**		*e*Pdiff	Pdif	16 24 42.9	+0.4		
VNA2	**Neumayer--Watz**	**99.48**	**184**		*e*PKiKP	PKiKP	16 29 07.9	-0.5		
J22A	**Midwest**	**99.55**	**47**	⇑	Pdiff	Pdif	16 24 44.6	+1.1		
	baz=100									
124A	**Stringfield Ra**	**99.56**	**58**	⇑	Pdiff	Pdif	16 24 44.5	+0.6		
	baz=100									
I22A	**9 Mile Ranch,**	**99.58**	**47**	⇓	Pdiff	Pdif	16 24 44.9	+1.3		
	baz=100									
Y24A	**Capitan**	**99.68**	**57**	⇑	Pdiff	Pdif	16 24 45.0	+0.6		
	baz=100									
H22A	**Clearmont**	**99.71**	**46**	⇑	Pdiff	Pdif	16 24 44.7	+0.6		
	baz=100									
D22A	**Cohagen**	**99.97**	**44**	⇓	Pdiff	Pdif	16 24 46.9	+1.7		
	baz=100									
A22A	**Carney Farms,**	**100.23**	**42**	⇓	Pdiff	Pdif	16 24 47.4	+1.1		
	baz=100									
H23A	**Clabaugh Cattl**	**100.39**	**46**	⇓	Pdiff	Pdif	16 24 48.6	+1.4		
	baz=100									
C23A	**Lambert**	**100.67**	**43**	⇓	Pdiff	Pdif	16 24 49.5	+1.2		
	baz=101									
TXAR	**Lajitas Array**	**100.82**	**62**		PKKPbc	PKKPbc	16 41 00.1	-0.6		
TXAR	**Lajitas Array**	**100.82**	**62**		PKKPbc	PKKPbc	16 41 00.1	-0.7		
	comp=Z,1.0nm,0.6s,baz=112,slow=3.8,SNR=9.2									
Z26A	**Caprock**	**100.84**	**58**	⇑	Pdiff	Pdif	16 24 50.4	+1.0		
	baz=101									
H24A	**Dirks Ranch, A**	**101.00**	**46**	⇑	Pdiff	Pdif	16 24 51.4	+1.6		
	baz=101									
E24A	**Baker**	**101.23**	**44**	⇓	Pdiff	Pdif	16 24 51.8	+1.0		
	baz=101									
DGMT	**Dagmar**	**101.36**	**42**	⇓	Pdiff	Pdif	16 24 52.7	+1.4		
	baz=101									
AKTO	**Aktyubinsk**	**104.07**	**320**		Pdif	Pdif	16 25 01.6	-1.6		
AKTO	**Aktyubinsk**	**104.07**	**320**		Pdiff	Pdif	16 25 01.6	-1.6		
	comp=Z,0.4nm,0.4s,baz=80,slow=4.9,SNR=4.2									
ARCES	**ARCESS Array B**	**112.86**	**344**		PKiKP	PKiKP	16 29 32.5	-0.6		
ARCES					SKP		16 32 21.6			
ARCES					PKKPbc	PK

NRDL				*e*SKPbc	**SKPab**	**16 32 43.1**	**+2.2**
NEUB	**Neuenburg**	**130.26**	**334**	*e*PKiKP	**PKiKP**	**16 30 08.0**	**+0.1**
NEUB				*e*SKPbc	**SKPab**	**16 32 44.0**	**+1.9**
CLZ	**Clausthal**	**130.41**	**335**	*e*SKPbc	**SKPab**	**16 32 44.9**	**+2.2**
CONA	**Conrad Observa**	**130.50**	**328**⇑	*i*PKiKP	**PKPdf**	**16 30 07.9**	**+0.2**
	comp=Z,7.8nm,0.8s						
CONA	**Conrad Observa**	**130.50**	**328**⇑	*i*P	**PKPdf**	**16 30 07.9**	**+0.2**
TANN	**Tannenbergstha**	**130.52**	**332**	*e*PKiKP	**PKiKP**	**16 30 08.3**	**-0.3**
TANN				*e*SKPbc	**SKPab**	**16 32 45.0**	**+1.7**
WERD	**Werda**	**130.56**	**332**	*e*PKiKP	**PKiKP**	**16 30 08.4**	**-0.2**
WERD				*e*SKPbc	**SKPab**	**16 32 45.1**	**+1.7**
PLN	**Plauen**	**130.61**	**333**	*e*PKiKP	**PKiKP**	**16 30 08.5**	**-0.2**
PLN				*e*SKPbc	**SKPab**	**16 32 45.4**	**+1.8**
GUNZ	**Gunzen**	**130.61**	**332**	*e*PKiKP	**PKiKP**	**16 30 08.7**	**0.0**
GUNZ				*e*SKPbc	**SKPab**	**16 32 45.4**	**+1.8**
WERN	**Wernitzgruen**	**130.65**	**332**	*e*PKiKP	**PKiKP**	**16 30 08.6**	**-0.2**
WERN				*e*SKPbc	**SKPab**	**16 32 45.6**	**+1.8**
NKC	**Novy Kostel**	**130.65**	**332**	*e*PKPdf	**PKPdf**	**16 30 07.9**	**+0.1**
NKC				*e*SKP	**SKPbc**	**16 32 45.3**	**+2.0**
MOX	**Moxa**	**130.74**	**333**	*e*PKiKP	**PKiKP**	**16 30 08.7**	**-0.2**
MOX				*e*SKPbc	**SKPab**	**16 32 45.7**	**+1.6**
IDI	**Anoyia**	**130.85**	**309**	*e*PKPdf	**PKPdf**	**16 30 08.7**	**0.0**
KHC	**Kasperske Hory**	**130.87**	**330**	*e*PKPdf	**PKPdf**	**16 30 08.4**	**+0.1**
KHC	**Kasperske Hory**	**130.87**	**330**	*e*PKPdf	**PKPdf**	**16 30 08.6**	**+0.3**
KHC				*e*SKP	**SKPbc**	**16 32 46.4**	**+2.3**
MANZ	**Manzenberg**	**130.98**	**332**	*e*PKiKP	**PKiKP**	**16 30 09.4**	**-0.1**
MANZ				*e*SKPbc	**SKPab**	**16 32 46.8**	**+1.6**
GEC2	**GERESS Array S**	**131.00**	**330**	*e*PKiKP	**PKiKP**	**16 30 09.4**	**-0.2**
GEC2				*e*SKPbc	**SKPab**	**16 32 46.6**	**+1.2**
GERES	**GERESS Array B**	**131.00**	**330**	PKP	**PKPdf**	**16 30 08.3**	**-0.3**
GERES				SKPbc	**SKPab**	**16 32 45.6**	**+0.2**
GERES	**GERESS Array B**	**131.00**	**330**	PKP	**PKPdf**	**16 30 08.3**	**-0.3**
	comp=Z,3.2nm,0.7s,baz=54,slow=1.7,SNR=9.7						
GERES				SKPbc	**SKPab**	**16 32 45.6**	**+0.2**
	comp=Z,2.8nm,0.6s,baz=46,slow=4.2,SNR=12						
ROTZ	**Rotzenmuhle**	**131.09**	**332**	*e*PKiKP	**PKiKP**	**16 30 09.6**	**-0.1**
ROTZ				*e*SKPbc	**SKPab**	**16 32 47.5**	**+1.9**
IBBN	**Ibbenburen**	**131.11**	**337**	*e*PKiKP	**PKiKP**	**16 30 09.6**	**0.0**
IBBN				*e*SKPbc	**SKPab**	**16 32 47.3**	**+1.7**
WET	**Wettzell**	**131.20**	**331**	*e*PKiKP	**PKPdf**	**16 30 09.4**	**+0.5**
WET				*e*SKPbc	**SKPab**	**16 32 47.5**	**+1.3**
UBBA	**Unterbreizbach**	**131.32**	**334**	*e*PKiKP	**PKiKP**	**16 30 09.8**	**-0.1**
UBBA				*e*SKPbc	**SKPab**	**16 32 48.1**	**+1.7**
PERS	**Pernice**	**131.71**	**327**	*e*PKPdf	**PKPdf**	**16 30 09.8**	**-0.2**
SOKA	**Soboth**	**131.72**	**327**⇑	*i*PKPdf	**PKPdf**	**16 30 06.7**	**-3.4**
	comp=Z,7.8nm,1.1s						
SOKA	**Soboth**	**131.72**	**327**⇑	*i*P	**PKPdf**	**16 30 06.7**	**-3.4**
RJOB	**Jochberg**	**132.19**	**330**	*e*PKiKP	**PKiKP**	**16 30 11.5**	**-0.5**
RJOB				*e*SKPbc	**SKPab**	**16 32 51.2**	**+0.7**
BOJS	**Bojanci**	**132.33**	**326**	*i* PKPdf	**PKPdf**	**16 30 12.3**	**+1.2**
BOJS				*i* SKP	**SKPbc**	**16 32 53.2**	**+3.8**
LJU	**Ljubljana**	**132.40**	**327**	*e*PKPdf	**PKPdf**	**16 30 11.5**	**+0.3**
LJU				*e*	**SKPbc**	**16 32 50.8**	**+1.3**
LJU				*i* SKP		16 32 53.0	
FUR	**Furstenfeldbru**	**132.64**	**331**	*e*SKPbc	**SKPab**	**16 32 53.0**	**+0.6**
ABTA	**Abfaltersbach**	**133.00**	**329**⇑	*i*PKPdf	**PKPdf**	**16 30 11.8**	**-0.7**
	comp=Z,9.5nm,0.7s						
ABTA	**Abfaltersbach**	**133.00**	**329**⇑	*i*P	**PKPdf**	**16 30 11.8**	**-0.7**
WTTA	**Wattenberg**	**133.09**	**330**⇓	*i*PKPdf	**PKPdf**	**16 30 12.1**	**-0.6**
	comp=Z,10nm,0.9s						
WTTA	**Wattenberg**	**133.09**	**330**⇓	*i*P	**PKPdf**	**16 30 12.2**	**-0.6**
STU	**Stuttgart**	**133.18**	**333**	*e*PKiKP	**PKiKP**	**16 30 14.1**	**+0.2**
MOTA	**Moosalm**	**133.30**	**330**⇑	*i*PKiKP	**PKPdf**	**16 30 12.9**	**-0.2**
	comp=Z,9.1nm,0.8s						
MOTA	**Moosalm**	**133.30**	**330**⇑	*i*P	**PKPdf**	**16 30 12.9**	**-0.2**
FETA	**Feichten**	**133.71**	**330**⇑	*i*PKPdf	**PKPdf**	**16 30 12.6**	**-1.3**
	comp=Z,11nm,0.8s						
FETA	**Feichten**	**133.71**	**330**⇑	*i*P	**PKPdf**	**16 30 12.6**	**-1.3**
WLF	**Walferdange**	**133.80**	**336**	PKP	**PKPdf**	**16 30 15.9**	**+2.1**
WLF				SKPab	**SKPab**	**16 32 57.7**	**+0.3**
WLF	**Walferdange**	**133.80**	**336**	*e*PKiKP	**PKPdf**	**16 30 15.8**	**+2.1**
WLF				*e*SKPbc	**SKPab**	**16 32 57.1**	**-0.3**
BFO	**Black Forest**	**133.89**	**333**	*e*SKPbc	**SKPab**	**16 32 56.7**	**-1.2**
DAVA	**Damuels**	**133.93**	**331**⇑	*i*PKPdf	**PKPdf**	**16 30 13.3**	**-1.0**
	comp=Z,10nm,0.9s						
DAVA	**Damuels**	**133.93**	**331**⇑	*i*P	**PKPdf**	**16 30 13.3**	**-1.0**
GIVF	**Givet**	**133.98**	**337**	*e*PKiKP	**PKPdf**	**16 30 14.4**	**+0.3**
GIVF	**Givet**	**133.98**	**337**	*e*PKPdf	**PKPdf**	**16 30 14.4**	**+0.3**
BAIF	**Baives**	**134.25**	**337**	*e*PKiKP	**PKPdf**	**16 30 15.6**	**+1.0**
BAIF	**Baives**	**134.25**	**337**	*e*PKPdf	**PKPdf**	**16 30 15.6**	**+1.0**
SAML	**Samuel**	**134.26**	**112**	*e*PKPdf	**PKPdf**	**16 30 15.1**	**-0.5**
CDF	**Champ du Feu**	**134.30**	**334**	*e*PKiKP	**PKPdf**	**16 30 15.0**	**+0.2**
	comp=Z,7.6nm,0.7s						
CDF	**Champ du Feu**	**134.30**	**334**	*e*PKPdf	**PKPdf**	**16 30 15.0**	**+0.2**
TUE	**Stuetta**	**134.77**	**331**	*e*PKPdf	**PKPdf**	**16 30 13.6**	**-2.4**
HINF	**Hinteralfeld**	**134.93**	**334**	*e*PKiKP	**PKPdf**	**16 30 16.3**	**+0.3**
	comp=Z,11nm,0.8s						
HINF	**Hinteralfeld**	**134.93**	**334**	*e*PKPdf	**PKPdf**	**16 30 16.3**	**+0.3**
TIP	**Timpagrande**	**135.00**	**318**	*e*PKPdf	**PKPdf**	**16 30 16.1**	**-0.3**
HAU	**Haudompre**	**135.01**	**334**	*e*PKiKP	**PKPdf**	**16 30 16.6**	**+0.5**
	comp=Z,7.8nm,0.6s						
HAU	**Haudompre**	**135.01**	**334**	*e*PKPdf	**PKPdf**	**16 30 16.6**	**+0.5**
MEZF	**Maizieres J'vi**	**135.16**	**336**	*e*PKiKP	**PKPdf**	**16 30 17.6**	**+1.3**
	comp=Z,16nm,0.7s						
MEZF	**Maizieres J'vi**	**135.16**	**336**	*e*PKPdf	**PKPdf**	**16 30 17.6**	**+1.3**
LOR	**Lormes**	**136.63**	**335**	*e*PKiKP	**PKPdf**	**16 30 19.6**	**+0.5**
	comp=Z,3.5nm,0.6s						
LOR	**Lormes**	**136.63**	**335**	*e*PKPdf	**PKPdf**	**16 30 19.6**	**+0.5**
SSF	**Saint Saulge**	**136.94**	**335**	*e*PKiKP	**PKPdf**	**16 30 20.9**	**+1.2**
	comp=Z,8.0nm,0.7s						
SSF	**Saint Saulge**	**136.94**	**335**	*e*PKPdf	**PKPdf**	**16 30 20.9**	**+1.2**
BNI	**Bardonecchia**	**137.09**	**331**	*e*PKPdf	**PKPdf**	**16 30 19.6**	**-0.6**
TCF	**Toulx Ste Croi**	**138.09**	**336**	*e*PKiKP	**PKPdf**	**16 30 22.1**	**+0.2**
	comp=Z,26nm,1.0s						
TCF	**Toulx Ste Croi**	**138.09**	**336**	*e*PKPdf	**PKPdf**	**16 30 22.1**	**+0.2**
KEST	**Kesra**	**141.82**	**318**	PKPpre	PKPpre	16 30 24.3	
KEST				*e*PKPdf	**PKPdf**	**16 30 25.4**	**-3.6**
KEST	**Kesra**	**141.82**	**318**	PKhKP	PKPpre	16 30 24.3	
	comp=Z,4.0nm,0.8s,baz=50,slow=2.6,SNR=5.3						
CMAH	**Djebel Manchou**	**142.50**	**321**	P	PKPdf	16 30 22.5	-7.6
ABSA	**Djebel Ababsia**	**142.69**	**321**	P	**PKPdf**	**16 30 27.0**	**-3.5**
CKFL	**Kef-Lekhel**	**143.08**	**321**	P	PKPbc	16 30 29.0	-0.2
CASM	**Ain Smara**	**143.31**	**321**	P	PKPab	16 30 29.0	-0.5
CTEI	**Djebel Teioual**	**143.49**	**321**	P	PKPab	16 30 30.0	-0.3
BDFB	**Brasilia**	**143.56**	**133**	PKP	PKPbc	16 30 31.2	0.0
BDFB	**Brasilia**	**143.56**	**133**	PKP	PKPbc	16 30 31.2	0.0
	comp=Z,63nm,0.8s,baz=237,slow=2.2,SNR=83						
SET	**Setif**	**144.01**	**322**	P	**PKPdf**	**16 30 33.0**	**+0.2**
CKHR	**Kef el Ahmar**	**144.07**	**322**	P	PKPbc	16 30 31.5	-0.8
PBRG	**Braganca**	**145.22**	**341**	*e*PKP	**PKPbc**	**16 30 35.5**	**-0.1**
PGAV	**Gavieira, Arco**	**145.54**	**343**	*e*PKP	**PKPbc**	**16 30 36.5**	**-0.1**
PCAB	**Cabril**	**145.70**	**343**	*e*PKP	**PKPbc**	**16 30 36.9**	**-0.1**
MVO	**Moncorvo**	**145.90**	**341**	*e*PKP	**PKPbc**	**16 30 37.6**	**-0.0**
POLO	**Lamas de Olo**	**145.94**	**342**	*e*PKP	**PKPbc**	**16 30 37.9**	**+0.1**
PVRL	**Vila Real**	**146.01**	**342**	*e*PKP	**PKPbc**	**16 30 38.0**	**+0.1**
ESDC	**Sonseca Array**	**146.10**	**336**	PKPbc	**PKPbc**	**16 30 37.4**	**-0.9**
ESDC				SKPbc	**SKiKP**	**16 33 28.7**	**+1.1**
ESDC				PP	**PP**	**16 34 06.3**	**+1.8**
ESDC				SKKPbc	**SKKPbc**	**16 41 21.9**	**-0.5**
ESDC	**Sonseca Array**	**146.10**	**336**	PKPbc	**PKPbc**	**16 30 37.4**	**-0.9**
	comp=Z,8.2nm,0.9s,baz=27,slow=2.4,SNR=26						
ESDC				SKPbc	**SKiKP**	**16 33 28.7**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=5.7,slow=2.6,SNR=3.2						
ESDC				PP	**PP**	**16 34 06.3**	**+1.8**
	comp=Z,0.2nm,0.2s,baz=11,slow=7.0,SNR=4.0						
ESDC				SKKPbc	**SKKPbc**	**16 41 21.9**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=207,slow=4.0,SNR=8.2						
ESLA	**Sonseca Array**	**146.10**	**336**	*e*PKPbc	**PKPbc**	**16 30 37.9**	**-0.4**
PAB	**San Pablo**	**146.37**	**336**	*e*PKPbc	**PKPbc**	**16 30 38.9**	**-0.1**
PVIS	**Viseu**	**146.57**	**342**	*e*PKP	**PKPbc**	**16 30 39.5**	**0.0**
MTE	**Manteigas**	**146.75**	**341**	*e*PKP	**PKPbc**	**16 30 40.4**	**+0.4**
MTE	**Manteigas**	**146.75**	**341**	*e*PKPbc	**PKPbc**	**16 30 40.1**	**+0.1**
PCBR	**Castelo Branco**	**147.24**	**341**	*e*PKP	**PKPbc**	**16 30 41.3**	**+0.1**
PMRV	**Marv??o**	**147.58**	**340**	*e*PKP	**PKPbc**	**16 30 42.4**	**+0.3**
PTOM	**Tomar**	**147.74**	**342**	*e*PKP	**PKPbc**	**16 30 42.7**	**+0.2**
PESTR	**Estremoz**	**148.15**	**340**	*e*PKP	**PKPbc**	**16 30 43.5**	**-0.1**
PMTG	**Montargil**	**148.18**	**341**	*e*PKP	**PKPbc**	**16 30 43.5**	**-0.1**
PBAR	**Barrancos**	**148.58**	**339**	*e*PKP	**PKPbc**	**16 30 45.0**	**+0.3**
EVO	**Evora**	**148.60**	**340**⇓	*i*PKiKP	**PKPbc**	**16 30 44.7**	**0.0**
	comp=Z,83nm,1.1s						
EVO	**Evora**	**148.60**	**340**	*e*PKP	**PKPbc**	**16 30 44.9**	**+0.2**
EVOP	**Sao Brissos**	**148.64**	**340**⇓	*i*PKPdf	**PKPbc**	**16 30 44.7**	**-0.1**
PBEJ	**Beja**	**149.00**	**340**	*e*PKP	**PKPbc**	**16 30 46.3**	**+0.6**
PCVE	**Castro Verde**	**149.42**	**340**	*e*PKP	**PKPbc**	**16 30 46.6**	**-0.1**
PVAQ	**Vaqueiros**	**149.51**	**339**	*e*PKP	**PKPbc**	**16 30 47.3**	**+0.4**
PTEO	**Sao Teotonio**	**149.73**	**340**	*e*PKP	**PKPbc**	**16 30 47.8**	**+0.4**
PBDV	**Barranco-do-Ve**	**149.73**	**339**	*e*PKP	**PKPbc**	**16 30 48.2**	**+0.7**
MORF	**Marmelete**	**149.92**	**340**	*e*PKP	**PKPbc**	**16 30 48.1**	**+0.1**
TAM	**Tamanrasset**	**151.25**	**301**	*e*PKPbc	**PKPbc**	**16 30 52.2**	**+0.6**
TOA0	**Torodi Ar. Sit**	**157.42**	**282**	*e*PKPdf	**PKPdf**	**16 30 53.1**	**-0.5**
TORD	**Torodi Ar. Bea**	**157.42**	**282**	PKP	**PKPdf**	**16 30 53.0**	**-0.6**
TORD				PKPab	**PKPab**	**16 31 28.1**	**-0.4**
TORD				PP	**PP**	**16 35 09.7**	**-0.3**
TORD	**Torodi Ar. Bea**	**157.42**	**282**	PKP	**PKPdf**	**16 30 53.0**	**-0.6**
	comp=Z,2.9nm,0.7s,baz=22,slow=1.3,SNR=19						
TORD				PKPab	**PKPab**	**16 31 28.1**	**-0.4**
	comp=Z,27nm,0.9s,baz=82,slow=4.1,SNR=36						
TORD				PP	**PP**	**16 35 09.7**	**-0.3**
	comp=Z,2.3nm,0.9s,baz=86,slow=4.4,SNR=3.0						
DBIC	**Dimbokro**	**163.82**	**262**	PKP	**PKPdf**	**16 31 00.0**	**-0.4**
DBIC				PKPab	**PKPab**	**16 31 56.3**	**-0.3**
DBIC	**Dimbokro**	**163.82**	**262**	PKP	**PKPdf**	**16 31 00.0**	**-0.4**
	comp=Z,30nm,1.3s,baz=100,slow=3.3,SNR=8.1						
DBIC				PKPab	**PKPab**	**16 31 56.3**	**-0.3**
	comp=Z,24nm,0.9s,baz=96,slow=5.9,SNR=14						
LIC	**Lamto**	**163.90**	**260**⇓	*i*PKIKP	**PKPdf**	**16 30 59.8**	**-0.7**
	comp=Z,25nm,0.7s						
LIC	**Lamto**	**163.90**	**260**⇓	*i*PKPdf	**PKPdf**	**16 30 59.8**	**-0.7**

JMA 17 16:14:57.1±0.1**, 24.11N**×**123.57E, h21**km±1km**, M3.9, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.22**	**104**	P	Pb	16 15 02.3	-0.8
HATJ				*e*S	Sb	16 15 06.3	-0.9
IRIF	**Iriomote-Funau**	**0.27**	**33**	P	Pb	16 15 03.0	-0.4
IRIF				*e*S	Sb	16 15 07.4	-0.4
JKRS	**Kuro-shima**	**0.42**	**72**	P	Pb	16 15 05.7	0.0
JKRS				*e*S	Sb	16 15 12.2	+0.6
JJJ	**Ishigaki jima**	**0.58**	**64**	P	Pb	16 15 08.0	-0.7
JJJ				*e*S	Sb	16 15 15.6	-0.9
YOJ	**Yonaguni jima**	**0.62**	**305**	P	Pb	16 15 09.2	-0.1
YOJ				*e*S	Sb	16 15 17.4	-0.2
JTJ	**Tarama**	**1.16**	**63**	P	Pn	16 15 17.4	-0.7
JTJ				*e*S	Sb	16 15 33.1	+0.1
JMJ	**Miyako jima 2**	**1.72**	**66**	P	Pn	16 15 26.1	+0.3
JMJ				*e*S	Sb	16 15 48.8	-0.4
JOGS	**Gusukube**	**1.79**	**68**	P	Pb	16 15 28.3	-1.0
JOGS				*e*S	Sb	16 15 52.4	+1.1

JMA 17 16:17:18.9±0.1**, 24.12N**×**123.58E, h21**km±2km**, M2.5, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.21**	**107**	P	Pb	16 17 24.1	-0.7
HATJ				*e*S	Sb	16 17 27.9	-1.1
IRIF	**Iriomote-Funau**	**0.25**	**33**	P	Pb	16 17 24.7	-0.4
IRIF				*e*S	Sb	16 17 29.0	-0.4
JKRS	**Kuro-shima**	**0.41**	**73**	P	Pb	16 17 27.3	0.0
JKRS				*e*S	Sb	16 17 33.8	+0.8
JJJ	**Ishigaki jima**	**0.57**	**65**	P	Pb	16 17 29.6	-0.7
JJJ				*e*S	Sb	16 17 37.3	-0.7
YOJ	**Yonaguni jima**	**0.62**	**303**	P	Pb	16 17 31.1	-0.1
YOJ				*e*S	Sb	16 17 39.3	-0.2
JTJ	**Tarama**	**1.15**	**63**	P	Pn	16 17 39.8	+0.1
JTJ				*e*S	Sn	16 17 54.9	+0.1

IDC 17 16:23:00.3±8.7**, 2.34N**×**127.09E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=168.1km s-min=134.8km az=77.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.26**	**163**	P	P	16 28 09.4	-0.2
	0.3nm,0.3s,baz=342,slow=11,SNR=5.1						
ASAR	**Alice Springs**	**26.69**	**166**	P	P	16 28 41.3	0.0
	0.1nm,0.3s,baz=346,slow=12,SNR=2.9						
STKA	**Stephens Creek**	**36.71**	**159**	P	P	16 30 09.4	+0.1
	1.0nm,0.6s,baz=349,slow=10,SNR=3.5						

CSEM ***17*** *16:27:34.8, 42.54N×13.29E, h11km, MD2.1/7, After ROM*
ROM 17 16:27:34.8±0.1**, 42.54N**×**13.29E, h11**km**, Md2.1/7, MI2.2/8, Error ellipse: s-maj=0.9km s-min=0.7km az=29.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.09**	**94**	Pg	Pg	16 27 38.0	+0.4
CAMP				Sg	Sg	16 27 39.9	+0.3
CAMP	**Campotosto**	**0.09**	**94**	Pg	Pg	16 27 38.0	+0.4
CAMP				Sg	Sg	16 27 39.9	+0.3
LNSS	**Leonessa**	**0.19**	**288**	Pg	Pg	16 27 39.5	+0.4
LNSS				Sg	Sg	16 27 42.8	+0.8
	2µm,0.2s						
LNSS	**Leonessa**	**0.19**	**288**	Pg	Pg	16 27 39.5	+0.4
LNSS				Sg	Sg	16 27 42.8	+0.8
	2µm,0.2s						
AQU	**L'Aquila**	**0.21**	**155**	Pg	Pg	16 27 39.9	+0.6
AQU				Sg	Sg	16 27 43.5	+1.1
	362nm,0.3s						
AQU	**L'Aquila**	**0.21**	**155**	Pg	Pg	16 27 39.9	+0.6
AQU				Sg	Sg	16 27 43.5	+1.1
	362nm,0.3s						
TERO	**Teramo**	**0.25**	**71**	Pg	Pg	16 27 40.2	+0.2
TERO				Sg	Sg	16 27 44.1	+0.5
	531nm,0.2s						
TERO	**Teramo**	**0.25**	**71**	Pg	Pg	16 27 40.2	+0.2
TERO				Sg	Sg	16 27 44.1	+0.5
	531nm,0.2s						
FIAM	**Fiamignano**	**0.30**	**204**	Pg	Pg	16 27 41.3	+0.2
FIAM				Sg	Sg	16 27 46.1	+0.9
	200nm,0.7s						
FIAM	**Fiamignano**	**0.30**	**204**	Pg	Pg	16 27 41.3	+0.2
FIAM				Sg	Sg	16 27 46.1	+0.9
	200nm,0.7s						
NRCA	**Norcia**	**0.32**	**337**	Pg	Pg	16 27 41.5	+0.2
NRCA				Sg	Sg	16 27 46.4	+0.7
NRCA	**Norcia**	**0.32**	**337**	Pg	Pg	16 27 41.5	+0.2
NRCA				Sg	Sg	16 27 46.4	+0.7
VCEL	**Villa Celiera**	**0.44**	**110**	Pg	Pg	16 27 44.0	+0.4
VCEL				Sg	Sg	16 27 50.1	+0.6
	198nm,0.4s						
VCEL	**Villa Celiera**	**0.44**	**110**	Pg	Pg	16 27 44.0	+0.4
VCEL				Sg	Sg	16 27 50.1	+0.6
	198nm,0.4s						
MNS	**Montasola**	**0.47**	**251**	Pg	Pg	16 27 44.2	0.0
MNS				Sg	Sg	16 27 51.4	+0.9
MNS	**Montasola**	**0.47**	**251**	Pg	Pg	16 27 44.2	0.0
MNS				Sg	Sg	16 27 51.4	+0.9
OFFI	**Offida**	**0.49**	**37**	Pg	Pb	16 27 45.4	-0.1
	285nm,0.3s						
OFFI	**Offida**	**0.49**	**37**	Pg	Pb	16 27 45.4	-0.1
	285nm,0.3s						
FDMO	**Fiordimonte**	**0.51**	**344**	Pg	Pg	16 27 45.0	+0.1
FDMO				Sg	Sb	16 27 52.7	-0.8
FDMO	**Fiordimonte**	**0.51**	**344**	Pg	Pg	16 27 45.0	+0.1
FDMO				Sg	Sb	16 27 52.7	-0.8
CESX	**Cesi**	**0.53**	**278**	Pg	Pg	16 27 44.9	-0.2
CESX				Sg	Sg	16 27 52.8	+0.7
	99nm,0.2s						
CESX	**Cesi**	**0.53**	**278**	Pg	Pg	16 27 44.9	-0.2
CESX				Sg	Sg	16 27 52.8	+0.7
	99nm,0.2s						
PTQR	**Pietraquaria**	**0.53**	**171**	Pg	Pg	16 27 45.5	+0.3
PTQR				Sg	Sg	16 27 53.0	+0.7
	5.0nm,0.3s						
PTQR	**Pietraquaria**	**0.53**	**171**	Pg	Pg	16 27 45.5	+0.3
PTQR				Sg	Sg	16 27 53.0	+0.7
	5.0nm,0.3s						
CESI	**CESI - Serrava**	**0.54**	**329**	Pg	Pg	16 27 45.5	0.0
CESI				Sg	Sg	16 27 53.5	+0.8
	27nm,0.3s						
CESI	**CESI - Serrava**	**0.54**	**329**	Pg	Pg	16 27 45.5	0.0
CESI				Sg	Sg	16 27 53.5	+0.8
	27nm,0.3s						
CERT	**Cerreto**	**0.64**	**201**	Pg	Pg	16 27 46.8	-0.4
CERT	**Cerreto**	**0.64**	**201**	Pg	Pg	16 27 46.8	-0.4
ASSB	**Assisi San Ben**	**0.68**	**317**	Pg	Pg	16 27 48.0	-0.1
ASSB				Sg	Sb	16 27 58.0	-0.3
ASSB	**Assisi San Ben**	**0.68**	**317**	Pg	Pg	16 27 48.0	-0.1
ASSB				Sg	Sb	16 27 58.0	-0.3
LPEL	**Lama dei Pelig**	**0.83**	**126**	Pg	Pg	16 27 50.3	-0.6
LPEL				Sg	Sb	16 28 02.6	0.0
LPEL	**Lama dei Pelig**	**0.83**	**126**	Pg	Pg	16 27 50.3	-0.6
LPEL				Sg	Sb	16 28 02.6	0.0

IDC ***17*** *16:37:20.4±0.5, 14.83N×144.69E, h0km, mb4.1/17,*
mb1 4.3/17, mb1mx4.2/27, mbtmp4.1/17, MS3.5/12,
Ms1 3.5/12, ms1mx3.3/42, Error ellipse: s-maj=21.6km
s-min=11.5km az=84.0
ISCJB ***17*** *16:37:22.3±0.4, 14.80N±0.05×144.55E±0.10, h22km,*
mb4.2/26, MS3.4/11, Error ellipse: s-maj=13.8km
s-min=5.9km az=165.0
NEIC ***17*** *16:37:23.3±4.4, 14.80N×144.64E, h19km±27km, mb4.5/7,*
Error ellipse: s-maj=10.7km s-min=6.2km az=81.0
BJI ***17*** *16:37:24.2, 14.70N×144.80E, h40km, mB5.1/2, mb4.8/5,*
Ms4.7/1, Ms7 4.3/1
ISC 17 16:37:23.9±0.5**, 14.80N**±0.06×**144.6E**±0.1**, h22km, n66,** σ0**58/71, mb4.1/26, MS3.4/11, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.23**	**170**	Pn	**Pn**	**16 37 45.3**	**-0.4**
GUMO				Sn	**Sn**	**16 38 01.6**	**-0.1**
GUMO	**Guam**	**1.23**	**170**	Pn	**Pn**	**16 37 45.3**	**-0.4**
	117nm,0.3s,baz=299,slow=5.1,SNR=42						
GUMO				Sn	**Sn**	**16 38 01.6**	**-0.1**
	148nm,0.3s,baz=347,slow=19,SNR=22						
JHJ	**Hachijo jima 2**	**18.76**	**347**	LR	LR	16 47 50.7	
	comp=Z,189nm,18.3s,baz=217,slow=34						
JNU	**Nakatsue**	**22.11**	**328**	LR	LR	16 49 32.4	
	comp=Z,75nm,19.6s,baz=61,slow=33						
MJAR	**Matsushiro Arr**	**22.40**	**346**	P	**P**	**16 42 20.9**	**0.0**
MJAR	**Matsushiro Arr**	**22.40**	**346**	P	**P**	**16 42 20.9**	**0.0**
	3.5nm,0.9s,baz=176,slow=9.9,SNR=9.6						
MJAR				LR	LR	16 50 04.4	
	comp=Z,124nm,18.4s,baz=165,slow=34						
MAT	**Matsushiro**	**22.40**	**346**	P	**P**	**16 42 21.8**	**+0.9**
MAT				S	Sn	16 47 11.0	+32
KSRS	**Korea Array**	**27.01**	**330**	P	**P**	**16 43 04.8**	**+0.6**
	2.5nm,0.9s,baz=147,slow=10,SNR=5.8						
KSRS				LR	LR	16 52 33.3	
	comp=Z,60nm,18.6s,baz=125,slow=34						
KSAR	**Wonju Array Be**	**27.02**	**330**	P	**P**	**16 43 04.8**	**+0.5**
ASAJ	**Asahikawa**	**29.27**	**357**	LR	LR	16 54 12.2	
	comp=Z,102nm,18.1s,baz=335,slow=35						
USRK	**Usuriysk Arra**	**31.22**	**342**	LR	LR	16 55 22.7	
	comp=Z,41nm,20.7s,baz=48,slow=35						
CTA	**Charters Tower**	**34.71**	**177**	LR	LR

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCY	**Rachaya**	**0.39**	**61**	*e*P	Pg	16 38 54.6	-0.8
RCY				*e*S	Sg	16 38 59.8	-0.8
BRBR	**Barbar**	**0.45**	**76**	*e*P	Pg	16 38 55.8	-0.7
BRBR				AML	AML	16 39 05.7	
	comp=Z,26nm,0.4s						
BHL	**Bhannes**	**0.62**	**17**	*e*P	Pg	16 38 58.8	-1.0
BHL	**Bhannes**	**0.62**	**17**	*e*P	Pg	16 38 58.8	-1.0
TCHB	**Talchebab**	**0.78**	**144**	*e*P	Pg	16 39 02.5	-0.1
TCHB				*e*S	Sg	16 39 12.3	-0.5
TCHB				AML	AML	16 39 13.8	
	comp=N,20nm,0.2s						
TCHB				AML	AML	16 39 13.8	
	comp=E,55nm,0.3s						
TCHB				AML	AML	16 39 16.3	
	comp=Z,42nm,0.8s						
TCHB	**Talchebab**	**0.78**	**144**	*e*P	Pg	16 39 02.5	-0.1
	SNR=72						
TCHB				*e*S	Sg	16 39 12.3	-0.5
	comp=Z,42nm,0.8s,SNR=92						
TOTH	**TOTAH**	**0.84**	**86**	*e*P	Pg	16 39 03.3	-0.5
TOTH				*e*S	Sb	16 39 17.2	+0.7
TOTH				AML	AML	16 39 25.0	
	comp=N,11nm,0.5s						
TOTH				AML	AML	16 39 26.7	
	comp=E,7.5nm,0.4s						
TOTH	**TOTAH**	**0.84**	**86**	*e*P	Pg	16 39 03.3	-0.5
	SNR=72						
TOTH				*e*S	Sb	16 39 17.2	+0.7
	comp=E,7.5nm,0.4s,SNR=92						
HWQ	**Hawqa**	**1.06**	**24**	*e*P	Pg	16 39 06.6	-1.5
HWQ				*e*S	Sg	16 39 20.6	-1.4
HWQ	**Hawqa**	**1.06**	**24**	*e*P	Pg	16 39 06.6	-1.5
HWQ				*e*S	Sg	16 39 20.6	-1.4
SALA	**Sala**	**1.24**	**118**	*e*P	Pg	16 39 10.3	-1.4
SALA				*e*S	Sg	16 39 27.0	-1.1
SALA				AML	AML	16 39 28.5	
	comp=E,3.3nm,0.3s						
SALA				AML	AML	16 39 28.8	
	comp=N,22nm,0.3s						
SALA				AML	AML	16 39 32.2	
	comp=Z,16nm,0.3s						
SALA	**Sala**	**1.24**	**118**	*e*P	Pg	16 39 10.3	-1.4
	SNR=61						
SALA				*e*S	Sg	16 39 27.0	-1.1
	comp=Z,16nm,0.3s,SNR=62						
ZALF	**Zalf**	**1.64**	**103**	*e*P	Pn	16 39 16.6	-0.8
ZALF				*e*S	Sn	16 39 37.9	-1.1
ZALF				AML	AML	16 39 40.2	
	comp=E,9.6nm,0.3s						
ZALF				AML	AML	16 39 40.8	
	comp=N,6.7nm,0.6s						
ZALF	**Zalf**	**1.64**	**103**	*e*P	Pn	16 39 16.6	-0.8
	SNR=47						
ZALF				*e*S	Sn	16 39 37.9	-1.1
	comp=N,6.7nm,0.6s,SNR=49						

IDC 17 16:42:51.8±2.3, 15°.80S×174°.59W, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.5/20, mbtmp3.6/4, ML1.8/1, Error ellipse: s-maj=195.4km s-min=28.8km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.31**	**56**	Pn	Pn	16 43 45.3	+0.3
	5.6nm,0.3s,baz=229,slow=9.3,SNR=16						
AFI				Sn	Sn	16 44 16.5	-8.6
	29nm,0.3s,baz=197,slow=20,SNR=12						
STKA	**Stephens Creek**	**42.84**	**240**	P	P	16 50 52.6	+0.7
	1.2nm,0.9s,baz=66,slow=10.0,SNR=2.9						
WRA	**Warramunga Arr**	**48.63**	**257**	P	P	16 51 37.9	0.0
	0.3nm,0.6s,baz=93,slow=7.4,SNR=7.6						
WRA				PcP	PcP	16 53 02.7	-0.8
	0.1nm,0.4s,baz=93,slow=3.4,SNR=4.0						
ASAR	**Alice Springs**	**48.89**	**252**	P	P	16 51 39.5	-0.4
	0.7nm,0.6s,baz=91,slow=8.1,SNR=31						

MAN 17 16:51:35, 9°.84N×125°.03E, h6km, mb4.4, ML3.2, MS3.0, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.33**	**330**	*e*P	Pb	16 51 42.8	-0.6
LLP	**Lapu-Lapu**	**1.15**	**294**	*e*P	Pg	16 51 57.0	-0.1
LLP				*e*S	Sn	16 52 14.9	+1.2
TBP	**Tagbilaran**	**1.16**	**263**	*e*P	Pg	16 51 53.3	-4.1
TBP				*e*S	Sn	16 52 15.9	+1.9
OCLP	**Ormoc**	**1.27**	**341**	*e*P	Pn	16 51 58.8	-0.6
PLP	**Palo**	**1.31**	**358**	*e*P	Pn	16 51 58.4	-1.5
PLP				*e*S	Sn	16 52 18.9	+1.1
CGP	**Cagayan de Oro**	**1.42**	**194**	*i*P	Pn	16 52 01.5	+0.1
CGP				*i*S	Sg	16 52 22.6	+1.9
BUKP	**Musuan**	**1.95**	**179**	*e*P	Pn	16 52 09.5	+0.7
GUIM	**Jordan**	**2.53**	**288**	*e*P	Pn	16 52 17.2	+0.6

IDC 17 17:18:18.6±1.1, 24°.22N×124°.94E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/25, mbtmp3.6/7, ML3.5/1, Error ellipse: s-maj=55.9km s-min=19.2km az=68.0
JMA 17 17:18:22.9±0.2, 24°.23N×125°.23E, h21km, M3.5
ISC 17 17:18:21.4±1.8, 24°.21N±0°.08×125°.19E±0°.06, h17km±11km, n16, σ1°36/21, mb3.6/6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.58**	**20**	P	**Pb**	**17 18 33.8**	**+0.7**
JOGS				S	**Sb**	**17 18 42.1**	**+1.0**
JMJ	**Miyako jima 2**	**0.61**	**9**	P	**Pb**	**17 18 34.2**	**+0.6**
JMJ				S	**Sb**	**17 18 42.4**	**+0.5**
JTJ	**Tarama**	**0.62**	**314**	P	**Pn**	**17 18 35.1**	**-0.3**
JTJ				*e*S	**Sb**	**17 18 43.2**	**+1.0**
JIJ	**Ishigaki jima**	**0.97**	**279**	P	**Pn**	**17 18 41.3**	**+1.1**
JIJ				*e*S	**Sn**	**17 18 54.9**	**+1.3**
JKRS	**Kuro-shima**	**1.08**	**272**	P	**Pn**	**17 18 43.7**	**+2.0**
JKRS				*e*S	**Sn**	**17 18 58.8**	**+2.5**
HATJ	**Hateruma jima**	**1.27**	**263**	*e*S	**Sg**	**17 19 02.6**	**0.0**
IRIF	**Iriomote-Funau**	**1.34**	**276**	P	**Pg**	**17 18 47.1**	**-0.1**
YOJ	**Yonaguni jima**	**2.00**	**278**	P	**Pb**	**17 18 57.1**	**-0.3**
JKE	**Kume jima 2**	**2.55**	**34**	P	**Pn**	**17 19 03.5**	**+1.4**
MJAR	**Matsushiro Arr**	**16.63**	**39**	Pn	**P**	**17 22 16.3**	**+0.2**
	0.2nm,0.3s,baz=226,slow=12,SNR=5.5						
SONM	**Songino Array**	**27.91**	**332**	P	**P**	**17 24 07.7**	**-3.0**
	0.2nm,0.7s,baz=128,slow=9.3,SNR=2.7						
MKAR	**Makanchi Array**	**40.90**	**314**	P	**P**	**17 26 02.3**	**-0.5**
	0.6nm,0.5s,baz=100,slow=9.8,SNR=19						
ZALV	**Zalesovo Beam**	**42.26**	**325**	P	**P**	**17 26 11.8**	**-2.0**
	0.5nm,0.4s,baz=105,slow=7.2,SNR=4.3						
WRA	**Warramunga Arr**	**44.78**	**168**	P	**P**	**17 26 34.9**	**+0.5**
	0.4nm,0.6s,baz=349,slow=8.8,SNR=7.7						
ASAR	**Alice Springs**	**48.34**	**169**	P	**P**	**17 27 02.1**	**-0.2**
	0.2nm,0.4s,baz=355,slow=7.2,SNR=9.4						
FINES	**FINESS Array B**	**73.25**	**330**	P	**P**	**17 29 50.9**	**-0.6**
	2.2nm,0.9s,baz=56,slow=5.2,SNR=3.8						

IDC 17 17:37:12.5±7.7, 3°.78S×102°.88W, h0km, mb3.5/4, mb1 3.9/4, mb1mx3.7/17, mbtmp3.5/4, MS3.5/7, Ms1 3.5/7, ms1mx3.3/23, Error ellipse: s-maj=212.8km s-min=162.9km az=83.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**22.20**	**21**	LR	LR	17 48 22.2	
	comp=Z,37nm,20.1s,baz=344,slow=30						
JTS	**JuntasAbangare**	**22.68**	**52**	LR	LR	17 49 03.3	
	comp=Z,158nm,19.8s,baz=338,slow=31						
ROSC	**El Rosal**	**29.79**	**73**	LR	LR	17 52 38.5	
	comp=Z,71nm,18.3s,baz=90,slow=31						
TXAR	**Lajitas Array**	**32.94**	**359**	LR	LR	17 55 18.8	
	comp=Z,68nm,18.6s,baz=5.0,slow=33						
LPAZ	**La Paz**	**36.33**	**112**	LR	LR	17 56 53.5	
	comp=Z,82nm,18.8s,baz=56,slow=32						
TKL	**Tuckaleechee C**	**43.13**	**23**	LR	LR	18 01 25.9	
	comp=Z,50nm,19.1s,baz=32,slow=34						
NVAR	**Mina Array Bea**	**44.36**	**343**	P	P	17 45 24.2	-0.8
	0.1nm,0.3s,baz=167,slow=6.1,SNR=2.7						
PDAR	**Pinedale Array**	**46.73**	**353**	P	P	17 45 44.4	+0.7
	0.4nm,0.8s,baz=162,slow=6.2,SNR=4.1						
PLCA	**Paso Flores**	**46.90**	**146**	LR	LR	18 00 52.2	
	comp=Z,146nm,18.4s,baz=358,slow=30						
YKA	**Yellowknife Ar**	**66.70**	**354**	P	P	17 48 05.5	+0.5
	0.7nm,0.9s,baz=163,slow=6.3,SNR=9.0						
ILAR	**Eielson Array**	**75.62**	**342**	P	P	17 48 58.6	-0.5
	0.9nm,0.8s,baz=154,slow=5.4,SNR=9.9						

DDA 17 17:49:59.7, 37°.68N×34°.73E, h13km, MD3.3
ISK 17 17:49:59.9, 37°.69N×34°.73E, h5km, MD3.5
CSEM 17 17:50:00.4±0.1, 37°.67N×34°.72E, h2km, MD3.3, Error ellipse: s-maj=3.5km s-min=3.0km az=58.0
ISC 17 17:50:00.6±1.0, 37°.68N±0°.02×34°.73E±0°.02, h8km±9km, n79, σ8°91/100, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GULE	**Gulek**	**0.40**	**174**	*i*P	**Pg**	**17 50 08.3**	**-0.2**
GULE				*i*S	**Sg**	**17 50 14.2**	**+0.4**
GULE	**Gulek**	**0.40**	**174**	*i*P	**Pg**	**17 50 08.3**	**-0.2**
GULE				*i*S	**Sg**	**17 50 14.2**	**+0.4**
NIG	**Nigde**	**0.44**	**348**	*e*PG	**Pg**	**17 50 08.9**	**-0.3**
NIG				*e*SG	**Sg**	**17 50 14.9**	**-0.1**
NIG	**Nigde**	**0.44**	**348**	*e*Pg	**Pg**	**17 50 08.9**	**-0.3**
NIG				*e*Sg	**Sg**	**17 50 14.9**	**-0.1**
BSTP	**Nigde**	**0.56**	**299**	*i*P	**Pb**	**17 50 13.0**	**+0.3**
BSTP				*i*S	**Sn**	**17 50 23.8**	**-0.7**
MERS	**Mersin**	**0.83**	**191**	*e*PG	**Pg**	**17 50 16.1**	**-0.4**
MERS				*e*SG	**Sb**	**17 50 28.3**	**-0.3**
MERS	**Mersin**	**0.83**	**191**	*e*Pg	**Pg**	**17 50 16.2**	**-0.4**
MERS				*e*Sg	**Sb**	**17 50 28.3**	**-0.3**
KOZT	**Kozan**	**0.90**	**103**	*e*PG	**Pg**	**17 50 17.4**	**-0.5**
KOZT				*e*SG	**Sb**	**17 50 30.4**	**-0.1**
KOZT	**Kozan**	**0.90**	**103**	*e*Pg	**Pg**	**17 50 17.4**	**-0.5**
KOZT				*e*Sg	**Sb**	**17 50 30.4**	**-0.1**
CEYT	**Ceyhan**	**1.05**	**129**	*e*PG	**Pg**	**17 50 20.5**	**-0.4**
CEYT	**Ceyhan**	**1.05**	**129**	*e*Pg	**Pg**	**17 50 20.5**	**-0.4**
SULT	**Sultanhani-AKS**	**1.09**	**299**	*e*PN	**Pg**	**17 50 21.4**	**-0.1**
SULT	**Sultanhani-AKS**	**1.09**	**299**	*e*Pn	**Pg**	**17 50 21.4**	**-0.1**
AVNT	**Avonos**	**1.10**	**5**	*i*P	**Pg**	**17 50 20.4**	**-1.4**
AVNT				*i*S	**Sb**	**17 50 36.6**	**+0.1**
AVNT	**Avonos**	**1.10**	**5**	*i*P	**Pg**	**17 50 20.4**	**-1.4**
AVNT				*i*S	**Sb**	**17 50 36.6**	**+0.1**
KRTS	**Karatas**	**1.22**	**155**	*e*PN	**Pg**	**17 50 24.3**	**+0.2**
KRTS	**Karatas**	**1.22**	**155**	*e*Pn	**Pg**	**17 50 24.3**	**+0.2**
ANDN	**Andirin**	**1.29**	**94**	*i*P	**Pn**	**17 50 23.9**	**-1.1**
ANDN				*i*S	**Sn**	**17 50 42.8**	**+0.3**
ANDN	**Andirin**	**1.29**	**94**	*i*P	**Pn**	**17 50 23.9**	**-1.1**
ANDN				*i*S	**Sn**	**17 50 42.8**	**+0.3**
BNN	**Bunyan**	**1.46**	**37**	*e*PN	**Pn**	**17 50 26.3**	**-1.1**
BNN	**Bunyan**	**1.46**	**37**	*e*Pn	**Pn**	**17 50 26.3**	**-1.1**
PINB	**Pinarbasi**	**1.65**	**53**	*i*P	**Pn**	**17 50 30.0**	**-0.1**
PINB				*i*S	**Sg**	**17 50 54.0**	**+0.2**
PINB	**Pinarbasi**	**1.65**	**53**	*i*P	**Pn**	**17 50 30.0**	**-0.1**
PINB				*i*S	**Sg**	**17 50 54.0**	**+0.2**
KMRS	**Kahramanmaras**	**1.73**	**95**	*e*PN	**Pn**	**17 50 31.8**	**+0.7**
KMRS	**Kahramanmaras**	**1.73**	**95**	*e*Pn	**Pn**	**17 50 31.8**	**+0.7**
ERMK	**Ermenek**	**1.78**	**235**	*i*P	**Pb**	**17 50 33.2**	**-0.4**
ERMK				*i*S	**Sg**	**17 50 59.7**	**+1.7**
ERMK	**Ermenek**	**1.78**	**235**	*i*P	**Pb**	**17 50 33.2**	**-0.4**
SARI	**SarD1z-Kayseri**	**1.84**	**57**	*e*PN	Pn	17 50 28.4	-4.2
KAMT	**Kaman**	**1.86**	**335**	*e*PN	**Pn**	**17 50 33.4**	**+0.5**
KAMT	**Kaman**	**1.86**	**335**	Pn	**Pn**	**17 50 33.4**	**+0.5**
KONT	**Konya--Tatoy**	**1.89**	**279**	*e*PN	**Pn**	**17 50 33.8**	**+0.6**
KONT	**Konya--Tatoy**	**1.89**	**279**	*e*Pn	**Pn**	**17 50 33.8**	**+0.6**
AYKD	**Aykdinkavak**	**1.90**	**217**	*i*P	**Pn**	**17 50 31.7**	**-1.5**
AYKD				*i*S	**Sn**	**17 50 55.5**	**-1.8**
AYKD	**Aykdinkavak**	**1.90**	**217**	*i*P	**Pn**	**17 50 31.7**	**-1.5**
AYKD				*i*S	**Sn**	**17 50 55.5**	**-1.8**
LADK	**Ladik-KONYA**	**1.94**	**286**	*e*PN	**Pn**	**17 50 33.6**	**-0.2**
LADK	**Ladik-KONYA**	**1.94**	**286**	*e*Pn	**Pn**	**17 50 33.7**	**-0.2**
CDAG	**Cicekdag**	**1.96**	**352**	*i*P	**Pn**	**17 50 35.0**	**+0.8**
CDAG				*i*S	**Sg**	**17 51 02.8**	**-0.8**
CDAG	**Cicekdag**	**1.96**	**352**	*i*P	**Pn**	**17 50 35.0**	**+0.8**
CDAG				*i*S	**Sg**	**17 51 02.8**	**-0.8**
YOZ	**Yozgat**	**2.01**	**13**	*e*PN	**Pn**	**17 50 35.4**	**+0.5**
YOZ	**Yozgat**	**2.01**	**13**	*e*Pn	**Pn**	**17 50 35.4**	**+0.5**
GAZ	**Gaziantep**	**2.04**	**104**	*e*PN	**Pn**	**17 50 35.5**	**+0.2**
GAZ	**Gaziantep**	**2.04**	**104**	*e*Pn	**Pn**	**17 50 35.5**	**+0.2**
KUZU	**Kuzuini**	**2.08**	**115**	*i*P	**Pn**	**17 50 36.7**	**+0.8**
KUZU				*i*S	**Sb**	**17 51 04.7**	**0.0**
KUZU	**Kuzuini**	**2.08**	**115**	*i*P	**Pn**	**17 50 36.7**	**+0.8**
KUZU				*i*S	**Sb**	**17 51 04.7**	**0.0**
AFSR	**Afşar-Bala (A**	**2.19**	**324**	*e*PN	**Pn**	**17 50 38.0**	**+0.6**
AFSR	**Afşar-Bala (A**	**2.19**	**324**	*e*Pn	**Pn**	**17 50 38.0**	**+0.6**
GZT	**Gaziantep**	**2.28**	**97**	*i*P	**Pn**	**17 50 39.7**	**+1.0**
GZT				*i*S	**Sb**	**17 51 11.2**	**+0.7**
CORM	**Corum**	**2.49**	**358**	*e*PN	**Pn**	**17 50 42.2**	**+0.7**
CORM	**Corum**	**2.49**	**358**	*e*Pn	**Pn**	**17 50 42.3**	**+0.7**
KIZT	**Kizilcal**	**2.54**	**299**	*e*PN	**Pn**	**17 50 43.8**	**+1.6**
KIZT	**Kizilcal**	**2.54**	**299**	*e*Pn	**Pn**	**17 50 43.8**	**+1.6**
LFK	**Lefkose**	**2.58**	**202**	*e*PN	**Pn**	**17 50 42.9**	**+0.1**
LFK	**Lefkose**	**2.58**	**202**	*e*Pn	**Pn**	**17 50 42.9**	**+0.1**
ANTO	**Ankara**	**2.66**	**326**	*e*PN	**Pn**	**17 50 45.4**	**+1.6**
ANTO	**Ankara**	**2.66**	**326**	*e*Pn	**Pn**	**17 50 45.4**	**+1.6**
LOD	**Lodumlu**	**2.68**	**326**	*e*PN	**Pn**	**17 50 45.1**	**+0.9**
LOD	**Lodumlu**	**2.68**	**326**	*e*Pn	**Pn**	**17 50 45.1**	**+0.9**
DARE	**Darende-Malaty**	**2.73**	**61**	*e*PN	Pn	17 50 39.8	-5.0
CSS	**Prodhromos**	**2.94**	**203**	*e*PN	**Pn**	**17 50 49.0**	**+1.4**
CSS	**Prodhromos**	**2.94**	**203**	*e*Pn	**Pn**	**17 50 49.0**	**+1.4**
MALT	**Malatya**	**2.99**	**77**	*e*PN	**Pn**	**17 50 49.3**	**+0.9**
MALT	**Malatya**	**2.99**	**77**	*e*Pn	**Pn**	**17 50 49.3**	**+0.9**
MYA	**Malataya**	**2.99**	**76**	*e*PN	**Pn**	**17 50 49.0**	**+0.6**
MYA	**Malataya**	**2.99**	**76**	*e*Pn	**Pn**	**17 50 49.0**	**+0.6**
CANT	**Cankiri**	**3.04**	**344**	*e*PN	**Pn**	**17 50 50.3**	**+1.2**
SVRH	**Sivrihisar-ESK**	**3.07**	**306**	*e*PN	**Pn**	**17 50 47.1**	**+1.3**
SVRH	**Sivrihisar-ESK**	**3.07**	**306**	*e*Pn	**Pn**	**17 50 47.1**	**+1.3**
URFA	**Urfa**	**3.26**	**93**	*e*PN	**Pn**	**17 50 52.7**	**+0.6**
URFA	**Urfa**	**3.26**	**93**	*e*Pn	**Pn**	**17 50 52.7**	**+0.6**
TOS	**Tosya**	**3.39**	**351**	*e*PN	**Pn**	**17 50 55.2**	**+1.3**
TOS	**Tosya**	**3.39**	**351**	*e*Pn	**Pn**	**17 50 55.2**	**+1.3**
ILIC	**ilic-Erzincan**	**3.49**	**58**	*e*PN	**Pn**	**17 50 56.3**	**+1.0**
ILIC	**ilic-Erzincan**	**3.49**	**58**	*e*Pn	**Pn**	**17 50 56.3**	**+1.0**
SVRC	**Sivrice-ELAZID**	**3.68**	**78**	*e*PN	**Pn**	**17 50 59.1**	**+1.1**
SVRC	**Sivrice-ELAZID**	**3.68**	**78**	*e*Pn	**Pn**	**17 50 59.1**	**+1.1**
PTK	**Pertek**	**3.86**	**70**	*e*PN	**Pn**	**17 51 01.7**	**+1.2**
PTK	**Pertek**	**3.86**	**70**	*e*Pn	**Pn**	**17 51 01.7**	**+1.2**
SAFT	**Safranbolu**	**3.89**	**337**	*e*PN	**Pn**	**17 51 02.8**	**+2.2**
SAFT	**Safranbolu**	**3.89**	**337**	*e*Pn	**Pn**	**17 51 02.8**	**+2.2**

CSEM 17 17:55:39.1, 37°.85N×29°.11E, h8km, MD2.8, After ISK
ISK 17 17:55:39.1, 37°.85N×29°.11E, h8km, MD2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.11**	**212**	PG	Pg	17 55 41.9	+0.2
DENT	**Denizli**	**0.11**	**212**	*i*Pg	Pg	17 55 41.9	+0.2
KHL	**Karahalli**	**0.58**	**35**	*e*PG	Pg	17 55 50.5	0.0
KHL	**Karahalli**	**0.58**	**35**	*e*Pg	Pg	17 55 50.5	+0.1
KULA	**Kula-Manisa**	**0.75**	**332**	*e*PG	Pg	17 55 53.9	+0.2
KULA				*e*SG	Sb	17 56 05.5	+0.3
KULA	**Kula-Manisa**	**0.75**	**332**	*e*Pg	Pg	17 55 53.9	+0.1
KULA				*e*Sg	Sb	17 56 05.5	+0.3
GLHS	**Glhisar (BURDU**	**0.76**	**156**	*e*PG	Pb	17 55 54.5	-0.2
GLHS	**Glhisar (BURDU**	**0.76**	**156**	*e*Pg	Pb	17 55 54.5	-0.2
YER	**Yerkesik**	**0.97**	**223**	*e*PG	Pg	17 55 57.8	0.0
YER	**Yerkesik**	**0.97**	**223**	*e*Pg	Pg	17 55 57.8	0.0
DALT	**Dalyan (Mudla)**	**1.14**	**199**	*e*PN	Pn	17 56 01.4	0.0
DALT	**Dalyan (Mudla)**	**1.14**	**199**	*e*Pn	Pn	17 56 01.4	0.0
FETY	**Fethiye**	**1.21**	**181**	*e*PN	Pg	17 56 02.9	+0.5
FETY	**Fethiye**	**1.21**	**181**	*e*Pn	Pg	17 56 02.9	+0.5
BCK	**Bucak**	**1.24**	**108**	*e*PN	Pg	17 56 03.5	+0.5
BCK	**Bucak**	**1.24**	**108**	*e*Pn	Pg	17 56 03.5	+0.5
SHUT	**Suhut-Afyon**	**1.34**	**58**	*e*PN	Pb	17 56 04.7	0.0
SHUT	**Suhut-Afyon**	**1.34**	**58**	*e*Pn	Pb	17 56 04.7	+0.1
TVSB	**Tavsanli**	**1.62**	**10**	*e*PN	Pn	17 56 08.5	+0.3
TVSB	**Tavsanli**	**1.62**	**10**	*e*Pn	Pn	17 56 08.5	+0.3

ATH 17 17:56:57.9, 40°.39N×19°.48E, h9km±3km, MD3.1/5
SKO 17 17:56:58.9, 40°.33N×19°.45E, h0km
ISC 17 17:56:58.5±2.6, 40°.36N±0°.06×19°.6E±0°.1, h1km±13km, n18, σ1°29/25, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.67**	**163**	P	**Pg**	**17 57 10.2**	**-1.2**
KEK				S	**Sg**	**17 57 19.5**	**-0.6**
KEK	**Kerkira**	**0.67**	**163**	*e*PB	**Pg**	**17 57 12.3**	**+0.9**
KEK				*e*SB	**Sg**	**17 57 21.6**	**+1.5**
IGT	**Igoumenitsa**	**1.02**	**144**	P	**Pg**	**17 57 17.2**	**-0.9**
IGT				S	**Sg**	**17 57 30.6**	**-0.7**
NEST	**Nestorio**	**1.15**	**87**	P	**Pg**	**17 57 18.8**	**-1.7**
JAN	**Janina**	**1.22**	**125**	P	**Pg**	**17 57 21.3**	**-0.6**
JAN	**Janina**	**1.22**	**125**	*e*PN	**Pg**	**17 57 21.2**	**-0.6**
JAN				*e*SB	**Sg**	**17 57 39.1**	**+1.4**
FNA	**Florina**	**1.45**	**72**	P	**Pn**	**17 57 25.2**	**-0.8**
FNA				S	**Sn**	**17 57 45.2**	**-0.5**
BIA	**Bitola**	**1.50**	**63**	*e*Pn	**Pn**	**17 57 27.3**	**+0.7**
KZN	**Kozani**	**1.70**	**91**	P	**Pb**	**17 57 30.9**	**+0.3**
KZN	**Kozani**	**1.70**	**91**	*e*PG	**Pn**	**17 57 30.2**	**+0.8**
LKD2	**Lefkada island**	**1.79**	**151**	P	**Pn**	**17 57 30.5**	**0.0**
LKD2				S	**Sn**	**17 57 51.8**	**-2.1**
THL	**Klokotos Trika**	**2.05**	**112**	*e*PN	**Pn**	**17 57 35.7**	**+1.5**
GRG	**Griva**	**2.25**	**74**	P	**Pn**	**17 57 38.8**	**+1.9**
EVR	**Evrytania**	**2.26**	**129**	*e*PN	**Pn**	**17 57 38.8**	**+1.7**
EVR				*e*SN	**Sb**	**17 58 08.5**	**-0.2**
LIT	**Litokhoron**	**2.27**	**96**	*e*PN	**Pn**	**17 57 39.2**	**+2.1**
VLS	**Valsamata**	**2.32**	**159**	*e*PB	**Pn**	**17 57 38.5**	**+0.6**
PLG	**Polygyros**	**2.98**	**88**	*e*PB	**Pn**	**17 57 48.7**	**+1.8**
KLV	**Kalavryta, Ach**	**3.07**	**138**	*e*PN	**Pn**	**17 57 48.6**	**+0.4**

NOU 17 18:10:56.3±1.1, 20°.18S×168°.31E, h10km, MD2.8, ML3.7
NEIC 17 18:10:56.1±0.5, 20°.24S×168°.16E, h10km, mb4.6/13, Error ellipse: s-maj=12.0km s-min=10.3km az=215.0
ISCJB 17 18:10:57.8±0.5, 20°.31S±0°.06×168°.15E±0°.07, h32km, mb4.3/17, MS3.6/7, Error ellipse: s-maj=11.3km s-min=6.8km az=35.4
IDC 17 18:11:00.3±1.3, 20°.25S×168°.12E, h36km±8km, mb3.8/8, mb1 4.1/10, mb1mx3.9/20, mbtmp3.9/10, ML3.8/2, MS3.7/9, Ms1 3.7/9, ms1mx3.4/37, Error ellipse: s-maj=23.5km s-min=21.1km az=96.0
ISC 17 18:10:59.6±0.6, 20°.34S±0°.08×168°.19E±0°.09, h32km, n52, σ1°02/61, mb4.3/17, MS3.7/7, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.17**	**214**	*e*P	**Pn**	**18 11 31.3**	**-2.2**
BAYA				*e*S	**Sn**	**18 11 59.1**	**-0.4**
BAYA				AMP		18 12 10.2	
	comp=Z,93nm,4.8s						
DZM	**Mont Dzumac**	**2.37**	**223**	*e*Pn	**Pn**	**18 11 35.0**	**-1.4**
	comp=Z,193nm,0.2s						
DZM				*e*Sn	**Sn**	**18 12 03.7**	**-0.6**
	comp=Z,784nm,0.2s						
DZM	**Mont Dzumac**	**2.37**	**223**	*e*P	**Pn**	**18 11 35.2**	**-1.2**
DZM				*e*S	**Sn**	**18 12 03.7**	**-0.6**
DZM				AMP		18 12 08.9	
	comp=Z,12μm,1.4s						
DZM	**Mont Dzumac**	**2.37**	**223**	*e*Pn	**Pn**	**18 11 34.9**	**-1.4**
DZM				Sn	**Sn**	**18 12 03.3**	**-1.1**
DZM				*e*Sn	**Sn**	**18 12 03.8**	**-0.6**
DZM	**Mont Dzumac**	**2.37**	**223**	Pn	**Pn**	**18 11 35.0**	**-1.4**
	comp=Z,32nm,0.3s,baz=56,slow=16,SNR=788						
DZM				Sn	**Sn**	**18 12 03.3**	**-1.1**
	comp=Z,195nm,0.3s,baz=138,slow=22,SNR=17						
DZM				LR	LR	18 12 23.4	
	comp=Z,611nm,19.0s,baz=42,slow=35						
NOUC	**Port Laguerre**	**2.48**	**225**	*e*P	**Pn**	**18 11 37.7**	**-0.1**
NOUC				*e*S	**Sn**	**18 12 06.6**	**-0.4**
NOUC				AMP		18 12 20.1	
	comp=Z,571nm,0.0s						
ARMA	**Armidale**	**17.99**	**233**	*e*Pn	P	18 15 12.4	+4.6
	comp=Z,19nm,1.2s						
URZ	**Urewera**	**19.46**	**158**	P	**Pn**

GERES	**GERESS Array B**	**144.97**	**330**	PKP	**PKPdf**	**18 30 34.5**	**+0.9**
GERES	**GERESS Array B**	**144.97**	**330**	PKP	**PKPdf**	**18 30 34.5**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=347,slow=1.3,SNR=1.7						
TORD	**Torodi Ar. Bea**	**165.22**	**243**	PKP	**PKPdf**	**18 31 01.4**	**-0.2**
TORD				PKPab	**PKPab**	**18 31 58.6**	**-0.3**
TORD				pPKPab	**pPKPab**	**18 32 08.2**	**-1.1**
TORD	**Torodi Ar. Bea**	**165.22**	**243**	PKP	**PKPdf**	**18 31 01.3**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=83,slow=0.3,SNR=3.5						
TORD				PKPab	**PKPab**	**18 31 58.6**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=101,slow=2.0,SNR=3.8						
TORD				pPKPab	**pPKPab**	**18 32 08.1**	**-1.1**
	comp=Z,1.8nm,1.1s,baz=104,slow=2.1,SNR=5.6						

*ISCJB **17** 18:11:42.9±0.7,39.°31N±0.°03×21.°05E±0.°05, h8km, Error ellipse: s-maj=6.2km s-min=4.8km az=165.8*
*CSEM **17** 18:11:43.6±0.2,39.°36N×20.°96E, h30km, ML1.8/2, Error ellipse: s-maj=7.3km s-min=6.7km az=62.0*
*ATH **17** 18:11:44.1,39.°47N×21.°07E, h36km±14km, MD3.0/3*
*THE **17** 18:11:44.6,39.°30N×20.°91E, h12km±1km, ML1.8/2, Error ellipse: s-maj=1.5km s-min=0.4km az=314.0*

ISC 17 18:11:43.5±1.0, 39.°31N±0.°03×21.°01E±0.°03, h8km, n14, σ0.962/24, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.36**	**341**	P	**Pg**	**18 11 51.5**	**+0.9**
JAN				S	**Sb**	**18 11 57.5**	**-0.6**
JAN	**Janina**	**0.36**	**341**	*e*PB	**Sb**	**18 11 51.5**	**+0.9**
JAN				*e*SB	**Sb**	**18 11 57.2**	**-0.9**
JAN	**Janina**	**0.36**	**341**	P	**Pg**	**18 11 51.5**	**+0.9**
JAN				*e*Sb	**Sb**	**18 11 57.2**	**-0.9**
JAN				S	**Sb**	**18 11 57.5**	**-0.6**
IGT	**Igoumenitsa**	**0.56**	**293**	P	**Pg**	**18 11 54.4**	**0.0**
IGT				S	**Sg**	**18 12 01.7**	**-0.1**
IGT	**Igoumenitsa**	**0.56**	**293**	P	**Pg**	**18 11 54.4**	**0.0**
IGT				S	**Sg**	**18 12 01.7**	**-0.1**
LKD2	**Lefkada island**	**0.59**	**207**	P	**Pg**	**18 11 55.1**	**+0.3**
LKD2				S	**Sg**	**18 12 03.1**	**+0.6**
LKD2	**Lefkada island**	**0.59**	**207**	P	**Pg**	**18 11 55.1**	**+0.3**
LKD2				S	**Sg**	**18 12 03.1**	**+0.6**
EVR	**Evrytania**	**0.74**	**122**	P	**Pb**	**18 11 59.6**	**+0.9**
EVR	**Evrytania**	**0.74**	**122**	P	**Pb**	**18 11 59.6**	**+0.9**
THL	**Klokotos Trika**	**0.82**	**72**	*e*PN	**Pg**	**18 11 59.0**	**-0.3**
THL				*e*SN	**Sg**	**18 12 09.6**	**-0.3**
THL	**Klokotos Trika**	**0.82**	**72**	*e*Pn	**Pg**	**18 11 59.0**	**-0.3**
THL				*e*Sn	**Sg**	**18 12 09.6**	**-0.3**
KEK	**Kerkira**	**1.01**	**294**	*e*PN	**Pb**	**18 12 03.4**	**+0.1**
KFL	**Anninata**	**1.21**	**188**	P	**Pb**	**18 12 06.2**	**-0.5**
KFL	**Anninata**	**1.21**	**188**	P	**Pb**	**18 12 06.2**	**-0.5**

IDC 17 18:13:29.6±0.8, 14.°90N×144.°78E, h0km, mb3.7/13, mb1 3.9/13, mb1mx3.8/26, mbtmp3.7/13, MS3.4/2, Ms1 3.4/2, ms1mx2.9/54, Error ellipse: s-maj=29.4km s-min=14.9km az=82.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.30**	**176**	Pn	Pg	18 13 53.4	-1.2
	377nm,0.3s,baz=296,slow=2.9,SNR=93						
GUMO				Sn	Sg	18 14 09.2	-2.3
	192nm,0.3s,baz=157,slow=21,SNR=20						
JNU	**Nakatsue**	**22.10**	**328**	P	P	18 18 25.9	-0.8
	3.3nm,0.7s,baz=91,slow=7.1,SNR=4.1						
MJAR	**Matsushiro Arr**	**22.34**	**346**	P	P	18 18 27.6	-1.6
	3.2nm,1.0s,baz=174,slow=9.9,SNR=5.5						
KSRS	**Korea Array**	**27.00**	**329**	P	P	18 19 14.7	+1.4
	0.9nm,0.9s,baz=132,slow=6.7,SNR=3.3						
KSRS				LR	LR	18 28 03.8	
	comp=Z,29nm,21.0s,baz=145,slow=32						
WRA	**Warramunga Arr**	**36.11**	**197**	P	P	18 20 33.5	-0.1
	1.4nm,0.8s,baz=22,slow=9.9,SNR=5.3						
ASAR	**Alice Springs**	**39.78**	**196**	P	P	18 21 05.2	+0.7
	0.3nm,0.6s,baz=22,slow=11,SNR=6.6						
CMAR	**Chiang Mai Arr**	**43.97**	**281**	P	P	18 21 39.9	+0.9
	1.0nm,0.7s,baz=84,slow=6.6,SNR=5.9						
SONM	**Songino Array**	**45.62**	**324**	P	P	18 21 50.9	-1.1
	0.2nm,0.7s,baz=133,slow=12,SNR=2.5						
MKAR	**Makanchi Array**	**60.50**	**316**	P	P	18 23 40.7	-0.9
	0.2nm,0.7s,baz=92,slow=8.9,SNR=3.4						
ZALV	**Zalesovo Beam**	**60.52**	**324**	P	P	18 23 41.4	-0.2
	0.2nm,0.4s,baz=108,slow=3.6,SNR=3.0						
YKA	**Yellowknife Ar**	**81.74**	**27**	P	P	18 25 49.6	-0.4
	0.6nm,0.8s,baz=287,slow=5.4,SNR=6.8						
RES	**Resolute Bay**	**83.30**	**13**	P	P	18 25 58.9	+1.0
	1.0nm,0.8s,baz=319,slow=3.9,SNR=4.4						
NVAR	**Mina Array Bea**	**86.17**	**51**	P	P	18 26 14.0	+0.5
	0.2nm,0.3s,baz=270,slow=4.5,SNR=2.3						
FINES	**FINESS Array B**	**89.95**	**335**	P	P	18 26 30.3	-0.3
	1.5nm,0.8s,baz=75,slow=5.9,SNR=3.5						
HFS	**Hagfors**	**95.56**	**338**	LR	LR	19 10 27.5	
	comp=Z,54nm,21.5s,baz=264,slow=36						
LPAZ	**La Paz**	**148.28**	**97**	PKPbc	PKPbc	18 33 19.6	+0.1
	0.7nm,0.7s,baz=303,slow=5.7,SNR=4.0						

BUC 17 18:14:37.5±0.7, 45.°41N×27.°35E, h11km±9km, MD2.1/4, 4C-4D, Error ellipse: s-maj=9.5km s-min=3.2km az=23.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRER		**0.27**	**263**	*i*P	Pg	18 14 43.2	+0.2
GRER				S	Sb	18 14 48.8	-0.2
GRER		**0.27**	**263**	*i*P	Pg	18 14 43.2	+0.2
GRER				*i* S	Sb	18 14 48.8	-0.2
CFR	**Carcaliu**	**0.60**	**113**	*i*P	Pg	18 14 49.5	+0.3
CFR				S	Sb	18 14 59.0	+0.6
CFR	**Carcaliu**	**0.60**	**113**	*i*P	Pg	18 14 49.5	+0.3
CFR				*i* S	Sb	18 14 59.0	+0.6
VRI	**Vrincioaia**	**0.63**	**316**	*i*P	Pg	18 14 50.1	+0.3
VRI	**Vrincioaia**	**0.63**	**316**	*i*P	Pg	18 14 50.1	+0.3
VRI				*i* S	Sb	18 14 59.7	+0.2
PLOR	**Plostina**	**0.66**	**312**	S	Sb	18 15 01.5	+1.1
PLOR	**Plostina**	**0.66**	**312**	*i* S	Sb	18 15 01.5	+1.1
MLR	**Muntele Rosu**	**0.99**	**275**	*i*P	Pn	18 14 57.3	-0.3
MLR	**Muntele Rosu**	**0.99**	**275**	*i*P	Pn	18 14 57.3	-0.3
MLR				*i* S	Sn	18 15 11.0	-0.7

IDC 17 18:14:40.7±1.3, 14.°64N×144.°32E, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.6/25, mbtmp3.7/8, MS3.1/1, Ms1 3.1/1, ms1mx2.4/53, Error ellipse: s-maj=50.6km s-min=17.0km az=68.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.18**	**153**	Pn	Pb	18 15 03.9	0.0
	62nm,0.3s,baz=202,slow=22,SNR=10						
GUMO				Sn	Sb	18 15 19.8	+0.2
	99nm,0.3s,baz=6.9,slow=23,SNR=5.8						
JNU	**Nakatsue**	**22.08**	**329**	P	P	18 19 38.4	+0.9
	2.9nm,0.6s,baz=157,slow=7.7,SNR=3.4						
MJAR	**Matsushiro Arr**	**22.48**	**347**	P	P	18 19 41.9	+0.1
	2.7nm,0.9s,baz=183,slow=8.2,SNR=4.9						
MJAR				LR	LR	18 27 37.6	
	comp=Z,49nm,18.1s,baz=255,slow=35						
KSRS	**Korea Array**	**26.99**	**330**	P	P	18 20 24.1	-0.1
	1.0nm,0.8s,baz=143,slow=8.4,SNR=3.3						
WRA	**Warramunga Arr**	**35.74**	**196**	P	P	18 21 42.5	+1.1
	0.7nm,0.8s,baz=23,slow=9.7,SNR=2.6						
CMAR	**Chiang Mai Arr**	**43.58**	**281**	P	P	18 22 46.1	-0.8
	1.7nm,0.8s,baz=88,slow=6.4,SNR=6.8						
SONM	**Songino Array**	**45.57**	**325**	P	P	18 23 01.8	-0.7
	0.4nm,0.8s,baz=131,slow=6.5,SNR=2.4						
MKAR	**Makanchi Array**	**60.37**	**316**	P	P	18 24 51.8	0.0
	0.5nm,0.8s,baz=92,slow=7.9,SNR=2.7						
ZALV	**Zalesovo Beam**	**60.46**	**324**	P	P	18 24 52.4	+0.2
	0.2nm,0.3s,baz=88,slow=9.2,SNR=2.5						

*NEIC **17** 18:17:53.0,30.°73S×71.°42W, h43km, MG4.0(GUC), After GUC.*
NEIC Felt [II] at Ovalle.
*GUC **17** 18:17:53.9±0.8,30.°73S×71.°42W, h43km±3km, ML4.0*

ISC 17 18:17:53.6±2.6, 30.°72S±0.°04×71.°6W±0.°2, h24km±17km, n18, σ0.968/32, 2C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMCH	**Combarbala**	**0.65**	**134**	*i*P	**Pb**	**18 18 06.0**	**-0.4**
CMCH				*i* S	**Sb**	**18 18 14.9**	**-0.3**
CMCH	**Combarbala**	**0.65**	**134**	*i*P	**Pb**	**18 18 06.0**	**-0.4**
CMCH				*i* S	**Sb**	**18 18 14.9**	**-0.3**
CMCH				AML	AML	18 18 15.1	
	comp=N,25μm,0.3s						
TLL	**Tololo Astrono**	**0.85**	**50**	*i*P	**Pb**	**18 18 09.8**	**-0.1**
TLL				*i* S	**Sb**	**18 18 21.1**	**+0.2**
TLL	**Tololo Astrono**	**0.85**	**50**	*i*P	**Pb**	**18 18 09.8**	**-0.1**
TLL				*i* S	**Sb**	**18 18 21.1**	**+0.2**
CHNG	**Los Chungos**	**1.16**	**178**	*i*P	**Pn**	**18 18 14.3**	**0.0**
CHNG				S	**Sn**	**18 18 28.6**	**-0.7**
CHNG	**Los Chungos**	**1.16**	**178**	*i*P	**Pn**	**18 18 14.3**	**0.0**
CHNG				*i* S	**Sn**	**18 18 28.6**	**-0.7**
LCO	**Las Campanas**	**1.86**	**24**	*e*Pn	**Pn**	**18 18 23.9**	**-0.2**
LCO	**Las Campanas**	**1.86**	**24**	*e*P	**Pn**	**18 18 24.2**	**+0.1**
LCO				*e*S	**Sn**	**18 18 47.1**	**+0.1**
ROCH	**El Roble**	**2.29**	**169**	*e*P	**Pn**	**18 18 29.8**	**-0.3**
ROCH				*i* S	**Sn**	**18 18 58.3**	**+0.6**
PEL	**Peldehue**	**2.53**	**163**	*e*P	**Pn**	**18 18 33.1**	**-0.1**
PEL				AML	AML	18 19 17.4	
	comp=N,824nm,0.3s						
CLCH	**Cerro Calan**	**2.80**	**162**	*e*P	**Pn**	**18 18 36.6**	**-0.4**
CLCH				*e*S	**Sn**	**18 19 11.7**	**+1.6**
CLCH				AML	AML	18 19 28.9	
	comp=E,486nm,0.4s						
FCH	**Farellones**	**2.81**	**158**	*e*P	**Pb**	**18 18 43.4**	**+0.1**
FCH				*e*S	**Sb**	**18 19 19.3**	**+1.9**
RCDM	**Rinconada Maip**	**2.83**	**167**	*e*P	**Pn**	**18 18 37.0**	**-0.3**
RCDM				*e*S	**Sn**	**18 19 09.9**	**-0.9**
RCDM	**Rinconada Maip**	**2.83**	**167**	*e*P	**Sn**	**18 18 37.0**	**-0.3**
RCDM				*e*S	**Sn**	**18 19 09.9**	**-0.9**
ANTU	**Antumapu**	**2.94**	**165**	*e*S	**Sn**	**18 19 12.7**	**-0.9**
ANTU				AML	AML	18 19 29.1	
	comp=E,354nm,0.6s						
LMEL	**Las Melosas**	**3.32**	**160**	*e*P	**Pn**	**18 18 45.1**	**+1.0**
LMEL				*e*S	**Sn**	**18 19 22.9**	**-0.1**
LMEL	**Las Melosas**	**3.32**	**160**	*e*P	**Pn**	**18 18 45.1**	**+1.0**
LMEL				*e*S	**Sn**	**18 19 22.9**	**-0.1**
LMEL				AML	AML	18 19 38.2	
	comp=N,211nm,0.1s						
TRQA	**Tornquist**	**10.77**	**135**	*e*Pn	**Pn**	**18 20 25.9**	**-0.4**

*BJI **17** 18:29:21.3, 1.°05S×133.°19E, h14km, mB4.9/26, mb4.8/43, Ms4.5/19, Ms7 4.3/20*
*AUST **17** 18:29:29.4, 0.°49S×133.°00E, h25km*
*ISCJB **17** 18:29:30.2±0.6, 0.°45S±0.°03×132.°90E±0.°03, h40km±5km, mb4.8/75, MS4.0/20, Error ellipse: s-maj=4.9km s-min=3.9km az=135.5*
*IDC **17** 18:29:30.3±2.8, 0.°45S×132.°89E, h26km±17km, mb4.4/20, mb1 4.5/21, mb1mx4.4/28, mbtmp4.4/21, ML5.0/1, MS3.9/17, Ms1 3.9/17, ms1mx3.7/39, Error ellipse: s-maj=22.3km s-min=9.5km az=76.0*
*NEIC **17** 18:29:32.2±0.3, 0.°51S×132.°75E, h45km, mb4.7/29, Error ellipse: s-maj=9.6km s-min=5.3km az=68.0*
*DJA **17** 18:29:33.5±0.7, 1.°S±3.°×13.°3E±.°, h40km±6km, M5.0/70, mB5.5/27, mb5.1/70, MLv5.4/12, Mw(mB)4.9/27*

ISC 17 18:29:30.4±0.5, 0.°49S±0.°03×132.°87E±0.°04, h27km±3km, n229, σ1.961/64/254, mb4.8/75, MS4.0/20, 1C-1D, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**1.65**	**257**	P	**Pn**	**18 29 57.5**	**-0.1**
SWI				S	**Sn**	**18 30 19.2**	**+1.3**
SWI	**Sorong**	**1.65**	**257**	P	**Pn**	**18 29 57.2**	**-0.4**
	baz=1.8,SNR=1000						
SWI				S	**Sb**	**18 30 19.5**	**-1.1**
	baz=1.8,SNR=8.3						
RKPI	**Ransiki, Papua**	**1.66**	**128**	P	**Pb**	**18 30 00.2**	**-0.2**
RKPI				S	**Sb**	**18 30 19.9**	**-1.0**
FAKI	**Fak Fak**	**2.49**	**194**	P	**Pn**	**18 30 10.1**	**+0.8**
FAKI				S	**Sn**	**18 30 39.0**	**+0.2**
BAKI	**Biak**	**3.31**	**102**	P	**Pn**	**18 30 20.9**	**+0.3**
SRPI	**Serui, Papua**	**3.64**	**112**	P	**Pn**	**18 30 25.9**	**+0.8**
BNDI	**Bandanaira**	**4.98**	**216**	P	**Pn**	**18 30 44.0**	**+0.5**
TLE	**Tual**	**5.12**	**181**	P	**Pn**	**18 30 45.5**	**+0.1**
	2μm,0.7s,26μm10nm						
TLE	**Tual**	**5.12**	**181**	P	**Pn**	**18 30 46.7**	**+1.3**
	baz=5.2,SNR=293						
TLE				S	**Sn**	**18 31 48.2**	**+4.7**
	baz=5.2,SNR=14						
LBMI	**Labuha**	**5.37**	**268**	P	**Pn**	**18 30 48.3**	**-0.5**
	489nm,0.7s,5μm1.7nm						
GAMI	**Galela, Maluku**	**5.58**	**294**	P	**Pn**	**18 30 53.5**	**+1.8**
	445nm,0.9s,7μm2.3nm						
TNTI	**Ternate**	**5.64**	**283**	P	**Pn**	**18 30 53.5**	**+1.0**
	289nm,0.8s,3μm1.1nm						
AAI	**Ambon**	**5.65**	**236**	P	**Pn**	**18 30 53.9**	**+1.3**
	2μm,0.8s,18μm6.2nm						
AAI	**Ambon**	**5.65**	**236**	P	**Pn**	**18 30 53.9**	**+1.3**
	baz=5.8,SNR=198						
PALU	**Palau**	**7.94**	**12**	P	**Pn**	**18 31 23.6**	**-0.6**
	baz=8.0,SNR=41						
PALU				S	**Sn**	**18 32 48.2**	**-5.1**
	baz=8.0,SNR=7.5						
JAY	**Jayapura**	**8.09**	**104**	P	**Pn**	**18 31 28.7**	**+2.4**
	18nm,0.7s						
JAY	**Jayapura**	**8.09**	**104**	P	Pb	18 31 40.9	-9.1
	baz=8.0,SNR=4.0						
KMSI	**Cibinong**	**8.95**	**277**	P	**Pn**	**18 31 40.5**	**+2.5**
	308nm,0.9s,2μm						
LUWI	**Luwuk**	**10.11**	**267**	P	**Pn**	**18 31 55.6**	**+1.7**
	264nm,1.1s,2μm						
DAV	**Davao City (W)**	**10.45**	**316**	Pn	**Pn**	**18 31 55.8**	**-2.8**
DAV	**Davao City (W)**	**10.45**	**316**	Pn	Pn	18 32 03.1	+4.5
	10nm,0.3s,baz=344,slow=9.8,SNR=4.1						
KDI	**Kendari**	**10.80**	**251**	P	**Pn**	**18 32 05.7**	**+2.3**
	60nm,1.0s						
MRSI	**Marisa**	**10.97**	**275**	P	**Pn**	**18 32 08.6**	**+2.9**
	56nm,0.7s,1μm						
BBSI	**Bau Bau**	**11.41**	**244**	P	**Pn**	**18 32 13.7**	**+1.9**
	88nm,1.2s						
SKSI	**Soroako, Sulaw**	**11.70**	**260**	P	**Pn**	**18 32 17.1**	**+1.3**
	75nm,0.7s,615nm						
KDU	**Kakadu**	**12.13**	**182**	P	**Pn**	**18 32 19.7**	**-1.8**
	baz=12,SNR=78						
KDU				S	**Sn**	**18 34 31.1**	**-4.8**
	baz=12,SNR=6.9						
MTN	**Manton Dam**	**12.39**	**188**	P	**Pn**	**18 32 23.2**	**-2.0**
	baz=12,SNR=556						
MTN				S	Sn	18 34 34.0	-8.5
	baz=12,SNR=12						
PCI	**Palu**	**13.04**	**268**	P	P	18 32 48.0	+3.9
	baz=13,SNR=3.8						
PCI				S	S	18 35 11.3	-12
	baz=13,SNR=6.1						
TTSI	**Tana Toraja**	**13.28**	**259**	P	**Pn**	**18 32 38.7**	**+1.3**
	57nm,0.8s						
MMRI	**Maumere**	**13.32**	**232**	P	**Pn**	**18 32 40.2**	**+2.2**
	90nm,0.9s,906nm						
SPSI	**Sidrap Palu**	**13.53**	**255**	P	**Pn**	**18 32 43.3**	**+2.5**
	89nm,0.8s,701nm						
BSSI	**Bau Bau, Buton**	**13.57**	**245**	P	**Pn**	**18 32 43.6**	**+2.3**
	66nm,0.9s,4μm						
BKSI	**Bulukumba**	**13.60**	**249**	P	**Pn**	**18 32 43.8**	**+2.1**
	88nm,0.6s,884nm						
KAPI	**Kappang**	**13.85**	**251**	*e*Pn	Pn	18 32 48.6	+3.5
	65nm,1.0s						
KAPI	**Kappang**	**13.85**	**251**	P	**Pn**	**18 32 47.6**	**+2.5**
	60nm,0.9s,582nm						
KAPI	**Kappang**	**13.85**	**251**	Pn	Pn	18 32 48.8	+3.8
	3.2nm,0.3s,baz=113,slow=7.6,SNR=14						
MYLDM	**Lahad Datu**	**15.41**	**292**	P	**P**	**18 33 09.9**	**-0.7**
MYLDM	**Lahad Datu**	**15.41**	**292**	P	**P**	**18 33 13.2**	**+2.7**
WSI	**Waingapu**	**15.48**	**234**	P	**P**	**18 33 13.4**	**+2.2**
BASI	**Baing, Sumba**	**15.58**	**231**	P	**P**	**18 33 11.9**	**-0.5**
SMKI	**Samarinda**	**15.66**	**270**	P	**P**	**18 33 16.0**	**+2.8**
TSM	**Tawau**	**15.72**	**288**	P	**Pn**	**18 33 10.8**	**+0.6**
PMG	**Port Moresby**	**16.76**	**122**	*e*Pn	**P**	**18 33 26.5**	**+1.1**
	35nm,1.0s						
PMG	**Port Moresby**	**16.76**	**122**	Pn	**P**	**18 33 27.3**	**+1.8**
	0.5nm,0.3s,baz=308,slow=12,SNR=4.8						
SDKM	**Sandakan**	**16.79**	**291**	P	**P**	**18 33 28.7**	**+2.8**
COEN	**Coen**	**16.83**	**143**	*e*Pn	**Pn**	**18 33 24.1**	**-0.2**
	120nm,0.6s						
COEN	**Coen**	**16.83**	**143**	P	**Pn**	**18 33 24.0**	**-0.4**
	baz=17,SNR=11						
KBKI	**Kotabaru**	**16.92**	**260**	P	**P**	**18 33 26.9**	**-0.4**
	42nm,1.3s,473nm						
KDM	**Kudat**	**17.61**	**295**	P	P	18 33 40.5	+5.7
KKM	**Kota Kinabalu**	**17.84**	**292**	*e*Pn	**P**	**18 33 39.2**	**+1.6**
	17nm,0.9s						
KKM	**Kota Kinabalu**	**17.84**	**292**	P	P	18 33 43.7	+6.1
KKM	**Kota Kinabalu**	**17.84**	**292**	P	**P**	**18 33 40.1**	**+2.5**
	22nm,1.6s						
KKM	**Kota Kinabalu**	**17.84**	**292**	P	**P**	18 33 52.1	+14
	baz=18,SNR=3.6						
BBKI	**Banjar Baru**	**18.25**	**260**	P	**P**	**18 33 44.3**	**+2.3**
	105nm,0.8s						
GUMO	**Guam**	**18.36**	**40**	LR	LR	18 40 00.0	
	comp=Z,327nm,20.3s,baz=152,slow=34						
KHKI	**Kahang-Kahang**	**18.89**	**245**	P	**Pn**	**18 33 49.7**	**0.0**
	112nm,1.3s,1μm						
FITZ	**Fitzroy Crossi**	**18.89**	**202**	*e*Pn	**P**	**18 33 46.2**	**-2.7**
	24nm,0.7s						
FITZ				*e*Sn	Sn	18 37 04.5	-16
FITZ				S	S	18 37 05.1	-17
FITZ	**Fitzroy Crossi**	**18.89**	**202**	P	**P**	**18 33 46.2**	**-2.7**
	1.8nm,0.3s,baz=19,slow=13,SNR=48						
FITZ				S	Sn	18 37 05.1	-15
	0.4nm,0.3s,baz=121,slow=4.9,SNR=4.9						
FITZ				LR	LR	18 41 37.7	
	comp=Z,180nm,19.7s,baz=31,slow=38						
FITZ	**Fitzroy Crossi**	**18.89**	**202**	P	**P**	**18 33 46.5**	**-2.5**
	baz=19,SNR=26						
FITZ				S	Sn	18 37 05.3	-15
	baz=19,SNR=3.4						
SRBI	**Singaraja**	**19.14**	**246**	P	**Pn**	**18 33 52.9**	**+0.1**
	97nm,1.5s,1μm						
WRAB	**Tennant Creek**	**19.38**	**176**	*e*Pn	**P**	**18 33 53.8**	**-0.6**
	42nm,0.7s						
WRAB				*e*Sn	S	18 37 18.3	-14
WRA	**Warramunga Arr**	**19.39**	**176**	P	**P**	**18 33 53.9**	**-0.5**
WRA				S	S	18 37 19.1	-13
WRA	**Warramunga Arr**	**19.39**	**176**	P	**P**	**18 33 53.9**	**-0.5**
	4.3nm,0.3s,baz=353,slow=12,SNR=129						
WRA				S	S	18 37 19.1	-13
	0.9nm,0.3s,baz=358,slow=22,SNR=12						
IGBI	**Denpasar**	**19.49**	**244**	P	**Pn**	**18 33 57.1**	**+0.2**
	87nm,0.8s,47μm						
KMMI	**Kalianget**	**19.94**	**250**	P	**Pn**	**18 34 03.5**	**+1.2**
	85nm,1.2s						
BYJI	**Banyuwangi**	**19.98**	**247**	P	**Pn**	**18 34 02.7**	**0.0**
BTM	**Bintulu**	**20.11**	**281**	P	Pn	18 34 05.3	+1.0
BLJI	**Banyuglugur**	**20.52**	**249**	P	Pn	18 34 08.4	-0.7
	103nm,1.0s						
GMJI	**Gumukmas**	**20.84**	**248**	P	**P**	**18 34 11.5**	**+1.2**
	126nm,1.1s,1μm						
SBUM	**Sibu**	**20.85**	**278**	P	Pn	18 34 12.2	-0.7
SBUM	**Sibu**	**20.85**	**278**	P	Pn	18 34 12.6	-0.3
	28nm,0.9s						
BWJI	**Bawean**	**20.86**	**255**	P	Pn	18 34 12.1	-1.0
	41nm,1.5s,1μm						
QIS	**Mount Isa**	**21.01**	**162**	P	**P**	**18 34 12.1**	**+0.1**
	baz=21,SNR=43						
PBKI	**Pangkalan Bun**	**21.30**	**264**	P	**P**	**18 34 15.8**	**+0.5**
	131nm,1.0s,1μm						
STKI	**Sintang**	**21.39**	**271**	P	**P**	**18 34 17.5**	**+1.2**
	37nm,1.1s,7μm						
KRKI	**Karangkates**	**21.72**	**249**	P	**P**	**18 34 21.8**	**+2.1**
	151nm,0.5s						
PWJI	**Pagerwojo**	**22.28**	**250**	P	**P**	**18 34 25.3**	**-0.5**
	39nm,1.1s						
KSM	**Kuching**	**22.64**	**275**	*e*Pn	**P**	**18 34 28.6**	**-1.0**
	67nm,1.6s						
KSM	**Kuching**	**22.64**	**275**	P	**P**	**18 34 30.3**	**+0.7**
KSM	**Kuching**	**22.64**	**275**	P	**P**	**18 34 30.1**	**+0.5**
	26nm,1.3s						
KSM	**Kuching**	**22.64**	**275**	P	**P**	**18 34 30.3**	**+0.7**
	baz=23,SNR=20						
PCJI	**Pacitan**	**22.93**	**250**	P	**P**	**18 34 30.5**	**-2.1**
	94nm,0.9s						
AS31	**Alice Springs**	**23.06**	**178**	*e*P	**P**	**18 34 33.8**	**-0.2**
AS31				*e*Sn	**S**	**18 38 40.5**	**-2.8**
ASAR	**Alice Springs**	**23.06**	**178**	P	**P**	**18 34 34.0**	**0.0**
ASAR				S	**S**	**18 38 44.5**	**+1.1**
ASAR	**Alice Springs**	**23.06**	**178**	P	**P**	**18 34 34.0**	**0.0**
	48nm,0.7s,baz=6.3,slow=6.8,SNR=533						
ASAR				S	**S**	**18 38 44.5**	**+1.1**
	26nm,1.0s,baz=1.4,slow=24,SNR=14						
ASAR				LR	LR	18 44 11.2	
	comp=Z,271nm,20.6s,baz=343,slow=38						
SMRI	**Semarang**	**23.30**	**253**	P	**P**	**18 34 37.6**	**+1.2**
	136nm,1.2s						
UGM	**Wanagama**	**23.46**	**251**	*e*P	**P**	**18 34 35.9**	**-2.1**
UGM	**Wanagama**	**23.46**	**251**	P	**P**	**18 34 38.5**	**+0.5**
	188nm,1.2s						
UGM	**Wanagama**	**23.46**	**251**	P	**P**	**18 34 38.6**	**+0.6**
	baz=24,SNR=3.8						
CTA	**Charters Tower**	**23.48**	**147**	P	**P**	**18 34 39.2**	**+1.1**
CTA	**Charters Tower**	**23.48**	**147**	P	**P**	**18 34 39.2**	**+1.1**
	34nm,0.9s,baz=328,slow=11,SNR=22						
CTA				LR	LR	18 44 54.9	
	comp=Z,624nm

20nm,0.9s
PSI Prapat 34.09 276 P **P** 18 36 11.9 -1.2
9.1nm,0.6s,baz=108,slow=5.7,SNR=6.0
PSI Prapat 34.09 276 P **P** 18 36 12.7 -0.5
baz=34,SNR=4.7
ARMA Armidale 34.70 151 P **P** 18 36 19.4 +1.1
baz=35,SNR=9.1
NJ2 Nanjing 34.98 339 *e*P **P** 18 36 20.4 0.0
NJ2 pmax pmax
comp=Z,20nm,0.6s
GSI Gunungsitoli 35.33 273 S S 18 42 17.9 +21
baz=36,SNR=9.0
NWAO Narrogin (SRO) 35.47 203 *e*P **P** 18 36 23.5 -1.2
comp=Z,12nm,0.8s
YNG Young 36.64 158 P **P** 18 36 35.7 +0.9
baz=37,SNR=6.6
GYA Guiyang 36.82 319 P **P** 18 36 38.0 +1.5
GYA PP **PnPn** 18 38 05.4 +4.6
GYA PcP **PcP** 18 38 58.8 +0.5
GYA S **S** 18 42 17.5 -1.9
GYA ScS **ScS** 18 46 45.6 -5.2
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,4.8s
ARPS Mount Arapiles 37.05 168 P **P** 18 36 38.7 +0.6
baz=37,SNR=17
RKGY Rocky Gully 37.05 202 P **P** 18 36 39.9 +1.7
baz=37,SNR=5.7
MJAR Matsushiro Arr 37.18 7 P **P** 18 36 37.4 -1.8
MJAR Matsushiro Arr 37.18 7 P **P** 18 36 37.4 -1.8
comp=Z,2.2nm,0.8s,baz=195,slow=8.9,SNR=8.0
KSAR Wonju Array Be 38.02 354 P **P** 18 36 46.4 +0.1
KSRS Korea Array 38.03 354 P **P** 18 36 46.4 0.0
comp=Z,2.7nm,0.9s,baz=169,slow=12,SNR=7.5
KSRS LR LR 18 50 34.9
comp=Z,176nm,19.6s,baz=171,slow=33
CM31 Chiang Mai Arr 38.28 301 *e*P **P** 18 36 48.4 -0.5
comp=Z,2.3nm,0.6s
CMAR Chiang Mai Arr 38.28 301 P **P** 18 36 49.1 +0.2
CMAR Chiang Mai Arr 38.28 301 P **P** 18 36 49.1 +0.2
comp=Z,2.8nm,0.8s,baz=120,slow=7.1,SNR=20
CMMT Chiang Mai 38.44 302 P **P** 18 36 50.8 +0.6
comp=Z,7.6nm,0.9s
CHTO Chiang Mai 38.44 302 *e*P **P** 18 36 49.1 -1.1
comp=Z,7.1nm,1.1s
CHTO Chiang Mai 38.44 302 P **P** 18 36 50.2 0.0
comp=Z,8.6nm,0.9s
TOO Toolamgi 38.70 164 P **P** 18 36 53.3 +1.2
baz=39,SNR=7.1
KMI Kunming 38.70 313 P **P** 18 36 53.4 +0.8
KMI sP sP 18 36 58.1 -6.0
KMI pmax pmax
comp=Z,11nm,1.1s
XAN Xi'an 41.05 329 P **P** 18 37 11.0 -0.7
XAN pP **pP** 18 37 21.4 +1.5
XAN pmax pmax
comp=Z,6.0nm,0.7s
CD2 Chengdu 41.70 321 P **P** 18 37 17.5 +0.3
CD2 pP **pP** 18 37 22.0 -3.4
CD2 sP **sP** 18 37 24.5 -4.2
CD2 PP **PnPn** 18 38 57.6 -1.3
CD2 PcP **PcP** 18 39 14.3 +0.7
CD2 PcS **PcS** 18 43 04.4 -0.8
CD2 S **S** 18 43 35.0 +2.4
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,140nm,5.3s
TAU Tasmania Unive 44.18 165 *e*P **P** 18 37 38.0 +1.0
comp=Z,52nm,1.2s
USRK Ussuriysk Arra 44.50 359 P **P** 18 37 39.5 +0.1
comp=Z,5.6nm,0.9s,baz=180,slow=7.0,SNR=7.3
CN2 Changchun 44.59 352 *e*P **P** 18 37 40.9 +0.7
CN2 *e*S **S** 18 44 18.9 +4.4
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,19.0s
CN2 LR LR
comp=E,100nm,19.0s
CN2 LR LR
comp=Z,100nm,20.0s
MDJ Mudanjiang 45.00 357 P **P** 18 37 43.6 +0.1
MDJ pmax pmax
comp=Z,16nm,0.9s
MDJ pmax pmax
comp=Z,110nm,4.2s
LZH Lanzhou 45.31 326 *e*P **P** 18 37 47.3 +1.0
LZH pP **pP** 18 37 50.5 -4.1
LZH sP sP 18 37 51.9 -6.0
LZH *e*PP **PP** 18 39 34.3 +1.7
LZH *e*S **S** 18 44 27.0 +1.5
LZH pmax pmax
comp=Z,25nm,1.5s
LZH pmax pmax
comp=Z,120nm,5.7s
LZH LR LR
comp=N,150nm,14.5s
LZH LR LR
comp=E,240nm,14.3s
LZH LR LR
comp=Z,380nm,17.8s
HHC Hu-ho-hao-te 45.47 337 *e*P **P** 18 37 48.3 +0.8
HHC pP **pP** 18 37 58.3 +2.5
HHC sP **sP** 18 38 02.0 +2.9
HHC PP **PP** 18 39 35.4 +1.2
HHC S **S** 18 44 27.3 -0.3
HHC sS **sS** 18 44 43.3 +2.1
HHC pmax pmax
comp=Z,55nm,1.0s
HHC pmax pmax
comp=Z,200nm,6.5s
HHC LR LR
comp=N,240nm,14.9s
HHC LR LR
comp=E,190nm,13.8s
HHC LR LR
comp=Z,280nm,14.3s
LSA Lhasa 49.81 311 P **P** 18 38 22.3 +0.5
GTA Gaotai 49.91 326 *e*P **P** 18 38 22.3 +0.3
GTA pP **pP** 18 38 25.6 -4.7
GTA sP sP 18 38 28.3 -5.3
GTA PP **PP** 18 40 19.9 +2.8
GTA S **S** 18 45 33.5 +2.8
GTA pmax pmax
comp=Z,5.0nm,1.3s
GTA pmax pmax
comp=Z,64nm,5.7s
GTA LR LR
comp=E,77nm,16.1s
GTA LR LR
comp=Z,100nm,14.7s
TAPN Taplejung 51.44 306 *e*P **P** 18 38 33.0 -0.9
comp=Z,41nm,1.2s
ODAN Odare 51.49 306 *e*P **P** 18 38 33.7 -0.6
comp=Z,32nm,0.9s
RAMN Ramite 52.17 305 *e*P **P** 18 38 39.1 -0.3
comp=Z,22nm,0.6s
ULN Ulaanbaatar 53.14 339 *e*P **P** 18 38 45.6 -0.4
comp=Z,9.2nm,1.0s
ULN Ulaanbaatar 53.14 339 P **P** 18 38 46.7 +0.7
GUN Gumba 53.15 306 *e*P **P** 18 38 46.1 -0.6
comp=Z,33nm,0.7s
SONM Songino Array 53.36 338 P **P** 18 38 48.0 +0.4
SONM PcP **PcP** 18 39 54.8 0.0
SONM Songino Array 53.36 338 P **P** 18 38 48.0 +0.4
comp=Z,3.2nm,0.9s,baz=153,slow=7.7,SNR=23
SONM PcP **PcP** 18 39 54.8 0.0
comp=Z,1.4nm,0.6s,baz=168,slow=4.6,SNR=4.4
PKI Pulchoki 53.39 305 *e*P **P** 18 38 47.5 -1.0
PKIN Phulchoki 53.41 305 *e*P **P** 18 38 47.6 -0.9
comp=Z,7.8nm,0.7s
KKN Kakani 53.59 306 *e*P **P** 18 38 48.9 -0.8
comp=Z,7.8nm,0.6s
DMN Daman 53.66 305 *e*P **P** 18 38 49.6 -0.7
comp=Z,22nm,0.9s
KOLN Koldanda 54.95 305 *e*P **P** 18 38 59.2 -0.5
comp=Z,25nm,0.6s
DANN Dangsing 55.04 306 *e*P **P** 18 38 59.9 -0.5
comp=Z,28nm,0.7s
PYUN Piuthan 55.57 305 *e*P **P** 18 39 03.6 -0.6
comp=Z,50nm,0.8s
PETK Petropavlovsk- 57.29 18 P **P** 18 39 16.2 +0.5
comp=Z,11nm,0.9s,baz=190,slow=7.5,SNR=7.7
PETK LR LR 18 59 30.9
comp=Z,93nm,20.0s,baz=184,slow=31
WMQ Urumqi 59.71 324 P **P** 18 39 34.0 +1.2
WMQ PP **PP** 18 41 48.0 +3.2
WMQ ScP **ScP** 18 44 17.0 -1.9
WMQ S **S** 18 47 39.0 -3.0
WMQ ScS **ScS** 18 49 15.0 -6.5
WMQ pmax pmax
comp=Z,15nm,1.0s
WMQ pmax pmax
comp=Z,86nm,6.0s
WMQ LR LR
comp=N,59nm,16.0s
WMQ LR LR
comp=E,88nm,16.0s
WMQ LR LR
comp=Z,44nm,16.0s
FX1 Attu Island--F 62.91 26 LR LR 19 01 16.0
comp=Z,27nm,21.9s,baz=85,slow=30
MK31 Makanchi Array 64.52 324 *e*P **P** 18 40 04.7 -0.3
MKAR Makanchi Array 64.52 324 P **P** 18 40 05.1 +0.1
MKAR Makanchi Array 64.52 324 P **P** 18 40 05.1 +0.1
comp=Z,2.7nm,0.5s,baz=113,slow=8.4,SNR=88
KSH Kashi 65.35 315 *e*P **P** 18 40 11.4 +0.7
KSH PcP **PcP** 18 40 42.6 -0.1
KSH PP **PP** 18 42 38.3 +3.6
KSH ScP 18 44 38.1
KSH PcS 18 44 44.9
KSH S **S** 18 48 50.3 -3.0
KSH pmax pmax
comp=Z,2.0nm,0.3s
KSH pmax pmax
comp=Z,88nm,2.6s
KSH LR LR
comp=N,96nm,4.2s
KSH LR LR
comp=E,180nm,4.1s
KSH LR LR
comp=Z,300nm,4.7s
TKM2 Tokmak 2 66.96 318 *e*P **P** 18 40 20.3 -0.7
comp=Z,3.9nm,0.8s
ZAA0 Zalesovo Array 67.15 332 *e*P **P** 18 40 20.0 -1.7
ZALV Zalesovo Beam 67.15 332 P **P** 18 40 20.8 -1.0
ZALV Zalesovo Beam 67.15 332 P **P** 18 40 20.8 -1.0
comp=Z,1.6nm,0.6s,baz=120,slow=7.5,SNR=10.0
CASY Casey 67.55 190 *e*P **P** 18 40 22.7 -1.3
AAK Ala-Archa 67.59 317 *e*P **P** 18 40 25.2 +0.2
comp=Z,4.3nm,1.2s
AAK Ala-Archa 67.59 317 P **P** 18 40 25.4 +0.4
comp=Z,1.0nm,0.6s,baz=129,slow=6.6,SNR=4.8
EKS2 Erkin-Say 68.09 317 *e*P **P** 18 40 28.3 +0.2
comp=Z,4.0nm,0.8s
KURK Kurchatov 68.60 326 *e*P **P** 18 40 30.4 -0.5
comp=Z,7.3nm,0.8s
KURBB Kurchatov Arra 68.60 326 P **P** 18 40 30.8 -0.1
comp=Z,3.1nm,0.7s,baz=123,slow=5.8,SNR=50
KBL Kabul 68.94 307 P **P** 18 40 32.4 -1.2
comp=Z,5.8nm,0.8s
KKAR Karatay Array 70.48 317 *e*P **P** 18 40 43.1 +0.3
BVAR Borovoye Array 74.19 326 P **P** 18 41 04.5 -0.2
BVAR Borovoye Array 74.19 326 P **P** 18 41 04.5 -0.2
comp=Z,4.3nm,0.9s,baz=116,slow=6.8,SNR=23
BRVK Borovoye 74.27 326 *e*P **P** 18 41 05.2 +0.1
comp=Z,9.0nm,0.8s
PPT Papeete 77.99 108 LR LR 19 08 33.6
comp=Z,67nm,21.9s,baz=319,slow=30
VNDA Vanda 78.55 174 P **P** 18 41 29.5 +0.6
VNDA Vanda 78.55 174 P **P** 18 41 29.5 +0.6
comp=Z,1.6nm,0.7s,baz=326,slow=5.6,SNR=20
VNDA LR LR 19 13 03.1
comp=Z,101nm,18.6s,baz=326,slow=33
ABKAR Akbulak array 79.28 320 *e*P **P** 18 41 33.0 -0.4
comp=Z,3.4nm,0.7s
SBA Scott Base 79.39 173 *e*P **P** 18 41 34.7 +1.1
comp=Z,4.0nm,0.8s
KDAK Kodiak Island 82.21 31 LR LR 19 20 45.9
comp=Z,92nm,18.4s,baz=272,slow=37
MCK McKinley 85.22 26 *e*P **P** 18 42 03.0 -1.3
comp=Z,11nm,1.0s
COLD Coldfoot 85.40 22 *e*P **P** 18 42 05.4 +0.3
comp=Z,2.8nm,0.9s
COLA College 85.89 25 *e*P **P** 18 42 06.8 -0.7
comp=Z,5.5nm,0.9s
ILAR Eielson Array 86.28 25 P **P** 18 42 08.2 -1.3
ILAR Eielson Array 86.28 25 P **P** 18 42 08.2 -1.3
comp=Z,3.0nm,0.8s,baz=254,slow=4.8,SNR=25
QSPA South Pole Qui 89.44 180 *e*P **P** 18 42 26.0 +1.2
comp=Z,9.0nm,0.9s
SYO Syowa Base 90.73 201 ||*eX* 18 42 49.4
INK Inuvik 91.79 22 P **P** 18 42 34.0 -1.5
INK Inuvik 91.79 22 P **P** 18 42 34.0 -1.5
comp=Z,0.8nm,0.9s,baz=309,slow=5.5,SNR=4.2
INK LR LR 19 22 07.1
comp=Z,62nm,18.7s,baz=313,slow=34
ARCES ARCESS Array B 96.48 340 P **P** 18 42 56.2 -0.8
ARCES ARCESS Array B 96.48 340 P **P** 18 42 56.2 -0.8
comp=Z,5.6nm,1.0s,baz=76,slow=10,SNR=5.2
ARCES LR LR 19 28 26.1
comp=Z,102nm,20.3s,baz=35,slow=37
MMAI Mount Meron Ar 96.53 303 LR LR 19 33 11.6
comp=Z,56nm,20.0s,baz=135,slow=40
EIL Elat 97.12 300 LR LR 19 29 36.7
comp=Z,64nm,18.7s,baz=92,slow=37
FINES FINESS Array B 98.41 332 LR LR 19 34 41.6
comp=Z,67nm,19.9s,baz=235,slow=40
YKA Yellowknife Ar 100.68 26 P **Pdif** 18 43 15.2 -0.8
YKA Yellowknife Ar 100.68 26 P **Pdif** 18 43 15.1 -0.8
comp=Z,0.3nm,0.6s,baz=292,slow=4.4,SNR=6.3
TORD Torodi Ar. Bea 130.03 287 PKP **PKPdf** 18 48 39.7 +0.9
TORD SKPbc **SKPab** 18 51 59.2 -0.4
TORD Torodi Ar. Bea 130.03 287 PKP **PKPdf** 18 48 39.7 +0.9
comp=Z,0.6nm,0.8s,baz=144,slow=1.2,SNR=3.5
TORD SKPbc **SKPab** 18 51 59.2 -0.4
comp=Z,1.4nm,1.1s,baz=149,slow=0.3,SNR=3.7
CPUP Villa Florida 151.58 161 PKPbc **PKPbc** 18 49 23.7 +0.8
CPUP PKPab **PKPab** 18 49 30.3 -1.0
CPUP Villa Florida 151.58 161 PKPbc **PKPbc** 18 49 23.7 +0.8
comp=Z,1.2nm,0.4s,baz=275,slow=1.0,SNR=9.8
CPUP PKPab **PKPab** 18 49 30.3 -1.0
comp=Z,2.7nm,0.6s,baz=211,slow=1.4,SNR=7.7
LPAZ La Paz 153.41 130 *e*PKPbc **PKPbc** 18 49 28.8 +0.7
LPAZ PKPab **PKPab** 18 49 39.1 -1.0
LPAZ La Paz 153.41 130 PKPbc **PKPbc** 18 49 29.0 +0.9
comp=Z,1.1nm,0.6s,baz=22,slow=1.6,SNR=5.6
LPAZ PKPab **PKPab** 18 49 39.1 -1.0
comp=Z,2.6nm,0.9s,baz=209,slow=1.0,SNR=5.4

IDC ***17*** *18:34:13.4±1.6,* **21°.18S×67°.00W, h200km±16km, mb3.1/4, mb1 3.3/8, mb1mx3.2/21, mbtmp3.1/8, Error ellipse: s-maj=20.5km s-min=14.3km az=69.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.98**	**347**	P		Pn	18 35 29.7	+1.3
	1.3nm,0.3s,baz=159,slow=6.9,SNR=30						
LPAZ				S		Sn	18 36 27.5	+0.1
	0.3nm,0.3s,baz=344,slow=22,SNR=4.0						
SIV	**San Ignacio**	**7.63**	**48**	P		Pn	18 36 01.9	-0.1
	2.9nm,0.3s,baz=239,slow=12,SNR=36						
SIV				S		Sn	18 37 26.2	-2.1
	1.2nm,0.3s,baz=320,slow=22,SNR=8.3						
CPUP	**Villa Florida**	**10.23**	**122**	P		Pn	18 36 36.0	+0.3
	1.6nm,0.3s,baz=289,slow=7.9,SNR=6.7						
PLCA	**Paso Flores**	**19.73**	**188**	P		P	18 38 26.8	-1.1
	0.1nm,0.3s,baz=19,slow=8.9,SNR=3.4						
SNAA	**Sanae**	**62.01**	**161**	P		P	18 44 12.5	+0.4
	0.4nm,0.8s,baz=264,slow=9.2,SNR=3.8						
TORD	**Torodi Ar. Bea**	**75.58**	**70**	P		P	18 45 37.0	+0.4
	0.5nm,0.4s,baz=252,slow=6.4,SNR=11						
NVAR	**Mina Array Bea**	**76.35**	**321**	P		P	18 45 40.0	-0.8
	0.2nm,0.4s,baz=116,slow=8.1,SNR=3.0						
YKA	**Yellowknife Ar**	**91.49**	**340**	P		P	18 46 57.1	+0.6
	0.1nm,0.5s,baz=132,slow=4.6,SNR=4.7						
ASAR	**Alice Springs**	**131.00**	**206**	PKP		PKPdf	18 53 01.8	-0.2
	0.1nm,0.4s,baz=140,slow=1.5,SNR=4.2						

IDC ***17*** *18:36:35.8±1.1,* **14°.75N×144°.57E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.4/25, mbtmp3.5/4, MS3.8/1, Ms1 3.9/1, ms1mx2.8/33, Error ellipse: s-maj=38.9km s-min=18.9km az=72.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.19**	**166**	Pn		Pn	18 37 00.1	+0.4
	32nm,0.3s,baz=278,slow=4.2,SNR=18						
GUMO				Sn		Sn	18 37 16.0	-0.6
	34nm,0.3s,baz=118,slow=20,SNR=5.2						
CMAR	**Chiang Mai Arr**	**43.79**	**281**	P		P	18 44 44.1	+0.4
	0.3nm,0.7s,baz=83,slow=7.4,SNR=3.9						
KURBB	**Kurchatov Arra**	**63.55**	**319**	P		P	18 47 07.7	-0.4
	0.1nm,0.3s,baz=97,slow=6.9,SNR=4.2						
YKA	**Yellowknife Ar**	**81.97**	**27**	P		P	18 48 56.1	-1.2
	0.1nm,0.6s,baz=292,slow=4.4,SNR=5.2						
NVAR	**Mina Array Bea**	**86.43**	**51**	P		P	18 49 22.6	+1.7
	0.2nm,0.4s,baz=263,slow=4.5,SNR=2.3						
NOA	**NORSAR Array B**	**95.86**	**339**	LR		LR	19 35 45.7	
	comp=Z,43nm,18.1s,baz=310,slow=37						

IDC ***17*** *18:43:16.7±2.8, 4°.41N×127°.07E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/24, mbtmp3.8/5, Error ellipse: s-maj=92.5km s-min=24.6km az=53.0*
ISCJB ***17*** *18:43:23.7±1.2, 4°.5N±0°.2×127°.4E±0°.3, h81km, mb3.6/5, Error ellipse: s-maj=47.3km s-min=8.0km az=154.3*
ISC 17 18:43:25.5±1.4, 4°.5N±0°.2×127°.2E±0°.3, h81km, n9, σ1s 0.8/8, mb3.6/5, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**2.61**	**338**	*e*P		Pn	18 44 09.8	+4.1
MATI				*e*S		**Sn**	**18 44 35.6**	**-0.9**
BUKP	**Musuan**	**3.99**	**327**	*e*P		**Pn**	**18 44 24.8**	**+0.4**
CTBH	**Cotabato--PC H**	**4.02**	**312**	*i* P		**Pn**	**18 44 25.8**	**+1.0**
PAGZ	**Pagadian**	**5.07**	**311**	*e*P		Pn	18 44 42.5	+3.4
FITZ	**Fitzroy Crossi**	**22.52**	**184**	P		**P**	**18 48 17.5**	**-1.4**
	1.3nm,0.5s,baz=18,slow=8.5,SNR=10						
WRA	**Warramunga Arr**	**25.28**	**164**	P		**P**	**18 48 44.0**	**-0.6**
	3.9nm,0.9s,baz=344,slow=10,SNR=12						
ASAR	**Alice Springs**	**28.75**	**167**	P		**P**	**18 49 15.3**	**-0.3**
	0.4nm,0.6s,baz=343,slow=6.5,SNR=13						
CMAR	**Chiang Mai Arr**	**30.93**	**299**	P		**P**	**18 49 34.7**	**-0.3**
	0.5nm,1.0s,baz=126,slow=8.2,SNR=3.8						
STKA	**Stephens Creek**	**38.68**	**160**	P		**P**	**18 50 42.7**	**+1.1**
	3.4nm,0.9s,baz=321,slow=11,SNR=4.9						

MOS ***17*** *18:46:01.5±1.3, 49°.92N×88°.95E, h13km, mb4.3/12, Error ellipse: s-maj=14.1km s-min=7.7km az=130.2*
IDC ***17*** *18:46:01.7±0.6, 50°.02N×89°.01E, h0km, mb3.9/15, mb1 4.1/22, mb1mx3.9/37, mbtmp3.9/22, ML3.7/7, Error ellipse: s-maj=11.6km s-min=8.9km az=162.0*
ISCJB ***17*** *18:46:01.6±0.8, 50°.09N±0°.03×88°.89E±0°.04, h8km±4km, mb4.0/21, Error ellipse: s-maj=5.5km s-min=4.5km az=5.0*
ASRS ***17*** *18:46:02.4±1.1, 49°.93N×88°.88E, h15km, Ms3.2/4*
BJI ***17*** *18:46:02.4, 50°.20N×88°.83E, h25km, mB4.7/2, mb4.5/2, ML4.1/7*
NNC ***17*** *18:46:04.9±5.4, 49°.79N×88°.26E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=43.9km s-min=31.1km az=95.0*
ISC 17 18:46:02.2±1.2, 50°.04N±0°.04×88°.86E±0°.04, h2km±8km, n79, σ1s 7.8/94, mb4.0/21, 15C-11D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKAR	**Aktash**	**0.84**	**290**	*e*Pg		**Pb**	**18 46 19.6**	**0.0**
AKAR				*e*Sg		**Sb**	**18 46 31.1**	**-0.4**
AKAR	**Aktash**	**0.84**	**290**	*e*PG		**Pb**	**18 46 19.6**	**0.0**
AKAR				*e*			18 46 31.1	
ARTR	**Artybash**	**2.02**	**331**	*e*Pg		**Pg**	**18 46 41.2**	**+0.2**
ARTR				*e*Sg		**Sg**	**18 47 09.6**	**+2.4**
ARTR	**Artybash**	**2.02**	**331**	*e*PN		**Pg**	**18 46 41.2**	**+0.2**
ARTR				*e*			18 47 09.6	
UKR	**Ust'-Kan**	**2.76**	**291**	*e*Pg		**Pb**	**18 46 51.2**	**-1.1**
UKR				*e*Sg		**Sg**	**18 47 30.3**	**-0.5**
UKR	**Ust'-Kan**	**2.76**	**291**	*e*PN		**Pb**	**18 46 51.2**	**-1.1**
UKR				*e*			18 47 30.3	
TASR	**Tashtagol**	**2.79**	**348**	*e*Pg		**Pg**	**18 46 56.1**	**+0.4**
TASR				*e*Sg		**Sg**	**18 47 33.2**	**+1.4**
TASR	**Tashtagol**	**2.79**	**348**	*e*PN		**Pg**	**18 46 56.1**	**+0.4**
TASR				*e*			18 47 33.2	
CERR	**Cheremushki**	**3.24**	**29**	*e*Pg		**Pg**	**18 47 03.4**	**-0.9**
CERR				*e*Sg		**Sg**	**18 47 45.1**	**-1.1**
CERR	**Cheremushki**	**3.24**	**29**	*e*PN		**Pg**	**18 47 03.4**	**-0.9**
CERR				*e*			18 47 45.1	
ZALV	**Zalesovo Beam**	**4.64**	**329**	PN		**Pn**	**18 47 15.6**	**+2.4**
ZALV							18 48 10.7	
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ZALV				smax	smax			
	comp=N,9.0nm,0.3s							
ZALV	**Zalesovo Beam**	**4.64**	**329**	Pn		**Pn**	**18 47 15.6**	**+2.4**
	comp=N,0.9nm,0.3s,baz=149,slow=13,SNR=21							
ZALV				Sn		**Sn**	**18 48 10.7**	**+3.1**
	comp=N,9.1nm,0.3s,baz=136,slow=22,SNR=6.0							
ZALV				Lg	Lg		18 48 28.1	
	comp=N,13nm,0.3s,baz=140,slow=28,SNR=3.9							
MK31	**Makanchi Array**	**5.45**	**236**	⇑Pn		**Pn**	**18 47 27.1**	**+2.7**
	comp=N,1.8nm,0.2s,baz=61,slow=14,SNR=533							
MK31				⇑Sn		**Sn**	**18 48 27.7**	**+0.2**
	comp=N,37nm,0.5s,baz=64,slow=21,SNR=7.5							
MK31				⇓Lg	Lg		18 48 52.6	
	comp=N,99nm,0.8s,baz=47,slow=27,SNR=4.9							
MKAR	**Makanchi Array**	**5.45**	**236**	PN		**Pn**	**18 47 26.8**	**+2.4**
MKAR							18 48 30.5	
MKAR				pmax	pmax			
	comp=Z,4.0nm,0.3s							
MKAR				smax	smax			
	comp=N,21nm,0.3s							
MKAR	**Makanchi Array**	**5.45**	**236**	Pn		**Pn**	**18 47 26.8**	**+2.4**
	comp=N,4.4nm,0.3s,baz=48,slow=16,SNR=474							
MKAR				Sn		**Sn**	**18 48 30.4**	**+2.9**
	comp=N,21nm,0.3s,baz=60,slow=24,SNR=14							
MKAR				Lg	Lg		18 48 55.1	
	comp=N,17nm,0.3s,baz=53,slow=30,SNR=4.2							
NVS	**Novosibirsk**	**5.91**	**327**	*e*Pn		**Pn**	**18 47 32.5**	**+1.9**
NVS				*e*Pg		**Pg**	**18 47 53.1**	**-2.2**
NVS				*e*Sn		**Sn**	**18 48 38.4**	**-0.4**
NVS				*e*Sg		**Sg**	**18 49 08.4**	**-3.4**
NVS	**Novosibirsk**	**5.91**	**327**	*e*PN		**Pn**	**18 47 32.5**	**+1.9**
NVS				*e*			18 47 53.1	
NVS				*e*			18 49 08.4	
WMQ	**Urumqi**	**6.27**	**188**	Pn		Pn	18 47 40.1	+4.3
WMQ				Sg		**Sg**	**18 49 23.3**	**-0.3**
WMQ				smax	smax			
	comp=N,140nm,0.7s							
WMQ				smax	smax			
	comp=E,120nm,0.7s							
KURK	**Kurchatov**	**6.58**	**280**	⇑Pn		**Pn**	**18 47 40.9**	**+1.0**
	comp=E,13nm,0.8s							
KURK				⇓Sn		**Sn**	**18 48 55.5**	**0.0**
	comp=E,12nm,0.5s							
KURK				⇓Lg	Lg		18 49 28.3	
	comp=E,163nm,0.8s							
KURK	**Kurchatov**	**6.58**	**280**	*d*PN		**Pn**	**18 47 41.7**	**+1.8**
KUR15	**Kurchatov Arra**	**6.62**	**279**	⇓Pn		**Pn**	**18 47 41.8**	**+1.4**
	comp=E,0.9nm,0.8s							
KUR15				⇓Sn		**Sn**	**18 48 57.1**	**+0.8**
	comp=E,1.0nm,0.6s							
KUR15				⇑Lg	Lg		18 49 28.2	
	comp=E,5.0nm,0.8s							
KURBB	**Kurchatov Arra**	**6.64**	**279**	Pn		**Pn**	**18 47 42.3**	**+1.6**
	comp=E,0.6nm,0.3s,baz=92,slow=14,SNR=144							
KURBB				Lg	Lg		18 49 32.8	
	comp=E,2.6nm,0.3s,baz=180,slow=32,SNR=4.8							
VOSK	**Vostochnaya**	**11.49**	**290**	⇑Pn		**Pn**	**18 48 45.8**	**-1.3**
	comp=E,2.1nm,0.7s							
VOSK				⇓Sn		**Sn**	**18 50 51.1**	**-4.8**
	comp=E,5.1nm,0.7s							
SONM	**Songino Array**	**11.74**	**94**	Pn		**Pn**	**18 48 51.1**	**+0.4**
	comp=E,0.1nm,0.3s,baz=269,slow=11,SNR=5.2							
SONM				Pg			18 49 39.5	
	comp=E,0.1nm,0.3s,baz=285,slow=16,SNR=3.3							
SONM				Lg	Lg		18 52 12.0	
	comp=E,0.2nm,0.3s,baz=287,slow=32,SNR=8.6							
BVA0	**Borovoye Array**	**11.88**	**292**	⇑Pn		**Pn**	**18 48 52.2**	**-0.2**
	comp=E,0.5nm,0.9s,baz=111,slow=15,SNR=6.2							
BVA0				⇑Sn		**Sn**	**18 51 00.9**	**-4.6**
	comp=E,0.6nm,0.5s,baz=100,slow=19,SNR=4.8							
BVAR	**Borovoye Array**	**11.88**	**292**	P		**Pn**	**18 48 52.4**	**-0.1**
BVAR							18 51 00.9	
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
BVAR				smax	smax			
	comp=N,2.0nm,0.3s							
BVAR	**Borovoye Array**	**11.88**	**292**	Pn		**Pn**	**18 48 52.4**	**-0.1**

	comp=N,0.7nm,0.3s,baz=102,slow=14,SNR=14							
BVAR				Sn	Sn	18 51 00.9	-4.6	
	comp=N,1.6nm,0.3s,baz=97,slow=20,SNR=8.5							
BRVK	**Borovoye**	**11.95**	**292**	⇑Pn	**Pn**	**18 48 50.6**	**-2.8**	
	comp=N,4.1nm,1.0s							
BRVK				⇓Sn	Sn	18 51 00.9	-6.3	
	comp=N,8.1nm,0.6s							
BRVK	**Borovoye**	**11.95**	**292**	*eP*	**Pn**	**18 48 54.0**	**+0.6**	
BRVK				pmax	pmax			
	comp=Z,1.0nm,0.4s							
AAK	**Ala-Archa**	**12.37**	**239**	P	**Pn**	**18 49 01.3**	**+1.9**	
AAK				pmax	pmax			
	comp=Z,1.0nm,0.3s							
AAK	**Ala-Archa**	**12.37**	**239**	Pn	**Pn**	**18 49 01.3**	**+1.9**	
	comp=Z,0.8nm,0.3s,baz=64,slow=9.3,SNR=10							
AAK				Lg	Lg	18 52 35.6		
	comp=Z,0.1nm,0.3s,baz=206,slow=21,SNR=4.6							
ZRNK	**Zerenda**	**12.70**	**291**	⇓Pn	**Pn**	**18 49 01.2**	**-2.5**	
	comp=Z,2.6nm,0.7s							
ZRNK				⇑Sn	**Sn**	**18 51 20.1**	**-5.5**	
	comp=Z,9.5nm,0.9s							
KK31	**Karatay Array**	**14.38**	**248**	⇑Pn	Pn	18 49 21.0	-5.6	
	comp=Z,2.3nm,0.8s,baz=50,slow=13,SNR=6.6							
KK31				⇑Sn	Sn	18 52 00.3	-6.3	
	comp=Z,1.8nm,0.6s,baz=56,slow=20,SNR=5.2							
KK31				⇓Lg	Lg	18 53 22.7		
	comp=Z,6.0nm,0.8s							
HHC	**Hu-ho-hao-te**	**18.33**	**111**	*eP*	**P**	**18 50 19.0**	**+1.3**	
HHC				S	**Sn**	**18 53 39.1**	**-3.6**	
HHC				pmax	pmax			
	comp=Z,39nm,0.5s							
HHC				pmax	pmax			
	comp=Z,170nm,5.9s							
AB31	**Akbulak array**	**18.69**	**279**	Pn	**P**	**18 50 21.6**	**0.0**	
	comp=Z,2.0nm,0.9s,baz=82,slow=11,SNR=12							
ARU	**Arti**	**19.12**	**301**	*c iP*	**Pn**	**18 50 27.2**	**+0.3**	
ARU				S	**S**	**18 54 02.9**	**-0.4**	
ARU				pmax	pmax			
	comp=Z,8.0nm,1.7s							
AKTO	**Aktyubinsk**	**19.67**	**283**	⇑Pn	**P**	**18 50 32.3**	**+0.1**	
	comp=Z,0.6nm,0.7s							
AKTO	**Aktyubinsk**	**19.67**	**283**	P	**P**	**18 50 32.6**	**+0.4**	
AKTO				pmax	pmax			
	comp=Z,1.0nm,0.3s							
AKTO	**Aktyubinsk**	**19.67**	**283**	P	**P**	**18 50 32.6**	**+0.4**	
	comp=Z,0.5nm,0.3s,baz=81,slow=11,SNR=18							
DANN	**Dangsing**	**22.01**	**192**	*eP*	**P**	**18 50 59.9**	**+1.9**	
	comp=Z,11nm,0.7s							
PYUN	**Piuthan**	**22.36**	**194**	*eP*	**P**	**18 51 03.5**	**+1.8**	
	comp=Z,31nm,0.8s							
KKN	**Kakani**	**22.39**	**188**	*eP*	P	18 50 54.0	-7.9	
	comp=Z,28nm,1.2s							
DMN	**Daman**	**22.58**	**189**	*eP*	P	18 50 53.5	-11	
KOLN	**Koldanda**	**22.60**	**192**	*eP*	**P**	**18 51 00.8**	**-3.4**	
	comp=Z,8.4nm,0.6s							
OBN	**Obninsk**	**31.55**	**300**	⇓*eP*	**P**	**18 52 24.8**	**-0.7**	
OBN				*eS*	**S**	**18 57 34.4**	**0.0**	
OBN				pmax	pmax			
	comp=Z,17nm,1.7s							
CMAR	**Chiang Mai Arr**	**32.53**	**162**	P	P	18 52 38.8	+4.3	
	comp=Z,0.5nm,1.0s,baz=344,slow=8.7,SNR=4.2							
JOF	**Joensuu**	**33.07**	**315**	*eP*	**P**	**18 52 39.9**	**+1.1**	
JOF				pmax	pmax			
	comp=Z,1.0nm,0.5s							
JOF	**Joensuu**	**33.07**	**315**	*ep*	**P**	**18 52 39.9**	**+1.1**	
	comp=Z,1.0nm,0.5s							
KAF	**Kangasniemi**	**35.48**	**314**	*eP*	**P**	**18 53 01.7**	**+2.1**	
KAF				pmax	pmax			
	comp=Z,2.0nm,0.8s							
KAF	**Kangasniemi**	**35.48**	**314**	*ep*	**P**	**18 53 01.7**	**+2.1**	
	comp=Z,2.3nm,0.8s							
FINES	**FINESS Array B**	**35.70**	**313**	P	**P**	**18 53 02.1**	**+0.6**	
	comp=Z,1.7nm,0.5s,baz=74,slow=8.2,SNR=17							
AKASG	**Malin Array Be**	**37.14**	**295**	*eP*	**P**	**18 53 14.7**	**+0.8**	
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.3s							
AKASG	**Malin Array Be**	**37.14**	**295**	P	**P**	**18 53 14.2**	**+0.3**	
	comp=Z,1.0nm,0.3s,baz=61,slow=9.2,SNR=4.7							
BRTR	**Keskin Array B**	**39.62**	**277**	P	**P**	**18 53 36.3**	**+1.1**	
	comp=Z,2.9nm,0.7s,baz=82,slow=7.3,SNR=21							
BRTR				PcP	**PcP**	**18 55 42.5**	**+0.3**	
	comp=Z,0.5nm,0.6s,baz=94,slow=4.8,SNR=3.5							
HFS	**Hagfors**	**41.89**	**314**	P	**P**	**18 53 53.6**	**+0.1**	
	comp=Z,4.4nm,0.7s,baz=77,slow=11,SNR=12							
NB2	**NORSAR Subarra**	**42.70**	**315**	P	**P**	**18 53 59.7**	**-0.4**	
	comp=Z,1.8nm,0.7s,baz=65,slow=7.9							
NOA	**NORSAR Array B**	**42.70**	**315**	P	**P**	**18 53 59.9**	**-0.2**	
	comp=Z,2.1nm,0.7s,baz=64,slow=7.7,SNR=10							
VYHS	**Vyhne**	**44.17**	**296**	*eP*	P	18 54 15.3	+3.2	
VYHS	**Vyhne**	**44.17**	**296**	*eP*	P	18 54 15.3	+3.2	
CLL	**Collm**	**46.06**	**302**	⇑*iP*	**P**	**18 54 27.5**	**+0.5**	
CLL				pmax	pmax			
	comp=Z,6.0nm,0.6s							
CLL	**Collm**	**46.06**	**302**	⇑*iP*	**P**	**18 54 27.5**	**+0.5**	
	comp=Z,6.0nm,0.6s							
GERES	**GERESS Array B**	**46.92**	**299**	P	**P**	**18 54 34.7**	**+0.7**	
	comp=Z,0.3nm,0.3s,baz=84,slow=9.0,SNR=1.9							
EKA	**Eskdalemuir Ar**	**52.10**	**314**	P	**P**	**18 55 13.2**	**0.0**	
	comp=Z,0.8nm,0.4s,baz=69,slow=6.6,SNR=5.1							
LPL	**La Plagne**	**52.72**	**299**	*eP*	**P**	**18 55 18.9**	**+0.6**	
LPG	**La Plagne**	**52.73**	**299**	*eP*	**P**	**18 55 19.3**	**+0.9**	
MBDF	**Montbardon**	**53.18**	**298**	*eP*	**P**	**18 55 23.0**	**+1.4**	
	comp=Z,8.4nm,0.7s							
BGF	**Bois d'Agland**	**54.26**	**302**	*eP*	**P**	**18 55 28.9**	**-0.4**	
LDF	**La Druitiere**	**54.60**	**305**	*eP*	**P**	**18 55 31.4**	**-0.3**	
FLN	**La Foliniere**	**54.69**	**306**	*eP*	**P**	**18 55 32.3**	**-0.1**	
LASF	**Ste Croix**	**55.23**	**299**	*eP*	**P**	**18 55 38.9**	**+2.5**	
RJF	**Les Rejaudoux**	**55.76**	**301**	*eP*	**P**	**18 55 41.3**	**+1.1**	
ILAR	**Eielson Array**	**57.65**	**25**	P	**P**	**18 55 54.0**	**+0.7**	
	comp=Z,0.4nm,0.6s,baz=318,slow=5.6,SNR=7.6							
INK	**Inuvik**	**57.83**	**17**	P	**P**	**18 55 55.6**	**+1.1**	
	comp=Z,1.6nm,0.7s,baz=349,slow=8.5,SNR=8.7							
ESDC	**Sonseca Array**	**62.51**	**300**	P	**P**	**18 56 27.0**	**-0.1**	
	comp=Z,0.4nm,0.4s,baz=57,slow=7.9,SNR=8.7							
YKA	**Yellowknife Ar**	**66.27**	**12**	P	**P**	**18 56 51.0**	**-0.2**	
	comp=Z,0.8nm,0.6s,baz=338,slow=6.9,SNR=18							
FITZ	**Fitzroy Crossi**	**75.22**	**144**	P	**P**	**18 57 45.1**	**-1.1**	
	comp=Z,1.4nm,0.8s,baz=305,slow=3.4,SNR=3.0							
TORD	**Torodi Ar. Bea**	**78.24**	**276**	P	**P**	**18 58 02.9**	**-0.6**	
	comp=Z,0.3nm,0.8s,baz=38,slow=3.8,SNR=3.6							
WRA	**Warramunga Arr**	**80.44**	**137**	P	**P**	**18 58 13.5**	**-1.7**	
	comp=Z,0.7nm,0.8s,baz=341,slow=5.9,SNR=5.9							
ASAR	**Alice Springs**	**83.53**	**139**	P	**P**	**18 58 29.6**	**-2.0**	
	comp=Z,0.4nm,0.5s,baz=332,slow=5.3,SNR=6.1							

*ISCJB **17** 18:47:05.5±0.3,63.00N±0.02×149.69W±0.06,h98km±4km, mb3.0/1,Error ellipse: s-maj=4.7km s-min=3.6km az=29.4*
*NEIC **17** 18:47:06.8,63.00N×149.72W,h83km,MG3.0(AEIC), After AEIC.*
*IDC **17** 18:47:06.2±2.2,62.95N×149.89W,h80km±28km,mb2.8/1, mb1 3.1/5,mb1mx2.9/28,mbtmp3.0/5,Error ellipse: s-maj=30.5km s-min=24.3km az=112.0*

ISC 17 18:47:06.5±0.9,62.99N±0.03×149.68W±0.03,h92km±6km, n63,σ1°25/77,Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUR	**Hurricane**	**0.03**	**125**	P	**Pn**	**18 47 18.8**	**-0.5**
TRF	**Thorofare Moun**	**0.54**	**330**	P	**Pn**	**18 47 21.2**	**-0.7**
TRF				S	**Sn**	**18 47 32.7**	**-0.6**
RND	**Reindeer**	**0.56**	**42**	P	**Pn**	**18 47 21.7**	**-0.3**
RND				S	**Sn**	**18 47 32.9**	**-0.7**
CUT	**Chulitna**	**0.65**	**205**	P	**Pn**	**18 47 22.2**	**-0.4**
TRAP	**Trapper Creek**	**0.71**	**202**	P	**Pn**	**18 47 22.7**	**-0.4**
MCK	**McKinley**	**0.81**	**24**	P	**Pn**	**18 47 24.4**	**+0.1**
MCK				S	**Sn**	**18 47 37.4**	**-0.2**
DHY	**Denali Highway**	**1.06**	**84**	P	**Pn**	**18 47 26.6**	**-0.4**
DHY				S	**Sn**	**18 47 42.9**	**+0.4**
PPLA	**Purkeypile**	**1.15**	**266**	P	**Pn**	**18 47 28.4**	**+0.3**
PPLA				S	**Sn**	**18 47 45.0**	**+0.5**
SKT	**Skwentna**	**1.33**	**221**	P	**Pn**	**18 47 29.8**	**-0.4**
SML	**Sawmill**	**1.34**	**152**	P	**Pn**	**18 47 30.5**	**+0.2**
SML				S	**Sn**	**18 47 49.3**	**+0.8**
PMR	**Palmer**	**1.43**	**169**	P	**Pn**	**18 47 31.3**	**-0.1**
PMR				S	**Sn**	**18 47 51.5**	**+1.4**
CHUM	**Lake Minchumin**	**1.48**	**308**	P	**Pn**	**18 47 32.2**	**+0.2**
CHUM				S	**Sn**	**18 47 50.6**	**-0.7**
NEA	**Nenana**	**1.61**	**9**	P	**Pn**	**18 47 33.5**	**-0.2**
WRH	**Wood River Hil**	**1.65**	**25**	P	**Pn**	**18 47 34.1**	**+0.1**
STLK	**Strandline Lak**	**1.81**	**215**	P	**Pn**	**18 47 36.4**	**+0.2**
CCB	**Clear Creek Bu**	**1.86**	**26**	P	**Pn**	**18 47 36.8**	**0.0**
HDA	**Harding Lake**	**1.87**	**39**	P	**Pn**	**18 47 37.2**	**+0.2**
DDM	**Donnelly Dome**	**1.90**	**63**	P	**Pn**	**18 47 38.2**	**+0.8**
RC01	**Rabbit Creek A**	**1.91**	**181**	P	**Pn**	**18 47 38.6**	**+1.1**
PAX	**Paxson**	**1.92**	**89**	P	**Pn**	**18 47 38.4**	**+0.6**
COLA	**College**	**2.05**	**22**	P	**Pn**	**18 47 39.5**	**+0.1**
MDM	**Murphy Dome**	**2.08**	**17**	P	**Pn**	**18 47 39.8**	**+0.1**
MLY	**Manley**	**2.10**	**348**	P	**Pn**	**18 47 40.1**	**+0.1**
SPU	**Mount Spurr**	**2.13**	**213**	P	**Pn**	**18 47 40.9**	**+0.4**
SPBG	**Spurr Blockage**	**2.15**	**217**	P	**Pn**	**18 47 41.4**	**+0.6**
BGL	**Barrier Glacie**	**2.15**	**217**	P	**Pn**	**18 47 41.1**	**+0.4**
HARP	**HAARP**	**2.17**	**104**	P	**Pn**	**18 47 41.6**	**+0.7**
ILAR	**Eielson Array**	**2.17**	**33**	P	**Pn**	**18 47 40.8**	**-0.1**
ILAR				S	**Sn**	**18 48 05.3**	**-1.9**
ILAR	**Eielson Array**	**2.17**	**33**	P	**Pn**	**18 47 40.8**	**-0.1**
	3.6nm,0.3s,baz=216,slow=14,SNR=169						
ILAR				S	**Sn**	**18 48 05.3**	**-1.9**
	9.7nm,0.3s,baz=195,slow=9.8,SNR=14						
IL1	**Eielson Array**	**2.17**	**33**	P	**Pn**	**18 47 40.9**	**0.0**
GLM	**Gilmore Dome**	**2.24**	**26**	P	**Pn**	**18 47 42.1**	**+0.2**
SLKM	**Skilak Lake**	**2.51**	**186**	P	**Pn**	**18 47 46.4**	**+1.0**
DOT	**Dot Lake**	**2.62**	**73**	P	**Pn**	**18 47 47.2**	**+0.3**
MENT	**Mentasta**	**2.73**	**89**	P	**Pn**	**18 47 48.9**	**+0.6**
DFR	**Drift River**	**2.80**	**212**	P	**Pn**	**18 47 49.3**	**-0.1**
TT01	**Tatalina**	**2.90**	**271**	P	**Pn**	**18 47 50.1**	**-0.4**
SEW	**Seward**	**2.90**	**178**	P	**Pn**	**18 47 50.9**	**+0.3**
EYAK	**Cordova Ski Ar**	**3.08**	**141**	P	**Pn**	**18 47 52.7**	**-0.3**
PRP	**Porcupine Dome**	**3.12**	**34**	P	**Pn**	**18 47 54.0**	**+0.4**
BMRM	**Bremner River**	**3.14**	**128**	P	**Pn**	**18 47 52.8**	**-1.1**
BRLK	**Bradley Lake**	**3.29**	**191**	P	**Pn**	**18 47 56.2**	**+0.3**
SVW2	**Sparrevohn**	**3.37**	**238**	P	**Pn**	**18 47 56.9**	**+0.1**
VRDI	**Verde Repeater**	**3.42**	**118**	P	**Pn**	**18 47 57.2**	**-0.6**
IM3	**Indian Mountai**	**3.48**	**331**	P	**Pn**	**18 47 58.5**	**+0.2**
BCA3	**Beaver Creek A**	**3.60**	**85**	P	**Pn**	**18 47 59.8**	**-0.3**
KIAG	**Kiagna River**	**4.03**	**118**	P	**Pn**	**18 48 05.1**	**-0.9**
EGAK	**Eagle**	**4.17**	**61**	P	**Pn**	**18 48 08.2**	**+0.5**
BARN	**Barnard Glacie**	**4.25**	**114**	P	**Pn**	**18 48 09.2**	**+0.2**
COLD	**Coldfoot**	**4.26**	**357**	P	**Pn**	**18 48 09.7**	**+0.8**
DAWY	**Dawson**	**4.73**	**72**	P	**Pn**	**18 48 15.4**	**+0.1**
BM3	**Burnt Mountain**	**4.93**	**23**	P	**Pn**	**18 48 18.5**	**+0.5**
KAKN	**Katmai Knife C**	**5.40**	**212**	P	**Pn**	**18 48 24.5**	**-0.1**
KDAK	**Kodiak Island**	**5.42**	**197**	P	**Pn**	**18 48 23.5**	**-1.2**
KDAK				S	**Sn**	**18 49 20.6**	**-5.1**
KDAK	**Kodiak Island**	**5.42**	**197**	P	**Pn**	**18 48 23.5**	**-1.2**
	0.7nm,0.3s,baz=48,slow=9.3,SNR=11						
KDAK				S	**Sn**	**18 49 20.6**	**-5.1**
	1.7nm,0.3s,baz=96,slow=24,SNR=9.4						
KABU	**Katmai Buttres**	**5.48**	**213**	P	**Pn**	**18 48 26.3**	**+0.7**
OHAK	**Old Harbor**	**6.06**	**199**	P	**Pn**	**18 48 31.8**	**-1.6**
HYT	**Haines Junctio**	**6.15**	**105**	P	**Pn**	**18 48 34.4**	**-0.4**
INK	**Inuvik**	**8.52**	**44**	P	**Pn**	**18 49 08.6**	**+1.8**
INK				S	**Sn**	**18 50 37.8**	**-3.3**
INK	**Inuvik**	**8.52**	**44**	P	**Pn**	**18 49 08.6**	**+1.8**
	0.1nm,0.3s,baz=246,slow=18,SNR=9.9						
INK				S	**Sn**	**18 50 37.8**	**-3.3**
	0.1nm,0.3s,baz=148,slow=18,SNR=1.8						
YKA	**Yellowknife Ar**	**15.96**	**76**	P	**P**	**18 50 48.3**	**+1.3**
YKA	**Yellowknife Ar**	**15.96**	**76**	P	**P**	**18 50 48.3**	**+1.3**
	0.1nm,0.3s,baz=283,slow=13,SNR=5.5						
MKAR	**Makanchi Array**	**63.05**	**323**	P	**P**	**18 57 24.0**	**+0.6**
MKAR	**Makanchi Array**	**63.05**	**323**	P	**P**	**18 57 24.0**	**+0.6**
	0.1nm,0.5s,baz=18,slow=5.6,SNR=3.0						

IDC 17 19:00:21.0±1.5,9.27S×158.83E,h516km±22km,mb2.7/3, mb1 2.8/4,mb1mx2.6/18,mbtmp2.8/4,Error ellipse: s-maj=73.6km s-min=27.0km az=113.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.11**	**99**	P	P	19 01 24.5	+0.4
	4.7nm,0.3s,baz=192,slow=9.3,SNR=2.8						
HNR				S	S	19 02 15.7	+0.3
	5.8nm,0.3s,baz=73,slow=23,SNR=8.4						
CTA	**Charters Tower**	**16.23**	**227**	P	P	19 03 44.9	+1.1
	0.4nm,0.3s,baz=80,slow=6.1,SNR=4.4						
WRA	**Warramunga Arr**	**25.93**	**243**	P	P	19 05 12.0	0.0
	1.2nm,0.3s,baz=72,slow=9.1,SNR=14						
STKA	**Stephens Creek**	**27.60**	**213**	P	P	19 05 26.6	+0.1
	0.8nm,0.4s,baz=32,slow=15,SNR=5.0						
ASAR	**Alice Springs**	**27.79**	**236**	P	P	19 05 27.7	-0.6
	0.3nm,0.4s,baz=63,slow=9.6,SNR=9.8						
SONM	**Songino Array**	**73.31**	**326**	P	P	19 10 59.9	+0.1
	0.3nm,0.8s,baz=116,slow=3.4,SNR=3.0						

IDC 17 19:04:28.2±6.0,9.75S×120.96E,h86km±45km,mb3.0/3, mb1 3.0/5,mb1mx3.0/20,mbtmp3.0/5,Error ellipse: s-maj=177.0km s-min=23.1km az=58.0,Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**4.85**	**346**	P	Pn	19 05 38.8	0.0
	2.0nm,0.3s,baz=121,slow=16,SNR=14						
WRA	**Warramunga Arr**	**16.42**	**130**	P	Pn	19 08 12.6	-0.9
	0.1nm,0.3s,baz=304,slow=13,SNR=5.2						
WRA				pP	pP	19 08 28.1	-3.3
	0.1nm,0.3s,baz=307,slow=9.7,SNR=7.9						
WRA				S	Sn	19 11 02.9	-12
	0.1nm,0.3s,baz=308,slow=22,SNR=3.7						
ASAR	**Alice Springs**	**18.56**	**140**	P	Pn	19 08 39.1	-0.5
	0.1nm,0.3s,baz=321,slow=11,SNR=6.6						
ASAR				S	S	19 11 54.0	-11
	0.1nm,0.3s,baz=314,slow=24,SNR=3.4						
SONM	**Songino Array**	**58.77**	**349**	P	P	19 14 18.6	+1.2
	0.2nm,0.6s,baz=149,slow=6.4,SNR=2.8						
MKAR	**Makanchi Array**	**66.01**	**332**	P	P	19 15 05.1	-0.5
	0.4nm,0.9s,baz=142,slow=7.3,SNR=3.5						
ZALV	**Zalesovo Beam**	**70.44**	**338**	P	P	19 15 32.4	-0.7
	0.3nm,0.5s,baz=110,slow=8.1,SNR=2.7						

*HLW **17** 19:06:31.1,33.69N×35.74E,h18km±22km,Md3.7,Ml3.1*
*NSSC **17** 19:06:34.8±1.2,33.30N×35.42E,h0km±5km,ML2.9,Fault plane solution: NP1:ψs148.34000°,δ43.96000°, λ-22.18000°.*
*ISCJB **17** 19:06:35.1±0.4,33.33N±0.02×35.40E±0.03,h8km±3km, Error ellipse: s-maj=4.3km s-min=2.8km az=28.7*
*CSEM **17** 19:06:35.5±0.1,33.33N×35.44E,h5km,MD3.0/4,Error ellipse: s-maj=2.8km s-min=2.1km az=146.0*
*GRAL **17** 19:06:35.4±0.5,33.28N×35.43E,h12km±5km,MD3.5*

ISC 17 19:06:35.7±1.1,33.32N±0.02×35.47E±0.03,h2km±11km, n58,σ0°74/79,4C-9D,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.20**	**325**	*eP*	**Pg**	**19 07 40.0**	**+0.4**
MATL	**Matarih**	**0.20**	**325**	*eP*	**Pg**	**19 06 40.0**	**+0.4**
KSDI	**Kefar Szold**	**0.21**	**129**	Pg	**Pg**	**19 06 39.5**	**-0.1**
KSDI				Sg	**Sg**	**19 06 43.4**	**+1.1**
MMC7	**Mount Meron ar**	**0.30**	**192**	Pg	**Pg**	**19 06 41.5**	**0.0**
MMA0	**Mount Meron ar**	**0.31**	**190**	Pg	**Pg**	**19 06 41.4**	**-0.2**
MMA0				Sg	**Sg**	**19 06 46.8**	**+1.2**
HNTI	**Hanita**	**0.34**	**226**	Pg	**Pg**	**19 06 42.4**	**+0.2**
BRBR	**Barbar**	**0.41**	**77**	⇓*eP*	**Pg**	**19 06 43.9**	**+0.3**
BRBR				AML	AML	19 06 52.0	
	comp=E,1μm,0.3s						
BRBR				AML	AML	19 06 52.6	
	comp=N,472nm,0.2s						
KSHT	**Keshet**	**0.44**	**139**	Pg	**Pg**	**19 06 44.6**	**+0.4**
KSHT				Sg	**Sg**	**19 06 51.7**	**+1.8**
BEYL	**Beirut**	**0.55**	**2**	*eP*	**Pg**	**19 06 46.1**	**-0.1**
BHL	**Bhannes**	**0.60**	**15**	*eP*	**Pg**	**19 06 47.0**	**-0.3**
BHL				*eS*	**Sg**	**19 06 55.5**	**+0.5**
BLGI	**Bet Lehem HaGe**	**0.63**	**202**	Pg	**Pg**	**19 06 47.9**	**+0.2**
BLGI				Sg	**Sg**	**19 06 56.9**	**+1.0**
QASN	**Qassioun**	**0.71**	**72**	⇑*eP*	**Pg**	**19 06 49.2**	**-0.1**
QASN				*eS*	**Sb**	**19 07 00.1**	**-1.0**
QASN				AML	AML	19 07 04.8	
	comp=N,1μm,0.4s						
QASN				AML	AML	19 07 06.4	
	comp=E,467nm,0.4s						
QASN	**Qassioun**	**0.71**	**72**	⇑*eP*	**Pg**	**19 06 49.2**	**-0.1**
	SNR=75						
QASN				*eS*	**Sb**	**19 07 00.1**	**-1.0**
	comp=E,467nm,0.4s,SNR=59						
TCHB	**Talchebab**	**0.78**	**147**	⇓*eP*	**Pg**	**19 06 50.7**	**+0.2**
TCHB				*eS*	**Sg**	**19 07 01.0**	**+0.5**
TCHB	**Talchebab**	**0.78**	**147**	⇓*eP*	**Pg**	**19 06 50.7**	**+0.2**
	SNR=75						
TCHB				*eS*	**Sg**	**19 07 01.0**	**+0.5**
	SNR=59						
TOTH	**TOTAH**	**0.81**	**87**	⇓*eP*	**Pg**	**19 06 51.4**	**+0.2**
TOTH				*eS*	**Sb**	**19 07 03.2**	**-0.6**
TOTH	**TOTAH**	**0.81**	**87**	⇓*eP*	**Pg**	**19 06 51.3**	**+0.2**
	SNR=75						
TOTH				*eS*	**Sb**	**19 07 03.2**	**-0.6**
	SNR=59						
OFRI	**'Ofer**	**0.81**	**210**	Pg	**Pg**	**19 06 51.0**	**-0.1**
MMLI	**Mount Malkishu**	**0.88**	**183**	Pg	**Pg**	**19 06 52.1**	**-0.5**
MMLI				Sg	**Sb**	**19 07 05.3**	**-0.7**
HWQ	**Hawqa**	**1.03**	**23**	*eP*	**Pg**	**19 06 55.6**	**+0.1**
HWQ				*eS*	**Sg**	**19 07 09.2**	**+0.2**
HMDT	**Nahal Hemdat**	**1.07**	**177**	Pg	**Pg**	**19 06 54.9**	**-1.2**
HMDT				Sg	**Sb**	**19 07 11.5**	**+0.3**
SLTI	**Sal'it**	**1.14**	**199**	Pg	**Pg**	**19 06 56.5**	**-0.9**
SLTI				Sg	**Sb**	**19 07 13.2**	**-0.1**
SALA	**Sala**	**1.23**	**119**	⇓*eP*	**Pb**	**19 06 58.5**	**-1.1**
SALA				*eS*	**Sb**	**19 07 16.1**	**+0.1**
SALA	**Sala**	**1.23**	**119**	⇓*eP*	**Pb**	**19 06 58.5**	**-1.1**
	SNR=57						
SALA				*eS*	**Sb**	**19 07 16.1**	**+0.1**
	SNR=49						
ZALF	**Zalf**	**1.62**	**104**	⇓*eP*	**Pn**	**19 07 04.9**	**-0.4**
ZALF				*eS*	**Sb**	**19 07 27.3**	**+0.2**
ROOS	**tl_alroos**	**1.74**	**60**	⇓*eP*	**Pn**	**19 07 07.4**	**+0.4**
ROOS				*eS*	**Sg**	**19 07 31.4**	**-0.2**
YTIR	**Yattir**	**1.98**	**189**	Pn	**Pn**	**19 07 10.3**	**+0.1**
RTMI	**Retamim**	**2.35**	**196**	Pn	**Pn**	**19 07 15.5**	**+0.1**
KZIT	**Kziot**	**2.57**	**201**	Pn	**Pn**	**19 07 18.2**	**-0.2**
ZFRI	**Zfri**	**2.77**	**185**	Pn	**Pn**	**19 07 20.7**	**-0.4**
RSH		**2.78**	**213**	P	**Pn**	**19 07 20.4**	**-0.8**
BTCH	**Batrach**	**2.83**	**17**	⇑*eP*	**Pn**	**19 07 22.1**	**+0.1**
BTCH	**Batrach**	**2.83**	**17**	⇑*eP*	**Pn**	**19 07 22.1**	**+0.1**
	SNR=45						
PRNI	**Paran**	**2.99**	**188**	Pn	**Pn**	**19 07 23.8**	**-0.3**
KRMI	**Paran Flat**	**3.26**	**191**	Pn	**Pn**	**19 07 27.5**	**-0.3**
AMAG	**Maghara**	**3.29**	**216**	P	**Pn**	**19 07 27.3**	**-1.0**
	baz=216						
AMAG	**Maghara**	**3.29**	**216**	P	**Pn**	**19 07 27.3**	**-1.0**
MBRI	**Mt Berech**	**3.55**	**188**	Pn	**Pn**	**19 07 31.5**	**-0.4**
HNKL	**Nakhl**	**3.61**	**201**	P	**Pn**	**19 07 31.4**	**-1.3**
	baz=203						
HNKL				AMP		19 08 00.0	
	comp=N,60μm,0.6s,logA/T=5.0,baz=203						
HNKL				S	**Sn**	**19 08 18.1**	**+2.2**
	baz=203						
HNKL	**Nakhl**	**3.61**	**201**	P	**Pn**	**19 07 31.4**	**-1.3**
HNKL				S	**Sn**	**19 08 18.1**	**+2.2**
SUZ		**4.13**	**214**	P	**Pn**	**19 07 39.0**	**-0.9**
	baz=214						
SUZ		**4.13**	**214**	P	**Pn**	**19 07 39.0**	**-0.9**
ZNM		**4.51**	**210**	P	**Pn**	**19 07 45.0**	**-0.1**
	baz=211						
ZNM		**4.51**	**210**	P	**Pn**	**19 07 45.0**	**-0.1**
HDHB	**Dhahab**	**4.64**	**189**	P	**Pn**	**19 07 46.4**	**-0.4**
	baz=192						
HDHB	**Dhahab**	**4.64**	**189**	P	**Pn**	**19 07 46.4**	**-0.4**
GLL	**Jalalah**	**4.92**	**222**	P	**Pn**	**19 07 50.3**	**-0.5**
	baz=221						
GLL	**Jalalah**	**4.92**	**222**	P	**Pn**	**19 07 50.3**	**-0.5**
HKAT	**Jabal Katrina**	**4.95**	**195**	P	**Pn**	**19 07 50.6**	**-0.6**
	baz=197						
HKAT	**Jabal Katrina**	**4.95**	**195**	P	**Pn**	**19 07 50.6**	**-0.6**
**

0.3nm,0.5s,baz=81,slow=6.7,SNR=3.7
TORD Torodi Ar. Bea 66.64 269 P **P** **19 25 25.2 -0.7**
0.9nm,0.4s,baz=47,slow=5.9,SNR=15
YKA Yellowknife Ar 80.27 3 P **P** **19 26 43.7 -1.2**
0.3nm,0.4s,baz=350,slow=5.5,SNR=6.5
WRA Warramunga Arr 81.72 123 P P 19 26 50.8 -2.3
83nm,0.4s,baz=329,slow=5.0,SNR=2.3
ULM Lac du Bonnet 92.05 352 P **P** **19 27 41.4 -1.6**
1.3nm,0.6s,baz=14,slow=8.3,SNR=3.0

IDC 17 19:16:15.0±3.1, 9°89S×111°64E, h0km, mb3.2/2, mb1 3.3/2, mb1mx3.1/20, mbtmp3.2/2, Error ellipse: s-maj=161.6km s-min=28.6km az=46.0, South of Java

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.07**	**117**	P	P	19 21 31.6	-0.7
	188nm,0.4s,baz=287,slow=12,SNR=8.5						
ASAR	**Alice Springs**	**25.28**	**126**	P	P	19 21 44.0	+0.7
	0.4nm,0.6s,baz=300,slow=8.8,SNR=7.9						
MKAR	**Makanchi Array**	**62.22**	**338**	P	P	19 26 38.4	-0.1
	0.1nm,0.4s,baz=154,slow=7.6,SNR=3.5						

IDC 17 19:23:00.1±7.9, 19°50S×169°27E, h163km±45km, mb3.7/3, mb1 3.8/4, mb1mx3.3/18, mbtmp3.7/4, MS4.0/2, Ms1 4.0/2, ms1mx3.0/30, Error ellipse: s-maj=88.0km s-min=67.1km az=110.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.68**	**225**	*e*P	Pn	19 23 56.7	0.0
DZM				*e*S	Sn	19 24 40.2	-0.6
DZM	**Mont Dzumac**	**3.68**	**225**	P	Pn	19 23 57.0	+0.3
	5.5nm,0.3s,baz=55,slow=20,SNR=95						
DZM				S	Sn	19 24 40.8	0.0
	4.0nm,0.3s,baz=279,slow=21,SNR=4.2						
NOUC	**Port Laguerre**	**3.79**	**226**	*e*P	Pn	19 23 59.2	+1.1
NOUC				*e*S	Sn	19 24 44.5	+1.3
STKA	**Stephens Creek**	**27.73**	**238**	P	P	19 28 34.2	+0.9
	1.5nm,0.6s,baz=74,slow=8.4,SNR=8.1						
RAR	**Rarotonga**	**29.06**	**99**	LR	LR	19 37 23.5	
	comp=Z,148nm,18.7s,baz=268,slow=30						
WRA	**Warramunga Arr**	**32.85**	**263**	P	P	19 29 17.4	-1.2
	0.5nm,0.5s,baz=98,slow=8.3,SNR=13						
ASAR	**Alice Springs**	**33.09**	**256**	P	P	19 29 20.4	-0.3
	2.3nm,0.5s,baz=84,slow=8.8,SNR=67						
FITZ	**Fitzroy Crossi**	**41.24**	**265**	P	P	19 30 29.6	+0.2
	2.5nm,0.6s,baz=107,slow=7.2,SNR=16						
USHA	**Ushuaia**	**91.20**	**151**	LR	LR	20 11 46.9	
	comp=Z,101nm,18.1s,baz=285,slow=32						

*GEN **17** 19:23:54.7, 45°.95N×7°.91E, h4km, ML0.8*
*CSEM **17** 19:23:54.5±0.1, 45°.94N×7°.93E, h5km, ML0.8, Error ellipse: s-maj=2.5km s-min=1.1km az=102.0*
ZUR 17 19:23:55.2, 45°.98N×7°.91E, h-0km±3km, ML1.1/2, 2C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMK	**Mattmark**	**0.08**	**25**	⇑*i*P	Pg	19 23 57.3	+0.1
	196nm,0.1s						
MMK				*e*Sg	Sg	19 23 58.8	+0.3
	196nm,0.1s						
MMK	**Mattmark**	**0.08**	**25**	⇑*i*Pg	Pg	19 23 57.3	+0.1
	196nm,0.1s						
MMK				*e*Sg	Sg	19 23 58.8	+0.3
	196nm,0.1s						
DIX	**Grande Dixence**	**0.37**	**287**	⇓*i*Pg	Pg	19 24 02.4	-0.3
	22nm,0.2s						
DIX				*e*Sg	Sg	19 24 07.6	-0.1
	22nm,0.2s						
DIX	**Grande Dixence**	**0.37**	**287**	⇓*i*Pg	Pg	19 24 02.4	-0.3
	22nm,0.2s						
DIX				*e*Sg	Sg	19 24 07.6	-0.1
	22nm,0.2s						
LKBD2	**Leukerbad 2**	**0.44**	**335**	*e*Pg	Pg	19 24 04.1	+0.1
LKBD2	**Leukerbad 2**	**0.44**	**335**	*e*Pg	Pg	19 24 04.1	+0.1
TRAV	**Traversella**	**0.48**	**194**	P	Pg	19 24 03.4	-1.1
TRAV				S	Sg	19 24 09.4	-1.4
RSP	**Reno Superiore**	**0.94**	**209**	P	Pg	19 24 12.0	-1.5
RSP				S	Sg	19 24 23.8	-2.1

*CSEM **17** 19:24:58.5±0.1, 42°.41N×13°.36E, h10km, ML3.0/10, Error ellipse: s-maj=2.8km s-min=1.9km az=61.0*
ROM 17 19:24:58.4±0.1, 42°.40N×13°.37E, h10km, Ml2.6/26, Error ellipse: s-maj=1.0km s-min=0.8km az=56.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.05**	**153**	Pg	Pg	19 25 00.7	+0.2
AQU				Sg	Sg	19 25 02.1	+0.2
	33µm,0.9s						
AQU	**L'Aquila**	**0.05**	**153**	Pg	Pg	19 25 00.7	+0.2
AQU				Sg	Sg	19 25 02.1	+0.2
	33µm,0.9s						
CAMP	**Campotosto**	**0.14**	**12**	Pg	Pg	19 25 02.1	+0.3
CAMP				Sg	Sg	19 25 04.9	+0.8
	2µm,0.7s						
CAMP	**Campotosto**	**0.14**	**12**	Pg	Pg	19 25 02.1	+0.3
CAMP				Sg	Sg	19 25 04.9	+0.8
	2µm,0.7s						
FAGN	**Fagnano**	**0.21**	**130**	Pg	Pg	19 25 03.6	+0.8
FAGN				Sg	Sg	19 25 07.5	+1.7
FAGN	**Fagnano**	**0.21**	**130**	Pg	Pg	19 25 03.6	+0.8
FAGN				Sg	Sg	19 25 07.5	+1.7
FIAM	**Fiamignano**	**0.23**	**235**	Pg	Pg	19 25 03.9	+0.6
FIAM				Sg	Sg	19 25 08.3	+1.8
	3µm,0.6s						
FIAM	**Fiamignano**	**0.23**	**235**	Pg	Pg	19 25 03.9	+0.6
FIAM				Sg	Sg	19 25 08.3	+1.8
	3µm,0.6s						
TERO	**Teramo**	**0.28**	**38**	Pg	Pg	19 25 04.4	+0.2
TERO				Sg	Sg	19 25 09.1	+1.0
	1µm,0.6s						
TERO	**Teramo**	**0.28**	**38**	Pg	Pg	19 25 04.4	+0.2
TERO				Sg	Sg	19 25 09.1	+1.0
	1µm,0.6s						
LNSS	**Leonessa**	**0.32**	**310**	Pg	Pg	19 25 05.3	+0.4
LNSS				Sg	Sg	19 25 10.4	+1.1
	2µm,0.8s						
LNSS	**Leonessa**	**0.32**	**310**	Pg	Pg	19 25 05.3	+0.4
LNSS				Sg	Sg	19 25 10.4	+1.1
	2µm,0.8s						
VCEL	**Villa Celiera**	**0.35**	**91**	Pg	Pg	19 25 06.1	+0.6
VCEL				Sg	Sb	19 25 12.0	-0.6
	2µm,0.8s						
VCEL	**Villa Celiera**	**0.35**	**91**	Pg	Pg	19 25 06.1	+0.6
VCEL				Sg	Sb	19 25 12.0	-0.6
	2µm,0.8s						
PTQR	**Pietraquaria**	**0.38**	**177**	Pg	Pg	19 25 06.4	+0.4
PTQR				Sg	Sg	19 25 12.0	+0.9
	61nm,0.3s						
PTQR	**Pietraquaria**	**0.38**	**177**	Pg	Pg	19 25 06.4	+0.4
PTQR				Sg	Sg	19 25 12.0	+0.9
	61nm,0.3s						
NRCA	**Norcia**	**0.47**	**337**	Pg	Pg	19 25 07.7	-0.1
NRCA				Sg	Sb	19 25 15.8	-0.4
	236nm,0.4s						
NRCA	**Norcia**	**0.47**	**337**	Pg	Pg	19 25 07.7	-0.1
NRCA				Sg	Sb	19 25 15.8	-0.4
	236nm,0.4s						
MNS	**Montasola**	**0.51**	**269**	Pg	Pg	19 25 08.7	+0.3
	272nm,0.7s						
MNS	**Montasola**	**0.51**	**269**	Pg	Pg	19 25 08.7	+0.3
	272nm,0.7s						
CERT	**Cerreto**	**0.54**	**213**	Pg	Pg	19 25 09.1	+0.2
	633nm,0.4s						
CERT	**Cerreto**	**0.54**	**213**	Pg	Pg	19 25 09.1	+0.2
	633nm,0.4s						
INTR	**Introdacqua**	**0.55**	**134**	Pg	Pg	19 25 09.3	0.0
INTR				Sg	Sb	19 25 18.5	0.0
	1µm,0.9s						
INTR	**Introdacqua**	**0.55**	**134**	Pg	Pg	19 25 09.3	0.0
INTR				Sg	Sb	19 25 18.5	0.0
	1µm,0.9s						
VVLD	**Villa Vallelon**	**0.56**	**160**	Pg	Pg	19 25 09.4	0.0
	354nm,0.7s						
VVLD	**Villa Vallelon**	**0.56**	**160**	Pg	Pg	19 25 09.4	0.0
	354nm,0.7s						
OFFI	**Offida**	**0.58**	**23**	Pg	Pb	19 25 10.9	+0.1
	2µm,0.6s						
OFFI	**Offida**	**0.58**	**23**	Pg	Pb	19 25 10.9	+0.1
	2µm,0.6s						
MTCE	**Montecelio**	**0.60**	**231**	Pg	Pg	19 25 10.2	+0.1
	222nm,0.8s						
MTCE	**Montecelio**	**0.60**	**231**	Pg	Pg	19 25 10.2	+0.1
	222nm,0.8s						
GUAR	**Guarcino**	**0.61**	**184**	Pg	Pg	19 25 10.6	+0.4
	187nm,0.6s						
GUAR	**Guarcino**	**0.61**	**184**	Pg	Pg	19 25 10.6	+0.4
	187nm,0.6s						
CESX	**Cesi**	**0.62**	**290**	Pg	Pg	19 25 10.4	-0.1
	136nm,0.5s						
CESX	**Cesi**	**0.62**	**290**	Pg	Pg	19 25 10.4	-0.1
	136nm,0.5s						
FDMO	**Fiordimonte**	**0.67**	**342**	Pg	Pg	19 25 11.2	-0.3
	128nm,0.8s						
FDMO	**Fiordimonte**	**0.67**	**342**	Pg	Pg	19 25 11.2	-0.3
	128nm,0.8s						
CESI	**CESI - Serrava**	**0.70**	**331**	Pg	Pg	19 25 11.6	-0.4
	54nm,0.5s						
CESI	**CESI - Serrava**	**0.70**	**331**	Pg	Pg	19 25 11.6	-0.4
	54nm,0.5s						
LPEL	**Lama dei Pelig**	**0.70**	**120**	Pg	Pg	19 25 11.9	-0.1
LPEL				Sg	Sb	19 25 22.4	-0.2
	220nm,0.7s						
LPEL	**Lama dei Pelig**	**0.70**	**120**	Pg	Pg	19 25 11.9	-0.1
LPEL				Sg	Sb	19 25 22.4	-0.2
	220nm,0.7s						
POFI	**Posta Fibreno**	**0.73**	**159**	Pg	Pg	19 25 12.5	-0.1
POFI	**Posta Fibreno**	**0.73**	**159**	Pg	Pg	19 25 12.5	-0.1
SDI	**San Donato**	**0.76**	**154**	Pg	Pg	19 25 12.9	-0.3
	91nm,0.5s						
SDI	**San Donato**	**0.76**	**154**	Pg	Pg	19 25 12.9	-0.3
	91nm,0.5s						
GUMA	**Gualdo di Mace**	**0.78**	**32**	Pg	Pg	19 25 11.5	-2.1
	561nm,0.5s						
GUMA	**Gualdo di Mace**	**0.78**	**32**	Pg	Pg	19 25 11.5	-2.1
	561nm,0.5s						
ASSB	**Assisi San Ben**	**0.83**	**321**	Pg	Pg	19 25 14.2	-0.3
	289nm,1.0s						
ASSB	**Assisi San Ben**	**0.83**	**321**	Pg	Pg	19 25 14.2	-0.3
	289nm,1.0s						
RNI2	**Rionero Sannit**	**0.91**	**140**	Pg	Pg	19 25 15.9	-0.1
	237nm,0.7s						
RNI2	**Rionero Sannit**	**0.91**	**140**	Pg	Pg	19 25 15.9	-0.1
	237nm,0.7s						
CERA	**Filignano**	**0.94**	**149**	Pg	Pg	19 25 16.0	-0.5
	240nm,0.7s						
CERA	**Filignano**	**0.94**	**149**	Pg	Pg	19 25 16.0	-0.5
	240nm,0.7s						
CING	**Cingoli**	**0.98**	**353**	Pg	Pg	19 25 16.8	-0.6
	156nm,1.0s						
CING	**Cingoli**	**0.98**	**353**	Pg	Pg	19 25 16.8	-0.6
	156nm,1.0s						
MIDA	**Miranda**	**1.00**	**139**	Pg	Pg	19 25 16.8	-1.0
	111nm,0.7s						
MIDA	**Miranda**	**1.00**	**139**	Pg	Pg	19 25 16.8	-1.0
	111nm,0.7s						
MGAB	**Montegabbione**	**1.06**	**299**	Pg	Pg	19 25 18.7	-0.2
MGAB	**Montegabbione**	**1.06**	**299**	Pg	Pg	19 25 18.7	-0.2
MURB	**Monte Urbino**	**1.06**	**324**	Pg	Pb	19 25 19.1	0.0
	251nm,0.7s						
MURB	**Monte Urbino**	**1.06**	**324**	Pg	Pb	19 25 19.1	0.0
	251nm,0.7s						
ARVD	**Arcevia**	**1.14**	**344**	Pg	Pb	19 25 19.8	-0.5
	103nm,0.9s						
ARVD	**Arcevia**	**1.14**	**344**	Pg	Pb	19 25 19.8	-0.5
	103nm,0.9s						
AOI	**Ancona**	**1.16**	**8**	Pg	Pb	19 25 20.7	0.0
AOI	**Ancona**	**1.16**	**8**	Pg	Pb	19 25 20.7	0.0
SACS	**San Casciano d**	**1.17**	**293**	Pg	Pg	19 25 21.1	+0.1
PIEI	**Pieia**	**1.29**	**332**	Pg	Pn	19 25 22.3	-0.3
	50nm,0.6s						
PIEI	**Pieia**	**1.29**	**332**	Pg	Pn	19 25 22.3	-0.3
	50nm,0.6s						
NVLJ	**Novalja**	**2.42**	**26**	*i* Pn	Pn	19 25 39.3	+1.2
NVLJ				Sn	Sb	19 26 10.7	-1.3
NVLJ	**Novalja**	**2.42**	**26**	Sn	Sb	19 26 10.7	-1.3
NVLJ	**Novalja**	**2.42**	**26**	*i* Pn	Pn	19 25 39.3	+1.2
STON	**Ston**	**3.23**	**80**	*e*Pn	Pn	19 25 50.4	+1.3
STON				Sn	Sn	19 26 31.3	+3.7
STON	**Ston**	**3.23**	**80**	*e*Pn	Pn	19 25 50.3	+1.2
STON				Sn	Sn	19 26 31.3	+3.7

IDC 17 19:28:20.0±1.8, 9°85S×152°45E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/15, mbtmp3.5/5, Error ellipse: s-maj=71.8km s-min=25.9km az=119.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.15**	**238**	P	P	19 32 55.6	-0.5
	149nm,0.5s,baz=63,slow=9.8,SNR=9.3						
ASAR	**Alice Springs**	**22.41**	**230**	P	P	19 33 21.0	+0.5
	0.8nm,0.9s,baz=63,slow=9.3,SNR=8.4						
STKA	**Stephens Creek**	**24.12**	**203**	P	P	19 33 37.2	-0.4
	2.4nm,1.0s,baz=20,slow=6.6,SNR=3.6						
MKAR	**Makanchi Array**	**83.89**	**319**	P	P	19 40 52.0	+0.2
	0.2nm,0.7s,baz=98,slow=6.3,SNR=2.6						
ZALV	**Zalesovo Beam**	**85.14**	**327**	P	P	19 40 57.5	-0.4
	0.5nm,0.6s,baz=124,slow=9.2,SNR=3.9						
ILAR	**Eielson Array**	**86.94**	**22**	P	P	19 41 06.7	0.0
	0.4nm,0.9s,baz=251,slow=4.8,SNR=4.4						
TORD	**Torodi Ar. Bea**	**151.16**	**279**	PKPbc	PKPbc	19 48 16.5	+0.1
	0.3nm,0.7s,baz=87,slow=2.9,SNR=2.4						

*ISCJB **17** 19:31:37.9±1.3, 31°.75±0°.2×111°.9W±0°.4, h10km, mb3.6/2, MS3.7/5, Error ellipse: s-maj=45.4km s-min=25.5km az=178.9*
*IDC **17** 19:31:37.9±1.7, 31°.62S×111°.85W, h0km, mb3.6/2, mb1 4.0/2, mb1mx3.6/18, mbtmp3.6/2, MS3.7/5, Ms1 3.7/5, ms1mx3.4/23, Error ellipse: s-maj=69.9km s-min=43.3km az=3.0*
ISC 17 19:31:39.6±1.0, 31°.6S±0°.2×111°.8W±0°.3, h10km, n13, σ0.8°77/8, MS3.9/5, Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**34.27**	**117**	LR	LR	19 48 34.1	
	comp=Z,114nm,20.5s,baz=180,slow=30						
PPT	**Papeete**	**36.88**	**283**	LR	LR	19 49 57.9	
	comp=Z,191nm,20.9s,baz=105,slow=30						
CFAA	**Coronel Fontan**	**36.93**	**102**	LR	LR	19 50 18.3	
	comp=Z,14nm,19.1s,baz=261,slow=30						
LPAZ	**La Paz**	**42.44**	**79**	P	**P**	**19 39 35.5**	**-0.1**
	0.2nm,1.2s,baz=214,slow=7.3,SNR=3.7						
URZ	**Urewera**	**57.36**	**242**	LR	LR	20 01 54.3	
	comp=Z,152nm,18.8s,baz=118,slow=32						
VNA3	**Neumayer Olymp**	**64.19**	**159**	*e*P	**P**	**19 42 13.7**	**-0.4**
VNA2	**Neumayer--Watz**	**65.00**	**159**	*e*P	**P**	**19 42 19.1**	**-0.3**
	baz=264,slow=3.7						
SNAA	**Sanae**	**65.99**	**161**	*e*P	**P**	**19 42 26.7**	**+0.9**
NVAR	**Mina Array Bea**	**69.94**	**355**	P	**P**	**19 42 51.8**	**+0.6**
	0.2nm,0.3s,baz=176,slow=7.0,SNR=3.7						
RCBR	**Riachuelo**	**74.97**	**88**	LR	LR	20 14 15.3	
	comp=Z,105nm,18.4s,baz=300,slow=34						
SONM	**Songino Array**	**146.83**	**310**	PKPbc	**PKPdf**	**19 51 20.4**	**+0.2**
	0.7nm,0.9s,baz=50,slow=2.0,SNR=5.1						
CMAR	**Chiang Mai Arr**	**149.33**	**252**	PKPbc	**PKPbc**	**19 51 29.4**	**0.0**
	1.1nm,1.1s,baz=251,slow=1.6,SNR=3.8						
ZALV	**Zalesovo Beam**	**154.68**	**337**	PKPab	**PKPab**	**19 51 53.9**	**-1.2**
	0.2nm,0.3s,baz=35,slow=5.3,SNR=2.7						

*LDG **17** 19:52:03.8±0.8, 37°.26N×12°.74W, h10km, Ml2.9/2, Error ellipse: s-maj=16.7km s-min=11.8km az=47.0*
*MDD **17** 19:52:03.6±2.0, 36°.82N×12°.50W, h0km, mb4.1/3, Error ellipse: s-maj=21.4km s-min=16.3km az=11.0, PRXIMO*
*CSEM **17** 19:52:05.5±0.4, 36°.92N×12°.35W, h10km, mb4.1/3, Error ellipse: s-maj=8.6km s-min=7.0km az=16.0*
*INMG **17** 19:52:05.1±1.0, 36°.68N×12°.89W, h10km, ML2.2, Error ellipse: s-maj=9.1km s-min=6.2km az=176.0*
ISC 17 19:52:03.7±3.6, 36°.9N±0°.1×12°.4W±0°.2, h10km, n55, σ0.9°98/98, 1C-1D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**2.90**	**83**	*e*Pn	**Pn**	**19 52 50.2**	**+0.3**
PFVI				*e*Sn	**Sn**	**19 53 24.7**	**-0.2**
PFVI				A	A	19 53 26.1	
	5.2nm,0.1s						
PFVI	**Vila Bisbo**	**2.90**	**83**	⇑P	**Pn**	**19 52 50.2**	**+0.3**
	3.0nm,0.1s,SNR=18						
PFVI				S	**Sn**	**19 53 24.6**	**-0.2**
	25nm,0.9s,SNR=7.0						
PFVI	**Vila Bisbo**	**2.90**	**83**	P	**Pn**	**19 52 50.2**	**+0.3**
	3.0nm,0.1s,SNR=18						
PFVI				*e*Sn	**Sn**	**19 53 24.7**	**-0.2**
	5.2nm,0.1s						
PTEO	**Sao Teotonio**	**3.04**	**76**	*e*Pn	**Pn**	**19 52 52.9**	**+1.0**
PTEO				*e*Sn	**Sn**	**19 53 28.4**	**+0.1**
PTEO				A	A	19 53 31.0	
	5.3nm,0.4s						
PTEO	**Sao Teotonio**	**3.04**	**76**	P	**Pn**	**19 52 52.9**	**+1.0**
PTEO				S	**Sn**	**19 53 28.4**	**+0.1**
	2.7nm,0.4s						
PTEO	**Sao Teotonio**	**3.04**	**76**	P	**Pn**	**19 52 52.9**	**+1.0**
PTEO				S	**Sn**	**19 53 28.4**	**+0.1**
	2.7nm,0.4s						
MORF	**Marmelete**	**3.06**	**80**	*e*Pn	**Pn**	**19 52 52.6**	**+0.4**
MORF				*e*Sn	**Sn**	**19 53 29.1**	**+0.3**
MORF				A	A	19 53 30.6	
	6.3nm,0.3s						
MORF	**Marmelete**	**3.06**	**80**	P	**Pn**	**19 52 52.6**	**+0.4**
MORF				S	**Sn**	**19 53 29.1**	**+0.3**
	6.3nm,0.3s						
MORF	**Marmelete**	**3.06**	**80**	P	**Pn**	**19 52 52.6**	**+0.4**
MORF				S	**Sn**	**19 53 29.1**	**+0.3**
	6.3nm,0.3s						
PMAFR	**Mafra**	**3.26**	**49**	*e*Pn	**Pn**	**19 52 55.9**	**+1.1**
PMAFR				*e*Sn	**Sn**	**19 53 35.7**	**+2.1**
PMAFR	**Mafra**	**3.26**	**49**	⇓P	**Pn**	**19 52 55.9**	**+1.1**
	3.8nm,0.1s,SNR=18						
PMAFR				S	**Sn**	**19 53 35.3**	**+1.7**
	43nm,0.5s,SNR=7.9						
PMAFR	**Mafra**	**3.26**	**49**	P	**Pn**	**19 52 55.9**	**+1.1**
	3.8nm,0.1s,SNR=18						
PMAFR				S	**Sn**	**19 53 35.3**	**+1.7**
	43nm,0.5s,SNR=7.9						
PMAFR				*e*Sn	**Sn**	**19 53 35.7**	**+2.1**
PCVE	**Castro Verde**	**3.59**	**76**	*e*Pn	**Pn**	**19 53 00.8**	**+1.4**
PCVE				*e*Sn	**Sn**	**19 53 41.4**	**-0.5**
PCVE				A	A	19 53 46.0	
	2.4nm,0.4s						
PCVE	**Castro Verde**	**3.59**	**76**	P	**Pn**	**19 53 00.8**	**+1.4**
PCVE				S	**Sn**	**19 53 41.4**	**-0.5**
	2.4nm,0.4s						
PCVE	**Castro Verde**	**3.59**	**76**	P	**Pn**	**19 53 00.8**	**+1.4**
PCVE				S	**Sn**	**19 53 41.4**	**-0.5**
	2.4nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.62**	**83**	*e*Pn	**Pn**	**19 53 00.7**	**+0.8**
PBDV				*e*Sn	**Sn**	**19 53 43.0**	**+0.3**
PBDV	**Barranco-do-Ve**	**3.62**	**83**	P	**Pn**	**19 53 00.7**	**+0.8**
PBDV				S	**Sn**	**19 53 43.0**	**+0.3**
PBDV	**Barranco-do-Ve**	**3.62**	**83**	P	**Pn**	**19 53 00.7**	**+0.8**
PBDV				S	**Sn**	**19 53 43.0**	**+0.3**
EVOP	**Sao Brissos**	**3.80**	**63**	*e*Pn	**Pn**	**19 53 02.7**	**+0.4**
EVOP				*e*Sn	**Sn**	**19 53 44.8**	**-2.3**
	1.6nm,0.3s						
PVAQ	**Vaqueiros**	**3.81**	**80**	*e*Pn	**Pn**	**19 53 03.4**	**+1.0**
PVAQ				*e*Sn	**Sn**	**19 53 47.0**	**-0.3**
PVAQ				A	A	19 53 50.1	
	2.5nm,0.1s						
PVAQ	**Vaqueiros**	**3.81**	**80**	P	**Pn**	**19 53 03.4**	**+1.0**
PVAQ				S	**Sn**	**19 53 47.0**	**-0.3**
	2.5nm,0.1s						
PVAQ	**Vaqueiros**	**3.81**	**80**	P	**Pn**	**19 53 03.4**	**+1.0**
PVAQ				S	**Sn**	**19 53 47.0**	**-0.3**
	2.5nm,0.1s						
PBEJ	**Beja**	**3.82**	**71**	*e*Pn	**Pn**	**19 53 03.6**	**+1.0**
PBEJ				*e*Sn	**Sn**	**19 53 46.5**	**-1.0**
PBEJ	**Beja**	**3.82**	**71**	P	**Pn**	**19 53 03.6**	**+1.0**
PBEJ				S	**Sn**	**19 53 46.5**	**-1.0**
PBEJ	**Beja**	**3.82**	**71**	P	**Pn**	**19 53 03.6**	**+1.0**
PBEJ				S	**Sn**	**19 53 46.5**	**-1.0**
EVO	**Evora**	**3.88**	**63**	*e*Pn	**Pn**	**19 53 02.7**	**-0.8**
EVO				*e*Sn	Sn	19 53 44.8	-4.3
	3.2nm,0.3s						
EVO	**Evora**	**3.88**	**63**	*e*Pn	**Pn**	**19 53 04.4**	**+0.9**
EVO				*e*Sn	**Sn**	**19 53 48.8**	**-0.3**
EVO				A	A	19 53 53.2	
	4.0nm,0.1s						
EVO	**Evora**	**3.88**	**63**	P	**Pn**	**19 53 04.4**	**+0.9**
EVO				S	**Sn**	**19 53 48.8**	**-0.3**
	4.0nm,0.1s						
EVO	**Evora**	**3.88**	**63**	P	**Pn**	**19 53 04.4**	**+0.9**
EVO				S	**Sn**	**19 53 48.8**	**-0.3**
	4.0nm,0.1s						
PMTG	**Montargil**	**3.99**	**55**	*e*Pn	**Pn**	**19 53 05.6**	**+0.7**
PMTG				*e*Sn	**Sn**	**19 53 52.5**	**+0.7**
PMTG	**Montargil**	**3.99**	**55**	*e*Pn	**Pn**	**19 53 05.6**	**+0.7**
PMTG				*e*Sn	**Sn**	**19 53 52.5**	**+0.7**
PESTR	**Estremoz**	**4.33**	**61**	*e*Pn	**Pn**	**19 53 10.4**	**+0.8**
PESTR				*e*Sn	**Sn**	**19 53 59.6**	**-0.5**
PESTR	**Estremoz**	**4.33**	**61**	P	**Pn**	**19 53 10.4**	**+0.8**
PESTR				S	**Sn**	**19 53 59.6**	**-0.5**
PESTR	**Estremoz**	**4.33**	**61**	P	**Pn**	**19 53 10.4**	**+0.8**
PESTR				S	**Sn**	**19 53 59.6**	**-0.5**
PBAR	**Barrancos**	**4.49**	**71**	*e*Pn	**Pn**	**19 53 12.8**	**+1.1**
PBAR				*e*Sn	**Sn**	**19 54 02.8**	**-1.2**
PBAR	**Barrancos**	**4.49**	**71**	P	**Pn**	**19 53 12.8**	**+1.1**
PBAR				S	**Sn**	**19 54 02.8**	**-1.2**
PBAR	**Barrancos**	**4.49**	**71**	P	**Pn**	**19 53 12.8**	**+1.1**
PBAR				S	**Sn**	**19 54 02.8**	**-1.2**
EMIN	**Mina Concepcio**	**4.68**	**77**	P	**Pn**	**19 53 14.7**	**+0.3**
	0.3nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**19 54 07.6**	**-1.2**
	1.2nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.68**	**77**	P	**Pn**	**19 53 14.7**	**+0.3**
	0.3nm,0.1s,SNR=7.9						
EMIN				S	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB11	**Plate Boundary**	**0.76**	**94**↓	*iP*	**Pn**	**20 07 03.0**	**-1.2**
PB11				*i* S	**Sn**	**20 07 16.0**	**+0.8**
PB11				AML	AML	20 07 20.4	
	comp=N,42μm,0.7s						
HMBC	**Humberston**	**0.78**	**137**↓	*i*P	**Pn**	**20 07 02.4**	**-2.2**
HMBC				*e*S	**Sn**	**20 07 14.9**	**-0.8**
HMBC				AML	AML	20 07 18.6	
	comp=N,21μm,0.6s						
MNMC	**Miæe Miæ**	**1.00**	**55**↓	*i*P	**Pn**	**20 07 06.6**	**-0.9**
MNMC				*i* S	**Sn**	**20 07 22.4**	**+1.5**
MNMC				AML	AML	20 07 27.5	
	comp=N,26μm,0.5s						
ARCH	**Arica**	**1.22**	**7**↓	*e*P	**Pn**	**20 07 07.6**	**-2.6**
ARCH				*e*S	**Sn**	**20 07 24.8**	**-0.9**
ARCH				AML	AML	20 07 26.9	
	comp=N,33μm,0.5s						
PB01	**Plate Boundary**	**1.61**	**146**↑	*i*P	**Pn**	**20 07 14.6**	**-0.9**
PB01				*e*S	**Sn**	**20 07 36.6**	**+1.3**
PB07	**Plate Boundary**	**2.08**	**165**↑	*e*P	**Pn**	**20 07 19.7**	**-2.2**
PB07				AML	AML	20 07 58.5	
	comp=E,4μm,0.5s						
PB09	**Plate Boundary**	**2.37**	**151**↑	*e*P	**Pn**	**20 07 25.6**	**-0.3**
PB09				*e*S	**Sn**	**20 07 54.9**	**+1.0**
PB09				AML	AML	20 08 05.8	
	comp=N,16μm,0.6s						
MACH	**Maria Elena**	**2.56**	**165**	*e*P	**Pn**	**20 07 27.1**	**-1.5**
PB04	**Plate Boundary**	**2.70**	**161**	*e*P	Pn	20 07 26.1	-4.1
PB06	**Plate Boundary**	**3.10**	**165**↑	*e*P	**Pn**	**20 07 33.1**	**-2.7**
LPAZ	**La Paz**	**4.06**	**33**	P	**Pn**	**20 07 52.2**	**+2.8**
	comp=N,9.5nm,0.3s,baz=191,slow=6.5,SNR=80						
LPAZ				LR	LR	20 09 35.4	
	comp=N,391nm,19.3s,baz=229,slow=41						
SIV	**San Ignacio**	**9.67**	**69**	P	**Pn**	**20 09 05.6**	**-0.3**
	comp=N,4.5nm,0.3s,baz=276,slow=9.8,SNR=49						
SIV				LR	LR	20 13 19.8	
	comp=N,211nm,20.0s,slow=40						
NNA	**Nana**	**9.83**	**320**	P	**Pn**	**20 09 10.3**	**+2.3**
	comp=N,1.2nm,0.3s,baz=175,slow=12,SNR=2.2						
CFAA	**Coronel Fontan**	**12.01**	**171**	P	**Pn**	**20 09 40.8**	**+3.0**
	comp=N,0.0nm,0.3s,baz=256,slow=12,SNR=2.7						
CFAA				S	**S**	**20 12 15.1**	**-1.5**
	comp=N,0.0nm,0.3s,baz=211,slow=15,SNR=2.3						
CPUP	**Villa Florida**	**13.76**	**121**	P	**Pn**	**20 10 03.1**	**+1.6**
	comp=N,0.5nm,0.3s,baz=274,slow=13,SNR=3.8						
CPUP				LR	LR	20 16 15.6	
	comp=N,108nm,21.5s,baz=289,slow=41						
PLCA	**Paso Flores**	**20.96**	**180**	P	**P**	**20 11 28.0**	**+0.4**
	comp=N,2.6nm,0.7s,baz=348,slow=12,SNR=6.5						
BDFB	**Brasilia**	**21.76**	**83**	P	**P**	**20 11 34.8**	**-1.6**
	comp=N,3.0nm,0.4s,baz=237,slow=11,SNR=4.3						
TXAR	**Lajitas Array**	**58.34**	**326**	P	**P**	**20 16 38.1**	**-0.6**
	comp=N,0.1nm,0.3s,baz=144,slow=41,SNR=2.5						
VNA2	**Neumayer--Watz**	**62.81**	**161**	*e*Pn	**P**	**20 17 10.0**	**+1.5**
	baz=313,slow=5.7						
SNAA	**Sanae**	**64.44**	**161**	*e*Pn	**P**	**20 17 20.5**	**+1.2**
DBIC	**Dimbokro**	**69.64**	**75**	P	**P**	**20 17 52.8**	**-0.4**
	comp=N,2.7nm,0.6s,baz=225,slow=8.6,SNR=4.0						
PDAR	**Pinedale Array**	**71.84**	**331**	P	**P**	**20 18 05.7**	**-0.6**
	comp=N,0.4nm,0.7s,baz=131,slow=9.8,SNR=3.7						
TORD	**Torodi Ar. Bea**	**78.14**	**71**	P	**P**	**20 18 42.5**	**-0.4**
	comp=N,3.5nm,0.6s,baz=251,slow=5.5,SNR=19						
YKA	**Yellowknife Ar**	**89.03**	**341**	P	**P**	**20 19 37.0**	**-0.5**
	comp=N,2.5nm,0.6s,baz=134,slow=4.7,SNR=82						
STKA	**Stephens Creek**	**120.21**	**211**	PKP	**PKPdf**	**20 25 34.3**	**-0.1**
	comp=N,0.9nm,0.5s,baz=169,slow=23,SNR=2.9						
ASAR	**Alice Springs**	**130.78**	**210**	PKP	**PKPdf**	**20 25 54.8**	**-0.1**
	comp=N,0.5nm,0.5s,baz=126,slow=1.7,SNR=16						
WRA	**Warramunga Arr**	**133.71**	**213**	PKP	**PKPdf**	**20 26 00.1**	**-0.3**
	comp=N,46nm,0.3s,baz=149,slow=1.8,SNR=2.4						
ZALV	**Zalesovo Beam**	**140.92**	**23**	PKP	**PKPdf**	**20 26 10.0**	**-2.6**
	comp=N,4.4nm,0.4s,baz=10.0,slow=2.6,SNR=3.9						
MKAR	**Makanchi Array**	**144.99**	**33**	PKP	**PKPdf**	**20 26 20.1**	**0.0**
	comp=N,5.7nm,0.6s,baz=320,slow=3.4,SNR=94						
SONM	**Songino Array**	**151.83**	**4**	PKPbc	**PKPbc**	**20 26 37.9**	**+0.2**
	comp=N,0.2nm,0.5s,baz=293,slow=1.6,SNR=5.1						

GUC 17 20:10:43.2±0.6, 22°47'S×70°34'W, h34km±3km, ML4.0, 4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**0.61**	**63**	*e*P	Pn	20 10 55.3	-0.4
MACH				*e*S	Sb	20 11 04.1	-0.4
PB04	**Plate Boundary**	**0.82**	**76**↓	*i*P	Pn	20 10 50.4	-8.0
PB04				*i* S	Sn	20 10 55.4	-14
PB04				AML	AML	20 10 55.6	
	comp=E,18μm,0.3s						
PB07	**Plate Boundary**	**0.85**	**30**↓	*i*P	Pn	20 10 59.0	0.0
PB07				*i* S	Sn	20 11 10.5	0.0
PB07				AML	AML	20 11 14.0	
	comp=E,4μm,0.3s						
ANCH	**Antofagasta**	**1.21**	**183**↓	*e*P	Pn	20 11 04.1	+0.4
ANCH				*e*S	Sb	20 11 19.9	-0.9
PB09	**Plate Boundary**	**1.22**	**57**↓	*e*P	Pn	20 11 05.0	+0.9
PB09				*i* S	Sb	20 11 21.4	-0.3
PB09				AML	AML	20 11 24.8	
	comp=E,7μm,0.5s						
PB01	**Plate Boundary**	**1.63**	**29**	*e*P	Pn	20 11 11.2	+1.5
PB01				*e*S	Sb	20 11 32.4	-0.7
PB01				AML	AML	20 11 34.4	
	comp=E,2μm,0.3s						
PB11	**Plate Boundary**	**2.77**	**13**	*e*P	Pn	20 11 27.9	+2.4
PB11				AML	AML	20 12 09.5	
	comp=N,2μm,0.3s						

IDC 17 20:11:20.7±3.3, 10°.11N×125°.74E, h0km, mb3.4/2, mb1 3.5/2, mb1mx3.1/23, mbtmp3.4/2, Error ellipse: s-maj=269.7km s-min=27.4km az=65.0
ISCJB 17 20:11:26.3±0.8, 10°.29N±0°.04×125°.94E±0°.07, h51km, mb4.3/3, Error ellipse: s-maj=9.5km s-min=6.3km az=170.6
MAN 17 20:11:27, 10°.27N×125°.80E, h23km, mb4.9, ML3.9, MS3.9
MAN INTENSITY II - LIBJO DINAGAT PROVINCE.
ISC 17 20:11:27.3±1.2, 10°.29N±0°.05×125°.90E±0°.09, h51km, n15, σ1§18/19, **mb3.6**/3, **3C-1D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.04**	**261**	*e*P	**Pn**	**20 11 44.5**	**-1.0**
PLP	**Palo**	**1.25**	**314**↓	*e*P	**Pn**	**20 11 47.2**	**-1.2**
PLP				*e*S	**Sn**	**20 12 03.0**	**-1.3**
BUTP	**Butuan**	**1.34**	**192**	*e*P	**Pn**	**20 11 49.4**	**-0.3**
BESP	**Borongan**	**1.38**	**341**	*e*P	**Pn**	**20 11 51.1**	**+1.0**
OCLP	**Ormoc**	**1.48**	**301**	*e*P	**Pn**	**20 11 53.2**	**+1.7**
LLP	**Lapu-Lapu**	**1.91**	**271**↑	*e*P	**Pn**	**20 11 57.6**	**+0.3**
LLP				*e*S	**Sn**	**20 12 20.0**	**-0.2**
TBP	**Tagbilaran**	**2.10**	**254**	*e*P	**Pn**	**20 12 00.2**	**+0.3**
TBP				*e*S	**Sn**	**20 12 25.1**	**+0.3**
CGP	**Cagayan de Oro**	**2.18**	**213**↑	*e*P	**Pn**	**20 12 01.7**	**+0.6**
CGP				*e*S	**Sn**	**20 12 27.2**	**+0.3**
CNP	**Catarman**	**2.52**	**331**	*e*P	**Pn**	**20 12 07.1**	**+1.4**
BUKP	**Musuan**	**2.54**	**199**	*e*P	**Pn**	**20 12 07.8**	**+1.7**
RCP	**Roxas**	**3.35**	**292**↑	*e*P	**Pn**	**20 12 18.4**	**+1.3**
PAGZ	**Pagadian**	**3.48**	**226**	*e*P	**Pn**	**20 12 20.7**	**+1.8**
WRA	**Warramunga Arr**	**31.17**	**165**	P	**P**	**20 17 40.4**	**-1.3**
	54nm,0.4s,baz=344,slow=9.4,SNR=2.0						
ASAR	**Alice Springs**	**34.65**	**167**	P	**P**	**20 18 10.8**	**-1.2**
	0.3nm,0.4s,baz=353,slow=6.9,SNR=9.1						
MKAR	**Makanchi Array**	**51.79**	**323**	P	**P**	**20 20 30.6**	**+0.6**
	0.3nm,0.6s,baz=125,slow=7.4,SNR=4.9						

ISCJB 17 20:21:01.6±0.7, 38°.38N±0°.03×21°.78E±0°.05, h15km±4km, Error ellipse: s-maj=7.0km s-min=5.1km az=20.6
CSEM 17 20:21:01.9±0.1, 38°.35N×21°.82E, h12km, ML1.9/4, Error ellipse: s-maj=3.5km s-min=2.9km az=113.0
ATH 17 20:21:02.0, 38°.35N×21°.78E, h19km±4km, MD3.0/4
THE 17 20:21:02.7, 38°.34N×21°.81E, h10km, ML1.9/4, Error ellipse: s-maj=0.8km s-min=0.4km az=297.0
ISC 17 20:21:01.8±0.9, 38°.34N±0°.03×21°.81E±0°.03, h15km±5km, **n28,** σ0§29/41, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.06**	**194**	P	**Pg**	**20 21 04.5**	**-0.1**
UPR				S	**Sg**	**20 21 06.3**	**-0.2**
UPR	**University Cam**	**0.06**	**194**	P	**Pg**	**20 21 04.5**	**-0.1**
UPR				S	**Sg**	**20 21 06.3**	**-0.2**
EFP	**Efpalio**	**0.12**	**43**	P	**Pg**	**20 21 05.4**	**+0.2**
EFP				S	**Sg**	**20 21 07.7**	**+0.2**
EFP	**Efpalio**	**0.12**	**43**	P	**Pg**	**20 21 05.4**	**+0.2**
EFP				S	**Sg**	**20 21 07.7**	**+0.2**
LAKA	**Lakka**	**0.17**	**127**	P	**Pg**	**20 21 06.2**	**+0.2**
LAKA				S	**Sg**	**20 21 09.1**	**+0.3**
LAKA	**Lakka**	**0.17**	**127**	P	**Pg**	**20 21 06.2**	**+0.2**
LAKA				S	**Sg**	**20 21 09.1**	**+0.3**
TRIZ	**Trizonia**	**0.21**	**84**	P	**Pb**	**20 21 07.0**	**-0.4**
TRIZ				S	**Sb**	**20 21 10.4**	**-0.7**
TRIZ	**Trizonia**	**0.21**	**84**	P	**Pb**	**20 21 07.0**	**-0.4**
TRIZ				S	**Sb**	**20 21 10.4**	**-0.7**
KALE	**Kalithea**	**0.27**	**79**	P	**Pg**	**20 21 07.9**	**+0.4**
KALE	**Kalithea**	**0.27**	**79**	P	**Pg**	**20 21 07.9**	**+0.4**
RLS	**Riolos of Patr**	**0.39**	**222**	P	**Pb**	**20 21 10.7**	**+0.3**
RLS	**Riolos of Patr**	**0.39**	**223**	*e*PB	**Pb**	**20 21 10.4**	**0.0**
RLS				*e*SB	**Sb**	**20 21 15.9**	**-0.3**
RLS	**Riolos of Patr**	**0.39**	**223**	*e*Pb	**Pb**	**20 21 10.4**	**0.0**
RLS	**Riolos of Patr**	**0.39**	**223**	P	**Pb**	**20 21 10.7**	**+0.3**
DSF	**Desfina**	**0.57**	**83**	P	**Pg**	**20 21 13.2**	**+0.1**
DSF	**Desfina**	**0.57**	**83**	P	**Pg**	**20 21 13.2**	**+0.1**
EVR	**Evrytania**	**0.57**	**0**	P	**Pb**	**20 21 13.6**	**0.0**
EVR	**Evrytania**	**0.57**	**0**	*e*PN	**Pg**	**20 21 13.4**	**+0.3**
EVR				*e*SN	**Sg**	**20 21 21.2**	**+0.4**
EVR	**Evrytania**	**0.57**	**0**	*e*Pn	**Pg**	**20 21 13.4**	**+0.3**
EVR	**Evrytania**	**0.57**	**0**	P	**Pb**	**20 21 13.6**	**0.0**
EVR				*e*Sn	**Sg**	**20 21 21.2**	**+0.4**
GUR	**Goura**	**0.59**	**134**	P	**Pg**	**20 21 13.5**	**+0.2**
GUR				S	**Sb**	**20 21 22.2**	**+0.2**
GUR	**Goura**	**0.59**	**134**	P	**Pg**	**20 21 13.5**	**+0.2**
GUR				S	**Sb**	**20 21 22.2**	**+0.2**
AMT	**Artemida-Makis**	**0.81**	**185**	P	**Pb**	**20 21 17.8**	**+0.2**
AMT	**Artemida-Makis**	**0.81**	**185**	P	**Pb**	**20 21 17.8**	**+0.2**
VLS	**Valsamata**	**0.97**	**261**	*e*PN	**Pg**	**20 21 20.5**	**-0.1**
VLS	**Valsamata**	**0.97**	**261**	*e*Pn	**Pg**	**20 21 20.5**	**-0.1**
LKR	**Lokris**	**0.99**	**71**	*e*PN	**Pn**	**20 21 21.0**	**-0.1**
LKR	**Lokris**	**0.99**	**71**	*e*Pn	**Pn**	**20 21 21.0**	**-0.1**

IDC 17 20:23:44.6±0.9, 14°.83N×144°.85E, h0km, mb3.3/7, mb1 3.6/7, mb1mx3.5/23, mbtmp3.3/7, MS3.2/2, Ms1 3.2/2, ms1mx2.4/30, Error ellipse: s-maj=33.4km s-min=15.9km az=90.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.23**	**179**	Pn	Pn	20 24 09.3	+0.2
	60nm,0.3s,baz=309,slow=3.1,SNR=20						
GUMO				Sn	Sg	20 24 24.5	+0.3
	90nm,0.3s,baz=95,slow=21,SNR=18						
MJAR	**Matsushiro Arr**	**22.43**	**346**	P	P	20 28 46.2	+1.2
	2.1nm,0.9s,baz=175,slow=9.9,SNR=5.8						
ASAJ	**Asahikawa**	**29.26**	**357**	LR	LR	20 39 02.7	
	comp=Z,30nm,21.1s,baz=32,slow=31						
WRA	**Warramunga Arr**	**36.06**	**197**	P	P	20 30 48.1	0.0
	39nm,0.4s,baz=23,slow=9.5,SNR=1.6						
ASAR	**Alice Springs**	**39.73**	**196**	P	P	20 31 19.0	-0.1
	0.3nm,1.0s,baz=18,slow=14,SNR=4.3						
CMAR	**Chiang Mai Arr**	**44.05**	**281**	P	P	20 31 54.5	-0.1
	0.3nm,0.8s,baz=94,slow=7.2,SNR=3.3						
SONM	**Songino Array**	**45.72**	**324**	P	P	20 32 07.6	-0.1
	0.1nm,0.4s,baz=114,slow=6.8,SNR=1.9						
SONM				LR	LR	20 49 50.2	
	comp=Z,36nm,20.1s,baz=342,slow=34						
MKAR	**Makanchi Array**	**60.60**	**316**	P	P	20 33 56.5	-0.8
	0.5nm,0.8s,baz=98,slow=8.8,SNR=4.3						
ILAR	**Eielson Array**	**67.46**	**26**	P	P	20 34 42.0	0.0
	0.3nm,0.8s,baz=218,slow=4.2,SNR=3.2						
YKA	**Yellowknife Ar**	**81.77**	**27**	P	P	20 36 04.8	-0.4
	0.4nm,0.8s,baz=287,slow=5.4,SNR=5.1						

IDC 17 20:30:33.3±1.3, 55°.37S×159°.33E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.9/13, mbtmp3.9/4, MS3.5/1, Ms1 3.5/1, ms1mx2.7/26, Error ellipse: s-maj=83.4km s-min=23.8km az=66.0, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**22.27**	**179**	P	P	20 35 32.5	+1.0
	0.6nm,0.6s,baz=345,slow=9.6,SNR=4.6						
STKA	**Stephens Creek**	**26.60**	**325**	P	P	20 36 14.8	+1.6
	1.3nm,0.6s,baz=136,slow=14,SNR=6.3						
ASAR	**Alice Springs**	**36.82**	**319**	P	P	20 37 43.4	+0.4
	3.0nm,0.8s,baz=157,slow=8.2,SNR=34						
ASAR				PcP	PcP	20 40 04.2	-0.8
	0.4nm,0.5s,baz=140,slow=4.2,SNR=4.1						
NWAO	**Narrogin (SRO)**	**36.83**	**290**	LR	LR	20 50 19.9	
	comp=Z,73nm,18.5s,baz=198,slow=32						
WRA	**Warramunga Arr**	**40.08**	**322**	P	P	20 38 09.9	-0.4
	36nm,0.3s,baz=158,slow=7.1,SNR=2.0						
WRA				PcP	PcP	20 40 14.3	-0.8
	35nm,0.3s,baz=159,slow=2.9,SNR=2.0						
FITZ	**Fitzroy Crossi**	**45.14**	**312**	P	P	20 38 50.6	-0.8
	2.6nm,0.9s,baz=164,slow=9.9,SNR=5.7						
FITZ				PcP	PcP	20 40 31.3	-0.6
	0.9nm,1.0s,baz=191,slow=5.2,SNR=5.9						
SNAA	**Sanae**	**52.64**	**187**	*e*P	P	20 39 48.0	-0.5
VNA3	**Neumayer Olymp**	**53.45**	**184**	*e*P	P	20 39 54.1	-0.3
VNA2	**Neumayer--Watz**	**53.65**	**185**	*e*P	P	20 39 55.7	-0.2
	baz=163,slow=1.2						
MKAR	**Makanchi Array**	**120.57**	**309**	PKP	PKPdf	20 49 24.8	-1.2
	0.2nm,0.4s,baz=204,slow=2.3,SNR=4.8						
ILAR	**Eielson Array**	**126.57**	**26**	PKP	PKPdf	20 49 37.6	+0.5
	0.5nm,0.9s,baz=225,slow=2.4,SNR=4.6						
TORD	**Torodi Ar. Bea**	**134.42**	**211**	PKP	PKPdf	20 49 52.7	-0.6
	0.3nm,0.6s,baz=163,slow=4.3,SNR=2.7						
AKASG	**Malin Array Be**	**150.17**	**282**	PKPbc	PKPbc	20 50 24.4	-0.6
	0.9nm,0.5s,baz=70,slow=3.2,SNR=4.3						

CSEM 17 20:42:01.0, 42°.46N×13°.44E, h11km, MD1.7/5, After ROM
ROM 17 20:42:01.0±0.1, 42°.46N×13°.44E, h11km, Md1.7/5, ML1.9/2, Error ellipse: s-maj=2.3km s-min=1.2km az=109.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.08**	**345**	Pg	Pg	20 42 04.1	+0.5
CAMP				Sg	Sg	20 42 06.0	+0.5
	235nm,0.4s						
CAMP	**Campotosto**	**0.08**	**345**	Pg	Pg	20 42 04.1	+0.5
CAMP				Sg	Sg	20 42 06.0	+0.5
	235nm,0.4s						
AQU	**L'Aquila**	**0.11**	**194**	Pg	Pg	20 42 04.3	+0.4
AQU				Sg	Sg	20 42 06.4	+0.5
	269nm,0.4s						
AQU	**L'Aquila**	**0.11**	**194**	Pg	Pg	20 42 04.3	+0.4
AQU				Sg	Sg	20 42 06.4	+0.5
	269nm,0.4s						
TERO	**Teramo**	**0.20**	**37**	Pg	Pb	20 42 06.2	-0.7
TERO				Sg	Sg	20 42 09.7	+1.2
TERO	**Teramo**	**0.20**	**37**	Pg	Pb	20 42 06.2	-0.7
TERO				Sg	Sg	20 42 09.7	+1.2
FIAM	**Fiamignano**	**0.30**	**231**	Pg	Pg	20 42 07.4	+0.1
FIAM				Sg	Sb	20 42 13.1	-0.7
FIAM	**Fiamignano**	**0.30**	**231**	Pg	Pg	20 42 07.4	+0.1
FIAM				Sg	Sb	20 42 13.1	-0.7
NRCA	**Norcia**	**0.44**	**328**	Pg	Pg	20 42 09.9	0.0
NRCA				Sg	Sg	20 42 16.5	+0.6
	79nm,0.1s						
NRCA	**Norcia**	**0.44**	**328**	Pg	Pg	20 42 09.9	0.0
NRCA				Sg	Sg	20 42 16.5	+0.6
	79nm,0.1s						

CSEM 17 20:42:57.5, 42°.25N×13°.47E, h10km, MD2.4/7, After ROM
ROM 17 20:42:57.5±0.1, 42°.25N×13°.47E, h10km, Md2.4/7, Ml1.8/6, Error ellipse: s-maj=0.9km s-min=0.6km az=12.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.09**	**82**	Pg	Pg	20 43 00.4	+0.4
FAGN				Sg	Sg	20 43 02.1	+0.3
	1μm,0.3s						
FAGN	**Fagnano**	**0.09**	**82**	Pg	Pg	20 43 00.4	+0.4
FAGN				Sg	Sg	20 43 02.1	+0.3
	1μm,0.3s						
AQU	**L'Aquila**	**0.11**	**333**	Pg	Pg	20 43 01.0	+0.6
AQU				Sg	Sg	20 43 03.0	+0.6
	269nm,0.4s						
AQU	**L'Aquila**	**0.11**	**333**	Pg	Pg	20 43 01.0	+0.6
AQU				Sg	Sg	20 43 03.0	+0.6
	269nm,0.4s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTQR	**Pietraquaria**	**0.24**	**193**	Pg	Pg	20 43 03.3	+0.8
PTQR				Sg	Sg	20 43 07.2	+1.3
	32nm,0.2s						
PTQR	**Pietraquaria**	**0.24**	**193**	Pg	Pg	20 43 03.3	+0.8
PTQR				Sg	Sg	20 43 07.2	+1.3
	32nm,0.2s						
FIAM	**Fiamignano**	**0.26**	**273**	Pg	Pg	20 43 03.7	+0.7
FIAM				Sg	Sb	20 43 08.0	-1.2
	83nm,0.6s						
FIAM	**Fiamignano**	**0.26**	**273**	Pg	Pg	20 43 03.7	+0.7
FIAM				Sg	Sb	20 43 08.0	-1.2
	83nm,0.6s						
VCEL	**Villa Celiera**	**0.31**	**63**	Pg	Pg	20 43 04.5	+0.6
VCEL				Sg	Sg	20 43 09.3	+1.1
	106nm,0.5s						
VCEL	**Villa Celiera**	**0.31**	**63**	Pg	Pg	20 43 04.5	+0.6
VCEL				Sg	Sg	20 43 09.3	+1.1
	106nm,0.5s						
VVLD	**Villa Vallelon**	**0.40**	**163**	Pg	Pg	20 43 05.9	+0.4
VVLD				Sg	Sb	20 43 12.1	-1.0
	39nm,0.4s						
VVLD	**Villa Vallelon**	**0.40**	**163**	Pg	Pg	20 43 05.9	+0.4
VVLD				Sg	Sb	20 43 12.1	-1.0
	39nm,0.4s						
INTR	**Introdacqua**	**0.40**	**127**	Pg	Pg	20 43 05.9	+0.3
INTR				Sg	Sb	20 43 12.5	-0.7
	83nm,0.3s						
INTR	**Introdacqua**	**0.40**	**127**	Pg	Pg	20 43 05.9	+0.3
INTR				Sg	Sb	20 43 12.5	-0.7
	83nm,0.3s						
CERT	**Cerreto**	**0.47**	**230**	Pg	Pg	20 43 07.2	+0.3
CERT	**Cerreto**	**0.47**	**230**	Pg	Pg	20 43 07.2	+0.3
LPEL	**Lama dei Pelig**	**0.57**	**111**	Pg	Pg	20 43 08.7	0.0
LPEL				Sg	Sb	20 43 17.1	-0.8
	108nm,0.3s						
LPEL	**Lama dei Pelig**	**0.57**	**111**	Pg	Pg	20 43 08.7	0.0
LPEL				Sg	Sb	20 43 17.1	-0.8
	108nm,0.3s						
SDI	**San Donato**	**0.60**	**155**	Pg	Pg	20 43 09.5	+0.2
SDI				Sg	Sb	20 43 18.6	-0.2
	18nm,0.2s						
SDI	**San Donato**	**0.60**	**155**	Pg	Pg	20 43 09.5	+0.2
SDI				Sg	Sb	20 43 18.6	-0.2
	18nm,0.2s						

ISCJB 17 20:49:35.8±1.2, 33°.31N±0°.05×35°.41E±0°.07, h8km±7km, Error ellipse: s-maj=10.0km s-min=7.0km az=155.2
CSEM 17 20:49:35.5±0.4, 33°.31N×35°.37E, h12km, ML2.7, Error ellipse: s-maj=8.0km s-min=4.2km az=72.0
NSSC 17 20:49:35.2±1.1, 33°.32N×35°.38E, h5km±5km, MD1.3, ML1.2
GRAL 17 20:49:36.8±0.3, 33°.30N×35°.42E, h5km±2km, MD2.7
ISC 17 20:49:36.3±1.3, 33°.30N±0°.04×35°.43E±0°.05, h11km±11km, **n16,** σ0§67/26, **Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.20**	**335**	*e*P	**Pg**	**20 49 40.6**	**-0.1**
MATL	**Matarih**	**0.20**	**335**	*e*P	**Pg**	**20 49 40.6**	**-0.1**
RCY	**Rachaya**	**0.39**	**60**	*e*P	**Pg**	**20 49 44.0**	**0.0**
RCY				*e*S	**Sg**	**20 49 49.4**	**+0.1**
BRBR	**Barbar**	**0.45**	**76**	*e*P	**Pg**	**20 49 45.2**	**+0.1**
BRBR				*e*S	**Sg**	**20 49 51.6**	**+0.5**
BRBR				AML	AML	20 49 52.7	
	comp=E,56nm,0.4s						
BRBR				AML	AML	20 49 53.2	
	comp=N,21nm,0.4s						
BHL	**Bhannes**	**0.63**	**17**	*e*P	**Pg**	**20 49 48.1**	**-0.4**
BHL	**Bhannes**	**0.63**	**17**	*e*P	**Pg**	**20 49 48.1**	**-0.4**
TCHB	**Talchebab**	**0.78**	**144**	*e*P	**Pg**	**20 49 51.3**	**0.0**
TCHB				AML	AML	20 49 52.2	
	comp=N,12nm,0.3s						
TCHB				*e*S	**Sb**	**20 50 02.2**	**-0.1**
TCHB				AML	AML	20 50 06.0	
	comp=E,19nm,0.5s						
TCHB	**Talchebab**	**0.78**	**144**	*e*P	**Pg**	**20 49 51.3**	**0.0**
	SNR=72						
TCHB				*e*S	**Sb**	**20 50 02.2**	**-0.1**
	comp=E,19nm,0.5s,SNR=91						
TOTH	**TOTAH**	**0.83**	**86**	*e*P	**Pg**	**20 49 52.4**	**-0.1**
TOTH	**TOTAH**	**0.83**	**86**	*e*P	**Pg**	**20 49 52.3**	**-0.1**
	SNR=72						
HWQ	**Hawqa**	**1.06**	**24**	*e*P	**Pg**	**20 49 55.9**	**-0.9**
HWQ				*e*S	**Sg**	**20 50 10.0**	**-0.6**
HWQ	**Hawqa**	**1.06**	**24**	*e*P	**Pg**	**20 49 55.9**	**-0.9**
HWQ				*e*S	**Sg**	**20 50 10.0**	**-0.6**
SALA	**Sala**	**1.24**	**118**	*e*P	**Pg**	**20 49 58.5**	**-1.6**
SALA				*e*S	**Sg**	**20 50 16.1**	**-0.2**
SALA				AML	AML	20 50 18.0

UPI				*e*S		**Sn**	**20 59 30.7**	**-0.8**
UPI				AML		AML	21 00 11.0	
	comp=Z,56nm,0.5s							
BLWY	**Bulawayo**	**6.35**	**11**	*i* P		**Pn**	**20 58 35.6**	**+1.6**
BLWY				*i*			20 58 36.3	
	baz=251,slow=12							
BLWY				*i* S		**Sn**	**20 59 46.6**	**+0.3**
SOE	**Somerset East**	**6.47**	**194**	*e*P		**Pn**	**20 58 36.5**	**+1.0**
SOE				*e*S		**Sn**	**20 59 48.0**	**-1.0**
SOE				AML		AML	21 00 20.4	
	comp=Z,22nm,0.6s							
GRM	**Grahamstown**	**6.92**	**186**	*e*S		**Sn**	**20 59 58.8**	**-1.2**
GRM				AML		AML	21 00 47.0	
	comp=Z,15nm,0.6s							
SUR	**Sutherland**	**8.24**	**222**	*e*P		**Pn**	**20 59 02.3**	**+2.4**
SUR				*e*S		**Sn**	**21 00 30.4**	**-2.3**
SUR				AML		AML	21 01 23.8	
	comp=Z,14nm,0.7s							
CVNA	**Calvinia**	**8.35**	**231**	*e*S		**Sn**	**21 00 32.8**	**-2.6**
CVNA				AML		AML	21 01 24.7	
	comp=Z,47nm,0.7s							
KOMG	**Komaggas**	**9.34**	**247**	*e*S		**Sn**	**21 00 56.7**	**-3.0**
KOMG				AML		AML	21 02 05.8	
	comp=Z,32nm,0.6s							
CER	**Ceres**	**9.84**	**223**	*e*S		**Sn**	**21 01 10.0**	**-1.9**
CER				AML		AML	21 02 11.1	
	comp=Z,12nm,0.6s							
LSZ	**Lusaka**	**11.11**	**4**	*e*P		**Pn**	**20 59 40.6**	**+1.4**
LSZ				*e*S		**Sn**	**21 01 39.3**	**-4.0**
LSZ				AML		AML	21 02 59.5	
	comp=Z,154nm,0.5s							

IDC ***17*** *21:02:27.6±0.6, 14°.88N×144°.73E, h0km, mb4.1/18, mb1 4.3/18, mb1mx4.2/26, mbtmp4.1/18, MS3.8/19, Ms1 3.8/19, ms1mx3.6/40, Error ellipse: s-maj=23.9km s-min=12.2km az=86.0*

NEIC ***17*** *21:02:28.9±0.3, 14°.86N×144°.71E, h10km, mb4.6/18, Error ellipse: s-maj=13.7km s-min=6.6km az=86.0*

ISCJB ***17*** *21:02:30.8±0.4, 14°.83N±0°.04×144°.63E±0°.09, h33km, mb4.4/38, MS3.8/19, Error ellipse: s-maj=12.1km s-min=5.8km az=167.2*

ISC 17 21:02:32.1±0.5, 14°.79N±0°.06×144°.8E±0°.1, h35km, n84, σ1§25/79, mb4.4/38, MS3.9/19, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**1.20**	**175**	*e*Pn		**Pn**	**21 02 52.1**	**-0.2**
GUMO				*e*Sn		**Sn**	**21 03 07.2**	**-0.1**
GUMO	**Guam**	**1.20**	**175**	Pn		**Pn**	**21 02 52.3**	**0.0**
	503nm,0.3s,baz=296,slow=2.6,SNR=249							
GUMO				Sn		**Sn**	**21 03 07.9**	**+0.5**
	784nm,0.3s,baz=106,slow=21,SNR=53							
JHJ	**Hachijo jima 2**	**18.80**	**347**	LR		LR	21 13 28.0	
	comp=Z,244nm,18.5s,baz=221,slow=35							
JNU	**Nakatsue**	**22.19**	**328**	P		**P**	**21 07 25.2**	**-0.1**
JNU	**Nakatsue**	**22.19**	**328**	P		**P**	**21 07 25.2**	**-0.1**
	11nm,0.8s,baz=142,slow=7.7,SNR=8.6							
JNU				LR		LR	21 14 28.3	
	comp=Z,52nm,18.3s,baz=314,slow=33							
MJAR	**Matsushiro Arr**	**22.44**	**346**	P		**P**	**21 07 28.5**	**+0.5**
MJAR	**Matsushiro Arr**	**22.44**	**346**	P		**P**	**21 07 28.5**	**+0.5**
	12nm,0.9s,baz=174,slow=10.0,SNR=30							
MAJO	**Matsushiro**	**22.44**	**346**	*e*Pn		**P**	**21 07 28.7**	**+0.7**
	23nm,1.0s							
MAT	**Matsushiro**	**22.44**	**346**	P		**P**	**21 07 28.4**	**+0.4**
MAT				S		**S**	**21 11 37.0**	**+4.7**
KSRS	**Korea Array**	**27.08**	**330**	P		**P**	**21 08 11.5**	**+0.1**
	3.0nm,0.9s,baz=144,slow=10,SNR=10.0							
KSRS				LR		LR	21 19 23.6	
	comp=Z,94nm,18.1s,baz=301,slow=38							
KSAR	**Wonju Array Be**	**27.09**	**330**	P		**P**	**21 08 11.5**	**0.0**
ASAJ	**Asahikawa**	**29.29**	**357**	*e*P		**P**	**21 08 31.1**	**0.0**
	13nm,1.2s							
ASAJ	**Asahikawa**	**29.29**	**357**	P		**P**	**21 08 32.8**	**+1.7**
	6.4nm,0.8s,baz=260,slow=33,SNR=4.1							
ASAJ				LR		LR	21 18 45.4	
	comp=Z,137nm,18.9s,baz=203,slow=34							
USRK	**Ussuriysk Arra**	**31.27**	**342**	P		**P**	**21 08 49.1**	**+0.6**
	2.3nm,0.8s,baz=149,slow=9.1,SNR=3.9							
USRK				LR		LR	21 21 01.8	
	comp=Z,174nm,18.1s,baz=282,slow=36							
CTA	**Charters Tower**	**34.69**	**178**	LR		LR	21 21 48.4	
	comp=Z,80nm,19.1s,baz=4.3,slow=33							
WRAB	**Tennant Creek**	**35.99**	**197**	*e*P		P	21 09 31.9	+2.0
	8.2nm,1.0s							
WRA	**Warramunga Arr**	**36.00**	**197**	P		**P**	**21 09 31.1**	**+1.1**
WRA	**Warramunga Arr**	**36.00**	**197**	P		**P**	**21 09 31.1**	**+1.1**
	35nm,0.3s,baz=24,slow=9.8,SNR=2.1							
FITZ	**Fitzroy Crossi**	**37.73**	**211**	*e*P		**P**	**21 09 45.3**	**+0.6**
	4.2nm,0.9s							
FITZ	**Fitzroy Crossi**	**37.73**	**211**	P		**P**	**21 09 45.7**	**+1.0**
	2.5nm,0.8s,baz=32,slow=14,SNR=7.1							
HHC	**Hu-ho-hao-te**	**38.81**	**318**	*e*P		P	21 09 56.8	+3.1
HHC				S		**S**	**21 15 52.6**	**+3.5**
HHC				pmax		pmax		
	comp=Z,20nm,0.6s							
HHC				pmax		pmax		
	comp=Z,150nm,5.8s							
PETK	**Petropavlovsk-**	**39.58**	**12**	LR		LR	21 28 03.3	
	comp=Z,74nm,18.3s,baz=2.5,slow=39							
ASAR	**Alice Springs**	**39.67**	**196**	P		**P**	**21 10 02.6**	**+1.7**
ASAR	**Alice Springs**	**39.67**	**196**	P		**P**	**21 10 02.6**	**+1.7**
	comp=Z,0.7nm,0.9s,baz=16,slow=10,SNR=6.3							
BTO	**Baotou**	**39.68**	**317**	*e*P		**P**	**21 10 00.6**	**-0.4**
LZH	**Lanzhou**	**42.20**	**308**	*e*P		**P**	**21 10 22.8**	**+0.9**
LZH				pP		**pP**	**21 10 27.3**	**-4.9**
LZH				sP		sP	21 10 29.8	-6.6
LZH				pmax		pmax		
	comp=Z,20nm,1.2s							
CM31	**Chiang Mai Arr**	**43.97**	**281**	*e*P		P	21 10 40.2	+3.9
	comp=Z,14nm,1.2s							
CMAR	**Chiang Mai Arr**	**43.97**	**281**	P		**P**	**21 10 36.6**	**+0.4**
CMAR	**Chiang Mai Arr**	**43.97**	**281**	P		**P**	**21 10 36.6**	**+0.4**
	comp=Z,2.5nm,1.0s,baz=77,slow=6.5,SNR=12							
CMAR				LR		LR	21 25 42.3	
	comp=Z,69nm,21.1s,baz=266,slow=32							
ULN	**Ulaanbaatar**	**45.35**	**325**	*e*P		P	21 10 51.1	+4.0
	comp=Z,3.4nm,0.8s							
SONM	**Songino Array**	**45.70**	**324**	P		**P**	**21 10 49.5**	**-0.2**
SONM				PcP		**PcP**	**21 12 27.6**	**+0.2**
SONM	**Songino Array**	**45.70**	**324**	P		**P**	**21 10 49.6**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=135,slow=8.5,SNR=5.9							
SONM				PcP		**PcP**	**21 12 27.6**	**+0.2**
	comp=Z,1.9nm,1.1s,baz=134,slow=2.3,SNR=5.6							
SONM				LR		LR	21 29 44.2	
	comp=Z,116nm,18.1s,baz=307,slow=36							
GTA	**Gaotai**	**46.31**	**311**	*e*P		**P**	**21 10 55.3**	**+0.6**
GTA				pP		**pP**	**21 11 04.8**	**-0.3**
GTA				sP		**sP**	**21 11 08.8**	**-0.5**
GTA				PcP		**PcP**	**21 12 31.3**	**+1.6**
GTA				S		**S**	**21 17 39.0**	**-0.7**
GTA				sS		**sS**	**21 17 55.1**	**-1.7**
GTA				pmax		pmax		
	comp=Z,5.0nm,1.0s							
GTA				pmax		pmax		
	comp=Z,190nm,4.3s							
GTA				LR		LR		
	comp=N,120nm,16.6s							
GTA				LR		LR		
	comp=E,110nm,16.1s							
GTA				LR		LR		
	comp=Z,150nm,16.2s							
STKA	**Stephens Creek**	**46.50**	**184**	*e*P		**P**	**21 10 56.3**	**+0.3**
	comp=Z,1.9nm,1.3s							
STKA	**Stephens Creek**	**46.50**	**184**	P		P	21 10 58.2	+2.3
	comp=Z,4.5nm,1.2s,baz=358,slow=5.5,SNR=3.4							
AFI	**Afiamalu**	**51.59**	**122**	LR		LR	21 28 23.3	
	comp=Z,131nm,21.0s,baz=263,slow=30							
TAPN	**Taplejung**	**54.28**	**293**	*e*P		**P**	**21 11 55.4**	**-0.1**
	comp=Z,30nm,0.9s							
ODAN	**Odare**	**54.56**	**293**	*e*P		**P**	**21 11 56.5**	**-0.9**
	comp=Z,12nm,0.7s							
BILL	**Bilibino**	**55.00**	**10**	*e*P		**P**	**21 11 60.0**	**+0.3**
	comp=Z,4.5nm,0.7s							
RAMN	**Ramite**	**55.26**	**293**	*e*P		**P**	**21 12 02.5**	**0.0**
	comp=Z,37nm,1.1s							
GUN	**Gumba**	**55.91**	**294**	*e*P		**P**	**21 12 06.7**	**-0.6**
	comp=Z,56nm,1.0s							
WMQ	**Urumqi**	**56.24**	**313**	P		**P**	**21 12 10.0**	**+0.9**
WMQ				pmax		pmax		
	comp=Z,15nm,1.0s							
PKI	**Pulchoki**	**56.33**	**293**	*e*P		**P**	**21 12 09.7**	**-0.5**
PKIN	**Phulchoki**	**56.34**	**293**	*e*P		**P**	**21 12 09.4**	**-0.8**
KKN	**Kakani**	**56.44**	**294**	*e*P		**P**	**21 12 11.1**	**+0.2**
DMN	**Daman**	**56.59**	**293**	*e*P		**P**	**21 12 11.4**	**-0.7**
	comp=Z,22nm,0.9s							
TIXI	**Tiksi**	**57.64**	**354**	*e*P		**P**	**21 12 16.4**	**-1.9**
	comp=Z,4.5nm,1.1s							
DANN	**Dangsing**	**57.78**	**294**	*e*P		**P**	**21 12 20.2**	**-0.3**
	comp=Z,55nm,0.9s							
KOLN	**Koldanda**	**57.93**	**294**	*e*P		**P**	**21 12 21.0**	**-0.4**
	comp=Z,24nm,0.9s							
PYUN	**Piuthan**	**58.47**	**294**	*e*P		**P**	**21 12 24.6**	**-0.6**
	comp=Z,66nm,1.0s							
MK31	**Makanchi Array**	**60.56**	**316**	*e*P		**P**	**21 12 37.9**	**-1.2**
MKAR	**Makanchi Array**	**60.56**	**316**	P		**P**	**21 12 39.0**	**-0.1**
MKAR	**Makanchi Array**	**60.56**	**316**	P		**P**	**21 12 39.0**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=95,slow=8.9,SNR=11							
ZALV	**Zalesovo Beam**	**60.60**	**324**	P		**P**	**21 12 38.6**	**-0.6**
ZALV	**Zalesovo Beam**	**60.60**	**324**	P		**P**	**21 12 38.6**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=109,slow=6.2,SNR=9.4							
ZALV				LR		LR	21 37 45.5	
	comp=Z,70nm,20.6s,baz=74,slow=35							
KURK	**Kurchatov**	**63.61**	**320**	*e*P		**P**	**21 12 58.7**	**-0.7**
	comp=Z,8.2nm,1.0s							
KURBB	**Kurchatov Arra**	**63.65**	**319**	LR		LR	21 41 02.3	
	comp=Z,98nm,20.2s,baz=115,slow=36							
ILAR	**Eielson Array**	**67.53**	**26**	P		**P**	**21 13 23.6**	**-0.9**
ILAR	**Eielson Array**	**67.53**	**26**	P		**P**	**21 13 23.6**	**-0.9**
	comp=Z,0.8nm,0.9s,baz=241,slow=5.1,SNR=8.4							
KKAR	**Karatay Array**	**68.59**	**311**	*e*P		**P**	**21 13 31.6**	**0.0**
	comp=Z,2.2nm,0.8s							
BRVK	**Borovoye**	**69.00**	**321**	*e*P		**P**	**21 13 33.9**	**0.0**
	comp=Z,7.9nm,1.0s							
KBL	**Kabul**	**70.12**	**302**	*e*P		P	21 13 48.8	+7.3
	comp=Z,4.4nm,0.8s							
PPT	**Papeete**	**72.29**	**114**	LR		LR	21 39 00.2	
	comp=Z,120nm,19.6s,baz=337,slow=30							
ABKAR	**Akbulak array**	**75.59**	**318**	*e*P		**P**	**21 14 12.9**	**-0.5**
	comp=Z,2.7nm,0.8s							
YKA	**Yellowknife Ar**	**81.85**	**27**	P		**P**	**21 14 48.5**	**+1.0**
YKA	**Yellowknife Ar**	**81.85**	**27**	P		**P**	**21 14 48.5**	**+1.0**
	comp=Z,2.2nm,0.9s,baz=288,slow=5.5,SNR=22							
RES	**Resolute Bay**	**83.41**	**13**	*e*P		**P**	**21 14 56.5**	**+1.1**
	comp=Z,3.8nm,0.8s							
RES	**Resolute Bay**	**83.41**	**13**	LR		LR	21 55 15.2	
	comp=Z,47nm,18.2s,baz=152,slow=38							
WVOR	**Wild Horse Val**	**84.94**	**48**	*e*P		P	21 15 07.5	+3.6
	comp=Z,5.5nm,0.3s							
ARCES	**ARCESS Array B**	**85.92**	**342**	P		**P**	**21 15 08.5**	**+0.3**
ARCES	**ARCESS Array B**	**85.92**	**342**	P		**P**	**21 15 08.5**	**+0.3**
	comp=Z,10nm,0.9s,baz=55,slow=14,SNR=6.5							
BSMT	**Bassoo Peak**	**86.02**	**42**	*e*P		**P**	**21 15 09.7**	**+0.3**
	comp=Z,7.1nm,1.0s							
NVAR	**Mina Array Bea**	**86.25**	**51**	P		**P**	**21 15 12.1**	**+1.4**
NVAR	**Mina Array Bea**	**86.25**	**51**	P		**P**	**21 15 12.1**	**+1.4**
	comp=Z,1.1nm,0.9s,baz=266,slow=5.6,SNR=5.5							
KBZ	**Khabaz**	**88.25**	**315**	LR		LR	21 55 40.4	
	comp=Z,61nm,21.4s,baz=163,slow=36							
FINES	**FINESS Array B**	**90.04**	**335**	P		**P**	**21 15 26.6**	**-1.4**
FINES	**FINESS Array B**	**90.04**	**335**	P		**P**	**21 15 26.6**	**-1.4**
	comp=Z,3.4nm,0.9s,baz=116,slow=4.4,SNR=6.3							
FINES				LR		LR	21 55 21.2	
	comp=Z,62nm,20.3s,baz=308,slow=35							
LOHW	**Long Hollow**	**90.18**	**45**	*e*P		**P**	**21 15 26.4**	**-2.9**
	comp=Z,2.5nm,0.6s							
AKASG	**Malin Array Be**	**93.98**	**325**	LR		LR	21 59 40.5	
	comp=Z,74nm,21.7s,baz=60,slow=37							
NOA	**NORSAR Array B**	**95.90**	**339**	LR		LR	22 01 22.9	
	comp=Z,39nm,18.1s,baz=45,slow=37							
BRTR	**Keskin Array B**	**96.17**	**314**	P		**P**	**21 15 56.3**	**-0.6**
BRTR	**Keskin Array B**	**96.17**	**314**	P		**P**	**21 15 56.3**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=96,slow=1.4,SNR=2.9							
BRTR				LR		LR	22 02 55.1	
	comp=Z,34nm,20.2s,baz=234,slow=38							
LPAZ	**La Paz**	**148.29**	**97**	PKPbc		**PKPab**	**21 22 18.0**	**-1.5**
LPAZ	**La Paz**	**148.29**	**97**	PKPbc		**PKPab**	**21 22 18.0**	**-1.5**
	comp=Z,1.2nm,0.8s,baz=23,slow=6.4,SNR=4.1							

LDG ***17*** *21:14:15.4±0.3, 25°.06N×94°.87E, h33km, Mb4.5/20, Ms3.6/6, Error ellipse: s-maj=15.6km s-min=10.0km az=156.0*

MOS ***17*** *21:14:15.5±0.9, 25°.33N×95°.25E, h33km, mb4.8/61, Error ellipse: s-maj=9.2km s-min=4.8km az=124.7*

ISCJB ***17*** *21:14:21.6±0.5, 25°.41N±0°.03×94°.98E±0°.02, h77km±4km, mb4.5/91, Error ellipse: s-maj=5.3km s-min=3.7km az=2.4*

BJI ***17*** *21:14:21.2, 25°.34N×95°.02E, h89km, mB4.8/19, mb4.8/29, Ms4.0/16, Ms7 3.7/15*

IDC ***17*** *21:14:23.9±2.0, 25°.42N×95°.23E, h88km±17km, mb4.1/26, mb1 4.2/27, mb1mx4.2/31, mbtmp4.1/27, MS3.4/5, Ms1 3.4/5, ms1mx3.0/43, Error ellipse: s-maj=14.1km s-min=10.6km az=37.0*

NEIC ***17*** *21:14:25.5±0.7, 25°.32N×95°.10E, h105km±6km, mb4.6/46, Error ellipse: s-maj=5.2km s-min=4.2km az=202.0*

NEIC Felt at Jorhat, India.

DJA ***17*** *21:14:31.7±1.0, 25°.1N±9°×9°.5E±1°.1, h150km±12km, M4.8/7, mB5.5/3, mb4.6/7, MLv5.0/2, Mw(mB)4.9/3*

ISC 17 21:14:24.3±0.4, 25.31N±0°.04×95°.03E±0°.03, h94km±3km, h94km:pP-P, n429, σ1§32/468, mb4.5/91, 100C-45D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IMP	**Imphal**	**1.12**	**242**	*ex*		Pn	21 14 41.0	-4.8
IMP				*e*S		**Sn**	**21 15 03.0**	**+1.1**
SHL	**Shillong**	**2.85**	**276**	*i*P		**Pn**	**21 15 07.0**	**-1.2**
SHL				*e*S		**Sn**	**21 15 46.6**	**+4.8**
AGT	**Agartala**	**3.72**	**248**	*ex*		Pn	21 15 24.0	+4.4
AGT				*ex*		x	21 16 05.0	
LSA	**Lhasa**	**5.57**	**323**	P		**Pn**	**21 15 43.3**	**-1.8**
TAPN	**Taplejung**	**6.87**	**289**	*e*Pn		**Pn**	**21 16 00.0**	**-2.8**
TAPN				*e*Sn		Sn	21 17 12.9	-6.7
	1μm,0.7s							
KMI	**Kunming**	**6.99**	**90**	P		**Pn**	**21 16 07.0**	**+2.7**
KMI				S		**Sn**	**21 17 25.5**	**+3.1**
KMI				pmax		pmax		
	comp=Z,51nm,0.8s							
KMI				LR		LR		
	comp=N,640nm,6.3s							
KMI				LR		LR		
	comp=E,200nm,3.8s							
KMI				LR		LR		
	comp=Z,250nm,9.1s							
ODAN	**Odare**	**7.04**	**284**	*e*Pn		**Pn**	**21 16 02.5**	**-2.5**
ODAN				*e*Sn		**Sn**	**21 17 18.1**	**-5.5**
CHTO	**Chiang Mai**	**7.41**	**150**	*e*P		**Pn**	**21 16 10.7**	**+0.8**
CHTO				*e*			21 17 28.2	
CHTO	**Chiang Mai**	**7.41**	**150**	*e*Pn		**Pn**	**21 16 10.7**	**+0.8**
CHTO				*e*Sn		**Sn**	**21 17 28.2**	**-4.3**
CHTO				*e*Lg		Lg	21 18 13.8	
CHTO	**Chiang Mai**	**7.41**	**150**	P		**Pn**	**21 16 11.4**	**+1.5**
	comp=Z,70nm,1.5s,comp=Z,905nmcomp=Z,0.3nm							
CMMT	**Chiang Mai**	**7.42**	**150**	P		**Pn**	**21 16 11.9**	**+1.9**
	comp=Z,61nm,1.5s,comp=Z,920nmcomp=Z,0.6nm							
CM31	**Chiang Mai Arr**	**7.73**	**151**	*e*Pn		**Pn**	**21 16 15.6**	**+1.4**
CM31				*e*Lg		Lg	21 18 18.2	
CMAR	**Chiang Mai Arr**	**7.73**	**151**	P		**Pn**	**21 16 15.4**	**+1.3**
CMAR	**Chiang Mai Arr**	**7.73**	**151**	P		**Pn**	**21 16 15.4**	**+1.3**
	comp=Z,5.0nm,0.3s,baz=324,slow=13,SNR=374							
RAMN	**Ramite**	**7.75**	**284**	*e*Pn		**Pn**	**21 16 12.5**	**-2.1**
RAMN				*e*Sn		Sn	21 17 34.3	-6.6
	comp=Z,699nm,0.4s							
BOK	**Bokaro**	**8.46**	**262**	*ex*		**Pn**	**21 16 21.6**	**-2.5**
BOK				AMB		AMB	21 16 22.1	
	comp=Z,172nm,0.6s							
BOK				*ex*		x	21 17 44.5	
GUN	**Gumba**	**8.59**	**290**	*e*Pn		**Pn**	**21 16 23.0**	**-3.2**
GUN				*e*Sn		Sn	21 17 52.1	-9.4
	comp=Z,1μm,0.7s							
PKI	**Pulchoki**	**8.91**	**287**	*e*Pn		Pn	21 16 27.0	-3.5
PKI				*e*Sn		Sn	21 18 01.1	-8.2
	comp=Z,190nm,0.4s							
PKIN	**Phulchoki**	**8.92**	**287**	*e*Pn		Pn	21 16 27.2	-3.5
PKIN				*e*Sn		Sn	21 18 01.0	-8.6
	comp=Z,1μm,0.6s							
KKN	**Kakani**	**9.07**	**288**	*e*Pn		Pn	21 16 29.1	-3.5
KKN				*e*Sn		Sn	21 18 04.0	-9.1
	comp=Z,700nm,0.6s							
DMN	**Daman**	**9.18**	**287**	*e*Pn		Pn	21 16 30.5	-3.7
DMN				*e*Sn		Sn	21 18 06.9	-8.9
	comp=Z,430nm,0.6s							
CD2	**Chengdu**	**9.52**	**52**	P		**Pn**	**21 16 37.0**	**-1.5**
CD2				sP			21 17 04.8	
CD2				S		**Sn**	**21 18 23.0**	**-0.7**
CD2				pmax		pmax		
	comp=Z,20nm,0.4s							
CD2				pmax		pmax		
	comp=Z,190nm,4.7s							
CD2				LR		LR		
	comp=N,390nm,9.8s							
CD2				LR		LR		
	comp=E,420nm,8.1s							
CD2				LR		LR		
	comp=Z,390nm,27.9s							
BWNR	**Bhubaneshwar**	**9.86**	**241**	*ex*		x	21 16 30.0	
DANN	**Dangsing**	**10.51**	**289**	*e*Pn		Pn	21 16 47.0	-5.3
DANN				*e*Sn		Sn	21 18 38.0	-10
	comp=Z,386nm,0.5s							
KOLN	**Koldanda**	**10.52**	**286**	*e*Pn		Pn	21 16 48.1	-4.3
KOLN				*e*Sn		Sn	21 18 38.7	-10
	comp=Z,291nm,0.4s							
GYA	**Guiyang**	**10.54**	**81**	⇓*i*P		**Pn**	**21 16 53.6**	**+1.0**
GYA				PP			21 17 05.0	
GYA				S		**Sn**	**21 18 50.0**	**+1.1**
GYA				pmax		pmax		
	comp=Z,110nm,0.7s							
PYUN	**Piuthan**	**11.11**	**287**	*e*Pn		Pn	21 16 55.0	-5.4
PYUN				*e*Sn		Sn	21 18 51.9	-11
	comp=Z,848nm,0.7s							
DGPR	**DIGLIPUR**	**12.23**	**190**	*e*P		**Pn**	**21 17 14.4**	**-0.8**
DGPR				AMB		AMB	21 17 31.7	
	comp=Z,74nm,1.7s							
LZH	**Lanzhou**	**13.14**	**33**	*e*P		**Pn**	**21 17 24.5**	**-3.0**
LZH				pmax		pmax		
	comp=Z,45nm,1.0s							
LZH				pmax		pmax		
	comp=Z,150nm,4.1s							
LZH				LR		LR		
	comp=N,370nm,8.0s							
LZH				LR		LR		
	comp=E,240nm,8.2s							
LZH				LR		LR		
	comp=Z,390nm,10.1s							
VIS	**Vishakhapatnam**	**13.24**	**238**	*e*P		**Pn**	**21 17 27.5**	**-1.2**
VIS				*e*P		P	21 17 27.7	-7.3
VIS				AMB		AMB	21 17 28.5	
	comp=Z,75nm,0.4s							
VIS				*ex*		x	21 19 43.8	
LGTI	**Lohaghat**	**13.76**	**291**	*e*P		**Pn**	**21 17 35.4**	**0.0**
LGTI				*ex*		x	21 20 00.1	
PTH	**Pithoragarh**	**13.81**	**291**	*ex*		P	21 17 31.9	-10
PTH				*ex*		x	21 19 56.3	
JBP	**Jabalpur**	**13.89**	**264**	⇑*i*P		**Pn**	**21 17 36.7**	**-0.4**
JBP				*i* x		x	21 17 38.1	
	comp=Z,47nm,0.4s							
JBP				*ex*		x	21 19 59.6	
UBPT	**Khong Chiam**	**13.97**	**134**	P		**Pn**	**21 17 39.9**	**+1.7**
	comp=Z,29nm,0.9s							
GTA	**Gaotai**	**14.63**	**15**	*e*P		Pn	21 17 43.0	-3.7
GTA				sP			21 18 14.5	
GTA				S		Sn	21 20 17.3	-11
GTA				PcP		**PcP**	**21 22 55.0**	**+1.6**
GTA				ScP		**ScP**	**21 26 20.1**	**+1.3**
GTA				PcS		**PcS**	**21 26 29.0**	**+0.4**
GTA				ScS		**ScS**	**21 29 56.8**	**+0.2**
GTA				pmax		pmax		
	comp=Z,3.0nm,0.7s							
GTA				pmax		pmax		
	comp=Z,100nm,9.5s							
GTA				LR		LR		
	comp=N,160nm,10.0s							
GTA				LR		LR		
	comp=E,260nm,9.0s							
GTA				LR		LR		
	comp=Z,120nm,17.6s							
DDI	**Dehra Dun**	**15.82**	**292**	*e*P		**Pn**	**21 18 00.3**	**-1.4**
DDI				*ex*		x	21 19 38.0	
BHPL	**Bhopal**	**16.18**	**266**	*e*P		**Pn**	**21 18 03.9**	**-2.4**
BHPL				AMB		AMB	21 18 05.3	
	comp=Z,80nm,0.5s							
NDI	**New Delhi**	**16.23**	**286**	*e*P		**Pn**	**21 18 06.0**	**-0.7**
NDI				*ex*		x	21 20 45.0	
SMLA	**Simla**	**16.77**	**294**	*i* x		**Pn**	**21 18 09.7**	**-3.7**
SMLA				AMB		AMB	21 18 11.5	
	comp=Z,29nm,0.5s							
HYB	**Hyderabad**	**17.22**	**246**	P		**Pn**	**21 18 19.0**	**-0.1**
HYB				S		**Sn**	**21 21 28.0**	**-2.7**
HYB	**Hyderabad**	**17.22**	**246**	P		**Pn**	**21 18 19.0**	**-0.1**
HYB				S		**Sn**	**21 21 28.0**	**-2.7**
HYB	**Hyderabad**	**17.22**	**246**	*i* P		**Pn**	**21 18 19.0**	**-0.1**
HYB				*e*S		**Sn**	**21 21 28.0**	**-2.7**
HYB	**Hyderabad**	**17.22**	**246**	*e*P		**P**	**21 18 20.1**	**+0.8**
DHRM	**DHARAMSHALA**	**17.80**	**297**	*ex*		**P**	**21 18 21.8**	**-3.9**
DHRM				AMB		AMB	21 18 26.1	
	comp=Z,27nm,0.8s							
AJM	**Ajmer**	**18.38**	**278**	*e*P		**P**	**21 18 30.0**	**-1.9**
AJM				*ex*		x	21 21 40.0	
LATR	**Latur**	**18.45**	**252**	*ex*		**P**	**21 18 30.3**	**-2.4**
LATR		

comp=Z,11nm,0.5s,baz=153,slow=8.0,SNR=203
MKAR ScP **ScP** **21 26 40.8 +1.8**
comp=Z,0.3nm,0.4s,baz=159,slow=2.8,SNR=5.0
MKAR LR LR 21 29 57.2
comp=Z,68nm,19.4s,baz=157,slow=39
TKM2 Tokmak 2 23.73 323 *eP* **P** **21 19 28.4 +0.4**
TKM2 *e* 21 23 09.6
TKM2 pmax pmax
comp=Z,17nm,1.2s
TKM2 Tokmak 2 23.73 323 *eP* **P** **21 19 28.4 +0.4**
comp=Z,17nm,1.2s
TKM2 *e*PcP **PcP** **21 23 09.6 +0.1**
TKM2 *e*ScP **ScP** **21 26 40.9 +1.5**
TKM2 Tokmak 2 23.73 323 P **P** **21 19 28.8 +0.7**
SNR=12
KBK Karagaybulak 23.91 321 P **P** **21 19 31.5 +1.8**
SNR=17
GSI Gunungsitoli 23.99 174 P **P** **21 19 31.6 +1.2**
AAK Ala-Archa 24.16 321 P **P** **21 19 33.1 +1.2**
AAK 21 23 12.3
AAK pmax pmax
comp=Z,5.0nm,0.5s
AAK pmax pmax
comp=Z,2.0nm,0.5s
AAK MLR MLR
comp=Z,43nm,19.6s
AAK Ala-Archa 24.16 321 P **P** **21 19 33.1 +1.2**
AAK PcP **PcP** **21 23 12.3 +1.9**
AAK Ala-Archa 24.16 321 P **P** **21 19 33.8 +2.0**
SNR=11
AAK Ala-Archa 24.16 321 P **P** **21 19 33.1 +1.2**
comp=Z,5.0nm,0.5s,baz=131,slow=7.0,SNR=28
AAK PcP **PcP** **21 23 12.3 +1.9**
comp=Z,1.9nm,0.5s,baz=177,slow=6.1,SNR=4.8
AAK LR LR 21 30 14.5
comp=Z,43nm,19.6s,baz=90,slow=39
SONM Songino Array 24.21 19 P **P** **21 19 32.4 +0.1**
SONM ScP **ScP** **21 26 40.2 -0.3**
SONM Songino Array 24.21 19 P **P** **21 19 32.4 +0.1**
comp=Z,3.3nm,0.5s,baz=196,slow=9.7,SNR=60
SONM ScP **ScP** **21 26 40.2 -0.3**
comp=Z,1.2nm,0.7s,baz=211,slow=3.4,SNR=8.3
KBL Kabul 24.27 298 *eP* **P** **21 19 33.8 +0.8**
KBL *e* 21 23 12.3
KBL pmax pmax
comp=Z,20nm,0.8s
KBL Kabul 24.27 298 *eP* **P** **21 19 33.8 +0.8**
comp=Z,20nm,0.8s
KBL *e*PcP **PcP** **21 23 12.3 +1.5**
KBL *e*ScP **ScP** **21 26 42.6 +1.6**
AML Almayashu 24.32 319 P **P** **21 19 35.0 +1.4**
SNR=7.1
ULN Ulaanbaatar 24.44 20 *eP* **P** **21 19 34.4 +0.1**
comp=Z,8.1nm,0.9s
ULN *e*PcP **PcP** **21 23 11.1 +0.2**
ULN Ulaanbaatar 24.44 20 P P 21 19 42.9 +8.6
comp=Z,12nm,0.8s
EKS2 Erkin-Say 24.59 320 *eP* **P** **21 19 37.2 +1.5**
EKS2 *e* 21 23 12.1
EKS2 pmax pmax
comp=Z,13nm,0.8s
EKS2 Erkin-Say 24.59 320 *eP* **P** **21 19 37.2 +1.5**
comp=Z,13nm,0.8s
EKS2 *e*PcP **PcP** **21 23 12.1 +0.8**
EKS2 Erkin-Say 24.59 320 P **P** **21 19 36.8 +1.0**
SNR=12
QUE Quetta 25.29 287 *eP* **P** **21 19 45.0 +2.7**
QUE *e*S **S** **21 24 03.0 +1.4**
QUE Quetta 25.29 287 *eP* **P** **21 19 45.0 +2.7**
QUE *e*S **S** **21 24 03.0 +1.4**
TPRI Tanjung Pinang 25.93 158 P **P** **21 19 43.9 -4.0**
comp=Z,1µm,0.9s,comp=Z,50µm
KKAR Karatay Array 26.80 318 *eP* **P** **21 19 55.6 0.0**
KKAR *e* 21 23 17.0
KKAR Karatay Array 26.80 318 *eP* **P** **21 19 55.6 0.0**
KKAR *e*PcP **PcP** **21 23 17.0 +0.8**
KKAR *e*ScP **ScP** **21 26 48.7 +0.9**
KURBB Kurchatov Arra 28.29 338 P **P** **21 20 09.1 +0.4**
comp=Z,4.0nm,0.6s,baz=146,slow=9.5,SNR=69
KURBB PcP **PcP** **21 23 19.9 +0.4**
comp=Z,0.4nm,0.3s,baz=346,slow=32,SNR=13
KURK Kurchatov 28.34 338*c i*P **P** **21 20 09.3 +0.1**
KURK pmax pmax
comp=Z,5.0nm,0.6s
KURK Kurchatov 28.34 338 *eP* **P** **21 20 09.6 +0.4**
comp=Z,7.7nm,0.9s
KURK *e*PcP **PcP** **21 23 20.4 +0.7**
ZAA0 Zalesovo Array 29.60 348 *eP* **P** **21 20 20.5 +0.2**
ZAA0 *e*PcP **PcP** **21 23 21.6 -1.2**
ZALV Zalesovo Beam 29.60 348 P **P** **21 20 20.7 +0.4**
ZALV pmax pmax
comp=Z,2.0nm,0.3s
ZALV Zalesovo Beam 29.60 348 P **P** **21 20 20.7 +0.4**
ZALV Zalesovo Beam 29.60 348 P **P** **21 20 20.7 +0.4**
comp=Z,1.9nm,0.3s,baz=165,slow=8.3,SNR=17
KSAR Wonju Array Be 30.40 59 P P 21 20 23.6 -4.0
KSRS Korea Array 30.43 59 P P 21 20 23.6 -4.3
comp=Z,0.8nm,0.5s,baz=252,slow=9.5,SNR=4.2
KSRS LR LR 21 33 59.3
comp=Z,42nm,19.5s,baz=235,slow=39
NVS Novosibirsk 30.76 347⇑ *i*P **P** **21 20 30.2 -0.3**
NVS *e* 21 23 22.5
NVS pmax pmax
comp=Z,4.0nm,0.4s
NVS pmax pmax
comp=N,2.0nm,0.4s
NVS pmax pmax
comp=E,2.0nm,0.4s
CN2 Changchun 30.87 46 *eP* **P** **21 20 32.4 +0.8**
BRVK Borovoye 33.37 333*c i*P **P** **21 20 53.4 -0.1**
BRVK pmax pmax
comp=Z,6.0nm,1.0s
BRVK Borovoye 33.37 333 *eP* **P** **21 20 53.6 +0.1**
comp=Z,5.0nm,0.5s
BRVK *e*PcP **PcP** **21 23 33.4 +0.4**
BRVK *e*ScP **ScP** **21 27 10.6 +1.6**
ZRNK Zerenda 33.84 332 *i* P **P** **21 20 57.4 -0.1**
ZRNK pmax pmax
comp=Z,3.0nm,0.4s
USRK Ussuriysk Arra 35.37 48 P **P** **21 21 08.0 -2.8**
comp=Z,1.1nm,0.4s,baz=245,slow=9.8,SNR=6.6
AB31 Akbulak array 36.25 320*ce*P **P** **21 21 18.9 +0.6**
AB31 pmax pmax
comp=Z,4.0nm,0.3s
ABKAR Akbulak array 36.25 320 *eP* **P** **21 21 19.1 +0.9**
ABKAR *e*ScP **ScP** **21 27 21.6 +2.2**
AKTO Aktyubinsk 37.90 321 *i* P **P** **21 21 32.5 +0.2**
MJAR Matsushiro Arr 38.41 62 P **P** **21 21 34.2 -2.6**
MJAR PcP **PcP** **21 23 47.8 -0.6**
MJAR Matsushiro Arr 38.41 62 P **P** **21 21 34.2 -2.6**
comp=Z,2.0nm,0.6s,baz=268,slow=10,SNR=11
MJAR PcP **PcP** **21 23 47.8 -0.6**
comp=Z,0.4nm,0.4s,baz=263,slow=1.8,SNR=4.9
JHJ Hachijo jima 2 39.59 68 LR LR 21 40 38.0
comp=Z,82nm,19.3s,baz=106,slow=40
ARU Arti 40.72 330*c i*P **P** **21 21 55.9 +0.3**
ARU 21 23 28.9
ARU S **S** **21 28 03.8 +4.9**
ARU SS **SS** **21 31 00.1 -2.7**
ARU pmax pmax
comp=Z,16nm,1.7s
KBD Kabd 42.04 286 *eP* **P** **21 22 07.6 +0.8**
KBD AMb AMB 21 22 12.2
comp=Z,9.7nm,0.6s
RDF Al-Radifah 42.20 286 *eP* **P** **21 22 09.2 +1.2**
RDF AMb AMB 21 22 13.4
comp=Z,52nm,0.7s
MIB Mutribah 42.28 287 *eP* **P** **21 22 09.5 +0.8**
MIB AMb AMB 21 22 13.7
comp=Z,22nm,0.8s
NAY Al-Naaiem 42.43 286 *eP* **P** **21 22 10.5 +0.6**
NAY AMb AMB 21 22 14.7
comp=Z,16nm,0.8s
ASAJ Asahikawa 42.71 52 P **P** **21 22 10.8 -1.2**
ASAJ Asahikawa 42.71 52 P **P** **21 22 10.8 -1.2**
comp=Z,5.4nm,0.6s,baz=325,slow=12,SNR=9.3
ZEI Tsey 45.09 306 *eP* **P** **21 22 32.1 +0.7**
ZEI pmax pmax
comp=Z,3.0nm,0.6s
KBZ Khabaz 45.92 307 P **P** **21 22 40.3 +2.7**
KBZ Khabaz 45.92 307 P **P** **21 22 40.3 +2.7**
KBZ Khabaz 45.92 307 P **P** **21 22 40.3 +2.7**
comp=Z,0.4nm,0.5s,baz=63,slow=7.5,SNR=3.6
KIV Kislovodsk 46.10 307⇑ *eP* **P** **21 22 40.2 +1.1**
KIV *e* 21 24 29.7
KIV *e*S S 21 29 24.0 +6.1
KIV pmax pmax
comp=Z,18nm,2.5s
TIXI Tiksi 50.11 13*d i*P **P** **21 23 09.0 -0.4**
TIXI pmax pmax
comp=Z,6.0nm,0.7s
OBN Obninsk 51.68 321⇓ *i*P **P** **21 23 20.5 -1.0**
OBN *e* 21 25 18.3
OBN *e*S S 21 30 41.8 +6.2
OBN pmax pmax
comp=Z,5.0nm,0.4s
BR131 Keskin Array S 52.78 302 *eP* **P** **21 23 30.4 +0.3**
comp=Z,2.1nm,0.6s
BRTR Keskin Array B 52.78 302 P **P** **21 23 30.4 +0.3**
BRTR Keskin Array B 52.78 302 P **P** **21 23 30.4 +0.3**
comp=Z,2.3nm,0.7s,baz=121,slow=7.4,SNR=17
SEY Seymchan 53.03 29 *eP* **P** **21 23 30.8 -0.5**
PETK Petropavlovsk- 53.87 42 P **P** **21 23 35.6 -2.1**
PETK pmax pmax
comp=Z,2.0nm,0.4s
PETK Petropavlovsk- 53.87 42 P **P** **21 23 35.6 -2.1**
PETK Petropavlovsk- 53.87 42 P **P** **21 23 35.6 -2.1**
comp=Z,1.5nm,0.4s,baz=241,slow=4.2,SNR=5.9
AKASG Malin Array Be 55.66 315*ce*P **P** **21 23 50.0 -0.6**
AKASG pmax pmax
comp=Z,6.0nm,0.5s
AKASG Malin Array Be 55.66 315 P **P** **21 23 50.1 -0.5**
AKASG Malin Array Be 55.66 315 P **P** **21 23 50.1 -0.5**
comp=Z,5.7nm,0.5s,baz=79,slow=6.3,SNR=23
AK01 Malin Array Si 55.67 315 *eP* **P** **21 23 50.1 -0.6**
KIEV Kiev 55.67 315 *eP* **P** **21 23 49.7 -1.0**
KIEV pmax pmax
comp=Z,8.0nm,0.6s
KIEV Kiev 55.67 315 *eP* **P** **21 23 49.7 -1.0**
comp=Z,7.9nm,0.6s
AK02 Malin Array Si 55.68 315 *eP* **P** **21 23 50.0 -0.7**
JOF Joensuu 55.84 330 *eP* **P** **21 23 53.0 +1.3**
JOF pmax pmax
comp=Z,5.0nm,0.4s
JOF Joensuu 55.84 330 *ep* **P** **21 23 53.0 +1.3**
comp=Z,4.5nm,0.4s
CFR Carcaliu 56.51 309⇑ *i*P **P** **21 23 56.8 +0.1**
CFR Carcaliu 56.51 309⇑ *i*P **P** **21 23 56.8 +0.1**
VRI Vrincioaia 57.45 310⇑ *i*P **P** **21 24 04.2 +0.8**
TESR 57.47 310⇓ *i*P **P** **21 24 03.6 +0.1**
PLOR Plostina 57.51 310⇑ *i*P **P** **21 24 05.2 +1.3**
KAF Kangasniemi 58.02 329 *eP* **P** **21 24 07.6 +0.5**
KAF Kangasniemi 58.02 329 *ep* **P** **21 24 07.6 +0.5**
MLR Muntele Rosu 58.03 309⇓ *i*P **P** **21 24 08.0 +0.4**
FINES FINESS Array B 58.06 328 P **P** **21 24 07.6 +0.2**
FINES FINESS Array B 58.06 328 P **P** **21 24 07.6 +0.2**
comp=Z,5.8nm,0.6s,baz=89,slow=7.1,SNR=32
BURAR Bucovina Array 58.37 312⇑ *i*P **P** **21 24 10.1 +0.2**
BUR08 Bucovina Ar. S 58.38 312 *eP* **P** **21 24 10.2 +0.2**
KEV Kevo 58.90 338 *eP* **P** **21 24 13.6 +0.5**
KEV pmax pmax
comp=Z,4.0nm,0.5s
KEV Kevo 58.90 338 *ep* **P** **21 24 13.6 +0.5**
comp=Z,4.1nm,0.5s
ARR Arges 58.96 309⇑ *i*P **P** **21 24 14.3 +0.3**
SUW Suwalki 59.36 319 *eP* **P** **21 24 15.8 -0.7**
SUW pmax pmax
comp=Z,29nm,1.1s
SUW Suwalki 59.36 319 *eP* **P** **21 24 15.8 -0.7**
comp=Z,29nm,1.1s
SUW Suwalki 59.36 319 *eP* **P** **21 24 16.4 -0.1**
ARCES ARCESS Array B 59.38 337 P **P** **21 24 16.6 +0.2**
ARCES ARCESS Array B 59.38 337 P **P** **21 24 16.6 +0.2**
comp=Z,4.5nm,0.6s,baz=98,slow=4.7,SNR=27
LOT Lotru 59.56 309⇑ *i*P **P** **21 24 18.1 -0.1**
SANT Santorini 59.60 299 *eP* **P** **21 24 18.1 -0.4**
comp=Z,23nm,0.6s
BILL Bilibino 59.78 24⇑ *i*P **P** **21 24 18.8 -0.3**
BILL *e* 21 26 30.0
BILL *e*S S 21 32 23.7 +0.9
BILL pmax pmax
comp=Z,7.0nm,0.8s
KWP Kalwaria Pacla 59.88 314⇑ *i*P **P** **21 24 20.6 +0.3**
KWP Kalwaria Pacla 59.88 314 *eP* **P** **21 24 20.5 +0.3**
comp=Z,25nm,1.1s
KWP Kalwaria Pacla 59.88 314⇑ *i*P **P** **21 24 20.6 +0.3**
KWP Kalwaria Pacla 59.88 314 *eP* **P** **21 24 20.8 +0.6**
DRGR 60.14 311⇓ *i*P **P** **21 24 22.7 +0.6**
DRGR 60.14 311⇓ *i*P **P** **21 24 22.7 +0.6**
IDI Anoyia 60.26 298 *eP* **P** **21 24 22.5 -0.6**
comp=Z,7.5nm,0.9s
VTS Vitosha 60.31 306⇑ *i*P **P** **21 24 23.9 +0.4**
CRVS Cervenica-Dubn 60.76 314 *eP* **P** **21 24 26.8 +0.6**
CRVS Cervenica-Dubn 60.76 314 *eP* **P** **21 24 26.8 +0.6**
CRVS *ep*P **pP** **21 24 47.8 -1.9**
GVD Gavdhos 60.99 297 *eP* **P** **21 24 27.7 -0.3**
comp=Z,19nm,0.6s
BZS Buzias 61.04 310⇓ *i*P **P** **21 24 28.2 +0.1**
BZS Buzias 61.04 310⇓ *i*P **P** **21 24 28.2 +0.1**
PMG Port Moresby 61.37 117 P **P** **21 24 30.7 0.0**
PMG Port Moresby 61.37 117 P **P** **21 24 30.7 0.0**
comp=Z,8.7nm,0.8s,baz=314,slow=10,SNR=3.7
AS31 Alice Springs 61.55 139 *eP* **P** **21 24 31.9 +0.1**
ASAR Alice Springs 61.55 139 P **P** **21 24 31.9 +0.1**
ASAR Alice Springs 61.55 139 P **P** **21 24 31.9 +0.1**
comp=Z,5.1nm,0.7s,baz=321,slow=6.7,SNR=66
KMBO Kilima Mbogo 61.69 254 P **P** **21 24 34.5 +1.3**
KMBO Kilima Mbogo 61.69 254 P **P** **21 24 34.5 +1.3**
comp=Z,1.1nm,0.8s,baz=82,slow=14,SNR=4.0
OJC Ojcow 61.70 315 *eP* **P** **21 24 33.5 +1.0**
OJC Ojcow 61.70 315 *eP* **P** **21 24 33.5 +1.0**
VYHS Vyhne 62.54 313 *eP* **P** **21 24 38.3 +0.1**
VYHS Vyhne 62.54 313 *eP* **P** **21 24 38.3 +0.1**
DPC Dobruska-Polom 63.90 316 *eP* **P** **21 24 48.2 +1.1**
DPC Dobruska-Polom 63.90 316 *eP* **P** **21 24 48.2 +1.1**
DPC *ex* x 21 25 08.3
UPC Upice 64.07 316 *eP* **P** **21 24 49.3 +1.1**
UPC Upice 64.07 316 *eP* **P** **21 24 49.3 +1.1**
UPC *ep*P **pP** **21 25 10.7 -1.1**
PVCC Panska Ves 64.97 316 *eP* P 21 24 57.7 +3.6
PVCC Panska Ves 64.97 316 *eP* P 21 24 57.7 +3.6
PRU Pruhonice 65.08 315 *eP* **P** **21 24 55.3 +0.5**
PRU Pruhonice 65.08 315 *eP* **P** **21 24 55.3 +0.5**
PRU *ep*P **pP** **21 25 16.2 -2.3**
NB2 NORSAR Subarra 65.24 328 P **P** **21 24 55.4 -0.2**
comp=Z,5.5nm,0.5s,baz=82,slow=6.5
NOA NORSAR Array B 65.24 328 P **P** **21 24 55.5 -0.2**
NOA NORSAR Array B 65.24 328 P **P** **21 24 55.5 -0.2**
comp=Z,5.3nm,0.6s,baz=83,slow=6.4,SNR=26
BRG Berggiesshubel 65.30 316 *eP* **P** **21 24 56.7 +0.5**
comp=Z,6.7nm,0.9s
BRG *e* 21 25 18.4
comp=Z,4.2nm,0.8s
BRG Berggiesshubel 65.30 316 *eP* **P** **21 24 56.7 +0.5**
BRG pmax pmax
comp=Z,7.0nm,1.0s
BRG pmax pmax
comp=Z,4.0nm,0.8s
NAO01 NORSAR Array S 65.42 328 *eP* **P** **21 24 56.0 -0.8**
CLL Collm 65.81 317 *eP* **P** **21 25 00.0 +0.6**
CLL Collm 65.81 317 *eP* **P** **21 25 00.0 +0.6**
GEC2 GERESS Array S 65.83 314 *eP* **P** **21 25 00.7 +0.9**
GEC2 GERESS Array S 65.83 314 *eP* **P** **21 25 00.7 +0.9**
GERES GERESS Array B 65.83 314 P **P** **21 25 00.3 +0.5**
GERES GERESS Array B 65.83 314 P **P** **21 25 00.3 +0.5**
comp=Z,2.9nm,0.5s,baz=66,slow=6.6,SNR=26
KHC Kasperske Hory 65.86 315 *eP* **P** **21 24 59.9 0.0**
KHC Kasperske Hory 65.86 315 *eP* **P** **21 24 59.9 0.0**
KHC *ex* x 21 25 20.1
NKC Novy Kostel 66.36 316 *eP* **P** **21 25 03.8 +0.7**
NKC Novy Kostel 66.36 316 *eP* **P** **21 25 03.8 +0.7**
CDF Champ du Feu 70.08 315 *eP* **P** **21 25 26.4 0.0**
CDF Champ du Feu 70.08 315 *eP* **P** **21 25 26.4 0.0**
CDF Champ du Feu 70.08 315 *eP* **P** **21 25 26.4 0.0**
TNA Tin City 70.10 26 *eP* **P** **21 25 26.4 +0.4**
comp=Z,3.4nm,0.8s
WLF Walferdange 70.44 316 P **P** **21 25 29.3 +0.8**
HINF Hinteralfeld 70.52 314⇑ *i*P **P** **21 25 28.6 -0.4**
comp=Z,4.7nm,0.7s
HINF Hinteralfeld 70.52 314⇑ *i*P **P** **21 25 28.6 -0.4**
HINF pmax pmax
comp=Z,5.0nm,0.7s
HINF Hinteralfeld 70.52 314⇑ *i*P **P** **21 25 28.6 -0.4**
comp=Z,4.7nm,0.7s
PGF Pioggiola 70.56 309 *eP* **P** **21 25 29.3 -0.2**
PGF Pioggiola 70.56 309 *eP* **P** **21 25 29.3 -0.2**
PGF Pioggiola 70.56 309 *eP* **P** **21 25 29.3 -0.2**
HAU Haudompre 70.79 315 *eP* **P** **21 25 29.8 -0.9**
HAU *e*R
comp=Z,76nm,19.5s
HAU Haudompre 70.79 315 *eP* **P** **21 25 29.8 -0.9**
HAU Haudompre 70.79 315 *eP* **P** **21 25 29.8 -0.9**
PAGF Fort de Pagny 71.03 315 *eP* **P** **21 25 32.5 +0.4**
PAGF Fort de Pagny 71.03 315 *eP* **P** **21 25 32.5 +0.4**
LPG La Plagne 71.25 312⇑ *i*P **P** **21 25 34.2 +0.4**
comp=Z,7.4nm,0.5s
LPG La Plagne 71.25 312⇑ *i*P **P** **21 25 34.2 +0.4**
LPG pmax pmax
comp=Z,7.0nm,0.5s
LPG La Plagne 71.25 312⇑ *i*P **P** **21 25 34.2 +0.4**
comp=Z,7.4nm,0.5s
LPL La Plagne 71.26 312⇑ *i*P **P** **21 25 34.1 +0.3**
comp=Z,9.5nm,0.4s
LPL La Plagne 71.26 312⇑ *i*P **P** **21 25 34.1 +0.3**
LPL pmax pmax
comp=Z,10.0nm,0.4s
LPL La Plagne 71.26 312⇑ *i*P **P** **21 25 34.1 +0.3**
comp=Z,9.5nm,0.4s
SBF Sospel 71.27 310 *eP* **P** **21 25 33.6 -0.1**
SBF Sospel 71.27 310 *eP* **P** **21 25 33.6 -0.1**
SBF Sospel 71.27 310 *eP* **P** **21 25 33.6 -0.1**
CABF La Chapelle 71.36 313 *eP* **P** **21 25 34.7 +0.4**
comp=Z,2.9nm,0.4s
CABF La Chapelle 71.36 313 *eP* **P** **21 25 34.7 +0.4**
CABF pmax pmax
comp=Z,3.0nm,0.4s
CABF La Chapelle 71.36 313 *eP* **P** **21 25 34.7 +0.4**
comp=Z,2.9nm,0.4s
MBDF Montbardon 71.47 311 *eP* **P** **21 25 34.2 -0.8**
comp=Z,7.9nm,0.7s
MBDF Montbardon 71.47 311 *eP* **P** **21 25 34.2 -0.8**
MBDF pmax pmax
comp=Z,8.0nm,0.7s
MBDF Montbardon 71.47 311 *eP* **P** **21 25 34.2 -0.8**
comp=Z,7.9nm,0.7s
MEZF Maizieres J'vi 71.47 315⇑ *i*P **P** **21 25 35.1 +0.4**
comp=Z,7.0nm,0.4s
MEZF Maizieres J'vi 71.47 315⇑ *i*P **P** **21 25 35.1 +0.4**
comp=Z,7.0nm,0.4s
BAIF Baives 71.53 317 *eP* **P** **21 25 34.9 -0.2**
BAIF Baives 71.53 317 *eP* **P** **21 25 34.9 -0.2**
BAIF Baives 71.53 317 *eP* **P** **21 25 34.9 -0.2**
SFTF Sexfontaines 71.57 315 *eP* **P** **21 25 35.3 0.0**
SFTF Sexfontaines 71.57 315 *eP* **P** **21 25 35.3 0.0**
FRF La Foret Royal 71.91 310 *eP* **P** **21 25 37.1 -0.3**
FRF La Foret Royal 71.91 310 *eP* **P** **21 25 37.1 -0.3**
FRF La Foret Royal 71.91 310 *eP* **P** **21 25 37.1 -0.3**
ORIF Oris-en-Rattie 72.02 312⇑ *i*P **P** **21 25 38.5 +0.3**
comp=Z,3.9nm,0.6s
ORIF *e*R
comp=Z,83nm,19.5s
ORIF Oris-en-Rattie 72.02 312⇑ *i*P **P** **21 25 38.5 +0.3**
ORIF pmax pmax
comp=Z,4.0nm,0.6s
ORIF Oris-en-Rattie 72.02 312⇑ *i*P **P** **21 25 38.5 +0.3**
comp=Z,3.9nm,0.6s
STKA Stephens Creek 72.18 140 P **P** **21 25 39.0 -0.1**
STKA Stephens Creek 72.18 140 P **P** **21 25 39.0 -0.1**
comp=Z,2.6nm,0.4s,baz=308,slow=5.7,SNR=11
KEST Kesra 72.38 302 P **P** **21 25 41.2 +0.7**
KEST Kesra 72.38 302 P **P** **21 25 41.2 +0.7**
comp=Z,2.7nm,0.9s,baz=88,slow=2.8,SNR=12
LOR Lormes 72.62 314⇑ *i*P **P** **21 25 41.3 -0.3**
comp=Z,3.8nm,0.6s
LOR *e*R
comp=Z,70nm,22.2s
LOR Lormes 72.62 314⇑ *i*P **P** **21 25 41.3 -0.3**
comp=Z,3.8nm,0.6s
SMF Signal de Mont 72.83 314⇑ *i*P **P** **21 25 42.7 -0.2**
comp=Z,5.8nm,0.5s
SMF Signal de Mont 72.83 314⇑ *i*P **P** **21 25 42.7 -0.2**
SMF pmax pmax
comp=Z,6.0nm,0.5s
SMF Signal de Mont 72.83 314⇑ *i*P **P** **21 25 42.7 -0.2**
comp=Z,5.8nm,0.5s
VIVF Saint-Julien-l 72.85 312 *eP* **P** **21 25 43.1 0.0**
VIVF Saint-Julien-l 72.85 312 *eP* **P** **21 25 43.1 0.0**
VIVF Saint-Julien-l 72.85 312 *eP* **P** **21 25 43.1 0.0**
SSF Saint Saulge 72.91 314⇑ *i*P **P** **21 25 43.4 +0.1**
comp=Z,4.3nm,0.5s
SSF Saint Saulge 72.91 314⇑ *i*P **P** **21 25 43.4 +0.1**
SSF pmax pmax
comp=Z,4.0nm,0.5s
SSF Saint Saulge 72.91 314⇑ *i*P **P** **21 25 43.4 +0.1**
comp=Z,4.3nm,0.5s
AVF Avril sur Loir 73.10 314⇑ *i*P **P** **21 25 44.2 -0.2**
comp=Z,10.0nm,0.9s
AVF Avril sur Loir 73.10 314⇑ *i*P **P** **21 25 44.2 -0.2**
AVF pmax pmax
comp=Z,10.0nm,0.9s
AVF Avril sur Loir 73.10 314⇑ *i*P **P** **21 25 44.2 -0.2**
comp=Z,10.0nm,0.9s
HYF Humbligny 73.40 315 *eP* **P** **21 25 46.8 +0.6**
HYF Humbligny 73.40 315 *eP* **P** **21 25 46.8 +0.6**
LASF Ste Croix 73.66 311⇑ *i*P **P** **21 25 48.0 +0.2**
LASF Ste Croix 73.66 311⇑ *i*P **P** **21 25 48.0 +0.2**
TCF Toulx Ste Croi 74.01 314⇑ *i*P **P** **21 25 50.2 +0.4**
comp=Z,6.4nm,0.7s
TCF Toulx Ste Croi 74.01 314⇑ *i*P **P** **21 25 50.2 +0.4**
TCF pmax pmax
comp=Z,6.0nm,0.7s
TCF Toulx Ste Croi 74.01 314⇑ *i*P **P** **21 25 50.2 +0.4**
comp=Z,6.4nm,0.7s
CAF Calviac 74.57 313 *eP* **P** **21 25 53.6 +0.4**
comp=Z,4.0nm,0.6s
CAF Calviac 74.57 313 *eP* **P** **21 25 53.6 +0.4**
CAF pmax pmax
comp=Z,4.0nm,0.6s
CAF Calviac 74.57 313 *eP* **P** **21 25 53.6 +0.4**
comp=Z,4.0nm,0.6s
LDF La Druitiere 74.69 317 *eP* **P** **21 25 53.7 0.0**
LDF La Druitiere 74.69 317 *eP* **P** **21 25 53.7 0.0**
LDF La Druitiere 74.69 317 *eP* **P** **21 25 53.7 0.0**
RJF Les Rejaudoux 74.81 313 *eP* **P** **21 25 55.2 +0.8**
RJF *e*R
comp=Z,76nm,19.8s
RJF Les Rejaudoux 74.81 313 *eP* **P** **21 25 55.2 +0.8**
RJF Les Rejaudoux 74.81 313 *eP* **P** **21 25 55.2 +0.8**
FLN La Foliniere 74.85 317 *eP* **P** **21 25 54.5 -0.1**
FLN *e*R
comp=Z,87nm,19.8s
FLN La Foliniere 74.85 317 *eP* **P** **21 25 54.5 -0.1**
FLN La Foliniere 74.85 317 *eP* **P** **21 25 54.5 -0.1**
MTLF Montolieu 75.03 311⇑ *i*P **P** **21 25 56.0 +0.3**
MTLF Montolieu 75.03 311⇑ *i*P **P** **21 25 56.0 +0.3**
MTLF Montolieu 75.03 311⇑ *i*P **P** **21 25 56.0 +0.3**
GRR Gorron 75.22 317 *eP* **P** **21 25 56.9 +0.2**
comp=Z,3.7nm,0.5s
GRR Gorron 75.22 317 *eP* **P** **21 25 56.9 +0.2**
GRR pmax pmax
comp=Z,4.0nm,0.5s
GRR Gorron 75.22 317 *eP* **P** **21 25 56.9 +0.2**
comp=Z,3.7nm,0.5s
LFF La Frestale 75.45 313⇑ *i*P **P** **21 25 58.7 +0.6**
LFF La Frestale 75.45 313⇑ *i*P **P** **21 25 58.7 +0.6**
LFF La Frestale 75.45 313⇑ *i*P **P** **21 25 58.7 +0.6**
COLD Coldfoot 75.88 21 *eP* **P** **21 26 00.6 +0.4**
comp=Z,7.4nm,1.3s
SGMF Saint Gilles 76.32 317 *eP* **P** **21 26 03.5 +0.5**
comp=Z,7.3nm,0.6s
SGMF Saint Gilles 76.32 317 *eP* **P** **21 26 03.5 +0.5**
SGMF pmax pmax
comp=Z,7.0nm,0.6s
SGMF Saint Gilles 76.32 317 *eP* **P** **21 26 03.5 +0.5**
comp=Z,7.3nm,0.6s
LSZ Lusaka 76.57 246 *eP* **P** **21 26 05.7 +0.7**
comp=Z,4.4nm,0.6s
ROSF Rostrenen 76.73 317⇑ *i*P **P** **21 26 05.7 +0.4**
comp=Z,3.2nm,0.4s
ROSF Rostrenen 76.73 317⇑ *i*P **P** **21 26 05.7 +0.4**
ROSF pmax pmax
comp=Z,3.0nm,0.4s
ROSF Rostrenen 76.73 317⇑ *i*P **P** **21 26 05.7 +0.4**
comp=Z,3.2nm,0.4s
QUIF Quistinic 76.83 317 *eP* **P** **21 26 06.2 +0.3**
QUIF Quistinic 76.83 317 *eP* **P** **21 26 06.2 +0.3**
QUIF Quistinic 76.83 317 *eP* **P** **21 26 06.2 +0.3**
SVW2 Sparrevohn 76.96 28 *eP* **P** **21 26 07.1 +0.7**
comp=Z,11nm,1.2s
ETSF Etsaut 77.08 311⇑ *i*P **P** **21 26 08.1 +0.6**
comp=Z,4.3nm,0.4s
ETSF Etsaut 77.08 311⇑ *i*P **P** **21 26 08.1 +0.6**
ETSF pmax pmax

	comp=Z,4.0nm,0.4s								
ETSF	**Etsaut**	**77.08**	**311**	⇑*i*P		**P**	**21 26 08.1**	**+0.6**
	comp=Z,4.3nm,0.4s								
PPLA	**Purkeypile**	**77.45**	**26**	*e*P		**P**	**21 26 09.2**	**0.0**
	comp=Z,16nm,1.0s								
SJPF	**Ste Jean**	**77.45**	**312**	*e*P		**P**	**21 26 09.9**	**+0.4**
SJPF	**Ste Jean**	**77.45**	**312**	*e*P		**P**	**21 26 09.9**	**+0.4**
SJPF	**Ste Jean**	**77.45**	**312**	*e*P		**P**	**21 26 09.9**	**+0.4**
TRF	**Thorofare Moun**	**77.88**	**25**	*e*P		**P**	**21 26 11.3**	**-0.4**
	comp=Z,32nm,1.8s								
COLA	**College**	**77.98**	**23**	*e*P		**P**	**21 26 11.5**	**-0.4**
COLA				pmax	pmax				
	comp=Z,5.0nm,0.6s								
COLA	**College**	**77.98**	**23**	*e*P		**P**	**21 26 11.5**	**-0.4**
	comp=Z,4.9nm,0.6s								
MCK	**McKinley**	**78.23**	**24**	*e*P		**P**	**21 26 13.3**	**-0.2**
MCK				pmax	pmax				
	comp=Z,11nm,1.0s								
MCK	**McKinley**	**78.23**	**24**	*e*P		**P**	**21 26 13.3**	**-0.2**
	comp=Z,11nm,1.0s								
ILAR	**Eielson Array**	**78.38**	**23**	P	P	**P**	**21 26 13.0**	**-1.2**
ILAR	**Eielson Array**	**78.38**	**23**	P	P	**P**	**21 26 13.0**	**-1.2**
	comp=Z,5.1nm,0.9s,baz=296,slow=5.4,SNR=36								
SPU	**Mount Spurr**	**78.40**	**27**	*e*P		**P**	**21 26 14.2**	**-0.2**
RSO	**Redoubt South**	**78.48**	**28**	*e*P		**P**	**21 26 14.7**	**-0.4**
PMR	**Palmer**	**79.36**	**26**	*e*P		**P**	**21 26 19.0**	**-0.6**
PMR				pmax	pmax				
	comp=Z,17nm,0.8s								
PMR	**Palmer**	**79.36**	**26**	*e*P		**P**	**21 26 19.0**	**-0.6**
	comp=Z,17nm,0.8s								
SML	**Sawmill**	**79.55**	**26**	*e*P		**P**	**21 26 20.8**	**+0.1**
SML				pmax	pmax				
	comp=Z,5.0nm,0.8s								
SML	**Sawmill**	**79.55**	**26**	*e*P		**P**	**21 26 20.8**	**+0.1**
	comp=Z,5.0nm,0.8s								
OHAK	**Old Harbor**	**79.93**	**31**	*e*P		**P**	**21 26 22.2**	**-0.6**
	comp=Z,24nm,0.8s								
PAX	**Paxson**	**79.95**	**24**	*e*P		**P**	**21 26 22.4**	**-0.5**
PAX				pmax	pmax				
	comp=Z,15nm,1.6s								
PAX	**Paxson**	**79.95**	**24**	*e*P		**P**	**21 26 22.4**	**-0.5**
	comp=Z,15nm,1.6s								
DOT	**Dot Lake**	**80.04**	**23**	*e*P		**P**	**21 26 23.9**	**+0.5**
	comp=Z,10nm,1.0s								
RES	**Resolute Bay**	**80.04**	**3**	*e*P		**P**	**21 26 23.2**	**+0.1**
	comp=Z,6.0nm,1.1s								
EGAK	**Eagle**	**80.31**	**21**	*e*P		**P**	**21 26 24.8**	**+0.1**
	comp=Z,11nm,1.0s								
ESDC	**Sonseca Array**	**80.72**	**309**	P		**P**	**21 26 27.7**	**+0.2**
ESDC	**Sonseca Array**	**80.72**	**309**	P		**P**	**21 26 27.7**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=53,slow=2.5,SNR=5.9								
BMRM	**Bremner River**	**81.50**	**25**	*e*P		**P**	**21 26 31.7**	**+0.6**
	comp=Z,20nm,0.7s								
BOSA	**Boshof**	**85.83**	**236**	P		**P**	**21 26 54.9**	**+1.1**
BOSA	**Boshof**	**85.83**	**236**	P		**P**	**21 26 54.9**	**+1.1**
	comp=Z,1.7nm,0.5s,baz=71,slow=7.6,SNR=9.0								
BOSA				LR		LR	22 07 24.9		
	comp=Z,87nm,19.4s,baz=245,slow=37								
TORD	**Torodi Ar. Bea**	**87.43**	**283**	P		**P**	**21 27 02.3**	**+0.5**
TORD	**Torodi Ar. Bea**	**87.43**	**283**	P		**P**	**21 27 02.3**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=44,slow=4.4,SNR=20								
YKA	**Yellowknife Ar**	**89.36**	**13**	P		**P**	**21 27 09.4**	**-0.6**
YKA	**Yellowknife Ar**	**89.36**	**13**	P		**P**	**21 27 09.4**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=335,slow=4.9,SNR=26								
PDAR	**Pinedale Array**	**108.57**	**19**	PKiKP		**PKiKP**	**21 32 41.8**	**-0.8**
PDAR	**Pinedale Array**	**108.57**	**19**	PKiKP		**PKiKP**	**21 32 41.8**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=64,slow=3.1,SNR=4.8								
PTRM	**Twissleman Ran**	**110.81**	**30**	*e*Pdif		**Pdif**	**21 28 45.9**	**-1.5**
OGNE	**Ogallala**	**112.21**	**14**	⇓P		**PKiKP**	**21 32 48.2**	**-1.1**
	baz=112								
O27A	**Beecher Island**	**112.83**	**14**	⇑P		**PKiKP**	**21 32 49.8**	**-0.8**
	baz=112								
GMRC	**Granite Mounta**	**113.53**	**27**	⇑P		**PKiKP**	**21 32 51.5**	**-0.6**
	baz=113								
SCI	**San Clemente I**	**113.80**	**31**	⇓P		**PKiKP**	**21 32 52.2**	**-0.2**
	baz=114								
R25A	**Fountain Ranch**	**114.33**	**17**	⇑P		PKPdf	21 32 52.9	-0.6
	baz=114								
R26A	**Arlington**	**114.40**	**16**	⇓P		PKPdf	21 32 52.6	-1.1
	baz=114								
R27A	**Eads**	**114.57**	**15**	⇑P		PKPdf	21 32 53.0	-0.9
	baz=114								
S26A	**Kim**	**115.03**	**16**	⇑P		**PKPdf**	**21 32 54.5**	**-0.4**
	baz=115								
U25A	**Circle Dot Ran**	**115.94**	**17**	⇑P		**PKPdf**	**21 32 56.4**	**-0.4**
	baz=116								
U27A	**Thompson Grove**	**116.33**	**16**	⇑P		**PKPdf**	**21 32 56.4**	**-1.0**
	baz=116								
V25A	**Rancho No Teng**	**116.41**	**18**	⇑P		**PKPdf**	**21 32 56.9**	**-0.8**
	baz=116								
U30A	**WK&E Inc. Balk**	**116.74**	**14**	⇑P		**PKPdf**	**21 32 58.2**	**0.0**
	baz=116								
X21A	**Alamocita Cree**	**116.75**	**21**	⇑P		**PKPdf**	**21 32 58.2**	**-0.2**
	baz=116								
W24A	**Lazy 6 Ranch,**	**116.78**	**19**	⇑P		**PKPdf**	**21 32 58.5**	**+0.1**
	baz=116								
Y22A	**Socorro**	**117.48**	**21**	⇓P		**PKPdf**	**21 32 59.5**	**-0.3**
	baz=117								
W27A	**Bowe Ranch, En**	**117.56**	**17**	⇓P		**PKPdf**	**21 32 59.4**	**-0.4**
	baz=117								
X25A	**Clemmons Ranch**	**117.63**	**18**	⇓P		**PKPdf**	**21 32 59.1**	**-0.9**
	baz=117								
Z20A	**Nine Sixteen R**	**117.70**	**22**	⇑P		**PKPdf**	**21 32 59.9**	**-0.3**
	baz=117								
Y23A	**Lovelace Mesa,**	**117.77**	**20**	⇑P		**PKPdf**	**21 33 00.0**	**-0.3**
	baz=117								
X26A	**CR and CF Fran**	**117.84**	**18**	⇑P		**PKPdf**	**21 33 00.0**	**-0.3**
	baz=118								
Y24A	**Capitan**	**117.97**	**19**	⇓P		**PKPdf**	**21 33 00.8**	**+0.1**
	baz=118								
Z22A	**Elephant Butte**	**118.11**	**21**	⇓P		**PKPdf**	**21 33 01.0**	**0.0**
	baz=118								
Z24A	**Sheeppen Canyo**	**118.54**	**19**	⇓P		**PKPdf**	**21 33 02.2**	**+0.3**
	baz=118								
MSTX	**Muleshoe**	**118.67**	**17**	⇓P		**PKPdf**	**21 33 02.0**	**0.0**
	baz=118								
X31A	**McDonald Ranch**	**118.71**	**14**	⇑P		**PKPdf**	**21 33 01.0**	**-1.0**
	baz=118								
Z25A	**Roswell**	**118.78**	**19**	⇓P		**PKPdf**	**21 33 02.2**	**0.0**
	baz=118								
Z26A	**Caprock**	**119.00**	**18**	⇓P		**PKPdf**	**21 33 02.2**	**-0.4**
	baz=119								
124A	**Stringfield Ra**	**119.10**	**20**	⇑P		**PKPdf**	**21 33 03.0**	**0.0**
	baz=119								
125A	**Gardner Draw,**	**119.38**	**19**	⇓P		**PKPdf**	**21 33 02.7**	**-0.6**
	baz=119								
Y32A	**R-V Farms, Ver**	**119.43**	**14**	⇑P		**PKPdf**	**21 33 02.2**	**-1.1**
	baz=119								
Z29A	**Hungry Hill Ra**	**119.62**	**16**	⇓P		**PKPdf**	**21 33 03.4**	**-0.4**
	baz=119								
127A	**Arkansas Junct**	**119.73**	**18**	⇑P		**PKPdf**	**21 33 03.0**	**-1.0**
	baz=119								
Z30A	**Sanderson Ranc**	**119.74**	**16**	⇓P		**PKPdf**	**21 33 03.5**	**-0.5**
	baz=119								
225A	**Deer Hill, Car**	**119.84**	**19**	⇑P		**PKPdf**	**21 33 02.5**	**-1.8**
	baz=120								
Z31A	**Sharp Cattle R**	**119.94**	**15**	⇑P		**PKPdf**	**21 33 03.4**	**-0.9**
	baz=120								
128A	**Castleberry Fa**	**120.02**	**17**	⇓P		**PKPdf**	**21 33 04.1**	**-0.4**
	baz=120								
MNTX	**Cornudas Mount**	**120.05**	**20**	⇓P		**PKPdf**	**21 33 04.8**	**+0.2**
	baz=120								
226B	**Tecolote Peak,**	**120.07**	**19**	⇑P		**PKPdf**	**21 33 04.2**	**-0.5**
	baz=120								
Z32A	**Haskell**	**120.10**	**14**	⇓P		**PKPdf**	**21 33 04.6**	**0.0**
	baz=120,SNR=7.2								
324A	**Moseley Ranch,**	**120.26**	**20**	⇑P		**PKPdf**	**21 33 05.0**	**-0.2**
	baz=120								
227A	**Bennet, Jal**	**120.38**	**18**	⇑P		**PKPdf**	**21 33 04.9**	**-0.3**
	baz=120								
131A	**Roby**	**120.50**	**15**	⇑P		**PKPdf**	**21 33 05.4**	**0.0**
	baz=120,SNR=6.6								
326A	**Caldwell Ranch**	**120.83**	**19**	⇓P		**PKPdf**	**21 33 04.9**	**-1.2**
	baz=120								
425A	**Indio Mountain**	**121.02**	**20**	⇓P		**PKPdf**	**21 33 06.5**	**-0.1**
	baz=121								
230A	**Sterling City**	**121.07**	**16**	⇓P		**PKPdf**	**21 33 06.1**	**-0.5**
	baz=121,SNR=6.7								
328A	**Wristen Ranch,**	**121.11**	**18**	⇑P		**PKPdf**	**21 33 05.6**	**-1.1**
	baz=121								
231A	**Bronte**	**121.22**	**15**	⇑P		**PKPdf**	**21 33 07.0**	**+0.2**
	baz=121								
329A	**Wagon Wheel Ra**	**121.23**	**17**	⇓P		**PKPdf**	**21 33 06.3**	**-0.6**
	baz=121								
232A	**Coleman**	**121.42**	**15**	⇓P		**PKPdf**	**21 33 07.4**	**+0.2**
	baz=121								
426A	**McDonald Obser**	**121.42**	**19**	⇓P		**PKPdf**	**21 33 06.5**	**-0.9**
	baz=121								
427A	**Hayter Ranch,**	**121.44**	**19**	⇓P		**PKPdf**	**21 33 06.7**	**-0.7**
	baz=121								
330A	**Mertzon**	**121.52**	**16**	⇑P		**PKPdf**	**21 33 06.8**	**-0.6**
	baz=121								
428A	**Kincaid Ranch,**	**121.76**	**18**	⇑P		**PKPdf**	**21 33 07.8**	**-0.1**
	baz=121,SNR=6.5								
331A	**San Angelo**	**121.80**	**16**	⇓P		**PKPdf**	**21 33 07.6**	**-0.3**
	baz=122								
332A	**Millersview**	**121.89**	**15**	⇓P		**PKPdf**	**21 33 08.1**	**-0.1**
	baz=122								
526A	**Mary Lane Ranc**	**121.97**	**20**	⇑P		**PKPdf**	**21 33 08.0**	**-0.5**
	baz=122								
527A	**Woodward Ranch**	**122.04**	**19**	⇑P		**PKPdf**	**21 33 08.2**	**-0.3**
	baz=122								
429A	**Davenport Ranc**	**122.07**	**17**	⇑P		**PKPdf**	**21 33 08.0**	**-0.6**
	baz=122,SNR=5.1								
430A	**Baggett Ranch,**	**122.09**	**17**	⇑P		**PKPdf**	**21 33 08.8**	**+0.2**
	baz=122								
528A	**Cox Ranch, San**	**122.26**	**18**	⇓P		**PKPdf**	**21 33 09.2**	**+0.2**
	baz=122								
431A	**Sonora**	**122.35**	**16**	⇑P		**PKPdf**	**21 33 08.9**	**-0.1**
	baz=122								
432A	**Menard**	**122.36**	**15**	⇓P		**PKPdf**	**21 33 08.2**	**-0.9**
	baz=122								
626A	**Big Bend Ranch**	**122.43**	**20**	⇓P		**PKPdf**	**21 33 08.7**	**-0.6**
	baz=122,SNR=5.1								
529A	**Stev Forest Ra**	**122.45**	**18**	⇑P		**PKPdf**	**21 33 09.1**	**-0.2**
	baz=122,SNR=7.8								
530A	**J-C Ranch, Com**	**122.67**	**17**	⇓P		**PKPdf**	**21 33 09.6**	**-0.1**
	baz=122,SNR=9.9								
JCT	**Junction City**	**122.74**	**15**	⇓P		**PKPdf**	**21 33 09.7**	**-0.1**
	baz=122								
627A	**Terlingua Ranc**	**122.75**	**19**	⇑P		**PKPdf**	**21 33 09.7**	**-0.3**
	baz=122,SNR=5.7								
TXAR	**Lajitas Array**	**122.78**	**19**	PKP		**PKPdf**	**21 33 09.9**	**0.0**
TXAR	**Lajitas Array**	**122.78**	**19**	PKP		**PKPdf**	**21 33 09.9**	**0.0**
	comp=Z,1.4nm,0.5s,baz=345,slow=0.5,SNR=16								
531A	**Rocksprings**	**122.86**	**16**	⇑P		**PKPdf**	**21 33 09.9**	**-0.1**
	baz=122								
628A	**Black Gap, Mar**	**122.87**	**19**	⇓P		**PKPdf**	**21 33 09.8**	**-0.3**
	baz=122,SNR=11								
532A	**Rocksprings**	**123.05**	**15**	⇓P		**PKPdf**	**21 33 10.2**	**-0.2**
	baz=123								
TIGA	**Tifton**	**123.56**	**359**	⇑P		**PKPdf**	**21 33 10.6**	**-0.7**
	baz=123								
631A	**Perdido Creek**	**123.57**	**16**	⇓P		**PKPdf**	**21 33 10.9**	**-0.4**
	baz=123								
632A	**Uvalde**	**123.67**	**16**	⇑P		**PKPdf**	**21 33 11.3**	**-0.3**
	baz=123								
BDFB	**Brasilia**	**144.17**	**278**	PKP		PKPbc	21 33 48.9	+0.5
BDFB	**Brasilia**	**144.17**	**278**	PKP		PKPbc	21 33 48.9	+0.5
	comp=Z,4.7nm,0.7s,baz=65,slow=7.1,SNR=7.2								
ROSC	**El Rosal**	**148.28**	**340**	*e*PKPbc		**PKPbc**	**21 34 01.7**	**+0.8**
ROSC	**El Rosal**	**148.28**	**340**	PKPbc		**PKPab**	**21 34 02.7**	**-1.4**
	comp=Z,36nm,0.7s,baz=180,slow=1.8,SNR=12								
SAML	**Samuel**	**153.64**	**304**	*e*PKPdf		**PKPdf**	**21 34 05.7**	**+0.5**
SAML				*e*PKPbc		**PKiKP**	**21 34 13.3**	**+0.2**

WEL 17 21:15:43.0±0.2, 37°29'S×177°35'E, h134km±2km, ML4.0/10, 5C-7D, Error ellipse: s-maj=1.8km s-min=1.3km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.81**	**110**	PN	Pn	21 16 03.9	-0.6
MXZ				SN	Sn	21 16 21.3	+0.3
OPRZ	**Ohinepanea**	**0.84**	**228**	⇓PN	Pn	21 16 04.7	-0.2
OPRZ				SN	Sn	21 16 21.3	-0.2
MWZ	**Matawai**	**1.05**	**172**	PN	Pn	21 16 06.6	-0.2
MWZ				SN	Sn	21 16 25.2	+0.3
PUZ	**Puketiti**	**1.06**	**138**	⇑PN	Pn	21 16 06.6	-0.2
KARZ	**Kaharoa**	**1.14**	**230**	⇓PN	Pn	21 16 07.8	+0.2
TARZ	**Mount Tarawera**	**1.16**	**215**	PN	Pn	21 16 08.5	+0.6
CNGZ	**Carnagh Statio**	**1.37**	**151**	PN	Pn	21 16 10.2	+0.2
PRRZ	**Plateau Road**	**1.43**	**212**	⇓PN	Pn	21 16 10.8	+0.2
ALRZ	**Allen Road**	**1.50**	**212**	⇓PN	Pn	21 16 11.6	+0.2
TOZ	**Tahuroa Road**	**1.54**	**253**	PN	Pn	21 16 11.8	+0.1
PRGZ	**Paritu Road**	**1.69**	**166**	PN	Pn	21 16 13.4	-0.1
KNZ	**Kokohu**	**1.75**	**172**	PN	Pn	21 16 13.8	-0.4
MKAZ	**Moumakai**	**1.75**	**275**	⇓PN	Pn	21 16 14.5	+0.3
NMHZ	**Naumai**	**1.86**	**193**	PN	Pn	21 16 16.1	+0.5
MHGZ	**Mahia Peninsul**	**1.91**	**167**	PN	Pn	21 16 16.0	-0.2
BKZ	**Black Stump Fm**	**1.99**	**200**	PN	Pn	21 16 16.1	-1.1
BKZ				SN	Sn	21 16 43.0	-0.4
RATZ	**Rangitukua**	**2.01**	**218**	PN	Pn	21 16 17.8	+0.4
KATZ	**Kakaramea**	**2.13**	**217**	PN	Pn	21 16 20.0	+1.0
MCHZ	**McNeill Hill**	**2.21**	**193**	PN	Pn	21 16 19.5	-0.3
KRVZ	**Karewarewa**	**2.25**	**216**	PN	Pn	21 16 20.6	+0.2
WTVZ	**West Tongariro**	**2.29**	**217**	PN	Pn	21 16 20.8	-0.2
OTVZ	**Oturere**	**2.30**	**215**	⇓PN	Pn	21 16 20.8	-0.2
HIZ	**Hauiti**	**2.32**	**237**	PN	Pn	21 16 21.7	+0.6
TWVZ	**Taurewa**	**2.33**	**220**	PN	Pn	21 16 21.3	-0.2
NGZ	**Ngauruhoe**	**2.34**	**216**	PN	Pn	21 16 21.4	-0.1
WPVZ	**Whakapapa**	**2.38**	**216**	PN	Pn	21 16 21.8	-0.2
BHHZ	**Black Hill Sta**	**2.42**	**204**	PN	Pn	21 16 21.4	-1.0
FWVZ	**Far West T-bar**	**2.42**	**215**	⇑PN	Pn	21 16 22.3	-0.3
TRVZ	**Turoa**	**2.46**	**215**	PN	Pn	21 16 22.4	-0.7
WNVZ	**Wahianoa**	**2.46**	**214**	PN	Pn	21 16 22.4	-0.7
MOVZ	**Moawhango**	**2.46**	**210**	PN	Pn	21 16 22.8	-1.1
KAHZ	**Kahuranaki**	**2.53**	**188**	PN	Pn	21 16 22.8	-1.0
PKVZ	**Pokaka**	**2.55**	**218**	PN	Pn	21 16 23.6	-0.4
MTVZ	**Mangateitei**	**2.56**	**215**	PN	Pn	21 16 23.8	-0.5
PXZ	**Pawanui**	**2.77**	**188**	PN	Pn	21 16 25.0	-1.7
PNHZ	**Pukenui**	**2.77**	**199**	PN	Pn	21 16 25.1	-1.8
WPHZ	**Waipukurau**	**2.86**	**194**	PN	Pn	21 16 26.1	-1.9
TSZ	**Takapari Road**	**2.97**	**201**	PN	Pn	21 16 27.4	-2.0
PRHZ	**Porangahau**	**3.03**	**190**	PN	Pn	21 16 28.1	-2.0
WAZ	**Wanganui**	**3.08**	**216**	PN	Pn	21 16 30.4	-0.5
DVHZ	**Dannevirke**	**3.15**	**197**	PN	Pn	21 16 29.1	-2.6
POWZ	**Post Office Ro**	**3.34**	**201**	⇑PN	Pn	21 16 31.7	-2.5
BFZ	**Birch Farm**	**3.50**	**194**	PN	Pn	21 16 33.3	-2.9
MRZ	**Mangatainoka R**	**3.64**	**202**	⇓PN	Pn	21 16 35.0	-3.1
TIWZ	**Tintock**	**3.67**	**198**	PN	Pn	21 16 35.6	-2.9
HOWZ	**Holdsworth Sta**	**3.88**	**201**	PN	Pn	21 16 37.7	-3.5
OGWZ	**Otaki Gorge**	**3.91**	**205**	⇑PN	Pn	21 16 38.6	-3.1
TMWZ	**Te Maipa**	**3.98**	**196**	PN	Pn	21 16 39.3	-3.3
KIW	**Kapiti Island**	**4.04**	**207**	PN	Pn	21 16 40.0	-3.4
MTW	**Mount Morrison**	**4.12**	**200**	PN	Pn	21 16 40.6	-3.9
CAW	**Cannon Point**	**4.21**	**204**	⇑PN	Pn	21 16 41.8	-3.8
TRWZ	**Traveller**	**4.30**	**197**	PN	Pn	21 16 43.0	-3.8
PAWZ	**Paruwai Farm**	**4.35**	**199**	PN	Pn	21 16 43.3	-4.2
DUWZ	**D'Urville Isla**	**4.41**	**216**	PN	Pn	21 16 44.8	-3.5
MSWZ	**Moikau Station**	**4.43**	**201**	PN	Pn	21 16 44.2	-4.4
BHW	**Baring Head**	**4.54**	**204**	PN	Pn	21 16 45.7	-4.3
PLWZ	**Palliser**	**4.57**	**200**	PN	Pn	21 16 45.9	-4.6
TUWZ	**Tuamarina**	**4.91**	**212**	PN	Pn	21 16 50.6	-4.3
NNZ	**Nelson**	**4.99**	**217**	PN	Pn	21 16 52.8	-3.1
QRZ	**Quartz Range**	**5.16**	**225**	PN	Pn	21 16 54.4	-3.8
THZ	**Tophouse**	**5.64**	**216**	PN	Pn	21 17 00.4	-4.3
KHZ	**Kahutara**	**5.90**	**209**	PN	Pn	21 17 03.3	-4.9
DSZ	**Denniston Nort**	**6.18**	**222**	PN	Pn	21 17 07.3	-4.7
LTZ	**Lake Taylor**	**6.73**	**214**	PN	Pn	21 17 13.9	-5.5
MQZ	**McQueen's Vall**	**7.34**	**208**	PN	Pn	21 17 21.0	-6.5
CTZ	**Chatham Island**	**7.91**	**146**	PN	Pn	21 17 37.9	+2.8
ODZ	**Otahua Downs**	**9.25**	**211**	PN	Pn	21 17 46.5	-6.7

*IDC **17** 21:23:57.5±0.8, 17°66'S×173°41'W, h0km, mb4.3/9, mb1 4.5/9, mb1mx4.2/21, mbtmp4.3/9, MS3.6/3, Ms1 3.6/3, ms1mx3.2/28, Error ellipse: s-maj=34.0km s-min=18.8km az=136.0*

*ISCJB **17** 21:23:58.9±0.4, 17°58'S±0°07'×173°26'W±0°07, h28km, mb4.4/14, MS3.6/3, Error ellipse: s-maj=10.5km s-min=7.7km az=137.7*

*NEIC **17** 21:23:58.5±0.6, 17°56'S×173°28'W, h10km, mb4.6/3, Error ellipse: s-maj=18.0km s-min=10.8km az=129.0*

*AUST **17** 21:24:06.5±6.2, 18°20'S×172°88'W, h89km, Error ellipse: s-maj=5.7km s-min=1.2km az=10.0*

ISC 17 21:24:01.1±0.5, 17°63'S±0°08'×173°19'W±0°07, h28km, n58, σ1s56/54, mb4.3/14, MS3.6/3, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**3.42**	**115**	P	**Pn**	**21 24 51.0**	**-1.6**
	baz=2.9,SNR=53						
NIUE				S	Sn	21 25 25.2	-7.0
	baz=2.9,SNR=10						
AFI	**Afiamalu**	**3.94**	**20**	Sn	**Sn**	**21 25 43.3**	**-1.9**
AFI	**Afiamalu**	**3.94**	**20**	Sn	**Sn**	**21 25 43.3**	**-1.9**
	45nm,0.3s,baz=58,slow=24,SNR=8.8						
RAR	**Rarotonga**	**13.15**	**108**	Pn	**Pn**	**21 27 05.2**	**-0.9**
	3.6nm,0.3s,baz=261,slow=9.2,SNR=6.2						
DZM	**Mont Dzumac**	**19.65**	**254**	*e*LR	LR	21 33 01.9	
	302nm,26.6s						
DZM	**Mont Dzumac**	**19.65**	**254**	P	**Pn**	**21 28 29.5**	**0.0**
DZM	**Mont Dzumac**	**19.65**	**254**	P	**Pn**	**21 28 29.5**	**0.0**
	0.6nm,0.3s,baz=78,slow=18,SNR=10						
URZ	**Urewera**	**22.24**	**201**	P	**P**	**21 28 54.7**	**-0.9**
URZ	**Urewera**	**22.24**	**201**	P	**P**	**21 28 54.7**	**-0.9**
	17nm,0.3s,baz=321,slow=3.4,SNR=28						
PPT2	**Papeete2**	**22.51**	**94**	*e*LR	LR	21 34 08.7	
	256nm,27.0s						
TBI	**Tubuai**	**22.93**	**108**	*e*LR	LR	21 34 24.8	
	213nm,32.0s						
QRZ	**Quartz Range**	**26.19**	**205**	*e*PN	**P**	**21 29 36.4**	**+3.1**
THZ	**Tophouse**	**26.84**	**203**	*e*PN	P	21 29 44.4	+5.1
HNR	**Honiara**	**27.33**	**284**	LR	LR	21 39 06.7	
	comp=Z,96nm,18.6s,baz=340,slow=34						
RPZ	**Rata Peaks**	**29.22**	**204**	P	**P**	**21 30 02.9**	**+2.5**
RPZ	**Rata Peaks**	**29.22**	**204**	P	**P**	**21 30 02.9**	**+2.5**
	11nm,0.6s,baz=291,slow=1.8,SNR=7.5						
CTA	**Charters Tower**	**38.39**	**260**	P	**P**	**21 31 19.6**	**-0.7**
CTA	**Charters Tower**	**38.39**	**260**	P	**P**	**21 31 19.6**	**-0.7**
	2.6nm,0.5s,baz=68,slow=11,SNR=5.4						
CTA				LR	LR	21 44 34.0	
	comp=Z,152nm,19.7s,baz=65,slow=32						
QLP	**Quilpie**	**40.28**	**250**	P	**P**	**21 31 34.1**	**-1.9**
	baz=40,SNR=4.3						
COEN	**Coen**	**42.08**	**269**	P	**P**	**21 31 49.7**	**-1.2**
	baz=42,SNR=4.5						
STKA	**Stephens Creek**	**43.13**	**242**	*e*P	**P**	**21 31 57.2**	**-2.1**
	0.5nm,0.7s						
STKA	**Stephens Creek**	**43.13**	**242**	P	**P**	**21 31 57.1**	**-2.2**
	1.5nm,0.6s,baz=99,slow=11,SNR=5.7						
STKA	**Stephens Creek**	**43.13**	**242**	P	**P**	**21 31 58.2**	**-1.2**
	baz=43,SNR=4.1						
BBOO	**Buckleboo**	**47.90**	**242**	P	**P**	**21 32 34.6**	**-2.4**
	baz=48,SNR=8.4						
WRAB	**Tennant Creek**	**49.55**	**259**	*e*P	**P**	**21 32 46.9**	**-3.1**
	3.4nm,0.4s						
WRA	**Warramunga Arr**	**49.56**	**259**	P	**P**	**21 32 47.6**	**-2.4**
WRA	**Warramunga Arr**	**49.56**	**259**	P	**P**	**21 32 47.6**	**-2.4**
	3.9nm,0.5s,baz=98,slow=6.9,SNR=116						
AS31	**Alice Springs**	**49.64**	**254**	*e*P	**P**	**21 32 48.6**	**-2.0**
ASAR	**Alice Springs**	**49.64**	**254**	P	**P**	**21 32 49.0**	**-1.6**
ASAR				PcP	**PcP**	**21 34 12.0**	**+0.1**
ASAR	**Alice Springs**	**49.64**	**254**	P	**P**	**21 32 49.0**	**-1.6**
	16nm,0.6s,baz=89,slow=8.6,SNR=170						
ASAR				PcP	**PcP**	**21 34 12.0**	**+0.1**
	0.8nm,0.7s,baz=92,slow=3.7,SNR=4.7						
FITZ	**Fitzroy Crossi**	**57.97**	**259**	*e*P	**P**	**21

UTMO *i* S Sn 21 56 18.2 -4.3

IDC **17** *22:13:20.8±1.9, 54°.40N×161°.64W, h0km, mb3.9/13, mb1 4.0/16, mb1mx3.9/31, mbtmp3.8/16, ML3.4/3, MS3.1/2, Ms1 3.1/2, ms1mx2.6/50, Error ellipse: s-maj=53.0km s-min=16.9km az=156.0*
NEIC **17** *22:13:26.8, 54°.51N×161°.49W, h2km, ML3.7(AEIC), After AEIC.*

ISC 17 22:13:23.5±1.7, 54°.40N±0°.07×161°.42W±0°.04, h17km±10km, n60, σ1°.48/69, mb4.0/13, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
DRIA	**Deer Island**	**0.75**	**320**	**P**		**Pn**		**22 13 39.6**	**+0.3**
DTU	**Dutton Round H**	**0.87**	**325**	**P**		**Pn**		**22 13 41.2**	**+0.3**
DTNA	**Dutton South F**	**0.90**	**328**	**P**		**Pn**		**22 13 41.8**	**+0.5**
DTNA				S		**Sb**		**22 13 52.8**	**+0.6**
HAG	**Hague Volcano**	**0.97**	**343**	**P**		**Pn**		**22 13 43.4**	**+1.1**
PS4A	**Pavlof South-4**	**0.99**	**345**	**P**		**Pn**		**22 13 43.6**	**+1.0**
PVV	**Pavlof Volcano**	**1.00**	**348**	**P**		**Pn**		**22 13 43.9**	**+1.1**
SDPT	**Sand Point**	**1.10**	**29**	*e*Pg		**Pn**		**22 13 45.5**	**+1.4**
SDPT				*e*Sg		**Sn**		**22 13 59.4**	**+0.5**
FALS	**False Pass**	**1.25**	**293**	P		**Pg**		**22 13 48.5**	**+1.0**
FALS				S		**Sn**		**22 14 04.1**	**+1.5**
SSLS	**Shishaldin Sou**	**1.54**	**283**	P		**Pg**		**22 13 52.6**	**-0.4**
SSLS				S		**Sb**		**22 14 12.2**	**+1.5**
SSLW	**Shishaldin Wes**	**1.62**	**285**	P		**Pg**		**22 13 53.6**	**-0.9**
WESE	**West Dahl East**	**1.85**	**274**	P		**Pb**		**22 13 57.3**	**+0.4**
WESN	**West Dahl Nort**	**1.85**	**277**	P		**Pb**		**22 13 57.4**	**+0.5**
VNHG	**Veniaminof 1**	**2.24**	**34**	P		**Pb**		**22 14 02.0**	**-1.4**
AKSA	**Akutan Strait**	**2.52**	**266**	P		**Pb**		**22 14 06.5**	**-1.7**
AKSA				S		**Sb**		**22 14 37.5**	**-1.5**
AKUT	**Akutan**	**2.57**	**266**	*e*Pn		**Pb**		**22 14 07.6**	**-1.4**
AKUT				*e*Sn		**Sn**		**22 14 37.4**	**+2.4**
CHGN	**Chignik**	**2.57**	**41**	*e*Pn		**Pb**		**22 14 07.3**	**-1.7**
CHGN				*e*Sn		**Sn**		**22 14 37.7**	**+2.6**
ANPB	**Aniakchak Plen**	**3.00**	**35**	P		**Pn**		**22 14 12.8**	**+2.6**
UNV	**Unalaska Valle**	**3.04**	**262**	*e*Pn		Pn		22 14 14.0	+3.3
UNV				*e*Sn		**Sn**		**22 14 47.3**	**+0.6**
MSW	**Makushin Switc**	**3.19**	**263**	P		**Pn**		**22 14 15.1**	**+2.3**
CAHL	**Cahill**	**5.01**	**40**	P		**Pn**		**22 14 40.0**	**+2.2**
KABR	**Katmai Barrier**	**5.19**	**41**	P		**Pn**		**22 14 42.5**	**+2.2**
OHAK	**Old Harbor** 19nm,0.7s	**5.39**	**55**	*e*Pn		**Pn**		**22 14 45.1**	**+2.2**
OHAK				*e*Sn		Sn		22 15 52.6	+8.0
KDAK	**Kodiak Island** 25nm,0.8s	**6.00**	**52**	*e*Pn		Pn		22 14 55.7	+4.4
KDAK				*e*Sb		**Sb**		**22 16 23.6**	**+4.7**
KDAK	**Kodiak Island** 0.8nm,0.3s,baz=223,slow=12,SNR=20	**6.00**	**52**	Pn		**Pn**		**22 14 52.0**	**+0.7**
KDAK				Sn		**Sn**		**22 15 57.0**	**-2.5**
	0.8nm,0.3s,baz=200,slow=17,SNR=2.7								
PPLA	**Purkeypile** 37nm,1.5s	**9.78**	**26**	*e*Pn		Pn		22 15 47.6	+4.3
TRF	**Thorofare Moun** 7.2nm,0.9s	**10.73**	**28**	*e*Pn		**Pn**		**22 15 57.1**	**+0.8**
TNA	**Tin City** 3.0nm,0.7s	**11.65**	**347**	*e*Pn		**Pn**		**22 16 10.9**	**+2.2**
PAX	**Paxson** 5.2nm,0.9s	**11.91**	**37**	*e*Pn		**Pn**		**22 16 13.4**	**+1.0**
ILAR	**Eielson Array**	**12.70**	**29**	Pn		**Pn**		**22 16 20.7**	**-2.4**
ILAR				Sn		**Sn**		**22 18 42.0**	**-1.9**
ILAR	**Eielson Array** 0.1nm,0.3s,baz=226,slow=13,SNR=4.1	**12.70**	**29**	Pn		**Pn**		**22 16 20.7**	**-2.4**
ILAR				Sn		**Sn**		**22 18 42.0**	**-1.9**
	0.0nm,0.3s,baz=208,slow=19,SNR=3.1								
ILAR				LR		LR		22 21 36.4	
	comp=Z,66nm,19.0s,baz=227,slow=39								
INK	**Inuvik**	**19.06**	**32**	P		**P**		**22 17 43.9**	**-0.6**
INK	**Inuvik** 0.1nm,0.3s,baz=221,slow=16,SNR=7.8	**19.06**	**32**	P		**P**		**22 17 43.9**	**-0.6**
INK				LR		LR		22 25 35.9	
	comp=Z,58nm,19.5s,baz=289,slow=38								
PETK	**Petropavlovsk-**	**23.97**	**284**	P		**P**		**22 18 36.1**	**-0.5**
PETK	**Petropavlovsk-** 3.3nm,0.5s,baz=90,slow=12,SNR=29	**23.97**	**284**	P		**P**		**22 18 36.1**	**-0.5**
YKA	**Yellowknife Ar**	**25.27**	**52**	P		**P**		**22 18 50.0**	**+1.6**
YKA	**Yellowknife Ar** 0.6nm,0.8s,baz=266,slow=7.6,SNR=7.9	**25.27**	**52**	P		**P**		**22 18 50.0**	**+1.6**
KSRS	**Korea Array** 1.9nm,0.8s,baz=48,slow=6.8,SNR=7.2	**49.81**	**281**	P		**P**		**22 22 15.1**	**0.0**
KSAR	**Wonju Array Be**	**49.84**	**281**	P		**P**		**22 22 15.1**	**-0.2**
SONM	**Songino Array**	**54.24**	**304**	P		**P**		**22 22 48.1**	**0.0**
SONM	**Songino Array** 1.1nm,0.8s,baz=46,slow=7.4,SNR=6.8	**54.24**	**304**	P		**P**		**22 22 48.1**	**0.0**
FINES	**FINESS Array B**	**64.35**	**356**	P		**P**		**22 23 56.8**	**-0.8**
FINES	**FINESS Array B** 1.5nm,0.6s,baz=21,slow=8.1,SNR=9.2	**64.35**	**356**	P		**P**		**22 23 56.8**	**-0.8**
NOA	**NORSAR Array B**	**64.76**	**4**	P		**P**		**22 23 59.6**	**-0.8**
NOA	**NORSAR Array B** 0.9nm,0.8s,baz=356,slow=6.2,SNR=2.6	**64.76**	**4**	P		**P**		**22 23 59.6**	**-0.8**
MKAR	**Makanchi Array**	**65.70**	**317**	P		**P**		**22 24 05.2**	**-1.5**
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=48,slow=6.1,SNR=4.6	**65.70**	**317**	P		**P**		**22 24 05.2**	**-1.5**
AKASG	**Malin Array Be**	**74.89**	**353**	P		**P**		**22 25 00.9**	**-1.8**
AKASG	**Malin Array Be** 1.8nm,0.6s,baz=13,slow=6.1,SNR=3.6	**74.89**	**353**	P		**P**		**22 25 00.9**	**-1.8**
GERES	**GERESS Array B**	**77.05**	**3**	P		**P**		**22 25 15.2**	**-0.1**
GERES	**GERESS Array B** 0.3nm,0.5s,baz=358,slow=5.6,SNR=1.5	**77.05**	**3**	P		**P**		**22 25 15.2**	**-0.1**
KBZ	**Khabaz**	**80.07**	**342**	P		**P**		**22 25 32.4**	**+0.5**
KBZ	**Khabaz** 3.1nm,0.9s,baz=283,slow=1.4,SNR=8.1	**80.07**	**342**	P		**P**		**22 25 32.4**	**+0.5**
CMAR	**Chiang Mai Arr**	**80.66**	**288**	P		**P**		**22 25 35.5**	**0.0**
CMAR	**Chiang Mai Arr** 1.2nm,0.8s,baz=22,slow=5.8,SNR=6.9	**80.66**	**288**	P		**P**		**22 25 35.5**	**0.0**
ESDC	**Sonseca Array**	**84.32**	**17**	P		**P**		**22 25 54.9**	**+0.6**
ESDC	**Sonseca Array** 0.2nm,0.4s,baz=346,slow=5.0,SNR=3.4	**84.32**	**17**	P		**P**		**22 25 54.9**	**+0.6**
BRTR	**Keskin Array B**	**85.36**	**348**	P		**P**		**22 25 59.7**	**+0.1**
BRTR	**Keskin Array B** 1.0nm,0.8s,baz=48,slow=1.6,SNR=7.4	**85.36**	**348**	P		**P**		**22 25 59.7**	**+0.1**
QSPA	**South Pole Qui**	**144.17**	**180**	PKP		**PKPab**		**22 32 55.1**	**+0.6**
QSPA	**South Pole Qui** 1.4nm,1.0s,baz=332,slow=3.8,SNR=5.4	**144.17**	**180**	PKP		**PKPab**		**22 32 55.1**	**+0.6**

IDC 17 22:18:13.7±11.0, 1°.94N×126°.67E, h181km±121km, mb3.3/7, mb1 3.3/8, mb1mx3.2/23, mbtmp3.2/8, Error ellipse: s-maj=48.4km s-min=23.5km az=62.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=7.6,slow=15,SNR=2.9	**19.95**	**183**	P		P		22 22 31.5	-0.4
WRA	**Warramunga Arr** 1.2nm,0.5s,baz=339,slow=11,SNR=8.6	**23.02**	**161**	P		P		22 23 03.0	+0.1
PMG	**Port Moresby** 13nm,0.9s,baz=302,slow=15,SNR=2.7	**23.32**	**119**	P		P		22 23 05.1	-0.7
ASAR	**Alice Springs** 0.5nm,0.6s,baz=343,slow=8.4,SNR=8.7	**26.41**	**165**	P		P		22 23 33.2	-0.5
STKA	**Stephens Creek** 1.3nm,0.6s,baz=340,slow=4.4,SNR=3.6	**36.50**	**158**	P		P		22 25 02.9	+1.2
SONM	**Songino Array** 0.2nm,0.6s,baz=156,slow=7.7,SNR=2.8	**48.96**	**342**	P		P		22 26 41.8	0.0
MKAR	**Makanchi Array** 0.5nm,0.5s,baz=120,slow=8.0,SNR=12	**58.98**	**326**	P		P		22 27 54.5	+0.2
BRTR	**Keskin Array B** 0.2nm,0.4s,baz=82,slow=1.7,SNR=3.5	**91.11**	**310**	P		P		22 30 57.1	-1.1

IDC 17 22:23:35.3±8.9, 23°.96S×179°.58E, h516km±83km, mb3.0/4, mb1 3.2/5, mb1mx3.0/19, mbtmp3.2/5, Error ellipse: s-maj=76.1km s-min=22.6km az=44.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
URZ	**Urewera** 4.4nm,0.3s,baz=9.6,slow=3.0,SNR=23	**14.41**	**188**	P		P		22 26 39.1	+0.3
URZ				S		S		22 29 10.5	+0.3
	0.8nm,0.3s,baz=76,slow=23,SNR=5.7								
STKA	**Stephens Creek** 0.7nm,0.4s,baz=94,slow=13,SNR=3.2	**34.34**	**248**	P		P		22 29 39.5	+0.8
ASAR	**Alice Springs** 0.9nm,0.7s,baz=97,slow=8.2,SNR=10	**41.64**	**261**	P		P		22 30 38.5	+0.1
WRA	**Warramunga Arr** 0.5nm,0.5s,baz=103,slow=8.3,SNR=4.1	**42.01**	**266**	P		P		22 30 40.4	-1.1
QSPA	**South Pole Qui** 3.7nm,0.6s,baz=315,slow=0.4,SNR=18	**66.12**	**180**	P		P		22 33 30.8	-0.1
SNAA	**Sanae**	**84.61**	**179**	*e*P		P		22 35 11.3	-2.4
VNA3	**Neumayer Olymp**	**84.83**	**177**	*e*P		P		22 35 12.6	-2.2
VNA2	**Neumayer--Watz** baz=176,slow=3.8	**85.25**	**178**	*e*P		P		22 35 14.7	-2.1
BRTR	**Keskin Array B** 0.3nm,0.6s,baz=104,slow=2.8,SNR=2.7	**147.31**	**307**	PKPbc		PKPbc		22 42 20.7	-0.4

IDC **17** *22:28:12.6±0.6, 14°.81N×144°.58E, h0km, mb4.0/22, mb1 4.2/22, mb1mx4.1/32, mbtmp4.0/22, MS3.6/18, Ms1 3.6/18, ms1mx3.4/39, Error ellipse: s-maj=20.4km s-min=13.1km az=85.0*
NEIC **17** *22:28:14.0±0.3, 14°.77N×144°.53E, h10km, mb4.5/8, Error ellipse: s-maj=11.9km s-min=6.2km az=79.0*
ISCJB **17** *22:28:15.1±0.3, 14°.75N±0°.05×144°.44E±0°.10, h27km, mb4.1/29, MS3.6/17, Error ellipse: s-maj=14.4km s-min=6.2km az=163.6*

ISC 17 22:28:16.6±0.5, 14°.72N±0°.06×144°.6E±0°.1, h27km, n63, σ1°.06/60, mb4.2/29, MS3.6/17, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
GUMO	**Guam**	**1.17**	**164**	*e*Pg		**Pn**		**22 28 36.9**	**-0.3**
GUMO				*e*Sg		**Sb**		**22 28 52.6**	**-0.3**
GUMO	**Guam** 101nm,0.3s,baz=296,slow=2.5,SNR=29	**1.17**	**164**	Pn		**Pn**		**22 28 37.2**	**0.0**
GUMO				Sn		**Sb**		**22 28 52.8**	**-0.1**
	299nm,0.3s,baz=3.6,slow=19,SNR=49								
JHJ	**Hachijo jima 2** comp=Z,115nm,18.7s,baz=62,slow=36	**18.82**	**348**	LR		LR		22 39 22.5	
JNU	**Nakatsue**	**22.13**	**328**	P		**P**		**22 33 10.2**	**-0.1**
JNU	**Nakatsue** 3.1nm,0.7s,baz=315,slow=1.4,SNR=3.1	**22.13**	**328**	P		**P**		**22 33 10.2**	**-0.1**
JNU				LR		LR		22 41 11.2	
	comp=Z,30nm,19.1s,baz=57,slow=35								
MJAR	**Matsushiro Arr**	**22.46**	**347**	P		**P**		**22 33 14.1**	**+0.4**
MJAR	**Matsushiro Arr** 6.7nm,0.9s,baz=171,slow=11,SNR=15	**22.46**	**347**	P		**P**		**22 33 14.1**	**+0.4**
MAJO	**Matsushiro** 5.1nm,0.3s	**22.46**	**347**	*e*P		**P**		**22 33 11.5**	**-2.2**
MAT	**Matsushiro**	**22.46**	**347**	P		**P**		**22 33 14.3**	**+0.6**
MAT				S		**S**		**22 37 23.6**	**+4.8**
KSRS	**Korea Array** 0.7nm,0.6s,baz=141,slow=9.2,SNR=3.9	**27.03**	**330**	P		**P**		**22 33 57.2**	**+0.6**
KSRS				LR		LR		22 44 28.6	
	comp=Z,76nm,18.1s,baz=6.9,slow=36								
KSAR	**Wonju Array Be**	**27.04**	**330**	P		**P**		**22 33 57.2**	**+0.5**
ASAJ	**Asahikawa** comp=Z,74nm,19.6s,baz=160,slow=36	**29.34**	**357**	LR		LR		22 46 01.8	
CTA	**Charters Tower** comp=Z,77nm,18.0s,baz=193,slow=33	**34.63**	**177**	LR		LR		22 47 03.5	
WRAB	**Tennant Creek** 3.7nm,0.9s	**35.87**	**197**	*e*P		**P**		**22 35 13.3**	**-1.1**
WRA	**Warramunga Arr**	**35.88**	**197**	P		**P**		**22 35 15.3**	**+0.8**
WRA	**Warramunga Arr** 3.5nm,0.9s,baz=18,slow=9.3,SNR=9.6	**35.88**	**197**	P		**P**		**22 35 15.3**	**+0.8**
FITZ	**Fitzroy Crossi** 4.5nm,1.1s	**37.57**	**210**	*e*P		**P**		**22 35 28.9**	**-0.1**
FITZ	**Fitzroy Crossi** 3.2nm,0.9s,baz=294,slow=10.0,SNR=4.7	**37.57**	**210**	P		**P**		**22 35 29.5**	**+0.6**
ASAR	**Alice Springs**	**39.55**	**195**	P		**P**		**22 35 46.2**	**+0.7**
ASAR	**Alice Springs** 0.4nm,0.7s,baz=23,slow=12,SNR=5.1	**39.55**	**195**	P		**P**		**22 35 46.2**	**+0.7**
DZM	**Mont Dzumac** 36nm,1.3s	**42.40**	**149**	*e*P		**P**		**22 36 10.3**	**+1.1**
CMAR	**Chiang Mai Arr**	**43.78**	**281**	P		**P**		**22 36 21.1**	**+0.7**
CMAR	**Chiang Mai Arr** 0.7nm,0.6s,baz=75,slow=7.1,SNR=5.9	**43.78**	**281**	P		**P**		**22 36 21.1**	**+0.7**
CMAR				LR		LR		22 51 29.4	
	comp=Z,56nm,21.9s,baz=277,slow=32								
SONM	**Songino Array**	**45.63**	**324**	P		**P**		**22 36 34.5**	**-0.5**
SONM				PcP		**PcP**		**22 38 13.3**	**+0.4**
SONM	**Songino Array** 0.4nm,0.7s,baz=120,slow=5.7,SNR=2.9	**45.63**	**324**	P		**P**		**22 36 34.4**	**-0.5**
SONM				PcP		**PcP**		**22 38 13.3**	**+0.4**
	1.6nm,0.9s,baz=119,slow=3.9,SNR=6.2								
SONM				LR		LR		22 55 33.2	
	comp=Z,70nm,20.2s,baz=359,slow=36								
AFI	**Afiamalu** comp=Z,51nm,18.0s,baz=44,slow=35	**51.74**	**121**	LR		LR		22 58 41.9	
MKAR	**Makanchi Array**	**60.47**	**316**	P		**P**		**22 38 24.2**	**+0.1**
MKAR	**Makanchi Array** 0.6nm,0.7s,baz=88,slow=9.0,SNR=5.9	**60.47**	**316**	P		**P**		**22 38 24.2**	**+0.1**
MKAR				LR		LR		23 05 40.5	
	comp=Z,43nm,19.4s,baz=354,slow=37								
ZALV	**Zalesovo Beam**	**60.53**	**324**	P		**P**		**22 38 23.3**	**-1.1**
ZALV	**Zalesovo Beam** 0.2nm,0.3s,baz=90,slow=5.9,SNR=3.7	**60.53**	**324**	P		**P**		**22 38 23.3**	**-1.1**
ZALV				LR		LR		23 03 54.2	
	comp=Z,49nm,19.7s,baz=72,slow=35								
RPZ	**Rata Peaks** comp=Z,180nm,18.5s,baz=262,slow=31	**63.00**	**159**	LR		LR		23 00 40.0	
KURK	**Kurchatov** 5.9nm,1.0s	**63.52**	**320**	*e*P		**P**		**22 38 43.3**	**-1.2**
KURBB	**Kurchatov Arra** 2.8nm,0.7s,baz=101,slow=6.7,SNR=40	**63.56**	**319**	P		**P**		**22 38 44.7**	**-0.1**
KURBB				LR		LR		23 06 09.3	
	comp=Z,55nm,21.1s,baz=110,slow=36								
AAK	**Ala-Archa** comp=Z,51nm,18.4s,baz=263,slow=40	**65.54**	**310**	LR		LR		23 12 02.4	
ILAR	**Eielson Array**	**67.69**	**26**	P		**P**		**22 39 09.2**	**-2.1**
ILAR	**Eielson Array** 0.6nm,0.7s,baz=258,slow=4.6,SNR=7.7	**67.69**	**26**	P		**P**		**22 39 09.2**	**-2.1**
BVAR	**Borovoye Array**	**68.85**	**321**	P		**P**		**22 39 18.2**	**-0.5**
BVAR	**Borovoye Array** 1.1nm,0.6s,baz=101,slow=7.7,SNR=8.8	**68.85**	**321**	P		**P**		**22 39 18.2**	**-0.5**
BVAR				LR		LR		23 10 22.0	
	comp=Z,65nm,19.3s,baz=259,slow=37								
INK	**Inuvik**	**73.45**	**23**	P		**P**		**22 39 45.8**	**-0.5**
INK	**Inuvik** 1.3nm,1.0s,baz=280,slow=5.0,SNR=3.2	**73.45**	**23**	P		**P**		**22 39 45.8**	**-0.5**
DLBC	**Dease Lake**	**75.21**	**33**	P		**P**		**22 39 56.7**	**-0.1**
DLBC	**Dease Lake** 3.4nm,0.8s,baz=227,slow=10,SNR=3.8	**75.21**	**33**	P		**P**		**22 39 56.7**	**-0.1**
ABKAR	**Akbulak array** 1.6nm,0.8s	**75.50**	**318**	*e*P		**P**		**22 39 57.8**	**-0.7**
YKA	**Yellowknife Ar**	**82.00**	**27**	P		**P**		**22 40 33.8**	**-0.3**
YKA	**Yellowknife Ar** 1.2nm,0.8s,baz=289,slow=5.5,SNR=15	**82.00**	**27**	P		**P**		**22 40 33.7**	**-0.3**
RES	**Resolute Bay** 2.6nm,0.8s	**83.53**	**13**	*e*P		**P**		**22 40 41.4**	**-0.4**
NEW	**Newport**	**84.59**	**42**	P		**P**		**22 40 48.4**	**+0.7**
NEW	**Newport** 1.7nm,0.5s,baz=27,slow=2.3,SNR=2.9	**84.59**	**42**	P		**P**		**22 40 48.4**	**+0.7**
ARCES	**ARCESS Array B**	**85.92**	**342**	P		**P**		**22 40 53.3**	**-0.6**
ARCES	**ARCESS Array B** 4.4nm,0.8s,baz=72,slow=9.1,SNR=7.0	**85.92**	**342**	P		**P**		**22 40 53.3**	**-0.6**
ARCES				LR		LR		23 25 33.8	
	comp=Z,61nm,18.2s,baz=260,slow=40								
BSMT	**Bassoo Peak** 4.3nm,0.9s	**86.21**	**42**	*e*P		**P**		**22 40 55.6**	**-0.5**
NVAR	**Mina Array Bea**	**86.46**	**51**	P		**P**		**22 40 58.6**	**+1.1**
NVAR	**Mina Array Bea** 0.5nm,0.7s,baz=282,slow=5.4,SNR=3.3	**86.46**	**51**	P		**P**		**22 40 58.6**	**+1.1**
ELK	**Elko**	**88.06**	**48**	P		**P**		**22 41 05.8**	**+0.5**
ELK	**Elko** 1.3nm,0.8s,baz=76,slow=2.2,SNR=3.6	**88.06**	**48**	P		**P**		**22 41 05.8**	**+0.5**
KBZ	**Khabaz** comp=Z,40nm,20.4s,baz=7.1,slow=36	**88.15**	**315**	LR		LR		23 21 47.2	
FINES	**FINESS Array B**	**90.01**	**335**	P		**P**		**22 41 12.1**	**-1.5**
FINES	**FINESS Array B** 2.2nm,0.8s,baz=25,slow=7.6,SNR=4.6	**90.01**	**335**	P		**P**		**22 41 12.1**	**-1.5**
FINES				LR		LR		23 20 21.4	
	comp=Z,52nm,18.4s,baz=315,slow=35								
NOA	**NORSAR Array B** comp=Z,22nm,18.6s,baz=40,slow=37	**95.89**	**339**	LR		LR		23 27 21.6	
BRTR	**Keskin Array B**	**96.06**	**314**	P		**P**		**22 41 41.5**	**-0.7**
BRTR	**Keskin Array B** 0.3nm,0.8s,baz=180,slow=0.1,SNR=2.7	**96.06**	**314**	P		**P**		**22 41 41.5**	**-0.7**
LPAZ	**La Paz**	**148.49**	**97**	PKPbc		**PKPbc**		**22 48 04.0**	**+1.3**
LPAZ	**La Paz** 1.4nm,0.8s,baz=278,slow=2.5,SNR=6.6	**148.49**	**97**	PKPbc		**PKPbc**		**22 48 04.0**	**+1.3**

CASC 17 22:44:39.8±2.1, 14°.01N×89°.95W, h0km±3km, MD3.5, 1C, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
RBDL	**Robledal**	**0.28**	**69**	*e*P		Pb		22 44 46.9	-1.1
RTR	**El Retiro**	**0.32**	**111**	↑P		Pb		22 44 47.9	-0.8
SBLS	**San Blas**	**0.36**	**118**	*e*P		Pb		22 44 48.4	-1.1
SNJE	**San Jose**	**0.37**	**113**	*e*P		Pb		22 44 48.5	-0.9
IXG	**Ixpaco**	**0.51**	**289**	*e*P		Pg		22 44 49.6	-0.3
IXG				*e*S		Sb		22 45 00.6	+0.5
NBG	**Las Nubes**	**0.69**	**326**	*e*P		Pg		22 44 53.6	+0.2
NBG				*e*S		Sn		22 45 07.2	-1.6
MTO2	**Montecristo 2**	**0.69**	**56**	*e*P		Pg		22 44 53.9	+0.5
MTO2				*e*S		Sb		22 45 04.0	-1.4
BOQS	**Boqueron**	**0.71**	**113**	*e*P		Pb		22 44 54.7	-0.6
PCG	**Pacaya**	**0.74**	**301**	*e*P		Pg		22 44 53.8	-0.6
PCG				*e*S		Sb		22 45 08.3	+1.5
LFU	**La Fuente**	**0.86**	**108**	*e*P		Pb		22 44 57.1	-0.6
LBRS	**Las Brisas**	**0.93**	**107**	*e*P		Pg		22 44 58.0	+0.4
LFRS	**El Faro**	**0.95**	**114**	*e*P		Pg		22 44 58.5	+0.3
LFRS				*e*S		Sb		22 45 13.4	+0.9
FUG	**Fuego 3**	**0.96**	**297**	*e*P		Pg		22 44 57.7	-0.9
MRL	**Marmol**	**1.08**	**14**	*e*P		Pb		22 45 01.6	0.0
MRL				*e*S		Sn		22 45 18.1	-0.2
SNVI	**San Vicente**	**1.15**	**110**	*e*P		Pb		22 45 02.7	-0.2
SNVI				*e*S		Sn		22 45 20.1	0.0
JAT	**Jato**	**1.66**	**281**	*e*P		Pn		22 45 10.6	+0.4
JAT				*e*S		Sg		22 45 33.3	+0.1
CAHU	**Cacacuatique**	**1.71**	**98**	*e*P		Pn		22 45 11.2	+0.1

IDC **17** *22:56:33.4±4.4, 60°.69S×22°.19W, h0km, mb3.5/1, mb1 3.5/1, mb1mx3.3/16, mbtmp3.5/1, Error ellipse: s-maj=235.7km s-min=96.3km az=90.0*

ISC 17 22:56:35.9±1.9, 60°.2S±0°.2×24°.3W±0°.6, h10km, n7, σ0°.96/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
VNA1	**Neumayer--Stat**	**12.40**	**155**	*e*Pn		**Pn**		**22 59 32.8**	**+0.7**
VNA3	**Neumayer Olymp**	**12.59**	**158**	*e*Pn		**Pn**		**22 59 33.3**	**-1.4**
VNA2	**Neumayer--Watz** baz=306,slow=15	**12.80**	**154**	*e*Pn		**Pn**		**22 59 37.9**	**+0.3**
SNAA	**Sanae**	**14.36**	**152**	*e*Pn		**Pn**		**22 59 59.1**	**+0.2**
TORD	**Torodi Ar. Bea** 0.3nm,0.7s,baz=199,slow=5.6,SNR=4.4	**76.00**	**26**	P		**P**		**23 08 22.3**	**-0.6**
YKA	**Yellowknife Ar** 0.2nm,0.8s,baz=128,slow=2.3,SNR=4.3	**140.19**	**314**	PKP		**PKPdf**		**23 16 03.9**	**+0.8**
SONM	**Songino Array** 0.4nm,0.8s,baz=222,slow=2.1,SNR=3.6	**149.28**	**91**	PKPbc		**PKPdf**		**23 16 19.7**	**+0.2**

IDC 17 23:00:29.3±6.6, 11°.74N×87°.04W, h33km±50km, mb3.4/7, mb1 3.8/8, mb1mx3.6/24, mbtmp3.4/8, ML2.9/1, Error ellipse: s-maj=64.2km s-min=18.8km az=48.0, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
JTS	**JuntasAbangare** 2.4nm,0.3s,baz=310,slow=19,SNR=5.6	**2.50**	**125**	Pn		Pn		23 01 08.1	+0.4
JTS				Sn		Sn		23 01 38.3	+1.2
	17nm,0.3s,baz=270,slow=20,SNR=12								
TXAR	**Lajitas Array** 0.8nm,0.7s,baz=136,slow=9.6,SNR=4.9	**23.38**	**321**	P		P		23 05 35.2	-0.2
TKL	**Tuckaleechee C** 4.8nm,0.7s,baz=187,slow=9.3,SNR=5.3	**24.00**	**7**	P		P		23 05 42.0	+1.0
PDAR	**Pinedale Array** 0.3nm,0.5s,baz=127,slow=9.8,SNR=4.0	**36.59**	**332**	P		P		23 07 32.0	-0.6
NVAR	**Mina Array Bea** 0.3nm,0.6s,baz=132,slow=7.4,SNR=2.4	**38.50**	**319**	P		P		23 07 49.5	+0.7
NVAR				PcP		PcP		23 10 02.0	+0.6
	0.3nm,0.6s,baz=171,slow=3.9,SNR=3.6								
BDFB	**Brasilia** 2.0nm,0.6s,baz=277,slow=8.1,SNR=3.3	**47.24**	**124**	P		P		23 08 58.7	-1.0
YKA	**Yellowknife Ar** 0.5nm,0.7s,baz=139,slow=7.6,SNR=14	**54.40**	**345**	P		P		23 09 51.7	-1.1
YKA				PcP		PcP		23 10 56.0	-0.2
	0.2nm,0.7s,baz=138,slow=3.8,SNR=5.9								
ILAR	**Eielson Array** 0.3nm,0.8s,baz=147,slow=4.7,SNR=4.7	**66.83**	**336**	P		P		23 11 17.2	-0.4
CMAR	**Chiang Mai Arr** 0.3nm,0.3s,baz=18,slow=1.7,SNR=2.7	**149.42**	**349**	PKP		PKPdf		23 20

0.1nm,0.4s,baz=130,slow=2.1,SNR=8.0
INK Inuvik 146.20 320 PKPbc PKPdf 00 08 25.4 +0.1
0.6nm,0.4s,baz=127,slow=0.7,SNR=6.0
ILAR Eielson Array 150.44 311 PKPbc PKPbc 00 08 36.8 -0.9
0.8nm,0.8s,baz=137,slow=2.0,SNR=12
SONM Songino Array 150.84 88 PKPbc PKPbc 00 08 39.6 +0.3
0.6nm,0.5s,baz=250,slow=3.6,SNR=4.5

IDC 18 00:08:09.2±2.8, 19°.14N×145°.04E, h243km±33km, mb 2.8/6, mb1 3.2/8, mb1mx3.0/27, mbtmp3.0/8, Error ellipse: s-maj=31.6km s-min=23.8km az=24.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.52**	**182**	P	Pn	00 09 31.1	-0.2
	19nm,0.3s,baz=4.4,slow=18,SNR=6.1						
GUMO				S	S	00 10 24.9	-12
	35nm,0.3s,baz=162,slow=24,SNR=24						
MJAR	**Matsushiro Arr**	**18.35**	**342**	P	P	00 12 05.7	-0.2
	0.3nm,0.3s,baz=165,slow=9.9,SNR=8.6						
SONM	**Songino Array**	**42.41**	**321**	P	P	00 15 40.4	+0.2
	0.3nm,0.7s,baz=132,slow=8.7,SNR=2.9						
CMAR	**Chiang Mai Arr**	**43.54**	**277**	P	P	00 15 50.0	+0.6
	0.3nm,0.3s,baz=79,slow=6.2,SNR=4.5						
ZALV	**Zalesovo Beam**	**57.29**	**322**	P	P	00 17 31.5	+0.1
	0.2nm,0.4s,baz=95,slow=7.2,SNR=3.1						
MKAR	**Makanchi Array**	**57.71**	**314**	P	P	00 17 33.5	-1.1
	0.2nm,0.7s,baz=82,slow=10,SNR=3.0						
YKA	**Yellowknife Ar**	**77.89**	**28**	P	P	00 19 40.4	+0.6
	0.4nm,0.8s,baz=291,slow=5.6,SNR=6.3						
NVAR	**Mina Array Bea**	**83.36**	**52**	P	P	00 20 09.2	-0.4
	0.4nm,0.7s,baz=258,slow=7.1,SNR=3.4						

*ATH **18** 00:15:40.7, 37°.83N×23°.72E, h21km±1km, MD2.9/10, ML1.4*
*ISCJB **18** 00:15:41.1±0.6, 37°.83N±0°.04×23°.70E±0°.06, h11km±4km, Error ellipse: s-maj=8.8km s-min=5.9km az=28.2*
*THE **18** 00:15:41.7, 37°.84N×23°.72E, h9km±1km, ML1.3/2, Error ellipse: s-maj=1.9km s-min=0.4km az=347.0*
*CSEM **18** 00:15:41.2±0.1, 37°.84N×23°.72E, h9km±1km, ML1.3/2, Error ellipse: s-maj=3.6km s-min=2.6km az=137.0*
ISC 18 00:15:41.4±1.0, 37°.83N±0°.03×23°.71E±0°.03, h12km±6km, n35, σ0°.43/50, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATH	**Athens Observa**	**0.14**	**1**	P	**Pg**	**00 15 44.8**	**-0.1**
ATH				S	**Sg**	**00 15 47.1**	**-0.2**
ATH	**Athens Observa**	**0.14**	**1**	*e*PB	**Pg**	**00 15 44.8**	**-0.1**
ATH				*e*SB	**Sg**	**00 15 48.3**	**+1.0**
ATH	**Athens Observa**	**0.14**	**1**	P	**Pg**	**00 15 44.8**	**-0.1**
ATH				S	**Sg**	**00 15 47.1**	**-0.2**
ATH				*e*Sb	**Sg**	**00 15 48.3**	**+1.0**
ATHU	**Athens Univers**	**0.14**	**23**	P	**Pg**	**00 15 44.6**	**-0.4**
ATHU				S	**Sg**	**00 15 46.8**	**-0.7**
ATHU	**Athens Univers**	**0.14**	**23**	P	**Pg**	**00 15 44.6**	**-0.4**
ATHU				S	**Sg**	**00 15 46.8**	**-0.7**
NAIG	**Nisos Aigina**	**0.19**	**247**	*e*PB	**Pg**	**00 15 45.5**	**-0.2**
NAIG	**Nisos Aigina**	**0.19**	**247**	*e*Pb	**Pg**	**00 15 45.5**	**-0.2**
PTL	**Penteli**	**0.25**	**29**	P	**Pg**	**00 15 46.5**	**-0.2**
PTL				S	**Sg**	**00 15 50.4**	**+0.2**
PTL	**Penteli**	**0.25**	**29**	*e*PB	**Pg**	**00 15 46.5**	**-0.2**
PTL				*e*SB	**Sg**	**00 15 50.4**	**+0.2**
PTL	**Penteli**	**0.25**	**29**	P	**Pg**	**00 15 46.5**	**-0.2**
PTL				S	**Sg**	**00 15 50.4**	**+0.2**
DID	**Didima**	**0.50**	**229**	P	**Pg**	**00 15 51.2**	**0.0**
DID				S	**Sb**	**00 15 59.2**	**-0.2**
DID	**Didima**	**0.50**	**229**	*e*PB	**Pg**	**00 15 51.2**	**0.0**
DID				*e*SB	**Sg**	**00 15 57.9**	**0.0**
DID	**Didima**	**0.50**	**229**	P	**Pg**	**00 15 51.2**	**0.0**
DID				*e*Sb	**Sg**	**00 15 57.9**	**0.0**
DID				S	**Sb**	**00 15 59.2**	**-0.2**
DIDY	**Didyma**	**0.53**	**228**	P	**Pg**	**00 15 51.9**	**0.0**
DIDY	**Didyma**	**0.53**	**228**	P	**Pg**	**00 15 51.9**	**0.0**
MRMA	**Marmari**	**0.57**	**67**	P	**Pg**	**00 15 52.5**	**-0.1**
MRMA	**Marmari**	**0.57**	**67**	P	**Pg**	**00 15 52.5**	**-0.1**
LTK	**Loutraki**	**0.62**	**288**	P	**Pg**	**00 15 53.6**	**0.0**
LTK	**Loutraki**	**0.62**	**288**	*e*PN	**Pg**	**00 15 53.5**	**0.0**
LTK				*e*SN	**Sg**	**00 16 01.4**	**-0.3**
LTK	**Loutraki**	**0.62**	**288**	*e*Pn	**Pg**	**00 15 53.5**	**0.0**
LTK				*e*Sn	**Sg**	**00 16 01.4**	**-0.3**
LKR	**Lokris**	**0.99**	**326**	P	**Pg**	**00 16 00.0**	**-0.6**
LKR	**Lokris**	**0.99**	**326**	*e*PN	**Pg**	**00 16 00.2**	**-0.4**
LKR	**Lokris**	**0.99**	**326**	P	**Pg**	**00 16 00.0**	**-0.6**
VLI	**Veliai**	**1.27**	**209**	*e*PN	**Pn**	**00 16 05.1**	**+0.1**
VLI	**Veliai**	**1.27**	**209**	*e*Pn	**Pn**	**00 16 05.1**	**+0.1**
KALE	**Kalithea**	**1.36**	**295**	*e*PN	**Pn**	**00 16 06.1**	**-0.2**
KALE	**Kalithea**	**1.36**	**295**	*e*Pn	**Pn**	**00 16 06.1**	**-0.2**
NEO	**Neokhori**	**1.52**	**346**	*e*PN	**Pn**	**00 16 08.2**	**-0.3**
NEO	**Neokhori**	**1.52**	**346**	*e*Pn	**Pn**	**00 16 08.2**	**-0.3**
AGG	**Agios Georgios**	**1.61**	**318**	*e*PN	**Pn**	**00 16 10.4**	**+0.7**
AGG	**Agios Georgios**	**1.61**	**318**	*e*Pn	**Pn**	**00 16 10.4**	**+0.7**
APE	**Apeiranthos**	**1.64**	**117**	*e*PN	**Pn**	**00 16 10.3**	**+0.2**
APE	**Apeiranthos**	**1.64**	**117**	*e*Pn	**Pn**	**00 16 10.3**	**+0.2**
THL	**Klokotos Trika**	**2.18**	**323**	*e*PN	**Pn**	**00 16 18.6**	**+1.1**
THL	**Klokotos Trika**	**2.18**	**323**	*e*Pn	**Pn**	**00 16 18.6**	**+1.1**

*CSEM **18** 00:27:26.2, 42°.29N×13°.43E, h10km, MD2.2/8, After ROM*
ROM 18 00:27:26.2±0.1, 42°.29N×13°.43E, h10km, Md2.2/8, Ml1.6/5, Error ellipse: s-maj=1.3km s-min=0.9km az=17.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.07**	**344**	Pg	Pg	00 27 28.9	+0.3
AQU				Sg	Sg	00 27 30.5	+0.2
	929nm,0.3s						
AQU	**L'Aquila**	**0.07**	**344**	Pg	Pg	00 27 28.9	+0.3
AQU				Sg	Sg	00 27 30.4	+0.1
	929nm,0.3s						
AQU	**L'Aquila**	**0.07**	**344**	Pg	Pg	00 27 28.9	+0.3
AQU				Sg	Sg	00 27 30.4	+0.1
	929nm,0.3s						
FAGN	**Fagnano**	**0.12**	**100**	Pg	Pg	00 27 29.8	+0.6
FAGN				Sg	Sg	00 27 32.1	+0.8
	621nm,0.5s						
FAGN	**Fagnano**	**0.12**	**100**	Pg	Pg	00 27 29.8	+0.6
FAGN				Sg	Sg	00 27 32.1	+0.8
	621nm,0.5s						
FIAM	**Fiamignano**	**0.23**	**265**	Pg	Pg	00 27 31.8	+0.7
FIAM				Sg	Sg	00 27 35.7	+1.2
	114nm,0.7

SLR				*e*S		**Sn**	**01 06 53.5**	**+0.9**
SLR				AML		AML	01 07 41.0	
	comp=Z,116nm,0.5s							
ERPM	**east rand prop**	**6.78**	**221**	*e*P		**Pn**	**01 05 47.6**	**+1.2**
ERPM				*e*S		**Sn**	**01 07 02.6**	**-1.3**
ERPM				AML		AML	01 07 52.0	
	comp=Z,59nm,0.6s							
KLOF	**Kloof**	**7.19**	**224**	*e*P		**Pn**	**01 05 53.7**	**+1.7**
KLOF				*e*S		**Sn**	**01 07 14.0**	**+0.1**
KLOF				AML		AML	01 08 10.5	
	comp=Z,59nm,0.3s							
KSR	**Koster**	**7.36**	**230**	*e*P		Pn	01 05 58.2	+3.9
KSR				*e*S		**Sn**	**01 07 18.4**	**+0.4**
KSR				AML		AML	01 08 10.9	
	comp=Z,63nm,0.5s							
LSZ	**Lusaka**	**7.62**	**321**	*e*P		**Pn**	**01 05 58.2**	**+0.3**
LSZ				*e*S		**Sn**	**01 07 20.9**	**-3.5**
LSZ				AML		AML	01 08 05.0	
	comp=Z,2µm,0.6s							
PRYS	**Parys**	**7.75**	**222**	*e*P		**Pn**	**01 06 00.4**	**+0.7**
PRYS				*e*S		**Sn**	**01 07 25.3**	**-2.3**
PRYS				AML		AML	01 08 28.6	
	comp=Z,44nm,0.6s							
LBTB	**Lobatse**	**7.92**	**240**	*e*P		**Pn**	**01 06 04.1**	**+2.1**
LBTB				*e*S		**Sn**	**01 07 31.6**	**-0.2**
LBTB				AML		AML	01 08 40.4	
	comp=Z,66nm,0.6s							
SWZ	**Schweizer**	**9.28**	**229**	*e*P		**Pn**	**01 06 22.6**	**+1.9**
SWZ				*e*S		**Sn**	**01 08 01.9**	**-3.2**
SWZ				AML		AML	01 09 12.5	
	comp=Z,34nm,0.6s							
KSD	**Kokstad**	**9.84**	**199**	*e*P		**Pn**	**01 06 31.4**	**+3.1**
KSD				*e*S		**Sn**	**01 08 15.6**	**-3.3**
KSD				AML		AML	01 09 38.5	
	comp=Z,38nm,0.6s							
BOSA	**Boshof**	**10.26**	**223**	*e*P		**Pn**	**01 06 34.8**	**+0.7**
BOSA				*e*S		Sn	01 08 24.1	-5.1
BOSA				AML		AML	01 09 42.9	
	comp=Z,24nm,0.7s							
TSUM	**Tsumeb**	**14.79**	**275**	*e*P		**Pn**	**01 07 36.8**	**+0.6**
TSUM				*e*S		Sn	01 10 12.7	-7.6
SUR	**Sutherland**	**15.62**	**222**	*e*P		**P**	**01 07 50.9**	**-0.5**
SUR				*e*S		Sn	01 10 31.7	-9.0
SUR				AML		AML	01 12 47.5	
	comp=Z,7.9nm,0.7s							
CVNA	**Calvinia**	**15.74**	**227**	*e*S		Sn	01 10 34.9	-8.4
CVNA				AML		AML	01 12 43.7	
	comp=Z,19nm,0.8s							

*ATH **18** 01:07:34.7,37°.80N×23°.79E,h19km±1km, MD2.9/10, ML1.5*
*ISCJB **18** 01:07:35.5±0.6,37°.83N±0°.04×23°.74E±0°.06,h16km±6km, Error ellipse: s-maj=8.0km s-min=6.9km az=30.6*
*CSEM **18** 01:07:35.2±0.2,37°.81N×23°.76E,h10km, MD2.9, Error ellipse: s-maj=5.2km s-min=4.3km az=132.0*
*THE **18** 01:07:35.2,37°.79N×23°.82E,h0km±2km, ML1.7/1, Error ellipse: s-maj=2.1km s-min=0.5km az=183.0*

ISC 18 01:07:35.3±0.9,37°.81N±0°.03×23°.78E±0°.03,h13km±7km, n37,σ0°38/47,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATHU	**Athens Univers**	**0.16**	**2**	P	**Pg**	**01 07 38.7**	**-0.3**
ATHU				S	**Sg**	**01 07 41.6**	**0.0**
ATHU	**Athens Univers**	**0.16**	**2**	P	**Pg**	**01 07 38.7**	**-0.3**
ATHU				S	**Sg**	**01 07 41.6**	**0.0**
ATH	**Athens Observa**	**0.17**	**343**	P	**Pg**	**01 07 39.1**	**-0.1**
ATH				S	**Sg**	**01 07 42.6**	**+0.7**
ATH	**Athens Observa**	**0.17**	**343**	*e*PB	**Pg**	**01 07 39.1**	**-0.1**
ATH				*e*SB	**Sg**	**01 07 42.7**	**+0.8**
ATH	**Athens Observa**	**0.17**	**343**	P	**Pg**	**01 07 39.1**	**-0.1**
ATH				S	**Sg**	**01 07 42.6**	**+0.7**
NAIG	**Nisos Aigina**	**0.23**	**257**	*e*PB	**Pg**	**01 07 40.0**	**-0.3**
NAIG	**Nisos Aigina**	**0.23**	**257**	*e*Pb	**Pg**	**01 07 40.0**	**-0.3**
PTL	**Penteli**	**0.25**	**16**	P	**Pg**	**01 07 40.4**	**-0.1**
PTL				S	**Sg**	**01 07 44.2**	**+0.1**
PTL	**Penteli**	**0.25**	**16**	*e*PB	**Pg**	**01 07 40.2**	**-0.3**
PTL				*e*SB	**Sg**	**01 07 44.4**	**+0.3**
PTL	**Penteli**	**0.25**	**16**	*e*Pb	**Pg**	**01 07 40.2**	**-0.3**
PTL				S	**Sg**	**01 07 44.2**	**+0.1**
DID	**Didima**	**0.53**	**235**	P	**Pg**	**01 07 45.4**	**-0.2**
DID	**Didima**	**0.53**	**235**	*e*PN	**Pg**	**01 07 45.4**	**-0.2**
DID	**Didima**	**0.53**	**235**	P	**Pg**	**01 07 45.4**	**-0.2**
MRMA	**Marmari**	**0.54**	**62**	P	**Pg**	**01 07 46.0**	**+0.2**
MRMA	**Marmari**	**0.54**	**62**	P	**Pg**	**01 07 46.0**	**+0.2**
LTK	**Loutraki**	**0.68**	**289**	P	**Pb**	**01 07 49.0**	**0.0**
LTK	**Loutraki**	**0.68**	**289**	*e*PN	**Pg**	**01 07 48.0**	**-0.4**
LTK				*e*SN	**Sb**	**01 07 58.1**	**-0.1**
LTK	**Loutraki**	**0.68**	**289**	*e*Pn	**Pg**	**01 07 48.0**	**-0.4**
LTK	**Loutraki**	**0.68**	**289**	P	**Pb**	**01 07 49.0**	**0.0**
LTK				*e*Sn	**Sb**	**01 07 58.1**	**-0.1**
MRKA	**Markates**	**0.91**	**351**	P	**Pn**	**01 07 53.5**	**-0.3**
MRKA	**Markates**	**0.91**	**351**	P	**Pn**	**01 07 53.5**	**-0.3**
LKR	**Lokris**	**1.04**	**324**	P	**Pb**	**01 07 55.2**	**+0.1**
LKR	**Lokris**	**1.04**	**324**	*e*PN	**Pb**	**01 07 54.8**	**-0.3**
LKR	**Lokris**	**1.04**	**324**	*e*Pn	**Pb**	**01 07 54.8**	**-0.3**
LKR	**Lokris**	**1.04**	**324**	P	**Pb**	**01 07 55.2**	**+0.1**
GUR	**Goura**	**1.14**	**277**	*e*PN	**Pb**	**01 07 56.5**	**-0.5**
GUR	**Goura**	**1.14**	**277**	*e*Pn	**Pb**	**01 07 56.5**	**-0.5**
SMIA	**Simia**	**1.16**	**337**	P	**Pg**	**01 07 57.9**	**+0.4**
SMIA	**Simia**	**1.16**	**337**	P	**Pg**	**01 07 57.9**	**+0.4**
VLI	**Veliai**	**1.28**	**212**	P	**Pn**	**01 07 59.1**	**+0.2**
VLI	**Veliai**	**1.28**	**212**	*e*PN	**Pn**	**01 07 59.0**	**+0.2**
VLI	**Veliai**	**1.28**	**212**	P	**Pn**	**01 07 59.1**	**+0.2**
APE	**Apeiranthos**	**1.58**	**117**	*e*PN	**Pb**	**01 08 03.8**	**-0.6**
APE	**Apeiranthos**	**1.58**	**117**	*e*Pn	**Pb**	**01 08 03.8**	**-0.6**
KYTH	**Kithira**	**1.64**	**201**	P	**Pn**	**01 08 04.6**	**+0.7**
KYTH	**Kithira**	**1.64**	**201**	*e*PN	**Pn**	**01 08 04.5**	**+0.7**
KYTH	**Kithira**	**1.64**	**201**	*e*Pn	**Pn**	**01 08 04.5**	**+0.7**

*ISCJB **18** 01:09:48.8±1.1,35°.73N±0°.07×26°.65E±0°.06,h56km±16km, Error ellipse: s-maj=12.8km s-min=7.1km az=158.7*
*ATH **18** 01:09:48.8,35°.73N×26°.61E,h45km±6km, MD3.2/9*
*CSEM **18** 01:09:48.8,35°.73N×26°.61E,h45km, MD3.2, After ATH*
*DDA **18** 01:10:09.6,37°.87N×29°.14E,h7km, MD2.4*

ISC 18 01:09:48.2±1.7,35°.72N±0°.07×26°.70E±0°.04,h66km±17km, n19,σ1°11/30,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.42**	**114**	*e*P	**Pn**	**01 10 00.6**	**+0.7**
KARP				*e*S	**Sn**	**01 10 08.2**	**-0.2**
KARP	**Karpathos**	**0.42**	**114**	*e*P	**Pn**	**01 10 00.6**	**+0.7**
KARP				*e*S	**Sn**	**01 10 08.2**	**-0.2**
ZKR	**Zakros**	**0.72**	**213**	*e*P	**Pn**	**01 10 03.0**	**0.0**
ZKR				*e*S	**Sn**	**01 10 13.5**	**-0.4**
ZKR	**Zakros**	**0.72**	**213**	*e*P	**Pn**	**01 10 03.0**	**0.0**
ZKR				*e*S	**Sn**	**01 10 13.5**	**-0.4**
NPS	**Neapolis**	**0.99**	**243**	*e*P	**Pn**	**01 10 06.3**	**-0.1**
NPS				*e*S	**Sn**	**01 10 18.9**	**-1.0**
NPS	**Neapolis**	**0.99**	**243**	*e*P	**Pn**	**01 10 06.3**	**-0.1**
NPS				*e*S	**Sn**	**01 10 18.9**	**-1.0**
LAST	**Lasithi**	**1.14**	**241**	*e*P	**Pn**	**01 10 08.6**	**+0.3**
LAST				*e*S	**Sn**	**01 10 22.8**	**-0.5**
LAST	**Lasithi**	**1.14**	**241**	*e*P	**Pn**	**01 10 08.6**	**+0.3**
LAST				*e*S	**Sn**	**01 10 22.8**	**-0.5**
SANT	**Santorini**	**1.19**	**303**	*e*P	**Pn**	**01 10 09.8**	**+0.8**
SANT				*e*S	**Sn**	**01 10 24.0**	**-0.5**
SANT	**Santorini**	**1.19**	**303**	*e*P	**Pn**	**01 10 09.8**	**+0.8**
SANT				*e*S	**Sn**	**01 10 24.0**	**-0.5**
ARG	**Arkhangelos**	**1.26**	**67**	*e*P	**Pn**	**01 10 11.9**	**+2.1**
ARG	**Arkhangelos**	**1.26**	**67**	*e*P	**Pn**	**01 10 11.9**	**+2.1**
IDI	**Anoyia**	**1.54**	**254**	*e*P	**Pn**	**01 10 13.8**	**+0.3**
IDI	**Anoyia**	**1.54**	**254**	*e*P	**Pn**	**01 10 13.8**	**+0.3**
SIVA	**Sivas**	**1.69**	**246**	*e*P	**Pn**	**01 10 16.8**	**+1.2**
SIVA	**Sivas**	**1.69**	**246**	*e*P	**Pn**	**01 10 16.8**	**+1.2**
TURN	**Turunc**	**1.92**	**53**	*i*P	**Pn**	**01 10 17.7**	**-1.0**
TURN				*i*S	**Sn**	**01 10 38.9**	**-3.0**
VAM	**Vamos**	**2.06**	**262**	*e*P	**Pn**	**01 10 21.9**	**+1.4**
VAM	**Vamos**	**2.06**	**262**	*e*P	**Pn**	**01 10 21.9**	**+1.4**

*DDA **18** 01:16:17.7,38°.40N×26°.43E,h21km, MD2.8*
*ATH **18** 01:16:17.1,38°.47N×25°.58E,h16km±5km, MD3.1/5*
*CSEM **18** 01:16:18.6±0.3,38°.38N×26°.39E,h10km, MD2.8, Error ellipse: s-maj=7.0km s-min=5.6km az=54.0*
*ISCJB **18** 01:16:18.9±0.5,38°.40N±0°.03×26°.43E±0°.03,h13km±3km, Error ellipse: s-maj=5.0km s-min=3.6km az=24.5*
*THE **18** 01:16:19.8,38°.39N×26°.34E,h20km±1km, ML1.9/3, Error ellipse: s-maj=2.5km s-min=0.5km az=275.0*
*ISK **18** 01:16:19.2,38°.38N×26°.53E,h5km, MD2.9*

ISC 18 01:16:18.8±0.8,38°.39N±0°.02×26°.42E±0°.02,h17km±5km, n47,σ0°93/71,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.14**	**103**	*i*P	**Pg**	**01 16 22.5**	**-0.3**
URLA				*i*S	**Sg**	**01 16 25.3**	**-0.2**
URLA	**Izmir**	**0.14**	**103**	*i*P	**Pg**	**01 16 22.5**	**-0.3**
URLA				*i*S	**Sg**	**01 16 25.3**	**-0.2**
CHOS	**Chios island**	**0.29**	**269**	P	**Pg**	**01 16 25.4**	**+0.4**
CHOS				S	**Sg**	**01 16 29.5**	**+0.2**
CHOS	**Chios island**	**0.29**	**269**	*e*PB	**Pg**	**01 16 25.4**	**+0.4**
CHOS				*e*SB	**Sg**	**01 16 30.1**	**+0.8**
CHOS	**Chios island**	**0.29**	**269**	P	**Pg**	**01 16 25.4**	**+0.4**
CHOS				S	**Sg**	**01 16 29.5**	**+0.2**
CHOS				*e*Sb	Sb	01 16 30.1	-0.1
BLCB	**Balcova**	**0.49**	**91**	*e*PG	**Pg**	**01 16 28.1**	**-0.4**
BLCB				*e*SG	**Sg**	**01 16 34.9**	**-0.3**
BLCB	**Balcova**	**0.49**	**91**	*e*Pg	**Pg**	**01 16 28.1**	**-0.4**
BLCB				*e*Sg	**Sg**	**01 16 34.9**	**-0.3**
IZM	**Izmir**	**0.66**	**89**	*e*PG	**Pb**	**01 16 31.6**	**-0.2**
IZM				*e*SG	**Sg**	**01 16 40.8**	**+0.2**
IZM	**Izmir**	**0.66**	**89**	*e*Pg	**Pb**	**01 16 31.7**	**-0.2**
IZM				*e*Sg	**Sg**	**01 16 40.8**	**+0.2**
PRK	**Paraskevi**	**0.86**	**352**	P	**Pb**	**01 16 35.3**	**0.0**
PRK				S	**Sg**	**01 16 47.5**	**+0.6**
PRK	**Paraskevi**	**0.86**	**352**	*e*PN	**Pb**	**01 16 35.2**	**0.0**
PRK				*e*SN	**Sn**	**01 16 48.6**	**+0.3**
PRK	**Paraskevi**	**0.86**	**352**	P	**Pb**	**01 16 35.3**	**0.0**
PRK				S	**Sg**	**01 16 47.5**	**+0.6**
PRK				*e*Sn	**Sn**	**01 16 48.6**	**+0.3**
SIGR	**SIGRI**	**0.93**	**332**	P	**Pb**	**01 16 36.4**	**0.0**
SIGR				S	**Sb**	**01 16 48.9**	**+0.4**
SIGR	**SIGRI**	**0.93**	**332**	P	**Pb**	**01 16 36.4**	**0.0**
SIGR				S	**Sb**	**01 16 48.9**	**+0.4**
AYVA	**Ayvalik**	**0.94**	**13**	*i*P	**Pb**	**01 16 35.8**	**-0.8**
AYVA				*i*S	**Sb**	**01 16 48.1**	**-0.7**
AYVA	**Ayvalik**	**0.94**	**13**	*i*P	**Pb**	**01 16 35.8**	**-0.8**
AYVA				*i*S	**Sb**	**01 16 48.1**	**-0.7**
GCAM	**G?zelcaml?**	**0.94**	**137**	*i*P	**Pb**	**01 16 36.2**	**-0.4**
GCAM				*i*S	**Sb**	**01 16 49.2**	**+0.4**
GCAM	**G?zelcaml?**	**0.94**	**137**	*i*P	**Pb**	**01 16 36.2**	**-0.4**
GCAM				*i*S	**Sb**	**01 16 49.2**	**+0.4**
AYDN	**Tasoluk**	**1.36**	**122**	*i*P	**Pn**	**01 16 43.0**	**0.0**
AYDN				*i*S	**Sn**	**01 16 57.9**	**-2.9**
AYDN	**Tasoluk**	**1.36**	**122**	*i*P	**Pn**	**01 16 43.0**	**0.0**
EZN	**Ezine**	**1.43**	**357**	*e*PN	**Pb**	**01 16 45.9**	**+0.9**
EZN	**Ezine**	**1.43**	**357**	*e*Pn	**Pb**	**01 16 45.9**	**+0.9**
BOZC	**Bozcaada**	**1.48**	**349**	*i*P	**Pn**	**01 16 44.5**	**0.0**
APE	**Apeiranthos**	**1.50**	**208**	P	**Pn**	**01 16 43.9**	**-1.0**
APE	**Apeiranthos**	**1.50**	**208**	*e*PN	**Pn**	**01 16 43.6**	**-1.3**
APE	**Apeiranthos**	**1.50**	**208**	*e*Pn	**Pn**	**01 16 43.6**	**-1.3**
APE	**Apeiranthos**	**1.50**	**208**	P	**Pn**	**01 16 43.9**	**-1.0**
BODT	**Bodrum**	**1.50**	**152**	*e*PN	**Pb**	**01 16 47.8**	**+1.6**
BODT	**Bodrum**	**1.50**	**152**	*e*Pn	**Pb**	**01 16 47.8**	**+1.6**
MLSB	**Milas**	**1.53**	**135**	*e*PN	**Pb**	**01 16 47.7**	**+1.0**
MLSB	**Milas**	**1.53**	**135**	*e*Pn	**Pb**	**01 16 47.7**	**+1.0**
BALY	**Balya**	**1.64**	**34**	*i*P	**Pn**	**01 16 47.6**	**+0.7**
BALY				*i*S	**Sn**	**01 17 08.7**	**+1.1**
BALY	**Balya**	**1.64**	**34**	*i*P	**Pn**	**01 16 47.6**	**+0.7**
BALY				*i*S	**Sn**	**01 17 08.7**	**+1.1**
MANT	**Manisa**	**1.68**	**86**	*i*P	**Pn**	**01 16 48.9**	**+1.3**
MANT				*i*S	**Sn**	**01 17 10.2**	**+1.3**
MANT	**Manisa**	**1.68**	**86**	*i*P	**Pn**	**01 16 48.9**	**+1.3**
MANT				*i*S	**Sn**	**01 17 10.2**	**+1.3**
BALB	**Balikesir**	**1.69**	**42**	*e*PN	**Pb**	**01 16 50.7**	**+1.4**
BALB	**Balikesir**	**1.69**	**42**	*e*Pn	**Pb**	**01 16 50.7**	**+1.4**
KULA	**Kula-Manisa**	**1.76**	**85**	*e*PN	**Pb**	**01 16 50.8**	**+0.1**
KULA	**Kula-Manisa**	**1.76**	**85**	*e*Pn	**Pb**	**01 16 50.8**	**+0.1**
LIA	**Limnos Island**	**1.79**	**328**	*e*PN	Pn	01 16 44.5	-4.3
LIA	**Limnos Island**	**1.79**	**328**	*e*Pn	Pn	01 16 44.5	-4.3
GONE	**Gonen-Balikesi**	**1.92**	**30**	*e*PN	**Pb**	**01 16 53.9**	**+0.5**
GONE	**Gonen-Balikesi**	**1.92**	**30**	*e*Pn	**Pb**	**01 16 53.9**	**+0.5**
DURS	**Dursunbey**	**2.00**	**52**	*i*P	**Pn**	**01 16 51.1**	**-0.8**
DURS				*i*S	**Sn**	**01 17 10.1**	**-1.6**
DURS	**Dursunbey**	**2.00**	**52**	*i*P	**Pn**	**01 16 51.1**	**-0.8**
DURS				*i*S	**Sn**	**01 17 15.1**	**-1.6**
SMTH	**Samothraki Isl**	**2.19**	**342**	*e*PN	**Pn**	**01 16 52.3**	**-2.1**
SMTH	**Samothraki Isl**	**2.19**	**342**	*e*Pn	**Pn**	**01 16 52.3**	**-2.1**

GUC 18 01:20:32.1±0.5,27°.23S×71°.04W,h24km±4km,MD3.5, ML3.5,1D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDCH	**Caldera**	**0.25**	**52**	*e*P	Pb	01 20 38.2	-0.2
CDCH				*i*S	Sb	01 20 42.5	-0.2
CDCH				AML	AML	01 20 43.0	
	comp=E,8µm,0.4s						
CPCH	**Copiapo**	**0.63**	**102**	*i*P	Pb	01 20 44.2	-0.3
CPCH				*i*S	Sb	01 20 53.0	+0.1
VACH	**Vallenar**	**1.37**	**169**	*i*P	Pn	01 20 49.0	-6.8
VACH				*i*S	Sn	01 21 06.8	-6.4
VACH				AML	AML	01 21 11.4	
	comp=N,2µm,0.5s						
LCO	**Las Campanas**	**1.81**	**170**	*e*P	Pn	01 21 03.3	+1.2
LCO				*e*S	Sb	01 21 26.8	-0.5
LCO				AML	AML	01 21 31.6	
	comp=N,449nm,0.5s						
TLL	**Tololo Astrono**	**2.94**	**176**	*i*P	Pn	01 21 19.1	+1.4
TLL				*i*S	Sn	01 21 54.7	+2.3
TLL				AML	AML	01 22 12.3	
	comp=E,203nm,0.6s						

IDC 18 01:21:48.7±1.3,8°.12N×39°.03W,h0km,mb3.7/3, mb1 4.0/4,mb1mx3.5/26,mbtmp3.8/4,ML3.9/1,MS3.4/1, Ms1 3.3/1,ms1mx2.8/38,Error ellipse: s-maj=39.9km s-min=28.7km az=150.0,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**14.20**	**167**	Pn	Pn	01 25 11.6	+0.3
	0.5nm,0.3s,baz=349,slow=15,SNR=9.2						
RCBR				Sn	Sn	01 27 42.2	-7.5
	0.2nm,0.3s,baz=283,slow=14,SNR=3.0						
BDFB	**Brasilia**	**25.23**	**201**	LR	LR	01 36 19.8	
	comp=Z,95nm,20.8s,baz=336,slow=34						
LPAZ	**La Paz**	**37.65**	**230**	P	P	01 29 06.3	-0.3
	1.4nm,0.5s,baz=43,slow=8.1,SNR=8.3						
TORD	**Torodi Ar. Bea**	**40.30**	**79**	P	P	01 29 28.0	-0.2
	2.0nm,0.8s,baz=271,slow=8.3,SNR=9.7						
YKA	**Yellowknife Ar**	**76.19**	**332**	P	P	01 33 38.7	+0.2
	0.1nm,0.8s,baz=99,slow=5.3,SNR=4.4						

IDC 18 01:27:31.8±5.3,3°.02S×140°.00E,h0km,mb3.0/2, mb1 3.3/3,mb1mx3.2/17,mbtmp3.1/3,ML3.0/1,Error ellipse: s-maj=205.5km s-min=29.9km az=88.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.70**	**198**	P	Pn	01 31 40.0	+0.1
	0.1nm,0.3s,baz=18,slow=12,SNR=2.5						
ASAR	**Alice Springs**	**21.35**	**196**	P	P	01 32 20.5	-0.4
	0.3nm,0.4s,baz=21,slow=11,SNR=6.6						
MKAR	**Makanchi Array**	**70.83**	**322**	P	P	01 38 50.6	+0.2
	0.1nm,0.4s,baz=122,slow=7.0,SNR=2.6						

IDC 18 01:50:17.1±11.0,1°.21S×136°.54E,h0km,mb4.0/2, mb1 4.0/3,mb1mx3.5/19,mbtmp3.8/3,ML3.5/1,Error ellipse: s-maj=177.1km s-min=118.5km az=146.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.75**	**186**	P	Pn	01 54 38.0	-0.2
	0.2nm,0.3s,baz=7.9,slow=12,SNR=4.9						
ASAR	**Alice Springs**	**22.47**	**186**	P	P	01 55 18.4	+0.2
	4.4nm,0.7s,baz=12,slow=11,SNR=56						
STKA	**Stephens Creek**	**30.88**	**172**	P	P	01 56 34.9	-0.5
	0.9nm,0.5s,baz=344,slow=7.4,SNR=3.4						

*IDC **18** 01:53:56.8±0.7,14°.79N×144°.60E,h0km, mb3.8/13, mb1 4.0/13,mb1mx3.9/25,mbtmp3.8/13,MS3.6/4, Ms1 3.6/4,ms1mx3.2/47, Error ellipse: s-maj=25.7km s-min=12.4km az=81.0*
*ISCJB **18** 01:53:58.7±0.5,14°.77N±0°.06×144°.4E±0°.1,h22km, mb4.0/22,MS3.5/3, Error ellipse: s-maj=18.0km s-min=6.2km az=161.1*
*NEIC **18** 01:53:58.3±0.3,14°.77N×144°.57E,h10km,mb4.3/8, Error ellipse: s-maj=14.3km s-min=5.9km az=79.0*

ISC 18 01:54:00.1±0.6,14°.78N±0°.07×144°.6E±0°.1,h22km,n52, σ0°63/51,mb4.1/22,MS3.2/3,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.22**	**166**	Pn	**Pn**	**01 54 21.6**	**-0.2**
GUMO				Sn	**Sb**	**01 54 37.9**	**+0.2**
GUMO	**Guam**	**1.22**	**166**	Pn	**Pn**	**01 54 21.6**	**-0.2**
	328nm,0.3s,baz=350,slow=6.7,SNR=321						
GUMO				Sn	**Sb**	**01 54 37.9**	**+0.2**
	462nm,0.3s,baz=360,slow=19,SNR=38						
JHJ	**Hachijo jima 2**	**18.77**	**347**	LR	LR	02 04 26.5	
	comp=Z,174nm,21.2s,baz=250,slow=34						
JNU	**Nakatsue**	**22.10**	**328**	LR	LR	02 05 58.6	
	comp=Z,64nm,19.3s,baz=98,slow=33						
MJAR	**Matsushiro Arr**	**22.41**	**346**	P	**P**	**01 58 58.3**	**+1.1**
MJAR	**Matsushiro Arr**	**22.41**	**346**	P	**P**	**01 58 58.3**	**+1.1**
	2.0nm,0.3s,baz=174,slow=9.4,SNR=10.0						
MJAR				LR	LR	02 06 39.9	
	comp=Z,91nm,20.0s,baz=200,slow=34						
MAJO	**Matsushiro**	**22.41**	**346**	*e*P	**P**	**01 58 58.6**	**+1.4**
	5.5nm,0.4s						
KSRS	**Korea Array**	**27.00**	**330**	P	**P**	**01 59 41.0**	**+0.6**
	1.7nm,0.7s,baz=145,slow=9.2,SNR=5.8						
KSAR	**Wonju Array Be**	**27.01**	**330**	P	**P**	**01 59 41.0**	**+0.5**
COEN	**Coen**	**28.59**	**183**	*e*P	**P**	**01 59 54.8**	**0.0**
	79nm,1.1s						
WRAB	**Tennant Creek**	**35.93**	**197**	*e*P	**P**	**02 00 59.6**	**+0.4**
	2.2nm,0.8s						
WRA	**Warramunga Arr**	**35.94**	**197**	P	**P**	**02 00 59.3**	**+0.1**
WRA	**Warramunga Arr**	**35.94**	**197**	P	**P**	**02 00 59.3**	**+0.1**
	1.8nm,0.8s,baz=6.5,slow=9.3,SNR=7.0						
FITZ	**Fitzroy Crossi**	**37.63**	**210**	P	**P**	**02 01 12.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**37.63**	**210**	P	**P**	**02 01 12.9**	**-0.6**
	2.2nm,1.0s,baz=34,slow=14,SNR=3.7						
ASAR	**Alice Springs**	**39.61**	**195**	P	**P**	**02 01 30.4**	**+0.2**
ASAR	**Alice Springs**	**39.61**	**195**	P	**P**	**02 01 30.4**	**+0.2**
	0.1nm,0.5s,baz=14,slow=6.2,SNR=3.5						
CMAR	**Chiang Mai Arr**	**43.79**	**281**	P	**P**	**02 02 05.0**	**+0.4**
CMAR	**Chiang Mai Arr**	**43.79**	**281**	P	**P**	**02 02 05.0**	**+0.4**
	4.2nm,1.0s,baz=83,slow=6.5,SNR=11						
SONM	**Songino Array**	**45.60**	**324**	P	**P**	**02 02 18.1**	**-0.7**
SONM	**Songino Array**	**45.60**	**324**	P	**P**	**02 02 18.1**	**-0.7**
	0.3nm,0.8s,baz=141,slow=5.0,SNR=3.1						
TAPN	**Taplejung**	**54.12**	**293**	*e*P	**P**	**02 03 24.0**	**-0.1**
ODAN	**Odare**	**54.39**	**293**	*e*P	**P**	**02 03 25.8**	**-0.3**
RAMN	**Ramite**	**55.10**	**293**	*e*P	**P**	**02 03 30.9**	**-0.3**
GUN	**Gumba**	**55.75**	**294**	*e*P	**P**	**02 03 36.5**	**+0.5**
	17nm,1.0s						
DMN	**Daman**	**56.43**	**293**	*e*P	**P**	**02 03 40.2**	**-0.6**
DANN	**Dangsing**	**57.62**	**294**	*e*P	**P**	**02 03 49.0**	**-0.2**
	14nm,0.7s						
PYUN	**Piuthan**	**58.30**	**294**	*e*P	**P**	**02 03 53.4**	**-0.5**
	15nm,1.0s						
MK31	**Makanchi Array**	**60.44**	**316**	*e*P	**P**	**02 04 08.2**	**+0.1**
MKAR	**Makanchi Array**	**60.44**	**316**	*e*P	**P**	**02 04 07.8**	**-0.4**
MKAR	**Makanchi Array**	**60.44**	**316**	P	**P**	**02 04 07.8**	**-0.4**
	0.4nm,0.5s,baz=93,slow=9.7,SNR=7.0						
ZALV	**Zalesovo Beam**	**60.50**	**324**	P	**P**	**02 04 09.2**	**+0.8**
ZALV	**Zalesovo Beam**	**60.50**	**324**	P	**P**	**02 04 09.1**	**+0.8**
	0.3nm,0.5s,baz=97,slow=7.4,SNR=2.5						
KURK	**Kurchatov**	**63.50**	**320**	*e*P	**P**	**02 04 28.4**	**-0.2**
	4.7nm,1.1s						
TKM2	**Tokmak 2**	**64.73**	**311**	*e*P	**P**	**02 04 36.9**	**-0.2**
	1.9nm,0.5s						
ILAR	**Eielson Array**	**67.62**	**26**	P	**P**	**02 04 53.6**	**-1.4**

PUZ **Puketiti** **9.90 201** PN Pn 02 06 03.6 -8.2
PUZ SN Sn 02 07 50.5 -11
OUZ **Omahuta** **9.99 228** *e*Pn **Pn** **02 06 14.0 +1.1**
OUZ **Omahuta** **9.99 228** *e*PN **Pn** **02 06 14.5 +1.5**
CNGZ **Carnagh Statio** **10.30 200** PN Pn 02 06 08.6 -8.6
CNGZ SN Sn 02 08 04.5 -6.4
OPRZ **Ohinepanea** **10.32 208** PN Pn 02 06 11.7 -5.7
OPRZ SN **Sn** **02 08 06.7 -4.8**
MWZ **Matawai** **10.38 203** PN Pn 02 06 09.4 -8.9
URZ **Urewera** **10.46 205** *e*Pn Pn 02 06 11.3 -8.1
URZ *e*Sn Sn 02 08 02.3 -13
URZ SN Sn 02 08 07.3 -7.6
URZ **Urewera** **10.46 205** PN Pn 02 06 10.7 -8.6
URZ **Urewera** **10.46 205** Pn Pn 02 06 11.3 -8.1
5.1nm,0.3s,baz=290,slow=2.5,SNR=24
URZ Sn Sn 02 08 07.3 -7.6
55nm,0.3s,baz=355,slow=2.9,SNR=4.4
KNZ **Kokohu** **10.95 201** PN Pn 02 06 16.0 -10
MHGZ **Mahia Peninsul** **11.00 200** PN Pn 02 06 18.1 -8.7
NMHZ **Naumai** **11.31 204** PN Pn 02 06 21.9 -9.2
HIZ **Hauiti** **11.62 212** PN Pn 02 06 31.0 -4.3
OTVZ **Oturere** **11.81 208** PN Pn 02 06 29.7 -8.2
NIUE **Niue** **11.84 36** P Pn 02 06 30.7 -7.7
baz=12,SNR=21
NIUE S Sn 02 08 30.9 -18
baz=12,SNR=13
MSVF **Nonsavu** **11.87 338** *e*P **Pn** **02 06 39.7 +0.9**
MSVF **Nonsavu** **11.87 338** *e*Pn **Pn** **02 06 39.7 +0.9**
MSVF **Nonsavu** **11.87 338** Pn **Pn** **02 06 40.5 +1.7**
4µm,2.0s,SNR=24
KAHZ **Kahuranaki** **11.91 202** PN Pn 02 06 29.0 -10
BHHZ **Black Hill Sta** **11.93 206** PN Pn 02 06 29.6 -10
WHVZ **Whangaehu Hut** **11.94 208** PN Pn 02 06 33.1 -6.7
TRVZ **Turoa** **11.97 208** PN Pn 02 06 32.2 -8.0
PKVZ **Pokaka** **12.05 208** PN **Pn** **02 06 39.3 -1.8**
PNHZ **Pukenui** **12.25 204** PN Pn 02 06 33.1 -11
PRHZ **Porangahau** **12.42 202** PN Pn 02 06 34.5 -12
ANWZ **Angora Road** **12.65 202** PN Pn 02 06 37.9 -11
PRWZ **Pori Road** **12.90 204** PN Pn 02 06 43.5 -9.1
BFZ **Birch Farm** **12.92 202** PN Pn 02 06 41.1 -12
NFK **Norfolk Island** **12.93 266** P **P** **02 07 01.5 -0.1**
baz=13,SNR=5.0
HOWZ **Holdsworth Sta** **13.37 204** PN Pn 02 06 46.7 -12
TMWZ **Te Maipa** **13.42 203** PN Pn 02 06 47.4 -12
OGWZ **Otaki Gorge** **13.42 205** PN Pn 02 06 47.4 -12
KIW **Kapiti Island** **13.56 206** PN Pn 02 06 49.4 -12
SNZO **South Karori** **14.03 206** *e*Pn **Pn** **02 07 05.8 -1.9**
SNZO **South Karori** **14.03 206** PN Pn 02 06 54.5 -13
CTZ **Chatham Island** **14.85 178** PN Pn 02 07 13.8 -4.7
KHZ **Kahutara** **15.42 206** *e*Pn Pn 02 07 17.8 -8.0
297nm,0.9s
KHZ *e*Sn Sn 02 09 58.8 -17
AFI **Afiamalu** **15.74 20** *e*Pn Pn 02 07 22.9 -7.3
228nm,0.9s
AFI SN Sn 02 10 07.1 -17
AFI **Afiamalu** **15.74 20** Pn Pn 02 07 21.2 -9.0
3.5nm,0.3s,baz=13,slow=9.3,SNR=4.7
AFI Sn Sn 02 10 07.1 -17
21nm,0.3s,baz=78,slow=19,SNR=5.8
DZM **Mont Dzumac** **16.16 291** *e*P **P** **02 07 39.8 +2.3**
1µm,1.6s
DZM *e*LQ LQ 02 10 28.4
21µm,27.4s
DZM *e*LR LR 02 11 10.7
42µm,25.8s
DZM **Mont Dzumac** **16.16 291** *e*P P 02 07 42.4 +4.9
DZM **Mont Dzumac** **16.16 291** *e*Pn **P** **02 07 39.4 +1.8**
1µm,1.6s
DZM SN **Sn** **02 10 28.5 -5.3**
DZM **Mont Dzumac** **16.16 291** Pn **P** **02 07 40.1 +2.6**
4.8nm,0.3s,baz=88,slow=17,SNR=37
DZM SN **Sn** **02 10 28.5 -5.3**
baz=92,slow=20,SNR=1.3
DZM LR LR 02 12 29.1
comp=Z,25µm,21.7s,baz=130,slow=32
NOUC **Port Laguerre** **16.26 291** *e*P **P** **02 07 42.1 +3.6**
WVZ **Waitaha Valley** **17.14 211** PN Pn 02 07 41.7 -5.7
RPZ **Rata Peaks** **17.52 209** *e*Pn Pn 02 07 43.8 -8.3
RPZ S Sn 02 10 43.5 -23
RPZ **Rata Peaks** **17.52 209** PN Pn 02 07 44.4 -7.6
RPZ **Rata Peaks** **17.52 209** P Pn 02 07 46.3 -5.7
30nm,0.3s,baz=35,slow=3.8,SNR=82
RPZ S Sn 02 10 43.5 -23
21nm,0.3s,baz=17,slow=21,SNR=13
RAR **Rarotonga** **17.60 68** *e*Pn **Pn** **02 07 49.0 -4.2**
268nm,1.0s
RAR *e*Sn Sn 02 10 44.2 -25
RAR **Rarotonga** **17.60 68** P **Pn** **02 07 48.8 -4.5**
15nm,0.3s,baz=234,slow=8.0,SNR=17
RAR S Sn 02 10 43.9 -25
12nm,0.3s,baz=87,slow=19,SNR=6.2
RAR LR LR 02 12 51.8
comp=Z,7µm,21.7s,baz=247,slow=31
FOZ **Fox Glacier** **18.00 212** PN P 02 07 49.3 -8.4
ODZ **Otahua Downs** **18.77 207** *e*P **P** **02 08 03.3 -2.8**
69nm,0.7s
ODZ *e*Sn S 02 11 17.2 -19
JCZ **Jackson Bay** **18.83 213** PN P 02 08 01.4 -5.4
LHI **Lord Howe Isla** **20.59 257** P Pn 02 08 30.5 +1.7
baz=21,SNR=23
TBI **Tubuai** **25.57 84** *e*P **P** **02 09 12.7 -2.6**
314nm,1.3s
TBI *e*S **S** **02 13 36.5 -2.1**
4µm,31.5s
TBI *e*LQ LQ 02 14 12.9
9µm,30.5s
TBI *e*LR LR 02 15 30.6
17µm,28.2s,baz=250
ARMA **Armidale** **27.01 259** *e*P **P** **02 09 30.4 +1.9**
218nm,1.3s
ARMA *e*PcP **PcP** **02 12 48.4 -0.2**
ARMA **Armidale** **27.01 259** P **P** **02 09 31.1 +2.7**
baz=27,SNR=21
MGCD **Mangrove Creek** **27.35 253** P **P** **02 09 34.2 +2.9**
baz=28,SNR=10
PAE **Paea** **27.73 72** *e*P **P** **02 09 34.2 -0.6**
26nm,1.2s
PAE *e*pP **pP** **02 09 46.8 -3.5**
37nm,1.0s
PPT2 **Papeete2** **27.77 72** *e*P **P** **02 09 34.1 -1.2**
108nm,1.3s
PPT2 *e*pP **pP** **02 09 47.7 -3.1**
255nm,1.2s
PPT2 *e*S **S** **02 14 14.2 +0.6**
3µm,30.0s
PPT2 *e*LQ LQ 02 15 05.8
9µm,25.5s
PPT2 *e*LR LR 02 16 26.8
18µm,27.2s,baz=237
PPT **Papeete** **27.78 72** P **P** **02 09 32.7 -2.6**
PPT **Papeete** **27.78 72** P **P** **02 09 32.7 -2.6**
30nm,0.3s,baz=233,slow=23,SNR=4.6
PPT LR LR 02 17 43.9
comp=Z,3µm,20.4s,baz=238,slow=30
TVO **Taravao** **27.95 73** *e*P **P** **02 09 36.2 -0.6**
114nm,0.9s
TIAR **Tiarei** **27.98 72** *e*P **P** **02 09 36.7 -0.3**
277nm,0.9s
TIAR *e*pP **pP** **02 09 49.1 -3.5**
547nm,0.9s
EIDS **Eidsvold** **28.31 270** *e*P **P** **02 09 41.1 +1.2**
1µm,2.4s
EIDS **Eidsvold** **28.31 270** P **P** **02 09 41.2 +1.2**
baz=29,SNR=27
HNR **Honiara** **28.80 308** P **P** **02 09 43.8 -0.6**
HNR **Honiara** **28.80 308** P **P** **02 09 43.8 -0.6**
51nm,0.6s,baz=204,slow=9.8,SNR=2.9
HNR LR LR 02 19 30.0
comp=Z,2µm,21.0s,baz=154,slow=33
CNB **Canberra Magne** **28.87 249** P **P** **02 09 46.8 +1.8**
baz=29,SNR=72
CNB S **S** **02 14 34.8 +4.0**
baz=29,SNR=8.2
CAN **Canberra** **29.17 249** *e*P **P** **02 09 48.9 +1.3**
CAN *e* 02 12 54.0
CAN pmax pmax
comp=Z,349nm,1.0s
CAN **Canberra** **29.17 249** *e*P **P** **02 09 48.9 +1.3**
comp=Z,349nm,1.0s
CAN *e*PcP **PcP** **02 12 54.0 +0.3**
MILA **Mila** **29.19 245** P **P** **02 09 49.3 +1.6**
baz=30,SNR=13
YNG **Young** **29.63 251** P **P** **02 09 53.5 +1.9**
baz=30,SNR=28
YNG S **S** **02 14 47.9 +5.4**
baz=30,SNR=7.3
RMQ **Roma** **30.09 266** P **P** **02 09 58.0 +2.2**
baz=30,SNR=114
PMOR **Pomariorio Ree** **30.46 69** *e*P **P** **02 09 58.1 -1.0**
comp=Z,263nm,1.4s
MOO **Moorlands** **31.63 235** P **P** **02 10 09.9 +0.8**
baz=32,SNR=6.3
TAU **Tasmania Unive** **31.65 234** *e*P **P** **02 10 09.2 -0.1**
TAU *e**PP **pP** **02 10 26.8 +1.9**
TAU *e* 02 13 00.8
TAU pmax pmax
comp=Z,373nm,1.5s
TAU **Tasmania Unive** **31.65 234** *e*P **P** **02 10 09.2 -0.1**
comp=Z,372nm,1.5s
TAU *e*pP **pP** **02 10 26.8 +1.9**
TAU *e*PcP **PcP** **02 13 00.8 +0.9**
TAU **Tasmania Unive** **31.65 234** P **P** **02 10 09.8 +0.5**
comp=Z,696nm,1.5s,SNR=7.1
CMSA **Cobar Meteorol** **32.00 256** P **P** **02 10 13.7 +1.2**
baz=32,SNR=46
TOO **Toolangi** **32.15 245** P **P** **02 10 14.5 +0.7**
baz=32,SNR=22
QLP **Quilpie** **34.03 264** P **P** **02 10 30.7 +0.5**
baz=34,SNR=44
CTA **Charters Tower** **34.19 277** P **P** **02 10 32.5 +0.8**
CTA S **S** **02 15 53.8 0.0**
CTA **Charters Tower** **34.19 277** P **P** **02 10 32.5 +0.8**
comp=Z,119nm,0.6s,baz=101,slow=11,SNR=124
CTA S **S** **02 15 53.8 0.0**
comp=Z,7.1nm,1.0s,baz=247,slow=16,SNR=6.2
CTA LR LR 02 23 08.8
comp=Z,10µm,18.7s,baz=113,slow=34
CTAO **Charters Tower** **34.19 277** *e*P **P** **02 10 32.9 +1.2**
CTAO *e*S **S** **02 15 54.8 +1.0**
CTAO pmax pmax
comp=Z,567nm,1.3s
CTAO **Charters Tower** **34.19 277** *e*P **P** **02 10 32.9 +1.2**
comp=Z,567nm,1.3s
CTAO *e*S **S** **02 15 54.8 +1.0**
ARPS **Mount Arapiles** **35.02 246** P **P** **02 10 39.0 +0.2**
baz=35,SNR=37
STKA **Stephens Creek** **35.44 255** *e*P **P** **02 10 43.0 +0.6**
comp=Z,48nm,1.0s
STKA *e*PcP **PcP** **02 13 12.2 +1.3**
STKA *e*ScP **ScP** **02 16 55.5 +4.2**
STKA ScP **ScP** **02 16 55.9 +4.6**
STKA PKiKP **PKiKP** **02 20 31.1 -0.8**
STKA P'P' 02 43 44.3
STKA **Stephens Creek** **35.44 255** P **P** **02 10 43.1 +0.7**
comp=Z,178nm,0.9s,baz=97,slow=9.0,SNR=112
STKA ScP **ScP** **02 16 55.9 +4.6**
comp=Z,17nm,1.0s,baz=44,slow=5.0,SNR=5.8
STKA PKiKP **PKiKP** **02 20 31.1 -0.8**
comp=Z,2.9nm,0.9s,baz=254,slow=9.5,SNR=3.6
STKA LR LR 02 24 34.9
comp=Z,5µm,18.3s,baz=86,slow=35
STKA PKPPKP P'P'df 02 43 44.3 -8.1
comp=Z,4.3nm,1.0s,baz=287,slow=3.6,SNR=3.5
STKA **Stephens Creek** **35.44 255** P **P** **02 10 43.0 +0.6**
baz=36,SNR=199
STKA S **S** **02 16 12.9 +0.1**
baz=36,SNR=4.3
RKT **Rikitea** **38.33 91** *e*P **P** **02 11 04.9 -2.0**
comp=Z,130nm,1.6s
RKT *e*pP **pP** **02 11 19.3 -3.6**
comp=Z,286nm,1.2s
RKT *e*S **S** **02 16 58.3 +1.4**
comp=Z,2µm,31.0s
RKT *e*LQ LQ 02 19 50.5
comp=Z,4µm,25.8s
RKT *e*LR LR 02 21 22.9
comp=Z,11µm,28.2s,baz=257
PMG **Port Moresby** **38.53 293** *e*P **P** **02 11 09.3 +0.6**
comp=Z,51nm,0.9s
PMG *e*S **S** **02 16 57.3 -2.8**
PMG ScP **ScP** **02 17 07.5 +4.5**
PMG **Port Moresby** **38.53 293** P **P** **02 11 09.3 +0.6**
comp=Z,63nm,1.1s,comp=Z,1µm
PMG **Port Moresby** **38.53 293** P **P** **02 11 08.1 -0.7**
comp=Z,26nm,0.9s,baz=164,slow=5.0,SNR=5.0
PMG ScP **ScP** **02 17 07.5 +4.5**
comp=Z,35nm,1.0s,baz=187,slow=3.3,SNR=4.6
PMG LR LR 02 24 20.8
comp=Z,6µm,21.5s,baz=115,slow=32
COEN **Coen** **39.47 284** *e*P **P** **02 11 18.2 +1.6**
comp=Z,566nm,0.9s
COEN *e*pP **pP** **02 11 31.9 -0.7**
COEN **Coen** **39.47 284** P **P** **02 11 17.5 +0.9**
baz=40,SNR=24
QIS **Mount Isa** **39.84 272** P **P** **02 11 20.3 +0.7**
baz=40,SNR=5.4
BBOO **Buckleboo** **39.99 252** *e*P **P** **02 11 20.0 -0.8**
comp=Z,2µm,0.8s
BBOO *e*pP **pP** **02 11 38.6 +1.8**
BBOO *e*S **S** **02 17 17.4 -4.4**
BBOO **Buckleboo** **39.99 252** P **P** **02 11 19.9 -0.8**
baz=40,SNR=88
BBOO S **S** **02 17 18.9 -2.9**
baz=40,SNR=6.2
AS31 **Alice Springs** **43.82 265** *e*P **P** **02 11 51.4 -0.8**
ASAR **Alice Springs** **43.82 265** P **P** **02 11 51.5 -0.6**
ASAR PcP **PcP** **02 13 39.6 +1.8**
ASAR ScP **ScP** **02 17 28.2 +4.3**
ASAR S **S** **02 18 15.2 -3.4**
ASAR PKiKP **PKiKP** **02 20 38.6 -0.7**
ASAR **Alice Springs** **43.82 265** P **P** **02 11 51.5 -0.6**
comp=Z,78nm,0.6s,baz=99,slow=6.8,SNR=607
ASAR PcP **PcP** **02 13 39.6 +1.8**
comp=Z,5.6nm,0.5s,baz=122,slow=4.0,SNR=3.4
ASAR ScP **ScP** **02 17 28.2 +4.3**
comp=Z,5.7nm,0.8s,baz=119,slow=3.9,SNR=5.7
ASAR S **S** **02 18 15.2 -3.4**
comp=Z,4.0nm,0.8s,baz=101,slow=14,SNR=4.1
ASAR PKiKP **PKiKP** **02 20 38.6 -0.7**
comp=Z,2.5nm,0.9s,baz=94,slow=1.3,SNR=4.7
ASAR LR LR 02 29 40.4
comp=Z,6µm,18.2s,baz=113,slow=36
WRAB **Tennant Creek** **44.67 270** *e*P **P** **02 11 58.2 -0.7**
WRAB *e**PP **pP** **02 12 15.0 -0.2**
WRAB *e*S **S** **02 18 28.1 -2.8**
WRAB pmax pmax
comp=Z,324nm,1.1s
WRAB **Tennant Creek** **44.67 270** *e*P **P** **02 11 58.2 -0.7**
comp=Z,324nm,1.1s
WRAB *e*pP **pP** **02 12 15.0 -0.2**
WRAB *e*S **S** **02 18 28.1 -2.8**
WRAB **Tennant Creek** **44.67 270** P **P** **02 11 58.0 -0.9**
comp=Z,1µm,1.0s,SNR=82
WRA **Warramunga Arr** **44.67 270** P **P** **02 11 57.6 -1.4**
WRA PP PP 02 13 50.1 +5.9
WRA ScP **ScP** **02 17 34.0 +6.6**
WRA S **S** **02 18 28.3 -2.7**
WRA PKiKP **PKiKP** **02 20 40.1 -0.1**
WRA P'P' 02 43 37.3
WRA **Warramunga Arr** **44.67 270** P **P** **02 11 57.6 -1.4**
comp=Z,152nm,0.9s,baz=108,slow=7.8,SNR=260
WRA PP PP 02 13 50.1 +5.9
comp=Z,60nm,1.3s,baz=104,slow=9.2,SNR=6.1
WRA ScP **ScP** **02 17 34.0 +6.6**
comp=Z,7.7nm,0.9s,baz=106,slow=4.0,SNR=4.7
WRA S **S** **02 18 28.3 -2.7**
comp=Z,20nm,1.2s,baz=108,slow=14,SNR=5.7
WRA PKiKP **PKiKP** **02 20 40.1 -0.1**
comp=Z,3.5nm,0.9s,baz=82,slow=0.9,SNR=4.9
WRA LR LR 02 29 35.9
comp=Z,3µm,18.2s,baz=105,slow=35
WRA PKPPKP **P'P'df** **02 43 37.3 -3.9**
comp=Z,1.2nm,0.9s,baz=306,slow=2.9,SNR=4.5
FORT **Forrest** **47.05 254** *e*P **P** **02 12 15.7 -1.8**
comp=Z,208nm,0.8s
FORT **Forrest** **47.05 254** P **P** **02 12 16.2 -1.3**
baz=47,SNR=69
JAY **Jayapura** **47.76 295** P **P** **02 12 23.2 -0.1**
comp=Z,63nm,1.5s,comp=Z,4µm
JAY **Jayapura** **47.76 295** P **P** **02 12 22.7 -0.6**
baz=48,SNR=7.1
SBA **Scott Base** **49.61 184** *e*P P 02 12 40.0 +3.5
SBA pmax pmax
comp=Z,510nm,1.0s
SBA **Scott Base** **49.61 184** *e*P P 02 12 40.0 +3.5
comp=Z,510nm,1.0s
VNDA **Vanda** **49.68 186** *e*P **P** **02 12 38.9 +1.8**
comp=Z,173nm,1.4s
VNDA **Vanda** **49.68 186** P **P** **02 12 39.6 +2.5**
comp=Z,26nm,0.7s,baz=3.8,slow=8.2,SNR=123
VNDA LR LR 02 28 58.7
comp=Z,946nm,21.3s,baz=40,slow=30
MTN **Manton Dam** **50.37 277** P **P** **02 12 42.7 -0.5**
baz=51,SNR=21
KMBL **Kambalda** **52.08 251** P **P** **02 12 54.2 -1.7**
baz=52,SNR=26
BAKI **Biak** **52.23 293** P **P** **02 12 57.0 -0.1**
comp=Z,158nm,2.1s,comp=Z,3µm
PUH **Pauahi** **52.49 27** *e*P **P** **02 12 59.5 +0.6**
PUH *e*pP **pP** **02 13 16.9 +1.3**
TLE **Tual** **52.52 286** P **P** **02 12 59.6 +0.3**
comp=Z,185nm,1.1s,comp=Z,3µm
POHA **Pohakuloa** **52.71 26** *e*P **P** **02 13 01.7 +1.0**
comp=Z,316nm,0.9s
POHA *e*pP **pP** **02 13 13.6 -3.8**
FITZ **Fitzroy Crossi** **52.99 268** *e*P **P** **02 13 02.1 -0.6**
comp=Z,377nm,1.3s
FITZ S **S** **02 20 23.9 -3.9**
FITZ **Fitzroy Crossi** **52.99 268** P **P** **02 13 01.5 -1.2**
comp=Z,176nm,1.0s,baz=123,slow=6.7,SNR=197
FITZ S **S** **02 20 23.9 -3.9**
comp=Z,3.7nm,1.0s,baz=206,slow=22,SNR=8.2
FITZ LR LR 02 35 19.2
comp=Z,4µm,18.7s,baz=120,slow=36
FITZ **Fitzroy Crossi** **52.99 268** P **P** **02 13 02.3 -0.4**
baz=53,SNR=180
HON **Honolulu** **53.26 23** *e*P **P** **02 13 05.4 +0.9**
HON *e**PP **pP** **02 13 22.6 +1.5**
HON **Honolulu** **53.26 23** *e*P **P** **02 13 05.3 +0.9**
HON *e*pP **pP** **02 13 22.6 +1.5**
HKL **Haleakala** **53.31 25** *e*P pP 02 13 19.7 -2.2
HKL **Haleakala** **53.31 25** *e*pP pP 02 13 19.7 -2.2
KIP **Kipapa** **53.35 23** *e*P **P** **02 13 05.9 +0.8**
KIP *e**PP **pP** **02 13 23.2 +1.5**
KIP pmax pmax
comp=Z,429nm,1.1s
KIP **Kipapa** **53.35 23** *e*P **P** **02 13 05.9 +0.8**
comp=Z,429nm,1.1s
KIP *e*pP **pP** **02 13 23.2 +1.5**
FAKI **Fak Fak** **54.40 289** P **P** **02 13 12.0 -1.1**
comp=Z,122nm,1.7s,comp=Z,2µm
RKGY **Rocky Gully** **55.32 246** P **P** **02 13 18.4 -1.1**
baz=56,SNR=12
KLBR **Kellerberrin** **55.43 250** P **P** **02 13 18.6 -1.8**
baz=56,SNR=57
NWAO **Narrogin (SRO)** **55.52 248** *e*P **P** **02 13 19.0 -1.9**
comp=Z,209nm,1.4s
NWAO **Narrogin (SRO)** **55.52 248** P **P** **02 13 20.0 -0.9**
SNR=8.0
NWAO **Narrogin (SRO)** **55.52 248** P **P** **02 13 19.2 -1.7**
comp=Z,84nm,1.1s,baz=104,slow=7.1,SNR=15
NWAO LR LR 02 35 50.6
comp=Z,2µm,20.0s,baz=101,slow=35
GUMO **Guam** **55.84 314** P **P** **02 13 23.5 +0.2**
comp=Z,108nm,0.9s,baz=163,slow=11,SNR=3.7
MEEK **Meekatharra** **56.13 256** P **P** **02 13 23.5 -1.9**
baz=56,SNR=33
SWI **Sorong** **56.37 290** P **P** **02 13 26.6 -0.6**
comp=Z,295nm,0.8s,comp=Z,3µm
SWI **Sorong** **56.37 290** P **P** **02 13 27.1 0.0**
baz=57,SNR=9.0
BLDU **Ballidu** **56.56 251** P **P** **02 13 26.5 -1.9**
baz=57,SNR=18
MIDW **Midway** **56.76 360** *e*P **P** **02 13 29.5 0.0**
comp=Z,448nm,1.8s
CASY **Casey** **56.78 207** *e*P **P** **02 13 28.4 -1.0**
comp=Z,256nm,1.0s
CASY *e*pP **pP** **02 13 45.9 -0.2**
MBWA **Marble Bar** **57.01 262** *e*P **P** **02 13 30.1 -1.6**
comp=Z,382nm,1.0s
MBWA **Marble Bar** **57.01 262** P **P** **02 13 30.8 -0.9**
SNR=34
MORW **Morawa** **57.56 252** P **P** **02 13 33.9 -1.6**
baz=58,SNR=35
NLAI **Namlea** **58.55 285** P **P** **02 13 41.8 -0.8**
comp=Z,132nm,1.7s,comp=Z,2µm
PALU **Palau** **58.76 300** P **P** **02 13 43.9 0.0**
baz=59,SNR=6.0
RPN **Rapa Nui** **59.27 106** LR LR 02 32 34.5
comp=Z,2µm,21.6s,baz=283,slow=29
MMRI **Maumere** **60.05 277** P **P** **02 13 52.3 -0.6**
comp=Z,366nm,1.3s,comp=Z,5µm
GAMI **Galela, Maluku** **60.75 290** P **P** **02 13 55.7 -2.0**
comp=Z,201nm,0.9s
BASI **Baing, Sumba** **60.77 274** P **P** **02 13 57.8 0.0**
comp=Z,440nm,1.3s,comp=Z,6µm
GIRL **Giralia** **61.23 259** P **P** **02 14 01.1 +0.2**
baz=62,SNR=18
QSPA **South Pole Qui** **61.24 180** P **P** **02 14 02.3 +1.9**
comp=Z,285nm,1.0s,baz=35,slow=3.2,SNR=562
QSPA S S 02 22 25.3 +10
comp=Z,8.1nm,1.0s,baz=104,slow=9.3,SNR=3.5
QSPA LR LR 02 34 47.1
comp=Z,2µm,21.7s,baz=36,slow=30
KDI **Kendari** **62.00 282** P **P** **02 14 04.5 -1.7**
comp=Z,98nm,1.5s,comp=Z,1µm
LUWI **Luwuk** **63.38 285** P **P** **02 14 14.8 -0.5**
comp=Z,221nm,1.3s,comp=Z,3µm
BKSI **Bulukumba** **63.48 279** P **P** **02 14 15.5 -0.5**
comp=Z,144nm,1.1s,comp=Z,2µm
MIR **Mirnyy** **63.76 206** *i*P **P** **02 14 17.5 +0.5**
MIR *i* 02 14 31.0
MIR pmax pmax
comp=Z,550nm,2.0s
KAPI **Kappang** **63.95 279** *e*P **P** **02 14 18.2 -0.8**
comp=Z,389nm,1.6s
KAPI **Kappang** **63.95 279** P **P** **02 14 17.9 -1.1**
SNR=20
KAPI **Kappang** **63.95 279** P **P** **02 14 17.4 -1.7**
comp=Z,554nm,1.5s,SNR=15
KAPI **Kappang** **63.95 279** P **P** **02 14 17.4 -1.7**
comp=Z,138nm,1.6s,comp=Z,3µm
KAPI **Kappang** **63.95 279** P **P** **02 14 17.7 -1.4**
comp=Z,62nm,1.1s,baz=109,slow=2.9,SNR=30
KAPI LR LR 02 40 54.3
comp=Z,2µm,21.7s,baz=158,slow=35
SPSI **Sidrap Palu** **64.46 280** P **P** **02 14 21.0 -1.4**
comp=Z,89nm,1.4s,comp=Z,1µm
TTSI **Tana Toraja** **64.87 281** P **P** **02 14 24.3 -0.8**
comp=Z,99nm,1.0s,comp=Z,1µm
DAV **Davao City (W)** **65.55 294** P **P** **02 14 28.6 -0.9**
DAV **Davao City (W)** **65.55 294** P **P** **02 14 28.6 -0.9**
comp=Z,100nm,0.3s,baz=37,slow=13,SNR=3.9
KHKI **Kahang-Kahang** **65.97 274** P **P** **02 14 30.9 -1.3**
comp=Z,202nm,1.3s,comp=Z,2µm
KHKI **Kahang-Kahang** **65.97 274** P **P** **02 14 31.3 -0.9**
comp=Z,202nm,1.3s,comp=Z,2µm
IGBI **Denpasar** **66.16 273** P **P** **02 14 33.3 -0.1**
comp=Z,305nm,1.0s
DNP **Denpasar** **66.17 273** P **P** **02 14 34.3 +0.8**
comp=Z,547nm,1.3s
SRBI **Singaraja** **66.44 274** P **P** **02 14 34.6 -0.6**
comp=Z,253nm,1.3s,comp=Z,3µm
SRBI **Singaraja** **66.44 274** P **P** **02 14 34.6 -0.6**
comp=Z,253nm,1.3s,comp=Z,3µm
CTBH **Cotabato--PC H** **66.71 293** *i*P **P** **02 14 36.9 0.0**
BYJI **Banyuwangi** **67.13 273** *i*P **P** **02 14 39.7 +0.1**
comp=Z,357nm,1.3s,comp=Z,13µm
BYJI **Banyuwangi** **67.13 273** P **P** **02 14 39.9 +0.3**
comp=Z,357nm,1.3s,comp=Z,13µm
KBKI **Kotabaru** **67.90 279** P **P** **02 14 44.2 -0.3**
comp=Z,116nm,1.6s,comp=Z,4µm
GMJI **Gumukmas** **67.90 273** P **P** **02 14 43.7 -0.8**
comp=Z,242nm,1.3s,comp=Z,3µm
GMJI **Gumukmas** **67.90 273** P **P** **02 14 43.9 -0.6**
comp=Z,242nm,1.1s,comp=Z,3µm
KMMI **Kalianget** **68.02 274** P **P** **02 14 45.1 -0.1**
comp=Z,312nm,1.2s,comp=Z,5µm
BLJI **Banyuglugur** **68.02 273** P **P** **02 14 44.9 -0.3**
comp=Z,205nm,0.7s,comp=Z,5µm
BLJI **Banyuglugur** **68.02 273** P **P** **02 14 45.1 -0.1**
comp=Z,205nm,0.7s,comp=Z,5µm
BBKI **Banjar Baru** **68.97 278** P **P** **02 14 51.8 +0.6**
comp=Z,225nm,1.4s,comp=Z,4µm
PWJI **Pagerwojo** **69.46 272** P **P** **02 14 53.6 -0.6**
comp=Z,168nm,1.3s,comp=Z,3µm
SJI **Sawahan** **69.62 272** P **P** **02 14 55.1 -0.2**
comp=Z,134nm,1.8s,comp=Z,3µm
PCJI **Pacitan** **69.93 272** P **P** **02 14 57.0 0.0**
comp=Z,602nm,1.2s,comp=Z,7µm
TSM **Tawau** **70.34 287** P **P** **02 14 59.4 -0.2**
TSM **Tawau** **70.34 287** P **P** **02 14 59.7 +0.1**
UGM **Wanagama** **70.63 272** *e*P **P** **02 15 00.6 -0.8**
comp=Z,305nm,1.1s
UGM **Wanagama** **70.63 272** P **P** **02 15 01.5 +0.1**
comp=Z,235nm,1.2s
UGM **Wanagama** **70.63 272** P **P** **02 15 01.2 -0.2**
baz=71,SNR=9.0

SMRI	**Semarang**	**71.10**	**272**	P		**P**	**02 15 04.9**	**+0.6**
	comp=Z,154nm,1.9s,comp=Z,3µm							
BJII	**Banjamegara**	**71.61**	**272**	P		**P**	**02 15 07.9**	**+0.5**
SDKM	**Sandakan**	**71.64**	**287**	P		**P**	**02 15 07.2**	**-0.3**
CLJI	**Cilicap**	**72.04**	**271**	P		**P**	**02 15 09.0**	**-0.9**
	comp=Z,140nm,1.5s,comp=Z,2µm							
KKM	**Kota Kinabalu**	**72.67**	**287**	*e*P		**P**	**02 15 13.1**	**-0.7**
	comp=Z,490nm,1.9s							
KKM	**Kota Kinabalu**	**72.67**	**287**	P		**P**	**02 15 13.6**	**-0.1**
KKM	**Kota Kinabalu**	**72.67**	**287**	P		**P**	**02 15 13.3**	**-0.4**
	comp=Z,122nm,1.6s,comp=Z,2µm							
KKM	**Kota Kinabalu**	**72.67**	**287**	P		**P**	**02 15 13.6**	**-0.1**
	baz=73,SNR=28							
TGY	**Tagaytay City**	**73.36**	**297**	P		**P**	**02 15 16.6**	**-1.1**
TGY	**Tagaytay City**	**73.36**	**297**	P		**P**	**02 15 16.6**	**-1.1**
	comp=Z,144nm,0.3s,baz=20,slow=4.5,SNR=4.0							
TGY				LR		LR	02 40 53.3	
	comp=Z,19nm,21.8s,baz=6.9,slow=30							
PMSA	**Palmer Station**	**73.41**	**156**	P		**P**	**02 15 17.8**	**+0.7**
PMSA	**Palmer Station**	**73.41**	**156**	P		**P**	**02 15 17.8**	**+0.7**
	comp=Z,73nm,1.0s,baz=273,slow=8.2,SNR=4.3							
LEM	**Lembang**	**73.68**	**271**	P		**P**	**02 15 20.7**	**+0.9**
	baz=74,SNR=5.5							
XMI	**Christmas Isla**	**73.71**	**267**	P		**P**	**02 15 20.2**	**+0.4**
	baz=74,SNR=4.2							
XMIS	**Christmas Isla**	**73.73**	**267**	P		**P**	**02 15 19.7**	**-0.2**
	baz=74,SNR=8.1							
BTM	**Bintulu**	**73.83**	**283**	P		**P**	**02 15 21.1**	**+0.6**
MAW	**Mawson**	**73.95**	**200**	P		**P**	**02 15 20.6**	**+0.4**
MAW	**Mawson**	**73.95**	**200**	P		**P**	**02 15 20.6**	**+0.4**
	comp=Z,161nm,0.8s,baz=127,slow=7.5,SNR=107							
MAW				LR		LR	02 48 18.1	
	comp=Z,2µm,19.6s,baz=118,slow=36							
MAW	**Mawson**	**73.95**	**200**	P		**P**	**02 15 21.5**	**+1.3**
	baz=74,SNR=68							
SBUM	**Sibu**	**74.19**	**282**	P		**P**	**02 15 22.8**	**+0.3**
SBUM	**Sibu**	**74.19**	**282**	P		**P**	**02 15 22.8**	**+0.3**
	comp=Z,106nm,1.8s,comp=Z,2µm							
KSM	**Kuching**	**75.34**	**280**	*e*P		**P**	**02 15 28.8**	**-0.4**
KSM				*e*PcP		**PcP**	**02 15 41.0**	**-1.3**
KSM				*e*pP		**pP**	**02 15 46.9**	**+0.1**
KSM	**Kuching**	**75.34**	**280**	P		**P**	**02 15 29.1**	**-0.1**
KSM	**Kuching**	**75.34**	**280**	P		**P**	**02 15 29.5**	**+0.2**
KSM	**Kuching**	**75.34**	**280**	P		**P**	**02 15 29.1**	**-0.1**
	comp=Z,110nm,2.0s,comp=Z,2µm							
KSM	**Kuching**	**75.34**	**280**	P		**P**	**02 15 29.1**	**-0.1**
	baz=76,SNR=36							
JOW	**Kunigami**	**76.09**	**312**	*e*P		**P**	**02 15 33.0**	**-0.2**
	comp=Z,22nm,0.7s							
USHA	**Ushuaia**	**76.84**	**146**	P		**P**	**02 15 37.8**	**+0.7**
USHA	**Ushuaia**	**76.84**	**146**	P		**P**	**02 15 37.8**	**+0.7**
	comp=Z,34nm,1.1s,baz=252,slow=6.3,SNR=6.9							
MJAR	**Matsushiro Arr**	**77.34**	**325**	P		**P**	**02 15 38.9**	**-1.1**
MJAR	**Matsushiro Arr**	**77.34**	**325**	P		**P**	**02 15 38.9**	**-1.1**
	comp=Z,31nm,0.8s,baz=169,slow=5.8,SNR=60							
MAJO	**Matsushiro**	**77.34**	**325**	*e*P		**P**	**02 15 40.1**	**+0.1**
MAJO				pmax		pmax		
	comp=Z,42nm,0.9s							
MAJO	**Matsushiro**	**77.34**	**325**	*e*P		**P**	**02 15 40.1**	**+0.1**
	comp=Z,42nm,0.9s							
MAT	**Matsushiro**	**77.34**	**325**	P		**P**	**02 15 39.3**	**-0.7**
MAT				S		**S**	**02 25 23.8**	**-1.4**
SYO	**Syowa Base**	**78.74**	**193**	⇓*i*P		**P**	**02 15 46.0**	**-1.3**
SYO	**Syowa Base**	**78.74**	**193**	⇓*i*pP		pP	02 16 05.2	+0.3
JNU	**Nakatsue**	**78.83**	**318**	P		**P**	**02 15 47.7**	**-0.7**
JNU	**Nakatsue**	**78.83**	**318**	P		**P**	**02 15 47.7**	**-0.7**
	comp=Z,14nm,0.6s,baz=101,slow=3.5,SNR=18							
JNU				LR		LR	02 45 23.8	
	comp=Z,886nm,21.4s,baz=149,slow=32							
NACB	**Ninganchiao**	**78.96**	**305**	*e*P		**P**	**02 15 46.0**	**-3.2**
	comp=Z,25nm,0.8s							
SSLB	**Suanglung**	**79.18**	**305**	*e*P		**P**	**02 15 49.5**	**-1.0**
	comp=Z,50nm,0.7s							
ERM	**Erimo**	**79.41**	**331**	*d i*P		**P**	**02 15 52.2**	**+1.0**
ERM				pmax		pmax		
	comp=Z,137nm,1.7s							
ERM	**Erimo**	**79.41**	**331**	*e*P		**P**	**02 15 53.0**	**+1.8**
	comp=Z,258nm,1.8s							
ERM	**Erimo**	**79.41**	**331**	P		**P**	**02 15 53.7**	**+2.5**
	comp=Z,307nm,0.9s,SNR=5.7							
SNAA	**Sanae**	**79.67**	**178**	*e*P		**P**	**02 15 53.1**	**+0.7**
SNAA	**Sanae**	**79.67**	**178**	*e*pP		pP	02 16 11.0	+0.9
SNAA	**Sanae**	**79.67**	**178**	*e*sP		sP	02 16 18.3	+1.1
SNAA	**Sanae**	**79.67**	**178**	*e*SKSac		SKSac	02 26 17.3	+1.4
SNAA	**Sanae**	**79.67**	**178**	*e*PKKPbc		PKKPbc	02 34 38.5	-2.0
SNAA	**Sanae**	**79.67**	**178**	*e*P		**P'P'df**	**02 42 45.4**	**-1.1**
SNAA	**Sanae**	**79.67**	**178**	*e*P		**P**	**02 15 52.8**	**+0.3**
	comp=Z,254nm,1.0s							
SNAA				PKKPbc		**PKKPbc**	**02 34 38.3**	**-2.2**
SNAA	**Sanae**	**79.67**	**178**	P		**P**	**02 15 53.1**	**+0.7**
	comp=Z,68nm,0.9s,baz=203,slow=5.1,SNR=26							
SNAA				PKKPbc		**PKKPbc**	**02 34 38.3**	**-2.2**
	comp=Z,0.7nm,0.7s,baz=232,slow=3.3,SNR=13							
SNAA				LR		LR	02 46 02.5	
	comp=Z,644nm,21.2s,baz=30,slow=32							
VNA3	**Neumayer Olymp**	**79.79**	**176**	*e*P		**P**	**02 15 53.8**	**+0.7**
VNA3	**Neumayer Olymp**	**79.79**	**176**	*e*pP		pP	02 16 11.9	+1.2
VNA3	**Neumayer Olymp**	**79.79**	**176**	*e*sP		sP	02 16 19.3	+1.5
VNA3	**Neumayer Olymp**	**79.79**	**176**	*e*SKSac		SKSac	02 26 11.4	+7.3
VNA3	**Neumayer Olymp**	**79.79**	**176**	*e*PKKPbc		PKKPbc	02 34 38.3	-1.9
VNA3	**Neumayer Olymp**	**79.79**	**176**	*e*P		**P'P'df**	**02 42 41.5**	**-4.7**
YUK	**Yuzh-Kuril'sk**	**80.00**	**334**	*c i*P		P	02 15 48.3	-6.1
YUK				*e*			02 18 53.1	
YUK				*i* S		**S**	**02 25 51.9**	**-1.3**
YUK				*e*SS		**SS**	**02 31 00.9**	**-4.2**
YUK				pmax		pmax		
	comp=Z,607nm,1.7s							
YUK				pmax		pmax		
	comp=N,621nm,1.7s							
YUK				pmax		pmax		
	comp=E,337nm,1.7s							
YUK				pmax		pmax		
	comp=Z,791nm,1.8s							
VNA2	**Neumayer--Watz**	**80.23**	**177**	*e*P		**P**	**02 15 56.6**	**+1.2**
	baz=168,slow=3.5							
VNA2	**Neumayer--Watz**	**80.23**	**177**	*e*pP		pP	02 16 14.5	+1.4
	baz=168,slow=3.5							
VNA2	**Neumayer--Watz**	**80.23**	**177**	*e*sP		sP	02 16 22.4	+2.2
	baz=168,slow=3.5							
VNA2	**Neumayer--Watz**	**80.23**	**177**	*e*SKSac		**SKSac**	**02 26 06.0**	**-1.2**
	baz=168,slow=3.5							
VNA2	**Neumayer--Watz**	**80.23**	**177**	*e*PKKPbc		PKKPbc	02 34 37.5	-1.7
	baz=168,slow=3.5							
VNA2	**Neumayer--Watz**	**80.23**	**177**	*e*P		P'P'df	02 42 38.8	-6.5
	baz=168,slow=3.5							
MAIT	**Maitri**	**80.43**	**183**	*e*P		P	02 15 46.8	-10
VNA1	**Neumayer--Stat**	**80.46**	**176**	*e*P		**P**	**02 15 57.8**	**+1.2**
VNA1	**Neumayer--Stat**	**80.46**	**176**	*e*pP		pP	02 16 15.7	+1.4
MYKOM	**Kota Tinggi**	**81.10**	**277**	P		**P**	**02 16 00.8**	**-0.3**
MYKOM	**Kota Tinggi**	**81.10**	**277**	P		**P**	**02 16 01.4**	**+0.4**
MYKOM	**Kota Tinggi**	**81.10**	**277**	P		**P**	**02 16 00.7**	**-0.3**
	comp=Z,169nm,1.4s,comp=Z,2µm							
ASAJ	**Asahikawa**	**81.37**	**332**	*e*P		**P**	**02 16 03.8**	**+2.1**
	comp=Z,50nm,0.9s							
ASAJ	**Asahikawa**	**81.37**	**332**	P		**P**	**02 16 02.0**	**+0.3**
	comp=Z,85nm,0.9s,baz=222,slow=8.6,SNR=32							
ASAJ				LR		LR	02 46 16.5	
	comp=Z,3µm,21.6s,baz=331,slow=31							
QZH	**Quanzhou**	**81.59**	**304**	⇑*i*P		**P**	**02 16 04.8**	**+1.5**
QZH				S		**S**	**02 26 12.3**	**+1.8**
QZH				pmax		pmax		
	comp=Z,1µm,3.6s							
QZH				LR		LR		
	comp=N,4µm,24.7s							
QZH				LR		LR		
	comp=E,3µm,20.9s							
QZH				LR		LR		
	comp=Z,2µm,26.4s							
KGM	**Kluang**	**81.68**	**277**	P		**P**	**02 16 04.1**	**0.0**
KGM	**Kluang**	**81.68**	**277**	P		**P**	**02 16 04.3**	**+0.2**
FX1	**Attu Island--F**	**81.83**	**354**	*e*P		**P**	**02 16 04.4**	**+0.5**
FX1				*e*pP		**pP**	**02 16 16.9**	**-4.7**
UNV	**Unalaska Valle**	**82.90**	**6**	*e*P		**P**	**02 16 09.3**	**-0.1**
	comp=Z,162nm,1.2s							
UNV				*e*pP		**pP**	**02 16 27.1**	**-0.1**
BSC	**Santa Cruz Isl**	**82.97**	**45**	⇓P		**P**	**02 16 12.5**	**+2.1**
	baz=83							
SCI	**San Clemente I**	**82.98**	**46**	⇑P		**P**	**02 16 12.4**	**+2.0**
	baz=83							
PLCA	**Paso Flores**	**83.10**	**133**	*e*P		**P**	**02 16 12.2**	**+1.0**
	comp=Z,206nm,1.1s							
PLCA				*e*pP		**pP**	**02 16 31.0**	**+2.0**
PLCA				PKKPbc		**PKKPbc**	**02 34 32.8**	**+0.8**
PLCA				P'P'			02 42 32.4	
PLCA				P'P'ab			02 42 37.1	
PLCA	**Paso Flores**	**83.10**	**133**	P		**P**	**02 16 12.7**	**+1.4**
	comp=Z,68nm,1.1s,baz=234,slow=5.4,SNR=45							
PLCA				PKKPbc		**PKKPbc**	**02 34 32.8**	**+0.8**
	comp=Z,6.0nm,1.0s,baz=320,slow=1.3,SNR=6.4							
PLCA				PKPPKP		P'P'df	02 42 32.4	-8.3
	comp=Z,2.2nm,0.9s,baz=253,slow=2.6,SNR=3.4							
PLCA				PKP2ab			02 42 37.1	
	comp=Z,7.5nm,1.2s,baz=40,slow=3.9,SNR=3.7							
PLCA				LR		LR	02 44 17.0	
	comp=Z,1µm,20.8s,baz=322,slow=29							
LPIG	**La Paz**	**83.21**	**58**	P		**P**	**02 16 12.7**	**+0.9**
LPIG	**La Paz**	**83.21**	**58**	P		**P**	**02 16 12.7**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=256,slow=4.2,SNR=3.3							
SBC	**Santa Barbara**	**83.21**	**45**	⇓P		**P**	**02 16 13.7**	**+2.1**
	baz=84							
BLG	**Laguna Peak**	**83.40**	**45**	P		**P**	**02 16 14.4**	**+1.8**
	baz=84,SNR=6.5							
PKM	**Peak Mountain**	**83.45**	**44**	P		**P**	**02 16 15.1**	**+2.1**
	baz=84,SNR=15							
KTGM	**Kuala Trenggan**	**83.46**	**280**	P		**P**	**02 16 13.9**	**+0.5**
SSE	**Sheshan**	**83.57**	**311**	*e*P		**P**	**02 16 16.5**	**+3.1**
SSE				pP		**pP**	**02 16 33.3**	**+2.1**
SSE				sP		**sP**	**02 16 40.4**	**+2.2**
SSE				S		**S**	**02 26 29.9**	**-0.6**
SSE				sS		**sS**	**02 26 58.8**	**-1.8**
SSE				pmax		pmax		
	comp=Z,51nm,0.7s							
SSE				pmax		pmax		
	comp=Z,95nm,3.5s							
SSE				LR		LR		
	comp=N,660nm,22.6s							
SSE				LR		LR		
	comp=E,750nm,22.6s							
SSE				LR		LR		
	comp=Z,1µm,22.3s							
KSRS	**Korea Array**	**83.58**	**319**	P		**P**	**02 16 14.2**	**+0.8**
	comp=Z,20nm,0.9s,baz=140,slow=5.8,SNR=47							
KSRS				LR		LR	02 46 15.5	
	comp=Z,541nm,21.8s,baz=134,slow=30							
KSAR	**Wonju Array Be**	**83.60**	**319**	P		**P**	**02 16 14.2**	**+0.7**
SMMC	**Simmler**	**83.62**	**44**	⇓P		**P**	**02 16 16.0**	**+2.3**
	baz=84							
YSS	**Yuzh-Sakhalins**	**83.64**	**334**	⇑*i*P		**P**	**02 16 15.5**	**+2.1**
YSS				*e**PP		**pP**	**02 16 33.4**	**+2.2**
YSS				*e*S		**S**	**02 26 33.0**	**+2.5**
YSS				pmax		pmax		
	comp=E,100nm,1.0s							
YSS				pmax		pmax		
	comp=Z,220nm,1.0s							
YSS				MLR		MLR		
	comp=N,500nm,18.0s							
YSS				MLR		MLR		
	comp=E,500nm,18.0s							
YSS				MLR		MLR		
	comp=Z,900nm,18.0s							
PTRM	**Twissleman Ran**	**83.72**	**43**	*e*P		**P**	**02 16 16.6**	**+2.4**
SAO	**San Andreas Ge**	**83.73**	**42**	*e*P		**P**	**02 16 15.6**	**+1.4**
SAO				*e**PP		**pP**	**02 16 33.7**	**+1.7**
SAO	**San Andreas Ge**	**83.73**	**42**	*e*P		**P**	**02 16 15.6**	**+1.4**
SAO				*e*pP		**pP**	**02 16 33.7**	**+1.7**
EFI	**East Falkland**	**83.74**	**147**	*e*P		**P**	**02 16 14.7**	**+0.5**
EFI				*e**PP		**pP**	**02 16 33.1**	**+1.2**
EFI				pmax		pmax		
	comp=Z,586nm,1.1s							
EFI	**East Falkland**	**83.74**	**147**	*e*P		**P**	**02 16 14.7**	**+0.5**
	comp=Z,586nm,1.1s							
EFI				*e*pP		**pP**	**02 16 33.0**	**+1.2**
EFI	**East Falkland**	**83.74**	**147**	P		**P**	**02 16 15.7**	**+1.6**
	comp=Z,1µm,1.2s,SNR=9.1							
109C	**Camp Elliot, M**	**83.84**	**47**	P		**P**	**02 16 16.6**	**+1.7**
	baz=84,SNR=6.8							
OSI	**Osito Adit**	**83.94**	**45**	*e*P		**P**	**02 16 17.0**	**+1.6**
	comp=Z,133nm,1.2s							
OSI	**Osito Adit**	**83.94**	**45**	⇑P		**P**	**02 16 17.5**	**+2.1**
	baz=84,SNR=6.5							
DECC	**Green Verdugo**	**83.95**	**46**	⇑P		**P**	**02 16 17.0**	**+1.6**
	baz=84							
PASC	**Pasadena Art C**	**83.99**	**46**	*e*P		**P**	**02 16 17.3**	**+1.8**
	comp=Z,103nm,1.2s							
PASC				*e*pP		**pP**	**02 16 35.0**	**+1.6**
BAR	**Barrett**	**83.99**	**48**	*e*P		**P**	**02 16 16.9**	**+1.2**
	comp=Z,166nm,1.6s							
BAR				*e*pP		**pP**	**02 16 35.0**	**+1.6**
MWC	**Mount Wilson**	**84.10**	**46**	*e*P		**P**	**02 16 16.9**	**+0.5**
MWC				*e**PP		**pP**	**02 16 35.6**	**+1.4**
MWC				*e*			02 19 30.8	
MWC	**Mount Wilson**	**84.10**	**46**	*e*P		**P**	**02 16 16.9**	**+0.5**
MWC				*e*pP		**pP**	**02 16 35.6**	**+1.4**
MWC				*e*PP		**PP**	**02 19 30.8**	**-0.9**
PET	**Petropavlovsk**	**84.20**	**346**	⇑*i*P		**P**	**02 16 16.1**	**0.0**
PET				*e*			02 19 38.8	
PET				*e*			02 26 32.5	
PET				*e*S		**S**	**02 26 39.1**	**+3.3**
PET				*e*PS		**PnS**	**02 27 30.2**	**-7.1**
PET				*e*SS		**SS**	**02 32 08.1**	**+1.0**
PET				pmax		pmax		
	comp=Z,60nm,0.9s							
PET				pmax		pmax		
	comp=Z,300nm,20.8s							
PET				pmax		pmax		
	comp=Z,500nm,14.0s							
PET				MLR		MLR		
	comp=Z,600nm,14.0s							
PET				MLR		MLR		
	comp=Z,800nm,20.0s							
ARVC	**Arvin**	**84.21**	**45**	⇑P		**P**	**02 16 18.6**	**+1.9**
	baz=85,SNR=19							
MURC	**Murrieta**	**84.24**	**47**	P		**P**	**02 16 18.5**	**+1.6**
	baz=85,SNR=27							
MONP	**Monument Peak**	**84.29**	**48**	P		**P**	**02 16 19.0**	**+1.6**
	baz=85,SNR=34							
HOPS	**Hopland**	**84.34**	**39**	*e*P		**P**	**02 16 18.6**	**+1.4**
	comp=Z,239nm,1.2s							
HOPS				*e*pP		**pP**	**02 16 37.1**	**+2.0**
INCN	**Inchon**	**84.35**	**318**	P		**P**	**02 16 19.0**	**+1.6**
	SNR=5.2							
DVTC	**Desert V Tower**	**84.35**	**48**	⇓P		**P**	**02 16 19.0**	**+1.4**
	baz=85,SNR=10.0							
BFSC	**Mount Baldy Ra**	**84.36**	**46**	P		**P**	**02 16 19.0**	**+1.3**
	baz=85,SNR=38							
PEA0B	**Petropavlovsk-**	**84.49**	**345**	*e*P		**P**	**02 16 17.9**	**+0.2**
PETK	**Petropavlovsk-**	**84.49**	**345**	P		**P**	**02 16 17.9**	**+0.3**
PETK				pmax		pmax		
	comp=Z,79nm,0.9s							
PETK	**Petropavlovsk-**	**84.49**	**345**	P		**P**	**02 16 17.9**	**+0.3**
PETK				SKKP			02 38 06.9	
PETK	**Petropavlovsk-**	**84.49**	**345**	P		**P**	**02 16 17.9**	**+0.3**
	comp=Z,79nm,0.9s,baz=130,slow=8.0,SNR=44							
PETK				SKKP			02 38 06.9	
	comp=Z,4.6nm,0.4s,baz=12,slow=8.0,SNR=4.1							
PETK				LR		LR	02 50 58.3	
	comp=Z,816nm,20.3s,baz=172,slow=34							
VES	**Vestal, Richgr**	**84.53**	**44**	P		**P**	**02 16 19.6**	**+1.4**
	baz=85,SNR=48							
KCPM	**Cahto Peak**	**84.55**	**39**	*e*P		**P**	**02 16 20.0**	**+1.6**
	comp=Z,155nm,1.4s							
KCPM				*e*pP		**pP**	**02 16 37.9**	**+1.7**
EDW2	**Edwards Air Fo**	**84.57**	**45**	P		**P**	**02 16 20.1**	**+1.5**
	baz=85,SNR=52							
KIPM	**Iron Peak**	**84.69**	**39**	*e*P		**P**	**02 16 20.7**	**+1.5**
	comp=Z,228nm,1.2s							
KIPM				*e*pP		**pP**	**02 16 38.6**	**+1.6**
PFO	**Pinyon Flat Ob**	**84.72**	**47**	*e*P		**P**	**02 16 20.9**	**+1.4**
	comp=Z,131nm,1.3s							
PFO				*e*pP		**pP**	**02 16 39.1**	**+1.8**
PFO	**Pinyon Flat Ob**	**84.72**	**47**	P		**P**	**02 16 21.0**	**+1.6**
	comp=Z,420nm,1.2s,SNR=30							
PFO	**Pinyon Flat Ob**	**84.72**	**47**	P		**P**	**02 16 21.1**	**+1.6**
	baz=85,SNR=41							
SWSC	**Sam W. Stewart**	**84.72**	**48**	⇑P		**P**	**02 16 20.7**	**+1.4**
	baz=85,SNR=25							
RCTC	**Rector, Farmer**	**84.74**	**43**	⇑P		**P**	**02 16 20.5**	**+1.2**
	baz=85							
ISA	**Isabella**	**84.78**	**44**	*e*P		**P**	**02 16 21.2**	**+1.6**
ISA				*e**PP		**pP**	**02 16 39.2**	**+1.7**
ISA				pmax		pmax		
	comp=Z,250nm,1.3s							
ISA	**Isabella**	**84.78**	**44**	*e*P		**P**	**02 16 21.2**	**+1.6**
	comp=Z,250nm,1.3s							
ISA				*e*pP		**pP**	**02 16 39.2**	**+1.7**
ISA	**Isabella**	**84.78**	**44**	P		**P**	**02 16 21.4**	**+1.7**
	baz=85,SNR=68							
IPM	**Ipoh**	**84.87**	**278**	*e*P		**P**	**02 16 19.8**	**-0.8**
	comp=Z,80nm,0.7s							
IPM				*e*pP		**pP**	**02 16 38.1**	**-0.3**
IPM	**Ipoh**	**84.87**	**278**	P		**P**	**02 16 20.2**	**-0.4**
IPM	**Ipoh**	**84.87**	**278**	P		**P**	**02 16 20.5**	**-0.1**
IPM	**Ipoh**	**84.87**	**278**	P		**P**	**02 16 20.0**	**-0.6**
	comp=Z,143nm,0.8s,comp=Z,2µm							
QIZ	**Qiongzhong**	**84.90**	**295**	P		**P**	**02 16 21.6**	**+1.1**
QIZ				pP		**pP**	**02 16 38.8**	**+0.5**
QIZ				S		**S**	**02 26 46.4**	**+2.1**
QIZ				sS		**sS**	**02 27 14.9**	**+0.4**
QIZ				LR		LR		
	comp=N,370nm,22.8s							
QIZ				LR		LR		
	comp=Z,850nm,30.5s							
SDPT	**Sand Point**	**85.11**	**10**	*e*P		**P**	**02 16 20.8**	**+0.2**
	comp=Z,616nm,1.4s							
SDPT				*e*pP		**pP**	**02 16 39.0**	**+0.6**
LRMC	**Laurel Mountai**	**85.14**	**45**	P		**P**	**02 16 23.2**	**+1.7**
	baz=86,SNR=42							
RRX	**Edison Barstow**	**85.19**	**46**	P		**P**	**02 16 23.5**	**+1.9**
	baz=86,SNR=7.9							
CMB	**Columbia Colle**	**85.22**	**42**	*e*P		**P**	**02 16 23.0**	**+1.3**
CMB				*e**PP		**pP**	**02 16 41.2**	**+1.6**
CMB				*e*			02 19 39.5	
CMB				pmax		pmax		
	comp=Z,201nm,1.1s							
CMB	**Columbia Colle**	**85.22**	**42**	*e*P		**P**	**02 16 23.0**	**+1.3**
	comp=Z,202nm,1.1s							
CMB				*e*pP		**pP**	**02 16 41.2**	**+1.6**
CMB				*e*PP		**PP**	**02 19 39.5**	**-0.9**
BELC	**Belle Mtn. Jos**	**85.26**	**47**	P		**P**	**02 16 23.9**	**+1.7**
	baz=86,SNR=87							
KHMM	**Horse Mountain**	**85.30**	**38**	*e*P		**P**	**02 16 24.1**	**+1.9**
	comp=Z,290nm,1.3s							
KHMM				*e*pP		**pP**	**02 16 42.2**	**+2.2**
BC3	**Big Chuckawall**	**85.40**	**48**	P		**P**	**02 16 24.8**	**+1.9**
	baz=86,SNR=107							
GLA	**Glamis**	**85.43**	**48**	*e*P		**P**	**02 16 25.0**	**+2.1**
GLA				*e**PP		**pP**	**02 16 42.8**	**+2.1**
GLA				*e*			02 19 43.2	
GLA				pmax		pmax		
	comp=Z,255nm,1.4s							
GLA	**Glamis**	**85.43**	**48**	*e*P		**P**	**02 16 24.9**	**+2.1**
	comp=Z,255nm,1.4s							
GLA				*e*pP		**pP**	**02 16 42.8**	**+2.1**
GLA				*e*PP		**PP**	**02 19 43.2**	**+1.0**
GLA	**Glamis**	**85.43**	**48**	P		**P**	**02 16 25.0**	**+2.1**
	baz=86,SNR=29							
OHCM	**Honcut**	**85.47**	**40**	*e*P		**P**	**02 16 24.0**	**+1.1**
VLA	**Vladivostok**	**85.48**	**325**	⇑*i*P		**P**	**02 16 22.0**	**-0.8**
VLA				*e*S		S	02 26 41.0	-8.0
VLA				pmax		pmax		
	comp=Z,46nm,1.2s							
CWC	**Cottonwood Cre**	**85.53**	**44**	⇑P		**P**	**02 16 25.2**	**+1.7**
	baz=86,SNR=7.6							
HEC	**Hector,Ludlow**	**85.58**	**46**	P		**P**	**02 16 25.2**	**+1.6**
	baz=86,SNR=83							
GSC	**Goldstone**	**85.58**	**46**	*e*P		**P**	**02 16 24.7**	**+1.0**
GSC				*e**PP		**pP**	**02 16 43.0**	**+1.5**
GSC	**Goldstone**	**85.58**	**46**	*e*P		**P**	**02 16 24.7**	**+1.0**
GSC				*e*pP		**pP**	**02 16 43.0**	**+1.5**
GSC	**Goldstone**	**85.58**	**46**	P		**P**	**02 16 25.3**	**+1.6**
	baz=86,SNR=68							
KULM	**Kulim**	**85.59**	**278**	*e*P		**P**	**02 16 23.6**	**-0.5**
	comp=Z,174nm,1.3s							
MPMC	**Manual Prospec**	**85.65**	**45**	P		**P**	**02 16 25.6**	**+1.5**
	baz=86,SNR=130							
KRMB	**Red Mountain**	**85.67**	**37**	*e*P		**P**	**02 16 26.0**	**+2.1**
	comp=Z,344nm,1.3s							
KRMB				*e*pP		**pP**	**02 16 44.1**	**+2.3**
NJ2	**Nanjing**	**85.72**	**310**	*e*P		**P**	**02 16 26.6**	**+2.3**
NJ2				PP		**PP**	**02 19 45.8**	**+1.3**
NJ2				S		**S**	**02 26 50.0**	**-1.8**
NJ2				pmax		pmax		
	comp=Z,50nm,0.9s							
NJ2				pmax		pmax		
	comp=Z,790nm,4.0s							
NJ2				LR		LR		
	comp=N,970nm,25.9s							
NJ2				LR		LR		
	comp=E,3µm,24.3s							
NJ2				LR		LR		
	comp=Z,2µm,24.5s							
WDC	**Whiskeytown Da**	**85.74**	**39**	*e*P		**P**	**02 16 25.7**	**+1.5**
WDC				*e**PP		**pP**	**02 16 43.7**	**+1.6**
WDC				pmax		pmax		
	comp=Z,289nm,1.3s							
WDC

HUMO **Hull Mountain** 86.93 37 *e*P P 02 16 31.5 +1.5
comp=Z,211nm,1.4s
HUMO *e*pP **pP** 02 16 49.8 +1.9
Y14A Wickenburg 87.17 49 ⇑P P 02 16 33.1 +1.6
baz=88,SNR=82
FCH Farellones 87.26 127 *i*P P 02 16 32.2 -0.2
W13A Hualapai Mount 87.31 47 P P 02 16 34.2 +1.9
baz=88,SNR=42
TUC Tucson 87.68 51 *e*P P 02 16 36.2 +2.2
TUC *e**PP **pP** 02 16 54.2 +2.3
TUC pmax pmax
comp=Z,32nm,1.2s
TUC Tucson 87.68 51 *e*P P 02 16 36.1 +2.2
comp=Z,32nm,1.2s
TUC *e*pP **pP** 02 16 54.1 +2.3
MDJ Mudanjiang 87.71 325 P P 02 16 34.5 +0.8
MDJ pP **pP** 02 16 51.1 -0.5
MDJ sP **sP** 02 16 57.9 -0.7
MDJ S **SKSac** 02 27 00.4 +4.4
MDJ pmax pmax
comp=Z,71nm,1.2s
MDJ pmax pmax
comp=Z,510nm,4.3s
MDJ LR LR
comp=N,700nm,27.1s
MDJ LR LR
comp=E,650nm,30.1s
MDJ LR LR
comp=Z,1µm,28.1s
CHBT CHBT 87.83 286 P P 02 16 36.4 +1.4
comp=Z,91nm,1.0s,comp=Z,2µm
MOD Modoc 87.88 39 *e*P P 02 16 35.6 +0.8
comp=Z,158nm,1.0s
MOD *e*pP **pP** 02 16 54.0 +1.3
WHN Wuhan 87.92 307 P P 02 16 36.3 +1.3
WHN pP **pP** 02 16 53.5 +0.6
WHN LR LR
comp=Z,3µm,22.3s
HABR Khabarovsk 88.01 331 *e*P P 02 16 36.6 +1.6
HABR *e**PP **pP** 02 16 51.1 -1.8
HABR PPP PPP 02 21 56.2
HABR S **SKSac** 02 26 56.4 -1.1
HABR *e* 02 27 19.6
HABR *e*SS **SS** 02 33 04.3 +1.1
HABR *e*SSS SSS 02 36 37.8
HABR pmax pmax
comp=Z,710nm,1.9s
HABR MLR MLR
comp=Z,678nm,19.0s
OHAK Old Harbor 88.12 13 *e*P P 02 16 36.2 +0.9
comp=Z,211nm,1.4s
OHAK *e*pP **pP** 02 16 54.0 +0.8
COR Corvallis 88.14 35 *e*P P 02 16 37.3 +1.6
COR *e**PP **pP** 02 16 55.6 +1.9
COR pmax pmax
comp=Z,246nm,1.6s
COR Corvallis 88.14 35 *e*P P 02 16 37.3 +1.6
comp=Z,246nm,1.6s
COR *e*pP **pP** 02 16 55.6 +1.9
319A Douglas 88.17 53 ⇑P P 02 16 38.0 +1.7
baz=88,SNR=22
DL2 Dalian 88.24 317 ⇑*i*P P 02 16 37.6 +1.2
DL2 pP **pP** 02 16 51.8 -2.5
DL2 SKS **SKSac** 02 27 01.3 +1.9
DL2 S **ScS** 02 27 21.8 +0.1
DL2 pmax pmax
comp=Z,110nm,1.0s
DL2 pmax pmax
comp=Z,500nm,3.6s
DL2 LR LR
comp=N,660nm,22.5s
DL2 LR LR
comp=E,660nm,23.1s
DL2 LR LR
comp=Z,1µm,21.1s
IRO Indian Ridge 88.27 36 P P 02 16 37.7 +1.0
R11A Troy Canyon, C 88.28 44 ⇓P P 02 16 38.4 +1.6
baz=89
BROR Big Rock Looko 88.35 36 P P 02 16 37.9 +1.2
X16A Lo Mia Camp, P 88.49 49 ⇓P P 02 16 40.4 +2.5
baz=89
320A Kipp Ranch, An 88.67 53 P P 02 16 41.1 +2.3
baz=89,SNR=59
KDAK Kodiak Island 88.78 13 *e*P P 02 16 39.3 +0.9
comp=Z,162nm,1.4s
KDAK *e*pP **pP** 02 16 57.5 +1.1
KDAK Kodiak Island 88.78 13 P P 02 16 38.7 +0.3
comp=Z,16nm,0.9s,baz=135,slow=7.0,SNR=4.3
220A Playas Peak, P 89.00 52 P P 02 16 42.4 +2.1
baz=89,SNR=100
SNY Shenyang 89.01 320 ⇑P P 02 16 40.5 +0.6
SNY S **S** 02 27 20.3 -2.6
SNY pmax pmax
comp=Z,370nm,3.9s
SNY LR LR
comp=N,450nm,21.0s
SNY LR LR
comp=E,460nm,21.6s
SNY LR LR
comp=Z,830nm,22.8s
U15A North Rim 89.15 47 ⇑P P 02 16 43.5 +2.4
baz=90
WVOR Wild Horse Val 89.15 39 *e*P P 02 16 41.5 +0.8
WVOR *e**PP **pP** 02 16 59.7 +1.0
WVOR pmax pmax
comp=Z,139nm,1.3s
WVOR Wild Horse Val 89.15 39 *e*P P 02 16 41.5 +0.8
comp=Z,139nm,1.3s
WVOR *e*pP **pP** 02 16 59.7 +1.0
CCUT Cedar City 89.15 46 *e*P P 02 16 43.0 +2.0
comp=Z,140nm,1.3s
CCUT *e*pP **pP** 02 17 01.3 +2.4
WUAZ Wupatki 89.19 48 *e*P P 02 16 42.5 +1.4
comp=Z,204nm,1.1s
WUAZ *e*pP **pP** 02 17 01.3 +2.2
WUAZ Wupatki 89.19 48 ⇓P P 02 16 43.7 +2.5
baz=90
ARUT Antelope Range 89.25 45 *e*P P 02 16 42.8 +1.4
ARUT pmax pmax
comp=Z,106nm,1.4s
ARUT Antelope Range 89.25 45 *e*P P 02 16 42.8 +1.4
comp=Z,106nm,1.4s
120A U Bar Ranch, L 89.29 52 P P 02 16 44.0 +2.3
baz=90,SNR=77
CN2 Changchun 89.30 322 ⇑P P 02 16 42.0 +0.8
CN2 *e*pP **pP** 02 16 59.1 0.0
CN2 *e*sP **sP** 02 17 05.8 -0.3
CN2 *e*S **S** 02 27 26.0 +0.4
CN2 pmax pmax
comp=Z,20nm,1.2s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,500nm,20.0s
CN2 LR LR
comp=E,600nm,20.0s
CN2 LR LR
comp=Z,600nm,22.0s
LCO Las Campanas 89.30 123 *e*P P 02 16 41.9 -0.2
comp=Z,180nm,1.8s
LCO *e*pP **pP** 02 17 00.5 +0.4
LCO Las Campanas 89.30 123 P P 02 16 42.4 +0.2
baz=89,SNR=5.4
VIPM Ingram Point 89.47 37 P P 02 16 43.5 +1.2
VIPM Ingram Point 89.47 37 P P 02 16 43.5 +1.2
BMW Boistfort Moun 89.51 34 P P 02 16 43.9 +1.7
BMW Boistfort Moun 89.51 34 P P 02 16 43.9 +1.7
X18A Snowflake 89.55 50 P P 02 16 45.0 +2.2
baz=90,SNR=74
VLL Laurance Lake 89.58 36 P P 02 16 44.1 +1.5
221A Mesquite Ranch 89.58 53 P P 02 16 45.2 +2.2
baz=90,SNR=38
Z20A Nine Sixteen R 89.65 51 P P 02 16 45.7 +2.4
baz=90,SNR=141
CFAA Coronel Fontan 89.66 126 P P 02 16 44.0 +0.5
CFAA Coronel Fontan 89.66 126 P P 02 16 44.0 +0.5
comp=Z,4.9nm,1.0s,baz=241,slow=3.9,SNR=45
VALT Mount Saint He 89.84 35 P P 02 16 45.6 +1.7
NLWA Neilton Lookou 89.85 33 *e*P P 02 16 45.7 +2.0
comp=Z,217nm,1.2s
NLWA *e*pP **pP** 02 17 03.8 +2.0
121A Cookes Peak, D 89.87 52 P P 02 16 46.5 +2.1
baz=90,SNR=63
G06A Carlson Farm, 89.96 36 P P 02 16 45.6 +1.2
ELK Elko 90.00 42 *e*P P 02 16 45.7 +0.8

KLR Kul'dur 90.03 329 ⇓*i*P P 02 16 43.0 -1.5
KLR *e*S **S** 02 27 33.0 +0.9
KLR *e*SS **SS** 02 33 36.5 +3.9
KLR pmax pmax
comp=E,70nm,1.8s
KLR pmax pmax
comp=Z,220nm,1.8s
W18A Petrified Fore 90.04 49 P P 02 16 47.6 +2.5
baz=90,SNR=25
TRQA Tornquist 90.08 134 *e*P P 02 16 45.6 +0.3
comp=Z,18nm,1.0s
TRQA *e*pP **pP** 02 17 04.4 +1.2
222A Williams Famil 90.11 53 P P 02 16 47.4 +1.9
baz=90,SNR=43
Y20A Horse Springs, 90.25 51 P P 02 16 48.6 +2.4
baz=91,SNR=158
Z21A St. Cloud Mine 90.39 52 P P 02 16 49.1 +2.3
baz=91,SNR=102
LON Longmire 90.40 35 *e*P P 02 16 47.1 +0.7
LON pmax pmax
comp=Z,117nm,1.3s
LON Longmire 90.40 35 *e*P P 02 16 47.0 +0.7
comp=Z,117nm,1.3s
HDW Hoodsport 90.42 33 P P 02 16 48.4 +2.0
MSU Marysvale 90.48 45 *e*P P 02 16 49.2 +2.0
MSU *e**PP **pP** 02 17 07.0 +1.9
MSU Marysvale 90.48 45 *e*P P 02 16 49.2 +2.0
MSU *e*pP **pP** 02 17 07.0 +1.9
WPW White Pass 90.50 35 P P 02 16 48.0 +1.1
122A Conniff Cattle 90.51 53 P P 02 16 49.8 +2.4
baz=91,SNR=20
223A Chaparral, Ant 90.53 53 P P 02 16 49.6 +2.2
baz=91,SNR=12
X20A Quemado 90.53 50 P P 02 16 49.6 +2.1
baz=91,SNR=172
Y21A Point of Rocks 90.79 51 P P 02 16 51.1 +2.4
baz=91,SNR=185
626A Big Bend Ranch 90.82 57 P P 02 16 50.2 +1.4
baz=91,SNR=74
Z22A Elephant Butte 90.85 52 P P 02 16 50.9 +1.9
baz=91,SNR=69
W20A Ramah 90.87 50 P P 02 16 51.2 +2.2
baz=91,SNR=186
425A Indio Mountain 90.88 55 P P 02 16 50.5 +1.3
baz=91,SNR=65
324A Moseley Ranch, 90.88 54 P P 02 16 50.1 +1.0
baz=91,SNR=67
PGC Sidney 90.94 32 *e*P P 02 16 50.1 +1.5
comp=Z,15nm,1.2s
PGC *e*pP **pP** 02 17 08.2 +1.5
X21A Alamocita Cree 90.96 51 ⇓P P 02 16 51.9 +2.3
baz=91,SNR=155
TXAR Lajitas Array 91.05 57 P P 02 16 51.1 +1.2
TXAR PKKPbc **PKKPbc** 02 34 13.7 +0.1
TXAR P'P' 02 42 19.3
TXAR Lajitas Array 91.05 57 P P 02 16 51.1 +1.2
comp=Z,36nm,1.1s,baz=215,slow=5.7,SNR=128
TXAR PKKPbc **PKKPbc** 02 34 13.7 +0.1
comp=Z,5.8nm,1.1s,baz=126,slow=3.2,SNR=9.8
TXAR PKPPKP **P'P'df** 02 42 19.3 -2.9
comp=Z,0.3nm,0.4s,baz=0.0,slow=2.5,SNR=4.5
TXAR LR LR 02 53 46.3
comp=Z,692nm,18.4s,baz=220,slow=33
MNTX Cornudas Mount 91.09 54 *e*P P 02 16 50.9 +0.9
comp=Z,81nm,1.3s
MNTX *e*pP **pP** 02 17 09.5 +1.6
MNTX Cornudas Mount 91.09 54 P P 02 16 51.1 +1.1
baz=91,SNR=106
DUG Dugway 91.11 44 *e*P P 02 16 50.6 +0.6
DUG *e**PP **pP** 02 17 09.0 +1.1
DUG *e* 02 20 26.7
DUG pmax pmax
comp=Z,59nm,1.3s
DUG Dugway 91.11 44 *e*P P 02 16 50.6 +0.6
comp=Z,59nm,1.3s
DUG *e*pP **pP** 02 17 09.0 +1.1
DUG *e*PP **PP** 02 20 26.7 -1.2
DUG Dugway 91.11 44 P P 02 16 51.0 +1.0
baz=92,SNR=30
526A Mary Lane Ranc 91.13 56 P P 02 16 51.6 +1.3
baz=91,SNR=64
224A Cornudas Mount 91.20 54 P P 02 16 52.0 +1.4
baz=92,SNR=59
325A Bean Ranch, Si 91.21 55 P P 02 16 51.4 +0.7
baz=92,SNR=59
Y22A Socorro 91.23 52 P P 02 16 52.5 +1.7
baz=92,SNR=94
RSO Redoubt South 91.25 12 *e*P P 02 16 49.1 -1.0
RSO *e*pP **pP** 02 17 08.5 +0.4
V20A Brimhall 91.28 49 P P 02 16 52.3 +1.4
baz=92,SNR=25
HAWA Hanford 91.31 36 *e*P P 02 16 51.7 +1.1
comp=Z,294nm,1.2s
HAWA *e*pP **pP** 02 17 10.1 +1.6
627A Terlingua Ranc 91.32 57 ⇑P P 02 16 52.7 +1.5
baz=92
GYA Guiyang 91.32 300 ⇑*i*P P 02 16 51.4 +0.2
GYA pP **pP** 02 17 11.0 +1.8
GYA sP **sP** 02 17 17.9 +1.7
GYA PP **PP** 02 20 33.3 +3.6
GYA SKS **SKSac** 02 27 17.0 -1.3
GYA S **S** 02 27 44.3 -1.0
GYA SS **SS** 02 33 55.8 +3.4
GYA pmax pmax
comp=Z,30nm,0.8s
GYA pmax pmax
comp=Z,210nm,6.5s
GYA LR LR
comp=N,6µm,19.4s
GYA LR LR
comp=E,5µm,19.0s
GYA LR LR
comp=Z,9µm,19.2s
Y22D IRIS PASSCAL I 91.34 51 P P 02 16 53.9 +2.7
baz=92,SNR=10
Q16A Castle Valley 91.35 46 P P 02 16 53.1 +2.0
baz=92,SNR=16
LENM Lemitar 91.35 51 *e*P P 02 16 52.9 +1.6
comp=Z,78nm,1.1s
LENM *e*pP **pP** 02 17 11.1 +1.9
MFID Camas Ranch 91.36 40 *e*P P 02 16 51.9 +0.9
comp=Z,128nm,1.1s
MFID *e*pP **pP** 02 17 10.3 +1.3
MFID Camas Ranch 91.36 40 P P 02 16 52.2 +1.2
baz=92,SNR=66
Z23A Rita Site, Whi 91.36 52 P P 02 16 53.1 +1.8
baz=92,SNR=36
S18A Hurst Farm, Bl 91.37 47 P P 02 16 52.5 +1.1
baz=92,SNR=23
LAZ Ladron 91.38 51 *e*P P 02 16 53.1 +1.7
comp=Z,89nm,1.4s
W21A San Fidel 91.43 50 P P 02 16 53.8 +2.1
baz=92,SNR=17
BMO Blue Mountains 91.47 38 *e*P P 02 16 51.9 +0.5
BMO pmax pmax
comp=Z,60nm,1.0s
BMO Blue Mountains 91.47 38 *e*P P 02 16 51.9 +0.5
comp=Z,60nm,1.0s
BMO *e*PP **PP** 02 20 26.9 -3.5
426A McDonald Obser 91.50 56 P P 02 16 53.1 +1.0
baz=92,SNR=74
X22A Bernardo 91.52 51 P P 02 16 54.4 +2.4
baz=92,SNR=33
527A Woodward Ranch 91.52 56 P P 02 16 53.1 +1.0
baz=92,SNR=43
TMUT Trail Mountain 91.56 45 *e*P P 02 16 53.9 +1.6
comp=Z,130nm,1.0s
SEW Seward 91.56 14 *e*P P 02 16 51.9 +0.6
comp=Z,136nm,1.3s
U20A Newcomb 91.57 49 P P 02 16 54.0 +1.8
baz=92,SNR=13
BNM Barren Site 91.58 52 *e*P P 02 16 53.7 +1.3
comp=Z,106nm,1.4s
124A Stringfield Ra 91.59 53 P P 02 16 54.0 +1.5
baz=92,SNR=55
LPM Los Pinos Moun 91.67 51 *e*P P 02 16 54.0 +1.2
comp=Z,83nm,1.2s
628A Black Gap, Mar 91.70 57 P P 02 16 54.0 +1.1
baz=92,SNR=56
225A Deer Hill, Car 91.72 54 P P 02 16 54.3 +1.3
baz=92,SNR=48
MPU Maple Canyon 91.72 44 *e*P P 02 16 54.1 +1.2
comp=Z,61nm,1.1s
MPU *e*pP **pP** 02 17 12.5 +1.6
ETW Entiat 91.72 35 P P 02 16 53.6 +1.0
V21A Milan 91.83 50 P P 02 16 55.2 +1.7
baz=92,SNR=16
Y23A Lovelace Mesa, 91.86 52 P P 02 16 55.0 +1.3
baz=92,SNR=56
SRU San Rafael 91.87 46 *e*P P 02 16 54.5 +0.9
SRU pmax pmax
comp=Z,115nm,1.2s
SRU San Rafael 91.87 46 *e*P P 02 16 54.5 +0.9
comp=Z,115nm,1.2s
SRU San Rafael 91.87 46 P P 02 16 54.8 +1.3
baz=92,SNR=75
326A Caldwell Ranch 91.89 55 P P 02 16 54.5 +0.8
baz=92,SNR=5.4
W22A Albuquerque 91.94 51 ⇑P P 02 16 56.0 +2.0
baz=92,SNR=10
P17A Butcher Ranch, 91.95 45 P P 02 16 55.5 +1.6
baz=92,SNR=29
I12A Atlanta 91.99 40 P P 02 16 55.5 +1.5
baz=92,SNR=84
Z24A Sheeppen Canyo 92.00 53 P P 02 16 55.8 +1.4
baz=92,SNR=38
427A Hayter Ranch, 92.06 56 P P 02 16 55.8 +1.3
baz=92,SNR=73
MVCO Mesa Verde 92.06 48 *e*P P 02 16 55.5 +1.0
comp=Z,30nm,1.0s
MVCO *e*pP **pP** 02 17 13.3 +0.8
MVCO *e*PP **PP** 02 20 36.0 +0.5
MVCO Mesa Verde 92.06 48 P P 02 16 55.8 +1.2
baz=92,SNR=12
GDL2 Guadalupe Moun 92.09 54 *e*P P 02 16 55.4 +0.7
comp=Z,83nm,1.1s
HVU Hansel Valley 92.10 43 *e*P P 02 16 55.6 +1.1
HVU *e**PP **pP** 02 17 13.8 +1.3
HVU *e* 02 20 34.8
HVU pmax pmax
comp=Z,206nm,1.3s
HVU Hansel Valley 92.10 43 *e*P P 02 16 55.6 +1.1
comp=Z,206nm,1.3s
HVU *e*pP **pP** 02 17 13.8 +1.3
HVU *e*PP **PP** 02 20 34.8 -0.8
X23A Hourglass Bar 92.12 51 P P 02 16 56.2 +1.3
baz=92,SNR=36
125A Gardner Draw, 92.13 54 P P 02 16 56.0 +1.2
baz=92,SNR=53
528A Cox Ranch, San 92.14 57 P P 02 16 55.9 +1.0
baz=92,SNR=47
226B Tecolote Peak, 92.17 54 P P 02 16 55.8 +0.8
baz=92,SNR=39
U21A Nageezi 92.17 49 P P 02 16 56.6 +1.6
baz=92,SNR=132
JLU Jordanelle 92.19 44 *e*P P 02 16 55.8 +0.7
comp=Z,103nm,1.4s
DAU Daniels Canyon 92.19 44 *e*P P 02 16 56.2 +1.0
DAU pmax pmax
comp=Z,62nm,1.2s
DAU Daniels Canyon 92.19 44 *e*P P 02 16 56.2 +1.0
comp=Z,62nm,1.2s
HLID Hailey 92.25 40 *e*P P 02 16 56.4 +1.3
comp=Z,92nm,1.0s
HLID *e*pP **pP** 02 17 14.8 +1.6
HLID *e*PP **PP** 02 20 34.5 -2.3
HLID Hailey 92.25 40 P P 02 16 56.5 +1.3
baz=93,SNR=87
BJI Beijing 92.26 315 P P 02 16 55.8 +0.7
BJI S **S** 02 27 55.8 +2.9
BJI SS **SS** 02 34 06.9 +1.7
BJI pmax pmax
comp=Z,62nm,1.1s
BJI pmax pmax
comp=Z,550nm,3.9s
BJI LR LR
comp=N,760nm,23.9s
BJI LR LR
comp=E,720nm,23.9s
BJI LR LR
comp=Z,1µm,33.9s
Y24A Capitan 92.28 52 P P 02 16 57.0 +1.4
baz=93,SNR=112
J13A Cove Ranch, Pi 92.28 41 P P 02 16 56.9 +1.6
baz=93,SNR=100
K14A Jones Ranch, D 92.33 42 P P 02 16 56.9 +1.3
baz=93,SNR=40
P18A Preston Nutter 92.35 45 ⇑P P 02 16 57.8 +1.9
baz=93
V22A San Miguel Ran 92.38 50 P P 02 16 57.4 +1.3
baz=93,SNR=21
Z25A Roswell 92.43 53 P P 02 16 57.7 +1.5
baz=93,SNR=67
GAMB Gambell 92.43 2 *e*P P 02 16 52.7 -2.6
comp=Z,142nm,1.4s
L15A Malad City 92.47 43 P P 02 16 57.3 +1.0
baz=93,SNR=97
CLNB Carlsbad 92.47 54 *e*P P 02 16 56.7 +0.3
comp=Z,26nm,1.5s
CLNB *e*pP **pP** 02 17 15.1 +0.7
W23A Werner Place, 92.47 51 P P 02 16 57.6 +1.1
baz=93,SNR=15
M16A Huntsville 92.50 43 ⇑P P 02 16 57.8 +1.3
baz=93
S20A Disappointment 92.51 48 P P 02 16 57.9 +1.2
baz=93,SNR=38
428A Kincaid Ranch, 92.51 56 P P 02 16 57.9 +1.3
baz=93,SNR=23
529A Stev Forest Ra 92.53 57 P P 02 16 57.3 +0.6
baz=93,SNR=32
T21A Navajo Lake 92.57 49 P P 02 16 58.4 +1.5
baz=93,SNR=18
126A Clayton Basin, 92.58 54 P P 02 16 57.7 +0.8
baz=93,SNR=22
Q19A Hogan Spring (92.58 46 P P 02 16 57.9 +1.1
baz=93,SNR=25
J14A Carey 92.61 41 ⇓P P 02 16 58.9 +2.0
baz=93
H12A Diamond D Ranc 92.62 39 P P 02 16 57.9 +1.0
baz=93,SNR=106
X24A Lazy VL Ranch, 92.63 52 ⇓P P 02 16 57.9 +0.7
baz=93,SNR=10.0
I13A Wildhorse Cree 92.64 40 P P 02 16 58.4 +1.3
baz=93,SNR=33
U22A Llaves 92.68 50 P P 02 16 58.8 +1.4
baz=93,SNR=14
R20A Redvale 92.70 47 P P 02 16 58.6 +1.1
baz=93,SNR=13
HWUT Hardware Ranch 92.72 43 *e*P P 02 16 57.6 +0.2
comp=Z,117nm,1.6s
HWUT *e*PP **PP** 02 20 39.1 -1.4
G12A Big Creek, Yel 92.72 39 ⇑P P 02 16 58.7 +1.3
baz=93
227A Bennet, Jal 92.76 55 P P 02 16 58.9 +1.2
baz=93,SNR=5.3
N17A Moffit Pass 92.76 44 P P 02 16 59.0 +1.2
baz=93,SNR=46
328A Wristen Ranch, 92.77 56 P P 02 16 58.2 +0.5
baz=93,SNR=13
V23A Ortiz Mt. (NFS 92.78 50 P P 02 16 59.8 +1.9
baz=93,SNR=35
S21A Coal Bank Pass 92.78 48 P P 02 16 59.3 +1.3
baz=93,SNR=41
K15A Arbon 92.80 42 P P 02 16 58.9 +1.2
baz=93,SNR=34
Y25A Mesa, Roswell 92.80 53 P P 02 16 59.0 +1.1
baz=93,SNR=78
CPRX Cap Rock 92.89 54 *e*P P 02 16 59.0 +0.6
comp=Z,80nm,1.0s
CPRX *e*pP **pP** 02 17 17.5 +1.1
Z26A Caprock 92.94 53 P P 02 16 59.4 +0.8
baz=93,SNR=82
H13A Challis 92.96 40 P P 02 16 59.6 +1.2
baz=93,SNR=62
PMR Palmer 92.98 13 *e*P P 02 16 58.1 +0.2
PMR pmax pmax
comp=Z,78nm,1.4s
PMR Palmer 92.98 13 *e*P P 02 16 58.1 +0.2
comp=Z,78nm,1.4s
T22A Edith 93.00 49 P P 02 17 00.1 +1.1
baz=93,SNR=16
W24A Lazy 6 Ranch, 93.01 51 P P 02 16 59.9 +0.9
baz=93,SNR=51
I14A Mackay 93.02 41 P P 02 17 00.3 +1.5
baz=93,SNR=66
429A Davenport Ranc 93.03 57 P P 02 16 59.7 +0.7
baz=93,SNR=94
L16A Fish Haven 93.04 43 P P 02 16 59.8 +0.9
baz=93,SNR=77
127A Arkansas Junct 93.06 54 P P 02 16 59.7 +0.6
baz=93,SNR=26
U23A El Rito 93.09 50 P P 02 17 00.7 +1.4
baz=93,SNR=23

WRAK **Wrangell Islan** 93.12 23 *e*P P 02 17 00.1 +1.6
comp=Z,44nm,1.1s
X25A **Clemmons Ranch** 93.15 52 P P 02 17 00.7 +1.2
baz=94,SNR=16
P19A **Cripple Cowboy** 93.15 46 P P 02 17 00.5 +1.0
baz=94,SNR=22
F12A **Elk City** 93.16 38 ⇑P P 02 17 00.3 +1.0
baz=94,SNR=114
M17A **Scullys Gap (B** 93.18 44 P P 02 17 00.6 +0.9
baz=94,SNR=12
Q20A **Ridgley Place,** 93.19 47 P P 02 17 00.7 +1.0
baz=94,SNR=28
530A **J-C Ranch, Com** 93.19 57 ⇑P P 02 17 00.7 +1.0
baz=94,SNR=25
NNA **Nana** 93.25 105 *e*P P 02 17 01.4 +1.0
comp=Z,15nm,0.9s
NNA **Nana** 93.25 105 P P 02 17 01.5 +1.1
comp=Z,5.5nm,0.3s,baz=232,slow=8.9,SNR=4.5
DIV **Divide** 93.27 15 *e*P P 02 16 59.7 +0.4
comp=Z,86nm,1.2s
J15A **Blackfoot** 93.28 41 P P 02 17 02.0 +2.1
baz=94,SNR=18
G13A **Cobalt** 93.30 39 P P 02 17 00.9 +0.9
baz=94,SNR=74
228A **UT Block 9, Go** 93.32 55 P P 02 17 01.4 +1.1
baz=94,SNR=14
SML **Sawmill** 93.34 13 *e*P P 02 16 59.8 +0.2
SML pmax pmax
comp=Z,9.0nm,1.0s
SML **Sawmill** 93.34 13 *e*P P 02 16 59.8 +0.2
comp=Z,8.9nm,1.0s
R21A **Cimarron** 93.34 48 P P 02 17 01.9 +1.5
baz=94,SNR=82
631A **Perdido Creek** 93.38 58 P P 02 17 01.0 +0.5
baz=94,SNR=38
V24A **Rampart Ranch,** 93.38 51 P P 02 17 02.1 +1.4
baz=94,SNR=39
BMRM **Bremner River** 93.39 15 *e*P P 02 17 00.3 +0.4
comp=Z,118nm,1.4s
Y26A **Elida** 93.40 53 P P 02 17 01.6 +0.9
baz=94,SNR=17
329A **Wagon Wheel Ra** 93.42 56 P P 02 17 01.5 +0.7
baz=94,SNR=31
L17A **Cokeville** 93.43 43 P P 02 17 01.4 +0.6
baz=94,SNR=19
K16A **Soda Springs** 93.44 42 P P 02 17 02.3 +1.6
baz=94,SNR=84
O19A **Miners Draw (B** 93.44 45 P P 02 17 01.7 +0.9
baz=94,SNR=21
P20A **De Beque** 93.44 46 P P 02 17 02.1 +1.3
baz=94,SNR=8.7
S22A **4UR Ranch, Cre** 93.46 48 P P 02 17 02.6 +1.5
baz=94,SNR=80
CMAR **Chiang Mai Arr** 93.47 289 P P 02 17 02.5 +1.3
CMAR PKiKP **PKiKP** 02 21 48.0 +0.9
CMAR PKKP **PKKPdf** 02 34 03.0 -2.8
CMAR PKKPbc **PKKPbc** 02 34 07.2 +0.4
CMAR P'P' 02 42 17.6
CMAR **Chiang Mai Arr** 93.47 289 P P 02 17 02.5 +1.3
comp=Z,11nm,0.9s,baz=139,slow=3.3,SNR=34
CMAR PKiKP **PKiKP** 02 21 48.0 +0.9
comp=Z,2.9nm,0.6s,baz=182,slow=0.7,SNR=6.7
CMAR PKKP **PKKPdf** 02 34 03.0 -2.8
comp=Z,0.9nm,0.3s,baz=269,slow=5.2,SNR=4.0
CMAR PKKPbc **PKKPbc** 02 34 07.2 +0.4
comp=Z,3.4nm,0.8s,baz=290,slow=4.0,SNR=10.0
CMAR PKPPKP **P'P'df** 02 42 17.6 -1.2
comp=Z,0.8nm,0.3s,baz=286,slow=3.5,SNR=4.1
CMAR LR LR 02 59 06.2
comp=Z,289nm,20.8s,baz=150,slow=36
732A **Laxson Ranch,** 93.48 59 P P 02 17 01.6 +0.6
baz=94,SNR=17
H14A **Leadore** 93.49 40 P P 02 17 02.3 +1.3
baz=94,SNR=92
N18A **Larsen Ranch,** 93.50 45 P P 02 17 01.8 +0.8
baz=94,SNR=29
Z27A **Tatum** 93.51 54 P P 02 17 01.6 +0.4
baz=94,SNR=27
M18A **Lyman** 93.52 44 ⇓P P 02 17 01.7 +0.5
baz=94,SNR=29
Q21A **Lamborn Mesa,** 93.59 47 P P 02 17 02.8 +1.3
baz=94,SNR=16
T23A **Casias Ranch,** 93.59 49 P P 02 17 03.1 +1.4
baz=94,SNR=14
430A **Baggett Ranch,** 93.60 57 ⇓P P 02 16 57.8 -3.8
baz=94,SNR=12
I15A **Monteview** 93.62 41 P P 02 17 03.7 +2.3
baz=94,SNR=7.2
CMMT **Chiang Mai** 93.64 289 P P 02 17 04.2 +2.2
comp=Z,25nm,1.2s,comp=Z,556nm
CHTO **Chiang Mai** 93.64 289 *e*P P 02 17 02.9 +0.9
CHTO pmax pmax
comp=Z,19nm,0.9s
CHTO **Chiang Mai** 93.64 289 *e*P P 02 17 02.9 +0.9
comp=Z,19nm,0.9s
CHTO **Chiang Mai** 93.64 289 P P 02 17 02.6 +0.6
SNR=8.5
CHTO **Chiang Mai** 93.64 289 P P 02 17 03.5 +1.5
comp=Z,28nm,1.3s,comp=Z,539nm
128A **Castleberry Fa** 93.66 55 P P 02 17 02.6 +0.8
baz=94,SNR=28
W25A **X Bar L Ranch,** 93.66 52 P P 02 17 02.6 +0.7
baz=94,SNR=78
XAN **Xi'an** 93.68 307 P P 02 17 02.8 +0.9
XAN pP **pP** 02 17 19.0 -0.8
XAN PP **PP** 02 20 50.4 +2.4
XAN SKS **SKSac** 02 27 31.4 +0.5
XAN S **ScS** 02 28 10.9 +3.6
XAN pmax pmax
comp=Z,10.0nm,1.3s
XAN pmax pmax
comp=Z,70nm,4.1s
XAN LR LR
comp=N,360nm,20.7s
XAN LR LR
comp=E,280nm,22.2s
XAN LR LR
comp=Z,310nm,23.3s
KMI **Kunming** 93.68 297 P P 02 17 03.3 +1.0
KMI pP **pP** 02 17 21.8 +1.5
KMI sP **sP** 02 17 28.8 +1.6
KMI PP **PP** 02 20 49.8 +1.4
KMI SKS **SKSac** 02 27 30.8 -0.9
KMI S **S** 02 28 04.1 -2.5
KMI sS **sS** 02 28 34.9 -2.4
KMI pmax pmax
comp=Z,39nm,1.4s
KMI pmax pmax
comp=Z,390nm,4.1s
KMI LR LR
comp=N,450nm,17.8s
KMI LR LR
comp=E,580nm,19.0s
KMI LR LR
comp=Z,840nm,20.2s
F13A **Darby** 93.68 39 P P 02 17 02.3 +0.6
baz=94,SNR=64
AHID **Auburn Hatcher** 93.69 42 *e*P P 02 17 02.7 +0.8
comp=Z,184nm,1.2s
X26A **CR and CF Fran** 93.75 52 P P 02 17 03.5 +1.2
baz=94,SNR=13
U24A **Moreno Valley** 93.75 50 ⇓P P 02 17 04.0 +1.5
baz=94
N19A **John Jarvie Ra** 93.75 45 P P 02 17 02.7 +0.5
baz=94,SNR=15
NEW **Newport** 93.78 36 *e*P P 02 17 02.0 0.0
comp=Z,16nm,1.2s
NEW **Newport** 93.78 36 P P 02 17 02.3 +0.4
baz=94,SNR=7.8
R22A **Saguache, Gunn** 93.78 48 P P 02 17 04.0 +1.5
baz=94,SNR=21
K17A **Gardner Place,** 93.78 43 P P 02 17 03.8 +1.4
baz=94,SNR=81
531A **Rocksprings** 93.79 58 P P 02 17 03.2 +0.8
baz=94,SNR=45
229A **Bryant Ranch,** 93.80 56 P P 02 17 03.3 +0.8
baz=94,SNR=8.3
G14A **Jackson** 93.83 39 P P 02 17 03.5 +1.0
baz=94,SNR=22
L18A **Fontenelle, Gr** 93.83 44 ⇑P P 02 17 03.7 +1.1
baz=94,SNR=12
Y27A **Causey** 93.85 53 ⇑P P 02 17 03.4 +0.7
baz=94,SNR=62
V25A **Rancho No Teng** 93.89 51 P P 02 17 03.9 +0.9
baz=94,SNR=52
O20A **White River Ci** 93.90 46 P P 02 17 03.8 +0.9
baz=94,SNR=22

H15A **Lima** 93.90 40 P P 02 17 04.2 +1.4
baz=94,SNR=36
RRI2 **Red Ridge** 93.90 42 *e*P P 02 17 04.0 +1.0
comp=Z,153nm,1.3s
MCMT **McKenzie Canyo** 93.91 40 *e*P P 02 17 04.0 +1.1
comp=Z,44nm,1.1s
MCMT *e*pP **pP** 02 17 22.5 +1.5
C11A **Tepee Creek (N** 93.95 36 P P 02 17 03.7 +0.9
baz=94,SNR=27
330A **Mertzon** 93.97 56 P P 02 17 03.5 +0.2
baz=94,SNR=12
431A **Sonora** 94.01 57 P P 02 17 03.8 +0.3
baz=94,SNR=11
632A **Uvalde** 94.02 59 P P 02 17 04.2 +0.7
baz=94,SNR=23
Q22A **Crested Butte,** 94.03 47 P P 02 17 04.9 +1.2
baz=94,SNR=43
P21A **Newcastle** 94.06 47 P P 02 17 04.7 +0.9
baz=94,SNR=12
W26A **Owens Ranch, T** 94.07 52 P P 02 17 04.4 +0.7
baz=94,SNR=16
Z28A **Tucker Farm, M** 94.08 54 P P 02 17 04.3 +0.5
baz=94,SNR=17
129A **Stewart Farms,** 94.11 55 P P 02 17 04.6 +0.7
baz=94,SNR=29
M19A **Rock Springs** 94.12 44 ⇑P P 02 17 04.8 +0.9
baz=94,SNR=8.9
I16A **Newdale** 94.12 41 P P 02 17 05.5 +1.7
baz=94,SNR=81
DCID1 **Drake Creek** 94.13 42 *e*P P 02 17 05.3 +1.4
comp=Z,140nm,1.3s
E13A **Victor** 94.17 38 ⇑P P 02 17 04.4 +0.5
baz=94,SNR=9.0
MSTX **Muleshoe** 94.17 53 P P 02 17 04.9 +0.7
baz=94,SNR=51
SMCO **Snowmass** 94.17 47 *e*P P 02 17 05.1 +0.6
comp=Z,51nm,1.0s
SMCO *e*pP **pP** 02 17 23.6 +1.2
SMCO *e*PP **PP** 02 20 50.2 -1.9
REDW **Red Top Meadow** 94.19 42 *e*P P 02 17 05.1 +0.9
comp=Z,2.2nm,1.2s
REDW *e*pP **pP** 02 17 23.3 +1.1
TPAW **Teton Pass** 94.20 42 *e*P P 02 17 05.4 +1.1
comp=Z,123nm,1.2s
F14A **Wisdom** 94.22 39 ⇓P P 02 17 05.9 +1.6
baz=95
K18A **Toltan Ranch,** 94.24 43 P P 02 17 05.7 +1.2
baz=95,SNR=87
532A **Rocksprings** 94.25 58 P P 02 17 05.3 +0.7
baz=95,SNR=43
230A **Sterling City** 94.26 56 P P 02 17 04.9 +0.3
baz=95,SNR=16
T24A **Torres, Weston** 94.27 50 P P 02 17 06.5 +1.7
baz=95,SNR=9.9
J17A **Brown Place, J** 94.27 42 P P 02 17 05.9 +1.3
baz=95,SNR=91
C12B **Nageli Ranch,** 94.27 37 P P 02 17 05.1 +0.8
baz=95,SNR=6.1
N20A **Spence Gulch,** 94.29 45 P P 02 17 05.8 +1.1
baz=95,SNR=19
X27A **F and S Farms,** 94.30 53 P P 02 17 05.8 +1.0
baz=95,SNR=25
SNOW **Snow King Moun** 94.30 42 *e*P P 02 17 05.8 +1.1
comp=Z,156nm,1.0s
SNOW *e*pP **pP** 02 17 24.3 +1.5
G15A **Dillon** 94.32 40 P P 02 17 05.8 +1.1
baz=95,SNR=72
ATAH **Atahualpa** 94.33 101 P P 02 17 08.4 +2.5
ATAH **Atahualpa** 94.33 101 P P 02 17 08.4 +2.5
comp=Z,9.7nm,0.9s,baz=253,slow=4.4,SNR=13
U25A **Circle Dot Ran** 94.34 51 P P 02 17 06.0 +0.9
baz=95,SNR=44
L19A **Farson** 94.34 44 P P 02 17 05.9 +1.0
baz=95,SNR=46
R23A **Moffat** 94.36 49 P P 02 17 06.5 +1.3
baz=95,SNR=26
DLMT **Dillon** 94.38 40 *e*P P 02 17 05.8 +0.8
comp=Z,88nm,1.2s
DLMT *e*pP **pP** 02 17 24.3 +1.4
DLMT *e*PP **PP** 02 20 49.9 -3.5
TNA **Tin City** 94.40 4 *e*P P 02 17 05.8 +1.5
comp=Z,108nm,1.3s
TNA *e*pP **pP** 02 17 23.7 +1.4
D13A **Huson** 94.42 38 P P 02 17 06.3 +1.3
baz=95,SNR=16
V26A **Tequesquite Ra** 94.44 51 ⇑P P 02 17 06.1 +0.7
baz=95,SNR=13
IMW **Indian Meadow** 94.45 42 *e*P P 02 17 06.7 +1.2
comp=Z,110nm,1.1s
IMW *e*pP **pP** 02 17 24.8 +1.3
331A **San Angelo** 94.47 57 P P 02 17 05.7 +0.2
baz=95,SNR=9.1
TRF **Thorofare Moun** 94.47 12 *e*P P 02 17 03.8 -1.1
comp=Z,59nm,1.1s
TRF *e*pP **pP** 02 17 21.9 -1.0
S24A **Houchin Ranch,** 94.47 49 P P 02 17 06.9 +1.2
baz=95,SNR=22
MOOW **Moose Ponds** 94.48 42 *e*P P 02 17 06.3 +0.8
comp=Z,62nm,1.4s
MOOW *e*PP **PP** 02 20 51.2 -3.1
LOHW **Long Hollow** 94.48 42 *e*P P 02 17 06.2 +0.7
comp=Z,84nm,1.2s
LOHW *e*pP **pP** 02 17 24.6 +1.0
JCT **Junction City** 94.50 58 *e*P P 02 17 05.9 +0.2
JCT pmax pmax
comp=Z,47nm,1.2s
JCT **Junction City** 94.50 58 *e*P P 02 17 05.9 +0.2
comp=Z,47nm,1.2s
JCT **Junction City** 94.50 58 P P 02 17 06.1 +0.4
baz=95,SNR=15
Y28A **McKinney Farm,** 94.50 54 P P 02 17 06.2 +0.4
baz=95,SNR=16
E14A **Clinton** 94.53 39 ⇑P P 02 17 06.5 +0.9
baz=95,SNR=19
P22A **Eagle** 94.54 47 P P 02 17 06.9 +1.0
baz=95,SNR=16
MSO **Missoula** 94.54 38 *e*P P 02 17 05.5 -0.1
comp=Z,26nm,1.3s
MSO *e*pP **pP** 02 17 23.5 -0.1
MSO *e*PP **PP** 02 20 51.3 -3.2
MSO **Missoula** 94.54 38 ⇑P P 02 17 05.9 +0.3
baz=95,SNR=10
W27A **Bowe Ranch, En** 94.54 52 P P 02 17 06.5 +0.6
baz=95,SNR=26
Z29A **Hungry Hill Ra** 94.55 54 P P 02 17 06.2 +0.2
baz=95,SNR=34
SKAG **Skagway** 94.58 20 *e*P P 02 17 06.0 +0.7
comp=Z,78nm,1.6s
SKAG *e*pP **pP** 02 17 25.4 +2.2
J18A **Kendall Valley** 94.59 43 P P 02 17 07.1 +1.0
baz=95,SNR=202
BW06 **Boulder Array** 94.61 43 P P 02 17 06.6 +0.4
baz=95,SNR=43
PDAR **Pinedale Array** 94.61 43 P P 02 17 06.5 +0.3
PDAR PP **PP** 02 20 53.5 -1.8
PDAR PKKPbc **PKKPbc** 02 34 04.2 -1.0
PDAR P'P' 02 42 18.8
PDAR **Pinedale Array** 94.61 43 P P 02 17 06.5 +0.3
comp=Z,26nm,0.9s,baz=210,slow=3.5,SNR=130
PDAR PP **PP** 02 20 53.5 -1.8
comp=Z,1.9nm,1.1s,baz=246,slow=6.3,SNR=4.3
PDAR PKKPbc **PKKPbc** 02 34 04.2 -1.0
comp=Z,7.4nm,0.8s,baz=82,slow=4.5,SNR=36
PDAR PKPPKP **P'P'df** 02 42 18.8 +4.4
comp=Z,3.2nm,1.1s,baz=103,slow=3.2,SNR=11
PDAR LR LR 02 51 45.9
comp=Z,2μm,21.6s,baz=231,slow=30
SEY **Seymchan** 94.63 347 *c i*P P 02 17 05.4 0.0
I17A **Pilgrim Ck.** 94.68 42 P P 02 17 08.2 +1.7
baz=95,SNR=42
M20A **Sweetwater, Wa** 94.71 45 P P 02 17 07.7 +1.1
baz=95,SNR=19
N21A **Black Mountain** 94.71 46 P P 02 17 07.8 +1.1
baz=95,SNR=28
432A **Menard** 94.71 57 P P 02 17 06.9 +0.2
baz=95,SNR=27
QLMT **Earthquake Lak** 94.72 41 *e*P P 02 17 07.8 +1.2
comp=Z,17nm,1.1s
BSMT **Bassoo Peak** 94.72 37 *e*P P 02 17 06.3 -0.2
comp=Z,20nm,1.1s
BSMT *e*PP **PP** 02 20 53.1 -2.9
F15A **Butte** 94.73 39 P P 02 17 07.4 +0.8
baz=95,SNR=14
T25A **Trinidad** 94.73 50 P P 02 17 07.8 +0.9
baz=95,SNR=14
130A **Snyder** 94.74 55 P P 02 17 07.2 +0.4
baz=95,SNR=16

LRM **Limekiln Ridge** 94.74 39 *e*P P 02 17 07.1 +0.4
comp=Z,265nm,1.2s
LRM *e*pP **pP** 02 17 25.7 +1.0
LRM *e*PP **PP** 02 20 54.9 -1.4
G16A **Moss Hill, Enn** 94.75 40 P P 02 17 07.7 +1.0
baz=95,SNR=48
H16A **Russell Place,** 94.75 41 P P 02 17 08.5 +1.8
baz=95,SNR=67
Q23A **Hartsel** 94.75 48 P P 02 17 08.7 +1.6
baz=95,SNR=6.0
U26A **Atchley Ranch,** 94.78 51 P P 02 17 07.8 +0.7
baz=95,SNR=32
R24A **Sanders Place,** 94.86 49 P P 02 17 08.5 +1.1
baz=95,SNR=18
X28A **Dimmitt** 94.86 53 P P 02 17 08.0 +0.7
baz=95,SNR=12
231A **Bronte** 94.87 56 P P 02 17 07.5 +0.1
baz=95,SNR=18
Y29A **Porterfield Fa** 94.89 54 P P 02 17 08.1 +0.6
baz=95,SNR=57
YMR **Madison River** 94.89 41 *e*P P 02 17 09.0 +1.6
comp=Z,145nm,1.2s
YMR *e*PP **PP** 02 20 56.4 -1.1
L20A **Wamsutter** 94.91 44 P P 02 17 08.9 +1.4
baz=95,SNR=24
JTMT **Jette** 94.92 37 *e*P P 02 17 06.6 -0.7
comp=Z,7.4nm,1.1s
JTMT *e*pP **pP** 02 17 25.2 -0.1
SWMT **Swartz Lake** 94.93 37 *e*P P 02 17 07.0 -0.4
comp=Z,10nm,1.2s
D14A **Greenough** 94.93 38 P P 02 17 07.5 +0.1
baz=95,SNR=14
H17A **Grant Village** 94.96 41 P P 02 17 09.8 +2.1
baz=95,SNR=41
CHMT **Chamberlain Mo** 94.96 38 *e*P P 02 17 08.0 +0.3
comp=Z,49nm,1.6s
MCK **McKinley** 94.97 12 *e*P P 02 17 06.8 -0.2
MCK *e*PP **pP** 02 17 25.3 +0.3
MCK pmax pmax
comp=Z,40nm,1.1s
MCK **McKinley** 94.97 12 *e*P P 02 17 06.8 -0.2
comp=Z,40nm,1.1s
MCK *e*pP **pP** 02 17 25.3 +0.3
PAX **Paxson** 94.98 14 *e*P P 02 17 07.1 -0.1
PAX *e*PP **pP** 02 17 25.2 +0.1
PAX pmax pmax
comp=Z,32nm,1.2s
PAX **Paxson** 94.98 14 *e*P P 02 17 07.1 -0.1
comp=Z,32nm,1.2s
PAX *e*pP **pP** 02 17 25.2 +0.1
Z30A **Sanderson Ranc** 94.98 55 P P 02 17 08.0 +0.1
baz=95,SNR=28
O22A **Kremmling** 94.99 47 P P 02 17 09.0 +0.9
baz=95,SNR=31
S25A **Robets Cordova** 95.00 50 P P 02 17 08.9 +0.9
baz=95,SNR=24
E15A **Deer Lodge** 95.00 39 P P 02 17 08.2 +0.5
baz=95,SNR=23
332A **Millersview** 95.01 57 P P 02 17 08.3 +0.3
baz=95,SNR=18
P23A **Jefferson** 95.01 48 P P 02 17 09.8 +1.6
baz=95,SNR=9.4
SLMT **Seeley Lake** 95.03 38 *e*P P 02 17 07.6 -0.3
comp=Z,23nm,1.2s
SLMT *e*PP **PP** 02 20 54.7 -3.7
K19A **Absolon Red Bu** 95.07 43 P P 02 17 08.6 +0.4
baz=95,SNR=9.4
V27A **Dan Oppiter Fa** 95.07 52 P P 02 17 09.3 +1.0
baz=95,SNR=26
BOZ **Bozeman (W)** 95.09 40 *e*P P 02 17 09.0 +0.8
BOZ *e*PP **pP** 02 17 27.3 +1.1
BOZ pmax pmax
comp=Z,72nm,1.2s
BOZ **Bozeman (W)** 95.09 40 *e*P P 02 17 09.0 +0.8
comp=Z,72nm,1.2s
BOZ *e*pP **pP** 02 17 27.3 +1.1
BOZ **Bozeman (W)** 95.09 40 P P 02 17 09.2 +1.0
baz=96,SNR=68
LKWY **Lake** 95.16 41 *e*P P 02 17 10.7 +2.1
LKWY *e*PP **pP** 02 17 29.2 +2.5
LKWY pmax pmax
comp=Z,82nm,1.1s
LKWY **Lake** 95.16 41 *e*P P 02 17 10.7 +2.1
comp=Z,82nm,1.1s
LKWY *e*pP **pP** 02 17 29.2 +2.5
LKWY *e*PP PP 02 20 53.0 -6.6
X29A **Tulia** 95.17 53 P P 02 17 09.4 +0.7
baz=96,SNR=30
F16A **Kennard Place,** 95.18 40 P P 02 17 09.8 +1.3
baz=96,SNR=11
131A **Roby** 95.19 56 P P 02 17 09.2 +0.4
baz=96,SNR=14
J19A **Crowheart** 95.19 43 ⇓P P 02 17 09.5 +0.8
baz=96,SNR=46
Q24A **Divide** 95.23 48 P P 02 17 10.8 +1.6
baz=96,SNR=14
K20A **Yellowstone Ra** 95.28 44 P P 02 17 09.4 +0.3
baz=96,SNR=26
M21A **Separation Pea** 95.28 45 P P 02 17 09.9 +0.6
baz=96,SNR=52
T26A **Comanche Natio** 95.30 50 P P 02 17 09.9 +0.5
baz=96,SNR=20
232A **Coleman** 95.33 57 P P 02 17 10.0 +0.5
baz=96,SNR=8.0
R25A **Fountain Ranch** 95.36 49 P P 02 17 10.6 +1.0
baz=96,SNR=8.7
ISCO **Idaho Springs** 95.39 47 *e*P P 02 17 10.4 +0.5
ISCO pmax pmax
comp=Z,25nm,1.4s
ISCO **Idaho Springs** 95.39 47 *e*P P 02 17 10.3 +0.5
comp=Z,25nm,1.4s
N22A **Wattenberg Ran** 95.40 46 P P 02 17 10.9 +1.0
baz=96,SNR=21
G17A **Pierce Place,** 95.41 41 ⇓P P 02 17 11.5 +1.8
baz=96,SNR=8.0
AMTX **Amarillo** 95.41 53 *e*P P 02 17 10.3 +0.4
comp=Z,79nm,1.4s
AMTX *e*pP **pP** 02 17 28.3 +0.5
AMTX **Amarillo** 95.41 53 P P 02 17 10.1 +0.3
baz=96,SNR=13
O23A **Lake Granby, G** 95.42 47 P P 02 17 11.2 +1.1
baz=96,SNR=24
U27A **Thompson Grove** 95.43 51 P P 02 17 10.3 +0.3
baz=96,SNR=14
D15A **Lincoln** 95.44 38 ⇑P P 02 17 10.7 +1.0
baz=96,SNR=18
Y30A **Stafford Cattl** 95.45 54 P P 02 17 10.4 +0.4
baz=96,SNR=9.1
DLBC **Dease Lake** 95.48 23 *e*P P 02 17 10.5 +1.0
L21A **Rawlins** 95.48 45 ⇓P P 02 17 10.9 +0.7
baz=96,SNR=20
V28A **Channing** 95.49 52 ⇑P P 02 17 11.4 +1.2
baz=96,SNR=6.4
W29A **Amraillo** 95.56 53 P P 02 17 11.7 +1.1
baz=96,SNR=7.8
A13A **Flathead Natio** 95.59 36 ⇑P P 02 17 11.1 +0.8
baz=96
E16A **East Helena** 95.60 39 P P 02 17 11.2 +0.8
baz=96,SNR=12
HHC **Hu-ho-hao-te** 95.61 314 *e*P P 02 17 10.9 +0.3
HHC pP **pP** 02 17 28.0 -0.6
HHC sP **sP** 02 17 34.9 -0.7
HHC PP **PP** 02 21 04.6 +1.6
HHC SKS **SKSac** 02 27 41.3 +0.2
HHC S **S** 02 28 20.4 -2.1
HHC SS **SS** 02 34 54.9 +1.7
HHC pmax pmax
comp=Z,53nm,0.7s
HHC pmax pmax
comp=Z,320nm,6.4s
HHC LR LR
comp=N,2μm,18.8s
HHC LR LR
comp=E,2μm,19.6s
HHC LR LR
comp=Z,4μm,19.1s
HRY **Holter Researc** 95.62 39 *e*P P 02 17 11.2 +0.7
comp=Z,41nm,1.4s
S26A **Kim** 95.62 50 ⇑P P 02 17 11.4 +0.5
baz=96,SNR=18
M22A **Cedar Creek Ra** 95.65 46 P P 02 17 11.8 +0.9
baz=96,SNR=28
H18A **Shoshone NF, C** 95.65 42 ⇑P P 02 17 12.2 +1.4
baz=96,SNR=34
I19A **Meeteetse** 95.67 42 P P 02 17 12.1 +1.2
baz=96,SNR=48
Z31A **Sharp Cattle R** 95.70 55 P P 02 17 11.4 +0.3

baz=96,SNR=16
ABTX Abilene, Hawle 95.71 56 P P 02 17 11.6 +0.4
baz=96,SNR=11
X30A Coker Ranch, T 95.76 54 P P 02 17 12.3 +0.9
baz=96,SNR=11
N23A Red Feather La 95.78 46 P P 02 17 12.6 +1.0
baz=96,SNR=19
CD2 Chengdu 95.79 302 ⇓P P 02 17 13.5 +1.9
CD2 pP **pP** 02 17 30.3 +0.7
CD2 sP **sP** 02 17 36.8 +0.2
CD2 PP **PP** 02 21 08.6 +4.1
CD2 SKS **SKSac** 02 27 43.4 +1.0
CD2 S **S** 02 28 23.6 -0.8
CD2 sS **sS** 02 28 52.4 -2.7
CD2 SS **SS** 02 34 59.0 +3.0
CD2 pmax pmax
comp=Z,60nm,0.7s
CD2 pmax pmax
comp=Z,240nm,4.3s
CD2 LR LR
comp=N,590nm,16.2s
CD2 LR LR
comp=E,860nm,21.1s
CD2 LR LR
comp=Z,1μm,23.7s
F17A Fitzpatrick Pl 95.80 40 P P 02 17 12.8 +1.4
baz=96,SNR=27
Q25A Bedland, Calha 95.80 49 P P 02 17 12.6 +0.9
baz=96,SNR=13
J20A Shoshoni 95.83 43 P P 02 17 12.7 +1.1
baz=96,SNR=31
T27A Campo 95.83 51 P P 02 17 12.2 +0.4
baz=96,SNR=9.6
C15A Salmond Ranch, 95.83 38 P P 02 17 11.8 +0.3
baz=96,SNR=13
B14A Marquette Ranc 95.84 37 P P 02 17 12.2 +0.7
baz=96,SNR=8.7
DOT Dot Lake 95.88 14 *e*P P 02 17 11.4 +0.2
comp=Z,35nm,1.1s
DOT *e*pP **pP** 02 17 29.5 +0.3
O24A Longmont 95.91 47 ⇑P P 02 17 13.5 +1.4
baz=96,SNR=6.5
K21A Alcova 95.93 44 P P 02 17 12.8 +0.7
baz=96,SNR=44
WALA Waterton Lakes 95.93 36 *e*P P 02 17 11.9 0.0
comp=Z,0.6nm,0.9s
Y31A Rekieta Farm, 95.94 55 P P 02 17 12.6 +0.4
baz=96,SNR=14
R26A Arlington 96.00 49 ⇑P P 02 17 13.1 +0.6
baz=96,SNR=18
E17A Martinsdale 96.01 40 P P 02 17 13.2 +0.8
baz=96,SNR=11
H19A Powell 96.04 42 P P 02 17 14.2 +1.6
baz=96,SNR=8.9
G18A Lazy EL Ranch, 96.08 41 P P 02 17 14.3 +1.6
baz=96,SNR=24
L22A Ellis Ranch, M 96.10 45 P P 02 17 14.2 +1.3
baz=96,SNR=40
A14A Double T Ranch 96.13 37 P P 02 17 13.2 +0.4
baz=96,SNR=15
I20A Worland 96.14 43 P P 02 17 13.9 +1.0
baz=96,SNR=24
RLMT Red Lodge 96.14 41 *e*P P 02 17 13.8 +0.8
comp=Z,32nm,1.1s
RLMT *e*pP **pP** 02 17 32.3 +1.2
RLMT Red Lodge 96.14 41 P P 02 17 14.3 +1.2
baz=96,SNR=26
P25A Willow Gulch B 96.17 48 P P 02 17 14.7 +1.4
baz=96,SNR=19
Z32A Haskell 96.17 55 ⇑P P 02 17 14.2 +0.9
baz=96,SNR=31
J21A Lysite 96.21 44 P P 02 17 14.4 +1.0
baz=97,SNR=48
COLA College 96.21 12 *e*P P 02 17 12.2 -0.4
COLA pmax pmax
comp=Z,38nm,1.1s
COLA College 96.21 12 *e*P P 02 17 12.2 -0.4
comp=Z,38nm,1.1s
M23A Laramie 96.23 46 ⇓P P 02 17 15.0 +1.4
baz=97
Q26A Hugo 96.28 49 ⇑P P 02 17 15.1 +1.3
baz=97,SNR=10
GCMT Greycliff 96.29 41 *e*P P 02 17 15.1 +1.5
comp=Z,65nm,1.5s
ILAR Eielson Array 96.30 13 P P 02 17 12.7 -0.4
ILAR PP **PP** 02 21 03.5 -4.2
ILAR PKiKP **PKiKP** 02 21 50.5 -0.1
ILAR P'P' 02 42 13.1
ILAR Eielson Array 96.30 13 P P 02 17 12.7 -0.4
comp=Z,5.5nm,0.8s,baz=222,slow=5.5,SNR=56
ILAR PP **PP** 02 21 03.5 -4.2
comp=Z,3.4nm,1.0s,baz=218,slow=7.6,SNR=4.8
ILAR PKiKP **PKiKP** 02 21 50.5 -0.1
comp=Z,1.8nm,0.9s,baz=318,slow=3.0,SNR=7.6
ILAR PKPPKP **P'P'df** 02 42 13.1 +4.2
comp=Z,0.4nm,0.8s,baz=296,slow=3.4,SNR=4.8
ILAR LR LR 03 02 46.5
comp=Z,552nm,18.2s,baz=22,slow=37
PHWY Pilot Hill 96.31 46 *e*P P 02 17 14.2 +0.2
comp=Z,5.0nm,0.6s
C16A Fuhringer Ranc 96.32 38 P P 02 17 13.9 +0.3
baz=97,SNR=15
F18A Big Timber 96.33 41 P P 02 17 15.2 +1.4
baz=97,SNR=14
K22A Casper 96.38 45 P P 02 17 15.1 +0.9
baz=97,SNR=33
N24A Carr 96.42 47 P P 02 17 16.1 +1.7
baz=97,SNR=9.9
R27A Eads 96.43 50 ⇓P P 02 17 15.0 +0.6
baz=97,SNR=13
X31A McDonald Ranch 96.48 54 P P 02 17 14.9 +0.3
baz=97,SNR=9.1
A15A Johnson Ranch, 96.50 37 ⇑P P 02 17 14.9 +0.5
baz=97,SNR=13
D17A Six Diamond Ra 96.51 39 P P 02 17 15.7 +1.0
baz=97,SNR=19
H20A Greybull 96.52 42 P P 02 17 15.1 +0.5
baz=97,SNR=21
O25A Wiggins 96.52 48 ⇓P P 02 17 15.3 +0.4
baz=97
Y32A R-V Farms, Ver 96.55 55 P P 02 17 15.6 +0.6
baz=97,SNR=24
I21A Big Trails, Te 96.56 43 P P 02 17 15.4 +0.5
baz=97,SNR=46
V30A Spur Ranch, Mi 96.56 53 P P 02 17 16.5 +1.4
baz=97,SNR=23
L23A Garrett 96.60 45 P P 02 17 16.0 +0.8
baz=97,SNR=25
B16A M & M Farms, S 96.70 38 P P 02 17 15.7 +0.3
baz=97,SNR=6.2
P26A Davis Ranch, A 96.73 48 ⇓P P 02 17 16.9 +1.1
baz=97,SNR=7.1
F19A Roth Farm, Mol 96.74 41 P P 02 17 16.6 +0.9
baz=97,SNR=16
C17A Wharram Farm, 96.75 39 P P 02 17 16.2 +0.6
baz=97,SNR=32
W31A Holland Ranch, 96.79 54 P P 02 17 16.6 +0.6
baz=97,SNR=13
M24A Cheyenne 96.80 46 ⇑P P 02 17 17.3 +1.2
baz=97,SNR=12
G20A Bridger 96.81 42 P P 02 17 17.1 +1.1
baz=97,SNR=9.4
J22A Midwest 96.83 44 P P 02 17 16.8 +0.6
baz=97,SNR=51
T29A Hugoton 96.86 51 P P 02 17 17.2 +0.9
baz=97,SNR=5.6
KSCO Kaye Shedlock' 96.92 49 ⇓P P 02 17 17.9 +1.3
baz=97
JTS JuntasAbangare 96.93 82 *e*P P 02 17 18.6 +1.4
comp=Z,20nm,1.4s
K23A Bowen Ranch, D 96.99 45 ⇓P Pdif 02 17 18.0
baz=97,SNR=23
L24A Wheatland 97.04 46 P Pdif 02 17 18.9 +1.7
baz=97,SNR=13
I22A 9 Mile Ranch, 97.09 43 ⇑P Pdif 02 17 18.3 +0.9
baz=97,SNR=34
B17A L&G Farms, Che 97.12 38 P Pdif 02 17 17.7 +0.4
baz=98,SNR=6.9
V31A Spring Creek L 97.16 53 P Pdif 02 17 19.2 +1.4
baz=98,SNR=12
H21A Big Horn, Sher 97.16 43 ⇑P Pdif 02 17 18.7 +1.0
baz=98,SNR=11
F20A Billings 97.17 41 ⇑P Pdif 02 17 18.8 +1.1
baz=98,SNR=6.1
E19A Rath Farm, Rou 97.18 40 P Pdif 02 17 18.8 +1.1
baz=98,SNR=15
BILL Bilibino 97.39 354 *e*P Pdif 02 17 17.9 0.0
BILL pmax pmax
comp=Z,49nm,1.5s
BILL Bilibino 97.39 354 *e*P Pdif 02 17 17.9 0.0
comp=Z,49nm,1.5s
G21A Lodge Grass 97.40 42 P Pdif 02 17 19.6 +0.9
baz=98,SNR=8.0
K24A Anderson Ranch 97.48 45 ⇓P Pdif 02 17 20.3 +1.1
baz=98
EGAK Eagle 97.50 15 *e*P Pdif 02 17 18.7 +0.3
comp=Z,15nm,1.0s
EGAK *e*PP **PP** 02 21 12.4 -4.4
D19A Cripps Ranch, 97.53 40 P Pdif 02 17 20.6 +1.4
baz=98,SNR=5.3
EGMT Eagleton 97.53 39 *e*P Pdif 02 17 19.7 +0.5
comp=Z,16nm,1.0s
EGMT *e*pP pP 02 17 38.0 +0.8
EGMT *e*PP **PP** 02 21 12.5 -5.2
H22A Clearmont 97.56 43 P Pdif 02 17 20.9 +1.4
baz=98,SNR=6.3
E20A Meyer Farm, Mu 97.58 41 ⇑P Pdif 02 17 21.0 +1.5
baz=98
O27A Beecher Island 97.63 48 ⇑P Pdif 02 17 21.2 +1.3
baz=98
B18A Beardsley Farm 97.73 38 ⇑P Pdif 02 17 20.9 +0.8
baz=98,SNR=12
C19A Slack Wire Ran 97.76 39 P Pdif 02 17 21.5 +1.3
baz=98,SNR=17
J24A Dixon Ranch, L 97.90 45 P Pdif 02 17 22.2 +1.2
baz=98,SNR=12
D20A Manuel Ranch, 97.90 40 P Pdif 02 17 22.1 +1.3
baz=98,SNR=7.5
G22A Birney 97.93 42 ⇑P Pdif 02 17 21.8 +0.7
baz=98,SNR=5.0
T31A Randall Ranch, 97.94 52 P Pdif 02 17 22.4 +1.2
baz=98,SNR=7.7
COLD Coldfoot 97.96 10 *e*P Pdif 02 17 20.9 +0.4
comp=Z,17nm,1.2s
A18A Metzger Ranch, 98.00 38 P Pdif 02 17 21.9 +0.7
baz=98,SNR=7.4
K25A Mack Ranch, Ha 98.01 46 ⇑P Pdif 02 17 22.2 +0.6
baz=98,SNR=7.4
I24A Kuemmerle Ranc 98.20 44 P Pdif 02 17 23.2 +0.9
baz=98,SNR=7.5
LPAZ La Paz 98.21 114 *e*P Pdif 02 17 23.8 +0.1
comp=Z,7.6nm,0.8s
LPAZ PKKPbc **PKKPbc** 02 33 54.0 -0.4
LPAZ La Paz 98.21 114 P Pdif 02 17 24.8 +1.1
comp=Z,5.3nm,0.6s,baz=214,slow=6.0,SNR=2.7
LPAZ PKKPbc **PKKPbc** 02 33 54.0 -0.4
comp=Z,2.8nm,0.9s,baz=352,slow=3.2,SNR=5.9
LPAZ LR LR 02 53 44.6
comp=Z,658nm,20.6s,baz=157,slow=30
B19A Brinkman Farms 98.22 39 P Pdif 02 17 23.3 +1.1
baz=99,SNR=9.5
F22A Rosebud 98.26 42 P Pdif 02 17 23.9 +1.4
baz=99,SNR=5.9
LZH Lanzhou 98.30 307 *e*P Pdif 02 17 24.0 +1.0
LZH pP pP 02 17 41.3 +0.3
LZH sP sP 02 17 47.5 -0.5
LZH PP **PP** 02 21 27.3 +3.4
LZH SKS **SKSac** 02 27 55.0 -0.4
LZH S **S** 02 28 44.4 -1.5
LZH pmax pmax
comp=Z,34nm,1.5s
LZH pmax pmax
comp=Z,230nm,7.6s
LZH LR LR
comp=N,790nm,19.5s
LZH LR LR
comp=E,1μm,19.6s
LZH LR LR
comp=Z,1μm,20.3s
OGNE Ogallala 98.31 48 ⇓P Pdif 02 17 24.1 +1.2
baz=99
C20A Veseth Ranch, 98.33 40 P Pdif 02 17 24.3 +1.6
baz=99,SNR=14
G23A Biddle 98.46 43 P Pdif 02 17 24.5 +1.1
baz=99,SNR=9.1
K26A Motz Farm, Whi 98.49 46 P Pdif 02 17 25.3 +1.7
baz=99,SNR=16
D21A La Casta Ranch 98.54 41 ⇑P Pdif 02 17 25.1 +1.5
baz=99
A19A Klindworth Far 98.60 38 P Pdif 02 17 25.0 +1.1
baz=99,SNR=11
RSSD Black Hills 98.70 44 *e*P Pdif 02 17 24.9 +0.2
RSSD *e*'PP pP 02 17 43.5 +0.8
RSSD *e* 02 21 29.2
RSSD pmax pmax
comp=Z,80nm,1.0s
RSSD Black Hills 98.70 44 *e*P Pdif 02 17 24.9 +0.2
comp=Z,80nm,1.0s
RSSD *e*pP pP 02 17 43.5 +0.8
RSSD *e*PP **PP** 02 21 29.2 +2.4
H24A Dirks Ranch, A 98.72 44 P Pdif 02 17 25.0 +0.4
baz=99,SNR=49
F23A Volborg 98.73 42 ⇑P Pdif 02 17 25.8 +1.3
baz=99
A20A Cobblestone Ra 99.02 39 P **Pdif** **02 17 26.6 +0.9**
baz=99,SNR=12
D22A Cohagen 99.05 41 P **Pdif** **02 17 27.3 +1.4**
baz=99,SNR=7.6
K27A Flueckinger Fa 99.08 46 P **Pdif** **02 17 28.2 +2.0**
baz=99,SNR=8.4
G24A Alzada 99.11 43 ⇑P **Pdif** **02 17 27.4 +1.1**
baz=100,SNR=8.0
B21A Ellsworth Farm 99.27 39 ⇑P **Pdif** **02 17 28.4 +1.5**
baz=100
F24A Ekalaka 99.36 43 P **Pdif** **02 17 28.9 +1.5**
baz=100,SNR=7.1
A22A Carney Farms, 100.19 39 ⇓P **Pdif** **02 17 32.2 +1.2**
baz=100
C24A Savage 100.26 41 ⇓P **Pdif** **02 17 33.1 +1.8**
baz=101
B23A Brockton 100.43 40 P **Pdif** **02 17 34.0 +1.9**
baz=101,SNR=5.6
CPUP Villa Florida 100.45 128 P **Pdif** **02 17 33.5 +0.7**
CPUP PKKPbc **PKKPbc** 02 33 45.6 -1.9
CPUP Villa Florida 100.45 128 P **Pdif** **02 17 33.5 +0.7**
comp=Z,1.0nm,0.6s,baz=255,slow=7.2,SNR=3.9
CPUP PKKPbc **PKKPbc** 02 33 45.6 -1.9
comp=Z,3.1nm,0.7s,baz=16,slow=4.8,SNR=11
BCIP Isla Barro Col 100.87 85 *e*Pdif **Pdif** **02 17 35.1 +0.4**
DGMT Dagmar 100.89 40 *e*P **Pdif** **02 17 35.1 +1.1**
comp=Z,22nm,0.9s
DGMT *e*pP pP 02 17 53.3 +1.2
DGMT Dagmar 100.89 40 P **Pdif** **02 17 35.8 +1.8**
baz=101,SNR=5.7
A24A Westby 101.23 40 ⇓P **Pdif** **02 17 37.0 +1.4**
baz=102
ULN Ulaanbaatar 102.04 318 *e*Pdif **Pdif** **02 17 39.9 +0.6**
ULN Ulaanbaatar 102.04 318 P **Pdif** **02 17 41.8 +2.4**
INK Inuvik 102.15 15 P **Pdif** **02 17 39.1 +0.1**
INK Inuvik 102.15 15 P **Pdif** **02 17 39.1 +0.1**
comp=Z,4.0nm,1.0s,baz=212,slow=5.7,SNR=15
SONM Songino Array 102.41 318 P **Pdif** **02 17 41.2 +0.2**
SONM PKiKP **PKiKP** **02 22 02.0 -0.2**
SONM PKKPbc **PKKPbc** **02 33 43.6 +0.4**
SONM Songino Array 102.41 318 P **Pdif** **02 17 41.2 +0.2**
comp=Z,1.4nm,0.9s,baz=124,slow=3.0,SNR=9.2
SONM PKiKP **PKiKP** **02 22 02.0 -0.2**
comp=Z,1.3nm,0.8s,baz=27,slow=2.0,SNR=4.8
SONM PKKPbc **PKKPbc** **02 33 43.6 +0.4**
comp=Z,4.7nm,0.7s,baz=277,slow=3.0,SNR=23
GTA Gaotai 102.68 308 ⇓P **Pdif** **02 17 43.8 +1.4**
GTA pP 02 18 00.9
GTA sP 02 18 07.8
GTA PP **PKiKP** **02 22 00.9 -2.1**
GTA SKS **SKSac** **02 28 16.8 +0.3**
GTA S **Sdif** **02 29 20.3 -2.0**
GTA sS sS 02 29 50.1 -3.6
GTA SS **SS** **02 36 34.9 +2.6**
GTA pmax pmax
comp=Z,5.0nm,1.3s
GTA pmax pmax
comp=Z,120nm,6.9s
GTA LR LR
comp=N,320nm,19.0s
GTA LR LR
comp=E,700nm,22.8s
GTA LR LR
comp=Z,910nm,21.8s
ECSD EROS Data Cent 103.18 47 *e*Pdif **Pdif** **02 17 44.6 +0.3**
comp=Z,21nm,1.5s
ECSD *e*PP **PP** **02 21 57.1 -3.3**
MDND Maddock 103.24 43 ⇓P **Pdif** **02 17 45.8 +1.3**
baz=104
YKA Yellowknife Ar 103.80 25 Pdif **Pdif** **02 17 46.9 +0.3**
YKA PKiKP **PKiKP** **02 22 03.9 -0.2**
YKA Yellowknife Ar 103.80 25 Pdiff **Pdif** **02 17 46.8 +0.3**
comp=Z,1.7nm,0.9s,baz=235,slow=4.3,SNR=33
YKA PKiKP **PKiKP** **02 22 03.9 -0.2**
comp=Z,0.9nm,0.7s,baz=262,slow=1.5,SNR=15
YKW3 Yellowknife Ar 103.84 25 *e*Pdif **Pdif** **02 17 47.4 +0.7**
SIV San Ignacio 103.97 117 PKKPbc PKKPbc 02 33 38.0 +0.8
SIV San Ignacio 103.97 117 PKKPbc PKKPbc 02 33 38.0 +0.8
comp=Z,3.7nm,0.8s,baz=102,slow=4.5,SNR=11
FFC Flin Flon 105.21 36 *e*PKP **PKiKP** **02 22 07.2 +0.3**
ZAK Zakamensk 105.42 319 *e*P **Pdif** **02 17 52.9 -1.3**
ZAK pmax pmax
comp=Z,3.0nm,1.2s
SAML Samuel 106.25 110 *e*PKP **PKiKP** **02 22 09.8 -0.4**
ULM Lac du Bonnet 106.52 41 Pdif **Pdif** **02 17 59.8 +0.8**
ULM PKKPbc **PKKPbc** **02 33 29.7 -0.9**
ULM Lac du Bonnet 106.52 41 Pdiff **Pdif** **02 17 59.8 +0.8**
comp=Z,3.8nm,0.8s,baz=238,slow=3.5,SNR=4.3
ULM PKKPbc **PKKPbc** **02 33 29.7 -0.9**
comp=Z,5.8nm,0.7s,baz=37,slow=3.3,SNR=7.4
TAPN Taplejung 106.70 292 *e*P **PKiKP** **02 22 11.4 +0.5**
comp=Z,36nm,1.1s
TAPN Taplejung 106.70 292 *e*P PKKPbc 02 33 23.0 -6.6
ODAN Odare 106.76 292 *e*P **PKiKP** **02 22 11.4 +0.4**
comp=Z,61nm,1.1s
ODAN Odare 106.76 292 *e*P PKKPbc 02 33 21.8 -7.5
comp=Z,31nm,1.1s
RAMN Ramite 107.44 292 *e*P **PKiKP** **02 22 12.6 +0.3**
comp=Z,17nm,0.5s
RAMN Ramite 107.44 292 *e*P PKKPbc 02 33 22.0 -5.2
comp=Z,32nm,1.2s
TRD Trivandrum 107.81 270⇑ *e*P **PP** **02 22 37.5 +2.4**
GUN Gumba 108.41 292 *e*P **PKiKP** **02 22 14.0 -0.2**
comp=Z,56nm,1.0s
GUN Gumba 108.41 292 *e*P **PKKPbc** **02 33 20.9 -3.4**
comp=Z,65nm,1.2s
PKI Pulchoki 108.66 292 *e*P **PKiKP** **02 22 14.3 -0.3**
comp=Z,69nm,1.1s
PKIN Phulchoki 108.67 292 *e*P **PKiKP** **02 22 14.1 -0.5**
KKN Kakani 108.85 292 *e*P **PKiKP** **02 22 14.2 -0.6**
comp=Z,42nm,1.0s
DMN Daman 108.92 292 *e*P **PKiKP** **02 22 14.7 -0.3**
comp=Z,37nm,1.1s
COWI Conover 108.99 47 *e*PKP **PKiKP** **02 22 13.6 -0.7**
KOLN Koldanda 110.21 291 *e*P **PKiKP** **02 22 16.8 -0.6**
comp=Z,37nm,1.0s
DANN Dangsing 110.30 292 *e*P **PKiKP** **02 22 16.9 -0.8**
comp=Z,83nm,1.1s
DANN Dangsing 110.30 292 *e*P **PKKPbc** **02 33 17.2 -1.0**
comp=Z,62nm,1.1s
HYB Hyderabad 110.34 279 *i* PKP **PKiKP** **02 22 16.5 -1.2**
HYB *e*pPKP PP 02 22 46.0 -7.5
HYB *e*SKS **SKSdf** **02 29 18.0 -6.5**
PYUN Piuthan 110.84 291 *e*P **PKiKP** **02 22 18.2 -0.4**
comp=Z,124nm,1.1s
PYUN Piuthan 110.84 291 *e*P **PKKPbc** **02 33 17.1 +0.7**
comp=Z,66nm,1.4s
WMQ Urumqi 112.75 309 PKP **PKiKP** **02 22 22.0 +0.5**
WMQ PP PP 02 23 16.0 +5.6
WMQ PKS **PKSdf** **02 25 57.0 -1.2**
WMQ SKS **SKSdf** **02 29 23.0 -5.1**
WMQ SKKS SKKSac 02 29 58.0 -8.3
WMQ SS **SS** **02 38 47.0 -1.2**
WMQ AMB AMB
comp=Z,110nm,11.0s
WMQ LR LR
comp=N,460nm,25.0s
WMQ LR LR
comp=E,690nm,25.0s
WMQ LR LR
comp=Z,840nm,25.0s
BDFB Brasilia 113.98 125 PKiKP **PKiKP** **02 22 24.7 -0.1**
BDFB PKKPbc **PKKPbc** **02 33 05.0 -0.6**
BDFB PKKPab **PKKPab** **02 33 15.2 +0.4**
BDFB Brasilia 113.98 125 PKiKP **PKiKP** **02 22 24.7 -0.1**
comp=Z,1.5nm,0.6s,baz=221,slow=11,SNR=3.8
BDFB PKKPbc **PKKPbc** **02 33 05.0 -0.6**
comp=Z,2.7nm,0.8s,baz=187,slow=5.5,SNR=4.3
BDFB PKKPab **PKKPab** **02 33 15.2 +0.4**
comp=Z,5.0nm,0.9s,baz=18,slow=8.1,SNR=5.2
RES Resolute Bay 115.61 17 *e*PKPdf **PKPdf** **02 22 25.0 -1.0**
DDI Dehra Dun 115.66 292 *ex* **PKPdf** **02 22 27.0 -0.5**
SJG San Juan 116.71 83 *e*PKPdf **PKPdf** **02 22 29.1 -0.6**
SUR Sutherland 116.71 197 *e*PKPdf **PKPdf** **02 22 30.4 +0.5**
CBYP Canovanas 117.03 83 *e*PKPdf **PKPdf** **02 22 30.4 -0.1**
MK31 Makanchi Array 117.25 311 *e*PKiKP **PKPdf** **02 22 29.3 -0.7**
MK31 Makanchi Array 117.25 311 *e*PKPdf **PKPdf** **02 22 29.3 -0.7**
MKAR Makanchi Array 117.25 311 PKiKP **PKPdf** **02 22 29.5 -0.5**
MKAR pmax pmax
comp=Z,18nm,0.7s
MKAR pmax pmax
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 117.25 311 PKP **PKPdf** **02 22 29.5 -0.5**
MKAR PKKPbc **PKKPbc** **02 32 55.0 +0.2**
MKAR SKKPbc SKKPbc 02 36 47.8 +10
MKAR Makanchi Array 117.25 311 PKP **PKPdf** **02 22 29.5 -0.5**
comp=Z,18nm,0.7s,baz=195,slow=1.0,SNR=105
MKAR PKKPbc **PKKPbc** **02 32 55.0 +0.2**
comp=Z,5.4nm,0.8s,baz=273,slow=3.7,SNR=20
MKAR SKKPbc SKKPbc 02 36 47.8 +10
comp=Z,2.1nm,1.0s,baz=329,slow=1.4,SNR=3.7
ZAA0 Zalesovo Array 117.29 319 *e*PKPdf **PKPdf** **02 22 28.8 -1.0**
ZALV Zalesovo Beam 117.29 319 PKiKP **PKPdf** **02 22 29.1 -0.7**
ZALV pmax pmax
comp=Z,15nm,0.8s
ZALV pmax pmax
comp=Z,1.0nm,0.8s
ZALV Zalesovo Beam 117.29 319 PKP **PKPdf** **02 22 29.1 -0.7**
ZALV PKKPbc **PKKPbc** **02 32 54.0 -0.8**
ZALV Zalesovo Beam 117.29 319 PKP **PKPdf** **02 22 29.1 -0.7**
comp=Z,15nm,0.8s,baz=166,slow=1.1,SNR=61
ZALV PKKPbc **PKKPbc** **02 32 54.0 -0.8**
comp=Z,1.3nm,0.8s,baz=276,slow=2.8,SNR=4.0
CDVI St. Croix 117.77 84 *e*PKPdf **PKPdf** **02 22 32.3 +0.5**
NVS Novosibirsk 118.37 320 *e*P Pdif 02 19 02.1 +11
NVS *i* 02 22 30.9
NVS *e* 02 29 25.3
NVS pmax pmax
comp=N,16nm,1.4s
NVS pmax pmax
comp=E,27nm,1.4s
BOSA Boshof 118.91 203 *e*PKPdf **PKPdf** **02 22 34.8 +0.8**
BOSA PKP **PKPdf** **02 22 35.3 +1.2**
BOSA PKKPbc **PKKPbc** **02 32 49.5 +0.7**
BOSA Boshof 118.91 203 PKP **PKPdf** **02 22 35.3 +1.2**
comp=E,30nm,1.0s,baz=147,slow=2.1,SNR=24
BOSA PKKPbc **PKKPbc** **02 32 49.5 +0.7**
comp=E,7.4nm,1.0s,baz=360,slow=7.8,SNR=7.4
KSH Kashi 119.98 301 *e*PKP **PKPdf** **02 22 36.5 +0.9**
KSH PP PP 02 24 10.8 +10
KSH PKS **PKSdf** **02 26 10.1 -2.3**
KSH SKS **SKSdf** **02 29 35.9 -6.3**
KSH SKKS **SKKSac** **02 30 52.6 -2.3**
KSH LR LR
comp=N,120nm,3.9s
KSH LR LR
comp=E,89nm,3.4s
KSH LR LR
comp=Z,200nm,4.9s
ULHL Ulahol 120.41 304 P **PKPdf** **02 22 37.1 +0.6**
SNR=41
KURK Kurchatov 120.42 314*c* *i*PKIKP **PKPdf** **02 22 35.4 -0.5**
KURK pmax pmax
comp=Z,121nm,1.2s
KURK Kurchatov 120.42 314 *e*PKPdf **PKPdf** **02 22 35.2 -0.8**
KURK Kurchatov 120.42 314 PKPdf **PKPdf** **02 22 35.8 -0.2**
SNR=36
TKM2 Tokmak 2 121.02 305 *e*PKIKP **PKPdf** **02 22 37.3 -0.4**
TKM2 Tokmak 2 121.02 305 *e*PKPdf **PKPdf** **02 22 37.3 -0.4**
TKM2 Tokmak 2 121.02 305 P **PKPdf** **02 22 37.6 0.0**
SNR=38
KZA Kyzart 121.09 304 P **PKPdf** **02 22 37.8 -0.3**
SNR=58
KBK Karagaybulak 121.43 305 P **PKPdf** **02 22 38.7 +0.3**
SNR=17
CHMS Chumysh 121.64 305 P **PKPdf** **02 22 38.5 -0.2**
SNR=31
FRU Bishkek 121.71 305⇑ *i*PKIKP **PKPdf** **02 22 40.0 +1.2**
FRU pmax pmax
comp=Z,180nm,1.9s
AAK Ala-Archa 121.76 304 *e*PKIKP **PKPdf** **02 22 38.9 -0.1**
AAK Ala-Archa 121.76 304 *e*PKPdf **PKPdf** **02 22 38.9 -0.1**
AAK PKKPbc **PKKPbc** **02 32 39.5 +1.2**
AAK SKKPbc SKKPbc 02 36 28.0 +5.3
AAK Ala-Archa 121.76 304 P **PKPdf** **02 22 39.3 +0.2**

SNR=27
AAK Ala-Archa 121.76 304 PKKPbc PKKPbc 02 32 39.5 +1.2
comp=Z,8.3nm,1.0s,baz=238,slow=5.6,SNR=14
AAK SKKPbc SKKPbc 02 36 28.0 +5.3
comp=Z,3.3nm,0.9s,baz=314,slow=2.5,SNR=4.4
USP Ospenovka 121.88 305 P **PKPdf 02 22 39.1 +0.1**
SNR=50
LBTB Lobatse 122.08 205 *e*PKPdf **PKPdf 02 22 40.9 +0.6**
LBTB PKKPbc **PKKPbc 02 32 36.9 0.0**
LBTB Lobatse 122.08 205 PKP **PKPdf 02 22 40.8 +0.6**
comp=Z,9.9nm,0.8s,baz=183,slow=2.6,SNR=16
LBTB PKKPbc **PKKPbc 02 32 36.9 0.0**
comp=Z,7.5nm,1.0s,baz=314,slow=5.5,SNR=4.9
AML Almayashu 122.24 304 P **PKPdf 02 22 40.7 +0.4**
SNR=96
EKS2 Erkin-Say 122.28 304 *e*PKIKP **PKPdf 02 22 40.1 +0.1**
EKS2 Erkin-Say 122.28 304 *e*PKPdf **PKPdf 02 22 40.1 +0.1**
EKS2 Erkin-Say 122.28 304 P **PKPdf 02 22 39.9 -0.1**
SNR=14
KBL Kabul 124.17 294 *e*PKIKP **PKPdf 02 22 44.3 +0.3**
KBL Kabul 124.17 294 *e*PKPdf **PKPdf 02 22 44.3 +0.3**
SCHQ Schefferville 124.69 41 *e*PKPdf **PKPdf 02 22 43.3 -0.8**
SCHQ PKP **PKPdf 02 22 43.6 -0.5**
SCHQ Schefferville 124.69 41 PKP **PKPdf 02 22 43.6 -0.5**
comp=Z,27nm,1.0s,baz=306,slow=1.1,SNR=19
KK31 Karatay Array 124.72 304 *i* PKIKP PKPdf 02 22 36.2 -8.3
KK31 pmax pmax
comp=Z,80nm,0.8s
KKAR Karatay Array 124.72 304 *e*PKIKP **PKPdf 02 22 44.3 -0.2**
KKAR Karatay Array 124.72 304 *e*PKPdf **PKPdf 02 22 44.3 -0.2**
BVA0 Borovoye Array 125.72 317 PKIKP PKPdf 02 22 38.5 -7.6
BVA0 pmax pmax
comp=Z,26nm,1.0s
BRVK Borovoye 125.79 317*c* *i*PKIKP **PKPdf 02 22 46.1 -0.1**
BRVK pmax pmax
comp=Z,138nm,1.2s
BRVK Borovoye 125.79 317 *e*PKPdf **PKPdf 02 22 46.0 -0.1**
BRVK Borovoye 125.79 317 PKPdf **PKPdf 02 22 46.2 +0.1**
SNR=46
RCBR Riachuelo 129.31 127 *e*PKPdf **PKPdf 02 22 55.0 +0.8**
WBK Wadi Bani Khal 129.32 277 PKPdf **PKPdf 02 22 55.6 +1.7**
SNR=6.0
LSZ Lusaka 129.67 213 *e*PKPdf **PKPdf 02 22 55.4 +0.4**
LSZ SKPbc SKPbc 02 26 15.9 +4.3
LSZ Lusaka 129.67 213 PKPdf **PKPdf 02 22 57.0 +2.0**
SNR=20
LSZ Lusaka 129.67 213 PKP **PKPdf 02 22 55.3 +0.4**
comp=Z,22nm,1.0s,baz=43,slow=9.4,SNR=25
LSZ SKPbc SKPbc 02 26 15.9 +4.3
comp=Z,7.1nm,0.8s,baz=47,slow=5.7,SNR=5.9
KBS Kingsbay 129.69 358 ⇑*i*P **PKPdf 02 22 53.3 +0.3**
KBS AMB AMB 02 22 56.5
comp=Z,78nm,1.5s
KBS Kingsbay 129.69 358*c* *i*PKIKP **PKPdf 02 22 53.4 +0.5**
KBS pmax pmax
comp=Z,88nm,1.7s
KBS Kingsbay 129.69 358 *e*PKPdf **PKPdf 02 22 53.1 +0.2**
JMDO Jabal Madar 129.99 276 PKPdf **PKPdf 02 22 55.7 +0.6**
SNR=14
TSUM Tsumeb 130.10 199 PKPpre PKPpre 02 22 45.9
TSUM PKP **PKPdf 02 22 55.1 -0.6**
TSUM PP **PP 02 25 05.0 -2.3**
TSUM Tsumeb 130.10 199 PKhKP PKPpre 02 22 45.9
comp=Z,2.5nm,0.8s,baz=62,slow=2.7,SNR=6.2
TSUM PKP **PKPdf 02 22 55.1 -0.6**
comp=Z,6.2nm,0.6s,baz=167,slow=1.9,SNR=14
TSUM PP **PP 02 25 05.0 -2.3**
comp=Z,18nm,1.0s,baz=161,slow=7.4,SNR=7.1
SPA0 Spitsbergen Ar 130.22 356 ⇑*i*P **PKPdf 02 22 53.8 -0.2**
SPITS Spitsbergen Ar 130.22 356 PKP **PKPdf 02 22 53.3 -0.7**
SPITS Spitsbergen Ar 130.22 356 PKP **PKPdf 02 22 53.3 -0.7**
comp=Z,48nm,0.8s,baz=79,slow=8.8,SNR=36
SMDO Samad 130.27 277 PKPdf **PKPdf 02 22 56.6 +0.8**
SNR=24
SFJD Kangerlussuaq 130.36 24 *i* P **PKPdf 02 22 54.9 +0.5**
comp=Z,8.4nm,0.9s
BSY Bisya 130.91 276 PKPdf **PKPdf 02 22 57.2 +0.3**
SNR=28
DAG Danmarks Havn 130.96 6 ⇑*i*PKIKP **PKPdf 02 22 54.3 -1.1**
DAG pmax pmax
comp=Z,7.0nm,0.8s
DAG MLR MLR
comp=Z,1μm,26.0s
DAG Danmarks Havn 130.96 6 ⇑*i*P **PKPdf 02 22 54.3 -1.1**
comp=Z,8.9nm,0.8s
DAG
comp=Z,990nm,25.0s
SUMG Summit 131.07 15 *e*PKIKP **PKPdf 02 22 56.0 -0.2**
SUMG Summit 131.07 15 *e*PKPdf **PKPdf 02 22 56.0 -0.2**
SUMG Summit 131.07 15 *i* P **PKPdf 02 22 56.7 +0.5**
comp=Z,18nm,0.9s
SUMG *i* 02 23 22.0
SUMG Summit 131.07 15 *i* P SKKPbc 02 35 41.6 -11
comp=Z,8.0nm,1.0s
HOQ Hoqain 131.08 277 PKPdf **PKPdf 02 22 57.6 +0.4**
SNR=22
RBK Rabkut 131.65 268 PKPdf **PKPdf 02 22 59.3 +0.8**
SNR=21
ARQ Araqi 131.69 277 PKPdf **PKPdf 02 22 58.6 +0.3**
SNR=14
ARU Arti 132.28 322 *i* PKIKP **PKPdf 02 22 58.2 -0.2**
ARU 02 25 19.5
ABKAR Akbulak array 132.36 312 *e*PKPdf **PKPdf 02 22 58.6 -0.1**
ABKAR *e*SKP 02 26 20.8
ABKAR *e*SKPdf **SKPdf 02 26 28.1 -0.3**
ABTO Aybut 132.38 268 PKPdf **PKPdf 02 23 00.8 +0.9**
SNR=22
SOKR Solikamsk 132.47 326*d* *i*PKIKP **PKPdf 02 22 59.8 +1.2**
SOKR SS SS 02 42 52.3 -5.0
SOKR pmax pmax
comp=Z,130nm,1.5s
HATD Hatta, Dubai 132.48 278 P **PKPdf 02 23 00.4 +0.6**
SNR=14
ASHO Ashiyiah 132.50 278 PKPdf **PKPdf 02 23 00.0 +0.1**
SNR=12
NAZ Nazwa, Dubai 132.94 278 PKPdf **PKPdf 02 23 01.3 +0.6**
SNR=6.5
AKTO Aktyubinsk 133.50 314 SKPbc **SKPab 02 26 27.5 +1.3**
AKTO Aktyubinsk 133.50 314 SKPbc **SKPab 02 26 27.5 +1.3**
comp=Z,12nm,0.9s,baz=118,slow=7.7,SNR=4.9
KMBO Kilima Mbogo 135.47 234 PKPpre PKPpre 02 22 56.8
KMBO *e*PKPpre PKPpre 02 22 57.7
KMBO *e*PKPdf **PKPdf 02 23 06.5 +0.4**
KMBO PKP **PKPdf 02 23 06.6 +0.5**
KMBO *e*SKP 02 26 36.1
KMBO Kilima Mbogo 135.47 234 PKPdf **PKPdf 02 23 07.7 +1.6**
SNR=11
KMBO Kilima Mbogo 135.47 234 PKhKP PKPpre 02 22 56.8
comp=Z,4.7nm,0.9s,baz=58,slow=4.0,SNR=7.5
KMBO PKP **PKPdf 02 23 06.6 +0.5**
comp=Z,34nm,1.1s,baz=34,slow=3.9,SNR=4.0
KMBO SKPbc **SKPab 02 26 36.2 -0.1**
comp=Z,5.4nm,0.9s,baz=133,slow=3.0,SNR=4.9
SCO Scoresbysund 136.08 12 *i* PKIKP **PKPdf 02 23 06.1 +1.0**
SCO pmax pmax
comp=Z,14nm,1.1s
SCO Scoresbysund 136.08 12 *i* P **PKPdf 02 23 06.1 +1.0**
comp=Z,14nm,1.1s
ARCES ARCESS Array B 137.22 348 PKPpre PKPpre 02 22 56.9
ARCES PKP **PKPdf 02 23 07.0 -0.3**
ARCES SKPbc **SKiKP 02 26 37.9 -1.8**
ARCES ARCESS Array B 137.22 348 PKhKP PKPpre 02 22 56.9
comp=Z,12nm,0.9s,baz=15,slow=3.3,SNR=16
ARCES PKP **PKPdf 02 23 07.0 -0.3**
comp=Z,34nm,0.7s,baz=63,slow=1.7,SNR=28
ARCES SKPbc **SKiKP 02 26 37.9 -1.8**
comp=Z,16nm,1.1s,baz=28,slow=5.5,SNR=3.7
ARE0 ARCESS Array S 137.22 348 *e*P **PKPdf 02 23 06.1 -1.2**
ARE0 ARCESS Array S 137.22 348 *e*PKPdf **PKPdf 02 23 07.1 -0.2**
KTK1 Kautokeino 138.07 349 *e* PKPdf 02 23 18.8 +10
TRO Tromso 138.13 352 *e*P **PKPdf 02 23 08.2 -0.7**
TRO AMB AMB 02 23 19.8
comp=Z,97nm,1.5s
TMCR Tamitsa 138.18 338 *e*PKIKP **PKPdf 02 23 05.6 -3.6**
TMCR pmax pmax
comp=Z,72nm,1.4s
ATD Arta Tunnel 138.81 254 PKP **PKPdf 02 23 13.9 +2.0**
ATD Arta Tunnel 138.81 254 PKP **PKPdf 02 23 13.9 +2.0**
comp=Z,44nm,0.9s,baz=298,slow=2.8,SNR=7.1
STEI Steigen 140.19 353 *e*P **PKPdf 02 23 13.3 +0.6**
STEI AMB AMB 02 23 17.4
comp=Z,96nm,1.6s
UMR Umm Al-Rimmam 140.89 282 *e*P **PKPdf 02 23 10.6 -4.6**
UMR AMb AMB 02 23 20.0
comp=Z,603nm,1.2s

RDF Al-Radifah 140.91 281 *e*P **PKPdf 02 23 10.8 -4.5**
RDF AMb AMB 02 23 20.3
comp=Z,644nm,1.4s
JOF Joensuu 141.21 340 *e*PKHKP PKPdf 02 23 09.0 -5.7
JOF pmax pmax
comp=Z,36nm,0.5s
JOF Joensuu 141.21 340 *e*p PKPdf 02 23 09.0 -5.7
comp=Z,36nm,0.5s
NAY Al-Naaiem 141.24 282 *e*P **PKPdf 02 23 10.7 -5.1**
NAY AMb AMB 02 23 20.4
comp=Z,141nm,1.2s
MIB Mutribah 141.26 283 *e*P **PKPdf 02 23 11.2 -4.7**
MIB AMb AMB 02 23 20.6
comp=Z,374nm,1.2s
MAK Makhachkala 141.53 304 *e*P **Pdif 02 20 33.6 -1.2**
MAK *i* 02 23 16.6
MAK *e* 02 26 19.4
MAK pmax pmax
comp=Z,281nm,1.6s
MAK pmax pmax
comp=Z,181nm,0.4s
STOK Stokkvaagen 141.98 353 *e*P **PKPdf 02 23 15.2 -0.8**
STOK AMB AMB 02 23 21.0
comp=Z,155nm,1.7s
DGRG David-gareji 143.27 302 P PKPbc 02 23 17.2 +0.8
KAF Kangasniemi 143.30 342 *e*PKIKP PKPbc 02 23 15.4 -0.3
KAF pmax pmax
comp=Z,53nm,0.7s
KAF Kangasniemi 143.30 342 *e*p PKPbc 02 23 15.4 -0.3
comp=Z,53nm,0.7s
MOS Moscow 143.40 327 *e*PKHKP PKPab 02 23 14.5 -0.6
MOS pmax pmax
comp=Z,173nm,1.2s
VRHR Novokhopersk 143.42 318 *e*PKHKP PKPab 02 23 15.0 -0.3
VRHR pmax pmax
comp=Z,90nm,1.1s
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,20nm,0.8s
VRHR MLR MLR
comp=Z,1μm,22.0s
VRHR MLR MLR
comp=N,170nm,14.0s
VRHR MLR MLR
comp=E,410nm,21.0s
TBLG Delisi 143.71 302 *e*PKIKP PKPbc 02 23 18.2 +0.6
TBLG Delisi 143.71 302 P PKPbc 02 23 18.2 +0.6
NSS Namsos 143.84 353 *e*P PKPab 02 23 14.9 -1.6
PUL Pulkovo 143.85 337 *i* PKIKP PKPbc 02 23 17.7 +0.3
GNI Garni 143.88 299 *e*P PKPbc 02 23 18.2 -0.1
GNI Garni 143.88 299 *e*PKPdf PKPbc 02 23 18.8 +0.4
GNI Garni 143.88 299 PKPdf PKPbc 02 23 19.0 +0.7
SNR=12
FIA1 FINESS Array S 143.91 341 *e*PKPdf PKPbc 02 23 17.2 -0.3
FINES FINESS Array B 143.91 341 PKP PKPbc 02 23 17.2 -0.3
FINES FINESS Array B 143.91 341 PKP PKPbc 02 23 17.2 -0.3
comp=E,84nm,1.0s,baz=68,slow=2.8,SNR=96
GOR Gori 144.15 303 P **PKPdf 02 23 20.1 -0.6**
ZEI Tsey 144.19 304 *i* PKIKP PKPbc 02 23 19.3 0.0
ZEI pmax pmax
comp=Z,108nm,1.3s
BHD Baghdad 144.20 288 *ex* **PKPab 02 23 17.9 -1.0**
BHD *ex* x 02 26 55.5
BHD *ex* x 02 30 19.5
BHD *ex* x 02 30 39.7
OBN Obninsk 144.24 327 ⇑*i*PKIKP **PKPab 02 23 18.1 -0.2**
OBN *e* 02 26 39.2
OBN *e*SS SS 02 45 24.3 +8.2
OBN pmax pmax
comp=Z,401nm,1.2s
OBN MLR MLR
comp=Z,700nm,20.0s
ONI Oni 144.54 304 P **PKPdf 02 23 21.1 -0.2**
VOR Voronezh 144.55 320 ⇓*i*PKIKP **PKPab 02 23 19.0 -0.6**
VOR pmax pmax
comp=Z,480nm,2.0s
CLDR Caldiran 144.59 298 *e*P **PKPdf 02 23 21.3 -0.5**
AKH Akhalkalaki 144.68 302 P **PKPdf 02 23 22.2 +0.4**
DYDN Diyadin 144.73 299 *i* P **PKPdf 02 23 22.4 +0.3**
KBZ Khabaz 144.74 306 PKIKP PKPbc 02 23 21.0 +0.4
KBZ pmax pmax
comp=Z,35nm,0.8s
KBZ Khabaz 144.74 306 PKP PKPbc 02 23 21.0 +0.3
KBZ Khabaz 144.74 306 PKP PKPbc 02 23 21.0 +0.4
comp=Z,35nm,0.8s,baz=92,slow=2.2,SNR=104
VSR Storozhevoye 144.79 320 *e*PKIKP PKPbc 02 23 20.7 +0.1
VSR pmax pmax
comp=Z,380nm,1.3s
VSR pmax pmax
comp=N,90nm,0.9s
VSR pmax pmax
comp=E,210nm,1.1s
VORD Divnogorie 144.82 319 *e*PKIKP **PKPab 02 23 20.4 -0.2**
VORD pmax pmax
comp=Z,140nm,0.8s
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,170nm,1.2s
VORD MLR MLR
comp=Z,800nm,25.0s
VORD MLR MLR
comp=N,2μm,23.0s
VORD MLR MLR
comp=E,1μm,21.0s
HAKT HAKKARI 144.84 295 *i* P **PKPdf 02 23 22.3 0.0**
KIV Kislovodsk 144.84 306 ⇑*i*PKIKP **PKPab 02 23 21.1 0.0**
KIV *i* 02 23 34.9
KIV *e* 02 26 40.0
KIV *e*PPS PPS 02 26 20.2
KIV *e*SS SS 02 45 25.9 +1.4
KIV pmax pmax
comp=Z,167nm,1.3s
CUKT Cukurca 144.93 295 *e*P PKPbc 02 23 21.7 +0.1
TVAN Van 145.03 297 *i* P **PKPdf 02 23 23.1 +0.5**
KARS Kars 145.09 301 *e*P **PKPbc 02 23 21.3 -0.8**
GEVA Gevas 145.31 296 *i* P **PKPab 02 23 24.1 +0.9**
TUTA Tutak 145.42 298 *i* P **PKPab 02 23 24.8 +1.2**
SIRN S¨¨rnak 145.87 295 *i* P **PKPab 02 23 28.4 +3.3**
ARTV Artvin 145.88 302 *i* P **PKPab 02 23 25.2 0.0**
DAGI Agillar 145.91 301 *i* P **PKPab 02 23 25.0 -0.2**
TATV Tatvan 145.92 297 *i* P **PKPbc 02 23 25.1 +0.3**
DBOC Borcka 146.05 302 *i* P **PKPbc 02 23 25.2 +0.3**
DDEM Demirkent 146.06 301 *i* P **PKPab 02 23 25.8 +0.1**
BCA Borcka 146.07 302 *e*P **PKPdf 02 23 24.2 +0.2**
DBAD Bademkaya 146.08 301 *i* P **PKPbc 02 23 25.3 +0.2**
MOL Molde 146.14 356 ⇑*i*P **PKPbc 02 23 24.4 0.0**
MOL AMB AMB 02 23 28.1
comp=Z,243nm,1.5s
ERZM Erzurum 146.48 300 *i* P **PKPbc 02 23 26.9 +0.3**
EZM Erzurum 146.48 300 *e*P **PKPbc 02 23 26.3 -0.3**
VRTB Varto-Mus 146.49 298 *e*P **PKPbc 02 23 26.3 -0.2**
BTMT Batman 146.56 296 *e*P **PKPdf 02 23 25.3 +0.3**
PZAR Pazar-Rize 146.65 302 *e*P **PKPdf 02 23 24.4 -0.5**
SOC Sochi 147.02 307*c* *i*PKIKP **PKPdf 02 23 25.1 -0.4**
SOC *i* 02 23 29.0
SOC *i* 02 26 51.6
SOC *e*PPP PPP 02 30 11.7
SOC pmax pmax
comp=Z,220nm,0.9s
SOC pmax pmax
comp=Z,187nm,0.9s
SOC MLR MLR
comp=Z,573nm,17.0s
BNGB Bing¶ll 147.11 298 *e*P **PKPdf 02 23 26.1 +0.2**
KOPT Kop Dagi 147.13 300 *i* P **PKPbc 02 23 27.3 -1.1**
NB2 NORSAR Subarra 147.32 352 PKP **PKPbc 02 23 27.6 -0.4**
baz=11,slow=2.9
NB2 NORSAR Subarra 147.32 352 PKP **PKPbc 02 23 27.6 -0.4**
comp=Z,176nm,0.9s,baz=11,slow=2.9
NOA NORSAR Array B 147.32 352 PKPbc **PKPdf 02 23 25.7 +0.2**
NOA NORSAR Array B 147.32 352 PKPbc **PKPdf 02 23 25.7 +0.2**
comp=Z,83nm,0.9s,baz=15,slow=4.4,SNR=154
BAYT Ayd¨¨ntepe-Bay 147.34 301 *e*P **PKPdf 02 23 27.0 +0.6**
KTUT Trabzon 147.53 302 *e*P **PKPdf 02 23 26.2 -0.2**
MACK Trabzon 147.53 302 *i* P **PKPab 02 23 30.6 -0.8**
NAO01 NORSAR Array S 147.55 353 *e*PKPdf **PKPdf 02 23 26.2 +0.4**
NAO01 *e*PKPbc **PKPbc 02 23 28.3 -0.2**
DIY Diyarbakir 147.57 296 *e*P **PKPbc 02 23 29.4 -0.1**
NC602 NORSAR Array S 147.58 352 *e*P **PKPdf 02 23 25.9 0.0**
HYA Hoyanger 147.62 357 *e*P **PKPbc 02 23 28.6 0.0**
DIYA Diyarbakir 147.65 296 *i* P **PKPbc 02 23 30.8 +1.1**
ERZN Erzincan 147.78 299 *e*P **PKPdf 02 23 27.7 +0.6**

GUMT Gumushane 147.83 301 *e*P **PKPbc 02 23 31.4 +1.3**
HFS Hagfors 147.86 350 PKPbc **PKPbc 02 23 28.9 -0.5**
HFS Hagfors 147.86 350 PKPbc **PKPbc 02 23 28.9 -0.5**
comp=Z,110nm,0.7s,baz=196,slow=0.5,SNR=89
KELT Kelkit 148.05 300 *i* P **PKPdf 02 23 28.5 +0.9**
SVRC Sivrice-ELAZID 148.25 297 *e*P **PKPdf 02 23 28.2 +0.3**
ANN Anapa 148.26 310 *i* PKIKP **PKPdf 02 23 26.9 -0.6**
ANN pmax pmax
comp=Z,332nm,0.9s
ANN MLR MLR
comp=N,327nm,22.0s
ANN MLR MLR
comp=E,459nm,22.0s
ANN MLR MLR
comp=Z,717nm,22.0s
IZAR Zarasai 148.29 335 *e*P **PKPdf 02 23 27.3 +0.1**
IZAR AMB AMB 02 23 33.2
comp=Z,197nm,1.2s
ESPY Espiye-Giresun 148.31 302 *e*P **PKPdf 02 23 28.0 +0.2**
ASK Askoy 148.34 358 *e*P **PKPbc 02 23 30.3 -0.2**
ASK AMB AMB 02 23 31.4
comp=Z,304nm,1.6s
RUND Rundenannen 148.40 357 *e*P **PKPbc 02 23 30.2 -0.6**
RUND AMB AMB 02 23 31.8
comp=Z,376nm,1.4s
BER Bergen 148.43 358 ⇑*i*P **PKPbc 02 23 30.0 -0.8**
BER AMB AMB 02 23 33.5
comp=Z,213nm,1.9s
ISAL Salakas 148.47 334 *e*P **PKPdf 02 23 27.6 +0.2**
ISAL AMB AMB 02 23 32.5
comp=Z,134nm,1.2s
ELZG Elazig 148.49 297 *i* P **PKPbc 02 23 32.9 +1.0**
MICGM Minsk 148.55 332 *e*P **PKPdf 02 23 27.0 -0.6**
EGD Espegrend 148.55 358 *e*P **PKPbc 02 23 29.9 -1.2**
EGD AMB AMB 02 23 32.2
comp=Z,175nm,1.4s
MNK Minsk 148.57 332 *e*PKIKP **PKPdf 02 23 27.0 -0.7**
MNK pmax pmax
comp=Z,1μm,1.0s
MNK pmax pmax
comp=E,280nm,1.5s
MNK pmax pmax
comp=N,360nm,1.1s
IIGN Ignalina 148.60 334 *e*P **PKPdf 02 23 28.1 +0.4**
IIGN AMB AMB 02 23 33.0
comp=Z,150nm,1.0s
GRSN GIRESUNGRSN 148.65 302 *i* P **PKPbc 02 23 32.1 0.0**
ILIC ilic-Erzincan 148.68 299 *e*P **PKPdf 02 23 28.8 +0.3**
NACGM Naroch 148.71 333 *e*P **PKPdf 02 23 26.0 -1.9**
KEMA Kemaliye 148.76 299 *i* P **PKPbc 02 23 34.1 +1.6**
ODD1 Odda 148.84 356 ⇑*i*P **PKPbc 02 23 32.4 +0.4**
ODD1 AMB AMB 02 23 33.9
comp=Z,255nm,1.0s
KONO Kongsberg 148.86 353 ⇑*i*P **PKPbc 02 23 32.0 +0.1**
KONO AMB AMB 02 23 33.6
comp=Z,245nm,0.9s
KONO AMS AMS 03 16 08.9
comp=Z,322nm,3.3s
KONO Kongsberg 148.86 353 *e*PKIKP **PKPdf 02 23 28.1 +0.1**
KONO *e* 02 23 32.1
KONO Kongsberg 148.86 353 *e*PKPdf **PKPdf 02 23 28.1 +0.1**
KONO *e*PKPbc **PKPbc 02 23 32.1 +0.1**
MALT Malatya 148.94 297 *e*P **PKPdf 02 23 29.8 +0.8**
MALT Malatya 148.94 297 ⇓*i*PKIKP **PKPdf 02 23 29.3 +0.3**
MALT Malatya 148.94 297 *e*PKPdf **PKPdf 02 23 29.6 +0.6**
MALT *e*PKPbc **PKiKP 02 23 34.2 -0.1**
MALT Malatya 148.94 297 ⇓*i*P **PKPdf 02 23 29.3 +0.3**
MYA Malataya 148.94 297 *e*P **PKPbc 02 23 32.4 -0.7**
ATAB Bozova 149.14 295 *i* P **PKPbc 02 23 35.0 +1.5**
AKCD Akcadag 149.34 297 *i* P **PKPbc 02 23 35.8 +1.7**
BLS5 Blasjo 149.34 356 *e*P **PKPbc 02 23 33.8 +0.6**
BLS5 AMB AMB 02 23 37.1
comp=Z,82nm,1.9s
RSDY Resadiye-TOKAT 149.46 301 *e*P **PKPdf 02 23 29.2 -0.4**
DARE Darende-Malaty 149.64 298 *e*P **PKPdf 02 23 30.4 +0.4**
GZT Gaziantep 149.73 295 *i* P **PKPbc 02 23 36.2 +1.1**
ERBA Erbaa 149.83 302 *i* P **PKPbc 02 23 36.2 +1.1**
STAV Stavanger 149.87 357 *e*P **PKPdf 02 23 31.3 +1.7**
STAV AMB AMB 02 23 32.4
comp=Z,86nm,1.3s
GAZ Gaziantep 150.03 295 *e*P **PKPbc 02 23 36.0 +0.3**
KUZU Kuzuini 150.17 294 *i* P **PKPdf 02 23 31.4 +0.5**
KMRS Kahramanmaras 150.24 296 *e*P **PKPdf 02 23 30.8 -0.2**
KVT Kavak 150.26 303 *e*P **PKPdf 02 23 31.3 +0.4**
HOMB Homborsund 150.33 354 *e*P **PKPdf 02 23 31.0 +0.7**
SNART Snartemo 150.37 355 *e*P **PKPbc 02 23 34.2 -1.5**
SNART AMB AMB 02 23 35.8
comp=Z,285nm,1.2s
SIM Simferopol' 150.42 311*ce* PKIKP **PKPdf 02 23 30.2 -0.8**
SIM pmax pmax
comp=Z,380nm,20.0s
AKASG Malin Array Be 150.43 325 PKIKP **PKPdf 02 23 30.0 -0.7**
AKASG 02 23 36.1
AKASG pmax pmax
comp=Z,6.0nm,0.8s
AKASG pmax pmax
comp=Z,198nm,0.8s
AKASG Malin Array Be 150.43 325 PKP **PKPdf 02 23 30.0 -0.7**
AKASG PKPbc **PKPbc 02 23 36.1 0.0**
AKASG Malin Array Be 150.43 325 PKP **PKPdf 02 23 30.0 -0.7**
comp=Z,6.1nm,0.8s,baz=58,slow=0.9,SNR=40
AKASG PKPbc **PKPbc 02 23 36.1 0.0**
comp=Z,198nm,0.8s,baz=46,slow=3.2,SNR=208
AK01 Malin Array Si 150.44 325 *e*PKPdf **PKPdf 02 23 30.3 -0.5**
AK01 *e*PKPbc **PKPbc 02 23 36.0 -0.2**
AK01 *e*PKPab **PKPab 02 23 42.7 -0.1**
KIEV Kiev 150.44 325 *e*PKIKP **PKPdf 02 23 30.2 -0.5**
KIEV *e* 02 23 36.0
KIEV *e* 02 23 42.2
KIEV Kiev 150.44 325 *e*PKPdf **PKPdf 02 23 30.2 -0.5**
KIEV *e*PKPbc **PKPbc 02 23 36.0 -0.1**
KIEV *e*PKPab **PKPab 02 23 42.2 -0.6**
AK02 Malin Array Si 150.46 325 *e*PKPdf **PKPdf 02 23 30.0 -0.8**
AK02 *e*PKPbc **PKPbc 02 23 36.2 0.0**
AK02 *e*PKPab **PKPab 02 23 42.7 -0.2**
PINB Pinarbasi 150.46 298 *i* P **PKPdf 02 23 31.5 -0.1**
SARI SarD1z-Kayseri 150.49 298 *e*P **PKPdf 02 23 31.6 +0.1**
ANDN Andirin 150.66 296 *e*P **PKPdf 02 23 32.2 +0.5**
DIKM Dikmen 150.69 305 *e*P **PKPdf 02 23 30.3 -1.2**
SUW Suwalki 150.77 335 *e*PKIKP **PKPdf 02 23 31.1 -0.1**
SUW *e* 02 23 36.9
SUW *e* 02 23 44.2
SUW Suwalki 150.77 335 *e*PKPdf **PKPdf 02 23 31.1 -0.1**
SUW *e*PKPbc **PKPbc 02 23 36.9 +0.2**
SUW *e*PKPab **PKPab 02 23 44.2 +0.1**
SUW Suwalki 150.77 335 *e*PKPdf **PKPdf 02 23 31.2 0.0**
SUW *e*PKPbc **PKPbc 02 23 37.0 +0.2**
SUW *e*PKPab **PKPab 02 23 44.2 +0.1**
SUW LMZ LR 03 23 57.2
BNN Bunyan 150.87 299 *e*P **PKPdf 02 23 32.2 +0.2**
KOZT Kozan 151.09 296 *e*P **PKPdf 02 23 33.2 +0.9**
BYBT Boyabat 151.10 304 *e*P **PKPdf 02 23 32.5 +0.4**
YOZ Yozgat 151.12 300 *e*P **PKPdf 02 23 35.0 +2.6**
HWQ Hawqa 151.24 289 *e*P **PKPbc 02 23 39.5 +0.8**
RCY Rachaya 151.35 288 *e*P **PKPbc 02 23 40.5 +1.4**
BHL Bhannes 151.50 289 *e*P **PKPbc 02 23 40.4 +1.1**
BZK Bozkurt 151.51 306 *e*P **PKPbc 02 23 36.3 -2.6**
CORM Corum 151.52 302 *e*P **PKPdf 02 23 32.1 -0.9**
KRTS Karatas 151.55 294 *e*P **PKPbc 02 23 37.1 -2.1**
AVNT Avonos 151.64 299 *i* P **PKPdf 02 23 33.0 -0.2**
TOS Tosya 151.75 304 *e*P **PKPbc 02 23 34.4 +1.1**
CDAG Cicekdag 151.84 301 *e*P **PKPdf 02 23 33.6 +0.1**
GULE Gulek 151.94 296 *i* P **PKPbc 02 23 41.9 +1.5**
NIG Nigde 151.95 298 *e*P **PKPbc 02 23 40.3 -0.1**
MUD Monsted U'grnd 152.04 352 ⇑*i*PKIKP **PKPbc 02 23 40.1 +0.5**
MUD pmax pmax
comp=Z,57nm,1.2s
MUD Monsted U'grnd 152.04 352 ⇑*i*P **PKPbc 02 23 40.1 +0.5**
comp=Z,57nm,1.1s
MUD *i* 02 23 57.8
BALT Daday 152.07 305 *e*P **PKPdf 02 23 34.5 +0.7**
CANT Cankiri 152.16 303 *e*P **PKPdf 02 23 30.6 -3.2**
MERS Mersin 152.20 295 *e*P **PKPdf 02 23 35.3 +1.3**
COP Copenhagen 152.30 348 ⇑*i*PKIKP **PKPbc 02 23 40.8 +0.6**
COP pmax pmax
comp=Z,92nm,0.8s
COP MLR MLR
comp=Z,480nm,26.0s
COP Copenhagen 152.30 348 ⇑*i*P **PKPbc 02 23 40.8 +0.6**
comp=Z,92nm,0.7s
COP *i* 02 23 58.7
COP
comp=Z,470nm,26.0s

BSD	**Bornholm Skovb**	152.33 345	⇑	*i*PKIKP	**PKPbc**	02 23 40.7	+0.4	
BSD				pmax	pmax			
	comp=Z,120nm,0.8s							
BSD				MLR	MLR			
	comp=Z,820nm,22.0s							
BSD	**Bornholm Skovb**	152.33 345	⇑	*i*P	**PKPbc**	02 23 40.7	+0.4	
	comp=Z,118nm,0.7s							
BSD				*i*		02 23 58.6		
BSD								
	comp=Z,820nm,21.0s							
ELDT	**Eldivan**	152.33 303		*i* P	**PKPdf**	02 23 34.0	-0.2	
BR131	**Keskin Array S**	152.37 301		*e*PKPdf	**PKPdf**	02 23 33.5	-0.7	
BR131				*e*PKPbc	**PKiKP**	02 23 41.5	+0.1	
BRTR	**Keskin Array B**	152.37 301		PKP	**PKPdf**	02 23 33.2	-1.0	
BRTR				PKPbc	**PKiKP**	02 23 41.3	-0.1	
BRTR	**Keskin Array B**	152.37 301		PKP	**PKPdf**	02 23 33.2	-1.0	
	comp=Z,12nm,1.0s,baz=129,slow=1.8,SNR=21							
BRTR				PKPbc	**PKiKP**	02 23 41.3	-0.1	
	comp=Z,78nm,0.9s,baz=126,slow=2.7,SNR=103							
ROSA	**Rosais**	152.58 61		*e*LQ	LQ	03 08 57.6		
ROSA				*e*LR	LR	03 14 57.0		
EREN	**Erenkoy**	152.63 292		*e*P	**PKPbc**	02 23 42.9	+1.2	
LLD	**Lille Linde**	152.68 348		*i* PKIKP	**PKPbc**	02 23 41.8	+0.7	
LLD				pmax	pmax			
	comp=Z,260nm,0.8s							
LLD	**Lille Linde**	152.68 348		*i* P	**PKPbc**	02 23 41.8	+0.7	
	comp=Z,262nm,0.7s							
LLD				*i*		02 24 00.1		
PGRA	**Graciosa**	152.72 60		*e*LQ	LQ	03 08 31.5		
PGRA				*e*LR	LR	03 15 09.9		
KIS	**Kishinev**	152.77 319		*i* PKIKP	**PKPdf**	02 23 33.0	-1.4	
KIS				*i*		02 23 40.0		
KIS				*e*		02 27 30.0		
KIS	**Kishinev**	152.77 319		*e*PKIKP	**PKPdf**	02 23 33.0	-1.4	
KIS				LRM	MLR	03 30 00.0		
	comp=Z,700nm,25.0s							
SULT	**Sultanhani-AKS**	152.78 298		*e*P	**PKPdf**	02 23 30.6	-4.2	
PHNC	**Paralimni**	152.78 291		P	**PKPbc**	02 23 42.7	+0.7	
	comp=Z,4.2nm,0.8s							
BBAL	**Bala**	152.79 301		*i* P	**PKPdf**	02 23 34.8	-0.1	
AFSR	**Af˙ar-Bala (A**	152.86 301		*e*P	**PKPdf**	02 23 34.4	-0.5	
ANTO	**Ankara**	152.96 302		*e*P	**PKPdf**	02 23 34.4	-0.7	
ANTO	**Ankara**	152.96 302		*e*PKIKP	**PKPdf**	02 23 35.0	0.0	
ANTO				*e*		02 23 42.9		
ANTO	**Ankara**	152.96 302		*e*PKPdf	**PKPdf**	02 23 35.0	0.0	
ANTO				*e*PKPbc	**PKiKP**	02 23 42.9	+0.4	
ANTO	**Ankara**	152.96 302	⇓	*i*P	**PKPdf**	02 23 35.1	0.0	
ANTO	**Ankara**	152.96 302		PKPdf	**PKPdf**	02 23 35.1	0.0	
	SNR=82							
LOD	**Lodumlu**	152.98 302		*e*P	**PKPdf**	02 23 35.1	0.0	
ESK	**Eskdalemuir**	153.23 8		*e*PKIKP	**PKPdf**	02 23 34.4	-0.4	
ESK				*e*		02 23 41.8		
ESK				*e*		02 23 54.1		
ESK	**Eskdalemuir**	153.23 8		*i* PKIKP	**PKPbc**	02 23 44.6	+2.3	
ESK	**Eskdalemuir**	153.23 8		*e*PKPdf	**PKPdf**	02 23 34.4	-0.4	
ESK				*e*PKPbc	**PKPbc**	02 23 41.8	-0.5	
ESK				*e*PKPab	**PKPab**	02 23 54.1	-0.2	
CSS	**Prodhromos**	153.36 291		P	**PKPbc**	02 23 44.1	+0.8	
	comp=Z,2.8nm,1.2s							
CSS	**Prodhromos**	153.36 291		*e*P	**PKPdf**	02 23 34.8	-1.0	
CSS	**Prodhromos**	153.36 291		P	**PKPbc**	02 23 43.5	+0.2	
CSS	**Prodhromos**	153.36 291		*e*PKPdf	**PKPdf**	02 23 34.3	-1.4	
CSS				*e*PKPbc	**PKPbc**	02 23 43.5	0.0	
GKP	**Gorka Klasztor**	153.37 340		*e*PKPdf	**PKPdf**	02 23 35.6	+0.5	
GKP				*e*PKPbc	**PKiKP**	02 23 43.5	+0.7	
GKP				*e*PKPab	**PKPab**	02 23 55.5	+0.5	
GKP				LMZ	LR	03 27 42.3		
BEL	**Belsk**	153.38 335		*e*PKPdf	**PKPdf**	02 23 35.3	+0.2	
BEL				*e*PKPbc	**PKiKP**	02 23 43.8	+0.9	
BEL				*e*PKPab	**PKPab**	02 23 55.5	+0.5	
BEL				LMZ	LR	03 23 31.3		
LEOM	**Leova**	153.38 318	⇑	PKIKP	**PKPdf**	02 23 35.5	+0.2	
LEOM	**Leova**	153.38 318	⇑	*i*P	**PKPdf**	02 23 35.5	+0.2	
MAMC	**Mammari**	153.44 292		P	**PKPbc**	02 23 44.2	+0.7	
LVV	**L'vov**	153.52 328		*e*PKIKP	**PKPdf**	02 23 34.3	-1.1	
LVV				*e*		02 23 42.5		
LADK	**Ladik-KONYA**	153.67 298		*e*P	**PKPdf**	02 23 38.6	+2.4	
TLCR		153.70 315	⇑	PKIKP	**PKPbc**	02 23 44.4	+0.7	
TLCR		153.70 315	⇑	*i*P	**PKPbc**	02 23 44.4	+0.7	
LEF	**Lefka**	153.71 291		*e*P	**PKPdf**	02 23 34.9	-1.3	
LEF	**Lefka**	153.71 291		*e*P	**PKPbc**	02 23 42.3	-1.7	
KDHN	**Kadinhani**	153.79 299		*i* P	**PKPdf**	02 23 35.4	-0.9	
ALFC	**Alevga**	153.94 292		P	**PKPbc**	02 23 44.6	0.0	
	comp=Z,1.6nm,1.0s							
CFR	**Carcaliu**	154.12 316		PKIKP	**PKPdf**	02 23 36.7	+0.3	
CFR	**Carcaliu**	154.12 316	⇓	PKIKP	**PKPbc**	02 23 45.0	+0.4	
CFR	**Carcaliu**	154.12 316	⇓	*i*P	**PKPbc**	02 23 45.0	+0.4	
AKMC	**Akamas**	154.17 291		P	**PKPbc**	02 23 44.7	-0.4	
PPCY	**Paphos**	154.18 291		P	**PKPbc**	02 23 44.8	-0.2	
KWP	**Kalwaria Pacla**	154.26 329		*e*PKIKP	**PKPdf**	02 23 36.8	+0.3	
KWP				*e*		02 23 45.0		
KWP				*e*		02 23 58.8		
KWP	**Kalwaria Pacla**	154.26 329		*e*PKPdf	**PKPdf**	02 23 36.8	+0.3	
KWP				*e*PKPbc	**PKiKP**	02 23 45.0	+0.2	
KWP				*e*PKPab	**PKPab**	02 23 58.8	-0.1	
KWP	**Kalwaria Pacla**	154.26 329	⇓	*i*P	**PKPbc**	02 23 37.2	+0.7	
KWP	**Kalwaria Pacla**	154.26 329	⇓	*e*PKPdf	**PKPdf**	02 23 35.0	-1.5	
KWP				*e*PKPbc	**PKiKP**	02 23 45.0	+0.7	
KWP				*e*PKPab	**PKPab**	02 23 58.5	-0.4	
KWP				LMZ	LR	03 24 54.0		
TESR		154.28 320	⇓	*i*P	**PKPdf**	02 23 35.8	-0.8	
BSEG	**Bad Segeberg**	154.34 350		*e*PKIKP	**PKPdf**	02 23 36.6	+0.2	
BSEG				*e*		02 23 45.7		
BSEG				*e*		02 23 59.1		
BSEG	**Bad Segeberg**	154.34 350		*e*PKPdf	**PKPdf**	02 23 36.6	+0.2	
BSEG				*e*PKPbc	**PKiKP**	02 23 45.7	+0.9	
BSEG				*e*PKPab	**PKPab**	02 23 59.1	+0.1	
BSEG				*ep*PKPab	**pPKPab**	02 24 17.1	0.0	
PETR		154.38 318	⇓	*i*P	**PKPbc**	02 23 43.9	-1.2	
BUR08	**Bucovina Ar. S**	154.39 323		*e*PKPdf	**PKPdf**	02 23 37.2	+0.4	
BUR08				*e*PKPbc	**PKiKP**	02 23 46.8	+1.5	
BUR08				*e*PKPab	**PKPab**	02 23 59.7	0.0	
BURAR	**Bucovina Array**	154.40 323	⇑	*i*P	**PKPdf**	02 23 37.0	+0.1	
HLG	**Helgoland**	154.42 353		*ep*PKPab	pPKPab	02 24 17.7	+0.3	
VRI	**Vrincioaia**	154.60 318	⇑	PKIKP	**PKPbc**	02 23 45.6	0.0	
VRI	**Vrincioaia**	154.60 318	⇑	*i*P	**PKPbc**	02 23 45.6	0.0	
PLOR	**Plostina**	154.65 318	⇓	PKIKP	**PKPdf**	02 23 41.4	+4.2	
PLOR	**Plostina**	154.65 318	⇓	*i*P	**PKPdf**	02 23 41.4	+4.2	
PSN	**Preselentsi**	154.82 313		*i* P	**PKPdf**	02 23 37.9	+0.5	
CMLA	**Cha da Macela**	154.88 62		*e*LR	LR	03 15 35.7		
KOLS	**Kolonicke sedl**	154.96 329		*e*PKIKP	**PKPdf**	02 23 37.7	+0.2	
KOLS				*e*		02 24 02.0		
KOLS	**Kolonicke sedl**	154.96 329		*e*PKP	**PKPdf**	02 23 37.7	+0.2	
KOLS				*e*		02 24 02.0		
RUE	**Ruedersdorf**	155.02 344		*e*PKPdf	**PKPdf**	02 23 37.7	+0.3	
RUE				*e*PKPbc	PKPab	02 23 47.1	-15	
RUE	**Ruedersdorf**	155.02 344		*e*PKPdf	**PKPdf**	02 23 37.5	+0.2	
RUE				*e*PKPbc	PKPab	02 23 47.4	-15	
RUE				*e*PKPab	PKPab	02 24 02.3	+0.4	
OJC	**Ojcow**	155.04 333		*e*PKIKP	**PKPdf**	02 23 37.6	0.0	
OJC	**Ojcow**	155.04 333		*e*PKPdf	**PKPdf**	02 23 37.6	0.0	
OJC				*e*PKPab	**PKPab**	02 24 02.8	+0.6	
ISR	**Istrita**	155.12 317	⇓	PKIKP	PKPdf	02 23 46.6	+8.7	
ISR	**Istrita**	155.12 317	⇓	*i*P	PKPdf	02 23 46.6	+8.7	
UZH	**Uzhgorod**	155.17 328		*i* PKIKP	PKPdf	02 23 45.0	+7.3	
UZH				*e*		02 23 55.9		
UZH				*e*		02 27 34.0		
ISP	**Isparta**	155.17 298		*e*PKIKP	PKPdf	02 23 47.0	+8.7	
ISP				*e*		02 24 03.0		
ISP	**Isparta**	155.17 298		*e*PKPbc	PKPdf	02 23 47.0	+8.7	
ISP				*e*PKPab	**PKPab**	02 24 03.0	-0.4	
BMR	**Baia Mare**	155.25 325	⇓	PKIKP	**PKPdf**	02 23 38.3	+0.4	
BMR	**Baia Mare**	155.25 325	⇓	*i*P	**PKPdf**	02 23 38.3	+0.4	
MLR	**Muntele Rosu**	155.26 318	⇑	*i*P	**PKPdf**	02 23 38.2	0.0	
CRVS	**Cervenica-Dubn**	155.35 329		*e*PKIKP	**PKPdf**	02 23 37.4	-0.6	
CRVS				*e*		02 24 03.5		
CRVS	**Cervenica-Dubn**	155.35 329		*e*PKP	**PKPdf**	02 23 37.4	-0.6	
CRVS				*e*		02 24 03.5		
TRPA	**Tarpa**	155.41 327	⇑	*i*P	PKPdf	02 23 47.8	+10	
TRPA	**Tarpa**	155.41 327	⇓	*e*	**PKPab**	02 24 04.6	-0.8	
SECR		155.45 317	⇑	*i*P	**PKPdf**	02 23 40.5	+2.2	
NIE	**Niedzica**	155.46 332		*e*PKIKP	**PKPdf**	02 23 38.8	+0.6	
NIE	**Niedzica**	155.46 332		*e*PKPdf	**PKPdf**	02 23 38.8	+0.6	
SULR		155.53 317	⇓	*i*P	**PKPdf**	02 23 43.5	+5.1	
RAC	**Raciborz**	155.76 335		*e*PKIKP	**PKPdf**	02 23 39.0	+0.5	
NRDL	**Niedersach Rie**	155.76 349		*e*PKPdf	**PKPdf**	02 23 38.3	0.0	
NRDL				*e*PKPbc	PKPab	02 23 48.5	-17	
NRDL				*e*PKPab	PKPab	02 24 04.9	-0.1	
NRDL				*ep*PKPab	**pPKPab**	02 24 23.1	0.0	
MDB	**Medias**	155.77 321	⇑	PKIKP	**PKPdf**	02 23 42.1	+3.4	
MDB	**Medias**	155.77 321	⇑	*i*P	**PKPdf**	02 23 42.1	+3.4	
KSP	**Ksiaz**	155.77 339		*e*PKIKP	**PKPdf**	02 23 38.7	+0.2	
KSP				*e*		02 23 48.9		
KSP	**Ksiaz**	155.77 339		*e*PKPdf	**PKPdf**	02 23 38.8	+0.2	
KSP				*e*PKPbc	PKPab	02 23 49.1	-16	
KSP				*e*PKPab	PKPab	02 24 06.1	+0.8	
KSP				LMZ	LR	03 23 53.6		
VOIR		155.81 319	⇑	PKIKP	**PKPdf**	02 23 41.7	+2.8	
VOIR		155.81 319	⇑	*i*P	**PKPdf**	02 23 41.7	+2.8	
OKC	**Ostrava-Krasne**	155.98 335		*i* PKIKP	**PKPdf**	02 23 38.9	+0.1	
OKC				*e*		02 24 06.9		
OKC				MLR	MLR			
	comp=Z,900nm,22.5s							
OKC	**Ostrava-Krasne**	155.98 335		*i* PKPDF	**PKPdf**	02 23 38.9	+0.1	
OKC				*e*PKPAB	**PKPab**	02 24 06.9	+0.7	
OKC				*e*PP	PP	02 27 37.4	-5.9	
OKC				AMS	AMS	03 28 00.0		
	comp=Z,900nm,22.5s							
ARR	**Arges**	156.09 319	⇑	*i*P	**PKPdf**	02 23 39.0	-0.2	
UPC	**Upice**	156.15 339		*i* PKIKP	**PKPdf**	02 23 39.1	+0.1	
UPC				*e*		02 23 49.8		
UPC	**Upice**	156.15 339		*i* PKPDF	**PKPdf**	02 23 39.1	+0.1	
UPC				*ex*	x	02 23 49.8		
UPC				*e*PKPAB	**PKPab**	02 24 08.3	+1.4	
UPC				*ep*PKP	**pPKPab**	02 24 24.3	-0.7	
DPC	**Dobruska-Polom**	156.19 338		*i* PKIKP	**PKPdf**	02 23 39.4	+0.2	
DPC				*e*		02 23 50.3		
DPC				MLR	MLR			
	comp=Z,700nm,24.6s							
DPC	**Dobruska-Polom**	156.19 338		*i* PKPDF	**PKPdf**	02 23 39.4	+0.2	
DPC				*ex*	x	02 23 50.3		
DPC				*e*PKPAB	**PKPab**	02 24 08.2	+1.0	
DPC				*ep*PKP	**pPKPab**	02 24 26.0	+0.8	
DPC				*ex*	x	02 27 35.7		
DPC				*ex*	x	02 40 59.4		
DPC				AMS	AMS	03 31 50.0		
	comp=Z,700nm,24.6s							
DRGR		156.24 324		PKIKP	**PKPdf**	02 23 39.3	-0.1	
MORC	**Moravsky Berou**	156.25 336	⇑	PKIKP	**PKPdf**	02 23 39.2	-0.1	
MORC	**Moravsky Berou**	156.25 336		*e*PKPdf	**PKPdf**	02 23 39.0	-0.2	
MORC	**Moravsky Berou**	156.25 336	⇑	*i*P	**PKPdf**	02 23 39.2	-0.1	
IBBN	**Ibbenburen**	156.28 352		*e*PKPdf	**PKPdf**	02 23 39.0	-0.1	
IBBN				*e*PKPbc	PKPab	02 23 49.6	-18	
IBBN				*e*PKPab	PKPab	02 24 07.5	+0.1	
IBBN				*ep*PKPab	**pPKPab**	02 24 25.6	+0.1	
CLL	**Collm**	156.28 344	⇑	*i*PKIKP	**PKPdf**	02 23 38.8	-0.4	
CLL				*i*		02 23 49.5		
CLL				*i*		02 24 07.4		
CLL				*e*		02 27 42.0		
CLL				pmax	pmax			
	comp=Z,144nm,2.0s							
CLL				pmax	pmax			
	comp=Z,105nm,1.7s							
CLL				pmax	pmax			
	comp=Z,80nm,1.1s							
CLL				MLR	MLR			
	comp=Z,1μm,22.0s							
CLL	**Collm**	156.28 344		*e*PKPdf	**PKPdf**	02 23 39.0	-0.2	
CLL				*e*PKPbc	PKPab	02 23 49.6	-18	
CLL				*e*PKPab	PKPab	02 24 07.1	-0.3	
CLL				*ep*PKPab	**pPKPab**	02 24 25.3	-0.2	
CLL	**Collm**	156.28 344	⇑	*i*PKPdf	**PKPdf**	02 23 38.8	-0.4	
	comp=Z,144nm,2.0s							
CLL			⇑	*i*PKPdiff	PKPab	02 23 49.5	-18	
	comp=Z,105nm,1.7s							
CLL				*ep*PKPdf	**pPKPdf**	02 23 58.0	+0.1	
CLL			⇓	*i*PKPab	PKPab	02 24 07.4	0.0	
	comp=Z,80nm,1.1s							
CLL				*e*		02 24 16.0		
CLL				*ep*PKPab	**pPKPab**	02 24 25.0	-0.5	
CLL				*e*PP	**PP**	02 27 42.0	-2.8	
CLL				*e*PPP	PPP	02 31 24.0		
CLL				*e*SKKSac	SKKSac	02 34 18.0	-11	
CLL				*e*PPPrev		02 36 42.0		
CLL				*e*PSKS		02 38 05.0		
CLL				*es*PSKS		02 38 30.0		
CLL				*e*SKKSdf	**SKKSdf**	02 39 11.0	-3.2	
CLL				*e*PPS	PPS	02 41 02.0		
CLL				*e*PSKSrev		02 42 23.0		
CLL				*e*		02 46 42.0		
CLL				*e*SSP	SSP	02 48 22.0		
CLL				*e*SSS	SSS	02 53 30.0		
CLL				*e*SSSS		02 57 42.0		
CLL				LmV		03 36 00.0		
	comp=Z,1μm,22.0s							
LIC	**Lamto**	156.32 161	⇑	*i*PKIKP	**PKPdf**	02 23 41.1	+0.7	
	comp=Z,82nm,1.0s							
LIC				*e*R				
	comp=Z,1μm,20.8s							
LIC	**Lamto**	156.32 161	⇑	*i*PKPdf	**PKPdf**	02 23 41.1	+0.7	
CLZ	**Clausthal**	156.34 348		*e*PKIKP	**PKPdf**	02 23 39.2	-0.1	
CLZ				*e*		02 24 07.7		
CLZ	**Clausthal**	156.34 348		*e*PKPdf	**PKPdf**	02 23 39.2	-0.1	
CLZ				*e*PKPab	**PKPab**	02 24 07.7	0.0	
CLZ				*ep*PKPab	**pPKPab**	02 24 25.9	+0.1	
BRG	**Berggiesshubel**	156.44 342		*i* PKP	**PKPdf**	02 23 39.5	+0.1	
	comp=Z,179nm,1.8s							
BRG				*i*		02 24 08.4		
	comp=Z,110nm,1.2s							
BRG				*i*		02 24 22.9		
	comp=Z,105nm,1.4s							
BRG				*e*		02 27 25.2		
BRG								
	comp=N,995nm,27.0s							
BRG								
	comp=E,293nm,33.0s							
BRG								
	comp=Z,1μm,24.9s							
BRG	**Berggiesshubel**	156.44 342		*i* PKIKP	**PKPdf**	02 23 39.5	+0.1	
BRG				pmax	pmax			
	comp=Z,179nm,1.8s							
BRG				pmax	pmax			
	comp=Z,110nm,1.2s							
BRG				pmax	pmax			
	comp=Z,105nm,1.4s							
BRG				MLR	MLR			
	comp=N,995nm,27.0s							
BRG				MLR	MLR			
	comp=E,293nm,33.0s							
BRG				MLR	MLR			
	comp=Z,1μm,24.9s							
BRG	**Berggiesshubel**	156.44 342		*e*PKPdf	**PKPdf**	02 23 39.3	-0.1	
BRG				*e*PKPab	**PKPab**	02 24 08.4	+0.3	
				*ep*PKPab	**pPKPab**	02 24 26.3	+0.1	
SZH	**Strazhica**	156.45 314		*i* P	**PKPdf**	02 23 39.2	-0.5	
FBE	**Freiberg**	156.55 343		*e*PKPdf	**PKPdf**	02 23 39.7	+0.2	
FBE				*e*PKPab	**PKPab**	02 24 09.0	+0.4	
FBE				*ep*PKPab	**pPKPab**	02 24 27.1	+0.4	
PVCC	**Panska Ves**	156.57 341		*i* PKIKP	**PKPdf**	02 23 39.8	+0.2	
PVCC				MLR	MLR			
	comp=Z,1μm,22.6s							
PVCC	**Panska Ves**	156.57 341		*i* PKPDF	**PKPdf**	02 23 39.8	+0.2	
PVCC				*e*PKPAB	**PKPab**	02 24 09.3	+0.6	
PVCC				AMS	AMS	03 32 00.0		
	comp=Z,1μm,22.6s							
NEUB	**Neuenburg**	156.66 345		*e*PKPdf	**PKPdf**	02 23 39.7	+0.1	
NEUB				*e*PKPab	**PKPab**	02 24 08.9	-0.2	
NEUB				*ep*PKPab	**pPKPab**	02 24 27.0	-0.1	
WTSB	**Winterswijk**	156.72 354		*e*PKPdf	**PKPdf**	02 23 39.4	-0.3	
WTSB				*e*PKPcd		02 23 50.4		
WTSB				*e*PKPab	**PKPab**	02 24 08.9	-0.3	
DEV	**Deva**	156.73 322	⇑	PKIKP	**PKPdf**	02 23 39.9	0.0	
DEV	**Deva**	156.73 322	⇑	*i*P	**PKPdf**	02 23 39.9	0.0	
PSZ	**Piszkesteto**	156.78 330	⇑	PKIKP	**PKPdf**	02 23 39.5	-0.5	
PSZ	**Piszkesteto**	156.78 330		*e*PKPdf	**PKPdf**	02 23 39.3	-0.8	
PSZ				*e*PKPab	**PKPab**	02 24 10.3	+0.5	
PSZ	**Piszkesteto**	156.78 330	⇑	*i*P	**PKPdf**	02 23 39.5	-0.5	
PSZ	**Piszkesteto**	156.78 330	⇑	*e*PKPdf	**PKPdf**	02 23 39.8	-0.2	
VYHS	**Vyhne**	156.79 332		*e*PKIKP	**PKPdf**	02 23 39.7	-0.3	
VYHS	**Vyhne**	156.79 332		*e*PKP	**PKPdf**	02 23 39.7	-0.3	
VYHS				*e*		02 24 10.0		
DBIC	**Dimbokro**	156.80 161		*e*PKPdf	**PKPdf**	02 23 41.6	+0.6	
DBIC				PKP	PKP	02 23 41.8		
DBIC				*e*PKPab	**PKPab**	02 24 10.7	+0.1	
DBIC				PKPab	PKPab	02 24 11.4	+0.9	
DBIC	**Dimbokro**	156.80 161		PKP	**PKPdf**	02 23 41.8	+0.8	
	comp=Z,27nm,1.0s,baz=140,slow=2.7,SNR=14							
DBIC				PKPab	**PKPab**	02 24 11.4	+0.9	
	comp=Z,41nm,0.9s,baz=182,slow=5.0,SNR=9.1							
TURN	**Turunc**	156.87 297		*i* P	**PKPdf**	02 23 41.2	+0.9	
VRAC	**Vranov**	156.98 336		PKP	**PKPdf**	02 23 40.3	+0.2	
VRAC				PKPab	**PKPab**	02 24 11.0	+0.4	
VRAC	**Vranov**	156.98 336	⇓	*i*P	**PKPdf**	02 23 40.4	+0.2	
VRAC	**Vranov**	156.98 336		PKP	**PKPdf**	02 23 40.3	+0.2	
	comp=Z,14nm,1.1s,baz=39,slow=1.5							
VRAC				PKPab	**PKPab**	02 24 11.0	+0.4	
	comp=Z,52nm,1.0s,baz=44,slow=4.7,SNR=7.4							
PRA	**Prague**	157.02 340		PKPDF	**PKPdf**	02 23 39.0	-1.2	
PRA				PKPAB	**PKPab**	02 24 12.0	+1.4	
PRA				pPKP	pPKPdf	02 24 30.0	+31	
PRU	**Pruhonice**	157.06 340		*i* PKIKP	**PKPdf**	02 23 40.4	+0.2	
PRU				*e*		02 23 51.4		
PRU				*e*		02 27 47.7		
PRU				*e*		02 41 00.5		
PRU				MLR	MLR			
	comp=Z,1μm,22.7s							
PRU	**Pruhonice**	157.06 340		*i* PKPDF	**PKPdf**	02 23 40.4	+0.2	
PRU				*ex*	x	02 23 51.4		
PRU				*e*PKPAB	**PKPab**	02 24 11.5	+0.7	
PRU				*ep*PKP	**pPKPab**	02 24 30.3	+1.4	
PRU				*e*PP	**PP**	02 27 47.7	-1.5	
PRU				*e*SKKS		02 38 02.1		
PRU				*ex*	x	02 41 00.5		
PRU				AMS	AMS	03 29 40.0		
	comp=Z,1μm,22.7s							
GZR	**Gura Zlata**	157.11 322	⇓	PKIKP	**PKPdf**	02 23 40.5	0.0	
GZR	**Gura Zlata**	157.11 322	⇓	*i*P	**PKPdf**	02 23 40.5	0.0	
BUG	**Bochum--Univer**	157.19 353		*e*PKPdf	**PKPdf**	02 23 40.3	0.0	
BUG				*e*PKPab	**PKPab**	02 24 11.1	-0.2	
BUG				*ep*PKPab	**pPKPab**	02 24 29.0	-0.4	
MOX	**Moxa**	157.23 345		*e*PKIKP	**PKPdf**	02 23 40.3	-0.1	
MOX				*e*		02 23 51.5		
MOX	**Moxa**	157.23 345		*e*PKPdf	**PKPdf**	02 23 40.3	-0.1	
MOX				*e*PKPbc	PKPab	02 23 51.5	-20	
MOX				*e*PKPab	PKPab	02 24 11.3	-0.2	
MOX				*ep*PKPab	**pPKPab**	02 24 29.4	-0.2	
TANN	**Tannenbergstha**	157.24 344		*e*PKPdf	**PKPdf**	02 23 40.3	-0.2	
TANN				*e*PKPab	**PKPab**	02 24 11.7	0.0	
TANN				*ep*PKPab	**pPKPab**	02 24 29.8	0.0	
AYDN	**Tasoluk**	157.24 299		*i* P	**PKPdf**	02 23 40.7	-0.2	
WERD	**Werda**	157.25 344		*e*PKPdf	**PKPdf**	02 23 40.2	-0.3	
WERD				*e*PKPab	**PKPab**	02 24 11.7	0.0	
WERD				*ep*PKPab	**pPKPab**	02 24 29.8	0.0	
PLN	**Plauen**	157.25 344		*e*PKPdf	**PKPdf**	02 23 40.4	-0.1	
PLN				*e*PKPab	**PKPab**	02 24 11.6	0.0	
PLN				*ep*PKPab	**pPKPab**	02 24 29.6	-0.1	
GUNZ	**Gunzen**	157.32 344		*e*PKPdf	**PKPdf**	02 23 40.5	-0.1	
GUNZ				*e*PKPab	**PKPab**	02 24 12.4	+0.4	
GUNZ				*ep*PKPab	**pPKPab**	02 24 30.3	+0.2	
SMOL	**Smolenice**	157.34 334		*e*PKIKP	**PKPdf**	02 23 41.8	+1.2	
SMOL	**Smolenice

PKSM	Moragy	158.63	328	⇑PKIKP	PKPdf	02 23 41.2	-1.1
PKSM	Moragy	158.63	328	⇑*i*P	PKPdf	02 23 41.2	-1.1
PKSM	Moragy	158.63	328	⇑*e*PKPdf	PKPdf	02 23 41.7	-0.6
ABH	Alteburg	158.69	351	PKP	PKPdf	02 23 42.3	0.0
GIVF	Givet	158.73	356	⇑*i*PKIKP	PKPdf	02 23 42.2	-0.1
	comp=Z,137nm,1.5s						
GIVF	Givet	158.73	356	⇑*i*PKIKP	PKPdf	02 23 42.2	-0.1
GIVF	Givet	158.73	356	⇑*i*PKPdf	PKPdf	02 23 42.2	-0.1
NVR	Nevrokopi	158.74	311	P	PKPdf	02 23 41.0	-1.6
DOU	Dourbes	158.75	357	PKPdf	PKPdf	02 23 42.1	-0.1
DOU				PKPab	PKPab	02 24 18.1	0.0
DOU				APKPab		02 24 35.7	
TOD	Tromm	158.77	349	PKIKP	PKPdf	02 23 42.1	-0.3
TOD	Tromm	158.77	349	PKP	PKPdf	02 23 42.1	-0.3
BAIF	Baives	158.80	357	⇑*i*PKIKP	PKPdf	02 23 42.3	0.0
	comp=Z,93nm,1.4s						
BAIF	Baives	158.80	357	⇑*i*PKIKP	PKPdf	02 23 42.3	0.0
BAIF	Baives	158.80	357	⇑*i*PKPdf	PKPdf	02 23 42.3	0.0
RUP	Ruppelstein	158.93	352	PKIKP	PKPdf	02 23 42.5	-0.1
RUP	Ruppelstein	158.93	352	PKP	PKPdf	02 23 42.5	-0.1
SRS	Serrai	159.03	311	P	PKPdf	02 23 40.4	-2.5
WLF	Walferdange	159.06	354	PKPdf	PKPdf	02 23 43.2	+0.5
WLF				PKPab	PKPab	02 24 20.0	+0.5
WLF	Walferdange	159.06	354	*e*PKIKP	PKPdf	02 23 42.7	0.0
WLF				*e*		02 24 20.3	
WLF	Walferdange	159.06	354	*e*PKPdf	PKPdf	02 23 43.2	+0.5
WLF				*e*PKPab	PKPab	02 24 19.8	+0.3
WLF				*ep*PKPab	pPKPab	02 24 38.0	+0.5
WLF	Walferdange	159.06	354	*e*PKPdf	PKPdf	02 23 42.7	0.0
WLF				*e*PKPab	PKPab	02 24 20.3	+0.8
ARSA	Arzberg	159.10	335	⇑*i*PKPdf	PKPdf	02 23 42.1	-0.7
	comp=Z,16nm,1.1s						
ARSA				⇑*i*PKPab	PKPab	02 24 19.5	-0.3
	comp=Z,37nm,1.3s						
ARSA	Arzberg	159.10	335	⇑*i*P	PKPdf	02 23 42.1	-0.7
ZKR	Zakros	159.12	293	P	PKPdf	02 23 41.9	-1.3
KTD	Kalmit	159.16	350	PKIKP	PKPdf	02 23 42.8	-0.1
KTD	Kalmit	159.16	350	PKP	PKPdf	02 23 42.8	-0.1
APE	Apeiranthos	159.20	299	P	PKPdf	02 23 40.8	-2.5
APE	Apeiranthos	159.20	299	⇑PKIKP	PKPdf	02 23 41.5	-1.8
APE	Apeiranthos	159.20	299	⇑*i*P	PKPdf	02 23 41.5	-1.8
BEHE	Becsehely	159.25	332	*e*PKPdf	PKPdf	02 23 42.7	-0.3
SOH	Sokhos	159.33	311	P	PKPdf	02 23 41.1	-2.2
SANT	Santorini	159.45	297	*e*PKPdf	PKPdf	02 23 41.9	-1.8
SANT				*e*PKPab	PKPab	02 24 20.9	-0.9
DIVS	Divibare	159.46	322	P	PKPdf	02 23 42.5	-0.9
KNT	Kendrikon	159.46	312	P	PKPdf	02 23 41.5	-1.9
PLG	Polygyros	159.48	309	P	PKPdf	02 23 41.5	-2.0
STU	Stuttgart	159.50	348	*e*PKIKP	PKPdf	02 23 42.9	-0.3
STU				*e*		02 24 21.8	
STU	Stuttgart	159.50	348	*e*PKPdf	PKPdf	02 23 43.1	-0.1
STU				*e*PKPab	PKPab	02 24 21.4	0.0
STU				*ep*PKPab	pPKPab	02 24 39.1	-0.4
STU	Stuttgart	159.50	348	*e*PKPdf	PKPdf	02 23 42.9	-0.3
STU				*e*PKPab	PKPab	02 24 21.8	+0.3
LANF	Langenberg	159.53	350	PKIKP	PKPdf	02 23 43.4	+0.1
LANF	Langenberg	159.53	350	PKP	PKPdf	02 23 43.4	+0.1
LANF	Langenberg	159.53	350	PKP	PKPdf	02 23 43.4	+0.1
NPS	Neapolis	159.58	294	P	PKPdf	02 23 43.3	-0.5
VAY	Valandovo	159.59	313	P	PKPdf	02 23 41.2	-2.3
VAY	Valandovo	159.59	313	*e*PKP	PKPdf	02 23 42.5	-1.0
VAY				*e*PKP	PKPab	02 24 22.1	-0.1
RJOB	Jochberg	159.59	340	*e*PKPdf	PKPdf	02 23 42.6	-0.8
RJOB				*e*PKPab	PKPab	02 24 22.6	+0.6
RJOB				*ep*PKPab	pPKPab	02 24 40.7	+0.7
FUR	Furstenfeldbru	159.62	343	*e*PKIKP	PKPdf	02 23 43.0	-0.4
FUR				*e*		02 24 22.3	
FUR	Furstenfeldbru	159.62	343	*e*PKPdf	PKPdf	02 23 43.0	-0.4
FUR				*e*PKPab	PKPab	02 24 22.3	+0.3
FUR				*ep*PKPab	pPKPab	02 24 40.5	+0.4
LAST	Lasithi	159.71	294	P	PKPdf	02 23 43.0	-1.0
MRMA	Marmari	159.76	303	P	PKPdf	02 23 42.5	-1.4
SOKA	Soboth	159.76	335	⇓*i*PKPdf	PKPdf	02 23 42.9	-0.8
	comp=Z,25nm,1.2s						
SOKA				⇑*i*PKPab	PKPab	02 24 22.6	-0.2
	comp=Z,111nm,1.7s						
SOKA	Soboth	159.76	335	⇓*i*P	PKPdf	02 23 42.9	-0.8
GROS	Grobnik	159.77	334	*i*PKPdf	PKPdf	02 23 42.8	-0.9
PERS	Pernice	159.77	335	*i*PKPdf	PKPdf	02 23 42.8	-0.9
PERS				*e*PKPab	PKPab	02 24 22.0	-0.8
GRG	Griva	159.89	312	P	PKPdf	02 23 42.3	-1.7
SKO	Skopje	159.95	316	*e*PKP	PKPdf	02 23 44.2	+0.2
SKO				*e*PKP	PKPab	02 24 25.3	+1.6
FLN	La Foliniere	159.98	6	⇑*i*PKIKP	PKPdf	02 23 43.6	-0.1
	comp=Z,153nm,1.5s						
FLN				*e*R			
	comp=Z,674nm,22.8s						
FLN	La Foliniere	159.98	6	⇑*i*PKIKP	PKPdf	02 23 43.6	-0.1
FLN	La Foliniere	159.98	6	⇑*i*PKPdf	PKPdf	02 23 43.6	-0.1
ROSF	Rostrenen	160.02	12	⇑*i*PKIKP	PKPdf	02 23 43.5	-0.3
	comp=Z,119nm,1.5s						
ROSF	Rostrenen	160.02	12	⇑*i*PKIKP	PKPdf	02 23 43.5	-0.3
ROSF	Rostrenen	160.02	12	⇑*i*PKPdf	PKPdf	02 23 43.5	-0.3
BFO	Black Forest	160.08	349	*e*PKIKP	PKPdf	02 23 43.4	-0.5
BFO				*e*		02 24 23.8	
BFO	Black Forest	160.08	349	*e*PKPdf	PKPdf	02 23 43.4	-0.5
BFO				*e*PKPab	PKPab	02 24 23.8	-0.2
BFO				*ep*PKPab	pPKPab	02 24 41.7	-0.4
BFO	Black Forest	160.08	349	*e*PKPdf	PKPdf	02 23 43.7	-0.3
BFO				*e*PKPab	PKPab	02 24 23.8	-0.2
MRKA	Markates	160.09	305	P	PKPdf	02 23 43.0	-1.2
XOR	Xorichti	160.10	307	P	PKPdf	02 23 42.4	-1.8
PTL	Penteli	160.14	303	P	PKPdf	02 23 42.4	-1.9
IDI	Anoyia	160.15	294	P	PKPdf	02 23 43.8	-0.7
IDI	Anoyia	160.15	294	*e*PKPdf	PKPdf	02 23 44.7	+0.2
IDI				*e*PKPab	PKPab	02 24 25.7	+0.7
CDF	Champ du Feu	160.16	351	⇑*i*PKIKP	PKPdf	02 23 43.5	-0.6
	comp=Z,159nm,1.9s						
CDF	Champ du Feu	160.16	351	⇑*i*PKIKP	PKPdf	02 23 43.5	-0.6
CDF	Champ du Feu	160.16	351	⇑*i*PKPdf	PKPdf	02 23 43.5	-0.6
LDF	La Druitiere	160.18	6	⇑*i*PKIKP	PKPdf	02 23 43.8	-0.2
	comp=Z,128nm,1.4s						
LDF	La Druitiere	160.18	6	⇑*i*PKIKP	PKPdf	02 23 43.8	-0.2
LDF	La Druitiere	160.18	6	⇑*i*PKPdf	PKPdf	02 23 43.8	-0.2
PAGF	Fort de Pagny	160.20	354	⇑*i*PKIKP	PKPdf	02 23 44.1	+0.1
	comp=Z,48nm,1.5s						
PAGF	Fort de Pagny	160.20	354	⇑*i*PKPdf	PKPdf	02 23 44.1	+0.1
SGMF	Saint Gilles	160.22	10	⇑*i*PKIKP	PKPdf	02 23 43.7	-0.3
	comp=Z,316nm,1.9s						
SGMF	Saint Gilles	160.22	10	⇑*i*PKIKP	PKPdf	02 23 43.7	-0.3
SGMF	Saint Gilles	160.22	10	⇑*i*PKPdf	PKPdf	02 23 43.7	-0.3
SPAK	Spaichingen-Ko	160.22	348	PKP	PKPdf	02 23 43.6	-0.6
LIT	Litokhoron	160.25	310	P	PKPdf	02 23 43.0	-1.4
SIVA	Sivas	160.28	294	P	PKPdf	02 23 44.4	-0.1
SMIA	Simia	160.30	306	P	PKPdf	02 23 43.5	-1.0
PLE	Plievlja	160.30	322	⇑*i*PKP	PKPdf	02 23 43.8	-0.7
MEZF	Maizieres J'vi	160.31	355	⇑*i*PKIKP	PKPdf	02 23 44.4	+0.3
	comp=Z,279nm,1.5s						
MEZF	Maizieres J'vi	160.31	355	⇑*i*PKPdf	PKPdf	02 23 44.4	+0.3
GRR	Gorron	160.31	7	⇑*i*PKIKP	PKPdf	02 23 44.0	-0.1
	comp=Z,168nm,1.6s						
GRR	Gorron	160.31	7	⇑*i*PKIKP	PKPdf	02 23 44.0	-0.1
GRR	Gorron	160.31	7	⇑*i*PKPdf	PKPdf	02 23 44.0	-0.1
IVA	Berane	160.32	320	⇑*i*PKP	PKPdf	02 23 43.6	-0.9
WTTA	Wattenberg	160.35	342	⇑*i*PKIKP	PKPdf	02 23 44.0	-0.5
WTTA	Wattenberg	160.35	342	⇑*i*PKPdf	PKPdf	02 23 44.0	-0.5
	comp=Z,37nm,1.2s						
WTTA				⇑*i*PKPab	PKPab	02 24 26.0	+0.6
	comp=Z,108nm,1.2s						
WTTA	Wattenberg	160.35	342	⇑*i*P	PKPdf	02 23 44.0	-0.5
ECH	Echery	160.37	351	*e*PKIKP	PKPdf	02 23 43.4	-0.8
ECH				*e*		02 24 24.8	
ECH				*e*		02 28 04.2	
ECH	Echery	160.37	351	*e*PKPdf	PKPdf	02 23 43.4	-0.8
ECH				*e*PKPab	PKPab	02 24 24.8	-0.5
ECH				*e*PP	PP	02 28 04.2	-2.9
ECH	Echery	160.37	351	PKP	PKPdf	02 23 43.9	-0.4
LIBD	Limburg	160.37	350	PKIKP	PKPdf	02 23 43.9	-0.3
LIBD	Limburg	160.37	350	PKP	PKPdf	02 23 43.9	-0.3
MOTA	Moosalm	160.42	343	⇑*i*PKIKP	PKPdf	02 23 43.8	-0.7
MOTA	Moosalm	160.42	343	⇑*i*PKPdf	PKPdf	02 23 43.8	-0.7
	comp=Z,29nm,1.1s						
MOTA				⇑*i*PKPab	PKPab	02 24 26.2	+0.5
	comp=Z,71nm,1.2s						
MOTA	Moosalm	160.42	343	⇑*i*P	PKPdf	02 23 43.8	-0.7
QUIF	Quistinic	160.44	12	⇑*i*PKIKP	PKPdf	02 23 44.1	-0.2
	comp=Z,306nm,1.9s						
QUIF	Quistinic	160.44	12	⇑*i*PKIKP	PKPdf	02 23 44.1	-0.2
QUIF	Quistinic	160.44	12	⇑*i*PKPdf	PKPdf	02 23 44.1	-0.2
PVY	Plav	160.46	319	⇑*i*PKP	PKPdf	02 23 43.8	-0.9
LJU	Ljubljana	160.49	335	*i*PKPdf	PKPdf	02 23 44.0	-0.4
LJU				*e*PKPbc	PKPab	02 24 02.0	-24
LJU				*e*PKPab	PKPab	02 24 26.0	+0.1
LJU				*e*		02 24 43.2	
THEF	They Montfort	160.50	353	PKIKP	PKPdf	02 23 44.5	+0.1
THEF	They Montfort	160.50	353	PKP	PKPdf	02 23 44.5	+0.1
THEF	They Montfort	160.50	353	PKP	PKPdf	02 23 44.5	+0.1
ATAL	Atalanti	160.51	305	P	PKPdf	02 23 43.0	-1.7
BCI	Bajram Curri	160.53	318	*e*PN	PKPdf	02 23 43.9	-0.7
LKR	Lokris	160.54	305	P	PKPdf	02 23 42.8	-1.9
BIA	Bitola	160.55	313	*e*PKP	PKPdf	02 23 43.6	-1.2
ABTA	Abfaltersbach	160.57	339	⇑*i*PKPdf	PKPdf	02 23 43.6	-1.0
	comp=Z,31nm,1.7s						
ABTA				⇓*i*PKPab	PKPab	02 24 25.2	-1.0
	comp=Z,69nm,1.0s						
ABTA	Abfaltersbach	160.57	339	⇑*i*P	PKPdf	02 23 43.6	-1.0
FELD	Feldberg im Sc	160.58	349	PKP	PKPdf	02 23 44.3	-0.3
SFTF	Sexfontaines	160.60	355	⇑*i*PKIKP	PKPdf	02 23 44.5	0.0
	comp=Z,346nm,1.4s						
SFTF	Sexfontaines	160.60	355	⇑*i*PKPdf	PKPdf	02 23 44.5	0.0
FNA	Florina	160.64	313	P	PKPdf	02 23 43.3	-1.5
UPM	Unac-Piva	160.65	322	⇑*i*PKP	PKPdf	02 23 43.7	-1.2
BOJS	Bojanci	160.65	333	*i*PKPdf	PKPdf	02 23 44.3	-0.3
BOJS				*e*PKPbc	PKPab	02 23 58.4	-28
BOJS				*e*PKPab	PKPab	02 24 25.7	-0.9
BOJS				*i*		02 24 43.1	
BOJS				*i*		02 28 12.0	
VAM	Vamos	160.68	295	P	PKPdf	02 23 45.0	0.0
HAU	Haudompre	160.68	353	⇑*i*PKIKP	PKPdf	02 23 44.3	-0.3
	comp=Z,316nm,1.9s						
HAU				*e*R			
	comp=Z,785nm,23.0s						
HAU	Haudompre	160.68	353	⇑*i*PKIKP	PKPdf	02 23 44.3	-0.3
HAU	Haudompre	160.68	353	⇑*i*PKPdf	PKPdf	02 23 44.3	-0.3
PHP	Peshkopia	160.72	316	*e*PN	PKPdf	02 23 43.7	-1.2
PHP	Peshkopia	160.72	316	P	PKPdf	02 23 43.4	-1.5
VOY	Vojsko	160.73	336	*e*PKPdf	PKPdf	02 23 44.0	-0.8
VOY				*e*PKPbc	PKPab	02 23 58.3	-29
VOY				*e*PKPab	PKPab	02 24 26.2	-0.8
VOY				*e*		02 24 41.8	
AXAR	Agios Charalam	160.73	306	P	PKPdf	02 23 43.7	-1.2
MOF	Molkenrain	160.73	351	PKIKP	PKPdf	02 23 44.3	-0.5
MOF	Molkenrain	160.73	351	PKP	PKPdf	02 23 44.3	-0.5
MOF	Molkenrain	160.73	351	PKP	PKPdf	02 23 44.3	-0.5
DAVA	Damuels	160.78	345	⇑*i*PKPdf	PKPdf	02 23 44.4	-0.6
	comp=Z,34nm,1.4s						
DAVA	Damuels	160.78	345	⇑*i*P	PKPdf	02 23 44.4	-0.6
JAVS	Javornik	160.79	335	*i*PKPdf	PKPdf	02 23 44.1	-0.7
JAVS				*e*PKPbc	PKPab	02 23 58.4	-29
JAVS				*i*PKPab	PKPab	02 24 26.3	-0.9
JAVS				*i*		02 24 44.1	
DID	Didima	160.80	302	P	PKPdf	02 23 42.6	-2.5
HINF	Hinteralfeld	160.81	351	⇑*i*PKIKP	PKPdf	02 23 44.3	-0.5
	comp=Z,224nm,1.7s						
HINF	Hinteralfeld	160.81	351	⇑*i*PKIKP	PKPdf	02 23 44.3	-0.5
HINF	Hinteralfeld	160.81	351	⇑*i*PKPdf	PKPdf	02 23 44.3	-0.5
LTK	Loutraki	160.81	304	P	PKPdf	02 23 42.8	-2.3
FETA	Feichten	160.82	343	⇑*i*PKPdf	PKPdf	02 23 44.4	-0.6
	comp=Z,49nm,1.5s						
FETA				⇓*i*PKPab	PKPab	02 24 28.3	+0.9
	comp=Z,54nm,1.2s						
FETA	Feichten	160.82	343	⇑*i*P	PKPdf	02 23 44.4	-0.6
THL	Klokotos Trika	160.83	309	P	PKPdf	02 23 43.4	-1.6
PUK	Puka	160.84	318	*e*PN	PKPdf	02 23 44.3	-0.7
AGG	Agios Georgios	160.85	307	P	PKPdf	02 23 43.6	-1.5
NKY	Niksic	160.86	321	⇑*i*PKP	PKPdf	02 23 44.2	-0.9
GVD	Gavdhos	160.89	294	P	PKPdf	02 23 44.2	-1.0
GVD	Gavdhos	160.89	294	*e*PKPdf	PKPdf	02 23 44.5	-0.7
GVD				*e*PKPab	PKPab	02 24 28.2	+0.1
KARN	Karanos	160.90	295	P	PKPdf	02 23 44.7	-0.5
TTG	Podgorica	160.96	320	⇑*i*PKP	PKPdf	02 23 44.0	-1.0
DSF	Desfina	160.97	305	P	PKPdf	02 23 43.4	-1.9
MAKR	Makrakomi, Fth	161.00	307	P	PKPdf	02 23 44.4	-0.8
BRY	Bratogost	161.05	322	⇑*i*PKP	PKPdf	02 23 44.3	-1.0
NEST	Nestorio	161.05	312	P	PKPdf	02 23 44.6	-0.7
BBS	Basel-Blauen	161.06	350	PKIKP	PKPdf	02 23 44.3	-0.7
BBS	Basel-Blauen	161.06	350	PKP	PKPdf	02 23 44.3	-0.7
BUM	Brajici-Budva	161.25	320	⇑*i*PKP	PKPdf	02 23 45.3	-0.2
ULC	Ulcinj	161.26	319	⇑*i*PKP	PKPdf	02 23 44.9	-0.5
EVR	Evrytania	161.27	307	P	PKPdf	02 23 44.7	-0.9
LOMF	Lomont	161.27	351	PKIKP	PKPdf	02 23 45.1	-0.2
LOMF	Lomont	161.27	351	PKP	PKPdf	02 23 45.1	-0.2
LOMF	Lomont	161.27	351	PKP	PKPdf	02 23 45.1	-0.2
TIR	Tirane	161.27	316	*e*PN	PKPdf	02 23 45.1	-0.3
GUR	Goura	161.30	304	P	PKPdf	02 23 44.7	-1.0
HCY	Herceg Novi	161.38	321	⇑*i*PKP	PKPdf	02 23 44.8	-0.7
EFP	Efpalio	161.41	306	P	PKPdf	02 23 45.4	-0.2
VLX	Viachokerasia	161.49	302	P	PKPdf	02 23 45.4	-0.5
JAN	Janina	161.57	310	P	PKPdf	02 23 45.5	-0.3
LOR	Lormes	161.60	357	⇑*i*PKIKP	PKPdf	02 23 45.6	0.0
	comp=Z,168nm,1.4s						
LOR				*e*R			
	comp=Z,2μm,22.2s						
LOR	Lormes	161.60	357	⇑*i*PKPdf	PKPdf	02 23 45.6	0.0
HYF	Humbligny	161.63	0	⇑*i*PKIKP	PKPdf	02 23 45.9	+0.3
HYF	Humbligny	161.63	0	⇑*i*PKPdf	PKPdf	02 23 45.9	+0.3
TUE	Stuetta	161.66	345	*e*PKPdf	PKPdf	02 23 45.2	-0.7
TUE				*e*PKPab	PKPab	02 24 31.2	0.0
TUE				*e*PP	PP	02 28 14.1	-0.2
DYR	Agios Nikonas	161.73	301	P	PKPdf	02 23 45.0	-1.1
SSF	Saint Saulge	161.82	358	⇑*i*PKIKP	PKPdf	02 23 45.8	0.0
	comp=Z,158nm,1.4s						
SSF	Saint Saulge	161.82	358	⇑*i*PKIKP	PKPdf	02 23 45.8	0.0
SSF	Saint Saulge	161.82	358	⇑*i*PKPdf	PKPdf	02 23 45.8	0.0
RLS	Riolos of Patr	161.88	305	P	PKPdf	02 23 46.2	+0.1
ITM	Ithomi	161.89	302	P	PKPdf	02 23 44.9	-1.3
AMT	Artemida-Makis	161.92	303	P	PKPdf	02 23 45.1	-1.1
IGT	Igoumenitsa	161.98	311	P	PKPdf	02 23 45.3	-0.9
CABF	La Chapelle	162.09	352	⇑*i*PKIKP	PKPdf	02 23 46.5	+0.3
	comp=Z,272nm,1.4s						
CABF	La Chapelle	162.09	352	⇑*i*PKIKP	PKPdf	02 23 46.5	+0.3
CABF	La Chapelle	162.09	352	⇑*i*PKPdf	PKPdf	02 23 46.5	+0.3
AVF	Avril sur Loir	162.10	359	⇑*i*PKIKP	PKPdf	02 23 45.8	-0.3
	comp=Z,99nm,1.4s						
AVF	Avril sur Loir	162.10	359	⇑*i*PKIKP	PKPdf	02 23 45.8	-0.3
AVF	Avril sur Loir	162.10	359	⇑*i*PKPdf	PKPdf	02 23 45.8	-0.3
LKD2	Lefkada island	162.12	308	P	PKPdf	02 23 45.7	-0.7
PYL	PYLOS	162.13	302	P	PKPdf	02 23 45.0	-1.4
MFF	Saint Martin d	162.15	6	⇑*i*PKIKP	PKPdf	02 23 46.2	+0.1
	comp=Z,200nm,1.4s						
MFF	Saint Martin d	162.15	6	⇑*i*PKIKP	PKPdf	02 23 46.2	+0.1
MFF	Saint Martin d	162.15	6	⇑*i*PKPdf	PKPdf	02 23 46.2	+0.1
SMF	Signal de Mont	162.23	357	⇑*i*PKIKP	PKPdf	02 23 46.0	-0.2
	comp=Z,119nm,1.4s						
SMF	Signal de Mont	162.23	357	⇑*i*PKIKP	PKPdf	02 23 46.0	-0.2
SMF	Signal de Mont	162.23	357	⇑*i*PKPdf	PKPdf	02 23 46.0	-0.2
KEK	Kerkira	162.23	312	P	PKPdf	02 23 45.9	-0.6
OG01	Vacheresse	162.29	351	PKP	PKPdf	02 23 46.5	+0.1
OG01	Vacheresse	162.29	351	PKP	PKPdf	02 23 46.5	+0.1
BGF	Bois d'Agland	162.34	360	⇑*i*PKIKP	PKPdf	02 23 46.5	+0.2
	comp=Z,200nm,1.5s						
BGF	Bois d'Agland	162.34	360	⇑*i*PKIKP	PKPdf	02 23 46.5	+0.2
BGF	Bois d'Agland	162.34	360	⇑*i*PKPdf	PKPdf	02 23 46.5	+0.2
KFL	Anninata	162.34	306	P	PKPdf	02 23 45.6	-1.0
VLS	Valsamata	162.45	307	P	PKPdf	02 23 45.9	-0.8
PMOZ	Porto Moniz, M	162.47	72	*e*LR	LR	03 19 38.6	
	comp=Z,703nm,20.0s						
TCF	Toulx Ste Croi	162.60	1	⇑*i*PKIKP	PKPdf	02 23 46.6	-0.1
	comp=Z,151nm,1.4s						
TCF	Toulx Ste Croi	162.60	1	⇑*i*PKIKP	PKPdf	02 23 46.6	-0.1
TCF	Toulx Ste Croi	162.60	1	⇑*i*PKPdf	PKPdf	02 23 46.6	-0.1
AGO	Saint Agoulin	162.84	359	PKP	PKPdf	02 23 47.0	+0.1
AGO	Saint Agoulin	162.84	359	PKP	PKPdf	02 23 47.0	+0.1
LPL	La Plagne	163.08	350	⇑*i*PKIKP	PKPdf	02 23 47.5	+0.1
	comp=Z,150nm,1.7s						
LPL	La Plagne	163.08	350	⇑*i*PKIKP	PKPdf	02 23 47.5	+0.1
LPL	La Plagne	163.08	350	⇑*i*PKPdf	PKPdf	02 23 47.5	+0.1
LPG	La Plagne	163.09	350	⇑*i*PKIKP	PKPdf	02 23 47.7	+0.2
	comp=Z,159nm,1.6s						
LPG	La Plagne	163.09	350	⇑*i*PKIKP	PKPdf	02 23 47.7	+0.2
LPG	La Plagne	163.09	350	⇑*i*PKPdf	PKPdf	02 23 47.7	+0.2
PYM	Petit Puy Mans	163.14	359	PKIKP	PKPdf	02 23 47.9	+0.6
PYM	Petit Puy Mans	163.14	359	PKP	PKPdf	02 23 47.9	+0.6
PYM	Petit Puy Mans	163.14	359	PKP	PKPdf	02 23 47.9	+0.6
PMPST	Porto Santo, M	163.15	71	*e*PKPdf	PKPdf	02 23 48.3	+0.7
PMPST				*ep*PKPdf	pPKPdf	02 24 05.3	-1.0
PMPS	Porto Santo	163.15	71	*e*PKPdf	PKPdf	02 23 49.8	+2.3
PMPS				*ep*PKPdf	pPKPdf	02 24 07.9	+1.6
BNI	Bardonecchia	163.54	350	*e*PKIKP	PKPdf	02 23 48.0	+0.3
BNI				*e*		02 24 40.0	
BNI	Bardonecchia	163.54	350	*e*PKPdf	PKPdf	02 23 48.0	+0.3
BNI				*e*PKPab	PKPab	02 24 40.0	+0.7
SSB	Saint Sauveur	163.55	355	*e*PKIKP	PKPdf	02 23 47.3	-0.3
SSB				*e*		02 24 39.0	
SSB	Saint Sauveur	163.55	355	*e*PKPdf	PKPdf	02 23 47.3	-0.3
SSB				*e*PKPab	PKPab	02 24 39.0	-0.2
SSB	Saint Sauveur	163.55	355	PKP	PKPdf	02 23 47.8	+0.2
RJF	Les Rejaudoux	163.56	3	⇑*i*PKIKP	PKPdf	02 23 47.9	+0.3
	comp=Z,187nm,1.4s						
RJF				*e*R			
	comp=Z,1μm,21.8s						
RJF	Les Rejaudoux	163.56	3	⇑*i*PKIKP	PKPdf	02 23 47.9	+0.3
RJF	Les Rejaudoux	163.56	3	⇑*i*PKPdf	PKPdf	02 23 47.9	+0.3
LBL	Lubilhac	163.66	359	PKIKP	PKPdf	02 23 48.3	+0.5
LBL	Lubilhac	163.66	359	PKP	PKPdf	02 23 48.3	+0.5
LBL	Lubilhac	163.66	359	PKP	PKPdf	02 23 48.3	+0.5
ORIF	Oris-en-Rattie	163.78	352	⇑*i*PKIKP	PKPdf	02 23 48.0	+0.1
	comp=Z,129nm,1.4s						
ORIF				*e*R			
	comp=Z,662nm,21.2s						
ORIF	Oris-en-Rattie	163.78	352	⇑*i*PKIKP	PKPdf	02 23 48.0	+0.1
ORIF	Oris-en-Rattie	163.78	352	⇑*i*PKPdf	PKPdf	02 23 48.0	+0.1
MBDF	Montbardon	163.84	350	⇑*i*PKIKP	PKPdf	02 23 48.0	0.0
	comp=Z,218nm,1.6s						
MBDF	Montbardon	163.84	350	⇑*i*PKIKP	PKPdf	02 23 48.0	0.0
MBDF	Montbardon	163.84	350	⇑*i*PKPdf	PKPdf	02 23 48.0	0.0
LFF	La Frestale	163.88

PTOM				*e*PKPdf	**pPKPdf**	**02 24 09.1**	**+0.6**
PTOM	**Tomar**	**165.89**	**38**	*e*PKPab	**PKPab**	**02 24 49.9**	**+0.1**
PTOM				*ep*PKPab	**pPKPab**	**02 25 08.2**	**+0.4**
PTOM	**Tomar**	**165.89**	**38**	*e*PP	PP	02 28 38.5	+1.6
RESF	**Ens**	**165.96**	**7**	PKP	**PKPdf**	**02 23 51.1**	**+1.2**
RESF	**Ens**	**165.96**	**7**	PKP	**PKPdf**	**02 23 51.1**	**+1.2**
LIS	**Lisbon**	**166.10**	**42**	*e*P	**PKPdf**	**02 23 50.4**	**+0.5**
LIS				*e*PP	**PP**	**02 28 39.7**	**+1.6**
LIS				AMS	AMS	03 40 17.0	
	comp=E,1μm,22.2s						
LIS	**Lisbon**	**166.10**	**42**	*e*PKIKP	**PKPdf**	**02 23 50.4**	**+0.5**
LIS				*e*		02 28 39.6	
ALMR	**Almeirim**	**166.13**	**39**	*e*P	**PKPdf**	**02 23 51.0**	**+1.0**
ALMR	**Almeirim**	**166.13**	**39**	*e*PKIKP	**PKPdf**	**02 23 50.9**	**+1.0**
PCBR	**Castelo Branco**	**166.21**	**35**	*e*PKPdf	**PKPdf**	**02 23 51.3**	**+1.3**
PCBR				*ep*PKPab	**pPKPdf**	**02 24 09.6**	**+0.8**
PCBR	**Castelo Branco**	**166.21**	**35**	*e*PKPab	**PKPab**	**02 24 50.9**	**-0.3**
PCBR				*ep*PKPab	**pPKPab**	**02 25 08.6**	**-0.6**
FILF	**Fillols**	**166.33**	**0**	PKP	**PKPdf**	**02 23 50.5**	**+0.4**
FILF	**Fillols**	**166.33**	**0**	PKP	**PKPdf**	**02 23 50.5**	**+0.4**
PMTG	**Montargil**	**166.38**	**39**	*e*PKPdf	**PKPdf**	**02 23 50.9**	**+0.7**
PMTG				*ep*PKPdf	**pPKPdf**	**02 24 09.2**	**+0.3**
PMTG	**Montargil**	**166.38**	**39**	*e*PKPab	**PKPab**	**02 24 51.8**	**-0.2**
PMTG				*ep*PKPab	**pPKPab**	**02 25 09.1**	**-0.9**
PMTG	**Montargil**	**166.38**	**39**	*e*PP	PP	02 28 40.8	+1.4
PMRV	**Marv??o**	**166.56**	**36**	*e*PKPdf	**PKPdf**	**02 23 51.5**	**+1.2**
PMRV				*ep*PKPdf	**pPKPdf**	**02 24 09.1**	**0.0**
PMRV	**Marv??o**	**166.56**	**36**	*e*PKPab	**PKPab**	**02 24 52.2**	**-0.6**
PMRV				*ep*PKPab	**pPKPab**	**02 25 09.6**	**-1.2**
PMRV	**Marv??o**	**166.56**	**36**	*e*PP	PP	02 28 40.3	0.0
PMRV				*e*LR	LR	03 22 34.3	
	comp=E,807nm,20.0s						
EVOP	**Sao Brissos**	**166.82**	**40**	*i*PKIKP	**PKPdf**	**02 23 51.8**	**+1.3**
EVOP	**Sao Brissos**	**166.82**	**40**	*i*PKPdf	**PKPdf**	**02 23 51.8**	**+1.3**
PESTR	**Estremoz**	**166.87**	**38**	*e*PKPdf	**PKPdf**	**02 23 51.8**	**+1.2**
PESTR				*ep*PKPdf	**pPKPdf**	**02 24 10.0**	**+0.7**
PESTR	**Estremoz**	**166.87**	**38**	*e*PKPab	**PKPab**	**02 24 53.1**	**-1.1**
PESTR				*ep*PKPab	**pPKPab**	**02 25 11.4**	**-0.8**
PESTR	**Estremoz**	**166.87**	**38**	*e*PP	PP	02 28 42.2	+0.2
EVO	**Evora**	**166.88**	**40**	*i*PKIKP	**PKPdf**	**02 23 51.8**	**+1.2**
	comp=E,237nm,1.4s						
EVO				*e*R			
	comp=E,878nm,20.5s						
EVO	**Evora**	**166.88**	**40**	*e*PKPdf	**PKPdf**	**02 23 52.0**	**+1.4**
EVO				*ep*PKPdf	**pPKPdf**	**02 24 10.2**	**+0.9**
EVO	**Evora**	**166.88**	**40**	*e*PKPab	**PKPab**	**02 24 54.3**	**+0.1**
EVO				*ep*PKPab	**pPKPab**	**02 25 11.5**	**-0.7**
EVO	**Evora**	**166.88**	**40**	*e*PP	PP	02 28 42.8	+0.8
PTEO	**Sao Teotonio**	**167.11**	**45**	*e*PKPdf	**PKPdf**	**02 23 52.4**	**+1.6**
PTEO				*ep*PKPdf	**pPKPdf**	**02 24 10.5**	**+1.0**
PTEO	**Sao Teotonio**	**167.11**	**45**	*e*PKPab	**PKPab**	**02 24 55.5**	**+0.3**
PTEO				*ep*PKPab	**pPKPab**	**02 25 13.3**	**0.0**
PFVI	**Vila Bisbo**	**167.30**	**47**	*e*PKPdf	**PKPdf**	**02 23 52.2**	**+1.3**
PFVI				*ep*PKPdf	**pPKPdf**	**02 24 10.9**	**+1.2**
MORF	**Marmelete**	**167.30**	**46**	*e*PKPdf	**PKPdf**	**02 23 52.1**	**+1.1**
MORF				*ep*PKPdf	**pPKPdf**	**02 24 08.8**	**-1.0**
MORF	**Marmelete**	**167.30**	**46**	*e*PKPab	**PKPab**	**02 24 55.7**	**-0.5**
MORF	**Marmelete**	**167.30**	**46**	*e*PP	PP	02 28 46.3	+1.8
MORF	**Marmelete**	**167.30**	**46**	*e*PKIKP	**PKPdf**	**02 23 51.8**	**+0.8**
MORF				*e*		02 28 45.8	
PBEJ	**Beja**	**167.31**	**41**	*e*PKPdf	**PKPdf**	**02 23 52.5**	**+1.6**
PBEJ				*ep*PKPdf	**pPKPdf**	**02 24 09.5**	**-0.2**
PCVE	**Castro Verde**	**167.47**	**43**	*e*PKPdf	**PKPdf**	**02 23 52.5**	**+1.5**
PCVE				*ep*PKPdf	**pPKPdf**	**02 24 09.7**	**-0.1**
PCVE	**Castro Verde**	**167.47**	**43**	*e*PKPab	**PKPab**	**02 24 56.6**	**-0.2**
PCVE				*ep*PKPab	**pPKPab**	**02 25 14.9**	**0.0**
PBAR	**Barrancos**	**167.67**	**39**	*e*PKPdf	**PKPdf**	**02 23 52.5**	**+1.3**
PBAR				*ep*PKPdf	**pPKPdf**	**02 24 10.6**	**+0.7**
PBAR	**Barrancos**	**167.67**	**39**	*e*PKPab	**PKPab**	**02 24 57.8**	**+0.1**
PBAR				*ep*PKPab	**pPKPab**	**02 25 15.7**	**0.0**
PBDV	**Barranco-do-Ve**	**167.79**	**44**	*e*PKPdf	**PKPdf**	**02 23 52.6**	**+1.3**
PBDV				*ep*PKPdf	**pPKPdf**	**02 24 11.6**	**+1.5**
PBDV	**Barranco-do-Ve**	**167.79**	**44**	*e*PP	PP	02 28 47.1	+0.2
PVAQ	**Vaqueiros**	**167.81**	**43**	*e*PKPdf	**PKPdf**	**02 23 52.9**	**+1.6**
PVAQ	**Vaqueiros**	**167.81**	**43**	*e*PKPab	**PKPab**	**02 24 58.5**	**+0.1**
PVAQ				*e*LR	LR	03 22 56.9	
	comp=E,726nm,20.0s						
PAB	**San Pablo**	**167.86**	**27**	*e*PKIKP	**PKPdf**	**02 23 52.3**	**+0.9**
PAB				*e*		02 24 58.9	
PAB	**San Pablo**	**167.86**	**27**	*e*PKPdf	**PKPdf**	**02 23 52.3**	**+0.9**
PAB				*e*PKPab	**PKPab**	**02 24 58.9**	**+0.4**
ESDC	**Sonseca Array**	**167.90**	**25**	PKP	**PKPdf**	**02 23 52.5**	**+1.1**
ESDC				PKPab	**PKPab**	**02 24 58.2**	**-0.4**
ESDC				PP	**PP**	**02 28 46.7**	**-0.1**
ESDC	**Sonseca Array**	**167.90**	**25**	PKP	**PKPdf**	**02 23 52.5**	**+1.1**
	comp=E,21nm,1.0s,baz=346,slow=2.7,SNR=96						
ESDC				PKPab	**PKPab**	**02 24 58.2**	**-0.4**
	comp=E,11nm,0.9s,baz=320,slow=4.6,SNR=19						
ESDC				PP	**PP**	**02 28 46.7**	**-0.1**
	comp=E,4.9nm,1.1s,baz=325,slow=4.7,SNR=6.4						
ESLA	**Sonseca Array**	**167.90**	**25**	*e*PKPdf	**PKPdf**	**02 23 52.2**	**+0.9**
ESLA				*e*PKPab	**PKPab**	**02 24 59.1**	**+0.4**
ESLA				*e*PP	**PP**	**02 28 46.5**	**-0.3**
VSL	**Villasalto**	**168.05**	**334**	*e*PKPdf	**PKPdf**	**02 23 51.7**	**+0.3**
KEST	**Kesra**	**171.14**	**322**	*e*PKPdf	**PKPdf**	**02 23 53.7**	**+0.3**
KEST				PKP		02 23 54.0	
KEST				PKPab	**PKPab**	**02 25 14.6**	**+1.3**
KEST	**Kesra**	**171.14**	**322**	PKP	**PKPdf**	**02 23 54.0**	**+0.5**
	comp=E,8.8nm,1.0s,baz=258,slow=1.5,SNR=19						
KEST				PKPab	**PKPab**	**02 25 14.6**	**+1.3**
	comp=E,5.3nm,1.0s,baz=135,slow=1.4,SNR=2.5						
SET	**Setif**	**172.34**	**343**	P	**PKPdf**	**02 23 56.0**	**+2.0**
EBNR	**Beni Rached**	**172.53**	**7**	P	**PKPdf**	**02 23 57.0**	**+2.9**
MDT	**Midelt**	**172.58**	**56**	PKPab	**PKPab**	**02 25 20.2**	**+0.3**
MDT				PP	**PP**	**02 29 13.0**	**+1.5**
MDT	**Midelt**	**172.58**	**56**	PKPab	**PKPab**	**02 25 20.2**	**+0.3**
	baz=292,slow=6.4						
MDT				PP	**PP**	**02 29 13.0**	**+1.5**
	comp=E,2.7nm,1.1s,baz=358,slow=5.3,SNR=6.6						
ECHA	**Ech Chlef**	**172.65**	**8**	P	PKPdf	02 24 00.0	+6.0
EMHD	**Djebel Mahouad**	**172.68**	**358**	P	**PKPdf**	**02 23 56.0**	**+1.8**
TAM	**Tamanrasset**	**173.44**	**203**	*e*PKIKP	**PKPdf**	**02 23 55.6**	**+0.6**
TAM				*e*		02 25 24.4	
TAM				*e*		02 29 12.4	
TAM	**Tamanrasset**	**173.44**	**203**	*e*PKPdf	**PKPdf**	**02 23 55.6**	**+0.6**
TAM				*e*PKPab	**PKPab**	**02 25 24.4**	**+0.7**
TAM				*e*PP	**PP**	**02 29 12.4**	**-2.2**

*CSEM **18** 02:05:45.3, 42°.27N × 13°.47E, h11 km, MD1.9/6, After ROM*
ROM 18 02:05:45.3±0.1, 42°.27N×13°.47E, h11 km, Md1.9/6, Ml1.2/2, Error ellipse: s-maj=1.7km s-min=1.0km az=23.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.08**	**90**	Pg	Pg	02 05 48.3	+0.5
FAGN				Sg	Sg	02 05 50.1	+0.4
FAGN	**Fagnano**	**0.08**	**90**	Pg	Pg	02 05 48.3	+0.5
FAGN				Sg	Sg	02 05 50.1	+0.4
AQU	**L'Aquila**	**0.10**	**329**	Pg	Pg	02 05 48.6	+0.5
AQU				Sg	Sg	02 05 50.7	+0.6
AQU	**L'Aquila**	**0.10**	**329**	Pg	Pg	02 05 48.6	+0.5
AQU				Sg	Sg	02 05 50.7	+0.6
FIAM	**Fiamignano**	**0.27**	**271**	Pg	Pg	02 05 51.4	+0.5
FIAM				Sg	Sg	02 05 55.7	+1.1
FIAM	**Fiamignano**	**0.27**	**271**	Pg	Pg	02 05 51.4	+0.5
FIAM				Sg	Sg	02 05 55.7	+1.1
VCEL	**Villa Celiera**	**0.30**	**65**	Pg	Pg	02 05 51.9	+0.3
VCEL				Sg	Sb	02 05 57.0	-1.0
	26nm,0.4s						
VCEL	**Villa Celiera**	**0.30**	**65**	Pg	Pg	02 05 51.9	+0.3
VCEL				Sg	Sb	02 05 57.0	-1.0
	26nm,0.4s						
TERO	**Teramo**	**0.37**	**15**	Pg	Pg	02 05 52.9	+0.1
TERO				Sg	Sg	02 05 58.8	+1.0
TERO	**Teramo**	**0.37**	**15**	Pg	Pg	02 05 52.9	+0.1
TERO				Sg	Sg	02 05 58.8	+1.0
INTR	**Introdacqua**	**0.41**	**128**	Pg	Pg	02 05 53.9	+0.4
INTR				Sg	Sb	02 06 00.1	-1.0
	18nm,0.2s						
INTR	**Introdacqua**	**0.41**	**128**	Pg	Pg	02 05 53.9	+0.4
INTR				Sg	Sb	02 06 00.1	-1.0
	18nm,0.2s						
LPEL	**Lama dei Pelig**	**0.57**	**112**	Pg	Pg	02 05 55.6	-0.9
LPEL				Sg	Sg	02 06 04.9	+0.8
LPEL	**Lama dei Pelig**	**0.57**	**112**	Pg	Pg	02 05 55.6	-0.9
LPEL				Sg	Sg	02 06 04.9	+0.8

*CSEM **18** 02:07:06.9, 42°.54N × 13°.32E, h8 km, MD2.3/22, After ROM*

*ROM **18** 02:07:06.9±0.1, 42°.54N×13°.32E, h8 km, Md2.3/22, Ml1.8/16, Error ellipse: s-maj=1.2km s-min=0.9km az=62.0*
ISC 18 02:07:07.1±0.9, 42°.56N±0°.02×13°.36E±0°.02, h16 km±5km, n44, σ0°.79/72, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.04**	**129**	Pg	**Pg**	**02 07 09.6**	**-0.5**
CAMP				Sg	**Sg**	**02 07 10.9**	**-1.2**
	430nm,0.4s						
CAMP	**Campotosto**	**0.04**	**129**	Pg	**Pg**	**02 07 09.6**	**-0.5**
CAMP				Sg	**Sg**	**02 07 10.9**	**-1.2**
	430nm,0.4s						
TERO	**Teramo**	**0.19**	**71**	Pg	**Pg**	**02 07 11.9**	**+0.2**
TERO				Sg	**Sg**	**02 07 15.2**	**+0.5**
	264nm,0.3s						
TERO	**Teramo**	**0.19**	**71**	Pg	**Pg**	**02 07 11.9**	**+0.2**
TERO				Sg	**Sg**	**02 07 15.2**	**+0.5**
	264nm,0.3s						
AQU	**L'Aquila**	**0.21**	**172**	Pg	**Pg**	**02 07 11.8**	**-0.2**
AQU				Sg	**Sg**	**02 07 15.2**	**-0.1**
	146nm,0.2s						
AQU	**L'Aquila**	**0.21**	**172**	Pg	**Pg**	**02 07 11.8**	**-0.2**
AQU				Sg	**Sg**	**02 07 15.2**	**-0.1**
	146nm,0.2s						
LNSS	**Leonessa**	**0.24**	**280**	Pg	**Pg**	**02 07 12.3**	**-0.3**
LNSS				Sg	**Sg**	**02 07 16.1**	**-0.2**
	569nm,0.2s						
LNSS	**Leonessa**	**0.24**	**280**	Pg	**Pg**	**02 07 12.3**	**-0.3**
LNSS				Sg	**Sg**	**02 07 16.1**	**-0.2**
	569nm,0.2s						
NRCA	**Norcia**	**0.33**	**326**	Pg	**Pg**	**02 07 14.0**	**0.0**
NRCA				Sg	**Sg**	**02 07 19.2**	**+0.5**
	398nm,0.2s						
NRCA	**Norcia**	**0.33**	**326**	Pg	**Pg**	**02 07 14.0**	**0.0**
NRCA				Sg	**Sg**	**02 07 19.2**	**+0.5**
	398nm,0.2s						
FAGN	**Fagnano**	**0.34**	**151**	Pg	**Pg**	**02 07 14.1**	**-0.1**
FAGN				Sg	**Sb**	**02 07 19.9**	**-0.2**
	240nm,0.4s						
FAGN	**Fagnano**	**0.34**	**151**	Pg	**Pg**	**02 07 14.1**	**-0.1**
FAGN				Sg	**Sb**	**02 07 19.9**	**-0.2**
	240nm,0.4s						
FIAM	**Fiamignano**	**0.35**	**212**	Pg	**Pg**	**02 07 13.8**	**-0.5**
FIAM				Sg	**Sg**	**02 07 18.7**	**-0.5**
	52nm,0.4s						
FIAM	**Fiamignano**	**0.35**	**212**	Pg	**Pg**	**02 07 13.8**	**-0.5**
FIAM				Sg	**Sg**	**02 07 18.7**	**-0.5**
	52nm,0.4s						
VCEL	**Villa Celiera**	**0.39**	**115**	Pg	**Pg**	**02 07 15.6**	**+0.5**
VCEL				Sg	**Sb**	**02 07 23.0**	**+1.4**
	71nm,0.2s						
VCEL	**Villa Celiera**	**0.39**	**115**	Pg	**Pg**	**02 07 15.6**	**+0.5**
VCEL				Sg	**Sb**	**02 07 23.0**	**+1.4**
	71nm,0.2s						
OFFI	**Offida**	**0.44**	**32**	Pg	**Pb**	**02 07 17.4**	**+0.8**
OFFI	**Offida**	**0.44**	**32**	Pg	**Pb**	**02 07 17.4**	**+0.8**
FDMO	**Fiordimonte**	**0.52**	**337**	Pg	**Pg**	**02 07 17.3**	**-0.1**
FDMO				Sg	**Sb**	**02 07 25.8**	**+0.7**
	33nm,0.4s						
FDMO	**Fiordimonte**	**0.52**	**337**	Pg	**Pg**	**02 07 17.3**	**-0.1**
FDMO				Sg	**Sb**	**02 07 25.8**	**+0.7**
	33nm,0.4s						
MNS	**Montasola**	**0.54**	**251**	Pg	**Pg**	**02 07 17.2**	**-0.5**
	40nm,0.3s						
MNS	**Montasola**	**0.54**	**251**	Pg	**Pg**	**02 07 17.2**	**-0.5**
	40nm,0.3s						
PTQR	**Pietraquaria**	**0.54**	**177**	Pg	**Pg**	**02 07 17.1**	**-0.8**
PTQR				Sg	**Sb**	**02 07 26.1**	**+0.2**
	3.0nm,0.2s						
PTQR	**Pietraquaria**	**0.54**	**177**	Pg	**Pg**	**02 07 17.1**	**-0.8**
PTQR				Sg	**Sb**	**02 07 26.1**	**+0.2**
	3.0nm,0.2s						
CESI	**CESI - Serrava**	**0.56**	**323**	Pg	**Pg**	**02 07 17.9**	**-0.2**
CESI				Sg	**Sb**	**02 07 27.0**	**+0.7**
	16nm,0.2s						
CESI	**CESI - Serrava**	**0.56**	**323**	Pg	**Pg**	**02 07 17.9**	**-0.2**
CESI				Sg	**Sb**	**02 07 27.0**	**+0.7**
	16nm,0.2s						
GUMA	**Gualdo di Mace**	**0.65**	**40**	Pg	**Pg**	**02 07 17.6**	**-2.3**
GUMA				Sg	**Sg**	**02 07 26.4**	**-2.2**
	78nm,0.4s						
GUMA	**Gualdo di Mace**	**0.65**	**40**	Pg	**Pg**	**02 07 17.6**	**-2.3**
GUMA				Sg	**Sg**	**02 07 26.4**	**-2.2**
	78nm,0.4s						
CERT	**Cerreto**	**0.68**	**205**	Pg	**Pg**	**02 07 19.3**	**-1.1**
	45nm,0.3s						
CERT	**Cerreto**	**0.68**	**205**	Pg	**Pg**	**02 07 19.3**	**-1.1**
	45nm,0.3s						
INTR	**Introdacqua**	**0.68**	**144**	Pg	**Pg**	**02 07 20.1**	**-0.4**
INTR	**Introdacqua**	**0.68**	**144**	Pg	**Pg**	**02 07 20.1**	**-0.4**
ASSB	**Assisi San Ben**	**0.71**	**313**	Pg	**Pg**	**02 07 20.5**	**-0.4**
ASSB				Sg	**Sb**	**02 07 31.1**	**+0.5**
ASSB	**Assisi San Ben**	**0.71**	**313**	Pg	**Pg**	**02 07 20.5**	**-0.4**
ASSB				Sg	**Sg**	**02 07 31.1**	**+0.5**
VVLD	**Villa Vallelon**	**0.72**	**164**	Pg	**Pg**	**02 07 20.8**	**-0.4**
	44nm,0.8s						
VVLD	**Villa Vallelon**	**0.72**	**164**	Pg	**Pg**	**02 07 20.8**	**-0.4**
	44nm,0.8s						
LPEL	**Lama dei Pelig**	**0.80**	**130**	Pg	**Pg**	**02 07 22.3**	**-0.3**
LPEL				Sg	**Sb**	**02 07 34.2**	**+0.9**
	16nm,0.1s						
LPEL	**Lama dei Pelig**	**0.80**	**130**	Pg	**Pg**	**02 07 22.3**	**-0.3**
LPEL				Sg	**Sb**	**02 07 34.2**	**+0.9**
	16nm,0.1s						
CING	**Cingoli**	**0.82**	**351**	Pg	**Pg**	**02 07 22.9**	**-0.2**
CING	**Cingoli**	**0.82**	**351**	Pg	**Pg**	**02 07 22.9**	**-0.2**
ARVD	**Arcevia**	**0.98**	**342**	Pg	**Pg**	**02 07 25.6**	**-0.6**
	11nm,0.4s						
ARVD	**Arcevia**	**0.98**	**342**	Pg	**Pg**	**02 07 25.6**	**-0.6**
	11nm,0.4s						
PIEI	**Pieia**	**1.15**	**328**	Pg	**Pb**	**02 07 28.8**	**+0.2**
	9.0nm,0.4s						
PIEI	**Pieia**	**1.15**	**328**	Pg	**Pb**	**02 07 28.8**	**+0.2**
	9.0nm,0.4s						

IDC 18 02:21:11.2±4.8, 5°.14S×145°.84E, h77 km±40 km, mb3.8/5, mb1 4.0/8, mb1mx3.7/21, mbtmp3.8/8, ML3.9/3, MS4.4/1, Ms1 4.4/1, ms1mx3.9/21, Error ellipse: s-maj=32.9km s-min=27.1km az=154.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.43**	**163**	P	Pn	02 22 17.4	+1.4
	23nm,0.3s,baz=348,slow=6.5,SNR=42						
PMG				S	Sn	02 23 06.1	-0.3
	16nm,0.3s,baz=150,slow=23,SNR=8.9						
CTA	**Charters Tower**	**14.86**	**178**	P	Pn	02 24 39.2	+1.9
	0.5nm,0.3s,baz=359,slow=14,SNR=5.1						
WRA	**Warramunga Arr**	**18.49**	**216**	P	P	02 25 21.1	-0.3
	0.5nm,0.3s,baz=40,slow=12,SNR=11						
ASAR	**Alice Springs**	**21.72**	**211**	P	P	02 25 56.2	0.0
	0.9nm,0.4s,baz=45,slow=7.7,SNR=14						
FITZ	**Fitzroy Crossi**	**23.57**	**235**	P	P	02 26 15.1	-0.1
	2.1nm,0.4s,baz=52,slow=9.9,SNR=21						
STKA	**Stephens Creek**	**26.89**	**188**	P	P	02 26 45.1	+0.1
	3.2nm,0.8s,baz=358,slow=11,SNR=7.0						
QSPA	**South Pole Qui**	**84.82**	**180**	P	P	02 33 37.3	+0.1
	0.9nm,0.6s,baz=67,slow=2.4,SNR=13						
ILAR	**Eielson Array**	**85.15**	**23**	P	P	02 33 38.1	-0.5
	1.4nm,0.7s,baz=250,slow=5.2,SNR=12						
BVAR	**Borovoye Array**	**85.41**	**324**	LR	LR	03 16 12.1	
	comp=Z,210nm,19.9s,baz=87,slow=39						
TORD	**Torodi Ar. Bea**	**143.76**	**285**	PKP	PKPbc	02 40 36.8	+0.4
	0.6nm,1.1s,baz=47,slow=3.6,SNR=2.5						
SIV	**San Ignacio**	**146.08**	**129**	PKPbc	PKPbc	02 40 43.4	-0.1
	1.4nm,0.5s,baz=230,slow=5.4,SNR=10						

*IDC **18** 02:26:23.9±1.3, 27°.03N×129°.98E, h0 km, mb3.7/8, mb1 3.8/9, mb1mx3.7/26, mbtmp3.7/9, ML3.7/1, Error ellipse: s-maj=64.7km s-min=18.0km az=71.0*
*JMA **18** 02:26:25.6±0.1, 27°.02N×129°.94E, h62 km, M3.7*
ISC 18 02:26:26.2±1.4, 27°.03N±0°.04×129°.96E±0°.05, h58 km±32km, n22, σ0°.88/25, mb3.5/8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.17**	**310**	P	**Pn**	**02 26 46.1**	**-0.3**
JTK				S	**Sn**	**02 27 00.7**	**-0.8**
JZK	**Kikaishima**	**1.28**	**1**	P	**Pn**	**02 26 48.2**	**+0.3**
JZK				S	**Sn**	**02 27 06.1**	**+2.0**
JAMN	**Amaminishikomi**	**1.39**	**330**	P	**Pn**	**02 26 49.0**	**-0.4**
JAMN				S	**Sn**	**02 27 06.2**	**-0.6**
JAM	**Amami Oshima**	**1.41**	**347**	P	**Pn**	**02 26 49.6**	**0.0**
JAM				S	**Sn**	**02 27 07.1**	**-0.1**
JOW	**Kunigami**	**1.52**	**263**	P	**Pn**	**02 26 51.0**	**0.0**
JOW				S	**Sn**	**02 27 09.4**	**-0.3**
JMZ	**Minamidaito 2**	**1.66**	**136**	P	**Pn**	**02 26 52.8**	**-0.1**
JMZ				*e*S	**Sn**	**02 27 12.7**	**-0.4**
JIH	**Iheya**	**1.77**	**271**	P	**Pn**	**02 26 54.8**	**+0.3**
JIH				*e*S	**Sn**	**02 27 16.3**	**+0.3**
JJT2	**Tamagusuku 2**	**2.17**	**246**	*e*S	**Sn**	**02 27 26.2**	**+0.6**
JAGN	**Aguni-jima**	**2.46**	**260**	P	**Pn**	**02 27 04.4**	**+0.4**
JAGN				*e*S	**Sn**	**02 27 32.9**	**0.0**
JNN	**Nakanoshima**	**2.80**	**359**	P	**Pn**	**02 27 08.7**	**+0.1**
JNN				*e*S	**Sn**	**02 27 41.2**	**0.0**
JKE	**Kume jima 2**	**2.92**	**257**	P	**Pn**	**02 27 10.0**	**-0.2**
JKC	**Kuchinoerabu**	**3.43**	**3**	S	**Sn**	**02 27 54.9**	**-1.6**
JTN	**Tanegashima 3**	**3.72**	**14**	P	**Pn**	**02 27 21.3**	**+0.1**
JTN				S	**Sn**	**02 28 03.6**	**-0.2**
JNU	**Nakatsue**	**6.12**	**7**	Pn	**Pn**	**02 27 55.9**	**+1.8**
	1.8nm,0.3s,baz=176,slow=2.1,SNR=12						
JNU				Sn	**Sn**	**02 29 00.7**	**-2.1**
	0.6nm,0.3s,baz=229,slow=13,SNR=2.4						
SONM	**Songino Array**	**27.76**	**325**	P	P	02 32 15.0	+5.6
	0.7nm,0.7s,baz=147,slow=11,SNR=4.2						
MKAR	**Makanchi Array**	**42.17**	**311**	P	P	02 34 18.4	+5.3
	0.6nm,0.8s,baz=89,slow=6.3,SNR=2.5						
ZALV	**Zalesovo Beam**	**42.56**	**322**	P	P	02 34 21.7	+5.6
	0.4nm,0.4s,baz=107,slow=7.7,SNR=3.0						
KURBB	**Kurchatov Arra**	**45.35**	**316**	P	P	02 34 42.6	+4.1
	0.4nm,0.5s,baz=102,slow=8.8,SNR=4.2						
WRA	**Warramunga Arr**	**46.89**	**174**	P	P	02 34 55.3	+4.4
	1.3nm,0.6s,baz=348,slow=8.2,SNR=7.3						
ASAR	**Alice Springs**	**50.54**	**175**	P	P	02 35 24.6	+5.7
	0.6nm,0.5s,baz=5.8,slow=14,SNR=14						
FINES	**FINESS Array B**	**72.93**	**331**	P	P	02 37 54.5	+5.5
	3.5nm,1.1s,baz=77,slow=8.4,SNR=7.0						
BRTR	**Keskin Array B**	**77.76**	**308**	P	P	02 38 24.1	+6.7
	0.5nm,0.9s,baz=100,slow=3.4,SNR=3.2						

*IDC **18** 02:29:43.4±0.6, 14°.78N×144°.59E, h0 km, mb4.2/19, mb1 4.3/19, mb1mx4.3/29, mbtmp4.2/19, MS4.6/3, Ms1 4.6/3, ms1mx3.7/37, Error ellipse: s-maj=23.2km s-min=12.2km az=81.0*
*NEIC **18** 02:29:44.8±0.3, 14°.77N×144°.62E, h10 km, mb4.6/16, Error ellipse: s-maj=10.4km s-min=5.7km az=83.0*
*ISCJB **18** 02:29:45.8±0.3, 14°.75N±0°.04×144°.53E±0°.09, h27 km, mb4.3/39, MS4.7/3, Error ellipse: s-maj=12.1km s-min=5.6km az=166.5*
ISC 18 02:29:47.3±0.4, 14°.75N±0°.06×144°.6E±0°.1, h27 km, n76, σ0°.95/77, mb4.4/39, MS4.6/3, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.18**	**169**	Pn	**Pn**	**02 30 06.8**	**-1.2**
GUMO				Sn	**Sn**	**02 30 22.2**	**-0.9**
GUMO	**Guam**	**1.18**	**169**	Pn	**Pn**	**02 30 06.8**	**-1.2**
	254nm,0.3s,baz=307,slow=0.7,SNR=111						
GUMO				Sn	**Sn**	**02 30 22.2**	**-0.9**
	719nm,0.3s,baz=28,slow=23,SNR=121						
JNU	**Nakatsue**	**22.15**	**328**	P	**P**	**02 34 41.0**	**-0.1**
JNU	**Nakatsue**	**22.15**	**328**	P	**P**	**02 34 41.0**	**-0.1**
	14nm,1.1s,baz=138,slow=2.5,SNR=4.6						
MJAR	**Matsushiro Arr**	**22.45**	**346**	P	**P**	**02 34 44.9**	**+0.6**
MJAR	**Matsushiro Arr**	**22.45**	**346

AKTO	**Aktyubinsk**	**76.64**	**319**	P		**P**	**02 41 35.1**	**-0.6**
AKTO	**Aktyubinsk**	**76.64**	**319**	P		**P**	**02 41 35.1**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=82,slow=5.0,SNR=3.1							
YKW3	**Yellowknife Ar**	**81.92**	**27**	*e*P		**P**	**02 42 03.5**	**-0.7**
	comp=Z,0.1nm,1.0s							
YKA	**Yellowknife Ar**	**81.94**	**27**	P		**P**	**02 42 03.9**	**-0.5**
YKA	**Yellowknife Ar**	**81.94**	**27**	P		**P**	**02 42 03.8**	**-0.5**
	comp=Z,2.6nm,0.9s,baz=289,slow=5.4,SNR=21							
RES	**Resolute Bay**	**83.48**	**13**	*e*P		**P**	**02 42 13.3**	**+1.2**
	comp=Z,3.6nm,0.9s							
NEW	**Newport**	**84.52**	**42**	*e*P		**P**	**02 42 18.1**	**0.0**
	comp=Z,2.6nm,0.9s							
ARCES	**ARCESS Array B**	**85.92**	**342**	P		**P**	**02 42 25.4**	**+0.8**
ARCES	**ARCESS Array B**	**85.92**	**342**	P		**P**	**02 42 25.4**	**+0.8**
	comp=Z,8.0nm,1.0s,baz=343,slow=3.8,SNR=4.6							
NVAR	**Mina Array Bea**	**86.38**	**51**	P		**P**	**02 42 29.6**	**+1.8**
NVAR	**Mina Array Bea**	**86.38**	**51**	P		**P**	**02 42 29.6**	**+1.8**
	comp=Z,2.2nm,0.9s,baz=89,slow=2.3,SNR=9.0							
BOZ	**Bozeman (W)**	**88.91**	**43**	*e*P		**P**	**02 42 40.3**	**+0.6**
	comp=Z,3.8nm,1.3s							
FINES	**FINESS Array B**	**90.02**	**335**	P		**P**	**02 42 43.8**	**-0.5**
FINES	**FINESS Array B**	**90.02**	**335**	P		**P**	**02 42 43.8**	**-0.5**
	comp=Z,6.5nm,1.1s,baz=93,slow=4.0,SNR=4.7							
MMAI	**Mount Meron Ar**	**97.50**	**307**	LR		LR	03 33 34.5	
	comp=Z,753nm,20.9s,baz=125,slow=39							
LCO	**Las Campanas**	**144.43**	**119**	*e*PKPdf		**PKPdf**	**02 49 21.6**	**-0.5**
TRQA	**Tornquist**	**146.94**	**140**	*e*PKPbc		**PKPdf**	**02 49 25.6**	**-0.3**
LPAZ	**La Paz**	**148.42**	**97**	*e*PKPbc		**PKPbc**	**02 49 33.4**	**+0.3**
LPAZ	**La Paz**	**148.42**	**97**	PKPbc		**PKPbc**	**02 49 34.2**	**+1.1**
	comp=Z,3.3nm,1.1s,baz=350,slow=2.2,SNR=6.6							
SAML	**Samuel**	**152.19**	**81**	*e*PKPab		**PKPbc**	**02 49 41.4**	**-0.1**
SAML				*e*PKPbc		**PKiKP**	**02 49 41.5**	**-0.3**

IDC ***18*** *02:30:54.2±1.0, 14.76°N×144.69°E, h0km, mb4.1/9, mb1 4.2/9, mb1mx3.9/25, mbtmp4.1/9, MS4.9/2, Ms1 4.8/2, ms1mx3.8/37, Error ellipse: s-maj=49.6km s-min=13.8km az=83.0*

NEIC ***18*** *02:30:55.9±0.5, 14.75°N×144.58°E, h10km, mb4.4/9, Error ellipse: s-maj=18.0km s-min=6.7km az=85.0*

ISCJB ***18*** *02:30:57.0±0.5, 14.74°N±0.06°×144.5°E±0.1, h27km, mb4.1/18, MS5.0/2, Error ellipse: s-maj=20.6km s-min=6.8km az=165.0*

ISC 18 02:30:58.4±0.7, 14.73°N±0.08°×144.6°E±0.2, h27km, n31, σ0s73/31, mb4.2/18, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**1.17**	**166**	Pn		**Pn**	**02 31 17.6**	**-1.4**
GUMO				Sn		**Sn**	**02 31 34.5**	**+0.3**
GUMO	**Guam**	**1.17**	**166**	Pn		**Pn**	**02 31 17.6**	**-1.4**
	136nm,0.3s,baz=146,slow=23,SNR=1.5							
GUMO				Sn		**Sn**	**02 31 34.5**	**+0.3**
	172nm,0.3s,baz=11,slow=23,SNR=5.3							
MJAR	**Matsushiro Arr**	**22.45**	**346**	P		**P**	**02 35 55.7**	**+0.3**
MJAR	**Matsushiro Arr**	**22.45**	**346**	P		**P**	**02 35 55.7**	**+0.3**
	4.6nm,0.8s,baz=171,slow=10.0,SNR=4.6							
MAJO	**Matsushiro**	**22.45**	**346**	*e*P		**P**	**02 35 55.3**	**-0.1**
	18nm,1.1s							
KSRS	**Korea Array**	**27.04**	**330**	P		**P**	**02 36 38.9**	**+0.5**
	0.8nm,0.4s,baz=152,slow=11,SNR=2.6							
KSAR	**Wonju Array Be**	**27.05**	**330**	P		**P**	**02 36 38.9**	**+0.4**
WRAB	**Tennant Creek**	**35.89**	**197**	*e*P		**P**	**02 37 56.7**	**+0.3**
	4.5nm,0.9s							
WRA	**Warramunga Arr**	**35.90**	**197**	P		**P**	**02 37 56.6**	**+0.1**
WRA	**Warramunga Arr**	**35.90**	**197**	P		**P**	**02 37 56.6**	**+0.1**
	1.4nm,0.5s,baz=25,slow=9.9,SNR=3.5							
FITZ	**Fitzroy Crossi**	**37.59**	**210**	P		**P**	**02 38 11.5**	**+0.6**
FITZ	**Fitzroy Crossi**	**37.59**	**210**	P		**P**	**02 38 11.5**	**+0.6**
	1.5nm,0.8s,baz=23,slow=12,SNR=3.6							
MBWA	**Marble Bar**	**43.21**	**215**	*e*P		**P**	**02 38 58.1**	**+0.7**
	13nm,1.2s							
KULM	**Kulim**	**44.19**	**262**	*e*P		**P**	**02 39 04.7**	**-0.7**
	7.2nm,1.0s							
STKA	**Stephens Creek**	**46.43**	**184**	P		**P**	**02 39 24.2**	**+1.3**
STKA	**Stephens Creek**	**46.43**	**184**	P		**P**	**02 39 24.2**	**+1.3**
	1.1nm,0.7s,baz=351,slow=12,SNR=3.0							
MKAR	**Makanchi Array**	**60.48**	**316**	P		**P**	**02 41 06.1**	**+0.2**
MKAR	**Makanchi Array**	**60.48**	**316**	P		**P**	**02 41 06.1**	**+0.2**
	0.5nm,0.5s,baz=88,slow=8.6,SNR=5.4							
KURK	**Kurchatov**	**63.53**	**320**	*e*P		**P**	**02 41 25.8**	**-0.6**
	1.2nm,0.4s							
AAK	**Ala-Archa**	**65.56**	**310**	*e*P		**P**	**02 41 40.3**	**+0.3**
	0.4nm,0.5s							
BRVK	**Borovoye**	**68.92**	**321**	*e*P		**P**	**02 42 00.9**	**0.0**
	1.2nm,0.5s							
ABKAR	**Akbulak array**	**75.51**	**318**	*e*P		**P**	**02 42 39.7**	**-0.7**
	3.0nm,1.1s							
YKA	**Yellowknife Ar**	**81.98**	**27**	P		**P**	**02 43 15.7**	**+0.1**
YKA	**Yellowknife Ar**	**81.98**	**27**	P		**P**	**02 43 15.7**	**+0.1**
	0.1nm,0.5s,baz=285,slow=5.1,SNR=4.3							
RES	**Resolute Bay**	**83.51**	**13**	*e*P		**P**	**02 43 24.0**	**+0.6**
	1.7nm,0.9s							
ARCES	**ARCESS Array B**	**85.91**	**342**	P		**P**	**02 43 35.8**	**+0.2**
ARCES	**ARCESS Array B**	**85.91**	**342**	P		**P**	**02 43 35.8**	**+0.2**
	5.0nm,0.9s,baz=76,slow=8.4,SNR=5.8							
KBZ	**Khabaz**	**88.16**	**315**	LR		LR	03 29 48.5	
	comp=Z,490nm,20.6s,baz=243,slow=40							
FINES	**FINESS Array B**	**90.01**	**335**	P		**P**	**02 43 54.0**	**-1.3**
FINES	**FINESS Array B**	**90.01**	**335**	P		**P**	**02 43 54.0**	**-1.3**
	1.2nm,0.6s,baz=72,slow=6.2,SNR=7.1							
BRTR	**Keskin Array B**	**96.07**	**314**	LR		LR	03 35 23.4	
	comp=Z,585nm,21.1s,baz=65,slow=40							

ISCJB ***18*** *02:38:16.7±0.8, 27.02°S±0.03°×26.73°E±0.03, h2km±5km, mb4.1/20, MS2.9/1, Error ellipse: s-maj=4.9km s-min=3.7km az=137.5*

PRE ***18*** *02:38:17.6±2.9, 26.97°S×26.78°E, h2km, ML4.5*

IDC ***18*** *02:38:18.9±0.6, 26.93°S×26.72°E, h0km, mb4.1/14, mb1 4.2/18, mb1mx4.1/32, mbtmp4.1/18, ML4.4/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/37, Error ellipse: s-maj=16.8km s-min=9.9km az=96.0*

NEIC ***18*** *02:38:19.5±0.3, 26.91°S×26.75°E, h5km, mb4.4/8, ML4.1(PRE), Error ellipse: s-maj=10.7km s-min=7.0km az=101.0*

BUL ***18*** *02:40:40.4±0.3, 21.26°S×25.92°E, h15km, MD4.2*

ISC 18 02:38:18.4±1.2, 26.90°S±0.03°×26.74°E±0.03, h1km±7km, n79, σ1s46/100, mb4.2/20, 4C-4D, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PRYS	**Parys**	**0.55**	**93**	*i* P		**Pg**	**02 38 28.9**	**-0.2**
PRYS				*e*S		**Sg**	**02 38 34.8**	**-1.5**
PRYS				AML		AML	02 38 40.1	
	comp=Z,7μm,0.6s							
KLOF	**Kloof**	**0.95**	**55**	↓ *i* P		**Pg**	**02 38 36.9**	**+0.2**
KLOF				*e*S		**Sg**	**02 38 48.1**	**-1.0**
KLOF				AML		AML	02 38 53.7	
	comp=Z,3μm,0.3s							
KSR	**Koster**	**1.05**	**8**	↑ *i* P		**Pg**	**02 38 39.7**	**+1.0**
KSR				*e*S		**Sb**	**02 38 54.2**	**+0.2**
KSR				AML		AML	02 38 58.4	
	comp=Z,2μm,0.2s							
SWZ	**Schweizer**	**1.29**	**257**	↓ *i* P		**Pg**	**02 38 44.5**	**+1.3**
SWZ				*e*S		**Sg**	**02 39 00.5**	**+0.6**
SWZ				AML		AML	02 39 04.2	
	comp=Z,4μm,0.4s							
ERPM	**east rand prop**	**1.45**	**68**	↓ *i* P		**Pn**	**02 38 46.3**	**+0.3**
ERPM				*e*S		**Sb**	**02 39 05.5**	**+0.1**
ERPM				AML		AML	02 39 06.5	
	comp=Z,957nm,0.5s							
SLR	**Silverton**	**1.81**	**50**	↓ *i* P		**Pn**	**02 38 51.4**	**+0.6**
SLR				*e*S		**Sn**	**02 39 14.8**	**+0.4**
SLR				AML		AML	02 39 16.5	
	comp=Z,1μm,0.4s							
LBTB	**Lobatse**	**2.14**	**331**	↑ *e*P		**Pb**	**02 38 57.7**	**-0.4**
LBTB				*e*S		**Sb**	**02 39 25.7**	**+0.5**
LBTB				AML		AML	02 39 28.7	
	comp=Z,2μm,0.4s							
LBTB	**Lobatse**	**2.14**	**331**	*e*Pn		**Pb**	**02 38 57.2**	**-0.9**
LBTB				Pg		**Pg**	**02 38 58.7**	**-0.8**
LBTB				Lg		Lg	02 39 26.4	
LBTB				*e*Sg		**Sg**	**02 39 27.1**	**-0.2**
LBTB				Rg		Rg	02 39 37.0	
LBTB	**Lobatse**	**2.14**	**331**	Pn		**Pb**	**02 38 57.4**	**-0.7**
	comp=Z,117nm,0.3s,baz=164,slow=14,SNR=794							
LBTB				Pg		**Pg**	**02 38 58.7**	**-0.8**
	comp=Z,117nm,0.3s,baz=164,slow=18,SNR=794							
LBTB				Lg		Lg	02 39 26.4	
	comp=Z,746nm,0.3s,baz=61,slow=21,SNR=53							
LBTB				Rg		Rg	02 39 37.0	
	comp=Z,486nm,0.4s,baz=295,slow=16,SNR=22							

BOSA	**Boshof**	**2.15**	**217**	↑ *i* P		**Pn**	**02 38 56.0**	**+0.4**
BOSA				*e*S		**Sn**	**02 39 22.9**	**-0.2**
BOSA				AML		AML	02 39 26.6	
	comp=Z,789nm,0.3s							
BOSA	**Boshof**	**2.15**	**217**	Pn		**Pn**	**02 38 56.0**	**+0.4**
BOSA				Pg		**Pb**	**02 38 58.2**	**-0.1**
BOSA				Lg		Lg	02 39 25.2	
BOSA				Rg		Rg	02 39 39.1	
BOSA	**Boshof**	**2.15**	**217**	Pn		**Pn**	**02 38 56.0**	**+0.4**
	comp=Z,71nm,0.3s,baz=43,slow=13,SNR=962							
BOSA				Pg		**Pb**	**02 38 58.2**	**-0.1**
	comp=Z,103nm,0.3s,baz=40,slow=18,SNR=162							
BOSA				Lg		Lg	02 39 25.2	
	comp=Z,266nm,0.3s,baz=319,slow=17,SNR=20							
BOSA				Rg		Rg	02 39 39.1	
	comp=Z,314nm,0.3s,baz=138,slow=3.9,SNR=5.2							
KSD	**Kokstad**	**4.32**	**148**	*e*P		**Pn**	**02 39 25.6**	**+0.2**
KSD				*e*S		**Sn**	**02 40 13.3**	**-3.2**
KSD				AML		AML	02 40 32.3	
	comp=Z,1μm,0.4s							
POGA	**Pongola**	**4.37**	**97**	*e*P		**Pn**	**02 39 26.0**	**+0.2**
POGA				*e*S		**Sn**	**02 40 15.5**	**-1.9**
POGA				AML		AML	02 40 37.2	
	comp=Z,754nm,0.4s							
UPI	**Upington**	**5.08**	**252**	*e*P		**Pn**	**02 39 36.4**	**+0.6**
UPI				*e*S		**Sn**	**02 40 32.2**	**-2.9**
UPI				AML		AML	02 41 00.7	
	comp=Z,226nm,0.5s							
MSNA	**Messina**	**5.43**	**34**	*e*P		**Pn**	**02 39 39.6**	**-1.0**
MSNA				*e*S		**Sn**	**02 40 41.4**	**-2.4**
MSNA				AML		AML	02 41 18.5	
	comp=Z,111nm,0.6s							
SOE	**Somerset East**	**5.88**	**190**	*e*S		**Sn**	**02 40 50.7**	**-4.2**
SOE				AML		AML	02 41 23.2	
	comp=Z,124nm,0.8s							
GRM	**Grahamstown**	**6.39**	**182**	*e*P		**Pn**	**02 39 52.5**	**-1.2**
GRM				*e*S		Sn	02 41 01.0	-6.5
GRM				AML		AML	02 41 51.6	
	comp=Z,102nm,0.6s							
BLWY	**Bulawayo**	**6.95**	**15**	*i* P		**Sn**	**02 41 22.5**	**+1.3**
BLWY				*i*			02 41 22.9	
	baz=246,slow=14							
BLWY				*i* S		Sb	02 41 53.7	+10
BUFB	**Buffelsbos**	**7.43**	**193**	*e*P		**Pn**	**02 40 05.8**	**-2.1**
BUFB				*e*S		Sn	02 41 25.1	-7.7
BUFB				AML		AML	02 42 26.2	
	comp=Z,85nm,0.4s							
SUR	**Sutherland**	**7.51**	**222**	*e*P		**Pn**	**02 40 09.6**	**+0.3**
SUR				*e*S		**Sn**	**02 41 31.9**	**-3.3**
SUR				AML		AML	02 42 14.7	
	comp=Z,81nm,0.4s							
SUR	**Sutherland**	**7.51**	**222**	*e*Pn		**Pn**	**02 40 09.2**	**-0.1**
	comp=Z,30nm,0.3s							
SUR				*e*Sn		**Sn**	**02 41 31.9**	**-3.3**
SUR				*e*Sg		Sg	02 42 13.3	-6.4
CVNA	**Calvinia**	**7.62**	**232**	*e*P		**Pn**	**02 40 09.7**	**-0.9**
CVNA				*e*S		**Sn**	**02 41 32.5**	**-5.2**
CVNA				AML		AML	02 42 20.8	
	comp=Z,209nm,0.5s							
KOMG	**Komaggas**	**8.65**	**248**	*e*P		**Pn**	**02 40 24.9**	**+0.1**
KOMG				*e*S		Sn	02 41 56.8	-6.2
KOMG				AML		AML	02 42 48.2	
	comp=Z,119nm,0.6s							
CER	**Ceres**	**9.11**	**223**	*e*P		**Pn**	**02 40 29.8**	**-1.2**
CER				*e*S		Sn	02 42 07.0	-7.3
CER				AML		AML	02 43 05.8	
	comp=Z,44nm,0.5s							
TSUM	**Tsumeb**	**11.39**	**310**	Pn		**Pn**	**02 41 02.9**	**+0.5**
TSUM				Sn		**Sn**	**02 43 05.8**	**-4.7**
TSUM				Lg		Lg	02 44 16.1	
TSUM	**Tsumeb**	**11.39**	**310**	Pn		**Pn**	**02 41 02.9**	**+0.5**
	comp=Z,2.4nm,0.3s,baz=132,slow=12,SNR=54							
TSUM				Sn		**Sn**	**02 43 05.8**	**-4.7**
	comp=Z,1.1nm,0.3s,baz=237,slow=23,SNR=7.4							
TSUM				Lg		Lg	02 44 16.1	
	comp=Z,2.0nm,0.3s,baz=294,slow=21,SNR=7.3							
LSZ	**Lusaka**	**11.64**	**7**	*e*P		**Pn**	**02 41 04.9**	**-1.1**
LSZ				*e*S		Sn	02 43 09.5	-7.2
LSZ				AML		AML	02 44 29.1	
	comp=Z,522nm,0.6s							
LSZ	**Lusaka**	**11.64**	**7**	*e*Pn		**Pn**	**02 41 04.5**	**-1.5**
LSZ				*e*Sn		Sn	02 43 08.7	-8.1
LSZ				Lg		Lg	02 44 20.4	
LSZ	**Lusaka**	**11.64**	**7**	Pn		**Pn**	**02 41 04.8**	**-1.1**
	comp=Z,2.7nm,0.3s,baz=179,slow=12,SNR=37							
LSZ				Sn		Sn	02 43 09.5	-7.2
	comp=Z,1.1nm,0.3s,baz=81,slow=20,SNR=5.6							
LSZ				Lg		Lg	02 44 20.4	
	comp=Z,2.1nm,0.3s,baz=123,slow=21,SNR=9.2							
DBIC	**Dimbokro**	**45.28**	**313**	*e*P		**P**	**02 46 38.7**	**+0.8**
	comp=Z,11nm,1.0s							
TOA0	**Torodi Ar. Sit**	**46.66**	**325**	*e*P		**P**	**02 46 48.6**	**-0.1**
TORD	**Torodi Ar. Bea**	**46.66**	**325**	P		**P**	**02 46 48.9**	**+0.1**
TORD	**Torodi Ar. Bea**	**46.66**	**325**	P		**P**	**02 46 48.9**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=156,slow=7.5,SNR=27							
SNAA	**Sanae**	**47.73**	**192**	*e*P		**P**	**02 46 57.1**	**+0.5**
SNAA	**Sanae**	**47.73**	**192**	*e*P		**P**	**02 46 57.0**	**+0.5**
SNAA	**Sanae**	**47.73**	**192**	*e*P		**P**	**02 46 56.6**	**+0.1**
	comp=Z,5.3nm,1.0s							
SNAA	**Sanae**	**47.73**	**192**	LR		LR	03 02 21.6	
	comp=Z,15nm,21.2s,baz=221,slow=30							
VNA3	**Neumayer Olymp**	**48.83**	**195**	*e*P		**P**	**02 47 05.0**	**+0.1**
VNA3	**Neumayer Olymp**	**48.83**	**195**	*e*P		**P**	**02 47 05.1**	**+0.1**
QSPA	**South Pole Qui**	**63.29**	**180**	P		**P**	**02 48 48.6**	**-0.1**
QSPA	**South Pole Qui**	**63.29**	**180**	P		**P**	**02 48 48.6**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=280,slow=3.1,SNR=22							
BRTR	**Keskin Array B**	**66.59**	**6**	P		**P**	**02 49 10.9**	**+0.5**
BRTR	**Keskin Array B**	**66.59**	**6**	P		**P**	**02 49 10.9**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=178,slow=10,SNR=4.6							
BDFB	**Brasilia**	**69.71**	**262**	P		**P**	**02 49 31.0**	**+0.5**
BDFB	**Brasilia**	**69.71**	**262**	P		**P**	**02 49 31.0**	**+0.5**
	comp=Z,2.9nm,0.5s,baz=45,slow=0.9,SNR=6.5							
MLR	**Muntele Rosu**	**72.05**	**359**	P		**P**	**02 49 45.3**	**+1.3**
MLR	**Muntele Rosu**	**72.05**	**359**	P		**P**	**02 49 45.3**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=306,slow=18,SNR=5.6							
ESDC	**Sonseca Array**	**72.16**	**336**	P		**P**	**02 49 45.5**	**+0.7**
ESDC	**Sonseca Array**	**72.16**	**336**	P		**P**	**02 49 45.5**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=156,slow=6.0,SNR=14							
VNDA	**Vanda**	**72.44**	**171**	*e*P		**P**	**02 49 46.0**	**+0.1**
	comp=Z,1.4nm,0.9s							
VNDA	**Vanda**	**72.44**	**171**	P		**P**	**02 49 46.3**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=236,slow=2.2,SNR=3.6							
BUR08	**Bucovina Ar. S**	**74.21**	**359**	*e*P		**P**	**02 49 56.4**	**-0.4**
AKASG	**Malin Array Be**	**77.29**	**2**	P		**P**	**02 50 14.7**	**+0.5**
AKASG	**Malin Array Be**	**77.29**	**2**	P		**P**	**02 50 14.7**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=181,slow=5.4,SNR=4.8							
KULM	**Kulim**	**78.16**	**78**	*e*P		**P**	**02 50 20.0**	**+0.1**
	comp=Z,3.5nm,0.6s							
KKAR	**Karatay Array**	**80.45**	**31**	*e*P		**P**	**02 50 32.8**	**+1.1**
	comp=Z,0.6nm,0.3s							
ABKAR	**Akbulak array**	**81.40**	**21**	*e*P		**P**	**02 50 36.2**	**-0.4**
	comp=Z,0.5nm,0.6s							
AKTO	**Aktyubinsk**	**81.83**	**20**	P		**P**	**02 50 39.2**	**+0.4**
AKTO	**Aktyubinsk**	**81.83**	**20**	P		**P**	**02 50 39.2**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=177,slow=3.2,SNR=3.2							
SAML	**Samuel**	**85.95**	**262**	*e*P		**P**	**02 51 00.9**	**0.0**
	comp=Z,3.9nm,1.2s							
LPAZ	**La Paz**	**86.98**	**253**	*e*P		**P**	**02 51 06.6**	**-0.1**
	comp=Z,1.3nm,0.5s							
LPAZ	**La Paz**	**86.98**	**253**	P		**P**	**02 51 06.8**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=78,slow=3.7,SNR=5.7							
FINES	**FINESS Array B**	**88.03**	**360**	P		**P**	**02 51 10.8**	**+1.0**
FINES	**FINESS Array B**	**88.03**	**360**	P		**P**	**02 51 10.8**	**+1.0**
	comp=Z,3.0nm,0.9s,baz=193,slow=7.8,SNR=8.5							
MKAR	**Makanchi Array**	**88.85**	**35**	P		**P**	**02 51 14.3**	**+0.3**
MKAR	**Makanchi Array**	**88.85**	**35**	P		**P**	**02 51 14.3**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=237,slow=4.9,SNR=3.3							
KURBB	**Kurchatov Arra**	**89.72**	**30**	P		**P**	**02 51 18.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=239,slow=5.6,SNR=3.4							
KURK	**Kurchatov**	**89.82**	**30**	P		**P**	**02 51 18.5**	**0.0**
ASAR	**Alice Springs**	**93.55**	**119**	P		**P**	**02 51 37.6**	**+1.0**
ASAR	**Alice Springs**	**93.55**	**119**	P		**P**	**02 51 37.6**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=231,slow=4.6,SNR=6.6							
YKA	**Yellowknife Ar**	**136.25**	**335**	PKP		**PKPdf**	**02 57 41.0**	**-0.1**
YKA	**Yellowknife Ar**	**136.25**	**335**	PKP		**PKPdf**	**02 57 40.9**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=54,slow=3.0,SNR=4.9							
TXAR	**Lajitas Array**	**136.45**	**285**	PKP		**PKPdf**	**02 57 44.7**	**+2.1**
TXAR	**Lajitas Array**	**136.45**	**285**	PKP		**PKPdf**	**02 57 44.7**	**+2.1**
	comp=Z,0.4nm,0.7s,baz=108,slow=2.9,SNR=2.7							
ILAR	**Eielson Array**	**141.90**	**356**	PKP		**PKPdf**	**02 57 54.0**	**+2.6**
ILAR	**Eielson Array**	**141.90**	**356**	PKP		**PKPdf**	**02 57 54.0**	**+2.6**
	comp=Z,0.3nm,0.6s,baz=336,slow=4.0,SNR=4.2							
NVAR	**Mina Array Bea**	**148.59**	**300**	PKPbc		**PKPab**	**02 58 09.8**	**-1.2**
NVAR	**Mina Array Bea**	**148.59**	**300**	PKPbc		**PKPab**	**02 58 09.8**	**-1.2**
	comp=Z,2.0nm,0.6s,baz=64,slow=5.5,SNR=19							

ISCJB ***18*** *02:41:21.8±0.5, 39.09°N±0.03°×29.04°E±0.03, h2km±6km, Error ellipse: s-maj=4.9km s-min=3.6km az=167.5*

ISK ***18*** *02:41:21.1, 39.08°N×29.06°E, h8km, MD2.8*

DDA ***18*** *02:41:21.9, 39.09°N×29.05°E, h11km, MD2.8*

CSEM ***18*** *02:41:22.0±0.1, 39.09°N×29.05°E, h8km, MD2.8, Error ellipse: s-maj=2.5km s-min=2.3km az=4.0*

ISC 18 02:41:22.1±1.0, 39.08°N±0.02°×29.04°E±0.02, h7km±9km, n30, σ0s45/50, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DEMI	**Demirci**	**0.26**	**262**	*i* P		**Pg**	**02 41 27.4**	**+0.2**
DEMI				*i* S		**Sg**	**02 41 30.8**	**+0.1**
DEMI	**Demirci**	**0.26**	**262**	*i* P		**Pg**	**02 41 27.4**	**+0.2**
DEMI				*i* S		**Sg**	**02 41 30.8**	**+0.1**
GDZ	**Gediz**	**0.34**	**89**	*i* P		**Pg**	**02 41 29.2**	**+0.4**
GDZ				*i* S		**Sg**	**02 41 33.9**	**+0.6**
GDZ	**Gediz**	**0.34**	**89**	*i* P		**Pg**	**02 41 29.2**	**+0.4**
GDZ				*i* S		**Sg**	**02 41 33.9**	**+0.6**
TVSB	**Tavsanli**	**0.49**	**41**	*e*PG		**Pg**	**02 41 31.2**	**-0.4**
TVSB				*e*SG		**Sg**	**02 41 37.9**	**-0.1**
TVSB	**Tavsanli**	**0.49**	**41**	*e*Pg		**Pg**	**02 41 31.2**	**-0.4**
TVSB				*e*Sg		**Sg**	**02 41 37.9**	**-0.1**
KULA	**Kula-Manisa**	**0.64**	**208**	*e*PG		**Pg**	**02 41 34.5**	**0.0**
KULA				*e*SG		**Sg**	**02 41 42.8**	**0.0**
KULA	**Kula-Manisa**	**0.64**	**208**	*e*Pg		**Pg**	**02 41 34.5**	**0.0**
KULA				*e*Sg		**Sg**	**02 41 42.8**	**0.0**
DURS	**Dursunbey**	**0.68**	**320**	*i* P		**Pg**	**02 41 35.0**	**-0.2**
DURS	**Dursunbey**	**0.68**	**320**	*i* P		**Pg**	**02 41 35.0**	**-0.2**
MANT	**Manisa**	**0.70**	**213**	*i* P		**Pg**	**02 41 35.7**	**+0.1**
MANT	**Manisa**	**0.70**	**213**	*i* P		**Pg**	**02 41 35.7**	**+0.1**
KHAL	**Karahalli**	**0.79**	**154**	*e*P		**Pb**	**02 41 38.0**	**-0.2**
KHAL				*i* S		**Sb**	**02 41 48.6**	**-0.6**
KHAL	**Karahalli**	**0.79**	**154**	*e*P		**Pb**	**02 41 38.0**	**-0.2**
KHAL				*i* S		**Sb**	**02 41 48.6**	**-0.6**
KHL	**Karahalli**	**0.84**	**154**	*e*PG		**Pg**	**02 41 37.9**	**-0.4**
KHL	**Karahalli**	**0.84**	**154**	*e*Pg		**Pg**	**02 41 37.9**	**-0.4**
AKHS	**Akhisar**	**0.98**	**258**	*i* P		**Pb**	**02 41 41.4**	**+0.1**
AKHS				*i* S		**Sb**	**02 41 54.6**	**+0.1**
AKHS	**Akhisar**	**0.98**	**258**	*i* P		**Pb**	**02 41 41.4**	**+0.1**
AKHS				*i* S		**Sb**	**02 41 54.6**	**+0.1**
BALB	**Balikesir**	**1.06**	**302**	*e*PG		**Pb**	**02 41 42.5**	**-0.2**
BALB				*e*SG		**Sb**	**02 41 57.1**	**+0.3**
BALB	**Balikesir**	**1.06**	**302**	*e*Pg		**Pb**	**02 41 42.5**	**-0.2**
BALB				*e*Sg		**Sb**	**02 41 57.1**	**+0.3**
BALY	**Balya**	**1.

*NEIC **18** 03:07:18.9±0.3, 14°.80N×144°.66E, h10km, mb4.5/12, Error ellipse: s-maj=10.0km s-min=5.3km az=86.0*
*ISCJB **18** 03:07:19.3±0.4, 14°.78N±0°.04×144°.56E±0°.10, h22km, mb4.1/31, MS3.6/8, Error ellipse: s-maj=14.1km s-min=5.9km az=169.2*

ISC 18 03:07:20.7±0.5, 14°.77N±0°.06×144°.7E±0°.1, h22km, n60, σ0s70/60, mb4.2/31, MS3.7/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.19**	**172**	Pn	**Pn**	**03 07 42.0**	**0.0**
GUMO				Sn	**Sb**	**03 07 57.4**	**0.0**
GUMO	**Guam**	**1.19**	**172**	Pn	**Pn**	**03 07 42.0**	**0.0**
	252nm,0.3s,baz=265,slow=2.4,SNR=84						
GUMO				Sn	**Sb**	**03 07 57.4**	**0.0**
	435nm,0.3s,baz=99,slow=18,SNR=73						
JHJ	**Hachijo jima 2**	**18.81**	**347**	LR	LR	03 17 35.8	
	comp=Z,325nm,20.8s,baz=222,slow=33						
JNU	**Nakatsue**	**22.17**	**328**	P	**P**	**03 12 14.8**	**-0.6**
JNU	**Nakatsue**	**22.17**	**328**	P	**P**	**03 12 14.8**	**-0.6**
	6.0nm,0.9s,baz=84,slow=2.6,SNR=4.7						
JNU				LR	LR	03 20 08.3	
	comp=Z,65nm,18.2s,baz=312,slow=35						
MJAR	**Matsushiro Arr**	**22.44**	**346**	P	**P**	**03 12 17.9**	**-0.3**
MJAR	**Matsushiro Arr**	**22.44**	**346**	P	**P**	**03 12 17.9**	**-0.3**
	4.9nm,0.9s,baz=172,slow=10,SNR=13						
MJAR				LR	LR	03 20 33.7	
	comp=Z,89nm,18.8s,baz=140,slow=36						
MAJO	**Matsushiro**	**22.45**	**346**	*eP*	**P**	**03 12 15.6**	**-2.6**
	7.7nm,0.8s						
MAT	**Matsushiro**	**22.45**	**346**	P	**P**	**03 12 18.8**	**+0.6**
KSRS	**Korea Array**	**27.07**	**330**	P	**P**	**03 13 02.7**	**+1.1**
	0.4nm,0.4s,baz=132,slow=8.6,SNR=3.9						
KSRS				LR	LR	03 22 22.1	
	comp=Z,102nm,18.6s,baz=150,slow=33						
KSAR	**Wonju Array Be**	**27.08**	**330**	P	**P**	**03 13 02.7**	**+1.0**
HNR	**Honiara**	**28.40**	**147**	LR	LR	03 24 32.1	
	comp=Z,213nm,18.2s,baz=336,slow=36						
ASAJ	**Asahikawa**	**29.30**	**357**	LR	LR	03 24 43.0	
	comp=Z,202nm,18.1s,baz=146,slow=36						
WRAB	**Tennant Creek**	**35.96**	**197**	*eP*	**P**	**03 14 20.0**	**0.0**
	5.0nm,0.8s						
WRA	**Warramunga Arr**	**35.97**	**197**	P	**P**	**03 14 20.0**	**-0.1**
WRA	**Warramunga Arr**	**35.97**	**197**	P	**P**	**03 14 20.0**	**-0.1**
	3.5nm,0.8s,baz=16,slow=9.5,SNR=12						
FITZ	**Fitzroy Crossi**	**37.69**	**211**	P	**P**	**03 14 34.7**	**0.0**
FITZ	**Fitzroy Crossi**	**37.69**	**211**	P	**P**	**03 14 34.7**	**0.0**
	3.8nm,0.9s,baz=25,slow=10,SNR=7.2						
ASAR	**Alice Springs**	**39.64**	**196**	P	**P**	**03 14 50.6**	**-0.4**
ASAR	**Alice Springs**	**39.64**	**196**	P	**P**	**03 14 50.6**	**-0.4**
	0.5nm,0.6s,baz=16,slow=12,SNR=7.6						
MBWA	**Marble Bar**	**43.32**	**215**	*eP*	**P**	**03 15 20.7**	**-0.5**
	5.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**43.92**	**281**	P	**P**	**03 15 25.7**	**-0.6**
CMAR	**Chiang Mai Arr**	**43.92**	**281**	P	**P**	**03 15 25.7**	**-0.6**
	3.1nm,0.9s,baz=78,slow=6.9,SNR=14						
CMAR				LR	LR	03 34 41.2	
	comp=Z,83nm,18.2s,baz=284,slow=37						
KULM	**Kulim**	**44.32**	**262**	*eP*	**P**	**03 15 29.6**	**+0.1**
	8.1nm,0.9s						
SONM	**Songino Array**	**45.68**	**324**	P	**P**	**03 15 40.9**	**+0.9**
SONM				PcP	**PcP**	**03 17 18.5**	**+0.6**
SONM	**Songino Array**	**45.68**	**324**	P	**P**	**03 15 40.9**	**+0.9**
	0.4nm,0.7s,baz=134,slow=10,SNR=3.4						
SONM				PcP	**PcP**	**03 17 18.5**	**+0.6**
	0.9nm,0.8s,baz=130,slow=2.7,SNR=5.2						
STKA	**Stephens Creek**	**46.48**	**184**	P	**P**	**03 15 46.4**	**+0.1**
STKA	**Stephens Creek**	**46.48**	**184**	P	**P**	**03 15 46.4**	**+0.1**
	1.9nm,0.7s,baz=11,slow=11,SNR=3.6						
FORT	**Forrest**	**48.04**	**199**	*eP*	**P**	**03 15 59.5**	**+1.0**
	21nm,0.9s						
AFI	**Afiamalu**	**51.63**	**121**	LR	LR	03 35 15.0	
	comp=Z,141nm,18.3s,baz=5.8,slow=32						
MK31	**Makanchi Array**	**60.54**	**316**	*eP*	**P**	**03 17 29.0**	**-0.4**
MKAR	**Makanchi Array**	**60.54**	**316**	P	**P**	**03 17 29.2**	**-0.2**
MKAR	**Makanchi Array**	**60.54**	**316**	P	**P**	**03 17 29.2**	**-0.2**
	0.5nm,0.5s,baz=92,slow=8.3,SNR=8.5						
ZALV	**Zalesovo Beam**	**60.58**	**324**	P	**P**	**03 17 29.3**	**-0.2**
ZALV	**Zalesovo Beam**	**60.58**	**324**	P	**P**	**03 17 29.3**	**-0.2**
	0.3nm,0.3s,baz=90,slow=8.6,SNR=2.9						
KURK	**Kurchatov**	**63.58**	**320**	*eP*	**P**	**03 17 48.8**	**-0.9**
	4.9nm,0.9s						
KURBB	**Kurchatov Arra**	**63.63**	**319**	P	**P**	**03 17 49.2**	**-0.8**
	0.4nm,0.5s,baz=100,slow=6.8,SNR=23						
KURBB				LR	LR	03 45 43.3	
	comp=Z,137nm,20.4s,baz=215,slow=36						
TKM2	**Tokmak 2**	**64.83**	**311**	*eP*	**P**	**03 17 58.2**	**-0.2**
	1.4nm,0.8s						
AAK	**Ala-Archa**	**65.63**	**310**	*eP*	**P**	**03 18 03.5**	**0.0**
	0.8nm,0.7s						
ILAR	**Eielson Array**	**67.57**	**26**	P	**P**	**03 18 14.2**	**-1.1**
ILAR	**Eielson Array**	**67.57**	**26**	P	**P**	**03 18 14.2**	**-1.1**
	0.1nm,0.5s,baz=319,slow=33,SNR=6.5						
BVAR	**Borovoye Array**	**68.91**	**321**	P	**P**	**03 18 23.5**	**-0.3**
BVAR	**Borovoye Array**	**68.91**	**321**	P	**P**	**03 18 23.5**	**-0.3**
	2.0nm,0.8s,baz=101,slow=7.7,SNR=7.8						
BRVK	**Borovoye**	**68.97**	**321**	*eP*	**P**	**03 18 23.9**	**-0.4**
	9.9nm,1.3s						
ABKAR	**Akbulak array**	**75.57**	**318**	*eP*	**P**	**03 19 03.1**	**-0.6**
	1.2nm,0.7s						
YKA	**Yellowknife Ar**	**81.89**	**27**	P	**P**	**03 19 38.7**	**+0.5**
YKA	**Yellowknife Ar**	**81.89**	**27**	P	**P**	**03 19 38.7**	**+0.5**
	1.1nm,0.9s,baz=290,slow=5.7,SNR=18						
RES	**Resolute Bay**	**83.44**	**13**	*eP*	**P**	**03 19 47.2**	**+1.1**
	2.4nm,1.0s						
ARCES	**ARCESS Array B**	**85.92**	**342**	P	**P**	**03 19 59.1**	**+0.5**
ARCES	**ARCESS Array B**	**85.92**	**342**	P	**P**	**03 19 59.1**	**+0.5**
	6.5nm,0.8s,baz=74,slow=8.9,SNR=5.8						
BSMT	**Bassoo Peak**	**86.07**	**42**	*eP*	**P**	**03 20 01.1**	**+0.9**
	22nm,1.7s						
NVAR	**Mina Array Bea**	**86.31**	**51**	P	**P**	**03 20 01.5**	**0.0**
NVAR	**Mina Array Bea**	**86.31**	**51**	P	**P**	**03 20 01.5**	**0.0**
	0.4nm,0.8s,baz=260,slow=7.2,SNR=4.1						
FINES	**FINESS Array B**	**90.03**	**335**	P	**P**	**03 20 18.1**	**-0.4**
FINES	**FINESS Array B**	**90.03**	**335**	P	**P**	**03 20 18.1**	**-0.4**
	2.2nm,0.9s,baz=86,slow=2.9,SNR=4.9						
FFC	**Flin Flon**	**90.90**	**32**	*eP*	**P**	**03 20 22.8**	**+0.1**
PDAR	**Pinedale Array**	**91.25**	**45**	P	**P**	**03 20 24.9**	**-0.1**
PDAR	**Pinedale Array**	**91.25**	**45**	P	**P**	**03 20 24.9**	**-0.1**
	0.4nm,0.8s,baz=187,slow=2.4,SNR=3.6						
LPAZ	**La Paz**	**148.34**	**97**	PKPbc	**PKPab**	**03 27 08.7**	**-1.6**
LPAZ	**La Paz**	**148.34**	**97**	PKPbc	**PKPab**	**03 27 08.7**	**-1.6**
	2.0nm,1.0s,baz=251,slow=2.6,SNR=7.1						

*ISCJB **18** 03:09:33.4±0.5, 10°.58N±0°.04×61°.81W±0°.03, h60km±7km, Error ellipse: s-maj=6.6km s-min=4.9km az=141.8*
*FUNV **18** 03:09:34.0, 10°.64N×61°.69W, h32km, MW3.4*
*TRN **18** 03:09:36.2, 10°.62N×61°.67W, h49km, MD3.0*

ISC 18 03:09:33.6±1.2, 10°.55N±0°.04×61°.80W±0°.04, h61km±9km, n16, σ1s57/28, 1D, Trinidad

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.40**	**76**	*eP*	**Pn**	**03 09 45.5**	**+0.7**
TRN				*eS*	**Sn**	**03 09 51.6**	**-1.3**
TPP	**Pointe-a-Pierr**	**0.42**	**124**	*eP*	**Pn**	**03 09 46.7**	**+1.8**
TPP				*eS*	**Sn**	**03 09 52.6**	**-0.4**
GUIV	**Guiria**	**0.42**	**283**	↓*P*	**Pn**	**03 09 44.9**	**-0.1**
GUIV				*eS*	**Sn**	**03 09 52.2**	**-1.0**
TBH	**Brigand Hill**	**0.73**	**95**	*eP*	**Pn**	**03 09 49.0**	**+0.7**
TBH				*eS*	**Sn**	**03 09 58.3**	**-0.7**
TPR	**Prospect**	**1.19**	**58**	*eP*	**Pn**	**03 09 55.7**	**+1.4**
CRUV	**Carupano**	**1.42**	**275**	*eP*	**Pn**	**03 09 57.6**	**+0.4**
CRUV				*eS*	**Sn**	**03 10 15.2**	**+0.2**
TOSP	**Speyside**	**1.45**	**59**	*eP*	**Pn**	**03 09 57.4**	**-0.3**
TOSP				*eS*	**Sn**	**03 10 14.3**	**-1.4**
GRW	**Mount Saint Ca**	**1.60**	**5**	*eP*	**Pn**	**03 10 00.7**	**+0.8**
ORIV	**Oritupano**	**2.16**	**227**	*eP*	**Pn**	**03 10 09.4**	**+2.0**
ORIV				*eS*	**Sn**	**03 10 35.3**	**+2.2**
RIOV	**Rio Grande**	**2.47**	**180**	*eP*	**Pn**	**03 10 13.0**	**+1.4**
RIOV				*eS*	**Sn**	**03 10 41.3**	**+0.8**
SVB	**Belmont**	**2.76**	**11**	*eP*	**Pn**	**03 10 17.6**	**+2.1**
SVB				*eS*	**Sn**	**03 10 47.9**	**+0.2**
PCRV	**Puerto La Cruz**	**2.81**	**263**	*eP*	**Pn**	**03 10 17.3**	**+1.1**
MCLT	**Moule a Chique**	**3.25**	**15**	*eS*	**Sn**	**03 10 58.6**	**-1.1**
CUPV	**Cœpira**	**3.95**	**263**	*eP*	**Pn**	**03 10 33.3**	**+1.4**
CUPV				*eS*	**Sn**	**03 11 16.4**	**-0.7**
LUEV	**Luepa**	**4.69**	**176**	*eP*	**Pn**	**03 10 41.7**	**-0.4**
LUEV				*eS*	**Sn**	**03 11 32.1**	**-3.3**
BAUV	**El Baul**	**6.36**	**256**	*eP*	**Pn**	**03 11 04.4**	**-0.3**
BAUV				*eS*	**Sn**	**03 12 12.1**	**-3.8**

IDC 18 03:14:37.0±2.4, 18°.54S×175°.28W, h206km±24km, mb3.5/10, mb1 3.8/11, mb1mx3.6/22, mbtmp3.5/11, Error ellipse: s-maj=29.6km s-min=12.3km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.70**	**37**	P	Pn	03 16 00.6	-0.1
	4.2nm,0.3s,baz=88,slow=3.0,SNR=4.3						
AFI				S	S	03 17 00.8	-5.8
	7.7nm,0.3s,baz=44,slow=23,SNR=15						
URZ	**Urewera**	**20.74**	**197**	P	P	03 19 01.5	-0.3
	3.2nm,0.5s,baz=198,slow=23,SNR=4.8						
CTA	**Charters Tower**	**36.29**	**261**	P	P	03 21 21.8	+0.7
	4.6nm,0.5s,baz=86,slow=8.9,SNR=8.0						
STKA	**Stephens Creek**	**40.96**	**243**	P	P	03 22 01.0	+1.2
	0.8nm,0.4s,baz=81,slow=11,SNR=3.8						
WRA	**Warramunga Arr**	**47.45**	**260**	P	P	03 22 50.8	-0.6
	3.9nm,0.4s,baz=96,slow=5.7,SNR=24						
ASAR	**Alice Springs**	**47.49**	**255**	P	P	03 22 51.0	-0.7
	6.2nm,0.5s,baz=91,slow=8.5,SNR=60						
NVAR	**Mina Array Bea**	**77.85**	**42**	P	P	03 26 12.8	+0.6
	0.9nm,0.7s,baz=217,slow=9.1,SNR=8.6						
TXAR	**Lajitas Array**	**83.84**	**56**	P	P	03 26 43.8	0.0
	0.2nm,0.6s,baz=221,slow=5.0,SNR=4.3						
PDAR	**Pinedale Array**	**85.79**	**42**	P	P	03 26 53.6	+0.2
	0.2nm,0.7s,baz=224,slow=5.0,SNR=2.4						
ILAR	**Eielson Array**	**85.87**	**12**	P	P	03 26 52.5	-0.6
	0.4nm,0.5s,baz=232,slow=6.3,SNR=10						
YKA	**Yellowknife Ar**	**93.68**	**24**	P	P	03 27 28.7	-0.9
	0.2nm,0.8s,baz=235,slow=4.9,SNR=6.7						
ARCES	**ARCESS Array B**	**127.44**	**351**	PKP	PKPdf	03 33 15.9	-0.7
	6.7nm,1.1s,baz=41,slow=2.9,SNR=3.1						
GERES	**GERESS Array B**	**148.91**	**348**	PKPbc	PKPbc	03 34 00.3	-0.1
	0.7nm,0.5s,baz=336,slow=4.3,SNR=3.2						

*NSSC **18** 03:14:48.5±2.3, 37°.41N×36°.39E, h5km±16km, MD1.1, ML2.4*
*ISK **18** 03:14:48.5, 37°.31N×36°.30E, h7km, MD3.4*
*ISCJB **18** 03:14:49.1±0.5, 37°.32N±0°.03×36°.29E±0°.03, h10km±4km, Error ellipse: s-maj=5.2km s-min=3.8km az=15.4*
*CSEM **18** 03:14:49.2±0.2, 37°.33N×36°.28E, h10km, MD3.2, Error ellipse: s-maj=5.3km s-min=3.9km az=9.0*
*DDA **18** 03:14:49.2, 37°.38N×36°.25E, h7km, MD3.2*

ISC 18 03:14:49.2±0.9, 37°.33N±0°.02×36°.27E±0°.02, h11km±8km, n46, σ0s86/62, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	**0.26**	**14**	*i* P	**Pg**	**03 14 53.5**	**-1.0**
ANDN				*i* S	**Sg**	**03 14 58.5**	**+0.4**
ANDN	**Andirin**	**0.26**	**14**	*i* P	**Pg**	**03 14 53.5**	**-1.0**
ANDN				*i* S	**Sg**	**03 14 58.5**	**+0.4**
KOZT	**Kozan**	**0.38**	**293**	*e*PG	**Pg**	**03 14 56.6**	**-0.2**
KOZT				*e*SG	**Sb**	**03 15 03.7**	**-0.3**
KOZT	**Kozan**	**0.38**	**293**	*e*Pg	**Pg**	**03 14 56.6**	**-0.2**
KOZT				*e*Sg	**Sb**	**03 15 03.7**	**-0.3**
CEYT	**Ceyhan**	**0.53**	**232**	*e*PG	**Pg**	**03 14 59.1**	**-0.3**
CEYT	**Ceyhan**	**0.53**	**232**	*e*Pg	**Pg**	**03 14 59.1**	**-0.3**
KMRS	**Kahramanmaras**	**0.53**	**71**	*e*PG	**Pg**	**03 14 58.8**	**-0.8**
KMRS				*e*SG	**Sg**	**03 15 06.5**	**-0.1**
KMRS	**Kahramanmaras**	**0.53**	**71**	*e*Pg	**Pg**	**03 14 58.8**	**-0.8**
KMRS				*e*Sg	**Sg**	**03 15 06.5**	**-0.1**
GAZ	**Gaziantep**	**0.77**	**102**	*e*PG	**Pg**	**03 15 04.5**	**+0.4**
GAZ				*e*SG	**Sg**	**03 15 14.9**	**+0.9**
GAZ	**Gaziantep**	**0.77**	**102**	*e*Pg	**Pg**	**03 15 04.5**	**+0.4**
GAZ				*e*Sg	**Sg**	**03 15 15.0**	**+0.9**
KUZU	**Kuzuini**	**0.85**	**131**	*i* P	**Pn**	**03 15 07.3**	**0.0**
KUZU				*i* S	**Sn**	**03 15 19.7**	**-0.1**
KUZU	**Kuzuini**	**0.85**	**131**	*i* P	**Pn**	**03 15 07.3**	**0.0**
GZT	**Gaziantep**	**1.03**	**88**	*i* P	**Pn**	**03 15 10.0**	**+0.2**
GZT				*i* S	**Sn**	**03 15 26.0**	**+1.7**
KRTS	**Karatas**	**1.04**	**224**	*e*PG	**Pg**	**03 15 08.7**	**-0.6**
KRTS	**Karatas**	**1.04**	**224**	*e*Pg	**Pg**	**03 15 08.7**	**-0.6**
BTCH	**Batrach**	**1.30**	**173**	*eP*	**Pb**	**03 15 13.9**	**+0.2**
BTCH				*eS*	**Sg**	**03 15 32.1**	**+1.0**
BTCH				AML	AML	03 15 37.9	
	comp=Z,83nm,0.4s						
BTCH				AML	AML	03 15 37.9	
	comp=E,89nm,0.6s						
BTCH				AML	AML	03 15 41.2	
	comp=N,114nm,0.4s						
BTCH	**Batrach**	**1.30**	**173**	*eP*	**Pb**	**03 15 13.9**	**+0.2**
	SNR=57						
BTCH				*eS*	**Sg**	**03 15 32.1**	**+1.0**
	comp=N,114nm,0.4s,SNR=49						
SARI	**SarD1z-Kayseri**	**1.39**	**14**	*e*PN	Pn	03 15 09.8	-5.0
MERS	**Mersin**	**1.47**	**252**	*e*PN	**Pn**	**03 15 15.9**	**+0.1**
MERS	**Mersin**	**1.47**	**252**	*e*Pn	**Pn**	**03 15 15.9**	**+0.1**
NIG	**Nigde**	**1.53**	**301**	*e*PN	**Pb**	**03 15 17.2**	**-0.5**
NIG	**Nigde**	**1.53**	**301**	*e*Pn	**Pb**	**03 15 17.2**	**-0.5**
BNN	**Bunyan**	**1.55**	**348**	*e*PN	**Pb**	**03 15 17.7**	**-0.4**
BNN	**Bunyan**	**1.55**	**348**	*e*Pn	**Pb**	**03 15 17.7**	**-0.4**
ATAB	**Bozova**	**1.62**	**85**	*i* P	**Pn**	**03 15 18.0**	**+0.2**
ATAB				*i* S	**Sb**	**03 15 39.5**	**-0.1**
SLMH	**Al Salmeh**	**1.74**	**129**	*eP*	**Pn**	**03 15 18.9**	**-0.5**
SLMH				*eS*	**Sn**	**03 15 40.1**	**-1.6**
SLMH				AML	AML	03 15 49.4	
	comp=Z,61nm,0.6s						
MALT	**Malatya**	**1.97**	**60**	*e*PN	**Pn**	**03 15 23.6**	**+0.9**
MALT	**Malatya**	**1.97**	**60**	*e*Pn	**Pn**	**03 15 23.6**	**+0.9**
MYA	**Malataya**	**1.98**	**59**	*e*PN	**Pn**	**03 15 22.6**	**-0.2**
MYA	**Malataya**	**1.98**	**59**	*e*Pn	**Pn**	**03 15 22.6**	**-0.2**
DARE	**Darende-Malaty**	**2.02**	**36**	*e*PN	Pn	03 15 17.3	-6.1
SULT	**Sultanhani-AKS**	**2.35**	**292**	*e*PN	**Pn**	**03 15 28.8**	**+0.9**
SULT	**Sultanhani-AKS**	**2.35**	**292**	*e*Pn	**Pn**	**03 15 28.8**	**+0.9**
JHLN	**Al Jahlan**	**2.41**	**133**	*eP*	**Pn**	**03 15 28.6**	**-0.1**
JHLN				*eS*	**Sn**	**03 15 57.0**	**-1.2**
JHLN				AML	AML	03 16 09.9	
	comp=Z,39nm,0.4s						
JHLN	**Al Jahlan**	**2.41**	**133**	*eP*	**Pn**	**03 15 28.6**	**-0.1**
	SNR=45						
JHLN				*eS*	**Sn**	**03 15 57.0**	**-1.2**
	comp=Z,39nm,0.4s,SNR=40						
YOZ	**Yozgat**	**2.42**	**342**	*e*PN	**Pn**	**03 15 30.0**	**+1.1**
YOZ	**Yozgat**	**2.42**	**342**	*e*Pn	**Pn**	**03 15 30.0**	**+1.1**
KSRV	**Kasrt alli**	**2.64**	**123**	↓*iP*	**Pb**	**03 15 38.1**	**+1.5**
KSRV				AML	AML	03 16 17.9	
	comp=E,30nm,0.5s						
KSRV				AML	AML	03 16 21.1	
	comp=Z,16nm,0.3s						
KAMT	**Kaman**	**2.86**	**316**	*e*PN	**Pn**	**03 15 36.4**	**+1.5**
CORM	**Corum**	**3.12**	**336**	*e*PN	**Pn**	**03 15 40.0**	**+1.6**
SFNV	**Sufian**	**3.21**	**105**	*eP*	**Pn**	**03 15 39.7**	**0.0**
SFNV				*eS*	**Sn**	**03 16 17.2**	**-0.9**
SFNV				AML	AML	03 16 41.9	
	comp=Z,32nm,0.5s						
SFNV	**Sufian**	**3.21**	**105**	*eP*	**Pn**	**03 15 39.7**	**0.0**
	SNR=45						
SFNV				*eS*	**Sn**	**03 16 17.2**	**-0.9**
	comp=Z,32nm,0.5s,SNR=40						
KBSD	**Kabsdagh**	**3.43**	**94**	*i* Pg	**Pb**	**03 15 51.1**	**+1.1**
KBSD				AML	AML	03 16 50.9	
	comp=Z,28nm,0.6s						
KBSD	**Kabsdagh**	**3.43**	**94**	*i* Pg	**Pb**	**03 15 51.1**	**+1.1**
	SNR=90						
MZRK	**Al-Mazaregh**	**3.83**	**112**	*eP*	**Pn**	**03 15 46.2**	**-2.0**
MZRK	**Al-Mazaregh**	**3.83**	**112**	*eP*	**Pn**	**03 15 46.2**	**-2.0**
	SNR=45						

*ATH **18** 03:19:06.3, 36°.10N×29°.88E, h6km, MD3.6/4*
*ISK **18** 03:19:09.5, 36°.99N×29°.16E, h5km, MD2.9*
*CSEM **18** 03:19:10.3±0.1, 37°.01N×29°.17E, h2km, MD2.9, Error ellipse: s-maj=4.0km s-min=3.0km az=150.0*
*DDA **18** 03:19:10.2, 36°.99N×29°.17E, h7km, MD3.0*

ISC 18 03:19:10.0±1.2, 37°.00N±0°.02×29°.18E±0°.02, h0km±11km, n47, σ1s09/69, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.30**	**57**	*e*PG	**Pg**	**03 19 15.8**	**0.0**
GLHS				*e*SG	**Sg**	**03 19 20.8**	**+1.2**
GLHS	**Glhisar (BURDU**	**0.30**	**57**	*e*Pg	**Pg**	**03 19 15.8**	**0.0**
GLHS				*e*Sg	**Sg**	**03 19 20.8**	**+1.2**
GOLH	**Golhisar**	**0.39**	**51**	*i* P	**Pg**	**03 19 17.8**	**+0.3**
GOLH				*i* S	**Sb**	**03 19 24.8**	**-1.6**
GOLH	**Golhisar**	**0.39**	**51**	*i* P	**Pg**	**03 19 17.8**	**+0.3**
GOLH				*i* S	**Sb**	**03 19 24.8**	**-1.6**
TURN	**Turunc**	**0.48**	**255**	*i* P	**Pn**	**03 19 25.0**	**+0.9**
TURN				*i* S	Sb	03 19 36.8	+7.9
DALT	**Dalyan (Mudla)**	**0.49**	**243**	*e*PG	**Pg**	**03 19 19.1**	**-0.4**
DALT				*e*SG	**Sg**	**03 19 25.8**	**-0.1**
DALT	**Dalyan (Mudla)**	**0.49**	**243**	*e*Pg	**Pg**	**03 19 19.1**	**-0.4**
DALT				*e*Sg	**Sg**	**03 19 25.8**	**-0.1**
ELL	**Elmali**	**0.63**	**113**	*e*PG	**Pg**	**03 19 22.5**	**+0.4**
ELL				*e*SG	**Sb**	**03 19 32.3**	**-1.1**
ELL	**Elmali**	**0.63**	**113**	*e*Pg	**Pg**	**03 19 22.5**	**+0.4**
ELL				*e*Sg	**Sb**	**03 19 32.3**	**-1.1**
DNZL	**Cakiroluk**	**0.70**	**351**	*i* P	**Pg**	**03 19 23.2**	**-0.3**
DNZL				*i* S	**Sb**	**03 19 34.2**	**-1.4**
DNZL	**Cakiroluk**	**0.70**	**351**	*i* P	**Pg**	**03 19 23.2**	**-0.3**
DNZL				*i* S	**Sb**	**03 19 34.2**	**-1.4**
YER	**Yerkesik**	**0.73**	**281**	*e*PG	**Pg**	**03 19 24.6**	**+0.4**
YER	**Yerkesik**	**0.73**	**281**	*e*Pg	**Pg**	**03 19 24.6**	**+0.4**
DENT	**Denizli**	**0.77**	**351**	*e*PG	**Pg**	**03 19 23.9**	**-0.9**
DENT				*e*SG	**Sb**	**03 19 36.2**	**-1.1**
DENT	**Denizli**	**0.77**	**351**	*e*Pg	**Pg**	**03 19 23.9**	**-0.9**
DENT				*e*Sg	**Sb**	**03 19 36.2**	**-1.1**
AKAS	**Kas**	**0.83**	**156**	*i* P	**Pb**	**03 19 26.7**	**-0.7**
AKAS				*i* S	**Sn**	**03 19 41.8**	**-0.3**
AKAS	**Kas**	**0.83**	**156**	*i* P	**Pb**	**03 19 26.7**	**-0.7**
AKAS				*i* S	**Sn**	**03 19 41.8**	**-0.3**
KORT	**Korkueli**	**0.93**	**89**	*i* P	**Pn**	**03 19 29.3**	**-1.2**
KORT	**Korkueli**	**0.93**	**89**	*i* P	**Pn**	**03 19 29.3**	**-1.2**
ARG	**Arkhangelos**	**1.15**	**228**	*e*PB	**Pn**	**03 19 33.0**	**-0.4**
ARG				*e*SB	**Sn**	**03 19 52.7**	**+2.9**
ARG	**Arkhangelos**	**1.15**	**228**	*e*Pb	**Pn**	**03 19 33.0**	**-0.4**
ARG				*e*Sb	**Sn**	**03 19 52.7**	**+2.9**
MLSB	**Milas**	**1.16**	**285**	*e*PN	**Pb**	**03 19 31.6**	**-1.4**
MLSB	**Milas**	**1.16**	**285**	*e*Pn	**Pb**	**03 19 31.6**	**-1.4**
ANTB	**Antalya**	**1.18**	**94**	*e*PN	**Pg**	**03 19 33.3**	**+0.6**
ANTB	**Antalya**	**1.18**	**94**	*e*Pn	**Pg**	**03 19 33.3**	**+0.6**
BCK	**Bucak**	**1.21**	**67**	*e*PN	**Pg**	**03 19 33.7**	**+0.4**
BCK	**Bucak**	**1.21**	**67**	*e*Pn	**Pg**	**03 19 33.7**	**+0.4**
ISP	**Isparta**	**1.35**	**52**	*e*PN	**Pg**	**03 19 36.2**	**+0.3**
ISP	**Isparta**	**1.35**	**52**	*e*Pn	**Pg**	**03 19 36.2**	**+0.3**
KHL	**Karahalli**	**1.35**	**11**	*e*PN	**Pg**	**03 19 36.0**	**0.0**
KHL	**Karahalli**	**1.35**	**11**	*e*Pn	**Pg**	**03 19 36.0**	**0.0**
KHAL	**Karahalli**	**1.39**	**10**	*i* P	**Pg**	**03 19 37.0**	**+0.2**
KHAL				*i* S	**Sg**	**03 19 56.9**	**+2.0**
KHAL	**Karahalli**	**1.39**	**10**	*i* P	**Pg**	**03 19 37.0**	**+0.2**
KHAL				*i* S	**Sg**	**03 19 56.9**	**+2.0**
BODT	**Bodrum**	**1.50**	**273**	*e*PN	**Pn**	**03 19 37.5**	**-0.7**
BODT	**Bodrum**	**1.50**	**273**	*e*Pn	**Pn**	**03 19 37.5**	**-0.7**
MANT	**Manisa**	**1.57**	**342**	*i* P	**Pb**	**03 19 39.6**	**-0.5**
MANT	**Manisa**	**1.57**	**342**	*i* P	**Pb**	**03 19 39.6**	**-0.5**
GCAM	**G?zelcaml?**	**1.71**	**295**	*eP*	**Pb**	**03 19 41.1**	**-1.1**
GCAM	**G?zelcaml?**	**1.71**	**295**	*eP*	**Pb**	**03 19 41.1**	**-1.1**
KARP	**Karpathos**	**2.18**	**229**	*e*PN	**Pn**	**03 19 47.2**	**-0.4**
KARP				*e*SN

GOLV	**Golondrinas**	**1.32**	**341**	P	Pb	03 29 57.2	0.0
CAYA	**Cayambe**	**1.33**	**33**	P	Pg	03 29 58.8	-0.6
CHAR	**Charly**	**1.42**	**48**	P	Pg	03 30 00.4	-0.5
COTA	**Cotacachi**	**1.43**	**15**	P	Pn	03 29 58.8	+0.1
MAG1	**Magdalena**	**1.44**	**313**	P	Pb	03 29 59.5	+0.2
LAV4	**Lava4-Reventad**	**1.45**	**49**	P	Pb	03 29 59.9	+0.2
CONE	**Cono NE Rev Vo**	**1.45**	**48**	P	Pg	03 30 00.9	-0.5
LITE	**Lita**	**1.88**	**11**	P	Pb	03 30 06.6	-0.4

*IDC **18** 03:32:16.2±0.9, 41°.67N×46°.64E, h0km, mb3.6/5, mb1 3.7/8, mb1mx3.5/27, mbtmp3.6/8, ML3.7/3, Error ellipse: s-maj=15.4km s-min=9.1km az=137.0*
*MOS **18** 03:32:16.4±1.6, 41°.63N×46°.64E, h6km, mb3.8/4, Error ellipse: s-maj=12.3km s-min=9.7km az=81.6*
*ISCJB **18** 03:32:17.5±0.8, 41°.83N±0°.02×46°.60E±0°.03, h6km±5km, mb3.4/6, Error ellipse: s-maj=3.9km s-min=3.6km az=179.9*
*CSEM **18** 03:32:17.7±0.2, 41°.90N×46°.57E, h2km, mb3.7/4, Error ellipse: s-maj=5.0km s-min=4.1km az=148.0*
*TIF **18** 03:32:17.6, 41°.72N×46°.57E, h24km±3km*
*NSSP **18** 03:32:18.2, 41°.65N×46°.43E, h10km, Ms3.8*
*NNC **18** 03:32:18.8±3.6, 42°.33N×46°.28E, h0km, mb3.4, Error ellipse: s-maj=43.9km s-min=24.3km az=91.0*
*AZER **18** 03:32:19.3, 41°.51N×46°.58E, h6km*

ISC 18 03:32:18.6±1.0, 41°.71N±0°.02×46°.44E±0°.02, h16km±7km, n94, σ1.958/127, mb3.6/6, 29C-22D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SEKA	**Sheki**	**0.76**	**131**	⇓P	**Pb**	**03 32 33.0**	**-0.5**
	SNR=388						
SEKA				⇑S	**Sn**	**03 32 45.7**	**-0.3**
SEKA	**Sheki**	**0.76**	**131**	P	**Pb**	**03 32 33.0**	**-0.5**
	SNR=388						
SEKA				S	**Sn**	**03 32 45.7**	**-0.3**
DGRG	**David-gareji**	**0.84**	**252**	P	**Pn**	**03 32 36.6**	**+0.8**
DGRG				S	**Sn**	**03 32 51.1**	**+3.2**
DGRG	**David-gareji**	**0.84**	**252**	P	**Pn**	**03 32 36.6**	**+0.8**
DGRG				S	**Sn**	**03 32 51.1**	**+3.2**
GANJ	**Ganja**	**1.07**	**185**	⇓P	**Pn**	**03 32 38.3**	**-0.7**
	SNR=340						
GANJ				⇑S	**Sn**	**03 32 53.3**	**-0.2**
TBLG	**Delisi**	**1.27**	**271**	*e*PG	**Pg**	**03 32 42.6**	**-0.4**
TBLG				*e*S	**Sg**	**03 33 00.8**	**+1.2**
TBLG	**Delisi**	**1.27**	**271**	P	**Pg**	**03 32 42.7**	**-0.4**
TBLG				S	**Sg**	**03 33 00.8**	**+1.2**
TBLG	**Delisi**	**1.27**	**271**	P	**Pg**	**03 32 42.7**	**-0.4**
TBLG				S	**Sg**	**03 33 00.8**	**+1.2**
MAK	**Makhachkala**	**1.48**	**32**	*e*PG	**Pb**	**03 32 46.7**	**+1.0**
MTKZ	**Martakert**	**1.54**	**169**	⇓*i*P	**Pn**	**03 32 44.5**	**-0.9**
MTKZ				⇑*i*S	**Sg**	**03 33 05.6**	**-2.6**
MTKZ	**Martakert**	**1.54**	**169**	⇓P	**Pn**	**03 32 44.5**	**-0.9**
BRDA	**Brd**	**1.55**	**158**	⇓P	**Pg**	**03 32 47.6**	**-0.9**
	SNR=126						
BRDA				⇑S	**Sg**	**03 33 11.5**	**+2.9**
BRDA	**Brd**	**1.55**	**158**	P	**Pg**	**03 32 47.6**	**-0.9**
	SNR=126						
BRDA				S	**Sg**	**03 33 11.5**	**+2.9**
KZR	**Kazreti**	**1.55**	**258**	P	**Pb**	**03 32 46.2**	**-0.8**
KZR				S	**Sg**	**03 33 07.4**	**-1.2**
KZR	**Kazreti**	**1.55**	**258**	P	**Pb**	**03 32 46.2**	**-0.8**
KZR				S	**Sg**	**03 33 07.4**	**-1.2**
QUBA	**Quba, Azerbaij**	**1.58**	**102**	⇑P	**Pg**	**03 32 48.5**	**-0.6**
	SNR=7.4						
QUBA				⇓S	**Sg**	**03 33 12.8**	**+3.1**
IML	**Ismayilli**	**1.60**	**124**	⇑P	**Pg**	**03 32 48.0**	**-1.4**
	SNR=6.2						
IML				⇑S	**Sg**	**03 33 11.7**	**+1.4**
IML	**Ismayilli**	**1.60**	**124**	P	**Pg**	**03 32 48.0**	**-1.4**
	SNR=6.2						
VADZ	**Vardenis**	**1.62**	**199**	⇓*i*P	Pg	03 32 52.0	+2.2
VADZ				⇑*i*S	Sg	03 33 15.0	+4.1
VADZ	**Vardenis**	**1.62**	**199**	⇓P	Pg	03 32 52.0	+2.2
VADZ				S	Sg	03 33 15.0	+4.1
STEZ	**Stepenevan**	**1.69**	**246**	⇑*i*P	**Pn**	**03 32 47.5**	**-0.1**
STEZ				⇑*i*S	**Sg**	**03 33 16.0**	**+3.0**
STE	**Stepanavan**	**1.71**	**246**	⇑P	**Pn**	**03 32 47.5**	**-0.4**
STE				S	**Sg**	**03 33 16.0**	**+2.3**
GOR	**Gori**	**1.76**	**280**	P	**Pb**	**03 32 50.3**	**-0.3**
GOR				S	**Sg**	**03 33 15.2**	**-0.1**
GOR	**Gori**	**1.76**	**280**	P	**Pb**	**03 32 50.3**	**-0.3**
GOR				S	**Sg**	**03 33 15.2**	**-0.1**
PQL	**Pirkuli**	**1.87**	**119**	⇑P	**Pb**	**03 32 52.7**	**+0.2**
	SNR=74						
PQL				⇓S	**Sg**	**03 33 21.8**	**+3.0**
PQL	**Pirkuli**	**1.87**	**119**	P	**Pb**	**03 32 52.7**	**+0.2**
	SNR=74						
STKZ		**1.91**	**173**	⇑*i*P	**Pn**	**03 32 50.4**	**-0.2**
STKZ				⇑*i*S	**Sb**	**03 33 15.9**	**-0.9**
STKZ		**1.91**	**173**	⇑P	**Pn**	**03 32 50.4**	**-0.2**
STKZ				S	**Sb**	**03 33 15.9**	**-0.9**
SIZA	**Siyzn**	**1.96**	**108**	⇓P	**Pg**	**03 32 55.8**	**-0.4**
	SNR=28						
SIZA				⇓S	**Sg**	**03 33 25.5**	**+3.8**
GNI	**Garni**	**2.02**	**220**	⇓*i*P	**Pb**	**03 32 54.2**	**-0.8**
GNI				⇓*i*S	**Sg**	**03 33 24.0**	**+0.4**
GNI	**Garni**	**2.02**	**220**	Pn	**Pg**	**03 32 55.3**	**-2.1**
	271nm,0.3s,baz=302,slow=2.5,SNR=840						
GNI				Lg	Lg	03 33 24.5	
	56nm,0.3s,baz=331,slow=11,SNR=14						
GNI	**Garni**	**2.02**	**220**	⇓P	**Pb**	**03 32 54.2**	**-0.8**
GNI	**Garni**	**2.02**	**220**	*i* Pn	**Pb**	**03 32 55.0**	**-0.1**
GNI				S	**Sg**	**03 33 24.0**	**+0.4**
ZEI	**Tsey**	**2.16**	**300**	⇓*i*PN	**Pb**	**03 32 56.9**	**-0.6**
ZEI				*e*S	**Sg**	**03 33 27.3**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,22nm,0.5s						
ZEI				smax	smax		
	comp=N,188nm,0.7s						
ZEI				smax	smax		
	comp=E,194nm,0.7s						
ZEI	**Tsey**	**2.16**	**300**	*i* Pn	**Pb**	**03 32 56.9**	**-0.6**
	comp=E,22nm,0.5s						
GRS	**Goris**	**2.21**	**182**	⇓*i*P	**Pg**	**03 33 02.0**	**+1.0**
GRS				⇑*i*S	Sg	03 33 34.0	+4.3
GRS	**Goris**	**2.21**	**182**	⇓P	**Pg**	**03 33 02.0**	**+1.0**
AKH	**Akhalkalaki**	**2.23**	**263**	P	**Pb**	**03 32 58.1**	**-0.5**
AKH				S	**Sb**	**03 33 27.7**	**+1.7**
AKH	**Akhalkalaki**	**2.23**	**263**	P	**Pb**	**03 32 58.1**	**-0.5**
AKH				S	**Sb**	**03 33 27.7**	**+1.7**
ONI	**Oni**	**2.39**	**293**	P	**Pb**	**03 33 00.3**	**-0.9**
ONI				S	**Sb**	**03 33 32.7**	**+2.3**
ONI	**Oni**	**2.39**	**293**	P	**Pb**	**03 33 00.3**	**-0.9**
ONI				S	**Sb**	**03 33 32.7**	**+2.3**
ALIB	**Äli-Bayra**	**2.62**	**131**	⇑P	**Pb**	**03 33 03.9**	**-1.3**
	SNR=3.4						
ALIB				⇑S	**Sg**	**03 33 43.8**	**+1.0**
ALIB	**Äli-Bayra**	**2.62**	**131**	P	**Pb**	**03 33 03.9**	**-1.3**
	SNR=3.4						
NAX	**Nakhchivan**	**2.63**	**196**	⇑P	**Pb**	**03 33 05.9**	**+0.4**
	SNR=17						
NAX				⇓S	**Sg**	**03 33 42.2**	**-1.1**
NAX	**Nakhchivan**	**2.63**	**196**	P	**Pb**	**03 33 05.9**	**+0.4**
	SNR=17						
GLBA	**Clilabad**	**2.88**	**148**	⇑P	**Pn**	**03 33 05.6**	**+1.7**
	SNR=5.0						
GLBA				⇑S	**Sb**	**03 33 41.0**	**-3.7**
GLBA	**Clilabad**	**2.88**	**148**	P	**Pn**	**03 33 05.6**	**+1.7**
	SNR=5.0						
GLBA				S	**Sb**	**03 33 41.0**	**-3.7**
KBZ	**Khabaz**	**3.29**	**309**	PN	**Pb**	**03 33 14.4**	**-2.3**
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KBZ	**Khabaz**	**3.29**	**309**	Pn	**Pb**	**03 33 14.4**	**-2.3**
	comp=Z,1.1nm,0.3s,baz=106,slow=8.6,SNR=19						
KBZ				Lg	Lg	03 34 04.4	
	comp=Z,2.5nm,0.3s,baz=282,slow=21,SNR=6.3						
KBZ	**Khabaz**	**3.29**	**309**	Pn	**Pb**	**03 33 14.4**	**-2.3**
LKRN	**Lenkeran, Azer**	**3.49**	**148**	⇑P	**Pn**	**03 33 14.3**	**+2.0**
	SNR=3.1						
LKRN				⇓S	**Sn**	**03 33 56.2**	**+2.9**
LKRN	**Lenkeran, Azer**	**3.49**	**148**	P	**Pn**	**03 33 14.3**	**+2.0**
	SNR=3.1						
LKRN				S	**Sn**	**03 33 56.2**	**+2.9**
KIV	**Kislovodsk**	**3.55**	**310**	*e*PN	**Pb**	**03 33 18.7**	**-2.5**
KIV				*i*		03 33 26.4	
KIV				*e*		03 34 00.4	
KIV						03 34 10.4	
KIV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KIV				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KIV				pmax	pmax		
	comp=N,50nm,0.9s						
KIV	**Kislovodsk**	**3.55**	**310**	*i* Pb	**Pg**	**03 33 26.4**	**-0.3**
	comp=N,6.0nm,0.5s						
KIV				Sb	**Sg**	**03 34 10.4**	**-2.3**
BHD	**Baghdad**	**8.58**	**192**	*ex*	**Pn**	**03 34 20.9**	**-1.3**
BHD				*ex*	x	03 36 01.7	
AKTK	**Aktyubinsk**	**11.85**	**39**	P	Pn	03 35 04.0	-2.9
AKTO	**Aktyubinsk**	**11.85**	**39**	⇑Pn	Pn	03 35 04.3	-2.6
	comp=N,0.2nm,0.4s						
AKTO				⇓Sn	Sn	03 37 13.9	-4.9
	comp=N,0.5nm,0.8s						
AKTO	**Aktyubinsk**	**11.85**	**39**	P	Pn	03 35 04.0	-2.9
AKTO	**Aktyubinsk**	**11.85**	**39**	Pn	Pn	03 35 04.0	-2.9
	comp=N,0.3nm,0.3s,baz=219,slow=15,SNR=2.5						
AKTO				Sn	Sn	03 37 11.9	-6.9
	comp=N,0.2nm,0.3s,baz=187,slow=21,SNR=2.0						
AKTO	**Aktyubinsk**	**11.85**	**39**	Pn	Pn	03 35 04.3	-2.6
	comp=N,0.2nm,0.4s						
AKTO				Sn	Sn	03 37 13.9	-4.9
	comp=N,0.5nm,0.8s						
AB31	**Akbulak array**	**12.10**	**47**	⇓Pn	**Pn**	**03 35 08.5**	**-1.8**
	comp=N,1.1nm,0.6s,baz=243,slow=13,SNR=19						
AB31				⇑Sn	**Sn**	**03 37 21.1**	**-3.8**
	comp=N,2.5nm,0.6s,baz=236,slow=21						
AB31	**Akbulak array**	**12.10**	**47**	Pn	**Pn**	**03 35 08.5**	**-1.8**
	comp=N,1.1nm,0.6s,baz=243,SNR=19						
AB31				Sn	**Sn**	**03 37 21.1**	**-3.8**
	comp=N,2.5nm,0.6s,baz=236						
OBN	**Obninsk**	**14.90**	**337**	⇑*e*P	**Pn**	**03 35 50.4**	**+1.9**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ARU	**Arti**	**16.70**	**24**	*d* iP	**Pn**	**03 36 12.9**	**+1.2**
ARU				S	**Sn**	**03 39 17.3**	**+0.7**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ARU	**Arti**	**16.70**	**24**	*i* P	**Pn**	**03 36 12.9**	**+1.2**
	comp=Z,5.0nm,0.7s						
KK31	**Karatay Array**	**17.82**	**77**	⇑Pn	**P**	**03 36 30.0**	**+3.4**
	comp=Z,0.2nm,0.3s,baz=284,slow=10,SNR=3.8						
ZRNK	**Zerenda**	**18.90**	**46**	⇑Pn	**P**	**03 36 37.7**	**-0.6**
	comp=Z,1.8nm,0.7s						
ZRNK	**Zerenda**	**18.90**	**46**	Pn	**P**	**03 36 37.7**	**-0.6**
	comp=Z,1.8nm,0.7s						
BRVK	**Borovoye**	**19.64**	**47**	⇑Pn	**P**	**03 36 45.3**	**-1.0**
	comp=Z,2.2nm,0.5s						
BRVK	**Borovoye**	**19.64**	**47**	*e*P	**P**	**03 36 46.0**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	**Borovoye**	**19.64**	**47**	Pn	**P**	**03 36 45.3**	**-1.0**
	comp=Z,2.2nm,0.5s						
BRVK	**Borovoye**	**19.64**	**47**	*e*P	**P**	**03 36 46.0**	**-0.3**
	comp=Z,2.0nm,0.7s						
BVA0	**Borovoye Array**	**19.68**	**47**	Pn	**P**	**03 36 46.6**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=253,slow=8.9,SNR=9.5						
BVA0	**Borovoye Array**	**19.68**	**47**	Pn	**P**	**03 36 46.6**	**-0.2**
	comp=Z,0.1nm,0.3s,SNR=9.5						
BVAR	**Borovoye Array**	**19.68**	**47**	P	**P**	**03 36 46.5**	**-0.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR	**Borovoye Array**	**19.68**	**47**	P	**P**	**03 36 46.5**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=254,slow=9.6,SNR=8.7						
BVAR	**Borovoye Array**	**19.68**	**47**	P	**P**	**03 36 46.5**	**-0.3**
	comp=Z,1.0nm,0.3s						
VOSK	**Vostochnaya**	**19.88**	**48**	⇑Pn	**P**	**03 36 48.5**	**-0.5**
	comp=Z,1.6nm,0.6s						
AAK	**Ala-Archa**	**20.78**	**78**	*e*P	**P**	**03 37 00.0**	**+0.9**
AAK				pmax	pmax		
	comp=Z,17nm,2.5s						
AAK	**Ala-Archa**	**20.78**	**78**	*e*P	**P**	**03 37 00.0**	**+0.9**
	comp=Z,17nm,2.5s						
FINES	**FINESS Array B**	**23.27**	**335**	P	**P**	**03 37 24.4**	**-0.8**
	comp=Z,3.1nm,1.0s,baz=139,slow=11,SNR=3.4						
FINES	**FINESS Array B**	**23.27**	**335**	P	**P**	**03 37 24.4**	**-0.8**
	comp=Z,3.0nm,1.0s						
KURK	**Kurchatov**	**23.86**	**57**	*e*P	**P**	**03 37 32.3**	**+1.2**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**23.86**	**57**	*e*P	**P**	**03 37 32.3**	**+1.2**
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**26.03**	**67**	P	**P**	**03 37 50.1**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**26.03**	**67**	P	**P**	**03 37 50.1**	**-0.8**
	comp=Z,1.5nm,0.9s,baz=268,slow=8.6,SNR=10						
MKAR	**Makanchi Array**	**26.03**	**67**	P	**P**	**03 37 50.1**	**-0.8**
	comp=Z,2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**28.16**	**51**	P	**P**	**03 38 09.8**	**-0.2**
ZALV	**Zalesovo Beam**	**28.16**	**51**	P	**P**	**03 38 09.8**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=278,slow=10.0,SNR=2.5						
ZALV	**Zalesovo Beam**	**28.16**	**51**	P	**P**	**03 38 09.8**	**-0.2**
NOA	**NORSAR Array B**	**28.75**	**324**	P	**P**	**03 38 16.7**	**+1.6**
	comp=Z,0.8nm,0.8s,baz=126,slow=6.8,SNR=3.5						
NOA	**NORSAR Array B**	**28.75**	**324**	P	**P**	**03 38 16.7**	**+1.6**
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**75.03**	**351**	P	**P**	**03 43 58.5**	**-0.4**
	comp=Z,0.1nm,0.6s,baz=8.2,slow=5.5,SNR=4.4						
YKA	**Yellowknife Ar**	**75.03**	**351**	P	**P**	**03 43 58.5**	**-0.4**

*CSEM **18** 03:35:29.3, 42°.30N×13°.54E, h7km, MD1.8/4, After ROM*
ROM 18 03:35:29.3±0.2, 42°.30N×13°.54E, h7km, Md1.8/4, Ml1.2/1, Error ellipse: s-maj=1.9km s-min=1.6km az=178.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.05**	**136**	Pg	Pg	03 35 31.1	+0.1
FAGN				Sg	Sg	03 35 32.3	+0.1
FAGN	**Fagnano**	**0.05**	**136**	Pg	Pg	03 35 31.1	+0.1
FAGN				Sg	Sg	03 35 32.3	+0.1
AQU	**L'Aquila**	**0.11**	**297**	Pg	Pg	03 35 32.6	+0.7
AQU				Sg	Sg	03 35 33.9	+0.3
AQU	**L'Aquila**	**0.11**	**297**	Pg	Pg	03 35 32.6	+0.7
AQU				Sg	Sg	03 35 33.9	+0.3
VCEL	**Villa Celiera**	**0.24**	**68**	Pg	Pg	03 35 35.2	+0.9
VCEL				Sg	Sg	03 35 38.9	+1.2
	37nm,0.4s						
VCEL	**Villa Celiera**	**0.24**	**68**	Pg	Pg	03 35 35.2	+0.9
VCEL				Sg	Sg	03 35 38.9	+1.2
	37nm,0.4s						
PTQR	**Pietraquaria**	**0.30**	**200**	Pg	Pb	03 35 37.1	0.0
PTQR				Sg	Sb	03 35 40.9	-1.5
	3.0nm,0.2s						
PTQR	**Pietraquaria**	**0.30**	**200**	Pg	Pb	03 35 37.1	0.0
PTQR				Sg	Sb	03 35 40.9	-1.5
	3.0nm,0.2s						

*BEO **18** 03:41:35.1±1.0, 38°.68N×25°.35E, h0km, ML4.0/2*
*ISCJB **18** 03:41:52.8±0.4, 40°.27N±0°.01×25°.28E±0°.02, h5km±3km, Error ellipse: s-maj=2.2km s-min=1.9km az=32.3*
*SOF **18** 03:41:53.1, 40°.30N×25°.31E, h9km, MD3.5*
*ATH **18** 03:41:53.1, 40°.25N×25°.27E, h22km±1km, MD3.7/36, ML2.9*
*DDA **18** 03:41:53.7, 40°.31N×25°.37E, h27km, MD3.5*
*ISK **18** 03:41:53.1, 40°.24N×25°.30E, h10km, ML3.6*
*CSEM **18** 03:41:54.1±0.1, 40°.26N×25°.28E, h10km, MD3.7, Error ellipse: s-maj=1.4km s-min=1.3km az=177.0*
*THE **18** 03:41:54.6, 40°.26N×25°.31E, h10km±1km, ML3.5/6, Error ellipse: s-maj=1.0km s-min=0.5km az=50.0*

ISC 18 03:41:54.3±0.9, 40°.25N±0°.01×25°.30E±0°.01, h11km±7km, n289, σ0.969/346, 17C-8D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMTH	**Samothraki Isl**	**0.28**	**38**	*e*PB	**Pg**	**03 41 59.7**	**-0.4**
SMTH				*e*SB	**Sg**	**03 42 04.5**	**+0.5**
SMTH	**Samothraki Isl**	**0.28**	**38**	*e*Pb	**Pg**	**03 41 59.7**	**-0.4**
SMTH				*e*Sb	**Sg**	**03 42 04.5**	**+0.5**
LIA	**Limnos Island**	**0.36**	**194**	P	**Pb**	**03 42 02.3**	**-0.4**
LIA				S	**Sb**	**03 42 07.5**	**-0.9**
LIA	**Limnos Island**	**0.36**	**194**	*e*PB	**Pg**	**03 42 01.2**	**-0.3**
LIA				*e*SB	**Sg**	**03 42 06.5**	**+0.3**
LIA	**Limnos Island**	**0.36**	**194**	*e*Pb	**Pg**	**03 42 01.2**	**-0.3**
LIA	**Limnos Island**	**0.36**	**194**	P	**Pb**	**03 42 02.3**	**-0.4**
LIA				*e*Sb	**Sg**	**03 42 06.5**	**+0.3**
LIA				S	**Sb**	**03 42 07.5**	**-0.9**
BOZC	**Bozcaada**	**0.70**	**125**	*i* P	**Pb**	**03 42 08.2**	**-0.4**
BOZC				*i* S	**Sb**	**03 42 17.8**	**-0.6**
ENEZ	**Enez**	**0.81**	**53**	*e*PG	**Pg**	**03 42 09.2**	**-0.8**
ENEZ	**Enez**	**0.81**	**53**	*e*Pg	**Pg**	**03 42 09.2**	**-0.8**

ALN	**Alexandroupoli**	**0.86**	**41**	P	**Pg**	**03 42 10.4**	**-0.5**
ALN				S	**Sb**	**03 42 22.2**	**-0.7**
ALN	**Alexandroupoli**	**0.86**	**41**	*e*PN	**Pg**	**03 42 10.4**	**-0.5**
ALN				*e*SN	**Sb**	**03 42 22.2**	**-0.7**
ALN	**Alexandroupoli**	**0.86**	**41**	P	**Pg**	**03 42 10.4**	**-0.5**
ALN				S	**Sb**	**03 42 22.2**	**-0.7**
EZN	**Ezine**	**0.89**	**118**	*e*PG	**Pg**	**03 42 11.2**	**-0.3**
EZN				*e*SG	**Sg**	**03 42 22.8**	**-0.3**
EZN	**Ezine**	**0.89**	**118**	*e*Pg	**Pg**	**03 42 11.2**	**-0.3**
EZN				*e*Sg	**Sg**	**03 42 22.8**	**-0.3**
GELI	**Tayfur-Gelibol**	**0.91**	**80**	*e*PG	**Pg**	**03 42 11.0**	**-0.8**
GELI	**Tayfur-Gelibol**	**0.91**	**80**	*e*Pg	**Pg**	**03 42 11.0**	**-0.8**
KAVA	**Kavala**	**0.96**	**322**	P	**Pb**	**03 42 12.7**	**-0.3**
KAVA				S	**Sb**	**03 42 26.1**	**+0.4**
KAVA	**Kavala**	**0.96**	**322**	P	**Pb**	**03 42 12.7**	**-0.3**
KAVA				S	**Sb**	**03 42 26.1**	**+0.4**
OUR	**Ouranopolis**	**1.01**	**275**	P	**Pb**	**03 42 13.7**	**-0.2**
OUR				S	**Sn**	**03 42 28.4**	**-0.3**
OUR	**Ouranopolis**	**1.01**	**275**	P	**Pb**	**03 42 13.7**	**-0.2**
OUR				S	**Sn**	**03 42 28.4**	**-0.3**
SIGR	**SIGRI**	**1.12**	**157**	P	**Pb**	**03 42 15.6**	**-0.1**
SIGR				S	**Sn**	**03 42 31.4**	**+0.1**
SIGR	**SIGRI**	**1.12**	**157**	P	**Pb**	**03 42 15.6**	**-0.1**
SIGR				S	**Sn**	**03 42 31.4**	**+0.1**
LPK	**Lapseki**	**1.12**	**83**	*e*PN	**Pg**	**03 42 15.2**	**-0.7**
LPK				*e*SN	**Sn**	**03 42 30.8**	**-0.7**
LPK	**Lapseki**	**1.12**	**83**	*e*Pn	**Pg**	**03 42 15.2**	**-0.7**
LPK				*e*Sn	**Sn**	**03 42 30.8**	**-0.7**
PRK	**Paraskevi**	**1.25**	**143**	P	**Pn**	**03 42 17.6**	**-0.1**
PRK				S	**Sn**	**03 42 34.5**	**-0.1**
PRK	**Paraskevi**	**1.25**	**143**	*e*PN	**Pb**	**03 42 17.8**	**-0.1**
PRK				*e*SN	**Sg**	**03 42 34.2**	**-0.3**
PRK	**Paraskevi**	**1.25**	**143**	*e*Pn	**Pb**	**03 42 17.8**	**-0.1**
PRK				S	**Sn**	**03 42 34.5**	**-0.1**
PAIG	**Paliouri**	**1.28**	**256**	P	**Pn**	**03 42 17.2**	**-1.0**
KDZ	**Kurdzhali**	**1.40**	**4**	P	**Pn**	**03 42 18.4**	**-1.5**
KDZ				Pg	**Pb**	**03 42 19.8**	**-0.8**
KDZ	**Kurdzhali**	**1.40**	**4**	P	**Pn**	**03 42 18.4**	**-1.5**
AYVA	**Ayvalik**	**1.42**	**131**	*i* P	**Pn**	**03 42 20.3**	**+0.2**
AYVA				*i* S	**Sb**	**03 42 39.0**	**0.0**
AYVA	**Ayvalik**	**1.42**	**131**	*i* P	**Pn**	**03 42 20.3**	**+0.2**
AYVA				*i* S	**Sb**	**03 42 39.0**	**0.0**
PLG	**Polygyros**	**1.42**	**276**	P	**Pn**	**03 42 19.7**	**-0.5**
PLG	**Polygyros**	**1.42**	**276**	*e*PN	**Pn**	**03 42 19.6**	**-0.6**
PLG				*e*SN	**Sn**	**03 42 37.4**	**-1.6**
PLG	**Polygyros**	**1.42**	**276**	P	**Pn**	**03 42 19.7**	**-0.5**
PLG				*e*Sn	**Sn**	**03 42 37.4**	**-1.6**
RKY	**Sarkoy-Tekirda**	**1.50**	**72**	*e*PN	**Pn**	**03 42 20.1**	**-1.1**
RKY	**Sarkoy-Tekirda**	**1.50**	**72**	*e*Pn	**Pn**	**03 42 20.1**	**-1.1**
SART	**Tekirdag**	**1.50**	**72**	*i* P	**Pn**	**03 42 20.1**	**-1.2**
SART				*i* S	**Sn**	**03 42 39.5**	**-1.4**
SART	**Tekirdag**	**1.50**	**72**	*i* P	**Pn**	**03 42 20.1**	**-1.2**
SART				*i* S	**Sn**	**03 42 39.5**	**-1.4**
RZN	**Rozhen**	**1.51**	**343**	*i* P	**Pn**	**03 42 21.1**	**-0.4**
RZN				Pg	**Pg**	**03 42 22.9**	**-0.3**
KRBG	**Karabiga-Canak**	**1.53**	**84**	*e*PN	**Pn**	**03 42 21.0**	**-0.7**
KRBG	**Karabiga-Canak**	**1.53**	**84**	*e*Pn	**Pn**	**03 42 21.0**	**-0.7**
AOS	**Alonnisos**	**1.54**	**226**	P	**Pn**	**03 42 20.9**	**-0.8**
AOS	**Alonnisos**	**1.54**	**226**	*e*PN	**Pn**	**03 42 20.8**	**-0.9**
AOS				*e*SN	**Sb**	**03 42 42.2**	**0.0**
AOS	**Alonnisos**	**1.54**	**226**	*e*Pn	**Pn**	**03 42 20.8**	**-0.9**
AOS				*e*Sn	**Sb**	**03 42 42.2**	**0.0**
NVR	**Nevrokopi**	**1.55**	**316**	P	**Pn**	**03 42 21.3**	**-0.6**
NVR				S	**Sn**	**03 42 42.0**	**0.0**
NVR	**Nevrokopi**	**1.55**	**316**	*e*PN	**Pn**	**03 42 21.3**	**-0.6**
NVR				*e*SN	**Sn**	**03 42 42.1**	**0.0**
NVR	**Nevrokopi**	**1.55**	**316**	P	**Pn**	**03 42 21.3**	**-0.6**
NVR				*e*Sn	**Sn**	**03 42 42.1**	**0.0**
SRS	**Serrai**	**1.56**	**304**	P	**Pn**	**03 42 21.3**	**-0.8**
SRS	**Serrai**	**1.56**	**304**	P	**Pn**	**03 42 21.3**	**-0.8**

PTL	Penteli	2.46	207	ePN	Pn	03 42 34.0	-0.5	PLOR	Plostina	5.69	10⇓	iP	Pn	03 43 20.8	+2.0
PTL	Penteli	2.46	207	P	Pn	03 42 34.0	-0.5	PLOR	Plostina	5.69	10⇓	iP	Pn	03 43 20.8	+2.0
DURS	Dursunbey	2.52	104	iP	Pn	03 42 35.5	+0.1	VRI	Vrincioaia	5.71	10⇑	iP	Pn	03 43 20.6	+1.5
DURS				iS	Sn	03 43 05.1	-1.1	VRI	Vrincioaia	5.71	10⇑	iP	Pn	03 43 20.6	+1.5
DURS	Dursunbey	2.52	104	iP	Pn	03 42 35.5	+0.1	DOPR	Dopca	5.72	1⇓	iP	Pn	03 43 19.8	+0.6
DURS				iS	Sn	03 43 05.1	-1.1	DOPR	Dopca	5.72	1⇓	iP	Pn	03 43 19.8	+0.6
CTYL	Yal??k??y-??at	2.58	61	ePN	Pn	03 42 35.0	-1.0	BZS	Buzias	6.01	334⇓	iP	Pn	03 43 22.7	-0.4
CTYL	Yal??k??y-??at	2.58	61	ePn	Pn	03 42 35.0	-1.0	BZS	Buzias	6.01	334	ePn	Pn	03 43 22.8	-0.4
ATH	Athens Observa	2.58	209	ePN	Pn	03 42 35.9	-0.2	BZS	Buzias	6.01	334⇓	iP	Pn	03 43 22.7	-0.4
ATH	Athens Observa	2.58	209	ePn	Pn	03 42 35.9	-0.2	DRGR		6.81	345⇑	iP	Pn	03 43 35.2	+1.0
AGG	Agios Georgios	2.60	243	ePN	Pn	03 42 36.1	-0.2	DRGR		6.81	345⇑	iP	Pn	03 43 35.2	+1.0
AGG	Agios Georgios	2.60	243	ePn	Pn	03 42 36.1	-0.2	CRVS	Cervenica-Dubn	9.07	344	ePN	Pn	03 44 03.9	-1.3
THL	Klokotos Trika	2.62	256	ePN	Pn	03 42 35.5	-1.0	VYHS	Vyhne	9.45	333	ePN	Pn	03 44 12.5	+2.1
THL	Klokotos Trika	2.62	256	ePn	Pn	03 42 35.5	-1.0	VYHS	Vyhne	9.45	333	ePn	Pn	03 44 12.5	+2.1
CTKS	Kestanelik-??a	2.63	67	ePN	Pn	03 42 36.9	+0.2								
CTKS	Kestanelik-??a	2.63	67	ePn	Pn	03 42 36.9	+0.2								
DST	Dursunbey	2.63	103	ePN	Pn	03 42 37.3	+0.5								
DST	Dursunbey	2.63	103	ePn	Pn	03 42 37.3	+0.5								
KZN	Kozani	2.70	272	ePN	Pn	03 42 37.3	-0.5								
KZN	Kozani	2.70	272	ePn	Pn	03 42 37.3	-0.5								
ARMT	Armutlu	2.74	82	ePN	Pn	03 42 38.8	+0.6								
ARMT	Armutlu	2.74	82	ePn	Pn	03 42 38.8	+0.6								
MDNY	Mudanya-Bursa	2.74	86	ePN	Pn	03 42 38.7	+0.4								
MDNY	Mudanya-Bursa	2.74	86	ePn	Pn	03 42 38.7	+0.4								
ORLT	Orhaneli	2.76	93	ePN	Pn	03 42 38.9	+0.3								
ORLT	Orhaneli	2.76	93	ePn	Pn	03 42 38.9	+0.3								
BGKT	Bogazkoy	2.80	69	ePN	Pn	03 42 39.4	+0.4								
BGKT	Bogazkoy	2.80	69	ePn	Pn	03 42 39.4	+0.4								
VTS	Vitosha	2.82	327	P	Pn	03 42 39.1	-0.4								
VTS	Vitosha	2.82	327	⇑iP	Sb	03 43 25.9	+6.5								
VTS	Vitosha	2.82	327	ePn	Pn	03 42 39.9	+0.4								
VTS	Vitosha	2.82	327	iP	Pn	03 42 39.9	+0.4								
VTS				Pg	Pg	03 42 47.3	-1.1								
VTS	Vitosha	2.82	327	P	Pn	03 42 39.1	-0.4								
VTS	Vitosha	2.82	327	ePN	Pn	03 42 39.9	+0.4								
NAIG	Nisos Aigina	2.86	210	ePN	Pn	03 42 40.4	+0.5								
NAIG	Nisos Aigina	2.86	210	ePn	Pn	03 42 40.4	+0.5								
LTK	Loutraki	2.87	220	P	Pn	03 42 40.2	+0.2								
LTK	Loutraki	2.87	220	ePN	Pn	03 42 39.6	-0.4								
LTK	Loutraki	2.87	220	ePn	Pn	03 42 39.6	-0.4								
LTK	Loutraki	2.87	220	P	Pn	03 42 40.2	+0.2								
PVL	Pavlikeni	2.97	0	P	Pn	03 42 40.5	-0.9								
PVL				Pg	Pb	03 42 47.9	+0.7								
PVL	Pavlikeni	2.97	0	P	Pn	03 42 40.5	-0.9								
ISK	Istanbul-Kandi	2.97	73	ePN	Pn	03 42 41.9	+0.4								
ISK	Istanbul-Kandi	2.97	73	ePn	Pn	03 42 41.9	+0.4								
GEMT	Gemlik	2.98	85	ePN	Pn	03 42 42.1	+0.6								
GEMT	Gemlik	2.98	85	ePn	Pn	03 42 42.1	+0.6								
EVR	Evrytania	3.01	245	ePN	Pn	03 42 41.7	-0.3								
EVR	Evrytania	3.01	245	ePn	Pn	03 42 41.7	-0.3								
FNA	Florina	3.04	281	P	Pn	03 42 43.0	+0.6								
FNA	Florina	3.04	281	P	Pn	03 42 43.0	+0.6								
SZH	Strazhica	3.05	9	P	Pn	03 42 42.4	-0.2								
SZH	Strazhica	3.05	9	P	Pn	03 42 42.4	-0.2								
KALE	Kalithea	3.07	234	ePN	Pn	03 42 42.8	-0.1								
KALE	Kalithea	3.07	234	ePn	Pn	03 42 42.8	-0.1								
YLV	Yalova	3.13	83	ePN	Pn	03 42 44.4	+0.8								
YLV	Yalova	3.13	83	ePn	Pn	03 42 44.4	+0.8								
KULA	Kula-Manisa	3.13	123	ePN	Pn	03 42 44.1	+0.4								
KULA	Kula-Manisa	3.13	123	ePn	Pn	03 42 44.1	+0.4								
TRIZ	Trizonia	3.13	234	ePN	Pn	03 42 43.7	+0.1								
TRIZ	Trizonia	3.13	234	ePn	Pn	03 42 43.7	+0.1								
DID	Didima	3.17	211	P	Pn	03 42 44.3	0.0								
DID	Didima	3.17	211	ePN	Pn	03 42 43.6	-0.7								
DID	Didima	3.17	211	ePn	Pn	03 42 43.6	-0.7								
DID	Didima	3.17	211	P	Pn	03 42 44.3	0.0								
APE	Apeiranthos	3.18	177	ePN	Pn	03 42 44.4	+0.1								
APE	Apeiranthos	3.18	177	⇑iP	Pn	03 42 43.8	-0.5								
APE	Apeiranthos	3.18	177	ePn	Pn	03 42 43.3	-1.0								
APE	Apeiranthos	3.18	177	⇑iP	Pn	03 42 43.8	-0.5								
APE	Apeiranthos	3.18	177	ePn	Pn	03 42 44.4	+0.1								
EFP	Efpalio	3.20	236	ePN	Pn	03 42 44.7	+0.2								
EFP	Efpalio	3.20	236	ePn	Pn	03 42 44.7	+0.2								
GUR	Goura	3.26	226	P	Pn	03 42 45.1	-0.4								
GUR	Goura	3.26	226	ePN	Pn	03 42 45.3	-0.2								
GUR	Goura	3.26	226	ePn	Pn	03 42 45.3	-0.2								
LAKA	Lakka	3.27	233	ePN	Pn	03 42 44.9	-0.6								
LAKA	Lakka	3.27	233	ePn	Pn	03 42 44.9	-0.6								
KLV	Kalavryta, Ach	3.29	229	ePN	Pn	03 42 45.5	-0.4								
KLV	Kalavryta, Ach	3.29	229	ePn	Pn	03 42 45.5	-0.4								
TVSB	Tavsanli	3.30	103	ePN	Pn	03 42 46.5	+0.4								
TVSB	Tavsanli	3.30	103	ePn	Pn	03 42 46.5	+0.4								
MPEP	Malo Peshtene	3.32	340	P	Pn	03 42 46.4	+0.2								
PRD	Provadia	3.34	27	P	Pn	03 42 45.9	-0.6								
SILS	Sile	3.42	73	ePN	Pn	03 42 47.1	-0.5								
SILT	Sile	3.42	73	ePn	Pn	03 42 47.1	-0.5								
JAN	Janina	3.47	262	ePN	Pn	03 42 47.9	-0.4								
JAN	Janina	3.47	262	ePn	Pn	03 42 47.9	-0.4								
CAVI	Cavuskoy	3.48	89	ePN	Pn	03 42 48.5	+0.2								
CAVI	Cavuskoy	3.48	89	ePn	Pn	03 42 48.6	+0.2								
MLSB	Milas	3.53	146	ePN	Pn	03 42 48.9	-0.2								
MLSB	Milas	3.53	146	ePn	Pn	03 42 48.9	-0.2								
BODT	Bodrum	3.55	153	ePN	Pn	03 42 49.6	+0.3								
BODT	Bodrum	3.55	153	ePn	Pn	03 42 49.7	+0.3								
ZAPS	Zavoj	3.62	327	ePn	Pn	03 42 52.0	+1.6								
ZAPS				eSn	Sg	03 43 48.7	-1.9								
BARS	Barje	3.67	316	ePn	Pn	03 42 50.2	-0.8								
BARS				eSn	Sb	03 43 46.7	+3.1								
BARS	Barje	3.67	316	ePn	Pn	03 42 50.2	-0.8								
VLX	Vlachokerasia	3.67	219	ePN	Pn	03 42 50.8	-0.3								
VLX	Vlachokerasia	3.67	219	ePn	Pn	03 42 50.8	-0.3								
RLS	Riolos of Patr	3.70	235	ePN	Pn	03 42 51.6	+0.2								
RLS	Riolos of Patr	3.70	235	ePn	Pn	03 42 51.6	+0.2								
KHL	Karahalli	3.80	119	ePN	Pn	03 42 53.5	+0.6								
KHL	Karahalli	3.80	119	ePn	Pn	03 42 53.5	+0.6								
GPA	Golpazari	3.83	88	ePN	Pn	03 42 54.2	+0.9								
GPA	Golpazari	3.83	88	ePn	Pn	03 42 54.2	+0.9								
LKD2	Lefkada island	3.87	249	ePN	Pn	03 42 54.2	+0.3								
LKD2	Lefkada island	3.87	249	ePn	Pn	03 42 54.2	+0.3								
YER	Yerkesik	3.89	142	ePN	Pn	03 42 54.1	0.0								
YER	Yerkesik	3.89	142	ePn	Pn	03 42 54.1	0.0								
ALT	Altintas	3.90	106	ePN	Pn	03 42 55.0	+0.7								
ALT	Altintas	3.90	106	ePn	Pn	03 42 55.0	+0.7								
AMT	Artemida-Makis	3.90	227	ePN	Pn	03 42 53.9	-0.3								
AMT	Artemida-Makis	3.90	227	ePn	Pn	03 42 53.9	-0.3								
DAT	Datca	3.94	152	ePN	Pn	03 42 55.0	+0.1								
DAT	Datca	3.94	152	ePn	Pn	03 42 55.0	+0.1								
GULT	Gulveren	3.99	86	ePN	Pn	03 42 56.4	+0.9								
GULT	Gulveren	3.99	86	ePn	Pn	03 42 56.4	+0.9								
ITM	Ithomi	4.04	222	ePN	Pn	03 42 56.9	+0.7								
ITM	Ithomi	4.04	222	ePn	Pn	03 42 56.9	+0.7								
DYR	Agios Nikonas	4.19	215	ePN	Pn	03 42 58.5	+0.3								
DYR	Agios Nikonas	4.19	215	ePn	Pn	03 42 58.5	+0.3								
ESKT	Eskisehir	4.33	98	ePN	Pn	03 43 00.8	+0.6								
ESKT	Eskisehir	4.33	98	ePn	Pn	03 43 00.8	+0.6								
KYTH	Kithira	4.34	205	P	Pn	03 43 00.5	+0.1								
KYTH	Kithira	4.34	205	ePN	Pn	03 43 00.4	+0.1								
KYTH	Kithira	4.34	205	ePn	Pn	03 43 00.4	+0.1								
DALT	Dalyan (Mudla)	4.35	142	ePN	Pn	03 43 00.8	+0.4								
DALT	Dalyan (Mudla)	4.35	142	ePn	Pn	03 43 00.8	+0.4								
PYL	PYLOS	4.36	221	ePN	Pn	03 43 01.2	+0.7								
PYL	PYLOS	4.36	221	ePn	Pn	03 43 01.2	+0.7								
BOLS	Boljevac	4.36	326	ePn	Pn	03 42 59.8	-0.7								
BOLS				eSn	Sb	03 44 06.2	+2.6								
BOLS	Boljevac	4.36	326	ePn	Pn	03 42 59.8	-0.7								
SHUT	Suhut-Afyon	4.41	111	ePN	Pn	03 43 02.3	+1.0								
SHUT	Suhut-Afyon	4.41	111	ePn	Pn	03 43 02.3	+1.0								
CVD	Cernavoda	4.54	26	⇑iP	Pn	03 43 03.8	+0.8								
CVD	Cernavoda	4.54	26	⇑iP	Pn	03 43 03.8	+0.8								
SVRH	Sivrihisar-ESK	4.86	97	ePN	Pn	03 43 08.3	+0.9								
SVRH	Sivrihisar-ESK	4.86	97	ePn	Pn	03 43 08.3	+0.9								
GRUS	Gruza	4.99	318	ePN	Pn	03 43 08.2	-0.9								
GRUS	Gruza	4.99	318	ePn	Pn	03 43 08.2	-0.9								
ELL	Elmali	5.03	133	ePN	Pn	03 43 10.7	+0.9								
ELL	Elmali	5.03	133	ePn	Pn	03 43 10.7	+0.9								
ARR	Arges	5.14	355	⇑iP	Pn	03 43 10.8	-0.5								
ARR	Arges	5.14	355	⇑iP	Pn	03 43 10.8	-0.5								
MLR	Muntele Rosu	5.26	5	⇑iP	Pn	03 43 13.9	+0.9								
MLR	Muntele Rosu	5.26	5	⇑iP	Pn	03 43 13.9	+0.9								
KIZT	Kizilcal	5.26	103	ePN	Pn	03 43 14.3	+1.2								
KIZT	Kizilcal	5.26	103	ePn	Pn	03 43 14.3	+1.2								
LOT	Lotru	5.32	348	⇑iP	Pn	03 43 13.4	-0.4								
LOT	Lotru	5.32	348	⇑iP	Pn	03 43 13.4	-0.4								
CFR	Carcaliu	5.35	22	⇓iP	Pn	03 43 13.7	-0.4								
CFR	Carcaliu	5.35	22	⇓iP	Pn	03 43 13.7	-0.4								
DIVS	Divibare	5.51	316	ePn	Pn	03 43 14.9	-1.5								
DIVS	Divibare	5.51	316	ePn	Pn	03 43 14.9	-1.5								
TLCR		5.57	27	⇑iP	Pn	03 43 17.3	+0.2								
TLCR		5.57	27	⇑iP	Pn	03 43 17.3	+0.2								

NNC 18 03:44:15.0±4.6, 54.02N×86.84E, h0km, mb3.6, mpv3.1, 3C-6D, Error ellipse: s-maj=37.5km s-min=23.2km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KURK	Kurchatov	6.02	240	⇓Pn		Pn	03 45 44.6	-0.7
	4.1nm,1.0s							
KURK				⇓Sn		Sn	03 46 55.7	+0.8
	2.9nm,1.0s							
KURK				⇓Lg		Lg	03 47 26.8	
	7.3nm,1.1s							
MK31	Makanchi Array	7.79	204	Pn		Pn	03 46 12.9	+3.3
	0.2nm,0.5s,baz=28,slow=14,SNR=16							
MK31				⇓Sn		Sn	03 47 44.8	+6.3
	0.6nm,0.6s,baz=28,slow=28,SNR=4.8							
MK31				⇓Lg		Lg	03 48 19.2	
	1.6nm,0.6s,baz=26,slow=28,SNR=4.5							
VOSK	Vostochnaya	9.57	269	⇑Pn		Pn	03 46 33.7	-0.3
	0.9nm,0.5s							
VOSK				⇑Sn		Sn	03 48 22.2	0.0
	4.9nm,1.1s							
ZRNK	Zerenda	10.69	271	⇓Pn		Pn	03 46 49.5	+0.3
	0.6nm,0.5s							
ZRNK				⇑Sn		Sn	03 48 48.3	-1.2
	2.8nm,1.1s							

SZGRF ***18*** *03:55:25.7, 41.67N×133.81E, h33km, mb5.4, Sea of Japan*

NIED ***18*** *03:56:00, 43.00N×131.30E, h700km, Mw5.2 Best double couple: M06.97000×10^16 NP1:φ±12.00000°, δ83.00000°, λ-65.00000°. NP2:φ±116.00000°, δ26.00000°, λ-164.00000°.*

JMA ***18*** *03:56:28.4±0.3, 42.96N×131.25E, h671km, M5.0*

SKHL ***18*** *03:56:29.9±1.7, 42.82N×130.62E, h564km±10km, mb5.6/2, msh5.6/9*

BGS ***18*** *03:56:29.5±1.9, 42.40N×130.07E, h564km, mb4.5*

BJI ***18*** *03:56:30.6, 42.80N×130.50E, h564km, mB5.1/18, mb5.4/48*

ISCJB ***18*** *03:56:30.5±0.1, 42.82N±0.02×130.51E±0.02, h563km, mb4.8/347, Error ellipse: s-maj=2.0km s-min=1.6km az=1.9*

MOS ***18*** *03:56:30.0±0.8, 42.85N×130.55E, h562km, mb5.0/141, Error ellipse: s-maj=6.7km s-min=3.7km az=111.9*

TEH ***18*** *03:56:30.1, 42.95N×130.69E, h570km, ML4.8*

NEIC ***18*** *03:56:31.3±0.1, 42.84N×130.48E, mb4.9/212, Error ellipse: s-maj=3.4km s-min=2.4km az=170.0*

IDC ***18*** *03:56:31.6±0.3, 42.83N×130.62E, h571km±3km, mb4.2/44, mb1 4.4/49, mb1mx4.4/50, mbtmp4.3/49, Error ellipse: s-maj=6.2km s-min=5.9km az=165.0*

DJA ***18*** *03:56:36.5±2.7, 43.1N±8.4×130.2E±8, h609km±23km, M4.8/16, mB5.3/9, mb4.9/16, Mw(mB)4.8/9*

ISC 18 03:56:31.2±0.2, 42.82N±0.03×130.70E±0.03, h568km, h568km:pP-P,n1459,σ1s25/1721, mb4.9/347, 115C-284D, Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VLA	Vladivostok	0.93	70	⇓iP		P	03 57 38.4	-0.6
VLA				iS		S	03 58 32.2	-2.2
VLA	Vladivostok	0.93	70	⇓iP		P	03 57 39.5	+0.5
VLA	Vladivostok	0.93	70	⇓iP		P	03 57 38.4	-0.6
VLA				iS		S	03 58 32.2	-2.2
GRTR	Gornotajezhnoj	1.39	50	⇓iP		P	03 57 41.2	+1.0
GRTR				iS		S	03 58 37.0	+0.4
USRK	Ussuriysk Arra	1.68	34	P		P	03 57 41.6	+0.6
	87nm,0.3s,baz=207,slow=3.2,SNR=1257							
USRK				S		S	03 58 39.2	+0.9
	4.5nm,0.3s,baz=249,slow=9.4,SNR=6.8							
MDJ	Mudanjiang	1.97	336	P		P	03 57 41.3	-0.9
MDJ				S		S	03 58 38.8	-1.7
MDJ				PcP		PcP	04 03 56.8	+0.8
MDJ				ScP		ScP	04 06 34.3	+0.7
MDJ				PcS		PcS	04 07 28.5	+0.5
MDJ				ScS		ScS	04 10 06.1	+0.5
MDJ				pmax		pmax		
	comp=Z,400nm,0.9s							
MDJ				pmax		pmax		
	comp=Z,500nm,5.0s							
CN2	Changchun	3.95	286	⇑P		P	03 57 54.5	+0.6
CN2				eS		S	03 58 57.0	-4.5
CN2				ScS		ScS	04 10 05.6	-1.1
CN2				pmax		pmax		
	comp=Z,30nm,0.9s							
CN2				pmax		pmax		
	comp=Z,200nm,3.0s							
TEY	Ternei	4.81	60	⇓iP		P	03 58 01.1	+0.7
TEY				AMB		AMB	03 58 02.0	
	comp=Z,469nm,0.9s							
TEY				AMB		AMB	03 58 02.4	
	comp=Z,2μm,2.0s							
TEY				iS		S	03 59 13.6	+0.2
TEY				A		A	03 59 15.3	
	comp=Z,258nm,1.0s							
TEY				A		A	03 59 15.3	
	comp=Z,249nm,1.0s							
TEY				A		A	03 59 16.0	
	comp=Z,3μm,4.0s							
TEY				A		A	03 59 16.0	
	comp=Z,5μm,4.0s							
SNY	Shenyang	5.37	262	⇑P		P	03 58 06.3	+1.2
SNY				S		S	03 59 18.9	-3.0
SNY				pmax		pmax		
	comp=Z,730nm,1.2s							
KSRS	Korea Array	5.76	203	eP		P	03 58 09.6	+1.0
KSRS	Korea Array	5.76	203	P		P	03 58 09.6	+1.0
	comp=Z,67nm,0.3s,baz=18,slow=8.6,SNR=1377							
KSRS				S		S	03 59 30.6	+2.5
	baz=21,slow=14,SNR=12							
KSRS				ScP		ScP	04 06 35.5	0.0
	comp=Z,0.5nm,0.3s,baz=297,slow=0.4,SNR=7.7							
KSAR	Wonju Array Be	5.78	203	P		P	03 58 09.6	+0.8
KSAR				S		S	03 59 30.6	+2.1
KSAR				ScP		ScP	04 06 35.5	0.0
INCN	Inchon	6.17	212	eP		P	03 58 13.1	+0.8
INCN	Inchon	6.17	212	P		P	03 58 13.6	+1.3
	SNR=88							
HABR	Khabarovsk	6.43	27	eP		P	03 58 14.8	+0.5
HABR				eS		S	03 59 38.9	0.0
HABR				pmax		pmax		
	comp=Z,66nm,1.0s							
HABR				pmax		pmax		
	comp=E,14nm,0.7s							
HABR				pmax		pmax		
	comp=N,27nm,0.9s							
HABR	Khabarovsk	6.43	27	eP		P	03 58 14.8	+0.5
KLR	Kul'dur	6.46	6	eP		P	03 58 12.8	-1.8
KLR				eS		S	03 59 36.2	-3.2
KLR				pmax		pmax		
	comp=N,62nm,1.6s							
KLR				pmax		pmax		
	comp=E,45nm,1.6s							
KLR				pmax		pmax		
	comp=Z,180nm,1.6s							
KLR				smax		smax		
	comp=N,350nm,1.8s							
KLR				smax		smax		
	comp=E,460nm,1.8s							
KLR	Kul'dur	6.46	6	eP		P	03 58 13.0	-1.6
KLR				AMB		AMB	03 58 15.4	
	comp=E,62nm,1.6s							
KLR				AMB		AMB	03 58 15.4	
	comp=E,45nm,1.6s							
KLR				AMB		AMB	03 58 15.4	
	comp=E,180nm,1.6s							
KLR				eS		S	03 59 36.2	-3.2
KLR				A		A	03 59 39.0	
	comp=E,350nm,1.8s							
KLR				A		A	03 59 39.0	
	comp=E,460nm,1.8s							
JHG	Hegura jima	6.87	134	P		P	03 58 19.1	+0.4
JHG				S		S	03 59 47.1	+0.5
JYM2	Yakumo 2	7.19	92	P		P	03 58 20.6	-1.0
JIW	Iwasaki	7.31	105	P		P	03 58 21.6	-1.2
JSR	Shiriuchi	7.34	97	P		P	03 58 21.8	-1.2
JSZ	Suzu	7.40	134	P		P	03 58 23.7	0.0
JSI2	Shiura 2	7.45	100	P		P	03 58 22.8	-1.3
JSD	Sado	7.49	127	P		P	03 58 23.3	-1.2
JSD				S		S	03 59 56.2	-1.1
JJH	Hakui	7.52	139	P		P	03 58 22.7	-2.1
JNB	Noboribetsu	7.63	89	P		P	03 58 24.0	-1.8
JKR	Kurayoshi	7.81	161	P		P	03 58 28.5	+0.8
JAW	Awa shima	7.83	121	P		P	03 58 25.4	-2.4
JAW				S		S	03 59 59.9	-3.4
JOT	Ohata	7.83	97	P		P	03 58 25.6	-2.1
JOT				eS		S	03 59 57.6	-5.7
JKG	Kaga	7.85	144	P		P	03 58 27.4	-0.6
DL2	Dalian	7.90	243	⇑iP		P	03 58 29.3	+0.8
DL2				sP		S	03 59 59.1	-5.5
DL2				S		S	04 00 05.9	+1.3
DL2				ScS		ScS	04 10 08.8	-2.4
DL2				pmax		pmax		
	comp=Z,870nm,5.7s							
JKY	Yasaka	7.95	153	P		P	03 58 29.0	-0.1
JTM	Tenmabayashi	8.01	101	P		P	03 58 27.2	-2.3
JHS	Saijyo	8.03	166	P		P	03 58 30.3	+0.4
JHS				eS		S	04 00 08.6	+1.5
JTT	Ttatey	8.04	138	P		P	03 58 29.5	-0.4
JJN	Nakama	8.09	132	P		P	03 58 29.1	-1.2
JJN				S		S	04 00 09.9	+1.9
JIZZ	Izumozaki	8.09	128	P		P	03 58 29.7	-0.7
JRG	Rokugo	8.24	111	P		P	03 58 29.9	-1.9
JNS	Sasagawa	8.26	124	P		P	03 58 30.2	-1.8
JYK	Kaneyama	8.29	115	P		P	03 58 30.5	-1.8
JAD	Aida	8.31	160	P		P	03 58 32.8	+0.2
JHIK	Hikimi	8.33	173	P		P	03 58 32.5	-0.3
JGN	Niukaw	8.34	140	P		P	03 58 31.8	-1.1
JGN				S		S	04 00 11.0	-1.6
JFM	Mihama	8.35	149	P		P	03 58 33.0	0.0
JFM				S		S	04 00 12.4	-0.4
JWT	Wachi	8.36	153	P		P	03 58 33.2	+0.1
JHK	Hiroka	8.46	128	P		P	03 58 32.2	-1.8
JHK				S		S	04 00 11.5	-3.3
JKZ	Kuzumaki	8.48	106	P		P	03 58 31.7	-2.5
JYS	Shirataka	8.48	120	P		P	03 58 32.5	-1.7
JGM	Miyama	8.50	145	P		P	03 58 33.9	-0.6
JGM				S		S	04 00 14.1	-1.5
MAJO	Matsushiro	8.53	135	eP		P	03 58 32.6	-2.1
MAJO	Matsushiro	8.53	135	eP		P	03 58 32.6	-2.1
MAT	Matsushiro	8.53	135	P		P	03 58 32.8	-1.9
MAT				S		S	04 00 12.9	-3.1
MAT

UGL *i* S **S** **04 00 42.0 -2.2**
UGL A A 04 00 46.0
comp=N,800nm,5.0s
UGL A A 04 00 46.0
comp=N,3µm,5.0s
TTO1 TONANKAI O.B.S 10.35 150 P **P** **03 58 51.7 -1.0**
EKMR Ekimchan 10.37 8⇑*i*P P 03 58 48.5 -4.4
EKMR AMB AMB 03 58 50.0
comp=N,6.0nm,0.5s
EKMR AMB AMB 03 58 50.0
comp=N,4.0nm,0.5s
EKMR AMB AMB 03 58 50.0
comp=N,27nm,0.5s
YUK Yuzh-Kuril'sk 11.10 79 *e*P **P** **03 59 01.5 +1.1**
YUK AMB AMB 03 59 05.0
comp=N,36nm,0.5s
YUK AMB AMB 03 59 05.0
comp=N,53nm,0.5s
YUK AMB AMB 03 59 05.0
comp=N,131nm,0.5s
YUK *e*S **S** **04 01 00.5 -2.7**
YUK A A 04 01 04.0
comp=N,5µm,3.0s
ZEA Zeya 11.17 349⇓*i*P **P** **03 59 01.2 +0.3**
ZEA AMB AMB 03 59 02.0
comp=N,200nm,2.0s
ZEA AMB AMB 03 59 02.0
comp=N,300nm,2.0s
ZEA AMB AMB 03 59 02.3
comp=N,140nm,1.0s
ZEA AMB AMB 03 59 02.3
comp=N,30nm,1.0s
ZEA AMB AMB 03 59 02.3
comp=N,210nm,1.0s
ZEA *e*S **S** **04 01 01.1 -3.1**
ZEA A A 04 01 03.0
comp=N,600nm,4.0s
ZEA A A 04 01 03.0
comp=N,1µm,4.0s
BJI Beijing 11.25 261 P **P** **03 59 02.1 +0.1**
BJI S **S** **04 01 03.5 -2.6**
BJI pmax pmax
comp=Z,130nm,1.1s
BSO1 Boso 1 11.43 132 P **P** **03 59 01.0 -2.4**
BSO1 *e*S **S** **04 01 03.6 -5.1**
TYV Tymovskoe 11.47 41⇓*i*P **P** **03 59 03.9 -0.2**
TYV AMB AMB 03 59 04.5
comp=Z,11nm,0.8s
TYV AMB AMB 03 59 04.5
comp=Z,46nm,0.8s
TYV *e*S **S** **04 01 08.8 -1.1**
TYV A A 04 01 12.0
comp=Z,1µm,5.0s
TYV A A 04 01 12.0
comp=Z,350nm,2.0s
TYV A A 04 01 12.0
comp=Z,240nm,2.0s
KROS Kirovskiy 11.88 349⇓*e*P P 03 59 03.7 -4.6
KROS AMB AMB 03 59 04.4
comp=Z,12nm,0.5s
KROS AMB AMB 03 59 04.4
comp=Z,3.0nm,0.5s
KROS AMB AMB 03 59 04.4
comp=Z,19nm,0.5s
BMKR Bomnak 11.97 355⇑*e*P P 03 59 04.4 -4.7
BMKR AMB AMB 03 59 04.9
comp=Z,19nm,0.5s
JHJ Hachijo jima 2 12.04 141 P **P** **03 59 09.0 -1.3**
comp=Z,36nm,0.3s,baz=61,slow=17,SNR=9.1
JHJ S **S** **04 01 20.3 -0.7**
comp=Z,25nm,0.3s,baz=30,slow=20,SNR=5.6
NKL Nikolayevsk 12.30 29 *e*S **S** **04 01 20.7 -4.7**
NKL ⇑*i*P **P** **03 59 09.7 -2.8**
NKL AMB AMB 03 59 10.8
comp=Z,90nm,1.0s
NKL AMB AMB 03 59 12.0
comp=Z,350nm,3.5s
NKL A A 04 01 23.0
comp=Z,30nm,0.9s
NKL A A 04 01 23.0
comp=Z,25nm,0.9s
NKL A A 04 01 27.5
comp=Z,600nm,5.0s
NKL A A 04 01 27.5
comp=Z,650nm,5.0s
KUR Kuril'sk 12.60 73 *e*P **P** **03 59 15.5 -0.2**
KUR *e*S **S** **04 01 29.5 -1.7**
KUR pmax pmax
comp=Z,260nm,1.0s
KUR smax smax
comp=N,1µm,1.6s
KUR smax smax
comp=E,610nm,1.5s
KUR smax smax
comp=N,5µm,5.0s
KUR smax smax
comp=E,4µm,4.0s
KUR Kuril'sk 12.60 73 *e*P **P** **03 59 15.5 -0.2**
KUR AMB AMB 03 59 16.7
comp=E,260nm,1.0s
KUR *e*S **S** **04 01 29.5 -1.7**
KUR A A 04 01 31.6
comp=E,1µm,1.6s
KUR A A 04 01 31.6
comp=E,610nm,1.6s
KUR A A 04 01 33.6
comp=E,5µm,4.5s
KUR A A 04 01 33.6
comp=E,4µm,4.5s
OKH Okha 13.47 33 *e*P P 03 59 27.7 +3.1
OKH *e*S **S** **04 01 47.8 +0.7**
OKH smax smax
comp=N,2µm,4.0s
OKH smax smax
comp=E,2µm,5.0s
OKH Okha 13.47 33 *e*P **P** **03 59 25.0 +0.5**
OKH AMB AMB 03 59 28.1
comp=E,200nm,0.5s
OKH *e*S **S** **04 01 47.8 +0.7**
OKH A A 04 01 53.6
comp=E,2µm,4.5s
NJ2 Nanjing 14.26 225 *e*P **P** **03 59 32.3 -0.7**
NJ2 sP **sPn** **04 01 28.3 -2.0**
NJ2 S **S** **04 02 02.0 -0.4**
NJ2 pmax pmax
comp=Z,150nm,0.5s
NJ2 pmax pmax
comp=Z,250nm,4.3s
HHC Hu-ho-hao-te 14.40 269 *e*P **P** **03 59 32.6 -1.8**
HHC sP **sPn** **04 01 28.9 -3.5**
HHC S **S** **04 01 59.1 -5.8**
HHC PcP PcP 04 04 11.4 +5.1
HHC ScP ScP 04 06 54.0 +7.4
HHC PcS **PcS** **04 07 44.8 +3.2**
HHC pmax pmax
comp=Z,170nm,0.6s
HHC pmax pmax
comp=Z,580nm,5.3s
CLNS Chul'man 14.52 347 *e*P **P** **03 59 33.0 -2.2**
CLNS *e*S **S** **04 02 05.2 -1.2**
CLNS pmax pmax
comp=Z,30nm,1.1s
CLNS pmax pmax
comp=E,6.0nm,0.9s
CLNS pmax pmax
comp=N,28nm,1.1s
CLNS smax smax
comp=N,80nm,1.1s
CLNS smax smax
comp=E,76nm,1.2s
CLNS Chul'man 14.52 347 *e*P **P** **03 59 33.0 -2.2**
CLNS AMB AMB 03 59 35.4
comp=E,28nm,1.1s
CLNS AMB AMB 03 59 35.4
comp=E,30nm,1.1s
CIT Chita 14.78 314 *e*P **P** **03 59 37.4 -0.5**
CIT *e*S **S** **04 02 12.2 +1.0**
CIT pmax pmax
comp=Z,927nm,1.1s
CIT Chita 14.78 314 *e*P **P** **03 59 37.4 -0.5**
BTO Baotou 15.60 269 *e*P **P** **03 59 45.3 -0.9**
BTO pmax pmax
comp=Z,23nm,0.9s
ULN Ulaanbaatar 17.34 295 *e*P **P** **04 00 02.9 +0.7**
comp=Z,504nm,1.1s
ULN Ulaanbaatar 17.34 295 P **P** **04 00 03.4 +1.2**
SNR=231
ULN Ulaanbaatar 17.34 295 P **P** **04 00 02.7 +0.5**
comp=Z,503nm,1.1s,comp=Z,5µm
SONM Songino Array 17.78 295 P **P** **04 00 07.2 +1.0**
SONM S **S** **04 03 04.2 +3.2**
SONM ScP **ScP** **04 06 52.4 -0.8**
SONM Songino Array 17.78 295 P **P** **04 00 07.2 +1.0**
comp=Z,7.4nm,0.3s,baz=101,slow=8.7,SNR=808
SONM S **S** **04 03 04.2 +3.2**
baz=45,slow=23,SNR=1.6
SONM ScP **ScP** **04 06 52.4 -0.8**
comp=Z,0.4nm,0.3s,baz=128,slow=2.0,SNR=8.3
WHN Wuhan 17.90 232⇑*i*P **P** **04 00 07.8 +0.5**
WHN S **S** **04 03 01.8 -1.4**
WHN pmax pmax
comp=Z,270nm,0.9s
OKHT Okhotsk 18.29 21 *e*P **P** **04 00 10.4 0.0**
SKR Severo-Kuril's 19.05 57 *e*P **P** **04 00 13.8 -3.6**
SKR AMB AMB 04 00 14.5
comp=Z,50nm,0.6s
XAN Xi'an 19.14 250 P **P** **04 00 18.8 +0.2**
XAN pmax pmax
comp=Z,17nm,0.8s
YAK Yakutsk 19.26 359 *e*P **P** **04 00 18.4 -0.8**
YAK *e*S **S** **04 03 20.6 -3.5**
YAK pmax pmax
comp=Z,59nm,0.9s
YAK pmax pmax
comp=N,24nm,1.0s
YAK pmax pmax
comp=E,3.0nm,0.8s
YAK pmax pmax
comp=N,5.0nm,0.8s
YAK pmax pmax
comp=Z,16nm,0.8s
YAK pmax pmax
comp=E,9.0nm,0.8s
YAK smax smax
comp=N,377nm,2.2s
YAK smax smax
comp=E,393nm,1.6s
YAK Yakutsk 19.26 359 *e*P **P** **04 00 18.4 -0.8**
IRK Irkutsk 20.08 307 *e*P **P** **04 00 26.7 -0.2**
IRK pmax pmax
comp=Z,203nm,1.1s
IRK Irkutsk 20.08 307 *e*P **P** **04 00 26.7 -0.2**
ZAK Zakamensk 20.22 301 *e*P **P** **04 00 28.9 +0.7**
ZAK *e* 04 10 42.4
ZAK pmax pmax
comp=Z,192nm,0.9s
TLY Talaya 20.30 305 *i*P **P** **04 00 29.1 +0.3**
TLY pmax pmax
comp=Z,246nm,0.9s
PEA0B Petropavlovsk- 20.69 51 *e*P **P** **04 00 32.3 0.0**
PETK Petropavlovsk- 20.69 51 P **P** **04 00 32.1 -0.2**
PETK pmax pmax
comp=Z,7.0nm,0.8s
PETK pmax pmax
comp=N,4.0nm,0.7s
PETK Petropavlovsk- 20.69 51 P **P** **04 00 32.1 -0.2**
PETK ScP **ScP** **04 06 59.0 -0.6**
PETK Petropavlovsk- 20.69 51 P **P** **04 00 32.1 -0.2**
comp=N,7.4nm,0.8s,baz=194,slow=8.8,SNR=9.5
PETK ScP **ScP** **04 06 59.0 -0.6**
comp=N,4.2nm,0.7s,baz=193,slow=6.1,SNR=4.3
PET Petropavlovsk 21.21 52⇓*i*P **P** **04 00 36.4 -0.6**
PET *e*S **S** **04 03 55.0 -0.3**
PET *e* 04 10 45.2
PET pmax pmax
comp=Z,200nm,15.8s
PET pmax pmax
comp=Z,300nm,17.0s
PET pmax pmax
comp=Z,93nm,1.3s
PET Petropavlovsk 21.21 52 *e*P **P** **04 00 36.4 -0.6**
LZH Lanzhou 21.74 261⇓*i*P **P** **04 00 43.4 +1.2**
LZH sP **sP** **04 03 11.0 +0.6**
LZH S **S** **04 04 05.3 +0.7**
LZH PcP **PcP** **04 04 22.5 +3.4**
LZH pmax pmax
comp=Z,69nm,1.3s
LZH pmax pmax
comp=Z,210nm,4.5s
MOY Mondy 21.89 304 *e*P **P** **04 00 43.9 +0.6**
MOY pmax pmax
comp=Z,92nm,2.0s
GTA Gaotai 23.45 272⇓P **P** **04 00 58.4 +1.1**
GTA PcP **PcP** **04 04 21.3 -1.3**
GTA S **S** **04 04 32.8 +1.5**
GTA ScP **ScP** **04 07 07.9 +0.6**
GTA ScS **ScS** **04 10 54.0 -0.8**
GTA pmax pmax
comp=Z,220nm,1.0s
GTA pmax pmax
comp=Z,480nm,5.7s
SEY Seymchan 23.80 25*c i*P **P** **04 01 00.7 +0.8**
SEY Seymchan 23.80 25 *e*P **P** **04 01 00.7 +0.8**
CDJ2 Chengdu 24.50 250⇓P **P** **04 06 06.- -0.1**
CDJ2 sP **sP** **04 03 39.1 -1.1**
CDJ2 PcP **PcP** **04 04 26.8 +1.8**
CDJ2 S **S** **04 04 47.4 -0.5**
CDJ2 ScP **ScP** **04 07 12.3 +2.0**
CDJ2 PcS **PcS** **04 08 05.8 0.0**
CDJ2 ScS **ScS** **04 10 59.4 +0.2**
CDJ2 pmax pmax
comp=Z,90nm,0.8s
CDJ2 pmax pmax
comp=Z,120nm,6.4s
GYA Guiyang 25.50 238⇓*i*P **P** **04 01 14.8 -0.9**
GYA sP **sP** **04 03 49.5 -1.7**
GYA PcP **PcP** **04 04 29.0 +1.5**
GYA S **S** **04 05 03.8 0.0**
GYA ScP **ScP** **04 07 15.0 +1.7**
GYA PcS **PcS** **04 08 09.3 +0.3**
GYA ScS **ScS** **04 11 03.4 -0.3**
GYA pmax pmax
comp=Z,90nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.8s
KMI Kunming 28.94 241 P **P** **04 01 45.8 0.0**
KMI S **S** **04 05 53.9 -3.6**
KMI pmax pmax
comp=Z,63nm,0.8s
QIZ Qiongzhong 29.54 223 P **P** **04 01 50.8 0.0**
QIZ S **S** **04 06 05.8 -0.7**
QIZ pmax pmax
comp=Z,39nm,1.3s
FX1 Attu Island--F 29.82 55 *e*P **P** **04 01 53.8 +1.0**
FX1 Attu Island--F 29.82 55 P **P** **04 01 53.8 +1.0**
comp=Z,65nm,0.4s,baz=251,slow=2.8,SNR=92
WMQ Urumqi 31.05 287 P **P** **04 02 04.0 +0.5**
WMQ PcP **PcP** **04 04 44.0 +2.8**
WMQ ScP **ScP** **04 07 35.0 +4.5**
WMQ ScS **ScS** **04 11 32.0 +2.9**
WMQ pmax pmax
comp=Z,87nm,0.8s
WMQ pmax pmax
comp=Z,300nm,5.0s
BILL Bilibino 31.51 25⇑*i*P **P** **04 02 07.5 +0.5**
BILL *i* 04 02 56.6
BILL *i*S **S** **04 06 34.8 -0.6**
BILL pmax pmax
comp=Z,49nm,1.3s
BILL Bilibino 31.51 25 *e*P **P** **04 02 07.5 +0.5**
ZAA0 Zalesovo Array 31.89 307 *e*P **P** **04 02 10.1 -0.4**
ZAA0 *e*ScP **ScP** **04 07 31.4 -1.7**
ZALV Zalesovo Beam 31.89 307 P **P** **04 02 10.4 -0.1**
ZALV 04 04 43.0
ZALV pmax pmax
comp=Z,83nm,0.9s
ZALV Zalesovo Beam 31.89 307 P **P** **04 02 10.3 -0.1**
ZALV PcP **PcP** **04 04 43.0 -0.2**
ZALV ScP **ScP** **04 07 31.4 -1.7**
ZALV Zalesovo Beam 31.89 307 P **P** **04 02 10.3 -0.1**
comp=Z,83nm,0.9s,baz=88,slow=7.6,SNR=248
ZALV PcP **PcP** **04 04 43.0 -0.2**
comp=Z,8.0nm,1.0s,baz=134,slow=4.3,SNR=3.6
ZALV ScP **ScP** **04 07 31.4 -1.7**
comp=Z,11nm,0.6s,baz=102,slow=3.0,SNR=20
NVS Novosibirsk 32.84 308⇓*i*P **P** **04 02 18.2 -0.3**
NVS *e*S **S** **04 06 52.6 -3.4**
NVS pmax pmax
comp=N,20nm,1.4s
NVS pmax pmax
comp=Z,135nm,1.4s
NVS pmax pmax
comp=E,88nm,1.3s
NVS smax smax
comp=E,32nm,2.2s
NVS Novosibirsk 32.84 308 *e*P **P** **04 02 18.2 -0.3**
AMKA Amchitka 33.63 58 *e*P **P** **04 02 25.6 +0.5**
comp=E,209nm,0.6s
MK31 Makanchi Array 34.14 294*c e*P **P** **04 02 29.7 +0.1**
MK31 pmax pmax
comp=Z,117nm,0.8s
MK31 Makanchi Array 34.14 294 *e*P **P** **04 02 29.7 +0.1**
MK31 *e*PcP **PcP** **04 04 48.5 -1.4**
MKAR Makanchi Array 34.14 294 P **P** **04 02 29.9 +0.4**
MKAR 04 04 49.3
MKAR pmax pmax
comp=Z,79nm,0.8s
MKAR Makanchi Array 34.14 294 *e*P **P** **04 02 30.0 +0.4**
MKAR PcP **PcP** **04 04 49.3 -0.6**
MKAR ScP **ScP** **04 07 40.1 -1.1**
MKAR Makanchi Array 34.14 294 P **P** **04 02 29.9 +0.4**
comp=Z,79nm,0.8s,baz=86,slow=9.8,SNR=715
MKAR PcP **PcP** **04 04 49.3 -0.6**
comp=Z,6.9nm,0.9s,baz=48,slow=2.2,SNR=4.2
MKAR ScP **ScP** **04 07 40.1 -1.1**
comp=Z,8.7nm,1.1s,baz=62,slow=6.0,SNR=5.3
LSA Lhasa 34.16 261 P **P** **04 02 31.3 +0.9**
UBPT Khong Chiam 34.94 226 P **P** **04 02 37.2 +0.7**
comp=Z,99nm,0.9s,comp=Z,817nm
IMP Imphal 35.10 251 *e*P P 04 02 34.0 -3.9
IMP *e*S **S** **04 07 29.0 -2.0**
KURK Kurchatov 35.88 301*d i*P **P** **04 02 43.6 -0.3**
KURK pmax pmax
comp=Z,248nm,1.1s
KURK Kurchatov 35.88 301 *e*P **P** **04 02 43.9 +0.1**
comp=Z,222nm,0.9s
KURK PcP **PcP** **04 04 54.5 -0.4**
KURK Kurchatov 35.88 301 *e*P **P** **04 02 43.6 -0.3**
KURK Kurchatov 35.88 301 P **P** **04 02 44.1 +0.3**
SNR=103
CMMT Chiang Mai 35.93 238 P **P** **04 02 45.3 +0.6**
comp=Z,160nm,0.9s,comp=Z,1µm
CHTO Chiang Mai 35.93 238 *e*P **P** **04 02 45.0 +0.3**
CHTO *e* 04 04 55.2
CHTO *e*S **S** **04 07 43.2 -0.1**
CHTO pmax pmax
comp=Z,117nm,0.8s
CHTO Chiang Mai 35.93 238 *e*P **P** **04 02 45.0 +0.3**
comp=Z,118nm,0.8s
CHTO *e*PcP **PcP** **04 04 55.2 -0.4**
CHTO *e*S **S** **04 07 43.2 -0.1**
CHTO Chiang Mai 35.93 238 *e*P **P** **04 02 45.0 +0.3**
CHTO Chiang Mai 35.93 238 P **P** **04 02 45.6 +0.9**
SNR=42
CHTO Chiang Mai 35.93 238 P **P** **04 02 44.8 +0.1**
comp=Z,177nm,0.9s,comp=Z,1µm
KURBB Kurchatov Arra 35.95 301 P **P** **04 02 44.4 0.0**
comp=Z,149nm,0.8s,baz=83,slow=8.3,SNR=898
KURBB PcP **PcP** **04 04 54.5 -0.6**
comp=Z,3.9nm,1.0s,baz=97,slow=3.9,SNR=4.7
SHL Shillong 36.05 254⇓*i*P **P** **04 02 46.0 +0.2**
comp=Z,29nm,0.8s
SHL *e*S **S** **04 07 43.0 -2.3**
CM31 Chiang Mai Arr 36.20 238 *e*P **P** **04 02 47.4 +0.4**
comp=Z,34nm,0.6s
CMAR Chiang Mai Arr 36.20 238 P **P** **04 02 47.6 +0.8**
CMAR pP **pP** **04 04 24.9 +2.0**
CMAR ScP **ScP** **04 07 48.4 -0.8**
CMAR Chiang Mai Arr 36.20 238 *e*P **P** **04 02 47.7 +0.8**
CMAR Chiang Mai Arr 36.20 238 P **P** **04 02 47.6 +0.8**
comp=Z,111nm,1.1s,baz=32,slow=7.7,SNR=166
CMAR pP **pP** **04 04 24.9 +2.0**
comp=Z,6.3nm,0.9s,baz=33,slow=9.4,SNR=5.1
CMAR ScP **ScP** **04 07 48.4 -0.8**
comp=Z,1.3nm,0.3s,baz=22,slow=4.2,SNR=10.0
TAPN Taplejung 37.98 260 *e*P **P** **04 03 02.6 +0.9**
comp=Z,334nm,0.7s
ODAN Odare 38.49 260 *e*P **P** **04 03 06.4 +0.6**
comp=Z,341nm,1.0s
GAMB Gambell 38.57 37 *e*P **P** **04 03 02.5 -3.1**
comp=Z,77nm,1.3s
GAMB *e*ScP **ScP** **04 07 54.6 -2.8**
CHBT CHBT 38.72 228 P **P** **04 03 09.1 +1.7**
comp=Z,28nm,1.6s,comp=Z,4µm
KKM Kota Kinabalu 38.80 203 *e*P **P** **04 03 08.7 +0.5**
GUN Gumba 38.99 262 *e*P **P** **04 03 10.3 +0.3**
comp=Z,601nm,0.7s
RAMN Ramite 39.02 261 *e*P **P** **04 03 10.5 +0.4**
comp=Z,575nm,0.8s
KKN Kakani 39.49 263 *e*P **P** **04 03 14.3 +0.4**
comp=Z,328nm,0.7s
PKI Pulchoki 39.52 262 *e*P **P** **04 03 14.4 +0.2**
comp=Z,297nm,0.7s
PKIN Phulchoki 39.53 262 *e*P **P** **04 03 14.6 +0.4**
comp=Z,256nm,0.8s
ULHL Ulahol 39.54 288 P **P** **04 03 14.3 +0.3**
SNR=40
DMN Daman 39.73 263 *e*P **P** **04 03 16.1 +0.3**
comp=Z,325nm,0.8s
TKM2 Tokmak 2 39.76 290 *e*P **P** **04 03 16.8 +1.0**
TKM2 pmax pmax
comp=Z,188nm,0.8s
TKM2 Tokmak 2 39.76 290 *e*P **P** **04 03 16.8 +1.0**
comp=Z,188nm,0.8s
TKM2 Tokmak 2 39.76 290 P **P** **04 03 16.8 +1.0**
SNR=234
VOSK Vostochnaya 40.25 306 P **P** **04 03 18.8 -0.5**
VOSK pmax pmax
comp=Z,222nm,0.9s
KZA Kyzart 40.29 289 P **P** **04 03 21.7 +1.4**
SNR=44
DANN Dangsing 40.29 265 *e*P **P** **04 03 21.4 +1.1**
comp=Z,1µm,0.6s
KBK Karagaybulak 40.30 289 P **P** **04 03 20.9 +0.9**
SNR=167
CHMS Chumysh 40.32 290 P **P** **04 03 20.3 +0.3**
SNR=30
TNA Tin City 40.32 34 *e*P **P** **04 03 21.4 +1.8**
comp=Z,76nm,0.9s
TNA *e*PcP **PcP** **04 05 09.9 +1.1**
TNA *e*ScP **ScP** **04 08 04.9 +0.7**
USP Ospenovka 40.40 291 P **P** **04 03 20.7 0.0**
SNR=66
FRU Bishkek 40.47 290⇓*i*P **P** **04 03 23.0 +1.8**
FRU *i* 04 05 15.0
FRU pmax pmax
comp=Z,220nm,1.9s
BVA0 Borovoye Array 40.55 306 *i*P **P** **04 03 21.3 -0.4**
BVA0 pmax pmax
comp=Z,11nm,1.1s
BVAR Borovoye Array 40.55 306 P **P** **04 03 21.6 -0.1**
BVAR 04 05 09.7
BVAR S **S** **04 08 48.3 -2.1**
BVAR pmax pmax
comp=Z,26nm,0.7s
BVAR pmax pmax
comp=Z,13nm,0.7s
BVAR pmax pmax
comp=N,3.0nm,0.6s
BVAR smax smax
comp=N,1.0nm,0.7s
BVAR Borovoye Array 40.55 306 P **P** **04 03 21.6 -0.1**
BVAR PcP **PcP** **04 05 09.7 -0.1**
BVAR ScP **ScP** **04 08 03.3 -2.1**
BVAR S **S** **04 08 48.3 -2.1**
BVAR PKiKP **PKiKP** **04 12 18.7 +1.9**
BVAR Borovoye Array 40.55 306 P **P** **04 03 21.6 -0.1**
comp=N,26nm,0.7s,baz=81,slow=9.2,SNR=165
BVAR PcP **PcP** **04 05 09.7 -0.1**
comp=N,13nm,0.7s,baz=80,slow=1.6,SNR=9.4
BVAR ScP **ScP** **04 08 03.3 -2.1**
comp=N,2.8nm,0.6s,baz=67,slow=3.9,SNR=4.3
BVAR S **S** **04 08 48.3 -2.1**
comp=N,1.3nm,0.7s,baz=74,slow=11,SNR=3.3
BVAR PKiKP **PKiKP** **04 12 18.7 +1.9**
comp=N,0.5nm,0.5s,baz=98,slow=11,SNR=4.2
BRVK Borovoye 40.61 306 *e*P **P** **04 03 22.2 +0.1**
BRVK *e* 04 05 10.2
BRVK *e*S **S** **04 08 48.9 -2.2**
BRVK pmax pmax
comp=Z,71nm,1.0s
BRVK Borovoye 40.61 306 *e*P **P** **04 03 22.1 +0.1**
comp=Z,71nm,1.0s
BRVK *e*PcP **PcP** **04 05 10.2 +0.3**
BRVK *e*ScP **ScP** **04 08 05.1 -0.5**
BRVK *e*S **S** **04 08 48.9 -2.2**

BRVK Borovoye 40.61 306 eP P 04 03 22.2 +0.1
BRVK Borovoye 40.61 306 P P 04 03 22.4 +0.3
SNR=37
AAK Ala-Archa 40.62 290 ceP P 04 03 22.9 +0.3
AAK pmax pmax
comp=Z,297nm,1.2s
AAK Ala-Archa 40.62 290 eP P 04 03 22.9 +0.3
comp=Z,18nm,0.8s
AAK PP PP 04 05 15.7 +3.9
AAK eScP ScP 04 08 05.1 -1.0
AAK Ala-Archa 40.62 290 eP P 04 03 22.9 +0.3
AAK Ala-Archa 40.62 290 P P 04 03 23.2 +0.6
SNR=37
AAK Ala-Archa 40.62 290 P P 04 03 23.0 +0.3
comp=Z,64nm,0.7s,baz=105,slow=5.3,SNR=226
AAK PP PP 04 05 15.7 +3.9
comp=Z,11nm,1.1s,baz=36,slow=13,SNR=5.5
KSH Kashi 40.72 285 P P 04 03 27.3 +3.9
KSH pP pP 04 05 05.6 +3.3
KSH PP PP 04 05 13.9 +1.1
KSH PcP PcP 04 05 16.4 +5.6
KSH sP sP 04 06 04.6 -1.7
KSH ScP ScP 04 08 13.4 +6.9
KSH S S 04 09 00.8 +7.3
KSH PcS PcS 04 09 07.4 +4.6
KSH sS sS 04 11 54.3 -0.1
KSH SS SS 04 12 19.1 +1.2
KSH ScS ScS 04 12 30.0 +6.2
KSH pmax pmax
comp=Z,15nm,0.8s
KOLN Koldanda 40.73 264 eP P 04 03 24.4 +0.7
comp=Z,565nm,0.8s
UCH Uchtor 40.75 289 P P 04 03 24.8 +0.8
SNR=12
PYUN Piuthan 41.00 265 eP P 04 03 26.6 +0.8
comp=Z,2μm,1.1s
EKS2 Erkin-Say 41.11 290 eP P 04 03 26.6 +0.2
EKS2 pmax pmax
comp=Z,65nm,0.8s
EKS2 Erkin-Say 41.11 290 eP P 04 03 26.6 +0.2
comp=Z,66nm,0.8s
EKS2 eScP ScP 04 08 07.5 -0.5
EKS2 Erkin-Say 41.11 290 P P 04 03 26.7 +0.4
SNR=85
AML Almayashu 41.35 289 P P 04 03 29.3 +0.7
SNR=108
ZRNK Zerenda 41.38 306 P P 04 03 28.3 0.0
ZRNK pmax pmax
comp=Z,122nm,0.5s
KK31 Karatay Array 43.20 292 ceP P 04 03 42.3 -0.3
KK31 pmax pmax
comp=Z,86nm,0.8s
KKAR Karatay Array 43.20 292 eP P 04 03 42.7 +0.1
KKAR pmax pmax
comp=Z,128nm,1.0s
KKAR Karatay Array 43.20 292 eP P 04 03 42.7 +0.1
comp=Z,128nm,1.0s
DDI Dehra Dun 43.43 271 ex x 04 03 42.0
SBUM Sibu 43.45 207 P P 04 03 46.3 +1.5
SDNR Sundarnagar 43.62 273 eP P 04 03 46.0 -0.1
SMLA Simla 43.66 273 eP P 04 03 46.7 +0.4
SMLA iP P 04 03 46.7 +0.4
SMLA AMb AMB 04 03 47.5
comp=Z,2μm,0.5s
SMLA iS S 04 09 34.5 -0.9
NDI New Delhi 44.92 270 eP P 04 03 55.0 -1.1
KSM Kuching 45.02 209 eP P 04 03 57.8 +0.8
comp=Z,23nm,1.2s
KSM Kuching 45.02 209 P P 04 03 57.9 +0.9
comp=Z,16nm,1.2s
KULM Kulim 45.87 224 eP P 04 04 04.5 +1.1
comp=Z,71nm,0.9s
KULM epP pP 04 05 47.8 +1.9
KULM eScP ScP 04 08 27.7 0.0
KULM Kulim 45.87 224 P P 04 04 05.1 +1.6
KULM Kulim 45.87 224 P P 04 04 06.0 +2.6
comp=Z,84nm,1.0s,comp=Z,902nm
JBP Jabalpur 46.08 261 ⇓iP P 04 04 05.2 +0.2
JBP iX x 04 04 05.9
comp=Z,175nm,0.9s
JBP eX x 04 05 48.3
SVW2 Sparrevohn 46.20 40 eP P 04 04 07.2 +1.8
comp=Z,40nm,1.2s
IPM Ipoh 46.37 223 eP P 04 04 06.8 -0.4
comp=Z,47nm,1.1s
IPM epP pP 04 05 51.0 +0.9
IPM eScP ScP 04 08 28.2 -1.6
IPM Ipoh 46.37 223 P P 04 04 07.8 +0.5
IPM Ipoh 46.37 223 P P 04 04 07.5 +0.2
comp=Z,47nm,1.1s
ARU Arti 46.49 313 diP P 04 04 07.2 -0.4
ARU e 04 05 29.0
ARU *PP pP 04 05 51.5 +1.2
ARU e 04 06 03.8
ARU S S 04 10 14.2 -0.2
ARU SS SS 04 13 49.2 -0.2
ARU pmax pmax
comp=Z,147nm,1.2s
ARU Arti 46.49 313 eP P 04 04 07.2 -0.4
SOKR Solikamsk 46.63 318 ciP P 04 04 08.3 -0.2
SOKR pmax pmax
comp=Z,70nm,1.1s
COLD Coldfoot 47.32 31 eP P 04 04 14.7 +1.1
comp=Z,59nm,1.1s
MYKOM Kota Tinggi 47.37 218 P P 04 04 17.1 +2.3
comp=Z,26nm,1.4s
PPLA Purkeypile 47.38 37 eP P 04 04 15.9 +1.6
comp=Z,259nm,1.8s
KGM Kluang 47.41 219 P P 04 04 16.7 +1.6
RSO Redoubt South 47.70 41 eP P 04 04 18.1 +1.3
RSO eScP ScP 04 08 36.8 +1.8
SPU Mount Spurr 47.85 40 eP P 04 04 17.8 +0.1
SPU epP pP 04 06 03.6 +2.2
SPU eScP ScP 04 08 35.0 -0.4
KBL Kabul 47.88 282 eP P 04 04 18.0 -0.6
KBL pmax pmax
comp=Z,116nm,1.0s
KBL Kabul 47.88 282 eP P 04 04 18.0 -0.6
comp=Z,116nm,1.0s
AB31 Akbulak array 47.89 304 ceP P 04 04 17.9 -0.3
AB31 pmax pmax
comp=Z,34nm,0.2s
ABKAR Akbulak array 47.89 304 eP P 04 04 18.1 -0.1
ABKAR eS S 04 10 32.4 -1.6
TRF Thorofare Moun 48.09 36 eP P 04 04 19.9 +0.2
comp=Z,20nm,0.8s
TRF eScP ScP 04 08 36.4 -0.2
OHAK Old Harbor 48.32 45 eP P 04 04 21.7 +0.5
comp=Z,183nm,1.3s
KDAK Kodiak Island 48.52 44 eP P 04 04 23.1 +0.4
comp=Z,96nm,1.0s
KDAK ScP ScP 04 08 38.1 -0.1
KDAK Kodiak Island 48.52 44 P P 04 04 23.1 +0.4
comp=Z,56nm,0.5s,baz=304,slow=3.5,SNR=167
KDAK ScP ScP 04 08 38.1 -0.1
comp=Z,14nm,1.0s,baz=216,slow=2.2,SNR=4.0
MCK McKinley 48.61 36 eP P 04 04 23.9 +0.6
MCK pmax pmax
comp=Z,82nm,1.1s
MCK McKinley 48.61 36 eP P 04 04 23.9 +0.6
comp=Z,82nm,1.1s
MCK eScP ScP 04 08 38.3 -0.3
MCK McKinley 48.61 36 eP P 04 04 23.9 +0.6
KAPI Kappang 48.63 195 P P 04 04 23.1 -1.0
KAPI Kappang 48.63 195 P P 04 04 23.1 -1.0
comp=Z,3.2nm,0.4s,baz=132,slow=15,SNR=4.4
AKTO Aktyubinsk 48.65 306 P P 04 04 23.3 -0.5
AKTO S S 04 10 43.4 -0.9
AKTO pmax pmax
comp=Z,45nm,0.9s
AKTO smax smax
comp=N,1.0nm,0.5s
AKTO Aktyubinsk 48.65 306 P P 04 04 23.3 -0.5
AKTO S S 04 10 43.4 -0.9
AKTO Aktyubinsk 48.65 306 P P 04 04 23.3 -0.5
comp=N,45nm,0.9s,baz=69,slow=13,SNR=55
AKTO S S 04 10 43.4 -0.9
comp=N,1.2nm,0.5s,baz=297,slow=2.5,SNR=6.6
COLA College 48.77 34 eP P 04 04 25.9 +1.5
COLA pmax pmax
comp=Z,163nm,0.8s
COLA College 48.77 34 eP P 04 04 25.9 +1.5
comp=Z,163nm,0.8s
COLA College 48.77 34 eP P 04 04 25.9 +1.5
PSI Prapat 48.88 224 P P 04 04 26.4 +0.3
PSI pP pP 04 06 11.5 +1.0
PSI ScP ScP 04 08 38.5 -2.1
PSI Prapat 48.88 224 P P 04 04 26.4 +0.3
comp=Z,21nm,0.8s,baz=360,slow=5.8,SNR=18
PSI pP pP 04 06 11.5 +1.0
comp=Z,6.7nm,0.6s,baz=360,slow=5.8,SNR=8.0
PSI ScP ScP 04 08 38.5 -2.1
comp=Z,13nm,0.9s,baz=349,slow=1.8,SNR=8.2
PMR Palmer 49.10 39 eP P 04 04 27.2 +0.3
PMR e*PP pP 04 06 12.1 +0.8
PMR pmax pmax
comp=Z,101nm,1.1s
PMR Palmer 49.10 39 eP P 04 04 27.2 +0.3
comp=Z,101nm,1.1s
PMR epP pP 04 06 12.1 +0.8
PMR eScP ScP 04 08 40.2 -0.4
ILAR Eielson Array 49.20 34 P P 04 04 27.9 +0.2
ILAR PP PP 04 06 30.4 +1.6
ILAR Eielson Array 49.20 34 eP P 04 04 27.9 +0.2
ILAR Eielson Array 49.20 34 P P 04 04 27.9 +0.2
comp=Z,53nm,0.6s,baz=290,slow=8.0,SNR=421
ILAR PP PP 04 06 30.4 +1.6
comp=Z,4.7nm,1.1s,baz=276,slow=8.4,SNR=5.9
SEW Seward 49.38 41 eP P 04 04 28.4 -0.6
comp=Z,109nm,1.0s
SML Sawmill 49.40 38 eP P 04 04 29.9 +0.7
SML e 04 06 32.4
SML pmax pmax
comp=Z,22nm,0.9s
SML Sawmill 49.40 38 eP P 04 04 29.9 +0.7
comp=Z,22nm,0.9s
SML ePP PP 04 06 32.4 +1.6
SML eScP ScP 04 08 42.2 +0.2
PAX Paxson 50.32 36 eP P 04 04 36.3 +0.3
PAX e 04 05 45.1
PAX pmax pmax
comp=Z,26nm,0.9s
PAX Paxson 50.32 36 eP P 04 04 36.3 +0.3
comp=Z,26nm,0.9s
PAX ePcP PcP 04 05 45.1 +0.8
PAX eScP ScP 04 08 46.2 +0.1
DOT Dot Lake 50.71 35 eP P 04 04 38.9 +0.2
comp=Z,161nm,0.8s
DOT eScP ScP 04 08 47.0 -0.6
HYB Hyderabad 50.76 257 iP P 04 04 38.0 -1.8
DIV Divide 50.78 38 eP P 04 04 40.4 +1.1
comp=Z,63nm,0.9s
MENT Mentasta 51.09 36 eP P 04 04 42.4 +0.9
BMRM Bremner River 51.37 38 eP P 04 04 44.8 +1.2
comp=Z,88nm,1.0s
BMRM ePcP PcP 04 05 49.2 +1.0
BMRM eScP ScP 04 08 51.3 +0.8
EGAK Eagle 51.53 33 eP P 04 04 45.2 +0.6
comp=Z,76nm,0.8s
INK Inuvik 53.05 28 P P 04 04 56.2 +0.8
INK ScP ScP 04 08 57.2 -0.5
INK S S 04 11 44.0 +1.2
INK Inuvik 53.05 28 eP P 04 04 56.2 +0.8
INK Inuvik 53.05 28 P P 04 04 56.2 +0.8
comp=Z,31nm,0.5s,baz=311,slow=7.6,SNR=297
INK ScP ScP 04 08 57.2 -0.5
comp=Z,6.1nm,0.9s,baz=291,slow=7.0,SNR=7.5
INK S S 04 11 44.0 +1.2
comp=Z,0.9nm,0.9s,baz=86,slow=29,SNR=5.5
SPITS Spitsbergen Ar 53.12 346 P P 04 04 56.1 +0.3
SPITS ScP ScP 04 08 57.5 -0.4
SPITS Spitsbergen Ar 53.12 346 P P 04 04 56.1 +0.3
comp=Z,7.4nm,0.7s,baz=81,slow=12,SNR=16
SPITS ScP ScP 04 08 57.5 -0.4
comp=Z,12nm,0.9s,baz=106,slow=31,SNR=5.4
KBS Kingsbay 53.42 348 ciP P 04 04 58.6 +0.8
KBS pmax pmax
comp=Z,42nm,2.5s
KBS Kingsbay 53.42 348 eP P 04 04 58.4 +0.6
comp=Z,18nm,0.9s
KBS Kingsbay 53.42 348 eP P 04 04 58.6 +0.8
POO Poona 53.44 261 ⇓iP P 04 04 57.0 -1.9
comp=Z,27nm,1.0s
TMCR Tamitsa 53.58 327 eP P 04 04 58.1 -1.0
TMCR e 04 05 55.3
TMCR pmax pmax
comp=Z,62nm,1.2s
PMG Port Moresby 54.10 160 eP P 04 05 03.9 +0.3
comp=Z,23nm,1.0s
IAKL Akhelmad 54.15 289 eP P 04 05 04.6 +0.5
PNL Peninsula 54.26 39 eP P 04 05 05.4 +1.3
comp=Z,99nm,0.8s
ISHV Shirvan 54.41 291 eP P 04 05 06.5 +0.7
ISFR Sfrayin 54.45 290 eP P 04 05 06.9 +0.8
KEV Kevo 54.95 336 eP P 04 05 08.6 -0.1
KEV Kevo 54.95 336 eP P 04 05 08.6 -0.1
ARCES ARCESS Array B 55.52 336 P P 04 05 12.4 -0.3
ARCES ARCESS Array B 55.52 336 eP P 04 05 12.4 -0.3
ARCES ARCESS Array B 55.52 336 P P 04 05 12.4 -0.3
comp=Z,15nm,0.4s,baz=60,slow=10.0,SNR=126
ARE0 ARCESS Array S 55.52 336 eP P 04 05 11.8 -0.9
ITEG Tejag 56.09 285 eP P 04 05 17.7 +0.2
SKAG Skagway 56.21 38 eP P 04 05 19.1 +1.5
comp=Z,78nm,1.3s
PALK Pallekele 56.33 246 eP P 04 05 19.2 0.0
comp=Z,46nm,1.0s
KTK1 Kautokeino 56.48 336 eP P 04 05 08.9 -10
JOF Joensuu 56.83 327 eP P 04 05 21.7 0.0
TRO Tromso 57.40 337 eP P 04 05 22.8 -2.7
MOS Moscow 57.58 318 eP P 04 05 25.4 -1.5
MOS e 04 06 09.3
MOS iS S 04 12 38.7 -3.0
MOS pmax pmax
comp=Z,200nm,1.0s
MOS pmax pmax
comp=Z,113nm,0.8s
MOS smax smax
comp=N,100nm,1.5s
MOS smax smax
comp=E,300nm,1.7s
COEN Coen 57.64 166 eP P 04 05 28.2 +0.3
VRHR Novokhopersk 57.78 312 eP P 04 05 26.5 -2.0
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=E,30nm,0.6s
VRHR pmax pmax
comp=Z,70nm,0.6s
IKIA Kiasar 57.86 291 eP P 04 05 29.9 +0.3
OBN Obninsk 58.41 318 ⇓iP P 04 05 31.6 -1.0
OBN e 04 07 49.2
OBN iS S 04 12 49.8 -2.5
OBN pmax pmax
comp=Z,63nm,1.5s
OBN Obninsk 58.41 318 eP P 04 05 31.6 -1.0
PUL Pulkovo 58.87 324 ciP P 04 05 35.6 0.0
PUL pmax pmax
comp=Z,114nm,0.8s
PUL Pulkovo 58.87 324 eP P 04 05 35.6 0.0
RES Resolute Bay 58.94 13 eP P 04 05 35.7 -0.1
comp=Z,40nm,0.7s
RES ePcP PcP 04 06 17.7 +0.3
IBAF Bafgh 59.06 286 eP P 04 05 37.3 -0.3
VSR Storozhevoye 59.06 313 eP P 04 05 35.9 -1.1
VSR pmax pmax
comp=N,30nm,0.9s
VSR pmax pmax
comp=E,40nm,0.9s
VSR pmax pmax
comp=Z,80nm,0.9s
DLBC Dease Lake 59.10 37 eP P 04 05 39.2 +1.9
VORD Divnogorie 59.12 313 eP P 04 05 36.4 -1.0
VORD pmax pmax
comp=Z,60nm,1.1s
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,50nm,0.9s
DAG Danmarks Havn 59.12 352 iP P 04 05 36.6 -0.4
DAG pmax pmax
comp=Z,9.0nm,0.8s
DAG Danmarks Havn 59.12 352 iP P 04 05 36.6 -0.4
comp=Z,12nm,0.8s
KAF Kangasniemi 59.23 328 eP P 04 05 37.3 -0.6
STEI Steigen 59.51 337 eP P 04 05 36.0 -3.7
FINES FINESS Array B 59.69 327 P P 04 05 40.4 -0.6
FINES PcP PcP 04 06 19.8 -1.0
FINES FINESS Array B 59.69 327 P P 04 05 40.4 -0.6
comp=Z,35nm,0.3s,baz=70,slow=6.3,SNR=526
FINES PcP PcP 04 06 19.8 -1.0
comp=Z,3.8nm,0.4s,baz=52,slow=5.4,SNR=3.5
IMEH Mehriz 59.84 286 eP P 04 05 42.1 -0.8
DGRG David-gareji 60.55 301 P P 04 05 46.4 -0.8
IZEF Zefreh 60.60 289 eP P 04 05 47.7 -0.2
ZEI Tsey 60.76 303 eP P 04 05 47.2 -1.6
ZEI pmax pmax
comp=Z,29nm,1.3s
TBLG Delisi 60.80 301 eP P 04 05 48.1 -0.7
TBLG Delisi 60.80 301 P P 04 05 48.1 -0.7
KBZ Khabaz 60.86 304 P P 04 05 48.7 -0.4
KBZ pmax pmax
comp=Z,11nm,0.6s
KBZ Khabaz 60.86 304 P P 04 05 48.6 -0.4
KBZ Khabaz 60.86 304 P P 04 05 48.6 -0.4
comp=Z,10nm,0.6s,baz=46,slow=4.6,SNR=29
KIV Kislovodsk 60.87 304 ⇓iP P 04 05 49.0 -0.3
KIV e 04 08 10.3
KIV iS S 04 13 22.7 -0.9
KIV pmax pmax
comp=Z,166nm,1.2s
KIV Kislovodsk 60.87 304 eP P 04 05 49.0 -0.3
IKLH Kolahrood 60.88 290 eP P 04 05 49.7 -0.1
MOR8 Moi Rana 60.89 335 eP P 04 05 46.7 -2.2
MOR8 AMB AMB 04 05 48.6
comp=Z,82nm,0.9s
GOR Gori 61.05 302 P P 04 05 50.1 -0.4
ONI Oni 61.13 303 P P 04 05 50.9 -0.1
STOK Stokkvaagen 61.21 336 eP P 04 05 50.1 -0.8
GNI Garni 61.66 300 eP P 04 05 54.8 +0.2
comp=Z,104nm,1.4s
GNI Garni 61.66 300 P P 04 05 55.0 +0.4
comp=Z,8.7nm,0.5s,baz=329,slow=2.9,SNR=13
IPIR Pirpir 61.72 290 eP P 04 05 55.7 +0.4
AKH Akhalkalaki 61.76 301 P P 04 05 55.1 -0.2
WBK Wadi Bani Khal 61.83 276 P P 04 05 57.0 +1.2
SNR=24
SMDO Samad 62.23 277 P P 04 05 59.6 +1.1
SNR=22
HOQ Hoqain 62.46 277 P P 04 06 00.1 +0.3
SNR=23
WRAB Tennant Creek 62.52 176 eP P 04 05 59.2 -0.9
WRAB pmax pmax
comp=Z,4.0nm,0.7s
WRAB Tennant Creek 62.52 176 eP P 04 05 59.2 -0.9
comp=Z,3.7nm,0.7s
WRA Warramunga Arr 62.53 176 P P 04 05 59.8 -0.4
WRA pP pP 04 07 53.4 +0.8
WRA ScP ScP 04 09 38.8 -1.4
WRA Warramunga Arr 62.53 176 P P 04 05 59.8 -0.4
comp=Z,3.6nm,0.5s,baz=353,slow=7.1,SNR=26
WRA pP pP 04 07 53.4 +0.8
comp=Z,0.9nm,0.7s,baz=352,slow=6.9,SNR=3.2
WRA ScP ScP 04 09 38.8 -1.4
comp=Z,4.3nm,0.9s,baz=350,slow=4.8,SNR=10
HATD Hatta, Dubai 62.57 279 P P 04 06 01.0 +0.5
SNR=14
JMDO Jabal Madar 62.61 276 P P 04 06 01.4 +0.5
SNR=23
ASHO Ashiyiah 62.70 279 P P 04 06 02.0 +0.5
SNR=16
YKW3 Yellowknife Ar 62.76 28 eP P 04 06 01.3 +0.3
comp=Z,0.9nm,0.9s
YKA Yellowknife Ar 62.81 28 P P 04 06 01.7 +0.3
YKA ScP ScP 04 09 40.5 -0.5
YKA Yellowknife Ar 62.81 28 eP P 04 06 01.7 +0.3
YKA Yellowknife Ar 62.81 28 P P 04 06 01.7 +0.3
comp=Z,82nm,1.0s,baz=313,slow=6.3,SNR=824
YKA ScP ScP 04 09 40.4 -0.5
comp=Z,1.8nm,1.0s,baz=322,slow=5.0,SNR=4.1
SOC Sochi 62.87 305 diP P 04 06 01.4 -0.7
SOC eS S 04 13 44.3 -3.6
SOC e 04 14 58.4
SOC eSS SS 04 18 07.6 +1.3
SOC eSSS SSS 04 21 12.1
SOC pmax pmax
comp=Z,38nm,0.6s
SOC Sochi 62.87 305 eP P 04 06 01.4 -0.7
BSY Bisya 63.05 277 P P 04 06 04.3 +0.7
SNR=38
ARQ Araqi 63.18 278 P P 04 06 05.0 +0.5
SNR=18
NACGM Naroch 63.22 321 e P 04 06 01.0 -3.1
ASUD Al Ashush, Dub 63.27 280 P P 04 06 06.0 +1.0
SNR=6.1
ANN Anapa 63.53 307 diP P 04 06 05.4 -0.9
ANN e*PP pP 04 07 57.1 -1.9
ANN e 04 08 44.3
ANN eS S 04 13 53.4 -2.5
ANN pmax pmax
comp=Z,135nm,1.3s
IDHR Dehrash 63.65 294 eP P 04 06 06.6 -0.9
CTAO Charters Tower 64.21 164 eP P 04 06 10.6 -0.3
CTAO pmax pmax
comp=Z,12nm,0.8s
CTAO Charters Tower 64.21 164 eP P 04 06 10.6 -0.3
comp=Z,12nm,0.8s
AKASG Malin Array Be 64.56 316 P P 04 06 11.8 -1.0
AKASG pmax pmax
comp=Z,54nm,0.7s
AKASG Malin Array Be 64.56 316 P P 04 06 11.8 -1.0
AKASG Malin Array Be 64.56 316 P P 04 06 11.8 -1.0
comp=Z,54nm,0.7s,baz=50,slow=6.5,SNR=124
AK01 Malin Array Si 64.57 316 eP P 04 06 11.6 -1.3
KIEV Kiev 64.57 316 eP P 04 06 11.7 -1.1
KIEV pmax pmax
comp=Z,56nm,0.7s
KIEV Kiev 64.57 316 eP P 04 06 11.7 -1.1
comp=Z,56nm,0.7s
AK02 Malin Array Si 64.60 316 eP P 04 06 11.8 -1.1
SUMG Summit 64.66 356 iP P 04 06 14.1 +0.6
SUMG pmax pmax
comp=Z,11nm,0.7s
SUMG Summit 64.66 356 eP P 04 06 14.1 +0.6
comp=Z,14nm,0.7s
SUMG Summit 64.66 356 iP P 04 06 14.1 +0.6
comp=Z,11nm,0.7s
POHA Pohakuloa 65.09 86 eP P 04 06 18.2 +1.3
comp=Z,92nm,1.0s
HFS Hagfors 65.22 331 P P 04 06 15.8 -0.9
HFS Hagfors 65.22 331 P P 04 06 15.8 -0.9
comp=Z,33nm,0.5s,baz=61,slow=4.2,SNR=276
GRSN GIRESUNGRSN 65.27 304 iP P 04 06 16.0 -1.5
SCO Scoresbysund 65.28 350 iP P 04 06 17.2 +0.3
SCO pmax pmax
comp=Z,6.0nm,0.9s
SCO Scoresbysund 65.28 350 iP P 04 06 17.2 +0.3
comp=Z,5.8nm,0.9s
SIM Simferopol' 65.36 309 ceP P 04 06 17.3 -0.6
SIM pmax pmax
comp=Z,55nm,0.6s
SUW Suwalki 65.42 322 eP P 04 06 17.4 -0.7
SUW pmax pmax
comp=Z,48nm,1.1s
SUW Suwalki 65.42 322 eP P 04 06 17.4 -0.7
comp=Z,48nm,1.1s
NB2 NORSAR Subarra 65.46 332 P P 04 06 16.9 -1.4
baz=42,slow=6.5
NB2 NORSAR Subarra 65.46 332 P P 04 06 16.9 -1.4
comp=Z,31nm,0.8s,baz=42,slow=6.5
NOA NORSAR Array B 65.46 332 P P 04 06 17.5 -0.8
NOA NORSAR Array B 65.46 332 P P 04 06 17.5 -0.8
comp=Z,22nm,0.7s,baz=42,slow=6.1,SNR=89
MOL Molde 65.55 335 eP P 04 06 17.7 -1.1
MOL AMB AMB 04 06 22.4
comp=Z,90nm,1.8s
NC602 NORSAR Array S 65.56 332 eP P 04 06 16.9 -2.0
NAO01 NORSAR Array S 65.71 332 eP P 04 06 18.6 -1.3
comp=Z,2.0nm,0.3s
UMR Umm Al-Rimmam 65.75 288 eP P 04 06 19.5 -1.1
UMR AMb AMB 04 06 20.4
comp=Z,132nm,1.0s
BHD Baghdad 65.83 294 ex P 04 06 15.2 -5.8
BHD ex PcP 04 06 47.0 +0.4
BHD ex S 04 14 17.7 -6.1
MIB Mutribah 65.87 289 eP P 04 06 20.2 -1.1
MIB AMb AMB 04 06 21.5
comp=Z,229nm,1.1s
KBD Kabd 65.99 288 eP P 04 06 21.2 -0.9
KBD AMb AMB 04 06 22.6
comp=Z,96nm,0.9s
QRN Al-Qurain 66.09 288 eP P 04 06 21.7 -1.0
QRN AMb AMB 04 06 23.1
comp=Z,188nm,1.3s
KEMA Kemaliye 66.11 302 iP P 04 06 22.8 0.0
AS31 Alice Springs 66.21 177 eP P 04 06 23.9 +0.5

ASAR Alice Springs 66.22 177 P P 04 06 23.7 +0.3
ASAR pP pP 04 08 18.6 +1.0
ASAR Alice Springs 66.22 177 P P 04 06 23.7 +0.3
comp=Z,2.1nm,0.7s,baz=358,slow=8.3,SNR=38
ASAR pP pP 04 08 18.6 +1.0
comp=Z,2.1nm,1.0s,baz=4.3,slow=4.6,SNR=2.2
RDF Al-Radifah 66.24 288 *eP* **P 04 06 23.0 -0.7**
RDF AMb AMB 04 06 24.4
comp=Z,208nm,1.1s
NAY Al-Naaiem 66.27 288 *eP* **P 04 06 22.5 -1.3**
NAY AMb AMB 04 06 23.8
comp=Z,60nm,0.7s
MALT Malatya 66.72 301 *eP* **P 04 06 26.4 -0.2**
MALT pmax pmax
comp=Z,26nm,1.1s
MALT Malatya 66.72 301 *eP* **P 04 06 26.4 -0.2**
comp=Z,26nm,1.1s
MALT Malatya 66.72 301⇓ *iP* **P 04 06 26.7 +0.1**
KONO Kongsberg 67.02 332 *eP* **P 04 06 26.8 -1.1**
KONO AMB AMB 04 06 33.4
comp=Z,16nm,1.6s
KIS Kishinev 67.04 313 *eP* **P 04 06 26.0 -2.3**
KIS Kishinev 67.04 313 *eP* **P 04 06 26.0 -2.3**
CTKT Corum 67.57 305 *iP* **P 04 06 31.7 -0.2**
LVV L'vov 67.71 318 *eP* **P 04 06 31.5 -0.8**
ODD1 Odda 67.84 333 *eP* **P 04 06 32.9 -0.1**
ODD1 AMB AMB 04 06 33.7
comp=Z,32nm,0.9s
GZT Gaziantep 67.84 301 *iP* **P 04 06 33.5 0.0**
BALT Daday 67.85 306 *iP* **P 04 06 33.9 +0.4**
RUND Rundenannen 67.87 334 *eP* **P 04 06 31.9 -1.1**
RUND AMB AMB 04 06 40.0
comp=Z,80nm,2.3s
ASK Askoy 67.87 334 *eP* **P 04 06 31.4 -1.6**
ASK AMB AMB 04 06 38.7
comp=Z,126nm,1.6s
ASK AMB AMB 04 06 38.7
comp=Z,126nm,1.6s
BER Bergen 67.90 334 *eP* **P 04 06 32.2 -1.0**
BER AMB AMB 04 06 40.3
comp=Z,42nm,1.3s
ILGA Ilgaz 67.95 306 *iP* **P 04 06 34.5 +0.3**
EGD Espegrend 68.02 334 *eP* **P 04 06 31.9 -2.0**
EGD AMB AMB 04 06 46.8
comp=Z,91nm,2.0s
TLCR 68.18 312⇓ *iP* **P 04 06 34.6 -0.6**
BSD Bornholm Skovb 68.26 326⇓ *iP* **P 04 06 34.6 -0.9**
BSD pmax pmax
comp=Z,37nm,0.9s
CDAG Cicekdag 68.44 304 *iP* **P 04 06 34.5 -2.5**
KWP Kalwaria Pacla 68.49 318 *eP* **P 04 06 36.9 -0.1**
KWP pmax pmax
comp=Z,86nm,1.0s
KWP Kalwaria Pacla 68.49 318 *eP* **P 04 06 36.9 -0.1**
comp=Z,86nm,1.0s
KWP Kalwaria Pacla 68.49 318⇓ *iP* **P 04 06 37.0 -0.1**
RBK Rabkut 68.50 274 P **P 04 06 37.2 -0.5**
SNR=5.7
TESR 68.51 314⇑ *iP* **P 04 06 36.8 -0.4**
BUR08 Bucovina Ar. S 68.53 316 *eP* **P 04 06 37.0 -0.5**
CFR Carcaliu 68.56 312 P **P 04 06 36.8 -0.7**
CFR Carcaliu 68.56 312⇑ *iP* **P 04 06 36.6 -0.9**
AVNT Avonos 68.66 303 *iP* **P 04 06 37.9 -0.6**
NLWA Neilton Lookou 68.67 45 *eP* **P 04 06 40.0 +1.8**
comp=Z,100nm,1.3s
BR131 Keskin Array S 68.82 305 *eP* **P 04 06 38.6 -0.8**
comp=Z,6.2nm,0.6s
BR131 ePP PP 04 09 13.5 -7.5
BRTR Keskin Array B 68.82 305 P **P 04 06 38.7 -0.7**
BRTR pP **pP 04 08 34.6 0.0**
BRTR PP PP 04 09 13.8 -7.2
BRTR Keskin Array B 68.82 305 P **P 04 06 38.7 -0.7**
comp=Z,9.0nm,0.7s,baz=63,slow=4.1,SNR=70
BRTR pP **pP 04 08 34.6 0.0**
comp=Z,3.4nm,1.0s,baz=76,slow=5.2,SNR=4.6
BRTR PP PP 04 09 13.8 -7.2
comp=Z,2.1nm,0.8s,baz=72,slow=12,SNR=4.3
SNART Snartemo 68.83 332 *eP* **P 04 06 36.0 -2.9**
SNART AMB AMB 04 06 40.1
comp=Z,35nm,1.3s
COP Copenhagen 68.85 328 *eP* **P 04 06 38.4 -0.6**
COP pmax pmax
comp=Z,22nm,0.9s
VRI Vrincioaia 68.88 313 P **P 04 06 39.2 -0.3**
VRI Vrincioaia 68.88 313⇑ *iP* **P 04 06 39.6 +0.1**
CMW Cultus Mountai 68.89 43 P **P 04 06 41.0 +1.4**
PLOR Plostina 68.93 313 P **P 04 06 39.6 -0.3**
PLOR Plostina 68.93 313⇑ *iP* **P 04 06 39.5 -0.3**
JCW Jim Creek 69.13 43 P **P 04 06 42.2 +1.3**
KOLS Kolonicke sedl 69.16 318 *eP* **P 04 06 40.7 -0.4**
KOLS pmax pmax
comp=Z,13nm,0.9s
KOLS Kolonicke sedl 69.16 318 *eP* **P 04 06 40.7 -0.4**
RPW Rockport 69.17 43 P **P 04 06 42.2 +0.9**
LLD Lille Linde 69.19 328 *eP* **P 04 06 41.0 -0.1**
LLD Lille Linde 69.19 328 *iP* **P 04 06 41.0 -0.1**
ANTO Ankara 69.24 305 *eP* **P 04 06 41.0 -0.8**
ANTO pmax pmax
comp=Z,43nm,1.0s
ANTO Ankara 69.24 305 *eP* **P 04 06 41.0 -0.8**
comp=Z,43nm,1.0s
ANTO Ankara 69.24 305⇑ *iP* **P 04 06 41.1 -0.8**
ANTO Ankara 69.24 305 P **P 04 06 41.8 0.0**
SNR=13
ABTO Aybut 69.26 275 P **P 04 06 41.9 -0.3**
SNR=12
UZH Uzhgorod 69.35 318 *eP* **P 04 06 43.7 +1.5**
UZH *e* 04 06 58.5
UZH *e**PP **pP 04 08 40.0 +2.3**
ISR Istrita 69.46 313⇓ *iP* **P 04 06 43.2 +0.2**
PSN Preselentsi 69.49 311 *iP* **P 04 06 43.0 -0.1**
OJC Ojcow 69.49 320 *eP* **P 04 06 43.0 0.0**
OJC Ojcow 69.49 320 *eP* **P 04 06 42.9 0.0**
comp=Z,77nm,0.8s
OJC Ojcow 69.49 320 *eP* **P 04 06 43.0 0.0**
OJC Ojcow 69.49 320 *eP* **P 04 06 43.0 0.0**
DOPR Dopca 69.53 314⇓ *iP* **P 04 06 43.7 +0.4**
MUD Monsted U'grnd 69.53 330 *iP* **P 04 06 42.9 -0.2**
MUD pmax pmax
comp=Z,24nm,0.8s
MLR Muntele Rosu 69.54 313 P **P 04 06 43.0 -0.5**
MLR Muntele Rosu 69.54 313 P **P 04 06 43.0 -0.5**
comp=Z,1.4nm,0.4s,baz=3.6,slow=4.2,SNR=32
TRPA Tarpa 69.56 317⇓ *iP* **P 04 06 43.7 +0.2**
TRPA Tarpa 69.56 317⇓ *e* **P 04 06 44.0 +0.5**
CRVS Cervenica-Dubn 69.58 318 *eP* **P 04 06 42.9 -0.7**
CRVS pmax pmax
comp=Z,15nm,1.0s
CRVS Cervenica-Dubn 69.58 318 *eP* **P 04 06 42.9 -0.7**
NIE Niedzica 69.79 319 *eP* **P 04 06 45.3 +0.4**
NIE *e* 04 07 01.8
NIE Niedzica 69.79 319 *eP* **P 04 06 45.3 +0.4**
NIE ePcP **PcP 04 07 01.8 -1.2**
SULR 69.90 313⇑ *iP* **P 04 06 42.8 -2.7**
NLW Nelson Butte 70.00 42 P **P 04 06 47.5 +1.1**
VOIR 70.05 314⇓ *iP* **P 04 06 46.8 +0.2**
LRW Lerwick 70.09 337 *eP* **P 04 06 46.1 -0.3**
RCS Mount Rainier- 70.11 44 P **P 04 06 48.7 +1.5**
LON Longmire 70.15 44 *eP* **P 04 06 48.1 +1.0**
LON pmax pmax
comp=Z,20nm,0.9s
LON Longmire 70.15 44 *eP* **P 04 06 48.1 +1.0**
comp=Z,20nm,0.9s
ARR Arges 70.32 314⇓ *iP* **P 04 06 48.5 +0.4**
WPW White Pass 70.32 44 P **P 04 06 49.5 +1.3**
RAC Raciborz 70.33 321 *eP* **P 04 06 48.5 +0.5**
TWW Teanaway 70.37 43 P **P 04 06 50.0 +1.6**
SFJD Kangerlussuaq 70.52 1 *iP* **P 04 06 48.9 +0.2**
comp=Z,10nm,0.8s
OKC Ostrava-Krasne 70.53 321 *eP* **P 04 06 48.8 -0.4**
OKC Ostrava-Krasne 70.53 321⇓ *eP* **P 04 06 48.8 -0.4**
RUE Ruedersdorf 70.61 325 *eP* **P 04 06 49.6 +0.1**
comp=Z,45nm,1.2s
BORA Eskisehir 70.62 307 *iP* **P 04 06 49.1 -0.9**
KSP Ksiaz 70.67 322⇓ *eP* **P 04 06 50.0 0.0**
KSP *e* 04 09 36.8
HUMR Humele 70.69 313⇓ *iP* **P 04 06 49.3 -0.9**
MPOR Mary's Peak 70.73 47 P **P 04 06 52.4 +1.8**
BUY Buyukada 70.78 308 *iP* **P 04 06 50.0 -0.8**
COR Corvallis 70.81 47 *eP* **P 04 06 53.0 +2.1**
COR pmax pmax
comp=Z,63nm,1.0s
COR Corvallis 70.81 47 *eP* **P 04 06 53.0 +2.1**
comp=Z,63nm,1.0s
MORC Moravsky Berou 70.85 321 *eP* **P 04 06 51.3 +0.1**
MORC pmax pmax
comp=Z,43nm,0.8s
MORC Moravsky Berou 70.85 321 *eP* **P 04 06 51.3 +0.1**
comp=Z,43nm,0.8s
MORC Moravsky Berou 70.85 321⇓ *iP* **P 04 06 51.2 +0.1**
BSEG Bad Segeberg 70.97 327 *eP* **P 04 06 51.8 +0.2**
BSEG pmax pmax
comp=Z,100nm,1.0s
BSEG Bad Segeberg 70.97 327 *eP* **P 04 06 51.8 +0.2**
comp=Z,100nm,1.0s
SZH Strazhica 71.00 312 *iP* **P 04 06 51.3 -0.8**
DPC Dobruska-Polom 71.01 322⇓ *iP* **P 04 06 52.5 +0.4**
DPC *e* 04 08 49.7
DPC Dobruska-Polom 71.01 322 *eP* **P 04 06 52.4 +0.4**
comp=Z,76nm,1.1s
DPC Dobruska-Polom 71.01 322⇓ *iP* **P 04 06 52.5 +0.4**
DPC ePP **pP 04 08 49.7 +1.4**
PSZ Piszkesteto 71.02 318 *eP* **P 04 06 52.2 0.0**
PSZ pmax pmax
comp=Z,33nm,1.0s
PSZ Piszkesteto 71.02 318 *eP* **P 04 06 52.2 0.0**
comp=Z,33nm,1.0s
PSZ Piszkesteto 71.02 318⇓ *iP* **P 04 06 52.1 -0.1**
PSZ Piszkesteto 71.02 318⇓ *e* **P 04 06 52.6 +0.4**
UPC Upice 71.04 322⇓ *iP* **P 04 06 52.3 +0.1**
UPC *e* 04 08 51.9
UPC Upice 71.04 322⇓ *iP* **P 04 06 52.3 +0.1**
UPC *ex* x 04 08 51.9
BOLV Bolvadin 71.07 305 *iP* **P 04 06 52.4 -0.3**
VLL Laurance Lake 71.08 45 P **P 04 06 54.1 +1.4**
VYHS Vyhne 71.13 319 *eP* **P 04 06 52.9 +0.1**
VYHS pmax pmax
comp=Z,9.0nm,1.0s
VYHS Vyhne 71.13 319 *eP* **P 04 06 52.9 +0.1**
VYHS epP **pP 04 08 49.9 +0.9**
JMB Yambol 71.17 311 *iP* **P 04 06 53.4 +0.3**
OD2 Odessa Site #2 71.28 42 P **P 04 06 54.5 +0.8**
NEW Newport 71.45 41 *eP* **P 04 06 55.8 +1.1**
comp=Z,27nm,0.9s
NEW Newport 71.45 41⇓ P **P 04 06 56.0 +1.4**
baz=71,SNR=25
ASF Jabal al Asfar 71.49 297 P **P 04 06 55.4 +0.2**
ASF PP PP 04 09 35.6 -8.1
ASF Jabal al Asfar 71.49 297 P **P 04 06 55.4 +0.2**
comp=Z,10nm,0.8s,baz=278,slow=3.3,SNR=18
ASF PP PP 04 09 35.6 -8.1
comp=Z,3.3nm,0.9s,baz=293,slow=5.1,SNR=3.6
HAWA Hanford 71.55 43 *eP* **P 04 06 56.6 +1.4**
comp=Z,34nm,0.6s
VRAC Vranov 71.62 321 P **P 04 06 55.9 +0.4**
VRAC Vranov 71.62 321⇓ *iP* **P 04 06 56.0 +0.4**
VRAC Vranov 71.62 321 P **P 04 06 55.9 +0.4**
comp=Z,30nm,0.8s,baz=53,slow=6.3,SNR=33
PVCC Panska Ves 71.67 323 *eP* **P 04 06 55.8 0.0**
PVCC Panska Ves 71.67 323⇓ *eP* **P 04 06 55.8 0.0**
A12A Yaak River Ran 71.67 40⇑ P **P 04 06 57.2 +1.2**
baz=72,SNR=11
BRG Berggiesshubel 71.70 323 *iP* **P 04 06 55.7 -0.3**
comp=Z,23nm,0.9s
BRG *e* 04 07 10.8
comp=Z,19nm,1.6s
BRG Berggiesshubel 71.70 323 *iP* **P 04 06 55.7 -0.3**
BRG *e* 04 07 10.8
BRG pmax pmax
comp=Z,23nm,0.9s
BRG Berggiesshubel 71.70 323 *eP* **P 04 06 55.9 -0.1**
comp=Z,23nm,0.9s
BZS Buzias 71.73 316 P **P 04 06 55.7 -0.6**
BZS Buzias 71.73 316⇓ *iP* **P 04 06 55.5 -0.8**
PKSN Nyarlorinc 71.73 318⇓ *e* **P 04 06 56.5 +0.3**
BUD Budapest 71.74 318⇑ *e* **P 04 06 56.4 +0.1**
CLL Collm 71.79 324⇓ *iP* **P 04 06 56.1 -0.4**
CLL *e**PP **pP 04 08 54.0 +0.9**
CLL pmax pmax
comp=Z,45nm,0.8s
CLL Collm 71.79 324 *eP* **P 04 06 56.1 -0.4**
comp=Z,45nm,0.8s
CLL Collm 71.79 324⇓ *iP* **P 04 06 56.1 -0.4**
comp=Z,45nm,0.8s
CLL ePcP **PcP 04 07 11.0 -0.5**
CLL epP **pP 04 08 54.0 +0.9**
CLL ePP **PP 04 09 47.0 +1.5**
SMOL Smolenice 71.79 320 *eP* **P 04 06 57.2 +0.6**
SMOL Smolenice 71.79 320 *eP* **P 04 06 57.2 +0.6**
KBO Bosley Butte 71.88 49 *eP* **P 04 06 58.6 +1.3**
comp=Z,67nm,1.1s
ISP Isparta 71.91 305 *eP* **P 04 06 54.6 -3.0**
ISP pmax pmax
comp=Z,30nm,0.8s
ISP Isparta 71.91 305 *eP* **P 04 06 54.6 -3.0**
comp=Z,30nm,0.8s
FBE Freiberg 71.92 324 *eP* **P 04 06 57.5 +0.2**
comp=Z,53nm,0.9s
MMAI Mount Meron Ar 71.93 298 P **P 04 06 57.4 -0.4**
MMAI Mount Meron Ar 71.93 298 P **P 04 06 57.4 -0.4**
comp=Z,11nm,0.7s,baz=56,slow=12,SNR=13
PKS7 Kunszentmiklos 71.98 318⇑ *e* **P 04 06 58.2 +0.5**
CSS Prodhromos 72.01 301 *eP* **P 04 06 57.4 -0.8**
comp=Z,41nm,0.7s
DIM Dimitrovgrad 72.03 311 *iP* **P 04 06 58.0 -0.1**
B12A Libby 72.03 40⇓ P **P 04 06 59.6 +1.5**
baz=72
PRU Pruhonice 72.07 322⇓ *iP* **P 04 06 58.2 0.0**
PRU Pruhonice 72.07 322⇓ *iP* **P 04 06 58.2 0.0**
PRU *ex* x 04 08 49.5
PKS6 Bocsa 72.09 317⇓ *e* **P 04 06 57.9 -0.4**
PKSG 72.11 319⇑ *e* **P 04 06 59.1 +0.6**
NRDL Niedersach Rie 72.13 326 *eP* **P 04 06 58.3 0.0**
comp=Z,22nm,1.0s
MPEP Malo Peshtene 72.14 313 *iP* **P 04 06 58.1 -0.6**
TREC Trest 72.14 322⇓ *iP* **P 04 06 58.7 +0.1**
TREC Trest 72.14 322⇓ *iP* **P 04 06 58.7 +0.1**
C11A Tepee Creek (N 72.16 41 P **P 04 07 00.4 +1.6**
baz=72,SNR=66
KHAL Karahalli 72.17 306 *iP* **P 04 06 58.1 -1.0**
A13A Flathead Natio 72.25 39⇓ P **P 04 07 00.2 +0.9**
baz=72
HUMO Hull Mountain 72.31 48 *eP* **P 04 07 01.2 +1.4**
comp=Z,26nm,1.5s
PKS2 Kecel 72.34 318⇑ *e* **P 04 06 59.9 +0.2**
KDZ Kurdzhali 72.36 311 *iP* **P 04 07 00.2 +0.2**
BALY Balya 72.37 308 *iP* **P 04 06 59.5 -0.6**
PKST T"s 72.38 319⇓ *e* **P 04 06 59.9 -0.1**
NEUB Neuenburg 72.39 325 *eP* **P 04 06 59.8 -0.2**
comp=Z,50nm,0.8s
WALA Waterton Lakes 72.39 39 *eP* **P 04 07 01.1 +0.9**
comp=Z,1.8nm,1.1s
PGB Panagyurishte 72.45 312 *iP* **P 04 07 00.6 0.0**
CLZ Clausthal 72.50 326 *eP* **P 04 07 00.9 +0.2**
CLZ pmax pmax
comp=Z,39nm,0.9s
CLZ Clausthal 72.50 326 *eP* **P 04 07 00.9 +0.2**
comp=Z,39nm,0.9s
C12B Naegeli Ranch, 72.62 40⇑ P **P 04 07 02.9 +1.4**
baz=72,SNR=14
B13A Whitefish 72.63 39⇓ P **P 04 07 02.6 +1.1**
baz=72,SNR=38
TANN Tannenbergstha 72.68 324 *eP* **P 04 07 01.8 +0.1**
comp=Z,63nm,2.0s
A14A Double T Ranch 72.68 38⇓ P **P 04 07 03.0 +1.1**
baz=72,SNR=62
WERD Werda 72.72 324 *eP* **P 04 07 02.0 +0.1**
comp=Z,20nm,1.0s
RZN Rozhen 72.72 311 *iP* **P 04 07 02.4 +0.1**
PKS9 Tamasi 72.73 318⇑ *e* **P 04 07 01.3 -0.7**
PLN Plauen 72.76 324 *eP* **P 04 07 02.3 +0.2**
comp=Z,102nm,1.0s
GUNZ Gunzen 72.77 324 *eP* **P 04 07 02.3 +0.1**
comp=Z,25nm,0.9s
SOP Sopron 72.79 320⇓ *e* **P 04 07 03.3 +1.0**
WERN Wernitzgruen 72.81 324 *eP* **P 04 07 02.6 +0.1**
comp=Z,26nm,0.8s
NKC Novy Kostel 72.82 324⇓ *iP* **P 04 07 02.5 0.0**
NKC Novy Kostel 72.82 324⇓ *iP* **P 04 07 02.5 0.0**
PKSM Moragy 72.82 318⇑ *iP* **P 04 07 01.8 -0.7**
PKSM Moragy 72.82 318⇓ *e* **P 04 07 02.2 -0.3**
BSMT Bassoo Peak 72.85 40 *eP* **P 04 07 04.5 +1.6**
MOX Moxa 72.87 324 *eP* **P 04 07 02.8 0.0**
MOX pmax pmax
comp=Z,25nm,1.2s
MOX Moxa 72.87 324 *eP* **P 04 07 02.8 0.0**
comp=Z,25nm,1.2s
BLMT Blacktail Moun 72.94 40 *eP* **P 04 07 05.1 +1.6**
VTS Vitosha 72.94 313⇓ *iP* **P 04 07 03.5 -0.1**
VTS Vitosha 72.94 313 *iP* **P 04 07 03.4 -0.1**
CONA Conrad Observa 72.94 320 *iP* **P 04 07 03.9 +0.5**
comp=Z,33nm,0.8s,SNR=37
CONA Conrad Observa 72.94 320 *iP* **P 04 07 03.9 +0.5**
comp=Z,33nm,0.8s
FFC Flin Flon 72.98 29 *eP* **P 04 07 03.2 -0.1**
FFC *e**PP **pP 04 09 01.3 +0.9**
FFC pmax pmax
comp=Z,63nm,1.1s
FFC Flin Flon 72.98 29 *eP* **P 04 07 03.2 -0.1**
comp=Z,63nm,1.1s
FFC epP **pP 04 09 01.3 +0.9**
A15A Johnson Ranch, 72.99 38 P **P 04 07 04.3 +0.7**
baz=73,SNR=38
YBH Yreka Blue Hor 73.04 49 *eP* **P 04 07 05.7 +1.7**
comp=Z,21nm,1.3s
KHMM Horse Mountain 73.04 50 *eP* **P 04 07 06.2 +2.1**
comp=Z,30nm,1.0s
C13A Hot Springs 73.07 40⇓ P **P 04 07 05.6 +1.5**
baz=73,SNR=56
KHC Kasperske Hory 73.12 322⇓ *iP* **P 04 07 04.4 +0.1**
KHC *e* 04 09 02.6
KHC Kasperske Hory 73.12 322 *eP* **P 04 07 04.3 0.0**
comp=Z,27nm,0.9s
KHC epP **pP 04 09 02.2 +0.8**
KHC Kasperske Hory 73.12 322⇓ *iP* **P 04 07 04.4 +0.1**
KHC *ex* x 04 07 27.5
KHC epP **pP 04 09 02.6 +1.1**
MANZ Manzenberg 73.15 324 *eP* **P 04 07 04.5 +0.1**
comp=Z,19nm,1.0s
D12A Red Ives Fores 73.15 41⇑ P **P 04 07 05.7 +1.2**
baz=73
JTMT Jette 73.16 40 *eP* **P 04 07 06.2 +1.5**
B14A Marquette Ranc 73.19 39 P **P 04 07 06.4 +1.6**
baz=73,SNR=34
AYVA Ayvalik 73.19 308 *iP* **P 04 07 04.3 -0.5**
YBMT Yellow Bay 73.21 39 *eP* **P 04 07 06.3 +1.4**
comp=Z,28nm,1.0s
IBBN Ibbenburen 73.21 327 *eP* **P 04 07 04.3 -0.3**
comp=Z,60nm,1.4s
ROTZ Rotzenmuhle 73.27 323 *eP* **P 04 07 05.5 +0.5**
comp=Z,74nm,1.8s
GEC2 GERESS Array S 73.28 322 *eP* **P 04 07 05.0 -0.3**
GEC2 GERESS Array S 73.28 322 *eP* **P 04 07 05.0 -0.3**
comp=Z,21nm,1.1s
GEC2 GERESS Array S 73.28 322 *eP* **P 04 07 05.0 -0.3**
GERES GERESS Array B 73.28 322 P **P 04 07 05.0 -0.3**
GERES GERESS Array B 73.28 322 P **P 04 07 05.0 -0.3**
comp=Z,10nm,0.8s,baz=45,slow=4.3,SNR=32
MMB Musomiste 73.34 312 *iP* **P 04 07 05.5 -0.2**
C14A Swan Lake 73.40 39⇑ P **P 04 07 07.2 +1.2**
baz=73
UBBA Unterbreizbach 73.43 325 *eP* **P 04 07 05.5 -0.3**
comp=Z,16nm,0.9s
WET Wettzell 73.43 323 *eP* **P 04 07 06.3 +0.3**
WET pmax pmax
comp=Z,25nm,1.0s
WET Wettzell 73.43 323 *eP* **P 04 07 06.3 +0.3**
comp=Z,25nm,1.0s
SWMT Swartz Lake 73.47 40 *eP* **P 04 07 07.8 +1.4**
KAC Achnashellach 73.48 337 *eP* **P 04 07 06.0 -0.1**
KAC Achnashellach 73.48 337 P **P 04 07 06.0 -0.1**
KKB Krupnik 73.50 312 *iP* **P 04 07 06.5 -0.1**
A16A West Butte Ran 73.52 37⇓ P **P 04 07 07.4 +0.7**
baz=73,SNR=53
D13A Huson 73.55 40⇑ P **P 04 07 07.8 +1.0**
baz=73,SNR=18
BEHE Becsehely 73.55 319⇓ *e* **P 04 07 07.0 +0.3**
B15A Bradely Ranch, 73.55 38 P **P 04 07 07.9 +1.1**
baz=73,SNR=76
ARSA Arzberg 73.59 320⇓ *iP* **P 04 07 07.0 +0.1**
comp=Z,22nm,0.8s,SNR=16
ARSA Arzberg 73.59 320⇓ *iP* **P 04 07 07.0 +0.1**
comp=Z,22nm,0.8s
AYDN Tasoluk 73.59 306 *iP* **P 04 07 07.5 +0.3**
KPL Plockton 73.72 337 *eP* **P 04 07 06.6 -0.8**
KPL AMB AMB 04 07 08.1
comp=Z,28nm,1.0s
BMO Blue Mountains 73.74 43 *eP* **P 04 07 09.2 +1.2**
BMO pmax pmax
comp=Z,80nm,1.4s
BMO Blue Mountains 73.74 43 *eP* **P 04 07 09.2 +1.2**
comp=Z,80nm,1.4s
MOA Molln 73.74 321⇓ *iP* **P 04 07 07.6 -0.2**
comp=Z,13nm,0.8s
MOA Molln 73.74 321⇓ *iP* **P 04 07 07.6 -0.2**
comp=Z,13nm,0.8s
GRF Grafenberg Arr 73.75 324 *eP* **P 04 07 08.4 +0.6**
GRF pmax pmax
comp=Z,95nm,0.9s
GRF Grafenberg Arr 73.75 324 *eP* **P 04 07 08.4 +0.6**
comp=Z,95nm,0.9s
WTSB Winterswijk 73.85 328 *eP* **P 04 07 07.9 -0.3**
comp=Z,49nm,1.1s
B16A M & M Farms, S 73.87 38⇓ P **P 04 07 09.7 +1.1**
baz=74,SNR=8.0
URLA Izmir 73.88 307 *iP* **P 04 07 08.0 -0.8**
SLMT Seeley Lake 73.90 40 *eP* **P 04 07 10.1 +1.2**
WDC Whiskeytown Da 73.91 49 *eP* **P 04 07 09.9 +1.0**
WDC pmax pmax
comp=Z,22nm,1.1s
WDC Whiskeytown Da 73.91 49 *eP* **P 04 07 09.9 +1.0**
comp=Z,22nm,1.1s
C15A Salmond Ranch, 73.92 39⇓ P **P 04 07 10.2 +1.2**
baz=74,SNR=97
A17A Triple J Farms 73.92 37⇓ P **P 04 07 09.9 +1.1**
baz=74,SNR=43
GCAM G?zelcaml? 73.95 307 *iP* **P 04 07 08.9 -0.2**
MSO Missoula 73.98 40 *eP* **P 04 07 09.9 +0.6**
comp=Z,23nm,1.0s
MSO Missoula 73.98 40⇑ P **P 04 07 10.4 +1.1**
baz=74,SNR=34
ESY Stoneypath 74.01 335 *eP* **P 04 07 09.2 +0.1**
D14A Greenough 74.01 40 P **P 04 07 10.6 +1.1**
baz=74,SNR=53
BUG Bochum--Univer 74.07 327 *eP* **P 04 07 09.2 -0.3**
comp=Z,30nm,0.9s
F12A Elk City 74.12 42 P **P 04 07 11.2 +1.0**
baz=74,SNR=42
E13A Victor 74.15 41 P **P 04 07 10.9 +0.6**
baz=74,SNR=6.5
VAY Valandovo 74.16 312 *eP* P 04 07 05.9 -4.4
PERS Pernice 74.23 320 *iP* **P 04 07 10.5 -0.1**
MOD Modoc 74.23 47 *eP* **P 04 07 12.2 +1.3**
comp=Z,55nm,1.2s
SOKA Soboth 74.24 320⇑ *iP* **P 04 07 10.6 -0.1**
comp=Z,66nm,0.9s
SOKA Soboth 74.24 320⇑ *iP* **P 04 07 10.6 -0.1**
comp=Z,66nm,0.9s
CHMT Chamberlain Mo 74.25 40 *eP* **P 04 07 11.6 +0.7**
EBL Broad Law 74.26 335 *eP* **P 04 07 10.2 -0.4**
C16A Fuhringer Ranc 74.30 38⇓ P **P 04 07 12.2 +1.1**
baz=74,SNR=43
EAB Aberfoyle 74.31 336 *eP* **P 04 07 10.6 -0.2**
A18A Metzger Ranch, 74.32 37⇑ P **P 04 07 12.0 +0.9**
baz=74,SNR=30
SKO Skopje 74.32 313 *eP* P 04 07 07.9 -3.3
EAU Auchinoon 74.33 335 *eP* **P 04 07 09.6 -1.3**
MSVF Nonsavu 74.33 133 *eP* P 04 07 14.7 +3.2
MSVF pmax pmax
comp=Z,39nm,1.1s
MSVF Nonsavu 74.33 133 *eP* P 04 07 14.7 +3.2
comp=Z,39nm,1.1s
B17A L&G Farms, Che 74.36 38⇑ P **P 04 07 12.7 +1.3**
baz=74,SNR=49
EIL Elat 74.37 296 P P **04 07 11.3 -0.3**
EIL Elat 74.37 296 P P **04 07 11.3 -0.3**
comp=Z,18nm,0.9s,baz=350,slow=3.3,SNR=15
PLE Pljevlja 74.46 315⇓ *iP* **P 04 07 11.8 -0.3**
E14A Clinton 74.50 40⇑ P **P 04 07 13.6 +1.3**
baz=74,SNR=48
D15A Lincoln 74.50 39⇓ P **P 04 07 13.5 +1.3**
baz=74,SNR=27
RJOB Jochberg 74.50 322 *eP* **P 04 07 12.5 +0.4**
comp=Z,34nm,0.9s
IVA Berane 74.52 315⇓ *iP* **P 04 07 12.5 +0.1**
TNS Taunus Mts 74.53 326 *eP* **P 04 07 12.2 0.0**
TNS pmax pmax
comp=Z,32nm,1.1s
TNS Taunus Mts 74.53 326 *eP* **P 04 07 12.2 0.0**
comp=Z,32nm,1.1s
G12A Big Creek, Yel 74.54 42⇓ P **P 04 07 13.4 +0.8**
baz=74
F13A Darby 74.55 41⇓ P **P 04 07 13.0 +0.4**

baz=74,SNR=7.2
OBKA Obir 74.59 320⇑*iP* P 04 07 12.4 -0.3
comp=Z,24nm,0.8s
OBKA Obir 74.59 320⇑*iP* P 04 07 12.4 -0.3
comp=Z,24nm,0.8s
EKA Eskdalemuir Ar 74.67 335 P P 04 07 12.7 -0.1
EKA Eskdalemuir Ar 74.67 335 P P 04 07 12.7 -0.1
comp=Z,3.7nm,0.4s,baz=29,slow=5.0,SNR=52
PVY Plav 74.68 314⇓*iP* P 04 07 12.8 -0.5
ESK Eskdalemuir 74.69 335 *eP* P 04 07 12.6 -0.4
ESK AMB AMB 04 07 17.3
comp=Z,51nm,1.9s
ESK Eskdalemuir 74.69 335 *eP* P 04 07 12.7 -0.2
ESK pmax pmax
comp=Z,19nm,0.9s
ESK Eskdalemuir 74.69 335 *eP* P 04 07 12.7 -0.2
comp=Z,19nm,0.9s
KBA Koelnbreinsper 74.73 321⇓*iP* P 04 07 13.5 -0.1
KBA pmax pmax
comp=Z,33nm,0.8s
KBA Koelnbreinsper 74.73 321⇓*iP* P 04 07 13.5 -0.1
comp=Z,33nm,0.8s,SNR=19
KBA Koelnbreinsper 74.73 321⇓*iP* P 04 07 13.5 -0.1
comp=Z,33nm,0.8s
B18A Beardsley Farm 74.74 37 ⇑P P 04 07 14.4 +0.9
baz=74,SNR=28
WVOR Wild Horse Val 74.75 46 *eP* P 04 07 14.9 +1.2
WVOR pmax pmax
comp=Z,30nm,1.1s
WVOR Wild Horse Val 74.75 46 *eP* P 04 07 14.9 +1.2
comp=Z,30nm,1.1s
ECK Cauldkaine Hil 74.78 335 *eP* P 04 07 13.0 -0.4
A19A Klindworth Far 74.80 36 P P 04 07 14.8 +1.0
baz=75,SNR=29
UPM Unac-Piva 74.80 315⇓*iP* P 04 07 13.6 -0.5
TOD Tromm 74.85 325 *eP* P 04 07 13.7 -0.3
TOD Tromm 74.85 325 *eP* P 04 07 13.7 -0.3
FUR Furstenfeldbru 74.87 323 *eP* P 04 07 14.4 +0.3
FUR pmax pmax
comp=Z,58nm,0.9s
FUR Furstenfeldbru 74.87 323 *eP* P 04 07 14.4 +0.3
comp=Z,58nm,0.9s
C17A Wharram Farm, 74.87 38 P P 04 07 14.8 +0.6
baz=75,SNR=31
E15A Deer Lodge 74.89 40 ⇑P P 04 07 15.3 +0.8
baz=75,SNR=55
MYKA Terra Mystica 74.93 321⇓*iP* P 04 07 13.9 -0.7
comp=Z,26nm,0.8s
MYKA Terra Mystica 74.93 321⇓*iP* P 04 07 13.9 -0.7
comp=Z,26nm,0.8s
F14A Wisdom 75.00 41 ⇓P P 04 07 15.0 -0.1
baz=75,SNR=13
STKA Stephens Creek 75.00 170 P P 04 07 14.8 0.0
STKA Stephens Creek 75.00 170 P P 04 07 14.8 0.0
comp=Z,3.3nm,0.6s,baz=357,slow=5.5,SNR=18
EGMT Eagleton 75.03 37 *eP* P 04 07 16.1 +0.9
comp=Z,68nm,1.1s
EGMT Eagleton 75.03 37 ⇑P P 04 07 15.9 +0.8
baz=75,SNR=28
BIA Bitola 75.05 312 *eP* P 04 07 13.4 -1.9
HRY Holter Researc 75.06 39 *eP* P 04 07 16.8 +1.4
B19A Brinkman Farms 75.06 36 ⇑P P 04 07 16.5 +1.2
baz=75,SNR=7.7
G13A Cobalt 75.10 42 ⇑P P 04 07 16.0 +0.3
baz=75,SNR=15
HGN Heimansgroeve 75.13 327 *eP* P 04 07 14.7 -0.8
comp=Z,37nm,1.2s
ABH Alteburg 75.16 326 *eP* P 04 07 15.7 0.0
TTG Podgorica 75.16 315⇓*iP* P 04 07 15.4 -0.4
A20A Cobblestone Ra 75.18 36 P P 04 07 16.8 +0.8
baz=75,SNR=15
H12A Diamond D Ranc 75.19 42 P P 04 07 17.2 +1.0
baz=75,SNR=96
BRY Bratogost 75.20 315⇓*iP* P 04 07 15.3 -0.9
BEBN Eben Emael 75.20 327 P P 04 07 15.8 -0.1
MEM Membach 75.22 327 P P 04 07 15.5 -0.5
comp=Z,23nm,1.1s
D17A Six Diamond Ra 75.26 38 ⇓P P 04 07 17.2 +0.7
baz=75,SNR=17
E16A East Helena 75.27 39 ⇑P P 04 07 17.8 +1.3
baz=75,SNR=42
STU Stuttgart 75.32 324 *eP* P 04 07 16.6 0.0
STU pmax pmax
comp=Z,35nm,0.9s
STU Stuttgart 75.32 324 *eP* P 04 07 16.5 0.0
comp=Z,38nm,0.9s
STU Stuttgart 75.32 324 *eP* P 04 07 16.6 0.0
comp=Z,35nm,0.9s
OHCM Honcut 75.35 50 *eP* P 04 07 17.6 +0.6
ABTA Abfaltersbach 75.36 321⇓*iP* P 04 07 15.8 -1.2
comp=Z,19nm,1.2s,SNR=6.8
ABTA Abfaltersbach 75.36 321⇓*iP* P 04 07 15.8 -1.2
comp=Z,19nm,1.2s
G14A Jackson 75.37 41 ⇑P P 04 07 17.5 +0.2
baz=75,SNR=11
APE Apeiranthos 75.38 307⇑*iP* P 04 07 15.3 -1.9
WTTA Wattenberg 75.38 322⇓*iP* P 04 07 17.0 -0.2
WTTA pmax pmax
comp=Z,19nm,0.7s
WTTA Wattenberg 75.38 322⇓*iP* P 04 07 17.0 -0.2
comp=Z,19nm,0.7s
WTTA Wattenberg 75.38 322⇓*iP* P 04 07 17.0 -0.2
comp=Z,19nm,0.7s
F15A Butte 75.39 40 ⇓P P 04 07 17.8 +0.4
baz=75,SNR=53
LRM Limekiln Ridge 75.43 40 *eP* P 04 07 18.8 +1.2
BUM Brajici-Budva 75.44 315⇓*iP* P 04 07 16.7 -0.8
H13A Challis 75.47 42 ⇑P P 04 07 18.5 +0.7
baz=75,SNR=20
ULC Ulcinj 75.50 314⇓*iP* P 04 07 17.0 -0.8
RUP Ruppelstein 75.50 326 *eP* P 04 07 17.4 -0.3
RUP Ruppelstein 75.50 326 *eP* P 04 07 17.4 -0.3
MFID Camas Ranch 75.51 44 *eP* P 04 07 19.3 +1.4
comp=Z,67nm,0.9s
MFID Camas Ranch 75.51 44 ⇑P P 04 07 19.4 +1.4
baz=75,SNR=50
A21A Bergtoll Ranch 75.53 35 ⇑P P 04 07 18.9 +1.1
baz=75
HCY Herceg Novi 75.55 315⇓*iP* P 04 07 17.8 -0.2
MOTA Moosalm 75.56 322⇓*iP* P 04 07 17.8 -0.3
MOTA pmax pmax
comp=Z,13nm,0.8s
MOTA Moosalm 75.56 322⇓*iP* P 04 07 17.8 -0.3
comp=Z,13nm,0.8s
MOTA Moosalm 75.56 322⇓*iP* P 04 07 17.8 -0.3
comp=Z,13nm,0.8s
C19A Slack Wire Ran 75.56 37 ⇓P P 04 07 19.4 +1.3
baz=75,SNR=34
I12A Atlanta 75.59 43 ⇑P P 04 07 19.9 +1.4
baz=75,SNR=30
TIR Tirane 75.60 313 *eP* P 04 07 18.0 -0.3
TIR pmax pmax
comp=Z,36nm,0.7s
TIR Tirane 75.60 313 *eP* P 04 07 18.0 -0.3
comp=Z,36nm,0.7s
RETA Reutte 75.61 323⇓*iP* P 04 07 18.4 +0.1
comp=Z,55nm,1.2s,SNR=20
RETA Reutte 75.61 323⇓*iP* P 04 07 18.4 +0.1
comp=Z,55nm,1.2s
BEKR Beckworth 75.61 49 *eP* P 04 07 19.4 +0.8
comp=Z,19nm,1.0s
D18A Linhart Farms, 75.63 38 P P 04 07 19.9 +1.4
baz=75,SNR=38
BCLA Clavier 75.65 327 P P 04 07 18.0 -0.4
LCCM Lewis and Clar 75.69 40 P P 04 07 20.1 +1.2
DLMT Dillon 75.69 41 *eP* P 04 07 20.5 +1.5
comp=Z,103nm,1.0s
E17A Martinsdale 75.70 39 P P 04 07 20.5 +1.5
baz=76,SNR=74
LHO Holmfirth 75.73 333 *eP* P 04 07 18.4 -0.4
LANF Langenberg 75.75 325 *eP* P 04 07 18.7 -0.3
LANF Langenberg 75.75 325 *eP* P 04 07 18.7 -0.3
LANF Langenberg 75.75 325 *eP* P 04 07 18.7 -0.3
F16A Kennard Place, 75.84 40 P P 04 07 21.0 +1.2
baz=76,SNR=36
H14A Leadore 75.87 41 ⇑P P 04 07 20.8 +0.9
baz=76,SNR=8.0
G15A Dillon 75.89 41 ⇓P P 04 07 21.4 +1.3
baz=76,SNR=105
SANT Santorini 75.89 307 *eP* P 04 07 17.5 -2.6
comp=Z,58nm,1.5s
WLF Walferdange 75.90 327 P P 04 07 19.6 -0.1
comp=Z,12nm,1.4s
WLF Walferdange 75.90 327 *eP* P 04 07 19.9 +0.1
comp=Z,31nm,1.4s
B21A Ellsworth Farm 75.92 35 P P 04 07 20.9 +0.9
baz=76,SNR=24
BOZ Bozeman (W) 75.94 40 *eP* P 04 07 21.7 +1.4
BOZ pmax pmax
comp=Z,30nm,0.9s
BOZ Bozeman (W) 75.94 40 *eP* P 04 07 21.7 +1.4
comp=Z,30nm,0.9s
BOZ Bozeman (W) 75.94 40 ⇓P P 04 07 21.5 +1.2
baz=76,SNR=56
A22A Carney Farms, 75.95 35 P P 04 07 20.7 +0.6
baz=76,SNR=30
MCMT McKenzie Canyo 75.97 41 *eP* P 04 07 21.1 +0.5
comp=Z,7.5nm,0.8s
FETA Feichten 75.97 322⇓*iP* P 04 07 20.1 -0.4
comp=Z,13nm,0.9s,SNR=5.7
FETA Feichten 75.97 322⇓*iP* P 04 07 20.1 -0.4
comp=Z,13nm,0.9s
SNF Seneffe 75.98 328 P P 04 07 19.7 -0.5
comp=Z,10.0nm,1.0s
SPAK Spaichingen-Ko 76.00 324 *eP* P 04 07 20.0 -0.5
I13A Wildhorse Cree 76.01 42 P P 04 07 22.4 +1.6
baz=76,SNR=67
BFO Black Forest 76.03 324 *eP* P 04 07 20.4 -0.1
BFO *e**PP pP 04 09 17.3 -1.7
BFO *e* 04 10 21.6
BFO pmax pmax
comp=Z,53nm,0.9s
BFO Black Forest 76.03 324 *eP* P 04 07 20.5 -0.1
comp=Z,58nm,0.9s
BFO Black Forest 76.03 324 *eP* P 04 07 20.4 -0.1
comp=Z,53nm,0.9s
BFO *eP* pP 04 09 17.3 -1.7
BFO *eP* pP 04 10 21.6 +0.8
C20A Veseth Ranch, 76.04 36 P P 04 07 21.7 +1.0
baz=76,SNR=27
E18A Harlowton 76.05 38 P P 04 07 22.3 +1.4
baz=76,SNR=18
D19A Cripps Ranch, 76.07 37 P P 04 07 22.1 +1.2
baz=76,SNR=50
GIVF Givet 76.09 327⇓*iP* P 04 07 20.2 -0.6
comp=Z,40nm,1.0s
GIVF Givet 76.09 327⇓*iP* P 04 07 20.2 -0.6
GIVF pmax pmax
comp=Z,40nm,1.0s
GIVF Givet 76.09 327⇓*iP* P 04 07 20.2 -0.6
comp=Z,40nm,1.0s
HLID Hailey 76.12 43 *eP* P 04 07 23.0 +1.6
comp=Z,25nm,0.9s
HLID Hailey 76.12 43 ⇓P P 04 07 23.0 +1.6
baz=76,SNR=38
DAVA Damuels 76.15 323⇓*iP* P 04 07 21.3 -0.1
comp=Z,63nm,0.9s,SNR=24
DAVA Damuels 76.15 323⇓*iP* P 04 07 21.3 -0.1
comp=Z,63nm,0.9s
G16A Moss Hill, Enn 76.17 40 ⇑P P 04 07 22.7 +1.1
baz=76,SNR=39
DOU Dourbes 76.18 328 P P 04 07 20.9 -0.4
comp=Z,15nm,1.7s
F17A Fitzpatrick Pl 76.20 39 ⇑P P 04 07 23.0 +1.3
baz=76,SNR=34
H15A Lima 76.22 41 ⇓P P 04 07 23.3 +1.3
baz=76,SNR=22
I14A Mackay 76.33 42 ⇓P P 04 07 24.0 +1.5
baz=76,SNR=13
WCN Washoe City 76.34 49 *eP* P 04 07 23.6 +0.9
WCN *e**PP pP 04 09 23.1 +1.9
WCN pmax pmax
comp=Z,60nm,1.6s
WCN Washoe City 76.34 49 *eP* P 04 07 23.6 +0.9
comp=Z,60nm,1.6s
WCN *eP* pP 04 09 23.1 +1.9
C21A Desert Coulee 76.35 36 P P 04 07 23.1 +0.7
baz=76,SNR=17
J13A Cove Ranch, Pi 76.36 43 ⇑P P 04 07 24.5 +1.8
baz=76,SNR=54
BAIF Baives 76.36 328⇓*iP* P 04 07 21.5 -0.8
comp=Z,22nm,1.0s
BAIF Baives 76.36 328⇓*iP* P 04 07 21.5 -0.8
BAIF pmax pmax
comp=Z,22nm,1.0s
BAIF Baives 76.36 328⇓*iP* P 04 07 21.5 -0.8
comp=Z,22nm,1.0s
A23A Redstone 76.40 34 P P 04 07 23.2 +0.6
baz=76,SNR=6.6
CDF Champ du Feu 76.41 325⇓*iP* P 04 07 22.3 -0.4
comp=Z,38nm,0.9s
CDF Champ du Feu 76.41 325⇓*iP* P 04 07 22.3 -0.4
CDF pmax pmax
comp=Z,38nm,0.9s
CDF Champ du Feu 76.41 325⇓*iP* P 04 07 22.3 -0.4
comp=Z,38nm,0.9s
B22A Reddig Ranch S 76.45 35 P P 04 07 23.9 +1.0
baz=76,SNR=7.1
D20A Manuel Ranch, 76.45 37 P P 04 07 24.2 +1.2
baz=76,SNR=35
FUORN Ofenpass-Fuorn 76.48 322 *eP* P 04 07 23.5 +0.1
comp=Z,42nm,0.8s
FELD Felberg im Sc 76.52 324 *eP* P 04 07 22.8 -0.6
DAVOX Davos/Dischmat 76.53 323 P P 04 07 23.5 -0.1
DAVOX Davos/Dischmat 76.53 323 P P 04 07 23.5 -0.1
comp=Z,20nm,0.7s,baz=48,slow=3.4,SNR=29
G17A Pierce Place, 76.60 40 P P 04 07 25.4 +1.5
baz=76,SNR=17
ECH Echery 76.61 325 *eP* P 04 07 23.1 -0.7
ECH pmax pmax
comp=Z,32nm,1.0s
ECH Echery 76.61 325 *eP* P 04 07 23.1 -0.7
comp=Z,32nm,1.0s
ECH Echery 76.61 325 *eP* P 04 07 23.5 -0.3
F18A Big Timber 76.64 39 ⇓P P 04 07 25.5 +1.4
baz=76,SNR=44
E19A Rath Farm, Rou 76.64 38 P P 04 07 25.4 +1.3
baz=76,SNR=47
QLMT Earthquake Lak 76.64 40 *eP* P 04 07 25.6 +1.3
J14A Carey 76.74 42 ⇓P P 04 07 26.2 +1.5
baz=76
B23A Brockton 76.74 34 ⇓P P 04 07 25.5 +1.0
baz=76,SNR=29
GCMT Greycliff 76.75 39 *eP* P 04 07 25.9 +1.1
comp=Z,30nm,0.9s
A24A Westby 76.79 34 P P 04 07 25.6 +0.8
baz=76,SNR=13
H16A Russell Place, 76.83 40 ⇓P P 04 07 26.9 +1.6
baz=77,SNR=50
CMB Columbia Colle 76.87 50 *eP* P 04 07 26.6 +1.2
CMB *e**PP pP 04 09 25.9 +1.7
CMB pmax pmax
comp=Z,41nm,1.0s
CMB Columbia Colle 76.87 50 *eP* P 04 07 26.6 +1.2
comp=Z,41nm,1.0s
CMB *eP* pP 04 09 25.9 +1.7
E20A Meyer Farm, Mu 76.91 37 ⇑P P 04 07 26.7 +1.3
baz=77,SNR=31
MOF Molkenrain 76.91 325 *eP* P 04 07 25.0 -0.5
MOF Molkenrain 76.91 325 *eP* P 04 07 25.0 -0.5
MOF Molkenrain 76.91 325 *eP* P 04 07 25.0 -0.5
C22A Vida 76.93 35 ⇓P P 04 07 26.2 +0.7
baz=77,SNR=16
PAGF Fort de Pagny 76.94 326⇓*iP* P 04 07 24.9 -0.6
comp=Z,22nm,1.0s
PAGF Fort de Pagny 76.94 326⇓*iP* P 04 07 24.9 -0.6
comp=Z,22nm,1.0s
IDI Anoyia 76.97 306 *eP* P 04 07 23.7 -2.3
comp=Z,49nm,0.9s
D21A La Casta Ranch 76.98 36 P P 04 07 26.6 +0.8
baz=77,SNR=14
YMR Madison River 76.98 40 *eP* P 04 07 27.4 +1.3
comp=Z,26nm,1.1s
TUE Stuta 77.01 323 *eP* P 04 07 25.9 -0.2
comp=Z,34nm,0.9s
TUE *eP* pP 04 09 26.4 +1.4
F19A Roth Farm, Mol 77.03 38 P P 04 07 27.3 +1.1
baz=77,SNR=26
BBS Basel-Blauen 77.05 324 *eP* P 04 07 25.8 -0.4
BBS Basel-Blauen 77.05 324 *eP* P 04 07 25.8 -0.4
HINF Hinteralfeld 77.05 325⇓*iP* P 04 07 25.4 -0.8
comp=Z,29nm,0.9s
HINF Hinteralfeld 77.05 325⇓*iP* P 04 07 25.4 -0.8
HINF pmax pmax
comp=Z,29nm,0.9s
HINF Hinteralfeld 77.05 325⇓*iP* P 04 07 25.4 -0.8
comp=Z,29nm,0.9s
DGMT Dagmar 77.07 34 *eP* P 04 07 27.0 +0.7
comp=Z,90nm,1.1s
DGMT Dagmar 77.07 34 P P 04 07 27.0 +0.7
baz=77,SNR=21
THEF They Montfort 77.09 326 *eP* P 04 07 25.8 -0.6
THEF They Montfort 77.09 326 *eP* P 04 07 25.8 -0.6
THEF They Montfort 77.09 326 *eP* P 04 07 25.8 -0.6
HAU Haudompre 77.12 325⇓*iP* P 04 07 25.9 -0.6
comp=Z,38nm,0.9s
HAU Haudompre 77.12 325⇓*iP* P 04 07 25.9 -0.6
HAU pmax pmax
comp=Z,38nm,0.9s
HAU Haudompre 77.12 325⇓*iP* P 04 07 25.9 -0.6
comp=Z,38nm,0.9s
G18A Lazy EL Ranch, 77.16 39 ⇓P P 04 07 27.6 +0.6
baz=77
C23A Lambert 77.18 35 P P 04 07 27.9 +1.0
baz=77,SNR=21
J15A Blackfoot 77.22 42 ⇑P P 04 07 28.6 +1.3
baz=77,SNR=17
MEZF Maizieres J'vi 77.26 326⇓*iP* P 04 07 27.1 -0.1
comp=Z,119nm,1.2s
MEZF Maizieres J'vi 77.26 326⇓*iP* P 04 07 27.1 -0.1
comp=Z,119nm,1.2s
D22A Cohagen 77.26 36 ⇑P P 04 07 28.1 +0.7
baz=77,SNR=18
I16A Newdale 77.33 41 ⇓P P 04 07 29.9 +1.9
baz=77,SNR=38
LKWY Lake 77.33 40 *eP* P 04 07 30.7 +2.6
LKWY pmax pmax
comp=Z,37nm,1.2s
LKWY Lake 77.33 40 *eP* P 04 07 30.7 +2.6
comp=Z,37nm,1.2s
E21A Keefer Ranch, 77.34 37 ⇓P P 04 07 28.8 +0.9
baz=77,SNR=6.3
H17A Grant Village 77.38 40 ⇑P P 04 07 31.0 +2.7
baz=77,SNR=53
MCH1 Michaelchurch 77.41 333 *eP* P 04 07 27.4 -0.5
MCH1 AMB AMB 04 07 35.5
comp=Z,57nm,1.8s
LOMF Lomont 77.42 325 *eP* P 04 07 27.8 -0.5
LOMF Lomont 77.42 325 *eP* P 04 07 27.8 -0.5
LOMF Lomont 77.42 325 *eP* P 04 07 27.8 -0.5
F20A Billings 77.43 38 ⇑P P 04 07 29.7 +1.3
baz=77
RLMT Red Lodge 77.44 39 *eP* P 04 07 29.9 +1.3
comp=Z,98nm,1.5s
RLMT Red Lodge 77.44 39 P P 04 07 29.9 +1.3
baz=77,SNR=42
K14A Jones Ranch, D 77.48 43 ⇑P P 04 07 30.1 +1.4
baz=77,SNR=32
SFTF Sexfontaines 77.50 326⇓*iP* P 04 07 28.1 -0.5
comp=Z,117nm,1.1s
SFTF Sexfontaines 77.50 326⇓*iP* P 04 07 28.1 -0.5
comp=Z,117nm,1.1s
IMW Indian Meadow 77.58 41 *eP* P 04 07 31.3 +1.9
comp=Z,30nm,1.0s
H18A Shoshone NF, C 77.59 39 P P 04 07 30.7 +1.3
baz=77,SNR=20
D23A Lindsay 77.66 35 P P 04 07 30.8 +1.3
baz=77,SNR=25
DCID1 Drake Creek 77.68 41 *eP* P 04 07 32.4 +2.5
comp=Z,28nm,0.9s
K15A Arbon 77.70 42 P P 04 07 31.9 +1.9
baz=78,SNR=8.3
C24A Savage 77.71 35 P P 04 07 30.7 +0.9
baz=78,SNR=7.3
I17A Pilgrim Ck. 77.73 40 P P 04 07 32.7 +2.5
baz=78,SNR=16
ELK Elko 77.74 45 *eP* P 04 07 31.9 +1.6
comp=Z,427nm,1.2s
GVD Gavdhos 77.75 306 *eP* P 04 07 28.5 -1.7
comp=Z,172nm,1.0s
GVD *eP* pP 04 09 28.8 -0.5
NVAR Mina Array Bea 77.76 49 P P 04 07 31.9 +1.4
NVAR pP pP 04 09 30.8 +1.2
NVAR Mina Array Bea 77.76 49 P P 04 07 31.9 +1.4
comp=Z,34nm,0.7s,baz=294,slow=5.2,SNR=238
NVAR pP pP 04 09 30.8 +1.2
comp=Z,5.2nm,1.1s,baz=297,slow=4.9,SNR=6.5
MOOW Moose Ponds 77.78 41 *eP* P 04 07 32.1 +1.7
comp=Z,32nm,1.0s
MOOW *eP* pP 04 09 31.9 +2.4
RRI2 Red Ridge 77.80 41 *eP* P 04 07 32.5 +1.8
comp=Z,162nm,2.0s
L14A Malta 77.83 43 P P 04 07 32.4 +1.8
baz=78,SNR=14
NV11 Mina Array Sit 77.84 49 *eP* P 04 07 31.7 +1.0
NV11 *eP* pP 04 09 31.4 +1.5
G20A Bridger 77.85 38 P P 04 07 31.1 +0.4
baz=78,SNR=16
TPAW Teton Pass 77.87 41 *eP* P 04 07 32.9 +1.8
comp=Z,18nm,1.0s
H19A Powell 77.91 39 P P 04 07 32.4 +1.4
baz=78,SNR=20
E22A Miles City 77.92 36 P P 04 07 31.6 +0.7
baz=78,SNR=6.0
LOHW Long Hollow 77.95 41 *eP* P 04 07 32.9 +1.5
comp=Z,13nm,0.9s
SNOW Snow King Moun 77.99 41 *eP* P 04 07 33.5 +1.9
comp=Z,12nm,0.8s
SENIN Lac Senin/Sane 77.99 324 *eP* P 04 07 31.0 -0.6
comp=Z,39nm,0.8s
K16A Soda Springs 78.06 42 P P 04 07 33.9 +2.0
baz=78,SNR=31
D24A Glendive 78.08 35 P P 04 07 33.0 +1.2
baz=78,SNR=16
J17A Brown Place, J 78.08 41 P P 04 07 33.8 +1.7
baz=78,SNR=12
E23A Ismay 78.15 36 P P 04 07 33.3 +1.1
baz=78,SNR=8.6
HVU Hansel Valley 78.25 43 *eP* P 04 07 34.5 +1.6
HVU pmax pmax
comp=Z,11nm,0.8s
HVU Hansel Valley 78.25 43 *eP* P 04 07 34.5 +1.6
comp=Z,11nm,0.8s
I18A Diamond G Ranc 78.26 40 P P 04 07 34.7 +1.6
baz=78,SNR=15
L15A Malad City 78.28 43 P P 04 07 34.5 +1.4
baz=78,SNR=23
F22A Rosebud 78.29 37 P P 04 07 33.9 +0.9
baz=78,SNR=13
G21A Lodge Grass 78.30 38 ⇑P P 04 07 33.7 +0.6
baz=78,SNR=13
CABF La Chapelle 78.32 325⇓*iP* P 04 07 32.6 -0.5
comp=Z,22nm,0.9s
CABF La Chapelle 78.32 325⇓*iP* P 04 07 32.6 -0.5
CABF pmax pmax
comp=Z,22nm,0.9s
CABF La Chapelle 78.32 325⇓*iP* P 04 07 32.6 -0.5
comp=Z,22nm,0.9s
MTUM Tungsten Hills 78.38 50 *eP* P 04 07 35.1 +1.3
I19A Meeteetse 78.39 39 ⇓P P 04 07 34.9 +1.2
baz=78,SNR=16
K17A Gardner Place, 78.44 41 ⇓P P 04 07 34.6 +0.6
baz=78,SNR=5.5
HEX Exmoor 78.47 333 *eP* P 04 07 32.6 -1.1
HEX Exmoor 78.47 333 P P 04 07 32.6 -1.1
H20A Greybull 78.51 39 P P 04 07 34.9 +0.7
baz=78,SNR=27
E24A Baker 78.53 35 P P 04 07 35.1 +0.9
baz=78,SNR=7.9
J18A Kendall Valley 78.53 41 P P 04 07 36.0 +1.5
baz=78,SNR=36
PTRM Twissleman Ran 78.64 52 *eP* P 04 07 36.7 +1.7
F23A Volborg 78.71 36 ⇓P P 04 07 36.4 +1.2
baz=78
G22A Birney 78.71 37 P P 04 07 36.2 +0.9
baz=78,SNR=14
CUC Castrocucco 78.72 315 *eP* P 04 07 34.3 -1.0
comp=Z,21nm,1.0s
CUC *eP* pP 04 09 36.5 +1.7
LOR Lormes 78.73 326⇓*iP* P 04 07 34.4 -0.8
comp=Z,108nm,1.0s
LOR Lormes 78.73 326⇓*iP* P 04 07 34.4 -0.8
comp=Z,108nm,1.0s
RCTC Rector, Farmer 78.74 51 P P 04 07 36.6 +1.2
baz=79,SNR=6.6
L16A Fish Haven 78.74 42 P P 04 07 37.0 +1.4
baz=78,SNR=13
HTL Hartland 78.76 333 *eP* P 04 07 34.8 -0.4
HTL AMB AMB 04 07 35.2
comp=Z,61nm,1.5s
HTL Hartland 78.76 333 P P 04 07 34.8 -0.4
HTL AMB AMB 04 07 35.2
comp=Z,61nm,1.5s
ULM Lac du Bonnet 78.79 28 *eP* P 04 07 35.1 -0.2
comp=Z,36nm,0.9s
ULM Lac du Bonnet 78.79 28 P P 04 07 35.1 -0.2
comp=Z,31nm,0.8s,baz=330,slow=6.4,SNR=42
TIP Timpagrande 78.81 314 *eP* P 04 07 35.5 -0.3
comp=Z,30nm,1.0s
H21A Big Horn, Sher 78.84 38 P P 04 07 36.9 +0.9

baz=79,SNR=18
I20A **Worland** 78.86 39 ⇓P P 04 07 37.6 +1.6
baz=79,SNR=43
LPL **La Plagne** 78.90 324⇓iP P 04 07 36.1 -0.3
comp=Z,68nm,0.8s
LPL **La Plagne** 78.90 324⇓iP P 04 07 36.1 -0.3
LPL pmax pmax
comp=Z,68nm,0.8s
LPL **La Plagne** 78.90 324⇓iP P 04 07 36.1 -0.3
comp=Z,68nm,0.8s
LPG **La Plagne** 78.91 324⇓iP P 04 07 36.3 -0.2
comp=Z,86nm,0.8s
LPG **La Plagne** 78.91 324⇓iP P 04 07 36.3 -0.2
LPG pmax pmax
comp=Z,86nm,0.8s
LPG **La Plagne** 78.91 324⇓iP P 04 07 36.3 -0.2
comp=Z,86nm,0.8s
J19A **Crowheart** 78.95 40 ⇑P P 04 07 37.4 +0.7
baz=79,SNR=30
K18A **Toltan Ranch,** 78.95 41 ⇑P P 04 07 38.0 +1.2
baz=79,SNR=13
L17A **Cokeville** 78.95 42 ⇓P P 04 07 37.5 +0.8
baz=79,SNR=11
HWUT **Hardware Ranch** 78.98 43 eP P 04 07 38.4 +1.5
comp=Z,49nm,0.9s
HWUT epP pP 04 09 37.8 +1.3
SMMC **Simmler** 79.01 52 ⇑P P 04 07 38.1 +1.1
baz=79,SNR=5.5
F24A **Ekalaka** 79.03 36 ⇑P P 04 07 37.2 +0.3
baz=79,SNR=24
SSF **Saint Saulge** 79.04 326⇓iP P 04 07 36.1 -0.7
comp=Z,59nm,0.9s
SSF **Saint Saulge** 79.04 326⇓iP P 04 07 36.1 -0.7
SSF pmax pmax
comp=Z,59nm,0.9s
SSF **Saint Saulge** 79.04 326⇓iP P 04 07 36.1 -0.7
comp=Z,59nm,0.9s
BW06 **Boulder Array** 79.09 41 eP P 04 07 37.9 +0.5
comp=Z,30nm,0.9s
BW06 **Boulder Array** 79.09 41 P P 04 07 38.0 +0.5
baz=79,SNR=41
PDAR **Pinedale Array** 79.09 41 P P 04 07 38.0 +0.5
PDAR pP pP 04 09 38.3 +1.2
PDAR **Pinedale Array** 79.09 41 P P 04 07 38.0 +0.5
comp=Z,23nm,0.9s,baz=347,slow=1.2,SNR=162
PDAR pP pP 04 09 38.3 +1.2
comp=Z,3.6nm,1.1s,baz=333,slow=1.7,SNR=5.8
G23A **Biddle** 79.13 37 P P 04 07 38.1 +0.7
baz=79,SNR=16
VES **Vestal, Richgr** 79.16 51 ⇓P P 04 07 37.8 +0.2
baz=79,SNR=16
M16A **Huntsville** 79.17 43 ⇓P P 04 07 39.0 +1.2
baz=79
H22A **Clearmont** 79.17 38 P P 04 07 38.6 +0.9
baz=79,SNR=10
FLN **La Foliniere** 79.21 330⇓iP P 04 07 36.6 -1.1
comp=Z,17nm,0.6s
FLN **La Foliniere** 79.21 330⇓iP P 04 07 36.6 -1.1
FLN pmax pmax
comp=Z,17nm,0.6s
FLN **La Foliniere** 79.21 330⇓iP P 04 07 36.6 -1.1
comp=Z,17nm,0.6s
LDF **La Druitiere** 79.22 329⇓iP P 04 07 36.6 -1.1
comp=Z,16nm,0.6s
LDF **La Druitiere** 79.22 329⇓iP P 04 07 36.6 -1.1
LDF pmax pmax
comp=Z,16nm,0.6s
LDF **La Druitiere** 79.22 329⇓iP P 04 07 36.6 -1.1
comp=Z,16nm,0.6s
HYF **Humbligny** 79.22 327⇓iP P 04 07 37.6 -0.2
HYF **Humbligny** 79.22 327⇓iP P 04 07 37.6 -0.2
SMF **Signal de Mont** 79.24 326⇓iP P 04 07 37.0 -0.9
comp=Z,53nm,1.1s
SMF **Signal de Mont** 79.24 326⇓iP P 04 07 37.0 -0.9
SMF pmax pmax
comp=Z,53nm,1.1s
SMF **Signal de Mont** 79.24 326⇓iP P 04 07 37.0 -0.9
comp=Z,53nm,1.1s
BNI **Bardonecchia** 79.29 323 eP P 04 07 38.0 -0.3
BNI pmax pmax
comp=Z,16nm,1.0s
BNI **Bardonecchia** 79.29 323 eP P 04 07 38.0 -0.3
comp=Z,16nm,1.0s
GRAC **Grapevine Rang** 79.30 49 P P 04 07 40.3 +1.8
baz=79,SNR=35
R11A **Troy Canyon, C** 79.30 47 ⇑P P 04 07 39.8 +1.2
baz=79,SNR=22
CWC **Cottonwood Cre** 79.30 50 P P 04 07 39.8 +1.2
baz=79,SNR=5.3
AVF **Avril sur Loir** 79.32 326⇓iP P 04 07 37.7 -0.6
comp=Z,119nm,0.9s
AVF **Avril sur Loir** 79.32 326⇓iP P 04 07 37.7 -0.6
AVF pmax pmax
comp=Z,119nm,0.9s
AVF **Avril sur Loir** 79.32 326⇓iP P 04 07 37.7 -0.6
comp=Z,119nm,0.9s
J20A **Shoshoni** 79.34 39 ⇑P P 04 07 39.4 +0.7
baz=79,SNR=10
I21A **Big Trails, Te** 79.35 39 ⇓P P 04 07 39.6 +0.9
baz=79,SNR=47
K19A **Absolon Red Bu** 79.38 40 P P 04 07 39.0 +0.1
baz=79,SNR=8.6
DUG **Dugway** 79.40 44 eP P 04 07 40.6 +1.6
DUG e*PP pP 04 09 38.5 -0.3
DUG pmax pmax
comp=Z,30nm,1.2s
DUG **Dugway** 79.40 44 eP P 04 07 40.6 +1.6
comp=Z,30nm,1.2s
DUG epP pP 04 09 38.5 -0.3
DUG **Dugway** 79.40 44 P P 04 07 40.6 +1.6
baz=79,SNR=23
MDND **Maddock** 79.40 32 ⇑P P 04 07 38.8 +0.1
baz=79,SNR=10
PKM **Peak Mountain** 79.40 52 P P 04 07 40.9 +1.7
baz=79,SNR=5.1
G24A **Alzada** 79.45 36 P P 04 07 39.6 +0.4
baz=79,SNR=7.9
JSA **Saint Aubin** 79.48 331 eP P 04 07 38.3 -0.7
JSA AMB AMB 04 07 39.0
comp=Z,44nm,0.9s
JSA **Saint Aubin** 79.48 331 P P 04 07 38.3 -0.7
JSA AMB AMB 04 07 39.0
comp=Z,44nm,0.9s
L18A **Fontenelle, Gr** 79.50 41 P P 04 07 40.9 +1.3
baz=79,SNR=24
MBDF **Montbardon** 79.50 323⇓iP P 04 07 38.5 -1.0
comp=Z,47nm,0.7s
MBDF **Montbardon** 79.50 323⇓iP P 04 07 38.5 -1.0
MBDF pmax pmax
comp=Z,47nm,0.7s
MBDF **Montbardon** 79.50 323⇓iP P 04 07 38.5 -1.0
comp=Z,47nm,0.7s
M17A **Scullys Gap (B** 79.53 42 ⇓P P 04 07 41.3 +1.5
baz=79,SNR=7.3
ISA **Isabella** 79.63 51 eP P 04 07 40.5 +0.3
ISA e*PP pP 04 09 40.6 +0.5
ISA pmax pmax
comp=Z,17nm,1.0s
ISA **Isabella** 79.63 51 eP P 04 07 40.5 +0.3
comp=Z,17nm,1.0s
ISA epP pP 04 09 40.6 +0.5
ISA **Isabella** 79.63 51 P P 04 07 40.6 +0.4
baz=80,SNR=13
J21A **Lysite** 79.64 39 P P 04 07 41.3 +1.0
baz=79,SNR=18
I22A **9 Mile Ranch,** 79.66 38 P P 04 07 41.0 +0.7
baz=79,SNR=13
GRR **Gorron** 79.66 330⇓iP P 04 07 39.2 -0.8
comp=Z,21nm,0.4s
GRR **Gorron** 79.66 330⇓iP P 04 07 39.2 -0.8
GRR pmax pmax
comp=Z,21nm,0.4s
GRR **Gorron** 79.66 330⇓iP P 04 07 39.2 -0.8
comp=Z,21nm,0.4s
L19A **Farson** 79.69 41 ⇓P P 04 07 41.1 +0.5
baz=80,SNR=36
BGF **Bois d'Agland** 79.71 326⇓iP P 04 07 39.7 -0.7
comp=Z,36nm,0.8s
BGF **Bois d'Agland** 79.71 326⇓iP P 04 07 39.7 -0.7
BGF pmax pmax
comp=Z,36nm,0.8s
BGF **Bois d'Agland** 79.71 326⇓iP P 04 07 39.7 -0.7
comp=Z,36nm,0.8s
SAOF **Saorge** 79.73 322 eP P 04 07 40.1 -0.5
SAOF **Saorge** 79.73 322 eP P 04 07 40.1 -0.5
SAOF **Saorge** 79.73 322 eP P 04 07 40.1 -0.5
ORIF **Oris-en-Rattie** 79.74 324⇓iP P 04 07 40.2 -0.5
comp=Z,34nm,0.7s
ORIF **Oris-en-Rattie** 79.74 324⇓iP P 04 07 40.2 -0.5
ORIF pmax pmax
comp=Z,34nm,0.7s
ORIF **Oris-en-Rattie** 79.74 324⇓iP P 04 07 40.2 -0.5
comp=Z,34nm,0.7s
K20A **Yellowstone Ra** 79.75 40 ⇑P P 04 07 40.4 -0.5
baz=80,SNR=6.3
SBC **Santa Barbara** 79.79 52 ⇓P P 04 07 40.8 -0.1
baz=80
JLU **Jordanelle** 79.79 43 eP P 04 07 42.6 +1.4
comp=Z,14nm,0.9s
ARVC **Arvin** 79.81 51 ⇓P P 04 07 41.4 +0.3
baz=80
N17A **Moffit Pass** 79.84 43 ⇑P P 04 07 41.9 +0.4
baz=80,SNR=16
TOUF **Mont Tournerai** 79.85 322 eP P 04 07 41.0 -0.4
TOUF **Mont Tournerai** 79.85 322 eP P 04 07 41.0 -0.4
TOUF **Mont Tournerai** 79.85 322 eP P 04 07 41.0 -0.4
H24A **Dirks Ranch, A** 79.85 36 ⇑P P 04 07 41.6 +0.3
baz=80,SNR=12
M18A **Lyman** 79.86 42 ⇓P P 04 07 42.5 +1.0
baz=80,SNR=25
SBF **Sospel** 79.88 322 eP P 04 07 40.3 -1.1
comp=Z,93nm,1.0s
SBF **Sospel** 79.88 322 eP P 04 07 40.3 -1.1
SBF pmax pmax
comp=Z,93nm,1.0s
SBF **Sospel** 79.88 322 eP P 04 07 40.3 -1.1
comp=Z,93nm,1.0s
MPMC **Manual Prospec** 79.90 50 ⇑P P 04 07 42.9 +1.1
baz=80,SNR=24
CEL **Celeste** 79.94 313 eP P 04 07 41.0 -0.9
comp=Z,53nm,0.9s
CEL epP pP 04 09 42.2 +0.4
FURC **Furnace Creek,** 79.96 49 ⇑P P 04 07 43.1 +1.3
baz=80,SNR=36
MVIF **Mont Vial** 79.98 322 eP P 04 07 41.4 -0.6
MVIF **Mont Vial** 79.98 322 eP P 04 07 41.4 -0.6
MVIF **Mont Vial** 79.98 322 eP P 04 07 41.4 -0.6
AGO **Saint Agoulin** 80.00 326 eP P 04 07 41.9 0.0
AGO **Saint Agoulin** 80.00 326 eP P 04 07 41.9 0.0
REVF **Revere** 80.01 322 eP P 04 07 41.4 -0.6
REVF **Revere** 80.01 322 eP P 04 07 41.4 -0.6
REVF **Revere** 80.01 322 eP P 04 07 41.4 -0.6
DAU **Daniels Canyon** 80.03 43 eP P 04 07 44.1 +1.5
DAU **Daniels Canyon** 80.03 43 eP P 04 07 44.1 +1.5
SSB **Saint Sauveur** 80.03 325 eP P 04 07 41.4 -0.7
SSB pmax pmax
comp=Z,25nm,0.8s
SSB **Saint Sauveur** 80.03 325 eP P 04 07 41.4 -0.7
comp=Z,25nm,0.8s
SSB **Saint Sauveur** 80.03 325 eP P 04 07 42.0 -0.1
J22A **Midwest** 80.03 38 ⇓P P 04 07 42.7 +0.4
baz=80,SNR=52
MPU **Maple Canyon** 80.14 44 eP P 04 07 44.3 +1.3
comp=Z,21nm,0.9s
PGF **Pioggiola** 80.18 320⇓iP P 04 07 42.2 -0.8
comp=Z,43nm,1.1s
PGF **Pioggiola** 80.18 320⇓iP P 04 07 42.2 -0.8
PGF pmax pmax
comp=Z,43nm,1.1s
PGF **Pioggiola** 80.18 320⇓iP P 04 07 42.2 -0.8
comp=Z,43nm,1.1s
TCF **Toulx Ste Croi** 80.19 327⇓iP P 04 07 42.6 -0.3
comp=Z,109nm,1.2s
TCF **Toulx Ste Croi** 80.19 327⇓iP P 04 07 42.6 -0.3
TCF pmax pmax
comp=Z,109nm,1.2s
TCF **Toulx Ste Croi** 80.19 327⇓iP P 04 07 42.6 -0.3
comp=Z,109nm,1.2s
LRMC **Laurel Mountai** 80.21 50 P P 04 07 44.5 +1.2
baz=80,SNR=20
CALN **Calern** 80.21 322 eP P 04 07 42.5 -0.7
CALN **Calern** 80.21 322 eP P 04 07 42.5 -0.7
CALN **Calern** 80.21 322 eP P 04 07 42.5 -0.7
OSI **Osito Adit** 80.24 52 eP P 04 07 44.6 +1.2
comp=Z,17nm,0.3s
OSI **Osito Adit** 80.24 52 ⇑P P 04 07 45.1 +1.7
baz=80
M19A **Rock Springs** 80.24 41 ⇓P P 04 07 44.5 +1.0
baz=80
L20A **Wamsutter** 80.25 40 P P 04 07 44.5 +1.0
baz=80,SNR=19
K21A **Alcova** 80.28 39 P P 04 07 44.4 +0.7
baz=80,SNR=38
PYM **Petit Puy Mans** 80.30 326 eP P 04 07 43.3 -0.2
PYM **Petit Puy Mans** 80.30 326 eP P 04 07 43.3 -0.2
PYM **Petit Puy Mans** 80.30 326 eP P 04 07 43.3 -0.2
VIVF **Saint-Julien-l** 80.31 324⇓iP P 04 07 43.2 -0.4
comp=Z,89nm,1.0s
VIVF **Saint-Julien-l** 80.31 324⇓iP P 04 07 43.2 -0.4
VIVF pmax pmax
comp=Z,89nm,1.0s
VIVF **Saint-Julien-l** 80.31 324⇓iP P 04 07 43.2 -0.4
comp=Z,89nm,1.0s
N18A **Larsen Ranch,** 80.39 42 P P 04 07 45.5 +1.2
baz=80,SNR=24
SGMF **Saint Gilles** 80.40 330⇓iP P 04 07 43.4 -0.5
comp=Z,55nm,1.0s
SGMF **Saint Gilles** 80.40 330⇓iP P 04 07 43.4 -0.5
SGMF pmax pmax
comp=Z,55nm,1.0s
SGMF **Saint Gilles** 80.40 330⇓iP P 04 07 43.4 -0.5
comp=Z,55nm,1.0s
AGMN **Agassiz Nation** 80.43 29 eP P 04 07 43.8 -0.3
comp=Z,25nm,0.8s
EDW2 **Edwards Air Fo** 80.47 51 P P 04 07 45.8 +1.2
baz=80,SNR=24
FRF **La Foret Royal** 80.47 322⇓iP P 04 07 43.3 -1.1
comp=Z,33nm,1.0s
FRF **La Foret Royal** 80.47 322⇓iP P 04 07 43.3 -1.1
FRF pmax pmax
comp=Z,33nm,1.0s
FRF **La Foret Royal** 80.47 322⇓iP P 04 07 43.3 -1.1
comp=Z,33nm,1.0s
I24A **Kuemmerle Ranc** 80.52 37 P P 04 07 45.4 +0.6
baz=80,SNR=12
RSSD **Black Hills** 80.57 37 eP P 04 07 46.0 +0.8
RSSD pmax pmax
comp=Z,60nm,1.2s
RSSD **Black Hills** 80.57 37 eP P 04 07 46.0 +0.8
comp=Z,60nm,1.2s
ROSF **Rostrenen** 80.59 331⇓iP P 04 07 44.6 -0.3
comp=Z,105nm,1.0s
ROSF **Rostrenen** 80.59 331⇓iP P 04 07 44.6 -0.3
ROSF pmax pmax
comp=Z,105nm,1.0s
ROSF **Rostrenen** 80.59 331⇓iP P 04 07 44.6 -0.3
comp=Z,105nm,1.0s
K22A **Casper** 80.61 39 P P 04 07 45.8 +0.5
baz=80,SNR=9.3
LBL **Lubilhac** 80.62 325 eP P 04 07 45.2 0.0
LBL **Lubilhac** 80.62 325 eP P 04 07 45.2 0.0
LBL **Lubilhac** 80.62 325 eP P 04 07 45.2 0.0
SMRF **Simiane la Rot** 80.62 323⇓iP P 04 07 44.5 -0.7
comp=Z,38nm,1.2s
SMRF **Simiane la Rot** 80.62 323⇓iP P 04 07 44.5 -0.7
comp=Z,38nm,1.2s
SHOC **Shoshone** 80.70 49 P P 04 07 47.2 +1.5
baz=80,SNR=11
N19A **John Jarvie Ra** 80.70 42 P P 04 07 46.7 +0.9
baz=80,SNR=32
LMR **La Mourre** 80.71 322⇓iP P 04 07 44.7 -0.9
comp=Z,66nm,1.0s
LMR **La Mourre** 80.71 322⇓iP P 04 07 44.7 -0.9
LMR pmax pmax
comp=Z,66nm,1.0s
LMR **La Mourre** 80.71 322⇓iP P 04 07 44.7 -0.9
comp=Z,66nm,1.0s
M20A **Sweetwater, Wa** 80.72 41 P P 04 07 47.5 +1.5
baz=80,SNR=16
DECC **Green Verdugo** 80.72 52 ⇓P P 04 07 47.0 +1.1
baz=81,SNR=5.4
L21A **Rawlins** 80.75 40 P P 04 07 46.7 +0.6
baz=80,SNR=12
GSC **Goldstone** 80.84 50 eP P 04 07 47.7 +1.2
GSC e*PP pP 04 09 47.3 +0.4
GSC pmax pmax
comp=Z,44nm,1.1s
GSC **Goldstone** 80.84 50 eP P 04 07 47.7 +1.2
comp=Z,44nm,1.1s
GSC epP pP 04 09 47.3 +0.4
GSC **Goldstone** 80.84 50 ⇑P P 04 07 47.7 +1.2
baz=81,SNR=20
PASC **Pasadena Art C** 80.86 52 eP P 04 07 47.6 +1.0
comp=Z,103nm,0.9s
MFF **Saint Martin d** 80.87 328⇓iP P 04 07 46.1 -0.3
comp=Z,61nm,1.0s
MFF **Saint Martin d** 80.87 328⇓iP P 04 07 46.1 -0.3
MFF pmax pmax
comp=Z,61nm,1.0s
MFF **Saint Martin d** 80.87 328⇓iP P 04 07 46.1 -0.3
comp=Z,61nm,1.0s
TMUT **Trail Mountain** 80.89 44 eP P 04 07 48.8 +1.7
comp=Z,24nm,0.8s
MWC **Mount Wilson** 80.90 51 eP P 04 07 47.8 +0.8
MWC pmax pmax
comp=Z,49nm,1.2s
MWC **Mount Wilson** 80.90 51 eP P 04 07 47.8 +0.8
comp=Z,49nm,1.2s
QUIF **Quistinic** 80.90 331⇓iP P 04 07 45.9 -0.6
comp=Z,35nm,0.9s
QUIF **Quistinic** 80.90 331⇓iP P 04 07 45.9 -0.6
QUIF pmax pmax
comp=Z,35nm,0.9s
QUIF **Quistinic** 80.90 331⇓iP P 04 07 45.9 -0.6
comp=Z,35nm,0.9s
J24A **Dixon Ranch, L** 80.92 37 ⇑P P 04 07 47.6 +0.8
baz=81
K23A **Bowen Ranch, D** 80.94 38 ⇑P P 04 07 47.1 +0.1
baz=81
MSU **Marysvale** 80.98 45 eP P 04 07 49.4 +2.0
MSU e*PP pP 04 09 49.9 +2.1
MSU **Marysvale** 80.98 45 eP P 04 07 49.4 +2.0
MSU epP pP 04 09 49.9 +2.1
P17A **Butcher Ranch,** 81.00 43 P P 04 07 48.9 +1.5
baz=81,SNR=24
M21A **Separation Pea** 81.02 40 P P 04 07 48.4 +0.8
baz=81,SNR=13
CCUT **Cedar City** 81.08 46 eP P 04 07 44.8 -3.2
comp=Z,34nm,1.7s
BFSC **Mount Baldy Ra** 81.12 51 P P 04 07 49.2 +1.1
baz=81,SNR=14
L22A **Ellis Ranch, M** 81.13 39 P P 04 07 49.3 +1.2
baz=81,SNR=6.0
P18A **Preston Nutter** 81.13 43 ⇓P P 04 07 49.6 +1.3
baz=81
O19A **Miners Draw (B** 81.18 42 P P 04 07 49.1 +0.8
baz=81,SNR=14
N20A **Spence Gulch,** 81.19 41 P P 04 07 49.8 +1.4
baz=81,SNR=30
Q16A **Castle Valley** 81.20 44 P P 04 07 50.0 +1.6
baz=81,SNR=10
TUQ **Turquoise Moun** 81.23 49 P P 04 07 50.2 +1.5
baz=81,SNR=34
RJF **Les Rejaudoux** 81.27 326⇓iP P 04 07 48.2 -0.3
comp=Z,82nm,1.2s
RJF **Les Rejaudoux** 81.27 326⇓iP P 04 07 48.2 -0.3
RJF pmax pmax
comp=Z,82nm,1.2s
RJF **Les Rejaudoux** 81.27 326⇓iP P 04 07 48.2 -0.3
comp=Z,82nm,1.2s
CIS **Catalina Islan** 81.29 52 ⇑P P 04 07 49.9 +1.1
baz=81
LASF **Ste Croix** 81.29 324⇓iP P 04 07 48.4 -0.2
comp=Z,48nm,1.0s
LASF **Ste Croix** 81.29 324⇓iP P 04 07 48.4 -0.2
comp=Z,48nm,1.0s
CAF **Calviac** 81.36 326⇓iP P 04 07 49.1 +0.1
comp=Z,97nm,1.0s
CAF **Calviac** 81.36 326⇓iP P 04 07 49.1 +0.1
CAF pmax pmax
comp=Z,97nm,1.0s
CAF **Calviac** 81.36 326⇓iP P 04 07 49.1 +0.1
comp=Z,97nm,1.0s
SRU **San Rafael** 81.38 44 eP P 04 07 50.4 +1.0
SRU pmax pmax
comp=Z,20nm,1.0s
SRU **San Rafael** 81.38 44 eP P 04 07 50.4 +1.0
comp=Z,20nm,1.0s
SRU **San Rafael** 81.38 44 P P 04 07 50.4 +1.0
baz=81,SNR=17
L23A **Garrett** 81.41 39 P P 04 07 49.8 +0.3
baz=81,SNR=19
HEC **Hector,Ludlow** 81.45 50 P P 04 07 51.0 +1.4
baz=81,SNR=22
BBRC **Big Bear Solar** 81.52 51 P P 04 07 51.4 +1.1
baz=81,SNR=5.2
M22A **Cedar Creek Ra** 81.55 40 P P 04 07 51.1 +0.8
baz=81,SNR=22
SCHQ **Schefferville** 81.58 10 eP P 04 07 50.1 +0.2
comp=Z,15nm,0.9s
SCHQ **Schefferville** 81.58 10 P P 04 07 50.0 +0.2
comp=Z,11nm,0.8s,baz=16,slow=5.8,SNR=15
N21A **Black Mountain** 81.61 41 P P 04 07 51.7 +1.1
baz=81,SNR=11
O20A **White River Ci** 81.74 42 ⇓P P 04 07 52.2 +1.0
baz=82,SNR=18
P19A **Cripple Cowboy** 81.76 42 P P 04 07 52.3 +1.0
baz=82,SNR=51
L24A **Wheatland** 81.81 38 ⇑P P 04 07 52.7 +1.2
baz=82,SNR=6.5
MURC **Murrieta** 81.84 51 P P 04 07 52.6 +0.9
baz=82,SNR=9.1
K25A **Mack Ranch, Ha** 81.84 37 ⇑P P 04 07 52.7 +1.1
baz=82,SNR=6.2
GMRC **Granite Mounta** 81.86 50 P P 04 07 53.2 +1.4
baz=82,SNR=29
LFF **La Frestale** 81.89 327⇓iP P 04 07 51.8 +0.2
comp=Z,121nm,0.8s
LFF **La Frestale** 81.89 327⇓iP P 04 07 51.8 +0.2
LFF pmax pmax
comp=Z,121nm,0.8s
LFF **La Frestale** 81.89 327⇓iP P 04 07 51.8 +0.2
comp=Z,121nm,0.8s
M23A **Laramie** 81.90 39 ⇓P P 04 07 53.3 +1.3
baz=82
LDFC **Landfair** 81.95 49 eP P 04 07 53.5 +1.2
comp=Z,41nm,0.9s
LDFC epP pP 04 09 55.0 +1.9
O21A **Pagoda** 82.05 41 P P 04 07 54.1 +1.3
baz=82,SNR=6.9
N22A **Wattenberg Ran** 82.08 40 P P 04 07 54.4 +1.4
baz=82,SNR=21
K26A **Motz Farm, Whi** 82.08 37 P P 04 07 53.7 +0.9
baz=82,SNR=8.8
Q19A **Hogan Spring (** 82.14 43 P P 04 07 54.2 +1.0
baz=82,SNR=16
P20A **De Beque** 82.15 42 P P 04 07 54.2 +0.9
baz=82,SNR=8.9
PHWY **Pilot Hill** 82.16 39 eP P 04 07 54.3 +0.9
comp=Z,47nm,1.1s
BELC **Belle Mtn. Jos** 82.24 50 P P 04 07 54.7 +0.9
baz=82,SNR=20
N23A **Red Feather La** 82.25 40 P P 04 07 55.3 +1.4
baz=82,SNR=17
EYMN **Ely** 82.25 27 eP P 04 07 53.1 -0.4
comp=Z,23nm,1.0s
PFO **Pinyon Flat Ob** 82.26 51 eP P 04 07 53.5 -0.4
comp=Z,31nm,1.1s
PFO epP pP 04 09 56.5 +1.6
PFO **Pinyon Flat Ob** 82.26 51 P P 04 07 55.0 +1.0
baz=82,SNR=17
M24A **Cheyenne** 82.32 39 ⇑P P 04 07 55.1 +1.0
baz=82,SNR=15
VSL **Villasalto** 82.36 318 eP P 04 07 53.4 -0.7
comp=Z,36nm,1.0s
109C **Camp Elliot, M** 82.41 52 ⇑P P 04 07 55.5 +1.0
baz=82
NEE2 **Needles Airpor** 82.45 49 ⇑P P 04 07 56.0 +1.3
baz=82
BRSD **Miller** 82.46 33 P P 04 07 55.2 +0.6
baz=82,SNR=8.1
U15A **North Rim** 82.48 46 P P 04 07 57.1 +2.0
baz=82,SNR=71
K27A **Fluckinger Fa** 82.49 36 P P 04 07 55.6 +0.8
baz=82,SNR=11
O22A **Kremmling** 82.54 41 P P 04 07 56.4 +1.0
baz=82,SNR=25
MTLF **Montolieu** 82.58 325⇓iP P 04 07 55.0 -0.2
comp=Z,26nm,1.0s
MTLF **Montolieu** 82.58 325⇓iP P 04 07 55.0 -0.2
MTLF pmax pmax
comp=Z,26nm,1.0s
MTLF **Montolieu** 82.58 325⇓iP P 04 07 55.0 -0.2
comp=Z,26nm,1.0s
P21A **Newcastle** 82.60 41 P P 04 07 56.9 +1.3
baz=82,SNR=29
IRM **Iron Mountain** 82.60 50 P P 04 07 57.1 +1.6
baz=82,SNR=48
W13A **Hualapai Mount** 82.61 48 P P 04 07 57.2 +1.5
baz=82,SNR=26
Q20A **Ridgley Place,** 82.62 42 P P 04 07 56.6 +0.9

baz=82,SNR=26
L26A Underwood Farm 82.66 37 ⇑P P 04 07 57.0 +1.3
baz=82
M25A Palm-Egli Farm 82.70 38 ⇑P P 04 07 57.6 +1.6
baz=82,SNR=6.8
S18A Hurst Farm, Bl 82.73 44 P P 04 07 57.4 +1.0
baz=82,SNR=26
O23A Lake Granby, G 82.80 40 ⇓P P 04 07 58.2 +1.5
baz=83,SNR=41
N24A Carr 82.80 39 ⇓P P 04 07 58.0 +1.5
baz=83,SNR=8.6
BC3 Big Chuckawall 82.80 50 P P 04 07 57.8 +1.3
baz=83,SNR=29
MONP Monument Peak 82.81 51 P P 04 07 57.7 +0.9
baz=83,SNR=9.8
BAR Barrett 82.81 52 eP P 04 07 57.3 +0.7
comp=Z,35nm,1.1s
P22A Eagle 82.88 41 ⇑P P 04 07 58.2 +1.2
baz=83,SNR=28
PDMCI Parker Dam,Lak 83.06 49 ⇓P P 04 07 58.9 +1.2
baz=83,SNR=23
Q21A Lamborn Mesa, 83.07 42 P P 04 07 59.3 +1.4
baz=83,SNR=18
M26A McRoberts Ranc 83.08 38 ⇓P P 04 07 59.1 +1.2
baz=83
SMCO Snowmass 83.10 41 eP P 04 07 59.7 +1.4
comp=Z,49nm,1.2s
SMCO epP pP 04 10 00.9 +1.3
SWSC Sam W. Stewart 83.13 51 ⇓P P 04 07 59.0 +0.9
baz=83,SNR=6.1
DVTC Desert V Tower 83.16 51 ⇑P P 04 07 59.7 +1.4
baz=83
R20A Redvale 83.17 43 ⇑P P 04 07 59.7 +1.2
baz=83,SNR=38
Y12C Blythe 83.25 50 P P 04 08 00.3 +1.7
baz=83,SNR=20
ISCO Idaho Springs 83.27 40 eP P 04 08 00.0 +1.0
ISCO pmax pmax
comp=Z,22nm,0.8s
ISCO Idaho Springs 83.27 40 eP P 04 08 00.0 +1.0
comp=Z,22nm,0.8s
O24A Longmont 83.27 40 P P 04 08 00.3 +1.5
baz=83,SNR=6.8
MLS Moulis 83.37 325 eP P 04 07 59.2 +0.1
MLS Moulis 83.37 325 eP P 04 07 59.2 +0.1
M27A Reverse DX Ran 83.37 37 ⇓P P 04 08 00.4 +1.1
baz=83
Q22A Crested Butte, 83.37 42 P P 04 08 01.2 +1.6
baz=83,SNR=29
R21A Cimarron 83.44 42 P P 04 08 01.5 +1.6
baz=83,SNR=33
S20A Disappointment 83.45 43 P P 04 08 01.4 +1.4
baz=83,SNR=27
P23A Jefferson 83.49 41 ⇑P P 04 08 01.6 +1.4
baz=83,SNR=19
GLA Glamis 83.60 50 eP P 04 08 01.9 +1.4
GLA e*PP pP 04 10 02.7 +0.8
GLA pmax pmax
comp=Z,34nm,0.9s
GLA Glamis 83.60 50 eP P 04 08 01.9 +1.4
comp=Z,34nm,0.9s
GLA epP pP 04 10 02.7 +0.8
GLA Glamis 83.60 50 P P 04 08 02.0 +1.4
baz=83,SNR=11
EPF Esparros 83.62 326 ⇓iP P 04 07 59.6 -0.8
comp=Z,21nm,1.1s
EPF Esparros 83.62 326 ⇓iP P 04 07 59.6 -0.8
EPF pmax pmax
comp=Z,21nm,1.0s
EPF Esparros 83.62 326 ⇓iP P 04 07 59.6 -0.8
comp=Z,21nm,1.0s
WUAZ Wupatki 83.66 46 eP P 04 08 02.5 +1.6
comp=Z,42nm,1.2s
WUAZ Wupatki 83.66 46 ⇓P P 04 08 02.5 +1.6
baz=84,SNR=16
O25A Wiggins 83.72 39 P P 04 08 02.2 +1.1
baz=84,SNR=11
RESF Ens 83.81 326 eP P 04 08 02.2 +0.8
RESF Ens 83.81 326 eP P 04 08 02.2 +0.8
P24A Kohler Place, 83.82 40 ⇑P P 04 08 03.2 +1.6
baz=84,SNR=5.6
MVCO Mesa Verde 83.86 44 eP P 04 08 03.2 +1.3
comp=Z,32nm,1.0s
MVCO Mesa Verde 83.86 44 P P 04 08 03.3 +1.3
baz=84,SNR=19
Q23A Hartsel 83.86 41 P P 04 08 03.4 +1.4
baz=84,SNR=7.3
S21A Coal Bank Pass 83.87 43 ⇓P P 04 08 03.5 +1.4
baz=84,SNR=79
N27A Anderson Farm, 83.89 38 P P 04 08 03.1 +1.2
baz=84,SNR=10
R22A Saguache, Gunn 83.94 42 P P 04 08 04.4 +1.9
baz=84,SNR=7.4
Y14A Wickenburg 83.96 49 P P 04 08 03.8 +1.5
baz=84,SNR=25
ECSD EROS Data Cent 83.98 32 eP P 04 08 02.3 +0.2
comp=Z,35nm,0.9s
O26A Horse Wrangler 83.99 39 P P 04 08 03.2 +0.9
baz=84,SNR=12
OGNE Ogallala 84.00 37 eP P 04 08 03.0 +0.6
comp=Z,121nm,1.3s
OGNE Ogallala 84.00 37 ⇓P P 04 08 03.3 +0.9
baz=84,SNR=8.8
ETSF Etsaut 84.10 326 ⇓iP P 04 08 02.9 +0.1
comp=Z,24nm,1.0s
ETSF Etsaut 84.10 326 ⇓iP P 04 08 02.9 +0.1
ETSF pmax pmax
comp=Z,24nm,1.0s
ETSF Etsaut 84.10 326 ⇓iP P 04 08 02.9 +0.1
comp=Z,24nm,1.0s
Q24A Divide 84.14 40 P P 04 08 04.5 +1.0
baz=84,SNR=7.8
SPMN St. Paul 84.15 29 P P 04 08 03.0 +0.1
baz=84,SNR=10.0
P25A Willow Gulch B 84.17 39 ⇓P P 04 08 04.5 +1.1
baz=84,SNR=19
SJPF Ste Jean 84.19 327 ⇓iP P 04 08 03.5 +0.3
comp=Z,17nm,1.0s
SJPF Ste Jean 84.19 327 ⇓iP P 04 08 03.5 +0.3
SJPF pmax pmax
comp=Z,17nm,1.0s
SJPF Ste Jean 84.19 327 ⇓iP P 04 08 03.5 +0.3
comp=Z,17nm,1.0s
S22A 4UR Ranch, Cre 84.28 42 ⇑P P 04 08 05.5 +1.4
baz=84,SNR=23
113A Mohawk Valley, 84.40 50 P P 04 08 05.5 +1.1
baz=84,SNR=19
O27A Beecher Island 84.41 38 P P 04 08 05.3 +0.8
baz=84,SNR=8.4
Z14A Wintersburg 84.42 49 P P 04 08 06.0 +1.5
baz=84,SNR=6.0
R23A Moffat 84.43 41 P P 04 08 02.5 -2.3
baz=84,SNR=18
X16A Lo Mia Camp, P 84.45 47 ⇑P P 04 08 06.2 +1.4
baz=84,SNR=36
U20A Newcomb 84.50 44 P P 04 08 06.5 +1.5
baz=84,SNR=5.7
P26A Davis Ranch, A 84.52 39 P P 04 08 05.9 +0.8
baz=84,SNR=12
T21A Navajo Lake 84.52 43 P P 04 08 06.8 +1.7
baz=84,SNR=8.3
Q25A Bedland, Calha 84.61 40 P P 04 08 06.3 +0.7
baz=84,SNR=12
R24A Sanders Place, 84.74 41 P P 04 08 07.6 +1.3
baz=84,SNR=16
T22A Edith 84.82 43 P P 04 08 08.4 +1.7
baz=85,SNR=32
U21A Nageezi 84.89 44 P P 04 08 08.6 +1.5
baz=85,SNR=25
Q26A Hugo 84.95 39 P P 04 08 08.0 +0.8
baz=85,SNR=9.8
V20A Brimhall 84.97 44 P P 04 08 08.6 +1.2
baz=85,SNR=7.3
S24A Houchin Ranch, 85.16 41 P P 04 08 09.7 +1.4
baz=85,SNR=15
X18A Snowflake 85.17 46 P P 04 08 09.9 +1.6
baz=85,SNR=13
R25A Fountain Ranch 85.20 40 P P 04 08 09.2 +0.8
baz=85,SNR=27
T23A Casias Ranch, 85.23 42 P P 04 08 10.2 +1.5
baz=85,SNR=16
KEST Kesra 85.28 316 eP P 04 08 08.6 -0.1
KEST Kesra 85.28 316 P P 04 08 08.2 -0.5
comp=Z,1.9nm,0.9s,baz=47,slow=3.3,SNR=5.5
KSCO Kaye Shedlock' 85.29 39 P P 04 08 09.8 +1.0
baz=85,SNR=14
BGNE Belgrade 85.30 35 P P 04 08 09.5 +0.9
baz=85,SNR=8.9
U22A Llaves 85.34 43 P P 04 08 10.9 +1.7
baz=85,SNR=19
V21A Milan 85.39 44 ⇑P P 04 08 10.4 +1.0
baz=85
W20A Ramah 85.47 45 P P 04 08 11.1 +1.3
baz=85,SNR=20
R26A Arlington 85.48 40 P P 04 08 10.4 +0.8
baz=85,SNR=44
S25A Robets Cordova 85.52 41 P P 04 08 10.4 +0.4
baz=85,SNR=13
214A Organ Pipe Nat 85.55 50 P P 04 08 11.4 +1.4
baz=85,SNR=9.8
V22A San Miguel Ran 85.67 43 ⇓P P 04 08 12.4 +1.7
baz=86,SNR=9.0
T24A Torres, Weston 85.69 42 P P 04 08 12.6 +1.7
baz=86,SNR=17
U23A El Rito 85.71 43 P P 04 08 12.8 +1.9
baz=86,SNR=20
R27A Eads 85.79 39 P P 04 08 11.7 +0.6
baz=86,SNR=26
X20A Quemado 85.92 45 P P 04 08 14.2 +2.2
baz=86,SNR=27
T25A Trinidad 85.94 41 P P 04 08 13.1 +1.0
baz=86,SNR=33
S26A Kim 86.01 40 P P 04 08 12.9 +0.7
baz=86,SNR=15
U24A Moreno Valley 86.10 42 P P 04 08 14.8 +1.9
baz=86,SNR=7.4
V23A Ortiz Mt. (NFS 86.17 43 P P 04 08 15.6 +2.4
baz=86,SNR=14
T26A Comanche Natio 86.31 41 P P 04 08 14.4 +0.7
baz=86,SNR=20
X21A Alamocita Cree 86.37 45 P P 04 08 16.2 +2.1
baz=86,SNR=15
TUC Tucson 86.41 48 eP P 04 08 15.6 +1.5
TUC e*PP pP 04 10 17.9 +1.2
TUC pmax pmax
comp=Z,9.0nm,1.1s
TUC Tucson 86.41 48 eP P 04 08 15.6 +1.5
comp=Z,9.0nm,1.1s
TUC epP pP 04 10 17.9 +1.2
Y20A Horse Springs, 86.47 46 P P 04 08 16.8 +2.2
baz=86,SNR=19
U25A Circle Dot Ran 86.53 42 P P 04 08 15.9 +1.1
baz=86,SNR=8.9
V24A Rampart Ranch, 86.64 42 P P 04 08 17.4 +2.0
baz=86,SNR=7.9
W23A Werner Place, 86.65 43 P P 04 08 17.3 +1.9
baz=86,SNR=13
X22A Bernardo 86.72 44 ⇑P P 04 08 18.5 +2.8
baz=86
LAZ Ladron 86.74 45 eP P 04 08 17.1 +1.3
comp=Z,6.2nm,1.1s
LAZ epP pP 04 10 20.4 +2.0
Y21A Point of Rocks 86.76 45 P P 04 08 18.3 +2.3
baz=87,SNR=24
T27A Campo 86.81 40 P P 04 08 17.0 +1.0
baz=87,SNR=13
SCIA State Center 86.85 31 eP P 04 08 17.0 +1.1
comp=Z,40nm,0.9s
U26A Atchley Ranch, 86.86 41 P P 04 08 17.5 +1.2
baz=87,SNR=16
V25A Rancho No Teng 86.88 42 P P 04 08 17.9 +1.5
baz=87,SNR=16
Z20A Nine Sixteen R 86.97 46 P P 04 08 19.0 +2.1
baz=87,SNR=28
W24A Lazy 6 Ranch, 86.98 43 ⇑P P 04 08 19.2 +2.3
baz=87,SNR=11
T28A Walsh 87.05 40 P P 04 08 17.8 +0.7
baz=87,SNR=5.6
Y22A Socorro 87.19 45 P P 04 08 19.8 +1.9
baz=87,SNR=7.8
BNM Barren Site 87.20 44 eP P 04 08 19.5 +1.5
comp=Z,18nm,1.3s
U27A Thmpson Grove 87.28 40 P P 04 08 19.3 +1.1
baz=87,SNR=38
Z21A St. Cloud Mine 87.31 46 P P 04 08 20.5 +2.0
baz=87,SNR=12
V26A Tequesquite Ra 87.32 41 P P 04 08 19.4 +1.0
baz=87,SNR=21
120A U Bar Ranch, L 87.39 47 P P 04 08 20.8 +2.0
baz=87,SNR=6.5
T29A Hugoton 87.41 39 ⇓P P 04 08 19.4 +0.6
baz=87,SNR=5.4
W25A X Bar L Ranch, 87.45 42 P P 04 08 20.5 +1.5
baz=87,SNR=12
X24A Lazy VL Ranch, 87.48 43 ⇑P P 04 08 21.1 +1.9
baz=87
Y23A Lovelace Mesa, 87.66 44 P P 04 08 21.9 +1.8
baz=88,SNR=16
Z22A Elephant Butte 87.72 45 P P 04 08 22.1 +1.8
baz=88,SNR=10
V27A Dan Oppiter Fa 87.81 41 P P 04 08 21.9 +1.2
baz=88,SNR=6.2
T30A Plains 87.84 39 ⇑P P 04 08 21.0 +0.3
baz=88
121A Cookes Peak, D 87.85 46 ⇑P P 04 08 22.5 +1.5
baz=88,SNR=7.8
KSU1 Kansas State U 87.87 35 eP P 04 08 21.6 +0.8
comp=Z,31nm,0.8s
W26A Owens Ranch, T 87.89 42 ⇓P P 04 08 22.7 +1.6
baz=88
X25A Clemmons Ranch 87.90 43 P P 04 08 23.2 +2.1
baz=88,SNR=5.6
319A Douglas 87.94 48 P P 04 08 23.0 +1.7
baz=88,SNR=9.8
220A Playas Peak, P 87.94 47 P P 04 08 23.1 +1.6
baz=88,SNR=9.5
Z23A Rita Site, Whi 88.10 45 P P 04 08 23.8 +1.7
baz=88,SNR=6.5
122A Cnf Cattle 88.14 45 P P 04 08 24.7 +2.4
baz=88,SNR=6.5
T31A Randall Ranch, 88.20 38 P P 04 08 23.6 +1.3
baz=88,SNR=11
ESDC Sonseca Array 88.20 327 P P 04 08 21.9 -0.5
ESDC PP PP 04 11 51.2 -7.9
ESDC Sonseca Array 88.20 327 P P 04 08 21.9 -0.5
comp=Z,5.2nm,0.8s,baz=21,slow=4.5,SNR=34
ESDC PP PP 04 11 51.2 -7.9
comp=Z,0.5nm,0.6s,baz=42,slow=6.9,SNR=4.2
U30A W&E Inc. Balk 88.22 39 P P 04 08 23.8 +1.3
baz=88,SNR=11
W27A Bowe Ranch, En 88.26 41 P P 04 08 24.2 +1.4
baz=88,SNR=14
X26A CR and CF Fran 88.30 42 P P 04 08 24.5 +1.5
baz=88,SNR=6.9
Y25A Mesa, Roswell 88.36 43 P P 04 08 24.7 +1.4
baz=88,SNR=17
320A Kipp Ranch, An 88.38 47 P P 04 08 25.2 +1.7
baz=88,SNR=6.8
PAB San Pablo 88.46 327 eP P 04 08 22.7 -0.9
PAB pmax pmax
comp=Z,12nm,1.1s
PAB San Pablo 88.46 327 eP P 04 08 22.7 -0.9
comp=Z,12nm,1.1s
Z24A Sheeppen Canyo 88.49 44 P P 04 08 25.9 +1.9
baz=88,SNR=16
222A Williams Famil 88.55 46 ⇑P P 04 08 25.5 +1.3
baz=88,SNR=5.0
123A Bell Site, Whi 88.57 45 ⇓P P 04 08 26.2 +1.9
baz=88
X27A F and S Farms, 88.57 42 ⇑P P 04 08 25.8 +1.5
baz=88,SNR=6.6
Y26A Elida 88.80 43 ⇓P P 04 08 26.8 +1.5
baz=89
Z25A Roswell 88.86 44 P P 04 08 27.6 +1.9
baz=89,SNR=32
124A Stringfield Ra 88.94 44 P P 04 08 27.8 +1.6
baz=89,SNR=25
AMTX Amarillo 89.07 41 eP P 04 08 27.9 +1.4
comp=Z,33nm,1.0s
AMTX Amarillo 89.07 41 P P 04 08 28.0 +1.4
baz=89,SNR=14
X28A Dimmitt 89.12 41 ⇑P P 04 08 28.1 +1.4
baz=89
Y27A Causey 89.15 42 P P 04 08 27.8 +0.8
baz=89,SNR=9.7
V31A Spring Creek L 89.21 39 P P 04 08 29.2 +2.1
baz=89,SNR=16
Z26A Caprock 89.24 43 P P 04 08 28.7 +1.3
baz=89,SNR=11
MSTX Muleshoe 89.28 42 P P 04 08 28.4 +0.8
baz=89,SNR=8.7
125A Gardner Draw, 89.38 44 P P 04 08 29.7 +1.6
baz=89,SNR=15
224A Cornudas Mount 89.40 45 P P 04 08 30.0 +1.8
baz=89,SNR=18
X29A Tulia 89.42 41 P P 04 08 29.4 +1.3
baz=89,SNR=16
HDIL Hopedale 89.48 29 eP P 04 08 29.1 +0.9
comp=Z,25nm,1.0s
Y28A McKinney Farm, 89.58 42 ⇑P P 04 08 30.1 +1.1
baz=89
Z27A Tatum 89.58 43 P P 04 08 30.1 +1.1
baz=89,SNR=20
W31A Holland Ranch, 89.64 39 ⇑P P 04 08 30.3 +1.2
baz=89,SNR=6.2
126A Clayton Basin, 89.72 44 ⇓P P 04 08 30.7 +1.2
baz=90
225A Deer Hill, Car 89.73 44 P P 04 08 31.6 +1.8
baz=90,SNR=21
MNTX Cornudas Mount 89.77 45 eP P 04 08 31.0 +1.3
comp=Z,10.0nm,1.1s
MNTX epP pP 04 10 32.6 -0.7
MNTX Cornudas Mount 89.77 45 P P 04 08 31.4 +1.7
baz=90,SNR=15
X30A Coker Ranch, T 89.81 40 ⇓P P 04 08 30.9 +1.0
baz=90
GDL2 Guadalupe Moun 89.89 44 eP P 04 08 31.9 +1.4
Y29A Porterfield Fa 89.90 41 ⇓P P 04 08 30.9 +0.5
baz=90,SNR=6.8
324A Moseley Ranch, 89.92 45 P P 04 08 31.9 +1.3
baz=90,SNR=10
Z28A Tucker Farm, M 90.02 42 ⇑P P 04 08 31.8 +0.8
baz=90,SNR=5.9
127A Arkansas Junct 90.03 43 P P 04 08 32.0 +1.0
baz=90,SNR=6.9
X31A McDonald Ranch 90.08 40 ⇑P P 04 08 32.6 +1.5
baz=90,SNR=14
CLNB Carlsbad 90.09 44 eP P 04 08 32.5 +1.2
comp=Z,1.0nm,0.4s
226B Tecolote Peak, 90.09 44 P P 04 08 32.9 +1.5
baz=90,SNR=24
325A Bean Ranch, Si 90.24 45 P P 04 08 33.8 +1.7
baz=90,SNR=22
Y30A Stafford Cattl 90.26 41 P P 04 08 33.4 +1.3
baz=90,SNR=13
Z29A Hungry Hill Ra 90.37 42 P P 04 08 33.9 +1.3
baz=90,SNR=34
Y31A Rekieta Farm, 90.50 40 ⇓P P 04 08 33.8 +0.8
baz=90
128A Castleberry Fa 90.51 42 P P 04 08 34.3 +1.1
baz=90,SNR=7.5
WMOK Wichita Mounta 90.55 39 eP P 04 08 34.3 +1.0
WMOK e*PP pP 04 10 37.8 +0.8
WMOK pmax pmax
comp=Z,28nm,1.2s
WMOK Wichita Mounta 90.55 39 eP P 04 08 34.2 +1.0
comp=Z,28nm,1.2s
WMOK epP pP 04 10 37.8 +0.8
Z30A Sanderson Ranc 90.63 41 P P 04 08 34.7 +1.0
baz=90,SNR=21
425A Indio Mountain 90.70 45 P P 04 08 35.9 +1.7
baz=90,SNR=20
326A Caldwell Ranch 90.80 44 P P 04 08 36.1 +1.5
baz=91,SNR=9.4
129A Stewart Farms, 90.80 42 P P 04 08 35.3 +0.7
baz=91,SNR=9.5
Y32A R-V Farms, Ver 90.85 40 P P 04 08 35.8 +1.1
baz=91,SNR=6.7
228A UT Block 9, Go 90.86 43 P P 04 08 36.5 +1.6
baz=91,SNR=5.1
TUL1 Tulsa 90.91 36 P P 04 08 36.5 +1.6
baz=91,SNR=5.2
327A Balmorhea Ranc 91.00 44 ⇓P P 04 08 37.9 +2.4
baz=91
Z31A Sharp Cattle R 91.08 40 P P 04 08 36.6 +0.8
baz=91,SNR=7.1
130A Snyder 91.27 41 P P 04 08 37.5 +0.8
baz=91,SNR=7.2
426A McDonald Obser 91.29 45 P P 04 08 38.2 +1.2
baz=91,SNR=18
328A Wristen Ranch, 91.34 43 P P 04 08 38.4 +1.4
baz=91,SNR=30
229A Bryant Ranch, 91.37 42 P P 04 08 38.5 +1.3
baz=91,SNR=12
Z32A Haskell 91.41 40 P P 04 08 38.2 +0.9
baz=91,SNR=17
ALLY Alegheny Colle 91.44 23 eP P 04 08 37.8 +0.6
comp=Z,19nm,0.8s
427A Hayter Ranch, 91.47 44 ⇑P P 04 08 39.3 +1.6
baz=91,SNR=14
131A Roby 91.49 41 P P 04 08 38.8 +1.1
baz=91,SNR=7.6
329A Wagon Wheel Ra 91.67 43 P P 04 08 39.7 +1.1
baz=92,SNR=17
526A Mary Lane Ranc 91.74 45 P P 04 08 40.7 +1.7
baz=92,SNR=22
230A Sterling City 91.78 42 P P 04 08 40.1 +1.0
baz=92,SNR=21
ABTX Abilene, Hawle 91.89 41 P P 04 08 40.5 +1.0
baz=92,SNR=5.7
ACSO Alum Creek Sta 91.90 25 eP P 04 08 39.9 +0.5
comp=Z,18nm,1.1s
527A Woodward Ranch 91.92 45 ⇓P P 04 08 41.5 +1.7
baz=92
428A Kincaid Ranch, 91.93 44 P P 04 08 41.8 +2.0
baz=92,SNR=55
626A Big Bend Ranch 92.12 45 P P 04 08 42.0 +1.4
baz=92,SNR=15
231A Bronte 92.13 41 P P 04 08 41.4 +0.8
baz=92,SNR=7.3
330A Mertzon 92.14 42 P P 04 08 41.6 +0.9
baz=92,SNR=11
528A Cox Ranch, San 92.33 44 P P 04 08 43.3 +1.6
baz=92,SNR=29
429A Davenport Ranc 92.41 43 P P 04 08 42.6 +0.6
baz=92,SNR=12
TXAR Lajitas Array 92.54 45 P P 04 08 44.2 +1.6
TXAR Lajitas Array 92.54 45 P P 04 08 44.2 +1.6
comp=Z,8.4nm,0.8s,baz=284,slow=3.4,SNR=64
331A San Angelo 92.59 42 P P 04 08 43.4 +0.7
baz=92,SNR=8.0
627A Terlingua Ranc 92.59 45 P P 04 08 44.2 +1.3
baz=92,SNR=14
430A Baggett Ranch, 92.61 43 ⇑P P 04 08 43.8 +0.9
baz=92,SNR=19
529A Stev Forest Ra 92.65 44 P P 04 08 44.2 +1.1
baz=92,SNR=12
628A Black Gap, Mar 92.82 45 ⇑P P 04 08 45.2 +1.3
baz=93
332A Millersview 92.86 41 P P 04 08 45.0 +1.1
baz=93,SNR=8.7
431A Sonora 93.01 42 P P 04 08 45.4 +0.7
baz=93,SNR=5.5
MIAR Mount Ida 93.02 35 eP P 04 08 45.6 +1.0
MIAR pmax pmax
comp=Z,11nm,0.8s
MIAR Mount Ida 93.02 35 eP P 04 08 45.6 +1.0
comp=Z,11nm,0.8s
530A J-C Ranch, Com 93.08 43 P P 04 08 46.0 +1.0
baz=93,SNR=21
432A Menard 93.25 42 P P 04 08 46.9 +1.1
baz=93,SNR=6.7
KMBO Kilima Mbogo 93.29 272 eP P 04 08 46.4 0.0
comp=Z,8.1nm,0.9s
KMBO epP pP 04 10 51.4 +1.0
KMBO PP PP 04 12 39.2 -1.1
KMBO Kilima Mbogo 93.29 272 P P 04 08 46.5 0.0
comp=Z,6.9nm,0.8s,baz=42,slow=8.9,SNR=17
KMBO PP PP 04 12 39.2 -1.1
comp=Z,1.7nm,0.6s,baz=61,slow=18,SNR=5.6
531A Rocksprings 93.46 43 ⇓P P 04 08 47.8 +1.1
baz=93,SNR=5.7
JCT Junction City 93.57 42 eP P 04 08 48.4 +1.1
JCT pmax pmax
comp=Z,10.0nm,0.9s
JCT Junction City 93.57 42 eP P 04 08 48.4 +1.1
comp=Z,10.0nm,0.9s
JCT Junction City 93.57 42 ⇓P P 04 08 48.2 +1.0
baz=93
532A Rocksprings 93.81 42 P P 04 08 49.4 +1.0
baz=94,SNR=13
631A Perdido Creek 94.06 43 P P 04 08 50.6 +1.2
baz=94,SNR=11
MDT Midelt 94.31 324 P P 04 08 50.0 -0.7
MDT Midelt 94.31 324 P P 04 08 50.0 -0.7
comp=Z,7.7nm,0.9s,baz=52,slow=3.9,SNR=15
632A Uvalde 94.38 42 ⇑P P 04 08 52.3 +1.4
baz=94
732A Laxson Ranch, 94.92 43 ⇑P P 04 08 54.8 +1.4
baz=95
KMSC Kings Mountain 97.08 26 ⇓P Pdif 04 09 02.8 -0.1
baz=97
TOA0 Torodi Ar. Sit 107.34 308 ePKP PKiKP 04 13 54.2 +0.2
TORD Torodi Ar. Bea 107.34 308 PKiKP PKiKP 04 13 53.8 -0.2

TORD				PP	PP	04 14 15.2	-8.5	
TORD				PKKPbc	**PKKPbc**	**04 25 07.0**	**-2.4**	
TORD	**Torodi Ar. Bea**	**107.34**	**308**	PKiKP	**PKiKP**	**04 13 53.8**	**-0.2**	
comp=Z,1.0nm,0.9s,baz=36,slow=1.8,SNR=5.3								
TORD				PP	PP	04 14 15.2	-8.5	
comp=Z,2.5nm,0.8s,baz=30,slow=7.1,SNR=7.8								
TORD				PKKPbc	**PKKPbc**	**04 25 07.0**	**-2.4**	
comp=Z,1.3nm,1.0s,baz=228,slow=1.9,SNR=8.0								
DBIC	**Dimbokro**	**116.34**	**309**	PKiKP	**PKPdf**	**04 14 10.3**	**-0.9**	
DBIC				PP	**PP**	**04 15 23.0**	**-4.0**	
DBIC	**Dimbokro**	**116.34**	**309**	PKiKP	**PKPdf**	**04 14 10.3**	**-0.9**	
comp=Z,4.3nm,1.0s,baz=202,slow=5.4,SNR=2.9								
DBIC				PP	**PP**	**04 15 23.0**	**-4.0**	
comp=Z,6.9nm,1.0s,baz=36,slow=7.9,SNR=3.5								
LBTB	**Lobatse**	**117.30**	**260**	*e*PKPdf	**PKPdf**	**04 14 12.5**	**-0.2**	
VNDA	**Vanda**	**121.60**	**172**	PKP	**PKPdf**	**04 14 18.8**	**-0.5**	
VNDA	**Vanda**	**121.60**	**172**	PKP	**PKPdf**	**04 14 18.8**	**-0.5**	
comp=Z,0.9nm,0.8s,baz=336,slow=4.3,SNR=4.6								
ROSC	**El Rosal**	**127.41**	**32**	PKP	**PKPdf**	**04 14 33.1**	**+0.2**	
ROSC				SKPbc	SKiKP	04 16 58.6	-17	
ROSC	**El Rosal**	**127.41**	**32**	PKP	**PKPdf**	**04 14 33.1**	**+0.2**	
comp=Z,2.0nm,0.4s,baz=171,slow=3.8,SNR=3.7								
ROSC				SKPbc	SKiKP	04 16 58.6	-17	
comp=Z,2.9nm,0.3s,baz=1.5,slow=4.6,SNR=4.1								
ATAH	**Atahualpa**	**136.19**	**44**	PKP	**PKPdf**	**04 14 50.6**	**+1.2**	
ATAH				SKPbc	**SKPbc**	**04 17 28.1**	**-0.4**	
ATAH	**Atahualpa**	**136.19**	**44**	PKP	**PKPdf**	**04 14 50.6**	**+1.2**	
comp=Z,5.6nm,0.7s,baz=128,slow=2.2								
ATAH				SKPbc	**SKPbc**	**04 17 28.1**	**-0.4**	
comp=Z,17nm,0.8s,baz=342,slow=2.5,SNR=12								
NNA	**Nana**	**141.09**	**46**	*e*PKPdf	**PKPdf**	**04 14 57.3**	**-0.5**	
NNA				SKPbc	**SKPbc**	**04 17 40.2**	**-1.3**	
NNA	**Nana**	**141.09**	**46**	SKPbc	**SKPbc**	**04 17 40.2**	**-1.3**	
comp=Z,4.7nm,0.4s,baz=208,slow=6.8,SNR=3.6								
SNAA	**Sanae**	**143.39**	**203**	*es*Pdiff		04 15 32.6		
SNAA	**Sanae**	**143.39**	**203**	*e*PKPdf	PKPab	04 14 58.1	-0.6	
SNAA				*e*SKPdf	**SKPbc**	**04 17 43.3**	**-1.9**	
SNAA				SKPbc	**SKPbc**	**04 17 44.0**	**-1.3**	
SNAA	**Sanae**	**143.39**	**203**	PKP	PKPab	04 14 58.2	-0.5	
comp=Z,8.1nm,0.8s,baz=152,slow=3.3,SNR=71								
SNAA				SKPbc	**SKPbc**	**04 17 44.0**	**-1.3**	
comp=Z,6.4nm,1.1s,baz=81,slow=3.9,SNR=9.8								
SAML	**Samuel**	**144.14**	**24**	*e*PKPdf	PKPbc	04 15 02.2	-0.6	
SAML				*e*SKPdf	**SKPbc**	**04 17 47.4**	**-1.4**	
LPAZ	**La Paz**	**149.05**	**37**	*e*PKPdf	**PKPdf**	**04 15 12.0**	**0.0**	
LPAZ				*e*PKPbc	**PKPbc**	**04 15 16.2**	**-0.6**	
LPAZ				PKPbc	**PKPbc**	**04 15 16.6**	**-0.2**	
LPAZ				*e*PKPab	**PKPab**	**04 15 22.8**	**-0.5**	
LPAZ	**La Paz**	**149.05**	**37**	PKPbc	**PKPbc**	**04 15 16.6**	**-0.2**	
comp=Z,11nm,0.9s,baz=331,slow=2.4,SNR=25								
SIV	**San Ignacio**	**151.43**	**24**	PKPbc	**PKPbc**	**04 15 20.6**	**-1.0**	
SIV				PKPab	**PKPab**	**04 15 32.9**	**+0.3**	
SIV	**San Ignacio**	**151.43**	**24**	PKPbc	**PKPbc**	**04 15 20.6**	**-1.0**	
comp=Z,6.0nm,0.8s,baz=349,slow=1.3,SNR=20								
SIV				PKPab	**PKPab**	**04 15 32.9**	**+0.3**	
comp=Z,9.5nm,0.7s,baz=7.7,slow=5.0,SNR=18								
LCO	**Las Campanas**	**157.94**	**58**	*e*PKPab	**PKPab**	**04 16 01.6**	**+0.8**	
CFAA	**Coronel Fontan**	**161.27**	**60**	PKPab	**PKPab**	**04 16 15.8**	**+0.9**	
CFAA	**Coronel Fontan**	**161.27**	**60**	PKPab	**PKPab**	**04 16 15.8**	**+0.9**	
comp=Z,1.7nm,0.9s,baz=305,slow=3.3,SNR=19								
CPUP	**Villa Florida**	**162.29**	**24**	PKPab	**PKPab**	**04 16 18.5**	**-0.8**	
CPUP	**Villa Florida**	**162.29**	**24**	PKPab	**PKPab**	**04 16 18.5**	**-0.8**	
comp=Z,1.9nm,0.6s,baz=317,slow=6.3,SNR=7.7								
PLCA	**Paso Flores**	**164.02**	**90**	PKP	**PKPdf**	**04 15 30.2**	**+0.7**	
PLCA				*e*PKPab	**PKPab**	**04 16 27.7**	**+0.8**	
PLCA				PKPab	PKPab	04 16 27.9	+1.0	
PLCA	**Paso Flores**	**164.02**	**90**	PKP	**PKPdf**	**04 15 30.2**	**+0.7**	
comp=Z,1.8nm,1.0s,baz=213,slow=4.2,SNR=3.1								
PLCA				PKPab	**PKPab**	**04 16 27.9**	**+1.0**	
comp=Z,5.5nm,0.9s,baz=255,slow=4.4,SNR=9.7								
TRQA	**Tornquist**	**169.24**	**68**	*e*PKPab	**PKPab**	**04 16 51.2**	**+1.2**	

*CSEM **18** 04:05:05.0,42°.42N×13°.38E,h11km,MD1.8/8,After ROM*
ROM 18 04:05:05.0±0.1,42°.42N×13°.38E,h11km±2km,Md1.8/8,
MI1.3/4,Error ellipse: s-maj=1.8km s-min=1.2km
az=134.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**166**	Pg	Pg	04 05 08.0	+0.5
AQU				Sg	Sg	04 05 09.7	+0.4
AQU	**L'Aquila**	**0.07**	**166**	Pg	Pg	04 05 08.0	+0.5
AQU				Sg	Sg	04 05 09.7	+0.4
CAMP	**Campotosto**	**0.12**	**11**	Pg	Pg	04 05 08.7	+0.5
CAMP				Sg	Sg	04 05 11.1	+0.6
45nm,0.3s							
CAMP	**Campotosto**	**0.12**	**11**	Pg	Pg	04 05 08.7	+0.5
CAMP				Sg	Sg	04 05 11.1	+0.6
45nm,0.3s							
FAGN	**Fagnano**	**0.22**	**136**	Pg	Pb	04 05 10.7	-0.3
191nm,0.3s							
FAGN	**Fagnano**	**0.22**	**136**	Pg	Pb	04 05 10.7	-0.3
191nm,0.3s							
FIAM	**Fiamignano**	**0.25**	**232**	Pg	Pg	04 05 10.7	+0.4
FIAM				Sg	Sg	04 05 14.4	+0.5
FIAM	**Fiamignano**	**0.25**	**232**	Pg	Pg	04 05 10.7	+0.4
FIAM				Sg	Sg	04 05 14.4	+0.5
TERO	**Teramo**	**0.26**	**39**	Pg	Pg	04 05 10.9	+0.4
TERO				Sg	Sg	04 05 15.0	+0.8
27nm,0.2s							
TERO	**Teramo**	**0.26**	**39**	Pg	Pg	04 05 10.9	+0.4
TERO				Sg	Sg	04 05 15.0	+0.8
27nm,0.2s							
LNSS	**Leonessa**	**0.31**	**306**	Pg	Pg	04 05 11.7	+0.2
LNSS				Sg	Sg	04 05 16.7	+0.9
LNSS	**Leonessa**	**0.31**	**306**	Pg	Pg	04 05 11.7	+0.2
LNSS				Sg	Sg	04 05 16.7	+0.9
VCEL	**Villa Celiera**	**0.34**	**94**	Pg	Pg	04 05 12.6	+0.5
VCEL				Sg	Sg	04 05 17.0	+0.2
37nm,0.4s							
VCEL	**Villa Celiera**	**0.34**	**94**	Pg	Pg	04 05 12.6	+0.5
VCEL				Sg	Sg	04 05 17.0	+0.2
37nm,0.4s							
NRCA	**Norcia**	**0.46**	**335**	Pg	Pg	04 05 14.2	+0.1
NRCA				Sg	Sb	04 05 21.3	-0.8
NRCA	**Norcia**	**0.46**	**335**	Pg	Pg	04 05 14.2	+0.1
NRCA				Sg	Sb	04 05 21.3	-0.8

*ISK **18** 04:06:52.9,39°.05N×29°.10E,h7km,MD2.9*
*ISCJB **18** 04:06:53.6±0.5,39°.08N±0°.03×29°.04E±0°.04,h4km±7km,*
Error ellipse: s-maj=6.0km s-min=4.6km az=149.6
*CSEM **18** 04:06:53.7±0.2,39°.07N×29°.04E,h5km,MD3.0,Error*
ellipse: s-maj=4.5km s-min=3.5km az=96.0
*DDA **18** 04:06:53.4,39°.09N×29°.04E,h7km,MD3.0*
ISC 18 04:06:53.8±1.0,39°.08N±0°.02×29°.04E±0°.02,h7km±11km,
n32,σ0°.47/42,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.26**	**263**	*i* P	**Pg**	**04 06 58.6**	**-0.3**
DEMI				*i* S	**Sg**	**04 07 02.6**	**+0.2**
DEMI	**Demirci**	**0.26**	**263**	*i* P	**Pg**	**04 06 58.6**	**-0.3**
DEMI				*i* S	**Sg**	**04 07 02.6**	**+0.2**
GDZ	**Gediz**	**0.34**	**88**	*i* P	**Pg**	**04 07 00.7**	**+0.2**
GDZ				*i* S	**Sg**	**04 07 05.6**	**+0.6**
GDZ	**Gediz**	**0.34**	**88**	*i* P	**Pg**	**04 07 00.7**	**+0.2**
GDZ				*i* S	**Sg**	**04 07 05.6**	**+0.6**
TVSB	**Tavsanli**	**0.49**	**41**	*e*PG	**Pg**	**04 07 02.8**	**-0.6**
TVSB				*e*SG	**Sg**	**04 07 09.3**	**-0.6**
TVSB	**Tavsanli**	**0.49**	**41**	*e*Pg	**Pg**	**04 07 02.8**	**-0.6**
TVSB				*e*Sg	**Sg**	**04 07 09.3**	**-0.6**
DST	**Dursunbey**	**0.62**	**328**	*e*PG	**Pb**	**04 07 07.0**	**0.0**
DST	**Dursunbey**	**0.62**	**328**	*e*Pg	**Pb**	**04 07 07.0**	**0.0**
KULA	**Kula-Manisa**	**0.64**	**208**	*e*PG	**Pg**	**04 07 06.2**	**+0.2**
KULA				*e*SG	**Sg**	**04 07 14.4**	**+0.2**
KULA	**Kula-Manisa**	**0.64**	**208**	*e*Pg	**Pg**	**04 07 06.2**	**+0.2**
KULA				*e*Sg	**Sg**	**04 07 14.5**	**+0.2**
MANT	**Manisa**	**0.70**	**213**	*i* P	**Pg**	**04 07 07.1**	**-0.1**
MANT	**Manisa**	**0.70**	**213**	*i* P	**Pg**	**04 07 07.1**	**-0.1**
KHAL	**Karahalli**	**0.79**	**153**	*i* P	**Pb**	**04 07 10.2**	**+0.4**
KHAL				*i* S	**Sb**	**04 07 20.5**	**-0.2**
KHAL	**Karahalli**	**0.79**	**153**	*i* P	**Pb**	**04 07 10.2**	**+0.4**
KHAL				*i* S	**Sb**	**04 07 20.5**	**-0.2**
KHL	**Karahalli**	**0.84**	**153**	*e*PG	**Pg**	**04 07 08.6**	**-1.3**
KHL	**Karahalli**	**0.84**	**153**	*e*Pg	**Pg**	**04 07 08.6**	**-1.3**
BALB	**Balikesir**	**1.06**	**302**	*e*PN	**Pb**	**04 07 14.7**	**+0.2**
BALB	**Balikesir**	**1.06**	**302**	*e*Pn	**Pb**	**04 07 14.7**	**+0.2**
CAVI	**Cavuskoy**	**1.28**	**28**	*e*PN	**Pn**	**04 07 18.1**	**0.0**
CAVI	**Cavuskoy**	**1.28**	**28**	*e*Pn	**Pn**	**04 07 18.1**	**0.0**
MDNY	**Mudanya-Bursa**	**1.30**	**355**	*e*PN	**Pg**	**04 07 19.1**	**+0.4**
MDNY	**Mudanya-Bursa**	**1.30**	**355**	*e*Pn	**Pg**	**04 07 19.1**	**+0.4**
KCTX	**Karacabey (Bur**	**1.30**	**336**	*e*PN	**Pn**	**04 07 17.9**	**-0.4**
KCTX	**Karacabey (Bur**	**1.30**	**336**	*e*Pn	**Pn**	**04 07 17.9**	**-0.4**
GONE	**Gonen-Balikesi**	**1.43**	**313**	*e*PN	**Pn**	**04 07 19.9**	**-0.2**
GONE	**Gonen-Balikesi**	**1.43**	**313**	*e*Pn	**Pn**	**04 07 19.9**	**-0.2**
ARMT	**Armutlu**	**1.50**	**355**	*e*PN	**Pb**	**04 07 21.6**	**-0.2**
ARMT	**Armutlu**	**1.50**	**355**	*e*Pn	**Pb**	**04 07 21.6**	**-0.2**
YLV	**Yalova**	**1.51**	**10**	*e*PN	**Pn**	**04 07 21.8**	**+0.5**
YLV	**Yalova**	**1.51**	**10**	*e*Pn	**Pn**	**04 07 21.8**	**+0.5**
GULT	**Gulveren**	**1.77**	**39**	*e*PN	**Pn**	**04 07 25.4**	**+0.6**
GULT	**Gulveren**	**1.77**	**39**	*e*Pn	**Pn**	**04 07 25.4**	**+0.6**

*IDC **18** 04:30:57.4±1.2,1°.27N×96°.99E,h0km,mb4.2/12,*
mb1 4.3/14,mb1mx4.1/28,mbtmp4.2/14,ML3.8/2,MS3.0/1,
Ms1 3.0/1,ms1mx2.4/45,Error ellipse: s-maj=29.5km
s-min=19.5km az=46.0
*DJA **18** 04:31:01.3±0.8,1°.1N±7°×9°.7E±°,h25km±5km,M4.2/7,*
mb4.4/2,MLv4.1/7
*NEIC **18** 04:31:01.1±5.2,1°.30N×97°.04E,h23km±35km,mb4.2/8,*
Error ellipse: s-maj=21.4km s-min=8.0km az=48.0
ISC 18 04:30:59.9±2.0,1°.34N±0°.07×96°.89E±0°.06,h15km±12km,
n49,σ1°.10/54,mb4.3/19,Off west coast of northern
Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.69**	**93**	P	**Pb**	**04 31 13.2**	**-0.4**
GSI				S	**Sb**	**04 31 23.0**	**0.0**
SNSI	**Sinabang, Aceh**	**1.20**	**332**	P	**Pg**	**04 31 23.2**	**+0.2**
SNSI				S	**Sb**	**04 31 38.2**	**+0.6**
KCSI	**Kotacane, Aceh**	**2.34**	**22**	P	**Pn**	**04 31 38.0**	**+0.2**
PSI	**Prapat**	**2.50**	**55**	Pn	**Pn**	**04 31 39.2**	**-0.9**
PSI				Sn	**Sb**	**04 32 17.2**	**+2.0**
PSI	**Prapat**	**2.50**	**55**	P	**Pn**	**04 31 38.5**	**-1.6**
PSI	**Prapat**	**2.50**	**55**	Pn	**Pn**	**04 31 39.2**	**-0.9**
4.7nm,0.3s,baz=258,slow=4.4,SNR=36							
PSI				Sn	**Sb**	**04 32 17.2**	**+2.0**
6.1nm,0.3s,baz=14,slow=21,SNR=2.4							
PSI				LR	LR	04 32 29.3	
comp=Z,308nm,20.8s,baz=300,slow=38							
MNSI	**Mandailing Nat**	**2.75**	**101**	P	**Pn**	**04 31 42.5**	**-0.9**
PPI	**Padang Panjang**	**3.94**	**117**	P	**Pn**	**04 32 00.1**	**+0.3**
BSI	**Banda Aceh**	**4.42**	**339**	P	**Pn**	**04 32 05.1**	**-1.4**
BSI				S	**Sn**	**04 32 55.1**	**-2.7**
IPM	**Ipoh**	**5.17**	**53**	P	**Pn**	**04 32 16.8**	**-0.1**
29nm,0.7s,0.1nm							
KULM	**Kulim**	**5.43**	**44**	*e*Pn	**Pn**	**04 32 19.2**	**-1.2**
33nm,0.9s							
KULM	**Kulim**	**5.43**	**44**	P	**Pn**	**04 32 19.2**	**-1.2**
CMAR	**Chiang Mai Arr**	**17.13**	**7**	P	**Pn**	**04 34 58.2**	**-0.7**
CMAR	**Chiang Mai Arr**	**17.13**	**7**	P	**Pn**	**04 34 58.2**	**-0.7**
0.4nm,0.3s,baz=200,slow=11,SNR=16							
CHTO	**Chiang Mai**	**17.48**	**6**	*e*P	**Pn**	**04 35 03.7**	**+0.4**
3.3nm,0.6s							
SHL	**Shillong**	**24.56**	**349**	*e*P	**P**	**04 36 20.0**	**+0.5**
WRA	**Warramunga Arr**	**42.38**	**122**	P	**P**	**04 38 52.6**	**-1.4**
WRA	**Warramunga Arr**	**42.38**	**122**	P	**P**	**04 38 52.6**	**-1.4**
1.2nm,0.6s,baz=303,slow=9.0,SNR=4.6							
WRAB	**Tennant Creek**	**42.38**	**122**	*e*P	**P**	**04 38 52.2**	**-1.8**
1.3nm,0.6s							
ASAR	**Alice Springs**	**43.73**	**127**	P	**P**	**04 39 04.0**	**-0.9**
ASAR	**Alice Springs**	**43.73**	**127**	P	**P**	**04 39 04.0**	**-0.9**
1.0nm,0.9s,baz=316,slow=7.5,SNR=5.0							
JNU	**Nakatsue**	**44.91**	**42**	P	**P**	**04 39 13.4**	**-0.9**
JNU	**Nakatsue**	**44.91**	**42**	P	**P**	**04 39 13.4**	**-0.9**
5.3nm,0.8s,baz=167,slow=3.8,SNR=3.7							
TKM2	**Tokmak 2**	**45.57**	**338**	*e*P	**P**	**04 39 20.6**	**+1.0**
1.3nm,0.6s							
AAK	**Ala-Archa**	**45.75**	**337**	*e*P	**P**	**04 39 22.2**	**+1.3**
1.4nm,0.8s							
KSAR	**Wonju Arr Be**	**45.88**	**35**	P	**P**	**04 39 21.4**	**-0.5**
KSRS	**Korea Array**	**45.91**	**35**	P	**P**	**04 39 21.4**	**-0.7**
5.2nm,0.9s,baz=221,slow=9.3,SNR=14							
EKS2	**Erkin-Say**	**46.05**	**336**	*e*P	**P**	**04 39 24.8**	**+1.5**
2.5nm,0.8s							
MK31	**Makanchi Array**	**47.03**	**346**	*e*P	**P**	**04 39 31.4**	**+0.7**
MKAR	**Makanchi Array**	**47.03**	**346**	P	**P**	**04 39 31.6**	**+0.9**
MKAR	**Makanchi Array**	**47.03**	**346**	P	**P**	**04 39 31.6**	**+0.9**
1.8nm,0.4s,baz=159,slow=8.9,SNR=37							
SONM	**Songino Array**	**47.04**	**9**	P	**P**	**04 39 31.2**	**+0.3**
SONM	**Songino Array**	**47.04**	**9**	P	**P**	**04 39 31.2**	**+0.3**
3.3nm,0.7s,baz=189,slow=8.9,SNR=31							
KURK	**Kurchatov**	**51.58**	**345**	*e*P	**P**	**04 40 06.0**	**+0.6**
3.7nm,0.9s							
MJAR	**Matsushiro Arr**	**51.80**	**43**	P	**P**	**04 40 07.4**	**+0.1**
MJAR	**Matsushiro Arr**	**51.80**	**43**	P	**P**	**04 40 07.4**	**+0.1**
0.4nm,0.3s,baz=233,slow=6.3,SNR=3.5							
USRK	**Ussuriysk Arra**	**52.82**	**31**	P	**P**	**04 40 14.8**	**+0.1**
8.9nm,0.8s,baz=226,slow=4.9,SNR=15							
ZAAO	**Zalesovo Array**	**53.37**	**351**	*e*P	**P**	**04 40 19.0**	**+0.4**
ZALV	**Zalesovo Beam**	**53.37**	**351**	P	**P**	**04 40 19.2**	**+0.6**
ZALV	**Zalesovo Beam**	**53.37**	**351**	P	**P**	**04 40 19.2**	**+0.6**
6.2nm,0.6s,baz=179,slow=6.2,SNR=38							
BRVK	**Borovoye**	**56.08**	**341**	*e*P	**P**	**04 40 38.1**	**-0.2**
3.8nm,1.0s							
ABKAR	**Akbulak array**	**57.24**	**332**	*e*P	**P**	**04 40 46.6**	**0.0**
4.2nm,0.8s							
KBZ	**Khabaz**	**63.76**	**319**	P	**P**	**04 41 33.7**	**+2.4**
KBZ	**Khabaz**	**63.76**	**319**	P	**P**	**04 41 33.7**	**+2.4**
1.3nm,0.7s,baz=155,slow=5.7,SNR=4.5							
BUR08	**Bucovina Ar. S**	**76.73**	**319**	*e*P	**P**	**04 42 51.0**	**+0.1**
FINES	**FINESS Array B**	**79.73**	**333**	P	**P**	**04 43 07.2**	**+0.2**
FINES	**FINESS Array B**	**79.73**	**333**	P	**P**	**04 43 07.2**	**+0.2**
2.5nm,1.0s,baz=104,slow=3.9,SNR=5.8							
ARCES	**ARCESS Array B**	**82.30**	**340**	P	**P**	**04 43 19.7**	**-0.9**
ARCES	**ARCESS Array B**	**82.30**	**340**	P	**P**	**04 43 19.7**	**-0.9**
5.7nm,1.1s,baz=83,slow=9.9,SNR=6.2							

*IDC **18** 04:31:29.2±0.8,3°.65N×126°.79E,h0km,mb4.1/10,*
mb1 4.2/10,mb1mx4.0/24,mbtmp4.1/10,MS3.3/1,
Ms1 3.3/1,ms1mx2.4/40,Error ellipse: s-maj=48.8km
s-min=14.3km az=71.0
*ISCJB **18** 04:31:33.5±0.4,3°.65N±0°.08×126°.8E±0°.1,h48km,*
mb4.2/21,Error ellipse: s-maj=20.8km s-min=7.2km
az=154.0
*NEIC **18** 04:31:33.8±0.4,3°.66N×126°.83E,h35km,mb4.3/11,Error*
ellipse: s-maj=23.5km s-min=7.4km az=66.0
ISC 18 04:31:35.3±0.6,3°.6N±0°.1×126°.8E±0°.2,h48km,n44,
σ1°.01/47,mb4.2/21,1D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.63**	**340**	LR	LR	04 34 04.0	
comp=Z,362nm,18.3s,baz=153,slow=43							
CTBH	**Cotabato--PC H**	**4.39**	**324**	*i*P	**Pn**	**04 32 39.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**21.64**	**183**	P	**P**	**04 36 22.2**	**+0.5**
FITZ	**Fitzroy Crossi**	**21.64**	**183**	P	**P**	**04 36 22.2**	**+0.5**
1.3nm,0.4s,baz=359,slow=6.6,SNR=11							
COEN	**Coen**	**23.84**	**137**	*e*P	**P**	**04 36 43.4**	**-0.9**
24nm,0.8s							
WRAB	**Tennant Creek**	**24.56**	**163**	*e*P	**P**	**04 36 50.5**	**-0.4**
19nm,1.1s							
WRA	**Warramunga Arr**	**24.57**	**163**	P	**P**	**04 36 50.8**	**-0.2**
WRA	**Warramunga Arr**	**24.57**	**163**	P	**P**	**04 36 50.8**	**-0.2**
8.7nm,0.8s,baz=343,slow=10,SNR=42							
AS31	**Alice Springs**	**28.00**	**166**	*e*P	**P**	**04 37 24.4**	**+2.5**
ASAR	**Alice Springs**	**28.00**	**166**	P	**P**	**04 37 21.9**	**-0.1**
ASAR	**Alice Springs**	**28.00**	**166**	P	**P**	**04 37 21.9**	**-0.1**
0.4nm,0.3s,baz=347,slow=8.2,SNR=11							
CMAR	**Chiang Mai Arr**	**31.01**	**300**	P	**P**	**04 37 48.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**31.01**	**300**	P	**P**	**04 37 48.9**	**+0.2**
0.7nm,0.3s,baz=112,slow=7.2,SNR=5.2							
KSAR	**Wonju Array Be**	**33.65**	**2**	P	**P**	**04 38 11.9**	**+0.3**
KSRS	**Korea Array**	**33.66**	**2**	P	**P**	**04 38 11.9**	**+0.2**
0.6nm,0.4s,baz=182,slow=11,SNR=3.6							
STKA	**Stephens Creek**	**38.01**	**159**	P	**P**	**04 38 49.6**	**+0.6**
STKA	**Stephens Creek**	**38.01**	**159**	P	**P**	**04 38 49.6**	**+0.6**
4.8nm,0.3s,baz=333,slow=10,SNR=19							
RAMN	**Ramite**	**44.89**	**305**	*e*P	**P**	**04 39 47.9**	**+2.1**
GUN	**Gumba**	**45.86**	**306**	*e*P	**P**	**04 39 52.4**	**-1.2**
PALK	**Pallekele**	**46.05**	**277**	*e*P	**P**	**04 39 54.6**	**-0.3**
13nm,1.0s							
ULN	**Ulaanbaatar**	**47.23**	**342**	*e*P	**P**	**04 40 04.0**	**+0.2**
4.8nm,1.1s							
SONM	**Songino Array**	**47.41**	**341**	P	**P**	**04 40 06.0**	**+0.9**
SONM				PcP	**PcP**	**04 41 36.4**	**+1.3**
SONM	**Songino Array**	**47.41**	**341**	P	**P**	**04 40 06.0**	**+0.9**
0.5nm,0.4s,baz=147,slow=8.6,SNR=4.0							
SONM				PcP	**PcP**	**04 41 36.4**	**+1.3**
0.9nm,0.7s,baz=157,slow=4.2,SNR=3.5							
KOLN	**Koldanda**	**47.66**	**305**	*e*P	**P**	**04 40 06.9**	**-0.6**
11nm,0.3s							
DANN	**Dangsing**	**47.76**	**306**	*e*P	**P**	**04 40 06.9**	**-1.4**
11nm,0.5s							
PYUN	**Piuthan**	**48.29**	**305**	*e*P	**P**	**04 40 11.2**	**-1.1**
MK31	**Makanchi Array**	**57.69**	**325**	*e*P	**P**	**04 41 20.9**	**-0.2**
MKAR	**Makanchi Array**	**57.69**	**325**	P	**P**	**04 41 20.6**	**-0.4**
MKAR				PcP	**PcP**	**04 42 15.8**	**+2.1**
MKAR	**Makanchi Array**	**57.69**	**325**	P	**P**	**04 41 20.6**	**-0.4**
1.6nm,0.5s,baz=118,slow=7.5,SNR=13							
MKAR				PcP	**PcP**	**04 42 15.8**	**+2.1**
0.6nm,0.6s,baz=131,slow=4.0,SNR=2.9							
TKM2	**Tokmak 2**	**59.88**	**319**	*e*P	**P**	**04 41 35.8**	**-0.8**
1.4nm,0.7s							
EKS2	**Erkin-Say**	**60.99**	**318**	*e*P	**P**	**04 41 44.4**	**+0.4**
1.2nm,0.6s							
KURK	**Kurchatov**	**61.87**	**327**	*e*P	**P**	**04 41 49.2**	**-0.5**
4.7nm,0.6s							
KKAR	**Karatay Array**	**63.37**	**317**	*e*P	**P**	**04 41 59.6**	**-0.2**
1.3nm,0.7s							
BRVK	**Borovoye**	**67.52**	**327**	*e*P	**P**	**04 42 26.1**	**-0.5**
3.1nm,0.9s							
ABKAR	**Akbulak array**	**72.29**	**321**	*e*P	**P**	**04 42 55.1**	**-0.7**
0.6nm,0.5s							
VNDA	**Vanda**	**83.33**	**173**	*e*P	**P**	**04 43 54.3**	**-2.3**
1.0nm,0.8s							
BRTR	**Keskin Array B**	**90.16**	**310**	P	**P**	**04 44 30.4**	**-0.6**
BRTR	**Keskin Array B**	**90.16**	**310**	P	**P**	**04 44 30.4**	**-0.6**
0.8nm,0.8s,baz=102,slow=5.2,SNR=4.2							
ARCES	**ARCESS Array B**	**90.57**	**340**	P	**P**	**04 44 31.8**	**-0.3**
ARCES	**ARCESS Array B**	**90.57**	**340**	P	**P**	**04 44 31.8**	**-0.3**
2.7nm,0.8s,baz=80,slow=7.4,SNR=4.9							
BUR08	**Bucovina Ar. S**	**95.14**	**318**	*e*P	**P**	**04 44 53.3**	**-0.5**
TOA0	**Torodi Ar. Sit**	**123.05**	**288**	*e*PKPdf	**PKPdf**	**04 50 25.6**	**-2.0**
TORD	**Torodi Ar. Bea**	**123.05**	**288**	PKP	**PKPdf**	**04 50 28.2**	**+0.6**
TORD	**Torodi Ar. Bea**	**123.05**	**288**	PKP	**PKPdf**	**04 50 28.2**	**+0.6**
0.2nm,0.4s,baz=59,slow=1.8,SNR=7.5							

*CSEM **18** 04:32:07.0,42°.57N×13°.35E,h10km,MD1.4/2,After ROM*
ROM 18 04:32:07.0±0.4,42°.57N×13°.35E,h10km±5km,Md1.4/2,
MI1.3/1,Error ellipse: s-maj=2.8km s-min=1.2km
az=175.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.06**	**127**	Pg	Pg	04 32 09.5	+0.3
CAMP				Sg	Sg	04 32 10.9	+0.1
38nm,0.4s							
**CAM

Ms1 3.0/1,ms1mx2.7/31,Error ellipse: s-maj=50.4km s-min=29.8km az=54.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
URZ	**Urewera**	**7.85**	**203**	P	Pn		05 09 26.3	-2.2
	0.3nm,0.3s,baz=149,slow=19,SNR=7.6							
URZ				Sn	Sn		05 10 49.6	-8.4
	1.3nm,0.3s,baz=149,slow=23,SNR=12							
URZ				LR	LR		05 11 37.5	
	comp=Z,104nm,21.3s,baz=221,slow=31							
ASAR	**Alice Springs**	**42.27**	**268**	P	P		05 15 28.5	0.0
	1.6nm,0.5s,baz=105,slow=7.5,SNR=31							
WRA	**Warramunga Arr**	**43.32**	**273**	P	P		05 15 37.2	+0.2
	2.8nm,0.4s,baz=113,slow=7.8,SNR=23							
FITZ	**Fitzroy Crossi**	**51.55**	**271**	P	P		05 16 40.8	-0.3
	1.9nm,0.9s,baz=134,slow=9.1,SNR=3.5							
QSPA	**South Pole Qui**	**59.02**	**180**	P	P		05 17 34.8	+0.4
	2.0nm,0.5s,baz=360,slow=1.8,SNR=29							
VNA3	**Neumayer Olymp**	**77.67**	**176**	*e*P	P		05 19 31.1	+0.1
VNA2	**Neumayer--Watz**	**78.09**	**177**	*e*P	P		05 19 33.0	-0.3
	baz=186,slow=4.2							
FINES	**FINESS Array B**	**145.51**	**339**	PKPbc	PKPdf		05 27 10.9	-1.4
	4.3nm,1.1s,baz=21,slow=4.6,SNR=3.9							

GUC 18 05:08:45.2±0.6,31°.82S×71°.89W,h24km±4km,MD3.6, ML3.0,2C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
CHNG	**Los Chungos**	**0.34**	**101**	⇓*i*P	Pb		05 08 52.3	-0.3
CHNG				*i* S	Sb		05 08 58.0	+0.2
CMCH	**Combarbala**	**0.99**	**50**	⇑*i*P	Pn		05 09 02.6	-1.2
CMCH				*i* S	Sb		05 09 16.5	-0.2
CMCH				AML	AML		05 09 20.5	
	comp=E,995nm,0.6s							
ROCH	**El Roble**	**1.37**	**147**	*e*P	Pn		05 09 08.8	-0.4
ROCH				*e*S	Sn		05 09 27.1	+0.3
ROCH				AML	AML		05 09 28.7	
	comp=N,367nm,0.3s							
PEL	**Peldehue**	**1.67**	**143**	*e*P	Pn		05 09 13.4	+0.4
PEL				*i* S	Sb		05 09 35.2	-0.7
PEL				AML	AML		05 09 39.8	
	comp=E,587nm,0.4s							
TLL	**Tololo Astrono**	**1.89**	**30**	*e*P	Pn		05 09 17.8	+1.4
TLL				*i* S	Sb		05 09 42.4	-0.5
TLL				AML	AML		05 09 49.2	
	comp=N,119nm,0.5s							
CLCH	**Cerro Calan**	**1.94**	**144**	⇑*i*P	Pn		05 09 18.2	+1.3
CLCH				*i* S	Sb		05 09 43.1	-0.9
CLCH				AML	AML		05 09 48.1	
	comp=N,164nm,0.4s							
FCH	**Farellones**	**2.02**	**139**	AML	AML		05 09 47.8	
	comp=E,128nm,0.3s							
ANTU	**Antumapu**	**2.04**	**149**	AML	AML		05 09 52.9	
	comp=N,113nm,0.4s							
LMEL	**Las Melosas**	**2.47**	**145**	⇓*i*P	Pn		05 09 25.3	+1.1
LMEL				*i* S	Sn		05 09 56.3	+2.5
LMEL				AML	AML		05 10 05.3	
	comp=N,94nm,0.4s							

*ISCJB **18** 05:12:14.4±0.4,38°.84N±0°.03×23°.16E±0°.04,h11km±3km, Error ellipse: s-maj=6.1km s-min=3.4km az=37.7*
*CSEM **18** 05:12:14.6±0.1,38°.83N×23°.16E,h8km,ML1.4/4,Error ellipse: s-maj=2.6km s-min=1.6km az=132.0*
*ATH **18** 05:12:14.3,38°.87N×22°.97E,h16km±2km,MD2.8/5*
*THE **18** 05:12:14.9,38°.84N×23°.15E,h8km±1km,ML1.4/4,Error ellipse: s-maj=1.2km s-min=0.3km az=110.0*

ISC 18 05:12:14.9±1.0,38°.85N±0°.02×23°.13E±0°.03,h7km±7km, n26,σ0°59/47,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
SMIA	**Simia**	**0.07**	**63**	P	**Pg**		**05 12 16.6**	**-0.2**
SMIA				S	**Sg**		**05 12 18.0**	**-0.2**
SMIA	**Simia**	**0.07**	**63**	P	**Pg**		**05 12 16.6**	**-0.2**
SMIA				S	**Sg**		**05 12 18.0**	**-0.2**
ATAL	**Atalanti**	**0.18**	**209**	P	**Pg**		**05 12 18.5**	**0.0**
ATAL				S	**Sg**		**05 12 21.4**	**+0.4**
ATAL	**Atalanti**	**0.18**	**209**	P	**Pg**		**05 12 18.5**	**0.0**
ATAL				S	**Sg**		**05 12 21.4**	**+0.4**
LKR	**Lokris**	**0.22**	**208**	P	**Pg**		**05 12 19.2**	**-0.1**
LKR				S	**Sg**		**05 12 22.9**	**+0.6**
LKR	**Lokris**	**0.22**	**208**	*e*PB	**Pg**		**05 12 19.2**	**-0.1**
LKR				*e*SB	**Sg**		**05 12 23.1**	**+0.8**
LKR	**Lokris**	**0.22**	**208**	*e*Pb	**Pg**		**05 12 19.3**	**-0.1**
LKR				S	**Sg**		**05 12 22.9**	**+0.6**
AXAR	**Agios Charalam**	**0.38**	**258**	P	**Pg**		**05 12 22.5**	**+0.2**
AXAR				S	**Sg**		**05 12 28.3**	**+1.0**
AXAR	**Agios Charalam**	**0.38**	**258**	P	**Pg**		**05 12 22.5**	**+0.2**
AXAR				S	**Sg**		**05 12 28.3**	**+1.0**
MRKA	**Markates**	**0.38**	**111**	P	**Pg**		**05 12 22.0**	**-0.4**
MRKA				S	**Sg**		**05 12 27.6**	**+0.1**
MRKA	**Markates**	**0.38**	**111**	P	**Pg**		**05 12 22.0**	**-0.4**
MRKA				S	**Sg**		**05 12 27.6**	**+0.1**
SKIA	**Skiathos**	**0.41**	**39**	P	**Pg**		**05 12 23.0**	**0.0**
SKIA				S	**Sg**		**05 12 28.7**	**+0.3**
SKIA	**Skiathos**	**0.41**	**39**	P	**Pg**		**05 12 23.0**	**0.0**
SKIA				S	**Sg**		**05 12 28.7**	**+0.3**
NEO	**Neokhori**	**0.47**	**9**	*e*PB	**Pg**		**05 12 23.9**	**-0.1**
NEO				*e*SB	**Sg**		**05 12 30.7**	**+0.6**
NEO	**Neokhori**	**0.47**	**9**	*e*Pb	**Pg**		**05 12 23.9**	**-0.1**
NEO				*e*Sb	**Sg**		**05 12 30.7**	**+0.6**
XOR	**Xorichti**	**0.52**	**5**	P	**Pg**		**05 12 25.1**	**+0.1**
XOR				S	**Sg**		**05 12 32.3**	**+0.5**
XOR	**Xorichti**	**0.52**	**5**	P	**Pg**		**05 12 25.1**	**+0.1**
XOR				S	**Sg**		**05 12 32.3**	**+0.5**
DSF	**Desfina**	**0.64**	**228**	P	**Pg**		**05 12 26.9**	**-0.4**
DSF				S	**Sg**		**05 12 36.2**	**+0.5**
DSF	**Desfina**	**0.64**	**228**	P	**Pg**		**05 12 26.9**	**-0.4**
DSF				S	**Sg**		**05 12 36.2**	**+0.5**
AGG	**Agios Georgios**	**0.65**	**286**	*e*PN	**Pg**		**05 12 24.7**	**-2.7**
AOS	**Alonnisos**	**0.67**	**61**	*e*PN	**Pb**		**05 12 29.1**	**+0.2**
AOS	**Alonnisos**	**0.67**	**61**	*e*Pn	**Pb**		**05 12 29.1**	**+0.2**
KALE	**Kalithea**	**0.90**	**240**	P	**Pg**		**05 12 31.6**	**-0.6**
KALE				S	**Sb**		**05 12 45.1**	**0.0**
KALE	**Kalithea**	**0.90**	**240**	P	**Pg**		**05 12 31.6**	**-0.6**
KALE				S	**Sb**		**05 12 45.1**	**0.0**
PTL	**Penteli**	**0.98**	**144**	*e*PN	**Pb**		**05 12 34.1**	**-0.2**
PTL	**Penteli**	**0.98**	**144**	*e*Pn	**Pb**		**05 12 34.1**	**-0.2**

*ISCJB **18** 05:20:22.6±0.4,4°.57N±0°.07×78°.4W±0°.1,h11km,mb4.1/25, MS3.4/3,Error ellipse: s-maj=18.2km s-min=7.1km az=152.1*
*IDC **18** 05:20:28.9±2.1,4°.55N×78°.51W,h46km±21km,mb3.8/16, mb1 4.0/20,mb1mx3.9/31,mbtmpb3.8/20,ML3.5/4,MS3.2/6, Ms1 3.3/6,ms1mx3.0/30,Error ellipse: s-maj=25.3km s-min=13.2km az=61.0*
*NEIC **18** 05:20:29.2±0.9,4°.47N×78°.59W,h52km±9km,mb4.3/15, Error ellipse: s-maj=13.0km s-min=7.0km az=63.0*

ISC 18 05:20:24.3±0.5,4°.58N±0°.07×78°.5W±0°.1,h11km,n103, σ0°90/96,mb4.2/25,MS3.5/3,7C-17D,South of Panama

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
ROSC	**El Rosal**	**4.12**	**86**	*e*Pn	Pn		05 21 31.9	+4.3
ROSC	**El Rosal**	**4.12**	**86**	P	Pn		05 21 31.6	+4.0
	12nm,0.3s,baz=359,slow=2.2,SNR=29							
BCIP	**Isla Barro Col**	**4.76**	**343**	*e*Pn	**Pn**		**05 21 37.4**	**+1.3**
JTS	**JuntasAbangare**	**8.59**	**312**	P	**Pn**		**05 22 28.6**	**-0.1**
JTS	**JuntasAbangare**	**8.59**	**312**	P	**Pn**		**05 22 28.6**	**-0.1**
	0.3nm,0.3s,baz=336,slow=20,SNR=2.0							
JTS				LR	LR		05 25 36.5	
	comp=Z,154nm,19.1s,baz=238,slow=36							
ATAH	**Atahualpa**	**11.63**	**180**	P	**Pn**		**05 23 11.7**	**+0.9**
ATAH	**Atahualpa**	**11.63**	**180**	P	**Pn**		**05 23 11.7**	**+0.9**
	0.9nm,0.3s,baz=8.5,slow=12,SNR=4.1							
ATAH				LR	LR		05 28 09.7	
	comp=Z,73nm,21.9s,baz=151,slow=40							
SDDR	**Presa de Saban**	**15.94**	**25**	*e*P	**P**		**05 24 13.9**	**+1.5**
	15nm,0.9s							
NNA	**Nana**	**16.53**	**174**	*e*P	**P**		**05 24 22.9**	**+4.0**
	36nm,1.1s							
NNA	**Nana**	**16.53**	**174**	P	**P**		**05 24 19.3**	**+0.3**
	0.9nm,0.3s,baz=354,slow=9.6,SNR=7.3							
SJG	**San Juan**	**18.05**	**41**	LR	LR		05 31 03.0	
	comp=Z,44nm,20.4s,baz=96,slow=35							
SAML	**Samuel**	**20.30**	**131**	*e*P	**P**		**05 24 60.0**	**-0.5**
	8.1nm,0.8s							
LPAZ	**La Paz**	**23.11**	**154**	*e*P	**P**		**05 25 32.3**	**+1.1**
	2.4nm,0.8s							
LPAZ	**La Paz**	**23.11**	**154**	P	**P**		**05 25 32.4**	**+1.3**
	2.1nm,0.7s,baz=339,slow=16,SNR=6.1							
LPAZ				LR	LR		05 34 41.7	
	comp=Z,52nm,18.5s,baz=28,slow=37							
SIV	**San Ignacio**	**26.71**	**140**	P	**P**		**05 26 04.1**	**+0.1**
SIV	**San Ignacio**	**26.71**	**140**	P	**P**		**05 26 04.1**	**+0.1**
	1.0nm,0.8s,baz=331,slow=7.6,SNR=6.6							
BDFB	**Brasilia**	**36.22**	**124**	LR	LR		05 41 57.2	
	comp=Z,82nm,21.7s,baz=336,slow=36							
ALLY	**Alegheny Colle**	**36.94**	**358**	*e*P	**P**		**05 27 35.0**	**+1.6**
	18nm,1.2s							
SRU	**San Rafael**	**45.01**	**324**	*e*P	**P**		**05 28 41.2**	**+1.0**
	7.4nm,1.1s							
SRU	**San Rafael**	**45.01**	**324**	⇓P	**P**		**05 28 40.4**	**+0.2**
	baz=45,SNR=5.7							
RSSD	**Black Hills**	**45.37**	**334**	*e*P	**P**		**05 28 43.8**	**+0.8**
	8.2nm,1.2s							
PLCA	**Paso Flores**	**45.67**	**172**	P	**P**		**05 28 44.0**	**-1.3**
PLCA	**Paso Flores**	**45.67**	**172**	P	**P**		**05 28 44.0**	**-1.3**
	1.8nm,0.8s,baz=332,slow=10.0,SNR=3.3							
L18A	**Fontenelle, Gr**	**46.65**	**327**	⇓P	**P**		**05 28 53.4**	**+0.3**
	baz=47							
PDAR	**Pinedale Array**	**46.99**	**329**	P	**P**		**05 28 55.5**	**-0.3**
PDAR	**Pinedale Array**	**46.99**	**329**	P	**P**		**05 28 55.5**	**-0.3**
	1.4nm,0.9s,baz=127,slow=9.5,SNR=10							
L17A	**Cokeville**	**47.22**	**327**	P	**P**		**05 28 58.2**	**+0.6**
	baz=47,SNR=5.5							
J18A	**Kendall Valley**	**47.54**	**329**	P	**P**		**05 29 01.0**	**+0.8**
	baz=48,SNR=8.0							
ULM	**Lac du Bonnet**	**47.83**	**345**	P	**P**		**05 29 01.1**	**-0.9**
ULM	**Lac du Bonnet**	**47.83**	**345**	P	**P**		**05 29 01.1**	**-0.9**
	4.1nm,0.6s,baz=162,slow=6.1,SNR=6.1							
ULM				LR	LR		05 49 52.3	
	comp=Z,66nm,18.5s,baz=329,slow=37							
J17A	**Brown Place, J**	**48.01**	**328**	⇑P	**P**		**05 29 04.3**	**+0.6**
	baz=48,SNR=8.0							
MOOW	**Moose Ponds**	**48.30**	**329**	*e*P	**P**		**05 29 06.7**	**+0.8**
	3.6nm,0.9s							
I17A	**Pilgrim Ck.**	**48.33**	**329**	⇓P	**P**		**05 29 07.2**	**+1.0**
	baz=48							
IMW	**Indian Meadow**	**48.50**	**329**	*e*P	**P**		**05 29 08.1**	**+0.5**
	3.3nm,0.8s							
RLMT	**Red Lodge**	**48.54**	**331**	⇑P	**P**		**05 29 08.1**	**+0.3**
	baz=49							
C23A	**Lambert**	**48.80**	**336**	⇓P	**P**		**05 29 10.0**	**+0.5**
	baz=49							
DGMT	**Dagmar**	**48.95**	**337**	*e*P	**P**		**05 29 11.3**	**+0.6**
	8.2nm,0.9s							
DGMT	**Dagmar**	**48.95**	**337**	⇓P	**P**		**05 29 11.4**	**+0.7**
	baz=49							
E20A	**Meyer Farm, Mu**	**49.04**	**333**	⇓P	**P**		**05 29 12.3**	**+0.8**
	baz=49							
A24A	**Westby**	**49.25**	**338**	⇓P	**P**		**05 29 13.7**	**+0.7**
	baz=49							
B23A	**Brockton**	**49.25**	**337**	⇑P	**P**		**05 29 14.1**	**+1.1**
	baz=49							
E19A	**Rath Farm, Rou**	**49.30**	**333**	⇓P	**P**		**05 29 14.1**	**+0.7**
	baz=50							
F18A	**Big Timber**	**49.33**	**331**	P	**P**		**05 29 14.6**	**+0.9**
	baz=50,SNR=9.1							
NVAR	**Mina Array Bea**	**49.45**	**319**	P	**P**		**05 29 15.6**	**+0.7**
NVAR	**Mina Array Bea**	**49.45**	**319**	P	**P**		**05 29 15.6**	**+0.7**
	0.9nm,0.8s,baz=124,slow=6.1,SNR=7.4							
D20A	**Manuel Ranch,**	**49.49**	**334**	⇓P	**P**		**05 29 14.8**	**0.0**
	baz=50							
F17A	**Fitzpatrick Pl**	**49.78**	**331**	⇑P	**P**		**05 29 18.9**	**+1.7**
	baz=50							
D19A	**Cripps Ranch,**	**49.88**	**333**	P	**P**		**05 29 18.9**	**+1.1**
	baz=50,SNR=5.6							
E18A	**Harlowton**	**49.91**	**332**	⇑P	**P**		**05 29 18.8**	**+0.7**
	baz=50							
A22A	**Carney Farms,**	**50.04**	**337**	⇓P	**P**		**05 29 19.7**	**+0.7**
	baz=50							
BOZ	**Bozeman (W)**	**50.08**	**330**	*e*P	**P**		**05 29 20.1**	**+0.6**
	3.1nm,1.1s							
MCMT	**McKenzie Canyo**	**50.13**	**328**	*e*P	**P**		**05 29 21.3**	**+1.2**
	1.2nm,1.0s							
HLID	**Hailey**	**50.14**	**326**	*e*P	**P**		**05 29 20.6**	**+0.6**
	1.6nm,0.8s							
C19A	**Slack Wire Ran**	**50.38**	**334**	⇓P	**P**		**05 29 22.4**	**+0.8**
	baz=50							
B20A	**Solberg Farm,**	**50.47**	**335**	⇓P	**P**		**05 29 23.1**	**+0.9**
	baz=51							
EGMT	**Eagleton**	**50.91**	**333**	⇑P	**P**		**05 29 26.1**	**+0.4**
	baz=51							
SCHQ	**Schefferville**	**50.98**	**9**	*e*P	**P**		**05 29 26.8**	**+0.8**
	12nm,1.2s							
SCHQ	**Schefferville**	**50.98**	**9**	P	**P**		**05 29 26.8**	**+0.8**
	6.5nm,1.0s,baz=206,slow=6.4,SNR=4.3							
C17A	**Wharram Farm,**	**51.08**	**332**	P	**P**		**05 29 27.6**	**+0.7**
	baz=51,SNR=6.2							
F13A	**Darby**	**51.55**	**328**	⇓P	**P**		**05 29 31.3**	**+0.7**
	baz=52							
A18A	**Metzger Ranch,**	**51.62**	**334**	⇓P	**P**		**05 29 31.2**	**+0.3**
	baz=52							
E13A	**Victor**	**51.92**	**329**	⇓P	**P**		**05 29 33.8**	**+0.6**
	baz=52							
A17A	**Triple J Farms**	**52.02**	**333**	⇓P	**P**		**05 29 34.4**	**+0.5**
	baz=52							
F12A	**Elk City**	**52.02**	**328**	P	**P**		**05 29 34.6**	**+0.6**
	baz=52,SNR=6.2							
MSO	**Missoula**	**52.05**	**330**	⇓P	**P**		**05 29 34.5**	**+0.2**
	baz=52							
NEW	**Newport**	**54.62**	**329**	*e*P	**P**		**05 29 53.0**	**0.0**
	1.5nm,0.6s							
NEW	**Newport**	**54.62**	**329**	P	**P**		**05 29 53.4**	**+0.4**
	1.8nm,0.7s,baz=125,slow=9.9,SNR=4.7							
FRB	**Frobisher Bay**	**59.49**	**5**	P	**P**		**05 30 26.9**	**-0.3**
FRB	**Frobisher Bay**	**59.49**	**5**	P	**P**		**05 30 26.9**	**-0.3**
	1.2nm,0.6s,baz=177,slow=8.2,SNR=5.7							
YKA	**Yellowknife Ar**	**63.65**	**342**	P	**P**		**05 30 55.0**	**-0.3**
YKA	**Yellowknife Ar**	**63.65**	**342**	P	**P**		**05 30 54.9**	**-0.3**
	2.0nm,0.8s,baz=132,slow=6.7,SNR=44							
YKW3	**Yellowknife Ar**	**63.70**	**342**	*e*P	**P**		**05 30 55.0**	**-0.6**
DLBC	**Dease Lake**	**66.84**	**333**	*e*P	**P**		**05 31 16.9**	**+0.8**
DLBC	**Dease Lake**	**66.84**	**333**	P	**P**		**05 31 17.0**	**+0.8**
	3.9nm,0.9s,baz=142,slow=6.6,SNR=4.0							
RES	**Resolute Bay**	**70.70**	**355**	P	**P**		**05 31 39.1**	**-0.7**
RES	**Resolute Bay**	**70.70**	**355**	P	**P**		**05 31 39.1**	**-0.7**
	0.9nm,1.0s,baz=136,slow=3.9,SNR=2.5							
INK	**Inuvik**	**73.39**	**341**	P	**P**		**05 31 55.8**	**-0.3**
INK	**Inuvik**	**73.39**	**341**	P	**P**		**05 31 55.8**	**-0.3**
	1.6nm,1.0s,baz=128,slow=9.8,SNR=4.8							
ESDC	**Sonseca Array**	**75.16**	**50**	P	**P**		**05 32 07.0**	**-0.1**
ESDC	**Sonseca Array**	**75.16**	**50**	P	**P**		**05 32 07.0**	**-0.1**
	0.4nm,0.5s,baz=277,slow=6.3,SNR=4.8							
ILAR	**Eielson Array**	**76.78**	**336**	P	**P**		**05 32 14.8**	**-0.9**
ILAR	**Eielson Array**	**76.78**	**336**	P	**P**		**05 32 14.8**	**-0.9**
	0.6nm,0.9s,baz=105,slow=3.5,SNR=6.2							
TORD	**Torodi Ar. Bea**	**79.39**	**78**	P	**P**		**05 32 30.2**	**-1.0**
TORD	**Torodi Ar. Bea**	**79.39**	**78**	P	**P**		**05 32 30.2**	**-1.0**
	1.3nm,1.1s,baz=285,slow=6.2,SNR=4.8							
SYO	**Syowa Base**	**104.05**	**161**	*e*P	**Pdif**		**05 34 26.5**	**-0.7**
MKAR	**Makanchi Array**	**126.09**	**16**	PKP	**PKPdf**		**05 39 26.5**	**-0.6**
MKAR	**Makanchi Array**	**126.09**	**16**	PKP	**PKPdf**		**05 39 26.5**	**-0.6**
	0.5nm,0.9s,baz=333,slow=1.4,SNR=4.2							
SONM	**Songino Array**	**127.64**	**356**	PKP	**PKPdf**		**05 39 30.6**	**+0.4**
SONM	**Songino Array**	**127.64**	**356**	PKP	**PKPdf**		**05 39 30.6**	**+0.4**
	1.1nm,0.7s,baz=294,slow=1.5,SNR=7.9							
AS31	**Alice Springs**	**143.48**	**236**	*e*PKPdf	PKPab		05 39 56.1	-0.2
ASAR	**Alice Springs**	**143.49**	**236**	PKP	PKPab		05 39 56.4	+0.1
ASAR	**Alice Springs**	**143.49**	**236**	PKP	PKPab		05 39 56.4	+0.1
	2.2nm,0.9s,baz=119,slow=4.1,SNR=16							
GUN	**Gumba**	**144.34**	**24**	*e*P	**PKPab**		**05 40 00.4**	**+0.6**
	33nm,1.0s							
PKI	**Pulchoki**	**144.45**	**25**	*e*P	**PKPab**		**05 40 00.2**	**0.0**
	11nm,0.6s							
WRAB	**Tennant Creek**	**144.60**	**242**	*e*PKPdf	**PKPab**		**05 39 59.9**	**-0.7**
WRA	**Warramunga Arr**	**144.61**	**242**	PKP	**PKPab**		**05 40 00.3**	**-0.2**
WRA	**Warramunga Arr**	**144.61**	**242**	PKP	**PKPab**		**05 40 00.3**	**-0.2**
	11nm,1.1s,baz=110,slow=3.3,SNR=26							
RAMN	**Ramite**	**145.49**	**24**	*e*P	**PKPbc**		**05 40 01.7**	**-2.0**
TAPN	**Taplejung**	**145.56**	**22**	*e*P	**PKPdf**		**05 40 04.1**	**+0.2**
ODAN	**Odare**	**145.88**	**23**	*e*P	**PKPdf**		**05 40 02.8**	**-1.6**
	2.9nm,0.6s							
FITZ	**Fitzroy Crossi**	**152.87**	**238**	*e*PKPbc	**PKPbc**		**05 40 21.1**	**-1.4**
CMAR	**Chiang Mai Arr**	**156.97**	**6**	PKP	**PKPdf**		**05 40 20.2**	**-0.9**
CMAR	**Chiang Mai Arr**	**156.97**	**6**	PKP	**PKPdf**		**05 40 20.2**	**-0.9**
	0.4nm,0.3s,baz=300,slow=2.0,SNR=4.8							

IDC 18 05:34:23.2±2.6,24°.18S×66°.51W,h168km±27km,mb3.1/3, mb1 3.3/4,mb1mx3.1/17,mbtmpb3.1/4,Error ellipse: s-maj=51.1km s-min=20.1km az=94.0,Salta Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
CFAA	**Coronel Fontan**	**7.56**	**191**	P	Pn		05 36 09.9	-0.8
	0.0nm,0.3s,baz=360,slow=13,SNR=6.4							
LPAZ	**La Paz**	**7.99**	**349**	P	Pn		05 36 17.9	+0.6
	0.3nm,0.3s,baz=152,slow=8.5,SNR=10.0							
LPAZ				S	Sn		05 37 43.1	-4.2
	0.0nm,0.3s,baz=254,slow=7.4,SNR=2.1							
QSPA	**South Pole Qui**	**66.03**	**180**	P	P		05 44 52.0	+0.4
	0.5nm,0.5s,baz=234,slow=5.8,SNR=5.1							
TORD	**Torodi Ar. Bea**	**76.22**	**69**	P	P		05 45 53.1	-0.3
	0.1nm,0.4s,baz=255,slow=5.7,SNR=3.4							
YKA	**Yellowknife Ar**	**94.44**	**340**	P	P		05 47 22.2	-1.3
	0.1nm,0.5s,baz=132,slow=4.6,SNR=7.5							
MKAR	**Makanchi Array**	**146.37**	**40**	PKPbc	PKPbc		05 53 44.4	+0.2
	0.4nm,0.4s,baz=304,slow=3.2,SNR=3.2							

*IDC **18** 06:01:17.0±10.0,0°.27N×122°.01E,h198km±105km, mb3.3/3,mb1 3.5/5,mb1mx3.1/25,mbtmpb3.3/5,Error ellipse: s-maj=148.2km s-min=18.0km az=57.0*
*ISCJB **18** 06:01:18.4±0.8,0°.26N±0°.09×121°.7E±0°.1,h202km, mb3.9/3,Error ellipse: s-maj=15.6km s-min=12.1km az=22.8*
*DJA **18** 06:01:20.7±0.8,0°N±6°×12°2E±°,h189km±7km,M3.8/6, mb3.9/1,MLv3.7/6*

ISC 18 06:01:18.4±1.1,0°.22N±0°.09×121°.8E±0°.1,h202km,n12, σ1§45/14,mb3.9/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
MRSI	**Marisa**	**0.31**	**35**	P	**Pn**		**06 01 46.3**	**+1.1**
MRSI				S	**S**		**06 02 06.9**	**+0.8**
LUWI	**Luwuk**	**1.61**	**141**	P	**Pn**		**06 01 54.9**	**+1.6**
LUWI				S	**S**		**06 02 21.0**	**+1.0**
KMSI	**Cibinong**	**2.24**	**81**	P	**Pn**		**06 02 00.8**	**+1.2**
TTSI	**Tana Toraja**	**3.78**	**211**	P	**Pn**		**06 02 19.6**	**+2.0**
KDI	**Kendari**	**4.24**	**168**	P	**Pn**		**06 02 24.4**	**+1.1**
SPSI	**Sidrap Palu**	**4.61**	**206**	P	**Pn**		**06 02 29.3**	**+1.3**
KAPI	**Kappang**	**5.58**	**201**	P	**Pn**		**06 02 40.8**	**+0.5**
KAPI	**Kappang**	**5.58**	**201**	P	**Pn**		**06 02 40.8**	**+0.5**
	0.8nm,0.3s,baz=44,slow=6.8,SNR=8.3							
FITZ	**Fitzroy Crossi**	**18.60**	**168**	P	**P**		**06 05 19.0**	**-1.8**
	0.3nm,0.3s,baz=19,slow=5.8,SNR=16							
WRA	**Warramunga Arr**	**23.52**	**149**	P	**P**		**06 06 08.3**	**-2.2**
	3.5nm,0.4s,baz=326,slow=11,SNR=37							
ASAR	**Alice Springs**	**26.51**	**154**	P	**P**		**06 06 36.5**	**-1.1**
	1.2nm,0.5s,baz=343,slow=14,SNR=32							
MKAR	**Makanchi Array**	**57.78**	**329**	P	**P**		**06 10 48.1**	**-0.5**
	0.6nm,0.5s,baz=128,slow=9.3,SNR=8.8							

IDC 18 06:02:55.2±1.1,0°.90S×132°.77E,h0km,mb4.1/5, mb1 4.2/7,mb1mx3.8/23,mbtmp4.0/7,ML4.0/2,Error ellipse: s-maj=55.3km s-min=18.3km az=79.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
FAKI	**Fak Fak**	**2.08**	**194**	P	Pg		06 03 36.6	+1.6
FITZ	**Fitzroy Crossi**	**18.48**	**202**	P	Pn		06 07 13.9	+1.1
	0.3nm,0.3s,baz=80,slow=11,SNR=10							
WRA	**Warramunga Arr**	**18.99**	**175**	P	Pn		06 07 18.9	-0.2
	0.5nm,0.3s,baz=356,slow=11,SNR=14							
ASAR	**Alice Springs**	**22.66**	**177**	P	P		06 07 58.8	+0.5
	2.3nm,0.3s,baz=358,slow=12,SNR=42							
STKA	**Stephens Creek**	**31.92**	**166**	P	P		06 09 21.2	-1.4
	0.8nm,0.3s,baz=330,slow=11,SNR=7.7							
MKAR	**Makanchi Array**	**64.79**	**324**	P	P		06 13 35.6	-0.2
	0.5nm,0.5s,baz=112,slow=8.1,SNR=9.7							
KURBB	**Kurchatov Arra**	**68.88**	**326**	P	P		06 14 01.1	-0.7
	0.9nm,

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**2.32**	**280**	⇑*i*P	**Pn**	**07 03 43.8**	**+0.5**
GSPH				*e*S	**Sn**	**07 04 10.8**	**-0.8**
FITZ	**Fitzroy Crossi**	**23.68**	**184**	P	**P**	**07 08 09.5**	**+0.4**
	1.7nm,0.8s,baz=10,slow=10,SNR=5.2						
WRA	**Warramunga Arr**	**26.40**	**165**	P	P	07 08 35.1	+1.3
	0.4nm,0.3s,baz=342,slow=10,SNR=6.1						
ASAR	**Alice Springs**	**29.88**	**168**	P	P	07 09 06.3	+1.5
	0.2nm,0.5s,baz=342,slow=6.9,SNR=5.7						
ASAR				PcP	**PcP**	**07 12 04.7**	**-0.9**
	0.2nm,0.5s,baz=343,slow=2.7,SNR=4.4						
SONM	**Songino Array**	**45.63**	**340**	P	**P**	**07 11 16.8**	**-0.2**
	0.7nm,0.7s,baz=157,slow=7.7,SNR=4.9						
PETK	**Petropavlovsk-**	**53.44**	**22**	P	P	07 12 17.1	+1.1
	2.8nm,0.7s,baz=224,slow=4.0,SNR=2.9						
MKAR	**Makanchi Array**	**56.27**	**324**	P	**P**	**07 12 37.2**	**+0.7**
	1.1nm,0.5s,baz=113,slow=7.5,SNR=30						
ZALV	**Zalesovo Beam**	**59.10**	**332**	P	**P**	**07 12 56.5**	**+0.3**
	0.9nm,0.3s,baz=104,slow=6.3,SNR=4.5						
ILAR	**Eielson Array**	**83.13**	**26**	P	**P**	**07 15 20.8**	**-0.2**
	0.3nm,0.5s,baz=239,slow=5.3,SNR=7.4						

*ISCJB **18** 07:05:46.9±0.7, 40.29N±0.03×25.33E±0.04, h2km±7km, Error ellipse: s-maj=5.2km s-min=4.6km az=37.7*
*CSEM **18** 07:05:47.2±0.2, 40.28N×25.33E, h2km, ML2.0/3, Error ellipse: s-maj=4.9km s-min=4.8km az=23.0*
*THE **18** 07:05:47.3, 40.27N×25.31E, h11km±1km, ML2.0/3, Error ellipse: s-maj=1.5km s-min=0.6km az=15.0*
*DDA **18** 07:05:49.0, 40.34N×25.58E, h7km, MD2.7*
ISC 18 07:05:47.1±1.1, 40.29N±0.04×25.32E±0.03, h12km±10km, n15, σ0.964/30, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.40**	**195**	P	**Pg**	**07 05 54.9**	**-0.2**
LIA				S	**Sg**	**07 06 00.4**	**0.0**
LIA	**Limnos Island**	**0.40**	**195**	P	**Pg**	**07 05 54.9**	**-0.2**
LIA				S	**Sg**	**07 06 00.4**	**0.0**
BOZC	**Bozcaada**	**0.72**	**128**	*i* P	**Pg**	**07 06 00.9**	**-0.2**
BOZC				*i* S	**Sg**	**07 06 10.2**	**-0.3**
ALN	**Alexandroupoli**	**0.83**	**42**	P	**Pg**	**07 06 03.0**	**-0.1**
ALN				S	**Sb**	**07 06 15.1**	**+0.6**
ALN	**Alexandroupoli**	**0.83**	**42**	P	**Pg**	**07 06 03.0**	**-0.1**
ALN				S	**Sb**	**07 06 15.1**	**+0.6**
KAVA	**Kavala**	**0.94**	**320**	P	**Pb**	**07 06 05.4**	**+0.1**
KAVA				S	**Sb**	**07 06 18.5**	**+0.8**
KAVA	**Kavala**	**0.94**	**320**	P	**Pb**	**07 06 05.4**	**+0.1**
KAVA				S	**Sb**	**07 06 18.5**	**+0.8**
OUR	**Ouranopolis**	**1.02**	**273**	P	**Pg**	**07 06 06.4**	**-0.4**
OUR				S	**Sn**	**07 06 21.0**	**-0.5**
OUR	**Ouranopolis**	**1.02**	**273**	P	**Pg**	**07 06 06.4**	**-0.4**
OUR				S	**Sn**	**07 06 21.0**	**-0.5**
SIGR	**SIGRI**	**1.15**	**159**	P	**Pg**	**07 06 08.9**	**-0.4**
SIGR				S	**Sg**	**07 06 24.1**	**-0.1**
SIGR	**SIGRI**	**1.15**	**159**	P	**Pg**	**07 06 08.9**	**-0.4**
SIGR				S	**Sg**	**07 06 24.1**	**-0.1**
SART	**Tekirdag**	**1.48**	**74**	*i* P	**Pn**	**07 06 13.8**	**+0.2**
SART				*i* S	**Sn**	**07 06 31.5**	**-1.4**
SART	**Tekirdag**	**1.48**	**74**	*i* P	**Pn**	**07 06 13.8**	**+0.2**
SART				*i* S	**Sn**	**07 06 31.5**	**-1.4**
BALY	**Balya**	**1.85**	**106**	*i* P	**Pb**	**07 06 21.1**	**+0.2**
BALY				*i* S	**Sb**	**07 06 45.3**	**+1.3**
BALY	**Balya**	**1.85**	**106**	*i* P	**Pb**	**07 06 21.1**	**+0.2**
BALY				*i* S	**Sb**	**07 06 45.3**	**+1.3**

*NEIC **18** 07:06:29.4, 13.24N×92.63W, h25km, mb4.9/119, MD4.8(MEX), After MEX.*
*MEX **18** 07:06:29.4±0.3, 13.24N×92.63W, h25km, MD4.8*
*IDC **18** 07:06:32.6±0.6, 14.28N×92.19W, h0km, mb4.6/18, mb1 4.8/20, mb1mx4.7/27, mbtmp4.6/20, ML3.9/2, MS4.4/24, Ms1 4.4/24, ms1mx4.2/39, Error ellipse: s-maj=25.0km s-min=11.0km az=61.0*
*ISCJB **18** 07:06:35.6±0.3, 14.11N±0.04×92.24W±0.03, h33km, mb4.8/132, MS4.5/31, Error ellipse: s-maj=6.5km s-min=3.1km az=28.3*
*GCMT **18** 07:06:36.8±0.3, 13.92N×92.88W, h14km, MW5.0, Moment Tensor Solution. s35,c45; s71,c109; Moment tensor: Scale 10^16 Nm; Mrr2.64±.13; Mθθ-1.81±.09; Mφφ-0.83±.09; Mrθ2.14±.23; Mθφ0.92±.05; Mφr-1.41±.22; Best double couple: M0 3.60000×10^16 NP1:φ300.00000°, δ22.00000°, λ87.00000°. NP2:φ123.00000°, δ68.00000°, λ91.00000°. Principal axes: T 3.7200, Plg67.0000°, Azm35.0000°; N -0.2800, Plg1.0000°, Azm302.0000°; P -3.4400, Plg23.0000°, Azm212.0000°; Data Used: II IU IC G.*
*BJI **18** 07:06:40.0, 14.20N×92.30W, h66km, mB5.2/8, Ms5.2/10, Ms7 4.8/11*
*CASC **18** 07:06:47.3±1.6, 14.34N×91.65W, h123km±34km, MD4.1, ML3.8, mb4.9(NEIC)*
ISC 18 07:06:33.3±0.6, 13.55N±0.10×92.56W±0.05, h36km±3km, n689, σ1.830/619, mb4.8/135, MS4.5/31, 167C-213D, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**2.74**	**9**	*i* P	**Pn**	**07 07 14.4**	**-0.5**
CCIG				*e*S	**Sn**	**07 07 49.8**	**+2.8**
CCIG	**Comitan**	**2.74**	**9**	*i* P	**Pn**	**07 07 14.4**	**-0.5**
CCIG				*e*S	**Sn**	**07 07 49.8**	**+2.8**
RBDL	**Robledal**	**2.85**	**78**	⇑*i*P	Pn	07 07 20.8	+4.5
RTR	**El Retiro**	**2.85**	**83**	*i* P	Pn	07 07 21.4	+5.0
SBLS	**San Blas**	**2.87**	**84**	*i* P	Pn	07 07 21.8	+5.1
SNJE	**San Jose**	**2.89**	**83**	*i* P	Pn	07 07 21.9	+5.0
SNJE				*e*S	**Sn**	**07 07 49.5**	**-1.1**
BOQS	**Boqueron**	**3.19**	**86**	⇓*i*P	Pn	07 07 26.5	+5.3
MTO2	**Montecristo 2**	**3.22**	**74**	*i* P	Pn	07 07 26.1	+3.6
MTO2				*e*S	Sn	07 07 52.8	-6.0
SNET	**Serv Nac Est T**	**3.24**	**87**	*e*P	Pn	07 07 26.9	+5.2
SNET				AML	AML	07 08 33.0	
	comp=Z,608nm,0.6s						
TGIG		**3.25**	**350**	*i* P	**Pn**	**07 07 20.5**	**-1.3**
TGIG				*e*S	**Sn**	**07 08 00.7**	**+1.4**
TGIG		**3.25**	**350**	*i* P	**Pn**	**07 07 20.5**	**-1.3**
TGIG				*e*S	**Sn**	**07 08 00.7**	**+1.4**
LFRS	**El Faro**	**3.40**	**88**	*i* P	Pn	07 07 29.1	+5.2
LBRS	**Las Brisas**	**3.42**	**86**	⇑*i*P	Pn	07 07 29.1	+4.9
CMIG	**Matias Romero**	**4.17**	**328**	*i* P	**Pn**	**07 07 32.8**	**-1.6**
CMIG				*e*S	**Sn**	**07 08 22.6**	**+0.6**
CMIG	**Matias Romero**	**4.17**	**328**	*i* P	**Pn**	**07 07 32.8**	**-1.6**
CMIG				*e*S	**Sn**	**07 08 22.6**	**+0.6**
CMIG	**Matias Romero**	**4.17**	**328**	Pn	Pn	07 07 30.8	-3.7
	comp=Z,4.5nm,0.3s,baz=136,slow=10,SNR=152						
CMIG				Sn	Sn	07 08 17.7	-4.2
	comp=Z,30nm,0.3s,baz=60,slow=9.4,SNR=5.7						
CAHU	**Cacacuatique**	**4.23**	**87**	*e*P	Pn	07 07 40.8	+5.3
CNCH	**Conchagua**	**4.61**	**93**	*e*P	Pn	07 07 46.6	+6.1
TGUH	**Tegucigalpa,Un**	**5.16**	**84**	*e*Pn	Pn	07 07 51.6	+3.6
VHO	**Vista Hermosa**	**5.33**	**312**	*i* P	**Pn**	**07 07 49.4**	**-1.1**
VHO				*e*S	**Sn**	**07 08 49.7**	**-1.2**
VHO	**Vista Hermosa**	**5.33**	**312**	*i* P	**Pn**	**07 07 49.4**	**-1.1**
VHO				*e*S	**Sn**	**07 08 49.7**	**-1.2**
TEIG	**Tepich**	**7.80**	**31**	*e*Pn	**Pn**	**07 08 23.9**	**-0.3**
TEIG				Lg	Lg	07 09 58.2	
TEIG	**Tepich**	**7.80**	**31**	Pn	Pn	07 08 21.1	-3.2
	comp=Z,7.4nm,0.3s,baz=145,slow=15,SNR=29						
TEIG				Lg	Lg	07 09 58.2	
	comp=Z,5.7nm,0.3s,baz=1.4,slow=22,SNR=4.0						
JTS	**JuntasAbangare**	**8.12**	**113**	*e*Pn	Pn	07 08 37.5	+8.7
JTS				Lg	Lg	07 10 46.6	
JTS	**JuntasAbangare**	**8.12**	**113**	Pn	Pn	07 08 37.8	+9.1
	comp=Z,2.5nm,0.3s,baz=314,slow=17,SNR=9.7						
JTS				Lg	Lg	07 10 46.6	
	baz=56,slow=24,SNR=6.8						
HKT	**Hockley**	**16.60**	**350**	*e*P	**Pn**	**07 10 21.1**	**-2.1**
	comp=Z,181nm,1.8s						
732A	**Laxson Ranch,**	**16.60**	**337**	⇓P	**Pn**	**07 10 22.7**	**-0.6**
	baz=17,SNR=26						
632A	**Uvalde**	**17.23**	**338**	⇓P	**Pn**	**07 10 30.6**	**-0.6**
	baz=18,SNR=10						
631A	**Perdido Creek**	**17.44**	**336**	⇑P	**Pn**	**07 10 33.1**	**-0.7**
	baz=18,SNR=15						
532A	**Rocksprings**	**17.84**	**339**	⇑P	**Pn**	**07 10 38.6**	**-0.2**
	baz=18,SNR=18						
531A	**Rocksprings**	**18.11**	**337**	⇑P	**Pn**	**07 10 41.4**	**-0.6**
	baz=18,SNR=11						
JCT	**Junction City**	**18.12**	**340**	*e*P	**Pn**	**07 10 42.2**	**0.0**
	comp=Z,34nm,1.1s						
JCT	**Junction City**	**18.12**	**340**	⇑P	**Pn**	**07 10 41.8**	**-0.4**
	baz=18,SNR=9.5						
530A	**J-C Ranch, Com**	**18.40**	**335**	⇓P	**P**	**07 10 45.3**	**-0.1**
	baz=19,SNR=12						
432A	**Menard**	**18.48**	**340**	⇓P	**P**	**07 10 46.5**	**+0.2**
	baz=19,SNR=12						
628A	**Black Gap, Mar**	**18.52**	**331**	⇑P	**Pn**	**07 10 47.6**	**+0.5**
	baz=19,SNR=35						
431A	**Sonora**	**18.59**	**338**	⇑P	**P**	**07 10 47.3**	**-0.2**
	baz=19,SNR=10						
VBMS	**Vicksburg**	**18.67**	**5**	*e*P	**P**	**07 10 48.0**	**-0.3**
	comp=Z,300nm,1.8s						
627A	**Terlingua Ranc**	**18.74**	**329**	⇑P	**Pn**	**07 10 50.9**	**+1.1**
	baz=19,SNR=42						
529A	**Stev Forest Ra**	**18.75**	**333**	⇓P	**Pn**	**07 10 50.2**	**+0.2**
	baz=19,SNR=45						
TXAR	**Lajitas Array**	**18.78**	**328**	P	**Pn**	**07 10 50.3**	**0.0**
TXAR	**Lajitas Array**	**18.78**	**328**	P	**Pn**	**07 10 50.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=148,slow=12,SNR=46						
WHTX	**Lake Whitney**	**18.89**	**347**	⇓P	**P**	**07 10 50.7**	**0.0**
	baz=19						
430A	**Baggett Ranch,**	**18.92**	**336**	⇓P	**Pn**	**07 10 52.0**	**0.0**
	baz=19,SNR=20						
332A	**Millersview**	**18.93**	**341**	⇑P	**P**	**07 10 51.2**	**0.0**
	baz=19,SNR=15						
528A	**Cox Ranch, San**	**19.04**	**332**	⇑P	**Pn**	**07 10 53.2**	**-0.2**
	baz=19,SNR=16						
429A	**Davenport Ranc**	**19.05**	**335**	⇓P	**Pn**	**07 10 53.4**	**-0.1**
	baz=19,SNR=30						
331A	**San Angelo**	**19.10**	**339**	⇑P	**P**	**07 10 53.4**	**+0.3**
	baz=19,SNR=27						
626A	**Big Bend Ranch**	**19.20**	**328**	⇑P	**Pn**	**07 10 56.2**	**+0.9**
	baz=20,SNR=42						
232A	**Coleman**	**19.37**	**342**	⇑P	**P**	**07 10 56.6**	**+0.6**
	baz=20,SNR=34						
527A	**Woodward Ranch**	**19.42**	**330**	⇓P	**Pn**	**07 10 57.9**	**-0.1**
	baz=20,SNR=42						
330A	**Mertzon**	**19.45**	**337**	⇓P	**P**	**07 10 57.4**	**+0.5**
	baz=20,SNR=12						
428A	**Kincaid Ranch,**	**19.47**	**333**	⇑P	**Pn**	**07 10 58.8**	**+0.1**
	baz=20,SNR=13						
526A	**Mary Lane Ranc**	**19.58**	**329**	⇓P	**Pn**	**07 11 00.9**	**+0.9**
	baz=20,SNR=29						
231A	**Bronte**	**19.63**	**340**	⇓P	**P**	**07 10 59.0**	**+0.2**
	baz=20,SNR=17						
RFTA	**Plano**	**19.73**	**350**	*e*P	**P**	**07 11 00.1**	**+0.2**
LPIG	**La Paz**	**19.78**	**305**	P	Pn	07 11 07.4	+5.1
LPIG	**La Paz**	**19.78**	**305**	P	Pn	07 11 07.4	+5.1
	baz=111,slow=3.1,SNR=5.2						
LPIG				LR	LR	07 18 04.5	
	comp=Z,24nm,20.1s,baz=249,slow=35						
329A	**Wagon Wheel Ra**	**19.84**	**336**	⇑P	**Pn**	**07 11 02.5**	**-0.4**
	baz=20,SNR=16						
230A	**Sterling City**	**19.86**	**338**	⇑P	**P**	**07 11 02.4**	**+1.0**
	baz=20,SNR=34						
427A	**Hayter Ranch,**	**19.90**	**332**	⇓P	**P**	**07 11 02.8**	**+0.9**
	baz=20,SNR=14						
ROSC	**El Rosal**	**19.95**	**114**	*e*P	Pn	07 11 12.3	+7.6
ROSC	**El Rosal**	**19.95**	**114**	P	Pn	07 11 11.0	+6.4
	comp=Z,0.4nm,0.3s,baz=183,slow=1.1,SNR=21						
LRAL	**Lakeview Retre**	**20.05**	**14**	*e*P	**P**	**07 11 02.2**	**-1.1**
	comp=Z,65nm,1.2s						
426A	**McDonald Obser**	**20.05**	**330**	⇓P	**P**	**07 11 04.8**	**+1.2**
	baz=20,SNR=28						
ABTX	**Abilene, Hawle**	**20.06**	**342**	⇓P	**P**	**07 11 03.9**	**+0.4**
	baz=20,SNR=30						
328A	**Wristen Ranch,**	**20.09**	**334**	⇑P	**P**	**07 11 04.5**	**+0.6**
	baz=20,SNR=47						
229A	**Bryant Ranch,**	**20.20**	**337**	⇓P	**P**	**07 11 05.4**	**+0.3**
	baz=20,SNR=13						
131A	**Roby**	**20.33**	**341**	⇓P	**P**	**07 11 06.4**	**-0.1**
	baz=21,SNR=12						
130A	**Snyder**	**20.45**	**339**	⇓P	**P**	**07 11 07.9**	**+0.1**
	baz=21,SNR=10						
326A	**Caldwell Ranch**	**20.56**	**331**	⇓P	**P**	**07 11 10.5**	**+1.4**
	baz=21,SNR=23						
425A	**Indio Mountain**	**20.62**	**328**	⇑P	**P**	**07 11 10.9**	**+1.1**
	baz=21,SNR=11						
228A	**UT Block 9, Go**	**20.64**	**335**	⇓P	**P**	**07 11 10.3**	**+0.5**
	baz=21,SNR=16						
Z32A	**Haskell**	**20.65**	**343**	⇑P	**P**	**07 11 10.3**	**+0.4**
	baz=21,SNR=42						
129A	**Stewart Farms,**	**20.81**	**337**	⇑P	**P**	**07 11 12.1**	**+0.4**
	baz=21,SNR=75						
227A	**Bennet, Jal**	**20.84**	**334**	⇑P	**P**	**07 11 13.4**	**+1.4**
	baz=21,SNR=20						
Z31A	**Sharp Cattle R**	**20.86**	**342**	⇑P	**P**	**07 11 12.2**	**+0.1**
	baz=21,SNR=44						
MIAR	**Mount Ida**	**20.92**	**358**	*e*P	**P**	**07 11 11.9**	**-0.8**
	comp=Z,81nm,1.1s						
128A	**Castleberry Fa**	**21.04**	**336**	⇓P	**P**	**07 11 14.5**	**+0.3**
	baz=21,SNR=47						
OXF	**Oxford**	**21.06**	**7**	*e*P	**P**	**07 11 12.9**	**-1.4**
	comp=Z,130nm,1.3s						
325A	**Bean Ranch, Si**	**21.09**	**329**	⇓P	**P**	**07 11 15.7**	**+0.9**
	baz=21,SNR=22						
UALR	**University of**	**21.13**	**0**	*e*P	**P**	**07 11 14.1**	**-0.9**
	comp=Z,344nm,2.2s						
Z30A	**Sanderson Ranc**	**21.14**	**340**	⇑P	**P**	**07 11 14.8**	**-0.5**
	baz=22,SNR=28						
226B	**Tecolote Peak,**	**21.29**	**332**	⇑P	**P**	**07 11 18.3**	**+1.4**
	baz=22,SNR=61						
Y32A	**R-V Farms, Ver**	**21.30**	**344**	⇓P	**P**	**07 11 16.7**	**-0.2**
	baz=22,SNR=29						
CLNB	**Carlsbad**	**21.31**	**333**	*e*P	**P**	**07 11 17.4**	**+0.3**
	comp=Z,12nm,0.9s						
Z29A	**Hungry Hill Ra**	**21.32**	**339**	⇑P	**P**	**07 11 16.8**	**-0.4**
	baz=22,SNR=62						
324A	**Moseley Ranch,**	**21.40**	**328**	⇑P	**P**	**07 11 18.9**	**+0.7**
	baz=22,SNR=25						
127A	**Arkansas Junct**	**21.44**	**334**	⇑P	**P**	**07 11 18.2**	**-0.3**
	baz=22,SNR=15						
GDL2	**Guadalupe Moun**	**21.48**	**332**	*e*P	**P**	**07 11 19.6**	**+0.6**
Y31A	**Rekieta Farm,**	**21.49**	**342**	⇑P	**P**	**07 11 19.0**	**0.0**
	baz=22,SNR=57						
MNTX	**Cornudas Mount**	**21.56**	**329**	*e*P	**P**	**07 11 19.2**	**-0.4**
	comp=Z,28nm,1.1s						
MNTX	**Cornudas Mount**	**21.56**	**329**	⇓P	**P**	**07 11 20.4**	**+0.7**
	baz=22,SNR=36						
Z28A	**Tucker Farm, M**	**21.59**	**337**	⇓P	**P**	**07 11 20.1**	**-0.1**
	baz=22,SNR=22						
Y30A	**Stafford Cattl**	**21.61**	**341**	⇓P	**P**	**07 11 19.9**	**-0.3**
	baz=22,SNR=42						
225A	**Deer Hill, Car**	**21.62**	**331**	⇓P	**P**	**07 11 21.4**	**+0.9**
	baz=22,SNR=28						
126A	**Clayton Basin,**	**21.70**	**333**	⇓P	**P**	**07 11 21.6**	**+0.3**
	baz=22,SNR=29						
WMOK	**Wichita Mounta**	**21.83**	**346**	*e*P	**P**	**07 11 21.2**	**-1.4**
	comp=Z,19nm,1.1s						
Y29A	**Porterfield Fa**	**21.85**	**339**	⇓P	**P**	**07 11 22.7**	**-0.1**
	baz=22,SNR=39						
224A	**Cornudas Mount**	**21.93**	**329**	⇓P	**P**	**07 11 24.4**	**+0.6**
	baz=22,SNR=55						
Z27A	**Tatum**	**21.94**	**336**	⇓P	**P**	**07 11 23.6**	**-0.2**
	baz=22,SNR=43						
CPRX	**Cap Rock**	**21.96**	**334**	*e*P	**P**	**07 11 23.9**	**-0.3**
	comp=Z,28nm,1.0s						
HBAR	**Harrisburg**	**21.98**	**4**	*e*P	**P**	**07 11 22.6**	**-1.4**
HBAR				*e*		07 11 36.8	
125A	**Gardner Draw,**	**22.00**	**332**	⇓P	**P**	**07 11 25.0**	**+0.5**
	baz=22,SNR=80						
X31A	**McDonald Ranch**	**22.04**	**344**	⇓P	**P**	**07 11 24.6**	**-0.2**
	baz=22,SNR=31						
Y28A	**McKinney Farm,**	**22.09**	**338**	⇓P	**P**	**07 11 25.3**	**-0.3**
	baz=22,SNR=58						
X30A	**Coker Ranch, T**	**22.12**	**342**	⇓P	**P**	**07 11 25.7**	**-0.1**
	baz=22,SNR=59						
Z26A	**Caprock**	**22.22**	**334**	⇓P	**P**	**07 11 27.1**	**+0.2**
	baz=22,SNR=84						
MSTX	**Muleshoe**	**22.34**	**337**	⇑P	**P**	**07 11 27.9**	**-0.3**
	baz=23,SNR=10						
SWET	**Sewanee**	**22.39**	**14**	*e*P	**P**	**07 11 26.9**	**-1.6**
	comp=Z,79nm,1.4s						
X29A	**Tulia**	**22.39**	**340**	⇓P	**P**	**07 11 28.2**	**-0.4**
	baz=23,SNR=31						
124A	**Stringfield Ra**	**22.41**	**330**	⇑P	**P**	**07 11 29.7**	**+0.6**
	baz=23,SNR=49						
Y27A	**Causey**	**22.42**	**336**	⇑P	**P**	**07 11 28.4**	**-0.6**
	baz=23,SNR=24						
TUL1	**Tulsa**	**22.45**	**353**	⇑P	**P**	**07 11 29.1**	**-0.1**
	baz=23,SNR=8.5						
Z25A	**Roswell**	**22.55**	**333**	⇓P	**P**	**07 11 30.7**	**+0.3**
	baz=23,SNR=37						
W31A	**Holland Ranch,**	**22.55**	**344**	⇑P	**P**	**07 11 30.0**	**-0.4**
	baz=23,SNR=20						
X28A	**Dimmitt**	**22.63**	**339**	⇓P	**P**	**07 11 30.3**	**-0.9**
	baz=23,SNR=11						
Y26A	**Elida**	**22.72**	**335**	⇓P	**P**	**07 11 32.3**	**0.0**
	baz=23,SNR=8.5						
123A	**Bell Site, Whi**	**22.75**	**329**	⇓P	**P**	**07 11 33.3**	**+0.7**
	baz=23,SNR=15						
AMTX	**Amarillo**	**22.78**	**340**	*e*P	**P**	**07 11 31.9**	**-1.0**
	comp=Z,101nm,0.8s						
AMTX	**Amarillo**	**22.78**	**340**	⇓P	**P**	**07 11 32.4**	**-0.5**
	baz=23,SNR=70						
WVT	**Waverly**	**22.88**	**10**	*e*P	**P**	**07 11 31.9**	**-1.8**
	comp=Z,18nm,1.0s						
Z24A	**Sheeppen Canyo**	**22.88**	**332**	⇑P	**P**	**07 11 34.9**	**+0.8**
	baz=23,SNR=31						
UTMT	**University of**	**22.93**	**8**	*e*P	**P**	**07 11 32.5**	**-1.8**
UTMT				*e*		07 11 47.0	
CPCT	**Cooper Cave**	**22.98**	**17**	*e*P	**P**	**07 11 33.2**	**-1.5**
W29A	**Amraillo**	**22.99**	**341**	⇑P	**P**	**07 11 34.5**	**-0.5**
	baz=23,SNR=41						
320A	**Kipp Ranch, An**	**22.99**	**323**	⇓P	**P**	**07 11 36.8**	**+1.6**
	baz=23,SNR=15						
JSC	**Jenkinsville**	**23.04**	**24**	*e*P	**P**	**07 11 34.8**	**-0.6**
JSC				*e*		07 11 50.3	
221A	**Mesquite Ranch**	**23.07**	**325**	⇓P	**P**	**07 11 37.6**	**+1.7**
	baz=23,SNR=12						
X27A	**F and S Farms,**	**23.07**	**337**	⇓P	**P**	**07 11 35.3**	**-0.5**
	baz=23,SNR=20						
V31A	**Spring Creek L**	**23.08**	**345**	⇑P	**P**	**07 11 35.7**	**-0.1**
	baz=24,SNR=40						
Y25A	**Mesa, Roswell**	**23.08**	**334**	⇓P	**P**	**07 11 36.5**	**+0.5**
	baz=23,SNR=36						
PARMO	**Parma**	**23.15**	**6**	*e*P	**P**	**07 11 34.3**	**-2.1**
122A	**Conniff Cattle**	**23.18**	**328**	⇓P	**P**	**07 11 38.0**	**+1.0**
	baz=24,SNR=7.3						
Z23A	**Rita Site, Whi**	**23.24**	**330**	⇑P	**P**	**07 11 38.6**	**+1.1**
	baz=24,SNR=30						
X26A	**CR and CF Fran**	**23.26**	**336**	⇓P	**P**	**07 11 37.7**	**0.0**
	baz=24,SNR=26						
V30A	**Spur Ranch, Mi**	**23.29**	**343**	⇑P	**P**	**07 11 37.7**	**-0.3**
	baz=24						
W28A	**Vega**	**23.30**	**340**	⇓P	**P**	**07 11 37.7**	**-0.5**
	baz=24,SNR=16						
TKL	**Tuckaleechee C**	**23.39**	**18**	*e*P	**P**	**07 11 38.1**	**-0.8**
TKL	**Tuckaleechee C**	**23.39**	**18**	P	**P**	**07 11 36.1**	**-2.8**
	comp=Z,24nm,1.0s,baz=195,slow=8.8,SNR=12						
TKL				LR	LR	07 21 51.0	
	comp=Z,1μm,20.0s,baz=214,slow=41						
220A	**Playas Peak, P**	**23.41**	**324**	⇓P	**P**	**07 11 41.2**	**+1.9**
	baz=24,SNR=21						
Y24A	**Capitan**	**23.41**	**332**	⇓P	**P**	**07 11 40.0**	**+0.6**
	baz=24,SNR=62						
W27A	**Bowe Ranch, En**	**23.43**	**338**	⇑P	**P**	**07 11 39.0**	**-0.4**
	baz=24,SNR=70						
121A	**Cookes Peak, D**	**23.47**	**326**	⇓P	**P**	**07 11 41.6**	**+1.8**
	baz=24,SNR=39						
319A	**Douglas**	**23.47**	**322**	⇓P	**P**	**07 11 41.7**	**+1.9**
	baz=24,SNR=16						
X25A	**Clemmons Ranch**	**23.59**	**334**	⇑P	**P**	**07 11 41.5**	**+0.6**
	baz=24,SNR=16						
Z22A	**Elephant Butte**	**23.60**	**329**	⇓P	**P**	**07 11 42.9**	**+1.8**
	baz=24,SNR=17						
Y23A	**Lovelace Mesa,**	**23.70**	**331**	⇑P	**P**	**07 11 44.0**	**+1.9**
	baz=24,SNR=25						
W26A	**Owens Ranch, T**	**23.71**	**337**	⇓P	**P**	**07 11 42.8**	**+0.7**
	baz=24,SNR=8.1						
V28A	**Channing**	**23.75**	**340**	⇑P	**P**	**07 11 42.6**	**+0.1**
	baz=24,SNR=81						
KMSC	**Kings Mountain**	**23.77**	**23**	⇓P	**P**	**07 11 41.9**	**-0.6**
	baz=24,SNR=11						
120A	**U Bar Ranch, L**	**23.95**	**325**	⇓P	**P**	**07 11 46.5**	**+2.1**
	baz=24,SNR=32						
X24A	**Lazy VL Ranch,**	**23.95**	**333**	⇑P	**P**	**07 11 45.1**	**+0.7**
	baz=24,SNR=7.7						
V27A	**Dan Oppiter Fa**	**23.97**	**339**	⇑P	**P**	**07 11 44.9**	**+0.4**
	baz=24,SNR=15						
U30A	**WK&E Inc. Balk**	**24.00**	**344**	⇓P	**P**	**07 11 45.2**	**+0.4**
	baz=24,SNR=22						
Z21A	**St. Cloud Mine**	**24.01**	**328**	⇑P	**P**	**07 11 46.5**	**+1.5**
	baz=24,SNR=16						
W25A	**X Bar L Ranch,**	**24.10**	**336**	⇓P	**P**	**07 11 46.6**	**+0.9**
	baz=24,SNR=42						
Y22A	**Socorro**	**24.15**	**330**	⇓P	**P**	**07 11 47.8**	**+1.5**

BLA	Blacksburg	25.94	23	eP	P	07 12 01.2	-1.1
	comp=Z,16nm,0.8s						
T24A	Torres, Weston	25.95	337	⇓P	P	07 12 03.9	+1.2
	baz=26,SNR=48						
V21A	Milan	25.98	331	⇑P	P	07 12 04.3	+1.3
	baz=26						
BLO	Bloomington	26.07	11	eP	P	07 12 01.9	-1.5
	comp=Z,23nm,0.9s						
214A	Organ Pipe Nat	26.07	318	⇓P	P	07 12 05.8	+2.2
	baz=26,SNR=6.0						
U22A	Llaves	26.10	333	⇑P	P	07 12 05.4	+1.4
	baz=26,SNR=22						
X18A	Snowflake	26.16	326	⇑P	P	07 12 06.4	+1.9
	baz=26,SNR=6.1						
S25A	Robets Cordova	26.24	338	⇓P	P	07 12 06.9	+1.6
	baz=27,SNR=43						
R27A	Eads	26.26	342	⇓P	P	07 12 05.5	+0.2
	baz=27,SNR=17						
T23A	Casias Ranch,	26.31	335	⇑P	P	07 12 07.2	+1.2
	baz=27,SNR=11						
V20A	Brimhall	26.37	330	⇓P	P	07 12 07.9	+1.4
	baz=27						
R26A	Arlington	26.48	341	⇓P	P	07 12 08.0	+0.7
	baz=27,SNR=12						
U21A	Nageezi	26.50	332	⇑P	P	07 12 09.5	+1.9
	baz=27,SNR=12						
S24A	Houchin Ranch,	26.51	337	⇓P	P	07 12 09.7	+1.9
	baz=27,SNR=17						
R25A	Fountain Ranch	26.62	339	⇑P	P	07 12 10.0	+1.4
	baz=27,SNR=28						
T22A	Edith	26.65	334	⇑P	P	07 12 11.0	+2.0
	baz=27,SNR=25						
S23A	Nye Farm, Mont	26.87	336	⇓P	P	07 12 13.1	+2.1
	baz=27,SNR=19						
KSCO	Kaye Shedlock'	26.88	342	⇑P	P	07 12 11.3	+0.4
	baz=27						
X16A	Lo Mia Camp, P	26.91	324	⇓P	P	07 12 13.5	+2.2
	baz=27,SNR=15						
T21A	Navajo Lake	26.91	333	⇓P	P	07 12 13.6	+2.2
	baz=27						
R24A	Sanders Place,	26.99	338	⇑P	P	07 12 13.8	+1.8
	baz=27						
Q26A	Hugo	27.07	341	⇓P	P	07 12 13.6	+1.0
	baz=27,SNR=10						
Z14A	Wintersburg	27.08	320	⇑P	P	07 12 14.6	+1.9
	baz=27						
113A	Mohawk Valley,	27.21	318	⇓P	P	07 12 15.8	+2.0
	baz=27						
R23A	Moffat	27.22	337	⇓P	P	07 12 16.0	+1.8
	baz=28,SNR=26						
S22A	4UR Ranch, Cre	27.24	335	⇑P	P	07 12 16.0	+1.6
	baz=28,SNR=44						
Q25A	Bedland, Calha	27.30	340	⇓P	P	07 12 15.6	+0.8
	baz=28,SNR=13						
Y14A	Wickenburg	27.50	321	⇑P	P	07 12 18.4	+1.9
	baz=28,SNR=10						
MVCO	Mesa Verde	27.53	332	eP	P	07 12 18.1	+1.3
	comp=Z,40nm,1.1s						
MVCO	Mesa Verde	27.53	332	⇓P	P	07 12 18.5	+1.7
	baz=28,SNR=23						
S21A	Coal Bank Pass	27.58	333	⇓P	P	07 12 18.3	+0.9
	baz=28,SNR=11						
P26A	Davis Ranch, A	27.60	342	⇓P	P	07 12 18.4	+1.0
	baz=28						
R22A	Saguache, Gunn	27.62	335	⇓P	P	07 12 19.9	+2.1
	baz=28,SNR=17						
Q24A	Divide	27.65	339	⇓P	P	07 12 19.3	+1.2
	baz=28,SNR=5.2						
WUAZ	Wupatki	27.67	325	eP	P	07 12 19.7	+1.6
	comp=Z,17nm,1.1s						
WUAZ	Wupatki	27.67	325	⇑P	P	07 12 20.2	+2.1
	baz=28,SNR=5.6						
Q23A	Hartsel	27.85	337	⇑P	P	07 12 21.0	+1.2
	baz=28						
O27A	Beecher Island	27.93	344	⇑P	P	07 12 21.2	+0.9
	baz=28						
S20A	Disappointment	27.97	333	⇓P	P	07 12 23.0	+2.1
	baz=28,SNR=7.0						
CBN	Corbin	28.02	26	eP	P	07 12 20.5	-0.4
	comp=Z,49nm,1.4s						
P24A	Kohler Place,	28.06	339	⇓P	P	07 12 22.5	+1.0
	baz=28						
R21A	Cimarron	28.07	334	⇑P	P	07 12 23.7	+1.9
	baz=28,SNR=10						
GLA	Glamis	28.09	317	eP	P	07 12 24.1	+2.4
	comp=Z,39nm,1.6s						
GLA	Glamis	28.09	317	⇑P	P	07 12 23.9	+2.2
	baz=28						
O26A	Horse Wrangler	28.21	342	⇑P	P	07 12 24.0	+1.1
	baz=29						
Q22A	Crested Butte,	28.23	336	⇓P	P	07 12 24.7	+1.5
	baz=29,SNR=11						
SCIA	State Center	28.26	359	eP	P	07 12 22.3	-0.7
	comp=Z,26nm,1.3s						
P23A	Jefferson	28.27	338	⇑P	P	07 12 25.6	+2.1
	baz=29,SNR=17						
R20A	Redvale	28.28	333	⇓P	P	07 12 25.7	+2.1
	baz=29,SNR=14						
O25A	Wiggins	28.34	341	⇑P	P	07 12 25.3	+1.3
	baz=29						
PDMCI	Parker Dam,Lak	28.44	320	⇓P	P	07 12 27.0	+2.2
	baz=29,SNR=7.0						
Q21A	Lamborn Mesa,	28.47	335	⇑P	P	07 12 27.5	+2.2
	baz=29,SNR=8.4						
N27A	Anderson Farm,	28.52	344	⇑P	P	07 12 26.1	+0.5
	baz=29						
SMCO	Snowmass	28.52	336	eP	P	07 12 27.6	+1.6
	comp=Z,34nm,1.4s						
S18A	Hurst Farm, Bl	28.62	330	⇓P	P	07 12 28.8	+2.2
	baz=29,SNR=7.3						
O24A	Longmont	28.66	340	⇑P	P	07 12 28.4	+1.5
	baz=29						
SWSC	Sam W. Stewart	28.66	316	⇑P	P	07 12 29.3	+2.5
	baz=29						
N26A	Koester Ranch,	28.73	343	⇑P	P	07 12 28.2	+0.7
	baz=29						
P22A	Eagle	28.80	337	⇓P	P	07 12 29.7	+1.5
	baz=29,SNR=9.1						
W13A	Hualapai Mount	28.82	322	⇑P	P	07 12 30.7	+2.3
	baz=29						
U15A	North Rim	28.84	326	⇓P	P	07 12 30.5	+1.8
	baz=29,SNR=7.4						
BC3	Big Chuckawall	28.87	318	⇓P	P	07 12 31.2	+2.4
	baz=29,SNR=16						
Q20A	Ridgley Place,	28.88	334	⇓P	P	07 12 30.4	+1.6
	baz=29						
IRM	Iron Mountain	28.99	319	⇓P	P	07 12 32.2	+2.5
	baz=29,SNR=7.6						
P21A	Newcastle	29.01	336	⇑P	P	07 12 31.7	+1.6
	baz=29,SNR=11						
O23A	Lake Granby, G	29.03	339	⇓P	P	07 12 31.7	+1.3
	baz=29,SNR=9.2						
MONP	Monument Peak	29.05	316	⇓P	P	07 12 32.7	+2.2
	baz=29						
O22A	Kremmling	29.22	338	⇓P	P	07 12 33.1	+1.1
	baz=30,SNR=9.2						
SDMD	Soldier's Deli	29.25	25	eP	P	07 12 31.0	-0.9
	comp=Z,16nm,1.0s						
Q19A	Hogan Spring (	29.30	333	⇓P	P	07 12 34.4	+1.9
	baz=30,SNR=15						
P20A	De Beque	29.38	335	⇓P	P	07 12 34.9	+1.7
	baz=30,SNR=6.2						
PFO	Pinyon Flat Ob	29.50	317	eP	P	07 12 36.6	+2.2
	comp=Z,15nm,1.5s						
PFO	Pinyon Flat Ob	29.50	317	⇓P	P	07 12 36.9	+2.5
	baz=30						
M25A	Palm-Egli Farm	29.53	342	⇓P	P	07 12 35.6	+1.0
	baz=30						
N23A	Red Feather La	29.65	339	⇓P	P	07 12 36.8	+1.1
	baz=30						
GMRC	Granite Mounta	29.71	319	⇓P	P	07 12 38.5	+2.3
	baz=30,SNR=8.0						
P19A	Cripple Cowboy	29.74	334	⇓P	P	07 12 38.2	+1.7
	baz=30						
N22A	Wattenberg Ran	29.75	338	⇓P	P	07 12 38.3	+1.7
	baz=30,SNR=7.5						
M24A	Cheyenne	29.80	341	⇓P	P	07 12 37.9	+1.0
	baz=30						
PHWY	Pilot Hill	29.85	340	eP	P	07 12 37.9	+0.4
	comp=Z,9.8nm,1.2s						
O20A	White River Ci	29.85	335	⇑P	P	07 12 39.4	+2.0
	baz=30,SNR=9.6						
SSPA	Standing Stone	29.89	23	eP	P	07 12 36.5	-1.0
	comp=Z,10nm,0.9s						
MVL	Millersville	29.95	25	eP	P	07 12 37.5	-0.6
	comp=Z,15nm,1.0s						
MURC	Murrieta	30.00	316	⇓P	P	07 12 41.4	+2.7
	baz=30						
SRU	San Rafael	30.00	331	eP	P	07 12 40.8	+2.0
	comp=Z,45nm,1.7s						
SRU	San Rafael	30.00	331	⇓P	P	07 12 40.5	+1.7
	baz=30						
N21A	Black Mountain	30.10	337	⇑P	P	07 12 41.5	+1.8
	baz=30,SNR=19						
Q16A	Castle Valley	30.15	330	⇑P	P	07 12 42.8	+2.6
	baz=30,SNR=13						
HEC	Hector,Ludlow	30.17	319	⇑P	P	07 12 42.9	+2.7
	baz=30						
CCUT	Cedar City	30.25	326	eP	P	07 12 43.7	+2.6
	comp=Z,12nm,1.1s						
ECSD	EROS Data Cent	30.28	354	eP	P	07 12 39.7	-1.3
	comp=Z,8.3nm,0.7s						
P18A	Preston Nutter	30.29	332	⇓P	P	07 12 42.9	+1.4
	baz=31						
M22A	Cedar Creek Ra	30.33	339	⇓P	P	07 12 42.6	+0.9
	baz=31						
MSU	Marysvale	30.34	329	eP	P	07 12 43.5	+1.7
O19A	Miners Draw (B	30.35	334	⇓P	P	07 12 43.9	+2.1
	baz=31,SNR=6.1						
P17A	Butcher Ranch,	30.39	331	⇓P	P	07 12 44.5	+2.2
	baz=31,SNR=7.5						
N20A	Spence Gulch,	30.45	336	⇓P	P	07 12 44.9	+2.1
	baz=31,SNR=20						
TMUT	Trail Mountain	30.47	331	eP	P	07 12 45.0	+1.9
	comp=Z,10nm,1.0s						
K25A	Mack Ranch, Ha	30.56	343	⇑P	P	07 12 44.1	+0.5
	baz=31						
L23A	Garrett	30.66	341	⇓P	P	07 12 45.6	+1.0
	baz=31,SNR=13						
M21A	Separation Pea	30.78	338	⇑P	P	07 12 47.4	+1.7
	baz=31,SNR=16						
MWC	Mount Wilson	30.94	316	eP	P	07 12 48.8	+1.6
	comp=Z,11nm,1.3s						
M20A	Sweetwater, Wa	30.99	337	⇓P	P	07 12 48.8	+1.3
	baz=31,SNR=12						
L21A	Rawlins	31.09	338	⇓P	P	07 12 50.2	+1.8
	baz=31,SNR=17						
N18A	Larsen Ranch,	31.15	334	⇓P	P	07 12 51.3	+2.4
	baz=32,SNR=16						
K23A	Bowen Ranch, D	31.21	341	⇓P	P	07 12 50.7	+1.3
	baz=32,SNR=9.1						
MPU	Maple Canyon	31.24	331	eP	P	07 12 51.6	+1.9
	comp=Z,21nm,1.1s						
MPU				epP	pP	07 13 02.9	+2.9
EDW2	Edwards Air Fo	31.28	317	⇓P	P	07 12 52.3	+2.3
	baz=32						
DAU	Daniels Canyon	31.38	332	eP	P	07 12 53.1	+2.0
K22A	Casper	31.41	340	⇑P	P	07 12 52.4	+1.3
	baz=32,SNR=11						
LRMC	Laurel Mountai	31.44	318	⇑P	P	07 12 53.8	+2.3
	baz=32						
L20A	Wamsutter	31.49	337	⇓P	P	07 12 53.4	+1.5
	baz=32,SNR=8.6						
FURC	Furnace Creek,	31.54	321	⇑P	P	07 12 54.6	+2.5
	baz=32						
SPMN	St. Paul	31.57	360	⇓P	P	07 12 52.4	+0.1
	baz=32,SNR=6.6						
N17A	Moffit Pass	31.62	333	⇑P	P	07 12 55.2	+2.0
	baz=32,SNR=9.2						
K21A	Alcova	31.64	339	⇓P	P	07 12 54.4	+1.2
	baz=32,SNR=5.7						
MPMC	Manual Prospec	31.67	319	⇑P	P	07 12 55.9	+2.3
	baz=32,SNR=9.2						
M18A	Lyman	31.69	334	⇓P	P	07 12 55.2	+1.5
	baz=32						
I24A	Kuemmerle Ranc	31.93	343	⇑P	P	07 12 56.2	+0.6
	baz=32						
DUG	Dugway	31.94	330	eP	P	07 12 58.3	+2.4
	comp=Z,12nm,1.2s						
DUG	Dugway	31.94	330	⇓P	P	07 12 58.2	+2.4
	baz=32						
BINY	Binghamton	31.96	24	eP	P	07 12 54.4	-1.4
	comp=Z,32nm,0.9s						
L19A	Farson	31.96	336	⇑P	P	07 12 57.3	+1.2
	baz=32,SNR=7.5						
M17A	Scullys Gap (B	31.98	334	⇑P	P	07 12 57.4	+1.1
	baz=32,SNR=11						
RSSD	Black Hills	32.01	344	eP	P	07 12 56.4	-0.1
	comp=Z,6.4nm,0.7s						
R11A	Troy Canyon, C	32.05	325	⇓P	P	07 12 59.4	+2.6
	baz=32,SNR=9.3						
K20A	Yellowstone Ra	32.05	338	⇑P	P	07 12 57.6	+0.8
	baz=32,SNR=5.4						
ISA	Isabella	32.06	318	⇓P	P	07 12 59.5	+2.6
	baz=32						
J22A	Midwest	32.08	341	⇓P	P	07 12 57.7	+0.7
	baz=32,SNR=8.0						
L18A	Fontenelle, Gr	32.09	335	⇓P	P	07 12 58.6	+1.4
	baz=32,SNR=17						
M16A	Huntsville	32.27	333	⇑P	P	07 13 00.8	+2.0
	baz=33						
CWC	Cottonwood Cre	32.28	319	⇓P	P	07 13 01.1	+2.2
	baz=32						
J21A	Lysite	32.34	339	⇓P	P	07 13 00.7	+1.4
	baz=33,SNR=21						
K19A	Absolon Red Bu	32.38	337	⇓P	P	07 13 00.6	+0.8
	baz=33,SNR=9.9						
HWUT	Hardware Ranch	32.48	333	eP	P	07 13 01.9	+1.3
	comp=Z,94nm,2.3s						
I22A	9 Mile Ranch,	32.51	341	⇑P	P	07 13 01.6	+0.8
	baz=33,SNR=8.3						
J20A	Shoshoni	32.56	339	⇑P	P	07 13 02.9	+1.6
	baz=33,SNR=9.6						
VES	Vestal, Richgr	32.57	318	⇓P	P	07 13 04.1	+2.9
	baz=33,SNR=8.8						
L17A	Cokeville	32.58	334	⇓P	P	07 13 02.5	+1.0
	baz=33,SNR=15						
BW06	Boulder Array	32.60	336	eP	P	07 13 02.0	+0.3
	comp=Z,12nm,1.3s						
BW06	Boulder Array	32.60	336	⇑P	P	07 13 02.6	+0.8
	baz=33,SNR=10						
PDAR	Pinedale Array	32.60	336	P	P	07 13 02.2	+0.5
PDAR				PcP	PcP	07 15 49.4	+1.8
PDAR	Pinedale Array	32.60	336	P	P	07 13 02.2	+0.5
	comp=Z,5.4nm,1.0s,baz=137,slow=8.4,SNR=29						
PDAR				PcP	PcP	07 15 49.4	+1.8
	comp=Z,1.1nm,0.7s,baz=155,slow=4.6,SNR=4.1						
PDAR				LR	LR	07 29 38.8	
	comp=Z,212nm,18.4s,baz=154,slow=43						
K18A	Toltan Ranch,	32.69	336	⇓P	P	07 13 03.8	+1.4
	baz=33,SNR=33						
I21A	Big Trails, Te	32.70	340	⇓P	P	07 13 03.2	+0.8
	baz=33						
H24A	Dirks Ranch, A	32.73	344	⇑P	P	07 13 03.0	+0.3
	baz=33,SNR=14						
L16A	Fish Haven	32.75	334	⇓P	P	07 13 04.5	+1.5
	baz=33,SNR=21						
J19A	Crowheart	32.84	338	⇑P	P	07 13 04.6	+0.9
	baz=33						
RCTC	Rector, Farmer	32.95	318	⇑P	P	07 13 07.0	+2.5
	baz=33,SNR=5.6						
H22A	Clearmont	33.10	342	⇑P	P	07 13 06.5	+0.6
	baz=34,SNR=8.0						
I20A	Worland	33.10	339	⇑P	P	07 13 07.4	+1.5
	baz=34,SNR=9.7						
K17A	Gardner Place,	33.14	335	⇑P	P	07 13 07.8	+1.4
	baz=34,SNR=18						
SADO	Sadowa	33.15	18	P	P	07 13 03.9	-2.3
SADO	Sadowa	33.15	18	P	P	07 13 03.9	-2.3
	comp=Z,7.4nm,0.9s,baz=240,slow=8.0,SNR=4.8						
HVU	Hansel Valley	33.16	332	eP	P	07 13 08.7	+2.2
	comp=Z,52nm,1.6s						
J18A	Kendall Valley	33.16	336	⇓P	P	07 13 07.8	+1.2
	baz=34,SNR=30						
L15A	Malad City	33.16	332	⇓P	P	07 13 08.0	+1.5
	baz=34,SNR=13						
AHID	Auburn Hatcher	33.22	335	eP	P	07 13 09.3	+2.2
	comp=Z,32nm,1.1s						
G24A	Alzada	33.23	345	⇓P	P	07 13 07.4	+0.4
	baz=34,SNR=7.3						
TRY	Troy	33.34	26	eP	P	07 13 06.3	-1.6
	comp=Z,48nm,1.2s						
H21A	Big Horn, Sher	33.34	341	⇑P	P	07 13 08.7	+0.6
	baz=34						
G23A	Biddle	33.38	343	⇓P	P	07 13 08.8	+0.6
	baz=34						
I19A	Meeteetse	33.48	338	⇓P	P	07 13 11.2	+1.9
	baz=34,SNR=19						
K16A	Soda Springs	33.48	334	⇓P	P	07 13 10.6	+1.3
	baz=34						
MLAC	Mammoth Lakes	33.50	320	⇑P	P	07 13 11.5	+1.9
	baz=34						
I18A	Diamond G Ranc	33.50	337	⇑P	P	07 13 11.0	+1.5
	baz=34,SNR=16						
H20A	Greybull	33.53	340	⇓P	P	07 13 10.5	+0.8
	baz=34,SNR=9.2						
J17A	Brown Place, J	33.56	336	⇓P	P	07 13 11.4	+1.3
	baz=34,SNR=55						
ELK	Elko	33.58	328	eP	P	07 13 12.5	+2.2
L14A	Malta	33.58	332	⇓P	P	07 13 12.1	+1.9
	baz=34,SNR=21						
NV11	Mina Array Sit	33.59	322	eP	P	07 13 12.6	+2.3
REDW	Red Top Meadow	33.62	336	eP	P	07 13 12.4	+1.8
	comp=Z,1.2nm,1.3s						
G22A	Birney	33.65	342	⇑P	P	07 13 11.0	+0.3
	baz=34,SNR=8.8						
SNOW	Snow King Moun	33.66	336	eP	P	07 13 12.5	+1.5
	comp=Z,76nm,0.9s						
NVAR	Mina Array Bea	33.68	322	P	P	07 13 13.8	+2.6
NVAR				PcP	PcP	07 15 54.3	+3.7
NVAR	Mina Array Bea	33.68	322	P	P	07 13 13.8	+2.6
	comp=Z,9.9nm,0.8s,baz=135,slow=8.7,SNR=90						
NVAR				PcP	PcP	07 15 54.3	+3.7
	comp=Z,1.6nm,0.8s,baz=138,slow=3.9,SNR=4.0						
F24A	Ekalaka	33.72	345	⇓P	P	07 13 11.4	+0.2
	baz=34,SNR=8.7						
LOHW	Long Hollow	33.73	336	eP	P	07 13 12.7	+1.1
	comp=Z,34nm,1.1s						
TPAW	Teton Pass	33.76	336	eP	P	07 13 13.4	+1.5
	comp=Z,64nm,1.3s						
K15A	Arbon	33.77	333	⇑P	P	07 13 13.5	+1.7
	baz=34,SNR=13						
RRI2	Red Ridge	33.80	335	eP	P	07 13 14.4	+2.2
	comp=Z,54nm,1.3s						
F23A	Volborg	33.86	344	⇑P	P	07 13 12.7	+0.2
	baz=34						
ACCN	Adirondack Com	33.88	25	eP	P	07 13 11.2	-1.4
	comp=Z,13nm,1.3s						
MOOW	Moose Ponds	33.90	336	eP	P	07 13 14.0	+1.0
	comp=Z,23nm,1.2s						
G21A	Lodge Grass	33.93	341	⇑P	P	07 13 13.4	+0.3
	baz=34						
DCID1	Drake Creek	33.95	335	eP	P	07 13 14.9	+1.5
	comp=Z,41nm,1.0s						
K14A	Jones Ranch, D	33.95	332	⇑P	P	07 13 14.7	+1.3
	baz=34,SNR=17						
I17A	Pilgrim Ck.	33.98	336	⇑P	P	07 13 15.2	+1.5
	baz=34,SNR=13						
H19A	Powell	34.03	339	⇓P	P	07 13 14.9	+0.9
	baz=34,SNR=16						
IMW	Indian Meadow	34.10	336	eP	P	07 13 15.9	+1.1
	comp=Z,87nm,2.0s						
NCB	Newcomb	34.14	24	eP	P	07 13 13.3	-1.6
	comp=Z,14nm,0.9s						
F22A	Rosebud	34.15	343	⇓P	P	07 13 15.9	+0.9
	baz=34						
G20A	Bridger	34.25	340	⇑P	P	07 13 16.2	+0.3
	baz=35,SNR=8.8						
H18A	Shoshone NF, C	34.28	338	⇑P	P	07 13 17.4	+1.1
	baz=35,SNR=45						
I16A	Newdale	34.30	335	⇓P	P	07 13 18.1	+1.7
	baz=35,SNR=14						
J15A	Blackfoot	34.30	334	⇓P	P	07 13 18.1	+1.7
	baz=35,SNR=13						
E24A	Baker	34.36	346	⇓P	P	07 13 17.2	+0.4
	baz=35,SNR=14						
H17A	Grant Village	34.38	337	⇑P	P	07 13 19.1	+1.9
	baz=35,SNR=13						
LKWY	Lake	34.45	337	eP	P	07 13 19.9	+2.1
	comp=Z,24nm,1.0s						
RLMT	Red Lodge	34.52	339	eP	P	07 13 18.7	+0.3
	comp=Z,75nm,2.1s						
RLMT	Red Lodge	34.52	339	⇓P	P	07 13 19.3	+0.9
	baz=35,SNR=11						
E23A	Ismay	34.55	344	⇓P	P	07 13 18.5	+0.1
	baz=35,SNR=11						
LONY	Lake Ozonia	34.55	23	eP	P	07 13 16.5	-1.9
	comp=Z,20nm,0.9s						
E22A	Miles City	34.67	344	⇓P	P	07 13 19.4	0.0
	baz=35						
MDND	Maddock	34.69	352	⇓P	P	07 13 18.9	-0.7
	baz=35,SNR=12						
CMB	Columbia Colle	34.71	320	eP	P	07 13 21.9	+1.9
	comp=Z,2.4nm,0.9s						
J14A	Carey	34.72	333	⇑P	P	07 13 22.0	+1.9
	baz=35						
F20A	Billings	34.74	341	⇓P	P	07 13 20.8	+0.6
	baz=35						
AGMN	Agassiz Nation	34.75	356	eP	P	07 13 18.5	-1.5
	comp=Z,8.1nm,0.8s						
G18A	Lazy EL Ranch,	34.80	339	⇓P	P	07 13 21.6	+0.9
	baz=35,SNR=8.6						
I15A	Monteview	34.81	334	⇓P	P	07 13 22.9	+2.0
	baz=35						
D24A	Glendive	34.88	346	⇓P	P	07 13 22.0	+0.7
	baz=35,SNR=24						
H16A	Russell Place,	34.90	336	⇑P	P	07 13 23.2	+1.5
	baz=35,SNR=20						
F19A	Roth Farm, Mol	35.05	340	⇑P	P	07 13 23.5	+0.7
	baz=35,SNR=8.4						
J13A	Cove Ranch, Pi	35.07	332	⇓P	P	07 13 24.3	+1.2
	baz=35,SNR=6.5						
QLMT	Earthquake Lak	35.07	336	eP	P	07 13 25.2	+2.1
QLMT				epP	pP	07 13 41.6	+8.2
QLMT				ePcP	PcP	07 16 01.9	+7.5
E21A	Keefer Ranch,	35.08	342	⇓P	P	07 13 23.4	+0.4
	baz=36,SNR=5.9						
WCN	Washoe City	35.11	322	eP	P	07 13 26.0	+2.5
	comp=Z,11nm,1.4s						
FRNY	Flat Rock	35.12	24	eP	P	07 13 22.0	-1.2
	comp=Z,68nm,2.2s						
D23A	Lindsay	35.15	345	⇑P	P	07 13 23.7	+0.1
	baz=36,SNR=14						
I14A	Mackay	35.17	333	⇓P	P	07 13 25.6	+1.6
	baz=36,SNR=13						
G17A	Pierce Place,	35.23	338	⇑P	P	07 13 26.6	+2.2
	baz=36,SNR=13						
GCMT	Greycliff	35.24	339	eP	P	07 13 25.4	+0.9
	comp=Z,11nm,1.2s						
C24A	Savage	35.30	346	⇓P	P	07 13 25.5	+0.7
	baz=36,SNR=19						
HLID	Hailey	35.31	332	eP	P	07 13 26.8	+1.6
	comp=Z,12nm,1.0s						
HLID	Hailey	35.31	332	⇑P	P	07 13 26.5	+1.3
	baz=36,SNR=17						
F18A	Big Timber	35.36	339	⇑P	P	07 13 26.5	+1.0
	baz=36,SNR=10.0						
E20A	Meyer Farm, Mu	35.37	341	⇓P	P	07 13 26.3	+0.9
	baz=36,SNR=16						
H15A	Lima	35.38	335	⇑P	P	07 13 28.1	+2.3
	baz=36,SNR=35						
D22A	Cohagen	35.38	344	⇑P	P	07 13 26.4	+0.8
	baz=36,SNR=36						
I13A	Wildhorse Cree	35.45	333	⇑P	P	07 13 27.9	+1.4
	baz=36,SNR=15						
E19A	Rath

comp=Z,21nm,0.8s
DGMT Dagmar 36.13 347 ⇓P P 07 13 32.1 +0.2
baz=36,SNR=11
OHCM Honcut 36.18 321 eP P 07 13 35.1 +2.7
D19A Cripps Ranch, 36.19 341 ⇑P P 07 13 33.3 +0.8
baz=37,SNR=16
G14A Jackson 36.23 335 ⇑P P 07 13 34.5 +1.4
baz=37,SNR=14
E17A Martinsdale 36.24 338 ⇑P P 07 13 34.1 +0.9
baz=37,SNR=9.9
C21A Desert Coulee 36.25 343 ⇓P P 07 13 33.4 +0.4
baz=37,SNR=6.8
H12A Diamond D Ranc 36.28 333 ⇓P P 07 13 34.7 +1.2
baz=37,SNR=35
LRM Limekiln Ridge 36.30 336 eP P 07 13 35.0 +1.3
B23A Brockton 36.30 346 ⇓P P 07 13 33.8 +0.4
baz=37,SNR=10
F15A Butte 36.33 336 ⇑P P 07 13 35.5 +1.6
baz=37,SNR=29
B22A Reddig Ranch S 36.40 345 ⇓P P 07 13 34.6 +0.3
baz=37
C20A Veseth Ranch, 36.41 342 ⇓P P 07 13 34.8 +0.4
baz=37,SNR=7.1
G13A Cobalt 36.44 334 ⇑P P 07 13 36.1 +1.4
baz=37,SNR=9.0
A24A Westby 36.51 347 ⇑P P 07 13 35.3 +0.1
baz=37,SNR=8.3
D18A Linhart Farms, 36.51 340 ⇓P P 07 13 36.3 +1.0
baz=37,SNR=7.5
WVOR Wild Horse Val 36.56 327 eP P 07 13 37.5 +1.7
comp=Z,33nm,1.4s
E16A East Helena 36.60 338 ⇓P P 07 13 37.5 +1.4
baz=37,SNR=24
F14A Wisdom 36.66 335 ⇓P P 07 13 38.0 +1.4
baz=37
ULM Lac du Bonnet 36.70 356 eP P 07 13 35.3 -1.4
comp=Z,7.0nm,0.8s
ULM PcP PcP 07 16 01.0 +2.2
ULM Lac du Bonnet 36.70 356 P P 07 13 35.1 -1.6
comp=Z,8.3nm,0.8s,baz=171,slow=9.7,SNR=10
ULM PcP PcP 07 16 01.0 +2.2
comp=Z,1.3nm,0.4s,baz=215,slow=0.6,SNR=4.7
ULM LR LR 07 32 42.2
comp=Z,295nm,18.2s,baz=251,slow=44
A23A Redstone 36.74 346 ⇓P P 07 13 37.9 +0.8
baz=37,SNR=7.2
SAML Samuel 36.75 126 eP P 07 13 37.9 +0.4
comp=Z,12nm,1.0s
C19A Slack Wire Ran 36.75 341 ⇑P P 07 13 37.9 +0.6
baz=37,SNR=8.2
D17A Six Diamond Ra 36.77 339 ⇓P P 07 13 38.5 +0.9
baz=37,SNR=19
HRY Holter Researc 36.81 338 eP P 07 13 39.0 +1.2
E15A Deer Lodge 36.87 337 ⇓P P 07 13 39.6 +1.2
baz=37,SNR=21
G12A Big Creek, Yel 36.94 333 ⇓P P 07 13 40.4 +1.3
baz=37
D16A Dana Ranch, Ca 36.98 338 ⇑P P 07 13 40.2 +0.9
baz=37
A22A Carney Farms, 37.02 345 ⇓P P 07 13 40.3 +0.8
baz=37,SNR=12
F13A Darby 37.03 334 ⇓P P 07 13 40.7 +0.9
baz=37,SNR=16
B20A Solberg Farm, 37.07 343 ⇓P P 07 13 40.7 +0.7
baz=37
E14A Clinton 37.20 336 ⇓P P 07 13 42.2 +1.0
baz=38,SNR=13
C17A Wharram Farm, 37.22 340 ⇑P P 07 13 42.0 +0.7
baz=38,SNR=17
EGMT Eagleton 37.23 341 eP P 07 13 42.1 +0.8
comp=Z,118nm,1.9s
EGMT Eagleton 37.23 341 ⇑P P 07 13 42.5 +1.2
baz=38,SNR=12
D15A Lincoln 37.34 337 ⇓P P 07 13 43.6 +1.2
baz=38,SNR=13
B19A Brinkman Farms 37.36 342 ⇑P P 07 13 43.5 +1.0
baz=38,SNR=5.7
F12A Elk City 37.40 334 ⇑P P 07 13 44.0 +1.1
baz=38,SNR=49
A20A Cobblestone Ra 37.44 343 ⇑P P 07 13 43.7 +0.6
baz=38
E13A Victor 37.50 335 ⇓P P 07 13 45.0 +1.2
baz=38,SNR=34
CHMT Chamberlain Mo 37.51 337 eP P 07 13 44.8 +0.8
B18A Beardsley Farm 37.56 341 ⇓P P 07 13 44.9 +0.7
baz=38,SNR=12
BMO Blue Mountains 37.64 331 eP P 07 13 45.7 +0.8
comp=Z,18nm,1.4s
C16A Fuhringer Ranc 37.70 339 ⇓P P 07 13 46.4 +1.0
baz=38,SNR=12
MSO Missoula 37.71 336 eP P 07 13 46.5 +1.0
comp=Z,17nm,1.1s
MSO Missoula 37.71 336 ⇓P P 07 13 46.1 +0.6
baz=38,SNR=21
A19A Klindworth Far 37.72 343 ⇓P P 07 13 46.0 +0.5
baz=38
D14A Greenough 37.75 336 ⇑P P 07 13 46.6 +0.7
baz=38,SNR=13
B17A L&G Farms, Che 37.80 340 ⇑P P 07 13 46.8 +0.7
baz=38
SLMT Seeley Lake 37.88 337 eP P 07 13 47.4 +0.4
C15A Salmond Ranch, 37.99 338 ⇑P P 07 13 49.0 +1.2
baz=38,SNR=14
A18A Metzger Ranch, 38.05 341 ⇑P P 07 13 49.1 +0.9
baz=38,SNR=14
D13A Huson 38.14 336 ⇑P P 07 13 50.2 +1.1
baz=38,SNR=19
B16A M & M Farms, S 38.21 339 ⇓P P 07 13 50.5 +0.8
baz=39,SNR=8.7
LPAZ La Paz 38.24 140 P P 07 13 57.9 +7.1
comp=Z,8.6nm,1.0s,baz=344,slow=10,SNR=18
SWMT Swartz Lake 38.29 336 eP P 07 13 51.0 +0.6
A17A Triple J Farms 38.34 341 ⇑P P 07 13 51.5 +0.8
baz=39,SNR=14
C14A Swan Lake 38.41 337 ⇓P P 07 13 52.5 +1.1
baz=39
B15A Bradely Ranch, 38.42 338 ⇑P P 07 13 52.4 +0.9
baz=39,SNR=10
D12A Red Ives Fores 38.47 335 ⇓P P 07 13 52.6 +0.7
baz=39
YBMT Yellow Bay 38.59 337 eP P 07 13 53.5 +0.6
comp=Z,32nm,1.5s
JTMT Jette 38.60 336 eP P 07 13 53.9 +0.9
A16A West Butte Ran 38.63 340 ⇑P P 07 13 54.1 +0.8
baz=39
C13A Hot Springs 38.66 336 ⇑P P 07 13 54.2 +0.8
baz=39,SNR=8.3
B14A Marquette Ranc 38.72 338 ⇓P P 07 13 55.0 +1.0
baz=39
BLMT Blacktail Moun 38.84 337 eP P 07 13 56.7 +1.5
BSMT Bassoo Peak 38.88 336 eP P 07 13 56.6 +1.2
C12B Naegeli Ranch, 39.04 335 ⇑P P 07 13 57.7 +1.0
baz=39,SNR=6.5
A15A Johnson Ranch, 39.05 339 ⇑P P 07 13 57.6 +0.8
baz=39,SNR=18
B13A Whitefish 39.18 337 ⇑P P 07 13 59.3 +1.5
baz=40,SNR=24
A14A Double T Ranch 39.29 338 ⇓P P 07 14 00.0 +1.3
baz=40,SNR=26
C11A Tepee Creek (N 39.47 335 ⇓P P 07 14 01.4 +1.3
baz=40
WALA Waterton Lakes 39.54 338 eP P 07 14 02.0 +1.2
comp=Z,0.8nm,1.4s
A13A Flathead Natio 39.62 337 ⇑P P 07 14 02.9 +1.4
baz=40
B12A Libby 39.70 336 ⇓P P 07 14 03.8 +1.8
baz=40,SNR=5.6
BROR Big Rock Looko 39.85 326 P P 07 14 04.5 +1.2
A12A Yaak River Ran 40.09 336 ⇑P P 07 14 07.1 +1.7
baz=40
NEW Newport 40.16 334 eP P 07 14 06.8 +0.9
comp=Z,8.6nm,1.1s
VLL Laurance Lake 40.24 328 P P 07 14 09.4 +2.7
EBG Ellensburg 40.70 330 P P 07 14 12.3 +1.9
LON Longmire 41.19 329 eP P 07 14 16.1 +1.6
comp=Z,31nm,1.7s
FFC Flin Flon 41.74 352 eP P 07 14 18.4 -0.3
comp=Z,6.9nm,0.6s
NLWA Neilton Lookou 42.66 329 eP P 07 14 28.4 +2.0
comp=Z,49nm,1.5s
SCHQ Schefferville 45.83 20 eP P 07 14 49.6 -2.1
comp=Z,19nm,0.9s
SCHQ PcP PcP 07 16 31.1 +2.5
SCHQ Schefferville 45.83 20 P P 07 14 49.6 -2.1
comp=Z,18nm,0.9s,baz=217,slow=5.5,SNR=15
SCHQ PcP PcP 07 16 31.1 +2.5
comp=Z,5.2nm,0.8s,baz=185,slow=2.8,SNR=3.6
SCHQ LR LR 07 34 57.1

comp=Z,1μm,19.1s,baz=26,slow=38
YKA Yellowknife Ar 51.34 347 P P 07 15 34.4 +0.5
YKA PcP PcP 07 16 49.9 +1.6
YKA Yellowknife Ar 51.34 347 P P 07 15 34.3 +0.5
comp=Z,35nm,0.8s,baz=151,slow=7.5,SNR=608
YKA PcP PcP 07 16 49.9 +1.6
comp=Z,2.5nm,0.8s,baz=149,slow=3.9,SNR=5.8
YKW3 Yellowknife Ar 51.40 347 eP P 07 15 34.5 +0.2
comp=Z,1.0nm,0.9s
CPUP Villa Florida 52.40 139 P P 07 15 50.0 +7.7
CPUP Villa Florida 52.40 139 P P 07 15 50.0 +7.7
comp=Z,7.9nm,1.0s,baz=306,slow=8.2,SNR=11
CPUP LR LR 07 40 26.4
comp=Z,171nm,18.7s,baz=68,slow=39
BDFB Brasilia 52.74 122 P P 07 15 50.2 +5.1
BDFB Brasilia 52.74 122 P P 07 15 50.2 +5.1
comp=Z,9.2nm,1.0s,baz=314,slow=7.4,SNR=7.4
BDFB LR LR 07 40 40.2
comp=Z,220nm,19.4s,baz=301,slow=39
DLBC Dease Lake 52.84 336 eP P 07 15 47.8 +2.5
RKT Rikitea 55.24 229 eLR LR 07 32 16.3
comp=Z,393nm,25.2s
PLCA Paso Flores 57.74 160 P P 07 16 30.2 +10
comp=Z,6.8nm,1.1s,baz=333,slow=6.9,SNR=6.9
PLCA LR LR 07 36 40.2
comp=Z,258nm,18.4s,baz=1.9,slow=31
RCBR Riachuelo 59.45 105 eP P 07 16 39.0 +5.9
comp=Z,48nm,1.4s
SFJD Kangerlussuaq 60.10 18 LR LR 07 43 04.8
comp=Z,676nm,19.4s,baz=230,slow=37
BMRM Bremner River 60.33 334 eP P 07 16 41.2 +2.8
comp=Z,12nm,0.9s
EGAK Eagle 60.92 338 eP P 07 16 43.5 +1.2
comp=Z,11nm,0.9s
RES Resolute Bay 61.14 359 eP P 07 16 43.0 -0.6
comp=Z,15nm,1.7s
DOT Dot Lake 61.41 337 eP P 07 16 47.8 +2.1
comp=Z,35nm,0.9s
PAX Paxson 61.63 336 eP P 07 16 48.7 +1.5
comp=Z,12nm,0.8s
PMR Palmer 62.57 333 eP P 07 16 55.1 +1.7
comp=Z,23nm,1.3s
ILAR Eielson Array 63.03 337 P P 07 16 57.6 +1.1
ILAR Eielson Array 63.03 337 P P 07 16 57.6 +1.1
comp=Z,12nm,1.0s,baz=132,slow=4.0,SNR=49
ILAR LR LR 07 48 09.1
comp=Z,279nm,18.9s,baz=152,slow=40
MCK McKinley 63.37 336 eP P 07 16 59.6 +0.8
comp=Z,33nm,1.4s
COLA College 63.45 337 eP P 07 17 00.5 +1.3
comp=Z,9.6nm,0.9s
SPU Mount Spurr 63.71 332 eP P 07 17 02.9 +1.8
TRF Thorofare Moun 63.81 335 eP P 07 17 02.5 +0.7
comp=Z,56nm,1.3s
PPT Papeete 64.20 243 LR LR 07 39 09.3
comp=Z,259nm,18.5s,baz=12,slow=30
PPT2 Papete2 64.21 243 eLR LR 07 36 16.1
comp=Z,250nm,25.5s
PPLA Purkeypile 64.39 334 eP P 07 17 06.2 +0.5
comp=Z,43nm,1.4s
COLD Coldfoot 65.35 339 eP P 07 17 14.0 +2.4
comp=Z,17nm,1.3s
TBI Tubuai 66.65 237 eLR LR 07 37 21.8
comp=Z,276nm,28.5s
BORG Borgarnes 69.85 26 LR LR 07 45 48.3
comp=Z,208nm,19.7s,baz=153,slow=34
TNA Tin City 71.70 335 eP P 07 17 54.0 +2.7
comp=Z,15nm,1.2s
DAG Danmarks Havn 73.22 13 *i* P P 07 17 59.5 -0.7
comp=Z,5.9nm,0.7s
DAG
comp=Z,560nm,21.0s
JMIC Jan Mayen 75.34 20 LR LR 07 50 38.6
comp=Z,558nm,21.8s,baz=256,slow=36
EVOP Sao Brissos 77.39 53 eP P 07 18 24.0 -0.8
comp=Z,9.2nm,0.9s
EVO Evora 77.47 53 eP P 07 18 24.0 -1.3
comp=Z,9.2nm,0.9s
EVO eR
comp=Z,269nm,22.2s
ESK Eskdalemuir 78.62 36 eP P 07 18 31.5 +0.2
comp=Z,13nm,0.7s
ROSF Rostrenen 79.54 43 eP P 07 18 37.1 +0.6
comp=Z,29nm,1.2s
ROSF Rostrenen 79.54 43 eP P 07 18 37.1 +0.6
comp=Z,29nm,1.2s
QUIF Quistinic 79.68 43 eP P 07 18 37.4 +0.1
comp=Z,8.0nm,0.8s
QUIF Quistinic 79.68 43 eP P 07 18 37.4 +0.1
comp=Z,8.0nm,0.8s
SGMF Saint Gilles 80.03 43 eP P 07 18 38.9 -0.3
comp=Z,5.2nm,0.7s
SGMF Saint Gilles 80.03 43 eP P 07 18 38.9 -0.3
comp=Z,5.2nm,0.7s
ESDC Sonseca Array 80.42 51 P P 07 18 42.1 +0.5
ESDC Sonseca Array 80.42 51 P P 07 18 42.1 +0.5
comp=Z,2.1nm,0.7s,baz=289,slow=5.8,SNR=13
ESLA Sonseca Array 80.42 51 eP P 07 18 42.6 +1.0
comp=Z,1.3nm,0.9s
SPITS Spitsbergen Ar 80.63 11 LR LR 07 58 00.7
comp=Z,895nm,18.1s,baz=285,slow=39
MDT Midelt 81.09 58 LR LR 07 47 11.7
comp=Z,148nm,21.3s,baz=310,slow=30
GRR Gorron 81.12 42 eP P 07 18 45.3 +0.3
comp=Z,11nm,0.6s
GRR Gorron 81.12 42 eP P 07 18 45.3 +0.3
comp=Z,11nm,0.6s
FLN La Foliniere 81.30 42 eP P 07 18 46.4 +0.4
comp=Z,14nm,0.8s
FLN eR
comp=Z,421nm,21.0s
FLN La Foliniere 81.30 42 eP P 07 18 46.4 +0.4
comp=Z,14nm,0.8s
LDF La Druitiere 81.57 42 eP P 07 18 47.7 +0.3
LDF La Druitiere 81.57 42 eP P 07 18 47.7 +0.3
MFF Saint Martin d 81.93 44 eP P 07 18 49.5 +0.2
comp=Z,10nm,0.9s
MFF Saint Martin d 81.93 44 eP P 07 18 49.5 +0.2
comp=Z,10nm,0.9s
ETSF Etsaut 82.36 48 eP P 07 18 52.4 +0.6
comp=Z,5.7nm,0.8s
ETSF Etsaut 82.36 48 eP P 07 18 52.4 +0.6
comp=Z,5.7nm,0.8s
LFF La Frestale 82.87 46 eP P 07 18 54.7 +0.4
comp=Z,20nm,1.1s
LFF La Frestale 82.87 46 eP P 07 18 54.7 +0.4
comp=Z,20nm,1.1s
EPF Esparros 82.98 48 eP P 07 18 55.5 +0.5
EPF Esparros 82.98 48 eP P 07 18 55.5 +0.5
RJF Les Rejaudoux 83.33 45 eP P 07 18 57.0 +0.3
RJF eR
comp=Z,218nm,20.5s
RJF Les Rejaudoux 83.33 45 eP P 07 18 57.0 +0.3
TCF Toulx Ste Croi 83.59 44 eP P 07 18 58.1 +0.1
comp=Z,4.5nm,0.8s
TCF Toulx Ste Croi 83.59 44 eP P 07 18 58.1 +0.1
comp=Z,4.5nm,0.8s
CAF Calviac 83.79 45 eP P 07 18 59.2 +0.1
CAF Calviac 83.79 45 eP P 07 18 59.2 +0.1
BGF Bois d'Agland 83.96 44 eP P 07 19 00.1 +0.2
comp=Z,12nm,0.8s
BGF Bois d'Agland 83.96 44 eP P 07 19 00.1 +0.2
comp=Z,12nm,0.8s
BAIF Baives 84.02 40 eP P 07 19 00.7 +0.6
BAIF Baives 84.02 40 eP P 07 19 00.7 +0.6
AVF Avril sur Loir 84.24 43 eP P 07 19 01.2 -0.1
comp=Z,4.7nm,0.7s
AVF Avril sur Loir 84.24 43 eP P 07 19 01.2 -0.1
comp=Z,4.7nm,0.7s
MTLF Montolieu 84.25 47 eP P 07 19 02.0 +0.5
MTLF Montolieu 84.25 47 eP P 07 19 02.0 +0.5
SSF Saint Saulge 84.28 43 eP P 07 19 01.6 +0.1
comp=Z,3.1nm,0.7s
SSF Saint Saulge 84.28 43 eP P 07 19 01.6 +0.1
comp=Z,3.1nm,0.7s
GIVF Givet 84.39 40 eP P 07 19 01.8 -0.2
GIVF Givet 84.39 40 eP P 07 19 01.8 -0.2
LOR Lormes 84.46 43 eP P 07 19 02.8 +0.3
comp=Z,8.2nm,1.0s
LOR eR
comp=Z,233nm,21.0s
LOR Lormes 84.46 43 eP P 07 19 02.8 +0.3
comp=Z,8.2nm,1.0s
SMF Signal de Mont 84.60 43 eP P 07 19 03.1 -0.1
SMF Signal de Mont 84.60 43 eP P 07 19 03.1 -0.1
NOA NORSAR Array B 84.80 28 P P 07 19 05.0 +1.2
NOA NORSAR Array B 84.80 28 P P 07 19 05.0 +1.2

comp=Z,2.8nm,1.0s,baz=290,slow=4.8,SNR=4.7
NOA LR LR 07 53 43.3
comp=Z,226nm,20.9s,baz=325,slow=34
MEZF Maizieres J'vi 84.94 41 eP P 07 19 05.5 +0.7
MEZF Maizieres J'vi 84.94 41 eP P 07 19 05.5 +0.7
SFTF Sexfontaines 85.01 42 eP P 07 19 05.7 +0.6
SFTF Sexfontaines 85.01 42 eP P 07 19 05.7 +0.6
LASF Ste Croix 85.23 46 eP P 07 19 07.5 +1.1
LASF Ste Croix 85.23 46 eP P 07 19 07.5 +1.1
PAGF Fort de Pagny 85.36 41 eP P 07 19 07.8 +0.9
PAGF Fort de Pagny 85.36 41 eP P 07 19 07.8 +0.9
VIVF Saint-Julien-l 85.61 45 eP P 07 19 08.0 -0.3
VIVF Saint-Julien-l 85.61 45 eP P 07 19 08.0 -0.3
HAU Haudompre 85.91 42 eP P 07 19 10.4 +0.7
comp=Z,8.4nm,0.6s
HAU eR
comp=Z,291nm,21.5s
HAU Haudompre 85.91 42 eP P 07 19 10.4 +0.7
comp=Z,8.4nm,0.6s
CABF La Chapelle 86.11 43 eP P 07 19 11.6 +0.8
CABF La Chapelle 86.11 43 eP P 07 19 11.6 +0.8
LIC Lamto 86.17 85 eP P 07 19 14.6 +3.0
comp=Z,32nm,1.1s
LIC eR
comp=Z,194nm,21.5s
LIC Lamto 86.17 85 eP P 07 19 14.6 +3.0
comp=Z,32nm,1.1s
DBIC Dimbokro 86.24 84 P P 07 19 14.0 +2.1
DBIC Dimbokro 86.24 84 P P 07 19 14.0 +2.1
comp=Z,4.0nm,0.7s,baz=276,slow=5.0,SNR=4.2
CDF Champ du Feu 86.39 41 eP P 07 19 12.9 +0.8
CDF Champ du Feu 86.39 41 eP P 07 19 12.9 +0.8
ORIF Oris-en-Rattie 86.42 45 eP P 07 19 13.0 +0.6
comp=Z,7.8nm,0.8s
ORIF eR
comp=Z,211nm,20.2s
ORIF Oris-en-Rattie 86.42 45 eP P 07 19 13.0 +0.6
comp=Z,7.8nm,0.8s
ARCES ARCESS Array B 86.73 18 LR LR 07 57 26.7
comp=Z,242nm,19.1s,baz=107,slow=36
LMR La Mourre 87.28 46 eP P 07 19 16.7 +0.2
LMR La Mourre 87.28 46 eP P 07 19 16.7 +0.2
DAVOX Davos/Dischmat 88.56 42 LR LR 07 55 54.8
comp=Z,153nm,18.5s,baz=268,slow=34
CLL Collm 89.00 37 eP P 07 19 25.0 +0.6
CLL eS S 07 30 07.0 -3.2
CLL ePS PS 07 31 20.0 +1.4
CLL e 07 39 00.0
CLL LmV 07 58 00.0
comp=Z,100nm,21.7s
GERES GERESS Array B 90.29 39 LR LR 07 58 06.4
comp=Z,245nm,20.1s,baz=263,slow=35
PETK Petropavlovsk- 90.70 325 LR LR 08 05 11.3
comp=Z,44nm,19.4s,baz=207,slow=39
TORD Torodi Ar. Bea 91.01 76 P P 07 19 36.6 +2.0
TORD Torodi Ar. Bea 91.01 76 P P 07 19 36.6 +2.0
comp=Z,0.6nm,0.7s,baz=276,slow=4.8,SNR=3.8
TORD LR LR 07 59 47.8
comp=Z,127nm,19.3s,baz=130,slow=35
FINES FINESS Array B 91.13 25 LR LR 08 01 35.1
comp=Z,199nm,19.0s,baz=360,slow=37
VRAC Vranov 91.88 38 LR LR 07 59 44.9
comp=Z,163nm,19.4s,baz=280,slow=35
AKASG Malin Array Be 98.40 33 LR LR 08 05 35.0
comp=Z,198nm,19.3s,baz=270,slow=36
CN2 Changchun 113.22 331 ePdif Pdif 07 21 11.3 -2.4
CN2 PP PP 07 25 57.3 +0.7
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,19.0s
CN2 LR LR
comp=E,200nm,19.0s
CN2 LR LR
comp=Z,200nm,19.0s
SONM Songino Array 116.59 346 PKP PKPdf 07 25 17.3 +3.4
SONM Songino Array 116.59 346 PKP PKPdf 07 25 17.3 +3.4
comp=Z,0.4nm,0.5s,baz=3.0,slow=1.4,SNR=5.1
KSRS Korea Array 116.59 325 PKP PKPdf 07 25 20.9 +6.9
comp=Z,0.4nm,0.3s,baz=39,slow=2.3,SNR=4.8
KSAR Wonju Array Be 116.62 325 PKP PKPdf 07 25 20.9 +6.8
BHD Baghdad 117.91 40 ex PKiKP 07 25 21.7 +5.0
MKAR Makanchi Array 119.75 4 PKP PKPdf 07 25 22.6 +2.7
MKAR Makanchi Array 119.75 4 PKP PKPdf 07 25 22.6 +2.7
comp=Z,0.6nm,0.8s,baz=23,slow=1.6,SNR=5.5
BJI Beijing 120.36 335 PKP PKPdf 07 25 24.8 +3.7
BJI SS SS 07 43 08.6 -3.0
BJI LR LR
comp=N,110nm,26.8s
BJI LR LR
comp=E,100nm,25.9s
BJI LR LR
comp=Z,93nm,24.7s
BOSA Boshof 120.66 115 PKP PKPdf 07 25 26.6 +4.4
BOSA Boshof 120.66 115 PKP PKPdf 07 25 26.6 +4.4
comp=Z,5.3nm,0.9s,baz=50,slow=1.4,SNR=7.9
HHC Hu-ho-hao-te 121.44 339 ePKP PKPdf 07 25 19.8 -3.6
HHC PKS PKSdf 07 28 55.8 -4.3
HHC AMB AMB
comp=Z,250nm,8.6s
HHC LR LR
comp=N,230nm,19.1s
HHC LR LR
comp=E,290nm,21.2s
HHC LR LR
comp=Z,190nm,19.9s
WMQ Urumqi 122.91 360 PKP PKPdf 07 25 28.0 +1.9
WMQ PP PP 07 27 08.0 +4.6
WMQ PKS PKSdf 07 29 03.0 +0.3
WMQ SKS SKSdf 07 32 35.0 -0.6
WMQ SKKS SKKSac 07 33 57.0 -4.2
WMQ SS SS 07 43 44.0 +0.4
WMQ AMB AMB
comp=Z,23nm,11.0s
WMQ LR LR
comp=N,140nm,25.0s
WMQ LR LR
comp=E,230nm,25.0s
WMQ LR LR
comp=Z,170nm,25.0s
GTA Gaotai 126.06 348 PKP PKPdf 07 25 39.3 +7.0
GTA sPKP 07 26 02.5
GTA PP PP 07 27 34.8 +10
GTA SKS SKSdf 07 32 39.3 -2.5
GTA SKKS SKKSac 07 34 15.5 -6.2
GTA SS SS 07 44 21.3 -2.4
GTA AMB AMB
comp=Z,83nm,5.2s
GTA LR LR
comp=N,110nm,19.0s
GTA LR LR
comp=E,100nm,17.1s
GTA LR LR
comp=Z,160nm,16.1s
KSH Kashi 126.13 11 ePKP PKPdf 07 25 32.1 -0.4
KSH ePP PP 07 27 28.0 +2.8
KSH PKS PKSdf 07 29 07.0 -2.2
KSH AMB AMB
comp=Z,90nm,3.3s
KSH LR LR
comp=N,35nm,3.5s
KSH LR LR
comp=Z,240nm,8.0s
STKA Stephens Creek 127.36 240 PKP PKPdf 07 25 42.2 +7.4
STKA Stephens Creek 127.36 240 PKP PKPdf 07 25 42.2 +7.4
comp=Z,1.9nm,0.8s,baz=61,slow=6.1,SNR=3.4
LZH Lanzhou 128.25 343 ePKP PKPdf 07 25 39.0 +2.4
LZH sPKP 07 26 05.6
LZH LR LR
comp=N,160nm,18.2s
LZH LR LR
comp=E,140nm,18.0s
LZH LR LR
comp=Z,180nm,20.1s
CD2 Chengdu 133.09 341 PKP PKPdf 07 25 47.8 +2.0
CD2 sPKP 07 26 14.4
CD2 PP PP 07 28 15.1 +4.4
CD2 PKS PKSdf 07 29 22.8 +0.4
CD2 SKS SKSdf 07 32 50.5 -4.3
CD2 SKKS SKKSac 07 34 58.4 -7.1
CD2 SS SS 07 45 45.8 -4.6
CD2 AMB AMB
comp=Z,100nm,4.2s
CD2 LR LR
comp=N,440nm,19.6s

CD2					LR	LR		
	comp=Z,260nm,22.0s							
WRA	**Warramunga Arr**	**134.76**	**255**		PKP	PKPdf	07 25 53.5	+4.4
WRA	**Warramunga Arr**	**134.76**	**255**		PKP	PKPdf	07 25 53.5	+4.4
	comp=Z,2.9nm,1.1s,baz=81,slow=2.2,SNR=6.8							
ASAR	**Alice Springs**	**135.00**	**250**		PKP	PKPdf	07 25 53.0	+3.5
ASAR	**Alice Springs**	**135.00**	**250**		PKP	PKPdf	07 25 53.0	+3.5
	comp=Z,0.5nm,0.7s,baz=74,slow=1.3,SNR=4.8							
GYA	**Guiyang**	**136.05**	**335**	*e*Pdif		**Pdif**	**07 22 55.8**	**0.0**
GYA				sPKP		**PKiKP**	**07 25 54.0**	**+0.8**
GYA				sPKP			07 26 20.6	
GYA				PP	PP		07 28 34.5	+4.8
GYA				AMB	AMB			
	comp=Z,90nm,7.8s							
FITZ	**Fitzroy Crossi**	**143.02**	**258**	*e*PKPdf		PKPdf	07 26 07.3	+3.1
FITZ	**Fitzroy Crossi**	**143.02**	**258**	PKP		PKPdf	07 26 10.6	+6.4
	comp=Z,1.8nm,0.8s,baz=69,slow=6.3,SNR=3.8							
CHTO	**Chiang Mai**	**145.90**	**340**	*e*PKPdf		**PKPab**	**07 26 11.4**	**+1.1**
CM31	**Chiang Mai Arr**	**146.23**	**340**	*e*PKPdf		**PKPab**	**07 26 12.9**	**+1.3**
CMAR	**Chiang Mai Arr**	**146.23**	**340**	PKPbc		**PKPab**	**07 26 13.3**	**+1.8**
CMAR	**Chiang Mai Arr**	**146.23**	**340**	PKPbc		**PKPab**	**07 26 13.3**	**+1.8**
	comp=Z,16nm,0.8s,baz=341,slow=4.5,SNR=95							
HYB	**Hyderabad**	**148.00**	**16**	*i* PKP		**PKPab**	**07 26 18.0**	**-0.5**
MBWA	**Marble Bar**	**148.31**	**252**	*e*PKPab		**PKPab**	**07 26 19.0**	**-0.8**

*IDC **18** 07:41:58.8±1.8, 60.22S×27.56W, h0km, mb3.8/2, mb1 3.9/2, mb1mx3.6/15, mbtmp3.8/2, Error ellipse: s-maj=78.7km s-min=48.6km az=25.0*

ISC 18 07:41:57.1±1.9, 61.1S±0.6×26.4W±0.5, h10km, n9, σ0.85/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.05**	**150**	*e*Pn		Pn	07 44 55.6	+7.0
VNA3	**Neumayer Olymp**	**12.16**	**154**	*e*Pn		Pn	07 44 56.1	+6.0
VNA2	**Neumayer--Watz**	**12.45**	**150**	*e*Pn		Pn	07 45 00.5	+6.4
	baz=310,slow=16							
SNAA	**Sanae**	**14.06**	**149**	*e*Pn		Pn	07 45 13.9	-2.2
CPUP	**Villa Florida**	**40.57**	**315**	P		P	07 49 32.6	-3.9
	1.2nm,0.8s,baz=163,slow=8.2,SNR=3.3							
TORD	**Torodi Ar. Bea**	**77.30**	**28**	P		**P**	**07 53 51.5**	**0.0**
	0.8nm,0.7s,baz=204,slow=5.3,SNR=4.8							
YKA	**Yellowknife Ar**	**140.09**	**314**	PKP		**PKPdf**	**08 01 24.7**	**+0.6**
	0.2nm,0.9s,baz=116,slow=1.4,SNR=3.8							
SONM	**Songino Array**	**150.27**	**95**	PKPbc		**PKPab**	**08 01 53.7**	**0.0**
	0.3nm,0.4s,baz=206,slow=2.2,SNR=5.9							
ILAR	**Eielson Array**	**153.55**	**304**	PKPbc		**PKPbc**	**08 01 53.6**	**-0.6**
	0.4nm,0.8s,baz=111,slow=2.2,SNR=4.1							

IDC 18 07:47:09.4±1.9, 59.63S×26.89W, h0km, mb3.8/2, mb1 3.9/2, mb1mx3.6/16, mbtmp3.8/2, Error ellipse: s-maj=80.2km s-min=45.4km az=10.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**52.63**	**307**	P		P	07 56 25.6	-0.2
	0.4nm,0.4s,baz=141,slow=6.5,SNR=3.1							
TORD	**Torodi Ar. Bea**	**76.11**	**29**	P		P	07 58 58.8	+0.1
	0.6nm,0.5s,baz=198,slow=7.1,SNR=7.2							
YKA	**Yellowknife Ar**	**138.89**	**315**	PKP		PKPdf	08 06 35.2	-0.8
	0.1nm,0.8s,baz=130,slow=2.1,SNR=5.1							
SONM	**Songino Array**	**150.59**	**93**	PKPbc		PKPbc	08 07 01.9	-0.4
	0.3nm,0.5s,baz=227,slow=2.3,SNR=4.3							
ILAR	**Eielson Array**	**152.50**	**306**	PKPbc		PKPbc	08 07 06.0	0.0
	0.3nm,0.8s,baz=156,slow=3.5,SNR=5.0							

IDC 18 07:48:50.0±1.8, 19.29N×145.08E, h0km, mb3.3/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.3/4, MS3.6/1, Ms1 3.6/1, ms1mx2.9/20, Error ellipse: s-maj=274.1km s-min=23.4km az=110.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.38**	**196**	P		P	07 56 29.2	-0.7
	0.5nm,0.4s,baz=17,slow=8.4,SNR=8.2							
ASAR	**Alice Springs**	**44.06**	**195**	P		P	07 57 00.5	+0.6
	0.2nm,0.5s,baz=18,slow=12,SNR=4.1							
ASAR				LR		LR	08 14 48.3	
	comp=Z,68nm,19.4s,baz=177,slow=35							
ILAR	**Eielson Array**	**63.38**	**26**	P		P	07 59 21.3	+0.3
	0.2nm,0.6s,baz=260,slow=5.8,SNR=5.1							
YKA	**Yellowknife Ar**	**77.74**	**28**	P		P	08 00 48.4	-0.3
	0.1nm,0.4s,baz=285,slow=5.4,SNR=4.0							

*PGC **18** 07:50:20.6±0.5, 59.68N×137.95W, h1km, ML3.5/4, 97km Ene of Yakutat, Ak Southeastern Alaska*
*NEIC **18** 07:50:20.6, 59.68N×137.95W, h1km, ML3.5(PGC), ML3.1(AEIC), After PGC.*

ISC 18 07:50:19.4±1.2, 59.76N±0.05×137.99W±0.02, h1km±11km, n39, σ1.32/51, 6D, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PNL	**Peninsula**	**0.72**	**263**	*e*Pg		**Pg**	**07 50 33.5**	**+0.4**
PNL				*e*Sg		**Sg**	**07 50 42.7**	**+0.2**
HYT	**Haines Junctio**	**1.09**	**13**	P		**Pn**	**07 50 41.2**	**-0.7**
HYT				S		**Sn**	**07 50 56.6**	**-1.1**
HYT	**Haines Junctio**	**1.09**	**13**	⇓P		**Pn**	**07 50 41.2**	**-0.7**
HYT				⇑S		**Sn**	**07 50 56.6**	**-1.1**
SKAG	**Skagway**	**1.39**	**101**	P		**Pb**	**07 50 44.7**	**-1.4**
SKAG				S		**Sg**	**07 51 03.0**	**-0.9**
SAMH	**Samovar Hills**	**1.45**	**286**	P		**Pg**	**07 50 47.4**	**+0.2**
SAMH				S		**Sg**	**07 51 08.1**	**+2.1**
WHY	**Whitehorse**	**1.79**	**59**	P		**Pb**	**07 50 52.4**	**-0.7**
WHY				S		**Sg**	**07 51 17.8**	**+0.7**
WHY	**Whitehorse**	**1.79**	**59**	⇑Pn		**Pb**	**07 50 52.4**	**-0.7**
WHY				⇑Sg		**Sg**	**07 51 17.4**	**+0.4**
BARN	**Barnard Glacie**	**2.24**	**307**	P		**Pb**	**07 50 58.8**	**-1.9**
KIAG	**Kiagna River**	**2.46**	**300**	P		**Pn**	**07 51 01.6**	**+0.8**
BALM	**Baldy**	**2.51**	**302**	P		**Pb**	**07 51 02.8**	**-2.5**
VRDI	**Verde Repeater**	**3.08**	**301**	P		**Pn**	**07 51 10.1**	**+0.9**
BMRM	**Bremner River**	**3.50**	**293**	*e*Pn		**Pn**	**07 51 16.1**	**+1.1**
BMRM				*e*Sn		**Sb**	**07 52 01.8**	**-3.3**
BCA3	**Beaver Creek A**	**3.78**	**333**	P		**Pn**	**07 51 19.8**	**+1.0**
EYAK	**Cordova Ski Ar**	**3.96**	**285**	P		**Pn**	**07 51 22.2**	**+1.0**
MENT	**Mentasta**	**4.21**	**322**	*e*Pn		**Pn**	**07 51 26.4**	**+1.7**
KLU	**Klutina**	**4.27**	**297**	P		**Pn**	**07 51 27.3**	**+1.7**
DLBC	**Dease Lake**	**4.32**	**104**	*e*Pn		**Pn**	**07 51 26.6**	**+0.4**
DLBC				*e*Pg		**Pg**	**07 51 40.6**	**-1.4**
DLBC				*e*Sg		**Sb**	**07 52 31.0**	**+2.4**
DLBC	**Dease Lake**	**4.32**	**104**	⇓Pn		**Pn**	**07 51 25.6**	**-0.6**
DLBC				⇑Sg		**Sb**	**07 52 30.6**	**+2.1**
DAWY	**Dawson**	**4.37**	**352**	P		**Pn**	**07 51 28.9**	**+2.0**
DAWY	**Dawson**	**4.37**	**352**	⇓Pn		**Pn**	**07 51 29.0**	**+2.1**
DAWY				⇓Sn		**Sn**	**07 52 19.2**	**+0.8**
DAWY				⇑Sg		**Sg**	**07 52 38.9**	**-0.7**
HARP	**HAARP**	**4.38**	**310**	P		**Pn**	**07 51 27.8**	**+0.9**
DOT	**Dot Lake**	**4.85**	**326**	*e*Pn		**Pn**	**07 51 34.5**	**+1.0**
DOT				*e*Pg		**Pg**	**07 51 53.4**	**+1.1**
DOT				*e*Sg		**Sg**	**07 52 56.1**	**+1.0**
EGAK	**Eagle**	**5.25**	**345**	P		Pn	07 51 41.0	+2.2
SML	**Sawmill**	**5.47**	**296**	*e*Pn		Pn	07 51 44.7	+2.8
SEW	**Seward**	**5.77**	**278**	P		**Pn**	**07 51 45.9**	**-0.2**
PMR	**Palmer**	**5.78**	**293**	P		**Pn**	**07 51 47.4**	**+1.4**
BRLK	**Bradley Lake**	**6.52**	**276**	P		**Pn**	**07 51 57.1**	**+0.8**
TRF	**Thorofare Moun**	**6.93**	**308**	*e*Pn		Pn	07 52 05.1	+3.0
	4.2nm,0.5s							
INK	**Inuvik**	**8.80**	**11**	P	n	**Pn**	**07 52 28.9**	**+1.4**
INK	**Inuvik**	**8.80**	**11**	⇓P	n	**Pn**	**07 52 28.9**	**+1.4**
GALN	**Gameti Lake**	**10.65**	**57**	P	n	**Pn**	**07 52 53.3**	**+0.5**
GALN	**Gameti Lake**	**10.65**	**57**	⇑P	n	**Pn**	**07 52 53.3**	**+0.5**
CTLN	**Castor Lake**	**11.27**	**56**	P	n	**Pn**	**07 53 02.4**	**+1.0**
CTLN	**Castor Lake**	**11.27**	**56**	⇑P	n	**Pn**	**07 53 02.4**	**+1.0**
ILKN	**Indian Lake**	**11.60**	**58**	P	n	**Pn**	**07 53 06.5**	**+0.7**
ILKN	**Indian Lake**	**11.60**	**58**	⇑P	n	**Pn**	**07 53 06.5**	**+0.7**
YKW3	**Yellowknife Ar**	**11.61**	**66**	P	n	**Pn**	**07 53 06.5**	**+0.6**
YKW3	**Yellowknife Ar**	**11.61**	**66**	⇑P	n	**Pn**	**07 53 06.5**	**+0.6**
JERN	**Jeri Cho Mine,**	**13.54**	**51**	⇓Pn		**Pn**	**07 53 31.0**	**-1.3**

*IDC **18** 08:04:06.4±2.0, 60.92S×22.93W, h0km, mb3.9/1, mb1 3.9/1, mb1mx3.5/16, mbtmp3.9/1, Error ellipse: s-maj=99.5km s-min=77.4km az=126.0*

ISC 18 08:04:07.4±1.4, 61.1S±0.2×22.8W±0.5, h10km, n11, σ0.51/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**11.20**	**155**	*e*Pn		**Pn**	**08 06 48.2**	**+0.9**
VNA3	**Neumayer Olymp**	**11.41**	**158**	*e*Pn		**Pn**	**08 06 49.8**	**-0.4**
VNA3	**Neumayer Olymp**	**11.41**	**158**	*e*Sn		Sn	08 08 48.8	-8.7
VNA2	**Neumayer--Watz**	**11.60**	**154**	*e*Pn		**Pn**	**08 06 52.5**	**-0.2**
	baz=315,slow=14							
VNA2	**Neumayer--Watz**	**11.60**	**154**	*e*Sn		Sn	08 08 51.7	-10
	baz=315,slow=14							
SNAA	**Sanae**	**13.15**	**152**	*e*Pn		**Pn**	**08 07 13.6**	**-0.4**
SNAA	**Sanae**	**13.15**	**152**	*e*Sn		Sn	08 09 28.3	-12
TORD	**Torodi Ar. Bea**	**76.54**	**24**	P		**P**	**08 15 57.3**	**-0.1**
	0.7nm,0.6s,baz=205,slow=6.1,SNR=8.4							
YKA	**Yellowknife Ar**	**141.41**	**312**	PKP		**PKPdf**	**08 23 36.9**	**+0.1**
	0.2nm,0.7s,baz=122,slow=2.5,SNR=7.6							
SONM	**Songino Array**	**148.49**	**91**	PKPbc		**PKPbc**	**08 23 53.6**	**+0.3**
	0.8nm,0.9s,baz=231,slow=2.7,SNR=5.9							
INK	**Inuvik**	**151.12**	**314**	PKPbc		**PKPbc**	**08 23 58.7**	**-0.1**
	1.1nm,0.8s,baz=113,slow=2.2,SNR=6.8							

*IDC **18** 08:15:36.3±2.2, 5.85S×130.40E, h0km, mb3.3/1, mb1 4.1/4, mb1mx3.6/19, mbtmp3.8/4, ML4.0/3, Error ellipse: s-maj=91.6km s-min=27.6km az=77.0*
*AUST **18** 08:15:44.2, 5.98S×130.53E, h200km*

ISC 18 08:15:42.5±1.1, 6.18S±0.06×130.3E±0.1, h124km, n10, σ3.26/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.51**	**78**	P		Pn	08 16 28.2	+5.6
	baz=2.2,SNR=7.6							
SWI	**Sorong**	**5.37**	**11**	P		**Pn**	**08 17 03.4**	**+2.8**
	baz=5.2,SNR=6.0							
SWI				S		**Sn**	**08 17 58.9**	**-2.5**
	baz=5.2,SNR=5.0							
MTN	**Manton Dam**	**6.68**	**173**	P		Pn	08 17 24.9	+6.7
	baz=6.9,SNR=39							
MTN				S		**Sn**	**08 18 38.9**	**+6.0**
	baz=6.9,SNR=7.6							
KDU	**Kakadu**	**6.82**	**162**	P		Pn	08 17 25.9	+5.7
	baz=7.0,SNR=75							
KDU				S		**Sn**	**08 18 40.0**	**+3.5**
	baz=7.0,SNR=5.1							
FITZ	**Fitzroy Crossi**	**12.69**	**200**	Pn		**P**	**08 18 43.7**	**-1.2**
	0.6nm,0.3s,baz=38,slow=12,SNR=25							
FITZ				Sn		**Sn**	**08 20 57.0**	**-1.5**
	0.5nm,0.3s,baz=66,slow=7.7,SNR=5.7							
FITZ	**Fitzroy Crossi**	**12.69**	**200**	P		**P**	**08 18 43.8**	**-1.1**
	baz=13,SNR=16							
FITZ				S		**Sn**	**08 20 57.0**	**-1.5**
	baz=13,SNR=3.7							
WRA	**Warramunga Arr**	**14.24**	**164**	Pn		**P**	**08 19 01.6**	**-0.6**
	0.6nm,0.3s,baz=347,slow=13,SNR=27							
WRA				Sn		**Sn**	**08 21 32.6**	**-3.4**
	0.5nm,0.3s,baz=341,slow=21,SNR=7.1							
COEN	**Coen**	**14.86**	**122**	S		**Sn**	**08 21 47.6**	**-3.5**
	baz=15,SNR=3.7							
ASAR	**Alice Springs**	**17.73**	**169**	P		Pn	08 19 49.0	+7.2
	0.5nm,0.3s,baz=350,slow=12,SNR=55							
ASAR				S		**Sn**	**08 23 01.3**	**+1.2**
	0.1nm,0.3s,baz=356,slow=28,SNR=5.0							
MKAR	**Makanchi Array**	**67.69**	**327**	P		P	08 26 34.2	+7.8
	0.2nm,0.6s,baz=120,slow=8.5,SNR=3.1							

*ISCJB **18** 08:18:16.3±0.4, 38.73N±0.02×22.53E±0.02, h15km±3km, Error ellipse: s-maj=2.7km s-min=2.3km az=147.9*
*CSEM **18** 08:18:16.5±0.1, 38.73N×22.57E, h8km, ML3.0/9, Error ellipse: s-maj=1.9km s-min=1.6km az=150.0*
*ATH **18** 08:18:16.0, 38.73N×22.56E, h21km, MD3.5/29, ML2.8*
*THE **18** 08:18:16.8, 38.72N×22.55E, h6km±1km, ML3.0/9, Error ellipse: s-maj=1.1km s-min=0.3km az=355.0*

ISC 18 08:18:16.6±0.8, 38.72N±0.01×22.56E±0.01, h14km±5km, n109, σ0.52/173, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AXAR	**Agios Charalam**	**0.09**	**61**	P		**Pg**	**08 18 19.5**	**-0.1**
AXAR				S		**Sg**	**08 18 21.6**	**-0.1**
AXAR	**Agios Charalam**	**0.09**	**61**	P		**Pg**	**08 18 21.5**	**-0.1**
AXAR				S		**Sg**	**08 18 21.6**	**-0.1**
DSF	**Desfina**	**0.31**	**185**	P		**Pg**	**08 18 22.5**	**-0.6**
DSF				S		**Sg**	**08 18 27.5**	**0.0**
DSF	**Desfina**	**0.31**	**185**	P		**Pg**	**08 18 22.5**	**-0.6**
DSF				S		**Sg**	**08 18 27.3**	**-0.2**
AGG	**Agios Georgios**	**0.35**	**329**	P		**Pg**	**08 18 23.4**	**-0.3**
AGG				S		**Sg**	**08 18 28.7**	**+0.1**
AGG	**Agios Georgios**	**0.35**	**329**	*e*PB		**Pg**	**08 18 23.5**	**-0.3**
AGG				*e*SB		**Sg**	**08 18 29.0**	**+0.4**
AGG	**Agios Georgios**	**0.35**	**329**	*e*Pb		**Pg**	**08 18 23.5**	**-0.3**
AGG				S		**Sg**	**08 18 28.7**	**+0.1**
AGG				*e*Sb		**Sg**	**08 18 29.0**	**+0.4**
LKR	**Lokris**	**0.35**	**102**	P		**Pg**	**08 18 23.4**	**-0.3**
LKR				S		**Sg**	**08 18 29.1**	**+0.5**
LKR	**Lokris**	**0.35**	**102**	*e*PB		**Pg**	**08 18 23.5**	**-0.3**
LKR				*e*SB		**Sg**	**08 18 29.4**	**+0.8**
LKR	**Lokris**	**0.35**	**102**	P		**Pg**	**08 18 23.4**	**-0.3**
LKR				S		**Sg**	**08 18 29.1**	**+0.5**
LKR				*e*Sb		**Sg**	**08 18 29.4**	**+0.8**
ATAL	**Atalanti**	**0.36**	**95**	P		**Pg**	**08 18 23.9**	**-0.1**
ATAL				S		**Sg**	**08 18 29.3**	**+0.4**
ATAL	**Atalanti**	**0.36**	**95**	P		**Pg**	**08 18 23.9**	**-0.1**
ATAL				S		**Sg**	**08 18 29.3**	**+0.4**
MAKR	**Makrakomi, Fth**	**0.44**	**311**	P		**Pg**	**08 18 25.3**	**-0.2**
MAKR				S		**Sg**	**08 18 32.0**	**+0.6**
MAKR	**Makrakomi, Fth**	**0.44**	**311**	P		**Pg**	**08 18 25.2**	**-0.2**
MAKR				S		**Sg**	**08 18 31.3**	**-0.1**
KALE	**Kalithea**	**0.47**	**225**	P		**Pg**	**08 18 25.2**	**-0.7**
KALE				S		**Sg**	**08 18 32.1**	**-0.1**
KALE	**Kalithea**	**0.47**	**225**	*e*PB		**Pg**	**08 18 25.2**	**-0.7**
KALE				*e*SB		**Sg**	**08 18 32.3**	**+0.1**
KALE	**Kalithea**	**0.47**	**225**	P		**Pg**	**08 18 25.2**	**-0.7**
KALE				S		**Sg**	**08 18 31.6**	**-0.6**
KALE				*e*Sb		**Sg**	**08 18 32.3**	**+0.1**
TRIZ	**Trizonia**	**0.52**	**227**	P		**Pg**	**08 18 26.0**	**-0.8**
TRIZ				S		**Sg**	**08 18 34.2**	**+0.3**
TRIZ	**Trizonia**	**0.52**	**227**	*e*PN		**Pg**	**08 18 26.1**	**-0.8**
TRIZ				*e*SN		**Sg**	**08 18 34.6**	**+0.7**
TRIZ	**Trizonia**	**0.52**	**227**	*e*Pn		**Pg**	**08 18 26.1**	**-0.8**
TRIZ				S		**Sg**	**08 18 33.7**	**-0.2**
TRIZ				*e*Sn		**Sg**	**08 18 34.6**	**+0.7**
SMIA	**Simia**	**0.53**	**73**	P		**Pg**	**08 18 26.8**	**-0.3**
SMIA				S		**Sg**	**08 18 34.6**	**+0.4**
SMIA	**Simia**	**0.53**	**73**	P		**Pg**	**08 18 26.8**	**-0.3**
SMIA				S		**Sg**	**08 18 34.6**	**+0.4**
EFP	**Efpalio**	**0.59**	**240**	P		**Pg**	**08 18 27.4**	**-0.7**
EFP				S		**Sg**	**08 18 36.5**	**+0.4**
EFP	**Efpalio**	**0.59**	**240**	*e*PN		**Pg**	**08 18 27.5**	**-0.7**
EFP				*e*SN		**Sg**	**08 18 36.5**	**+0.4**
EFP	**Efpalio**	**0.59**	**240**	*e*Pn		**Pg**	**08 18 27.5**	**-0.7**
EFP				S		**Sg**	**08 18 35.6**	**-0.5**
EFP				*e*Sn		**Sg**	**08 18 36.5**	**+0.4**
EVR	**Evrytania**	**0.62**	**288**	P		**Pg**	**08 18 28.6**	**-0.1**
EVR	**Evrytania**	**0.62**	**288**	*e*PN		**Pg**	**08 18 28.6**	**-0.1**
EVR				*e*SN		**Sg**	**08 18 36.8**	**-0.2**
EVR	**Evrytania**	**0.62**	**288**	P		**Pg**	**08 18 28.6**	**-0.1**
EVR				*e*Sn		**Sg**	**08 18 36.8**	**-0.2**
PSA1	**Psathopyrgos**	**0.66**	**233**	*e*PN		**Pg**	**08 18 29.1**	**-0.4**
PSA1				*e*SN		**Sg**	**08 18 38.9**	**+0.6**
LAKA	**Lakka**	**0.66**	**224**	P		**Pg**	**08 18 28.8**	**-0.8**
LAKA				S		**Sg**	**08 18 38.4**	**+0.1**
LAKA	**Lakka**	**0.66**	**224**	*e*PN		**Pg**	**08 18 28.9**	**-0.7**
LAKA				*e*SN		**Sg**	**08 18 38.3**	**0.0**
LAKA	**Lakka**	**0.66**	**224**	P		**Pg**	**08 18 28.8**	**-0.8**
LAKA				*e*Sn		**Sg**	**08 18 38.3**	**0.0**
UPR	**University Cam**	**0.75**	**234**	S		**Sb**	**08 18 41.7**	**+0.2**
UPR	**University Cam**	**0.75**	**234**	S		**Sb**	**08 18 41.7**	**+0.2**
KLV	**Kalavryta, Ach**	**0.75**	**206**	*e*PN		**Pg**	**08 18 30.7**	**-0.5**
KLV				*e*SN		**Sb**	**08 18 43.0**	**+1.4**
KLV	**Kalavryta, Ach**	**0.75**	**206**	*e*Pn		**Pg**	**08 18 30.7**	**-0.5**
KLV				*e*Sn		**Sb**	**08 18 43.0**	**+1.4**
LTK	**Loutraki**	**0.77**	**155**	P		**Pg**	**08 18 30.7**	**-0.8**
LTK				S		**Sb**	**08 18 42.2**	**+0.1**
LTK	**Loutraki**	**0.77**	**155**	*e*PN		**Pg**	**08 18 30.9**	**-0.6**
LTK	**Loutraki**	**0.77**	**155**	P		**Pg**	**08 18 30.7**	**-0.8**
LTK				S		**Sb**	**08 18 42.2**	**+0.1**
NEO	**Neokhori**	**0.78**	**41**	*e*PN		**Pg**	**08 18 30.8**	**-1.0**
NEO				*e*SN		**Sg**	**08 18 42.3**	**+0.3**
NEO	**Neokhori**	**0.78**	**41**	*e*Pn		**Pg**	**08 18 30.8**	**-1.0**
NEO				*e*Sn		**Sg**	**08 18 42.3**	**+0.3**
GUR	**Goura**	**0.80**	**192**	P		**Pg**	**08 18 31.5**	**-0.7**
GUR	**Goura**	**0.80**	**192**	*e*PN		**Pg**	**08 18 31.6**	**-0.7**
GUR				*e*Sn		**Sg**	**08 18 42.6**	**-0.2**
MRKA	**Markates**	**0.80**	**91**	P		**Pg**	**08 18 31.6**	**-0.6**
MRKA				S		**Sb**	**08 18 43.5**	**+0.4**
MRKA	**Markates**	**0.80**	**91**	P		**Pg**	**08 18 31.6**	**-0.6**
MRKA				S		**Sb**	**08 18 43.5**	**+0.4**
XOR	**Xorichti**	**0.81**	**37**	P		**Pg**	**08 18 31.6**	**-0.7**
XOR				S		**Sb**	**08 18 43.5**	**+0.2**
XOR	**Xorichti**	**0.81**	**37**	P		**Pg**	**08 18 31.6**	**-0.7**
XOR				S		**Sb**	**08 18 43.5**	**+0.2**
SKIA	**Skiathos**	**0.83**	**58**	P		**Pg**	**08 18 32.5**	**-0.3**
SKIA				S		**Sb**	**08 18 44.8**	**+0.8**
SKIA	**Skiathos**	**0.83**	**58**	P		**Pg**	**08 18 32.5**	**-0.3**
SKIA				S		**Sb**	**08 18 44.8**	**+0.8**
THL	**Klokotos Trika**	**0.94**	**333**	P		**Pb**	**08 18 33.9**	**-0.8**
THL	**Klokotos Trika**	**0.94**	**333**	*e*PN		**Pb**	**08 18 34.0**	**-0.8**
THL				*e*SN		**Sb**	**08 18 47.2**	**+0.1**
THL	**Klokotos Trika**	**0.94**	**333**	P		**Pb**	**08 18 33.9**	**-0.8**
THL				*e*Sn		**Sb**	**08 18 47.2**	**+0.1**
RLS	**Riolos of Patr**	**1.09**	**233**	P		**Pb**	**08 18 36.9**	**-0.3**
RLS	**Riolos of Patr**	**1.09**	**233**	*e*PN		**Pb**	**08 18 36.7**	**-0.5**
RLS				*e*SN		**Sb**	**08 18 51.6**	**+0.4**
RLS	**Riolos of Patr**	**1.09**	**233**	P		**Pb**	**08 18 36.9**	**-0.3**
RLS				*e*Sn		**Sb**	**08 18 51.6**	**+0.4**
AOS	**Alonnisos**	**1.12**	**66**	P		**Pb**	**08 18 37.4**	**-0.4**
AOS	**Alonnisos**	**1.12**	**66**	*e*PN		**Pb**	**08 18 37.3**	**-0.5**
AOS				*e*SN		**Sb**	**08 18 52.5**	**+0.2**
AOS	**Alonnisos**	**1.12**	**66**	P		**Pb**	**08 18 37.4**	**-0.4**
AOS				*e*Sn		**Sb**	**08 18 52.5**	**+0.2**
ATH	**Athens Observa**	**1.18**	**129**	P		**Pn**	**08 18 38.8**	**+0.1**
ATH	**Athens Observa**	**1.18**	**129**	*e*PN		**Pn**	**08 18 38.9**	**+0.2**
ATH				*e*SN		**Sn**	**08 18 54.7**	**+0.2**
ATH	**Athens Observa**	**1.18**	**129**	P		**Pn**	**08 18 38.8**	**+0.1**
ATH				*e*Sn		**Sn**	**08 18 54.7**	**+0.2**
NAIG	**Nisos Aigina**	**1.21**	**142**	*e*PN		**Pn**	**08 18 39.3**	**+0.2**
NAIG	**Nisos Aigina**	**1.21**	**142**	*e*Pn		**Pn**	**08 18 39.3**	**+0.2**
ATHU	**Athens Univers**	**1.22**	**128**	P		**Pn**	**08 18 39.1**	**-0.2**
ATHU	**Athens Univers**	**1.22**	**128**	P		**Pn**	**08 18 39.1**	**-0.2**
PTL	**Penteli**	**1.23**	**123**	P		**Pn**	**08 18 39.6**	**+0.2**
PTL	**Penteli**	**1.23**	**123**	*e*PN		**Pn**	**08 18 39.6**	**+0.2**
PTL				*e*SN		**Sb**	**08 18 55.3**	**0.0**
PTL	**Penteli**	**1.23**	**123**	P		**Pn**	**08 18 39.6**	**+0.2**
PTL				*e*Sn		**Sb**	**08 18 55.3**	**0.0**
DID	**Didima**	**1.33**	**156**	P		**Pn**	**08 18 40.6**	**-0.2**
DID	**Didima**	**1.33**	**156**	*e*PN		**Pn**	**08 18 40.6**	**-0.2**
DID				*e*SN		**Sg**	**08 18 59.9**	**+0.5**
DID	**Didima**	**1.33**	**156**	P		**Pn**	**08 18 40.6**	**-0.2**
DID				*e*Sn		**Sg**	**08 18 59.9**	**+0.5**
VLX	**Vlachokerasia**	**1.36**	**186**	P		**Pn**	**08 18 41.7**	**+0.4**
VLX	**Vlachokerasia**	**1.36**	**186**	*e*PN		**Pn**	**08 18 42.0**	**+0.1**
VLX				*e*SN		**Sg**	**08 19 00.4**	**0.0**
VLX	**Vlachokerasia**	**1.36**	**186**	P		**Pn**	**08 18 41.7**	**+0.4**
VLX	**Vlachokerasia**	**1.36**

LSP	Las Mesas	2.97	250	⇑	*e*P	Pn	08 25 30.8	+0.1
CRPR	Cabo Rojo, PR	3.06	247	⇓	*e*P	Pn	08 25 32.1	+0.2
CRPR	Cabo Rojo, PR	3.06	247	⇓	*e*P	Pn	08 25 32.1	+0.2
CRPR	Cabo Rojo, PR	3.06	247	⇓	*e*P	Pn	08 25 32.1	+0.2
SEG	Port Louis	3.79	138		*e*P	Pn	08 25 43.9	+1.9
HMG	Houelmont	4.00	144		*e*P	Pn	08 25 48.9	+4.0
PHG	Guadaloupe-2	4.01	143		*e*P	Pb	08 25 52.0	-2.8
SDDR	Presa de Saban	6.75	269		*e*Pn	Pn	08 26 22.3	-0.4
	53nm,0.6s							
SDDR					*e*Sn	Sn	08 27 36.9	-2.0
ROSC	El Rosal	17.40	216		P	P	08 28 47.7	-0.4
ROSC	El Rosal	17.40	216		P	P	08 28 47.7	-0.4
	0.5nm,0.3s,baz=174,slow=0.4,SNR=4.6							
PDAR	Pinedale Array	44.75	312		P	P	08 32 57.5	+0.5
PDAR	Pinedale Array	44.75	312		P	P	08 32 57.5	+0.5
	0.3nm,0.6s,baz=127,slow=11,SNR=3.2							
NVAR	Mina Array Bea	50.40	304		P	P	08 33 43.6	+2.6
NVAR	Mina Array Bea	50.40	304		P	P	08 33 43.6	+2.6
	0.2nm,0.6s,baz=95,slow=9.5,SNR=3.1							
YKA	Yellowknife Ar	55.29	334		P	P	08 34 15.7	-0.7
YKA	Yellowknife Ar	55.29	334		P	P	08 34 15.7	-0.7
	0.3nm,0.6s,baz=106,slow=7.5,SNR=9.4							
TORD	Torodi Ar. Bea	63.22	85		P	P	08 35 14.5	+2.4
TORD	Torodi Ar. Bea	63.22	85		P	P	08 35 14.5	+2.4
	0.3nm,0.9s,baz=284,slow=5.8,SNR=2.4							

WEL 18 08:30:31.4±0.5, 38.12S×176.06E, h167km±4km, ML3.7/16, 15C-1D, Error ellipse: s-maj=3.9km s-min=3.4km az=0.0, North Island

Code	Station Name	Δ°	AZ°		Phase ID		Time	Res
					Op	ISC	h m s	ISC
URZ	Urewera	0.84	100	⇑	PN	Pn	08 30 56.4	-0.2
URZ					SN	Sn	08 31 15.5	-0.4
TWVZ	Taurewa	1.07	207	⇑	PN	Pn	08 30 58.7	+0.3
BKZ	Black Stump Fm	1.10	162	⇑	PN	Pn	08 30 58.5	-0.1
BKZ					SN	Sn	08 31 18.6	-1.1
NMHZ	Naumai	1.14	149	⇑	PN	Pn	08 30 59.7	+0.8
NMHZ					SN	Sn	08 31 21.2	+0.9
WPVZ	Whakapapa	1.16	200		PN	Pn	08 30 58.5	-0.7
MWZ	Matawai	1.18	101		PN	Pn	08 30 59.2	0.0
MWZ					SN	Sn	08 31 20.0	-0.7
TUVZ	Tukino	1.19	195	⇑	PN	Pn	08 30 59.7	+0.2
FWVZ	Far West T-bar	1.20	199		PN	Pn	08 30 59.7	0.0
TRVZ	Turoa	1.24	199	⇓	PN	Pn	08 31 00.3	+0.2
WNVZ	Wahianoa	1.26	196	⇑	PN	Pn	08 31 00.1	0.0
PKVZ	Pokaka	1.29	205		PN	Pn	08 31 00.3	0.0
MOVZ	Moawhango	1.31	190		PN	Pn	08 30 60.0	-0.5
MOVZ					SN	Sn	08 31 21.9	-1.1
MTVZ	Mangateitei	1.34	200		PN	Pn	08 31 00.7	-0.1
BHHZ	Black Hill Sta	1.37	180	⇑	PN	Pn	08 31 00.6	-0.4
MCHZ	McNeill Hill	1.41	160		PN	Pn	08 31 01.8	+0.4
MCHZ					SN	Sn	08 31 24.7	+0.1
KNZ	Kokohu	1.55	126		PN	Pn	08 31 02.5	-0.1
PUZ	Puketiti	1.73	89		PN	Pn	08 31 05.2	+0.6
MHGZ	Mahia Peninsul	1.78	126		PN	Pn	08 31 05.0	-0.1
KAHZ	Kahuranaki	1.79	159	⇑	PN	Pn	08 31 05.1	-0.2
PNHZ	Pukenui	1.79	177		PN	Pn	08 31 04.4	-0.9
WAZ	Wanganui	1.83	207		PN	Pn	08 31 04.8	-0.9
TSZ	Takapari Road	1.94	182		PN	Pn	08 31 05.8	-1.1
WPHZ	Waipukurau	1.96	171		PN	Pn	08 31 06.2	-0.9
PXZ	Pawanui	2.01	162	⇑	PN	Pn	08 31 06.7	-0.8
DVHZ	Dannevirke	2.18	178	⇑	PN	Pn	08 31 08.0	-1.5
PRHZ	Porangahau	2.19	168		PN	Pn	08 31 08.6	-1.1
POWZ	Post Office Ro	2.28	186		PN	Pn	08 31 09.1	-1.7
BFZ	Birch Farm	2.56	177		PN	Pn	08 31 11.9	-2.1
MRZ	Mangatainoka R	2.57	188	⇑	PN	Pn	08 31 11.9	-2.2
TIWZ	Tintock	2.66	183		PN	Pn	08 31 13.0	-2.2
OGWZ	Otaki Gorge	2.78	194	⇑	PN	Pn	08 31 14.4	-2.3
HOWZ	Holdsworth Sta	2.81	188	⇑	PN	Pn	08 31 14.3	-2.7
KIW	Kapiti Island	2.88	198	⇑	PN	Pn	08 31 15.1	-2.7
MTW	Mount Morrison	3.06	188		PN	Pn	08 31 17.1	-3.1
CAW	Cannon Point	3.08	194		PN	Pn	08 31 17.5	-2.9
DUWZ	D'Urville Isla	3.15	211		PN	Pn	08 31 18.4	-2.9
TRWZ	Traveller	3.29	185		PN	Pn	08 31 19.8	-3.1
PAWZ	Paruwai Farm	3.29	188		PN	Pn	08 31 19.7	-3.4
MSWZ	Moikau Station	3.35	190		PN	Pn	08 31 20.2	-3.5
SNZO	South Karori	3.35	198		PN	Pn	08 31 20.3	-3.4
TCW	Tory Channel	3.38	203		PN	Pn	08 31 20.9	-3.2
BHW	Baring Head	3.41	195	⇑	PN	Pn	08 31 21.0	-3.5
PLWZ	Palliser	3.50	190		PN	Pn	08 31 22.0	-3.7
NNZ	Nelson	3.72	213		PN	Pn	08 31 24.5	-4.0
QRZ	Quartz Range	3.84	224		PN	Pn	08 31 26.1	-3.9
THZ	Tophouse	4.37	213		PN	Pn	08 31 33.1	-3.8
KHZ	Kahutara	4.71	203		PN	Pn	08 31 37.2	-3.9
LTZ	Lake Taylor	5.48	211		PN	Pn	08 31 46.6	-4.7

*ISCJB **18** 08:48:57.7±0.8, 3.3S±0.1×100.4E±0.2, h29km, mb4.1/14, Error ellipse: s-maj=26.9km s-min=9.8km az=141.7*
*IDC **18** 08:48:58.6±1.0, 3.39S×100.27E, h23km±3km, mb3.9/10, mb1 4.0/10, mb1mx3.9/24, mbtmp4.0/10, MS3.2/1, Ms1 3.2/1, ms1mx2.5/40, Error ellipse: s-maj=34.4km s-min=14.4km az=56.0*
*NEIC **18** 08:49:00.6±0.7, 3.31S×100.36E, h35km, mb4.1/5, Error ellipse: s-maj=23.5km s-min=7.5km az=52.0*
ISC 18 08:48:58.9±0.9, 3.4S±0.1×100.3E±0.2, h29km, n30, σ1§06/38, mb4.1/14, Southern Sumatera

Code	Station Name	Δ°	AZ°		Phase ID		Time	Res
					Op	ISC	h m s	ISC
PSI	Prapat	6.29	348		LR	LR	08 53 26.2	
	comp=Z,221nm,20.8s,baz=355,slow=43							
KAPI	Kappang	19.49	95		*e*P	P	08 53 23.7	-0.1
	4.9nm,0.6s							
CMAR	Chiang Mai Arr	21.74	357		P	P	08 53 47.2	-0.9
CMAR	Chiang Mai Arr	21.74	357		P	P	08 53 47.2	-0.9
	2.0nm,0.3s,baz=184,slow=13,SNR=8.9							
WRA	Warramunga Arr	37.07	119		P	P	08 56 06.3	-0.5
WRA	Warramunga Arr	37.07	119		P	P	08 56 06.3	-0.5
	0.8nm,0.6s,baz=309,slow=8.9,SNR=17							
WRAB	Tennant Creek	37.08	119		*e*P	P	08 56 09.0	+2.1
	1.7nm,0.6s							
ASAR	Alice Springs	38.23	125		P	P	08 56 16.9	+0.2
ASAR	Alice Springs	38.23	125		P	P	08 56 16.9	+0.2
	1.3nm,0.5s,baz=300,slow=6.3,SNR=22							
AS31	Alice Springs	38.23	125		*e*P	P	08 56 16.9	+0.2
STKA	Stephens Creek	48.04	131		P	P	08 57 36.6	+0.9
STKA					pP	pP	08 57 42.6	-2.0
STKA	Stephens Creek	48.04	131		P	P	08 57 36.6	+0.9
	1.7nm,0.8s,baz=301,slow=7.8,SNR=3.9							
STKA					pP	pP	08 57 42.6	-2.0
	0.6nm,0.5s,baz=333,slow=9.0,SNR=1.8							
KSAR	Wonju Array Be	48.04	30		P	P	08 57 35.4	-0.2
KSRS	Korea Array	48.07	30		P	P	08 57 35.4	-0.4
	0.8nm,0.9s,baz=214,slow=8.5,SNR=5.1							
SONM	Songino Array	51.28	5		P	P	08 58 01.5	+1.2
SONM					pP	pP	08 58 08.6	-0.6
SONM					PcP	PcP	08 59 15.8	+0.7
SONM	Songino Array	51.28	5		P	P	08 58 01.5	+1.2
	3.2nm,0.6s,baz=188,slow=9.3,SNR=30							
SONM					pP	pP	08 58 08.6	-0.6
	2.4nm,0.9s,baz=189,slow=8.3,SNR=9.0							
SONM					PcP	PcP	08 59 15.8	+0.7
	0.6nm,0.6s,baz=183,slow=5.1,SNR=2.6							
ULN	Ulaanbaatar	51.38	6		*e*P	P	08 58 01.8	+0.7
	0.9nm,0.4s							
MK31	Makanchi Array	52.42	344		*e*P	P	08 58 09.6	+0.8
MKAR	Makanchi Array	52.42	344		P	P	08 58 09.6	+0.8
MKAR	Makanchi Array	52.42	344		P	P	08 58 09.6	+0.8
	3.4nm,0.6s,baz=148,slow=8.1,SNR=36							
USRK	Ussuriysk Arra	55.25	27		P	P	08 58 29.8	+0.4
	3.2nm,0.7s,baz=229,slow=5.2,SNR=10							
USRK					pP	pP	08 58 36.4	-1.9
	1.6nm,0.6s,baz=220,slow=4.0,SNR=4.1							
KURK	Kurchatov	57.00	344		*e*P	P	08 58 42.6	+0.8
	2.5nm,0.8s							
ZAA0	Zalesovo Array	58.57	349		*e*P	P	08 58 53.3	+0.5
ZALV	Zalesovo Beam	58.57	349		P	P	08 58 53.0	+0.3
ZALV	Zalesovo Beam	58.57	349		P	P	08 58 53.0	+0.3
	3.6nm,0.9s,baz=174,slow=4.5,SNR=15							
ABKAR	Akbulak array	62.98	332		*e*P	P	08 59 23.1	+0.3
	1.0nm,0.6s							
BRTR	Keskin Array B	74.45	313		P	P	09 00 35.2	+0.4
BRTR					pP	pP	09 00 41.9	-2.2
BRTR	Keskin Array B	74.45	313		P	P	09 00 35.2	+0.4
	0.5nm,0.7s,baz=128,slow=9.3,SNR=3.5							
BRTR					pP	pP	09 00 41.9	-2.2
	0.8nm,0.7s,baz=134,slow=7.1,SNR=4.0							
TXAR	Lajitas Array	145.61	39		PKPbc	PKPab	09 08 36.9	+1.1
TXAR					pPKPbc	pPKPbc	09 08 44.3	-0.8

TXAR	Lajitas Array	145.61	39		PKPbc	PKPab	09 08 36.9	+1.1
	1.9nm,0.6s,baz=238,slow=0.8,SNR=32							
TXAR					pPKPbc	pPKPbc	09 08 44.3	-0.8
	1.2nm,0.6s,baz=264,slow=1.3,SNR=11							

TRN 18 08:49:07.3, 18.49N×62.07W, h71km, MD3.8, 1C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKI	Saint Kitts	1.31	209	*e*P	Pn	08 49 31.6	+1.7
SKI				*e*S	Sn	08 49 48.7	+1.9
BPA	Boggy Peak	1.45	172	*e*P	Pn	08 49 32.8	+1.2
BPA				*e*S	Sn	08 49 52.1	+2.1
SEG	Port Louis	2.14	165	*e*P	Pn	08 49 41.9	+1.0
LZG	Guadaloupe-1	2.35	173	*e*P	Pn	08 49 45.2	+1.5
BCG	Bois Riant Cap	2.43	170	*e*P	Pn	08 49 46.1	+1.3
SCG	Saint Claude	2.47	171	*e*P	Pn	08 49 46.8	+1.4
DOG	Dongo Capester	2.48	170	*e*P	Pn	08 49 46.9	+1.4
PHG	Guadaloupe-2	2.49	171	*e*P	Pn	08 49 47.0	+1.3
HMG	Houelmont	2.52	172	*e*P	Pn	08 49 47.8	+1.8
TBG	Guadaloupe-3	2.65	171	⇑ *e*P	Pn	08 49 49.3	+1.5
MGG	Marie-Galante	2.65	164	*e*P	Pn	08 49 49.2	+1.5
DVCT	Vielle Casse P	2.92	167	*e*P	Pn	08 49 54.4	+2.9
DVCT				*e*S	Sn	08 50 28.6	+3.1
DLPL	La Plaine	3.23	166	*e*P	Pn	08 49 58.4	+2.6
DLPL				*e*S	Sn	08 50 34.5	+1.4
FDF	Fort de France	3.83	167	*e*P	Pn	08 50 04.7	+0.7
FDF	Fort de France	3.83	167	*e*P	Pn	08 50 04.8	+0.8
FDF				*e*S	Sn	08 50 48.0	+0.1

*ISCJB **18** 09:05:56.0±0.2, 42.44N±0.01×13.34E±0.01, h13km±1km, mb3.9/13, MS3.4/2, Error ellipse: s-maj=2.2km s-min=1.6km az=36.0*
*SZGRF **18** 09:05:55.3, 42.13N×13.56E, h10km, mb4.1, Central Italy*
*ROM **18** 09:05:56.2±0.0, 42.44N×13.36E, h14km±1km, Ml4.0/40, Error ellipse: s-maj=0.7km s-min=0.5km az=58.0*
*CSEM **18** 09:05:56.6±0.1, 42.46N×13.34E, h2km, mb4.1/8, ML4.5/12, Error ellipse: s-maj=2.3km s-min=1.7km az=30.0*
*PDG **18** 09:05:56.7±0.7, 42.47N×13.37E, h10km, ML3.8/8, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
*LDG **18** 09:05:56.1±0.1, 42.50N×13.40E, h2km, Ml3.7/10, Error ellipse: s-maj=3.8km s-min=2.3km az=44.0*
*IDC **18** 09:05:56.0±1.0, 42.54N×13.22E, h0km, mb3.7/8, mb1 3.8/14, mb1mx3.7/32, mbtmp3.6/14, ML3.8/6, MS3.4/2, Ms1 3.4/2, ms1mx2.4/44, Error ellipse: s-maj=16.6km s-min=13.6km az=90.0*
*NEIC **18** 09:05:56.0, 42.44N×13.36E, h15km, mb3.8/1, ML3.8(ROM), After ROM.*
NEIC Felt [IV] at L'Aquila; [III] at Ascoli Piceno, Castellalto, Montorio al Vomano, San Benedetto del Tronto and Teramo; [II] at Avezzano, Cassino, Chieti, Foligno, Frattocchie, Jesi, Latina, Pescara, Rieti, Rome, Sulmona and Terni. Felt in Abruzzo, Lazio, Marche and Umbria.
*MOS **18** 09:05:56.1±1.3, 42.54N×13.38E, h13km, mb4.1/8, Error ellipse: s-maj=9.2km s-min=5.1km az=83.6*
*PRU **18** 09:05:57.2, 42.51N×13.45E, h1km, M3.8*
*THE **18** 09:06:00.5, 42.50N×13.76E, h2km±11km, ML4.0/1, Error ellipse: s-maj=15.1km s-min=1.9km az=278.0*
*STR **18** 09:06:07.0±1.0, 42.97N×12.79E, h10km, Ml3.7, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BEO **18** 09:06:15.5±0.7, 43.01N×15.10E, h0km, ML3.6/7*
ISC 18 09:05:57.7±0.6, 42.45N±0.01×13.36E±0.01, h12km±3km, n472, σ1§58/578, mb4.0/13, 43C-29D, Central Italy

Code	Station Name	Δ°	AZ°		Phase ID		Time	Res
					Op	ISC	h m s	ISC
CAMP	Campotosto	0.09	21		P	Pg	09 05 59.9	-0.8
CAMP					S	Sg	09 06 02.2	-0.6
CAMP	Campotosto	0.09	21	⇓	*e*Pg	Pg	09 05 59.9	-0.8
CAMP					Sg	Sg	09 06 02.2	-0.6
	87μm,0.4s							
CAMP	Campotosto	0.09	21	⇓	*e*Pg	Pg	09 05 59.9	-0.8
CAMP					Sg	Sg	09 06 02.2	-0.6
	87μm,0.4s							
AQU	L'Aquila	0.10	163	⇑	*e*Pg	Pg	09 05 59.7	-0.9
AQU	L'Aquila	0.10	163	⇑	*i*Pg	Pg	09 05 59.8	-0.8
AQU					Sg	Sg	09 06 02.0	-0.7
	96μm,0.3s							
AQU	L'Aquila	0.10	163		*e*P	Pg	09 05 59.7	-0.9
AQU					Sg	Sg	09 06 02.0	-0.7
	96μm,0.3s							
FAGN	Fagnano	0.24	138		P	Pg	09 06 02.1	-0.8
FAGN					S	Sg	09 06 05.7	-0.7
FAGN	Fagnano	0.24	138		Pg	Pg	09 06 02.1	-0.8
FAGN					Sg	Sg	09 06 05.6	-0.7
	53μm,0.3s							
FAGN	Fagnano	0.24	138		Pg	Pg	09 06 02.1	-0.8
FAGN					S	Sg	09 06 05.7	-0.7
TERO	Teramo	0.25	45		P	Pg	09 06 02.0	-0.9
TERO					S	Sg	09 06 06.3	-0.2
TERO	Teramo	0.25	45	⇑	*e*Pg	Pg	09 06 02.0	-0.9
TERO					Sg	Sg	09 06 06.3	-0.2
TERO	Teramo	0.25	45	⇑	*e*Pg	Pg	09 06 02.0	-0.9
TERO					Sg	Sg	09 06 06.3	-0.2
FIAM	Fiamignano	0.26	226		P	Pg	09 06 02.1	-1.0
FIAM					S	Sg	09 06 06.1	-0.6
FIAM	Fiamignano	0.26	226	⇑	*i*Pg	Pg	09 06 02.1	-1.0
FIAM					Sg	Sg	09 06 06.1	-0.6
	24μm,0.5s							
FIAM	Fiamignano	0.26	226	⇑	*i*Pg	Pg	09 06 02.1	-1.0
FIAM					Sg	Sg	09 06 06.1	-0.6
	24μm,0.5s							
LNSS	Leonessa	0.28	303		P	Pg	09 06 02.6	-1.0
LNSS					S	Sg	09 06 07.3	-0.3
LNSS	Leonessa	0.28	303		Pg	Pg	09 06 02.6	-1.0
LNSS					Sg	Sg	09 06 06.9	-0.7
	28μm,0.6s							
LNSS	Leonessa	0.28	303		Pg	Pg	09 06 02.6	-1.0
LNSS					Sg	Sg	09 06 06.9	-0.7
	28μm,0.6s							
LNSS					S	Sg	09 06 07.3	-0.3
VCEL	Villa Celiera	0.36	98		S	Sg	09 06 04.0	-5.7
VCEL					S	Sb	09 06 10.6	-1.0
VCEL	Villa Celiera	0.36	98		Pg	Sg	09 06 04.0	-5.7
VCEL					Sg	Sg	09 06 09.6	-0.1
	33μm,0.5s							
VCEL	Villa Celiera	0.36	98		Pg	Sg	09 06 04.0	-5.7
VCEL					Sg	Sg	09 06 09.6	-0.1
	33μm,0.5s							
VCEL					S	Sb	09 06 10.6	-1.0
GAVE	Gavelli	0.42	305		Pg	Pg	09 06 05.0	-1.1
GAVE	Gavelli	0.42	305		Pg	Pg	09 06 05.0	-1.1
PTQR	Pietraquaria	0.43	176		P	Pg	09 06 04.9	-1.2
PTQR	Pietraquaria	0.43	176		Pg	Pg	09 06 04.9	-1.2
PTQR	Pietraquaria	0.43	176		Pg	Pg	09 06 04.9	-1.2
NRCA	Norcia	0.43	335		P	Pg	09 06 05.0	-1.2
NRCA					S	Sg	09 06 11.6	-0.4
NRCA	Norcia	0.43	335		Pg	Pg	09 06 05.0	-1.2
NRCA					Sg	Sg	09 06 11.5	-0.4
	18μm,0.1s							
NRCA	Norcia	0.43	335		Pg	Pg	09 06 05.0	-1.2
NRCA					Sg	Sg	09 06 11.5	-0.4
	18μm,0.1s							
MNS	Montasola	0.51	263		Pg	Pg	09 06 06.0	-1.7
	4μm,0.5s							
MNS	Montasola	0.51	263		Pg	Pg	09 06 06.0	-1.7
	4μm,0.5s							
OFFI	Offida	0.54	26		Pg	Pg	09 06 07.8	-0.5
	20μm,0.4s							
OFFI	Offida	0.54	26		Pg	Pg	09 06 07.8	-0.5
	20μm,0.4s							
TRTR	Tortoreto Alta	0.54	48		Pg	Pg	09 06 07.9	-0.4
	38μm,0.9s							
TRTR	Tortoreto Alta	0.54	48		Pg	Pg	09 06 07.9	-0.4
	38μm,0.9s							
CERT	Cerreto	0.57	210		*e*P	Pg	09 06 07.4	-1.5
CERT					S	Sb	09 06 18.5	+0.8
CERT	Cerreto	0.57	210		Pg	Pg	09 06 07.4	-1.5
	32μm,0.7s							
CERT	Cerreto	0.57	210		Pg	Pg	09 06 07.4	-1.5
	32μm,0.7s							
CERT					S	Sb	09 06 18.5	+0.8
INTR	Introdacqua	0.59	137		Pg	Pg	09 06 07.4	-1.8
INTR					Sg	Sg	09 06 15.4	-1.7
	15μm,0.8s							
INTR					Sg	Sg	09 06 15.4	-1.7
	15μm,0.8s							
CESX	Cesi	0.60	286		Pg	Pg	09 06 07.5	-1.9
	4μm,0.5s							
CESX	Cesi	0.60	286		Pg	Pg	09 06 07.5	-1.9
	4μm,0.5s							
VVLD	Villa Vallelon	0.61	161		Pg	Pg	09 06 07.9	-1.6
	9μm,0.9s							
VVLD	Villa Vallelon	0.61	161		Pg	Pg	09 06 07.9	-1.6
	9μm,0.9s							
FDMO	Fiordimonte	0.62	341		Pg	Pg	09 06 08.2	-1.6
FDMO					Sg	Sg	09 06 17.8	-0.3
	3μm,0.3s							
FDMO	Fiordimonte	0.62	341		Pg	Pg	09 06 08.2	-1.6
FDMO					Sg	Sg	09 06 17.8	-0.3
	3μm,0.3s							
MTCE	Montecelio	0.63	228		Pg	Pg	09 06 08.2	-1.7
	4μm,0.6s							
MTCE	Montecelio	0.63	228		Pg	Pg	09 06 08.2	-1.7
	4μm,0.6s							
CESI	CESI - Serrava	0.65	329		Pg	Pg	09 06 08.8	-1.6
CESI					Sg	Sg	09 06 18.9	-0.1
	2μm,0.4s							
CESI	CESI - Serrava	0.65	329		Pg	Pg	09 06 08.8	-1.6
CESI					Sg	Sg	09 06 18.9	-0.1
	2μm,0.4s							
GUAR	Guarcino	0.65	183		Pg	Pg	09 06 08.6	-1.8
	4μm,0.5s							
GUAR	Guarcino	0.65	183		Pg	Pg	09 06 08.6	-1.8
	4μm,0.5s							
LPEL	Lama dei Pelig	0.73	123		Pg	Pg	09 06 09.6	-2.2
LPEL					Sg	Sg	09 06 20.5	-0.9
	7μm,0.4s							
LPEL	Lama dei Pelig	0.73	123		Pg	Pg	09 06 09.6	-2.2
LPEL					Sg	Sg	09 06 20.5	-0.9
	7μm,0.4s							
GUMA	Gualdo di Mace	0.74	34		Pg	Pg	09 06 08.6	-3.5
	19μm,0.4s							
CAFR	Castel Frentan	0.76	106		Pg	Pg	09 06 10.9	-1.5
	8μm,0.5s							
CAFR	Castel Frentan	0.76	106		Pg	Pg	09 06 10.9	-1.5
	8μm,0.5s							
POFI	Posta Fibreno	0.77	160		Pg	Pg	09 06 10.7	-2.0
	2μm,0.6s							
POFI	Posta Fibreno	0.77	160		Pg	Pg	09 06 10.7	-2.0
	2μm,0.6s							
ASSB	Assisi San Ben	0.79	319		Pg	Pg	09 06 11.2	-1.8
ASSB					Sg	Sg	09 06 22.3	-1.0
	3μm,0.4s							
ASSB	Assisi San Ben	0.79	319		Pg	Pg	09 06 11.2	-1.8
ASSB					Sg	Sg	09 06 22.3	-1.0
	3μm,0.4s							
RMP	Rome, Mte Porz	0.80	218		Pg	Pg	09 06 11.3	-1.9
	5μm,0.5s							
RMP	Rome, Mte Porz	0.80	218		Pg	Pg	09 06 11.3	-1.9
	5μm,0.5s							
SDI	San Donato	0.81	156		Pg	Pg	09 06 11.2	-2.1
SDI	San Donato	0.81	156		Pg	Pg	09 06 11.2	-2.1
RDP	Rocca di Papa	0.84	215		Pg	Pg	09 06 12.1	-1.8
	12μm,0.5s							
RDP	Rocca di Papa	0.84	215		Pg	Pg	09 06 12.1	-1.8
	12μm,0.5s							
MA9	Marino	0.86	218		Pg	Pg	09 06 12.6	-1.6
	7μm,0.7s							
MA9	Marino	0.86	218		Pg	Pg	09 06 12.6	-1.6
	7μm,0.7s							
SNTG	Esanatoglia	0.86	339		Pg	Pg	09 06 12.5	-1.9
SNTG	Esanatoglia	0.86	339		Pg	Pg	09 06 12.5	-1.9
GIUL	Giuliano Di Ro	0.89	185		Pg	Pg	09 06 12.6	-2.3
	4μm,0.7s							
GIUL	Giuliano Di Ro	0.89	185		Pg	Pg	09 06 12.6	-2.3
	4μm,0.7s							
CING	Cingoli	0.94	352		Pg	Pg	09 06 13.8	-1.9
	4μm,0.4s							
CING	Cingoli	0.94	352		Pg	Pg	09 06 13.8	-1.9
	4μm,0.4s							
RNI2	Rionero Sannit	0.95	141		Pg	Pg	09 06 13.8	-2.2
	3μm,0.5s							
RNI2	Rionero Sannit	0.95	141		Pg	Pg	09 06 13.8	-2.2
	3μm,0.5s							
CERA	Filignano	0.98	150		Pg	Pb	09 06 14.2	-2.4
	4μm,0.8s							
CERA	Filignano	0.98	150		Pg	Pb	09 06 14.2	-2.4
	4μm,0.8s							
MGAB	Montegabbione	1.03	297		Pg	Pb	09 06 15.6	-1.9
	2μm,0.5s							
MGAB	Montegabbione	1.03	297		Pg	Pb	09 06 15.6	-1.9
	2μm,0.5s							
MIDA	Miranda	1.04	140		Pg	Pb	09 06 15.0	-2.7
	3μm,0.7s							
MIDA	Miranda	1.04	140		Pg	Pb	09 06 15.0	-2.7
	3μm,0.7s							

JAVS	Javornik	3.48	8	*i* Pn	Pn	09 06 50.7	-1.0		
JAVS				*i* Sn	Sn	09 07 33.6	+0.8		
VOY	Vojsko	3.60	6	*e*Pn	Pn	09 06 52.0	-1.4		
VOY				*e*Sn	Sn	09 07 36.1	+0.3		
VOY	Vojsko	3.60	6	*e*Pn	Pn	09 06 52.0	-1.4		
VOY				*e*Sn	Sn	09 07 36.1	+0.3		
HCY	Herceg Novi	3.80	88⇑	*i*Pn	Pn	09 06 56.1	+0.2		
HCY				*e*Sn	Sn	09 07 41.9	+1.4		
HCY	Herceg Novi	3.80	88⇑	*i*Pn	Pn	09 06 56.1	+0.2		
HCY				*e*Sn	Sn	09 07 41.9	+1.4		
PDKS	Podkum	3.80	17	*i* Pn	Pn	09 06 55.8	-0.2		
PDKS	Podkum	3.80	17	*i* Pn	Pn	09 06 55.8	-0.2		
BRY	Bratogost	3.84	81⇑	*i*Pn	Pn	09 06 57.6	+0.9		
BRY				*e*Sn	Sn	09 07 43.0	+1.2		
BRY	Bratogost	3.84	81⇑	*i*Pn	Pn	09 06 57.6	+0.9		
BRY				*e*Sn	Sn	09 07 43.0	+1.2		
BUM	Brajici-Budva	4.10	90⇓	*i*Pn	Pn	09 07 01.0	+0.9		
BUM				*e*Sn	Sn	09 07 49.4	+1.4		
BUM	Brajici-Budva	4.10	90⇓	*i*Pn	Pn	09 07 01.0	+0.9		
BUM				*e*Sn	Sn	09 07 49.4	+1.4		
UPM	Unac-Piva	4.14	78⇓	*i*Pn	Pn	09 07 01.9	+1.0		
UPM				*e*Sn	Sn	09 07 50.5	+1.2		
UPM	Unac-Piva	4.14	78⇓	*i*Pn	Pn	09 07 01.9	+1.0		
UPM				*e*Sn	Sn	09 07 50.5	+1.2		
OBKA	Obir	4.15	11⇑	*i*Pn	Pn	09 06 59.4	-1.4		
	SNR=18								
OBKA	Obir	4.15	11	Pn	Pn	09 06 59.4	-1.4		
	SNR=18								
TIP	Timpagrande	4.16	141	Pn	Pn	09 07 03.6	+2.6		
TIP	Timpagrande	4.16	141	Pn	Pn	09 07 03.6	+2.6		
NKY	Niksic	4.17	83⇑	*i*Pn	Pn	09 07 01.8	+0.7		
NKY	Niksic	4.17	83⇑	*i*Pn	Pn	09 07 01.8	+0.7		
MYKA	Terra Mystica	4.19	3⇓	*i*Pn	Pn	09 07 01.4	0.0		
MYKA	Terra Mystica	4.19	3	Pn	Pn	09 07 01.4	0.0		
VSL	Villasalto	4.22	227	*e*Pn	Pn	09 07 01.3	-0.4		
VSL	Villasalto	4.22	227	*e*Pn	Pn	09 07 01.3	-0.4		
ABTA	Abfaltersbach	4.34	352⇑	*i*Pn	Pn	09 07 03.5	0.0		
	SNR=74								
ABTA	Abfaltersbach	4.34	352	Pn	Pn	09 07 03.5	0.0		
	SNR=74								
PDG	Podgorica	4.36	88	*e*Pn	Pn	09 07 04.5	+0.8		
PDG				*e*Sn	Sn	09 07 43.8	-11		
PDG	Podgorica	4.36	88⇑	*i*Pn	Pn	09 07 04.4	+0.8		
PDG				*e*Sn	Sn	09 07 55.6	+1.3		
TTG	Podgorica	4.36	88⇑	*i*Pn	Pn	09 07 04.4	+0.8		
TTG				*e*Sn	Sn	09 07 55.6	+1.3		
SOKA	Soboth	4.39	15⇓	*i*Pn	Pn	09 07 03.8	-0.4		
SOKA	Soboth	4.39	15	Pn	Pn	09 07 03.8	-0.4		
ULC	Ulcinj	4.39	94⇓	*i*Pn	Pn	09 07 04.2	0.0		
ULC				*e*Sn	Sn	09 07 56.1	+0.8		
ULC	Ulcinj	4.39	94⇓	*i*Pn	Pn	09 07 04.2	0.0		
ULC				*e*Sn	Sn	09 07 56.1	+0.8		
PLE	Pljevlja	4.51	77⇑	*i*Pn	Pn	09 07 06.1	+0.2		
PLE				*e*Sn	Sn	09 07 58.8	+0.5		
PLE	Pljevlja	4.51	77⇑	*i*Pn	Pn	09 07 06.1	+0.2		
PLE				*e*Sn	Sn	09 07 58.8	+0.5		
SAOF	Saorge	4.51	292	P	Pn	09 07 07.8	+2.0		
SAOF	Saorge	4.51	292	P	Pn	09 07 07.8	+2.0		
SBF	Sospel	4.56	290	*e*Pn	Pn	09 07 07.0	+0.5		
SBF				*e*Sn	Sn	09 07 57.0	-2.4		
	59nm,0.8s								
SBF	Sospel	4.56	290	*e*Pn	Pn	09 07 07.0	+0.5		
SBF				*e*Sn	Sn	09 07 57.0	-2.4		
	30nm,0.8s								
AUTN	L'Aution	4.61	292	P	Pn	09 07 09.3	+2.1		
AUTN	L'Aution	4.61	292	P	Pn	09 07 09.3	+2.1		
CEL	Celeste	4.61	154	*e*Pn	Pn	09 07 07.0	-0.1		
CEL	Celeste	4.61	154	*e*Pn	Pn	09 07 07.0	-0.1		
KBA	Koelnbreinsper	4.63	360⇑	*i*Pn	Pn	09 07 07.7	+0.1		
	SNR=22								
KBA	Koelnbreinsper	4.63	360	Pn	Pn	09 07 07.7	+0.1		
	SNR=22								
BBLS	Lazići	4.64	70⇓	*i*Pn	Pn	09 07 08.4	+0.8		
BBLS	Lazići	4.64	70⇓	*i*Pn	Pn	09 07 08.4	+0.8		
BEHE	Becsehely	4.71	30	*e*	Pb	09 07 17.8	-2.2		
TOUF	Mont Tournerai	4.74	291	P	Pn	09 07 10.4	+1.4		
TOUF	Mont Tournerai	4.74	291	P	Pn	09 07 10.4	+1.4		
BEY	Berane	4.83	83⇓	*i*Pn	Pn	09 07 11.2	+1.0		
BEY				*e*Sn	Sn	09 08 07.1	+0.9		
IVA	Berane	4.83	83⇓	*i*Pn	Pn	09 07 11.2	+1.0		
IVA				*e*Sn	Sn	09 08 07.1	+0.9		
PUK	Puka	4.86	93	*e*PN	Pn	09 07 11.6	+1.0		
PUK	Puka	4.86	93	*e*Pn	Pn	09 07 11.6	+1.0		
PVY	Plav	4.88	86	*e*Pn	Pn	09 07 12.4	+1.5		
PVY				*e*Sn	Sn	09 08 07.9	+0.6		
PVY	Plav	4.88	86	*e*Pn	Pn	09 07 12.4	+1.5		
PVY				*e*Sn	Sn	09 08 07.9	+0.6		
CALN	Calern	4.92	288	P	Pn	09 07 12.4	+1.0		
CALN	Calern	4.92	288	P	Pn	09 07 12.4	+1.0		
FETA	Feichten	4.94	339⇓	*i*Pn	Pn	09 07 12.3	+0.5		
	SNR=21								
FETA	Feichten	4.94	339	Pn	Pn	09 07 12.3	+0.5		
	SNR=21								
TUE	Stuetta	4.95	326	*e*Pn	Pn	09 07 12.1	+0.2		
TUE	Stuetta	4.95	326	*e*Pn	Pn	09 07 12.1	+0.2		
TEKS	Tekeris	4.95	63	*e*Pn	Pn	09 07 11.0	-0.8		
TEKS	Tekeris	4.95	63	*e*Pn	Pn	09 07 11.0	-0.8		
BCI	Bajram Curri	4.96	89	*e*PN	Pn	09 07 13.8	+1.8		
BCI	Bajram Curri	4.96	89	*e*Pn	Pn	09 07 13.8	+1.8		
WTTA	Wattenberg	4.97	346⇑	*i*Pn	Pn	09 07 13.2	+1.0		
	SNR=22								
WTTA	Wattenberg	4.97	346	Pn	Pn	09 07 13.2	+1.0		
	SNR=22								
TIR	Tirane	4.97	101	*e*P	Pn	09 07 12.5	+0.4		
TIR	Tirane	4.97	101	*e*P	Pn	09 07 12.5	+0.4		
TIR	Tirane	4.97	101	*e*P	Pn	09 07 12.5	+0.4		
DAVOX	Davos/Dischmat	5.00	331	Pn	Pn	09 07 14.2	+1.6		
DAVOX				Sn	Sn	09 08 09.2	-1.1		
DAVOX	Davos/Dischmat	5.00	331	Pn	Pn	09 07 14.2	+1.6		
	5.0nm,0.3s,baz=157,slow=18,SNR=30								
DAVOX				Sn	Sn	09 08 09.2	-1.1		
	6.6nm,0.3s,baz=320,slow=22,SNR=4.5								
DAVOX	Davos/Dischmat	5.00	331	P	Pn	09 07 14.2	+1.6		
	5.0nm,0.3s								
DAVOX				S	Sn	09 08 09.2	-1.1		
	7.0nm,0.3s								
FRF	La Foret Royal	5.05	285	*e*Pn	Pn	09 07 13.1	0.0		
FRF	La Foret Royal	5.05	285	*e*Pn	Pn	09 07 13.1	0.0		
WATA	Walderalm	5.05	346⇓	*i*Pn	Pn	09 07 14.5	+1.2		
	SNR=13								
WATA	Walderalm	5.05	346	Pn	Pn	09 07 14.5	+1.2		
	SNR=13								
DIVS	Divibare	5.11	69	P	Pn	09 07 14.4	+0.3		
DIVS	Divibare	5.11	69	*e*Pn	Pn	09 07 14.2	+0.1		
DIVS				*e*Sn	Sn	09 07 57.4	-16		
DIVS	Divibare	5.11	69	P	Pn	09 07 14.4	+0.3		
LMR	La Mourre	5.11	282	*e*Pn	Pn	09 07 13.5	-0.5		
LMR	La Mourre	5.11	282	*e*Pn	Pn	09 07 13.5	-0.5		
MOTA	Moosalm	5.15	343⇑	*i*Pn	Pn	09 07 15.8	+1.1		
	SNR=17								
MOTA			⇑	*i*Sn	Sn	09 08 15.2	+1.1		
MOTA	Moosalm	5.15	343	Pn	Pn	09 07 15.8	+1.1		
	SNR=17								
MOTA				Sn	Sn	09 08 15.2	+1.1		
MBDF	Montbardon	5.30	298	*e*P	Pn	09 07 19.1	+2.4		
MBDF	Montbardon	5.30	298	*e*P	Pn	09 07 19.1	+2.4		
RJOB	Jochberg	5.30	356	*e*Pn	Pn	09 07 17.7	+1.0		
RJOB				*e*Sn	Sn	09 08 19.4	+1.7		
PHP	Peshkopia	5.32	96	*e*PN	Pn	09 07 18.3	+1.4		
PHP	Peshkopia	5.32	96	P	Pn	09 07 17.8	+0.9		
PHP				S	Sn	09 08 17.4	-0.8		
PHP	Peshkopia	5.32	96	P	Pn	09 07 17.8	+0.9		
PHP	Peshkopia	5.32	96	*e*Pn	Pn	09 07 18.3	+1.4		
PHP				S	Sn	09 08 17.4	-0.8		
PKSM	Moragy	5.34	43⇑	*e*	Pn	09 07 14.7	-2.4		
PKSM	Moragy	5.34	43⇑	*e*P	Pn	09 07 14.7	-2.4		
FGSL	Fruska Gora	5.39	58	*e*Pn	Pn	09 07 17.6	-0.3		
FRGS	Fruska Gora	5.39	58	*e*Pn	Pn	09 07 17.6	-0.3		
DAVA	Damuels	5.43	334⇑	*i*Pn	Pn	09 07 19.9	+1.3		
	SNR=19								
DAVA	Damuels	5.43	334	Pn	Pn	09 07 19.9	+1.3		
	SNR=19								
BNI	Bardonecchia	5.50	301	*e*P	Pn	09 07 21.2	+1.8		
BNI	Bardonecchia	5.50	301	*e*Pn	Pn	09 07 21.2	+1.8		
BNI	Bardonecchia	5.50	301	*e*P	Pn	09 07 21.2	+1.8		
GRUS	Gruza	5.57	73⇓	*i*Pn	Pn	09 07 20.7	+0.5		
GRUS				*e*Sg	Sn	09 08 27.6	+3.5		
GRUS	Gruza	5.57	73⇓	*i*Pn	Pn	09 07 20.7	+0.5		
KEK	Kerkira	5.58	117	P	Pn	09 07 21.6	+1.2		
KEK	Kerkira	5.58	117	P	Pn	09 07 21.6	+1.2		
LPG	La Plagne	5.66	305	*e*Sn	Sn	09 08 24.0	-2.8		
	10.0nm,0.5s								
LPG	La Plagne	5.66	305	*e*Sn	Sn	09 08 24.0	-2.8		
	5.0nm,0.5s								
LPL	La Plagne	5.68	305	*e*P	Pn	09 07 25.1	+3.1		
LPL				*e*Sn	Sn	09 08 23.1	-4.2		
	8.1nm,0.4s								
LPL	La Plagne	5.68	305	*e*P	Pn	09 07 25.1	+3.1		
LPL				*e*Sn	Sn	09 08 23.1	-4.2		
	4.1nm,0.4s								
SOP	Sopron	5.70	22⇑	*e*	Pn	09 07 21.3	-0.8		
SOP	Sopron	5.70	22⇑	*e*P	Pn	09 07 21.3	-0.8		
SELS	Selova	5.75	80	*e*Pn	Pn	09 07 23.0	+0.2		
SELS	Selova	5.75	80	*e*Pn	Pn	09 07 23.0	+0.2		
CONA	Conrad Observa	5.76	17⇑	*i*Pn	Pn	09 07 22.3	-0.6		
	SNR=14								
CONA	Conrad Observa	5.76	17	Pn	Pn	09 07 22.3	-0.6		
	SNR=14								
SMRF	Simiane la Rot	5.89	288	*e*P	Pn	09 07 26.4	+1.6		
SMRF	Simiane la Rot	5.89	288	*e*P	Pn	09 07 26.4	+1.6		
ORIF	Oris-en-Rattie	5.96	297	*e*P	Pn	09 07 29.6	+3.9		
ORIF	Oris-en-Rattie	5.96	297	*e*P	Pn	09 07 29.6	+3.9		
SKO	Skopje	6.02	92	*e*Pn	Pn	09 07 27.3	+0.9		
IGT	Igoumenitsa	6.02	117	P	Pn	09 07 27.7	+1.2		
IGT	Igoumenitsa	6.02	117	P	Pn	09 07 27.7	+1.2		
NEST	Nestorio	6.12	107	P	Pn	09 07 29.2	+1.2		
NEST	Nestorio	6.12	107	P	Pn	09 07 29.2	+1.2		
BIA	Bitola	6.12	101	P	Pn	09 07 29.1	+1.2		
BIA	Bitola	6.12	101	*e*Pn	Pn	09 07 27.6	-0.3		
BIA	Bitola	6.12	101	P	Pn	09 07 29.1	+1.2		
FNA	Florina	6.23	103	P	Pn	09 07 30.3	+0.9		
FNA	Florina	6.23	103	P	Pn	09 07 30.3	+0.9		
BARS	Barje	6.25	84	*e*Pn	Pn	09 07 30.2	+0.6		
BARS				*e*Sn	Sn	09 08 26.8	-14		
BARS	Barje	6.25	84	*e*Pn	Pn	09 07 30.2	+0.6		
GEC2	GERESS Array S	6.40	2	*e*P	Pn	09 07 31.5	-0.3		
GEC2				*e*		09 08 41.2			
GEC2	GERESS Array S	6.40	2	*e*Pn	Pn	09 07 31.5	-0.3		
GEC2				*e*Sn	Sn	09 08 41.2	-3.6		
GEC2	GERESS Array S	6.40	2	*e*P	Pn	09 07 31.5	-0.3		
GEC2				*e*S	Sn	09 08 41.2	-3.6		
GERES	GERESS Array B	6.40	2	Pn	Pn	09 07 30.8	-1.0		
	1.2nm,0.3s,baz=172,slow=13,SNR=18								
GERES				Sn	Sn	09 08 42.4	-2.4		
	5.0nm,0.3s,baz=176,slow=23,SNR=10								
GERES				Lg	Lg	09 09 25.3			
	baz=180,slow=29,SNR=1.8								
GERES	GERESS Array B	6.40	2	P	Pn	09 07 30.8	-1.0		
	1.0nm,0.3s								
GERES				S	Sn	09 08 42.4	-2.4		
	5.0nm,0.3s								
BOLS	Boljevac	6.43	75	*e*Pn	Pn	09 07 31.9	-0.2		
BOLS	Boljevac	6.43	75	*e*Pn	Pn	09 07 31.9	-0.2		
SPAK	Spaichingen-Ko	6.51	332	P	Pn	09 07 33.7	+0.4		
FELD	Feldberg im Sc	6.62	327	P	Pn	09 07 34.2	-0.6		
CABF	La Chapelle	6.66	311	*e*Pn	Pn	09 07 35.4	+0.1		
CABF	La Chapelle	6.66	311	*e*Pn	Pn	09 07 35.4	+0.1		
KHC	Kasperske Hory	6.69	1	*e*P	Pn	09 07 34.2	-1.4		
KHC				*e*		09 08 48.3			
KHC	Kasperske Hory	6.69	1	*e*Pn	Pn	09 07 33.5	-2.1		
KHC				*e*Sn	Sn	09 08 49.7	-2.0		
KHC	Kasperske Hory	6.69	1	*e*PN	Pn	09 07 34.2	-1.4		
KHC				*ex*	x	09 07 42.5			
KHC				*e*SN	Sn	09 08 48.3	-3.4		
KHC	Kasperske Hory	6.69	1	Pn	Pn	09 07 32.8	-1.4		
KHC				*e*Sn	Sn	09 08 49.7	-2.0		
WET	Wettzell	6.71	357	*e*P	Pn	09 07 35.5	-0.4		
WET				*e*		09 08 47.6			
WET	Wettzell	6.71	357	*e*Pn	Pn	09 07 35.5	-0.4		
WET				*e*Sn	Sn	09 08 47.6	-4.6		
WET	Wettzell	6.71	357	*e*P	Pn	09 07 35.5	-0.4		
WET				*e*S	Sn	09 08 47.6	-4.6		
BZS	Buzias	6.74	59⇑	*i*P	Pn	09 07 36.8	+0.5		
BZS	Buzias	6.74	59	*e*Pn	Pn	09 07 36.5	+0.2		
BZS	Buzias	6.74	59	*e*Pn	Pn	09 07 36.5	+0.2		
BZS	Buzias	6.74	59⇑	*i*P	Pn	09 07 36.8	+0.5		
VIVF	Saint-Julien-l	6.75	294	*e*Pn	Pn	09 07 38.3	+1.8		
VIVF	Saint-Julien-l	6.75	294	*e*Pn	Pn	09 07 38.3	+1.8		
LOMF	Lomont	6.75	319	P	Pn	09 07 37.6	+1.1		
LOMF	Lomont	6.75	319	P	Pn	09 07 37.6	+1.1		
ZAPS	Zavoj	6.86	80	*e*Pn	Pn	09 07 38.5	+0.4		
ZAPS				*e*Sn	Sn	09 08 40.6	-16		
ZAPS	Zavoj	6.86	80	*e*Pn	Pn	09 07 38.5	+0.4		
BFO	Black Forest	6.87	331	*e*P	Pn	09 07 37.7	-0.4		
BFO				*e*		09 08 53.7			
BFO	Black Forest	6.87	331	*e*Pn	Pn	09 07 37.7	-0.4		
BFO				*e*Sn	Sn	09 08 53.7	-2.4		
BFO	Black Forest	6.87	331	*e*Pn	Pn	09 07 37.2	-0.9		
BFO	Black Forest	6.87	331	*e*Pn	Pn	09 07 37.2	-0.9		
BFO	Black Forest	6.87	331	*e*P	Pn	09 07 37.7	-0.4		
BFO				*e*S	Sn	09 08 53.7	-2.4		
VAY	Valandovo	6.96	96	*e*Pn	Pn	09 07 38.7	-0.7		
MOF	Molkenrain	6.97	323	P	Pn	09 07 39.0	-0.6		
MOF				S	Sn	09 08 57.7	-1.1		
MOF	Molkenrain	6.97	323	P	Pn	09 07 39.0	-0.6		
MOF				S	Sn	09 08 57.7	-1.1		
HINF	Hinteralfeld	7.07	322	*e*Pn	Pn	09 07 40.6	-0.3		
HINF				*e*Sn	Sn	09 08 57.4	-3.8		
	24nm,0.4s								
HINF	Hinteralfeld	7.07	322	*e*Pn	Pn	09 07 40.6	-0.3		
HINF				*e*Sn	Sn	09 08 57.4	-3.8		
	12nm,0.4s								
LASF	Ste Croix	7.13	286	*e*Pn	Pn	09 07 41.8	+0.1		
LASF	Ste Croix	7.13	286	*e*Pn	Pn	09 07 41.8	+0.1		
KFL	Anninata	7.14	125	P	Pn	09 07 44.2	+2.4		
KFL	Anninata	7.14	125	P	Pn	09 07 44.2	+2.4		
VYHS	Vyhne	7.17	31	*e*P	Pn	09 07 42.1	-0.1		
VYHS				*e*		09 09 00.0			
VYHS	Vyhne	7.17	31	*e*PN	Pn	09 07 42.1	-0.1		
VYHS				*e*SN	Sn	09 09 00.0	-3.4		
VYHS	Vyhne	7.17	31	*e*P	Pn	09 07 42.1	-0.1		
VYHS				*e*S	Sn	09 09 00.0	-3.4		
VRAC	Vranov	7.22	17	Pn	Pn	09 07 42.5	-0.5		
VRAC				Sn	Sn	09 09 00.6	-4.2		
VRAC	Vranov	7.22	17	Pn	Pn	09 07 42.5	-0.5		
	0.9nm,0.3s,baz=206,slow=14,SNR=4.1								
VRAC				Sn	Sn	09 09 00.6	-4.2		
	0.8nm,0.3s,baz=259,slow=16,SNR=2.4								
VRAC	Vranov	7.22	17	P	Pn	09 07 42.5	-0.5		
	1.0nm,0.3s								
VRAC				S	Sn	09 09 00.6	-4.2		
	1.0nm,0.3s								
ECH	Echery	7.24	325	*e*P	Pn	09 07 41.5	-1.7		
ECH	Echery	7.24	325	*e*Pn	Pn	09 07 41.5	-1.7		
ECH	Echery	7.24	325	P	Pn	09 07 43.2	0.0		
ECH				S	Sn	09 09 02.4	-2.8		
ECH	Echery	7.24	325	P	Pn	09 07 43.2	0.0		
ECH				S	Sn	09 09 02.4	-2.8		
KKB	Krupnik	7.25	91	P	Pn	09 07 44.9	+1.6		
KKB	Krupnik	7.25	91	P	Pn	09 07 44.9	+1.6		
VTS	Vitosha	7.28	86	P	Pn	09 07 44.6	+0.7		
VTS	Vitosha	7.28	86	*i*P	Pn	09 07 44.6	+0.7		
VTS	Vitosha	7.28	86	*e*Pn	Pn	09 07 44.1	+0.3		
VTS				*e*Sn	Sn	09 08 52.1	-14		
VTS	Vitosha	7.28	86	P	Pn	09 07 44.5	+0.7		
VTS	Vitosha	7.28	86	*e*Pn	Pn	09 07 44.1	+0.3		
VTS	Vitosha	7.28	86	P	Pn	09 07 44.6	+0.7		
CDF	Champ du Feu	7.34	326	*e*Pn	Pn	09 07 43.8	-0.8		
CDF				*e*Sn	Sn	09 09 04.4	-3.5		
	24nm,0.5s								
CDF	Champ du Feu	7.34	326	*e*Pn	Pn	09 07 43.8	-0.8		
CDF				*e*Sn	Sn	09 09 04.4	-3.5		
	12nm,0.5s								
ROTZ	Rotzenmuhle	7.37	354	*e*Pn	Pn	09 07 45.3	+0.4		
ROTZ				*e*Sn	Sn	09 09 03.1	-5.2		
KEST	Kesra	7.40	206	Pn	Pn	09 07 49.1	+3.7		
KEST				Sn	Sn	09 09 11.0	+1.7		
KEST	Kesra	7.40	206	Pn	Pn	09 07 49.1	+3.7		
	1.2nm,0.3s,baz=286,slow=3.5,SNR=22								
KEST				Sn	Sn	09 09 11.0	+1.7		
	0.1nm,0.3s,baz=73,slow=19,SNR=2.4								
KEST	Kesra	7.40	206	Pn	Pn	09 07 49.2	+3.7		
GZR	Gura Zlata	7.41	63	*i*P	Pn	09 07 46.9	+1.4		
GZR	Gura Zlata	7.41	63	*e*Pn	Pn	09 07 45.3	-0.2		
GZR	Gura Zlata	7.41	63	*e*Pn	Pn	09 07 45.3	-0.2		
GZR	Gura Zlata	7.41	63	*i*P	Pn	09 07 46.9	+1.4		
HAU	Haudompre	7.44	321	*e*Pn	Pn	09 07 46.0	0.0		
HAU				*e*Sn	Sn	09 09 05.1	-5.2		
	32nm,0.5s								
HAU	Haudompre	7.44	321	*e*Pn	Pn	09 07 46.0	0.0		
HAU				*e*Sn	Sn	09 09 05.1	-5.2		
	16nm,0.5s								
PRU	Pruhonice	7.59	6	*e*P	Pn	09 07 46.1	-1.8		
PRU				*e*		09 09 09.9			
PRU	Pruhonice	7.59	6	*e*PN	Pn	09 07 46.1	-1.8		
PRU				*e*SN	Sn	09 09 09.9	-3.9		
PRU	Pruhonice	7.59	6	Pn	Pn	09 07 46.1	-1.8		
PRU				Sn	Sn	09 09 09.9	-3.9		
MMB	Musomiste	7.76	93	P	Pn	09 07 51.8	+1.3		
MMB	Musomiste	7.76	93	P	Pn	09 07 51.8	+1.3		
THEF	They Montfort	7.77	321	P	Pn	09 07 49.2	-1.3		
THEF	They Montfort	7.77	321	P	Pn	09 07 49.2	-1.3		
LAKA	Lakka	7.80	120	P	Pn	09 07 53.6	+2.6		
LAKA	Lakka	7.80	120	P	Pn	09 07 53.6	+2.6		
NKC	Novy Kostel	7.81	356	*e*SN	Sn	09 09 14.3	-5.1		
MORC	Moravsky Berou	7.88	20	*e*P	Pn	09 07 49.9	-2.2		
MORC	Moravsky Berou	7.88	20	*e*Pn	Pn	09 07 49.9	-2.2		
MORC	Moravsky Berou	7.88	20⇓	*i*P	Pn	09 07 52.2	+0.1		
MORC	Moravsky Berou	7.88	20⇓	*i*P	Pn	09 07 52.2	+0.1		
NVR	Nevrokopi	7.91	94	P	Pn	09 07 53.9	+1.5		
NVR	Nevrokopi	7.91	94	P	Pn	09 07 53.9	+1.5		
GUNZ	Gunzen	7.95	355	*e*Pn	Pn	09 07 53.1	+0.1		
GUNZ				*e*Sn	Sn	09 09 19.9	-2.9		
DRGR		7.96	54⇓	*i*P	Pn	09 07 55.4	+2.3		
DRGR		7.96	54⇓	*i*P	Pn	09 07 55.4	+2.3		
SMF	Signal de Mont	7.99	305	*e*Pn	Pn	09 07 54.1	+0.6		
SMF				*e*Sn	Sn	09 09 18.6	-5.1		
	9.9nm,0.6s								
SMF	Signal de Mont	7.99	305	*e*Pn	Pn	09 07 54.1	+0.6		
SMF				*e*Sn	Sn	09 09 18.6	-5.1		
	4.9nm,0.6s								
GUR	Goura	8.21	120	P	Pn	09 07 58.9	+2.2		
GUR	Goura	8.21	120	P	Pn	09 07 58.9	+2.2		
SFTF	Sexfontaines	8.22	317	*e*Pn	Pn	09 07 56.8	+0.2		
SFTF	Sexfontaines	8.22	317	*e*Pn	Pn	09 07 56.8	+0.2		
MTLF	Montolieu	8.23	280	*e*Pn	Pn	09 07 56.5	-0.3		
MTLF	Montolieu	8.23	280	*e*Pn	Pn	09 07 56.5	-0.3		
MOX	Moxa	8.29	352	*e*P	Pn	09 07 57.5	-0.1		
MOX				*e*		09 09 25.9			
MOX	Moxa	8.29	352	*e*Pn	Pn	09 07 57.5	-0.1		
MOX				*e*Sn	Sn	09 09 25.9	-5.1		
MOX	Moxa	8.29	352	*e*P	Pn	09 07 57.5	-0.1		
LOR	Lormes	8.29	309	*e*Pn	Pn	09 07 57.8	+0.1		
LO

TORD	**Torodi Ar. Bea**	**30.90**	**203**	P	**P**	**09 12 13.8**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=16,slow=9.3,SNR=13						
TORD	**Torodi Ar. Bea**	**30.90**	**203**	P	**P**	**09 12 13.9**	**-0.2**
ARU	**Arti**	**31.91**	**48** *d*	*i* P	**P**	**09 12 22.4**	**-0.3**
ARU						09 13 23.0	
ARU				S	**S**	**09 17 33.7**	**+0.6**
ARU				SS	**SnSn**	**09 19 18.3**	**-3.0**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ARU	**Arti**	**31.91**	**48**	*i* P	**P**	**09 12 22.4**	**-0.3**
	comp=Z,10.0nm,1.0s						
ARU				S	**S**	**09 17 33.7**	**+0.6**
BRVK	**Borovoye**	**38.74**	**54** *d*	*i* P	**P**	**09 13 22.2**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRVK	**Borovoye**	**38.74**	**54**	*i* P	**P**	**09 13 22.2**	**+0.8**
	comp=Z,4.0nm,1.0s						
KKAR	**Karatay Array**	**41.24**	**69**	*e*P	**P**	**09 13 43.3**	**+0.9**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KKAR	**Karatay Array**	**41.24**	**69**	*e*P	**P**	**09 13 43.2**	**+0.9**
	comp=Z,1.3nm,0.6s						
KKAR	**Karatay Array**	**41.24**	**69**	*e*P	**P**	**09 13 43.2**	**+0.9**
	comp=Z,1.3nm,0.6s						
AAK	**Ala-Archa**	**44.15**	**68**‖	*e*P	**P**	**09 14 06.3**	**+0.1**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
AAK	**Ala-Archa**	**44.15**	**68**	*e*P	**P**	**09 14 06.3**	**+0.1**
	comp=Z,7.0nm,1.7s						
ZALV	**Zalesovo Beam**	**47.04**	**50**	P	**P**	**09 14 28.3**	**-0.3**
ZALV	**Zalesovo Beam**	**47.04**	**50**	P	**P**	**09 14 28.2**	**-0.3**
ZALV	**Zalesovo Beam**	**47.04**	**50**	P	**P**	**09 14 28.2**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=283,slow=8.7,SNR=4.0						
ZALV	**Zalesovo Beam**	**47.04**	**50**	P	**P**	**09 14 28.3**	**-0.3**
MKAR	**Makanchi Array**	**47.82**	**60**	P	**P**	**09 14 34.9**	**0.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**47.82**	**60**	P	**P**	**09 14 34.9**	**0.0**
MKAR	**Makanchi Array**	**47.82**	**60**	P	**P**	**09 14 34.9**	**0.0**
	comp=Z,0.8nm,0.6s,baz=280,slow=7.3,SNR=11						
MKAR	**Makanchi Array**	**47.82**	**60**	P	**P**	**09 14 34.9**	**0.0**
	comp=Z,1.0nm,0.6s						
TIXI	**Tiksi**	**57.53**	**20**‖	*e*P	**P**	**09 15 46.5**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.6s						
TIXI	**Tiksi**	**57.53**	**20**	*e*P	**P**	**09 15 46.5**	**+0.3**
	comp=Z,3.0nm,1.6s						
SONM	**Songino Array**	**61.93**	**50**	P	**P**	**09 16 18.2**	**+1.1**
SONM	**Songino Array**	**61.93**	**50**	P	**P**	**09 16 18.2**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=294,slow=8.0,SNR=5.1						
SONM	**Songino Array**	**61.93**	**50**	P	**P**	**09 16 18.2**	**+1.1**
	comp=Z,1.0nm,0.7s						
ULN	**Ulaanbaatar**	**62.28**	**49**	*e*P	**P**	**09 16 18.0**	**-1.5**
YKA	**Yellowknife Ar**	**67.41**	**337**	P	**P**	**09 16 52.0**	**-0.4**
YKA	**Yellowknife Ar**	**67.41**	**337**	P	**P**	**09 16 52.0**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=40,slow=5.7,SNR=8.6						
YKA	**Yellowknife Ar**	**67.41**	**337**	P	**P**	**09 16 52.0**	**-0.4**
ILAR	**Eielson Array**	**72.00**	**351**	P	**P**	**09 17 22.2**	**+1.5**
ILAR	**Eielson Array**	**72.00**	**351**	P	**P**	**09 17 22.2**	**+1.5**
	comp=Z,0.2nm,0.8s,baz=356,slow=4.8,SNR=4.1						
ILAR	**Eielson Array**	**72.00**	**351**	P	**P**	**09 17 22.2**	**+1.5**
ATAH	**Atahualpa**	**96.06**	**266**	LR	LR	10 00 27.4	
	comp=Z,34nm,20.1s,baz=359,slow=34						

IDC 18 09:09:34.7±2.0, 3°.18S×150°.72E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/18, mbtmp3.5/3, Error ellipse: s-maj=145.6km s-min=32.0km az=127.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.10**	**223**	P		P	P	09 14 43.7	+1.3
	0.8nm,0.3s,baz=49,slow=11,SNR=12								
ASAR	**Alice Springs**	**26.07**	**217**	P		P	P	09 15 09.9	-0.2
	0.3nm,0.4s,baz=49,slow=8.3,SNR=10								
YKA	**Yellowknife Ar**	**94.96**	**28**	P		P	P	09 22 57.6	-1.2
	0.1nm,0.9s,baz=266,slow=4.2,SNR=3.9								

DJA 18 09:35:40.9±0.4, 5°.3S×110°.2E±, h17km±6km, M3.8/4, MLv3.8/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EGSI	**Enggano, Bengk**	**0.67**	**166**	P		P	Pg	09 35 53.3	-0.8
EGSI				S		Sb		09 36 04.1	+1.0
MNAI	**Manna**	**0.90**	**68**	P		Pb		09 35 56.7	-1.4
MNAI				S		Sg		09 36 10.7	+0.4
MBSI	**MBSI**	**0.94**	**9**	P		Pb		09 35 57.0	-1.9
MBSI				S		Sb		09 36 10.9	-0.2
MBSI	**MBSI**	**0.94**	**9**	P		Sn		09 36 13.5	+1.0
	871nm,0.6s								
LWLI	**Liwa**	**1.96**	**99**	P		Sn		09 36 39.7	+1.9
	458nm,0.7s								
KASI	**Kota Agung**	**2.50**	**109**	P		Pn		09 36 21.5	+0.6
KASI				S		Sn		09 36 51.2	+0.1
KRJI	**Kerinci**	**2.67**	**346**	P		Pn		09 36 23.9	+0.6
KRJI				S		Sn		09 36 56.2	+0.7
TNG	**Tangerang**	**4.74**	**108**	P		Pg		09 37 19.0	+7.3
	1μm,0.5s								
TNG	**Tangerang**	**4.74**	**108**	P		Pg		09 37 19.2	+7.5
	26μm3μm,0.5s								

*ISCJB **18** 09:45:24.3±0.7, 53°.59S±0°.08×2°.8E±0°.3, h10km, mb3.8/8, MS3.9/15, Error ellipse: s-maj=22.5km s-min=11.5km az=1.2*

*IDC **18** 09:45:24.4±0.8, 53°.68S×2°.87E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.9/21, mbtmp3.9/9, ML4.1/1, MS3.8/16, Ms1 3.8/16, ms1mx3.7/33, Error ellipse: s-maj=27.5km s-min=20.1km az=87.0*

ISC 18 09:45:25.9±0.8, 53°.6S±0°.1×2°.9E±0°.2, h10km, n24, σ0.86/15, mb3.9/8, MS3.9/15, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**17.80**	**192**	*e*P		**P**	**P**	**09 49 36.0**	**+1.9**
VNA2	**Neumayer--Watz**	**17.95**	**191**	*e*P		**Pn**	**Pn**	**09 49 35.2**	**-0.1**
	baz=14,slow=13								
SNAA	**Sanae**	**18.28**	**186**	*e*P		**P**	**P**	**09 49 39.5**	**0.0**
SNAA	**Sanae**	**18.28**	**186**	Pn		**Pn**	**Pn**	**09 49 38.3**	**-1.0**
	0.6nm,0.3s,baz=10,slow=13,SNR=45								
SNAA				LR		LR	LR	09 54 56.2	
	comp=Z,157nm,22.0s,baz=336,slow=31								
VNA3	**Neumayer Olymp**	**18.53**	**193**	*e*P		**Pn**	**Pn**	**09 49 43.9**	**+1.6**
BOSA	**Boshof**	**29.89**	**42**	LR		LR	LR	10 01 04.0	
	comp=Z,155nm,20.7s,baz=199,slow=31								
PMSA	**Palmer Station**	**34.34**	**224**	LR		LR	LR	10 03 54.7	
	comp=Z,133nm,18.2s,baz=68,slow=32								
TSUM	**Tsumeb**	**36.19**	**24**	P		**P**	**P**	**09 52 29.2**	**+0.5**
	2.4nm,0.8s,baz=172,slow=14,SNR=3.4								
TSUM				LR		LR	LR	10 04 20.2	
	comp=Z,231nm,20.3s,baz=185,slow=31								
QSPA	**South Pole Qui**	**36.61**	**180**	P		**P**	**P**	**09 52 32.0**	**0.0**
	1.6nm,0.8s,baz=232,slow=3.2,SNR=7.9								
QSPA				LR		LR	LR	10 06 41.0	
	comp=Z,473nm,18.6s,baz=232,slow=35								
USHA	**Ushuaia**	**40.05**	**238**	LR		LR	LR	10 05 54.2	
	comp=Z,127nm,18.6s,baz=304,slow=31								
LSZ	**Lusaka**	**43.11**	**37**	LR		LR	LR	10 09 23.9	
	comp=Z,262nm,18.2s,baz=187,slow=33								
VNDA	**Vanda**	**48.46**	**174**	P		**P**	**P**	**09 54 07.7**	**-0.1**
	1.3nm,0.7s,baz=231,slow=4.7,SNR=8.1								
VNDA				LR		LR	LR	10 15 42.0	
	comp=Z,82nm,21.1s,baz=205,slow=38								
OPO	**Ambohidratompo**	**48.80**	**62**	LR		LR	LR	10 13 17.3	
	comp=Z,128nm,18.1s,baz=165,slow=34								
CPUP	**Villa Florida**	**51.70**	**277**	P		**P**	**P**	**09 54 32.8**	**-0.3**
	0.3nm,0.3s,baz=128,slow=1.5,SNR=4.4								
CPUP				LR		LR	LR	10 12 31.4	
	comp=Z,55nm,19.3s,baz=11,slow=32								
CFAA	**Coronel Fontan**	**54.32**	**264**	P		**P**	**P**	**09 54 52.0**	**-0.4**
	0.1nm,0.4s,baz=110,slow=4.8,SNR=4.2								
BDFB	**Brasilia**	**54.76**	**294**	LR		LR	LR	10 12 47.3	
	comp=Z,103nm,20.4s,baz=199,slow=30								
KMBO	**Kilima Mbogo**	**59.52**	**41**	LR		LR	LR	10 19 39.1	
	comp=Z,119nm,19.3s,baz=96,slow=34								
DBIC	**Dimbokro**	**60.43**	**351**	LR		LR	LR	10 14 19.2	
	comp=Z,126nm,20.7s,baz=343,slow=29								
LPAZ	**La Paz**	**65.81**	**275**	P		**P**	**P**	**09 56 11.9**	**-0.2**
	1.4nm,0.7s,baz=233,slow=5.6,SNR=8.4								
LPAZ				LR		LR	LR	10 20 31.6	
	comp=Z,42nm,21.5s,baz=270,slow=32								
TORD	**Torodi Ar. Bea**	**66.52**	**359**	P		**P**	**P**	**09 56 16.4**	**+0.7**
	0.7nm,0.7s,baz=200,slow=5.5,SNR=5.0								
TORD				LR		LR	LR	10 18 55.8	
	comp=Z,101nm,20.0s,baz=165,slow=30								
ASAR	**Alice Springs**	**92.16**	**136**	P		**P**	**P**	**09 58 34.9**	**-0.9**
	0.5nm,0.9s,baz=189,slow=4.7,SNR=3.4								
BRTR	**Keskin Array B**	**96.69**	**23**	LR		LR	LR	10 43 36.0	
	comp=Z,31nm,21.6s,baz=12,slow=36								
MJAR	**Matsushiro Arr**	**144.80**	**101**	PKP		**PKPab**	**PKPab**	**10 05 01.3**	**-0.2**
	1.8nm,0.8s,baz=212,slow=3.4,SNR=7.0								
YKA	**Yellowknife Ar**	**147.06**	**311**	PKPbc		**PKPbc**	**PKPbc**	**10 05 07.2**	**-0.3**
	0.7nm,0.8s,baz=104,slow=2.7,SNR=22								

*RSPR **18** 09:46:57.3, 19°.17N×64°.12W, h25km±18km, MD3.6/8*
*NEIC **18** 09:46:57.3, 19°.17N×64°.12W, h25km, MD3.6(RSPR), After RSPR.*

ISC 18 09:46:56.9±3.4, 19°.1N±0°.1×64°.1W±0°.2, h34km±3km, n38, σ0.75/60, 15C-12D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.82**	**216**	*i* P		**Pn**	**Pn**	**09 47 12.0**	**0.0**
TBVI				*e*S		**Sb**	**Sb**	**09 47 23.1**	**-0.3**
TBVI	**Tortola**	**0.82**	**216**	*i* Pu		**Pn**	**Pn**	**09 47 12.0**	**0.0**
TBVI				*e*S		**Sb**	**Sb**	**09 47 23.1**	**-0.3**
TBVI	**Tortola**	**0.82**	**216**	*i* P		**Pb**	**Pb**	**09 47 12.2**	**-0.5**
TBVI				*e*S		**Sb**	**Sb**	**09 47 23.1**	**-0.3**
STVI	**Saint Thomas**	**1.08**	**227**‖	*e*P		**Pn**	**Pn**	**09 47 15.2**	**-0.5**
STVI	**Saint Thomas**	**1.08**	**227**	*e*S		**Sn**	**Sn**	**09 47 29.1**	**-0.3**
STVI	**Saint Thomas**	**1.08**	**227**‖	*e*P		**Pn**	**Pn**	**09 47 15.2**	**-0.5**
STVI				*e*S		**Sn**	**Sn**	**09 47 29.1**	**-0.3**
STVI	**Saint Thomas**	**1.08**	**227**‖	*e*P		**Pn**	**Pn**	**09 47 15.2**	**-0.5**
STVI				*e*S		**Sn**	**Sn**	**09 47 29.1**	**-0.3**
CDVI	**St. Croix**	**1.46**	**205**	*e*Pn		**Pb**	**Pb**	**09 47 23.6**	**0.0**
CDVI				*e*Sn		**Sb**	**Sb**	**09 47 44.0**	**+2.1**
MTP	**Monte Pirata**	**1.68**	**234**‖	*e*P		**Pn**	**Pn**	**09 47 24.0**	**+0.1**
MTP	**Monte Pirata**	**1.68**	**234**	*e*S		**Sn**	**Sn**	**09 47 44.6**	**+0.3**
MTP	**Monte Pirata**	**1.68**	**234**‖	*e*P		**Pn**	**Pn**	**09 47 24.0**	**+0.1**
MTP				*e*Sn		**Sn**	**Sn**	**09 47 44.2**	**-0.1**
MTP				*e*S		**Sn**	**Sn**	**09 47 44.6**	**+0.3**
MTP	**Monte Pirata**	**1.68**	**234**‖	*e*P		**Pn**	**Pn**	**09 47 24.2**	**+0.3**
MTP				*e*S		**Sn**	**Sn**	**09 47 44.6**	**+0.3**
CBYP	**Canovanas**	**1.84**	**244**‖	*e*P		**Pn**	**Pn**	**09 47 25.8**	**-0.3**
CBYP	**Canovanas**	**1.84**	**244**	*e*S		**Sn**	**Sn**	**09 47 47.3**	**-1.0**
CBYP	**Canovanas**	**1.84**	**244**‖	*e*P		**Pn**	**Pn**	**09 47 25.8**	**-0.3**
CBYP				*e*S		**Sn**	**Sn**	**09 47 47.3**	**-1.0**
CBYP	**Canovanas**	**1.84**	**244**‖	*e*P		**Pn**	**Pn**	**09 47 25.8**	**-0.3**
CBYP				*e*S		**Sn**	**Sn**	**09 47 47.3**	**-1.0**
HUMP	**Col San Antoni**	**1.89**	**241**‖	*e*P		**Pn**	**Pn**	**09 47 26.8**	**-0.1**
HUMP	**Col San Antoni**	**1.89**	**241**	*e*S		**Sn**	**Sn**	**09 47 48.9**	**-0.7**
HUMP	**Col San Antoni**	**1.89**	**241**‖	*e*P		**Pn**	**Pn**	**09 47 26.8**	**-0.1**
HUMP				*e*S		**Sn**	**Sn**	**09 47 48.9**	**-0.7**
HUMP	**Col San Antoni**	**1.89**	**241**‖	*e*P		**Pn**	**Pn**	**09 47 26.8**	**-0.1**
HUMP				*e*S		**Sn**	**Sn**	**09 47 48.9**	**-0.7**
SJG	**San Juan**	**2.16**	**244**‖	*e*P		**Pn**	**Pn**	**09 47 30.0**	**-0.5**
SJG	**San Juan**	**2.16**	**244**‖	*i* P		**Pn**	**Pn**	**09 47 30.2**	**-0.3**
SJG	**San Juan**	**2.16**	**244**‖	*i* P		**Pn**	**Pn**	**09 47 30.2**	**-0.3**
SJG				*e*Sn		**Sn**	**Sn**	**09 47 55.2**	**-0.9**
SJG	**San Juan**	**2.16**	**244**‖	*e*P		**Pn**	**Pn**	**09 47 30.0**	**-0.5**
SJG	**San Juan**	**2.16**	**244**‖	*i* P		**Pn**	**Pn**	**09 47 30.2**	**-0.3**
CELP	**Cerrillos**	**2.54**	**247**‖	*i* P		**Pn**	**Pn**	**09 47 35.6**	**-0.2**
CELP				*e*S		**Sn**	**Sn**	**09 48 05.7**	**+0.1

BRTR	**Keskin Array B**	**74.48**	**313**	P		P	10 19 47.6	-0.4	
	0.2nm,0.3s,baz=160,slow=4.6,SNR=3.3								
TXAR	**Lajitas Array**	**145.60**	**39**	PKPbc		PKPab	10 27 49.4	+0.4	
	1.7nm,0.6s,baz=298,slow=1.0,SNR=26								

*IDC **18** 10:11:54.7±0.7, 19°.21N×64°.29W, h0km, mb3.7/12, mb1 4.0/14, mb1mx3.8/29, mbtmp3.8/14, ML3.3/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/47, Error ellipse: s-maj=20.2km s-min=16.0km az=66.0*

*ISCJB **18** 10:11:56.7±1.2, 19°.34N±0°.04×64°.30W±0°.03, h23km±9km, mb3.7/13, MS3.4/7, Error ellipse: s-maj=6.5km s-min=3.9km az=172.9*

*NEIC **18** 10:11:58.5, 19°.38N×64°.28W, h10km, MD3.7(RSPR), After RSPR.*

*RSPR **18** 10:11:58.5, 19°.38N×64°.28W, h10km×11km, MD3.7/16*

ISC 18 10:11:56.3±1.9, 19°29N±0°.05×64°30W±0°.03, h8km±12km, n98, σ0s92/132, mb3.7/13, MS3.4/7, 42C-9D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**1.12**	**214**	*eP*	**Pg**	**10 12 17.3**	**-0.4**
STVI	**Saint Thomas**	**1.12**	**214**	*eS*	**Sb**	**10 12 32.4**	**-0.3**
STVI	**Saint Thomas**	**1.12**	**214**	*eP*	**Pg**	**10 12 17.3**	**-0.4**
STVI				*eS*	**Sb**	**10 12 32.4**	**-0.3**
STVI	**Saint Thomas**	**1.12**	**214**	*eP*	**Pg**	**10 12 17.3**	**-0.4**
STVI				*eS*	**Sb**	**10 12 32.4**	**-0.3**
CDVI	**St. Croix**	**1.59**	**196**	*eP*	**Pn**	**10 12 25.0**	**+0.3**
CDVI	**St. Croix**	**1.59**	**196**	*eP*	**Pn**	**10 12 25.2**	**+0.4**
CDVI				*eS*	**Sb**	**10 12 46.0**	**-0.2**
CDVI	**St. Croix**	**1.59**	**196**	*eP*	**Pn**	**10 12 25.2**	**+0.4**
CDVI				*eS*	**Sb**	**10 12 46.0**	**-0.2**
CDVI	**St. Croix**	**1.59**	**196**	*eP*	**Pn**	**10 12 25.2**	**+0.4**
CDVI	**St. Croix**	**1.59**	**196**	*eP*	**Pn**	**10 12 25.4**	**+0.6**
CDVI				*eS*	**Sn**	**10 12 45.4**	**-0.2**
CDVI				*eS*	**Sb**	**10 12 46.0**	**-0.2**
MTP	**Monte Pirata**	**1.68**	**225**	*eP*	**Pn**	**10 12 25.8**	**-0.2**
MTP	**Monte Pirata**	**1.68**	**225**	*eS*	**Sn**	**10 12 47.0**	**-0.7**
MTP	**Monte Pirata**	**1.68**	**225**	*eP*	**Pn**	**10 12 25.8**	**-0.2**
MTP				*eS*	**Sn**	**10 12 47.0**	**-0.7**
MTP	**Monte Pirata**	**1.68**	**225**	*eP*	**Pn**	**10 12 25.8**	**-0.2**
MTP				*eS*	**Sn**	**10 12 47.0**	**-0.7**
CBYP	**Canovanas**	**1.79**	**236**	*eP*	**Pn**	**10 12 27.4**	**-0.2**
CBYP	**Canovanas**	**1.79**	**236**	*eS*	**Sn**	**10 12 49.8**	**-0.7**
CBYP	**Canovanas**	**1.79**	**236**	*eP*	**Pn**	**10 12 27.4**	**-0.2**
CBYP				*eS*	**Sn**	**10 12 49.8**	**-0.7**
CBYP	**Canovanas**	**1.79**	**236**	*eP*	**Pn**	**10 12 27.4**	**-0.2**
CBYP				*eS*	**Sn**	**10 12 49.8**	**-0.7**
HUMP	**Col San Antoni**	**1.86**	**232**	*eP*	**Pn**	**10 12 28.6**	**+0.1**
HUMP	**Col San Antoni**	**1.86**	**232**	*eS*	**Sn**	**10 12 52.2**	**0.0**
HUMP	**Col San Antoni**	**1.86**	**232**	*eP*	**Pn**	**10 12 28.6**	**+0.1**
HUMP				*eS*	**Sn**	**10 12 52.2**	**0.0**
HUMP	**Col San Antoni**	**1.86**	**232**	*eP*	**Pn**	**10 12 28.6**	**+0.1**
HUMP				*eS*	**Sn**	**10 12 52.2**	**0.0**
CPD	**Cerro la Pandu**	**1.97**	**231**	*eP*	**Pn**	**10 12 30.3**	**+0.3**
CPD	**Cerro la Pandu**	**1.97**	**231**	*eS*	**Sn**	**10 12 55.3**	**+0.2**
CPD	**Cerro la Pandu**	**1.97**	**231**	*eP*	**Pn**	**10 12 30.3**	**+0.3**
CPD				*eS*	**Sn**	**10 12 55.3**	**+0.2**
CPD	**Cerro la Pandu**	**1.97**	**231**	*eP*	**Pn**	**10 12 30.3**	**+0.3**
CPD				*eS*	**Sn**	**10 12 55.3**	**+0.2**
SJG	**San Juan**	**2.11**	**237**	*eP*	**Pn**	**10 12 31.7**	**-0.3**
SJG	**San Juan**	**2.11**	**237**	*eS*	**Sn**	**10 12 57.4**	**-0.9**
SJG	**San Juan**	**2.11**	**237**	*eP*	**Pn**	**10 12 31.6**	**-0.3**
SJG				*eS*	**Sn**	**10 12 58.4**	**+0.1**
SJG	**San Juan**	**2.11**	**237**	*eP*	**Pn**	**10 12 31.7**	**-0.3**
SJG				Sn	**Sn**	**10 12 55.6**	**-2.7**
SJG				*eS*	**Sn**	**10 12 57.4**	**-0.9**
SJG				*eS*	**Sn**	**10 12 58.4**	**+0.1**
SJG	**San Juan**	**2.11**	**237**	*eP*	**Pn**	**10 12 31.6**	**-0.3**
SJG	**San Juan**	**2.11**	**237**	*eP*	**Pn**	**10 12 31.7**	**-0.3**
SJG				*eS*	**Sn**	**10 12 57.4**	**-0.9**
SJG				*eS*	**Sn**	**10 12 58.4**	**+0.1**
SJG	**San Juan**	**2.11**	**237**	Pn	**Pn**	**10 12 31.6**	**-0.3**
	48nm,0.3s,baz=65,slow=9.4,SNR=83						
SJG				Sn	**Sn**	**10 12 55.6**	**-2.7**
	105nm,0.3s,baz=57,slow=21,SNR=20						
SKI	**Saint Kitts**	**2.44**	**142**	*eP*	**Pn**	**10 12 38.5**	**+1.9**
SKI				*eS*	**Sn**	**10 13 03.9**	**-2.8**
CELP	**Cerrillos**	**2.48**	**241**	*eP*	**Pn**	**10 12 37.2**	**+0.2**
CELP				*eS*	**Sn**	**10 13 07.3**	**-0.1**
CELP	**Cerrillos**	**2.48**	**241**	*eP*	**Pn**	**10 12 37.2**	**+0.2**
CELP				*eS*	**Sn**	**10 13 07.3**	**-0.1**
CELP	**Cerrillos**	**2.48**	**241**	*eP*	**Pn**	**10 12 37.2**	**+0.2**
CELP				*eS*	**Sn**	**10 13 07.3**	**-0.1**
AOPR	**Arecibo Observ**	**2.51**	**248**	*eP*	**Pn**	**10 12 37.6**	**+0.2**
AOPR	**Arecibo Observ**	**2.51**	**248**	*eS*	**Sn**	**10 13 07.2**	**-1.0**
AOPR	**Arecibo Observ**	**2.51**	**248**	*eP*	**Pn**	**10 12 37.6**	**+0.2**
AOPR				*eS*	**Sn**	**10 13 07.2**	**-1.0**
AOPR	**Arecibo Observ**	**2.51**	**248**	*eP*	**Pn**	**10 12 37.6**	**+0.2**
AOPR				*eS*	**Sn**	**10 13 07.2**	**-1.0**
OBIP	**Obispado Ponce**	**2.51**	**241**	*eP*	**Pn**	**10 12 37.8**	**+0.3**
OBIP	**Obispado Ponce**	**2.51**	**241**	*eS*	**Sn**	**10 13 07.9**	**-0.4**
OBIP	**Obispado Ponce**	**2.51**	**241**	*eP*	**Pn**	**10 12 37.8**	**+0.3**
OBIP				*eS*	**Sn**	**10 13 07.9**	**-0.4**
OBIP	**Obispado Ponce**	**2.51**	**241**	*eP*	**Pn**	**10 12 37.8**	**+0.3**
OBIP				*eS*	**Sn**	**10 13 07.9**	**-0.4**
LRS	**Lares**	**2.61**	**248**	*eP*	**Pn**	**10 12 38.4**	**-0.5**
LRS				*eS*	**Sn**	**10 13 09.8**	**-1.0**
LRS	**Lares**	**2.61**	**248**	*eP*	**Pn**	**10 12 38.4**	**-0.5**
LRS				*eS*	**Sn**	**10 13 09.8**	**-1.0**
LRS	**Lares**	**2.61**	**248**	*eP*	**Pn**	**10 12 38.4**	**-0.5**
LRS				*eS*	**Sn**	**10 13 09.8**	**-1.0**
GBPR	**Guanica, Bosqu**	**2.77**	**242**	*eP*	**Pn**	**10 12 41.7**	**+0.7**
GBPR	**Guanica, Bosqu**	**2.77**	**242**	*eP*	**Pn**	**10 12 41.7**	**+0.7**
GBPR	**Guanica, Bosqu**	**2.77**	**242**	*eP*	**Pn**	**10 12 41.7**	**+0.7**
AGPR	**Aguadilla, PR**	**2.78**	**253**	*eP*	**Pn**	**10 12 41.5**	**+0.2**
AGPR	**Aguadilla, PR**	**2.78**	**253**	*eS*	**Sn**	**10 13 14.8**	**-0.2**
AGPR	**Aguadilla, PR**	**2.78**	**253**	*eP*	**Pn**	**10 12 41.5**	**+0.2**
AGPR				*eS*	**Sn**	**10 13 14.8**	**-0.2**
AGPR	**Aguadilla, PR**	**2.78**	**253**	*eP*	**Pn**	**10 12 41.5**	**+0.2**
AGPR				*eS*	**Sn**	**10 13 14.8**	**-0.2**
LSP	**Las Mesas**	**2.86**	**248**	*eP*	**Pn**	**10 12 42.5**	**+0.1**
LSP				*eS*	**Sn**	**10 13 16.8**	**-0.3**
LSP	**Las Mesas**	**2.86**	**248**	*eP*	**Pn**	**10 12 42.5**	**+0.1**
LSP				*eS*	**Sn**	**10 13 16.8**	**-0.3**
LSP	**Las Mesas**	**2.86**	**248**	*eP*	**Pn**	**10 12 42.5**	**+0.1**
LSP				*eS*	**Sn**	**10 13 16.8**	**-0.3**
ANWB	**Willy Bob**	**2.88**	**124**	*ePn*	Pn	10 12 38.7	-3.8
ANWB				*eSn*	**Sn**	**10 13 14.3**	**-3.1**
CRPR	**Cabo Rojo, PR**	**2.95**	**245**	*eP*	**Pn**	**10 12 44.3**	**+0.8**
CRPR	**Cabo Rojo, PR**	**2.95**	**245**	*eS*	**Sn**	**10 13 19.6**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.95**	**245**	*eP*	**Pn**	**10 12 44.3**	**+0.8**
CRPR				*eS*	**Sn**	**10 13 19.6**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.95**	**245**	*eP*	**Pn**	**10 12 44.3**	**+0.8**
CRPR				*eS*	**Sn**	**10 13 19.6**	**+0.4**
SEG	**Port Louis**	**3.91**	**137**	*eP*	**Pn**	**10 12 54.5**	**-2.2**
LZG	**Guadaloupe-1**	**3.95**	**142**	*eP*	**Pn**	**10 12 56.2**	**-1.0**
BCG	**Bois Riant Cap**	**4.08**	**141**	*eP*	**Pn**	**10 12 59.9**	**+0.8**
SCG	**Saint Claude**	**4.09**	**142**	*eP*	**Pn**	**10 13 01.4**	**+2.1**
HMG	**Houelmont**	**4.12**	**143**	*eP*	**Pn**	**10 13 01.3**	**+1.7**
PHG	**Guadaloupe-2**	**4.12**	**142**	*eP*	**Pn**	**10 13 02.5**	**+2.7**
DOG	**Dongo Capester**	**4.12**	**141**	*eP*	**Pn**	**10 13 01.7**	**+2.0**
DEG	**La Desirade**	**4.28**	**133**	*eP*	**Pn**	**10 13 02.5**	**+0.7**
DR12	**Loma Pena Alta**	**4.83**	**265**	*eP*	**Pn**	**10 13 09.1**	**-0.3**
DR12	**Loma Pena Alta**	**4.83**	**265**	*eP*	**Pn**	**10 13 09.1**	**-0.3**
SDDR	**Presa de Saban**	**6.61**	**269**	*ePn*	**Pn**	**10 13 34.8**	**+0.8**
	167nm,0.6s						
SDDR				*eSn*	**Sn**	**10 14 48.7**	**-1.0**
GRTK	**Grand Turk**	**6.78**	**290**	*ePn*	**Pn**	**10 13 34.3**	**-1.9**
GRTK				*eSn*	Sn	10 14 44.3	-9.3
GTBY	**Guantanamo Bay**	**10.21**	**275**	*ePn*	**Pn**	**10 14 22.9**	**-0.3**
ROSC	**El Rosal**	**17.36**	**216**	Pn	**Pn**	**10 15 58.7**	**-0.8**
ROSC	**El Rosal**	**17.36**	**216**	Pn	**Pn**	**10 15 58.7**	**-0.8**
	2.3nm,0.3s,baz=181,slow=7.9,SNR=4.0						
NHSC	**New Hope**	**19.77**	**317**	P	Pn	10 16 34.2	+5.7
	20nm,0.5s						
JTS	**JuntasAbangare**	**21.86**	**249**	P	**P**	**10 16 52.4**	**+2.7**
JTS	**JuntasAbangare**	**21.86**	**249**	P	**P**	**10 16 52.4**	**+2.7**
	4.8nm,0.8s,baz=11,slow=10,SNR=3.0						
JTS				LR	LR	10 23 19.9	
	comp=Z,76nm,21.7s,baz=306,slow=31						
SADO	**Sadowa**	**28.26**	**337**	LR	LR	10 28 04.2	
	comp=Z,82nm,19.0s,baz=94,slow=34						
LPAZ	**La Paz**	**35.55**	**186**	P	P	10 18 51.9	-3.0
	0.7nm,0.4s,baz=102,slow=0.8,SNR=6.7						
TXAR	**Lajitas Array**	**37.09**	**293**	P	**P**	**10 19 07.4**	**-0.1**
	0.8nm,0.8s,baz=112,slow=9.5,SNR=9.0						
BDFB	**Brasilia**	**38.23**	**154**	P	**P**	**10 19 16.7**	**-0.5**
	1.5nm,0.5s,baz=285,slow=14,SNR=3.2						

ANMO	**Albuquerque**	**40.32**	**302**	P		**P**	**10 19 34.7**	**0.0**	
	0.4nm,0.3s,baz=103,slow=7.6,SNR=5.9								
FRB	**Frobisher Bay**	**44.52**	**357**	P		**P**	**10 20 08.4**	**+0.3**	
	1.4nm,0.7s,baz=178,slow=11,SNR=3.3								
PDAR	**Pinedale Array**	**44.62**	**312**	P		**P**	**10 20 10.3**	**+0.7**	
	0.4nm,0.5s,baz=114,slow=7.8,SNR=5.2								
CPUP	**Villa Florida**	**45.85**	**171**	P		**P**	**10 20 19.7**	**+0.6**	
	1.0nm,0.5s,baz=101,slow=3.4,SNR=3.7								
CPUP				LR		LR	10 38 52.9		
	comp=Z,43nm,19.2s,baz=352,slow=35								
NVAR	**Mina Array Bea**	**50.26**	**304**	P		**P**	**10 20 54.7**	**+1.1**	
	0.5nm,0.8s,baz=98,slow=17,SNR=4.3								
CFAA	**Coronel Fontan**	**50.74**	**184**	LR		LR	10 44 31.3		
	comp=Z,8.3nm,19.1s,baz=230,slow=39								
YKA	**Yellowknife Ar**	**55.19**	**334**	P		**P**	**10 21 28.8**	**-0.5**	
	0.3nm,0.6s,baz=106,slow=7.3,SNR=14								
TORD	**Torodi Ar. Bea**	**63.35**	**85**	P		**P**	**10 22 26.3**	**-0.3**	
	0.4nm,0.7s,baz=296,slow=8.9,SNR=2.8								
TORD				LR		LR	10 46 14.5		
	comp=Z,93nm,19.2s,baz=170,slow=32								
INK	**Inuvik**	**64.57**	**337**	LR		LR	10 47 50.2		
	comp=Z,27nm,18.4s,baz=89,slow=33								
NOA	**NORSAR Array B**	**66.31**	**31**	LR		LR	10 46 51.8		
	comp=Z,23nm,18.1s,baz=300,slow=32								
ILAR	**Eielson Array**	**69.58**	**333**	P		**P**	**10 23 05.1**	**-0.6**	
	0.2nm,0.5s,baz=104,slow=4.1,SNR=7.7								
BRTR	**Keskin Array B**	**83.78**	**50**	P		**P**	**10 24 26.9**	**+0.3**	
	1.0nm,0.9s,baz=255,slow=3.7,SNR=4.7								
WRA	**Warramunga Arr**	**162.43**	**265**	PKPab		**PKPab**	**10 32 45.8**	**-1.5**	
	0.4nm,0.8s,baz=80,slow=4.1,SNR=4.8								
ASAR	**Alice Springs**	**162.51**	**252**	PKPab		**PKPab**	**10 32 46.6**	**-1.0**	
	0.7nm,0.9s,baz=96,slow=4.7,SNR=5.0								

*ISCJB **18** 10:24:36.5±0.4, 42°.39N±0°.02×13°.30E±0°.03, h12km±3km, Error ellipse: s-maj=4.1km s-min=3.1km az=167.4*

*ROM **18** 10:24:36.7±0.1, 42°.39N×13°.33E, h10km, Ml2.8/20, Error ellipse: s-maj=1.3km s-min=1.0km az=90.0*

*CSEM **18** 10:24:37.0±0.1, 42°.39N×13°.30E, h5km, ML3.5/4, Error ellipse: s-maj=2.6km s-min=2.0km az=78.0*

ISC 18 10:24:37.5±0.8, 42°39N±0°.02×13°33E±0°.02, h10km±5km, n61, σ0s92/83, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**125**	Pg	**Pg**	**10 24 39.5**	**-0.4**
AQU				Sg	**Sg**	**10 24 41.1**	**-0.5**
AQU	**L'Aquila**	**0.07**	**125**	Pg	**Pg**	**10 24 39.5**	**-0.4**
AQU				Sg	**Sg**	**10 24 41.1**	**-0.5**
CAMP	**Campotosto**	**0.15**	**24**	Pg	**Pg**	**10 24 40.8**	**-0.3**
CAMP				Sg	**Sg**	**10 24 43.5**	**-0.1**
CAMP	**Campotosto**	**0.15**	**24**	Pg	**Pg**	**10 24 40.8**	**-0.3**
CAMP				Sg	**Sg**	**10 24 43.5**	**-0.1**
FIAM	**Fiamignano**	**0.20**	**231**	Pg	**Pg**	**10 24 41.7**	**-0.1**
FIAM				Sg	**Sg**	**10 24 44.6**	**-0.1**
	2µm,0.7s						
FIAM	**Fiamignano**	**0.20**	**231**	Pg	**Pg**	**10 24 41.7**	**-0.1**
FIAM				Sg	**Sg**	**10 24 44.6**	**-0.1**
	2µm,0.7s						
FAGN	**Fagnano**	**0.23**	**124**	Pg	**Pg**	**10 24 42.1**	**-0.2**
FAGN				Sg	**Sg**	**10 24 46.1**	**+0.5**
	9µm,0.4s						
FAGN	**Fagnano**	**0.23**	**124**	Pg	**Pg**	**10 24 42.1**	**-0.2**
FAGN				Sg	**Sg**	**10 24 46.1**	**+0.5**
	9µm,0.4s						
TERO	**Teramo**	**0.31**	**42**	Pg	**Pg**	**10 24 43.1**	**-0.7**
TERO				Sg	**Sg**	**10 24 47.7**	**-0.2**
	1µm,0.3s						
TERO	**Teramo**	**0.31**	**42**	Pg	**Pg**	**10 24 43.1**	**-0.7**
TERO				Sg	**Sg**	**10 24 47.7**	**-0.2**
	1µm,0.3s						
PTQR	**Pietraquaria**	**0.38**	**171**	Pg	**Pg**	**10 24 44.6**	**-0.4**
PTQR				Sg	**Sg**	**10 24 50.4**	**+0.4**
PTQR	**Pietraquaria**	**0.38**	**171**	Pg	**Pg**	**10 24 44.6**	**-0.4**
PTQR				Sg	**Sg**	**10 24 50.4**	**+0.4**
VCEL	**Villa Celiera**	**0.38**	**90**	Pg	**Pg**	**10 24 44.6**	**-0.5**
	2µm,0.4s						
VCEL	**Villa Celiera**	**0.38**	**90**	Pg	**Pg**	**10 24 44.6**	**-0.5**
	2µm,0.4s						
NRCA	**Norcia**	**0.47**	**341**	Pg	**Pg**	**10 24 46.1**	**-0.6**
NRCA				Sg	**Sg**	**10 24 53.2**	**+0.3**
NRCA	**Norcia**	**0.47**	**341**	Pg	**Pg**	**10 24 46.1**	**-0.6**
NRCA				Sg	**Sg**	**10 24 53.2**	**+0.3**
CERT	**Cerreto**	**0.51**	**210**	Pg	**Pg**	**10 24 46.9**	**-0.6**
	1µm,0.5s						
CERT	**Cerreto**	**0.51**	**210**	Pg	**Pg**	**10 24 46.9**	**-0.6**
	1µm,0.5s						
VVLD	**Villa Vallelon**	**0.57**	**157**	Pg	**Pg**	**10 24 47.6**	**-1.0**
	423nm,0.6s						
VVLD	**Villa Vallelon**	**0.57**	**157**	Pg	**Pg**	**10 24 47.6**	**-1.0**
	423nm,0.6s						
MTCE	**Montecelio**	**0.57**	**230**	Pg	**Pg**	**10 24 47.8**	**-0.8**
	183nm,0.4s						
MTCE	**Montecelio**	**0.57**	**230**	Pg	**Pg**	**10 24 47.8**	**-0.8**
	183nm,0.4s						
INTR	**Introdacqua**	**0.58**	**131**	Pg	**Pg**	**10 24 48.1**	**-0.6**
	535nm,0.5s						
INTR	**Introdacqua**	**0.58**	**131**	Pg	**Pg**	**10 24 48.1**	**-0.6**
	535nm,0.5s						
CESX	**Cesi**	**0.59**	**292**	Pg	**Pg**	**10 24 48.1**	**-0.9**
CESX	**Cesi**	**0.59**	**292**	Pg	**Pg**	**10 24 48.1**	**-0.9**
GUAR	**Guarcino**	**0.60**	**181**	Pg	**Pb**	**10 24 49.4**	**-0.7**
	244nm,0.3s						
GUAR	**Guarcino**	**0.60**	**181**	Pg	**Pb**	**10 24 49.4**	**-0.7**
	244nm,0.3s						
TRTR	**Tortoreto Alta**	**0.60**	**46**	Pg	**Pb**	**10 24 49.6**	**-0.5**
	1µm,0.8s						
TRTR	**Tortoreto Alta**	**0.60**	**46**	Pg	**Pb**	**10 24 49.6**	**-0.5**
	1µm,0.8s						
OFFI	**Offida**	**0.60**	**26**	Pg	**Pg**	**10 24 49.4**	**+0.2**
	1µm,0.6s						
OFFI	**Offida**	**0.60**	**26**	Pg	**Pg**	**10 24 49.4**	**+0.2**
	1µm,0.6s						
FDMO	**Fiordimonte**	**0.67**	**345**	Pg	**Pg**	**10 24 49.6**	**-0.8**
FDMO				Sg	**Sg**	**10 24 59.7**	**+0.5**
FDMO	**Fiordimonte**	**0.67**	**345**	Pg	**Pg**	**10 24 49.6**	**-0.8**
FDMO				Sg	**Sg**	**10 24 59.7**	**+0.5**
LPEL	**Lama dei Pelig**	**0.73**	**118**	Pg	**Pg**	**10 24 50.4**	**-1.2**
LPEL				Sg	**Sb**	**10 25 01.7**	**-0.6**
	493nm,0.2s						
LPEL	**Lama dei Pelig**	**0.73**	**118**	Pg	**Pg**	**10 24 50.4**	**-1.2**
LPEL				Sg	**Sb**	**10 25 01.7**	**-0.6**
	493nm,0.2s						
POFI	**Posta Fibreno**	**0.73**	**157**	Pg	**Pg**	**10 24 50.9**	**-0.8**
	152nm,0.5s						
POFI	**Posta Fibreno**	**0.73**	**157**	Pg	**Pg**	**10 24 50.9**	**-0.8**
	152nm,0.5s						
SDI	**San Donato**	**0.77**	**152**	Pg	**Pg**	**10 24 51.5**	**-1.0**
	152nm,0.5s						
SDI	**San Donato**	**0.77**	**152**	Pg	**Pg**	**10 24 51.5**	**-1.0**
	152nm,0.5s						
GUMA	**Gualdo di Mace**	**0.81**	**34**	Pg	**Pg**	**10 24 49.9**	**-3.2**
	744nm,0.4s						
GIUL	**Giuliano Di Ro**	**0.84**	**184**	Pg	**Pg**	**10 24 52.4**	**-1.3**
	142nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.84**	**184**	Pg	**Pg**	**10 24 52.4**	**-1.3**
	142nm,0.6s						
SNTG	**Esanatoglia**	**0.91**	**342**	Pg	**Pg**	**10 24 53.8**	**-1.2**
SNTG	**Esanatoglia**	**0.91**	**342**	Pg	**Pg**	**10 24 53.8**	**-1.2**
CING	**Cingoli**	**0.99**	**354**	Pg	**Pg**	**10 24 55.1**	**-1.4**
CING	**Cingoli**	**0.99**	**354**	Pg	**Pg**	**10 24 55.1**	**-1.4**
MIDA	**Miranda**	**1.02**	**137**	Pg	**Pg**	**10 24 55.3**	**-1.9**
	101nm,0.5s						
MIDA	**Miranda**	**1.02**	**137**	Pg	**Pg**	**10 24 55.3**	**-1.9**
	101nm,0.5s						
MGAB	**Montegabbione**	**1.03**	**300**	Pg	**Pg**	**10 24 56.6**	**-0.8**
	184nm,0.5s						
MGAB	**Montegabbione**	**1.03**	**300**	Pg	**Pg**	**10 24 56.6**	**-0.8**
	184nm,0.5s						
TOLF	**Tolfa**	**1.04**	**252**	Pg	**Pg**	**10 24 56.5**	**-1.0**
	137nm,0.6s						
TOLF	**Tolfa**	**1.04**	**252**	Pg	**Pg**	**10 24 56.5**	**-1.0**
	137nm,0.6s						
MURB	**Monte Urbino**	**1.05**	**326**	Pg	**Pg**	**10 24 56.9**	**-0.8**
	394nm,0.3s						
MURB	**Monte Urbino**	**1.05**	**326**	Pg	**Pg**	**10 24 56.9**	**-0.8**
	394nm,0.3s						
AOI	**Ancona**	**1.17**	**10**	Pg	**Pb**	**10 24 59.0**	**-0.9**
	241nm,1.2s						
AOI	**Ancona**	**1.17**	**10**	Pg	**Pb**	**10 24 59.0**	**-0.9**
	241nm,1.2s						
NVLJ	**Novalja**	**2.44**	**27**	*ePn*	**Pn**	**10 25 18.8**	**+1.4**
NVLJ				Sn	**Sn**	**10 25 47.8**	**+0.5**
NVLJ	**Novalja**	**2.44**	**27**	*ePn*	**Pn**	**10 25 18.7**	**+1.4**
NVLJ				Sn	**Sn**	**10 25 47.7**	**+0.5**

STON	**Ston**	**3.26**	**80**	*ePn*		**Pn**	**10 25 30.6**	**+1.9**	
STON				Sn		**Sn**	**10 26 08.2**	**+0.7**	
STON	**Ston**	**3.26**	**80**	*ePn*		**Pn**	**10 25 30.5**	**+1.9**	
STON				Sn		**Sn**	**10 26 08.1**	**+0.7**	

*NSSC **18** 10:37:35.8±0.6, 33°.71N×36°.64E, h1km±6km, MD0.9, ML1.9*

*CSEM **18** 10:37:37.9±0.5, 33°.62N×36°.67E, h2km, ML1.9, Error ellipse: s-maj=12.4km s-min=6.0km az=47.0*

*GRAL **18** 10:37:40.4±0.3, 33°.70N×36°.66E, h27km±32km, MD3.2*

ISC 18 10:37:37.2±1.4, 33°66N±0°.05×36°62E±0°.04, h10km±10km, n13, σ0s50/22, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QASN	**Qassioun**	**0.32**	**247**	*eP*	**Pg**	**10 37 43.2**	**-0.4**
QASN				*eS*	**Sg**	**10 37 48.4**	**+0.5**
QASN				AML	AML	10 37 53.4	
	comp=Z,299nm,0.3s						
QASN	**Qassioun**	**0.32**	**247**	*eP*	**Pg**	**10 37 43.2**	**-0.4**
	SNR=93						
QASN				*eS*	**Sg**	**10 37 48.4**	**+0.5**
	comp=Z,299nm,0.3s,SNR=59						
RCY	**Rachaya**	**0.68**	**256**	*eP*	**Pn**	**10 37 53.3**	**+0.2**
RCY				*eS*	**Sn**	**10 38 03.0**	**-0.8**
HWQ	**Hawqa**	**0.84**	**318**	*eP*	**Pn**	**10 37 55.2**	**-0.1**
HWQ				*eS*	**Sb**	**10 38 06.0**	**+0.7**
HWQ	**Hawqa**	**0.84**	**318**	*eP*	**Pn**	**10 37 55.2**	**-0.1**
HWQ				*eS*	**Sb**	**10 38 06.0**	**+0.7**
BHL	**Bhannes**	**0.84**	**287**	*eP*	**Pn**	**10 37 55.6**	**+0.3**
BHL	**Bhannes**	**0.84**	**287**	*eP*	**Pn**	**10 37 55.6**	**+0.3**
ZALF	**Zalf**	**0.95**	**141**	*eP*	**Pg**	**10 37 55.2**	**-0.2**
ZALF				*eS*	**Sg**	**10 38 08.0**	**+0.3**
ZALF				AML	AML	10 38 11.5	
	comp=N,40nm,0.5s						
ZALF				AML	AML	10 38 12.8	
	comp=E,49nm,0.4s						
ZALF				AML	AML	10 38 23.0	
	comp=Z,22nm,0.4s						
ZALF	**Zalf**	**0.95**	**141**	*eP*	**Pg**	**10 37 55.2**	**-0.2**
	SNR=67						
ZALF				*eS*	**Sg**	**10 38 08.0**	**+0.3**
	comp=Z,22nm,0.4s,SNR=59						
SALA	**Sala**	**0.95**	**174**	*eP*	**Pg**	**10 37 55.1**	**-0.4**
SALA				*eS*	**Sb**	**10 38 09.4**	**+0.7**
SALA				AML	AML	10 38 14.9	
	comp=N,86nm,0.4s						
SALA				AML	AML	10 38 15.4	
	comp=E,7.6nm,0.3s						
SALA	**Sala**	**0.95**	**174**	*eP*	**Pg**	**10 37 55.1**	**-0.4**
	SNR=67						
SALA				*eS*	**Sb**	**10 38 09.4**	**+0.7**
	comp=E,7.6nm,0.3s,SNR=59						
TCHB	**Talchebab**	**1.13**	**209**	*eP*	**Pb**	**10 37 58.6**	**-0.3**
TC

DRWC	**Darouich**	**2.21**	**359**	*e*P	**Pn**	**11 01 10.9**	**+1.4**
	SNR=45						
DRWC				*e*S	**Sb**	**11 01 39.4**	**-0.8**
	SNR=40						

IDC 18 11:04:53.7±1.5, 6°28.S×153°26.E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/19, mbtmp3.6/6, MS2.8/1, Ms1 2.8/1, ms1mx2.3/33, Error ellipse: s-maj=60.1km s-min=22.8km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.80**	**242**	Pn	Pn	11 06 44.3	+10
	1.4nm,0.3s,baz=37,slow=14,SNR=5.0						
HNR	**Honiara**	**7.33**	**116**	LR	LR	11 08 34.7	
	comp=Z,63nm,19.1s,baz=144,slow=30						
WRA	**Warramunga Arr**	**22.86**	**232**	P	P	11 10 00.1	+1.2
	0.8nm,0.5s,baz=60,slow=10,SNR=19						
ASAR	**Alice Springs**	**25.41**	**225**	P	P	11 10 23.2	0.0
	0.4nm,0.6s,baz=56,slow=9.1,SNR=8.7						
STKA	**Stephens Creek**	**27.71**	**202**	P	P	11 10 43.3	-0.6
	1.1nm,0.9s,baz=12,slow=14,SNR=2.3						
FITZ	**Fitzroy Crossi**	**29.39**	**244**	P	P	11 10 58.9	-0.1
	0.8nm,0.6s,baz=67,slow=8.0,SNR=4.4						
MKAR	**Makanchi Array**	**81.73**	**319**	P	P	11 17 13.7	-0.7
	1.0nm,0.9s,baz=104,slow=3.9,SNR=6.2						
ILAR	**Eielson Array**	**83.35**	**22**	P	P	11 17 23.2	+0.8
	0.3nm,0.9s,baz=225,slow=6.2,SNR=3.8						
TORD	**Torodi Ar. Bea**	**151.17**	**286**	PKPbc	PKPbc	11 24 49.2	-1.0
	0.4nm,0.7s,baz=70,slow=2.7,SNR=2.8						
TORD				PKPab	PKPab	11 24 57.8	-0.1
	0.4nm,0.7s,baz=63,slow=3.4,SNR=2.6						

NIED ***18*** *11:07:00,27°.10N×130°.00E, h8km, Mw3.8 Best double couple: M₀5.85000×10¹⁴ NP1:φ₀250.00000°, δ67.00000°, λ-68.00000°. NP2:φ₀24.00000°, δ32.00000°, λ-131.00000°.*

IDC ***18*** *11:07:19.9±1.0, 27°.15N×129°.76E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.8/25, mbtmp3.7/9, ML3.8/1, Error ellipse: s-maj=41.5km s-min=18.8km az=72.0*

ISCJB ***18*** *11:07:22.3±0.6, 27°.14N±0°.03×130°.03E±0°.04, h33km±7km, mb3.6/8, Error ellipse: s-maj=6.1km s-min=4.5km az=29.4*

JMA ***18*** *11:07:22.2, 27°.12N×130°.05E, h54km, M4.0*

ISC 18 11:07:21.5±3.3, 27°.14N±0°.04×130°.03E±0°.04, h17km±21km, n23, σ1§19/35, mb3.7/8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**1.16**	**304**	P	**Pb**	**11 07 42.7**	**-0.4**
JTK				S	**Sb**	**11 07 58.1**	**+0.3**
JZK	**Kikaishima**	**1.18**	**358**	P	**Pb**	**11 07 42.7**	**-0.7**
JZK				S	**Sb**	**11 07 58.0**	**-0.4**
JAM	**Amami Oshima**	**1.32**	**344**	P	**Pn**	**11 07 45.4**	**+0.1**
JAM				S	**Sb**	**11 08 01.5**	**-1.2**
JAMN	**Amaminishikomi**	**1.34**	**326**	P	**Pn**	**11 07 45.2**	**-0.3**
JAMN				S	**Sb**	**11 08 02.0**	**-1.1**
JOW	**Kunigami**	**1.59**	**259**	P	**Pn**	**11 07 48.9**	**-0.1**
JOW				S	**Sn**	**11 08 07.9**	**-1.3**
JMZ	**Minamidaito 2**	**1.69**	**141**	P	**Pn**	**11 07 49.6**	**-0.7**
JMZ				S	**Sn**	**11 08 10.3**	**-1.3**
JIH	**Iheya**	**1.84**	**267**	P	**Pn**	**11 07 52.3**	**-0.1**
JIH				S	**Sn**	**11 08 15.1**	**-0.2**
JJT2	**Tamagusuku 2**	**2.27**	**245**	P	**Pn**	**11 07 58.2**	**-0.1**
JJT2				S	**Sn**	**11 08 25.2**	**-0.7**
JAGN	**Aguni-jima**	**2.55**	**258**	P	**Pn**	**11 08 01.9**	**-0.2**
JAGN				S	**Sn**	**11 08 30.9**	**-1.9**
JNN	**Nakanoshima**	**2.70**	**357**	P	**Pn**	**11 08 04.5**	**+0.3**
JNN				S	**Sn**	**11 08 36.1**	**-0.4**
JKE	**Kume jima 2**	**3.01**	**255**	P	**Pn**	**11 08 07.9**	**-0.6**
JKE				S	**Sn**	**11 08 42.5**	**-1.7**
JKC	**Kuchinoerabu**	**3.32**	**2**	P	**Pn**	**11 08 12.9**	**+0.2**
JKC				S	**Sn**	**11 08 49.5**	**-2.2**
JTN	**Tanegashima 3**	**3.60**	**13**	P	**Pn**	**11 08 16.9**	**+0.2**
JTN				S	**Sn**	**11 08 57.7**	**-1.2**
JNU	**Nakatsue**	**6.01**	**7**	Pn	**Pn**	**11 08 51.4**	**+1.6**
	2.3nm,0.3s,baz=186,slow=15,SNR=33						
JNU				Sn	**Sn**	**11 09 55.5**	**-2.7**
	0.8nm,0.3s,baz=221,slow=23,SNR=1.4						
KSRS	**Korea Array**	**10.44**	**351**	Pn	**Pn**	**11 09 53.1**	**+2.7**
	0.1nm,0.3s,baz=173,slow=13,SNR=4.6						
MKAR	**Makanchi Array**	**42.15**	**311**	P	P	11 15 11.2	-1.9
	0.1nm,0.4s,baz=95,slow=9.0,SNR=2.6						
ZALV	**Zalesovo Beam**	**42.52**	**322**	P	**P**	**11 15 14.9**	**-1.1**
	0.3nm,0.3s,baz=128,slow=9.3,SNR=2.7						
KURBB	**Kurchatov Arra**	**45.32**	**315**	P	**P**	**11 15 38.1**	**-0.4**
	0.3nm,0.4s,baz=102,slow=8.8,SNR=4.9						
WRA	**Warramunga Arr**	**46.98**	**174**	P	**P**	**11 15 52.0**	**+0.1**
	0.8nm,0.6s,baz=352,slow=8.3,SNR=3.5						
ASAR	**Alice Springs**	**50.64**	**175**	P	P	11 16 22.0	+2.0
	0.7nm,0.5s,baz=5.7,slow=14,SNR=8.9						
KBZ	**Khabaz**	**69.83**	**310**	P	**P**	**11 18 32.8**	**+1.6**
	1.2nm,0.5s,baz=66,slow=2.6,SNR=5.2						
FINES	**FINESS Array B**	**72.86**	**331**	P	**P**	**11 18 49.9**	**+0.6**
	4.1nm,0.9s,baz=56,slow=7.4,SNR=5.3						
YKA	**Yellowknife Ar**	**77.02**	**26**	P	**P**	**11 19 14.4**	**+1.2**
	0.2nm,0.7s,baz=300,slow=5.4,SNR=5.2						

IDC ***18*** *11:09:15.9±0.8, 6°.55S×154°.35E, h0km, mb3.9/13, mb1 4.1/16, mb1mx4.0/23, mbtmp3.9/16, ML3.7/3, MS3.4/3, Ms1 3.4/3, ms1mx2.7/34, Error ellipse: s-maj=24.4km s-min=16.2km az=124.0*

NEIC ***18*** *11:09:17.4±0.5, 6°.54S×154°.35E, h10km, mb4.6/2, Error ellipse: s-maj=12.5km s-min=9.2km az=133.0*

ISCJB ***18*** *11:09:20.3±0.5, 6°.66S±0°.08×154°.38E±0°.07, h48km, mb3.9/15, MS3.3/3, Error ellipse: s-maj=12.5km s-min=8.2km az=143.0*

ISC 18 11:09:22.4±0.6, 6°.68S±0°.10×154°.39E±0°.08, h48km, n36, σ0§99/40, mb3.9/15, MS3.3/3, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.15**	**117**	Pn	**Pn**	**11 10 50.1**	**-0.6**
HNR	**Honiara**	**6.15**	**117**	Pn	**Pn**	**11 10 50.1**	**-0.6**
	4.3nm,0.3s,baz=208,slow=15,SNR=2.8						
PMG	**Port Moresby**	**7.65**	**249**	Pn	**Pn**	**11 11 10.8**	**-0.5**
PMG				Sn	**Sn**	**11 12 37.0**	**+0.2**
PMG				*e*Sn	Sn	11 12 40.5	+3.7
PMG	**Port Moresby**	**7.65**	**249**	Pn	**Pn**	**11 11 10.8**	**-0.5**
	1.9nm,0.3s,baz=75,slow=11,SNR=10						
PMG				Sn	**Sn**	**11 12 37.0**	**+0.2**
	baz=38,slow=19,SNR=3.6						
CTA	**Charters Tower**	**15.49**	**210**	Pn	**Pn**	**11 12 57.8**	**0.0**
CTA	**Charters Tower**	**15.49**	**210**	Pn	**Pn**	**11 12 57.8**	**0.0**
	0.4nm,0.3s,baz=44,slow=12,SNR=2.3						
WRAB	**Tennant Creek**	**23.49**	**234**	*e*P	**P**	**11 14 27.5**	**-0.7**
	38nm,1.6s						
WRA	**Warramunga Arr**	**23.51**	**234**	P	**P**	**11 14 27.6**	**-0.7**
WRA	**Warramunga Arr**	**23.51**	**234**	P	**P**	**11 14 27.6**	**-0.7**
	4.7nm,0.9s,baz=59,slow=10,SNR=25						
ASAR	**Alice Springs**	**25.94**	**227**	P	**P**	**11 14 50.6**	**+0.2**
ASAR	**Alice Springs**	**25.94**	**227**	P	**P**	**11 14 50.6**	**+0.2**
	1.5nm,0.9s,baz=53,slow=9.2,SNR=11						
ASAR				LR	LR	11 25 10.6	
	comp=Z,99nm,20.6s,baz=133,slow=37						
STKA	**Stephens Creek**	**27.77**	**204**	P	**P**	**11 15 07.2**	**+0.5**
STKA	**Stephens Creek**	**27.77**	**204**	P	**P**	**11 15 07.2**	**+0.5**
	1.2nm,0.7s,baz=32,slow=15,SNR=2.5						
STKA				LR	LR	11 26 36.2	
	comp=Z,68nm,20.3s,baz=25,slow=37						
FITZ	**Fitzroy Crossi**	**30.23**	**245**	P	**P**	**11 15 27.7**	**-1.1**
FITZ	**Fitzroy Crossi**	**30.23**	**245**	P	**P**	**11 15 27.7**	**-1.1**
	4.1nm,0.8s,baz=81,slow=7.2,SNR=11						
FITZ				LR	LR	11 27 15.3	
	comp=Z,64nm,19.0s,baz=253,slow=36						
KSRS	**Korea Array**	**50.38**	**333**	P	**P**	**11 18 14.2**	**-0.6**
	0.6nm,0.7s,baz=156,slow=9.3,SNR=3.5						
KSAR	**Wonju Array Be**	**50.39**	**333**	P	**P**	**11 18 14.2**	**-0.7**
CMAR	**Chiang Mai Arr**	**60.10**	**296**	P	**P**	**11 19 26.2**	**+0.9**
CMAR	**Chiang Mai Arr**	**60.10**	**296**	P	**P**	**11 19 26.2**	**+0.9**
	0.4nm,0.3s,baz=95,slow=6.4,SNR=3.4						
SONM	**Songino Array**	**68.74**	**328**	P	**P**	**11 20 21.4**	**0.0**
SONM	**Songino Array**	**68.74**	**328**	P	**P**	**11 20 21.4**	**0.0**
	0.6nm,0.8s,baz=128,slow=6.3,SNR=2.8						
MCK	**McKinley**	**81.99**	**22**	*e*P	**P**	**11 21 36.4**	**-0.5**
	4.9nm,1.0s						
MKAR	**Makanchi Array**	**82.77**	**319**	P	**P**	**11 21 41.1**	**-0.3**
MKAR	**Makanchi Array**	**82.77**	**319**	P	**P**	**11 21 41.1**	**-0.3**
	1.6nm,0.8s,baz=103,slow=5.2,SNR=11						
ILAR	**Eielson Array**	**83.30**	**22**	P	**P**	**11 21 41.8**	**-1.9**
	0.1nm,0.6s,baz=238,slow=5.9,SNR=5.4						
ZALV	**Zalesovo Beam**	**83.58**	**326**	P	**P**	**11 21 44.2**	**-1.1**
ZALV	**Zalesovo Beam**	**83.58**	**326**	P	**P**	**11 21 44.2**	**-1.1**
	0.8nm,0.6s,baz=128,slow=5.3,SNR=6.8						
KURK	**Kurchatov**	**86.21**	**322**	P	**P**	**11 21 57.9**	**-0.8**
KURBB	**Kurchatov Arra**	**86.24**	**322**	P	**P**	**11 21 57.9**	**-0.9**
	0.2nm,0.3s,baz=107,slow=3.9,SNR=3.4						
NVAR	**Mina Array Bea**	**92.00**	**52**	P	**P**	**11 22 28.7**	**+2.1**
NVAR	**Mina Array Bea**	**92.00**	**52**	P	**P**	**11 22 28.7**	**+2.1**
	1.2nm,1.1s,baz=262,slow=6.3,SNR=4.9						
YKA	**Yellowknife Ar**	**96.34**	**28**	P	**P**	**11 22 45.6**	**-0.1**
YKA	**Yellowknife Ar**	**96.34**	**28**	P	**P**	**11 22 45.6**	**-0.1**
	0.2nm,1.0s,baz=275,slow=4.6,SNR=3.8						
TORD	**Torodi Ar. Bea**	**152.36**	**286**	PKPbc	**PKPbc**	**11 29 15.1**	**+0.9**
TORD				PKPab	**PKPab**	**11 29 26.1**	**+1.7**
TORD	**Torodi Ar. Bea**	**152.36**	**286**	PKPbc	**PKPbc**	**11 29 15.1**	**+0.9**
	1.0nm,0.7s,baz=64,slow=1.8,SNR=6.3						
TORD				PKPab	**PKPab**	**11 29 26.1**	**+1.7**
	1.9nm,0.8s,baz=80,slow=4.0,SNR=8.4						

IDC 18 11:26:16.1±1.6, 6°.66S×154°.70E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.7/20, mbtmp3.7/9, ML2.9/1, MS3.4/1, Ms1 3.3/1, ms1mx2.5/33, Error ellipse: s-maj=59.0km s-min=20.4km az=129.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.95**	**249**	Pn	Pn	11 28 14.4	+1.3
	1.0nm,0.3s,baz=119,slow=5.8,SNR=3.5						
PMG				Sn	Sn	11 29 39.1	-4.7
	0.3nm,0.3s,baz=24,slow=19,SNR=2.3						
WRA	**Warramunga Arr**	**23.77**	**234**	P	P	11 31 29.5	-1.1
	0.9nm,0.6s,baz=59,slow=10.0,SNR=16						
ASAR	**Alice Springs**	**26.18**	**228**	P	P	11 31 53.3	+0.7
	0.3nm,0.5s,baz=57,slow=9.2,SNR=12						
STKA	**Stephens Creek**	**27.91**	**204**	LR	LR	11 43 34.6	
	comp=Z,86nm,20.5s,baz=204,slow=37						
FITZ	**Fitzroy Crossi**	**30.52**	**245**	P	P	11 32 31.2	-0.2
	0.9nm,0.6s,baz=72,slow=8.1,SNR=5.6						
SONM	**Songino Array**	**68.90**	**327**	P	P	11 37 23.4	+0.3
	0.3nm,0.4s,baz=123,slow=5.1,SNR=3.5						
MKAR	**Makanchi Array**	**82.96**	**319**	P	P	11 38 43.7	+0.5
	0.8nm,0.8s,baz=104,slow=5.8,SNR=7.9						
ILAR	**Eielson Array**	**83.17**	**22**	P	P	11 38 44.3	+0.4
	0.1nm,0.5s,baz=259,slow=4.9,SNR=3.4						
ZALV	**Zalesovo Beam**	**83.74**	**326**	P	P	11 38 45.8	-1.3
	0.2nm,0.2s,baz=114,slow=7.1,SNR=5.5						
YKA	**Yellowknife Ar**	**96.18**	**28**	P	P	11 39 45.4	-0.4
	0.1nm,0.9s,baz=267,slow=3.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**152.66**	**286**	PKPbc	PKPbc	11 46 16.1	+0.1
	0.7nm,0.9s,baz=105,slow=2.8,SNR=4.0						

UPP ***18*** *11:54:20.8, 59°.83N×22°.22E, h0km, ML2.0, Suspected Mining explosion.*

ISCJB ***18*** *11:54:20.9±0.4, 59°.68N±0°.03×22°.16E±0°.05, h0km, Error ellipse: s-maj=4.9km s-min=3.7km az=20.8*

IDC ***18*** *11:54:21.9±1.9, 59°.54N×22°.35E, h0km, mb1 3.0/4, mb1mx2.8/29, mbtmp2.9/4, ML2.3/3, Error ellipse: s-maj=24.2km s-min=7.8km az=162.0*

CSEM ***18*** *11:54:21.0±0.2, 59°.74N×22°.31E, h2km, ML2.0, Error ellipse: s-maj=5.3km s-min=4.0km az=1.0, Mining explosion.*

BER ***18*** *11:54:22.8±4.6, 59°.75N×22°.23E, h0km, ML2.2(NAO), Suspected explosion*

HEL ***18*** *11:54:22.1±0.2, 59°.63N×22°.08E, h0km, ML2.2, ML2.0(UPP), Explosion*

NAO ***18*** *11:54:22.5±1.6, 59°.77N×22°.27E, ML2.2*

ISC 18 11:54:21.1±0.7, 59°.69N±0°.03×22°.22E±0°.02, h0km, n45, σ1§28/71, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**1.21**	**63**	*e*P	**Pg**	**11 54 45.0**	**+0.7**
MEF				*e*S	**Sg**	**11 55 00.8**	**+0.7**
MEF				*e*SB	**Sn**	**11 55 03.4**	**+1.0**
MEF	**Metsahovi**	**1.21**	**63**	*e*P	**Pg**	**11 54 42.8**	**-1.5**
	SNR=68						
MEF				S	**Sg**	**11 55 00.7**	**+0.7**
MEF				Sb	**Sn**	**11 55 03.4**	**+1.0**
AAL	**Aland**	**1.22**	**294**	*e*P	**Pg**	**11 54 44.4**	**-0.1**
AAL				*e*S	**Sg**	**11 55 00.9**	**+0.5**
AAL				*e*SN	**Sn**	**11 55 03.3**	**+0.7**
AAL	**Aland**	**1.22**	**294**	P	**Pg**	**11 54 44.4**	**-0.1**
AAL				S	**Sg**	**11 55 00.8**	**+0.5**
AAL				Sn	**Sn**	**11 55 03.3**	**+0.7**
MTSE	**Matsula**	**1.28**	**139**	*e*P	**Pg**	**11 54 45.0**	**-0.5**
MTSE				*e*S	**Sg**	**11 55 01.7**	**-0.4**
MTSE	**Matsula**	**1.28**	**139**	P	**Pg**	**11 54 45.0**	**-0.5**
MTSE				S	**Sg**	**11 55 01.7**	**-0.4**
RAF	**Rauma**	**1.35**	**351**	*e*P	**Pg**	**11 54 46.9**	**-0.1**
RAF				*e*S	**Sb**	**11 55 05.9**	**+0.8**
RAF	**Rauma**	**1.35**	**351**	P	**Pg**	**11 54 46.9**	**-0.1**
RAF				S	**Sb**	**11 55 05.9**	**+0.8**
GRAU	**Graesoe**	**1.96**	**291**	*e*P	**Pn**	**11 54 54.7**	**-0.8**
GRAU				*e*S	**Sb**	**11 55 23.2**	**+0.7**
GRAU	**Graesoe**	**1.96**	**291**	P	**Pn**	**11 54 54.7**	**-0.8**
GRAU				S	**Sb**	**11 55 23.1**	**+0.7**
PVF	**Pernaja**	**2.01**	**63**	*e*P	**Pb**	**11 54 59.0**	**+0.4**
PVF				MSG	**Sg**	**11 55 30.2**	**+4.6**
	comp=Z,30nm,0.1s						
PVF	**Pernaja**	**2.01**	**63**	P	**Pb**	**11 54 58.9**	**+0.4**
SLIT	**Slitere, Latvi**	**2.07**	**179**	*e*P	**Pn**	**11 54 57.8**	**+0.8**
	SNR=50						
SLIT				*e*S	**Sb**	**11 55 25.5**	**-0.2**
	comp=Z,200nm,0.9s,SNR=50						
FLYU	**Flymyra**	**2.23**	**283**	*e*P	**Pn**	**11 54 58.9**	**-0.4**
FLYU	**Flymyra**	**2.23**	**283**	P	**Pn**	**11 54 58.8**	**-0.4**
NYNU	**Nynaeshamn**	**2.27**	**254**	*e*P	**Pn**	**11 54 59.9**	**+0.2**
NYNU	**Nynaeshamn**	**2.27**	**254**	P	**Pn**	**11 54 59.9**	**+0.2**
BACU	**Backbrunna**	**2.59**	**276**	*e*P	**Pn**	**11 55 04.8**	**+0.6**
BACU	**Backbrunna**	**2.59**	**276**	P	**Pn**	**11 55 04.8**	**+0.6**
FIA0	**FINESS Array S**	**2.59**	**46**	Pn	**Pn**	**11 55 05.0**	**+0.8**
	baz=227,slow=14						
FIA0				Pg	**Pb**	**11 55 07.5**	**-0.8**
	baz=225,slow=14						
FIA0				Lg	Lg	11 55 41.2	
	baz=223,slow=28						
FIA0	**FINESS Array S**	**2.59**	**46**	Pn	**Pn**	**11 55 05.0**	**+0.8**
	baz=227,slow=14						
FIA0				Pg	**Pb**	**11 55 07.5**	**-0.8**
	baz=225,slow=14						
FIA0				Lg	Lg	11 55 41.2	
	baz=223,slow=28						
FIA0	**FINESS Array S**	**2.59**	**46**	*e*PB	**Pb**	**11 55 08.8**	**+0.5**
FIA0	**FINESS Array S**	**2.59**	**46**	Pn	**Pn**	**11 55 05.0**	**+0.8**
	baz=227,slow=13,SNR=50						
FIA0	**FINESS Array S**	**2.59**	**46**	Pg	**Pb**	**11 55 07.5**	**-0.8**
	baz=225,slow=14,SNR=90						
FIA0	**FINESS Array S**	**2.59**	**46**	Pb	**Pb**	**11 55 08.8**	**+0.5**
FIA0				Lg	Lg	11 55 41.2	
	baz=223,slow=25,SNR=50						
FINES	**FINESS Array B**	**2.59**	**46**	Pn	**Pn**	**11 55 05.0**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=228,slow=12,SNR=22						
FINES				Sn	**Sb**	**11 55 41.5**	**+0.8**
	comp=Z,4.2nm,0.3s,baz=230,slow=25,SNR=20						
IGGU	**Iggoen**	**2.71**	**298**	*e*P	**Pn**	**11 55 05.5**	**-0.4**
IGGU	**Iggoen**	**2.71**	**298**	P	**Pn**	**11 55 05.5**	**-0.4**
KEF	**Keuruu**	**2.80**	**26**	MSG	**Sg**	**11 55 50.9**	**-0.1**
	comp=Z,7.3nm,0.1s						
KAF	**Kangasniemi**	**3.14**	**38**	MSG	Sg	11 56 12.4	+10
	comp=Z,5.6nm,0.1s						
VAF	**Ylistaro**	**3.37**	**3**	MSG	**Sg**	**11 56 09.7**	**+0.5**
	comp=Z,3.9nm,0.1s						
SUF	**Sumiainen**	**3.58**	**30**	MSG	**Sg**	**11 56 19.8**	**+3.8**
	comp=Z,4.0nm,0.1s						
HFS	**Hagfors**	**4.32**	**280**	Pn	**Pn**	**11 55 29.4**	**+1.6**
	baz=120,slow=11						
HFS				Pg	**Pb**	**11 55 39.0**	**+1.3**
	baz=88,slow=22						
HFS				Sn	**Sn**	**11 56 18.1**	**-0.7**
	baz=110,slow=28						
HFS				Lg	Lg	11 56 34.6	
	baz=86,slow=28						
HFS	**Hagfors**	**4.32**	**280**	Pn	**Pn**	**11 55 29.4**	**+1.6**
	baz=120,slow=11						
HFS				Pg	**Pb**	**11 55 39.0**	**+1.3**
	baz=88,slow=22						
HFS				Sn	**Sn**	**11 56 18.1**	**-0.7**
	baz=110,slow=28						
HFS				Lg	Lg	11 56 34.6	
	baz=86,slow=28						
HFS	**Hagfors**	**4.32**	**280**	Pn	**Pn**	**11 55 29.7**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=94,slow=15,SNR=14						
HFS				Sn	**Sn**	**11 56 18.1**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=99,slow=18,SNR=5.9						
HFS				Lg	Lg	11 56 38.7	
	comp=Z,2.1nm,0.3s,baz=80,slow=29,SNR=12						
HFS	**Hagfors**	**4.32**	**280**	Pn	**Pn**	**11 55 29.5**	**+1.6**
	baz=120,slow=10,SNR=50						
HFS				Sn	**Sn**	**11 56 18.1**	**-0.7**
	baz=110,slow=23,SNR=50						
HFS				Lg	Lg	11 56 34.6	
	baz=86,slow=27,SNR=50						
KJN	**Kajaani**	**5.12**	**28**	MSG	**Sg**	**11 57 03.5**	**-1.7**
	comp=Z,3.3nm,0.2s						
NB2	**NORSAR Subarra**	**5.63**	**289**	Pn	**Pn**	**11 55 46.3**	**+0.4**
	baz=85,slow=14						
NB2				Lg	Lg	11 57 14.5	
NB2	**NORSAR Subarra**	**5.63**	**289**	Pn	**Pn**	**11 55 46.3**	**+0.4**
	baz=85,slow=14						
NB2				Lg	Lg	11 57 14.5	
NB2	**NORSAR Subarra**	**5.63**	**289**	Pn	**Pn**	**11 55 46.3**	**+0.4**
	baz=85,slow=13,SNR=50						
NB2				Lg	Lg	11 57 14.5	
NOA	**NORSAR Array B**	**5.63**	**289**	Pn	**Pn**	**11 55 46.6**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=138,slow=11,SNR=7.8						
NOA				Sn	**Sn**	**11 56 50.4**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=112,slow=21,SNR=2.7						
NOA				Lg	Lg	11 57 15.7	
	comp=Z,0.7nm,0.3s,baz=135,slow=18,SNR=5.8						
ARA0	**ARCESS Array S**	**9.98**	**7**	Pn	**Pn**	**11 56 43.2**	**-2.3**
	baz=184,slow=14						
ARA0				Sn	Sn	11 58 31.1	-7.0
	baz=193,slow=28						
ARA0	**ARCESS Array S**	**9.98**	**7**	Pn	**Pn**	**11 56 43.2**	**-2.3**
	baz=184,slow=14						
ARA0				Sn	Sn	11 58 31.1	-7.0
	baz=193,slow=28						
ARA0	**ARCESS Array S**	**9.98**	**7**	Pn	**Pn**	**11 56 43.2**	**-2.3**
	baz=184,slow=14,SNR=50						
ARCES	**ARCESS Array B**	**9.98**	**7**	Pn	**Pn**	**11 56 46.1**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=185,slow=12,SNR=16						
ARCES				Sn	**Sn**	**11 58 33.8**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=191,slow=23,SNR=2.8						

IDC ***18*** *11:58:38.9±3.0, 59°.40N×22°.42E, h0km, mb1 3.1/4, mb1mx2.9/29, mbtmp3.0/4, ML2.4/4, Error ellipse: s-maj=45.9km s-min=10.3km az=158.0*

ISCJB ***18*** *11:58:39.5±0.5, 59°.67N±0°.04×22°.14E±0°.05, h0km, Error ellipse: s-maj=5.8km s-min=3.7km az=159.0*

UPP ***18*** *11:58:39.6, 59°.71N×22°.26E, h0km, ML2.1, Suspected Mining explosion.*

CSEM ***18*** *11:58:40.2±0.2, 59°.67N×22°.19E, h2km, ML2.1, Error ellipse: s-maj=6.5km s-min=4.8km az=176.0, Mining explosion.*

HEL ***18*** *11:58:40.6±0.1, 59°.63N×22°.11E, h0km, ML2.1(UPP), Explosion*

ISC 18 11:58:38.7±0.8, 59°.65N±0°.04×22°.22E±0°.03, h0km, n39, σ1§15/47, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**1.24**	**62**	*e*P	**Pb**	**11 59 02.9**	**-0.1**
MEF	**Metsahovi**	**1.24**	**62**	P	**Pb**	**11 59 02.8**	**-0.1**
MEF				*e*S	**Sb**	**11 59 19.5**	**+0.1**
	36nm,0.2s,SNR=68						
AAL	**Aland**	**1.24**	**296**	*e*P	**Pg**	**11 59 02.3**	**-0.2**
AAL	**Aland**	**1.24**	**296**	P	**Pg**	**11 59 02.3**	**-0.2**
AAL				S	**Sb**	**11 59 19.8**	**+0.3**
MTSE	**Matsula**	**1.25**	**138**	*e*P	**Pb**	**11 59 03.2**	**0.0**
MTSE	**Matsula**	**1.25**	**138**	P	**Pb**	**11 59 03.1**	**0.0**
RAF	**Rauma**	**1.40**	**351**	*e*P	**Pg**	**11 59 05.4**	**0.0**
RAF	**Rauma**	**1.40**	**351**	*e*P	**Pg**	**11 59 05.5**	**0.0**
	SNR=51						
RAF				*e*S	**Sg**	**11 59 22.3**	**-1.3**
	48nm,0.2s,SNR=51						
GRAU	**Graesoe**	**1.97**	**292**	*e*P	**Pn**	**11 59 14.2**	**+0.9**
GRAU	**Graesoe**	**1.97**	**292**	P	**Pn**	**11 59 14.2**	**+0.9**
SLIT	**Slitere, Latvi**	**2.03**	**179**	*e*P	**Pb**	**11 59 15.9**	**-0.5**
	SNR=51						
PVF	**Pernaja**	**2.04**	**62**	*e*P	**Pb**	**11 59 17.0**	**+0.4**
PVF				*e*S	**Sg**	**11 59 43.5**	**-0.6**
PVF	**Pernaja**	**2.04**	**62**	P	**Pb**	**11 59 16.9**	**+0.4**
FORU	**

HFS					Lg	Lg	12 01 08.3				
	baz=90,slow=37										
HFS	**Hagfors**	**4.06**	**273**	Pn	**Pn**	**12 00 05.0**	**+0.5**				
	0.2nm,0.3s,baz=92,slow=12,SNR=8.9										
HFS					Pg	**Pb**	**12 00 13.8**	**+0.4**			
	0.5nm,0.3s,baz=97,slow=18,SNR=8.9										
HFS					Lg	Lg	12 01 07.8				
	1.7nm,0.3s,baz=93,slow=32,SNR=6.9										
HFS	**Hagfors**	**4.06**	**273**	Pn	**Pn**	**12 00 03.9**	**-0.5**				
	SNR=8.2										
HFS					Sn	**Sn**	**12 00 52.1**	**-0.5**			
	SNR=5.6										
HFS					Lg	Lg	12 01 08.3				
	SNR=5.0										
NB2	**NORSAR Subarra**	**5.30**	**284**	Pn	**Pn**	**12 00 20.6**	**-0.8**				
	baz=95,slow=12										
NB2					Lg	Lg	12 01 50.4				
	baz=101,slow=37										
NB2	**NORSAR Subarra**	**5.30**	**284**	Pn	**Pn**	**12 00 20.6**	**-0.8**				
	baz=95,slow=12										
NB2					Lg	Lg	12 01 50.4				
	baz=101,slow=37										
NB2	**NORSAR Subarra**	**5.30**	**284**	Pn	**Pn**	**12 00 20.6**	**-0.8**				
	SNR=8.8										
NB2					Lg	Lg	12 01 50.4				
	SNR=2.7										
NOA	**NORSAR Array B**	**5.30**	**284**	Pn	**Pn**	**12 00 20.9**	**-0.5**				
	0.3nm,0.3s,baz=105,slow=15,SNR=8.2										
NOA					Sn	**Sn**	**12 01 25.0**	**+1.9**			
	0.4nm,0.3s,baz=110,slow=18,SNR=2.7										
ARA0	**ARCESS Array S**	**9.53**	**8**	Pn	**Pn**	**12 01 20.2**	**+0.8**				
	baz=184,slow=14										
ARA0					Sn	**Sn**	**12 03 06.3**	**-0.7**			
	baz=186,slow=28										
ARA0	**ARCESS Array S**	**9.53**	**8**	Pn	**Pn**	**12 01 20.2**	**+0.8**				
	baz=184,slow=14										
ARA0					Sn	**Sn**	**12 03 06.3**	**-0.7**			
	baz=186,slow=28										
ARA0	**ARCESS Array S**	**9.53**	**8**	Pn	**Pn**	**12 01 20.2**	**+0.8**				
	SNR=9.8										
ARA0					Sn	**Sn**	**12 03 06.3**	**-0.7**			
ARCES	**ARCESS Array B**	**9.53**	**8**	Pn	**Pn**	**12 01 20.8**	**+1.4**				
	0.3nm,0.3s,baz=186,slow=14,SNR=10										
ARCES					Sn	**Sn**	**12 03 07.2**	**+0.2**			
	0.1nm,0.3s,baz=187,slow=23,SNR=2.7										

IDC 18 12:00:46.8±0.6, 12°50'S×65°14'E, h0km, mb3.8/12, mb1 4.0/12, mb1mx3.8/29, mbtmp3.8/12, MS3.6/4, Ms1 3.6/4, ms1mx3.0/45, Error ellipse: s-maj=22.3km s-min=19.7km az=158.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**18.32**	**249**	LR		LR	12 10 20.7	
	comp=Z,187nm,18.2s,baz=255,slow=31							
LSZ	**Lusaka**	**35.95**	**261**	P		P	12 07 49.4	-0.3
	1.6nm,0.6s,baz=100,slow=8.2,SNR=4.2							
LBTB	**Lobatse**	**39.31**	**246**	P		P	12 08 18.4	+0.3
	2.1nm,0.4s,baz=108,slow=6.4,SNR=5.8							
BOSA	**Boshof**	**40.42**	**240**	LR		LR	12 22 52.9	
	comp=Z,90nm,18.7s,baz=355,slow=33							
CMAR	**Chiang Mai Arr**	**45.36**	**48**	P		P	12 09 07.1	-0.1
	0.5nm,0.3s,baz=242,slow=7.7,SNR=3.9							
BVAR	**Borovoye Array**	**65.41**	**3**	P		P	12 11 30.7	-0.5
	0.4nm,0.7s,baz=165,slow=6.0,SNR=2.8							
ASAR	**Alice Springs**	**65.78**	**110**	P		P	12 11 33.5	-0.8
	1.0nm,0.8s,baz=273,slow=6.9,SNR=8.5							
WRA	**Warramunga Arr**	**66.47**	**106**	P		P	12 11 38.8	0.0
	2.0nm,1.1s,baz=271,slow=5.8,SNR=6.7							
ZALV	**Zalesovo Beam**	**68.28**	**12**	P		P	12 11 50.7	+1.3
	0.4nm,0.4s,baz=206,slow=6.1,SNR=4.0							
AKASG	**Malin Array Be**	**70.31**	**337**	P		P	12 12 01.1	-0.9
	0.2nm,0.3s,baz=120,slow=5.5,SNR=4.0							
SONM	**Songino Array**	**70.38**	**28**	P		P	12 12 02.7	0.0
	0.6nm,0.7s,baz=252,slow=4.2,SNR=4.2							
SONM					LR	LR	12 41 34.7	
	comp=Z,49nm,19.4s,baz=264,slow=35							
VRAC	**Vranov**	**74.90**	**329**	LR		LR	12 43 37.4	
	comp=Z,25nm,18.7s,baz=73,slow=34							
QSPA	**South Pole Qui**	**77.57**	**180**	P		P	12 12 45.1	+0.4
	0.8nm,1.0s,baz=259,slow=5.2,SNR=3.1							
ESDC	**Sonseca Array**	**82.41**	**313**	P		P	12 13 10.8	-0.3
	0.1nm,0.3s,baz=109,slow=6.3,SNR=4.4							
MJAR	**Matsushiro Arr**	**84.17**	**51**	P		P	12 13 21.2	+1.0
	0.8nm,0.9s,baz=238,slow=6.3,SNR=3.4							
ILAR	**Eielson Array**	**123.31**	**16**	PKP		PKPdf	12 19 44.3	-1.1
	0.2nm,0.9s,baz=328,slow=3.2,SNR=3.0							
YKA	**Yellowknife Ar**	**130.08**	**360**	PKP		PKPdf	12 19 57.5	-0.9
	0.2nm,0.6s,baz=343,slow=2.3,SNR=6.2							
PDAR	**Pinedale Array**	**149.49**	**352**	PKPbc		PKPbc	12 20 38.5	-0.2
	1.1nm,0.8s,baz=90,slow=3.0,SNR=7.4							
NVAR	**Mina Array Bea**	**153.31**		PKPbc		PKPbc	12 20 49.8	+0.7
	0.7nm,0.7s,baz=318,slow=1.2,SNR=7.1							
TXAR	**Lajitas Array**	**160.28**	**330**	PKPab		PKPab	12 21 29.5	+0.1
	0.1nm,0.4s,baz=307,slow=0.6,SNR=3.6							

*ISCJB **18** 12:21:28.4±0.5, 18°.83S×169°.64E±0°.08, h246km, mb4.1/15, Error ellipse: s-maj=11.8km s-min=8.8km az=139.0*
*AUST **18** 12:21:33.9, 19°.00S×170°.00E, h300km*
*IDC **18** 12:21:33.8±1.5, 18°.92S×169°.52E, h284km±14km, mb3.8/15, mb1 3.9/17, mb1mx3.7/26, mbtmp3.8/17, Error ellipse: s-maj=13.3km s-min=10.9km az=166.0*
*NEIC **18** 12:21:33.4±0.7, 18°.93S×169°.55E, h281km±7km, mb4.6/2, Error ellipse: s-maj=8.9km s-min=7.7km az=164.0*
*NOU **18** 12:21:34.3±1.5, 19°.44S×170°.22E, h10km±999km, MD3.3, ML3.7*

ISC 18 12:21:30.9±0.6, 18°.86S±0°.09×169°.50E±0°.08, h246km, n66, σ1s52/55, mb4.1/15, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.29**	**221**	*eP*		**Pn**	**12 22 40.1**	**+2.0**
DZM				*eS*		**S**	**12 23 30.5**	**-0.9**
DZM				AMP			12 24 08.5	
	comp=Z,299nm,0.6s							
DZM	**Mont Dzumac**	**4.29**	**221**	P		**Pn**	**12 22 41.0**	**+3.0**
DZM	**Mont Dzumac**	**4.29**	**221**	P		**Pn**	**12 22 41.0**	**+3.0**
	comp=Z,8.0nm,0.3s,baz=56,slow=17,SNR=89							
PLUM	**Mont Dore**	**4.33**	**218**	*eP*		**Pn**	**12 22 40.9**	**+2.6**
NOUC	**Port Laguerre**	**4.40**	**222**	*eP*		Pn	12 22 44.2	+4.9
NOUC				AMP			12 24 13.5	
	comp=Z,22nm,6.0s							
MSVF	**Nonsavu**	**8.20**	**84**	*ePn*		**Pn**	**12 23 29.1**	**+2.1**
	comp=Z,56nm,0.9s							
HNR	**Honiara**	**13.17**	**314**	P		**Pn**	**12 24 32.0**	**+2.9**
HNR	**Honiara**	**13.17**	**314**	P		**Pn**	**12 24 32.0**	**+2.9**
	comp=Z,2.1nm,0.3s,baz=164,slow=9.1,SNR=3.9							
EIDS	**Eidsvold**	**18.24**	**246**	P		**P**	**12 25 28.7**	**+2.2**
	baz=19,SNR=6.8							
ARMA	**Armidale**	**19.88**	**231**	P		**P**	**12 25 45.6**	**+1.6**
	baz=20,SNR=6.6							
URZ	**Urewera**	**20.44**	**163**	P		**P**	**12 25 49.4**	**-0.4**
URZ	**Urewera**	**20.44**	**163**	P		**P**	**12 25 49.4**	**-0.4**
	comp=Z,8.8nm,0.6s,baz=259,slow=17,SNR=11							
RMQ	**Roma**		**20.57**	**245**	P	**P**	**12 25 53.0**	**+1.6**
	baz=21,SNR=12							
MGCD	**Mangrove Creek**	**21.80**	**225**	P		**P**	**12 26 04.3**	**+0.9**
	baz=22,SNR=10							
CTA	**Charters Tower**	**21.95**	**263**	P		**P**	**12 26 05.8**	**+0.9**
CTA	**Charters Tower**	**21.95**	**263**	P		**P**	**12 26 05.8**	**+0.9**
	comp=Z,4.8nm,0.7s,baz=115,slow=11,SNR=6.1							
CNB	**Canberra Magne**	**24.21**	**223**	P		**P**	**12 26 26.0**	**+0.5**
	baz=24,SNR=27							
QLP	**Quilpie**	**24.51**	**247**	P		**P**	**12 26 28.6**	**+0.5**
	baz=25,SNR=5.4							
RPZ	**Rata Peaks**	**24.82**	**177**	P		**P**	**12 26 30.3**	**-0.4**
RPZ	**Rata Peaks**	**24.82**	**177**	P		**P**	**12 26 30.3**	**-0.4**
	comp=Z,5.4nm,0.7s,baz=181,slow=7.7,SNR=5.7							
CMSA	**Cobar Meteorol**	**24.90**	**235**	P		**P**	**12 26 31.7**	**0.0**
	baz=25,SNR=28							
TOO	**Toolangi**	**28.06**	**223**	P		**P**	**12 26 59.9**	**+0.1**
	baz=28,SNR=17							
STKA	**Stephens Creek**	**28.25**	**237**	P		**P**	**12 27 02.2**	**+0.7**
STKA	**Stephens Creek**	**28.25**	**237**	P		**P**	**12 27 02.2**	**+0.7**
	comp=Z,13nm,0.6s,baz=61,slow=8.1,SNR=28							
STKA	**Stephens Creek**	**28.25**	**237**	P		**P**	**12 27 02.2**	**+0.7**
	baz=29,SNR=12							
ARPS	**Mount Arapiles**	**30.12**	**228**	P		**P**	**12 27 18.2**	**+0.3**
	baz=30,SNR=5.4							
MOO	**Moorlands**	**30.17**	**214**	P		**P**	**12 27 18.3**	**0.0**
	baz=30,SNR=4.0							
BBOO	**Buckleboo**	**32.99**	**238**	P		**P**	**12 27 42.9**	**-0.2**
	baz=33,SNR=8.7							

WRA	**Warramunga Arr**	**33.14**	**262**		P	P	12 27 43.5	-1.0			
WRA					S	**S**	**12 32 43.4**	**-2.2**			
WRA					ScP	**ScP**	**12 33 39.0**	**-3.3**			
WRA	**Warramunga Arr**	**33.14**	**262**		P	P	12 27 43.5	-1.0			
	comp=Z,1.4nm,0.3s,baz=96,slow=8.5,SNR=65										
WRA					S	**S**	**12 32 43.4**	**-2.2**			
	comp=Z,0.7nm,0.8s,baz=91,slow=15,SNR=6.2										
WRA					ScP	**ScP**	**12 33 39.0**	**-3.3**			
	comp=Z,0.9nm,1.0s,baz=92,slow=3.6,SNR=5.9										
AS31	**Alice Springs**	**33.45**	**255**	*eP*		**P**	**12 27 46.8**	**-0.4**			
ASAR	**Alice Springs**	**33.46**	**255**	P		**P**	**12 27 46.9**	**-0.4**			
ASAR				S		S	12 32 46.0	-4.4			
ASAR	**Alice Springs**	**33.46**	**255**	P		**P**	**12 27 46.9**	**-0.4**			
	comp=Z,29nm,0.6s,baz=83,slow=9.0,SNR=403										
ASAR					S	S	12 32 46.0	-4.4			
	comp=Z,0.3nm,0.6s,baz=86,slow=15,SNR=4.0										
MTN	**Manton Dam**	**37.33**	**273**	P		**P**	**12 28 19.9**	**-0.3**			
	baz=38,SNR=7.0										
TLE	**Tual**	**38.15**	**285**	S		S	12 34 10.5	+8.7			
	baz=39,SNR=3.4										
FITZ	**Fitzroy Crossi**	**41.52**	**264**	P		**P**	**12 28 54.9**	**+0.2**			
FITZ	**Fitzroy Crossi**	**41.52**	**264**	P		**P**	**12 28 54.9**	**+0.2**			
	comp=Z,5.6nm,0.6s,baz=103,slow=6.9,SNR=26										
FITZ	**Fitzroy Crossi**	**41.52**	**264**	P		**P**	**12 28 54.9**	**+0.2**			
	baz=42,SNR=17										
MEEK	**Meekatharra**	**47.31**	**251**	P		**P**	**12 29 39.6**	**-0.7**			
	baz=48,SNR=24										
KLBR	**Kellerberrin**	**48.09**	**244**	P		**P**	**12 29 45.6**	**-0.7**			
	baz=48,SNR=8.0										
NWAO	**Narrogin (SRO)**	**48.60**	**242**	P		**P**	**12 29 49.1**	**-1.0**			
NWAO	**Narrogin (SRO)**	**48.60**	**242**	P		**P**	**12 29 49.1**	**-1.0**			
	comp=Z,5.4nm,0.7s,baz=97,slow=6.2,SNR=6.1										
VNDA	**Vanda**	**58.82**	**182**	P		P	12 31 01.5	-1.7			
VNDA	**Vanda**	**58.82**	**182**	P		P	12 31 01.5	-1.7			
	comp=Z,1.4nm,0.5s,baz=356,slow=6.6,SNR=14										
QSPA	**South Pole Qui**	**71.19**	**180**	*eP*		P	12 32 21.0	-2.0			
	comp=Z,10nm,0.9s										
FX1	**Attu Island--F**	**71.51**	**2**	P		**P**	**12 32 24.2**	**-0.5**			
FX1	**Attu Island--F**	**71.51**	**2**	P		**P**	**12 32 24.2**	**-0.5**			
	comp=Z,14nm,0.8s,baz=192,slow=9.3,SNR=2.6										
CMAR	**Chiang Mai Arr**	**78.57**	**294**	P		P	12 33 04.8	-0.9			
CMAR	**Chiang Mai Arr**	**78.57**	**294**	P		P	12 33 04.8	-0.9			
	comp=Z,0.3nm,0.3s,baz=116,slow=4.3,SNR=3.3										
MAW	**Mawson**	**78.88**	**202**	P		P	12 33 04.8	-1.7			
MAW	**Mawson**	**78.88**	**202**	P		P	12 33 04.8	-1.7			
	comp=Z,2.2nm,0.7s,baz=101,slow=10,SNR=3.4										
YBH	**Yreka Blue Hor**	**86.86**	**44**	P		**P**	**12 33 47.1**	**-0.8**			
YBH	**Yreka Blue Hor**	**86.86**	**44**	P		**P**	**12 33 47.2**	**-0.8**			
	comp=Z,1.2nm,0.6s,baz=297,slow=6.8,SNR=5.5										
NVAR	**Mina Array Bea**	**88.37**	**48**	P		**P**	**12 33 54.5**	**-0.8**			
NVAR	**Mina Array Bea**	**88.37**	**48**	P		**P**	**12 33 54.5**	**-0.8**			
	comp=Z,0.8nm,0.6s,baz=234,slow=6.9,SNR=8.0										
SNAA	**Sanae**	**89.55**	**182**	*eP*		P	12 33 57.6	-2.6			
ILAR	**Eielson Array**	**89.80**	**17**	P		P	12 33 58.5	-2.6			
ILAR	**Eielson Array**	**89.80**	**17**	P		P	12 33 58.5	-2.6			
	comp=Z,0.4nm,0.7s,baz=236,slow=5.0,SNR=8.5										
VNA3	**Neumayer Olymp**	**90.13**	**180**	*eP*		P	12 34 00.3	-2.5			
VNA2	**Neumayer--Watz**	**90.43**	**181**	*eP*		P	12 34 02.0	-2.2			
	baz=190,slow=4.9										
YKA	**Yellowknife Ar**	**100.22**	**27**	P		**Pdif**	**12 34 47.2**	**-1.3**			
YKA	**Yellowknife Ar**	**100.22**	**27**	P		**Pdif**	**12 34 47.2**	**-1.3**			
	comp=Z,0.3nm,0.7s,baz=254,slow=4.8,SNR=7.7										
GERES	**GERESS Array B**	**144.27**	**332**	PKP		**PKPab**	**12 40 35.3**	**-0.9**			
GERES	**GERESS Array B**	**144.27**	**332**	PKP		**PKPab**	**12 40 35.3**	**-0.9**			
	comp=Z,0.4nm,0.6s,baz=43,slow=1.9,SNR=3.0										
TORD	**Torodi Ar. Bea**	**166.97**	**246**	PKPab		**PKPab**	**12 42 10.8**	**-2.4**			
TORD	**Torodi Ar. Bea**	**166.97**	**246**	PKPab		**PKPab**	**12 42 10.8**	**-2.4**			
	comp=Z,0.4nm,0.9s,baz=134,slow=4.2,SNR=3.1										

*ISCJB **18** 12:43:05.8±0.4, 59°.68N±0°.03×22°.18E±0°.05, h0km, Error ellipse: s-maj=4.9km s-min=3.7km az=7.3*
*CSEM **18** 12:43:06.7±0.2, 59°.69N×22°.22E, h2km, ML1.8, Error ellipse: s-maj=5.3km s-min=3.9km az=4.0, Mining explosion.*
*HEL **18** 12:43:07.1±0.1, 59°.66N×22°.17E, h0km, ML1.9, ML1.8(UPP), Explosion*
*UPP **18** 12:43:07.2, 59°.73N×22°.12E, h0km, ML1.8, Suspected Mining explosion.*
*NAO **18** 12:43:08.7±1.9, 59°.87N×22°.13E, ML2.0*
*IDC **18** 12:43:08.1±1.8, 59°.66N×22°.25E, h0km, mb1 3.1/4, mb1mx2.8/29, mbtmp3.0/4, ML2.4/4, Error ellipse: s-maj=24.5km s-min=8.0km az=160.0*
*BER **18** 12:43:10.2±3.6, 59°.90N×22°.10E, h0km, ML2.0(NAO), Suspected explosion*

ISC 18 12:43:05.8±0.7, 59°.65N±0°.03×22°.18E±0°.02, h0km, n48, σ1s40/66, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AAL	**Aland**	**1.22**	**297**	*eP*		**Pg**	**12 43 28.4**	**-0.8**
AAL				*eS*		**Sg**	**12 43 44.7**	**-0.3**
AAL	**Aland**	**1.22**	**297**	P		**Pg**	**12 43 28.4**	**-0.8**
AAL				S		**Sg**	**12 43 45.2**	**+0.2**
MEF	**Metsahovi**	**1.25**	**62**	*eP*		**Pg**	**12 43 29.4**	**-0.4**
MEF				*eS*		**Sg**	**12 43 45.3**	**-0.8**
MEF	**Metsahovi**	**1.25**	**62**	P		**Pg**	**12 43 29.3**	**-0.4**
MEF				S		**Sg**	**12 43 45.2**	**-0.8**
MTSE	**Matsula**	**1.26**	**137**	*eP*		**Pg**	**12 43 30.1**	**+0.3**
MTSE				*eS*		**Sg**	**12 43 45.4**	**-0.8**
MTSE	**Matsula**	**1.26**	**137**	P		**Pg**	**12 43 30.1**	**+0.3**
MTSE				S		**Sg**	**12 43 45.3**	**-0.8**
RAF	**Rauma**	**1.40**	**352**	*eP*		**Pg**	**12 43 31.5**	**-1.0**
RAF				*eS*		**Sg**	**12 43 50.0**	**-0.5**
RAF	**Rauma**	**1.40**	**352**	*eP*		**Pg**	**12 43 32.1**	**-0.4**
	SNR=68							
RAF				*eS*		**Sg**	**12 43 50.3**	**-0.2**
	14nm,0.2s,SNR=68							
GRAU	**Graesoe**	**1.96**	**292**	*eP*		**Pn**	**12 43 40.6**	**+0.5**
GRAU				*eS*		**Sb**	**12 44 06.8**	**-0.3**
GRAU	**Graesoe**	**1.96**	**292**	P		**Pn**	**12 43 40.6**	**+0.5**
GRAU				S		**Sb**	**12 44 06.8**	**-0.3**
SLIT	**Slitere, Latvi**	**2.03**	**178**	*eS*		**Sb**	**12 44 09.8**	**+0.7**
	164nm,0.5s,SNR=68							
PVF	**Pernaja**	**2.05**	**62**	*eP*		**Pb**	**12 43 43.2**	**-0.7**
PVF				*eS*		**Sb**	**12 44 09.3**	**-0.6**
PVF	**Pernaja**	**2.05**	**62**	P		**Pb**	**12 43 43.1**	**-0.7**
FORU	**Forsmark**	**2.14**	**292**	*eP*		**Pn**	**12 43 43.9**	**+1.1**
FORU	**Forsmark**	**2.14**	**292**	P		**Pn**	**12 43 43.8**	**+1.1**
FLYU	**Flymyra**	**2.22**	**284**	*eP*		**Pn**	**12 43 45.0**	**+1.3**
FLYU	**Flymyra**	**2.22**	**284**	P		**Pn**	**12 43 45.0**	**+1.3**
NYNU	**Nynaeshamn**	**2.24**	**255**	*eP*		**Pb**	**12 43 45.8**	**-1.1**
NYNU	**Nynaeshamn**	**2.24**	**255**	P		**Pb**	**12 43 45.8**	**-1.1**
OSTU	**Oestervaala**	**2.61**	**285**	*eP*		**Pn**	**12 43 50.6**	**+1.5**
OSTU	**Oestervaala**	**2.61**	**285**	P		**Pn**	**12 43 50.6**	**+1.5**
FIA0	**FINESS Array S**	**2.64**	**45**	Pn		**Pn**	**12 43 51.5**	**+2.0**
	baz=227,slow=12							
FIA0					Lg	Lg	12 44 26.4	
	baz=239,slow=28							
FIA0	**FINESS Array S**	**2.64**	**45**	Pn		**Pn**	**12 43 51.5**	**+2.0**
	baz=227,slow=12							
FIA0					Lg	Lg	12 44 26.4	
	baz=239,slow=28							
FIA0	**FINESS Array S**	**2.64**	**45**	*ePB*		**Pb**	**12 43 52.6**	**-1.2**
FIA0	**FINESS Array S**	**2.64**	**45**	Pn		**Pn**	**12 43 51.5**	**+2.0**
	baz=227,slow=12,SNR=50							
FIA0	**FINESS Array S**	**2.64**	**45**	Pb		**Pb**	**12 43 52.6**	**-1.2**
FIA0					Lg	Lg	12 44 26.5	
	baz=239,slow=24,SNR=90							
FINES	**FINESS Array B**	**2.64**	**45**	Pn		**Pb**	**12 43 51.9**	**-2.0**
	0.5nm,0.3s,baz=227,slow=13,SNR=24							
FINES					Sn	**Sb**	**12 44 27.0**	**+0.3**
	1.4nm,0.3s,baz=232,slow=25,SNR=17							
IGGU	**Iggoen**	**2.72**	**299**	*eP*		**Pn**	**12 43 51.3**	**+0.7**
IGGU	**Iggoen**	**2.72**	**299**	P		**Pn**	**12 43 51.3**	**+0.7**
GOTU	**Gotland**	**2.73**	**225**	*eP*		**Pn**	**12 43 52.1**	**+1.4**
GOTU	**Gotland**	**2.73**	**225**	P		**Pn**	**12 43 52.1**	**+1.4**
VJF	**Virojoki**	**2.84**	**69**	MSG		**Sg**	**12 44 39.1**	**+2.3**
	comp=Z,5.5nm,0.1s							
KEF	**Keuruu**	**2.85**	**26**	MSG		**Sg**	**12 44 38.9**	**+1.7**
	comp=Z,3.7nm,0.1s							
VAF	**Ylistaro**	**3.42**	**4**	MSG		**Sg**	**12 45 00.5**	**+5.1**
	comp=Z,1.7nm,0.2s							
SUF	**Sumiainen**	**3.63**	**30**	MSG		**Sg**	**12 45 06.5**	**+4.1**
	comp=Z,1.9nm,0.2s							
HFS	**Hagfors**	**4.30**	**280**	Pn		**Pn**	**12 44 14.2**	**+1.8**
	baz=106,slow=9.3							
HFS					Sn	**Sn**	**12 45 02.5**	**-0.7**
	baz=104,slow=28							
HFS					Lg	Lg	12 45 19.6	
	baz=96,slow=37							
HFS	**Hagfors**	**4.30**	**280**	Pn		**Pn**	**12 44 14.2**	**+1.8**
	baz=106,slow=9.0,SNR=50							
HFS					Sn	**Sn**	**12 45 02.5**	**-0.7**
	baz=104,slow=24,SNR=50							
HFS					Lg	Lg	12 45 19.6	
	baz=96,slow=29,SNR=90							
KJN	**Kajaani**	**5.16**	**28**	MSG		**Sg**	**12 45 50.5**	**-0.9**
	comp=Z,2.1nm,0.2s							
NB2	**NORSAR Subarra**	**5.62**	**289**	Pn		**Pn**	**12 44 30.9**	**+0.4**
	baz=91,slow=14							
NB2					Lg	Lg	12 46 00.8	
NB2	**NORSAR Subarra**	**5.62**	**289**	Pn		**Pn**	**12 44 30.9**	**+0.4**
	baz=91,slow=14							
NB2					Lg	Lg	12 46 00.8	
NB2	**NORSAR Subarra**	**5.62**	**289**	Pn		**Pn**	**12 44 30.9**	**+0.4**
	baz=91,slow=13,SNR=50							
NB2					Lg	Lg	12 46 00.8	
	SNR=50							
NOA	**NORSAR Array B**	**5.62**	**289**	Pn		**Pn**	**12 44 31.2**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=94,slow=16,SNR=3.8							
NOA					Sn	**Sn**	**12 45 35.1**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=139,slow=18,SNR=2.5							
ARA0	**ARCESS Array S**	**10.03**	**7**	Pn		**Pn**	**12 45 29.4**	**-1.5**
	baz=184,slow=14							
ARA0	**ARCESS Array S**	**10.03**	**7**	Pn		**Pn**	**12 45 29.4**	**-1.5**
	baz=184,slow=14							
ARA0	**ARCESS Array S**	**10.03**	**7**	Pn		**Pn**	**12 45 29.4**	**-1.5**
	baz=184,slow=13,SNR=50							
ARCES	**ARCESS Array B**	**10.03**	**7**	Pn		**Pn**	**12 45 30.0**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=183,slow=13,SNR=7.5							
ARCES					Sn	Sn	12 47 17.5	-6.4
	comp=Z,0.1nm,0.3s,baz=191,slow=23,SNR=2.7							

*ISCJB **18** 12:47:30.2±0.4, 59°.68N±0°.03×22°.14E±0°.05, h0km, Error ellipse: s-maj=4.7km s-min=3.8km az=7.7*
*IDC **18** 12:47:30.9±2.6, 59°.50N×22°.30E, h0km, mb1 3.1/4, mb1mx2.9/29, mbtmp3.0/4, ML2.8/3, Error ellipse: s-maj=37.6km s-min=8.4km az=163.0*
*UPP **18** 12:47:31.2, 59°.77N×22°.14E, h0km, ML2.2, Suspected Mining explosion.*
*CSEM **18** 12:47:31.0±0.2, 59°.72N×22°.17E, h2km, ML2.2, Error ellipse: s-maj=5.0km s-min=3.7km az=178.0, Mining explosion.*
*HEL **18** 12:47:31.1±0.1, 59°.67N×22°.14E, h0km, ML2.2(UPP), Explosion*
*NAO **18** 12:47:33.4±1.5, 60°.00N×21°.99E, ML2.1*
*BER **18** 12:47:35.0±3.9, 60°.05N×21°.99E, h0km, ML2.1(NAO), Suspected explosion*

ISC 18 12:47:30.1±0.8, 59°.69N±0°.03×22°.14E±0°.02, h0km, n43, σ1s27/60, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AAL	**Aland**	**1.19**	**295**	*eP*		**Pg**	**12 47 52.4**	**-0.4**
AAL				*eS*		**Sg**	**12 48 08.5**	**+0.4**
AAL	**Aland**	**1.19**	**295**	P		**Pg**	**12 47 52.6**	**-0.2**
AAL				S		**Sg**	**12 48 08.6**	**+0.4**
MEF	**Metsahovi**	**1.25**	**64**	*eP*		**Pg**	**12 47 53.6**	**-0.6**
MEF				*eS*		**Sg**	**12 48 09.7**	**-0.8**
MEF	**Metsahovi**	**1.25**	**64**	*eP*		**Pg**	**12 47 53.6**	**-0.6**
	SNR=68							
MEF				S		**Sg**	**12 48 09.6**	**-0.8**
MTSE	**Matsula**	**1.30**	**138**	*eP*		**Pg**	**12

ARA0	**ARCESS Array S** baz=187,slow=14	9.99	7	Pn		**Pn**	12 49 53.5	-1.2
ARA0	baz=172,slow=22			Sn		Sn	12 51 34.8	-13
ARA0	**ARCESS Array S** baz=187,slow=14	9.99	7	Pn		**Pn**	12 49 53.5	-1.2
ARA0	baz=172,slow=22			Sn		Sn	12 51 34.8	-13
ARA0	**ARCESS Array S** baz=187,slow=13,SNR=50	9.99	7	Pn		**Pn**	12 49 53.5	-1.2
ARCES	**ARCESS Array B** 0.3nm,0.3s,baz=188,slow=12,SNR=11	9.99	7	Pn		**Pn**	12 49 55.0	+0.3

*ROM **18** 12:51:03.9±0.4,45.68N×11.10E,h2km, Md2.5/3, Error ellipse: s-maj=8.2km s-min=2.4km az=163.0*
*CSEM **18** 12:51:04.6±0.2,45.69N×11.09E,h15km, MD2.3, Error ellipse: s-maj=5.0km s-min=2.3km az=165.0*
ISC 18 12:51:04.7±1.1,**45.68N**±0.05×**11.09E**±0.02,**h9**km±8km, **n31**,σ0**946**/50,**11C-3D**,**Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDS	**Dosso del Somm**	**0.21**	**19**	*i*Pg	**Pg**	**12 51 09.4**	**+0.2**
DDS				*i* Sg	**Sg**	**12 51 12.3**	**0.0**
DDS	**Dosso del Somm**	**0.21**	**19**	*i*Pg	**Pg**	**12 51 09.4**	**+0.2**
DDS				*i* Sg	**Sg**	**12 51 12.3**	**0.0**
SALO	**Salr**	**0.40**	**262**	*e*Pg	**Pg**	**12 51 12.8**	**+0.2**
SALO	**Salr**	**0.40**	**262**	Pg	**Pg**	**12 51 12.8**	**+0.2**
SALO				Sg	**Sb**	**12 51 19.1**	**-1.1**
SALO	**Salr**	**0.40**	**262**	*e*Pg	**Pg**	**12 51 12.8**	**+0.2**
SALO				Sg	**Sb**	**12 51 19.1**	**-1.1**
PANI	**Panarotta**	**0.40**	**22**	*e*Pg	**Pg**	**12 51 12.9**	**+0.2**
PANI	**Panarotta**	**0.40**	**22**	*e*Pg	**Pg**	**12 51 12.9**	**+0.2**
RNI	**Roncone**	**0.43**	**315**	*e*Pg	**Pg**	**12 51 12.9**	**-0.4**
RNI				*e*Sg	**Sg**	**12 51 18.9**	**-0.2**
RNI	**Roncone**	**0.43**	**315**	*e*Pg	**Pg**	**12 51 12.9**	**-0.4**
RNI				*e*Sg	**Sg**	**12 51 18.9**	**-0.2**
CGRP	**Cima Grappa**	**0.54**	**68**	*e*Pg	**Pb**	**12 51 15.6**	**-0.8**
CGRP				*e*Sg	**Sg**	**12 51 22.6**	**+0.3**
CGRP	**Cima Grappa**	**0.54**	**68**	Pg	**Pb**	**12 51 15.6**	**-0.8**
CGRP				Sg	**Sg**	**12 51 22.6**	**+0.3**
CGRP	**Cima Grappa**	**0.54**	**68**	*e*Pg	**Pb**	**12 51 15.6**	**-0.8**
CGRP				*e*Sg	**Sg**	**12 51 22.6**	**+0.3**
CTI	**Castel Tesino**	**0.54**	**46**	*e*Pg	**Pg**	**12 51 15.1**	**-0.1**
CTI				*e*Sg	**Sg**	**12 51 22.1**	**-0.2**
CTI	**Castel Tesino**	**0.54**	**46**	Pg	**Pg**	**12 51 15.1**	**-0.1**
CTI				Sg	**Sg**	**12 51 22.1**	**-0.2**
CTI	**Castel Tesino**	**0.54**	**46**	*e*Pg	**Pg**	**12 51 15.1**	**-0.1**
CTI				*e*Sg	**Sg**	**12 51 22.1**	**-0.2**
APPI	**Appiano**	**0.81**	**7**	Pg	**Pb**	**12 51 20.9**	**-0.1**
APPI	**Appiano**	**0.81**	**7**	Pg	**Pb**	**12 51 20.9**	**-0.1**
KOSI	**Kohlern**	**0.81**	**14**	*e*Pg	**Pg**	**12 51 20.1**	**-0.3**
KOSI				*e*Sg	**Sg**	**12 51 31.5**	**+0.5**
MDI	**Monti di Nese**	**0.97**	**276**	Pg	**Pb**	**12 51 23.5**	**-0.2**
MDI				Sg	**Sb**	**12 51 37.5**	**+0.8**
MDI	**Monti di Nese**	**0.97**	**276**	*e*Pg	**Pb**	**12 51 23.5**	**-0.2**
MDI				Sg	**Sb**	**12 51 37.5**	**+0.8**
MOSI	**Grossmontoni**	**1.01**	**338**	*e*Pg	**Pb**	**12 51 24.7**	**+0.2**
ABSI	**Aberstueckl**	**1.06**	**9**	*e*Pg	**Pg**	**12 51 24.7**	**-0.5**
FUORN	**Ofenpass-Fuorn**	**1.10**	**329**	Pg	**Pg**	**12 51 25.4**	**-0.6**
FUORN	**Ofenpass-Fuorn**	**1.10**	**329**	Pg	**Pg**	**12 51 25.4**	**-0.6**
CIMO	**Cimolais**	**1.13**	**56**	*e*Pg	**Pn**	**12 51 26.9**	**+0.1**
CIMO				*e*Sg	**Sn**	**12 51 43.2**	**+0.8**
CIMO	**Cimolais**	**1.13**	**56**	*e*Pg	**Pn**	**12 51 26.9**	**+0.1**
CIMO				*e*Sg	**Sn**	**12 51 43.2**	**+0.8**
RISI	**Rein**	**1.44**	**28**	Pg	**Pg**	**12 51 32.1**	**-0.3**
RISI				Sg	**Sg**	**12 51 51.2**	**0.0**
RISI	**Rein**	**1.44**	**28**	*e*Pg	**Pg**	**12 51 32.1**	**-0.3**
RISI				Sg	**Sg**	**12 51 51.2**	**0.0**
ZOU	**Zoufplan**	**1.58**	**55**	*e*Pg	**Pg**	**12 51 34.6**	**-0.3**
VINO	**Villanova**	**1.64**	**68**	Pg	**Pb**	**12 51 35.1**	**+0.1**
VINO	**Villanova**	**1.64**	**68**	Pg	**Pb**	**12 51 35.1**	**+0.1**

*ISCJB **18** 12:54:29.3±0.4,59.69N±0.04×22.16E±0.05,h0km, Error ellipse: s-maj=5.1km s-min=3.7km az=6.7*
*CSEM **18** 12:54:29.8±0.2,59.72N×22.25E,h2km, ML2.2, Error ellipse: s-maj=4.9km s-min=3.8km az=15.0, Mining explosion.*
*HEL **18** 12:54:30.5±0.1,59.67N×22.13E,h0km, ML2.2, ML2.2(UPP), Explosion*
*NAO **18** 12:54:30.9±1.7,59.77N×22.05E, ML2.3*
*BER **18** 12:54:32.3±2.9,59.81N×22.02E,h0km, ML2.3(NAO), Suspected explosion*
*IDC **18** 12:54:33.6±0.9,59.83N×22.06E,h0km, mb1 3.0/5, mb1mx2.9/30, mbtmp3.0/5, ML2.5/3, Error ellipse: s-maj=11.9km s-min=7.1km az=168.0*
*UPP **18** 12:54:34.2,59.73N×21.60E,h0km, ML2.2, Suspected Mining explosion.*
ISC 18 12:54:29.0±0.7,**59.69N**±0.03×**22.14E**±0.02,**h0**km,**n51**, σ1**934**/69,**Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	**Aland**	**1.19**	**295**	*e*P	**Pg**	**12 54 51.4**	**-0.2**
AAL				*e*S	**Sg**	**12 55 06.6**	**-0.4**
AAL	**Aland**	**1.19**	**295**	P	**Pg**	**12 54 51.5**	**-0.2**
AAL				S	**Sg**	**12 55 06.6**	**-0.4**
MEF	**Metsahovi**	**1.25**	**64**	*e*P	**Pb**	**12 54 53.1**	**-0.5**
MEF				*e*S	**Sg**	**12 55 08.9**	**-0.4**
MEF	**Metsahovi**	**1.25**	**64**	P	**Pb**	**12 54 53.0**	**-0.5**
MEF				S	**Sg**	**12 55 08.9**	**-0.4**
MTSE	**Matsula**	**1.30**	**138**	*e*P	**Pg**	**12 54 53.4**	**-0.6**
MTSE				*e*S	**Sg**	**12 55 09.9**	**-0.9**
MTSE	**Matsula**	**1.30**	**138**	P	**Pg**	**12 54 53.3**	**-0.6**
MTSE				S	**Sg**	**12 55 09.8**	**-0.9**
RAF	**Rauma**	**1.35**	**352**	*e*P	**Pb**	**12 54 54.9**	**-0.3**
RAF				*e*S	**Sb**	**12 55 12.7**	**-0.4**
RAF	**Rauma** SNR=68	**1.35**	**352**	*e*P	**Pb**	**12 54 55.0**	**-0.2**
RAF				S	**Sb**	**12 55 12.6**	**-0.4**
GRAU	**Graesoe**	**1.92**	**291**	*e*P	**Pn**	**12 55 03.7**	**+0.8**
GRAU	**Graesoe**	**1.92**	**291**	P	**Pn**	**12 55 03.7**	**+0.8**
PVF	**Pernaja**	**2.05**	**64**	*e*P	**Pb**	**12 55 07.1**	**0.0**
PVF				*e*S	**Sb**	**12 55 33.3**	**+0.2**
SLIT	**Slitere, Latvi** SNR=50	**2.07**	**178**	*e*P	**Pb**	**12 55 07.1**	**-0.2**
FORU	**Forsmark**	**2.11**	**291**	*e*P	**Pb**	**12 55 07.2**	**-0.8**
FORU	**Forsmark**	**2.11**	**291**	P	**Pb**	**12 55 07.2**	**-0.8**
FLYU	**Flymyra**	**2.19**	**284**	*e*P	**Pn**	**12 55 07.8**	**+1.2**
FLYU	**Flymyra**	**2.19**	**284**	P	**Pn**	**12 55 07.8**	**+1.2**
NYNU	**Nynaeshamn**	**2.23**	**254**	*e*P	**Pn**	**12 55 08.7**	**+1.7**
NYNU				*e*S	**Sb**	**12 55 37.7**	**-0.3**
NYNU	**Nynaeshamn**	**2.23**	**254**	P	**Pn**	**12 55 08.7**	**+1.7**
NYNU				S	**Sb**	**12 55 37.7**	**-0.3**
UPP	**Uppsala**	**2.29**	**276**	*e*P	**Pb**	**12 55 10.4**	**-0.7**
UPP	**Uppsala**	**2.29**	**276**	P	**Pb**	**12 55 10.4**	**-0.7**
BACU	**Backbrunna**	**2.55**	**276**	*e*P	**Pn**	**12 55 12.6**	**+1.1**
BACU	**Backbrunna**	**2.55**	**276**	P	**Pn**	**12 55 12.6**	**+1.1**
OSTU	**Oestervaala**	**2.57**	**284**	*e*P	**Pb**	**12 55 14.2**	**-1.8**
OSTU	**Oestervaala**	**2.57**	**284**	P	**Pb**	**12 55 14.1**	**-1.8**
FIA0	**FINESS Array S** baz=225,slow=14	**2.62**	**46**	Pn	**Pb**	**12 55 15.2**	**-1.6**
FIA0	baz=232,slow=28			Lg	Lg	12 55 50.4	
FIA0	**FINESS Array S** baz=225,slow=14	**2.62**	**46**	Pn	**Pb**	**12 55 15.2**	**-1.6**
FIA0	baz=232,slow=28			Lg	Lg	12 55 50.4	
FIA0	**FINESS Array S** baz=225,slow=13,SNR=3.2	**2.62**	**46**	Pn	**Pb**	**12 55 15.2**	**-1.6**
FIA0	baz=232,slow=24,SNR=90			Lg	Lg	12 55 50.4	
FINES	**FINESS Array B** 1.4nm,0.3s,baz=232,slow=13,SNR=54	**2.62**	**46**	Pn	**Pb**	**12 55 16.2**	**-0.6**
FINES	4.7nm,0.3s,baz=232,slow=23,SNR=25			Sn	**Sb**	**12 55 50.4**	**+0.8**
IGGU	**Iggoen**	**2.68**	**298**	*e*P	**Pn**	**12 55 15.0**	**+1.6**
IGGU	**Iggoen**	**2.68**	**298**	P	**Pn**	**12 55 14.9**	**+1.6**
ARNU	**Arnoeviken**	**3.09**	**313**	*e*P	**Pn**	**12 55 20.7**	**+1.8**
ARNU	**Arnoeviken**	**3.09**	**313**	P	**Pn**	**12 55 20.6**	**+1.8**
KAF	**Kangasniemi** comp=Z,4.7nm,0.2s	**3.17**	**38**	MSG	**Sg**	**12 56 12.6**	**+1.7**
FALU	**Falun**	**3.26**	**287**	*e*P	**Pn**	**12 55 23.6**	**+2.3**
FALU	**Falun**	**3.26**	**287**	P	**Pn**	**12 55 23.5**	**+2.3**
VAF	**Ylistaro** comp=Z,4.0nm,0.2s	**3.38**	**4**	MSG	Sg	12 56 22.7	+5.3
SUF	**Sumiainen** comp=Z,5.7nm,0.2s	**3.61**	**31**	MSG	**Sg**	**12 56 26.9**	**+2.1**
HFS	**Hagfors** baz=92,slow=16	**4.27**	**280**	Pn	**Pn**	**12 55 36.1**	**+0.9**
HFS	baz=90,slow=22			Sn	**Sn**	**12 56 24.2**	**-1.6**
HFS	baz=98,slow=37			Lg	Lg	12 56 38.9	
HFS	**Hagfors** baz=92,slow=16	**4.27**	**280**	Pn	**Pn**	**12 55 36.1**	**+0.9**
HFS	baz=90,slow=22			Sn	**Sn**	**12 56 24.2**	**-1.6**
HFS	baz=98,slow=37			Lg	Lg	12 56 38.9	
HFS	**Hagfors** comp=Z,0.2nm,0.3s,baz=91,slow=15,SNR=13	**4.27**	**280**	Pn	**Pn**	**12 55 36.7**	**+1.5**
HFS	comp=Z,0.8nm,0.3s,baz=97,slow=17,SNR=14			Pg	**Pb**	**12 55 47.7**	**+2.8**
HFS	comp=Z,0.5nm,0.3s,baz=101,slow=30,SNR=5.0			Sn	**Sn**	**12 56 27.8**	**+2.1**
HFS	comp=Z,1.8nm,0.3s,baz=93,slow=30,SNR=13			Lg	Lg	12 56 44.3	
HFS	**Hagfors** baz=92,slow=16,SNR=50	**4.27**	**280**	Pn	**Pn**	**12 55 36.1**	**+0.9**
HFS	baz=90,slow=20,SNR=50			Sn	**Sn**	**12 56 24.2**	**-1.6**
HFS	baz=98,slow=29,SNR=90			Lg	Lg	12 56 38.9	
KJN	**Kajaani** comp=Z,4.9nm,0.2s	**5.14**	**28**	MSG	**Sg**	**12 57 15.6**	**+1.7**
NB2	**NORSAR Subarra** baz=90,slow=12	**5.59**	**289**	Pn	**Pn**	**12 55 53.1**	**-0.2**
NB2				Lg	Lg	12 57 22.5	
NB2	**NORSAR Subarra** baz=90,slow=12	**5.59**	**289**	Pn	**Pn**	**12 55 53.1**	**-0.2**
NB2				Lg	Lg	12 57 22.5	
NB2	**NORSAR Subarra** baz=90,slow=12,SNR=50	**5.59**	**289**	Pn	**Pn**	**12 55 53.1**	**-0.2**
NOA	**NORSAR Array B** comp=Z,0.3nm,0.3s,baz=93,slow=15,SNR=7.0	**5.59**	**289**	Pn	**Pn**	**12 55 55.4**	**+2.1**
NOA	comp=Z,0.2nm,0.3s,baz=56,slow=23,SNR=2.5			Sn	**Sn**	**12 56 57.2**	**-1.0**
AKASG	**Malin Array Be** comp=Z,1.0nm,0.3s,baz=340,slow=11,SNR=5.5	**9.87**	**153**	Pn	**Pn**	**12 56 54.0**	**+2.1**
ARA0	**ARCESS Array S** baz=184,slow=14	**9.99**	**7**	Pn	**Pn**	**12 56 53.5**	**-0.1**
ARA0	baz=193,slow=28			Sn	**Sn**	12 58 39.6	-6.7
ARA0	**ARCESS Array S** baz=184,slow=14	**9.99**	**7**	Pn	**Pn**	**12 56 53.5**	**-0.1**
ARA0	baz=193,slow=28			Sn	Sn	12 58 39.6	-6.7
ARA0	**ARCESS Array S** baz=184,slow=13,SNR=50	**9.99**	**7**	Pn	**Pn**	**12 56 53.5**	**-0.1**
ARCES	**ARCESS Array B** comp=Z,0.3nm,0.3s,baz=185,slow=12,SNR=8.4	**9.99**	**7**	Pn	**Pn**	**12 56 53.6**	**0.0**
ARCES	comp=Z,0.2nm,0.3s,baz=183,slow=23,SNR=3.5			Sn	**Sn**	**12 58 42.0**	**-4.3**

IDC 18 12:54:46.5±0.7,**14.57N**×**144.38E**,**h0**km,**mb3.6**/12, **mb1 3.8**/12,**mb1mx3.7**/25,**mbtmp3.6**/12,**MS3.3**/11, **Ms1 3.4**/11,**ms1mx3.1**/41,**Error ellipse: s-maj=28.5km s-min=12.0km az=73.0,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.09**	**154**	Pn	Pn	12 55 09.4	+0.5
GUMO	92nm,0.3s,baz=300,slow=3.9,SNR=34			Sn	Sn	12 55 23.9	-0.8
JHJ	**Hachijo jima 2** comp=Z,53nm,19.0s,baz=135,slow=34	**18.93**	**348**	LR	LR	13 05 36.8	
DAV	**Davao City (W)** comp=Z,93nm,22.0s,baz=281,slow=34	**19.90**	**250**	LR	LR	13 05 58.1	
JNU	**Nakatsue** 3.3nm,0.8s,baz=146,slow=7.3,SNR=3.1	**22.17**	**329**	P	P	12 59 44.0	-0.3
JNU	comp=Z,30nm,20.2s,baz=50,slow=36			LR	LR	13 07 56.4	
MJAR	**Matsushiro Arr** 2.6nm,0.9s,baz=172,slow=9.2,SNR=9.4	**22.56**	**347**	P	P	12 59 48.8	+0.4
MJAR	comp=Z,44nm,19.1s,baz=225,slow=36			LR	LR	13 08 09.7	
KSRS	**Korea Array** 0.9nm,0.8s,baz=134,slow=10,SNR=4.8	**27.08**	**330**	P	P	13 00 32.6	+1.8
KSRS	comp=Z,33nm,18.3s,baz=145,slow=36			LR	LR	13 11 06.0	
ASAJ	**Asahikawa** comp=Z,37nm,20.7s,baz=138,slow=35	**29.48**	**357**	LR	LR	13 12 07.7	
WRA	**Warramunga Arr** 3.6nm,0.9s,baz=12,slow=9.7,SNR=32	**35.69**	**196**	P	P	13 01 46.9	+0.1
ASAR	**Alice Springs** 0.3nm,0.4s,baz=17,slow=13,SNR=7.3	**39.36**	**195**	P	P	13 02 18.1	+0.2
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=80,slow=7.4,SNR=4.4	**43.65**	**282**	P	P	13 02 52.8	-0.5
CMAR	comp=Z,36nm,18.5s,baz=168,slow=34			LR	LR	13 19 15.5	
SONM	**Songino Array** 0.8nm,0.8s,baz=125,slow=7.2,SNR=3.7	**45.66**	**325**	P	P	13 03 08.3	-0.7
STKA	**Stephens Creek** 0.9nm,0.5s,baz=344,slow=7.4,SNR=4.0	**46.26**	**183**	P	P	13 03 13.6	-0.1
MKAR	**Makanchi Array** 0.9nm,0.8s,baz=93,slow=7.7,SNR=6.1	**60.46**	**316**	P	P	13 04 57.4	-0.7
ZALV	**Zalesovo Beam** 0.2nm,0.4s,baz=94,slow=5.8,SNR=3.2	**60.55**	**324**	P	P	13 04 58.3	-0.3
ZALV	comp=Z,27nm,20.6s,baz=91,slow=36			LR	LR	13 31 19.4	
ILAR	**Eielson Array** 0.1nm,0.4s,baz=242,slow=6.2,SNR=3.1	**67.89**	**26**	P	P	13 05 46.4	-0.2
YKA	**Yellowknife Ar** 0.4nm,1.0s,baz=300,slow=4.8,SNR=3.9	**82.21**	**27**	P	P	13 07 09.3	0.0
NEW	**Newport** comp=Z,70nm,18.4s,baz=262,slow=32	**84.81**	**42**	LR	LR	13 40 28.7	
ELK	**Elko** comp=Z,68nm,20.4s,baz=264,slow=31	**88.28**	**48**	LR	LR	13 40 11.0	
PDAR	**Pinedale Array** comp=Z,45nm,21.5s,baz=79,slow=33	**91.61**	**45**	LR	LR	13 44 46.2	

*CSEM **18** 13:22:29.8, 42.40N×13.36E, h11km, After ROM*
ROM 18 13:22:29.8±0.1,**42.40N**×**13.36E**,**h11**km±1km,**MI2.2**/4, **Error ellipse: s-maj=1.6km s-min=1.3km az=97.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.06**	**145**	Pg	Pg	13 22 32.5	+0.4
AQU				Sg	Sg	13 22 34.2	+0.4
AQU	**L'Aquila**	**0.06**	**145**	Pg	Pg	13 22 32.5	+0.4
AQU				Sg	Sg	13 22 34.2	+0.4
CAMP	**Campotosto**	**0.14**	**16**	Pg	Pg	13 22 33.7	+0.4
CAMP				Sg	Sg	13 22 36.2	+0.4
CAMP	**Campotosto**	**0.14**	**16**	Pg	Pg	13 22 33.7	+0.4
CAMP				Sg	Sg	13 22 36.2	+0.4
FAGN	**Fagnano**	**0.21**	**129**	Pg	Pb	13 22 35.3	-0.5
FAGN				Sg	Sg	13 22 37.9	+0.3
FAGN	**Fagnano**	**0.21**	**129**	Pg	Pb	13 22 35.3	-0.5
FAGN				Sg	Sg	13 22 37.9	+0.3
FIAM	**Fiamignano**	**0.22**	**234**	Pg	Pg	13 22 35.0	+0.4
FIAM				Sg	Sg	13 22 38.6	+0.7
FIAM	**Fiamignano**	**0.22**	**234**	Pg	Pg	13 22 35.0	+0.4
FIAM				Sg	Sg	13 22 38.6	+0.7
TERO	**Teramo**	**0.29**	**39**	Pg	Pg	13 22 36.0	+0.2
TERO	342nm,0.1s			Sg	Sg	13 22 40.5	+0.8
TERO	**Teramo**	**0.29**	**39**	Pg	Pg	13 22 36.0	+0.2
TERO	342nm,0.1s			Sg	Sg	13 22 40.5	+0.8
LNSS	**Leonessa**	**0.31**	**311**	Pg	Pg	13 22 36.5	+0.2
LNSS	389nm,0.3s			Sg	Sg	13 22 41.6	+1.0
LNSS	**Leonessa**	**0.31**	**311**	Pg	Pg	13 22 36.5	+0.2
LNSS	389nm,0.3s			Sg	Sg	13 22 41.6	+1.0
VCEL	**Villa Celiera** 121nm,0.7s	**0.36**	**91**	Pg	Pb	13 22 38.4	0.0
VCEL	**Villa Celiera** 121nm,0.7s	**0.36**	**91**	Pg	Pb	13 22 38.4	0.0
NRCA	**Norcia**	**0.47**	**338**	Pg	Pg	13 22 39.2	0.0
NRCA				Sg	Sb	13 22 46.5	-0.8
NRCA	**Norcia** 140nm,0.1s	**0.47**	**338**	Pg	Pg	13 22 39.2	0.0
NRCA	140nm,0.1s			Sg	Sb	13 22 46.5	-0.8

*CSEM **18** 13:22:48.3,42.42N×13.29E,h10km,MD2.3/7, After ROM*
ROM 18 13:22:48.3±0.1,**42.42N**×**13.29E**,**h10**km±1km,**Md2.3**/7, **Ml2.2**/5,**Error ellipse: s-maj=1.2km s-min=1.1km az=179.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.11**	**130**	Pg	Pg	13 22 51.7	+0.6
AQU				Sg	Sg	13 22 54.0	+0.9
AQU	**L'Aquila**	**0.11**	**130**	Pg	Pg	13 22 51.7	+0.6
AQU				Sg	Sg	13 22 54.0	+0.9
CAMP	**Campotosto**	**0.14**	**37**	Pg	Pg	13 22 52.3	+0.5
CAMP				Sg	Sg	13 22 54.8	+0.6
CAMP	**Campotosto**	**0.14**	**37**	Pg	Pg	13 22 52.3	+0.5
CAMP				Sg	Sg	13 22 54.8	+0.6
FIAM	**Fiamignano**	**0.20**	**220**	Pg	Pg	13 22 53.3	+0.6
FIAM				Sg	Sg	13 22 56.6	+0.9
FIAM	**Fiamignano**	**0.20**	**220**	Pg	Pg	13 22 53.3	+0.6
FIAM				Sg	Sg	13 22 56.6	+0.9
LNSS	**Leonessa**	**0.26**	**314**	Pg	Pg	13 22 54.3	+0.5
LNSS	389nm,0.3s			Sg	Sb	13 22 58.8	-1.1
LNSS	**Leonessa**	**0.26**	**314**	Pg	Pg	13 22 54.3	+0.5
LNSS	389nm,0.3s			Sg	Sb	13 22 58.8	-1.1
FAGN	**Fagnano**	**0.27**	**126**	Pg	Pg	13 22 54.4	+0.6
FAGN				Sg	Sb	13 22 59.4	-0.5
FAGN	**Fagnano**	**0.27**	**126**	Pg	Pg	13 22 54.4	+0.6
FAGN				Sg	Sb	13 22 59.4	-0.5
TERO	**Teramo**	**0.30**	**49**	Pg	Pg	13 22 54.7	+0.1
TERO	342nm,0.1s			Sg	Sg	13 22 59.4	+0.7
TERO	**Teramo**	**0.30**	**49**	Pg	Pg	13 22 54.7	+0.1
TERO	342nm,0.1s			Sg	Sg	13 22 59.4	+0.7
VCEL	**Villa Celiera** 121nm,0.7s	**0.41**	**94**	Pg	Pg	13 22 57.1	+0.6
VCEL				Sg	Sg	13 23 02.9	+0.9
VCEL	**Villa Celiera** 121nm,0.7s	**0.41**	**94**	Pg	Pg	13 22 57.1	+0.6
VCEL				Sg	Sg	13 23 02.9	+0.9
NRCA	**Norcia** 140nm,0.1s	**0.43**	**342**	Pg	Pg	13 22 57.2	+0.2
NRCA				Sg	Sb	13 23 04.2	-0.6
NRCA	**Norcia** 140nm,0.1s	**0.43**	**342**	Pg	Pg	13 22 57.2	+0.2
NRCA				Sg	Sb	13 23 04.2	-0.6

CASC 18 13:30:32.8±4.3,**8.33N**×**82.98W**,**h12**km±19km,**MD3.5**,**2C, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**0.37**	**330**	*e*P	Pb	13 30 41.1	-0.2
ACR				*e*S	Sb	13 30 48.4	+1.3
BRU2	**Volcan**	**0.54**	**32**	*i*P	Pg	13 30 44.0	+0.3
BRU2				*e*S	Sb	13 30 52.6	+0.4
TBS2		**0.56**	**35**	*e*P	Pb	13 30 45.2	+0.5
TBS2				*e*S	Sn	13 30 54.7	-1.4
BRU	**Baru**	**0.63**	**41**	*i*P	Pg	13 30 45.2	-0.5
LAJ	**Bijagual**	**1.89**	**324**	*e*P	Pb	13 31 07.1	-0.5
LAJ				*e*P	Pg	13 31 09.2	-0.2
CGA2	**Cerro Gallo 2**	**2.23**	**319**	*e*P	Pn	13 31 11.2	+1.6
CGA2				*e*S	Sb	13 31 41.3	+0.5

*ISCJB **18** 13:33:01.4±0.7,39.12N±0.04×27.59E±0.06,h9km±7km, Error ellipse: s-maj=7.2km s-min=6.0km az=0.2*
*CSEM **18** 13:33:01.6±0.2,39.09N×27.62E,h12km,MD2.7, Error ellipse: s-maj=5.1km s-min=3.8km az=81.0*
*ISK **18** 13:33:01.1,39.13N×27.59E,h8km, ML1.9*
*DDA **18** 13:33:02.1,39.01N×27.63E,h25km, MD2.7*
ISC 18 13:33:01.7±1.4,**39.09N**±0.03×**27.62E**±0.03,**h8**km±12km, **n30**,σ0**959**/**37**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.26**	**144**	*i*P	**Pg**	**13 33 07.0**	**+0.1**
AKHS				*i* S	**Sb**	**13 33 12.6**	**-0.6**
AKHS	**Akhisar**	**0.26**	**144**	*i*P	**Pg**	**13 33 07.0**	**+0.1**
AKHS				*i* S	**Sb**	**13 33 12.6**	**-0.6**
AKS	**Akhisar**	**0.26**	**145**	*e*Pg	**Pg**	**13 33 07.0**	**+0.2**
AKS				*e*Sg	**Sb**	**13 33 12.9**	**-0.3**
AKS	**Akhisar**	**0.26**	**145**	*e*Pg	**Pg**	**13 33 07.0**	**+0.2**
AKS				*e*Sg	**Sb**	**13 33 12.9**	**-0.3**
BALB	**Balikesir**	**0.58**	**20**	*e*PG	**Pg**	**13 33 13.2**	**+0.2**
BALB	**Balikesir**	**0.58**	**20**	*e*Pg	**Pg**	**13 33 13.2**	**+0.2**
BLCB	**Balcova**	**0.84**	**213**	*e*PG	**Pg**	**13 33 17.9**	**+0.1**
BLCB				*e*SG	**Sb**	**13 33 30.3**	**+0.5**
BLCB	**Balcova**	**0.84**	**213**	*e*Pg	**Pg**	**13 33 17.9**	**+0.1**
BLCB				*e*Sg	**Sb**	**13 33 30.3**	**+0.5**
DEMI	**Demirci**	**0.85**	**93**	*i*P	**Pb**	**13 33 19.1**	**+0.3**
DEMI				*i* S	**Sn**	**13 33 34.3**	**+1.5**
DEMI	**Demirci**	**0.85**	**93**	*i*P	**Pb**	**13 33 19.1**	**+0.3**
MANT	**Manisa**	**0.95**	**129**	*e*P	**Pg**	**13 33 18.9**	**-1.0**
MANT	**Manisa**	**0.95**	**129**	*e*P	**Pg**	**13 33 18.9**	**-1.0**
GONE	**Gonen-Balikesi**	**0.96**	**3**	*e*PG	**Pg**	**13 33 19.3**	**-0.8**
GONE	**Gonen-Balikesi**	**0.96**	**3**	*e*Pg	**Pg**	**13 33 19.3**	**-0.8**
KULA	**Kula-Manisa**	**1.00**	**125**	*e*PG	**Pg**	**13 33 20.4**	**-0.4**
KULA	**Kula-Manisa**	**1.00**	**125**	*e*Pg	**Pg**	**13 33 20.4**	**-0.4**
URLA	**Izmir**	**1.08**	**228**	*i*P	**Pg**	**13 33 22.3**	**-0.2**
URLA	**Izmir**	**1.08**	**228**	*i*P	**Pg**	**13 33 22.3**	**-0.2**
KRBG	**Karabiga-Canak**	**1.32**	**349**	*e*PN	**Pn**	**13 33 25.6**	**-0.8**
KRBG	**Karabiga-Canak**	**1.32**	**349**	*e*Pn	**Pn**	**13 33 25.6**	**-0.8**
ORLT	**Orhaneli**	**1.37**	**46**	*e*PN	**Pn**	**13 33 27.2**	**+0.1**
ORLT	**Orhaneli**	**1.37**	**46**	*e*Pn	**Pn**

WRA	**Warramunga Arr**	**72.52**	**112**	P	P	14 23 14.3	+0.4
	0.8nm,0.9s,baz=296,slow=5.4,SNR=5.3						
ASAR	**Alice Springs**	**72.89**	**116**	P	P	14 23 15.9	-0.3
	0.8nm,0.8s,baz=290,slow=5.8,SNR=7.5						
PETK	**Petropavlovsk-**	**88.46**	**37**	LR	LR	15 07 26.6	
	comp=Z,23nm,19.4s,baz=58,slow=38						

*ISCJB **18** 14:26:32.9±1.0,51.48N±0.09×172.97W±0.08,h37km, mb3.4/3,Error ellipse: s-maj=13.6km s-min=6.7km az=3.7*
*NEIC **18** 14:26:37.4,51.55N×173.45W,h17km, ML3.2(AEIC), After AEIC.*
*IDC **18** 14:26:41.7±8.3,52.20N×173.11W,h77km±46km,mb3.1/3, mb1 3.4/6,mb1mx3.1/31,mbtmp3.3/6,ML3.3/3,Error ellipse: s-maj=172.4km s-min=24.0km az=165.0*

ISC 18 14:26:34.4±1.4,51.5N±0.1×173.11W±0.06,h37km,n13, σ1§33/15,mb3.4/3,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**0.96**	**316**	P	**Pn**	**14 26 51.1**	**-0.2**
ATKA				S	**Sn**	**14 27 01.5**	**-2.2**
KOFP	**Korovin Flat P**	**0.98**	**321**	P	**Pn**	**14 26 52.5**	**+0.9**
KOSE	**Korovin Southe**	**1.01**	**325**	P	**Pn**	**14 26 52.8**	**+0.7**
KOSE				S	**Sn**	**14 27 05.5**	**+0.4**
KOWE	**Korovin West**	**1.10**	**321**	P	**Pn**	**14 26 54.8**	**+1.5**
KOWE				S	**Sn**	**14 27 08.3**	**+0.9**
OKTU	**Okmok Mt. Tuli**	**3.62**	**57**	P	Pn	14 27 35.2	+7.3
UNV	**Unalaska Valle**	**4.64**	**57**	*e*Pn	**Pn**	**14 27 42.3**	**+0.4**
UNV				*e*Sn	**Sn**	**14 28 35.9**	**+1.5**
AMKA	**Amchitka**	**4.75**	**271**	P	Pn	14 27 43.8	+0.5
AMKA				*e*Pn	Pn	14 27 44.6	+1.3
FX1	**Attu Island--F**	**8.55**	**285**	P	Pn	14 28 40.7	+5.3
	0.4nm,0.3s,baz=254,slow=15,SNR=4.5						
PETK	**Petropavlovsk-**	**17.87**	**287**	P	**P**	**14 30 41.8**	**+1.6**
	0.1nm,0.3s,baz=99,slow=12,SNR=3.9						
ILAR	**Eielson Array**	**18.98**	**36**	P	**P**	**14 30 50.2**	**-2.1**
	0.2nm,0.3s,baz=228,slow=9.4,SNR=21						
INK	**Inuvik**	**25.33**	**34**	P	**P**	**14 31 55.9**	**-1.4**
	1.8nm,0.7s,baz=254,slow=9.8,SNR=14						
YKA	**Yellowknife Ar**	**32.53**	**47**	P	**P**	**14 33 00.8**	**-0.5**
	0.1nm,0.4s,baz=270,slow=8.0,SNR=4.8						
MKAR	**Makanchi Array**	**62.67**	**312**	P	**P**	**14 36 54.9**	**-0.1**
	0.1nm,0.3s,baz=53,slow=5.7,SNR=5.0						

IDC 18 14:35:14.6±6.1,2.38N×95.80E,h0km,mb3.7/3,mb1 3.7/5, mb1mx3.4/28,mbtmp3.6/5,ML3.3/2,MS3.7/2,Ms1 3.7/2, ms1mx2.7/51,Error ellipse: s-maj=129.3km s-min=38.6km az=21.0,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**3.15**	**82**	Pn	Pn	14 36 05.6	-0.1
	1.7nm,0.3s,baz=253,slow=8.3,SNR=5.2						
CMAR	**Chiang Mai Arr**	**16.27**	**11**	Pn	Pn	14 39 05.1	+0.3
	0.1nm,0.3s,baz=201,slow=9.7,SNR=5.0						
MKAR	**Makanchi Array**	**45.78**	**347**	P	P	14 43 37.6	-0.4
	0.6nm,0.6s,baz=160,slow=7.7,SNR=10						
KURBB	**Kurchatov Arra**	**50.24**	**346**	P	P	14 44 13.3	+0.9
	0.6nm,0.7s,baz=164,slow=7.4,SNR=8.6						
ZALV	**Zalesovo Beam**	**52.19**	**352**	P	P	14 44 26.2	-0.9
	0.8nm,0.4s,baz=166,slow=7.8,SNR=7.2						
KMBO	**Kilima Mbogo**	**58.63**	**267**	LR	LR	15 05 53.0	
	comp=Z,56nm,20.1s,baz=95,slow=31						
ASF	**Jabal al Asfar**	**62.64**	**305**	LR	LR	15 12 27.9	
	comp=Z,57nm,18.8s,baz=225,slow=36						

IDC 18 14:37:16.4±1.8,5.18N×127.17E,h0km,mb3.5/5, mb1 3.7/5,mb1mx3.5/24,mbtmp3.6/5,Error ellipse: s-maj=97.6km s-min=23.3km az=68.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**23.18**	**184**	P	P	14 42 24.6	-0.4
	0.6nm,0.6s,baz=344,slow=7.4,SNR=2.8						
WRA	**Warramunga Arr**	**25.94**	**164**	P	P	14 42 50.3	-0.4
	1.6nm,0.5s,baz=345,slow=10,SNR=22						
ASAR	**Alice Springs**	**29.41**	**167**	P	P	14 43 23.0	+1.1
	0.1nm,0.4s,baz=343,slow=7.5,SNR=5.3						
STKA	**Stephens Creek**	**39.33**	**160**	P	P	14 44 47.2	-0.4
	0.8nm,0.4s,baz=330,slow=9.8,SNR=5.6						
MKAR	**Makanchi Array**	**56.63**	**325**	P	P	14 47 01.3	-0.1
	0.2nm,0.4s,baz=123,slow=7.7,SNR=7.4						

*NIED **18** 14:53:00,33.90N×137.30E,h400km,Mw4.3 Best double couple: M0 3.34000×10^15 NP1:φs144.00000°, δ89.00000°,λ46.00000°. NP2:φs53.00000°,δ44.00000°, λ179.00000°.*
*ISCJB **18** 14:53:48.4±0.3,33.90N±0.05×137.24E±0.05, h361km±2km,mb3.6/17,Error ellipse: s-maj=8.3km s-min=5.7km az=149.4*
*JMA **18** 14:53:48.2±0.2,33.88N×137.29E,h363km±2km,M3.8*
*IDC **18** 14:53:49.3±0.5,33.83N×137.21E,h352km±5km,mb3.4/17, mb1 3.6/23,mb1mx3.5/33,mbtmp3.5/23,Error ellipse: s-maj=9.3km s-min=8.0km az=110.0*

ISC 18 14:53:49.3±0.6,33.92N±0.06×137.24E±0.05,h354km±5km, n65,σ1§29/85,mb3.6/17,8C-11D,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTO3	**TONANKAI O.B.S**	**0.14**	**113**	↑P	**Pn**	**14 54 34.1**	**+0.7**
TTO2	**TONANKAI O.B.S**	**0.25**	**223**	↑P	**Pn**	**14 54 34.0**	**+0.7**
TTO2				S	**S**	**14 55 10.9**	**+2.3**
TTO4	**TONANKAI O.B.S**	**0.27**	**70**	P	**Pn**	**14 54 34.2**	**+0.9**
TTO4				S	**S**	**14 55 10.4**	**+1.8**
TK01	**Tokai 1**	**0.33**	**118**	S	**S**	**14 55 10.1**	**+1.4**
TK02	**Tokai 2**	**0.43**	**86**	P	**Pn**	**14 54 34.4**	**+0.8**
TK02				*e*S	**S**	**14 55 11.1**	**+2.0**
TTO1	**TONANKAI O.B.S**	**0.48**	**232**	↑P	**Pn**	**14 54 34.2**	**+0.5**
TTO5	**TONANKAI O.B.S**	**0.52**	**50**	↓P	**Pn**	**14 54 34.7**	**+0.9**
JIE	**Ise**	**0.64**	**317**	↑P	**Pn**	**14 54 34.8**	**+0.5**
JIE				S	**S**	**14 55 10.0**	**-0.4**
JKN2	**Miekihoku**	**0.86**	**292**	↑P	**Pn**	**14 54 35.2**	**+0.2**
JKN2				S	**S**	**14 55 10.7**	**-0.9**
HMMJ	**Hamamatsu 2**	**1.02**	**23**	↓P	**Pn**	**14 54 35.9**	**+0.4**
HMMJ				S	**S**	**14 55 12.5**	**-0.1**
JWZ	**Kozaga**	**1.33**	**253**	↑P	**Pn**	**14 54 36.7**	**-0.3**
JWZ				S	**S**	**14 55 13.7**	**-1.5**
JAO	**Obara**	**1.34**	**1**	↓P	**Pn**	**14 54 37.8**	**+0.8**
JAO				*e*S	**S**	**14 55 16.0**	**+0.6**
JWY	**Kouya**	**1.40**	**283**	↑P	**Pn**	**14 54 37.8**	**+0.4**
JWY				S	**S**	**14 55 15.0**	**-1.0**
JEG	**Eigenji**	**1.40**	**330**	P	**Pn**	**14 54 38.2**	**+0.9**
JEG				*e*S	**S**	**14 55 15.8**	**-0.1**
JNY	**Yasuok**	**1.52**	**20**	↓P	**Pn**	**14 54 38.5**	**+0.5**
JGM	**Miyama**	**1.83**	**347**	↓P	**Pn**	**14 54 40.5**	**+0.7**
JGM				S	**S**	**14 55 20.4**	**0.0**
JYN	**Shimob**	**1.91**	**34**	P	**Pn**	**14 54 40.5**	**+0.1**
JOD2	**Odawara 2**	**2.03**	**48**	↓P	**Pn**	**14 54 41.2**	**0.0**
JWT	**Wachi**	**2.04**	**312**	↑P	**Pn**	**14 54 41.7**	**+0.5**
JWT				S	**S**	**14 55 21.8**	**-1.1**
JHJ	**Hachijo jima 2**	**2.27**	**110**	P	**Pn**	**14 54 42.7**	**-0.3**
	47nm,0.3s,baz=238,slow=3.8,SNR=23						
JHJ				S	**S**	**14 55 28.6**	**+2.5**
	36nm,0.3s,baz=69,slow=21,SNR=3.5						
JAI	**Aioi**	**2.32**	**268**	P	**Pn**	**14 54 43.4**	**+0.1**
JAI				S	**S**	**14 55 25.6**	**-1.1**
JRY	**Ryogami san**	**2.50**	**33**	↓P	**Pn**	**14 54 45.1**	**+0.4**
JHU	**Hanno**	**2.56**	**41**	↓P	**Pn**	**14 54 45.0**	**-0.1**
MAT	**Matsushiro**	**2.73**	**17**	P	**Pn**	**14 54 46.6**	**0.0**
MAT				S	**S**	**14 55 31.4**	**-1.4**
MAT	**Matsushiro**	**2.73**	**17**	P	**Pn**	**14 54 46.7**	**+0.1**
MJAR	**Matsushiro Arr**	**2.73**	**17**	P	**Pn**	**14 54 46.6**	**-0.1**
	16nm,0.3s,baz=166,slow=9.2,SNR=339						
MJAR				S	**S**	**14 55 31.9**	**-0.8**
	1.1nm,0.3s,baz=195,slow=16,SNR=9.2						
BSO4	**Boso 4**	**2.78**	**67**	↓P	**Pn**	**14 54 46.0**	**-0.9**
BSO3	**Boso 3**	**2.85**	**71**	P	**Pn**	**14 54 45.8**	**-1.5**
JAG	**Ashikaga**	**3.09**	**35**	↓P	**Pn**	**14 54 48.6**	**-1.1**
BSO1	**Boso 1**	**3.18**	**76**	P	**Pn**	**14 54 48.1**	**-1.9**
JYT	**Yasato**	**3.34**	**46**	P	**Pn**	**14 54 50.5**	**-1.5**
JHO	**Hitachi**	**3.83**	**44**	↓P	**Pn**	**14 54 55.2**	**-1.5**
JNU	**Nakatsue**	**5.37**	**263**	P	**Pn**	**14 55 13.4**	**+0.2**
	1.0nm,0.3s,baz=44,slow=9.0,SNR=24						
JNU				S	**S**	**14 56 21.5**	**+0.3**
	baz=92,slow=16,SNR=3.2						

KSRS	**Korea Array**	**8.36**	**298**	P	**Pn**	**14 55 48.8**	**+1.2**
	1.1nm,0.3s,baz=113,slow=12,SNR=71						
KSRS				S	**S**	**14 57 28.9**	**+4.6**
	baz=106,slow=23,SNR=6.0						
ASAJ	**Asahikawa**	**11.00**	**21**	P	P	**14 56 19.5**	**0.0**
	2.3nm,0.3s,baz=222,slow=10.0,SNR=51						
ASAJ				S	**S**	**14 58 17.1**	**-4.9**
	0.8nm,0.3s,baz=67,slow=26,SNR=8.7						
USRK	**Ussuriysk Arra**	**11.04**	**340**	P	**P**	**14 56 20.4**	**+0.5**
	4.0nm,0.3s,baz=160,slow=11,SNR=66						
PETK	**Petropavlovsk-**	**24.10**	**31**	P	**P**	**14 58 35.7**	**+1.7**
	1.2nm,0.5s,baz=200,slow=5.8,SNR=13						
SONM	**Songino Array**	**26.94**	**310**	P	**P**	**14 59 00.9**	**+1.4**
	2.7nm,0.8s,baz=113,slow=9.7,SNR=7.6						
CMAR	**Chiang Mai Arr**	**37.41**	**256**	P	**P**	**15 00 29.4**	**-0.5**
	2.2nm,0.7s,baz=48,slow=8.2,SNR=16						
ZALV	**Zalesovo Beam**	**41.60**	**315**	ScP	**ScP**	**15 06 08.2**	**-0.6**
	0.2nm,0.3s,baz=85,slow=3.7,SNR=4.3						
KAPI	**Kappang**	**42.11**	**207**	P	**P**	**15 01 06.6**	**-1.5**
	8.0nm,0.4s,baz=326,slow=9.9,SNR=4.1						
TAPN	**Taplejung**	**42.78**	**275**	*e*P	**P**	**15 01 13.1**	**-0.8**
	3.5nm,0.4s						
MKAR	**Makanchi Array**	**42.97**	**304**	P	**P**	**15 01 15.2**	**+0.5**
	1.6nm,0.7s,baz=91,slow=9.9,SNR=20						
MKAR				ScP	**ScP**	**15 06 13.6**	**-0.9**
	0.6nm,0.9s,baz=59,slow=5.9,SNR=4.1						
ODAN	**Odare**	**43.23**	**274**	*e*P	**P**	**15 01 14.3**	**-3.0**
	7.0nm,0.3s						
RAMN	**Ramite**	**43.85**	**275**	*e*P	**P**	**15 01 19.7**	**-2.5**
	21nm,0.7s						
GUN	**Gumba**	**44.10**	**277**	*e*P	**P**	**15 01 23.9**	**-0.4**
	9.8nm,0.7s						
PKIN	**Phulchoki**	**44.62**	**276**	*e*P	**P**	**15 01 27.7**	**-0.6**
KKN	**Kakani**	**44.63**	**277**	*e*P	**P**	**15 01 27.7**	**-0.7**
DMN	**Daman**	**44.84**	**277**	*e*P	**P**	**15 01 28.9**	**-1.1**
	11nm,0.9s						
DANN	**Dangsing**	**45.69**	**278**	*e*P	**P**	**15 01 36.6**	**0.0**
	29nm,0.5s						
KOLN	**Koldanda**	**46.03**	**277**	*e*P	**P**	**15 01 38.0**	**-1.2**
PYUN	**Piuthan**	**46.41**	**278**	*e*P	**P**	**15 01 41.1**	**-1.0**
	16nm,0.6s						
FITZ	**Fitzroy Crossi**	**52.90**	**194**	P	**P**	**15 02 29.5**	**-0.7**
	0.7nm,0.5s,baz=19,slow=7.0,SNR=10.0						
WRA	**Warramunga Arr**	**53.63**	**183**	P	**P**	**15 02 34.3**	**-1.2**
	1.3nm,0.4s,baz=360,slow=7.7,SNR=36						
ILAR	**Eielson Array**	**53.93**	**31**	P	**P**	**15 02 37.5**	**+0.4**
	0.6nm,0.5s,baz=248,slow=5.3,SNR=32						
ASAR	**Alice Springs**	**57.35**	**184**	P	**P**	**15 03 00.8**	**-1.0**
	0.8nm,0.6s,baz=355,slow=4.6,SNR=21						
ARCES	**ARCESS Array B**	**65.69**	**339**	P	**P**	**15 03 56.8**	**+0.5**
	3.5nm,1.0s,baz=64,slow=8.2,SNR=7.7						
YKA	**Yellowknife Ar**	**68.18**	**28**	P	**P**	**15 04 12.7**	**+0.7**
	0.8nm,0.6s,baz=299,slow=6.1,SNR=24						
FINES	**FINESS Array B**	**69.95**	**332**	P	**P**	**15 04 22.9**	**+0.2**
	2.6nm,0.6s,baz=53,slow=5.9,SNR=33						
NB2	**NORSAR Subarra**	**75.69**	**336**	P	**P**	**15 04 56.2**	**0.0**
	comp=Z,0.9nm,0.6s,baz=43,slow=5.9						
NOA	**NORSAR Array B**	**75.69**	**336**	P	**P**	**15 04 56.4**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=47,slow=5.2,SNR=5.1						
NVAR	**Mina Array Bea**	**79.59**	**51**	P	**P**	**15 05 19.9**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=299,slow=4.6,SNR=9.9						
PDAR	**Pinedale Array**	**82.27**	**43**	P	**P**	**15 05 33.0**	**+0.8**
	comp=Z,1.3nm,0.9s,baz=297,slow=2.9,SNR=9.5						
GERES	**GERESS Array B**	**83.48**	**326**	P	**P**	**15 05 39.0**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=40,slow=3.8,SNR=2.8						
TXAR	**Lajitas Array**	**94.72**	**50**	P	**P**	**15 06 32.6**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=294,slow=3.9,SNR=6.5						

IDC 18 14:53:59.4±0.9,13.17N×144.07E,h140km±10km,mb3.4/8, mb1 3.6/8,mb1mx3.3/26,mbtmp3.4/8,MS3.0/1,Ms1 3.0/1, ms1mx2.2/21,Error ellipse: s-maj=33.0km s-min=16.9km az=92.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.89**	**62**	P	Pn	14 54 23.4	+1.2
	86nm,0.3s,baz=302,slow=19,SNR=159						
GUMO				S	Sn	14 54 40.1	+0.5
	162nm,0.3s,baz=3.7,slow=23,SNR=24						
JNU	**Nakatsue**	**23.23**	**331**	P	P	14 58 54.9	+0.7
	2.8nm,0.9s,baz=176,slow=13,SNR=3.0						
WRA	**Warramunga Arr**	**34.27**	**196**	P	P	15 00 31.5	-0.7
	0.2nm,0.6s,baz=14,slow=9.2,SNR=5.7						
ASAR	**Alice Springs**	**37.93**	**195**	P	P	15 01 03.8	+0.4
	0.3nm,1.0s,baz=14,slow=13,SNR=3.1						
PETK	**Petropavlovsk-**	**41.30**	**12**	LR	LR	15 18 53.2	
	comp=Z,21nm,19.6s,baz=4.9,slow=36						
MKAR	**Makanchi Array**	**61.25**	**316**	P	P	15 03 59.5	-0.2
	0.3nm,0.4s,baz=91,slow=9.4,SNR=6.5						
YKA	**Yellowknife Ar**	**83.59**	**27**	P	P	15 06 11.9	+0.2
	0.1nm,0.3s,baz=287,slow=5.0,SNR=4.0						
NVAR	**Mina Array Bea**	**87.79**	**51**	P	P	15 06 33.8	+0.6
	0.5nm,0.5s,baz=266,slow=6.3,SNR=4.1						
VNDA	**Vanda**	**91.10**	**176**	P	P	15 06 47.2	-0.3
	0.6nm,0.3s,baz=350,slow=4.3,SNR=16						
FINES	**FINESS Array B**	**91.21**	**335**	P	P	15 06 47.0	-1.4
	3.8nm,0.9s,baz=60,slow=5.5,SNR=3.3						

*IDC **18** 15:02:40.2±24.0,18.87S×173.38W,h0km,mb4.4/4, mb1 4.5/4,mb1mx3.9/21,mbtmp4.4/4,Error ellipse: s-maj=448.1km s-min=150.9km az=73.0*

NEIC 18 15:02:25.9±7.1,18.66S×171.29W,h10km,mb4.6/2,Error ellipse: s-maj=138.0km s-min=21.6km az=85.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**12.15**	**209**	*e*Pn	Pn	15 05 19.2	-0.1
CTA	**Charters Tower**	**40.00**	**261**	P	P	15 10 01.4	+0.1
CTA	**Charters Tower**	**40.00**	**261**	P	P	15 10 01.4	+0.1
	4.0nm,0.4s,baz=86,slow=11,SNR=12						
CTAO	**Charters Tower**	**40.00**	**261**	*e*P	P	15 10 00.8	-0.4
STKA	**Stephens Creek**	**44.27**	**243**	P	P	15 10 36.3	+0.3
STKA	**Stephens Creek**	**44.27**	**243**	P	P	15 10 36.3	+0.3
	1.7nm,0.7s,baz=89,slow=11,SNR=4.9						
AS31	**Alice Springs**	**51.12**	**254**	*e*P	P	15 11 28.4	-0.7
ASAR	**Alice Springs**	**51.10**	**254**	P	P	15 11 29.6	+0.4
ASAR	**Alice Springs**	**51.10**	**254**	P	P	15 11 29.6	+0.4
	3.6nm,0.5s,baz=91,slow=8.3,SNR=129						
WRAB	**Tennant Creek**	**51.13**	**259**	*e*P	P	15 11 29.4	-0.1
	2.0nm,0.3s						
WRA	**Warramunga Arr**	**51.14**	**259**	P	P	15 11 30.0	+0.6
WRA	**Warramunga Arr**	**51.14**	**259**	P	P	15 11 30.0	+0.6
	2.0nm,0.3s,baz=96,slow=7.6,SNR=180						
MBWA	**Marble Bar**	**64.43**	**255**	*e*P	P	15 13 02.7	-0.2
	4.7nm,0.7s						

JMA 18 15:09:38.0,38.94N×140.88E,h6km±1km,M0.5,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.27**	**87**	P	Pg	15 09 43.2	0.0
JMK				S	Sg	15 09 46.7	0.0
JRG	**Rokugo**	**0.49**	**337**	S	Sg	15 09 54.7	+0.6
JOU	**Okura**	**0.60**	**196**	P	Pg	15 09 49.6	0.0
JOM	**Ohasama**	**0.62**	**31**	P	Pg	15 09 49.5	-0.5
JOM				S	Sg	15 09 57.8	-0.3

JMA 18 15:10:30.1±0.1,36.50N×137.65E,h2km±1km,M0.9, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTT	**Ttatey**	**0.28**	**292**	P	Pg	15 10 36.3	+0.9
JTT				*e*S	Sg	15 10 40.8	+1.7
JNG	**Nsakai**	**0.38**	**104**	P	Pg	15 10 37.6	+0.2
JNG				S	Sg	15 10 42.7	+0.3
JGN	**Niukaw**	**0.39**	**224**	P	Pg	15 10 37.8	+0.2
JGN				S	Sg	15 10 43.3	+0.6
MAT	**Matsushiro**	**0.45**	**84**	P	Pg	15 10 38.7	-0.1
MAT				S	Sg	15 10 44.7	0.0
MAT	**Matsushiro**	**0.45**	**84**	P	Pg	15 10 38.9	+0.1
MAT				S	Sg	15 10 44.7	0.0

IDC 18 15:13:38.5±1.2,4.03N×126.93E,h0km,mb3.6/6, mb1 3.7/6,mb1mx3.5/24,mbtmp3.6/6,1D,Error ellipse: s-maj=95.4km s-min=18.0km az=71.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**4.15**	**320**	↓*i*P	Pb	15 14 49.4	-3.0
FITZ	**Fitzroy Crossi**	**22.02**	**183**	P	P	15 18 34.9	+0.1
	1.5nm,0.9s,baz=12,slow=12,SNR=5.0						
WRA	**Warramunga Arr**	**24.91**	**163**	P	P	15 19 03.0	-0.4
	1.3nm,0.8s,baz=344,slow=9.8,SNR=14						
ASAR	**Alice Springs**	**28.35**	**166**	P	P	15 19 34.4	-0.1
	0.2nm,0.5s,baz=345,slow=7.0,SNR=7.0						
STKA	**Stephens Creek**	**38.34**	**160**	P	P	15 21 01.5	+0.3
	0.6nm,0.4s,baz=338,slow=10,SNR=3.5						
SONM	**Songino Array**	**47.08**	**341**	P	P	15 22 12.5	+0.2
	0.5nm,0.4s,baz=142,slow=7.3,SNR=2.5						
MKAR	**Makanchi Array**	**57.43**	**325**	P	P	15 23 28.7	-0.4
	0.4nm,0.5s,baz=121,slow=8.5,SNR=8.1						

*CSEM **18** 15:25:42.4,42.31N×13.50E,h10km,MD2.6/23,After ROM*

ROM 18 15:25:42.4±0.1,42.31N×13.50E,h10km,Md2.6/23, Ml2.2/20,Error ellipse: s-maj=0.9km s-min=0.6km az=58.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.08**	**124**	Pg	Pg	15 25 45.1	+0.2
FAGN				Sg	Sg	15 25 47.1	+0.5
	3µm,0.4s						
FAGN	**Fagnano**	**0.08**	**124**	Pg	Pg	15 25 45.1	+0.2
FAGN				Sg	Sg	15 25 47.1	+0.5
	3µm,0.4s						
AQU	**L'Aquila**	**0.08**	**302**	Pg	Pg	15 25 45.4	+0.5
AQU				Sg	Sg	15 25 47.3	+0.5
	1µm,0.5s						
AQU	**L'Aquila**	**0.08**	**302**	Pg	Pg	15 25 45.4	+0.5
AQU				Sg	Sg	15 25 47.3	+0.5
	1µm,0.5s						
CAMP	**Campotosto**	**0.23**	**344**	Pg	Pg	15 25 47.8	+0.3
CAMP				Sg	Sg	15 25 51.5	+0.6
	272nm,0.7s						
CAMP	**Campotosto**	**0.23**	**344**	Pg	Pg	15 25 47.8	+0.3
CAMP				Sg	Sg	15 25 51.5	+0.6
	272nm,0.7s						
VCEL	**Villa Celiera**	**0.27**	**72**	Pg	Pg	15 25 48.4	+0.3
VCEL				Sg	Sg	15 25 53.0	+1.2
	679nm,0.5s						
VCEL	**Villa Celiera**	**0.27**	**72**	Pg	Pg	15 25 48.4	+0.3
VCEL				Sg	Sg	15 25 53.0	+1.2
	679nm,0.5s						
FIAM	**Fiamignano**	**0.28**	**262**	Pg	Pg	15 25 48.9	+0.6
FIAM				Sg	Sg	15 25 53.3	+1.0
	403nm,0.5s						
FIAM	**Fiamignano**	**0.28**	**262**	Pg	Pg	15 25 48.9	+0.6
FIAM				Sg	Sg	15 25 53.3	+1.0
	403nm,0.5s						
PTQR	**Pietraquaria**	**0.30**	**194**	Pg	Pg	15 25 49.0	+0.5
PTQR				Sg	Sg	15 25 53.7	+1.1
	51nm,0.2s						
PTQR	**Pietraquaria**	**0.30**	**194**	Pg	Pg	15 25 49.0	+0.5
PTQR				Sg	Sg	15 25 53.7	+1.1
	51nm,0.2s						
TERO	**Teramo**	**0.32**	**14**	Pg	Pg	15 25 49.1	+0.1
TERO				Sg	Sg	15 25 54.5	+1.1
	297nm,0.3s						
TERO	**Teramo**	**0.32**	**14**	Pg	Pg	15 25 49.1	+0.1
TERO				Sg	Sg	15 25 54.5	+1.1
	297nm,0.3s						
INTR	**Introdacqua**	**0.42**	**134**	Pg	Pg	15 25 51.2	+0.3
INTR				Sg	Sg	15 25 57.5	+0.9
	189nm,0.4s						
INTR	**Introdacqua**	**0.42**	**134**	Pg	Pg	15 25 51.2	+0.3
INTR				Sg	Sg	15 25 57.5	+0.9
	189nm,0.4s						
LNSS	**Leonessa**	**0.45**	**311**	Pg	Pg	15 25 51.6	+0.2
LNSS				Sg	Sb	15 25 58.5	-0.9
	179nm,0.4s						
LNSS	**Leonessa**	**0.45**	**311**	Pg	Pg	15 25 51.6	+0.2
LNSS				Sg	Sb	15 25 58.5	-0.9
	179nm,0.4s						
VVLD	**Villa Vallelon**	**0.45**	**168**	Pg	Pg	15 25 51.5	+0.2
VVLD				Sg	Sb	15 25 59.2	-0.1
	237nm,0.5s						
VVLD	**Villa Vallelon**	**0.45**	**168**	Pg	Pg	15 25 51.5	+0.2
VVLD				Sg	Sb	15 25 59.2	-0.1
	237nm,0.5s						
CERT	**Cerreto**	**0.53**	**227**	Pg	Pg	15 25 52.8	0.0
	223nm,0.5s						
CERT	**Cerreto**	**0.53**	**227**	Pg	Pg	15 25 52.8	0.0
	223nm,0.5s						
GUAR	**Guarcino**	**0.53**	**195**	Pg	Pg	15 25 52.9	0.0
	132nm,0.4s						
GUAR	**Guarcino**	**0.53**	**195**	Pg	Pg	15 25 52.9	0.0
	132nm,0.4s						
LPEL	**Lama dei Pelig**	**0.57**	**117**	Pg	Pg	15 25 53.9	+0.2
LPEL				Sg	Sb	15 26 02.2	-0.7

*GCMT **18** 15:29:25.8±0.3,23.34S×68.55W,h146km±2km,MW5.1, Moment Tensor Solution. s41,c49; s70,c105; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.40±.17; $M_{\theta\theta}$0.07±.23; $M_{\phi\phi}$3.33±.23; $M_{r\theta}$2.43±.14; $M_{r\phi}$-5.40±.18; $M_{\theta\phi}$-0.40±.18; Best double couple: $M_0$6.60000×10^{16} NP1:ϕ_s182.00000°, δ54.00000°,λ-27.00000°. NP2:ϕ_s288.00000°,δ69.00000°, λ-141.00000°. Principal axes: T 7.6300, Plg9.0000°, Azm52.0000°; N -2.1200, Plg46.0000°, Azm312.0000°; P -5.5100, Plg42.0000°, Azm151.0000°; Data Used: II IU IC G CN.*

ISC 18 15:29:19.9±0.3,23°29S±0'.04×68°42W±0'.04,h116km±2km, h116km:pP-P,n529,σ1°20/856,mb4.8/51,260C-222D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
SPCH	**San Pedro de A**	**0.43**	**29**	⇓*i*P		**Pn**	**15 29 37.3**	**-0.2**
SPCH				*i* S		**Sn**	**15 29 50.6**	**0.0**
SPCH	**San Pedro de A**	**0.43**	**29**	⇓*i*P		**Pn**	**15 29 37.3**	**-0.2**
SPCH				*i* S		**Sn**	**15 29 50.6**	**0.0**
SPCH				AML	AML		15 29 51.3	
	comp=E,281μm,0.5s							
PB04	**Plate Boundary**	**1.42**	**316**	AML	AML		15 30 14.2	
	comp=N,68μm,0.7s							
CEN1	**Los Morros**	**1.64**	**266**	⇓*i*P		**Pn**	**15 29 49.0**	**+0.1**
CEN1				*i* S		**Sn**	**15 30 11.2**	**+0.3**
CEN1	**Los Morros**	**1.64**	**266**	⇓*i*P		**Pn**	**15 29 49.0**	**+0.1**
CEN1				*i* S		**Sn**	**15 30 11.2**	**+0.3**
CEN1				AML	AML		15 30 13.3	
	comp=N,32μm,0.6s							
MACH	**Maria Elena**	**1.64**	**311**	⇓*i*P		**Pn**	**15 29 47.6**	**-1.5**
MACH				*i* S		**Sn**	**15 30 09.0**	**-2.2**
MACH	**Maria Elena**	**1.64**	**311**	⇓*i*P		**Pn**	**15 29 47.6**	**-1.5**
MACH				*i* S		**Sn**	**15 30 09.0**	**-2.2**
PB09	**Plate Boundary**	**1.67**	**333**	⇓*i*P		**Pn**	**15 29 48.7**	**-0.6**
PB09				*i* S		**Sn**	**15 30 10.4**	**-1.2**
PB09				AML	AML		15 30 18.6	
	comp=E,77μm,0.5s							
ANCH	**Antofagasta**	**1.87**	**257**	⇑*i*P		**Pn**	**15 29 50.4**	**-1.1**
ANCH				*i* S		**Sn**	**15 30 13.2**	**-2.5**
ANCH	**Antofagasta**	**1.87**	**257**	⇑*i*P		**Pn**	**15 29 50.4**	**-1.1**
ANCH				*i* S		**Sn**	**15 30 13.2**	**-2.5**
ANCH				AML	AML		15 30 18.8	
	comp=E,77μm,0.7s							
MECH	**Mejillones**	**1.87**	**275**	⇑*i*P		**Pn**	**15 29 50.2**	**-1.4**
MECH				*i* S		**Sn**	**15 30 13.3**	**-2.5**
MECH	**Mejillones**	**1.87**	**275**	⇑*i*P		**Pn**	**15 29 50.2**	**-1.4**
MECH				*i* S		**Sn**	**15 30 13.3**	**-2.5**
PB01	**Plate Boundary**	**2.44**	**336**	*i* P		**Pn**	**15 29 57.0**	**-1.9**
PB01				*i* S		**Sn**	**15 30 26.4**	**-2.5**
PB01				AML	AML		15 30 30.3	
	comp=E,20μm,0.5s							
HMBC	**Humberston**	**3.29**	**335**	AML	AML		15 31 17.9	
	comp=E,11μm,0.6s							
LCO	**Las Campanas**	**6.06**	**199**	*e*Pn		Pn	15 30 43.5	-3.8
LPAZ	**La Paz**	**6.97**	**2**	P		**Pn**	**15 30 59.4**	**-0.6**
LPAZ				S		**Sn**	**15 32 19.4**	**+1.2**
LPAZ	**La Paz**	**6.97**	**2**	P		**Pn**	**15 30 59.4**	**-0.6**
	comp=E,49nm,0.3s,baz=175,slow=8.2,SNR=807							
LPAZ				S		**Sn**	**15 32 19.4**	**+1.2**
	comp=E,4.5nm,0.3s,baz=289,slow=25,SNR=2.3							
CFAA	**Coronel Fontan**	**8.29**	**179**	P		**Pn**	**15 31 15.1**	**-2.2**
CFAA				S		Sn	15 32 40.5	-8.7
CFAA	**Coronel Fontan**	**8.29**	**179**	P		**Pn**	**15 31 15.1**	**-2.2**
	comp=E,6.1nm,0.3s,baz=351,slow=13,SNR=408							
CFAA				S		Sn	15 32 40.5	-8.7
	comp=E,3.3nm,0.3s,baz=276,slow=18,SNR=6.4							
SIV	**San Ignacio**	**10.03**	**45**	P		Pn	15 31 37.2	-3.8
SIV				S		Sn	15 33 20.2	-11
SIV	**San Ignacio**	**10.03**	**45**	P		Pn	15 31 37.2	-3.8
	comp=E,86nm,0.3s,baz=240,slow=11,SNR=262							
SIV				S		Sn	15 33 20.2	-11
	comp=E,9.1nm,0.3s,baz=258,slow=16,SNR=7.7							
CPUP	**Villa Florida**	**10.52**	**109**	P		**Pn**	**15 31 45.7**	**-1.8**
CPUP	**Villa Florida**	**10.52**	**109**	P		**Pn**	**15 31 45.7**	**-1.8**
	comp=E,2.6nm,0.3s,baz=270,slow=11,SNR=18							
NNA	**Nana**	**13.80**	**323**	P		**Pn**	**15 32 29.7**	**-1.1**
NNA				S		**Sn**	**15 35 00.2**	**-2.9**
NNA	**Nana**	**13.80**	**323**	P		**Pn**	**15 32 29.7**	**-1.1**
	comp=E,1.1nm,0.3s,baz=192,slow=11,SNR=5.3							
NNA				S		**Sn**	**15 35 00.2**	**-2.9**
	comp=E,1.7nm,0.3s,baz=166,slow=17,SNR=3.4							
TRQA	**Tornquist**	**15.72**	**161**	*e*Pn		**Pn**	**15 32 51.6**	**-3.3**
	comp=E,158nm,1.4s							
PLCA	**Paso Flores**	**17.49**	**185**	P		**P**	**15 33 15.8**	**-0.1**
	comp=E,18nm,0.9s							
PLCA				S		**S**	**15 36 33.1**	**+1.2**
PLCA	**Paso Flores**	**17.49**	**185**	P		**P**	**15 33 15.8**	**-0.1**
	comp=E,1.5nm,0.3s,baz=16,slow=13,SNR=22							
PLCA				S		**S**	**15 36 33.1**	**+1.2**
	comp=E,0.1nm,0.3s,baz=356,slow=19,SNR=1.4							
ATAH	**Atahualpa**	**18.70**	**328**	P		**P**	**15 33 30.5**	**+0.6**
ATAH	**Atahualpa**	**18.70**	**328**	P		**P**	**15 33 30.5**	**+0.6**
	comp=E,1.2nm,0.3s,baz=158,slow=7.0,SNR=25							
BDFB	**Brasilia**	**20.68**	**72**	P		**P**	**15 33 49.6**	**-1.2**
BDFB				S		**S**	**15 37 31.3**	**-4.4**
BDFB	**Brasilia**	**20.68**	**72**	P		**P**	**15 33 49.6**	**-1.2**
	comp=E,158nm,0.8s,baz=245,slow=11,SNR=169							
BDFB				S		**S**	**15 37 31.3**	**-4.4**
	comp=E,5.5nm,0.5s,baz=239,slow=12,SNR=2.2							
BDFB				LR		LR	15 43 35.1	
	comp=E,540nm,18.2s,baz=333,slow=42							
CAM4	**Nova Friburgo**	**23.84**	**93**	⇑*i*P		**P**	**15 34 21.4**	**-1.4**
CAM4				*i*			15 34 22.4	
CAM4				*i*			15 34 25.0	
CAM4				*i*			15 34 28.2	
CAM4				*i*			15 34 31.1	
CAM4				*i*			15 34 34.6	
CAM4				*i*			15 34 51.5	
USHA	**Ushuaia**	**31.50**	**180**	P		**P**	**15 35 31.0**	**+0.5**
USHA	**Ushuaia**	**31.50**	**180**	P		**P**	**15 35 31.0**	**+0.5**
	comp=E,6.6nm,0.7s,baz=347,slow=7.4,SNR=6.8							
SDV	**Santo Domingo**	**32.05**	**356**	*e*P		**P**	**15 35 35.9**	**0.0**
	comp=E,8.7nm,0.8s							
RCBR	**Riachuelo**	**35.81**	**66**	P		**P**	**15 36 06.3**	**-2.1**
RCBR	**Riachuelo**	**35.81**	**66**	P		**P**	**15 36 06.3**	**-2.1**
	comp=E,24nm,0.9s,baz=235,slow=11,SNR=8.6							
JTS	**JuntasAbangare**	**37.09**	**332**	P		**P**	**15 36 18.6**	**-0.6**
JTS				*e*pP		**pP**	**15 36 47.6**	**+2.4**
JTS	**JuntasAbangare**	**37.09**	**332**	P		**P**	**15 36 18.6**	**-0.6**
	comp=E,2.1nm,0.4s,baz=325,slow=17,SNR=4.2							
MVM	**Montagne Vaucl**	**38.32**	**12**	*e*P		**P**	**15 36 32.4**	**+2.8**
FDF	**Fort de France**	**38.45**	**11**	*e*P		**P**	**15 36 33.2**	**+2.6**
CRPR	**Cabo Rojo, PR**	**41.06**	**2**	*e*P		**P**	**15 36 51.2**	**-0.9**
	comp=E,89nm,0.4s							
CELP	**Cerrillos**	**41.15**	**3**	*e*P		**P**	**15 36 50.6**	**-2.2**
SJG	**San Juan**	**41.21**	**3**	P		**P**	**15 36 55.2**	**+1.9**
SJG	**San Juan**	**41.21**	**3**	P		**P**	**15 36 55.2**	**+1.9**
	comp=E,36nm,0.8s,baz=177,slow=2.7,SNR=10.0							
HUMP	**Col San Antoni**	**41.25**	**4**	*e*P		**P**	**15 36 55.6**	**+1.9**
	comp=E,19nm,0.4s							
MPR	**Mayaguez**	**41.27**	**2**	*e*P		P	15 36 58.7	+4.9
	comp=E,24nm,0.6s							
AOPR	**Arecibo Observ**	**41.41**	**2**	*e*P		**P**	**15 36 58.1**	**+3.1**
	comp=E,53nm,0.4s							
TIGA	**Tifton**	**56.32**	**344**	⇓P		**P**	**15 38 50.4**	**+1.8**
	baz=57							
VNA3	**Neumayer Olymp**	**58.25**	**161**	*e*P		**P**	**15 39 02.8**	**+1.0**
VNA1	**Neumayer--Stat**	**58.46**	**160**	*e*P		**P**	**15 39 04.8**	**+1.6**
VNA2	**Neumayer--Watz**	**58.82**	**160**	*e*P		**P**	**15 39 06.9**	**+1.1**
	baz=294,slow=7.9							
CPCT	**Cooper Cave**	**60.38**	**345**	*e*P		**P**	**15 39 16.7**	**-0.1**
TKL	**Tuckaleechee C**	**60.40**	**346**	*e*P		**P**	**15 39 16.7**	**-0.3**
TKL				*e*pP		**pP**	**15 39 50.0**	**+4.8**
SNAA	**Sanae**	**60.45**	**161**	*e*P		**P**	**15 39 17.6**	**+0.6**
SNAA	**Sanae**	**60.45**	**161**	*e*P		**P**	**15 39 17.3**	**+0.3**
	comp=E,128nm,1.5s							
SNAA	**Sanae**	**60.45**	**161**	P		**P**	**15 39 17.5**	**+0.5**
	comp=E,6.3nm,0.5s,baz=284,slow=6.6,SNR=197							
SWET	**Sewanee**	**60.51**	**344**	*e*P		**P**	**15 39 16.9**	**-0.9**
	comp=E,29nm,0.9s							
632A	**Uvalde**	**60.54**	**329**	⇓P		**P**	**15 39 18.1**	**0.0**
	baz=61							
631A	**Perdido Creek**	**60.85**	**328**	⇓P		**P**	**15 39 20.0**	**-0.2**
	baz=61							
631A				⇑pP		**pP**	**15 39 48.1**	**-0.3**
	baz=61,SNR=8.8							
532A	**Rocksprings**	**61.12**	**329**	⇓P		**P**	**15 39 22.3**	**+0.3**
	baz=61							
532A				⇓pP		**pP**	**15 39 50.2**	**-0.1**
	baz=61							
JCT	**Junction City**	**61.36**	**329**	*e*P		**P**	**15 39 23.5**	**-0.1**
	comp=E,19nm,0.8s							
JCT				*e*pP		**pP**	**15 39 52.0**	**0.0**
JCT	**Junction City**	**61.36**	**329**	⇓P		**P**	**15 39 23.6**	**-0.1**
	baz=62							
JCT				⇓pP		**pP**	**15 39 51.7**	**-0.2**
	baz=62,SNR=5.1							
531A	**Rocksprings**	**61.45**	**328**	⇓P		**P**	**15 39 24.8**	**+0.6**
	baz=62,SNR=6.5							
531A				⇑pP		**pP**	**15 39 53.6**	**+1.1**
	baz=62,SNR=8.1							
WHTX	**Lake Whitney**	**61.58**	**332**	⇓P		**P**	**15 39 25.1**	**+0.1**
	baz=62							
WHTX				⇑pP		**pP**	**15 39 53.3**	**-0.1**
	baz=62							
432A	**Menard**	**61.69**	**329**	⇑P		**P**	**15 39 25.7**	**-0.1**
	baz=62,SNR=8.3							
432A				pP		**pP**	**15 39 54.1**	**0.0**
	baz=62,SNR=6.4							
530A	**J-C Ranch, Com**	**61.83**	**328**	⇓P		**P**	**15 39 26.3**	**-0.5**
	baz=62							
530A				pP		**pP**	**15 39 55.5**	**+0.4**
	baz=62,SNR=7.8							
431A	**Sonora**	**61.91**	**329**	⇑P		**P**	**15 39 27.5**	**+0.2**
	baz=62							
431A				⇑pP		**pP**	**15 39 55.5**	**-0.2**
	baz=62							
628A	**Black Gap, Mar**	**62.07**	**326**	⇓P		**P**	**15 39 29.0**	**+0.7**
	baz=62,SNR=9.3							
628A				pP		**pP**	**15 39 57.8**	**+1.0**
	baz=62,SNR=5.5							
332A	**Millersview**	**62.09**	**330**	⇑P		**P**	**15 39 28.5**	**+0.1**
	baz=62,SNR=7.4							
332A				pP		**pP**	**15 39 56.9**	**+0.1**
	baz=62,SNR=5.7							
529A	**Stev Forest Ra**	**62.24**	**327**	⇑P		**P**	**15 39 30.2**	**+0.7**
	baz=63,SNR=12							
529A				pP		**pP**	**15 39 58.6**	**+0.6**
	baz=63,SNR=10.0							
MIAR	**Mount Ida**	**62.28**	**337**	*e*P		**P**	**15 39 29.1**	**-0.6**
	comp=E,23nm,1.0s							
MIAR				*e*pP		**pP**	**15 39 57.4**	**-0.6**
627A	**Terlingua Ranc**	**62.30**	**326**	⇑P		**P**	**15 39 30.5**	**+0.4**
	baz=63							
627A				⇑pP		**pP**	**15 39 58.2**	**-0.2**
	baz=63							
430A	**Baggett Ranch,**	**62.30**	**328**	⇑P		**P**	**15 39 29.7**	**-0.2**
	baz=63							
430A				⇓pP		**pP**	**15 39 57.5**	**-0.8**
	baz=63							
331A	**San Angelo**	**62.35**	**329**	⇓P		**P**	**15 39 30.1**	**-0.1**
	baz=63							
331A				⇑pP		**pP**	**15 39 58.1**	**-0.5**
	baz=63							
TXAR	**Lajitas Array**	**62.35**	**325**	P		**P**	**15 39 29.9**	**-0.4**
TXAR				pP		**pP**	**15 39 58.9**	**+0.2**
TXAR	**Lajitas Array**	**62.35**	**325**	P		**P**	**15 39 29.9**	**-0.4**
	comp=E,0.5nm,0.5s,baz=132,slow=8.9,SNR=9.0							
TXAR				pP		**pP**	**15 39 58.9**	**+0.2**
	comp=E,1.3nm,0.7s,baz=152,slow=8.6,SNR=5.5							
429A	**Davenport Ranc**	**62.49**	**328**	⇓P		**P**	**15 39 31.7**	**+0.4**
	baz=63,SNR=5.6							
429A				pP		**pP**	**15 40 00.0**	**+0.4**
	baz=63,SNR=6.9							
626A	**Big Bend Ranch**	**62.77**	**325**	⇓P		**P**	**15 39 34.2**	**+1.1**
	baz=63,SNR=18							
626A				pP		**pP**	**15 40 02.5**	**+1.0**
	baz=63,SNR=6.0							
330A	**Mertzon**	**62.78**	**329**	⇑P		**P**	**15 39 33.9**	**+0.8**
	baz=63							
330A				⇑pP		**pP**	**15 40 01.1**	**-0.5**
	baz=63							
428A	**Kincaid Ranch,**	**62.97**	**327**	⇑P		**P**	**15 39 34.9**	**+0.5**
	baz=63							
527A	**Woodward Ranch**	**62.97**	**326**	⇑P		**P**	**15 39 34.9**	**+0.4**
	baz=63							
527A				⇓pP		**pP**	**15 40 03.1**	**+0.1**
	baz=63							
ABTX	**Abilene, Hawle**	**63.09**	**331**	⇑P		**P**	**15 39 35.2**	**+0.1**
	baz=63							
ABTX				⇓pP		**pP**	**15 40 03.3**	**-0.2**
	baz=63							
526A	**Mary Lane Ranc**	**63.15**	**325**	⇑P		**P**	**15 39 36.5**	**+0.8**
	baz=64,SNR=12							
526A				⇑pP		**pP**	**15 40 04.7**	**+0.6**
	baz=64							
329A	**Wagon Wheel Ra**	**63.24**	**328**	⇑P		**P**	**15 39 37.1**	**+0.9**
	baz=64							
329A				⇓pP		**pP**	**15 40 03.7**	**-1.0**
	baz=64							
427A	**Hayter Ranch,**	**63.43**	**327**	⇑P		**P**	**15 39 37.9**	**+0.4**
	baz=64							
427A				⇑pP		**pP**	**15 40 06.0**	**+0.1**
	baz=64							
131A	**Roby**	**63.47**	**330**	⇑P		**P**	**15 39 37.5**	**-0.1**
	baz=64,SNR=5.7							
131A				pP		**pP**	**15 40 05.7**	**-0.4**
	baz=64,SNR=5.8							
328A	**Wristen Ranch,**	**63.56**	**327**	⇓P		**P**	**15 39 38.6**	**+0.3**
	baz=64							
328A				pP		**pP**	**15 40 07.1**	**+0.3**
	baz=64,SNR=5.3							
Z32A	**Haskell**	**63.59**	**331**	⇓P		**P**	**15 39 39.1**	**+0.7**
	baz=64							
Z32A				⇑pP		**pP**	**15 40 06.9**	**0.0**
	baz=64							
426A	**McDonald Obser**	**63.60**	**326**	⇑P		**P**	**15 39 39.3**	**+0.5**
	baz=64,SNR=6.9							
426A				⇓pP		**pP**	**15 40 06.4**	**-0.9**
	baz=64							
130A	**Snyder**	**63.67**	**330**	⇓P		**P**	**15 39 38.9**	**0.0**
	baz=64							
130A				pP		**pP**	**15 40 07.5**	**0.0**
	baz=64,SNR=5.0							
SIUC	**Southern Illin**	**63.75**	**342**	*e*pP		pP	15 40 07.1	-0.7
Z31A	**Sharp Cattle R**	**63.90**	**331**	⇓P		**P**	**15 39 40.5**	**+0.1**
	baz=64,SNR=5.7							
Z31A				⇑pP		**pP**	**15 40 08.8**	**-0.1**
	baz=64							
228A	**UT Block 9, Go**	**64.05**	**328**	⇓P		**P**	**15 39 42.3**	**+0.8**
	baz=64							
228A				⇓pP		**pP**	**15 40 09.6**	**-0.4**
	baz=64							
326A	**Caldwell Ranch**	**64.09**	**326**	⇑P		**P**	**15 39 42.1**	**+0.3**
	baz=64,SNR=5.4							
326A				⇓pP		**pP**	**15 40 10.7**	**+0.4**
	baz=64							
129A	**Stewart Farms,**	**64.12**	**329**	⇑P		**P**	**15 39 42.8**	**+0.8**
	baz=64							
129A				⇑pP		**pP**	**15 40 10.0**	**-0.5**
	baz=64							
Y32A	**R-V Farms, Ver**	**64.17**	**332**	⇓P		**P**	**15 39 42.2**	**+0.1**
	baz=64							
Y32A				⇑pP		**pP**	**15 40 10.3**	**-0.3**
	baz=64							
425A	**Indio Mountain**	**64.19**	**325**	⇑P		**P**	**15 39 42.9**	**+0.4**
	baz=64,SNR=6.8							
425A				pP		**pP**	**15 40 11.6**	**+0.5**
	baz=64,SNR=6.5							
Z30A	**Sanderson Ranc**	**64.32**	**330**	⇓P		**P**	**15 39 42.9**	**-0.3**
	baz=65,SNR=8.0							
Z30A				⇓pP		**pP**	**15 40 11.4**	**-0.4**
	baz=65							
TUL1	**Tulsa**	**64.32**	**336**	⇓P		**P**	**15 39 42.7**	**-0.3**
	baz=65							
TUL1				⇓pP		**pP**	**15 40 11.1**	**-0.5**
	baz=65							
128A	**Castleberry Fa**	**64.41**	**328**	⇓P		**P**	**15 39 43.7**	**-0.2**
	baz=65							
128A				⇓pP		**pP**	**15 40 11.9**	**-0.4**
	baz=65							
Y31A	**Rekieta Farm,**	**64.49**	**331**	⇑P		**P**	**15 39 44.4**	**+0.1**
	baz=65,SNR=5.9							
Y31A				pP		**pP**	**15 40 12.6**	**-0.2**
	baz=65,SNR=6.0							
Z29A	**Hungry Hill Ra**	**64.57**	**329**	⇓P		**P**	**15 39 44.5**	**-0.3**
	baz=65							
Z29A				⇓pP		**pP**	**15 40 12.1**	**-1.3**
	baz=65							
ACSO	**Alum Creek Sta**	**64.63**	**348**	*e*P		**P**	**15 39 44.0**	**-1.0**
	comp=E,14nm,0.8s							
ACSO				*e*pP		**PcP**	**15 40 15.9**	**-2.0**
325A	**Bean Ranch, Si**	**64.65**	**326**	⇓P		**P**	**15 39 45.9**	**+0.4**
	baz=65,SNR=18							
325A				pP		**pP**	**15 40 14.3**	**+0.2**
	baz=65,SNR=7.0							
226B	**Tecolote Peak,**	**64.80**	**327**	⇑P		**P**	**15 39 47.3**	**+0.9**
	baz=65,SNR=10							
226B				⇑pP		**pP**	**15 40 15.7**	**+0.7**
	baz=65							
127A	**Arkansas Junct**	**64.88**	**328**	⇓P		**P**	**15 39 48.2**	**+1.2**
	baz=65							
Z28A	**Tucker Farm, M**	**64.91**	**329**	⇑P		**P**	**15 39 47.6**	**+0.5**
	baz=65							
Z28A				⇓pP		**pP**	**15 40 15.1**	**-0.6**
	baz=65							
X31A	**McDonald Ranch**	**64.93**	**332**	⇑P		**P**	**15 39 47.0**	**-0.1**
	baz=65,SNR=9.4							
X31A				⇓pP		**pP**	**15 40 15.3**	**-0.4**
	baz=65							
324A	**Moseley Ranch,**	**64.97**	**325**	⇓P		**P**	**15 39 47.1**	**-0.4**
	baz=65,SNR=10							
324A				pP		**pP**	**15 40 15.9**	**-0.3**
	baz=65,SNR=5.8							
GDL2	**Guadalupe Moun**	**65.00**	**327**	*e*P		**P**	**15 39 48.2**	**+0.5**
GDL2				*e*pP		**pP**	**15 40 17.0**	**+0.7**
Y29A	**Porterfield Fa**	**65.05**	**330**	⇑P		**P**	**15 39 47.6**	**-0.3**
	baz=65,SNR=5.1							
Y29A				⇓pP		**pP**	**15 40 15.9**	**-0.6**
	baz=65							
MNTX	**Cornudas Mount**	**65.12**	**326**	⇑P		**P**	**15 39 48.1**	**-0.3**
	baz=65,SNR=8.6							
MNTX				⇓pP		**pP**	**15 40 16.5**	**-0.4**
	baz=65							
MNTX				⇓pP		**pP**	**15 40 16.5**	**-0.4**
	baz=65							
225A	**Deer Hill, Car**	**65.16**	**326**	⇑P		**P**	**15 39 49.3**	**+0.5**
	baz=66,SNR=11							
225A				⇑pP		**pP**	**15 40 16.8**	**-0.6**
	baz=66							
X30A	**Coker Ranch, T**	**65.17**	**331**	⇓P		**P**	**15 39 48.7**	**0.0**
	baz=66							
X30A				⇑pP		**pP**	**15 40 16.7**	**-0.6**
	baz=66							
126A	**Clayton Basin,**	**65.18**	**327**	⇑P		**P**	**15 39 49.2**	**+0.4**
	baz=66							
Z27A	**Tatum**	**65.33**	**328**	⇑P		**P**	**15 39 49.8**	**0.0**
	baz=66,SNR=8.8							
Z27A				⇑pP		**pP**	**15 40 17.8**	**-0.6**
	baz=66							
Y28A	**McKinney Farm,**	**65.36**	**329**	⇓pP		pP	15 40 17.9	-0.7
	baz=66							
W31A	**Holland Ranch,**	**65.39**	**332**	⇓P		**P**	**15 39 50.5**	**+0.5**
	baz=66							
W31A				⇓pP		**pP**	**15 40 18.1**	**-0.5**
	baz=66							
224A	**Cornudas Mount**	**65.49**	**326**	⇓P		**P**	**15 39 50.8**	**-0.1**
	baz=66,SNR=11							
224A				⇑pP		**pP**	**15 40 19.4**	**-0.1**
	baz=66							
125A	**Gardner Draw,**	**65.51**	**327**	⇓P		**P**	**15 39 50.8**	**-0.2**
	baz=66,SNR=8.3							
125A				⇓pP		**pP**	**15 40 19.2**	**-0.5**
	baz=66							
X29A	**Tulia**	**65.55**	**330**	⇓P		**P**	**15 39 51.7**	**+0.5**
	baz=66							
MSTX	**Muleshoe**	**65.65**	**329**	⇓P		**P**	**15 39 51.8**	**-0.1**
	baz=66,SNR=8.2							
MSTX				⇑pP		**pP**	**15 40 20.2**	**-0.3**
	baz=66							
Z26A	**Caprock**	**65.67**	**328**	⇑P		**P**	**15 39 52.3**	**+0.3**
	baz=66,SNR=12							
Y27A	**Causey**	**65.77**	**329**	⇑P		**P**	**15 39 52.3**	**-0.3**
	baz=66,SNR=7.6							
Y27A				⇓pP		**pP**	**15 40 20.8**	**-0.5**
	baz=66							
X28A	**Dimmitt**	**65.84**	**330**	⇑pP		pP	15 40 21.8	+0.1
	baz=66							
AMTX	**Amarillo**	**65.90**	**330**	⇓P		**P**	**15 39 53.8**	**+0.4**
	baz=66							
124A	**Stringfield Ra**	**65.95**	**326**	⇓P		**P**	**15 39 54.4**	**+0.4**
	baz=66,SNR=11							
Z25A	**Roswell**	**66.04**	**327**	⇓P		**P**	**15 39 54.3**	**-0.1**
	baz=66,SNR=7.8							
V30A	**Spur Ranch, Mi**	**66.20**	**332**	⇓P		**P**	**15 39 57.0**	**+1.8**
	baz=66							
222A	**Williams Famil**	**66.34**	**325**	⇓P		**P**	**15 39 57.4**	**+1.1**
	baz=67							
Z24A	**Sheeppen Canyo**	**66.41**	**327**	⇑P		**P**	**15 39 57.2**	**+0.4**
	baz=67,SNR=11							
Z24A				⇓pP		**PcP**	**15 40 25.8**	**+0.1**
	baz=67							
Y25A	**Mesa, Roswell**	**66.54**	**328**	⇑P		**P**	**15 39 57.4**	**-0.2**
	baz=67,SNR=7.8							
Y25A				⇑pP		**PcP**	**15 40 25.8**	**-0.3**
	baz=67							
X26A	**CR and CF Fran**	**66.62**	**329**	⇑P		**P**	**15 39 58.2**	**+0.1**
	baz=67							
X26A				⇑pP		**pP**	**15 40 26.8**	**0.0**
	baz=67							
221A	**Mesquite Ranch**	**66.63**	**324**	⇓P		**P**	**15 39 59.8**	**+1.6**
	baz=67							
W27A	**Bowe Ranch, En**	**66.69**	**329**	⇑pP		pP	15 40 26.9	-0.3
	baz=67							
122A	**Conniff Cattle**	**66.75**	**325**	⇑P		**P**	**15 40 00.4**	**+1.5**
	baz=67							
Z23A	**Rita Site, Whi**	**66.79**	**326**	⇑P		**P**	**15 40 00.1**	**+0.9**
	baz=67,SNR=5.9							
Z23A				⇑pP		**pP**	**15 40 28.7**	**+0.8**
	baz=67							
U30A	**WK&E Inc. Balk**	**66.83**	**332**	⇓P		**P**

V24A	**Rampart Ranch,**	**68.27**	**328**	⇓P		**P**	**15 40 09.2 +0.6**
	baz=69,SNR=12						
V24A				⇑pP		**pP**	**15 40 37.8 +0.4**
	baz=69						
U25A	**Circle Dot Ran**	**68.41**	**329**	⇓P		**P**	**15 40 09.9 +0.6**
	baz=69,SNR=9.6						
U25A				pP		**pP**	**15 40 38.8 +0.6**
	baz=69,SNR=5.6						
Y20A	**Horse Springs,**	**68.41**	**325**	⇓P		**P**	**15 40 11.3 +1.7**
	baz=69,SNR=7.1						
Y20A				⇑pP		**pP**	**15 40 39.8 +1.4**
	baz=69						
LIC	**Lamto**	**68.47**	**73**	⇑*i*P		**P**	**15 40 09.9 -0.1**
	comp=E,19nm,0.7s,baz=258						
LIC	**Lamto**	**68.47**	**73**	⇑*i*P		**P**	**15 40 09.9 -0.1**
	comp=E,19nm,0.7s						
TUC	**Tucson**	**68.52**	**322**	*ep*P		pP	15 40 39.9 +1.1
X21A	**Alamocita Cree**	**68.52**	**326**	⇓P		**P**	**15 40 11.9 +1.7**
	baz=69,SNR=10						
W22A	**Albuquerque**	**68.54**	**327**	⇑P		**P**	**15 40 11.9 +1.6**
	baz=69						
W22A				⇑pP		**pP**	**15 40 40.6 +1.5**
	baz=69						
T26A	**Comanche Natio**	**68.66**	**330**	⇑P		**P**	**15 40 11.7 +0.8**
	baz=69,SNR=11						
T26A				⇑pP		**pP**	**15 40 40.1 +0.3**
	baz=69						
V23A	**Ortiz Mt. (NFS**	**68.73**	**328**	⇓P		**P**	**15 40 13.0 +1.6**
	baz=69						
V23A				⇑pP		**pP**	**15 40 41.7 +1.4**
	baz=69						
SCIA	**State Center**	**68.81**	**340**	*ep*P		pP	15 40 39.9 -0.4
DBIC	**Dimbokro**	**68.82**	**73**	P		**P**	**15 40 11.5 -0.7**
DBIC				pP		**pP**	**15 40 39.8 -1.3**
DBIC	**Dimbokro**	**68.82**	**73**	P		**P**	**15 40 11.5 -0.7**
	comp=E,26nm,0.9s,baz=210,slow=7.4,SNR=22						
DBIC				pP		**pP**	**15 40 39.8 -1.3**
	comp=E,8.0nm,0.5s,baz=229,slow=6.9,SNR=2.9						
DBIC				LR		LR	16 08 33.3
	comp=E,132nm,19.8s,baz=190,slow=34						
X20A	**Quemado**	**68.97**	**325**	⇓P		**P**	**15 40 13.9 +1.0**
	baz=69,SNR=6.7						
X20A				⇑pP		**pP**	**15 40 43.0 +1.2**
	baz=69						
W21A	**San Fidel**	**68.97**	**326**	⇑P		**P**	**15 40 14.6 +1.6**
	baz=69,SNR=5.4						
W21A				⇓pP		**pP**	**15 40 42.9 +1.1**
	baz=69						
S26A	**Kim**	**68.98**	**331**	⇑P		**P**	**15 40 14.0 +1.1**
	baz=69,SNR=15						
S26A				pP		**pP**	**15 40 42.3 +0.6**
	baz=69,SNR=6.8						
T25A	**Trinidad**	**69.01**	**330**	⇑P		**P**	**15 40 14.0 +0.9**
	baz=69,SNR=5.6						
T25A				⇑pP		**pP**	**15 40 42.6 +0.6**
	baz=69						
U23A	**El Rito**	**69.20**	**328**	⇓P		**P**	**15 40 15.6 +1.3**
	baz=70						
U23A				⇓pP		**pP**	**15 40 44.1 +0.9**
	baz=70						
V22A	**San Miguel Ran**	**69.23**	**327**	⇑P		**P**	**15 40 15.5 +1.0**
	baz=70,SNR=8.9						
V22A				pP		**pP**	**15 40 45.0 +1.6**
	baz=70,SNR=5.5						
R27A	**Eads**	**69.23**	**332**	⇑P		**P**	**15 40 14.6 +0.3**
	baz=70						
T24A	**Torres, Weston**	**69.26**	**329**	P		**P**	**15 40 15.4 +0.7**
	baz=70,SNR=5.1						
T24A				⇓pP		**pP**	**15 40 44.7 +1.1**
	baz=70						
W20A	**Ramah**	**69.42**	**326**	⇑P		**P**	**15 40 16.5 +0.7**
	baz=70,SNR=7.0						
W20A				pP		**pP**	**15 40 45.8 +1.1**
	baz=70,SNR=5.3						
214A	**Organ Pipe Nat**	**69.42**	**321**	⇑P		**P**	**15 40 16.6 +1.1**
	baz=70,SNR=6.9						
214A				pP		**pP**	**15 40 46.1 +1.7**
	baz=70,SNR=9.5						
S25A	**Robets Cordova**	**69.45**	**330**	⇑P		**P**	**15 40 16.2 +0.5**
	baz=70,SNR=11						
S25A				⇑pP		**pP**	**15 40 45.5 +0.9**
	baz=70						
R26A	**Arlington**	**69.53**	**331**	⇑P		**P**	**15 40 16.3 +0.1**
	baz=70,SNR=12						
R26A				pP		**pP**	**15 40 45.5 +0.4**
	baz=70,SNR=8.4						
U22A	**Llaves**	**69.56**	**328**	⇑P		**P**	**15 40 18.0 +1.4**
	baz=70,SNR=5.9						
T23A	**Casias Ranch,**	**69.69**	**329**	⇑pP		pP	15 40 47.3 +1.0
	baz=70						
X18A	**Snowflake**	**69.73**	**324**	⇑P		**P**	**15 40 18.8 +1.2**
	baz=70						
X18A				⇓pP		**pP**	**15 40 47.8 +1.3**
	baz=70						
KSCO	**Kaye Shedlock'**	**69.76**	**332**	⇑P		**P**	**15 40 17.8 +0.2**
	baz=70						
KSCO				⇑pP		**pP**	**15 40 47.1 +0.6**
	baz=70						
R25A	**Fountain Ranch**	**69.77**	**331**	⇓P		**P**	**15 40 17.9 +0.2**
	baz=70,SNR=5.5						
R25A				⇑pP		**pP**	**15 40 47.0 +0.4**
	baz=70						
S24A	**Houchin Ranch,**	**69.79**	**330**	⇓P		**P**	**15 40 18.9 +0.8**
	baz=70,SNR=11						
S24A				⇓pP		**pP**	**15 40 48.2 +1.2**
	baz=70						
V20A	**Brimhall**	**69.92**	**326**	⇑P		**P**	**15 40 19.3 +0.6**
	baz=70						
V20A				⇓pP		**pP**	**15 40 48.7 +1.0**
	baz=70						
U21A	**Nageezi**	**70.00**	**327**	⇑P		**P**	**15 40 20.0 +0.7**
	baz=70,SNR=8.0						
U21A				pP		**pP**	**15 40 49.5 +1.3**
	baz=70,SNR=5.1						
BGNE	**Belgrade**	**70.03**	**337**	⇓P		**P**	**15 40 18.6 -0.4**
	baz=70,SNR=13						
BGNE				pP		**pP**	**15 40 48.2 +0.2**
	baz=70,SNR=8.0						
W18A	**Petrified Fore**	**70.06**	**325**	⇑P		**P**	**15 40 20.4 +0.8**
	baz=70						
W18A				⇓pP		**pP**	**15 40 49.8 +1.3**
	baz=70						
Q26A	**Hugo**	**70.07**	**332**	⇑pP		pP	15 40 49.3 +0.8
	baz=70						
T22A	**Edith**	**70.09**	**328**	⇓pP		pP	15 40 50.1 +1.3
	baz=70						
R24A	**Sanders Place,**	**70.22**	**330**	⇑pP		pP	15 40 50.8 +1.4
	baz=70						
T21A	**Navajo Lake**	**70.38**	**328**	⇓pP		pP	15 40 51.7 +1.2
	baz=71						
U20A	**Newcomb**	**70.40**	**327**	⇓pP		pP	15 40 51.7 +1.1
	baz=71						
X16A	**Lo Mia Camp, P**	**70.45**	**323**	⇑P		**P**	**15 40 23.0 +1.0**
	baz=71,SNR=7.6						
X16A				pP		**pP**	**15 40 52.8 +1.8**
	baz=71,SNR=5.6						
R23A	**Moffat**	**70.52**	**329**	⇑P		**P**	**15 40 22.9 +0.5**
	baz=71,SNR=8.6						
R23A				⇑pP		**pP**	**15 40 52.4 +0.9**
	baz=71						
P26A	**Davis Ranch, A**	**70.52**	**332**	⇓pP		pP	15 40 52.0 +0.8
	baz=71						
113A	**Mohawk Valley,**	**70.57**	**321**	⇑pP		pP	15 40 52.6 +1.2
	baz=71						
S22A	**4UR Ranch, Cre**	**70.64**	**329**	⇓P		**P**	**15 40 24.0 +0.8**
	baz=71,SNR=5.2						
O27A	**Beecher Island**	**70.68**	**333**	pP		pP	15 40 53.3 +1.1
	baz=71,SNR=7.2						
Q24A	**Divide**	**70.83**	**330**	⇑P		**P**	**15 40 24.8 +0.5**
	baz=71,SNR=10						
Q24A				pP		**pP**	**15 40 54.0 +0.7**
	baz=71,SNR=7.4						
P25A	**Willow Gulch B**	**70.84**	**331**	⇑pP		pP	15 40 54.4 +1.1
	baz=71						
Y14A	**Wickenburg**	**70.97**	**322**	⇑P		**P**	**15 40 26.3 +1.3**
	baz=71						
Y14A				⇑pP		**pP**	**15 40 55.5 +1.5**
	baz=71						
R22A	**Saguache, Gunn**	**70.99**	**329**	⇓P		**P**	**15 40 26.7 +1.3**
	baz=71						
MVCO	**Mesa Verde**	**71.03**	**327**	*e*P		**P**	**15 40 26.2 +0.6**
	comp=E,93nm,1.9s						
MVCO				*ep*P		**pP**	**15 40 55.3 +0.8**
MVCO	**Mesa Verde**	**71.03**	**327**	⇑P		**P**	**15 40 26.6 +1.1**
	baz=71,SNR=6.9						
MVCO				⇓pP		**pP**	**15 40 55.7 +1.1**
	baz=71						
S21A	**Coal Bank Pass**	**71.04**	**328**	⇓P		**P**	**15 40 26.8 +1.2**
	baz=71,SNR=12						
S21A				⇑pP		**pP**	**15 40 55.7 +1.0**
	baz=71						
O26A	**Horse Wrangler**	**71.07**	**332**	⇑pP		pP	15 40 55.7 +1.1
	baz=71						
OGNE	**Ogallala**	**71.13**	**334**	⇑pP		pP	15 40 55.5 +0.7
	baz=72						
WUAZ	**Wupatki**	**71.24**	**324**	⇓P		**P**	**15 40 27.9 +1.2**
	baz=72,SNR=10.0						
WUAZ				pP		**pP**	**15 40 57.5 +1.8**
	baz=72,SNR=5.8						
GLA	**Glamis**	**71.39**	**320**	*ep*P		pP	15 40 58.3 +1.7
GLA	**Glamis**	**71.39**	**320**	⇓pP		pP	15 40 58.0 +1.4
	baz=72						
S20A	**Disappointment**	**71.45**	**328**	⇓P		**P**	**15 40 29.6 +1.6**
	baz=72,SNR=10.0						
S20A				⇓pP		**pP**	**15 40 58.6 +1.5**
	baz=72						
R21A	**Cimarron**	**71.48**	**328**	⇑P		**P**	**15 40 29.5 +1.3**
	baz=72,SNR=8.0						
R21A				pP		**pP**	**15 40 58.5 +1.3**
	baz=72,SNR=5.4						
P23A	**Jefferson**	**71.48**	**330**	⇑P		**P**	**15 40 29.5 +1.2**
	baz=72						
ECSD	**EROS Data Cent**	**71.54**	**339**	*e*P		**P**	**15 40 27.3 -0.8**
	comp=E,25nm,1.3s						
Q22A	**Crested Butte,**	**71.56**	**329**	⇓P		**P**	**15 40 29.8 +1.0**
	baz=72,SNR=6.8						
Y12C	**Blythe**	**71.71**	**321**	⇑P		**P**	**15 40 31.3 +1.9**
	baz=72						
Y12C				⇓pP		**pP**	**15 41 00.2 +1.8**
	baz=72						
ISCO	**Idaho Springs**	**71.72**	**331**	⇑P		**P**	**15 40 30.6 +0.9**
	baz=72						
ISCO				⇓pP		**pP**	**15 40 59.7 +1.0**
	baz=72						
R20A	**Redvale**	**71.74**	**328**	⇓P		**P**	**15 40 31.4 +1.6**
	baz=72,SNR=15						
R20A				pP		**pP**	**15 41 00.5 +1.7**
	baz=72,SNR=7.1						
O24A	**Longmont**	**71.74**	**331**	⇑P		**P**	**15 40 31.0 +1.4**
	baz=72						
SMCO	**Snowmass**	**71.84**	**329**	*e*P		**P**	**15 40 31.4 +0.8**
	comp=E,10nm,0.8s						
Q21A	**Lamborn Mesa,**	**71.86**	**329**	⇓P		**P**	**15 40 31.7 +1.3**
	baz=72						
P22A	**Eagle**	**72.08**	**330**	⇑pP		pP	15 41 02.0 +1.2
	baz=72						
S18A	**Hurst Farm, Bl**	**72.16**	**326**	⇓P		**P**	**15 40 33.2 +0.9**
	baz=72,SNR=14						
S18A				⇓pP		**pP**	**15 41 02.8 +1.4**
	baz=72						
BC3	**Big Chuckawall**	**72.19**	**320**	⇓P		**P**	**15 40 33.3 +0.9**
	baz=72,SNR=5.8						
BC3				pP		**pP**	**15 41 03.1 +1.6**
	baz=72,SNR=7.1						
O23A	**Lake Granby, G**	**72.19**	**331**	⇓P		**P**	**15 40 33.7 +1.3**
	baz=72,SNR=8.7						
O23A				pP		**pP**	**15 41 02.8 +1.3**
	baz=72,SNR=5.2						
MONP	**Monument Peak**	**72.23**	**319**	⇓P		**P**	**15 40 34.3 +1.6**
	baz=72						
MONP				⇓pP		**pP**	**15 41 03.3 +1.5**
	baz=72						
BAR	**Barrett**	**72.24**	**319**	*e*P		**P**	**15 40 34.4 +1.8**
BAR				*ep*P		**pP**	**15 41 03.2 +1.6**
W13A	**Hualapai Mount**	**72.31**	**322**	⇑P		**P**	**15 40 35.1 +1.9**
	baz=73						
P21A	**Newcastle**	**72.34**	**329**	⇓P		**P**	**15 40 34.8 +1.5**
	baz=73,SNR=16						
P21A				pP		**pP**	**15 41 04.0 +1.6**
	baz=73,SNR=5.9						
IRM	**Iron Mountain**	**72.37**	**321**	⇑P		**P**	**15 40 35.0 +1.6**
	baz=73,SNR=6.4						
IRM				pP		**pP**	**15 41 04.1 +1.7**
	baz=73,SNR=6.6						
M25A	**Palm-Egli Farm**	**72.38**	**333**	⇑pP		pP	15 41 03.5 +1.0
	baz=73						
U15A	**North Rim**	**72.41**	**324**	⇓P		**P**	**15 40 35.9 +2.1**
	baz=73,SNR=11						
U15A				pP		**pP**	**15 41 05.0 +2.1**
	baz=73,SNR=6.7						
O22A	**Kremling**	**72.44**	**330**	⇑P		**P**	**15 40 35.0 +1.0**
	baz=73,SNR=14						
O22A				pP		**pP**	**15 41 03.9 +0.8**
	baz=73,SNR=7.6						
L26A	**Underwood Farm**	**72.47**	**334**	⇑P		**P**	**15 40 36.1 +2.2**
	baz=73						
L26A				⇓pP		**pP**	**15 41 04.2 +1.2**
	baz=73						
K27A	**Flueckinger Fa**	**72.69**	**335**	⇑P		**P**	**15 40 36.5 +1.4**
	baz=73						
K27A				⇓pP		**pP**	**15 41 05.4 +1.2**
	baz=73						
M24A	**Cheyenne**	**72.73**	**332**	⇑P		**P**	**15 40 36.9 +1.4**
	baz=73						
M24A				pP		**pP**	**15 41 05.7 +1.1**
	baz=73,SNR=7.5						
PFO	**Pinyon Flat Ob**	**72.75**	**319**	*e*P		**P**	**15 40 37.1 +1.4**
	comp=E,8.3nm,1.1s						
PFO				*ep*P		**pP**	**15 41 06.2 +1.3**
PFO	**Pinyon Flat Ob**	**72.75**	**319**	⇓P		**P**	**15 40 37.3 +1.6**
	baz=73						
PFO				⇓pP		**pP**	**15 41 06.4 +1.5**
	baz=73						
BELC	**Belle Mtn. Jos**	**72.75**	**320**	⇓P		**P**	**15 40 37.5 +1.8**
	baz=73						
BELC				⇑pP		**pP**	**15 41 06.4 +1.5**
	baz=73						
N23A	**Red Feather La**	**72.75**	**331**	⇓P		**P**	**15 40 37.0 +1.2**
	baz=73,SNR=6.1						
N23A				⇓pP		**pP**	**15 41 05.7 +0.8**
	baz=73						
Q19A	**Hogan Spring (**	**72.77**	**328**	⇑P		**P**	**15 40 37.3 +1.6**
	baz=73,SNR=7.2						
PHWY	**Pilot Hill**	**72.87**	**332**	*e*P		**P**	**15 40 37.2 +0.7**
PHWY				*ep*P		**pP**	**15 41 06.4 +0.8**
N22A	**Wattenberg Ran**	**72.91**	**331**	⇑P		**P**	**15 40 38.2 +1.5**
	baz=73,SNR=7.1						
N22A				⇓pP		**pP**	**15 41 07.1 +1.2**
	baz=73						
K26A	**Motz Farm, Whi**	**73.07**	**334**	⇑P		**P**	**15 40 38.7 +1.4**
	baz=73						
GMRC	**Granite Mounta**	**73.10**	**321**	⇓P		**P**	**15 40 39.5 +1.8**
	baz=73,SNR=9.1						
GMRC				pP		**pP**	**15 41 08.9 +1.9**
	baz=73,SNR=6.8						
M23A	**Laramie**	**73.12**	**332**	⇓P		**P**	**15 40 39.2 +1.3**
	baz=74						
M23A				⇑pP		**pP**	**15 41 08.0 +1.0**
	baz=74						
P19A	**Cripple Cowboy**	**73.16**	**328**	⇑P		**P**	**15 40 39.5 +1.4**
	baz=74,SNR=26						
P19A				pP		**pP**	**15 41 08.8 +1.5**
	baz=74,SNR=6.1						
O20A	**White River Ci**	**73.20**	**329**	⇓P		**P**	**15 40 39.5 +1.2**
	baz=74,SNR=14						
O20A				pP		**pP**	**15 41 08.8 +1.3**
	baz=74,SNR=6.4						
N21A	**Black Mountain**	**73.36**	**330**	⇓P		**P**	**15 40 40.9 +1.6**
	baz=74						
M22A	**Cedar Creek Ra**	**73.45**	**331**	⇓P		**P**	**15 40 40.9 +1.1**
	baz=74						
M22A				⇓pP		**pP**	**15 41 09.9 +0.8**
	baz=74						
SRU	**San Rafael**	**73.51**	**327**	*e*P		**P**	**15 40 41.0 +0.8**
SRU				*ep*P		**pP**	**15 41 10.0 +0.6**
SRU	**San Rafael**	**73.51**	**327**	⇓P		**P**	**15 40 41.3 +1.2**
	baz=74,SNR=7.1						
SRU				⇑pP		**pP**	**15 41 10.1 +0.7**
	baz=74,SNR=6.5						
HEC	**Hector,Ludlow**	**73.53**	**320**	⇑P		**P**	**15 40 42.3 +2.1**
	baz=74,SNR=6.5						
HEC				⇓pP		**pP**	**15 41 10.6 +1.2**
	baz=74,SNR=5.6						
Q16A	**Castle Valley**	**73.69**	**327**	⇑P		**P**	**15 40 42.6 +1.4**
	baz=74						
O19A	**Miners Draw (B**	**73.75**	**329**	⇑P		**P**	**15 40 42.6 +1.1**
	baz=74,SNR=7.0						
O19A				⇑pP		**pP**	**15 41 11.7 +1.1**
	baz=74						
N20A	**Spence Gulch,**	**73.76**	**330**	⇑P		**P**	**15 40 42.7 +1.0**
	baz=74,SNR=10						
N20A				⇓pP		**pP**	**15 41 11.8 +1.0**
	baz=74						
P18A	**Preston Nutter**	**73.77**	**328**	⇓P		**P**	**15 40 43.4 +1.6**
	baz=74						
P18A				⇓pP		**pP**	**15 41 12.4 +1.4**
	baz=74						
CCUT	**Cedar City**	**73.82**	**324**	*e*P		**P**	**15 40 43.7 +1.7**
	comp=E,17nm,0.9s						
EYMN	**Ely**	**73.88**	**344**	*e*P		**P**	**15 40 41.0 -0.8**
	comp=E,11nm,0.8s						
EYMN				*ep*P		pP	15 41 05.2 -5.9
L22A	**Ellis Ranch, M**	**73.89**	**331**	⇓P		**P**	**15 40 43.9 +1.6**
	baz=74						
P17A	**Butcher Ranch,**	**73.90**	**327**	⇑P		**P**	**15 40 43.7 +1.3**
	baz=74,SNR=11						
P17A				⇑pP		**pP**	**15 41 12.4 +0.8**
	baz=74,SNR=7.1						
MSU	**Marysvale**	**73.90**	**326**	*e*P		**P**	**15 40 43.5 +1.0**
MSU				*ep*P		**pP**	**15 41 13.4 +1.6**
BFSC	**Mount Baldy Ra**	**73.91**	**319**	⇑P		**P**	**15 40 44.1 +1.6**
	baz=74						
MVU	**Marysvale**	**73.92**	**326**	*e*P		**P**	**15 40 44.0 +1.4**
M21A	**Separation Pea**	**73.96**	**331**	⇑P		**P**	**15 40 44.1 +1.3**
	baz=74,SNR=10						
M21A				⇑pP		**pP**	**15 41 13.0 +0.9**
	baz=74						
K23A	**Bowen Ranch, D**	**74.13**	**332**	⇓P		**P**	**15 40 45.0 +1.4**
	baz=74,SNR=6.0						
K23A				pP		**pP**	**15 41 14.0 +1.1**
	baz=74,SNR=5.2						
MWC	**Mount Wilson**	**74.14**	**319**	*e*P		**P**	**15 40 45.2 +1.3**
	comp=E,11nm,1.1s						
GSC	**Goldstone**	**74.14**	**321**	*e*P		**P**	**15 40 45.1 +1.4**
	comp=E,31nm,1.5s						
GSC				*ep*P		**pP**	**15 41 14.6 +1.6**
J24A	**Dixon Ranch, L**	**74.19**	**333**	⇑P		**P**	**15 40 45.8 +1.9**
	baz=74,SNR=5.3						
J24A				pP		**pP**	**15 41 14.8 +1.6**
	baz=74,SNR=5.2						
N19A	**John Jarvie Ra**	**74.24**	**329**	⇑P		**P**	**15 40 44.7 +0.3**
	baz=75,SNR=10.0						
N19A				pP		**pP**	**15 41 14.5 +0.9**
	baz=75,SNR=6.5						
M20A	**Sweetwater, Wa**	**74.24**	**330**	⇓P		**P**	**15 40 45.5 +1.0**
	baz=75,SNR=5.4						
M20A				⇓pP		**pP**	**15 41 14.1 +0.4**
	baz=75						
L21A	**Rawlins**	**74.25**	**331**	⇑P		**P**	**15 40 45.4 +0.9**
	baz=75,SNR=16						
L21A				pP		**pP**	**15 41 14.6 +0.9**
	baz=75,SNR=7.6						
K22A	**Casper**	**74.43**	**332**	⇓P		**P**	**15 40 46.5 +1.1**
	baz=75						
N18A	**Larsen Ranch,**	**74.54**	**329**	⇑P		**P**	**15 40 47.3 +1.2**
	baz=75						
N18A				⇓pP		**pP**	**15 41 15.8 +0.5**
	baz=75						
EDW2	**Edwards Air Fo**	**74.55**	**320**	⇑P		**P**	**15 40 47.4 +1.3**
	baz=75						
EDW2				pP		**pP**	**15 41 16.6 +1.2**
	baz=75,SNR=5.4						
RSSD	**Black Hills**	**74.60**	**334**	*e*P		**P**	**15 40 47.1 +0.7**
	comp=E,18nm,0.9s						
RSSD				*ep*P		**pP**	**15 41 16.1 +0.5**
I24A	**Kuemmerle Ranc**	**74.62**	**334**	⇑P		**P**	**15 40 47.6 +1.2**
	baz=75						
I24A				⇑pP		**pP**	**15 41 16.5 +0.9**
	baz=75						
SYO	**Syowa Base**	**74.68**	**159**	⇑*e*P		**P**	**15 40 45.6 -0.7**
SYO	**Syowa Base**	**74.68**	**159**	⇑*e*PcP		**PcP**	**15 40 56.2 -3.8**
L20A	**Wamsutter**	**74.72**	**330**	⇑P		**P**	**15 40 48.3 +1.1**
	baz=75,SNR=9.2						
L20A				pP		**pP**	**15 41 17.4 +1.0**
	baz=75,SNR=5.7						
K21A	**Alcova**	**74.73**	**331**	⇑P		**P**	**15 40 47.8 +0.6**
	baz=75,SNR=21						
K21A				pP		**pP**	**15 41 17.7 +1.3**
	baz=75,SNR=10						
MPU	**Maple Canyon**	**74.76**	**327**	*e*P		**P**	**15 40 48.6 +1.2**
MPU				*ep*P		**pP**	**15 41 17.9 +1.3**
J22A	**Midwest**	**75.03**	**332**	⇓P		**P**	**15 40 49.6 +0.8**
	baz=75,SNR=11						
J22A				pP		**pP**	**15 41 18.7 +0.6**
	baz=75,SNR=6.4						
MPMC	**Manual Prospec**	**75.06**	**321**	⇓P		**P**	**15 40 50.5 +1.2**
	baz=75						
MPMC				⇑pP		**pP**	**15 41 19.0 +0.5**
	baz=75						
N17A	**Moffit Pass**	**75.07**	**328**	⇓P		**P**	**15 40 50.9 +1.6**
	baz=75,SNR=20						
N17A				pP		**pP**	**15 41 20.1 +1.5**
	baz=75,SNR=5.8						
M18A	**Lyman**	**75.07**	**329**	⇑P		**P**	**15 40 49.8 +0.6**
	baz=75,SNR=5.8						
M18A				pP		**pP**	**15 41 18.7 +0.2**
	baz=75,SNR=5.9						
JLU	**Jordanelle**	**75.11**	**327**	*e*P		**P**	**15 40 50.7 +1.3**
	comp=E,15nm,1.2s						
JLU				*ep*P		**pP**	**15 41 20.0 +1.3**
VNDA	**Vanda**	**75.17**	**190**	*e*P		**P**	**15 40 51.0 +1.9**
	comp=E,11nm,1.3s						
VNDA				pP		**pP**	**15 41 19.9 +1.5**
VNDA	**Vanda**	**75.17**	**190**	P		**P**	**15 40 51.0 +1.9**
	comp=E,3.1nm,0.9s,baz=145,slow=6.6,SNR=11						
VNDA				pP		**pP**	**15 41 19.9 +1.5**
	comp=E,2.1nm,0.7s,baz=152,slow=2.0,SNR=3.2						
VNDA				LR		LR	16 12 45.9
	comp=E,39nm,18.2s,baz=47,slow=35						
K20A	**Yellowstone Ra**	**75.24**	**331**	⇓P		**P**	**15 40 50.6 +0.6**
	baz=76,SNR=9.9						
K20A				pP		**pP**	**15 41 19.9 +0.5**
	baz=76,SNR=5.9						
L19A	**Farson**	**75.26**	**330**	⇓P		**P**	**15 40 51.5 +1.3**
	baz=76,SNR=11						
L19A				pP		**pP**	**15 41 20.8 +1.2**
	baz=76,SNR=5.0						
H24A	**Dirks Ranch, A**	**75.32**	**334**	⇓P		**P**	**15 40 51.0 +0.6**
	baz=76,SNR=12						
H24A				pP		**pP**	**15 41 20.3 +0.6**
	baz=76,SNR=8.5						
ISA	**Isabella**	**75.37**	**320**	*e*P		**P**	**15 40 52.3 +1.5**
ISA				*ep*P		**pP**	**15 41 21.5 +1.4**
ISA	**Isabella**	**75.37**	**320**	⇑P		**P**	**15 40 52.0 +1.1**
	baz=76,SNR=8.4						
ISA				pP		**pP**	**15 41 21.6 +1.5**
	baz=76,SNR=8.0						
AGMN	**Agassiz Nation**	**75.39**	**341**	*e*P		**P**	**15 40 50.1 -0.4**
	comp=E,15nm,1.0s						
AGMN				*ep*P		**pP**	**15 41 15.3 -4.6**
J21A	**Lysite**	**75.39**	**332**	⇑P		**P**	**15 40 51.9 +1.0**
	baz=76,SNR=7.7						
M17A	**Scullys Gap (B**	**75.39**	**329**	⇑P		**P**	**15 40 51.7 +0.7**
	baz=76,SNR=6.5						
I22A	**9 Mile Ranch,**	**75.42**	**333**	⇑P		**P**	**15 40 51.7 +0.7**
	baz=76,SNR=11						
I22A				pP		**pP**	**15 41 21.1 +0.8**
	baz=76,SNR=7.9						
L18A	**Fontenelle, Gr**	**75.44**	**329**	⇑P		**P**	**15 40 52.2 +0.9**
	baz=76,SNR=15						
L18A				pP		**pP**	**15 41 21.

I21A pP **pP** 15 41 22.6 +0.6
baz=76,SNR=5.7
M16A Huntsville 75.74 328 ⇓P **P** 15 40 53.9 +0.9
baz=76
M16A ⇑pP **pP** 15 41 22.9 +0.5
baz=76
G24A Alzada 75.75 335 pP pP 15 41 22.9 +0.7
baz=76,SNR=5.5
VES Vestal, Richgr 75.85 320 ⇑P **P** 15 40 55.0 +1.5
baz=76
VES pP **pP** 15 41 24.4 +1.6
baz=76,SNR=5.0
BW06 Boulder Array 75.88 330 ⇑P **P** 15 40 54.2 +0.4
baz=76,SNR=5.9
PDAR Pinedale Array 75.88 330 P **P** 15 40 53.8 0.0
PDAR pP **pP** 15 41 23.4 +0.3
PDAR Pinedale Array 75.88 330 P **P** 15 40 53.8 0.0
comp=E,1.8nm,0.6s,baz=138,slow=7.1,SNR=17
PDAR pP **pP** 15 41 23.4 +0.3
comp=E,2.4nm,0.5s,baz=137,slow=7.8,SNR=6.8
H22A Clearmont 75.93 333 ⇑P **P** 15 40 53.8 -0.1
baz=76,SNR=5.7
L17A Cokeville 75.97 329 ⇑P **P** 15 40 54.3 0.0
baz=76,SNR=7.9
L17A ⇓pP **pP** 15 41 24.0 +0.3
baz=76
K18A Toltan Ranch, 76.00 330 ⇑P **P** 15 40 55.3 +0.8
baz=76,SNR=14
K18A pP **pP** 15 41 25.2 +1.4
baz=76,SNR=5.3
G23A Biddle 76.03 334 ⇓P **P** 15 40 55.0 +0.6
baz=76,SNR=8.5
G23A pP **pP** 15 41 24.4 +0.7
baz=76,SNR=9.1
J19A Crowheart 76.04 331 ⇓P **P** 15 40 55.1 +0.5
baz=76,SNR=6.5
SMMC Simmler 76.05 319 ⇓P **P** 15 40 55.9 +1.2
baz=76
MDND Maddock 76.15 339 ⇑P **P** 15 40 55.1 +0.1
baz=76,SNR=8.9
MDND pP **pP** 15 41 25.0 +0.7
baz=76,SNR=5.1
I20A Worland 76.17 332 ⇑P **P** 15 40 56.2 +0.9
baz=76
I20A ⇑pP **pP** 15 41 25.1 +0.5
baz=76
L16A Fish Haven 76.18 328 ⇓P **P** 15 40 55.9 +0.4
baz=76,SNR=9.6
F24A Ekalaka 76.19 335 ⇑P **P** 15 40 55.9 +0.6
baz=76,SNR=6.9
F24A pP **pP** 15 41 25.4 +0.7
baz=76,SNR=6.5
G22A Birney 76.41 333 ⇑pP pP 15 41 26.6 +0.6
baz=77
J18A Kendall Valley 76.44 330 ⇑P **P** 15 40 57.1 +0.2
baz=77,SNR=20
J18A pP **pP** 15 41 27.1 +0.8
baz=77,SNR=6.7
F23A Volborg 76.47 334 ⇑P **P** 15 40 57.7 +0.8
baz=77
F23A ⇑pP **pP** 15 41 26.7 +0.5
baz=77
K17A Gardner Place, 76.50 329 ⇑P **P** 15 40 57.6 +0.3
baz=77,SNR=13
K17A pP **pP** 15 41 27.5 +0.9
baz=77,SNR=5.7
H20A Greybull 76.54 332 ⇑P **P** 15 40 57.2 -0.1
baz=77,SNR=12
H20A pP **pP** 15 41 26.8 +0.1
baz=77,SNR=7.2
MTUM Tungsten Hills 76.58 321 *e*pP pP 15 41 28.6 +1.3
I19A Meeteetse 76.62 331 ⇑P **P** 15 40 58.4 +0.4
baz=77,SNR=14
I19A ⇑pP **pP** 15 41 28.3 +1.0
baz=77
L15A Malad City 76.63 328 ⇓P **P** 15 40 58.1 +0.1
baz=77,SNR=13
L15A ⇑pP **pP** 15 41 28.1 +0.7
baz=77
I18A Diamond G Ranc 76.72 330 ⇑P **P** 15 40 59.1 +0.6
baz=77,SNR=20
I18A pP **pP** 15 41 29.2 +1.2
baz=77,SNR=6.1
E24A Baker 76.73 335 ⇓P **P** 15 40 58.9 +0.6
baz=77,SNR=7.8
E24A pP **pP** 15 41 28.8 +1.1
baz=77,SNR=10
G21A Lodge Grass 76.80 333 ⇓P **P** 15 40 58.9 +0.2
baz=77,SNR=9.0
G21A pP **pP** 15 41 28.9 +0.8
baz=77,SNR=6.6
F22A Rosebud 76.86 334 ⇑P **P** 15 40 59.3 +0.3
baz=77,SNR=5.5
F22A pP **pP** 15 41 28.8 +0.3
baz=77,SNR=6.0
J17A Brown Place, J 76.87 330 ⇓P **P** 15 41 00.1 +0.7
baz=77,SNR=12
K16A Soda Springs 76.88 329 ⇑P **P** 15 41 00.3 +0.9
baz=77,SNR=25
K16A pP **pP** 15 41 30.3 +1.5
baz=77,SNR=5.5
MLAC Mammoth Lakes 76.93 321 ⇓P **P** 15 41 00.9 +1.0
baz=77
SNOW Snow King Moun 76.97 330 *e*P **P** 15 41 01.0 +1.0
comp=E,16nm,0.9s
L14A Malta 77.08 327 ⇓P **P** 15 41 01.4 +0.9
baz=77
TPAW Teton Pass 77.08 330 *e*P **P** 15 41 01.5 +0.9
H19A Powell 77.12 332 ⇓P **P** 15 41 01.5 +0.9
baz=77
H19A ⇑pP **pP** 15 41 30.5 +0.4
baz=77
ELK Elko 77.14 325 *e*P **P** 15 41 01.8 +0.8
comp=E,7.0nm,1.0s
RRI2 Red Ridge 77.14 329 *e*P **P** 15 41 02.0 +1.0
comp=E,24nm,0.9s
ULM Lac du Bonnet 77.15 342 P **P** 15 40 59.9 -0.6
ULM pP **pP** 15 41 29.5 -0.3
ULM Lac du Bonnet 77.15 342 P **P** 15 40 59.9 -0.6
comp=E,6.0nm,0.4s,baz=161,slow=6.8,SNR=12
ULM pP **pP** 15 41 29.5 -0.3
comp=E,7.8nm,0.5s,baz=155,slow=8.2,SNR=5.8
ULM LR LR 16 19 54.7
comp=E,76nm,20.3s,baz=5.5,slow=39
NVAR Mina Array Bea 77.17 322 P **P** 15 41 02.0 +0.9
NVAR pP **pP** 15 41 31.2 +0.6
NVAR Mina Array Bea 77.17 322 P **P** 15 41 02.0 +0.9
comp=E,2.2nm,0.8s,baz=150,slow=6.5,SNR=18
NVAR pP **pP** 15 41 31.2 +0.6
comp=E,2.7nm,0.8s,baz=145,slow=6.7,SNR=7.3
D24A Glendive 77.20 336 ⇑P **P** 15 41 02.0 +1.1
baz=78
D24A ⇑pP **pP** 15 41 31.1 +0.7
baz=78
K15A Arbon 77.22 328 ⇑P **P** 15 41 02.1 +0.9
baz=78,SNR=6.3
G20A Bridger 77.22 332 ⇓P **P** 15 41 01.4 +0.3
baz=78,SNR=12
G20A pP **pP** 15 41 31.1 +0.5
baz=78,SNR=6.6
I17A Pilgrim Ck. 77.24 330 ⇓P **P** 15 41 02.4 +1.0
baz=78,SNR=19
I17A ⇓pP **pP** 15 41 32.3 +1.5
baz=78
F21A Absaloka Mine, 77.25 333 ⇓pP pP 15 41 31.0 +0.3
baz=78
IMW Indian Meadow 77.39 330 *e*P **P** 15 41 03.1 +0.7
H18A Shoshone NF, C 77.42 331 ⇑P **P** 15 41 02.7 +0.2
baz=78,SNR=20
H18A pP **pP** 15 41 32.7 +0.8
baz=78,SNR=5.9
K14A Jones Ranch, D 77.43 328 ⇑P **P** 15 41 03.0 +0.6
baz=78
TORD Torodi Ar. Bea 77.54 70 P **P** 15 41 03.0 -0.4
TORD pP **pP** 15 41 32.8 -0.1
TORD Torodi Ar. Bea 77.54 70 P **P** 15 41 03.0 -0.4
comp=E,28nm,0.6s,baz=257,slow=5.5,SNR=332
TORD pP **pP** 15 41 32.8 -0.1
comp=E,5.4nm,0.4s,baz=253,slow=5.3,SNR=1.8
C24A Savage 77.58 336 ⇓P **P** 15 41 04.2 +1.2
baz=78
C24A ⇓pP **pP** 15 41 33.7 +1.2
baz=78
D23A Lindsay 77.58 335 ⇑P **P** 15 41 04.3 +1.3
baz=78
D23A ⇓pP **pP** 15 41 33.7 +1.2
baz=78

RLMT Red Lodge 77.59 332 ⇑P **P** 15 41 03.9 +0.6
baz=78,SNR=12
RLMT pP **pP** 15 41 34.0 +1.2
baz=78,SNR=5.3
RLMT pP **pP** 15 41 34.0 +1.2
baz=78,SNR=5.3
I16A Newdale 77.63 330 ⇓P **P** 15 41 04.6 +1.1
baz=78
F20A Billings 77.65 333 ⇓P **P** 15 41 04.3 +0.7
baz=78
F20A ⇓pP **pP** 15 41 33.5 +0.6
baz=78
J15A Blackfoot 77.71 329 ⇑P **P** 15 41 04.7 +0.7
baz=78,SNR=7.3
J15A ⇓pP **pP** 15 41 34.4 +0.9
baz=78
E21A Keefer Ranch, 77.81 334 ⇑P **P** 15 41 05.3 +1.0
baz=78
E21A ⇓pP **pP** 15 41 34.7 +0.9
baz=78
SCHQ Schefferville 77.81 1 P **P** 15 41 04.3 +0.3
SCHQ pP **pP** 15 41 33.5 -0.1
SCHQ Schefferville 77.81 1 P **P** 15 41 04.3 +0.3
comp=E,4.4nm,0.7s,baz=184,slow=17,SNR=9.8
SCHQ pP **pP** 15 41 33.5 -0.1
comp=E,7.4nm,0.9s,baz=159,slow=6.5,SNR=3.6
G18A Lazy EL Ranch, 77.88 332 ⇑P **P** 15 41 05.2 +0.3
baz=78,SNR=14
G18A pP **pP** 15 41 35.3 +1.0
baz=78,SNR=7.1
D22A Cohagen 77.94 335 ⇑P **P** 15 41 05.9 +0.9
baz=78,SNR=5.1
D22A pP **pP** 15 41 35.8 +1.2
baz=78,SNR=5.7
F19A Roth Farm, Mol 78.03 332 ⇑P **P** 15 41 06.0 +0.3
baz=78
C23A Lambert 78.10 336 ⇓P **P** 15 41 06.7 +0.9
baz=78
C23A ⇓pP **pP** 15 41 36.2 +0.9
baz=78
H16A Russell Place, 78.15 330 P **P** 15 41 07.4 +1.0
baz=78,SNR=14
J14A Carey 78.17 328 ⇓P **P** 15 41 07.9 +1.4
baz=78,SNR=6.8
J14A pP **pP** 15 41 37.7 +1.7
baz=78,SNR=5.3
D21A La Casta Ranch 78.20 334 ⇓P **P** 15 41 07.8 +1.3
baz=78
E20A Meyer Farm, Mu 78.21 333 ⇑P **P** 15 41 07.0 +0.4
baz=78,SNR=16
E20A pP **pP** 15 41 36.7 +0.7
baz=78,SNR=9.5
DGMT Dagmar 78.28 337 *e*P **P** 15 41 07.8 +1.0
DGMT *e*pP **pP** 15 41 37.5 +1.2
DGMT Dagmar 78.28 337 ⇑P **P** 15 41 07.3 +0.5
baz=79,SNR=6.5
DGMT pP **pP** 15 41 37.6 +1.2
baz=79,SNR=5.7
QLMT Earthquake Lak 78.33 330 *e*P **P** 15 41 09.2 +1.7
F18A Big Timber 78.41 332 ⇓P **P** 15 41 08.1 +0.4
baz=79,SNR=15
F18A pP **pP** 15 41 38.2 +1.0
baz=79,SNR=8.9
E19A Rath Farm, Rou 78.45 333 ⇑P **P** 15 41 08.2 +0.3
baz=79,SNR=25
E19A pP **pP** 15 41 38.4 +1.0
baz=79,SNR=11
J13A Cove Ranch, Pi 78.55 328 ⇑P **P** 15 41 09.6 +1.0
baz=79,SNR=5.0
B23A Brockton 78.57 336 ⇓P **P** 15 41 09.9 +1.5
baz=79
A24A Westby 78.59 337 ⇑P **P** 15 41 09.7 +1.2
baz=79
A24A pP **pP** 15 41 39.4 +1.3
baz=79,SNR=7.2
I14A Mackay 78.59 329 ⇑P **P** 15 41 10.1 +1.2
baz=79,SNR=6.9
D20A Manuel Ranch, 78.68 334 ⇓P **P** 15 41 09.3 +0.2
baz=79,SNR=8.8
D20A pP **pP** 15 41 39.4 +0.7
baz=79,SNR=8.2
HLID Hailey 78.79 328 *e*P **P** 15 41 11.0 +1.1
comp=E,18nm,1.0s
HLID Hailey 78.79 328 ⇑P **P** 15 41 11.1 +1.2
baz=79,SNR=27
HLID pP **pP** 15 41 41.2 +1.7
baz=79,SNR=5.6
G16A Moss Hill, Enn 78.81 330 ⇑P **P** 15 41 10.7 +0.7
baz=79
G16A ⇑pP **pP** 15 41 40.3 +0.8
baz=79
B22A Reddig Ranch S 78.82 335 ⇑P **P** 15 41 10.3 +0.5
baz=79
F17A Fitzpatrick Pl 78.82 331 ⇓P **P** 15 41 10.7 +0.7
baz=79,SNR=11
F17A pP **pP** 15 41 40.9 +1.4
baz=79,SNR=6.9
I13A Wildhorse Cree 78.90 328 ⇓P **P** 15 41 11.7 +1.1
baz=79,SNR=13
I13A ⇑pP **pP** 15 41 41.6 +1.4
baz=79
D19A Cripps Ranch, 79.05 333 ⇓P **P** 15 41 11.3 +0.1
baz=79,SNR=6.1
D19A pP **pP** 15 41 41.4 +0.7
baz=79,SNR=6.4
BOZ Bozeman (W) 79.05 331 ⇓P **P** 15 41 11.6 +0.3
baz=79,SNR=7.6
BOZ ⇓pP **pP** 15 41 41.2 +0.4
baz=79
BOZ ⇓pP **pP** 15 41 41.2 +0.4
baz=79
H14A Leadore 79.07 329 ⇑P **P** 15 41 12.5 +1.1
baz=79,SNR=9.0
G15A Dillon 79.07 330 ⇑P **P** 15 41 12.1 +0.7
baz=79,SNR=9.5
G15A pP **pP** 15 41 42.2 +1.2
baz=79,SNR=5.8
DLMT Dillon 79.27 330 *e*P **P** 15 41 13.7 +1.2
I12A Atlanta 79.31 328 ⇓P **P** 15 41 14.2 +1.4
baz=80
I12A ⇓pP **pP** 15 41 43.7 +1.4
baz=80
E17A Martinsdale 79.34 332 ⇑P **P** 15 41 13.3 +0.5
baz=80,SNR=7.4
E17A pP **pP** 15 41 43.5 +1.1
baz=80,SNR=5.2
A22A Carney Farms, 79.35 336 ⇑pP pP 15 41 43.1 +0.8
baz=80
MFID Camas Ranch 79.38 327 ⇑P **P** 15 41 14.0 +0.9
baz=80
MFID ⇓pP **pP** 15 41 43.9 +1.2
baz=80
H13A Challis 79.45 329 ⇓P **P** 15 41 14.5 +1.0
baz=80,SNR=23
H13A pP **pP** 15 41 44.7 +1.7
baz=80,SNR=5.1
LRM Limekiln Ridge 79.56 330 *e*P **P** 15 41 15.1 +1.0
LRM *e*pP **pP** 15 41 44.8 +1.1
C19A Slack Wire Ran 79.57 333 ⇑pP pP 15 41 44.2 +0.7
baz=80
G14A Jackson 79.58 329 ⇑P **P** 15 41 14.9 +0.7
baz=80
G14A ⇑pP **pP** 15 41 44.7 +0.9
baz=80
F15A Butte 79.59 330 ⇑P **P** 15 41 14.9 +0.7
baz=80,SNR=10.0
F15A pP **pP** 15 41 45.1 +1.2
baz=80,SNR=6.2
B20A Solberg Farm, 79.72 334 ⇓P **P** 15 41 15.1 +0.4
baz=80
H12A Diamond D Ranc 79.73 328 ⇑P **P** 15 41 15.9 +0.9
baz=80,SNR=11
H12A ⇑pP **pP** 15 41 45.9 +1.3
baz=80
D17A Six Diamond Ra 79.80 332 ⇑P **P** 15 41 15.8 +0.5
baz=80
D17A ⇑pP **pP** 15 41 45.5 +0.6
baz=80
G13A Cobalt 79.83 329 ⇑P **P** 15 41 16.7 +1.1
baz=80,SNR=61
G13A ⇓pP **pP** 15 41 46.6 +1.5
baz=80
F14A Wisdom 79.97 330 ⇓pP pP 15 41 47.4 +1.5
baz=80
A20A Cobblestone Ra 80.03 335 ⇑P **P** 15 41 16.3 -0.1
baz=80,SNR=14
A20A pP **pP** 15 41 46.8 +0.8
baz=80,SNR=5.8

D16A Dana Ranch, Ca 80.08 332 ⇓P **P** 15 41 17.5 +0.7
baz=80
D16A ⇓pP **pP** 15 41 47.6 +1.2
baz=80
E15A Deer Lodge 80.10 331 ⇓P **P** 15 41 17.6 +0.6
baz=80,SNR=8.6
E15A pP **pP** 15 41 47.8 +1.2
baz=80,SNR=6.8
C17A Wharram Farm, 80.20 332 ⇑P **P** 15 41 17.8 +0.4
baz=80,SNR=6.5
C17A pP **pP** 15 41 47.5 +0.5
baz=80,SNR=5.5
G12A Big Creek, Yel 80.38 328 ⇑P **P** 15 41 19.0 +0.4
baz=81
A19A Klindworth Far 80.40 334 ⇓P **P** 15 41 18.2 -0.2
baz=81,SNR=6.6
A19A pP **pP** 15 41 48.5 +0.5
baz=81,SNR=5.5
F13A Darby 80.40 329 ⇑P **P** 15 41 19.1 +0.6
baz=81,SNR=34
F13A pP **pP** 15 41 49.5 +1.4
baz=81,SNR=6.8
E14A Clinton 80.48 330 ⇓P **P** 15 41 19.9 +0.9
baz=81,SNR=7.5
E14A ⇓pP **pP** 15 41 49.8 +1.2
baz=81
D15A Lincoln 80.51 331 ⇓P **P** 15 41 20.0 +0.8
baz=81,SNR=6.4
D15A ⇓pP **pP** 15 41 49.9 +1.1
baz=81
MOD Modoc 80.67 323 *e*P **P** 15 41 21.1 +1.0
CHMT Chamberlain Mo 80.74 331 *e*P **P** 15 41 21.5 +1.0
C16A Fuhringer Ranc 80.76 332 ⇑P **P** 15 41 20.5 +0.2
baz=81,SNR=9.3
C16A pP **pP** 15 41 50.8 +0.7
baz=81,SNR=8.0
F12A Elk City 80.81 329 P **P** 15 41 21.6 +0.9
baz=81,SNR=6.5
E13A Victor 80.82 330 ⇑P **P** 15 41 21.6 +0.9
baz=81,SNR=10
E13A ⇓pP **pP** 15 41 51.4 +1.0
baz=81
D14A Greenough 80.98 331 ⇑P **P** 15 41 22.6 +1.0
baz=81,SNR=6.7
D14A ⇓pP **pP** 15 41 52.2 +0.9
baz=81
MSO Missoula 80.99 330 ⇓P **P** 15 41 22.3 +0.7
baz=81
SLMT Seeley Lake 81.10 331 *e*P **P** 15 41 23.1 +0.8
C15A Salmond Ranch, 81.11 332 ⇑P **P** 15 41 22.9 +0.6
baz=81,SNR=27
C15A pP **pP** 15 41 53.2 +1.3
baz=81,SNR=6.6
BMO Blue Mountains 81.16 327 *e*P **P** 15 41 23.3 +0.8
D13A Huson 81.43 330 ⇓P **P** 15 41 24.4 +0.5
baz=82,SNR=14
D13A pP **pP** 15 41 54.8 +1.2
baz=82,SNR=5.8
B15A Bradely Ranch, 81.50 332 ⇑P **P** 15 41 23.9 -0.4
baz=82,SNR=13
B15A ⇓pP **pP** 15 41 53.9 -0.1
baz=82
SWMT Swartz Lake 81.53 331 *e*P **P** 15 41 25.3 +0.8
A16A West Butte Ran 81.58 333 ⇑P **P** 15 41 24.9 +0.2
baz=82,SNR=14
A16A pP **pP** 15 41 55.2 +0.8
baz=82,SNR=6.7
C14A Swan Lake 81.61 331 ⇑P **P** 15 41 26.0 +1.1
baz=82
C14A ⇓pP **pP** 15 41 55.5 +0.9
baz=82
D12A Red Ives Fores 81.81 330 ⇑P **P** 15 41 27.0 +1.1
baz=82
JTMT Jette 81.83 331 *e*P **P** 15 41 27.0 +0.9
B14A Marquette Ranc 81.85 332 ⇑P **P** 15 41 26.6 +0.4
baz=82,SNR=5.4
B14A ⇑pP **pP** 15 41 56.2 +0.3
baz=82
C13A Hot Springs 81.91 331 ⇑P **P** 15 41 27.1 +0.7
baz=82,SNR=12
C13A pP **pP** 15 41 57.4 +1.2
baz=82,SNR=5.3
BLMT Blacktail Moun 82.07 331 *e*P **P** 15 41 28.0 +0.6
BSMT Bassoo Peak 82.14 331 *e*P **P** 15 41 28.6 +0.9
BOSA Boshof 82.22 118 P **P** 15 41 28.8 +0.1
BOSA Boshof 82.22 118 P **P** 15 41 28.8 +0.1
comp=E,6.0nm,0.7s,baz=250,slow=4.6,SNR=14
A14A Double T Ranch 82.37 332 ⇑P **P** 15 41 29.3 +0.4
baz=83
A14A ⇓pP **pP** 15 41 58.7 +0.1
baz=83
B13A Whitefish 82.38 331 P **P** 15 41 29.2 +0.4
baz=83,SNR=10
B13A pP **pP** 15 41 59.6 +1.0
baz=83,SNR=6.3
MAW Mawson 82.50 163 P **P** 15 41 30.3 +1.1
comp=E,10nm,0.4s
MAW pP **pP** 15 42 01.4 +2.5
MAW Mawson 82.50 163 P **P** 15 41 30.3 +1.1
comp=E,18nm,0.6s,baz=210,slow=5.7,SNR=48
MAW pP **pP** 15 42 01.4 +2.5
comp=E,9.3nm,0.6s,baz=223,slow=5.6,SNR=3.5
MAW LR LR 16 19 17.8
comp=E,141nm,18.9s,baz=341,slow=36
MDT Midelt 82.55 50 LR LR 16 17 24.4
comp=E,87nm,21.1s,baz=168,slow=35
A13A Flathead Natio 82.78 331 ⇑P **P** 15 41 31.6 +0.6
baz=83,SNR=22
A13A pP **pP** 15 42 02.0 +1.3
baz=83,SNR=8.1
C11A Tepee Creek (N 82.80 330 ⇑P **P** 15 41 31.1 0.0
baz=83,SNR=13
C11A pP **pP** 15 42 01.6 +0.8
baz=83,SNR=6.6
B12A Libby 82.96 331 ⇓P **P** 15 41 32.4 +0.6
baz=83,SNR=6.7
B12A pP **pP** 15 42 02.7 +1.1
baz=83,SNR=5.9
PCVE Castro Verde 83.01 44 *e*P **P** 15 41 33.7 +1.4
A12A Yaak River Ran 83.33 331 ⇓P **P** 15 41 34.7 +1.0
baz=84
A12A pP **pP** 15 42 04.5 +1.0
baz=84,SNR=6.2
HAWA Hanford 83.35 327 *e*P **P** 15 41 34.7 +0.9
PBEJ Beja 83.35 44 *e*P **P** 15 41 34.9 +0.9
comp=E,23nm,1.8s
EVOP Sao Brissos 83.48 43 *e*P **P** 15 41 33.4 -1.3
comp=E,9.6nm,0.8s
NEW Newport 83.51 330 ⇓P **P** 15 41 34.7 0.0
baz=84
NEW ⇑pP **pP** 15 42 04.3 -0.2
baz=84
EVO Evora 83.56 43 *e*P **P** 15 41 33.4 -1.7
comp=E,9.6nm,0.8s
PMTG Montargil 83.74 43 *e*P **P** 15 41 37.1 +1.1
comp=E,24nm,1.6s
ESDC Sonseca Array 86.79 44 P **P** 15 41 52.0 +0.7
ESDC pP **pP** 15 42 22.3 +1.1
ESDC Sonseca Array 86.79 44 P **P** 15 41 52.0 +0.7
comp=E,1.2nm,0.8s,baz=230,slow=5.3,SNR=8.6
ESDC pP **pP** 15 42 22.3 +1.1
comp=E,2.2nm,0.9s,baz=236,slow=5.2,SNR=3.1
SJPF Ste Jean 90.39 42 *e*P **P** 15 42 05.5 -2.6
comp=E,22nm,1.3s
SJPF Ste Jean 90.39 42 *e*P **P** 15 42 05.5 -2.6
comp=E,22nm,1.3s
MTLF Montolieu 92.66 44 *e*P **P** 15 42 17.9 -0.7
MTLF Montolieu 92.66 44 *e*P **P** 15 42 17.9 -0.7
YKA Yellowknife Ar 93.02 340 P **P** 15 42 19.3 -0.4
YKA pP **pP** 15 42 49.5 -0.4
YKA Yellowknife Ar 93.02 340 P **P** 15 42 19.3 -0.4
comp=E,4.3nm,0.7s,baz=135,slow=4.7,SNR=102
YKA pP **pP** 15 42 49.5 -0.4
comp=E,4.8nm,0.6s,baz=135,slow=4.5,SNR=12
KEST Kesra 94.02 53 LR LR 16 29 05.9
comp=E,43nm,19.1s,baz=318,slow=38
VIVF Saint-Julien-I 94.94 43 *e*P **P** 15 42 27.8 -1.3
comp=E,6.2nm,0.8s
VIVF Saint-Julien-I 94.94 43 *e*P **P** 15 42 27.8 -1.3
comp=E,6.2nm,0.8s
SSF Saint Saulge 95.27 41 *e*P **P** 15 42 29.0 -1.5
SSF Saint Saulge 95.27 41 *e*P **P** 15 42 29.0 -1.5
LOR Lormes 95.58 41 *e*P **P** 15 42 29.8 -2.1
comp=E,18nm,1.4s
LOR Lormes 95.58 41 *e*P **P** 15 42 29.8 -2.1
comp=E,18nm,1.4s
FRF La Foret Royal 95.61 45 *e*P **P** 15 42 31.8 -0.3

comp=E,9.8nm,1.0s
FRF La Foret Royal 95.61 45 *e*P **P 15 42 31.8 -0.3**
comp=E,9.8nm,1.0s
ORIF Oris-en-Rattie 95.73 43 *e*P **P 15 42 32.1 -0.7**
ORIF Oris-en-Rattie 95.73 43 *e*P **P 15 42 32.1 -0.7**
BRTR Keskin Array B 113.48 55 PKiKP **PKiKP 15 47 44.0 -0.5**
BRTR PP **PP 15 48 35.1 -2.9**
BRTR Keskin Array B 113.48 55 PKiKP **PKiKP 15 47 44.0 -0.5**
comp=E,0.9nm,0.7s,baz=242,slow=3.1,SNR=6.7
BRTR PP **PP 15 48 35.1 -2.9**
comp=E,0.4nm,0.7s,baz=225,slow=5.1,SNR=3.6
STKA Stephens Creek 118.08 209 PKP **PKPdf 15 47 54.5 +0.9**
STKA Stephens Creek 118.08 209 PKP **PKPdf 15 47 54.5 +0.9**
comp=E,1.0nm,0.6s,baz=177,slow=4.7,SNR=3.2
KBZ Khabaz 120.87 52 PKP **PKPdf 15 47 59.1 +0.7**
KBZ Khabaz 120.87 52 PKP **PKPdf 15 47 59.1 +0.7**
comp=E,4.1nm,0.9s,baz=237,slow=1.8,SNR=12
ASAR Alice Springs 128.53 206 PKP **PKPdf 15 48 14.6 +0.6**
ASAR pPKP **pPKPdf 15 48 46.0 +0.6**
ASAR Alice Springs 128.53 206 PKP **PKPdf 15 48 14.6 +0.6**
comp=E,4.0nm,0.6s,baz=130,slow=1.6,SNR=32
ASAR pPKP **pPKPdf 15 48 46.0 +0.6**
comp=E,2.1nm,0.6s,baz=133,slow=2.1,SNR=5.6
WRA Warramunga Arr 131.63 209 PKP **PKPdf 15 48 20.3 +0.5**
WRA pPKP **pPKPdf 15 48 52.2 +0.9**
WRA Warramunga Arr 131.63 209 PKP **PKPdf 15 48 20.3 +0.5**
comp=E,3.3nm,0.5s,baz=151,slow=1.8,SNR=29
WRA pPKP **pPKPdf 15 48 52.2 +0.9**
comp=E,1.4nm,0.5s,baz=162,slow=1.6,SNR=3.9
PETK Petropavlovsk- 134.26 323 PKP **PKPdf 15 48 23.2 -0.5**
PETK Petropavlovsk- 134.26 323 PKP **PKPdf 15 48 23.2 -0.5**
comp=E,2.2nm,0.8s,baz=104,slow=5.3,SNR=5.1
FITZ Fitzroy Crossi 136.63 200 PKP **PKPdf 15 48 30.6 +1.4**
FITZ Fitzroy Crossi 136.63 200 PKP **PKPdf 15 48 30.6 +1.4**
comp=E,2.9nm,0.5s,baz=199,slow=8.6,SNR=5.3
ZALV Zalesovo Beam 143.36 26 PKP PKPbc 15 48 38.5 +0.7
ZALV pPKP pPKPdf 15 49 10.2 -1.6
ZALV Zalesovo Beam 143.36 26 PKP PKPbc 15 48 38.5 +0.7
comp=E,5.8nm,0.7s,baz=297,slow=4.7,SNR=39
ZALV pPKP pPKPdf 15 49 10.2 -1.6
comp=E,5.9nm,0.5s,baz=314,slow=3.5,SNR=6.4
KSH Kashi 145.84 53 *e*PKPbc **PKPbc 15 48 46.0 0.0**
KSH pPKP **pPKPdf 15 49 13.0 -3.8**
KSH sPKP 15 49 24.0
KSH PP **PP 15 52 12.0 +3.8**
KSH PKS **PKSdf 15 52 21.3 +0.6**
KSH SKS **SKSdf 15 55 44.1 +0.4**
KSH SKKS **SKKSac 15 58 49.8 +0.6**
KSH SS **SS 16 10 55.9 +2.5**
KSH AMB AMB
comp=Z,87nm,3.4s
KSH LR LR
comp=N,13nm,3.8s
KSH LR LR
comp=E,28nm,3.3s
KSH LR LR
comp=Z,90nm,5.7s
MKAR Makanchi Array 146.79 38 PKPbc **PKPbc 15 48 47.6 -0.8**
MKAR pPKPbc pPKPbc 15 49 18.6 -0.9
MKAR Makanchi Array 146.79 38 PKPbc **PKPbc 15 48 47.6 -0.8**
comp=Z,13nm,0.7s,baz=319,slow=1.7,SNR=97
MKAR pPKPbc pPKPbc 15 49 18.6 -0.9
comp=Z,13nm,0.7s,baz=318,slow=2.9,SNR=8.3
ASAJ Asahikawa 147.17 317 PKPbc **PKPbc 15 48 50.0 +0.5**
ASAJ pPKPbc **pPKPbc 15 49 21.2 +0.6**
ASAJ Asahikawa 147.17 317 PKPbc **PKPbc 15 48 49.9 +0.5**
comp=Z,18nm,1.0s,baz=23,slow=3.2,SNR=10
ASAJ pPKPbc **pPKPbc 15 49 21.2 +0.6**
comp=Z,14nm,0.9s,baz=354,slow=32,SNR=4.3
HYB Hyderabad 148.54 95 *i* PKP **PKPbc 15 48 54.0 +0.1**
KAPI Kappang 150.76 197 PKPbc **PKPbc 15 48 60.0 +0.5**
KAPI PKPab **PKPab 15 49 08.7 +2.0**
KAPI Kappang 150.76 197 PKPbc **PKPbc 15 48 60.0 +0.5**
comp=Z,15nm,0.6s,baz=221,slow=3.4,SNR=16
KAPI PKPab **PKPab 15 49 08.7 +2.0**
comp=Z,7.4nm,0.4s,baz=220,slow=7.9,SNR=4.8
WMQ Urumqi 151.62 38 PKPbc **PKPbc 15 49 01.0 +0.3**
WMQ pPKP **pPKPdf 15 49 28.0 +2.1**
WMQ sPKP 15 49 39.0
WMQ PP PP 15 52 51.0 +10
WMQ SKS **SKSdf 15 55 57.0 +5.8**
WMQ SKKS SKKSac 15 59 29.0 +8.1
WMQ SS SS 16 12 07.0 +10
WMQ AMB AMB
comp=Z,33nm,13.0s
WMQ LR LR
comp=N,660nm,26.0s
WMQ LR LR
comp=E,580nm,26.0s
WMQ LR LR
comp=Z,530nm,26.0s
USRK Ussuriysk Arra 153.24 326 PKP **PKPdf 15 48 57.0 +0.4**
comp=Z,1.5nm,0.7s,baz=349,slow=1.9,SNR=4.8
USRK PKPbc **PKiKP 15 49 05.2 +1.0**
comp=Z,4.2nm,0.9s,baz=13,slow=2.9,SNR=5.2
USRK pPKPbc **pPKPbc 15 49 35.8 +0.3**
comp=Z,3.2nm,0.7s,baz=5.7,slow=3.4,SNR=4.7
MJAR Matsushiro Arr 153.51 306 PKP **PKPdf 15 48 57.5 +0.3**
MJAR PKPbc **PKiKP 15 49 05.5 +0.3**
MJAR PKPab **PKPab 15 49 18.0 +0.2**
MJAR pPKPbc **pPKPbc 15 49 36.4 0.0**
MJAR pPKPab **pPKPab 15 49 48.4 +0.1**
MJAR Matsushiro Arr 153.51 306 PKP **PKPdf 15 48 57.5 +0.3**
comp=Z,0.4nm,0.4s,baz=233,slow=3.3,SNR=4.1
MJAR PKPbc **PKiKP 15 49 05.5 +0.3**
comp=Z,2.4nm,0.6s,baz=84,slow=1.1,SNR=16
MJAR PKPab **PKPab 15 49 18.0 +0.2**
comp=Z,6.8nm,1.1s,baz=68,slow=1.7,SNR=12
MJAR pPKPbc **pPKPbc 15 49 36.4 0.0**
comp=Z,2.0nm,0.7s,baz=111,slow=2.3,SNR=3.2
MJAR pPKPab **pPKPab 15 49 48.4 +0.1**
comp=Z,3.5nm,0.9s,baz=94,slow=2.1,SNR=3.8
MAT Matsushiro 153.51 306 PKP **PKPbc 15 49 05.0 0.0**
SONM Songino Array 155.16 8 PKP **PKPdf 15 49 00.0 +0.7**
SONM PKPbc PKPab 15 49 09.2 -15
SONM pPKPab **pPKPab 15 49 54.9 -0.1**
SONM Songino Array 155.16 8 PKP **PKPdf 15 49 00.0 +0.7**
comp=Z,1.6nm,0.6s,baz=162,slow=0.9,SNR=4.7
SONM PKPbc PKPab 15 49 09.2 -15
comp=Z,2.3nm,0.6s,baz=300,slow=2.9,SNR=4.2
SONM pPKPab **pPKPab 15 49 54.9 -0.1**
comp=Z,3.0nm,0.7s,baz=311,slow=2.7,SNR=3.3
CN2 Changchun 156.56 334 *e*PKP PKPdf 15 48 55.3 -5.9
KSRS Korea Array 160.09 319 PKP **PKPdf 15 49 06.7 +1.1**
comp=Z,5.4nm,1.1s,baz=54,slow=1.0,SNR=23
KSRS PKPab **PKPab 15 49 45.5 -0.5**
comp=Z,2.8nm,1.0s,baz=50,slow=0.7,SNR=4.7
KSRS pPKPab **pPKPab 15 50 17.3 +0.9**
comp=Z,2.2nm,0.9s,baz=52,slow=4.0,SNR=4.5
KSAR Wonju Array Be 160.12 319 PKP **PKPdf 15 49 06.7 +1.0**
KSAR PKPab **PKPab 15 49 45.5 -0.7**
KSAR pPKPab **pPKPab 15 50 17.3 +0.7**
GTA Gaotai 161.07 29 PKP **PKPdf 15 49 08.1 +1.3**
GTA pPKP **pPKPdf 15 49 34.6 -3.9**
GTA sPKP 15 49 45.4
GTA PKPab **PKPab 15 49 51.0 +0.6**
GTA PP **PP 15 53 32.4 -0.8**
GTA SKS **SKSdf 15 56 01.6 +0.2**
GTA SKKS **SKKSac 16 00 09.8 -1.5**
GTA AMB AMB
comp=Z,120nm,5.2s
GTA LR LR
comp=N,64nm,14.2s
GTA LR LR
comp=E,58nm,14.7s
GTA LR LR
comp=Z,87nm,14.2s
HHC Hu-ho-hao-te 162.49 0 *e*PKP **PKPdf 15 49 06.9 -1.3**
HHC pPKP **pPKPdf 15 49 33.8 -6.1**
HHC PKS **PKSdf 15 52 39.3 -2.1**
HHC PP **PP 15 53 43.3 +3.2**
HHC SKS **SKSdf 15 56 00.8 -1.6**
HHC SKKS **SKKSac 16 00 20.6 +2.3**
HHC SS **SS 16 13 55.6 +3.9**
HHC AMB AMB
comp=Z,220nm,8.8s
LZH Lanzhou 165.59 26 *e*PKP **PKPdf 15 49 12.5 +1.3**
LZH pPKP **pPKPdf 15 49 44.3 +1.3**
LZH sPKP 15 49 56.9
LZH LR LR
comp=N,160nm,18.3s
LZH LR LR
comp=E,150nm,18.5s
LZH LR LR
comp=Z,200nm,20.2s
CMAR Chiang Mai Arr 167.25 110 PKP **PKPdf 15 49 13.5 +0.7**
CMAR PKPab **PKPab 15 50 18.4 +0.3**
CMAR Chiang Mai Arr 167.25 110 PKP **PKPdf 15 49 13.5 +0.7**
comp=Z,0.3nm,0.4s,baz=246,slow=2.8,SNR=5.7
CMAR PKPab **PKPab 15 50 18.4 +0.3**
comp=Z,1.1nm,0.5s,baz=246,slow=5.2,SNR=8.2
CD2 Chengdu 169.70 41 PKP **PKPdf 15 49 12.3 -1.8**
CD2 pPKP **pPKPdf 15 49 44.0 -1.9**
CD2 sPKP 15 49 56.4
CD2 PKPab **PKPab 15 50 28.9 +0.3**
CD2 PKS **PKSdf 15 52 43.5 -3.2**
CD2 PP **PP 15 54 19.5 +1.3**
CD2 SKS **SKSdf 15 56 02.6 -4.7**
CD2 SKKS **SKKSac 16 00 53.3 -1.5**
CD2 SS **SS 16 15 05.3 -1.1**
CD2 AMB AMB
comp=Z,120nm,5.6s
GYA Guiyang 174.53 54 *e*PKP **PKPdf 15 49 15.0 -1.6**
GYA pPKP **pPKPdf 15 49 47.3 -1.0**
GYA sPKP 15 49 59.0
GYA PKPab **PKPab 15 50 50.6 +0.2**
GYA PKS **PKSdf 15 52 46.1 -2.9**
GYA PP **PP 15 54 44.4 +1.7**
GYA AMB AMB
comp=Z,90nm,8.2s

IDC ***18*** *15:41:36.8±1.0, 4°.06N×126°.56E, h0km, mb3.8/7, mb1 1.4/7, mb1mx3.8/24, mbtmp3.8/7, MS3.6/3, Ms1 3.6/3, ms1mx2.8/50, Error ellipse: s-maj=53.7km s-min=16.7km az=69.0*
ISCJB ***18*** *15:41:41.3±0.7, 4°.02N±0°.09×126°.7E±0°.2, h45km, mb3.8/7, MS3.6/3, Error ellipse: s-maj=26.3km s-min=8.0km az=156.4*
ISC 18 15:41:42.9±0.9, 4°.1N±0°.1×126°.7E±0°.2, h45km, n17, σ0s89/14, mb3.6/7, MS3.7/3, 1C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**2.67**	**319**	*i* P	**Pn**	**15 42 23.9**	**+0.3**
MATI	**Mati**	**2.91**	**351**	*e*P	**Pn**	**15 42 26.9**	**+0.2**
DAV	**Davao City (W)**	**3.20**	**340**	Pn	Pn	15 42 35.5	+4.8
DAV				Sn	Sn	15 43 22.9	+15
	18nm,0.3s,baz=78,slow=22,SNR=5.6						
CTBH	**Cotabato--PC H**	**3.98**	**322**	*i* P	**Pn**	**15 42 41.5**	**0.0**
BUKP	**Musuan**	**4.13**	**337**	*e*P	**Pn**	**15 42 44.2**	**+0.6**
PAGZ	**Pagadian**	**5.01**	**319**	*e*P	**Pn**	**15 42 56.6**	**+1.1**
IPIL	**Ipil**	**5.53**	**312**	*e*P	**Pn**	**15 43 03.4**	**+0.7**
FITZ	**Fitzroy Crossi**	**22.04**	**183**	P	**P**	**15 46 32.5**	**-1.3**
	1.4nm,0.7s,baz=9.4,slow=12,SNR=5.9						
FITZ				LR	LR	15 56 01.0	
	comp=Z,57nm,19.6s,baz=345,slow=39						
WRA	**Warramunga Arr**	**25.00**	**163**	P	**P**	**15 47 02.8**	**+0.1**
	4.1nm,0.8s,baz=343,slow=11,SNR=24						
ASAR	**Alice Springs**	**28.43**	**166**	P	**P**	**15 47 34.0**	**+0.4**
	0.7nm,0.7s,baz=340,slow=6.4,SNR=13						
CMAR	**Chiang Mai Arr**	**30.68**	**300**	P	**P**	**15 47 54.0**	**+0.4**
	0.8nm,0.6s,baz=118,slow=7.4,SNR=5.8						
KSRS	**Korea Array**	**33.26**	**2**	P	**P**	**15 48 16.5**	**+0.4**
	0.6nm,0.9s,baz=184,slow=9.3,SNR=5.2						
STKA	**Stephens Creek**	**38.44**	**159**	P	**P**	**15 49 01.4**	**+1.0**
	2.2nm,0.7s,baz=348,slow=8.6,SNR=5.9						
MKAR	**Makanchi Array**	**57.27**	**325**	P	**P**	**15 51 24.2**	**-1.8**
	1.1nm,0.5s,baz=133,slow=7.0,SNR=4.2						
ASF	**Jabal al Asfar**	**87.69**	**302**	LR	LR	16 34 32.7	
	comp=Z,33nm,20.0s,baz=141,slow=36						
EIL	**Elat**	**89.53**	**300**	LR	LR	16 36 56.3	
	comp=Z,72nm,18.1s,baz=94,slow=37						
TORD	**Torodi Ar. Bea**	**122.78**	**288**	PKP	**PKPdf**	**16 00 34.7**	**-0.3**
	0.6nm,0.8s,baz=91,slow=2.5,SNR=3.5						

STR ***18*** *15:49:55.0±0.4, 51°.16N×16°.79E, h1km, Ml4.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISCJB ***18*** *15:49:57.1±0.2, 51°.52N±0°.01×15°.98E±0°.02, h0km, mb3.8/12, MS3.4/1, Error ellipse: s-maj=2.0km s-min=1.8km az=160.0*
CSEM ***18*** *15:49:58.8±0.1, 51°.55N×16°.01E, h1km, mb4.0/5, ML4.2/10, Ms4.0, Error ellipse: s-maj=2.9km s-min=2.7km az=176.0*
LDG ***18*** *15:49:58.4±0.1, 51°.54N×16°.09E, h1km, Ml4.3/26, Error ellipse: s-maj=3.3km s-min=1.6km az=171.0, Suspected Mining induced.*
IPEC ***18*** *15:49:58.3±0.3, 51°.60N×16°.18E, h0km, 2km, ML3.5/3, Error ellipse: s-maj=2.2km s-min=1.6km az=29.0*
MOS ***18*** *15:49:58.9±0.9, 51°.55N×16°.05E, h9km, mb4.1/5, Error ellipse: s-maj=8.3km s-min=4.9km az=87.5*
PRU ***18*** *15:49:59.8, 51°.53N×16°.09E, h0km*
BGR ***18*** *15:50:00.4±0.4, 51°.52N×16°.07E, h1km, ML3.8/15, Error ellipse: s-maj=3.3km s-min=2.2km az=18.0*
WAR ***18*** *15:50:01.5, 51°.47N×16°.10E*
VIE ***18*** *15:50:02.6±0.8, 51°.27N×16°.01E, h1km±4km, mb3.2/12, ML3.2/12, Ms4.0/2, Error ellipse: s-maj=4.2km s-min=2.0km az=6.0 72 km WNW of Wroclaw Suspected Mining induced.*
IDC ***18*** *15:50:03.0±1.5, 51°.46N×16°.04E, h21km±11km, mb3.5/8, mb1 3.7/16, mb1mx3.6/31, mbtmp3.6/16, ML3.4/8, MS3.2/2, Ms1 3.2/2, ms1mx2.3/59, Error ellipse: s-maj=9.4km s-min=6.3km az=100.0*
BNS ***18*** *15:50:04.9±0.9, 51°.36N×15°.64E, h5km, ML3.8*
UPP ***18*** *15:50:05.0, 51°.88N×15°.54E, h0km, ML2.2, Suspected Mining explosion.*
ISC 18 15:50:00.0±0.5, 51°.46N±0°.02×16°.06E±0°.02, h0km, n291, σ1s16/300, mb3.7/12, 23C-22D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.64**	**167**	*e*Pg	**Pg**	**15 50 13.4**	**+1.2**
KSP				*e*Sg	**Sb**	**15 50 23.3**	**-0.1**
KSP	**Ksiaz**	**0.64**	**167**	*i*P	**Pg**	**15 50 13.4**	**+1.2**
KSP				*e*		15 50 25.3	
KSP	**Ksiaz**	**0.64**	**167**	*e*Pg	**Pg**	**15 50 13.4**	**+1.2**
KSP				*e*Sg	**Sb**	**15 50 23.1**	**-0.3**
KSP	**Ksiaz**	**0.64**	**167**	Pg	**Pg**	**15 50 13.4**	**+1.2**
KSP				Sg	**Sb**	**15 50 23.3**	**-0.1**
KSP				*e*S	**Sn**	**15 50 25.3**	**-1.8**
UPC	**Upice**	**0.95**	**182**	*i* P	**Pg**	**15 50 19.3**	**+1.0**
UPC	**Upice**	**0.95**	**182**	*i* PG	**Pg**	**15 50 19.3**	**+1.0**
UPC	**Upice**	**0.95**	**182**	Pg	**Pg**	**15 50 19.3**	**+1.0**
DPC	**Dobruska-Polom**	**1.12**	**171**	*e*Pg	**Pg**	**15 50 22.2**	**+0.7**
DPC				*e*Sg	**Sg**	**15 50 38.0**	**+1.9**
DPC	**Dobruska-Polom**	**1.12**	**171**	*i* P	**Pg**	**15 50 22.0**	**+0.5**
DPC				*e*		15 50 37.7	
DPC				smax	smax		
	comp=N,414nm,0.8s						
DPC				MLR	MLR		
	comp=Z,900nm,5.2s						
DPC	**Dobruska-Polom**	**1.12**	**171**	*i* PG	**Pg**	**15 50 22.0**	**+0.5**
DPC				*e*SG	**Sg**	**15 50 37.7**	**+1.6**
	comp=Z,414nm,0.8s						
DPC				AMS	AMS	15 50 40.0	
	comp=Z,900nm,5.2s						
DPC	**Dobruska-Polom**	**1.12**	**171**	Pg	**Pg**	**15 50 22.2**	**+0.7**
DPC				*e*S	**Sg**	**15 50 37.7**	**+1.6**
	comp=Z,900nm,5.2s						
DPC				Sg	**Sg**	**15 50 38.0**	**+1.9**
PVCC	**Panska Ves**	**1.33**	**226**	*i* P	**Pg**	**15 50 25.6**	**+0.2**
PVCC				*e*		15 50 45.2	
PVCC				smax	smax		
	comp=N,1μm,0.3s						
PVCC				MLR	MLR		
	comp=Z,800nm,5.9s						
PVCC	**Panska Ves**	**1.33**	**226**	*i* PG	**Pg**	**15 50 25.6**	**+0.2**
PVCC				*e*SG	**Sb**	**15 50 45.2**	**+1.9**
	comp=Z,1μm,0.3s						
PVCC				AMS	AMS	15 50 50.0	
	comp=Z,800nm,5.9s						
PVCC	**Panska Ves**	**1.33**	**226**	*e*Pg	**Pg**	**15 50 25.4**	**0.0**
	baz=43						
PVCC				*e*Sg	**Sg**	**15 50 44.4**	**+1.8**
	baz=43						
BRG	**Berggiesshubel**	**1.46**	**247**	PN	**Pn**	**15 50 26.2**	**-1.4**
BRG				PG	**Pn**	**15 50 28.1**	**+0.5**
BRG				SG	**Sg**	**15 50 48.0**	**+1.2**
	comp=Z,723nm,0.9s						
BRG							
	comp=N,607nm,3.6s						
BRG							
	comp=E,758nm,3.9s						
BRG							
	comp=Z,624nm,3.4s						
BRG	**Berggiesshubel**	**1.46**	**247**	*e*Pn	**Pn**	**15 50 26.5**	**-1.1**
BRG				*e*Pg	**Pn**	**15 50 28.1**	**+0.5**
BRG				*e*Sg	**Sg**	**15 50 48.4**	**+1.6**
BRG	**Berggiesshubel**	**1.46**	**247**	P	**Pn**	**15 50 26.2**	**-1.4**
BRG						15 50 48.0	
BRG				smax	smax		
	comp=N,723nm,0.9s						
BRG				MLR	MLR		
	comp=N,607nm,3.6s						
BRG				MLR	MLR		
	comp=E,758nm,3.9s						
BRG				MLR	MLR		
	comp=Z,624nm,3.4s						
BRG	**Berggiesshubel**	**1.46**	**247**	P	**Pn**	**15 50 26.2**	**-1.4**
BRG	**Berggiesshubel**	**1.46**	**247**	Pn	**Pn**	**15 50 26.5**	**-1.1**
BRG	**Berggiesshubel**	**1.46**	**247**	Pg	**Pn**	**15 50 28.1**	**+0.5**
BRG				S	**Sg**	**15 50 48.0**	**+1.2**
	comp=Z,624nm,3.4s						
BRG				Sg	**Sg**	**15 50 48.4**	**+1.6**
KRLC	**Kraliky**	**1.46**	**161**	*i* P	**Pn**	**15 50 27.5**	**-0.2**
KRLC				*e*		15 50 48.8	
KRLC	**Kraliky**	**1.46**	**161**	*i* PG	**Pn**	**15 50 27.5**	**-0.2**
KRLC				*e*SG	**Sn**	**15 50 48.8**	**+1.3**
KRLC	**Kraliky**	**1.46**	**161**	Pg	**Pn**	**15 50 27.5**	**-0.2**
KRLC				Sg	**Sn**	**15 50 48.8**	**+1.3**
PRU	**Pruhonice**	**1.76**	**214**	*i* P	**Pn**	**15 50 31.5**	**-0.3**
PRU				*e*		15 50 57.0	
PRU				smax	smax		
	comp=N,225nm,0.5s						
PRU				MLR	MLR		
	comp=Z,900nm,4.0s						
PRU	**Pruhonice**	**1.76**	**214**	*i* PN	**Pn**	**15 50 31.5**	**-0.3**
PRU				*i* PG	**Pb**	**15 50 34.2**	**+1.0**
PRU				*e*SG	**Sb**	**15 50 57.0**	**+1.2**
	comp=Z,225nm,0.5s						
PRU				AMS	AMS	15 51 10.0	
	comp=Z,900nm,4.0s						
PRU	**Pruhonice**	**1.76**	**214**	Pn	**Pn**	**15 50 31.5**	**-0.3**
PRU	**Pruhonice**	**1.76**	**214**	Pg	**Pb**	**15 50 34.2**	**+1.0**
PRU				Sg	**Sb**	**15 50 57.0**	**+1.2**
	comp=Z,225nm,0.5s						
FBE	**Freiberg**	**1.79**	**253**	*e*Pn	**Pn**	**15 50 31.1**	**-1.0**
FBE				*e*Pg	**Pb**	**15 50 33.9**	**+0.3**
FBE				*e*Sg	**Sb**	**15 50 57.9**	**+1.4**
FBE	**Freiberg**	**1.79**	**253**	Pn	**Pn**	**15 50 31.1**	**-1.0**
CLL	**Collm**	**1.92**	**267**	*e*Pn	**Pn**	**15 50 32.4**	**-1.6**
CLL				*e*Pg	**Pn**	**15 50 36.0**	**+2.0**
CLL				*e*Sg	**Sb**	**15 51 01.9**	**+1.5**
CLL	**Collm**	**1.92**	**267**	*i* P	**Pn**	**15 50 32.4**	**-1.6**
CLL				*i*		15 51 01.4	
CLL	**Collm**	**1.92**	**267**	*i* Pn	**Pn**	**15 50 32.4**	**-1.6**
CLL				*i* Pg	**Pb**	**15 50 35.5**	**-0.4**
CLL				*i*		15 50 39.4	
CLL				*i* Sg	**Sb**	**15 51 01.4**	**+1.0**
	comp=Z,307nm,0.7s						
CLL	**Collm**	**1.92**	**267**	Pn	**Pn**	**15 50 32.4**	**-1.6**
CLL	**Collm**	**1.92**	**267**	Pg	**Pn**	**15 50 36.0**	**+2.0**
CLL				*i* S	**Sb**	**15 51 01.4**	**+1.0**
CLL				Sg	**Sb**	**15 51 01.9**	**+1.5**
MORC	**Moravsky Berou**	**1.93**	**150**	*e*Pn	**Pn**	**15 50 33.6**	**-0.6**
MORC				*e*Sg	**Sg**	**15 51 03.2**	**+1.1**
MORC	**Moravsky Berou**	**1.93**	**150**	*i* P	**Pn**	**15 50 33.6**	**-0.6**
MORC	**Moravsky Berou**	**1.93**	**150**	*i*P	**Pn**	**15 50 33.6**	**-0.6**
MORC				Sg	**Sg**	**15 51 03.2**	**+1.1**
RAC	**Raciborz**	**1.93**	**135**	*e*P	**Pb**	**15 50 37.0**	**+0.9**
RAC				*e*		15 51 03.8	
RAC	**Raciborz**	**1.93**	**135**	*e*P	**Pb**	**15 50 37.0**	**+0.9**
RAC				*e*S	**Sg**	**15 51 03.8**	**+1.7**
GKP	**Gorka Klasztor**	**1.95**	**21**	*e*Pn	**Pn**	**15 50 34.5**	**+0.2**
GKP				*e*Pg	Pg	15 50 41.1	+3.7
GKP				*e*Sn	**Sn**	**15 50 59.1**	**-0.4**
GKP				*e*Sg	**Sg**	**15 51 08.4**	**+5.7**
GKP	**Gorka Klasztor**	**1.95**	**21**	*e*Pn	**Pn**	**15 50 34.6**	**+0.2**
OKC	**Ostrava-Krasne**	**2.10**	**140**	*e*Pn	**Pn**	**15 50 35.8**	**-0.6**
OKC				*e*Sg	**Sg**	**15 51 07.6**	**+0.2**
OKC	**Ostrava-Krasne**	**2.10**	**140**	*e*P	**Pn**	**15 50 35.1**	**-1.3**
OKC				*e*		15 51 07.2	
OKC				smax	smax		
	comp=N,528nm,0.9s						
OKC				MLR	MLR		
	comp=Z,400nm,5.7s						
OKC	**Ostrava-Krasne**	**2.10**	**140**	*e*PN	**Pn**	**15 50 35.1**	**-1.3**
OKC				*i* PG	**Pb**	**15 50 39.8**	**+0.9**
OKC				*e*SG	**Sg**	**15 51 07.2**	**-0.2**
	comp=Z,528nm,0.9s						
OKC				AMS	AMS	15 51 20.0	
	comp=Z,400nm,5.7s						
OKC	**Ostrava-Krasne**	**2.10**	**140**	Pn	**Pn**	**15 50 35.8**	**-0.6**
VRAC	**Vranov**	**2.18**	**171**	*i*P	**Pn**	**15 50 37.8**	**+0.2**
VRAC	**Vranov**	**2.18**	**171**	Pn	**Pn**	**15 50 37.8**	**+0.2**
	comp=Z,3.5nm,0.3s,baz=344,slow=16,SNR=40						
VRAC				Lg	Lg	15 51 11.8	
	comp=Z,21nm,0.3s,baz=241,slow=18,SNR=8.2						
VRAC	**Vranov**	**2.18**	**171**	*e*Pn	**Pn**	**15 50 37.5**	**-0.1**
VRAC	**Vranov**	**2.18**	**171**	*i*P	**Pn**	**15 50 37.8**	**+0.2**
VRAC				*e*Sg	**Sg**	**15 51 10.4**	**+0.3**
TREC	**Trest**	**2.20**	**190**	*i* P	**Pb**	**15 50 42.1**	**+1.4**
TREC				MLR	MLR		
	comp=Z,500nm,4.2s						
TREC	**Trest**	**2.20**	**190**	*i* PG	**Pb**	**15 50 42.1**	**+1.4**
TREC				AMS	AMS	15 51 20.0	
	comp=Z,500nm,4.2s						
TREC	**Trest**	**2.20**	**190**	Pg	**Pb**	**15 50 42.1**	**+1.4**
KRUC	**Moravsky**	**2.41**	**175**	*e*Pn	**Pn**	**15 50 40.7**	**0.0**
	baz=357						
KRUC				*e*Sg	**Sg**	**15 51 17.6**	**+0.2**
	comp=Z,279nm,1.1s,baz=357						
NKC	**Novy Kostel**	**2.60**	**243**	*i* P	**Pn**	**15 50 42.9**	**-0.4**
NKC				*e*		15 51 24.7	
NKC				smax	smax		
	comp=N,501nm,0.6s						
NKC				MLR	MLR		
	comp=Z,500nm,5.9s						
NKC	**Novy Kostel**	**2.60**	**243**	*i* PN	**Pn**	**15 50 42.9**	**-0.4**
NKC				*i* PG	**Pb**	**15 50 48.9**	**+1.4**
NKC				*e*SG	**Sg**	**15 51 24.7**	**+1.2**
	comp=Z,500nm,0.6s						
NKC				AMS	AMS	15 51 40.0	
	comp=Z,500nm,5.9s						
NKC	**Novy Kostel**	**2.60**	**243**	Pn	**Pn**	**15 50 42.9**	**-0.4**
OJC	**Ojcow**	**2.68**	**116**	*e*P	**Pn**	**15 50 42.9**	**-1.5**
OJC				*e*		15 51 26.1	
OJC	**Ojcow**	**2.68**	**116**	*e*Pn	**Pn**	**15 50 42.9**	**-1.5**
OJC				*e*Pg	**Pg**	**15 50 51.1**	**-0.2**
OJC				*e*Sg	**Sg**	**15 51 26.1**	**+0.1**
OJC	**Ojcow**	**2.68**	**116**	*e*P	**Pn**	**15 50 42.9**	**-1.5**
KHC	**Kasperske Hory**	**2.82**	**215**	*i* P	**Pn**	**15 50 45.9**	**-0.5**
KHC				*e*		15 51 21.5	
KHC				smax	smax		
	comp=N,194nm,0.8s						
KHC				MLR	MLR		
	comp=Z,400nm,4.9s						
KHC	**Kasperske Hory**	**2.82**	**215**	*i* PN	**Pn**	**15 50 45.9**	**-0.5**
KHC				*i* PG	**Pb**	**15 50 52.4**	**+1.1**
KHC				*e*SN	**Sn**	**15 51 21.5**	**+0.4**
KHC				*e*SG	**Sg**	**15 51 31.2**	**+0.5**
	comp=Z,194nm,0.8s						
KHC				AMS	AMS	15 51 40.0	
	comp=Z,400nm,4.9s						
KHC	**Kasperske Hory**	**2.82**	**215**	Pn	**Pn**	**15 50 45.9**	**-0.5**
MANZ	**Manzenberg**	**2.91**	**241**	*e*Pn	**Pn**	**15 50 47.5**	**-0.1**
MANZ				*e*Pg	**Pg**	**15 50 56.2**	**+0.4**
MANZ				*e*Sg	**Sg**	**15 51 33.7**	**+0.2**
MANZ	**Manzenberg**	**2.91**	**241**	Pn	**Pn**	**15 50 47.5**	**-

GERES GERESS Array B 3.02 211 Pn **Pn 15 50 50.1 +0.8**
comp=Z,6.3nm,0.3s,baz=28,slow=13,SNR=163
GERES Pg **Pg 15 50 58.1 +0.1**
comp=Z,14nm,0.3s,baz=22,slow=15,SNR=55
GERES Sn **Sn 15 51 24.8 -1.4**
comp=Z,8.7nm,0.3s,baz=22,slow=19,SNR=6.8
GERES Lg Lg 15 51 40.2
comp=Z,26nm,0.3s,baz=28,slow=29,SNR=12
GERES GERESS Array B 3.02 211 S **Sn 15 51 24.8 -1.4**
SMOL Smolenice 3.08 163 *e*P **Pn 15 50 51.7 +1.8**
SMOL Smolenice 3.08 163 *e*PN **Pn 15 50 51.7 +1.8**
SMOL *e* 15 50 59.5
SMOL Smolenice 3.08 163 *e*P **Pn 15 50 51.7 +1.8**
SMOL *e*Sg **Sg 15 51 42.1 +3.2**
WET Wettzell 3.09 223 *e*Pn **Pn 15 50 50.4 +0.3**
WET *e*Sg **Sg 15 51 39.3 +0.1**
WET Wettzell 3.09 223 *e*P **Pn 15 50 50.4 +0.3**
WET Wettzell 3.09 223 Pn **Pn 15 50 50.4 +0.3**
WET Sg **Sg 15 51 39.3 +0.1**
NIE Niedzica 3.40 125 *e*P **Pg 15 51 04.2 -1.0**
NIE Niedzica 3.40 125 *e*P **Pg 15 51 04.2 -1.0**
NIE *e*S **Sg 15 51 48.2 -1.0**
VYHS Vyhne 3.47 148 *e*P **Pn 15 50 55.0 -0.3**
VYHS pmax pmax
comp=N,37nm,1.1s
VYHS Vyhne 3.47 148 *e*PN **Pn 15 50 55.0 -0.3**
VYHS *e* 15 51 10.2
VYHS Vyhne 3.47 148 *e*P **Pn 15 50 55.0 -0.3**
comp=N,37nm,1.1s
VYHS *e*Sg **Sg 15 51 50.6 -0.8**
CONA Conrad Observa 3.54 182 *i* Pn **Pn 15 50 56.7 +0.4**
SNR=32
CONA ⇓*i*Sg **Sg 15 51 53.7 +0.1**
comp=N,91nm,0.4s
CONA Conrad Observa 3.54 182 Pn **Pn 15 50 56.7 +0.4**
SNR=32
CONA Sg **Sg 15 51 53.7 +0.1**
comp=N,91nm,0.4s
GRA1 Grafenberg Arr 3.56 242 Pn **Pn 15 50 56.5 0.0**
GRA1 Sg **Sg 15 51 54.8 +0.6**
GRF Grafenberg Arr 3.56 242 *e*Pn **Pn 15 50 56.5 0.0**
GRF *e*Sg **Sg 15 51 54.8 +0.6**
GRF Grafenberg Arr 3.56 242 *e*P **Pn 15 50 56.5 0.0**
CLZ Clausthal 3.56 278 *e*Pn **Pn 15 50 56.1 -0.5**
CLZ *e*Sg **Sg 15 51 53.7 -0.7**
CLZ Clausthal 3.56 278 *e*P **Pn 15 50 56.1 -0.5**
CLZ Clausthal 3.56 278 Pn **Pn 15 50 56.1 -0.5**
CLZ Sg **Sg 15 51 53.7 -0.7**
BSD Bornholm Skovb 3.72 350 *i* P Pn 15 50 55.6 -3.1
BSD *i* S Sn 15 51 34.9 -8.4
BSD Bornholm Skovb 3.72 350 *i* P Pn 15 50 55.6 -3.1
BSD *i* S Sn 15 51 34.9 -8.4
BSD Bornholm Skovb 3.72 350 *i* P Pn 15 50 55.6 -3.1
SOP Sopron 3.79 175⇓*e* **Pn 15 50 59.8 +0.1**
SOP Sopron 3.79 175⇓*e*P **Pn 15 50 59.8 +0.1**
MOA Molln 3.80 199⇑*i*Pn **Pn 15 51 00.2 +0.4**
comp=65
MOA ⇑*i*Sg **Sg 15 52 01.1 -0.9**
comp=N,148nm,0.8s
MOA Molln 3.80 199 Pn **Pn 15 51 00.2 +0.4**
SNR=65
MOA Sg **Sg 15 52 01.1 -0.9**
comp=N,148nm,0.8s
ARSA Arzberg 4.23 185⇑*i*Pn **Pn 15 51 05.2 -0.5**
SNR=16
ARSA ⇑*i*Sg **Sg 15 52 17.2 +1.4**
comp=N,138nm,0.9s
ARSA Arzberg 4.23 185 Pn **Pn 15 51 05.2 -0.5**
SNR=16
ARSA Sg **Sg 15 52 17.2 +1.4**
comp=N,138nm,0.9s
CRVS Cervenica-Dubn 4.31 124 *e*P **Pn 15 51 06.2 -0.7**
CRVS pmax pmax
comp=N,146nm,1.7s
CRVS Cervenica-Dubn 4.31 124 *e*PN **Pn 15 51 06.2 -0.7**
CRVS *e* 15 51 23.4
CRVS Cervenica-Dubn 4.31 124 *e*P **Pn 15 51 06.2 -0.7**
comp=N,146nm,1.7s
CRVS *e*Sg **Sg 15 52 16.8 -1.7**
PSZ Piszkesteto 4.33 143⇓*i*P **Pn 15 51 07.9 +0.7**
PSZ Piszkesteto 4.33 143⇓*e* **Pn 15 51 07.5 +0.3**
PSZ Piszkesteto 4.33 143⇓*i*P **Pn 15 51 07.9 +0.7**
PKSG 4.35 159⇓*e* **Pn 15 51 07.3 0.0**
PKSG 4.35 159⇓*e*P **Pn 15 51 07.3 0.0**
BUD Budapest 4.42 153 *e* **Pn 15 51 09.7 +1.3**
BUD Budapest 4.42 153 *e*P **Pn 15 51 09.7 +1.3**
KWP Kalwaria Pacla 4.62 111 *e*Pg **Pb 15 51 24.8 +2.9**
KWP Kalwaria Pacla 4.62 111 *e*Pg **Pb 15 51 24.9 +3.0**
KOLS Kolonicke sedl 4.72 120 *e*P **Pn 15 51 11.8 -0.7**
KOLS pmax pmax
comp=N,120nm,1.4s
KOLS Kolonicke sedl 4.72 120 *e*PN **Pn 15 51 11.8 -0.7**
KOLS *e* 15 51 33.1
KOLS Kolonicke sedl 4.72 120 *e*P **Pn 15 51 11.8 -0.7**
comp=N,120nm,1.4s
KOLS *e*Sg **Sg 15 52 31.8 +0.1**
KBA Koelnbreinsper 4.73 203⇑*i*Pn **Pn 15 51 13.6 +0.8**
SNR=31
KBA ⇓*i*Sg **Sg 15 52 32.8 +0.8**
comp=N,115nm,0.7s
KBA Koelnbreinsper 4.73 203 Pn **Pn 15 51 13.6 +0.8**
SNR=31
KBA Sg **Sg 15 52 32.8 +0.8**
comp=N,115nm,0.7s
UZH Uzhgorod 4.91 123 *e*P **Pn 15 51 13.3 -1.8**
UZH *e*S **Sn 15 52 09.7 -2.9**
UZH pmax pmax
comp=N,40nm,1.0s
UZH pmax pmax
comp=E,47nm,1.0s
UZH pmax pmax
comp=Z,35nm,1.0s
UZH Uzhgorod 4.91 123 *e*P **Pn 15 51 13.3 -1.8**
UZH *e*S **Sn 15 52 09.7 -2.9**
TOD Tromm 4.99 251 P **Pn 15 51 15.5 -0.6**
BEHE Becsehely 5.02 174⇓*e* **Pn 15 51 18.3 +1.8**
BEHE Becsehely 5.02 174⇓*e*P **Pn 15 51 18.3 +1.8**
GROS Grobnik 5.02 184 *i* Pn **Pn 15 51 17.5 +0.9**
GROS Grobnik 5.02 184 Pn **Pn 15 51 17.5 +0.9**
KOGS Kog 5.02 178 *i* Pn **Pn 15 51 17.7 +1.2**
KOGS Kog 5.02 178 *i* Pn **Pn 15 51 17.7 +1.2**
WATA Walderalm 5.06 217⇑*i*Pn **Pn 15 51 17.7 +0.4**
SNR=17
WATA Walderalm 5.06 217 Pn **Pn 15 51 17.7 +0.4**
SNR=17
WTTA Wattenberg 5.10 216 *i* Pn **Pn 15 51 18.9 +1.1**
SNR=15
WTTA ⇑*i*Sg **Sg 15 52 46.1 +2.4**
comp=Z,83nm,0.9s
WTTA Wattenberg 5.10 216 Pn **Pn 15 51 18.9 +1.1**
SNR=15
WTTA Sg **Sg 15 52 46.1 +2.4**
comp=Z,83nm,0.9s
DEL Delary 5.18 346 S Sn 15 52 11.5 -7.7
MOTA Moosalm 5.24 220⇓*i*Pn **Pn 15 51 20.0 +0.3**
SNR=12
MOTA ⇑*i*Sg **Sg 15 52 50.5 +2.3**
comp=Z,197nm,1.3s
MOTA Moosalm 5.24 220 Pn **Pn 15 51 20.0 +0.3**
SNR=12
MOTA Sg **Sg 15 52 50.5 +2.3**
comp=Z,197nm,1.3s
ABTA Abfaltersbach 5.26 208⇑*i*Pn **Pn 15 51 20.0 0.0**
SNR=20
ABTA ⇑*i*Sg **Sg 15 52 50.3 +1.3**
comp=Z,92nm,0.8s
ABTA Abfaltersbach 5.26 208 Pn **Pn 15 51 20.0 0.0**
SNR=20
ABTA Sg **Sg 15 52 50.3 +1.3**
comp=Z,92nm,0.8s
LVV L'vov 5.33 105 *e*P Pn 15 51 28.0 +7.2
LVV *e*S Sb 15 52 32.0 -6.5
TRPA Tarpa 5.36 126⇓*e* **Pn 15 51 20.4 -0.8**
TRPA Tarpa 5.36 126⇓*e*P **Pn 15 51 20.4 -0.8**
KOE Koeppel 5.37 262 *e*Pn **Pn 15 51 19.9 -1.4**
KOE Koeppel 5.37 262 Pn **Pn 15 51 19.9 -1.4**
PKSM Moragy 5.52 161⇓*e* **Pn 15 51 24.6 +1.2**
VOY Vojsko 5.62 196 *e*Pn **Pn 15 51 25.3 +0.4**
VOY *e* 15 51 50.2
VOY *e* 15 52 45.7
VOY *e* 15 53 03.8
VOY *e* 15 53 11.3
VOY Vojsko 5.62 196 *e*Pn **Pn 15 51 25.3 +0.4**
FETA Feichten 5.65 220 *i* Pn **Pn 15 51 26.0 +0.6**
SNR=15
FETA ⇑*i*Sg **Sg 15 53 03.6 +2.1**
comp=Z,50nm,0.8s
CRES Cresnjev 5.65 184 *i* Pn **Pn 15 51 26.6 +1.3**
CRES Cresnjev 5.65 184 *i* Pn **Pn 15 51 26.6 +1.3**
BGG Burgeitz 5.67 261 *e*Pn **Pn 15 51 24.3 -1.1**
BGG Burgeitz 5.67 261 Pn **Pn 15 51 24.3 -1.1**
LAUG Laupendahl 5.71 272 *e*Pn **Pn 15 51 25.0 -1.0**
LAUG Laupendahl 5.71 272 Pn **Pn 15 51 25.0 -1.0**
DAVA Damuels 5.81 226⇑*i*Pn **Pn 15 51 27.6 +0.1**
DAVA ⇓*i*Sg **Sg 15 53 09.4 +2.9**
comp=Z,62nm,0.7s
LANF Langenberg 5.85 248 P **Pn 15 51 27.2 -0.8**
STB Steinbach 5.88 265 *e*Pn **Pn 15 51 28.2 -0.2**
STB *e*Sn Sn 15 52 30.4 -6.1
comp=Z,35nm,1.4s
STB Steinbach 5.88 265 Pn **Pn 15 51 28.2 -0.2**
BOJS Bojanci 5.99 185 *i* Pn **Pn 15 51 30.8 +1.0**
BOJS Bojanci 5.99 185 *i* Pn **Pn 15 51 30.8 +1.0**
GNOU Gnosjoe 6.00 348 P Pn 15 51 26.9 -3.0
GNOU S Sn 15 52 29.8 -9.4
HILG Hillesheim 6.05 263 *e*Pn **Pn 15 51 30.7 -0.1**
HILG Hillesheim 6.05 263 Pn **Pn 15 51 30.7 -0.1**
EKSU Eksjoe 6.14 356 P Pn 15 51 29.2 -2.7
DAVOX Davos/Dischmat 6.19 223 Pn **Pn 15 51 33.0 +0.2**
comp=Z,0.9nm,0.3s,baz=40,slow=12,SNR=10
DAVOX Lg Lg 15 53 17.6
comp=Z,0.9nm,0.3s,baz=312,slow=23,SNR=8.9
KLL Kalltalsperre 6.20 266 *e*Pn **Pn 15 51 31.9 -0.9**
KLL Kalltalsperre 6.20 266 Pn **Pn 15 51 31.9 -0.9**
DRGR 6.39 134⇓*i*P **Pn 15 51 35.4 -0.1**
DRGR 6.39 134⇓*i*P **Pn 15 51 35.4 -0.1**
MEM Membach 6.40 266 PN **Pn 15 51 34.6 -0.9**
MEM SG **Sg 15 53 29.6 +4.2**
MEM Membach 6.40 266 Pn **Pn 15 51 34.6 -0.9**
CDF Champ du Feu 6.44 245 *e*Pn Pn 15 51 33.8 -2.3
CDF Champ du Feu 6.44 245 *e*Pg Pb 15 51 58.1 +5.2
CDF *e*Sg Sg 15 53 21.2 -5.5
comp=Z,228nm,1.1s
CDF Champ du Feu 6.44 245 *e*Pn Pn 15 51 33.8 -2.3
CDF Champ du Feu 6.44 245 *e*Pg Pb 15 51 58.1 +5.2
CDF *e*Sg Sg 15 53 21.2 -5.5
comp=Z,114nm,1.1s
WLF Walferdange 6.56 258 PN **Pn 15 51 37.9 +0.2**
WLF SG **Sg 15 53 30.5 -0.2**
WLF Walferdange 6.56 258 Pn **Pn 15 51 37.9 +0.2**
WLF Sg **Sg 15 53 30.5 -0.2**
LNKU Linkoeping 6.79 358 P Pn 15 51 37.1 -3.6
LNKU S Sn 15 52 48.9 -10
FKPU Falk 6.85 350 P Pn 15 51 39.2 -2.4
BCLA Clavier 6.88 265 PN **Pn 15 51 41.9 -0.2**
BCLA SG **Sg 15 53 40.9 +0.1**
BCLA Clavier 6.88 265 Pn **Pn 15 51 41.8 -0.2**
BCLA Sg **Sg 15 53 40.9 +0.1**
BZS Buzias 6.91 146⇑*i*P **Pn 15 51 43.7 +1.2**
BZS Buzias 6.91 146⇑*i*P **Pn 15 51 43.7 +1.2**
VIKU Vikbolandet 7.07 3 P Pn 15 51 42.0 -2.6
BURAR Bucovina Array 7.09 119⇑*i*P **Pn 15 51 45.4 +0.3**
BURAR Bucovina Array 7.09 119⇑*i*P **Pn 15 51 45.4 +0.3**
HAU Haudompre 7.18 245 *e*Pn Pn 15 51 43.8 -2.4
HAU Haudompre 7.18 245 *e*Pg Pb 15 52 12.3 +6.8
HAU *e*Sg Sg 15 53 44.0 -6.5
comp=Z,84nm,0.9s
HAU Haudompre 7.18 245 *e*Pn Pn 15 51 43.8 -2.4
HAU Haudompre 7.18 245 *e*Pg Pb 15 52 12.3 +6.8
HAU *e*Sg Sg 15 53 44.0 -6.5
comp=Z,42nm,0.9s
GIVF Givet 7.25 264 *e*Pn Pn 15 51 43.8 -3.4
GIVF *e*Sg Sb 15 53 45.0 +11
comp=Z,73nm,0.9s
GIVF Givet 7.25 264 *e*Pn Pn 15 51 43.8 -3.4
GIVF *e*Sg Sb 15 53 45.0 +11
comp=Z,36nm,0.9s
PAGF Fort de Pagny 7.27 250 *e*Pn Pn 15 51 44.5 -2.9
PAGF *e*Sg Sg 15 53 46.4 -6.9
comp=Z,44nm,1.1s
PAGF Fort de Pagny 7.27 250 *e*Pn Pn 15 51 44.5 -2.9
PAGF *e*Sg Sg 15 53 46.4 -6.9
comp=Z,22nm,1.1s
THEF They Montfort 7.27 248 P **Pn 15 51 46.2 -1.3**
DOU Dourbes 7.40 264 PN **Pn 15 51 49.2 0.0**
DOU SG **Sg 15 54 00.6 +3.2**
DOU Dourbes 7.40 264 Pn **Pn 15 51 49.1 0.0**
NYNU Nynaeshamn 7.64 8 P Pn 15 51 50.1 -2.4
BAIF Baives 7.65 264 *e*Pn Pn 15 51 49.0 -3.6
BAIF *e*Sg Sg 15 53 57.5 -8.0
comp=Z,120nm,1.5s
BAIF Baives 7.65 264 *e*Pn Pn 15 51 49.0 -3.6
BAIF *e*Sg Sg 15 53 57.5 -8.0
comp=Z,60nm,1.5s
MEZF Maizieres J'vi 7.69 252 *e*Pn Pn 15 51 49.5 -3.7
MEZF *e*Sg Sg 15 53 59.8 -7.0
comp=Z,134nm,1.3s
MEZF Maizieres J'vi 7.69 252 *e*Pn Pn 15 51 49.5 -3.7
MEZF *e*Sg Sg 15 53 59.8 -7.0
comp=Z,67nm,1.3s
ESKU Eskilstuna 7.79 1 P Pn 15 51 50.7 -3.8
SFTF Sexfontaines 7.83 250 *e*Pn Pn 15 51 52.5 -2.7
SFTF *e*Sg Sg 15 54 04.1 -7.4
comp=Z,222nm,1.4s
SFTF Sexfontaines 7.83 250 *e*Pn Pn 15 51 52.5 -2.7
SFTF *e*Sg Sg 15 54 04.1 -7.4
comp=Z,111nm,1.4s
CABF La Chapelle 8.15 237 *e*Pn Pn 15 51 57.1 -2.5
CABF La Chapelle 8.15 237 *e*Pg Pb 15 52 30.4 +8.3
CABF *e*Sg Sg 15 54 14.9 -6.7
comp=Z,222nm,1.3s
CABF La Chapelle 8.15 237 *e*Pn Pn 15 51 57.1 -2.5
CABF La Chapelle 8.15 237 *e*Pg Pb 15 52 30.4 +8.3
CABF *e*Sg Sg 15 54 14.9 -6.7
comp=Z,111nm,1.3s
AKASG Malin Array Be 8.33 90 P Pn 15 51 59.1 -2.8
AKASG 15 53 29.0
AKASG pmax pmax
comp=Z,4.0nm,0.3s
AKASG smax smax
comp=N,2.0nm,0.3s
AKASG Malin Array Be 8.33 90 Pn Pn 15 51 59.1 -2.8
comp=N,4.0nm,0.3s,baz=277,slow=12,SNR=13
AKASG Sn Sn 15 53 28.9 -7.6
comp=N,1.7nm,0.3s,baz=268,slow=23,SNR=5.2
AKASG Lg Lg 15 54 32.2
comp=N,0.4nm,0.3s,baz=268,slow=27,SNR=5.1
BACU Backbrunna 8.44 4 P Pn 15 52 00.4 -2.9
LPL La Plagne 8.58 230 *e*Pn Pn 15 52 02.3 -3.4
LPL La Plagne 8.58 230 *e*Pg Pg 15 52 38.0 -6.4
LPL *e*Sg Sg 15 54 28.9 -6.6
comp=N,61nm,1.3s
LPL La Plagne 8.58 230 *e*Pn Pn 15 52 02.3 -3.4
LPL La Plagne 8.58 230 *e*Pg Pg 15 52 38.0 -6.4
LPL *e*Sg Sg 15 54 28.9 -6.6
comp=N,30nm,1.3s
LPG La Plagne 8.59 230 *e*Pn Pn 15 52 02.9 -2.9
LPG La Plagne 8.59 230 *e*Pg Pg 15 52 38.2 -6.3
LPG *e*Sg Sg 15 54 29.6 -6.1
comp=N,81nm,1.4s
LPG La Plagne 8.59 230 *e*Pn Pn 15 52 02.9 -2.9
LPG La Plagne 8.59 230 *e*Pg Pg 15 52 38.2 -6.3
LPG *e*Sg Sg 15 54 29.6 -6.1
comp=N,40nm,1.4s
FLYU Flymyra 8.75 6 P Pn 15 52 04.2 -3.5
HFS Hagfors 8.79 352 Pn **Pn 15 52 07.9 -0.4**
comp=N,0.2nm,0.3s,baz=160,slow=13,SNR=8.3
HFS Sn Sn 15 53 40.9 -7.2
comp=N,0.4nm,0.3s,baz=185,slow=29,SNR=3.8
HFS Lg Lg 15 54 42.9
comp=N,0.6nm,0.3s,baz=174,slow=30,SNR=4.2
LOR Lormes 9.00 247 *e*Pn Pn 15 52 07.4 -3.7
LOR Lormes 9.00 247 *e*Pg Pn 15 52 45.3 +34
LOR *e*Sg Sn 15 54 40.9 +48
comp=N,44nm,0.9s
LOR Lormes 9.00 247 *e*Pn Pn 15 52 07.4 -3.7
LOR Lormes 9.00 247 *e*Pg Pn 15 52 45.3 +34
LOR *e*Sg Sn 15 54 40.9 +48
comp=N,22nm,0.9s
MBDF Montbardon 9.16 226 *e*Pn Pn 15 52 10.1 -3.4
MBDF *e*Sg Sn 15 54 47.4 +50
comp=N,52nm,1.2s
MBDF Montbardon 9.16 226 *e*Pn Pn 15 52 10.1 -3.4
SSF Saint Saulge 9.31 247 *e*Pn Pn 15 52 12.8 -2.6
SSF Saint Saulge 9.31 247 *e*Pg Pn 15 52 53.4 +38
SSF *e*Sg Sn 15 54 50.9 +50
comp=N,17nm,1.2s
SMF Signal de Mont 9.36 244 *e*Pn Pn 15 52 13.3 -2.7
SMF *e*Sg Sn 15 54 51.9 +50
comp=N,45nm,0.9s
SMF Signal de Mont 9.36 244 *e*Pn Pn 15 52 13.3 -2.7
SMF *e*Sg Sn 15 54 51.9 +50
comp=N,22nm,0.9s
ORIF Oris-en-Rattie 9.43 230 *e*Pn Pn 15 52 13.8 -3.4
ORIF *e*Sg Sn 15 54 55.4 +51
comp=N,88nm,1.5s
ORIF Oris-en-Rattie 9.43 230 *e*Pn Pn 15 52 13.8 -3.4
ORIF *e*Sg Sn 15 54 55.4 +51
comp=N,44nm,1.5s
AVF Avril sur Loir 9.55 246 *e*Pn Pn 15 52 15.8 -2.9
AVF *e*Sg Sn 15 54 58.1 +51
comp=N,46nm,1.1s
AVF Avril sur Loir 9.55 246 *e*Pn Pn 15 52 15.8 -2.9
AVF *e*Sg Sn 15 54 58.1 +51
comp=N,23nm,1.1s
SBF Sospel 9.57 221 *e*Pn **Pn 15 52 17.3 -1.7**
SBF Sospel 9.57 221 *e*Pn **Pn 15 52 17.3 -1.7**
BGF Bois d'Agland 9.97 246 *e*Pn Pn 15 52 22.4 -2.0
BGF *e*Sg Sn 15 55 11.4 +54
comp=N,38nm,0.9s
BGF Bois d'Agland 9.97 246 *e*Pn Pn 15 52 22.4 -2.0
BGF *e*Sg Sn 15 55 11.4 +54
comp=N,19nm,0.9s
NOA NORSAR Array B 9.97 346 Pn Pn 15 52 20.6 -3.8
comp=N,0.2nm,0.3s,baz=160,slow=11,SNR=4.6
NOA Sn Sn 15 54 09.1 -7.8
comp=N,0.2nm,0.3s,baz=100,slow=17,SNR=3.6
VIVF Saint-Julien-l 10.07 233 *e*Sg Sn 15 55 15.2 +56
comp=N,38nm,1.1s
VIVF Saint-Julien-l 10.07 233 *e*Sg Sn 15 55 15.2 +56
comp=N,19nm,1.1s
FRF La Foret Royal 10.14 222 *e*Pn Pn 15 52 24.3 -2.5
FRF La Foret Royal 10.14 222 *e*Pn Pn 15 52 24.3 -2.5
SMRF Simiane la Rot 10.29 227 *e*Pn Pn 15 52 26.1 -2.7
SMRF Simiane la Rot 10.29 227 *e*Pn Pn 15 52 26.1 -2.7
TCF Toulx Ste Croi 10.48 246 *e*Pn Pn 15 52 29.1 -2.4
TCF *e*Sg Sn 15 55 27.2 +58
comp=N,65nm,1.2s
TCF Toulx Ste Croi 10.48 246 *e*Pn Pn 15 52 29.1 -2.4
LASF Ste Croix 11.04 233 *e*Sg 15 55 45.3
comp=N,51nm,1.4s
LASF Ste Croix 11.04 233 *e*Sg 15 55 45.3
comp=N,25nm,1.4s
CAF Calviac 11.39 240 *e*Pn Pn 15 52 40.0 -3.9
CAF *e*Sg 15 55 56.2
comp=N,40nm,1.4s
CAF Calviac 11.39 240 *e*Pn Pn 15 52 40.0 -3.9
CAF *e*Sg 15 55 56.2
comp=N,20nm,1.4s
FINES FINESS Array B 11.42 25 Pn Pn 15 52 40.2 -4.0
comp=N,0.5nm,0.3s,baz=206,slow=10,SNR=17
FINES Sn Sn 15 54 42.5 -10
comp=N,0.6nm,0.3s,baz=209,slow=21,SNR=6.0
EKA Eskdalemuir Ar 12.10 296 Pn Pn 15 52 49.5 -4.0
baz=101,slow=14,SNR=9.0
MTLF Montolieu 12.39 234 *e*Sg 15 56 27.4
comp=N,21nm,1.2s
MTLF Montolieu 12.39 234 *e*Sg 15 56 27.4
comp=N,10nm,1.2s
OBN Obninsk 12.79 65⇑*e*P **Pn 15 53 04.2 +1.2**
OBN pmax pmax
comp=Z,12nm,1.2s
EPF Esparros 13.58 238 *e*Sg S 15 57 04.5 +55
comp=Z,43nm,1.6s
EPF Esparros 13.58 238 *e*Sg S 15 57 04.5 +55
comp=Z,22nm,1.6s
ESDC Sonseca Array 18.25 238 LR LR 16 02 25.2
comp=Z,42nm,19.8s,baz=130,slow=41
ARCES ARCESS Array B 18.68 10 Pn P 15 54 13.0 -6.4
comp=Z,0.2nm,0.3s,baz=193,slow=13,SNR=9.4
KIV Kislovodsk 19.35 102⇓*e*P **P 15 54 25.8 -1.2**
KIV pmax pmax
comp=Z,4.0nm,1.2s
ZEI Tsey 20.74 104 *e*P **P 15 54 42.8 +0.5**
ZEI pmax pmax
comp=Z,3.0nm,1.3s
ARU Arti 25.19 62*c i*P **P 15 55 25.1 -1.8**
ARU 15 55 56.8
ARU S **S 15 59 54.4 +1.6**
ARU SS **SnSn 16 00 44.1 +2.1**
ARU pmax pmax
comp=Z,5.0nm,1.0s
AKTO Aktyubinsk 26.20 76 P **P 15 55 34.9 -1.2**
AKTO pmax pmax
comp=Z,1.0nm,0.5s
AKTO Aktyubinsk 26.20 76 P **P 15 55 34.9 -1.2**
comp=Z,0.8nm,0.5s,baz=289,slow=9.0,SNR=3.6
BRVK Borovoye 32.57 65⇑*e*P **P 15 56 32.4 -0.2**
BRVK pmax pmax
comp=Z,6.0nm,1.2s
KURK Kurchatov 38.24 66*d i*P **P 15 57 20.7 -0.7**
KURK pmax pmax
comp=Z,8.0nm,2.5s
KURK Kurchatov 38.24 66 *i* P **P 15 57 20.7 -0.7**
comp=Z,8.0nm,2.5s
AAK Ala-Archa 39.81 79*c i*P **P 15 57 35.2 +0.3**
AAK pmax pmax
comp=Z,12nm,1.2s
AAK Ala-Archa 39.81 79 *i* P **P 15 57 35.2 +0.3**
comp=Z,12nm,1.2s
TORD Torodi Ar. Bea 39.94 202 P **P 15 57 35.8 -0.2**
comp=Z,1.3nm,0.9s,baz=6.6,slow=8.3,SNR=6.1
ZALV Zalesovo Beam 40.25 59 P **P 15 57 38.0 -0.2**
ZALV pmax pmax
comp=Z,1.0nm,0.9s
ZALV Zalesovo Beam 40.25 59 P **P 15 57 38.0 -0.2**
comp=Z,1.2nm,0.9s,baz=306,slow=10,SNR=6.5
ZALV Zalesovo Beam 40.25 59 P **P 15 57 38.0 -0.2**
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 42.26 69 P **P 15 57 54.4 -0.5**
MKAR MLR MLR
comp=Z,54nm,20.5s
MKAR Makanchi Array 42.26 69 P **P 15 57 54.4 -0.5**
comp=Z,0.2nm,0.3s,baz=310,slow=6.6,SNR=4.8
MKAR LR LR 16 17 35.0
comp=Z,54nm,20.5s,baz=6.2,slow=39
MKAR Makanchi Array 42.26 69 P **P 15 57 54.4 -0.5**
comp=Z,54nm,20.5s
TLY Talaya 51.18 53 *e*P **P 15 59 04.7 +0.1**
TLY Talaya 51.18 53 *e*P **P 15 59 04.7 +0.1**
YAK Yakutsk 55.26 32 *e*P **P 15 59 32.4 -2.1**
YAK Yakutsk 55.26 32 *e*P **P 15 59 32.4 -2.1**
ULN Ulaanbaatar 55.29 55 *e*P **P 15 59 35.0 -0.1**
YKA Yellowknife Ar 59.89 336 P **P 16 00 06.1 -0.9**
comp=Z,1.2nm,0.7s,baz=30,slow=6.6,SNR=31
YKA Yellowknife Ar 59.89 336 P **P 16 00 06.1 -0.9**
comp=Z,1.0nm,0.7s
ILAR Eielson Array 63.35 352 P **P 16 00 29.9 -0.5**
comp=Z,0.3nm,0.9s,baz=15,slow=3.7,SNR=4.1
ILAR Eielson Array 63.35 352 P **P 16 00 29.9 -0.5**
PDAR Pinedale Array 74.96 322 P **P 16 01 42.3 -0.8**
comp=Z,0.6nm,0.8s,baz=48,slow=4.4,SNR=4.9
NVAR Mina Array Bea 81.99 325 P **P 16 02 22.7 +0.8**
comp=Z,0.5nm,0.9s,baz=35,slow=3.3,SNR=3.0

IDC 18 16:06:22.5±1.2,6.58S×155.15E,h0km,mb3.4/5, mb1 3.6/6,mb1mx3.5/19,mbtmp3.5/6,ML3.8/1,Error ellipse: s-maj=30.1km s-min=26.5km az=179.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.53**	**121**	Pn	Pn	16 07 47.2	+1.1
	2.8nm,0.3s,baz=292,slow=11,SNR=4.3						
HNR				Sn	Sn	16 08 53.7	+3.3
	4.8nm,0.3s,baz=112,slow=19,SNR=2.8						
WRA	**Warramunga Arr**	**24.18**	**235**	P	P	16 11 41.2	+0.4
	0.4nm,0.5s,baz=58,slow=9.3,SNR=10						
ASAR	**Alice Springs**	**26.56**	**228**	P	P	16 12 00.8	-1.7
	0.5nm,0.9s,baz=64,slow=9.1,SNR=5.8						
CMAR	**Chiang Mai Arr**	**60.75**	**295**	P	P	16 16 37.9	+1.3
	0.7nm,0.8s,baz=124,slow=5.9,SNR=6.0						
ILAR	**Eielson Array**	**82.94**	**21**	P	P	16 18 47.4	-1.6
	0.1nm,0.5s,baz=237,slow=5.5,SNR=4.4						
MKAR	**Makanchi Array**	**83.20**	**319**	P	P	16 18 51.4	+0.6
	0.3nm,0.7s,baz=112,slow=6.6,SNR=4.4						

*IDC **18** 16:16:10.6±2.2,31°.97N×30°.74E, h0km, mb3.7/9, mb1 3.8/13,mb1mx3.6/30,mbtmp3.7/13,ML3.6/4,Error ellipse: s-maj=44.3km s-min=21.2km az=31.0*

*CSEM **18** 16:16:15.5±0.1,32°.08N×30°.80E, h30km, Mw3.3, Error ellipse: s-maj=5.0km s-min=3.0km az=73.0*

*HLW **18** 16:16:15.6,32°.13N×30°.91E, h33km±38km, Md3.2, Ml3.4*

*NIC **18** 16:16:18.5±0.3,32°.25N×30°.83E, h25km, mb4.2, ML3.7, MW3.3*

*ATH **18** 16:17:00.6,34°.54N×27°.72E, h101km±6km*

ISC 18 16:16:12.1±1.4**,32°.09N**±0°.03×**30°.83E**±0°.04**, h8**km±10km**, n187,**σ1**.5**4**/203**, mb3.6**/9**, 2C-2D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SQR		**2.22**	**172**	P	**Pn**	**16 16 50.8**	**+1.6**
HMYD	**Mayadein**	**2.28**	**181**	P	**Pb**	**16 16 52.5**	**-1.1**
	baz=183						
HMYD	**Mayadein**	**2.28**	**181**	P	**Pb**	**16 16 52.5**	**-1.1**
KOT	**Kottamia**	**2.32**	**158**	P	**Pn**	**16 16 52.1**	**+1.5**
	baz=160						
KOT				AMP		16 17 00.0	
	comp=E,530μm,0.3s,logA/T=6.2,baz=160						
KOT				S	**Sn**	**16 17 18.2**	**-1.1**
	baz=160						
KOT	**Kottamia**	**2.32**	**158**	P	**Pn**	**16 16 52.1**	**+1.5**
KOT				S	**Sn**	**16 17 18.2**	**-1.1**
HHAG	**Hagoal**	**2.39**	**153**	P	**Pn**	**16 16 51.9**	**+0.3**
	baz=154						
HHAG				AMP		16 17 00.0	
	comp=E,240μm,0.1s,logA/T=6.2,baz=154						
HHAG				S	**Sn**	**16 17 19.8**	**-1.2**
	baz=154						
HHAG	**Hagoal**	**2.39**	**153**	P	**Pn**	**16 16 51.9**	**+0.3**
HHAG				S	**Sn**	**16 17 19.8**	**-1.2**
HNAT	**Natroun**	**2.45**	**184**	P	**Pn**	**16 16 54.5**	**+2.1**
	baz=186						
HNAT	**Natroun**	**2.45**	**184**	P	**Pn**	**16 16 54.5**	**+2.1**
AMAG	**Maghara**	**2.49**	**125**	P	**Pn**	**16 16 53.2**	**+0.2**
	baz=126						
AMAG	**Maghara**	**2.49**	**125**	P	**Pn**	**16 16 53.2**	**+0.2**
HSAF	**As Saff**	**2.54**	**166**	P	**Pn**	**16 16 55.3**	**+1.7**
	baz=167						
HSAF	**As Saff**	**2.54**	**166**	P	**Pn**	**16 16 55.3**	**+1.7**
GLL	**Jalalah**	**2.61**	**163**	P	**Pn**	**16 16 55.4**	**+0.7**
	baz=164						
GLL	**Jalalah**	**2.61**	**163**	P	**Pn**	**16 16 55.4**	**+0.7**
RSH		**2.71**	**114**	P	**Pn**	**16 16 56.3**	**+0.3**
	baz=115						
RSH		**2.71**	**114**	P	**Pn**	**16 16 56.3**	**+0.3**
SUZ		**2.82**	**142**	P	**Pn**	**16 16 58.9**	**+1.4**
	baz=143						
SUZ		**2.82**	**142**	P	**Pn**	**16 16 58.9**	**+1.4**
PPCY	**Paphos**	**3.06**	**24**	P	**Pn**	**16 17 02.0**	**+1.2**
PPCY	**Paphos**	**3.06**	**24**	P	**Pn**	**16 17 02.0**	**+1.2**
HBNS	**Bani Suwayf**	**3.14**	**174**	P	**Pn**	**16 17 04.0**	**+2.1**
	baz=175						
HBNS	**Bani Suwayf**	**3.14**	**174**	P	**Pn**	**16 17 04.0**	**+2.1**
MATC	**Matruh**	**3.15**	**257**	P	**Pn**	**16 17 03.9**	**+1.9**
	baz=258						
ZAF		**3.16**	**152**	P	**Pn**	**16 17 03.7**	**+1.5**
	baz=153						
ZAF		**3.16**	**152**	P	**Pn**	**16 17 03.7**	**+1.5**
AKMC	**Akamas**	**3.19**	**23**	⇑P	**Pn**	**16 17 03.7**	**+1.1**
AKMC	**Akamas**	**3.19**	**23**	⇑P	**Pn**	**16 17 03.7**	**+1.1**
ZNM		**3.22**	**146**	P	**Pn**	**16 17 04.3**	**+1.2**
	baz=147						
ZNM		**3.22**	**146**	P	**Pn**	**16 17 04.3**	**+1.2**
HMAT	**Matruh**	**3.33**	**254**	P	**Pn**	**16 17 06.8**	**+2.2**
	baz=254						
HMAT				AMP		16 17 00.0	
	comp=E,120μm,0.4s,logA/T=5.5,baz=254						
HMAT	**Matruh**	**3.33**	**254**	P	**Pn**	**16 17 03.9**	**-0.7**
ALFC	**Alevga**	**3.40**	**25**	P	**Pn**	**16 17 06.8**	**+1.3**
	comp=E,7.0nm,0.2s						
ALFC				S	**Sn**	**16 17 44.5**	**-1.5**
ALFC	**Alevga**	**3.40**	**25**	P	**Pn**	**16 17 06.8**	**+1.3**
	comp=E,7.0nm,0.2s						
ALFC				S	**Sn**	**16 17 44.5**	**-1.5**
HNKL	**Nakhl**	**3.46**	**128**	P	**Pn**	**16 17 06.5**	**+0.3**
	baz=128						
HNKL				AMP		16 18 00.0	
	comp=E,130μm,0.5s,logA/T=5.4,baz=128						
HNKL	**Nakhl**	**3.46**	**128**	P	**Pn**	**16 17 06.6**	**+0.3**
CSS	**Prodhromos**	**3.55**	**35**	P	**Pn**	**16 17 09.6**	**+2.1**
	comp=E,2.4nm,0.3s						
CSS				S	**Sn**	**16 17 49.0**	**-0.7**
CSS	**Prodhromos**	**3.55**	**35**	*e*P	**Sg**	**16 18 09.3**	**+3.2**
CSS	**Prodhromos**	**3.55**	**35**	P	**Pn**	**16 17 09.6**	**+2.1**
	comp=E,2.4nm,0.3s						
CSS				S	**Sn**	**16 17 49.0**	**-0.7**
AKDN	**Akdeniz- K¯–br**	**3.67**	**29**	*e*P	**Sg**	**16 18 11.4**	**+1.5**
MAMC	**Mammari**	**3.67**	**32**	P	**Pn**	**16 17 12.1**	**+3.0**
MAMC	**Mammari**	**3.67**	**32**	P	**Pn**	**16 17 12.1**	**+3.0**
LFK	**Lefkose**	**3.90**	**35**	*e*P	**Sg**	**16 18 14.6**	**-2.8**
PHNC	**Paralimni**	**3.95**	**42**	⇓P	**Pn**	**16 17 14.5**	**+1.5**
PHNC				S	**Sn**	**16 17 58.8**	**-0.8**
PHNC	**Paralimni**	**3.95**	**42**	⇓P	**Pn**	**16 17 14.5**	**+1.5**
PHNC				S	**Sn**	**16 17 58.8**	**-0.8**
MMAI	**Mount Meron Ar**	**3.97**	**75**	Pn	**Pn**	**16 17 13.3**	**-0.1**
	comp=E,18nm,0.3s,baz=259,slow=12,SNR=114						
MMAI				Sn	**Sn**	**16 17 56.5**	**-3.6**
	comp=E,33nm,0.3s,baz=252,slow=22,SNR=15						
HRDS	**Abu Rudays**	**3.98**	**147**	P	**Pn**	**16 17 14.2**	**+0.7**
	baz=148						
GRB	**Gharib**	**4.16**	**155**	P	**Pn**	**16 17 17.1**	**+1.1**
	baz=156						
GRB	**Gharib**	**4.16**	**155**	P	**Pn**	**16 17 17.1**	**+1.1**
AKAS	**Kas**	**4.26**	**347**	*e*P	**Pn**	**16 17 18.8**	**+1.4**
AKAS				*e*S	Sn	16 17 57.4	-10
AKAS	**Kas**	**4.26**	**347**	*e*P	**Pn**	**16 17 18.8**	**+1.4**
EIL	**Elat**	**4.28**	**123**	Pn	**Pn**	**16 17 17.8**	**+0.2**
	comp=E,3.9nm,0.3s,baz=282,slow=6.5,SNR=52						
EIL				Sn	**Sn**	**16 18 03.4**	**-4.4**
	comp=E,11nm,0.3s,baz=0.0,slow=20,SNR=9.1						
GAZI	**Gazipasa**	**4.32**	**16**	*e*P	**Pn**	**16 17 19.5**	**+1.4**
GAZI				*e*S	**Sn**	**16 18 03.7**	**-5.0**
GAZI	**Gazipasa**	**4.32**	**16**	*e*P	**Pn**	**16 17 19.5**	**+1.4**
GAZI				*e*S	**Sn**	**16 18 03.7**	**-5.0**
HBST	**Basata**	**4.41**	**129**	P	**Pn**	**16 17 20.2**	**+0.8**
	baz=130						
HBST	**Basata**	**4.41**	**129**	P	**Pn**	**16 17 20.2**	**+0.8**
EREN	**Erenkoy**	**4.42**	**38**	*e*P	Sg	16 18 21.7	-12
BHL	**Bhannes**	**4.44**	**65**	*e*P	**Pn**	**16 17 21.3**	**+1.4**
BHL	**Bhannes**	**4.44**	**65**	*e*P	**Pn**	**16 17 21.3**	**+1.4**
RCY	**Rachaya**	**4.45**	**70**	*e*P	**Pn**	**16 17 21.2**	**+1.3**
TR2		**4.46**	**145**	P	**Pn**	**16 17 20.7**	**+0.7**
	baz=146						
TR2		**4.46**	**145**	P	**Pn**	**16 17 20.7**	**+0.7**
HKAT	**Jabal Katrina**	**4.48**	**142**	P	**Pn**	**16 17 21.4**	**+0.9**
	baz=142						
HKAT	**Jabal Katrina**	**4.48**	**142**	P	**Pn**	**16 17 21.4**	**+0.9**
KARP	**Karpathos**	**4.61**	**320**	*e*P	**Pn**	**16 17 22.9**	**+0.8**
KARP				*e*S	**Pg**	**16 17 39.2**	**-1.2**
KARP	**Karpathos**	**4.61**	**320**	*e*P	**Pn**	**16 17 22.9**	**+0.8**
KARP				*e*S	**Pg**	**16 17 39.2**	**-1.2**
HDHB	**Dhahab**	**4.69**	**135**	P	**Pn**	**16 17 23.6**	**+0.5**
	baz=135						
HDHB	**Dhahab**	**4.69**	**135**	P	**Pn**	**16 17 23.6**	**+0.5**
ELL	**Elmali**	**4.71**	**351**	*e*P	**Pn**	**16 17 25.4**	**+1.8**
FETY	**Fethiye**	**4.76**	**343**	*e*P	**Pn**	**16 17 25.7**	**+1.5**
HWQ	**Hawqa**	**4.81**	**62**	*e*P	**Pn**	**16 17 25.5**	**+0.5**
HWQ	**Hawqa**	**4.81**	**62**	*e*P	**Pn**	**16 17 25.5**	**+0.5**
ERMK	**Ermenek**	**4.86**	**20**	*e*P	**Pn**	**16 17 28.8**	**+3.1**
ERMK				*e*S	**Sn**	**16 18 20.2**	**-2.1**
ERMK	**Ermenek**	**4.86**	**20**	*e*P	**Pn**	**16 17 28.8**	**+3.1**
ERMK				*e*S	**Sn**	**16 18 20.2**	**-2.1**
TR1		**4.88**	**146**	P	**Pn**	**16 17 26.8**	**+0.9**
	baz=146						
TR1		**4.88**	**146**	P	**Pn**	**16 17 26.8**	**+0.9**
ZKR	**Zakros**	**4.89**	**309**	P	**Pn**	**16 17 26.3**	**+0.3**
ZKR	**Zakros**	**4.89**	**309**	*e*P	**Pn**	**16 17 26.5**	**+0.5**
ZKR	**Zakros**	**4.89**	**309**	P	**Pn**	**16 17 26.3**	**+0.3**
ZKR	**Zakros**	**4.89**	**309**	*e*P	**Pn**	**16 17 26.5**	**+0.5**
KORT	**Korkueli**	**4.92**	**356**	*e*P	**Pn**	**16 17 29.3**	**+2.9**
KORT				*e*S	Sn	16 18 16.3	-7.4
KORT	**Korkueli**	**4.92**	**356**	*e*P	**Pn**	**16 17 29.3**	**+2.9**
DALT	**Dalyan (Mudla)**	**5.01**	**339**	*e*P	**Pn**	**16 17 28.9**	**+1.3**
SHRM		**5.07**	**145**	P	**Pn**	**16 17 29.4**	**+1.0**
	baz=145						
SHRM		**5.07**	**145**	P	**Pn**	**16 17 29.4**	**+1.0**
TURN	**Turunc**	**5.12**	**340**	*e*P	**Pn**	**16 17 30.8**	**+1.8**
TURN				*e*S	Sn	16 18 15.6	-13
TURN	**Turunc**	**5.12**	**340**	*e*P	**Pn**	**16 17 30.8**	**+1.8**
ASF	**Jabal al Asfar**	**5.15**	**87**	Pn	**Pn**	**16 17 29.9**	**+0.3**
	comp=E,1.4nm,0.3s,baz=126,slow=8.7,SNR=6.9						
ASF				Sn	**Sn**	**16 18 25.5**	**-3.7**
	comp=E,2.4nm,0.3s,baz=216,slow=19,SNR=7.9						
GLHS	**Glhisar (BURDU**	**5.18**	**348**	*e*P	**Pn**	**16 17 31.7**	**+1.7**
GOLH	**Golhisar**	**5.24**	**349**	*e*P	**Pn**	**16 17 33.9**	**+3.0**
GOLH				*e*S	Sn	16 18 24.1	-7.5
GOLH	**Golhisar**	**5.24**	**349**	*e*P	**Pn**	**16 17 33.9**	**+3.0**
GOLH	**Golhisar**	**5.24**	**349**	*e*S	Sn	16 18 24.1	-7.5
DAT	**Datca**	**5.36**	**331**	*e*P	**Pn**	**16 17 32.5**	**0.0**
BCK	**Butak**	**5.37**	**358**	*e*P	**Pn**	**16 17 34.8**	**+2.2**
NPS	**Neapolis**	**5.38**	**307**	P	**Pn**	**16 17 33.5**	**+0.8**
NPS	**Neapolis**	**5.38**	**307**	*e*P	**Pn**	**16 17 33.5**	**+0.8**
NPS	**Neapolis**	**5.38**	**307**	P	**Pn**	**16 17 33.5**	**+0.8**
NPS	**Neapolis**	**5.38**	**307**	*e*P	**Pn**	**16 17 33.5**	**+0.8**
HFRF	**Wahat Farafira**	**5.39**	**205**	P	**Pn**	**16 17 34.5**	**+1.7**
	baz=206						
HFRF	**Wahat Farafira**	**5.39**	**205**	P	**Pn**	**16 17 34.5**	**+1.7**
HHRG	**Al Ghardaqah**	**5.40**	**153**	P	**Pn**	**16 17 34.7**	**+1.7**
	baz=154						
HHRG	**Al Ghardaqah**	**5.40**	**153**	P	**Pn**	**16 17 34.7**	**+1.7**
LAST	**Lasithi**	**5.42**	**306**	P	**Pn**	**16 17 33.8**	**+0.6**
LAST	**Lasithi**	**5.42**	**306**	*e*P	**Pn**	**16 17 33.9**	**+0.7**
LAST	**Lasithi**	**5.42**	**306**	P	**Pn**	**16 17 33.8**	**+0.6**
LAST	**Lasithi**	**5.42**	**306**	*e*P	**Pn**	**16 17 33.9**	**+0.7**
SWA2		**5.43**	**240**	P	**Pn**	**16 17 35.2**	**+1.9**
	baz=240						
SWA2				AMP		16 19 00.0	
	comp=E,60μm,0.5s,logA/T=5.1,baz=240						
SWA2		**5.43**	**240**	P	**Pn**	**16 17 35.2**	**+1.9**
YER	**Yerkesik**	**5.46**	**338**	*e*P	**Pn**	**16 17 34.7**	**+0.9**
MERS	**Mersin**	**5.66**	**32**	*e*P	**Pn**	**16 17 39.2**	**+2.6**
ISP	**Isparta**	**5.73**	**358**	*e*P	**Pn**	**16 17 40.0**	**+2.4**
BODT	**Bodrum**	**5.75**	**331**	*e*P	**Pn**	**16 17 37.3**	**-0.5**
MLSB	**Milas**	**5.77**	**335**	*e*P	**Pn**	**16 17 38.6**	**+0.5**
DNZL	**Cakiroluk**	**5.78**	**346**	*e*P	**Pn**	**16 17 39.8**	**+1.5**
DNZL				*e*S	Sn	16 18 35.8	-9.1
DNZL	**Cakiroluk**	**5.78**	**346**	*e*P	**Pn**	**16 17 39.8**	**+1.5**
DNZL	**Cakiroluk**	**5.78**	**346**	*e*S	Sn	16 18 35.8	-9.1
SIVA	**Sivas**	**5.81**	**302**	*e*P	**Pn**	**16 17 39.5**	**+0.9**
SIVA	**Sivas**	**5.81**	**302**	*e*P	**Pn**	**16 17 39.5**	**+0.9**
DENT	**Denizli**	**5.84**	**346**	*e*P	**Pn**	**16 17 40.5**	**+1.4**
IDI	**Anoyia**	**5.89**	**304**	P	**Pn**	**16 17 40.4**	**+0.6**
IDI	**Anoyia**	**5.89**	**304**	*e*P	**Pn**	**16 17 40.3**	**+0.5**
IDI	**Anoyia**	**5.89**	**304**	*e*P	**Pn**	**16 17 40.3**	**+0.5**
AYDN	**Tasoluk**	**6.07**	**337**	*e*P	**Pn**	**16 17 44.5**	**+2.3**
AYDN	**Tasoluk**	**6.07**	**337**	*e*P	**Pn**	**16 17 44.5**	**+2.3**
HSFG		**6.13**	**153**	P	**Pn**	**16 17 44.4**	**+1.4**
	baz=153						
HSFG		**6.13**	**153**	P	**Pn**	**16 17 44.4**	**+1.4**
THR1	**Thera Island**	**6.17**	**315**	P	**Pn**	**16 17 42.7**	**-0.8**
THR1	**Thera Island**	**6.17**	**315**	P	**Pn**	**16 17 42.7**	**-0.8**
THR6	**Thira Island,**	**6.20**	**315**	P	**Pn**	**16 17 43.2**	**-0.7**
THR6	**Thira Island,**	**6.20**	**315**	P	**Pn**	**16 17 43.2**	**-0.7**
LADK	**Ladik-KONYA**	**6.23**	**11**	*e*P	**Pn**	**16 17 46.9**	**+2.4**
THR3	**Thira Island,**	**6.23**	**315**	P	**Pn**	**16 17 43.9**	**-0.4**
THR3	**Thira Island,**	**6.23**	**315**	P	**Pn**	**16 17 43.9**	**-0.4**
THR2	**Thira island,**	**6.23**	**316**	P	**Pn**	**16 17 43.8**	**-0.6**
THR2	**Thira island,**	**6.23**	**316**	P	**Pn**	**16 17 43.8**	**-0.6**
GVD	**Gavdhos**	**6.27**	**298**	P	**Pn**	**16 17 45.0**	**+0.1**
GVD	**Gavdhos**	**6.27**	**298**	*e*P	**Pn**	**16 17 45.2**	**+0.3**
GVD	**Gavdhos**	**6.27**	**298**	*e*P	**Pn**	**16 17 45.2**	**+0.3**
KHL	**Karahalli**	**6.32**	**351**	*e*P	**Pn**	**16 17 46.8**	**+1.2**
VAM	**Vamos**	**6.44**	**303**	*e*P	**Pn**	**16 17 48.0**	**+0.8**
VAM	**Vamos**	**6.44**	**303**	*e*P	**Pn**	**16 17 48.0**	**+0.8**
SHUT	**Suhut-Afyon**	**6.46**	**358**	*e*P	**Pn**	**16 17 49.5**	**+1.9**
APE	**Apeiranthos**	**6.62**	**320**	*e*P	**Pn**	**16 17 48.1**	**-1.6**
APE	**Apeiranthos**	**6.62**	**320**	P	**Pn**	**16 17 49.0**	**-0.7**
APE	**Apeiranthos**	**6.62**	**320**	*e*P	**Pn**	**16 17 49.1**	**-0.7**
APE	**Apeiranthos**	**6.62**	**320**	*e*P	**Pn**	**16 17 49.1**	**-0.7**
KARN	**Karanos**	**6.64**	**302**	P	**Pn**	**16 17 50.4**	**+0.4**
KARN	**Karanos**	**6.64**	**302**	*e*P	**Pn**	**16 17 50.4**	**+0.4**
KARN	**Karanos**	**6.64**	**302**	*e*P	**Pn**	**16 17 50.4**	**+0.4**
KULA	**Kula-Manisa**	**6.66**	**345**	*e*P	**Pn**	**16 17 51.3**	**+1.0**
ALT	**Altintas**	**6.98**	**355**	*e*P	**Pn**	**16 17 56.3**	**+1.6**
BLCB	**Balcova**	**7.01**	**335**	*e*P	**Pn**	**16 17 55.2**	**+0.2**
SVRH	**Sivrihisar-ESK**	**7.37**	**4**	*e*P	**Pn**	**16 18 01.9**	**+1.9**
TVSB	**Tavsanli**	**7.43**	**352**	*e*P	**Pn**	**16 18 02.2**	**+1.2**
KYTH	**Kithira**	**7.69**	**305**	P	**Pn**	**16 18 02.8**	**-1.7**
KYTH	**Kithira**	**7.69**	**305**	*e*P	**Pn**	**16 18 03.0**	**-1.5**
KYTH	**Kithira**	**7.69**	**305**	*e*P	**Pn**	**16 18 03.0**	**-1.5**
BRTR	**Keskin Array B**	**7.96**	**16**	Pn	**Pn**	**16 18 10.3**	**+2.2**
	comp=E,0.3nm,0.3s,baz=189,slow=15,SNR=13						
VLI	**Veliai**	**7.99**	**307**	P	**Pn**	**16 18 06.7**	**-1.8**
VLI	**Veliai**	**7.99**	**307**	*e*P	**Pn**	**16 18 06.7**	**-1.8**
VLI	**Veliai**	**7.99**	**307**	*e*P	**Pn**	**16 18 06.7**	**-1.8**
DID	**Didima**	**8.26**	**313**	P	**Pn**	**16 18 11.1**	**-1.1**
DID	**Didima**	**8.26**	**313**	*e*P	**Pn**	**16 18 11.3**	**-0.9**
DID	**Didima**	**8.26**	**313**	*e*P	**Pn**	**16 18 11.3**	**-0.9**
GONE	**Gonen-Balikesi**	**8.34**	**343**	*e*P	**Pn**	**16 18 13.1**	**-0.2**
DYR	**Agios Nikonas**	**8.43**	**306**	*e*P	**Pn**	**16 18 14.3**	**-0.2**
DYR	**Agios Nikonas**	**8.43**	**306**	*e*P	**Pn**	**16 18 14.3**	**-0.2**
CORM	**Corum**	**8.64**	**20**	*e*P	**Pn**	**16 18 19.3**	**+1.8**
VLX	**Vlachokerasia**	**8.72**	**309**	*e*P	**Pn**	**16 18 16.8**	**-1.9**
VLX	**Vlachokerasia**	**8.72**	**309**	*e*P	**Pn**	**16 18 16.8**	**-1.9**
LTK	**Loutraki**	**8.75**	**315**	*e*P	**Pn**	**16 18 18.8**	**-0.2**
LTK	**Loutraki**	**8.75**	**315**	*e*P	**Pn**	**16 18 18.8**	**-0.2**
GUR	**Goura**	**9.08**	**312**	P	**Pn**	**16 18 22.1**	**-1.5**
GUR	**Goura**	**9.08**	**312**	*e*P	**Pn**	**16 18 22.1**	**-1.5**
GUR	**Goura**	**9.08**	**312**	*e*P	**Pn**	**16 18 22.1**	**-1.5**
AMT	**Artemida-Makis**	**9.26**	**308**	*e*P	**Pn**	**16 18 25.9**	**0.0**
AMT	**Artemida-Makis**	**9.26**	**308**	*e*P	**Pn**	**16 18 25.9**	**0.0**
AGG	**Agios Georgios**	**9.79**	**317**	P	**Pn**	**16 18 32.5**	**-0.7**
GERES	**GERESS Array B**	**21.13**	**327**	P	**P**	**16 20 57.7**	**+0.3**
	comp=E,0.4nm,0.4s,baz=134,slow=9.9,SNR=5.7						
AKTO	**Aktyubinsk**	**27.22**	**40**	P	**P**	**16 21 58.2**	**+1.9**
	comp=E,1.4nm,0.7s,baz=216,slow=8.7,SNR=5.0						
AAK	**Ala-Archa**	**35.91**	**60**	P	**P**	**16 23 14.3**	**+1.2**
	comp=E,0.6nm,0.6s,baz=254,slow=7.4,SNR=3.9						
ARCES	**ARCESS Array B**	**37.62**	**357**	P	**P**	**16 23 27.0**	**0.0**
	comp=E,3.1nm,1.0s,baz=163,slow=6.6,SNR=5.2						
KURBB	**Kurchatov Arra**	**39.52**	**48**	P	**P**	**16 23 44.3**	**+1.1**
	comp=E,1.0nm,0.7s,baz=261,slow=8.4,SNR=14						
MKAR	**Makanchi Array**	**41.63**	**54**	P	**P**	**16 24 01.7**	**+1.0**
	comp=E,0.6nm,0.7s,baz=263,slow=7.2,SNR=8.4						
ZALV	**Zalesovo Beam**	**43.83**	**44**	P	**P**	**16 24 17.7**	**-0.7**
	comp=E,0.4nm,0.4s,baz=280,slow=8.6,SNR=3.4						
CMAR	**Chiang Mai Arr**	**62.18**	**85**	P	**P**	**16 26 34.4**	**0.0**
	comp=E,0.3nm,0.7s,baz=300,slow=9.1,SNR=4.4						
YKA	**Yellowknife Ar**	**81.74**	**345**	P	**P**	**16 28 31.4**	**+0.5**
	comp=E,0.3nm,0.6s,baz=28,slow=5.4,SNR=9.8						

*IDC **18** 16:18:23.3±1.1,3°.32S×139°.62E, h0km, mb4.0/9, mb1 4.3/10,mb1mx4.1/19,mbtmp4.1/10,ML4.5/1,MS3.1/2, Ms1 3.1/2,ms1mx2.5/31,Error ellipse: s-maj=40.2km s-min=19.3km az=94.0*

*NEIC **18** 16:18:28.2±6.8,3°.28S×139°.40E, h29km±48km, mb4.1/9, Error ellipse: s-maj=19.8km s-min=13.0km az=50.0*

*ISCJB **18** 16:18:29.2±0.5,3°.36S±0°.05×139°.36E±0°.06, h50km, mb4.0/13,MS3.2/1,Error ellipse: s-maj=10.1km s-min=5.5km az=151.6*

*DJA **18** 16:18:32.9±0.4,3°.5S±4°×13°.9E±°, h86km±8km, M4.7/4, mb4.9/3,mB5.2/1,MLv4.6/4,Mw(mB)4.6/1*

*AUST **18** 16:18:32.9±0.0,3°.45S×139°.29E, h73km±1km, Error ellipse: s-maj=2.4km s-min=1.4km az=319.0*

ISC 18 16:18:31.4±0.6**,3°.40S**±0°.06×**139°.28E**±0°.06**, h50**km**, n45, σ1**5**8**/48**, mb4.0**/13**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WAMI	**Wamena**	**0.74**	**230**	P	Pn	16 18 52.5	+6.8
WAMI				S	Sn	16 19 05.8	+10
JAY	**Jayapura**	**1.68**	**58**	P	**Pn**	**16 19 00.0**	**+1.6**
JAY	**Jayapura**	**1.68**	**58**	P	**Pn**	**16 19 00.5**	**+2.1**
	baz=1.7,SNR=6.0						
SRPI	**Serui, Papua**	**3.39**	**297**	P	**Pn**	**16 19 23.6**	**+1.7**
SRPI				S	**Sn**	**16 20 02.7**	**+1.8**
BAKI	**Biak**	**3.85**	**305**	P	**Pn**	**16 19 28.6**	**+0.4**
BAKI				S	**Sn**	**16 20 12.6**	**+0.3**
MMPI	**Merauke**	**5.15**	**168**	P	Pn	16 19 49.6	+3.6
	647nm,0.6s						
COEN	**Coen**	**11.17**	**160**	P	**Pn**	**16 21 10.5**	**+2.0**
	baz=11,SNR=18						
KDU	**Kakadu**	**11.42**	**216**	P	**Pn**	**16 21 12.9**	**+1.0**
	baz=11,SNR=67						
MTN	**Manton Dam**	**12.36**	**220**	P	**Pn**	**16 21 26.5**	**+1.7**
	baz=12,SNR=12						
QIS	**Mount Isa**	**17.05**	**179**	P	**Pn**	**16 22 26.8**	**+0.4**
	baz=17,SNR=18						
WRAB	**Tennant Creek**	**17.12**	**196**	*e*Pn	**Pn**	**16 22 26.7**	**-0.6**
	16nm,0.6s						
WRAB				*e*Sn	Sn	16 25 27.2	-10
WRA	**Warramunga Arr**	**17.13**	**196**	P	**Pn**	**16 22 26.1**	**-1.3**
WRA				S	Sn	16 25 27.7	-9.4
WRA	**Warramunga Arr**	**17.13**	**196**	P	**Pn**	**16 22 26.1**	**-1.3**
	1.7nm,0.3s,baz=16,slow=13,SNR=51						
WRA				S	Sn	16 25 27.7	-9.4
	0.4nm,0.3s,baz=6.7,slow=23,SNR=4.6						
CTAO	**Charters Tower**	**17.93**	**158**	P	**P**	**16 22 38.0**	**+0.7**
	5.6nm,0.9s						
PCI	**Palu**	**19.58**	**277**	S	Sn	16 26 50.6	+14
	baz=20,SNR=4.3						
FITZ	**Fitzroy Crossi**	**19.80**	**221**	*e*P	**P**	**16 22 58.1**	**+0.3**
	3.0nm,0.5s						
FITZ				*e*S	S	16 26 26.9	-11
FITZ				S	Sn	16 26 29.6	-12
FITZ	**Fitzroy Crossi**	**19.80**	**221**	P	**P**	**16 22 58.2**	**+0.4**
	4.9nm,0.6s,baz=42,slow=11,SNR=32						
FITZ				S	S	16 26 29.6	-8.6
	4.6nm,1.0s,baz=191,slow=16,SNR=4.4						
FITZ				LR	LR	16 30 46.1	
	comp=Z,41nm,21.0s,baz=162,slow=37						
FITZ	**Fitzroy Crossi**	**19.80**	**221**	P	**P**	**16 22 58.5**	**+0.8**
	baz=20,SNR=13						
FITZ				S	S	16 26 28.1	-10
	baz=20,SNR=3.5						
AS31	**Alice Springs**	**20.80**	**194**	*e*P	**P**	**16 23 09.1**	**+0.4**
AS31				*e*S	**S**	**16 26 51.2**	**-7.1**
ASAR	**Alice Springs**	**20.80**	**194**	P	**P**	**16 23 09.0**	**+0.3**
ASAR				S	**S**	**16 26 57.6**	**-0.6**
ASAR	**Alice Springs**	**20.80**	**194**	P	**P**	**16 23 09.0**	**+0.3**
	9.4nm,0.6s,baz=20,slow=10,SNR=134						
ASAR				S	**S**	**16 26 57.6**	**-0.6**
	1.4nm,0.8s,baz=11,slow=28,SNR=4.8						
KKM	**Kota Kinabalu**	**24.87**	**292**	P	**P**	**16 23 48.1**	**-1.6**
MBWA	**Marble Bar**	**25.94**	**226**	*e*P	**P**	**16 24 01.1**	**+1.8**
	3.3nm,0.5s						
STKA	**Stephens Creek**	**28.41**	**176**	LR	LR	16 36 58.6	
	comp=Z,63nm,20.1s,baz=19,slow=39						
CM31	**Chiang Mai Arr**	**45.27**	**300**	*e*P	**P**	**16 26 44.9**	**+0.4**
CMAR	**Chiang Mai Arr**	**45.27**	**300**	P	**P**	**16 26 45.4**	**+0.9**
CMAR				PcP	**PcP**	**16 28 24.9**	**+1.0**
CMAR	**Chiang Mai Arr**	**45.27**	**300**	P	**P**	**16 26 45.4**	**+0.9**
	2.0nm,0.8s,baz=120,slow=6.6,SNR=16						
CMAR				PcP	**PcP**	**16 28 24.9**	**+1.0**
	0.7nm,0.9s,baz=104,slow

JAR Ashorobuto 2.92 265 P **Pn** **16 37 06.6 +1.3**
JAR eS **Sn** **16 37 39.5 +0.4**
JOB Onbets 2.95 257 P **Pn** **16 37 06.6 +0.9**
JOB eS **Sn** **16 37 39.6 -0.2**
JMP Maruseppu 3.20 279 P **Pn** **16 37 10.9 +1.7**
JCH Churui 3.37 254 P **Pn** **16 37 12.3 +0.9**
JCH eS **Sn** **16 37 49.2 -0.9**
JKK2 Kamakawa 2 3.64 276 P **Pn** **16 37 17.2 +2.1**
ERM Erimo 3.74 246 *d iPN* **Pn** **16 37 19.0 +2.5**
ERM Erimo 3.74 246 *eP* **Pn** **16 37 19.0 +2.5**
ASAJ Asahikawa 3.76 279 P **Pn** **16 37 18.6 +1.7**
comp=E,8.4nm,0.3s,baz=113,slow=11,SNR=124
ASAJ S Sn 16 38 08.2 +8.4
comp=E,7.9nm,0.3s,baz=197,slow=19,SNR=4.7
JFR Furan 3.79 265 P **Pn** **16 37 18.9 +1.7**
JFR eS **Sn** **16 38 00.8 +0.3**
JNBK Urakawa-nobuka 3.91 252 P **Pn** **16 37 19.3 +0.5**
JNBK eS **Sn** **16 38 02.3 -1.0**
JSE Soyaes 3.95 292 P **Pn** **16 37 21.1 +1.8**
JHR Hokuryu 4.37 274 P **Pn** **16 37 28.0 +2.8**
JWK2 Keihoku 4.52 294 P Pn 16 37 30.5 +3.3
JEW Eniwo 4.67 263 P **Pn** **16 37 31.3 +2.1**
YSS Yuzh-Sakhalins 4.86 315‖ *e*PN **Pn** **16 37 33.8 +2.0**
YSS eS **Sn** **16 38 25.6 -1.1**
YSS pmax pmax
comp=Z,20nm,0.5s
YSS smax smax
comp=E,50nm,0.8s
YSS Yuzh-Sakhalins 4.86 315↑ *eP* **Pn** **16 37 33.8 +2.0**
YSS AMB AMB 16 37 35.5
comp=E,20nm,0.5s
YSS eS **Sn** **16 38 25.6 -1.1**
YSS A A 16 38 28.0
comp=E,50nm,0.8s
HABR Khabarovsk 10.08 303 *e*PN **Pn** **16 38 42.9 -0.3**
HABR *e* 16 40 41.8
HABR pmax pmax
comp=N,25nm,2.2s
HABR pmax pmax
comp=Z,14nm,1.3s
HABR pmax pmax
comp=E,14nm,0.9s
HABR MLR MLR
comp=Z,38nm,15.0s
MAT Matsushiro 10.16 229 P **Pn** **16 38 44.2 -0.2**
MJAR Matsushiro Arr 10.16 229 P **Pn** **16 38 44.5 +0.1**
comp=Z,1.7nm,0.3s,baz=28,slow=14,SNR=82
MJAR LR LR 16 43 05.5
comp=Z,34nm,19.9s,baz=235,slow=40
USRK Ussuriysk Arra 11.38 278 P **Pn** **16 39 01.4 +0.4**
comp=Z,0.3nm,0.3s,baz=87,slow=14,SNR=7.1
VLA Vladivostok 11.56 273‖ *e*PN **Pn** **16 39 06.4 +3.0**
VLA Vladivostok 11.56 273 *eP* **Pn** **16 39 06.4 +3.0**
PETK Petropavlovsk- 11.56 31 PN **Pn** **16 39 03.2 -0.3**
PETK pmax pmax
comp=Z,1.0nm,0.3s
PETK Petropavlovsk- 11.56 31 P **Pn** **16 39 03.2 -0.3**
comp=Z,0.5nm,0.3s,baz=196,slow=12,SNR=17
KSRS Korea Array 16.27 255 P **Pn** **16 40 04.7 -1.2**
comp=Z,0.1nm,0.3s,baz=62,slow=12,SNR=13
KSRS LR LR 16 46 49.9
comp=Z,22nm,18.1s,baz=45,slow=39
JNU Nakatsue 16.84 237 P **P** **16 40 14.4 -0.1**
comp=Z,0.2nm,0.3s,baz=41,slow=11,SNR=4.4
HHC Hu-ho-hao-te 26.81 277 *eP* P 16 41 48.8 -7.1
HHC S **S** **16 46 25.5 -2.4**
HHC pmax pmax
comp=Z,32nm,0.5s
HHC pmax pmax
comp=Z,120nm,5.5s
ILAR Eielson Array 41.34 36 P **P** **16 44 01.7 +0.8**
comp=Z,0.5nm,0.6s,baz=278,slow=8.9,SNR=8.3
ZALV Zalesovo Beam 41.43 307 P **P** **16 44 00.7 -1.0**
ZALV 16 45 57.8
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 41.43 307 P **P** **16 44 00.7 -1.0**
comp=Z,0.2nm,0.4s,baz=86,slow=9.1,SNR=2.4
ZALV PcP **PcP** **16 45 57.8 -0.8**
comp=Z,0.9nm,0.6s,baz=68,slow=2.5,SNR=6.8
MKAR Makanchi Array 45.03 298 P **P** **16 44 30.6 -0.4**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 45.03 298 P **P** **16 44 30.6 -0.4**
comp=Z,1.4nm,0.8s,baz=79,slow=8.4,SNR=13
KURK Kurchatov 45.97 304↑ *eP* **P** **16 44 38.1 -0.1**
KURK pmax pmax
comp=Z,1.0nm,0.7s
INK Inuvik 46.30 30 P **P** **16 44 41.5 +0.9**
comp=Z,1.1nm,0.6s,baz=297,slow=4.4,SNR=7.6
BRVK Borovoye 49.97 310‖ *eP* **P** **16 45 09.3 +0.2**
BRVK pmax pmax
comp=Z,6.0nm,3.0s
AAK Ala-Archa 51.81 296‖ *eP* **P** **16 45 23.2 -0.1**
AAK pmax pmax
comp=Z,2.0nm,0.8s
ARU Arti 54.74 317 *d iP* **P** **16 45 43.8 -0.6**
ARU 16 47 44.0
ARU S S 16 53 28.9 +8.7
ARU SS **SS** **16 57 07.7 +4.4**
ARU pmax pmax
comp=Z,10.0nm,2.5s
YKA Yellowknife Ar 55.67 34 P **P** **16 45 51.6 +0.7**
comp=Z,0.5nm,0.6s,baz=297,slow=6.7,SNR=13
ARCES ARCESS Array B 59.53 340 P **P** **16 46 17.5 -0.5**
comp=Z,2.5nm,0.8s,baz=37,slow=7.9,SNR=8.3
WRA Warramunga Arr 64.43 194 P **P** **16 46 51.4 0.0**
comp=Z,1.5nm,0.8s,baz=10,slow=6.9,SNR=12
FINES FINESS Array B 65.19 333 P **P** **16 46 54.8 -1.0**
comp=Z,2.5nm,0.7s,baz=61,slow=6.7,SNR=7.5
NVAR Mina Array Bea 67.28 58 P **P** **16 47 11.1 +1.1**
comp=Z,1.0nm,0.6s,baz=302,slow=7.3,SNR=9.1
ASAR Alice Springs 68.15 194 P **P** **16 47 16.2 +1.1**
comp=Z,0.4nm,0.7s,baz=12,slow=6.4,SNR=7.8
PDAR Pinedale Array 69.66 50 P **P** **16 47 24.2 -0.5**
comp=Z,0.3nm,0.5s,baz=48,slow=2.2,SNR=4.0
NB2 NORSAR Subarra 69.89 339 P **P** **16 47 24.8 -0.8**
comp=Z,1.6nm,0.5s,baz=31,slow=6.5
NOA NORSAR Array B 69.89 339 P **P** **16 47 24.9 -0.6**
comp=Z,1.0nm,0.5s,baz=31,slow=6.4,SNR=9.0
KIV Kislovodsk 70.18 312‖ *eP* **P** **16 47 28.3 +0.6**
KIV pmax pmax
comp=Z,5.0nm,0.8s
KBZ Khabaz 70.22 312 P **P** **16 47 27.7 -0.1**
KBZ pmax pmax
comp=Z,2.0nm,0.7s
KBZ Khabaz 70.22 312 P **P** **16 47 27.7 -0.1**
comp=Z,1.9nm,0.7s,baz=34,slow=7.3,SNR=8.8
AKASG Malin Array Be 71.95 324 P **P** **16 47 37.0 -1.1**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 71.95 324 P **P** **16 47 37.0 -1.1**
comp=Z,1.0nm,0.4s,baz=40,slow=6.1,SNR=7.0
CLL Collm 77.64 333 *eP* **P** **16 48 11.0 0.0**
BRTR Keskin Array B 77.95 314 P **P** **16 48 13.1 -0.1**
comp=Z,0.3nm,0.6s,baz=49,slow=4.4,SNR=2.6
EKA Eskdalemuir Ar 78.38 344 P **P** **16 48 14.6 -0.5**
comp=Z,0.6nm,0.7s,baz=30,slow=5.5,SNR=5.7
GERES GERESS Array B 79.49 331 P **P** **16 48 20.5 -0.9**
comp=Z,0.4nm,0.6s,baz=48,slow=2.0,SNR=3.5
TXAR Lajitas Array 82.36 57 P **P** **16 48 37.8 +0.8**
comp=Z,0.4nm,0.6s,baz=308,slow=4.4,SNR=7.9
VNA2 Neumayer--Watz 149.98 196 *e*PKP **PKPbc** **16 56 04.9 +1.2**
VNA3 Neumayer Olymp 150.15 194 *e*PKP **PKPbc** **16 56 05.0 +0.9**

*ISCJB **18** 17:04:54.9±0.2,3.°84N±0.°04×82.°49W±0.°04,h10km, mb4.4/60,MS4.0/23,Error ellipse: s-maj=7.3km s-min=4.3km az=137.7*
*IDC **18** 17:04:54.7±0.6,3.°88N×82.°56W,h0km,mb4.2/20, mb1 4.4/23,mb1mx4.4/32,mbtmp4.3/23,ML4.0/3,MS4.0/22, Ms1 4.0/22,ms1mx3.8/38,Error ellipse: s-maj=26.7km s-min=11.0km az=59.0*
*NEIC **18** 17:04:56.0±0.2,3.°88N×82.°51W,h10km,mb4.7/42,Error ellipse: s-maj=7.8km s-min=4.7km az=53.0*
*GCMT **18** 17:05:00.5±0.3,3.°87N×82.°62W,h14km±2km,MW4.8, Moment Tensor Solution. s17,c19; s65,c87; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.17±.09; $M_{\theta\theta}$0.12±.08; $M_{\phi\phi}$0.05±.10; $M_{r\theta}$-0.17±.18; $M_{\theta\phi}$2.02±.10; $M_{\phi r}$0.15±.19; Best double couple: $M_0$2.00000×10^{16} NP1:ϕ_s181.00000°, δ85.00000°,λ-175.00000°. NP2:ϕ_s90.00000°,δ85.00000°, λ-5.00000°. Principal axes: T 2.1100, Plg0.0000°,*

2009 APR

Azm136.0000°; N -0.1500, Plg83.0000°, Azm228.0000°; P -1.9600, Plg7.0000°, Azm46.0000°; Data Used: IC II IU G CN.

ISC 18 17:04:55.8±0.4,3.°90N±0.°05×82.°54W±0.°07,h10km,n403, σ1.°54/384,mb4.6/60,MS4.0/23,134C-120D,South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		
OTAV	**Otavalo**	**5.47**	**132**	*e*Pn	**Pn**	**17 06 16.2**	**-1.7**
	43nm,0.5s						
BCIP	**Isla Barro Col**	**5.88**	**27**	*e*Pn	**Pn**	**17 06 24.9**	**+1.8**
	297nm,0.6s						
BCIP				*e*Sn	**Sn**	**17 07 29.0**	**-1.6**
JTS	**JuntasAbangare**	**6.78**	**339**	*e*Pn	Pn	17 06 32.2	-3.4
	191nm,0.6s						
JTS				*e*Sn	**Sn**	**17 07 48.4**	**-4.6**
JTS				Sn	**Sn**	**17 07 50.2**	**-2.8**
JTS	**JuntasAbangare**	**6.78**	**339**	Pn	**Pn**	**17 06 32.9**	**-2.7**
	25nm,0.3s,baz=128,slow=5.4,SNR=98						
JTS				Sn	**Sn**	**17 07 50.2**	**-2.8**
	baz=66,slow=19,SNR=1.7						
JTS				LR	LR	17 08 59.3	
	comp=Z,995nm,20.0s,baz=146,slow=36						
ROSC	**El Rosal**	**8.24**	**83**	*e*Pn	Pn	17 07 00.4	+4.5
ROSC	**El Rosal**	**8.24**	**83**	Pn	Pn	17 07 00.6	+4.7
	18nm,0.3s,baz=182,slow=0.9,SNR=10						
PAYG	**Puerto Ayora**	**8.98**	**240**	*e*Pn	**Pn**	**17 07 07.4**	**+1.7**
	273nm,1.5s						
TGUH	**Tegucigalpa,Un**	**11.12**	**335**	Pn	Pn	17 07 30.8	-4.2
ATAH	**Atahualpa**	**11.72**	**159**	Pn	Pn	17 07 46.0	+2.4
ATAH	**Atahualpa**	**11.72**	**159**	Pn	Pn	17 07 46.0	+2.4
	1.1nm,0.3s,baz=356,slow=9.8,SNR=5.1						
SDV	**Santo Domingo**	**12.82**	**67**	*e*Pn	Pn	17 08 02.3	+3.8
	0.9nm,1.3s						
NNA	**Nana**	**16.77**	**160**	*e*Pn	**P**	**17 08 51.9**	**-1.4**
	47nm,1.1s						
NNA	**Nana**	**16.77**	**160**	Pn	**P**	**17 08 52.3**	**-1.0**
	1.6nm,0.3s,baz=334,slow=12,SNR=8.2						
TEIG	**Tepich**	**17.16**	**341**	Pn	**Pn**	**17 08 55.9**	**0.0**
TEIG	**Tepich**	**17.16**	**341**	Pn	**Pn**	**17 08 55.9**	**0.0**
	0.5nm,0.3s,baz=160,slow=9.4,SNR=2.8						
CMIG	**Matias Romero**	**17.85**	**318**	Pn	**P**	**17 09 04.8**	**-0.4**
CMIG	**Matias Romero**	**17.85**	**318**	Pn	**P**	**17 09 04.8**	**-0.4**
	0.1nm,0.3s,baz=129,slow=11,SNR=13						
CMIG				LR	LR	17 14 38.3	
	comp=Z,556nm,21.7s,baz=185,slow=33						
SDDR	**Presa de Saban**	**18.59**	**35**	*e*P	**Pn**	**17 09 16.6**	**+3.1**
	37nm,0.8s						
AGPR	**Aguadilla, PR**	**20.91**	**45**	*e*P	Pn	17 09 40.8	-0.4
SJG	**San Juan**	**21.37**	**47**	*e*P	**P**	**17 09 45.5**	**+1.9**
	48nm,0.9s						
SJG	**San Juan**	**21.37**	**47**	P	**P**	**17 09 45.5**	**+1.9**
	13nm,0.2s,baz=238,slow=8.1,SNR=16						
SJG				LR	LR	17 17 40.1	
	comp=Z,336nm,21.7s,baz=94,slow=36						
CDVI	**St. Croix**	**22.19**	**50**	*e*P	**P**	**17 09 52.9**	**+0.4**
	224nm,1.2s						
SAML	**Samuel**	**23.14**	**124**	*e*P	**P**	**17 10 02.3**	**-0.2**
	52nm,1.4s						
FDF	**Fort de France**	**23.66**	**62**	*e*P	**P**	**17 10 09.8**	**+2.1**
DWPF	**Disney**	**24.10**	**2**	*e*P	**P**	**17 10 12.2**	**+0.5**
	28nm,0.8s						
BBGH	**Gun Hill**	**24.48**	**67**	*e*P	P	17 10 22.9	+7.4
LPAZ	**La Paz**	**24.61**	**145**	*e*P	**P**	**17 10 18.1**	**+0.9**
	63nm,1.2s						
LPAZ	**La Paz**	**24.61**	**145**	P	**P**	**17 10 18.6**	**+1.4**
	18nm,0.8s,baz=323,slow=12,SNR=35						
LPAZ				LR	LR	17 20 53.9	
	comp=Z,188nm,18.7s,baz=54,slow=39						
TIGA	**Tifton**	**27.41**	**358**	↑P	**P**	**17 10 44.9**	**+3.2**
	baz=28						
SIV	**San Ignacio**	**29.01**	**133**	P	**P**	**17 10 56.2**	**0.0**
SIV	**San Ignacio**	**29.01**	**133**	P	**P**	**17 10 56.2**	**0.0**
	0.9nm,0.6s,baz=315,slow=10.0,SNR=3.7						
SIV				LR	LR	17 22 58.3	
	comp=Z,755nm,18.2s,slow=37						
732A	**Laxson Ranch,**	**29.73**	**328**	↑P	**P**	**17 11 04.8**	**+2.3**
	baz=30						
632A	**Uvalde**	**30.26**	**329**	↓P	**P**	**17 11 08.6**	**+1.4**
	baz=30						
631A	**Perdido Creek**	**30.60**	**328**	↓P	**P**	**17 11 11.0**	**+0.9**
	baz=31						
532A	**Rocksprings**	**30.82**	**330**	↓P	**P**	**17 11 13.9**	**+1.7**
	baz=31						
JCT	**Junction City**	**31.06**	**330**	↓P	**P**	**17 11 15.6**	**+1.3**
	baz=31						
531A	**Rocksprings**	**31.18**	**329**	↑P	P	17 11 18.8	+3.4
	baz=31						
SWET	**Sewanee**	**31.32**	**355**	*e*P	P	17 11 20.9	+4.5
	5.0nm,0.8s						
432A	**Menard**	**31.38**	**331**	↓P	**P**	**17 11 18.0**	**+1.0**
	baz=32						
530A	**J-C Ranch, Com**	**31.58**	**328**	↓P	**P**	**17 11 20.4**	**+1.6**
	baz=32						
TKL	**Tuckaleechee C**	**31.62**	**358**	LR	LR	17 23 32.9	
	comp=Z,147nm,19.4s,baz=135,slow=35						
431A	**Sonora**	**31.63**	**329**	↑P	**P**	**17 11 20.9**	**+1.6**
	baz=32,SNR=15						
332A	**Millersview**	**31.77**	**331**	↓P	**P**	**17 11 21.4**	**+1.0**
	baz=32,SNR=5.7						
628A	**Black Gap, Mar**	**31.93**	**325**	↓P	**P**	**17 11 24.1**	**+2.2**
	baz=32						
430A	**Baggett Ranch,**	**32.03**	**329**	↓P	**P**	**17 11 24.4**	**+1.6**
	baz=32,SNR=7.7						
331A	**San Angelo**	**32.04**	**330**	↑P	**P**	**17 11 25.2**	**+2.3**
	baz=32						
MIAR	**Mount Ida**	**32.17**	**343**	*e*P	**P**	**17 11 22.9**	**-1.0**
	11nm,1.1s						
627A	**Terlingua Ranc**	**32.19**	**324**	↑P	**P**	**17 11 26.2**	**+1.9**
	baz=32						
429A	**Davenport Ranc**	**32.25**	**328**	↑P	**P**	**17 11 26.1**	**+1.3**
	baz=32,SNR=8.2						
TXAR	**Lajitas Array**	**32.27**	**324**	P	**P**	**17 11 26.0**	**+1.0**
TXAR	**Lajitas Array**	**32.27**	**324**	P	**P**	**17 11 26.0**	**+1.0**
	1.7nm,0.9s,baz=133,slow=7.9,SNR=7.6						
TXAR				LR	LR	17 24 06.2	
	comp=Z,110nm,19.1s,baz=355,slow=36						
528A	**Cox Ranch, San**	**32.38**	**326**	↓P	**P**	**17 11 27.3**	**+1.3**
	baz=32						
WVT	**Waverly**	**32.44**	**352**	*e*P	**P**	**17 11 26.4**	**+0.1**
330A	**Mertzon**	**32.50**	**329**	↓P	**P**	**17 11 27.9**	**+1.0**
	baz=33,SNR=6.9						
626A	**Big Bend Ranch**	**32.70**	**324**	↓P	**P**	**17 11 30.1**	**+1.3**
	baz=33						
428A	**Kincaid Ranch,**	**32.76**	**327**	↓P	**P**	**17 11 31.2**	**+1.9**
	baz=33						
527A	**Woodward Ranch**	**32.84**	**325**	↑P	**P**	**17 11 31.3**	**+1.3**
	baz=33,SNR=8.1						
329A	**Wagon Wheel Ra**	**32.98**	**329**	↓P	**P**	**17 11 32.5**	**+1.4**
	baz=33,SNR=7.5						
427A	**Hayter Ranch,**	**33.25**	**326**	↓P	**P**	**17 11 34.9**	**+1.3**
	baz=33						
229A	**Bryant Ranch,**	**33.27**	**329**	↑P	**P**	**17 11 34.9**	**+1.3**
	baz=33						
426A	**Mcdonald Obser**	**33.47**	**325**	↑P	**P**	**17 11 37.1**	**+1.5**
	baz=34,SNR=8.8						
LPIG	**La Paz**	**33.47**	**309**	LR	LR	17 23 56.6	
	comp=Z,14nm,18.7s,baz=92,slow=34						
228A	**UT Block 9, Go**	**33.79**	**328**	↓P	**P**	**17 11 39.8**	**+1.5**
	baz=34						
326A	**Caldwell Ranch**	**33.92**	**326**	↓P	**P**	**17 11 40.8**	**+1.4**
	baz=34,SNR=7.7						
128A	**Castleberry Fa**	**34.13**	**329**	↑P	**P**	**17 11 42.2**	**+0.9**
	baz=34						
SIUC	**Southern Illin**	**34.20**	**351**	P	**P**	**17 11 41.8**	**+0.2**
Z29A	**Hungry Hill Ra**	**34.26**	**331**	↓P	**P**	**17 11 43.3**	**+1.1**
	baz=34,SNR=5.3						
325A	**Bean Ranch, Si**	**34.53**	**325**	↑P	**P**	**17 11 45.9**	**+1.2**
	baz=35,SNR=5.6						
226B	**Tecolote Peak,**	**34.60**	**327**	↑P	**P**	**17 11 47.2**	**+1.8**
	baz=35,SNR=17						
GDL2	**Guadalupe Moun**	**34.81**	**326**	*e*P	**P**	**17 11 49.1**	**+2.0**
	41nm,0.8s						
324A	**Moseley Ranch,**	**34.88**	**324**	↑P	**P**	**17 11 48.8**	**+1.1**
	baz=35,SNR=14						
126A	**Clayton Basin,**	**34.96**	**327**	↑P	**P**	**17 11 49.9**	**+1.5**
	baz=35,SNR=6.6						
225A	**Deer Hill, Car**	**34.99**	**326**	↓P	**P**	**17 11 50.5**	**+1.7**
	baz=35,SNR=7.5						
Z27A	**Tatum**	**35.06**	**329**	↑P	**P**	**17 11 49.8**	**+0.5**
	baz=35						
125A	**Gardner Draw,**	**35.32**	**327**	↓P	**P**	**17 11 53.2**	**+1.7**
	baz=36,SNR=9.8						
MSTX	**Muleshoe**	**35.35**	**330**	↑P	**P**	**17 11 52.6**	**+0.9**
	baz=36,SNR=6.2						
Z26A	**Caprock**	**35.42**	**328**	↑P	**P**	**17 11 54.3**	**+1.9**
	baz=36,SNR=9.2						
Y27A	**Causey**	**35.48**	**330**	↓P	**P**	**17 11 53.6**	**+0.8**
	baz=36,SNR=6.5						
124A	**Stringfield Ra**	**35.79**	**326**	↓P	**P**	**17 11 57.7**	**+2.0**
	baz=36,SNR=17						
Z25A	**Roswell**	**35.82**	**327**	↓P	**P**	**17 11 57.8**	**+1.9**
	baz=36,SNR=17						
Y26A	**Elida**	**35.85**	**329**	↓P	**P**	**17 11 58.4**	**+2.3**
	baz=36						
ACSO	**Alum Creek Sta**	**36.17**	**359**	*e*P	**P**	**17 11 56.2**	**-2.3**
	15nm,0.9s						
Z24A	**Sheeppen Canyo**	**36.21**	**327**	↓P	**P**	**17 12 01.4**	**+2.1**
	baz=36,SNR=9.2						
Y25A	**Mesa, Roswell**	**36.30**	**328**	↓P	**P**	**17 12 01.9**	**+2.0**
	baz=36,SNR=7.6						
X26A	**CR and CF Fran**	**36.34**	**330**	↓P	**P**	**17 12 01.5**	**+1.2**
	baz=36,SNR=11						
W27A	**Bowe Ranch, En**	**36.38**	**331**	↑P	**P**	**17 12 01.7**	**+1.2**
	baz=36,SNR=7.6						
Z23A	**Rita Site, Whi**	**36.64**	**326**	↑P	**P**	**17 12 04.7**	**+1.8**
	baz=37,SNR=10.0						
Y24A	**Capitan**	**36.70**	**327**	↑P	**P**	**17 12 05.0**	**+1.6**
	baz=37,SNR=16						
W26A	**Owens Ranch, T**	**36.74**	**330**	↑P	**P**	**17 12 04.7**	**+1.1**
	baz=37						
X25A	**Clemmons Ranch**	**36.75**	**329**	↑P	**P**	**17 12 05.6**	**+1.8**
	baz=37,SNR=16						
121A	**Cookes Peak, D**	**37.02**	**323**	↑P	**P**	**17 12 07.9**	**+1.8**
	baz=37,SNR=8.9						
220A	**Playas Peak, P**	**37.03**	**322**	↑P	**P**	**17 12 07.7**	**+1.5**
	baz=37,SNR=7.5						
Y23A	**Lovelace Mesa,**	**37.04**	**327**	↓P	**P**	**17 12 08.1**	**+1.8**
	baz=37,SNR=28						
Z22A	**Elephant Butte**	**37.05**	**325**	↓P	**P**	**17 12 08.1**	**+1.8**
	baz=37,SNR=9.9						
W25A	**X Bar L Ranch,**	**37.19**	**330**	↓P	**P**	**17 12 09.2**	**+1.7**
	baz=37,SNR=21						
KSU1	**Kansas State U**	**37.30**	**342**	*e*P	**P**	**17 12 07.3**	**-0.9**
	11nm,0.8s						
V26A	**Tequesquite Ra**	**37.31**	**331**	↓P	**P**	**17 12 10.0**	**+1.4**
	baz=38,SNR=26						
U27A	**Thompson Grove**	**37.37**	**333**	↑P	**P**	**17 12 10.3**	**+1.4**
	baz=38						
BNM	**Barren Site**	**37.52**	**326**	*e*P	**P**	**17 12 12.1**	**+1.6**
	8.6nm,1.0s						
120A	**U Bar Ranch, L**	**37.54**	**322**	↓P	**P**	**17 12 12.7**	**+2.1**
	baz=38						
Y22A	**Socorro**	**37.55**	**326**	↑P	**P**	**17 12 13.0**	**+2.4**
	baz=38,SNR=8.9						
T28A	**Walsh**	**37.63**	**334**	↓P	P	17 12 13.8	+2.7
	baz=38						
W24A	**Lazy 6 Ranch,**	**37.67**	**329**	↑P	**P**	**17 12 13.7**	**+2.1**
	baz=38,SNR=14						
V25A	**Rancho No Teng**	**37.76**	**330**	↓P	**P**	**17 12 14.6**	**+2.2**
	baz=38,SNR=30						
U26A	**Atchley Ranch,**	**37.77**	**332**	↑P	**P**	**17 12 14.4**	**+1.9**
	baz=38,SNR=13						
CFAA	**Coronel Fontan**	**37.85**	**160**	P	**P**	**17 12 12.9**	**0.0**
CFAA	**Coronel Fontan**	**37.85**	**160**	P	**P**	**17 12 12.9**	**0.0**
	0.2nm,0.5s,baz=291,slow=5.6,SNR=3.7						
T27A	**Campo**	**37.85**	**333**	↑P	**P**	**17 12 15.2**	**+2.2**
	baz=38						
Z20A	**Nine Sixteen R**	**37.91**	**323**	↓P	**P**	**17 12 16.0**	**+2.3**
	baz=38,SNR=9.1						
LAZ	**Ladron**	**37.99**	**326**	*e*P	**P**	**17 12 15.9**	**+1.6**
	3.7nm,0.9s						
X22A	**Bernardo**	**38.00**	**326**	↑P	**P**	**17 12 16.1**	**+1.8**
	baz=38						
V24A	**Rampart Ranch,**	**38.00**	**329**	↑P	**P**	**17 12 16.5**	**+2.1**
	baz=38,SNR=17						
Y21A	**Point of Rocks**	**38.01**	**325**	↑P	**P**	**17 12 16.9**	**+2.4**
	baz=38						
W23A	**Werner Place,**	**38.02**	**328**	↑P	**P**	**17 12 17.1**	**+2.5**
	baz=38,SNR=18						
ANMO	**Albuquerque**	**38.02**	**327**	P	**P**	**17 12 16.5**	**+1.9**
ANMO	**Albuquerque**	**38.02**	**327**	P	**P**	**17 12 16.5**	**+1.9**
	12nm,0.9s,baz=152,slow=10.0,SNR=34						
ANMO				LR	LR	17 28 06.7	
	comp=Z,128nm,20.7s,baz=315,slow=37						
U25A	**Circle Dot Ran**	**38.10**	**331**	↑P	**P**	**17 12 17.2**	**+1.9**
	baz=38,SNR=6.4						
T26A	**Comanche Natio**	**38.34**	**332**	↓P	**P**	**17 12 19.3**	**+2.1**
	baz=38						
W22A	**Albuquerque**	**38.34**	**327**	↑P	**P**	**17 12 19.3**	**+2.0**
	baz=38						
Y20A	**Horse Springs,**	**38.34**	**324**	↓P	**P**	**17 12 18.9**	**+1.5**
	baz=38						
X21A	**Alamocita Cree**	**38.39**	**325**	↓P	**P**	**17 12 20.2**	**+2.5**
	baz=38,SNR=9.1						
V23A	**Ortiz Mt. (NFS**	**38.48**	**328**	↑P	**P**	**17 12 20.9**	**+2.3**
	baz=39						
BINY	**Binghamton**	**38.58**	**8**	*e*P	**P**	**17 12 20.3**	**+1.3**
	21nm,1.1s						
S26A	**Kim**	**38.65**	**333**	↑P	**P**	**17 12 21.7**	**+2.0**
	baz=39,SNR=6.5						
T25A	**Trinidad**	**38.69**	**332**	↑P	P	17 12 22.9	+2.6
	baz=39,SNR=22						
CPUP	**Villa Florida**	**38.71**	**142**	P	**P**	**17 12 20.2**	**-0.1**
CPUP	**Villa Florida**	**38.71**	**142**	P	**P**	**17 12 20.2**	**-0.1**
	2.2nm,0.8s,baz=281,slow=11,SNR=6.0						
CPUP				LR	LR	17 30 00.0	
	comp=Z,250nm,18.1s,baz=306,slow=39						
X20A	**Quemado**	**38.86**	**325**	↓P	**P**	**17 12 23.9**	**+2.2**
	baz=39,SNR=7.0						
R27A	**Eads**	**38.90**	**334**	↑P	**P**	**17 12 23.5**	**+1.7**
	baz=39						
U23A	**El Rito**	**38.94**	**329**	↑P	**P**	**17 12 24.8**	**+2.5**
	baz=39,SNR=19						
T24A	**Torres, Weston**	**38.95**	**331**	↑P	**P**	**17 12 24.9**	**+2.4**
	baz=39,SNR=9.0						
V22A	**San Miguel Ran**	**38.99**	**328**	↑P	**P**	**17 12 24.8**	**+1.9**
	baz=39,SNR=12						
S25A	**Robets Cordova**	**39.12**	**332**	↑P	**P**	**17 12 26.3**	**+2.5**
	baz=39,SNR=9.1						
R26A	**Arlington**	**39.19**	**334**	↓P	**P**	**17 12 27.1**	**+2.7**
	baz=39,SNR=6.8						
W20A	**Ramah**	**39.28**	**325**	↓P	**P**	**17 12 27.7**	**+2.5**
	baz=39,SNR=8.8						
BDFB	**Brasilia**	**39.30**	**120**	LR	LR	17 31 01.5	
	comp=Z,312nm,18.2s,baz=114,slow=40						
V21A	**Milan**	**39.30**	**327**	↓P	P	17 12 28.1	+2.7
	baz=40						
U22A	**Llaves**	**39.32**	**328**	↑P	P	17 12 28.3	+2.8
	baz=40,SNR=5.4						
T23A	**Casias Ranch,**	**39.40**	**330**	↓P	**P**	**17 12 28.8**	**+2.5**
	baz=40,SNR=13						
KSCO	**Kaye Shedlock'**	**39.43**	**335**	↓P	**P**	**17 12 28.2**	**+1.9**
	baz=40		

O26A **Horse Wrangler** 40.75 335 ⇓P P 17 12 39.0 +1.8
baz=41
Q23A **Hartsel** 40.77 332 ⇑P P 17 12 39.9 +2.2
baz=41
S21A **Coal Bank Pass** 40.78 329 ⇑P P 17 12 39.4 +1.6
baz=41,SNR=14
MVCO **Mesa Verde** 40.81 328 *e*P P 17 12 39.4 +1.5
19nm,0.9s
MVCO **Mesa Verde** 40.81 328 ⇑P P 17 12 40.0 +2.1
baz=41,SNR=11
SADO **Sadowa** 40.81 4 LR LR 17 28 58.0
comp=Z,118nm,20.6s,baz=179,slow=35
OGNE **Ogallala** 40.84 337 ⇑P P 17 12 39.7 +1.9
baz=41
N27A **Anderson Farm,** 40.91 337 ⇑P P 17 12 40.1 +1.6
baz=41
113A **Mohawk Valley,** 40.96 318 ⇑P P 17 12 40.3 +1.4
baz=41
P23A **Jefferson** 41.15 332 ⇑P P 17 12 42.1 +1.3
baz=41,SNR=7.7
Y14A **Wickenburg** 41.19 320 ⇓P P 17 12 42.2 +1.2
baz=41
R21A **Cimarron** 41.19 330 ⇓P P 17 12 42.7 +1.7
baz=41
S20A **Disappointment** 41.20 328 ⇓P P 17 12 43.1 +1.9
baz=41
WUAZ **Wupatki** 41.23 323 *e*P P 17 12 42.7 +1.4
16nm,0.9s
WUAZ **Wupatki** 41.23 323 ⇓P P 17 12 43.3 +1.9
baz=41,SNR=14
Q22A **Crested Butte,** 41.26 331 ⇑P P 17 12 43.9 +2.3
baz=41,SNR=17
ISCO **Idaho Springs** 41.39 333 ⇓P P 17 12 44.6 +1.9
baz=42
R20A **Redvale** 41.48 329 ⇑P P 17 12 45.6 +2.3
baz=42,SNR=10.0
SMCO **Snowmass** 41.53 331 *e*P P 17 12 45.2 +1.2
13nm,1.1s
Q21A **Lamborn Mesa,** 41.56 330 ⇑P P 17 12 46.4 +2.3
baz=42,SNR=6.4
P22A **Eagle** 41.76 332 ⇑P P 17 12 47.6 +1.9
baz=42
O23A **Lake Granby, G** 41.86 333 ⇑P P 17 12 48.6 +2.0
baz=42
S18A **Hurst Farm, Bl** 41.97 327 ⇓P P 17 12 49.0 +1.6
baz=42,SNR=7.9
P21A **Newcastle** 42.03 331 ⇑P P 17 12 50.4 +2.4
baz=42,SNR=19
O22A **Kremmling** 42.11 332 ⇓P P 17 12 50.1 +1.5
baz=42,SNR=5.6
U15A **North Rim** 42.39 324 ⇑P P 17 12 52.6 +1.7
baz=42,SNR=9.6
M24A **Cheyenne** 42.41 335 ⇑P P 17 12 53.0 +2.2
baz=43
N23A **Red Feather La** 42.42 333 ⇓P P 17 12 52.9 +1.7
baz=43
Q19A **Hogan Spring (** 42.51 329 ⇑P P 17 12 53.3 +1.6
baz=43,SNR=15
PHWY **Pilot Hill** 42.54 334 *e*P P 17 12 53.2 +1.1
8.6nm,1.3s
MONP **Monument Peak** 42.83 316 ⇓P P 17 12 55.5 +1.1
baz=43
K25A **Mack Ranch, Ha** 42.97 337 ⇑P P 17 12 57.7 +2.2
baz=43
N21A **Black Mountain** 43.03 332 ⇑P P 17 12 58.4 +2.3
baz=43,SNR=6.8
BELC **Belle Mtn. Jos** 43.19 318 ⇓P P 17 12 58.8 +1.5
baz=43
PFO **Pinyon Flat Ob** 43.26 317 ⇓P P 17 12 59.4 +1.5
baz=43
SRU **San Rafael** 43.29 328 *e*P P 17 12 57.9 -0.2
16nm,0.9s
SRU **San Rafael** 43.29 328 ⇑P P 17 12 59.6 +1.5
baz=43,SNR=14
GMRC **Granite Mounta** 43.43 319 ⇑P P 17 13 00.7 +1.5
baz=44
N20A **Spence Gulch,** 43.44 331 ⇓P P 17 13 01.1 +1.8
baz=44,SNR=5.7
Q16A **Castle Valley** 43.49 327 ⇓P P 17 13 01.4 +1.6
baz=44
P18A **Preston Nutter** 43.52 329 ⇓P P 17 13 01.6 +1.5
baz=44
L22A **Ellis Ranch, M** 43.56 334 ⇑P P 17 13 02.4 +2.2
baz=44
M21A **Separation Pea** 43.63 333 ⇓P P 17 13 02.3 +1.4
baz=44
P17A **Butcher Ranch,** 43.67 328 ⇓P P 17 13 02.5 +1.4
baz=44,SNR=6.7
MSU **Marysvale** 43.76 326 *e*P P 17 13 02.8 +0.8
5.2nm,0.9s
MVU **Marysvale** 43.77 326 *e*P P 17 13 03.5 +1.4
5.8nm,0.9s
J24A **Dixon Ranch, L** 43.89 337 ⇑P P 17 13 05.0 +2.2
baz=44
N19A **John Jarvie Ra** 43.93 331 ⇑P P 17 13 04.4 +1.1
baz=44
RSSD **Black Hills** 44.32 338 *e*P P 17 13 07.8 +1.5
5.4nm,0.6s
DAU **Daniels Canyon** 44.62 329 *e*P P 17 13 09.6 +0.7
J22A **Midwest** 44.70 335 ⇓P P 17 13 10.6 +1.3
baz=45
M18A **Lyman** 44.77 330 ⇓P P 17 13 10.9 +0.9
baz=45
N17A **Moffit Pass** 44.80 329 ⇑P P 17 13 11.7 +1.4
baz=45
JLU **Jordanelle** 44.86 329 *e*P P 17 13 11.4 +0.6
K20A **Yellowstone Ra** 44.91 333 ⇑P P 17 13 11.9 +0.9
baz=45,SNR=9.1
L19A **Farson** 44.95 332 ⇑P P 17 13 12.7 +1.4
baz=45,SNR=6.3
EDW2 **Edwards Air Fo** 45.03 318 ⇑P P 17 13 13.1 +1.1
baz=45
H24A **Dirks Ranch, A** 45.05 338 ⇓P P 17 13 13.3 +1.3
baz=45,SNR=7.0
J21A **Lysite** 45.06 334 ⇑P P 17 13 13.2 +1.0
baz=45,SNR=5.2
M17A **Scullys Gap (B** 45.10 330 ⇑P P 17 13 13.7 +1.0
baz=45,SNR=11
K19A **Absolon Red Bu** 45.27 333 ⇑P P 17 13 14.7 +0.8
baz=45,SNR=7.2
DUG **Dugway** 45.30 327 ⇑P P 17 13 15.5 +1.4
baz=45
J20A **Shoshoni** 45.34 334 ⇑P P 17 13 15.9 +1.5
baz=46
MPMC **Manual Prospec** 45.39 319 ⇑P P 17 13 16.0 +0.9
baz=46
M16A **Huntsville** 45.48 329 ⇓P P 17 13 16.7 +1.2
baz=46
PDAR **Pinedale Array** 45.55 332 P P 17 13 16.4 +0.1
PDAR **Pinedale Array** 45.55 332 P P 17 13 16.4 +0.1
2.1nm,0.9s,baz=135,slow=9.0,SNR=12
PDAR LR LR 17 33 54.7
comp=Z,179nm,18.6s,baz=148,slow=38
R11A **Troy Canyon, C** 45.63 323 ⇓P P 17 13 18.4 +1.6
baz=46
HWUT **Hardware Ranch** 45.66 329 *e*P P 17 13 17.4 +0.4
L17A **Cokeville** 45.68 330 ⇑P P 17 13 17.9 +0.7
baz=46,SNR=7.5
K18A **Toltan Ranch,** 45.68 332 ⇓P P 17 13 19.1 +1.8
baz=46,SNR=6.8
AGMN **Agassiz Nation** 45.68 348 *e*P P 17 13 16.7 -0.1
8.4nm,1.0s
J19A **Crowheart** 45.71 333 ⇑P P 17 13 18.7 +1.3
baz=46
PLCA **Paso Flores** 45.76 167 *e*P P 17 13 17.2 -0.3
PLCA **Paso Flores** 45.76 167 P P 17 13 17.3 -0.3
4.5nm,1.2s,baz=343,slow=9.5,SNR=6.6
ISA **Isabella** 45.81 318 *e*P P 17 13 19.6 +1.4
I20A **Worland** 45.84 334 ⇑P P 17 13 19.4 +1.1
baz=46,SNR=5.8
L16A **Fish Haven** 45.89 330 ⇑P P 17 13 19.4 +0.6
baz=46
TRQA **Tornquist** 45.90 157 *e*P P 17 13 17.3 -1.4
F24A **Ekalaka** 45.94 339 ⇑P P 17 13 20.3 +1.2
baz=46,SNR=6.2
J18A **Kendall Valley** 46.11 332 ⇑P P 17 13 21.4 +0.7
baz=46,SNR=7.4
K17A **Gardner Place,** 46.19 331 ⇓P P 17 13 22.0 +0.8
baz=46
F23A **Volborg** 46.19 338 ⇓P P 17 13 22.2 +1.2
baz=46
H20A **Greybull** 46.21 335 ⇑P P 17 13 22.1 +0.8
baz=46
L15A **Malad City** 46.37 329 ⇑P P 17 13 23.3 +0.7
baz=46,SNR=10
I18A **Diamond G Ranc** 46.40 333 ⇓P P 17 13 23.7 +0.9
baz=47,SNR=5.6
G21A **Lodge Grass** 46.48 336 ⇓P P 17 13 24.3 +0.9
baz=47
E24A **Baker** 46.51 339 ⇑P P 17 13 25.0 +1.6
baz=47
J17A **Brown Place, J** 46.55 332 ⇓P P 17 13 25.2 +1.1
baz=47
F22A **Rosebud** 46.56 337 ⇓P P 17 13 25.0 +1.1
baz=47
K16A **Soda Springs** 46.58 331 ⇓P P 17 13 25.4 +1.2
baz=47
SMMC **Simmler** 46.64 317 ⇓P P 17 13 26.2 +1.5
baz=47
LOHW **Long Hollow** 46.69 332 *e*P P 17 13 25.3 +0.2
TPAW **Teton Pass** 46.76 332 *e*P P 17 13 25.4 -0.4
4.3nm,0.6s
L14A **Malta** 46.83 329 ⇑P P 17 13 27.5 +1.3
baz=47
RRI2 **Red Ridge** 46.83 331 *e*P P 17 13 26.2 -0.1
8.5nm,0.6s
MOOW **Moose Ponds** 46.86 332 *e*P P 17 13 25.9 -0.6
3.1nm,1.0s
G20A **Bridger** 46.89 335 ⇑P P 17 13 27.2 +0.6
baz=47,SNR=5.5
I17A **Pilgrim Ck.** 46.91 332 ⇑P P 17 13 28.2 +1.3
baz=47
K15A **Arbon** 46.94 330 ⇑P P 17 13 28.2 +1.2
baz=47
D24A **Glendive** 46.99 340 ⇑P P 17 13 28.9 +1.7
baz=47,SNR=9.7
E22A **Miles City** 47.00 338 ⇓P P 17 13 28.6 +1.3
baz=47
ELK **Elko** 47.01 326 *e*P P 17 13 27.4 -0.3
ELK **Elko** 47.01 326 P P 17 13 27.9 +0.1
2.0nm,0.8s,baz=137,slow=4.1,SNR=7.6
ELK LR LR 17 32 08.9
comp=Z,202nm,20.8s,baz=328,slow=35
IMW **Indian Meadow** 47.07 332 *e*P P 17 13 28.0 -0.2
H18A **Shoshone NF, C** 47.09 334 ⇓P P 17 13 29.2 +0.9
baz=47,SNR=5.9
K14A **Jones Ranch, D** 47.16 329 ⇑P P 17 13 30.0 +1.2
baz=47
NV11 **Mina Array Sit** 47.25 321 *e*P P 17 13 30.4 +0.9
RLMT **Red Lodge** 47.26 334 *e*P P 17 13 28.1 -1.5
6.0nm,1.0s
RLMT **Red Lodge** 47.26 334 ⇓P P 17 13 30.5 +0.9
baz=47
NVAR **Mina Array Bea** 47.34 321 P P 17 13 31.8 +1.5
NVAR **Mina Array Bea** 47.34 321 P P 17 13 31.8 +1.5
4.0nm,0.8s,baz=136,slow=7.2,SNR=31
NVAR LR LR 17 32 54.9
comp=Z,188nm,22.0s,baz=24,slow=36
D23A **Lindsay** 47.35 339 ⇓P P 17 13 31.6 +1.5
baz=48
C24A **Savage** 47.38 340 ⇓P P 17 13 31.9 +1.6
baz=48
J15A **Blackfoot** 47.41 330 ⇓P P 17 13 32.0 +1.3
baz=48
ULM **Lac du Bonnet** 47.54 348 P P 17 13 33.5 +2.1
ULM **Lac du Bonnet** 47.54 348 P P 17 13 33.5 +2.1
10nm,0.9s,baz=148,slow=9.8,SNR=5.0
G18A **Lazy EL Ranch,** 47.55 334 ⇓P P 17 13 33.7 +2.0
baz=48
RCBR **Riachuelo** 47.57 101 LR LR 17 33 25.2
comp=Z,186nm,20.2s,baz=275,slow=36
D22A **Cohagen** 47.68 338 ⇓P P 17 13 34.3 +1.7
baz=48
F19A **Roth Farm, Mol** 47.71 335 ⇓P P 17 13 33.9 +1.0
baz=48
H16A **Russell Place,** 47.82 332 ⇓P P 17 13 35.3 +1.4
baz=48
C23A **Lambert** 47.88 340 ⇑P P 17 13 35.7 +1.6
baz=48,SNR=7.3
J14A **Carey** 47.90 330 ⇓P P 17 13 35.7 +1.2
baz=48,SNR=6.3
E20A **Meyer Farm, Mu** 47.90 336 ⇑P P 17 13 35.6 +1.3
baz=48
BMN **Battle Mountai** 47.94 324 *e*P P 17 13 35.0 +0.1
9.3nm,1.1s
QLMT **Earthquake Lak** 48.01 332 *e*P P 17 13 35.9 +0.6
1.1nm,1.0s
G17A **Pierce Place,** 48.07 333 ⇑P P 17 13 37.9 +2.2
baz=48,SNR=7.9
F18A **Big Timber** 48.08 335 ⇑P P 17 13 36.9 +1.2
baz=48,SNR=14
C22A **Vida** 48.08 339 ⇓P P 17 13 36.6 +1.0
baz=48,SNR=8.3
E19A **Rath Farm, Rou** 48.13 336 ⇓P P 17 13 37.1 +0.9
baz=48,SNR=7.2
J13A **Cove Ranch, Pi** 48.28 329 ⇑P P 17 13 38.4 +0.9
baz=48
I14A **Mackay** 48.30 330 ⇓P P 17 13 39.0 +1.4
baz=48
B23A **Brockton** 48.38 340 ⇑P P 17 13 39.3 +1.4
baz=48,SNR=5.9
D20A **Manuel Ranch,** 48.38 337 ⇓P P 17 13 39.4 +1.4
baz=48
H15A **Lima** 48.41 331 ⇓P P 17 13 40.4 +1.9
baz=49,SNR=8.3
CMB **Columbia Colle** 48.43 320 P P 17 13 39.7 +1.1
A24A **Westby** 48.45 341 ⇓P P 17 13 40.1 +1.6
baz=49,SNR=5.9
G16A **Moss Hill, Enn** 48.48 333 ⇑P P 17 13 40.4 +1.5
baz=49,SNR=7.2
F17A **Fitzpatrick Pl** 48.48 334 ⇑P P 17 13 40.4 +1.4
baz=49
HLID **Hailey** 48.52 329 *e*P P 17 13 39.3 0.0
1.0nm,0.5s
HLID **Hailey** 48.52 329 ⇑P P 17 13 40.5 +1.1
baz=49
I13A **Wildhorse Cree** 48.62 330 ⇓P P 17 13 41.6 +1.4
baz=49,SNR=12
MCMT **McKenzie Canyo** 48.67 331 *e*P P 17 13 41.5 +1.0
1.6nm,0.7s
E18A **Harlowton** 48.68 335 ⇑P P 17 13 41.5 +1.0
baz=49
BOZ **Bozeman (W)** 48.72 333 *e*P P 17 13 41.4 +0.6
5.1nm,0.8s
BOZ **Bozeman (W)** 48.72 333 ⇑P P 17 13 41.4 +0.6
baz=49,SNR=12
D19A **Cripps Ranch,** 48.74 336 ⇓P P 17 13 42.1 +1.3
baz=49
G15A **Dillon** 48.75 332 ⇑P P 17 13 42.1 +1.0
baz=49
H14A **Leadore** 48.76 331 ⇓P P 17 13 42.6 +1.4
baz=49
C20A **Veseth Ranch,** 48.84 337 ⇓P P 17 13 42.8 +1.2
baz=49
E17A **Martinsdale** 49.01 334 ⇓P P 17 13 44.0 +1.0
baz=49
I12A **Atlanta** 49.06 329 ⇓P P 17 13 44.5 +1.1
baz=49
D18A **Linhart Farms,** 49.14 336 ⇑P P 17 13 45.3 +1.4
baz=49
A22A **Carney Farms,** 49.15 340 ⇑P P 17 13 45.3 +1.4
baz=49,SNR=9.7
MFID **Camas Ranch** 49.15 328 ⇑P P 17 13 45.0 +0.9
baz=49
H13A **Challis** 49.16 330 ⇓P P 17 13 45.2 +1.0
baz=49
LRM **Imekiln Ridge** 49.23 333 *e*P P 17 13 45.3 +0.6
35nm,1.1s
F15A **Butte** 49.26 333 ⇑P P 17 13 45.8 +0.8
baz=49
C19A **Slack Wire Ran** 49.27 337 ⇓P P 17 13 46.3 +1.5
baz=49
G14A **Jackson** 49.27 331 ⇑P P 17 13 46.0 +0.9
baz=49
E16A **East Helena** 49.42 334 ⇓P P 17 13 47.1 +1.0
baz=50
H12A **Diamond D Ranc** 49.45 330 ⇓P P 17 13 47.5 +1.0
baz=50
D17A **Six Diamond Ra** 49.47 335 ⇑P P 17 13 47.3 +0.8
baz=50
BEKR **Beckworth** 49.48 322 *e*P P 17 13 47.1 +0.4
1.1nm,0.6s
G13A **Cobalt** 49.53 331 ⇑P P 17 13 47.6 +0.6
baz=50
D16A **Dana Ranch, Ca** 49.75 334 ⇓P P 17 13 49.7 +1.1
baz=50
E15A **Deer Lodge** 49.77 333 ⇑P P 17 13 49.5 +0.7
baz=50
B19A **Brinkman Farms** 49.81 337 ⇑P P 17 13 50.1 +1.1
baz=50
C17A **Wharram Farm,** 49.88 335 ⇓P P 17 13 51.3 +1.7
baz=50
WVOR **Wild Horse Val** 50.04 325 *e*P P 17 13 51.0 +0.1
26nm,1.2s
F13A **Darby** 50.09 331 ⇓P P 17 13 51.8 +0.6
baz=50
B18A **Beardsley Farm** 50.09 337 ⇓P P 17 13 52.5 +1.4
baz=50
G12A **Big Creek, Yel** 50.10 330 ⇑P P 17 13 51.9 +0.6
baz=50
A19A **Klindworth Far** 50.12 338 ⇑P P 17 13 52.5 +1.2
baz=50
E14A **Clinton** 50.15 332 ⇓P P 17 13 52.4 +0.7
baz=50,SNR=7.4
D15A **Lincoln** 50.18 334 ⇓P P 17 13 53.0 +1.1
baz=50
E13A **Victor** 50.49 332 ⇑P P 17 13 55.2 +0.9
baz=51
F12A **Elk City** 50.51 331 ⇓P P 17 13 55.2 +0.8
baz=51,SNR=8.0
B16A **M & M Farms, S** 50.89 335 ⇑P P 17 13 57.7 +0.6
baz=51
B15A **Bradely Ranch,** 51.17 335 ⇑P P 17 14 00.2 +0.9
baz=51
D12A **Red Ives Fores** 51.49 332 ⇓P P 17 14 02.2 +0.5
baz=52
B14A **Marquette Ranc** 51.52 334 ⇓P P 17 14 03.1 +1.1
baz=52
C13A **Hot Springs** 51.58 333 ⇑P P 17 14 03.3 +0.9
baz=52
A15A **Johnson Ranch,** 51.76 335 ⇑P P 17 14 04.5 +0.8
baz=52
BSMT **Bassoo Peak** 51.81 333 *e*P P 17 14 04.8 +0.6
2.1nm,0.7s
YBH **Yreka Blue Hor** 52.02 322 P P 17 14 04.6 -1.1
YBH **Yreka Blue Hor** 52.02 322 P P 17 14 04.6 -1.1
2.6nm,0.8s,baz=115,slow=5.7,SNR=7.5
YBH LR LR 17 35 59.8
comp=Z,195nm,18.6s,baz=144,slow=36
B13A **Whitefish** 52.05 333 ⇓P P 17 14 07.9 +2.0
baz=52
WALA **Wateon Lakes** 52.32 334 *e*P P 17 14 06.6 -1.3
SCHQ **Schefferville** 52.35 11 P P 17 14 06.8 -1.0
SCHQ **Schefferville** 52.35 11 P P 17 14 06.8 -1.0
2.1nm,0.8s,baz=221,slow=9.3,SNR=2.8
A13A **Flathead Natio** 52.44 334 ⇑P P 17 14 10.1 +1.3
baz=53
FFC **Flin Flon** 53.07 346 *e*P P 17 14 13.0 -0.2
6.8nm,0.9s
NEW **Newport** 53.19 332 P P 17 14 11.6 -2.7
NEW **Newport** 53.19 332 ⇑P P 17 14 17.1 +2.8
baz=53
NEW **Newport** 53.19 332 LR LR 17 37 21.3
comp=Z,142nm,19.7s,baz=279,slow=37
FRB **Frobisher Bay** 60.59 7 LR LR 17 40 12.1
comp=Z,97nm,19.6s,baz=230,slow=35
YKA **Yellowknife Ar** 63.10 344 P P 17 15 23.4 +0.1
YKA **Yellowknife Ar** 63.10 344 P P 17 15 23.4 +0.1
2.3nm,0.7s,baz=143,slow=6.2,SNR=46
YKW3 **Yellowknife Ar** 63.16 344 *e*P P 17 15 22.7 -1.0
0.1nm,0.8s
DLBC **Dease Lake** 65.66 335 *e*P P 17 15 40.9 +0.6
DLBC **Dease Lake** 65.66 335 P P 17 15 41.3 +1.0
4.8nm,1.0s,baz=128,slow=8.8,SNR=5.9
PPT2 **Papeete2** 69.46 250 *e*LR LR 17 37 05.0
304nm,25.5s
TBI **Tubuai** 70.56 244 *e*LR LR 17 37 36.5
264nm,27.5s
RES **Resolute Bay** 71.08 357 *e*P P 17 16 13.3 -0.5
RES **Resolute Bay** 71.08 357 P P 17 16 14.2 +0.4
0.6nm,0.8s,baz=169,slow=5.2,SNR=3.3
INK **Inuvik** 72.77 342 P P 17 16 24.4 +0.4
INK **Inuvik** 72.77 342 P P 17 16 24.4 +0.4
1.8nm,0.8s,baz=125,slow=6.2,SNR=6.9
INK LR LR 17 50 11.1
comp=Z,99nm,18.4s,baz=63,slow=37
EGAK **Eagle** 73.52 338 *e*P P 17 16 27.8 -0.8
SUMG **Summit** 73.72 13 *e*P P 17 16 30.2 +0.1
8.1nm,0.9s
SUMG **Summit** 73.72 13 *i*P P 17 16 30.5 +0.4
7.2nm,0.8s
MENT **Mentasta** 73.73 335 *e*P P 17 16 30.1 +0.2
SML **Sawmill** 75.30 333 P P 17 16 38.9 -0.2
ILAR **Eielson Array** 75.75 337 P P 17 16 41.4 -0.2
ILAR **Eielson Array** 75.75 337 P P 17 16 41.4 -0.2
1.0nm,0.7s,baz=138,slow=4.6,SNR=17
ILAR LR LR 17 52 26.7
comp=Z,105nm,19.6s,baz=139,slow=38
COLA **College** 76.17 336 P P 17 16 44.4 +0.5
MCK **McKinley** 76.21 335 *e*P P 17 16 44.8 +0.5
DBIC **Dimbokro** 77.33 84 P P 17 16 49.1 -2.5
PPLA **Purkeypile** 77.35 334 *e*P P 17 16 50.5 -0.3
28nm,1.5s
ESDC **Sonseca Array** 78.72 50 P P 17 16 59.9 +1.0
ESDC **Sonseca Array** 78.72 50 P P 17 16 59.9 +1.0
2.5nm,0.8s,baz=266,slow=5.9,SNR=14
ESDC LR LR 17 50 09.5
comp=Z,47nm,18.3s,baz=180,slow=34
ESLA **Sonseca Array** 78.72 50 *e*P P 17 16 58.7 -0.2
TOA0 **Torodi Ar. Sit** 83.51 77 *e*P P 17 17 24.7 -0.1
TORD **Torodi Ar. Bea** 83.51 77 P P 17 17 25.6 +0.8
TORD **Torodi Ar. Bea** 83.51 77 P P 17 17 25.6 +0.8
0.7nm,0.8s,baz=288,slow=4.6,SNR=4.7
ECH **Echery** 86.92 42 P P 17 17 39.7 -1.5
6.8nm,1.1s
VNA3 **Neumayer Olymp** 88.22 162 *e*P P 17 17 53.2 +6.3
NOA **NORSAR Array B** 88.44 29 LR LR 17 54 02.4
comp=Z,34nm,20.6s,baz=345,slow=33
VNA2 **Neumayer--Watz** 88.84 161 *e*P P 17 17 55.4 +5.6
ZAA0 **Zalesovo Array** 121.39 9 *e*PKPdf **PKPdf** 17 23 50.1 +0.6
CN2 **Changchun** 126.25 335 *e*PKP **PKPdf** 17 24 00.3 +1.2
MKAR **Makanchi Array** 127.77 13 PKP **PKPdf** 17 24 02.9 +0.9
MKAR **Makanchi Array** 127.77 13 PKP **PKPdf** 17 24 02.8 +0.9
0.4nm,0.9s,baz=22,slow=1.3,SNR=3.8
WMQ **Urumqi** 131.69 9 PKP **PKPdf** 17 24 08.8 -0.8
KSH **Kashi** 132.47 23 *e*PKP **PKPdf** 17 24 13.5 +2.2
KSH PP PP 17 26 38.9 +5.5
KSH PKS **PKSdf** 17 27 47.8 0.0
KSH SKS **SKSdf** 17 31 21.6 -1.5
KSH SKKS **SKKSac** 17 33 30.3 -0.8
KSH SS **SS** 17 44 17.0 +4.7
KSH LR LR
comp=Z,270nm,6.3s
HHC **Hu-ho-hao-te** 133.63 345 *e*PKP **PKPdf** 17 24 11.6 -1.8
HHC PP **PP** 17 26 43.8 +3.3
HHC PKS **PKSdf** 17 27 46.1 -3.7
HHC SKS **SKSdf** 17 31 20.8 -4.3
HHC SKKS **SKKSac** 17 33 35.3 -2.7
HHC SS **SS** 17 44 27.6 +1.7
HHC AMB AMB
comp=Z,87nm,7.3s
HHC LR LR
comp=N,290nm,20.2s
HHC LR LR
comp=E,350nm,20.8s
HHC LR LR
comp=Z,240nm,20.2s
ASAR **Alice Springs** 139.72 237 PKPpre PKPpre 17 24 16.2
ASAR **Alice Springs** 139.72 237 PKhKP PKPpre 17 24 16.2
comp=Z,0.2nm,0.7s,baz=101,slow=2.9,SNR=3.5
LZH **Lanzhou** 139.77 352 *e*PKP **PKPdf** 17 24 23.5 -1.5
LZH sPKP 17 24 28.1
LZH LR LR
comp=N,110nm,18.0s
LZH LR LR
comp=E,120nm,17.8s
LZH LR LR
comp=Z,140nm,20.0s
WRA **Warramunga Arr** 140.69 243 PKPpre PKPpre 17 24 20.7
WRA **Warramunga Arr** 140.69 243 PKhKP PKPpre 17 24 20.7
comp=Z,0.3nm,0.6s,baz=105,slow=2.7,SNR=5.3
GYA **Guiyang** 148.53 344 PKPbc **PKPdf** 17 24 39.0 -1.4
GYA PKPab **PKPab** 17 24 47.6 +0.4
GYA PKS **PP** 17 28 11.0 -0.6
GYA PP PP 17 28 14.8 +3.2
GYA AMB AMB
comp=Z,80nm,7.8s

*IDC **18** 17:19:06.2±0.9,50°.62N×177°.03E,h0^{km},mb3.4/8, mb1 3.8/10,mb1mx3.5/30,mbtmp3.4/10,ML3.1/2,Error ellipse: s-maj=21.4km s-min=12.3km az=27.0*
*ISCJB **18** 17:19:09.4±0.7,50°.71N±0°.07×176°.86E±0°.08,h33^{km}, mb3.4/8,Error ellipse: s-maj=10.5km s-min=6.5km az=163.9*
*NEIC **18** 17:19:10.5,50°.68N×177°.02E,h10^{km},ML3.5(AEIC),After AEIC.*
ISC 18 17:19:11.1±1.0,50°.7N±0°.1×176°.97E±0°.06,h35^{km},n19, σ1°28/24,mb3.4/8,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSA	**Little Sitkin**	**1.58**	**37**	P	**Pn**	**17 19 36.3**	**-0.3**
LSSE	**Little Sitkin**	**1.59**	**39**	P	**Pn**	**17 19 36.7**	**0.0**
LSNW	**Little Sitkin**	**1.60**	**37**	P	**Pn**	**17 19 36.6**	**-0.2**
LSPA	**Little Sitkin**	**1.61**	**38**	P	**Pn**	**17 19 36.1**	**-1.0**
LSPA				S	**Sn**	**17 19 56.6**	**0.0**
AMKA	**Amchitka**	**1.62**	**64**	P	**Pn**	**17 19 35.2**	**-1.9**
AMKA				S	**Sn**	**17 19 53.1**	**-3.7**
CESW	**Semis' Southwe**	**2.03**	**53**	P	**Pn**	**17 19 42.7**	**0.0**
CETU	**Semis' Tuman**	**2.03**	**50**	P	**Pn**	**17 19 43.3**	**+0.5**
CETU				S	**Sn**	**17 20 07.9**	**+1.0**
CERAA	**Semis' Rag'd T**	**2.09**	**54**	P	**Pn**	**17 19 43.5**	**-0.1**
CERAA				S	**Sn**	**17 20 08.7**	**+0.3**
CEAP	**Semis' Anvil P**	**2.09**	**50**	P	**Pn**	**17 19 43.9**	**+0.2**
FX1	**Attu Island--F**	**3.22**	**314**	Pn	**Pn**	**17 19 58.1**	**-1.0**
	3.3nm,0.3s,baz=152,slow=18,SNR=24						
FX1				Sn	**Sn**	**17 20 34.9**	**-1.2**
	12nm,0.3s,baz=270,slow=20,SNR=23						
KDAK	**Kodiak Island**	**19.03**	**56**	P	**P**	**17 23 27.7**	**-2.0**
	0.4nm,0.3s,baz=286,slow=7.4,SNR=9.7						
ILAR	**Eielson Array**	**23.46**	**39**	P	**P**	**17 24 15.9**	**-1.0**
	0.1nm,0.5s,baz=248,slow=9.4,SNR=4.5						
YKA	**Yellowknife Ar**	**37.62**	**45**	P	**P**	**17 26 21.8**	**-0.1**
	0.2nm,0.4s,baz=282,slow=9.1,SNR=8.1						
NVAR	**Mina Array Bea**	**46.30**	**79**	P	**P**	**17 27 35.3**	**+1.9**
	0.3nm,0.6s,baz=287,slow=9.4,SNR=3.8						
PDAR	**Pinedale Array**	**49.06**	**69**	P	**P**	**17 27 55.5**	**+0.8**
	0.5nm,0.3s,baz=297,slow=6.0,SNR=6.4						
TXAR	**Lajitas Array**	**61.41**	**78**	P	**P**	**17 29 23.9**	**+0.2**
	0.4nm,0.5s,baz=316,slow=7.5,SNR=3.2						
NOA	**NORSAR Array B**	**68.03**	**353**	P	**P**	**17 30 07.9**	**+1.6**
	0.6nm,0.8s,baz=7.0,slow=5.8,SNR=3.3						
WRA	**Warramunga Ar**	**79.72**	**220**	P	**P**	**17 31 14.8**	**-0.2**
	0.3nm,0.8s,baz=32,slow=6.1,SNR=3.1						
ASAR	**Alice Springs**	**83.22**	**219**	P	**P**	**17 31 33.8**	**+0.2**
	0.2nm,0.8s,baz=27,slow=5.5,SNR=4.4						

ISCJB ***18*** *17:33:42.9±0.6,44°.14N±0°.07×147°.05E±0°.09, h135km±4km,mb3.6/14, Error ellipse: s-maj=14.0km s-min=6.5km az=137.5*

MOS ***18*** *17:33:43.2±1.0,44°.22N×146°.94E, h139km, mb4.0/8, Error ellipse: s-maj=20.0km s-min=13.4km az=79.7*

JMA ***18*** *17:33:45.8±0.5, 44°.07N×146°.94E, h121km±4km, M3.4*

IDC ***18*** *17:33:45.7±2.3,44°.25N×146°.85E, h142km±20km, mb3.5/14, mb1 3.6/17, mb1mx3.5/28, mbtmp3.4/17, Error ellipse: s-maj=19.2km s-min=15.6km az=114.0*

ISC 18 17:33:43.9±0.9**,44°.15N**±0°.08×**147°.04E**±0°.08**,h130**km±7km**, n43,**σ0**95/49,mb3.8/14,2D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.85**	**263**	*d* PN	**Pn**	**17 34 05.8**	**+0.4**
YUK				*i* S	**Sn**	**17 34 21.7**	**0.0**
YUK				pmax	pmax		
	comp=N,124nm,0.2s						
YUK				pmax	pmax		
	comp=E,184nm,0.2s						
YUK				pmax	pmax		
	comp=Z,287nm,0.2s						
YUK				smax	smax		
	comp=N,2μm,0.2s						
YUK				smax	smax		
	comp=E,2μm,0.4s						
NEM2	**Nemuro 2**	**1.22**	**231**	P	**Pn**	**17 34 09.1**	**+0.2**
NEM2				*e*S	**Sn**	**17 34 26.7**	**-1.2**
KUR	**Kuril'sk**	**1.24**	**28**	*i* PN	**Pn**	**17 34 09.2**	**+0.1**
KUR				*i* S	**Sn**	**17 34 28.0**	**-0.3**
KUR				pmax	pmax		
	comp=N,210nm,0.5s						
KUR				pmax	pmax		
	comp=Z,210nm,0.5s						
KUR				pmax	pmax		
	comp=E,270nm,0.3s						
KUR				smax	smax		
	comp=N,990nm,0.5s						
KUR				smax	smax		
	comp=E,630nm,0.3s						
JRA	**Rausu**	**1.40**	**262**	P	**Pn**	**17 34 11.3**	**+0.5**
JNK	**Nakash**	**1.77**	**252**	P	**Pn**	**17 34 15.9**	**+0.9**
JAK	**Akkeshi**	**2.05**	**237**	P	**Pn**	**17 34 18.7**	**+0.2**
JAK				*e*S	**Sn**	**17 34 44.1**	**-0.8**
JTKR	**Abashiri--Toko**	**2.26**	**267**	P	**Pn**	**17 34 21.5**	**+0.5**
JTKR				*e*S	**Sn**	**17 34 49.4**	**-0.1**
JAR	**Ashorobuto**	**2.52**	**251**	P	**Pn**	**17 34 25.7**	**+1.4**
JOB	**Onbets**	**2.64**	**243**	P	**Pn**	**17 34 26.8**	**+1.0**
JOB				*e*S	**Sn**	**17 34 57.8**	**-0.2**
JMP	**Maruseppu**	**2.65**	**268**	P	**Pn**	**17 34 31.6**	**+0.3**
JCH	**Churui**	**3.08**	**242**	P	**Pn**	**17 34 31.9**	**+0.3**
JCH				*e*S	**Sn**	**17 35 07.5**	**-0.8**
JKK2	**Kamakawa 2**	**3.10**	**266**	P	**Pn**	**17 34 32.8**	**+0.9**
ASAJ	**Asahikawa**	**3.20**	**271**	P	**Pn**	**17 34 34.2**	**+1.2**
ASAJ	**Asahikawa**	**3.20**	**271**	P	**Pn**	**17 34 34.2**	**+1.2**
	comp=E,2.6nm,0.3s,baz=85,slow=15,SNR=40						
JSE	**Soyaes**	**3.28**	**286**	P	**Pn**	**17 34 34.6**	**+0.5**
JFR	**Furan**	**3.37**	**255**	P	**Pn**	**17 34 37.5**	**+2.2**
JNBK	**Urakawa-nobuka**	**3.64**	**241**	P	**Pn**	**17 34 38.6**	**-0.3**
JWK2	**Keihoku**	**3.84**	**290**	P	**Pn**	**17 34 43.3**	**+1.8**
JHR	**Hokuryu**	**3.86**	**266**	P	**Pn**	**17 34 43.5**	**+1.8**
YSS	**Yuzh-Sakhalins**	**4.11**	**315**	*e*PN	Pn	17 34 37.0	-8.1
YSS				*e*		17 35 30.0	
MJAR	**Matsushiro Arr**	**10.15**	**225**	P	**Pn**	**17 36 05.5**	**-0.8**
	comp=E,0.3nm,0.3s,baz=29,slow=13,SNR=6.8						
USRK	**Ussuriysk Arra**	**10.80**	**276**	P	**Pn**	**17 36 14.5**	**-0.4**
	comp=E,0.5nm,0.3s,baz=82,slow=15,SNR=9.2						
ZALV	**Zalesovo Beam**	**40.70**	**307**	P	**P**	**17 41 10.7**	**-0.6**
ZALV	**Zalesovo Beam**	**40.70**	**307**	P	**P**	**17 41 10.7**	**-0.6**
	comp=E,0.3nm,0.4s,baz=85,slow=8.8,SNR=3.0						
ILAR	**Eielson Array**	**41.22**	**36**	P	**P**	**17 41 16.2**	**+0.7**
	comp=E,0.6nm,0.9s,baz=279,slow=9.2,SNR=6.3						
MKAR	**Makanchi Array**	**44.33**	**297**	P	**P**	**17 41 40.8**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**44.33**	**297**	P	**P**	**17 41 40.8**	**-0.1**
	comp=Z,3.1nm,0.7s,baz=78,slow=8.4,SNR=38						
INK	**Inuvik**	**46.10**	**30**	P	**P**	**17 41 54.9**	**+0.4**
	comp=Z,1.7nm,0.3s,baz=294,slow=6.6,SNR=16						
YKA	**Yellowknife Ar**	**55.52**	**34**	P	**P**	**17 43 05.5**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=301,slow=6.9,SNR=6.1						
ARCES	**ARCESS Array B**	**58.85**	**339**	P	**P**	**17 43 27.1**	**-1.2**
	comp=Z,1.8nm,0.8s,baz=40,slow=7.1,SNR=6.0						
FINES	**FINESS Array B**	**64.48**	**333**	P	**P**	**17 44 04.5**	**-1.6**
	comp=Z,1.3nm,0.4s,baz=33,slow=8.3,SNR=16						
WRA	**Warramunga Arr**	**64.83**	**193**	P	**P**	**17 44 09.1**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=12,slow=6.8,SNR=5.8						
ASAR	**Alice Springs**	**68.54**	**193**	P	**P**	**17 44 34.0**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=9.4,slow=7.4,SNR=5.6						
NB2	**NORSAR Subarra**	**69.20**	**339**	P	**P**	**17 44 35.0**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=32,slow=6.5						
NOA	**NORSAR Array B**	**69.20**	**339**	P	**P**	**17 44 35.2**	**-1.0**
	comp=Z,1.6nm,0.7s,baz=33,slow=6.6,SNR=11						
KBZ	**Khabaz**	**69.48**	**311**	P	**P**	**17 44 37.9**	**-0.1**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KBZ	**Khabaz**	**69.48**	**311**	P	**P**	**17 44 37.9**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=45,slow=7.1,SNR=9.2						
AKASG	**Malin Array Be**	**71.21**	**324**	P	**P**	**17 44 47.7**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**71.21**	**324**	P	**P**	**17 44 47.7**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=40,slow=7.3,SNR=7.8						
BRTR	**Keskin Array B**	**77.21**	**313**	P	**P**	**17 45 23.3**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=54,slow=5.2,SNR=3.7						
GERES	**GERESS Array B**	**78.77**	**331**	P	**P**	**17 45 31.9**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=46,slow=5.6,SNR=3.5						
VNA2	**Neumayer--Watz**	**150.34**	**197**	*eP*	**PKPbc**	**17 53 20.3**	**+1.7**
	baz=135,slow=2.1						
VNA3	**Neumayer Olymp**	**150.53**	**195**	*eP*	**PKPbc**	**17 53 20.4**	**+1.4**

IDC ***18*** *17:46:54.5±17.0,4°.93S×129°.12E, h250km±197km, mb2.8/1, mb1 3.0/4, mb1mx2.8/21, mbtmp2.8/4, Error ellipse: s-maj=115.9km s-min=48.4km az=39.0*

ISCJB ***18*** *17:47:03.9±1.1,5°.44S±0°.09×129°.11E±0°.09, h300km, mb2.9/1, Error ellipse: s-maj=13.1km s-min=11.4km az=137.1*

AUST ***18*** *17:47:05.2±0.0,5°.68S×129°.04E, h294km, Error ellipse: s-maj=2.8km s-min=1.3km az=227.0*

ISC 18 17:47:04.1±1.2**,5°.52S**±0°.09×**129°.1E**±0°.1**, h300**km**, n10,** σ1**s57/11, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**3.64**	**92**	P	**Pn**	**17 48 07.8**	**+1.4**
	baz=3.7,SNR=27						
TLE				S	**S**	**17 48 54.9**	**-1.5**
	baz=3.7,SNR=3.7						
MTN	**Manton Dam**	**7.55**	**165**	P	**Pn**	**17 48 52.4**	**+0.1**
	baz=7.5,SNR=6.8						
MTN				S	**S**	**17 50 20.7**	**+0.9**
	baz=7.5,SNR=4.8						
KDU	**Kakadu**	**7.87**	**155**	P	**Pn**	**17 48 56.9**	**+0.8**
	baz=7.8,SNR=5.4						
WSI	**Waingapu**	**9.63**	**244**	P	P	17 49 31.6	+10
	baz=9.5,SNR=3.2						
PCI	**Palu**	**10.30**	**296**	P	**Pn**	**17 49 27.3**	**+1.2**
	baz=10,SNR=14						
FITZ	**Fitzroy Crossi**	**12.95**	**195**	P	**Pn**	**17 49 55.2**	**-2.9**
	0.1nm,0.3s,baz=21,slow=9.8,SNR=7.4						
FITZ	**Fitzroy Crossi**	**12.95**	**195**	P	**Pn**	**17 49 57.1**	**-1.1**
	baz=13,SNR=3.1						
WRA	**Warramunga Arr**	**15.22**	**161**	P	**P**	**17 50 23.0**	**-0.7**
	0.4nm,0.3s,baz=342,slow=11,SNR=9.2						
WRA				S	S	17 53 21.6	+12
	0.1nm,0.3s,baz=329,slow=22,SNR=2.2						
ASAR	**Alice Springs**	**18.63**	**166**	P	**P**	**17 51 00.3**	**-0.3**
	0.3nm,0.3s,baz=346,slow=12,SNR=38						
ASAR				S	**S**	**17 54 18.4**	**+1.5**
	0.0nm,0.3s,baz=346,slow=22,SNR=4.6						
MKAR	**Makanchi Array**	**66.49**	**327**	P	P	17 57 14.6	-7.4
	0.1nm,0.4s,baz=110,slow=7.2,SNR=6.2						

NOU ***18*** *17:49:07.5±0.3,18°.40S×177°.80W, h30km*

MOS ***18*** *17:49:36.8±0.9,20°.43S×178°.52W, h533km, mb5.0/37, Error ellipse: s-maj=8.6km s-min=7.5km az=61.7*

ISCJB ***18*** *17:49:38.2±0.5,20°.67S±0°.03×178°.48W±0°.02, h555km±6km, mb5.1/202, Error ellipse: s-maj=5.4km s-min=2.8km az=160.6*

DJA ***18*** *17:49:38.9±0.7,21°.5S±5°×17°.8W±°, h553km±10km, M5.5/31, mB5.8/20, mb5.3/31, MLv6.4/1, Mw(mB)5.3/20*

BJI ***18*** *17:49:38.8,20°.29S×177°.97W, h572km, mB5.4/36, mb5.2/44*

NEIC ***18*** *17:49:39.5±0.1,20°.61S×178°.48W, mb5.0/114, MW5.7, Error ellipse: s-maj=6.2km s-min=4.0km az=147.0, Moment Tensor Solution. s21 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.93; $M_{\theta\theta}$1.04; $M_{\phi\phi}$-0.11; $M_{r\theta}$-2.43; $M_{\theta\phi}$-1.19; $M_{\phi r}$-3.98; Best double couple: $M_0$4.90000×10^{17} NP1:ϕ_s148.00000°,δ1.00000°,λ-153.00000°. NP2: ϕ_s31.00000°,δ90.00000°,λ-90.00000°. Principal axes: T 3.7700, Plg44.0000°, Azm120.0000°; N 1.7900, Plg0.0000°, Azm211.0000°; P -5.5600, Plg45.0000°, Azm301.0000°;*

IDC ***18*** *17:49:40.5±0.5,20°.55S×178°.46W, h570km±5km, mb4.5/38, mb1 4.6/40, mb1mx4.6/40, mbtmp4.5/40 Error ellipse: s-maj=8.4km s-min=6.7km az=158.0*

AUST ***18*** *17:49:41.2±0.0,20°.58S×178°.38W, h578km, Error ellipse: s-maj=1.0km s-min=0.8km az=287.0*

SZGRF ***18*** *17:49:42.1,20°.72S×177°.48W, h595km, Fiji Islands region*

GCMT ***18*** *17:49:42.1±0.2,20°.58S×178°.41W, h575km±1km, MW5.7, Moment Tensor Solution. s85,c164; s42,c42; Moment tensor: Scale 10^{17}Nm; M_{rr}-1.27±.05; $M_{\theta\theta}$0.49±.08; $M_{\phi\phi}$0.78±.08; $M_{r\theta}$-2.78±.08; $M_{\theta\phi}$0.07±.07; $M_{\phi r}$-3.76±.07; Best double couple: $M_0$4.80000×10^{17} NP1:ϕ_s203.00000°, δ6.00000°,λ-103.00000°. NP2:ϕ_s36.00000°,δ84.00000°, λ-89.00000°. Principal axes: T 4.5200, Plg39.0000°, Azm125.0000°; N 0.5300, Plg1.0000°, Azm216.0000°; P -5.0500, Plg51.0000°, Azm308.0000°; Data Used: II IU IC G CN.*

ISC 18 17:49:39.7±0.2**,20°.61S**±0°.04×**178°.38W**±0°.03**, h569**km±1km**,h569**km**:pP-P,n1329,**σ1**s43**/1607**,mb5.1**/202**, 211C-194D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.43**	**310**	*i* P	**P**	**17 51 06.2**	**-0.1**
MSVF	**Nonsavu**	**4.43**	**310**	*i* Pn	**P**	**17 51 06.2**	**-0.1**
MSVF	**Nonsavu**	**4.43**	**310**	P	**P**	**17 51 06.0**	**-0.3**
	10μm,0.6s						
NIUE	**Niue**	**8.10**	**81**	P	**P**	**17 51 37.9**	**-1.1**
	baz=8.1,SNR=32						
NIUE				S	S	17 53 26.0	+9.3
	baz=8.1,SNR=6.3						
RAO	**Raoul Island**	**8.62**	**177**	*e*P	**P**	**17 51 42.4**	**-1.5**
	666nm,0.3s						
RAO				*e*S	S	17 53 12.5	-13
AFI	**Afiamalu**	**9.17**	**44**	*e*P	P	17 51 46.4	-3.4
	183nm,0.6s						
AFI				*e*S	S	17 53 24.7	-12
AFI				S	S	17 53 26.6	-10
AFI	**Afiamalu**	**9.17**	**44**	P	**P**	**17 51 46.8**	**-3.0**
	39nm,0.3s,baz=21,slow=1.6,SNR=42						
AFI				S	S	17 53 26.6	-10
	26nm,0.3s,baz=30,slow=20,SNR=13						
LASL	**Noumea**	**14.14**	**261**	*e*P	**P**	**17 52 39.7**	**-0.6**
DZM	**Mont Dzumac**	**14.22**	**261**	*e*P	**P**	**17 52 40.8**	**-0.4**
	104nm,0.7s						
DZM	**Mont Dzumac**	**14.22**	**261**	*e*P	**P**	**17 52 40.5**	**-0.7**
DZM	**Mont Dzumac**	**14.22**	**261**	*e*P	**P**	**17 52 40.9**	**-0.4**
	93nm,0.6s						
DZM				*e*S	**S**	**17 55 07.7**	**-2.6**
DZM				S	S	17 55 08.6	-1.7
DZM	**Mont Dzumac**	**14.22**	**261**	P	**P**	**17 52 40.8**	**-0.4**
	8.5nm,0.3s,baz=84,slow=15,SNR=103						
DZM				S	**S**	**17 55 08.6**	**-1.7**
	baz=0.0,slow=20,SNR=4.2						
NOUC	**Port Laguerre**	**14.35**	**261**	*e*P	**P**	**17 52 43.5**	**+1.1**
OUZ	**Omahuta**	**16.18**	**204**	*e*P	**P**	**17 53 01.1**	**+1.0**
	122nm,1.1s						
WCZ	**Waipu Caves**	**16.56**	**201**	PN	**P**	**17 53 05.1**	**+1.7**
MKAZ	**Moumakai**	**17.38**	**198**	PN	**P**	**17 53 12.0**	**+1.2**
RAR	**Rarotonga**	**17.39**	**95**	*e*P	**P**	**17 53 10.9**	**-0.3**
	238nm,1.3s						
RAR	**Rarotonga**	**17.39**	**95**	P	**P**	**17 53 11.0**	**-0.2**
	2.2nm,0.3s,baz=253,slow=10,SNR=12						
KBAZ	**Karaka Road Bo**	**17.45**	**198**	PN	**P**	**17 53 13.4**	**+2.0**
MWZ	**Matawai**	**18.02**	**190**	PN	**P**	**17 53 14.8**	**-1.9**
MWZ				SN	**S**	**17 56 07.2**	**-6.1**
URZ	**Urewera**	**18.02**	**192**	*e*P	**P**	**17 53 13.7**	**-3.0**
	67nm,0.6s						
URZ				S	**S**	**17 56 08.4**	**-4.7**
URZ				*e*S	S	17 56 08.6	-4.5
URZ	**Urewera**	**18.02**	**192**	PN	**P**	**17 53 13.7**	**-3.0**
URZ				SN	**S**	**17 56 07.2**	**-6.0**
URZ	**Urewera**	**18.02**	**192**	P	**P**	**17 53 14.1**	**-2.6**
	16nm,0.3s,baz=12,slow=3.2,SNR=93						
URZ				S	**S**	**17 56 08.4**	**-4.7**
	2.3nm,0.3s,baz=216,slow=19,SNR=12						
HIZ	**Hauiti**	**18.78**	**197**	PN	**P**	**17 53 25.1**	**+1.5**
BKZ	**Black Stump Fm**	**19.02**	**192**	PN	**P**	**17 53 23.6**	**-2.3**
BKZ				SN	S	17 56 21.6	-7.8
FWVZ	**Far West T-bar**	**19.31**	**194**	PN	**P**	**17 53 27.1**	**-1.6**
TRVZ	**Turoa**	**19.35**	**194**	PN	**P**	**17 53 27.6**	**-1.5**
VRZ	**Vera Road**	**19.38**	**196**	PN	**P**	**17 53 29.5**	**+0.4**
BHHZ	**Black Hill Sta**	**19.42**	**193**	PN	**P**	**17 53 26.6**	**-2.9**
KAHZ	**Kahuranaki**	**19.55**	**191**	PN	**P**	**17 53 30.1**	**-0.6**
TSZ	**Takapari Road**	**19.99**	**193**	PN	**P**	**17 53 32.0**	**-2.6**
ANWZ	**Angora Road**	**20.27**	**191**	PN	**P**	**17 53 36.0**	**-1.1**
BFZ	**Birch Farm**	**20.53**	**192**	PN	**P**	**17 53 38.2**	**-1.3**
SNZO	**South Karori**	**21.46**	**194**	*e*P	**P**	**17 53 46.7**	**-1.1**
	45nm,0.6s						
SNZO				*e*S	S	17 56 59.5	-8.3
TUWZ	**Tuamarina**	**21.76**	**196**	PN	**P**	**17 53 49.1**	**-1.4**
THZ	**Tophouse**	**22.34**	**197**	PN	**P**	**17 53 54.7**	**-1.1**
DSZ	**Denniston Nort**	**22.66**	**199**	PN	**P**	**17 53 57.8**	**-0.7**
KHZ	**Kahutara**	**22.79**	**196**	*e*P	**P**	**17 53 58.2**	**-1.4**
	27nm,0.4s						
KHZ				*e*PcP	**PcP**	**17 57 24.8**	**-4.7**
TARA	**Tarawa**	**23.43**	**338**	*e*P	**P**	**17 54 05.2**	**-0.6**
	381nm,0.7s						
HNR	**Honiara**	**23.67**	**295**	*e*P	**P**	**17 54 06.6**	**-1.3**
	216nm,1.2s						
HNR	**Honiara**	**23.67**	**295**	P	**P**	**17 54 06.7**	**-1.1**
	18nm,0.3s,baz=97,slow=6.7,SNR=13						
RPZ	**Rata Peaks**	**24.68**	**199**	*e*P	**P**	**17 54 15.0**	**-1.4**
	156nm,0.5s						
RPZ	**Rata Peaks**	**24.68**	**199**	P	**P**	**17 54 15.6**	**-0.8**
	19nm,0.5s,baz=27,slow=3.3,SNR=31						
TBI	**Tubuai**	**26.93**	**101**	*e*P	**P**	**17 54 37.3**	**+0.8**
TBI				*e*pP	pP	17 56 02.4	-5.1
	285nm,1.2s						
PAE	**Paea**	**27.35**	**89**	*e*P	**P**	**17 54 40.0**	**-0.2**
	40nm,1.3s						
PAE				*e*pP	**pP**	**17 56 06.6**	**-4.8**
	60nm,1.5s						
PPT2	**Papeete2**	**27.36**	**89**	*e*P	**P**	**17 54 40.6**	**+0.1**
	252nm,1.3s						
PPT2				*e*pP	**pP**	**17 56 07.3**	**-4.4**
	201nm,1.5s						
PPT	**Papeete**	**27.37**	**89**	P	**P**	**17 54 40.6**	**+0.1**
PPT	**Papeete**	**27.37**	**89**	P	**P**	**17 54 40.6**	**+0.1**
	179nm,1.0s,baz=70,slow=22,SNR=9.8						
TIAR	**Tiarei**	**27.59**	**89**	*e*P	**P**	**17 54 42.7**	**+0.3**
	213nm,1.1s						
TIAR				*e*pP	**pP**	**17 56 09.3**	**-4.3**
	404nm,1.4s						
TVO	**Taravao**	**27.63**	**89**	*e*P	**P**	**17 54 43.4**	**+0.6**
	296nm,1.3s						
TVO				*e*pP	**pP**	**17 56 09.8**	**-4.3**
	461nm,1.6s						
EIDS	**Eidsvold**	**28.48**	**255**	*e*P	**P**	**17 54 50.0**	**-0.1**
	78nm,0.6s						
EIDS				*e*S	**S**	**17 58 57.0**	**-1.4**
EIDS				*e*ScP	**ScP**	**18 00 32.8**	**+1.7**
EIDS	**Eidsvold**	**28.48**	**255**	P	**P**	**17 54 50.4**	**+0.4**
	baz=28,SNR=62						
EIDS				S	**S**	**17 58 58.8**	**+0.4**
	baz=28,SNR=13						
ARMA	**Armidale**	**28.70**	**244**	*e*P	**P**	**17 54 52.9**	**+0.8**
	56nm,1.2s						
ARMA	**Armidale**	**28.70**	**244**	P	**P**	**17 54 53.1**	**+1.0**
	baz=29,SNR=30						
MEH	**Mehetia**	**28.73**	**90**	*e*P	**P**	**17 54 52.7**	**+0.4**
	306nm,1.1s						
MEH				*e*pP	**pP**	**17 56 19.8**	**-4.3**
	285nm,1.3s						
PMOR	**Pomariorio Ree**	**29.52**	**84**	*e*P	**P**	**17 54 59.5**	**+0.3**
	525nm,1.3s						
MGCD	**Mangrove Creek**	**29.85**	**239**	P	**P**	**17 55 03.1**	**+1.3**
	baz=30,SNR=5.8						
RMQ	**Roma**	**30.64**	**253**	P	**P**	**17 55 09.7**	**+1.0**
	baz=31,SNR=73						
RMQ				S	**S**	**17 59 35.8**	**+4.0**
	baz=31,SNR=7.1						
CNB	**Canberra Magne**	**31.88**	**236**	P	**P**	**17 55 20.1**	**+1.0**
	baz=32,SNR=16						
CTA	**Charters Tower**	**33.13**	**265**	P	**P**	**17 55 30.3**	**+0.4**
CTA	**Charters Tower**	**33.13**	**265**	P	**P**	**17 55 30.3**	**+0.4**
	245nm,0.5s,baz=92,slow=10,SNR=460						
CTAO	**Charters Tower**	**33.13**	**265**	*i* P	**P**	**17 55 30.0**	**+0.1**
CTAO				*e*S	**S**	**18 00 09.3**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,235nm,0.6s						
CTAO	**Charters Tower**	**33.13**	**265**	*i* P	**P**	**17 55 30.0**	**+0.1**
	comp=Z,235nm,0.6s						
CTAO				*e*S	**S**	**18 00 09.3**	**-0.6**
CMSA	**Cobar Meteorol**	**33.92**	**244**	P	**P**	**17 55 36.6**	**+0.2**
	baz=34,SNR=68						
QLP	**Quilpie**	**34.69**	**253**	P	**P**	**17 55 42.8**	**-0.1**
	baz=35,SNR=121						
PMG	**Port Moresby**	**35.02**	**283**	*i* P	**P**	**17 55 45.5**	**-0.4**
	comp=Z,570nm,1.2s						
PMG	**Port Moresby**	**35.02**	**283**	P	**P**	**17 55 45.9**	**+0.1**
	comp=Z,428nm,1.2s,comp=Z,4μm						
PMG	**Port Moresby**	**35.02**	**283**	P	**P**	**17 55 45.9**	**+0.1**
	comp=Z,281nm,0.9s,baz=87,slow=5.5,SNR=53						
TOO	**Toolangi**	**35.55**	**234**	P	**P**	**17 55 50.3**	**+0.4**
	baz=36,SNR=32						
PATS	**Pohnpei**	**35.62**	**318**	P	**P**	**17 55 51.9**	**+1.1**
	baz=36,SNR=5.5						
MOO	**Moorlands**	**36.18**	**225**	P	**P**	**17 55 56.3**	**+1.4**
	baz=36,SNR=3.7						
TAU	**Tasmania Unive**	**36.30**	**224**	P	**P**	**17 55 55.9**	**-0.1**
TAU	**Tasmania Unive**	**36.30**	**224**	P	**P**	**17 55 55.9**	**-0.1**
COEN	**Coen**	**37.24**	**274**	*i* P	**P**	**17 56 04.1**	**0.0**
	comp=Z,4μm,1.3s						
COEN				*e*ScP	**ScP**	**18 01 04.6**	**+2.6**
COEN	**Coen**	**37.24**	**274**	P	**P**	**17 56 04.7**	**+0.6**
	baz=37,SNR=78						
COEN				S	**S**	**18 01 12.8**	**+1.4**
	baz=37,SNR=6.5						
STKA	**Stephens Creek**	**37.42**	**244**	*e*P	**P**	**17 56 04.7**	**-0.7**
	comp=Z,69nm,1.6s						
STKA				ScP	**ScP**	**18 01 04.4**	**+2.0**
STKA				*e*ScP	**ScP**	**18 01 04.7**	**+2.3**
STKA	**Stephens Creek**	**37.42**	**244**	P	**P**	**17 56 05.7**	**+0.3**
	comp=Z,17nm,0.4s,baz=86,slow=8.8,SNR=94						
STKA				ScP	**ScP**	**18 01 04.4**	**+2.0**
	comp=Z,18nm,1.1s,baz=90,slow=1.0,SNR=6.9						
STKA	**Stephens Creek**	**37.42**	**244**	P	**P**	**17 56 05.7**	**+0.3**
	baz=37,SNR=106						
STKA

baz=50,SNR=5.7
FITZ Fitzroy Crossi 52.66 263 ⇓*i*P P 17 58 01.7 -0.4
comp=Z,363nm,1.6s
FITZ *e*S **S** 17 04 44.3 -3.5
FITZ S S 18 04 47.6 -0.2
FITZ Fitzroy Crossi 52.66 263 P P 17 58 02.3 +0.3
comp=Z,25nm,0.5s,baz=100,slow=6.4,SNR=228
FITZ S **S** 18 04 47.6 -0.2
comp=Z,2.6nm,0.9s,baz=277,slow=19,SNR=11
FITZ Fitzroy Crossi 52.66 263 P P 17 58 01.9 -0.1
baz=53,SNR=172
FITZ S **S** 18 04 48.6 +0.8
baz=53,SNR=7.7
SWI Sorong 52.93 285 P P 17 58 04.3 +0.3
baz=53,SNR=27
PALU Palau 54.02 296 P P 17 58 12.0 +0.3
baz=54,SNR=29
KMBL Kambalda 54.20 246 P P 17 58 12.4 -0.3
baz=54,SNR=18
AAI Ambon 54.60 280 P P 17 58 15.4 -0.3
baz=55,SNR=15
TNTI Ternate 57.15 285 P P 17 58 33.7 +0.3
comp=Z,558nm,1.3s,comp=Z,8μmcomp=Z,2.3nm
MBWA Marble Bar 57.49 258 *e*P P 17 58 35.0 -0.6
comp=Z,90nm,0.5s
MBWA *e*PcP PcP 17 59 09.5 -12
MBWA *e*ScP **ScP** 18 02 27.8 +0.9
MBWA Marble Bar 57.49 258 P P 17 58 35.7 +0.1
SNR=15
MEEK Meekatharra 57.55 251 P P 17 58 34.7 -1.2
baz=58,SNR=91
KLBR Kellerberrin 57.69 245 P P 17 58 36.5 -0.4
baz=58,SNR=63
SBA Scott Base 57.74 184⇑*i*P P 17 58 38.8 +2.5
SBA pmax pmax
comp=Z,187nm,1.4s
SBA Scott Base 57.74 184⇑*i*P P 17 58 38.8 +2.5
comp=Z,187nm,1.4s
SBA *e*pP **pP** 18 00 29.8 +3.5
VNDA Vanda 57.77 185⇑*i*P P 17 58 38.4 +1.8
comp=Z,32nm,0.8s
VNDA *e*ScP **ScP** 18 02 29.4 +2.3
VNDA Vanda 57.77 185 P P 17 58 38.8 +2.3
comp=Z,22nm,0.7s,baz=7.0,slow=7.4,SNR=137
NWAO Narrogin (SRO) 58.01 243 *e*P P 17 58 38.9 0.0
comp=Z,24nm,0.6s
NWAO *e*pP **pP** 18 00 33.6 +4.6
NWAO Narrogin (SRO) 58.01 243 P P 17 58 39.0 0.0
comp=Z,27nm,0.5s,baz=112,slow=8.0,SNR=61
BLDU Ballidu 58.69 246 P P 17 58 43.2 -0.4
baz=59,SNR=49
BBSI Bau Bau 59.15 276 P P 17 58 48.1 +1.2
comp=Z,129nm,1.3s,comp=Z,2μm
MORW Morawa 59.46 248 P P 17 58 48.6 -0.2
baz=59,SNR=88
WSI Waingapu 59.90 271 P P 17 58 52.5 +0.6
baz=60,SNR=6.2
DAV Davao City (W) 61.54 291 P P 17 59 03.0 +0.4
DAV Davao City (W) 61.54 291 P P 17 59 03.5 +0.8
SNR=7.2
DAV Davao City (W) 61.54 291 P P 17 59 03.0 +0.4
comp=Z,62nm,0.4s,baz=53,slow=5.1,SNR=10
KAPI Kappang 61.94 275 ⇓*i*P P 17 59 03.4 -1.9
comp=Z,88nm,1.4s
KAPI Kappang 61.94 275 P P 17 59 04.4 -0.9
SNR=31
KAPI Kappang 61.94 275 P P 17 59 04.2 -1.1
comp=Z,270nm,1.1s,SNR=19
KAPI Kappang 61.94 275 P P 17 59 04.1 -1.2
comp=Z,150nm,1.5s,comp=Z,2μm
KAPI Kappang 61.94 275 P P 17 59 04.2 -1.1
comp=Z,7.6nm,0.4s,baz=117,slow=9.0,SNR=45
GIRL Giralia 62.18 255 P P 17 59 08.1 +1.4
baz=62,SNR=18
CTBH Cotabato--PC H 62.78 290⇓*e*P P 17 59 10.6 -0.1
PCI Palu 63.37 280 P P 17 59 27.4 +13
baz=63,SNR=3.2
CASY Casey 63.72 205 *e*P P 17 59 15.9 +0.2
comp=Z,36nm,0.9s
CASY *e*pP **pP** 18 01 10.4 +1.6
KHKI Kahang-Kahang 64.70 270 P P 17 59 22.0 -0.9
SRBI Singaraja 65.16 270 P P 17 59 25.7 -0.1
comp=Z,157nm,1.9s,comp=Z,2μm
KMMI Kalianget 66.67 271 P P 17 59 36.2 +1.1
GMJI Gumukmas 66.76 270 P P 17 59 35.8 +0.1
comp=Z,108nm,1.6s,comp=Z,2μm
BLJI Banyuglugur 66.79 270 P P 17 59 36.0 +0.1
comp=Z,192nm,1.2s,comp=Z,3μm
MYLDM Lahad Datu 67.02 285 P P 17 59 39.8 +2.5
TSM Tawau 67.22 284 P P 17 59 39.1 +0.6
KRKI Karangkates 67.72 269 P P 17 59 43.9 +2.3
comp=Z,214nm,1.5s
PWJI Pagerwojo 68.38 269 P P 17 59 46.0 +0.4
comp=Z,169nm,1.2s,comp=Z,2μm
SDKM Sandakan 68.39 285 P P 17 59 45.4 -0.3
SJI Sawahan 68.50 270 P P 17 59 46.7 +0.2
comp=Z,125nm,1.5s,comp=Z,2μm
TGY Tagaytay City 68.89 295 P P 17 59 48.8 +0.2
TGY Tagaytay City 68.89 295 P P 17 59 48.8 +0.2
comp=Z,68nm,0.4s,baz=153,slow=11,SNR=8.5
PCJI Pacitan 68.91 269 P P 17 59 49.2 +0.4
comp=Z,479nm,0.5s,comp=Z,7μm
KDM Kudat 69.25 286 P P 17 59 51.9 +1.1
KKM Kota Kinabalu 69.45 285 *e*P P 17 59 51.8 -0.4
comp=Z,355nm,1.5s
KKM Kota Kinabalu 69.45 285 P P 17 59 52.6 +0.5
KKM Kota Kinabalu 69.45 285 P P 17 59 52.7 +0.5
baz=70,SNR=41
QSPA South Pole Qui 69.46 180 S **S** 18 08 15.0 +1.2
comp=Z,1.1nm,0.8s,baz=38,slow=20,SNR=14
UGM Wanagama 69.61 269 P P 17 59 55.1 +2.1
comp=Z,237nm,1.1s
UGM Wanagama 69.61 269 P P 17 59 53.1 0.0
baz=70,SNR=48
SMRI Semarang 69.97 270 P P 17 59 56.0 +0.8
MJAR Matsushiro Arr 70.09 324 P P 17 59 54.9 -0.5
MJAR Matsushiro Arr 70.09 324 P P 17 59 54.9 -0.5
comp=Z,27nm,0.5s,baz=160,slow=6.5,SNR=294
MAJO Matsushiro 70.09 324⇓*i*P P 17 59 54.7 -0.7
MAJO *e**PP **pP** 18 01 50.4 -1.3
MAJO pmax pmax
comp=Z,31nm,0.6s
MAJO Matsushiro 70.09 324⇓*i*P P 17 59 54.7 -0.7
comp=Z,32nm,0.6s
MAJO *e*pP **pP** 18 01 50.4 -1.3
MAT Matsushiro 70.09 324 P P 17 59 54.8 -0.6
MAT S **S** 18 08 17.6 -4.0
BJII Banjamegara 70.56 269 P P 18 00 00.4 +1.7
comp=Z,80nm,2.1s,comp=Z,2μm
BTM Bintulu 71.17 281 P P 18 00 03.6 +1.4
TGJI Tegal 71.26 270 P P 18 00 02.7 -0.1
comp=Z,151nm,1.6s
SBUM Sibu 71.68 280 P P 18 00 06.0 +0.8
SBUM Sibu 71.68 280 P P 18 00 05.6 +0.4
comp=Z,78nm,2.2s,comp=Z,2μm
AMKA Amchitka 71.70 358 *e*P P 18 00 03.7 -0.7
JNU Nakatsue 72.11 317⇓*e*P P 18 00 06.7 -0.6
comp=Z,87nm,1.4s
JNU *e*pP **pP** 18 02 05.0 +0.5
JNU Nakatsue 72.11 317 P P 18 00 07.2 -0.2
comp=Z,63nm,1.1s,baz=100,slow=4.8,SNR=31
YUK Yuzh-Kuril'sk 72.19 334*d*iP P 18 00 00.9 -6.5
YUK *i* *SP sP 18 03 01.9 -1.5
YUK *i* S **S** 18 08 44.1 -0.7
YUK *i* SS **SS** 18 13 35.9 -2.9
YUK pmax pmax
comp=E,157nm,0.7s
YUK pmax pmax
comp=Z,303nm,0.7s
YUK pmax pmax
comp=N,160nm,0.7s
YUK pmax pmax
comp=Z,982nm,1.8s
CISI Cisompet, Garu 72.26 268 P P 18 00 08.2 -0.4
LEM Lembang 72.69 269 P P 18 00 11.5 +0.3
comp=Z,265nm,1.9s,comp=Z,4μm
LEM Lembang 72.69 269 P P 18 00 12.1 +0.9
baz=73,SNR=6.8
KSM Kuching 73.08 278 *e*P P 18 00 13.4 +0.2
comp=Z,180nm,1.1s
KSM Kuching 73.08 278 P P 18 00 14.0 +0.7
KSM Kuching 73.08 278 P P 18 00 13.6 +0.4
baz=73,SNR=113
TWG Pinlang 73.14 303 *e*P P 18 00 11.6 -1.8
comp=Z,272nm,0.6s
YULB Yu-li 73.27 304⇑*i*P P 18 00 12.7 -1.4
comp=Z,20nm,0.5s
XMI Christmas Isla 73.32 265 P P 18 00 15.6 +1.0
baz=73,SNR=3.5
XMIS Christmas Isla 73.35 265 P P 18 00 15.3 +0.5
baz=73,SNR=5.8
NACB Ninganchiao 73.45 304⇓*i*P P 18 00 14.0 -1.1
comp=Z,82nm,0.7s
CBJI Citeko 73.54 269 P P 18 00 14.9 -1.0
comp=Z,368nm,1.0s,comp=Z,8μm
FX1 Attu Island--F 73.55 355 *e*P P 18 00 14.1 -0.9
FX1 Attu Island--F 73.55 355 P P 18 00 14.6 -0.4
comp=Z,54nm,0.6s,baz=186,slow=3.2,SNR=27
DBJI Dramaga 73.59 269 P P 18 00 16.0 -0.2
comp=Z,327nm,1.3s,comp=Z,5μm
ASAJ Asahikawa 73.66 332⇓*i*P P 18 00 16.9 +1.1
comp=Z,51nm,1.0s
ASAJ Asahikawa 73.66 332 P P 18 00 17.3 +1.5
comp=Z,60nm,0.6s,baz=215,slow=6.9,SNR=164
SSLB Suanglung 73.74 304⇓*e*P P 18 00 15.6 -1.3
comp=Z,52nm,0.4s
TPUB Ta-pu 73.74 303⇓*i*P P 18 00 15.3 -1.5
comp=Z,82nm,0.6s
YHNB Yeheng 73.88 305⇑*i*P P 18 00 17.5 -0.2
comp=Z,87nm,1.1s
SBJI Serang 74.31 269 P P 18 00 20.7 +0.5
comp=Z,249nm,1.6s,comp=Z,4μm
SKR Severo-Kuril's 74.46 343 *e*P P 18 00 16.5 -3.7
SKR *e* 18 03 08.0
SKR *e*S **S** 18 09 07.0 -2.4
SKR *e* 18 09 46.0
SKR pmax pmax
comp=E,30nm,0.5s
SKR pmax pmax
comp=Z,80nm,0.5s
SKR smax smax
comp=N,1μm,12.0s
SKR smax smax
comp=E,2μm,12.0s
UNV Unalaska Valle 74.85 7⇑*i*P P 18 00 21.6 -0.6
comp=E,39nm,0.5s
BLSI Bandar Lampung 75.39 270 P P 18 00 26.8 +0.5
comp=E,120nm,1.3s,comp=E,2μm
YSS Yuzh-Sakhalins 75.83 334⇓*i*P P 18 00 29.7 +1.8
YSS *e*S **S** 18 09 27.0 +2.6
YSS *e* 18 09 46.0
YSS pmax pmax
comp=Z,490nm,1.8s
YSS pmax pmax
comp=Z,800nm,4.0s
YSS smax smax
comp=N,500nm,6.0s
PET Petropavlovsk 75.99 346⇑*i*P P 18 00 28.5 -0.1
PET *e**SP **sP** 18 03 25.8 0.0
PET *i* S **S** 18 09 26.1 +0.3
PET *e* 18 09 49.3
PET *e*SS **SS** 18 14 37.6 +2.1
PET *e*SSS SSS 18 17 55.1
PET pmax pmax
comp=Z,600nm,8.3s
PET pmax pmax
comp=Z,38nm,0.6s
PET pmax pmax
comp=Z,200nm,12.5s
KASI Kota Agung 76.04 269 P P 18 00 29.0 -0.9
comp=Z,283nm,0.9s,comp=Z,3μm
QZH Quanzhou 76.18 304⇑*i*P P 18 00 32.8 +2.5
QZH S **S** 18 09 32.1 +3.1
QZH pmax pmax
comp=Z,230nm,1.2s
QZH pmax pmax
comp=Z,2μm,3.6s
PEA0B Petropavlovsk- 76.29 345⇓*i*P P 18 00 29.9 -0.4
PETK Petropavlovsk- 76.29 345 P P 18 00 30.1 -0.2
PETK Petropavlovsk- 76.29 345 P P 18 00 30.1 -0.2
PETK Petropavlovsk- 76.29 345 P P 18 00 30.1 -0.2
comp=Z,42nm,0.6s,baz=138,slow=7.1,SNR=158
LWLI Liwa 76.62 270 P P 18 00 32.5 -0.7
comp=Z,224nm,1.6s,comp=Z,3μm
KSRS Korea Array 76.74 319 P P 18 00 33.9 +0.8
comp=Z,15nm,0.6s,baz=128,slow=5.9,SNR=153
KSRS PP **PP** 18 03 34.4 -2.2
comp=Z,6.0nm,1.3s,baz=131,slow=8.3,SNR=4.6
KSAR Wonju Array Be 76.75 319 P P 18 00 33.9 +0.7
KSAR PP **PP** 18 03 34.4 -2.4
SSE Sheshan 77.49 310⇓P P 18 00 37.3 0.0
SSE pP **pP** 18 02 36.8 0.0
SSE sP **sP** 18 03 35.8 +0.8
SSE PP **PP** 18 03 40.4 -2.5
SSE S **S** 18 09 42.0 -0.6
SSE ScS **ScS** 18 10 01.3 -2.3
SSE sS **sS** 18 13 16.8 +1.1
SSE pmax pmax
comp=Z,19nm,0.8s
SSE pmax pmax
comp=Z,320nm,6.2s
INCN Inchon 77.56 318⇓*i*P P 18 00 38.0 +0.4
comp=Z,202nm,1.6s
INCN Inchon 77.56 318 P P 18 00 38.5 +0.9
SNR=13
MNAI Manna 77.88 270 P P 18 00 41.2 +1.3
comp=Z,324nm,1.3s,comp=Z,7μm
BSC Santa Cruz Isl 77.93 47 ⇓P P 18 00 41.4 +1.6
baz=78
VLA Vladivostok 78.17 325*d*iP P 18 00 40.7 0.0
VLA pmax pmax
comp=Z,90nm,1.7s
PKM Peak Mountain 78.32 46 ⇑P P 18 00 43.4 +1.4
baz=79,SNR=5.7
SMMC Simmler 78.44 45 ⇑P P 18 00 43.9 +1.5
baz=79
KSI Kapahiang 78.46 270 P P 18 00 42.3 -0.8
comp=Z,291nm,1.0s,comp=Z,4μm
USRK Ussuriysk Arra 78.85 326 P P 18 00 45.4 +1.1
comp=Z,21nm,0.6s,baz=124,slow=3.1,SNR=77
USRK pP **pP** 18 02 45.7 +1.3
comp=Z,1.7nm,0.8s,baz=114,slow=4.9,SNR=1.8
ARVC Arvin 79.12 46 ⇓P P 18 00 47.6 +1.6
baz=79
MWC Mount Wilson 79.14 47 *e*P P 18 00 47.0 +0.7
MWC pmax pmax
comp=Z,15nm,0.9s
MWC Mount Wilson 79.14 47 *e*P P 18 00 47.0 +0.7
comp=Z,15nm,0.9s
MYKOM Kota Tinggi 79.20 276 P P 18 00 47.8 +0.9
MYKOM Kota Tinggi 79.20 276 P P 18 00 47.5 +0.6
comp=Z,102nm,1.5s,comp=Z,2μm
BAR Barrett 79.25 49 *e*P P 18 00 47.6 +0.8
comp=Z,58nm,1.6s
VES Vestal, Richgr 79.36 45 ⇓P P 18 00 48.6 +1.4
baz=80
MURC Murrieta 79.38 48 ⇑P P 18 00 48.8 +1.3
baz=80,SNR=6.2
BFSC Mount Baldy Ra 79.42 47 ⇓P P 18 00 48.9 +1.2
baz=80
MONP Monument Peak 79.55 49 ⇓P P 18 00 50.0 +1.4
baz=80,SNR=25
EDW2 Edwards Air Fo 79.55 47 ⇓P P 18 00 49.6 +1.3
baz=80,SNR=27
ISA Isabella 79.66 46⇑*i*P P 18 00 49.8 +0.9
ISA pmax pmax
comp=Z,74nm,1.4s
ISA Isabella 79.66 46⇑*i*P P 18 00 49.8 +0.9
comp=Z,74nm,1.4s
ISA Isabella 79.66 46 ⇓P P 18 00 50.4 +1.5
baz=80,SNR=27
NJ2 Nanjing 79.68 310 *e*P P 18 00 50.3 +1.3
NJ2 pP **pP** 18 02 48.3 -1.1
NJ2 PP **PP** 18 04 01.5 +0.7
NJ2 sS sS 18 13 41.0 +1.1
NJ2 pmax pmax
comp=Z,160nm,1.0s
NJ2 pmax pmax
comp=Z,510nm,9.3s
KGM Kluang 79.77 276 P P 18 00 51.0 +1.1
CMB Columbia Colle 79.78 43 *e*P P 18 00 50.0 +0.5
CMB pmax pmax
comp=Z,48nm,1.4s
CMB Columbia Colle 79.78 43 *e*P P 18 00 50.0 +0.5
comp=Z,48nm,1.4s
PFO Pinyon Flat Ob 79.91 48 *e*P P 18 00 51.2 +0.9
comp=Z,36nm,1.5s
PFO Pinyon Flat Ob 79.91 48 ⇓P P 18 00 51.6 +1.2
baz=80,SNR=9.7
WDC Whiskeytown Da 79.98 40 *e*P P 18 00 51.5 +1.1
WDC pmax pmax
comp=Z,83nm,1.5s
WDC Whiskeytown Da 79.98 40 *e*P P 18 00 51.5 +1.1
comp=Z,83nm,1.5s
SWSC Sam W. Stewart 80.02 49 ⇑P P 18 00 52.1 +1.4
baz=80,SNR=12
KRJI Kerinci 80.06 272 P P 18 00 51.4 -0.2
comp=Z,107nm,1.2s,comp=Z,2μm
LRMC Laurel Mountai 80.09 46 ⇓P P 18 00 52.6 +1.3
baz=80,SNR=14
HABR Khabarovsk 80.37 331 *i* P P 18 00 52.9 +0.7
HABR *e**PP **pP** 18 02 49.6 -3.2
HABR *e**SP **sP** 18 03 46.9 -3.8
HABR *e*PPP PPP 18 05 57.5
HABR *e*S **S** 18 10 13.0 +1.4
HABR *e*SS **SS** 18 15 38.6 -2.0
HABR pmax pmax
comp=N,49nm,2.6s
HABR pmax pmax
comp=E,36nm,1.3s
HABR pmax pmax
comp=Z,170nm,1.3s
HABR MLR MLR
comp=Z,46nm,18.0s
MDJ Mudanjiang 80.41 325 P P 18 00 53.3 +0.8
MDJ pP **pP** 18 02 56.9 +3.7
MDJ sP **sP** 18 03 49.9 -1.1
MDJ PP PP 18 04 12.1 +5.6
MDJ S **S** 18 10 14.0 +1.8
MDJ pmax pmax
comp=Z,60nm,1.4s
MDJ pmax pmax
comp=Z,520nm,6.1s
BELC Belle Mtn. Jos 80.44 48 ⇑P P 18 00 54.3 +1.1
baz=81,SNR=14
MLAC Mammoth Lakes 80.54 44 ⇓P P 18 00 55.4 +1.7
baz=81
MPMC Manual Prospec 80.55 46 ⇓P P 18 00 55.1 +1.4
baz=81,SNR=16
GSC Goldstone 80.59 47 *e*P P 18 00 54.5 +0.7
GSC pmax pmax
comp=Z,51nm,1.5s
GSC Goldstone 80.59 47 *e*P P 18 00 54.5 +0.7
comp=Z,50nm,1.5s
YBH Yreka Blue Hor 80.59 39 *e*P P 18 00 55.2 +1.6
comp=Z,65nm,1.3s
YBH Yreka Blue Hor 80.59 39 P P 18 00 55.5 +1.8
comp=Z,20nm,0.7s,baz=229,slow=0.3,SNR=64
BC3 Big Chuckawall 80.64 49 ⇓P P 18 00 55.7 +1.6
baz=81,SNR=14
HEC Hector,Ludlow 80.66 47 ⇓P P 18 00 55.0 +0.8
baz=81,SNR=16
GLA Glamis 80.76 50⇑*i*P P 18 00 56.2 +1.5
GLA pmax pmax
comp=Z,43nm,1.0s
GLA Glamis 80.76 50⇑*i*P P 18 00 56.2 +1.5
comp=Z,43nm,1.0s
GLA Glamis 80.76 50 ⇑P P 18 00 56.4 +1.7
baz=81,SNR=14
LBCM Butte Creek Ri 80.86 40 P P 18 00 56.5 +1.4
BEKR Beckworth 80.88 41⇑*i*P P 18 00 56.0 +0.7
comp=Z,38nm,1.5s
WCN Washoe City 80.92 42⇓*e*P P 18 00 57.2 +1.7
WCN pmax pmax
comp=Z,57nm,1.4s
WCN Washoe City 80.92 42⇓*e*P P 18 00 57.2 +1.7
comp=Z,57nm,1.4s
HUMO Hull Mountain 81.00 38⇑*e*P P 18 00 57.5 +1.8
comp=Z,52nm,1.4s
KDAK Kodiak Island 81.00 14 P P 18 00 55.6 +0.4
KDAK Kodiak Island 81.00 14 P P 18 00 55.6 +0.4
comp=Z,8.6nm,0.6s,baz=215,slow=6.8,SNR=8.4
GMRC Granite Mounta 81.09 48 ⇑P P 18 00 57.8 +1.4
baz=81,SNR=8.7
IRM Iron Mountain 81.12 49 ⇑P P 18 00 58.0 +1.5
baz=81,SNR=27
KTGM Kuala Trenggan 81.15 279 P P 18 00 58.7 +1.6
TUQ Turquoise Moun 81.27 47 ⇑P P 18 00 58.6 +1.3
baz=82,SNR=8.2
BKNI Bangkinang 81.30 274 P P 18 00 58.5 +0.7
PMSA Palmer Station 81.33 157 *e*P P 18 00 58.0 +1.0
comp=Z,88nm,0.9s
PMSA Palmer Station 81.33 157 P P 18 00 58.0 +1.0
comp=Z,83nm,0.9s,baz=206,slow=6.3,SNR=7.9
MAW Mawson 81.34 200 *e*P P 18 00 57.4 +0.4
comp=Z,7.3nm,1.3s
MAW Mawson 81.34 200 P P 18 00 58.0 +1.0
comp=Z,14nm,0.8s,baz=153,slow=4.8,SNR=13
NVAR Mina Array Bea 81.34 44 P P 18 00 58.8 +1.0
NVAR pP **pP** 18 03 00.9 +2.1
NVAR PKKPbc **PKKPbc** 18 19 29.4 +0.6
NVAR Mina Array Bea 81.34 44 P P 18 00 58.8 +1.0
comp=Z,12nm,0.7s,baz=224,slow=7.9,SNR=64
NVAR pP **pP** 18 03 00.9 +2.1
comp=Z,1.5nm,0.8s,baz=220,slow=8.3,SNR=3.0
NVAR PKKPbc **PKKPbc** 18 19 29.4 +0.6
comp=Z,0.8nm,0.8s,baz=98,slow=2.7,SNR=6.2
Y12C Blythe 81.34 49 ⇑P P 18 00 59.1 +1.5
baz=82,SNR=10
113A Mohawk Valley, 81.38 50 ⇓P P 18 00 59.3 +1.5
baz=82,SNR=17
NV11 Mina Array Sit 81.44 44 *e*P P 18 00 58.6 +0.4
NV11 *e*pP **pP** 18 03 02.5 +3.2
DL2 Dalian 81.57 317⇓*i*P P 18 00 59.3 +0.7
DL2 pP **pP** 18 03 01.3 +1.6
DL2 sP **sP** 18 03 58.8 +1.3
DL2 S **S** 18 10 22.4 -1.8
DL2 pmax pmax
comp=Z,64nm,1.5s
DL2 pmax pmax
comp=Z,480nm,5.5s
PPI Padang Panjang 81.63 273 P P 18 00 59.0 -0.5
comp=Z,26nm,2.1s,comp=Z,934nm
PPI Padang Panjang 81.63 273 P P 18 00 58.5 -1.1
baz=82,SNR=3.8
214A Organ Pipe Nat 81.66 51 ⇓P P 18 01 01.0 +1.7
baz=82,SNR=16
FRIM Kepong 81.79 277 P P 18 01 01.1 +0.8
MPOR Mary's Peak 81.85 36 P P 18 01 02.3 +2.2
MOD Modoc 82.12 40 *e*P P 18 01 02.5 +0.9
comp=Z,28nm,0.8s
MOD *e*pP **pP** 18 03 05.1 +2.2
CN2 Changchun 82.17 323 ⇓P P 18 01 02.0 +0.4
CN2 *e*pP **pP** 18 02 59.4 -3.5
CN2 *e*S **S** 18 10 32.3 +2.3
CN2 pmax pmax
comp=Z,90nm,1.1s
CN2 pmax pmax
comp=Z,200nm,6.0s
WHN Wuhan 82.23 307 P P 18 01 02.5 +0.4
WHN pP **pP** 18 03 00.1 -3.4
WHN sP **sP** 18 04 04.8 +3.6
WHN S **SKSac** 18 10 28.3 -0.7
WHN pmax pmax
comp=Z,310nm,1.6s
WHN pmax pmax
comp=Z,1μm,7.8s
IRO Indian Ridge 82.27 37 P P 18 01 03.8 +1.5
Z14A Wintersburg 82.27 50 ⇑P P 18 01 04.1 +1.8
baz=82,SNR=16
BROR Big Rock Looko 82.32 37 P P 18 01 04.0 +1.7
KLR Kul'dur 82.44 330 *e*P P 18 01 00.0 -2.8
KLR *e*S S 18 10 26.0 -6.5
KLR pmax pmax
comp=Z,120nm,1.8s
Y14A Wickenburg 82.52 50 ⇑P P 18 01 05.0 +1.3
baz=83,SNR=11
IPM Ipoh 82.80 278 *e*P P 18 01 05.9 +0.5
comp=Z,53nm,0.6s
IPM *e*pP **pP** 18 03 08.2 +1.2
IPM Ipoh 82.80 278 P P 18 01 06.3 +0.9
IPM Ipoh 82.80 278 P P 18 01 06.0 +0.5
comp=Z,87nm,0.8s,comp=Z,2μm
MNSI Mandailing Nat 82.83 274 P P 18 01 05.2 -0.4
comp=Z,96nm,0.9s
UBPT Khong Chiam 82.84 289 P P 18 01 06.5 +1.0
comp=Z,103nm,1.3s,comp=Z,1μm
R11A Troy Canyon, C 83.07 45 ⇑P P 18 01 07.3 +0.8
baz=83
BMN Battle Mountai 83.17 42 *e*P P 18 01 07.7 +0.8
BMN pmax pmax
comp=Z,33nm,1.1s
BMN Battle Mountai 83.17 42 *e*P P 18 01 07.7 +0.8
comp=Z,33nm,1.1s
TUC Tucson 83.32 52⇑*i*P P 18 01 09.3 +1.6
TUC *e**PP **pP** 18 03 10.5 +1.0
TUC pmax pmax
comp=Z,17nm,1.5s

TUC Tucson 83.32 52⇑*iP* P 18 01 09.3 +1.6
comp=Z,17nm,1.5s
TUC *epP* **pP** 18 03 10.5 +1.0
WVOR Wild Horse Val 83.44 40 *eP* P 18 01 09.4 +1.3
WVOR pmax pmax
comp=Z,39nm,1.3s
WVOR Wild Horse Val 83.44 40 *eP* P 18 01 09.4 +1.3
comp=Z,39nm,1.3s
NLWA Neilton Lookou 83.52 34 *eP* P 18 01 09.8 +1.5
comp=Z,52nm,1.5s
OSR Olympics--Salm 83.55 34 P P 18 01 10.6 +2.2
FL2 Flat Top 2 83.58 35 P P 18 01 11.0 +2.3
SEW Seward 83.81 14 *eP* P 18 01 08.9 -0.4
comp=Z,30nm,1.1s
319A Douglas 83.99 53 ⇑P P 18 01 13.0 +1.8
baz=84,SNR=20
CCUT Cedar City 84.14 46 *eP* P 18 01 13.1 +1.3
comp=Z,62nm,1.7s
CCUT *epP* **pP** 18 03 15.2 +1.3
PSI Prapat 84.15 275 P P 18 01 11.6 -0.7
PSI Prapat 84.15 275 P P 18 01 11.7 -0.6
comp=Z,72nm,1.5s,comp=Z,1μm
PSI Prapat 84.15 275 P P 18 01 11.6 -0.7
comp=Z,29nm,0.9s,baz=128,slow=5.2,SNR=43
PSI Prapat 84.15 275 P P 18 01 11.8 -0.6
baz=84,SNR=31
GAMB Gambell 84.27 3⇓*iP* P 18 01 08.3 -3.1
comp=Z,82nm,1.4s
GAMB *epP* **pP** 18 03 12.0 -1.7
U15A North Rim 84.30 48 ⇓P P 18 01 14.3 +1.6
baz=85
WUAZ Wupatki 84.48 49⇑*iP* P 18 01 14.7 +1.2
comp=Z,29nm,1.3s
WUAZ pP **pP** 18 03 16.9 +1.2
WUAZ Wupatki 84.48 49 ⇑P P 18 01 14.7 +1.2
baz=85,SNR=12
320A Kipp Ranch, An 84.54 54 ⇓P P 18 01 16.0 +2.1
baz=85,SNR=19
ELK Elko 84.60 43 *eP* P 18 01 14.3 +0.3
ELK *epP* **pP** 18 03 18.4 +2.0
CHBT CHBT 84.66 286 P P 18 01 16.1 +1.5
comp=Z,89nm,1.1s
BBB Bella Bella 84.67 28 P P 18 01 14.2 +0.5
BBB Bella Bella 84.67 28 P P 18 01 14.2 +0.5
comp=Z,15nm,0.6s,baz=255,slow=6.6,SNR=5.1
220A Playas Peak, P 84.81 53 ⇑P P 18 01 16.8 +1.7
baz=85,SNR=32
GSI Gunungsitoli 84.88 273 P P 18 01 16.8 +1.1
comp=Z,175nm,1.6s,comp=Z,3μm
GSI Gunungsitoli 84.88 273 P P 18 01 17.1 +1.4
baz=85,SNR=55
X18A Snowflake 85.01 50 ⇑P P 18 01 17.3 +1.1
baz=85
120A U Bar Ranch, L 85.03 53 ⇓P P 18 01 17.9 +1.7
baz=85,SNR=12
PMR Palmer 85.20 14⇓*iP* P 18 01 15.6 -0.5
PMR pmax pmax
comp=Z,24nm,0.8s
PMR Palmer 85.20 14⇓*iP* P 18 01 15.6 -0.5
comp=Z,24nm,0.8s
Z20A Nine Sixteen R 85.33 52 ⇑P P 18 01 19.3 +1.7
baz=86,SNR=22
221A Mesquite Ranch 85.42 54 ⇓P P 18 01 19.7 +1.6
baz=86,SNR=12
MSU Marysvale 85.43 46 *eP* P 18 01 18.9 +0.8
MSU pmax pmax
comp=Z,32nm,1.6s
MSU Marysvale 85.43 46 *eP* P 18 01 18.9 +0.8
comp=Z,32nm,1.6s
MSU *epP* **pP** 18 03 24.1 +3.3
W18A Petrified Fore 85.45 50 ⇑P P 18 01 20.0 +1.8
baz=86
SML Sawmill 85.57 14 *eP* P 18 01 17.9 -0.1
SML pmax pmax
comp=Z,30nm,1.7s
SML Sawmill 85.57 14 *eP* P 18 01 17.9 -0.1
comp=Z,30nm,1.7s
DIV Divide 85.58 15 *eP* P 18 01 18.1 +0.1
comp=Z,58nm,1.2s
BMO Blue Mountains 85.62 39 *eP* P 18 01 19.2 +0.5
BMO pmax pmax
comp=Z,11nm,0.8s
BMO Blue Mountains 85.62 39 *eP* P 18 01 19.2 +0.5
comp=Z,12nm,0.8s
BMO *epP* **pP** 18 03 21.2 -0.2
121A Cookes Peak, D 85.66 53 ⇑P P 18 01 20.7 +1.4
baz=86,SNR=16
MFID Camas Ranch 85.69 40 *eP* P 18 01 19.3 +0.2
comp=Z,40nm,1.5s
MFID *epP* **pP** 18 03 24.8 +3.0
MFID Camas Ranch 85.69 40 ⇑P P 18 01 20.4 +1.3
baz=86,SNR=12
BJI Beijing 85.72 316 P P 18 01 19.5 +0.4
BJI pmax pmax
comp=Z,66nm,1.9s
BMRM Bremner River 85.73 16 *eP* P 18 01 18.8 +0.1
comp=Z,24nm,0.8s
PPLA Purkeypile 85.76 12 *eP* P 18 01 17.2 -1.7
comp=Z,32nm,1.5s
Y20A Horse Springs, 85.86 52 ⇑P P 18 01 21.9 +1.6
baz=86,SNR=17
DUG Dugway 85.88 44 *eP* P 18 01 20.6 +0.5
DUG pmax pmax
comp=Z,6.0nm,1.2s
DUG Dugway 85.88 44 *eP* P 18 01 20.6 +0.5
comp=Z,5.7nm,1.2s
DUG Dugway 85.88 44 ⇓P P 18 01 22.2 +2.2
baz=86
X20A Quemado 86.07 51 ⇑P P 18 01 22.4 +1.2
baz=86,SNR=13
PNL Peninsula 86.09 19 *eP* P 18 01 19.7 -0.8
PNL *epP* **pP** 18 03 18.9 -4.5
Z21A St. Cloud Mine 86.10 52 ⇑P P 18 01 23.0 +1.6
baz=86,SNR=7.1
TNA Tin City 86.27 4 *eP* P 18 01 21.6 +0.5
comp=Z,18nm,1.1s
TNA *epP* **pP** 18 03 24.3 +0.2
Q16A Castle Valley 86.32 46 ⇓P P 18 01 23.6 +1.3
baz=87
I12A Atlanta 86.33 40 ⇑P P 18 01 23.5 +1.3
baz=87
W20A Ramah 86.34 50 ⇓P P 18 01 23.8 +1.3
baz=87,SNR=17
GYA Guiyang 86.40 300⇑*iP* P 18 01 23.3 +0.5
GYA pP **pP** 18 03 27.0 +1.2
GYA sP **sP** 18 04 22.4 -0.7
GYA PP **PP** 18 04 57.5 +2.4
GYA SKS **SKSac** 18 10 54.3 -1.4
GYA S **S** 18 11 11.0 -1.0
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,190nm,5.9s
SEY Seymchan 86.40 347*diP* P 18 01 21.7 -0.1
Y21A Point of Rocks 86.42 52 ⇑P P 18 01 24.6 +1.7
baz=87,SNR=20
TMUT Trail Mountain 86.48 46 *eP* P 18 01 24.3 +1.2
comp=Z,46nm,1.5s
S18A Hurst Farm, Bl 86.52 48 ⇑P P 18 01 25.1 +1.8
baz=87
SYO Syowa Base 86.54 193⇑*eP* P 18 01 21.0 -1.5
SYO Syowa Base 86.54 193⇓*epP* pP 18 03 25.7 +0.2
X21A Alamocita Cree 86.54 51 ⇓P P 18 01 24.7 +1.2
baz=87,SNR=11
Z22A Elephant Butte 86.60 53 ⇑P P 18 01 25.1 +1.4
baz=87,SNR=7.8
TRF Thorofare Moun 86.63 12 *eP* P 18 01 20.9 -2.2
comp=Z,53nm,0.9s
TRF *epP* **pP** 18 03 28.0 +1.7
HLID Hailey 86.64 41 *eP* P 18 01 24.8 +1.2
comp=Z,19nm,1.1s
HLID *epP* **pP** 18 03 29.6 +2.8
HLID Hailey 86.64 41 ⇓P P 18 01 25.0 +1.4
baz=87,SNR=22
V20A Brimhall 86.69 50 ⇓P P 18 01 24.9 +0.9
baz=87
J13A Cove Ranch, Pi 86.70 41 ⇑P P 18 01 25.3 +1.4
baz=87,SNR=18
HVU Hansel Valley 86.72 43 *eP* P 18 01 24.5 +0.5
HVU pmax pmax
comp=Z,19nm,1.3s
HVU Hansel Valley 86.72 43 *eP* P 18 01 24.5 +0.5
comp=Z,19nm,1.3s
123A Bell Site, Whi 86.85 54 ⇑P P 18 01 26.0 +1.2
baz=87
SRU San Rafael 86.85 46 *eP* P 18 01 25.6 +0.9
SRU pmax pmax
comp=Z,75nm,1.5s
SRU San Rafael 86.85 46 *eP* P 18 01 25.6 +0.9
comp=Z,75nm,1.5s
SRU *epP* **pP** 18 03 30.6 +2.7
SRU San Rafael 86.85 46 ⇓P P 18 01 25.6 +0.9
baz=87,SNR=21
LHMI Lhok Sumawe 86.86 277 P P 18 01 27.1 +2.0
K14A Jones Ranch, D 86.87 42 ⇓P P 18 01 26.1 +1.4
baz=87,SNR=7.9
P17A Butcher Ranch, 86.89 46 ⇑P P 18 01 26.0 +1.1
baz=87,SNR=11
H12A Diamond D Ranc 86.90 40 ⇑P P 18 01 26.0 +1.1
baz=87,SNR=30
324A Moseley Ranch, 86.91 55 ⇑P P 18 01 26.2 +1.1
baz=87,SNR=21
Y22A Socorro 86.91 52 ⇓P P 18 01 26.3 +1.2
baz=87,SNR=9.7
G12A Big Creek, Yel 86.94 39 ⇑P P 18 01 26.1 +1.1
baz=87
JLU Jordanelle 86.98 45 *eP* P 18 01 25.6 +0.2
comp=Z,23nm,1.6s
425A Indio Mountain 87.00 56 ⇓P P 18 01 27.0 +1.4
baz=87,SNR=34
I13A Wildhorse Cree 87.01 41 ⇑P P 18 01 27.0 +1.5
baz=87,SNR=11
DAU Daniels Canyon 87.01 45 *eP* P 18 01 27.4 +1.8
DAU pmax pmax
comp=Z,20nm,1.4s
DAU Daniels Canyon 87.01 45 *eP* P 18 01 27.4 +1.8
comp=Z,20nm,1.4s
LENM Lemitar 87.01 52 *eP* P 18 01 26.6 +1.0
comp=Z,20nm,1.3s
J14A Carey 87.06 41 ⇓P P 18 01 27.1 +1.5
baz=87,SNR=20
L15A Malad City 87.09 43 ⇓P P 18 01 26.4 +0.7
baz=87,SNR=10
TIY Taiyuan 87.09 312 *eP* P 18 01 26.9 +1.2
TIY sP **sP** 18 04 22.6 -3.6
626A Big Bend Ranch 87.14 57 ⇑P P 18 01 27.6 +1.4
baz=87,SNR=26
Z23A Rita Site, Whi 87.15 53 ⇑P P 18 01 27.4 +1.1
baz=87,SNR=5.6
MCK McKinley 87.16 13 *eP* P 18 01 24.4 -1.0
MCK pmax pmax
comp=Z,82nm,1.2s
MCK McKinley 87.16 13 *eP* P 18 01 24.4 -1.0
comp=Z,82nm,1.2s
MCK *epP* **pP** 18 03 27.4 -1.3
224A Cornudas Mount 87.16 54 ⇓P P 18 01 27.6 +1.3
baz=87,SNR=32
SKAG Skagway 87.20 20 *eP* P 18 01 25.6 0.0
comp=Z,107nm,1.8s
PAX Paxson 87.25 14 *eP* P 18 01 25.4 -0.5
PAX pmax pmax
comp=Z,32nm,1.4s
PAX Paxson 87.25 14 *eP* P 18 01 25.4 -0.5
comp=Z,32nm,1.4s
BNM Bean Site 87.26 52 *eP* P 18 01 27.3 +0.4
comp=Z,37nm,1.7s
BNM *epP* **pP** 18 03 31.3 +1.1
325A Bean Ranch, Si 87.27 55 ⇑P P 18 01 27.8 +0.9
baz=88,SNR=30
H13A Challis 87.27 40 ⇓P P 18 01 27.8 +1.3
baz=88,SNR=28
P18A Preston Nutter 87.29 46 ⇑P P 18 01 28.1 +1.1
baz=88
F12A Elk City 87.33 39 ⇑P P 18 01 27.6 +0.9
baz=88,SNR=61
LPM Los Pinos Moun 87.33 52 *eP* P 18 01 28.1 +1.0
comp=Z,19nm,1.3s
526A Mary Lane Ranc 87.39 57 ⇓P P 18 01 28.8 +1.4
baz=88,SNR=30
TXAR Lajitas Array 87.41 57 P P 18 01 29.0 +1.5
TXAR pP **pP** 18 03 32.9 +2.0
TXAR PKKPbc **PKKPbc** 18 19 13.1 -0.9
TXAR Lajitas Array 87.41 57 P P 18 01 29.0 +1.5
comp=Z,11nm,0.9s,baz=223,slow=6.0,SNR=76
TXAR pP **pP** 18 03 32.9 +2.0
comp=Z,3.3nm,1.0s,baz=236,slow=4.9,SNR=5.7
TXAR PKKPbc **PKKPbc** 18 19 13.1 -0.9
comp=Z,0.5nm,0.5s,baz=164,slow=4.6,SNR=6.5
HWUT Hardware Ranch 87.41 44 *eP* P 18 01 27.4 +0.1
comp=Z,19nm,1.4s
I14A Mackay 87.42 41 ⇓P P 18 01 29.2 +1.8
baz=88,SNR=22
124A Stringfield Ra 87.49 54 ⇑P P 18 01 29.2 +1.2
baz=88,SNR=15
U21A Nageezi 87.56 50 ⇓P P 18 01 29.2 +1.0
baz=88,SNR=8.0
G13A Cobalt 87.57 40 P P 18 01 29.1 +1.2
baz=88,SNR=22
Y23A Lovelace Mesa, 87.59 52 ⇑P P 18 01 29.3 +0.9
baz=88,SNR=11
MENT Mentasta 87.63 15 *eP* P 18 01 27.9 +0.2
NEW Newport 87.67 36 ⇑P P 18 01 29.9 +1.7
baz=88
627A Terlingua Ranc 87.68 57 ⇑P P 18 01 29.8 +1.1
baz=88,SNR=35
426A McDonald Obser 87.70 56 ⇑P P 18 01 30.0 +1.1
baz=88,SNR=32
L16A Fish Haven 87.70 43 ⇑P P 18 01 29.4 +0.7
baz=88,SNR=9.9
225A Deer Hill, Car 87.71 55 ⇑P P 18 01 30.3 +1.4
baz=88,SNR=14
J15A Blackfoot 87.78 42 ⇑P P 18 01 30.8 +1.8
baz=88,SNR=20
527A Woodward Ranch 87.80 57 ⇑P P 18 01 30.3 +1.0
baz=88,SNR=21
Z24A Sheeppen Canyo 87.83 53 ⇓P P 18 01 30.6 +1.1
baz=88,SNR=7.0
H14A Leadore 87.84 40 ⇓P P 18 01 30.7 +1.4
baz=88,SNR=24
R20A Redvale 87.88 48 ⇑P P 18 01 30.4 +0.8
baz=88,SNR=5.9
F13A Darby 87.89 39 ⇑P P 18 01 30.2 +0.8
baz=88,SNR=26
C11A Tepee Creek (N 87.91 37 ⇓P P 18 01 30.7 +1.4
baz=88
SNAA Sanae 87.91 179 *eP* P 18 01 28.9 -0.1
SNAA Sanae 87.91 179 *epP* pP 18 03 32.2 -0.3
SNAA Sanae 87.91 179 *eP* P 18 01 28.0 -1.1
comp=Z,24nm,1.3s
SNAA *epP* **pP** 18 03 31.4 -1.1
XAN Xi'an 87.92 307 P P 18 01 30.3 +0.6
XAN pP **pP** 18 03 31.0 -2.2
XAN SKS **SKSac** 18 10 59.9 -4.4
XAN S **S** 18 11 26.8 +1.1
XAN sS **sS** 18 15 07.6 +1.7
XAN pmax pmax
comp=Z,23nm,1.6s
XAN pmax pmax
comp=Z,110nm,7.9s
M17A Scullys Gap (B 87.93 44 ⇓P P 18 01 31.0 +1.2
baz=88,SNR=8.2
D12A Red Ives Fores 87.98 38 ⇓P P 18 01 30.6 +0.9
baz=88
326A Caldwell Ranch 88.01 56 P P 18 01 31.1 +0.9
baz=88,SNR=11
K16A Soda Springs 88.02 43 ⇓P P 18 01 31.6 +1.4
baz=88,SNR=18
S21A Coal Bank Pass 88.04 48 P P 18 01 31.6 +1.1
baz=88,SNR=13
Y24A Capitan 88.04 53 ⇑P P 18 01 31.5 +1.0
baz=88,SNR=31
I15A Monteview 88.06 41 ⇓P P 18 01 31.9 +1.7
baz=88
VNA3 Neumayer Olymp 88.06 176 *eP* P 18 01 30.0 +0.3
VNA3 Neumayer Olymp 88.06 176 *epP* pP 18 03 27.8 -5.4
W23A Werner Place, 88.07 51 ⇓P P 18 01 31.5 +0.9
baz=88
125A Gardner Draw, 88.07 54 ⇓P P 18 01 31.5 +1.0
baz=88,SNR=17
628A Black Gap, Mar 88.09 58 ⇓P P 18 01 31.9 +1.3
baz=88,SNR=21
L17A Cokeville 88.11 43 ⇑P P 18 01 31.1 +0.5
baz=88
G14A Jackson 88.11 40 ⇑P P 18 01 31.8 +1.2
baz=88,SNR=11
P19A Cripple Cowboy 88.15 46 ⇓P P 18 01 32.0 +1.1
baz=88,SNR=12
DOT Dot Lake 88.16 15 *eP* P 18 01 29.5 -0.5
comp=Z,29nm,1.1s
DOT *epP* **pP** 18 03 32.5 -1.2
226B Tecolote Peak, 88.20 55 ⇓P P 18 01 32.1 +1.1
baz=88,SNR=24
J16A Bone 88.23 42 ⇓P P 18 01 32.6 +1.5
baz=88
427A Hayter Ranch, 88.26 56 ⇑P P 18 01 32.8 +1.4
baz=88,SNR=41
MCMT McKenzie Canyo 88.26 40 *eP* P 18 01 32.5 +1.2
comp=Z,21nm,1.2s
MCMT *epP* **pP** 18 03 35.5 +0.6
H15A Lima 88.28 41 ⇓P P 18 01 32.9 +1.5
baz=88,SNR=12
DLBC Dease Lake 88.29 23 P P 18 01 32.4 +1.6
DLBC Dease Lake 88.29 23 P P 18 01 32.4 +1.6
comp=Z,3.0nm,0.6s,baz=191,slow=6.7,SNR=6.0
Q20A Ridgley Place, 88.29 47 ⇑P P 18 01 32.4 +0.9
baz=88,SNR=9.4
M18A Lyman 88.30 44 ⇑P P 18 01 32.2 +0.7
baz=89,SNR=15
Z25A Roswell 88.30 54 ⇑P P 18 01 32.9 +1.3
baz=88,SNR=16
V23A Ortiz Mt. (NFS 88.31 51 ⇑P P 18 01 33.2 +1.5
baz=88,SNR=10
E13A Victor 88.32 39 ⇓P P 18 01 32.5 +1.2
baz=89
N18A Larsen Ranch, 88.33 45 ⇓P P 18 01 32.7 +1.0
baz=89,SNR=16
O19A Miners Draw (B 88.37 46 ⇓P P 18 01 32.8 +1.0
baz=89,SNR=13
COLA College 88.39 13 *eP* P 18 01 30.6 -0.4
COLA e*PP **pP** 18 03 32.1 -2.7
COLA pmax pmax
comp=Z,28nm,0.6s
COLA College 88.39 13 *eP* P 18 01 30.6 -0.4
comp=Z,28nm,0.6s
COLA *epP* **pP** 18 03 32.1 -2.7
RRI2 Red Ridge 88.45 42 *eP* P 18 01 33.1 +0.9
comp=Z,41nm,1.0s
528A Cox Ranch, San 88.45 57 ⇓P P 18 01 33.8 +1.4
baz=89,SNR=12
VNA2 Neumayer--Watz 88.49 177 *eP* P 18 01 32.3 +0.6
baz=191,slow=3.2
VNA2 Neumayer--Watz 88.49 177 *epP* pP 18 03 31.6 -3.7
baz=191,slow=3.2
ILAR Eielson Array 88.50 13 P P 18 01 30.8 -0.8
ILAR pP **pP** 18 03 35.0 -0.4
ILAR PP **PP** 18 05 07.5 -3.2
ILAR PKiKP **PKiKP** 18 06 27.2 -0.7
ILAR PKKP **PKKPdf** 18 19 09.8 +2.3
ILAR Eielson Array 88.50 13 P P 18 01 30.8 -0.8
comp=Z,11nm,0.6s,baz=216,slow=5.3,SNR=243
ILAR pP **pP** 18 03 35.0 -0.4
comp=Z,1.5nm,1.1s,baz=229,slow=4.9,SNR=2.2
ILAR PP **PP** 18 05 07.5 -3.2
comp=Z,1.7nm,0.8s,baz=222,slow=8.1,SNR=4.6
ILAR PKiKP **PKiKP** 18 06 27.2 -0.7
comp=Z,0.5nm,0.5s,baz=272,slow=2.8,SNR=7.6
ILAR PKKP **PKKPdf** 18 19 09.8 +2.3
comp=Z,0.2nm,0.6s,baz=339,slow=2.3,SNR=4.1
D13A Huson 88.52 38 ⇓P P 18 01 33.2 +1.1
baz=89
R21A Cimarron 88.53 48 ⇑P P 18 01 33.9 +1.1
baz=89,SNR=24
U23A El Rito 88.56 50 ⇑P P 18 01 34.0 +1.1
baz=89,SNR=9.9
Y25A Mesa, Roswell 88.60 53 P P 18 01 33.7 +0.7
baz=89,SNR=18
I16A Newdale 88.61 42 ⇑P P 18 01 34.6 +1.8
baz=89,SNR=17
N19A John Jarvie Ra 88.62 45 ⇓P P 18 01 33.5 +0.5
baz=89,SNR=8.6
W24A Lazy 6 Ranch, 88.63 52 ⇑P P 18 01 33.7 +0.5
baz=89,SNR=9.0
G15A Dillon 88.66 40 ⇓P P 18 01 34.2 +1.2
baz=89,SNR=25
DCID1 Drake Creek 88.66 42 *eP* P 18 01 33.9 +0.8
comp=Z,37nm,1.2s
MSO Missoula 88.67 38 ⇑P P 18 01 34.1 +1.2
baz=89
DLMT Dillon 88.69 40 *eP* P 18 01 34.3 +1.1
comp=Z,40nm,1.4s
E14A Clinton 88.71 39 ⇓P P 18 01 34.0 +0.8
baz=89,SNR=11
VNA1 Neumayer--Stat 88.72 177 *eP* P 18 01 33.5 +0.8
VNA1 Neumayer--Stat 88.72 177 *epP* pP 18 03 33.0 -3.4
Q21A Lamborn Mesa, 88.73 48 ⇓P P 18 01 34.7 +1.1
baz=89,SNR=7.4
BSMT Bassoo Peak 88.74 37 *eP* P 18 01 34.1 +0.7
comp=Z,4.7nm,0.7s
REDW Red Top Meadow 88.75 42 *eP* P 18 01 34.5 +0.9
comp=Z,0.3nm,1.0s
TPAW Teton Pass 88.75 42 *eP* P 18 01 33.6 0.0
comp=Z,30nm,1.3s
TPAW *epP* **pP** 18 03 39.9 +2.4
S22A 4UR Ranch, Cre 88.75 49 ⇑P P 18 01 34.9 +1.1
baz=89,SNR=19
C13A Hot Springs 88.77 37 ⇑P P 18 01 34.3 +1.0
baz=89
428A Kincaid Ranch, 88.77 57 ⇑P P 18 01 35.1 +1.3
baz=89,SNR=6.3
J17A Brown Place, J 88.84 42 ⇓P P 18 01 34.9 +1.0
baz=89,SNR=20
Z26A Caprock 88.85 54 ⇑P P 18 01 34.9 +0.7
baz=89,SNR=12
SNOW Snow King Moun 88.86 42 *eP* P 18 01 35.0 +0.9
comp=Z,28nm,1.0s
529A Stev Forest Ra 88.88 57 ⇓P P 18 01 34.9 +0.6
baz=89,SNR=14
X25A Clemmons Ranch 88.88 52 ⇓P P 18 01 34.7 +0.4
baz=89,SNR=6.9
O20A White River Ci 88.89 46 ⇑P P 18 01 35.2 +0.9
baz=89,SNR=12
K18A Toltan Ranch, 88.91 43 ⇓P P 18 01 35.5 +1.2
baz=89,SNR=31
M19A Rock Springs 88.93 45 ⇑P P 18 01 35.3 +0.8
baz=89,SNR=9.4
V24A Rampart Ranch, 88.96 51 ⇑P P 18 01 36.0 +1.2
baz=89,SNR=11
IMW Indian Meadow 88.96 42 *eP* P 18 01 35.7 +1.1
comp=Z,36nm,1.1s
IMW *epP* **pP** 18 03 39.5 +1.0
F15A Butte 89.00 40 ⇑P P 18 01 35.9 +1.2
baz=89,SNR=7.9
MOOW Moose Ponds 89.01 42 *eP* P 18 01 35.5 +0.8
comp=Z,26nm,1.4s
MOOW *epP* **pP** 18 03 42.4 +3.7
LRM Limekiln Ridge 89.02 40 *eP* P 18 01 33.9 -0.9
comp=Z,126nm,1.3s
LRM *epP* **pP** 18 03 37.2 -1.4
LRM *ePP* PP 18 05 10.1 -5.5
LOHW Long Hollow 89.03 42 *eP* P 18 01 35.2 +0.3
comp=Z,12nm,0.7s
LOHW *epP* **pP** 18 03 38.9 +0.1
D14A Greenough 89.06 38 ⇑P P 18 01 35.7 +0.9
baz=89,SNR=10
127A Arkansas Junct 89.07 55 ⇓P P 18 01 35.6 +0.4
baz=89,SNR=7.5
KMI Kunming 89.09 297 P P 18 01 36.3 +0.8
KMI pP **pP** 18 03 44.3 +4.9
KMI sP **sP** 18 04 37.3 +0.9
KMI PP **PP** 18 05 15.8 -0.7
KMI SKS **SKSac** 18 11 10.0 -1.8
KMI S **S** 18 11 36.8 -0.3
KMI pmax pmax
comp=Z,52nm,1.2s
KMI pmax pmax
comp=Z,500nm,4.2s
L19A Farson 89.09 44 ⇑P P 18 01 36.1 +1.0
baz=89,SNR=27
G16A Moss Hill, Enn 89.10 40 ⇑P P 18 01 36.2 +1.1
baz=89,SNR=14
CHMT Chamberlain Mo 89.12 38 *eP* P 18 01 34.9 -0.3
comp=Z,20nm,1.5s
QLMT Earthquake Lak 89.13 41 *eP* P 18 01 36.9 +1.6
comp=Z,5.1nm,1.2s
SLMT Seeley Lake 89.15 38 *eP* P 18 01 35.8 +0.5
comp=Z,15nm,1.4s
H16A Russell Place, 89.18 41 ⇓P P 18 01 37.4 +1.9
baz=89
HHC Hu-ho-hao-te 89.18 315 ⇓P P 18 01 36.3 +0.8
HHC pP **pP** 18 03 36.0 -3.4
HHC PP **PP** 18 05 19.8 +3.1
HHC SKS **SKSac** 18 11 14.5 +3.1
HHC S **S** 18 11 38.3 +1.2
HHC pmax pmax
comp=Z,110nm,1.0s
HHC pmax pmax
comp=Z,290nm,6.3s
B13A Whitefish 89.20 37 ⇑P P 18 01 36.0 +0.7
baz=90,SNR=6.9
I17A Pilgrim Ck. 89.20 42 ⇑P P 18 01 37.2 +1.6

baz=90,SNR=17
J18A Kendall Valley 89.20 43 ⇓P P 18 01 36.7 +1.0
baz=90,SNR=71
N20A Spence Gulch, 89.20 46 ⇑P P 18 01 36.7 +1.0
baz=90,SNR=21
Q22A Crested Butte, 89.21 48 ⇑P P 18 01 36.9 +1.0
baz=90,SNR=13
E15A Deer Lodge 89.22 39 ⇓P P 18 01 36.6 +1.0
baz=90,SNR=5.5
BW06 Boulder Array 89.28 43 ⇑P P 18 01 36.7 +0.6
baz=90,SNR=22
PDAR Pinedale Array 89.28 43 P P 18 01 36.5 +0.5
PDAR PKKP **PKKPbc** 18 19 08.0 -2.2
PDAR Pinedale Array 89.28 43 P P 18 01 36.5 +0.5
comp=Z,11nm,0.7s,baz=207,slow=3.0,SNR=91
PDAR PKKP **PKKPbc** 18 19 08.0 -2.2
comp=Z,0.7nm,0.7s,baz=88,slow=4.6,SNR=7.2
C14A Swan Lake 89.28 38 ⇑P P 18 01 36.9 +1.1
baz=90
SMCO Snowmass 89.31 47 *e*P P 18 01 36.8 +0.3
comp=Z,20nm,1.4s
W25A X Bar L Ranch, 89.33 52 ⇓P P 18 01 36.9 +0.5
baz=90,SNR=22
YMR Madison River 89.33 41 *e*P P 18 01 37.5 +1.2
comp=Z,68nm,1.5s
YMR *e*pP **pP** 18 03 41.7 +1.5
429A Davenport Ranc 89.35 57 ⇑P P 18 01 37.1 +0.7
baz=90,SNR=29
228A UT Block 9, Go 89.42 55 ⇓P P 18 01 37.3 +0.5
baz=90
BOZ Bozeman (W) 89.42 40 *e*P P 18 01 37.5 +0.9
BOZ *e**PP **pP** 18 03 40.9 +0.4
BOZ pmax pmax
comp=Z,35nm,1.4s
BOZ Bozeman (W) 89.42 40 *e*P P 18 01 37.5 +0.9
comp=Z,35nm,1.4s
BOZ *e*pP **pP** 18 03 40.9 +0.4
BOZ Bozeman (W) 89.42 40 ⇑P P 18 01 38.0 +1.4
baz=90,SNR=22
H17A Grant Village 89.44 42 ⇑P P 18 01 39.2 +2.4
baz=90,SNR=16
Z27A Tatum 89.45 54 ⇑P P 18 01 37.5 +0.6
baz=90,SNR=12
PLCA Paso Flores 89.45 134 *e*P P 18 01 38.2 +1.3
PLCA Paso Flores 89.45 134 P P 18 01 38.9 +2.0
comp=Z,17nm,0.9s,baz=225,slow=6.8,SNR=27
V25A Rancho No Teng 89.49 51 ⇑P P 18 01 37.7 +0.5
baz=90,SNR=16
X26A CR and CF Fran 89.53 53 ⇑P P 18 01 38.1 +0.8
baz=90,SNR=5.9
A13A Flathead Natio 89.53 36 ⇑P P 18 01 38.2 +1.3
baz=90
M20A Sweetwater, Wa 89.56 45 ⇓P P 18 01 38.6 +1.2
baz=90,SNR=8.9
I18A Diamond G Ranc 89.57 42 ⇓P P 18 01 38.4 +1.0
baz=90,SNR=12
530A J-C Ranch, Com 89.59 58 ⇑P P 18 01 38.4 +0.8
baz=90,SNR=11
D15A Lincoln 89.61 39 ⇑P P 18 01 38.4 +1.0
baz=90,SNR=9.2
329A Wagon Wheel Ra 89.63 56 ⇓P P 18 01 38.3 +0.6
baz=90,SNR=9.8
LKWY Lake 89.63 42 *e*P P 18 01 39.6 +1.9
LKWY *e**PP **pP** 18 03 41.6 -0.1
LKWY pmax pmax
comp=Z,28nm,1.3s
LKWY Lake 89.63 42 *e*P P 18 01 39.6 +1.9
comp=Z,28nm,1.3s
LKWY *e*pP **pP** 18 03 41.6 -0.1
P22A Eagle 89.65 47 P P 18 01 38.7 +0.9
baz=90,SNR=6.3
R23A Moffat 89.66 49 ⇓P P 18 01 39.1 +1.1
baz=90,SNR=11
N21A Black Mountain 89.67 46 ⇓P P 18 01 39.0 +1.1
baz=90,SNR=16
L20A Wamsutter 89.71 44 ⇓P P 18 01 39.2 +1.2
baz=90,SNR=18
128A Castleberry Fa 89.71 55 ⇑P P 18 01 39.0 +0.9
baz=90,SNR=5.1
T24A Torres, Weston 89.72 50 ⇓P P 18 01 39.5 +1.3
baz=90,SNR=9.4
Y27A Causey 89.73 54 ⇑P P 18 01 38.7 +0.5
baz=90,SNR=8.2
K19A Absolon Red Bu 89.77 44 ⇑P P 18 01 38.5 +0.3
baz=90,SNR=17
W26A Owens Ranch, T 89.79 52 ⇓P P 18 01 39.4 +0.9
baz=90
EGAK Eagle 89.80 15 *e*P P 18 01 37.5 -0.1
comp=Z,42nm,1.1s
EGAK *e*pP **pP** 18 03 41.0 -0.7
CM31 Chiang Mai Arr 89.82 290 *e*P P 18 01 40.5 +1.7
comp=Z,68nm,1.1s
CMAR Chiang Mai Arr 89.82 290 P P 18 01 40.1 +1.3
CMAR PP **PP** 18 05 19.1 -2.9
CMAR PKKPbc **PKKPbc** 18 19 08.6 +1.0
CMAR Chiang Mai Arr 89.82 290 P P 18 01 40.1 +1.3
comp=Z,31nm,1.0s,baz=114,slow=2.8,SNR=135
CMAR PP **PP** 18 05 19.1 -2.9
comp=Z,0.9nm,0.6s,baz=111,slow=4.9,SNR=4.0
CMAR PKKPbc **PKKPbc** 18 19 08.6 +1.0
comp=Z,1.3nm,0.7s,baz=300,slow=4.6,SNR=10.0
HRY Holter Researc 89.85 39 *e*P P 18 01 39.6 +1.1
comp=Z,8.4nm,0.8s
E16A East Helena 89.85 39 ⇓P P 18 01 39.7 +1.3
baz=90
J19A Crowheart 89.85 43 ⇓P P 18 01 39.5 +0.9
baz=90,SNR=21
S24A Houchin Ranch, 89.85 49 ⇓P P 18 01 40.0 +1.1
baz=90,SNR=16
B14A Marquette Ranc 89.87 37 ⇑P P 18 01 39.0 +0.5
baz=90,SNR=18
U25A Circle Dot Ran 89.89 51 ⇑P P 18 01 39.9 +0.9
baz=90,SNR=14
631A Perdido Creek 89.90 59 ⇑P P 18 01 39.3 +0.4
baz=90,SNR=28
C15A Salmond Ranch, 89.94 38 ⇓P P 18 01 40.2 +1.4
baz=90,SNR=5.8
CMMT Chiang Mai 89.95 290 P P 18 01 41.2 +1.8
comp=Z,59nm,1.4s,comp=Z,1µm
CHTO Chiang Mai 89.95 290 *e*P P 18 01 40.3 +0.9
CHTO *e**PP **pP** 18 03 41.9 -1.6
CHTO pmax pmax
comp=Z,68nm,1.0s
CHTO Chiang Mai 89.95 290 *e*P P 18 01 40.3 +0.9
comp=Z,68nm,1.0s
CHTO *e*pP **pP** 18 03 41.9 -1.6
CHTO *e*PP PP 18 05 15.4 -7.7
CHTO Chiang Mai 89.95 290 P P 18 01 40.9 +1.5
SNR=21
CHTO Chiang Mai 89.95 290 P P 18 01 40.7 +1.3
comp=Z,66nm,1.4s,comp=Z,1µm
K20A Yellowstone Ra 90.02 44 ⇑P P 18 01 39.6 +0.2
baz=90,SNR=20
COLD Coldfoot 90.05 11 *e*P P 18 01 38.8 +0.1
comp=Z,22nm,1.1s
O22A Kremmling 90.05 47 ⇓P P 18 01 40.4 +0.6
baz=90,SNR=15
V26A Tequesquite Ra 90.08 52 ⇑P P 18 01 40.1 +0.3
baz=90,SNR=8.3
A14A Double T Ranch 90.11 37 ⇑P P 18 01 40.4 +0.8
baz=90,SNR=11
732A Laxson Ranch, 90.11 59 ⇓P P 18 01 40.5 +0.6
baz=90
F17A Fitzpatrick Pl 90.14 40 ⇓P P 18 01 41.6 +1.7
baz=90,SNR=9.8
H18A Shoshone NF, C 90.14 42 ⇑P P 18 01 41.0 +1.0
baz=90,SNR=7.2
M21A Separation Pea 90.17 45 ⇑P P 18 01 40.8 +0.6
baz=90,SNR=14
D16A Dana Ranch, Ca 90.17 39 ⇑P P 18 01 40.8 +0.9
baz=90
129A Stewart Farms, 90.19 55 ⇑P P 18 01 40.9 +0.5
baz=90,SNR=5.6
T25A Trinidad 90.20 50 ⇓P P 18 01 40.9 +0.5
baz=90,SNR=7.6
531A Rocksprings 90.22 58 ⇑P P 18 01 41.2 +0.7
baz=90,SNR=10.0
330A Mertzon 90.23 56 ⇓P P 18 01 40.8 +0.3
baz=90
B15A Bradely Ranch, 90.25 38 ⇓P P 18 01 41.3 +1.1
baz=90,SNR=5.7
I19A Meeteetse 90.25 42 ⇓P P 18 01 41.6 +1.1
baz=90,SNR=11
E17A Martinsdale 90.30 40 ⇑P P 18 01 42.6 +2.0
baz=91
W27A Bowe Ranch, En 90.30 53 ⇓P P 18 01 41.0 +0.1
baz=90,SNR=5.2

L21A Rawlins 90.33 45 ⇑P P 18 01 41.5 +0.6
baz=91,SNR=9.2
U26A Atchley Ranch, 90.37 51 ⇓P P 18 01 41.5 +0.3
baz=91,SNR=9.0
431A Sonora 90.38 57 ⇓P P 18 01 41.4 +0.2
baz=91
S25A Robets Cordova 90.41 50 ⇓P P 18 01 42.1 +0.8
baz=91,SNR=20
C16A Fuhringer Ranc 90.45 38 ⇓P P 18 01 41.9 +0.7
baz=91,SNR=5.5
230A Sterling City 90.47 56 ⇑P P 18 01 41.3 -0.3
baz=91
O23A Lake Granby, G 90.50 47 ⇑P P 18 01 42.9 +1.0
baz=91,SNR=8.0
J20A Shoshoni 90.51 43 ⇓P P 18 01 42.7 +1.1
baz=91,SNR=26
G18A Lazy EL Ranch, 90.52 41 ⇑P P 18 01 43.1 +1.4
baz=91,SNR=8.2
ISCO Idaho Springs 90.53 47 ⇓P P 18 01 42.6 +0.6
baz=91
CD2 Chengdu 90.55 303 P P 18 01 42.4 +0.4
CD2 pP **pP** 18 03 46.8 +0.7
CD2 sP **sP** 18 04 42.3 -0.7
CD2 PP **PP** 18 05 30.3 +2.7
CD2 SKS **SKSac** 18 11 19.6 0.0
CD2 S **S** 18 11 48.4 -1.3
CD2 sS **sS** 18 15 28.8 -2.8
CD2 SS **SS** 18 18 11.4 +2.3
CD2 pmax pmax
comp=Z,30nm,0.4s
CD2 pmax pmax
comp=Z,340nm,4.3s
H19A Powell 90.56 42 ⇑P P 18 01 43.3 +1.5
baz=91,SNR=6.3
632A Uvalde 90.57 59 ⇓P P 18 01 42.9 +0.8
baz=91
Z29A Hungry Hill Ra 90.57 55 ⇑P P 18 01 42.3 +0.2
baz=91
M22A Cedar Creek Ra 90.58 46 ⇓P P 18 01 42.6 +0.4
baz=91,SNR=14
RLMT Red Lodge 90.61 41 *e*P P 18 01 43.0 +0.9
comp=Z,19nm,1.3s
RLMT *e*pP **pP** 18 03 48.5 +2.2
RLMT Red Lodge 90.61 41 ⇑P P 18 01 43.7 +1.6
baz=91,SNR=10.0
F18A Big Timber 90.71 41 ⇑P P 18 01 43.9 +1.5
baz=91
K21A Alcova 90.72 44 ⇓P P 18 01 43.3 +0.6
baz=91,SNR=16
532A Rocksprings 90.72 58 ⇑P P 18 01 43.2 +0.5
baz=91,SNR=13
R25A Fountain Ranch 90.73 49 ⇑P P 18 01 43.3 +0.5
baz=91,SNR=5.7
D17A Six Diamond Ra 90.75 39 ⇓P P 18 01 43.7 +1.1
baz=91,SNR=16
V27A Dan Oppiter Fa 90.76 52 ⇓P P 18 01 43.8 +0.8
baz=91
I20A Worland 90.76 43 ⇑P P 18 01 44.0 +1.2
baz=91
331A San Angelo 90.78 57 ⇑P P 18 01 43.3 +0.3
baz=91
N23A Red Feather La 90.79 46 ⇓P P 18 01 44.0 +0.9
baz=91,SNR=10
T26A Comanche Natio 90.81 50 ⇓P P 18 01 43.4 +0.2
baz=91,SNR=6.0
E18A Harlowton 90.92 40 ⇑P P 18 01 45.3 +1.9
baz=91,SNR=7.3
J21A Lysite 90.92 44 ⇑P P 18 01 44.6 +1.0
baz=91,SNR=17
JCT Junction City 90.94 58 *e*P P 18 01 43.0 -0.8
JCT pmax pmax
comp=Z,7.0nm,0.8s
JCT Junction City 90.94 58 *e*P P 18 01 43.0 -0.8
comp=Z,7.3nm,0.8s
JCT Junction City 90.94 58 ⇑P P 18 01 43.8 +0.1
baz=91
U27A Thompson Grove 91.05 51 ⇑P P 18 01 44.2 -0.1
baz=91,SNR=6.3
S26A Kim 91.09 50 ⇑P P 18 01 44.8 +0.4
baz=91,SNR=13
432A Menard 91.10 57 ⇑P P 18 01 44.5 0.0
baz=91
231A Bronte 91.11 56 ⇓P P 18 01 44.5 0.0
baz=91,SNR=10
A16A West Butte Ran 91.12 37 ⇑P P 18 01 45.1 +0.8
baz=91,SNR=9.1
K22A Jasper 91.20 45 ⇑P P 18 01 45.7 +0.9
baz=92,SNR=7.6
I21A Big Trails, Te 91.23 43 ⇓P P 18 01 45.3 +0.4
baz=92,SNR=12
PHWY Pilot Hill 91.30 46 *e*P P 18 01 45.2 -0.3
comp=Z,4.4nm,0.8s
332A Millersview 91.34 57 ⇑P P 18 01 45.9 +0.3
baz=92
131A Roby 91.35 56 ⇑P P 18 01 45.9 +0.2
baz=92
R26A Arlington 91.39 49 ⇑P P 18 01 46.1 +0.3
baz=92
L23A Garrett 91.50 45 ⇓P P 18 01 47.0 +0.6
baz=92,SNR=18
E19A Rath Farm, Rou 91.55 40 ⇓P P 18 01 47.5 +1.2
baz=92
J22A Midwest 91.58 44 ⇑P P 18 01 47.0 +0.5
baz=92,SNR=12
232A Coleman 91.61 57 ⇓P P 18 01 47.1 +0.3
baz=92
I22A 9 Mile Ranch, 91.79 43 ⇓P P 18 01 49.3 +1.8
baz=92
M24A Cheyenne 91.80 46 ⇓P P 18 01 48.8 +1.1
baz=92
D19A Cripps Ranch, 91.83 40 ⇑P P 18 01 49.6 +2.1
baz=92,SNR=6.1
R27A Eads 91.85 50 ⇑P P 18 01 48.3 +0.4
baz=92
ABTX Abilene, Hawle 91.91 56 ⇑P P 18 01 49.1 +0.9
baz=92
YAK Yakutsk 92.08 338 *e*P P 18 01 46.8 -1.4
YAK *e* 18 05 34.6
YAK *e* 18 11 58.9
YAK pmax pmax
comp=Z,41nm,1.1s
YAK pmax pmax
comp=N,9.0nm,1.2s
YAK pmax pmax
comp=E,14nm,1.3s
YAK pmax pmax
comp=N,41nm,1.9s
YAK pmax pmax
comp=Z,210nm,4.2s
YAK pmax pmax
comp=E,73nm,3.6s
KSCO Kaye Shedlock' 92.27 49 ⇓P P 18 01 51.5 +1.6
baz=92,SNR=7.0
Z32A Haskell 92.30 55 ⇓P P 18 01 51.1 +1.2
baz=92
LZH Lanzhou 92.56 308 ⇓P P 18 01 52.1 +0.9
LZH pP **pP** 18 03 56.8 +1.2
LZH sP **sP** 18 04 52.5 +0.1
LZH PP **PP** 18 05 46.3 +3.1
LZH SKS **SKSac** 18 11 30.1 -0.6
LZH S **S** 18 12 05.0 -2.3
LZH sS **sS** 18 15 47.8 -2.7
LZH SS **SS** 18 18 40.9 +3.4
LZH pmax pmax
comp=Z,120nm,1.5s
LZH pmax pmax
comp=Z,600nm,5.6s
Y32A R-V Farms, Ver 92.60 55 ⇓P P 18 01 52.4 +1.1
baz=93
J24A Dixon Ranch, L 92.73 45 ⇓P P 18 01 53.6 +1.8
baz=93
A19A Klindworth Far 92.75 38 ⇓P P 18 01 53.9 +2.2
baz=93
N27A Anderson Farm, 93.08 47 ⇓P P 18 01 55.1 +1.6
baz=93
F23A Vosburg 93.30 42 ⇓P P 18 01 55.8 +1.5
baz=94
CIT Chita 93.38 325 *e*P P 18 01 54.4 -0.1
CIT *e* 18 05 53.9
CIT pmax pmax
comp=Z,68nm,2.0s
H24A Dirks Ranch, A 93.41 43 ⇑P P 18 01 55.9 +1.1
baz=94
RSSD Black Hills 93.48 44 *e*P P 18 01 54.9 -0.4
RSSD pmax pmax
comp=Z,3.0nm,0.7s
RSSD Black Hills 93.48 44 *e*P P 18 01 54.9 -0.4

comp=Z,2.7nm,0.7s
C23A Lambert 94.35 40 ⇓P P 18 02 01.0 +2.0
baz=95
E24A Baker 94.35 42 ⇑P P 18 02 00.6 +1.5
baz=95
INK Inuvik 94.47 15 P P 18 01 57.6 -1.4
INK pP **pP** 18 04 04.6 +1.1
INK Inuvik 94.47 15 P P 18 01 57.6 -1.4
comp=Z,5.0nm,0.9s,baz=230,slow=3.6,SNR=16
INK pP **pP** 18 04 04.6 +1.1
comp=Z,2.3nm,0.9s,baz=225,slow=4.7,SNR=3.6
ULN Ulaanbaatar 95.22 319 *e*P P 18 02 02.6 -0.4
comp=Z,33nm,1.6s
ULN *e*pP **pP** 18 04 06.0 -1.6
ULN *e*PP PP 18 05 55.4 -7.9
ULN Ulaanbaatar 95.22 319 P P 18 02 03.1 0.0
SNR=8.6
ULN Ulaanbaatar 95.22 319 P P 18 02 02.7 -0.4
DGMT Dagmar 95.23 40 ⇓P P 18 02 04.9 +1.9
baz=96
SONM Songino Array 95.61 319 P P 18 02 05.1 +0.3
SONM PP **PP** 18 06 02.0 -4.2
SONM Songino Array 95.61 319 P P 18 02 05.1 +0.3
comp=Z,2.1nm,0.6s,baz=116,slow=3.4,SNR=4.0
SONM PP **PP** 18 06 02.0 -4.2
comp=Z,1.1nm,0.6s,baz=90,slow=3.0,SNR=3.8
BGNE Belgrade 96.37 48 ⇑P P 18 02 10.0 +1.8
baz=97
YKA Yellowknife Ar 96.76 25 P P 18 02 09.6 +0.2
YKA pP **pP** 18 04 13.2 -1.0
YKA PKiKP **PKiKP** 18 06 41.0 -1.2
YKA PKKPbc **PKKPbc** 18 18 48.6 -2.6
YKA Yellowknife Ar 96.76 25 P P 18 02 09.5 +0.2
comp=Z,0.9nm,0.6s,baz=242,slow=4.5,SNR=35
YKA pP **pP** 18 04 13.1 -1.0
comp=Z,0.3nm,0.6s,baz=240,slow=4.4,SNR=3.0
YKA PKiKP **PKiKP** 18 06 40.9 -1.2
comp=Z,0.2nm,0.4s,baz=242,slow=1.4,SNR=6.1
YKA PKKPbc **PKKPbc** 18 18 48.6 -2.6
comp=Z,0.3nm,0.4s,baz=39,slow=2.4,SNR=15
GTA Gaotai 96.77 309 ⇑P P 18 02 11.1 +0.9
GTA pP **pP** 18 04 14.8 -0.1
GTA sP **sP** 18 05 09.5 -2.2
GTA PP **PP** 18 06 17.6 +2.3
GTA SKS **SKSac** 18 11 55.5 +2.8
GTA S **ScS** 18 12 43.6 +0.3
GTA SS **SS** 18 19 39.6 +3.2
GTA pmax pmax
comp=Z,12nm,1.6s
GTA pmax pmax
comp=Z,120nm,7.4s
ZAK Zakamensk 98.49 321 ⇓*i*P Pdif 18 02 16.8 -0.8
ZAK *e* 18 12 00.7
ZAK pmax pmax
comp=Z,3.0nm,1.7s
TIXI Tiksi 98.76 345 ⇑*e*P Pdif 18 02 17.5 -0.6
TIXI pmax pmax
comp=Z,9.0nm,1.3s
LPAZ La Paz 102.34 113 *e*P **Pdif** 18 02 40.0 +3.8
comp=Z,6.4nm,1.0s
TAPN Taplejung 102.52 295 *e*P **PKiKP** 18 06 54.6 +0.6
comp=Z,204nm,1.8s
ODAN Odare 102.65 294 *e*P **PKiKP** 18 06 53.9 -0.3
comp=Z,115nm,1.5s
RAMN Ramite 103.36 294 *e*P **PKiKP** 18 06 55.4 -0.1
comp=Z,126nm,1.5s
GUN Gumba 104.24 295 *e*P **PKiKP** 18 06 55.6 -1.6
comp=Z,358nm,2.1s
PKI Pulchoki 104.55 294 *e*P **PKiKP** 18 06 57.0 -0.8
comp=Z,12nm,0.6s
PKIN Phulchoki 104.56 294 *e*P **PKiKP** 18 06 56.8 -0.9
comp=Z,6.6nm,0.7s
KKN Kakani 104.72 294 *e*P **PKiKP** 18 06 57.2 -0.7
comp=Z,11nm,0.7s
DMN Daman 104.81 294 *e*P **PKiKP** 18 06 57.4 -0.8
KOLN Koldanda 106.14 294 *e*P **PKiKP** 18 06 59.3 -1.2
comp=Z,4.5nm,0.5s
DANN Dangsing 106.16 295 *e*P **PKiKP** 18 06 59.1 -1.6
WMQ Urumqi 106.73 311 Pdif **Pdif** 18 02 56.0 +1.7
WMQ PP **PP** 18 07 32.0 +3.3
WMQ S **Sdif** 18 14 07.0 +0.9
WMQ SS **SS** 18 21 55.0 +3.0
WMQ AMB AMB
comp=Z,57nm,10.0s
PYUN Piuthan 106.75 294 *e*P **PKiKP** 18 07 00.0 -1.7
ZAA0 Zalesovo Array 110.36 321 *e*PKPdf **PKiKP** 18 07 05.7 -1.6
ZAA0 *e*PP PP 18 07 46.4 -7.7
ZAA0 *e*SKP S 18 09 48.2
ZALV Zalesovo Beam 110.36 321 PKiKP **PKiKP** 18 07 06.2 -1.1
ZALV Zalesovo Beam 110.36 321 PKiKP **PKiKP** 18 07 06.2 -1.1
ZALV PP PP 18 07 47.0 -7.1
ZALV SKP 18 09 49.4
ZALV PKKPab **PKKPab** 18 18 22.4 +0.9
ZALV Zalesovo Beam 110.36 321 PKiKP **PKiKP** 18 07 06.2 -1.1
comp=Z,5.5nm,0.6s,baz=109,slow=1.3,SNR=36
ZALV PP PP 18 07 47.0 -7.1
comp=Z,1.2nm,0.7s,baz=90,slow=2.9,SNR=5.2
ZALV SKP 18 09 49.4
comp=Z,0.9nm,0.6s,baz=104,slow=1.8,SNR=4.0
ZALV PKKPab **PKKPab** 18 18 22.4 +0.9
comp=Z,1.1nm,0.7s,baz=263,slow=5.8,SNR=6.2
MK31 Makanchi Array 111.02 313 *e*P **Pdif** 18 03 13.2 -0.1
MK31 *e* 18 07 07.4
MK31 Makanchi Array 111.02 313 *e*Pdif **Pdif** 18 03 13.2 -0.1
MK31 *e*PKPdf **PKiKP** 18 07 07.4 -1.5
MKAR Makanchi Array 111.02 313 P **Pdif** 18 03 15.8 +2.5
MKAR *i* 18 07 08.1
MKAR Makanchi Array 111.02 313 Pdif **Pdif** 18 03 15.8 +2.5
MKAR PKiKP **PKiKP** 18 07 08.1 -0.8
MKAR SKP 18 09 51.5
MKAR PKKPbc **PKKPbc** 18 18 08.0 -0.6
MKAR Makanchi Array 111.02 313 Pdif **Pdif** 18 03 15.8 +2.5
comp=Z,0.6nm,0.5s,baz=82,slow=5.4,SNR=12
MKAR PKiKP **PKiKP** 18 07 08.1 -0.8
comp=Z,3.2nm,0.4s,baz=96,slow=0.9,SNR=60
MKAR SKP 18 09 51.5
comp=Z,2.5nm,1.0s,baz=80,slow=1.6,SNR=5.0
MKAR PKKPbc **PKKPbc** 18 18 08.0 -0.6
comp=Z,2.5nm,0.7s,baz=275,slow=3.7,SNR=20
NVS Novosibirsk 111.38 322 *e*PKiKP **PKiKP** 18 07 07.9 -1.3
NVS *e*S **SKSac** 18 12 57.3 -0.4
NVS pmax pmax
comp=N,2.0nm,0.6s
NVS pmax pmax
comp=E,3.0nm,0.6s
NVS pmax pmax
comp=Z,5.0nm,0.6s
NVS smax smax
comp=N,22nm,1.9s
NVS smax smax
comp=E,88nm,1.4s
KURK Kurchatov 113.84 317 *c i*PKiKP **PKiKP** 18 07 13.3 -0.8
KURK pmax pmax
comp=Z,7.0nm,0.8s
KURK Kurchatov 113.84 317 *e*PKPdf **PKiKP** 18 07 12.6 -1.4
KURK *e*PP PP 18 08 13.0 -5.7
KURK *e*SKP 18 09 56.4
KURK *e*PKKP **PKKPbc** 18 17 58.9 -0.4
KSH Kashi 114.66 305 *e*PKP PKPdf 18 07 17.0 +0.8
KSH PP **PP** 18 08 29.5 +4.6
KSH PKS **PKSdf** 18 10 51.5 -1.5
KSH SKS **SKSdf** 18 13 37.3 +2.4
KSH SKKS **SKKSac** 18 14 27.8 +0.8
KSH SS SS 18 23 44.3 +7.6
ULHL Ulahol 114.77 308 P PKPdf 18 07 16.4 0.0
SNR=11
TKM2 Tokmak 2 115.31 309 *e*PKiKP **PKPdf** 18 07 16.3 -1.2
TKM2 *e* 18 08 27.6
TKM2 Tokmak 2 115.31 309 *e*PKPdf **PKPdf** 18 07 16.3 -1.2
TKM2 *e*PP **PP** 18 08 27.6 -1.8
TKM2 *e*SKP 18 09 59.7
TKM2 Tokmak 2 115.31 309 P **PKPdf** 18 07 17.0 -0.4
SNR=12
KBK Karagaybulak 115.76 308 P **PKPdf** 18 07 18.2 -0.1
SNR=5.6
FRU Bishkek 116.02 308 *e*PKiKP **PKPdf** 18 07 19.0 +0.4
FRU *i* 18 08 32.0
FRU *e* 18 13 17.0
AAK Ala-Archa 116.09 308 *e*PKiKP **PKPdf** 18 07 17.9 -1.0
AAK *e* 18 08 30.6
AAK Ala-Archa 116.09 308 *e*PKPdf **PKPdf** 18 07 17.9 -1.0
AAK PKP **PKPdf** 18 07 18.2 -0.7
AAK *e*PP **PP** 18 08 30.6 -4.2
AAK *e*SKP 18 10 00.8

AAK Ala-Archa 116.09 308 P PP 18 08 31.5 -3.3
SNR=5.1
AAK Ala-Archa 116.09 308 PKP PKPdf 18 07 18.2 -0.7
comp=Z,2.1nm,0.6s,baz=185,slow=3.8,SNR=13
USP Ospenovka 116.13 309 P PKPdf 18 07 18.4 -0.4
SNR=19
EKS2 Erkin-Say 116.62 308 ePKIKP PKPdf 18 07 19.5 -0.4
EKS2 e 18 08 37.0
EKS2 Erkin-Say 116.62 308 ePKPdf PKPdf 18 07 19.5 -0.4
EKS2 ePP PP 18 08 37.0 -1.3
EKS2 eSKP 18 10 02.6
EKS2 Erkin-Say 116.62 308 P PKPdf 18 07 19.8 -0.1
SNR=6.7
AML Almayashu 116.64 308 P PKPdf 18 07 20.1 -0.2
SNR=19
SCHQ Schefferville 118.97 38 PKP PKPdf 18 07 22.9 -1.0
SCHQ Schefferville 118.97 38 PKP PKPdf 18 07 22.9 -1.0
comp=Z,2.1nm,0.7s,baz=262,slow=6.0,SNR=5.0
BRVK Borovoye 119.00 320 ePKIKP PKPdf 18 07 23.2 -0.8
BRVK e 18 08 55.8
BRVK Borovoye 119.00 320 ePKPdf PKPdf 18 07 23.2 -0.8
BRVK ePP PP 18 08 55.8 +1.8
BRVK eSKP 18 10 06.5
BRVK Borovoye 119.00 320 P PKPdf 18 07 24.0 +0.1
SNR=8.4
KKAR Karatay Array 119.04 309 ePKIKP PKPdf 18 07 23.6 -0.8
KKAR e 18 08 52.2
KKAR Karatay Array 119.04 309 ePKPdf PKPdf 18 07 23.6 -0.8
KKAR ePP PP 18 08 52.2 -2.5
KKAR eSKP 18 10 06.6
KBL Kabul 119.63 299 ePKIKP PKPdf 18 07 26.0 -0.1
KBL e 18 08 53.9
KBL Kabul 119.63 299 ePKPdf PKPdf 18 07 26.0 -0.1
KBL ePP PP 18 08 53.9 -5.3
KBL eSKP 18 10 08.4
SPITS Spitsbergen Ar 121.95 356 PKP PKPdf 18 07 29.0 -0.1
SPITS Spitsbergen Ar 121.95 356 PKP PKPdf 18 07 29.0 -0.1
comp=Z,11nm,0.6s,baz=98,slow=3.9,SNR=36
DAG Danmarks Havn 122.88 5 i PKIKP PKPdf 18 07 29.4 -1.4
DAG pmax pmax
comp=Z,3.0nm,0.7s
DAG Danmarks Havn 122.88 5 i P PKPdf 18 07 29.4 -1.4
comp=Z,4.9nm,0.7s
SFJD Kangerlussuaq 123.17 22 PKP PKPdf 18 07 31.0 -0.5
SFJD Kangerlussuaq 123.17 22 i P PKPdf 18 07 31.0 -0.5
SFJD Kangerlussuaq 123.17 22 PKP PKPdf 18 07 31.0 -0.5
comp=Z,10.0nm,0.5s,baz=231,slow=1.9
SUMG Summit 123.34 13 i PKIKP PKPdf 18 07 32.5 +0.2
SUMG pmax pmax
comp=Z,7.0nm,1.1s
SUMG Summit 123.34 13 ePKPdf PKPdf 18 07 32.4 +0.1
SUMG Summit 123.34 13 i P PKPdf 18 07 32.5 +0.2
comp=Z,6.5nm,1.1s
ARU Arti 125.09 325 i PKIKP PKPdf 18 07 35.5 0.0
ARU 18 09 29.5
ARU 18 13 44.8
ARU SS SS 18 25 45.5 -1.7
ABKAR Akbulak array 125.92 316 ePKPdf PKPdf 18 07 37.1 -0.2
ABKAR eSKP 18 10 12.9
BOSA Boshof 126.00 206 PKP PKPdf 18 07 39.3 +0.8
BOSA Boshof 126.00 206 PKP PKPdf 18 07 39.3 +0.8
comp=Z,3.7nm,0.5s,baz=184,slow=4.4,SNR=8.9
AKTO Aktyubinsk 126.91 318 PKIKP PKPdf 18 07 39.4 +0.1
AKTO Aktyubinsk 126.91 318 PKP PKPdf 18 07 39.4 +0.1
AKTO Aktyubinsk 126.91 318 PKP PKPdf 18 07 39.4 +0.1
comp=Z,8.1nm,0.5s,baz=86,slow=4.9,SNR=27
SCO Scoresbysund 128.18 10 i PKIKP PKPdf 18 07 41.4 +0.4
SCO pmax pmax
comp=Z,3.0nm,1.0s
SCO Scoresbysund 128.18 10 i P PKPdf 18 07 41.4 +0.4
comp=Z,3.2nm,1.0s
KEV Kevo 128.51 349 ePKIKP PKPdf 18 07 42.2 +0.5
KEV pmax pmax
comp=Z,4.0nm,0.5s
KEV Kevo 128.51 349 ep PKPdf 18 07 42.2 +0.5
comp=Z,4.0nm,0.5s
APA Apatity 128.96 345⇑ i PKIKP PKPdf 18 07 42.0 -0.6
APA i 18 09 39.0
APA MLR MLR
comp=Z,700nm,24.0s
ARCES ARCESS Array B 128.96 349 PKP PKPdf 18 07 42.9 +0.2
ARCES ARCESS Array B 128.96 349 PKP PKPdf 18 07 42.9 +0.2
comp=Z,8.7nm,0.4s,baz=48,slow=1.3,SNR=75
ARE0 ARCESS Array S 128.96 349 ePKPdf PKPdf 18 07 42.9 +0.3
BANOM Banah 129.79 287 P SKPbc 18 10 17.1 +1.8
SNR=5.7
HATD Hatta, Dubai 129.82 286 P SKPbc 18 10 17.1 +1.6
SNR=8.0
ASHO Ashiyiah 129.87 285 P SKPbc 18 10 17.3 +1.6
SNR=9.9
NAZ Nazwa, Dubai 130.26 286 P SKPbc 18 10 18.5 +1.4
SNR=9.1
RBK Rabkut 130.38 276 P SKPbc 18 10 19.1 +1.4
SNR=15
ASUD Al Ashush, Dub 130.52 285 P SKPbc 18 10 20.2 +2.2
SNR=7.9
ABTO Aybut 131.19 275 P SKPbc 18 10 23.2 +2.5
SNR=19
JOF Joensuu 133.12 342 ePKIKP PKPdf 18 07 49.6 -1.0
JOF Joensuu 133.12 342 ep PKPdf 18 07 49.6 -1.0
KAF Kangasniemi 135.16 344 ePKIKP PKPdf 18 07 54.1 -0.3
KAF pmax pmax
comp=Z,14nm,0.5s
KAF Kangasniemi 135.16 344 ep PKPdf 18 07 54.1 -0.3
comp=Z,14nm,0.5s
MAK Makhachkala 135.75 311 ePKIKP PKPdf 18 07 54.5 -1.6
MAK pmax pmax
comp=Z,24nm,0.6s
FINES FINESS Array B 135.78 343 SKP SKPbc 18 10 36.6 +2.4
comp=Z,27nm,1.0s,baz=57,slow=5.1,SNR=18
LSZ Lusaka 135.81 218 SKP SKPdf 18 10 37.6 -1.1
comp=Z,1.8nm,0.7s,baz=74,slow=5.3,SNR=5.5
MOS Moscow 135.82 332 ePKHKP PKPre 18 07 47.2
OBN Obninsk 136.68 331⇑ i PKIKP PKPdf 18 07 57.3 -0.1
OBN pmax pmax
comp=Z,17nm,1.0s
TSUM Tsumeb 137.46 203 SKP SKPdf 18 10 42.0 +0.4
comp=Z,1.1nm,0.7s,baz=328,slow=3.5,SNR=3.4
DGRG David-gareji 137.69 309 P SKPdf 18 10 42.4 +1.1
RDF Al-Radifah 137.70 291 eP PKPdf 18 07 50.5 -10
RDF AMb AMB 18 08 03.5
comp=Z,52nm,0.6s
MIB Mutribah 137.87 292 eP PKPdf 18 07 50.5 -10
MIB AMb AMB 18 08 03.1
comp=Z,48nm,1.2s
NAY Al-Naaiem 137.96 291 eP PKPdf 18 07 50.5 -10
NAY AMb AMB 18 07 55.1
comp=Z,6.3nm,1.4s
TBLG Delisi 138.06 310 P SKiKP 18 10 43.2 -2.0
ZEI Tsey 138.34 312 i PKIKP PKPdf 18 08 02.8 +1.6
ZEI pmax pmax
comp=Z,8.0nm,1.0s
KZR Kazreti 138.40 310 P SKiKP 18 10 44.7 -1.3
GNI Garni 138.49 308 SKP SKPdf 18 10 44.8 +2.0
comp=Z,1.9nm,0.4s,baz=166,slow=1.8,SNR=9.3
KBZ Khabaz 138.71 314 PKHKP PKPpre 18 07 54.2
KBZ Khabaz 138.71 314 PKPpre PKPpre 18 07 54.2
KBZ SKP 18 10 45.5
KBZ Khabaz 138.71 314 PKhKP PKPpre 18 07 54.2
comp=Z,0.9nm,0.4s,baz=45,slow=1.4,SNR=5.8
KBZ SKP 18 10 45.5
comp=Z,4.8nm,0.9s,baz=104,slow=2.2,SNR=11
ONI Oni 138.71 312 P SKPdf 18 10 44.9 +1.8
KIV Kislovodsk 138.78 314⇑ i PKIKP PKPdf 18 08 01.6 -0.2
KIV pmax pmax
comp=Z,16nm,1.3s
KMBO Kilima Mbogo 138.98 243 PKPpre PKPpre 18 07 56.7
KMBO ePKPdf PKiKP 18 08 04.8 -0.9
KMBO SKP 18 10 47.0
KMBO eSKP 18 10 47.6
KMBO Kilima Mbogo 138.98 243 P SKiKP 18 10 47.7 -0.6
SNR=6.1
KMBO Kilima Mbogo 138.98 243 PKhKP PKPpre 18 07 56.7
comp=Z,1.4nm,0.7s,baz=116,slow=7.6,SNR=3.7
KMBO SKP 18 10 47.0
comp=Z,16nm,1.1s,baz=64,slow=1.7,SNR=13
NB2 NORSAR Subarra1 139.04 353 PKP PKPpre 18 07 52.5
comp=Z,3.5nm,0.7s,baz=10,slow=3.2
NOA NORSAR Array B 139.04 353 PKPpre PKPpre 18 07 52.6
NOA SKP 18 10 45.6
NOA NORSAR Array B 139.04 353 PKhKP PKPpre 18 07 52.6
comp=Z,3.2nm,0.6s,baz=18,slow=2.8,SNR=22
NOA SKP 18 10 45.6
comp=Z,8.5nm,1.0s,baz=16,slow=4.4,SNR=12
AKH Akhalkalaki 139.05 310 P SKiKP 18 10 45.1 -2.4

CLDR Caldiran 139.37 307 eP PKPdf 18 07 56.2 -7.0
HFS Hagfors 139.59 351 PKPpre PKPpre 18 07 54.4
HFS SKP 18 10 45.5
HFS Hagfors 139.59 351 PKhKP PKPpre 18 07 54.4
comp=Z,15nm,0.4s,baz=85,slow=4.8,SNR=70
HFS SKP 18 10 45.5
comp=Z,20nm,1.0s,baz=77,slow=1.9,SNR=11
HKR Hakkari 139.87 304 eP PKPdf 18 07 58.0 -6.1
CUKT Cukurca 140.05 304 eP PKPdf 18 07 57.2 -7.2
BHD Baghdad 140.11 298 ex SKPdf 18 10 38.6 -7.0
BHD ex x 18 12 21.7
BHD ex x 18 14 35.5
BHD ex x 18 17 38.0
BHD ex x 18 17 50.8
IZAR Zarasai 140.36 338 eP PKPdf 18 07 58.2 -5.9
IZAR AMB AMB 18 08 01.4
comp=Z,12nm,0.6s
ISAL Salakas 140.55 338 eP PKPdf 18 07 58.8 -5.7
ISAL AMB AMB 18 08 01.9
comp=Z,5.6nm,0.8s
KONO Kongsberg 140.58 354 ePKHKP PKPpre 18 07 58.1
KONO Kongsberg 140.58 354 ePKPpre PKPpre 18 07 58.1
KONO eSKP 18 10 48.5
IIGN Ignalina 140.69 338 eP PKPdf 18 07 59.4 -5.4
IIGN AMB AMB 18 08 01.6
comp=Z,5.5nm,0.6s
MICGM Minsk 140.74 336 eP SKPbc 18 10 49.0 +0.7
SOC Sochi 140.91 315 ePKHKP PKPpre 18 07 56.5
SOC i 18 08 06.1
SOC e 18 11 12.6
SOC ePPP PPP 18 14 32.4
EZM Erzurum 141.05 309 eP PKPdf 18 08 01.8 -4.5
VRTB Varto-Mus 141.20 307 eP PKPdf 18 08 02.7 -3.7
BAYT Ayd¯–ntepe-Bay 141.78 310 eP PKPdf 18 08 01.7 -5.7
BNGB Bing¶ll 141.83 307 eP PKPdf 18 08 01.4 -6.1
ANN Anapa 141.87 318 i PKHKP PKPpre 18 08 01.7
ANN e 18 11 15.0
ANN e 18 14 27.8
ANN pmax pmax
comp=Z,57nm,1.3s
GUMT Gumushane 142.24 310 eP PKPdf 18 08 05.0 -3.2
ERZN Erzincan 142.35 309 eP PKPdf 18 08 04.0 -4.4
FURI Furi 142.42 257 P PKPdf 18 08 07.5 -2.0
FURI S SKiKP 18 10 55.9 +0.5
DIY Diyarbakir 142.49 306 eP PKPdf 18 08 05.8 -2.9
MVH1 Achvaich 142.49 5 eP PKPdf 18 08 03.2 -4.7
MVH1 Achvaich 142.49 5 P PKPdf 18 08 03.2 -4.7
DIYA Diyarbakir 142.56 306 i P PKPdf 18 08 06.1 -2.7
ESPY Espiye-Giresun 142.61 311 eP PKPdf 18 08 04.7 -4.0
KAC Achnashellach 142.81 6 eP PKPdf 18 08 05.5 -3.0
KAC Achnashellach 142.81 6 P PKPdf 18 08 05.5 -3.0
SUW Suwalki 142.81 339 ePKHKP PKPdf 18 08 05.7 -2.9
SUW Suwalki 142.81 339 ePKPdf PKPdf 18 08 05.7 -2.9
SUW Suwalki 142.81 339 ePKP PKPdf 18 08 05.7 -2.9
PTK Pertek 142.82 308 eP PKPdf 18 08 07.2 -2.2
MCD Coleburn Disti 142.90 4 eP PKPdf 18 08 05.0 -3.6
MCD Coleburn Disti 142.90 4 P PKPdf 18 08 05.0 -3.6
KPL Plockton 142.93 7 eP PKPdf 18 08 04.9 -3.7
KPL Plockton 142.93 7 P PKPdf 18 08 04.9 -3.7
AKASG Malin Array Be 142.94 331 PKHKP PKPpre 18 08 05.3
AKASG Malin Array Be 142.94 331 PKPpre PKPpre 18 08 05.3
AKASG SKPbc SKPbc 18 10 53.9 +0.1
AKASG Malin Array Be 142.94 331 PKhKP PKPpre 18 08 05.3
comp=Z,65nm,0.5s,baz=43,slow=4.1,SNR=411
AKASG SKPbc SKPbc 18 10 53.9 +0.1
comp=Z,19nm,1.0s,baz=43,slow=2.6,SNR=18
SHEL Horse Pasture 142.95 168 ePKIKP PKPdf 18 08 09.6 -0.5
SHEL Horse Pasture 142.95 168 ePKPdf PKPdf 18 08 09.6 -0.5
AK01 Malin Array Si 142.95 331 ePKPdf PKPdf 18 08 05.6 -3.3
AK01 eSKP 18 10 53.1
KIEV Kiev 142.95 331 ePKHKP PKPdf 18 08 05.3 -3.6
KIEV Kiev 142.95 331 ePKPdf PKPdf 18 08 05.3 -3.6
KIEV eSKP 18 10 50.7
MDO Dochfour 142.95 5 eP PKiKP 18 08 05.6 -6.6
MDO Dochfour 142.95 5 P PKiKP 18 08 05.6 -6.6
AK02 Malin Array Si 142.98 331 ePKPdf PKPdf 18 08 05.8 -3.2
AK02 eSKP 18 10 51.5
SVRC Sivrice-ELAZID 143.04 307 eP PKPab 18 08 07.0 -0.5
MME1 Meikle Cairn 143.19 4 eP PKPab 18 08 06.1 -1.1
MME1 Meikle Cairn 143.19 4 P PKPab 18 08 06.1 -1.1
SUSE Susehri 143.24 310 i P PKPab 18 08 08.1 0.0
ILIC ilic-Erzincan 143.24 309 eP PKPab 18 08 07.2 -0.9
ELZG Elazig 143.24 307 i P PKPdf 18 08 09.3 -0.7
KEMA Kemaliye 143.35 309 i P PKPbc 18 08 09.2 +0.5
MYA Malataya 143.71 307 eP PKPab 18 08 09.9 0.0
MALT Malatya 143.72 307 eP PKPbc 18 08 08.8 -1.1
MALT Malatya 143.72 307 ePKIKP PKPbc 18 08 09.6 -0.3
MALT Malatya 143.72 307 ePKPdf PKPbc 18 08 09.6 -0.3
MALT epPKPdf pPKPdf 18 10 23.3 -0.2
MALT eSKP 18 10 58.1
MALT Malatya 143.72 307 i P PKPdf 18 08 10.6 -0.2
MUD Monsted U'grnd 143.76 353 i PKIKP PKPbc 18 08 08.8 -0.5
MUD pmax pmax
comp=Z,92nm,0.9s
MUD Monsted U'grnd 143.76 353 i P PKPbc 18 08 08.8 -0.5
comp=Z,92nm,0.8s
RSDY Resadiye-TOKAT 143.79 311 eP PKPbc 18 08 09.0 -1.0
SIM Simferopol' 143.85 320 dePKIKP PKPab 18 08 10.2 +0.1
SIM pmax pmax
comp=Z,144nm,0.9s
ELO Logie Almond 143.97 5 eP PKPbc 18 08 09.7 -0.3
ELO Logie Almond 143.97 5 P PKPbc 18 08 09.7 -0.3
COP Copenhagen 144.05 350 i PKIKP PKPbc 18 08 10.0 -0.2
COP pmax pmax
comp=Z,42nm,0.8s
COP Copenhagen 144.05 350 i P PKPbc 18 08 10.0 -0.2
comp=Z,42nm,0.8s
ATAB Bozova 144.08 306 i P PKPdf 18 08 11.5 +0.1
ERBA Erbaa 144.08 312 i P PKPdf 18 08 11.4 +0.1
AKCD Akcadag 144.10 307 i P PKPdf 18 08 11.8 +0.3
BSD Bornholm Skovb 144.12 347 i PKIKP PKPbc 18 08 09.5 -0.9
BSD pmax pmax
comp=Z,86nm,0.8s
BSD Bornholm Skovb 144.12 347 i P PKPbc 18 08 09.5 -0.9
comp=Z,86nm,0.8s
EAB Aberfoyle 144.19 6 eP PKPbc 18 08 09.8 -0.9
EAB Aberfoyle 144.19 6 P PKPbc 18 08 09.8 -0.9
DARE Darende-Malaty 144.33 308 eP PKPbc 18 08 09.3 -2.5
KVT Kavak 144.41 313 eP PKPdf 18 08 10.4 -1.4
TOKA Tokat 144.42 311 i P PKPbc 18 08 12.0 0.0
LLD Lille Linde 144.42 350 ePKHKP PKPdf 18 08 07.6 -3.7
LLD pmax pmax
comp=Z,56nm,0.9s
LLD Lille Linde 144.42 350 i P PKPdf 18 08 07.6 -3.7
comp=Z,56nm,0.9s
PGBU Glenifferbraes 144.55 6 eP PKPdf 18 08 10.7 -0.8
PGBU Glenifferbraes 144.55 6 P PKPdf 18 08 10.7 -0.8
MBAR Mbarara 144.56 237 PKP PKPbc 18 08 13.3 0.0
MBAR Mbarara 144.56 237 PKP PKPbc 18 08 13.3 0.0
comp=Z,34nm,0.8s,baz=108,slow=5.0,SNR=48
ESY Stoneypath 144.60 4 eP PKPdf 18 08 11.4 -0.2
ESY Stoneypath 144.60 4 P PKPdf 18 08 11.4 -0.2
EAU Auchinoon 144.61 5 eP PKPdf 18 08 11.2 -0.4
EAU Auchinoon 144.61 5 P PKPdf 18 08 11.2 -0.4
DIKM Dikmen 144.71 314 eP PKPdf 18 08 11.6 -0.7
EBL Broad Law 144.71 5 eP PKPdf 18 08 10.4 -1.4
EBL Broad Law 144.71 5 P PKPdf 18 08 10.4 -1.4
GAZ Gaziantep 144.99 306 eP PKPdf 18 08 11.8 -1.2
BYBT Boyabat 145.12 314 eP PKPab 18 08 14.5 -0.5
KMRS Kahramanmaras 145.12 307 eP PKPdf 18 08 12.5 -0.7
EKA Eskdalemuir Ar 145.14 5 PKPbc PKPbc 18 08 13.1 -0.5
EKA Eskdalemuir Ar 145.14 5 PKPbc PKPbc 18 08 13.1 -0.5
comp=Z,7.1nm,0.5s,baz=351,slow=3.0,SNR=45
ESK Eskdalemuir 145.15 5 eP PKPdf 18 08 11.0 -1.6
ESK Eskdalemuir 145.15 5 P PKPdf 18 08 11.0 -1.6
ESK Eskdalemuir 145.15 5 ePKIKP PKPdf 18 08 12.0 -0.6
ESK Eskdalemuir 145.15 5 i PKIKP PKPbc 18 08 13.4 -0.2
ESK Eskdalemuir 145.15 5 ePKPdf PKPdf 18 08 12.0 -0.6
SARI SarD1z-Kayseri 145.17 308 eP PKPdf 18 08 13.0 -0.4
GKP Gorka Klasztor 145.25 344 ePKP PKPbc 18 08 13.8 -0.1
ECK Cauldkaine Hil 145.29 5 eP PKPdf 18 08 12.9 +0.1
ECK Cauldkaine Hil 145.29 5 P PKPdf 18 08 12.9 +0.1
BZK Bozkurt 145.40 315 eP PKPdf 18 08 13.0 -0.4
BEL Belsk 145.43 339 ePKP PKPbc 18 08 14.2 -0.3
BNN Bunyan 145.43 309 eP PKPdf 18 08 13.7 -0.1
GAL1 Galloway 145.46 6 eP PKPbc 18 08 14.0 -0.5
GAL1 Galloway 145.46 6 P PKPbc 18 08 14.0 -0.5
YOZ Yozgat 145.50 311 eP PKPbc 18 08 15.5 +0.2
ANDN Andirin 145.51 307 i P PKPbc 18 08 15.6 +0.2
KIS Kishinev 145.63 326 i PKIKP PKPdf 18 08 13.5 -0.2
KIS pmax pmax
comp=Z,400nm,1.8s
KIS pmax pmax
KIS Kishinev 145.63 326 i PKIKP PKPdf 18 08 13.5 -0.2
KIS M x 18 08 14.0
comp=Z,400nm,1.8s
KIS Kishinev 145.63 326 ePP PP 18 11 22.0 -20
CORM Corum 145.77 312 eP PKPdf 18 08 14.9 +0.6
TOS Tosya 145.81 314 eP PKPbc 18 08 16.5 +0.4
LVV L'vov 145.85 344 ePKIKP PKPdf 18 08 13.9 -0.1
KESW Keswick, Cumbr 145.88 5 eP PKPdf 18 08 13.6 -0.3
KESW Keswick, Cumbr 145.88 5 P PKPdf 18 08 13.6 -0.3
KOZT Kozan 145.93 307 eP PKPdf 18 08 15.3 +0.8
BALT Daday 146.01 315 eP PKPdf 18 08 14.9 +0.2
ILGA Ilgaz 146.01 314 eP PKPdf 18 08 14.9 +0.1
BSEG Bad Segeberg 146.07 351 ePKIKP PKPbc 18 08 16.3 +0.1
BSEG Bad Segeberg 146.07 351 ePKPbc PKPbc 18 08 16.3 +0.1
HLG Helgoland 146.14 353 ePKPbc PKPbc 18 08 16.8 +0.4
IAS Iasi 146.14 328⇑ i P PKPbc 18 08 17.0 +0.3
AVNT Avonos 146.17 310 eP PKPdf 18 08 14.8 -0.3
CDAG Cicekdag 146.18 311 eP PKPdf 18 08 15.3 +0.3
LEOM Leova 146.27 326 i P PKPbc 18 08 17.2 +0.2
CANT Cankiri 146.28 313 eP PKPbc 18 08 16.7 -0.6
ELDT Eldivan 146.46 313 i P PKPbc 18 08 18.3 +0.2
ASF Jabal al Asfar 146.51 297 PKPbc PKPbc 18 08 19.0 +0.7
ASF Jabal al Asfar 146.51 297 PKPbc PKPbc 18 08 19.0 +0.7
comp=Z,31nm,0.9s,baz=324,slow=0.9,SNR=36
KWP Kalwaria Pacla 146.53 335 ePKIKP PKPbc 18 08 17.5 -0.2
KWP Kalwaria Pacla 146.53 335 ePKPbc PKPbc 18 08 17.5 -0.2
KWP Kalwaria Pacla 146.53 335 i P PKPbc 18 08 17.9 +0.2
KWP Kalwaria Pacla 146.53 335 ePKP PKPbc 18 08 17.7 0.0
KRTS Karatas 146.58 306 eP PKPbc 18 08 17.6 -0.6
NIG Nigde 146.61 309 eP PKPdf 18 08 15.7 -0.3
SAFT Safranbolu 146.61 315 eP PKPdf 18 08 15.9 +0.4
BR131 Keskin Array S 146.65 312 ePKPdf PKPdf 18 08 15.0 -0.9
BR131 ePKPbc PKPbc 18 08 18.2 -0.3
BRTR Keskin Array B 146.65 312 PKPbc PKPbc 18 08 18.1 -0.5
BRTR Keskin Array B 146.65 312 PKPbc PKPbc 18 08 18.1 -0.5
comp=Z,18nm,0.5s,baz=147,slow=4.8,SNR=161
KAMT Kaman 146.75 311 eP PKPbc 18 08 18.8 0.0
DLF Lyons Farm 146.77 9 i P PKPbc 18 08 17.5 -0.7
GULE Gulek 146.78 307 eP PKPdf 18 08 15.8 -0.4
TLCR 146.79 324 i P PKPbc 18 08 18.7 +0.2
HWQ Hawqa 146.81 301 eP PKPbc 18 08 18.3 -0.8
RUE Ruedersdorf 146.82 346 ePKPbc PKPbc 18 08 18.5 +0.2
RUE Ruedersdorf 146.82 346 ePKPdf PKPdf 18 08 16.6 +1.1
WME Myndd Eilian 146.95 7 eP PKPdf 18 08 16.0 +0.3
WME Myndd Eilian 146.95 7 P PKPdf 18 08 16.0 +0.3
BUR08 Bucovina Ar. S 146.97 330 ePKPdf PKPdf 18 08 16.9 +0.8
BUR08 ePKPbc PKPbc 18 08 19.8 +0.7
LHO Holmfirth 147.01 4 eP PKPbc 18 08 17.6 -1.3
LHO Holmfirth 147.01 4 P PKPbc 18 08 17.6 -1.3
WLF1 Llynfaes 147.05 7 eP PKPdf 18 08 17.2 +1.4
WLF1 Llynfaes 147.05 7 P PKPdf 18 08 17.2 +1.4
TESR 147.07 327 i P PKPbc 18 08 19.1 -0.1
YRC Rhoscolyn 147.07 7 eP PKPdf 18 08 16.6 +0.8
YRC Rhoscolyn 147.07 7 P PKPdf 18 08 16.6 +0.8
RCY Rachaya 147.09 300 eP PKPbc 18 08 19.9 0.0
MERS Mersin 147.12 307 eP PKPdf 18 08 17.9 +1.3
WPM1 Penmaenmawr 147.13 6 eP PKPbc 18 08 18.0 -1.1
WPM1 Penmaenmawr 147.13 6 P PKPbc 18 08 18.0 -1.1
OJC Ojcow 147.13 338 ePKP2 PKPab 18 08 23.5 +0.7
OJC Ojcow 147.13 338 ePKPdf PKPdf 18 08 16.1 0.0
OJC ePKPbc PKPbc 18 08 19.2 -0.1
OJC ePKPab PKPab 18 08 23.5 +0.7
BHL Bhannes 147.14 301 eP PKPbc 18 08 19.9 -0.1
AFSR Af˙ar-Bala (A 147.17 312 eP PKPdf 18 08 16.5 -0.1
CFR Carcaliu 147.17 324 i P PKPbc 18 08 19.3 -0.2
ANTO Ankara 147.17 313 eP PKPdf 18 08 17.2 +0.6
ANTO Ankara 147.17 313 ePKIKP PKPdf 18 08 17.5 +0.9
ANTO Ankara 147.17 313 ePKPdf PKPdf 18 08 17.5 +0.9
ANTO epPKPdf pPKPdf 18 10 32.0 +2.6
ANTO Ankara 147.17 313 i P PKPbc 18 08 19.9 +0.1
ANTO Ankara 147.17 313 P PKPdf 18 08 16.6 0.0
SNR=48
LOD Lodumlu 147.19 313 eP PKPdf 18 08 18.0 +1.4
KOLS Kolonicke sedl 147.26 335 ePKIKP PKPdf 18 08 16.7 +0.3
KOLS e 18 08 20.6
KOLS Kolonicke sedl 147.26 335 ePKP PKPdf 18 08 16.7 +0.3
KOLS e 18 08 20.6
KOLS e 18 10 33.3
PETR 147.30 326⇑ i P PKPbc 18 08 21.2 +1.4
YRE Yr Eifl 147.35 7 eP PKPdf 18 08 15.3 -1.1
YRE Yr Eifl 147.35 7 P PKPdf 18 08 15.3 -1.1
SULT Sultanhani-AKS 147.37 309 eP PKPdf 18 08 18.2 +1.2
VRI Vrincioaia 147.47 327 i P PKPbc 18 08 20.0 -0.3
UZH Uzhgorod 147.49 334 ePKIKP PKPbc 18 08 20.1 -0.1
NRDL Niedersach Rie 147.50 350 ePKPdf PKPdf 18 08 16.4 -0.1
NRDL ePKPbc PKPbc 18 08 20.2 +0.2
PLOR Plostina 147.51 327 i P PKPab 18 08 20.2 +0.2
MMAI Mount Meron Ar 147.56 299 PKPbc PKPbc 18 08 20.6 +0.6
MMAI pPKPbc pPKPbc 18 10 32.8 +1.1
MMAI Mount Meron Ar 147.56 299 PKPbc PKPbc 18 08 21.6 +0.6
comp=Z,54nm,0.5s,baz=71,slow=5.8,SNR=226
MMAI pPKPbc pPKPbc 18 10 32.8 +1.1
comp=Z,28nm,1.0s,baz=70,slow=4.7,SNR=4.3
CRVS Cervenica-Dubn 147.61 335 ePKIKP PKPdf 18 08 16.9 0.0
CRVS Cervenica-Dubn 147.61 335 ePKP PKPdf 18 08 16.9 0.0
CRVS e 18 08 20.9
CRVS e 18 10 32.1
NIE Niedzica 147.62 337 ePKP2 PKPab 18 08 23.8 -1.0
NIE Niedzica 147.62 337 ePKIKP PKiKP 18 08 21.7 -0.4
NIE ePKPab PKPab 18 08 23.8 -1.0
GRER 147.66 326⇑ i P PKPbc 18 08 22.4 +1.6
KSP Ksiaz 147.69 343 ePKP2 PKPab 18 08 25.3 +0.3
KSP eSS SS 18 30 10.0 -1.5
KSP Ksiaz 147.69 343 ePKP PKPbc 18 08 21.2 +0.5
BMR Baia Mare 147.72 332 i P PKPbc 18 08 21.2 +0.4
TRPA Tarpa 147.78 333 i P PKPbc 18 08 20.8 -0.2
TRPA Tarpa 147.78 333 i e PKPbc 18 08 21.3 +0.3
RAC Raciborz 147.78 340 ePKP2 PKPbc 18 08 21.4 +0.5
EREN Erenkoy 147.84 304 eP PKPbc 18 08 21.3 -0.2
HLM1 Long Mynd 147.96 5 eP PKPdf 18 08 18.1 +0.7
HLM1 Long Mynd 147.96 5 P PKPdf 18 08 18.1 +0.7
MDUB Mudurnu 147.97 315 eP PKPbc 18 08 20.6 -1.3
IBBN Ibbenburen 148.00 353 ePKPdf PKPdf 18 08 17.5 +0.1
IBBN ePKPbc PKPbc 18 08 21.0 -0.4
OKC Ostrava-Krasne 148.01 340 ePKP2 PKPbc 18 08 22.2 +0.7
OKC Ostrava-Krasne 148.01 340⇑ ePKP PKPbc 18 08 22.2 +0.7
OKC ePKPAB PKPab 18 08 27.0 +0.6
OKC ex x 18 10 37.5
OKC eSKP 18 11 29.5
ISP Istrita 148.06 326⇑ i P PKPbc 18 08 22.0 +0.1
UPC Upice 148.07 343 ePKHKP PKPdf 18 08 18.1 +0.5
UPC Upice 148.07 343 ePKPDF PKPdf 18 08 18.1 +0.5
UPC ⇑ ePKP PKiKP 18 08 22.5 -0.4
PSN Preselentsi 148.07 322 P PKPbc 18 08 22.5 +0.6
CLL Collm 148.09 346⇑ ePKHKP PKPdf 18 08 18.0 +0.4
CLL i 18 08 26.5
CLL e 18 11 51.0
CLL pmax pmax
comp=Z,19nm,1.6s
CLL pmax pmax
comp=Z,158nm,1.3s
CLL pmax pmax
comp=Z,95nm,1.3s
CLL pmax pmax
comp=Z,37nm,1.9s
CLL Collm 148.09 346 ePKPdf PKPdf 18 08 17.5 -0.1
CLL ePKPbc PKPbc 18 08 21.9 +0.3
CLL epPKPbc pPKPbc 18 10 37.6 +5.0
CLL Collm 148.09 346 ePKPdf PKPdf 18 08 18.0 +0.4
comp=Z,19nm,1.6s
CLL i PKPbc PKPbc 18 08 21.7 +0.1
comp=Z,158nm,1.3s
CLL ⇑ i PKPab PKPab 18 08 26.5 -0.1
comp=Z,95nm,1.3s
CLL epPKPbc pPKPbc 18 10 34.0 +1.4
CLL e 18 10 39.0
CLL eSKPbc SKiKP 18 11 09.0 +3.5
CLL esPKPdf sPKPdf 18 11 28.0 +2.7
CLL ePKSdf PKSdf 18 11 51.0 -1.4
comp=Z,37nm,1.9s
CLL epPP 18 13 54.0
CLL esPP 18 14 47.0
CLL eSKSac SKSac 18 17 48.0 -2.0
CLL esSKSac 18 21 42.0
CLL epPSKS 18 24 06.0
CLL esPSKS 18 25 10.0
CLL esPPS 18 27 36.0
CLL eSS SS 18 30 06.0 -10

CLL e(sSS) 18 33 24.0
CLL eSSS SSS 18 35 56.0
CLL esSSS 18 39 18.0
CLZ Clausthal 148.09 350 ePKHKP **PKPdf 18 08 17.9 +0.2**
CLZ Clausthal 148.09 350 ePKPdf **PKPdf 18 08 17.9 +0.2**
CLZ ePKPbc **PKPbc 18 08 22.1 +0.4**
CLZ epPKPbc **pPKPbc 18 10 38.0 +5.4**
PHNC Paralimni 148.11 304 P **PKPbc 18 08 22.4 +0.2**
comp=Z,1.3nm,0.7s
DPC Dobruska-Polom 148.12 342 ePKHKP **PKPdf 18 08 18.3 +0.5**
DPC e 18 08 28.0
DPC Dobruska-Polom 148.12 342 ePKPDF **PKPdf 18 08 18.3 +0.5**
DPC ⇑ePKP **PKiKP 18 08 22.8 -0.3**
DPC ePKPAB **PKPab 18 08 28.0 +1.1**
DPC epPKP **pPKPdf 18 10 34.5 +3.9**
DPC esPKP 18 11 30.5
MLR Muntele Rosu 148.12 327 PKPbc **PKPbc 18 08 21.9 -0.2**
MLR Muntele Rosu 148.12 327⇓*i*P **PKPbc 18 08 21.9 -0.2**
MLR Muntele Rosu 148.12 327 PKPbc **PKPbc 18 08 21.9 -0.2**
comp=Z,4.3nm,0.4s,baz=12,slow=2.3,SNR=72
LADK Ladik-KONYA 148.20 310 e**P PKPbc 18 08 21.3 -1.2**
KRLC Kraliky 148.23 341 ePKP2 **PKPbc 18 08 22.9 +0.8**
KRLC Kraliky 148.23 341⇑ePKP **PKPbc 18 08 22.9 +0.8**
KRLC epPKP **pPKPdf 18 10 35.7 +4.9**
KDHN Kadinhani 148.24 311 e**P PKPbc 18 08 22.2 -0.4**
SVRH Sivrihisar-ESK 148.24 313 e**P PKPbc 18 08 22.3 -0.3**
MORC Moravsky Berou 148.26 340 ePKIKP **PKPdf 18 08 18.0 0.0**
MORC Moravsky Berou 148.26 340 ePKPdf **PKPdf 18 08 18.0 0.0**
MORC ePKPbc **PKPbc 18 08 22.7 +0.5**
MORC epPKPdf **pPKPdf 18 10 32.2 +1.3**
MORC Moravsky Berou 148.26 340⇓*i*P **PKPbc 18 08 22.3 +0.1**
BRG Berggiesshubel 148.28 345 *i* PKP **PKPdf 18 08 17.8 -0.2**
comp=Z,50nm,2.0s
BRG *e* 18 08 22.6
comp=Z,346nm,2.0s
BRG *e* 18 10 33.5
comp=Z,75nm,1.8s
BRG Berggiesshubel 148.28 345 *i* PKIKP **PKPdf 18 08 17.8 -0.2**
BRG pmax pmax
comp=Z,51nm,2.0s
BRG pmax pmax
comp=Z,346nm,2.0s
BRG pmax pmax
comp=Z,75nm,1.8s
BRG Berggiesshubel 148.28 345 ePKPdf **PKPdf 18 08 17.6 -0.3**
BRG ePKPbc **PKPbc 18 08 22.4 +0.3**
BRG epPKPbc **pPKPbc 18 10 38.4 +5.3**
KONT Konya--Tatoy 148.30 310 e**P PKPbc 18 08 21.4 -1.3**
FBE Freiberg 148.37 346 ePKPdf **PKPdf 18 08 18.5 +0.4**
FBE ePKPbc **PKPbc 18 08 22.9 +0.5**
FBE epPKPbc **pPKPbc 18 10 38.9 +5.5**
LFK Lefkose 148.41 304 e**P PKPbc 18 08 22.7 -0.4**
PVCC Panska Ves 148.44 344 ePKHKP **PKPdf 18 08 19.0 +0.8**
PVCC Panska Ves 148.44 344 ePKPDF **PKPdf 18 08 19.0 +0.8**
PVCC ⇑ePKP **PKiKP 18 08 23.5 -0.2**
PVCC *ex* x 18 10 38.6
PVCC esPKP 18 11 28.2
GULT Gulveren 148.44 315 e**P PKPbc 18 08 22.3 -0.7**
WTSB Winterswijk 148.44 354 ePKPdf **PKPbc 18 08 22.4 0.0**
WTSB eX 18 08 27.9
MCH1 Michaelchurch 148.46 5 e**P PKPdf 18 08 18.2 0.0**
MCH1 Michaelchurch 148.46 5 P **PKPdf 18 08 18.2 0.0**
SULR 148.51 325⇑*i*P **PKPdf 18 08 19.5 +1.0**
SSW Stow on the Wo 148.59 4 e**P PKPbc 18 08 21.5 -1.4**
SSW Stow on the Wo 148.59 4 P **PKPbc 18 08 21.5 -1.4**
EIL Elat 148.60 293 PKPbc **PKPbc 18 08 24.2 +0.6**
EIL Elat 148.60 293 PKPbc **PKPbc 18 08 24.2 +0.6**
comp=Z,42nm,0.9s,baz=57,slow=1.8,SNR=23
VOIR 148.62 327⇓*i*P **PKPbc 18 08 23.5 +0.2**
GPA Golpazari 148.65 315 e**P PKPbc 18 08 23.4 0.0**
ESKT Eskisehir 148.66 313 e**P PKPbc 18 08 22.0 -1.6**
CSS Prodhromos 148.67 304 P **PKPbc 18 08 23.9 +0.2**
comp=Z,1.3nm,0.7s
CSS Prodhromos 148.67 304 e**P PKPbc 18 08 22.0 -1.6**
CSS Prodhromos 148.67 304 ePKPbc **PKPbc 18 08 22.7 -1.0**
MAMC Mammari 148.69 304 P **PKPbc 18 08 23.9 +0.2**
DRGR 148.74 332⇓*i*P **PKPbc 18 08 23.4 -0.1**
BORA Eskisehir 148.76 314 e**P PKPbc 18 08 22.4 -1.4**
PRD Provadia 148.82 322 P **PKPbc 18 08 24.1 +0.4**
ARR Arges 148.87 328⇓*i*P **PKPbc 18 08 24.6 +0.7**
PRA Prague 148.89 344 PKPDF **PKPdf 18 08 19.0 +0.1**
PRA ⇑PKP **PKPbc 18 08 24.0 +0.3**
PRA PKPAB **PKPab 18 08 31.0 +1.0**
PRA pPKP **pPKPdf 18 10 37.0 +5.2**
BUG Bochum--Univer 148.91 353 ePKPbc **PKPbc 18 08 23.6 0.0**
BUG epPKPbc **pPKPbc 18 10 40.9 +6.1**
VYHS Vyhne 148.93 338 ePKIKP **PKPdf 18 08 19.2 +0.1**
VYHS e 18 08 31.3
VYHS Vyhne 148.93 338 ePKP **PKPdf 18 08 19.2 +0.1**
VYHS e 18 08 24.6
VYHS e 18 08 31.3
VYHS e 18 10 35.3
PRU Pruhonice 148.94 344 ePKIKP **PKPdf 18 08 19.3 +0.3**
PRU e 18 08 30.5
PRU Pruhonice 148.94 344 ePKPDF **PKPdf 18 08 19.3 +0.3**
PRU ⇑ePKP **PKPbc 18 08 24.1 +0.3**
PRU ePKPAB **PKPab 18 08 30.5 +0.3**
PRU epPKP **pPKPdf 18 10 36.6 +4.7**
PRU esPKP 18 11 32.9
PRU *ex* x 18 14 52.0
LEF Lefka 148.96 304 e**P PKPbc 18 08 22.9 -1.4**
VRAC Vranov 148.97 341 PKPbc **PKPbc 18 08 23.6 -0.3**
VRAC Vranov 148.97 341⇑*i*P **PKPbc 18 08 24.8 +0.9**
VRAC Vranov 148.97 341 PKPbc **PKPbc 18 08 23.6 -0.3**
comp=Z,22nm,1.0s,baz=25,slow=2.2,SNR=26
BOLV Bolvadin 148.97 312 *i* P **PKPbc 18 08 24.1 -0.3**
MOX Moxa 149.00 348 ePKIKP **PKPdf 18 08 18.7 -0.4**
MOX Moxa 149.00 348 ePKPdf **PKPdf 18 08 18.7 -0.4**
MOX ePKPbc **PKPbc 18 08 24.1 +0.1**
MOX epPKPbc **pPKPbc 18 10 41.1 +5.9**
GAZI Gazipasa 149.01 307 *i* P **PKPbc 18 08 23.4 -1.0**
PSZ Piszkesteto 149.01 336 ePKIKP **PKPdf 18 08 19.1 -0.2**
PSZ Piszkesteto 149.01 336 ePKPdf **PKPdf 18 08 19.1 -0.2**
PSZ ePKPbc **PKPbc 18 08 24.3 +0.1**
PSZ Piszkesteto 149.01 336⇓*i*P **PKPbc 18 08 24.2 +0.1**
PSZ Piszkesteto 149.01 336⇓*e* **PKPbc 18 08 24.6 +0.4**
PLN Plauen 149.04 347 ePKPdf **PKPdf 18 08 19.0 -0.2**
PLN ePKPbc **PKPbc 18 08 24.2 +0.1**
PLN ePKPab **PKPab 18 08 30.4 -0.2**
PLN epPKPbc **pPKPbc 18 10 41.0 +5.7**
UBBA Unterbreizbach 149.14 350 ePKPdf **PKPdf 18 08 19.1 -0.1**
UBBA ePKPbc **PKPbc 18 08 23.9 -0.2**
UBBA ePKPab **PKPab 18 08 30.2 -0.6**
UBBA epPKPbc **pPKPbc 18 10 40.7 +5.3**
ALFC Alevga 149.17 305 P **PKPbc 18 08 24.4 -0.5**
comp=Z,1.8nm,0.5s
NKC Novy Kostel 149.22 346 ePKHKP PKPdf 18 08 25.2 +5.7
NKC Novy Kostel 149.22 346⇑ePKP PKPdf 18 08 25.2 +5.7
NKC epPKP pPKPdf 18 10 39.6 +7.2
NKC *ex* x 18 14 50.3
LOT Lotru 149.24 329⇓*i*P **PKPbc 18 08 24.1 -0.7**
HUMR Humele 149.28 326⇓*i*P **PKPbc 18 08 24.3 -0.5**
SMOL Smolenice 149.40 339 ePKHKP PKPdf 18 08 26.1 +6.3
SMOL e 18 08 33.5
SMOL Smolenice 149.40 339 ePKP PKPdf 18 08 26.1 +6.3
SMOL e 18 08 33.5
AKMC Akamas 149.42 305 P **PKPbc 18 08 24.8 -0.7**
PPCY Paphos 149.46 304 P **PKPbc 18 08 24.9 -0.6**
MANZ Manzenberg 149.53 347 ePKPdf **PKPdf 18 08 19.9 -0.1**
MANZ ePKPbc **PKPbc 18 08 25.4 +0.1**
MANZ epPKPbc **pPKPbc 18 10 40.7 +4.1**
BEBN Eben Emael 149.71 355 PKPbc **PKPbc 18 08 25.6 0.0**
BEBN PKPab **PKPab 18 08 33.1 -0.1**
BUD Budapest 149.71 336⇓*e* **PKPbc 18 08 25.9 +0.2**
ROTZ Rotzenmuhle 149.71 346 ePKPdf **PKPdf 18 08 19.9 -0.4**
ROTZ ePKPbc **PKiKP 18 08 26.1 -0.2**
ROTZ ePKPab **PKPab 18 08 33.5 +0.1**
ROTZ epPKPbc **pPKPbc 18 10 41.0 +4.0**
HGN Heimansgroeve 149.72 355 ePKPdf **PKPbc 18 08 26.0 +0.4**
HGN eX 18 08 33.3
GZR Gura Zlata 149.76 330⇑*i*P **PKPbc 18 08 26.2 +0.2**
BCK Bucak 149.78 310 e**P PKPbc 18 08 24.6 -1.7**
GDZ Gediz 149.80 314 *i* P **PKPbc 18 08 25.9 -0.5**
PKSN Nyarlorinc 149.86 335⇑*e* **PKPbc 18 08 26.9 +0.8**
MEM Membach 149.86 354 PKPdf **PKPdf 18 08 19.7 -0.7**
MEM PKPbc **PKiKP 18 08 26.4 -0.2**
MEM PKPab **PKPab 18 08 34.7 +0.7**
TNS Taunus Mts 149.96 351 ePKHKP PKPdf 18 08 26.4 +5.7
TNS *e* 18 08 34.2
TNS Taunus Mts 149.96 351 ePKPbc PKPdf 18 08 26.4 +5.7
TNS ePKPab **PKPab 18 08 34.2 -0.3**
TNS epPKPbc pPKPbc 18 10 42.0 +4.3
ANTB Antalya 149.97 309 e**P PKPbc 18 08 25.6 -1.0**
PVL Pavlikeni 149.97 324 P **PKPbc 18 08 26.9 +0.4**
KHC Kasperske Hory 149.98 344 ePKIKP **PKPdf 18 08 21.1 +0.3**
KHC *e* 18 08 34.9
KHC Kasperske Hory 149.98 344 ePKPdf **PKPdf 18 08 20.6 -0.2**
KHC ePKPbc **PKPbc 18 08 26.6 +0.2**
KHC ePKPab **PKPab 18 08 34.9 +0.3**
KHC epPKPdf **pPKPdf 18 10 35.3 +1.6**
KHC Kasperske Hory 149.98 344 ePKPDF **PKPdf 18 08 21.1 +0.3**
KHC ⇑ePKP **PKiKP 18 08 27.0 0.0**
KHC ePKPAB **PKPab 18 08 34.9 +0.3**
KHC *ex* x 18 09 00.0
KHC esPKP 18 11 36.7
GRF Grafenberg Arr 149.99 347 ePKIKP **PKPdf 18 08 20.6 -0.1**
GRF *e* 18 08 34.4
GRF Grafenberg Arr 149.99 347 ePKPdf **PKPdf 18 08 20.6 -0.1**
GRF ePKPbc **PKPbc 18 08 26.6 +0.3**
GRF ePKPab **PKPab 18 08 34.4 -0.2**
GRF epPKPbc **pPKPbc 18 10 42.0 +4.2**
PKS7 Kunszentmiklos 150.01 336⇑*e* **PKPbc 18 08 26.8 +0.4**
PKSG 150.02 337⇑*e* **PKPbc 18 08 26.6 +0.2**
SNF Seneffe 150.09 357 PKPbc **PKPbc 18 08 27.0 +0.5**
SNF PKPab **PKPab 18 08 35.1 +0.2**
BCLA Clavier 150.11 355 PKPbc **PKPbc 18 08 26.6 +0.1**
BCLA PKPab **PKPab 18 08 34.9 -0.1**
BZS Buzias 150.12 331⇑*i*P **PKPbc 18 08 26.5 -0.3**
WET Wettzell 150.14 345 ePKIKP **PKPdf 18 08 20.9 -0.1**
WET *e* 18 08 35.2
WET Wettzell 150.14 345 ePKPdf **PKPdf 18 08 20.9 -0.1**
WET ePKPbc **PKPbc 18 08 26.9 +0.2**
WET ePKPab **PKPab 18 08 35.2 0.0**
WET epPKPbc **pPKPbc 18 10 42.4 +4.2**
KHAL Karahalli 150.14 312 *i* P **PKPbc 18 08 26.8 -0.4**
KORT Korkueli 150.15 309 *i* P **PKPbc 18 08 26.8 -0.5**
GEC2 GERESS Array S 150.21 344 ePKIKP **PKPdf 18 08 20.6 -0.6**
GEC2 *e* 18 08 35.3
GEC2 GERESS Array S 150.21 344 ePKPdf **PKPdf 18 08 20.6 -0.6**
GEC2 ePKPbc **PKPbc 18 08 27.0 0.0**
GEC2 ePKPab **PKPab 18 08 35.3 -0.3**
GEC2 epPKPbc **pPKPbc 18 10 42.5 +4.0**
GERES GERESS Array B 150.21 344 PKP **PKPdf 18 08 21.1 -0.1**
GERES PKPbc **PKPbc 18 08 26.8 -0.2**
GERES pPKPbc **pPKPbc 18 10 39.9 +1.4**
GERES GERESS Array B 150.21 344 PKP **PKPdf 18 08 21.1 -0.1**
comp=Z,1.5nm,0.8s,baz=90,slow=2.0,SNR=12
GERES PKPbc **PKPbc 18 08 26.8 -0.2**
comp=Z,16nm,0.5s,baz=29,slow=2.2,SNR=131
GERES pPKPbc **pPKPbc 18 10 39.9 +1.4**
comp=Z,1.4nm,0.8s,baz=38,slow=1.7,SNR=3.0
DURS Dursunbey 150.22 315 *i* P **PKPbc 18 08 26.7 -0.6**
PKST T"s 150.26 337⇑*e* **PKPbc 18 08 27.0 0.0**
DEMI Demirci 150.34 314 *i* P **PKPbc 18 08 27.2 -0.4**
SOP Sopron 150.41 339⇓*e* **PKPbc 18 08 27.7 +0.4**
CONA Conrad Observa 150.42 340⇑*i*PKPdf **PKPdf 18 08 20.8 -0.7**
comp=Z,3.4nm,1.1s
CONA ⇓*i*PKiKP **PKiKP 18 08 27.8 -0.2**
comp=Z,32nm,0.6s,SNR=18
CONA Conrad Observa 150.42 340⇑*i*P **PKPdf 18 08 20.8 -0.7**
PKS2 Kecel 150.45 335⇑*e* **PKPbc 18 08 27.9 +0.5**
GIVF Givet 150.46 356 ePKIKP **PKPdf 18 08 22.0 +0.6**
GIVF Givet 150.46 356 ePKIKP **PKPdf 18 08 22.0 +0.6**
GIVF Givet 150.46 356 ePKPdf **PKPdf 18 08 22.2 +0.6**
DOU Dourbes 150.48 356 PKPbc **PKPbc 18 08 27.6 +0.1**
DOU PKPab **PKPab 18 08 36.6 0.0**
DOU APKP pPKPdf 18 10 42.9 +8.5
TOD Tromm 150.50 350 PKIKP **PKPdf 18 08 20.8 -0.7**
TOD Tromm 150.50 350 PKP **PKPdf 18 08 20.8 -0.7**
BAIF Baives 150.54 357 ePKIKP **PKPdf 18 08 23.0 +1.5**
BAIF Baives 150.54 357 ePKIKP **PKPdf 18 08 23.0 +1.5**
BAIF Baives 150.54 357 ePKPdf **PKPdf 18 08 23.0 +1.5**
DIM Dimitrovgrad 150.61 322 P **PKPbc 18 08 28.4 +0.4**
GOLH Golhisar 150.62 310 *i* P **PKPbc 18 08 27.9 -0.4**
RUP Ruppelstein 150.65 353 PKIKP **PKPdf 18 08 21.1 -0.7**
RUP Ruppelstein 150.65 353 PKP **PKPdf 18 08 21.1 -0.7**
PKS9 Tatrasi 150.73 336⇑*e* **PKPbc 18 08 28.2 +0.1**
MPEP Malo Peshtene 150.74 326 P **PKPbc 18 08 28.6 +0.3**
DNZL Cakiroluk 150.77 312 *i* P **PKPbc 18 08 29.1 +0.3**
WLF Walferdange 150.78 354 PKPbc **PKPbc 18 08 28.7 +0.5**
WLF PKPab **PKPab 18 08 38.0 +0.1**
WLF APKPbc 18 10 41.8
WLF Walferdange 150.78 354 ePKIKP **PKPbc 18 08 28.6 +0.5**
WLF *e* 18 08 38.0
WLF Walferdange 150.78 354 ePKPdf **PKPdf 18 08 22.2 +0.3**
WLF ePKPbc **PKPbc 18 08 28.7 +0.5**
WLF ePKPab **PKPab 18 08 38.0 +0.1**
WLF epPKPbc **pPKPbc 18 10 44.3 +4.6**
WLF Walferdange 150.78 354 ePKPbc **PKPbc 18 08 28.6 +0.5**
WLF ePKPab **PKPab 18 08 38.0 +0.1**
PKSM Moragy 150.91 335⇓*i*P **PKPbc 18 08 28.1 -0.4**
PKSM Moragy 150.91 335⇓*e* **PKPbc 18 08 28.5 0.0**
MOA Molln 150.96 342⇑*i*PKPbc **PKPbc 18 08 28.2 -0.4**
comp=Z,10nm,0.5s,SNR=19
AKAS Kas 151.02 308 *i* P **PKPbc 18 08 28.5 -0.8**
AKHS Akhisar 151.03 315 *i* P **PKPbc 18 08 28.4 -0.7**
PGB Panagyurishte 151.06 324 P **PKPbc 18 08 28.9 -0.2**
STU Stuttgart 151.25 350 ePKIKP **PKPbc 18 08 29.2 0.0**
STU Stuttgart 151.25 350 ePKPdf **PKPdf 18 08 22.9 +0.2**
STU ePKPbc **PKiKP 18 08 29.4 -0.1**
STU ePKPab **PKPab 18 08 39.7 -0.2**
LANF Langenberg 151.26 352 PKIKP **PKPdf 18 08 23.2 +0.5**
LANF Langenberg 151.26 352 PKP **PKPdf 18 08 23.2 +0.5**
LANF Langenberg 151.26 352 PKP **PKPdf 18 08 23.2 +0.5**
RZN Rozhen 151.31 322 P **PKPbc 18 08 29.2 -0.7**
BEHE Becsehely 151.38 338⇓*e* **PKPbc 18 08 29.9 +0.3**
FUR Furstenfeldbru 151.43 346 ePKIKP **PKPbc 18 08 29.7 0.0**
FUR *e* 18 08 40.9
FUR Furstenfeldbru 151.43 346 ePKPbc **PKPbc 18 08 29.7 0.0**
FUR ePKPab **PKPab 18 08 40.9 +0.2**
RJOB Jochberg 151.47 344 ePKPbc **PKPbc 18 08 29.5 -0.3**
RJOB ePKPab **PKPab 18 08 41.3 +0.4**
VTS Vitosha 151.55 325⇓*i*P **PKPbc 18 08 30.3 0.0**
VTS Vitosha 151.55 325 P **PKPbc 18 08 30.5 +0.2**
AYDN Tasoluk 151.60 312 *i* P **PKPbc 18 08 30.6 +0.2**
SOKA Soboth 151.79 340⇑*i*PKPdf **PKPdf 18 08 23.1 -0.5**
comp=Z,5.3nm,1.3s
SOKA ⇑*i*PKPbc **PKPbc 18 08 30.1 -0.5**
comp=Z,14nm,0.7s
SOKA Soboth 151.79 340⇑*i*P **PKPdf 18 08 23.1 -0.5**
PERS Pernice 151.80 340 *i* PKPdf **PKPdf 18 08 22.6 -1.0**
PERS *i* PKPbc **PKPbc 18 08 29.8 -0.8**
PERS *i* PKPab **PKPab 18 08 42.4 0.0**
BFO Black Forest 151.82 351 ePKIKP **PKPdf 18 08 23.3 -0.2**
BFO *e* 18 08 41.6
BFO Black Forest 151.82 351 ePKPdf **PKPdf 18 08 22.5 -1.1**
BFO ePKPbc **PKPbc 18 08 30.5 -0.1**
BFO ePKPab **PKPab 18 08 41.8 -0.5**
BFO Black Forest 151.82 351 ePKPdf **PKPdf 18 08 23.3 -0.2**
BFO ePKPbc **PKPbc 18 08 30.6 +0.1**
BFO ePKPab **PKPab 18 08 41.5 -0.8**
BFO epPKPdf **pPKPdf 18 10 42.0 +5.4**
FLN La Foliniere 151.86 3 ePKIKP **PKPdf 18 08 23.8 +0.3**
comp=Z,13nm,0.6s
FLN *e*R
comp=Z,129nm,20.0s
FLN La Foliniere 151.86 3 ePKIKP **PKPdf 18 08 23.8 +0.3**
FLN La Foliniere 151.86 3 ePKPdf **PKPdf 18 08 23.8 +0.3**
CDF Champ du Feu 151.89 352 ePKIKP **PKPdf 18 08 24.0 +0.3**
CDF Champ du Feu 151.89 352 ePKIKP **PKPdf 18 08 24.0 +0.3**
CDF Champ du Feu 151.89 352 ePKPdf **PKPdf 18 08 24.0 +0.3**
PAGF Fort de Pagny 151.92 354 ePKIKP **PKPdf 18 08 24.5 +0.8**
PAGF Fort de Pagny 151.92 354 ePKPdf **PKPdf 18 08 24.5 +0.8**
KBA Koelnbreinsper 151.93 343⇑*i*PKPbc **PKPbc 18 08 30.3 -0.7**
comp=Z,15nm,0.5s,SNR=19
MMB Musomiste 151.94 323 P **PKPbc 18 08 30.7 -0.4**
SPAK Spaichingen-Ko 151.97 350 PKP **PKPdf 18 08 22.4 -1.5**
MEZF Maizieres J'vi 152.03 355 ePKIKP **PKPdf 18 08 24.5 +0.7**
comp=Z,18nm,0.9s
MEZF Maizieres J'vi 152.03 355 ePKPdf **PKPdf 18 08 24.5 +0.7**
LDF La Druitiere 152.04 2 ePKIKP **PKPdf 18 08 24.0 +0.2**
comp=Z,24nm,1.0s
LDF La Druitiere 152.04 2 ePKIKP **PKPdf 18 08 24.0 +0.2**
LDF La Druitiere 152.04 2 ePKPdf **PKPdf 18 08 24.0 +0.2**
ROSF Rostrenen 152.06 7 ePKIKP **PKPdf 18 08 24.4 +0.6**
comp=Z,9.5nm,0.8s
ROSF Rostrenen 152.06 7 ePKIKP **PKPdf 18 08 24.4 +0.6**
ROSF Rostrenen 152.06 7 ePKPdf **PKPdf 18 08 24.4 +0.6**
ECH Echery 152.10 352 PKIKP **PKPdf 18 08 24.1 +0.1**
ECH *e* 18 08 30.6
ECH *e* 18 08 42.7
ECH Echery 152.10 352 PKP **PKPdf 18 08 24.1 +0.1**
ECH PKPbc **PKPbc 18 08 30.6 -0.6**
ECH ePKPab **PKPab 18 08 42.6 -0.8**
ECH Echery 152.10 352 PKP **PKPdf 18 08 24.1 +0.1**
KKB Krupnik 152.11 324 P **PKPbc 18 08 31.2 -0.2**
WATA Walderalm 152.14 345⇑*i*PKIKP **PKPdf 18 08 25.0 +0.8**
WATA Walderalm 152.14 345⇑*i*PKPdf **PKPdf 18 08 25.0 +0.8**
comp=Z,1.8nm,0.5s
WATA ⇓*i*PKPbc **PKPbc 18 08 30.9 -0.5**
comp=Z,21nm,0.5s,SNR=14
WATA Walderalm 152.14 345⇑*i*P **PKPdf 18 08 25.0 +0.8**
RETA Reutte 152.18 347⇑*i*PKPdf **PKPdf 18 08 24.0 -0.1**
comp=Z,5.9nm,1.1s
RETA *i* PKiKP **PKiKP 18 08 31.6 -0.1**
comp=Z,7.1nm,0.5s,SNR=7.5
RETA Reutte 152.18 347⇑*i*P **PKPdf 18 08 24.1 -0.1**
WTTA Wattenberg 152.19 345⇑*i*PKIKP **PKPdf 18 08 24.5 +0.1**
WTTA Wattenberg 152.19 345⇑*i*PKPdf **PKPdf 18 08 24.5 +0.1**
comp=Z,9.7nm,1.4s
WTTA *i* PKiKP **PKPbc 18 08 31.6 0.0**
comp=Z,21nm,0.4s,SNR=18
WTTA Wattenberg 152.19 345⇑*i*P **PKPdf 18 08 24.5 +0.1**
GRR Gorron 152.21 4 ePKIKP **PKPdf 18 08 24.4 +0.3**
GRR Gorron 152.21 4 ePKIKP **PKPdf 18 08 24.4 +0.3**
GRR Gorron 152.21 4 ePKPdf **PKPdf 18 08 24.4 +0.3**
SGMF Saint Gilles 152.21 6 ePKIKP **PKPdf 18 08 24.7 +0.6**
SGMF Saint Gilles 152.21 6 ePKIKP **PKPdf 18 08 24.7 +0.6**
SGMF Saint Gilles 152.21 6 ePKPdf **PKPdf 18 08 24.7 +0.6**
THEF They Montfort 152.22 354 PKIKP **PKPdf 18 08 24.3 +0.2**
THEF They Montfort 152.22 354 PKP **PKPdf 18 08 24.3 +0.2**
THEF They Montfort 152.22 354 PKP **PKPdf 18 08 24.3 +0.2**
MYKA Terra Mystica 152.25 342⇑*i*PKPbc **PKPbc 18 08 30.8 -0.8**
comp=Z,13nm,0.5s
FELD Feldberg im Sc 152.31 351 PKP **PKPdf 18 08 24.3 -0.1**
SFTF Sexfontaines 152.33 355 ePKIKP **PKPdf 18 08 25.0 +0.7**
SFTF Sexfontaines 152.33 355 ePKPdf **PKPdf 18 08 25.0 +0.7**
HAU Haudompre 152.40 353 ePKIKP **PKPdf 18 08 24.9 +0.5**
HAU *e*R
comp=Z,106nm,20.5s
HAU Haudompre 152.40 353 ePKIKP **PKPdf 18 08 24.9 +0.5**
HAU Haudompre 152.40 353 ePKPdf **PKPdf 18 08 24.9 +0.5**
ABTA Abfaltersbach 152.45 344⇑*i*PKPdf **PKPdf 18 08 24.2 -0.5**
comp=Z,11nm,1.1s
ABTA ⇓*i*PKPbc **PKPbc 18 08 31.7 -0.3**
comp=Z,30nm,0.6s,SNR=15
ABTA Abfaltersbach 152.45 344⇑*i*P **PKPdf 18 08 24.1 -0.5**
MOF Molkenrain 152.46 352 PKIKP **PKPdf 18 08 24.7 +0.1**
MOF Molkenrain 152.46 352 PKP **PKPdf 18 08 24.7 +0.1**
MOF Molkenrain 152.46 352 PKP **PKPdf 18 08 24.7 +0.1**
QUIF Quistinic 152.48 7 ePKIKP **PKPdf 18 08 24.4 -0.1**
QUIF Quistinic 152.48 7 ePKIKP **PKPdf 18 08 24.4 -0.1**
QUIF Quistinic 152.48 7 ePKPdf **PKPdf 18 08 24.4 -0.1**
LJU Ljubljana 152.51 340 *i* PKPdf **PKPdf 18 08 24.3 -0.3**
LJU *i* PKPbc **PKPbc 18 08 31.8 -0.3**
LJU *i* PKPab **PKPab 18 08 45.2 -0.1**
LJU *i* 18 09 06.9
LJU *i* 18 09 19.6
LJU *i* 18 10 31.4
DAVA Damuels 152.55 348⇑*i*PKPdf **PKPdf 18 08 24.8 -0.1**
comp=Z,12nm,1.4s
DAVA *i* PKiKP **PKiKP 18 08 32.6 +0.1**
comp=Z,11nm,0.6s,SNR=5.1
DAVA Damuels 152.55 348⇑*i*P **PKPdf 18 08 24.8 -0.1**
FETA Feichten 152.63 346⇑*i*PKPdf **PKPdf 18 08 25.2 +0.2**
comp=Z,8.2nm,0.9s
FETA ⇑*i*PKiKP **PKiKP 18 08 32.7 0.0**
comp=Z,14nm,0.6s
FETA Feichten 152.63 346⇑*i*P **PKPdf 18 08 25.2 +0.2**
VOY Vojsko 152.72 341 ePKPdf **PKPdf 18 08 25.2 +0.2**
VOY ePKPbc **PKPbc 18 08 32.4 -0.3**
VOY ePKPab **PKPab 18 08 45.2 -1.1**
BOJS Bojanci 152.75 339 *i* PKPdf **PKPdf 18 08 24.8 -0.1**
BOJS *i* PKPbc **PKPbc 18 08 32.5 -0.2**
BOJS *i* PKPab **PKPab 18 08 45.9 -0.5**
BOJS *i* 18 09 08.1
BOJS *i* 18 09 20.7
BOJS epPKPbc **pPKPbc 18 10 46.8 +2.3**
VAY Valandovo 152.76 324 ePKP **PKPbc 18 08 31.8 -1.0**
BBS Basel-Blauen 152.79 351 PKIKP **PKPdf 18 08 22.4 -2.6**
BBS Basel-Blauen 152.79 351 PKP **PKPdf 18 08 22.4 -2.6**
JAVS Javornik 152.79 341 *i* PKPbc **PKPbc 18 08 32.4 -0.5**
JAVS *i* PKPab **PKPab 18 08 45.8 -0.8**
SKO Skopje 152.92 326 ePKP **PKPbc 18 08 33.8 +0.6**
LOMF Lomont 152.99 352 PKIKP **PKPdf 18 08 25.4 0.0**
LOMF Lomont 152.99 352 PKP **PKPdf 18 08 25.4 0.0**
LOMF Lomont 152.99 352 PKP **PKPdf 18 08 25.4 0.0**
DAVOX Davos/Dischmat 153.04 347 PKP **PKPdf 18 08 26.7 +1.1**
DAVOX PKPbc **PKiKP 18 08 33.5 0.0**
DAVOX Davos/Dischmat 153.04 347 PKP **PKPdf 18 08 26.7 +1.1**
comp=Z,4.4nm,0.7s,baz=104,slow=4.2,SNR=8.7
DAVOX PKPbc **PKiKP 18 08 33.5 0.0**
comp=Z,34nm,0.5s,baz=248,slow=3.7,SNR=75
TRI Trieste 153.05 341 ePKIKP **PKPdf 18 08 24.7 -0.6**
TRI *e* 18 08 32.5
TRI *e* 18 08 46.3
TRI Trieste 153.05 341 ePKPdf **PKPdf 18 08 24.7 -0.6**
TRI ePKPbc **PKPbc 18 08 32.5 -0.8**
TRI ePKPab **PKPab 18 08 46.2 -1.3**
LOR Lormes 153.34 357 ePKIKP **PKPdf 18 08 26.4 +0.6**
LOR *e*R
comp=Z,52nm,21.2s
LOR Lormes 153.34 357 ePKPdf **PKPdf 18 08 26.4 +0.6**
TUE Stuetta 153.44 348 ePKPdf **PKPdf 18 08 25.8 -0.4**
TUE ePKPbc **PKPbc 18 08 34.4 0.0**
TUE epPKPdf **pPKPdf 18 10 40.9 +1.5**
SSF Saint Saulge 153.57 357 ePKIKP **PKPdf 18 08 26.7 +0.6**
comp=Z,11nm,0.7s
SSF Saint Saulge 153.57 357 ePKIKP **PKPdf 18 08 26.7 +0.6**
SSF Saint Saulge 153.57 357 ePKPdf **PKPdf 18 08 26.7 +0.6**
BIA Bitola 153.65 325 ePKP **PKPbc 18 08 33.7 -1.1**
CABF La Chapelle 153.81 353 ePKIKP **PKPdf 18 08 27.5 +0.9**
comp=Z,30nm,1.1s
CABF La Chapelle 153.81 353 ePKIKP **PKPdf 18 08 27.5 +0.9**
CABF La Chapelle 153.81 353 ePKPdf **PKPdf 18 08 27.5 +0.9**
AVF Avril sur Loir 153.84 357 ePKIKP **PKPdf 18 08 27.4 +0.9**
AVF Avril sur Loir 153.84 357 ePKIKP **PKPdf 18 08 27.4 +0.9**
AVF Avril sur Loir 153.84 357 ePKPdf **PKPdf 18 08 27.4 +0.9**
SMF Signal de Mont 153.97 357 ePKIKP **PKPdf 18 08 27.0 +0.3**
SMF Signal de Mont 153.97 357 ePKIKP **PKPdf 18 08 27.0 +0.3**
SMF Signal de Mont 153.97 357 ePKPdf **PKPdf 18 08 27.0 +0.3**
MFF Saint Martin d 154.03 3 ePKIKP **PKPdf 18 08 27.0 +0.3**
comp=Z,23nm,1.2s
MFF Saint Martin d 154.03 3 ePKIKP **PKPdf 18 08 27.0 +0.3**
MFF Saint Martin d 154.03 3 ePKPdf **PKPdf 18 08 27.0 +0.3**
BGF Bois d'Agland 154.10 358 ePKIKP **PKPdf 18 08 27.2 +0.4**
BGF Bois d'Agland 154.10 358 ePKIKP **PKPdf 18 08 27.2 +0.4**
BGF Bois d'Agland 154.10 358 ePKPdf **PKPdf 18 08 27.2 +0.4**
TCF Toulx Ste Croi 154.38 359 ePKIKP **PKPdf 18 08 27.8 +0.5**
TCF Toulx Ste Croi 154.38 359 ePKIKP **PKPdf 18 08 27.8 +0.5**
TCF Toulx Ste Croi 154.38 359 ePKPdf **PKPdf 18 08 27.8 +0.5**
LPL La Plagne 154.80 352 ePKIKP **PKPdf 18 08 28.8 +0.7**
LPL La Plagne 154.80 352 ePKIKP **PKPdf 18 08 28.8 +0.7**
LPL La Plagne 154.80 352 ePKPdf **PKPdf 18 08 28.8 +0.7**
**LPG La Plagne 154.82

LFF	**La Frestale**	**155.72**	**2**	*e*PKPdf	**PKPdf**	**18 08 29.5**	**+0.4**
CAF	**Calviac**	**155.75**	**359**	*e*PKIKP	**PKPdf**	**18 08 30.0**	**+0.8**
CAF	**Calviac**	**155.75**	**359**	*e*PKIKP	**PKPdf**	**18 08 30.0**	**+0.8**
CAF	**Calviac**	**155.75**	**359**	*e*PKPdf	**PKPdf**	**18 08 30.0**	**+0.8**
SMRF	**Simiane la Rot**	**156.47**	**353**	*e*PKIKP	**PKPdf**	**18 08 31.2**	**+1.1**
SMRF	**Simiane la Rot**	**156.47**	**353**	*e*PKPdf	**PKPdf**	**18 08 31.2**	**+1.1**
LASF	**Ste Croix** comp=Z,14nm,1.1s	**156.52**	**356**	*e*PKIKP	**PKPdf**	**18 08 30.9**	**+0.7**
LASF	**Ste Croix**	**156.52**	**356**	*e*PKPdf	**PKPdf**	**18 08 30.9**	**+0.7**
PGF	**Pioggiola**	**157.26**	**346**	*e*PKIKP	**PKPdf**	**18 08 31.1**	**-0.2**
PGF	**Pioggiola**	**157.26**	**346**	*e*PKIKP	**PKPdf**	**18 08 31.1**	**-0.2**
PGF	**Pioggiola**	**157.26**	**346**	*e*PKPdf	**PKPdf**	**18 08 31.1**	**-0.2**
MTLF	**Montolieu**	**157.33**	**359**	*e*PKIKP	**PKPdf**	**18 08 31.6**	**+0.4**
MTLF	**Montolieu**	**157.33**	**359**	*e*PKIKP	**PKPdf**	**18 08 31.6**	**+0.4**
MTLF	**Montolieu**	**157.33**	**359**	*e*PKPdf	**PKPdf**	**18 08 31.6**	**+0.4**
TIP	**Timpagrande**	**157.37**	**328**	*e*PKPdf	**PKPdf**	**18 08 30.0**	**-1.4**
TIP				*e*PKPab	**PKPab**	**18 09 06.8**	**+0.2**
SJPF	**Ste Jean** comp=Z,66nm,1.6s	**157.43**	**5**	*e*PKIKP	**PKPdf**	**18 08 31.4**	**+0.1**
SJPF	**Ste Jean**	**157.43**	**5**	*e*PKIKP	**PKPdf**	**18 08 31.4**	**+0.1**
SJPF	**Ste Jean**	**157.43**	**5**	*e*PKPdf	**PKPdf**	**18 08 31.4**	**+0.1**
EPF	**Esparros** comp=Z,23nm,1.2s	**157.62**	**2**	*e*PKIKP	**PKPdf**	**18 08 33.2**	**+1.6**
EPF	**Esparros**	**157.62**	**2**	*e*PKIKP	**PKPdf**	**18 08 33.2**	**+1.6**
ETSF	**Etsaut** comp=Z,4.2nm,0.7s	**157.70**	**4**	*e*PKIKP	**PKPdf**	**18 08 32.6**	**+0.9**
ETSF	**Etsaut**	**157.70**	**4**	*e*PKIKP	**PKPdf**	**18 08 32.6**	**+0.9**
ETSF	**Etsaut**	**157.70**	**4**	*e*PKPdf	**PKPdf**	**18 08 32.6**	**+0.9**
PBRG	**Braganca**	**157.71**	**17**	*e*PKPab	**PKPab**	**18 09 08.8**	**+0.9**
POLO	**Lamas de Olo**	**157.81**	**19**	*e*PKPab	**PKPab**	**18 09 09.2**	**+0.8**
PVRL	**Vila Real**	**157.92**	**19**	*e*PKPab	**PKPab**	**18 09 09.4**	**+0.6**
MVO	**Moncorvo**	**158.23**	**18**	*e*PKPdf	**PKPdf**	**18 08 34.0**	**+1.6**
MVO	**Moncorvo**	**158.23**	**18**	*e*PKPab	**PKPab**	**18 09 10.1**	**-0.1**
PTOM	**Tomar**	**159.19**	**22**	*e*PKPab	**PKPab**	**18 09 14.4**	**+0.1**
PCBR	**Castelo Branco**	**159.30**	**20**	*e*PKPdf	**PKPdf**	**18 08 35.2**	**+1.6**
PMAFR	**Mafra**	**159.44**	**25**	*e*PKPab	**PKPab**	**18 09 16.4**	**+0.9**
PMRV	**Marv??o**	**159.71**	**20**	*e*PKPab	**PKPab**	**18 09 17.3**	**+0.7**
PESTR	**Estremoz**	**160.14**	**22**	*e*PKPab	**PKPab**	**18 09 18.9**	**+0.4**
EVOP	**Sao Brissos**	**160.25**	**23**	*e*PKIKP	**PKPdf**	**18 08 35.3**	**+0.6**
EVOP	**Sao Brissos**	**160.25**	**23**	*e*PKPdf	**PKPdf**	**18 08 35.3**	**+0.6**
EVO	**Evora** comp=Z,16nm,0.8s	**160.29**	**23**	*e*PKIKP	**PKPdf**	**18 08 35.3**	**+0.5**
EVO				*e*R			
EVO	**Evora** comp=Z,51nm,21.8s	**160.29**	**23**	*e*PKPdf	**PKPdf**	**18 08 35.9**	**+1.1**
EVO	**Evora**	**160.29**	**23**	*e*PKPab	**PKPab**	**18 09 19.8**	**+0.6**
ESDC	**Sonseca Array**	**160.40**	**13**	PKP	**PKPdf**	**18 08 36.5**	**+1.6**
ESDC				PKPab	**PKPab**	**18 09 19.8**	**+0.2**
ESDC	**Sonseca Array** comp=Z,0.4nm,0.6s,baz=23,slow=2.2,SNR=5.7	**160.40**	**13**	PKP	**PKPdf**	**18 08 36.5**	**+1.6**
ESDC	comp=Z,1.8nm,0.6s,baz=348,slow=4.1,SNR=17			PKPab	**PKPab**	**18 09 19.8**	**+0.2**
PBEJ	**Beja**	**160.79**	**23**	*e*PKPdf	**PKPdf**	**18 08 37.2**	**+1.9**
MORF	**Marmelete**	**161.11**	**26**	*e*PKPdf	**PKPdf**	**18 08 37.8**	**+2.1**
KEST	**Kesra**	**163.48**	**337**	PKPab	**PKPab**	**18 09 33.5**	**+0.2**
KEST	**Kesra** comp=Z,2.4nm,0.7s,baz=319,slow=1.8,SNR=9.0	**163.48**	**337**	PKPab	**PKPab**	**18 09 33.5**	**+0.2**
LIC	**Lamto** comp=Z,34nm,0.9s	**164.31**	**155**	*e*PKIKP	**PKPdf**	**18 08 38.7**	**-0.7**
LIC	**Lamto**	**164.31**	**155**	*e*PKPdf	**PKPdf**	**18 08 38.7**	**-0.7**
DBIC	**Dimbokro**	**164.79**	**155**	PKP	**PKPdf**	**18 08 39.6**	**-0.2**
DBIC				PKPab	**PKPab**	**18 09 40.6**	**+1.2**
DBIC	**Dimbokro** comp=Z,10.0nm,0.8s,baz=242,slow=1.0,SNR=11	**164.79**	**155**	PKP	**PKPdf**	**18 08 39.6**	**-0.2**
DBIC	comp=Z,30nm,0.8s,baz=196,slow=5.3,SNR=25			PKPab	**PKPab**	**18 09 40.6**	**+1.2**
MDT	**Midelt**	**166.63**	**23**	PKP	**PKPdf**	**18 08 42.6**	**+1.7**
MDT				PKPab	**PKPab**	**18 09 48.6**	**+1.2**
MDT	**Midelt** comp=Z,3.2nm,0.7s,baz=296,slow=1.9,SNR=5.4	**166.63**	**23**	PKP	**PKPdf**	**18 08 42.6**	**+1.7**
MDT	comp=Z,2.0nm,0.6s,baz=309,slow=2.0,SNR=7.2			PKPab	**PKPab**	**18 09 48.6**	**+1.2**
TOA0	**Torodi Ar. Sit**	**172.58**	**181**	*e*PKPdf	**PKPdf**	**18 08 43.6**	**-1.1**
TOA0				*e*PKPab	**PKPab**	**18 10 13.8**	**0.0**
TORD	**Torodi Ar. Bea**	**172.58**	**181**	PKP	**PKPdf**	**18 08 43.8**	**-0.9**
TORD				PKPab	**PKPab**	**18 10 14.3**	**+0.5**
TORD	**Torodi Ar. Bea** comp=Z,6.0nm,0.9s,baz=342,slow=0.8,SNR=31	**172.58**	**181**	PKP	**PKPdf**	**18 08 43.8**	**-0.9**
TORD	comp=Z,11nm,0.8s,baz=180,slow=3.6,SNR=29			PKPab	**PKPab**	**18 10 14.3**	**+0.5**
TAM	**Tamanrasset**	**175.77**	**302**	*e*PKIKP	**PKPdf**	**18 08 46.8**	**+1.0**
TAM				*e*		18 10 29.0	
TAM	**Tamanrasset**	**175.77**	**302**	*e*PKPdf	**PKPdf**	**18 08 46.8**	**+1.0**
TAM				*e*PKPab	**PKPab**	**18 10 29.0**	**+0.5**

IDC 18 17:50:12.7±4.9, 20°.60S×178°.36W, h539km±52km, mb4.1/19, mb1 4.2/19, mb1mx4.1/26, mbtmp4.1/19, Error ellipse: s-maj=36.0km s-min=19.6km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower** 47nm,0.4s,baz=96,slow=10,SNR=5.0	**33.15**	**265**	P	P	17 56 04.2	-0.6
PMG	**Port Moresby** 116nm,1.2s,baz=196,slow=8.1,SNR=4.5	**35.04**	**283**	P	P	17 56 20.5	-0.2
ASAR	**Alice Springs** 60nm,0.9s,baz=85,slow=8.6,SNR=7.8	**44.17**	**257**	P	P	17 57 34.5	+0.4
WRA	**Warramunga Arr** 17nm,0.3s,baz=95,slow=7.6,SNR=9.6	**44.25**	**262**	P	P	17 57 34.1	-0.6
MJAR	**Matsushiro Arr** 3.8nm,0.6s,baz=162,slow=6.3,SNR=2.6	**70.09**	**324**	P	P	18 00 30.3	-0.6
JNU	**Nakatsue** 17nm,0.9s,baz=63,slow=1.3,SNR=5.0	**72.12**	**317**	P	P	18 00 42.7	-0.1
ASAJ	**Asahikawa** 24nm,0.7s,baz=159,slow=8.5,SNR=4.5	**73.66**	**332**	P	P	18 00 52.1	+0.8
PETK	**Petropavlovsk-** 26nm,0.9s,baz=149,slow=8.0,SNR=7.0	**76.28**	**345**	P	P	18 01 05.4	-0.5
KSRS	**Korea Array** 3.9nm,0.8s,baz=130,slow=6.0,SNR=5.4	**76.74**	**319**	P	P	18 01 09.3	+0.7
USRK	**Ussuriysk Arra** 9.8nm,0.8s,baz=118,slow=4.0,SNR=6.7	**78.85**	**326**	P	P	18 01 20.9	+0.9
YBH	**Yreka Blue Hor** 5.7nm,0.8s,baz=29,slow=2.3,SNR=2.1	**80.58**	**39**	P	P	18 01 30.1	+0.9
NVAR	**Mina Array Bea** 2.6nm,0.7s,baz=226,slow=9.1,SNR=3.5	**81.33**	**44**	P	P	18 01 34.3	+0.9
PSI	**Prapat** 5.1nm,0.4s,baz=214,slow=5.2,SNR=4.3	**84.17**	**275**	P	P	18 01 47.2	-0.8
DLBC	**Dease Lake** 3.4nm,0.8s,baz=276,slow=5.9,SNR=3.1	**88.27**	**23**	P	P	18 02 05.0	-1.5
ILAR	**Eielson Array** 8.3nm,1.0s,baz=234,slow=5.3,SNR=11	**88.49**	**13**	P	P	18 02 06.3	-0.9
PDAR	**Pinedale Array** 2.2nm,0.8s,baz=236,slow=1.6,SNR=3.8	**89.27**	**43**	P	P	18 02 12.0	+0.3
CMAR	**Chiang Mai Arr** 8.9nm,0.9s,baz=125,slow=3.0,SNR=7.5	**89.83**	**290**	P	P	18 02 15.5	+0.9
INK	**Inuvik** 2.5nm,0.8s,baz=257,slow=4.8,SNR=4.9	**94.46**	**15**	P	P	18 02 33.6	-1.0
YKA	**Yellowknife Ar** 0.5nm,0.8s,baz=254,slow=4.7,SNR=5.2	**96.74**	**25**	P	P	18 02 44.0	-1.1
MKAR	**Makanchi Array** 0.4nm,0.3s,baz=47,slow=6.5,SNR=11	**111.02**	**313**	Pdiff	Pdif	18 03 49.3	+0.3
AKTO	**Aktyubinsk** 5.2nm,0.8s,baz=340,slow=2.2,SNR=5.5	**126.92**	**318**	PKP	PKPdf	18 08 13.3	-1.9
AKASG	**Malin Array Be** 31nm,0.8s,baz=42,slow=4.4,SNR=8.6	**142.94**	**331**	PKhKP	PKPpre	18 08 40.9	
EKA	**Eskdalemuir Ar** 11nm,0.9s,baz=342,slow=2.8,SNR=7.0	**145.13**	**5**	PKPbc	PKPdf	18 08 48.4	-0.2
ASF	**Jabal al Asfar** 14nm,0.9s,baz=210,slow=0.6,SNR=4.5	**146.52**	**297**	PKPbc	PKPbc	18 08 53.9	-0.4
BRTR	**Keskin Array B** 5.9nm,0.7s,baz=116,slow=2.9,SNR=4.7	**146.66**	**312**	PKPbc	PKPbc	18 08 53.6	-0.9
MMAI	**Mount Meron Ar** 34nm,0.9s,baz=46,slow=4.8,SNR=5.4	**147.57**	**299**	PKPbc	PKPbc	18 08 57.0	+0.1

ROM 18 18:06:38.1±0.5, 42°.24N×13°.62E, h8km, Md1.7/3, Ml1.1/2, Error ellipse: s-maj=6.1km s-min=1.9km az=176.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.04**	**320**	Pg	Pg	18 06 39.7	-0.1
FAGN				Sg	Sg	18 06 41.0	0.0
AQU	**L'Aquila** 38nm,0.6s	**0.20**	**306**	Pg	Pg	18 06 42.9	+0.7
AQU				Sg	Sg	18 06 46.2	+1.2
VCEL	**Villa Celiera** 28nm,0.5s	**0.23**	**47**	Pg	Pg	18 06 44.1	+1.2
VCEL				Sg	Sg	18 06 47.1	+1.0

*DDA **18** 18:20:40.0, 38°.38N×39°.03E, h16km, MD2.9*
*ISCJB **18** 18:20:40.7±0.5, 38°.39N±0°.04×39°.02E±0°.03, h8km±4km, Error ellipse: s-maj=6.3km s-min=3.6km az=14.0*
*CSEM **18** 18:20:40.5±0.2, 38°.44N×39°.02E, h5km, MD2.8, Error ellipse: s-maj=7.4km s-min=4.3km az=11.0*
*ISK **18** 18:20:40.0, 38°.42N×39°.04E, h7km, MD2.8*

ISC 18 18:20:40.8±0.8, 38°.41N±0°.03×39°.04E±0°.02, h12km±6km, n28, σ0°75/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.09**	**333**	*i* Pg	**Pg**	**18 20 43.9**	**+0.1**
ELZG				*i* Sg	**Sg**	**18 20 46.2**	**+0.3**
SVRC	**Sivrice-ELAZID**	**0.21**	**100**	*e*PG	**Pg**	**18 20 45.0**	**-0.5**
SVRC				*e*SG	**Sg**	**18 20 48.4**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.21**	**100**	*e*Pg	**Pg**	**18 20 45.0**	**-0.5**
SVRC				*e*Sg	**Sg**	**18 20 48.4**	**-0.3**
MYA	**Malataya**	**0.49**	**260**	*e*PG	**Pg**	**18 20 49.9**	**-0.5**
MYA				*e*SG	**Sg**	**18 20 57.1**	**+0.1**
MYA	**Malataya**	**0.49**	**260**	*e*Pg	**Pg**	**18 20 49.9**	**-0.5**
MYA				*e*Sg	**Sg**	**18 20 57.1**	**+0.1**
MALT	**Malatya**	**0.49**	**258**	*e*PG	**Pg**	**18 20 50.5**	**0.0**
MALT	**Malatya**	**0.49**	**258**	*e*Pg	**Pg**	**18 20 50.5**	**0.0**
AKCD	**Akcadag**	**0.89**	**263**	*i* P	**Pg**	**18 20 57.0**	**-0.9**
AKCD				*i* S	**Sg**	**18 21 08.9**	**-0.6**
AKCD	**Akcadag**	**0.89**	**263**	*i* P	**Pg**	**18 20 57.0**	**-0.9**
KEMA	**Kemaliye**	**0.95**	**334**	*e*P	**Pg**	**18 20 58.9**	**-0.3**
KEMA				*e*S	**Sb**	**18 21 12.5**	**+0.6**
KEMA	**Kemaliye**	**0.95**	**334**	*e*P	**Pg**	**18 20 58.9**	**-0.3**
DIYA	**Diyarbakir**	**0.98**	**120**	*e*P	**Pg**	**18 20 59.9**	**+0.1**
DIYA				*e*S	**Sn**	**18 21 13.9**	**-0.4**
DIYA	**Diyarbakir**	**0.98**	**120**	*e*P	**Pb**	**18 20 59.9**	**+0.1**
DIYA				*e*S	**Sn**	**18 21 13.9**	**-0.4**
DIY	**Diyarbakir**	**1.07**	**119**	*e*PG	**Pb**	**18 21 00.8**	**-0.4**
DIY				*e*SG	**Sn**	**18 21 16.2**	**-0.2**
DIY	**Diyarbakir**	**1.07**	**119**	*e*Pg	**Pb**	**18 21 00.8**	**-0.4**
DIY				*e*Sg	**Sn**	**18 21 16.2**	**-0.2**
ILIC	**ilic-Erzincan**	**1.10**	**341**	*e*PN	**Pg**	**18 21 01.2**	**-0.7**
ILIC	**ilic-Erzincan**	**1.10**	**341**	*e*Pn	**Pg**	**18 21 01.3**	**-0.7**
DARE	**Darende-Malaty**	**1.10**	**299**	*e*PN	**Pn**	**18 21 03.4**	**+1.2**
DARE	**Darende-Malaty**	**1.10**	**299**	*e*Pn	**Pn**	**18 21 03.4**	**+1.2**
BINT	**Bingol**	**1.23**	**67**	*e*Pn	**Pn**	**18 21 06.7**	**+2.9**
ERZN	**Erzincan**	**1.29**	**24**	*e*PN	**Pg**	**18 21 04.8**	**-0.7**
EZC	**Erzincan**	**1.36**	**10**	*e*Pn	**Pn**	**18 21 04.8**	**-0.9**
BNGB	**Bing¶l**	**1.41**	**65**	*e*PN	**Pb**	**18 21 06.7**	**-0.3**
BEST	**Besiri**	**1.83**	**106**	*e*P	**Pb**	**18 21 13.6**	**-0.7**
BEST				*e*S	**Sb**	**18 21 37.3**	**+0.1**
GAZ	**Gaziantep**	**1.91**	**230**	*e*PN	**Pn**	**18 21 13.8**	**+0.7**
GAZ	**Gaziantep**	**1.91**	**230**	*e*Pn	**Pn**	**18 21 13.8**	**+0.7**
KMRS	**Kahramanmaras**	**1.92**	**242**	*e*PN	**Pn**	**18 21 13.9**	**+0.7**
KMRS	**Kahramanmaras**	**1.92**	**242**	*e*Pn	**Pn**	**18 21 14.0**	**+0.7**

IDC 18 18:45:53.2±2.6, 14°.04N×92°.60W, h0km, mb3.7/3, mb1 3.9/6, mb1mx3.7/24, mbtmp3.6/6, ML3.6/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/42, Error ellipse: s-maj=45.4km s-min=38.0km az=179.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero** 1.6nm,0.3s,baz=145,slow=11,SNR=8.6	**3.75**	**324**	Pn	Pn	18 46 51.4	-0.9
CMIG				Sn	Sn	18 47 36.3	-0.9
TEIG	**Tepich** 0.9nm,0.3s,baz=247,slow=7.7,SNR=3.6	**7.41**	**33**	Pn	Pn	18 47 42.9	+0.2
TEIG				Sn	Sn	18 49 09.5	+1.9
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=137,slow=14,SNR=2.9	**18.35**	**328**	P	P	18 50 11.1	+1.6
ATAH	**Atahualpa** comp=Z,51nm,20.8s,baz=226,slow=28	**25.33**	**145**	LR	LR	18 57 44.3	
NVAR	**Mina Array Bea** 0.6nm,0.7s,baz=128,slow=9.6,SNR=5.0	**33.27**	**322**	P	P	18 52 32.5	-0.2
YKA	**Yellowknife Ar** 2.1nm,0.7s,baz=150,slow=7.4,SNR=54	**50.85**	**347**	P	P	18 54 54.5	-1.0
ILAR	**Eielson Array** 0.3nm,0.6s,baz=117,slow=6.6,SNR=3.9	**62.57**	**337**	P	P	18 56 19.8	+1.0
CMAR	**Chiang Mai Arr** 0.9nm,0.7s,baz=325,slow=3.5,SNR=8.1	**145.76**	**340**	PKPbc	PKPdf	19 05 33.8	-1.0

*LDG **18** 18:58:22.3±0.3, 40°.62N×5°.43E, h10km, Ml3.0/15, Error ellipse: s-maj=6.8km s-min=3.5km az=144.0*
*CSEM **18** 18:58:23.5±0.4, 40°.74N×5°.52E, h10km, ML3.0, Error ellipse: s-maj=8.9km s-min=4.0km az=142.0*
*MDD **18** 18:58:23.6±1.5, 40°.64N×5°.68E, h16km±17km, mb3.5/14, Error ellipse: s-maj=15.8km s-min=5.8km az=143.0, PRXIMO*
*STR **18** 18:58:28.8±1.8, 40°.97N×5°.14E, h5km, Ml3.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*GEN **18** 18:58:30.2, 40°.98N×6°.41E, h5km, ML2.8*

ISC 18 18:58:27.1±1.3, 40°.98N±0°.03×5°.24E±0°.02, h13km±8km, n103, σ1°59/117, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFON	**Fontmartina** 1.4nm,0.3s,SNR=12	**2.25**	**291**	P	**Pn**	**18 59 04.3**	**+0.1**
CFON				S	**Sb**	**18 59 35.1**	**-0.3**
CFON	**Fontmartina** 1.4nm,0.3s,SNR=12	**2.25**	**291**	P	**Pn**	**18 59 04.3**	**+0.1**
CFON				S	**Sb**	**18 59 35.1**	**-0.3**
LMR	**La Mourre** 11nm,0.2s	**2.54**	**21**	*e*Pn	Pn	18 59 06.5	-1.5
LMR				*e*Sn	**Sn**	**18 59 36.7**	**-2.1**
LMR	**La Mourre** 2.8nm,0.2s	**2.54**	**21**	P	Pn	18 59 06.5	-1.5
LMR				S	**Sn**	**18 59 36.7**	**-2.1**
FILF	**Fillols**	**2.55**	**309**	P	Pn	18 59 10.9	+2.6
FILF				S	**Sb**	**18 59 45.0**	**+0.9**
FILF	**Fillols**	**2.55**	**309**	P	Pn	18 59 10.9	+2.6
FILF				S	**Sb**	**18 59 45.0**	**+0.9**
FRF	**La Foret Royal**	**2.79**	**22**	*e*Pn	Pn	18 59 10.2	-1.2
FRF	14nm,0.3s			*e*Sn	**Sn**	**18 59 43.6**	**-1.3**
FRF	**La Foret Royal** 3.4nm,0.3s	**2.79**	**22**	P	Pn	18 59 10.2	-1.2
FRF				S	**Sn**	**18 59 43.6**	**-1.3**
CLLI	**Llivia** 2.1nm,0.8s,SNR=14	**2.87**	**303**	P	**Pn**	**18 59 14.3**	**+1.6**
CLLI				S	**Sb**	**18 59 51.8**	**-1.4**
CLLI	**Llivia** 2.1nm,0.8s,SNR=14	**2.87**	**303**	P	**Pn**	**18 59 14.3**	**+1.6**
CLLI	3.1nm,0.3s,SNR=13			S	**Sb**	**18 59 51.8**	**-1.4**
CARF	**Carcanieres**	**2.91**	**308**	S	**Sb**	**18 59 52.8**	**-1.8**
CARF	**Carcanieres**	**2.91**	**308**	S	**Sb**	**18 59 52.8**	**-1.8**
EMIR	**Miracle** 4.0nm,0.3s,SNR=12	**2.94**	**290**	P	**Pn**	**18 59 14.0**	**+0.4**
EMIR	16nm,0.6s,SNR=12			S	**Sb**	**18 59 53.4**	**-2.0**
EMIR	**Miracle** 4.0nm,0.3s,SNR=12	**2.94**	**290**	P	**Pn**	**18 59 14.0**	**+0.4**
EMIR	16nm,0.6s,SNR=12			S	**Sb**	**18 59 53.4**	**-2.0**
EPOB	**Poblet** 1.0nm,0.3s,SNR=10	**3.16**	**278**	P	**Pn**	**18 59 16.3**	**-0.4**
EPOB	2.7nm,0.3s,SNR=6.6			S	**Sn**	**18 59 56.7**	**+2.4**
EPOB	**Poblet** 1.0nm,0.3s,SNR=10	**3.16**	**278**	P	**Pn**	**18 59 16.3**	**-0.4**
EPOB	2.7nm,0.3s,SNR=6.6			S	**Sn**	**18 59 56.7**	**+2.4**
PGF	**Pioggiola** 22nm,0.2s	**3.22**	**60**	*e*Pn	Pn	18 59 10.2	-7.4
PGF				*e*Sn	Sn	18 59 43.4	-13
PGF	**Pioggiola**	**3.22**	**60**	P	Pn	18 59 10.2	-7.4
MTLF	**Montolieu**	**3.26**	**317**	*e*Pn	**Pn**	**18 59 18.3**	**+0.4**
MTLF	**Montolieu**	**3.26**	**317**	*e*P	**Pn**	**18 59 19.8**	**+1.9**
MTLF	20nm,0.2s			*e*Sn	**Sn**	**18 59 59.9**	**+3.3**
MTLF	**Montolieu**	**3.26**	**317**	P	**Pn**	**18 59 18.3**	**+0.4**
MTLF	5.0nm,0.2s			S	**Sn**	**18 59 59.9**	**+3.3**
LASF	**Ste Croix** 6.0nm,0.2s	**3.26**	**342**	*e*P	**Pn**	**18 59 18.5**	**+0.5**
LASF				*e*Sn	**Sn**	**18 59 57.5**	**+0.8**
LASF	**Ste Croix**	**3.26**	**342**	P	**Pn**	**18 59 18.5**	**+0.5**
LASF				S	**Sn**	**18 59 57.5**	**+0.8**

SBF	**Sospel** 1.5nm,0.2s	**3.31**	**29**	*e*Pn	Pn	18 59 16.1	-2.6
SBF	21nm,0.3s			*e*Sn	Sn	18 59 52.8	-5.2
SBF	**Sospel** 5.2nm,0.3s	**3.31**	**29**	P	Pn	18 59 16.1	-2.6
SBF				S	Sn	18 59 52.8	-5.2
CSOR	**Sort** 1.5nm,0.6s,SNR=7.5	**3.38**	**296**	P	**Pn**	**18 59 21.6**	**+1.9**
CSOR	6.2nm,0.3s,SNR=12			S	**Sb**	**19 00 04.8**	**-3.1**
CSOR	**Sort** 1.5nm,0.6s,SNR=7.5	**3.38**	**296**	P	**Pn**	**18 59 21.6**	**+1.9**
CSOR	6.2nm,0.3s,SNR=12			S	**Sb**	**19 00 04.8**	**-3.1**
EIBI	**Ibiza** 7.0nm,0.4s,SNR=20	**3.57**	**238**	P	Pn	18 59 19.1	-3.1
EIBI	8.5nm,0.4s,SNR=12			S	Sn	18 59 57.4	-6.8
EIBI	**Ibiza** 7.0nm,0.4s,SNR=20	**3.57**	**238**	P	Pn	18 59 19.1	-3.1
EIBI	8.5nm,0.4s,SNR=12			S	Sn	18 59 57.4	-6.8
STV	**Sant Anna di V**	**3.61**	**25**	P	**Pn**	**18 59 22.1**	**-0.8**
ERTA	**Horta de San J** 4.3nm,1.1s,SNR=5.6	**3.71**	**271**	P	**Pn**	**18 59 22.7**	**-1.5**
ERTA	1.7nm,0.4s,SNR=6.5			S	**Sn**	**19 00 08.6**	**+0.8**
ERTA	**Horta de San J** 4.3nm,1.1s,SNR=5.6	**3.71**	**271**	P	**Pn**	**18 59 22.7**	**-1.5**
ERTA	1.7nm,0.4s,SNR=6.5			S	**Sn**	**19 00 08.6**	**+0.8**
RORO	**Rocca Rossa**	**3.77**	**33**	P	Pn	18 59 21.7	-3.2
PZZ	**Stroppo**	**3.79**	**21**	P	**Pn**	**18 59 25.1**	**-0.3**
VIVF	**Saint-Julien-l** 4.2nm,0.2s	**3.90**	**354**	*e*P	**Pn**	**18 59 28.0**	**+1.2**
VIVF				*e*Sn	**Sn**	**19 00 12.9**	**+0.5**
VIVF	**Saint-Julien-l** 1.1nm,0.2s	**3.90**	**354**	P	**Pn**	**18 59 28.0**	**+1.2**
VIVF				S	**Sn**	**19 00 12.9**	**+0.5**
MBDF	**Montbardon** 2.9nm,0.5s	**3.91**	**16**	*e*P	**Pn**	**18 59 28.4**	**+1.3**
MBDF				*e*Sn	**Sn**	**19 00 12.3**	**-0.7**
MBDF	**Montbardon** 0.8nm,0.5s	**3.91**	**16**	P	**Pn**	**18 59 28.4**	**+1.3**
MBDF				S	**Sn**	**19 00 12.3**	**-0.7**
ORIF	**Oris-en-Rattie**	**3.97**	**7**	*e*P	Pn	18 59 30.0	+2.2
ORIF	**Oris-en-Rattie**	**3.97**	**7**	P	Pn	18 59 30.0	+2.2
EPF	**Esparros**	**4.18**	**301**	*e*Pn	Pn	18 59 28.1	-2.6
EPF	**Esparros**	**4.18**	**301**	P	Pn	18 59 28.1	-2.6
PCP	**Piancastagn**	**4.32**	**33**	P	Pn	18 59 28.6	-3.9
SSB	**Saint Sauveur**	**4.33**	**353**	P	**Pn**	**18 59 33.8**	**+1.1**
SSB	**Saint Sauveur**	**4.33**	**353**	P	**Pn**	**18 59 33.8**	**+1.1**
ESAC	**San Caprasio** 6.5nm,0.3s,SNR=7.7	**4.36**	**282**	P	**Pn**	**18 59 33.8**	**+0.7**
ESAC	7.9nm,0.3s,SNR=5.6			S	**Sn**	**19 00 26.6**	**+2.8**
ESAC	**San Caprasio** 6.5nm,0.3s,SNR=7.7	**4.36**	**282**	P	**Pn**	**18 59 33.8**	**+0.7**
ESAC	7.9nm,0.3s,SNR=5.6			S	**Sn**	**19 00 26.6**	**+2.8**
EMOS	**Mosqueruela** 1.0nm,2.4s,SNR=7.9	**4.38**	**264**	P	**Pn**	**18 59 32.8**	**-0.8**
EMOS	22nm,1.7s,SNR=7.9			S	**Sn**	**19 00 24.7**	**+0.1**
EMOS	**Mosqueruela** 1.0nm,2.4s,SNR=7.9	**4.38**	**264**	P	**Pn**	**18 59 32.8**	**-0.8**
EMOS	22nm,1.7s,SNR=7.9			S	**Sn**	**19 00 24.7**	**+0.1**
LBL	**Lubilhac**	**4.50**	**342**	P	**Pn**	**18 59 37.2**	**+2.2**
LBL	**Lubilhac**	**4.50**	**342**	P	**Pn**	**18 59 37.2**	**+2.2**
CAF	**Calviac**	**4.58**	**331**	*e*Pn	**Pn**	**18 59 36.8**	**+0.7**
CAF	**Calviac**	**4.58**	**331**	*e*P	Pn	18 59 39.1	+3.0
CAF	2.4nm,0.2s			*e*Sn	**Sn**	**19 00 28.8**	**-0.5**
CAF	**Calviac**	**4.58**	**331**	P	**Pn**	**18 59 36.8**	**+0.7**
CAF	0.6nm,0.2s			S	**Sn**	**19 00 28.8**	**-0.5**
LPG	**La Plagne** 1.4nm,0.4s	**4.65**	**13**	*e*P	Pn	18 59 39.4	+2.1
LPG				*e*Sn	**Sn**	**19 00 30.4**	**-0.9**
LPG	**La Plagne** 0.3nm,0.4s	**4.65**	**13**	P	Pn	18 59 39.4	+2.1
LPG				S	**Sn**	**19 00 30.4**	**-0.9**
LPL	**La Plagne** 3.3nm,0.6s

GUD				S		Sn	19 01 32.9	+0.6
	21nm,3.0s,SNR=7.9							
EQES	**Quesada**	**7.17**	**246**	P		**Pn**	**19 00 10.9**	**-0.9**
	0.8nm,0.6s,SNR=7.9							
EQES				S		**Sn**	**19 01 31.4**	**-1.8**
	14nm,1.2s,SNR=7.9							
EQES	**Quesada**	**7.17**	**246**	P		**Pn**	**19 00 10.9**	**-0.9**
	0.8nm,0.6s,SNR=7.9							
EQES				S		**Sn**	**19 01 31.4**	**-1.8**
	14nm,1.2s,SNR=7.9							
CDF	**Champ du Feu**	**7.57**	**10**	*e*Pn		**Pn**	**19 00 16.4**	**-0.9**
CDF	**Champ du Feu**	**7.57**	**10**	P		**Pn**	**19 00 16.4**	**-0.9**
PAGF	**Fort de Pagny**	**7.58**	**2**	*e*Pn		**Pn**	**19 00 16.8**	**-0.5**
PAGF	**Fort de Pagny**	**7.58**	**2**	*e*Pn		**Pn**	**19 00 16.8**	**-0.5**
EARI	**Arriondas**	**8.10**	**290**	S		**Sn**	**19 01 57.6**	**+1.6**
	74nm,2.4s,SNR=7.9							
EARI	**Arriondas**	**8.10**	**290**	S		**Sn**	**19 01 57.6**	**+1.6**
	74nm,2.4s,SNR=7.9							

IDC 18 19:06:03.6±1.6, 9.75S×152.52E, h0km, mb3.6/6, mb1 3.6/7, mb1mx3.5/17, mbtmp3.6/7, ML1.9/1, Error ellipse: s-maj=48.1km s-min=22.5km az=119.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.30**	**273**	Pn		Pn		19 07 24.6	+0.5
	0.3nm,0.3s,baz=210,slow=16,SNR=2.7								
WRA	**Warramunga Arr**	**20.27**	**238**	P			P	19 10 39.9	-1.1
	46nm,0.4s,baz=61,slow=11,SNR=1.9								
ASAR	**Alice Springs**	**22.53**	**230**	P			P	19 11 05.5	+0.1
	0.6nm,0.8s,baz=60,slow=9.3,SNR=8.2								
STKA	**Stephens Creek**	**24.24**	**203**	P			P	19 11 23.3	+0.9
	2.0nm,1.1s,baz=37,slow=10,SNR=2.9								
USRK	**Ussuriysk Arra**	**56.83**	**342**	P			P	19 15 50.8	+0.9
	1.8nm,0.7s,baz=150,slow=41,SNR=3.9								
MKAR	**Makanchi Array**	**83.87**	**319**	P			P	19 18 35.1	-0.3
	0.5nm,0.7s,baz=110,slow=7.2,SNR=5.9								
ZALV	**Zalesovo Beam**	**85.10**	**327**	P			P	19 18 40.7	-0.7
	0.4nm,0.6s,baz=134,slow=6.2,SNR=3.6								
ILAR	**Eielson Array**	**86.82**	**22**	P			P	19 18 49.2	-0.4
	0.4nm,0.9s,baz=251,slow=5.6,SNR=3.1								

NIED ***18*** *19:17:00,46.00N×152.10E,h47km,Mw6.5 Best double couple: M0 5.90000×10^18 NP1:φs339.00000°,δ75.00000°, λ48.00000°. NP2:φs232.00000°,δ44.00000°,λ158.00000°.*

KRSC ***18*** *19:17:52.0±0.3,45.17N×152.37E,h53km±25km,ML6.6*

SKHL ***18*** *19:17:54.8±1.8,45.68N×152.31E,h70km±9km,mb7.1/8, mbh6.8/5,Ms6.2/2,msh7.0/5*

SKHL Felt (II) at Yushno-Kurilsk.

JMA ***18*** *19:17:55.5±0.6,45.99N×152.07E,h30km,M6.5*

JMA Felt III J1.

ISCJB ***18*** *19:17:57.6±0.3,46.01N±0.01×151.50E±0.01,h34km±2km, mb6.2/529,MS6.4/293,Error ellipse: s-maj=2.6km s-min=1.4km az=153.0*

NEIC ***18*** *19:17:58.9±0.1,46.02N×151.43E,h35km,mb6.3/283, ME6.3,MS6.3/155,MW6.4,MW6.6,MW6.7(USGS),Error ellipse: s-maj=3.2km s-min=2.1km az=155.0,Moment Tensor Solution. s130 Moment tensor: Scale 10^18Nm; Mrr5.05; Mθθ-1.00; Mφφ-4.05; Mrθ1.63; Mθφ-1.87; Mφr2.71; Best double couple: M0 5.90000×10^18 NP1:φs28.00000°, δ61.00000°,λ93.00000°. NP2:φs203.00000°,δ29.00000°, λ85.00000°. Principal axes: T 5.9700, Plg73.0000°, Azm305.0000°; N -0.1200, Plg2.0000°, Azm206.0000°; P -5.8500, Plg16.0000°, Azm116.0000°; Complex earthquake observed on broadband displacement seismograms. A small event is followed by a much larger event about 1.5 seconds later. Depth from synthetics of broadband displacement seismograms based on the larger event. Energy computed from CMT mechanism.*

NEIC Felt [II] at Yuzhno-Kuril'sk. Recorded [3 JMA] in southeastern Hokkaido. Also recorded [1 JMA] in Aomori, Iwate and Miyagi, Honshu.

MOS ***18*** *19:17:59.2±1.1,46.04N×151.44E,h54km,mb6.5/152, MS6.6/93 Error ellipse: s-maj=6.0km s-min=4.0km az=93.6 Broadband fault plane solution: P waves. M0 2.10000×10^19 NP1:φs217.00000°,δ45.00000°, λ95.00000°. NP2:φs30.00000°,δ45.00000°,λ85.00000°. Principal axes: T Plg86.0000°, Azm214.0000°; N Plg4.0000°, Azm34.0000°; P Plg0.0000°, Azm124.0000°;*

MOS Fault plane solution: P-wave C159, D11 . Felt (II) at Yuzhno-Kuril'sk.

BJI ***18*** *19:18:00.0,46.15N×151.47E,h62km,mB6.7/54,mb6.1/67, Ms6.6/82,Ms7 6.5/70*

IDC ***18*** *19:18:00.1±1.5,46.04N×151.46E,h42km±13km,mb5.5/52, mb1 5.6/56,mb1mx5.6/57,mbtmp5.5/56,ML5.1/4,MS6.4/59, Ms1 6.4/59,ms1mx6.3/69,Error ellipse: s-maj=9.3km s-min=6.9km az=133.0*

BGS ***18*** *19:18:00.0±1.3,46.36N×152.05E,h33km,mb6.4,MS6.2*

DJA ***18*** *19:18:02.3±1.3,46.13N×151.0E±1.9,h10km,M6.6/9, mb6.0/9,mB6.8/9,Mw(mB)6.7/9,Mwp6.6/8*

SZGRF ***18*** *19:18:04.4,46.71N×151.27E,h33km,mb6.7,MS6.7,Kuril Islands, Russia*

GCMT ***18*** *19:18:06.0±0.1,45.96N×151.74E,h50km,MW6.6, Moment Tensor Solution. s117,c295; s99,c221; Moment tensor: Scale 10^19Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: M0 1.00000×10^19 NP1:φs231.00000°,δ33.00000°, λ109.00000°. NP2:φs28.00000°,δ59.00000°,λ78.00000°. Principal axes: T 1.0000, Plg73.0000°, Azm268.0000°; N 0.0200, Plg10.0000°, Azm35.0000°; P -1.0200, Plg13.0000°, Azm127.0000°; Data Used: II IU CN IC G. LP body wave period 50 sec. Mantle waves from 103 sta. Surface waves: sta=121, comp=307, per= 50.*

NEIC ***18*** *19:18:16.0±0.0,45.90N×151.27E,h47km,Moment Tensor Solution. s141 Moment tensor: Scale 10^19Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: M0 1.10000×10^19 NP1:φs30.00000°, δ63.00000°,λ80.00000°. NP2:φs232.00000°,δ28.00000°, λ109.00000°. Principal axes: T 1.0900, Plg70.0000°, Azm279.0000°; N -0.0300, Plg8.0000°, Azm34.0000°; P -1.0600, Plg17.0000°, Azm127.0000°;*

ISC 18 19:18:01.1±0.4, 46.05N±0.03×151.40E±0.02, h51km±2km, h50km:pP-P,n2358,σ1s25/2526, mb6.2/531, MS6.4/294, 625C-262D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.61**	**253**	⇓*i*PN		**Pn**		**19 18 42.0**	**+1.2**
KUR				*e*S		**Sn**		**19 19 10.0**	**-1.2**
KUR				pmax		pmax			
	comp=Z,50μm,3.0s								
KUR				pmax		pmax			
	comp=N,25μm,4.0s								
KUR				pmax		pmax			
	comp=E,76μm,4.0s								
KUR				smax		smax			
	comp=N,813μm,6.0s								
KUR				smax		smax			
	comp=E,457μm,6.0s								
KUR	**Kuril'sk**	**2.61**	**253**	⇑*i*P		**Pn**		**19 18 42.0**	**+1.2**
KUR				⇓*i*P		**Pn**		**19 18 42.0**	**+1.2**
KUR				AMB		AMB		19 18 47.2	
	comp=E,25μm,4.0s								
KUR				AMB		AMB		19 18 47.2	
	comp=E,76μm,4.0s								
KUR				AMB		AMB		19 18 47.2	
	comp=E,50μm,3.0s								
KUR				A		A		19 19 30.0	
	comp=E,813μm,6.0s								
KUR				A		A		19 19 30.0	
	comp=E,457μm,6.0s								
YUK	**Yuzh-Kuril'sk**	**4.41**	**245**	*ce*PN		**Pn**		**19 19 07.2**	**+1.7**
YUK				*i* S		**Sn**		**19 20 00.1**	**+4.6**
YUK				pmax		pmax			
	comp=N,5μm,0.6s								
YUK				pmax		pmax			
	comp=E,6μm,0.6s								
YUK				pmax		pmax			
	comp=Z,5μm,0.6s								
YUK				smax		smax			
	comp=E,22μm,0.7s								
YUK				smax		smax			
	comp=N,39μm,0.7s								
YUK				MLR		MLR			
	comp=N,235μm,15.0s								
YUK				MLR		MLR			
	comp=E,104μm,15.0s								
YUK				MLR		MLR			
	comp=Z,78μm,15.0s								
YUK	**Yuzh-Kuril'sk**	**4.41**	**245**	⇑*i*P		**Pn**		**19 19 07.2**	**+1.7**
YUK				AMB		AMB		19 19 18.3	
	comp=Z,5μm,0.6s								
YUK				AMB		AMB		19 19 18.3	
	comp=Z,6μm,0.6s								
YUK				AMB		AMB		19 19 18.3	
	comp=Z,5μm,0.6s								
YUK				*i* S		**Sn**		**19 20 00.1**	**+4.6**
YUK				A		A		19 20 16.4	
	comp=Z,39μm,0.7s								
YUK				A		A		19 20 16.4	
	comp=Z,22μm,0.7s								
NEM2	**Nemuro 2**	**4.84**	**238**	P		**Pn**		**19 19 10.7**	**-0.7**
NEM2				*e*S		**Sn**		**19 20 05.8**	**-0.3**
JRA	**Rausu**	**4.93**	**247**	P		**Pn**		**19 19 14.6**	**+2.1**
JRA				*e*S		Sn		19 20 14.9	+6.7
JNK	**Nakash**	**5.35**	**245**	P		**Pn**		**19 19 19.7**	**+1.3**
JNK				*e*S		**Sn**		**19 20 23.9**	**+5.2**
SKR	**Severo-Kuril's**	**5.60**	**32**	*e*PN		Pn		19 19 17.4	-4.3
SKR				pmax		pmax			
	comp=E,870nm,0.6s								
SKR				pmax		pmax			
	comp=Z,3μm,0.6s								
SKR				pmax		pmax			
	comp=N,490nm,0.4s								
SKR				pmax		pmax			
	comp=N,8μm,4.0s								
SKR				pmax		pmax			
	comp=E,7μm,4.0s								
SKR				pmax		pmax			
	comp=Z,9μm,4.0s								
SKR				MLR		MLR			
	comp=N,95μm,18.0s								
SKR				MLR		MLR			
	comp=E,158μm,14.0s								
SKR				MLR		MLR			
	comp=Z,114μm,14.0s								
SKR	**Severo-Kuril's**	**5.60**	**32**	*e*P		**Pn**		**19 19 22.7**	**+1.0**
SKR				*i* S		**Sn**		**19 20 26.4**	**+1.7**
SKR	**Severo-Kuril's**	**5.60**	**32**	*e*P		Pn		19 19 17.4	-4.3
SKR				AMB		AMB		19 19 25.0	
	comp=Z,490nm,0.4s								
SKR				AMB		AMB		19 19 25.0	
	comp=Z,870nm,0.6s								
SKR				AMB		AMB		19 19 25.0	
	comp=Z,3μm,0.6s								
SKR				AMB		AMB		19 19 25.0	
	comp=Z,8μm,4.0s								
SKR				AMB		AMB		19 19 25.0	
	comp=Z,7μm,4.0s								
SKR				AMB		AMB		19 19 25.0	
	comp=Z,9μm,4.0s								
SKR				AMB		AMB		19 19 25.0	
	comp=Z,8μm,4.0s								
SKR				AMB		AMB		19 19 25.0	
	comp=Z,7μm,4.0s								
SKR				*i* S		**Sn**		**19 20 20.7**	**-4.0**
SKR				A		A		19 20 31.0	
	comp=Z,28μm,8.0s								
SKR				A		A		19 20 31.0	
	comp=Z,212μm,8.0s								
SKR				A		A		19 20 31.0	
	comp=Z,145μm,10.0s								
SKR				A		A		19 20 31.0	
	comp=Z,30μm,8.0s								
SKR				A		A		19 20 31.0	
	comp=Z,213μm,8.0s								
SKR				A		A		19 20 31.0	
	comp=Z,143μm,10.0s								
SKR				A		A		19 20 49.5	
	comp=Z,6μm,0.6s								
SKR				A		A		19 20 49.5	
	comp=Z,10μm,0.6s								
SKR				A		A		19 20 49.5	
	comp=Z,5μm,0.6s								
SKR				AMS		AMS		19 21 48.0	
	comp=Z,146μm,14.0s								
SKR				AMS		AMS		19 21 48.0	
	comp=Z,115μm,14.0s								
SKR				AMS		AMS		19 21 48.0	
	comp=Z,90μm,18.0s								
SKR				AMS		AMS		19 21 48.0	
	comp=Z,95μm,18.0s								
SKR				AMS		AMS		19 21 48.0	
	comp=Z,158μm,14.0s								
SKR				AMS		AMS		19 21 48.0	
	comp=Z,114μm,14.0s								
JAK	**Akkeshi**	**5.68**	**240**	P		**Pn**		**19 19 22.3**	**-0.6**
JAK				*e*S		**Sn**		**19 20 27.1**	**+0.3**
JTKR	**Abashiri--Toko**	**5.70**	**251**	⇓P		**Pn**		**19 19 25.5**	**+2.3**
YSS	**Yuzh-Sakhalins**	**6.03**	**282**	⇓*i*PN		Pn		19 19 32.4	+4.7
YSS				*e*S		**Sn**		**19 20 38.4**	**+3.0**
YSS				pmax		pmax			
	comp=Z,4μm,0.8s								
YSS				pmax		pmax			
	comp=E,3μm,0.7s								
YSS				pmax		pmax			
	comp=Z,36μm,5.0s								
YSS				pmax		pmax			
	comp=E,36μm,6.0s								
YSS				MLR		MLR			
	comp=N,217μm,18.0s								
YSS				MLR		MLR			
	comp=E,293μm,18.0s								
YSS				MLR		MLR			
	comp=Z,408μm,18.0s								
YSS	**Yuzh-Sakhalins**	**6.03**	**282**	*e*P		Pn		19 19 31.9	+4.2
YSS				*i* S		Sn		19 20 44.8	+9.4
YSS	**Yuzh-Sakhalins**	**6.03**	**282**	⇓*i*P		Pn		19 19 32.4	+4.7
YSS				⇓*i*P		Pn		19 19 32.4	+4.7
YSS				⇓*i*P		Pn		19 19 32.4	+4.7
YSS				AMB		AMB		19 19 35.0	
	comp=Z,4μm,0.8s								
YSS				AMB		AMB		19 19 35.0	
	comp=Z,3μm,0.7s								
YSS				AMB		AMB		19 19 38.0	
	comp=Z,36μm,5.0s								
YSS				AMB		AMB		19 19 38.0	
	comp=Z,40μm,4.0s								
YSS				AMB		AMB		19 19 38.0	
	comp=Z,46μm,4.0s								
YSS				AMB		AMB		19 19 38.0	
	comp=Z,36μm,6.0s								
YSS				*e*S		**Sn**		**19 20 38.4**	**+3.0**
YSS				*e*LQ		LQ		19 21 02.0	
YSS				*e*LR		LR		19 21 22.0	
YSS				AMS		AMS		19 21 38.0	
	comp=Z,408μm,18.0s								
YSS				AMS		AMS		19 21 38.0	
	comp=Z,217μm,18.0s								
YSS				AMS		AMS		19 21 38.0	
	comp=Z,293μm,18.0s								
YSS				AMS		AMS		19 21 48.0	
	comp=Z,573μm,18.0s								
YSS				AMS		AMS		19 21 48.0	
	comp=Z,303μm,18.0s								
YSS				AMS		AMS		19 21 48.0	
	comp=Z,337μm,18.0s								
JMP	**Maruseppu**	**6.05**	**253**	⇓P		**Pn**		**19 19 31.0**	**+3.0**
JAR	**Ashorobuto**	**6.10**	**246**	⇑P		**Pn**		**19 19 30.4**	**+1.8**
JAR				*e*S		**Sn**		**19 20 41.3**	**+4.3**
JOB	**Onbets**	**6.26**	**242**	⇑P		**Pn**		**19 19 31.2**	**+0.4**
JSE	**Soyaes**	**6.29**	**263**	P		**Pn**		**19 19 34.4**	**+3.2**
PAU	**Pauzhetka**	**6.49**	**31**	PN		**Pn**		**19 19 33.3**	**-0.7**
PAU				S		**Sn**		**19 20 48.4**	**+1.8**
PAU	**Pauzhetka**	**6.49**	**31**	*e*P		**Pn**		**19 19 33.3**	**-0.7**
PAU				*i* S		**Sn**		**19 20 48.2**	**+1.6**
JKK2	**Kamakawa 2**	**6.51**	**254**	P		Pn		19 19 37.7	+3.4
ASAJ	**Asahikawa**	**6.52**	**256**	*e*Sn		**Sn**		**19 20 43.8**	**-3.7**
ASAJ	**Asahikawa**	**6.52**	**256**	P		Pn		19 19 38.3	+3.8
ASAJ	**Asahikawa**	**6.52**	**256**	P		Pn		19 19 38.1	+3.7
	comp=Z,40nm,0.3s,baz=89,slow=17,SNR=259								
ASAJ				LR		LR		19 22 15.5	
	comp=Z,560μm,21.5s,baz=76,slow=39								
JWK2	**Keihoku**	**6.70**	**267**	P		Pn		19 19 42.6	+5.8
JCH	**Churui**	**6.71**	**242**	P		**Pn**		**19 19 36.5**	**-0.5**
JCH				*e*S		**Sn**		**19 20 53.8**	**+1.8**
JFR	**Furan**	**6.92**	**248**	⇑P		**Pn**		**19 19 42.0**	**+2.2**
JSS	**Shosan**	**6.94**	**260**	P		Pn		19 19 45.9	+5.8
UGL	**Uglegorsk**	**7.00**	**299**	⇓*i*PN		Pn		19 19 45.8	+4.9
UGL				*e*S		Sn		19 21 08.3	+9.2
UGL				pmax		pmax			
	comp=Z,4μm,0.4s								
UGL				pmax		pmax			
	comp=N,1μm,0.5s								
UGL				pmax		pmax			
	comp=E,1μm,0.5s								
UGL				pmax		pmax			
	comp=N,30μm,5.0s								
UGL				pmax		pmax			
	comp=E,48μm,5.0s								
UGL				pmax		pmax			
	comp=Z,51μm,5.0s								
UGL				smax		smax			
	comp=N,2μm,0.6s								
UGL				smax		smax			
	comp=E,5μm,0.6s								
UGL				smax		smax			
	comp=Z,2μm,0.5s								
UGL	**Uglegorsk**	**7.00**	**299**	⇓*i*P		Pn		19 19 45.8	+4.9
UGL				⇓*i*P		Pn		19 19 45.8	+4.9
UGL				AMB		AMB		19 19 50.0	
	comp=Z,30μm,5.0s								
UGL				AMB		AMB		19 19 50.0	
	comp=Z,48μm,5.0s								
UGL				AMB		AMB		19 19 50.0	
	comp=Z,1μm,0.5s								
UGL				AMB		AMB		19 19 50.0	
	comp=Z,1μm,0.5s								
UGL				AMB		AMB		19 19 50.0	
	comp=Z,4μm,0.4s								
UGL				AMB		AMB		19 19 50.0	
	comp=Z,51μm,5.0s								
UGL				*e*S		Sn		19 21 08.3	+9.2
UGL				A		A		19 21 11.0	
	comp=Z,2μm,0.6s								
UGL				A		A		19 21 11.0	
	comp=Z,5μm,0.6s								
UGL				A		A		19 21 11.0	
	comp=Z,2μm,0.5s								
JAB	**Ashibetsu**	**7.01**	**252**	⇑P		Pn		19 19 44.7	+3.6
MIPR	**Malaya Ipel'ka**	**7.15**	**27**	P		**Pn**		**19 19 44.3**	**+1.3**
JEM	**Erimo**	**7.18**	**239**	P		**Pn**		**19 19 44.0**	**+0.6**
JEM				*e*S		**Sn**		**19 21 03.3**	**-0.2**
ERM	**Erimo**	**7.18**	**239**	⇓*e*PN		**Pn**		**19 19 42.2**	**-1.2**
ERM				*e*				19 21 06.1	
ERM				pmax		pmax			
	comp=Z,9μm,1.0s								
ERM	**Erimo**	**7.18**	**239**	⇓*e*Pn		**Pn**		**19 19 42.2**	**-1.2**
	comp=Z,9μm,1.0s								
ERM				*e*Sn		**Sn**		**19 21 06.1**	**+2.6**
ERM	**Erimo**	**7.18**	**239**	Pn		**Pn**		**19 19 44.4**	**+1.0**
	comp=Z,27μm,0.5s								
JHR	**Hokuryu**	**7.25**	**255**	P		Pn		19 19 48.6	+4.2
JBT2	**Biratori 2**	**7.25**	**246**	⇑P		**Pn**		**19 19 45.0**	**+0.6**
JNBK	**Urakawa-nobuka**	**7.27**	**242**	⇑P		**Pn**		**19 19 43.8**	**-0.9**
JNBK				*e*S		**Sn**		**19 21 07.1**	**+1.3**
TYV	**Tymovskoe**	**7.54**	**313**	*e*P		Pn		19 19 52.0	+3.6
TYV				AMB		AMB		19 19 53.8	
	comp=Z,374nm,1.0s								
TYV				AMB		AMB		19 19 53.8	
	comp=Z,607nm,1.0s								
TYV				AMB		AMB		19 19 53.8	
	comp=Z,836nm,1.0s								
JEW	**Eniwo**	**7.81**	**249**	⇑P		**Pn**		**19 19 54.2**	**+2.2**
MTVR	**Mutnovka**	**7.81**	**32**	*e*P		**Pn**		**19 19 51.3**	**-0.9**
MTVR				*i* S		**Sn**		**19 21 18.3**	**-1.0**
APC	**Apacha**	**7.83**	**26**	*e*P		**Pn**		**19 19 53.4**	**+1.1**
APC				*i* S		**Sn**		**19 21 23.1**	**+3.6**
RUS	**Russkaya**	**7.90**	**33**	*e*P		**Pn**		**19 19 50.5**	**-2.7**
PEA0B	**Petropavlovsk-**	**8.16**	**28**	*e*Pn		**Pn**		**19 19 57.2**	**+0.4**
PEA0B				*e*S		Sn		19 21 39.1	+12
PETK	**Petropavlovsk-**	**8.16**	**28**	PN		**Pn**		**19 19 57.2**	**+0.4**
PETK				pmax		pmax			
	comp=Z,8.0nm,0.3s								
PETK				MLR		MLR			
	comp=Z,161μm,20.2s								
PETK	**Petropavlovsk-**	**8.16**	**28**	P		**Pn**		**19 19 57.2**	**+0.4**
PETK	**Petropavlovsk-**	**8.16**	**28**	P		**Pn**		**19 19 57.2**	**+0.4**
	comp=Z,7.6nm,0.3s,baz=182,slow=13,SNR=95								
PETK				LR		LR		19 23 07.7	
	comp=Z,161μm,20.1s,baz=71,slow=38								
JSK	**Shakotan**	**8.23**	**255**	P		**Pn**		**19 20 00.8**	**+2.9**
JNB	**Noboribetsu**	**8.25**	**248**	P		**Pn**		**19 19 58.9**	**+0.8**
PET	**Petropavlovsk**	**8.42**	**31**	⇑*i*PN		**Pn**		**19 20 01.2**	**+0.9**
PET				pmax		pmax			
	comp=Z,17μm,10.2s								
PET				pmax		pmax			
	comp=Z,1μm,1.6s								
PET				MLR		MLR			
	comp=Z,196μm,30.0s								
PET				MLR		MLR			
	comp=Z,112μm,16.0s								
JKB	**Kayabe**	**8.55**	**245**	P		**Pn**		**19 20 01.9**	**-0.3**
JKB				*e*S		**Sn**		**19 21 34.9**	**-2.4**
KOK	**Koryaka**	**8.63**	**30**	*e*P		**Pn**		**19 20 03.1**	**-0.2**
UGLR	**Uglovaya**	**8.63**	**31**	*e*P		**Pn**		**19 20 03.1**	**-0.2**
UGLR				*i* S		**Sn**		**19 21 40.1**	**+0.9**
AVH	**Avacha**	**8.64**	**31**	*e*P		**Pn**		**19 20 03.1**	**-0.4**
SMAR	**Somma**	**8.66**	**31**	*e*P		**Pn**		**19 20 03.2**	**-0.7**
SDLR	**Sedlovina**	**8.71**	**31**	*e*P		**Pn**		**19 20 02.9**	**-1.5**
JSH	**Shimam**	**8.82**	**251**	P		**Pn**		**19 20 08.0**	**+2.1**
JYM2	**Yakumo 2**	**8.86**	**248**	⇑P		**Pn**		**19 20 06.5**	**+0.1**
SPN	**Mys Shipunski**	**9.00**	**35**	*e*P		**Pn**		**19 20 06.9**	**-1.4**
JSR	**Shiriuchi**	**9.13**	**244**	P		**Pn**		**19 20 09.8**	**-0.4**
JTM	**Tenmabayashi**	**9.17**	**239**	P		**Pn**		**19 20 08.7**	**-2.0**
JTM				*e*S		Sn		19 21 46.1	-6.4
JANG	**Nango**	**9.18**	**235**	P		Pn		19 20 07.7	-3.1
JANG				*e*S		Sn		19 21 43.8	-8.8
JTH	**Tanohata**	**9.28**	**232**	P		Pn		19 20 08.5	-3.7
JTH				*e*S		Sn		19 21 46.5	-8.5
OKH	**Okha**	**9.28**	**327**	⇓*i*PN		Pn		19 20 15.6	+3.5
OKH				*e*S		Sn		19 22 01.5	+6.5
OKH				pmax		pmax			
	comp=Z,78μm,4.0s								
OKH				smax		smax			
	comp=N,56μm,7.0s								
OKH				smax		smax			
	comp=E,63μm,10.0s								
OKH				MLR		MLR			
	comp=Z,77μm,14.0s								
OKH	**Okha**	**9.28**	**327**	⇓*i*P		Pn		19 20 15.6	+3.5
OKH				*e*P		Pn		19 20 16.8	+4.7
OKH				AMB		AMB		19 20 20.5	
	comp=Z,6μm,1.2s								
OKH				AMB		AMB		19 20 22.0	
	comp=Z,40μm,5.0s								
OKH				AMB		AMB		19 20 22.0	
	comp=Z,49μm,6.0s								
OKH				AMB		AMB		19 20 22.0	
	comp=Z,78μm,4.0s								
OKH				*e*S		Sn		19 22 01.5	+6.5
OKH				A		A		19 22 12.4	
	comp=Z,56μm,7.0s								
OKH				A		A		19 22 12.4	
	comp=Z,63μm,10.0s								
OKH				AMS		AMS		19 25 45.6	
	comp=Z,77μm,14.0s								
JOSM	**Okushiri--Mats**	**9.45**	**249**	P		**Pn**		**19 20 14.9**	**+0.3**
KII	**Karymskiy**	**9.52**	**30**	*e*P		**Pn**		**19 20 16.1**	**+0.7**
JKZ	**Kuzumaki**	**9.54**	**234**	P		**Pn**		**19 20 12.9**	**-2.9**
JAH	**Hinai**	**9.81**	**237**	P		**Pn**		**19 20 17.3**	**-2.1**
JOM	**Ohasama**	**9.92**	**232**	P		Pn		19 20 17.6	-3.3
NKL	**Nikolayevsk**	**9.93**	**320**	⇓*i*P		**Pn**		**19 20 21.5**	**+0.4**
NKL				AMB		AMB		19 20 27.5	
	comp=Z,3μm,1.0s								
NKL				AMB		AMB		19 20 27.5	
	comp=Z,5μm,1.0s								
NKL				AMB		AM

TEY AMB AMB 19 20 36.0
comp=Z,13μm,8.0s
TEY AMB AMB 19 20 36.0
comp=Z,15μm,8.6s
TEY A A 19 23 00.0
comp=Z,55μm,19.0s
TEY A A 19 23 00.0
comp=Z,99μm,20.0s
TEY eLR LR 19 25 14.0
TEY AMS AMS 19 25 24.0
comp=Z,61μm,13.0s
TEY AMS AMS 19 25 24.0
comp=Z,43μm,13.0s
TEY AMS AMS 19 25 24.0
comp=Z,61μm,14.0s
JOG2 Oga 2 10.48 238 P **Pn 19 20 27.4 -1.2**
JIO Ouri 10.63 228 P Pn 19 20 26.5 -4.1
JIO eS Sn 19 22 19.9 -8.2
MKZ Mys Kozlova 10.77 34 PN **Pn 19 20 29.5 -2.9**
MKZ Mys Kozlova 10.77 34 *eP* **Pn 19 20 30.0 -2.4**
TUMR Tumrok 10.77 28 *eP* **Pn 19 20 33.7 +1.1**
ESO Esso 10.90 22 *eP* **Pn 19 20 35.2 +1.0**
ESO *i* S **Sn 19 22 35.4 +0.9**
KMNR Kamenistaya 11.19 27 *eP* **Pn 19 20 38.8 +0.4**
KPT Kopyto 11.37 26 *eP* **Pn 19 20 40.7 0.0**
HABR Khabarovsk 11.37 288 *ce*PN **Pn 19 20 38.2 -2.5**
HABR pmax pmax
comp=Z,5.0nm,0.7s
HABR MLR MLR
comp=Z,236μm,18.0s
KIRR Kirishev 11.39 26 *eP* **Pn 19 20 41.9 +0.8**
JYA Atsumi 11.41 233 P **Pn 19 20 39.0 -2.3**
BZMR Bezymyannaya 11.42 27 *eP* **Pn 19 20 41.4 -0.1**
BZGR Bezymyannyi-Gr 11.49 27 *eP* **Pn 19 20 41.3 -1.1**
SRDR Sredinnyy 11.52 24 *eP* **Pn 19 20 44.0 +1.3**
LGNR Loginova 11.61 27 *eP* **Pn 19 20 44.3 +0.1**
KRSR Krestovskiy 11.68 26 *eP* **Pn 19 20 44.8 -0.2**
JFK Kawauchi 11.70 226 P Pn 19 20 41.5 -3.9
JFK eS Sn 19 22 42.7 -12
JAW Awa shima 11.77 234 P **Pn 19 20 43.8 -2.4**
KLY Klyuchi 11.79 26 PN **Pn 19 20 47.2 +0.9**
KLY Klyuchi 11.79 26 *eP* **Pn 19 20 47.1 +0.8**
BDR Baidarnaya 12.17 27 *eP* **Pn 19 20 51.5 -0.2**
JNS Sasagawa 12.18 232 P **Pn 19 20 49.7 -2.1**
SRKR Sorokina 12.23 26 *eP* **Pn 19 20 52.5 0.0**
SMKR Semkarok 12.27 27 *eP* **Pn 19 20 53.8 +0.9**
JFY Yanaizu 12.27 229 P **Pn 19 20 51.1 -2.0**
KBTR Krutoberegovo 12.42 31 PN **Pn 19 20 51.9 -3.1**
KBTR Krutoberegovo 12.42 31 *eP* **Pn 19 20 53.0 -2.0**
JSD Sado 12.62 235 P Pn 19 20 54.6 -3.2
JIZZ Izumozaki 12.72 232 P **Pn 19 20 57.3 -1.9**
JHK Hiroka 12.76 231 P **Pn 19 20 57.1 -2.6**
BKI Bering 12.99 40 *eP* Pn 19 20 59.5 -3.3
JJN Nakama 13.33 233 P **Pn 19 21 04.9 -2.6**
JHG Hegura jima 13.52 238 P **Pn 19 21 08.2 -2.0**
KLR Kul'dur 13.62 291 ⇓ *i*P **Pn 19 21 13.2 +1.8**
MJAR Matsushiro Arr 13.71 231 P Pn 19 21 09.5 -3.3
MJAR Matsushiro Arr 13.71 231 P Pn 19 21 09.5 -3.3
comp=Z,8.0nm,0.3s,baz=27,slow=13,SNR=310
MAJO Matsushiro 13.72 231 ⇑ *i*P Pn 19 21 09.4 -3.4
MAJO pmax pmax
comp=Z,570nm,0.6s
MAJO Matsushiro 13.72 231 ⇑ *i*Pn **Pn** 19 21 09.4 -3.4
comp=Z,570nm,0.6s
MAT Matsushiro 13.72 231 P Pn 19 21 09.5 -3.3
MAT S Sn 19 23 51.4 +7.9
MAT Matsushiro 13.72 231 P **Pn 19 21 09.8 -3.0**
USRK Ussuriysk Arra 13.82 269 P **Pn 19 21 16.1 +2.0**
comp=Z,6.7nm,0.3s,baz=80,slow=13,SNR=132
USRK LR LR 19 26 41.1
comp=Z,260μm,19.5s,baz=68,slow=38
JNG Nsakai 13.87 231 P Pn 19 21 11.8 -3.2
PALN Palana 14.04 18 *eP* **Pn 19 21 18.0 +1.0**
JTT Ttatey 14.15 233 P **Pn 19 21 16.4 -2.2**
VLA Vladivostok 14.20 265 ⇓ *i*P **Pn 19 21 17.0 -2.3**
VLA eS **Sn 19 23 58.5 +3.2**
JJH Hakui 14.23 235 P **Pn 19 21 17.2 -2.5**
JGN Niukaw 14.44 232 P **Pn 19 21 19.9 -2.6**
JGM Miyama 15.15 232 P **Pn 19 21 29.2 -2.6**
MDJ Mudanjiang 15.40 273 P **Pn 19 21 35.1 +0.2**
MDJ S **Sn 19 24 23.6 -0.7**
MDJ PcP **PcP 19 26 37.5 +1.5**
MDJ PcS **PcS 19 30 13.8 +2.6**
MDJ pmax pmax
comp=Z,160nm,1.2s
MDJ pmax pmax
comp=Z,15μm,8.3s
MDJ LR LR
comp=N,54μm,23.6s
MDJ LR LR
comp=E,144μm,24.4s
MDJ LR LR
comp=Z,223μm,21.3s
FX1 Attu Island--F 15.68 56 *e*Pn **Pn 19 21 35.7 -2.8**
FX1 *e*Sn Sn 19 24 20.5 -10
FX1 Attu Island--F 15.68 56 P **Pn 19 21 36.0 -2.4**
comp=Z,42nm,0.3s,baz=275,slow=8.2,SNR=56
FX1 LR LR 19 26 57.1
comp=Z,60μm,21.7s,baz=276,slow=34
JFM Mihama 15.68 233 P **Pn 19 21 36.6 -2.0**
JHJ Hachijo jima 2 15.69 219 P **Pn 19 21 37.1 -1.6**
comp=Z,11nm,0.3s,baz=99,slow=18,SNR=6.1
JHJ LR LR 19 27 59.5
comp=Z,37μm,19.1s,baz=23,slow=38
TILK Tilichiki 16.84 26 *eP* **Pn 19 21 52.2 -0.8**
SEY Seymchan 16.93 2 *de*P **Pn 19 21 53.3 -0.8**
ZEA Zeya 17.29 305 ⇑ *i*P **Pn 19 21 58.0 -0.7**
ZEA ⇑ *i*P **Pn 19 21 58.0 -0.7**
ZEA AMB AMB 19 22 03.0
comp=Z,1μm,1.2s
ZEA AMB AMB 19 22 03.0
comp=Z,2μm,1.2s
ZEA AMB AMB 19 22 03.0
comp=Z,2μm,1.0s
ZEA AMB AMB 19 22 07.0
comp=Z,31μm,7.0s
ZEA AMB AMB 19 22 07.0
comp=Z,9μm,7.0s
ZEA AMB AMB 19 22 07.0
comp=Z,22μm,7.0s
CN2 Changchun 18.49 272 *eP* **P 19 22 11.8 -1.0**
CN2 eS Sn 19 25 32.8 -6.2
CN2 pmax pmax
comp=Z,12μm,12.0s
AMKA Amchitka 19.10 64 *eP* **Pn 19 22 20.4 -0.3**
comp=Z,287nm,0.8s
AMKA eS S 19 25 35.0 -18
KSRS Korea Array 19.45 252 P **P 19 22 23.5 +0.1**
comp=Z,16nm,0.3s,baz=58,slow=9.1,SNR=146
KSRS PcP **PcP 19 26 44.1 +1.5**
comp=Z,0.1nm,0.3s,baz=40,slow=2.1,SNR=4.7
KSRS LR LR 19 29 12.9
comp=Z,101μm,19.4s,baz=59,slow=34
KSRS ScP **ScP 19 30 15.4 +1.3**
baz=18,slow=0.7,SNR=6.7
KSAR Wonju Array Be 19.49 252 P **P 19 22 23.5 -0.3**
KSAR PcP **PcP 19 26 44.1 +1.4**
KSAR ScP **ScP 19 30 15.4 +1.2**
CLNS Chul'man 19.60 313 *eP* **P 19 22 25.6 +0.7**
CLNS *e*S **Sn 19 26 06.4 +0.7**
CLNS pmax pmax
comp=Z,585nm,1.0s
CLNS pmax pmax
comp=E,338nm,1.0s
CLNS pmax pmax
comp=N,456nm,1.2s
CLNS smax smax
comp=E,32μm,11.9s
CLNS smax smax
comp=N,16μm,10.0s
CLNS MLR MLR
comp=Z,161μm,19.0s
CLNS MLR MLR
comp=E,233μm,18.0s
CLNS MLR MLR
comp=N,155μm,19.0s
INCN Inchon 20.30 254 ⇑ *i*P **P 19 22 33.5 +0.8**
comp=N,1μm,0.9s
INCN *e*S Sn 19 26 22.4 -0.3
INCN LR LR
comp=Z,87μm,19.0s
INCN Inchon 20.30 254 P **P 19 22 34.0 +1.4**
SNR=179
YAK Yakutsk 20.30 330 *c i*P **P 19 22 31.6 -0.7**
YAK *e* 19 22 47.2
YAK *e*S **S 19 26 14.1 -2.7**
YAK pmax pmax
comp=Z,4μm,1.3s
YAK pmax pmax
comp=N,2μm,1.3s
YAK pmax pmax
comp=E,2μm,1.3s
YAK smax smax
comp=E,9μm,3.2s
YAK smax smax
comp=N,19μm,4.2s
YAK MLR MLR
comp=Z,152μm,21.0s
YAK MLR MLR
comp=E,153μm,25.0s
YAK MLR MLR
comp=N,110μm,31.0s
JNU Nakatsue 20.34 238 ⇑ *e*P **P 19 22 33.5 +0.3**
comp=N,350nm,1.3s
JNU *e*S **S 19 26 18.9 +0.6**
JNU Nakatsue 20.34 238 P **P 19 22 33.8 +0.6**
JNU Nakatsue 20.34 238 P Pn 19 22 34.6 -1.0
comp=N,199nm,0.8s,baz=50,slow=10,SNR=94
JNU LR LR 19 31 55.1
comp=N,20μm,18.4s,baz=42,slow=41
SNY Shenyang 20.43 268 ⇑ P **P 19 22 34.8 +0.9**
SNY S **S 19 26 20.8 +1.1**
SNY pmax pmax
comp=Z,650nm,1.3s
SNY LR LR
comp=N,68μm,16.8s
SNY LR LR
comp=E,136μm,18.0s
SNY LR LR
comp=Z,178μm,20.6s
JTSN Tsuno 20.61 235 P Pn 19 22 37.5 -1.2
JIU2 Izumi 2 20.79 237 P **P 19 22 38.8 +0.8**
JTZ Takazaki 21.11 235 P **P 19 22 42.7 +1.4**
JZO Okuchi 21.21 236 P **P 19 22 43.4 +0.9**
JHD Hondo 21.25 238 P **P 19 22 44.0 +1.2**
NGSJ Nagasakinomoza 21.33 239 P **P 19 22 44.9 +1.2**
JTSR Tashiro 2 21.75 234 P **P 19 22 49.3 +1.0**
JSU Suzuyama 21.76 235 P **P 19 22 48.8 +0.4**
JFU Fukue jima 2 21.94 240 P **P 19 22 51.1 +0.8**
DL2 Dalian 23.00 263 ⇑ *i*P **P 19 23 01.3 -0.1**
DL2 S **S 19 27 08.8 +0.9**
DL2 PcS **PcS 19 30 29.8 +1.3**
DL2 ScS **ScS 19 34 09.8 +1.1**
DL2 pmax pmax
comp=Z,820nm,0.9s
DL2 pmax pmax
comp=Z,22μm,9.7s
DL2 LR LR
comp=N,54μm,15.6s
DL2 LR LR
comp=E,32μm,18.1s
DL2 LR LR
comp=Z,102μm,26.8s
BILL Bilibino 23.35 14 ⇑ *e*P **P 19 23 03.4 -1.2**
BILL *i* 19 23 33.2
BILL *i* S **S 19 27 14.3 +1.0**
BILL pmax pmax
comp=Z,134nm,0.9s
BILL Bilibino 23.35 14 *e*P **P 19 23 01.8 -2.8**
comp=Z,142nm,0.8s
BILL LR LR
comp=Z,104μm,19.0s
JAMN Amaminishikomi 24.96 232 P **P 19 23 19.7 0.0**
CIT Chita 25.30 297 *e*P **P 19 23 22.1 -0.6**
CIT *e* 19 23 41.1
CIT *e* 19 23 57.7
BJI Beijing 26.28 270 P **P 19 23 31.8 +0.2**
BJI S **S 19 28 02.5 +2.0**
BJI pmax pmax
comp=Z,440nm,1.0s
BJI pmax pmax
comp=Z,16μm,7.6s
BJI LR LR
comp=N,74μm,18.4s
BJI LR LR
comp=E,165μm,18.2s
BJI LR LR
comp=Z,130μm,21.5s
JOW Kunigami 26.56 232 ⇑ *i*P **P 19 23 34.0 -0.2**
comp=Z,580nm,1.4s
JOW Kunigami 26.56 232 P **P 19 23 34.4 +0.2**
JIH Iheya 26.57 232 P **P 19 23 33.8 -0.5**
GAMB Gambell 27.08 36 ⇑ *e*P **P 19 23 34.5 -4.0**
comp=Z,315nm,1.0s
JAGN Aguni-jima 27.32 233 P **P 19 23 40.2 -0.8**
TIA Tai'an 27.44 261 P **P 19 23 43.0 +0.9**
TIA S **S 19 28 15.5 -3.4**
TIA pmax pmax
comp=Z,560nm,1.0s
TIA LR LR
comp=N,43μm,18.1s
TIA LR LR
comp=E,83μm,16.2s
TIA LR LR
comp=Z,61μm,15.7s
SSE Sheshan 27.74 248 ⇓ P **P 19 23 46.0 +1.3**
SSE pP **pP 19 23 57.3 -0.4**
SSE S **S 19 28 23.6 0.0**
SSE pmax pmax
comp=Z,500nm,1.3s
SSE pmax pmax
comp=Z,13μm,11.3s
SSE LR LR
comp=N,34μm,19.6s
SSE LR LR
comp=E,35μm,19.6s
SSE LR LR
comp=Z,57μm,19.5s
TIXI Tiksi 27.82 345 PFAKE 19 24 00.0 +15
TIXI LR LR
comp=Z,95μm,20.0s
UNV Unalaska Valle 27.84 58 P **P 19 23 46.8 +1.4**
comp=Z,46nm,1.0s
NJ2 Nanjing 28.66 252 *e*P **P 19 23 54.0 +1.1**
NJ2 S **S 19 28 38.0 0.0**
NJ2 pmax pmax
comp=Z,150nm,0.6s
NJ2 pmax pmax
comp=Z,11μm,4.7s
NJ2 LR LR
comp=N,19μm,13.2s
NJ2 LR LR
comp=E,20μm,11.8s
NJ2 LR LR
comp=Z,17μm,15.2s
HHC Hu-ho-hao-te 29.16 274 ⇑ P **P 19 23 57.8 +0.3**
HHC PP **PnPn 19 24 52.0 +0.1**
HHC S **S 19 28 45.6 -0.5**
HHC SS **SnSn 19 30 15.0 +0.8**
HHC pmax pmax
comp=Z,470nm,1.4s
HHC pmax pmax
comp=Z,25μm,7.3s
HHC LR LR
comp=N,137μm,15.5s
HHC LR LR
comp=E,191μm,16.3s
HHC LR LR
comp=Z,229μm,17.5s
TNA Tin City 29.27 34 ⇑ *e*P **P 19 23 57.8 -0.2**
comp=Z,566nm,0.7s
WAKE Wake Island 29.52 150 P **P 19 23 59.6 -1.0**
comp=Z,483nm,1.3s
WAKE LR LR
comp=Z,75μm,22.0s
TIY Taiyuan 29.94 268 *e*P **P 19 24 06.1 +1.8**
TIY PP **PnPn 19 25 02.6 +0.4**
TIY S **S 19 28 59.5 +1.2**
TIY sS **sS 19 29 21.5 +1.2**
TIY pmax pmax
comp=Z,360nm,0.9s
TIY pmax pmax
comp=Z,10μm,13.1s
TIY LR LR
comp=N,16μm,12.8s
TIY LR LR
comp=E,55μm,15.5s
TIY LR LR
comp=Z,82μm,17.8s
ULN Ulaanbaatar 30.01 290 ⇑ *e*P **P 19 24 03.2 -1.8**
comp=Z,193nm,1.2s
ULN *e*PcP **PcP 19 27 05.1 -0.9**
ULN *e*ScP **ScP 19 30 42.8 -0.9**
ULN LR LR
comp=Z,92μm,19.0s
ULN Ulaanbaatar 30.01 290 P **P 19 24 04.7 -0.4**
SNR=81
ULN Ulaanbaatar 30.01 290 P **P 19 24 04.5 -0.5**
comp=Z,168nm,0.8s,comp=Z,6μmcomp=Z,108μm
ULN Ulaanbaatar 30.01 290 P **P 19 24 04.6 -0.4**
comp=Z,124nm,1.1s,comp=Z,9μmcomp=Z,108μm
BTO Baotou 30.33 275 *e*P **P 19 24 08.1 +0.3**
BTO pmax pmax
comp=Z,46nm,1.0s
MIDW Midway 30.34 115 *e*P **P 19 24 07.2 -0.7**
comp=Z,164nm,1.2s
MIDW LR LR
comp=Z,82μm,22.0s
SONM Songino Array 30.45 290 P **P 19 24 08.4 -0.5**
SONM PcP **PcP 19 27 08.3 +1.2**
SONM ScP **ScP 19 30 46.1 +1.0**
SONM PKKKP 19 57 29.6
SONM Songino Array 30.45 290 P **P 19 24 08.4 -0.5**
comp=Z,46nm,0.8s,baz=75,slow=7.0,SNR=40
SONM PcP **PcP 19 27 08.3 +1.2**
comp=Z,63nm,1.1s,baz=98,slow=2.8,SNR=6.0
SONM ScP **ScP 19 30 46.1 +1.0**
comp=Z,14nm,1.0s,baz=60,slow=1.9,SNR=3.5
SONM LR LR 19 37 42.0
comp=Z,129μm,18.1s,baz=60,slow=39
SONM P3KP 19 57 29.6
comp=Z,0.8nm,0.6s,baz=336,slow=3.2,SNR=3.9
IRK Irkutsk 30.98 299 *e*P **P 19 24 13.4 0.0**
IRK *e* 19 25 38.3
IRK pmax pmax
comp=Z,88nm,1.6s
TLY Talaya 31.45 298 *c i*P **P 19 24 15.8 -1.7**
TLY *e* 19 25 37.4
TLY *e* 19 27 08.4
TLY *e*S **S 19 29 23.7 +2.1**
TLY *e*SS **SS 19 31 28.6 -8.9**
TLY pmax pmax
comp=Z,90nm,1.2s
TLY MLR MLR
comp=Z,149μm,19.0s
TLY Talaya 31.45 298 P **P 19 24 17.4 -0.1**
comp=Z,408nm,0.7s,SNR=14
TATO Taipei 31.88 239 ⇑ *e*P **P 19 24 23.0 +1.6**
comp=Z,350nm,1.1s
TATO LR LR
comp=Z,67μm,22.0s
ZAK Zakamensk 31.90 296 *e*P **P 19 24 21.2 -0.4**
ZAK pmax pmax
comp=Z,54nm,1.1s
YHNB Yeheng 32.17 239 ⇑ *e*P **P 19 24 24.8 +0.7**
comp=Z,104nm,0.8s
YHNB LR LR
comp=Z,78μm,22.0s
NACB Ninganchiao 32.42 238 ⇑ *e*P **P 19 24 25.5 -0.7**
comp=Z,48nm,0.6s
NACB *e*PcP **PcP 19 27 13.3 +0.8**
NACB *e*ScP **ScP 19 30 52.2 +0.4**
WHN Wuhan 32.60 255 ⇑ P **P 19 24 23.9 -3.8**
WHN S **S 19 29 42.0 +2.1**
WHN LR LR
comp=N,47μm,13.6s
WHN LR LR
comp=E,17μm,12.3s
WHN LR LR
comp=Z,160μm,31.1s
GUMO Guam 32.83 192 LR LR 19 38 21.2
comp=Z,62μm,18.7s,baz=28,slow=37
MOY Mondy 33.08 298 *e*P **P 19 24 33.0 +1.1**
MOY pmax pmax
comp=Z,125nm,1.9s
SSLB Suanglung 33.09 238 ⇑ *e*P **P 19 24 32.1 0.0**
comp=Z,372nm,1.1s
SSLB *e*S **S 19 29 42.8 -4.8**
SSLB *e*ScP **ScP 19 30 54.0 -0.2**
YULB Yu-li 33.19 237 ⇑ *e*P **P 19 24 32.7 -0.2**
comp=Z,107nm,0.6s
YULB *e*S **S 19 29 48.8 -0.3**
TPUB Ta-pu 33.65 238 ⇑ *i*P **P 19 24 37.0 0.0**
comp=Z,315nm,0.6s
TPUB *e*ScP **ScP 19 30 56.8 +0.6**
QZH Quanzhou 33.66 243 ⇑ *i*P **P 19 24 39.6 +2.6**
QZH S **S 19 29 59.1 +2.8**
QZH pmax pmax
comp=Z,2μm,1.3s
QZH pmax pmax
comp=Z,18μm,3.8s
QZH LR LR
comp=N,70μm,17.6s
QZH LR LR
comp=E,39μm,15.6s
QZH LR LR
comp=Z,126μm,26.2s
TWG Pinlang 33.76 237 ⇑ *e*P **P 19 24 37.4 -0.6**
comp=Z,3μm,0.9s
TWG *e*S **S 19 29 56.0 -1.9**
XAN Xi'an 34.27 265 P **P 19 24 43.1 +0.8**
XAN pP **pP 19 24 54.0 -1.5**
XAN S **S 19 30 02.6 -3.2**
XAN SS **SnSn 19 32 16.3 -2.1**
XAN pmax pmax
comp=Z,240nm,1.3s
XAN pmax pmax
comp=Z,3μm,8.7s
XAN LR LR
comp=N,52μm,18.3s
XAN LR LR
comp=E,13μm,18.3s
XAN LR LR
comp=Z,23μm,18.3s
OHAK Old Harbor 35.14 51 *e*P **P 19 24 48.1 -1.4**
comp=Z,278nm,1.1s
RSO Redoubt South 35.21 45 *e*P **P 19 24 50.5 +0.3**
comp=Z,24nm,0.5s
KDAK Kodiak Island 35.46 50 P **P 19 24 50.9 -1.3**
KDAK *e*PcP **PcP 19 27 20.6 -0.1**
KDAK LR LR
comp=Z,46μm,22.0s
KDAK Kodiak Island 35.46 50 P **P 19 24 50.9 -1.3**
comp=Z,129nm,0.8s,baz=303,slow=4.0,SNR=35
PPLA Purkeypile 35.47 41 ⇑ *e*P **P 19 24 53.0 +0.5**
comp=Z,604nm,1.3s
TRF Thorofare Moun 36.34 40 ⇑ *e*P **P 19 24 58.5 -1.4**
comp=Z,3μm,0.5s
TRF *e*PcP **PcP 19 27 25.5 +2.1**
COLD Coldfoot 36.57 34 *e*P **P 19 25 01.3 -0.4**
comp=Z,98nm,0.5s
COLD *e*PcP **PcP 19 27 25.1 +1.3**
LZH Lanzhou 36.72 272 ⇑ P **P 19 25 05.3 +1.8**
LZH pP **pP 19 25 16.8 +0.1**
LZH PP **PnPn 19 26 31.0 +3.0**
LZH S **S 19 30 45.1 +1.5**
LZH SS **SnSn 19 33 12.8 -5.0**
LZH pmax pmax
comp=Z,2μm,1.2s
LZH pmax pmax
comp=Z,11μm,4.3s
LZH LR LR
comp=N,69μm,15.9s
LZH LR LR
comp=E,77μm,16.5s
LZH LR LR
comp=Z,113μm,17.0s
SEW Seward 36.87 46 ⇑ *e*P **P 19 25 03.8 -0.4**
comp=Z,170nm,1.1s
PMR Palmer 36.92 43 ⇑ *e*P **P 19 25 04.4 -0.3**
PMR *e* 19 27 24.5
PMR pmax pmax
comp=Z,69nm,0.8s
PMR Palmer 36.92 43 ⇑ *e*P **P 19 25 04.4 -0.3**
comp=Z,69nm,0.8s
PMR *e*PcP **PcP 19 27 24.5 -0.4**
MCK McKinley 36.95 40 ⇑ *i*P **P 19 25 04.9 0.0**
MCK pmax pmax
comp=Z,858nm,1.4s
MCK McKinley 36.95 40 ⇑ *i*P **P 19 25 04.9 0.0**
comp=Z,858nm,1.4s
KRAR Krasnoyarsk 37.06 307 ⇑ *i*P **P 19 25 05.0 -0.9**
KRAR pmax pmax
comp=Z,82nm,1.2s
KRAR MLR MLR
comp=Z,232μm,21.0s

SML Sawmill 37.29 43⇑ eP P 19 25 07.3 -0.6
SML pmax pmax
comp=Z,30nm,0.8s
SML Sawmill 37.29 43⇑ eP P 19 25 07.3 -0.6
comp=Z,30nm,0.8s
COLA College 37.42 38⇑ eP P 19 25 08.3 -0.5
COLA pmax pmax
comp=Z,412nm,0.9s
COLA MLR MLR
comp=Z,31µm,22.0s
COLA College 37.42 38⇑ eP P 19 25 08.3 -0.5
comp=Z,412nm,0.9s
COLA LR LR
comp=Z,31µm,22.0s
PIP Pasuquin 37.57 233⇓ eP P 19 25 11.3 +0.7
PALP Palanan 37.62 229⇑ eP P 19 25 10.7 -0.3
ILAR Eielson Array 37.83 38 P P 19 25 11.3 -1.0
ILAR e 19 55 26.3
ILAR PKKKP 19 57 10.1
ILAR Eielson Array 37.83 38 P P 19 25 11.3 -1.0
comp=Z,128nm,1.1s,baz=260,slow=7.9,SNR=113
ILAR LR LR 19 40 33.3
comp=Z,19µm,18.5s,baz=282,slow=36
ILAR P3KPbc 19 55 26.3
comp=Z,0.7nm,0.9s,baz=142,slow=3.4,SNR=3.1
ILAR P3KP 19 57 10.1
comp=Z,1.5nm,1.1s,baz=343,slow=0.9,SNR=5.2
GTA Gaotai 37.91 279 ⇑P P 19 25 14.5 +1.1
GTA PP PnPn 19 26 44.3 +2.1
GTA PcP PcP 19 27 30.8 +2.2
GTA S S 19 31 02.8 +1.4
GTA PcS PcS 19 31 18.9 +1.4
GTA SS SnSn 19 33 39.3 -6.9
GTA pmax pmax
comp=Z,140nm,1.2s
GTA pmax pmax
comp=Z,8µm,8.8s
GTA LR LR
comp=N,44µm,16.6s
GTA LR LR
comp=E,45µm,16.2s
GTA LR LR
comp=Z,60µm,17.6s
CAUP Cauayan 38.04 230 eP P 19 25 15.6 +1.0
ABRA Dolores 38.06 232 eP P 19 25 14.8 0.0
GZH Guangzhou 38.30 246 P P 19 25 12.8 -3.9
GZH PP PnPn 19 26 47.8 +0.8
GZH S S 19 31 00.5 -6.8
GZH LR LR
comp=N,39µm,23.4s
GZH LR LR
comp=E,34µm,22.5s
GZH LR LR
comp=Z,98µm,19.6s
HKC Hong Kong Obse 38.34 245⇑ iP P 19 25 18.0 +1.0
HKC i S S 19 31 06.0 -1.9
PAX Paxson 38.54 41⇑ eP P 19 25 18.0 -0.5
PAX pmax pmax
comp=Z,109nm,0.8s
PAX Paxson 38.54 41⇑ eP P 19 25 18.0 -0.5
comp=Z,109nm,0.8s
DIV Divide 38.58 44⇑ eP P 19 25 18.3 -0.4
comp=Z,104nm,0.6s
DOT Dot Lake 39.12 40⇑ eP P 19 25 21.9 -1.3
comp=Z,296nm,0.8s
BMRM Bremner River 39.16 44 eP P 19 25 23.5 -0.1
comp=Z,261nm,0.9s
BALP Baler 39.17 229 eP P 19 25 23.8 -0.2
BCPH Baguio City Da 39.17 231⇑ iP P 19 25 23.1 -1.1
MENT Mentasta 39.34 41⇑ eP P 19 25 24.9 -0.1
BOLP Bolinao 39.54 232 eP P 19 25 25.6 -1.4
PCPH Palayan 39.57 230⇑ eP P 19 25 26.7 -0.6
CD2 Chengdu 39.63 265⇑ iP P 19 25 28.9 +1.0
CD2 pP pP 19 25 39.1 -2.1
CD2 PP PnPn 19 27 04.5 +1.6
CD2 PcP PcP 19 27 36.5 +2.5
CD2 PcS PcS 19 31 25.4 +1.2
CD2 S S 19 31 28.8 +1.4
CD2 SS SS 19 34 17.3 -6.7
CD2 ScS ScS 19 35 32.1 +1.0
CD2 pmax pmax
comp=Z,3µm,1.0s
CD2 pmax pmax
comp=Z,14µm,5.8s
CD2 LR LR
comp=N,42µm,15.2s
CD2 LR LR
comp=E,51µm,20.1s
CD2 LR LR
comp=Z,68µm,21.1s
SCZP Santa Cruz 40.03 231 eP P 19 25 32.0 +0.8
GQP Guinayangan 40.26 227⇓ eP P 19 25 33.2 +0.1
EGAK Eagle 40.28 38 eP P 19 25 31.5 -1.3
EGAK LR LR
comp=Z,22µm,21.0s
CNP Catarman 40.37 223 eP P 19 25 35.1 +1.1
GYA Guiyang 40.40 257⇑ iP P 19 25 34.8 +0.4
GYA PP PnPn 19 27 13.9 +1.8
GYA PcP PcP 19 27 39.0 +2.4
GYA S S 19 31 28.8 -10
GYA SS SS 19 34 34.3 -5.2
GYA pmax pmax
comp=Z,320nm,1.0s
GYA pmax pmax
comp=Z,9µm,9.3s
GYA LR LR
comp=N,24µm,18.9s
GYA LR LR
comp=E,29µm,18.7s
GYA LR LR
comp=Z,50µm,19.9s
AUQP San Andres 40.64 226 eP P 19 25 36.5 +0.3
TGY Tagaytay City 40.87 229 P P 19 25 39.2 +1.0
TGY Tagaytay City 40.87 229 P P 19 25 39.2 +1.0
comp=Z,301nm,0.6s,baz=173,slow=7.3,SNR=17
PLP Palo 41.40 221⇑ iP P 19 25 42.7 +0.2
LUBP Lubang 41.54 229 eP P 19 25 42.7 -0.9
OCLP Ormoc 41.67 222 eP P 19 25 45.4 +0.7
OTRP Odiongan 41.79 226 eP P 19 25 46.5 +0.9
PNL Peninsula 41.94 45⇑ iP P 19 25 48.5 +2.0
comp=Z,165nm,1.3s
ZAA0 Zalesovo Array 42.06 306 eP P 19 25 45.4 -2.1
ZAA0 eScP ScP 19 31 28.0 +0.6
ZALV Zalesovo Beam 42.06 306 P P 19 25 46.1 -1.4
ZALV 19 27 41.9
ZALV pmax pmax
comp=Z,7.0nm,0.4s
ZALV MLR MLR
comp=Z,208µm,18.7s
ZALV Zalesovo Beam 42.06 306 P P 19 25 46.1 -1.4
ZALV PcP PcP 19 27 41.9 +0.5
ZALV ScP ScP 19 31 29.1 +1.7
ZALV PKKKP 19 57 11.7
ZALV Zalesovo Beam 42.06 306 P P 19 25 46.1 -1.4
comp=Z,7.4nm,0.3s,baz=62,slow=7.7,SNR=45
ZALV PcP PcP 19 27 41.9 +0.5
comp=Z,198nm,1.0s,baz=67,slow=4.4,SNR=21
ZALV ScP ScP 19 31 29.1 +1.7
comp=Z,18nm,0.9s,baz=85,slow=4.8,SNR=3.7
ZALV LR LR 19 44 33.8
comp=Z,208µm,18.6s,baz=72,slow=38
ZALV P3KP 19 57 11.7
comp=Z,1.2nm,0.8s,baz=318,slow=1.9,SNR=5.3
RCP Roxas 42.12 224⇑ eP P 19 25 48.3 0.0
SJMP San Jose 42.16 227 eP P 19 25 49.1 +0.5
MSLP Maasin 42.36 221 eP P 19 25 50.5 +0.2
LLP Lapu-Lapu 42.61 222⇑ eP P 19 25 52.0 -0.4
NVS Novosibirsk 42.67 308 eP P 19 25 51.1 -1.3
NVS e 19 27 44.3
NVS pmax pmax
comp=E,207nm,2.3s
NVS pmax pmax
comp=Z,347nm,2.3s
NVS pmax pmax
comp=N,62nm,1.8s
INK Inuvik 42.87 32 P P 19 25 54.2 +0.4
INK Inuvik 42.87 32 P P 19 25 54.2 +0.4
comp=N,543nm,0.8s,baz=283,slow=6.8,SNR=257
BUTP Butuan 43.05 219 eP P 19 25 56.4 +0.4
QIZ Qiongzhong 43.48 246 P P 19 26 02.8 +3.4
QIZ pmax pmax
comp=Z,220nm,1.7s
QIZ pmax pmax
comp=Z,10µm,9.5s
QIZ LR LR
comp=N,28µm,23.6s
QIZ LR LR
comp=E,18µm,21.5s
QIZ LR LR
comp=Z,58µm,22.4s
CUYO Cuyo Island 43.58 226 eP P 19 26 00.8 +0.6
CGP Cagayan de Oro 43.92 220⇓ eP P 19 26 02.8 -0.1
KMI Kunming 43.94 259 P P 19 26 04.5 +1.2
KMI pP pP 19 26 14.8 -2.1
KMI PP PP 19 27 45.3 -1.0
KMI PcP PcP 19 27 53.1 +4.6
KMI S S 19 32 30.8 -0.8
KMI pmax pmax
comp=Z,780nm,1.6s
KMI pmax pmax
comp=Z,12µm,6.3s
KMI LR LR
comp=N,42µm,19.2s
KMI LR LR
comp=E,8µm,18.1s
KMI LR LR
comp=Z,38µm,20.3s
SKAG Skagway 44.00 45⇑ eP P 19 26 04.8 +1.7
comp=Z,1µm,2.1s
WMQ Urumqi 44.07 291 P P 19 26 04.0 0.0
WMQ PP PcP 19 27 48.0 -0.5
WMQ ScP ScP 19 31 37.0 +1.1
WMQ S S 19 32 34.0 +1.3
WMQ SS SS 19 35 42.0 -9.0
WMQ ScS ScS 19 35 58.0 +0.1
WMQ pmax pmax
comp=Z,240nm,1.0s
WMQ pmax pmax
comp=Z,7µm,6.0s
WMQ LR LR
comp=N,66µm,17.0s
WMQ LR LR
comp=E,45µm,16.0s
WMQ LR LR
comp=Z,52µm,16.0s
ENPP El Nido 44.09 228 eP P 19 26 05.2 +0.9
BUKP Musuan 44.27 219 eP P 19 26 05.5 -0.3
DAV Davao City (W) 44.77 218 eP P 19 26 11.0 +1.3
DAV Davao City (W) 44.77 218⇑ iP P 19 26 11.5 +1.8
DAV Davao City (W) 44.77 218⇑ iS S 19 33 05.5 +22
DAV Davao City (W) 44.77 218 P P 19 26 12.2 +2.5
SNR=8.8
DAV Davao City (W) 44.77 218 P P 19 26 09.1 -0.6
DAV Davao City (W) 44.77 218 P P 19 26 11.0 +1.3
comp=Z,107nm,0.5s,baz=59,slow=22,SNR=8.5
DAV LR LR 19 42 20.8
comp=Z,13µm,20.7s,baz=252,slow=33
PAGZ Pagadian 45.05 221 eP P 19 26 11.6 -0.3
CTBH Cotabato--PC H 45.22 220⇑ iP P 19 26 14.1 +0.8
MK31 Makanchi Array 46.20 297 eP P 19 26 19.2 -1.6
MK31 e 19 27 54.9
MK31 eS S 19 33 02.1 -1.3
MK31 Makanchi Array 46.20 297 eP P 19 26 19.2 -1.6
MK31 ePcP PcP 19 27 54.9 -0.9
MK31 eScP ScP 19 31 43.9 -0.7
MK31 eS S 19 33 02.1 -1.3
MKAR Makanchi Array 46.20 297 P P 19 26 20.0 -0.8
MKAR 19 27 56.3
MKAR pmax pmax
comp=Z,69nm,0.7s
MKAR MLR MLR
comp=Z,131µm,19.5s
MKAR Makanchi Array 46.20 297 P P 19 26 20.0 -0.8
MKAR PcP PcP 19 27 56.2 +0.5
MKAR ScP ScP 19 31 44.9 +0.3
MKAR PKKKP 19 56 50.0
MKAR Makanchi Array 46.20 297 P P 19 26 20.0 -0.8
comp=Z,69nm,0.7s,baz=71,slow=5.4,SNR=130
MKAR PcP PcP 19 27 56.2 +0.5
comp=Z,42nm,0.6s,baz=60,slow=5.7,SNR=7.9
MKAR ScP ScP 19 31 44.9 +0.3
comp=Z,29nm,1.0s,baz=65,slow=3.8,SNR=4.8
MKAR LR LR 19 46 52.7
comp=Z,131µm,19.5s,baz=59,slow=38
MKAR P3KP 19 56 50.0
comp=Z,0.3nm,0.7s,baz=325,slow=1.8,SNR=3.6
CRAG Craig 46.42 50⇑ eP P 19 26 24.2 +1.9
comp=Z,233nm,1.2s
WRAK Wrangell Islan 46.48 48⇑ eP P 19 26 24.3 +1.6
comp=Z,215nm,1.1s
WRAK LR LR
comp=Z,23µm,21.0s
KURK Kurchatov 46.76 304 ceP P 19 26 24.3 -0.7
KURK pmax pmax
comp=Z,175nm,1.3s
KURK MLR MLR
comp=Z,56µm,22.0s
KURK Kurchatov 46.76 304 eP P 19 26 22.9 -2.1
comp=Z,111nm,0.8s
KURK ePcP PcP 19 27 59.0 +1.4
KURK eS S 19 33 10.0 -1.1
KURK Kurchatov 46.76 304 P P 19 26 23.4 -1.6
SNR=93
KURK Kurchatov 46.76 304 P P 19 26 24.8 -0.2
comp=Z,806nm,1.1s,SNR=19
KURBB Kurchatov Arra 46.85 303 P P 19 26 24.9 -0.8
comp=Z,48nm,0.7s,baz=68,slow=8.2,SNR=91
KURBB PcP PcP 19 27 59.0 +1.1
comp=Z,74nm,1.0s,baz=70,slow=3.4,SNR=11
KURBB LR LR 19 46 59.6
comp=Z,44µm,20.2s,baz=65,slow=37
DLBC Dease Lake 46.93 45⇑ eP P 19 26 27.5 +1.1
DLBC Dease Lake 46.93 45 P P 19 26 27.8 +1.5
comp=Z,160nm,0.9s,baz=283,slow=8.7,SNR=43
BATP Bataraza 46.97 228 eP P 19 26 28.7 +1.6
KIP Kipapa 47.73 103 eP P 19 26 31.3 -1.7
KIP pmax pmax
comp=Z,240nm,1.2s
KIP MLR MLR
comp=Z,45µm,22.0s
KIP Kipapa 47.73 103 eP P 19 26 31.3 -1.7
comp=Z,240nm,1.2s
KIP LR LR
comp=Z,45µm,22.0s
HON Honolulu 47.81 103 P P 19 26 32.6 -0.9
HON Honolulu 47.81 103 P P 19 26 32.6 -0.9
TARA Tarawa 48.35 151 eP P 19 26 37.8 0.0
comp=Z,1µm,1.7s
TARA LR LR
comp=Z,93µm,22.0s
GAMI Galela, Maluku 48.65 212 P P 19 26 41.4 +1.4
BAKI Biak 48.94 200 P P 19 26 44.3 +2.0
comp=Z,741nm,1.6s,comp=Z,15µmcomp=Z,63µm
UBPT Khng Chiam 49.05 247 P P 19 26 42.7 -0.4
comp=Z,272nm,2.5s,comp=Z,11µm
KDM Kudat 49.06 228 P P 19 26 44.5 +1.3
LSA Lhasa 49.12 273 P P 19 26 48.3 +4.1
LSA S S 19 33 42.0 -4.0
LSA pmax pmax
comp=Z,340nm,1.2s
LSA LR LR
comp=N,18µm,29.9s
LSA LR LR
comp=E,38µm,29.9s
JAY Jayapura 49.28 194 P P 19 26 46.4 +1.5
SRPI Serui, Papua 49.57 200 P P 19 26 47.9 +0.9
MYLDM Lahad Datu 49.70 225 P P 19 26 49.9 +1.8
MYLDM Lahad Datu 49.70 225 P P 19 26 49.6 +1.5
comp=E,315nm,2.2s,comp=E,11µmcomp=E,109µm
MYLDM Lahad Datu 49.70 225 P P 19 26 51.0 +2.9
comp=E,315nm,2.2s,comp=E,11µmcomp=E,108µm
RKPI Ransiki, Papua 49.75 203 P P 19 26 49.0 +0.6
TNTI Ternate 49.79 212 P P 19 26 49.5 +0.8
SDKM Sandakan 49.96 227 P P 19 26 50.4 +0.3
SWI Sorong 49.98 207 P P 19 26 50.0 -0.2
comp=E,291nm,1.8s,comp=E,10µmcomp=E,75µm
SWI Sorong 49.98 207 P P 19 26 50.7 +0.5
KKM Kota Kinabalu 50.12 228⇑ eP P 19 26 50.2 -1.2
comp=E,333nm,1.4s
KKM LR LR
comp=Z,20µm,19.0s
KKM Kota Kinabalu 50.12 228 P P 19 26 52.6 +1.1
KKM Kota Kinabalu 50.12 228 P P 19 26 52.0 +0.6
comp=Z,202nm,1.8s,comp=Z,8µmcomp=Z,97µm
KKM Kota Kinabalu 50.12 228 P P 19 26 51.4 0.0
comp=Z,202nm,1.8s,comp=Z,8µmcomp=Z,98µm
MNI Manado 50.16 216 P P 19 26 53.2 +1.7
IMP Imphal 50.24 265 eP P 19 26 50.0 -2.2
IMP ex x 19 27 53.0
IMP eS S 19 34 05.0 +4.1
BVAR Borovoye Array 50.38 309 P P 19 26 52.0 -0.9
BVAR 19 28 12.5
BVAR pmax pmax
comp=Z,20nm,0.6s
BVAR MLR MLR
comp=Z,136µm,20.4s
BVAR Borovoye Array 50.38 309 P P 19 26 52.0 -0.9
BVAR PcP PcP 19 28 12.5 +1.8
BVAR Borovoye Array 50.38 309 P P 19 26 52.0 -0.9
comp=Z,20nm,0.6s,baz=56,slow=8.8,SNR=74
BVAR PcP PcP 19 28 12.5 +1.8
comp=Z,48nm,0.5s,baz=73,slow=4.8,SNR=11
BVAR LR LR 19 49 53.5
comp=Z,136µm,20.4s,baz=63,slow=38
BRVK Borovoye 50.42 309 eP P 19 26 51.8 -1.4
BRVK e 19 28 10.8
BRVK eS S 19 34 01.6 -1.1
BRVK pmax pmax
comp=Z,126nm,1.0s
BRVK MLR MLR
comp=Z,151µm,21.0s
BRVK Borovoye 50.42 309 eP P 19 26 51.8 -1.4
comp=Z,126nm,1.0s
BRVK ePcP PcP 19 28 10.8 0.0
BRVK eS S 19 34 01.6 -1.1
BRVK LR LR
comp=Z,151µm,21.0s
BBB Bella Bella 50.48 52 P P 19 26 54.8 +1.3
BBB Bella Bella 50.48 52 P P 19 26 54.8 +1.3
comp=Z,85nm,1.0s,baz=290,slow=8.5,SNR=9.0
ALE Alert 50.55 5 P P 19 26 53.0 -0.8
comp=Z,954nm,0.8s,SNR=67
TSM Tawau 50.78 225 P P 19 26 56.5 +0.2
CMMT Chiang Mai 50.80 256 P P 19 26 57.9 +1.5
comp=Z,946nm,1.3s,comp=Z,18µm
CMMT Chiang Mai 50.80 256 P P 19 26 58.9 +2.5
CHTO Chiang Mai 50.80 256⇑ eP P 19 26 57.0 +0.6
CHTO eS S 19 34 09.2 +0.6
CHTO pmax pmax
comp=Z,1µm,1.3s
CHTO MLR MLR
comp=Z,46µm,20.0s
CHTO Chiang Mai 50.80 256⇑ eP P 19 26 57.0 +0.6
comp=Z,1µm,1.3s
CHTO eS S 19 34 09.2 +0.6
CHTO LR LR
comp=Z,46µm,20.0s
CHTO Chiang Mai 50.80 256 P P 19 26 58.0 +1.6
SNR=342
CHTO Chiang Mai 50.80 256 P P 19 26 57.4 +1.0
comp=Z,1µm,1.3s,comp=Z,20µmcomp=Z,81µm
CHTO Chiang Mai 50.80 256 P P 19 26 57.4 +1.0
comp=Z,1µm,1.3s,comp=Z,20µmcomp=Z,81µm
WAMI Wamena 50.98 196 P P 19 27 02.3 +4.6
PUH Pauahi 51.04 103 P P 19 26 57.6 -0.7
LBMI Labuha 51.04 211 P P 19 27 00.5 +2.3
CM31 Chiang Mai Arr 51.05 255 eP P 19 26 59.7 +1.4
comp=Z,198nm,0.8s
CMAR Chiang Mai Arr 51.05 255 P P 19 26 59.8 +1.5
CMAR Chiang Mai Arr 51.05 255 P P 19 26 59.8 +1.5
comp=Z,459nm,1.1s,baz=34,slow=7.3,SNR=425
CMAR LR LR 19 50 27.1
comp=Z,40µm,18.9s,baz=57,slow=38
SHL Shillong 51.16 268⇑ iP P 19 27 00.5 +1.2
SHL i S S 19 34 17.0 +3.1
FAKI Fak Fak 51.63 205 P P 19 27 04.6 +2.0
comp=Z,311nm,2.0s,comp=Z,11µmcomp=Z,58µm
FAKI Fak Fak 51.63 205 P P 19 27 03.9 +1.3
RES Resolute Bay 51.87 18 eP P 19 27 02.5 -1.2
comp=Z,65nm,1.2s
RES Resolute Bay 51.87 18 P P 19 27 03.3 -0.4
comp=Z,91nm,0.9s,baz=308,slow=9.0,SNR=80
YKW3 Yellowknife Ar 52.15 36⇑ eP P 19 27 05.2 -0.8
comp=Z,4.7nm,0.9s
ULHL Ulahol 52.18 295 P P 19 27 06.8 +0.1
SNR=316
YKA Yellowknife Ar 52.19 36 P P 19 27 06.0 -0.2
YKA PKKKP 19 56 36.4
YKA Yellowknife Ar 52.19 36 P P 19 27 06.0 -0.2
comp=Z,240nm,0.9s,baz=297,slow=6.9,SNR=389
YKA P3KP 19 56 36.4
comp=Z,0.5nm,1.0s,baz=56,slow=2.1,SNR=4.3
TKM2 Tokmak 2 52.23 296⇑ eP P 19 27 05.8 -1.3
TKM2 pmax pmax
comp=Z,18nm,0.6s
TKM2 MLR MLR
comp=Z,88µm,20.0s
TKM2 Tokmak 2 52.23 296⇑ eP P 19 27 05.8 -1.3
comp=Z,18nm,0.6s
TKM2 LR LR
comp=Z,88µm,20.0s
TKM2 Tokmak 2 52.23 296 P P 19 27 07.2 +0.1
SNR=101
MRSI Marisa 52.24 218 P P 19 27 06.3 -0.9
comp=Z,961nm,1.1s,comp=Z,12µm
MRSI Marisa 52.24 218 P P 19 27 05.8 -1.4
CHMS Chumysh 52.72 296 P P 19 27 10.6 0.0
SNR=30
USP Ospenovka 52.74 297 P P 19 27 12.8 +2.2
SNR=38
KBK Karagaybulak 52.78 296 P P 19 27 12.3 +1.1
SNR=92
FRU Bishkek 52.89 296 eP P 19 27 13.0 +1.2
FRU i 19 28 25.0
FRU eS S 19 34 40.0 +3.0
FRU pmax pmax
comp=Z,2µm,3.0s
FRU MLR MLR
comp=Z,110µm,18.0s
KZA Kyzart 52.90 295 P P 19 27 12.9 +0.7
SNR=73
CHBT CHBT 52.95 247 P P 19 27 14.0 +1.6
comp=Z,507nm,1.4s,comp=Z,13µm
CHBT CHBT 52.95 247 P P 19 27 13.6 +1.2
TAPN Taplejung 52.95 273 eP P 19 27 14.1 +1.4
comp=Z,2µm,0.9s
KBS Kingsbay 53.00 351⇑ iP P 19 27 12.4 +0.4
KBS eS S 19 34 36.5 -0.9
KBS AMS AMS 19 48 46.2
comp=Z,22µm,20.3s
KBS Kingsbay 53.00 351⇑ eP P 19 27 10.4 -1.6
KBS pmax pmax
comp=Z,134nm,1.1s
KBS MLR MLR
comp=Z,25µm,20.0s
KBS Kingsbay 53.00 351⇑ eP P 19 27 10.4 -1.6
comp=Z,134nm,1.1s
KBS LR LR
comp=Z,25µm,20.0s
MSAI Masohi 53.07 209 P P 19 27 14.7 +1.5
comp=Z,61nm,2.8s,comp=Z,2µm
AAK Ala-Archa 53.08 296 eP P 19 27 13.1 -0.3
AAK i *PP pP 19 27 29.1 +2.0
AAK pmax pmax
comp=Z,208nm,0.9s
AAK MLR MLR
comp=Z,206µm,21.0s
AAK Ala-Archa 53.08 296⇑ eP P 19 27 11.6 -1.7
comp=Z,92nm,0.8s
AAK Ala-Archa 53.08 296 P P 19 27 13.4 +0.1
SNR=76
AAK Ala-Archa 53.08 296 P P 19 27 15.1 +1.7
SNR=14
AAK Ala-Archa 53.08 296 P P 19 27 13.0 -0.3
comp=Z,685nm,1.1s
AAK Ala-Archa 53.08 296 P P 19 27 14.4 +1.1
comp=Z,70nm,0.9s,baz=46,slow=8.7,SNR=181
AAK LR LR 19 51 05.5
comp=Z,90µm,20.5s,baz=28,slow=37
SPITS Spitsbergen Ar 53.09 349 LR LR 19 53 06.8
comp=Z,35µm,19.1s,baz=45,slow=40
LUWI Luwuk 53.26 217 P P 19 27 13.2 -1.4
ODAN Odare 53.48 272 eP P 19 27 17.7 +1.2
comp=Z,1µm,1.0s
EKS2 Erkin-Say 53.51 296⇑ eP P 19 27 15.5 -0.9
EKS2 pmax pmax
comp=Z,2µm,2.5s
EKS2 MLR MLR
comp=Z,133µm,20.0s
EKS2 Erkin-Say 53.51 296⇑ eP P 19 27 15.5 -0.9
comp=Z,2µm,2.5s
EKS2 LR LR
comp=Z,133µm,20.0s
EKS2 Erkin-Say 53.51 296 P P 19 27 19.4 +2.9
SNR=16

AAI **Ambon** 53.63 209 P **P** 19 27 17.3 -0.1
comp=Z,304nm,2.6s,comp=Z,8μmcomp=Z,111μm
AAI **Ambon** 53.63 209 P **P** 19 27 17.7 +0.3
KSH **Kashi** 53.82 292 P **P** 19 27 21.9 +3.2
KSH PcP **PcP** 19 28 27.4 +3.4
KSH PP **PP** 19 29 25.0 +5.1
KSH PcS **PcS** 19 32 25.4 +2.1
KSH S **S** 19 34 53.0 +3.2
KSH ScS **ScS** 19 37 06.5 +2.9
KSH SS **SS** 19 38 36.0 +5.3
KSH LR LR
comp=N,14μm,12.8s
KSH LR LR
comp=E,31μm,14.9s
KSH LR LR
comp=Z,174μm,27.8s
AML **Almayashu** 53.84 296 P **P** 19 27 20.8 +1.6
SNR=22
GUN **Gumba** 53.87 274 *eP* **P** 19 27 20.8 +1.3
comp=Z,3μm,1.1s
SOKR **Solikamsk** 53.90 321 *c iP* **P** 19 27 18.3 -0.5
SOKR S **S** 19 34 52.1 +2.2
SOKR pmax pmax
comp=Z,90nm,1.0s
SOKR MLR MLR
comp=Z,101μm,22.0s
RAMN **Ramite** 53.97 273 *eP* **P** 19 27 21.4 +1.3
TLE **Tual** 54.08 203 P **P** 19 27 21.6 +1.0
comp=Z,338nm,2.6s,comp=Z,13μmcomp=Z,78μm
HSP **Hornsund** 54.13 349 *eP* **P** 19 27 20.9 +0.6
BTM **Bintulu** 54.17 230 P **P** 19 27 21.7 +0.3
KKN **Kakani** 54.36 275 *eP* **P** 19 27 24.3 +1.3
comp=Z,5μm,1.5s
PKI **Pulchoki** 54.41 274 *eP* **P** 19 27 24.4 +1.0
comp=Z,4μm,1.4s
PKIN **Phulchoki** 54.41 274 *eP* **P** 19 27 24.6 +1.2
DMN **Daman** 54.60 275 *eP* **P** 19 27 26.4 +1.7
ARU **Arti** 54.72 317 *d iP* **P** 19 27 22.7 -2.1
ARU 19 28 27.7
ARU 19 29 27.4
ARU PPP PPP 19 30 39.8
ARU S **S** 19 34 58.8 -2.4
ARU 19 37 07.4
ARU pmax pmax
comp=Z,275nm,1.7s
ARU MLR MLR
comp=Z,78μm,22.0s
ARU **Arti** 54.72 317 P **P** 19 27 23.4 -1.4
comp=Z,995nm,0.5s,SNR=83
PGC **Sidney** 54.82 54 *eP* **P** 19 27 25.4 -0.3
comp=Z,9.4nm,1.3s
DANN **Dangsing** 55.07 276 *eP* **P** 19 27 29.9 +1.7
SGKI **Sangatta, Kali** 55.10 223 P **P** 19 27 23.0 -5.1
SMKI **Samarinda** 55.22 223 P **P** 19 27 30.7 +1.8
comp=Z,244nm,1.3s,comp=Z,8μm
SMKI **Samarinda** 55.22 225 P **P** 19 27 29.7 +0.8
NLWA **Neilton Lookou** 55.25 55 *eP* **P** 19 27 29.0 +0.1
comp=Z,299nm,1.0s
NLWA LR LR
comp=Z,26μm,22.0s
SBUM **Sibu** 55.26 230 P **P** 19 27 30.1 +0.9
SBUM **Sibu** 55.26 230 P **P** 19 27 29.4 +0.2
comp=Z,181nm,3.1s,comp=Z,7μmcomp=Z,89μm
KKAR **Karatay Array** 55.29 298 *eP* **P** 19 27 28.4 -0.9
KKAR *eS* **S** 19 35 04.7 -4.6
KKAR **Karatay Array** 55.29 298 *eP* **P** 19 27 28.4 -0.9
comp=Z,2.2nm,0.6s
KKAR *eS* **S** 19 35 04.7 -4.6
PMG **Port Moresby** 55.34 185 *eP* **P** 19 27 27.0 -2.6
comp=Z,162nm,1.4s
PMG LR LR
comp=Z,11μm,20.0s
PMG **Port Moresby** 55.34 185 P **P** 19 27 32.1 +2.4
comp=Z,232nm,1.8s,comp=Z,7μm
PMG **Port Moresby** 55.34 185 P P 19 27 32.9 +3.2
comp=Z,125nm,2.3s,comp=Z,7μm
PMG **Port Moresby** 55.34 185 P **P** 19 27 30.1 +0.5
comp=Z,39nm,0.8s,baz=3.0,slow=9.5,SNR=9.3
BLN **Blyn Mountain** 55.43 54 P **P** 19 27 30.6 +0.4
KOLN **Koldanda** 55.54 276 *eP* **P** 19 27 33.0 +1.5
comp=Z,3μm,1.0s
BJO **Bjornoya** 55.57 346 *eP* **P** 19 27 27.7 -3.0
BJO AMS AMS 19 53 05.3
comp=Z,32μm,19.5s
CAL **Calcutta** 55.59 268 *eP* **P** 19 27 31.9 +0.3
CAL *ex* x 19 27 34.3
CAL *ex* x 19 35 19.7
CAL *ex* x 19 58 10.9
comp=Z,14μm,18.6s
MBW **Mount Baker** 55.62 53 P **P** 19 27 31.5 -0.1
PYUN **Piuthan** 55.76 276 *eP* **P** 19 27 34.4 +1.4
HNR **Honiara** 55.76 170 *eP* **P** 19 27 30.9 -1.9
comp=Z,312nm,1.0s
HNR **Honiara** 55.76 170 P **P** 19 27 32.6 -0.2
comp=Z,48nm,0.8s,baz=216,slow=5.0,SNR=1.9
HNR LR LR 19 48 12.4
comp=Z,30μm,21.9s,baz=160,slow=32
KDI **Kendari** 55.96 215 P **P** 19 27 35.9 +1.7
TTSI **Tana Toraja** 56.32 219 P **P** 19 27 39.3 +2.5
BOK **Bokaro** 56.47 270 *eP* **P** 19 27 39.2 +1.3
KKSI **Kolaka, Sulawe** 56.55 216 P **P** 19 27 38.6 +0.2
TDL **Tradedollar La** 56.77 56 P **P** 19 27 40.3 +0.4
PTH **Pithoragarh** 56.78 280 *eP* **P** 19 27 41.7 +1.5
PTH *ex* x 19 35 34.0
LON **Longmire** 56.78 55 *eP* **P** 19 27 39.4 -0.4
LON pmax pmax
comp=Z,85nm,1.1s
LON **Longmire** 56.78 55 *eP* **P** 19 27 39.4 -0.4
comp=Z,85nm,1.1s
LGTI **Lohaghat** 56.82 280 *ex* P 19 27 47.4 +7.1
LGTI *ex* x 19 35 36.4
NLW **Nelson Butte** 56.87 53 P **P** 19 27 41.0 +0.4
LVZ **Lovozero** 56.93 336 *c iP* **P** 19 27 40.7 +0.1
LVZ pmax pmax
comp=Z,184nm,1.2s
LVZ MLR MLR
comp=Z,55μm,23.0s
WPW **White Pass** 56.96 55 P **P** 19 27 41.6 +0.4
TWW **Teanaway** 57.10 54 P **P** 19 27 43.0 +0.8
KSM **Kuching** 57.11 231 *eP* **P** 19 27 42.8 +0.4
comp=Z,280nm,1.1s
KSM LR LR
comp=Z,16μm,22.0s
KSM **Kuching** 57.11 231 P **P** 19 27 43.9 +1.4
KSM **Kuching** 57.11 231 P **P** 19 27 43.0 +0.6
comp=Z,238nm,1.1s,comp=Z,8μmcomp=Z,85μm
KSM **Kuching** 57.11 231 P **P** 19 27 43.0 +0.6
comp=Z,238nm,1.1s,comp=Z,8μmcomp=Z,85μm
COR **Corvallis** 57.12 58 *eP* **P** 19 27 43.0 +0.8
COR pmax pmax
comp=Z,648nm,1.2s
COR **Corvallis** 57.12 58 *eP* **P** 19 27 43.0 +0.8
comp=Z,648nm,1.2s
G04A **Mulino** 57.26 57 P **P** 19 27 43.8 +0.6
DAG **Danmarks Havn** 57.29 357 ⇑ *iP* **P** 19 27 42.5 -0.4
DAG pmax pmax
comp=Z,79nm,0.9s
DAG MLR MLR
comp=Z,15μm,28.0s
DAG **Danmarks Havn** 57.29 357 ⇑ *iP* **P** 19 27 42.5 -0.4
comp=Z,94nm,0.9s
DAG
comp=Z,12μm,27.0s
BBSI **Bau Bau** 57.37 215 P P 19 27 47.6 +3.4
KEBM **Edson Butte** 57.48 60 *eP* **P** 19 27 45.4 +0.6
comp=Z,347nm,1.2s
APA **Apatity** 57.50 336 ⇑ *iP* **P** 19 27 44.2 -0.3
APA *i* S **S** 19 35 36.0 -1.8
APA *i* 19 37 26.0
APA *i* SS **SS** 19 39 28.0 +0.7
APA pmax pmax
comp=Z,230nm,1.5s
VLL **Laurance Lake** 57.58 56 P **P** 19 27 46.3 +0.7
KEV **Kevo** 57.60 340 *eP* **P** 19 27 44.9 -0.3
KEV **Kevo** 57.60 340 *ep* **P** 19 27 44.9 -0.3
STKI **Sintang** 57.66 229 P **P** 19 27 48.6 +2.3
DDI **Dehra Dun** 57.78 282 *eP* **P** 19 27 48.6 +1.5
DDI *ex* x 19 35 39.5
VFP **Flag Point** 57.78 56 P **P** 19 27 47.5 +0.4
DHRM **DHARAMSHALA** 57.80 285 *eP* **P** 19 27 48.2 +0.7
SDNR **Sundarnagar** 57.80 283 *eP* **P** 19 27 48.0 +0.8
SDNR *eS* **S** 19 35 45.4 +2.6
SMLA **Simla** 57.90 283 *i* P **P** 19 27 48.9 +1.1
SMLA *i* S **S** 19 35 43.4 -0.5

KBO **Bosley Butte** 57.92 61 *eP* **P** 19 27 48.8 +0.8
comp=Z,927nm,1.7s
ABKAR **Akbulak array** 57.96 309 *eP* **P** 19 27 46.8 -1.2
comp=Z,98nm,0.5s
IRO **Indian Ridge** 58.07 58 P **P** 19 27 50.0 +0.9
THN **Thein Dam** 58.08 285 *eP* **P** 19 27 47.9 -1.2
THN *eS* **S** 19 35 46.8 +0.5
KAPI **Kappang** 58.11 218 ⇑ *iP* **P** 19 27 47.7 -1.7
comp=Z,599nm,1.5s
KAPI **Kappang** 58.11 218 P **P** 19 27 48.7 -0.7
SNR=127
KAPI **Kappang** 58.11 218 P **P** 19 27 48.9 -0.5
comp=Z,1μm,1.4s,SNR=60
KAPI **Kappang** 58.11 218 P **P** 19 27 48.1 -1.3
comp=Z,288nm,1.4s,comp=Z,10μmcomp=Z,49μm
KAPI **Kappang** 58.11 218 P **P** 19 27 49.8 +0.4
KAPI **Kappang** 58.11 218 P **P** 19 27 48.4 -1.1
comp=Z,121nm,1.1s,baz=23,slow=3.8,SNR=66
KAPI LR LR 19 51 09.0
comp=Z,7μm,20.7s,baz=208,slow=34
ARCES **ARCESS Array B** 58.12 340 P **P** 19 27 48.9 +0.1
ARCES ⇑ *e* 19 57 36.9
ARCES **ARCESS Array B** 58.12 340 P **P** 19 27 48.9 +0.1
comp=Z,77nm,0.9s,baz=36,slow=7.8,SNR=73
ARCES PKP2bc 19 57 36.9
comp=Z,5.7nm,0.9s,baz=349,slow=3.1,SNR=6.6
ARCES LR LR 19 58 55.8
comp=Z,29μm,19.2s,baz=291,slow=42
ARE0 **ARCESS Array S** 58.12 340 *eP* **P** 19 27 49.2 +0.3
KTGM **Kuala Trenggan** 58.14 241 P **P** 19 27 51.7 +2.0
OD2 **Odessa Site #2** 58.17 53 P **P** 19 27 49.5 0.0
KBKI **Kotabaru** 58.20 223 P **P** 19 27 50.6 +0.5
BKSI **Bulukumba** 58.23 217 P **P** 19 27 50.1 -0.1
BHK **Bhakra** 58.23 284 *eP* **P** 19 27 52.0 +1.8
BHK *ex* x 19 28 21.0
HAWA **Hanford** 58.28 54 ⇑ *eP* **P** 19 27 50.4 0.0
comp=Z,718nm,1.7s
HAWA LR LR
comp=Z,17μm,22.0s
AKTO **Aktyubinsk** 58.30 311 P **P** 19 27 51.6 +1.2
AKTO pmax pmax
comp=Z,43nm,0.5s
AKTO MLR MLR
comp=Z,205μm,19.6s
AKTO **Aktyubinsk** 58.30 311 P **P** 19 27 51.5 +1.2
AKTO **Aktyubinsk** 58.30 311 P **P** 19 27 51.5 +1.2
comp=Z,42nm,0.5s,baz=45,slow=7.4,SNR=38
AKTO LR LR 19 55 25.9
comp=Z,205μm,19.6s,baz=232,slow=38
TMCR **Tamitsa** 58.39 332 *eP* **P** 19 27 49.1 -1.7
TMCR *eS* **S** 19 35 47.8 -1.7
TMCR pmax pmax
comp=Z,336nm,1.4s
HUMO **Hull Mountain** 58.46 60 ⇑ *eP* **P** 19 27 52.5 +0.8
comp=Z,336nm,1.7s
KRMB **Red Mountain** 58.51 61 ⇑ *eP* **P** 19 27 54.3 +2.1
comp=Z,523nm,1.8s
NEW **Newport** 58.54 52 ⇑ *eP* **P** 19 27 51.6 -0.6
comp=Z,308nm,1.2s
NEW LR LR
comp=Z,12μm,22.0s
NEW **Newport** 58.54 52 ⇓ P **P** 19 27 52.1 -0.1
baz=58,SNR=129
NEW **Newport** 58.54 52 P **P** 19 27 52.0 -0.2
comp=Z,129nm,0.9s,baz=320,slow=7.2,SNR=46
DGPR **DIGLIPUR** 58.85 256 *eP* **P** 19 27 56.3 +1.6
A12A **Yaak River Ran** 58.95 50 ⇑ P **P** 19 27 55.5 +0.5
baz=59,SNR=37
BBKI **Banjar Baru** 58.98 224 P **P** 19 27 53.9 -1.6
KHMM **Horse Mountain** 59.00 62 *eP* **P** 19 27 56.3 +0.7
comp=Z,367nm,1.4s
YBH **Yreka Blue Hor** 59.12 60 P **P** 19 27 56.7 +0.3
YBH **Yreka Blue Hor** 59.12 60 P **P** 19 27 56.7 +0.3
comp=Z,51nm,0.9s,baz=316,slow=5.6,SNR=37
YBH LR LR 19 51 08.3
comp=Z,8μm,20.5s,baz=304,slow=34
B12A **Libby** 59.25 51 ⇑ P **P** 19 27 57.6 +0.5
baz=59,SNR=11
C11A **Tepee Creek (N** 59.26 52 ⇑ P **P** 19 27 57.3 +0.1
baz=59
NDI **New Delhi** 59.37 281 *eP* **P** 19 27 57.0 -1.2
NDI *eS* **S** 19 36 04.0 +0.8
TRO **Tromso** 59.49 343 *eP* **P** 19 27 58.3 0.0
TRO AMB AMB 19 28 00.9
comp=Z,294nm,1.1s
TRO *e* 19 31 39.6
TRO *eS* **S** 19 36 04.2 +0.7
TRO AMS AMS 19 51 34.1
comp=Z,37μm,27.6s
A13A **Flathead Natio** 59.61 50 ⇓ P **P** 19 27 59.8 +0.2
baz=59,SNR=135
FUNA **Funafuti** 59.76 148 PFAKE 19 28 10.0 +9.2
FUNA LR LR
comp=Z,40μm,21.0s
C12B **Naegeli Ranch,** 59.76 51 ⇑ P **P** 19 28 00.8 +0.2
baz=60,SNR=56
KIPM **Iron Peak** 59.78 63 *eP* **P** 19 28 01.4 +0.4
comp=Z,131nm,0.9s
KCPM **Cahto Peak** 59.80 63 *eP* **P** 19 28 01.8 +0.7
comp=Z,83nm,0.8s
WALA **Waterton Lakes** 59.80 49 ⇑ *eP* **P** 19 28 00.7 -0.3
comp=Z,6.7nm,0.6s
WDC **Whiskeytown Da** 59.90 61 ⇑ *eP* **P** 19 28 01.8 +0.1
WDC pmax pmax
comp=Z,105nm,1.0s
WDC **Whiskeytown Da** 59.90 61 ⇑ *eP* **P** 19 28 01.8 +0.1
comp=Z,105nm,1.0s
B13A **Whitefish** 59.91 50 ⇑ P **P** 19 28 02.0 +0.4
baz=60,SNR=292
PBA **Port Blair** 60.07 255 *eP* P 19 28 04.7 +1.6
IPM **Ipoh** 60.10 242 ⇑ *iP* **P** 19 28 03.4 +0.1
comp=Z,288nm,1.3s
IPM **Ipoh** 60.10 242 P **P** 19 28 03.9 +0.6
IPM **Ipoh** 60.10 242 P **P** 19 28 03.6 +0.3
comp=Z,215nm,2.7s,comp=Z,8μmcomp=Z,90μm
A14A **Double T Ranch** 60.11 49 ⇑ P **P** 19 28 02.9 -0.2
baz=60,SNR=187
COEN **Coen** 60.19 189 *eP* **P** 19 28 02.8 -1.0
comp=Z,1μm,1.2s
D12A **Red Ives Fores** 60.22 52 ⇑ P **P** 19 28 04.2 +0.4
baz=60
C13A **Hot Springs** 60.27 51 ⇑ P **P** 19 28 04.4 +0.3
baz=60,SNR=114
BMO **Blue Mountains** 60.45 55 ⇑ *eP* **P** 19 28 05.2 -0.2
BMO pmax pmax
comp=Z,200nm,1.3s
BMO MLR MLR
comp=Z,20μm,22.0s
BMO **Blue Mountains** 60.45 55 ⇑ *eP* **P** 19 28 05.2 -0.2
comp=Z,200nm,1.3s
BMO LR LR
comp=Z,20μm,22.0s
A15A **Johnson Ranch,** 60.47 49 ⇓ P **P** 19 28 04.7 -0.8
baz=60,SNR=68
MOD **Modoc** 60.47 59 ⇑ *eP* **P** 19 28 05.9 +0.2
comp=Z,497nm,1.2s
MYKOM **Kota Tinggi** 60.52 238 P **P** 19 28 08.0 +1.9
MYKOM **Kota Tinggi** 60.52 238 P **P** 19 28 07.5 +1.4
comp=Z,284nm,2.4s,comp=Z,10μmcomp=Z,89μm
HOPS **Hopland** 60.53 63 *eP* **P** 19 28 05.9 0.0
comp=Z,316nm,1.5s
B14A **Marquette Ranc** 60.55 50 ⇑ P **P** 19 28 06.2 0.0
baz=60,SNR=156
KGM **Kluang** 60.66 239 P **P** 19 28 09.0 +2.0
C14A **Swan Lake** 60.66 50 ⇑ P **P** 19 28 06.9 +0.1
baz=60
D13A **Huson** 60.68 51 ⇓ P **P** 19 28 06.8 -0.2
baz=60,SNR=117
FRIM **Kepong** 60.70 241 P **P** 19 28 08.8 +1.4
B15A **Bradely Ranch,** 60.96 49 ⇓ P **P** 19 28 08.5 -0.4
baz=61,SNR=120
JBP **Jabalpur** 60.99 274 ⇑ *ix* x 19 28 12.6
JBP *eS* **S** 19 36 24.1 +0.2
JBP *i* x x 19 57 22.4
comp=Z,26μm,14.5s
F12A **Elk City** 61.06 53 ⇑ P **P** 19 28 09.8 +0.2
baz=61,SNR=326
A16A **West Butte Ran** 61.08 48 ⇓ P **P** 19 28 09.2 -0.5
baz=61
SLMT **Seeley Lake** 61.12 51 *eP* **P** 19 28 09.7 -0.4
comp=Z,500nm,1.2s
MSO **Missoula** 61.13 51 ⇑ *iP* **P** 19 28 09.6 -0.4
comp=Z,279nm,1.2s
MSO LR LR
comp=Z,7μm,22.0s
MSO **Missoula** 61.13 51 ⇓ P **P** 19 28 10.0 0.0
baz=61,SNR=180
WVOR **Wild Horse Val** 61.13 58 *eP* **P** 19 28 10.0 -0.2
WVOR pmax pmax
comp=Z,305nm,1.1s
WVOR MLR MLR
comp=Z,13μm,22.0s
WVOR **Wild Horse Val** 61.13 58 *eP* **P** 19 28 10.0 -0.2
comp=Z,305nm,1.1s
WVOR LR LR
comp=Z,13μm,22.0s
D14A **Greenough** 61.21 51 ⇑ P **P** 19 28 10.6 -0.1
baz=61,SNR=478
KBL **Kabul** 61.21 291 ⇑ *eP* **P** 19 28 09.5 -1.4
KBL pmax pmax
comp=Z,749nm,1.2s
KBL **Kabul** 61.21 291 ⇑ *eP* **P** 19 28 09.5 -1.4
comp=Z,749nm,1.2s
E13A **Victor** 61.23 52 ⇑ P **P** 19 28 10.6 -0.1
baz=61,SNR=112
C15A **Salmond Ranch,** 61.27 50 ⇓ P **P** 19 28 11.5 +0.5
baz=61,SNR=372
B16A **M & M Farms, S** 61.35 49 ⇑ P **P** 19 28 10.8 -0.6
baz=61,SNR=182
G12A **Big Creek, Yel** 61.40 54 ⇓ P **P** 19 28 11.6 -0.4
baz=61
JOF **Joensuu** 61.43 333 *eP* **P** 19 28 10.7 -0.9
JOF **Joensuu** 61.43 333 *ep* **P** 19 28 10.7 -0.9
CHMT **Chamberlain Mo** 61.45 51 *eP* **P** 19 28 11.6 -0.8
comp=Z,76nm,0.9s
SUMG **Summit** 61.47 3 *eP* **P** 19 28 12.0 -0.3
SUMG pmax pmax
comp=Z,1μm,1.0s
SUMG **Summit** 61.47 3 *eP* **P** 19 28 12.0 -0.3
comp=Z,1μm,1.0s
SUMG **Summit** 61.47 3 *i* P **P** 19 28 12.8 +0.5
comp=Z,821nm,0.8s
SUMG
comp=Z,31μm,19.0s
SUMG **Summit** 61.47 3 *i* P P'P'df 19 57 15.7 -15
A17A **Triple J Farms** 61.55 48 ⇑ P **P** 19 28 12.5 -0.3
baz=61,SNR=108
F13A **Darby** 61.55 53 ⇓ P **P** 19 28 12.8 -0.2
baz=61,SNR=178
E14A **Clinton** 61.62 52 ⇑ P **P** 19 28 13.3 -0.2
baz=61,SNR=237
BEKR **Beckworth** 61.67 61 ⇑ *eP* **P** 19 28 13.4 -0.5
comp=Z,195nm,1.4s
STEI **Steigen** 61.67 343 *eP* **P** 19 28 12.7 -0.4
STEI AMB AMB 19 28 23.1
comp=Z,123nm,1.4s
C16A **Fuhringer Ranc** 61.71 49 ⇓ P **P** 19 28 14.1 +0.2
baz=62,SNR=228
D15A **Lincoln** 61.76 51 ⇓ P **P** 19 28 14.3 -0.1
baz=62,SNR=125
B17A **L&G Farms, Che** 61.90 49 ⇑ P **P** 19 28 15.2 0.0
baz=62,SNR=214
A18A **Metzger Ranch,** 62.00 48 ⇓ P **P** 19 28 15.3 -0.5
baz=62,SNR=18
H12A **Diamond D Ranc** 62.02 54 ⇑ P **P** 19 28 16.0 -0.2
baz=62,SNR=146
FFC **Flin Flon** 62.03 39 ⇑ *eP* **P** 19 28 14.7 -1.1
FFC pmax pmax
comp=Z,202nm,0.9s
FFC MLR MLR
comp=Z,25μm,22.0s
FFC **Flin Flon** 62.03 39 ⇑ *eP* **P** 19 28 14.7 -1.1
comp=Z,202nm,0.9s
FFC LR LR
comp=Z,25μm,22.0s
FFC **Flin Flon** 62.03 39 P **P** 19 28 15.5 -0.3
comp=Z,1μm,0.8s
G13A **Cobalt** 62.03 53 ⇓ P **P** 19 28 15.9 -0.3
baz=62,SNR=416
F14A **Wisdom** 62.06 52 ⇓ P **P** 19 28 16.2 -0.2
baz=62,SNR=19
E15A **Deer Lodge** 62.08 51 ⇑ P **P** 19 28 16.3 -0.2
baz=62,SNR=144
MFID **Camas Ranch** 62.17 55 ⇑ *eP* **P** 19 28 16.7 -0.4
comp=Z,700nm,1.8s
MFID **Camas Ranch** 62.17 55 ⇓ P **P** 19 28 17.0 -0.1
baz=62,SNR=60
VIS **Vishakhapatnam** 62.29 267 *eP* **P** 19 28 18.9 +0.9
VIS *eS* **S** 19 36 42.0 +1.5
D16A **Dana Ranch, Ca** 62.29 50 ⇓ P **P** 19 28 18.0 +0.1
baz=62
I12A **Atlanta** 62.33 55 ⇑ P **P** 19 28 18.3 +0.1
baz=62
C17A **Wharram Farm,** 62.33 49 ⇓ P **P** 19 28 18.0 -0.1
baz=62,SNR=273
H13A **Challis** 62.35 54 ⇓ P **P** 19 28 18.2 -0.1
baz=62,SNR=260
B18A **Beardsley Farm** 62.37 48 ⇑ P **P** 19 28 18.4 +0.1
baz=62,SNR=170
G14A **Jackson** 62.37 53 ⇑ P **P** 19 28 17.8 -0.8
baz=62,SNR=55
JMIC **Jan Mayen** 62.38 353 *eP* **P** 19 28 19.9 +2.0
JMIC AMB AMB 19 28 24.1
comp=Z,963nm,1.9s
JMIC *eS* **S** 19 36 39.6 -0.7
JMIC AMS AMS 19 52 24.7
comp=Z,11μm,23.7s
JMIC **Jan Mayen** 62.38 353 LR LR 19 57 47.9
comp=Z,9μm,18.7s,baz=23,slow=38
WCN **Washoe City** 62.38 61 ⇑ *eP* **P** 19 28 18.3 -0.4
WCN *eS* **S** 19 36 46.8 +5.2
WCN pmax pmax
comp=Z,497nm,1.5s
WCN **Washoe City** 62.38 61 ⇑ *eP* **P** 19 28 18.3 -0.4
comp=Z,497nm,1.5s
WCN *eS* **S** 19 36 46.8 +5.2
XMAS **Kiritimati** 62.49 119 *eP* **P** 19 28 16.5 -2.9
comp=Z,682nm,1.8s
XMAS LR LR
comp=Z,19μm,22.0s
F15A **Butte** 62.53 52 ⇓ P **P** 19 28 19.5 -0.1
baz=62,SNR=381
AJM **Ajmer** 62.53 280 *eP* **P** 19 28 20.0 +0.3
E16A **East Helena** 62.53 51 ⇓ P **P** 19 28 19.5 0.0
baz=62,SNR=102
LRM **Limekiln Ridge** 62.56 52 *eP* **P** 19 28 19.6 -0.3
comp=Z,580nm,0.5s
A19A **Klindworth Far** 62.56 47 ⇓ P **P** 19 28 19.4 -0.2
baz=62,SNR=141
EGMT **Eagleton** 62.61 48 *eP* **P** 19 28 19.6 -0.4
comp=Z,422nm,1.1s
EGMT LR LR
comp=Z,20μm,22.0s
EGMT **Eagleton** 62.61 48 ⇓ P **P** 19 28 19.8 -0.1
baz=62,SNR=26
D17A **Six Diamond Ra** 62.67 50 ⇑ P **P** 19 28 20.3 -0.2
baz=62,SNR=200
CMBY **CAMPBELL BAY** 62.69 250 *eP* **P** 19 28 21.0 +0.2
PSI **Prapat** 62.71 243 P **P** 19 28 21.3 +0.3
PSI **Prapat** 62.71 243 P **P** 19 28 21.4 +0.3
comp=Z,194nm,2.1s,comp=Z,7μmcomp=Z,73μm
PSI **Prapat** 62.71 243 P **P** 19 28 21.3 +0.3
comp=Z,85nm,0.8s,baz=14,slow=8.3,SNR=45
PSI LR LR 19 55 05.7
comp=Z,22μm,21.8s,baz=217,slow=35
BHPL **Bhopal** 62.71 276 *eP* **P** 19 28 21.6 +0.7
B19A **Brinkman Farms** 62.76 48 ⇑ P **P** 19 28 20.9 0.0
baz=62,SNR=176
DLMT **Dillon** 62.77 52 *eP* **P** 19 28 20.4 -0.7
comp=Z,855nm,2.0s
CMB **Columbia Colle** 62.78 63 ⇑ *eP* **P** 19 28 20.7 -0.5
CMB *eS* **S** 19 36 49.1 +2.7
CMB pmax pmax
comp=Z,338nm,1.4s
CMB **Columbia Colle** 62.78 63 ⇑ *eP* **P** 19 28 20.7 -0.5
comp=Z,338nm,1.4s
CMB *eS* **S** 19 36 49.1 +2.7
H14A **Leadore** 62.81 53 ⇑ P **P** 19 28 21.3 -0.2
baz=63,SNR=55
I13A **Wildhorse Cree** 62.83 54 ⇑ P **P** 19 28 21.8 +0.2
baz=63,SNR=195
HLID **Hailey** 62.88 55 ⇑ *eP* **P** 19 28 21.9 0.0
comp=Z,154nm,1.2s
HLID LR LR
comp=Z,13μm,22.0s
HLID **Hailey** 62.88 55 ⇓ P **P** 19 28 22.0 +0.1
baz=63,SNR=108
SAO **San Andreas Ge** 62.91 64 *eP* **P** 19 28 20.9 -1.1
SAO pmax pmax
comp=Z,130nm,1.4s
SAO **San Andreas Ge** 62.91 64 *eP* **P** 19 28 20.9 -1.1
comp=Z,130nm,1.4s
G15A **Dillon** 62.95 52 ⇑ P **P** 19 28 21.9 -0.5

baz=63,SNR=167
NGP Nagpur 62.96 273 *e*P P **19 28 21.2 -1.3**
NGP *ex* x 19 36 45.5
NGP *ex* x 19 58 18.9
comp=Z,29µm,18.8s
MCMT McKenzie Canyo 62.97 53 *e*P P **19 28 21.6 -1.0**
comp=Z,51nm,1.0s
A20A Cobblestone Ra 63.01 47 ⇑P P **19 28 22.8 +0.2**
baz=63,SNR=55
E17A Martinsdale 63.02 50 ⇓P P **19 28 23.2 +0.4**
baz=63
F16A Kennard Place, 63.03 51 ⇑P P **19 28 22.9 +0.1**
baz=63,SNR=24
D18A Linhart Farms, 63.11 49 ⇑P P **19 28 23.5 +0.2**
baz=63,SNR=77
BOZ Bozeman (W) 63.12 51⇑*e*P P **19 28 23.6 +0.2**
BOZ *e*S S **19 36 49.1 -1.5**
BOZ pmax pmax
comp=Z,333nm,1.4s
BOZ MLR MLR
comp=Z,9µm,21.0s
BOZ Bozeman (W) 63.12 51⇑*e*P P **19 28 23.6 +0.2**
comp=Z,333nm,1.4s
BOZ *e*S S **19 36 49.1 -1.5**
BOZ LR LR
comp=Z,9µm,21.0s
BOZ Bozeman (W) 63.12 51 ⇑P P **19 28 23.6 +0.2**
baz=63,SNR=252
J13A Cove Ranch, Pi 63.12 55 ⇓P P **19 28 23.6 +0.1**
baz=63,SNR=109
C19A Slack Wire Ran 63.16 48 ⇑P P **19 28 24.0 +0.4**
baz=63,SNR=194
I14A Mackay 63.20 54 ⇑P P **19 28 24.3 +0.3**
baz=63,SNR=189
BMN Battle Mountai 63.20 59 *e*P P **19 28 24.2 +0.1**
BMN *e*S S **19 36 55.0 +3.1**
BMN pmax pmax
comp=Z,178nm,1.0s
BMN MLR MLR
comp=Z,17µm,22.0s
BMN Battle Mountai 63.20 59 *e*P P **19 28 24.2 +0.1**
comp=Z,178nm,1.0s
BMN *e*S S **19 36 55.0 +3.1**
BMN LR LR
comp=Z,17µm,22.0s
H15A Lima 63.21 53 ⇑P P **19 28 23.9 -0.3**
baz=63,SNR=44
B20A Solberg Farm, 63.24 47 ⇓P P **19 28 23.8 -0.2**
baz=63,SNR=31
G16A Moss Hill, Enn 63.29 52 ⇓P P **19 28 24.7 +0.1**
baz=63,SNR=375
KONS Konsvik 63.32 343 *e*P P **19 28 22.0 -2.2**
KONS AMB AMB 19 28 32.3
comp=Z,124nm,1.6s
MOR8 Moi Rana 63.32 342 *e*P P **19 28 23.5 -0.8**
MOR8 AMB AMB 19 28 28.5
comp=Z,224nm,1.1s
FLOS Flostrand 63.41 342 *e*P P **19 28 24.4 -0.4**
comp=Z,216nm,1.6s
FLOS AMB AMB 19 28 46.0
comp=Z,216nm,1.6s
A21A Bergtoll Ranch 63.44 46 ⇑P P **19 28 25.6 +0.2**
baz=63,SNR=36
E18A Harlowton 63.46 50 ⇓P P **19 28 25.8 +0.2**
baz=63,SNR=100
F17A Fitzpatrick Pl 63.48 51 ⇑P P **19 28 26.1 +0.3**
baz=63,SNR=120
STOK Stokkvaagen 63.49 343 *e*P P **19 28 26.3 +1.0**
STOK AMB AMB 19 28 30.8
comp=Z,220nm,1.4s
J14A Carey 63.54 54 ⇑P P **19 28 27.2 +0.9**
baz=63,SNR=197
KAF Kangasniemi 63.57 335 *e*P P **19 28 25.6 -0.3**
KAF pmax pmax
comp=Z,50nm,0.7s
KAF Kangasniemi 63.57 335 *e*p P **19 28 25.6 -0.3**
comp=Z,50nm,0.7s
D19A Cripps Ranch, 63.62 49 ⇓P P **19 28 26.9 +0.2**
baz=63,SNR=53
SCO Scoresbysund 63.68 358 *i*P P **19 28 26.9 +0.4**
SCO pmax pmax
comp=Z,190nm,1.0s
SCO MLR MLR
comp=Z,11µm,22.0s
SCO Scoresbysund 63.68 358 *i*P P **19 28 26.9 +0.4**
comp=Z,188nm,1.0s
SCO
comp=Z,11µm,22.0s
SCO Scoresbysund 63.68 358 *i*P P'P'df **19 57 23.6 -3.0**
I15A Monteview 63.69 53 ⇑P P **19 28 27.7 +0.5**
baz=64
C20A Veseth Ranch, 63.72 48 ⇑P P **19 28 27.6 +0.4**
baz=64,SNR=82
QLMT Earthquake Lak 63.74 52 *e*P P **19 28 27.6 -0.1**
comp=Z,41nm,1.3s
B21A Ellsworth Farm 63.76 47 ⇓P P **19 28 27.9 +0.4**
baz=64,SNR=15
G17A Pierce Place, 63.81 51 ⇑P P **19 28 28.4 +0.4**
baz=64
NVAR Mina Array Bea 63.81 61 P P **19 28 28.3 +0.1**
NVAR Mina Array Bea 63.81 61 P P **19 28 28.3 +0.1**
comp=Z,75nm,0.9s,baz=293,slow=7.1,SNR=164
NVAR LR LR 19 49 50.7
comp=Z,8µm,21.4s,baz=66,slow=30
NV11 Mina Array Sit 63.90 61⇑*e*P P **19 28 28.5 -0.2**
NV11 *e*S S 19 37 09.0 +8.4
H16A Russell Place, 63.93 52 ⇓P P **19 28 29.2 +0.3**
baz=64
A22A Carney Farms, 63.95 46 ⇑P P **19 28 28.7 0.0**
baz=64,SNR=190
F18A Big Timber 63.99 50 ⇓P P **19 28 29.7 +0.5**
baz=64
MLAC Mammoth Lakes 63.99 62 ⇑P P **19 28 30.3 +0.9**
baz=64,SNR=16
D20A Manuel Ranch, 64.05 48 ⇓P P **19 28 29.9 +0.4**
baz=64,SNR=172
GCMT Greycliff 64.08 50⇑*e*P P **19 28 30.4 +0.6**
comp=Z,106nm,0.9s
PUL Pulkovo 64.08 331⇓*e*P P **19 28 29.4 +0.1**
PUL pmax pmax
comp=Z,430nm,1.1s
PUL MLR MLR
comp=Z,36µm,22.0s
J15A Blackfoot 64.10 54 ⇑P P **19 28 30.6 +0.7**
baz=64,SNR=122
YMR Madison River 64.10 52⇑*e*P P **19 28 30.3 +0.2**
comp=Z,413nm,1.4s
C21A Desert Coulee 64.11 47 ⇓P P **19 28 29.9 0.0**
baz=64,SNR=43
E19A Rath Farm, Rou 64.12 49 ⇓P P **19 28 30.4 +0.4**
baz=64,SNR=119
FIA1 FINESS Array S 64.16 334⇑*e*P P **19 28 28.7 -1.1**
FINES FINESS Array B 64.16 334 P P **19 28 29.1 -0.7**
FINES ⇑*e* 19 57 19.0
FINES FINESS Array B 64.16 334 P P **19 28 29.1 -0.7**
comp=Z,67nm,0.4s,baz=43,slow=4.8,SNR=168
FINES PKP2bc 19 57 19.0
comp=Z,7.9nm,0.9s,baz=134,slow=4.0,SNR=8.2
FINES LR LR 19 59 05.8
comp=Z,47µm,20.7s,baz=42,slow=38
ELK Elko 64.18 57 *e*P P **19 28 30.4 -0.2**
comp=Z,81nm,1.1s
ELK Elko 64.18 57 P P **19 28 31.0 +0.3**
comp=Z,30nm,0.8s,baz=304,slow=5.4,SNR=47
ELK LR LR 19 52 01.7
comp=Z,12µm,21.8s,baz=324,slow=32
K14A Jones Ranch, D 64.23 55 ⇓P P **19 28 31.5 +0.7**
baz=64,SNR=72
I16A Newdale 64.33 53 ⇓P P **19 28 32.2 +0.8**
baz=64,SNR=67
MOS Moscow 64.34 325 *e*P P **19 28 30.3 -0.8**
MOS *e* 19 29 06.9
MOS *e* 19 30 50.2
MOS *e*PPP PPP 19 32 28.5
MOS *e*S S **19 37 00.1 -5.0**
MOS *i* 19 38 19.2
MOS *e*SS SS 19 41 22.6 +8.1
MOS pmax pmax
comp=Z,188nm,1.3s
MOS pmax pmax
comp=N,129nm,1.1s
MOS pmax pmax
comp=Z,3µm,4.0s
MOS pmax pmax
comp=N,2µm,4.0s
MOS pmax pmax
comp=E,2µm,4.0s
MOS MLR MLR
comp=N,26µm,17.0s
MOS MLR MLR
comp=Z,35µm,16.0s
MOS MLR MLR
comp=E,28µm,16.0s
B22A Reddig Ranch S 64.36 46 ⇑P P **19 28 31.4 -0.1**
baz=64,SNR=8.3
F19A Roth Farm, Mol 64.43 50 ⇓P P **19 28 32.4 +0.4**
baz=64,SNR=144
E20A Meyer Farm, Mu 64.44 49 ⇓P P **19 28 32.4 +0.4**
baz=64,SNR=38
G18A Lazy EL Ranch, 64.45 51 ⇓P P **19 28 32.1 -0.2**
baz=64,SNR=56
LKWY Lake 64.48 52 *e*P P **19 28 33.7 +1.1**
LKWY pmax pmax
comp=Z,198nm,1.0s
LKWY MLR MLR
comp=Z,14µm,20.0s
LKWY Lake 64.48 52 *e*P P **19 28 33.7 +1.1**
comp=Z,198nm,1.0s
LKWY LR LR
comp=Z,14µm,20.0s
A23A Redstone 64.48 45 ⇓P P **19 28 32.3 +0.1**
baz=64
H17A Grant Village 64.49 52 ⇓P P **19 28 34.3 +1.7**
baz=64
K15A Arbon 64.50 54 ⇓P P **19 28 33.4 +0.8**
baz=64,SNR=113
L14A Malta 64.52 55 ⇓P P **19 28 33.2 +0.5**
baz=64,SNR=82
IMW Indian Meadow 64.61 52 *e*P P **19 28 34.0 +0.5**
comp=Z,197nm,1.1s
J16A Bone 64.64 53 ⇓P P **19 28 34.2 +0.6**
baz=64
DCID1 Drake Creek 64.67 53⇑*e*P P **19 28 34.0 +0.2**
comp=Z,370nm,1.1s
DCID1 *e*S S **19 37 14.0 +4.0**
TPH Tonopah 64.69 61 PFAKE 19 28 50.0 +16
TPH LR LR
comp=Z,9µm,22.0s
RLMT Red Lodge 64.73 51⇑*e*P P **19 28 34.2 +0.1**
comp=Z,146nm,1.4s
RLMT LR LR
comp=Z,10µm,20.0s
RLMT Red Lodge 64.73 51 ⇑P P **19 28 34.6 +0.5**
baz=64,SNR=132
SMMC Simmler 64.73 65 ⇓P P **19 28 34.7 +0.7**
baz=64
B23A Brockton 64.75 46 ⇓P P **19 28 33.9 -0.1**
baz=64,SNR=112
RRI2 Red Ridge 64.76 53⇑*e*P P **19 28 34.7 +0.3**
comp=Z,288nm,0.8s
C22A Vida 64.78 47 ⇓P P **19 28 34.0 -0.2**
baz=64,SNR=7.6
I17A Pilgrim Ck. 64.80 52 ⇓P P **19 28 35.9 +1.3**
baz=65,SNR=106
H18A Shoshone NF, C 64.81 51 ⇑P P **19 28 35.1 +0.4**
baz=65,SNR=110
MOOW Moose Ponds 64.82 52⇑*e*P P **19 28 34.8 0.0**
comp=Z,894nm,1.9s
TPAW Teton Pass 64.87 53⇑*e*P P **19 28 35.3 +0.2**
comp=Z,498nm,1.2s
F20A Billings 64.89 49 ⇑P P **19 28 35.0 0.0**
baz=65
A24A Westby 64.94 45 ⇓P P **19 28 35.0 -0.2**
baz=65,SNR=52
K16A Soda Springs 64.94 54 ⇓P P **19 28 36.4 +0.9**
baz=65,SNR=145
HVU Hansel Valley 64.95 55⇑*e*P P **19 28 35.5 0.0**
HVU pmax pmax
comp=Z,148nm,1.0s
HVU Hansel Valley 64.95 55⇑*e*P P **19 28 35.5 0.0**
comp=Z,148nm,1.0s
E21A Keefer Ranch, 64.96 48 ⇓P P **19 28 35.9 +0.4**
baz=65,SNR=13
VES Vestal, Richgr 64.97 64 ⇑P P **19 28 34.9 -0.6**
baz=65,SNR=24
LOHW Long Hollow 64.98 53⇑*e*P P **19 28 36.0 +0.2**
comp=Z,452nm,1.4s
LOHW *e*S S 19 37 23.1 +9.1
SNOW Snow King Moun 65.00 53⇑*e*P P **19 28 36.5 +0.6**
comp=Z,424nm,1.4s
REDW Red Top Meadow 65.01 53⇑*e*P P **19 28 36.7 +0.7**
comp=Z,8.7nm,1.4s
D22A Cohagen 65.02 47 ⇓P P **19 28 36.3 +0.5**
baz=65,SNR=11
L15A Malad City 65.02 55 ⇑P P **19 28 36.2 +0.2**
baz=65,SNR=68
J17A Brown Place, J 65.08 53 ⇓P P **19 28 37.1 +0.7**
baz=65,SNR=148
C23A Lambert 65.10 46 ⇑P P **19 28 36.4 +0.1**
baz=65,SNR=55
PKM Peak Mountain 65.11 65 ⇑P P **19 28 37.0 +0.3**
baz=65,SNR=10.0
DGMT Dagmar 65.14 45⇑*e*P P **19 28 35.9 -0.7**
comp=Z,243nm,0.9s
DGMT *e*S S **19 37 17.9 +2.5**
DGMT LR LR
comp=Z,24µm,22.0s
DGMT Dagmar 65.14 45 ⇓P P **19 28 36.4 -0.1**
baz=65,SNR=55
H19A Powell 65.18 51 ⇓P P **19 28 37.4 +0.4**
baz=65,SNR=47
OBN Obninsk 65.20 325*c*iP P **19 28 36.0 -0.7**
OBN *i* 19 30 56.0
OBN *i*S S **19 37 12.1 -3.6**
OBN *i* 19 38 25.3
OBN pmax pmax
comp=Z,173nm,1.0s
OBN MLR MLR
comp=Z,55µm,21.0s
OBN Obninsk 65.20 325 P P **19 28 36.6 -0.1**
comp=Z,1µm,1.1s,SNR=8.2
G20A Bridger 65.23 50 ⇓P P **19 28 37.0 -0.2**
baz=65,SNR=94
AHID Auburn Hatcher 65.26 54 *e*P P **19 28 37.3 -0.3**
comp=Z,221nm,1.3s
AHID LR LR
comp=Z,17µm,22.0s
NSS Namsos 65.27 342⇑*i*P P 19 28 32.7 -4.3
NSS AMB AMB 19 28 40.0
comp=Z,63nm,1.6s
NSS *e* 19 32 39.0
NSS *e*S S **19 37 14.1 -2.2**
NSS AMS AMS 19 56 39.2
comp=Z,17µm,26.5s
GRAC Grapevine Rang 65.29 62 ⇑P P **19 28 38.3 +0.7**
baz=65,SNR=16
I18A Diamond G Ranc 65.36 52 ⇑P P **19 28 39.1 +0.8**
baz=65,SNR=117
F21A Absaloka Mine, 65.41 49 ⇑P P **19 28 38.5 +0.2**
baz=65,SNR=7.6
ISA Isabella 65.46 64 *e*P P **19 28 37.5 -1.4**
ISA pmax pmax
comp=Z,149nm,1.4s
ISA Isabella 65.46 64 *e*P P **19 28 37.5 -1.4**
comp=Z,149nm,1.4s
ISA Isabella 65.46 64 ⇓P P **19 28 37.9 -0.9**
baz=65,SNR=43
D23A Lindsay 65.50 47 ⇓P P **19 28 39.3 +0.4**
baz=65,SNR=30
R11A Troy Canyon, C 65.51 60 ⇓P P **19 28 39.2 -0.1**
baz=65,SNR=200
L16A Fish Haven 65.56 54 ⇓P P **19 28 39.7 +0.1**
baz=65,SNR=10.0
J18A Kendall Valley 65.57 53 ⇓P P **19 28 39.7 0.0**
baz=65,SNR=121
ARVC Arvin 65.59 64 ⇑P P **19 28 39.5 -0.1**
baz=65,SNR=8.2
I19A Meeteetse 65.59 51 ⇓P P **19 28 40.0 +0.3**
baz=65,SNR=117
DAC Darwin (Calif) 65.61 63 *e*P P **19 28 39.3 -0.7**
DAC pmax pmax
comp=Z,253nm,1.5s
DAC MLR MLR
comp=Z,12µm,22.0s
DAC Darwin (Calif) 65.61 63 *e*P P **19 28 39.3 -0.7**
comp=Z,253nm,1.5s
DAC LR LR
comp=Z,12µm,22.0s
E22A Miles City 65.61 48 ⇑P P **19 28 39.6 0.0**
baz=65,SNR=80
C24A Savage 65.66 46 ⇓P P **19 28 40.0 +0.1**
baz=65,SNR=12
HWUT Hardware Ranch 65.75 55 *e*P P **19 28 40.5 -0.3**
comp=Z,291nm,1.2s
HWUT LR LR
comp=Z,9µm,20.0s
G21A Lodge Grass 65.76 49 ⇓P P **19 28 40.3 -0.4**
baz=66,SNR=32
L17A Cokeville 65.82 54 ⇓P P **19 28 41.4 +0.2**
baz=66,SNR=8.9
HYB Hyderabad 65.82 270 *i*P P **19 28 40.0 -1.3**
comp=Z,250nm,1.0s
HYB *e*PcP PcP **19 29 13.0 +1.0**
HYB *e*PP PP 19 31 12.0 +5.5
HYB *e*S S **19 37 24.0 -0.4**
HYB *e*SS SS 19 41 32.0 -7.5
HYB Hyderabad 65.82 270 *e*P P **19 28 41.8 +0.5**
MPMC Manual Prospec 65.82 63 ⇑P P **19 28 41.1 -0.2**
baz=66,SNR=84
H20A Greybull 65.83 50 ⇑P P **19 28 40.8 -0.4**
baz=66,SNR=31
F22A Rosebud 65.89 48 ⇑P P **19 28 41.3 -0.2**
baz=66,SNR=102
VRHR Novokhopersk 65.89 319 *e*P P **19 28 39.7 -1.5**
VRHR *e*S S **19 37 18.9 -5.4**
VRHR pmax pmax
comp=N,80nm,0.9s
VRHR pmax pmax
comp=E,70nm,0.9s
VRHR pmax pmax
comp=Z,110nm,0.9s
VRHR smax smax
comp=N,490nm,2.0s
VRHR smax smax
comp=E,170nm,2.0s
VRHR smax smax
comp=Z,150nm,2.0s
VRHR MLR MLR
comp=N,18µm,16.0s
VRHR MLR MLR
comp=E,17µm,16.0s
VRHR MLR MLR
comp=Z,52µm,16.0s
M16A Huntsville 65.90 55 ⇑P P **19 28 41.8 +0.1**
baz=66
E23A Ismay 65.91 47 ⇓P P **19 28 41.8 +0.3**
baz=66,SNR=125
K18A Toltan Ranch, 65.93 53 ⇑P P **19 28 42.4 +0.5**
baz=66,SNR=115
ABKT Ailbek 65.93 300 P P **19 28 42.9 +1.1**
comp=Z,3µm,1.1s
FURC Furnace Creek, 65.94 62 ⇓P P **19 28 42.0 +0.2**
baz=66,SNR=94
DUG Dugway 65.95 57⇑*e*P P **19 28 42.0 0.0**
DUG pmax pmax
comp=Z,562nm,1.4s
DUG MLR MLR
comp=Z,13µm,22.0s
DUG Dugway 65.95 57⇑*e*P P **19 28 42.0 0.0**
comp=Z,562nm,1.4s
DUG LR LR
comp=Z,13µm,22.0s
DUG Dugway 65.95 57 ⇓P P **19 28 42.2 +0.2**
baz=66,SNR=184
OSI Osito Adit 65.98 65⇑*e*P P **19 28 41.9 -0.3**
comp=Z,241nm,1.1s
OSI Osito Adit 65.98 65 ⇓P P **19 28 42.3 +0.1**
baz=66,SNR=9.6
D24A Glendive 65.99 46 ⇑P P **19 28 42.2 +0.2**
baz=66,SNR=102
CTA Charters Tower 65.99 185 P P **19 28 41.0 -1.1**
CTA ⇑*e* 19 57 14.1
CTA Charters Tower 65.99 185 P P **19 28 41.0 -1.1**
comp=Z,40nm,0.8s,baz=5.7,slow=7.8,SNR=22
CTA PKP2bc 19 57 14.1
comp=Z,15nm,1.2s,baz=249,slow=7.8,SNR=4.3
CTAO Charters Tower 65.99 185⇑*e*P P **19 28 41.0 -1.1**
CTAO pmax pmax
comp=Z,272nm,1.5s
CTAO MLR MLR
comp=Z,16µm,21.0s
CTAO Charters Tower 65.99 185⇑*e*P P **19 28 41.0 -1.1**
comp=Z,272nm,1.5s
CTAO LR LR
comp=Z,16µm,21.0s
SFJD Kangerlussuaq 66.04 9⇑*e*P P **19 28 40.9 -1.0**
comp=Z,1µm,1.8s
SFJD Kangerlussuaq 66.04 9 *i*P P **19 28 41.3 -0.6**
comp=Z,91nm,0.8s
SFJD
comp=Z,17µm,20.0s
SFJD Kangerlussuaq 66.04 9 *i*P P'P'df 19 57 13.8 -8.8
SFJD Kangerlussuaq 66.04 9 P P **19 28 41.4 -0.4**
comp=Z,134nm,0.8s,baz=340,slow=6.4,SNR=30
SFJD LR LR 20 00 49.0
comp=Z,25µm,20.2s,baz=341,slow=39
J19A Crowheart 66.06 52 ⇑P P **19 28 43.0 +0.2**
baz=66,SNR=164
LRMC Laurel Mountai 66.07 63 ⇑P P **19 28 42.9 +0.1**
baz=66,SNR=44
FRB Frobisher Bay 66.09 18 P P **19 28 41.3 -1.0**
FRB Frobisher Bay 66.09 18 P P **19 28 41.3 -1.0**
comp=Z,287nm,0.5s,baz=319,slow=8.0,SNR=129
BLG Laguna Peak 66.09 65 ⇓P P **19 28 42.3 -0.5**
baz=66,SNR=5.8
BW06 Boulder Array 66.11 53⇑*e*P P **19 28 42.4 -0.8**
comp=Z,196nm,1.0s
BW06 LR LR
comp=Z,11µm,22.0s
BW06 Boulder Array 66.11 53 ⇓P P **19 28 42.8 -0.3**
baz=66,SNR=232
PDAR Pinedale Array 66.11 53 P P **19 28 42.8 -0.3**
PDAR ⇑*e* 19 57 10.0
PDAR Pinedale Array 66.11 53 P P **19 28 42.8 -0.3**
comp=Z,120nm,0.8s,baz=281,slow=1.7,SNR=195
PDAR LR LR 19 54 12.6
comp=Z,7µm,20.3s,baz=324,slow=33
PDAR PKP2bc 19 57 10.0
comp=Z,0.8nm,0.9s,baz=158,slow=2.6,SNR=6.1
I20A Worland 66.12 51 ⇑P P **19 28 43.2 +0.2**
baz=66,SNR=71
CTU Camp Tracy 66.24 56 *e*P P **19 28 44.0 +0.1**
comp=Z,183nm,1.2s
H21A Big Horn, Sher 66.25 50 ⇑P P **19 28 43.7 -0.1**
baz=66
G22A Birney 66.25 49 ⇑P P **19 28 43.6 -0.2**
baz=66,SNR=43
EDW2 Edwards Air Fo 66.27 64 ⇑P P **19 28 44.0 0.0**
baz=66,SNR=86
M17A Scullys Gap (B 66.35 54 ⇓P P **19 28 44.5 -0.1**
baz=66,SNR=44
E24A Baker 66.37 47 ⇑P P **19 28 44.4 -0.1**
baz=66,SNR=32
F23A Volborg 66.38 48 ⇓P P **19 28 44.5 0.0**
baz=66
L18A Fontenelle, Gr 66.40 54 ⇓P P **19 28 44.9 -0.1**
baz=66,SNR=78
DECC Green Verdugo 66.47 65 ⇓P P **19 28 45.0 -0.3**
baz=66
K19A Absolon Red Bu 66.47 52 ⇑P P **19 28 44.6 -0.7**
baz=66,SNR=73
JLU Jordanelle 66.47 55 *e*P P **19 28 45.4 0.0**
comp=Z,438nm,1.5s
VOR Voronezh 66.53 321 P P **19 28 44.0 -1.3**
VOR pmax pmax
comp=Z,75nm,1.5s
LATR Latur 66.53 273 *ex* P 19 28 41.5 -4.3
LATR *ex* x 19 29 10.0
J20A Shoshoni 66.54 51 ⇑P P **19 28 45.9 +0.2**
baz=66,SNR=155
N17A Moffit Pass 66.60 55 ⇓P P **19 28 46.2 -0.1**
baz=66,SNR=197
PASC Pasadena Art C 66.61 65 *e*P P **19 28 45.3 -0.9**
comp=Z,381nm,1.6s
H22A Clearmont 66.64 50 ⇓P P **19 28 45.9 -0.4**
baz=66,SNR=24
MWC Mount Wilson 66.65 64 *e*P P **19 28 46.0 -0.7**
MWC pmax pmax
comp=Z,463nm,1.5s
MWC Mount Wilson 66.65 64 *e*P P **19 28 46.0 -0.7**
comp=Z,463nm,1.5s
I21A Big Trails, Te 66.66 51 ⇓P P **19 28 46.5 0.0**
baz=66,SNR=220
L19A Farson 66.67 53 ⇑P P **19 28 46.4 -0.2**
baz=66,SNR=60
DAU Daniels Canyon 66.71 56 *e*P P **19 28 47.4 +0.3**
DAU pmax pmax
comp=Z,423nm,1.4s
DAU Daniels Canyon 66.71 56 *e*P P **19 28 47.4 +0.3**
comp=Z,423nm,1.4s
M18A Lyman 66.71 54 ⇑P P **19 28 46.8 -0.2**
baz=66,SNR=48

G23A	**Biddle**	66.73	49	⇑P		P		19 28 46.6	-0.2	
	baz=66,SNR=78									
GSC	**Goldstone**	66.73	63	⇓eP		P		19 28 46.6	-0.4	
GSC					pmax	pmax				
	comp=Z,269nm,1.5s									
GSC	**Goldstone**	66.73	63	⇓eP		P		19 28 46.6	-0.4	
	comp=Z,270nm,1.5s									
GSC	**Goldstone**	66.73	63	⇓P		P		19 28 46.7	-0.4	
	baz=66,SNR=54									
MPU	**Maple Canyon**	66.75	56	⇑eP		P		19 28 47.1	-0.1	
	comp=Z,438nm,1.3s									
F24A	**Ekalaka**	66.79	48	⇓P		P		19 28 47.0	-0.2	
	baz=66,SNR=104									
K20A	**Yellowstone Ra**	66.86	52	⇑P		P		19 28 47.0	-0.8	
	baz=67,SNR=87									
J21A	**Lysite**	66.89	51	⇓P		P		19 28 47.9	-0.2	
	baz=67,SNR=52									
VSR	**Storozhevoye**	66.91	321	eP		P		19 28 46.6	-1.1	
VSR				ePPP		PPP		19 32 58.2		
VSR				eS		S		19 37 33.7	-2.9	
VSR					pmax	pmax				
	comp=N,100nm,0.8s									
VSR					pmax	pmax				
	comp=E,90nm,0.8s									
VSR					pmax	pmax				
	comp=Z,100nm,0.8s									
VSR					smax	smax				
	comp=N,630nm,2.9s									
VSR					smax	smax				
	comp=E,620nm,2.9s									
VSR					smax	smax				
	comp=Z,380nm,2.9s									
VSR					MLR	MLR				
	comp=N,36µm,17.0s									
VSR					MLR	MLR				
	comp=E,46µm,17.0s									
VSR					MLR	MLR				
	comp=Z,95µm,17.0s									
CIS	**Catalina Islan**	66.97	65	⇓P		P		19 28 48.7	+0.2	
	baz=67,SNR=7.9									
VORD	**Divnogorie**	67.03	320	eP		P		19 28 48.6	+0.1	
VORD				e				19 31 16.5		
VORD				eS		S		19 37 35.0	-3.0	
VORD					pmax	pmax				
	comp=N,140nm,0.9s									
VORD					pmax	pmax				
	comp=E,170nm,0.9s									
VORD					pmax	pmax				
	comp=Z,120nm,0.9s									
VORD					pmax	pmax				
	comp=E,120nm,1.0s									
VORD					pmax	pmax				
	comp=Z,70nm,1.0s									
VORD					pmax	pmax				
	comp=N,70nm,0.5s									
VORD					smax	smax				
	comp=N,210nm,1.9s									
VORD					smax	smax				
	comp=E,290nm,1.9s									
VORD					smax	smax				
	comp=Z,130nm,1.9s									
VORD					MLR	MLR				
	comp=N,43µm,18.0s									
VORD					MLR	MLR				
	comp=E,42µm,18.0s									
VORD					MLR	MLR				
	comp=Z,76µm,18.0s									
I22A	**9 Mile Ranch,**	67.04	50	⇑P		P		19 28 48.9	0.0	
	baz=67,SNR=84									
G24A	**Alzada**	67.15	48	⇑P		P		19 28 49.0	-0.6	
	baz=67,SNR=24									
ARUT	**Antelope Range**	67.16	59	eP		P		19 28 49.5	-0.2	
ARUT					pmax	pmax				
	comp=Z,269nm,1.3s									
ARUT	**Antelope Range**	67.16	59	eP		P		19 28 49.5	-0.2	
	comp=Z,269nm,1.3s									
SCI	**San Clemente I**	67.16	66	⇓P		P		19 28 49.7	+0.1	
	baz=67									
H23A	**Clabaugh Cattl**	67.16	49	⇓P		P		19 28 49.0	-0.6	
	baz=67									
M19A	**Rock Springs**	67.17	54	⇓P		P		19 28 49.4	-0.5	
	baz=67,SNR=17									
TUQ	**Turquoise Moun**	67.19	62	⇓P		P		19 28 49.8	-0.2	
	baz=67,SNR=76									
N18A	**Larsen Ranch,**	67.24	54	⇑P		P		19 28 49.8	-0.4	
	baz=67,SNR=47									
L20A	**Wamsutter**	67.29	53	⇑P		P		19 28 50.3	-0.3	
	baz=67,SNR=48									
HEC	**Hector,Ludlow**	67.34	63	⇓P		P		19 28 50.5	-0.3	
	baz=67,SNR=37									
CCUT	**Cedar City**	67.36	59	⇑eP		P		19 28 50.8	-0.3	
	comp=Z,319nm,1.4s									
J22A	**Midwest**	67.36	51	⇑P		P		19 28 50.4	-0.6	
	baz=67,SNR=123									
MVU	**Marysvale**	67.41	58	eP		P		19 28 52.0	+0.5	
	comp=Z,152nm,1.3s									
MSU	**Marysvale**	67.42	58	eP		P		19 28 51.7	+0.2	
MSU					pmax	pmax				
	comp=Z,416nm,1.5s									
MSU	**Marysvale**	67.42	58	eP		P		19 28 51.7	+0.2	
	comp=Z,416nm,1.5s									
WRAB	**Tennant Creek**	67.47	197	⇑iP		P		19 28 50.3	-1.2	
WRAB					pmax	pmax				
	comp=Z,269nm,0.9s									
WRAB					MLR	MLR				
	comp=Z,12µm,22.0s									
WRAB	**Tennant Creek**	67.47	197	⇑iP		P		19 28 50.3	-1.2	
	comp=Z,269nm,0.9s									
WRAB				eS		S		19 37 11.4	-32	
WRAB					LR	LR				
	comp=Z,12µm,22.0s									
K21A	**Alcova**	67.47	52	⇓P		P		19 28 51.3	-0.4	
	baz=67,SNR=136									
TMUT	**Trail Mountain**	67.47	56	eP		P		19 28 51.4	-0.5	
	comp=Z,285nm,1.3s									
H24A	**Dirks Ranch, A**	67.48	48	⇓P		P		19 28 50.9	-0.7	
	baz=67,SNR=65									
WRA	**Warramunga Arr**	67.48	197	P		P		19 28 51.0	-0.6	
WRA	**Warramunga Arr**	67.48	197	P		P		19 28 51.0	-0.6	
	comp=Z,217nm,0.8s,baz=12,slow=6.6,SNR=8.0									
WRA					LR	LR		19 56 51.5		
	comp=Z,12µm,21.7s,baz=20,slow=34									
N19A	**John Jarvie Ra**	67.57	54	⇓P		P		19 28 51.9	-0.5	
	baz=67,SNR=50									
MURC	**Murrieta**	67.60	64	⇑P		P		19 28 52.0	-0.5	
	baz=67,SNR=21									
P17A	**Butcher Ranch,**	67.63	56	⇓P		P		19 28 52.6	-0.1	
	baz=67,SNR=89									
MDRS	**Chennai**	67.64	266	eP		P		19 28 54.0	+1.1	
M20A	**Sweetwater, Wa**	67.72	53	⇓P		P		19 28 53.3	-0.1	
	baz=68,SNR=65									
Q16A	**Castle Valley**	67.75	57	⇑P		P		19 28 53.4	-0.1	
	baz=68,SNR=42									
GMRC	**Granite Mounta**	67.78	63	⇑P		P		19 28 53.5	-0.3	
	baz=68,SNR=76									
MDND	**Maddock**	67.81	43	⇓P		P		19 28 53.2	-0.3	
	baz=68,SNR=51									
P18A	**Preston Nutter**	67.81	56	⇑P		P		19 28 53.8	-0.2	
	baz=68									
ULM	**Lac du Bonnet**	67.82	40	P		P		19 28 52.6	-0.9	
ULM				⇑e				19 57 09.8		
ULM	**Lac du Bonnet**	67.82	40	P		P		19 28 52.6	-0.9	
	comp=Z,106nm,0.8s,baz=313,slow=6.7,SNR=31									
ULM					PKP2bc			19 57 09.8		
	comp=Z,2.1nm,0.5s,baz=150,slow=3.6,SNR=7.6									
ULM					LR	LR		19 57 52.6		
	comp=Z,12µm,20.6s,baz=202,slow=35									
K22A	**Casper**	67.86	51	⇓P		P		19 28 53.6	-0.5	
	baz=68,SNR=62									
L21A	**Rawlins**	67.86	52	⇓P		P		19 28 53.8	-0.4	
	baz=68,SNR=64									
J23A	**Dilts Ranch, B**	67.87	50	⇑P		P		19 28 53.6	-0.6	
	baz=68,SNR=9.0									
MSVF	**Nonsavu**	67.92	153	eP		P		19 28 56.7	+2.2	
MSVF					pmax	pmax				
	comp=Z,177nm,1.3s									
MSVF					MLR	MLR				
	comp=Z,53µm,21.0s									
MSVF	**Nonsavu**	67.92	153	eP		P		19 28 56.6	+2.2	
	comp=Z,177nm,1.3s									
MSVF					LR	LR				
	comp=Z,53µm,21.0s									
LDFC	**Landfair**	67.93	62	eP		P		19 28 54.2	-0.4	
	comp=Z,887nm,1.3s									
MOL	**Molde**	67.94	343	eP		P		19 28 53.2	-0.8	
MOL					AMB	AMB		19 28 59.6		
	comp=Z,319nm,1.8s									
MOL				e				19 33 01.4		
MOL				eS		S		19 37 51.0	+2.4	
MOL					AMS	AMS		19 54 33.6		
	comp=Z,24µm,33.9s									
FITZ	**Fitzroy Crossi**	67.98	206	⇑eP		P		19 28 54.5	-0.3	
	comp=Z,449nm,1.5s									
FITZ				⇑e				19 57 16.5		
FITZ	**Fitzroy Crossi**	67.98	206	P		P		19 28 54.5	-0.3	
	comp=Z,134nm,0.9s,baz=17,slow=5.9,SNR=97									
FITZ					PKP2bc			19 57 16.5		
	comp=Z,4.5nm,0.8s,baz=197,slow=6.1,SNR=11									
FITZ					LR	LR		19 58 31.3		
	comp=Z,6µm,20.6s,baz=270,slow=36									
SRU	**San Rafael**	67.99	56	⇑eP		P		19 28 54.1	-0.9	
SRU					pmax	pmax				
	comp=Z,218nm,0.8s									
SRU	**San Rafael**	67.99	56	⇑eP		P		19 28 54.1	-0.9	
	comp=Z,218nm,0.8s									
SRU	**San Rafael**	67.99	56	⇑P		P		19 28 54.8	-0.2	
	baz=68,SNR=172									
O19A	**Miners Draw (B**	68.00	54	⇓P		P		19 28 54.6	-0.5	
	baz=68,SNR=69									
I24A	**Kuemmerle Ranc**	68.05	49	⇑P		P		19 28 54.4	-0.9	
	baz=68,SNR=19									
BHJ	**Bhuj**	68.06	281	eP		P		19 28 57.3	+1.9	
PFO	**Pinyon Flat Ob**	68.06	64	eP		P		19 28 54.2	-1.3	
	comp=Z,211nm,1.5s									
PFO					LR	LR				
	comp=Z,12µm,22.0s									
PFO	**Pinyon Flat Ob**	68.06	64	⇓P		P		19 28 55.1	-0.4	
	baz=68,SNR=28									
BELC	**Belle Mtn. Jos**	68.09	63	⇓P		P		19 28 55.0	-0.6	
	baz=68,SNR=24									
DOMB	**Dombas**	68.09	342	eP		P		19 28 55.2	+0.2	
DOMB					AMB	AMB		19 28 58.6		
	comp=Z,152nm,1.4s									
M21A	**Separation Pea**	68.10	52	⇑P		P		19 28 55.3	-0.5	
	baz=68,SNR=101									
N20A	**Spence Gulch,**	68.12	54	⇓P		P		19 28 56.0	+0.1	
	baz=68,SNR=148									
109C	**Camp Elliot, M**	68.13	65	⇓P		P		19 28 55.6	-0.1	
	baz=68,SNR=7.2									
RSSD	**Black Hills**	68.18	49	⇑eP		P		19 28 55.4	-0.8	
RSSD				eS		S		19 37 54.5	+1.9	
RSSD					pmax	pmax				
	comp=Z,161nm,1.0s									
RSSD	**Black Hills**	68.18	49	⇑eP		P		19 28 55.4	-0.8	
	comp=Z,161nm,1.0s									
RSSD				eS		S		19 37 54.5	+1.9	
K23A	**Bowen Ranch, D**	68.27	51	⇓P		P		19 28 56.2	-0.5	
	baz=68,SNR=30									
AFI	**Afiamalu**	68.29	141	PFAKE				19 29 10.0	+13	
AFI					LR	LR				
	comp=Z,29µm,22.0s									
L22A	**Ellis Ranch, M**	68.33	52	⇑P		P		19 28 57.2	+0.1	
	baz=68,SNR=79									
POO	**Poona**	68.34	275	eP		P		19 28 56.5	-0.8	
POO				i PCP		PcP		19 29 21.0	-1.6	
POO				i PP		PP		19 31 28.0	-0.4	
POO				i S		S		19 37 56.0	+1.3	
POO				i PPS		PPS		19 38 31.5		
POO				i SKS		SKSac		19 38 51.5	-0.5	
J24A	**Dixon Ranch, L**	68.39	50	⇑P		P		19 28 56.6	-0.8	
	baz=68,SNR=20									
NB2	**NORSAR Subarra**	68.50	340	P		P		19 28 57.0	-0.6	
	baz=30,slow=6.5									
NB2	**NORSAR Subarra**	68.50	340	P		P		19 28 57.0	-0.6	
	comp=Z,137nm,0.6s,baz=30,slow=6.5									
NOA	**NORSAR Array B**	68.50	340	P		P		19 28 56.9	-0.8	
NOA				⇑e				19 57 09.3		
NOA	**NORSAR Array B**	68.50	340	P		P		19 28 56.9	-0.8	
	comp=Z,59nm,0.4s,baz=27,slow=6.4,SNR=194									
NOA					PKP2bc			19 57 09.3		
	comp=Z,6.9nm,1.0s,baz=201,slow=3.2,SNR=6.4									
NOA					LR	LR		20 04 13.1		
	comp=Z,27µm,19.8s,baz=15,slow=40									
IRM	**Iron Mountain**	68.51	63	⇓P		P		19 28 58.0	-0.2	
	baz=68,SNR=75									
P19A	**Cripple Cowboy**	68.53	55	⇓P		P		19 28 58.1	-0.4	
	baz=68,SNR=117									
BAR	**Barrett**	68.54	65	eP		P		19 28 57.7	-0.7	
	comp=Z,322nm,1.6s									
MONP	**Monument Peak**	68.56	65	⇓P		P		19 28 58.2	-0.5	
	baz=68,SNR=22									
IZAR	**Zarasai**	68.58	330	eP		P		19 28 58.5	+0.4	
IZAR					AMB	AMB		19 29 01.0		
	comp=Z,77nm,1.0s									
N21A	**Black Mountain**	68.59	53	⇓P		P		19 28 58.4	-0.4	
	baz=68,SNR=60									
O20A	**White River Ci**	68.61	54	⇑P		P		19 28 58.2	-0.7	
	baz=68,SNR=53									
MAK	**Makhachkala**	68.62	310	eP		P		19 28 58.2	-0.4	
MAK				e				19 29 22.9		
MAK				e				19 31 31.4		
MAK				ePPP		PPP		19 33 06.9		
MAK				eS		S		19 37 57.4	+0.1	
MAK				e				19 38 48.0		
MAK				eSS		SS		19 42 21.2	-0.3	
MAK					pmax	pmax				
	comp=E,171nm,0.8s									
MAK					pmax	pmax				
	comp=N,91nm,0.5s									
MAK					smax	smax				
	comp=N,3µm,6.9s									
MAK					smax	smax				
	comp=E,3µm,6.3s									
MAK					MLR	MLR				
	comp=N,97µm,20.0s									
MAK					MLR	MLR				
	comp=E,146µm,20.0s									
MAK					MLR	MLR				
	comp=Z,117µm,20.0s									
BC3	**Big Chuckawall**	68.66	63	⇑P		P		19 28 58.6	-0.6	
	baz=68,SNR=37									
M22A	**Cedar Creek Ra**	68.66	52	⇑P		P		19 28 58.8	-0.5	
	baz=68,SNR=46									
W13A	**Hualapai Mount**	68.67	61	⇓P		P		19 28 58.9	-0.5	
	baz=68,SNR=65									
L23A	**Garrett**	68.67	51	⇓P		P		19 28 58.4	-0.8	
	baz=68,SNR=39									
HFS	**Hagfors**	68.69	339	PKP2bc		P'P'df		19 57 07.4	-11	
	comp=Z,7.3nm,0.9s,baz=119,slow=1.8,SNR=6.9									
HFS					LR	LR		20 01 39.6		
	comp=Z,63µm,21.5s,baz=28,slow=38									
U15A	**North Rim**	68.74	59	⇓P		P		19 29 00.2	+0.3	
	baz=68,SNR=143									
NAO01	**NORSAR Array S**	68.74	340	eP		P		19 28 58.7	-0.4	
	comp=Z,260nm,1.1s									
ISAL	**Salakas**	68.76	330	eP		P		19 28 59.6	+0.4	
ISAL					AMB	AMB		19 29 02.3		
	comp=Z,119nm,1.1s									
Q19A	**Hogan Spring (**	68.82	56	⇓P		P		19 28 59.7	-0.5	
	baz=69,SNR=11									
IIGN	**Ignalina**	68.90	330	eP		P		19 29 00.6	+0.4	
IIGN					AMB	AMB		19 29 03.2		
	comp=Z,142nm,1.0s									
DVTC	**Desert V Tower**	68.91	65	⇑P		P		19 29 00.4	-0.3	
	baz=69,SNR=19									
SWSC	**Sam W. Stewart**	68.92	64	⇓P		P		19 29 00.4	-0.2	
	baz=69,SNR=13									
KAD	**Karad**	68.94	273	ex		P		19 29 06.0	+5.0	
MICGM	**Minsk**	68.98	329	⇑eP		P		19 29 00.0	-0.7	
O21A	**Pagoda**	68.99	54	⇑P		P		19 29 00.9	-0.4	
	baz=69									
MNK	**Minsk**	69.00	329	⇑eP		P		19 29 00.0	-0.8	
MNK				ePPP		PPP		19 33 08.0		
MNK				eS		S		19 37 57.0	-4.5	
MNK					pmax	pmax				
	comp=N,400nm,1.5s									
MNK					pmax	pmax				
	comp=E,140nm,1.5s									
MNK					pmax	pmax				
	comp=Z,560nm,1.0s									
MNK					MLR	MLR				
	comp=E,22µm,17.0s									
MNK					MLR	MLR				
	comp=Z,120µm,16.0s									
MNK					MLR	MLR				
	comp=N,48µm,16.0s									
PDMCI	**Parker Dam,Lak**	69.04	62	⇓P		P		19 29 03.6	+2.2	
	baz=69,SNR=23									
NACGM	**Naroch**	69.06	329	eP		P		19 28 57.0	-4.2	
M23A	**Laramie**	69.10	52	⇓P		P		19 29 01.5	-0.5	
	baz=69,SNR=31									
L24A	**Wheatland**	69.13	51	⇑P		P		19 29 01.8	-0.3	
	baz=69									
N22A	**Wattenberg Ran**	69.15	53	⇓P		P		19 29 02.3	0.0	
	baz=69,SNR=32									
DZM	**Mont Dzumac**	69.16	165	eP		P		19 29 05.3	+3.1	
	comp=N,268nm,1.5s									
DZM				eS		S		19 38 04.8	+0.7	
	comp=N,27µm,28.3s									
DZM				eSS		SS		19 42 36.2	+4.4	
	comp=N,26µm,31.5s									
DZM				eLQ		LQ		19 47 04.8		
	comp=N,63µm,30.1s									
DZM				eLR		LR		19 50 13.2		
	comp=N,51µm,22.1s									
DZM	**Mont Dzumac**	69.16	165	eP		P		19 29 01.3	-0.9	
	comp=N,475nm,1.8s									
DZM	**Mont Dzumac**	69.16	165	P		P		19 29 02.1	-0.1	
	comp=N,52nm,1.1s,baz=312,slow=5.1,SNR=3.1									
DZM					LR	LR		19 58 51.1		
	comp=N,31µm,18.5s,baz=0.3,slow=36									
Y12C	**Blythe**	69.17	63	⇑P		P		19 29 02.2	0.0	
	baz=69,SNR=35									
AGMN	**Agassiz Nation**	69.24	41	eP		P		19 29 01.2	-1.2	
	comp=N,138nm,0.9s									
AGMN					LR	LR				
	comp=Z,14µm,21.0s									
S18A	**Hurst Farm, Bl**	69.25	57	⇑P		P		19 29 02.5	-0.6	
	baz=69,SNR=81									
K25A	**Mack Ranch, Ha**	69.31	50	⇑P		P		19 29 02.4	-0.7	
	baz=69,SNR=8.1									
PHWY	**Pilot Hill**	69.36	52	eP		P		19 29 02.7	-0.9	
	comp=Z,194nm,1.5s									
N23A	**Red Feather La**	69.37	52	⇑P		P		19 29 03.8	0.0	
	baz=69,SNR=46									
Q20A	**Ridgley Place,**	69.38	55	⇑P		P		19 29 03.1	-0.6	
	baz=69,SNR=50									
BORG	**Borgarnes**	69.39	357	eP		P		19 29 04.5	+1.4	
	comp=Z,1µm,1.4s									
BORG	**Borgarnes**	69.39	357	P		P		19 29 05.0	+2.0	
	comp=Z,3µm,1.2s,SNR=30									
BORG	**Borgarnes**	69.39	357	LR		LR		19 56 13.7		
	comp=Z,10µm,21.9s,baz=6.5,slow=33									
GLA	**Glamis**	69.45	64	eP		P		19 29 03.9	-0.1	
GLA					pmax	pmax				
	comp=Z,476nm,1.4s									
GLA	**Glamis**	69.45	64	eP		P		19 29 03.9	-0.1	
	comp=Z,476nm,1.4s									
GLA	**Glamis**	69.45	64	⇓P		P		19 29 03.9	-0.1	
	baz=69,SNR=20									
P21A	**Newcastle**	69.47	54	⇑P		P		19 29 04.1	-0.2	
	baz=69,SNR=148									
HYA	**Hoyanger**	69.49	343	eP		P		19 29 03.7	0.0	
HYA					AMB	AMB		19 29 07.5		
	comp=Z,377nm,2.9s									
HYA				eS		S		19 38 07.1	+0.2	
O22A	**Kremmling**	69.54	53	⇑P		P		19 29 04.4	-0.4	
	baz=69,SNR=34									
L25A	**Engebretsen Ra**	69.57	50	⇓P		P		19 29 04.5	-0.2	
	baz=69,SNR=9.9									
M24A	**Cheyenne**	69.59	51	⇓P		P		19 29 05.1	+0.2	
	baz=69,SNR=52									
K26A	**Motz Farm, Whi**	69.61	49	⇑P		P		19 29 04.2	-0.7	
	baz=69,SNR=24									
P22A	**Eagle**	69.81	54	⇓P		P		19 29 06.5	+0.2	
	baz=70,SNR=37									
R20A	**Redvale**	69.85	56	⇑P		P		19 29 06.3	-0.3	
	baz=70,SNR=55									
O23A	**Lake Granby, G**	69.86	53	⇑P		P		19 29 07.1	+0.4	
	baz=70,SNR=59									
Q21A	**Lamborn Mesa,**	69.87	55	⇑P		P		19 29 06.6	-0.1	
	baz=70,SNR=78									
SUE	**Sulen**	69.87	343	eP		pP		19 29 20.4	0.0	
WUAZ	**Wupatki**	69.91	60	eP		P		19 29 06.6	-0.4	
	comp=Z,411nm,1.5s									
WUAZ					LR	LR				
	comp=Z,11µm,22.0s									
WUAZ	**Wupatki**	69.91	60	⇓P		P		19 29 07.1	+0.1	
	baz=70,SNR=59									
SMCO	**Snowmass**	69.98	54	eP		P		19 29 07.0	-0.7	
	comp=Z,373nm,1.5s									
Y14A	**Wickenburg**	69.98	62	⇓P		P		19 29 07.2	-0.1	
	baz=70,SNR=66									
N24A	**Carr**	70.00	52	⇑P		P		19 29 07.7	+0.3	
	baz=70,SNR=26									
M25A	**Palm-Egli Farm**	70.03	51	⇓P		P		19 29 07.7	+0.1	
	baz=70,SNR=33									
KONO	**Kongsberg**	70.10	340	⇑iP		P		19 29 06.4	-1.1	
KONO					AMB	AMB		19 29 11.7		
	comp=Z,333nm,1.9s									
KONO				eS		S		19 38 16.8	+2.5	
KONO				eSS		SS		19 42 56.7	+13	
KONO					AMS	AMS		19 57 27.3		
	comp=Z,28µm,28.5s									
KONO	**Kongsberg**	70.10	340	eP		P		19 29 06.8	-0.7	
KONO					pmax	pmax				
	comp=Z,440nm,1.5s									
KONO					MLR	MLR				
	comp=Z,38µm,22.0s									
KONO	**Kongsberg**	70.10	340	eP		P		19 29 06.8	-0.7	
	comp=Z,440nm,1.5s									
KONO					LR	LR				
	comp=Z,38µm,22.0s									
K27A	**Flueckinger Fa**	70.11	49	⇓P		P		19 29 07.5	-0.5	
	baz=70									
S20A	**Disappointment**	70.11	56	⇑P		P		19 29 07.9	-0.4	
	baz=70,SNR=94									
R21A	**Cimarron**	70.20	55	⇓P		P		19 29 09.0	+0.2	
	baz=70,SNR=139									
Q22A	**Crested Butte,**	70.23	54	⇑P		P		19 29 09.0	-0.1	
	baz=70,SNR=61									
113A	**Mohawk Valley,**	70.30	63	⇑P		P		19 29 08.8	-0.4	
	baz=70,SNR=63									
ISCO	**Idaho Springs**	70.31	53	eP		P		19 29 08.6	-0.9	
ISCO					pmax	pmax				
	comp=Z,310nm,1.3s									
ISCO					MLR	MLR				
	comp=Z,16µm,22.0s									
ISCO	**Idaho Springs**	70.31	53	eP		P		19 29 08.6	-0.9	
	comp=Z,310nm,1.3s									
ISCO					LR	LR				
	comp=Z,16µm,22.0s									
ISCO	**Idaho Springs**	70.31	53	⇑P		P		19 29 09.6	+0.1	
	baz=70								

comp=Z,4.6nm,1.0s,baz=196,slow=4.1,SNR=6.6
KBZ LR LR 20 04 33.3
comp=Z,143μm,19.4s,baz=41,slow=40
M26A McRoberts Ranc 70.50 50 ⇓P **P** **19 29 10.5 +0.1**
baz=70
EGD Espegrend 70.50 343 *eP* **P** **19 29 09.5 -0.4**
EGD AMB AMB 19 29 13.2
comp=Z,970nm,1.6s
ODD1 Odda 70.53 342 *eP* **P** **19 29 10.5 +0.3**
ODD1 AMB AMB 19 29 14.7
comp=Z,411nm,2.2s
ODD1 *e* 19 33 18.0
ODD1 *eS* **S** **19 38 20.4 +1.1**
BRSD Miller 70.55 46 ⇑P **P** **19 29 09.8 -0.7**
baz=70,SNR=7.4
S21A Coal Bank Pass 70.55 56 ⇑P **P** **19 29 11.1 +0.1**
baz=70,SNR=161
X16A Lo Mia Camp, P 70.61 60 ⇑P **P** **19 29 11.6 +0.3**
baz=70,SNR=21
ZEI Tsey 70.65 312 *eP* **P** **19 29 11.1 -0.3**
ZEI *ePPP* PPP 19 33 25.3
ZEI *eS* S 19 38 16.0 -5.7
ZEI *e* 19 39 08.8
ZEI pmax pmax
comp=Z,142nm,1.2s
ZEI pmax pmax
comp=N,82nm,0.8s
ZEI pmax pmax
comp=E,150nm,0.9s
ZEI pmax pmax
comp=Z,3μm,9.9s
ZEI MLR MLR
comp=Z,192μm,22.0s
ZEI MLR MLR
comp=N,152μm,23.0s
ZEI MLR MLR
comp=E,108μm,20.0s
R22A Saguache, Gunn 70.75 55 ⇑P **P** **19 29 12.8 +0.5**
baz=70,SNR=86
DGRG David-gareji 70.81 310 P **P** **19 29 13.2 +1.0**
Q23A Hartsel 70.81 54 ⇑P **P** **19 29 12.7 +0.1**
baz=71,SNR=29
SOFL Sornfelli, Far 70.83 349⇑ *eP* **P** **19 29 11.8 -0.2**
SOFL AMB AMB 19 29 14.9
comp=Z,673nm,1.5s
SOFL AMS AMS 20 01 10.7
comp=Z,14μm,18.4s
SOFL Sornfelli, Far 70.83 349 P **P** **19 29 11.8 -0.2**
SOFL AMB AMB 19 29 14.9
comp=Z,673nm,1.5s
SOFL AMS AMS 20 01 10.7
comp=Z,14μm,18.4s
M27A Reverse DX Ran 70.85 50 ⇑P **P** **19 29 12.3 -0.3**
baz=71
P24A Kohler Place, 70.90 53 ⇑P **P** **19 29 13.2 +0.3**
baz=71,SNR=10
N26A Koester Ranch, 70.90 51 ⇑P **P** **19 29 12.8 -0.1**
baz=71,SNR=13
O25A Wiggins 70.91 52 ⇑P **P** **19 29 13.4 +0.4**
baz=71,SNR=13
TBLG Delisi 70.94 311 *eP* **P** **19 29 14.0 +1.0**
TBLG Delisi 70.94 311 P **P** **19 29 14.1 +1.0**
ONI Oni 71.01 312 P **P** **19 29 14.0 +0.6**
U20A Newcomb 71.01 57 ⇓P **P** **19 29 14.2 +0.5**
baz=71,SNR=6.9
BLS5 Blasjo 71.01 342 *eP* **P** **19 29 13.4 +0.3**
BLS5 AMB AMB 19 29 18.6
comp=Z,147nm,1.7s
BLS5 *i* 19 33 28.5
SUW Suwalki 71.03 331 *eP* **P** **19 29 12.4 -0.8**
SUW pmax pmax
comp=Z,647nm,1.1s
SUW Suwalki 71.03 331 *eP* **P** **19 29 12.4 -0.8**
comp=Z,647nm,1.1s
SUW Suwalki 71.03 331 *eP* **P** **19 29 12.6 -0.6**
SUW *ePP* **PP** **19 31 46.2 -4.3**
SUW *eS* **S** **19 38 21.3 -3.9**
SUW *eScS* **ScS** **19 39 13.2 +0.4**
SUW LMZ LR 19 57 26.2
S22A 4UR Ranch, Cre 71.05 55 ⇑P **P** **19 29 14.3 +0.3**
baz=71,SNR=82
EIDS Eidsvold 71.08 180 *eP* **P** **19 29 13.6 -0.1**
comp=Z,630nm,1.8s
GOR Gori 71.10 311 P **P** **19 29 15.8 +1.9**
Q24A Divide 71.15 53 ⇓P **P** **19 29 14.3 -0.4**
baz=71,SNR=32
W18A Petrified Fore 71.16 59 ⇑P **P** **19 29 15.4 +0.8**
baz=71
AS31 Alice Springs 71.18 197 *eP* **P** **19 29 14.1 -0.4**
ASAR Alice Springs 71.18 197 P **P** **19 29 14.4 -0.1**
ASAR P'P' 19 57 02.5
ASAR Alice Springs 71.18 197 P **P** **19 29 14.4 -0.1**
comp=Z,126nm,0.9s,baz=10,slow=5.5,SNR=144
ASAR PKPPKP **P'P'df** **19 57 02.5 -1.5**
comp=Z,1.3nm,1.0s,baz=160,slow=3.0,SNR=5.5
ASAR LR LR 19 58 26.1
comp=Z,10μm,21.6s,baz=11,slow=34
O26A Horse Wrangler 71.26 51 ⇓P **P** **19 29 14.5 -0.6**
baz=71,SNR=27
N27A Anderson Farm, 71.28 50 ⇑P **P** **19 29 15.0 -0.2**
baz=71,SNR=82
R23A Moffat 71.31 54 ⇓P **P** **19 29 15.7 +0.2**
baz=71,SNR=68
P25A Willow Gulch B 71.31 52 ⇓P **P** **19 29 15.4 0.0**
baz=71,SNR=60
KZR Kazreti 71.36 311 P **P** **19 29 16.6 +1.0**
PALK Pallekele 71.42 261⇑ *eP* **P** **19 29 15.4 -0.8**
comp=Z,594nm,1.3s
PALK *ePP* **PP** **19 31 53.4 -1.7**
PALK Pallekele 71.42 261 P **P** **19 29 17.6 +1.4**
SNR=27
PALK Pallekele 71.42 261 P **P** **19 29 17.3 +1.1**
comp=Z,2μm,1.3s,SNR=34
X18A Snowflake 71.43 59 ⇓P **P** **19 29 16.4 +0.1**
baz=71,SNR=37
V20A Brimhall 71.44 58 ⇓P **P** **19 29 16.4 +0.1**
baz=71,SNR=38
214A Organ Pipe Nat 71.44 63 ⇓P **P** **19 29 15.9 -0.3**
baz=71,SNR=50
AKASG Malin Array Be 71.45 325 P **P** **19 29 15.4 -0.5**
AKASG pmax pmax
comp=Z,84nm,0.4s
AKASG MLR MLR
comp=Z,84μm,21.0s
AKASG Malin Array Be 71.45 325 P **P** **19 29 15.3 -0.5**
AKASG P'P' 19 56 56.2
AKASG Malin Array Be 71.45 325 P **P** **19 29 15.3 -0.5**
comp=Z,84nm,0.4s,baz=36,slow=6.1,SNR=35
AKASG PKPPKP P'P'df 19 56 56.2 -17
comp=Z,0.3nm,0.3s,baz=218,slow=5.5,SNR=4.1
AKASG LR LR 20 02 57.3
comp=Z,84μm,21.0s,baz=30,slow=38
OGNE Ogallala 71.45 50⇑ *eP* **P** **19 29 15.6 -0.6**
comp=Z,453nm,0.8s
OGNE LR LR
comp=Z,18μm,19.0s
OGNE Ogallala 71.45 50 ⇓P **P** **19 29 15.8 -0.4**
baz=71,SNR=84
EYMN Ely 71.46 39⇑ *eP* **P** **19 29 14.6 -1.4**
comp=Z,313nm,1.0s
EYMN LR LR
comp=Z,17μm,20.0s
KIEV Kiev 71.47 325 *eP* **P** **19 29 13.8 -2.2**
KIEV *eS* **S** **19 38 30.4 0.0**
KIEV pmax pmax
comp=Z,319nm,1.0s
KIEV MLR MLR
comp=Z,81μm,21.0s
KIEV Kiev 71.47 325 *eP* **P** **19 29 13.8 -2.2**
comp=Z,320nm,1.0s
KIEV *eS* **S** **19 38 30.4 0.0**
KIEV LR LR
comp=Z,81μm,21.0s
AK01 Malin Array Si 71.47 325⇑ *eP* **P** **19 29 14.5 -1.4**
AK01 *eS* **S** **19 38 29.6 -0.8**
U21A Nageezi 71.48 57 ⇑P **P** **19 29 16.5 -0.1**
baz=71,SNR=53
AK02 Malin Array Si 71.50 325 *eP* **P** **19 29 14.7 -1.4**
AK02 *eS* **S** **19 38 33.0 +2.3**
T22A Edith 71.51 56 ⇓P **P** **19 29 17.0 +0.2**
baz=71,SNR=55
S23A Nye Farm, Mont 71.54 55 ⇑P **P** **19 29 17.3 +0.3**
baz=71
HOMB Homborsund 71.59 340⇑ *i*P **P** **19 29 15.8 -0.7**
HOMB AMB AMB 19 29 20.9
comp=Z,260nm,1.3s
HOMB *i* 19 33 40.2
HOMB *eS* **S** **19 38 36.9 +5.3**
STAV Stavanger 71.62 342 *eP* **P** **19 29 13.7 -3.0**
STAV AMB AMB 19 29 17.1
comp=Z,200nm,1.0s
R24A Sanders Place, 71.68 54 ⇑P **P** **19 29 17.9 +0.1**
baz=71,SNR=37
P26A Davis Ranch, A 71.72 52 ⇓P **P** **19 29 17.4 -0.5**
baz=72,SNR=34
O27A Beecher Island 71.75 51 ⇑P **P** **19 29 17.4 -0.6**
baz=72,SNR=26
LRW Lerwick 71.82 346⇑ *eP* **P** **19 29 17.6 -0.3**
LRW AMB AMB 19 29 20.7
comp=Z,468nm,1.7s
LRW AMS AMS 20 02 22.2
comp=Z,15μm,19.2s
LRW Lerwick 71.82 346 P **P** **19 29 17.6 -0.3**
LRW AMB AMB 19 29 20.7
comp=Z,468nm,1.7s
LRW AMS AMS 20 02 22.2
comp=Z,15μm,19.2s
AKH Akhalkalaki 71.83 311 P **P** **19 29 19.9 +1.3**
SNART Snartemo 71.83 341 *eP* **P** **19 29 16.2 -1.8**
SNART AMB AMB 19 29 20.1
comp=Z,341nm,0.8s
W20A Ramah 71.89 58 ⇓P **P** **19 29 18.7 -0.4**
baz=72,SNR=45
V21A Milan 71.92 57 ⇓P **P** **19 29 19.0 -0.3**
baz=72
U22A Llaves 71.98 56 ⇑P **P** **19 29 19.5 -0.1**
baz=72,SNR=56
T23A Casias Ranch, 71.99 55 ⇑P **P** **19 29 19.6 -0.1**
baz=72,SNR=21
S24A Houchin Ranch, 72.04 54 ⇓P **P** **19 29 19.9 -0.1**
baz=72,SNR=56
GNI Garni 72.07 309 *eP* **P** **19 29 19.8 -0.2**
comp=Z,418nm,1.1s
GNI Garni 72.07 309 P **P** **19 29 22.1 +2.1**
comp=Z,167nm,0.9s,baz=13,slow=1.9,SNR=63
GNI LR LR 20 04 39.8
comp=Z,71μm,19.2s,baz=322,slow=39
Q26A Hugo 72.08 52 ⇑P **P** **19 29 19.7 -0.4**
baz=72,SNR=20
SOC Sochi 72.18 315 *c i*P **P** **19 29 20.6 +0.3**
SOC *e* 19 29 33.8
SOC *ePPP* PPP 19 33 43.1
SOC *eS* S 19 38 32.4 -6.4
SOC *e* 19 39 23.5
SOC pmax pmax
comp=Z,4μm,3.3s
SOC pmax pmax
comp=Z,175nm,0.8s
SOC smax smax
comp=E,2μm,13.8s
SOC smax smax
comp=N,5μm,13.8s
SOC MLR MLR
comp=Z,57μm,16.0s
R25A Fountain Ranch 72.20 53 ⇓P **P** **19 29 20.3 -0.5**
baz=72,SNR=32
ECSD EROS Data Cent 72.22 45⇑ *eP* **P** **19 29 19.5 -1.1**
comp=Z,199nm,0.9s
ECSD LR LR
comp=Z,24μm,22.0s
V22A San Miguel Ran 72.27 57 ⇓P **P** **19 29 21.2 -0.1**
baz=72,SNR=62
X20A Quemado 72.29 59 ⇑P **P** **19 29 21.8 +0.4**
baz=72,SNR=77
ANN Anapa 72.39 317 *eP* **P** **19 29 20.6 -0.9**
ANN *e* 19 29 39.5
ANN *e* 19 32 02.7
ANN *ePPP* PPP 19 33 47.1
ANN *eS* **S** **19 38 39.5 -1.6**
ANN *i* 19 39 21.3
ANN *eSS* **SS** **19 43 19.9 +0.8**
ANN pmax pmax
comp=N,2μm,9.5s
ANN pmax pmax
comp=Z,5μm,9.5s
ANN pmax pmax
comp=E,645nm,5.8s
ANN pmax pmax
comp=Z,363nm,1.4s
W21A San Fidel 72.39 58 ⇓P **P** **19 29 22.7 +0.6**
baz=72
U23A El Rito 72.40 56 ⇑P **P** **19 29 22.3 +0.2**
baz=72,SNR=120
TUC Tucson 72.45 62⇑ *eP* **P** **19 29 21.7 -0.6**
TUC MLR MLR
comp=Z,7μm,20.0s
TUC Tucson 72.45 62⇑ *eP* **P** **19 29 21.7 -0.6**
comp=Z,56nm,1.5s
TUC LR LR
comp=Z,7μm,20.0s
S25A Robets Cordova 72.46 54 ⇓P **P** **19 29 22.1 -0.3**
baz=72,SNR=24
KSCO Kaye Shedlock' 72.51 52 ⇑P **P** **19 29 22.0 -0.6**
baz=72,SNR=22
T24A Torres, Weston 72.53 55 ⇑P **P** **19 29 23.3 +0.4**
baz=72
R26A Arlington 72.56 53 ⇓P **P** **19 29 22.5 -0.4**
baz=72,SNR=9.5
KARS Kars 72.61 311 *eP* **P** **19 29 24.7 +1.5**
BSD Bornholm Skovb 72.71 336 *i* P **P** **19 29 22.9 -0.4**
BSD pmax pmax
comp=Z,120nm,1.1s
BSD MLR MLR
comp=Z,39μm,21.0s
BSD Bornholm Skovb 72.71 336 *i* P **P** **19 29 22.9 -0.4**
comp=Z,123nm,1.1s
BSD
comp=Z,39μm,21.0s
BCA Borcka 72.78 312 *eP* **P** **19 29 23.9 -0.1**
X21A Alamocita Cree 72.78 58 ⇓P **P** **19 29 24.8 +0.4**
baz=73,SNR=81
MBWA Marble Bar 72.80 211⇑ *eP* **P** **19 29 23.1 -1.0**
comp=Z,279nm,1.4s
MBWA LR LR
comp=Z,6μm,22.0s
MBWA Marble Bar 72.80 211 P **P** **19 29 24.5 +0.4**
SNR=18
Y20A Horse Springs, 72.80 59 ⇓P **P** **19 29 24.8 +0.3**
baz=73,SNR=73
ARTV Artvin 72.81 312 *i* P **P** **19 29 25.5 +1.0**
V23A Ortiz Mt. (NFS 72.81 56 ⇓P **P** **19 29 25.3 +0.7**
baz=73,SNR=30
DBOC Borcka 72.83 312 *i* P **P** **19 29 24.9 +0.6**
T25A Trinidad 72.84 54 ⇑P **P** **19 29 24.3 -0.4**
baz=73,SNR=47
U24A Moreno Valley 72.86 55 ⇓P **P** **19 29 25.4 +0.5**
baz=73,SNR=28
W22A Albuquerque 72.88 57 ⇓P **P** **19 29 25.2 +0.2**
baz=73
DAGI Agillar 72.89 312 *i* P **P** **19 29 26.0 +1.2**
COP Copenhagen 72.90 337 *i* P **P** **19 29 24.0 -0.4**
COP pmax pmax
comp=Z,56nm,1.0s
COP MLR MLR
comp=Z,19μm,24.0s
COP Copenhagen 72.90 337 *i* P **P** **19 29 24.0 -0.4**
comp=Z,56nm,1.0s
COP
comp=Z,19μm,23.0s
COP Copenhagen 72.90 337 *i* P P'P'df 19 57 37.0 +26
R27A Eads 72.93 52 ⇓P **P** **19 29 24.3 -0.7**
baz=73,SNR=52
S26A Kim 73.03 53 ⇓P **P** **19 29 24.9 -0.8**
baz=73,SNR=38
MUD Monsted U'grnd 73.06 339 *i* P **P** **19 29 25.6 +0.3**
MUD pmax pmax
comp=Z,72nm,1.0s
MUD MLR MLR
comp=Z,31μm,22.0s
MUD Monsted U'grnd 73.06 339 *i* P **P** **19 29 25.6 +0.3**
comp=Z,72nm,1.0s
MUD
comp=Z,31μm,22.0s
DYDN Diyadin 73.06 310 *i* P **P** **19 29 27.8 +1.8**
DDEM Demirkent 73.11 312 *i* P **P** **19 29 27.2 +1.1**
TRD Trivandrum 73.13 265 *eP* **P** **19 29 25.8 -0.6**
TRD ⇑*ex* x 19 29 32.5
TRD *ex* x 19 32 25.5
Y21A Point of Rocks 73.15 58 ⇑P **P** **19 29 27.1 +0.5**
baz=73,SNR=42
BGNE Belgrade 73.15 47 ⇓P **P** **19 29 25.1 -1.2**
baz=73,SNR=26
LAZ Ladron 73.19 58⇑ *eP* **P** **19 29 26.8 0.0**
comp=Z,164nm,1.4s
X22A Bernardo 73.19 58 ⇑P **P** **19 29 27.4 +0.7**
baz=73,SNR=29
ANMO Albuquerque 73.21 57 P **P** **19 29 27.4 +0.5**
ANMO Albuquerque 73.21 57 P **P** **19 29 27.4 +0.5**
comp=Z,31nm,0.9s,baz=314,slow=6.3,SNR=33
ANMO LR LR 19 57 21.1
comp=Z,9μm,21.2s,baz=113,slow=32
Z20A Nine Sixteen R 73.23 60 ⇓P **P** **19 29 27.2 +0.3**
baz=73,SNR=83
CLDR Caldiran 73.23 309 *eP* **P** **19 29 27.6 +0.6**
W23A Werner Place, 73.24 57 ⇑P **P** **19 29 27.3 +0.2**
baz=73,SNR=27
LLD Lille Linde 73.27 337 *i* P **P** **19 29 28.5 +1.9**
LLD pmax pmax
comp=Z,140nm,0.9s
LLD Lille Linde 73.27 337 *i* P **P** **19 29 28.5 +1.9**
comp=Z,139nm,0.9s
T26A Comanche Natio 73.28 54 ⇓P **P** **19 29 26.3 -1.0**
baz=73,SNR=66
PZAR Pazar-Rize 73.34 312 *eP* **P** **19 29 28.1 +0.9**
V24A Rampart Ranch, 73.35 56 ⇓P **P** **19 29 28.0 +0.3**
baz=73,SNR=45
U25A Circle Dot Ran 73.37 55 ⇑P **P** **19 29 27.3 -0.5**
baz=73,SNR=39
LENM Lemitar 73.45 58⇑ *eP* **P** **19 29 28.4 +0.1**
comp=Z,200nm,1.5s
LPM Los Pinos Moun 73.55 58 *eP* **P** **19 29 28.6 -0.3**
comp=Z,180nm,1.6s
120A U Bar Ranch, L 73.60 60 ⇑P **P** **19 29 29.3 +0.2**
baz=73,SNR=53
GKP Gorka Klasztor 73.60 333 *eP* **P** **19 29 28.7 +0.1**
GKP *eS* **SKiKP** **19 38 52.7 -1.0**
GKP *eScS* **SKKSac** **19 39 31.9 +1.1**
GKP LMZ LR 20 05 01.5
Y22A Socorro 73.62 58 ⇑P **P** **19 29 29.4 +0.1**
baz=73,SNR=35
TUTA Tutak 73.64 310 *i* P **P** **19 29 31.0 +1.7**
W24A Lazy 6 Ranch, 73.64 56 ⇓P **P** **19 29 29.6 +0.2**
baz=73,SNR=42
Z21A St. Cloud Mine 73.64 59 ⇓P **P** **19 29 30.1 +0.6**
baz=73,SNR=26
BEL Belsk 73.65 331 *eP* **P** **19 29 29.6 +0.7**
BEL *eS* **SKiKP** **19 38 54.4 +0.6**
BEL *eScS* **ScS** **19 39 37.5 +3.8**
BEL LMZ LR 19 59 07.0
V25A Rancho No Teng 73.65 55 ⇓P **P** **19 29 29.3 -0.2**
baz=73,SNR=35
HOMI Horasan 73.65 311 *i* P **P** **19 29 31.1 +1.6**
RGN Rugen 73.66 336 *eP* **P** **19 29 30.5 +1.6**
comp=Z,2μm,1.7s
BNM Barren Site 73.67 58 *eP* **P** **19 29 29.3 -0.4**
comp=Z,178nm,1.5s
U26A Atchley Ranch, 73.75 54 ⇑P **P** **19 29 30.3 +0.3**
baz=74,SNR=8.5
SIM Simferopol' 73.82 319 *ce*P **P** **19 29 30.2 +0.2**
SIM PPP PPP 19 34 01.2
SIM *eS* **SKiKP** **19 38 55.3 +1.0**
SIM pmax pmax
comp=Z,214nm,1.0s
SIM pmax pmax
comp=Z,3μm,12.0s
SIM MLR MLR
comp=Z,40μm,16.0s
T27A Campo 73.85 53 ⇑P **P** **19 29 30.7 +0.2**
baz=74,SNR=20
COWI Conover 73.92 39 *eP* **P** **19 29 29.2 -1.4**
comp=Z,98nm,0.8s
COWI LR LR
comp=Z,16μm,20.0s
319A Douglas 74.02 61 ⇑P **P** **19 29 31.7 +0.1**
baz=74,SNR=60
EZM Erzurum 74.04 311 *eP* **P** **19 29 33.7 +2.0**
KTUT Trabzon 74.06 313 *eP* **P** **19 29 31.1 -0.4**
X24A Lazy VL Ranch, 74.08 57 ⇑P **P** **19 29 32.5 +0.5**
baz=74,SNR=19
MACK Trabzon 74.10 313 *i* P **P** **19 29 32.4 +0.6**
Z22A Elephant Butte 74.10 59 ⇓P **P** **19 29 32.3 +0.2**
baz=74,SNR=55
220A Playas Peak, P 74.11 61 ⇑P **P** **19 29 32.1 0.0**
baz=74,SNR=70
121A Cookes Peak, D 74.12 60 ⇑P **P** **19 29 32.4 +0.2**
baz=74,SNR=56
V26A Tequesquite Ra 74.15 55 ⇑P **P** **19 29 32.4 +0.1**
baz=74,SNR=39
LVV L'vov 74.16 328⇑ *i*P **P** **19 29 32.1 +0.2**
LVV *i* 19 32 16.1
LVV *i* 19 34 05.5
LVV *i* S **S** **19 38 58.9 -2.2**
LVV *i* 19 39 36.5
LVV *e* 19 43 49.1
LVV *e* 19 47 01.3
LVV MLR MLR
comp=N,44μm,21.0s
LVV MLR MLR
comp=E,29μm,21.0s
LVV MLR MLR
comp=Z,54μm,21.0s
Y23A Lovelace Mesa, 74.16 58 ⇑P **P** **19 29 32.4 -0.1**
baz=74,SNR=56
W25A X Bar L Ranch, 74.18 56 ⇓P **P** **19 29 32.3 -0.1**
baz=74,SNR=82
U27A Thompson Grove 74.25 54 ⇑P **P** **19 29 31.9 -1.0**
baz=74,SNR=33
GEVA Gevas 74.29 309 *i* P **P** **19 29 34.5 +1.3**
BAYT Ayd¯ntepe-Bay 74.31 312 *eP* **P** **19 29 33.2 0.0**
KOPT Kop Dagi 74.40 312 *i* P **P** **19 29 35.4 +1.5**
SCHQ Schefferville 74.41 22 *eP* **P** **19 29 32.4 -0.9**
comp=Z,2μm,2.1s
SCHQ Schefferville 74.41 22 P **P** **19 29 33.2 -0.1**
comp=Z,110nm,0.8s,baz=337,slow=8.9,SNR=89
SCHQ LR LR 20 03 50.2
comp=Z,18μm,22.0s,baz=341,slow=37
MVH1 Achvaich 74.42 347⇑ *eP* **P** **19 29 32.8 -0.5**
MVH1 Achvaich 74.42 347 P **P** **19 29 32.8 -0.5**
HKR Hakkari 74.46 308 *eP* **P** **19 29 35.3 +1.2**
122A Conniff Cattle 74.47 59 ⇓P **P** **19 29 34.9 +0.7**
baz=74,SNR=7.8
221A Mesquite Ranch 74.49 60 ⇓P **P** **19 29 34.2 -0.1**
baz=74,SNR=22
HAKT HAKKARI 74.49 308 *i* P **P** **19 29 35.4 +1.0**
320A Kipp Ranch, An 74.50 61 ⇑P **P** **19 29 34.6 +0.1**
baz=74,SNR=9.6
Y24A Capitan 74.53 57 ⇓P **P** **19 29 34.4 -0.2**
baz=74,SNR=33
Z23A Rita Site, Whi 74.53 58 ⇑P **P** **19 29 34.4 -0.1**
baz=74,SNR=28
VRTB Varto-Mus 74.53 311 *eP* **P** **19 29 35.9 +1.4**
KIS Kishinev 74.54 323⇑ *i*P **P** **19 29 33.0 -1.2**
KIS *i* 19 29 52.0
KIS *e* 19 32 20.0
KIS *i* PPP PPP 19 34 08.0
KIS *i* S **S** **19 39 03.0 -2.4**
KIS *i* PS **PnS** **19 39 38.0 -6.9**
KIS pmax pmax
comp=N,800nm,1.6s
KIS pmax pmax
comp=E,900nm,1.6s
KIS pmax pmax
comp=Z,2μm,1.6s
KIS pmax pmax
comp=N,3μm,10.0s
KIS pmax pmax
comp=E,2μm,10.0s
KIS pmax pmax
comp=Z,7μm,10.0s
KIS smax smax
comp=N,6μm,12.0s
KIS smax smax
comp=E,2μm,8.0s
KIS MLR MLR
comp=E,35μm,17.0s
KIS MLR MLR
comp=Z,91μm,17.0s
KIS MLR MLR
comp=N,65μm,20.0s
KIS MLR MLR
comp=Z,79μm,18.0s
KIS Kishinev 74.54 323⇑ *i*P **P** **19 29 33.0 -1.2**
comp=Z,2μm,1.6s
KIS Kishinev 74.54 323 *ePP* PP 19 32 20.0 -0.6
KIS Kishinev 74.54 323⇑ *i*P **P** **19 29 34.4 +0.2**
X25A Clemmons Ranch 74.55 56 ⇑P **P** **19 29 34.7 0.0**
baz=74
T29A Hugoton 74.57 52 ⇓P **P** **19 29 33.6 -1.1**

baz=74,SNR=14
TATV Tatvan 74.58 310 *i* P **P** **19 29 36.5 +1.7**
MCD Coleburn Disti 74.59 346⇑ *e*P **P** **19 29 33.8 -0.5**
MCD Coleburn Disti 74.59 346 P **P** **19 29 33.8 -0.5**
GUMT Gumushane 74.60 313 *e*P **P** **19 29 35.9 +1.0**
ESPY Espiye-Giresun 74.64 314 *e*P **P** **19 29 34.3 -0.7**
W26A Owens Ranch, T 74.67 55 ⇓P **P** **19 29 35.3 0.0**
baz=74,SNR=13
CUKT Cukurca 74.77 308 *e*P **P** **19 29 36.1 +0.3**
KWP Kalwaria Pacla 74.80 328 *e*P **P** **19 29 35.8 +0.1**
KWP pmax pmax
comp=Z,2µm,1.0s
KWP MLR MLR
comp=Z,67µm,22.0s
KWP Kalwaria Pacla 74.80 328 *e*P **P** **19 29 35.8 +0.1**
comp=Z,2µm,1.0s
KWP LR LR
comp=Z,67µm,22.0s
KWP Kalwaria Pacla 74.80 328⇑ *i*P **P** **19 29 36.6 +0.9**
KWP Kalwaria Pacla 74.80 328 *e*P **P** **19 29 36.4 +0.7**
KWP *e*S **S** **19 39 06.3 -2.0**
KWP *e*ScS **SKKSac** **19 39 41.4 +1.3**
KWP LMZ LR 20 03 32.7
MME1 Meikle Cairn 74.80 346⇑ *e*P **P** **19 29 34.6 -1.0**
MME1 Meikle Cairn 74.80 346 P **P** **19 29 34.6 -1.0**
222A Williams Famil 74.83 60 ⇑P **P** **19 29 36.7 +0.4**
baz=75,SNR=12
GRSN GIRESUNGRSN 74.87 314 *e*P **P** **19 29 36.3 0.0**
IAS Iasi 74.91 324⇑ *i*P **P** **19 29 36.5 +0.2**
MDO Dochfour 74.91 347⇑ *e*P **P** **19 29 35.7 -0.4**
MDO Dochfour 74.91 347 P **P** **19 29 35.7 -0.4**
KELT Kelkit 74.95 313 *i*P **P** **19 29 37.8 +0.9**
123A Bell Site, Whi 74.95 59 ⇑P **P** **19 29 37.0 0.0**
baz=75
Y25A Mesa, Roswell 74.96 57 ⇓P **P** **19 29 37.3 +0.3**
baz=75,SNR=23
Z24A Sheeppen Canyo 74.99 58 ⇓P **P** **19 29 37.2 -0.1**
baz=75,SNR=29
KAC Achnashellach 75.00 347⇑ *i*P **P** **19 29 36.6 -0.1**
KAC Achnashellach 75.00 347 P **P** **19 29 36.6 -0.1**
BSEG Bad Segeberg 75.03 337 *e*P **P** **19 29 37.3 +0.5**
BSEG pmax pmax
comp=Z,885nm,1.4s
BSEG Bad Segeberg 75.03 337 *e*P **P** **19 29 37.3 +0.5**
comp=Z,885nm,1.4s
X26A CR and CF Fran 75.03 56 ⇑P **P** **19 29 37.1 -0.4**
baz=75,SNR=37
BNGB Bing¶ll 75.06 311 *e*P **P** **19 29 38.5 +1.0**
T30A Plains 75.07 52 ⇓P **P** **19 29 36.5 -1.0**
baz=75,SNR=5.8
V28A Channing 75.07 54 ⇑P **P** **19 29 36.6 -1.0**
baz=75,SNR=8.0
W27A Bowe Ranch, En 75.09 55 ⇑P **P** **19 29 37.2 -0.5**
baz=75,SNR=32
ERZN Erzincan 75.12 312 *e*P **P** **19 29 39.1 +1.2**
BANOM Banah 75.15 292 P **P** **19 29 38.9 +0.8**
SNR=73
LEOM Leova 75.20 323⇓ *i*P **P** **19 29 38.3 +0.3**
KPL Plockton 75.21 347⇑ *e*P **P** **19 29 37.6 -0.3**
KPL AMB AMB 19 29 40.7
comp=Z,772nm,1.4s
KPL *e* 19 39 03.5
KPL AMS AMS 20 06 23.8
comp=Z,12µm,21.5s
KPL Plockton 75.21 347 P **P** **19 29 37.6 -0.3**
KPL AMB AMB 19 29 40.7
comp=Z,772nm,1.4s
KPL 19 39 03.5
KPL AMS AMS 20 06 23.8
comp=Z,12µm,21.5s
SIRN S¨¬rnak 75.24 309 *i* P P 19 29 43.3 +4.8
SCIA State Center 75.25 44 *e*P **P** **19 29 37.3 -1.1**
comp=Z,279nm,0.8s
SCIA LR LR
comp=Z,24µm,22.0s
KSB Sheil Bridge 75.30 347⇑ *e*P **P** **19 29 38.2 -0.2**
KSB Sheil Bridge 75.30 347 P **P** **19 29 38.2 -0.2**
PRAR RASCA 75.31 325⇑ *i*P **P** **19 29 38.7 +0.1**
RUE Ruedersdorf 75.34 335 *e*P **P** **19 29 39.0 +0.4**
comp=Z,781nm,1.3s
RUE Ruedersdorf 75.34 335 *e*P **P** **19 29 38.8 +0.2**
comp=Z,712nm,1.3s
OJC Ojcow 75.35 330 *e*P **P** **19 29 37.8 -1.0**
OJC *e**PP **PcP** **19 29 47.8 -4.1**
OJC *e* 19 32 25.6
OJC *e*S **S** **19 39 13.4 -0.9**
OJC *e*SS **SS** **19 43 59.0 -4.8**
OJC MLR MLR
comp=Z,40µm,20.4s
OJC Ojcow 75.35 330 *e*P **P** **19 29 37.8 -1.0**
OJC *e*pP **PcP** **19 29 47.8 -4.1**
OJC *e*PP **PP** **19 32 25.6 -1.7**
OJC *e*S **S** **19 39 13.4 -0.9**
OJC *e*SS **SS** **19 43 59.0 -4.8**
OJC L L 20 06 28.9
comp=Z,40µm,20.4s
X27A F and S Farms, 75.37 55 ⇑P **P** **19 29 39.2 -0.1**
baz=75,SNR=12
V29A Stinnett 75.37 53 ⇑P **P** **19 29 38.9 -0.4**
baz=75,SNR=5.1
U30A WK&E Inc. Balk 75.38 52 ⇑P **P** **19 29 38.2 -1.1**
baz=75,SNR=11
124A Stringfield Ra 75.39 58 ⇓P **P** **19 29 39.4 -0.2**
baz=75,SNR=27
Z25A Roswell 75.41 57 ⇓P **P** **19 29 39.5 -0.1**
baz=75,SNR=29
W28A Vega 75.43 54 ⇑P **P** **19 29 39.4 -0.3**
baz=75,SNR=10
HLG Helgoland 75.43 339 *e*P **P** **19 29 39.7 +0.5**
comp=Z,450nm,1.2s
SUSE Susehri 75.44 313 *i* P **P** **19 29 40.1 +0.4**
Y26A Elida 75.47 56 ⇑P **P** **19 29 39.6 -0.3**
baz=75,SNR=11
BUR08 Bucovina Ar. S 75.49 326 *e*P **P** **19 29 39.8 0.0**
T31A Randall Ranch, 75.50 51 ⇓P **P** **19 29 38.9 -1.0**
baz=75,SNR=20
BURAR Bucovina Array 75.50 326⇑ *i*P **P** **19 29 40.5 +0.6**
KOLS Kolonicke sedl 75.54 328 *e*P **P** **19 29 40.0 +0.1**
KOLS pmax pmax
comp=Z,469nm,1.1s
KOLS Kolonicke sedl 75.54 328 *e*P **P** **19 29 40.0 +0.1**
KOLS *e*S **S** **19 39 12.0 -4.5**
KOLS *e*SS SS 19 44 53.6 +47
KSU1 Kansas State U 75.65 48 *e*P **P** **19 29 38.1 -2.7**
comp=Z,164nm,1.0s
KSU1 LR LR
comp=Z,24µm,21.0s
WBK Wadi Bani Khal 75.69 288 P **P** **19 29 43.0 +1.7**
SNR=83
ELO Logie Almond 75.73 346⇑ *e*P **P** **19 29 40.5 -0.4**
ELO Logie Almond 75.73 346 P **P** **19 29 40.5 -0.4**
RSDY Resadiye-TOKAT 75.74 314 *e*P **P** **19 29 42.8 +1.5**
UZH Uzhgorod 75.78 328 *e*P **P** **19 29 42.0 +0.7**
UZH *e* 19 29 55.0
UZH *e* 19 29 58.2
UZH *e* 19 30 02.4
UZH *e* 19 32 28.0
UZH *e*PPP PPP 19 34 15.0
UZH *e*S **S** **19 39 18.6 -0.5**
UZH *e*PS PnS 19 40 17.2 +16
UZH MLR MLR
comp=N,31µm,21.0s
UZH MLR MLR
comp=E,35µm,21.0s
UZH MLR MLR
comp=Z,26µm,21.0s
224A Cornudas Mount 75.79 59 ⇓P **P** **19 29 41.6 -0.3**
baz=76,SNR=45
DIKM Dikmen 75.81 316 *e*P **P** **19 29 42.3 +0.7**
ERBA Erbaa 75.81 315 *i*P **P** **19 29 43.1 +1.4**
PTK Pertek 75.81 312 *e*P **P** **19 29 42.5 +0.6**
ILIC ilic-Erzincan 75.82 313 *e*P **P** **19 29 42.3 +0.4**
TESR 75.83 324⇑ *i*P **P** **19 29 42.0 +0.4**
NIE Niedzica 75.84 329 *e*P **P** **19 29 42.9 +1.2**
NIE Niedzica 75.84 329 *e*P **P** **19 29 42.9 +1.2**
Z26A Caprock 75.84 57 ⇓P **P** **19 29 41.6 -0.4**
baz=76,SNR=119
W29A Amraillo 75.85 54 ⇓P **P** **19 29 42.5 +0.5**
baz=76,SNR=9.9
CRVS Cervenica-Dubn 75.86 329 *e*P **P** **19 29 42.0 +0.2**
CRVS pmax pmax
comp=Z,955nm,1.9s
CRVS Cervenica-Dubn 75.86 329 *e*P **P** **19 29 42.0 +0.2**
CRVS *e*S **S** **19 39 15.4 -4.7**
CRVS *e*SS SS 19 44 34.7 +23
COCO West Island 75.86 235 *e*P **P** **19 29 42.6 +0.5**
COCO pmax pmax
comp=Z,1µm,1.4s
COCO MLR MLR
comp=Z,8µm,22.0s
COCO West Island 75.86 235 *e*P **P** **19 29 42.6 +0.5**
comp=Z,1µm,1.4s
COCO LR LR
comp=Z,8µm,22.0s
COCO West Island 75.86 235 P P 19 29 46.5 +4.4
SNR=5.7
COCO West Island 75.86 235 P P 19 29 45.5 +3.4
comp=Z,631nm,2.1s
Y27A Causey 75.88 56⇑ P **P** **19 29 41.8 -0.5**
baz=76,SNR=61
125A Gardner Draw, 75.89 58 ⇓P **P** **19 29 42.1 -0.2**
baz=76,SNR=55
V30A Spur Ranch, Mi 75.92 53 ⇑P **P** **19 29 41.7 -0.7**
baz=76
U31A Nine Bar Ranch 75.94 52 ⇓P **P** **19 29 42.0 -0.5**
baz=76,SNR=10
X28A Dimmitt 75.97 55 ⇓P **P** **19 29 42.2 -0.5**
baz=76,SNR=7.0
KSP Ksiaz 75.98 333⇑ *e*P **P** **19 29 42.8 +0.4**
KSP *e* 19 32 32.5
KSP *e*PPP PPP 19 34 20.3
KSP *e*S **S** **19 39 18.0 -3.3**
KSP *e*SS **SS** **19 44 18.0 +4.6**
KSP MLR MLR
comp=Z,102µm,21.1s
KSP Ksiaz 75.98 333 *e*P **P** **19 29 42.8 +0.4**
KSP *e*S **S** **19 39 18.5 -2.8**
KSP *e*ScS **ScS** **19 39 52.8 +0.3**
KSP LMZ LR 20 07 21.6
TLCR 75.98 322⇑ *i*P **P** **19 29 42.9 +0.4**
KEMA Kemaliye 75.99 313 *i*P **P** **19 29 44.1 +1.3**
SMDO Samad 75.99 289 P **P** **19 29 44.6 +1.6**
SNR=63
AMTX Amarillo 76.00 54 *e*P **P** **19 29 42.4 -0.5**
comp=Z,467nm,1.3s
AMTX LR LR
comp=Z,9µm,21.0s
AMTX Amarillo 76.00 54⇑ P **P** **19 29 42.6 -0.3**
baz=76,SNR=43
RAC Raciborz 76.01 331 *e*P **P** **19 29 43.1 +0.5**
RAC *e*S **S** **19 39 19.6 -2.0**
RAC MLR MLR
comp=Z,24µm,20.0s
HATD Hatta, Dubai 76.02 291 P **P** **19 29 44.0 +1.0**
SNR=125
MSTX Muleshoe 76.04 55 ⇓P **P** **19 29 43.3 +0.1**
baz=76,SNR=22
ESY Stoneypath 76.07 345⇑ *e*P **P** **19 29 42.4 -0.4**
ESY Stoneypath 76.07 345 P **P** **19 29 42.4 -0.4**
TRPA Tarpa 76.11 327⇓ *i*P **P** **19 29 43.8 +0.7**
TRPA Tarpa 76.11 327⇑ *e*P **P** **19 29 44.2 +1.1**
EAB Aberfoyle 76.11 346⇑ *i*P **P** **19 29 43.0 -0.1**
EAB Aberfoyle 76.11 346 P **P** **19 29 43.0 -0.1**
ARMA Armidale 76.11 180 *e*P **P** **19 29 44.0 +0.7**
comp=Z,433nm,1.4s
DIY Diyarbakir 76.11 311 *e*P **P** **19 29 44.9 +1.4**
HOQ Hoqain 76.12 289 P **P** **19 29 43.7 +0.1**
SNR=83
BMR Baia Mare 76.12 327⇑ *i*P **P** **19 29 44.0 +0.7**
DIYA Diyarbakir 76.15 311 *i*P **P** **19 29 45.2 +1.5**
EDI Edinburgh 76.17 346 *e*P **P** **19 29 41.9 -1.4**
EDI Edinburgh 76.17 346 *e*P **P** **19 29 42.4 -1.0**
EDI AMB AMB 19 29 44.5
comp=Z,464nm,2.3s
EDI AMS AMS 19 57 28.6
comp=Z,11µm,29.8s
EDI Edinburgh 76.17 346 P **P** **19 29 42.4 -1.0**
EDI AMB AMB 19 29 44.5
comp=Z,464nm,2.3s
EDI AMS AMS 19 57 28.6
comp=Z,11µm,29.8s
ASHO Ashiyiah 76.17 291 P **P** **19 29 44.7 +0.7**
SNR=151
BZK Bozkurt 76.17 317 *e*P **P** **19 29 43.6 0.0**
225A Deer Hill, Car 76.18 58 ⇓P **P** **19 29 43.8 -0.3**
baz=76,SNR=13
BYBT Boyabat 76.18 316 *e*P **P** **19 29 44.9 +1.2**
NAZ Nazwa, Dubai 76.21 292 P **P** **19 29 44.8 +0.7**
SNR=53
TOKA Tokat 76.22 314 *i*P **P** **19 29 45.6 +1.6**
PETR 76.22 323⇑ *i*P **P** **19 29 45.5 +1.7**
OKC Ostrava-Krasne 76.23 331⇑ *i*P **P** **19 29 44.5 +0.6**
OKC MLR MLR
comp=Z,22µm,17.9s
OKC Ostrava-Krasne 76.23 331⇑ *i*P **P** **19 29 44.5 +0.6**
OKC AMS AMS 20 06 20.0
comp=Z,22µm,17.9s
SVRC Sivrice-ELAZID 76.24 311 *e*P **P** **19 29 45.7 +1.4**
MARD Mardin 76.25 310 *i*P **P** **19 29 45.7 +1.4**
Z27A Tatum 76.26 56 ⇓P **P** **19 29 43.7 -0.7**
baz=76,SNR=120
324A Moseley Ranch, 76.27 59⇑ P **P** **19 29 44.0 -0.6**
baz=76,SNR=30
126A Clayton Basin, 76.27 57 ⇓P **P** **19 29 43.9 -0.6**
baz=76,SNR=15
CFR Carcaliu 76.28 322⇑ *i*P **P** **19 29 44.4 +0.2**
EBL Broad Law 76.28 345⇑ *e*P **P** **19 29 44.0 0.0**
EBL Broad Law 76.28 345 P **P** **19 29 44.0 0.0**
EAU Auchinoon 76.29 346⇑ *i*P **P** **19 29 44.0 0.0**
EAU Auchinoon 76.29 346 P **P** **19 29 44.0 0.0**
X29A Tulia 76.31 54⇑ P **P** **19 29 44.4 -0.2**
baz=76,SNR=57
VRI Vrincioaia 76.31 324⇑ *i*P **P** **19 29 45.2 +0.8**
ELZG Elazig 76.32 312 *i*P **P** **19 29 46.5 +1.8**
PLOR Plostina 76.36 324⇑ *i*P **P** **19 29 45.2 +0.5**
UPC Upice 76.36 333⇑ *i*P **P** **19 29 45.2 +0.6**
UPC Upice 76.36 333⇑ *i*P **P** **19 29 45.2 +0.6**
NRDL Niedersach Rie 76.37 337 *e*P **P** **19 29 44.7 +0.2**
comp=Z,521nm,1.4s
V31A Spring Creek L 76.38 52 ⇓P **P** **19 29 44.8 -0.2**
baz=76,SNR=42
Y28A McKinney Farm, 76.38 55 ⇓P **P** **19 29 45.3 +0.1**
baz=76,SNR=9.5
GDL2 Guadalupe Moun 76.39 58 *e*P **P** **19 29 44.7 -0.5**
comp=Z,411nm,1.4s
DPC Dobruska-Polom 76.40 332⇑ *i*P **P** **19 29 45.0 +0.1**
DPC *e*S **S** **19 39 24.2 -1.8**
DPC MLR MLR
comp=Z,59µm,18.6s
DPC Dobruska-Polom 76.40 332⇑ *i*P **P** **19 29 45.0 +0.1**
DPC *ex* x 19 32 55.6
DPC *e*S **S** **19 39 24.2 -1.8**
DPC AMS AMS 20 07 00.0
comp=Z,59µm,18.6s
W30A Crocket Farms 76.40 53 ⇓P **P** **19 29 45.0 -0.2**
baz=76,SNR=7.2
JMDO Jabal Madar 76.44 288 P **P** **19 29 46.7 +1.2**
SNR=138
KRLC Kraliky 76.49 332⇑ *i*P **P** **19 29 46.0 +0.6**
KRLC Kraliky 76.49 332⇑ *i*P **P** **19 29 46.0 +0.6**
MORC Moravsky Berou 76.49 331 *e*P **P** **19 29 44.9 -0.5**
MORC pmax pmax
comp=Z,784nm,1.2s
MORC Moravsky Berou 76.49 331 *e*P **P** **19 29 44.9 -0.5**
comp=Z,784nm,1.2s
MORC Moravsky Berou 76.49 331⇑ *i*P **P** **19 29 45.5 +0.1**
PGBU Glenifferbraes 76.49 346⇑ *e*P **P** **19 29 45.0 -0.2**
PGBU AMB AMB 19 29 48.3
comp=Z,1µm,1.6s
PGBU *e* 19 39 21.8
PGBU AMS AMS 20 03 49.4
comp=Z,10µm,22.1s
PGBU Glenifferbraes 76.49 346 P **P** **19 29 45.0 -0.2**
PGBU AMB AMB 19 29 48.3
comp=Z,1µm,1.6s
PGBU 19 39 21.8
PGBU AMS AMS 20 03 49.4
comp=Z,10µm,22.1s
PMSU Muirshiel 76.50 346⇑ *e*P **P** **19 29 44.9 -0.3**
PMSU Muirshiel 76.50 346 P **P** **19 29 44.9 -0.3**
226B Tecolote Peak, 76.59 58⇑ P **P** **19 29 45.9 -0.4**
baz=76,SNR=56
CLL Collm 76.60 335 *i* P **P** **19 29 45.7 -0.2**
CLL *e* 19 29 51.0
CLL *e*S **S** **19 39 23.0 -5.0**
CLL pmax pmax
comp=Z,501nm,0.8s
CLL MLR MLR
comp=Z,52µm,20.5s
CLL Collm 76.60 335 *e*P **P** **19 29 45.7 -0.2**
comp=Z,800nm,1.3s
CLL Collm 76.60 335 *i* P **P** **19 29 45.7 -0.2**
comp=Z,501nm,0.8s
CLL *e*Plp 19 29 47.0
comp=Z,6µm,24.9s
CLL *e* 19 29 51.0
CLL *e*PP **PP** **19 32 42.0 +4.2**
CLL *e*PPP PPP 19 34 30.0
CLL *e*S **S** **19 39 23.0 -5.0**
CLL *i*ScS **ScS** **19 39 55.8 -1.6**
CLL *e*SP **SPn** **19 40 03.0 -1.0**
CLL *e*PPS PPS 19 40 21.0
CLL *e*SS SS 19 44 36.0 +13
CLL *e*SSS SSS 19 48 00.0
CLL *e* 19 49 24.0
CLL *e*SKPPKPbc 20 00 25.0
CLL Lm MLR 20 06 00.0
comp=N,35µm,21.0s
CLL Lm MLR 20 06 00.0
comp=E,20µm,19.6s
CLL Lm MLR 20 06 00.0
comp=Z,52µm,20.5s
GRER 76.61 323⇑ *i*P **P** **19 29 47.9 +1.9**
325A Bean Ranch, Si 76.62 59⇑ P **P** **19 29 46.0 -0.6**
baz=76,SNR=38
127A Arkansas Junct 76.63 57⇓ P **P** **19 29 46.1 -0.5**
baz=76,SNR=5.9
ASUD Al Ashush, Dub 76.68 292 P **P** **19 29 47.9 +1.1**
SNR=35
BRG Berggiesshubel 76.69 334 *i* P **P** **19 29 46.5 +0.1**
comp=Z,479nm,1.4s
BRG PP **PP** **19 32 39.0 +0.4**
BRG S **S** **19 39 29.0 -0.1**
BRG SS **SS** **19 44 22.0 -2.1**
BRG *e*PKPPKP P'P'df 19 56 49.6 -14
comp=Z,16nm,1.6s
BRG
comp=N,31µm,18.4s
BRG
comp=E,16µm,15.8s
BRG
comp=Z,48µm,18.3s
BRG Berggiesshubel 76.69 334 *i* P **P** **19 29 46.5 +0.1**
BRG 19 32 39.0
BRG S **S** **19 39 29.0 -0.1**
BRG SS **SS** **19 44 22.0 -2.1**
BRG pmax pmax
comp=Z,479nm,1.4s
BRG MLR MLR
comp=N,31µm,18.4s
BRG MLR MLR
comp=E,16µm,15.8s
BRG MLR MLR
comp=Z,48µm,18.3s
BRG Berggiesshubel 76.69 334 *e*P **P** **19 29 46.5 +0.1**
comp=Z,480nm,1.4s
EKA Eskdalemuir Ar 76.72 345 PKPPKP P'P'df 19 56 50.8 -13
comp=Z,2.1nm,1.1s,baz=169,slow=1.4,SNR=4.7
MYA Malataya 76.74 312 *e*P **P** **19 29 48.1 +1.1**
MALT Malatya 76.75 312 *e*P **P** **19 29 48.5 +1.4**
MALT Malatya 76.75 312 *e*P **P** **19 29 48.4 +1.3**
MALT pmax pmax
comp=Z,576nm,1.2s
MALT MLR MLR
comp=Z,98µm,20.0s
MALT Malatya 76.75 312 *e*P **P** **19 29 48.4 +1.3**
comp=Z,576nm,1.2s
MALT LR LR
comp=Z,98µm,20.0s
MALT Malatya 76.75 312⇑ *i*P **P** **19 29 48.2 +1.1**
ESK Eskdalemuir 76.75 345⇑ *e*P **P** **19 29 46.4 -0.2**
ESK AMB AMB 19 29 49.6
comp=Z,557nm,1.8s
ESK AMS AMS 19 57 32.8
comp=Z,12µm,28.2s
ESK Eskdalemuir 76.75 345 P **P** **19 29 46.4 -0.2**
ESK AMB AMB 19 29 49.6
comp=Z,557nm,1.8s
ESK AMS AMS 19 57 32.8
comp=Z,12µm,28.2s
ESK Eskdalemuir 76.75 345 *e*P **P** **19 29 46.5 -0.2**
ESK pmax pmax
comp=Z,880nm,1.4s
ESK MLR MLR
comp=Z,11µm,20.0s
ESK Eskdalemuir 76.75 345 *e*P **P** **19 29 46.5 -0.2**
comp=Z,880nm,1.4s
ESK LR LR
comp=Z,11µm,20.0s
ESK Eskdalemuir 76.75 345 P **P** **19 29 46.0 -0.7**
comp=Z,2µm,1.1s,SNR=90
Y29A Porterfield Fa 76.75 55 ⇓P **P** **19 29 46.7 -0.4**
baz=76,SNR=18
W31A Holland Ranch, 76.75 53⇑ P **P** **19 29 46.7 -0.5**
baz=76,SNR=20
Z28A Tucker Farm, M 76.75 56 ⇓P **P** **19 29 47.3 0.0**
baz=76,SNR=13
BSY Bisya 76.77 289 P **P** **19 29 48.6 +1.2**
SNR=118
X30A Coker Ranch, T 76.77 54⇑ P **P** **19 29 46.9 -0.3**
baz=76,SNR=10
DOPR Dopca 76.78 325⇓ *i*P **P** **19 29 48.7 +1.7**
BALT Daday 76.79 317 *i*P **P** **19 29 49.0 +1.6**
PVCC Panska Ves 76.80 333⇑ *i*P **P** **19 29 47.6 +0.5**
PVCC *e*S **S** **19 39 27.6 -2.7**
PVCC MLR MLR
comp=Z,49µm,17.6s
PVCC Panska Ves 76.80 333⇑ *i*P **P** **19 29 47.6 +0.5**
PVCC *e*S **S** **19 39 27.6 -2.7**
PVCC AMS AMS 20 07 40.0
comp=Z,49µm,17.6s
ARQ Araqi 76.80 290 P **P** **19 29 48.9 +1.4**
SNR=87
CTKT Corum 76.82 316 *i*P **P** **19 29 49.2 +1.6**
FBE Freiberg 76.83 334 *e*P **P** **19 29 47.5 +0.3**
comp=Z,2µm,1.8s
ECK Cauldkaine Hil 76.86 345⇑ *i*P **P** **19 29 46.7 -0.6**
ECK Cauldkaine Hil 76.86 345 P **P** **19 29 46.7 -0.6**
TOS Tosya 76.87 316 *e*P **P** **19 29 50.1 +2.4**
CLZ Clausthal 76.88 336 *e*P **P** **19 29 48.2 +0.7**
CLZ pmax pmax
comp=Z,1µm,1.4s
CLZ Clausthal 76.88 336 *e*P **P** **19 29 48.2 +0.7**
comp=Z,1µm,1.4s
MLR Muntele Rosu 76.94 324⇑ *i*P **P** **19 29 48.4 +0.3**
MLR Muntele Rosu 76.94 324 LR LR 20 06 09.2
comp=Z,8µm,20.9s,baz=47,slow=38
EFOR EFORIE 76.95 322⇑ *i*P **P** **19 29 49.3 +1.4**
PGOR Pogoanele 76.98 323⇓ *i*P **P** **19 29 49.3 +1.2**
ISR Istrita 77.00 323⇓ *i*P **P** **19 29 49.4 +1.1**
XAL Allendale 77.00 345⇑ *e*P **P** **19 29 47.9 -0.3**
XAL Allendale 77.00 345 P **P** **19 29 47.9 -0.3**
ILGA Ilgaz 77.01 317 *i*P **P** **19 29 50.4 +1.7**
CVD Cernavoda 77.02 322⇑ *i*P **P** **19 29 49.6 +1.3**
AKCD Akcadag 77.02 312 *i*P **P** **19 29 50.4 +1.7**
425A Indio Mountain 77.03 59⇑ P **P** **19 29 48.6 -0.3**
baz=77,SNR=74
DARE Darende-Malaty 77.04 313 *e*P **P** **19 29 49.7 +1.0**
MDB Medias 77.04 325⇑ *i*P **P** **19 29 50.0 +1.5**
X31A McDonald Ranch 77.14 53 ⇓P **P** **19 29 48.8 -0.5**
baz=77,SNR=32
VYHS Vyhne 77.14 330 *e*P **P** **19 29 49.9 +0.9**
VYHS pmax pmax
comp=Z,414nm,1.3s
VYHS Vyhne 77.14 330 *e*P **P** **19 29 49.9 +0.9**
VYHS *e*S **S** **19 39 29.7 -4.4**
VYHS *e*SS SS 19 45 19.0 +48
Z29A Hungry Hill Ra 77.17 55 ⇓P **P** **19 29 49.0 -0.5**
baz=77,SNR=67
IBBN Ibbenburen 77.17 338 *e*P **P** **19 29 49.3 +0.3**
comp=Z,6µm,3.0s
Y30A Stafford Cattl 77.17 54 ⇓P **P** **19 29 49.2 -0.4**
baz=77,SNR=7.3
128A Castleberry Fa 77.18 56 ⇓P **P** **19 29 49.0 -0.6**
baz=77,SNR=62
URFA Urfa 77.19 311 *e*P **P** **19 29 50.8 +1.2**
VRAC Vranov 77.21 332⇑ *i*P **P** **19 29 50.0 +0.6**
VRAC Vranov 77.21 332 LR LR 20 08 56.7
comp=Z,45µm,20.2s,baz=26,slow=40
BHD Baghdad 77.23 305 *i* x **P** **19 29 47.0 -2.7**
BHD *i* x x 19 39 31.7
CORM Corum 77.24 315 *e*P **P** **19 29 50.2 +0.4**
PRA Prague 77.25 333⇑ P **P** **19 29 50.0 +0.5**
PRA *ex* x 19 30 12.0

PRA S **S** **19 39 37.0 +1.9**
PRA *ex* x 19 40 06.0
PRA AMS AMS 20 08 30.0
326A Caldwell Ranch **77.25 58** ⇑P **P** **19 29 49.5 -0.5**
baz=77,SNR=21
PSZ Piszkesteto **77.26 329** *eP* **P** **19 29 50.0 +0.2**
PSZ pmax pmax
comp=Z,1μm,1.4s
PSZ MLR MLR
comp=Z,35μm,19.0s
PSZ Piszkesteto **77.26 329** *eP* **P** **19 29 50.0 +0.2**
comp=Z,1μm,1.4s
PSZ LR LR
comp=Z,35μm,19.0s
PSZ Piszkesteto **77.26 329**⇑ *iP* **P** **19 29 50.4 +0.6**
PSZ Piszkesteto **77.26 329**⇓ *eP* **P** **19 29 50.6 +0.8**
SECR **77.26 324**⇓ *iP* **P** **19 29 50.8 +1.0**
PRU Pruhonice **77.28 333** *eP* **P** **19 29 49.8 0.0**
PRU *eS* S 19 39 25.8 -10
PRU MLR MLR
comp=Z,61μm,19.0s
PRU Pruhonice **77.28 333**⇑ *eP* **P** **19 29 49.8 0.0**
PRU *ex* x 19 33 00.3
PRU *ex* x 19 39 25.8
PRU AMS AMS 20 07 20.0
comp=Z,61μm,19.0s
GCD Castle Douglas **77.31 346**⇑ *eP* **P** **19 29 49.6 -0.2**
GCD Castle Douglas **77.31 346** P **P** **19 29 49.6 -0.2**
YOZ Yozgat **77.31 315** *eP* **P** **19 29 51.1 +0.8**
VOIR **77.35 324**⇑ *iP* **P** **19 29 51.4 +1.1**
SAFT Safranbolu **77.35 317** *eP* **P** **19 29 51.6 +1.3**
CANT Cankiri **77.40 316** *eP* **P** **19 29 50.8 +0.1**
KESW Keswick, Cumbr **77.42 345**⇑ *eP* **P** **19 29 50.8 +0.3**
KESW AMB AMB 19 29 53.7
comp=Z,1μm,1.4s
KESW AMS AMS 19 58 05.9
comp=Z,12μm,36.6s
KESW Keswick, Cumbr **77.42 345** P **P** **19 29 50.8 +0.3**
KESW AMB AMB 19 29 53.7
comp=Z,1μm,1.4s
KESW AMS AMS 19 58 05.9
comp=Z,12μm,36.6s
GAL1 Galloway **77.44 346**⇑ *eP* **P** **19 29 50.0 -0.4**
GAL1 AMB AMB 19 29 53.3
comp=Z,712nm,1.5s
GAL1 *e* 19 39 25.2
GAL1 AMS AMS 20 08 38.4
comp=Z,13μm,20.8s
GAL1 Galloway **77.44 346** P **P** **19 29 50.0 -0.4**
GAL1 AMB AMB 19 29 53.3
comp=Z,712nm,1.5s
GAL1 19 39 25.2
GAL1 AMS AMS 20 08 38.4
comp=Z,13μm,20.8s
ATAB Bozova **77.45 311** *i* P **P** **19 29 52.9 +1.9**
PSN Preselentsi **77.46 322** P **P** **19 29 52.0 +1.2**
Y31A Rekieta Farm, **77.47 54** ⇑P **P** **19 29 50.4 -0.8**
baz=77,SNR=9.5
SULR **77.47 323**⇑ *iP* **P** **19 29 48.4 -2.5**
Z30A Sanderson Ranc **77.48 55** ⇓P **P** **19 29 50.5 -0.7**
baz=77,SNR=74
228A UT Block 9, Go **77.48 57** ⇑P **P** **19 29 50.8 -0.5**
baz=77,SNR=23
327A Balmorhea Ranc **77.50 58** ⇑P **P** **19 29 52.0 +0.7**
baz=77
PINB Pinarbasi **77.51 313** *i* P **P** **19 29 53.0 +1.4**
129A Stewart Farms, **77.53 56** ⇑P **P** **19 29 51.5 0.0**
baz=77
ARR Arges **77.57 325**⇑ *iP* **P** **19 29 53.0 +1.4**
PLN Plauen **77.58 335** *eP* **P** **19 29 51.9 +0.5**
comp=Z,6μm,1.7s
ELDT Eldivan **77.58 316** *i* P **P** **19 29 53.2 +1.4**
TREC Trest **77.58 332**⇑ *iP* **P** **19 29 52.0 +0.5**
TREC *eS* **S** **19 39 39.3 +0.4**
TREC MLR MLR
comp=Z,62μm,19.7s
TREC Trest **77.58 332**⇑ *iP* **P** **19 29 52.0 +0.5**
TREC *eS* S **19 39 39.3 +0.4**
TREC AMS AMS 20 07 50.0
comp=Z,62μm,19.7s
MOX Moxa **77.59 335** *eP* **P** **19 29 51.8 +0.3**
MOX pmax pmax
comp=Z,805nm,1.5s
MOX Moxa **77.59 335** *eP* **P** **19 29 51.8 +0.3**
comp=Z,805nm,1.5s
BNN Bunyan **77.65 314** *eP* **P** **19 29 51.6 -0.6**
426A McDonald Obser **77.69 59** ⇑P **P** **19 29 51.9 -0.7**
baz=78,SNR=20
SARI SarD1z-Kayseri **77.70 313** *eP* **P** **19 29 53.7 +1.1**
NKC Novy Kostel **77.71 334**⇑ *iP* **P** **19 29 52.4 +0.2**
NKC *eS* **S** **19 39 35.9 -4.3**
NKC MLR MLR
comp=Z,41μm,17.8s
NKC Novy Kostel **77.71 334**⇑ *iP* **P** **19 29 52.4 +0.2**
NKC *eS* **S** **19 39 35.9 -4.3**
NKC AMS AMS 20 09 00.0
comp=Z,41μm,17.8s
WTSB Winterswijk **77.72 338** *i* P **P** **19 29 52.1 0.0**
comp=Z,2μm,1.7s
WMOK Wichita Mounta **77.73 52** *eP* **P** **19 29 51.5 -1.1**
WMOK pmax pmax
comp=Z,313nm,1.0s
WMOK MLR MLR
comp=Z,17μm,20.0s
WMOK Wichita Mounta **77.73 52** *eP* **P** **19 29 51.5 -1.1**
comp=Z,313nm,1.0s
WMOK LR LR
comp=Z,17μm,20.0s
CDAG Cicekdag **77.79 315** *i* P **P** **19 29 54.0 +1.0**
CIOR Ciorogarla **77.82 323**⇑ *iP* **P** **19 29 52.8 0.0**
DEV Deva **77.83 326**⇓ *iP* **P** **19 29 53.9 +1.0**
LOT Lotru **77.85 325**⇑ *iP* **P** **19 29 53.2 0.0**
KDZE Karadeniz Ereo **77.88 318** *eP* **P** **19 29 52.6 -0.6**
328A Wristen Ranch, **77.89 57** ⇓P **P** **19 29 52.9 -0.6**
baz=78,SNR=68
Y32A R-V Farms, Ver **77.90 53** ⇓P **P** **19 29 52.9 -0.7**
baz=78,SNR=19
UBBA Unterbreizbach **77.90 336** *eP* **P** **19 29 53.4 +0.3**
comp=Z,1μm,1.7s
427A Hayter Ranch, **77.93 58** ⇑P **P** **19 29 53.3 -0.5**
baz=78,SNR=31
BUD Budapest **77.94 329**⇑ *eP* **P** **19 29 54.5 +1.1**
UMR Umm Al-Rimmam **77.96 300** *eP* **P** **19 29 54.5 +0.7**
UMR AMb AMB 19 29 57.5
comp=Z,2μm,1.1s
MIB Mutribah **78.00 300** *eP* **P** **19 29 54.9 +0.8**
MIB AMb AMB 19 29 57.7
comp=Z,3μm,1.1s
Z31A Sharp Cattle R **78.01 54** ⇓P **P** **19 29 53.3 -0.9**
baz=78,SNR=71
MANZ Manzenberg **78.03 335** *eP* **P** **19 29 54.3 +0.3**
comp=Z,458nm,1.2s
229A Bryant Ranch, **78.05 56** ⇑P **P** **19 29 53.9 -0.5**
baz=78,SNR=21
BR131 Keskin Array S **78.07 316** *eP* **P** **19 29 54.9 +0.4**
comp=Z,270nm,1.0s
BRTR Keskin Array B **78.07 316** P **P** **19 29 55.3 +0.8**
BRTR PKKPbc **PKKPbc** **19 48 50.4 -1.4**
BRTR P'P' 19 56 26.9
BRTR Keskin Array B **78.07 316** P **P** **19 29 55.3 +0.8**
comp=Z,339nm,1.1s,baz=62,slow=3.2,SNR=365
BRTR PKKPbc **PKKPbc** **19 48 50.4 -1.4**
comp=Z,1.1nm,1.0s,baz=180,slow=5.6,SNR=5.1
BRTR PKPPKP P'P'df 19 56 26.9 -34
comp=Z,0.9nm,0.9s,baz=188,slow=3.6,SNR=4.9
BRTR LR LR 20 09 26.9
comp=Z,38μm,20.0s,baz=19,slow=40
STKA Stephens Creek **78.07 189** P **P** **19 29 54.1 -0.1**
comp=Z,75nm,1.0s
STKA Stephens Creek **78.07 189** P **P** **19 29 54.2 +0.1**
comp=Z,26nm,0.8s,baz=358,slow=7.8,SNR=19
STKA LR LR 20 02 54.2
comp=Z,20μm,21.7s,baz=7.7,slow=34
130A Snyder **78.07 55** ⇑P **P** **19 29 53.9 -0.7**
baz=78,SNR=10
BUG Bochum--Univer **78.08 338** *eP* **P** **19 29 54.3 +0.2**
comp=Z,989nm,1.4s
526A Mary Lane Ranc **78.09 59** ⇑P **P** **19 29 54.5 -0.3**
baz=78,SNR=37
HUMR Humele **78.12 324**⇑ *iP* **P** **19 29 54.5 0.0**
PKSN Nyarlorinc **78.13 328**⇓ *eP* **P** **19 29 55.8 +1.3**
KMRS Kahramanmaras **78.14 312** *eP* **P** **19 29 55.3 +0.5**
HDIL Hopedale **78.17 43** *eP* **P** **19 29 53.7 -1.2**
comp=Z,268nm,0.7s
HDIL LR LR
comp=Z,16μm,22.0s
PRD Provadia **78.19 322** P **P** **19 29 55.8 +0.9**
AWI1 Witton **78.19 342**⇑ *eP* **P** **19 29 53.8 -0.9**
AWI1 Witton **78.19 342** P **P** **19 29 53.8 -0.9**
LHO Holmfirth **78.19 344**⇑ *eP* **P** **19 29 54.7 0.0**
LHO Holmfirth **78.19 344** P **P** **19 29 54.7 0.0**
ROTZ Rotzenmuhle **78.20 334** *eP* **P** **19 29 55.6 +0.7**
comp=Z,738nm,1.4s
ABA1 Baconsthorpe **78.20 342**⇑ *eP* **P** **19 29 55.0 +0.2**
ABA1 Baconsthorpe **78.20 342** P **P** **19 29 55.0 +0.2**
AVNT Avonos **78.20 314** *i* P **P** **19 29 56.0 +0.7**
GAZ Gaziantep **78.24 312** *eP* **P** **19 29 56.9 +1.5**
PKSG **78.24 330**⇓ *eP* **P** **19 29 56.3 +1.2**
KBD Kabd **78.24 300** *eP* **P** **19 29 56.2 +0.7**
KBD AMb AMB 19 29 59.2
comp=Z,1μm,1.1s
GMM Mts of Mourne **78.24 347**⇑ *eP* **P** **19 29 54.7 -0.3**
GMM Mts of Mourne **78.24 347** P **P** **19 29 54.7 -0.3**
PKS7 Kunszentmiklos **78.26 329**⇓ *eP* **P** **19 29 56.4 +1.2**
GZR Gura Zlata **78.29 326**⇑ *iP* **P** **19 29 55.9 +0.4**
329A Wagon Wheel Ra **78.30 57** ⇓P **P** **19 29 55.3 -0.5**
baz=78,SNR=60
KAMT Kaman **78.31 315** *eP* **P** **19 29 55.6 -0.3**
527A Woodward Ranch **78.31 59** ⇑P **P** **19 29 55.4 -0.6**
baz=78,SNR=27
KHC Kasperske Hory **78.34 333**⇑ *iP* **P** **19 29 55.8 +0.1**
KHC *e* 19 30 03.0
KHC *eS* **S** **19 39 46.8 -0.2**
KHC MLR MLR
comp=Z,65μm,17.3s
KHC Kasperske Hory **78.34 333** *eP* **P** **19 29 55.9 +0.1**
comp=Z,985nm,1.2s
KHC Kasperske Hory **78.34 333** *ex* x 19 03 20.5
KHC ⇑ *iP* **P** **19 29 55.8 +0.1**
KHC *ePCP* **PcP** **19 30 03.0 -1.9**
KHC *ex* x 19 33 07.8
KHC *eS* **S** **19 39 46.8 -0.2**
KHC AMS AMS 20 08 30.0
comp=Z,65μm,17.3s
131A Roby **78.35 55** ⇓P **P** **19 29 55.5 -0.6**
baz=78,SNR=23
LOD Lodumlu **78.37 316** *eP* **P** **19 29 57.4 +1.4**
ANTO Ankara **78.37 316** *eP* **P** **19 29 56.9 +0.8**
ANTO Ankara **78.37 316** *eP* **P** **19 29 56.8 +0.7**
ANTO pmax pmax
comp=Z,870nm,1.3s
ANTO MLR MLR
comp=Z,33μm,19.0s
ANTO Ankara **78.37 316** *eP* **P** **19 29 56.8 +0.7**
comp=Z,870nm,1.3s
ANTO LR LR
comp=Z,33μm,19.0s
ANTO Ankara **78.37 316**⇑ *iP* **P** **19 29 57.3 +1.2**
ANTO Ankara **78.37 316** P **P** **19 29 57.1 +1.0**
SNR=237
ANDN Andirin **78.37 313** *i* P **P** **19 29 57.6 +1.4**
Z32A Haskeli **78.39 54** ⇓P **P** **19 29 55.4 -0.9**
baz=78,SNR=44
QRN Al-Qurain **78.42 299** *eP* **P** **19 29 56.9 +0.5**
QRN AMb AMB 19 30 00.1
comp=Z,2μm,1.2s
626A Big Bend Ranch **78.43 59** ⇑P **P** **19 29 55.9 -0.7**
baz=78,SNR=60
AEU East Anglia Un **78.43 342**⇑ *eP* **P** **19 29 56.4 +0.4**
AEU East Anglia Un **78.43 342** P **P** **19 29 56.4 +0.4**
428A Kincaid Ranch, **78.44 58** ⇓P **P** **19 29 56.6 0.0**
baz=78,SNR=55
NAY Al-Naaiem **78.46 300** *eP* **P** **19 29 57.1 +0.4**
NAY AMb AMB 19 30 00.8
comp=Z,1μm,1.2s
BBAL Bala **78.46 316** *i* P **P** **19 29 57.4 +0.7**
TUL1 Tulsa **78.47 50** ⇓P **P** **19 29 55.7 -0.9**
baz=78,SNR=25
PKST T``s **78.48 330**⇓ *eP* **P** **19 29 57.4 +0.9**
LPIG La Paz **78.49 67** LR LR 19 59 52.6
comp=Z,520nm,19.3s,baz=97,slow=32
PKS6 Bocsa **78.49 328**⇓ *eP* **P** **19 29 57.2 +0.7**
230A Sterling City **78.51 56** ⇑P **P** **19 29 56.2 -0.8**
baz=78,SNR=32
RDF Al-Radifah **78.51 300** *eP* **P** **19 29 58.0 +1.0**
WET Wettzell **78.54 334** *eP* **P** **19 29 57.5 +0.7**
WET pmax pmax
comp=Z,1μm,1.3s
WET Wettzell **78.54 334** *eP* **P** **19 29 57.5 +0.7**
comp=Z,1μm,1.3s
GEC2 GERESS Array S **78.55 333** *eP* **P** **19 29 57.1 +0.1**
GEC2 pmax pmax
comp=Z,494nm,1.3s
GEC2 GERESS Array S **78.55 333** *eP* **P** **19 29 57.1 +0.1**
comp=Z,494nm,1.3s
GERES GERESS Array B **78.55 333** P **P** **19 29 56.8 -0.1**
GERES PKKPbc **PKKPbc** **19 48 48.9 -2.0**
GERES P'P' 19 56 30.9
GERES GERESS Array B **78.55 333** P **P** **19 29 56.8 -0.1**
comp=Z,50nm,0.4s,baz=35,slow=4.4,SNR=347
GERES PKKPbc **PKKPbc** **19 48 48.9 -2.0**
comp=Z,1.0nm,0.7s,baz=222,slow=1.3,SNR=8.1
GERES PKPPKP P'P'df 19 56 30.9 -30
comp=Z,0.2nm,0.3s,baz=204,slow=1.9,SNR=4.6
GERES LR LR 20 08 47.4
comp=Z,42μm,18.3s,baz=26,slow=39
BZS Buzias **78.55 327**⇓ *iP* **P** **19 29 56.5 -0.4**
GRF Grafenberg Arr **78.56 335** *eP* **P** **19 29 57.6 +0.7**
GRF pmax pmax
comp=Z,925nm,1.1s
GRF MLR MLR
comp=Z,35μm,20.7s
GRF Grafenberg Arr **78.56 335** *eP* **P** **19 29 57.6 +0.7**
comp=Z,925nm,1.1s
GRF *eL* L 20 11 18.4
comp=Z,35μm,20.7s
GRFO Grafenberg **78.56 335** *eP* **P** **19 29 57.1 +0.2**
GRFO pmax pmax
comp=Z,302nm,1.8s
GRFO Grafenberg **78.56 335** *eP* **P** **19 29 57.1 +0.2**
comp=Z,302nm,1.8s
AFSR Af`ar-Bala (A **78.56 316** *eP* **P** **19 29 58.1 +0.9**
TIM Timisoara **78.60 327**⇑ *iP* **P** **19 29 58.3 +1.2**
SOP Sopron **78.62 331**⇑ *eP* **P** **19 29 58.3 +1.1**
CONA Conrad Observa **78.65 331** *i* P **P** **19 29 58.0 +0.5**
comp=Z,855nm,1.4s,SNR=561
CONA Conrad Observa **78.65 331** *i* P **P** **19 29 58.0 +0.5**
comp=Z,855nm,1.4s
MDUB Mudumu **78.65 318** *eP* **P** **19 29 58.2 +0.6**
ZIMR **78.68 323**⇑ *iP* **P** **19 29 58.3 +0.7**
PKS2 Kecel **78.71 329**⇓ *eP* **P** **19 29 58.3 +0.6**
KOZT Kozan **78.71 313** *eP* **P** **19 29 58.9 +0.9**
SZH Strazhica **78.76 323** P **P** **19 29 58.2 +0.1**
CRAR CRAIOVA **78.77 325**⇑ *iP* **P** **19 29 58.6 +0.5**
WME Myndd Eilian **78.78 345**⇑ *eP* **P** **19 29 57.5 -0.5**
WME Myndd Eilian **78.78 345** P **P** **19 29 57.5 -0.5**
528A Cox Ranch, San **78.79 58** ⇑P **P** **19 29 58.4 -0.2**
baz=79,SNR=55
ABTX Abilene, Hawle **78.81 54** ⇑P **P** **19 29 57.8 -0.8**
baz=79,SNR=22
330A Mertzon **78.83 56** ⇑P **P** **19 29 57.9 -0.8**
baz=79,SNR=34
SILT Sile **78.83 319** *eP* **P** **19 29 58.0 -0.5**
WPM1 Penmaenmawr **78.84 345**⇑ *eP* **P** **19 29 57.6 -0.7**
WPM1 Penmaenmawr **78.84 345** P **P** **19 29 57.6 -0.7**
NIG Nigde **78.84 314** *eP* **P** **19 30 00.8 +1.8**
TXAR Lajitas Array **78.87 59** P **P** **19 29 58.5 -0.5**
TXAR PKKPbc **PKKPbc** **19 48 51.7 +1.8**
TXAR P'P' 19 56 38.1
TXAR Lajitas Array **78.87 59** P **P** **19 29 58.5 -0.5**
comp=Z,33nm,0.7s,baz=299,slow=3.7,SNR=112
TXAR PKKPbc **PKKPbc** **19 48 51.7 +1.8**
comp=Z,2.0nm,0.8s,baz=131,slow=4.9,SNR=5.8
TXAR PKPPKP P'P'df 19 56 38.1 -21
comp=Z,0.5nm,0.8s,baz=193,slow=3.7,SNR=3.6
TNS Taunus Mts **78.87 337** *eP* **P** **19 29 59.0 +0.4**
TNS pmax pmax
comp=Z,630nm,1.2s
TNS Taunus Mts **78.87 337** *eP* **P** **19 29 59.0 +0.4**
comp=Z,630nm,1.2s
WLF1 Llynfaes **78.90 345**⇑ *eP* **P** **19 29 58.2 -0.4**
WLF1 AMB AMB 19 30 01.5
comp=Z,480nm,1.7s
WLF1 *e* 19 39 50.8
WLF1 AMS AMS 20 05 35.6
comp=Z,15μm,24.1s
WLF1 Llynfaes **78.90 345** P **P** **19 29 58.2 -0.4**
WLF1 AMB AMB 19 30 01.5
comp=Z,480nm,1.7s
WLF1 19 39 50.8
WLF1 AMS AMS 20 05 35.6
comp=Z,15μm,24.1s
SPNC Sapanca-Adapaz **78.90 318** *eP* **P** **19 29 59.3 +0.4**
231A Bronte **78.93 55** ⇓P **P** **19 29 58.2 -1.0**
baz=79,SNR=32
RMGR Halanga-Turnu **78.93 325**⇓ *iP* **P** **19 29 59.6 +0.6**
627A Terlingua Ranc **78.95 59** ⇑P **P** **19 29 58.9 -0.6**
baz=79,SNR=67
YRC Rhoscolyn **78.96 346**⇑ *eP* **P** **19 29 58.1 -0.8**
YRC Rhoscolyn **78.96 346** P **P** **19 29 58.1 -0.8**
PKS9 Tamasi **78.97 329**⇓ *eP* **P** **19 29 59.4 +0.3**
429A Davenport Ranc **78.98 57** ⇓P **P** **19 29 58.8 -0.7**
baz=79,SNR=15
YLL Llanberis **79.00 345**⇑ *eP* **P** **19 29 58.8 -0.3**
YLL Llanberis **79.00 345** P **P** **19 29 58.8 -0.3**
GULT Gulveren **79.00 318** *eP* **P** **19 29 59.3 -0.3**
HGN Heimansgroeve **79.05 338** *eP* **P** **19 29 59.8 +0.3**
comp=Z,2μm,1.6s
HGN *ePP* PP 19 33 12.4 +14
HGN *ePPP* PPP 19 35 05.8
HGN *ePPPP* 19 36 33.3
HGN *eS* **S** **19 39 53.2 -1.2**
HGN *eSS* SS 19 45 26.8 +27
HGN *eSSS* SSS 19 48 24.6
PVL Pavlikeni **79.05 323** P **P** **19 30 00.8 +1.2**
FOEL Foel Wylfa **79.06 345** *eP* **P** **19 29 59.4 -0.2**
FOEL *e* 19 39 51.0
FOEL AMS AMS 20 06 51.9
comp=Z,19μm,20.8s
FOEL Foel Wylfa **79.06 345** P **P** **19 29 59.4 -0.2**
FOEL 19 39 51.0
FOEL AMS AMS 20 06 51.9
comp=Z,19μm,20.8s
BEBN Eben Emael **79.08 339** P **P** **19 29 59.8 +0.1**
comp=Z,342nm,1.7s
CEYT Ceyhan **79.11 313** *eP* **P** **19 29 59.6 -0.5**
JMB Yambol **79.13 322** P **P** **19 30 01.1 +1.0**
JMB Yambol **79.13 322** P **P** **19 30 01.1 +1.0**
SADO Sadowa **79.14 34** P **P** **19 30 00.2 +0.1**
SADO Sadowa **79.14 34** P **P** **19 30 00.2 +0.1**
comp=Z,28nm,0.9s,baz=341,slow=8.3,SNR=22
SADO LR LR 20 06 53.7
comp=Z,13μm,21.6s,baz=356,slow=37
529A Stev Forest Ra **79.15 58** ⇑P **P** **19 30 00.1 -0.5**
baz=79,SNR=60
PKSM Moragy **79.16 329**⇑ *iP* **P** **19 29 59.8 -0.4**
PKSM Moragy **79.16 329**⇑ *eP* **P** **19 29 59.9 -0.3**
ISK Istambul-Kandi **79.17 319** *eP* **P** **19 29 59.3 -1.0**
MEM Membach **79.17 338** P **P** **19 30 00.4 +0.2**
comp=Z,466nm,1.4s
CTYL Yal??k??y-??at **79.18 320** *eP* **P** **19 29 59.8 -0.6**
YRE Yr Eifl **79.20 345**⇑ *eP* **P** **19 29 59.6 -0.7**
YRE Yr Eifl **79.20 345** P **P** **19 29 59.6 -0.7**
BGKT Bogazkoy **79.20 320** *eP* **P** **19 29 59.6 -0.9**
SLM Saint Louis **79.22 45** *eP* **P** **19 29 59.3 -1.3**
SLM pmax pmax
comp=Z,270nm,1.1s
SLM Saint Louis **79.22 45** *eP* **P** **19 29 59.3 -1.3**
comp=Z,270nm,1.1s
628A Black Gap, Mar **79.22 59** ⇓P **P** **19 30 00.2 -0.7**
baz=79,SNR=29
MOA Molln **79.24 332** *i* P **P** **19 30 01.1 +0.4**
comp=Z,196nm,1.1s,SNR=124
MOA Molln **79.24 332** *i* P **P** **19 30 01.1 +0.4**
comp=Z,196nm,1.1s
430A Baggett Ranch, **79.25 57** ⇓P **P** **19 30 00.2 -0.8**
baz=79,SNR=60
DLF Lyons Farm **79.25 347**⇑ *iP* **P** **19 30 00.7 +0.2**
CTKS Kestanelik-??a **79.28 320** *eP* **P** **19 29 58.5 -2.4**
SVRH Sivrihisar-ESK **79.31 317** *eP* **P** **19 29 59.6 -1.7**
SULT Sultanhani-AKS **79.32 315** *eP* **P** **19 30 01.7 +0.4**
AAM Ann Arbor **79.32 38** *eP* **P** **19 30 00.1 -1.0**
AAM pmax pmax
comp=Z,123nm,0.9s
AAM MLR MLR
comp=Z,16μm,19.0s
AAM Ann Arbor **79.32 38** *eP* **P** **19 30 00.1 -1.0**
comp=Z,123nm,0.9s
AAM LR LR
comp=Z,16μm,19.0s
331A San Angelo **79.33 56** ⇑P **P** **19 30 00.6 -0.9**
baz=79,SNR=45
TOD Tromm **79.33 336** *eP* **P** **19 30 01.5 +0.4**
TOD Tromm **79.33 336** *eP* **P** **19 30 01.5 +0.4**
SFIN Scholer Farm **79.33 42** ⇓P **P** **19 30 00.3 -1.0**
baz=79,SNR=18
FORT Forrest **79.34 200** *eP* **P** **19 30 01.0 -0.1**
comp=Z,228nm,0.8s
232A Coleman **79.35 55** ⇓P **P** **19 30 00.9 -0.7**
baz=79,SNR=37
ARSA Arzberg **79.35 331** *i* P **P** **19 30 01.8 +0.5**
comp=Z,562nm,1.4s,SNR=341
ARSA Arzberg **79.35 331** *i* P **P** **19 30 01.8 +0.5**
comp=Z,562nm,1.4s
HLM1 Long Mynd **79.36 344**⇑ *eP* **P** **19 30 01.3 +0.1**
HLM1 AMB AMB 19 30 04.5
comp=Z,833nm,1.8s
HLM1 Long Mynd **79.36 344** P **P** **19 30 01.3 +0.1**
HLM1 AMB AMB 19 30 04.5
comp=Z,833nm,1.8s
UCC Uccle **79.41 339** P **P** **19 30 01.5 0.0**
SLVT Silivri **79.42 320** *eP* **P** **19 30 01.2 -0.5**
YLV Yalova **79.42 319** *eP* **P** **19 30 01.4 -0.5**
ABH Alteburg **79.43 337** *eP* **P** **19 30 02.0 +0.4**
CAVI Cavuskoy **79.50 318** *eP* **P** **19 30 02.0 -0.2**
BCLA Clavier **79.52 339** P **P** **19 30 02.3 +0.2**
comp=Z,545nm,1.6s
ESKT Eskisehir **79.57 317** *eP* **P** **19 30 03.0 +0.3**
KIZT Kizilcal **79.58 316** *eP* **P** **19 30 03.6 +0.8**
MPEP Malo Peshtene **79.59 324** P **P** **19 30 03.0 +0.4**
BEHE Becsehely **79.60 330**⇑ *eP* **P** **19 30 03.2 +0.6**
GEMT Gemlik **79.61 319** *eP* **P** **19 30 02.5 -0.3**
FVM French Village **79.63 45** *eP* **P** **19 30 01.9 -1.1**
FVM French Village **79.63 45** *eP* **P** **19 30 01.9 -1.1**
KRTS Karatas **79.64 313** *eP* **P** **19 30 04.1 +1.1**
530A J-C Ranch, Com **79.65 57** ⇓P **P** **19 30 02.8 -0.5**
baz=79,SNR=91
ARMT Armutlu **79.66 319** *eP* **P** **19 30 02.0 -1.1**
332A Millersview **79.67 55** ⇓P **P** **19 30 02.5 -0.8**
baz=79,SNR=50
SSW Stow on the Wo **79.68 344**⇑ *iP* **P** **19 30 03.5 +0.5**
SSW Stow on the Wo **79.68 344** P **P** **19 30 03.5 +0.5**
431A Sonora **79.69 56** ⇓P **P** **19 30 02.6 -0.8**
baz=80,SNR=65
SNF Seneffe **79.69 339** P **P** **19 30 03.3 +0.3**
comp=Z,525nm,2.1s
SKP1 Kophill **79.71 343**⇑ *iP* **P** **19 30 02.9 -0.1**
SKP1 Kophill **79.71 343** P **P** **19 30 02.9 -0.1**
CRLT Corlu **79.71 320** *eP* **P** **19 30 03.3 0.0**
BBOO Buckleboo **79.72 193** *eP* **P** **19 30 02.9 -0.2**
comp=Z,18μm,2.2s
RUP Ruppelstein **79.72 337** *eP* **P** **19 30 03.5 +0.2**
RUP Ruppelstein **79.72 337** *eP* **P** **19 30 03.5 +0.2**
KTD Kalmit **79.79 337** *eP* **P** **19 30 03.9 +0.3**
KTD Kalmit **79.79 337** *eP* **P** **19 30 03.9 +0.3**
KOGS Kog **79.80 330** *eP* **P** **19 30 03.4 -0.3**
MDNY Mudanya-Bursa **79.80 319** *eP* **P** **19 30 03.3 -0.5**
RJOB Jochberg **79.81 333** *eP* **P** **19 30 04.6 +0.8**
comp=Z,538nm,1.3s
ELSH Elham, Standar **79.83 341**⇑ *eP* **P** **19 30 04.1 +0.4**
ELSH AMB AMB 19 30 07.2
comp=Z,2μm,1.3s
ELSH *e* 19 39 58.5
ELSH AMS AMS 20 09 03.2
comp=Z,34μm,20.5s
ELSH Elham, Standar **79.83 341** P **P** **19 30 04.1 +0.4**
ELSH AMB AMB 19 30 07.2
comp=Z,2μm,1.3s
ELSH 19 39 58.5
ELSH AMS AMS 20 09 03.2
comp=Z,34μm,20.5s
MERS Mersin **79.85 313** *eP* **P** **19 30 03.8 -0.4**
MCH1 Michaelchurch **79.88 344**⇑ *eP* **P** **19 30 03.8 -0.1**
MCH1 AMB AMB 19 30 07.2
comp=Z,1μm,1.6s
MCH1 *e* 19 40 00.7
MCH1 AMS AMS 20 07 38.2
comp=Z,16μm,20.4s
MCH1 Michaelchurch **79.88 344** P **P** **19 30 03.8 -0.1**
MCH1 AMB AMB 19 30 07.2
comp=Z,1μm,1.6s
MCH1 19 40 00.7
MCH1 AMS AMS 20 07 38.2
comp=Z,16μm,20.4s

LADK Ladik-KONYA 79.88 316 *e*P **P** 19 30 04.1 -0.3
FUR Furstenfeldbru 79.90 334 *e*P **P** 19 30 04.7 +0.4
FUR pmax pmax
comp=Z,1µm,1.2s
FUR Furstenfeldbru 79.90 334 *e*P **P** 19 30 04.7 +0.4
comp=Z,1µm,1.2s
TKR Tekirdag 79.91 320 *e*P **P** 19 30 04.6 +0.3
DIM Dimitrovgrad 79.92 322 P **P** 19 30 05.4 +1.0
GIVF Givet 79.94 339⇑ *i*P **P** 19 30 04.5 +0.2
comp=Z,2µm,1.6s
GIVF Givet 79.94 339⇑ *i*P **P** 19 30 04.5 +0.2
GIVF pmax pmax
comp=Z,2µm,1.6s
GIVF Givet 79.94 339⇑ *i*P **P** 19 30 04.5 +0.2
comp=Z,2µm,1.6s
RAO Raoul Island 79.95 153 PFAKE 19 30 20.0 +16
RAO LR LR
comp=Z,37µm,22.0s
STU Stuttgart 79.97 336 *e*P **P** 19 30 04.5 -0.1
STU pmax pmax
comp=Z,872nm,1.3s
STU Stuttgart 79.97 336 *e*P **P** 19 30 04.9 +0.3
comp=Z,911nm,1.3s
STU Stuttgart 79.97 336 *e*P **P** 19 30 04.5 -0.1
comp=Z,872nm,1.3s
WLF Walferdange 80.00 338 *e*P **P** 19 30 05.3 +0.6
comp=Z,620nm,2.3s
WLF Walferdange 80.00 338 *e*P **P** 19 30 05.0 +0.3
WLF pmax pmax
comp=Z,2µm,1.9s
WLF MLR MLR
comp=Z,53µm,21.0s
WLF Walferdange 80.00 338 *e*P **P** 19 30 05.3 +0.6
comp=Z,2µm,1.9s
WLF Walferdange 80.00 338 *e*P **P** 19 30 05.0 +0.3
comp=Z,2µm,1.9s
WLF LR LR
comp=Z,53µm,21.0s
DOU Dourbes 80.00 339 P **P** 19 30 04.6 -0.1
comp=Z,408nm,1.8s
432A Menard 80.01 56⇑ *i*P **P** 19 30 04.3 -0.9
baz=80,SNR=40
SOKA Soboth 80.01 331⇓ *i*P **P** 19 30 05.1 +0.2
comp=Z,1µm,1.3s
SOKA Soboth 80.01 331⇓ *i*P **P** 19 30 05.1 +0.2
comp=Z,1µm,1.3s
KONT Konya--Tatoy 80.08 315 *e*P **P** 19 30 06.0 +0.5
PGB Panagyurishte 80.09 323 P **P** 19 30 06.0 +0.6
531A Rocksprings 80.10 57⇓ P **P** 19 30 04.8 -0.8
baz=80,SNR=48
SWN1 Swindon 80.11 343⇑ *e*P **P** 19 30 05.6 +0.4
SWN1 AMB AMB 19 30 08.8
comp=Z,3µm,1.4s
SWN1 AMS AMS 19 59 59.5
comp=Z,17µm,32.6s
SWN1 Swindon 80.11 343 P **P** 19 30 05.6 +0.4
SWN1 AMB AMB 19 30 08.8
comp=Z,3µm,1.4s
SWN1 AMS AMS 19 59 59.5
comp=Z,17µm,32.6s
KCTX Karacabey (Bur 80.13 319 *e*P **P** 19 30 04.9 -0.7
BAIF Baives 80.13 339⇑ *i*P **P** 19 30 05.7 +0.3
comp=Z,2µm,1.4s
BAIF Baives 80.13 339⇑ *i*P **P** 19 30 05.7 +0.3
BAIF pmax pmax
comp=Z,2µm,1.4s
BAIF Baives 80.13 339⇑ *i*P **P** 19 30 05.7 +0.3
comp=Z,2µm,1.4s
RFTA Plano 80.17 52 *e*P **P** 19 30 04.8 -1.1
OLIL Olney 80.17 43 *e*P **P** 19 30 04.5 -1.3
comp=Z,112nm,0.8s
LANF Langenberg 80.17 337 *e*P **P** 19 30 05.9 +0.2
LANF Langenberg 80.17 337 *e*P **P** 19 30 05.9 +0.2
LANF Langenberg 80.17 337 *e*P **P** 19 30 05.9 +0.2
WOL Wolverton 80.18 343⇑ *e*P **P** 19 30 05.2 -0.4
WOL AMB AMB 19 30 08.6
comp=Z,1µm,1.9s
WOL *e* 19 40 05.1
WOL AMS AMS 20 08 22.5
comp=Z,17µm,19.5s
WOL Wolverton 80.18 343 P **P** 19 30 05.2 -0.4
WOL AMB AMB 19 30 08.6
comp=Z,1µm,1.9s
WOL 19 40 05.1
WOL AMS AMS 20 08 22.5
comp=Z,17µm,19.5s
MFT Murefte 80.19 320 *e*P **P** 19 30 06.5 +0.5
MRMT Marmara Adasi 80.20 320 *e*P **P** 19 30 06.2 +0.2
KBA Koelnbreinsper 80.22 332 *i*P **P** 19 30 06.7 +0.5
KBA pmax pmax
comp=Z,2µm,1.4s
KBA Koelnbreinsper 80.22 332 *i*P **P** 19 30 06.7 +0.5
comp=Z,2µm,1.4s,SNR=759
KBA Koelnbreinsper 80.22 332 *i*P **P** 19 30 06.7 +0.5
comp=Z,2µm,1.4s
PLD Plovdiv 80.23 323 P **P** 19 30 06.2 +0.1
PLD Plovdiv 80.23 323 P **P** 19 30 06.2 +0.1
RAR Rarotonga 80.23 135 LR LR 19 58 14.9
comp=Z,22µm,21.8s,baz=326,slow=30
BNT Bandirma 80.25 320 *e*P **P** 19 30 06.2 0.0
TVSB Tavsanli 80.27 318 *e*P **P** 19 30 05.4 -1.1
ALT Altintas 80.28 318 *e*P **P** 19 30 06.0 -0.6
KDZ Kurdzhali 80.30 322 P **P** 19 30 07.4 +0.9
JCT Junction City 80.30 56 *e*P **P** 19 30 05.5 -1.2
JCT pmax pmax
comp=Z,575nm,1.4s
JCT MLR MLR
comp=Z,12µm,22.0s
JCT Junction City 80.30 56 *e*P **P** 19 30 05.5 -1.2
comp=Z,575nm,1.4s
JCT LR LR
comp=Z,12µm,22.0s
JCT Junction City 80.30 56⇓ P **P** 19 30 06.0 -0.8
baz=80,SNR=23
RKY Sarkoy-Tekirda 80.31 320 *e*P **P** 19 30 06.8 +0.1
OBKA Obir 80.32 331 *i*P **P** 19 30 06.6 0.0
comp=Z,314nm,1.2s,SNR=144
OBKA Obir 80.32 331 *i*P **P** 19 30 06.7 0.0
comp=Z,314nm,1.3s
SIUC Southern Illin 80.44 44 *e*P **P** 19 30 06.3 -0.9
comp=Z,371nm,1.1s
VTS Vitosha 80.45 324 P **P** 19 30 07.7 +0.3
VTS Vitosha 80.45 324⇑ *i*P **P** 19 30 08.1 +0.7
VTS Vitosha 80.45 324 P **P** 19 30 07.7 +0.3
DIVS Divibare 80.45 327 P **P** 19 30 07.2 -0.2
SHUT Suhut-Afyon 80.48 317 *e*P **P** 19 30 07.3 -0.3
KRBG Karabiga-Canak 80.50 320 *e*P **P** 19 30 07.3 -0.2
532A Rocksprings 80.50 56⇑ P **P** 19 30 06.9 -0.9
baz=80,SNR=61
WHTX Lake Whitney 80.51 53⇑ P **P** 19 30 07.1 -0.7
baz=80,SNR=28
MYKA Terra Mystica 80.52 332⇑ *i*P **P** 19 30 07.4 -0.2
comp=Z,399nm,1.2s
MYKA Terra Mystica 80.52 332⇑ *i*P **P** 19 30 07.5 -0.2
comp=Z,399nm,1.2s
DST Dursunbey 80.54 319 *e*P **P** 19 30 07.6 -0.3
STR Strasbourg 80.55 336 *e*P **P** 19 30 08.6 +1.0
STR Strasbourg 80.55 336 *e*P **P** 19 30 08.6 +1.0
STR Strasbourg 80.55 336 *e*P **P** 19 30 08.6 +1.0
WATA Walderalm 80.55 334⇑ *i*P **P** 19 30 08.4 +0.5
WATA pmax pmax
comp=Z,709nm,1.0s
WATA Walderalm 80.55 334⇑ *i*P **P** 19 30 08.4 +0.5
comp=Z,708nm,1.0s,SNR=341
WATA Walderalm 80.55 334⇑ *i*P **P** 19 30 08.4 +0.5
comp=Z,708nm,1.0s
MSNY Massena 80.55 31 *e*P **P** 19 30 06.2 -1.5
comp=Z,768nm,0.8s
BLO Bloomington 80.56 42 *e*P **P** 19 30 06.6 -1.4
BLO pmax pmax
comp=Z,76nm,0.8s
BLO Bloomington 80.56 42 *e*P **P** 19 30 06.5 -1.4
comp=Z,76nm,0.8s
RZN Rozhen 80.57 322 P **P** 19 30 09.0 +0.9
WTTA Wattenberg 80.60 334 *i*P **P** 19 30 08.8 +0.6
WTTA pmax pmax
comp=Z,1µm,1.2s
WTTA Wattenberg 80.60 334 *i*P **P** 19 30 08.8 +0.6
comp=Z,1µm,1.2s,SNR=563
WTTA Wattenberg 80.60 334 *i*P **P** 19 30 08.8 +0.6
comp=Z,1µm,1.2s
SISC Sisak 80.60 330 P **P** 19 30 08.3 +0.3
GONE Gonen-Balikesi 80.61 320 *e*P **P** 19 30 07.8 -0.3
BFO Black Forest 80.62 336 *e*P **P** 19 30 08.1 0.0
BFO *e* 19 48 45.3
BFO pmax pmax
comp=Z,851nm,1.3s
BFO MLR MLR
comp=Z,22µm,19.0s
BFO Black Forest 80.62 336 *e*P **P** 19 30 08.3 +0.2
comp=Z,858nm,1.2s
BFO Black Forest 80.62 336 *e*P **P** 19 30 08.1 0.0
comp=Z,851nm,1.3s
BFO *e*PKKP **PKKPbc** 19 48 45.3 -1.0
BFO LR LR
comp=Z,22µm,19.0s
631A Perdido Creek 80.64 57⇑ P **P** 19 30 07.8 -0.7
baz=80,SNR=90
ALN Alexandroupoli 80.64 321 P **P** 19 30 09.0 +0.7
RETA Reutte 80.67 334 *i*P **P** 19 30 08.6 +0.2
comp=Z,685nm,1.1s,SNR=302
RETA Reutte 80.67 334 *i*P **P** 19 30 08.6 +0.2
comp=Z,685nm,1.1s
MIAR Mount Ida 80.68 49 *e*P **P** 19 30 07.5 -1.2
MIAR pmax pmax
comp=Z,170nm,1.0s
MIAR MLR MLR
comp=Z,16µm,21.0s
MIAR Mount Ida 80.68 49 *e*P **P** 19 30 07.5 -1.2
comp=Z,170nm,1.0s
MIAR LR LR
comp=Z,16µm,21.0s
MOTA Moosalm 80.69 334 *i*P **P** 19 30 09.1 +0.4
MOTA pmax pmax
comp=Z,1µm,1.2s
MOTA Moosalm 80.69 334 *i*P **P** 19 30 09.0 +0.4
comp=Z,1µm,1.2s,SNR=725
MOTA Moosalm 80.69 334 *i*P **P** 19 30 09.1 +0.4
comp=Z,1µm,1.2s
SPAK Spaichingen-Ko 80.69 336 *e*P **P** 19 30 09.0 +0.4
LJU Ljubljana 80.74 331 *i*P **P** 19 30 08.3 -0.4
LJU *e*PP **PP** 19 33 15.2 +2.8
LJU *e*S S 19 40 09.9 -2.6
LJU *e*SS SS 19 46 12.4 +47
LPK Lapseki 80.76 320 *e*P **P** 19 30 09.2 +0.2
ABTA Abfaltersbach 80.78 333 *i*P **P** 19 30 08.7 -0.4
comp=Z,404nm,1.3s,SNR=203
ABTA Abfaltersbach 80.78 333 *i*P **P** 19 30 08.7 -0.4
comp=Z,404nm,1.3s
CDF Champ du Feu 80.84 337⇑ *i*P **P** 19 30 09.6 +0.2
comp=Z,2µm,1.3s
CDF Champ du Feu 80.84 337⇑ *i*P **P** 19 30 09.6 +0.2
CDF pmax pmax
comp=Z,2µm,1.3s
CDF Champ du Feu 80.84 337⇑ *i*P **P** 19 30 09.6 +0.2
comp=Z,2µm,1.3s
BALB Balikesir 80.85 319 *e*P **P** 19 30 08.9 -0.5
HEX Exmoor 80.92 344⇑ *e*P **P** 19 30 09.8 +0.2
HEX Exmoor 80.92 344 P **P** 19 30 09.8 +0.2
VOY Vojsko 80.96 332 *e*P **P** 19 30 08.9 -1.2
VOY *e* 19 30 34.2
BOJS Bojanci 80.96 330 *i*P **P** 19 30 09.8 -0.1
BOJS *e*PP **PP** 19 33 17.4 +3.1
BOJS *e*S **S** 19 40 12.3 -2.4
BOJS *e*SS SS 19 46 14.6 +46
LONY Lake Ozonia 80.98 31 *e*P **P** 19 30 08.2 -1.9
comp=Z,143nm,1.3s
LONY LR LR
comp=Z,11µm,19.0s
LIBD Limburg 80.99 336 *e*P **P** 19 30 10.7 +0.7
LIBD Limburg 80.99 336 *e*P **P** 19 30 10.7 +0.7
USIN University of 80.99 43 *e*P **P** 19 30 09.3 -0.9
comp=Z,409nm,1.3s
PARMO Parma 81.00 45 *e*P **P** 19 30 10.3 +0.1
ERPA Erie 81.02 36 *e*P **P** 19 30 09.6 -0.7
comp=Z,186nm,0.6s
ERPA LR LR
comp=Z,11µm,20.0s
JAVS Javornik 81.03 331 *i*P **P** 19 30 09.5 -0.9
JAVS *e*S **S** 19 40 12.1 -3.5
CAN Canberra 81.03 182 *e*P **P** 19 30 09.9 -0.3
CAN pmax pmax
comp=Z,317nm,1.7s
CAN MLR MLR
comp=Z,26µm,22.0s
CAN Canberra 81.03 182 *e*P **P** 19 30 09.9 -0.3
comp=Z,317nm,1.7s
CAN LR LR
comp=Z,26µm,22.0s
632A Uvalde 81.03 57⇓ P **P** 19 30 10.1 -0.6
baz=81,SNR=22
ECH Echery 81.05 337 *e*P **P** 19 30 10.4 0.0
ECH pmax pmax
comp=Z,523nm,1.1s
ECH MLR MLR
comp=Z,30µm,20.0s
ECH Echery 81.05 337 *e*P **P** 19 30 10.4 0.0
comp=Z,523nm,1.1s
ECH LR LR
comp=Z,30µm,20.0s
ECH Echery 81.05 337 *e*P **P** 19 30 10.5 0.0
MMB Musomiste 81.06 323 P **P** 19 30 11.4 +0.8
EREN Erenkoy 81.06 313 *e*P **P** 19 30 10.0 -0.7
ISP Isparta 81.07 317 PFAKE 19 30 20.0 +9.2
ISP LR LR
comp=Z,44µm,20.0s
FETA Feichten 81.09 334 *i*P **P** 19 30 11.3 +0.4
comp=Z,424nm,1.2s,SNR=245
FETA Feichten 81.09 334 *i*P **P** 19 30 11.3 +0.4
comp=Z,424nm,1.2s
KKB Krupnik 81.10 324 P **P** 19 30 11.6 +0.8
DAVA Damuels 81.11 335 *i*P **P** 19 30 11.2 +0.3
comp=Z,520nm,1.1s,SNR=237
DAVA Damuels 81.11 335 *i*P **P** 19 30 11.2 +0.3
comp=Z,520nm,1.1s
HWQ Hawqa 81.11 311 *e*P **P** 19 30 11.1 0.0
HTL Hartland 81.11 345⇑ *e*P **P** 19 30 10.9 +0.3
HTL AMB AMB 19 30 14.0
comp=Z,853nm,1.8s
HTL *e* 19 40 06.0
HTL AMS AMS 20 08 03.5
comp=Z,16µm,22.6s
HTL Hartland 81.11 345 P **P** 19 30 10.9 +0.3
HTL AMB AMB 19 30 14.0
comp=Z,853nm,1.8s
HTL 19 40 06.0
HTL AMS AMS 20 08 03.5
comp=Z,16µm,22.6s
VAL Valentia 81.12 349 *e*P **P** 19 30 08.4 -2.2
VAL Valentia 81.12 349⇓ *i*S **S** 19 40 13.9 -2.2
VAL *e* 19 51 50.1
FELD Feldberg im Sc 81.12 336 *e*P **P** 19 30 10.8 -0.1
PAGF Fort de Pagny 81.13 338⇑ *i*P **P** 19 30 11.5 +0.7
comp=Z,687nm,1.1s
PAGF Fort de Pagny 81.13 338⇑ *i*P **P** 19 30 11.5 +0.7
comp=Z,687nm,1.0s
KHL Karahalli 81.15 317 *e*P **P** 19 30 11.1 0.0
FRNY Flat Rock 81.15 31 *e*P **P** 19 30 09.0 -2.0
comp=Z,39nm,0.9s
UALR University of 81.15 48 *e*P **P** 19 30 09.6 -1.5
comp=Z,870nm,2.3s
NVR Nevrokopi 81.21 323 P **P** 19 30 11.6 +0.2
NVR Nevrokopi 81.21 323 *e*P **P** 19 30 11.6 +0.2
PVMO Portageville 81.22 46 *e*P **P** 19 30 10.1 -1.3
comp=Z,210nm,0.6s
KAVA Kavala 81.22 322 P **P** 19 30 11.6 +0.2
TRI Trieste 81.29 331 *e*P **P** 19 30 10.4 -1.3
TRI pmax pmax
comp=Z,720nm,1.3s
TRI Trieste 81.29 331 *e*P **P** 19 30 10.4 -1.3
comp=Z,720nm,1.3s
ACSO Alum Creek Sta 81.30 39 *e*P **P** 19 30 10.8 -1.1
comp=Z,197nm,1.0s
ACSO LR LR
comp=Z,13µm,20.0s
BCK Bucak 81.33 316 *e*P **P** 19 30 09.7 -2.4
PLE Pljevlja 81.34 327⇑ *i*P **P** 19 30 12.0 -0.1
ALLY Alegheny Colle 81.34 36 *e*P **P** 19 30 11.2 -0.8
comp=Z,227nm,0.8s
MEZF Maizieres J'vi 81.35 338⇑ *i*P **P** 19 30 12.6 +0.7
comp=Z,3µm,1.4s
MEZF Maizieres J'vi 81.35 338⇑ *i*P **P** 19 30 12.6 +0.7
comp=Z,3µm,1.4s
THEF They Montfort 81.36 337 *e*P **P** 19 30 12.3 +0.3
THEF They Montfort 81.36 337 *e*P **P** 19 30 12.3 +0.3
THEF They Montfort 81.36 337 *e*P **P** 19 30 12.3 +0.3
PQI Presque Isle 81.38 26 *e*P **P** 19 30 10.9 -1.2
comp=Z,502nm,1.3s
MOF Molkenrain 81.39 337 *e*P **P** 19 30 12.1 -0.2
MOF Molkenrain 81.39 337 *e*P **P** 19 30 12.1 -0.2
MOF Molkenrain 81.39 337 *e*P **P** 19 30 12.1 -0.2
EZN Ezine 81.39 320 *e*P **P** 19 30 11.6 -0.8
KULA Kula-Manisa 81.40 318 *e*P **P** 19 30 11.6 -0.9
HBAR Harrisburg 81.41 47 *e*P **P** 19 30 12.0 -0.5
GNAR Gosnell 81.41 46 *e*P **P** 19 30 10.9 -1.5
comp=Z,7µm,1.2s
WCI Wyandotte Cave 81.42 42 *e*P **P** 19 30 11.5 -1.1
WCI pmax pmax
comp=Z,278nm,1.3s
WCI Wyandotte Cave 81.42 42 *e*P **P** 19 30 11.5 -1.1
comp=Z,278nm,1.3s
HAU Haudompre 81.46 337⇑ *i*P **P** 19 30 12.7 +0.1
comp=Z,2µm,1.5s
HAU *e*R
comp=Z,42µm,20.5s
HAU Haudompre 81.46 337⇑ *i*P **P** 19 30 12.7 +0.1
HAU pmax pmax
comp=Z,2µm,1.5s
HAU Haudompre 81.46 337⇑ *i*P **P** 19 30 12.7 +0.1
comp=Z,2µm,1.5s
AKS Akhisar 81.49 319 *e*P **P** 19 30 13.7 +0.8
732A Laxson Ranch, 81.50 57⇓ P **P** 19 30 12.8 -0.3
baz=81,SNR=43
SRS Serrai 81.51 323 P **P** 19 30 13.1 +0.1
IVA Berane 81.53 326⇑ *i*P **P** 19 30 12.8 -0.3
GLAT Glass 81.54 45 *e*P **P** 19 30 12.3 -0.9
DYA Yadsworthy 81.55 344⇑ *e*P **P** 19 30 12.4 -0.6
DYA AMB AMB 19 30 16.1
comp=Z,1µm,1.5s
DYA *e* 19 40 14.1
DYA AMS AMS 20 00 22.4
comp=Z,14µm,30.7s
DYA Yadsworthy 81.55 344 P **P** 19 30 12.4 -0.6
DYA AMB AMB 19 30 16.1
comp=Z,1µm,1.5s
DYA 19 40 14.1
DYA AMS AMS 20 00 22.4
comp=Z,14µm,30.7s
PHNC Paralimni 81.55 313 P **P** 19 30 12.8 -0.4
comp=Z,7.6nm,1.3s
BHL Bhannes 81.55 311 *e*P **P** 19 30 13.6 +0.2
LFK Lefkose 81.59 313 *e*P **P** 19 30 13.4 -0.1
KAAM Kaadhehdhoo 81.60 262 P **P** 19 30 15.8 +2.1
comp=Z,545nm,2.3s,comp=Z,12µm
SFTF Sexfontaines 81.63 338⇑ *i*P **P** 19 30 13.9 +0.5
comp=Z,2µm,1.0s
SFTF Sexfontaines 81.63 338⇑ *i*P **P** 19 30 13.9 +0.5
comp=Z,2µm,1.0s
UPM Unac-Piva 81.63 327⇑ *i*P **P** 19 30 13.6 -0.2
BBS Basel-Blauen 81.64 336 *e*P **P** 19 30 13.2 -0.3
BBS Basel-Blauen 81.64 336 *e*P **P** 19 30 13.2 -0.3
NCB Newcomb 81.67 31 *e*P **P** 19 30 12.3 -1.4
comp=Z,117nm,1.1s
NCB LR LR
comp=Z,10µm,22.0s
PMOR Pomariorio Ree 81.68 122 *e*P P 19 30 18.2 +4.2
comp=Z,278nm,1.2s
SKO Skopje 81.68 325 P **P** 19 30 15.0 +1.2
SKO Skopje 81.68 325 *i*P **P** 19 30 14.8 +1.0
UTMT University of 81.69 45 *e*P **P** 19 30 13.0 -0.9
comp=Z,634nm,1.1s
ANTB Antalya 81.74 316 *e*P **P** 19 30 11.6 -2.6
PVY Plav 81.74 326⇑ *i*P **P** 19 30 13.8 -0.5
KNT Kendrikon 81.77 323 P **P** 19 30 14.5 +0.2
VAY Valandovo 81.77 324 P **P** 19 30 14.1 -0.1
VAY Valandovo 81.77 324 *i*P **P** 19 30 14.2 -0.1
RCY Rachaya 81.77 310 *e*P **P** 19 30 15.6 +0.9
HALT Halls 81.80 46 *e*P **P** 19 30 15.8 +1.3
AKIN Ak¯-nc¯-lar- K 81.83 313 *e*P **P** 19 30 16.5 +1.8
MAMC Mammari 81.83 313 P **P** 19 30 14.6 -0.1
DENT Denizli 81.83 317 *e*P **P** 19 30 15.6 +0.8
LIA Limnos Island 81.84 321 P **P** 19 30 14.4 -0.3
LIA Limnos Island 81.84 321 *e*P **P** 19 30 14.7 0.0
SOH Sokhos 81.86 323 P **P** 19 30 14.5 -0.3
SOH Sokhos 81.86 323 *e*P **P** 19 30 14.6 -0.3
PRK Paraskevi 81.89 320 P **P** 19 30 14.9 -0.1
BCI Bajram Curri 81.89 326 *e*PN **P** 19 30 14.7 -0.3
NVLJ Novalja 81.92 330 P **P** 19 30 14.0 -1.0
NKY Niksic 81.93 327⇑ *i*P **P** 19 30 14.9 -0.4
LOMF Lomont 81.93 337 *e*P **P** 19 30 15.5 +0.3
LOMF Lomont 81.93 337 *e*P **P** 19 30 15.5 +0.3
LOMF Lomont 81.93 337 *e*P **P** 19 30 15.5 +0.3
CSS Prodhromos 81.94 313 P **P** 19 30 15.5 +0.2
comp=Z,7.6nm,1.3s
CSS Prodhromos 81.94 313 P **P** 19 30 15.5 +0.2
CSS Prodhromos 81.94 313 *e*P **P** 19 30 15.4 +0.2
comp=Z,2µm,1.8s
CSS LR LR
comp=Z,27µm,20.0s
OUR Ouranopolis 82.00 322 P **P** 19 30 15.3 -0.2
TUE Stuetta 82.00 335 *e*P **P** 19 30 15.7 0.0
comp=Z,1µm,1.5s
TUE *e*S **S** 19 40 22.9 -3.1
TUE LR LR
comp=Z,32µm,21.0s
MDV Middlebury 82.02 31 *e*P **P** 19 30 13.9 -1.6
BRY Bratogost 82.03 327⇑ *i*P **P** 19 30 15.2 -0.6
GLHS Glhisar (BURDU 82.09 317 *e*P **P** 19 30 14.2 -2.0
MET Memphis--Engin 82.12 47 P **P** 19 30 18.9 +2.7
comp=Z,411nm,1.0s
IZM Izmir 82.13 319 *e*P **P** 19 30 15.8 -0.5
GRG Griva 82.14 324 P **P** 19 30 16.0 -0.3
GRG Griva 82.14 324 *e*P **P** 19 30 16.1 -0.3
HORT Hortiatis 82.15 323 P **P** 19 30 16.0 -0.4
ALFC Alevga 82.16 314 P **P** 19 30 16.0 -0.5
comp=Z,4.5nm,0.5s
TTG Podgorica 82.16 326⇑ *i*P **P** 19 30 15.9 -0.4
THE Thessaloniki 82.18 323 P **P** 19 30 15.6 -0.8
THE Thessaloniki 82.18 323 *e*P **P** 19 30 16.2 -0.2
PLG Polygyros 82.19 323 P **P** 19 30 16.2 -0.4
PLG Polygyros 82.19 323 *e*P **P** 19 30 16.1 -0.5
ASF Jabal al Asfar 82.22 309 LR LR 20 12 57.2
comp=Z,22µm,18.2s,baz=263,slow=40
ELL Elmali 82.22 316 *e*P **P** 19 30 15.3 -1.6
PUK Puka 82.24 326 *e*PN **P** 19 30 16.7 -0.1
BLCB Balcova 82.25 319 *e*P **P** 19 30 15.3 -1.6
LBNH Lisbon 82.25 30 *e*P **P** 19 30 16.2 -0.6
LBNH pmax pmax
comp=Z,847nm,2.1s
LBNH MLR MLR
comp=Z,14µm,19.0s
LBNH Lisbon 82.25 30 *e*P **P** 19 30 16.2 -0.6
comp=Z,847nm,2.1s
LBNH LR LR
comp=Z,14µm,19.0s
PHP Peshkopia 82.33 325 *e*PN **P** 19 30 16.9 -0.3
PHP Peshkopia 82.33 325 P **P** 19 30 17.0 -0.3
SZAC Souni-Zanaja 82.33 313 P **P** 19 30 19.6 +2.2
WVT Waverly 82.37 45 *e*P **P** 19 30 16.3 -1.2
WVT pmax pmax
comp=Z,119nm,1.0s
WVT Waverly 82.37 45 *e*P **P** 19 30 16.3 -1.2
comp=Z,119nm,1.0s
STON Ston 82.37 328 P **P** 19 30 15.8 -1.6
MMAI Mount Meron Ar 82.37 310 LR LR 20 11 48.5
comp=Z,80µm,20.0s,baz=50,slow=39
ACCN Adirondack Com 82.38 31 *e*P **P** 19 30 16.1 -1.4
comp=Z,114nm,1.1s
JSA Saint Aubin 82.39 343⇑ *e*P **P** 19 30 17.4 +0.1
JSA AMB AMB 19 30 20.7
comp=Z,1µm,1.6s
JSA *e* 19 40 24.5
JSA AMS AMS 20 06 49.9
comp=Z,22µm,23.3s
JSA Saint Aubin 82.39 343 P **P** 19 30 17.4 +0.1
JSA AMB AMB 19 30 20.7
comp=Z,1µm,1.6s
JSA 19 40 24.5
JSA AMS AMS 20 06 49.9
comp=Z,22µm,23.3s
AKMC Akamas 82.39 314 P **P** 19 30 17.8 +0.1
BUM Brajici-Budva 82.41 327⇑ *i*P **P** 19 30 17.6 -0.1
HCY Herceg Novi 82.43 327⇑ *i*P **P** 19 30 16.9 -0.9
FLN La Foliniere 82.43 342⇑ *i*P **P** 19 30 17.9 +0.3
comp=Z,3µm,1.5s
FLN *e*R
comp=Z,41µm,21.0s
FLN La Foliniere 82.43 342⇑ *i*P **P** 19 30 17.9 +0.3
FLN pmax pmax
comp=Z,3µm,1.5s
FLN La Foliniere 82.43 342⇑ *i*P **P** 19 30 17.9 +0.3
comp=Z,3µm,1.5s
RBK Rabkut 82.45 287 P **P** 19 30 18.6 +0.4
SNR=34

PAIG Paliouri 82.46 322 P P 19 30 17.7 -0.2
PAIG Paliouri 82.46 322 *e*P P 19 30 17.5 -0.4
PPCY Paphos 82.50 314 P P 19 30 18.0 -0.2
LDF La Druitiere 82.51 341⇑*i*P P 19 30 18.2 +0.1
comp=Z,3µm,1.6s
LDF La Druitiere 82.51 341⇑*i*P P 19 30 18.2 +0.1
LDF pmax pmax
comp=Z,3µm,1.6s
LDF La Druitiere 82.51 341⇑*i*P P 19 30 18.2 +0.1
comp=Z,3µm,1.6s
BIA Bitola 82.53 324 P P 19 30 17.4 -1.0
BIA Bitola 82.53 324 *e*P P 19 30 17.3 -1.1
BINY Binghamton 82.54 33 *e*P P 19 30 16.7 -1.6
comp=Z,1µm,2.1s
BINY LR LR
comp=Z,10µm,19.0s
ULC Ulcinj 82.56 326⇑*i*P P 19 30 18.0 -0.5
HNH Hanover 82.59 30 *e*P P 19 30 17.7 -0.9
comp=Z,430nm,1.3s
YER Yerkesik 82.68 318 *e*P P 19 30 17.9 -1.3
CHOS Chios island 82.69 320 P P 19 30 19.2 -0.1
FETY Fethiye 82.71 317 *e*P P 19 30 18.2 -1.1
FNA Florina 82.71 324 P P 19 30 18.9 -0.4
FNA Florina 82.71 324 *e*P P 19 30 18.9 -0.4
PPT Papeete 82.73 124 LR LR 19 59 30.6
comp=Z,35µm,21.8s,baz=260,slow=30
WVL Waterville 82.73 28 *e*P P 19 30 18.3 -0.9
comp=Z,5µm,2.1s
PPT2 Papeete2 82.74 124 *e*P P 19 30 23.8 +4.2
comp=Z,287nm,1.6s
PPT2 *e*S S 19 40 32.6 -1.1
PPT2 comp=Z,8µm,15.2s *e*SS SS 19 46 03.3 +5.8
comp=Z,9µm,27.5s
PPT2 *e*LR LR 19 56 25.8
comp=Z,79µm,23.0s,baz=324
MLSB Milas 82.79 318 *e*P P 19 30 19.6 -0.2
PAE Paea 82.80 125 *e*P P 19 30 23.8 +4.0
comp=Z,51nm,1.3s
LOR Lormes 82.80 338⇑*i*P P 19 30 19.9 +0.3
comp=Z,3µm,1.3s
LOR *e*R
comp=Z,68µm,22.2s
LOR Lormes 82.80 338⇑*i*P P 19 30 19.9 +0.3
comp=Z,3µm,1.3s
DALT Dalyan (Mudla) 82.81 317 *e*P P 19 30 19.3 -0.6
CABF La Chapelle 82.81 337⇑*i*P P 19 30 20.2 +0.4
comp=Z,1µm,1.5s
CABF La Chapelle 82.81 337⇑*i*P P 19 30 20.2 +0.4
CABF pmax pmax
comp=Z,1µm,1.5s
CABF La Chapelle 82.81 337⇑*i*P P 19 30 20.2 +0.4
comp=Z,1µm,1.5s
LIT Litokhoron 82.82 323 P P 19 30 19.0 -0.9
LIT Litokhoron 82.82 323 *e*P P 19 30 19.0 -0.9
TIR Tirane 82.84 325 *e*PN P 19 30 19.9 0.0
TIR Tirane 82.84 325 P P 19 30 19.7 -0.2
TIR Tirane 82.84 325 *e*P P 19 30 19.6 -0.2
TIR pmax pmax
comp=Z,730nm,1.1s
TIR MLR MLR
comp=Z,52µm,21.0s
TIR Tirane 82.84 325 *e*P P 19 30 19.6 -0.2
comp=Z,730nm,1.1s
TIR LR LR
comp=Z,52µm,21.0s
TIAR Tiarei 82.85 124 *e*P P 19 30 24.0 +3.9
comp=Z,241nm,1.1s
OXF Oxford 82.86 47 *e*P P 19 30 18.8 -1.3
OXF pmax pmax
comp=Z,517nm,1.2s
OXF MLR MLR
comp=Z,13µm,22.0s
OXF Oxford 82.86 47 *e*P P 19 30 18.8 -1.3
comp=Z,517nm,1.2s
OXF LR LR
comp=Z,13µm,22.0s
GRR Gorron 82.87 342⇑*i*P P 19 30 20.4 +0.5
comp=Z,4µm,1.4s
GRR Gorron 82.87 342⇑*i*P P 19 30 20.4 +0.5
GRR pmax pmax
comp=Z,4µm,1.4s
GRR Gorron 82.87 342⇑*i*P P 19 30 20.4 +0.5
comp=Z,4µm,1.4s
OG01 Vacheresse 82.90 336 *e*P P 19 30 20.4 +0.1
OG01 Vacheresse 82.90 336 *e*P P 19 30 20.4 +0.1
TRY Troy 82.95 32 *e*P P 19 30 18.9 -1.5
comp=Z,281nm,1.3s
KZN Kozani 82.95 324 P P 19 30 20.1 -0.5
KZN Kozani 82.95 324 *e*P P 19 30 19.8 -0.8
HKT Hockley 82.96 54 *e*P P 19 30 20.9 +0.3
HKT pmax pmax
comp=Z,157nm,1.5s
HKT Hockley 82.96 54 *e*P P 19 30 20.9 +0.3
comp=Z,157nm,1.5s
AOS Alonnisos 83.01 322 P P 19 30 20.6 -0.2
FFD Franklin Falls 83.02 30 *e*P P 19 30 20.3 -0.5
comp=Z,6µm,2.1s
SSF Saint Saulge 83.08 339⇑*i*P P 19 30 21.4 +0.4
comp=Z,616nm,1.1s
SSF Saint Saulge 83.08 339⇑*i*P P 19 30 21.4 +0.4
SSF pmax pmax
comp=Z,616nm,1.1s
SSF Saint Saulge 83.08 339⇑*i*P P 19 30 21.4 +0.4
comp=Z,616nm,1.1s
TVO Taravao 83.08 124 *e*P P 19 30 25.6 +4.2
comp=Z,334nm,1.2s
HYF Humbligny 83.11 339⇑*i*P P 19 30 22.0 +0.8
HYF Humbligny 83.11 339⇑*i*P P 19 30 22.0 +0.8
SSPA Standing Stone 83.12 36 *e*P P 19 30 20.2 -1.1
comp=Z,1µm,2.0s
XOR Xorichti 83.14 322 P P 19 30 20.8 -0.7
NEST Nestorio 83.15 324 P P 19 30 21.4 -0.3
PLAL Pickwick Lake 83.16 45 PFAKE 19 30 30.0 +8.4
PLAL LR LR
comp=Z,13µm,21.0s
ABTO Aybut 83.16 288 P P 19 30 22.5 +0.5
SNR=123
SKIA Skiathos 83.19 322 P P 19 30 21.1 -0.6
BODT Bodrum 83.20 318 *e*P P 19 30 20.3 -1.5
EMMW East Machias 83.31 27 *e*P P 19 30 21.4 -0.9
comp=Z,684nm,1.4s
DAT Datca 83.34 318 *e*P P 19 30 21.1 -1.6
OUZ Omahuta 83.35 162 *e*P P 19 30 21.3 -0.9
comp=Z,95nm,1.5s
SGMF Saint Gilles 83.36 343⇑*i*P P 19 30 23.0 +0.6
comp=Z,3µm,1.4s
SGMF Saint Gilles 83.36 343⇑*i*P P 19 30 23.0 +0.6
SGMF Saint Gilles 83.36 343⇑*i*P P 19 30 23.0 +0.6
comp=Z,3µm,1.4s
AVF Avril sur Loir 83.37 339⇑*i*P P 19 30 23.1 +0.6
comp=Z,5µm,1.5s
AVF Avril sur Loir 83.37 339⇑*i*P P 19 30 23.1 +0.6
AVF Avril sur Loir 83.37 339⇑*i*P P 19 30 23.1 +0.6
comp=Z,5µm,1.5s
SMF Signal de Mont 83.38 338⇑*i*P P 19 30 23.2 +0.6
comp=Z,5µm,1.4s
SMF Signal de Mont 83.38 338⇑*i*P P 19 30 23.2 +0.6
SMF Signal de Mont 83.38 338⇑*i*P P 19 30 23.2 +0.6
comp=Z,5µm,1.4s
ROSF Rostrenen 83.42 343⇑*i*P P 19 30 23.4 +0.6
comp=Z,3µm,1.4s
ROSF Rostrenen 83.42 343⇑*i*P P 19 30 23.4 +0.6
ROSF Rostrenen 83.42 343⇑*i*P P 19 30 23.4 +0.6
comp=Z,3µm,1.4s
THL Klokotos Trika 83.47 323 P P 19 30 21.4 -1.7
THL Klokotos Trika 83.47 323 *e*P P 19 30 21.5 -1.7
ARG Arkhangelos 83.50 317 P P 19 30 23.3 -0.1
MRKA Markates 83.52 322 P P 19 30 22.8 -0.7
SMIA Simia 83.54 322 P P 19 30 23.0 -0.6
BST Brest 83.61 344 *e*P P 19 30 23.3 -0.4
BST Brest 83.61 344 *e*P P 19 30 23.3 -0.4
LPL La Plagne 83.63 336⇑*i*P P 19 30 25.1 +0.9
comp=Z,1µm,1.2s
LPL La Plagne 83.63 336⇑*i*P P 19 30 25.1 +0.9
LPL pmax pmax
comp=Z,1µm,1.2s
LPL La Plagne 83.63 336⇑*i*P P 19 30 25.1 +0.9
comp=Z,1µm,1.2s
LPG La Plagne 83.65 336⇑*i*P P 19 30 25.3 +1.0
comp=Z,2µm,1.2s
LPG La Plagne 83.65 336⇑*i*P P 19 30 25.3 +1.0
LPG pmax pmax
comp=Z,2µm,1.2s
LPG La Plagne 83.65 336⇑*i*P P 19 30 25.3 +1.0
comp=Z,2µm,1.2s

MRMA Marmari 83.71 321 P P 19 30 25.2 +0.8
BGF Bois d'Agland 83.72 339⇑*i*P P 19 30 24.9 +0.6
comp=Z,3µm,1.5s
BGF Bois d'Agland 83.72 339⇑*i*P P 19 30 24.9 +0.6
BGF Bois d'Agland 83.72 339⇑*i*P P 19 30 24.9 +0.6
comp=Z,3µm,1.5s
VLO Vlora 83.73 325 *e*PN P 19 30 25.7 +1.2
VLC Villacollemand 83.76 333 *e*P P 19 30 24.8 +0.2
comp=Z,657nm,1.2s
VLC LR LR
comp=Z,55µm,20.0s
ATAL Atalanti 83.77 322 P P 19 30 23.8 -0.9
AGG Agios Georgios 83.79 323 P P 19 30 23.3 -1.6
AGG Agios Georgios 83.79 323 *e*P P 19 30 23.4 -1.5
QUIF Quistinic 83.80 343⇑*i*P P 19 30 25.1 +0.4
comp=Z,2µm,1.8s
QUIF Quistinic 83.80 343⇑*i*P P 19 30 25.1 +0.4
QUIF pmax pmax
comp=Z,2µm,1.8s
QUIF Quistinic 83.80 343⇑*i*P P 19 30 25.1 +0.4
comp=Z,2µm,1.8s
LKR Lokris 83.82 322 P P 19 30 23.8 -1.2
LKR Lokris 83.82 322 *e*P P 19 30 23.8 -1.2
QUA2 Belchertown 83.82 31 *e*P P 19 30 23.3 -1.6
comp=Z,172nm,1.2s
MEH Mehetia 83.84 123 *e*P P 19 30 29.3 +4.1
comp=Z,305nm,1.3s
AXAR Agios Charalam 83.87 322 P P 19 30 24.3 -0.9
JAN Janina 83.88 324 P P 19 30 25.2 -0.1
JAN Janina 83.88 324 *e*P P 19 30 25.4 +0.1
MAKR Makrakomi, Fth 83.88 323 P P 19 30 24.2 -1.1
PTL Penteli 83.94 321 P P 19 30 24.1 -1.6
APE Apeiranthos 84.01 319 P P 19 30 24.1 -1.9
APE Apeiranthos 84.01 319⇑*i*P P 19 30 24.6 -1.4
TZTN Tazewell 84.07 42 *e*P P 19 30 25.3 -1.0
comp=Z,124nm,1.0s
ATH Athens Observa 84.07 321 P P 19 30 25.0 -1.3
ATH Athens Observa 84.07 321 *e*P P 19 30 25.5 -0.8
BNI Bardonecchia 84.07 336 *e*P P 19 30 26.4 +0.1
BNI *e*S S 19 40 43.9 -3.0
BNI pmax pmax
comp=Z,258nm,1.0s
BNI MLR MLR
comp=Z,51µm,19.0s
BNI Bardonecchia 84.07 336 *e*P P 19 30 26.4 +0.1
comp=Z,258nm,1.0s
BNI *e*S S 19 40 43.9 -3.0
BNI LR LR
comp=Z,51µm,19.0s
WES Weston 84.09 30 *e*P P 19 30 25.4 -0.9
WES pmax pmax
comp=Z,755nm,1.3s
WES Weston 84.09 30 *e*P P 19 30 25.4 -0.9
comp=Z,754nm,1.3s
GDM Grand'Maison 84.09 336 *e*P P 19 30 27.4 +0.9
GDM Grand'Maison 84.09 336 *e*P P 19 30 27.4 +0.9
VBMS Vicksburg 84.09 49 *e*P P 19 30 25.9 -0.6
comp=Z,395nm,1.2s
VBMS LR LR
comp=Z,13µm,20.0s
EVR Evrytania 84.10 323 P P 19 30 25.6 -0.9
EVR Evrytania 84.10 323 *e*P P 19 30 25.6 -0.9
AGO Saint Agoulin 84.11 338 *e*P P 19 30 27.2 +0.8
AGO Saint Agoulin 84.11 338 *e*P P 19 30 27.2 +0.8
TCF Toulx Ste Croi 84.13 339⇑*i*P P 19 30 27.3 +0.8
comp=Z,4µm,1.7s
TCF Toulx Ste Croi 84.13 339⇑*i*P P 19 30 27.3 +0.8
TCF Toulx Ste Croi 84.13 339⇑*i*P P 19 30 27.3 +0.8
comp=Z,4µm,1.7s
GRN Grenoble 84.16 336 *e*P P 19 30 27.8 +1.1
GRN Grenoble 84.16 336 *e*P P 19 30 27.8 +1.1
GRN Grenoble 84.16 336 *e*P P 19 30 27.8 +1.1
IGT Igoumenitsa 84.19 324 P P 19 30 26.5 -0.4
DSF Desfina 84.22 322 P P 19 30 25.1 -2.0
KEK Kerkira 84.26 325 P P 19 30 26.7 -0.5
KEK Kerkira 84.26 325 *e*P P 19 30 27.1 -0.1
MBDF Montbardon 84.34 336⇑*i*P P 19 30 28.0 +0.3
comp=Z,859nm,1.3s
MBDF Montbardon 84.34 336⇑*i*P P 19 30 28.0 +0.3
MBDF pmax pmax
comp=Z,859nm,1.3s
MBDF Montbardon 84.34 336⇑*i*P P 19 30 28.0 +0.3
comp=Z,859nm,1.3s
PAL Palisades 84.36 33 *e*P P 19 30 26.1 -1.5
PAL pmax pmax
comp=Z,136nm,0.9s
PAL Palisades 84.36 33 *e*P P 19 30 26.1 -1.5
comp=Z,136nm,0.9s
LTK Loutraki 84.36 322 P P 19 30 25.7 -2.0
LTK Loutraki 84.36 322 *e*P P 19 30 26.3 -1.4
AQU L'Aquila 84.37 330 *e*P P 19 30 27.9 +0.1
comp=Z,1µm,1.1s
AQU LR LR
comp=Z,66µm,22.0s
BRNJ Basking Ridge 84.38 33 *e*P P 19 30 27.5 -0.3
comp=Z,43µm,0.8s
MFF Saint Martin d 84.40 341⇑*i*P P 19 30 28.6 +0.8
comp=Z,2µm,1.4s
MFF Saint Martin d 84.40 341⇑*i*P P 19 30 28.6 +0.8
MFF pmax pmax
comp=Z,2µm,1.4s
MFF Saint Martin d 84.40 341⇑*i*P P 19 30 28.6 +0.8
comp=Z,2µm,1.4s
KALE Kalithea 84.40 322 *e*P P 19 30 26.7 -1.3
ORIF Oris-en-Rattie 84.42 336⇑*i*P P 19 30 29.0 +0.9
comp=Z,419nm,0.7s
ORIF *e*R
comp=Z,51µm,21.0s
ORIF Oris-en-Rattie 84.42 336⇑*i*P P 19 30 29.0 +0.9
ORIF pmax pmax
comp=Z,419nm,0.7s
ORIF Oris-en-Rattie 84.42 336⇑*i*P P 19 30 29.0 +0.9
comp=Z,419nm,0.7s
BRYW Bryant College 84.43 31 *e*P P 19 30 27.0 -1.1
comp=Z,170nm,0.8s
PYM Petit Puy Mans 84.43 338 *e*P P 19 30 28.3 +0.3
PYM Petit Puy Mans 84.43 338 *e*P P 19 30 28.3 +0.3
PYM Petit Puy Mans 84.43 338 *e*P P 19 30 28.3 +0.3
YLE Yale 84.45 32 *e*P P 19 30 26.4 -1.7
comp=Z,143nm,1.0s
TRIZ Trizonia 84.45 322 P P 19 30 27.0 -1.2
SSB Saint Sauveur 84.46 337 *e*P P 19 30 28.4 +0.2
SSB pmax pmax
comp=Z,1µm,1.4s
SSB MLR MLR
comp=Z,15µm,19.0s
SSB Saint Sauveur 84.46 337 *e*P P 19 30 28.4 +0.2
comp=Z,1µm,1.4s
SSB LR LR
comp=Z,15µm,19.0s
SSB Saint Sauveur 84.46 337 *e*P P 19 30 28.9 +0.7
NWAO Narrogin (SRO) 84.47 208 *e*P P 19 30 27.8 -0.3
comp=Z,329nm,1.3s
NWAO LR LR
comp=Z,5µm,20.0s
NWAO Narrogin (SRO) 84.47 208 P P 19 30 28.6 +0.6
SNR=18
NWAO Narrogin (SRO) 84.47 208 P P 19 30 27.9 -0.1
comp=Z,183nm,1.0s,baz=28,slow=6.1
EFP Efpalio 84.47 322 P P 19 30 27.9 -0.4
EFP Efpalio 84.47 322 *e*P P 19 30 27.8 -0.5
CPCT Cooper Cave 84.50 43 *e*P P 19 30 27.4 -1.1
CPNY Central Park 84.52 33 *e*P P 19 30 27.7 -0.7
comp=Z,138nm,0.8s
SURF Saint Ours 84.56 335 *e*P P 19 30 29.3 +0.4
SURF Saint Ours 84.56 335 *e*P P 19 30 29.3 +0.4
SDMD Soldier's Deli 84.58 35 *e*P P 19 30 25.6 -3.3
comp=Z,2µm,2.2s
LAKA Lakka 84.60 322 *e*P P 19 30 28.3 -0.7
THR3 Thira Island, 84.61 319 P P 19 30 27.0 -2.0
UPR University Cam 84.64 322 P P 19 30 28.4 -0.7
UPR University Cam 84.64 322 *e*P P 19 30 29.4 +0.3
DID Didima 84.67 321 P P 19 30 26.9 -2.5
DID Didima 84.67 321 *e*P P 19 30 27.3 -2.1
TKL Tuckaleechee C 84.69 42 *e*P P 19 30 28.1 -1.3
TKL Tuckaleechee C 84.69 42 P P 19 30 29.4 -0.1
comp=Z,56nm,0.8s,baz=290,slow=0.5,SNR=29
TKL LR LR 20 12 52.7
comp=Z,17µm,19.4s,baz=331,slow=39
LKD2 Lefkada island 84.69 324 P P 19 30 28.7 -0.7
LKD2 Lefkada island 84.69 324 *e*P P 19 30 29.2 -0.2
GUR Goura 84.70 322 P P 19 30 28.2 -1.4
GUR Goura 84.70 322 *e*P P 19 30 28.7 -0.9
SAOF Saorge 84.79 335 *e*P P 19 30 29.8 -0.1
SAOF Saorge 84.79 335 *e*P P 19 30 29.8 -0.1

SAOF Saorge 84.79 335 *e*P P 19 30 29.8 -0.1
VIVF Saint-Julien-l 84.82 337⇑*i*P P 19 30 30.9 +0.9
comp=Z,3µm,1.6s
VIVF Saint-Julien-l 84.82 337⇑*i*P P 19 30 30.9 +0.9
VIVF Saint-Julien-l 84.82 337⇑*i*P P 19 30 30.9 +0.9
comp=Z,3µm,1.6s
AUTN L'Aution 84.82 335 *e*P P 19 30 30.5 +0.3
AUTN L'Aution 84.82 335 *e*P P 19 30 30.5 +0.3
AUTN L'Aution 84.82 335 *e*P P 19 30 30.5 +0.3
LBL Lubilhac 84.85 338 *e*P P 19 30 29.9 -0.3
LBL Lubilhac 84.85 338 *e*P P 19 30 29.9 -0.3
LBL Lubilhac 84.85 338 *e*P P 19 30 29.9 -0.3
TOUF Mont Tournerai 84.86 335 *e*P P 19 30 30.5 +0.1
TOUF Mont Tournerai 84.86 335 *e*P P 19 30 30.5 +0.1
TOUF Mont Tournerai 84.86 335 *e*P P 19 30 30.5 +0.1
FRNF Fournols 84.88 339 *e*P P 19 30 30.9 +0.6
FRNF Fournols 84.88 339 *e*P P 19 30 30.9 +0.6
BLA Blacksburg 84.92 39 *e*P P 19 30 29.8 -0.9
BLA pmax pmax
comp=Z,222nm,1.0s
BLA MLR MLR
comp=Z,15µm,19.0s
BLA Blacksburg 84.92 39 *e*P P 19 30 29.8 -0.9
comp=Z,222nm,1.0s
BLA LR LR
comp=Z,15µm,19.0s
SBF Sospel 84.94 335⇑*i*P P 19 30 30.6 0.0
comp=Z,2µm,1.4s
SBF Sospel 84.94 335⇑*i*P P 19 30 30.6 0.0
SBF pmax pmax
comp=Z,2µm,1.4s
SBF Sospel 84.94 335⇑*i*P P 19 30 30.6 0.0
comp=Z,2µm,1.4s
RLS Riolos of Patr 84.97 323 *e*P P 19 30 30.6 -0.2
MVIF Mont Vial 84.99 335 *e*P P 19 30 31.1 +0.1
MVIF Mont Vial 84.99 335 *e*P P 19 30 31.1 +0.1
MVIF Mont Vial 84.99 335 *e*P P 19 30 31.1 +0.1
REVF Revere 85.07 335 *e*P P 19 30 31.0 -0.3
REVF Revere 85.07 335 *e*P P 19 30 31.0 -0.3
REVF Revere 85.07 335 *e*P P 19 30 31.0 -0.3
VLX Vlachokerasia 85.16 322 P P 19 30 30.6 -1.3
VLX Vlachokerasia 85.16 322 *e*P P 19 30 30.8 -1.1
CALN Calern 85.20 335 *e*P P 19 30 32.3 +0.2
CALN Calern 85.20 335 *e*P P 19 30 32.3 +0.2
CALN Calern 85.20 335 *e*P P 19 30 32.3 +0.2
EIL Elat 85.21 309 LR LR 20 13 30.7
comp=Z,29µm,19.1s,baz=30,slow=39
RJF Les Rejaudoux 85.22 339⇑*i*P P 19 30 32.8 +0.9
comp=Z,1µm,1.3s
RJF *e*R
comp=Z,74µm,22.2s
RJF Les Rejaudoux 85.22 339⇑*i*P P 19 30 32.8 +0.9
RJF pmax pmax
comp=Z,1µm,1.3s
RJF Les Rejaudoux 85.22 339⇑*i*P P 19 30 32.8 +0.9
comp=Z,1µm,1.3s
VLS Valsamata 85.24 323 P P 19 30 31.3 -0.9
VLS Valsamata 85.24 323 *e*P P 19 30 31.6 -0.6
LRAL Lakeview Retre 85.25 46 *e*P P 19 30 30.9 -1.4
comp=Z,101nm,1.2s
LRAL LR LR
comp=Z,10µm,22.0s
ZKR Zakros 85.30 318 P P 19 30 32.3 -0.2
AMT Artemida-Makis 85.31 322 P P 19 30 31.4 -1.2
AMT Artemida-Makis 85.31 322 *e*P P 19 30 31.8 -0.8
SMRF Simiane la Rot 85.38 336⇑*i*P P 19 30 33.9 +1.1
comp=Z,2µm,1.6s
SMRF Simiane la Rot 85.38 336⇑*i*P P 19 30 33.9 +1.1
comp=Z,2µm,1.6s
CBN Corbin 85.39 36 *e*P P 19 30 32.2 -0.6
comp=Z,172nm,0.9s
CBN LR LR
comp=Z,22µm,22.0s
CAF Calviac 85.44 339⇑*i*P P 19 30 34.4 +1.3
comp=Z,3µm,1.6s
CAF Calviac 85.44 339⇑*i*P P 19 30 34.4 +1.3
CAF Calviac 85.44 339⇑*i*P P 19 30 34.4 +1.3
comp=Z,3µm,1.6s
FRF La Foret Royal 85.45 335⇑*i*P P 19 30 33.4 +0.3
comp=Z,2µm,1.5s
FRF La Foret Royal 85.45 335⇑*i*P P 19 30 33.4 +0.3
FRF pmax pmax
comp=Z,2µm,1.5s
FRF La Foret Royal 85.45 335⇑*i*P P 19 30 33.4 +0.3
comp=Z,2µm,1.5s
NPS Neapolis 85.46 318 P P 19 30 32.1 -1.2
VLI Veliai 85.46 321 P P 19 30 30.9 -2.4
VLI Veliai 85.46 321 *e*P P 19 30 31.1 -2.2
ITM Ithomi 85.51 322 P P 19 30 32.2 -1.4
ITM Ithomi 85.51 322 *e*P P 19 30 32.4 -1.2
CUC Castrocucco 85.57 327 *e*P P 19 30 32.1 -1.7
comp=Z,369nm,1.3s
CUC *e*S S 19 41 00.1 -1.6
CUC LR LR
comp=Z,49µm,21.0s
LAST Lasithi 85.60 318 P P 19 30 33.6 -0.5
PGF Pioggiola 85.65 333⇑*i*P P 19 30 34.3 0.0
comp=Z,2µm,1.5s
PGF Pioggiola 85.65 333⇑*i*P P 19 30 34.3 0.0
PGF pmax pmax
comp=Z,2µm,1.5s
PGF Pioggiola 85.65 333⇑*i*P P 19 30 34.3 0.0
comp=Z,2µm,1.5s
DYR Agios Nikonas 85.69 321 P P 19 30 33.4 -1.0
DYR Agios Nikonas 85.69 321 *e*P P 19 30 33.5 -1.0
LMR La Mourre 85.70 335⇑*i*P P 19 30 34.8 +0.5
comp=Z,4µm,1.4s
LMR La Mourre 85.70 335⇑*i*P P 19 30 34.8 +0.5
LMR La Mourre 85.70 335⇑*i*P P 19 30 34.8 +0.5
comp=Z,4µm,1.4s
LFF La Frestale 85.75 340⇑*i*P P 19 30 35.8 +1.2
comp=Z,3µm,1.5s
LFF La Frestale 85.75 340⇑*i*P P 19 30 35.8 +1.2
LFF La Frestale 85.75 340⇑*i*P P 19 30 35.8 +1.2
comp=Z,3µm,1.5s
LASF Ste Croix 85.76 337⇑*i*P P 19 30 36.0 +1.3
comp=Z,2µm,1.5s
LASF Ste Croix 85.76 337⇑*i*P P 19 30 36.0 +1.3
comp=Z,2µm,1.5s
PYL PYLOS 85.83 322 P P 19 30 33.5 -1.6
PYL PYLOS 85.83 322 *e*P P 19 30 33.7 -1.4
TIP Timpagrande 85.92 326 *e*P P 19 30 35.1 -0.5
comp=Z,2µm,1.3s
TIP *e*S S 19 41 00.1 -5.1
TIP LR LR
comp=Z,72µm,20.0s
VAM Vamos 85.99 319 P P 19 30 35.1 -0.8
VAM Vamos 85.99 319 *e*P P 19 30 35.7 -0.2
SIVA Sivas 86.03 319 P P 19 30 35.8 -0.3
KARN Karanos 86.12 319 P P 19 30 35.7 -0.9
KMSC Kings Mountain 86.24 41 ⇓P P 19 30 36.5 -0.7
baz=86,SNR=32
OSPF L'Ospedale 86.39 333 *e*P P 19 30 38.0 +0.1
OSPF L'Ospedale 86.39 333 *e*P P 19 30 38.0 +0.1
GVD Gavdhos 86.51 319 P P 19 30 37.5 -1.0
GVD Gavdhos 86.51 319 *e*P P 19 30 37.3 -1.2
comp=Z,2µm,1.3s
GVD *e*S S 19 41 00.5 -10
HIZ Hauiti 86.78 162 PN P 19 30 39.4 0.0
BRAL Brewton 86.84 47 *e*P P 19 30 39.3 -0.9
comp=Z,314nm,1.0s
BRAL LR LR
comp=Z,12µm,22.0s
MTLF Montolieu 86.88 338⇑*i*P P 19 30 41.4 +1.2
comp=Z,1µm,1.4s
MTLF Montolieu 86.88 338⇑*i*P P 19 30 41.4 +1.2
MTLF pmax pmax
comp=Z,1µm,1.4s
MTLF Montolieu 86.88 338⇑*i*P P 19 30 41.4 +1.2
comp=Z,1µm,1.4s
JSC Jenkinsville 86.99 41 *e*P P 19 30 39.7 -1.1
JSC Jenkinsville 86.99 41 *e*P P 19 30 39.7 -1.1
CEL Celeste 87.05 326 *e*P P 19 30 40.2 -1.0
comp=Z,269nm,1.1s
CEL LR LR
comp=Z,41µm,20.0s
URZ Urewera 87.05 160 P P 19 30 40.0 -0.7
comp=Z,58nm,1.0s
URZ Urewera 87.05 160 LR LR 20 03 19.4
comp=Z,24µm,21.5s,baz=172,slow=31
LRDF Laroque-de-Fa 87.17 338 *e*P P 19 30 41.9 +0.3
LRDF Laroque-de-Fa 87.17 338 *e*P P 19 30 41.9 +0.3
TBI Tubuai 87.39 128 *e*P P 19 30 46.0 +3.3
comp=Z,513nm,1.6s
TBI *e*S S 19 41 22.1 +2.8

TBI eSS SS 19 47 10.3 +4.6
comp=Z,17µm,19.0s
comp=Z,8µm,28.2s
TBI eLR LR 19 58 22.1
comp=Z,65µm,31.0s,baz=320
CARF Carcanieres 87.49 338 eP P **19 30 43.2 -0.1**
CARF Carcanieres 87.49 338 eP P **19 30 43.2 -0.1**
SJAF Saint Jean de 87.50 337 eP P **19 30 43.9 +0.7**
SJAF Saint Jean de 87.50 337 eP P **19 30 43.9 +0.7**
FILF Fillols 87.52 338 eP P **19 30 43.5 +0.2**
FILF Fillols 87.52 338 eP P **19 30 43.5 +0.2**
MLS Moulis 87.53 339 eP P **19 30 42.9 -0.4**
MLS Moulis 87.53 339 eP P **19 30 42.9 -0.4**
EPF Esparros 87.65 339⇑ iP P **19 30 43.0 -0.9**
comp=Z,654nm,1.5s
EPF Esparros 87.65 339⇑ iP P **19 30 43.0 -0.9**
EPF pmax pmax
comp=Z,654nm,1.5s
EPF Esparros 87.65 339⇑ iP P **19 30 43.0 -0.9**
comp=Z,654nm,1.5s
DGAR Diego Garcia 87.68 257 eP P **19 30 42.9 -1.5**
DGAR pmax pmax
comp=Z,1µm,1.3s
DGAR MLR MLR
comp=Z,13µm,22.0s
DGAR Diego Garcia 87.68 257 eP P **19 30 42.9 -1.5**
comp=Z,1µm,1.3s
DGAR LR LR
comp=Z,13µm,22.0s
DGAR Diego Garcia 87.68 257 P P **19 30 45.3 +1.0**
SNR=5.7
CNNC Cliffs of the 87.69 38 eP P **19 30 44.3 +0.2**
comp=Z,160nm,0.9s
CNNC LR LR
comp=Z,17µm,19.0s
TRVZ Turoa 87.69 161 PN P **19 30 45.2 +1.2**
MELF Melles 87.69 339 eP P **19 30 44.2 0.0**
MELF Melles 87.69 339 eP P **19 30 44.2 0.0**
LABF Labassere 87.69 339 eP P **19 30 43.9 -0.3**
LABF Labassere 87.69 339 eP P **19 30 43.9 -0.3**
MTVZ Mangateitei 87.75 162 ePN P **19 30 45.9 +1.8**
ORDF Ordiarp 87.78 340 eP P **19 30 43.2 -1.3**
ORDF Ordiarp 87.78 340 eP P **19 30 43.2 -1.3**
REYF Montagne du Re 87.79 340 eP P **19 30 44.7 0.0**
REYF Montagne du Re 87.79 340 eP P **19 30 44.7 0.0**
OSSF Osses 87.82 340 eP P **19 30 44.6 -0.1**
OSSF Osses 87.82 340 eP P **19 30 44.6 -0.1**
RESF Ens 87.86 339 eP P **19 30 45.3 +0.3**
RESF Ens 87.86 339 eP P **19 30 45.3 +0.3**
VIEF Viey 87.86 339 eP P **19 30 45.0 0.0**
VIEF Viey 87.86 339 eP P **19 30 45.0 0.0**
SJPF Ste Jean 87.94 340⇑ iP P **19 30 46.2 +0.9**
comp=Z,173nm,1.3s
SJPF Ste Jean 87.94 340⇑ iP P **19 30 46.2 +0.9**
SJPF pmax pmax
comp=Z,173nm,1.3s
SJPF Ste Jean 87.94 340⇑ iP P **19 30 46.2 +0.9**
comp=Z,173nm,1.3s
LARF Larrau 87.96 340 eP P **19 30 45.5 +0.1**
LARF Larrau 87.96 340 eP P **19 30 45.5 +0.1**
ETSF Etsaut 87.99 340⇑ iP P **19 30 45.3 -0.3**
comp=Z,259nm,1.1s
ETSF Etsaut 87.99 340⇑ iP P **19 30 45.3 -0.3**
ETSF pmax pmax
comp=Z,259nm,1.1s
ETSF Etsaut 87.99 340⇑ iP P **19 30 45.3 -0.3**
comp=Z,259nm,1.1s
MUKL Al Mukalla 88.06 289⇑ eP P **19 30 46.8 +0.6**
TIGA Tifton 88.23 44 ⇑P P **19 30 46.7 -0.1**
baz=88,SNR=23
VSL Villasalto 88.29 332 eP P **19 30 47.0 0.0**
comp=Z,659nm,1.3s
VSL LR LR
comp=Z,28µm,21.0s
NHSC New Hope 88.46 41 eP P **19 30 47.2 -0.6**
comp=Z,1µm,1.9s
NHSC LR LR
comp=Z,14µm,19.0s
TAU Tasmania Unive 88.65 183 eP P **19 30 48.7 +0.5**
TAU pmax pmax
comp=Z,37nm,1.2s
TAU MLR MLR
comp=Z,12µm,21.0s
TAU Tasmania Unive 88.65 183 eP P **19 30 48.7 +0.5**
comp=Z,37nm,1.2s
TAU LR LR
comp=Z,12µm,21.0s
OGWZ Otaki Gorge 89.06 162 PN pP 19 31 02.8 -2.1
SNZO South Karori 89.44 163 eP P **19 30 50.0 -1.9**
comp=Z,68nm,0.9s
SNZO LR LR
comp=Z,20µm,19.0s
WDD Wield Dalam 89.67 326 eP P **19 30 53.2 -0.3**
comp=Z,348nm,1.1s
WDD LR LR
comp=Z,22µm,20.0s
PBRG Braganca 90.38 344 eP P **19 30 57.6 +0.8**
comp=Z,154nm,1.9s
PBRG Braganca 90.38 344 ePP PP 19 34 32.6 +2.1
PGAV Gavieira, Arco 90.51 345 eP P **19 30 58.4 +0.9**
comp=Z,192nm,1.9s
PGAV Gavieira, Arco 90.51 345 ePP PP 19 34 33.5 +1.9
PGAV eSKSac **SKSac 19 41 24.2 -0.5**
PGAV eS S **19 41 50.1 +1.4**
PGAV eLQ LQ 19 54 59.1
PGAV eLR LR 20 02 26.1
comp=Z,18µm,22.0s
PCAB Cabril 90.71 345 eP P **19 30 59.2 +0.9**
comp=Z,187nm,1.9s
LBOS 90.98 291⇑ eP P **19 31 00.8 +0.5**
POLO Lamas de Olo 91.00 344 eP P **19 31 00.5 +0.8**
comp=Z,116nm,1.6s
POLO Lamas de Olo 91.00 344 ePP PP 19 34 41.2 +5.8
MVO Moncorvo 91.05 344 eP P **19 31 00.8 +0.8**
comp=Z,156nm,1.6s
MVO Moncorvo 91.05 344 ePP PP 19 34 37.9 +2.0
MVO eSKSac **SKSac 19 41 27.9 +0.2**
MVO eS S **19 41 50.7 -2.9**
MVO eLQ LQ 19 55 00.2
MVO eLR LR 20 03 09.8
comp=Z,26µm,20.0s
RPZ Rata Peaks 91.07 166 eP P **19 30 59.0 -0.5**
comp=Z,66nm,0.8s
RPZ Rata Peaks 91.07 166 LR LR 20 11 40.8
comp=Z,17µm,18.8s,baz=318,slow=35
PVRL Vila Real 91.08 344 eP P **19 31 00.4 +0.4**
comp=Z,240nm,1.5s
PVRL Vila Real 91.08 344 ePP PP 19 34 37.1 +1.1
PTO Porto 91.37 345 eP P **19 31 00.5 -0.8**
CMAH Djebel Manchou 91.54 332 P P **19 31 04.1 +1.8**
CAEH 'Ain El Ouahch 91.58 332 P P **19 31 04.3 +1.9**
PVIS Viseu 91.65 344 eP P **19 31 03.5 +0.8**
comp=Z,165nm,1.8s
KEST Kesra 91.69 330 eP P **19 31 02.6 -0.5**
KEST Kesra 91.69 330 P P **19 31 03.0 -0.1**
comp=Z,99nm,1.1s,baz=286,slow=1.0,SNR=40
KEST LR LR 20 18 43.6
comp=Z,12µm,18.1s,baz=337,slow=40
ABSA Djebel Ababsia 91.84 332 P P **19 31 05.7 +2.0**
ESDC Sonseca Array 91.84 341 P P **19 31 02.5 -1.2**
ESDC PKKPbc **PKKPbc 19 48 20.5 +0.8**
ESDC Sonseca Array 91.84 341 P P **19 31 02.5 -1.2**
comp=Z,3.8nm,0.4s,baz=6.9,slow=4.4,SNR=57
ESDC PKKPbc **PKKPbc 19 48 20.5 +0.8**
comp=Z,0.5nm,0.6s,baz=218,slow=2.3,SNR=4.9
ESDC LR LR 20 18 21.8
comp=Z,20µm,19.6s,baz=20,slow=39
ESLA Sonseca Array 91.84 341 eP P **19 31 02.1 -1.6**
comp=Z,77nm,1.7s
MTE Manteigas 91.89 344 eP P **19 31 04.7 +0.8**
comp=Z,167nm,1.9s
MTE Manteigas 91.89 344 ePP PP 19 34 43.6 +1.1
MTE eSKSac **SKSac 19 41 34.0 +1.5**
MTE eS **SKKSac 19 41 54.2 +5.1**
MTE eLQ LQ 19 55 24.7
MTE eLR LR 20 03 45.5
comp=Z,25µm,20.0s
MTE Manteigas 91.89 344 eP P **19 31 02.1 -1.7**
comp=Z,287nm,1.7s
MTE ePP **PP 19 34 39.9 -2.6**
MTE LR LR
comp=Z,24µm,20.0s
CKFL Kef-Lekhel 91.97 332 P P **19 31 06.0 +1.6**
DWPF Disney 92.02 45 eP P **19 31 04.3 -0.2**
PAB San Pablo 92.05 341 eP P **19 31 03.2 -1.4**
PAB pmax pmax
comp=Z,27nm,1.0s
PAB MLR MLR
comp=Z,24µm,20.0s
PAB San Pablo 92.05 341 eP P **19 31 03.2 -1.4**
comp=Z,27nm,1.0s
PAB LR LR
comp=Z,24µm,20.0s
CASM Ain Smara 92.17 332 P P **19 31 06.7 +1.5**
CTEI Djebel Teioual 92.38 332 P P **19 31 08.7 +2.4**
PCBR Castelo Branco 92.42 344 eP P **19 31 06.8 +0.6**
comp=Z,104nm,2.0s
PCBR Castelo Branco 92.42 344 ePP PP 19 34 47.2 +0.7
SET Setif 92.58 333 P P **19 31 08.0 +0.9**
CKHR Kef el Ahmar 92.71 333 P P **19 31 08.8 +1.0**
ABA Alger-Bouzarea 92.74 335 P P **19 31 09.6 +1.8**
PMRV Marv??o 92.80 344 eP P **19 31 08.7 +0.7**
comp=Z,95nm,1.9s
PMRV Marv??o 92.80 344 ePP PP 19 34 51.8 +2.2
PMRV eSKSac **SKSac 19 41 39.5 +2.0**
PMRV eS **SKKSac 19 41 59.7 +3.9**
PMRV eLQ LQ 19 55 36.1
PMRV eLR LR 20 04 15.9
comp=Z,26µm,20.0s
PTOM Tomar 92.81 345 eP P **19 31 08.7 +0.7**
comp=Z,150nm,1.9s
PMTG Montargil 93.31 344 eP P **19 31 10.6 +0.3**
comp=Z,95nm,2.3s
PMTG Montargil 93.31 344 ePP PP 19 34 56.1 +2.6
EMHD Djebel Mahouad 93.32 335 P P **19 31 12.4 +1.8**
PESTR Estremoz 93.38 344 eP P **19 31 11.1 +0.4**
comp=Z,80nm,1.5s
PESTR Estremoz 93.38 344 ePP PP 19 34 55.6 +1.5
PMAFR Mafra 93.61 345 eP P **19 31 12.6 +0.8**
comp=Z,186nm,1.4s
EBNR Beni Rached 93.65 336 P P **19 31 13.6 +1.6**
EVO Evora 93.79 344 eP P **19 31 11.2 -1.3**
comp=Z,149nm,1.3s
EVO eR
comp=Z,43µm,20.0s
EVO Evora 93.79 344 eP P **19 31 13.1 +0.6**
comp=Z,104nm,2.2s
EVO Evora 93.79 344 ePP PP 19 34 59.0 +1.7
EVOP Sao Brissos 93.81 344 eP P **19 31 11.2 -1.4**
EVOP pmax pmax
comp=Z,149nm,1.3s
EVOP Sao Brissos 93.81 344 eP P **19 31 11.2 -1.4**
comp=Z,149nm,1.3s
LIS Lisbon 93.82 345 eP P **19 31 13.2 +0.5**
LIS eS **SKSac 19 41 44.7 +1.7**
LIS AMS AMS 20 19 00.3
comp=N,24µm,21.0s
LIS Lisbon 93.82 345 eP P **19 31 13.2 +0.5**
LIS eS **SKSac 19 41 44.7 +1.7**
LIS Lisbon 93.82 345 eP P **19 31 13.2 +0.5**
LIS eS **SKSac 19 41 44.7 +1.7**
ECHA Ech Chlef 93.83 336 P P **19 31 14.2 +1.5**
PBAR Barrancos 93.94 343 eP P **19 31 14.7 +1.4**
EANR 'Ain N'Sour 94.09 336 P P **19 31 15.3 +1.2**
PBEJ Beja 94.25 344 eP P **19 31 16.0 +1.3**
comp=N,94nm,2.1s
ETRT Tiaret 94.56 336 P P **19 31 17.4 +1.1**
PCVE Castro Verde 94.67 344 eP P **19 31 17.6 +1.0**
comp=N,105nm,1.6s
PCVE Castro Verde 94.67 344 ePP PP 19 35 03.8 -0.3
TEIG Tepich 94.79 54 PFAKE 19 31 30.0 +13
TEIG LR LR
comp=Z,8µm,20.0s
PVAQ Vaqueiros 94.82 343 eP P **19 31 18.2 +0.9**
comp=Z,53nm,1.7s
PVAQ Vaqueiros 94.82 343 ePP PP 19 35 07.2 +1.8
PVAQ eSKSac **SKSac 19 41 49.1 +0.6**
PVAQ eS **SKKSac 19 42 12.6 +1.9**
PVAQ eLQ LQ 19 56 32.1
PVAQ eLR LR 20 05 28.2
comp=Z,18µm,22.0s
PTEO Sao Teotonio 94.88 344 eP P **19 31 18.6 +1.0**
comp=Z,156nm,1.9s
PBDV Barranco-do-Ve 95.02 344 eP P **19 31 19.5 +1.2**
comp=Z,92nm,2.0s
PBDV Barranco-do-Ve 95.02 344 ePP PP 19 35 07.6 +0.7
MORF Marmelete 95.10 344 eP P **19 31 19.7 +1.1**
comp=Z,192nm,1.7s
MORF Marmelete 95.10 344 ePP PP 19 35 09.1 +1.5
MORF Marmelete 95.10 344 eP P **19 31 18.9 +0.3**
MORF e **PP 19 35 08.5 +0.9**
MORF eS **SKSac 19 41 51.5 +1.4**
PGRA Graciosa 95.30 360 eP P **19 31 20.5 +1.1**
comp=Z,147nm,1.4s
PGRA eLR LR 20 05 03.9
comp=Z,2µm,20.4s
PFVI Vila Bisbo 95.30 344 eP P **19 31 20.3 +0.8**
PFVI Vila Bisbo 95.30 344 ePP PP 19 35 09.6 +0.5
BBSR BB Station 95.38 30 PFAKE 19 31 30.0 +10
BBSR LR LR
comp=Z,14µm,21.0s
SOR Soroa 95.60 49 e P **19 31 23.1 +2.0**
ROSA Rosais 95.61 360 eP P **19 31 20.5 -0.4**
comp=Z,45nm,0.8s
ROSA eLQ LQ 19 58 03.9
RKT Rikitea 95.71 117 eP P **19 31 23.7 +2.3**
comp=Z,24nm,0.8s
RKT eSKSac **SKSac 19 41 55.0 +1.8**
comp=Z,11µm,29.8s
RKT eSP **SP 19 43 53.7 +0.3**
comp=Z,13µm,34.8s
RKT eSS **SS 19 49 09.1 +3.6**
comp=Z,15µm,28.5s
RKT eLR LR 20 02 05.2
comp=Z,59µm,32.5s,baz=320
PSET Sete Cidades 96.46 358 eP P 19 31 18.3 -6.5
comp=Z,126nm,1.1s
PSET eLQ LQ 19 57 51.8
PSET eLR LR 20 04 20.8
comp=Z,1µm,18.5s
CMLA Cha da Macela 96.52 358 eP P **19 31 26.1 +1.1**
comp=Z,108nm,1.3s
CMLA eLQ LQ 19 58 38.1
CMLA eLR LR 20 04 25.3
comp=Z,1µm,20.0s
CMLA Cha da Macela 96.52 358 PFAKE 19 31 40.0 +15
CMLA LR LR
comp=Z,9µm,20.0s
PSMN Pico do Norte, 97.26 357 eP P **19 31 26.1 -2.3**
comp=Z,85nm,1.4s
PSMN eLQ LQ 19 58 42.1
PSMN eLR LR 20 04 42.9
comp=Z,755nm,15.7s
RTC Rabat Centre 97.94 342 PFAKE 19 31 40.0 +8.5
RTC LR LR
comp=Z,12µm,20.0s
FURI Furi 98.95 293 P Pdif **19 31 38.4 +1.7**
FURI S **PP 19 35 38.3 -0.3**
PTCN Pitcairn Islan 100.17 115 PFAKE 19 31 50.0 +8.6
PTCN LR LR
comp=Z,13µm,19.0s
TGUH Tegucigalpa,Un 100.27 57 ePdif Pdif **19 31 41.0 -1.1**
TGUH LR LR
comp=Z,7µm,22.0s
PMPST Porto Santo, M 100.46 350 eP Pdif **19 31 44.1 +1.3**
PMPST Porto Santo, M 100.46 350 ePP PP 19 35 49.5 +0.9
PMPS Porto Santo 100.48 350 eP Pdif **19 31 44.6 +1.8**
PMOZ Porto Moniz, M 100.81 350 eP Pdif **19 31 46.9 +2.4**
PMOZ Porto Moniz, M 100.81 350 ePP PP 19 35 52.3 +0.9
PMOZ eSKSac SKSac 19 42 27.0 +7.5
PMOZ eLQ LQ 19 58 29.0
PMOZ eLR LR 20 05 16.9
comp=Z,8µm,20.0s
PMAR Madeira 100.88 350 eP Pdif **19 31 46.4 +1.5**
comp=Z,188nm,1.5s
LMGC Las Mercedes 100.95 46 e Pdif **19 31 42.5 -2.6**
FUL Funchal 100.95 350 eP Pdif **19 31 47.1 +2.2**
MOAC Moa 101.44 44 e PP 19 35 51.1 -5.5
RCC Rio Carpintero 101.65 45 e PP 19 35 41.7 -17
GTBY Guantanamo Bay 102.00 44 PFAKE 19 32 00.0 +10
GTBY LR LR
comp=Z,12µm,22.0s
MASC Masc 102.21 43 e 19 36 08.0
MTDJ Mount Denham 102.22 47 PFAKE 19 32 00.0 +9.0
MTDJ LR LR
comp=Z,10µm,19.0s
GRTK Grand Turk 102.49 40 PFAKE 19 32 00.0 +8.0
GRTK LR LR
comp=Z,15µm,22.0s
JTS JuntasAbangare 104.62 58 PFAKE 19 32 10.0 +8.4
JTS LR LR
comp=Z,6µm,22.0s
SDDR Presa de Saban 104.62 42 PFAKE 19 32 10.0 +8.4
SDDR LR LR
comp=Z,13µm,20.0s
TAM Tamanrasset 104.81 328 eP Pdif **19 32 02.2 -0.3**
TAM pmax pmax
comp=Z,110nm,2.0s
TAM MLR MLR
comp=Z,13µm,22.0s
TAM Tamanrasset 104.81 328 ePdif Pdif **19 32 02.2 -0.3**
comp=Z,110nm,2.0s
TAM LR LR
comp=Z,13µm,22.0s
KMBO Kilima Mbogo 107.39 287 ePdif Pdif **19 32 13.1 -1.1**
comp=Z,59nm,2.1s
KMBO LR LR
comp=Z,13µm,20.0s
KMBO Kilima Mbogo 107.39 287 Pdiff Pdif **19 32 14.9 +0.8**
comp=Z,2.9nm,0.9s,baz=22,slow=5.1,SNR=6.9
SJG San Juan 107.66 37 PFAKE 19 36 30.0
SJG LR LR
comp=Z,8µm,20.0s
BCIP Isla Barro Col 108.48 54 PFAKE 19 36 40.0
BCIP LR LR
comp=Z,5µm,21.0s
RER Riviere de l'E 108.76 259 PFAKE 19 36 40.0
RER LR LR
comp=Z,6µm,20.0s
PAYG Puerto Ayora 109.80 69 PFAKE 19 36 40.0
PAYG LR LR
comp=Z,7µm,22.0s
ANWB Willy Bob 109.83 34 PFAKE 19 36 40.0
ANWB LR LR
comp=Z,6µm,20.0s
MBAR Mbarara 111.26 293 PFAKE 19 36 40.0
MBAR LR LR
comp=Z,496nm,20.0s
DRV Dumont d'Urvil 112.72 185 Pdif Pdif **19 32 30.0 -6.1**
FDF Fort de France 112.74 34 PFAKE 19 36 40.0
FDF LR LR
comp=Z,8µm,22.0s
ABPO Ambohimpanom 113.19 266 PFAKE 19 36 40.0
ABPO LR LR
comp=Z,10µm,20.0s
BBGH Gun Hill 114.81 34 PFAKE 19 36 50.0 +14
BBGH LR LR
comp=Z,19µm,22.0s
GRGR Grenville 114.90 36 PFAKE 19 36 50.0 +13
GRGR LR LR
comp=Z,11µm,22.0s
TOA0 Torodi Ar. Sit 115.06 327 ePdif Pdif **19 32 49.1 +1.2**
TOA0 ePKPdf **PKiKP 19 36 35.7 -1.1**
TORD Torodi Ar. Bea 115.06 327 PKP **PKPdf 19 36 36.1 -0.7**
TORD PKKPbc **PKKPbc 19 47 10.3 -0.5**
TORD PKKP PKKPdf 19 47 27.2 -6.3
TORD Torodi Ar. Bea 115.06 327 PKP **PKPdf 19 36 36.1 -0.7**
comp=Z,7.6nm,0.5s,baz=14,slow=2.4,SNR=54
TORD PKKPbc **PKKPbc 19 47 10.3 -0.5**
comp=Z,3.1nm,1.0s,baz=201,slow=3.0,SNR=6.6
TORD PKKP PKKPdf 19 47 27.2 -6.3
comp=Z,9.5nm,1.1s,baz=198,slow=3.2,SNR=6.0
ROSC El Rosal 115.09 52 PKP **PKPdf 19 36 37.5 +0.1**
ROSC El Rosal 115.09 52 PKP **PKPdf 19 36 37.5 +0.1**
comp=Z,5.1nm,0.4s,baz=190,slow=0.3,SNR=5.7
RPN Rapa Nui 115.18 104 PFAKE 19 36 50.0 +13
RPN LR LR
comp=Z,24µm,22.0s
CASY Casey 116.31 197 PFAKE 19 36 50.0 +13
CASY LR LR
comp=Z,5µm,19.0s
OTAV Otavalo 116.49 59 PFAKE 19 36 50.0 +10
OTAV LR LR
comp=Z,5µm,22.0s
PAF Port-aux-Franc 118.24 227 PFAKE 19 36 50.0 +8.3
PAF LR LR
comp=Z,8µm,21.0s
BBTS Babate 118.59 347 PKP **PKPdf 19 36 44.8 +1.2**
BBTS Babate 118.59 347 PKP **PKPdf 19 36 44.8 +1.2**
comp=Z,44nm,0.9s,baz=225,slow=1.4,SNR=4.5
SACV Santiago Islan 119.10 354 PFAKE 19 37 00.0 +15
SACV LR LR
comp=Z,5µm,20.0s
MIR Mirnyy 120.77 203⇑ iPKIKP **PKPdf 19 36 46.5 +0.4**
MIR *i* 19 37 02.0
MIR pmax pmax
comp=Z,63nm,1.0s
ATAH Atahualpa 122.32 64 PKP **PKPdf 19 36 50.8 -0.5**
ATAH Atahualpa 122.32 64 PKP **PKPdf 19 36 50.8 -0.5**
comp=Z,21nm,0.9s,baz=1.2,slow=1.6,SNR=11
DBIC Dimbokro 123.39 331 ePKPdf **PKPdf 19 36 51.9 -1.0**
DBIC PKP **PKPdf 19 36 52.5 -0.4**
DBIC ePP PP 19 38 27.7 -5.4
DBIC PP PP 19 38 33.8 +0.6
DBIC eSKP 19 40 19.5
DBIC Dimbokro 123.39 331 PKP **PKPdf 19 36 52.5 -0.4**
comp=Z,23nm,0.5s,baz=355,slow=2.8,SNR=36
DBIC PP **PP 19 38 33.8 +0.6**
comp=Z,28nm,1.1s,baz=9.7,slow=7.6,SNR=3.8
VNDA Vanda 123.47 177 ePKPdf **PKPdf 19 36 49.7 -1.3**
VNDA PKP **PKPdf 19 36 50.0 -1.0**
VNDA Vanda 123.47 177 PKP **PKPdf 19 36 50.0 -1.0**
comp=Z,16nm,0.8s,baz=317,slow=4.0,SNR=32
LSZ Lusaka 123.78 284 ePKPdf **PKPdf 19 36 53.4 -0.2**
LSZ PKP **PKPdf 19 36 53.7 +0.1**
LSZ ePP **PP 19 38 38.2 +1.3**
LSZ LR LR
comp=Z,17µm,22.0s
LSZ Lusaka 123.78 284 P **PKPdf 19 36 54.6 +1.0**
SNR=17
LSZ Lusaka 123.78 284 PKP **PKPdf 19 36 53.7 +0.1**
comp=Z,13nm,0.5s,baz=35,slow=5.0,SNR=25
LIC Lamto 123.87 331 ePKIKP **PKPdf 19 36 52.9 -0.9**
comp=Z,89nm,0.8s
LIC eR
comp=Z,26µm,22.8s
LIC Lamto 123.87 331 ePKPdf **PKPdf 19 36 52.9 -0.9**
SBA Scott Base 124.00 176 ePKIKP **PKPdf 19 36 50.9 -1.1**
SBA MLR MLR
comp=Z,6µm,19.0s
SBA Scott Base 124.00 176 ePKPdf **PKPdf 19 36 50.9 -1.1**
SBA eSKP 19 40 22.1
SBA LR LR
comp=Z,6µm,19.0s
NNA Nana 127.01 66 ePKPdf **PKPdf 19 36 59.1 -0.6**
NNA LR LR
comp=Z,5µm,22.0s
NNA Nana 127.01 66 PKP **PKPdf 19 36 59.1 -0.6**
comp=Z,31nm,0.7s,baz=269,slow=4.5,SNR=12
MAW Mawson 131.00 210 PKP **PKPdf 19 37 04.9 -0.7**
MAW Mawson 131.00 210 PKP **PKPdf 19 37 04.9 -0.7**
comp=Z,12nm,0.9s,baz=44,slow=1.5,SNR=8.6
SAML Samuel 132.64 50 ePKPpre PKPpre 19 36 56.4
SAML ePKPdf **PKPdf 19 37 09.5 -0.9**
SAML ePP PP 19 39 26.9 -7.5
SAML eSKP 19 40 31.0
SAML LR LR
comp=Z,8µm,21.0s
TSUM Tsumeb 133.65 290 ePKPpre PKPpre 19 36 57.9
TSUM PKPpre PKPpre 19 37 00.5
TSUM ePKPdf **PKPdf 19 37 09.9 -2.4**
TSUM PKP **PKPdf 19 37 10.0 -2.3**
TSUM ePP **PP 19 39 40.5 -1.0**
TSUM eSKP 19 40 31.0
TSUM LR LR
comp=Z,22µm,21.0s
TSUM Tsumeb 133.65 290 PKhKP PKPpre 19 37 00.5
comp=Z,4.9nm,0.9s,baz=21,slow=3.6,SNR=4.3
TSUM PKP **PKPdf 19 37 10.0 -2.3**
comp=Z,12nm,1.0s,baz=36,slow=2.1,SNR=8.7
BOSA Boshof 134.67 273 ePKPpre PKPpre 19 37 01.9
BOSA PKPpre PKPpre 19 37 02.1
BOSA PKP **PKPdf 19 37 11.7 -2.3**
BOSA ePP PP 19 39 41.4 -6.7
BOSA eSKP 19 40 39.6
BOSA Boshof 134.67 273 PKhKP PKPpre 19 37 02.1
comp=Z,3.7nm,0.5s,baz=78,slow=3.5,SNR=14
BOSA PKP **PKPdf 19 37 11.7 -2.3**
comp=Z,13nm,0.5s,baz=17,slow=1.1,SNR=21
LPAZ La Paz 135.72 61 ePKPpre PKPpre 19 37 07.4
LPAZ PKP **PKPdf 19 37 15.9 -1.0**
LPAZ ePKPdf **PKiKP 19 37 17.1 -1.3**
LPAZ ePP **PP 19 39 56.1 +1.1**
LPAZ eSKP 19 40 42.9
LPAZ La Paz 135.72 61 PKP **PKPdf 19 37 15.9 -1.0**

	comp=Z,5.1nm,0.8s,baz=339,slow=2.7,SNR=11								
QSPA	**South Pole Qui**	**135.79**	**180**		PKPpre	PKPpre	19 37 03.8		
QSPA					PKP	**PKPdf**	**19 37 14.3**	**-0.5**	
QSPA					LR	LR			
	comp=Z,9μm,22.0s								
QSPA	**South Pole Qui**	**135.79**	**180**		PKhKP	PKPpre	19 37 03.8		
	comp=Z,7.5nm,0.8s,baz=324,slow=2.7,SNR=18								
QSPA					PKP	**PKPdf**	**19 37 14.3**	**-0.5**	
	comp=Z,87nm,1.0s,baz=273,slow=0.5,SNR=20								
RCBR	**Riachuelo**	**139.43**	**11**	*e*PKPdf		**PKPdf**	**19 37 22.3**	**-0.9**	
RCBR					PKP	**PKPdf**	**19 37 23.1**	**-0.1**	
RCBR					LR	LR			
	comp=Z,6μm,22.0s								
RCBR	**Riachuelo**	**139.43**	**11**		PKP	**PKPdf**	**19 37 23.1**	**-0.1**	
	comp=Z,63nm,1.2s,baz=337,slow=2.6,SNR=9.6								
SIV	**San Ignacio**	**139.60**	**53**		PKPpre	PKPpre	19 37 14.5		
SIV	**San Ignacio**	**139.60**	**53**		PKhKP	PKPpre	19 37 14.5		
	comp=Z,4.4nm,0.5s,baz=301,slow=3.3,SNR=8.1								
SYO	**Syowa Base**	**139.70**	**211**	μ*e*X		**PKiKP**	**19 37 19.6**	**-4.5**	
SUR	**Sutherland**	**139.98**	**272**	*e*PKPpre		PKPpre	19 37 18.3		
SUR					LR	LR			
	comp=Z,11μm,21.0s								
SUR	**Sutherland**	**139.98**	**272**		P	**PKPdf**	**19 37 27.5**	**+3.7**	
	SNR=5.2								
LCO	**Las Campanas**	**143.02**	**77**	*e*PKPdf		**PKPdf**	**19 37 26.9**	**-2.6**	
LCO					LR	LR			
	comp=Z,11μm,22.0s								
TLL	**Tololo Astrono**	**143.67**	**79**⇑	*e*P		**PKPdf**	**19 37 29.2**	**-1.3**	
CMCH	**Combarbala**	**144.14**	**81**	*e*P		**PKPab**	**19 37 27.2**	**-1.6**	
SHEL	**Horse Pasture**	**144.43**	**320**	*e*PKIKP		PKPbc	19 37 30.6	+0.1	
SHEL					MLR	MLR			
	comp=Z,8μm,22.0s								
SHEL	**Horse Pasture**	**144.43**	**320**	*e*PKPdf		PKPbc	19 37 30.6	+0.1	
SHEL					LR	LR			
	comp=Z,8μm,22.0s								
IHA	**Instituto Hidr**	**144.78**	**84**	*e*P		**PKPab**	**19 37 30.3**	**-0.7**	
BDFB	**Brasilia**	**145.60**	**35**		PKPbc	**PKPdf**	**19 37 33.7**	**-0.4**	
BDFB	**Brasilia**	**145.60**	**35**		PKPbc	**PKPdf**	**19 37 33.7**	**-0.4**	
	comp=Z,76nm,0.9s,baz=317,slow=2.9,SNR=51								
CLCH	**Cerro Calan**	**145.75**	**83**	*e*P		**PKPdf**	**19 37 33.1**	**-0.6**	
FCH	**Farellones**	**145.88**	**83**	*e*P		**PKPbc**	**19 37 34.4**	**-0.7**	
LMEL	**Las Melosas**	**146.23**	**84**‖	*e*P		**PKPdf**	**19 37 34.0**	**-0.7**	
CFAA	**Coronel Fontan**	**146.29**	**79**		PKPbc	**PKPdf**	**19 37 34.7**	**0.0**	
CFAA	**Coronel Fontan**	**146.29**	**79**		PKPbc	**PKPdf**	**19 37 34.7**	**0.0**	
	comp=Z,14nm,0.7s,baz=283,slow=3.4,SNR=57								
CCHI	**Chillan**	**146.38**	**89**⇑	*e*P		**PKPbc**	**19 37 35.9**	**-0.1**	
MAIT	**Maitri**	**148.53**	**204**	*e*P		PKPdf	19 37 29.4	-7.7	
PLCA	**Paso Flores**	**149.33**	**95**	*e*PKPdf		**PKPdf**	**19 37 37.8**	**-1.6**	
PLCA					PKPbc	**PKPbc**	**19 37 41.9**	**-2.0**	
PLCA					*e*PKPbc	**PKiKP**	**19 37 45.4**	**+0.4**	
PLCA	**Paso Flores**	**149.33**	**95**		PKPbc	**PKPbc**	**19 37 41.9**	**-2.0**	
	comp=Z,23nm,0.9s,baz=288,slow=2.4,SNR=14								
CPUP	**Villa Florida**	**149.84**	**59**		PKP	**PKPdf**	**19 37 41.8**	**+1.2**	
CPUP					PKPbc	**PKPbc**	**19 37 45.0**	**-0.4**	
CPUP	**Villa Florida**	**149.84**	**59**		PKP	**PKPdf**	**19 37 41.8**	**+1.2**	
	comp=Z,24nm,0.5s,baz=312,slow=3.7,SNR=31								
CPUP					PKPbc	**PKPbc**	**19 37 45.0**	**-0.4**	
	comp=Z,24nm,0.5s,baz=301,slow=2.9,SNR=78								
COYC	**Coyhaique**	**149.97**	**105**⇑	*e*P		**PKPdf**	**19 37 40.7**	**+0.5**	
SNAA	**Sanae**	**151.55**	**197**	*e*PKPdf		**PKPdf**	**19 37 40.8**	**-1.2**	
SNAA	**Sanae**	**151.55**	**197**	*e*P		**PKPbc**	**19 37 47.7**	**-0.5**	
SNAA	**Sanae**	**151.55**	**197**	*e*PP		PP	19 41 29.9	+1.3	
SNAA	**Sanae**	**151.55**	**197**	*e*PKPdf		**PKPdf**	**19 37 40.0**	**-2.0**	
SNAA					PKP	**PKPdf**	**19 37 41.3**	**-0.6**	
SNAA					*e*PKPbc	**PKPbc**	**19 37 47.2**	**-1.0**	
SNAA	**Sanae**	**151.55**	**197**		PKP	**PKPdf**	**19 37 41.3**	**-0.6**	
	comp=Z,4.5nm,1.0s,baz=134,slow=1.2,SNR=19								
SNAA					PKPbc	**PKPbc**	**19 37 47.3**	**-1.0**	
	comp=Z,36nm,0.8s,baz=178,slow=3.3,SNR=72								
SPB	**Sao Paulo**	**152.91**	**41**	*e*PKPdf		**PKPdf**	**19 37 45.9**	**+0.5**	
SPB					*e*PKPbc	**PKiKP**	**19 37 54.0**	**+1.2**	
SPB					LR	LR			
	comp=Z,8μm,22.0s								
VNA2	**Neumayer--Watz**	**153.02**	**195**	*e*PKPdf		**PKPdf**	**19 37 43.9**	**-0.2**	
VNA2	**Neumayer--Watz**	**153.02**	**195**	*e*P		**PKPbc**	**19 37 51.5**	**+0.1**	
VNA2	**Neumayer--Watz**	**153.02**	**195**	*e*PP		PP	19 41 36.8	-0.1	
PMSA	**Palmer Station**	**153.07**	**147**		PFAKE		19 38 00.0	-3.4	
PMSA					LR	LR			
	comp=Z,12μm,21.0s								
VNA3	**Neumayer Olymp**	**153.15**	**193**	*e*PKPdf		**PKPdf**	**19 37 43.5**	**-0.8**	
VNA3	**Neumayer Olymp**	**153.15**	**193**	*e*P		**PKPbc**	**19 37 50.6**	**-1.1**	
VNA3	**Neumayer Olymp**	**153.15**	**193**	*e*PP		PP	19 41 36.9	-0.7	
VNA1	**Neumayer--Stat**	**153.41**	**195**	*e*PKPdf		**PKPdf**	**19 37 45.4**	**+0.8**	
VNA1	**Neumayer--Stat**	**153.41**	**195**	*e*P		**PKPbc**	**19 37 55.1**	**+2.9**	
USHA	**Ushuaia**	**153.48**	**124**		PKPbc	**PKPbc**	**19 37 51.3**	**-1.5**	
USHA	**Ushuaia**	**153.48**	**124**		PKPbc	**PKPbc**	**19 37 51.3**	**-1.5**	
	comp=Z,31nm,1.0s,baz=233,slow=3.3,SNR=9.4								
CAM4	**Nova Friburgo**	**153.77**	**30**⇑	*i*P		**PKPdf**	**19 37 48.6**	**+1.7**	
CAM4				*i*			19 37 56.2		
CAM4				*i*			19 38 02.8		
CAM4				*i*			19 38 07.6		
TRQA	**Tornquist**	**154.11**	**84**	*e*PKPdf		**PKPdf**	**19 37 45.0**	**-1.7**	
TRQA				*e*PKPbc		**PKiKP**	**19 37 55.1**	**+0.2**	
TRQA					LR	LR			
	comp=Z,15μm,22.0s								
LPA	**La Plata**	**155.21**	**74**		PKP	**PKPab**	**19 38 14.0**	**+0.6**	
EFI	**East Falkland**	**159.90**	**117**		PFAKE		19 38 00.0	+6.5	
EFI					LR	LR			
	comp=Z,19μm,22.0s								

IDC 18 19:28:48.6±1.9,5°87S×143°36E, h0km, mb3.9/3, mb1 4.2/4, mb1mx3.8/15, mbtmp4.0/4, ML5.1/2, Error ellipse: s-maj=73.0km s-min=27.1km az=116.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.51**	**211**	Pn	Pn	19 32 39.9	-1.9
	16nm,0.3s,baz=26,slow=13,SNR=2.4						
WRA				Sn	Sn	19 35 33.4	-13
	6.2nm,0.3s,baz=40,slow=22,SNR=2.4						
ASAR	**Alice Springs**	**19.90**	**206**	P	P	19 33 21.8	-0.1
	0.7nm,0.3s,baz=28,slow=11,SNR=6.3						
ASAR				S	S	19 36 55.5	-11
	0.2nm,0.3s,baz=16,slow=24,SNR=3.1						
FITZ	**Fitzroy Crossi**	**21.15**	**233**	P	P	19 33 36.0	+0.6
	5.8nm,0.8s,baz=39,slow=13,SNR=7.2						
MKAR	**Makanchi Array**	**75.11**	**322**	P	P	19 40 33.5	+0.9
	0.7nm,0.8s,baz=104,slow=7.5,SNR=4.5						
ILAR	**Eielson Array**	**86.80**	**24**	P	P	19 41 33.8	-0.8
	0.6nm,0.8s,baz=256,slow=4.7,SNR=5.9						

IDC 18 19:32:09.5±2.6, 49°00S×128°57E, h0km, mb4.0/2, mb1 4.2/2, mb1mx3.8/13, mbtmp4.0/2, Error ellipse: s-maj=94.3km s-min=51.4km az=121.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**25.63**	**11**	P	P	19 37 40.7	0.0
	2.7nm,0.8s,baz=191,slow=9.3,SNR=6.3						
CMAR	**Chiang Mai Arr**	**72.15**	**330**	P	P	19 43 36.1	+0.3
	0.6nm,0.4s,baz=176,slow=5.1,SNR=7.2						
YKA	**Yellowknife Ar**	**143.56**	**44**	PKP	PKPdf	19 51 46.1	+1.3
	0.4nm,1.0s,baz=260,slow=2.9,SNR=3.5						
ESDC	**Sonseca Array**	**145.30**	**273**	PKPbc	PKPbc	19 51 47.3	-1.2
	0.5nm,0.6s,baz=90,slow=3.0,SNR=5.7						
RES	**Resolute Bay**	**148.48**	**20**	PKPab	PKPab	19 51 58.6	-1.3
	1.6nm,0.9s,baz=301,slow=5.9,SNR=3.7						

*ISK **18** 19:55:43.8, 38°76N×26°87E, h13km, MD2.9*
*DDA **18** 19:55:44.0, 38°79N×26°88E, h20km, MD3.0*
*CSEM **18** 19:55:44.8±0.1, 38°77N×26°89E, h15km, MD2.9, Error ellipse: s-maj=1.7km s-min=1.4km az=72.0*
*ISCJB **18** 19:55:45.1±0.4, 38°77N±0°03×26°90E±0°04, h16km±8km, Error ellipse: s-maj=5.1km s-min=3.7km az=143.5*
*THE **18** 19:55:47.4, 38°80N×26°68E, h0km±3km, ML2.2/2, Error ellipse: s-maj=6.7km s-min=0.5km az=98.0*
*ATH **18** 19:55:48.2, 38°93N×26°73E, h30km, MD3.0/3*
ISC 18 19:55:44.3±1.0, 38°78N±0°02×26°86E±0°02, h13km±9km, n46, σ0s40/68, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.41**	**160**	*e*PG	**Pg**	**19 55 52.5**	**0.0**
BLCB				*e*SG	**Sg**	**19 55 58.3**	**+0.2**
BLCB	**Balcova**	**0.41**	**160**	*e*Pg	**Pg**	**19 55 52.5**	**0.0**
BLCB				*e*Sg	**Sg**	**19 55 58.3**	**+0.2**
URLA	**Izmir**	**0.47**	**207**	*e*P	**Pb**	**19 55 54.4**	**+0.1**
URLA				*e*S	**Sb**	**19 56 01.6**	**+0.5**
URLA	**Izmir**	**0.47**	**207**	*e*P	**Pb**	**19 55 54.4**	**+0.1**
URLA				*e*S	**Sb**	**19 56 01.6**	**+0.5**
IZM	**Izmir**	**0.49**	**140**	*e*PG	**Pg**	**19 55 54.0**	**0.0**
IZM				*e*SG	**Sg**	**19 56 00.4**	**-0.1**
IZM	**Izmir**	**0.49**	**140**	*e*Pg	**Pg**	**19 55 54.0**	**0.0**
IZM				*e*Sg	**Sg**	**19 56 00.4**	**-0.1**
AYVA	**Ayvalik**	**0.55**	**346**	*e*P	**Pb**	**19 55 55.9**	**+0.2**
AYVA				*e*S	**Sb**	**19 56 03.6**	**+0.1**
AYVA	**Ayvalik**	**0.55**	**346**	*e*P	**Pb**	**19 55 55.9**	**+0.2**
AYVA				*e*S	**Sb**	**19 56 03.6**	**+0.1**
PRK	**Paraskevi**	**0.66**	**316**	P	**Pn**	**19 55 58.5**	**-0.8**
PRK				S	**Sb**	**19 56 06.8**	**+0.2**
PRK	**Paraskevi**	**0.66**	**316**	*e*PB	**Pn**	**19 55 58.5**	**-0.8**
PRK				*e*SB	**Sg**	**19 56 05.9**	**+0.2**
PRK	**Paraskevi**	**0.66**	**316**	P	**Pn**	**19 55 58.5**	**-0.8**
PRK				*e*Sb	**Sg**	**19 56 05.9**	**+0.2**
PRK				S	**Sb**	**19 56 06.8**	**+0.2**
CHOS	**Chios island**	**0.74**	**239**	P	**Pn**	**19 56 00.0**	**-0.5**
CHOS				S	**Sb**	**19 56 10.1**	**+0.9**
CHOS	**Chios island**	**0.74**	**239**	P	**Pn**	**19 56 00.0**	**-0.5**
CHOS				S	**Sb**	**19 56 10.1**	**+0.9**
AKHS	**Akhisar**	**0.75**	**82**	*e*P	**Pb**	**19 55 59.2**	**0.0**
AKHS				*e*S	**Sb**	**19 56 09.0**	**-0.3**
AKHS	**Akhisar**	**0.75**	**82**	*e*P	**Pb**	**19 55 59.2**	**0.0**
AKHS				*e*S	**Sb**	**19 56 09.0**	**-0.3**
AKS	**Akhisar**	**0.75**	**82**	*e*PG	**Pb**	**19 55 59.0**	**-0.2**
AKS	**Akhisar**	**0.75**	**82**	*e*Pg	**Pb**	**19 55 59.0**	**-0.2**
GCAM	**G?zelcaml?**	**1.11**	**165**	*e*P	**Pn**	**19 56 05.2**	**-0.3**
GCAM				*e*S	**Sg**	**19 56 19.9**	**-0.3**
GCAM	**G?zelcaml?**	**1.11**	**165**	*e*P	**Pn**	**19 56 05.2**	**-0.3**
GCAM				*e*S	**Sg**	**19 56 19.9**	**-0.3**
EZN	**Ezine**	**1.13**	**338**	*e*PN	**Pn**	**19 56 05.8**	**+0.1**
EZN	**Ezine**	**1.13**	**338**	*e*Pn	**Pb**	**19 56 05.8**	**+0.1**
BALB	**Balikesir**	**1.17**	**42**	*e*PN	**Pg**	**19 56 06.6**	**-0.2**
BALB	**Balikesir**	**1.17**	**42**	*e*Pn	**Pg**	**19 56 06.6**	**-0.2**
BOZC	**Bozcaada**	**1.23**	**330**	*e*P	**Pg**	**19 56 08.0**	**0.0**
BOZC				*e*S	**Sb**	**19 56 23.4**	**+0.1**
GONE	**Gonen-Balikesi**	**1.42**	**26**	*e*PN	**Pb**	**19 56 10.2**	**-0.4**
GONE	**Gonen-Balikesi**	**1.42**	**26**	*e*Pn	**Pb**	**19 56 10.2**	**-0.4**
KULA	**Kula-Manisa**	**1.43**	**100**	*e*PN	**Pb**	**19 56 10.6**	**-0.3**
KULA	**Kula-Manisa**	**1.43**	**100**	*e*Pn	**Pb**	**19 56 10.6**	**-0.3**
DST	**Dursunbey**	**1.60**	**58**	*e*PN	**Pn**	**19 56 12.6**	**+0.3**
DST	**Dursunbey**	**1.60**	**58**	*e*Pn	**Pn**	**19 56 12.6**	**+0.3**
LPK	**Lapseki**	**1.60**	**357**	*e*PN	**Pn**	**19 56 12.7**	**+0.5**
LPK	**Lapseki**	**1.60**	**357**	*e*Pn	**Pn**	**19 56 12.7**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.65**	**350**	*e*PN	**Pn**	**19 56 13.3**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.65**	**350**	*e*Pn	**Pn**	**19 56 13.4**	**+0.5**
KRBG	**Karabiga-Canak**	**1.65**	**12**	*e*PN	**Pn**	**19 56 13.2**	**+0.3**
KRBG	**Karabiga-Canak**	**1.65**	**12**	*e*Pn	**Pn**	**19 56 13.2**	**+0.3**
LIA	**Limnos Island**	**1.72**	**311**	P	**Pb**	**19 56 15.9**	**+0.2**
LIA				S	**Sg**	**19 56 39.5**	**0.0**
LIA	**Limnos Island**	**1.72**	**311**	*e*PN	**Pb**	**19 56 15.5**	**-0.2**
LIA				*e*SN	**Sn**	**19 56 35.5**	**-0.1**
LIA	**Limnos Island**	**1.72**	**311**	*e*Sn	**Sn**	**19 56 35.5**	**-0.1**
LIA				S	**Sg**	**19 56 39.5**	**0.0**
KCTX	**Karacabey (Bur**	**1.88**	**37**	*e*PN	**Pn**	**19 56 16.5**	**+0.3**
KCTX	**Karacabey (Bur**	**1.88**	**37**	*e*Pn	**Pn**	**19 56 16.5**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.92**	**7**	*e*PN	**Pn**	**19 56 17.4**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.92**	**7**	*e*Pn	**Pn**	**19 56 17.4**	**+0.6**
SMTH	**Samothraki Isl**	**1.98**	**329**	*e*PN	**Pb**	**19 56 19.1**	**-1.1**
TVSB	**Tavsanli**	**2.13**	**71**	*e*PN	**Pn**	**19 56 20.1**	**+0.5**
TVSB	**Tavsanli**	**2.13**	**71**	*e*Pn	**Pn**	**19 56 20.1**	**+0.5**

*ISK **18** 19:58:19.7, 38°78N×26°89E, h12km, MD3.4*
*DDA **18** 19:58:19.6, 38°78N×26°89E, h22km, ML3.5*
*ISCJB **18** 19:58:20.1±0.5, 38°79N±0°02×26°87E±0°03, h12km±4km, Error ellipse: s-maj=4.3km s-min=3.2km az=153.8*
*CSEM **18** 19:58:20.8±0.1, 38°77N×26°88E, h15km, MD3.4, Error ellipse: s-maj=2.5km s-min=1.6km az=75.0*
*ATH **18** 19:58:21.3, 38°72N×26°67E, h37km±3km, MD3.3/4*
ISC 18 19:58:20.4±1.0, 38°77N±0°02×26°87E±0°02, h14km±9km, n100, σ0s53/122, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.41**	**161**	PG	**Pb**	**19 58 28.8**	**-0.6**
BLCB				*e*SG	**Sg**	**19 58 34.4**	**+0.4**
BLCB	**Balcova**	**0.41**	**161**	*i* Pg	**Pb**	**19 58 28.8**	**-0.6**
BLCB				*e*Sg	**Sg**	**19 58 34.4**	**+0.4**
URLA	**Izmir**	**0.46**	**208**	*i* P	**Pb**	**19 58 30.1**	**-0.3**
URLA				*i* S	**Sb**	**19 58 37.3**	**+0.2**
URLA	**Izmir**	**0.46**	**208**	*i* P	**Pb**	**19 58 30.1**	**-0.3**
URLA				*i* S	**Sb**	**19 58 37.3**	**+0.2**
IZM	**Izmir**	**0.48**	**141**	PG	**Pg**	**19 58 29.7**	**-0.2**
IZM				*e*SG	**Sg**	**19 58 36.1**	**-0.2**
IZM	**Izmir**	**0.48**	**141**	*i* Pg	**Pg**	**19 58 29.7**	**-0.2**
IZM				*e*Sg	**Sg**	**19 58 36.1**	**-0.2**
AYVA	**Ayvalik**	**0.56**	**345**	*i* P	**Pb**	**19 58 31.7**	**-0.2**
AYVA				*i* S	**Sb**	**19 58 39.2**	**-0.6**
AYVA	**Ayvalik**	**0.56**	**345**	*i* P	**Pb**	**19 58 31.7**	**-0.2**
AYVA				*i* S	**Sb**	**19 58 39.2**	**-0.6**
PRK	**Paraskevi**	**0.67**	**316**	*e*PN	**Pb**	**19 58 33.9**	**+0.1**
PRK				*e*SN	**Sb**	**19 58 43.6**	**+0.6**
PRK	**Paraskevi**	**0.67**	**316**	*e*Pn	**Pb**	**19 58 33.9**	**+0.1**
PRK				*e*Sn	**Sb**	**19 58 43.6**	**+0.6**
AKS	**Akhisar**	**0.74**	**81**	*e*PG	**Pg**	**19 58 34.5**	**-0.3**
AKS				*e*SG	**Sb**	**19 58 45.0**	**-0.1**
AKS	**Akhisar**	**0.74**	**81**	*e*Pg	**Pg**	**19 58 34.5**	**-0.3**
AKS				*e*Sg	**Sb**	**19 58 45.0**	**-0.1**
AKHS	**Akhisar**	**0.74**	**81**	*e*P	**Pb**	**19 58 35.6**	**+0.5**
AKHS				*e*S	**Sb**	**19 58 45.0**	**-0.2**
AKHS	**Akhisar**	**0.74**	**81**	*e*P	**Pb**	**19 58 35.6**	**+0.5**
AKHS				*e*S	**Sb**	**19 58 45.0**	**-0.2**
GCAM	**G?zelcaml?**	**1.11**	**165**	*e*P	**Pb**	**19 58 41.2**	**-0.1**
GCAM				*e*S	**Sb**	**19 58 55.4**	**-0.1**
GCAM	**G?zelcaml?**	**1.11**	**165**	*e*P	**Pb**	**19 58 41.2**	**-0.1**
GCAM				*e*S	**Sb**	**19 58 55.4**	**-0.1**
EZN	**Ezine**	**1.14**	**338**	*e*PN	**Pb**	**19 58 41.7**	**-0.1**
EZN	**Ezine**	**1.14**	**338**	*e*Pn	**Pb**	**19 58 41.7**	**-0.1**
BALB	**Balikesir**	**1.17**	**42**	*e*PN	**Pb**	**19 58 42.1**	**-0.2**
BALB	**Balikesir**	**1.17**	**42**	*e*Pn	**Pb**	**19 58 42.1**	**-0.2**
BOZC	**Bozcaada**	**1.25**	**329**	*e*P	**Pb**	**19 58 43.6**	**-0.1**
BOZC				*e*S	**Sb**	**19 58 59.6**	**0.0**
MANT	**Manisa**	**1.35**	**101**	*i* P	**Pn**	**19 58 44.8**	**-0.2**
MANT				*i* S	**Sb**	**19 59 02.3**	**-0.5**
MANT	**Manisa**	**1.35**	**101**	*i* P	**Pn**	**19 58 44.8**	**-0.2**
MANT				*i* S	**Sb**	**19 59 02.3**	**-0.5**
AYDN	**Tasoluk**	**1.36**	**144**	*i* P	**Pn**	**19 58 45.0**	**-0.1**
AYDN				*i* S	**Sn**	**19 59 03.4**	**+0.5**
AYDN	**Tasoluk**	**1.36**	**144**	*i* P	**Pn**	**19 58 45.0**	**-0.1**
GONE	**Gonen-Balikesi**	**1.42**	**26**	*e*PN	**Pn**	**19 58 45.7**	**-0.1**
GONE	**Gonen-Balikesi**	**1.42**	**26**	*e*Pn	**Pn**	**19 58 45.7**	**-0.1**
KULA	**Kula-Manisa**	**1.42**	**100**	*e*PN	**Pn**	**19 58 45.7**	**-0.2**
KULA	**Kula-Manisa**	**1.42**	**100**	*e*Pn	**Pn**	**19 58 45.7**	**-0.2**
DEMI	**Demirci**	**1.46**	**79**	*e*P	**Pn**	**19 58 46.4**	**-0.1**
DEMI	**Demirci**	**1.46**	**79**	*e*P	**Pn**	**19 58 46.4**	**-0.1**
DST	**Dursunbey**	**1.59**	**58**	*e*PN	**Pn**	**19 58 47.9**	**-0.3**
DST	**Dursunbey**	**1.59**	**58**	*e*Pn	**Pn**	**19 58 47.9**	**-0.3**
LPK	**Lapseki**	**1.60**	**357**	*e*PN	**Pn**	**19 58 48.6**	**+0.3**
LPK	**Lapseki**	**1.60**	**357**	*e*Pn	**Pn**	**19 58 48.6**	**+0.3**
MLSB	**Milas**	**1.64**	**154**	*e*PN	**Pn**	**19 58 49.1**	**+0.4**
MLSB	**Milas**	**1.64**	**154**	*e*Pn	**Pn**	**19 58 49.2**	**+0.4**
KRBG	**Karabiga-Canak**	**1.65**	**11**	*e*PN	**Pn**	**19 58 49.2**	**+0.2**
KRBG	**Karabiga-Canak**	**1.65**	**11**	*e*Pn	**Pn**	**19 58 49.2**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.65**	**349**	*e*PN	**Pn**	**19 58 49.2**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.65**	**349**	*e*Pn	**Pn**	**19 58 49.3**	**+0.2**
LIA	**Limnos Island**	**1.73**	**311**	*e*PB	**Pn**	**19 58 50.2**	**+0.2**
LIA	**Limnos Island**	**1.73**	**311**	*e*Pb	**Pn**	**19 58 50.2**	**+0.2**
BODT	**Bodrum**	**1.74**	**168**	*e*PN	**Pn**	**19 58 50.8**	**+0.6**
BODT	**Bodrum**	**1.74**	**168**	*e*Pn	**Pn**	**19 58 50.8**	**+0.6**
KCTX	**Karacabey (Bur**	**1.88**	**37**	*e*PN	**Pn**	**19 58 51.6**	**-0.6**
KCTX	**Karacabey (Bur**	**1.88**	**37**	*e*Pn	**Pn**	**19 58 51.6**	**-0.6**
MRMT	**Marmara Adasi**	**1.91**	**17**	*e*PN	**Pn**	**19 58 52.5**	**-0.2**
MRMT	**Marmara Adasi**	**1.91**	**17**	*e*Pn	**Pn**	**19 58 52.5**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.93**	**7**	*e*PN	**Pn**	**19 58 52.9**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.93**	**7**	*e*Pn	**Pn**	**19 58 52.9**	**0.0**
YER	**Yerkesik**	**1.98**	**145**	*e*PN	**Pn**	**19 58 53.8**	**+0.3**
YER	**Yerkesik**	**1.98**	**145**	*e*Pn	**Pn**	**19 58 53.8**	**+0.3**
DENT	**Denizli**	**1.98**	**120**	*e*PN	**Pn**	**19 58 54.1**	**+0.6**
DENT	**Denizli**	**1.98**	**120**	*e*Pn	**Pn**	**19 58 54.1**	**+0.6**
SMTH	**Samothraki Isl**	**1.99**	**329**	*e*PN	**Pn**	**19 58 54.4**	**+0.7**
SMTH				*e*SN	**Sn**	**19 59 17.5**	**-0.9**
SMTH	**Samothraki Isl**	**1.99**	**329**	*e*Pn	**Pn**	**19 58 54.4**	**+0.7**
SMTH				*e*Sn	**Sn**	**19 59 17.5**	**-0.9**
APE	**Apeiranthos**	**2.00**	**212**	*e*PN	**Pn**	**19 58 53.9**	**0.0**
APE	**Apeiranthos**	**2.00**	**212**	*e*PN	**Pn**	**19 58 52.9**	**-1.0**
APE	**Apeiranthos**	**2.00**	**212**	*e*Pn	**Pn**	**19 58 53.9**	**0.0**
MFT	**Murefte**	**2.04**	**9**	*e*PN	**Pn**	**19 58 55.1**	**+0.8**
MFT	**Murefte**	**2.04**	**9**	*e*Pn	**Pn**	**19 58 55.2**	**+0.8**
ENEZ	**Enez**	**2.04**	**344**	*e*PN	**Pn**	**19 58 54.9**	**+0.6**
ENEZ	**Enez**	**2.04**	**344**	*e*Pn	**Pn**	**19 58 54.9**	**+0.6**
DAT	**Datca**	**2.11**	**164**	*e*PN	**Pn**	**19 58 56.1**	**+0.7**
DAT	**Datca**	**2.11**	**164**	*e*Pn	**Pn**	**19 58 56.1**	**+0.7**
TVSB	**Tavsanli**	**2.12**	**71**	*e*PN	**Pn**	**19 58 55.6**	**0.0**
TVSB	**Tavsanli**	**2.12**	**71**	*e*Pn	**Pn**	**19 58 55.6**	**0.0**
KHL	**Karahalli**	**2.12**	**101**	*e*PN	**Pn**	**19 58 56.2**	**+0.6**
KHL	**Karahalli**	**2.12**	**101**	*e*Pn	**Pn**	**19 58 56.2**	**+0.6**
MDNY	**Mudanya-Bursa**	**2.23**	**44**	*e*PN	**Pn**	**19 58 57.2**	**+0.3**
MDNY	**Mudanya-Bursa**	**2.23**	**44**	*e*Pn	**Pn**	**19 58 57.2**	**+0.3**
TKR	**Tekirdag**	**2.27**	**13**	*e*PN	**Pn**	**19 58 58.0**	**+0.5**
TKR	**Tekirdag**	**2.27**	**13**	*e*Pn	**Pn**	**19 58 58.0**	**+0.5**
ARMT	**Armutlu**	**2.36**	**40**	*e*PN	**Pn**	**19 58 58.4**	**-0.4**
ARMT	**Armutlu**	**2.36**	**40**	*e*Pn	**Pn**	**19 58 58.4**	**-0.4**
DALT	**Dalyan (Mudla)**	**2.44**	**144**	*e*PN	**Pn**	**19 59 00.8**	**+1.0**
DALT	**Dalyan (Mudla)**	**2.44**	**144**	*e*Pn	**Pn**	**19 59 00.9**	**+1.0**
GEMT	**Gemlik**	**2.44**	**46**	*e*PN	**Pn**	**19 59 00.5**	**+0.7**
GEMT	**Gemlik**	**2.44**	**46**	*e*Pn	**Pn**	**19 59 00.5**	**+0.7**
CRLT	**Corlu**	**2.45**	**15**	*e*PN	**Pn**	**19 59 00.8**	**+0.9**
CRLT	**Corlu**	**2.45**	**15**	*e*Pn	**Pn**	**19 59 00.8**	**+0.9**
ALT	**Altintas**	**2.54

IMW	**Indian Meadow**	**1.86**	**140**	*e*Pg		**Pb**	**20 00 21.6**	**-0.1**
F12A	**Elk City**	**1.93**	**283**	⇓Pb		**Pn**	**20 00 21.6**	**+1.2**
	baz=1.9,SNR=299							
J15A	**Blackfoot**	**1.95**	**177**	⇑Pb		**Pn**	**20 00 22.6**	**+2.0**
	baz=1.9,SNR=170							
G12A	**Big Creek, Yel**	**1.95**	**265**	⇑Pb		**Pn**	**20 00 21.9**	**+1.2**
	baz=1.9							
SLMT	**Seeley Lake**	**2.00**	**342**	*e*Pn		**Pn**	**20 00 22.6**	**+1.2**
DCID1	**Drake Creek**	**2.02**	**150**	*e*Pg		**Pb**	**20 00 24.8**	**+0.6**
MOOW	**Moose Ponds**	**2.06**	**140**	*e*Pb		**Pb**	**20 00 24.8**	**-0.4**
F18A	**Big Timber**	**2.08**	**73**	⇓Pb		**Pb**	**20 00 24.5**	**-1.0**
	baz=2.1							
G18A	**Lazy EL Ranch,**	**2.13**	**90**	⇑Pg		**Pg**	**20 00 27.2**	**-1.1**
	baz=2.1,SNR=125							
J14A	**Carey**	**2.13**	**199**	⇓Pb		**Pn**	**20 00 24.4**	**+1.2**
	baz=2.1,SNR=270							
H18A	**Shoshone NF, C**	**2.17**	**107**	⇑Pg		**Pb**	**20 00 27.9**	**+0.9**
	baz=2.2							
D13A	**Huson**	**2.18**	**324**	⇓Pg		**Pg**	**20 00 29.3**	**-0.1**
	baz=2.2,SNR=16							
J16A	**Bone**	**2.18**	**161**	⇓Pb		**Pn**	**20 00 26.5**	**+2.5**
	baz=2.2							
TPAW	**Teton Pass**	**2.19**	**147**	*e*Pg		**Pb**	**20 00 27.6**	**+0.2**
RRI2	**Red Ridge**	**2.19**	**155**	*e*Pb		**Pb**	**20 00 26.9**	**-0.4**
HLID	**Hailey**	**2.21**	**217**	*e*Pn		**Pn**	**20 00 24.9**	**+0.5**
HLID	**Hailey**	**2.21**	**217**	⇑Pb		**Pn**	**20 00 25.5**	**+1.2**
	baz=2.2,SNR=103							
E18A	**Harlowton**	**2.22**	**56**	⇑Pb		**Pn**	**20 00 25.9**	**+1.4**
	baz=2.2,SNR=33							
D17A	**Six Diamond Ra**	**2.23**	**35**	⇓P		**Pn**	**20 00 25.5**	**+0.9**
	baz=2.2,SNR=180							
LOHW	**Long Hollow**	**2.24**	**140**	*e*Pb		**Pb**	**20 00 27.7**	**-0.3**
J13A	**Cove Ranch, Pi**	**2.26**	**211**	⇑Pb		**Pn**	**20 00 26.4**	**+1.4**
	baz=2.2,SNR=146							
SNOW	**Snow King Moun**	**2.29**	**145**	*e*Pg		**Pb**	**20 00 29.3**	**+0.3**
REDW	**Red Top Meadow**	**2.34**	**147**	*e*Pg		**Pg**	**20 00 33.0**	**+0.6**
REDW				*e*Sg		**Sg**	**20 01 04.2**	**+1.6**
RLMT	**Red Lodge**	**2.35**	**94**	*e*Pb		**Pb**	**20 00 30.2**	**+0.2**
RLMT	**Red Lodge**	**2.35**	**94**	⇓Pb		**Pb**	**20 00 28.6**	**-1.4**
	baz=2.3,SNR=82							
SWMT	**Swartz Lake**	**2.38**	**336**	*e*Pn		**Pn**	**20 00 28.1**	**+1.6**
I12A	**Atlanta**	**2.40**	**231**	⇑P		**Pn**	**20 00 27.8**	**+0.9**
	baz=2.4							
C15A	**Salmond Ranch,**	**2.43**	**360**	⇑P		**Pn**	**20 00 28.1**	**+0.8**
	baz=2.5,SNR=36							
C16A	**Fuhringer Ranc**	**2.52**	**13**	⇓P		**Pn**	**20 00 29.3**	**+0.8**
	baz=2.5,SNR=17							
JTMT	**Jette**	**2.67**	**335**	*e*Pn		**Pn**	**20 00 32.6**	**+2.0**
BSMT	**Bassoo Peak**	**2.93**	**330**	*e*Pn		**Pn**	**20 00 36.8**	**+2.5**
BLMT	**Blacktail Moun**	**2.94**	**336**	*e*Pn		**Pn**	**20 00 36.6**	**+2.3**
MFID	**Camas Ranch**	**3.02**	**232**	*e*Pn		**Pn**	**20 00 37.4**	**+2.0**
EGMT	**Eagleton**	**3.31**	**35**	*e*Pn		**Pn**	**20 00 41.1**	**+1.8**
PDAR	**Pinedale Array**	**3.37**	**139**	Pn		**Pb**	**20 00 46.6**	**-0.8**
PDAR				Lg		Lg	20 01 33.6	
PDAR	**Pinedale Array**	**3.37**	**139**	Pn		**Pb**	**20 00 46.7**	**-0.8**
	0.8nm,0.3s,baz=319,slow=11,SNR=13							
PDAR				Lg		Lg	20 01 33.6	
	0.5nm,0.3s,baz=338,slow=26,SNR=4.2							
HVU	**Hansel Valley**	**3.57**	**182**	*e*Pb		**Pb**	**20 00 49.1**	**-1.6**
NEW	**Newport**	**4.27**	**315**	Pn		**Pn**	**20 00 53.8**	**+1.3**
NEW				*e*Pb		**Pb**	**20 01 04.3**	**+1.6**
NEW				Lg		Lg	20 02 01.7	
NEW	**Newport**	**4.27**	**315**	Pn		**Pn**	**20 00 53.8**	**+1.3**
	0.6nm,0.3s,baz=145,slow=9.3,SNR=12							
NEW				Lg		Lg	20 02 01.7	
	3.5nm,0.3s,baz=46,slow=22,SNR=9.2							
JLU	**Jordanelle**	**4.81**	**170**	*e*Pg		**Pg**	**20 01 16.8**	**-3.0**
HAWA	**Hanford**	**4.97**	**285**	*e*Pn		**Pn**	**20 01 04.0**	**+1.9**
ELK	**Elko**	**4.99**	**204**	Pn		Pb	20 01 10.2	-4.9
ELK				Lg		Lg	20 02 19.8	
ELK	**Elko**	**4.99**	**204**	Pn		Pb	20 01 10.2	-4.9
	0.4nm,0.3s,baz=16,slow=16,SNR=12							
ELK				Lg		Lg	20 02 19.8	
	0.8nm,0.3s,baz=114,slow=20,SNR=3.7							
DUG	**Dugway**	**5.15**	**182**	*e*Pb		**Pb**	**20 01 19.4**	**+1.7**
NVAR	**Mina Array Bea**	**8.12**	**214**	Pn		Pn	20 01 52.8	+7.3
NVAR				Pg		Pb	20 02 12.1	+3.8
NVAR	**Mina Array Bea**	**8.12**	**214**	Pn		Pn	20 01 52.8	+7.3
	0.0nm,0.3s,baz=24,slow=12,SNR=3.0							
NVAR				Pg		Pb	20 02 12.1	+3.8
	0.1nm,0.3s,baz=30,slow=15,SNR=3.6							
YKA	**Yellowknife Ar**	**17.22**	**357**	Pn		Pn	20 03 42.9	-4.8
YKA				Lg		Lg	20 08 37.0	
YKA	**Yellowknife Ar**	**17.22**	**357**	Pn		Pn	20 03 42.9	-4.8
	0.0nm,0.3s,baz=174,slow=14,SNR=4.2							
YKA				Lg		Lg	20 08 36.9	
	0.0nm,0.3s,baz=171,slow=29,SNR=2.9							

*ISCJB **18** 20:03:54.8±0.4,23°.86N±0°.02×122°.54E±0°.02,h17km±3km, mb3.9/12, Error ellipse: s-maj=3.1km s-min=2.4km az=159.4*
*TAP **18** 20:03:55.9,23°.95N×122°.50E,h28km,ML4.0,C*
*JMA **18** 20:03:56.1±0.5,24°.00N×122°.49E,h28km*
*IDC **18** 20:03:58.3±0.8,24°.01N×122°.47E,h52km±6km, mb3.6/11, mb1 3.7/12,mb1mx3.4/28,mbtmp3.6/12, Error ellipse: s-maj=39.5km s-min=11.9km az=65.0*

ISC 18 20:03:54.2±1.1,23°.90N±0°.02×122°.52E±0°.02,h17km±7km, n79,σ1°40/140,mb3.8/12,3C-5D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.72**	**39**	P	**Pb**	**20 04 08.8**	**+0.5**
YOJ				S	**Sg**	**20 04 17.6**	**-0.2**
HWA	**Hwalien**	**0.84**	**276**	*e*P	**Pb**	**20 04 11.3**	**+1.0**
	baz=260						
HWA				*e*S	**Sb**	**20 04 22.2**	**+0.8**
	baz=260						
TWD	**Chiawan**	**0.86**	**282**	P	**Pg**	**20 04 10.9**	**-0.1**
	baz=279						
TWD				S	**Sg**	**20 04 22.4**	**0.0**
	baz=279						
ENA	**Nanau**	**0.89**	**307**	⇑P	**Pb**	**20 04 11.6**	**+0.5**
	baz=313						
ENA				*e*S	**Sn**	**20 04 24.4**	**-0.1**
	baz=313						
TWC	**Suao**	**0.94**	**319**	⇑*i*P	**Pg**	**20 04 12.1**	**-0.3**
	baz=318						
TWC				S	**Sb**	**20 04 24.4**	**+0.3**
	baz=318						
ESL	**Shilin**	**1.00**	**265**	*e*P	**Pg**	**20 04 12.8**	**-0.7**
	baz=262						
ESL				*e*S	**Sg**	**20 04 26.0**	**-0.6**
	baz=262						
ILA	**Ilan**	**1.11**	**321**	*e*P	**Pb**	**20 04 15.6**	**+0.5**
	baz=320						
ILA				*e*S	**Sn**	**20 04 32.2**	**+2.1**
	baz=320						
TWE	**Neicheng**	**1.13**	**317**	P	**Pb**	**20 04 15.9**	**+0.6**
	baz=315						
ENTT	**Nioudou**	**1.14**	**311**	⇓P	**Pb**	**20 04 16.0**	**+0.5**
	baz=295						
ENTT				*e*S	**Sn**	**20 04 32.1**	**+1.3**
	baz=295						
EHY	**Hungye**	**1.16**	**251**	⇑*i*P	**Pb**	**20 04 16.0**	**+0.1**
	baz=248						
EHY				*e*S	**Sb**	**20 04 30.6**	**-0.2**
	baz=248						
WHF	**Hehuan Shan**	**1.17**	**282**	⇓*i*P	**Pb**	**20 04 16.1**	**-0.2**
	baz=280						
WHF				S	**Sb**	**20 04 32.2**	**+0.8**
	baz=280						
NNS	**Nan Shan**	**1.18**	**298**	⇓*i*P	**Pb**	**20 04 16.3**	**+0.1**
	baz=296						
NNS				*e*S	**Sb**	**20 04 31.6**	**+0.4**
	baz=296						
HATJ	**Hateruma jima**	**1.19**	**82**	P	**Pb**	**20 04 17.0**	**+0.7**
HATJ				S	**Sb**	**20 04 32.7**	**+1.3**
IRIF	**Iriomote-Funau**	**1.19**	**68**	P	**Pb**	**20 04 17.4**	**+1.1**
IRIF				*e*S	**Sb**	**20 04 32.9**	**+1.4**
TWB1	**Santiao Chiao**	**1.21**	**336**	*e*P	**Pb**	**20 04 16.5**	**-0.1**
	baz=353						
TWB1				S	**Sg**	**20 04 32.5**	**-0.8**
	baz=353						
TWF1	**Yuli**	**1.25**	**244**	⇓*i*P	**Pn**	**20 04 17.2**	**+0.3**
	baz=242						
TWF1				*e*S	**Sb**	**20 04 32.8**	**-0.3**
	baz=242						
TWT	**Tachien**	**1.28**	**286**	P	**Pn**	**20 04 18.4**	**+1.0**
	baz=273						
TWT				*e*S	**Sb**	**20 04 35.1**	**+0.9**
	baz=273						
NSK	**Sanguang**	**1.31**	**306**	⇓*i*P	**Pn**	**20 04 18.5**	**+0.6**
	baz=305						
NSK				*e*S	**Sb**	**20 04 35.1**	**+0.1**
	baz=305						
CHKT	**Chengkung**	**1.32**	**233**	*e*P	**Pn**	**20 04 17.5**	**-0.4**
	baz=219						
CHKT				*e*S	**Sb**	**20 04 33.5**	**-1.8**
	baz=219						
NWF	**Wu-fen Shan**	**1.35**	**330**	*e*P	**Pn**	**20 04 18.6**	**+0.2**
	baz=330						
NWF				*e*S	**Sg**	**20 04 37.6**	**-0.2**
	baz=330						
JKRS	**Kuro-shima**	**1.40**	**76**	P	**Pn**	**20 04 20.2**	**+1.1**
JKRS				S	**Sn**	**20 04 39.3**	**+2.1**
TAP1	**Taipei**	**1.45**	**322**	*e*P	**Pb**	**20 04 21.0**	**+0.1**
	baz=321						
TAP1				*e*S	**Sg**	**20 04 41.1**	**-0.1**
	baz=321						
TAP	**Taipei**	**1.46**	**321**	*e*P	**Pb**	**20 04 21.4**	**+0.4**
	baz=321						
TAP				*e*S	**Sg**	**20 04 41.4**	**-0.1**
	baz=321						
SMLT	**Sun Moon Lake**	**1.48**	**270**	*e*P	**Pn**	**20 04 21.1**	**+0.8**
	baz=268						
SMLT				*e*S	**Sn**	**20 04 39.6**	**+0.3**
	baz=268						
TYC	**Yuchr**	**1.52**	**271**	P	**Pn**	**20 04 21.5**	**+0.9**
	baz=269						
TYC				*e*S	**Sn**	**20 04 41.6**	**+1.5**
	baz=269						
ELDTW	**Lidau**	**1.55**	**243**	*e*P	**Pn**	**20 04 21.2**	**0.0**
	baz=241						
ELDTW				*e*S	**Sn**	**20 04 39.4**	**-1.6**
	baz=241						
JIJ	**Ishigaki jima**	**1.56**	**72**	P	**Pn**	**20 04 21.6**	**+0.5**
JIJ				*e*S	**Sn**	**20 04 41.3**	**+0.4**
TWS1	**Kuangyinshan**	**1.56**	**320**	*e*P	**Pn**	**20 04 21.3**	**+0.1**
	baz=336						
NSTT	**Nanjuang**	**1.56**	**298**	*i*P	**Pb**	**20 04 23.0**	**+0.2**
	baz=285						
NSTT				S	**Sn**	**20 04 42.5**	**+1.3**
	baz=285						
TWY	**Chenhua**	**1.61**	**329**	*e*P	**Pb**	**20 04 23.4**	**-0.1**
	baz=329						
TWY				*e*S	**Sg**	**20 04 44.3**	**-1.7**
	baz=329						
NCU	**National Centr**	**1.62**	**312**	*e*P	**Pn**	**20 04 22.8**	**+0.8**
	baz=311						
NCU				*e*S	**Sb**	**20 04 44.4**	**+0.6**
	baz=311						
ALS	**Alishan**	**1.62**	**257**	*e*P	**Pn**	**20 04 23.5**	**+1.2**
	baz=255						
ALS				*e*S	**Sn**	**20 04 43.6**	**+0.7**
	baz=255						
TWQ1	**Liyutan**	**1.66**	**286**	*e*P	**Pb**	**20 04 24.5**	**+0.2**
	baz=284						
TWQ1				*e*S	**Sb**	**20 04 45.5**	**+0.5**
	baz=284						
HSN	**Hsinchu**	**1.68**	**303**	*e*P	**Pn**	**20 04 24.3**	**+1.5**
	baz=303						
HSN				*e*S	**Sb**	**20 04 45.6**	**+0.2**
	baz=303						
WNT	**Mingjian**	**1.68**	**270**	*e*P	**Pb**	**20 04 25.7**	**+1.0**
	baz=268						
WNT				*e*S	**Sn**	**20 04 45.0**	**+1.0**
	baz=268						
NSY	**Sanyi**	**1.69**	**288**	P	**Pn**	**20 04 24.9**	**+1.9**
	baz=287						
NSY				S	**Sb**	**20 04 46.4**	**+0.6**
	baz=287						
TTN	**Taitung**	**1.70**	**228**	*e*P	**Pn**	**20 04 23.2**	**+0.1**
	baz=227						
TTN				*e*S	**Sn**	**20 04 43.3**	**-1.2**
	baz=227						
TCU	**Taichung**	**1.70**	**279**	*e*P	**Pb**	**20 04 25.8**	**+0.7**
	baz=277						
TCU				*e*S	**Sb**	**20 04 47.1**	**+0.8**
	baz=277						
TWG	**Pinlang**	**1.71**	**231**	*e*P	**Pn**	**20 04 23.3**	**0.0**
	baz=243						
TWG				*e*S	**Sn**	**20 04 43.5**	**-1.2**
	baz=243						
CHN5	**Tsauling**	**1.71**	**260**	*e*P	**Pn**	**20 04 25.3**	**+1.9**
	baz=249						
CHN5				*e*S	**Sn**	**20 04 46.2**	**+1.2**
	baz=249						
PCYT	**Pengchaiyu**	**1.77**	**347**	*e*P	**Pn**	**20 04 24.7**	**+0.6**
	baz=347						
WGK	**Gukeng**	**1.81**	**264**	*e*P	**Pn**	**20 04 26.1**	**+1.6**
	baz=262						
WGK				*e*S	**Sb**	**20 04 50.9**	**+1.7**
	baz=262						
CHN4	**Tsaushan**	**1.85**	**253**	*e*P	**Pn**	**20 04 27.4**	**+2.3**
	baz=252						
CHN4				*e*S	**Sn**	**20 04 50.8**	**+2.6**
	baz=252						
WTP	**Ta-pu**	**1.86**	**250**	*e*P	**Pn**	**20 04 27.6**	**+2.1**
	baz=239						
WTP				*e*S	**Sn**	**20 04 51.0**	**+2.3**
	baz=239						
CHN2	**Minshiung**	**1.91**	**259**	*e*P	**Pn**	**20 04 27.2**	**+1.2**
	baz=258						
CHN2				*e*S	**Sn**	**20 04 51.9**	**+2.2**
	baz=258						
ECL	**Taimali**	**1.94**	**228**	*e*P	**Pn**	**20 04 26.2**	**-0.2**
	baz=227						
ECL				*e*S	**Sn**	**20 04 48.7**	**-1.6**
	baz=227						
CHN1	**Nanshi**	**1.96**	**249**	*e*P	**Pn**	**20 04 29.2**	**+2.4**
	baz=248						
CHN1				*e*S	**Sn**	**20 04 54.0**	**+3.0**
	baz=248						
CHY	**Chiayi**	**1.96**	**259**	*e*P	**Pn**	**20 04 29.1**	**+2.4**
	baz=257						
CHY				*e*S	**Sn**	**20 04 52.9**	**+1.9**
	baz=257						
TWK	**Hsinying**	**1.97**	**252**	*e*P	**Pn**	**20 04 27.8**	**+0.9**
	baz=250						
TWK				*e*S	**Sn**	**20 04 53.5**	**+2.3**
	baz=250						
WTCT	**Ta-ch'eng**	**2.05**	**270**	*e*P	**Pn**	**20 04 29.6**	**+1.7**
	baz=268						
WTCT				*e*S	**Sn**	**20 04 56.0**	**+2.9**
	baz=268						
WSF	**Szhu**	**2.12**	**263**	*e*P	**Pn**	**20 04 29.8**	**+0.9**
	baz=262						
WSF				*e*S	**Sn**	**20 04 58.0**	**+3.1**
	baz=262						
CHN3	**Shinhua**	**2.14**	**248**	*e*P	**Pn**	**20 04 30.5**	**+1.3**
	baz=247						
CHN3				*e*S	**Sn**	**20 04 58.8**	**+3.4**
	baz=247						
TAW	**Tawu**	**2.14**	**225**	*e*P	**Pn**	**20 04 29.8**	**+0.6**
	baz=233						
TAW				*e*S	**Sn**	**20 04 53.9**	**-1.5**
	baz=233						
EAST	**Anshuo**	**2.15**	**226**	P	**Pn**	**20 04 29.7**	**+0.2**
	baz=225						
EAST				*e*S	**Sn**	**20 04 53.8**	**-2.0**
	baz=225						
CHN8	**Yiju**	**2.19**	**256**	*e*P	**Pn**	**20 04 32.0**	**+2.2**
	baz=254						
CHN8				*e*S	**Sn**	**20 04 59.0**	**+2.5**
	baz=254						
SGLT	**Jiouru**	**2.20**	**238**	*e*P	**Pn**	**20 04 30.8**	**+0.8**
	baz=237						
SGLT				*e*S	**Sn**	**20 04 59.2**	**+2.3**
	baz=237						
TWM1	**Shoushan**	**2.20**	**241**	*e*P	**Pn**	**20 04 32.0**	**+1.9**
	baz=240						
TWM1				*e*S	**Sb**	**20 05 03.3**	**+2.6**
	baz=240						
SCLT	**Jiali**	**2.25**	**252**	*e*P	**Pn**	**20 04 33.0**	**+2.3**
	baz=250						
SCLT				*e*S	**Sn**	**20 05 00.9**	**+2.8**
	baz=250						
TAI1	**Yung-k'ang**	**2.27**	**248**	*e*P	**Pn**	**20 04 32.1**	**+1.1**
	baz=247						
TAI1				*e*S	**Sn**	**20 05 00.9**	**+2.4**
	baz=247						
SCZT	**Fangliau**	**2.31**	**229**	*e*P	**Pn**	**20 04 34.0**	**+2.4**
	baz=221						
SCZT				*e*S	**Sn**	**20 05 01.4**	**+1.7**
	baz=221						
TSEB	**Hengchuen, Pin**	**2.49**	**217**	*e*P	**Pn**	**20 04 36.9**	**+3.0**
	baz=227						
TSEB				*e*S	**Sn**	**20 05 06.4**	**+2.4**
	baz=227						
HEN	**Hengchun**	**2.50**	**221**	*e*P	**Pn**	**20 04 35.3**	**+1.1**
	baz=221						
HEN				*e*S	**Sn**	**20 05 05.1**	**+0.9**
	baz=221						
TWK1	**Hengchun**	**2.51**	**219**	*e*P	**Pn**	**20 04 35.7**	**+1.5**
	baz=219						
TWK1				*e*S	**Sn**	**20 05 04.9**	**+0.5**
	baz=219						
TWP	**Hsiaoliuchiu**	**2.52**	**233**	*e*P	**Pb**	**20 04 39.6**	**+0.7**
	baz=246						
PNG	**Penghu**	**2.74**	**264**	*e*P	**Pn**	**20 04 39.0**	**+1.6**
	baz=262						
PNG				*e*S	**Sn**	**20 05 10.6**	**+0.5**
	baz=262						
KNM	**Kinmen**	**3.77**	**279**	*e*P	**Pn**	**20 04 52.6**	**+1.0**
	baz=278						
KSRS	**Korea Array**	**14.29**	**18**	P	**Pn**	**20 07 17.5**	**+1.8**
	baz=194,slow=12,SNR=4.7						
SONM	**Songino Array**	**27.12**	**336**	P	**P**	**20 09 35.4**	**-1.0**
	0.9nm,0.8s,baz=153,slow=11,SNR=3.0						
MKAR	**Makanchi Array**	**39.39**	**316**	P	**P**	**20 11 22.6**	**-0.5**
	0.8nm,0.5s,baz=98,slow=10.0,SNR=30						
ZALV	**Zalesovo Beam**	**41.15**	**327**	P	P	20 11 35.2	-2.3
	1.0nm,0.6s,baz=114,slow=8.3,SNR=6.4						
ZALV				pP	pP	20 11 49.1	+6.5
	0.7nm,0.5s,baz=112,slow=7.8,SNR=3.4						
KURBB	**Kurchatov Arra**	**43.11**	**320**	P	**P**	**20 11 52.1**	**-1.4**
	0.3nm,0.4s,baz=108,slow=9.8,SNR=8.1						
WRA	**Warramunga Arr**	**45.07**	**164**	P	**P**	**20 12 10.1**	**+0.6**
	62nm,0.6s,baz=345,slow=8.7,SNR=2.3						
ASAR	**Alice Springs**	**48.56**	**166**	P	**P**	**20 12 38.0**	**+1.3**
	0.9nm,0.5s,baz=354,slow=14,SNR=19						
ASAR				pP	pP	20 12 51.9	+10
	0.5nm,0.6s,baz=353,slow=14,SNR=3.6						
BVAR	**Borovoye Array**	**48.67**	**321**	P	**P**	**20 12 36.2**	**-1.2**
	0.6nm,0.5s,baz=102,slow=7.7,SNR=9.8						
BVAR				pP	pP	20 12 50.5	+7.9
	0.5nm,0.6s,baz=107,slow=7.4,SNR=3.9						
STKA	**Stephens Creek**	**58.38**	**161**	P	**P**	**20 13 48.7**	**-0.1**
	0.6nm,0.5s,baz=348,slow=2.8,SNR=2.4						
STKA				pP	pP	20 14 02.9	+8.7
	1.9nm,0.7s,baz=344,slow=5.4,SNR=2.7						
FINES	**FINESS Array B**	**72.31**	**330**	P	**P**	**20 15 17.8**	**-0.9**
	3.4nm,0.9s,baz=90,slow=3.8,SNR=3.9						
BRTR	**Keskin Array B**	**74.32**	**307**	P	**P**	**20 15 29.8**	**-1.5**
	0.6nm,0.8s,baz=91,slow=15,SNR=5.0						
BRTR				pP	**PcP**	**20 15 45.2**	**-0.7**
	0.5nm,0.6s,baz=98,slow=5.0,SNR=3.2						
HFS	**Hagfors**	**78.41**	**331**	P	**P**	**20 15 52.5**	**-1.3**
	2.5nm,0.9s,baz=134,slow=4.2,SNR=3.8						
YKA	**Yellowknife Ar**	**82.75**	**23**	P	**P**	**20 16 15.8**	**-1.2**
	0.4nm,0.6s,baz=312,slow=5.1,SNR=16						

*IDC **18** 20:05:20.0±4.2,1°.74S×101°.91E,h0km,mb3.4/5, mb1 3.5/6,mb1mx3.3/25,mbtmp3.4/6,ML3.3/1, Error ellipse: s-maj=95.0km s-min=72.7km az=95.0*
*ISCJB **18** 20:05:28.1±0.8,1°.48S±0°.07×99°.37E±0°.04,h10km, mb3.6/4, Error ellipse: s-maj=9.6km s-min=6.3km az=7.0*
*DJA **18** 20:05:29.7±0.4,1°.5S±4°×9°.9E±°,h11km,M4.2/8,MLv4.2/8*

ISC 18 20:05:28.9±1.0,1°.43S±0°.07×99°.43E±0°.05,h10km,n15, σ1°72/17,mb3.7/4,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SISI	**Saibi**	**0.36**	**287**	P	**Pg**	**20 05 35.2**	**-0.9**
PDSI	**Padang**	**1.15**	**63**	P	**Pb**	**20 05 49.7**	**-1.3**
PDSI				S	**Sb**	**20 06 07.3**	**+1.3**
PPI	**Padang Panjang**	**1.37**	**45**	P	**Pn**	**20 05 53.2**	**-0.9**
PPI				S	**Sn**	**20 06 13.6**	**+1.4**
SDSI	**Sungai Dareh**	**2.06**	**76**	P	**Pn**	**20 06 03.8**	**+0.2**
SDSI				S	**Sn**	**20 06 30.5**	**+1.2**
KRJI	**Kerinci**	**2.13**	**108**	P	**Pn**	**20 06 05.2**	**+0.5**
KRJI				S	**Sn**	**20 06 33.4**	**+2.1**
BKNI	**Bangkinang**	**2.37**	**43**	P	**Pb**	**20 06 12.1**	**+0.3**
GSI	**Gunungsitoli**	**3.29**	**326**	P	**Pn**	**20 06 23.2**	**+2.6**
KSI	**Kapahiang**	**3.85**	**125**	P	**Pn**	**20 06 31.5**	**+3.1**
PSI	**Prapat**	**4.23**	**353**	Pn	Pb	20 06 40.4	-3.2
	0.9nm,0.3s,baz=159,slow=14,SNR=3.4						
MNAI	**Manna**	**4.57**	**130**	P	**Pn**	**20 06 36.6**	**-1.5**
CMAR	**Chiang Mai Arr**	**19.77**	**359**	P	**P**	**20 09 58.2**	**-1.1**
	0.7nm,0.7s,baz=183,slow=9.9,SNR=4.4						
MKAR	**Makanchi Array**	**50.33**	**345**	P	**P**	**20 14 25.0**	**-1.0**
	0.2nm,0.3s,baz=162,slow=8.8,SNR=9.4						
KURBB	**Kurchatov Arra**	**54.85**	**344**	P	**P**	**20 15 00.3**	**+1.0**
	0.2nm,0.6s,baz=159,slow=7.5,SNR=2.6						
ZALV	**Zalesovo Beam**	**56.51**	**350**	P	**P**	**20 15 08.7**	**-2.5**
	0.5nm,0.3s,baz=146,slow=6.2,SNR=5.3						
BRTR	**Keskin Array B**	**72.52**	**312**	P	P	20 17 01.5	+5.0
	1.1nm,1.2s,baz=108,slow=4.7,SNR=3.8						

*IDC **18** 20:54:56.4±4.1,6°.51S×132°.09E,h0km,ML5.6/1,Error ellipse: s-maj=274.4km s-min=32.1km az=74.0*
*ISCJB **18** 20:55:01.6±0.9,6°.76S±0°.06×131°.7E±0°.1,h46km,mb3.3/1, Error ellipse: s-maj=21.5km s-min=7.3km az=171.1*
*AUST **18** 20:55:02.8±8.1,6°.55S×132°.33E,h183km,Error ellipse: s-maj=5.1km s-min=1.0km az=260.0*

ISC 18 20:55:02.8±1.2,6.71S±0°.08×131°.8E±0°.2,h46km,n9, σ0°46/8,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLE	**Tual**	**1.39**	**40**	P	Pn	20 55 30.8	+4.9
	baz=1.0,SNR=45						
TLE				S	Sn	20 55 51.0	+7.9
	baz=1.0,SNR=5.2						
SWI	**Sorong**	**5.84**	**354**	P	**Pn**	**20 56 26.6**	**-0.3**
	baz=5.8,SNR=4.2						
SWI				S	Sx	20 57 21.3	
	baz=5.8,SNR=8.1						
KDU	**Kakadu**	**5.97**	**174**	P	Pn	20 56 31.9	+3.2
	baz=6.1,SNR=23						
KDU				S	**Sn**	**20 57 35.7**	**-0.1**
	baz=6.1,SNR=11						
MTN	**Manton D

ARS					Smax				
	comp=E,5μm,0.3s								
ORL	**Orlik**	**0.94**	**269**	*e*PG		**Pb**	**21 17 01.8**	**+0.2**
ORL				*e*			21 17 14.6	
ORL				pmax	pmax			
	comp=Z,590nm,0.3s								
ORL				smax	smax				
	comp=N,2μm,0.5s								
ORL	**Orlik**	**0.94**	**269**	⇑*i*Pg		**Pb**	**21 17 01.9**	**+0.3**
	comp=N,179nm,0.4s								
ORL				⇑*i*Pg		**Pb**	**21 17 01.9**	**+0.3**
	comp=N,717nm,0.4s								
ORL				⇓*i*Pg		**Pb**	**21 17 01.9**	**+0.3**
	comp=N,687nm,0.4s								
ORL				*e*Sg		**Sg**	**21 17 14.6**	**+0.8**
ORL				Pmax				
	comp=N,418nm,0.1s								
ORL				Smax					
	comp=N,2μm,0.7s								
TLY	**Talaya**	**1.67**	**121**	⇓*i*PN		**Pn**	**21 17 12.6**	**+0.2**
TLY				*e*			21 17 33.2	
TLY				pmax	pmax				
	comp=Z,141nm,0.4s								
TLY				smax	smax				
	comp=N,735nm,0.4s								
TLY	**Talaya**	**1.67**	**121**	⇓*i*Pg		**Pn**	**21 17 12.6**	**+0.2**
TLY				*e*			21 17 14.2	
TLY				*e*Sg		**Sn**	**21 17 33.3**	**-0.3**
TLY				max					
	comp=N,120nm,0.3s								
TLY				Smax					
	comp=N,731nm,0.4s								
IRK	**Irkutsk**	**1.82**	**99**	*e*PN		**Pb**	**21 17 15.7**	**-0.9**
IRK				*e*			21 17 38.4	
IRK				pmax	pmax				
	comp=Z,328nm,0.2s								
IRK				smax	smax				
	comp=N,2μm,0.4s								
IRK	**Irkutsk**	**1.82**	**99**	*e*Pg		**Pn**	**21 17 15.5**	**+1.1**
IRK				*e*Sg		**Sn**	**21 17 38.0**	**+0.7**
IRK				Pmax					
	comp=N,326nm,0.2s								
IRK				Smax					
	comp=N,2μm,0.5s								
LSTR	**Listvyanka**	**2.25**	**107**	*e*PN		**Pb**	**21 17 22.8**	**-1.2**
LSTR				*e*			21 17 51.0	
LSTR				pmax	pmax				
	comp=Z,121nm,0.6s								
LSTR				smax	smax				
	comp=N,590nm,1.2s								
LSTR	**Listvyanka**	**2.25**	**107**	*e*Pn		**Pn**	**21 17 20.6**	**+0.2**
LSTR				*e*Pg		**Pb**	**21 17 22.7**	**-1.2**
LSTR				*e*			21 17 24.9	
LSTR				*e*Sg		**Sb**	**21 17 50.7**	**-1.0**
LSTR				max					
	comp=N,103nm,0.4s								
LSTR				Smax					
	comp=N,455nm,0.6s								
ZAK	**Zakamensk**	**2.50**	**150**	*e*PN		**Pn**	**21 17 24.7**	**+0.9**
ZAK				*i*			21 17 27.0	
ZAK				*e*			21 17 59.0	
ZAK				pmax	pmax				
	comp=Z,58nm,0.5s								
ZAK				smax	smax				
	comp=E,458nm,0.6s								
ZAK	**Zakamensk**	**2.50**	**150**	*e*Pn		**Pn**	**21 17 24.9**	**+1.1**
ZAK				⇑*i*Pg		**Pb**	**21 17 27.2**	**-0.9**
ZAK				*e*Sg		**Sb**	**21 17 59.3**	**+0.5**
ZAK				Pmax					
	comp=E,58nm,0.3s								
ZAK				Smax					
	comp=E,458nm,0.6s								
TRG	**Tyrgan**	**3.05**	**84**	*e*PN		**Pn**	**21 17 30.7**	**-0.6**
TRG				*e*			21 17 37.4	
TRG				*e*S		**Sn**	**21 18 06.4**	**-1.4**
TRG				*e*			21 18 18.2	
TRG				pmax	pmax				
	comp=Z,130nm,0.4s								
TRG				smax	smax				
	comp=N,209nm,0.5s								
TRG	**Tyrgan**	**3.05**	**84**	⇓*i*Pn		**Pn**	**21 17 30.8**	**-0.6**
TRG				*e*Pg		**Pb**	**21 17 37.9**	**+0.3**
TRG				*e*Sn		**Sn**	**21 18 06.1**	**-1.7**
TRG				*e*Sg		**Sb**	**21 18 16.6**	**+1.8**
TRG				Pmax					
	comp=N,126nm,0.4s								
TRG				Smax					
	comp=N,171nm,0.3s								
KAB	**Kabansk**	**3.30**	**97**	*e*PN		**Pb**	**21 17 44.1**	**+2.3**
KAB				*e*			21 18 26.0	
KAB				pmax	pmax				
	comp=Z,120nm,0.8s								
KAB				smax	smax				
	comp=N,1μm,1.7s								
KAB	**Kabansk**	**3.30**	**97**	*e*Sg		**Sb**	**21 18 23.8**	**+2.0**
KAB				Smax					
	comp=N,943nm,0.7s								
FFNB	**Fofonovo**	**3.37**	**97**	*e*Pn		**Pn**	**21 17 37.4**	**+1.7**
FFNB				*e*Pg		**Pb**	**21 17 43.0**	**+0.1**
FFNB				*e*Sg		**Sb**	**21 18 25.6**	**+1.9**
FFNB				Pmax					
	comp=N,82nm,0.4s								
FFNB				Smax					
	comp=N,337nm,0.6s								
OGRR	**Ongureny**	**3.92**	**71**	*e*PN		**Pn**	**21 17 44.0**	**+0.7**
OGRR				*e*			21 17 53.7	
OGRR				*e*			21 18 44.3	
OGRR				pmax	pmax				
	comp=Z,76nm,0.5s								
OGRR				smax	smax				
	comp=N,638nm,0.8s								
OGRR	**Ongureny**	**3.92**	**71**	*e*Pn		**Pn**	**21 17 42.2**	**-1.1**
OGRR				*e*			21 17 44.5	
OGRR				*e*Pg		**Pb**	**21 17 53.5**	**+1.2**
OGRR				*e*Sn		**Sn**	**21 18 27.8**	**-1.3**
OGRR				*e*Sg		**Sb**	**21 18 43.7**	**+4.1**
OGRR				Pmax					
	comp=N,77nm,0.3s								
OGRR				Smax					
	comp=N,640nm,0.5s								
UUDB	**Ulan-Yde**	**3.95**	**98**	*e*Pn		**Pn**	**21 17 44.2**	**+0.5**
UUDB				*e*Pg		**Pb**	**21 17 54.0**	**+1.2**
UUDB				*e*Sg		**Sb**	**21 18 44.4**	**+3.9**
UUDB				Pmax					
	comp=N,54nm,0.8s								
UUDB				Smax					
	comp=N,195nm,0.8s								
MXMB	**Maximikha**	**4.53**	**78**	*e*Pn		**Pn**	**21 17 51.3**	**-0.4**
MXMB				*e*Pg		**Pb**	**21 18 04.1**	**+1.3**
MXMB				*e*Sg		**Sb**	**21 19 03.1**	**+5.8**
MXMB				Pmax					
	comp=N,30nm,0.5s								
MXMB				Smax					
	comp=N,334nm,0.9s								
SYVR	**Suvo**	**5.33**	**75**	*e*Pn		**Pn**	**21 18 02.4**	**-0.2**
SYVR				*e*			21 18 19.9	
SYVR				*e*Sg		Sb	21 19 26.3	+6.2
SYVR				Smax					
	comp=N,65nm,1.1s								
SONM	**Songino Array**	**5.73**	**144**	Pn		**Pb**	**21 18 24.9**	**+1.5**
	comp=N,3.1nm,0.3s,baz=315,slow=16,SNR=41								
SONM				Lg	Lg		21 19 42.2		
	comp=N,6.8nm,0.3s,baz=317,slow=30,SNR=29								
NIZ	**Nizh Angarsk**	**5.79**	**53**	*e*PN		**Pn**	**21 18 09.1**	**+0.1**
NIZ				*e*			21 18 25.9	
NIZ				*e*S		**Sn**	**21 19 12.4**	**-2.8**
NIZ				*e*			21 19 40.8	
NIZ				pmax	pmax				
	comp=Z,23nm,0.4s								
NIZ				smax	smax				
	comp=N,649nm,1.2s								
NIZ	**Nizh Angarsk**	**5.79**	**53**	*e*Pn		**Pn**	**21 18 09.2**	**+0.2**
NIZ				*e*Sn		**Sn**	**21 19 12.6**	**-2.6**
NIZ				*e*Sg		Sb	21 19 41.6	+8.2
NIZ				Smax					
	comp=N,647nm,1.1s								
ULN	**Ulaanbaatar**	**5.96**	**140**	*e*Pg		**Pb**	**21 18 30.1**	**+2.9**
ULN				*e*Sg		Sg	21 19 46.9	-7.7
YLYR	**Ulyunkhan**	**6.27**	**64**	*e*Pn		**Pn**	**21 18 15.6**	**0.0**
YLYR				*e*Sn		**Sn**	**21 19 23.2**	**-3.8**
YLYR				*e*Sg		Sb	21 19 55.9	+8.6
YLYR				Smax					
	comp=N,123nm,0.7s								
KMO	**Kumora**	**6.67**	**56**	*e*Pn		**Pn**	**21 18 21.6**	**+0.6**
KMO				*e*Sn		**Sn**	**21 19 33.8**	**-3.0**
KMO				*e*Sg		Sg	21 20 10.0	-7.3
KMO				Smax					
	comp=N,233nm,1.1s								
YOA	**Uoyan**	**7.04**	**55**	*e*Pn		**Pn**	**21 18 28.4**	**+2.3**
YOA				*e*Sn		**Sn**	**21 19 43.9**	**-2.1**
YOA				*e*Sg		Sg	21 20 22.8	-6.4
YOA				Smax					
	comp=N,647nm,1.2s								
KPC	**Khapcheranga**	**7.51**	**108**	*e*PN		**Pn**	**21 18 31.4**	**-1.2**
KPC				*e*			21 18 57.2	
KPC				*e*			21 20 35.0	
KPC				pmax	pmax				
	comp=Z,2.0nm,0.2s								
KPC				smax	smax				
	comp=N,41nm,1.2s								
KPC	**Khapcheranga**	**7.51**	**108**	*e*Pn		**Pn**	**21 18 33.2**	**+0.6**
KPC				*e*Pg		Pb	21 18 57.7	+4.2
KPC				*e*Sg		Sg	21 20 34.8	-9.4
KPC				Pmax					
	comp=N,3.0nm,0.4s								
KPC				Smax					
	comp=N,41nm,0.8s								
UKT	**Uakit**	**7.80**	**63**	*e*Pn		**Pn**	**21 18 36.2**	**-0.5**
UKT				*e*Sg		Sg	21 20 43.8	-10
UKT				Smax					
	comp=N,56nm,0.9s								
BOD	**Bodaibo**	**8.95**	**49**	*e*PG		Pg	21 19 21.9	-13
BOD				*e*S		**Sn**	**21 20 28.3**	**-4.4**
BOD				*e*			21 21 20.2		
BOD				pmax	pmax				
	comp=Z,3.0nm,0.4s								
BOD				smax	smax				
	comp=N,74nm,1.6s								
BOD	**Bodaibo**	**8.95**	**49**	*e*Pn		**Pn**	**21 18 52.8**	**+0.6**
BOD				*e*			21 19 20.8		
BOD				*e*Sn		**Sn**	**21 20 28.7**	**-4.0**
BOD				*e*Sg		Sg	21 21 19.9	-10
BOD				Smax					
	comp=N,73nm,1.6s								
ZALV	**Zalesovo Beam**	**10.00**	**285**	Pn		Pn	21 19 35.5	+29
	comp=N,0.1nm,0.3s,baz=104,slow=18,SNR=2.5								
TUP	**Tupik**	**11.24**	**73**	*e*Sg		Sn	21 22 29.2	+60
TUP				Smax					
	comp=N,19nm,1.0s								
MKAR	**Makanchi Array**	**13.60**	**252**	Pn		P	21 20 18.2	+13
	comp=N,0.0nm,0.3s,baz=56,slow=11,SNR=3.8								
MKAR				Lg	Lg		21 24 04.2		
	comp=N,0.0nm,0.3s,baz=64,slow=31,SNR=4.6								

*ISCJB **18** 21:23:09.7±1.1,40.°41N±0.°03×25.°96E±0.°08,h2km±7km, Error ellipse: s-maj=10.0km s-min=5.2km az=8.7*
*ISK **18** 21:23:09.8,40.°40N×25.°99E,h8km,MD2.8*
*CSEM **18** 21:23:10.1±0.2,40.°42N×25.°96E,h8km,MD2.8,Error ellipse: s-maj=4.9km s-min=2.7km az=88.0*
*DDA **18** 21:23:10.7,40.°39N×26.°06E,h7km,MD2.9*

ISC 18 21:23:09.9±1.4,**40.°42N**±0.°03×**25.°97E**±0.°06,**h9**km±10km, **n27**,σ**0.°33**/36,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENEZ	**Enez**	**0.34**	**24**	*e*PG	**Pg**	**21 23 16.5**	**-0.2**
ENEZ				*e*SG	**Sb**	**21 23 23.3**	**-0.4**
ENEZ	**Enez**	**0.34**	**24**	*e*Pg	**Pg**	**21 23 16.5**	**-0.2**
ENEZ				*e*Sg	**Sb**	**21 23 23.3**	**-0.4**
GELI	**Tayfur-Gelibol**	**0.39**	**94**	*e*PG	**Pg**	**21 23 17.6**	**+0.1**
GELI				*e*SG	**Sg**	**21 23 22.6**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.39**	**94**	*e*Pg	**Pg**	**21 23 17.6**	**+0.1**
GELI				*e*Sg	**Sg**	**21 23 22.6**	**-0.1**
BOZC	**Bozcaada**	**0.58**	**174**	*e*P	**Pg**	**21 23 21.2**	**-0.1**
BOZC				*e*S	**Sg**	**21 23 29.1**	**+0.2**
LPK	**Lapseki**	**0.61**	**95**	*e*PG	**Pg**	**21 23 22.0**	**+0.3**
LPK				*e*SG	**Sb**	**21 23 30.4**	**-0.9**
LPK	**Lapseki**	**0.61**	**95**	*e*Pg	**Pg**	**21 23 22.0**	**+0.3**
LPK				*e*Sg	**Sb**	**21 23 30.4**	**-0.9**
EZN	**Ezine**	**0.66**	**155**	*e*PG	**Pg**	**21 23 22.4**	**-0.2**
EZN	**Ezine**	**0.66**	**155**	*e*Pg	**Pg**	**21 23 22.4**	**-0.2**
RKY	**Sarkoy-Tekirda**	**0.96**	**74**	*e*PG	**Pg**	**21 23 28.5**	**+0.1**
RKY	**Sarkoy-Tekirda**	**0.96**	**74**	*e*Pg	**Pg**	**21 23 28.5**	**+0.1**
KRBG	**Karabiga-Canak**	**1.02**	**91**	*e*PG	**Pb**	**21 23 29.8**	**+0.1**
KRBG	**Karabiga-Canak**	**1.02**	**91**	*e*Pg	**Pb**	**21 23 29.8**	**+0.1**
MFT	**Murefte**	**1.06**	**70**	*e*PG	**Pg**	**21 23 30.4**	**0.0**
MFT	**Murefte**	**1.06**	**70**	*e*Pg	**Pg**	**21 23 30.4**	**0.0**
AYVA	**Ayvalik**	**1.25**	**153**	*e*P	**Pn**	**21 23 33.8**	**+0.3**
AYVA				*e*S	**Sn**	**21 23 50.4**	**0.0**
AYVA	**Ayvalik**	**1.25**	**153**	*e*P	**Pn**	**21 23 33.8**	**+0.3**
AYVA				*e*S	**Sn**	**21 23 50.4**	**0.0**
MRMT	**Marmara Adasi**	**1.25**	**81**	*e*PN	**Pb**	**21 23 34.0**	**+0.2**
MRMT	**Marmara Adasi**	**1.25**	**81**	*e*Pn	**Pb**	**21 23 34.0**	**+0.2**
TKR	**Tekirdag**	**1.32**	**64**	*e*PN	**Pb**	**21 23 35.1**	**+0.3**
TKR	**Tekirdag**	**1.32**	**64**	*e*Pn	**Pb**	**21 23 35.1**	**+0.3**
GONE	**Gonen-Balikesi**	**1.37**	**105**	*e*PN	**Pb**	**21 23 35.7**	**0.0**
GONE	**Gonen-Balikesi**	**1.37**	**105**	*e*Pn	**Pb**	**21 23 35.7**	**0.0**
CRLT	**Corlu**	**1.52**	**62**	*e*PN	**Pb**	**21 23 38.1**	**-0.1**
CRLT	**Corlu**	**1.52**	**62**	*e*Pn	**Pb**	**21 23 38.1**	**-0.1**
EDRB	**Edirne**	**1.54**	**22**	*e*PN	**Pn**	**21 23 37.9**	**+0.4**
EDRB	**Edirne**	**1.54**	**22**	*e*Pn	**Pn**	**21 23 37.9**	**+0.4**

IDC 18 21:33:41.9±0.6,**18.°56N**×**145.°96E**,**h145**km±5km,**mb3.8**/23, **mb1 3.9**/25,**mb1mx3.9**/34,**mbtmp3.8**/25,**Error ellipse: s-maj=14.0km s-min=7.2km az=89.0,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.05**	**192**	P	Pn	21 34 57.3	+1.4
	29nm,0.3s,baz=145,slow=3.2,SNR=14						
GUMO				S	Sn	21 35 53.9	+0.2
	51nm,0.3s,baz=334,slow=22,SNR=7.5						
MJAR	**Matsushiro Arr**	**19.17**	**341**	P	P	21 37 54.8	+0.6
	1.0nm,0.3s,baz=173,slow=11,SNR=19						
MAT	**Matsushiro**	**19.17**	**341**	P	P	21 37 55.4	+1.2
KSRS	**Korea Array**	**24.57**	**324**	P	P	21 38 48.4	+0.1
	2.0nm,0.7s,baz=147,slow=9.3,SNR=12						
KSRS				pP	pP	21 39 18.2	+0.1
	2.0nm,0.8s,baz=149,slow=10,SNR=4.2						
USRK	**Ussuriysk Arra**	**28.12**	**338**	P	P	21 39 21.1	+1.1
	1.5nm,0.6s,baz=152,slow=9.5,SNR=10.0						
KAPI	**Kappang**	**34.87**	**230**	P	P	21 40 19.6	0.0
	4.7nm,0.5s,baz=353,slow=2.3,SNR=7.3						
CTA	**Charters Tower**	**38.41**	**180**	P	P	21 40 48.9	-0.6
	2.0nm,0.4s,baz=6.2,slow=9.9,SNR=7.9						
WRA	**Warramunga Arr**	**39.93**	**197**	P	P	21 41 01.5	-0.6
	355nm,0.4s,baz=20,slow=9.2,SNR=43						
FITZ	**Fitzroy Crossi**	**41.55**	**210**	P	P	21 41 15.1	-0.2
	3.3nm,0.3s,baz=34,slow=8.4,SNR=64						
SONM	**Songino Array**	**43.40**	**321**	P	P	21 41 29.8	-0.4
	0.8nm,0.5s,baz=137,slow=9.9,SNR=5.9						
ASAR	**Alice Springs**	**43.59**	**196**	P	P	21 41 31.9	+0.1
	1.9nm,0.6s,baz=23,slow=8.6,SNR=30						
ASAR				PcP	PcP	21 43 17.1	+0.3
	0.6nm,0.6s,baz=28,slow=3.2,SNR=4.6						
CMAR	**Chiang Mai Arr**	**44.48**	**278**	P	P	21 41 40.6	+1.6
	0.8nm,0.6s,baz=76,slow=6.8,SNR=6.5						
DZM	**Mont Dzumac**	**45.08**	**153**	P	P	21 41 44.5	+0.8
	5.4nm,0.5s,baz=330,slow=7.3,SNR=14						
STKA	**Stephens Creek**	**50.33**	**185**	P	P	21 42 23.2	-0.7
	2.2nm,0.4s,baz=356,slow=8.7,SNR=21						
TAPN	**Taplejung**	**53.94**	**291**	*e*P	P	21 42 53.1	+1.9
	3.2nm,0.4s						
ODAN	**Odare**	**54.26**	**290**	*e*P	P	21 42 54.8	+1.3
	4.0nm,0.4s						
DANN	**Dangsing**	**57.35**	**292**	*e*P	P	21 43 16.8	+1.2
	13nm,0.5s						
PYUN	**Piuthan**	**58.05**	**292**	*e*P	P	21 43 24.0	+3.6
NWAO	**Narrogin (SRO)**	**58.10**	**208**	P	P	21 43 19.6	-0.5
	6.6nm,0.6s,baz=38,slow=8.5,SNR=10						
ZALV	**Zalesovo Beam**	**58.27**	**323**	P	P	21 43 21.0	-0.1
	1.8nm,0.4s,baz=110,slow=8.7,SNR=16						
MKAR	**Makanchi Array**	**58.73**	**314**	P	P	21 43 24.8	+0.3
	2.4nm,0.6s,baz=90,slow=9.0,SNR=28						
MKAR				pP	pP	21 43 57.9	-0.7
	0.4nm,0.6s,baz=79,slow=9.6,SNR=1.8						
KURBB	**Kurchatov Arra**	**61.58**	**318**	P	P	21 43 43.2	-0.6
	3.3nm,0.4s,baz=93,slow=7.5,SNR=113						
ILAR	**Eielson Array**	**63.66**	**26**	P	P	21 43 56.5	-0.8
	0.9nm,0.7s,baz=262,slow=4.3,SNR=7.4						
ILAR				pP	pP	21 44 31.2	-0.8
	0.6nm,0.7s,baz=267,slow=5.6,SNR=3.5						
AAK	**Ala-Archa**	**64.14**	**309**	P	P	21 44 01.7	+0.5
	0.8nm,0.5s,baz=81,slow=5.6,SNR=6.6						
BVAR	**Borovoye Array**	**66.73**	**320**	P	P	21 44 17.5	+0.1
	baz=97,slow=7.7						
INK	**Inuvik**	**69.40**	**23**	P	P	21 44 33.5	-0.1
	1.4nm,0.8s,baz=256,slow=6.4,SNR=7.3						
AKTO	**Aktyubinsk**	**74.63**	**318**	P	P	21 45 05.1	-0.1
	0.9nm,0.5s,baz=108,slow=10.0,SNR=8.4						
YKA	**Yellowknife Ar**	**77.99**	**28**	P	P	21 45 24.1	+0.2
	0.7nm,0.7s,baz=288,slow=5.5,SNR=15						
KEV	**Kevo**	**82.14**	**342**	*e*p	P	21 45 46.1	+0.1
	4.1nm,0.8s						
ARCES	**ARCESS Array B**	**82.70**	**342**	P	P	21 45 49.2	+0.2
	2.1nm,0.5s,baz=86,slow=9.1,SNR=13						
ARCES				pP	pP	21 46 25.2	-0.1
	4.1nm,0.9s,baz=70,slow=8.2,SNR=1.8						
NVAR	**Mina Array Bea**	**83.03**	**52**	P	P	21 45 52.2	+0.6
	1.0nm,0.5s,baz=271,slow=5.8,SNR=11						
NVAR				pP	pP	21 46 28.7	+0.8
	1.6nm,0.7s,baz=262,slow=6.7,SNR=5.6						
JOF	**Joensuu**	**84.24**	**335**	*e*p	P	21 45 56.1	-0.8
	1.9nm,0.4s						
FINES	**FINESS Array B**	**87.11**	**335**	P	P	21 46 09.6	-1.5
	2.1nm,0.3s,baz=65,slow=5.6,SNR=32						
BRTR	**Keskin Array B**	**94.38**	**314**	P	P	21 46 43.6	-2.1
	0.5nm,0.7s,baz=103,slow=4.3,SNR=4.3						
TORD	**Torodi Ar. Bea**	**132.73**	**309**	PKP	PKPdf	21 52 39.5	-1.0
	0.2nm,0.4s,baz=49,slow=1.2,SNR=9.3						
LPAZ	**La Paz**	**147.43**	**91**	PKPbc	PKPbc	21 53 10.4	+0.1
	1.3nm,0.5s,baz=341,slow=4.6,SNR=5.5						

IDC 18 21:37:17.8±1.9,**3.°83N**×**126.°68E**,**h0**km,**mb3.8**/2, **mb1 3.9**/2,**mb1mx3.4**/21,**mbtmp3.8**/2,**MS3.3**/1,**Ms1 3.3**/1, **ms1mx2.5**/40,**Error ellipse: s-maj=153.7km s-min=25.1km az=65.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**3.40**	**341**	LR	LR	21 39 32.0	
	comp=Z,400nm,18.8s,baz=249,slow=39						
WRA	**Warramunga Arr**	**24.79**	**163**	P	P	21 42 41.7	+0.1
	4.4nm,0.8s,baz=343,slow=11,SNR=13						
ASAR	**Alice Springs**	**28.22**	**166**	P	P	21 43 11.6	-1.0
	0.3nm,0.6s,baz=345,slow=7.0,SNR=2.8						
STKA	**Stephens Creek**	**38.24**	**159**	P	P	21 44 40.8	+1.1
	2.3nm,0.9s,baz=333,slow=11,SNR=2.8						
MKAR	**Makanchi Array**	**57.45**	**325**	P	P	21 47 08.4	-0.1
	0.3nm,0.5s,baz=118,slow=7.9,SNR=5.8						

*ISCJB **18** 21:48:29.3±0.6,39.°02N±0.°03×29.°68E±0.°04,h8km±6km, Error ellipse: s-maj=5.7km s-min=5.2km az=136.9*
*CSEM **18** 21:48:29.5±0.1,39.°03N×29.°69E,h8km,MD2.8,Error ellipse: s-maj=2.0km s-min=1.8km az=69.0*
*ISK **18** 21:48:29.2,39.°05N×29.°69E,h10km,MD2.7*
*DDA **18** 21:48:30.5,39.°01N×29.°61E,h6km,MD2.8*

ISC 18 21:48:29.6±1.0,**39.°03N**±0.°03×**29.°68E**±0.°03,**h11**km±9km, **n22**,σ**0.°22**/34,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.17**	**290**	*i* P	**Pg**	**21 48 33.5**	**+0.1**
GDZ				*i* S	**Sg**	**21 48 35.9**	**-0.2**
GDZ	**Gediz**	**0.17**	**290**	*i* P	**Pg**	**21 48 33.5**	**+0.1**
GDZ				*i* S	**Sg**	**21 48 35.9**	**-0.2**
ALT	**Altintas**	**0.33**	**86**	*e*PG	**Pg**	**21 48 36.5**	**+0.1**
ALT				*e*SG	**Sg**	**21 48 41.1**	**+0.3**
ALT	**Altintas**	**0.33**	**86**	*e*Pg	**Pg**	**21 48 36.5**	**+0.1**
ALT				*e*Sg	**Sg**	**21 48 41.1**	**+0.3**
TVSB	**Tavsanli**	**0.45**	**338**	*e*PG	**Pg**	**21 48 38.4**	**-0.1**
TVSB				*e*SG	**Sg**	**21 48 44.4**	**-0.1**
TVSB	**Tavsanli**	**0.45**	**338**	*e*Pg	**Pg**	**21 48 38.4**	**-0.1**
TVSB				*e*Sg	**Sg**	**21 48 44.4**	**-0.1**
KHAL	**Karahalli**	**0.68**	**193**	*e*P	**Pg**	**21 48 42.8**	**+0.1**
KHAL				*e*S	**Sg**	**21 48 51.1**	**-0.5**
KHAL	**Karahalli**	**0.68**	**193**	*e*P	**Pg**	**21 48 42.8**	**+0.1**
KHAL				*e*S	**Sg**	**21 48 51.1**	**-0.5**
KHL	**Karahalli**	**0.72**	**190**	*e*PG	**Pg**	**21 48 43.5**	**0.0**
KHL	**Karahalli**	**0.72**	**190**	*e*Pg	**Pg**	**21 48 43.5**	**0.0**
DEMI	**Demirci**	**0.75**	**271**	*e*P	**Pg**	**21 48 44.3**	**+0.1**
DEMI				*e*S	**Sg**	**21 48 54.0**	**0.0**
DEMI	**Demirci**	**0.75**	**271**	*e*P	**Pg**	**21 48 44.3**	**+0.1**
DEMI				*e*S	**Sg**	**21 48 54.0**	**0.0**
KULA	**Kula-Manisa**	**0.95**	**238**	*e*PG	**Pg**	**21 48 48.2**	**+0.3**
KULA	**Kula-Manisa**	**0.95**	**238**	*e*Pg	**Pg**	**21 48 48.2**	**+0.3**
DST	**Dursunbey**	**1.00**	**305**	*e*PG	**Pg**	**21 48 48.9**	**0.0**
DST	**Dursunbey**	**1.00**	**305**	*e*Pg	**Pg**	**21 48 48.9**	**0.0**
DURS	**Dursunbey**	**1.10**	**302**	*e*P	**Pn**	**21 48 51.2**	**+0.1**
DURS				*e*S	**Sg**	**21 49 05.2**	**+0.2**
DURS	**Dursunbey**	**1.10**	**302**	*e*P	**Pn**	**21 48 51.2**	**+0.1**
DURS				*e*S	**Sg**	**21 49 05.2**	**+0.2**
GULT	**Gulveren**	**1.54**	**24**	*e*PN	**Pn**	**21 48 56.8**	**-0.3**
GULT	**Gulveren**	**1.54**	**24**	*e*Pn	**Pn**	**21 48 56.8**	**-0.3**
ARMT	**Armutlu**	**1.66**	**338**	*e*PN	**Pn**	**21 48 58.9**	**+0.2**
ARMT	**Armutlu**	**1.66**	**338**	*e*Pn	**Pn**	**21 48 58.9**	**+0.2**

IDC 18 22:05:14.8±1.7,**3.°09N**×**126.°71E**,**h0**km,**mb3.7**/4, **mb1 3.9**/4,**mb1mx3.6**/22,**mbtmp3.8**/4,**Error ellipse: s-maj=103.4km s-min=23.2km az=68.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.08**	**183**	P	P	22 10 01.5

SJMP	**San Jose**	**6.11**	**180**	*e*P		Pn	22 08 58.7	+7.4
TATO	**Taipei**	**6.35**	**3**	*e*Pn		Pn	22 08 58.3	+3.8
TATO				*e*S		**Sn**	**22 10 06.7**	**+0.8**
JOW	**Kunigami**	**10.50**	**37**	*e*Pn		**Pn**	**22 09 51.5**	**0.0**
	6.6nm,0.6s							
JNU	**Nakatsue**	**16.89**	**29**	*e*Pn		**P**	**22 11 18.9**	**0.0**
JNU	**Nakatsue**	**16.89**	**29**	Pn		**Pn**	**22 11 18.7**	**+1.5**
	0.7nm,0.3s,baz=216,slow=8.7,SNR=17							
KSAR	**Wonju Array Be**	**19.68**	**16**	P		**P**	**22 11 50.8**	**+1.2**
KSRS	**Korea Array**	**19.70**	**16**	P		**P**	**22 11 50.8**	**+1.0**
	0.6nm,0.3s,baz=204,slow=11,SNR=29							
CMAR	**Chiang Mai Arr**	**21.05**	**273**	P		**P**	**22 12 04.8**	**+0.1**
CMAR				PcP		**PcP**	**22 16 11.8**	**+0.9**
CMAR	**Chiang Mai Arr**	**21.05**	**273**	P		**P**	**22 12 04.8**	**+0.1**
	2.3nm,0.5s,baz=78,slow=8.4,SNR=15							
CMAR				PcP		**PcP**	**22 16 11.8**	**+0.9**
	1.1nm,0.5s,baz=18,slow=1.4,SNR=8.2							
MJAR	**Matsushiro Arr**	**23.35**	**37**	P		**P**	**22 12 29.1**	**+0.3**
MJAR	**Matsushiro Arr**	**23.35**	**37**	P		**P**	**22 12 29.1**	**+0.3**
	2.2nm,0.8s,baz=220,slow=7.4,SNR=8.1							
KAPI	**Kappang**	**23.51**	**183**	*e*Pn		**P**	**22 12 29.5**	**-1.0**
KAPI	**Kappang**	**23.51**	**183**	P		**P**	**22 12 29.5**	**-1.0**
	3.5nm,0.6s,baz=14,slow=11,SNR=4.4							
USRK	**Ussuriysk Arra**	**27.10**	**17**	P		**P**	**22 13 03.8**	**+0.8**
	2.7nm,0.7s,baz=210,slow=9.6,SNR=8.3							
ULN	**Ulaanbaatar**	**31.37**	**342**	*e*Pn		**P**	**22 13 42.4**	**+1.3**
	1.2nm,0.6s							
ULN				*e*PcP		**PcP**	**22 16 34.6**	**+0.2**
SONM	**Songino Array**	**31.54**	**341**	P		**P**	**22 13 43.6**	**+1.0**
SONM	**Songino Array**	**31.54**	**341**	P		**P**	**22 13 43.6**	**+1.0**
	1.4nm,0.5s,baz=158,slow=9.6,SNR=7.7							
FITZ	**Fitzroy Crossi**	**36.74**	**173**	P		**P**	**22 14 27.3**	**-0.5**
FITZ	**Fitzroy Crossi**	**36.74**	**173**	P		**P**	**22 14 27.3**	**-0.5**
	2.4nm,0.6s,baz=348,slow=5.0,SNR=7.1							
WRAB	**Tennant Creek**	**40.43**	**161**	*e*P		**P**	**22 14 57.2**	**-1.5**
	1.4nm,0.4s							
WRA	**Warramunga Arr**	**40.44**	**161**	P		**P**	**22 14 57.2**	**-1.6**
WRA				PcP		**PcP**	**22 17 02.3**	**+0.8**
WRA	**Warramunga Arr**	**40.44**	**161**	P		**P**	**22 14 57.2**	**-1.6**
	1.8nm,0.5s,baz=342,slow=9.1,SNR=19							
WRA				PcP		**PcP**	**22 17 02.3**	**+0.8**
	2.9nm,0.7s,baz=341,slow=3.4,SNR=12							
MK31	**Makanchi Array**	**42.45**	**320**	*e*P		**P**	**22 15 16.1**	**+0.9**
MK31				*e*PcP		**PcP**	**22 17 07.8**	**0.0**
MKAR	**Makanchi Array**	**42.45**	**320**	P		**P**	**22 15 15.9**	**+0.8**
MKAR				PcP		**PcP**	**22 17 07.8**	**+0.1**
MKAR	**Makanchi Array**	**42.45**	**320**	P		**P**	**22 15 15.9**	**+0.8**
	3.0nm,0.7s,baz=114,slow=9.9,SNR=28							
MKAR				PcP		**PcP**	**22 17 07.8**	**+0.1**
	2.2nm,0.7s,baz=97,slow=5.1,SNR=7.7							
AS31	**Alice Springs**	**43.82**	**163**	*e*P		**P**	**22 15 26.3**	**-0.1**
ASAR	**Alice Springs**	**43.82**	**163**	P		**P**	**22 15 25.6**	**-0.7**
ASAR				PcP		**PcP**	**22 17 12.6**	**0.0**
ASAR	**Alice Springs**	**43.82**	**163**	P		**P**	**22 15 25.6**	**-0.7**
	1.9nm,0.5s,baz=341,slow=6.9,SNR=27							
ASAR				PcP		**PcP**	**22 17 12.6**	**0.0**
	0.9nm,0.6s,baz=339,slow=2.8,SNR=6.2							
ZALV	**Zalesovo Beam**	**44.97**	**330**	P		**P**	**22 15 35.0**	**-0.3**
ZALV	**Zalesovo Beam**	**44.97**	**330**	P		**P**	**22 15 35.0**	**-0.3**
	2.0nm,0.8s,baz=108,slow=7.2,SNR=9.4							
AAK	**Ala-Archa**	**46.02**	**312**	P		**P**	**22 15 45.6**	**+1.6**
AAK	**Ala-Archa**	**46.02**	**312**	P		**P**	**22 15 45.6**	**+1.6**
	0.8nm,0.5s,baz=131,slow=13,SNR=5.3							
KURK	**Kurchatov**	**46.44**	**324**	*e*P		**P**	**22 15 47.4**	**+0.5**
KURBB	**Kurchatov Arra**	**46.45**	**323**	P		**P**	**22 15 47.2**	**+0.3**
	7.7nm,0.8s,baz=118,slow=8.5,SNR=12							
KKAR	**Karatay Array**	**48.97**	**311**	*e*P		**P**	**22 16 07.0**	**+0.4**
	2.2nm,0.8s							
NWAO	**Narrogin (SRO)**	**51.38**	**184**	P		**P**	**22 16 24.3**	**-0.6**
NWAO	**Narrogin (SRO)**	**51.38**	**184**	P		**P**	**22 16 24.3**	**-0.6**
	7.1nm,0.6s,baz=360,slow=4.6,SNR=7.7							
BVAR	**Borovoye Array**	**52.04**	**324**	P		**P**	**22 16 29.9**	**+0.3**
BVAR				PcP		**PcP**	**22 17 41.2**	**-0.4**
BVAR	**Borovoye Array**	**52.04**	**324**	P		**P**	**22 16 29.9**	**+0.3**
	1.4nm,0.6s,baz=120,slow=11,SNR=12							
BVAR				PcP		**PcP**	**22 17 41.2**	**-0.4**
	3.2nm,0.6s,baz=108,slow=4.1,SNR=13							
BRVK	**Borovoye**	**52.11**	**324**	*e*P		**P**	**22 16 30.3**	**+0.1**
	7.1nm,1.0s							
BRVK				*e*PcP		**PcP**	**22 17 41.4**	**-0.4**
TIXI	**Tiksi**	**53.24**	**3**	*e*P		**P**	**22 16 37.7**	**-0.5**
	7.9nm,1.1s							
STKA	**Stephens Creek**	**53.89**	**158**	P		**P**	**22 16 43.4**	**-0.1**
STKA	**Stephens Creek**	**53.89**	**158**	P		**P**	**22 16 43.4**	**-0.1**
	3.0nm,0.7s,baz=312,slow=3.5,SNR=6.1							
ABKAR	**Akbulak array**	**57.39**	**317**	*e*P		**P**	**22 17 08.7**	**+0.1**
	1.4nm,0.5s							
AKTO	**Aktyubinsk**	**58.81**	**318**	P		**P**	**22 17 18.5**	**+0.1**
AKTO	**Aktyubinsk**	**58.81**	**318**	P		**P**	**22 17 18.5**	**+0.1**
	1.1nm,0.4s,baz=111,slow=9.3,SNR=4.3							
KBZ	**Khabaz**	**68.99**	**311**	P		**P**	**22 18 26.0**	**+0.4**
KBZ	**Khabaz**	**68.99**	**311**	P		**P**	**22 18 26.0**	**+0.4**
	2.2nm,0.8s,baz=18,slow=1.5,SNR=6.9							
KDAK	**Kodiak Island**	**72.49**	**34**	P		**P**	**22 18 47.1**	**+0.5**
KDAK	**Kodiak Island**	**72.49**	**34**	P		**P**	**22 18 47.1**	**+0.5**
	4.6nm,0.6s,baz=249,slow=4.5,SNR=5.6							
COLD	**Coldfoot**	**72.50**	**24**	*e*P		**P**	**22 18 47.1**	**+0.6**
	2.2nm,0.7s							
MCK	**McKinley**	**73.47**	**28**	*e*P		**P**	**22 18 52.3**	**-0.1**
	21nm,1.5s							
ILAR	**Eielson Array**	**74.18**	**26**	P		**P**	**22 18 56.0**	**-0.5**
ILAR	**Eielson Array**	**74.18**	**26**	P		**P**	**22 18 56.0**	**-0.5**
	1.1nm,0.6s,baz=266,slow=5.1,SNR=18							
ARCES	**ARCESS Array B**	**74.69**	**339**	P		**P**	**22 18 58.8**	**-0.6**
ARCES	**ARCESS Array B**	**74.69**	**339**	P		**P**	**22 18 58.8**	**-0.6**
	1.5nm,0.7s,baz=38,slow=6.1,SNR=6.4							
SPITS	**Spitsbergen Ar**	**74.91**	**348**	P		**P**	**22 19 00.5**	**0.0**
SPITS	**Spitsbergen Ar**	**74.91**	**348**	P		**P**	**22 19 00.5**	**0.0**
	6.3nm,1.0s,baz=75,slow=6.4,SNR=7.7							
FINES	**FINESS Array B**	**76.24**	**330**	P		**P**	**22 19 07.8**	**-0.5**
FINES	**FINESS Array B**	**76.24**	**330**	P		**P**	**22 19 07.8**	**-0.5**
	2.3nm,0.9s,baz=345,slow=2.2,SNR=5.8							
BRTR	**Keskin Array B**	**76.48**	**308**	P		**P**	**22 19 09.3**	**-1.1**
BRTR	**Keskin Array B**	**76.48**	**308**	P		**P**	**22 19 09.3**	**-1.1**
	0.2nm,0.5s,baz=96,slow=4.4,SNR=4.2							
AKASG	**Malin Array Be**	**77.03**	**319**	P		**P**	**22 19 11.5**	**-1.4**
AKASG	**Malin Array Be**	**77.03**	**319**	P		**P**	**22 19 11.5**	**-1.4**
	0.7nm,0.5s,baz=54,slow=6.4,SNR=5.2							
MLR	**Muntele Rosu**	**80.51**	**315**	P		**P**	**22 19 32.1**	**-0.4**
MLR	**Muntele Rosu**	**80.51**	**315**	P		**P**	**22 19 32.1**	**-0.4**
	0.4nm,0.7s,baz=191,slow=6.9,SNR=4.8							
NB2	**NORSAR Subarra**	**83.13**	**333**	P		**P**	**22 19 44.6**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=62,slow=5.1							
NOA	**NORSAR Array B**	**83.13**	**333**	P		**P**	**22 19 44.6**	**-1.2**
NOA	**NORSAR Array B**	**83.13**	**333**	P		**P**	**22 19 44.6**	**-1.2**
	comp=Z,1.1nm,0.8s,baz=64,slow=4.9,SNR=5.6							
DLBC	**Dease Lake**	**83.76**	**30**	P		**P**	**22 19 48.6**	**-0.5**
DLBC	**Dease Lake**	**83.76**	**30**	P		**P**	**22 19 48.6**	**-0.5**
	comp=Z,2.1nm,0.6s,baz=225,slow=17,SNR=3.3							
RES	**Resolute Bay**	**84.15**	**9**	*e*P		**P**	**22 19 50.6**	**-0.1**
	comp=Z,2.9nm,0.9s							
GERES	**GERESS Array B**	**87.12**	**321**	P		**P**	**22 20 05.7**	**-0.4**
GERES	**GERESS Array B**	**87.12**	**321**	P		**P**	**22 20 05.7**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=52,slow=8.8,SNR=3.6							
YKW3	**Yellowknife Ar**	**88.06**	**23**	*e*P		**P**	**22 20 10.6**	**+0.4**
YKA	**Yellowknife Ar**	**88.11**	**23**	P		**P**	**22 20 10.8**	**+0.4**
YKA	**Yellowknife Ar**	**88.11**	**23**	P		**P**	**22 20 10.8**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=309,slow=4.4,SNR=86							
TXAR	**Lajitas Array**	**115.65**	**43**	PKP		**PKPdf**	**22 26 03.5**	**+0.5**
TXAR	**Lajitas Array**	**115.65**	**43**	PKP		**PKPdf**	**22 26 03.5**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=229,slow=0.9,SNR=11							
TKL	**Tuckaleechee C**	**121.09**	**24**	PKP		**PKPdf**	**22 26 13.3**	**+0.1**
TKL	**Tuckaleechee C**	**121.09**	**24**	PKP		**PKPdf**	**22 26 13.3**	**+0.1**
	comp=Z,2.4nm,0.6s,baz=239,slow=4.0,SNR=4.4							

IDC ***18*** *22:15:19.3±1.0,9.°13S×125.°99E, h0km, mb3.8/6, mb1 4.0/10, mb1mx3.8/23, mbtmp3.8/10, ML3.9/4, MS3.7/1, Ms1 3.7/1, ms1mx2.9/36, Error ellipse: s-maj=43.0km s-min=21.4km az=73.0*

ISCJB ***18*** *22:15:20.5±0.6, 9.°45S±0.°05×125.°74E±0.°06, h33km, mb3.8/6, Error ellipse: s-maj=9.3km s-min=5.9km az=149.0*

AUST ***18*** *22:15:28.4±99.0, 9.°68S×125.°98E, h17km±1km, Error ellipse: s-maj=3.4km s-min=1.1km az=323.0*

ISC 18 22:15:23.5±0.7, 9.°43S±0.°06×125.°72E±0.°07, h35km, n18, σ2°53/19, mb3.8/6, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MTN	**Manton Dam**	**6.30**	**123**	P		Pn	22 16 57.3	+3.2
	baz=6.0,SNR=40							
MTN				S		**Sn**	**22 18 04.5**	**-0.4**
	baz=6.0,SNR=9.1							

KAPI	**Kappang**	**7.37**	**306**	Pn		**Pn**	**22 17 07.2**	**-1.5**
	0.4nm,0.3s,baz=84,slow=9.2,SNR=2.1							
KDU	**Kakadu**	**7.38**	**117**	P		**Pn**	**22 17 11.1**	**+2.3**
	baz=7.0,SNR=18							
KDU				S		**Sn**	**22 18 30.6**	**-0.7**
	baz=7.0,SNR=5.5							
FITZ	**Fitzroy Crossi**	**8.62**	**180**	Pn		**Pn**	**22 17 28.6**	**+2.8**
	1.2nm,0.3s,baz=20,slow=12,SNR=39							
FITZ				Sn		**Sn**	**22 19 02.4**	**+0.5**
	7.2nm,0.3s,baz=0.2,slow=7.6,SNR=9.9							
FITZ				LR		LR	22 21 21.0	
	comp=Z,489nm,19.4s,baz=246,slow=40							
FITZ	**Fitzroy Crossi**	**8.62**	**180**	P		Pn	22 17 29.9	+4.1
	baz=8.4,SNR=24							
PCI	**Palu**	**10.30**	**325**	S		Sn	22 19 28.4	-15
	baz=11,SNR=3.7							
WRA	**Warramunga Arr**	**13.36**	**142**	Pn		**Pn**	**22 18 29.6**	**-1.2**
	1.3nm,0.3s,baz=312,slow=14,SNR=30							
WRA				Sn		Sn	22 20 50.0	-8.2
	2.1nm,0.3s,baz=313,slow=24,SNR=17							
ASAR	**Alice Springs**	**16.17**	**152**	Pn		**Pn**	**22 19 09.5**	**+1.2**
	0.4nm,0.3s,baz=323,slow=10,SNR=20							
ASAR				Sn		**Sn**	**22 22 01.7**	**-5.0**
	0.5nm,0.3s,baz=319,slow=19,SNR=13							
JAY	**Jayapura**	**16.41**	**66**	P		**P**	**22 19 15.7**	**+1.9**
	baz=16,SNR=3.2							
MEEK	**Meekatharra**	**18.39**	**201**	P		Pn	22 19 43.2	+7.4
	baz=18,SNR=7.6							
MEEK				S		**Sn**	**22 22 55.2**	**-5.1**
	baz=18,SNR=5.5							
MORW	**Morawa**	**21.54**	**204**	S		**S**	**22 24 09.3**	**+2.4**
	baz=22,SNR=4.4							
KSRS	**Korea Array**	**46.69**	**2**	P		**P**	**22 23 47.5**	**-1.4**
	2.4nm,0.8s,baz=179,slow=8.6,SNR=12							
MJAR	**Matsushiro Arr**	**47.22**	**14**	P		**P**	**22 23 50.6**	**-2.5**
	0.6nm,0.7s,baz=193,slow=8.6,SNR=5.1							
SONM	**Songino Array**	**59.54**	**345**	P		**P**	**22 25 23.0**	**-0.5**
	0.5nm,0.6s,baz=182,slow=9.5,SNR=3.0							
MKAR	**Makanchi Array**	**68.04**	**329**	P		**P**	**22 26 19.4**	**-0.1**
	0.7nm,0.6s,baz=126,slow=7.7,SNR=9.4							
KURBB	**Kurchatov Arra**	**72.45**	**331**	P		**P**	**22 26 46.7**	**+0.4**
	0.5nm,0.7s,baz=134,slow=5.4,SNR=7.4							
BVAR	**Borovoye Array**	**77.92**	**329**	P		**P**	**22 27 18.3**	**+0.5**
	0.3nm,0.5s,baz=108,slow=9.3,SNR=3.8							
TORD	**Torodi Ar. Bea**	**125.07**	**279**	PKP		**PKPdf**	**22 34 24.9**	**+3.6**
	1.1nm,0.8s,baz=52,slow=1.9,SNR=9.8							

IDC ***18*** *22:18:09.6±1.7, 39.°70N×73.°06E, h0km, mb3.7/5, mb1 3.7/10, mb1mx3.4/32, mbtmp3.5/10, ML2.9/5, MS4.2/4, Ms1 4.2/4, ms1mx3.5/50, Error ellipse: s-maj=32.7km s-min=14.3km az=135.0*

ISC 18 22:18:15.4±1.5, 40.°1N±0.°1×72.°99E±0.°08, h33km, n22, σ1°72/18, mb3.4/5, MS4.6/3, 4C-3D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AML	**Almayashu**	**2.14**	**14**	P		**Pb**	**22 18 52.5**	**-1.2**
	SNR=40							
KZA	**Kyzart**	**2.64**	**39**	P		**Pn**	**22 18 55.7**	**-0.4**
	SNR=55							
EKS2	**Erkin-Say**	**2.67**	**12**	P		**Pb**	**22 19 00.1**	**-2.5**
	SNR=22							
AAK	**Ala-Archa**	**2.81**	**23**	Pn		**Pb**	**22 19 02.1**	**-3.0**
	3.3nm,0.3s,baz=161,slow=6.8,SNR=70							
AAK				Lg		Lg	22 19 46.9	
	4.4nm,0.3s,baz=306,slow=21,SNR=13							
AAK				LR		LR	22 20 20.0	
	comp=Z,592nm,18.2s,baz=89,slow=42							
KBK	**Karagaybulak**	**2.99**	**29**	P		**Pb**	**22 19 06.2**	**-1.8**
	SNR=9.3							
ULHL	**Ulahol**	**3.29**	**47**	P		**Pn**	**22 19 03.2**	**-1.5**
	SNR=19							
TKM2	**Tokmak 2**	**3.47**	**33**	⇑Pn		**Pn**	**22 19 07.7**	**+0.5**
	6.2nm,0.8s							
TKM2				⇑Pg		**Pb**	**22 19 17.0**	**+0.8**
	11nm,0.7s							
TKM2				⇓Lg		Lg	22 20 03.3	
	27nm,0.8s							
TKM2	**Tokmak 2**	**3.47**	**33**	P		**Pn**	**22 19 08.2**	**+0.9**
	SNR=7.2							
KK31	**Karatay Array**	**3.57**	**329**	Pn		**Pb**	**22 19 16.1**	**-1.7**
	1.8nm,0.3s,baz=138,slow=12,SNR=89							
KK31				⇑Pg		Pn	22 19 24.6	+16
	13nm,0.7s,baz=142,slow=16,SNR=7.8							
KK31				⇓Lg		Lg	22 20 20.6	
	11nm,0.5s,baz=145,slow=29,SNR=4.3							
KK31	**Karatay Array**	**3.57**	**329**	Pn		**Pb**	**22 19 16.1**	**-1.7**
	1.8nm,0.3s,baz=138,slow=12,SNR=89							
KK31				⇑Pg		Pn	22 19 24.6	+16
	13nm,0.7s,baz=142,slow=16,SNR=7.8							
KK31				⇓Lg		Lg	22 20 20.6	
	11nm,0.5s,baz=145,slow=29,SNR=4.3							
MKAR	**Makanchi Array**	**9.54**	**42**	Pn		Pn	22 20 33.5	+3.1
	0.0nm,0.3s,baz=224,slow=16,SNR=2.6							
MKAR				Lg		Lg	22 23 11.4	
	0.0nm,0.3s,baz=234,slow=32,SNR=4.2							
KURBB	**Kurchatov Arra**	**11.26**	**18**	Pn		**Pn**	**22 20 55.2**	**+1.4**
	0.0nm,0.3s,baz=208,slow=11,SNR=3.1							
KURBB				Lg		Lg	22 24 11.2	
	0.0nm,0.3s,baz=16,slow=14,SNR=5.6							
BVAR	**Borovoye Array**	**13.10**	**353**	Pn		**Pn**	**22 21 20.8**	**+1.8**
	0.2nm,0.3s,baz=160,slow=13,SNR=12							
BVAR				Lg		Lg	22 25 15.0	
	baz=186,slow=25,SNR=4.1							
ZALV	**Zalesovo Beam**	**16.04**	**26**	Pn		**Pn**	**22 21 58.1**	**-0.1**
	0.1nm,0.3s,baz=218,slow=9.3,SNR=7.6							
BRTR	**Keskin Array B**	**30.03**	**282**	P		**P**	**22 24 22.0**	**+0.6**
	0.4nm,0.7s,baz=88,slow=7.5,SNR=3.0							
FINES	**FINESS Array B**	**35.51**	**323**	P		**P**	**22 25 10.2**	**+1.5**
	0.6nm,0.6s,baz=97,slow=7.7,SNR=3.7							
ARCES	**ARCESS Array B**	**38.51**	**335**	P		P	22 25 37.3	+3.1
	4.5nm,1.0s,baz=97,slow=7.6,SNR=3.9							
KAPI	**Kappang**	**62.08**	**125**	LR		LR	22 54 51.7	
	comp=Z,222nm,21.3s,baz=84,slow=36							
RES	**Resolute Bay**	**65.26**	**356**	LR		LR	23 02 34.6	
	comp=Z,352nm,19.7s,baz=37,slow=41							
TORD	**Torodi Ar. Bea**	**67.38**	**268**	P		**P**	**22 29 05.5**	**-2.2**
	0.2nm,0.5s,baz=54,slow=5.2,SNR=4.3							
INK	**Inuvik**	**70.14**	**10**	LR		LR	23 02 13.8	
	comp=Z,377nm,20.2s,baz=320,slow=38							
YKA	**Yellowknife Ar**	**77.61**		P		**P**	**22 30 09.2**	**+1.3**
	0.2nm,0.6s,baz=350,slow=5.7,SNR=8.1							

IDC 18 22:31:11.3±2.2, 5.°07N×126.°69E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.4/23, mbtmp3.7/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/39, Error ellipse: s-maj=173.4km s-min=25.0km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DAV	**Davao City (W)**	**2.28**	**331**	LR		LR	22 33 01.9	
	comp=Z,276nm,19.0s,baz=219,slow=49							
WRA	**Warramunga Arr**	**25.96**	**163**	P		P	22 36 45.8	0.0
	1.4nm,0.4s,baz=343,slow=10,SNR=5.3							
ASAR	**Alice Springs**	**29.41**	**166**	P		P	22 37 16.7	0.0
	0.2nm,0.6s,baz=345,slow=7.0,SNR=3.9							
MKAR	**Makanchi Array**	**56.45**	**325**	P		P	22 40 54.9	-0.1
	0.5nm,0.4s,baz=115,slow=7.4,SNR=12							

CSEM ***18*** *22:37:43.1, 33.°30N×35.°46E, h0km, ML2.6, After GRAL*

GRAL 18 22:37:43.1±0.3, 33.°30N×35.°46E, h1km±102km, MD2.6, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RCY	**Rachaya**	**0.37**	**59**	*e*P		Pg	22 37 49.7	-0.7
RCY				*e*S		Sg	22 37 54.6	-0.8
BHL	**Bhannes**	**0.62**	**15**	*e*P		Pg	22 37 54.2	-1.0
BHL	**Bhannes**	**0.62**	**15**	*e*P		Pg	22 37 54.2	-1.0
HWQ	**Hawqa**	**1.05**	**23**	*e*P		Pg	22 38 02.0	-1.5
HWQ				*e*S		Sg	22 38 15.9	-1.4
HWQ	**Hawqa**	**1.05**	**23**	*e*P		Pg	22 38 02.0	-1.5
HWQ				*e*S		Sg	22 38 15.9	-1.4

ISCJB ***18*** *22:39:05.7±1.1, 1.°54S±0.°05×99.°89E±0.°08, h33km, mb3.6/5, MS3.7/1, Error ellipse: s-maj=12.4km s-min=6.3km az=154.4*

DJA ***18*** *22:39:08.4±0.5, 1.°3S×10.°0E±°, h29km±7km, M4.0/6, MLv4.0/6*

IDC ***18*** *22:39:10.1±5.0, 1.°39S×100.°39E, h73km±37km, mb3.3/5, mb1 3.4/7, mb1mx3.3/25, mbtmp3.3/7, ML3.8/2, MS3.5/2, Ms1 3.5/2, ms1mx3.3/23, Error ellipse: s-maj=122.7km s-min=18.1km az=57.0*

ISC 18 22:39:07.2±0.9, 1.°48S±0.°05×100.°06E±0.°07, h33km, n14, σ1°52/16, mb3.6/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PDSI	**Padang**	**0.69**	**36**	P		**Pb**	**22 39 21.5**	**+0.6**
PDSI				S		**Sn**	**22 39 30.9**	**+0.6**
SISI	**Saibi**	**0.98**	**279**	P		**Pn**	**22 39 26.4**	**+1.7**
PPI	**Padang Panjang**	**1.07**	**18**	P		**Pb**	**22 39 27.3**	**+0.1**
PPI				S		**Sb**	**22 39 41.0**	**+0.1**
KRJI	**Kerinci**	**1.53**	**114**	P		**Pb**	**22 39 35.1**	**0.0**
KRJI				S		**Sb**	**22 39 54.3**	**+0.1**
MNSI	**Mandailing Nat**	**2.31**	**348**	P		**Pn**	**22 39 45.0**	**+2.1**
MNAI	**Manna**	**4.07**	**135**	P		**Pn**	**22 40 08.3**	**+1.0**
MNAI				S		**Sn**	**22 40 55.5**	**+1.7**
PSI	**Prapat**	**4.40**	**345**	P		**Pn**	**22 40 13.6**	**+1.7**
	4.9nm,0.3s,baz=165,slow=9.2,SNR=9.6							
PSI				LR		LR	22 41 34.8	
	comp=Z,350nm,20.9s,baz=205,slow=34							
CMAR	**Chiang Mai Arr**	**19.84**	**357**	P		**P**	**22 43 34.2**	**-1.3**
	0.1nm,0.3s,baz=187,slow=9.5,SNR=4.0							
DAV	**Davao City (W)**	**26.84**	**71**	LR		LR	22 58 58.8	
	comp=Z,179nm,18.8s,baz=279,slow=45							
WRA	**Warramunga Arr**	**38.21**	**121**	P		P	22 46 20.8	-3.5
	0.3nm,0.4s,baz=303,slow=9.0,SNR=2.7							
ASAR	**Alice Springs**	**39.51**	**127**	P		P	22 46 32.4	-2.9
	0.3nm,0.5s,baz=290,slow=8.4,SNR=5.2							
SONM	**Songino Array**	**49.42**	**6**	P		**P**	**22 47 52.0**	**-2.1**
	0.3nm,0.5s,baz=190,slow=7.3,SNR=2.5							
MKAR	**Makanchi Array**	**50.54**	**344**	P		**P**	**22 48 01.1**	**-1.4**
	0.8nm,0.5s,baz=159,slow=8.3,SNR=16							
MKAR				pP		**pP**	**22 48 14.4**	**+2.0**
	0.9nm,0.6s,baz=151,slow=7.9,SNR=8.3							
ZALV	**Zalesovo Beam**	**56.67**	**349**	P		**P**	**22 48 45.3**	**-1.9**
	0.9nm,0.5s,baz=158,slow=6.1,SNR=7.8							

DDA 18 22:41:03.7, 37.°96N×29.°25E, h7km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DENT	**Denizli**	**0.27**	**221**	*e*PG		Pg	22 41 09.0	-0.1
DENT				*e*SG		Sg	22 41 12.8	+0.2
DNZL	**Cakiroluk**	**0.31**	**212**	*e*P		Pg	22 41 10.4	+0.3
DNZL				*e*S		Sg	22 41 14.8	+0.3
KHL	**Karahalli**	**0.42**	**30**	*e*PG		Pg	22 41 12.1	0.0
KHAL	**Karahalli**	**0.45**	**24**	*e*P		Pg	22 41 12.5	-0.1
KHAL				*e*S		Sg	22 41 19.6	+0.8
KULA	**Kula-Manisa**	**0.73**	**320**	*e*PG		Pb	22 41 18.4	-0.4
AYDN	**Tasoluk**	**1.13**	**255**	*e*P		Pn	22 41 26.1	+0.1
AYDN				*e*S		Sn	22 41 41.4	-0.4

**IDC 18 22:58:13.7±0.8, 3.°10N×126.°73E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.7/24, mbtmp3.9/8, MS3.

h30km:pP-P,n1281,σ1§17/1479,mb5.2/350,MS4.6/72,
307C-179D,Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**1.36**	**99**	**P**	**Pn**	**23 31 44.5**	**-2.3**
FX1				S	**Sn**	**23 32 02.7**	**-1.0**
FX1	**Attu Island--F**	**1.36**	**99**	**Pn**	**Pn**	**23 31 44.4**	**-2.3**
	7μm,0.3s,baz=294,slow=7.9,SNR=4608						
FX1				Sn	**Sn**	**23 32 02.7**	**-1.0**
	8μm,0.3s,baz=180,slow=19,SNR=14						
FX1				LR	LR	23 32 15.5	
	comp=Z,139μm,19.2s,baz=13,slow=41						
SMY	**Shemya**	**1.95**	**100**	**P**	**Pn**	**23 31 53.7**	**-1.0**
SMY				S	**Sn**	**23 32 18.8**	**+0.6**
SMY	**Shemya**	**1.95**	**100**	**P**	**Pn**	**23 31 53.7**	**-1.0**
SMY				S	**Sn**	**23 32 18.8**	**+0.6**
BKI	**Bering**	**3.59**	**307**	**P**	**Pn**	**23 32 17.3**	**+0.1**
BKI				S	**Sn**	**23 32 57.2**	**-1.3**
BKI	**Bering**	**3.59**	**307**	***e*P**	**Pn**	**23 32 17.3**	**+0.1**
BKI				*i* S	**Sn**	**23 32 57.2**	**-1.3**
LSNW	**Little Sitkin**	**4.76**	**101**	**P**	**Pn**	**23 32 31.7**	**-1.8**
LSSA	**Little Sitkin**	**4.77**	**101**	**P**	**Pn**	**23 32 32.2**	**-1.3**
LSPA	**Little Sitkin**	**4.80**	**101**	**P**	**Pn**	**23 32 33.8**	**-0.1**
LSPA				S	**Sn**	**23 33 28.5**	**0.0**
LSSE	**Little Sitkin**	**4.81**	**101**	**P**	**Pn**	**23 32 33.1**	**-0.9**
CERAA	**Semis' Rag'd T**	**5.48**	**99**	**P**	**Pn**	**23 32 42.5**	**-0.7**
KBTR	**Krutoberegovo**	**5.64**	**306**	**P**	**Pn**	**23 32 44.6**	**-0.7**
KBTR				S	**Sn**	**23 33 45.4**	**-3.6**
KBTR	**Krutoberegovo**	**5.64**	**306**	***e*P**	**Pn**	**23 32 44.6**	**-0.7**
KBTR				*i* S	**Sn**	**23 33 45.4**	**-3.6**
MKZ	**Mys Kozlova**	**5.64**	**288**	**P**	**Pn**	**23 32 44.5**	**-0.9**
MKZ				S	**Sn**	**23 33 45.5**	**-3.6**
MKZ	**Mys Kozlova**	**5.64**	**288**	***e*P**	**Pn**	**23 32 44.5**	**-0.9**
MKZ				*i* S	**Sn**	**23 33 45.5**	**-3.6**
SMKR	**Semkarok**	**6.47**	**306**	***e*P**	**Pn**	**23 32 58.4**	**+1.5**
SMKR				*i* S	**Sn**	**23 34 10.2**	**+0.5**
ZLN	**Zelenaya**	**6.57**	**300**	***e*P**	**Pn**	**23 32 59.4**	**+1.2**
ZLN				*i* S	**Sn**	**23 34 10.8**	**-1.3**
SPN	**Mys Shipunski**	**6.58**	**274**	**P**	**Pn**	**23 32 57.1**	**-1.2**
SPN				S	**Sn**	**23 34 06.7**	**-5.4**
SPN	**Mys Shipunski**	**6.58**	**274**	***e*P**	**Pn**	**23 32 57.1**	**-1.2**
SPN				*i* S	**Sn**	**23 34 06.7**	**-5.4**
BDR	**Baidarnaya**	**6.59**	**305**	***e*P**	**Pn**	**23 32 59.7**	**+1.1**
BDR				*i* S	**Sn**	**23 34 11.2**	**-1.5**
SRKR	**Sorokina**	**6.66**	**306**	***e*P**	**Pn**	**23 33 00.2**	**+0.8**
SRKR				*i* S	**Sn**	**23 34 11.8**	**-2.4**
TUMR	**Tumrok**	**6.69**	**293**	***e*P**	**Pn**	**23 33 00.3**	**+0.3**
TUMR				*i* S	**Sn**	**23 34 12.4**	**-2.8**
BZMR	**Bezymyannaya**	**6.70**	**299**	***e*P**	**Pn**	**23 33 01.5**	**+1.4**
BZMR				*i* S	**Sn**	**23 34 15.0**	**-0.5**
BZWR	**Bezymyannyi-We**	**6.71**	**299**	***e*P**	**Pn**	**23 33 01.3**	**+1.0**
BZWR				*i* S	**Sn**	**23 34 14.6**	**-1.1**
KLY	**Klyuchi**	**6.76**	**302**	**P**	**Pn**	**23 33 00.6**	**-0.2**
KLY				S	**Sn**	**23 34 13.8**	**-2.9**
KLY	**Klyuchi**	**6.76**	**302**	***e*P**	**Pn**	**23 33 00.6**	**-0.2**
KLY				*i* S	**Sn**	**23 34 13.8**	**-2.9**
KRSR	**Krestovskiy**	**6.77**	**301**	***e*P**	**Pn**	**23 33 01.4**	**+0.4**
KRSR				*i* S	**Sn**	**23 34 14.6**	**-2.4**
KMNR	**Kamenistaya**	**6.78**	**297**	***e*P**	**Pn**	**23 33 01.7**	**+0.6**
KMNR				*i* S	**Sn**	**23 34 15.6**	**-1.6**
KIRR	**Kirishev**	**6.79**	**299**	***e*P**	**Pn**	**23 33 02.4**	**+1.1**
KIRR				*i* S	**Sn**	**23 34 16.2**	**-1.3**
KPT	**Kopyto**	**6.86**	**299**	***e*P**	**Pn**	**23 33 03.3**	**+1.1**
KPT				*i* S	**Sn**	**23 34 18.1**	**-1.0**
KII	**Karymskiy**	**6.91**	**282**	***e*P**	**Pn**	**23 33 02.2**	**-0.7**
KII				*i* S	**Sn**	**23 34 15.2**	**-5.2**
KOZR	**Kozyr**	**7.06**	**299**	**P**	**Pn**	**23 33 06.7**	**+1.8**
KOZR				S	**Sn**	**23 34 23.5**	**-0.6**
KOZ	**Kozyrevsk**	**7.07**	**299**	***e*P**	**Pn**	**23 33 06.7**	**+1.6**
KOZ				*i* S	**Sn**	**23 34 23.5**	**-0.8**
SRDR	**Sredinnyy**	**7.25**	**301**	***e*P**	**Pn**	**23 33 08.9**	**+1.4**
SRDR				*i* S	**Sn**	**23 34 27.8**	**-0.9**
SDLR	**Sedlovina**	**7.25**	**276**	**P**	**Pn**	**23 33 06.9**	**-0.7**
SDLR				*i* S	**Sn**	**23 34 24.0**	**-4.8**
UGLR	**Uglovaya**	**7.29**	**276**	***e*P**	**Pn**	**23 33 07.8**	**-0.3**
UGLR				*i* S	**Sn**	**23 34 25.4**	**-4.4**
KRER	**Koryakskii**	**7.33**	**276**	***e*P**	**Pn**	**23 33 08.3**	**-0.4**
KRER				*i* S	**Sn**	**23 34 25.9**	**-5.0**
AVH	**Avacha**	**7.33**	**276**	**P**	**Pn**	**23 33 08.4**	**-0.4**
AVH				*i* S	**Sn**	**23 34 27.2**	**-3.7**
KOK	**Koryaka**	**7.39**	**276**	***e*P**	**Pn**	**23 33 09.6**	**0.0**
KOK				*i* S	**Sn**	**23 34 28.5**	**-3.9**
PET	**Petropavlovsk**	**7.41**	**274**	***e*P**	Pn	23 33 02.7	-6.9
PET				*e*S	Sn	23 34 26.2	-6.3
PET				pmax	pmax		
	comp=Z,500nm,1.6s						
PET				pmax	pmax		
	comp=Z,177nm,0.9s						
PET				smax	smax		
	comp=E,837nm,0.6s						
PET				smax	smax		
	comp=N,749nm,0.5s						
PET				MLR	MLR		
	comp=Z,3μm,18.0s						
PET				MLR	MLR		
	comp=Z,3μm,20.0s						
PET	**Petropavlovsk**	**7.41**	**274**	***e*P**	**Pn**	**23 33 09.3**	**-0.3**
PET				*i* S	**Sn**	**23 34 28.1**	**-4.4**
RUS	**Russkaya**	**7.57**	**270**	**P**	**Pn**	**23 33 10.9**	**-1.0**
RUS				S	Sn	23 34 30.4	-6.2
RUS	**Russkaya**	**7.57**	**270**	***e*P**	**Pn**	**23 33 10.9**	**-1.0**
RUS				*i* S	Sn	23 34 30.4	-6.2
ESO	**Esso**	**7.66**	**296**	**P**	**Pn**	**23 33 12.8**	**-0.3**
ESO				S	**Sn**	**23 34 34.2**	**-4.5**
ESO	**Esso**	**7.66**	**296**	***e*P**	**Pn**	**23 33 12.8**	**-0.3**
ESO				*i* S	**Sn**	**23 34 34.2**	**-4.5**
MTVR	**Mutnovka**	**7.76**	**270**	***e*P**	**Pn**	**23 33 14.2**	**-0.5**
MTVR				*i* S	Sn	23 34 34.8	-6.7
TILK	**Tilichiki**	**7.80**	**342**	***e*P**	Pn	23 33 19.2	+4.3
TILK				*i* S	**Sn**	**23 34 45.5**	**+3.5**
GRL	**Gorelyy**	**7.82**	**271**	***e*P**	**Pn**	**23 33 15.9**	**+0.5**
GRL				*i* S	**Sn**	**23 34 39.2**	**-3.6**
PEA0B	**Petropavlovsk-**	**7.97**	**275**	***e*Pn**	**Pn**	**23 33 17.7**	**+0.3**
PEA0B				*e*S	**Sn**	**23 34 42.3**	**-4.1**
PETK	**Petropavlovsk-**	**7.97**	**275**	**P**	**Pn**	**23 33 16.7**	**-0.7**
PETK						23 34 42.7	
PETK				pmax	pmax		
	comp=Z,22nm,0.3s						
PETK				smax	smax		
	comp=N,32nm,0.3s						
PETK				MLR	MLR		
	comp=Z,2μm,21.1s						
PETK	**Petropavlovsk-**	**7.97**	**275**	Pn	**Pn**	**23 33 16.7**	**-0.7**
PETK				Sn	**Sn**	**23 34 42.7**	**-3.7**
PETK	**Petropavlovsk-**	**7.97**	**275**	Pn	**Pn**	**23 33 16.7**	**-0.7**
	comp=Z,22nm,0.3s,baz=91,slow=12,SNR=202						
PETK				Sn	**Sn**	**23 34 42.7**	**-3.7**
	comp=Z,32nm,0.3s,baz=96,slow=39,SNR=6.7						
PETK				LR	LR	23 36 22.3	
	comp=Z,2μm,21.1s,baz=96,slow=38						
APC	**Apacha**	**8.32**	**274**	***e*P**	**Pn**	**23 33 22.0**	**-0.1**
APC				*i* S	**Sn**	**23 34 50.8**	**-4.1**
PALN	**Palana**	**8.56**	**319**	***e*P**	Pn	23 33 30.6	+5.2
PALN				*e*S	**Sn**	**23 35 04.3**	**+3.6**
MIPR	**Malaya Ipel'ka**	**8.66**	**270**	**P**	**Pn**	**23 33 27.6**	**+0.8**
MIPR				*i* S	**Sn**	**23 35 00.2**	**-3.2**
SKR	**Severo-Kuril's**	**9.48**	**261**	***e*P**	Pn	23 33 32.4	-5.7
SKR				pmax	pmax		
	comp=N,50nm,0.8s						
SKR				pmax	pmax		
	comp=E,60nm,0.8s						
SKR				pmax	pmax		
	comp=Z,250nm,0.8s						
SKR	**Severo-Kuril's**	**9.48**	**261**	***e*P**	**Pn**	**23 33 36.4**	**-1.7**
SKR				*i* S	Sn	23 35 14.1	-9.5
UNV	**Unalaska Valle**	**13.44**	**78**	***e*Pn**	**Pn**	**23 34 32.9**	**+0.7**
SEY	**Seymchan**	**13.84**	**323**	***e*P**	**Pn**	**23 34 38.3**	**+0.7**
AKUT	**Akutan**	**13.84**	**76**	***e*Pn**	**Pn**	**23 34 38.4**	**+0.8**
AKUT				*e*S	Sn	23 36 59.1	-11
GAMB	**Gambell**	**13.96**	**33**	***e*Pn**	**Pn**	**23 34 37.0**	**-2.1**
	comp=Z,68nm,1.1s						
GAMB				*e*S	**Sn**	**23 37 07.6**	**-5.2**
BILL	**Bilibino**	**15.13**	**353**	***e*P**	**P**	**23 34 57.4**	**-2.4**
BILL				pmax	pmax		
	comp=Z,170nm,0.9s						
BILL	**Bilibino**	**15.13**	**353**	***e*Pn**	**P**	**23 34 57.4**	**-2.4**
	comp=Z,170nm,0.9s						
TNA	**Tin City**	**16.36**	**32**	***e*Pn**	**P**	**23 35 13.0**	**-0.4**
	comp=Z,62nm,1.0s						
OKH	**Okha**	**16.69**	**283**	*i* P	**P**	**23 35 18.0**	**+0.8**
OKH				pmax	pmax		
	comp=Z,2μm,10.0s						
OKH				MLR	MLR		
	comp=Z,3μm,14.0s						
SDPT	**Sand Point**	**16.80**	**71**	***e*Pn**	**Pn**	**23 35 15.0**	**-1.6**
	comp=Z,137nm,0.8s						
CHGN	**Chignik**	**17.91**	**68**	***e*Pn**	**Pn**	**23 35 29.8**	**-0.4**
UGL	**Uglegorsk**	**18.52**	**269**	***e*P**	**Pn**	**23 35 40.0**	**+2.3**
UGL				*e*S	**S**	**23 39 10.0**	**+3.2**
UGL				pmax	pmax		
	comp=Z,221nm,0.9s						
UGL				pmax	pmax		
	comp=N,500nm,6.0s						
UGL				pmax	pmax		
	comp=E,2μm,6.0s						
UGL				smax	smax		
	comp=N,700nm,10.0s						
UGL				smax	smax		
	comp=E,2μm,8.0s						
UGL				MLR	MLR		
	comp=N,1μm,14.0s						
UGL				MLR	MLR		
	comp=E,600nm,14.0s						
YUK	**Yuzh-Kuril'sk**	**18.84**	**251**	***c i*P**	P	23 35 33.3	-7.6
YUK				*i* S	**Sn**	**23 39 06.7**	**-4.6**
YUK				pmax	pmax		
	comp=E,62nm,0.9s						
YUK				pmax	pmax		
	comp=Z,75nm,0.9s						
YUK				pmax	pmax		
	comp=N,55nm,0.6s						
YUK				pmax	pmax		
	comp=Z,17μm,1.6s						
YUK				MLR	MLR		
	comp=N,633nm,21.0s						
YUK				MLR	MLR		
	comp=E,485nm,21.0s						
YUK				MLR	MLR		
	comp=Z,586nm,21.0s						
YSS	**Yuzh-Sakhalins**	**19.05**	**262**	***e*P**	**Pn**	**23 35 45.9**	**+1.8**
YSS				*e*		23 39 17.0	
YSS				pmax	pmax		
	comp=N,60nm,1.0s						
YSS				pmax	pmax		
	comp=E,140nm,1.0s						
YSS				pmax	pmax		
	comp=Z,130nm,1.0s						
YSS				MLR	MLR		
	comp=Z,1μm,13.0s						
YSS				MLR	MLR		
	comp=E,700nm,14.0s						
SVW2	**Sparrevohn**	**19.66**	**53**	***e*Pn**	**Pn**	**23 35 51.3**	**-0.1**
	comp=E,41nm,1.0s						
ASAJ	**Asahikawa**	**20.67**	**256**	***e*P**	**P**	**23 36 01.8**	**+0.9**
	comp=E,35nm,0.9s						
ASAJ	**Asahikawa**	**20.67**	**256**	P	**P**	**23 36 00.8**	**-0.1**
	comp=E,46nm,0.9s,baz=70,slow=6.0,SNR=22						
ASAJ				LR	LR	23 42 53.0	
	comp=E,1μm,21.1s,baz=84,slow=34						
OHAK	**Old Harbor**	**20.68**	**64**	***e*P**	**P**	**23 35 59.6**	**-1.2**
	comp=E,343nm,0.7s						
OHAK				*e*S	**S**	**23 39 46.1**	**-3.8**
RSO	**Redoubt South**	**20.96**	**55**	***e*P**	**P**	**23 36 05.2**	**+1.0**
KDAK	**Kodiak Island**	**21.02**	**63**	***e*P**	**P**	**23 36 04.4**	**-0.1**
	comp=E,128nm,0.9s						
KDAK	**Kodiak Island**	**21.02**	**63**	P	**P**	**23 36 03.8**	**-0.8**
	comp=E,55nm,0.4s,baz=284,slow=5.1,SNR=113						
SPU	**Mount Spurr**	**21.37**	**53**	***e*P**	**P**	**23 36 09.7**	**+1.3**
PPLA	**Purkeypile**	**21.54**	**48**	***e*P**	**P**	**23 36 11.6**	**+1.4**
	comp=E,226nm,1.2s						
ERM	**Erimo**	**21.65**	**250**	***c i*P**	**P**	**23 36 12.5**	**+1.1**
ERM				pmax	pmax		
	comp=Z,145nm,1.0s						
ERM	**Erimo**	**21.65**	**250**	***e*P**	**P**	**23 36 13.0**	**+1.6**
	comp=Z,138nm,1.0s						
TRF	**Thorofare Moun**	**22.48**	**47**	***e*P**	**P**	**23 36 20.0**	**-0.3**
	comp=Z,148nm,1.1s						
SEW	**Seward**	**22.60**	**56**	***e*P**	**P**	**23 36 20.6**	**-0.8**
	comp=Z,132nm,1.2s						
PMR	**Palmer**	**22.80**	**52**	***e*P**	**P**	**23 36 23.1**	**-0.5**
PMR				*e*		23 40 10.1	
PMR				pmax	pmax		
	comp=Z,33nm,1.0s						
PMR	**Palmer**	**22.80**	**52**	***e*P**	**P**	**23 36 23.1**	**-0.5**
	comp=Z,33nm,1.0s						
PMR				***e*PcP**	**PcP**	**23 40 10.1**	**-3.8**
HABR	**Khabarovsk**	**22.99**	**273**	***e*P**	**P**	**23 36 26.2**	**+0.5**
HABR				***e****PP	**pP**	**23 36 32.6**	**-1.2**
HABR				***e****SP	**sP**	**23 36 37.1**	**-0.6**
HABR				***e*PPP**	PPP	23 36 57.5	
HABR				*e*		23 40 13.4	
HABR				*e*S	**S**	**23 40 35.4**	**+1.5**
HABR				***e****SS	**sS**	**23 40 48.1**	**-0.1**
HABR				***e*SSS**	SSS	23 41 20.5	
HABR				*e*		23 47 34.0	
HABR				pmax	pmax		
	comp=E,555nm,2.7s						
HABR				pmax	pmax		
	comp=Z,868nm,2.7s						
HABR				pmax	pmax		
	comp=N,131nm,1.8s						
HABR				MLR	MLR		
	comp=Z,1μm,18.0s						
HABR				MLR	MLR		
	comp=N,866nm,19.0s						
HABR				MLR	MLR		
	comp=E,906nm,18.0s						
MCK	**McKinley**	**23.12**	**47**	***e*P**	**P**	**23 36 26.5**	**-0.4**
MCK				pmax	pmax		
	comp=Z,149nm,0.9s						
MCK	**McKinley**	**23.12**	**47**	***e*P**	**P**	**23 36 26.5**	**-0.4**
	comp=Z,149nm,0.9s						
SML	**Sawmill**	**23.20**	**52**	***e*P**	**P**	**23 36 28.2**	**+0.5**
SML				pmax	pmax		
	comp=Z,30nm,1.0s						
SML	**Sawmill**	**23.20**	**52**	***e*P**	**P**	**23 36 28.2**	**+0.5**
	comp=Z,30nm,1.0s						
COLD	**Coldfoot**	**23.40**	**38**	***e*P**	**P**	**23 36 29.2**	**-0.4**
	comp=Z,30nm,0.7s						
YAK	**Yakutsk**	**23.46**	**309**	***c i*P**	**P**	**23 36 28.8**	**-1.4**
YAK				***e****PP	**pP**	**23 36 36.7**	**-1.9**
YAK				***e*PPP**	PPP	23 37 04.5	
YAK				*e*		23 40 14.2	
YAK				*e*S	**S**	**23 40 40.0**	**-1.4**
YAK				***e*SSS**	SSS	23 41 24.2	
YAK				*e*		23 47 35.6	
YAK				pmax	pmax		
	comp=Z,123nm,1.1s						
YAK				pmax	pmax		
	comp=N,13nm,1.2s						
YAK				pmax	pmax		
	comp=E,54nm,1.2s						
YAK				pmax	pmax		
	comp=Z,91nm,0.9s						
YAK				pmax	pmax		
	comp=N,47nm,1.6s						
YAK				pmax	pmax		
	comp=E,21nm,0.6s						
YAK				smax	smax		
	comp=N,170nm,1.8s						
YAK				smax	smax		
	comp=E,132nm,1.6s						
YAK				MLR	MLR		
	comp=Z,2μm,19.0s						
YAK				MLR	MLR		
	comp=N,408nm,13.0s						
YAK				MLR	MLR		
	comp=E,1μm,17.0s						
COLA	**College**	**23.77**	**44**	***e*P**	**P**	**23 36 33.0**	**-0.1**
COLA				pmax	pmax		
	comp=Z,121nm,0.7s						
COLA	**College**	**23.77**	**44**	***e*P**	**P**	**23 36 33.0**	**-0.1**
	comp=Z,122nm,0.7s						
ILAR	**Eielson Array**	**24.16**	**45**	P	**P**	**23 36 35.3**	**-1.5**
ILAR				PcP	**PcP**	**23 40 16.1**	**-0.6**
ILAR	**Eielson Array**	**24.16**	**45**	P	**P**	**23 36 35.3**	**-1.5**
	comp=Z,64nm,0.9s,baz=250,slow=8.4,SNR=243						
ILAR				PcP	**PcP**	**23 40 16.1**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=268,slow=3.1,SNR=4.1						
ILAR				LR	LR	23 46 18.1	
	comp=Z,1μm,19.2s,baz=94,slow=37						
DIV	**Divide**	**24.41**	**54**	***e*P**	**P**	**23 36 39.1**	**-0.1**
	comp=Z,52nm,0.8s						
PAX	**Paxson**	**24.59**	**49**	***e*P**	**P**	**23 36 40.8**	**-0.1**
PAX				pmax	pmax		
	comp=Z,165nm,0.9s						
PAX	**Paxson**	**24.59**	**49**	***e*P**	**P**	**23 36 40.8**	**-0.1**
	comp=Z,165nm,0.9s						
KLR	**Kul'dur**	**24.66**	**277**	***i*P**	**P**	**23 36 39.6**	**-1.9**
KLR				*e*S	**S**	**23 41 02.5**	**+1.6**
KLR				pmax	pmax		
	comp=N,70nm,1.8s						
KLR				pmax	pmax		
	comp=E,200nm,1.8s						
KLR				pmax	pmax		
	comp=Z,320nm,1.8s						
BMRM	**Bremner River**	**24.98**	**54**	***e*P**	**P**	**23 36 44.9**	**+0.6**
	comp=Z,198nm,0.9s						
DOT	**Dot Lake**	**25.27**	**48**	***e*P**	**P**	**23 36 46.9**	**-0.1**
	comp=Z,552nm,1.0s						
MENT	**Mentasta**	**25.39**	**49**	***e*P**	**P**	**23 36 48.3**	**+0.3**
CLNS	**Chul'man**	**26.29**	**297**	***e*P**	**P**	**23 36 55.7**	**-0.6**
CLNS				***e****PP	**pP**	**23 37 04.2**	**-0.8**
CLNS				*e*		23 37 36.2	
CLNS				*e*		23 40 20.5	
CLNS				*e*S	**S**	**23 41 23.6**	**-3.2**
CLNS				***e*SS**	SnSn	23 42 58.2	+31
CLNS				pmax	pmax		
	comp=Z,15nm,1.2s						
CLNS				pmax	pmax		
	comp=N,14nm,1.4s						
CLNS				pmax	pmax		
	comp=E,27nm,1.3s						
CLNS				pmax	pmax		
	comp=Z,23nm,1.1s						
CLNS				pmax	pmax		
	comp=N,30nm,1.1s						
CLNS				pmax	pmax		
	comp=E,18nm,1.0s						
CLNS				smax	smax		
	comp=N,220nm,12.3s						
CLNS				smax	smax		
	comp=E,750nm,12.5s						
CLNS				MLR	MLR		
	comp=Z,2μm,15.0s						
CLNS				MLR	MLR		
	comp=Z,2μm,18.0s						
CLNS				MLR	MLR		
	comp=E,892nm,13.0s						
EGAK	**Eagle**	**26.60**	**45**	***e*P**	**P**	**23 36 58.3**	**-0.7**
	comp=E,148nm,1.0s						
USRK	**Ussuriysk Arra**	**26.93**	**266**	P	**P**	**23 37 01.9**	**-0.2**
	comp=E,31nm,0.7s,baz=58,slow=7.7,SNR=68						
USRK				PcP	**PcP**	**23 40 24.0**	**+0.7**
	comp=E,2.2nm,0.8s,baz=167,slow=3.3,SNR=3.8						
USRK				ScP	**ScP**	**23 44 01.9**	**+0.9**
	comp=E,1.8nm,0.9s,baz=62,slow=5.4,SNR=5.1						
USRK				LR	LR	23 47 22.7	
	comp=E,409nm,19.1s,baz=42,slow=36						
VLA	**Vladivostok**	**27.60**	**265**	***i*P**	**P**	**23 37 07.6**	**-0.5**
VLA				*e*		23 37 52.0	
VLA				*e*S	**S**	**23 41 46.7**	**-0.8**
VLA				pmax	pmax		
	comp=Z,65nm,1.5s						
MDJ	**Mudanjiang**	**28.16**	**269**	P	**P**	**23 37 12.6**	**-0.4**
MDJ				pP	**pP**	**23 37 18.9**	**-2.9**
MDJ				sP	**sP**	**23 37 25.0**	**-0.5**
MDJ				PcP	**PcP**	**23 40 28.9**	**+2.6**
MDJ				S	**S**	**23 41 56.8**	**+0.5**
MDJ				ScP	**ScP**	**23 44 03.5**	**-1.3**
MDJ				PcS	**PcS**	**23 44 09.6**	**+1.3**
MDJ				ScS	**ScS**	**23 47 54.4**	**-2.9**
MDJ				pmax	pmax		
	comp=Z,34nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,200nm,6.4s						
MDJ				LR	LR		
	comp=N,460nm,18.4s						
MDJ				LR	LR		
	comp=E,570nm,22.5s						
MDJ				LR	LR		
	comp=Z,870nm,30.6s						
MJAR	**Matsushiro Arr**	**28.20**	**247**	P	**P**	**23 37 13.9**	**+0.4**
MJAR	**Matsushiro Arr**	**28.20**	**247**	P	**P**	**23 37 13.9**	**+0.4**
	comp=Z,31nm,1.1s,baz=23,slow=8.1,SNR=56						
MJAR				LR	LR	23 47 25.7	
	comp=Z,404nm,19.8s,baz=60,slow=34						
MAJO	**Matsushiro**	**28.20**	**247**	***e*P**	**P**	**23 37 14.3**	**+0.8**
MAJO				pmax	pmax		
	comp=Z,200nm,1.4s						
MAJO	**Matsushiro**	**28.20**	**247**	***e*P**	**P**	**23 37 14.2**	**+0.8**
	comp=Z,200nm,1.4s						
MAT	**Matsushiro**	**28.20**	**247**	P	**P**	**23 37 14.0**	**+0.5**
MAT				S	**S**	**23 41 57.6**	**+0.5**
SKAG	**Skagway**	**29.75**	**56**	***e*P**	**P**	**23 37 28.8**	**+1.7**
	comp=Z,22nm,0.7s						
INK	**Inuvik**	**29.82**	**38**	P	**P**	**23 37 27.6**	**0.0**
INK				PcP	**PcP**	**23 40 30.2**	**+0.2**
INK	**Inuvik**	**29.82**	**38**	P	**P**	**23 37 27.6**	**0.0**
	comp=Z,12nm,0.6s,baz=277,slow=7.6,SNR=97						
INK				PcP	**PcP**	**23 40 30.2**	**+0.2**
	comp=Z,6.1nm,0.4s,baz=321,slow=4.7,SNR=9.6						
JHJ	**Hachijo jima 2**	**29.92**	**241**	LR	LR	23 46 55.6	
	comp=Z,481nm,20.8s,baz=54,slow=31						
CN2	**Changchun**	**31.10**	**271**	***e*P**	**P**	**23 37 38.6**	**-0.5**
CN2				***e*sP**	**sP**	**23 37 52.1**	**+0.6**
CN2				*e*S	**S**	**23 42 40.0**	**-2.4**
CN2				pmax	pmax		
	comp=Z,60nm,1.4s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,1μm,20.0s						
CN2				LR	LR		
	comp=E,700nm,20.0s						
WRAK	**Wrangell Islan**	**32.09**	**61**	***e*P**	**P**	**23 37 48.7**	**+1.1**
	comp=E,37nm,0.6s						
DLBC	**Dease Lake**	**32.67**	**57**	***e*P**	**P**	**23 37 54.6**	**+1.8**
SNY	**Shenyang**	**33.36**	**270**	§P	**P**	**23 37 59.8**	**+0.9**
SNY				PP	**PP**	**23 39 13.1**	**-1.3**
SNY				pmax	pmax		
	comp=Z,21nm,1.3s						
SNY				LR	LR		
	comp=N,350nm,13.8s						
SNY				LR	LR		
	comp=E,680nm,16.8s						
SNY				LR	LR		
	comp=Z,790nm,15.6s						
KSRS	**Korea Array**	**33.50**	**260**	P	**P**	**23 38 01.8**	**+1.6**
	comp=Z,26nm,1.0s,baz=51,slow=8.3,SNR=68						
KSRS				ScP	**ScP**	**23 44 23.8**	**+1.3**
	comp=Z,2.1nm,0.9s,baz=61,slow=4.2,SNR=7.7						
KSRS				LR	LR	23 51 54.8	
	comp=Z,421nm,20.3s,baz=51,slow=37						
KSAR	**Wonju Array Be**	**33.53**	**260**	P	**P**	**23 38 01.8**	**+1.3**
KSAR				ScP	**ScP**	**23 44 23.8**	**+1.2**
CIT	**Chita**	**34.10**	**292**	***e*P**	**P**	**23 38 05.9**	**+0.6**
INCN	**Inchon**	**34.25**	**261**	***e*P**	**P**	**23 38 08.5**

comp=N,980nm,17.8s
BJI LR LR
comp=E,840nm,19.6s
BJI LR LR
comp=Z,910nm,21.8s
IRK Irkutsk 39.10 296 *e*P **P 23 38 47.4 -0.5**
IRK pmax pmax
comp=Z,45nm,1.6s
KIP Kipapa 39.57 131 ⇑*i*P **P 23 38 53.0 +1.0**
KIP pmax pmax
comp=Z,147nm,1.7s
KIP Kipapa 39.57 131 *e*P **P 23 38 53.4 +1.4**
comp=Z,750nm,2.4s
TLY Talaya 39.71 296 ⇑*i*P **P 23 38 52.0 -1.0**
TLY pmax pmax
comp=Z,19nm,1.1s
TLY MLR MLR
comp=Z,2µm,20.0s
TLY Talaya 39.71 296 P **P 23 38 53.1 +0.1**
comp=Z,96nm,1.2s,SNR=5.9
ULN Ulaanbaatar 39.77 289 *e*P **P 23 38 54.0 +0.2**
comp=Z,28nm,1.1s
ULN Ulaanbaatar 39.77 289 P **P 23 38 54.4 +0.7**
SNR=15
ULN Ulaanbaatar 39.77 289 P **P 23 38 55.1 +1.4**
comp=Z,24nm,1.4s,comp=Z,322nm
SONM Songino Array 40.16 289 P **P 23 38 57.5 +0.6**
SONM Songino Array 40.16 289 P **P 23 38 57.5 +0.6**
comp=Z,9.3nm,0.7s,baz=59,slow=9.2,SNR=46
SONM LR LR 23 56 54.3
comp=Z,484nm,18.6s,baz=65,slow=38
PGC Sidney 40.33 69 *e*P **P 23 38 58.2 +0.1**
comp=Z,1.4nm,1.0s
ZAK Zakamensk 40.56 294 ⇑*i*P **P 23 39 00.3 +0.1**
ZAK *e* 23 41 01.8
ZAK pmax pmax
comp=Z,12nm,1.5s
RES Resolute Bay 40.74 24 *e*P **P 23 39 00.5 -0.7**
comp=Z,14nm,1.0s
RES *e*PcP **PcP 23 41 01.1 -0.8**
RES Resolute Bay 40.74 24 LR LR 23 58 59.0
comp=Z,220nm,18.9s,baz=299,slow=41
NLWA Neilton Lookou 40.77 71 *e*P **P 23 39 02.4 +0.6**
comp=Z,71nm,1.4s
JOW Kunigami 41.04 247 *e*P **P 23 39 04.8 +0.6**
comp=Z,32nm,0.9s
MBW Mount Baker 41.13 68 P **P 23 39 05.4 +0.5**
MOY Mondy 41.15 297 *e*P **P 23 39 05.2 +0.2**
MOY pmax pmax
comp=Z,42nm,2.8s
HHC Hu-ho-hao-te 41.16 277 *e*P **P 23 39 04.5 -0.7**
HHC pP **pP 23 39 13.8 -0.4**
HHC sP **sP 23 39 18.0 +0.2**
HHC PP **PP 23 40 42.8 +2.5**
HHC PcP **PcP 23 41 08.1 +4.1**
HHC ScP **ScP 23 44 51.1 -0.3**
HHC PcS **PcS 23 44 54.9 -0.2**
HHC S **S 23 45 14.3 -2.2**
HHC sS **sS 23 45 30.6 -0.6**
HHC SS **SS 23 48 12.8 -6.8**
HHC ScS **ScS 23 49 03.9 -3.2**
HHC pmax pmax
comp=Z,35nm,0.6s
HHC pmax pmax
comp=Z,400nm,5.0s
HHC LR LR
comp=N,1µm,12.4s
HHC LR LR
comp=E,2µm,13.5s
HHC LR LR
comp=Z,2µm,13.9s
CMW Cultus Mountai 41.20 69 P **P 23 39 06.4 +1.0**
ALE Alert 41.95 9 P **P 23 39 11.9 +0.9**
comp=Z,104nm,0.5s,SNR=11
BTO Baotou 42.24 278 *e*P **P 23 39 14.3 +0.3**
RCM Mount Rainier- 42.29 70 P **P 23 39 15.5 +0.8**
LON Longmire 42.30 70 *e*P **P 23 39 14.6 +0.2**
LON pmax pmax
comp=Z,9.0nm,0.7s
LON Longmire 42.30 70 *e*P **P 23 39 14.6 +0.2**
comp=Z,9.3nm,0.7s
WPW White Pass 42.48 70 P **P 23 39 16.5 +0.6**
NJ2 Nanjing 42.62 262 *e*P **P 23 39 18.3 +1.3**
NJ2 pP **pP 23 39 25.6 -0.4**
NJ2 sP **sP 23 39 29.5 -0.1**
NJ2 PP **PP 23 40 55.4 -0.6**
NJ2 S **S 23 45 38.0 +0.1**
NJ2 sS **sS 23 45 54.0 +1.4**
NJ2 pmax pmax
comp=Z,70nm,1.0s
NJ2 pmax pmax
comp=Z,160nm,11.8s
NJ2 LR LR
comp=N,460nm,19.4s
NJ2 LR LR
comp=E,470nm,20.7s
NJ2 LR LR
comp=Z,430nm,16.9s
COR Corvallis 42.69 74 *e*P **P 23 39 17.4 -0.1**
COR pmax pmax
comp=Z,64nm,1.0s
COR Corvallis 42.69 74 *e*P **P 23 39 17.4 -0.1**
comp=Z,64nm,1.0s
SSOR Sweet Springs 43.01 73 P **P 23 39 21.0 +0.7**
SSOR Sweet Springs 43.01 73 P **P 23 39 21.0 +0.7**
KRAR Krasnoyarsk 43.09 306 ⇑*i*P **P 23 39 20.7 +0.1**
KRAR pmax pmax
comp=Z,81nm,1.0s
KEBM Edson Butte 43.10 77 *e*P **P 23 39 22.9 +1.9**
comp=Z,99nm,1.1s
VLL Laurance Lake 43.11 72 P **P 23 39 21.7 +0.7**
VFP Flag Point 43.32 72 P **P 23 39 23.3 +0.5**
OD2 Odessa Site #2 43.68 68 P **P 23 39 25.5 0.0**
HAWA Hanford 43.79 70 *e*P **P 23 39 26.6 +0.2**
comp=Z,54nm,0.8s
H2OWA Water 43.85 69 P **P 23 39 27.2 +0.4**
NEW Newport 44.06 66 *e*P **P 23 39 28.6 0.0**
comp=Z,24nm,0.8s
NEW *e*ScP **ScP 23 45 03.7 +0.9**
NEW ScP **ScP 23 45 04.3 +1.5**
NEW Newport 44.06 66 P **P 23 39 28.6 0.0**
baz=44,SNR=35
NEW Newport 44.06 66 ScP **ScP 23 45 04.3 +1.5**
comp=Z,3.8nm,0.8s,baz=282,slow=6.5,SNR=6.3
NEW LR LR 23 56 19.3
comp=Z,522nm,19.2s,baz=299,slow=34
HUMO Hull Mountain 44.07 76 *e*P **P 23 39 28.9 +0.2**
comp=Z,16nm,1.0s
KHMM Horse Mountain 44.69 78 *e*P **P 23 39 34.5 +0.7**
comp=Z,98nm,1.4s
YBH Yreka Blue Hor 44.75 77 *e*P **P 23 39 35.0 +0.8**
comp=Z,18nm,0.8s
C11A Tepee Creek (N 44.78 66 ⇑P **P 23 39 34.5 +0.2**
baz=45
A13A Flathead Natio 45.16 64 ⇑P **P 23 39 37.6 +0.2**
baz=45
C12B Naegeli Ranch, 45.29 66 ⇑P **P 23 39 38.7 +0.3**
baz=45,SNR=37
WALA Waterton Lakes 45.36 63 *e*P **P 23 39 39.3 +0.3**
comp=Z,3.9nm,0.9s
B13A Whitefish 45.45 64 P **P 23 39 40.2 +0.5**
baz=45,SNR=28
WDC Whiskeytown Da 45.57 78 *e*P **P 23 39 40.8 +0.2**
WDC pmax pmax
comp=Z,27nm,1.1s
WDC Whiskeytown Da 45.57 78 *e*P **P 23 39 40.8 +0.2**
comp=Z,27nm,1.1s
BSMT Bassoo Peak 45.58 65 *e*P **P 23 39 41.1 +0.2**
comp=Z,34nm,0.6s
A14A Double T Ranch 45.67 63 ⇓P **P 23 39 41.7 +0.2**
baz=46,SNR=37
BLMT Blacktail Moun 45.72 65 *e*P **P 23 39 42.5 +0.5**
C13A Hot Springs 45.80 65 ⇓P **P 23 39 42.8 +0.3**
baz=46,SNR=12
JTMT Jette 45.92 65 *e*P **P 23 39 44.0 +0.5**
BMO Blue Mountains 45.96 70 *e*P **P 23 39 43.6 -0.2**
comp=Z,24nm,1.0s
YBMT Yellow Bay 46.00 65 *e*P **P 23 39 44.2 +0.1**
comp=Z,35nm,0.8s
MOD Modoc 46.05 75 *e*P **P 23 39 45.0 +0.4**
comp=Z,78nm,1.3s
B14A Marquette Ranc 46.11 64 P **P 23 39 45.3 +0.3**
baz=46,SNR=26
C14A Swan Lake 46.20 65 ⇓P **P 23 39 45.9 +0.2**
baz=46
D13A Huson 46.21 66 P **P 23 39 45.5 -0.2**
baz=46,SNR=18
SWMT Swartz Lake 46.21 65 *e*P **P 23 39 45.6 -0.2**
WHN Wuhan 46.39 264 P **P 23 39 47.9 +0.8**
WHN S **S 23 46 34.3 +1.7**
WHN pmax pmax
comp=Z,240nm,1.2s
WHN LR LR
comp=Z,990nm,11.4s
B15A Bradely Ranch, 46.52 63 P **P 23 39 48.1 -0.1**
baz=46,SNR=29
F12A Elk City 46.57 68 ⇓P **P 23 39 48.9 +0.3**
baz=46,SNR=41
SLMT Seeley Lake 46.65 65 *e*P **P 23 39 49.3 0.0**
MSO Missoula 46.65 66 *e*P **P 23 39 49.3 +0.1**
comp=Z,15nm,0.8s
MSO Missoula 46.65 66 ⇓P **P 23 39 49.3 +0.1**
baz=46,SNR=30
A16A West Butte Ran 46.66 62 ⇓P **P 23 39 49.0 -0.3**
baz=46
WVOR Wild Horse Val 46.69 73 *e*P **P 23 39 50.0 +0.5**
WVOR pmax pmax
comp=Z,33nm,1.3s
WVOR Wild Horse Val 46.69 73 *e*P **P 23 39 50.0 +0.5**
comp=Z,33nm,1.3s
D14A Greenough 46.74 65 ⇑P **P 23 39 49.8 -0.1**
baz=46,SNR=40
E13A Victor 46.75 66 ⇓P **P 23 39 49.6 -0.3**
baz=46,SNR=25
C15A Salmond Ranch, 46.81 64 ⇓P **P 23 39 51.1 +0.6**
baz=47,SNR=213
G12A Big Creek, Yel 46.91 69 ⇓P **P 23 39 51.5 +0.2**
baz=47,SNR=28
B16A M & M Farms, S 46.92 63 ⇓P **P 23 39 51.2 0.0**
baz=47,SNR=14
CHMT Chamberlain Mo 46.98 65 *e*P **P 23 39 51.6 -0.3**
OHCM Honcut 46.99 79 *e*P **P 23 39 51.8 0.0**
F13A Darby 47.06 67 ⇓P **P 23 39 52.2 -0.2**
baz=47,SNR=29
A17A Tri J Farms 47.14 62 ⇓P **P 23 39 53.4 +0.4**
baz=47,SNR=17
E14A Clinton 47.15 66 ⇓P **P 23 39 53.3 +0.1**
baz=47,SNR=57
XAN Xi'an 47.20 272 P **P 23 39 53.8 +0.2**
XAN pP **pP 23 40 05.3 +2.7**
XAN S **S 23 46 43.1 -1.3**
XAN pmax pmax
comp=Z,10.0nm,1.4s
XAN pmax pmax
comp=Z,53nm,6.9s
XAN LR LR
comp=N,340nm,16.9s
XAN LR LR
comp=Z,210nm,21.1s
C16A Fuhringer Ranc 47.27 64 ⇑P **P 23 39 53.9 0.0**
baz=47,SNR=24
D15A Lincoln 47.30 65 ⇑P **P 23 39 54.5 +0.1**
baz=47,SNR=40
BEKR Beckworth 47.31 77 *e*P **P 23 39 54.3 -0.2**
comp=Z,6.4nm,0.9s
B17A L&G Farms, Che 47.48 63 ⇑P **P 23 39 55.6 0.0**
baz=47,SNR=7.2
H12A Diamond D Ranc 47.53 69 ⇑P **P 23 39 55.7 -0.4**
baz=47,SNR=9.6
G13A Cobalt 47.54 68 ⇑P **P 23 39 56.1 -0.1**
baz=47,SNR=97
SSLB Suanglung 47.55 252 *e*P **P 23 39 56.3 0.0**
comp=Z,26nm,0.9s
E15A Deer Lodge 47.61 66 ⇑P **P 23 39 56.7 0.0**
baz=47,SNR=56
KBS Kingsbay 47.61 355 *e*P **P 23 39 57.1 +1.0**
KBS *e*S S 23 46 55.3 +6.2
KBS AMS AMS 23 56 08.9
comp=Z,346nm,23.8s
KBS Kingsbay 47.61 355 *e*P P 23 39 59.6 +3.5
KBS pmax pmax
comp=Z,23nm,1.1s
KBS Kingsbay 47.61 355 *e*P P 23 39 59.6 +3.5
comp=Z,23nm,1.1s
YULB Yu-li 47.66 251 *e*P **P 23 39 57.0 -0.2**
comp=Z,73nm,1.3s
MFID Camas Ranch 47.69 71 *e*P **P 23 39 57.5 +0.1**
comp=Z,16nm,0.9s
MFID Camas Ranch 47.69 71 ⇓P **P 23 39 57.4 +0.1**
baz=48
D16A Dana Ranch, Ca 47.84 64 ⇓P **P 23 39 58.6 +0.1**
baz=48
I12A Atlanta 47.84 70 ⇑P **P 23 39 58.7 +0.1**
baz=48,SNR=29
H13A Challis 47.86 68 ⇓P **P 23 39 58.7 +0.1**
baz=48,SNR=40
HRY Holter Researc 47.88 65 *e*P **P 23 39 59.2 +0.4**
G14A Jackson 47.88 67 ⇓P **P 23 39 58.7 -0.2**
baz=48
C17A Wharram Farm, 47.90 63 ⇑P **P 23 39 58.9 0.0**
baz=48,SNR=74
B18A Beardsley Farm 47.96 62 ⇓P **P 23 39 59.4 +0.1**
baz=48,SNR=26
QZH Quanzhou 48.02 255 P **P 23 40 02.8 +2.9**
QZH S **S 23 46 58.1 +2.1**
QZH pmax pmax
comp=Z,160nm,1.1s
QZH LR LR
comp=Z,710nm,24.9s
WCN Washoe City 48.03 77 *e*P **P 23 40 00.6 +0.5**
WCN pmax pmax
comp=Z,22nm,1.0s
WCN Washoe City 48.03 77 *e*P **P 23 40 00.6 +0.5**
comp=Z,22nm,1.0s
F15A Butte 48.05 66 ⇓P **P 23 39 59.9 -0.3**
baz=48,SNR=29
E16A East Helena 48.07 65 ⇑P **P 23 39 59.9 -0.4**
baz=48
LRM Limekiln Ridge 48.08 66 *e*P **P 23 40 00.4 -0.1**
FFC Flin Flon 48.10 51 *i*P **P 23 40 00.9 +0.7**
FFC Flin Flon 48.10 51 *e*P **P 23 40 00.5 +0.3**
comp=Z,18nm,1.2s
ZAA0 Zalesovo Array 48.11 308 *e*P **P 23 39 58.6 -1.7**
ZALV Zalesovo Beam 48.11 308 P **P 23 39 58.3 -2.0**
ZALV pmax pmax
comp=Z,4.0nm,0.5s
ZALV MLR MLR
comp=Z,728nm,18.2s
ZALV Zalesovo Beam 48.11 308 P **P 23 39 58.2 -2.0**
ZALV Zalesovo Beam 48.11 308 P **P 23 39 58.2 -2.0**
comp=Z,4.4nm,0.5s,baz=53,slow=6.8,SNR=35
ZALV LR LR 00 02 19.3
comp=Z,728nm,18.2s,baz=52,slow=39
TPUB Ta-pu 48.11 252 *e*P **P 23 40 02.0 +1.3**
comp=Z,866nm,2.8s
A19A Klindworth Far 48.19 61 ⇑P **P 23 40 01.1 0.0**
baz=48,SNR=29
EGMT Eagleton 48.20 62 *e*P **P 23 40 01.2 +0.1**
comp=Z,40nm,0.8s
EGMT Eagleton 48.20 62 ⇑P **P 23 40 01.0 -0.2**
baz=48,SNR=17
D17A Six Diamond Ra 48.23 64 ⇑P **P 23 40 01.2 -0.3**
baz=48,SNR=52
DLMT Dillon 48.29 67 *e*P **P 23 40 01.6 -0.4**
comp=Z,30nm,1.4s
DLMT *e*ScP **ScP 23 45 21.9 +1.2**
H14A Leadore 48.32 68 ⇑P **P 23 40 02.1 -0.2**
baz=48,SNR=17
NVS Novosibirsk 48.33 309 ⇑*i*P **P 23 40 00.7 -1.2**
NVS *e* 23 41 52.6
NVS *e*S S 23 46 53.0 -6.7
NVS pmax pmax
comp=N,22nm,1.8s
NVS pmax pmax
comp=E,41nm,1.8s
NVS pmax pmax
comp=Z,14nm,1.8s
NVS pmax pmax
comp=Z,21nm,1.4s
NVS pmax pmax
comp=N,14nm,1.7s
NVS pmax pmax
comp=E,22nm,1.7s
NVS smax smax
comp=N,51nm,2.7s
NVS smax smax
comp=E,34nm,2.0s
I13A Wildhorse Cree 48.34 69 ⇑P **P 23 40 02.6 +0.1**
baz=48,SNR=50
B19A Brinkman Farms 48.37 61 ⇑P **P 23 40 02.7 +0.3**
baz=48,SNR=25
HLID Hailey 48.39 70 *e*P **P 23 40 03.0 +0.1**
comp=E,36nm,1.4s
HLID *e*ScP **ScP 23 45 22.2 +1.1**
HLID Hailey 48.39 70 ⇓P **P 23 40 03.0 +0.1**
baz=48,SNR=22
G15A Dillon 48.47 67 ⇓P **P 23 40 03.1 -0.3**
baz=48,SNR=32
MCMT McKenzie Canyo 48.48 67 *e*P **P 23 40 03.3 -0.3**
comp=E,7.4nm,0.4s
CMB Columbia Colle 48.49 79 *e*P **P 23 40 04.0 +0.5**
CMB pmax pmax
comp=Z,50nm,1.6s
CMB Columbia Colle 48.49 79 *e*P **P 23 40 04.0 +0.5**
comp=Z,50nm,1.6s
CMB *e*ScP **ScP 23 45 22.6 +1.2**
F16A Kennard Place, 48.56 66 ⇑P **P 23 40 03.7 -0.4**
baz=48
E17A Martinsdale 48.56 65 ⇑P **P 23 40 04.7 +0.6**
baz=48
J13A Cove Ranch, Pi 48.63 70 ⇑P **P 23 40 05.0 +0.3**
baz=48,SNR=17
A20A Cobblestone Ra 48.64 60 ⇓P **P 23 40 04.6 0.0**
baz=48,SNR=11
BOZ Bozeman (W) 48.64 66 *e*P **P 23 40 04.9 +0.2**
BOZ pmax pmax
comp=Z,37nm,0.8s
BOZ Bozeman (W) 48.64 66 *e*P **P 23 40 04.9 +0.2**
comp=Z,37nm,0.8s
BOZ Bozeman (W) 48.64 66 ⇓P **P 23 40 05.1 +0.4**
baz=48,SNR=62
D18A Linhart Farms, 48.68 63 ⇑P **P 23 40 05.9 +1.0**
baz=48,SNR=19
I14A Mackay 48.70 69 ⇓P **P 23 40 05.7 +0.4**
baz=48,SNR=50
H15A Lima 48.73 67 ⇑P **P 23 40 04.9 -0.5**
baz=48,SNR=16
C19A Slack Wire Ran 48.75 62 ⇑P **P 23 40 06.2 +0.8**
baz=48,SNR=30
BMN Battle Mountai 48.78 75 *e*P **P 23 40 06.2 +0.3**
BMN pmax pmax
comp=Z,72nm,1.6s
BMN Battle Mountai 48.78 75 *e*P **P 23 40 06.2 +0.3**
comp=Z,72nm,1.6s
G16A Moss Hill, Enn 48.81 66 ⇑P **P 23 40 06.1 +0.1**
baz=49,SNR=56
LZH Lanzhou 48.86 278 ⇑P **P 23 40 07.5 +1.0**
LZH pP **pP 23 40 17.6 +2.0**
LZH sP **sP 23 40 21.3 +2.1**
LZH PP **PP 23 42 00.6 +0.9**
LZH S **S 23 47 06.5 -1.5**
LZH sS **sS 23 47 23.6 +0.7**
LZH pmax pmax
comp=Z,73nm,1.4s
LZH pmax pmax
comp=Z,260nm,8.3s
LZH LR LR
comp=N,1µm,14.7s
LZH LR LR
comp=E,1µm,14.5s
LZH LR LR
comp=Z,2µm,15.2s
B20A Solberg Farm, 48.86 61 ⇑P **P 23 40 06.3 +0.1**
baz=49,SNR=14
E18A Harlowton 49.01 64 ⇑P **P 23 40 08.3 +0.8**
baz=49,SNR=35
F17A Fitzpatrick Pl 49.01 65 ⇑P **P 23 40 07.8 +0.2**
baz=49,SNR=15
GTA Gaotai 49.03 284 ⇑P **P 23 40 08.3 +0.5**
GTA pP **pP 23 40 18.4 +1.5**
GTA sP **sP 23 40 22.3 +1.8**
GTA PcP **PcP 23 41 31.4 +0.2**
GTA PP **PP 23 42 02.5 +1.3**
GTA S **S 23 47 10.5 +0.2**
GTA sS **sS 23 47 26.9 +1.6**
GTA pmax pmax
comp=Z,38nm,1.6s
GTA pmax pmax
comp=Z,250nm,5.2s
GTA LR LR
comp=N,1µm,16.2s
GTA LR LR
comp=E,1µm,16.6s
GTA LR LR
comp=Z,2µm,16.2s
J14A Carey 49.05 69 ⇓P **P 23 40 07.7 -0.2**
baz=49,SNR=5.5
A21A Bergtoll Ranch 49.10 60 ⇑P **P 23 40 06.2 -1.8**
baz=49
D19A Cripps Ranch, 49.19 63 ⇓P **P 23 40 09.6 +0.8**
baz=49,SNR=24
QLMT Earthquake Lak 49.26 67 *e*P **P 23 40 09.9 +0.4**
C20A Veseth Ranch, 49.32 62 ⇓P **P 23 40 10.5 +0.8**
baz=49,SNR=24
G17A Pierce Place, 49.34 66 ⇓P **P 23 40 11.0 +0.9**
baz=49,SNR=10
H16A Russell Place, 49.45 67 ⇑P **P 23 40 11.5 +0.5**
baz=49,SNR=82
NVAR Mina Array Bea 49.46 77 P **P 23 40 11.2 0.0**
NVAR ScP **ScP 23 45 27.0 +1.2**
NVAR Mina Array Bea 49.46 77 P **P 23 40 11.2 0.0**
comp=Z,5.9nm,0.7s,baz=291,slow=7.6,SNR=46
NVAR ScP **ScP 23 45 27.0 +1.2**
comp=Z,2.1nm,1.0s,baz=305,slow=2.6,SNR=4.5
NVAR LR LR 23 58 30.3
comp=Z,540nm,20.4s,baz=62,slow=33
F18A Big Timber 49.53 64 ⇓P **P 23 40 12.3 +0.8**
baz=49,SNR=36
NV11 Mina Array Sit 49.55 77 *e*P **P 23 40 11.6 -0.2**
J15A Blackfoot 49.61 69 ⇓P **P 23 40 13.1 +1.0**
baz=49
A22A Carney Farms, 49.62 59 ⇓P **P 23 40 12.6 +0.6**
baz=49
YMR Madison River 49.62 66 *e*P **P 23 40 12.8 +0.5**
comp=Z,41nm,0.9s
D20A Manuel Ranch, 49.64 62 ⇑P **P 23 40 12.9 +0.7**
baz=49,SNR=18
E19A Rath Farm, Rou 49.68 63 ⇑P **P 23 40 13.1 +0.5**
baz=50,SNR=27
ELK Elko 49.73 73 *e*P **P 23 40 13.1 0.0**
C21A Desert Coulee 49.73 61 ⇑P **P 23 40 13.0 +0.2**
baz=50,SNR=8.5
K14A Jones Ranch, D 49.74 70 ⇓P **P 23 40 13.8 +0.7**
baz=50,SNR=12
I16A Newdale 49.84 68 ⇑P **P 23 40 14.1 +0.2**
baz=50
F19A Roth Farm, Mol 49.98 64 ⇓P **P 23 40 15.4 +0.5**
baz=50,SNR=15
G18A Lazy EL Ranch, 49.98 65 ⇓P **P 23 40 15.2 +0.3**
baz=50,SNR=12
LKWY Lake 50.00 66 *e*P **P 23 40 16.9 +1.7**
LKWY pmax pmax
comp=Z,30nm,0.9s
LKWY Lake 50.00 66 *e*P **P 23 40 16.9 +1.7**
comp=Z,30nm,0.9s
E20A Meyer Farm, Mu 50.01 63 ⇓P **P 23 40 16.0 +0.9**
baz=50,SNR=26
H17A Grant Village 50.01 66 ⇓P **P 23 40 17.1 +1.8**
baz=50,SNR=37
MTUM Tungsten Hills 50.02 79 *e*P **P 23 40 16.0 +0.6**
L14A Malta 50.03 70 ⇑P **P 23 40 16.6 +1.2**
baz=50,SNR=12
IMW Indian Meadow 50.13 67 *e*P **P 23 40 16.6 +0.4**
comp=Z,36nm,1.2s
J16A Bone 50.15 68 ⇑P **P 23 40 17.8 +1.5**
baz=50
DAG Danmarks Havn 50.23 3 *i*P **P 23 40 15.8 -0.4**
DAG pmax pmax
comp=Z,9.0nm,0.8s
DAG Danmarks Havn 50.23 3 *i*P **P 23 40 15.8 -0.4**
comp=Z,12nm,0.8s
RLMT Red Lodge 50.27 65 *e*P **P 23 40 18.0 +0.8**
comp=Z,27nm,0.6s
RLMT Red Lodge 50.27 65 ⇑P **P 23 40 17.9 +0.8**
baz=50,SNR=57
I17A Pilgrim Ck. 50.32 67 ⇑P **P 23 40 18.7 +1.1**
baz=50,SNR=8.6
MOOW Moose Ponds 50.33 67 *e*P **P 23 40 18.0 +0.3**
comp=Z,11nm,1.0s
H18A Shoshone NF, C 50.33 66 ⇑P **P 23 40 19.0 +1.3**
baz=50,SNR=34
TPAW Teton Pass 50.38 68 *e*P **P 23 40 18.7 +0.5**
comp=Z,28nm,1.4s
C22A Vida 50.42 60 ⇑P **P 23 40 20.1 +2.0**
baz=50,SNR=6.2
B23A Brockton 50.43 59 ⇑P **P 23 40 18.5 +0.4**
baz=50,SNR=13
F20A Billings 50.44 64 ⇓P **P 23 40 19.1 +0.8**
baz=50
K16A Soda Springs 50.45 69 ⇑P **P 23 40 20.3 +1.7**

baz=50,SNR=24
HVU Hansel Valley 50.46 70 *e*P **P 23 40 19.2 +0.6**
HVU pmax pmax
comp=Z,15nm,0.8s
HVU Hansel Valley 50.46 70 *e*P **P 23 40 19.2 +0.6**
comp=Z,15nm,0.8s
LOHW Long Hollow 50.50 67 *e*P **P 23 40 19.0 +0.1**
comp=Z,13nm,0.8s
SNOW Snow King Moun 50.51 68 *e*P **P 23 40 19.9 +0.8**
comp=Z,17nm,1.1s
L15A Malad City 50.54 70 ⇓P **P 23 40 19.9 +0.7**
baz=50,SNR=8.3
D22A Cohagen 50.64 61 ⇑P **P 23 40 20.6 +0.8**
baz=50,SNR=14
A24A Westby 50.65 58 ⇓P **P 23 40 20.2 +0.4**
baz=50,SNR=14
H19A Powell 50.71 65 ⇑P **P 23 40 21.5 +1.1**
baz=50,SNR=21
C23A Lambert 50.75 60 ⇑P **P 23 40 21.3 +0.7**
baz=50,SNR=30
G20A Bridger 50.78 64 ⇓P **P 23 40 21.2 +0.3**
baz=51,SNR=61
DGMT Dagmar 50.84 59 *e*P **P 23 40 21.3 +0.1**
comp=Z,26nm,0.7s
DGMT Dagmar 50.84 59 ⇑P **P 23 40 21.7 +0.5**
baz=51,SNR=11
I18A Diamond G Ranc 50.88 67 ⇓P **P 23 40 22.8 +1.0**
baz=51,SNR=21
K17A Gardner Place, 50.88 68 ⇓P **P 23 40 22.3 +0.4**
baz=51
PKM Peak Mountain 50.95 82 ⇑P **P 23 40 23.0 +0.6**
baz=51
F21A Absaloka Mine, 50.98 63 ⇑P **P 23 40 23.1 +0.7**
baz=51
L16A Fish Haven 51.07 69 ⇑P **P 23 40 23.7 +0.4**
baz=51
J18A Kendall Valley 51.08 67 ⇓P **P 23 40 23.8 +0.4**
baz=51,SNR=24
R11A Troy Canyon, C 51.11 76 ⇑P **P 23 40 23.7 +0.1**
baz=51,SNR=40
I19A Meeteetse 51.11 66 ⇓P **P 23 40 24.1 +0.6**
baz=51,SNR=15
E22A Miles City 51.21 62 ⇑P **P 23 40 24.9 +0.9**
baz=51,SNR=14
ISA Isabella 51.22 80 *e*P **P 23 40 23.8 -0.5**
ISA pmax pmax
comp=Z,152nm,2.8s
ISA Isabella 51.22 80 *e*P **P 23 40 23.8 -0.5**
comp=Z,152nm,2.8s
HWUT Hardware Ranch 51.26 70 *e*P **P 23 40 24.9 +0.2**
G21A Lodge Grass 51.32 64 ⇑P **P 23 40 25.2 +0.3**
baz=51,SNR=9.0
L17A Cokeville 51.33 69 ⇑P **P 23 40 25.4 +0.2**
baz=51,SNR=12
M16A Huntsville 51.42 70 ⇑P **P 23 40 26.2 +0.3**
baz=51,SNR=12
K18A Toltan Ranch, 51.44 68 ⇓P **P 23 40 26.9 +0.9**
baz=51,SNR=35
DUG Dugway 51.48 72 *e*P **P 23 40 26.5 +0.2**
DUG pmax pmax
comp=Z,31nm,1.1s
DUG Dugway 51.48 72 *e*P **P 23 40 26.5 +0.2**
comp=Z,31nm,1.1s
DUG Dugway 51.48 72 ⇑P **P 23 40 27.0 +0.7**
baz=51,SNR=27
E23A Ismay 51.52 61 ⇓P **P 23 40 27.3 +0.9**
baz=51,SNR=11
MPMC Manual Prospec 51.53 79 ⇑P **P 23 40 26.9 +0.1**
baz=51,SNR=6.9
J19A Crowheart 51.58 67 ⇓P **P 23 40 27.8 +0.7**
baz=51,SNR=22
BW06 Boulder Array 51.63 67 *e*P **P 23 40 27.5 0.0**
comp=Z,28nm,0.9s
BW06 Boulder Array 51.63 67 ⇓P **P 23 40 27.8 +0.3**
baz=51,SNR=22
PDAR Pinedale Array 51.63 67 P **P 23 40 27.4 -0.1**
PDAR Pinedale Array 51.63 67 P **P 23 40 27.4 -0.1**
comp=Z,27nm,0.8s,baz=360,slow=2.9,SNR=123
PDAR LR LR 00 01 17.6
comp=Z,514nm,21.5s,baz=312,slow=35
D24A Glendive 51.63 60 ⇑P **P 23 40 28.3 +1.0**
baz=51,SNR=16
I20A Worland 51.65 65 ⇓P **P 23 40 27.9 +0.4**
baz=51
H21A Big Horn, Sher 51.80 64 ⇑P **P 23 40 29.0 +0.4**
baz=52,SNR=26
G22A Birney 51.82 63 ⇑P **P 23 40 29.2 +0.5**
baz=52,SNR=22
M17A Scullys Gap (B 51.86 69 ⇑P **P 23 40 29.2 0.0**
baz=52,SNR=13
L18A Fontenelle, Gr 51.91 69 ⇓P **P 23 40 30.1 +0.5**
baz=52,SNR=14
F23A Volborg 51.97 62 ⇓P **P 23 40 30.3 +0.6**
baz=52
K19A Absolon Red Bu 51.98 67 ⇓P **P 23 40 30.0 -0.1**
baz=52,SNR=29
JLU Jordanelle 51.99 71 *e*P **P 23 40 30.8 +0.6**
comp=Z,18nm,1.0s
E24A Baker 52.00 61 ⇓P **P 23 40 30.6 +0.6**
baz=52
EDW2 Edwards Air Fo 52.05 80 ⇓P **P 23 40 30.4 -0.1**
baz=52
J20A Shoshoni 52.06 66 ⇓P **P 23 40 31.4 +0.8**
baz=52,SNR=25
N17A Moffit Pass 52.11 70 ⇓P **P 23 40 30.9 -0.3**
baz=52
L19A Farson 52.18 68 ⇑P **P 23 40 31.6 0.0**
baz=52,SNR=11
I21A Big Trails, Te 52.19 65 ⇑P **P 23 40 31.7 +0.2**
baz=52,SNR=28
M18A Lyman 52.23 69 ⇑P **P 23 40 31.9 0.0**
baz=52,SNR=12
DAU Daniels Canyon 52.23 71 *e*P **P 23 40 32.8 +0.8**
DAU Daniels Canyon 52.23 71 *e*P **P 23 40 32.8 +0.8**
MPU Maple Canyon 52.28 71 *e*P **P 23 40 33.1 +0.8**
comp=Z,42nm,1.4s
G23A Biddle 52.31 63 ⇓P **P 23 40 32.7 +0.4**
baz=52,SNR=16
K20A Yellowstone Ra 52.38 67 ⇓P **P 23 40 32.7 -0.3**
baz=52,SNR=21
F24A Ekalaka 52.40 61 ⇓P **P 23 40 33.6 +0.7**
baz=52,SNR=11
J21A Lysite 52.42 66 ⇓P **P 23 40 33.6 +0.3**
baz=52,SNR=25
GSC Goldstone 52.46 79 *e*P **P 23 40 33.5 0.0**
GSC pmax pmax
comp=Z,43nm,1.3s
GSC Goldstone 52.46 79 *e*P **P 23 40 33.5 0.0**
comp=Z,42nm,1.3s
GSC Goldstone 52.46 79 ⇓P **P 23 40 33.8 +0.3**
baz=52,SNR=15
MWC Mount Wilson 52.46 81 *e*P **P 23 40 33.7 0.0**
MWC pmax pmax
comp=Z,53nm,1.4s
MWC Mount Wilson 52.46 81 *e*P **P 23 40 33.7 0.0**
comp=Z,53nm,1.4s
CD2 Chengdu 52.50 273 ⇑P **P 23 40 34.8 +0.9**
CD2 pP **pP 23 40 44.8 +1.8**
CD2 sP **sP 23 40 48.5 +1.9**
CD2 PcP **PcP 23 41 45.8 +1.7**
CD2 PP **PP 23 42 34.5 +1.8**
CD2 PcS **PcS 23 45 42.6 -0.1**
CD2 S **S 23 47 56.6 -1.8**
CD2 sS **sS 23 48 13.1 -0.3**
CD2 SS **SS 23 51 32.9 -3.4**
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,170nm,5.1s
CD2 LR LR
comp=N,620nm,16.6s
CD2 LR LR
comp=E,600nm,13.7s
CD2 LR LR
comp=Z,490nm,15.7s
I22A 9 Mile Ranch, 52.58 65 ⇑P **P 23 40 35.0 +0.6**
baz=52,SNR=27
M19A Rock Springs 52.69 68 ⇓P **P 23 40 35.1 -0.2**
baz=52,SNR=9.2
N18A Larsen Ranch, 52.75 69 ⇓P **P 23 40 35.9 +0.1**
baz=52,SNR=6.2
G24A Alzada 52.75 62 ⇓P **P 23 40 35.6 0.0**
baz=52,SNR=16
L20A Wamsutter 52.81 67 ⇑P **P 23 40 36.8 +0.6**
baz=53,SNR=13
TUQ Turquoise Moun 52.89 79 ⇑P **P 23 40 37.2 +0.4**
baz=53
J22A Midwest 52.90 65 ⇑P **P 23 40 37.5 +0.7**
baz=53,SNR=89
SUMG Summit 52.93 11 *i* P **P 23 40 37.6 +0.7**
SUMG pmax pmax
comp=Z,34nm,1.1s
SUMG Summit 52.93 11 *e*P **P 23 40 36.8 -0.1**
comp=Z,43nm,1.0s
SUMG Summit 52.93 11 *i* P **P 23 40 37.6 +0.7**
comp=Z,34nm,1.1s
CCUT Cedar City 52.94 75 *e*P **P 23 40 37.4 +0.2**
comp=Z,12nm,0.9s
MVU Marysvale 52.96 73 *e*P **P 23 40 38.1 +0.7**
comp=Z,10nm,0.8s
K21A Alcova 52.99 66 ⇑P **P 23 40 37.6 0.0**
baz=53
WMQ Urumqi 52.99 296 P **P 23 40 38.0 +0.6**
WMQ PcP **PcP 23 41 46.0 +0.2**
WMQ PP **PP 23 42 39.0 +2.1**
WMQ ScP **ScP 23 45 40.0 -0.8**
WMQ S **S 23 48 03.0 -1.9**
WMQ ScS **ScS 23 50 21.0 -3.5**
WMQ pmax pmax
comp=Z,32nm,0.9s
WMQ pmax pmax
comp=Z,220nm,5.0s
WMQ LR LR
comp=N,3μm,17.0s
WMQ LR LR
comp=E,1μm,17.0s
WMQ LR LR
comp=Z,2μm,17.0s
TMUT Trail Mountain 53.00 72 *e*P **P 23 40 38.4 +0.6**
comp=Z,32nm,0.7s
H24A Dirks Ranch, A 53.06 63 ⇑P **P 23 40 37.9 0.0**
baz=53,SNR=46
HEC Hector,Ludlow 53.06 79 ⇓P **P 23 40 38.2 +0.1**
baz=53
N19A John Jarvie Ra 53.08 69 ⇑P **P 23 40 38.2 0.0**
baz=53,SNR=16
KURK Kurchatov 53.10 307 *c i*P **P 23 40 37.0 -0.9**
KURK pmax pmax
comp=Z,124nm,1.2s
KURK Kurchatov 53.10 307 *e*P **P 23 40 37.2 -0.7**
comp=Z,126nm,1.2s
KURK Kurchatov 53.10 307 P **P 23 40 37.6 -0.3**
SNR=44
P17A Butcher Ranch, 53.15 71 ⇑P **P 23 40 39.3 +0.5**
baz=53,SNR=7.1
M20A Sweetwater, Wa 53.24 68 ⇓P **P 23 40 40.0 +0.6**
baz=53,SNR=10
Q16A Castle Valley 53.28 72 ⇓P **P 23 40 40.6 +0.8**
baz=53,SNR=11
P18A Preston Nutter 53.33 71 ⇓P **P 23 40 40.9 +0.7**
baz=53
L21A Rawlins 53.38 67 ⇓P **P 23 40 40.8 +0.4**
baz=53,SNR=8.6
K22A Casper 53.38 66 ⇓P **P 23 40 41.1 +0.7**
baz=53,SNR=13
J23A Dilts Ranch, B 53.41 64 ⇓P **P 23 40 41.0 +0.5**
baz=53
GMRC Granite Mounta 53.50 79 ⇑P **P 23 40 41.4 +0.2**
baz=53,SNR=11
O19A Miners Draw (B 53.51 69 ⇓P **P 23 40 42.0 +0.6**
baz=53,SNR=20
SRU San Rafael 53.52 71 *e*P **P 23 40 42.3 +0.8**
SRU pmax pmax
comp=Z,33nm,0.8s
SRU San Rafael 53.52 71 *e*P **P 23 40 42.3 +0.8**
comp=Z,33nm,0.8s
SRU San Rafael 53.52 71 ⇑P **P 23 40 42.1 +0.6**
baz=53,SNR=27
MDND Maddock 53.58 57 ⇓P **P 23 40 42.3 +0.7**
baz=53,SNR=8.2
I24A Kuemmerle Ranc 53.61 63 ⇑P **P 23 40 42.0 0.0**
baz=53
M21A Separation Pea 53.62 67 ⇓P **P 23 40 42.4 +0.1**
baz=53,SNR=19
N20A Spence Gulch, 53.63 68 ⇑P **P 23 40 43.2 +0.8**
baz=53,SNR=13
RSSD Black Hills 53.75 63 *e*P **P 23 40 43.2 0.0**
RSSD pmax pmax
comp=Z,29nm,0.6s
RSSD Black Hills 53.75 63 *e*P **P 23 40 43.1 0.0**
comp=Z,29nm,0.6s
ULM Lac du Bonnet 53.82 53 *e*P **P 23 40 43.2 0.0**
ULM Lac du Bonnet 53.82 53 P **P 23 40 43.3 0.0**
comp=Z,9.3nm,0.6s,baz=312,slow=8.4,SNR=16
ULM LR LR 00 04 28.6
comp=Z,815nm,19.3s,baz=310,slow=37
PFO Pinyon Flat Ob 53.84 81 ⇑P **P 23 40 43.9 +0.1**
baz=54
L22A Ellis Ranch, M 53.85 66 ⇓P **P 23 40 44.9 +1.1**
baz=54,SNR=15
MK31 Makanchi Array 53.87 302 *e*P **P 23 40 42.5 -1.3**
MK31 Makanchi Array 53.87 302 *e*P **P 23 40 42.5 -1.3**
MKAR Makanchi Array 53.87 302 P **P 23 40 42.5 -1.3**
MKAR pmax pmax
comp=Z,5.0nm,0.6s
MKAR MLR MLR
comp=Z,1μm,21.0s
MKAR Makanchi Array 53.87 302 P **P 23 40 42.5 -1.3**
MKAR Makanchi Array 53.87 302 P **P 23 40 42.5 -1.3**
comp=Z,5.2nm,0.6s,baz=58,slow=6.4,SNR=74
MKAR LR LR 00 04 23.4
comp=Z,1μm,21.0s,baz=34,slow=37
J24A Dixon Ranch, L 53.94 64 ⇓P **P 23 40 44.7 +0.3**
baz=54
GYA Guiyang 53.98 267 ⇑*i*P **P 23 40 44.3 -0.6**
GYA pP **pP 23 40 56.8 +2.8**
GYA PcP **PcP 23 41 52.0 +2.2**
GYA ScP **ScP 23 45 45.6 +0.2**
GYA sS **sS 23 48 33.5 -0.3**
GYA SS **SS 23 51 58.9 -1.0**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,760nm,18.2s
GYA LR LR
comp=E,620nm,18.9s
GYA LR LR
comp=Z,770nm,19.0s
P19A Cripple Cowboy 54.04 70 ⇑P **P 23 40 45.9 +0.5**
baz=54,SNR=27
N21A Black Mountain 54.10 68 ⇑P **P 23 40 46.2 +0.5**
baz=54
O20A White River Ci 54.12 69 ⇓P **P 23 40 46.1 +0.3**
baz=54,SNR=14
M22A Cedar Creek Ra 54.18 67 ⇓P **P 23 40 47.1 +0.8**
baz=54,SNR=14
L23A Garrett 54.19 66 ⇑P **P 23 40 46.7 +0.3**
baz=54,SNR=42
IRM Iron Mountain 54.23 79 ⇑P **P 23 40 46.7 +0.1**
baz=54,SNR=13
W13A Hualapai Mount 54.32 77 ⇑P **P 23 40 47.6 +0.2**
baz=54,SNR=11
U15A North Rim 54.33 75 ⇑P **P 23 40 48.3 +0.8**
baz=54,SNR=19
Q19A Hogan Spring (54.34 71 ⇑P **P 23 40 47.8 +0.4**
baz=54
O21A Pagoda 54.50 69 ⇑P **P 23 40 49.2 +0.6**
baz=54
KEV Kevo 54.65 345 *e*P **P 23 40 48.9 -0.1**
KEV pmax pmax
comp=Z,8.0nm,0.6s
KEV Kevo 54.65 345 *e*p **P 23 40 48.9 -0.1**
comp=Z,7.5nm,0.6s
L24A Wheatland 54.66 65 ⇓P **P 23 40 50.5 +0.8**
baz=54
S18A Hurst Farm, Bl 54.79 72 ⇑P **P 23 40 51.3 +0.4**
baz=55,SNR=20
K25A Mack Ranch, Ha 54.86 64 ⇓P **P 23 40 51.5 +0.4**
baz=55,SNR=5.8
PHWY Pilot Hill 54.88 66 *e*P **P 23 40 53.4 +1.9**
comp=Z,11nm,0.8s
N23A Red Feather La 54.89 67 ⇓P **P 23 40 52.1 +0.6**
baz=55,SNR=12
Y12C Blythe 54.89 79 ⇑P **P 23 40 51.8 +0.5**
baz=55
Q20A Ridgley Place, 54.89 70 ⇓P **P 23 40 51.6 +0.1**
baz=55,SNR=12
P21A Newcastle 54.98 69 ⇓P **P 23 40 52.7 +0.6**
baz=55,SNR=9.8
LVZ Lovozero 54.98 341 ⇑*e*P **P 23 40 51.7 +0.2**
LVZ pmax pmax
comp=Z,50nm,1.0s
O22A Kremmling 55.05 68 ⇓P **P 23 40 53.2 +0.5**
baz=55,SNR=16
ARCES ARCESS Array B 55.08 346 P **P 23 40 51.7 -0.4**
ARCES ARCESS Array B 55.08 346 P **P 23 40 51.7 -0.4**
comp=Z,13nm,0.6s,baz=30,slow=7.6,SNR=61
ARCES LR LR 00 07 39.0
comp=Z,300nm,18.5s,baz=3.7,slow=40
ARE0 ARCESS Array S 55.08 346 *e*P **P 23 40 51.7 -0.4**
M24A Cheyenne 55.11 66 ⇓P **P 23 40 54.5 +1.5**
baz=55,SNR=6.9
AGMN Agassiz Nation 55.14 54 *e*P **P 23 40 52.9 0.0**
comp=Z,31nm,0.8s
K26A Motz Farm, Whi 55.17 64 ⇓P **P 23 40 52.7 -0.6**
baz=55
GLA Glamis 55.20 80 *e*P **P 23 40 53.8 +0.2**
GLA pmax pmax
comp=Z,16nm,0.8s
GLA Glamis 55.20 80 *e*P **P 23 40 53.8 +0.2**
comp=Z,16nm,0.8s
GLA Glamis 55.20 80 ⇓P **P 23 40 54.3 +0.7**
baz=55
TGY Tagaytay City 55.32 245 P **P 23 40 55.9 +1.4**
TGY Tagaytay City 55.32 245 P **P 23 40 55.9 +1.4**
comp=Z,194nm,0.3s,baz=106,slow=4.7,SNR=5.5
P22A Eagle 55.32 69 ⇓P **P 23 40 55.6 +1.0**
baz=55,SNR=13
BRVK Borovoye 55.32 314 *c i*P **P 23 40 53.6 -0.5**
BRVK pmax pmax
comp=Z,96nm,1.7s
BRVK Borovoye 55.32 314 *e*P **P 23 40 53.8 -0.3**
comp=Z,42nm,0.9s
BRVK Borovoye 55.32 314 P **P 23 40 54.0 -0.1**
SNR=25
O23A Lake Granby, G 55.37 68 ⇑P **P 23 40 56.2 +1.2**
baz=55,SNR=36
R20A Redvale 55.37 71 ⇓P **P 23 40 55.8 +0.9**
baz=55
Q21A Lamborn Mesa, 55.38 70 ⇓P **P 23 40 55.6 +0.6**
baz=55,SNR=16
SMCO Snowmass 55.49 69 *e*P **P 23 40 56.0 0.0**
comp=Z,14nm,0.8s
WUAZ Wupatki 55.50 75 *e*P **P 23 40 56.4 +0.6**
comp=Z,13nm,0.8s
WUAZ Wupatki 55.50 75 ⇑P **P 23 40 57.1 +1.2**
baz=55
APA Apatity 55.51 342 ⇑*i*P **P 23 40 55.0 -0.2**
APA pmax pmax
comp=Z,70nm,1.4s
APA MLR MLR
comp=Z,700nm,12.0s
N24A Carr 55.52 66 ⇓P **P 23 40 56.9 +1.0**
baz=55,SNR=6.8
S20A Disappointment 55.63 71 ⇑P **P 23 40 57.4 +0.5**
baz=55,SNR=31
Y14A Wickenburg 55.65 78 ⇓P **P 23 40 56.5 -0.3**
baz=56
K27A Fluckinger Fa 55.68 63 ⇓P **P 23 40 57.7 +0.8**
baz=56
R21A Cimarron 55.72 70 ⇑P **P 23 40 58.4 +0.9**
baz=56,SNR=20
Q22A Crested Butte, 55.74 69 ⇑P **P 23 40 58.7 +0.9**
baz=56,SNR=22
ISCO Idaho Springs 55.82 68 *e*P **P 23 40 59.4 +1.1**
ISCO pmax pmax
comp=Z,29nm,0.8s
ISCO Idaho Springs 55.82 68 *e*P **P 23 40 59.4 +1.1**
comp=Z,29nm,0.8s
ISCO Idaho Springs 55.82 68 ⇑P **P 23 40 59.7 +1.5**
baz=56
SOKR Solikamsk 55.85 326 *c i*P **P 23 40 57.5 -0.2**
SOKR pmax pmax
comp=Z,20nm,1.1s
SOKR MLR MLR
comp=Z,530nm,17.0s
KTK1 Kautokeino 55.88 347 *e*P **P 23 40 57.3 -0.6**
KTK1 *e*pP **pP 23 41 04.7 -2.4**
KTK1 AMB AMB 23 41 07.2
comp=Z,262nm,1.6s
O24A Longmont 55.90 67 ⇓P **P 23 41 00.4 +1.7**
baz=56,SNR=13
MVCO Mesa Verde 55.98 72 *e*P **P 23 41 00.0 +0.6**
comp=Z,66nm,1.4s
MVCO Mesa Verde 55.98 72 ⇓P **P 23 41 00.2 +0.8**
baz=56,SNR=14
P23A Jefferson 55.99 68 ⇑P **P 23 41 01.2 +1.7**
baz=56,SNR=8.1
113A Mohawk Valley, 56.03 79 ⇓P **P 23 40 59.5 +0.1**
baz=56
M26A McRoberts Ranc 56.03 65 ⇑P **P 23 41 00.6 +1.0**
baz=56
S21A Coal Bank Pass 56.07 71 ⇓P **P 23 41 01.1 +1.0**
baz=56,SNR=19
Z14A Wintersburg 56.09 78 ⇓P **P 23 41 00.7 +0.8**
baz=56
SFJD Kangerlussuaq 56.18 18 *i* P **P 23 40 59.6 -0.4**
comp=Z,8.2nm,1.3s
X16A Lo Mia Camp, P 56.23 76 ⇑P **P 23 41 02.6 +1.5**
baz=56,SNR=8.5
R22A Saguache, Gunn 56.27 70 ⇑P **P 23 41 02.5 +1.0**
baz=56,SNR=22
Q23A Hartsel 56.32 69 ⇑P **P 23 41 03.1 +1.2**
baz=56,SNR=12
SCO Scoresbysund 56.35 5 *i* P **P 23 41 02.4 +1.2**
SCO pmax pmax
comp=Z,7.0nm,1.0s
SCO Scoresbysund 56.35 5 *i* P **P 23 41 02.4 +1.2**
comp=Z,6.7nm,1.0s
M27A Reverse DX Ran 56.40 64 ⇑P **P 23 41 01.8 -0.4**
baz=56
O25A Wiggins 56.43 66 ⇓P **P 23 41 03.6 +1.1**
baz=56
S22A 4UR Ranch, Cre 56.56 70 ⇑P **P 23 41 05.4 +1.8**
baz=56,SNR=46
Q24A Divide 56.66 68 ⇑P **P 23 41 05.6 +1.3**
baz=56,SNR=7.2
T21A Navajo Lake 56.69 71 ⇓P **P 23 41 05.8 +1.5**
baz=56
W18A Petrified Fore 56.73 74 ⇓P **P 23 41 06.3 +1.6**
baz=56
O26A Horse Wrangler 56.79 66 ⇓P **P 23 41 06.4 +1.4**
baz=57
R23A Moffat 56.82 69 ⇑P **P 23 41 07.0 +1.6**
baz=57,SNR=16
N27A Anderson Farm, 56.82 65 ⇑P **P 23 41 06.9 +1.7**
baz=57,SNR=8.1
P25A Willow Gulch B 56.82 67 ⇓P **P 23 41 07.4 +2.1**
baz=57,SNR=17
V20A Brimhall 56.99 73 ⇑P **P 23 41 07.4 +0.9**
baz=57
OGNE Ogallala 57.00 64 *e*P **P 23 41 07.6 +1.2**
comp=Z,113nm,0.6s
OGNE Ogallala 57.00 64 ⇓P **P 23 41 08.0 +1.6**
baz=57,SNR=15
U21A Nageezi 57.01 72 ⇓P **P 23 41 08.0 +1.3**
baz=57,SNR=15
X18A Snowflake 57.02 75 ⇑P **P 23 41 08.2 +1.5**
baz=57,SNR=12
T22A Edith 57.03 71 ⇑P **P 23 41 08.5 +1.7**
baz=57,SNR=14
S23A Nye Farm, Mont 57.06 70 ⇓P **P 23 41 05.3 -1.7**
baz=57
214A Organ Pipe Nat 57.17 79 ⇑P **P 23 41 08.5 +0.9**
baz=57
R24A Sanders Place, 57.19 69 ⇓P **P 23 41 09.6 +1.6**
baz=57,SNR=15
Q25A Bedland, Calha 57.20 68 ⇓P **P 23 41 09.5 +1.5**
baz=57,SNR=18
P26A Davis Ranch, A 57.24 66 ⇓P **P 23 41 09.9 +1.6**
baz=57,SNR=14
O27A Beecher Island 57.28 65 ⇑P **P 23 41 10.0 +1.6**
baz=57,SNR=12
KMI Kunming 57.33 269 P **P 23 41 09.3 +0.2**
KMI sP **sP 23 41 23.1 +1.2**
KMI S **S 23 49 05.0 +1.4**
KMI sS **sS 23 49 19.1 +0.3**
KMI SS **SS 23 52 56.1 +3.2**
KMI pmax pmax
comp=Z,12nm,1.1s
W20A Ramah 57.44 74 ⇓P **P 23 41 10.8 +1.1**
baz=57,SNR=7.3
V21A Milan 57.46 72 ⇓P **P 23 41 10.9 +1.1**
baz=57
TMCR Tamitsa 57.48 338 *e*P **P 23 41 09.9 +0.6**
TMCR pmax pmax
comp=Z,116nm,1.0s
EYMN Ely 57.49 52 *e*P **P 23 41 09.5 -0.1**
comp=Z,42nm,0.7s

U22A	**Llaves**	**57.51**	**71**	⇓P		**P**	**23 41 11.3 +1.1**
	baz=57,SNR=19						
T23A	**Casias Ranch,**	**57.51**	**70**	⇑P		**P**	**23 41 11.3 +1.1**
	baz=57						
S24A	**Houchin Ranch,**	**57.55**	**69**	⇓P		**P**	**23 41 11.8 +1.2**
	baz=57,SNR=10						
ARU	**Arti**	**57.58**	**323**	*d iP*		**P**	**23 41 09.4 -0.7**
ARU							23 42 02.6
ARU				S		**S**	**23 49 04.3 -1.4**
ARU				pmax		pmax	
	comp=Z,54nm,1.2s						
ARU				MLR		MLR	
	comp=Z,678nm,17.0s						
ARU	**Arti**	**57.58**	**323**	P		**P**	**23 41 09.6 -0.5**
	comp=Z,224nm,0.6s,SNR=8.8						
Q26A	**Hugo**	**57.59**	**67**	⇓P		**P**	**23 41 12.4 +1.7**
	baz=57						
R25A	**Fountain Ranch**	**57.72**	**68**	⇓P		**P**	**23 41 11.3 -0.2**
	baz=58						
V22A	**San Miguel Ran**	**57.80**	**72**	⇑P		**P**	**23 41 12.2 -0.1**
	baz=58,SNR=10						
X20A	**Quemado**	**57.86**	**74**	⇑P		**P**	**23 41 13.6 +0.9**
	baz=58,SNR=10						
U23A	**El Rito**	**57.92**	**71**	⇑P		**P**	**23 41 14.6 +1.5**
	baz=58,SNR=24						
ECSD	**EROS Data Cent**	**57.92**	**59**	*eP*		**P**	**23 41 12.3 -0.5**
	comp=Z,26nm,0.9s						
S25A	**Robets Cordova**	**57.97**	**69**	⇓P		**P**	**23 41 14.5 +1.1**
	baz=58						
KSCO	**Kaye Shedlock'**	**58.03**	**66**	⇑P		**P**	**23 41 15.3 +1.6**
	baz=58,SNR=6.0						
T24A	**Torres, Weston**	**58.04**	**70**	⇑P		**P**	**23 41 15.8 +1.8**
	baz=58,SNR=7.6						
R26A	**Arlington**	**58.07**	**68**	⇑P		**P**	**23 41 15.5 +1.5**
	baz=58						
TUC	**Tucson**	**58.12**	**78**	*eP*		**P**	**23 41 14.0 -0.3**
TUC	**Tucson**	**58.12**	**78**	*eP*		**P**	**23 41 14.0 -0.3**
V23A	**Ortiz Mt (NFS**	**58.34**	**72**	⇑P		**P**	**23 41 17.6 +1.6**
	baz=58,SNR=15						
X21A	**Alamocita Cree**	**58.34**	**74**	⇓P		**P**	**23 41 18.0 +1.9**
	baz=58,SNR=26						
T25A	**Trinidad**	**58.35**	**69**	⇓P		**P**	**23 41 17.4 +1.3**
	baz=58,SNR=11						
Y20A	**Horse Springs,**	**58.38**	**75**	⇓P		**P**	**23 41 17.8 +1.4**
	baz=58,SNR=12						
R27A	**Eads**	**58.45**	**67**	⇓P		**P**	**23 41 17.7 +1.1**
	baz=58						
Y21A	**Point of Rocks**	**58.72**	**74**	⇑P		**P**	**23 41 20.0 +1.2**
	baz=58						
LAZ	**Ladron**	**58.74**	**73**	*eP*		**P**	**23 41 20.2 +1.3**
	comp=Z,21nm,1.4s						
X22A	**Bernardo**	**58.74**	**73**	⇑P		**P**	**23 41 20.4 +1.6**
	baz=59						
ANMO	**Albuquerque**	**58.75**	**72**	*eP*		**P**	**23 41 19.8 +0.9**
	comp=Z,168nm,2.9s						
BGNE	**Belgrade**	**58.76**	**62**	⇓P		**P**	**23 41 19.1 +0.4**
	baz=58,SNR=12						
W23A	**Werner Place,**	**58.77**	**72**	⇑P		**P**	**23 41 20.4 +1.3**
	baz=59						
T26A	**Comanche Natio**	**58.79**	**69**	⇑P		**P**	**23 41 19.7 +0.6**
	baz=59						
SPMN	**St. Paul**	**58.79**	**55**	⇑P		**P**	**23 41 19.4 +0.6**
	baz=58,SNR=11						
Z20A	**Nine Sixteen R**	**58.82**	**75**	⇑P		**P**	**23 41 20.6 +1.2**
	baz=59,SNR=12						
V24A	**Rampart Ranch,**	**58.87**	**71**	⇑P		**P**	**23 41 20.9 +1.1**
	baz=59,SNR=14						
W24A	**Lazy 6 Ranch,**	**59.16**	**71**	⇓P		**P**	**23 41 23.2 +1.5**
	baz=59						
V25A	**Rancho No Teng**	**59.16**	**70**	⇑P		**P**	**23 41 22.8 +1.0**
	baz=59						
Y22A	**Socorro**	**59.18**	**74**	⇓P		**P**	**23 41 22.9 +1.1**
	baz=59,SNR=16						
120A	**U Bar Ranch, L**	**59.21**	**76**	⇓P		**P**	**23 41 23.3 +1.2**
	baz=59,SNR=22						
BNM	**Barren Site**	**59.22**	**73**	*eP*		**P**	**23 41 22.4 +0.2**
	comp=Z,40nm,1.5s						
Z21A	**St. Cloud Mine**	**59.22**	**75**	⇑P		**P**	**23 41 23.5 +1.3**
	baz=59						
T27A	**Campo**	**59.36**	**68**	⇑P		**P**	**23 41 23.6 +0.6**
	baz=59						
T28A	**Walsh**	**59.66**	**68**	⇓P		**P**	**23 41 25.7 +0.7**
	baz=59						
V26A	**Tequesquite Ra**	**59.66**	**70**	⇑P		**P**	**23 41 26.7 +1.6**
	baz=60						
Z22A	**Elephant Butte**	**59.67**	**74**	⇑P		**P**	**23 41 26.4 +1.2**
	baz=60,SNR=7.3						
319A	**Douglas**	**59.67**	**77**	⇑P		**P**	**23 41 26.3 +1.0**
	baz=60,SNR=9.6						
MOR8	**Moi Rana**	**59.69**	**349**	*eP*		**P**	**23 41 22.7 -2.0**
MOR8				*epP*		**pP**	**23 41 30.5 -3.5**
MOR8				AMB		AMB	23 41 32.5
	comp=Z,51nm,1.3s						
W25A	**X Bar L Ranch,**	**59.70**	**71**	⇓P		**P**	**23 41 26.3 +0.9**
	baz=60,SNR=8.5						
Y23A	**Lovelace Mesa,**	**59.71**	**73**	⇑P		**P**	**23 41 26.2 +0.7**
	baz=60,SNR=16						
121A	**Cookes Peak, D**	**59.71**	**75**	⇑P		**P**	**23 41 26.7 +1.1**
	baz=60						
220A	**Playas Peak, P**	**59.73**	**76**	⇓P		**P**	**23 41 26.7 +1.0**
	baz=60,SNR=18						
COWI	**Conover**	**59.94**	**52**	*eP*		**P**	**23 41 26.2 -0.5**
	comp=Z,14nm,0.8s						
TKM2	**Tokmak 2**	**59.98**	**302**	*i P*		**P**	**23 41 26.9 -0.4**
TKM2	**Tokmak 2**	**59.98**	**302**	*eP*		**P**	**23 41 26.9 -0.4**
TKM2	**Tokmak 2**	**59.98**	**302**	P		**P**	**23 41 27.0 -0.4**
	SNR=14						
JOF	**Joensuu**	**60.04**	**340**	*eP*		**P**	**23 41 27.2 +0.1**
JOF				pmax		pmax	
	comp=Z,40nm,0.6s						
JOF	**Joensuu**	**60.04**	**340**	*ep*		**P**	**23 41 27.2 +0.1**
	comp=Z,40nm,0.6s						
Y24A	**Capitan**	**60.07**	**72**	⇑P		**P**	**23 41 28.8 +0.8**
	baz=60,SNR=12						
Z23A	**Rita Site, Whi**	**60.09**	**74**	⇓P		**P**	**23 41 29.4 +1.3**
	baz=60						
221A	**Mesquite Ranch**	**60.09**	**76**	⇑P		**P**	**23 41 29.7 +1.5**
	baz=60,SNR=9.5						
ULHL	**Ulahol**	**60.14**	**301**	P		**P**	**23 41 28.2 -0.2**
	SNR=18						
320A	**Kipp Ranch, An**	**60.14**	**77**	⇑P		**P**	**23 41 30.0 +1.5**
	baz=60						
V27A	**Dan Oppiter Fa**	**60.23**	**69**	⇑P		**P**	**23 41 30.1 +1.2**
	baz=60						
USP	**Ospenovka**	**60.29**	**303**	P		**P**	**23 41 29.1 -0.1**
	SNR=18						
222A	**Williams Famil**	**60.42**	**75**	⇓P		**P**	**23 41 31.7 +1.4**
	baz=60						
Y25A	**Mesa, Roswell**	**60.50**	**72**	⇓P		**P**	**23 41 31.2 +0.4**
	baz=60,SNR=12						
KBK	**Karagaybulak**	**60.51**	**303**	P		**P**	**23 41 30.7 -0.2**
	SNR=9.3						
Z24A	**Sheeppen Canyo**	**60.54**	**73**	⇓P		**P**	**23 41 32.3 +1.0**
	baz=60						
X26A	**CR and CF Fran**	**60.55**	**71**	⇑P		**P**	**23 41 31.9 +0.7**
	baz=60						
V28A	**Channing**	**60.58**	**69**	⇓P		**P**	**23 41 32.5 +1.2**
	baz=60						
AAK	**Ala-Archa**	**60.75**	**303**	*ceP*		**P**	**23 41 32.1 -0.4**
AAK				pmax		pmax	
	comp=Z,97nm,1.6s						
AAK	**Ala-Archa**	**60.75**	**303**	*eP*		**P**	**23 41 32.2 -0.3**
	comp=Z,6.0nm,1.1s						
AAK	**Ala-Archa**	**60.75**	**303**	P		**P**	**23 41 32.6 +0.1**
	SNR=14						
KZA	**Kyzart**	**60.77**	**302**	P		**P**	**23 41 32.9 -0.1**
	SNR=6.7						
X27A	**F and S Farms,**	**60.88**	**70**	⇑P		**P**	**23 41 34.7 +1.2**
	baz=61						
LSA	**Lhasa**	**60.90**	**281**	P		**P**	**23 41 34.6 +0.5**
124A	**Stringfield Ra**	**60.94**	**73**	⇑P		**P**	**23 41 34.9 +0.8**
	baz=61						
Z25A	**Roswell**	**60.95**	**72**	⇓P		**P**	**23 41 35.0 +1.1**
	baz=61,SNR=6.0						
SCIA	**State Center**	**60.97**	**58**	*eP*		**P**	**23 41 34.3 +0.5**
	comp=Z,55nm,0.6s						
T31A	**Randall Ranch,**	**61.02**	**66**	⇑P		**P**	**23 41 34.7 +0.4**
	baz=61						
EKS2	**Erkin-Say**	**61.09**	**303**	*eP*		**P**	**23 41 34.5 -0.3**
EKS2				pmax		pmax	
	comp=Z,46nm,1.4s						
EKS2	**Erkin-Say**	**61.09**	**303**	*eP*		**P**	**23 41 34.5 -0.3**
	comp=Z,46nm,1.4s						
EKS2	**Erkin-Say**	**61.09**	**303**	P		**P**	**23 41 34.8 0.0**
	SNR=20						
KSU1	**Kansas State U**	**61.23**	**62**	*eP*		**P**	**23 41 34.6 -1.1**
	comp=Z,29nm,0.6s						
224A	**Cornudas Mount**	**61.36**	**74**	⇓P		**P**	**23 41 37.2 +0.4**
	baz=61,SNR=10						
Z26A	**Caprock**	**61.38**	**72**	⇑P		**P**	**23 41 37.2 +0.4**
	baz=61,SNR=9.4						
Y27A	**Causey**	**61.40**	**71**	⇑P		**P**	**23 41 37.8 +0.8**
	baz=61,SNR=14						
125A	**Gardner Draw,**	**61.43**	**73**	⇑P		**P**	**23 41 38.0 +0.8**
	baz=61,SNR=11						
X28A	**Dimmitt**	**61.48**	**70**	⇑P		**P**	**23 41 37.7 +0.2**
	baz=61						
AMTX	**Amarillo**	**61.51**	**69**	⇑P		**P**	**23 41 37.9 +0.2**
	baz=61						
AML	**Almayashu**	**61.52**	**303**	P		**P**	**23 41 38.0 -0.1**
	SNR=9.6						
MSTX	**Muleshoe**	**61.56**	**71**	⇑P		**P**	**23 41 38.8 +0.8**
	baz=61						
225A	**Deer Hill, Car**	**61.74**	**73**	⇑P		**P**	**23 41 40.3 +1.0**
	baz=62						
KAF	**Kangasniemi**	**61.76**	**342**	*eP*		**P**	**23 41 38.9 +0.1**
KAF				pmax		pmax	
	comp=Z,18nm,0.7s						
KAF	**Kangasniemi**	**61.76**	**342**	*ep*		**P**	**23 41 38.9 +0.1**
	comp=Z,18nm,0.7s						
Z27A	**Tatum**	**61.78**	**71**	⇓P		**P**	**23 41 40.2 +0.6**
	baz=62,SNR=10						
126A	**Clayton Basin,**	**61.81**	**72**	⇓P		**P**	**23 41 40.3 +0.6**
	baz=62						
X29A	**Tulia**	**61.82**	**69**	⇑P		**P**	**23 41 40.7 +1.0**
	baz=62						
324A	**Moseley Ranch,**	**61.84**	**74**	⇓P		**P**	**23 41 40.7 +0.7**
	baz=62						
V31A	**Spring Creek L**	**61.89**	**67**	⇑P		**P**	**23 41 41.0 +0.8**
	baz=62						
Y28A	**McKinney Farm,**	**61.90**	**70**	⇓P		**P**	**23 41 40.1 -0.2**
	baz=62						
GDL2	**Guadalupe Moun**	**61.94**	**73**	*eP*		**P**	**23 41 42.3 +1.7**
226B	**Tecolote Peak,**	**62.14**	**73**	⇑P		**P**	**23 41 42.6 +0.7**
	baz=62,SNR=15						
127A	**Arkansas Junct**	**62.17**	**72**	⇓P		**P**	**23 41 44.1 +2.0**
	baz=62						
325A	**Bean Ranch, Si**	**62.19**	**74**	⇑P		**P**	**23 41 43.0 +0.6**
	baz=62						
Y29A	**Porterfield Fa**	**62.26**	**70**	⇓P		**P**	**23 41 43.4 +0.6**
	baz=62,SNR=9.3						
W31A	**Holland Ranch,**	**62.26**	**68**	⇑P		**P**	**23 41 43.2 +0.6**
	baz=62						
KSH	**Kashi**	**62.27**	**299**	P		P	23 41 46.1 +3.4
KSH				PcP		**PcP**	**23 42 24.9 +2.5**
KSH				PP		PP	23 44 05.6 +6.1
KSH				PcS		**PcS**	**23 46 27.8 +2.1**
KSH				S		**S**	**23 50 08.5 +1.9**
KSH				ScS		**SKKSac**	**23 51 32.1 -0.4**
KSH				SS		**SS**	**23 54 14.0 +4.6**
KSH				pmax		pmax	
	comp=Z,110nm,1.5s						
KSH				LR		LR	
	comp=N,280nm,5.2s						
KSH				LR		LR	
	comp=E,910nm,14.6s						
KSH				LR		LR	
	comp=Z,330nm,10.6s						
Z28A	**Tucker Farm, M**	**62.27**	**71**	⇑P		**P**	**23 41 41.6 -1.2**
	baz=62						
SCHQ	**Schefferville**	**62.29**	**34**	*eP*		**P**	**23 41 42.4 -0.2**
	comp=Z,30nm,0.9s						
SCHQ	**Schefferville**	**62.29**	**34**	P		**P**	**23 41 42.5 0.0**
	comp=Z,18nm,0.8s,baz=321,slow=7.0,SNR=26						
KKAR	**Karatay Array**	**62.39**	**306**	*eP*		**P**	**23 41 42.5 -0.9**
KKAR	**Karatay Array**	**62.39**	**306**	*eP*		**P**	**23 41 42.5 -0.9**
FIA1	**FINESS Array S**	**62.42**	**342**	*eP*		**P**	**23 41 42.9 -0.3**
FINES	**FINESS Array B**	**62.42**	**342**	P		**P**	**23 41 43.0 -0.1**
FINES	**FINESS Array B**	**62.42**	**342**	P		**P**	**23 41 43.0 -0.1**
	comp=Z,26nm,0.7s,baz=28,slow=8.6,SNR=34						
FINES				LR		LR	00 13 25.0
	comp=Z,220nm,19.5s,baz=228,slow=40						
ABKAR	**Akbulak array**	**62.53**	**316**	*eP*		**P**	**23 41 43.7 -0.4**
	comp=Z,14nm,0.5s						
425A	**Indio Mountain**	**62.61**	**75**	⇓P		**P**	**23 41 46.0 +0.8**
	baz=62,SNR=12						
X31A	**McDonald Ranch**	**62.65**	**68**	⇑P		**P**	**23 41 46.8 +1.6**
	baz=62						
Z29A	**Hungry Hill Ra**	**62.68**	**70**	⇑P		**P**	**23 41 46.5 +0.9**
	baz=62,SNR=8.7						
Y30A	**Stafford Cattl**	**62.69**	**69**	⇓P		**P**	**23 41 46.2 +0.7**
	baz=62						
128A	**Castleberry Fa**	**62.71**	**71**	⇓P		**P**	**23 41 46.6 +0.8**
	baz=62,SNR=9.3						
326A	**Caldwell Ranch**	**62.81**	**73**	⇓P		**P**	**23 41 47.1 +0.7**
	baz=63,SNR=12						
Z30A	**Sanderson Ranc**	**62.99**	**70**	⇑P		**P**	**23 41 48.2 +0.7**
	baz=63,SNR=14						
HNR	**Honiara**	**63.01**	**192**	LR		LR	00 02 56.8
	comp=Z,334nm,20.6s,baz=20,slow=30						
228A	**UT Block 9, Go**	**63.02**	**72**	⇑P		**P**	**23 41 48.2 +0.4**
	baz=63						
SWI	**Sorong**	**63.14**	**226**	P		**P**	**23 41 49.8 +1.2**
	comp=Z,54nm,1.0s						
UBPT	**King Chiam**	**63.23**	**260**	P		**P**	**23 41 50.2 +1.0**
	comp=Z,42nm,1.2s,comp=Z,574nm						
WMOK	**Wichita Mounta**	**63.24**	**67**	*eP*		**P**	**23 41 49.4 +0.2**
WMOK				pmax		pmax	
	comp=Z,31nm,0.9s						
WMOK	**Wichita Mounta**	**63.24**	**67**	*eP*		**P**	**23 41 49.4 +0.2**
	comp=Z,31nm,0.9s						
426A	**McDonald Obser**	**63.26**	**74**	⇓P		**P**	**23 41 49.9 +0.4**
	baz=63,SNR=8.2						
Y32A	**R-V Farms, Ver**	**63.41**	**68**	⇑P		**P**	**23 41 50.8 +0.5**
	baz=63,SNR=9.9						
328A	**Wristen Ranch,**	**63.43**	**73**	⇑P		**P**	**23 41 50.9 +0.4**
	baz=63,SNR=17						
427A	**Hayter Ranch,**	**63.48**	**73**	⇑P		**P**	**23 41 51.4 +0.5**
	baz=63						
Z31A	**Sharp Cattle R**	**63.52**	**69**	⇑P		**P**	**23 41 51.0 -0.1**
	baz=63,SNR=8.7						
229A	**Bryant Ranch,**	**63.57**	**71**	⇑P		**P**	**23 41 52.2 +0.7**
	baz=63						
130A	**Snyder**	**63.59**	**70**	⇑P		**P**	**23 41 52.3 +0.8**
	baz=63						
526A	**Mary Lane Ranc**	**63.67**	**74**	⇓P		**P**	**23 41 52.5 +0.3**
	baz=64,SNR=13						
329A	**Wagon Wheel Ra**	**63.83**	**72**	⇑P		**P**	**23 41 53.9 +0.7**
	baz=64,SNR=11						
131A	**Roby**	**63.86**	**70**	⇑P		**P**	**23 41 53.7 +0.5**
	baz=64,SNR=13						
527A	**Woodward Ranch**	**63.88**	**74**	⇑P		**P**	**23 41 54.0 +0.4**
	baz=64						
Z32A	**Haskell**	**63.91**	**69**	⇓P		**P**	**23 41 53.8 +0.3**
	baz=64						
MOL	**Molde**	**63.91**	**352**	*eP*		**P**	**23 41 53.2 +0.1**
MOL				*epP*		**pP**	**23 42 00.6 -1.8**
MOL				AMB		AMB	23 42 04.8
	comp=Z,41nm,1.3s						
HDIL	**Hopedale**	**63.96**	**57**	*eP*		**P**	**23 41 53.7 -0.1**
	comp=Z,62nm,0.4s						
428A	**Kincaid Ranch,**	**63.99**	**73**	⇑P		**P**	**23 41 55.0 +0.8**
	baz=64,SNR=18						
TUL1	**Tulsa**	**64.02**	**64**	⇓P		**P**	**23 41 54.2 0.0**
	baz=64						
626A	**Big Bend Ranch**	**64.02**	**75**	⇓P		**P**	**23 41 54.3 -0.1**
	baz=64,SNR=15						
230A	**Sterling City**	**64.03**	**71**	⇑P		**P**	**23 41 54.9 +0.5**
	baz=64,SNR=8.4						
MYLDM	**Lahad Datu**	**64.06**	**241**	P		**P**	**23 41 57.2 +2.5**
	comp=Z,31nm,1.4s						
DOMB	**Dombas**	**64.29**	**351**	*eP*		**P**	**23 41 54.9 -0.7**
DOMB				AMB		AMB	23 41 57.0
	comp=Z,53nm,1.2s						
ABTX	**Abilene, Hawle**	**64.32**	**69**	⇑P		**P**	**23 41 56.3 0.0**
	baz=64,SNR=10						
528A	**Cox Ranch, San**	**64.35**	**73**	⇑P		**P**	**23 41 57.6 +0.9**
	baz=64						
330A	**Mertzon**	**64.35**	**71**	⇑P		**P**	**23 41 56.8 +0.2**
	baz=64						
CMMT	**Chiang Mai**	**64.39**	**267**	P		**P**	**23 41 58.3 +1.4**
	comp=Z,18nm,1.6s,comp=Z,552nm						
CHTO	**Chiang Mai**	**64.39**	**267**	*eP*		**P**	**23 41 57.0 +0.1**
CHTO	**Chiang Mai**	**64.39**	**267**	*eP*		**P**	**23 41 57.0 +0.1**
CHTO	**Chiang Mai**	**64.39**	**267**	P		**P**	**23 41 57.8 +0.9**
	SNR=7.2						
CHTO	**Chiang Mai**	**64.39**	**267**	P		**P**	**23 41 57.8 +0.9**
	comp=Z,20nm,1.6s,comp=Z,386nm						
231A	**Bronte**	**64.45**	**70**	⇓P		**P**	**23 41 57.5 +0.3**
	baz=64						
TXAR	**Lajitas Array**	**64.45**	**75**	P		**P**	**23 41 57.4 +0.1**
TXAR	**Lajitas Array**	**64.45**	**75**	P		**P**	**23 41 57.4 +0.1**
	comp=Z,12nm,0.6s,baz=304,slow=5.3,SNR=97						
TXAR				LR		LR	00 10 59.0
	comp=Z,363nm,19.0s,baz=5.0,slow=37						
429A	**Davenport Ranc**	**64.52**	**73**	⇑P		**P**	**23 41 57.8 +0.1**
	baz=64,SNR=13						
627A	**Terlingua Ranc**	**64.53**	**74**	⇑P		**P**	**23 41 58.4 +0.6**
	baz=64,SNR=20						
KKM	**Kota Kinabalu**	**64.56**	**244**	P		**P**	**23 41 59.7 +1.6**
	comp=Z,30nm,1.5s,comp=Z,611nm						
CMAR	**Chiang Mai Arr**	**64.67**	**267**	P		**P**	**23 41 59.1 +0.4**
CMAR	**Chiang Mai Arr**	**64.67**	**267**	P		**P**	**23 41 59.1 +0.4**
	comp=Z,7.6nm,0.8s,baz=24,slow=7.4,SNR=34						
CMAR				LR		LR	00 11 42.1
	comp=Z,277nm,19.6s,baz=28,slow=38						
TAPN	**Taplejung**	**64.67**	**282**	*eP*		**P**	**23 41 59.6 +0.6**
529A	**Stev Forest Ra**	**64.70**	**73**	⇓P		**P**	**23 41 59.4 +0.5**
	baz=64						
430A	**Baggett Ranch,**	**64.78**	**72**	⇑P		**P**	**23 41 59.7 +0.3**
	baz=65,SNR=11						
628A	**Black Gap, Mar**	**64.79**	**74**	⇓P		**P**	**23 41 59.8 +0.4**
	baz=65,SNR=8.2						
331A	**San Angelo**	**64.85**	**71**	⇓P		**P**	**23 42 00.2 +0.4**
	baz=65,SNR=10						
232A	**Coleman**	**64.86**	**70**	⇓P		**P**	**23 42 00.1 +0.2**
	baz=65,SNR=14						
MOS	**Moscow**	**64.89**	**333**	*eP*		**P**	**23 41 59.1 -0.5**
MOS				*e*			23 42 06.7
MOS				pmax		pmax	
	comp=Z,77nm,1.4s						
MOS				MLR		MLR	
	comp=Z,700nm,20.0s						
NB2	**NORSAR Subarra**	**65.04**	**349**	P		**P**	**23 42 00.5 -0.1**
	baz=14,slow=6.5						
NB2	**NORSAR Subarra**	**65.04**	**349**	P		**P**	**23 42 00.5 -0.1**
	comp=Z,31nm,0.6s,baz=14,slow=6.5						
NOA	**NORSAR Array B**	**65.04**	**349**	P		**P**	**23 42 00.5 -0.1**
NOA	**NORSAR Array B**	**65.04**	**349**	P		**P**	**23 42 00.5 -0.1**
	comp=Z,26nm,0.6s,baz=15,slow=6.5,SNR=150						
NOA				LR		LR	00 12 34.3
	comp=Z,119nm,20.9s,baz=355,slow=38						
332A	**Millersview**	**65.19**	**70**	⇓P		**P**	**23 42 02.7 +0.8**
	baz=65,SNR=9.1						
530A	**J-C Ranch, Com**	**65.19**	**72**	⇑P		**P**	**23 42 02.8 +0.8**
	baz=65,SNR=13						
SFIN	**Scholer Farm**	**65.19**	**55**	⇓P		**P**	**23 42 01.6 -0.3**
	baz=65						
431A	**Sonora**	**65.22**	**72**	⇑P		**P**	**23 42 02.3 +0.1**
	baz=65,SNR=19						
ODAN	**Odare**	**65.22**	**282**	*eP*		**P**	**23 42 02.1 -0.4**
	comp=Z,54nm,1.1s						
NAO01	**NORSAR Array S**	**65.27**	**349**	*eP*		**P**	**23 42 01.7 -0.3**
	comp=Z,6.4nm,0.5s						
NC602	**NORSAR Array S**	**65.30**	**349**	*eP*		**P**	**23 42 02.5 +0.3**
FVM	**French Village**	**65.32**	**59**	*eP*		**P**	**23 42 02.1 -0.6**
FVM				pmax		pmax	
	comp=Z,28nm,0.6s						
FVM	**French Village**	**65.32**	**59**	*eP*		**P**	**23 42 02.1 -0.6**
	comp=Z,28nm,0.6s						
GUN	**Gumba**	**65.32**	**284**	*eP*		**P**	**23 42 03.2 -0.1**
	comp=Z,99nm,1.0s						
432A	**Menard**	**65.53**	**71**	⇑P		**P**	**23 42 04.3 +0.1**
	baz=65						
RAMN	**Ramite**	**65.62**	**283**	*eP*		**P**	**23 42 04.9 -0.2**
	comp=Z,160nm,0.9s						
HFS	**Hagfors**	**65.63**	**348**	LR		LR	00 12 01.7
	comp=Z,159nm,18.7s,baz=23,slow=37						
531A	**Rocksprings**	**65.64**	**72**	⇓P		**P**	**23 42 05.3 +0.3**
	baz=65,SNR=9.9						
OBN	**Obninsk**	**65.73**	**333**	*c iP*		**P**	**23 42 05.1 +0.1**
OBN				*e*			23 44 28.5
OBN				*eS*		S	23 50 56.9 +8.1
OBN				pmax		pmax	
	comp=Z,47nm,1.0s						
OBN				MLR		MLR	
	comp=Z,500nm,22.0s						
KKN	**Kakani**	**65.77**	**284**	*eP*		**P**	**23 42 05.7 -0.3**
JCT	**Junction City**	**65.83**	**71**	*eP*		**P**	**23 42 05.7 -0.4**
JCT				pmax		pmax	
	comp=Z,17nm,0.7s						
JCT	**Junction City**	**65.83**	**71**	*eP*		**P**	**23 42 05.7 -0.4**
	comp=Z,17nm,0.7s						
JCT	**Junction City**	**65.83**	**71**	⇓P		**P**	**23 42 06.5 +0.4**
	baz=66,SNR=11						
PKI	**Pulchoki**	**65.85**	**284**	*eP*		**P**	**23 42 06.4 -0.3**
	comp=Z,74nm,0.9s						
PKIN	**Phulchoki**	**65.86**	**284**	*eP*		**P**	**23 42 07.1 +0.5**
	comp=Z,25nm,0.6s						
OLIL	**Olney**	**65.94**	**57**	*eP*		**P**	**23 42 06.3 -0.4**
	comp=Z,84nm,1.1s						
DMN	**Daman**	**66.00**	**284**	*eP*		**P**	**23 42 08.0 +0.4**
WHTX	**Lake Whitney**	**66.02**	**68**	⇑P		**P**	**23 42 07.4 +0.1**
	baz=66						
532A	**Rocksprings**	**66.03**	**71**	⇑P		**P**	**23 42 07.1 -0.4**
	baz=66,SNR=9.9						
ASK	**Askoy**	**66.17**	**352**	*eP*		**P**	**23 42 06.7 -1.0**
ASK				AMB		AMB	23 42 08.6
	comp=Z,109nm,1.7s						
ASK				*e*			23 42 14.2
631A	**Perdido Creek**	**66.18**	**72**	⇑P		**P**	**23 42 08.3 -0.1**
	baz=66,SNR=8.7						
RUND	**Rundenannen**	**66.22**	**352**	*eP*		**P**	**23 42 07.6 -0.6**
RUND				AMB		AMB	23 42 09.1
	comp=Z,80nm,1.0s						
DANN	**Dangsing**	**66.23**	**286**	*eP*		**P**	**23 42 08.5 -0.5**
	comp=Z,106nm,1.2s						
MIAR	**Mount Ida**	**66.24**

VRHR pmax pmax
comp=N,10.0nm,0.3s
VRHR pmax pmax
comp=E,20nm,0.7s
VRHR MLR MLR
comp=N,110nm,18.0s
VRHR MLR MLR
comp=E,380nm,18.0s
VRHR MLR MLR
comp=Z,450nm,18.0s
ISAL Salakas 67.85 339 *e*P **P 23 42 19.3 +0.8**
ISAL AMB AMB 23 42 23.3
comp=Z,12nm,1.3s
DDI Dehra Dun 68.00 291 *ex* P 23 42 16.0 -4.0
IIGN Ignalina 68.03 339 *e*P **P 23 42 20.4 +0.7**
IIGN AMB AMB 23 42 25.5
comp=Z,18nm,1.2s
WVT Waverly 68.07 59 *e*P **P 23 42 19.9 -0.4**
WVT pmax pmax
comp=Z,29nm,0.8s
WVT Waverly 68.07 59 *e*P **P 23 42 19.9 -0.4**
comp=Z,29nm,0.8s
SNART Snartemo 68.11 351 *e*P **P 23 42 18.3 -1.8**
SNART AMB AMB 23 42 27.8
comp=Z,47nm,1.7s
NCB Newcomb 68.32 45 *e*P **P 23 42 20.2 -1.6**
comp=Z,9.6nm,0.8s
NACGM Naroch 68.33 339 *e* **P 23 42 20.0 -1.6**
VSR Storozhevoye 68.42 330 *e*P **P 23 42 21.1 -1.0**
VSR pmax pmax
comp=N,40nm,0.9s
VSR pmax pmax
comp=E,20nm,0.9s
VSR pmax pmax
comp=Z,50nm,0.9s
VSR MLR MLR
comp=N,530nm,22.0s
VSR MLR MLR
comp=E,380nm,22.0s
VSR MLR MLR
comp=Z,870nm,22.0s
HKT Hockley 68.47 69 *e*P **P 23 42 23.2 +0.5**
HKT pmax pmax
comp=Z,53nm,1.5s
HKT Hockley 68.47 69 *e*P **P 23 42 23.2 +0.5**
comp=Z,53nm,1.5s
OXF Oxford 68.49 61 *e*P **P 23 42 22.6 -0.3**
OXF pmax pmax
comp=Z,192nm,1.1s
OXF Oxford 68.49 61 *e*P **P 23 42 22.6 -0.3**
comp=Z,192nm,1.1s
VORD Divnogorie 68.60 330 *e*P **P 23 42 23.2 -0.1**
VORD pmax pmax
comp=N,30nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.8s
VORD pmax pmax
comp=Z,30nm,0.8s
VORD MLR MLR
comp=N,490nm,19.0s
VORD MLR MLR
comp=E,240nm,19.0s
VORD MLR MLR
comp=Z,740nm,19.0s
BINY Binghamton 68.99 47 *e*P **P 23 42 25.0 -0.9**
comp=Z,8.4nm,0.6s
ACCN Adirondack Com 69.04 45 *e*P **P 23 42 24.8 -1.4**
comp=Z,17nm,1.0s
LBNH Lisbon 69.07 43 *e*P **P 23 42 26.1 -0.3**
LBNH pmax pmax
comp=Z,36nm,1.4s
LBNH Lisbon 69.07 43 *e*P **P 23 42 26.1 -0.3**
comp=Z,36nm,1.4s
MVH1 Achvaich 69.24 357 *e*P **P 23 42 27.5 +0.4**
MVH1 Achvaich 69.24 357 P **P 23 42 27.5 +0.4**
SSPA Standing Stone 69.39 49 *e*P **P 23 42 27.8 -0.6**
comp=Z,36nm,1.1s
MCD Coleburn Disti 69.55 357⇑ *e*P **P 23 42 29.3 +0.2**
MCD Coleburn Disti 69.55 357 P **P 23 42 29.3 +0.2**
KBL Kabul 69.65 301 *e*P **P 23 42 28.5 -1.9**
KBL pmax pmax
comp=Z,18nm,0.7s
KBL Kabul 69.65 301 *e*P **P 23 42 28.5 -1.9**
comp=Z,18nm,0.7s
SBUM Sibu 69.73 246 P **P 23 42 31.7 +1.0**
comp=Z,30nm,1.2s,comp=Z,477nm
MDO Dochfour 69.73 357⇑ *e*P **P 23 42 29.9 -0.3**
MDO Dochfour 69.73 357 P **P 23 42 29.9 -0.3**
MUD Monsted U'grnd 69.76 349 *i* P **P 23 42 31.5 +1.1**
MUD pmax pmax
comp=Z,14nm,1.0s
MUD Monsted U'grnd 69.76 349 *i* P **P 23 42 31.5 +1.1**
comp=Z,14nm,0.9s
SUW Suwalki 69.92 340 *e*P **P 23 42 31.3 -0.1**
SUW pmax pmax
comp=Z,62nm,1.0s
SUW Suwalki 69.92 340 *e*P **P 23 42 31.3 -0.1**
comp=Z,62nm,1.0s
SUW Suwalki 69.92 340 *e*P **P 23 42 31.2 -0.1**
TZTN Tazewell 69.92 56 *e*P **P 23 42 31.8 0.0**
comp=Z,38nm,1.1s
CPCT Cooper Cave 70.29 57 *e*P **P 23 42 33.4 -0.6**
BSD Bornholm Skovb 70.32 346 *e*P **P 23 42 33.9 +0.1**
BSD pmax pmax
comp=Z,24nm,0.8s
BSD Bornholm Skovb 70.32 346 *i* P **P 23 42 33.9 +0.1**
comp=Z,24nm,0.7s
TKL Tuckaleechee C 70.50 56 *e*P **P 23 42 34.9 -0.4**
WES Weston 70.84 44 *e*P **P 23 42 36.5 -0.7**
WES pmax pmax
comp=Z,11nm,0.6s
WES Weston 70.84 44 *e*P **P 23 42 36.5 -0.7**
comp=Z,11nm,0.6s
SDMD Soldier's Deli 70.85 49 *e*P **P 23 42 36.8 -0.5**
comp=Z,35nm,0.8s
PAL Palisades 70.87 46 *e*P **P 23 42 36.5 -0.9**
PAL pmax pmax
comp=Z,14nm,0.6s
PAL Palisades 70.87 46 *e*P **P 23 42 36.5 -0.9**
comp=Z,14nm,0.6s
LRAL Lakeview Retre 70.90 60 *e*P **P 23 42 36.5 -1.3**
comp=Z,43nm,1.4s
BLA Blacksburg 70.93 53 *e*P **P 23 42 37.5 -0.5**
BLA pmax pmax
comp=Z,20nm,0.8s
BLA Blacksburg 70.93 53 *e*P **P 23 42 37.5 -0.5**
comp=Z,20nm,0.8s
EAB Aberfoyle 70.98 357 *e*P **P 23 42 37.8 0.0**
EAB Aberfoyle 70.98 357 P **P 23 42 37.8 0.0**
CPNY Central Park 71.02 47 *e*P **P 23 42 36.9 -1.5**
comp=Z,20nm,0.6s
ESY Stoneypath 71.19 356⇑ *e*P **P 23 42 38.7 -0.5**
ESY Stoneypath 71.19 356 P **P 23 42 38.7 -0.5**
EAU Auchinoon 71.30 357⇑ *e*P **P 23 42 39.9 +0.1**
EAU Auchinoon 71.30 357 P **P 23 42 39.9 +0.1**
EBL Broad Law 71.35 356 *e*P **P 23 42 40.0 -0.1**
EBL Broad Law 71.35 356 P **P 23 42 40.0 -0.1**
PGBU Glenifferbraes 71.36 357⇑ *e*P **P 23 42 40.3 +0.2**
PGBU AMB AMB 23 42 42.1
comp=Z,52nm,1.3s
PGBU Glenifferbraes 71.36 357 P **P 23 42 40.3 +0.2**
PGBU AMB AMB 23 42 42.1
comp=Z,52nm,1.3s
KSM Kuching 71.59 247 *e*P **P 23 42 42.4 +0.3**
comp=Z,37nm,1.1s
KSM Kuching 71.59 247 P **P 23 42 43.0 +0.9**
comp=Z,31nm,1.2s,comp=Z,458nm
AKASG Malin Array Be 71.64 335 P **P 23 42 41.7 -0.2**
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKASG Malin Array Be 71.64 335 P **P 23 42 41.7 -0.2**
AKASG Malin Array Be 71.64 335 P **P 23 42 41.7 -0.2**
comp=Z,4.7nm,0.5s,baz=24,slow=5.8,SNR=30
AKASG LR LR 00 20 21.8
comp=Z,302nm,18.1s,baz=25,slow=41
KIEV Kiev 71.65 335 *e*P **P 23 42 41.5 -0.5**
KIEV pmax pmax
comp=Z,21nm,0.9s
KIEV Kiev 71.65 335 *e*P **P 23 42 41.5 -0.5**
comp=Z,21nm,0.9s
AK01 Malin Array Si 71.65 335 *e*P **P 23 42 42.0 0.0**
AK02 Malin Array Si 71.68 335 *e*P **P 23 42 41.7 -0.5**
GKP Gorka Klasztor 71.73 344 *e*P **P 23 42 42.0 -0.4**
ESK Eskdalemuir 71.82 356 *e*P **P 23 42 43.0 +0.1**
ESK AMB AMB 23 42 44.4
comp=Z,31nm,0.8s
ESK Eskdalemuir 71.82 356 P **P 23 42 43.0 +0.1**
ESK AMB AMB 23 42 44.4
comp=Z,31nm,0.8s
ESK Eskdalemuir 71.82 356 *i* P **P 23 42 44.2 +1.3**
ESK Eskdalemuir 71.82 356 *e*P **P 23 42 43.4 +0.5**
comp=Z,24nm,0.7s
ECK Cauldkaine Hil 71.95 356⇑ *e*P **P 23 42 43.8 +0.1**
ECK Cauldkaine Hil 71.95 356 P **P 23 42 43.8 +0.1**
BSEG Bad Segeberg 72.10 348 *e*P **P 23 42 45.1 +0.5**
BSEG pmax pmax
comp=Z,26nm,0.9s
BSEG Bad Segeberg 72.10 348 *e*P **P 23 42 45.1 +0.5**
comp=Z,26nm,0.9s
KAPI Kappang 72.12 235 *e*P **P 23 42 44.9 -0.4**
comp=Z,23nm,1.3s
KAPI Kappang 72.12 235 P **P 23 42 45.0 -0.2**
comp=Z,15nm,1.4s
KMSC Kings Mountain 72.13 55 ⇑P **P 23 42 44.6 -0.6**
baz=72
HLG Helgoland 72.14 350 *e*P **P 23 42 44.7 -0.1**
comp=Z,774nm,1.6s
GAL1 Galloway 72.32 357⇑ *e*P **P 23 42 45.7 -0.2**
GAL1 AMB AMB 23 42 47.6
comp=Z,32nm,2.4s
GAL1 Galloway 72.32 357 P **P 23 42 45.7 -0.2**
GAL1 AMB AMB 23 42 47.6
comp=Z,32nm,2.4s
ABKT Ailbek 72.32 310 P **P 23 42 46.0 -0.3**
comp=Z,111nm,1.0s,SNR=13
BEL Belsk 72.45 341 *e*P **P 23 42 47.9 +1.1**
IMYA Miami 72.68 308 *e*P **P 23 42 49.3 +0.7**
JSC Jenkinsville 72.85 56 *e*P **P 23 42 48.9 -0.5**
JSC Jenkinsville 72.85 56 *e*P **P 23 42 48.9 -0.5**
ISRO Mashad 73.01 308 *e*P **P 23 42 48.7 -1.8**
IKRD Kardeh 73.08 309 *e*P **P 23 42 48.6 -2.5**
IPAY Payeh 73.12 309 *e*P **P 23 42 50.8 -0.5**
IMOG Moghan 73.23 308 *e*P **P 23 42 52.3 +0.2**
LHO Holmfirth 73.53 356⇑ *e*P **P 23 42 53.4 +0.3**
LHO Holmfirth 73.53 356 P **P 23 42 53.4 +0.3**
NRDL Niedersach Rie 73.54 348 *e*P **P 23 42 53.1 0.0**
comp=Z,15nm,1.6s
NRDL *e*pP **pP 23 43 00.8 -1.8**
KIV Kislovodsk 73.59 324 *c i*P **P 23 42 54.2 +0.4**
KIV *e*S **SKiKP 23 52 18.7 -2.5**
KIV pmax pmax
comp=Z,40nm,1.3s
LVV L'vov 73.69 338 *e*P **P 23 42 53.7 -0.4**
KBZ Khabaz 73.72 324 P **P 23 42 55.4 +1.0**
KBZ pmax pmax
comp=Z,23nm,0.9s
KBZ MLR MLR
comp=Z,293nm,21.1s
KBZ Khabaz 73.72 324 P **P 23 42 55.4 +1.0**
KBZ Khabaz 73.72 324 P **P 23 42 55.4 +1.0**
comp=Z,23nm,0.9s,baz=26,slow=3.7,SNR=54
KBZ LR LR 00 19 11.3
comp=Z,293nm,21.1s,baz=242,slow=39
WPM1 Penmaenmawr 73.90 357 *e*P **P 23 42 55.4 +0.1**
WPM1 Penmaenmawr 73.90 357 P **P 23 42 55.4 +0.1**
IBBN Ibbenburen 74.00 349 *e*P **P 23 42 56.5 +0.6**
comp=Z,34nm,0.7s
IBBN *e*pP **pP 23 43 04.1 -1.3**
CLZ Clausthal 74.14 348 *e*P **P 23 42 57.3 +0.5**
CLZ *e**PP **pP 23 43 04.9 -1.4**
CLZ pmax pmax
comp=Z,26nm,1.2s
CLZ Clausthal 74.14 348 *e*P **P 23 42 57.3 +0.5**
comp=Z,26nm,1.2s
CLZ *e*pP **pP 23 43 04.9 -1.4**
KWP Kalwaria Pacla 74.15 339 *e*P **P 23 42 57.9 +1.0**
KWP pmax pmax
comp=Z,136nm,1.2s
KWP Kalwaria Pacla 74.15 339 *e*P **P 23 42 57.9 +1.0**
comp=Z,136nm,1.2s
KWP Kalwaria Pacla 74.15 339⇓ *i*P **P 23 42 57.9 +1.0**
KWP Kalwaria Pacla 74.15 339 *e*P **P 23 42 58.0 +1.0**
ZEI Tsey 74.18 322 *e*P **P 23 42 57.3 -0.1**
ZEI pmax pmax
comp=Z,42nm,1.1s
OJC Ojcow 74.19 341 *e*P **P 23 42 57.9 +0.8**
OJC Ojcow 74.19 341 *e*P **P 23 42 57.9 +0.8**
KSP Ksiaz 74.23 344 *e*P **P 23 42 57.0 -0.3**
KSP *e**PP **pP 23 43 04.5 -2.3**
KSP *e* 23 43 11.7
KSP Ksiaz 74.23 344 *e*P **P 23 42 57.7 +0.4**
CLL Collm 74.30 346⇑ *i*P **P 23 42 57.4 -0.2**
CLL *i* 23 43 05.1
CLL *e*S **S 23 52 32.0 +2.8**
CLL pmax pmax
comp=Z,52nm,1.8s
CLL MLR MLR
comp=Z,200nm,20.4s
CLL Collm 74.30 346 *e*P **P 23 42 57.5 -0.2**
comp=Z,54nm,1.8s
CLL *e*pP **pP 23 43 05.2 -1.9**
CLL Collm 74.30 346⇑ *i*P **P 23 42 57.4 -0.2**
comp=Z,52nm,1.8s
CLL comp=Z,44nm,1.5s *i* pP **pP 23 43 05.1 -2.0**
CLL *e*PP **PP 23 45 39.0 -4.0**
CLL *e*S **S 23 52 32.0 +2.8**
CLL *e*SP **SPn 23 52 59.0 -1.8**
CLL *e*PPS PPS 23 53 15.0
CLL *e*SS SS 23 57 24.0 +10
CLL *e*SSS SSS 00 00 36.0
CLL *e* 00 01 18.0
CLL LmV 00 19 00.0
comp=Z,200nm,20.4s
WTSB Winterswijk 74.44 350 *e*P **P 23 42 58.5 +0.1**
IPM Ipoh 74.44 256 P **P 23 42 58.9 -0.1**
comp=Z,23nm,0.9s
ONI Oni 74.50 323 P **P 23 42 59.6 +0.5**
BRG Berggiesshubel 74.58 345 *i* P **P 23 42 59.3 0.0**
comp=Z,15nm,0.8s
BRG *e*PP **PP 23 45 45.6 +0.2**
comp=Z,16nm,1.7s
BRG Berggiesshubel 74.58 345 *i* P **P 23 42 59.3 0.0**
BRG *e* 23 45 45.6
BRG pmax pmax
comp=Z,15nm,0.8s
BRG pmax pmax
comp=Z,16nm,1.7s
BRG Berggiesshubel 74.58 345 *e*P **P 23 42 59.4 0.0**
comp=Z,50nm,1.7s
BRG *e*pP **pP 23 43 07.1 -1.7**
UPC Upice 74.60 344 *i* P **P 23 43 00.0 +0.6**
UPC *e**PP **pP 23 43 07.7 -1.2**
UPC Upice 74.60 344 *i* P **P 23 43 00.0 +0.6**
UPC *e*pP **pP 23 43 07.7 -1.2**
HLM1 Long Mynd 74.60 356 *e*P **P 23 42 58.7 -0.7**
HLM1 AMB AMB 23 43 03.1
comp=Z,22nm,2.1s
HLM1 Long Mynd 74.60 356 P **P 23 42 58.7 -0.7**
HLM1 AMB AMB 23 43 03.1
comp=Z,22nm,2.1s
FBE Freiberg 74.62 346 *e*P **P 23 43 00.1 +0.6**
comp=Z,60nm,1.5s
FBE *e*pP **pP 23 43 07.6 -1.4**
ANN Anapa 74.63 328 *e*P **P 23 42 59.0 -0.7**
ANN pmax pmax
comp=Z,189nm,7.2s
DPC Dobruska-Polom 74.70 343 *i* P **P 23 43 01.0 +0.9**
DPC *e**PP **pP 23 43 08.1 -1.5**
DPC MLR MLR
comp=Z,400nm,20.1s
DPC Dobruska-Polom 74.70 343 *i* P **P 23 43 01.0 +0.9**
DPC *e*pP **pP 23 43 08.1 -1.5**
DPC AMS AMS 00 21 30.0
comp=Z,400nm,20.1s
TBLG Delisi 74.77 321 *e*P **P 23 43 01.4 +0.8**
TBLG Delisi 74.77 321 P **P 23 43 01.4 +0.8**
DGRG David-gareji 74.77 321 P **P 23 43 02.0 +1.4**
GOR Gori 74.78 322 P **P 23 43 01.4 +0.6**
PVCC Panska Ves 74.82 345 *i* P **P 23 43 01.1 +0.4**
PVCC Panska Ves 74.82 345 *i* P **P 23 43 01.1 +0.4**
NIE Niedzica 74.85 341 *e*P **P 23 43 02.0 +1.0**
NIE *e**PP **pP 23 43 09.8 -0.6**
NIE Niedzica 74.85 341 *e*P **P 23 43 02.0 +1.0**
NIE *e*pP **pP 23 43 09.8 -0.6**
OKC Ostrava-Krasne 74.87 342 *i* P **P 23 43 01.8 +0.8**
OKC *e**PP **pP 23 43 09.7 -0.8**
OKC MLR MLR
comp=Z,300nm,21.2s
OKC Ostrava-Krasne 74.87 342 *i* P **P 23 43 01.8 +0.8**
OKC *e*pP **pP 23 43 09.7 -0.8**
OKC AMS AMS 00 21 20.0
comp=Z,300nm,21.2s
KRLC Kraliky 74.88 343 *i* P **P 23 43 01.9 +0.7**
KRLC *e**PP **pP 23 43 09.1 -1.5**
KRLC Kraliky 74.88 343 *i* P **P 23 43 01.9 +0.7**
KRLC *e*pP **pP 23 43 09.1 -1.5**
KOLS Kolonicke sedl 74.91 339 *e*P **P 23 43 02.0 +0.7**
KOLS pmax pmax
comp=Z,28nm,1.5s
KOLS Kolonicke sedl 74.91 339 *e*P **P 23 43 02.0 +0.7**
KOLS *e* 23 55 35.5
BUG Bochum--Univer 74.91 350 *e*P **P 23 43 01.6 +0.4**
comp=Z,56nm,2.1s
BUG *e*pP **pP 23 43 08.6 -2.1**
SOC Sochi 74.95 326 *e*P P 23 42 57.7 -3.9
SOC *e**PP pP 23 43 11.0 -0.1
SOC pmax pmax
comp=Z,48nm,1.2s
SOC MLR MLR
comp=Z,308nm,14.0s
MYKOM Kota Tinggi 74.97 252 P **P 23 43 03.0 +0.9**
comp=Z,27nm,1.2s
DZM Mont Dzumac 74.98 184 *e*LR LR 00 06 03.3
comp=Z,396nm,21.7s
MORC Moravsky Berou 75.03 343 *e*P **P 23 43 02.6 +0.6**
MORC pmax pmax
comp=Z,31nm,1.3s
MORC Moravsky Berou 75.03 343 *e*P **P 23 43 02.6 +0.6**
comp=Z,31nm,1.3s
MORC Moravsky Berou 75.03 343⇓ *i*P **P 23 43 03.9 +1.9**
CRVS Cervenica-Dubn 75.11 340 *e*P **P 23 43 03.0 +0.6**
CRVS pmax pmax
comp=Z,24nm,1.5s
CRVS Cervenica-Dubn 75.11 340 *e*P **P 23 43 03.0 +0.6**
MCH1 Michaelchurch 75.13 356⇑ *e*P **P 23 43 02.4 0.0**
MCH1 AMB AMB 23 43 03.8
comp=Z,38nm,2.1s
MCH1 Michaelchurch 75.13 356 P **P 23 43 02.4 0.0**
MCH1 AMB AMB 23 43 03.8
comp=Z,38nm,2.1s
MOX Moxa 75.14 347 *e*P **P 23 43 02.8 +0.2**
MOX *e**PP **pP 23 43 10.3 -1.8**
MOX pmax pmax
comp=Z,33nm,1.8s
MOX Moxa 75.14 347 *e*P **P 23 43 02.8 +0.2**
comp=Z,33nm,1.8s
MOX *e*pP **pP 23 43 10.3 -1.8**
KIS Kishinev 75.16 334 *e*P **P 23 43 02.0 -0.7**
KIS *e*S S 23 52 32.0 -6.9
KIS MLR MLR
comp=N,400nm,17.0s
KIS MLR MLR
comp=Z,500nm,17.0s
KIS MLR MLR
comp=Z,500nm,18.0s
KIS Kishinev 75.16 334 *e*P **P 23 43 02.0 -0.7**
KIS *e*S S 23 52 32.0 -6.9
KIS LRM MLR 00 20 32.0
comp=Z,500nm,18.0s
UZH Uzhgorod 75.19 339 *e*P **P 23 43 04.0 +1.2**
UZH *e* 23 43 06.4
UZH *e*S **S 23 52 37.2 -2.0**
UZH *e*PS **PnS 23 53 21.2 +4.7**
UZH *e*SS **SS 23 57 34.4 +6.9**
UBBA Unterbreizbach 75.19 348 *e*P **P 23 43 03.0 +0.3**
comp=Z,32nm,1.7s
UBBA *e*pP **pP 23 43 10.5 -1.7**
PLN Plauen 75.22 346 *e*P **P 23 43 03.4 +0.3**
comp=Z,138nm,1.6s
PLN *e*pP **pP 23 43 10.9 -1.7**
VAL Valentia 75.30 1 *e*P **P 23 43 03.1 -0.3**
PRU Pruhonice 75.34 345 *i* P **P 23 43 03.9 +0.2**
PRU *e**PP **pP 23 43 11.1 -2.1**
PRU MLR MLR
comp=Z,300nm,18.2s
PRU Pruhonice 75.34 345 *i* P **P 23 43 03.9 +0.2**
PRU *e*pP **pP 23 43 11.1 -2.1**
PRU AMS AMS 00 25 30.0
comp=Z,300nm,18.2s
NKC Novy Kostel 75.43 346 *i* P **P 23 43 04.4 +0.1**
NKC *e**PP **pP 23 43 11.5 -2.3**
NKC MLR MLR
comp=Z,300nm,14.6s
NKC Novy Kostel 75.43 346 *i* P **P 23 43 04.4 +0.1**
NKC *e*pP **pP 23 43 11.5 -2.3**
NKC AMS AMS 00 20 00.0
comp=Z,300nm,14.6s
BUR08 Bucovina Ar. S 75.46 337 *e*P **P 23 43 05.2 +0.6**
BUR08 *e*PP **PP 23 45 56.2 +3.1**
BURAR Bucovina Array 75.48 337⇓ *i*P **P 23 43 05.2 +0.5**
AKH Akhalkalaki 75.51 322 P **P 23 43 06.2 +1.1**
TRPA Tarpa 75.61 339⇓ *i*P **P 23 43 06.6 +1.4**
VRAC Vranov 75.66 343⇓ *i*P **P 23 43 06.9 +1.3**
HGN Heimansgroeve 75.72 350 *e*P **P 23 43 05.9 0.0**
comp=Z,26nm,1.2s
MANZ Manzenberg 75.72 346 *e*P **P 23 43 06.2 +0.3**
comp=Z,18nm,1.4s
MANZ *e*pP **pP 23 43 13.7 -1.7**
WOL Wolverton 75.73 355 *e*P **P 23 43 06.2 +0.3**
WOL AMB AMB 23 43 07.3
comp=Z,50nm,2.3s
WOL Wolverton 75.73 355 P **P 23 43 06.2 +0.3**
WOL AMB AMB 23 43 07.3
comp=Z,50nm,2.3s
BMR Baia Mare 75.83 338⇑ *i*P **P 23 43 08.5 +2.0**
TREC Trest 75.86 344 *i* P **P 23 43 07.3 +0.6**
TREC *e**PP **pP 23 43 14.1 -2.1**
TREC MLR MLR
comp=Z,300nm,14.2s
TREC Trest 75.86 344 *i* P **P 23 43 07.3 +0.6**
TREC *e*pP **pP 23 43 14.1 -2.1**
TREC AMS AMS 00 22 10.0
comp=Z,300nm,14.2s
MEM Membach 75.86 350 P **P 23 43 07.4 +0.7**
comp=Z,18nm,1.4s
MEM AP **pP 23 43 13.9 -2.3**
ROTZ Rotzenmuhle 75.92 346 *e*P **P 23 43 07.9 +0.9**
comp=Z,30nm,1.4s
ROTZ *e*pP **pP 23 43 15.3 -1.2**
TNS Taunus Mts 75.97 349 *e*P **P 23 43 07.6 +0.2**
TNS *e**PP **pP 23 43 15.3 -1.6**
TNS pmax pmax
comp=Z,24nm,1.6s
TNS Taunus Mts 75.97 349 *e*P **P 23 43 07.6 +0.2**
comp=Z,24nm,1.6s
TNS *e*pP **pP 23 43 15.3 -1.6**
CTA Charters Tower 75.98 204 LR LR 00 10 45.0
comp=Z,180nm,19.9s,baz=23,slow=31
CTAO Charters Tower 75.98 204 *e*P **P 23 43 06.8 -0.8**
CTAO pmax pmax
comp=Z,39nm,1.0s
CTAO Charters Tower 75.98 204 *e*P **P 23 43 06.8 -0.8**
comp=Z,39nm,1.0s
VYHS Vyhne 76.02 341 *e*P **P 23 43 08.8 +1.1**
VYHS pmax pmax
comp=Z,16nm,1.3s
VYHS Vyhne 76.02 341 *e*P **P 23 43 08.8 +1.1**
VYHS *e* 23 55 17.5
HEX Exmoor 76.09 357 *e*P **P 23 43 07.9 -0.1**
HEX Exmoor 76.09 357 P **P 23 43 07.9 -0.1**
BCLA Clavier 76.12 351 P **P 23 43 08.2 0.0**
SNF Seneffe 76.13 351 P **P 23 43 08.2 0.0**
comp=Z,17nm,1.7s
GNI Garni 76.13 320 *e*P **P 23 43 09.5 +0.8**
comp=Z,34nm,1.0s
GNI *e*PP **PP 23 46 03.0 +4.0**
GNI Garni 76.13 320 P **P 23 43 10.7 +2.1**
SNR=15
GNI Garni 76.13 320 P **P 23 43 10.2 +1.5**
comp=Z,9.6nm,0.7s,baz=310,slow=1.7,SNR=27
GNI LR LR 00 21 26.2
comp=Z,600nm,19.9s,baz=292,slow=40
GRF Grafenberg Arr 76.13 347 *e*P **P 23 43 09.0 +0.7**
GRF *e**PP **pP 23 43 16.5 -1.3**
GRF pmax pmax
comp=Z,70nm,1.7s
GRF Grafenberg Arr 76.13 347 *e*P **P 23 43 09.0 +0.7**
comp=Z,70nm,1.7s
GRF *e*pP **pP 23 43 16.5 -1.3**
GRF Grafenberg Arr 76.13 347 *e*L L 00 23 25.0
comp=Z,206nm,20.2s
TESR 76.17 335⇓ *i*P **P 23 43 08.8 +0.3**
ISHM Shahmirzad 76.26 312 *e*P **P 23 43 10.1 +0.5**

IANJ **Anjilo** 76.27 312 *eP* P 23 43 10.3 +0.7
SMOL **Smolenice** 76.27 342 *eP* P 23 43 11.6 +2.5
SMOL **Smolenice** 76.27 342 *eP* P 23 43 11.6 +2.5
KHC **Kasperske Hory** 76.33 345 *i* P P 23 43 10.3 +0.9
KHC *e**PP pP 23 43 17.3 -1.6
KHC MLR MLR
comp=Z,400nm,25.1s
KHC **Kasperske Hory** 76.33 345 *eP* P 23 43 09.8 +0.4
comp=Z,34nm,1.1s
KHC **Kasperske Hory** 76.33 345 *i* P P 23 43 10.3 +0.9
KHC *epP* pP 23 43 17.3 -1.6
KHC AMS AMS 00 20 20.0
comp=Z,400nm,25.1s
PSZ **Piszkesteto** 76.36 340 *eP* P 23 43 10.8 +1.1
PSZ pmax pmax
comp=Z,48nm,1.4s
PSZ **Piszkesteto** 76.36 340 *eP* P 23 43 10.8 +1.1
comp=Z,48nm,1.4s
PSZ **Piszkesteto** 76.36 340⇑ *iP* P 23 43 11.6 +1.9
WET **Wettzell** 76.42 345 *eP* P 23 43 10.6 +0.6
WET *e**PP pP 23 43 18.3 -1.2
WET pmax pmax
comp=Z,22nm,1.1s
WET **Wettzell** 76.42 345 *eP* P 23 43 10.6 +0.6
comp=Z,22nm,1.1s
WET *epP* pP 23 43 18.3 -1.2
GIVF **Givet** 76.48 351 *eP* P 23 43 10.1 -0.1
comp=Z,19nm,0.9s
GIVF **Givet** 76.48 351 *eP* P 23 43 10.1 -0.1
GIVF pmax pmax
comp=Z,19nm,0.9s
GIVF **Givet** 76.48 351 *eP* P 23 43 10.1 -0.1
comp=Z,19nm,0.9s
DOU **Dourbes** 76.51 351 P P 23 43 11.0 +0.6
comp=Z,11nm,1.5s
DOU AP pP 23 43 17.9 -2.0
BAIF **Baives** 76.58 351⇑ *iP* P 23 43 10.9 +0.1
comp=Z,15nm,0.7s
BAIF **Baives** 76.58 351⇑ *iP* P 23 43 10.9 +0.1
BAIF pmax pmax
comp=Z,15nm,0.7s
BAIF **Baives** 76.58 351⇑ *iP* P 23 43 10.9 +0.1
comp=Z,15nm,0.7s
GEC2 **GERESS Array S** 76.59 345 *eP* P 23 43 11.4 +0.4
GEC2 *e**PP pP 23 43 19.2 -1.3
GEC2 pmax pmax
comp=Z,18nm,0.7s
GEC2 **GERESS Array S** 76.59 345 *eP* P 23 43 11.4 +0.4
comp=Z,18nm,0.7s
GEC2 *epP* pP 23 43 19.2 -1.3
GERES **GERESS Array B** 76.59 345 P P 23 43 11.3 +0.4
GERES **GERESS Array B** 76.59 345 P P 23 43 11.3 +0.4
comp=Z,9.8nm,0.6s,baz=30,slow=5.4,SNR=116
GERES LR LR 00 21 10.6
comp=Z,283nm,20.8s,baz=174,slow=39
VRI **Vrincioaia** 76.75 335⇑ *iP* P 23 43 13.5 +1.7
PLOR **Plostina** 76.78 335⇓ *iP* P 23 43 13.7 +1.7
WLF **Walferdange** 76.78 350 P P 23 43 12.7 +0.8
comp=Z,13nm,1.6s
WLF **Walferdange** 76.78 350 *epP* pP 23 43 20.2 -1.2
IHRS **Heris** 76.80 318 *eP* P 23 43 12.8 +0.3
DRGR 76.83 338⇑ *iP* P 23 43 13.0 +0.6
ISRB **Sarab** 76.97 317 *eP* P 23 43 14.0 +0.5
IMRD **Marand** 77.00 319 *eP* P 23 43 12.7 -0.9
CFR **Carcaliu** 77.02 334⇑ *iP* P 23 43 13.8 +0.5
PSI **Prapat** 77.02 257 P P 23 43 14.2 +0.3
comp=Z,36nm,1.3s
CONA **Conrad Observa** 77.12 343 *i* P P 23 43 15.2 +1.3
comp=Z,43nm,1.4s,SNR=23
CONA **Conrad Observa** 77.12 343 *i* P P 23 43 15.2 +1.3
comp=Z,43nm,1.4s
ITBZ **Tabriz** 77.23 318 *eP* P 23 43 15.6 +0.7
LANF **Langenberg** 77.27 349 *eP* P 23 43 14.9 +0.2
LANF **Langenberg** 77.27 349 *eP* P 23 43 14.9 +0.2
LANF **Langenberg** 77.27 349 *eP* P 23 43 14.9 +0.2
MLR **Muntele Rosu** 77.29 336⇑ *iP* P 23 43 16.3 +1.2
STU **Stuttgart** 77.30 348 *epP* pP 23 43 22.8 -1.6
MOA **Molln** 77.46 344⇑ *iP* P 23 43 16.5 +0.6
comp=Z,16nm,0.8s,SNR=8.4
MOA **Molln** 77.46 344⇑ *iP* P 23 43 16.5 +0.6
comp=Z,16nm,0.8s
ISR **Istrita** 77.49 335⇑ *iP* P 23 43 17.7 +1.6
IMHD **Mahdasht** 77.52 314 *eP* P 23 43 16.9 +0.4
IR3 **Iran Long-Peri** 77.54 314 *eP* P 23 43 16.5 -0.1
VOIR 77.56 336⇑ *iP* P 23 43 18.6 +2.1
FUR **Furstenfeldbru** 77.62 346 *eP* P 23 43 17.2 +0.5
FUR *e**PP pP 23 43 24.8 -1.4
FUR pmax pmax
comp=Z,29nm,1.4s
FUR **Furstenfeldbru** 77.62 346 *eP* P 23 43 17.2 +0.5
comp=Z,29nm,1.4s
FUR *epP* pP 23 43 24.8 -1.4
IVRN **Varamin** 77.64 313 *eP* P 23 43 16.9 -0.2
HYB **Hyderabad** 77.68 282 *i* P P 23 43 16.0 -1.5
ARR **Arges** 77.73 336⇓ *iP* P 23 43 19.0 +1.6
RJOB **Jochberg** 77.81 345 *eP* P 23 43 18.4 +0.6
comp=Z,26nm,1.8s
RJOB *epP* pP 23 43 26.5 -0.8
ARSA **Arzberg** 77.83 343 *i* P P 23 43 19.2 +1.3
comp=Z,31nm,1.5s,SNR=17
ARSA **Arzberg** 77.83 343 *i* P P 23 43 19.2 +1.3
comp=Z,31nm,1.5s
BFO **Black Forest** 77.85 348 *eP* P 23 43 18.1 +0.1
BFO *e**PP pP 23 43 25.9 -1.6
BFO pmax pmax
comp=Z,42nm,1.9s
BFO **Black Forest** 77.85 348 *eP* P 23 43 18.1 +0.1
comp=Z,42nm,1.9s
BFO *epP* pP 23 43 25.9 -1.6
BFO **Black Forest** 77.85 348 *eP* P 23 43 17.8 -0.2
comp=Z,4.9nm,0.8s
CDF **Champ du Feu** 77.89 349⇑ *iP* P 23 43 18.2 -0.1
comp=Z,6.7nm,0.6s
CDF **Champ du Feu** 77.89 349⇑ *iP* P 23 43 18.2 -0.1
CDF pmax pmax
comp=Z,7.0nm,0.6s
CDF **Champ du Feu** 77.89 349⇑ *iP* P 23 43 18.2 -0.1
comp=Z,6.7nm,0.6s
PAGF **Fort de Pagny** 77.92 350⇑ *iP* P 23 43 18.8 +0.5
comp=Z,12nm,0.7s
PAGF **Fort de Pagny** 77.92 350⇑ *iP* P 23 43 18.8 +0.5
comp=Z,12nm,0.7s
SPAK **Spaichingen-Ko** 78.01 348 *eP* P 23 43 19.4 +0.4
MEZF **Maizieres J'vi** 78.04 350⇑ *iP* P 23 43 19.3 +0.3
comp=Z,24nm,0.8s
MEZF **Maizieres J'vi** 78.04 350⇑ *iP* P 23 43 19.3 +0.3
comp=Z,24nm,0.8s
IRAZ **Razeghan** 78.08 314 *eP* P 23 43 20.2 +0.5
ECH **Echery** 78.10 349 *eP* P 23 43 19.0 -0.4
ECH pmax pmax
comp=Z,10.0nm,1.1s
ECH **Echery** 78.10 349 *eP* P 23 43 19.0 -0.4
comp=Z,10nm,1.1s
GZR **Gura Zlata** 78.14 338⇑ *iP* P 23 43 20.3 +0.6
BZS **Buzias** 78.19 339⇓ *iP* P 23 43 20.2 +0.3
PPT **Papeete** 78.21 142 LR LR 00 10 32.1
comp=Z,562nm,20.2s,baz=0.5,slow=30
THEF **They Montfort** 78.22 350 *eP* P 23 43 20.1 +0.1
THEF **They Montfort** 78.22 350 *eP* P 23 43 20.1 +0.1
THEF **They Montfort** 78.22 350 *eP* P 23 43 20.1 +0.1
FLN **La Foliniere** 78.23 354⇑ *iP* P 23 43 19.6 -0.4
comp=Z,44nm,1.1s
FLN *eR*
comp=Z,178nm,21.5s
FLN **La Foliniere** 78.23 354⇑ *iP* P 23 43 19.6 -0.4
FLN pmax pmax
comp=Z,44nm,1.1s
FLN **La Foliniere** 78.23 354⇑ *iP* P 23 43 19.6 -0.4
comp=Z,44nm,1.1s
PPT2 **Papeete2** 78.23 142 *e*LR LR 00 07 26.4
comp=Z,1µm,24.0s,baz=337
PKSM **Moragy** 78.25 341⇑ *iP* P 23 43 21.5 +1.3
FELD **Feldberg im Sc** 78.33 348 *eP* P 23 43 20.7 -0.1
SFTF **Sexfontaines** 78.34 350⇑ *iP* P 23 43 20.8 +0.1
comp=Z,50nm,0.9s
SFTF **Sexfontaines** 78.34 350⇑ *iP* P 23 43 20.8 +0.1
comp=Z,50nm,0.9s
KBA **Koelnbreinsper** 78.36 345 *i* P P 23 43 22.5 +1.5
KBA pmax pmax
comp=Z,92nm,1.3s
KBA **Koelnbreinsper** 78.36 345 *i* P P 23 43 22.5 +1.5
comp=Z,92nm,1.3s,SNR=35
KBA **Koelnbreinsper** 78.36 345 *i* P P 23 43 22.5 +1.5
comp=Z,92nm,1.3s
LDF **La Druitiere** 78.38 354⇑ *iP* P 23 43 20.4 -0.4
comp=Z,27nm,1.1s
LDF **La Druitiere** 78.38 354⇑ *iP* P 23 43 20.4 -0.4
LDF pmax pmax
comp=Z,27nm,1.1s
LDF **La Druitiere** 78.38 354⇑ *iP* P 23 43 20.4 -0.4
comp=Z,27nm,1.1s
WATA **Walderalm** 78.38 346⇓ *iP* P 23 43 21.7 +0.6
WATA pmax pmax
comp=Z,9.0nm,0.6s
WATA **Walderalm** 78.38 346⇓ *iP* P 23 43 21.7 +0.6
comp=Z,8.8nm,0.6s
WATA **Walderalm** 78.38 346⇓ *iP* P 23 43 21.7 +0.6
comp=Z,8.8nm,0.6s
HAU **Haudompre** 78.40 350⇑ *iP* P 23 43 20.9 -0.1
comp=Z,12nm,0.7s
HAU *eR*
comp=Z,211nm,21.8s
HAU **Haudompre** 78.40 350⇑ *iP* P 23 43 20.9 -0.1
HAU pmax pmax
comp=Z,12nm,0.7s
HAU **Haudompre** 78.40 350⇑ *iP* P 23 43 20.9 -0.1
comp=Z,12nm,0.7s
MOTA **Moosalm** 78.44 346⇑ *iP* P 23 43 21.9 +0.5
MOTA pmax pmax
comp=Z,15nm,1.0s
MOTA **Moosalm** 78.44 346⇑ *iP* P 23 43 21.9 +0.5
comp=Z,15nm,1.0s,SNR=18
MOTA **Moosalm** 78.44 346⇑ *iP* P 23 43 21.9 +0.5
comp=Z,15nm,1.0s
WTTA **Wattenberg** 78.44 346 *i* P P 23 43 22.4 +0.9
WTTA pmax pmax
comp=Z,21nm,0.7s
WTTA **Wattenberg** 78.44 346 *i* P P 23 43 22.4 +0.9
comp=Z,21nm,0.7s,SNR=19
WTTA **Wattenberg** 78.44 346 *i* P P 23 43 22.4 +0.9
comp=Z,21nm,0.7s
MOF **Molkenrain** 78.46 349 *eP* P 23 43 20.7 -0.8
MOF **Molkenrain** 78.46 349 *eP* P 23 43 20.7 -0.8
MOF **Molkenrain** 78.46 349 *eP* P 23 43 20.7 -0.8
SOKA **Soboth** 78.47 343⇑ *iP* P 23 43 22.5 +0.9
comp=Z,45nm,1.3s
SOKA **Soboth** 78.47 343⇑ *iP* P 23 43 22.4 +0.9
comp=Z,45nm,1.3s
GRR **Gorron** 78.62 354⇑ *iP* P 23 43 22.1 -0.1
comp=Z,21nm,0.6s
GRR **Gorron** 78.62 354⇑ *iP* P 23 43 22.1 -0.1
GRR pmax pmax
comp=Z,21nm,0.6s
GRR **Gorron** 78.62 354⇑ *iP* P 23 43 22.1 -0.1
comp=Z,21nm,0.6s
OBKA **Obir** 78.72 344 *i* P P 23 43 23.8 +1.0
comp=Z,38nm,0.9s,SNR=19
OBKA **Obir** 78.72 344 *i* P P 23 43 23.8 +1.0
comp=Z,38nm,0.9s
IBAF **Bafgh** 78.72 308 *eP* P 23 43 22.3 -0.9
ICHK **Chekchek** 78.72 309 *eP* P 23 43 23.3 0.0
MYKA **Terra Mystica** 78.75 344⇑ *iP* P 23 43 23.7 +0.6
comp=Z,10nm,0.8s
MYKA **Terra Mystica** 78.75 344⇑ *iP* P 23 43 23.6 +0.6
comp=Z,10nm,0.8s
ROSF **Rostrenen** 78.80 356 *eP* P 23 43 23.2 0.0
comp=Z,7.7nm,0.7s
ROSF **Rostrenen** 78.80 356 *eP* P 23 43 23.2 0.0
ROSF pmax pmax
comp=Z,8.0nm,0.7s
ROSF **Rostrenen** 78.80 356 *eP* P 23 43 23.2 0.0
comp=Z,7.7nm,0.7s
FETA **Feichten** 78.81 346⇑ *iP* P 23 43 24.0 +0.5
comp=Z,16nm,1.0s
FETA **Feichten** 78.81 346⇑ *iP* P 23 43 23.9 +0.5
comp=Z,16nm,1.0s
ABTA **Abfaltersbach** 78.81 345 *i* P P 23 43 24.2 +0.8
comp=Z,28nm,1.1s,SNR=16
ABTA **Abfaltersbach** 78.81 345 *i* P P 23 43 24.2 +0.8
comp=Z,28nm,1.1s
SGMF **Saint Gilles** 78.85 356⇑ *iP* P 23 43 23.4 0.0
comp=Z,32nm,0.9s
SGMF **Saint Gilles** 78.85 356⇑ *iP* P 23 43 23.4 0.0
SGMF pmax pmax
comp=Z,32nm,0.9s
SGMF **Saint Gilles** 78.85 356⇑ *iP* P 23 43 23.4 0.0
comp=Z,32nm,0.9s
CMIG **Matias Romero** 78.98 76 P P 23 43 24.4 -0.3
CMIG **Matias Romero** 78.98 76 P P 23 43 24.4 -0.3
comp=Z,4.6nm,0.6s,baz=330,slow=8.8,SNR=6.1
LOMF **Lomont** 78.99 349 *eP* P 23 43 24.6 +0.2
LOMF **Lomont** 78.99 349 *eP* P 23 43 24.6 +0.2
LOMF **Lomont** 78.99 349 *eP* P 23 43 24.6 +0.2
IKLH **Kolahrood** 79.11 312 *eP* P 23 43 25.6 +0.1
IZEF **Zefen** 79.13 311 *eP* P 23 43 25.6 0.0
QUIF **Quistinic** 79.21 356 *eP* P 23 43 25.4 0.0
comp=Z,29nm,1.1s
QUIF **Quistinic** 79.21 356 *eP* P 23 43 25.4 0.0
QUIF pmax pmax
comp=Z,29nm,1.1s
QUIF **Quistinic** 79.21 356 *eP* P 23 43 25.4 0.0
comp=Z,29nm,1.1s
IMEH **Mehriz** 79.34 309 *eP* P 23 43 26.0 -0.7
WRAB **Tennant Creek** 79.35 215 *eP* P 23 43 26.3 -0.1
WRAB pmax pmax
comp=Z,27nm,0.9s
WRAB **Tennant Creek** 79.35 215 *eP* P 23 43 26.3 -0.1
comp=Z,27nm,0.9s
WRA **Warramunga Arr** 79.36 215 P P 23 43 25.7 -0.8
WRA **Warramunga Arr** 79.36 215 P P 23 43 25.7 -0.8
comp=Z,8.4nm,0.7s,baz=28,slow=5.5,SNR=4.9
WRA LR LR 00 14 39.0
comp=Z,164nm,21.2s,baz=225,slow=33
SZH **Strazhica** 79.38 335 P P 23 43 26.5 +0.1
LOR **Lormes** 79.38 351 *eP* P 23 43 26.3 -0.1
LOR *eR*
comp=Z,270nm,20.8s
LOR **Lormes** 79.38 351 *eP* P 23 43 26.3 -0.1
JAVS **Javornik** 79.39 344 *iP* P 23 43 26.6 -0.1
HYF **Humbligny** 79.49 352 *eP* P 23 43 27.4 +0.4
HYF **Humbligny** 79.49 352 *eP* P 23 43 27.4 +0.4
TUE **Stuetta** 79.54 347 *eP* P 23 43 27.8 +0.2
comp=Z,13nm,0.8s
POO **Poona** 79.55 287 *eP* P 23 43 19.0 -8.8
BOJS **Bojanci** 79.57 343 *iP* P 23 43 28.1 +0.7
SSF **Saint Saulge** 79.62 351 *eP* P 23 43 27.6 -0.1
comp=Z,26nm,1.1s
SSF **Saint Saulge** 79.62 351 *eP* P 23 43 27.6 -0.1
SSF pmax pmax
comp=Z,26nm,1.0s
SSF **Saint Saulge** 79.62 351 *eP* P 23 43 27.6 -0.1
comp=Z,26nm,1.0s
SKDS **Skadanscina** 79.74 344 *i* P P 23 43 28.2 -0.2
CABF **La Chapelle** 79.80 349⇑ *iP* P 23 43 29.1 +0.3
comp=Z,22nm,0.8s
CABF **La Chapelle** 79.80 349⇑ *iP* P 23 43 29.1 +0.3
CABF pmax pmax
comp=Z,22nm,0.8s
CABF **La Chapelle** 79.80 349⇑ *iP* P 23 43 29.1 +0.3
comp=Z,22nm,0.8s
MPEP **Malo Peshtene** 79.84 336 P P 23 43 29.3 +0.3
AVF **Avril sur Loir** 79.90 351⇑ *iP* P 23 43 29.2 0.0
comp=Z,67nm,1.4s
AVF **Avril sur Loir** 79.90 351⇑ *iP* P 23 43 29.2 0.0
AVF pmax pmax
comp=Z,67nm,1.4s
AVF **Avril sur Loir** 79.90 351⇑ *iP* P 23 43 29.2 0.0
comp=Z,67nm,1.4s
IPIR **Pirpir** 79.96 312 *eP* P 23 43 30.7 +0.5
SMF **Signal de Mont** 80.00 351⇑ *iP* P 23 43 29.7 -0.1
comp=Z,38nm,1.2s
SMF **Signal de Mont** 80.00 351⇑ *iP* P 23 43 29.7 -0.1
SMF pmax pmax
comp=Z,38nm,1.2s
SMF **Signal de Mont** 80.00 351⇑ *iP* P 23 43 29.7 -0.1
comp=Z,38nm,1.2s
MALT **Malatya** 80.08 324 *eP* P 23 43 31.0 +0.5
MALT *e* 23 46 30.0
MALT pmax pmax
comp=Z,36nm,1.3s
MALT **Malatya** 80.08 324 *eP* P 23 43 31.0 +0.5
comp=Z,36nm,1.3s
MALT *ePP* PP 23 46 30.0 -2.0
MALT **Malatya** 80.08 324⇓ *iP* P 23 43 31.6 +1.1
BGF **Bois d'Agland** 80.18 352 *eP* P 23 43 30.9 +0.2
comp=Z,11nm,0.7s
BGF **Bois d'Agland** 80.18 352 *eP* P 23 43 30.9 +0.2
BGF pmax pmax
comp=Z,11nm,0.7s
BGF **Bois d'Agland** 80.18 352 *eP* P 23 43 30.9 +0.2
comp=Z,11nm,0.7s
MFF **Saint Martin d** 80.36 354⇑ *iP* P 23 43 31.8 +0.1
comp=Z,13nm,0.7s
MFF **Saint Martin d** 80.36 354⇑ *iP* P 23 43 31.8 +0.1
MFF pmax pmax
comp=Z,13nm,0.7s
MFF **Saint Martin d** 80.36 354⇑ *iP* P 23 43 31.8 +0.1
comp=Z,13nm,0.7s
BR131 **Keskin Array S** 80.42 328 *eP* P 23 43 32.8 +0.4
comp=Z,9.2nm,0.7s
BRTR **Keskin Array B** 80.42 328 P P 23 43 32.8 +0.4
BRTR **Keskin Array B** 80.42 328 P P 23 43 32.8 +0.4
comp=Z,11nm,0.7s,baz=51,slow=2.6,SNR=100
BRTR LR LR 00 26 18.8
comp=Z,140nm,19.9s,baz=175,slow=41
PGB **Panagyurishte** 80.50 336 P P 23 43 33.0 +0.4
TCF **Toulx Ste Croi** 80.50 352⇑ *iP* P 23 43 32.5 0.0
comp=Z,28nm,1.1s
TCF **Toulx Ste Croi** 80.50 352⇑ *iP* P 23 43 32.5 0.0
TCF pmax pmax
comp=Z,28nm,1.1s
TCF **Toulx Ste Croi** 80.50 352⇑ *iP* P 23 43 32.5 0.0
comp=Z,28nm,1.1s
ANTO **Ankara** 80.56 329 *eP* P 23 43 34.1 +1.1
ANTO pmax pmax
comp=Z,39nm,1.2s
ANTO **Ankara** 80.56 329 *eP* P 23 43 34.1 +1.1
comp=Z,39nm,1.2s
ANTO **Ankara** 80.56 329⇓ *iP* P 23 43 33.2 +0.2
ANTO **Ankara** 80.56 329 P P 23 43 34.8 +1.8
SNR=12
AGO **Saint Agoulin** 80.65 351 *eP* P 23 43 34.1 +0.8
AGO **Saint Agoulin** 80.65 351 *eP* P 23 43 34.1 +0.8
VTS **Vitosha** 80.69 336⇑ *iP* P 23 43 34.2 +0.5
VTS **Vitosha** 80.69 336 P P 23 43 33.7 0.0
LPL **La Plagne** 80.81 349⇑ *iP* P 23 43 35.4 +1.0
comp=Z,13nm,0.7s
LPL **La Plagne** 80.81 349⇑ *iP* P 23 43 35.4 +1.0
LPL pmax pmax
comp=Z,13nm,0.6s
LPL **La Plagne** 80.81 349⇑ *iP* P 23 43 35.4 +1.0
comp=Z,13nm,0.6s
LPG **La Plagne** 80.83 349⇑ *iP* P 23 43 35.6 +1.0
comp=Z,61nm,1.1s
LPG **La Plagne** 80.83 349⇑ *iP* P 23 43 35.6 +1.0
LPG pmax pmax
comp=Z,61nm,1.1s
LPG **La Plagne** 80.83 349⇑ *iP* P 23 43 35.6 +1.0
comp=Z,61nm,1.1s
PYM **Petit Puy Mans** 80.96 351 *eP* P 23 43 35.5 +0.5
PYM **Petit Puy Mans** 80.96 351 *eP* P 23 43 35.5 +0.5
PYM **Petit Puy Mans** 80.96 351 *eP* P 23 43 35.5 +0.5
FITZ **Fitzroy Crossi** 80.98 223 *eP* P 23 43 35.3 +0.1
comp=Z,19nm,0.7s
RZN **Rozhen** 81.17 335 P P 23 43 36.4 +0.1
BNI **Bardonecchia** 81.27 349 *eP* P 23 43 37.6 +0.8
BNI pmax pmax
comp=Z,79nm,1.5s
BNI **Bardonecchia** 81.27 349 *eP* P 23 43 37.6 +0.8
comp=Z,79nm,1.5s
SSB **Saint Sauveur** 81.28 350 *eP* P 23 43 37.1 +0.4
SSB pmax pmax
comp=Z,10.0nm,0.9s
SSB **Saint Sauveur** 81.28 350 *eP* P 23 43 37.1 +0.4
comp=Z,10nm,0.9s
SSB **Saint Sauveur** 81.28 350 *eP* P 23 43 37.5 +0.8
KKB **Krupnik** 81.41 336 P P 23 43 38.2 +0.8
LBL **Lubilhac** 81.45 351 *eP* P 23 43 38.9 +1.2
LBL **Lubilhac** 81.45 351 *eP* P 23 43 38.9 +1.2
LBL **Lubilhac** 81.45 351 *eP* P 23 43 38.9 +1.2
ORIF **Oris-en-Rattie** 81.50 349⇑ *iP* P 23 43 38.9 +1.0
comp=Z,56nm,1.0s
ORIF *eR*
comp=Z,200nm,20.5s
ORIF **Oris-en-Rattie** 81.50 349⇑ *iP* P 23 43 38.9 +1.0
ORIF pmax pmax
comp=Z,56nm,1.0s
ORIF **Oris-en-Rattie** 81.50 349⇑ *iP* P 23 43 38.9 +1.0
comp=Z,56nm,1.0s
MMB **Musomiste** 81.51 336 P P 23 43 38.9 +0.9
RJF **Les Rejaudoux** 81.53 352 *eP* P 23 43 38.0 0.0
RJF *eR*
comp=Z,283nm,21.8s
RJF **Les Rejaudoux** 81.53 352 *eP* P 23 43 38.0 0.0
RJF **Les Rejaudoux** 81.53 352 *eP* P 23 43 38.0 0.0
MBDF **Montbardon** 81.58 349⇑ *iP* P 23 43 39.3 +0.8
comp=Z,21nm,0.7s
MBDF **Montbardon** 81.58 349⇑ *iP* P 23 43 39.3 +0.8
MBDF pmax pmax
comp=Z,21nm,0.7s
MBDF **Montbardon** 81.58 349⇑ *iP* P 23 43 39.3 +0.8
comp=Z,21nm,0.7s
VLC **Villacollemand** 81.66 346 *eP* P 23 43 39.5 +0.8
comp=Z,20nm,0.8s
VIVF **Saint-Julien-l** 81.69 350⇑ *iP* P 23 43 39.4 +0.5
comp=Z,14nm,0.7s
VIVF **Saint-Julien-l** 81.69 350⇑ *iP* P 23 43 39.4 +0.5
VIVF pmax pmax
comp=Z,14nm,0.7s
VIVF **Saint-Julien-l** 81.69 350⇑ *iP* P 23 43 39.4 +0.5
comp=Z,14nm,0.7s
SKO **Skopje** 81.69 338 *eP* P 23 43 39.0 +0.2
CAF **Calviac** 81.86 352⇑ *iP* P 23 43 40.3 +0.5
comp=Z,30nm,0.9s
CAF **Calviac** 81.86 352⇑ *iP* P 23 43 40.3 +0.5
CAF pmax pmax
comp=Z,30nm,0.9s
CAF **Calviac** 81.86 352⇑ *iP* P 23 43 40.3 +0.5
comp=Z,30nm,0.9s
LFF **La Frestale** 81.95 353 *eP* P 23 43 40.5 +0.3
comp=Z,58nm,1.3s
LFF **La Frestale** 81.95 353 *eP* P 23 43 40.5 +0.3
LFF pmax pmax
comp=Z,58nm,1.3s
LFF **La Frestale** 81.95 353 *eP* P 23 43 40.5 +0.3
comp=Z,58nm,1.3s
VAY **Valandovo** 82.05 336 *eP* P 23 43 40.5 -0.2
TOUF **Mont Tournerai** 82.23 348 *eP* P 23 43 42.5 +0.6
TOUF **Mont Tournerai** 82.23 348 *eP* P 23 43 42.5 +0.6
TOUF **Mont Tournerai** 82.23 348 *eP* P 23 43 42.5 +0.6
SBF **Sospel** 82.36 348 *eP* P 23 43 42.6 +0.2
comp=Z,80nm,1.1s
SBF **Sospel** 82.36 348 *eP* P 23 43 42.6 +0.2
SBF pmax pmax
comp=Z,80nm,1.1s
SBF **Sospel** 82.36 348 *eP* P 23 43 42.6 +0.2
comp=Z,80nm,1.1s
MVIF **Mont Vial** 82.36 348 *eP* P 23 43 44.1 +1.6
MVIF **Mont Vial** 82.36 348 *eP* P 23 43 44.1 +1.6
MVIF **Mont Vial** 82.36 348 *eP* P 23 43 44.1 +1.6
SMRF **Simiane la Rot** 82.46 349 *eP* P 23 43 44.3 +1.4
SMRF **Simiane la Rot** 82.46 349 *eP* P 23 43 44.3 +1.4
LASF **Ste Croix** 82.54 351 *eP* P 23 43 44.1 +0.8
comp=Z,12nm,0.8s
LASF **Ste Croix** 82.54 351 *eP* P 23 43 44.1 +0.8
comp=Z,12nm,0.8s
BIA **Bitola** 82.63 337 *eP* P 23 43 41.6 -2.3
FRF **La Foret Royal** 82.75 349 *eP* P 23 43 44.5 +0.1
comp=Z,42nm,1.1s
FRF **La Foret Royal** 82.75 349 *eP* P 23 43 44.5 +0.1
FRF pmax pmax
comp=Z,43nm,1.1s
FRF **La Foret Royal** 82.75 349 *eP* P 23 43 44.5 +0.1
comp=Z,42nm,1.1s
AQU **L'Aquila** 82.95 343 *eP* P 23 43 45.0 -0.4
comp=Z,365nm,0.8s
AQU **L'Aquila** 82.95 343⇓ *iP* P 23 43 43.1 -2.4
AS31 **Alice Springs** 82.96 214 *eP* P 23 43 45.9 +0.4
ASAR **Alice Springs** 82.96 214 P P 23 43 45.6 0.0
ASAR PKKPbc **PKKPbc** 00 02 05.5 -1.5
ASAR **Alice Springs** 82.96 214 P P 23 43 45.6 0.0
comp=Z,6.4nm,0.7s,baz=19,slow=5.1,SNR=70
ASAR PKKPbc **PKKPbc** 00 02 05.5 -1.5
comp=Z,0.4nm,0.5s,baz=191,slow=2.0,SNR=6.2
ASAR LR LR 00 16 20.6
comp=Z,209nm,21.2s,baz=16,slow=32
LMR **La Mourre** 82.99 349 *eP* P 23 43 46.1 +0.5
comp=Z,40nm,0.9s
LMR **La Mourre** 82.99 349 *eP* P 23 43 46.1 +0.5
LMR pmax pmax
comp=Z,40nm,0.9s
LMR **La Mourre** 82.99 349 *eP* P 23 43 46.1 +0.5
comp=Z,40nm,0.9s
MTLF **Montolieu** 83.42 352⇑ *iP* P 23 43 48.6 +0.7
comp=Z,14nm,0.7s
MTLF **Montolieu** 83.42 352⇑ *iP* P 23 43 48.6 +0.7

MTLF				pmax	pmax			
	comp=Z,14nm,0.7s							
MTLF	**Montolieu**	**83.42**	**352**	⇑*iP*	**P**	**23**	**43**	**48.6 +0.7**
	comp=Z,14nm,0.7s							
PGF	**Pioggiola**	**83.44**	**347**	⇑*iP*	**P**	**23**	**43**	**48.5 +0.4**
	comp=Z,61nm,0.9s							
PGF	**Pioggiola**	**83.44**	**347**	⇑*iP*	**P**	**23**	**43**	**48.5 +0.4**
PGF				pmax	pmax			
	comp=Z,61nm,0.9s							
PGF	**Pioggiola**	**83.44**	**347**	⇑*iP*	**P**	**23**	**43**	**48.5 +0.4**
	comp=Z,61nm,0.9s							
TBI	**Tubuai**	**83.55**	**144**	*e*LR	LR	00	09	57.0
	comp=Z,746nm,30.8s,baz=336							
EPF	**Esparros**	**83.88**	**353**	⇑*iP*	**P**	**23**	**43**	**50.1 -0.2**
	comp=Z,9.7nm,0.8s							
EPF	**Esparros**	**83.88**	**353**	⇑*iP*	**P**	**23**	**43**	**50.1 -0.2**
EPF				pmax	pmax			
	comp=Z,10.0nm,0.8s							
EPF	**Esparros**	**83.88**	**353**	⇑*iP*	**P**	**23**	**43**	**50.1 -0.2**
	comp=Z,9.7nm,0.8s							
SJPF	**Ste Jean**	**83.90**	**354**	*eP*	**P**	**23**	**43**	**51.3 +0.9**
	comp=Z,6.6nm,0.6s							
SJPF	**Ste Jean**	**83.90**	**354**	*eP*	**P**	**23**	**43**	**51.3 +0.9**
SJPF				pmax	pmax			
	comp=Z,7.0nm,0.6s							
SJPF	**Ste Jean**	**83.90**	**354**	*eP*	**P**	**23**	**43**	**51.3 +0.9**
	comp=Z,6.6nm,0.6s							
MIB	**Mutribah**	**83.99**	**313**	*eP*	**P**	**23**	**43**	**53.0 -0.7**
MIB				AMb	AMB	23	43	52.4
	comp=Z,58nm,1.5s							
ETSF	**Etsaut**	**84.07**	**354**	⇑*iP*	**P**	**23**	**43**	**52.0 +0.7**
	comp=Z,27nm,0.8s							
ETSF	**Etsaut**	**84.07**	**354**	⇑*iP*	**P**	**23**	**43**	**52.0 +0.7**
ETSF				pmax	pmax			
	comp=Z,27nm,0.8s							
ETSF	**Etsaut**	**84.07**	**354**	⇑*iP*	**P**	**23**	**43**	**52.0 +0.7**
	comp=Z,27nm,0.8s							
KBD	**Kabd**	**84.37**	**313**	*eP*	**P**	**23**	**43**	**51.4 -1.6**
KBD				AMb	AMB	23	43	54.0
	comp=Z,31nm,1.5s							
NAY	**Al-Naaiem**	**84.51**	**313**	*eP*	**P**	**23**	**43**	**52.7 -0.9**
NAY				AMb	AMB	23	43	54.9
	comp=Z,34nm,1.7s							
RDF	**Al-Radifah**	**84.65**	**313**	*eP*	**P**	**23**	**43**	**53.6 -0.8**
RDF				AMb	AMB	23	43	55.6
	comp=Z,84nm,1.0s							
CSS	**Prodhromos**	**84.86**	**326**	*eP*	**P**	**23**	**43**	**55.2 -0.1**
	comp=Z,92nm,1.3s							
PGAV	**Gavieira, Arco**	**85.28**	**359**	*eP*	**P**	**23**	**43**	**58.9 +1.4**
	comp=Z,66nm,1.8s							
APE	**Apeiranthos**	**85.29**	**333**	⇓*iP*	**P**	**23**	**43**	**55.4 -2.1**
PBRG	**Braganca**	**85.43**	**358**	*eP*	**P**	**23**	**43**	**58.9 +0.8**
	comp=Z,30nm,1.7s							
POLO	**Lamas de Olo**	**85.87**	**359**	*eP*	**P**	**23**	**43**	**59.3 -1.1**
	comp=Z,24nm,1.7s							
PVRL	**Vila Real**	**85.97**	**359**	*eP*	**P**	**23**	**44**	**01.0 +0.2**
MVO	**Moncorvo**	**86.07**	**358**	*eP*	**P**	**23**	**44**	**01.7 +0.4**
PVIS	**Viseu**	**86.53**	**359**	*eP*	**P**	**23**	**44**	**03.6 0.0**
MTE	**Manteigas**	**86.84**	**359**	*eP*	**P**	**23**	**44**	**05.3 +0.2**
IDI	**Anoyia**	**87.14**	**333**	*eP*	**P**	**23**	**44**	**04.8 -1.9**
	comp=Z,10.0nm,0.6s							
PCBR	**Castelo Branco**	**87.40**	**359**	*eP*	**P**	**23**	**44**	**08.2 +0.5**
	comp=Z,30nm,1.5s							
ESDC	**Sonseca Array**	**87.47**	**356**	P	**P**	**23**	**44**	**07.5 -0.7**
ESDC	**Sonseca Array**	**87.47**	**356**	P	**P**	**23**	**44**	**07.5 -0.7**
	comp=Z,2.7nm,0.6s,baz=356,slow=4.3,SNR=29							
ESDC				LR	LR	00	20	47.5
	comp=Z,122nm,21.4s,baz=60,slow=34							
PTOM	**Tomar**	**87.63**	**360**	*eP*	**P**	**23**	**44**	**09.3 +0.4**
GVD	**Gavdhos**	**87.78**	**333**	*eP*	**P**	**23**	**44**	**08.9 -0.8**
	comp=Z,74nm,1.1s							
PESTR	**Estremoz**	**88.37**	**359**	*eP*	**P**	**23**	**44**	**13.9 +1.5**
STKA	**Stephens Creek**	**88.42**	**205**	*eP*	**P**	**23**	**44**	**12.8 +0.4**
	comp=Z,8.9nm,1.3s							
STKA	**Stephens Creek**	**88.42**	**205**	P	**P**	**23**	**44**	**12.2 -0.2**
	comp=Z,8.0nm,0.9s,baz=347,slow=4.6,SNR=9.8							
STKA				LR	LR	00	19	30.7
	comp=Z,198nm,19.9s,baz=19,slow=33							
PBAR	**Barrancos**	**89.06**	**358**	*eP*	**P**	**23**	**44**	**14.7 -0.9**
KEST	**Kesra**	**90.07**	**345**	P	**P**	**23**	**44**	**19.9 -0.6**
KEST	**Kesra**	**90.07**	**345**	P	**P**	**23**	**44**	**19.9 -0.6**
	comp=Z,1.1nm,0.7s,baz=266,slow=5.9,SNR=6.0							
KEST				LR	LR	00	32	25.4
	comp=Z,77nm,20.8s,baz=250,slow=41							
TORD	**Torodi Ar. Bea**	**113.35**	**349**	PKiKP	**PKiKP**	**23**	**49**	**57.1 -1.5**
TORD				PP	**PP**	**23**	**50**	**45.2 -3.1**
TORD				PKKP	**PKKPab**	**00**	**00**	**55.8 +2.5**
TORD	**Torodi Ar. Bea**	**113.35**	**349**	PKiKP	**PKiKP**	**23**	**49**	**57.1 -1.5**
	comp=Z,0.3nm,0.7s,baz=15,slow=1.3,SNR=2.7							
TORD				PP	**PP**	**23**	**50**	**45.2 -3.1**
	comp=Z,2.6nm,1.1s,baz=7.2,slow=5.6,SNR=5.1							
TORD				PKKP	**PKKPab**	**00**	**00**	**55.8 +2.5**
	comp=Z,1.2nm,0.7s,baz=184,slow=4.4,SNR=5.8							
SIV	**San Ignacio**	**125.12**	**68**	PKP	**PKPdf**	**23**	**50**	**21.7 +0.6**
SIV	**San Ignacio**	**125.12**	**68**	PKP	**PKPdf**	**23**	**50**	**21.7 +0.6**
	comp=Z,3.5nm,0.7s,baz=216,slow=9.0,SNR=3.6							
BDFB	**Brasilia**	**131.71**	**54**	PKP	**PKPdf**	**23**	**50**	**34.4 +0.6**
BDFB	**Brasilia**	**131.71**	**54**	PKP	**PKPdf**	**23**	**50**	**34.4 +0.6**
	comp=Z,1.0nm,0.5s,baz=194,slow=4.2,SNR=2.8							
CPUP	**Villa Florida**	**135.40**	**73**	PKP	**PKPdf**	**23**	**50**	**41.3 +1.0**
CPUP	**Villa Florida**	**135.40**	**73**	PKP	**PKPdf**	**23**	**50**	**41.3 +1.0**
	comp=Z,0.2nm,0.4s,baz=292,slow=5.4,SNR=2.2							
PLCA	**Paso Flores**	**137.50**	**99**	PKP	**PKPdf**	**23**	**50**	**45.1 +1.3**
PLCA	**Paso Flores**	**137.50**	**99**	PKP	**PKPdf**	**23**	**50**	**45.1 +1.3**
	comp=Z,4.4nm,1.2s,baz=297,slow=2.3,SNR=2.4							
MAW	**Mawson**	**143.97**	**218**	*e*PKPdf	PKPab	23	50	51.5 -0.4
MAW				PKP	PKPbc	23	50	52.3 -0.2
MAW	**Mawson**	**143.97**	**218**	PKP	PKPab	23	50	52.3 +0.4
	comp=Z,6.9nm,0.6s,baz=115,slow=3.5,SNR=18							
BOSA	**Boshof**	**144.87**	**301**	*e*PKPdf	**PKPab**	**23**	**50**	**56.2 -0.5**
BOSA	**Boshof**	**144.87**	**301**	PKP	**PKPab**	**23**	**50**	**56.1 -0.5**
	comp=Z,14nm,0.6s,baz=26,slow=3.4,SNR=37							
SNAA	**Sanae**	**161.18**	**186**	*e*PKPab	**PKPab**	**23**	**52**	**04.0 +0.7**
SNAA	**Sanae**	**161.18**	**186**	PKPab	**PKPab**	**23**	**52**	**03.9 +0.5**
SNAA	**Sanae**	**161.18**	**186**	PKPab	**PKPab**	**23**	**52**	**03.9 +0.5**
	comp=Z,1.1nm,0.9s,baz=207,slow=3.9,SNR=3.1							
VNA3	**Neumayer Olymp**	**161.81**	**179**	*e*PKPab	**PKPab**	**23**	**52**	**05.0 -1.0**
VNA2	**Neumayer--Watz**	**162.12**	**182**	*e*PKPab	**PKPab**	**23**	**52**	**07.1 -0.2**

*ISCJB **18** 23:36:38.1±0.3,34°.45N±0°.06×137°.39E±0°.07, h312km±3km, mb3.6/15, Error ellipse: s-maj=9.6km s-min=8.7km az=29.3*

*JMA **18** 23:36:38.8±0.2,34°.41N×137°.51E, h308km±2km, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s=40.00000°, δ71.00000°, λ_s-149.00000°. NP2: ϕ_s299.00000°, δ61.00000°, λ_s-22.00000°. Principal axes: T Plg7.0000°, Azm167.0000°; N Plg54.0000°, Azm67.0000°; P Plg35.0000°, Azm262.0000°;*

*IDC **18** 23:36:38.7±0.6,34°.46N×137°.39E, h301km±6km, mb3.5/15, mb1 3.5/21, mb1mx3.4/35, mbtmp3.5/21 Error ellipse: s-maj=15.9km s-min=9.2km az=68.0*

ISC 18 23:36:39.0±0.7, 34°.44N±0°.07×137°.39E±0°.07, h307km±5km, n49, σ0°.970/60, mb3.7/15, 3C-9D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAA	**Atsumi**	**0.28**	**314**	⇓*iP*		**Pn**	**23 37 18.3**	**+0.4**
JAA				*e*S		**S**	**23 37 48.6**	**-0.3**
TTO5	**TONANKAI O.B.S**	**0.33**	**124**	⇓*iP*		**Pn**	**23 37 17.6**	**-0.3**
TK04	**Tokai 4**	**0.41**	**97**	*iP*		**Pn**	**23 37 18.6**	**+0.6**
HMMJ	**Hamamatsu 2**	**0.50**	**33**	⇓*iP*		**Pn**	**23 37 18.5**	**+0.2**
JIE	**Ise**	**0.56**	**266**	⇓*iP*		**Pn**	**23 37 18.8**	**+0.3**
JIE				*e*S		**S**	**23 37 49.4**	**-0.6**
TK02	**Tokai 2**	**0.58**	**148**	P		**Pn**	**23 37 18.8**	**+0.4**
JKN2	**Miekihoku**	**0.94**	**258**	⇓*iP*		**Pn**	**23 37 20.1**	**+0.2**
JNY	**Yasuok**	**1.00**	**23**	⇓*iP*		**Pn**	**23 37 20.2**	**0.0**
JEG	**Eigenji**	**1.07**	**311**	⇑*iP*		**Pn**	**23 37 21.0**	**+0.5**
JGM	**Miyama**	**1.37**	**337**	⇑*iP*		**Pn**	**23 37 22.5**	**+0.5**
JGM				*e*S		**S**	**23 37 56.1**	**-0.2**
JYN	**Shimob**	**1.42**	**42**	P		**Pn**	**23 37 22.3**	**-0.1**
JOD2	**Odawara 2**	**1.62**	**59**	⇓*iP*		**Pn**	**23 37 23.3**	**-0.3**
JRY	**Ryogami san**	**2.01**	**38**	⇓*iP*		**Pn**	**23 37 26.5**	**+0.1**
JRY				*e*S		**S**	**23 38 04.1**	**-0.1**
JKG	**Kaga**	**2.03**	**335**	⇑*iP*		**Pn**	**23 37 26.8**	**+0.3**
JHU	**Hanno**	**2.10**	**47**	⇓*iP*		**Pn**	**23 37 27.1**	**0.0**
JHU				*e*S		**S**	**23 38 04.5**	**-1.0**
MJAR	**Matsushiro Arr**	**2.20**	**18**	P		**Pn**	**23 37 27.2**	**-0.8**
	6.9nm,0.3s,baz=193,slow=10,SNR=67							
MJAR				S		**S**	**23 38 05.5**	**-1.6**
	3.2nm,0.3s,baz=198,slow=17,SNR=12							
MAT	**Matsushiro**	**2.21**	**17**	P		**Pn**	**23 37 28.0**	**0.0**
MAT				*e*S		**S**	**23 38 06.2**	**-0.8**
MAT	**Matsushiro**	**2.21**	**17**	P		**Pn**	**23 37 28.0**	**0.0**
MAT				*e*S		**S**	**23 38 06.3**	**-0.8**
JHJ	**Hachijo jima 2**	**2.39**	**123**	P		**Pn**	**23 37 29.1**	**-0.6**
	38nm,0.3s,baz=74,slow=22,SNR=14							
JHJ				S		**S**	**23 38 10.4**	**+0.3**
	28nm,0.3s,baz=252,slow=23,SNR=6.8							
JNU	**Nakatsue**	**5.58**	**258**	P		**Pn**	**23 38 02.0**	**-1.5**
	0.5nm,0.3s,baz=67,slow=8.0,SNR=14							
KSRS	**Korea Array**	**8.24**	**294**	P		**Pn**	**23 38 36.0**	**+0.4**
	0.4nm,0.3s,baz=107,slow=13,SNR=10.0							
ASAJ	**Asahikawa**	**10.47**	**21**	P		**Pn**	**23 39 01.7**	**-1.0**
	2.9nm,0.3s,baz=235,slow=8.5,SNR=12							
USRK	**Ussuriysk Arra**	**10.60**	**338**	P		**Pn**	**23 39 04.9**	**+0.6**
	0.7nm,0.3s,baz=149,slow=12,SNR=7.0							
SONM	**Songino Array**	**26.70**	**309**	P		**P**	**23 41 51.5**	**+0.7**
	2.3nm,0.7s,baz=123,slow=8.4,SNR=3.8							
ZALV	**Zalesovo Beam**	**41.32**	**315**	P		**P**	**23 43 56.0**	**+0.9**
	1.5nm,0.4s,baz=94,slow=8.4,SNR=4.6							
ZALV				PcP		**PcP**	**23 45 47.5**	**+0.4**
	2.0nm,0.5s,baz=100,slow=3.4,SNR=7.1							
MKAR	**Makanchi Array**	**42.78**	**304**	P		**P**	**23 44 08.1**	**+1.1**
	4.6nm,0.6s,baz=84,slow=10,SNR=6.0							
TAPN	**Taplejung**	**42.86**	**275**	*eP*		**P**	**23 44 07.7**	**-0.6**
ODAN	**Odare**	**43.31**	**274**	*eP*		**P**	**23 44 11.2**	**-0.6**
RAMN	**Ramite**	**43.93**	**275**	*eP*		**P**	**23 44 16.4**	**-0.3**
	8.9nm,0.4s							
GUN	**Gumba**	**44.16**	**276**	*eP*		**P**	**23 44 19.2**	**+0.6**
PKI	**Pulchoki**	**44.67**	**276**	*eP*		**P**	**23 44 21.7**	**-0.9**
	8.7nm,0.5s							
PKIN	**Phulchoki**	**44.68**	**276**	*eP*		**P**	**23 44 22.9**	**+0.3**
KKN	**Kakani**	**44.70**	**276**	*eP*		**P**	**23 44 21.8**	**-0.9**
KURBB	**Kurchatov Arra**	**45.07**	**310**	P		**P**	**23 44 25.1**	**+0.1**
	0.4nm,0.3s,baz=342,slow=9.2,SNR=8.0							
DANN	**Dangsing**	**45.74**	**278**	*eP*		**P**	**23 44 31.0**	**+0.1**
	45nm,0.5s							
KOLN	**Koldanda**	**46.08**	**277**	*eP*		**P**	**23 44 32.3**	**-1.2**
	8.4nm,0.5s							
PYUN	**Piuthan**	**46.46**	**278**	*eP*		**P**	**23 44 36.0**	**-0.4**
	22nm,0.5s							
BVAR	**Borovoye Array**	**49.93**	**313**	P		**P**	**23 45 00.2**	**-1.9**
	0.7nm,0.3s,baz=100,slow=9.0,SNR=15							
BVAR				PcP		**PcP**	**23 46 17.9**	**+0.6**
	1.4nm,0.4s,baz=109,slow=3.4,SNR=10							
ILAR	**Eielson Array**	**53.42**	**31**	P		**P**	**23 45 27.6**	**+0.1**
	0.3nm,0.8s,baz=268,slow=7.9,SNR=3.2							
WRA	**Warramunga Arr**	**54.16**	**184**	P		**P**	**23 45 32.5**	**-0.9**
	1.2nm,0.3s,baz=360,slow=7.7,SNR=5.1							
ASAR	**Alice Springs**	**57.88**	**184**	P		**P**	**23 46 00.1**	**+0.7**
	0.4nm,0.4s,baz=21,slow=11,SNR=5.9							
AKTO	**Aktyubinsk**	**57.98**	**312**	P		**P**	**23 46 00.6**	**+0.6**
	3.0nm,0.6s,baz=72,slow=13,SNR=8.3							
ARCES	**ARCESS Array B**	**65.25**	**339**	P		**P**	**23 46 47.9**	**+0.1**
	6.4nm,1.1s,baz=78,slow=9.5,SNR=4.1							
FINES	**FINESS Array B**	**69.55**	**331**	P		**P**	**23 47 14.1**	**-0.6**
	2.7nm,0.5s,baz=64,slow=6.6,SNR=14							
AKASG	**Malin Array Be**	**74.30**	**321**	P		**P**	**23 47 42.9**	**0.0**
	1.1nm,0.5s,baz=51,slow=5.9,SNR=4.7							
NOA	**NORSAR Array B**	**75.27**	**336**	P		**P**	**23 47 49.0**	**+0.7**
	0.9nm,0.7s,baz=43,slow=5.8,SNR=4.2							
BRTR	**Keskin Array B**	**78.06**	**310**	P		**P**	**23 48 05.5**	**+1.0**
	0.8nm,0.8s,baz=118,slow=4.2,SNR=3.1							
GERES	**GERESS Array B**	**83.12**	**326**	P		**P**	**23 48 30.5**	**-0.4**
	0.8nm,0.6s,baz=41,slow=7.1,SNR=5.5							
TORD	**Torodi Ar. Bea**	**116.67**	**310**	PKP		**PKPdf**	**23 54 46.2**	**-1.2**
	0.3nm,1.0s,baz=13,slow=1.1,SNR=5.2							

IDC 18 23:44:30.3±1.9, 6°.54S×129°.05E, h0km, mb3.9/1, mb1 3.8/3, mb1mx3.4/19, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=117.3km s-min=30.2km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**14.28**	**159**	Pn		Pn	23 47 53.7	-0.3
	0.3nm,0.3s,baz=338,slow=13,SNR=3.1							
ASAR	**Alice Springs**	**17.66**	**165**	P		Pn	23 48 38.2	+0.2
	0.3nm,0.3s,baz=343,slow=9.9,SNR=15							
MKAR	**Makanchi Array**	**67.33**	**327**	P		P	23 55 27.2	0.0
	0.5nm,0.4s,baz=119,slow=8.2,SNR=15							

IDC 18 23:45:35.6±1.8, 55°.08N×165°.87E, h0km, mb3.2/2, mb1 3.5/4, mb1mx3.2/29, mbtmp3.2/4, ML2.9/2, MS3.9/1, Ms1 3.9/1, ms1mx3.2/20, Error ellipse: s-maj=33.1km s-min=18.2km az=33.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FX1	**Attu Island--F**	**4.83**	**114**	Pn		Pn	23 46 48.3	-1.2
	1.4nm,0.3s,baz=323,slow=15,SNR=2.6							
FX1				Sn		Sn	23 47 41.0	-5.2
	3.3nm,0.3s,baz=165,slow=20,SNR=3.8							
PETK	**Petropavlovsk-**	**5.20**	**251**	Pn		Pn	23 46 53.8	-0.7
	0.7nm,0.3s,baz=71,slow=18,SNR=8.3							
PETK				Sn		Sn	23 47 49.3	-5.9
	0.7nm,0.3s,baz=24,slow=24,SNR=4.4							
ILAR	**Eielson Array**	**24.97**	**48**	P		P	23 50 59.9	-0.5
	0.7nm,0.8s,baz=253,slow=8.4,SNR=8.6							
SONM	**Songino Array**	**36.74**	**284**	LR		LR	00 08 14.6	
	comp=Z,175nm,18.9s,baz=80,slow=37							
YKA	**Yellowknife Ar**	**39.36**	**46**	P		P	23 53 06.0	-0.2
	0.2nm,0.5s,baz=296,slow=7.5,SNR=5.8							

*IDC **18** 23:46:43.8±1.6, 3°.51S×132°.31E, h0km, mb3.5/4, mb1 3.8/6, mb1mx3.6/21, mbtmp3.6/6, ML3.8/2, Error ellipse: s-maj=64.1km s-min=25.5km az=77.0*

*DJA **18** 23:46:45.4±0.6, 3°.5±3°×13°.2E±°, h139km±7km, M4.0/9, MLv4.0/9*

*ISCJB **18** 23:46:47.6±0.6, 3°.47S±0°.05×131°.74E±0°.07, h33km, mb3.4/4, Error ellipse: s-maj=9.9km s-min=6.0km az=161.5*

ISC 18 23:46:48.9±0.8, 3°.52S±0°.06×131°.86E±0°.07, h35km, n16, σ2°.935/14, mb3.5/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FAKI	**Fak Fak**	**0.71**	**33**	P		Pn	23 47 08.0	+5.6
FAKI				S		Sn	23 47 25.1	+13
BNDI	**Bandanaira**	**2.19**	**243**	P		**Pn**	**23 47 21.9**	**-1.0**
BNDI				S		**Sn**	**23 47 52.8**	**+4.0**
TLE	**Tual**	**2.28**	**158**	P		Pn	23 47 26.3	+2.2
TLE				S		Sn	23 47 54.6	+3.6
SWI	**Sorong**	**2.70**	**347**	P		**Pn**	**23 47 27.7**	**-2.2**
SWI				S		**Sn**	**23 48 00.1**	**-1.3**
MSAI	**Masohi**	**2.93**	**273**	P		**Pn**	**23 47 31.8**	**-1.3**
RKPI	**Ransiki, Papua**	**3.05**	**49**	P		**Pn**	**23 47 34.8**	**+0.1**
RKPI				S		Sn	23 48 21.2	+11
AAI	**Ambon**	**3.66**	**267**	P		Pn	23 47 39.3	-3.8
NLAI	**Namlea**	**4.76**	**273**	P		**Pn**	**23 47 55.5**	**-2.7**
BAKI	**Biak**	**4.83**	**62**	P		Pn	23 47 54.9	-4.2
KAPI	**Kappang**	**12.17**	**263**	Pn		Pn	23 49 44.4	+4.6
	0.2nm,0.3s,baz=91,slow=11,SNR=4.9							
WRA	**Warramunga Arr**	**16.51**	**172**	Pn		**Pn**	**23 50 36.0**	**-1.9**
	0.5nm,0.3s,baz=353,slow=12,SNR=10.0							
ASAR	**Alice Springs**	**20.13**	**175**	P		**P**	**23 51 19.4**	**-0.7**
	1.9nm,0.8s,baz=360,slow=12,SNR=17							
ASAR				S		**S**	**23 55 00.7**	**-3.8**
	1.0nm,0.9s,baz=356,slow=25,SNR=4.2							
CTA	**Charters Tower**	**21.64**	**141**	P		**P**	**23 51 36.7**	**+0.3**
	1.9nm,0.7s,baz=325,slow=12,SNR=3.8							
MKAR	**Makanchi Array**	**66.39**	**325**	P		**P**	**23 57 36.1**	**+1.7**
	0.2nm,0.6s,baz=120,slow=8.0,SNR=3.8							
ZALV	**Zalesovo Beam**	**69.33**	**332**	P		**P**	**23 57 53.9**	**+1.1**
	0.2nm,0.4s,baz=123,slow=5.3,SNR=2.8							
BVAR	**Borovoye Array**	**76.15**	**327**	P		**P**	**23 58 35.7**	**+2.4**
	0.3nm,0.7s,baz=104,slow=6.1,SNR=3.2							

*CRAAG **18** 23:51:41.4, 36°.49N×7°.17E, Ml4.5*

*CSEM **18** 23:51:42.9±0.5, 36°.55N×7°.34E, h2km, ML4.5, Error ellipse: s-maj=10.9km s-min=6.5km az=126.0*

*ISCJB **18** 23:51:43.7±0.9, 36°.82N±0°.03×7°.29E±0°.04, h8km±7km, mb3.4/4, Error ellipse: s-maj=5.6km s-min=5.1km az=172.0*

*IDC **18** 23:51:43.8±1.1, 36°.30N×7°.13E, h0km, mb3.3/7, mb1 3.6/10, mb1mx3.5/33, mbtmp3.5/10, ML3.4/2, MS2.8/2, Ms1 2.8/2, ms1mx2.5/21, Error ellipse: s-maj=21.4km s-min=18.6km az=49.0*

*LDG **18** 23:51:45.2±0.6, 36°.59N×7°.04E, h10km, Ml3.9/15, Error ellipse: s-maj=14.0km s-min=4.4km az=129.0*

*STR **18** 23:51:56.7±0.7, 37°.54N×7°.12E, h10km, Ml3.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 18 23:51:43.8±0.7, 36°.65N±0°.04×7°.33E±0°.04, h15km±6km, n167, σ1°.53/100, mb3.4/5, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CMAH	**Djebel Manchou**	**0.07**	**107**	P		**Pg**	**23 51 47.8**	**+0.8**
CMAH	**Djebel Manchou**	**0.07**	**107**	P		**Pg**	**23 51 47.8**	**+0.8**
ABSA	**Djebel Ababsia**	**0.39**	**163**	P		**Pg**	**23 51 49.3**	**-2.5**
ABSA	**Djebel Ababsia**	**0.39**	**163**	P		**Pg**	**23 51 49.3**	**-2.5**
CAEH	**'Ain El Ouahch**	**0.41**	**289**	P		**Pg**	**23 51 50.3**	**-1.8**
CAEH	**'Ain El Ouahch**	**0.41**	**289**	P		**Pg**	**23 51 50.3**	**-1.8**
CKFL	**Kef-Lekhel**	**0.55**	**244**	P		Pg	23 51 50.5	-4.3
CKFL	**Kef-Lekhel**	**0.55**	**244**	P		Pg	23 51 50.5	-4.3
CASM	**Ain Smara**	**0.78**	**241**	P		Pg	23 51 54.6	-4.5
CASM	**Ain Smara**	**0.78**	**241**	P		Pg	23 51 54.6	-4.5
SET	**Setif**	**1.62**	**255**	P		**Pn**	**23 52 11.0**	**-0.9**
SET	**Setif**	**1.62**	**255**	P		**Pn**	**23 52 11.0**	**-0.9**
KEST	**Kesra**	**1.87**	**119**	Pn		**Pb**	**23 52 17.7**	**+0.1**
	15nm,0.3s,baz=242,slow=3.8,SNR=312							
KEST				Sn		**Sg**	**23 52 43.3**	**-0.6**
	12nm,0.3s,baz=338,slow=9.5,SNR=6.8							
EMHD	**Djebel Mahouad**	**3.56**	**264**	P		**Pn**	**23 52 39.5**	**+0.9**
EMHD	**Djebel Mahouad**	**3.56**	**264**	P		**Pn**	**23 52 39.5**	**+0.9**
EBNR	**Beni Rached**	**4.69**	**267**	P		Pn	23 52 50.0	-4.1
EBNR	**Beni Rached**	**4.69**	**267**	P		Pn	23 52 50.0	-4.1
ECHA	**Ech Chlef**	**4.84**	**266**	P		**Pn**	**23 52 54.5**	**-1.5**
ECHA	**Ech Chlef**	**4.84**	**266**	P		**Pn**	**23 52 54.5**	**-1.5**
OSPF	**L'Ospedale**	**5.21**	**16**	P		**Pn**	**23 53 03.9**	**+2.6**
OSPF	**L'Ospedale**	**5.21**	**16**	P		**Pn**	**23 53 03.9**	**+2.6**
EIBI	**Ibiza**	**5.30**	**298**	P		**Pn**	**23 53 04.1**	**+1.7**
	34nm,0.3s,SNR=72							
OKGL	**Djebel Kef Gue**	**5.43**	**266**	P		**Pn**	**23 53 04.3**	**0.0**
	SNR=7.9							
PGF	**Pioggiola**	**6.03**	**12**	*e*Pn		**Pn**	**23 53 15.6**	**+3.1**
PGF				*e*Sn		**Sn**	**23 54 19.0**	**-2.3**
	29nm,0.4s							
EBEN	**Beniarda**	**6.34**	**291**	P		Pn	23 53 19.0	+2.3
	8.1nm,0.3s,SNR=31							
CFON	**Fontmartina**	**6.37**	**325**	P		**Pn**	**23 53 17.9**	**+0.8**
	6.9nm,0.4s,SNR=18							
LMR	**La Mourre**	**6.71**	**355**	*e*Pn		**Pn**	**23 53 22.9**	**+1.2**
LMR				*e*Sn		Sn	23 54 32.1	-5.7
	51nm,0.3s							
LMR	**La Mourre**	**6.71**	**355**	*e*Pn		**Pn**	**23 53 22.9**	**+1.2**
EPOB	**Poblet**	**6.77**	**316**	P		**Pn**	**23 53 23.9**	**+1.3**
	6.6nm,0.5s,SNR=22							
SJAF	**Saint Jean de**	**6.77**	**331**	P		**Pn**	**23 53 22.8**	**+0.3**
SJAF	**Saint Jean de**	**6.77**	**331**	P		**Pn**	**23 53 22.8**	**+0.3**
EMIR	**Miracle**	**6.92**	**321**

PYM	**Petit Puy Mans**	**9.66**	**342**	P	**Pn**	**23 54 03.1 +0.8**
PYM				S	**Sn**	**23 55 48.5 -2.0**
PYM	**Petit Puy Mans**	**9.66**	**342**	P	**Pn**	**23 54 03.1 +0.8**
LFF	**La Frestale**	**9.67**	**331**	*e*Pn	**Pn**	**23 54 01.3 -1.0**
RJF	**Les Rejaudoux**	**9.70**	**335**	*e*Pn	**Pn**	**23 54 01.4 -1.3**
EMIJ	**Mijas**	**9.74**	**273**	P	**Pn**	**23 54 03.8 +0.5**
	SNR=7.9					
GUD	**Guadarrama**	**9.83**	**297**	P	Pn	23 54 08.1 +3.4
	6.2nm,0.3s,SNR=27					
CABF	**La Chapelle**	**10.00**	**355**	*e*Pn	**Pn**	**23 54 06.9 0.0**
CABF	**La Chapelle**	**10.00**	**355**	*e*Pn	**Pn**	**23 54 06.9 0.0**
DAVOX	**Davos/Dischmat**	**10.30**	**10**	Pn	Pn	23 54 17.0 +5.9
	0.3nm,0.3s,baz=4.5,slow=18,SNR=3.8					
SMF	**Signal de Mont**	**10.32**	**346**	*e*Pn	**Pn**	**23 54 10.5 -0.8**
SMF	**Signal de Mont**	**10.32**	**346**	*e*Pn	**Pn**	**23 54 10.5 -0.8**
TCF	**Toulx Ste Croi**	**10.37**	**340**	*e*Pn	**Pn**	**23 54 12.3 +0.4**
TCF	**Toulx Ste Croi**	**10.37**	**340**	*e*Pn	**Pn**	**23 54 12.3 +0.4**
BGF	**Bois d'Agland**	**10.46**	**343**	*e*Pn	**Pn**	**23 54 12.4 -0.7**
BGF	**Bois d'Agland**	**10.46**	**343**	*e*Pn	**Pn**	**23 54 12.4 -0.7**
ELAN	**Lanestosa**	**10.56**	**312**	P	Pn	23 54 17.8 +3.3
	7.1nm,0.4s,SNR=22					
SSF	**Saint Saulge**	**10.79**	**346**	*e*Pn	**Pn**	**23 54 17.3 -0.3**
SSF	**Saint Saulge**	**10.79**	**346**	*e*Pn	**Pn**	**23 54 17.3 -0.3**
LOR	**Lormes**	**10.92**	**347**	*e*Pn	**Pn**	**23 54 18.6 -0.9**
EPLA	**Plasencia**	**11.07**	**292**	P	Pn	23 54 25.4 +3.8
	3.6nm,0.7s,SNR=7.7					
EMIN	**Mina Concepcio**	**11.23**	**280**	P	Pn	23 54 25.7 +2.0
	4.3nm,0.5s,SNR=13					
HAU	**Haudompre**	**11.38**	**357**	*e*Pn	**Pn**	**23 54 26.0 +0.3**
HAU				*e*Sn	Sn	23 56 23.6 -8.8
	5.3nm,0.5s					
HAU	**Haudompre**	**11.38**	**357**	*e*Pn	**Pn**	**23 54 26.0 +0.3**
MFF	**Saint Martin d**	**11.41**	**333**	*e*Pn	**Pn**	**23 54 24.9 -1.2**
SFTF	**Sexfontaines**	**11.67**	**352**	*e*Pn	**Pn**	**23 54 30.9 +1.2**
SFTF	**Sexfontaines**	**11.67**	**352**	*e*Pn	**Pn**	**23 54 30.9 +1.2**
EARI	**Arriondas**	**11.69**	**308**	P	Pn	23 54 33.5 +3.5
	9.1nm,0.5s,SNR=44					
CDF	**Champ du Feu**	**11.76**	**360**	*e*Pn	**Pn**	**23 54 31.8 +0.8**
CDF	**Champ du Feu**	**11.76**	**360**	*e*Pn	**Pn**	**23 54 31.8 +0.8**
PAGF	**Fort de Pagny**	**11.96**	**355**	*e*Pn	**Pn**	**23 54 33.8 +0.2**
PAGF	**Fort de Pagny**	**11.96**	**355**	*e*Pn	**Pn**	**23 54 33.8 +0.2**
MEZF	**Maizieres J'vi**	**11.97**	**353**	*e*Pn	**Pn**	**23 54 34.4 +0.7**
MEZF	**Maizieres J'vi**	**11.97**	**353**	*e*Pn	**Pn**	**23 54 34.4 +0.7**
PESTR	**Estremoz**	**12.02**	**285**	*e*P	Pn	23 54 37.0 +2.5
PESTR	**Estremoz**	**12.02**	**285**	*e*P	Pn	23 54 37.0 +2.5
PVAQ	**Vaqueiros**	**12.06**	**278**	*e*P	**Pn**	**23 54 35.6 +0.6**
PVAQ	**Vaqueiros**	**12.06**	**278**	*e*P	**Pn**	**23 54 35.6 +0.6**
MVO	**Moncorvo**	**12.06**	**296**	*e*P	Pn	23 54 38.8 +3.7
MVO	**Moncorvo**	**12.06**	**296**	*e*P	Pn	23 54 38.8 +3.7
PBRG	**Braganca**	**12.07**	**300**	*e*P	Pn	23 54 38.1 +2.9
PBRG	**Braganca**	**12.07**	**300**	*e*P	Pn	23 54 38.1 +2.9
PCBR	**Castelo Branco**	**12.07**	**290**	*e*P	Pn	23 54 39.3 +4.1
PCBR	**Castelo Branco**	**12.07**	**290**	*e*P	Pn	23 54 39.3 +4.1
ECAL	**Calabor**	**12.11**	**300**	P	Pn	23 54 39.0 +3.2
	18nm,0.3s,SNR=14					
PBEJ	**Beja**	**12.18**	**281**	*e*P	**Pn**	**23 54 38.0 +1.3**
PBEJ	**Beja**	**12.18**	**281**	*e*P	**Pn**	**23 54 38.0 +1.3**
MTE	**Manteigas**	**12.24**	**292**	*e*P	Pn	23 54 41.1 +3.5
MTE	**Manteigas**	**12.24**	**292**	*e*P	Pn	23 54 41.1 +3.5
PCVE	**Castro Verde**	**12.31**	**279**	*e*P	**Pn**	**23 54 39.2 +0.7**
PCVE	**Castro Verde**	**12.31**	**279**	*e*P	**Pn**	**23 54 39.2 +0.7**
PVIS	**Viseu**	**12.57**	**293**	*e*P	Pn	23 54 45.1 +3.0
PVIS	**Viseu**	**12.57**	**293**	*e*P	Pn	23 54 45.1 +3.0
PVRL	**Vila Real**	**12.59**	**296**	*e*P	Pn	23 54 45.8 +3.5
PVRL	**Vila Real**	**12.59**	**296**	*e*P	Pn	23 54 45.8 +3.5
POLO	**Lamas de Olo**	**12.68**	**296**	*e*P	Pn	23 54 46.9 +3.4
POLO	**Lamas de Olo**	**12.68**	**296**	*e*P	Pn	23 54 46.9 +3.4
GERES	**GERESS Array B**	**13.05**	**19**	Pn	P	23 54 55.9 -3.1
	0.1nm,0.3s,baz=202,slow=13,SNR=3.0					
GERES				LR	LR	00 00 36.8
	comp=Z,68nm,20.7s,baz=257,slow=40					
GIVF	**Givet**	**13.57**	**353**	*e*Pn	**Pn**	**23 54 55.4 -0.2**
BAIF	**Baives**	**13.60**	**351**	*e*Pn	**Pn**	**23 54 56.2 +0.3**
BAIF	**Baives**	**13.60**	**351**	*e*Pn	**Pn**	**23 54 56.2 +0.3**
CRVS	**Cervenica-Dubn**	**16.02**	**36**	*e*P	P	23 55 37.9 +6.1
MLR	**Muntele Rosu**	**16.55**	**52**	LR	LR	00 02 54.1
	comp=Z,16nm,18.6s,baz=31,slow=40					
EKA	**Eskdalemuir Ar**	**20.02**	**342**	P	Pn	23 56 19.8 +2.2
	0.4nm,0.6s,baz=159,slow=10,SNR=4.2					
BRTR	**Keskin Array B**	**20.88**	**74**	P	Pn	23 56 30.8 +2.8
	0.6nm,0.7s,baz=255,slow=10,SNR=5.8					
AKASG	**Malin Array Be**	**21.06**	**41**	P	P	23 56 32.8 +5.7
	0.9nm,0.6s,baz=232,slow=10,SNR=4.4					
TORD	**Torodi Ar. Bea**	**23.94**	**194**	P	**P**	**23 56 55.9 -1.5**
	2.2nm,0.8s,baz=7.7,slow=9.3,SNR=22					
NOA	**NORSAR Array B**	**24.54**	**5**	P	P	23 57 08.8 +6.2
	0.9nm,0.8s,baz=179,slow=6.7,SNR=3.5					
MKAR	**Makanchi Array**	**54.88**	**54**	P	P	00 01 17.4 +3.9
	0.4nm,0.5s,baz=286,slow=6.7,SNR=9.4					
YKA	**Yellowknife Ar**	**70.80**	**335**	P	P	00 03 03.5 +4.3
	0.1nm,0.5s,baz=50,slow=6.6,SNR=4.9					

IDC 18 23:54:14.8±3.6, **20.10S**×**67.70W**, **h185**km±24km, **mb3.4**/2, **mb1 3.4**/6, **mb1mx3.2**/21, **mbtmpg3.2**/6, **Error ellipse: s-maj=54.3km s-min=23.6km az=37.0, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.81**	**354**	P	Pn	23 55 14.5	-0.1
	4.8nm,0.3s,baz=152,slow=6.0,SNR=108						
SIV	**San Ignacio**	**7.51**	**58**	P	Pn	23 56 01.6	-0.3
	2.1nm,0.3s,baz=265,slow=10.0,SNR=30						
CPUP	**Villa Florida**	**11.38**	**125**	P	Pn	23 56 52.2	+0.1
	0.6nm,0.3s,baz=286,slow=11,SNR=5.4						
BDFB	**Brasilia**	**19.25**	**80**	P	P	23 58 25.4	-0.1
	0.2nm,0.3s,baz=284,slow=12,SNR=3.1						
TORD	**Torodi Ar. Bea**	**75.82**	**70**	P	P	00 05 41.3	+0.2
	0.7nm,0.7s,baz=254,slow=5.4,SNR=7.9						
YKA	**Yellowknife Ar**	**90.25**	**340**	P	P	00 06 53.9	0.0
	0.3nm,0.4s,baz=131,slow=4.7,SNR=13						
MKAR	**Makanchi Array**	**143.84**	**36**	PKP	PKPbc	00 13 26.3	+0.1
	0.1nm,0.4s,baz=296,slow=2.4,SNR=4.2						

*ISCJB **19** 00:15:01.5±1.0, 35.84N×0.04×29.56E±0.05, h6km±5km, Error ellipse: s-maj=8.3km s-min=4.7km az=135.8*
*DDA **19** 00:15:01.2, 35.83N×29.53E, h6km, MD3.0*
*ISK **19** 00:15:02.7, 35.96N×29.58E, h9km, MD3.3*
*ATH **19** 00:15:02.9, 35.99N×29.57E, h34km±17km, MD3.5/6*
*CSEM **19** 00:15:04.2±0.3, 35.95N×29.51E, h15km, MD3.5, Error ellipse: s-maj=8.1km s-min=3.6km az=140.0*
ISC 19 00:15:02.6±1.5, **35.89N**±0.05×**29.58E**±0.04, **h14**km±10km, **n52**, σ1**02**/73, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**0.26**	**0**	*e*PB	**Pb**	**00 15 09.4**	**+0.2**
AKAS	**Kas**	**0.35**	**3**	*i* P	**Pb**	**00 15 10.5**	**-0.2**
AKAS				*i* S	**Sb**	**00 15 17.0**	**+0.9**
AKAS	**Kas**	**0.35**	**3**	*i* P	**Pb**	**00 15 10.5**	**-0.2**
AKAS				*i* S	**Sb**	**00 15 17.0**	**+0.9**
FETY	**Fethiye**	**0.85**	**332**	*e*PG	**Pg**	**00 15 18.4**	**-0.7**
FETY				*e*SG	**Sb**	**00 15 30.2**	**-0.3**
FETY	**Fethiye**	**0.85**	**332**	*e*Pg	**Pg**	**00 15 18.4**	**-0.7**
FETY				*e*Sg	**Sb**	**00 15 30.2**	**-0.3**
ELL	**Elmali**	**0.90**	**17**	*e*PG	**Pg**	**00 15 19.0**	**-1.0**
ELL				*e*SG	**Sg**	**00 15 30.9**	**-1.0**
DALT	**Dalyan (Mudla)**	**1.17**	**319**	*e*PN	**Pb**	**00 15 24.1**	**-0.5**
DALT				*e*SN	**Sn**	**00 15 40.3**	**0.0**
DALT	**Dalyan (Mudla)**	**1.17**	**319**	*e*Pn	**Pb**	**00 15 24.1**	**-0.5**
DALT				*e*Sn	**Sn**	**00 15 40.3**	**0.0**
ARG	**Arkhangelos**	**1.23**	**286**	*e*PN	**Pn**	**00 15 24.8**	**-0.5**
ARG				*e*SN	**Sg**	**00 15 41.7**	**-0.5**
ARG	**Arkhangelos**	**1.23**	**286**	*e*Pn	**Pn**	**00 15 24.8**	**-0.5**
ARG				*e*Sn	**Sg**	**00 15 41.7**	**-0.5**
TURN	**Turunc**	**1.26**	**322**	*e*P	**Pg**	**00 15 28.2**	**+1.3**
TURN				*e*S	**Sg**	**00 15 47.3**	**+4.0**
GLHS	**Glhisar (BURDU**	**1.27**	**357**	*e*PN	**Pb**	**00 15 25.9**	**-0.5**
GLHS	**Glhisar (BURDU**	**1.27**	**357**	*e*Pn	**Pb**	**00 15 25.9**	**-0.5**
KORT	**Korkueli**	**1.27**	**29**	*e*P	**Pn**	**00 15 26.1**	**0.0**
KORT				*e*S	**Sg**	**00 15 43.0**	**-0.7**
KORT	**Korkueli**	**1.27**	**29**	*e*S	**Sg**	**00 15 43.0**	**-0.7**
GOLH	**Golhisar**	**1.35**	**359**	*e*P	**Pn**	**00 15 27.0**	**-0.1**
GOLH				*e*S	**Sg**	**00 15 47.4**	**+1.3**
GOLH	**Golhisar**	**1.35**	**359**	*e*P	**Pn**	**00 15 27.0**	**-0.1**
GOLH				*e*S	**Sg**	**00 15 47.4**	**+1.3**
YER	**Yerkesik**	**1.63**	**320**	*e*PN	**Pn**	**00 15 31.1**	**+0.2**
YER	**Yerkesik**	**1.63**	**320**	*e*Pn	**Pn**	**00 15 31.1**	**+0.2**
BCK	**Bucak**	**1.77**	**27**	*e*PN	**Pb**	**00 15 33.8**	**-1.0**
BCK	**Bucak**	**1.77**	**27**	*e*Pn	**Pb**	**00 15 33.8**	**-1.0**
DAT	**Datca**	**1.82**	**298**	*e*PN	**Pn**	**00 15 34.4**	**+0.7**
DAT	**Datca**	**1.82**	**298**	*e*Pn	**Pn**	**00 15 34.4**	**+0.7**
DNZL	**Cakiroluk**	**1.85**	**347**	*e*P	**Pb**	**00 15 36.2**	**-0.1**
DNZL				*e*S	**Sb**	**00 15 59.3**	**-0.2**
DENT	**Denizli**	**1.92**	**347**	*e*PN	**Pn**	**00 15 35.0**	**+0.2**
KARP	**Karpathos**	**2.00**	**261**	*e*PN	**Pn**	**00 15 36.9**	**+0.9**
KARP				*e*SN	**Sn**	**00 16 00.6**	**-0.3**
KARP	**Karpathos**	**2.00**	**261**	*e*Pn	**Pn**	**00 15 36.9**	**+0.9**
KARP				*e*Sn	**Sn**	**00 16 00.6**	**-0.3**
MLSB	**Milas**	**2.02**	**315**	*e*PN	**Pn**	**00 15 37.0**	**+0.6**
MLSB	**Milas**	**2.02**	**315**	*e*Pn	**Pn**	**00 15 37.0**	**+0.6**
ISP	**Isparta**	**2.08**	**21**	*e*PN	**Pn**	**00 15 38.2**	**+1.1**
ISP	**Isparta**	**2.08**	**21**	*e*Pn	**Pn**	**00 15 38.2**	**+1.1**
BODT	**Bodrum**	**2.17**	**303**	*e*PN	**Pn**	**00 15 37.9**	**-0.5**
BODT	**Bodrum**	**2.17**	**303**	*e*Pn	**Pn**	**00 15 37.9**	**-0.5**
AYDN	**Tasoluk**	**2.24**	**323**	*e*P	**Pb**	**00 15 41.5**	**-1.3**
AYDN				*e*S	**Sb**	**00 16 09.8**	**-0.7**
AYDN	**Tasoluk**	**2.24**	**323**	*e*P	**Pb**	**00 15 41.5**	**-1.3**
KHL	**Karahalli**	**2.43**	**359**	*e*PN	**Pn**	**00 15 42.8**	**+0.7**
KULA	**Kula-Manisa**	**2.73**	**345**	*e*PN	**Pn**	**00 15 46.6**	**+0.5**
KULA	**Kula-Manisa**	**2.73**	**345**	*e*Pn	**Pn**	**00 15 46.6**	**+0.5**
SHUT	**Suhut-Afyon**	**2.77**	**16**	*e*PN	**Pn**	**00 15 48.0**	**+1.3**
SHUT	**Suhut-Afyon**	**2.77**	**16**	*e*Pn	**Pn**	**00 15 48.0**	**+1.3**
ZKR	**Zakros**	**2.85**	**255**	*e*PN	**Pn**	**00 15 49.4**	**+1.7**
ZKR				*e*SN	**Sn**	**00 16 21.6**	**-0.3**
ZKR	**Zakros**	**2.85**	**255**	*e*Pn	**Pn**	**00 15 49.4**	**+1.7**
ZKR				*e*Sn	**Sn**	**00 16 21.6**	**-0.3**
LADK	**Ladik-KONYA**	**3.21**	**43**	*e*PN	**Pn**	**00 15 54.3**	**+1.6**
LADK	**Ladik-KONYA**	**3.21**	**43**	*e*Pn	**Pn**	**00 15 54.3**	**+1.6**
NPS	**Neapolis**	**3.30**	**260**	*e*PN	**Pn**	**00 15 54.9**	**+1.1**
NPS				*e*SN	**Sn**	**00 16 31.2**	**-1.6**
NPS	**Neapolis**	**3.30**	**260**	*e*Pn	**Pn**	**00 15 54.9**	**+1.1**
NPS				*e*Sn	**Sn**	**00 16 31.2**	**-1.6**
LAST	**Lasithi**	**3.42**	**259**	*e*PN	**Pn**	**00 15 56.9**	**+1.2**
LAST	**Lasithi**	**3.42**	**259**	*e*Pn	**Pn**	**00 15 56.9**	**+1.2**
TVSB	**Tavsanli**	**3.56**	**358**	*e*PN	**Pn**	**00 15 58.6**	**+1.1**
TVSB	**Tavsanli**	**3.56**	**358**	*e*Pn	**Pn**	**00 15 58.6**	**+1.1**
IDI	**Anoyia**	**3.87**	**262**	*e*PN	**Pn**	**00 16 02.7**	**+0.9**
IDI	**Anoyia**	**3.87**	**262**	*e*Pn	**Pn**	**00 16 02.7**	**+0.9**

*CSEM **19** 00:24:56.3, 42.45N×13.35E, h14km, MD2.0/14, After ROM*
ROM 19 00:24:56.3±0.1, **42.45N**×**13.35E**, **h14**km±1km, **Md2.0**/14, **Ml1.4**/8, **Error ellipse: s-maj=0.8km s-min=0.7km az=58.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.09**	**30**	Pg	Pg	00 24 59.7	+0.2
CAMP				Sg	Sg	00 25 01.9	+0.2
	134nm,0.3s						
CAMP	**Campotosto**	**0.09**	**30**	Pg	Pg	00 24 59.7	+0.2
CAMP				Sg	Sg	00 25 01.9	+0.2
	134nm,0.3s						
AQU	**L'Aquila**	**0.11**	**157**	Pg	Pg	00 24 59.7	+0.1
AQU				Sg	Sg	00 25 02.1	+0.3
	168nm,0.2s						
AQU	**L'Aquila**	**0.11**	**157**	Pg	Pg	00 24 59.7	+0.1
AQU				Sg	Sg	00 25 02.1	+0.3
	168nm,0.2s						
FIAM	**Fiamignano**	**0.25**	**222**	Pg	Pg	00 25 02.0	+0.2
FIAM				Sg	Sb	00 25 06.5	-0.7
	23nm,0.4s						
FIAM	**Fiamignano**	**0.25**	**222**	Pg	Pg	00 25 02.0	+0.2
FIAM				Sg	Sb	00 25 06.5	-0.7
	23nm,0.4s						
TERO	**Teramo**	**0.26**	**49**	Pg	Pg	00 25 01.8	0.0
TERO				Sg	Sg	00 25 06.1	+0.5
	58nm,0.3s						
TERO	**Teramo**	**0.26**	**49**	Pg	Pg	00 25 01.8	0.0
TERO				Sg	Sg	00 25 06.1	+0.5
	58nm,0.3s						
FAGN	**Fagnano**	**0.26**	**137**	Pg	Pg	00 25 02.2	+0.3
FAGN	**Fagnano**	**0.26**	**137**	Pg	Pg	00 25 02.2	+0.3
LNSS	**Leonessa**	**0.27**	**304**	Pg	Pg	00 25 02.4	+0.2
LNSS				Sg	Sb	00 25 07.1	-0.7
	31nm,0.3s						
LNSS	**Leonessa**	**0.27**	**304**	Pg	Pg	00 25 02.4	+0.2
LNSS				Sg	Sb	00 25 07.1	-0.7
	31nm,0.3s						
VCEL	**Villa Celiera**	**0.37**	**99**	Pg	Pg	00 25 04.2	+0.2
VCEL				Sg	Sb	00 25 10.3	-0.4
	50nm,0.5s						
VCEL	**Villa Celiera**	**0.37**	**99**	Pg	Pg	00 25 04.2	+0.2
VCEL				Sg	Sb	00 25 10.3	-0.4
	50nm,0.5s						
NRCA	**Norcia**	**0.42**	**336**	Pg	Pg	00 25 04.7	-0.1
NRCA				Sg	Sb	00 25 11.3	-0.6
	43nm,0.2s						
NRCA	**Norcia**	**0.42**	**336**	Pg	Pg	00 25 04.7	-0.1
NRCA				Sg	Sb	00 25 11.3	-0.6
	43nm,0.2s						
PTQR	**Pietraquaria**	**0.43**	**175**	Pg	Pg	00 25 04.9	-0.2
PTQR				Sg	Sb	00 25 11.8	-0.6
	3.0nm,0.2s						
PTQR	**Pietraquaria**	**0.43**	**175**	Pg	Pg	00 25 04.9	-0.2
PTQR				Sg	Sb	00 25 11.8	-0.6
	3.0nm,0.2s						
MNS	**Montasola**	**0.50**	**262**	Pg	Pg	00 25 06.0	-0.2
MNS				Sg	Sg	00 25 13.3	+0.4
	5.0nm,0.2s						
MNS	**Montasola**	**0.50**	**262**	Pg	Pg	00 25 06.0	-0.2
MNS				Sg	Sg	00 25 13.3	+0.4
	5.0nm,0.2s						
CERT	**Cerreto**	**0.57**	**208**	Pg	Pg	00 25 07.3	-0.3
CERT	**Cerreto**	**0.57**	**208**	Pg	Pg	00 25 07.3	-0.3
INTR	**Introdacqua**	**0.61**	**137**	Pg	Pg	00 25 08.4	+0.1
INTR	**Introdacqua**	**0.61**	**137**	Pg	Pg	00 25 08.4	+0.1
FDMO	**Fiordimonte**	**0.61**	**342**	Pg	Pg	00 25 08.2	-0.2
FDMO	**Fiordimonte**	**0.61**	**342**	Pg	Pg	00 25 08.2	-0.2
CESI	**CESI - Serrava**	**0.64**	**330**	Pg	Pg	00 25 09.0	+0.1
CESI	**CESI - Serrava**	**0.64**	**330**	Pg	Pg	00 25 09.0	+0.1

*CSEM **19** 00:25:42.8, 42.45N×13.36E, h14km, After ROM*
ROM 19 00:25:42.8±0.1, **42.45N**×**13.36E**, **h14**km±1km, **Ml1.4**/4, **Error ellipse: s-maj=1.0km s-min=0.7km az=147.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.09**	**23**	Pg	Pg	00 25 46.5	+0.4
CAMP				Sg	Sg	00 25 48.6	+0.3
	134nm,0.3s						
CAMP	**Campotosto**	**0.09**	**23**	Pg	Pg	00 25 46.5	+0.4
CAMP				Sg	Sg	00 25 48.6	+0.3
	134nm,0.3s						
TERO	**Teramo**	**0.25**	**47**	Pg	Pg	00 25 48.6	+0.3
TERO				Sg	Sg	00 25 52.5	+0.5
	58nm,0.3s						
TERO	**Teramo**	**0.25**	**47**	Pg	Pg	00 25 48.6	+0.3
TERO				Sg	Sg	00 25 52.5	+0.5
	58nm,0.3s						
FIAM	**Fiamignano**	**0.26**	**224**	Pg	Pg	00 25 48.8	+0.3
FIAM				Sg	Sg	00 25 53.0	+0.6
	23nm,0.4s						
FIAM	**Fiamignano**	**0.26**	**224**	Pg	Pg	00 25 48.8	+0.3
FIAM				Sg	Sg	00 25 53.0	+0.6
	23nm,0.4s						
LNSS	**Leonessa**	**0.28**	**302**	Pg	Pg	00 25 49.0	+0.1
LNSS				Sg	Sg	00 25 53.6	+0.5
	31nm,0.3s						
LNSS	**Leonessa**	**0.28**	**302**	Pg	Pg	00 25 49.0	+0.1
LNSS				Sg	Sg	00 25 53.6	+0.5
	31nm,0.3s						
NRCA	**Norcia**	**0.42**	**334**	Pg	Pg	00 25 51.5	+0.1
NRCA				Sg	Sb	00 25 58.0	-0.4
	43nm,0.2s						
NRCA	**Norcia**	**0.42**	**334**	Pg	Pg	00 25 51.5	+0.1
NRCA				Sg	Sb	00 25 58.0	-0.4
	43nm,0.2s						

*ISK **19** 00:28:58.7, 37.49N×30.42E, h8km, MD3.5*
*ISCJB **19** 00:28:59.1±0.5, 37.50N±0.03×30.44E±0.03, h6km±5km, Error ellipse: s-maj=4.8km s-min=3.9km az=40.7*
*CSEM **19** 00:28:59.0±0.1, 37.49N×30.41E, h2km, MD3.5, Error ellipse: s-maj=2.3km s-min=2.0km az=145.0*
*DDA **19** 00:28:59.5, 37.54N×30.41E, h20km, ML3.3*
ISC 19 00:28:59.6±1.1, **37.50N**±0.02×**30.42E**±0.03, **h7**km±10km, **n87**, σ0**59**/97, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCK	**Bucak**	**0.14**	**107**	*e*PG	**Pg**	**00 29 02.7**	**+0.1**
BCK	**Bucak**	**0.14**	**107**	*e*Pg	**Pg**	**00 29 02.7**	**+0.1**
ISP	**Isparta**	**0.33**	**14**	*e*PG	**Pg**	**00 29 06.0**	**-0.1**
ISP				*e*SG	**Sg**	**00 29 11.4**	**+0.9**
ISP	**Isparta**	**0.33**	**14**	*e*Pg	**Pg**	**00 29 06.0**	**-0.1**
ISP				*e*Sg	**Sg**	**00 29 11.4**	**+0.9**
KORT	**Korkueli**	**0.50**	**186**	*i* P	**Pb**	**00 29 09.8**	**-1.2**
KORT				*i* S	**Sb**	**00 29 18.6**	**+0.1**
ANTB	**Antalya**	**0.63**	**163**	*e*PG	**Pg**	**00 29 10.7**	**-1.0**
ANTB	**Antalya**	**0.63**	**163**	*e*Pg	**Pg**	**00 29 10.7**	**-1.0**
GOLH	**Golhisar**	**0.73**	**249**	*e*P	**Pg**	**00 29 12.8**	**-0.9**
GOLH				*e*S	**Sb**	**00 29 25.5**	**+0.3**
GOLH	**Golhisar**	**0.73**	**249**	*e*P	**Pg**	**00 29 12.8**	**-0.9**
GLHS	**Glhisar (BURDU**	**0.81**	**245**	*e*PG	**Pg**	**00 29 14.8**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.81**	**245**	*e*Pg	**Pg**	**00 29 14.8**	**-0.4**
ELL	**Elmali**	**0.86**	**209**	*e*PG	**Pg**	**00 29 15.4**	**-0.7**
ELL	**Elmali**	**0.86**	**209**	*e*Pg	**Pg**	**00 29 15.4**	**-0.7**
SHUT	**Suhut-Afyon**	**1.05**	**6**	*e*PG	**Pg**	**00 29 18.8**	**-1.1**
SHUT	**Suhut-Afyon**	**1.05**	**6**	*e*Pg	**Pg**	**00 29 18.8**	**-1.1**
KHL	**Karahalli**	**1.08**	**319**	*e*PN	**Pg**	**00 29 19.7**	**-0.8**
KHL	**Karahalli**	**1.08**	**319**	*e*Pn	**Pg**	**00 29 19.7**	**-0.8**
DNZL	**Cakiroluk**	**1.11**	**280**	*e*P	**Pg**	**00 29 19.8**	**-1.1**
DNZL				*e*S	**Sn**	**00 29 37.7**	**+0.3**
DNZL	**Cakiroluk**	**1.11**	**280**	*e*P	**Pg**	**00 29 19.8**	**-1.1**
DNZL				*e*S	**Sn**	**00 29 37.7**	**+0.3**
DENT	**Denizli**	**1.13**	**283**	*e*PN	**Pg**	**00 29 21.0**	**-0.3**
DENT	**Denizli**	**1.13**	**283**	*e*Pn	**Pg**	**00 29 21.0**	**-0.3**
KHAL	**Karahalli**	**1.14**	**320**	*e*P	**Pg**	**00 29 20.7**	**-0.8**
KHAL				*e*S	**Sn**	**00 29 39.4**	**+1.4**
KHAL	**Karahalli**	**1.14**	**320**	*e*P	**Pg**	**00 29 20.7**	**-0.8**
KHAL				*e*S	**Sn**	**00 29 39.4**	**+1.4**
BOLV	**Bolvadin**	**1.28**	**19**	*e*P	**Pn**	**00 29 24.4**	**+0.2**
BOLV	**Bolvadin**	**1.28**	**19**	*e*P	**Pn**	**00 29 24.4**	**+0.2**
FETY	**Fethiye**	**1.38**	**231**	*e*PN	**Pn**	**00 29 24.9**	**-0.4**
FETY	**Fethiye**	**1.38**	**231**	*e*Pn	**Pn**	**00 29 24.9**	**-0.4**
AKAS	**Kas**	**1.43**	**208**	*e*P	**Pg**	**00 29 28.4**	**+1.5**
AKAS				*e*S	Sn	00 29 53.7	+8.5
AKAS	**Kas**	**1.43**	**208**	*e*P	**Pg**	**00 29 28.4**	**+1.5**
ALT	**Altintas**	**1.57**	**351**	*e*PN	**Pn**	**00 29 27.6**	**-0.5**
ALT	**Altintas**	**1.57**	**351**	*e*Pn	**Pn**	**00 29 27.6**	**-0.5**
DALT	**Dalyan (Mudla)**	**1.60**	**243**	*e*PN	**Pn**	**00 29 28.2**	**-0.3**
DALT	**Dalyan (Mudla)**	**1.60**	**243**	*e*Pn	**Pn**	**00 29 28.2**	**-0.3**
KONT	**Konya--Tatoy**	**1.60**	**73**	*e*PN	**Pn**	**00 29 27.9**	**-0.5**
KONT	**Konya--Tatoy**	**1.60**	**73**	*e*Pn	**Pn**	**00 29 27.9**	**-0.5**
KDHN	**Kadinhani**	**1.68**	**52**	*e*P	**Pb**	**00 29 30.5**	**-0.5**
KDHN	**Kadinhani**	**1.68**	**52**	*e*P	**

LZH				*e*PP		**PnPn**	**00 49 05.5 +1.3**
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,43nm,4.1s						
LZH				LR	LR		
	comp=N,210nm,11.5s						
LZH				LR	LR		
	comp=E,230nm,10.3s						
LZH				LR	LR		
	comp=Z,300nm,13.6s						
KURBB	**Kurchatov Arra**	**16.68**	**344**	Pn		**Pn**	**00 49 20.9 +0.2**
	comp=Z,0.0nm,0.3s,baz=162,slow=11,SNR=12						
ZALV	**Zalesovo Beam**	**19.16**	**358**	P		**Pn**	**00 49 51.2 +0.1**
	comp=Z,0.2nm,0.3s,baz=184,slow=10,SNR=8.2						
CMAR	**Chiang Mai Arr**	**20.04**	**141**	P		**P**	**00 50 00.1 +0.2**
	baz=322,slow=12,SNR=10.0						
BVAR	**Borovoye Array**	**21.25**	**334**	P		**P**	**00 50 13.9 +1.1**
	comp=Z,1.0nm,0.5s,baz=144,slow=11,SNR=9.4						
AKTO	**Aktyubinsk**	**25.53**	**316**	P		**P**	**00 50 56.0 +0.9**
	comp=Z,1.1nm,0.6s,baz=104,slow=12,SNR=3.5						
BRTR	**Keskin Array B**	**41.33**	**293**	P		**P**	**00 53 12.2 -0.2**
	comp=Z,0.2nm,0.4s,baz=98,slow=8.9,SNR=2.5						
GERES	**GERESS Array B**	**53.59**	**309**	P		**P**	**00 54 46.9 -0.5**
	comp=Z,0.4nm,0.7s,baz=76,slow=5.6,SNR=4.1						
WRA	**Warramunga Arr**	**71.34**	**132**	P		**P**	**00 56 46.4 +0.1**
	comp=Z,1.4nm,0.7s,baz=328,slow=6.1,SNR=4.8						
ASAR	**Alice Springs**	**73.91**	**135**	P		**P**	**00 57 01.6 +0.1**
	comp=Z,0.7nm,0.8s,baz=322,slow=6.8,SNR=7.4						
YKA	**Yellowknife Ar**	**81.66**	**9**	P		**P**	**00 57 46.0 +2.0**
	comp=Z,0.1nm,0.6s,baz=341,slow=5.2,SNR=4.3						

IDC ***19*** *00:54:15.1±1.2,56°.45N×152°.81W,h0km,mb3.5/11, mb1 3.7/12,mb1mx3.6/29,mbtmp3.5/12,ML3.0/1,Error ellipse: s-maj=28.5km s-min=17.4km az=46.0*
NEIC ***19*** *00:54:16.6,56°.21N×152°.39W,h20km,ML3.2(AEIC),After AEIC.*

ISC 19 00:54:22.2±1.9,56°.6N±0°.1×152°.25W±0°.05,h44km±16km, n50,σ1°.963/59,mb3.4/10,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.87**	**319**	*e*Pn		**Pn**		**00 54 36.5**	**-1.4**
OHAK				*e*S		**Sn**		**00 54 52.8**	**+3.4**
KDAK	**Kodiak Island**	**1.23**	**352**	*e*Pn		**Pn**		**00 54 41.2**	**-1.7**
KDAK	**Kodiak Island**	**1.23**	**352**	Pn		**Pn**		**00 54 41.0**	**-1.9**
	11nm,0.3s,baz=190,slow=9.3,SNR=25								
KDAK				Sn		**Sn**		**00 54 58.5**	**+0.3**
	19nm,0.3s,baz=195,slow=24,SNR=6.4								
CAHL	**Cahill**	**2.22**	**313**	P		**Pn**		**00 54 53.8**	**-2.8**
KAKN	**Katmai Knife C**	**2.30**	**320**	P		**Pn**		**00 54 55.7**	**-2.0**
KAPH	**Katmai Pasha**	**2.32**	**332**	P		**Pn**		**00 54 57.3**	**-0.6**
MCNL	**McNeil River**	**2.85**	**338**	P		**Pn**		**00 55 04.3**	**-0.8**
AUP	**Augustine Pinn**	**2.87**	**348**	P		**Pn**		**00 55 05.2**	**-0.2**
AUW	**Augustine West**	**2.88**	**347**	P		**Pn**		**00 55 05.3**	**-0.2**
OPT	**Oil Point**	**3.13**	**351**	P		**Pn**		**00 55 08.7**	**-0.4**
BRLK	**Bradley Lake**	**3.28**	**12**	P		**Pn**		**00 55 09.7**	**-1.4**
BRLK				S		**Sn**		**00 55 52.6**	**+3.7**
ANNW	**Aniakchak Nort**	**3.31**	**279**	P		Pn		00 55 06.6	-4.8
AZAC	**Aniakchak**	**3.31**	**278**	P		Pn		00 55 06.7	-4.8
ILIM	**Iliamna**	**3.54**	**354**	P		**Pn**		**00 55 13.9**	**-0.7**
SEW	**Seward**	**3.84**	**21**	*e*Pn		**Pn**		**00 55 16.8**	**-1.8**
SEW				*e*S		**Sn**		**00 56 00.2**	**-2.2**
RSO	**Redoubt South**	**3.91**	**356**	*e*Pn		**Pn**		**00 55 19.0**	**-0.8**
RSO				*e*S		**Sn**		**00 56 07.0**	**+2.4**
CKL	**Chakachamna La**	**4.64**	**359**	P		**Pn**		**00 55 28.8**	**-0.9**
RC01	**Rabbit Creek A**	**4.72**	**15**	*e*Pn		**Pn**		**00 55 30.0**	**-0.7**
RC01				*e*S		**Sn**		**00 56 21.8**	**-2.3**
SVW2	**Sparrevohn**	**4.86**	**341**	P		**Pn**		**00 55 31.1**	**-1.5**
STLK	**Strandline Lak**	**4.95**	**2**	P		**Pn**		**00 55 33.0**	**-0.9**
EYAK	**Cordova Ski Ar**	**5.24**	**38**	P		**Pn**		**00 55 36.5**	**-1.3**
PMR	**Palmer**	**5.29**	**16**	*e*Pn		**Pn**		**00 55 36.1**	**-2.3**
SKT	**Skwentna**	**5.44**	**4**	P		**Pn**		**00 55 39.9**	**-0.7**
RAGM	**Ragged Mountai**	**5.51**	**43**	P		**Pn**		**00 55 40.4**	**-1.3**
GOAT	**Goat Mountain**	**5.62**	**41**	P		**Pn**		**00 55 42.2**	**-1.0**
GOAT				S		**Sn**		**00 56 48.5**	**+2.0**
SML	**Sawmill**	**5.62**	**19**	*e*Pn		**Pn**		**00 55 42.8**	**-0.4**
SML				S		**Sn**		**00 56 50.1**	**+3.6**
DIV	**Divide**	**5.67**	**34**	*e*Pn		**Pn**		**00 55 42.8**	**-1.1**
DIV				*e*S		**Sn**		**00 56 46.9**	**-0.8**
DT1	**Dutton Round H**	**5.84**	**260**	P		Pn		00 55 38.9	-7.2
KLU	**Klutina**	**5.92**	**31**	P		**Pn**		**00 55 45.8**	**-1.4**
BMRM	**Bremner River**	**5.94**	**39**	*e*Pn		**Pn**		**00 55 47.0**	**-0.5**
	9.1nm,0.5s								
BMRM				*e*S		**Sn**		**00 56 50.3**	**-3.8**
TTO1	**Tatalina**	**6.63**	**345**	P		**Pn**		**00 55 55.0**	**-2.0**
WASW	**Wrangell South**	**6.78**	**34**	P		**Pn**		**00 55 58.6**	**-0.6**
BALM	**Baldy**	**6.82**	**45**	P		**Pn**		**00 55 58.4**	**-1.2**
DHY	**Denali Highway**	**6.97**	**19**	P		**Pn**		**00 56 00.4**	**-1.3**
TRF	**Thorofare Moun**	**6.97**	**7**	*e*Pn		**Pn**		**00 56 02.0**	**+0.3**
	4.6nm,0.8s								
PAX	**Paxson**	**7.27**	**25**	*e*Pn		**Pn**		**00 56 07.0**	**+1.2**
PAX				*e*S		**Sn**		**00 57 28.3**	**+1.4**
PNL	**Peninsula**	**7.48**	**60**	P		**Pn**		**00 56 07.8**	**-0.8**
ILAR	**Eielson Array**	**8.63**	**15**	Pn		**Pn**		**00 56 23.5**	**-0.8**
	0.4nm,0.3s,baz=207,slow=14,SNR=17								
ILAR				Sn		**Sn**		**00 57 59.2**	**-1.0**
	0.2nm,0.3s,baz=223,slow=27,SNR=4.1								
INK	**Inuvik**	**14.52**	**28**	Pn		**Pn**		**00 57 44.9**	**+0.3**
	0.0nm,0.3s,baz=210,slow=11,SNR=3.1								
YKA	**Yellowknife Ar**	**19.76**	**57**	P		**Pn**		**00 58 49.4**	**-0.4**
	0.5nm,0.8s,baz=271,slow=10.0,SNR=10								
NVAR	**Mina Array Bea**	**28.82**	**115**	P		**P**		**01 00 17.8**	**+1.6**
	0.3nm,0.7s,baz=297,slow=10.0,SNR=3.5								
PDAR	**Pinedale Array**	**30.34**	**99**	P		**P**		**01 00 30.9**	**+1.2**
	0.4nm,0.7s,baz=318,slow=4.2,SNR=4.4								
TXAR	**Lajitas Array**	**43.48**	**108**	P		**P**		**01 02 21.6**	**+0.5**
	0.3nm,0.7s,baz=316,slow=5.5,SNR=4.7								
SCHQ	**Schefferville**	**45.18**	**54**	P		**P**		**01 02 35.7**	**+1.4**
	1.5nm,0.6s,baz=291,slow=10,SNR=4.8								
NOA	**NORSAR Array B**	**62.01**	**9**	P		**P**		**01 04 38.1**	**+0.8**
	0.9nm,0.8s,baz=352,slow=6.7,SNR=3.2								
KURBB	**Kurchatov Arra**	**65.22**	**327**	P		**P**		**01 04 56.5**	**-2.1**
	0.1nm,0.3s,baz=26,slow=7.2,SNR=4.1								
BVAR	**Borovoye Array**	**65.30**	**333**	P		**P**		**01 04 58.7**	**-0.4**
	0.6nm,0.7s,baz=31,slow=6.9,SNR=5.7								
MKAR	**Makanchi Array**	**67.38**	**323**	P		**P**		**01 05 11.5**	**-1.0**
	0.2nm,0.5s,baz=38,slow=7.3,SNR=3.4								
GERES	**GERESS Array B**	**74.30**	**10**	P		**P**		**01 05 54.6**	**0.0**
	0.2nm,0.5s,baz=0.0,slow=7.1,SNR=3.4								
BRTR	**Keskin Array B**	**83.94**	**355**	P		**P**		**01 06 46.5**	**-0.9**
	0.3nm,0.8s,baz=336,slow=3.2,SNR=2.8								

ISK ***19*** *00:58:07.8,38°.59N×39°.70E,h5km,MD2.7*
CSEM ***19*** *00:58:09.8±0.9,38°.62N×39°.66E,h10km,MD2.7,Error ellipse: s-maj=15.1km s-min=10.1km az=81.0*
DDA ***19*** *00:58:09.9,38°.53N×39°.65E,h7km,MD2.8*
ISCJB ***19*** *00:58:10.4±0.9,38°.61N±0°.04×39°.64E±0°.06,h6km±12km, Error ellipse: s-maj=8.6km s-min=6.7km az=157.2*

ISC 19 00:58:10.2±1.0,38°.60N±0°.04×39°.64E±0°.04,h13km±9km, n11,σ0°.77/22,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.34**	**229**	*e*PG		**Pg**		**00 58 16.1**	**-1.1**
SVRC				*e*SG		**Sg**		**00 58 23.0**	**+1.1**
SVRC	**Sivrice-ELAZID**	**0.34**	**229**	*e*Pg		**Pg**		**00 58 16.1**	**-1.1**
SVRC				*e*Sg		**Sg**		**00 58 23.0**	**+1.1**
PTK	**Pertek**	**0.35**	**327**	*e*PG		**Pg**		**00 58 16.6**	**-0.7**
PTK				*e*SG		**Sg**		**00 58 22.8**	**+0.8**
PTK	**Pertek**	**0.35**	**327**	*e*Pg		**Pg**		**00 58 16.6**	**-0.7**
PTK				*e*Sg		**Sg**		**00 58 22.8**	**+0.8**
ELZG	**Elazig**	**0.52**	**259**	*e*P		**Pb**		**00 58 21.5**	**+0.1**
ELZG				*e*S		**Sg**		**00 58 28.1**	**+0.7**
ELZG	**Elazig**	**0.52**	**259**	*e*P		**Pb**		**00 58 21.5**	**+0.1**
ELZG				*e*S		**Sg**		**00 58 28.1**	**+0.7**
DIYA	**Diyarbakir**	**0.78**	**150**	*e*P		**Pn**		**00 58 26.4**	**-0.6**
DIYA				*e*S		**Sb**		**00 58 37.0**	**+0.8**
MALT	**Malatya**	**0.99**	**253**	*e*PG		**Pg**		**00 58 28.5**	**-0.9**
MALT				*e*SG		**Sn**		**00 58 44.0**	**+0.1**
MALT	**Malatya**	**0.99**	**253**	*e*Pg		**Pg**		**00 58 28.5**	**-0.9**
MALT				*e*Sg		**Sn**		**00 58 44.0**	**+0.1**
BEST	**Besiri**	**1.47**	**118**	*e*P		**Pn**		**00 58 36.6**	**0.0**
BEST				*e*S		**Sg**		**00 58 57.2**	**-0.3**
MARD	**Mardin**	**1.57**	**145**	*e*P		**Pg**		**00 58 40.3**	**-0.1**
MARD				*e*S		**Sb**		**00 58 59.3**	**+0.2**

KRSC 19 01:08:59.4±1.7,48°.12N×155°.98E,h10km±10km,ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.57**	**2**	*e*P		Pn		01 09 41.6	+0.6
SKR				*i* S		Sn		01 10 12.3	+0.1
MIPR	**Malaya Ipel'ka**	**4.19**	**7**	P		Pn		01 10 04.5	+1.1
MTVR	**Mutnovka**	**4.59**	**17**	P		Pn		01 10 11.4	+2.4
MTVR				*i* S		Sn		01 11 04.2	+1.7
RUS	**Russkaya**	**4.61**	**20**	P		Pn		01 10 11.1	+2.0
RUS				*i* S		Sn		01 11 03.6	+0.9
GRL	**Gorelyy**	**4.63**	**16**	P		Pn		01 10 11.7	+2.1
KOK	**Koryaka**	**5.45**	**17**	P		Pn		01 10 22.6	+1.9
KRER	**Koryakskii**	**5.48**	**18**	P		Pn		01 10 22.6	+1.3
SDLR	**Sedlovina**	**5.48**	**19**	P		Pn		01 10 23.7	+2.4

IDC 19 01:34:03.0±7.0,17°.53S×178°.50W,h441km±76km, mb3.1/7,mb1 3.5/7,mb1mx3.3/18,mbtmp3.1/7,3C-4D, Error ellipse: s-maj=68.9km s-min=25.2km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.73**	**241**	P		P		01 40 47.9	0.0
	2.4nm,0.4s,baz=90,slow=9.4,SNR=12								
WRA	**Warramunga Arr**	**44.62**	**259**	P		P		01 41 34.4	-0.5
	1.9nm,0.5s,baz=96,slow=7.0,SNR=16								
ASAR	**Alice Springs**	**44.81**	**254**	P		P		01 41 36.3	0.0
	19nm,0.6s,baz=90,slow=8.3,SNR=342								
NVAR	**Mina Array Bea**	**79.22**	**44**	P		P		01 45 22.4	+0.8
	0.6nm,0.7s,baz=219,slow=12,SNR=4.1								
ILAR	**Eielson Array**	**85.54**	**13**	P		P		01 45 51.2	-1.7
	0.2nm,0.5s,baz=209,slow=7.2,SNR=3.2								
TXAR	**Lajitas Array**	**85.87**	**58**	P		P		01 45 55.6	+0.1
	0.7nm,0.7s,baz=221,slow=5.4,SNR=9.7								
PDAR	**Pinedale Array**	**87.14**	**43**	P		P		01 46 00.7	-0.6
	0.4nm,0.6s,baz=188,slow=3.0,SNR=4.4								
YKA	**Yellowknife Ar**	**94.03**	**25**	P		P		01 46 32.5	+0.1
	0.1nm,0.5s,baz=232,slow=4.6,SNR=6.9								
MKAR	**Makanchi Array**	**108.81**	**314**	PKiKP		PKiKP		01 51 40.6	-0.5
	0.2nm,0.7s,baz=156,slow=1.6,SNR=5.2								
KWP	**Kalwaria Pacla**	**143.69**	**337**	*i* P		PKPdf		01 52 46.6	-0.1
BURAR	**Bucovina Array**	**144.24**	**332**	*i* P		PKPdf		01 52 49.5	+1.6
TESR		**144.39**	**330**	*i* P		PKPdf		01 52 49.0	+0.9
BRTR	**Keskin Array B**	**144.46**	**315**	PKP		PKPbc		01 52 48.2	0.0
	1.8nm,0.8s,baz=130,slow=4.5,SNR=17								
CFR	**Carailiu**	**144.58**	**327**	*i* P		PKPab		01 52 50.3	+1.8
NIE	**Niedzica**	**144.74**	**339**	*e*PX		PKPab		01 52 50.3	+1.2
TRPA	**Tarpa**	**144.97**	**335**	*i* P		PKPab		01 52 50.3	+0.4
CLL	**Collm**	**145.08**	**347**	*i* P		PKPab		01 52 50.6	+0.4
	comp=Z,5.0nm,0.9s								
UPC	**Upice**	**145.11**	**344**	*e*P		PKPab		01 52 51.1	+0.7
DPC	**Dobruska-Polom**	**145.17**	**343**	*e*P		PKPab		01 52 51.5	+0.8
PVCC	**Panska Ves**	**145.46**	**345**	*e*P		PKPab		01 52 52.1	+0.4
MLR	**Muntele Rosu**	**145.47**	**329**	*i* P		PKPab		01 52 51.9	-0.2
PRU	**Pruhonice**	**145.96**	**345**	*e*P		PKPbc		01 52 52.9	+0.7
GERES	**GERESS Array B**	**147.23**	**345**	PKPbc		PKPbc		01 52 56.3	+0.4
	comp=Z,2.0nm,0.5s,baz=20,slow=2.8,SNR=28								
TORD	**Torodi Ar. Bea**	**175.64**	**183**	PKP		PKPdf		01 53 19.9	-2.4
	comp=Z,1.0nm,1.1s,baz=174,slow=1.4,SNR=2.9								

IDC 19 01:46:35.8±1.7,3°.08N×126°.28E,h0km,mb3.4/4, mb1 3.7/4,mb1mx3.4/23,mbtmp3.5/4,Error ellipse: s-maj=117.1km s-min=22.9km az=69.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.06**	**182**	P		P		01 51 23.3	+1.7
	1.0nm,0.5s,baz=18,slow=11,SNR=6.2								
WRA	**Warramunga Arr**	**24.21**	**161**	P		P		01 51 53.4	-1.0
	1.4nm,0.4s,baz=338,slow=11,SNR=7.6								
ASAR	**Alice Springs**	**27.60**	**165**	P		P		01 52 24.9	-0.2
	0.1nm,0.3s,baz=338,slow=7.4,SNR=5.2								
MKAR	**Makanchi Array**	**57.83**	**326**	P		P		01 56 28.4	-0.9
	0.2nm,0.5s,baz=120,slow=8.6,SNR=4.0								
TORD	**Torodi Ar. Bea**	**122.69**	**288**	PKP		PKPdf		02 05 35.5	+0.8
	0.6nm,1.0s,baz=86,slow=0.7,SNR=3.0								

IDC 19 02:00:37.7±10.0,18°.24S×178°.12W,h647km±144km, mb2.9/8,mb1 3.1/8,mb1mx2.9/21,mbtmp2.9/8,Error ellipse: s-maj=89.5km s-min=42.7km az=158.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.67**	**261**	P		P		02 06 28.5	+0.3
	3.1nm,0.6s,baz=93,slow=10,SNR=7.4								
STKA	**Stephens Creek**	**38.72**	**242**	P		P		02 07 09.0	-0.2
	1.0nm,0.5s,baz=112,slow=11,SNR=3.9								
WRA	**Warramunga Arr**	**44.85**	**260**	P		P		02 07 57.1	-0.1
	2.0nm,0.4s,baz=96,slow=7.6,SNR=14								
ASAR	**Alice Springs**	**44.97**	**255**	P		P		02 07 58.0	-0.1
	2.2nm,0.5s,baz=88,slow=8.0,SNR=51								
FITZ	**Fitzroy Crossi**	**53.25**	**261**	P		P		02 08 59.1	+0.4
	1.8nm,0.9s,baz=114,slow=6.7,SNR=7.8								
NVAR	**Mina Array Bea**	**79.47**	**44**	P		P		02 11 39.6	+0.2
	0.4nm,0.8s,baz=234,slow=7.5,SNR=2.4								
TXAR	**Lajitas Array**	**85.93**	**57**	P		P		02 12 12.0	+0.3
	0.3nm,0.7s,baz=219,slow=7.7,SNR=4.4								
ILAR	**Eielson Array**	**86.14**	**13**	P		P		02 12 11.4	-0.3
	0.1nm,0.4s,baz=219,slow=4.4,SNR=4.4								

MEX 19 02:02:00.1±0.4,16°.20N×98°.10W,h5km±3km,MD3.7,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.20**	**352**	*e*P		Pg		02 02 03.7	-0.4
PNIG				*i* S		Sg		02 02 06.7	-0.1
VHO	**Vista Hermosa**	**1.57**	**56**	*i* P		Pn		02 02 25.8	-3.2
VHO				*i* S		Sn		02 02 45.2	-4.7
UTMO	**Huajuapan**	**1.65**	**10**	*e*P		Pn		02 02 26.2	-3.8
UTMO				*i* S		Sn		02 02 46.8	-5.0
HUIG	**Huatulco**	**1.96**	**102**	*i* P		Pn		02 02 29.8	-4.3
HUIG				*e*S		Sn		02 02 54.5	-4.5
YAIG	**Yautepec**	**2.81**	**341**	*i* P		Pn		02 02 43.4	-2.5
YAIG				*i* S		Sn		02 03 15.8	-4.5
ARIG	**Puente Sto Nin**	**2.98**	**314**	*i* P		Pn		02 02 46.0	-2.2
ARIG				*i* S		Sn		02 03 21.4	-3.0

IDC 19 02:16:05.5±7.1,7°.54S×129°.19E,h0km,mb3.8/1, mb1 3.6/3,mb1mx3.3/19,mbtmp3.4/3,ML3.3/1,Error ellipse: s-maj=114.9km s-min=84.7km az=95.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.30**	**158**	Pn		Pn		02 19 15.7	0.0
	0.2nm,0.3s,baz=337,slow=13,SNR=3.2								
WRA				Sn		Sn		02 21 40.9	-3.6
	0.2nm,0.3s,baz=335,slow=24,SNR=4.4								
ASAR	**Alice Springs**	**16.66**	**165**	Pn		Pn		02 20 00.4	-0.2
	0.1nm,0.3s,baz=349,slow=11,SNR=7.0								
ASAR				Sn		Sn		02 23 07.8	+1.4
	0.1nm,0.3s,baz=331,slow=15,SNR=3.3								
STKA	**Stephens Creek**	**26.84**	**156**	P		P		02 21 47.7	0.0
	0.5nm,0.3s,baz=325,slow=12,SNR=2.6								

IDC ***19*** *02:22:50.7±1.6,1°.31S×99°.76E,h0km,mb3.8/7,mb1 3.8/8, mb1mx3.6/26,mbtmp3.8/8,ML3.5/1,Error ellipse: s-maj=77.6km s-min=17.0km az=60.0*
DJA ***19*** *02:22:54.7±0.4,1°.5±2°×10°.0E±°,h10km,M4.1/10, MLv4.1/10*

ISC 19 02:22:52.4±1.9,1°.11S±0°.05×99°.88E±0°.07,h3km±14km, n19,σ1°.24/22,mb4.1/7,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PDSI	**Padang**	**0.62**	**72**	P		**Pg**		**02 23 04.3**	**0.0**
PDSI				S		**Sg**		**02 23 11.9**	**-0.4**
SISI	**Saibi**	**0.82**	**255**	P		**Pn**		**02 23 11.2**	**+0.4**
PPI	**Padang Panjang**	**0.83**	**39**	P		**Pg**		**02 23 08.0**	**-0.4**
PPI				S		**Sg**		**02 23 18.4**	**-0.8**
BKNI	**Bangkinang**	**1.84**	**39**	P		**Pb**		**02 23 26.1**	**-0.6**
BKNI				S		**Sg**		**02 23 51.1**	**-0.5**
KRJI	**Kerinci**	**1.86**	**122**	P		**Pg**		**02 23 27.8**	**-0.3**
KRJI				S		**Sg**		**02 23 53.1**	**+0.8**
MNSI	**Mandailing Nat**	**1.91**	**351**	P		**Pb**		**02 23 27.9**	**-0.1**
MNSI				S		**Sb**		**02 23 53.8**	**+1.5**
RGRI	**Rengat**	**2.57**	**73**	P		Pn		02 23 30.1	-4.9
GSI	**Gunungsitoli**	**3.32**	**316**	P		**Pn**		**02 23 47.7**	**+2.4**
PSI	**Prapat**	**4.00**	**346**	P		**Pn**		**02 23 56.6**	**+1.8**
PSI	**Prapat**	**4.00**	**346**	Pn		**Pn**		**02 23 56.0**	**+1.3**
	3.0nm,0.3s,baz=160,slow=13,SNR=11								
PSI				Lg		Lg		02 24 59.0	
	baz=56,slow=23,SNR=2.3								
MNAI	**Manna**	**4.46**	**136**	P		**Pn**		**02 24 03.6**	**+2.6**
WRA	**Warramunga Arr**	**38.55**	**121**	P		**P**		**02 30 15.6**	**-1.1**
	0.4nm,0.6s,baz=304,slow=9.2,SNR=4.7								
ASAR	**Alice Springs**	**39.88**	**127**	P		**P**		**02 30 26.1**	**-1.7**
	0.3nm,0.7s,baz=300,slow=7.3,SNR=5.1								
MKAR	**Makanchi Array**	**50.14**	**344**	P		**P**		**02 31 49.2**	**0.0**
	0.9nm,0.3s,baz=160,slow=8.5,SNR=20								
KURBB	**Kurchatov Arra**	**54.66**	**343**	P		**P**		**02 32 22.8**	**+0.2**
	0.3nm,0.6s,baz=162,slow=7.1,SNR=6.5								
ZALV	**Zalesovo Beam**	**56.27**	**349**	P		**P**		**02 32 33.4**	**-0.7**
	1.3nm,0.6s,baz=170,slow=6.5,SNR=3.9								
BVAR	**Borovoye Array**	**59.31**	**340**	P		**P**		**02 32 54.5**	**-1.0**
	1.0nm,0.6s,baz=152,slow=7.9,SNR=4.6								
FINES	**FINESS Array B**	**83.27**	**332**	P		**P**		**02 35 20.1**	**-0.1**
	1.1nm,0.8s,baz=94,slow=4.2,SNR=3.5								
TXAR	**Lajitas Array**	**144.07**	**36**	PKP		PKPbc		02 42 28.1	-0.2
	0.2nm,0.5s,baz=341,slow=1.9,SNR=6.1								

ISCJB ***19*** *02:25:24.5±0.5,29°.95N±0°.05×70°.22E±0°.04,h12km, mb3.6/13,MS3.3/2,Error ellipse: s-maj=7.9km s-min=4.1km az=27.4*
IDC ***19*** *02:25:24.6±0.9,30°.02N×70°.22E,h0km,mb3.6/13, mb1 3.8/15,mb1mx3.7/33,mbtmp3.7/15,ML3.9/2,MS3.1/3, Ms1 3.2/3,ms1mx2.7/35,Error ellipse: s-maj=20.9km s-min=18.8km az=59.0*

ISC 19 02:25:26.1±0.7,29°.99N±0°.06×70°.20E±0°.06,h12km,n39, σ1°.69/43,mb3.7/13,1D,Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
THW	**Thamme Wali**	**3.09**	**25**	P		**Pn**		**02 26 16.1**	**+1.3**
CEP	**Cherat**	**4.09**	**20**	P		**Pn**		**02 26 29.9**	**+1.3**
CEP				S		**Sn**		**02 27 16.0**	**-0.5**
AJM	**Ajmer**	**5.25**	**131**	*ex*		**Pn**		**02 26 46.0**	**+1.5**
AJM				*ex*		x		02 28 17.0	
KHET	**Khetri**	**5.27**	**110**	*e*P		**Pn**		**02 26 45.5**	**+0.9**
KHET				*e*S		**Sn**		**02 27 45.2**	**-0.1**
KHET				AML		AML		02 28 22.5	
	comp=N,210nm,0.5s								
KHET				AML		AML		02 28 26.1	
	comp=E,286nm,0.4s								
THN	**Thein Dam**	**5.32**	**61**	*e*P		**Pn**		**02 26 46.0**	**+0.7**
THN				*ex*		x		02 27 47.8	
BHK	**Bhakra**	**5.54**	**74**	*e*S		**Sn**		**02 27 56.0**	**+3.9**
KUDL	**Kundal**	**5.80**	**107**	*e*P		**Pn**		**02 26 53.3**	**+1.3**
KUDL				*e*S		**Sn**		**02 27 57.5**	**-1.0**
KUDL				AML		AML		02 28 35.5	
	comp=E,41nm,0.4s								
KUDL				AML		AML		02 28 37.2	
	comp=N,47nm,0.3s								
SDNR	**Sundarnagar**	**6.02**	**74**	*e*P		**Pn**		**02 26 58.0**	**+3.0**
SDNR				*e*S		**Sn**		**02 28 05.0**	**+1.1**
SMLA	**Simla**	**6.12**	**78**	*i* P		Pn		02 26 59.6	+3.3
SMLA				*e*S		**Sn**		**02 28 08.5**	**+2.3**
SMLA				AML		AML		02 28 54.0	

HMTT	**Tlapaneco**	**2.66**	**76**	*e*P		**Pn**	**02 40 57.5**	**-0.7**
HMTT				*i* S		**Sn**	**02 41 29.7**	**-0.6**
YAIG	**Yautepec**	**2.68**	**51**	*i* P		**Pn**	**02 40 58.3**	**-0.3**
YAIG				*e*S		**Sn**	**02 41 30.8**	**-0.2**
CHVM	**Chichinautzin**	**2.77**	**46**	*e*P		**Pn**	**02 40 59.6**	**-0.4**
CHVM				*i* S		**Sn**	**02 41 32.6**	**-0.9**
MZVM		**2.78**	**44**	*i* P		**Pn**	**02 41 00.4**	**+0.5**
MZVM				*i* S		**Sn**	**02 41 33.7**	**+0.4**
SZVM	**Salazar**	**2.79**	**40**	*i* P		**Pn**	**02 41 00.6**	**+0.3**
SZVM				*i* S		**Sn**	**02 41 33.0**	**-0.9**
UNM	**Universidad Na**	**2.92**	**43**	*i* P		**Pn**	**02 41 01.6**	**-0.3**
UNM				*i* S		**Sn**	**02 41 36.5**	**-0.5**
AZVM	**Cuida Lopez Ma**	**3.04**	**38**	*i* P		**Pn**	**02 41 03.4**	**-0.3**
AZVM				*i* S		**Sn**	**02 41 39.9**	**-0.3**
VCVM	**Valle de Chalc**	**3.04**	**46**	*i* S		**Sn**	**02 41 39.1**	**-1.1**
PBIG	**Penon de los B**	**3.06**	**42**	*i* P		**Pn**	**02 41 03.7**	**+0.1**
PBIG				*i* S		**Sn**	**02 41 40.3**	**+0.3**
PNIG	**Pinotepa**	**3.11**	**104**	*i* P		**Pn**	**02 41 04.3**	**-0.1**
PNIG				*e*S		**Sn**	**02 41 41.1**	**-0.4**
PTVM	**Pico Tres Padr**	**3.15**	**40**	*i* P		**Pn**	**02 41 05.1**	**-0.1**
PTVM				*i* S		**Sn**	**02 41 43.2**	**+0.3**
UTMO	**Huajuapan**	**3.37**	**78**	*i* P		**Pn**	**02 41 08.0**	**-0.1**
UTMO				*i* S		**Sn**	**02 41 48.7**	**+0.6**
IIO	**Organos**	**3.41**	**45**	*e*P		**Pn**	**02 41 08.7**	**-0.1**
IIO				*i* S		**Sn**	**02 41 48.3**	**-0.9**
VTVM	**Tizayuca**	**3.50**	**42**	*i* P		**Pn**	**02 41 09.6**	**-0.4**
VTVM				*i* S		**Sn**	**02 41 51.1**	**-0.3**
TPIG	**Tehuac#an**	**3.92**	**71**	*i* P		**Pn**	**02 41 16.5**	**+0.9**
TPIG				*i* S		**Sn**	**02 42 01.1**	**-0.6**
VHO	**Vista Hermosa**	**4.34**	**91**	*i* P		**Pn**	**02 41 22.4**	**+1.0**
VHO				*i* S		**Sn**	**02 42 12.1**	**+0.1**
HUIG	**Huatulco**	**5.15**	**105**	*i* P		**Pn**	**02 41 32.7**	**+0.3**
HUIG				*i* S		**Sn**	**02 42 31.3**	**-0.4**
CMIG	**Matias Romero**	**6.11**	**90**	*e*P		**Pn**	**02 41 46.6**	**+1.0**
CMIG				*i* S		**Sn**	**02 42 56.3**	**+1.0**
CMIG	**Matias Romero**	**6.11**	**90**	P		**Pn**	**02 41 46.4**	**+0.8**
	0.3nm,0.3s,baz=265,slow=15,SNR=4.6							
CMIG				S		**Sn**	**02 42 50.3**	**-5.0**
	1.2nm,0.3s,baz=253,slow=22,SNR=4.5							
CMIG				LR	LR		02 44 29.1	
	comp=Z,102nm,19.6s,baz=130,slow=43							
TXAR	**Lajitas Array**	**12.29**	**350**	P	P		02 43 17.6	-5.1
	0.0nm,0.3s,baz=169,slow=14,SNR=4.8							
ANMO	**Albuquerque**	**18.29**	**346**	P		**P**	**02 44 31.7**	**+2.3**
	0.1nm,0.3s,baz=168,slow=13,SNR=4.3							
NVAR	**Mina Array Bea**	**25.89**	**328**	P		**P**	**02 45 49.4**	**+1.9**
	1.6nm,0.7s,baz=148,slow=11,SNR=14							
YKA	**Yellowknife Ar**	**46.22**	**351**	P		**P**	**02 48 39.8**	**-0.2**
	1.0nm,0.8s,baz=159,slow=7.2,SNR=19							

*ISCJB **19** 02:43:03.3±0.4,34.78N±0.04×85.65E±0.09,h33km, mb3.7/13,MS3.5/5,Error ellipse: s-maj=10.1km s-min=5.3km az=172.9*
*BJI **19** 02:43:04.3,34.85N×85.05E,h14km,mB4.3/2,mb4.4/5, Ms4.3/2,Ms7 4.0/3*
*IDC **19** 02:43:04.2±5.5,34.59N×85.58E,h33km±42km,mb3.6/12, mb1 3.8/17,mb1mx3.7/32,mbtmp3.6/17,ML3.4/4,MS3.5/4, Ms1 3.5/4,ms1mx3.2/18,Error ellipse: s-maj=24.6km s-min=14.6km az=34.0*

ISC 19 02:43:05.5±0.6,34.76N±0.08×85.50E±0.07,h35km,n34, σ1s81/34,mb3.7/13,MS3.5/5,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DANN	**Dangsing**	**6.56**	**194**	*e*P		**Pn**	**02 44 41.6**	**+1.8**
	49nm,0.7s							
GUN	**Gumba**	**6.83**	**177**	*e*P		**Pn**	**02 44 44.5**	**+0.9**
	35nm,0.4s							
KKN	**Kakani**	**6.95**	**182**	*e*P		**Pn**	**02 44 47.9**	**+2.8**
	39nm,0.5s							
LSA	**Lhasa**	**6.95**	**135**	Pn		Pn	02 44 50.0	+4.6
PYUN	**Piuthan**	**6.97**	**199**	*e*P		**Pn**	**02 44 44.6**	**-0.8**
	27nm,0.5s							
DMN	**Daman**	**7.13**	**183**	*e*P		**Pn**	**02 44 49.6**	**+1.9**
	27nm,0.5s							
KOLN	**Koldanda**	**7.15**	**194**	*e*P		**Pn**	**02 44 48.4**	**+0.5**
	20nm,0.6s							
PKIN	**Phulchoki**	**7.16**	**181**	*e*P		**Pn**	**02 44 50.2**	**+2.2**
	28nm,0.4s							
PKI	**Pulchoki**	**7.17**	**181**	*e*P		**Pn**	**02 44 49.7**	**+1.5**
	48nm,0.4s							
TAPN	**Taplejung**	**7.62**	**165**	*e*P		**Pn**	**02 44 54.1**	**-0.3**
	12nm,0.5s							
RAMN	**Ramite**	**7.84**	**173**	*e*P		**Pn**	**02 44 56.5**	**-0.9**
	25nm,0.5s							
SHL	**Shillong**	**10.70**	**147**	*ex*		**Pn**	**02 45 39.0**	**+2.6**
AAK	**Ala-Archa**	**11.64**	**316**	Pn		**Pn**	**02 45 50.7**	**+1.4**
	0.1nm,0.3s,baz=136,slow=7.5,SNR=13							
MKAR	**Makanchi Array**	**12.27**	**350**	Pn		**Pn**	**02 45 57.7**	**+0.1**
	0.2nm,0.3s,baz=163,slow=14,SNR=19							
LZH	**Lanzhou**	**15.02**	**80**	*e*P		**Pn**	**02 46 36.5**	**+1.1**
LZH				pP		**P**	**02 46 39.8**	**-0.6**
LZH				sP		sP	02 46 41.3	-1.3
LZH				*e*PP		**pP**	**02 46 48.3**	**-1.2**
LZH				pmax		pmax		
	comp=Z,23nm,1.0s							
LZH				pmax		pmax		
	comp=Z,54nm,4.2s							
LZH				LR		LR		
	comp=N,240nm,10.6s							
LZH				LR		LR		
	comp=E,270nm,11.3s							
LZH				LR		LR		
	comp=Z,310nm,14.0s							
KURBB	**Kurchatov Arra**	**16.65**	**344**	Pn		**Pn**	**02 46 56.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=160,slow=11,SNR=13							
ZALV	**Zalesovo Beam**	**19.19**	**359**	P		**Pn**	**02 47 27.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=173,slow=13,SNR=11							
XAN	**Xi'an**	**19.34**	**85**	P		**P**	**02 47 26.8**	**-1.2**
XAN				pP		**Pn**	**02 47 31.9**	**+2.7**
XAN				pmax		pmax		
	comp=Z,1.0nm,0.9s							
XAN				LR		LR		
	comp=N,200nm,16.4s							
XAN				LR		LR		
	comp=E,67nm,15.4s							
XAN				LR		LR		
	comp=Z,53nm,13.3s							
CMAR	**Chiang Mai Arr**	**20.17**	**140**	P		**P**	**02 47 34.6**	**-2.4**
	comp=Z,0.6nm,0.3s,baz=321,slow=12,SNR=9.9							
CMAR				LR		LR	02 56 11.5	
	comp=Z,119nm,18.4s,baz=180,slow=39							
SONM	**Songino Array**	**20.34**	**44**	LR		LR	02 56 17.4	
	comp=Z,128nm,18.1s,baz=248,slow=39							
BVAR	**Borovoye Array**	**21.18**	**334**	P		**P**	**02 47 48.8**	**+1.1**
	comp=Z,3.2nm,0.7s,baz=146,slow=12,SNR=25							
AKTO	**Aktyubinsk**	**25.39**	**317**	P		**P**	**02 48 30.5**	**+1.1**
	comp=Z,1.7nm,0.7s,baz=115,slow=9.7,SNR=9.0							
QIZ	**Qiongzhong**	**26.67**	**120**	P		P	02 48 46.8	+5.5
QIZ				S		**S**	**02 53 19.9**	**+5.5**
QIZ				pmax		pmax		
	comp=Z,23nm,1.7s							
QIZ				LR		LR		
	comp=Z,270nm,10.4s							
KBZ	**Khabaz**	**33.87**	**298**	LR		LR	03 06 22.8	
	comp=Z,96nm,20.0s,baz=193,slow=41							
KSRS	**Korea Array**	**34.18**	**73**	P		**P**	**02 49 46.9**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=273,slow=9.1,SNR=4.3							
BRTR	**Keskin Array B**	**41.11**	**293**	P		**P**	**02 50 45.7**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=105,slow=7.8,SNR=6.6							
BRTR				LR		LR	03 12 17.8	
	comp=Z,59nm,18.4s,baz=99,slow=42							
MJAR	**Matsushiro Arr**	**42.43**	**72**	P		**P**	**02 50 54.7**	**-2.2**
	comp=Z,0.5nm,0.3s,baz=281,slow=9.6,SNR=3.6							
NOA	**NORSAR Array B**	**52.82**	**324**	P		**P**	**02 52 18.7**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=87,slow=7.5,SNR=3.3							
GERES	**GERESS Array B**	**53.42**	**309**	P		**P**	**02 52 22.8**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=79,slow=6.9,SNR=9.3							
WRA	**Warramunga Arr**	**71.50**	**132**	P		**P**	**02 54 21.7**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=325,slow=6.6,SNR=5.8							
ILAR	**Eielson Array**	**72.70**	**21**	P		**P**	**02 54 29.2**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=311,slow=5.1,SNR=14							
ASAR	**Alice Springs**	**74.06**	**135**	P		**P**	**02 54 36.0**	**-2.0**
	comp=Z,0.7nm,0.8s,baz=312,slow=5.5,SNR=6.7							
TORD	**Torodi Ar. Bea**	**77.59**	**277**	P		**P**	**02 54 56.7**	**-1.8**
	comp=Z,0.2nm,0.5s,baz=67,slow=3.6,SNR=2.2							
YKA	**Yellowknife Ar**	**81.74**	**9**	P		**P**	**02 55 19.2**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=336,slow=5.2,SNR=10							

*ISCJB **19** 02:43:44.5±0.5,34.66N±0.08×85.48E±0.09,h33km, mb4.0/20,Error ellipse: s-maj=13.5km s-min=9.0km az=38.5*

*MOS **19** 02:43:44.8±1.0,34.71N×85.51E,h33km,mb4.2/17,Error ellipse: s-maj=20.2km s-min=10.1km az=109.3*
*IDC **19** 02:43:50.4±3.2,34.78N×85.57E,h68km±29km,mb3.7/17, mb1 3.9/21,mb1mx3.8/32,mbtmp3.8/21,ML3.7/4,MS3.1/1, Ms1 3.1/1,ms1mx2.9/22,Error ellipse: s-maj=21.8km s-min=12.6km az=32.0*

ISC 19 02:43:46.6±0.8,34.6N±0.1×85.51E±0.09,h35km,n42, σ1s03/37,mb4.1/20,3C,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AAK	**Ala-Archa**	**11.75**	**316**	P		**Pn**	**02 46 32.6**	**+0.8**
AAK	**Ala-Archa**	**11.75**	**316**	P		**Pn**	**02 46 32.6**	**+0.8**
	0.3nm,0.3s,baz=122,slow=12,SNR=8.6							
GTA	**Gaotai**	**12.39**	**63**	*e*P		P	02 46 56.8	+4.7
GTA				pP		Pn	02 47 00.5	+20
GTA				sP			02 47 02.8	
GTA				pmax		pmax		
	comp=Z,3.0nm,1.2s							
MKAR	**Makanchi Array**	**12.40**	**350**	P		**Pn**	**02 46 40.7**	**+0.2**
MKAR				MLR		MLR		
	comp=Z,89nm,18.1s							
MKAR	**Makanchi Array**	**12.40**	**350**	P		**Pn**	**02 46 40.7**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=158,slow=13,SNR=9.9							
MKAR				LR		LR	02 52 17.3	
	comp=Z,89nm,18.1s,baz=172,slow=41							
LZH	**Lanzhou**	**15.03**	**79**	*e*P		**P**	**02 47 23.5**	**+2.0**
LZH				pP		**pP**	**02 47 31.0**	**+0.3**
LZH				sP		sP	02 47 34.1	-1.0
LZH				pmax		pmax		
	comp=Z,21nm,1.3s							
KURBB	**Kurchatov Arra**	**16.78**	**344**	P		**Pn**	**02 47 39.3**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=12,slow=22,SNR=18							
KURK	**Kurchatov**	**16.85**	**345**	*ce*P		**P**	**02 47 44.6**	**+3.2**
KURK				pmax		pmax		
	comp=Z,10.0nm,0.8s							
ZALV	**Zalesovo Beam**	**19.33**	**359**	P		**Pn**	**02 48 08.9**	**-1.0**
ZALV	**Zalesovo Beam**	**19.33**	**359**	P		**Pn**	**02 48 08.9**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=179,slow=11,SNR=7.7							
CMAR	**Chiang Mai Arr**	**20.05**	**140**	P		Pn	02 48 19.7	+0.9
	comp=Z,4.1nm,0.6s,baz=321,slow=9.5,SNR=9.7							
NVS	**Novosibirsk**	**20.28**	**356**	*e*P		Pn	02 48 20.2	-0.9
NVS				pmax		pmax		
	comp=N,5.0nm,1.2s							
NVS				pmax		pmax		
	comp=Z,5.0nm,1.2s							
SONM	**Songino Array**	**20.43**	**43**	P		Pn	02 48 22.4	-0.8
	comp=Z,3.2nm,1.0s,baz=251,slow=9.0,SNR=3.7							
BVAR	**Borovoye Array**	**21.31**	**334**	P		**P**	**02 48 30.4**	**+0.2**
BVAR				pmax		pmax		
	comp=Z,7.0nm,0.7s							
BVAR	**Borovoye Array**	**21.31**	**334**	P		**P**	**02 48 30.4**	**+0.2**
	comp=Z,7.3nm,0.7s,baz=144,slow=11,SNR=14							
BRVK	**Borovoye**	**21.37**	**334**	*ce*P		P	02 48 37.8	+7.0
BRVK				pmax		pmax		
	comp=Z,7.0nm,0.8s							
AKTO	**Aktyubinsk**	**25.49**	**317**	P		**P**	**02 49 11.7**	**+0.3**
AKTO				pmax		pmax		
	comp=Z,3.0nm,0.6s							
AKTO	**Aktyubinsk**	**25.49**	**317**	P		**P**	**02 49 11.7**	**+0.3**
	comp=Z,2.9nm,0.6s,baz=131,slow=11,SNR=6.6							
KSRS	**Korea Array**	**34.20**	**73**	P		**P**	**02 50 27.9**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=284,slow=9.1,SNR=5.3							
BRTR	**Keskin Array B**	**41.17**	**293**	P		**P**	**02 51 29.2**	**+1.4**
	comp=Z,1.3nm,0.9s,baz=95,slow=7.4,SNR=7.1							
MJAR	**Matsushiro Arr**	**42.46**	**72**	P		**P**	**02 51 37.3**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=285,slow=8.8,SNR=4.2							
AKASG	**Malin Array Be**	**43.32**	**310**	P		**P**	**02 51 44.3**	**-0.7**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.5s							
AKASG	**Malin Array Be**	**43.32**	**310**	P		**P**	**02 51 44.3**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=80,slow=7.7,SNR=4.1							
ARCES	**ARCESS Array B**	**47.59**	**336**	P		**P**	**02 52 19.6**	**+1.1**
	comp=Z,2.7nm,0.8s,baz=76,slow=5.1,SNR=3.7							
SEY	**Seymchan**	**49.37**	**34**	*ce*P		P	02 52 37.1	+4.8
NB2	**NORSAR Subarra**	**52.94**	**324**	P		**P**	**02 52 58.0**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=84,slow=7.4							
NOA	**NORSAR Array B**	**52.94**	**324**	P		**P**	**02 52 58.2**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=84,slow=7.5,SNR=5.0							
GERES	**GERESS Array B**	**53.51**	**309**	P		**P**	**02 53 03.5**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=75,slow=5.8,SNR=8.9							
LPG	**La Plagne**	**59.00**	**306**	*e*P		**P**	**02 53 42.8**	**-0.2**
	comp=Z,6.6nm,0.9s							
LPL	**La Plagne**	**59.00**	**306**	*e*P		**P**	**02 53 42.7**	**-0.3**
	comp=Z,4.4nm,0.6s							
BAIF	**Baives**	**59.15**	**312**	*e*P		**P**	**02 53 43.5**	**-0.1**
SFTF	**Sexfontaines**	**59.22**	**310**	*e*P		**P**	**02 53 43.6**	**-0.6**
ORIF	**Oris-en-Rattie**	**59.77**	**306**	*e*P		**P**	**02 53 46.1**	**-2.1**
SSF	**Saint Saulge**	**60.58**	**309**	*e*P		**P**	**02 53 52.7**	**-0.9**
	comp=Z,8.3nm,1.1s							
AVF	**Avril sur Loir**	**60.78**	**309**	*e*P		**P**	**02 53 55.0**	**+0.1**
	comp=Z,10nm,1.1s							
TCF	**Toulx Ste Croi**	**61.69**	**309**	*e*P		**P**	**02 54 00.7**	**-0.4**
ESDC	**Sonseca Array**	**68.56**	**304**	P		**P**	**02 54 45.1**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=60,slow=5.9,SNR=4.6							
WRA	**Warramunga Arr**	**71.40**	**132**	P		**P**	**02 55 04.0**	**+0.7**
	comp=Z,2.4nm,0.6s,baz=326,slow=6.3,SNR=10.0							
ILAR	**Eielson Array**	**72.82**	**21**	P		**P**	**02 55 10.3**	**-0.9**
	comp=Z,1.7nm,0.9s,baz=309,slow=4.9,SNR=12							
ASAR	**Alice Springs**	**73.96**	**134**	P		**P**	**02 55 19.3**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=325,slow=5.8,SNR=9.9							
TORD	**Torodi Ar. Bea**	**77.62**	**277**	P		**P**	**02 55 39.5**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=46,slow=4.9,SNR=3.1							
YKA	**Yellowknife Ar**	**81.87**	**9**	P		**P**	**02 56 00.4**	**-1.5**
	comp=Z,1.1nm,0.9s,baz=334,slow=5.6,SNR=11							

MEX 19 02:54:33.7±0.9,18.12N×101.73W,h26km±14km,MD4.1, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.57**	**153**	*e*P		Pb	02 54 42.7	-2.4
ZIIG				*i* S		Sb	02 54 51.4	-1.4
ARIG	**Puente Sto Nin**	**1.33**	**83**	*e*P		Pn	02 54 53.8	-2.9
ARIG				*i* S		Sn	02 55 09.0	-4.5
MMIG	**Aquila**	**1.54**	**277**	*e*P		Pn	02 54 57.0	-2.5
MMIG				*i* S		Sn	02 55 15.4	-3.3
CAIG	**El Cayaco**	**1.76**	**127**	*e*P		Pn	02 55 00.8	-1.7
CAIG				*i* S		Sn	02 55 20.1	-3.9
MEIG	**Mezcala**	**2.02**	**95**	*e*P		Pn	02 55 04.8	-1.4
MEIG				*i* S		Sn	02 55 28.2	-2.6
ACX	**Acapulco**	**2.18**	**124**	*i* P		Pn	02 55 05.8	-2.5
ACX				*i* S		Sn	02 55 29.8	-4.7
YAIG	**Yautepec**	**2.64**	**73**	*i* P		Pn	02 55 13.0	-1.8
YAIG				*i* S		Sn	02 55 42.9	-3.3
UTMO	**Huajuapan**	**3.75**	**94**	*i* P		Pn	02 55 28.7	-1.6
UTMO				*i* S		Sn	02 56 11.2	-2.6
PNIG	**Pinotepa**	**3.85**	**116**	*i* P		Pn	02 55 29.1	-2.2
PNIG				*i* S		Sn	02 56 13.6	-2.2
VHO	**Vista Hermosa**	**4.88**	**102**	*i* P		Pn	02 55 44.2	-1.5
VHO				*i* S		Sn	02 56 39.1	-2.5

*CSEM **19** 02:57:41.2,37.20N×21.49E,h23km,ML2.1/2,After THE*
THE 19 02:57:41.2,37.20N±21.49E,h23km±1km,ML2.1/2,Error ellipse: s-maj=1.7km s-min=0.5km az=89.0,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ITM	**Ithomi**	**0.35**	**93**	P		Pb	02 57 48.7	-0.2
ITM				S		Sb	02 57 54.5	+0.4
ITM	**Ithomi**	**0.35**	**93**	P		Pb	02 57 48.7	-0.2
ITM				S		Sb	02 57 54.5	+0.4
PYL	**PYLOS**	**0.36**	**146**	P		Pb	02 57 49.2	+0.1
PYL				S		Sb	02 57 54.8	+0.3
PYL	**PYLOS**	**0.36**	**146**	P		Pb	02 57 49.2	+0.1
PYL				S		Sb	02 57 54.8	+0.3
AMT	**Artemida-Makis**	**0.38**	**28**	P		Pb	02 57 49.0	-0.3
AMT				S		Sb	02 57 55.3	+0.4
AMT	**Artemida-Makis**	**0.38**	**28**	P		Pb	02 57 49.0	-0.3
AMT				S		Sb	02 57 55.3	+0.4
GUR	**Goura**	**1.00**	**42**	P		Pn	02 57 59.1	-0.9
GUR				S		Sb	02 58 12.3	-0.6
GUR	**Goura**	**1.00**	**42**	P		Pn	02 57 59.1	-0.9
GUR				S		Sb	02 58 12.3	-0.6

*CSEM **19** 02:57:57.3,38.29N×22.66E,h12km,ML1.1/4,After THE*
THE 19 02:57:57.3,38.29N×22.66E,h12km±2km,ML1.1/4,Error ellipse: s-maj=2.2km s-min=0.5km az=316.0,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DSF	**Desfina**	**0.16**	**318**	P		Pg	02 58 00.9	-0.2
DSF				S		Sg	02 58 03.9	+0.1
DSF	**Desfina**	**0.16**	**318**	P		Pg	02 58 00.9	-0.2
DSF				S		Sg	02 58 03.8	0.0
DSF	**Desfina**	**0.16**	**318**	P		Pg	02 58 00.9	-0.2
DSF				S		Sg	02 58 03.9	+0.1
DSF	**Desfina**	**0.16**	**318**	P		Pg	02 58 00.9	-0.2
DSF				S		Sg	02 58 03.8	0.0
LTK	**Loutraki**	**0.36**	**138**	P		Pg	02 58 04.4	-0.2
LTK				S		Sg	02 58 09.8	+0.3
LTK	**Loutraki**	**0.36**	**138**	P		Pg	02 58 04.4	-0.2
LTK				S		Sg	02 58 09.8	+0.3
KALE	**Kalithea**	**0.42**	**284**	P		Pg	02 58 05.5	-0.3
KALE				S		Sg	02 58 11.6	+0.1
KALE	**Kalithea**	**0.42**	**284**	P		Pg	02 58 05.5	-0.3
KALE				S		Sg	02 58 11.6	+0.1
LKR	**Lokris**	**0.45**	**36**	P		Pg	02 58 05.8	-0.3
LKR				S		Sg	02 58 12.7	+0.6
LKR	**Lokris**	**0.45**	**36**	P		Pg	02 58 05.8	-0.3
LKR				S		Sg	02 58 12.7	+0.6
TRIZ	**Trizonia**	**0.47**	**279**	P		Pg	02 58 05.9	-0.6
TRIZ				S		Sb	02 58 13.8	-0.6
TRIZ	**Trizonia**	**0.47**	**279**	P		Pg	02 58 05.9	-0.6
TRIZ				S		Sb	02 58 13.8	-0.6
AXAR	**Agios Charalam**	**0.47**	**360**	P		Pg	02 58 06.7	0.0
AXAR				S		Sg	02 58 13.3	+0.2
AXAR	**Agios Charalam**	**0.47**	**360**	P		Pg	02 58 06.7	0.0
AXAR				S		Sg	02 58 13.3	+0.2

*THE **19** 03:15:57.2,37.76N×22.94E,h30km±2km,ML1.5/3,Error ellipse: s-maj=2.5km s-min=0.4km az=54.0*
*ISCJB **19** 03:15:58.4±0.5,37.73N±0.03×22.90E±0.03,h11km±4km, Error ellipse: s-maj=4.8km s-min=3.8km az=34.8*
*CSEM **19** 03:15:58.1±0.1,37.73N×22.91E,h12km,ML1.5/3,Error ellipse: s-maj=3.0km s-min=2.3km az=22.0*
*ATH **19** 03:15:58.7,37.73N×22.90E,h6km,MD2.7/11*

ISC 19 03:15:58.2±0.9,37.73N±0.03×22.90E±0.02,h14km±9km, n32,σ0s40/51,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LTK	**Loutraki**	**0.30**	**9**	P		**Pg**	**03 16 04.2**	**-0.2**
LTK				S		**Sg**	**03 16 09.2**	**+0.4**
LTK	**Loutraki**	**0.30**	**9**	*e*PG		**Pg**	**03 16 04.3**	**-0.2**
LTK				*e*SG		**Sg**	**03 16 09.1**	**+0.3**
LTK	**Loutraki**	**0.30**	**9**	*e*Pg		**Pg**	**03 16 04.3**	**-0.2**
LTK				S		**Sg**	**03 16 09.2**	**+0.4**
DID	**Didima**	**0.34**	**130**	P		**Pg**	**03 16 05.0**	**-0.3**
DID				S		**Sb**	**03 16 11.4**	**0.0**
DID	**Didima**	**0.34**	**130**	*e*PG		**Pg**	**03 16 04.7**	**-0.6**
DID				*e*SB		**Sb**	**03 16 10.9**	**-0.5**
DID	**Didima**	**0.34**	**130**	*e*Pg		**Pg**	**03 16 04.7**	**-0.6**
DID	**Didima**	**0.34**	**130**	P		**Pg**	**03 16 05.0**	**-0.3**
DID				*e*Sb		**Sb**	**03 16 10.9**	**-0.5**
DID				S		**Sb**	**03 16 11.4**	**0.0**
DIDY	**Didyma**	**0.35**	**136**	P		**Pg**	**03 16 05.0**	**-0.4**
DIDY				S		**Sb**	**03 16 11.5**	**-0.2**
DIDY	**Didyma**	**0.35**	**136**	P		**Pg**	**03 16 05.0**	**-0.4**
DIDY				S		**Sb**	**03 16 11.5**	**-0.2**
NAIG	**Nisos Aigina**	**0.46**	**86**	*e*PB		**Pg**	**03 16 07.4**	**-0.1**
NAIG	**Nisos Aigina**	**0.46**	**86**	*e*Pb		**Pg**	**03 16 07.4**	**-0.1**
GUR	**Goura**	**0.49**	**295**	P		**Pg**	**03 16 07.5**	**-0.5**
GUR				S		**Sb**	**03 16 15.6**	**-0.2**
GUR	**Goura**	**0.49**	**295**	*e*PB		**Pg**	**03 16 07.3**	**-0.7**
GUR				*e*SB		**Sg**	**03 16 14.9**	**+0.3**
GUR	**Goura**	**0.49**	**295**	P		**Pg**	**03 16 07.5**	**-0.5**
GUR				*e*Sb		**Sg**	**03 16 14.9**	**+0.3**
GUR				S		**Sb**	**03 16 15.6**	**-0.2**
VLX	**Vlachokerasia**	**0.55**	**230**	*e*PB		**Pb**	**03 16 09.6**	**-0.1**
VLX				*e*SB		**Sb**	**03 16 16.9**	**-0.5**
VLX	**Vlachokerasia**	**0.55**	**230**	*e*Pb		**Pb**	**03 16 09.6**	**-0.1**
VLX				*e*Sb		**Sb**	**03 16

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.53**	**78**	*e*PG	**Pg**	**03 56 05.8**	**-0.7**
ISP				*e*SG	**Sb**	**03 56 15.4**	**+0.2**
ISP	**Isparta**	**0.53**	**78**	*e*Pg	**Pg**	**03 56 05.8**	**-0.7**
ISP				*e*Sg	**Sb**	**03 56 15.4**	**+0.2**
GOLH	**Golhisar**	**0.54**	**207**	*i* P	**Pg**	**03 56 05.9**	**-0.8**
GOLH				*i* S	**Sb**	**03 56 14.9**	**-0.6**
GOLH	**Golhisar**	**0.54**	**207**	*i* P	**Pg**	**03 56 05.9**	**-0.8**
GOLH				*i* S	**Sb**	**03 56 14.9**	**-0.6**
BCK	**Bucak**	**0.62**	**114**	*e*PG	**Pg**	**03 56 08.0**	**-0.3**
BCK				*e*SG	**Sb**	**03 56 18.7**	**+0.7**
BCK	**Bucak**	**0.62**	**114**	*e*Pg	**Pg**	**03 56 08.0**	**-0.3**
BCK				*e*Sg	**Sb**	**03 56 18.7**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.63**	**208**	*e*PG	**Pg**	**03 56 07.6**	**-0.8**
GLHS				*e*SG	**Sb**	**03 56 18.0**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.63**	**208**	*e*Pg	**Pg**	**03 56 07.6**	**-0.8**
GLHS				*e*Sg	**Sb**	**03 56 18.0**	**-0.2**
DNZL	**Cakiroluk**	**0.65**	**268**	*e*P	**Pg**	**03 56 08.9**	**0.0**
DNZL				*e*S	**Sg**	**03 56 17.3**	**-0.2**
DNZL	**Cakiroluk**	**0.65**	**268**	*e*P	**Pg**	**03 56 08.9**	**0.0**
DNZL				*e*S	**Sg**	**03 56 17.3**	**-0.2**
DENT	**Denizli**	**0.67**	**274**	*e*PG	**Pg**	**03 56 08.7**	**-0.4**
DENT	**Denizli**	**0.67**	**274**	*e*Pg	**Pg**	**03 56 08.7**	**-0.4**
KHL	**Karahalli**	**0.67**	**336**	*e*PG	**Pg**	**03 56 09.0**	**-0.1**
KHL	**Karahalli**	**0.67**	**336**	*e*Pg	**Pg**	**03 56 09.0**	**-0.1**
KHAL	**Karahalli**	**0.72**	**336**	*e*P	**Pb**	**03 56 10.6**	**-0.2**
KHAL				*e*S	**Sb**	**03 56 20.8**	**0.0**
KHAL	**Karahalli**	**0.72**	**336**	*e*P	**Pb**	**03 56 10.6**	**-0.2**
KHAL				*e*S	**Sb**	**03 56 20.8**	**0.0**
KORT	**Korkueli**	**0.81**	**152**	*e*P	**Pg**	**03 56 10.1**	**-1.7**
KORT				*e*S	**Sb**	**03 56 23.5**	**+0.1**
KORT	**Korkueli**	**0.81**	**152**	*e*P	**Pg**	**03 56 10.1**	**-1.7**
KORT				*e*S	**Sb**	**03 56 23.5**	**+0.1**
ELL	**Elmali**	**0.97**	**178**	*e*PG	**Pg**	**03 56 14.1**	**-0.7**
ELL	**Elmali**	**0.97**	**178**	*e*Pg	**Pg**	**03 56 14.1**	**-0.7**
SHUT	**Suhut-Afyon**	**0.99**	**32**	*e*PG	**Pg**	**03 56 14.7**	**-0.6**
SHUT	**Suhut-Afyon**	**0.99**	**32**	*e*Pg	**Pg**	**03 56 14.7**	**-0.6**
ANTB	**Antalya**	**1.03**	**142**	*e*PG	**Pg**	**03 56 15.5**	**-0.4**
ANTB	**Antalya**	**1.03**	**142**	*e*Pg	**Pg**	**03 56 15.5**	**-0.4**
KULA	**Kula-Manisa**	**1.24**	**310**	*e*PN	**Pn**	**03 56 19.7**	**+0.1**
KULA	**Kula-Manisa**	**1.24**	**310**	*e*Pn	**Pn**	**03 56 19.7**	**+0.1**
FETY	**Fethiye**	**1.25**	**210**	*e*PN	**Pn**	**03 56 19.3**	**-0.3**
FETY	**Fethiye**	**1.25**	**210**	*e*Pn	**Pn**	**03 56 19.3**	**-0.3**
BOLV	**Bolvadin**	**1.31**	**40**	*e*P	**Pn**	**03 56 20.3**	**-0.3**
BOLV				*e*S	**Sb**	**03 56 37.1**	**-0.8**
BOLV	**Bolvadin**	**1.31**	**40**	*e*P	**Pn**	**03 56 20.3**	**-0.3**
BOLV				*e*S	**Sb**	**03 56 37.1**	**-0.8**
ALT	**Altintas**	**1.35**	**8**	*e*PN	**Pn**	**03 56 21.1**	**0.0**
ALT	**Altintas**	**1.35**	**8**	*e*Pn	**Pn**	**03 56 21.2**	**0.0**
DALT	**Dalyan (Mudla)**	**1.36**	**227**	*e*PN	**Pn**	**03 56 21.1**	**-0.1**
DALT	**Dalyan (Mudla)**	**1.36**	**227**	*e*Pn	**Pn**	**03 56 21.1**	**-0.1**
AKAS	**Kas**	**1.49**	**188**	*e*P	**Pb**	**03 56 24.2**	**+0.2**
AKAS				*e*S	**Sg**	**03 56 48.1**	**+3.9**
AKAS	**Kas**	**1.49**	**188**	*e*P	**Pb**	**03 56 24.2**	**+0.2**
TVSB	**Tavsanli**	**1.76**	**350**	*e*PN	**Pn**	**03 56 27.2**	**+0.4**
TVSB	**Tavsanli**	**1.76**	**350**	*e*Pn	**Pn**	**03 56 27.2**	**+0.4**

TAP 19 04:01:42.8, 24.70N×121.76E, h80km, ML3.8, 2C-12D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILA	**Ilan**	**0.07**	**353**	⇓*i*P	**Pn**	04 01 55.0	+0.8
	baz=343						
ILA				*i* S	Sn	04 02 04.7	+2.1
	baz=343						
TWE	**Neicheng**	**0.09**	**285**	⇓*i*P	**Pn**	04 01 54.8	+0.6
	baz=285						
TWE				*i* S	Sn	04 02 03.8	+1.2
	baz=285						
TWC	**Suao**	**0.12**	**137**	⇓*i*P	**Pn**	04 01 55.1	+0.8
	baz=134						
TWC				*i* S	Sn	04 02 04.2	+1.4
	baz=134						
ENTT	**Nioudou**	**0.18**	**251**	⇓*i*P	**Pn**	04 01 55.1	+0.6
	baz=262						
ENTT				*i* S	Sn	04 02 03.4	+0.2
	baz=262						
ENA	**Nanau**	**0.27**	**183**	P	**Pn**	04 01 55.2	+0.3
	baz=189						
ENA				S	Sn	04 02 05.8	+1.9
	baz=189						
NSK	**Sanguang**	**0.36**	**266**	⇓*i*P	**Pn**	04 01 55.6	0.0
	baz=266						
NSK				*i* S	Sn	04 02 04.2	-0.9
	baz=266						
NWF	**Wu-fen Shan**	**0.37**	**3**	⇓P	**Pn**	04 01 56.0	+0.3
	baz=357						
NWF				S	Sn	04 02 05.2	0.0
	baz=357						
TWB1	**Santiao Chiao**	**0.37**	**34**	⇓*i*P	**Pn**	04 01 55.9	+0.4
	baz=42						
TWB1				S	Sn	04 02 04.9	-0.1
	baz=42						
TAP1	**Taipei**	**0.40**	**328**	*e*P	**Pn**	04 01 56.0	+0.3
	baz=318						
TAP1				*e*S	Sn	04 02 05.3	0.0
	baz=318						
TAP	**Taipei**	**0.41**	**326**	*e*P	**Pn**	04 01 56.0	+0.2
	baz=318						
TAP				*e*S	Sn	04 02 05.4	0.0
	baz=318						
NNS	**Nan Shan**	**0.43**	**234**	⇓*i*P	**Pn**	04 01 56.7	+0.5
	baz=236						
NNS				S	Sn	04 02 06.3	+0.3
	baz=236						
TWS1	**Kuangyinshan**	**0.51**	**322**	*e*P	**Pn**	04 01 57.0	+0.4
	baz=311						
TWS1				S	Sn	04 02 07.3	+0.5
	baz=311						
NCU	**National Centr**	**0.58**	**298**	P	**Pn**	04 01 57.7	+0.5
	baz=290						
NCU				S	Sn	04 02 08.5	+0.4
	baz=290						
TWY	**Chenhua**	**0.59**	**346**	⇑P	**Pn**	04 01 57.8	+0.4
	baz=338						
TWY				*e*S	Sn	04 02 08.7	+0.5
	baz=338						
TWD	**Chiawan**	**0.63**	**193**	*e*P	**Pn**	04 01 57.2	-0.5
	baz=199						
TWD				*e*S	Sn	04 02 08.0	-0.9
	baz=199						
NSTT	**Nanjuang**	**0.69**	**265**	⇓*i*P	**Pn**	04 01 58.7	+0.4
	baz=264						
NSTT				S	Sn	04 02 09.7	-0.2
	baz=264						
TWT	**Tachien**	**0.69**	**230**	⇓*i*P	**Pn**	04 01 59.9	+1.3
	baz=227						
TWT				S	Sn	04 02 11.3	+1.0
	baz=227						
WHF	**Hehuan Shan**	**0.71**	**219**	⇓*i*P	**Pn**	04 01 59.6	+0.5
	baz=212						
WHF				*e*S	Sn	04 02 11.7	+0.5
	baz=212						
HSN	**Hsinchu**	**0.72**	**278**	*e*P	**Pn**	04 01 58.7	0.0
	baz=280						
HSN				*e*S	Sn	04 02 10.5	0.0
	baz=280						
HWA	**Hwalien**	**0.73**	**191**	*e*P	**Pn**	04 01 59.9	+1.1
	baz=198						
ESL	**Shilin**	**0.93**	**199**	*e*P	**Pn**	04 02 00.1	-0.9
	baz=192						
NSY	**Sanyi**	**0.95**	**253**	⇓P	**Pn**	04 02 02.3	+1.0
	baz=254						
NSY				*e*S	Sn	04 02 16.2	+1.1
	baz=254						
TWQ1	**Liyutan**	**0.96**	**249**	*e*P	**Pn**	04 02 02.1	+0.7
	baz=250						
TWQ1				*e*S	Sn	04 02 15.7	+0.4
	baz=250						
PCYT	**Pengchaiyu**	**0.97**	**17**	*e*P	**Pn**	04 02 00.3	-1.2
	baz=18						
SMLT	**Sun Moon Lake**	**1.13**	**224**	P	**Pn**	04 02 04.5	+1.0
	baz=232						
SMLT				*e*S	Sn	04 02 20.7	+1.6
	baz=232						
TCU	**Taichung**	**1.13**	**241**	*e*P	**Pn**	04 02 04.3	+0.9
	baz=243						
TCU				*e*S	Sn	04 02 18.7	-0.1
	baz=243						
TYC	**Yuchr**	**1.14**	**226**	*e*P	**Pn**	04 02 04.5	+1.0
	baz=228						
TYC				*e*S	Sn	04 02 20.5	+1.4
	baz=228						
YOJ	**Yonaguni jima**	**1.17**	**101**	⇑P	**Pn**	04 02 03.4	-0.4
	baz=102						
YOJ				*e*S	Sn	04 02 18.9	-0.8
	baz=102						
EHY	**Hungye**	**1.25**	**199**	*e*P	**Pn**	04 02 05.3	+0.3
	baz=191						
WNT	**Mingjian**	**1.27**	**230**	*e*P	**Pn**	04 02 06.2	+1.0
	baz=242						
WNT				*e*S	Sn	04 02 23.6	+1.5
	baz=242						
TWF1	**Yuli**	**1.41**	**198**	*e*P	**Pn**	04 02 07.0	0.0
	baz=197						
ALS	**Alishan**	**1.47**	**217**	*e*P	**Pn**	04 02 09.6	+1.5
	baz=229						
ALS				*e*S	Sn	04 02 29.8	+2.6
	baz=229						
CHN5	**Tsauling**	**1.48**	**222**	*e*P	**Pn**	04 02 08.8	+0.9
	baz=224						
CHN5				*e*S	Sn	04 02 28.6	+1.7
	baz=224						
WTCT	**Ta-ch'eng**	**1.58**	**239**	*e*P	**Pn**	04 02 09.7	+0.5
	baz=241						
WTCT				*e*S	Sn	04 02 29.6	+0.5
	baz=241						
CHKT	**Chengkung**	**1.63**	**193**	*e*P	**Pn**	04 02 11.0	+1.2
	baz=192						
ELDTW	**Lidau**	**1.65**	**204**	*e*P	**Pn**	04 02 11.4	+1.2
	baz=198						
CHY	**Chiayi**	**1.71**	**226**	*e*P	**Pn**	04 02 12.4	+1.7
	baz=227						
CHN4	**Tsaushan**	**1.71**	**219**	*e*P	**Pn**	04 02 12.2	+1.3
	baz=220						
WTP	**Ta-pu**	**1.79**	**216**	*e*P	**Pn**	04 02 12.5	+0.6
	baz=227						
TWK	**Hsinying**	**1.84**	**219**	*e*P	**Pn**	04 02 13.6	+1.0
	baz=220						
CHN1	**Nanshi**	**1.88**	**217**	*e*P	**Pn**	04 02 13.7	+0.6
	baz=229						
TWG	**Pinlang**	**1.97**	**199**	*e*P	**Pn**	04 02 14.0	-0.4
	baz=190						
PNG	**Penghu**	**2.31**	**241**	*e*P	**Pn**	04 02 19.2	+0.5
	baz=242						
EAST	**Anshuo**	**2.45**	**200**	*e*P	**Pn**	04 02 22.4	+1.6
	baz=191						

BGS ***19*** *04:08:08.7±1.9, 40.36N×79.98E, h33km, mb5.0, MS5.1*
IDC ***19*** *04:08:14.8±0.4, 41.15N×78.20E, h0km, mb4.8/38, mb1 4.9/43, mb1mx4.9/44, mbtmp4.8/43, ML5.0/5, MS4.7/30, Ms1 4.7/30, ms1mx4.6/38, Error ellipse: s-maj=9.4km s-min=7.6km az=39.0*
LDG ***19*** *04:08:14.2±0.3, 41.16N×78.11E, h10km, Mb5.3/44, Ms4.7/10, Error ellipse: s-maj=16.6km s-min=6.0km az=162.0*
ISCJB ***19*** *04:08:15.5±0.5, 41.29N±0.01×78.23E±0.02, h10km±3km, mb5.2/312, MS5.0/95, Error ellipse: s-maj=2.6km s-min=2.0km az=22.4*
NNC ***19*** *04:08:15.6±0.9, 41.23N×78.20E, h5km±4km, mb5.8, mpv5.5, Error ellipse: s-maj=6.6km s-min=4.6km az=159.0*
BJI ***19*** *04:08:18.1, 41.27N×78.27E, h30km, mB5.2/32, mb5.1/54, ML5.8/8, Ms5.4/64, Ms7 5.1/55*
MOS ***19*** *04:08:18.7±1.0, 41.31N×78.24E, h33km, mb5.4/127, MS4.8/42, Error ellipse: s-maj=5.4km s-min=3.2km az=128.1*
MOS Felt (III-IV) ay Almaty.
TEH ***19*** *04:08:19.7, 41.30N×78.22E, h27km, ML5.2*
NEIC ***19*** *04:08:21.0±0.4, 41.28N×78.20E, h39km±3km, mb5.3/168, Error ellipse: s-maj=3.6km s-min=2.4km az=188.0*
NEIC Felt at Bishkek. Felt [II] at Almaty, Kazakhstan.
GCMT ***19*** *04:08:20.2±0.1, 41.29N×78.32E, h26km, MW5.4, Moment Tensor Solution. s69,c116; s99,c199; Moment tensor: Scale 10^17 Nm; Mrr=-0.02±.02; Mθθ=1.36±.02; Mϕϕ 1.38±.02; Mrθ 0.05±.04; Mϕθ=-0.41±.02; Mϕr=-0.05±.04; Best double couple: Mo1.40000×10^17 NP1:ϕs217.00000°, δ87.00000°, λ0.00000°. NP2:ϕs127.00000°, δ90.00000°, λ177.00000°. Principal axes: T 1.4400, Plg2.0000°, Azm82.0000°; N -0.0200, Plg87.0000°, Azm303.0000°; P -1.4200, Plg2.0000°, Azm172.0000°; Data Used: II IU IC G CN. Surface waves from 103 sta.*
DJA ***19*** *04:08:25.6±1.2, 42.2N×117.3E±, h50km±15km, M6.0/7, mB5.6/4, mb5.1/7, MLv6.8/1, Mw(mB)5.0/4*
SZGRF ***19*** *04:08:32.9, 42.34N×77.06E, h33km, mb5.2, MS5.0, Lake Issyk-Kul, Kyrgyzstan, region*

ISC 19 04:08:19.0±0.4, 41.27N±0.03×78.22E±0.02, h23km±2km, h23km:pP-P, n1088, σ1932/1137, mb5.2/310, MS5.0/95, 141C-127D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**1.77**	**304**	*i* P	**Pn**	**04 08 48.7**	**+0.3**
ULHL	**Ulahol**	**1.77**	**304**	P	**Pn**	**04 08 48.7**	**+0.3**
	SNR=4374						
KNDC	**Almaty**	**2.16**	**335**	⇑Pg	**Pb**	**04 08 56.1**	**-1.3**
KNDC				⇑Lg	Lg	04 09 26.3	
AAA	**Alma-Ata**	**2.21**	**335**	*i* PN	**Pb**	**04 08 56.6**	**-1.8**
AAA				*e*S	**Sb**	**04 09 25.9**	**+0.5**
AAA				pmax	pmax		
	comp=Z,67μm,0.4s						
AAA				smax	smax		
	comp=E,72μm,0.5s						
KZA	**Kyzart**	**2.37**	**291**	*i* P	**Pb**	**04 08 58.4**	**-2.7**
KZA	**Kyzart**	**2.37**	**291**	P	**Pb**	**04 08 58.5**	**-2.7**
KSH	**Kashi**	**2.45**	**225**	⇑*i*Pg	Pb	04 09 06.6	+4.2
KSH				Sg	Sb	04 09 43.4	+11
KSH				smax	smax		
	comp=N,24μm,0.9s						
KSH				smax	smax		
	comp=E,50μm,1.0s						
TKM2	**Tokmak 2**	**2.56**	**311**	⇓Pg	**Pb**	**04 09 02.1**	**-2.2**
	comp=E,3μm,0.5s						
TKM2				⇑Lg	Lg	04 09 37.3	
	comp=E,57μm,0.5s						
TKM2	**Tokmak 2**	**2.56**	**311**	*e*PN	**Pb**	**04 09 01.8**	**-2.5**
TKM2				*e*		04 09 12.3	
TKM2				*e*		04 09 30.7	
TKM2				*e*		04 09 36.9	
TKM2	**Tokmak 2**	**2.56**	**311**	*e*Pn	**Pb**	**04 09 01.8**	**-2.5**
TKM2				*e*Pg	Pn	04 09 12.3	+13
TKM2				*e*Sn	**Sn**	**04 09 30.7**	**+1.0**
TKM2				*e*Sg	**Sb**	**04 09 36.9**	**+1.5**
TKM2	**Tokmak 2**	**2.56**	**311**	P	**Pb**	**04 09 02.1**	**-2.2**
	SNR=2275						
KBK	**Karagaybulak**	**2.81**	**301**	*i* P	**Pb**	**04 09 05.4**	**-3.1**
KBK	**Karagaybulak**	**2.81**	**301**	P	**Pb**	**04 09 05.4**	**-3.1**
	SNR=3440						
UCH	**Uchtor**	**2.93**	**290**	*i* P	**Pn**	**04 09 06.2**	**+1.6**
UCH	**Uchtor**	**2.93**	**290**	P	**Pn**	**04 09 06.2**	**+1.6**
	SNR=194						
AAK	**Ala-Archa**	**3.10**	**297**	*e*PN	**Pn**	**04 09 09.2**	**+2.6**
AAK				*e*		04 09 52.5	
AAK						04 09 53.0	
AAK	**Ala-Archa**	**3.10**	**297**	*e*Pn	**Pn**	**04 09 09.2**	**+2.6**
AAK				*e*Sn	**Sb**	**04 09 52.5**	**+1.7**
AAK				Lg	Lg	04 09 53.0	
AAK	**Ala-Archa**	**3.10**	**297**	P	**Pn**	**04 09 09.1**	**+2.6**
	SNR=2710						
AAK	**Ala-Archa**	**3.10**	**297**	Pn	**Pn**	**04 09 09.2**	**+2.6**
	comp=E,43μm,0.5s						
AAK	**Ala-Archa**	**3.10**	**297**	Pn	**Pn**	**04 09 08.2**	**+1.6**
	comp=E,71nm,0.3s,baz=117,slow=9.6,SNR=527						
AAK				Lg	Lg	04 09 53.0	
	comp=E,2μm,0.3s,baz=250,slow=19,SNR=22						
CHMS	**Chumysh**	**3.10**	**305**	*i* P	**Pn**	**04 09 08.8**	**+2.2**
CHMS	**Chumysh**	**3.10**	**305**	P	**Pn**	**04 09 08.8**	**+2.2**
	SNR=805						
FRU	**Bishkek**	**3.11**	**301**	⇑*e*PN	**Pb**	**04 09 10.6**	**-2.9**
FRU				*i*		04 09 14.0	
FRU				*i* S	Sb	04 09 57.0	+6.0
FRU				pmax	pmax		
	comp=Z,3μm,0.8s						
FRU				smax	smax		
	comp=E,38μm,1.2s						
USP	**Ospenovka**	**3.41**	**307**	*i* P	**Pn**	**04 09 12.9**	**+2.2**
USP	**Ospenovka**	**3.41**	**307**	P	**Pn**	**04 09 12.9**	**+2.2**
	SNR=67						
AML	**Almayashu**	**3.50**	**286**	*i* P	**Pn**	**04 09 13.6**	**+1.3**
AML	**Almayashu**	**3.50**	**286**	P	**Pn**	**04 09 13.6**	**+1.3**
	SNR=147						
EKS2	**Erkin-Say**	**3.59**	**294**	*e*PN	**Pn**	**04 09 15.5**	**+2.2**
EKS2	**Erkin-Say**	**3.59**	**294**	P	Pn	04 09 15.9	+2.6
	SNR=170						
KK31	**Karatay Array**	**6.01**	**290**	⇑Pn	**Pn**	**04 09 46.3**	**-0.2**
	comp=E,16nm,0.6s,baz=119,slow=11,SNR=2393						
KK31				⇓Pg	Pb	04 10 05.1	+2.1
	comp=E,608nm,0.6s,baz=104,slow=13,SNR=125						
KK31				⇑Lg	Lg	04 11 26.6	
	comp=E,2μm,0.7s,baz=93,slow=26,SNR=6.7						
KK31	**Karatay Array**	**6.01**	**290**	*i* PN	**Pn**	**04 09 46.7**	**+0.2**
KK31				pmax	pmax		
	comp=Z,6.0nm,0.2s						
KKAR	**Karatay Array**	**6.01**	**290**	*e*PN	**Pn**	**04 09 46.6**	**+0.1**
KKAR				*e*		04 11 24.1	
KKAR	**Karatay Array**	**6.01**	**290**	*e*Pn	**Pn**	**04 09 46.6**	**+0.1**
KKAR				*e*Pg	**Pb**	**04 10 03.8**	**+0.8**
KKAR				*e*Sg	Sb	04 11 24.1	+10
MK31	**Makanchi Array**	**6.26**	**27**	Pn	**Pn**	**04 09 50.2**	**+0.4**
	comp=Z,413nm,0.7s,baz=202,slow=12,SNR=2051						
MK31				⇑Pg	Pb	04 10 09.8	+2.7
	comp=Z,432nm,0.6s,baz=223,slow=15,SNR=4.4						
MK31				⇓Sn	**Sn**	**04 11 02.7**	**+2.1**
	comp=Z,1μm,0.6s,baz=205,slow=22,SNR=4.2						
MK31				⇑Lg	Lg	04 11 35.3	
	comp=Z,3μm,0.8s,baz=211,slow=29,SNR=6.2						
MK31	**Makanchi Array**	**6.26**	**27**	*i* PN	**Pn**	**04 09 50.6**	**+0.8**
MK31				pmax	pmax		
	comp=Z,196nm,0.4s						
MK31	**Makanchi Array**	**6.26**	**27**	*e*Pn	**Pn**	**04 09 50.6**	**+0.8**
MK31				*e*Sn	**Sn**	**04 10 57.0**	**-3.6**
MKAR	**Makanchi Array**	**6.26**	**27**	PN	**Pn**	**04 09 51.1**	**+1.3**
MKAR						04 11 04.4	
MKAR				pmax	pmax		
	comp=Z,33nm,0.3s						
MKAR				smax	smax		
	comp=N,210nm,0.3s						
MKAR				MLR	MLR		
	comp=Z,3μm,21.9s						
MKAR	**Makanchi Array**	**6.26**	**27**	Pn	**Pn**	**04 09 51.1**	**+1.3**
MKAR				Sn	**Sn**	**04 11 04.5**	**+3.9**
MKAR				Lg	Lg	04 11 35.1	
MKAR	**Makanchi Array**	**6.26**	**27**	Pn	**Pn**	**04 09 51.1**	**+1.3**
	comp=Z,33nm,0.3s,baz=208,slow=14,SNR=469						
MKAR				Sn	**Sn**	**04 11 04.4**	**+3.9**
	comp=Z,210nm,0.3s,baz=217,slow=22,SNR=7.1						
MKAR				Lg	Lg	04 11 35.1	
	comp=Z,387nm,0.3s,baz=212,slow=29,SNR=8.1						
MKAR				LR	LR	04 12 41.1	
	comp=Z,3μm,21.9s,baz=209,slow=42						
WMQ	**Urumqi**	**7.45**	**67**	Pn	**Pn**	**04 10 07.1**	**+0.9**
WMQ				Sn	**Sn**	**04 11 32.0**	**+2.0**
JMU	**Jammu**	**8.94**	**198**	*ex*	Pn	04 10 23.0	-3.6
CEP	**Cherat**	**8.96**	**216**	P	**Pn**	**04 10 28.8**	**+1.8**
CEP				S	**Sn**	**04 12 10.0**	**+2.7**
THN	**Thein Dam**	**9.04**	**194**	*e*P	**Pn**	**04 10 27.6**	**-0.4**
THN				*ex*	x	04 12 00.0	
DHRM	**DHARAMSHALA**	**9.13**	**190**	*e*P	**Pn**	**04 10 31.4**	**+1.9**
DHRM				AMB	AMB	04 10 36.7	
	comp=Z,977nm,2.0s						
KURBB	**Kurchatov Arra**	**9.36**	**1**	⇓Lg	Lg	04 13 13.5	
	comp=Z,914nm,0.8s						
KURBB	**Kurchatov Arra**	**9.36**	**1**	Pn	**Pn**	**04 10 32.3**	**-0.1**
	comp=Z,5.6nm,0.3s,baz=188,slow=12,SNR=559						
KURBB				Lg	Lg	04 13 10.7	
	comp=Z,25nm,0.3s,baz=181,slow=28,SNR=8.1						
KURBB				LR	LR	04 14 21.3	
	comp=Z,5μm,18.0s,baz=185,slow=39						
KURK	**Kurchatov**	**9.46**	**2**	⇓Pn	**Pn**	**04 10 32.7**	**-0.9**
	comp=Z,348nm,1.1s						
KURK				⇑Pg		04 11 08.1	
	comp=Z,666nm,1.1s						
KURK				⇑Lg	Lg	04 13 16.3	
	comp=Z,3μm,0.9s						
KURK	**Kurchatov**	**9.46**	**2**	*e*P	**Pn**	**04 10 33.4**	**-0.2**
KURK	**Kurchatov**	**9.46**	**2**	*e*Pn	**Pn**	**04 10 33.4**	**-0.2**
KURK				Lg	Lg	04 13 10.7	
KURK				*e*Lg	Lg	04 13 11.6	
KURK	**Kurchatov**	**9.46**	**2**	P	**Pn**	**04 10 34.1**	**+0.5**
	SNR=120						
KURK	**Kurchatov**	**9.46**	**2**	Pn	**Pn**	**04 10 33.1**	**-0.5**
	comp=Z,1μm,0.5s						
SDNR	**Sundarnagar**	**9.80**	**186**	*e*P	**Pn**	**04 10 39.0**	**+0.5**
SDNR				*ex*	x	04 12 38.0	
KBL	**Kabul**	**9.88**	**230**	*e*P	**Pn**	**04 10 40.8**	**+1.1**
KBL				*e*		04 12 30.9	
KBL	**Kabul**	**9.88**	**230**	*e*Pn	**Pn**	**04 10 40.8**	**+1.1**
KBL				*e*Sn	**Sn**	**04 12 30.9**	**+0.9**
THW	**Thamme Wali**	**9.91**	**213**	P	**Pn**	**04 11 41.1**	**+1.1**
BHK	**Bhakra**	**9.94**	**189**	*e*P	**Pn**	**04 10 41.6**	**+1.3**
BHK				*e*S	**Sn**	**04 12 32.2**	**+1.1**
SMLA	**Simla**	**10.15**	**185**	*e*P	**Pn**	**04 10 43.5**	**+0.3**
SMLA				*i* P	**Pn**	**04 10 43.5**	**+0.3**
SMLA				*i* x	x	04 12 26.6	
SMLA				⇓		04 12 28.3	
	comp=N,2μm,0.3s						
SMLA				⇓		04 12 29.4	
	comp=E,3μm,0.4s						
SARP	**Sargodha**	**10.33**	**207**	P	**Pn**	**04 10 47.6**	**+1.8**
DDI	**Dehra Dun**	**10.92**	**181**	*e*P	**Pn**	**04 10 54.6**	**+0.7**
DDI				AMB	AMB	04 10 57.8	
	comp=Z,3μm,0.9s						
DDI				*ex*	x	04 12 46.0	
PTH	**Pithoragarh**	**11.80**	**171**	*e*P	**Pn**	**04 11 04.3**	**-1.8**
PTH				*ex*	x	04 13 06.9	
LGTI	**Lohaghat**	**11.90**	**171**	*ex*	Pn	04 11 11.3	+4.0
LGTI				*ex*	x	04 13 16.1	
VOSK	**Vostochnaya**	**12.47**	**339**	⇑Pn	**Pn**	**04 11 13.5**	**-1.4**
	comp=Z,316nm,0.8s						
VOSK				⇓Sn	**Sn**	**04 13 33.8**	**+0.8**
	comp=Z,362nm,0.9s						
VOSK				⇓Lg	Lg	04 14 52.9	
	comp=Z,3μm,1.4s						
NDI	**New Delhi**	**12.58**	**184**	*ex*	Pn	04 11 12.0	-4.5
NDI				*ex*	x	04 13 20.0	
BVA0	**Borovoye Array**	**12.90**	**338**	Pn	**Pn**	**04 11 19.6**	**-1.2**
	comp=Z,52nm,0.9s,baz=149,slow=15,SNR=1061						
BVA0			

ZAA0 eLg Lg 04 15 18.1
ZALV Zalesovo Beam 13.44 17 P **Pn** **04 11 27.4 -0.7**
ZALV 04 14 00.8
ZALV pmax pmax
comp=Z,5.0nm,0.3s
ZALV smax smax
comp=N,5.0nm,0.3s
ZALV MLR MLR
comp=Z,3μm,18.2s
ZALV Zalesovo Beam 13.44 17 Pn **Pn** **04 11 27.4 -0.7**
ZALV Sn **Sn** **04 14 00.8 +4.2**
ZALV Lg Lg 04 15 25.6
ZALV Zalesovo Beam 13.44 17 Pn **Pn** **04 11 27.4 -0.7**
comp=Z,5.1nm,0.3s,baz=201,slow=12,SNR=492
ZALV Sn **Sn** **04 14 00.8 +4.2**
comp=Z,5.1nm,0.3s,baz=212,slow=19,SNR=3.0
ZALV Lg Lg 04 15 25.6
comp=Z,8.0nm,0.3s,baz=216,slow=31,SNR=3.4
ZALV LR LR 04 17 01.4
comp=Z,3μm,18.2s,baz=201,slow=39
DANN Dangsing 13.66 159 eP Pn 04 11 27.8 -3.7
PYUN Piuthan 13.71 162 eP Pn 04 11 27.3 -4.8
comp=Z,393nm,0.6s
NVS Novosibirsk 13.98 12⇓ *i*P **Pn** **04 11 33.3 -2.2**
NVS pmax pmax
comp=N,187nm,1.1s
NVS pmax pmax
comp=Z,216nm,1.1s
NVS pmax pmax
comp=E,99nm,0.8s
KOLN Koldanda 14.17 160 eP Pn 04 11 33.9 -4.5
comp=E,90nm,0.4s
KKN Kakani 14.64 154 eP Pn 04 11 41.0 -3.9
comp=E,107nm,0.5s
GUN Gumba 14.73 152 eP Pn 04 11 42.8 -3.4
comp=E,313nm,0.7s
DMN Daman 14.75 155 eP Pn 04 11 42.4 -4.0
comp=E,94nm,0.4s
PKIN Phulchoki 14.88 154 eP Pn 04 11 44.4 -3.7
comp=E,139nm,0.6s
PKI Pulchoki 14.89 154 eP Pn 04 11 44.6 -3.7
comp=E,88nm,0.5s
IMYA Miami 14.95 257 eP Pn 04 11 44.2 -4.8
AJM Ajmer 15.04 192 ex **Pn** **04 11 47.0 -3.2**
AJM AMb AMB 04 11 48.4
comp=Z,359nm,0.9s
AB31 Akbulak array 15.12 308⇑Pn **Pn** **04 11 48.2 -2.7**
comp=Z,47nm,0.6s,baz=112,slow=14,SNR=302
AB31 ⇓Sn **Sn** **04 14 40.3 +2.7**
comp=Z,76nm,0.8s
AB31 ⇑Lg Lg 04 16 15.4
comp=Z,243nm,0.9s,baz=108,slow=27,SNR=4.1
AB31 Akbulak array 15.12 308 *i*P **Pn** **04 11 48.8 -2.1**
AB31 pmax pmax
comp=Z,35nm,0.6s
ABKAR Akbulak array 15.12 308 ePn **Pn** **04 11 48.5 -2.5**
ABKAR eLg Lg 04 16 09.8
ISRO Mashad 15.43 257 eP **Pn** **04 11 51.5 -3.7**
LSA Lhasa 15.60 134 P **Pn** **04 11 59.5 +1.6**
LSA S **Sn** **04 14 50.5 +0.3**
LSA LR LR
comp=N,3μm,25.9s
LSA LR LR
comp=E,7μm,28.8s
IMOG Moghan 15.61 257 eP Pn 04 11 52.7 -5.0
IPAY Payeh 15.72 258 eP **Pn** **04 11 55.1 -4.0**
ABKT Ailbek 15.85 264 Pn **Pn** **04 11 56.9 -3.6**
comp=E,252nm,1.1s,SNR=10.0
RAMN Ramite 15.87 152 eP **Pn** **04 11 58.0 -3.0**
comp=E,249nm,0.6s
TAPN Taplejung 15.93 148 eP **Pn** **04 11 59.8 -2.1**
comp=E,212nm,0.8s
ODAN Odare 16.24 149 eP **Pn** **04 12 03.1 -2.7**
comp=E,438nm,0.7s
GTA Gaotai 16.57 89⇑P **Pn** **04 12 06.4 -3.4**
GTA S Sn 04 15 06.3 -6.8
GTA pmax pmax
comp=Z,33nm,1.7s
GTA pmax pmax
comp=Z,300nm,5.5s
GTA LR LR
comp=N,6μm,15.7s
GTA LR LR
comp=E,8μm,13.1s
GTA LR LR
comp=Z,5μm,14.3s
AKTO Aktyubinsk 16.75 310⇑Pn **Pn** **04 12 11.3 -0.7**
comp=Z,19nm,1.0s
AKTO ⇑Lg Lg 04 17 07.5
comp=Z,152nm,2.0s
AKTO Aktyubinsk 16.75 310 *i*P **Pn** **04 12 11.2 -0.7**
AKTO pmax pmax
comp=Z,17nm,1.1s
AKTO Aktyubinsk 16.75 310 Pn **Pn** **04 12 10.9 -1.0**
AKTO Aktyubinsk 16.75 310 Pn **Pn** **04 12 10.9 -1.0**
comp=Z,1.0nm,0.3s,baz=107,slow=12,SNR=34
AKTO LR LR 04 18 24.0
comp=Z,2μm,19.1s,baz=291,slow=36
KRAR Krasnoyarsk 17.59 28⇑*i*P **Pn** **04 12 21.2 -1.1**
KRAR pmax pmax
comp=Z,170nm,1.2s
BHPL Bhopal 17.99 182 eP **P** **04 12 27.6 -0.3**
BHPL AMb AMB 04 12 34.6
comp=Z,286nm,1.5s
JBP Jabalpur 18.11 175⇓*ex* **Pn** **04 12 26.0 -2.9**
JBP *i* x x 04 12 33.5
comp=Z,244nm,1.0s
JBP *ex* x 04 15 35.0
BOK Bokaro 18.57 157 eP **P** **04 12 34.0 -0.3**
BOK AMB AMB 04 12 39.4
comp=Z,76nm,1.1s
MOY Mondy 18.75 49 eP **P** **04 12 35.8 -0.3**
MOY pmax pmax
comp=Z,64nm,1.6s
SHL Shillong 19.33 140⇓*i*P **P** **04 12 41.0 -1.8**
SHL *ex* x 04 16 17.0
BHJ Bhuj 19.35 204 eP **Pn** **04 12 43.0 -1.0**
ZAK Zakamensk 19.62 54⇑*i*P **P** **04 12 46.6 +0.9**
ZAK pmax pmax
comp=Z,94nm,1.0s
IKIA Kiasar 19.77 263 eP **P** **04 12 47.7 +0.1**
IKIA eP **Pn** **04 12 48.5 -0.7**
ARU Arti 19.83 327 *d i*P **P** **04 12 48.0 +0.2**
ARU S **S** **04 16 30.1 +0.4**
ARU pmax pmax
comp=Z,296nm,1.0s
ARU MLR MLR
comp=Z,2μm,12.0s
ARU Arti 19.83 327 P **Pn** **04 12 48.9 -0.5**
comp=Z,2μm,0.8s,SNR=85
IANJ Anjilo 19.89 261 eP **Pn** **04 12 50.0 -0.6**
NGP Nagpur 20.07 178 ex Pn 04 12 46.7 -5.8
NGP ex x 04 16 17.4
ISHM Shahmirzad 20.22 262 eP Pn 04 12 54.5 -0.1
TLY Talaya 20.27 50 eP **P** **04 12 53.8 +1.1**
TLY e 04 13 04.2
TLY ePPP PPP 04 13 09.8
TLY eS **S** **04 16 40.5 +1.6**
TLY pmax pmax
comp=Z,25nm,0.8s
TLY MLR MLR
comp=Z,1μm,16.0s
TLY Talaya 20.27 50 Pn **P** **04 12 53.5 +0.8**
comp=Z,229nm,0.6s,SNR=18
IALA Alasht 20.47 264 eP Pn 04 12 56.3 -1.3
AGT Agartala 20.48 144 ex **pP** **04 13 02.0 +0.5**
AGT ex x 04 13 47.0
CAL Calcutta 20.52 152 eP **P** **04 12 55.9 +0.4**
CAL ex x 04 12 58.9
CAL eS **S** **04 16 42.0 -2.2**
IBAF Bafgh 20.58 249 eP Pn 04 12 57.2 -1.5
LZH Lanzhou 20.63 96⇑P **P** **04 12 57.6 +0.7**
LZH pP pP 04 13 07.3 +4.0
LZH sP sP 04 13 12.5 +6.2
LZH PP **PnPn** **04 13 19.6 +4.8**
LZH S **S** **04 16 42.6 -3.9**
LZH sS **sS** **04 16 55.1 -1.7**
LZH SS **SnSn** **04 17 12.5 +6.5**
LZH pmax pmax
comp=Z,140nm,1.0s
LZH pmax pmax
comp=Z,2μm,5.2s
LZH LR LR
comp=N,10μm,13.2s
LZH LR LR
comp=E,7μm,13.0s
LZH LR LR
comp=Z,11μm,16.0s
ILAS Lasjerd 20.63 262 eP Pn 04 12 58.1 -1.4
IRK Irkutsk 20.84 49 eP **P** **04 12 59.1 +0.3**
IRK *e* 04 13 19.0
IRK eS **S** **04 16 46.4 -3.6**
IRK pmax pmax
comp=Z,217nm,1.4s
IMP Imphal 21.01 137 eP **P** **04 12 59.0 -2.0**
IMP *ex* x 04 15 17.0
ICHK Chekchek 21.05 252 eP **P** **04 13 02.6 +1.1**
SONM Songino Array 21.05 62 P **P** **04 13 02.3 +0.9**
SONM Songino Array 21.05 62 P **P** **04 13 02.3 +0.9**
comp=Z,461nm,0.8s,baz=264,slow=11,SNR=626
SONM LR LR 04 21 25.7
comp=Z,4μm,18.0s,baz=268,slow=37
IMEH Mehriz 21.36 250 eP **P** **04 13 05.4 +0.5**
ULN Ulaanbaatar 21.50 62 eP **P** **04 13 07.0 +0.9**
comp=Z,261nm,1.0s
ULN Ulaanbaatar 21.50 62 P **P** **04 13 07.1 +1.0**
SNR=213
ULN Ulaanbaatar 21.50 62 P **P** **04 13 06.5 +0.4**
comp=Z,265nm,0.9s,comp=Z,3μm
SIZA Siyzn 22.03 279 P **P** **04 13 12.1 +0.3**
SNR=19
IZEF Zefreh 22.22 256 eP **P** **04 13 14.9 +0.8**
QUBA Quba, Azerbaij 22.28 280 P **P** **04 13 15.9 +1.4**
SNR=15
PQL Pirkuli 22.31 279 P **P** **04 13 15.2 +0.3**
SNR=17
IKLH Kolahrood 22.57 258 eP **P** **04 13 18.9 +1.1**
IML Ismayilli 22.62 279 P **P** **04 13 18.2 +0.2**
SNR=52
LKRN Lenkeran, Azer 22.65 273 P **P** **04 13 18.0 -0.4**
SNR=49
SOKR Solikamsk 22.67 331 *d i*P **P** **04 13 18.5 +0.2**
SOKR pmax pmax
comp=Z,260nm,1.4s
SOKR MLR MLR
comp=Z,4μm,22.0s
MAK Makhachkala 22.79 285 eP **P** **04 13 19.9 +0.1**
MAK *e* 04 13 45.7
MAK ePPP PPP 04 13 52.9
MAK eS **S** **04 17 29.4 +2.0**
MAK eSS **SnSn** **04 18 00.8 +2.4**
MAK pmax pmax
comp=Z,105nm,1.4s
MAK MLR MLR
comp=Z,8μm,17.0s
GLBA Clilabad 22.80 275 P **P** **04 13 19.5 -0.5**
SNR=117
LATR Latur 22.82 184 ex P 04 13 15.3 -4.9
POO Poona 22.97 191 eP **P** **04 13 25.7 +3.9**
CD2 Chengdu 23.01 109 P **P** **04 13 23.0 +0.8**
CD2 pP pP 04 13 33.5 +4.8
CD2 PP **PnPn** **04 13 53.6 +6.4**
CD2 PcP **PcP** **04 17 13.5 +2.1**
CD2 S **S** **04 17 26.3 -5.2**
CD2 sS **sS** **04 17 43.8 +1.0**
CD2 PcS **PcS** **04 20 51.3 +0.7**
CD2 pmax pmax
comp=Z,60nm,0.5s
CD2 pmax pmax
comp=Z,300nm,4.5s
CD2 LR LR
comp=N,5μm,15.2s
CD2 LR LR
comp=E,5μm,12.2s
CD2 LR LR
comp=Z,4μm,12.5s
IPIR Pirpir 23.38 257 eP **P** **04 13 28.0 +1.8**
BRDA Brd 23.47 278 P **P** **04 13 29.4 +2.7**
SNR=12
HYB Hyderabad 23.77 179 *i*P **P** **04 13 28.5 -1.3**
comp=Z,70nm,1.0s
HYB Hyderabad 23.77 179 eP **P** **04 13 29.9 +0.1**
HYB AMB AMB 04 13 36.4
comp=Z,145nm,2.3s
VIS Vishakhapatnam 23.87 168 eP **P** **04 13 31.6 +0.9**
VIS eP **pP** **04 13 36.8 -0.8**
VIS AMb AMB 04 13 40.4
comp=Z,133nm,1.8s
BTO Baotou 23.97 81 eP **P** **04 13 31.9 +0.3**
KAD Karad 24.13 189 eP **P** **04 13 34.6 +1.4**
KAD ex x 04 19 47.0
DGRG David-gareji 24.58 281 P **P** **04 13 38.1 +0.9**
HATD Hatta, Dubai 24.62 235 P **P** **04 13 37.8 +0.2**
SNR=11
SARR Saratov 24.70 305 *d*P P 04 13 43.0 +5.0
SARR *i* S **S** **04 18 01.5 +3.1**
SARR pmax pmax
comp=Z,83nm,0.9s
ASHO Ashiyiah 24.77 235 P **P** **04 13 39.6 +0.6**
SNR=30
NAZ Nazwa, Dubai 24.80 236 P **P** **04 13 40.0 +0.8**
SNR=7.8
HOQ Hoqain 24.84 231 P **P** **04 13 41.5 +1.9**
SNR=7.7
TBLG Delisi 25.00 282 eP **P** **04 13 41.8 +0.9**
TBLG eS **S** **04 18 08.1 +4.7**
TBLG Delisi 25.00 282 P **P** **04 13 41.9 +0.9**
NAX Nakhchivan 25.00 276 P P 04 13 48.1 +7.1
SNR=6.2
HHC Hu-ho-hao-te 25.07 80 eP **P** **04 13 41.8 +0.2**
HHC PP **PnPn** **04 14 19.1 +3.8**
HHC PcP **PcP** **04 17 17.3 +1.5**
HHC S **S** **04 18 01.6 -3.1**
HHC sS **sS** **04 18 13.3 -2.8**
HHC SS **SnSn** **04 19 01.3 +6.9**
HHC ScP **ScP** **04 20 53.0 -0.3**
HHC PcS **PcS** **04 20 55.8 -0.3**
HHC pmax pmax
comp=Z,91nm,0.8s
HHC pmax pmax
comp=Z,1μm,5.9s
HHC LR LR
comp=N,9μm,13.8s
HHC LR LR
comp=E,4μm,13.6s
HHC LR LR
comp=Z,4μm,15.9s
XAN Xi'an 25.27 97 P **P** **04 13 43.3 -0.1**
XAN pP **pP** **04 13 50.8 +0.5**
XAN S **S** **04 18 11.8 +3.9**
XAN pmax pmax
comp=Z,17nm,1.0s
XAN pmax pmax
comp=Z,96nm,4.5s
XAN LR LR
comp=N,4μm,17.4s
XAN LR LR
comp=E,1μm,18.4s
XAN LR LR
comp=Z,1μm,17.4s
ASUD Al Ashush, Dub 25.27 236 P **P** **04 13 44.8 +1.3**
SNR=7.7
GNI Garni 25.32 279 eP **P** **04 13 45.6 +1.6**
comp=Z,155nm,1.0s
GNI Garni 25.32 279 P **P** **04 13 45.6 +1.6**
SNR=59
GNI Garni 25.32 279 P **P** **04 13 45.6 +1.6**
comp=Z,25nm,1.0s,baz=204,slow=1.6,SNR=24
JMDO Jabal Madar 25.33 228 P **P** **04 13 45.9 +1.8**
SNR=7.2
GOR Gori 25.41 283 P **P** **04 13 47.2 +2.5**
ZEI Tsey 25.44 285 eP **P** **04 13 44.8 -0.4**
ZEI eS **S** **04 18 14.6 +3.7**
ZEI pmax pmax
comp=Z,11nm,0.6s
ARQ Araqi 25.50 232 P **P** **04 13 47.1 +1.5**
SNR=22
ONI Oni 25.80 285 P **P** **04 13 47.0 -1.2**
KMI Kunming 25.95 121 P **P** **04 13 50.9 +1.0**
KMI pP pP 04 14 01.9 +5.0
KMI sP sP 04 14 07.0 +7.3
KMI PP **PnPn** **04 14 33.3 +5.5**
KMI S **S** **04 18 17.8 -1.4**
KMI sS sS 04 18 34.0 +3.3
KMI pmax pmax
comp=Z,92nm,1.0s
KMI LR LR
comp=N,3μm,19.8s
KMI LR LR
comp=E,4μm,17.9s
KMI LR LR
comp=Z,2μm,23.0s
AKH Akhalkalaki 25.97 282 P **P** **04 13 51.3 +1.3**
KBZ Khabaz 26.04 287 P **P** **04 13 49.8 -0.5**
KBZ pmax pmax
comp=Z,6.0nm,1.1s
KBZ Khabaz 26.04 287 P **P** **04 13 49.8 -0.5**
KBZ Khabaz 26.04 287 P **P** **04 13 49.8 -0.5**
comp=Z,6.0nm,1.1s,baz=74,slow=11,SNR=7.3
KIV Kislovodsk 26.17 288⇑eP **P** **04 13 51.6 0.0**
KIV *e* 04 14 28.5
KIV *e* 04 19 33.6
KIV pmax pmax
comp=Z,36nm,1.7s
KIV MLR MLR
comp=Z,3μm,15.0s
CIT Chita 26.28 54 eP **P** **04 13 51.4 -1.1**
CIT *e* 04 14 07.0
CIT *e* 04 14 38.8
CIT *e* 04 14 45.3
CIT pmax pmax
comp=Z,187nm,1.4s
TIY Taiyuan 26.54 86 eP **P** **04 13 55.9 +0.9**
TIY LR LR
comp=N,2μm,11.0s
TIY LR LR
comp=E,3μm,12.5s
TIY LR LR
comp=Z,4μm,12.2s
VRHR Novokhopersk 26.92 304 eP **P** **04 13 58.1 -0.1**
VRHR e*PP pP 04 14 12.4 +7.3
VRHR eS **S** **04 18 33.8 +0.2**
VRHR pmax pmax
comp=N,2.0nm,0.5s
VRHR pmax pmax
comp=E,5.0nm,0.5s
VRHR pmax pmax
comp=Z,20nm,0.5s
VRHR smax smax
comp=N,110nm,1.2s
VRHR smax smax
comp=Z,5.0nm,0.6s
VRHR smax smax
comp=E,50nm,1.2s
VRHR MLR MLR
comp=N,440nm,13.0s
VRHR MLR MLR
comp=E,2μm,13.0s
VRHR MLR MLR
comp=Z,3μm,13.0s
UMR Umm Al-Rimmam 27.33 254 eP **P** **04 14 02.2 +0.1**
UMR AMb AMB 04 14 11.4
comp=Z,113nm,1.7s
MIB Mutribah 27.47 255 eP **P** **04 14 03.0 -0.2**
MIB AMb AMB 04 14 12.7
comp=Z,93nm,1.3s
KBD Kabd 27.56 254 eP **P** **04 14 03.9 -0.2**
KBD AMb AMB 04 14 16.1
comp=Z,30nm,0.7s
GYA Guiyang 27.70 113⇑*i*P **P** **04 14 05.8 +0.2**
GYA pP pP 04 14 18.0 +5.5
GYA sP sP 04 14 22.4 +7.0
GYA PP **PnPn** **04 14 56.3 +4.8**
GYA S **S** **04 18 52.6 +6.0**
GYA sS sS 04 19 03.8 +5.7
GYA SS **SnSn** **04 20 05.3 +6.1**
GYA ScS **ScS** **04 24 50.0 -3.5**
GYA pmax pmax
comp=Z,30nm,0.8s
GYA pmax pmax
comp=Z,130nm,4.8s
GYA LR LR
comp=N,2μm,17.4s
GYA LR LR
comp=E,2μm,14.0s
GYA LR LR
comp=Z,2μm,14.0s
RDF Al-Radifah 27.80 253 eP **P** **04 14 06.7 +0.4**
RDF AMb AMB 04 14 18.4
comp=Z,64nm,1.3s
NAY Al-Naaiem 27.84 254 eP **P** **04 14 06.2 -0.5**
NAY AMb AMB 04 14 20.5
comp=Z,61nm,0.8s
BHD Baghdad 27.95 264 ex **P** **04 14 05.7 -1.9**
BHD *i* x 04 18 47.0
SOC Sochi 28.35 288 eP **P** **04 14 11.3 +0.3**
SOC e*SP sP 04 14 24.8 +3.9
SOC *e* 04 14 59.3
SOC eSSS SSS 04 15 09.6
SOC eS **S** **04 18 58.9 +2.7**
SOC pmax pmax
comp=Z,39nm,1.0s
SOC MLR MLR
comp=Z,4μm,19.0s
VORD Divnogorie 28.38 303 eP **P** **04 14 11.0 -0.2**
VORD e*PP pP 04 14 22.2 +4.1
VORD eS **S** **04 18 55.2 -1.3**
VORD pmax pmax
comp=N,7.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,20nm,0.6s
VORD smax smax
comp=E,180nm,1.1s
VORD smax smax
comp=Z,4.0nm,0.3s
VORD smax smax
comp=N,40nm,0.5s
VORD MLR MLR
comp=N,3μm,16.0s
VORD MLR MLR
comp=E,1μm,16.0s
VORD MLR MLR
comp=Z,4μm,16.0s
VSR Storozhevoye 28.48 304 eP **P** **04 14 12.0 -0.1**
VSR e*PP pP 04 14 23.0 +4.0
VSR eS **S** **04 18 56.5 -1.6**
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,20nm,0.6s
VSR pmax pmax
comp=Z,20nm,0.6s
VSR smax smax
comp=N,60nm,0.9s
VSR smax smax
comp=E,40nm,0.9s
VSR smax smax
comp=Z,10.0nm,0.9s
VSR MLR MLR
comp=N,4μm,17.0s
VSR MLR MLR
comp=E,2μm,17.0s
VSR MLR MLR
comp=Z,4μm,17.0s
VOR Voronezh 28.50 305 P **P** **04 14 13.0 +0.7**
VOR pmax pmax
comp=Z,250nm,1.2s
CHTO Chiang Mai 28.54 135 eP **P** **04 14 14.1 +1.2**
CHTO pmax pmax
comp=Z,29nm,1.1s
CHTO Chiang Mai 28.54 135 eP **P** **04 14 14.1 +1.2**
comp=Z,29nm,1.1s
CHTO Chiang Mai 28.54 135 P **P** **04 14 14.8 +1.8**
SNR=8.4
CHTO Chiang Mai 28.54 135 P P 04 14 16.3 +3.4
CHTO Chiang Mai 28.54 135 P P 04 14 16.3 +3.4
comp=Z,20nm,1.6s,comp=Z,344nm
BJI Beijing 28.68 80 P **P** **04 14 13.0 -0.9**
BJI S **S** **04 18 59.0 -2.4**
BJI pmax pmax
comp=Z,10.0nm,0.7s
BJI pmax pmax
comp=Z,190nm,5.5s
BJI LR LR
comp=N,4μm,15.7s
BJI LR LR
comp=E,4μm,14.5s
BJI LR LR
comp=Z,2μm,17.0s
CMAR Chiang Mai Arr 28.84 136 P **P** **04 14 14.4 -1.1**
CMAR Chiang Mai Arr 28.84 136 P **P** **04 14 14.4 -1.1**
comp=Z,1.8nm,0.4s,baz=317,slow=9.1,SNR=11
ANN Anapa 29.80 291 eP P 04 14 27.8 +3.9
ANN e*PP pP 04 14 38.9 +8.1

ANN eS S 04 19 25.8 +6.8
ANN pmax pmax
comp=Z,79nm,1.3s
ANN MLR MLR
comp=N,2µm,16.0s
ANN MLR MLR
comp=E,2µm,16.0s
ANN MLR MLR
comp=Z,3µm,16.0s
MOS Moscow 30.05 313 eP **P 04 14 25.8 -0.1**
MOS e 04 14 39.3
MOS e 04 15 27.3
MOS e 04 17 30.3
MOS eS **S 04 19 22.3 -0.4**
MOS eSSS SSS 04 21 21.1
MOS pmax pmax
comp=Z,68nm,0.9s
MOS MLR MLR
comp=Z,2µm,11.0s
OBN Obninsk 30.52 311 deP **P 04 14 30.2 +0.1**
OBN i 04 14 43.2
OBN i 04 15 31.6
OBN i 04 17 25.9
OBN S **S 04 19 31.0 +0.9**
OBN pmax pmax
comp=Z,38nm,1.2s
OBN MLR MLR
comp=Z,1µm,18.0s
MALT Malatya 30.53 278 eP **P 04 14 31.6 +1.0**
MALT pmax pmax
comp=Z,49nm,1.3s
MALT Malatya 30.53 278 eP **P 04 14 31.6 +1.0**
comp=Z,49nm,1.3s
MALT Malatya 30.53 278 ⇑iP **P 04 14 31.9 +1.3**
TIA Tai'an 30.58 87 P **P 04 14 32.4 +1.5**
TIA LR LR
comp=N,5µm,15.7s
TIA LR LR
comp=E,3µm,15.7s
TIA LR LR
comp=Z,4µm,16.7s
WHN Wuhan 30.96 99 ⇑P **P 04 14 34.9 +0.6**
WHN pP **pP 04 14 41.5 +0.3**
WHN S **S 04 19 37.8 +0.3**
WHN pmax pmax
comp=Z,94nm,1.4s
WHN LR LR
comp=N,12µm,17.5s
WHN LR LR
comp=E,5µm,16.2s
WHN LR LR
comp=Z,8µm,16.8s
ABTO Aybut 32.04 229 P **P 04 14 43.9 0.0**
SNR=8.7
SIM Simferopol' 32.11 292 eP **P 04 14 44.1 -0.2**
SIM eS **S 04 19 54.0 -1.2**
SIM pmax pmax
comp=Z,22nm,1.0s
SIM MLR MLR
comp=Z,2µm,21.0s
TMCR Tamitsa 32.54 328 eP **P 04 14 48.7 +0.9**
TMCR pmax pmax
comp=Z,87nm,1.1s
DL2 Dalian 33.04 80 eP P 04 14 58.0 +5.5
DL2 S S 04 20 22.1 +12
DL2 pmax pmax
comp=Z,50nm,1.2s
DL2 pmax pmax
comp=Z,310nm,2.7s
DL2 LR LR
comp=N,2µm,14.5s
DL2 LR LR
comp=Z,1µm,14.3s
CLNS Chul'man 33.57 46 eP **P 04 14 57.4 +0.4**
CLNS e 04 16 05.9
CLNS e 04 17 34.0
CLNS eS **S 04 20 15.8 -2.0**
CLNS pmax pmax
comp=Z,24nm,0.9s
CLNS pmax pmax
comp=E,14nm,1.0s
CLNS pmax pmax
comp=N,6.0nm,1.1s
CLNS pmax pmax
comp=E,13nm,1.1s
CLNS pmax pmax
comp=N,8.0nm,1.1s
CLNS pmax pmax
comp=Z,17nm,1.1s
CLNS smax smax
comp=N,62nm,10.8s
CLNS smax smax
comp=E,143nm,15.4s
CLNS MLR MLR
comp=Z,1µm,11.0s
CLNS MLR MLR
comp=N,1µm,11.0s
CLNS MLR MLR
comp=E,840nm,12.0s
NJ2 Nanjing 33.61 93 eP **P 04 14 58.6 +1.1**
NJ2 pP pP 04 15 11.1 +6.6
NJ2 sP sP 04 15 15.0 +7.6
NJ2 PP **PP 04 16 12.0 -1.7**
NJ2 S **S 04 20 20.0 +1.2**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
NJ2 pmax pmax
comp=Z,160nm,4.3s
NJ2 LR LR
comp=N,3µm,14.2s
NJ2 LR LR
comp=E,2µm,13.6s
NJ2 LR LR
comp=Z,2µm,10.0s
SNY Shenyang 33.65 74 ⇓P **P 04 14 58.3 +0.6**
SNY S **S 04 20 22.8 +3.6**
SNY pmax pmax
comp=Z,36nm,1.9s
SNY pmax pmax
comp=Z,330nm,4.3s
SNY LR LR
comp=N,2µm,12.4s
SNY LR LR
comp=E,3µm,15.1s
SNY LR LR
comp=Z,4µm,16.2s
BR131 Keskin Array S 33.66 282 eP **P 04 14 58.1 0.0**
comp=Z,17nm,0.8s
BRTR Keskin Array B 33.66 282 P **P 04 14 58.1 0.0**
BRTR Keskin Array B 33.66 282 P **P 04 14 58.1 0.0**
comp=Z,7.3nm,0.8s,baz=94,slow=8.5,SNR=58
BRTR LR LR 04 29 40.8
comp=Z,838nm,20.6s,baz=243,slow=38
PALK Pallekele 33.92 176 eP **P 04 15 01.0 +0.6**
comp=Z,10nm,0.6s
ANTO Ankara 34.24 283 eP **P 04 15 04.9 +1.9**
ANTO pmax pmax
comp=Z,30nm,1.1s
ANTO Ankara 34.24 283 eP **P 04 15 04.9 +1.9**
comp=Z,30nm,1.1s
ANTO Ankara 34.24 283 ⇑iP **P 04 15 03.5 +0.5**
ANTO Ankara 34.24 283 P **P 04 15 03.7 +0.7**
SNR=14
CN2 Changchun 34.53 70 ⇑P **P 04 15 05.3 -0.1**
CN2 epP **pP 04 15 09.8 -2.6**
CN2 PP **PnPn 04 16 21.1 +0.4**
CN2 eS **S 04 20 33.8 +1.1**
CN2 pmax pmax
comp=Z,30nm,1.1s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,2µm,15.0s
CN2 LR LR
comp=E,4µm,15.0s
CN2 LR LR
comp=Z,3µm,14.0s
PUL Pulkovo 34.67 319 ceP **P 04 15 07.2 +0.9**
PUL pmax pmax
comp=Z,64nm,0.5s
AKASG Malin Array Be 34.75 303 P **P 04 15 06.9 -0.3**
AKASG pmax pmax
comp=Z,29nm,0.9s
AKASG Malin Array Be 34.75 303 P **P 04 15 06.9 -0.3**
AKASG Malin Array Be 34.75 303 P **P 04 15 06.9 -0.3**
comp=Z,29nm,0.9s,baz=76,slow=8.1,SNR=26

AK01 Malin Array Si 34.76 303 eP **P 04 15 07.4 +0.1**
KIEV Kiev 34.76 303 eP **P 04 15 07.5 +0.2**
KIEV pmax pmax
comp=Z,81nm,1.1s
KIEV Kiev 34.76 303 eP **P 04 15 07.5 +0.2**
comp=Z,81nm,1.1s
AK02 Malin Array Si 34.77 303 eP **P 04 15 07.3 0.0**
QIZ Qiongzhong 34.90 120 P **P 04 15 08.8 0.0**
QIZ sP sP 04 15 24.8 +6.2
QIZ S **S 04 20 37.9 -0.9**
QIZ pmax pmax
comp=Z,35nm,2.0s
QIZ LR LR
comp=N,2µm,20.6s
QIZ LR LR
comp=E,2µm,19.6s
QIZ LR LR
comp=Z,1µm,15.1s
JOF Joensuu 34.92 324 eP **P 04 15 10.1 +1.6**
JOF Joensuu 34.92 324 ep **P 04 15 10.1 +1.6**
UBPT Khong Chiam 35.03 130 P **P 04 15 09.9 0.0**
comp=Z,41nm,1.1s
CHBT CHBT 35.37 136 P P 04 15 20.9 +8.1
comp=Z,47nm,1.2s,comp=Z,2µm
LVZ Lovozero 35.42 333 ceP **P 04 15 12.9 +0.1**
LVZ pmax pmax
comp=Z,223nm,2.5s
KIS Kishinev 35.43 296 eP **P 04 15 12.0 -1.1**
KIS e 04 17 40.0
KIS eS **S 04 20 46.0 -0.5**
KIS MLR MLR
comp=N,1µm,15.0s
KIS MLR MLR
comp=Z,2µm,15.0s
KIS MLR MLR
comp=E,1µm,14.0s
KIS MLR MLR
comp=Z,2µm,16.0s
KIS Kishinev 35.43 296 eP **P 04 15 12.0 -1.1**
KIS eS **S 04 20 46.0 -0.5**
KIS eSS **SnSn 04 23 12.0 +5.7**
KIS eLQ LQ 04 28 30.0
KIS LRM MLR 04 33 20.0
comp=Z,2µm,16.0s
MICGM Minsk 35.48 309 eP **P 04 15 12.0 -1.4**
MNK Minsk 35.50 309 eP **P 04 15 12.0 -1.6**
MNK eS **S 04 20 46.0 -1.5**
MNK MLR MLR
comp=Z,7µm,15.0s
CSS Prodhromos 35.56 275 eP **P 04 15 13.4 -1.0**
comp=Z,12nm,0.9s
APA Apatity 35.71 332 ⇓iP **P 04 15 15.0 -0.2**
APA eS **S 04 20 50.0 -0.4**
APA pmax pmax
comp=Z,28nm,1.0s
APA MLR MLR
comp=Z,4µm,11.0s
TLCR 35.76 293 ⇓iP **P 04 15 16.5 +0.6**
SSE Sheshan 35.82 92 P **P 04 15 16.4 -0.2**
SSE sP sP 04 15 32.6 +6.1
SSE PP **PP 04 16 37.8 -0.3**
SSE S **S 04 20 49.6 -3.2**
SSE ScS **ScS 04 25 32.0 -1.6**
SSE pmax pmax
comp=Z,53nm,1.1s
SSE pmax pmax
comp=Z,160nm,6.4s
SSE LR LR
comp=N,2µm,14.1s
SSE LR LR
comp=E,1µm,14.1s
SSE LR LR
comp=Z,1µm,14.0s
NACGM Naroch 36.12 310 eP **P 04 15 17.0 -1.9**
CFR Carcaliu 36.23 293 ⇑iP **P 04 15 20.9 +0.9**
IZAR Zarasai 36.44 311 eP **P 04 15 23.0 +1.4**
IZAR AMB AMB 04 15 28.4
comp=Z,22nm,0.8s
IIGN Ignalina 36.44 311 eP **P 04 15 23.1 +1.4**
IIGN AMB AMB 04 15 28.5
comp=Z,16nm,0.9s
ISAL Salakas 36.50 311 eP **P 04 15 23.5 +1.4**
ISAL AMB AMB 04 15 29.0
comp=Z,20nm,0.8s
ISP Isparta 36.58 281 eP **P 04 15 23.0 -0.2**
ISP pmax pmax
comp=Z,27nm,0.9s
ISP Isparta 36.58 281 eP **P 04 15 23.0 -0.2**
comp=Z,27nm,0.9s
ISP Isparta 36.58 281 ⇓iP **P 04 15 22.9 -0.2**
PETR 36.74 295 ⇑iP **P 04 15 26.5 +2.2**
YAK Yakutsk 36.79 38 eP **P 04 15 24.2 -0.3**
YAK e 04 16 48.8
YAK e 04 17 45.8
YAK eS S 04 20 59.0 -7.9
YAK eSS **SnSn 04 23 39.6 +0.9**
YAK e 04 25 32.5
YAK pmax pmax
comp=Z,75nm,1.0s
YAK pmax pmax
comp=N,10.0nm,1.3s
YAK pmax pmax
comp=E,42nm,1.3s
YAK pmax pmax
comp=Z,55nm,1.3s
YAK pmax pmax
comp=N,13nm,0.9s
YAK pmax pmax
comp=E,54nm,1.6s
YAK smax smax
comp=N,51nm,2.0s
YAK smax smax
comp=E,65nm,2.0s
TESR 36.98 296 ⇓iP **P 04 15 26.8 +0.4**
FIA1 FINESS Array S 37.01 321 eP **P 04 15 27.0 +0.6**
FINES FINESS Array B 37.01 321 P **P 04 15 27.0 +0.6**
FINES FINESS Array B 37.01 321 P **P 04 15 27.0 +0.6**
comp=E,41nm,0.6s,baz=99,slow=9.0,SNR=269
KAF Kangasniemi 37.01 322 eP **P 04 15 27.1 +0.7**
KAF pmax pmax
comp=Z,9.0nm,0.6s
KAF Kangasniemi 37.01 322 ep **P 04 15 27.1 +0.7**
comp=Z,8.8nm,0.6s
VRI Vrincioaia 37.06 295 ⇑iP **P 04 15 27.8 +0.7**
PRAR RASCA 37.11 297 ⇓iP **P 04 15 28.9 +1.4**
PLOR Plostina 37.12 295 ⇓iP **P 04 15 29.0 +1.4**
QZH Quanzhou 37.16 103 eP **P 04 15 30.3 +2.2**
QZH S **S 04 21 15.0 +1.6**
QZH LR LR
comp=N,6µm,16.1s
QZH LR LR
comp=E,2µm,11.0s
QZH LR LR
comp=Z,5µm,14.6s
INCN Inchon 37.23 80 eP **P 04 15 28.6 -0.1**
comp=Z,49nm,0.8s
INCN Inchon 37.23 80 P **P 04 15 29.4 +0.7**
SNR=8.6
MDJ Mudanjiang 37.25 67 P **P 04 15 27.6 -1.1**
MDJ pP pP 04 15 38.6 +2.9
MDJ sP sP 04 15 43.8 +5.2
MDJ S **S 04 21 11.9 -2.5**
MDJ sS **ScP 04 21 31.3 -2.2**
MDJ pmax pmax
comp=Z,8.0nm,1.1s
MDJ pmax pmax
comp=Z,18nm,2.7s
MDJ LR LR
comp=N,5µm,23.9s
MDJ LR LR
comp=E,2µm,22.9s
MDJ LR LR
comp=Z,3µm,17.7s
ISR Istrita 37.35 294 ⇓iP **P 04 15 31.1 +1.5**
MLR Muntele Rosu 37.67 294 P **P 04 15 32.9 +0.5**
MLR Muntele Rosu 37.67 294 ⇑iP **P 04 15 33.8 +1.4**
MLR Muntele Rosu 37.67 294 P **P 04 15 32.9 +0.5**
comp=Z,3.5nm,0.6s,baz=62,slow=2.5,SNR=52
MLR LR LR 04 31 46.5
comp=Z,315nm,19.0s,baz=55,slow=37
BURAR Bucovina Array 37.74 298 ⇓iP **P 04 15 33.5 +0.6**
BUR08 Bucovina Ar. S 37.75 298 eP **P 04 15 33.5 +0.5**
KLR Kul'dur 37.82 59 eP **P 04 15 31.7 -1.8**
KLR eS **S 04 21 27.0 +4.0**
KLR MLR MLR
comp=E,3µm,12.0s
KLR MLR MLR
comp=Z,6µm,12.0s
DOPR Dopca 37.95 295 ⇓iP **P 04 15 35.8 +1.2**
JMB Yambol 37.98 289 eP **P 04 15 37.3 +2.4**
LVV L'vov 38.16 302 eP **P 04 15 36.8 +0.5**
LVV e 04 17 05.5
LVV eS **S 04 21 29.3 +1.2**
LVV e 04 24 09.7
LVV e 04 24 40.7
LVV MLR MLR
comp=N,2µm,13.0s
LVV MLR MLR
comp=E,2µm,13.0s
LVV MLR MLR
comp=Z,1µm,13.0s
KSAR Wonju Array Be 38.17 79 P **P 04 15 36.4 -0.2**
KSRS Korea Array 38.20 79 P **P 04 15 36.4 -0.4**
comp=Z,11nm,0.9s,baz=284,slow=8.4,SNR=23
KSRS LR LR 04 34 36.3
comp=Z,1µm,18.2s,baz=285,slow=41
SZH Strazhica 38.23 291 eP **P 04 15 35.4 -1.5**
SUW Suwalki 38.24 309 eP **P 04 15 37.2 +0.2**
SUW pmax pmax
comp=Z,95nm,0.9s
SUW Suwalki 38.24 309 eP **P 04 15 37.1 +0.2**
comp=Z,95nm,0.9s
SUW Suwalki 38.24 309 eP **P 04 15 36.4 -0.5**
VOIR 38.30 295 ⇓iP **P 04 15 38.3 +0.6**
ARR Arges 38.60 295 ⇓iP **P 04 15 41.3 +1.1**
KEV Kevo 38.71 334 eP **P 04 15 41.1 +0.5**
KEV Kevo 38.71 334 ep **P 04 15 41.1 +0.5**
BMR Baia Mare 38.87 298 ⇑iP **P 04 15 43.4 +1.1**
USRK Ussuriysk Arra 39.03 67 P **P 04 15 43.3 -0.3**
comp=Z,14nm,0.8s,baz=281,slow=8.1,SNR=28
USRK LR LR 04 32 31.9
comp=Z,2µm,18.1s,baz=279,slow=37
KWP Kalwaria Pacla 39.04 302 eP **P 04 15 44.0 +0.3**
KWP pmax pmax
comp=Z,113nm,0.9s
KWP Kalwaria Pacla 39.04 302 eP **P 04 15 44.0 +0.3**
comp=Z,113nm,0.9s
KWP Kalwaria Pacla 39.04 302 ⇓iP **P 04 15 44.8 +1.1**
KWP Kalwaria Pacla 39.04 302 eP **P 04 15 45.0 +1.3**
ARCES ARCESS Array B 39.13 334 P **P 04 15 44.6 +0.4**
ARCES ARCESS Array B 39.13 334 P **P 04 15 44.6 +0.4**
comp=Z,39nm,0.7s,baz=104,slow=8.3,SNR=152
ARCES LR LR 04 33 17.1
comp=Z,1µm,19.0s,baz=110,slow=38
ARE0 ARCESS Array S 39.13 334 eP **P 04 15 44.5 +0.3**
LOT Lotru 39.17 295 ⇓iP **P 04 15 46.3 +1.3**
VLA Vladivostok 39.24 69 ⇑iP **P 04 15 43.7 -1.7**
VLA e 04 17 52.2
VLA eS **S 04 21 41.4 -3.1**
VLA pmax pmax
comp=Z,47nm,1.5s
YHNB Yeheng 39.37 101 eP **P 04 15 47.6 +0.8**
comp=Z,189nm,1.9s
TRPA Tarpa 39.42 299 ⇑iP **P 04 15 47.7 +0.9**
TRPA Tarpa 39.42 299 ⇑eP **P 04 15 48.0 +1.2**
KOLS Kolonicke sedl 39.44 301 eP **P 04 15 48.0 +0.9**
KOLS pmax pmax
comp=Z,11nm,1.1s
KOLS Kolonicke sedl 39.44 301 eP **P 04 15 47.9 +0.9**
UZH Uzhgorod 39.48 300 eP **P 04 15 49.0 +1.6**
UZH i 04 16 04.0
UZH e 04 17 22.1
UZH eS **S 04 21 47.4 -0.6**
UZH MLR MLR
comp=N,4µm,15.0s
UZH MLR MLR
comp=E,2µm,15.0s
UZH MLR MLR
comp=Z,1µm,15.0s
RZN Rozhen 39.54 289 eP **P 04 15 48.2 0.0**
DRGR 39.58 297 ⇑iP **P 04 15 49.2 +0.9**
DEV Deva 39.66 296 ⇓iP **P 04 15 51.1 +2.2**
MPEP Malo Peshtene 39.74 292 eP **P 04 15 50.6 +1.0**
KTK1 Kautokeino 39.76 333 eP **P 04 15 49.7 +0.3**
KTK1 AMB AMB 04 15 51.3
comp=Z,152nm,1.6s
KTK1 AMS AMS 04 32 03.5
comp=Z,5µm,12.7s
GZR Gura Zlata 39.87 295 ⇓iP **P 04 15 51.8 +1.1**
BEL Belsk 39.91 305 eP **P 04 15 52.1 +1.2**
CRVS Cervenica-Dubn 39.97 301 eP **P 04 15 51.6 +0.1**
CRVS pmax pmax
comp=Z,12nm,1.5s
CRVS Cervenica-Dubn 39.97 301 eP **P 04 15 51.6 +0.1**
HABR Khabarovsk 40.10 60 P **P 04 15 51.6 -0.9**
HABR e*PP **pP 04 16 01.8 +2.2**
HABR e*SP sP 04 16 07.0 +4.5
HABR e 04 17 55.0
HABR eS **S 04 21 54.2 -3.1**
HABR e*SS sS 04 22 13.6 +4.7
HABR e 04 25 53.7
HABR pmax pmax
comp=E,51nm,1.8s
HABR pmax pmax
comp=Z,92nm,1.8s
HABR pmax pmax
comp=N,34nm,1.8s
HABR MLR MLR
comp=Z,2µm,21.0s
TWG Pinlang 40.25 104 eP **P 04 15 56.2 +2.2**
comp=Z,594nm,1.2s
MMB Musomiste 40.27 289 eP **P 04 15 54.9 +0.8**
VTS Vitosha 40.34 291 ⇑iP **P 04 15 55.3 +0.6**
VTS Vitosha 40.34 291 eP **P 04 15 54.4 -0.3**
APE Apeiranthos 40.55 282 ⇑iP **P 04 15 56.2 -0.3**
BZS Buzias 40.60 296 ⇓iP **P 04 15 57.7 +1.0**
NIE Niedzica 40.61 302 eP **P 04 15 58.0 +1.2**
NIE e 04 16 03.2
NIE Niedzica 40.61 302 eP **P 04 15 58.0 +1.2**
NIE e 04 16 03.2
KKB Krupnik 40.65 290 eP **P 04 15 57.4 +0.2**
OJC Ojcow 40.79 303 eP **P 04 15 58.6 +0.4**
OJC e*PP pP 04 16 08.5 +3.2
OJC eS **S 04 22 04.7 -2.8**
OJC Ojcow 40.79 303 eP **P 04 15 58.6 +0.4**
OJC epP pP 04 16 08.5 +3.2
OJC eS **S 04 22 04.7 -2.8**
OJC L L 04 31 13.9
comp=Z,1µm,18.1s
KULM Kulim 41.06 145 eP **P 04 16 00.9 +0.1**
comp=Z,93nm,1.8s
KULM Kulim 41.06 145 P **P 04 16 02.8 +2.0**
VAY Valandovo 41.19 289 eP **P 04 16 01.6 0.0**
PSZ Piszkesteto 41.20 300 eP **P 04 15 59.5 -2.2**
PSZ pmax pmax
comp=Z,21nm,0.9s
PSZ Piszkesteto 41.20 300 eP **P 04 15 59.5 -2.2**
comp=Z,21nm,0.9s
PSZ Piszkesteto 41.20 300 ⇓iP **P 04 16 02.6 +0.9**
PSZ Piszkesteto 41.20 300 ⇓eP **P 04 16 03.4 +1.7**
TRO Tromso 41.39 333 eP **P 04 16 02.5 -0.4**
TRO AMB AMB 04 16 17.2
comp=Z,131nm,1.4s
TRO eSS SS 04 25 22.1 +2.4
TRO AMS AMS 04 33 06.8
comp=Z,3µm,9.3s
PKSN Nyarlorinc 41.45 298 ⇓eP **P 04 16 05.5 +1.8**
PKS6 Bocsa 41.73 298 ⇓eP **P 04 16 05.3 -0.7**
IDI Anoyia 41.74 280 eP **P 04 16 05.3 -1.0**
comp=Z,20nm,0.6s
VYHS Vyhne 41.76 301 eP **P 04 16 07.3 +1.1**
VYHS pmax pmax
comp=Z,16nm,1.1s
VYHS Vyhne 41.76 301 eP **P 04 16 07.3 +1.1**
GKP Gorka Klasztor 41.84 308 eP **P 04 16 07.7 +0.9**
BUD Budapest 41.87 299 ⇓eP **P 04 16 09.0 +1.9**
PKS7 Kunszentmiklos 41.89 299 ⇑eP **P 04 16 09.8 +2.6**
OKC Ostrava-Krasne 41.91 303 eP **P 04 16 07.4 0.0**
OKC eS **S 04 22 25.7 +1.6**
OKC MLR MLR
comp=Z,1µm,12.1s
OKC Ostrava-Krasne 41.91 303 eP **P 04 16 07.4 0.0**
OKC eS **S 04 22 25.7 +1.6**
OKC AMS AMS 04 33 00.0
comp=Z,1µm,12.1s
IPM Ipoh 41.95 145 eP **P 04 16 07.5 -0.6**
comp=Z,12nm,0.8s
IPM Ipoh 41.95 145 P **P 04 16 07.8 -0.2**
IPM Ipoh 41.95 145 P P 04 16 14.8 +6.8

PKS2 **Kecel** 41.99 298⇓ *e*P P 04 16 07.8 -0.3
JNU **Nakatsue** 42.18 84 *e*P P 04 16 09.6 -0.3
comp=Z,39nm,1.5s
MORC **Moravsky Berou** 42.30 303 *e*P P 04 16 11.2 +0.5
MORC pmax pmax
comp=Z,28nm,1.0s
MORC **Moravsky Berou** 42.30 303 *e*P P 04 16 11.2 +0.5
comp=Z,28nm,1.0s
MORC **Moravsky Berou** 42.30 303⇑ *i*P P 04 16 11.3 +0.5
PKSG 42.31 299⇓ *e*P P 04 16 12.0 +1.3
PKSM **Moragy** 42.45 297⇓ *i*P P 04 16 12.5 +0.7
PKSM **Moragy** 42.45 297⇓ *e*P P 04 16 13.0 +1.2
BJO **Bjornoya** 42.51 340 *e*P P 04 16 09.8 -2.2
GVD **Gavdhos** 42.52 280 *e*P P 04 16 11.4 -1.2
comp=Z,144nm,0.8s
IVA **Berane** 42.57 292⇑ *i*P P 04 16 14.1 +1.1
PKST **T''s** 42.58 299⇓ *e*P P 04 16 13.8 +0.9
PKS9 **Tamasi** 42.59 298⇓ *e*P P 04 16 13.8 +0.8
PSI **Prapat** 42.59 149 P P 04 16 14.7 +1.3
comp=Z,37nm,1.0s
PSI **Prapat** 42.59 149 LR LR 04 36 04.9
comp=Z,551nm,18.9s,baz=204,slow=39
PVY **Plav** 42.62 292 *e*P P 04 16 14.2 +0.8
MOR8 **Moi Rana** 42.63 327 *e*P P 04 16 12.3 -0.8
MOR8 AMB AMB 04 16 18.9
comp=Z,72nm,1.2s
SMOL **Smolenice** 42.66 301 *e*P P 04 16 15.2 +1.6
SMOL **Smolenice** 42.66 301 *e*P P 04 16 15.2 +1.6
KRLC **Kraliky** 42.72 303 *e*P P 04 16 14.7 +0.7
KRLC **Kraliky** 42.72 303 *e*P P 04 16 14.7 +0.7
PLE **Pljevlja** 42.78 293⇑ *i*P P 04 16 15.6 +0.9
KSP **Ksiaz** 42.86 305 *e*P P 04 16 16.0 +0.9
KSP *e*S S 04 22 39.5 +1.4
KSP *e*SS SS 04 25 45.0 -4.4
KSP MLR MLR
comp=Z,6µm,16.1s
KSP **Ksiaz** 42.86 305 *e*P P 04 16 16.3 +1.2
DPC **Dobruska-Polom** 42.94 304 *i* P P 04 16 17.2 +1.3
DPC *e*S S 04 22 42.3 +2.8
DPC AMS AMS 04 35 00.0
comp=N,2µm,10.8s
VRAC **Vranov** 43.01 302 P P 04 16 16.4 0.0
VRAC **Vranov** 43.01 302⇑ *i*P P 04 16 16.0 -0.4
VRAC **Vranov** 43.01 302 P P 04 16 16.4 0.0
comp=N,6.7nm,0.7s,baz=75,slow=8.3,SNR=9.8
HFS **Hagfors** 43.02 319 P P 04 16 16.8 +0.5
HFS **Hagfors** 43.02 319 P P 04 16 16.8 +0.5
comp=N,40nm,0.7s,baz=99,slow=9.2,SNR=81
FLOS **Flostrand** 43.08 328 *e*P P 04 16 16.4 -0.2
FLOS AMB AMB 04 16 31.7
comp=Z,138nm,1.4s
UPC **Upice** 43.10 304 *e*P P 04 16 18.1 +1.0
UPC **Upice** 43.10 304 *e*P P 04 16 18.1 +1.0
UPM **Unac-Piva** 43.15 293⇑ *i*P P 04 16 18.6 +0.8
TTG **Podgorica** 43.16 292⇑ *i*P P 04 16 18.0 +0.3
STOK **Stokkvaagen** 43.22 328 *e*P P 04 16 18.0 +0.3
ULC **Ulcinj** 43.32 291⇑ *i*P P 04 16 20.0 +1.0
SOP **Sopron** 43.43 300⇓ *e*P P 04 16 19.4 -0.4
BUM **Brajici-Budva** 43.46 292⇑ *i*P P 04 16 20.4 +0.2
BRY **Bratogost** 43.51 293 *e*P P 04 16 21.0 +0.4
BEHE **Becsehely** 43.62 298⇓ *e*P P 04 16 22.7 +1.4
NSS **Namsos** 43.64 325 *e*P P 04 16 17.3 -3.9
TREC **Trest** 43.72 303 *e*P P 04 16 23.1 +1.0
TREC MLR MLR
comp=Z,2µm,19.2s
TREC **Trest** 43.72 303 *e*P P 04 16 23.1 +1.0
TREC AMS AMS 04 37 40.0
comp=Z,2µm,19.2s
CONA **Conrad Observa** 43.82 301⇑ *i*P P 04 16 24.0 +0.9
comp=Z,46nm,0.9s,SNR=26
CONA **Conrad Observa** 43.82 301⇑ *i*P P 04 16 24.0 +0.9
comp=Z,46nm,0.9s
PVCC **Panska Ves** 44.00 305 *e*P P 04 16 25.7 +1.4
PVCC MLR MLR
comp=Z,3µm,14.4s
PVCC **Panska Ves** 44.00 305 *e*P P 04 16 25.7 +1.4
PVCC AMS AMS 04 35 30.0
comp=Z,3µm,14.4s
PRU **Pruhonice** 44.14 304 *e*P P 04 16 26.1 +0.6
PRU *e*S S 04 22 55.9 -1.0
PRU MLR MLR
comp=Z,2µm,11.4s
PRU **Pruhonice** 44.14 304 *e*P P 04 16 26.1 +0.6
PRU *e*S S 04 22 55.9 -1.0
PRU AMS AMS 04 35 40.0
comp=Z,2µm,11.4s
NB2 **NORSAR Subarra** 44.17 320 P P 04 16 25.7 +0.1
baz=86,slow=8.6
NB2 **NORSAR Subarra** 44.17 320 P P 04 16 25.7 +0.1
comp=Z,39nm,0.7s,baz=86,slow=8.6
NOA **NORSAR Array B** 44.17 320 P P 04 16 25.9 +0.3
NOA **NORSAR Array B** 44.17 320 P P 04 16 25.9 +0.3
comp=Z,31nm,0.7s,baz=86,slow=7.9,SNR=105
ARSA **Arzberg** 44.23 300⇑ *i*P P 04 16 26.4 +0.2
comp=Z,9.6nm,0.8s,SNR=14
ARSA **Arzberg** 44.23 300⇑ *i*P P 04 16 26.4 +0.2
comp=Z,9.6nm,0.8s
SPA0 **Spitsbergen Ar** 44.25 345 *e*P P 04 16 26.3 +0.3
SPA0 *e*S S 04 22 59.8 +1.9
SPA0 *e*SS SS 04 26 17.8 +1.9
SPITS **Spitsbergen Ar** 44.25 345 P P 04 16 25.9 -0.1
SPITS **Spitsbergen Ar** 44.25 345 P P 04 16 25.9 -0.1
comp=Z,7.4nm,0.5s,baz=126,slow=10.0,SNR=49
BRG **Berggiesshubel** 44.30 305 *e*P P 04 16 27.7 +1.0
comp=Z,16nm,1.2s
BRG *i* pP pP 04 16 38.6 +4.7
comp=Z,12nm,0.8s
BRG *i* 04 16 43.5
comp=Z,20nm,1.0s
BRG S S 04 23 00.0 +0.8
BRG SS SS 04 26 10.0 -7.6
BRG
comp=N,4µm,16.7s
BRG
comp=E,2µm,13.0s
BRG
comp=Z,2µm,12.7s
BRG **Berggiesshubel** 44.30 305 *e*P P 04 16 27.7 +1.0
BRG *i* *PP pP 04 16 38.6 +4.7
BRG *i* 04 16 43.5
BRG S S 04 23 00.0 +0.8
BRG SS SS 04 26 10.0 -7.6
BRG pmax pmax
comp=Z,16nm,1.2s
BRG pmax pmax
comp=Z,12nm,0.8s
BRG pmax pmax
comp=Z,20nm,1.0s
BRG MLR MLR
comp=N,4µm,16.7s
BRG MLR MLR
comp=E,2µm,13.0s
BRG MLR MLR
comp=Z,2µm,12.7s
BRG **Berggiesshubel** 44.30 305 *e*P P 04 16 27.7 +1.0
comp=Z,26nm,1.2s
NAO01 **NORSAR Array S** 44.34 320 *e*P P 04 16 26.8 -0.1
comp=Z,20nm,0.6s
FBE **Freiberg** 44.65 305 *e*P P 04 16 30.7 +1.2
comp=Z,46nm,1.1s
PERS **Pernice** 44.67 299 *i* P P 04 16 30.2 +0.4
MNSI **Mandailing Nat** 44.68 149 P P 04 16 32.3 +2.2
comp=Z,70nm,1.0s,comp=Z,3µm
SOKA **Soboth** 44.71 299⇓ *i*P P 04 16 30.5 +0.3
comp=Z,45nm,1.0s
SOKA **Soboth** 44.71 299⇓ *i*P P 04 16 30.5 +0.3
comp=Z,45nm,1.0s
CLL **Collm** 44.78 306 *e*P P 04 16 31.0 +0.5
CLL *i* 04 16 40.5
CLL pmax pmax
comp=Z,23nm,1.1s
CLL MLR MLR
comp=Z,2µm,19.3s
CLL **Collm** 44.78 306 *e*P P 04 16 31.0 +0.5
comp=Z,28nm,1.1s
CLL **Collm** 44.78 306 *e*P P 04 16 31.0 +0.5
comp=Z,23nm,1.1s
CLL *i* 04 16 35.6
CLL *i* pP pP 04 16 40.5 +2.8
CLL *i* 04 16 43.1
CLL *e*PP PP 04 18 17.0 +2.0
CLL *e*S S 04 23 06.0 -0.1
CLL *e*SS SS 04 26 30.0 +3.2
CLL LmH 04 32 00.0
comp=N,3µm,19.9s
CLL LmH 04 32 00.0
comp=E,1µm,21.3s
CLL LV 04 34 00.0
comp=Z,2µm,19.3s
MOA **Molln** 44.88 301⇑ *i*P P 04 16 31.4 -0.1
comp=Z,22nm,1.0s,SNR=12
MOA **Molln** 44.88 301⇑ *i*P P 04 16 31.4 -0.1
comp=Z,22nm,1.0s
BOJS **Bojanci** 44.92 297 *i* P P 04 16 32.2 +0.4
BOJS *e*S S 04 23 07.4 -0.9
GEC2 **GERESS Array S** 44.97 302 *e*P P 04 16 34.1 +1.9
GEC2 pmax pmax
comp=Z,48nm,1.2s
GEC2 **GERESS Array S** 44.97 302 *e*P P 04 16 34.1 +1.9
comp=Z,48nm,1.2s
GERES **GERESS Array B** 44.97 302 P P 04 16 32.6 +0.4
GERES **GERESS Array B** 44.97 302 P P 04 16 32.6 +0.4
comp=Z,14nm,0.8s,baz=64,slow=7.6,SNR=75
GERES LR LR 04 37 12.8
comp=Z,2µm,18.4s,baz=77,slow=39
KHC **Kasperske Hory** 44.97 303 *e*P P 04 16 32.5 +0.3
KHC *e* 04 16 45.0
KHC *e* 04 18 22.5
KHC *e*S S 04 23 12.4 +3.4
KHC MLR MLR
comp=Z,2µm,21.0s
KHC **Kasperske Hory** 44.97 303 *e*P P 04 16 32.4 +0.3
comp=Z,12nm,0.8s
KHC **Kasperske Hory** 44.97 303 *e*P P 04 16 32.5 +0.3
KHC *ex* x 04 16 37.0
KHC *e*pP pP 04 16 45.0 +5.7
KHC *e*PP PP 04 18 22.5 +5.3
KHC *e*S S 04 23 12.4 +3.4
KHC AMS AMS 04 38 10.0
comp=Z,2µm,21.0s
OBKA **Obir** 45.08 299⇑ *i*P P 04 16 33.7 +0.5
comp=Z,45nm,1.1s,SNR=13
OBKA **Obir** 45.08 299⇑ *i*P P 04 16 33.6 +0.5
comp=Z,45nm,1.1s
KONO **Kongsberg** 45.12 318 *e*P P 04 16 33.1 0.0
KONO AMB AMB 04 16 40.2
comp=Z,59nm,1.4s
KONO *e*SS SS 04 26 34.8 +1.8
KONO AMS AMS 04 34 43.8
comp=Z,1µm,13.2s
KONO **Kongsberg** 45.12 318 *e*P P 04 16 33.5 +0.3
KONO pmax pmax
comp=Z,65nm,1.1s
KONO **Kongsberg** 45.12 318 *e*P P 04 16 33.5 +0.3
comp=Z,65nm,1.1s
KGM **Kluang** 45.16 143 P P 04 16 37.7 +3.8
LJU **Ljubljana** 45.24 298 *i* P P 04 16 34.8 +0.5
LJU *e*S S 04 23 14.5 +1.6
LJU *i* SS SS 04 26 38.9 +3.4
KBS **Kingsbay** 45.31 346 *e*P P 04 16 34.4 0.0
KBS AMB AMB 04 16 35.6
comp=Z,43nm,0.7s
KBS *e*S S 04 23 11.9 -1.2
KBS *e*SS SS 04 26 37.3 +1.5
KBS AMS AMS 04 38 34.9
comp=Z,1µm,12.5s
KBS **Kingsbay** 45.31 346⇑ *e*P P 04 16 35.2 +0.8
KBS pmax pmax
comp=Z,19nm,0.6s
KBS **Kingsbay** 45.31 346 *e*P P 04 16 34.8 +0.4
comp=Z,25nm,0.6s
NKC **Novy Kostel** 45.38 305 AMS AMS 04 35 50.0
comp=Z,2µm,14.3s
WET **Wettzell** 45.41 303 *e*P P 04 16 36.7 +1.1
WET pmax pmax
comp=Z,46nm,1.6s
WET **Wettzell** 45.41 303 *e*P P 04 16 36.7 +1.1
comp=Z,46nm,1.6s
PLN **Plauen** 45.50 305 *e*P P 04 16 37.2 +0.9
comp=Z,177nm,1.4s
YSS **Yuzh-Sakhalins** 45.52 60⇑ *e*P P 04 16 41.5 +5.1
YSS *e**SP sP 04 16 57.8 +11
YSS *e*S S 04 23 18.0 +1.1
YSS pmax pmax
comp=Z,50µm,1.2s
YSS MLR MLR
comp=Z,2µm,14.0s
YSS MLR MLR
comp=N,1µm,17.0s
YSS MLR MLR
comp=E,1µm,15.0s
MYKOM **Kota Tinggi** 45.60 143 P P 04 16 43.5 +6.1
ROTZ **Rotzenmuhle** 45.66 304 *e*P P 04 16 38.6 +1.0
comp=Z,31nm,1.4s
VOY **Vojsko** 45.66 299 *e*P P 04 16 37.7 0.0
VOY *e* 04 16 42.5
VOY *e* 04 16 53.7
VOY *e* 04 17 05.0
VOY *e* 04 17 10.7
MANZ **Manzenberg** 45.66 304 *e*P P 04 16 38.6 +1.0
comp=Z,29nm,1.4s
MOL **Molde** 45.74 322 *e*P P 04 16 38.5 +0.5
MOL AMB AMB 04 16 46.6
comp=Z,54nm,1.3s
MOL AMS AMS 04 35 36.9
comp=Z,3µm,11.4s
MOX **Moxa** 45.79 305 *e*P P 04 16 39.4 +0.8
MOX pmax pmax
comp=Z,41nm,1.4s
MOX **Moxa** 45.79 305 *e*P P 04 16 39.4 +0.8
comp=Z,41nm,1.4s
TRI **Trieste** 45.85 298 *e*P P 04 16 39.2 +0.1
TRI pmax pmax
comp=Z,55nm,0.8s
TRI **Trieste** 45.85 298 *e*P P 04 16 39.1 +0.1
comp=Z,55nm,0.8s
MUD **Monsted U'grnd** 45.88 314 *i* P P 04 16 40.3 +1.2
MUD pmax pmax
comp=Z,24nm,1.1s
MUD **Monsted U'grnd** 45.88 314 *i* P P 04 16 40.3 +1.2
comp=Z,24nm,1.1s
TIP **Timpagrande** 46.10 289 *e*P P 04 16 40.6 -0.7
comp=Z,84nm,1.2s
MAJO **Matsushiro** 46.12 75 *e*P P 04 16 40.7 -0.7
MAJO pmax pmax
comp=Z,70nm,1.4s
MAJO **Matsushiro** 46.12 75 *e*P P 04 16 40.7 -0.7
comp=Z,70nm,1.4s
MAT **Matsushiro** 46.12 75 P P 04 16 40.5 -0.9
MAT S S 04 23 24.8 -1.1
MJAR **Matsushiro Arr** 46.12 75 P P 04 16 41.3 -0.1
MJAR **Matsushiro Arr** 46.12 75 P P 04 16 41.3 -0.1
comp=Z,14nm,1.0s,baz=289,slow=9.5,SNR=30
MJAR LR LR 04 36 37.5
comp=Z,966nm,20.8s,baz=315,slow=37
PPI **Padang Panjang** 46.15 148 P P 04 16 43.5 +1.8
comp=Z,37nm,1.0s
NRDL **Niedersach Rie** 46.23 308 *e*P P 04 16 43.0 +1.1
comp=Z,50nm,1.3s
CLZ **Clausthal** 46.24 307 *e*P P 04 16 42.9 +0.8
CLZ pmax pmax
comp=Z,26nm,1.1s
CLZ **Clausthal** 46.24 307 *e*P P 04 16 42.9 +0.8
comp=Z,26nm,1.1s
GRF **Grafenberg Arr** 46.29 304 *e*P P 04 16 44.0 +1.4
GRF pmax pmax
comp=Z,58nm,1.0s
GRF MLR MLR
comp=Z,2µm,21.2s
GRF **Grafenberg Arr** 46.29 304 *e*P P 04 16 44.0 +1.4
comp=Z,58nm,1.0s
GRF *e*L L 04 35 50.0
comp=Z,2µm,21.2s
ASAJ **Asahikawa** 46.32 64 *e*P P 04 16 42.3 -0.6
comp=Z,43nm,1.3s
CUC **Castrocucco** 46.46 290 *e*P P 04 16 44.7 +0.6
comp=Z,39nm,0.9s
SNART **Snartemo** 46.56 317 *e*P P 04 16 43.1 -1.4
SNART AMB AMB 04 16 59.6
comp=Z,35nm,1.0s
ODD1 **Odda** 46.57 319 *e*P P 04 16 45.6 +1.0
ODD1 AMB AMB 04 16 47.1
comp=Z,54nm,1.4s
FUR **Furstenfeldbru** 46.70 302 *e*P P 04 16 47.2 +1.4
FUR pmax pmax
comp=Z,63nm,0.9s
FUR **Furstenfeldbru** 46.70 302 *e*P P 04 16 47.2 +1.4
comp=Z,63nm,0.9s
UBBA **Unterbreizbach** 46.73 306 *e*P P 04 16 47.4 +1.5
comp=Z,18nm,1.3s
WTTA **Wattenberg** 46.75 301⇑ *i*P P 04 16 46.2 -0.2
WTTA pmax pmax
comp=Z,38nm,1.0s
WTTA **Wattenberg** 46.75 301⇑ *i*P P 04 16 46.2 -0.2
comp=Z,38nm,1.0s,SNR=20
WTTA **Wattenberg** 46.75 301⇑ *i*P P 04 16 46.1 -0.2
comp=Z,38nm,1.0s
WATA **Walderalm** 46.77 301⇑ *i*P P 04 16 46.1 -0.4
WATA pmax pmax
comp=Z,39nm,1.4s
WATA **Walderalm** 46.77 301⇑ *i*P P 04 16 46.1 -0.4
comp=Z,39nm,1.4s,SNR=9.5
WATA **Walderalm** 46.77 301⇑ *i*P P 04 16 46.1 -0.4
comp=Z,39nm,1.4s
MOTA **Moosalm** 47.07 301⇓ *i*P P 04 16 49.0 +0.1
MOTA pmax pmax
comp=Z,22nm,0.9s
MOTA **Moosalm** 47.07 301⇓ *i*P P 04 16 49.0 +0.1
comp=Z,22nm,0.9s,SNR=29
MOTA **Moosalm** 47.07 301⇓ *i*P P 04 16 49.0 +0.1
comp=Z,22nm,0.9s
CEL **Celeste** 47.09 288 *e*P P 04 16 49.0 0.0
comp=Z,68nm,1.1s
RUND **Rundenannen** 47.10 320 *e*P P 04 16 48.5 -0.2
RUND AMB AMB 04 16 53.9
comp=Z,123nm,1.6s
BER **Bergen** 47.12 320 *e*P P 04 16 48.5 -0.3
BER AMB AMB 04 16 59.6
comp=Z,87nm,1.6s
BER AMS AMS 04 36 07.5
comp=Z,2µm,11.2s
ASK **Askoy** 47.17 320 *e*P P 04 16 48.9 -0.3
ASK AMB AMB 04 16 55.4
comp=Z,117nm,1.7s
EGD **Espegrend** 47.19 319 *e*P P 04 16 48.5 -0.9
EGD AMB AMB 04 16 55.8
comp=Z,124nm,1.5s
STAV **Stavanger** 47.21 318 *e*P P 04 16 46.7 -2.9
RETA **Reutte** 47.24 301 *i* P P 04 16 50.4 +0.3
comp=Z,37nm,0.7s,SNR=31
RETA **Reutte** 47.24 301 *i* P P 04 16 50.4 +0.3
comp=Z,37nm,0.7s
SEY **Seymchan** 47.28 37⇑ *e*P P 04 16 50.3 +0.2
ERM **Erimo** 47.46 66⇓ *e*P P 04 16 52.1 +0.4
ERM pmax pmax
comp=Z,51nm,1.2s
IBBN **Ibbenburen** 47.67 308 *e*P P 04 16 54.0 +0.8
comp=Z,62nm,1.6s
TOD **Tromm** 47.82 305 *e*P P 04 16 56.0 +1.5
TOD **Tromm** 47.82 305 *e*P P 04 16 56.0 +1.5
STU **Stuttgart** 47.84 304 *e*P P 04 16 56.3 +1.7
STU pmax pmax
comp=Z,61nm,1.1s
STU **Stuttgart** 47.84 304 *e*P P 04 16 56.4 +1.7
comp=Z,66nm,1.2s
STU **Stuttgart** 47.84 304 *e*P P 04 16 56.3 +1.7
comp=Z,61nm,1.1s
TNS **Taunus Mts** 47.85 306 *e*P P 04 16 56.6 +1.8
TNS pmax pmax
comp=Z,16nm,1.1s
TNS **Taunus Mts** 47.85 306 *e*P P 04 16 56.6 +1.8
comp=Z,16nm,1.1s
DAVA **Damuels** 47.88 301⇑ *i*P P 04 16 56.0 +0.8
comp=Z,61nm,0.8s,SNR=20
DAVA **Damuels** 47.88 301⇑ *i*P P 04 16 56.0 +0.8
comp=Z,61nm,0.8s
DAVOX **Davos/Dischmat** 48.05 301 P P 04 16 56.5 0.0
DAVOX **Davos/Dischmat** 48.05 301 P P 04 16 56.5 0.0
comp=Z,7.7nm,0.5s,baz=117,slow=7.1,SNR=23
BUG **Bochum--Univer** 48.21 307 *e*P P 04 16 59.0 +1.6
comp=Z,35nm,1.2s
SPAK **Spaichingen-Ko** 48.31 303 *e*P P 04 16 59.2 +0.8
KDM **Kudat** 48.44 124 P P 04 17 02.1 +2.5
TUE **Stuetta** 48.50 301 *e*P P 04 17 00.2 +0.2
comp=Z,18nm,0.8s
BFO **Black Forest** 48.52 303 *e*P P 04 17 01.3 +1.3
BFO pmax pmax
comp=Z,40nm,1.0s
BFO **Black Forest** 48.52 303 *e*P P 04 17 01.3 +1.3
comp=Z,40nm,1.0s
BFO **Black Forest** 48.52 303 *e*P P 04 17 00.3 +0.3
comp=Z,34nm,1.0s
BFO **Black Forest** 48.52 303 P P 04 17 00.8 +0.8
comp=Z,182nm,1.0s,SNR=11
YUK **Yuzh-Kuril'sk** 48.55 63 *d*iP P 04 17 05.9 +5.7
YUK *e*S S 04 24 11.9 +12
YUK pmax pmax
comp=Z,3.0nm,0.9s
KKM **Kota Kinabalu** 48.74 125 *e*P P 04 17 03.3 +1.3
comp=Z,64nm,1.2s
KKM **Kota Kinabalu** 48.74 125 P P 04 17 03.3 +1.3
RUP **Ruppelstein** 48.87 305 *e*P P 04 17 01.2 -1.4
RUP **Ruppelstein** 48.87 305 *e*P P 04 17 01.2 -1.4
KSM **Kuching** 49.06 135 *e*P P 04 17 04.8 +0.5
comp=Z,41nm,1.0s
KSM **Kuching** 49.06 135 P P 04 17 05.6 +1.2
BTM **Bintulu** 49.16 131 P P 04 17 06.9 +1.7
CDF **Champ du Feu** 49.16 304 *e*P P 04 17 04.6 -0.3
comp=Z,72nm,1.1s
CDF **Champ du Feu** 49.16 304 *e*P P 04 17 04.6 -0.3
CDF pmax pmax
comp=Z,72nm,1.1s
CDF **Champ du Feu** 49.16 304 *e*P P 04 17 04.6 -0.3
comp=Z,72nm,1.1s
MEM **Membach** 49.22 307 P P 04 17 07.0 +1.8
comp=Z,9.3nm,1.2s
SBUM **Sibu** 49.29 133 P P 04 17 07.8 +1.8
ECH **Echery** 49.30 303 *e*P P 04 17 06.2 +0.3
ECH pmax pmax
comp=Z,46nm,1.1s
ECH **Echery** 49.30 303 *e*P P 04 17 06.2 +0.3
comp=Z,46nm,1.1s
ECH **Echery** 49.30 303 *e*P P 04 17 06.8 +0.9
BBS **Basel-Blauen** 49.33 302 *e*P P 04 17 01.4 -4.8
BBS **Basel-Blauen** 49.33 302 *e*P P 04 17 01.4 -4.8
BEBN **Eben Emael** 49.36 307 P P 04 17 06.5 +0.3
WLF **Walferdange** 49.44 306 P P 04 17 07.7 +0.8
comp=Z,24nm,1.4s
WLF **Walferdange** 49.44 306 *e*P P 04 17 07.0 +0.1
WLF pmax pmax
comp=Z,23nm,0.9s
WLF **Walferdange** 49.44 306 *e*P P 04 17 07.8 +0.9
comp=Z,36nm,1.1s
WLF **Walferdange** 49.44 306 *e*P P 04 17 07.0 +0.1
comp=Z,23nm,0.9s
MOF **Molkenrain** 49.44 303 *e*P P 04 17 06.3 -0.8
MOF **Molkenrain** 49.44 303 *e*P P 04 17 06.3 -0.8
MOF **Molkenrain** 49.44 303 *e*P P 04 17 06.3 -0.8
HINF **Hinteralfeld** 49.63 303 *e*P P 04 17 08.1 -0.3
comp=Z,72nm,0.9s
HINF **Hinteralfeld** 49.63 303 *e*P P 04 17 08.1 -0.3
HINF pmax pmax
comp=Z,72nm,0.9s
HINF **Hinteralfeld** 49.63 303 *e*P P 04 17 08.1 -0.3
comp=Z,72nm,0.9s
SDKM **Sandakan** 49.66 125 P P 04 17 10.5 +1.5
BCLA **Clavier** 49.71 307 P P 04 17 08.6 -0.3
comp=Z,18nm,1.6s
HAU **Haudompre** 49.88 303 *e*P P 04 17 10.0 -0.3
comp=Z,62nm,1.1s
HAU *e*R
comp=Z,2µm,19.0s
HAU **Haudompre** 49.88 303 *e*P P 04 17 10.0 -0.3
HAU pmax pmax
comp=Z,62nm,1.1s
HAU **Haudompre** 49.88 303 *e*P P 04 17 10.0 -0.3
comp=Z,62nm,1.1s
KSI **Kapahiang** 49.93 147 P P 04 17 20.2 +9.2
comp=Z,101nm,0.9s,comp=Z,12µm
THEF **They Montfort** 50.03 304 *e*P P 04 17 09.8 -1.7
THEF **They Montfort** 50.03 304 *e*P P 04 17 09.8 -1.7
THEF **They Montfort** 50.03 304 *e*P P 04 17 09.8 -1.7
PAGF **Fort de Pagny** 50.08 304 *e*P P 04 17 12.0 +0.2
comp=Z,12nm,1.1s
PAGF **Fort de Pagny** 50.08 304 *e*P P 04 17 12.0 +0.2
comp=Z,12nm,1.1s
GIVF **Givet** 50.10 306 *e*P P 04 17 12.2 +0.3
comp=Z,105nm,1.3s
GIVF **Givet** 50.10 306 *e*P P 04 17 12.2 +0.3
GIVF pmax pmax

comp=Z,105nm,1.3s
GIVF Givet 50.10 306 *e*P **P 04 17 12.2 +0.3**
comp=Z,105nm,1.3s
PGF Pioggiola 50.18 296 *e*P **P 04 17 12.5 -0.3**
comp=Z,72nm,1.1s
PGF Pioggiola 50.18 296 *e*P **P 04 17 12.5 -0.3**
PGF pmax pmax
comp=Z,72nm,1.1s
PGF Pioggiola 50.18 296 *e*P **P 04 17 12.5 -0.3**
comp=Z,72nm,1.1s
DOU Dourbes 50.24 307 P **P 04 17 14.0 +1.0**
comp=Z,15nm,1.3s
SNF Seneffe 50.29 307 P **P 04 17 14.4 +1.1**
comp=Z,12nm,1.5s
BAIF Baives 50.49 307 *e*P **P 04 17 15.2 +0.3**
comp=Z,100nm,1.2s
BAIF Baives 50.49 307 *e*P **P 04 17 15.2 +0.3**
BAIF pmax pmax
comp=Z,101nm,1.2s
BAIF Baives 50.49 307 *e*P **P 04 17 15.2 +0.3**
comp=Z,100nm,1.2s
MEZF Maizieres J'vi 50.52 304 *e*P **P 04 17 15.3 +0.2**
comp=Z,188nm,1.1s
MEZF Maizieres J'vi 50.52 304 *e*P **P 04 17 15.3 +0.2**
comp=Z,188nm,1.1s
LPG La Plagne 50.53 300 *e*P **P 04 17 15.6 -0.1**
comp=Z,54nm,0.9s
LPG La Plagne 50.53 300 *e*P **P 04 17 15.6 -0.1**
LPG pmax pmax
comp=Z,54nm,0.9s
LPG La Plagne 50.53 300 *e*P **P 04 17 15.6 -0.1**
comp=Z,54nm,0.9s
LPL La Plagne 50.54 300 *e*P **P 04 17 15.6 0.0**
comp=Z,144nm,1.2s
LPL La Plagne 50.54 300 *e*P **P 04 17 15.6 0.0**
LPL pmax pmax
comp=Z,145nm,1.2s
LPL La Plagne 50.54 300 *e*P **P 04 17 15.6 0.0**
comp=Z,144nm,1.2s
RSL Roselend 50.55 301 *e*P **P 04 17 16.8 +1.2**
RSL Roselend 50.55 301 *e*P **P 04 17 16.8 +1.2**
RSL Roselend 50.55 301 *e*P **P 04 17 16.8 +1.2**
CABF La Chapelle 50.55 302 *e*P **P 04 17 15.0 -0.5**
comp=Z,68nm,1.2s
CABF La Chapelle 50.55 302 *e*P **P 04 17 15.0 -0.5**
CABF pmax pmax
comp=Z,68nm,1.2s
CABF La Chapelle 50.55 302 *e*P **P 04 17 15.0 -0.5**
comp=Z,68nm,1.2s
SAOF Saorge 50.59 298 *e*P **P 04 17 14.6 -1.2**
SAOF Saorge 50.59 298 *e*P **P 04 17 14.6 -1.2**
SAOF Saorge 50.59 298 *e*P **P 04 17 14.6 -1.2**
SFTF Sexfontaines 50.63 304 *e*P **P 04 17 15.8 -0.2**
comp=Z,130nm,1.1s
SFTF Sexfontaines 50.63 304 *e*P **P 04 17 15.8 -0.2**
comp=Z,130nm,1.1s
AUTN L'Aution 50.67 298 *e*P **P 04 17 15.7 -0.9**
AUTN L'Aution 50.67 298 *e*P **P 04 17 15.7 -0.9**
AUTN L'Aution 50.67 298 *e*P **P 04 17 15.7 -0.9**
SBF Sospel 50.72 298 *e*P **P 04 17 16.5 -0.3**
comp=Z,117nm,1.0s
SBF Sospel 50.72 298 *e*P **P 04 17 16.5 -0.3**
SBF pmax pmax
comp=Z,117nm,1.0s
SBF Sospel 50.72 298 *e*P **P 04 17 16.5 -0.3**
comp=Z,117nm,1.0s
BNI Bardonecchia 50.75 300 *e*P **P 04 17 16.9 -0.2**
BNI pmax pmax
comp=Z,75nm,1.0s
BNI Bardonecchia 50.75 300 *e*P **P 04 17 16.9 -0.2**
comp=Z,75nm,1.0s
TOUF Mont Tournerai 50.78 298 *e*P **P 04 17 19.6 +2.2**
TOUF Mont Tournerai 50.78 298 *e*P **P 04 17 19.6 +2.2**
TOUF Mont Tournerai 50.78 298 *e*P **P 04 17 19.6 +2.2**
MBDF Montbardon 50.82 299 *e*P **P 04 17 17.6 0.0**
comp=Z,86nm,1.0s
MBDF Montbardon 50.82 299 *e*P **P 04 17 17.6 0.0**
MBDF pmax pmax
comp=Z,86nm,1.0s
MBDF Montbardon 50.82 299 *e*P **P 04 17 17.6 0.0**
comp=Z,86nm,1.0s
MYLDM Lahad Datu 50.83 124 P **P 04 17 19.6 +1.8**
MVIF Mont Vial 50.89 298 *e*P **P 04 17 15.2 -3.0**
MVIF Mont Vial 50.89 298 *e*P **P 04 17 15.2 -3.0**
MVIF Mont Vial 50.89 298 *e*P **P 04 17 15.2 -3.0**
CALN Calern 51.12 298 *e*P **P 04 17 22.1 +2.2**
CALN Calern 51.12 298 *e*P **P 04 17 22.1 +2.2**
CALN Calern 51.12 298 *e*P **P 04 17 22.1 +2.2**
TSM Tawau 51.12 125 P **P 04 17 21.1 +1.1**
TSM Tawau 51.12 125 P **P 04 17 21.2 +1.2**
ORIF Oris-en-Rattie 51.33 300 *e*P **P 04 17 20.6 -0.8**
comp=Z,58nm,0.8s
ORIF *e*R
comp=Z,2µm,22.2s
ORIF Oris-en-Rattie 51.33 300 *e*P **P 04 17 20.6 -0.8**
ORIF pmax pmax
comp=Z,59nm,0.8s
ORIF Oris-en-Rattie 51.33 300 *e*P **P 04 17 20.6 -0.8**
comp=Z,58nm,0.8s
FRF La Foret Royal 51.36 298 *e*P **P 04 17 20.9 -0.6**
comp=Z,82nm,1.1s
FRF La Foret Royal 51.36 298 *e*P **P 04 17 20.9 -0.6**
FRF pmax pmax
comp=Z,82nm,1.1s
FRF La Foret Royal 51.36 298 *e*P **P 04 17 20.9 -0.6**
comp=Z,82nm,1.1s
TPI Tanjungpandan 51.36 141 P P 04 17 30.3 +8.5
LMR La Mourre 51.54 298 *e*P **P 04 17 22.6 -0.3**
comp=Z,60nm,1.2s
LMR La Mourre 51.54 298 *e*P **P 04 17 22.6 -0.3**
LMR pmax pmax
comp=Z,60nm,1.2s
LMR La Mourre 51.54 298 *e*P **P 04 17 22.6 -0.3**
comp=Z,60nm,1.2s
LOR Lormes 51.72 303 *e*P **P 04 17 23.2 -1.0**
comp=Z,36nm,1.1s
LOR *e*R
comp=Z,1µm,20.8s
LOR Lormes 51.72 303 *e*P **P 04 17 23.2 -1.0**
comp=Z,36nm,1.1s
LWLI Liwa 51.77 146 P P 04 17 34.3 +9.3
comp=Z,135nm,0.8s,comp=Z,8µm
DAG Danmarks Havn 51.78 343 *i*P **P 04 17 24.1 -0.1**
DAG pmax pmax
comp=Z,29nm,0.8s
DAG MLR MLR
comp=Z,730nm,16.0s
DAG Danmarks Havn 51.78 343⇓*i*P **P 04 17 24.1 -0.1**
comp=Z,38nm,0.8s
DAG
comp=Z,720nm,15.0s
BILL Bilibino 51.80 29⇓*i*P **P 04 17 25.0 +0.6**
BILL *i* 04 17 32.3
BILL *i* 04 19 30.3
BILL pmax pmax
comp=Z,25nm,1.0s
BILL Bilibino 51.80 29 *e*P **P 04 17 24.8 +0.4**
comp=Z,28nm,0.9s
OCF Saint Nazaire 51.84 300 *e*P **P 04 17 26.1 +0.9**
OG26 St.-Nazaire-De 51.84 300 *e*P **P 04 17 26.1 +0.9**
SMRF Simiane la Rot 51.90 299 *e*P **P 04 17 25.5 -0.1**
comp=Z,46nm,1.0s
SMRF Simiane la Rot 51.90 299 *e*P **P 04 17 25.5 -0.1**
comp=Z,46nm,1.0s
ELSH Elham, Standar 51.94 309 AMS AMS 04 39 32.5
comp=Z,1µm,17.3s
SMF Signal de Mont 51.97 303 *e*P **P 04 17 25.3 -0.7**
comp=Z,96nm,1.0s
SMF Signal de Mont 51.97 303 *e*P **P 04 17 25.3 -0.7**
SMF pmax pmax
comp=Z,96nm,1.0s
SMF Signal de Mont 51.97 303 *e*P **P 04 17 25.3 -0.7**
comp=Z,96nm,1.0s
SSF Saint Saulge 52.02 303 *e*P **P 04 17 25.8 -0.6**
comp=Z,68nm,1.2s
SSF Saint Saulge 52.02 303 *e*P **P 04 17 25.8 -0.6**
SSF pmax pmax
comp=Z,68nm,1.2s
SSF Saint Saulge 52.02 303 *e*P **P 04 17 25.8 -0.6**
comp=Z,68nm,1.2s
SSB Saint Sauveur 52.05 301 *e*P **P 04 17 26.7 0.0**
SSB pmax pmax
comp=Z,12nm,0.9s
SSB Saint Sauveur 52.05 301 *e*P **P 04 17 26.7 0.0**
comp=Z,12nm,0.9s
SSB Saint Sauveur 52.05 301 *e*P **P 04 17 26.7 0.0**

MCD Coleburn Disti 52.13 318 *e*P **P 04 17 27.2 +0.1**
MCD Coleburn Disti 52.13 318 P **P 04 17 27.2 +0.1**
VIVF Saint-Julien-l 52.14 300 *e*P **P 04 17 27.0 -0.4**
comp=Z,39nm,0.7s
VIVF Saint-Julien-l 52.14 300 *e*P **P 04 17 27.0 -0.4**
VIVF pmax pmax
comp=Z,39nm,0.7s
VIVF Saint-Julien-l 52.14 300 *e*P **P 04 17 27.0 -0.4**
comp=Z,39nm,0.7s
AVF Avril sur Loir 52.22 303 *e*P **P 04 17 27.3 -0.6**
comp=Z,146nm,0.9s
AVF Avril sur Loir 52.22 303 *e*P **P 04 17 27.3 -0.6**
AVF pmax pmax
comp=Z,146nm,0.9s
AVF Avril sur Loir 52.22 303 *e*P **P 04 17 27.3 -0.6**
comp=Z,146nm,0.9s
ESY Stoneypath 52.36 315 *e*P **P 04 17 28.9 +0.1**
ESY Stoneypath 52.36 315 P **P 04 17 28.9 +0.1**
KASI Kota Agung 52.41 146 P P 04 17 36.1 +6.5
comp=Z,42nm,0.8s
HYF Humbligny 52.48 304 *e*P **P 04 17 29.6 -0.3**
HYF Humbligny 52.48 304 *e*P **P 04 17 29.6 -0.3**
MVH1 Achvaich 52.49 318 *e*P **P 04 17 29.6 -0.1**
MVH1 Achvaich 52.49 318 P **P 04 17 29.6 -0.1**
XAL Allendale 52.52 314 *e*P **P 04 17 29.4 -0.6**
XAL Allendale 52.52 314 P **P 04 17 29.4 -0.6**
PEA0B Petropavlovsk- 52.61 48 *e*P **P 04 17 30.8 +0.1**
PETK Petropavlovsk- 52.61 48 P **P 04 17 31.7 +1.0**
PETK pmax pmax
comp=Z,1.0nm,0.4s
PETK MLR MLR
comp=Z,451nm,21.5s
PETK Petropavlovsk- 52.61 48 P **P 04 17 31.7 +1.0**
PETK Petropavlovsk- 52.61 48 P **P 04 17 31.7 +1.0**
comp=Z,1.0nm,0.4s,baz=265,slow=9.6,SNR=5.0
PETK LR LR 04 39 45.8
comp=Z,451nm,21.5s,baz=291,slow=36
BGF Bois d'Agland 52.63 303 *e*P **P 04 17 30.5 -0.5**
comp=Z,41nm,0.9s
BGF Bois d'Agland 52.63 303 *e*P **P 04 17 30.5 -0.5**
BGF pmax pmax
comp=Z,41nm,0.9s
BGF Bois d'Agland 52.63 303 *e*P **P 04 17 30.5 -0.5**
comp=Z,41nm,0.9s
EBL Broad Law 52.64 315 *e*P **P 04 17 31.1 +0.3**
EBL Broad Law 52.64 315 P **P 04 17 31.1 +0.3**
AGO Saint Agoulin 52.65 302 *e*P **P 04 17 31.2 0.0**
AGO Saint Agoulin 52.65 302 *e*P **P 04 17 31.2 0.0**
EDI Edinburgh 52.66 316 *e*P **P 04 17 30.6 -0.4**
EDI AMB AMB 04 17 30.9
comp=Z,28nm,1.0s
EDI AMS AMS 04 45 14.3
comp=Z,1µm,15.1s
EDI Edinburgh 52.66 316 P **P 04 17 30.6 -0.4**
EDI AMB AMB 04 17 30.9
comp=Z,28nm,1.0s
EDI AMS AMS 04 45 14.3
comp=Z,1µm,15.1s
MDO Dochfour 52.75 318 *e*P **P 04 17 31.6 0.0**
MDO Dochfour 52.75 318 P **P 04 17 31.6 0.0**
EAU Auchinoon 52.83 316 *e*P **P 04 17 32.6 +0.3**
EAU Auchinoon 52.83 316 P **P 04 17 32.6 +0.3**
PYM Petit Puy Mans 52.85 302 *e*P **P 04 17 32.6 -0.1**
PYM Petit Puy Mans 52.85 302 *e*P **P 04 17 32.6 -0.1**
PYM Petit Puy Mans 52.85 302 *e*P **P 04 17 32.6 -0.1**
EKA Eskdalemuir Ar 52.86 315 P **P 04 17 32.6 +0.2**
EKA Eskdalemuir Ar 52.86 315 P **P 04 17 32.6 +0.2**
comp=Z,17nm,0.8s,baz=74,slow=8.8,SNR=65
SKP1 Kophill 52.86 310 *e*P **P 04 17 33.1 +0.5**
SKP1 Kophill 52.86 310 P **P 04 17 33.1 +0.5**
ESK Eskdalemuir 52.89 315 *e*P **P 04 17 32.7 0.0**
ESK AMB AMB 04 17 34.7
comp=Z,23nm,1.3s
ESK AMS AMS 04 38 37.0
comp=Z,2µm,15.3s
ESK Eskdalemuir 52.89 315 P **P 04 17 32.7 0.0**
ESK AMB AMB 04 17 34.7
comp=Z,23nm,1.3s
ESK AMS AMS 04 38 37.0
comp=Z,2µm,15.3s
ESK Eskdalemuir 52.89 315 *i*P **P 04 17 33.4 +0.7**
ESK Eskdalemuir 52.89 315 *e*P **P 04 17 32.6 -0.1**
comp=Z,36nm,1.0s
ECK Cauldkaine Hil 52.89 315 *e*P **P 04 17 32.7 -0.1**
ECK Cauldkaine Hil 52.89 315 P **P 04 17 32.7 -0.1**
KEST Kesra 52.91 288 *e*P **P 04 17 33.4 +0.1**
KEST Kesra 52.91 288 LR LR 04 43 40.8
comp=Z,190nm,18.2s,baz=328,slow=40
LASF Ste Croix 52.99 300 *e*P **P 04 17 33.5 -0.2**
comp=Z,89nm,1.1s
LASF Ste Croix 52.99 300 *e*P **P 04 17 33.5 -0.2**
comp=Z,89nm,1.1s
KESW Keswick, Cumbr 53.09 314 *e*P **P 04 17 33.4 -0.9**
KESW AMB AMB 04 17 36.5
comp=Z,43nm,1.2s
KESW AMS AMS 04 39 47.8
comp=Z,2µm,16.9s
KESW Keswick, Cumbr 53.09 314 P **P 04 17 33.4 -0.9**
KESW AMB AMB 04 17 36.5
comp=Z,43nm,1.2s
KESW AMS AMS 04 39 47.8
comp=Z,2µm,16.9s
TCF Toulx Ste Croi 53.14 303 *e*P **P 04 17 34.4 -0.4**
comp=Z,70nm,1.1s
TCF Toulx Ste Croi 53.14 303 *e*P **P 04 17 34.4 -0.4**
TCF pmax pmax
comp=Z,70nm,1.1s
TCF Toulx Ste Croi 53.14 303 *e*P **P 04 17 34.4 -0.4**
comp=Z,70nm,1.1s
PET Petropavlovsk 53.18 48 *e*P P 04 17 40.4 +5.5
PET *e*S **S 04 25 04.0 -0.1**
PET pmax pmax
comp=Z,30nm,0.9s
PET MLR MLR
comp=Z,700nm,18.0s
PET MLR MLR
comp=Z,500nm,14.0s
KAC Achnashellach 53.20 318 *e*P **P 04 17 35.0 0.0**
KAC Achnashellach 53.20 318 P **P 04 17 35.0 0.0**
PGBU Glenifferbraes 53.39 316 *e*P **P 04 17 36.7 +0.3**
PGBU AMB AMB 04 17 42.6
comp=Z,39nm,1.2s
PGBU AMS AMS 04 44 43.3
comp=Z,1µm,13.6s
PGBU Glenifferbraes 53.39 316 P **P 04 17 36.7 +0.3**
PGBU AMB AMB 04 17 42.6
comp=Z,39nm,1.2s
PGBU AMS AMS 04 44 43.3
comp=Z,1µm,13.6s
KPL Plockton 53.44 318 *e*P **P 04 17 35.5 -1.2**
KPL AMB AMB 04 17 35.9
comp=Z,29nm,3.1s
KPL AMS AMS 04 39 40.7
comp=Z,1µm,14.2s
KPL Plockton 53.44 318 P **P 04 17 35.5 -1.2**
KPL AMB AMB 04 17 35.9
comp=Z,29nm,3.1s
KPL AMS AMS 04 39 40.7
comp=Z,1µm,14.2s
HLM1 Long Mynd 53.74 312 *e*P **P 04 17 39.2 +0.1**
HLM1 Long Mynd 53.74 312 P **P 04 17 39.2 +0.1**
FOEL Foel Wylfa 53.78 312 AMS AMS 04 44 35.5
comp=Z,1µm,11.7s
CAF Calviac 53.80 301 *e*P **P 04 17 39.4 -0.2**
comp=Z,50nm,1.1s
CAF Calviac 53.80 301 *e*P **P 04 17 39.4 -0.2**
CAF pmax pmax
comp=Z,50nm,1.1s
CAF Calviac 53.80 301 *e*P **P 04 17 39.4 -0.2**
comp=Z,50nm,1.1s
FLN La Foliniere 53.82 306 *e*P **P 04 17 38.7 -0.9**
comp=Z,49nm,1.0s
FLN *e*R
comp=Z,2µm,18.2s
FLN La Foliniere 53.82 306 *e*P **P 04 17 38.7 -0.9**
FLN pmax pmax
comp=Z,49nm,1.0s
FLN La Foliniere 53.82 306 *e*P **P 04 17 38.7 -0.9**
comp=Z,49nm,1.0s
GAL1 Galloway 53.86 315 AMS AMS 04 39 04.3
comp=Z,1µm,16.2s
RJF Les Rejaudoux 53.99 302 *e*P **P 04 17 41.0 0.0**
comp=Z,84nm,1.1s
RJF *e*R
comp=Z,2µm,21.0s

RJF Les Rejaudoux 53.99 302 *e*P **P 04 17 41.0 0.0**
RJF pmax pmax
comp=Z,84nm,1.1s
RJF Les Rejaudoux 53.99 302 *e*P **P 04 17 41.0 0.0**
comp=Z,84nm,1.1s
MCH1 Michaelchurch 54.01 311 *e*P **P 04 17 40.4 -0.6**
MCH1 AMB AMB 04 17 50.6
comp=Z,83nm,0.9s
MCH1 AMS AMS 04 43 18.2
comp=Z,1µm,11.9s
MCH1 Michaelchurch 54.01 311 P **P 04 17 40.4 -0.6**
MCH1 AMB AMB 04 17 50.6
comp=Z,83nm,0.9s
MCH1 AMS AMS 04 43 18.2
comp=Z,1µm,11.9s
GRR Gorron 54.20 306 *e*P **P 04 17 41.6 -0.8**
comp=Z,103nm,1.0s
GRR Gorron 54.20 306 *e*P **P 04 17 41.6 -0.8**
GRR pmax pmax
comp=Z,103nm,1.0s
GRR Gorron 54.20 306 *e*P **P 04 17 41.6 -0.8**
comp=Z,103nm,1.0s
WLF1 Llynfaes 54.29 313 AMS AMS 04 40 46.6
comp=Z,1µm,14.2s
MTLF Montolieu 54.38 299 *e*P **P 04 17 43.5 -0.3**
comp=Z,30nm,1.0s
MTLF Montolieu 54.38 299 *e*P **P 04 17 43.5 -0.3**
MTLF pmax pmax
comp=Z,30nm,1.0s
MTLF Montolieu 54.38 299 *e*P **P 04 17 43.5 -0.3**
comp=Z,30nm,1.0s
YRC Rhoscolyn 54.41 313 *e*P **P 04 17 44.2 +0.4**
YRC Rhoscolyn 54.41 313 P **P 04 17 44.2 +0.4**
MFF Saint Martin d 54.50 304 *e*P **P 04 17 43.7 -0.9**
comp=Z,58nm,1.1s
MFF Saint Martin d 54.50 304 *e*P **P 04 17 43.7 -0.9**
MFF pmax pmax
comp=Z,59nm,1.1s
MFF Saint Martin d 54.50 304 *e*P **P 04 17 43.7 -0.9**
comp=Z,58nm,1.1s
LFF La Frestale 54.65 302 *e*P **P 04 17 45.6 -0.1**
comp=Z,106nm,1.1s
LFF La Frestale 54.65 302 *e*P **P 04 17 45.6 -0.1**
LFF pmax pmax
comp=Z,106nm,1.1s
LFF La Frestale 54.65 302 *e*P **P 04 17 45.6 -0.1**
comp=Z,106nm,1.1s
JSA Saint Aubin 54.66 308 AMS AMS 04 45 24.6
comp=Z,969nm,16.4s
ALE Alert 54.91 354 P **P 04 17 47.9 +0.8**
comp=Z,131nm,0.6s,SNR=13
SCO Scoresbysund 54.96 336 *i*P **P 04 17 48.7 +1.1**
SCO pmax pmax
comp=Z,6.0nm,0.8s
SCO MLR MLR
comp=Z,580nm,17.0s
SCO Scoresbysund 54.96 336 *i*P **P 04 17 48.7 +1.1**
comp=Z,5.7nm,0.8s
SCO
comp=Z,580nm,16.0s
DYA Yadsworthy 55.18 309 AMS AMS 04 40 20.8
comp=Z,1µm,15.4s
SGMF Saint Gilles 55.28 307 *e*P **P 04 17 49.7 -0.6**
comp=Z,130nm,1.2s
SGMF Saint Gilles 55.28 307 *e*P **P 04 17 49.7 -0.6**
SGMF pmax pmax
comp=Z,130nm,1.2s
SGMF Saint Gilles 55.28 307 *e*P **P 04 17 49.7 -0.6**
comp=Z,130nm,1.2s
MLS Moulis 55.29 299 *e*P **P 04 17 49.7 -0.7**
MLS Moulis 55.29 299 *e*P **P 04 17 49.7 -0.7**
BBKI Banjar Baru 55.63 134 P P 04 18 01.2 +8.1
TGJI Tegal 55.65 142 P P **04 17 56.1 +2.9**
comp=Z,71nm,0.5s,comp=Z,6µm
ROSF Rostrenen 55.68 307 *e*P **P 04 17 52.5 -0.6**
comp=Z,74nm,1.1s
ROSF Rostrenen 55.68 307 *e*P **P 04 17 52.5 -0.6**
ROSF pmax pmax
comp=Z,75nm,1.1s
ROSF Rostrenen 55.68 307 *e*P **P 04 17 52.5 -0.6**
comp=Z,74nm,1.1s
EPF Esparros 55.75 300 *e*P **P 04 17 52.6 -1.2**
comp=Z,18nm,0.9s
EPF Esparros 55.75 300 *e*P **P 04 17 52.6 -1.2**
EPF pmax pmax
comp=Z,18nm,0.9s
EPF Esparros 55.75 300 *e*P **P 04 17 52.6 -1.2**
comp=Z,18nm,0.9s
QUIF Quistinic 55.80 306 *e*P **P 04 17 53.2 -0.8**
comp=Z,64nm,1.0s
QUIF Quistinic 55.80 306 *e*P **P 04 17 53.2 -0.8**
QUIF pmax pmax
comp=Z,64nm,1.0s
QUIF Quistinic 55.80 306 *e*P **P 04 17 53.2 -0.8**
comp=Z,64nm,1.0s
RESF Ens 55.85 300 *e*P **P 04 17 54.9 +0.3**
RESF Ens 55.85 300 *e*P **P 04 17 54.9 +0.3**
KMBO Kilima Mbogo 56.20 232 *e*P **P 04 17 56.5 -1.0**
comp=Z,7.0nm,1.0s
KMBO Kilima Mbogo 56.20 232 P **P 04 17 56.7 -0.8**
comp=Z,2.3nm,0.9s,baz=67,slow=9.1,SNR=5.5
KMBO LR LR 04 44 42.9
comp=Z,534nm,18.4s,baz=322,slow=39
KBKI Kotabaru 56.23 132 P P 04 18 04.9 +7.5
ETSF Etsaut 56.40 300 *e*P **P 04 17 58.2 -0.2**
comp=Z,35nm,0.9s
ETSF Etsaut 56.40 300 *e*P **P 04 17 58.2 -0.2**
ETSF pmax pmax
comp=Z,35nm,0.9s
ETSF Etsaut 56.40 300 *e*P **P 04 17 58.2 -0.2**
comp=Z,35nm,0.9s
PCI Palu 56.41 127 P P 04 18 11.1 +12
MRSI Marisa 56.62 124 P P **04 18 02.3 +2.1**
comp=Z,55nm,1.0s,comp=Z,709nm
SJPF Ste Jean 56.73 301 *e*P **P 04 18 00.0 -0.7**
comp=Z,17nm,0.8s
SJPF Ste Jean 56.73 301 *e*P **P 04 18 00.0 -0.7**
SJPF pmax pmax
comp=Z,17nm,0.8s
SJPF Ste Jean 56.73 301 *e*P **P 04 18 00.0 -0.7**
comp=Z,17nm,0.8s
SJI Sawahan 57.67 140 P P 04 18 15.2 +7.5
comp=Z,30nm,1.2s,comp=Z,6µm
KMSI Cibinong 57.83 122 P P 04 18 20.6 +12
comp=Z,199nm,0.9s
TTSI Tana Toraja 58.11 129 P P 04 18 16.5 +5.8
comp=Z,42nm,1.1s,comp=Z,546nm
SUMG Summit 58.36 342 *i*P **P 04 18 13.0 +0.8**
SUMG pmax pmax
comp=Z,17nm,0.9s
SUMG MLR MLR
comp=Z,610nm,20.0s
SUMG Summit 58.36 342 *e*P **P 04 18 12.3 0.0**
comp=Z,26nm,1.0s
SUMG Summit 58.36 342 *i*P **P 04 18 13.0 +0.8**
comp=Z,17nm,0.9s
SUMG
comp=Z,610nm,19.0s
KAPI Kappang 59.66 130 *e*P **P 04 18 21.0 -0.5**
comp=Z,22nm,1.1s
KAPI Kappang 59.66 130 P P 04 18 26.9 +5.4
comp=Z,15nm,1.6s
KAPI Kappang 59.66 130 P **P 04 18 20.5 -1.0**
comp=Z,1.9nm,0.3s,baz=270,slow=6.1,SNR=3.3
BKSI Bulukumba 60.12 130 P P 04 18 30.5 +5.8
KHKI Kahang-Kahang 60.15 136 P P 04 18 28.3 +3.5
ESDC Sonseca Array 60.20 298 P **P 04 18 24.7 -0.3**
ESDC Sonseca Array 60.20 298 P **P 04 18 24.7 -0.3**
comp=Z,2.6nm,0.6s,baz=54,slow=6.7,SNR=26
ESDC LR LR 04 46 20.1
comp=Z,668nm,18.3s,baz=40,slow=38
ESLA Sonseca Array 60.20 298 *e*P **P 04 18 24.7 -0.3**
comp=Z,4.5nm,1.0s
PAB San Pablo 60.52 298 *e*P **P 04 18 27.0 -0.3**
PAB pmax pmax
comp=Z,16nm,1.2s
PAB San Pablo 60.52 298 *e*P **P 04 18 27.0 -0.3**
comp=Z,16nm,1.2s
MVO Moncorvo 61.45 301 *e*P **P 04 18 33.8 +0.3**
MVO *e*LQ LQ 04 33 57.1
MVO *e*LR LR 04 37 06.6
comp=Z,752nm,18.0s
GAMB Gambell 61.73 28 *e*P P 04 18 31.7 -3.2
comp=Z,13nm,1.0s
PCAB Cabril 61.80 302 *e*P **P 04 18 36.4 +0.5**
comp=Z,72nm,1.4s
PGAV Gavieira, Arco 61.83 302 *e*P **P 04 18 36.6 +0.5**

comp=Z,49nm,1.8s
PGAV A A 04 44 47.7
comp=Z,676nm,20.0s
TNA Tin City 61.92 26 *e*P **P 04 18 38.1 +1.9**
comp=Z,30nm,1.1s
MTE Manteigas 62.18 301 *e*LQ LQ 04 34 04.1
MTE *e*LR LR 04 37 45.8
comp=Z,602nm,18.0s
PVIS Viseu 62.24 301 *e*P **P 04 18 39.3 +0.5**
comp=Z,42nm,1.6s
PCBR Castelo Branco 62.43 300 *e*P **P 04 18 41.7 +1.6**
PMRV Marv??o 62.59 300 *e*P **P 04 18 41.9 +0.7**
comp=Z,46nm,1.6s
PMRV *e*LR LR 04 37 31.8
comp=Z,880nm,16.0s
TAM Tamanrasset 62.61 277 *e*P **P 04 18 41.3 -0.4**
TAM pmax pmax
comp=Z,6.0nm,0.8s
TAM Tamanrasset 62.61 277 *e*P **P 04 18 41.3 -0.4**
comp=Z,6.1nm,0.8s
PBAR Barrancos 63.03 298 *e*P **P 04 18 44.2 +0.1**
comp=Z,43nm,1.3s
PTOM Tomar 63.16 300 *e*P **P 04 18 45.9 +1.0**
PMTG Montargil 63.33 300 *e*P **P 04 18 45.3 -0.8**
EVO Evora 63.48 299 *e*P **P 04 18 44.9 -2.2**
comp=Z,84nm,1.5s
EVO *e*R
comp=Z,710nm,21.8s
EVOP Sao Brissos 63.56 299 *e*P **P 04 18 44.9 -2.6**
EVOP pmax pmax
comp=Z,84nm,1.5s
EVOP Sao Brissos 63.56 299 *e*P **P 04 18 44.9 -2.6**
comp=Z,84nm,1.5s
GUMO Guam 63.65 95 LR LR 04 47 43.9
comp=Z,294nm,18.2s,baz=304,slow=37
PVAQ Vaqueiros 63.90 298 *e*LR LR 04 39 12.6
comp=Z,774nm,18.0s
RES Resolute Bay 64.24 358 *e*P **P 04 18 51.3 -0.1**
comp=Z,13nm,0.8s
SFJD Kangerlussuaq 65.27 340 P **P 04 18 58.3 0.0**
SFJD Kangerlussuaq 65.27 340 *i* P **P 04 18 58.1 -0.2**
comp=Z,13nm,0.8s
SFJD Kangerlussuaq 65.27 340 P **P 04 18 58.3 0.0**
comp=Z,19nm,0.8s,baz=53,slow=5.1,SNR=6.3
COLD Coldfoot 65.77 19 *e*P **P 04 19 01.6 +0.1**
comp=Z,31nm,1.0s
COLA College 68.23 19 *e*P **P 04 19 17.3 +0.1**
COLA pmax pmax
comp=Z,21nm,0.9s
COLA College 68.23 19 *e*P **P 04 19 17.3 +0.1**
comp=Z,21nm,0.9s
ILAR Eielson Array 68.55 19 P **P 04 19 18.6 -0.7**
ILAR Eielson Array 68.55 19 P **P 04 19 18.6 -0.7**
comp=Z,6.6nm,0.8s,baz=317,slow=5.0,SNR=87
ILAR LR LR 04 49 34.3
comp=Z,750nm,19.9s,baz=322,slow=36
PPLA Purkeypile 68.65 22 *e*P **P 04 19 20.5 +0.5**
comp=Z,29nm,0.8s
TRF Thorofare Moun 68.74 21 *e*P **P 04 19 20.1 -0.6**
comp=Z,7.4nm,0.7s
MCK McKinley 68.88 20 *e*P **P 04 19 21.4 +0.1**
MCK pmax pmax
comp=Z,15nm,0.9s
MCK McKinley 68.88 20 *e*P **P 04 19 21.4 +0.1**
comp=Z,14nm,0.9s
EGAK Eagle 69.88 17 *e*P **P 04 19 27.4 0.0**
comp=Z,15nm,1.0s
DOT Dot Lake 70.18 19 *e*P **P 04 19 28.9 -0.5**
comp=Z,7.1nm,0.7s
PAX Paxson 70.40 20 *e*P **P 04 19 30.2 -0.6**
PAX pmax pmax
comp=Z,23nm,1.0s
PAX Paxson 70.40 20 *e*P **P 04 19 30.2 -0.6**
comp=Z,23nm,1.0s
PMR Palmer 70.56 22 *e*P **P 04 19 31.4 -0.2**
PMR pmax pmax
comp=Z,27nm,1.0s
PMR Palmer 70.56 22 *e*P **P 04 19 31.4 -0.2**
comp=Z,26nm,1.0s
SML Sawmill 70.61 21 *e*P **P 04 19 32.2 +0.2**
SML pmax pmax
comp=Z,11nm,0.9s
SML Sawmill 70.61 21 *e*P **P 04 19 32.2 +0.2**
comp=Z,12nm,0.9s
MENT Mentasta 70.86 19 *e*P **P 04 19 33.2 -0.3**
TOA0 Torodi Ar. Sit 71.36 271 *e*P **P 04 19 35.9 -1.4**
TORD Torodi Ar. Bea 71.36 271 P **P 04 19 35.9 -1.4**
TORD Torodi Ar. Bea 71.36 271 P **P 04 19 35.9 -1.4**
comp=Z,9.1nm,0.5s,baz=45,slow=5.2,SNR=200
TORD LR LR 04 57 50.8
comp=Z,400nm,19.8s,baz=80,slow=42
SEW Seward 71.68 23 *e*P **P 04 19 38.1 -0.3**
comp=Z,30nm,1.0s
BMRM Bremner River 72.31 20 *e*P **P 04 19 42.7 +0.4**
comp=Z,36nm,1.0s
KDAK Kodiak Island 72.57 26 *e*P **P 04 19 43.9 +0.2**
comp=Z,30nm,0.8s
KDAK Kodiak Island 72.57 26 P **P 04 19 44.0 +0.2**
comp=Z,217nm,0.8s,SNR=9.3
OHAK Old Harbor 72.78 26 *e*P **P 04 19 45.5 +0.5**
comp=Z,24nm,0.6s
LSZ Lusaka 72.82 231 *e*P **P 04 19 44.7 -1.3**
comp=Z,6.0nm,0.7s
MBWA Marble Bar 73.08 140 *e*P **P 04 19 47.2 0.0**
comp=Z,12nm,0.7s
FITZ Fitzroy Crossi 73.61 133 *e*P **P 04 19 50.0 -0.4**
comp=Z,15nm,1.0s
FITZ Fitzroy Crossi 73.61 133 P **P 04 19 49.8 -0.6**
comp=Z,8.4nm,0.9s,baz=333,slow=7.1,SNR=16
PNL Peninsula 74.75 19 *e*P **P 04 19 56.7 +0.1**
SKAG Skagway 75.87 17 *e*P **P 04 20 03.7 +0.7**
comp=Z,18nm,0.8s
YKW3 Yellowknife Ar 76.01 6 *e*P **P 04 20 03.0 -0.7**
comp=Z,0.3nm,0.8s
YKA Yellowknife Ar 76.07 6 P **P 04 20 03.9 -0.3**
YKA Yellowknife Ar 76.07 6 P **P 04 20 03.9 -0.3**
comp=Z,16nm,0.6s,baz=344,slow=5.8,SNR=513
DLBC Dease Lake 77.91 15 *e*P **P 04 20 14.7 +0.1**
SCHQ Schefferville 79.72 340 *e*P **P 04 20 23.4 -1.1**
comp=Z,26nm,1.3s
SCHQ Schefferville 79.72 340 P **P 04 20 23.9 -0.7**
comp=Z,9.8nm,0.8s,baz=23,slow=5.3,SNR=17
SCHQ LR LR 05 01 41.8
comp=Z,491nm,19.1s,baz=34,slow=40
WRAB Tennant Creek 80.06 128 *e*P **P 04 20 26.8 0.0**
WRAB pmax pmax
comp=Z,20nm,0.8s
WRAB Tennant Creek 80.06 128 *e*P **P 04 20 26.8 0.0**
comp=Z,20nm,0.8s
WRAB Tennant Creek 80.06 128 P **P 04 20 27.9 +1.1**
comp=Z,161nm,0.7s,SNR=8.4
WRA Warramunga Arr 80.06 128 P **P 04 20 26.6 -0.2**
WRA PKKPbc **PKKPbc 04 39 11.1 +0.5**
WRA Warramunga Arr 80.06 128 P **P 04 20 26.6 -0.2**
comp=Z,10.0nm,0.7s,baz=332,slow=5.8,SNR=89
WRA PKKPbc **PKKPbc 04 39 11.1 +0.5**
comp=Z,0.7nm,0.5s,baz=144,slow=2.1,SNR=9.8
WRA LR LR 05 01 41.4
comp=Z,206nm,21.6s,baz=250,slow=40
DBIC Dimbokro 80.44 270 *e*P **P 04 20 27.7 -1.3**
comp=Z,13nm,0.8s
DBIC Dimbokro 80.44 270 P **P 04 20 27.9 -1.2**
comp=Z,6.8nm,0.7s,baz=50,slow=5.3,SNR=8.8
DBIC LR LR 05 02 10.4
comp=Z,457nm,18.4s,baz=34,slow=40
PMG Port Moresby 80.76 111 *e*P **P 04 20 30.2 -0.5**
comp=Z,29nm,0.9s
PMG Port Moresby 80.76 111 P **P 04 20 30.1 -0.6**
comp=Z,12nm,0.9s,baz=77,slow=3.2,SNR=3.7
LIC Lamto 80.86 270 *e*P **P 04 20 30.0 -1.3**
comp=Z,44nm,0.9s,baz=50
LIC *e*R
comp=Z,739nm,19.0s
LIC Lamto 80.86 270 *e*P **P 04 20 30.0 -1.3**
comp=Z,44nm,0.9s
COEN Coen 81.24 117 *e*P **P 04 20 34.8 +1.6**
comp=Z,167nm,0.8s
NWAO Narrogin (SRO) 82.12 148 *e*P **P 04 20 36.4 -1.0**
comp=Z,9.0nm,0.7s
NWAO Narrogin (SRO) 82.12 148 P **P 04 20 36.7 -0.8**
comp=Z,7.8nm,0.6s,baz=352,slow=6.5,SNR=9.4
TSUM Tsumeb 82.27 236 *e*P **P 04 20 38.8 +0.1**
comp=Z,10nm,0.9s
AS31 Alice Springs 82.68 130 *e*P **P 04 20 40.2 -0.4**
ASAR Alice Springs 82.68 130 P **P 04 20 40.2 -0.4**
ASAR PKKPbc **PKKPbc 04 39 05.2 +0.4**
ASAR Alice Springs 82.68 130 P **P 04 20 40.2 -0.4**
comp=Z,7.4nm,0.7s,baz=318,slow=4.9,SNR=105
ASAR PKKPbc **PKKPbc 04 39 05.2 +0.4**
comp=Z,0.4nm,0.7s,baz=128,slow=2.6,SNR=4.5
ASAR LR LR 04 59 07.6
comp=Z,216nm,21.3s,baz=314,slow=37
BBTS Babate 83.98 284 LR LR 04 58 53.5
comp=Z,526nm,21.0s,baz=14,slow=36
FFC Flin Flon 84.38 0 *i* P **P 04 20 48.6 -0.4**
FFC Flin Flon 84.38 0 *e*P **P 04 20 48.4 -0.7**
comp=Z,31nm,1.0s
FFC Flin Flon 84.38 0 P **P 04 20 48.1 -0.9**
comp=Z,170nm,1.1s,SNR=17
BOSA Boshof 85.06 225 *e*P **P 04 20 52.0 -0.8**
comp=Z,39nm,1.6s
BOSA Boshof 85.06 225 P **P 04 20 52.0 -0.8**
comp=Z,2.3nm,0.8s,baz=46,slow=3.4,SNR=3.8
BOSA LR LR 05 03 38.7
comp=Z,226nm,18.7s,baz=32,slow=39
FORT Forrest 85.19 139 *e*P **P 04 20 53.0 -0.3**
comp=Z,44nm,1.0s
PQI Presque Isle 87.43 337 *e*P **P 04 21 04.0 -0.2**
comp=Z,34nm,0.9s
CTA Charters Tower 87.67 119 P **P 04 21 05.2 -0.5**
CTA Charters Tower 87.67 119 P **P 04 21 05.2 -0.5**
comp=Z,10nm,0.8s,baz=326,slow=5.9,SNR=9.9
CTAO Charters Tower 87.67 119 *e*P **P 04 21 06.3 +0.6**
CTAO pmax pmax
comp=Z,12nm,0.9s
CTAO Charters Tower 87.67 119 *e*P **P 04 21 06.3 +0.6**
comp=Z,12nm,0.9s
ULM Lac du Bonnet 88.72 356 P **P 04 21 09.4 -0.9**
ULM Lac du Bonnet 88.72 356 P **P 04 21 09.4 -0.9**
comp=Z,9.3nm,0.9s,baz=355,slow=5.3,SNR=8.9
ULM LR LR 05 04 49.7
comp=Z,494nm,19.3s,baz=359,slow=38
A12A Yaak River Ran 89.35 9 ⇓P **P 04 21 12.6 -0.9**
baz=89
WALA Waterton Lakes 89.42 8 *e*P **P 04 21 12.6 -1.2**
comp=Z,0.5nm,1.0s
A13A Flathead Natio 89.49 8 ⇑P **P 04 21 13.0 -1.1**
baz=89
A14A Double T Ranch 89.56 8 ⇓P **P 04 21 13.5 -0.9**
baz=89,SNR=9.8
NLWA Neilton Lookou 89.57 15 *e*P **P 04 21 14.5 +0.1**
comp=Z,16nm,1.2s
A15A Johnson Ranch, 89.62 7 ⇑P **P 04 21 13.7 -1.0**
baz=89,SNR=22
A16A West Butte Ran 89.75 6 ⇓P **P 04 21 14.2 -1.2**
baz=89,SNR=15
B12A Libby 89.81 9 ⇓P **P 04 21 15.0 -0.6**
baz=89
NEW Newport 89.82 10 *e*P **P 04 21 15.2 -0.4**
comp=Z,12nm,1.0s
NEW Newport 89.82 10 ⇑P **P 04 21 15.2 -0.4**
baz=89,SNR=8.6
A17A Triple J Farms 89.83 6 ⇑P **P 04 21 13.8 -1.9**
baz=89,SNR=10
A18A Metzger Ranch, 89.91 5 ⇑P **P 04 21 15.4 -0.7**
baz=90,SNR=25
A19A Klindworth Far 89.98 5 ⇑P **P 04 21 16.0 -0.3**
baz=90,SNR=9.7
A21A Bergtoll Ranch 90.01 3 ⇑P **P 04 21 15.8 -0.7**
baz=90
B13A Whitefish 90.04 8 ⇑P **P 04 21 16.0 -0.7**
baz=90,SNR=7.8
A22A Carney Farms, 90.05 3 ⇓P **P 04 21 15.5 -1.1**
baz=90
A20A Cobblestone Ra 90.07 4 ⇓P **P 04 21 16.0 -0.8**
baz=90,SNR=7.4
A24A Westby 90.17 1 ⇑P **P 04 21 17.4 +0.2**
baz=90,SNR=7.2
B14A Marquette Ranc 90.18 8 ⇓P **P 04 21 17.0 -0.4**
baz=90,SNR=9.9
B16A M M Farms, S 90.27 7 ⇑P **P 04 21 18.0 +0.3**
baz=90
B15A Bradely Ranch, 90.29 7 ⇓P **P 04 21 16.7 -1.2**
baz=90,SNR=23
C11A Tepee Creek (N 90.35 10 ⇓P **P 04 21 18.3 +0.2**
baz=90,SNR=6.7
BLMT Blacktail Moun 90.41 8 *e*P **P 04 21 18.5 -0.1**
comp=Z,9.3nm,0.8s
B19A Brinkman Farms 90.44 5 ⇓P **P 04 21 17.8 -0.7**
baz=90
B18A Beardsley Farm 90.44 5 ⇓P **P 04 21 17.4 -1.2**
baz=90,SNR=10
B17A L&G Farms, Che 90.47 6 ⇑P **P 04 21 17.9 -0.8**
baz=90,SNR=10
B20A Solberg Farm, 90.51 4 ⇓P **P 04 21 18.3 -0.5**
baz=90
BSMT Bassoo Peak 90.52 9 *e*P **P 04 21 19.1 0.0**
comp=Z,22nm,1.0s
B21A Ellsworth Farm 90.57 3 ⇓P **P 04 21 19.4 +0.3**
baz=90
LON Longmire 90.57 14 *e*P **P 04 21 18.2 -0.9**
LON pmax pmax
comp=Z,11nm,1.0s
LON Longmire 90.57 14 *e*P **P 04 21 18.2 -0.9**
comp=Z,11nm,1.0s
C12B Naegeli Ranch, 90.58 9 ⇑P **P 04 21 18.5 -0.7**
baz=90,SNR=8.6
YBMT Yellow Bay 90.59 8 *e*P **P 04 21 18.9 -0.4**
comp=Z,7.5nm,1.0s
B23A Brockton 90.61 2 ⇑P **P 04 21 17.6 -1.7**
baz=90,SNR=6.8
DGMT Dagmar 90.62 2 *e*P **P 04 21 19.7 +0.4**
comp=Z,22nm,1.0s
DGMT Dagmar 90.62 2 ⇓P **P 04 21 18.1 -1.2**
baz=90
AGMN Agassiz Nation 90.66 356 *e*P **P 04 21 18.7 -0.8**
comp=Z,14nm,1.0s
JTMT Jette 90.68 8 *e*P **P 04 21 19.7 -0.1**
comp=Z,13nm,1.1s
C13A Hot Springs 90.71 9 ⇓P **P 04 21 19.3 -0.5**
baz=90,SNR=29
C14A Swan Lake 90.71 8 ⇑P **P 04 21 19.0 -0.8**
baz=90
LBNH Lisbon 90.75 339 *e*P **P 04 21 20.2 +0.2**
LBNH pmax pmax
comp=Z,11nm,1.0s
LBNH Lisbon 90.75 339 *e*P **P 04 21 20.2 +0.2**
comp=Z,11nm,1.0s
EGMT Eagleton 90.81 5 *e*P **P 04 21 19.7 -0.6**
comp=Z,26nm,1.1s
EGMT Eagleton 90.81 5 ⇓P **P 04 21 20.0 -0.3**
baz=90,SNR=12
C15A Salmond Ranch, 90.82 7 ⇓P **P 04 21 19.2 -1.2**
baz=90,SNR=11
C16A Fuhringer Ranc 90.88 7 ⇑P **P 04 21 19.4 -1.2**
baz=90,SNR=12
SWMT Swartz Lake 90.94 8 *e*P **P 04 21 20.5 -0.5**
comp=Z,8.5nm,1.0s
LONY Lake Ozonia 91.08 341 *e*P **P 04 21 21.6 +0.2**
comp=Z,18nm,1.0s
C17A Wharram Farm, 91.12 6 ⇓P **P 04 21 21.1 -0.7**
baz=91,SNR=8.0
C19A Slack Wire Ran 91.15 5 ⇑P **P 04 21 21.4 -0.5**
baz=91,SNR=6.3
C21A Desert Coulee 91.16 4 ⇓P **P 04 21 20.6 -1.3**
baz=91,SNR=9.8
C20A Veseth Ranch, 91.23 4 ⇓P **P 04 21 21.3 -0.9**
baz=91,SNR=8.2
D12A Red Ives Fores 91.24 9 ⇑P **P 04 21 21.7 -0.6**
baz=91
MDND Maddock 91.25 359 ⇓P **P 04 21 22.5 +0.3**
baz=91
SLMT Seeley Lake 91.26 8 *e*P **P 04 21 21.9 -0.6**
comp=Z,10nm,0.7s
C23A Lambert 91.26 2 ⇓P **P 04 21 22.2 -0.1**
baz=91,SNR=11
C22A Vida 91.30 3 ⇑P **P 04 21 23.0 +0.5**
baz=91,SNR=6.7
D13A Huson 91.30 9 ⇑P **P 04 21 21.6 -1.0**
baz=91
MDV Middlebury 91.31 340 *e*P **P 04 21 22.5 0.0**
D14A Greenough 91.42 8 ⇑P **P 04 21 22.6 -0.5**
baz=91,SNR=7.7
C24A Savage 91.55 2 ⇑P **P 04 21 24.5 +0.8**
baz=91,SNR=5.5
D15A Lincoln 91.56 7 ⇑P **P 04 21 23.4 -0.4**
baz=91
D17A Six Diamond Ra 91.61 6 ⇓P **P 04 21 23.1 -0.9**
baz=91,SNR=15
CHMT Chamberlain Mo 91.61 8 *e*P **P 04 21 23.1 -1.0**
comp=Z,7.8nm,1.0s
MSO Missoula 91.62 8 *e*P **P 04 21 24.1 0.0**
comp=Z,6.3nm,1.1s
MSO Missoula 91.62 8 ⇑P **P 04 21 24.3 +0.3**
baz=91,SNR=5.5
D16A Dana Ranch, Ca 91.66 7 ⇓P **P 04 21 23.8 -0.5**
baz=91
D19A Cripps Ranch, 91.72 5 ⇓P **P 04 21 23.8 -0.7**
baz=91,SNR=8.1
D20A Manuel Ranch, 91.84 4 ⇑P **P 04 21 25.5 +0.4**
baz=92
D22A Cohagen 91.88 3 ⇑P **P 04 21 26.2 +1.0**
baz=92,SNR=18
D23A Lindsay 91.89 2 ⇓P **P 04 21 26.6 +1.4**
baz=92
D21A La Casta Ranch 91.93 4 ⇓P **P 04 21 25.9 +0.4**
baz=92
HRY Holter Researc 91.95 7 *e*P **P 04 21 24.9 -0.7**
comp=Z,8.8nm,0.7s
D24A Glendive 91.97 2 ⇓P **P 04 21 26.8 +1.1**
baz=92
E13A Victor 91.98 9 ⇑P **P 04 21 25.4 -0.3**
baz=92
ACCN Adirondack Com 92.01 340 *e*P **P 04 21 25.9 +0.1**
comp=Z,7.4nm,1.0s
E14A Clinton 92.08 8 ⇑P **P 04 21 26.3 +0.1**
baz=92,SNR=6.7
E16A East Helena 92.14 7 ⇑P **P 04 21 26.5 0.0**
baz=92
E15A Deer Lodge 92.16 7 ⇓P **P 04 21 25.7 -1.0**
baz=92
E18A Harlowton 92.25 6 ⇑P **P 04 21 27.4 +0.4**
baz=92,SNR=7.9
E17A Martinsdale 92.28 6 ⇓P **P 04 21 27.1 -0.1**
baz=92
E20A Meyer Farm, Mu 92.43 4 ⇓P **P 04 21 28.0 +0.2**
baz=92,SNR=5.6
E19A Rath Farm, Rou 92.43 5 ⇑P **P 04 21 28.1 +0.3**
baz=92,SNR=7.8
E24A Baker 92.53 2 ⇓P **P 04 21 29.0 +0.8**
baz=92
F12A Elk City 92.53 9 ⇑P **P 04 21 27.6 -0.8**
baz=92
E23A Ismay 92.56 2 ⇑P **P 04 21 29.4 +1.0**
baz=92
F13A Darby 92.60 9 ⇑P **P 04 21 28.6 -0.1**
baz=92,SNR=6.6
TRY Troy 92.62 340 *e*P **P 04 21 28.7 +0.2**
comp=Z,22nm,1.1s
F15A Butte 92.75 7 ⇓P **P 04 21 29.5 +0.1**
baz=92
LRM Limekiln Ridge 92.77 7 *e*P **P 04 21 28.8 -0.8**
comp=Z,64nm,1.1s
F17A Fitzpatrick Pl 92.85 6 ⇓P **P 04 21 30.4 +0.6**
baz=92,SNR=6.6
F18A Big Timber 92.92 6 ⇑P **P 04 21 30.5 +0.3**
baz=92,SNR=7.8
BOZ Bozeman (W) 93.02 7 *e*P **P 04 21 30.6 0.0**
BOZ pmax pmax
comp=Z,8.0nm,1.0s
BOZ Bozeman (W) 93.02 7 *e*P **P 04 21 30.6 0.0**
comp=Z,8.1nm,1.0s
BOZ Bozeman (W) 93.02 7 ⇑P **P 04 21 30.9 +0.2**
baz=93,SNR=8.8
F19A Roth Farm, Mol 93.03 5 ⇑P **P 04 21 30.9 +0.3**
baz=93,SNR=9.8
GCMT Greycliff 93.04 6 *e*P **P 04 21 30.6 -0.1**
comp=Z,5.6nm,0.9s
F20A Billings 93.13 4 ⇑P **P 04 21 31.3 +0.2**
baz=93
DLMT Dillon 93.21 8 *e*P **P 04 21 31.3 -0.3**
comp=Z,11nm,1.3s
G14A Jackson 93.24 8 ⇑P **P 04 21 31.6 -0.2**
baz=93
F22A Rosebud 93.25 3 ⇓P **P 04 21 31.7 +0.1**
baz=93
G13A Cobalt 93.30 9 ⇑P **P 04 21 31.3 -0.6**
baz=93,SNR=6.3
STKA Stephens Creek 93.32 130 P **P 04 21 31.1 -0.7**
STKA Stephens Creek 93.32 130 P **P 04 21 31.1 -0.7**
comp=Z,3.4nm,0.8s,baz=344,slow=6.0,SNR=4.6
F23A Volborg 93.33 3 ⇓P **P 04 21 32.1 +0.1**
baz=93
G15A Dillon 93.42 8 ⇓P **P 04 21 32.4 -0.1**
baz=93,SNR=5.5
G16A Moss Hill, Enn 93.42 7 ⇑P **P 04 21 32.4 -0.1**
baz=93
G20A Bridger 93.70 5 ⇑P **P 04 21 33.5 -0.2**
baz=93,SNR=8.0
MCMT McKenzie Canyo 93.72 8 *e*P **P 04 21 33.5 -0.5**
comp=Z,3.5nm,0.9s
RLMT Red Lodge 93.73 5 ⇑P **P 04 21 34.2 +0.2**
baz=93,SNR=6.8
G21A Lodge Grass 93.75 4 ⇑P **P 04 21 34.4 +0.4**
baz=93
H14A Leadore 93.87 8 ⇑P **P 04 21 35.0 +0.4**
baz=94,SNR=11
H15A Lima 93.94 8 ⇑P **P 04 21 35.1 +0.1**
baz=94
H16A Russell Place, 93.99 7 ⇓P **P 04 21 35.2 0.0**
baz=94
H19A Powell 94.20 5 ⇑P **P 04 21 36.3 +0.3**
baz=94
LKWY Lake 94.20 6 *e*P **P 04 21 37.0 +0.8**
LKWY pmax pmax
comp=Z,15nm,1.0s
LKWY Lake 94.20 6 *e*P **P 04 21 37.0 +0.8**
comp=Z,14nm,1.0s
H24A Dirks Ranch, A 94.33 2 ⇑P **P 04 21 36.8 +0.2**
baz=94
HUMO Hull Mountain 94.35 16 *e*P **P 04 21 36.4 -0.2**
comp=Z,7.1nm,1.0s
H17A Grant Village 94.36 6 ⇓P **P 04 21 38.1 +1.2**
baz=94,SNR=6.5
H21A Big Horn, Sher 94.36 4 ⇑P **P 04 21 36.9 +0.1**
baz=94,SNR=5.7
H22A Clearmont 94.42 3 ⇓P **P 04 21 37.7 +0.6**
baz=94
H20A Greybull 94.45 4 ⇓P **P 04 21 37.5 +0.3**
baz=94
I12A Atlanta 94.47 10 ⇑P **P 04 21 37.2 -0.2**
baz=94,SNR=8.1
I13A Wildhorse Cree 94.48 9 ⇓P **P 04 21 37.0 -0.4**
baz=94
I14A Mackay 94.54 8 ⇓P **P 04 21 37.1 -0.6**
baz=94,SNR=7.1
I15A Monteview 94.57 8 ⇓P **P 04 21 37.1 -0.6**
baz=94
BRSD Miller 94.64 358 ⇓P **P 04 21 37.7 -0.2**
baz=94
MFID Camas Ranch 94.76 10 ⇓P **P 04 21 38.6 0.0**
baz=94
HLID Hailey 94.79 9 ⇑P **P 04 21 38.9 +0.1**
baz=94
I16A Newdale 94.79 7 ⇓P **P 04 21 38.1 -0.7**
baz=94
IMW Indian Meadow 94.82 7 *e*P **P 04 21 39.9 +0.8**
comp=Z,9.4nm,1.0s
I17A Pilgrim Ck. 94.83 6 ⇓P **P 04 21 39.5 +0.4**
baz=94
I19A Meeteetse 94.83 5 ⇓P **P 04 21 38.8 -0.3**
baz=94
RSSD Black Hills 94.97 2 *e*P **P 04 21 39.8 +0.1**
RSSD pmax pmax
comp=Z,9.0nm,0.8s
RSSD Black Hills 94.97 2 *e*P **P 04 21 39.8 +0.1**
comp=Z,8.6nm,0.8s
I20A Worland 94.97 5 ⇑P **P 04 21 39.1 -0.5**
baz=95,SNR=5.1
J13A Cove Ranch, Pi 94.98 9 ⇑P **P 04 21 39.3 -0.4**
baz=95
MOOW Moose Ponds 94.98 7 *e*P **P 04 21 39.8 0.0**
comp=Z,5.3nm,1.1s
I22A 9 Mile Ranch, 95.12 3 ⇑P **P 04 21 39.8 -0.5**
baz=95
LOHW Long Hollow 95.13 6 *e*P **P 04 21 40.5 +0.1**
comp=Z,4.2nm,1.0s
I21A Big Trails, Te 95.16 4 ⇓P **P 04 21 39.9 -0.6**
baz=95,SNR=12
AAM Ann Arbor 95.22 347 *e*P **P 04 21 40.1 -0.4**
AAM Ann Arbor 95.22 347 *e*P **P 04 21 40.1 -0.4**
ECSD EROS Data Cent 95.25 356 *e*P **P 04 21 40.3 -0.4**
comp=Z,6.4nm,0.8s
J16A Bone 95.38 7 ⇑P **P 04 21 41.0 -0.6**
baz=95
J20A Shoshoni 95.57 5 ⇓P **P 04 21 42.8 +0.4**
baz=95
J19A Crowheart 95.60 5 ⇑P **P 04 21 42.2 -0.3**
baz=95,SNR=18
J22A Midwest 95.60 3 ⇑P **P 04 21 41.3 -1.2**
baz=95,SNR=7.9
J21A Lysite 95.62 4 ⇓P **P 04 21 42.5 -0.2**
baz=95

J23A	**Dilts Ranch, B** baz=95	**95.64**	**3**	⇑P		**P**	**04 21 43.1**	**+0.4**
J24A	**Dixon Ranch, L** baz=95	**95.75**	**2**	⇑P		**P**	**04 21 42.7**	**-0.5**
K17A	**Gardner Place,** baz=96	**95.96**	**7**	⇑P		**P**	**04 21 43.9**	**-0.3**
K19A	**Absolon Red Bu** baz=96	**96.05**	**5**	⇓P		**P**	**04 21 43.8**	**-0.8**
PDAR	**Pinedale Array**	**96.06**	**6**	P		**P**	**04 21 44.1**	**-0.6**
PDAR	**Pinedale Array** comp=Z,0.7nm,0.4s,baz=55,slow=2.6,SNR=13	**96.06**	**6**	P		**P**	**04 21 44.1**	**-0.6**
PDAR	comp=Z,493nm,19.0s,baz=215,slow=37			LR		LR	05 07 35.7	
K18A	**Toltan Ranch,** baz=96	**96.15**	**6**	⇓P		**P**	**04 21 44.0**	**-1.1**
K20A	**Yellowstone Ra** baz=96,SNR=7.5	**96.25**	**5**	⇑P		**P**	**04 21 45.1**	**-0.3**
K22A	**Casper** baz=96	**96.36**	**4**	⇑P		**P**	**04 21 45.5**	**-0.5**
L14A	**Malta** baz=96	**96.44**	**9**	⇑P		**P**	**04 21 45.0**	**-1.3**
K25A	**Mack Ranch, Ha** baz=96	**96.48**	**2**	⇓P		**P**	**04 21 47.3**	**+0.8**
L15A	**Malad City** baz=96	**96.56**	**8**	⇓P		**P**	**04 21 46.3**	**-0.6**
L16A	**Fish Haven** baz=96	**96.64**	**7**	⇓P		**P**	**04 21 46.9**	**-0.5**
L19A	**Farson** baz=96,SNR=8.2	**96.73**	**6**	⇓P		**P**	**04 21 48.0**	**+0.2**
L22A	**Ellis Ranch, M** baz=97	**96.98**	**3**	⇑P		Pdif	04 21 49.4	
L21A	**Rawlins** baz=97	**97.00**	**4**	⇓P			04 21 49.1	
L24A	**Wheatland** baz=97	**97.02**	**2**	⇑P		Pdif	04 21 49.3	+0.3
HWUT	**Hardware Ranch** comp=Z,9.5nm,0.8s	**97.03**	**7**	*e*P		Pdif	04 21 49.3	+0.1
ACSO	**Alum Creek Sta** comp=Z,5.7nm,0.8s	**97.10**	**346**	*e*P		**P**	**04 21 48.5**	**-0.6**
M17A	**Scullys Gap (B** baz=97	**97.25**	**7**	⇑P		Pdif	04 21 50.3	+0.1
M21A	**Separation Pea** baz=97	**97.35**	**4**	⇓P		**P**	**04 21 48.6**	**-2.1**
M20A	**Sweetwater, Wa** baz=97	**97.42**	**5**	⇓P		Pdif	04 21 51.2	+0.2
BEKR	**Beckworth** comp=Z,1.8nm,1.0s	**97.50**	**14**	*e*P		**P**	**04 21 50.2**	**-1.0**
M23A	**Laramie** baz=97	**97.57**	**3**	⇑P		Pdif	04 21 52.2	+0.6
M22A	**Cedar Creek Ra** baz=97	**97.60**	**4**	⇑P		Pdif	04 21 53.2	+1.4
N18A	**Larsen Ranch,** baz=97	**97.83**	**6**	⇓P		Pdif	04 21 54.1	+1.3
N23A	**Red Feather La** baz=98	**98.13**	**3**	⇓P		**P**	**04 21 53.0**	**-1.1**
N21A	**Black Mountain** baz=98	**98.19**	**4**	⇓P		Pdif	04 21 55.4	+1.0
DUG	**Dugway**	**98.30**	**9**	*e*P		**P**	**04 21 54.6**	**-0.2**
DUG	comp=Z,5.0nm,1.0s			pmax		pmax		
DUG	**Dugway** comp=Z,5.0nm,1.0s	**98.30**	**9**	*e*P		**P**	**04 21 54.6**	**-0.2**
DUG	**Dugway** baz=98	**98.30**	**9**	⇑P		**P**	**04 21 54.5**	**-0.2**
O19A	**Miners Draw (B** baz=98	**98.54**	**6**	⇑P		**P**	**04 21 55.3**	**-0.5**
O22A	**Kremmling** baz=98	**98.84**	**4**	⇑P		Pdif	04 21 57.9	+0.5
NVAR	**Mina Array Bea**	**99.26**	**13**	P		**Pdif**	**04 21 59.5**	**+0.3**
NVAR	**Mina Array Bea** comp=Z,0.3nm,0.7s,baz=64,slow=2.1,SNR=2.6	**99.26**	**13**	P		**Pdif**	**04 21 59.5**	**+0.3**
NVAR	comp=Z,359nm,18.3s,baz=28,slow=38			LR		LR	05 11 39.2	
U30A	**WK&E Inc. Balk** baz=102	**102.57**	**359**	⇓P		**Pdif**	**04 22 12.2**	**-1.6**
DZM	**Mont Dzumac** comp=Z,314nm,22.8s	**102.93**	**108**	*e*LR		LR	04 55 58.7	
TXAR	**Lajitas Array**	**109.73**	**2**	PKiKP		**PKiKP**	**04 26 47.8**	**-0.5**
TXAR	**Lajitas Array** comp=Z,0.4nm,0.7s,baz=89,slow=0.7,SNR=3.2	**109.73**	**2**	PKiKP		**PKiKP**	**04 26 47.8**	**-0.5**
SNAA	**Sanae**	**125.89**	**203**	*e*P		PKPdf	04 27 24.4	+6.7
SNAA	**Sanae**	**125.89**	**203**	*e*PKPdf		**PKPdf**	**04 27 17.4**	**-0.3**
VNA2	**Neumayer--Watz** baz=11,slow=5.0	**126.98**	**204**	*e*P		**PKPdf**	**04 27 19.7**	**0.0**
ROSC	**El Rosal**	**127.69**	**325**	*e*PKPdf		**PKPdf**	**04 27 22.4**	**-0.9**
VNA3	**Neumayer Olymp**	**127.79**	**204**	*e*P		**PKPdf**	**04 27 21.6**	**+0.4**
QSPA	**South Pole Qui**	**131.05**	**180**	PKP		**PKPdf**	**04 27 26.9**	**-0.7**
QSPA				*e*PKPdf		**PKiKP**	**04 27 27.2**	**-1.3**
QSPA	**South Pole Qui** comp=Z,2.7nm,0.7s,baz=264,slow=2.1,SNR=18	**131.05**	**180**	PKP		**PKPdf**	**04 27 26.9**	**-0.7**
PPT2	**Papeete2** comp=Z,270nm,25.2s	**132.87**	**75**	*e*LR		LR	05 09 57.6	
SAML	**Samuel**	**133.13**	**302**	*e*PKPdf		**PKPdf**	**04 27 32.5**	**-0.6**
TBI	**Tubuai** comp=Z,284nm,24.0s	**136.50**	**81**	*e*LR		LR	05 11 36.6	
CPUP	**Villa Florida**	**140.60**	**278**	PKP		**PKPdf**	**04 27 45.0**	**-1.6**
CPUP	**Villa Florida** comp=Z,1.2nm,0.5s,baz=344,slow=2.0,SNR=7.7	**140.60**	**278**	PKP		**PKPdf**	**04 27 45.0**	**-1.6**
LPAZ	**La Paz**	**141.79**	**301**	PKP		**PKPdf**	**04 27 48.4**	**-1.4**
LPAZ				*e*PKPdf		**PKiKP**	**04 27 49.1**	**-3.5**
LPAZ	**La Paz** comp=Z,1.2nm,0.7s,baz=143,slow=2.9,SNR=2.1	**141.79**	**301**	PKP		**PKPdf**	**04 27 48.4**	**-1.4**
NNA	**Nana**	**143.56**	**316**	*e*PKPdf		**PKPdf**	**04 27 51.9**	**-0.4**
TRQA	**Tornquist**	**149.38**	**263**	*e*PKPbc		**PKPbc**	**04 28 05.0**	**-0.8**
LCO	**Las Campanas**	**151.95**	**286**	*e*PKPbc		**PKPbc**	**04 28 12.2**	**-0.2**
PLCA	**Paso Flores**	**156.48**	**261**	*e*PKPdf		**PKPdf**	**04 28 10.9**	**-0.8**
PLCA				PKPab		**PKPab**	**04 28 39.8**	**-0.7**
PLCA	**Paso Flores** comp=Z,3.4nm,0.9s,baz=52,slow=4.7,SNR=4.8	**156.48**	**261**	PKPab		**PKPab**	**04 28 39.8**	**-0.7**

*NNC **19** 04:28:20.0±2.0, 41.22N×78.20E, h9km±12km, mb3.8, mpv3.5, Error ellipse: s-maj=13.6km s-min=11.3km az=129.0*
ISC 19 04:28:16.8±3.4, 41.0N±0.2×78.25E±0.10, h10km, n14, σ1§44/12, 6C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol** SNR=70	**1.97**	**311**	P	**Pb**	**04 28 53.2**	**+0.3**
KNDC	**Almaty**	**2.44**	**337**	⇑Pg	**Pb**	**04 29 00.8**	**0.0**
KNDC				⇑Lg	Lg	04 29 30.9	
KZA	**Kyzart** SNR=58	**2.51**	**297**	P	**Pg**	**04 29 03.9**	**-1.0**
TKM2	**Tokmak 2** 16nm,0.3s	**2.78**	**315**	⇑Pg	**Pb**	**04 29 06.8**	**+0.2**
TKM2	221nm,0.8s			⇓Lg	Lg	04 29 41.5	
TKM2	**Tokmak 2** SNR=8.6	**2.78**	**315**	P	**Pb**	**04 29 07.3**	**+0.6**
KBK	**Karagaybulak** SNR=14	**2.99**	**305**	P	**Pb**	**04 29 12.4**	**+2.3**
CHMS	**Chumysh** SNR=6.0	**3.30**	**309**	P	**Pb**	**04 29 16.1**	**+0.6**
AML	**Almayashu** SNR=21	**3.61**	**290**	P	**Pg**	**04 29 24.5**	**-1.5**
USP	**Ospenovka** SNR=13	**3.61**	**311**	P	**Sb**	**04 30 06.1**	**+1.5**
EKS2	**Erkin-Say** SNR=11	**3.75**	**298**	P	**Pg**	**04 29 26.0**	**-2.6**
KK31	**Karatay Array** 2.0nm,0.5s,baz=111,slow=16,SNR=24	**6.14**	**293**	⇑Pg	Pg	04 30 10.3	-4.1
KK31	8.7nm,0.6s,baz=103,slow=27,SNR=13			Lg	Lg	04 31 30.1	
MK31	**Makanchi Array** 1.0nm,0.5s,baz=204,slow=14,SNR=17	**6.51**	**25**	⇓Pn	**Pn**	**04 29 53.3**	**+0.7**
MK31	2.9nm,0.7s,baz=206,slow=25,SNR=3.7			⇓Sn	**Sn**	**04 31 06.5**	**-0.3**
MK31	5.7nm,0.7s,baz=211,slow=28,SNR=6.5			⇑Lg	Lg	04 31 37.1	
KURBB	**Kurchatov Arra** 1.9nm,0.6s	**9.65**	**1**	⇑Lg	Lg	04 33 16.5	
KURK	**Kurchatov** 7.3nm,0.8s	**9.75**	**1**	⇓Lg	Lg	04 33 20.7	

*ISCJB **19** 04:29:07.0±0.5, 39.10N±0.03×29.08E±0.03, h9km±6km, Error ellipse: s-maj=5.1km s-min=4.4km az=173.4*
*ISK **19** 04:29:06.1, 39.11N×29.07E, h5km, MD2.7*
*DDA **19** 04:29:07.1, 39.08N×29.07E, h7km, MD2.6*
*CSEM **19** 04:29:07.0±0.2, 39.12N×29.07E, h5km, MD2.6, Error ellipse: s-maj=3.6km s-min=3.1km az=75.0*
ISC 19 04:29:07.2±1.0, 39.12N±0.03×29.06E±0.03, h10km±11km, n20, σ0§32/31, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEMI	**Demirci**	**0.28**	**255**	*i* Pg	**Pg**	**04 29 12.9**	**+0.1**
DEMI				*i* Sg	**Sg**	**04 29 16.8**	**+0.2**
GDZ	**Gediz**	**0.33**	**95**	*e*P	**Pg**	**04 29 13.8**	**0.0**
GDZ				*e*S	**Sg**	**04 29 18.6**	**+0.4**
GDZ	**Gediz**	**0.33**	**95**	*e*P	**Pg**	**04 29 13.8**	**0.0**
GDZ				*e*S	**Sg**	**04 29 18.6**	**+0.4**
TVSB	**Tavsanli**	**0.46**	**43**	*e*Pg	**Pg**	**04 29 15.8**	**-0.3**
TVSB				*e*Sg	**Sg**	**04 29 21.8**	**-0.3**
TVSB	**Tavsanli**	**0.46**	**43**	*e*Pg	**Pg**	**04 29 15.8**	**-0.3**
TVSB				*e*Sg	**Sg**	**04 29 21.8**	**-0.3**
DURS	**Dursunbey**	**0.66**	**317**	*e*P	**Pg**	04 29 16.2	-3.9
DURS				*e*S	**Sb**	**04 29 31.0**	**+0.7**
KULA	**Kula-Manisa**	**0.68**	**208**	*e*PG	**Pg**	**04 29 20.1**	**-0.2**
KULA				*e*SG	**Sg**	**04 29 28.9**	**-0.3**
KULA	**Kula-Manisa**	**0.68**	**208**	*e*Pg	**Pg**	**04 29 20.1**	**-0.2**
KULA				*e*Sg	**Sg**	**04 29 28.9**	**-0.3**
KHAL	**Karahalli**	**0.82**	**156**	*e*P	**Pg**	**04 29 23.3**	**+0.3**
KHAL				*e*S	**Sg**	**04 29 33.2**	**-0.4**
KHAL	**Karahalli**	**0.82**	**156**	*e*P	**Pg**	**04 29 23.3**	**+0.3**
KHAL				*e*S	**Sg**	**04 29 33.2**	**-0.4**
ALT	**Altintas**	**0.82**	**94**	*e*PG	**Pg**	**04 29 22.8**	**-0.2**
ALT				*e*SG	**Sg**	**04 29 33.7**	**+0.1**
ALT	**Altintas**	**0.82**	**94**	*e*Pg	**Pg**	**04 29 22.8**	**-0.2**
ALT				*e*Sg	**Sg**	**04 29 33.7**	**+0.1**
KHL	**Karahalli**	**0.87**	**155**	*e*PG	**Pg**	**04 29 23.7**	**-0.2**
KHL	**Karahalli**	**0.87**	**155**	*e*Pg	**Pg**	**04 29 23.7**	**-0.2**
KCTX	**Karacabey (Bur**	**1.27**	**335**	*e*PN	**Pn**	**04 29 30.6**	**-0.4**
KCTX	**Karacabey (Bur**	**1.27**	**335**	*e*Pn	**Pn**	**04 29 30.6**	**-0.4**
GONE	**Gonen-Balikesi**	**1.41**	**312**	*e*PN	**Pb**	**04 29 33.6**	**+0.1**
GONE	**Gonen-Balikesi**	**1.41**	**312**	*e*Pn	**Pb**	**04 29 33.7**	**+0.1**
ARMT	**Armutlu**	**1.46**	**354**	*e*PN	**Pn**	**04 29 33.7**	**+0.1**
ARMT	**Armutlu**	**1.46**	**354**	*e*Pn	**Pn**	**04 29 33.7**	**+0.1**

*NNC **19** 04:44:47.9±2.2, 41.24N×78.14E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=17.3km s-min=12.1km az=2.0*
ISC 19 04:44:49.7±3.4, 41.3N±0.2×78.1E±0.2, h10km, n14, σ0§88/12, 5C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol** SNR=71	**1.68**	**305**	P	**Pb**	**04 45 19.9**	**-1.0**
KNDC	**Almaty**	**2.10**	**337**	⇓Pg	**Pb**	**04 45 27.8**	**-0.2**
KNDC				⇑Lg	Lg	04 45 57.2	
KZA	**Kyzart** SNR=40	**2.27**	**291**	P	**Pb**	**04 45 30.9**	**-0.1**
TKM2	**Tokmak 2** 10nm,0.5s	**2.47**	**312**	⇑Pg	**Pb**	**04 45 33.4**	**-1.0**
TKM2	98nm,0.5s			⇓Lg	Lg	04 46 08.6	
TKM2	**Tokmak 2** SNR=9.7	**2.47**	**312**	P	**Pb**	**04 45 34.6**	**+0.3**
KBK	**Karagaybulak** SNR=15	**2.71**	**301**	P	**Pb**	**04 45 38.8**	**+0.3**
AAK	**Ala-Archa** SNR=14	**3.00**	**298**	P	**Pb**	**04 45 44.2**	**+0.8**
CHMS	**Chumysh** SNR=8.8	**3.02**	**306**	P	**Pb**	**04 45 43.6**	**0.0**
USP	**Ospenovka** SNR=8.5	**3.32**	**308**	P	**Pb**	**04 45 48.9**	**+0.2**
AML	**Almayashu** SNR=25	**3.40**	**286**	P	**Pb**	**04 45 49.0**	**-1.3**
EKS2	**Erkin-Say** SNR=20	**3.50**	**295**	P	**Pb**	**04 45 53.4**	**+1.5**
KK31	**Karatay Array** 2.0nm,0.7s,baz=108,slow=14,SNR=21	**5.92**	**290**	⇓Pg	Pg	04 46 37.4	-5.6
KK31	2.1nm,0.5s,baz=99,slow=28,SNR=8.9			⇑Lg	Lg	04 47 56.0	
MK31	**Makanchi Array** 1.0nm,0.5s,baz=201,slow=14,SNR=10	**6.28**	**27**	⇓Pn	**Pn**	**04 46 22.6**	**+0.1**
MK31	2.7nm,0.7s,baz=211,slow=28,SNR=4.2			⇑Lg	Lg	04 48 04.2	
KURBB	**Kurchatov Arra** 1.8nm,0.9s	**9.34**	**2**	⇑Lg	Lg	04 49 43.8	

*NSSP **19** 04:45:31.6, 41.65N×46.63E, h10km, Ms3.1*
*CSEM **19** 04:45:32.5±0.8, 41.68N×46.63E, h2km, ML3.1, Error ellipse: s-maj=19.3km s-min=7.7km az=44.0*
*TIF **19** 04:45:33.9, 41.69N×46.47E, h26km±3km*
ISC 19 04:45:30.1±2.1, 41.81N±0.07×46.73E±0.07, h8km±11km, n19, σ1§07/36, 5C-8D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DGRG	**David-gareji**	**1.08**	**251**	P	**Pb**	**04 45 51.1**	**+0.2**
DGRG				S	**Sg**	**04 46 05.4**	**+0.7**
DGRG	**David-gareji**	**1.08**	**251**	P	**Pb**	**04 45 51.1**	**+0.2**
DGRG				S	**Sg**	**04 46 05.4**	**+0.7**
TBLG	**Delisi**	**1.49**	**268**	P	**Pn**	**04 45 57.5**	**+0.4**
TBLG				S	**Sn**	**04 46 15.5**	**-1.2**
TBLG	**Delisi**	**1.49**	**268**	P	**Pn**	**04 45 57.5**	**+0.4**
TBLG				S	**Sn**	**04 46 15.5**	**-1.2**
MTKZ	**Martakert**	**1.61**	**177**	*i* P	**Pn**	**04 45 58.8**	**0.0**
MTKZ				*i* S	**Sn**	**04 46 19.4**	**-0.3**
MTKZ	**Martakert**	**1.61**	**177**	⇓P	**Pn**	**04 45 58.8**	**0.0**
MTKZ				S	**Sn**	**04 46 19.4**	**-0.3**
VADZ	**Vardenis**	**1.80**	**205**	*e*P	**Pn**	**04 46 02.0**	**+0.5**
VADZ				*e*S	**Sn**	**04 46 25.0**	**+0.4**
VADZ	**Vardenis**	**1.80**	**205**	P	**Pn**	**04 46 02.0**	**+0.5**
VADZ				S	**Sn**	**04 46 25.0**	**+0.4**
STEZ	**Stepenevan**	**1.93**	**246**	*i* P	**Pn**	**04 46 02.5**	**-0.8**
STEZ				⇓S	**Sn**	**04 46 25.5**	**-2.2**
GOR	**Gori**	**1.96**	**276**	P	**Sg**	**04 46 30.4**	**-2.7**
STKZ		**2.00**	**179**	*i* P	**Pb**	**04 46 06.4**	**-0.2**
STKZ				⇑ *i* S	**Sb**	**04 46 31.5**	**-0.1**
STKZ		**2.00**	**179**	⇓P	**Pb**	**04 46 06.4**	**-0.2**
STKZ				S	**Sb**	**04 46 31.5**	**-0.1**
GNI	**Garni**	**2.24**	**223**	⇑ *i* P	**Pb**	**04 46 09.7**	**-1.1**
GNI				⇓ *i* S	**Sb**	**04 46 38.6**	**-0.1**
GNI	**Garni**	**2.24**	**223**	⇑P	**Pb**	**04 46 09.7**	**-1.1**
GRS	**Goris**	**2.33**	**188**	⇑ *i* P	**Pg**	**04 46 15.0**	**+0.3**
GRS				⇑ *i* S	**Sg**	**04 46 45.0**	**+0.2**
AKH	**Akhalkalaki**	**2.46**	**262**	P	**Pn**	**04 46 12.9**	**+2.3**
AKH				S	**Sn**	**04 46 42.3**	**+1.5**
AKH	**Akhalkalaki**	**2.46**	**262**	P	**Pn**	**04 46 12.9**	**+2.3**
AKH				S	**Sn**	**04 46 42.3**	**+1.5**
ONI	**Oni**	**2.56**	**289**	P	**Pb**	**04 46 15.7**	**-0.4**
ONI				S	**Sb**	**04 46 47.6**	**-0.1**
ONI	**Oni**	**2.56**	**289**	P	**Pb**	**04 46 15.7**	**-0.4**
ONI				S	**Sb**	**04 46 47.6**	**-0.1**

*IDC **19** 05:23:22.2±0.3, 4.15N×126.67E, h0km, mb5.6/40, mb1 5.7/41, mb1mx5.7/42, mbtmp5.6/41, ML4.6/1, MS5.8/28, Ms1 5.8/28, ms1mx5.6/50, Error ellipse: s-maj=10.1km s-min=7.4km az=83.0*
*BJI **19** 05:23:22.7, 3.77N×126.78E, h38km, mB6.2/58, mb5.8/67, Ms6.1/82, Ms7 6.1/72*
*NEIC **19** 05:23:25.0±1.4, 4.14N×126.68E, h25km, mb5.9/144, ME5.9, MS5.9/149, MW6.1, Error ellipse: s-maj=4.8km s-min=3.3km az=71.0, Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt [III] in the Kepulauan Talaud.
*MOS **19** 05:23:25.5±1.1, 4.14N×126.73E, h33km, mb6.2/77, MS5.9/74, Error ellipse: s-maj=8.1km s-min=4.3km az=117.0*
*TEH **19** 05:23:27.0, 4.11N×126.73E, h35km, ML6.4*
*ISCJB **19** 05:23:28.8±0.3, 4.12N±0.01×126.77E±0.02, h65km±2km, mb5.8/239, Error ellipse: s-maj=3.4km s-min=2.3km az=164.7*
*GCMT **19** 05:23:29.9±0.1, 4.14N×126.87E, h25km, MW6.1, Moment Tensor Solution. s106,c239; s93,c142; Moment tensor: Scale 10^{18}Nm; M_{rr}1.54±.01; $M_{\theta\theta}$0.03±.01; $M_{\phi\phi}$-1.56±.01; $M_{r\theta}$0.20±.03; $M_{\theta\phi}$-0.18±.01; $M_{\phi r}$0.28±.02; Best double couple: $M_0$1.60000×10^{18} NP1:ϕ_S180.00000°, δ40.00000°, λ81.00000°. NP2:ϕ_S12.00000°, δ51.00000°, λ98.00000°. Principal axes: T 1.5900, Plg82.0000°, Azm325.0000°; N 0.0300, Plg6.0000°, Azm187.0000°; P -1.6100, Plg5.0000°, Azm97.0000°; Data Used: II IU CN IC G. Surface waves: sta=106, comp=233, per= 50.*
*AUST **19** 05:23:30.4±0.2, 3.96N×126.85E, h59km Error ellipse: s-maj=0.7km s-min=0.5km az=226.0*
*DJA **19** 05:23:32.1±0.3, 4.N±2.×12.7E±., h67km±3km, M6.1/114, mb5.9/114, mB6.4/106, MLv6.3/12, Mw(mB)6.1/106, Mwp6.2/38*
ISC 19 05:23:27.2±0.2, 4.12N±0.02×126.74E±0.03, h34km, h34km:pP-P, n1600, σ1§61/1774, mb5.9/235, MS5.9/248, 215C-132D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.29**	**250**	P	**Sn**	**05 24 08.8**	**+3.9**
GAMI	**Galela, Maluku**	**2.50**	**155**	P	**Pn**	**05 24 03.3**	**-2.2**
GSPH	**General Santos**	**2.65**	**318**	⇑ *i* P	**Pn**	**05 24 09.4**	**+1.8**
MATI	**Mati**	**2.85**	**350**	*e*P	Pn	05 24 16.5	+6.2
DAV	**Davao City (W)**	**3.15**	**338**	*e*Pn	Pn	05 24 17.7	+3.2
DAV				Sn	**Sb**	**05 24 57.3**	**-3.2**
DAV				*e*Sn	Sn	05 25 01.7	+11
DAV	**Davao City (W)**	**3.15**	**338**	⇑*e*P	Pn	05 24 18.3	+3.9
DAV	**Davao City (W)** SNR=153	**3.15**	**338**	P	Pn	05 24 18.0	+3.5
DAV	**Davao City (W)**	**3.15**	**338**	P	Pn	05 24 17.7	+3.2
DAV	**Davao City (W)** 58nm,0.3s,baz=58,slow=1.3,SNR=27	**3.15**	**338**	Pn	Pn	05 24 17.9	+3.5
DAV	554nm,0.3s,baz=65,slow=21,SNR=6.3			Sn	**Sb**	**05 24 57.3**	**-3.2**
DMPH	**Davao City--Mi**	**3.19**	**337**	*e*P	Pn	05 24 24.0	+9.0
MNI	**Manado**	**3.27**	**216**	P	Pn	05 24 19.5	+3.4
TNTI	**Ternate**	**3.39**	**169**	P	**Pn**	**05 24 18.9**	**+1.2**
CTBH	**Cotabato--PC H**	**3.96**	**321**	⇑*e*P	Pn	05 24 28.7	+3.1
BUKP	**Musuan**	**4.09**	**336**	*e*P	Pn	05 24 31.3	+3.9
KMSI	**Cibinong**	**4.48**	**218**	P	Pn	05 24 37.0	+4.3
CGP	**Cagayan de Oro**	**4.76**	**335**	⇑*e*P	Pn	05 24 42.0	+5.4
LBMI	**Labuha**	**4.79**	**171**	P	**Pn**	**05 24 39.8**	**+2.8**
PAGZ	**Pagadian**	**4.99**	**318**	*e*P	Pn	05 24 43.5	+3.8
ZMPH	**Zamboanga City**	**5.44**	**301**	⇑ *i* P	**Pn**	**05 24 47.1**	**+1.1**
ZMPH				*i* S	**Sn**	**05 25 48.0**	**+0.6**
IPIL	**Ipil**	**5.52**	**311**	⇑*e*P	**Pn**	**05 24 49.4**	**+2.4**
IPIL				*e*S	**Sn**	**05 25 54.1**	**+4.7**
DCPH	**Dipolog City**	**5.57**	**323**	⇓*e*P	Pn	05 24 53.2	+5.5
MRSI	**Marisa** 18nm203µm86µm4µm,0.7s	**6.01**	**233**	P	Pn	05 24 56.6	+2.8
TBP	**Tagbilaran**	**6.23**	**333**	*e*P	Pn	05 25 01.3	+4.5
TBP				*e*S	Pb	05 25 21.8	+6.9
SNPH	**Sibulan**	**6.25**	**326**	⇑*e*P	Pn	05 24 49.9	-7.2
MSLP	**Maasin**	**6.26**	**343**	*e*P	Pn	05 25 03.8	+6.6
LUWI	**Luwuk** 38nm220µm146µm10µm,1.2s	**6.49**	**218**	P	Pn	05 25 05.1	+4.7
LLP	**Lapu-Lapu**	**6.74**	**336**	⇓*e*P	Pn	05 25 08.5	+4.6
LLP				*e*S	Sb	05 26 33.4	-10
APSI	**Ampana**	**7.14**	**226**	P	Pn	05 25 19.1	+10
OCLP	**Ormoc**	**7.20**	**343**	*e*P	Pn	05 25 17.3	+7.1
PLP	**Palo**	**7.21**	**346**	⇑*e*P	**Pn**	**05 25 12.6**	**+2.3**
NLAI	**Namlea** 1µm,0.7s,33µm55µm9.7nm	**7.32**	**177**	P	**Pn**	**05 25 11.8**	**0.0**
GUIM	**Jordan**	**7.66**	**328**	*e*P	Pn	05 25 22.9	+6.4
MSAI	**Masohi** 275nm,1.7s,4µm1.0nm	**7.73**	**164**	P	Pn	05 25 21.8	+4.3
AAI	**Ambon** 1µm,1.2s,15µm155µm4.1nm	**7.89**	**169**	P	**Pn**	**05 25 22.3**	**+2.6**
AAI	**Ambon** baz=7.8,SNR=20	**7.89**	**169**	P	**Pn**	**05 25 21.6**	**+1.9**
MYLDM	**Lahad Datu**	**8.28**	**278**	P	Pn	05 25 31.6	+6.6
MYLDM	**Lahad Datu** 1µm,1.9s,46µm669µm8.3nm	**8.28**	**278**	P	Pn	05 25 30.8	+5.8
RCP	**Roxas**	**8.38**	**332**	⇓*e*P	Pn	05 25 30.9	+4.5
PCI	**Palu** baz=8.5,SNR=8.5	**8.52**	**234**	P	Pn	05 25 33.5	+5.2
CNP	**Catarman**	**8.58**	**346**	*e*P	Pn	05 25 38.6	+10
CUYO	**Cuyo Island**	**8.77**	**320**	*e*P	Pn	05 25 36.7	+5.0
TSM	**Tawau**	**8.85**	**271**	P	Pn	05 25 36.7	+3.9
FAKI	**Fak Fak** 734nm,1.0s,12µm224µm	**8.90**	**142**	P	**Pn**	**05 25 34.4**	**+0.9**
KDI	**Kendari** 997nm,1.8s,21µm	**9.02**	**207**	P	**Pn**	**05 25 35.9**	**+0.7**
BNDI	**Bandanaira** 2µm,1.7s,38µm124µm	**9.15**	**160**	P	**Pn**	**05 25 38.5**	**+1.6**
OTRP	**Odiongan**	**9.43**	**331**	*e*P	Pn	05 25 48.0	+7.3
SDKM	**Sandakan**	**9.63**	**279**	P	Pn	05 25 48.8	+5.1
TTSI	**Tana Toraja** 1µm,1.7s,28µm	**9.93**	**224**	P	Pn	05 25 51.1	+3.5
SJMP	**San Jose**	**9.98**	**326**	*e*P	Pn	05 25 55.2	+6.9
BATP	**Bataraza**	**10.03**	**298**	*e*P	Pn	05 25 56.5	+7.5
ENPP	**El Nido**	**10.10**	**315**	*e*P	Pn	05 25 56.4	+6.4
KDM	**Kudat**	**10.25**	**286**	P	Pn	05 26 00.1	+8.2
BBSI	**Bau Bau** 632nm,1.8s,12µm	**10.42**	**204**	P	Pn	05 26 00.5	+6.2
SMKI	**Samarinda** 699nm,0.9s,13µm	**10.55**	**245**	P	Pn	05 26 02.9	+6.7
GQP	**Guinayangan**	**10.61**	**337**	⇑*e*P	Pn	05 26 04.7	+7.8
SPSI	**Sidrap Palu** 473nm,2.5s,17µm	**10.63**	**221**	P	Pn	05 26 00.8	+3.5
KKM	**Kota Kinabalu**	**10.66**	**281**	*e*Pn	Pn	05 26 02.2	+4.5
KKM				*e*Sn	Sn	05 28 10.6	+14
KKM	**Kota Kinabalu**	**10.66**	**281**	P	Pn	05 26 04.4	+6.6
KKM	**Kota Kinabalu** 917nm,1.2s,26µm223µm	**10.66**	**281**	P	Pn	05 26 03.6	+5.9
KKM	**Kota Kinabalu** baz=11,SNR=24	**10.66**	**281**	P	Pn	05 26 03.5	+5.7
BAKI	**Biak** 2µm,1.5s,38µm212µm	**10.74**	**119**	P	Pn	05 26 02.8	+4.0
LQP	**Lukban**	**11.18**	**333**	*e*P	Pn	05 26 18.0	+13
TLE	**Tual** 1µm,1.4s,32µm146µm	**11.39**	**148**	P	**Pn**	**05 26 10.7**	**+3.0**
TLE	**Tual** baz=11,SNR=17	**11.39**	**148**	P	**

2µm,1.7s,47µm84µm
BWJI Bawean 17.21 235 P pP 05 27 36.0 +0.8
IGBI Denpasar 17.29 222 P **P** **05 27 28.5 +1.1**
761nm,1.1s
BYJI Banyuwangi 17.40 225 P **P** **05 27 31.5 +2.9**
2µm,1.3s,37µm
MTN Manton Dam 17.41 166 P **Pn** **05 27 24.5 -3.1**
baz=17,SNR=156
MTN S **Sn** **05 30 42.0 +1.4**
baz=17,SNR=5.0
BLJI Banyuglugur 17.64 228 P **P** **05 27 31.6 +0.4**
834nm,0.8s,11µm
KDU Kakadu 17.64 161 P **Pn** **05 27 27.1 -3.5**
baz=18,SNR=127
GMJI Gumukmas 18.10 227 P **P** **05 27 37.9 +1.6**
657nm,0.8s,13µm
KRKI Karangkates 18.76 229 P **Pn** **05 27 44.5 +0.3**
1µm,1.1s
SJI Sawahan 19.03 232 P **P** **05 27 45.8 -0.8**
826nm,1.1s,11µm
PWJI Pagerwojo 19.18 231 P **P** **05 27 47.5 -0.6**
391nm,0.8s,7µm
TWG Pinlang 19.38 344 *e*P **P** **05 27 48.7 -1.6**
3µm,1.4s
TWG *e*S **S** **05 31 22.1 -5.7**
SMRI Semarang 19.70 236 P **Pn** **05 27 54.9 -0.6**
362nm,1.0s,17µm
PCJI Pacitan 19.77 232 P **Pn** **05 27 55.4 -0.9**
414nm,0.8s,6µm
YULB Yu-li 19.87 345 *e*P **P** **05 27 53.3 -2.3**
200nm,0.4s
TPUB Ta-pu 19.96 343 *e*P **P** **05 27 56.3 -0.3**
568nm,0.9s
UGM Wanagama 20.12 234 *e*P **P** **05 27 58.6 0.0**
375nm,0.9s
UGM Wanagama 20.12 234 P Pn 05 28 05.9 +5.4
416nm,1.0s,12µm
UGM Wanagama 20.12 234 P **P** **05 27 58.5 0.0**
baz=20,SNR=17
GUMO Guam 20.21 61 P **P** **05 27 59.4 0.0**
70nm,1.8s
GUMO *e*S Sn 05 31 48.6 +0.4
GUMO S **S** **05 31 49.3 +4.7**
GUMO Guam 20.21 61 P **P** **05 27 59.4 0.0**
70nm,0.3s,baz=186,slow=3.2,SNR=7.9
GUMO S Sn 05 31 49.3 +1.0
32nm,0.6s,baz=177,slow=19,SNR=1.5
GUMO LR LR 05 33 56.2
comp=Z,22µm,21.4s,baz=229,slow=31
YOGI Yogyakarta 20.25 234 P Pn 05 28 01.7 -0.3
1µm,0.7s,15µm
TPI Tanjungpandan 20.27 251 P Pn 05 28 02.5 +0.3
62nm,0.9s,5µm37µm
SSLB Suanglung 20.33 345 *e*P **P** **05 28 00.1 -0.7**
373nm,0.6s
SSLB *e*S **S** **05 31 43.6 -3.4**
BJII Banjamegara 20.46 236 P Pn 05 28 03.3 -1.2
518nm,1.7s,11µm64µm
NACB Ninganchiao 20.54 346 P **P** **05 28 02.7 -0.3**
131nm,0.7s
TGJI Tegal 20.70 238 P **P** **05 28 05.6 +0.8**
489nm,1.8s,13µm
YHNB Yeheng 21.07 346 *e*P **P** **05 28 07.0 -1.8**
278nm,0.9s
YHNB *e*S **S** **05 32 04.2 +2.5**
YHNB LR LR
comp=Z,48µm,22.0s
CLJI Cilicap 21.24 236 P **P** **05 28 10.0 -0.6**
comp=Z,308nm,1.4s,comp=Z,5µm
TATO Taipei 21.34 347 *e*P **P** **05 28 11.2 -0.3**
comp=Z,3µm,2.6s
TATO *e*S **S** **05 32 06.9 0.0**
TATO LR LR
comp=Z,35µm,22.0s
PPBI Pangkal Pinang 21.52 254 P **P** **05 28 15.5 +1.9**
comp=Z,172nm,1.0s,comp=Z,7µm
HKC Hong Kong Obse 21.79 327⇑ *i*P **P** **05 28 16.0 -0.4**
HKC *i*S **S** **05 32 16.0 +0.2**
LEM Lembang 21.97 240 P **P** **05 28 19.4 +0.8**
comp=Z,606nm,0.8s,comp=Z,16µm
LEM Lembang 21.97 240 P **P** **05 28 21.8 +3.2**
baz=22,SNR=9.7
FITZ Fitzroy Crossi 22.11 183 P **P** **05 28 18.9 -1.0**
comp=Z,306nm,0.9s
FITZ S **S** **05 32 16.4 -5.5**
FITZ *e* 05 32 16.5
FITZ Fitzroy Crossi 22.11 183 P **P** **05 28 18.9 -1.0**
comp=Z,83nm,0.8s,baz=20,slow=9.4,SNR=112
FITZ S **S** **05 32 16.4 -5.5**
comp=Z,53nm,0.9s,baz=172,slow=19,SNR=10
FITZ Fitzroy Crossi 22.11 183 P **P** **05 28 18.0 -1.8**
baz=22,SNR=684
FITZ S **S** **05 32 17.1 -4.7**
baz=22,SNR=12
QZH Quanzhou 22.14 340⇑ *i*P **P** **05 28 20.1 0.0**
QZH sP **sP** **05 28 33.1 -0.2**
QZH S **S** **05 32 18.4 -3.8**
QZH pmax pmax
comp=Z,310nm,0.7s
QZH pmax pmax
comp=Z,6µm,4.8s
QZH LR LR
comp=N,62µm,19.5s
QZH LR LR
comp=E,43µm,20.0s
QZH LR LR
comp=Z,71µm,17.8s
CISI Cisompet, Garu 22.17 238 P **P** **05 28 20.8 +0.2**
comp=Z,397nm,1.7s,comp=Z,11µmcomp=Z,47µm
QIZ Qiongzhong 22.18 313 P **P** **05 28 19.8 -0.8**
QIZ pP **pP** **05 28 27.8 -1.8**
QIZ sP **sP** **05 28 37.4 +3.5**
QIZ S **S** **05 32 22.4 -0.8**
QIZ pmax pmax
comp=Z,190nm,0.8s
QIZ pmax pmax
comp=Z,3µm,6.9s
QIZ LR LR
comp=N,20µm,18.7s
QIZ LR LR
comp=Z,42µm,22.9s
CBJI Citeko 22.45 242 P **P** **05 28 25.2 +1.6**
comp=Z,2µm,0.9s,comp=Z,35µmcomp=Z,216µm
DBJI Dramaga 22.60 242 P **P** **05 28 25.8 +0.6**
comp=Z,405nm,1.2s,comp=Z,17µm
JOW Kunigami 22.63 4 *e*P **P** **05 28 24.9 -0.5**
comp=Z,155nm,0.8s
JOW *e* 05 32 33.7
GZH Guangzhou 22.88 327 P **P** **05 28 29.8 +1.8**
GZH S **S** **05 32 38.5 +3.0**
GZH LR LR
comp=N,42µm,17.7s
GZH LR LR
comp=E,49µm,20.2s
GZH LR LR
comp=Z,60µm,17.6s
SBJI Serang 22.96 244 P **P** **05 28 30.6 +1.6**
comp=Z,711nm,1.3s,comp=Z,15µm
MYKOM Kota Tinggi 22.98 265 P **P** **05 28 31.0 +1.9**
MYKOM Kota Tinggi 22.98 265 P **P** **05 28 30.1 +0.9**
comp=Z,619nm,0.7s,comp=Z,10µmcomp=Z,73µm
BLSI Bandar Lampung 23.45 246 P **P** **05 28 35.6 +1.7**
comp=Z,595nm,0.6s,comp=Z,8µm
KGM Kluang 23.48 266 P **P** **05 28 35.8 +1.6**
KTGM Kuala Trenggan 23.56 274 P **P** **05 28 36.9 +2.0**
CGJI Cibinong 23.57 243 P **P** **05 28 33.7 -1.3**
comp=Z,644nm,1.2s,comp=Z,11µm
KASI Kota Agung 24.20 247 P **P** **05 28 40.5 -0.4**
comp=Z,366nm,0.9s,comp=Z,7µm
COEN Coen 24.26 138 *e*P **P** **05 28 39.2 -2.2**
comp=Z,1µm,1.3s
COEN *e*S S 05 32 50.8 -7.4
COEN Coen 24.26 138 P **P** **05 28 39.1 -2.2**
baz=24,SNR=26
PMG Port Moresby 24.38 124 P **P** **05 28 42.3 -0.3**
comp=Z,26nm,1.9s
PMG *e*S S 05 32 51.3 -9.0
PMG LR LR
comp=Z,14µm,19.0s
PMG Port Moresby 24.38 124 P **P** **05 28 43.7 +1.1**
comp=Z,103nm,1.8s,comp=Z,5µmcomp=Z,20µm
PMG Port Moresby 24.38 124 P **P** **05 28 42.3 -0.3**
comp=Z,46nm,1.1s,baz=5.3,slow=4.2,SNR=7.2
LWLI Liwa 24.41 248 P **P** **05 28 43.6 +0.6**
comp=Z,793nm,1.0s,comp=Z,10µmcomp=Z,29µm
WRAB Tennant Creek 25.05 163 *e*P **P** **05 28 47.3 -1.2**
WRAB *e*S **S** **05 33 05.4 -5.4**
WRAB pmax pmax
comp=Z,1µm,1.1s
WRAB MLR MLR
comp=Z,20µm,20.0s
WRAB Tennant Creek 25.05 163 *e*P **P** **05 28 47.3 -1.2**
comp=Z,1µm,1.1s
WRAB *e*S **S** **05 33 05.4 -5.4**
WRAB LR LR
comp=Z,20µm,20.0s
WRA Warramunga Arr 25.05 163 P **P** **05 28 47.3 -1.3**
WRA S **S** **05 33 06.3 -4.6**
WRA *e* 06 01 45.9
WRA Warramunga Arr 25.05 163 P **P** **05 28 47.3 -1.3**
comp=Z,648nm,0.8s,baz=342,slow=10,SNR=448
WRA S **S** **05 33 06.3 -4.6**
comp=Z,15nm,0.9s,baz=332,slow=16,SNR=2.4
WRA P3KPbc 06 01 45.9
comp=Z,0.5nm,1.0s,baz=159,slow=3.8,SNR=2.7
FRIM Kepong 25.08 269 P **P** **05 28 50.3 +1.4**
MNAI Manna 25.22 251 P **P** **05 28 51.9 +1.7**
comp=Z,480nm,0.9s,comp=Z,16µm
KSI Kapahiang 25.34 253 P **P** **05 28 54.5 +3.2**
comp=Z,482nm,0.7s,comp=Z,16µm
XMI Christmas Isla 25.48 235 P **P** **05 28 50.9 -1.6**
baz=26,SNR=11
XMIS Christmas Isla 25.53 235 P **P** **05 28 53.5 +0.6**
baz=26,SNR=12
CHBT CHBT 25.60 291 P **P** **05 28 55.3 +1.7**
comp=Z,453nm,1.5s,comp=Z,8µm
IPM Ipoh 25.65 272 *e*P **P** **05 28 53.2 -0.9**
comp=Z,132nm,0.8s
IPM *e*S S 05 33 08.8 -12
IPM Ipoh 25.65 272 P **P** **05 28 55.2 +1.1**
IPM Ipoh 25.65 272 P **P** **05 28 54.4 +0.3**
comp=Z,281nm,0.8s,comp=Z,5µmcomp=Z,42µm
BKNI Bangkinang 25.96 262 P **P** **05 28 58.0 +1.1**
comp=Z,839nm,0.9s,comp=Z,8µm
KRJI Kerinci 26.01 257 P **P** **05 29 01.8 +4.3**
comp=Z,451nm,2.6s,comp=Z,21µm
KULM Kulim 26.03 274 *e*P **P** **05 28 56.4 -1.2**
comp=Z,386nm,1.3s
KULM *e*S S 05 33 16.5 -10
KULM LR LR
comp=Z,26µm,19.0s
KULM Kulim 26.03 274 P **P** **05 28 58.6 +1.0**
KULM Kulim 26.03 274 P **P** **05 28 58.0 +0.4**
comp=Z,286nm,1.1s,comp=Z,5µmcomp=Z,39µm
MBWA Marble Bar 26.05 195 *e*P **P** **05 28 57.0 -0.6**
comp=Z,378nm,0.8s
MBWA *e*S **S** **05 33 19.9 -6.7**
MBWA LR LR
comp=Z,9µm,22.0s
MBWA Marble Bar 26.05 195 P **P** **05 28 57.5 -0.1**
SNR=59
PPI Padang Panjang 26.72 261 P **P** **05 29 04.0 +0.2**
comp=Z,320nm,0.8s,comp=Z,6µmcomp=Z,43µm
PPI Padang Panjang 26.72 261 P P 05 29 12.2 +8.4
baz=27,SNR=7.3
MNSI Madalling Nat 27.34 264 P **P** **05 29 08.9 -0.4**
comp=Z,388nm,0.9s,comp=Z,5µm
SSE Sheshan 27.34 350 P **P** **05 29 10.1 +1.0**
SSE S **S** **05 33 50.3 +3.6**
SSE PcS **PcS** **05 36 08.9 -0.8**
SSE pmax pmax
comp=Z,180nm,1.0s
SSE pmax pmax
comp=Z,4µm,6.5s
SSE LR LR
comp=N,17µm,21.8s
SSE LR LR
comp=E,9µm,21.8s
SSE LR LR
comp=Z,25µm,19.1s
QIS Mount Isa 27.59 153 P **P** **05 29 10.8 -0.7**
baz=28,SNR=101
PSI Prapat 27.80 268 P **P** **05 29 13.3 -0.3**
PSI S **S** **05 33 52.8 -1.9**
PSI Prapat 27.80 268 P **P** **05 29 13.2 -0.4**
comp=Z,155nm,1.0s,comp=Z,4µmcomp=Z,27µm
PSI Prapat 27.80 268 P **P** **05 29 13.3 -0.3**
comp=Z,117nm,0.9s,baz=80,slow=12,SNR=68
PSI S **S** **05 33 52.8 -1.9**
comp=Z,6.3nm,0.8s,baz=23,slow=15,SNR=2.9
PSI Prapat 27.80 268 P **P** **05 29 13.6 0.0**
baz=28,SNR=50
PSI S **S** **05 33 56.5 +1.7**
baz=28,SNR=5.9
TSI Tuntungan 28.12 270 P P 05 29 19.4 +3.0
comp=Z,299nm,1.8s,comp=Z,7µm
SISI Saibi 28.16 259 P **P** **05 29 18.2 +1.5**
comp=Z,301nm,0.9s,comp=Z,10µm
AS31 Alice Springs 28.49 166 *e*P **P** **05 29 18.6 -1.0**
AS31 *e*S **S** **05 34 04.9 -0.3**
ASAR Alice Springs 28.49 166 P **P** **05 29 19.3 -0.3**
ASAR S **S** **05 34 08.3 +3.1**
ASAR *e* 06 01 32.3
ASAR Alice Springs 28.49 166 P **P** **05 29 19.3 -0.3**
comp=Z,36nm,0.7s,baz=349,slow=7.5,SNR=200
ASAR S **S** **05 34 08.3 +3.1**
comp=Z,7.7nm,0.8s,baz=345,slow=14,SNR=3.0
ASAR P3KPbc 06 01 32.3
comp=Z,0.4nm,0.7s,baz=156,slow=4.1,SNR=3.9
NJ2 Nanjing 28.75 346 *e*P **P** **05 29 23.3 +1.6**
NJ2 pP **pP** **05 29 33.9 +2.5**
NJ2 sP **sP** **05 29 37.4 +1.9**
NJ2 PP **PnPn** **05 30 16.1 +2.8**
NJ2 S **S** **05 34 11.0 +1.9**
NJ2 sS **sS** **05 34 28.5 +3.4**
NJ2 pmax pmax
comp=Z,2µm,4.9s
NJ2 LR LR
comp=N,15µm,17.8s
NJ2 LR LR
comp=E,12µm,16.4s
NJ2 LR LR
comp=Z,25µm,20.6s
WHN Wuhan 28.77 337⇑ *i*P **P** **05 29 22.0 +0.1**
WHN pP **pP** **05 29 31.9 +0.3**
WHN sP sP 05 29 40.3 +4.7
WHN PcP **PcP** **05 32 33.4 +1.9**
WHN S S 05 34 02.8 -6.5
WHN pmax pmax
comp=Z,220nm,0.9s
WHN pmax pmax
comp=Z,2µm,4.2s
WHN LR LR
comp=N,59µm,18.5s
WHN LR LR
comp=E,80µm,18.6s
WHN LR LR
comp=Z,131µm,20.3s
JNU Nakatsue 29.11 7 P **P** **05 29 24.2 -0.7**
comp=Z,10nm,1.0s
JNU S S 05 34 23.2 +8.4
JNU *e*S S 05 34 27.1 +12
JNU Nakatsue 29.11 7 P **P** **05 29 24.2 -0.7**
comp=Z,92nm,0.8s,baz=177,slow=4.3,SNR=39
JNU S S 05 34 23.2 +8.4
comp=Z,7.9nm,0.9s,baz=130,slow=19,SNR=2.7
JNU LR LR 05 41 14.2
comp=Z,11µm,19.4s,baz=177,slow=37
GSI Gunungsitoli 29.27 265 P **P** **05 29 25.4 -1.2**
comp=Z,268nm,0.9s,comp=Z,12µm
GSI Gunungsitoli 29.27 265 P **P** **05 29 25.8 -0.8**
baz=29,SNR=18
GSI S S 05 33 58.6 -19
baz=29,SNR=8.8
GIRL Giralia 29.28 204 P **P** **05 29 28.8 +2.3**
baz=29,SNR=14
GIRL S **S** **05 34 15.6 -1.9**
baz=29,SNR=3.0
GYA Guiyang 29.37 321⇑ *i*P **P** **05 29 27.4 -0.1**
GYA pP **pP** **05 29 40.0 +2.8**
GYA PP **PnPn** **05 30 26.4 +4.5**
GYA PcP **PcP** **05 32 35.5 +2.1**
GYA S **S** **05 34 20.8 +1.6**
GYA sS **sS** **05 34 37.0 +1.8**
GYA SS **SnSn** **05 35 53.5 +6.2**
GYA ScP **ScP** **05 36 13.3 +0.5**
GYA ScS **ScS** **05 40 06.8 -0.7**
GYA pmax pmax
comp=Z,50nm,0.8s
GYA LR LR
comp=N,24µm,16.4s
GYA LR LR
comp=E,22µm,17.0s
GYA LR LR
comp=Z,29µm,18.0s
CM31 Chiang Mai Arr 30.69 300 *e*P **P** **05 29 39.1 0.0**
comp=Z,72nm,0.7s
CMAR Chiang Mai Arr 30.69 300 P **P** **05 29 39.4 +0.3**
CMAR PcP **PcP** **05 32 37.8 +1.0**
CMAR S **S** **05 34 40.9 +1.1**
CMAR ScP **ScP** **05 36 20.7 +3.6**
CMAR *e* 06 01 25.0
CMAR Chiang Mai Arr 30.69 300 P **P** **05 29 39.4 +0.3**
comp=Z,68nm,0.7s,baz=118,slow=7.3,SNR=181
CMAR PcP **PcP** **05 32 37.8 +1.0**
comp=Z,11nm,0.9s,baz=110,slow=2.1,SNR=5.3
CMAR S **S** **05 34 40.9 +1.1**
comp=Z,0.4nm,0.5s,baz=104,slow=19,SNR=2.3
CMAR ScP **ScP** **05 36 20.7 +3.6**
comp=Z,29nm,1.2s,baz=142,slow=1.6,SNR=14
CMAR LR LR 05 41 34.0
comp=Z,18µm,19.8s,baz=107,slow=36
CMAR P3KPbc 06 01 25.0
comp=Z,0.4nm,0.3s,baz=297,slow=4.0,SNR=2.7
CTAO Charters Tower 30.76 142 *e*P **P** **05 29 39.4 -0.3**
CTAO *e*S **S** **05 34 37.4 -3.5**
CTAO MLR MLR
comp=Z,12µm,20.0s
CTAO Charters Tower 30.76 142 *e*P **P** **05 29 39.4 -0.3**
CTAO *e*S **S** **05 34 37.4 -3.5**
CTAO LR LR
comp=Z,12µm,20.0s
CMMT Chiang Mai 30.83 300 P **P** **05 29 41.2 +0.8**
comp=Z,190nm,1.5s,comp=Z,3µm
CHTO Chiang Mai 30.83 300 *e*P **P** **05 29 39.9 -0.5**
CHTO *e* 05 32 37.8
CHTO MLR MLR
comp=Z,15µm,20.0s
CHTO Chiang Mai 30.83 300 *e*P **P** **05 29 39.9 -0.5**
CHTO *e*PcP **PcP** **05 32 37.8 +0.7**
CHTO LR LR
comp=Z,15µm,20.0s
CHTO Chiang Mai 30.83 300 P **P** **05 29 41.3 +0.9**
SNR=55
CHTO Chiang Mai 30.83 300 P **P** **05 29 40.6 +0.2**
comp=Z,155nm,1.4s,comp=Z,3µmcomp=Z,21µm
KMI Kunming 31.11 314 P **P** **05 29 43.5 +0.5**
KMI pP **pP** **05 29 53.8 +1.1**
KMI sP **sP** **05 29 57.5 +0.7**
KMI PP **PnPn** **05 30 48.6 +3.4**
KMI PcP **PcP** **05 32 40.4 +2.3**
KMI S **S** **05 34 43.6 -3.2**
KMI pmax pmax
comp=Z,90nm,1.0s
KMI LR LR
comp=N,11µm,23.3s
KMI LR LR
comp=E,20µm,22.3s
KMI LR LR
comp=Z,36µm,22.9s
JHJ Hachijo jima 2 31.32 21 LR LR 05 42 08.8
comp=Z,20µm,19.1s,baz=206,slow=36
BSI Banda Aceh 31.36 274 P **P** **05 29 46.8 +1.7**
comp=Z,131nm,0.9s,comp=Z,2µmcomp=Z,51µm
MEEK Meekatharra 31.57 194 P **P** **05 29 45.8 -1.0**
baz=32,SNR=177
MEEK S **S** **05 34 52.0 -1.5**
baz=32,SNR=7.2
TIA Tai'an 33.14 346 P **P** **05 30 00.6 +0.2**
TIA S **S** **05 35 14.3 -3.4**
TIA pmax pmax
comp=Z,200nm,0.9s
TIA LR LR
comp=N,12µm,20.6s
TIA LR LR
comp=E,15µm,17.2s
TIA LR LR
comp=Z,18µm,18.6s
KSAR Wonju Array Be 33.18 2 P **P** **05 30 00.8 +0.1**
KSAR PcP **PcP** **05 32 44.2 +1.1**
KSAR S **S** **05 35 21.4 +3.2**
KSAR ScP **ScP** **05 36 28.5 +3.4**
KSRS Korea Array 33.19 2 P **P** **05 30 00.8 0.0**
comp=Z,35nm,0.6s,baz=179,slow=10,SNR=125
KSRS PcP **PcP** **05 32 44.2 +1.1**
comp=Z,25nm,0.9s,baz=182,slow=3.6,SNR=9.6
KSRS S **S** **05 35 21.4 +3.1**
comp=Z,0.8nm,0.4s,baz=189,slow=15,SNR=2.5
KSRS ScP **ScP** **05 36 28.5 +3.4**
comp=Z,8.0nm,1.1s,baz=184,slow=3.2,SNR=6.9
INCN Inchon 33.20 360 *e*P **P** **05 30 00.2 -0.8**
comp=Z,64nm,1.0s
INCN LR LR
comp=Z,15µm,20.0s
INCN Inchon 33.20 360 P **P** **05 30 02.0 +1.0**
SNR=8.4
COCO West Island 33.86 241 PFAKE 05 30 20.0 +13
COCO LR LR
comp=Z,10µm,21.0s
MAJO Matsushiro 33.94 17 *e*P **P** **05 30 05.4 -2.0**
MAJO *e* 05 32 45.6
MAJO pmax pmax
comp=Z,64nm,1.0s
MAJO MLR MLR
comp=Z,17µm,21.0s
MAJO Matsushiro 33.94 17 *e*P **P** **05 30 05.3 -2.0**
comp=Z,64nm,1.0s
MAJO *e*PcP **PcP** **05 32 45.6 +0.3**
MAJO LR LR
comp=Z,17µm,21.0s
MAT Matsushiro 33.94 17 P **P** **05 30 05.8 -1.6**
MAT S **S** **05 35 31.8 +1.6**
MJAR Matsushiro Arr 33.94 17 P **P** **05 30 05.6 -1.8**
MJAR PcP **PcP** **05 32 46.5 +1.1**
MJAR S S 05 35 39.8 +10
MJAR ScP **ScP** **05 36 31.6 +3.7**
MJAR Matsushiro Arr 33.94 17 P **P** **05 30 05.6 -1.8**
comp=Z,28nm,0.8s,baz=199,slow=9.5,SNR=63
MJAR PcP **PcP** **05 32 46.5 +1.1**
comp=Z,14nm,0.9s,baz=194,slow=3.1,SNR=4.1
MJAR S S 05 35 39.8 +10
comp=Z,0.6nm,0.3s,baz=233,slow=12,SNR=2.8
MJAR ScP **ScP** **05 36 31.6 +3.7**
comp=Z,3.9nm,0.9s,baz=205,slow=4.8,SNR=6.1
MJAR LR LR 05 41 29.6
comp=Z,15µm,21.5s,baz=190,slow=32
XAN Xi'an 34.07 333 P **P** **05 30 08.3 -0.3**
XAN SS SS 05 37 39.8 -21
XAN pmax pmax
comp=Z,180nm,0.8s
XAN pmax pmax
comp=Z,580nm,10.5s
XAN LR LR
comp=N,15µm,20.5s
XAN LR LR
comp=E,7µm,18.4s
XAN LR LR
comp=Z,11µm,18.4s
CD2 Chengdu 34.34 323 P **P** **05 30 11.3 +0.3**
CD2 pP **pP** **05 30 21.4 +0.7**
CD2 sP **sP** **05 30 25.6 +0.8**
CD2 PP **PP** **05 31 27.6 -1.6**
CD2 PcP **PcP** **05 32 46.4 -0.2**
CD2 S **S** **05 35 36.3 -0.2**
CD2 sS **sS** **05 35 52.9 +0.3**
CD2 PcS **PcS** **05 36 31.8 -1.3**
CD2 SS **SnSn** **05 37 48.0 +0.2**
CD2 pmax pmax
comp=Z,270nm,0.8s
CD2 pmax pmax
comp=Z,2µm,4.3s
CD2 LR LR
comp=N,32µm,17.6s
CD2 LR LR
comp=E,33µm,19.6s
CD2 LR LR
comp=Z,39µm,18.6s
MORW Morawa 34.57 197 P **P** **05 30 13.4 +0.5**
baz=35,SNR=8.3
DGPR DIGLIPUR 34.58 287 *e*P **P** **05 30 12.2 -1.0**
DGPR AMB AMB 05 31 38.3
comp=Z,148nm,0.4s
FORT Forrest 34.73 178 *e*P **P** **05 30 13.2 -1.1**
comp=Z,716nm,0.9s
FORT Forrest 34.73 178 P **P** **05 30 13.1 -1.1**
baz=35,SNR=81
QLP Quilpie 34.90 152 P **P** **05 30 14.8 -1.0**
baz=35,SNR=68
DL2 Dalian 34.93 353 *e*P **P** **05 30 16.8 +0.9**

DL2 eS S 05 35 46.8 +1.5
DL2 pmax pmax
comp=Z,370nm,0.9s
DL2 pmax pmax
comp=Z,4μm,3.9s
DL2 LR LR
comp=E,7μm,18.0s
DL2 LR LR
comp=Z,7μm,19.0s
KMBL Kambalda 35.59 187 P P 05 30 20.9 -0.8
baz=36,SNR=160
HNR Honiara 35.72 112 eP P 05 30 21.1 -1.9
HNR Honiara 35.72 112 LR LR 05 44 02.9
comp=Z,11μm,18.8s,baz=279,slow=35
BLDU Ballidu 35.85 195 P P 05 30 23.8 -0.1
baz=36,SNR=82
TIY Taiyuan 35.90 340 eP P 05 30 24.0 -0.4
TIY pP pP 05 30 34.3 +0.1
TIY S S 05 36 02.8 +2.4
TIY pmax pmax
comp=Z,2μm,7.2s
TIY LR LR
comp=N,16μm,17.1s
TIY LR LR
comp=E,5μm,13.3s
TIY LR LR
comp=Z,14μm,15.3s
KLBR Kellerberrin 36.53 193 P P 05 30 29.4 -0.3
baz=37,SNR=98
BJI Beijing 37.01 346 P P 05 30 34.1 +0.4
BJI pP pP 05 30 43.8 +0.3
BJI sP sP 05 30 48.8 +1.3
BJI PP PnPn 05 32 01.5 +2.7
BJI S S 05 36 15.3 -1.8
BJI pmax pmax
comp=Z,510nm,1.3s
BJI pmax pmax
comp=Z,5μm,4.1s
BJI LR LR
comp=N,8μm,21.3s
BJI LR LR
comp=E,13μm,21.7s
BJI LR LR
comp=Z,11μm,20.9s
RMQ Roma 37.15 146 P P 05 30 35.0 -0.1
baz=37,SNR=9.8
IMP Imphal 37.65 306 eP P 05 30 36.0 -3.4
IMP ex x 05 32 55.0
IMP ex x 05 36 41.0
SNY Shenyang 37.65 356 ⇑P P 05 30 39.3 +0.3
SNY S S 05 36 26.4 -0.3
SNY pmax pmax
comp=Z,160nm,2.0s
SNY pmax pmax
comp=Z,340nm,3.6s
SNY LR LR
comp=N,12μm,20.1s
SNY LR LR
comp=E,14μm,19.6s
SNY LR LR
comp=Z,14μm,17.7s
EIDS Eidsvold 37.65 142 P P 05 30 38.5 -0.8
baz=38,SNR=59
BBOO Buckleboo 37.78 167 eP P 05 30 39.4 -0.9
comp=Z,70μm,2.7s
BBOO Buckleboo 37.78 167 P P 05 30 39.0 -1.3
baz=38,SNR=326
BBOO S S 05 36 29.8 +0.9
baz=38,SNR=5.3
NWAO Narrogin (SRO) 37.94 193 eP P 05 30 41.9 +0.3
comp=Z,523nm,1.5s
NWAO LR LR
comp=Z,5μm,22.0s
NWAO Narrogin (SRO) 37.94 193 P P 05 30 42.3 +0.7
SNR=19
LZH Lanzhou 38.17 329 ⇑P P 05 30 43.8 0.0
LZH pP pP 05 30 54.3 +0.6
LZH sP sP 05 30 58.3 +0.6
LZH PP PnPn 05 32 16.0 +2.8
LZH S S 05 36 34.5 -0.7
LZH sS sS 05 36 52.0 +0.6
LZH SS SnSn 05 39 15.1 -5.6
LZH pmax pmax
comp=Z,390nm,1.0s
LZH pmax pmax
comp=Z,2μm,4.1s
LZH LR LR
comp=N,36μm,15.2s
LZH LR LR
comp=E,30μm,16.0s
LZH LR LR
comp=Z,47μm,18.0s
STKA Stephens Creek 38.49 159 eP P 05 30 45.9 -0.4
comp=Z,185nm,1.4s
STKA ePP PP 05 32 14.6 -0.3
STKA S S 05 36 38.6 -1.1
STKA Stephens Creek 38.49 159 P P 05 30 45.9 -0.4
comp=Z,509nm,1.1s,baz=332,slow=8.2,SNR=141
STKA S S 05 36 38.6 -1.1
comp=Z,18nm,1.0s,baz=221,slow=19,SNR=3.8
STKA Stephens Creek 38.49 159 P P 05 30 46.0 -0.4
baz=38,SNR=233
STKA S S 05 36 40.1 +0.4
baz=38,SNR=5.4
HHC Hu-ho-hao-te 39.03 342 ⇑P P 05 30 50.8 -0.1
HHC PP PnPn 05 32 25.5 +2.1
HHC PcP PcP 05 33 00.1 -0.5
HHC ScP ScP 05 36 44.9 -1.8
HHC S S 05 36 48.6 +0.7
HHC sS sS 05 37 06.4 +2.2
HHC SS SS 05 39 34.4 -6.6
HHC ScS ScS 05 40 55.3 -2.7
HHC pmax pmax
comp=Z,250nm,0.9s
HHC pmax pmax
comp=Z,7μm,6.4s
HHC LR LR
comp=N,37μm,15.7s
HHC LR LR
comp=E,25μm,15.8s
HHC LR LR
comp=Z,43μm,15.8s
VLA Vladivostok 39.10 6*j iP* P 05 30 50.8 -0.5
VLA *i* 05 33 00.5
VLA *i* S S 05 36 48.3 -0.3
VLA pmax pmax
comp=Z,159nm,1.3s
BTO Baotou 39.32 340 eP P 05 30 52.3 -1.0
AGT Agartala 39.45 303 ex pP 05 31 02.0 -2.4
AGT ex x 05 31 57.0
CN2 Changchun 39.53 359 ⇑P P 05 30 54.4 -0.4
CN2 epP pP 05 31 04.1 -0.6
CN2 PP PnPn 05 32 30.8 +1.7
CN2 PcP PcP 05 33 00.9 -1.1
CN2 eS S 05 36 55.0 -0.1
CN2 pmax pmax
comp=Z,40nm,0.8s
CN2 pmax pmax
comp=Z,3μm,10.0s
CN2 LR LR
comp=N,6μm,17.0s
CN2 LR LR
comp=E,7μm,17.0s
CN2 LR LR
comp=Z,9μm,19.0s
SHL Shillong 39.66 306 eP P 05 30 56.0 -0.4
SHL ex x 05 36 53.5
CMSA Cobar Meteorol 39.79 154 P P 05 30 57.3 +0.1
baz=40,SNR=52
USRK Ussuriysk Arra 40.18 6 P P 05 31 00.8 +0.6
comp=Z,35nm,0.8s,baz=190,slow=8.0,SNR=79
USRK ScP ScP 05 36 54.5 +3.6
comp=Z,12nm,1.2s,baz=211,slow=3.3,SNR=5.8
USRK S S 05 37 07.4 +2.6
comp=Z,4.7nm,1.0s,baz=191,slow=7.9,SNR=4.2
MDJ Mudanjiang 40.41 3 P P 05 31 02.3 +0.2
MDJ pP pP 05 31 11.3 -0.7
MDJ sP sP 05 31 15.1 -0.9
MDJ ScP ScP 05 36 51.5 -0.3
MDJ PcS PcS 05 36 55.9 +0.7
MDJ S S 05 37 08.5 +0.3
MDJ sS sS 05 37 23.3 -1.2
MDJ pmax pmax
comp=Z,92nm,1.7s
MDJ pmax pmax
comp=Z,2μm,6.3s
MDJ LR LR
comp=N,7μm,21.0s
MDJ LR LR
comp=E,5μm,20.2s
MDJ LR LR
comp=Z,9μm,19.8s
ERM Erimo 40.48 19 eP P 05 31 02.3 -0.5
ERM pmax pmax
comp=Z,127nm,1.3s
ERM MLR MLR
comp=Z,13μm,20.0s
ERM Erimo 40.48 19 eP P 05 31 02.2 -0.5
comp=Z,127nm,1.3s
ERM LR LR
comp=Z,13μm,20.0s
CAL Calcutta 41.43 300 eP P 05 31 09.4 -1.5
CAL ex x 05 31 09.4
CAL ex x 05 37 19.0
WAKE Wake Island 41.74 66 PFAKE 05 31 30.0 +17
WAKE LR LR
comp=Z,8μm,21.0s
ARMA Armidale 41.78 147 eP P 05 31 14.2 +0.4
comp=Z,299nm,1.0s
ARMA Armidale 41.78 147 P P 05 31 13.8 0.0
baz=42,SNR=74
LSA Lhasa 42.19 311 P P 05 31 17.3 -0.3
LSA S S 05 37 31.3 -4.8
LSA LR LR
comp=N,4μm,24.6s
LSA LR LR
comp=E,9μm,26.0s
LSA LR LR
comp=Z,14μm,25.3s
ASAJ Asahikawa 42.21 17 eP P 05 31 16.6 -0.3
ASAJ Asahikawa 42.21 17 P P 05 31 17.4 +0.4
comp=Z,72nm,0.8s,baz=214,slow=8.2
ASAJ LR LR 05 50 25.4
comp=Z,15μm,18.0s,baz=44,slow=38
GTA Gaotai 42.77 329 ⇑P P 05 31 21.0 -0.7
GTA pP pP 05 31 30.9 -0.8
GTA sP sP 05 31 34.9 -0.8
GTA PP PP 05 33 02.6 +1.2
GTA PcP PcP 05 33 15.0 +2.1
GTA ScP ScP 05 37 00.8 -0.7
GTA PcS PcS 05 37 04.9 -0.2
GTA S S 05 37 41.8 -1.9
GTA sS sS 05 37 57.4 -2.6
GTA SS SS 05 40 45.5 -10
GTA ScS ScS 05 41 17.3 -3.3
GTA pmax pmax
comp=Z,160nm,0.8s
GTA pmax pmax
comp=Z,2μm,6.9s
GTA LR LR
comp=N,29μm,18.5s
GTA LR LR
comp=E,25μm,18.5s
GTA LR LR
comp=Z,44μm,19.0s
ARPS Mount Arapiles 43.05 162 P P 05 31 24.0 +0.1
baz=43,SNR=218
YUK Yuzh-Kuril'sk 43.18 20*c iP* P 05 31 14.7 -10
YUK *i* PPP PPP 05 33 46.7
YUK *e*SSS SSS 05 41 00.7
YUK pmax pmax
comp=N,56nm,0.6s
YUK pmax pmax
comp=Z,52nm,0.6s
YUK pmax pmax
comp=E,26nm,0.6s
YUK pmax pmax
comp=Z,35nm,0.2s
YUK MLR MLR
comp=N,2μm,21.0s
YUK MLR MLR
comp=E,2μm,21.0s
YUK MLR MLR
comp=Z,7μm,21.0s
YNG Young 43.33 154 P P 05 31 27.1 +0.9
baz=43,SNR=47
MGCD Mangrove Creek 43.71 150 P P 05 31 30.8 +1.5
baz=44,SNR=13
TAPN Taplejung 43.80 306 eP P 05 31 29.5 -0.9
comp=Z,321nm,0.6s
ODAN Odare 43.85 305 eP P 05 31 30.3 -0.5
comp=Z,504nm,0.7s
BOK Bokaro 43.97 300 eP P 05 31 32.2 +0.6
BOK AMB AMB 05 31 34.8
comp=Z,141nm,2.7s
CAN Canberra 44.45 154 eP P 05 31 35.5 +0.3
CAN eS S 05 38 08.8 +0.6
CAN pmax pmax
comp=Z,1μm,1.5s
CAN MLR MLR
comp=Z,10μm,19.0s
CAN Canberra 44.45 154 eP P 05 31 35.5 +0.3
comp=Z,1μm,1.5s
CAN eS S 05 38 08.8 +0.6
CAN LR LR
comp=Z,10μm,19.0s
RAMN Ramite 44.54 305 eP P 05 31 35.7 -0.6
comp=Z,361nm,0.8s
VIS Vishakhapatnam 44.59 291 eP P 05 31 37.3 +0.8
VIS AMB AMB 05 31 41.8
comp=Z,158nm,5.7s
VIS ex x 05 37 14.5
CNB Canberra Magne 44.61 153 P P 05 31 37.6 +1.0
baz=45,SNR=13
HABR Khabarovsk 44.76 8*c iP* P 05 31 36.5 -0.9
HABR *e**PP pP 05 31 45.6 -1.7
HABR *e**SP sP 05 31 49.4 -1.9
HABR *e* 05 33 16.9
HABR *e* 05 33 20.5
HABR eS S 05 38 12.4 +0.3
HABR *e**SS sS 05 38 28.1 -0.4
HABR *e* 05 41 30.0
HABR pmax pmax
comp=Z,288nm,2.0s
HABR pmax pmax
comp=N,107nm,2.0s
HABR pmax pmax
comp=E,67nm,2.0s
HABR pmax pmax
comp=Z,1μm,3.0s
HABR MLR MLR
comp=Z,8μm,16.0s
YSS Yuzh-Sakhalins 44.86 16⇑eP P 05 31 38.0 -0.2
YSS *e* 05 31 45.0
YSS *e* 05 33 22.0
YSS eS S 05 38 12.0 -1.6
YSS *e* 05 41 37.0
YSS pmax pmax
comp=N,110nm,1.1s
YSS pmax pmax
comp=E,40nm,1.1s
YSS pmax pmax
comp=Z,140nm,1.1s
YSS MLR MLR
comp=Z,7μm,18.0s
YSS MLR MLR
comp=N,5μm,19.0s
YSS MLR MLR
comp=E,8μm,18.0s
TOO Toolangi 45.00 159 P P 05 31 40.8 +1.3
baz=45,SNR=46
KLR Kul'dur 45.15 5 eP P 05 31 36.8 -3.7
KLR eS S 05 38 30.0 +12
KLR *e* 05 41 37.5
KLR pmax pmax
comp=Z,920nm,3.0s
KLR pmax pmax
comp=Z,4μm,10.0s
KLR MLR MLR
comp=E,5μm,14.0s
KLR MLR MLR
comp=Z,10μm,14.0s
GUN Gumba 45.51 306 eP P 05 31 43.3 -0.8
comp=Z,446nm,0.6s
PKI Pulchoki 45.76 305 eP P 05 31 44.9 -1.2
comp=Z,130nm,0.7s
PKIN Phulchoki 45.77 305 eP P 05 31 44.9 -1.2
comp=Z,90nm,0.8s
PALK Pallekele 45.91 276 eP P 05 31 44.9 -2.3
comp=Z,278nm,1.8s
PALK Pallekele 45.91 276 P P 05 31 47.7 +0.6
SNR=6.9
PALK Pallekele 45.91 276 P P 05 31 47.0 -0.1
comp=Z,342nm,0.8s,SNR=7.0
PALK Pallekele 45.91 276 P P 05 31 47.6 +0.5
comp=Z,94nm,1.6s,comp=Z,3μm
KKN Kakani 45.95 305 eP P 05 31 46.5 -1.0
comp=Z,134nm,0.5s
MILA Mila 45.99 155 P P 05 31 48.6 +1.3
baz=46,SNR=11
DMN Daman 46.02 305 eP P 05 31 46.9 -1.2
comp=Z,184nm,0.7s
TARA Tarawa 46.20 92 PFAKE 05 32 00.0 +11
TARA LR LR
comp=Z,12μm,19.0s
NOUC Port Laguerre 46.65 126 eP P 05 31 53.4 +0.7
DZM Mont Dzumac 46.75 126 eP P 05 31 54.1 +0.4
comp=Z,316nm,1.2s
DZM eS S 05 38 39.4 -2.4
comp=Z,16μm,26.5s
DZM Mont Dzumac 46.75 126 eP P 05 31 54.1 +0.4
comp=Z,148nm,1.1s
ULN Ulaanbaatar 46.75 342 eP P 05 31 53.1 -0.2
comp=Z,152nm,1.0s
ULN ePcP PcP 05 33 26.6 +0.2
ULN LR LR
comp=Z,25μm,21.0s
ULN Ulaanbaatar 46.75 342 P P 05 31 53.4 0.0
SNR=120
ULN Ulaanbaatar 46.75 342 P P 05 31 54.2 +0.8
comp=Z,172nm,1.0s,comp=Z,3μm
NORM Noumea 46.86 126 eP P 05 31 54.1 -0.3
SONM Songino Array 46.93 341 P P 05 31 55.6 +0.9
SONM PcP PcP 05 33 27.4 +0.4
SONM S S 05 38 49.1 +5.4
SONM Songino Array 46.93 341 P P 05 31 55.6 +0.9
comp=Z,25nm,0.5s,baz=154,slow=8.6,SNR=51
SONM PcP PcP 05 33 27.4 +0.4
comp=Z,37nm,0.8s,baz=167,slow=3.4,SNR=5.5
SONM S S 05 38 49.1 +5.4
comp=Z,2.1nm,1.0s,baz=140,slow=7.5,SNR=2.0
SONM LR LR 05 53 09.7
comp=Z,20μm,20.7s,baz=156,slow=38
KOLN Koldanda 47.31 304 eP P 05 31 57.0 -1.2
comp=Z,594nm,0.5s
DANN Dangsing 47.40 305 eP P 05 31 57.5 -1.4
comp=Z,746nm,0.6s
PYUN Piuthan 47.94 305 eP P 05 32 02.2 -0.8
comp=Z,546nm,0.6s
JBP Jabalpur 48.95 297⇑*iP* P 05 32 10.5 -0.1
JBP ex x 05 41 57.8
CIT Chita 48.99 349 eP P 05 32 12.5 +2.0
CIT *e* 05 32 22.5
CIT *e* 05 32 28.1
CIT pmax pmax
comp=Z,1μm,2.8s
HYB Hyderabad 49.00 289 *i* P P 05 32 09.5 -1.6
comp=Z,100nm,1.0s
HYB ePP PP 05 34 08.0 +3.1
HYB eS S 05 39 12.0 -1.7
HYB Hyderabad 49.00 289 eP P 05 32 11.9 +0.8
NGP Nagpur 49.28 294 eP P 05 32 10.3 -2.9
NGP ex x 05 39 11.9
TRD Trivandrum 49.65 278⇓eP P 05 32 25.4 +9.3
TRD eS S 05 39 33.4 +11
MOO Moorlands 49.92 160 P P 05 32 18.9 +1.2
baz=50,SNR=13
ZAK Zakamensk 50.16 341⇑*iP* P 05 32 19.6 +0.1
ZAK *e* 05 33 40.2
ZAK pmax pmax
comp=Z,33nm,1.3s
TAU Tasmania Unive 50.38 160 eP P 05 32 21.5 +0.4
TAU pmax pmax
comp=Z,248nm,1.1s
TAU MLR MLR
comp=Z,8μm,19.0s
TAU Tasmania Unive 50.38 160 eP P 05 32 21.5 +0.4
comp=Z,248nm,1.1s
TAU LR LR
comp=Z,8μm,19.0s
LATR Latur 51.04 290 eP P 05 32 23.0 -3.5
TLY Talaya 51.16 342 eP P 05 32 27.1 +0.1
TLY *e* 05 33 40.7
TLY *e* 05 34 24.6
TLY ePPP PPP 05 35 27.1
TLY eS S 05 39 39.1 -3.7
TLY eSS ScS 05 42 19.1 +4.2
TLY pmax pmax
comp=Z,91nm,0.9s
TLY MLR MLR
comp=Z,15μm,22.0s
TLY Talaya 51.16 342 P P 05 32 27.9 +0.9
comp=Z,559nm,0.8s,SNR=78
BHPL Bhopal 51.24 297 eP P 05 32 27.9 -0.1
IRK Irkutsk 51.46 343⇓*iP* P 05 32 30.5 +1.3
IRK eS S 05 39 57.8 +11
IRK *e* 05 42 17.6
IRK pmax pmax
comp=Z,531nm,3.3s
MNGI Mangalore 52.00 283 *i* P PcP 05 33 50.5 +4.5
MOY Mondy 52.02 340 eP P 05 32 34.6 +1.1
MOY pmax pmax
comp=Z,659nm,3.6s
WMQ Urumqi 52.41 325 P P 05 32 37.0 +0.5
WMQ pP pP 05 32 47.0 +0.4
WMQ sP sP 05 32 51.0 +0.4
WMQ PcP PcP 05 33 48.0 +0.9
WMQ PP PP 05 34 37.0 +1.5
WMQ ScP ScP 05 37 41.0 -0.9
WMQ S S 05 39 59.0 -1.4
WMQ ScS ScS 05 42 21.0 -3.1
WMQ SS SS 05 43 36.0 -2.7
WMQ pmax pmax
comp=Z,150nm,1.0s
WMQ pmax pmax
comp=Z,2μm,5.0s
WMQ LR LR
comp=N,38μm,18.0s
WMQ LR LR
comp=E,22μm,18.0s
WMQ LR LR
comp=Z,30μm,18.0s
SKR Severo-Kuril's 52.55 23 eP P 05 32 32.0 -5.2
SKR *e* 05 33 52.0
SKR ePPP PPP 05 35 49.0
SKR S S 05 39 54.0 -7.8
SKR ePS PKiKP 05 40 11.0 -16
SKR pmax pmax
comp=N,2μm,10.0s
SKR pmax pmax
comp=E,2μm,10.0s
SKR pmax pmax
comp=Z,3μm,10.0s
SKR pmax pmax
comp=E,320nm,1.5s
SKR pmax pmax
comp=Z,560nm,1.5s
SKR smax smax
comp=N,3μm,14.0s
SKR smax smax
comp=E,2μm,14.0s
SKR MLR MLR
comp=N,3μm,18.0s
SKR MLR MLR
comp=E,2μm,18.0s
SKR MLR MLR
comp=Z,4μm,18.0s
CLNS Chul'man 52.59 359*c iP* P 05 32 36.6 -0.9
CLNS *e**PP pP 05 32 50.8 +3.2
CLNS *e* 05 33 47.5
CLNS *e* 05 34 34.4
CLNS ePPP PPP 05 35 38.7
CLNS eS S 05 39 59.2 -3.1
CLNS pmax pmax
comp=E,18nm,0.9s
CLNS pmax pmax
comp=Z,58nm,0.9s
CLNS pmax pmax
comp=N,43nm,1.0s
CLNS pmax pmax
comp=N,22nm,0.8s
CLNS pmax pmax
comp=Z,21nm,1.0s
CLNS pmax pmax
comp=E,17nm,0.8s
CLNS smax smax

comp=N,2µm,16.2s
CLNS smax smax
comp=E,2µm,11.5s
CLNS MLR MLR
comp=E,4µm,18.0s
CLNS MLR MLR
comp=N,2µm,18.0s
CLNS MLR MLR
comp=Z,3µm,20.0s
DDI Dehra Dun 52.75 305 *e*P **P 05 32 37.8 -1.4**
DDI AMB AMB 05 32 39.6
comp=Z,864nm,2.0s
NDI New Delhi 52.92 303 *i* x P 05 32 36.0 -4.4
GOA Goa 53.22 286 *e*P **P 05 32 42.7 -0.1**
HMDM Hanimaadhoo 53.36 275 P **P 05 32 44.0 +0.1**
comp=Z,144nm,1.2s,comp=Z,4µm
MNCY Minicoy 53.52 277 *e*P **P 05 32 43.4 -1.6**
POO Poona 53.59 290 *e*P **P 05 32 44.7 -0.9**
SMLA Simla 53.75 306 *i*P **P 05 32 45.8 -0.6**
SMLA AMB AMB 05 32 47.1
comp=Z,275nm,0.9s
KAAM Kaadhehdhoo 53.81 268 P **P 05 32 48.9 +1.7**
comp=Z,194nm,1.0s
KAAM Kaadhehdhoo 53.81 268 P **P 05 32 48.9 +1.7**
baz=54,SNR=4.6
SDNR Sundarnagar 54.03 306 *e*P **P 05 32 49.0 +0.4**
BHK Bhakra 54.45 306 *e*P **P 05 32 52.6 +1.0**
AJM Ajmer 54.49 300 *e*P **P 05 32 51.0 -1.0**
DHRM DHARAMSHALA 54.82 307 *e*P **P 05 32 54.1 -0.5**
DHRM AMB AMB 05 33 05.6
comp=Z,403nm,2.4s
MSVF Nonsavu 55.06 115 *e*P **P 05 32 57.2 +0.9**
MSVF pmax pmax
comp=Z,159nm,1.0s
MSVF MLR MLR
comp=Z,6µm,19.0s
MSVF Nonsavu 55.06 115 *e*P **P 05 32 57.2 +0.9**
comp=Z,159nm,1.0s
MSVF LR LR
comp=Z,6µm,19.0s
MSVF Nonsavu 55.06 115 P **P 05 32 57.0 +0.7**
comp=Z,598nm,1.2s,SNR=18
PEA0B Petropavlovsk- 55.06 22 *e*P **P 05 32 55.3 -0.4**
PETK Petropavlovsk- 55.06 22 P **P 05 32 56.0 +0.4**
PETK S **S 05 40 38.8 +2.9**
PETK Petropavlovsk- 55.06 22 P **P 05 32 56.0 +0.4**
PETK S **S 05 40 38.8 +2.9**
PETK Petropavlovsk- 55.06 22 P **P 05 32 56.0 +0.4**
comp=Z,37nm,0.6s,baz=201,slow=5.1,SNR=43
PETK S **S 05 40 38.8 +2.9**
comp=Z,1.9nm,0.9s,baz=184,slow=16,SNR=2.8
PETK LR LR 05 58 48.1
comp=Z,6µm,18.5s,baz=211,slow=39
THN Thein Dam 55.35 307 *ex* P 05 32 54.5 -3.5
THN *ex* x 05 37 54.5
PET Petropavlovsk 55.36 23⇑*i*P **P 05 32 56.2 -1.5**
PET *e**PP **pP 05 33 09.0 +1.1**
PET *e*S **S 05 40 38.1 -1.7**
PET pmax pmax
comp=Z,2µm,16.7s
PET pmax pmax
comp=Z,2µm,16.4s
PET pmax pmax
comp=Z,196nm,1.6s
PET MLR MLR
comp=Z,8µm,19.0s
PET MLR MLR
comp=Z,7µm,19.0s
DGAR Diego Garcia 55.37 258 PFAKE 05 33 10.0 +11
DGAR LR LR
comp=Z,5µm,19.0s
MK31 Makanchi Array 57.24 325*c e*P **P 05 33 10.2 -1.2**
MK31 pmax pmax
comp=Z,85nm,0.4s
MK31 Makanchi Array 57.24 325 *e*P **P 05 33 10.5 -0.9**
MK31 *e*PP **PP 05 35 18.0 -0.7**
MKAR Makanchi Array 57.24 325 P **P 05 33 10.6 -0.8**
MKAR S **S 05 41 02.2 -2.9**
MKAR Makanchi Array 57.24 325 P **P 05 33 10.6 -0.8**
MKAR ScP **ScP 05 38 07.8 +4.8**
MKAR S **S 05 41 02.2 -2.9**
MKAR P'P' 06 03 02.1
MKAR Makanchi Array 57.24 325 P **P 05 33 10.6 -0.8**
comp=Z,158nm,0.6s,baz=121,slow=7.6,SNR=562
MKAR ScP **ScP 05 38 07.8 +4.8**
comp=Z,15nm,0.8s,baz=136,slow=5.0,SNR=5.8
MKAR S **S 05 41 02.2 -2.9**
comp=Z,1.5nm,0.8s,baz=137,slow=13,SNR=2.3
MKAR LR LR 05 58 54.7
comp=Z,25µm,19.9s,baz=120,slow=37
MKAR PKPPKP **P'P'df 06 03 02.1 +0.7**
comp=Z,1.2nm,0.9s,baz=278,slow=4.4,SNR=5.4
KSH Kashi 57.78 315 P **P 05 33 15.5 +0.1**
KSH pP **pP 05 33 25.0 -0.6**
KSH sP **sP 05 33 29.8 +0.2**
KSH PcP **PcP 05 34 06.0 -1.9**
KSH PP **PP 05 35 24.6 +0.9**
KSH ScP **ScP 05 38 01.3 -4.4**
KSH PcS **PcS 05 38 06.4 -2.9**
KSH S **S 05 41 11.9 -0.7**
KSH sS **sS 05 41 29.1 -0.3**
KSH ScS **ScS 05 42 58.3 -4.5**
KSH SS **SS 05 45 04.8 +1.3**
KSH pmax pmax
comp=Z,2µm,3.5s
KSH LR LR
comp=N,11µm,17.4s
KSH LR LR
comp=E,6µm,16.0s
KSH LR LR
comp=Z,16µm,27.6s
YAK Yakutsk 57.82 2 *e*P **P 05 33 15.1 +0.1**
YAK *e* 05 34 03.3
YAK *e* 05 35 22.3
YAK *e*S S 05 41 03.3 -8.7
YAK *e* 05 43 00.2
YAK *e*SSS SSS 05 47 27.9
YAK pmax pmax
comp=Z,327nm,0.9s
YAK pmax pmax
comp=N,168nm,1.2s
YAK pmax pmax
comp=E,23nm,1.0s
YAK pmax pmax
comp=Z,308nm,3.2s
YAK pmax pmax
comp=N,138nm,2.7s
YAK pmax pmax
comp=E,152nm,2.8s
YAK smax smax
comp=N,688nm,4.9s
YAK smax smax
comp=E,258nm,2.6s
MIDW Midway 58.18 59 PFAKE 05 33 30.0 +12
MIDW LR LR
comp=Z,5µm,22.0s
BHJ Bhuj 58.23 295 *e*P **P 05 33 17.9 -0.8**
BHJ AMB AMB 05 33 19.2
comp=Z,246nm,1.6s
KRAR Krasnoyarsk 58.39 338⇓*e*P **P 05 33 19.9 +0.8**
KRAR pmax pmax
comp=Z,132nm,0.7s
AAA Alma-Ata 58.73 319 *i* P **P 05 33 21.7 -0.2**
AAA *e*S **S 05 41 20.9 -3.8**
AAA pmax pmax
comp=Z,2µm,4.5s
AAA smax smax
comp=N,2µm,10.6s
AAA MLR MLR
comp=Z,15µm,21.0s
ULHL Ulahol 58.74 318 P **P 05 33 22.8 +0.6**
SNR=78
OUZ Omahuta 58.84 136 *e*P **P 05 33 24.1 +1.5**
comp=Z,164nm,1.4s
KZA Kyzart 59.34 317 P **P 05 33 27.6 +1.0**
SNR=87
TKM2 Tokmak 2 59.46 318 *i* P **P 05 33 27.7 +0.5**
TKM2 Tokmak 2 59.46 318 *e*P **P 05 33 26.3 -0.9**
comp=Z,126nm,1.1s
TKM2 LR LR
comp=Z,27µm,21.0s
TKM2 Tokmak 2 59.46 318 P **P 05 33 27.7 +0.5**
SNR=12
KBK Karagaybulak 59.78 318 P **P 05 33 30.2 +0.9**
SNR=25

UCH Uchtor 59.90 317 P **P 05 33 31.7 +1.2**
SNR=21
CHMS Chumysh 60.06 318 P **P 05 33 31.3 +0.3**
SNR=20
AAK Ala-Archa 60.08 318*c i*P **P 05 33 30.8 -0.6**
AAK pmax pmax
comp=Z,303nm,1.6s
AAK Ala-Archa 60.08 318 *e*P **P 05 33 30.6 -0.8**
comp=Z,5.6nm,0.9s
AAK ⇑*e* 06 03 05.5
AAK Ala-Archa 60.08 318 P **P 05 33 31.1 -0.2**
SNR=64
AAK Ala-Archa 60.08 318 P **P 05 33 32.1 +0.7**
SNR=38
AAK Ala-Archa 60.08 318 P **P 05 33 32.0 +0.7**
comp=Z,291nm,1.2s,SNR=37
AAK Ala-Archa 60.08 318 LR LR 06 01 34.7
comp=Z,32µm,21.9s,baz=86,slow=38
AAK PKP2bc 06 03 05.5
comp=Z,8.3nm,1.1s,baz=152,slow=1.5,SNR=7.8
FRU Bishkek 60.08 318 *e*P **P 05 33 31.0 -0.2**
FRU pmax pmax
comp=Z,790nm,2.8s
ZAA0 Zalesovo Array 60.25 333 *e*P **P 05 33 30.5 -1.5**
ZALV Zalesovo Beam 60.25 333 P **P 05 33 30.8 -1.3**
ZALV S **S 05 41 40.2 -3.6**
ZALV Zalesovo Beam 60.25 333 P **P 05 33 30.8 -1.3**
ZALV S **S 05 41 40.2 -3.6**
ZALV P'P' 06 02 56.5
ZALV Zalesovo Beam 60.25 333 P **P 05 33 30.8 -1.3**
comp=Z,44nm,0.4s,baz=121,slow=6.8,SNR=215
ZALV S **S 05 41 40.2 -3.6**
comp=Z,3.2nm,0.9s,baz=120,slow=17,SNR=3.5
ZALV LR LR 06 01 28.5
comp=Z,11µm,18.6s,baz=133,slow=38
ZALV PKPPKP **P'P'df 06 02 56.5 +0.2**
comp=Z,2.2nm,0.9s,baz=289,slow=4.5,SNR=7.7
USP Ospenovka 60.34 318 P **P 05 33 33.3 +0.3**
SNR=7.7
AML Almayashu 60.41 317 P **P 05 33 33.9 0.0**
SNR=110
EKS2 Erkin-Say 60.57 317 *e*P **P 05 33 33.3 -1.4**
EKS2 *e* 05 34 18.5
EKS2 pmax pmax
comp=Z,85nm,0.8s
EKS2 MLR MLR
comp=Z,31µm,22.0s
EKS2 Erkin-Say 60.57 317 *e*P **P 05 33 33.3 -1.4**
comp=Z,84nm,0.8s
EKS2 *e*PcP **PcP 05 34 18.5 -0.5**
EKS2 LR LR
comp=Z,31µm,22.0s
EKS2 Erkin-Say 60.57 317 P **P 05 33 34.7 0.0**
SNR=83
KBL Kabul 61.30 307 *e*P **P 05 33 38.3 -1.6**
KBL pmax pmax
comp=Z,94nm,0.9s
KBL Kabul 61.30 307 *e*P **P 05 33 38.3 -1.6**
comp=Z,94nm,0.9s
KBL Kabul 61.30 307 P **P 05 33 39.7 -0.2**
baz=62,SNR=8.4
KURBB Kurchatov Arra 61.42 327 P **P 05 33 39.0 -1.1**
comp=Z,174nm,0.7s,baz=123,slow=7.0,SNR=19
KURBB S **S 05 41 54.8 -4.0**
comp=Z,7.1nm,0.8s,baz=64,slow=10,SNR=4.1
KURBB PKP2bc 06 03 02.9
comp=Z,1.8nm,0.9s,baz=292,slow=3.4,SNR=6.9
KURK Kurchatov 61.42 327 *e*P **P 05 33 39.0 -1.1**
KURK S **S 05 41 54.8 -4.0**
KURK pmax pmax
comp=Z,309nm,0.7s
KURK MLR MLR
comp=Z,11µm,19.0s
KURK Kurchatov 61.42 327 *e*P **P 05 33 39.0 -1.1**
comp=Z,309nm,0.7s
KURK *e*S S 05 41 37.6 -21
KURK S S 05 41 54.8 -4.0
KURK ⇑*e* 06 03 02.9
KURK LR LR
comp=Z,11µm,19.0s
KURK Kurchatov 61.42 327 P **P 05 33 38.8 -1.3**
SNR=148
KURK Kurchatov 61.42 327 P **P 05 33 39.0 -1.1**
comp=Z,3µm,0.6s
NVS Novosibirsk 61.53 333⇑*i*P **P 05 33 38.9 -1.9**
NVS *e*S S 05 41 53.8 -6.3
NVS *e* 05 43 22.8
NVS pmax pmax
comp=Z,137nm,1.0s
NVS pmax pmax
comp=N,50nm,0.7s
NVS pmax pmax
comp=E,70nm,1.0s
NVS smax smax
comp=N,28nm,1.4s
NVS smax smax
comp=E,40nm,1.4s
SEY Seymchan 61.65 13⇑*e*P **P 05 33 43.2 +1.8**
FX1 Attu Island--F 61.74 30 S S 05 42 14.5 +12
comp=E,9.7nm,0.7s,baz=42,slow=15,SNR=2.1
RPZ Rata Peaks 62.07 145 *e*P **P 05 33 45.1 +0.4**
comp=E,145nm,1.0s
RAO Raoul Island 62.55 126 PFAKE 05 34 00.0 +12
RAO LR LR
comp=Z,3µm,21.0s
KHZ Kahutara 62.77 143 *e*P **P 05 33 48.8 -0.5**
comp=Z,113nm,1.1s
URZ Urewera 62.82 137 *e*P **P 05 33 49.2 -0.5**
comp=Z,182nm,1.3s
URZ Urewera 62.82 137 LR LR 06 00 51.2
comp=Z,9µm,19.7s,baz=313,slow=36
SNZO South Karori 62.86 141 *e*P **P 05 33 48.8 -1.1**
comp=Z,175nm,1.1s
SNZO LR LR
comp=Z,10µm,21.0s
KK31 Karatay Array 62.96 317*c e*P **P 05 33 49.8 -0.8**
KK31 pmax pmax
comp=Z,78nm,0.9s
KKAR Karatay Array 62.96 317 *e*P **P 05 33 49.1 -1.5**
KKAR pmax pmax
comp=Z,90nm,0.9s
KKAR Karatay Array 62.96 317 *e*P **P 05 33 49.1 -1.5**
comp=Z,90nm,0.9s
AFI Afiamalu 63.55 108 *e*P **P 05 33 55.6 +0.6**
comp=Z,122nm,1.4s
AFI Afiamalu 63.55 108 LR LR 05 58 58.4
comp=Z,5µm,18.8s,baz=273,slow=34
NIUE Niue 66.41 113 P **P 05 34 14.8 +1.3**
baz=66,SNR=7.3
BVA0 Borovoye Array 67.00 327 P **P 05 34 15.2 -1.5**
BVA0 pmax pmax
comp=Z,26nm,1.0s
BVAR Borovoye Array 67.00 327 P **P 05 34 16.0 -0.7**
BVAR S **S 05 43 05.2 -2.7**
BVAR Borovoye Array 67.00 327 P **P 05 34 16.0 -0.7**
BVAR S **S 05 43 05.2 -2.7**
BVAR ⇑*e* 06 02 47.4
BVAR Borovoye Array 67.00 327 P **P 05 34 16.0 -0.7**
comp=Z,122nm,0.7s,baz=128,slow=9.8,SNR=426
BVAR S **S 05 43 05.2 -2.7**
comp=Z,1.9nm,0.8s,baz=108,slow=4.7,SNR=1.3
BVAR PKP2bc 06 02 47.4
comp=Z,5.7nm,1.2s,baz=308,slow=3.6,SNR=9.4
BRVK Borovoye 67.07 327*c i*P **P 05 34 16.5 -0.6**
BRVK pmax pmax
comp=Z,183nm,0.7s
BRVK Borovoye 67.07 327 *e*P **P 05 34 16.1 -1.0**
comp=Z,180nm,0.8s
BRVK LR LR
comp=Z,11µm,21.0s
BRVK Borovoye 67.07 327 P **P 05 34 16.7 -0.5**
SNR=107
WBK Wadi Bani Khal 67.92 293 P **P 05 34 22.8 -0.3**
SNR=9.6
IDAH Dahanechah 68.37 304 *e*P **P 05 34 25.6 -0.5**
JMDO Jabal Madar 68.70 292 P **P 05 34 27.5 -0.5**
SNR=16
SMDO Samad 68.80 293 P **P 05 34 28.0 -0.7**
SNR=8.3
IKOO Kooshah 69.04 303 *e*P **P 05 34 29.4 -0.9**
BILL Bilibino 69.17 15*c i*P **P 05 34 29.2 -0.8**
BILL *i* 05 34 46.4
BILL *i* S **S 05 43 31.8 -1.5**
BILL *e* 05 43 59.4
BILL *i* 05 44 30.1
BILL pmax pmax
comp=Z,93nm,2.0s
BILL MLR MLR
comp=Z,2µm,20.0s
ITEG Tejag 69.33 304 *e*P **P 05 34 31.5 -0.4**
HOQ Hoqain 69.52 294 P **P 05 34 32.6 -0.5**
SNR=18
BSY Bisya 69.56 293 P **P 05 34 32.8 -0.5**
SNR=11
IAKL Akhelmad 69.93 307 *e*P **P 05 34 34.5 -1.2**
ARQ Araqi 70.22 293 P **P 05 34 37.0 -0.4**
SNR=9.5
ISFR Sfrayin 70.60 308 *e*P **P 05 34 40.1 +0.3**
ABKT Ailbek 70.66 309 P **P 05 34 40.7 +0.9**
comp=Z,502nm,1.0s,SNR=34
HATD Hatta, Dubai 70.69 295 P **P 05 34 39.8 -0.4**
SNR=20
ASHO Ashiyiah 70.75 295 P **P 05 34 40.1 -0.5**
SNR=16
NAZ Nazwa, Dubai 71.13 295 P **P 05 34 42.2 -0.7**
SNR=11
CASY Casey 71.21 187 *e*P **P 05 34 42.5 0.0**
CASY comp=Z,66nm,0.8s LR LR
comp=Z,3µm,20.0s
ASUD Al Ashush, Dub 71.40 294 P **P 05 34 44.8 +0.3**
SNR=11
IBAF Bafgh 71.83 302 *e*P **P 05 34 45.2 -2.0**
AB31 Akbulak array 71.86 321*c e*P **P 05 34 44.6 -2.2**
AB31 pmax pmax
comp=Z,65nm,0.7s
ABKAR Akbulak array 71.86 321 *e*P **P 05 34 45.7 -1.1**
comp=Z,1.5nm,0.8s
MRIV Mauritius Mete 72.11 247 *e*P **P 05 34 48.3 -0.6**
RBK Rabkut 72.12 287 P **P 05 34 48.3 -0.7**
SNR=19
PAF Port-aux-Franc 72.20 215 PFAKE 05 35 00.0 +11
PAF LR LR
comp=Z,5µm,21.0s
IMEH Mehriz 72.62 301 *e*P **P 05 34 49.6 -2.4**
ICHK Chekchek 72.88 302 *e*P **P 05 34 51.7 -1.8**
ABTO Aybut 72.99 287 P **P 05 34 53.5 -0.7**
SNR=35
AKTO Aktyubinsk 73.36 322 P **P 05 34 55.1 -0.6**
AKTO S **S 05 44 20.6 -1.8**
AKTO Aktyubinsk 73.36 322 P **P 05 34 55.1 -0.6**
AKTO S **S 05 44 20.6 -1.8**
AKTO Aktyubinsk 73.36 322 P **P 05 34 55.1 -0.6**
comp=Z,85nm,0.6s,baz=102,slow=8.2,SNR=209
AKTO S **S 05 44 20.6 -1.8**
comp=Z,2.1nm,0.8s,baz=128,slow=17,SNR=3.6
IANJ Anjilo 73.64 306 *e*P **P 05 34 56.4 -1.6**
RER Riviere de l'E 73.89 247 PFAKE 05 35 10.0 +11
RER LR LR
comp=Z,5µm,20.0s
ISHM Shahmirzad 74.19 306 *e*P **P 05 34 59.8 -1.4**
ILAS Lasjerd 74.41 305 *e*P **P 05 35 01.2 -1.3**
MIR Mirnyy 74.54 193⇑*i*P **P 05 35 04.0 +1.8**
MIR *e* 05 35 09.0
MIR *e*S **S 05 44 38.0 +3.1**
MIR *e*PS **PnS 05 45 06.0 -6.5**
MIR pmax pmax
comp=Z,2µm,4.0s
MIR pmax pmax
comp=Z,460nm,2.2s
MIR MLR MLR
comp=N,2µm,18.0s
MIR MLR MLR
comp=E,1µm,18.0s
MIR MLR MLR
comp=Z,2µm,18.0s
IFIR Firoozkooh 74.60 306 *e*P **P 05 35 03.8 +0.2**
ARU Arti 74.61 328*c i*P **P 05 35 01.8 -1.1**
ARU 05 37 49.3
ARU PPP PPP 05 39 34.2
ARU S **S 05 44 35.1 -1.1**
ARU SS **SS 05 49 23.4 -0.3**
ARU pmax pmax
comp=Z,139nm,0.7s
ARU MLR MLR
comp=Z,9µm,20.0s
ARU Arti 74.61 328 P **P 05 35 01.2 -1.7**
comp=Z,1µm,0.5s,SNR=20
KIP Kipapa 74.77 69⇑*i*P **P 05 35 05.5 +1.0**
KIP pmax pmax
comp=Z,282nm,2.5s
KIP Kipapa 74.77 69 *e*P **P 05 35 05.3 +0.8**
comp=Z,82nm,1.1s
KIP LR LR
comp=Z,6µm,20.0s
IDMV Damavand 75.18 306 *e*P **P 05 35 05.6 -1.4**
IKLH Kolahrood 75.35 303 *e*P **P 05 35 06.9 -1.1**
IVRN Varamin 75.38 305 *e*P **P 05 35 05.7 -2.2**
XMAS Kiritimati 75.71 89 PFAKE 05 35 20.0 +10
XMAS LR LR
comp=Z,8µm,21.0s
IPIR Pirpir 75.88 303 *e*P **P 05 35 10.8 -0.3**
IR3 Iran Long-Peri 75.99 305 *e*P **P 05 35 10.7 -0.7**
RAR Rarotonga 76.18 113 *e*P **P 05 35 13.8 +1.2**
comp=Z,494nm,1.9s
RAR S S 05 45 04.2 +9.4
RAR LR LR
comp=Z,2µm,20.0s
RAR Rarotonga 76.18 113 S S 05 45 04.2 +9.4
comp=Z,2.6nm,0.3s,baz=129,slow=14,SNR=3.2
TNA Tin City 76.22 23 *e*P **P 05 35 11.7 -0.2**
comp=Z,103nm,1.2s
IMHD Mahdasht 76.30 306 *e*P **P 05 35 12.0 -1.2**
IR5 Iran Long-Peri 76.33 305 *e*P **P 05 35 11.5 -1.9**
SOKR Solikamsk 76.38 331*c i*P **P 05 35 12.2 -0.7**
SOKR S **S 05 44 59.8 +4.3**
SOKR pmax pmax
comp=Z,180nm,1.2s
SOKR MLR MLR
comp=Z,12µm,21.0s
IRAZ Razeghan 76.88 305 *e*P **P 05 35 15.2 -1.4**
PUH Pauahi 77.37 71 *e*P **P 05 35 19.9 +0.4**
QRN Al-Qurain 78.23 298 *e*P **P 05 35 22.0 -2.0**
QRN AMb AMB 05 35 27.7
comp=Z,187nm,0.5s
UMR Umm Al-Rimmam 78.44 299 *e*P **P 05 35 23.4 -1.7**
UMR AMb AMB 05 35 26.4
comp=Z,139nm,0.9s
KBD Kabd 78.44 299 *e*P **P 05 35 23.1 -2.0**
RDF Al-Radifah 78.56 299 *e*P **P 05 35 24.0 -1.8**
RDF AMb AMB 05 35 32.7
comp=Z,119nm,0.9s
MIB Mutribah 78.77 299 *e*P **P 05 35 25.4 -1.6**
MIB AMb AMB 05 35 33.6
comp=Z,169nm,1.0s
NAY Al-Naaiem 78.84 299 *e*P **P 05 35 25.8 -1.6**
NAY AMb AMB 05 35 39.4
comp=Z,104nm,1.2s
MAK Makhachkala 79.33 313 *e*P P 05 35 25.4 -4.3
MAK *e* 05 38 32.7
MAK *e*PPP PPP 05 40 20.5
MAK *e*S **S 05 45 24.6 -3.5**
MAK pmax pmax
comp=Z,114nm,1.2s
MAK MLR MLR
comp=Z,7µm,19.0s
IHRS Heris 79.38 308 *e*P **P 05 35 29.6 -0.8**
IDHR Dehrash 79.74 304 *e*P P 05 35 29.1 -3.3
IAZR Azarshahr 80.18 307 *e*P **P 05 35 34.1 -0.7**
IMRD Marand 80.44 308 *e*P **P 05 35 35.5 -0.6**
DGRG David-gareji 80.82 311 P **P 05 35 37.1 -0.8**
DGRG S **S 05 45 43.6 -0.4**
OHAK Old Harbor 81.12 33 *e*P **P 05 35 38.3 -0.7**
comp=Z,119nm,0.9s
GNI Garni 81.24 310 *e*PG **P 05 35 39.8 -0.5**
GNI Garni 81.24 310 *e*P **P 05 35 40.1 -0.3**
comp=Z,80nm,0.9s
GNI S **S 05 45 50.8 +2.1**
GNI Garni 81.24 310 P **P 05 35 41.1 +0.8**
SNR=20
GNI Garni 81.24 310 P **P 05 35 41.2 +0.8**
comp=Z,3.8nm,0.5s,baz=341,slow=2.6,SNR=9.2
GNI S **S 05 45 50.8 +2.1**
comp=Z,7.8nm,0.4s,baz=162,slow=20,SNR=2.1
GNI LR LR 06 19 44.2
comp=Z,3µm,18.8s,baz=84,slow=42
TBLG Delisi 81.30 311 *e*P **P 05 35 39.2 -1.2**
TBLG *e*S **S 05 45 46.7 -2.3**
TBLG Delisi 81.30 311 P **P 05 35 39.3 -1.2**
TBLG S **S 05 45 46.7 -2.3**
BHD Baghdad 81.37 303 *i* x **P 05 35 39.0 -1.9**

BHD *i* x x 05 35 51.8
BHD *i* x x 05 45 45.9
BHD *i* x x 05 45 58.1
ABPO Ambohimpanom 81.46 250 *e*P **P 05 35 41.3 -0.6**
ABPO pmax pmax
comp=Z,73nm,0.7s
ABPO MLR MLR
comp=Z,2μm,20.0s
ABPO Ambohimpanom 81.46 250 *e*P **P 05 35 41.2 -0.6**
comp=Z,73nm,0.7s
ABPO LR LR
comp=Z,2μm,20.0s
KDAK Kodiak Island 81.55 32 *e*P **P 05 35 41.3 0.0**
comp=Z,358nm,1.3s
KDAK S **S 05 45 50.3 -0.5**
KDAK LR LR
comp=Z,5μm,22.0s
KDAK Kodiak Island 81.55 32 P **P 05 35 41.8 +0.5**
comp=Z,85nm,0.6s,baz=278,slow=4.8,SNR=38
KDAK S **S 05 45 50.3 -0.5**
comp=Z,5.7nm,1.0s,baz=314,slow=18,SNR=2.0
CLDR Caldiran 81.85 309 *e*PG **P 05 35 43.5 -0.2**
ZEI Tsey 81.96 312 *e*P **P 05 35 43.8 -0.4**
ZEI *e*S **S 05 45 52.1 -4.1**
ZEI pmax pmax
comp=Z,38nm,0.7s
CUKT Cukurca 82.06 307 *e*PG **P 05 35 43.5 -1.1**
AKH Akhalkalaki 82.23 311 P **P 05 35 48.4 +2.9**
AKH S **S 05 45 57.5 -1.4**
PPLA Purkeypile 82.28 27 *e*P **P 05 35 45.3 +0.1**
comp=Z,134nm,0.7s
ONI Oni 82.29 312 P **P 05 35 45.5 -0.2**
ONI S **S 05 45 56.8 -2.4**
KARS Kars 82.53 310 *e*PG **P 05 35 47.1 +0.1**
KBZ Khabaz 82.72 313 P **P 05 35 48.0 +0.3**
KBZ S **S 05 45 59.7 -3.7**
KBZ Khabaz 82.72 313 P **P 05 35 48.0 +0.3**
KBZ S **S 05 45 59.7 -3.7**
KBZ Khabaz 82.72 313 P **P 05 35 48.0 +0.3**
comp=Z,10nm,0.7s,baz=134,slow=4.5,SNR=21
KBZ S **S 05 45 59.7 -3.7**
comp=Z,1.5nm,0.7s,baz=245,slow=14,SNR=2.0
KBZ LR LR 06 18 41.1
comp=Z,8μm,19.9s,baz=273,slow=40
KIV Kislovodsk 82.88 314*c i*P **P 05 35 47.8 -0.9**
KIV *e* 05 35 53.1
KIV *e* 05 36 05.0
KIV *i* 05 39 06.7
KIV *i* 05 46 01.2
KIV *e*PS PnS 05 47 12.6 +14
KIV *e*SS SS 05 51 24.1 -4.5
KIV pmax pmax
comp=Z,125nm,2.5s
KIV MLR MLR
comp=Z,5μm,21.0s
TRF Thorofare Moun 83.19 27 *e*P **P 05 35 49.0 -1.0**
comp=Z,367nm,1.3s
SEW Seward 83.36 30 *e*P **P 05 35 50.4 -0.3**
comp=Z,243nm,1.2s
ARTV Artvin 83.40 311 *i* P **P 05 35 51.4 -0.3**
DAGI Agillar 83.41 311 *i* P **P 05 35 51.5 0.0**
COLD Coldfoot 83.53 23 *e*P **P 05 35 52.4 +0.9**
comp=Z,265nm,1.2s
COLD *e*PP **PP 05 39 08.8 +5.0**
DDEM Demirkent 83.54 311 *i* P **P 05 35 51.7 -0.5**
DBAD Bademkaya 83.58 311 *i* P **P 05 35 52.0 -0.5**
PMR Palmer 83.59 29 *e*P **P 05 35 51.3 -0.6**
PMR *e* 05 39 07.2
PMR pmax pmax
comp=Z,382nm,1.2s
PMR Palmer 83.59 29 *e*P **P 05 35 51.3 -0.6**
comp=Z,382nm,1.2s
PMR *e*PP **PP 05 39 07.2 +2.7**
DBOC Borcka 83.60 311 *i* P **P 05 35 52.0 -0.4**
VRHR Novokhopersk 83.75 321 *e*P **P 05 35 51.9 -1.0**
VRHR *e*S **S 05 46 10.1 -3.4**
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,40nm,0.6s
VRHR pmax pmax
comp=Z,60nm,0.6s
VRHR smax smax
comp=E,490nm,1.5s
VRHR smax smax
comp=Z,10.0nm,0.5s
VRHR smax smax
comp=N,180nm,1.5s
VRHR MLR MLR
comp=N,2μm,24.0s
VRHR MLR MLR
comp=E,5μm,24.0s
VRHR MLR MLR
comp=Z,6μm,24.0s
VRTB Varto-Mus 83.76 309 *e*PG **P 05 35 53.6 +0.1**
MCK McKinley 83.81 26 *e*P **P 05 35 52.4 -0.6**
MCK pmax pmax
comp=Z,606nm,1.4s
MCK McKinley 83.81 26 *e*P **P 05 35 52.4 -0.6**
comp=Z,606nm,1.4s
VNDA Vanda 83.81 173 *e*P **P 05 35 52.4 -0.2**
comp=Z,71nm,0.9s
VNDA S **S 05 46 12.7 -0.5**
VNDA PKKPbc **PKKPbc 05 54 11.9 -0.5**
VNDA Vanda 83.81 173 P **P 05 35 52.5 -0.2**
comp=Z,60nm,0.9s,baz=317,slow=5.9,SNR=64
VNDA S **S 05 46 12.7 -0.5**
comp=Z,1.4nm,0.9s,baz=6.3,slow=9.2,SNR=2.2
VNDA PKKPbc **PKKPbc 05 54 11.9 -0.5**
comp=Z,2.1nm,0.6s,baz=151,slow=3.3,SNR=3.5
VNDA LR LR 06 14 53.9
comp=Z,3μm,18.8s,baz=336,slow=37
EZM Erzurum 83.83 310 *e*PG **P 05 35 52.9 -1.1**
BEST Besiri 83.92 308 *i* P **P 05 35 54.5 +0.2**
SML Sawmill 83.99 28 *e*P **P 05 35 53.9 -0.1**
SML pmax pmax
comp=Z,181nm,1.2s
SML Sawmill 83.99 28 *e*P **P 05 35 53.9 -0.1**
comp=Z,181nm,1.2s
MAW Mawson 84.13 200 P **P 05 35 54.7 +0.3**
MAW Mawson 84.13 200 P **P 05 35 54.7 +0.3**
comp=Z,24nm,0.7s,baz=60,slow=6.7,SNR=30
MAW LR LR 06 08 23.3
comp=Z,2μm,21.2s,baz=66,slow=32
MAW Mawson 84.13 200 P **P 05 35 55.6 +1.2**
baz=84,SNR=18
COLA College 84.34 25 *e*P **P 05 35 54.5 -1.1**
COLA pmax pmax
comp=Z,73nm,1.0s
COLA MLR MLR
comp=Z,3μm,20.0s
COLA College 84.34 25 *e*P **P 05 35 54.5 -1.1**
comp=Z,73nm,1.0s
COLA LR LR
comp=Z,3μm,20.0s
BNGB Bing ¶‖ 84.37 309 *e*PG **P 05 35 56.6 +0.1**
SBA Scott Base 84.72 172 PFAKE 05 36 10.0 +13
SBA LR LR
comp=Z,3μm,19.0s
ILAR Eielson Array 84.74 25 P **P 05 35 57.7 0.0**
ILAR S S 05 46 16.8 -6.3
ILAR PKKPbc **PKKPbc 05 54 09.8 +0.2**
ILAR P'P' 06 02 12.7
ILAR Eielson Array 84.74 25 P **P 05 35 57.7 0.0**
comp=Z,57nm,1.1s,baz=252,slow=5.8,SNR=160
ILAR S S 05 46 16.8 -6.3
comp=Z,0.4nm,0.8s,baz=254,slow=5.5,SNR=2.7
ILAR PKKPbc **PKKPbc 05 54 09.8 +0.2**
comp=Z,0.5nm,0.7s,baz=83,slow=0.7,SNR=5.1
ILAR PKPPKP **P'P'df 06 02 12.7 -1.0**
comp=Z,0.8nm,1.2s,baz=112,slow=2.4,SNR=4.0
ILAR LR LR 06 13 41.5
comp=Z,3μm,20.7s,baz=130,slow=36
BAYT Ayd¯ntepe-Bay 84.77 310 *e*PG **P 05 35 58.2 -0.4**
SOC Sochi 85.03 313*c i*P **P 05 35 58.2 -1.4**
SOC *e**PP **pP 05 36 07.3 -2.9**
SOC *i* S S 05 46 18.5 -8.1
SOC pmax pmax
comp=Z,71nm,0.7s
SOC MLR MLR
comp=Z,5μm,21.0s
ERZN Erzincan 85.10 309 *e*PG **P 05 35 60.0 -0.2**
DIV Divide 85.20 29 *e*P **P 05 36 00.4 +0.2**
comp=Z,796nm,1.3s
VORD Divnogorie 85.22 321 *e*P **P 05 35 59.2 -1.1**
VORD *e*S S 05 46 21.0 -7.2
VORD pmax pmax
comp=N,50nm,0.7s
VORD pmax pmax
comp=E,40nm,0.7s
VORD pmax pmax
comp=Z,110nm,0.7s
VORD pmax pmax
comp=Z,420nm,1.0s
VORD pmax pmax
comp=N,50nm,0.5s
VORD pmax pmax
comp=E,60nm,0.5s
VORD smax smax
comp=E,80nm,1.1s
VORD smax smax
comp=Z,5.0nm,0.6s
VORD smax smax
comp=N,40nm,1.1s
VORD MLR MLR
comp=N,2μm,20.0s
VORD MLR MLR
comp=E,4μm,20.0s
VORD MLR MLR
comp=Z,5μm,20.0s
PPT Papeete 85.22 108 LR LR 06 12 44.7
comp=Z,2μm,18.2s,baz=127,slow=35
PPT2 Papeete2 85.22 108 *e*P **P 05 36 01.4 +0.3**
comp=Z,90nm,1.5s
PPT2 *e*S **S 05 46 25.7 -3.9**
comp=Z,3μm,20.5s
PPT2 *e*SS **SS 05 52 04.0 -0.4**
comp=Z,5μm,30.2s
PPT2 *e*LQ LQ 05 59 18.9
comp=Z,9μm,39.0s
PPT2 *e*LR LR 06 03 02.0
comp=Z,5μm,26.0s
PAE Paea 85.23 108 *e*P **P 05 36 01.0 0.0**
comp=Z,17nm,1.1s
VOR Voronezh 85.27 321‖ *i*P **P 05 35 59.0 -1.6**
VOR pmax pmax
comp=Z,1μm,1.2s
GUMT Gumushane 85.27 310 *e*PG **P 05 36 03.8 +2.8**
VSR Storozhevoye 85.29 321 *e*P **P 05 35 59.5 -1.2**
VSR *e*S S 05 46 21.7 -7.2
VSR pmax pmax
comp=N,4.0nm,0.8s
VSR pmax pmax
comp=E,50nm,0.8s
VSR pmax pmax
comp=Z,140nm,0.8s
VSR pmax pmax
comp=Z,630nm,1.2s
VSR pmax pmax
comp=N,1.0nm,0.2s
VSR pmax pmax
comp=E,230nm,1.2s
VSR smax smax
comp=N,150nm,1.5s
VSR smax smax
comp=Z,30nm,1.5s
VSR smax smax
comp=E,20nm,0.8s
VSR MLR MLR
comp=N,2μm,20.0s
VSR MLR MLR
comp=E,4μm,20.0s
VSR MLR MLR
comp=Z,6μm,20.0s
PAX Paxson 85.35 27 *e*P **P 05 36 00.5 -0.4**
PAX pmax pmax
comp=Z,200nm,0.9s
PAX Paxson 85.35 27 *e*P **P 05 36 00.5 -0.4**
comp=Z,200nm,0.9s
TIAR Tiarei 85.44 108 *e*P **P 05 36 02.0 -0.1**
comp=Z,66nm,0.9s
TVO Taravao 85.55 108 *e*P **P 05 36 02.6 -0.1**
comp=Z,221nm,1.4s
TMCR Tamitsa 85.75 334‖ *i*P **P 05 36 03.2 +0.5**
TMCR *e*S **S 05 46 27.6 -5.3**
TMCR pmax pmax
comp=Z,309nm,0.7s
BMRM Bremner River 85.77 29 *e*P **P 05 36 02.9 -0.1**
comp=Z,485nm,1.3s
TBI Tubuai 85.93 114 *e*P **P 05 36 04.4 -0.1**
comp=Z,110nm,1.1s
TBI Tubuai 85.93 114 *e*PP PP 05 39 21.0 -3.7
comp=Z,778nm,18.5s
TBI *e*S **S 05 46 32.1 -4.1**
comp=Z,3μm,26.0s
TBI *e*SS SS 05 52 07.4 -7.1
comp=Z,4μm,39.8s
TBI *e*LQ LQ 05 59 41.3
comp=Z,3μm,36.0s
TBI *e*LR LR 06 03 21.1
comp=Z,7μm,26.0s
DOT Dot Lake 85.98 27 *e*P **P 05 36 03.5 -0.4**
comp=Z,42nm,0.8s
MOS Moscow 86.12 325*c i*P **P 05 36 04.3 -0.4**
MOS *e*S S 05 46 28.0 -8.9
MOS pmax pmax
comp=Z,1μm,1.7s
MOS pmax pmax
comp=E,310nm,1.9s
MOS pmax pmax
comp=N,243nm,1.3s
MOS pmax pmax
comp=Z,4μm,2.9s
MOS MLR MLR
comp=Z,12μm,19.0s
MOS MLR MLR
comp=E,8μm,18.0s
MENT Mentasta 86.15 27 *e*P **P 05 36 05.5 +0.7**
MALT Malatya 86.15 308 PFAKE 05 36 20.0 +15
MALT LR LR
comp=Z,3μm,19.0s
ATAB Bozova 86.29 307 *i* P **P 05 36 05.7 -0.4**
AKCD Akcadag 86.55 308 *i* P **P 05 36 06.7 -0.7**
PMOR Pomariorio Ree 86.58 105 *e*P **P 05 36 08.1 +0.3**
comp=Z,338nm,1.4s
ANN Anapa 86.64 315*c i*P **P 05 36 05.4 -2.1**
ANN *e*S S 05 46 28.6 -14
ANN pmax pmax
comp=Z,161nm,0.7s
MEH Mehetia 86.68 108 *e*P **P 05 36 07.9 -0.4**
comp=Z,129nm,1.0s
OBN Obninsk 86.75 325*c i*P **P 05 36 07.0 -0.8**
OBN *i* 05 36 14.7
OBN *i* 05 36 19.3
OBN *e* 05 39 31.3
OBN *i* 05 46 32.0
OBN *i* 05 46 42.7
OBN *i* PS **PnS 05 47 53.3 +8.2**
OBN *i* SSS SSS 05 55 51.6
OBN pmax pmax
comp=Z,934nm,1.7s
OBN MLR MLR
comp=Z,10μm,19.0s
OBN Obninsk 86.75 325 P **P 05 36 08.1 +0.3**
comp=Z,3μm,1.3s,SNR=27
RSDY Resadiye-TOKAT 86.91 310 *e*PG **P 05 36 08.8 -0.2**
LVZ Lovozero 87.00 338*de*P **P 05 36 09.8 +0.9**
LVZ pmax pmax
comp=Z,81nm,1.2s
EGAK Eagle 87.20 25 *e*P **P 05 36 09.4 -0.4**
comp=Z,69nm,1.0s
EGAK LR LR
comp=Z,3μm,21.0s
KMRS Kahramanmaras 87.39 307 *e*PG **P 05 36 11.0 -0.4**
FURI Furi 87.47 279 P **P 05 36 13.8 +1.2**
FURI S S 05 46 43.1 -9.1
APA Apatity 87.50 337‖ *i*P **P 05 36 11.0 -0.2**
APA *e*S **S 05 46 48.0 -1.8**
APA *i* PS **PnS 05 48 00.0 +6.3**
APA *i* SS **SS 05 52 30.0 -5.1**
APA MLR MLR
comp=Z,22μm,19.0s
ASF Jabal al Asfar 87.70 302 P **P 05 36 14.0 +0.9**
ASF Jabal al Asfar 87.70 302 P **P 05 36 14.0 +0.9**
comp=Z,18nm,0.8s,baz=334,slow=1.1,SNR=11
SARI SarD1z-Kayseri 87.72 308 *e*PG **P 05 36 12.7 -0.5**
ANDN Andirin 87.83 307 *i* P **P 05 36 13.0 -0.6**
KVT Kavak 87.85 311 *e*PG **P 05 36 13.2 -0.4**
KOZT Kozan 88.25 307 *e*PG **P 05 36 15.1 -0.3**
HWQ Hawqa 88.36 304 *e*P **P 05 36 15.3 -1.0**
DIKM Dikmen 88.40 311 *e*PG **P 05 36 14.8 -1.3**
BHL Bhannes 88.63 304 *e*P **P 05 36 16.4 -1.1**
KSDI Kefar Szold 88.68 303 *e*P **P 05 36 19.7 +2.1**
CTKT Corum 88.83 310 *i* P **P 05 36 17.7 -0.6**
JOF Joensuu 88.84 333 *e*P **P 05 36 18.4 +0.8**
JOF pmax pmax
comp=Z,92nm,0.6s
JOF Joensuu 88.84 333 *e*p **P 05 36 18.4 +0.8**
comp=Z,92nm,0.6s
MMAI Mount Meron Ar 88.91 303 P **P 05 36 18.8 +0.1**
MMAI S S 05 46 49.2 -16
MMAI Mount Meron Ar 88.91 303 P **P 05 36 18.8 +0.1**
comp=Z,5.1nm,0.5s,baz=75,slow=6.1,SNR=14
MMAI S S 05 46 49.2 -16
comp=Z,0.4nm,0.3s,baz=196,slow=14,SNR=2.0
AVNT Avonos 88.92 309 *i* P **P 05 36 18.8 -0.1**
SIM Simferopol' 88.98 315*ce*P **P 05 36 17.9 -0.8**
SIM *e* 05 39 48.0
SIM *e* 05 46 46.0
SIM *e*S **S 05 47 03.0 -1.8**
SIM pmax pmax
comp=Z,500nm,11.0s
SIM pmax pmax
comp=Z,32nm,1.6s
SIM MLR MLR
comp=Z,10μm,22.0s
CORM Corum 88.98 310 *e*PG **P 05 36 18.6 -0.5**
CDAG Cicekdag 89.23 309 *i* P **P 05 36 18.4 -1.7**
MERS Mersin 89.33 307 *e*PG **P 05 36 18.6 -2.0**
KEV Kevo 89.53 340 *e*P **P 05 36 20.2 -0.5**
KEV pmax pmax
comp=Z,23nm,0.6s
KEV Kevo 89.53 340 *e*P **P 05 36 19.9 -0.8**
comp=Z,33nm,0.8s
KEV LR LR
comp=Z,8μm,21.0s
KEV Kevo 89.53 340 *e*p **P 05 36 20.2 -0.5**
comp=Z,23nm,0.6s
EIL Elat 89.54 300 *e*PG **P 05 36 21.2 -0.5**
EIL Elat 89.54 300 P **P 05 36 22.2 +0.5**
EIL S S 05 46 50.6 -20
EIL Elat 89.54 300 P **P 05 36 22.2 +0.5**
comp=Z,16nm,0.7s,baz=92,slow=4.3,SNR=4.7
EIL S S 05 46 50.6 -20
comp=Z,2.4nm,0.4s,baz=132,slow=14,SNR=1.9
EIL Elat 89.54 300 P **P 05 36 22.6 +0.9**
baz=90,SNR=5.9
KMBO Kilima Mbogo 89.57 269 *e*P **P 05 36 22.2 -0.3**
comp=Z,129nm,1.4s
KMBO S S 05 46 54.3 -18
KMBO Kilima Mbogo 89.57 269 P **P 05 36 23.0 +0.5**
comp=Z,47nm,0.9s,baz=87,slow=6.4,SNR=74
KMBO S S 05 46 54.3 -18
comp=Z,0.3nm,0.3s,baz=55,slow=18,SNR=2.3
KMBO LR LR 06 13 37.8
comp=Z,2μm,22.0s,baz=90,slow=34
PUL Pulkovo 89.71 330*d i*P **P 05 36 22.3 +0.5**
PUL pmax pmax
comp=Z,163nm,0.7s
CANT Cankiri 89.72 311 *e*PG **P 05 36 20.8 -1.6**
BR131 Keskin Array S 89.78 310 *e*P **P 05 36 21.5 -1.3**
comp=Z,5.8nm,0.5s
BRTR Keskin Array B 89.78 310 P **P 05 36 22.3 -0.5**
BRTR PP PP 05 39 46.8 -8.5
BRTR S S 05 46 51.2 -22
BRTR P'P' 06 02 03.0
BRTR Keskin Array B 89.78 310 P **P 05 36 22.3 -0.5**
comp=Z,16nm,0.9s,baz=130,slow=4.4,SNR=35
BRTR PP PP 05 39 46.7 -8.5
comp=Z,3.5nm,0.9s,baz=111,slow=8.4,SNR=4.7
BRTR S S 05 46 51.2 -22
comp=Z,0.2nm,0.4s,baz=66,slow=7.1,SNR=2.3
BRTR PKPPKP **P'P'df 06 02 03.0 -2.8**
comp=Z,0.2nm,0.4s,baz=277,slow=2.5,SNR=3.5
INK Inuvik 89.79 21 P **P 05 36 21.5 -0.5**
INK S **SKSac 05 46 50.2 +0.4**
INK PKKP **PKKPdf 05 53 54.5 +2.0**
INK Inuvik 89.79 21 P **P 05 36 21.5 -0.5**
comp=Z,71nm,1.2s,baz=284,slow=6.0,SNR=69
INK S **SKSac 05 46 50.2 +0.4**
comp=Z,1.0nm,1.0s,baz=288,slow=6.4,SNR=5.3
INK PKKP **PKKPdf 05 53 54.5 +2.0**
comp=Z,2.3nm,0.5s,baz=116,slow=1.6,SNR=19
BALT Daday 89.81 311 *i* P **P 05 36 23.0 0.0**
SULT Sultanhani-AKS 90.02 308 *e*PG **P 05 36 22.0 -1.9**
ARCES ARCESS Array B 90.09 340 P **P 05 36 22.3 -1.1**
ARCES PKiKP **PKiKP 05 41 19.8 +0.6**
ARCES ARCESS Array B 90.09 340 P **P 05 36 22.3 -1.1**
comp=Z,25nm,0.7s,baz=88,slow=6.5,SNR=97
ARCES PKiKP **PKiKP 05 41 19.8 +0.6**
comp=Z,3.8nm,0.6s,baz=126,slow=2.5,SNR=9.1
ARCES LR LR 06 23 47.2
comp=Z,5μm,21.1s,baz=83,slow=40
ARE0 ARCESS Array S 90.09 340 *e*P **P 05 36 22.5 -0.9**
SPITS Spitsbergen Ar 90.10 349 P **P 05 36 23.0 -0.3**
SPITS Spitsbergen Ar 90.10 349 P **P 05 36 23.0 -0.3**
comp=Z,31nm,0.8s,baz=100,slow=5.9,SNR=27
SPITS LR LR 06 22 09.0
comp=Z,16μm,20.5s,baz=55,slow=39
BBAL Bala 90.20 309 *i* P **P 05 36 22.7 -2.0**
AFSR Af˘ar-Bala (A 90.25 309 *e*PG **P 05 36 23.5 -1.5**
SAFT Safranbolu 90.36 311 *e*PG **P 05 36 24.5 -0.8**
ANTO Ankara 90.42 310 *e*PG **P 05 36 23.9 -1.8**
ANTO Ankara 90.42 310 *e*P **P 05 36 24.3 -1.4**
ANTO pmax pmax
comp=Z,10.0nm,0.8s
ANTO MLR MLR
comp=Z,3μm,19.0s
ANTO Ankara 90.42 310 *e*P **P 05 36 24.3 -1.4**
comp=Z,9.6nm,0.8s
ANTO LR LR
comp=Z,3μm,19.0s
ANTO Ankara 90.42 310⇑ *i*P **P 05 36 26.6 +0.9**
ANTO Ankara 90.42 310 P **P 05 36 25.3 -0.4**
SNR=10.0
CSS Prodhromos 90.46 305 *e*PG **P 05 36 24.6 -1.3**
CSS Prodhromos 90.46 305 *e*P **P 05 36 24.4 -1.5**
comp=Z,35nm,0.9s
CSS LR LR
comp=Z,3μm,22.0s
CSS Prodhromos 90.46 305 *e*P **P 05 36 25.7 -0.2**
SKAG Skagway 90.51 30 *e*P **P 05 36 25.5 0.0**
comp=Z,69nm,1.3s
KBS Kingsbay 90.62 350 *e*P **P 05 36 26.7 +0.9**
KBS AMB AMB 05 36 31.9
comp=Z,32nm,0.8s
KBS *e*PP **PP 05 39 58.1 -2.6**
KBS *e*SKS **SKSac 05 46 55.7 +1.2**
KBS AMS AMS 06 20 16.7
comp=Z,7μm,21.2s
KBS Kingsbay 90.62 350⇑ *i*P **P 05 36 25.9 +0.2**
KBS pmax pmax
comp=Z,41nm,1.3s
KBS Kingsbay 90.62 350 *e*P **P 05 36 24.9 -0.9**
comp=Z,24nm,0.8s
KBS LR LR
comp=Z,8μm,21.0s
BJO Bjornoya 90.69 345 *e*P **P 05 36 23.5 -2.6**
BJO *e*PP **PP 05 40 01.6 +0.3**
LADK Ladik-KONYA 90.92 308 *e*PG **P 05 36 26.0 -2.1**
KTK1 Kautokeino 90.99 339 *e*P **P 05 36 26.3 -1.3**
KTK1 AMB AMB 05 36 38.0
comp=Z,209nm,1.6s
KTK1 *e*PP PP 05 39 57.5 -6.3
KTK1 AMS AMS 06 19 54.3
comp=Z,13μm,22.2s
KIZT Kizilcal 91.22 309 *e*PG **P 05 36 27.8 -1.7**
KAF Kangasniemi 91.26 332 *e*P **P 05 36 28.8 -0.2**
KAF pmax pmax
comp=Z,33nm,0.6s
KAF Kangasniemi 91.26 332 *e*p **P 05 36 28.8 -0.2**
comp=Z,33nm,0.6s,baz=75,slow=4.3
KDZE Karadeniz Ereo 91.29 311 *e*PG **P 05 36 27.6 -2.0**
FIA1 FINESS Array S 91.49 332 *e*P **P 05 36 29.9 -0.2**
FINES FINESS Array B 91.49 332 P **P 05 36 29.9 -0.1**
FINES FINESS Array B 91.49 332 P **P 05 36 29.9 -0.1**
comp=Z,56nm,0.8s,baz=64,slow=5.3,SNR=91
FINES LR LR 06 21 52.2
comp=Z,9μm,19.1s,baz=80,slow=38
AKASG Malin Array Be 91.60 321*ce*P **P 05 36 30.2 -0.6**
AKASG pmax pmax
comp=Z,36nm,0.7s
AKASG Malin Array Be 91.60 321 P **P 05 36 30.0 -0.8**
AKASG Malin Array Be 91.60 321 P **P 05 36 30.0 -0.8**
comp=Z,36nm,0.7s,baz=70,slow=4.3,SNR=113
AK01 Malin Array Si 91.61 321 *e*P **P 05 36 30.1 -0.7**

KIEV	**Kiev**	**91.61**	**321**	*e*P		**P**	**05 36 29.1**	**-1.7**
KIEV				pmax		pmax			
	comp=Z,120nm,1.2s								
KIEV				MLR		MLR			
	comp=Z,7µm,21.0s								
KIEV	**Kiev**	**91.61**	**321**	*e*P		**P**	**05 36 29.1**	**-1.7**
	comp=Z,120nm,1.2s								
KIEV				LR		LR			
	comp=Z,7µm,21.0s								
AK02	**Malin Array Si**	**91.62**	**321**	*e*P		**P**	**05 36 29.6**	**-1.3**
MICGM	**Minsk**	**91.81**	**325**⇑	*i*P		**P**	**05 36 31.0**	**-0.7**
MNK	**Minsk**	**91.84**	**325**⇑	*i*P		**P**	**05 36 31.0**	**-0.8**
MNK				*e*			05 40 18.0		
MNK				*e*			05 47 02.0		
MNK				*e*S		**S**	**05 47 28.0**	**-2.6**
MNK				pmax		pmax			
	comp=Z,520nm,1.2s								
MNK				pmax		pmax			
	comp=E,450nm,1.8s								
MNK				MLR		MLR			
	comp=Z,25µm,18.0s								
MNK				MLR		MLR			
	comp=E,17µm,18.0s								
BOLV	**Bolvadin**	**91.97**	**309**	*i* P		**P**	**05 36 31.8**	**-1.2**
GULT	**Gulveren**	**92.09**	**311**	*e*PG		P	05 36 30.0	-3.5	
BORA	**Eskisehir**	**92.21**	**310**	*i* P		**P**	**05 36 32.7**	**-1.3**
TRO	**Tromso**	**92.29**	**341**	*e*P		**P**	**05 36 34.3**	**+0.8**
TRO				AMB		AMB	05 36 39.4		
	comp=Z,171nm,1.9s								
TRO				*e*PP		**PP**	**05 40 13.3**	**-0.7**
TRO				*e*SKS		**SKSac**	**05 47 02.9**	**-1.2**
TRO				AMS		AMS	06 21 07.1		
	comp=Z,7µm,20.5s								
NACGM	**Naroch**	**92.37**	**325**	*e*P		P	05 36 31.0	-3.3	
ISP	**Isparta**	**92.41**	**308**	*e*PG		**P**	**05 36 32.4**	**-2.6**
ISP	**Isparta**	**92.41**	**308**	PFAKE			05 36 50.0	+15	
ISP				LR		LR			
	comp=Z,3µm,20.0s								
KIS	**Kishinev**	**92.41**	**317**α	*i*P		**P**	**05 36 32.0**	**-2.6**
KIS				*e*			05 40 22.0		
KIS				*e*			05 47 05.0		
KIS				*e*S		S	05 47 30.0	-6.1	
KIS				*e*PS		PnS	05 49 00.0	+7.8	
KIS				pmax		pmax			
	comp=Z,600nm,3.0s								
KIS				pmax		pmax			
	comp=Z,1µm,4.0s								
KIS	**Kishinev**	**92.41**	**317**⇑	*i*P		**P**	**05 36 32.0**	**-2.6**
	comp=Z,600nm,3.0s								
KIS	**Kishinev**	**92.41**	**317**	*e*PP		PP	05 40 22.0	+6.3	
KIS	**Kishinev**	**92.41**	**317**	*e*SKS		**SKSac**	**05 47 05.0**	**-0.7**
KIS				*e*S		S	05 47 30.0	-6.1	
KIS	**Kishinev**	**92.41**	**317**	*e*PS		PS	05 49 00.0	+9.0	
KIS				LRM		MLR	06 25 04.0		
	comp=Z,10µm,20.0s								
IZAR	**Zarasai**	**92.51**	**326**	*e*P		**P**	**05 36 35.5**	**+0.6**
IZAR				AMB		AMB	05 36 36.8		
	comp=Z,33nm,0.9s								
ALT	**Altintas**	**92.57**	**309**	*e*PG		**P**	**05 36 34.0**	**-1.7**
IIGN	**Ignalina**	**92.60**	**326**	*e*P		**P**	**05 36 35.9**	**+0.5**
IIGN				AMB		AMB	05 36 36.3		
	comp=Z,40nm,1.2s								
WRAK	**Wrangell Islan**	**92.61**	**33**	*e*P		**P**	**05 36 36.6**	**+1.3**
	comp=Z,167nm,1.2s								
WRAK				LR		LR			
	comp=Z,2µm,20.0s								
ISAL	**Salakas**	**92.61**	**326**	*e*P		**P**	**05 36 36.0**	**+0.6**
ISAL				AMB		AMB	05 36 36.3		
	comp=Z,25nm,1.0s								
CAVI	**Cavuskoy**	**92.63**	**310**	*e*PG		**P**	**05 36 35.3**	**-0.6**
SILT	**Sile**	**92.65**	**311**	*e*PG		**P**	**05 36 33.5**	**-2.4**
TLCR		**92.68**	**315**	*i*P		**P**	**05 36 36.3**	**+0.4**
SYO	**Syowa Base**	**92.80**	**201**	*e*P		**P**	**05 36 35.4**	**-0.5**
SYO	**Syowa Base**	**92.80**	**201**	*e*PcP		**PcP**	**05 36 39.9**	**+3.4**
SYO	**Syowa Base**	**92.80**	**201**⇑	*e*pP		pP	05 36 46.0	-0.6	
BUY	**Buyukada**	**93.09**	**311**	*i* P		**P**	**05 36 36.3**	**-1.6**
ISK	**Istanbul-Kandi**	**93.10**	**311**	*e*PG		**P**	**05 36 35.5**	**-2.5**
CFR	**Carcaliu**	**93.16**	**316**	*i*P		**P**	**05 36 38.1**	**0.0**
AKAS	**Kas**	**93.34**	**307**	*i* P		**P**	**05 36 36.5**	**-2.9**
PSN	**Preselentsi**	**93.36**	**314**	*i* P		**P**	**05 36 37.6**	**-1.5**
DLBC	**Dease Lake**	**93.40**	**31**	*e*P		**P**	**05 36 39.1**	**+0.1**
DLBC	**Dease Lake**	**93.40**	**31**	P		**P**	**05 36 39.4**	**+0.3**
	comp=Z,34nm,1.2s,baz=287,slow=3.3,SNR=17								
CTKS	**Kestanelik-??a**	**93.49**	**312**	*e*PG		**P**	**05 36 37.9**	**-1.9**
SLVT	**Silivri**	**93.71**	**312**	*e*PG		**P**	**05 36 39.3**	**-1.5**
KULA	**Kula-Manisa**	**93.77**	**309**	*e*PG		**P**	**05 36 39.5**	**-1.7**
TESR		**93.96**	**317**⇑	*i*P		**P**	**05 36 41.3**	**-0.5**
PRD	**Provadia**	**94.00**	**314**	*i* P		**P**	**05 36 40.6**	**-1.4**
VRI	**Vrincioaia**	**94.02**	**316**	*i*P		**P**	**05 36 42.5**	**+0.4**
QSPA	**South Pole Qui**	**94.03**	**180**	*e*P		**P**	**05 36 42.0**	**+0.2**
	comp=Z,128nm,1.3s								
QSPA				*e*PP		**PP**	**05 40 28.0**	**0.0**
QSPA				LR		LR			
	comp=Z,4µm,19.0s								
DALT	**Dalyan (Mudla)**	**94.04**	**307**	*e*PG		**P**	**05 36 39.9**	**-2.5**
PLOR	**Plostina**	**94.08**	**316**⇑	*i*P		**P**	**05 36 42.7**	**+0.3**
STEI	**Steigen**	**94.13**	**339**	*e*P		**P**	**05 36 42.6**	**+0.5**
STEI				AMB		AMB	05 36 52.3		
	comp=Z,93nm,1.4s								
GONE	**Gonen-Balikesi**	**94.29**	**311**	*e*PG		P	05 36 40.0	-3.4	
AKHS	**Akhisar**	**94.37**	**309**	*i* P		**P**	**05 36 41.9**	**-2.0**
AYDN	**Tasoluk**	**94.50**	**308**	*i* P		**P**	**05 36 42.0**	**-2.6**
KRBG	**Karabiga-Canak**	**94.53**	**311**	*e*PG		**P**	**05 36 42.6**	**-1.9**
SUW	**Suwalki**	**94.61**	**325**	*e*P		**P**	**05 36 43.7**	**-0.9**
SUW				pmax		pmax			
	comp=Z,350nm,0.9s								
SUW	**Suwalki**	**94.61**	**325**	*e*P		**P**	**05 36 43.7**	**-0.9**
	comp=Z,350nm,0.9s								
SUW	**Suwalki**	**94.61**	**325**	*e*P		**P**	**05 36 43.8**	**-0.9**
SUW				*e*SKSac		**SKSac**	**05 47 19.2**	**+1.7**
SUW				*e*S		**S**	**05 47 51.2**	**-3.9**
SUW				*es*S		**sS**	**05 48 10.9**	**-2.1**
SUW				LMZ		LR	06 21 48.9		
MLR	**Muntele Rosu**	**94.63**	**316**	P		**P**	**05 36 45.1**	**0.0**
MLR	**Muntele Rosu**	**94.63**	**316**⇑	*i*P		**P**	**05 36 45.2**	**+0.1**
MLR	**Muntele Rosu**	**94.63**	**316**	P		**P**	**05 36 45.1**	**0.0**
	comp=Z,11nm,0.8s,baz=41,slow=1.1,SNR=101								
MLSB	**Milas**	**94.64**	**308**	*e*PG		**P**	**05 36 42.8**	**-2.4**
JMB	**Yambol**	**94.71**	**313**	*i* P		**P**	**05 36 44.3**	**-1.1**
BURAR	**Bucovina Array**	**94.72**	**318**⇑	*i*P		**P**	**05 36 45.8**	**+0.4**
BUR08	**Bucovina Ar. S**	**94.72**	**318**	*e*P		**P**	**05 36 44.9**	**-0.5**
IZM	**Izmir**	**94.87**	**309**	*e*PG		**P**	**05 36 46.0**	**-0.2**
LVV	**L'vov**	**95.03**	**321**	*e*P		**P**	**05 36 45.1**	**-1.6**
LVV				*e*			05 40 33.5		
LVV				*e*S		S	05 47 48.7	-10	
LVV				*i*			05 49 18.1		
LVV				*e*			05 54 19.9		
LVV				*e*			05 58 00.5		
LVV				pmax		pmax			
	comp=Z,100nm,1.5s								
SZH	**Strazhica**	**95.04**	**314**	*i* P		**P**	**05 36 45.1**	**-1.8**
BODT	**Bodrum**	**95.04**	**308**	*e*PG		P	05 36 43.6	-3.4	
BLCB	**Balcova**	**95.05**	**309**	*e*PG		**P**	**05 36 45.1**	**-1.9**
MOR8	**Moi Rana**	**95.08**	**338**	*e*P		**P**	**05 36 43.9**	**-2.7**
MOR8				AMB		AMB	05 36 54.2		
	comp=Z,61nm,1.4s								
ALN	**Alexandroupoli**	**95.38**	**312**	*e*P		P	05 36 40.8	-7.6	
KARP	**Karpathos**	**95.40**	**306**	*e*P		**P**	**05 36 47.5**	**-1.2**
FLOS	**Flostrand**	**95.42**	**338**	*e*P		**P**	**05 36 46.1**	**-1.9**
FLOS				AMB		AMB	05 36 55.0		
	comp=Z,184nm,1.5s								
PVL	**Pavlikeni**	**95.48**	**314**	*i* P		**P**	**05 36 47.8**	**-1.0**
ARR	**Arges**	**95.56**	**316**⇑	*i*P		**P**	**05 36 49.3**	**0.0**
BOZC	**Bozcaada**	**95.56**	**311**	*i* P		**P**	**05 36 47.3**	**-2.0**
KDZ	**Kurdzhali**	**95.71**	**312**	*i* P		**P**	**05 36 47.8**	**-2.2**
CHOS	**Chios island**	**95.81**	**309**	*e*P		**P**	**05 36 47.9**	**-2.7**
BMR	**Baia Mare**	**95.84**	**319**⇑	*i*P		**P**	**05 36 50.9**	**+0.5**
KWP	**Kalwaria Pacla**	**95.91**	**321**	*e*P		**P**	**05 36 50.2**	**-0.5**
KWP				pmax		pmax			
	comp=Z,119nm,1.0s								
KWP				MLR		MLR			
	comp=Z,7µm,22.0s								
KWP	**Kalwaria Pacla**	**95.91**	**321**	*e*P		**P**	**05 36 50.2**	**-0.5**
	comp=Z,119nm,1.0s								
KWP				LR		LR			
	comp=Z,7µm,22.0s								
KWP	**Kalwaria Pacla**	**95.91**	**321**⇑	*i*P		**P**	**05 36 51.1**	**+0.4**
KWP	**Kalwaria Pacla**	**95.91**	**321**	*e*P		**P**	**05 36 50.7**	**0.0**
KWP				*e*SKSac		**SKSac**	**05 47 28.2**	**+3.5**
KWP				*e*S		**SKKSac**	**05 47 47.8**	**-1.3**
KWP				LMZ		LR	06 24 10.1		
MBAR	**Mbarara**	**96.03**	**270**	PFAKE			05 37 00.0	+7.8	
MBAR				LR		LR			
	comp=Z,707nm,21.0s								
LOT	**Lotru**	**96.14**	**316**⇑	*i*P		**P**	**05 36 52.2**	**+0.2**
PLD	**Plovdiv**	**96.15**	**313**	*i* P		**P**	**05 36 49.9**	**-2.0**
RZN	**Rozhen**	**96.22**	**313**	*i* P		**P**	**05 36 50.7**	**-1.8**
ZKR	**Zakros**	**96.23**	**306**	*e*P		**P**	**05 36 52.3**	**-0.2**
KOLS	**Kolonicke sedl**	**96.35**	**320**	*e*P		**P**	**05 36 53.1**	**+0.4**
KOLS				pmax		pmax			
	comp=Z,52nm,1.2s								
KOLS	**Kolonicke sedl**	**96.35**	**320**	*e*P		**P**	**05 36 53.1**	**+0.4**
TRPA	**Tarpa**	**96.37**	**319**⇑	*i*P		**P**	**05 36 52.5**	**-0.3**
TRPA	**Tarpa**	**96.37**	**319**⇑	*e*P		**P**	**05 36 52.0**	**+0.2**
UZH	**Uzhgorod**	**96.41**	**320***c*	*i*P		**P**	**05 36 53.8**	**+0.8**
UZH				*i*			05 37 00.2		
UZH				*e*			05 40 46.8		
UZH				*e*PPP		PPP	05 42 47.8		
UZH				*e*S		**S**	**05 48 08.4**	**-2.6**
UZH				*i* PS		**PS**	**05 49 30.0**	**-5.0**
POGA	**Pongola**	**96.43**	**243**	*e*P		**P**	**05 36 50.9**	**-2.6**
POGA				AMB		AMB	05 37 08.9		
	comp=Z,61nm,2.9s								
APE	**Apeiranthos**	**96.45**	**308**	*i*P		**P**	**05 36 51.7**	**-1.8**
APE	**Apeiranthos**	**96.45**	**308**	*e*P		**P**	**05 36 50.6**	**-2.9**
PGB	**Panagyurishte**	**96.45**	**313**	*i* P		**P**	**05 36 52.3**	**-1.1**
BEL	**Belsk**	**96.55**	**323**	*e*P		**P**	**05 36 53.8**	**+0.3**
BEL				*e*SKSac		**SKSac**	**05 47 31.9**	**+4.0**
BEL				LMZ		LR	06 22 46.1		
DRGR		**96.56**	**318**	*i*P		**P**	**05 36 53.3**	**-0.5**
MPEP	**Malo Peshtene**	**96.59**	**314**	*i* P		**P**	**05 36 53.9**	**0.0**
DEV	**Deva**	**96.64**	**317**⇑	*i*P		**P**	**05 36 54.8**	**+0.8**
NSS	**Namsos**	**96.68**	**337**	*e*P		P	05 36 50.0	-3.8	
NSS				*e*SKS		**SKSac**	**05 47 29.4**	**+1.4**
NSS				AMS		AMS	06 23 42.8		
	comp=Z,4µm,19.2s								
LAST	**Lasithi**	**96.82**	**306**	*e*P		**P**	**05 36 54.7**	**-0.5**
GZR	**Gura Zlata**	**96.83**	**316**⇑	*i*P		**P**	**05 36 55.1**	**+0.1**
DAG	**Danmarks Havn**	**96.87**	**352**⇑	*i*P		**P**	**05 36 53.3**	**-1.1**
DAG				pmax		pmax			
	comp=Z,26nm,0.8s								
DAG				MLR		MLR			
	comp=Z,5µm,22.0s								
DAG	**Danmarks Havn**	**96.87**	**352**⇑	*i*P		**P**	**05 36 53.3**	**-1.1**
	comp=Z,36nm,0.8s								
DAG									
	comp=Z,4µm,22.0s								
CRVS	**Cervenica-Dubn**	**96.88**	**320**	*e*P		**P**	**05 36 55.5**	**+0.4**
CRVS				pmax		pmax			
	comp=Z,128nm,1.2s								
CRVS	**Cervenica-Dubn**	**96.88**	**320**	*e*P		**P**	**05 36 55.5**	**+0.4**
NVR	**Nevrokopi**	**96.92**	**312**	*e*P		**P**	**05 36 52.9**	**-2.6**
MMB	**Musomiste**	**96.97**	**313**	*i* P		**P**	**05 36 53.1**	**-2.6**
VTS	**Vitosha**	**97.14**	**314**⇑	*i*P		**P**	**05 36 56.2**	**-0.4**
VTS	**Vitosha**	**97.14**	**314**	*i* P		**P**	**05 36 54.2**	**-2.4**
IDI	**Anoyia**	**97.27**	**306**	*e*P		**P**	**05 36 55.4**	**-1.8**
	comp=Z,16nm,0.8s								
IDI	**Anoyia**	**97.27**	**306**	*e*P		**P**	**05 36 56.6**	**-0.7**
KKB	**Krupnik**	**97.38**	**313**	*i* P		**P**	**05 36 55.3**	**-2.2**
SIVA	**Sivas**	**97.38**	**306**	*e*P		**P**	**05 36 56.8**	**-0.9**
SOH	**Sokhos**	**97.40**	**312**	*e*P		**P**	**05 36 57.3**	**-0.4**
PLG	**Polygyros**	**97.42**	**311**	*e*P		P	05 36 52.3	-5.5	
RES	**Resolute Bay**	**97.42**	**10**	*e*P		**P**	**05 36 56.5**	**-0.5**
	comp=Z,19nm,1.0s								
NIE	**Niedzica**	**97.48**	**321**	*e*P		Pdif	05 36 58.7	+0.8	
NIE	**Niedzica**	**97.48**	**321**	*e*P		Pdif	05 36 58.7	+0.8	
PTL	**Penteli**	**97.57**	**309**	*e*P		**P**	**05 36 56.0**	**-2.5**
BZS	**Buzias**	**97.58**	**317**⇓	*i*P		**P**	**05 36 57.9**	**-0.4**
OJC	**Ojcow**	**97.59**	**322**	*e*P		**P**	**05 36 57.7**	**-0.6**
OJC				*e*			05 40 57.5		
OJC				*e*			05 47 34.8		
OJC				*e*S		**ScS**	**05 48 23.5**	**+2.2**
OJC				*e*SS		SS	05 55 09.6	+9.0	
OJC				MLR		MLR			
	comp=Z,7µm,19.9s								
OJC	**Ojcow**	**97.59**	**322**	*e*P		**P**	**05 36 57.7**	**-0.6**
OJC				*e*PP		**PP**	**05 40 57.5**	**+1.8**
OJC				*e*SKSac		**SKSac**	**05 47 34.8**	**+1.5**
OJC				*e*S		**ScS**	**05 48 23.5**	**+2.2**
OJC				*e*SS		SS	05 55 09.6	+9.0	
OJC				L		L	06 23 02.3		
	comp=Z,7µm,19.9s								
HFS	**Hagfors**	**97.68**	**332**	P		**P**	**05 36 57.9**	**-0.6**
HFS	**Hagfors**	**97.68**	**332**	P		**P**	**05 36 57.9**	**-0.6**
	comp=Z,9.4nm,0.5s,baz=96,slow=4.6,SNR=57								
HFS				LR		LR	06 24 38.4		
	comp=Z,7µm,19.8s,baz=63,slow=38								
MSNA	**Messina**	**97.76**	**248**	*e*P		**P**	**05 36 58.9**	**-0.8**
MSNA				AMB		AMB	05 37 01.1		
	comp=Z,70nm,4.0s								
VAM	**Vamos**	**97.80**	**306**	*e*P		**P**	**05 36 59.4**	**-0.2**
VAY	**Valandovo**	**97.87**	**313**	*e*P		**P**	**05 36 57.3**	**-2.4**
GVD	**Gavdhos**	**98.00**	**306**	*e*P		**P**	**05 36 59.1**	**-1.4**
	comp=Z,42nm,0.8s								
KARN	**Karanos**	**98.03**	**306**	*e*P		Pdif	05 37 02.1	+1.4	
PSZ	**Piszkesteto**	**98.14**	**319**	*e*P		**P**	**05 37 00.1**	**-0.8**
PSZ				pmax		pmax			
	comp=Z,100nm,1.4s								
PSZ				MLR		MLR			
	comp=Z,6µm,19.0s								
PSZ	**Piszkesteto**	**98.14**	**319**	*e*P		**P**	**05 37 00.1**	**-0.8**
	comp=Z,100nm,1.4s								
PSZ				LR		LR			
	comp=Z,6µm,19.0s								
PSZ	**Piszkesteto**	**98.14**	**319**⇓	*i*P		Pdif	05 37 01.2	+0.3	
PSZ	**Piszkesteto**	**98.14**	**319**⇑	*e*P		**P**	**05 37 00.8**	**-0.1**
DID	**Didima**	**98.16**	**309**	*e*P		**P**	**05 36 59.3**	**-1.9**
LIT	**Litokhoron**	**98.20**	**311**	*e*P		P	05 36 55.9	-5.4	
GKP	**Gorka Klasztor**	**98.22**	**325**	*e*P		**P**	**05 37 00.6**	**-0.4**
GKP				*e*SKSac		**SKSac**	**05 47 42.5**	**+6.2**
GKP				LMZ		LR	06 24 06.6		
LTK	**Loutraki**	**98.27**	**309**	*e*P		P	05 36 54.0	-7.6	
PKSN	**Nyarlorinc**	**98.43**	**318**⇓	*e*Pdiff		Pdif	05 37 03.2	+1.1	
NB2	**NORSAR Subarra**	**98.44**	**334**	P		**P**	**05 37 00.4**	**-1.5**
	baz=68,slow=4.6								
NB2	**NORSAR Subarra**	**98.44**	**334**	P		**P**	**05 37 00.4**	**-1.5**
	comp=Z,41nm,1.1s,baz=68,slow=4.6								
NOA	**NORSAR Array B**	**98.44**	**334**	P		**P**	**05 37 00.8**	**-1.1**
NOA				PP		**PP**	**05 40 58.4**	**-3.6**
NOA				PKKP		**PKKPdf**	**05 53 37.4**	**+0.3**
NOA	**NORSAR Array B**	**98.44**	**334**	P		**P**	**05 37 00.8**	**-1.1**
	comp=Z,5.7nm,0.8s,baz=66,slow=4.5,SNR=45								
NOA				PP		**PP**	**05 40 58.4**	**-3.6**
	comp=Z,3.1nm,0.7s,baz=74,slow=8.0,SNR=3.9								
NOA				PKKP		**PKKPdf**	**05 53 37.4**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=269,slow=5.9,SNR=2.8								
NOA				LR		LR	06 27 04.5		
	comp=Z,7µm,18.5s,baz=70,slow=39								
AGG	**Agios Georgios**	**98.55**	**310**	*e*P		**P**	**05 37 00.5**	**-2.4**
VLI	**Veliai**	**98.56**	**308**	*e*P		**P**	**05 37 01.1**	**-1.8**
KYTH	**Kithira**	**98.56**	**307**	*e*P		**P**	**05 37 00.7**	**-2.3**
RAC	**Raciborz**	**98.61**	**322**	*e*P		Pdif	05 37 03.4	+0.5	
RAC				MLR		MLR			
	comp=Z,6µm,20.0s								
VYHS	**Vyhne**	**98.67**	**320**	*e*P		Pdif	05 37 03.3	+0.1	
VYHS				*e*			05 37 14.8		
THL	**Klokotos Trika**	**98.67**	**311**	*e*P		P	05 36 59.6	-3.7	
NAO01	**NORSAR Array S**	**98.67**	**334**	*e*P		**P**	**05 37 01.5**	**-1.4**
	comp=Z,32nm,0.9s								
PKS6	**Bocsa**	**98.71**	**318**⇓	*e*Pdiff		Pdif	05 37 04.3	+0.9	
OKC	**Ostrava-Krasne**	**98.72**	**322**	*e*P		Pdif	05 37 04.0	+0.7	
OKC				*e*			05 37 13.8		
OKC				*e*			05 41 04.3		
OKC				*e*			05 47 41.8		
OKC				MLR		MLR			
	comp=Z,4µm,21.2s								
OKC	**Ostrava-Krasne**	**98.72**	**322**	*e*PDIFF		Pdif	05 37 04.0	+0.7	
OKC				*e*pP		pP	05 37 13.8	-0.3	
OKC				*e*PP		**PP**	**05 41 04.3**	**-0.1**
OKC				*e*SKS		**SKSac**	**05 47 41.8**	**+2.8**
OKC				AMS		AMS	06 23 40.0		
	comp=Z,4µm,21.2s								
GUR	**Goura**	**98.77**	**309**	*e*P		**P**	**05 37 02.0**	**-2.0**
BUD	**Budapest**	**98.83**	**319**⇑	*e*Pdiff		Pdif	05 37 04.0	+0.1	
PKS7	**Kunszentmiklos**	**98.86**	**319**⇓	*e*Pdiff		Pdif	05 37 04.7	+0.7	
BIA	**Bitola**	**98.86**	**312**	*e*P		**P**	**05 37 02.3**	**-2.0**
VLX	**Vlachokerasia**	**98.86**	**309**	*e*P		P	05 37 00.7	-3.7	
BSD	**Bornholm Skovb**	**98.90**	**327**	*i* P		**P**	**05 37 03.0**	**-1.0**
BSD				MLR		MLR			
	comp=Z,7µm,19.0s								
BSD	**Bornholm Skovb**	**98.90**	**327**	*i* P		**P**	**05 37 03.0**	**-1.0**
BSD									
	comp=Z,7µm,18.0s								
EVR	**Evrytania**	**98.97**	**310**	*e*P		**P**	**05 37 04.4**	**-0.4**
PKS2	**Kecel**	**98.97**	**318**⇓	*e*Pdiff		Pdif	05 37 05.8	+1.3	
EFP	**Efpalio**	**99.00**	**310**	*e*P		P	05 37 04.2	-0.6	
YKW3	**Yellowknife Ar**	**99.10**	**24**	*e*P		**Pdif**	**05 37 02.6**	**-2.1**
	comp=Z,0.8nm,1.5s								
MORC	**Moravsky Berou**	**99.11**	**322**	*e*P		**Pdif**	**05 37 04.9**	**-0.3**
MORC				pmax		pmax			
	comp=Z,86nm,1.4s								
MORC	**Moravsky Berou**	**99.11**	**322**	*e*P		**Pdif**	**05 37 04.9**	**-0.3**
	comp=Z,86nm,1.4s								
MORC	**Moravsky Berou**	**99.11**	**322**⇑	*i*P		**Pdif**	**05 37 05.6**	**+0.4**
YKA	**Yellowknife Ar**	**99.14**	**24**	P		**Pdif**	**05 37 04.3**	**-0.6**
YKA				PKiKP		**PKiKP**	**05 41 35.3**	**+0.3**
YKA				PKKPbc		**PKKPbc**	**05 53 29.1**	**-3.5**
YKA	**Yellowknife Ar**	**99.14**	**24**	P		**Pdif**	**05 37 04.3**	**-0.6**
	comp=Z,3.3nm,0.6s,baz=295,slow=4.6,SNR=58								
YKA				PKiKP		**PKiKP**	**05 41 35.3**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=301,slow=1.8,SNR=7.4								
YKA				PKKPbc		**PKKPbc**	**05 53 29.0**	**-3.5**
	comp=Z,0.5nm,0.6s,baz=121,slow=3.3,SNR=10								
RKT	**Rikitea**	**99.22**	**113**	*e*SKSac		**SKSac**	**05 47 38.1**	**-4.4**
	comp=Z,3µm,22.5s								
RKT	**Rikitea**	**99.22**	**113**	*e*PS		PS	05 50 08.4	+1.9	
	comp=Z,2µm,34.0s								
RKT				*e*LQ		LQ	06 05 10.6		
	comp=Z,2µm,32.5s								
RKT				*e*LR		LR	06 09 32.7		
	comp=Z,5µm,26.2s								
ITM	**Ithomi**	**99.25**	**309**	*e*P		**Pdif**	**05 37 02.7**	**-3.3**
PKSG		**99.26**	**319**⇓	*e*Pdiff		**Pdif**	**05 37 06.6**	**+0.8**
LSZ	**Lusaka**	**99.32**	**255**	*e*P		**Pdif**	**05 37 05.0**	**-1.9**
LSZ	**Lusaka**	**99.32**	**255**	*e*P		**Pdif**	**05 37 05.8**	**-1.1**
	comp=Z,34nm,1.0s								
LSZ				LR		LR			
	comp=Z,6µm,21.0s								
LSZ	**Lusaka**	**99.32**	**255**	P		**Pdif**	**05 37 07.1**	**+0.2**
	SNR=13								
MOL	**Molde**	**99.33**	**336**	*e*P		**Pdif**	**05 37 06.0**	**+0.3**
MOL				AMB		AMB	05 37 13.6		
	comp=Z,52nm,1.6s								
MOL				AMS		AMS	06 26 12.8		
	comp=Z,15µm,19.6s								
PHP	**Peshkopia**	**99.35**	**313**	*e*PN		**Pdif**	**05 37 09.1**	**+2.7**
SLR	**Silverton**	**99.39**	**245**	*e*P		**Pdif**	**05 37 06.4**	**-0.6**
SLR				AMB		AMB	05 37 13.8		
	comp=Z,44nm,1.2s								
RLS	**Riolos of Patr**	**99.42**	**309**	*e*P		**Pdif**	**05 37 06.6**	**-0.1**
PKSM	**Moragy**	**99.43**	**318**⇓	*i*P		**Pdif**	**05 37 06.9**	**+0.3**
PKSM	**Moragy**	**99.43**	**318**⇓	*e*Pdiff		**Pdif**	**05 37 06.0**	**-0.6**
BCI	**Bajram Curri**	**99.45**	**314**	*e*PN		**Pdif**	**05 37 06.5**	**-0.3**
PYL	**PYLOS**	**99.46**	**308**	*e*P		**Pdif**	**05 37 04.7**	**-2.2**
JMIC	**Jan Mayen**	**99.48**	**346**	*e*P		**Pdif**	**05 37 04.2**	**-2.1**
JMIC				AMS		AMS	06 27 28.4		
	comp=Z,4µm,21.9s								
JMIC	**Jan Mayen**	**99.48**	**346**	LR		LR	06 26 15.6		
	comp=Z,4µm,21.2s,baz=51,slow=38								
KRLC	**Kraliky**	**99.48**	**322**	*e*P		**Pdif**	**05 37 07.3**	**+0.5**
KRLC	**Kraliky**	**99.48**	**322**	*e*PDIFF		**Pdif**	**05 37 07.3**	**+0.

PRU e 05 41 20.6
PRU e 05 47 49.9
PRU e 05 51 11.9
PRU MLR MLR
comp=Z,9µm,19.4s
PRU Pruhonice 100.88 323 ePDIFF **Pdif 05 37 13.5 +0.5**
PRU epP pP 05 37 23.3 -0.5
PRU ePP **PP 05 41 20.6 -0.2**
PRU eSKS 05 47 49.9
PRU ex x 05 51 11.9
PRU AMS AMS 06 25 20.0
comp=Z,9µm,19.4s
PRA Prague 100.92 323 PDIFF **Pdif 05 37 14.0 +0.9**
PRA AMS AMS 06 25 00.0
JCW Jim Creek 100.93 39 P **Pdif 05 37 14.7 +1.4**
BRG Berggiesshubel 100.93 323 PDIF **Pdif 05 37 12.0 -1.2**
BRG i 05 37 25.6
comp=Z,54nm,1.1s
BRG Berggiesshubel 100.93 323 i PKP **PP 05 41 17.0 -4.2**
BRG i PP PKiKP 05 41 19.6 -19
comp=Z,19nm,1.3s
BRG SKS 05 47 50.0
BRG SDIF **Sdif 05 48 52.0 +2.8**
BRG PS PS 05 50 10.0 -14
BRG e 05 53 26.9
comp=Z,4.7nm,1.2s
BRG SS SS 05 55 39.0 -8.2
BRG ePKPPKP P'P'dF 06 01 36.6 -7.3
comp=Z,22nm,2.1s
BRG
comp=N,5µm,19.6s
BRG
comp=E,6µm,18.8s
BRG
comp=Z,10µm,19.4s
BRG Berggiesshubel 100.93 323 P **Pdif 05 37 12.0 -1.2**
BRG pmax pmax
comp=Z,54nm,1.1s
BRG Berggiesshubel 100.93 323 ePdiff **Pdif 05 37 14.5 +1.3**
KOGS Kog 100.94 319 i Pdiff **Pdif 05 37 12.8 -0.5**
KOGS e 05 41 14.7
KOGS e 05 50 38.3
ARSA Arzberg 101.17 320⇑ iPdiff **Pdif 05 37 14.0 -0.4**
comp=Z,13nm,1.0s,SNR=17
ARSA Arzberg 101.17 320⇑ iP **Pdif 05 37 14.0 -0.4**
comp=Z,13nm,1.0s
FBE Freiberg 101.26 324 ePdiff **Pdif 05 37 16.1 +1.5**
FL2 Flat Top 2 101.29 41 P **Pdif 05 37 16.5 +1.4**
BER Bergen 101.32 334 e Pdif 05 36 56.2 -18
BER ePP **PP 05 41 22.1 -1.6**
BER eSKS 05 47 49.0
BER eSS SS 05 56 00.9 +9.1
BER AMS AMS 06 28 05.7
comp=Z,9µm,18.7s
CLL Collm 101.33 324 i P **Pdif 05 37 15.7 +0.8**
CLL pmax pmax
comp=Z,147nm,1.8s
CLL MLR MLR
comp=Z,6µm,20.8s
CLL Collm 101.33 324 ePdiff **Pdif 05 37 15.8 +0.8**
CLL Collm 101.33 324⇓ iPdif **Pdif 05 37 15.7 +0.8**
comp=Z,147nm,1.8s
CLL esPdif sPdif 05 37 28.0 -1.5
CLL e(PP) 05 41 15.0
CLL ePPP PPP 05 43 30.0
CLL eSKSac **SKSac 05 47 54.0 +2.2**
CLL eSKKSac **SKKSac 05 48 30.0 +1.8**
CLL eSdif **Sdif 05 48 54.0 +1.5**
CLL e(PS) 05 50 16.0
CLL ePPS PPS 05 51 19.0
CLL eSS **SS 05 55 54.0 +1.3**
CLL ePSS PSS 05 56 41.0
CLL eSKKSacre 06 00 42.0
CLL e 06 04 36.0
CLL LmH 06 23 00.0
comp=N,5µm,21.9s
CLL LmH 06 23 00.0
comp=E,4µm,22.0s
CLL LmV 06 28 00.0
comp=Z,6µm,20.8s
MUD Monsted U'grnd 101.36 330 i P **Pdif 05 37 16.2 +1.3**
MUD MLR MLR
comp=Z,4µm,19.0s
MUD Monsted U'grnd 101.36 330 i P **Pdif 05 37 16.2 +1.3**
MUD
comp=Z,4µm,18.0s
LON Longmire 101.47 41 eP **Pdif 05 37 16.3 +0.5**
LON pmax pmax
comp=Z,16nm,1.4s
LON Longmire 101.47 41 ePdif **Pdif 05 37 16.3 +0.5**
comp=Z,16nm,1.4s
SOE Somerset East 101.62 238 eP **Pdif 05 37 14.2 -2.6**
SOE AMB AMB 05 37 24.1
comp=Z,62nm,3.0s
PERS Pernice 101.63 319 i Pdiff **Pdif 05 37 14.7 -1.7**
SOKA Soboth 101.67 319⇑ iPdiff **Pdif 05 37 16.8 +0.1**
comp=Z,14nm,0.9s
SOKA Soboth 101.67 319⇑ iP **Pdif 05 37 16.8 +0.1**
comp=Z,14nm,0.9s
KHC Kasperske Hory 101.76 322 eP **Pdif 05 37 17.7 +0.7**
KHC e 05 41 30.6
KHC e 05 47 56.7
KHC e 05 51 17.8
KHC MLR MLR
comp=Z,7µm,18.1s
KHC Kasperske Hory 101.76 322 ePdif **Pdif 05 37 15.1 -1.9**
comp=Z,43nm,1.4s
KHC Kasperske Hory 101.76 322 ePDIFF **Pdif 05 37 17.7 +0.7**
KHC epP pP 05 37 27.0 -1.0
KHC ex x 05 41 18.5
KHC ePP **PP 05 41 30.6 +3.1**
KHC eSKS 05 47 56.7
KHC ex x 05 51 17.8
KHC AMS AMS 06 27 30.0
comp=Z,7µm,18.1s
MOA Molln 101.78 321 i Pdiff **Pdif 05 37 17.5 +0.5**
comp=Z,40nm,0.9s,SNR=24
MOA Molln 101.78 321 i P **Pdif 05 37 17.5 +0.5**
comp=Z,40nm,0.9s
GEC2 GERESS Array S 101.79 322 eP **Pdif 05 37 18.2 +1.0**
GEC2 GERESS Array S 101.79 322 ePdiff **Pdif 05 37 18.2 +1.0**
GERES GERESS Array B 101.79 322 P **Pdif 05 37 17.5 +0.3**
GERES PKiKP **PKiKP 05 41 41.0 +0.7**
GERES PKKPbc **PKKPbc 05 53 23.7 -0.9**
GERES GERESS Array B 101.79 322 P **Pdif 05 37 17.5 +0.3**
comp=Z,12nm,0.9s,baz=73,slow=4.5,SNR=66
GERES PKiKP **PKiKP 05 41 41.0 +0.7**
comp=Z,3.5nm,0.8s,baz=62,slow=2.1,SNR=6.1
GERES PKKPbc **PKKPbc 05 53 23.7 -0.9**
comp=Z,0.7nm,0.8s,baz=232,slow=4.8,SNR=5.0
BSEG Bad Segeberg 101.82 327 eP **Pdif 05 37 18.4 +1.4**
BSEG Bad Segeberg 101.82 327 ePdiff **Pdif 05 37 18.4 +1.4**
LBTB Lobatse 101.83 245 ePdif **Pdif 05 37 16.4 -1.4**
BOJS Bojanci 101.90 318 i Pdiff **Pdif 05 37 17.1 -0.5**
BOJS eSKSac **SKSac 05 47 56.0 +1.2**
BOJS e 05 48 58.0
BOJS e 05 50 46.8
BOJS e 06 01 22.2
MAIT Maitri 101.95 198 eP **Pdif 05 37 10.9 -6.3**
HUMO Hull Mountain 101.96 45 ePdif **Pdif 05 37 19.1 +1.1**
comp=Z,17nm,1.1s
OBKA Obir 102.04 319⇑ iPdiff **Pdif 05 37 18.2 -0.2**
comp=Z,14nm,1.0s
OBKA Obir 102.04 319⇑ iP **Pdif 05 37 18.2 -0.2**
comp=Z,14nm,1.0s
BOSA Boshof 102.05 242 P **Pdif 05 37 18.6 -0.1**
BOSA Boshof 102.05 242 P **Pdif 05 37 18.6 -0.1**
comp=Z,4.5nm,0.9s,baz=81,slow=4.5,SNR=4.1
NKC Novy Kostel 102.05 323 eP **Pdif 05 37 19.1 +0.9**
NKC MLR MLR
comp=Z,10µm,18.9s
NKC Novy Kostel 102.05 323 ePDIFF **Pdif 05 37 19.1 +0.9**
NKC esP 05 37 30.4
NKC ePP PP 05 41 22.8 -6.8
NKC AMS AMS 06 26 40.0
comp=Z,10µm,18.9s
FRIS Frissel Point 102.08 43 P **Pdif 05 37 19.8 +1.1**
PLN Plauen 102.13 324 ePdiff **Pdif 05 37 19.8 +1.3**
ETW Entiat 102.14 40 P **Pdif 05 37 19.6 +0.8**
WET Wettzell 102.19 322 eP **Pdif 05 37 20.1 +1.2**
WET Wettzell 102.19 322 ePdiff **Pdif 05 37 20.1 +1.2**
LJU Ljubljana 102.21 319 i Pdiff **Pdif 05 37 18.5 -0.5**
LJU e 05 41 09.7
LJU ePP **PP 05 41 32.8 +1.9**
LJU eSKSac **SKSac 05 47 57.1 +0.8**
LJU e 05 56 55.7
LJU e 06 01 24.0
MANZ Manzenberg 102.35 323 ePdiff **Pdif 05 37 20.9 +1.4**
ROTZ Rotzenmuhle 102.37 323 ePdiff **Pdif 05 37 21.3 +1.7**
MOX Moxa 102.39 324 eP **Pdif 05 37 20.9 +1.2**
MOX Moxa 102.39 324 ePdiff **Pdif 05 37 20.9 +1.2**
NRDL Niedersach Rie 102.53 326 ePdiff **Pdif 05 37 21.8 +1.7**
MYKA Terra Mystica 102.59 319⇑ iPdiff **Pdif 05 37 20.4 -0.4**
comp=Z,7.1nm,0.8s
MYKA Terra Mystica 102.59 319⇑ iP **Pdif 05 37 20.4 -0.4**
comp=Z,7.1nm,0.8s
KBA Koelnbreinsper 102.63 320⇑ iP **Pdif 05 37 20.8 -0.2**
KBA pmax pmax
comp=Z,11nm,0.8s
KBA Koelnbreinsper 102.63 320⇑ iPdiff **Pdif 05 37 20.8 -0.2**
comp=Z,11nm,0.8s,SNR=7.4
KBA Koelnbreinsper 102.63 320⇑ iP **Pdif 05 37 20.8 -0.2**
comp=Z,11nm,0.8s
VOY Vojsko 102.63 319 ePdiff **Pdif 05 37 20.7 -0.3**
CLZ Clausthal 102.64 325 eP **Pdif 05 37 22.4 +1.6**
CLZ Clausthal 102.64 325 ePdiff **Pdif 05 37 22.4 +1.6**
SCO Scoresbysund 102.66 350 i P **Pdif 05 37 21.3 +0.9**
SCO pmax pmax
comp=Z,6.0nm,1.0s
SCO MLR MLR
comp=Z,4µm,21.0s
SCO Scoresbysund 102.66 350 i P **Pdif 05 37 21.3 +0.9**
comp=Z,6.4nm,1.0s
SCO
comp=Z,3µm,20.0s
CADS Cadrg 102.66 319 i Pdiff **Pdif 05 37 19.8 -1.3**
RJOB Jochberg 102.74 321 ePdiff **Pdif 05 37 22.1 +0.7**
TRI Trieste 102.82 319 eP **Pdif 05 37 20.3 -1.4**
TRI pmax pmax
comp=Z,24nm,1.1s
TRI Trieste 102.82 319 ePdif **Pdif 05 37 20.3 -1.4**
comp=Z,24nm,1.1s
SUMG Summit 102.85 355 i P **Pdif 05 37 22.6 +0.8**
SUMG MLR MLR
comp=Z,4µm,20.0s
SUMG Summit 102.85 355 i P **Pdif 05 37 22.6 +0.8**
SUMG
comp=Z,4µm,20.0s
GRF Grafenberg Arr 102.99 323 eP **Pdif 05 37 23.8 +1.4**
GRF Grafenberg Arr 102.99 323 ePdiff **Pdif 05 37 23.8 +1.4**
VIPM Ingram Point 102.99 43 P **Pdif 05 37 24.3 +1.6**
VIPM Ingram Point 102.99 43 P **Pdif 05 37 24.3 +1.6**
HAWA Hanford 103.07 41 PFAKE 05 37 30.0 +7.2
HAWA LR LR
comp=Z,3µm,22.0s
UBBA Unterbreizbach 103.27 324 ePdiff **Pdif 05 37 24.6 +1.2**
ABTA Abfaltersbach 103.28 320⇑ iPdiff **Pdif 05 37 23.1 -0.7**
comp=Z,26nm,1.7s
ABTA Abfaltersbach 103.28 320⇑ iP **Pdif 05 37 23.1 -0.7**
comp=Z,26nm,1.7s
FUR Furstenfeldbru 103.54 322 eP **Pdif 05 37 26.0 +1.1**
FUR Furstenfeldbru 103.54 322 ePdiff **Pdif 05 37 26.0 +1.1**
CEL Celeste 103.62 311 ePdif **Pdif 05 37 25.2 -0.3**
WTTA Wattenberg 103.65 321⇑ iP **Pdif 05 37 25.6 0.0**
WTTA pmax pmax
comp=Z,76nm,1.9s
WTTA Wattenberg 103.65 321⇑ iPdiff **Pdif 05 37 25.6 0.0**
comp=Z,76nm,1.9s,SNR=19
WTTA Wattenberg 103.65 321⇑ iP **Pdif 05 37 25.6 0.0**
comp=Z,76nm,1.9s
WATA Walderalm 103.66 321⇑ iP **Pdif 05 37 25.4 -0.2**
WATA pmax pmax
comp=Z,19nm,0.9s
WATA Walderalm 103.66 321⇑ iPdiff **Pdif 05 37 25.4 -0.2**
comp=Z,19nm,0.9s,SNR=17
WATA Walderalm 103.66 321⇑ iP **Pdif 05 37 25.4 -0.2**
comp=Z,19nm,0.9s
NEW Newport 103.91 38 ePdif **Pdif 05 37 27.0 +0.5**
comp=Z,8.5nm,0.9s
NEW LR LR
comp=Z,3µm,20.0s
NEW Newport 103.91 38⇑ P **Pdif 05 37 27.7 +1.1**
baz=104
IBBN Ibbenburen 103.91 326 ePdiff **Pdif 05 37 27.9 +1.5**
MOTA Moosalm 103.95 321⇑ iP **Pdif 05 37 26.8 -0.1**
MOTA pmax pmax
comp=Z,15nm,0.8s
MOTA Moosalm 103.95 321⇑ iPdiff **Pdif 05 37 26.8 -0.1**
comp=Z,15nm,0.8s,SNR=16
MOTA Moosalm 103.95 321⇑ iP **Pdif 05 37 26.8 -0.1**
comp=Z,15nm,0.8s
MOD Modoc 104.06 45 ePdif **Pdif 05 37 27.9 +0.4**
comp=Z,56nm,1.4s
RETA Reutte 104.11 321⇑ iPdiff **Pdif 05 37 27.6 +0.1**
comp=Z,8.3nm,1.0s
RETA Reutte 104.11 321⇑ iP **Pdif 05 37 27.6 +0.1**
comp=Z,8.3nm,1.0s
AQU L'Aquila 104.18 315 PFAKE 05 37 40.0 +12
AQU LR LR
comp=Z,5µm,19.0s
FETA Feichten 104.31 321⇑ iPdiff **Pdif 05 37 29.0 +0.4**
comp=Z,33nm,1.8s,SNR=10.0
FETA Feichten 104.31 321⇑ iP **Pdif 05 37 29.0 +0.4**
comp=Z,33nm,1.8s
TNS Taunus Mts 104.42 324 eP **Pdif 05 37 30.2 +1.4**
TNS Taunus Mts 104.42 324 ePdiff **Pdif 05 37 30.2 +1.4**
TOD Tromm 104.47 324 eP **Pdif 05 37 28.9 -0.1**
TOD Tromm 104.47 324 eP **Pdif 05 37 28.9 -0.1**
A12A Yaak River Ran 104.54 37⇓ P **Pdif 05 37 31.7 +2.4**
baz=104
BUG Bochum--Univer 104.56 326 ePdiff **Pdif 05 37 30.5 +1.2**
STU Stuttgart 104.58 323 eP **Pdif 05 37 30.4 +1.0**
STU pmax pmax
comp=Z,51nm,1.5s
STU Stuttgart 104.58 323 ePdiff **Pdif 05 37 30.6 +1.2**
STU Stuttgart 104.58 323 ePdif **Pdif 05 37 30.4 +1.0**
comp=Z,51nm,1.5s
C11A Tepee Creek (N 104.61 38⇓ P **Pdif 05 37 31.1 +1.4**
baz=104
BEKR Beckworth 104.66 47 ePdif **Pdif 05 37 30.9 +0.6**
comp=Z,5.8nm,0.9s
DAVA Damuels 104.75 321⇑ iPdiff **Pdif 05 37 30.8 +0.4**
comp=Z,22nm,1.6s
DAVA Damuels 104.75 321⇑ iP **Pdif 05 37 30.8 +0.4**
comp=Z,22nm,1.6s
B12A Libby 104.77 38⇓ P **Pdif 05 37 32.0 +1.6**
baz=105
DAVOX Davos/Dischmat 104.94 321 Pdif **Pdif 05 37 31.5 +0.1**
DAVOX PKiKP **PKiKP 05 41 46.6 +0.4**
DAVOX Davos/Dischmat 104.94 321 Pdiff **Pdif 05 37 31.5 +0.1**
comp=Z,11nm,0.8s,baz=63,slow=4.3,SNR=21
DAVOX PKiKP **PKiKP 05 41 46.6 +0.4**
comp=Z,3.9nm,0.8s,baz=90,slow=3.0,SNR=4.3
WVOR Wild Horse Val 105.05 44 eP **Pdif 05 37 32.7 +0.8**
WVOR pmax pmax
comp=Z,27nm,1.5s
WVOR MLR MLR
comp=Z,3µm,20.0s
WVOR Wild Horse Val 105.05 44 ePdif **Pdif 05 37 32.7 +0.8**
comp=Z,27nm,1.5s
WVOR LR LR
comp=Z,3µm,20.0s
BMO Blue Mountains 105.08 41 eP **Pdif 05 37 32.6 +0.6**
BMO pmax pmax
comp=Z,8.0nm,1.2s
BMO MLR MLR
comp=Z,3µm,22.0s
BMO Blue Mountains 105.08 41 ePdif **Pdif 05 37 32.6 +0.6**
comp=Z,8.4nm,1.2s
BMO LR LR
comp=Z,3µm,22.0s
ABH Altenburg 105.09 324 eP **Pdif 05 37 32.5 +0.8**
SPAK Spaichingen-Ko 105.10 322 eP **Pdif 05 37 31.9 0.0**
CMB Columbia Colle 105.20 49 eP **Pdif 05 37 33.5 +0.9**
CMB pmax pmax
comp=Z,16nm,1.4s
CMB Columbia Colle 105.20 49 ePdif **Pdif 05 37 33.5 +0.9**
comp=Z,16nm,1.4s
BFO Black Forest 105.28 323 eP **Pdif 05 37 33.3 +0.7**
BFO Black Forest 105.28 323 ePdiff **Pdif 05 37 33.3 +0.7**
BFO Black Forest 105.28 323 ePdif **Pdif 05 37 33.1 +0.5**
comp=Z,23nm,1.6s
BFO LR LR
comp=Z,7µm,19.0s
WCN Washoe City 105.28 48 ePKPdf **PKiKP 05 41 45.0 -2.1**
A13A Flathead Natio 105.28 37⇓ P **Pdif 05 37 35.3 +2.6**
baz=105
A13A Flathead Natio 105.28 37⇑ P **PKiKP 05 41 48.6 +1.9**
baz=105
LANF Langenberg 105.32 323 eP **Pdif 05 37 33.2 +0.4**
LANF Langenberg 105.32 323 eP **Pdif 05 37 33.2 +0.4**
WDD Wield Dalam 105.35 309 PFAKE 05 42 00.0
WDD LR LR
comp=Z,2µm,20.0s
TUE Stuetta 105.40 320 ePdif **Pdif 05 37 31.9 -1.5**
comp=Z,16nm,1.2s
RUP Ruppelstein 105.45 324 eP **Pdif 05 37 33.6 +0.2**
RUP Ruppelstein 105.45 324 eP **Pdif 05 37 33.6 +0.2**
B13A Whitefish 105.49 37⇓ P **Pdif 05 37 35.8 +2.2**
baz=105,SNR=11
D12A Red Ives Fores 105.49 39⇓ P **Pdif 05 37 35.5 +1.8**
baz=105
BSMT Bassoo Peak 105.51 38 ePdif **Pdif 05 37 35.4 +1.5**
comp=Z,21nm,1.3s
WALA Waterton Lakes 105.53 37 ePdif **Pdif 05 37 34.1 +0.3**
comp=Z,1.0nm,1.3s
SNAA Sanae 105.59 195 ePP PP 05 41 55.5 -0.1
SNAA Sanae 105.59 195 eP **Pdif 05 37 34.9 +1.3**
SNAA Sanae 105.59 195 ePKPdf **PKiKP 05 41 47.2 +0.6**
SNAA PKKPbc **PKKPbc 05 53 12.8 -1.2**
SNAA Sanae 105.59 195 PKKPbc PKKPbc 05 53 12.8 -1.2
comp=Z,1.6nm,0.9s,baz=308,slow=2.0,SNR=6.0
SUR Sutherland 105.65 238 PFAKE 05 42 00.0
SUR LR LR
comp=Z,4µm,20.0s
MEM Membach 105.65 325 P **Pdif 05 37 35.4 +1.2**
MEM PKP **PKiKP 05 41 48.4 +1.2**
FELD Feldberg im Sc 105.67 322 eP **Pdif 05 37 34.7 +0.2**
C13A Hot Springs 105.72 38⇓ P **Pdif 05 37 36.3 +1.6**
baz=106,SNR=6.3
C13A Hot Springs 105.72 38⇓ P **PKiKP 05 41 48.7 +1.2**
baz=106
BEBN Eben Emael 105.75 326 P **Pdif 05 37 35.1 +0.5**
A14A Double T Ranch 105.86 36⇓ P **Pdif 05 37 37.0 +1.6**
baz=106,SNR=32
JTMT Jette 105.86 38 ePdif **Pdif 05 37 36.1 +0.7**
comp=Z,10nm,1.3s
CDF Champ du Feu 105.88 323 eP **Pdif 05 37 35.1 -0.3**
comp=Z,26nm,1.0s
CDF Champ du Feu 105.88 323 eP **Pdif 05 37 35.1 -0.3**
CDF pmax pmax
comp=Z,26nm,1.0s
CDF Champ du Feu 105.88 323 eP **Pdif 05 37 35.1 -0.3**
comp=Z,26nm,1.0s
YBMT Yellow Bay 105.98 38 ePdif **Pdif 05 37 37.4 +1.5**
comp=Z,13nm,1.3s
WLF Walferdange 106.00 324 P **Pdif 05 37 37.5 +1.8**
comp=Z,28nm,2.2s
WLF Walferdange 106.00 324 eP **Pdif 05 37 35.0 -0.7**
WLF pmax pmax
comp=Z,13nm,0.8s
WLF MLR MLR
comp=Z,6µm,20.0s
WLF Walferdange 106.00 324 ePdiff **Pdif 05 37 37.5 +1.8**
WLF Walferdange 106.00 324 ePdif **Pdif 05 37 35.0 -0.7**
comp=Z,13nm,0.8s
WLF LR LR
comp=Z,6µm,20.0s
D13A Huson 106.03 39⇑ P **Pdif 05 37 37.3 +1.3**
baz=106
ECH Echery 106.04 323 eP **Pdif 05 37 35.3 -0.7**
ECH pmax pmax
comp=Z,2.0nm,0.7s
ECH MLR MLR
comp=Z,6µm,19.0s
ECH Echery 106.04 323 ePdif **Pdif 05 37 35.3 -0.7**
comp=Z,1.9nm,0.7s
ECH LR LR
comp=Z,6µm,19.0s
ECH Echery 106.04 323 eP **Pdif 05 37 35.1 -0.9**
F12A Elk City 106.07 40⇑ P **Pdif 05 37 37.8 +1.4**
baz=106,SNR=12
BCLA Clavier 106.14 325 P **Pdif 05 37 36.1 -0.3**
comp=Z,29nm,2.3s
BCLA PKP **PKiKP 05 41 43.2 -4.9**
SWMT Swartz Lake 106.14 38 ePKPdf **PKiKP 05 41 50.7 +2.3**
BBS Basel-Blauen 106.14 322 eP **Pdif 05 37 36.2 -0.3**
BBS Basel-Blauen 106.14 322 eP **Pdif 05 37 36.2 -0.3**
C14A Swan Lake 106.18 38⇑ P **Pdif 05 37 37.4 +0.7**
baz=106
MOF Molkenrain 106.21 322 eP **Pdif 05 37 36.9 0.0**
MOF Molkenrain 106.21 322 eP **Pdif 05 37 36.9 0.0**
MOF Molkenrain 106.21 322 eP **Pdif 05 37 36.9 0.0**
B14A Marquette Ranc 106.21 37⇓ P **Pdif 05 37 39.3 +2.3**
baz=106,SNR=21
A15A Johnson Ranch, 106.26 36⇓ P **Pdif 05 37 39.0 +2.0**
baz=106,SNR=15
G12A Big Creek, Yel 106.28 41⇓ P **Pdif 05 37 38.2 +0.8**
baz=106
HINF Hinteralfeld 106.39 322 eP **Pdif 05 37 36.9 -0.7**
comp=Z,84nm,1.8s
HINF Hinteralfeld 106.39 322 eP **Pdif 05 37 36.9 -0.7**
HINF pmax pmax
comp=Z,84nm,1.8s
HINF Hinteralfeld 106.39 322 eP **Pdif 05 37 36.9 -0.7**
comp=Z,84nm,1.8s
MSO Missoula 106.46 39 ePKPdf 05 41 49.9
MSO LR LR
comp=Z,1µm,20.0s
MSO Missoula 106.46 39⇓ P **Pdif 05 37 37.9 -0.1**
baz=106
E13A Victor 106.47 39⇑ P **Pdif 05 37 39.1 +1.1**
baz=106
UCC Uccle 106.49 326 P **Pdif 05 37 38.4 +0.6**
MLAC Mammoth Lakes 106.50 49⇓ P **Pdif 05 37 39.8 +1.2**
baz=106
GIVF Givet 106.56 325 eP **Pdif 05 37 38.5 +0.3**
GIVF Givet 106.56 325 eP **Pdif 05 37 38.5 +0.3**
GIVF Givet 106.56 325 eP **Pdif 05 37 38.5 +0.3**
SLMT Seeley Lake 106.56 38 ePKPdf **PKiKP 05 41 47.4 -1.8**
PKM Peak Mountain 106.58 52⇓ P **Pdif 05 37 41.7 +2.7**
baz=107
LOMF Lomont 106.61 322 eP **Pdif 05 37 38.6 0.0**
LOMF Lomont 106.61 322 eP **Pdif 05 37 38.6 0.0**
LOMF Lomont 106.61 322 eP **Pdif 05 37 38.6 0.0**
MFID Camas Ranch 106.61 42 ePdif **Pdif 05 37 39.3 +0.6**
comp=Z,9.6nm,1.0s
MFID Camas Ranch 106.61 42⇓ P **Pdif 05 37 40.2 +1.4**
baz=107
HAU Haudompre 106.62 323 eP **Pdif 05 37 38.1 -0.5**
comp=Z,16nm,1.0s
HAU eR
comp=Z,7µm,19.5s
HAU Haudompre 106.62 323 eP **Pdif 05 37 38.1 -0.5**
HAU pmax pmax
comp=Z,16nm,1.0s
HAU Haudompre 106.62 323 eP **Pdif 05 37 38.1 -0.5**
comp=Z,16nm,1.0s
D14A Greenough 106.62 38⇓ P **Pdif 05 37 39.8 +1.1**
baz=107,SNR=6.0
NVAR Mina Array Bea 106.64 48 Pdif **Pdif 05 37 39.5 +0.4**
NVAR PKKPbc **PKKPbc 05 53 09.2 -0.7**
NVAR PKKPab **PKKPab 05 53 24.9 -0.4**
NVAR Mina Array Bea 106.64 48 Pdiff **Pdif 05 37 39.6 +0.4**
comp=Z,5.6nm,0.8s,baz=271,slow=5.2,SNR=31
NVAR PKKPbc **PKKPbc 05 53 09.2 -0.7**
comp=Z,1.6nm,0.7s,baz=138,slow=4.0,SNR=9.1
NVAR PKKPab **PKKPab 05 53 24.9 -0.4**
comp=Z,2.9nm,0.7s,baz=132,slow=5.0,SNR=8.9
F13A Darby 106.65 40⇑ P **Pdif 05 37 39.4 +0.5**
baz=107
B15A Bradely Ranch, 106.66 37⇓ P **Pdif 05 37 40.9 +2.1**
baz=107,SNR=12
B15A Bradely Ranch, 106.66 37⇑ P **PKiKP 05 41 50.0 +0.8**
baz=107
SNF Seneffe 106.67 326 P **Pdif 05 37 40.0 +1.3**
SNF PKP **PKiKP 05 41 50.5 +1.5**
DOU Dourbes 106.69 325 P **Pdif 05 37 39.8 +1.0**
comp=Z,9.9nm,1.3s
DOU PKP **PKiKP 05 41 50.8 +1.7**
THEF They Montfort 106.74 323 eP **Pdif 05 37 39.2 +0.1**
THEF They Montfort 106.74 323 eP **Pdif 05 37 39.2 +0.1**
THEF They Montfort 106.74 323 eP **Pdif 05 37 39.2 +0.1**
BMN Battle Mountai 106.74 46 PFAKE 05 42 00.0
BMN LR LR
comp=Z,3µm,22.0s
PAGF Fort de Pagny 106.75 324 eP **Pdif 05 37 39.1 0.0**
comp=Z,2.8nm,0.7s
PAGF Fort de Pagny 106.75 324 eP **Pdif 05 37 39.1 0.0**
comp=Z,2.8nm,0.7s
H12A Diamond D Ranc 106.81 41⇑ P **Pdif 05 37 38.7 -1.0**
baz=107
CHMT Chamberlain Mo 106.85 38 ePdif **Pdif 05 37 39.6 -0.3**
comp=Z,8.4nm,1.5s
CHMT ePKPdf **PKiKP 05 41 50.8 +1.0**

VES	Vestal, Richgr	106.87	51	⇓P		Pdif	05 37 42.7	+2.8		
	baz=107									
C15A	Salmond Ranch,	106.87	37	⇑P		Pdif	05 37 41.9	+2.0		
	baz=107,SNR=11									
C15A	Salmond Ranch,	106.87	37	⇑P		PKiKP	05 41 50.5	+0.8		
	baz=107									
E14A	Clinton	106.92	39	⇑P		Pdif	05 37 41.6	+1.4		
	baz=107									
BAIF	Baives	106.93	325	*e*P		Pdif	05 37 40.2	+0.4		
	comp=Z,102nm,1.8s									
BAIF	Baives	106.93	325	*e*P		Pdif	05 37 40.2	+0.4		
BAIF				pmax		pmax				
	comp=Z,102nm,1.8s									
BAIF	Baives	106.93	325	*e*P		Pdif	05 37 40.2	+0.4		
	comp=Z,102nm,1.8s									
I12A	Atlanta	106.93	42	⇓P		Pdif	05 37 41.2	+0.9		
	baz=107									
A16A	West Butte Ran	106.94	36	⇑P		Pdif	05 37 41.9	+1.8		
	baz=107,SNR=8.8									
G13A	Cobalt	107.00	40	⇓P		Pdif	05 37 41.9	+1.4		
	baz=107,SNR=6.8									
B16A	M & M Farms, S	107.12	36	⇓P		Pdif	05 37 42.8	+1.9		
	baz=107,SNR=5.6									
PGF	Pioggiola	107.16	317	*e*P		Pdif	05 37 40.7	-0.5		
	comp=Z,18nm,1.0s									
PGF	Pioggiola	107.16	317	*e*P		Pdif	05 37 40.7	-0.5		
PGF				pmax		pmax				
	comp=Z,18nm,1.0s									
PGF	Pioggiola	107.16	317	*e*P		Pdif	05 37 40.7	-0.5		
	comp=Z,18nm,1.0s									
MEZF	Maizieres J'vi	107.17	324	*e*P		Pdif	05 37 41.1	+0.1		
MEZF	Maizieres J'vi	107.17	324	*e*P		Pdif	05 37 41.1	+0.1		
H13A	Challis	107.20	41	⇑P		Pdif	05 37 43.0	+1.6		
	baz=107,SNR=11									
VNA2	Neumayer--Watz	107.21	194	*e*PP		PP	05 42 08.9	+1.6		
D15A	Lincoln	107.25	38	⇓P		Pdif	05 37 45.1	+3.5		
	baz=107									
SFTF	Sexfontaines	107.31	323	*e*P		Pdif	05 37 41.4	-0.2		
	comp=Z,29nm,1.2s									
SFTF	Sexfontaines	107.31	323	*e*P		Pdif	05 37 41.4	-0.2		
	comp=Z,29nm,1.3s									
BORG	Borgarnes	107.37	346		PFAKE		05 42 00.0			
BORG					LR	LR				
	comp=Z,6μm,21.0s									
C16A	Fuhringer Ranc	107.38	37	⇓P		Pdif	05 37 44.1	+2.0		
	baz=107,SNR=7.6									
CABF	La Chapelle	107.39	322	*e*P		Pdif	05 37 41.9	-0.2		
	comp=Z,67nm,1.8s									
CABF	La Chapelle	107.39	322	*e*P		Pdif	05 37 41.9	-0.2		
CABF				pmax		pmax				
	comp=Z,67nm,1.8s									
CABF	La Chapelle	107.39	322	*e*P		Pdif	05 37 41.9	-0.2		
	comp=Z,67nm,1.8s									
G14A	Jackson	107.43	40	⇑P		Pdif	05 37 44.4	+1.8		
	baz=107									
E15A	Deer Lodge	107.44	39	⇑P		Pdif	05 37 44.3	+1.9		
	baz=107,SNR=7.2									
LPG	La Plagne	107.45	320	*e*P		Pdif	05 37 42.6	-0.1		
	comp=Z,15nm,0.8s									
LPG	La Plagne	107.45	320	*e*P		Pdif	05 37 42.6	-0.1		
LPG				pmax		pmax				
	comp=Z,15nm,0.8s									
LPG	La Plagne	107.45	320	*e*P		Pdif	05 37 42.6	-0.1		
	comp=Z,15nm,0.8s									
LPL	La Plagne	107.46	320	*e*P		Pdif	05 37 42.5	-0.1		
	comp=Z,56nm,1.4s									
LPL	La Plagne	107.46	320	*e*P		Pdif	05 37 42.5	-0.1		
LPL				pmax		pmax				
	comp=Z,56nm,1.4s									
LPL	La Plagne	107.46	320	*e*P		Pdif	05 37 42.5	-0.1		
	comp=Z,56nm,1.4s									
HLID	Hailey	107.50	42	*e*Pdif		Pdif	05 37 44.0	+1.2		
	comp=Z,9.2nm,1.3s									
HLID				LR		LR				
	comp=Z,2μm,21.0s									
HLID	Hailey	107.50	42	⇑P		Pdif	05 37 44.4	+1.6		
	baz=107,SNR=8.0									
VNA3	Neumayer Olymp	107.54	194	*e*PP		PP	05 42 08.6	-1.2		
I13A	Wildhorse Cree	107.56	41	⇓P		Pdif	05 37 44.7	+1.6		
	baz=108,SNR=9.9									
TPH	Tonopah	107.56	48		PFAKE		05 42 00.0			
TPH					LR	LR				
	comp=Z,2μm,21.0s									
BNI	Bardonecchia	107.69	320	*e*PKPdf		PKiKP	05 41 50.6	-0.7		
BNI					LR	LR				
	comp=Z,7μm,20.0s									
SBF	Sospel	107.69	319	*e*P		Pdif	05 37 42.4	-1.1		
	comp=Z,27nm,0.9s									
SBF	Sospel	107.69	319	*e*P		Pdif	05 37 42.4	-1.1		
SBF				pmax		pmax				
	comp=Z,27nm,0.9s									
SBF	Sospel	107.69	319	*e*P		Pdif	05 37 42.4	-1.1		
	comp=Z,27nm,0.9s									
J13A	Cove Ranch, Pi	107.73	42	⇑P		Pdif	05 37 46.3	+2.5		
	baz=108,SNR=5.5									
J13A	Cove Ranch, Pi	107.73	42	⇓P		PKiKP	05 41 52.6	+1.2		
	baz=108									
H14A	Leadore	107.76	41	⇑P		Pdif	05 37 45.1	+1.1		
	baz=108									
F15A	Butte	107.79	39	⇑P		Pdif	05 37 45.8	+1.7		
	baz=108									
HRY	Holter Researc	107.82	38	*e*Pdif		Pdif	05 37 45.8	+1.7		
	comp=Z,4.2nm,0.7s									
DAC	Darwin (Calif)	107.88	50		PFAKE		05 42 00.0			
DAC					LR	LR				
	comp=Z,10μm,22.0s									
EKA	Eskdalemuir Ar	107.88	333		Pdif	Pdif	05 37 44.2	+0.3		
EKA					PKiKP	PKiKP	05 41 52.5	+1.4		
EKA					PKKPbc	PKKPbc	05 53 04.3	-2.0		
EKA	Eskdalemuir Ar	107.88	333		Pdiff	Pdif	05 37 44.2	+0.3		
	comp=Z,1.3nm,0.7s,baz=51,slow=4.9,SNR=7.6									
EKA					PKiKP	PKiKP	05 41 52.5	+1.4		
	comp=Z,1.6nm,0.6s,baz=28,slow=2.9,SNR=9.9									
EKA					PKKPbc	PKKPbc	05 53 04.3	-2.0		
	comp=Z,2.2nm,0.9s,baz=236,slow=3.6,SNR=5.3									
ESK	Eskdalemuir	107.91	333		PFAKE		05 42 00.0			
ESK					LR	LR				
	comp=Z,7μm,21.0s									
DLMT	Dillon	107.94	40	*e*Pdif		Pdif	05 37 45.2	+0.5		
	comp=Z,5.9nm,1.1s									
I14A	Mackay	107.99	41	⇑P		Pdif	05 37 47.6	+2.6		
	baz=108									
E16A	East Helena	108.00	38	⇑P		Pdif	05 37 48.7	+3.8		
	baz=108,SNR=13									
MPMC	Manual Prospec	108.03	50	⇑P		Pdif	05 37 47.8	+2.5		
	baz=108,SNR=7.6									
VSL	Villasalto	108.03	314		PFAKE		05 42 00.0			
VSL					LR	LR				
	comp=Z,3μm,22.0s									
ELK	Elko	108.03	45	*e*Pdif		Pdif	05 37 46.8	+1.5		
ELK				*e*PKPdf		PKiKP	05 41 52.7	+0.4		
C17A	Wharram Farm,	108.05	37	⇑P		Pdif	05 37 49.3	+4.3		
	baz=108									
C17A	Wharram Farm,	108.05	37	⇓P		PKiKP	05 41 53.1	+1.3		
	baz=108									
G15A	Dillon	108.09	40	⇓P		Pdif	05 37 48.6	+3.2		
	baz=108									
J14A	Carey	108.19	42	⇑P		Pdif	05 37 48.4	+2.5		
	baz=108,SNR=5.3									
H15A	Lima	108.22	40	⇓P		Pdif	05 37 49.7	+3.6		
	baz=108									
ORIF	Oris-en-Rattie	108.26	320	*e*P		Pdif	05 37 45.7	-0.3		
	comp=Z,14nm,0.9s									
ORIF				*e*R						
	comp=Z,9μm,22.0s									
ORIF	Oris-en-Rattie	108.26	320	*e*P		Pdif	05 37 45.7	-0.3		
ORIF				pmax		pmax				
	comp=Z,15nm,0.9s									
ORIF	Oris-en-Rattie	108.26	320	*e*P		Pdif	05 37 45.7	-0.3		
	comp=Z,14nm,0.9s									
D17A	Six Diamond Ra	108.32	37	⇓P		Pdif	05 37 50.4	+4.1		
	baz=108,SNR=7.6									
FRF	La Foret Royal	108.33	319	*e*P		Pdif	05 37 45.6	-0.7		
	comp=Z,76nm,1.7s									
FRF	La Foret Royal	108.33	319	*e*P		Pdif	05 37 45.6	-0.7		
FRF				pmax		pmax				
	comp=Z,76nm,1.7s									
FRF	La Foret Royal	108.33	319	*e*P		Pdif	05 37 45.6	-0.7		
	comp=Z,76nm,1.7s									
BOZ	Bozeman (W)	108.42	39		PFAKE		05 42 00.0			
BOZ					LR	LR				
	comp=Z,2μm,21.0s									
BOZ	Bozeman (W)	108.42	39	⇓P		Pdif	05 37 50.4	+3.6		
	baz=108									
LOR	Lormes	108.45	323	*e*P		Pdif	05 37 46.4	-0.3		
	comp=Z,11nm,0.8s									
LOR				*e*R						
	comp=Z,7μm,19.8s									
LOR	Lormes	108.45	323	*e*P		Pdif	05 37 46.4	-0.3		
	comp=Z,11nm,0.8s									
EGMT	Eagleton	108.46	36	*e*Pdif		Pdif	05 37 48.1	+1.2		
	comp=Z,14nm,1.4s									
EGMT				*e*PKPdf		PKiKP	05 41 53.6	+1.0		
EGMT					LR	LR				
	comp=Z,2μm,21.0s									
EGMT	Eagleton	108.46	36	⇓P		PKiKP	05 41 53.3	+0.7		
	baz=108									
BFSC	Mount Baldy Ra	108.48	52	⇑P		Pdif	05 37 58.6	+11		
	baz=108									
G16A	Moss Hill, Enn	108.50	39	⇑P		Pdif	05 37 49.8	+2.6		
	baz=108									
LMR	La Mourre	108.52	318	*e*P		Pdif	05 37 46.9	-0.2		
	comp=Z,63nm,1.7s									
LMR	La Mourre	108.52	318	*e*P		Pdif	05 37 46.9	-0.2		
LMR				pmax		pmax				
	comp=Z,63nm,1.7s									
LMR	La Mourre	108.52	318	*e*P		Pdif	05 37 46.9	-0.2		
	comp=Z,63nm,1.7s									
E17A	Martinsdale	108.53	38	⇓P		Pdif	05 37 51.7	+4.3		
	baz=108									
I15A	Monteview	108.59	41	⇓P		Pdif	05 37 50.5	+2.9		
	baz=108									
R11A	Troy Canyon, C	108.67	47	⇑P		Pdif	05 37 50.7	+2.6		
	baz=109,SNR=7.8									
K14A	Jones Ranch, D	108.74	42	⇓P		Pdif	05 37 51.0	+2.7		
	baz=109									
SMF	Signal de Mont	108.75	322	*e*P		Pdif	05 37 47.7	-0.4		
	comp=Z,22nm,1.0s									
SMF	Signal de Mont	108.75	322	*e*P		Pdif	05 37 47.7	-0.4		
SMF				pmax		pmax				
	comp=Z,22nm,1.0s									
SMF	Signal de Mont	108.75	322	*e*P		Pdif	05 37 47.7	-0.4		
	comp=Z,22nm,1.0s									
SSF	Saint Saulge	108.76	323	*e*P		Pdif	05 37 47.9	-0.2		
	comp=Z,8.1nm,0.9s									
SSF	Saint Saulge	108.76	323	*e*P		Pdif	05 37 47.9	-0.2		
SSF				pmax		pmax				
	comp=Z,8.0nm,0.9s									
SSF	Saint Saulge	108.76	323	*e*P		Pdif	05 37 47.9	-0.2		
	comp=Z,8.1nm,0.9s									
SMRF	Simiane la Rot	108.86	319	*e*P		Pdif	05 37 49.0	+0.3		
	comp=Z,46nm,1.4s									
SMRF	Simiane la Rot	108.86	319	*e*P		Pdif	05 37 49.0	+0.3		
	comp=Z,46nm,1.4s									
FFC	Flin Flon	108.88	27	*e*P		Pdif	05 37 48.7	+0.3		
FFC				pmax		pmax				
	comp=Z,3.0nm,0.8s									
FFC				MLR		MLR				
	comp=Z,3μm,22.0s									
FFC	Flin Flon	108.88	27	*e*Pdif		Pdif	05 37 48.7	+0.3		
	comp=Z,2.6nm,0.8s									
FFC				LR		LR				
	comp=Z,3μm,22.0s									
F17A	Fitzpatrick Pl	108.91	38	⇓P		Pdif	05 37 53.4	+4.4		
	baz=109									
SSB	Saint Sauveur	108.95	321		PFAKE		05 42 10.0			
SSB					LR	LR				
	comp=Z,4μm,20.0s									
AVF	Avril sur Loir	108.98	323	*e*P		Pdif	05 37 48.7	-0.4		
	comp=Z,64nm,1.7s									
AVF	Avril sur Loir	108.98	323	*e*P		Pdif	05 37 48.7	-0.4		
AVF				pmax		pmax				
	comp=Z,64nm,1.7s									
AVF	Avril sur Loir	108.98	323	*e*P		Pdif	05 37 48.7	-0.4		
	comp=Z,64nm,1.7s									
SFJD	Kangerlussuaq	109.02	359		PFAKE		05 42 00.0			
SFJD					LR	LR				
	comp=Z,4μm,22.0s									
SFJD	Kangerlussuaq	109.02	359	*i* P		Pdif	05 37 49.7	+0.9		
SFJD										
	comp=Z,3μm,23.0s									
VIVF	Saint-Julien-l	109.06	320	*e*P		Pdif	05 37 49.0	-0.5		
	comp=Z,11nm,1.0s									
VIVF	Saint-Julien-l	109.06	320	*e*P		Pdif	05 37 49.0	-0.5		
VIVF	Saint-Julien-l	109.06	320	*e*P		Pdif	05 37 49.0	-0.5		
E18A	Harlowton	109.06	38	⇑P		Pdif	05 37 54.3	+4.7		
	baz=109,SNR=12									
H16A	Russell Place,	109.08	40	⇓P		Pdif	05 37 52.9	+3.0		
	baz=109,SNR=5.1									
G17A	Pierce Place,	109.13	39	⇑P		Pdif	05 37 56.0	+6.1		
	baz=109									
I16A	Newdale	109.30	41	⇑P		Pdif	05 37 55.2	+4.4		
	baz=109									
KEST	Kesra	109.39	310	PKiKP		PKiKP	05 41 55.0	+0.3		
KEST				PP		PP	05 42 24.2	-0.2		
KEST	Kesra	109.39	310	PKiKP		PKiKP	05 41 55.0	+0.3		
	comp=Z,1.9nm,1.1s,baz=42,slow=4.4,SNR=3.0									
KEST				PP		PP	05 42 24.2	-0.2		
	comp=Z,2.8nm,0.8s,baz=87,slow=6.4,SNR=5.3									
TSUM	Tsumeb	109.44	251		PFAKE		05 42 10.0			
TSUM					LR	LR				
	comp=Z,4μm,21.0s									
J16A	Bone	109.48	41	⇑P		Pdif	05 37 54.7	+3.1		
	baz=109									
F18A	Big Timber	109.49	38	⇑P		Pdif	05 37 57.1	+5.6		
	baz=109									
F18A	Big Timber	109.49	38	⇓P		PKiKP	05 41 56.3	+1.6		
	baz=109									
GCMT	Greycliff	109.58	38	*e*PKPdf		PKiKP	05 41 57.4	+2.6		
PFO	Pinyon Flat Ob	109.63	52	PFAKE			05 42 10.0			
PFO					LR	LR				
	comp=Z,4μm,19.0s									
C20A	Veseth Ranch,	109.64	36	⇑P		PKiKP	05 41 55.4	+0.6		
	baz=110									
IMW	Indian Meadow	109.64	40	*e*Pdif		Pdif	05 37 55.0	+2.5		
H17A	Grant Village	109.65	40	⇓P		Pdif	05 37 57.8	+5.4		
	baz=110									
K16A	Soda Springs	109.68	42	⇑P		Pdif	05 37 56.9	+4.3		
	baz=110									
LKWY	Lake	109.69	40		PFAKE		05 42 10.0			
LKWY					LR	LR				
	comp=Z,3μm,21.0s									
E19A	Rath Farm, Rou	109.79	37	⇓P		PKiKP	05 41 57.3	+2.2		
	baz=110									
BELC	Belle Mtn. Jos	109.86	52	⇓P		PKiKP	05 41 56.6	+0.9		
	baz=110									
TCF	Toulx Ste Croi	109.92	323	*e*P		Pdif	05 37 53.3	0.0		
	comp=Z,8.5nm,0.9s									
TCF	Toulx Ste Croi	109.92	323	*e*P		Pdif	05 37 53.3	0.0		
TCF	Toulx Ste Croi	109.92	323	*e*P		Pdif	05 37 53.3	0.0		
DUG	Dugway	109.95	45	*e*P		Pdif	05 37 54.7	+1.0		
DUG					MLR	MLR				
	comp=Z,2μm,19.0s									
DUG	Dugway	109.95	45	*e*Pdif		Pdif	05 37 54.7	+1.0		
DUG					LR	LR				
	comp=Z,2μm,19.0s									
SNOW	Snow King Moun	109.95	41	*e*PKPdf		PKiKP	05 41 57.0	+1.2		
F19A	Roth Farm, Mol	109.99	38	⇑P		PKiKP	05 41 57.2	+1.6		
	baz=110									
AHID	Auburn Hatcher	110.04	42		PFAKE		05 42 10.0			
AHID					LR	LR				
	comp=Z,2μm,20.0s									
C21A	Desert Coulee	110.11	35	⇓P		PKiKP	05 41 57.1	+1.5		
	baz=110									
RLMT	Red Lodge	110.14	39		PFAKE		05 42 10.0			
RLMT					LR	LR				
	comp=Z,2μm,20.0s									
HWUT	Hardware Ranch	110.22	43		PFAKE		05 42 10.0			
HWUT					LR	LR				
	comp=Z,4μm,22.0s									
ARUT	Antelope Range	110.45	47	*e*P		Pdif	05 37 50.0	-6.0		
ARUT	Antelope Range	110.45	47	*e*Pdif		Pdif	05 37 50.0	-6.0		
H19A	Powell	110.53	39	⇓P		PKiKP	05 41 57.6	+0.9		
	baz=110									
D21A	La Casta Ranch	110.56	36	⇓P		PKiKP	05 41 57.3	+0.7		
	baz=110									
CAF	Calvac	110.67	321	*e*P		Pdif	05 37 57.1	+0.4		
	comp=Z,23nm,1.5s									
CAF	Calvac	110.67	321	*e*P		Pdif	05 37 57.1	+0.4		
CAF	Calvac	110.67	321	*e*P		Pdif	05 37 57.1	+0.4		
JLU	Jordanelle	110.73	44	Pdif		Pdif	05 37 57.6	+0.2		
G20A	Bridger	110.75	38	⇑P		PKiKP	05 41 58.5	+1.5		
	baz=111									
RJF	Les Rejaudoux	110.82	322	*e*P		Pdif	05 37 57.7	+0.4		
	comp=Z,20nm,1.3s									
RJF				*e*R						
	comp=Z,6μm,20.0s									
RJF	Les Rejaudoux	110.82	322	*e*P		Pdif	05 37 57.7	+0.4		
RJF	Les Rejaudoux	110.82	322	*e*P		Pdif	05 37 57.7	+0.4		
I19A	Meeteetse	110.83	40	⇓P		PKiKP	05 41 58.4	+1.1		
	baz=111									
M17A	Scullys Gap (B	110.89	43	⇑P		PKiKP	05 41 58.4	+0.8		
	baz=111									
B23A	Brockton	110.97	34	⇑P		PKiKP	05 41 58.9	+1.7		
	baz=111									
D22A	Cohagen	110.99	36	⇓P		PKiKP	05 41 58.9	+1.5		
	baz=111									
BW06	Boulder Array	111.05	41		PFAKE		05 42 10.0			
BW06					LR	LR				
	comp=Z,4μm,22.0s									
PDAR	Pinedale Array	111.05	41		Pdif	Pdif	05 38 00.3	+1.6		
PDAR					PKKPbc	PKKPbc	05 52 55.5	-0.6		
PDAR					PKKPab	PKKPab	05 53 04.5	-1.3		
PDAR	Pinedale Array	111.05	41		Pdiff	Pdif	05 38 00.3	+1.6		
	comp=Z,0.6nm,0.8s,baz=214,slow=3.1,SNR=4.2									
PDAR					PKKPbc	PKKPbc	05 52 55.5	-0.6		
	comp=Z,0.9nm,0.6s,baz=121,slow=6.5,SNR=5.7									
PDAR					PKKPab	PKKPab	05 53 04.5	-1.3		
	comp=Z,9.3nm,0.9s,baz=120,slow=4.5,SNR=15									
MVU	Marysvale	111.06	46		PFAKE		05 42 10.0			
MVU					LR	LR				
	comp=Z,3μm,22.0s									
MSU	Marysvale	111.08	46	*e*P		Pdif	05 38 00.7	+1.8		
MSU	Marysvale	111.08	46	*e*Pdif		Pdif	05 38 00.7	+1.8		
MSU				*e*PKPdf		PKiKP	05 42 00.0	+2.0		
L18A	Fontenelle, Gr	111.11	42	⇓P		PKiKP	05 41 59.1	+1.1		
	baz=111									
MFF	Saint Martin d	111.17	324	*e*P		Pdif	05 37 59.1	+0.3		
	comp=Z,76nm,2.0s									
MFF	Saint Martin d	111.17	324	*e*P		Pdif	05 37 59.1	+0.3		
MFF	Saint Martin d	111.17	324	*e*P		Pdif	05 37 59.1	+0.3		
C23A	Lambert	111.22	35	⇑P		PKiKP	05 41 59.5	+1.7		
	baz=111									
H20A	Greybull	111.24	39	⇓P		PKiKP	05 41 58.8	+0.8		
	baz=111									
A24A	Westby	111.26	33	⇑P		PKiKP	05 41 59.3	+1.5		
	baz=111									
MTLF	Montolieu	111.32	320	*e*P		Pdif	05 37 59.3	-0.3		
MTLF	Montolieu	111.32	320	*e*P		Pdif	05 37 59.3	-0.3		
MTLF	Montolieu	111.32	320	*e*P		Pdif	05 37 59.3	-0.3		
DGMT	Dagmar	111.41	34	*e*PKPdf		PKiKP	05 41 58.1	0.0		
DGMT					LR	LR				
	comp=Z,2μm,20.0s									
DGMT	Dagmar	111.41	34	⇓P		PKiKP	05 41 59.6	+1.5		
	baz=111									
I20A	Worland	111.42	39	⇑P		PKiKP	05 41 59.4	+1.0		
	baz=111									
K19A	Absolon Red Bu	111.49	41	⇓P		PKiKP	05 41 59.4	+0.8		
	baz=111									
D23A	Lindsay	111.54	35	⇑P		PKiKP	05 41 59.7	+1.3		
	baz=111									
SGMF	Saint Gilles	111.66	326	*e*P		Pdif	05 38 00.9	0.0		
	comp=Z,58nm,1.5s									
SGMF	Saint Gilles	111.66	326	*e*P		Pdif	05 38 00.9	0.0		
SGMF	Saint Gilles	111.66	326	*e*P		Pdif	05 38 00.9	0.0		
J20A	Shoshoni	111.73	40	⇓P		PKiKP	05 41 59.6	+0.6		
	baz=112									
C24A	Savage	111.80	35	⇓P		PKiKP	05 42 00.2	+1.3		
	baz=112									
E23A	Ismay	111.84	36	⇓P		PKiKP	05 42 00.2	+1.2		
	baz=112									
G22A	Birney	111.92	38	⇓P		PKiKP	05 42 00.2	+0.9		
	baz=112									
I21A	Big Trails, Te	112.01	39	⇑P		PKiKP	05 42 00.2	+0.6		
	baz=112									
J21A	Lysite	112.14	40	⇑P		PKiKP	05 42 00.4	+0.6		
	baz=112									
F23A	Volborg	112.20	37	⇑P		PKiKP	05 42 00.7	+0.9		
	baz=112									
L20A	Wamsutter	112.20	41	⇑P		PKiKP	05 42 00.7	+0.7		
	baz=112									
H22A	Clearmont	112.21	38	⇑P		PKiKP	05 42 00.2	+0.3		
	baz=112									
G23A	Biddle	112.48	37	⇓P		PKiKP	05 42 00.7	+0.4		
	baz=112									
I22A	9 Mile Ranch,	112.48	39	⇓P		PKiKP	05 42 01.2	+0.8		
	baz=112									
K21A	Alcova	112.61	40	⇑P		PKiKP	05 42 01.1	+0.3		
	baz=112									
EPF	Esparros	112.67	320	*e*P		Pdif	05 38 06.5	+0.8		
	comp=Z,19nm,1.4s									
EPF	Esparros	112.67	320	*e*P		Pdif	05 38 06.5	+0.8		
EPF	Esparros	112.67	320	*e*P		Pdif	05 38 06.5	+0.8		
F24A	Ekalaka	112.70	36	⇑P		PKiKP	05 42 01.2	+0.5		
	baz=113									
J22A	Midwest	112.72	39	⇓P		PKiKP	05 42 00.8	-0.1		
	baz=113									
WUAZ	Wupatki	112.86	49		PFAKE		05 42 10.0			
WUAZ					LR	LR				
	comp=Z,3μm,22.0s									
L21A	Rawlins	112.86	41	⇓P		PKiKP	05 42 01.3	0.0		
	baz=113			

TAM MLR MLR
comp=Z,2µm,21.0s
TAM Tamanrasset 116.72 298 ePKPdf **PKPdf** 05 42 10.6 +1.5
TAM LR LR
comp=Z,2µm,21.0s
ANMO Albuquerque 116.75 47 PFAKE 05 42 20.0 +11
ANMO LR LR
comp=Z,2µm,19.0s
R25A Fountain Ranch 116.79 43 ⇓P **PKPdf** 05 42 09.5 +0.6
baz=117
Y22A Socorro 116.82 49 ⇓P **PKPdf** 05 42 09.8 +0.7
baz=117
OGNE Ogallala 116.83 40 PFAKE 05 42 20.0 +11
OGNE LR LR
comp=Z,3µm,21.0s
LPM Los Pinos Moun 116.90 48 ePKPdf **PKPdf** 05 42 10.0 +0.8
Q26A Hugo 116.92 42 ⇑P **PKPdf** 05 42 09.5 +0.5
baz=117
O27A Beecher Island 116.94 41 ⇑P **PKPdf** 05 42 10.0 +1.0
baz=117
X23A Hourglass Bar 117.11 48 ⇑P **PKPdf** 05 42 10.2 +0.6
baz=117
ESDC Sonseca Array 117.17 319 PKP **PKPdf** 05 42 09.5 +0.1
ESDC PP **PP** 05 43 19.5 +0.1
ESDC PKKPbc **PKKPbc** 05 52 35.1 +0.2
ESDC Sonseca Array 117.17 319 PKP **PKPdf** 05 42 09.5 +0.1
comp=Z,2.7nm,0.8s,baz=20,slow=2.1,SNR=16
ESDC PP **PP** 05 43 19.5 +0.1
comp=Z,2.4nm,0.9s,baz=43,slow=7.4,SNR=3.3
ESDC PKKPbc **PKKPbc** 05 52 35.1 +0.2
comp=Z,1.3nm,0.8s,baz=262,slow=3.2,SNR=4.5
V24A Rampart Ranch, 117.26 46 ⇓P **PKPdf** 05 42 10.4 +0.4
baz=117
R26A Arlington 117.28 43 ⇑P **PKPdf** 05 42 10.5 +0.7
baz=117
122A Conniff Cattle 117.32 50 ⇓P **PKPdf** 05 42 11.2 +1.2
baz=117
PAB San Pablo 117.49 319 ePKIKP **PKPdf** 05 42 09.8 -0.3
PAB MLR MLR
comp=Z,5µm,20.0s
PAB San Pablo 117.49 319 ePKPdf **PKPdf** 05 42 09.8 -0.3
PAB LR LR
comp=Z,5µm,20.0s
U25A Circle Dot Ran 117.55 45 ⇓P **PKPdf** 05 42 11.0 +0.6
baz=118
V25A Rancho No Teng 117.67 46 ⇓P **PKPdf** 05 42 10.8 +0.1
baz=118
T26A Comanche Natio 117.75 44 ⇑P **PKPdf** 05 42 11.3 +0.5
baz=118
PBRG Braganca 117.76 322 ePKPdf **PKPdf** 05 42 11.5 +1.0
U26A Atchley Ranch, 118.02 45 ⇑P **PKPdf** 05 42 12.0 +0.7
baz=118
W25A X Bar L Ranch, 118.08 46 ⇑P **PKPdf** 05 42 11.5 +0.1
baz=118
EYMN Ely 118.28 28 PFAKE 05 42 20.0 +8.7
EYMN LR LR
comp=Z,3µm,22.0s
V26A Tequesquite Ra 118.29 45 ⇑P **PKPdf** 05 42 12.0 +0.2
baz=118
MVO Moncorvo 118.30 322 ePKPdf **PKPdf** 05 42 10.9 -0.7
MVO Moncorvo 118.30 322 ePP PP 05 43 27.1 0.0
MVO eSS SS 05 59 57.9 +17
MVO eLQ LQ 06 18 36.5
MVO eLR LR 06 25 55.4
comp=Z,6µm,20.0s
ECSD EROS Data Cent 118.46 34 ePKPdf **PKPdf** 05 42 11.7 0.0
ECSD LR LR
comp=Z,2µm,20.0s
124A Stringfield Ra 118.49 49 ⇓P **PKPdf** 05 42 12.7 +0.3
baz=118
Y25A Mesa, Roswell 118.51 48 ⇓P **PKPdf** 05 42 12.6 +0.4
baz=118
PGAV Gavieira, Arco 118.59 323 ePKPdf **PKPdf** 05 42 12.8 +0.7
PGAV Gavieira, Arco 118.59 323 ePP PP 05 43 29.6 +0.5
PGAV eSS SS 06 00 11.3 +27
PGAV eLQ LQ 06 19 21.8
PGAV eLR LR 06 23 35.1
comp=Z,5µm,20.0s
PCAB Cabril 118.60 323 ePKPdf **PKPdf** 05 42 13.8 +1.7
W26A Owens Ranch, T 118.64 46 ⇓P **PKPdf** 05 42 13.1 +0.6
baz=119
POLO Lamas de Olo 118.65 322 ePKPdf **PKPdf** 05 42 13.9 +1.6
U27A Thompson Grove 118.66 44 ⇓P **PKPdf** 05 42 13.2 +0.8
baz=119
PVRL Vila Real 118.66 322 ePKPdf **PKPdf** 05 42 14.0 +1.8
Z25A Roswell 118.79 48 ⇓P **PKPdf** 05 42 13.3 +0.5
baz=119
X26A CR and CF Fran 118.86 47 ⇓P **PKPdf** 05 42 13.4 +0.4
baz=119
PMSA Palmer Station 118.97 175 PFAKE 05 42 20.0 +8.0
PMSA LR LR
comp=Z,2µm,19.0s
BGNE Belgrade 118.98 37 ⇑P **PKPdf** 05 42 13.1 +0.3
baz=119
MNTX Cornudas Mount 118.99 50 PFAKE 05 42 20.0 +6.9
MNTX LR LR
comp=Z,2µm,20.0s
324A Moseley Ranch, 119.02 51 ⇑P **PKPdf** 05 42 14.2 +0.8
baz=119
MTE Manteigas 119.06 321 ePKPdf **PKPdf** 05 42 14.6 +1.5
MTE Manteigas 119.06 321 ePP PP 05 43 33.1 +0.7
MTE eSS SS 05 59 38.9 -12
MTE eLQ LQ 06 19 05.7
MTE eLR LR 06 23 49.4
comp=Z,6µm,22.0s
MTE Manteigas 119.06 321 ePKPdf **PKPdf** 05 42 13.7 +0.7
MTE LR LR
comp=Z,6µm,21.0s
PVIS Viseu 119.10 322 ePKPdf **PKPdf** 05 42 14.7 +1.6
PVIS Viseu 119.10 322 ePP PP 05 43 33.7 +1.1
W27A Bowe Ranch, En 119.16 46 ⇓P **PKPdf** 05 42 14.3 +0.8
baz=119
T29A Hugoton 119.33 43 ⇓P **PKPdf** 05 42 14.3 +0.6
baz=119
X27A F and S Farms, 119.33 46 ⇑P **PKPdf** 05 42 13.6 -0.2
baz=119
PCBR Castelo Branco 119.34 321 ePKPdf **PKPdf** 05 42 14.9 +1.4
325A Bean Ranch, Si 119.45 50 ⇑P **PKPdf** 05 42 15.1 +0.9
baz=119
PMRV Marv??o 119.52 320 ePKPdf **PKPdf** 05 42 14.3 +0.4
PMRV eSS SS 06 00 18.9 +22
PMRV eLQ LQ 06 16 09.3
PMRV eLR LR 06 21 28.8
comp=Z,4µm,20.0s
SPMN St. Paul 119.54 31 ⇑P **PKPdf** 05 42 14.6 +0.9
baz=119
Y27A Causey 119.65 47 ⇓P **PKPdf** 05 42 15.3 +0.9
baz=120
425A Indio Mountain 119.69 51 ⇓P **PKPdf** 05 42 15.5 +0.9
baz=120
226B Tecolote Peak, 119.75 49 ⇓P **PKPdf** 05 42 15.7 +1.1
baz=120
V29A Stinnett 119.84 44 ⇑P **PKPdf** 05 42 15.5 +0.8
baz=120
Z27A Tatum 119.89 48 ⇑P **PKPdf** 05 42 15.9 +1.0
baz=120
MSTX Muleshoe 119.90 47 ⇑P **PKPdf** 05 42 15.9 +1.0
baz=120
T30A Plains 119.91 43 ⇑P **PKPdf** 05 42 15.8 +1.0
baz=120
PESTR Estremoz 119.97 320 ePKPdf **PKPdf** 05 42 16.0 +1.2
PBAR Barrancos 120.00 319 ePKPdf **PKPdf** 05 42 15.1 +0.3
X28A Dimmitt 120.05 46 ⇑P **PKPdf** 05 42 16.0 +0.8
baz=120
PTOM Tomar 120.06 321 ePKPdf **PKPdf** 05 42 16.4 +1.5
PTOM Tomar 120.06 321 ePP PP 05 43 38.5 -0.7
127A Arkansas Junct 120.08 48 ⇑P **PKPdf** 05 42 15.6 +0.3
baz=120
U30A WK&E Inc. Balk 120.10 43 ⇑P **PKPdf** 05 42 15.6 +0.5
baz=120
SCHQ Schefferville 120.18 9 PKP **PKPdf** 05 42 14.7 0.0
SCHQ Schefferville 120.18 9 PKP **PKPdf** 05 42 14.7 0.0
comp=Z,22nm,0.7s,baz=358,slow=3.4,SNR=13
AMTX Amarillo 120.23 45 PFAKE 05 42 30.0 +14
AMTX LR LR
comp=Z,4µm,22.0s
PMTG Montargil 120.26 320 ePKPdf **PKPdf** 05 42 15.5 +0.2
Y28A McKinney Farm, 120.31 47 ⇓P **PKPdf** 05 42 16.1 +0.5
baz=120
EVO Evora 120.43 320 ePKIKP **PKPdf** 05 42 15.3 -0.3
comp=Z,102nm,1.2s
EVO eR
comp=Z,4µm,20.8s
EVO Evora 120.43 320 ePKPdf **PKPdf** 05 42 17.0 +1.4
X29A Tulia 120.44 46 ⇓P **PKPdf** 05 42 15.8 -0.1
baz=120

EVOP Sao Brissos 120.50 320 ePKIKP **PKPdf** 05 42 15.3 -0.5
EVOP Sao Brissos 120.50 320 ePKPdf **PKPdf** 05 42 15.3 -0.5
PBEJ Beja 120.62 319 ePKPdf **PKPdf** 05 42 17.6 +1.6
U31A Nine Bar Ranch 120.73 43 ⇓P **PKPdf** 05 42 17.0 +0.6
baz=121
COWI Conover 120.73 28 ePKPdf **PKPdf** 05 42 15.6 -0.5
COWI LR LR
comp=Z,3µm,22.0s
Y29A Porterfield Fa 120.75 46 ⇑P **PKPdf** 05 42 16.8 +0.3
baz=121
PVAQ Vaqueiros 120.87 319 ePKPdf **PKPdf** 05 42 17.3 +0.8
PVAQ eSS SS 06 00 33.0 +19
PVAQ eLQ LQ 06 14 13.2
PVAQ eLR LR 06 23 06.4
comp=Z,4µm,18.0s
PCVE Castro Verde 120.96 319 ePKPdf **PKPdf** 05 42 18.0 +1.3
MESJ Messejana 120.96 319 eP **PKPdf** 05 42 16.5 -0.2
MESJ ePP **PP** 05 43 46.2 +0.9
MESJ eS **SKSac** 05 49 10.5 -2.2
MESJ eSS **SS** 06 00 16.9 +1.9
MESJ AMS AMS 06 36 00.5
comp=E,4µm,20.5s
MESJ Messejana 120.96 319 ePKIKP **PKPdf** 05 42 16.4 -0.2
MESJ eS **SKSac** 05 49 10.5 -2.2
MESJ eSS **SS** 06 00 16.8 +1.9
Z29A Hungry Hill Ra 121.02 47 ⇓P **PKPdf** 05 42 17.0 -0.1
baz=121
X30A Coker Ranch, T 121.03 45 ⇑P **PKPdf** 05 42 17.4 +0.4
baz=121
527A Woodward Ranch 121.03 51 ⇑P **PKPdf** 05 42 17.6 +0.3
baz=121
LIS Lisbon 121.05 321 ePP PP 05 43 45.4 -0.5
LIS eSS SS 06 00 17.8 +1.8
LIS AMS AMS 06 41 48.6
comp=E,4µm,21.6s
LIS Lisbon 121.05 321 ePP PP 05 43 45.4 -0.5
LIS eSS SS 06 00 17.8 +1.8
V31A Spring Creek L 121.06 44 ⇓P **PKPdf** 05 42 17.5 +0.5
baz=121
328A Wristen Ranch, 121.09 49 ⇑P **PKPdf** 05 42 17.8 +0.6
baz=121
MDT Midelt 121.09 312 PKKPbc PKKPbc 05 52 20.1 -0.3
MDT Midelt 121.09 312 PKKPbc PKKPbc 05 52 20.1 -0.3
comp=E,2.9nm,0.9s,baz=246,slow=6.9,SNR=2.8
PBDV Barranco-do-Ve 121.11 318 ePKPdf **PKPdf** 05 42 19.0 +2.0
129A Stewart Farms, 121.21 48 ⇑P **PKPdf** 05 42 17.8 +0.4
baz=121
KSU1 Kansas State U 121.30 39 ePKPdf **PKPdf** 05 42 17.6 +0.3
KSU1 LR LR
comp=Z,3µm,20.0s
W31A Holland Ranch, 121.30 44 ⇓P **PKPdf** 05 42 17.8 +0.4
baz=121
TXAR Lajitas Array 121.35 52 PKKPbc PKKPbc 05 52 18.7 -0.7
TXAR Lajitas Array 121.35 52 PKKPbc PKKPbc 05 52 18.7 -0.7
comp=Z,0.7nm,0.6s,baz=139,slow=7.0,SNR=8.9
Z30A Sanderson Ranc 121.43 47 ⇓P **PKPdf** 05 42 18.5 +0.7
baz=121
PTEO Sao Teotonio 121.45 319 ePKPdf **PKPdf** 05 42 19.3 +1.7
627A Terlingua Ranc 121.51 52 ⇑P **PKPdf** 05 42 18.9 +0.8
baz=122
MORF Marmelete 121.54 319 ePKPdf **PKPdf** 05 42 19.7 +1.8
MORF Marmelete 121.54 319 ePKIKP **PKPdf** 05 42 17.4 -0.5
MORF eS **SKSac** 05 49 13.8 -1.1
MORF eSS **SS** 06 00 23.8 +1.2
SCIA State Center 121.55 34 ePKPdf **PKPdf** 05 42 17.6 -0.1
SCIA LR LR
comp=Z,2µm,20.0s
X31A McDonald Ranch 121.56 45 ⇓P **PKPdf** 05 42 18.8 +0.8
baz=122
229A Bryant Ranch, 121.57 48 ⇓P **PKPdf** 05 42 18.4 +0.3
baz=122
Y31A Rekieta Farm, 121.71 46 ⇓P **PKPdf** 05 42 19.1 +0.8
baz=122
PFVI Vila Bisbo 121.76 319 ePKPdf **PKPdf** 05 42 19.9 +1.7
628A Black Gap, Mar 121.89 51 ⇓P **PKPdf** 05 42 20.1 +1.3
baz=122
529A Stev Forest Ra 122.12 51 ⇑P **PKPdf** 05 42 19.9 +0.7
baz=122
Z31A Sharp Cattle R 122.12 46 ⇓P **PKPdf** 05 42 20.0 +0.9
baz=122
RTC Rabat Centre 122.13 315 PFAKE 05 42 30.0 +11
RTC LR LR
comp=Z,2µm,20.0s
429A Davenport Ranc 122.14 50 ⇓P **PKPdf** 05 42 19.6 +0.3
baz=122
WMOK Wichita Mounta 122.34 44 PFAKE 05 42 30.0 +11
WMOK LR LR
comp=Z,3µm,20.0s
430A Baggett Ranch, 122.56 49 ⇑P **PKPdf** 05 42 20.7 +0.7
baz=122
Z32A Haskell 122.61 46 ⇓P **PKPdf** 05 42 21.2 +1.2
baz=122
231A Bronte 122.69 48 ⇑P **PKPdf** 05 42 20.5 +0.3
baz=123
TOA0 Torodi Ar. Sit 122.81 288 ePKPdf **PKPdf** 05 42 20.7 -0.1
TORD Torodi Ar. Bea 122.81 288 PKP **PKPdf** 05 42 20.8 0.0
TORD PKKPab **PKKPab** 05 52 14.3 +0.5
TORD Torodi Ar. Bea 122.81 288 PKP **PKPdf** 05 42 20.8 0.0
comp=Z,16nm,0.8s,baz=52,slow=1.6,SNR=68
TORD PKKPab **PKKPab** 05 52 14.3 +0.5
comp=Z,0.9nm,0.6s,baz=242,slow=2.5,SNR=9.4
331A San Angelo 122.92 48 ⇓P **PKPdf** 05 42 21.4 +0.7
baz=123
531A Rocksprings 123.38 50 ⇓P **PKPdf** 05 42 23.3 +1.7
baz=123
332A Millersview 123.39 48 ⇑P **PKPdf** 05 42 22.5 +0.9
baz=123
TUL1 Tulsa 123.71 41 ⇑P **PKPdf** 05 42 22.9 +0.9
baz=124
GLMI Grayling 123.78 26 ePKPdf **PKPdf** 05 42 23.3 +1.4
GLMI LR LR
comp=Z,2µm,20.0s
JCT Junction City 123.79 49 PFAKE 05 42 30.0 +7.6
JCT LR LR
comp=Z,2µm,20.0s
JCT Junction City 123.79 49 ⇑P **PKPdf** 05 42 23.5 +1.1
baz=124
632A Uvalde 124.28 50 ⇓P **PKPdf** 05 42 24.7 +1.4
baz=124
732A Laxson Ranch, 124.50 51 ⇑P **PKPdf** 05 42 25.1 +1.3
baz=124
RFTA Plano 124.74 45 ePKPdf **PKPdf** 05 42 25.2 +1.1
MIAR Mount Ida 125.98 41 PFAKE 05 42 40.0 +14
MIAR LR LR
comp=Z,5µm,21.0s
AAM Ann Arbor 126.18 28 ePKIKP **PKPdf** 05 42 27.4 +0.8
AAM MLR MLR
comp=Z,2µm,21.0s
AAM Ann Arbor 126.18 28 ePKPdf **PKPdf** 05 42 27.4 +0.8
AAM LR LR
comp=Z,2µm,21.0s
SIUC Southern Illin 126.64 35 ePKPdf **PKPdf** 05 42 29.0 +1.4
HKT Hockley 127.01 47 ePKIKP **PKPdf** 05 42 28.6 +0.2
HKT Hockley 127.01 47 ePKPdf **PKPdf** 05 42 28.6 +0.2
HKT ePP **PP** 05 44 26.0 -0.3
PARMO Parma 127.03 37 ePKPdf **PKPdf** 05 42 29.4 +1.0
HBAR Harrisburg 127.21 38 ePKPdf **PKPdf** 05 42 29.5 +0.7
HBAR ePP **PP** 05 44 26.5 -0.8
GNAR Gosnell 127.34 38 ePKPdf **PKPdf** 05 42 30.2 +1.2
USIN University of 127.35 34 ePKPdf **PKPdf** 05 42 30.0 +1.1
MSNY Massena 127.42 19 ePKPdf **PKPdf** 05 42 30.1 +0.2
GLAT Glass 127.58 37 ePKPdf **PKPdf** 05 42 30.3 +0.9
PQI Presque Isle 127.76 13 ePKPdf **PKPdf** 05 42 29.9 +0.5
UTMT University of 127.78 36 ePKPdf **PKPdf** 05 42 31.6 +1.8
UTMT ePP **PP** 05 44 31.3 +0.3
HALT Halls 127.78 37 ePKPdf **PKPdf** 05 42 31.4 +1.6
LONY Lake Ozonia 127.85 19 ePKPdf **PKPdf** 05 42 27.1 -2.6
LONY LR LR
comp=Z,3µm,21.0s
ERPA Erie 127.96 25 PFAKE 05 42 40.0 +10
ERPA LR LR
comp=Z,3µm,22.0s
USHA Ushuaia 127.97 169 PKP **PKPdf** 05 42 29.4 -0.2
USHA Ushuaia 127.97 169 PKP **PKPdf** 05 42 29.4 -0.2
comp=Z,4.9nm,0.7s,baz=180,slow=3.0,SNR=3.7
ACSO Alum Creek Sta 128.11 29 PFAKE 05 42 40.0 +10
ACSO LR LR
comp=Z,3µm,22.0s
ALLY Alegheny Colle 128.27 26 ePKPdf **PKPdf** 05 42 31.6 +1.0
NCB Newcomb 128.54 19 ePKPdf **PKPdf** 05 42 31.5 +0.4
NCB LR LR
comp=Z,3µm,21.0s
OXF Oxford 128.67 39 PFAKE 05 42 40.0 +8.5
OXF LR LR
comp=Z,3µm,21.0s

MDV Middlebury 128.85 18 ePKPdf **PKPdf** 05 42 32.9 +1.3
LBNH Lisbon 129.02 17 ePKIKP **PKPdf** 05 42 33.4 +1.5
LBNH MLR MLR
comp=Z,3µm,20.0s
LBNH Lisbon 129.02 17 ePKPdf **PKPdf** 05 42 33.4 +1.5
LBNH LR LR
comp=Z,3µm,20.0s
PMPST Porto Santo, M 129.10 319 ePKPdf **PKPdf** 05 42 34.0 +1.6
PMPS Porto Santo 129.12 319 ePKPdf **PKPdf** 05 42 34.3 +1.9
PLAL Pickwick Lake 129.17 37 PFAKE 05 42 40.0 +7.5
PLAL LR LR
comp=Z,2µm,21.0s
ACCN Adirondack Com 129.25 19 ePKPdf **PKPdf** 05 42 32.3 -0.1
WVL Waterville 129.35 15 ePKPdf **PKPdf** 05 42 32.5 0.0
HNH Hanover 129.40 18 ePKPdf **PKPdf** 05 42 33.6 +1.0
VBMS Vicksburg 129.42 42 PFAKE 05 42 40.0 +7.0
VBMS LR LR
comp=Z,4µm,22.0s
BINY Binghamton 129.48 22 PFAKE 05 42 40.0 +7.1
BINY LR LR
comp=Z,3µm,22.0s
PMAR Madeira 129.70 320 ePKPdf **PKPdf** 05 42 34.7 +0.9
FUL Funchal 129.74 319 ePKPdf **PKPdf** 05 42 31.9 -1.7
FFD Franklin Falls 129.80 17 ePKPdf **PKPdf** 05 42 35.0 +1.6
FFD ePP **PP** 05 44 44.5 +1.0
PMOZ Porto Moniz, M 129.82 320 ePKPdf **PKPdf** 05 42 35.7 +1.8
PMOZ A A 06 42 40.5
comp=Z,2µm,20.0s
TRY Troy 129.83 20 ePKPdf **PKPdf** 05 42 33.6 +0.1
SSPA Standing Stone 130.07 24 ePKPdf **PKPdf** 05 42 34.2 +0.2
SSPA ePP **PP** 05 44 43.1 -2.4
DBIC Dimbokro 130.51 282 eP **PKPdf** 05 42 32.9 -2.7
DBIC Dimbokro 130.51 282 ePKPdf **PKPdf** 05 42 34.9 -0.7
DBIC PKP **PKPdf** 05 42 36.1 +0.5
DBIC ePP **PP** 05 44 53.5 +3.2
DBIC SKPbc **SKPbc** 05 45 58.8 +2.0
DBIC Dimbokro 130.51 282 PKP **PKPdf** 05 42 36.1 +0.5
comp=Z,13nm,0.7s,baz=59,slow=2.9,SNR=18
DBIC SKPbc **SKPbc** 05 45 58.8 +2.0
comp=Z,23nm,0.9s,baz=70,slow=4.9,SNR=9.3
QUA2 Belchertown 130.66 19 ePKPdf **PKPdf** 05 42 35.1 0.0
QUA2 ePP **PP** 05 44 48.9 -0.3
LIC Lamto 130.76 282 ePKIKP **PKPdf** 05 42 36.5 +0.4
comp=Z,48nm,0.8s
LIC eR
comp=Z,4µm,22.0s
LIC Lamto 130.76 282 ePKPdf **PKPdf** 05 42 36.5 +0.4
WES Weston 130.89 18 ePKIKP **PKPdf** 05 42 35.2 -0.3
WES Weston 130.89 18 ePKPdf **PKPdf** 05 42 35.1 -0.3
WES ePP **PP** 05 44 50.9 +0.3
CPCT Cooper Cave 130.91 34 ePKPdf **PKPdf** 05 42 36.2 +0.4
CPCT ePP **PP** 05 44 51.0 -0.3
CMLA Cha da Macela 131.01 331 ePP PP 05 44 49.8 -2.0
CMLA Cha da Macela 131.01 331 PFAKE 05 42 50.0 +14
CMLA LR LR
comp=Z,3µm,20.0s
PGRA Graciosa 131.13 334 ePP PP 05 44 54.1 +1.7
LRAL Lakeview Retre 131.15 38 PFAKE 05 42 50.0 +14
LRAL LR LR
comp=Z,2µm,19.0s
BRYW Bryant College 131.25 18 ePKPdf **PKPdf** 05 42 37.6 +1.3
PAL Palisades 131.28 21 ePKIKP **PKPdf** 05 42 36.3 0.0
PAL Palisades 131.28 21 ePKPdf **PKPdf** 05 42 36.3 0.0
PAL ePP **PP** 05 44 53.6 +0.4
YLE Yale 131.34 20 ePKPdf **PKPdf** 05 42 37.9 +1.6
PSMN Pico do Norte, 131.38 330 ePP PP 05 44 48.9 -5.3
CPNY Central Park 131.45 21 ePKPdf **PKPdf** 05 42 36.8 +0.2
ROSA Rosais 131.50 334 ePP PP 05 44 48.0 -6.8
SDMD Soldier's Deli 131.53 24 ePKPdf **PKPdf** 05 42 37.1 +0.2
BLA Blacksburg 131.72 29 PFAKE 05 42 50.0 +13
BLA LR LR
comp=Z,3µm,21.0s
SHEL Horse Pasture 131.88 252 PFAKE 05 42 50.0 +12
SHEL LR LR
comp=Z,4µm,20.0s
CBN Corbin 132.32 26 PFAKE 05 42 50.0 +12
CBN LR LR
comp=Z,4µm,19.0s
EFI East Falkland 132.44 176 PFAKE 05 42 50.0 +12
EFI LR LR
comp=Z,2µm,20.0s
BRAL Brewton 132.46 40 PFAKE 05 42 50.0 +11
BRAL LR LR
comp=Z,3µm,21.0s
KMSC Kings Mountain 132.87 32 ⇓P **PKPdf** 05 42 41.3 +1.8
baz=133
JSC Jenkinsville 133.56 32 ePKHKP PKPdf 05 42 32.2 -8.6
JSC Jenkinsville 133.56 32 ePKPdf PKPdf 05 42 32.2 -8.6
CMIG Matias Romero 133.80 62 PKP **PKPdf** 05 42 42.6 +0.9
CMIG Matias Romero 133.80 62 PKP **PKPdf** 05 42 42.6 +0.9
comp=Z,5.8nm,0.6s,baz=290,slow=3.4,SNR=7.9
TIGA Tifton 134.33 37 ⇑P **PKPdf** 05 42 44.2 +1.9
baz=134
CNNC Cliffs of the 134.52 29 PFAKE 05 42 50.0 +7.4
CNNC LR LR
comp=Z,3µm,19.0s
NHSC New Hope 135.04 33 PFAKE 05 43 00.0 +16
NHSC LR LR
comp=Z,2µm,20.0s
TEIG Tepich 137.95 54 PFAKE 05 43 00.0 +11
TEIG LR LR
comp=Z,2µm,20.0s
PLCA Paso Flores 140.37 159 PKPpre PKPpre 05 42 46.1
PLCA ePKPdf **PKPdf** 05 42 51.0 -2.3
PLCA PKP **PKiKP** 05 42 54.7 -1.1
PLCA Paso Flores 140.37 159 PKhKP PKPpre 05 42 46.1
comp=Z,9.4nm,1.1s,baz=146,slow=1.4,SNR=7.3
PLCA PKP **PKiKP** 05 42 54.7 -1.1
comp=Z,12nm,1.0s,baz=207,slow=3.1,SNR=12
SOR Soroa 140.50 46 *e* **PKPdf** 05 42 56.3 +2.3
TGUH Tegucigalpa,Un 141.73 61 ePKPdf PKPdf 05 42 50.9 -5.4
TGUH LR LR
comp=Z,2µm,22.0s
BBSR BB Station 142.11 16 PFAKE 05 43 10.0 +13
BBSR LR LR
comp=Z,2µm,22.0s
PAYG Puerto Ayora 142.85 86 ePKPdf **PKPdf** 05 42 58.1 -0.3
PAYG LR LR
comp=Z,3µm,20.0s
MGV Manicaragua 143.08 44 *e* PKPbc 05 42 55.9 +0.5
SACV Santiago Islan 145.03 303 ePKPdf **PKPdf** 05 43 01.9 -0.3
SACV LR LR
comp=Z,2µm,19.0s
TRQA Tornquist 145.30 168 ePKPbc **PKPbc** 05 43 01.1 -0.7
TRQA LR LR
comp=Z,2µm,20.0s
JTS JuntasAbangare 145.34 65 ePKPdf **PKPab** 05 43 02.9 +0.2
JTS PKPbc **PKPab** 05 43 03.8 +1.1
JTS ePKPbc **PKPbc** 05 43 03.9 +1.4
JTS LR LR
comp=Z,2µm,20.0s
JTS JuntasAbangare 145.34 65 PKPbc **PKPab** 05 43 03.8 +1.1
comp=Z,116nm,0.8s,baz=350,slow=4.2,SNR=47
LMEL Las Melosas 146.48 154⇑ *i*P **PKPab** 05 43 06.6 0.0
LMGC Las Mercedes 146.50 43 *e* **PKPbc** 05 43 06.4 +0.5
IHA Instituto Hidr 146.50 151 *i* P **PKPbc** 05 43 05.7 +0.1
CLCH Cerro Calan 146.71 153⇑ *i*P **PKPbc** 05 43 06.9 +0.6
CVJ Coleyville 147.35 46 *i* P **PKPab** 05 43 10.0 -0.4
MTDJ Mount Denham 147.35 46 ePKPdf **PKPdf** 05 43 06.5 +0.3
MTDJ ePKPbc **PKPbc** 05 43 09.1 +0.6
MTDJ LR LR
comp=Z,2µm,21.0s
RCC Rio Carpintero 147.43 42 *e* **PKPbc** 05 43 09.2 +0.6
BBJ Bamboo Saint A 147.44 46 *i* P **PKPbc** 05 43 09.2 +0.5
BNJ Bonny Gate 147.71 46 *i* P **PKPab** 05 43 12.5 +0.8
GTBY Guantanamo Bay 147.87 41 ePKPdf **PKPdf** 05 43 07.0 +0.2
GTBY ePKPbc **PKPbc** 05 43 10.4 +0.7
GTBY LR LR
comp=Z,2µm,20.0s
STH Stony Hill 147.97 46 *i* P **PKPbc** 05 43 09.9 -0.2
GWJ Greenwich 148.03 46 *i* P **PKPab** 05 43 12.6 -0.5
HOJ Hope 148.06 46 *i* P **PKPbc** 05 43 10.3 0.0
MASC Masc 148.26 40 *e* **PKPdf** 05 43 09.0 +1.6
YHJ Yallahs 148.31 46 *i* P **PKPdf** 05 43 08.4 +0.7
CMCH Combarbala 148.33 150⇓ *i*P **PKPbc** 05 43 11.4 +0.6
GRTK Grand Turk 149.08 34 ePKPbc **PKPbc** 05 43 13.5 +0.7
GRTK LR LR
comp=Z,3µm,20.0s
TLL Tololo Astrono 149.24 149 *i* P **PKPdf** 05 43 10.7 +1.6
CFAA Coronel Fontan 149.25 154 PKP **PKPdf** 05 43 09.8 +0.9
CFAA PKPbc **PKPbc** 05 43 13.5 +0.4
CFAA Coronel Fontan 149.25 154 PKP **PKPdf** 05 43 09.8 +0.9
comp=Z,3.0nm,0.9s,baz=241,slow=1.9,SNR=8.5

CFAA PKPbc **PKPbc** **05 43 13.5 +0.4**
comp=Z,6.0nm,0.9s,baz=224,slow=2.2,SNR=21
LCO Las Campanas 150.22 148 *e*PKPdf **PKPdf** **05 43 11.3 +0.6**
LCO *e*PKPbc **PKPbc** **05 43 16.2 +0.4**
LCO LR LR
comp=Z,3μm,20.0s
LCO Las Campanas 150.22 148 *i* P **PKPdf** **05 43 12.8 +2.1**
BCIP Isla Barro Col 150.40 63 *e*PKPdf **PKPdf** **05 43 11.1 0.0**
BCIP *e*PKPbc **PKiKP** **05 43 17.2 +0.1**
BCIP LR LR
comp=Z,1μm,20.0s
SDDR Presa de Saban 150.98 37 *e*PKPdf **PKPdf** **05 43 11.9 +0.1**
SDDR *e*PKPbc **PKPbc** **05 43 18.0 +0.3**
SDDR LR LR
comp=Z,3μm,19.0s
LSP Las Mesas 153.98 31 *e*PKPdf **PKPdf** **05 43 16.9 +0.6**
LRS Lares 154.01 31 *e*PKPdf **PKPdf** **05 43 16.8 +0.4**
CRPR Cabo Rojo, PR 154.11 31 *e*PKPdf **PKPdf** **05 43 16.7 +0.3**
CRPR *e*PKPab **PKPab** **05 43 38.8 +0.8**
CELP Cerrillos 154.33 30 *e*PKPdf **PKPdf** **05 43 17.7 +1.0**
OBIP Obispado Ponce 154.34 30 *e*PKPdf **PKPdf** **05 43 17.8 +1.1**
OBIP *e*PKPab **PKPab** **05 43 39.2 +0.2**
OTAV Otavalo 154.46 81 PFAKE 05 43 30.0 +3.9
OTAV LR LR
comp=Z,2μm,21.0s
SJG San Juan 154.51 30 *e*PKPdf **PKPdf** **05 43 17.9 +0.9**
SJG *e*PKPbc **PKiKP** **05 43 26.2 +0.8**
SJG *e*PKPab **PKPab** **05 43 40.4 +0.7**
SJG LR LR
comp=Z,2μm,20.0s
SJG San Juan 154.51 30 PKP **PKPdf** **05 43 17.9 +0.9**
comp=Z,29nm,0.9s,baz=329,slow=2.2,SNR=2.6
CBYP Canovanas 154.51 29 *e*PKPdf **PKPdf** **05 43 17.7 +0.6**
ATAH Atahualpa 154.81 98 PKP **PKPdf** **05 43 19.9 +1.8**
ATAH PKPbc **PKiKP** **05 43 27.9 +1.1**
ATAH Atahualpa 154.81 98 PKP **PKPdf** **05 43 19.9 +1.8**
comp=Z,65nm,1.2s,baz=302,slow=3.4,SNR=21
ATAH PKPbc **PKiKP** **05 43 27.9 +1.1**
comp=Z,28nm,0.7s,baz=338,slow=1.4,SNR=13
MTP Monte Pirata 154.81 28 *e*PKPdf **PKPdf** **05 43 18.4 +0.9**
MTP *e*PKPab **PKPab** **05 43 42.6 +1.6**
STVI Saint Thomas 154.87 27 *e*PKPdf **PKPdf** **05 43 18.3 +0.8**
STVI *e*PKPbc **PKPbc** **05 43 25.8 -0.3**
STVI *e*PKPab **PKPab** **05 43 43.6 +2.4**
NNA Nana 155.39 110 *e*PKPdf **PKPdf** **05 43 18.9 +0.5**
NNA PKP **PKPdf** **05 43 20.0 +1.6**
NNA *e*PKPab **PKPab** **05 43 43.8 0.0**
NNA *e*PP **PP** **05 47 20.8 +0.3**
NNA LR LR
comp=Z,2μm,20.0s
NNA Nana 155.39 110 PKP **PKPdf** **05 43 20.0 +1.6**
comp=Z,29nm,1.1s,baz=267,slow=3.3,SNR=11
CDVI St. Croix 155.48 27 *e*PKPdf **PKPdf** **05 43 18.2 -0.1**
CDVI *e*PKPab **PKPab** **05 43 44.2 +0.4**
ANWB Willy Bob 156.77 21 PFAKE 05 43 30.0 +10
ANWB LR LR
comp=Z,2μm,21.0s
ROSC El Rosal 157.14 67 *e*PKPdf **PKPdf** **05 43 22.9 +1.7**
ROSC El Rosal 157.14 67 PKP **PKPdf** **05 43 22.8 +1.7**
comp=Z,16nm,1.0s,baz=360,slow=1.1,SNR=15
CPUP Villa Florida 157.58 170 PKP **PKPdf** **05 43 21.7 +0.9**
CPUP PKPab **PKPab** **05 43 53.6 +1.0**
CPUP Villa Florida 157.58 170 PKP **PKPdf** **05 43 21.7 +0.9**
comp=Z,2.8nm,0.7s,baz=108,slow=2.0,SNR=9.2
CPUP PKPab **PKPab** **05 43 53.6 +1.0**
comp=Z,31nm,0.9s,baz=176,slow=4.6,SNR=11
SEG Port Louis 158.03 22 *e*P **PKPdf** **05 43 22.8 +1.1**
LZG Guadaloupe-1 158.17 23 *e*P **PKPdf** **05 43 22.4 +0.5**
SDV Santo Domingo 158.39 53 *e*PKPdf **PKPdf** **05 43 24.3 +1.9**
SDV *e*PP **PP** **05 47 35.0 -1.6**
SDV LR LR
comp=Z,1.0nm,20.0s
TBG Guadaloupe-3 158.49 23 *e*P **PKPdf** **05 43 23.7 +1.5**
CAM4 Nova Friburgo 159.12 209 ⇓P **PKPab** **05 43 54.7 -5.1**
CAM4 *i* 05 43 59.0
CAM4 *i* 05 44 01.9
CAM4 *i* 05 44 13.3
CAM4 *i* 05 44 18.1
CAM4 *i* 05 44 23.3
CAM4 *i* 05 44 26.9
CAM4 *i* 05 44 29.3
CAM4 *i* 05 44 51.3
CAM4 *i* 05 45 01.4
FDF Fort de France 159.70 23 *e*PKIKP **PKPdf** **05 43 24.0 +0.3**
FDF MLR MLR
comp=Z,2μm,22.0s
FDF Fort de France 159.70 23 *e*PKPdf **PKPdf** **05 43 24.0 +0.3**
FDF LR LR
comp=Z,2μm,22.0s
SPB Sao Paulo 159.84 196 PFAKE 05 43 30.0 +6.4
SPB LR LR
comp=Z,2μm,21.0s
LPAZ La Paz 161.04 131 *e*PKPdf **PKPdf** **05 43 26.5 +0.6**
LPAZ PKP **PKPdf** **05 43 26.6 +0.8**
LPAZ *e*PKPab **PKPab** **05 44 10.8 +1.9**
LPAZ La Paz 161.04 131 PKP **PKPdf** **05 43 26.6 +0.8**
comp=Z,28nm,1.1s,baz=21,slow=1.8,SNR=44
BBGH Gun Hill 161.74 20 PFAKE 05 43 40.0 +14
BBGH LR LR
comp=Z,7μm,22.0s
GRGR Grenville 161.82 27 PFAKE 05 43 40.0 +14
GRGR LR LR
comp=Z,1μm,21.0s
RCBR Riachuelo 162.63 264 PKP **PKPdf** **05 43 27.7 +0.8**
RCBR PKPab **PKPab** **05 44 15.3 -0.1**
RCBR LR LR
comp=Z,4μm,19.0s
RCBR Riachuelo 162.63 264 PKP **PKPdf** **05 43 27.7 +0.8**
comp=Z,18nm,1.1s,baz=233,slow=1.3,SNR=3.9
RCBR PKPab **PKPab** **05 44 15.3 -0.1**
comp=Z,42nm,0.8s,baz=94,slow=3.4,SNR=12
SIV San Ignacio 165.92 147 PKP **PKPdf** **05 43 31.0 +1.3**
SIV PKPab **PKPab** **05 44 30.0 +0.6**
SIV San Ignacio 165.92 147 PKP **PKPdf** **05 43 31.0 +1.3**
comp=Z,23nm,1.2s,baz=235,slow=1.9,SNR=31
SIV PKPab **PKPab** **05 44 30.0 +0.6**
comp=Z,3.5nm,0.6s,baz=212,slow=6.2,SNR=3.4
BDFB Brasilia 167.45 204 PKP **PKPdf** **05 43 31.5 +0.5**
BDFB PKPab **PKPab** **05 44 36.6 +0.4**
BDFB Brasilia 167.45 204 PKP **PKPdf** **05 43 31.5 +0.5**
comp=Z,9.1nm,1.0s,baz=358,slow=3.4,SNR=6.3
BDFB PKPab **PKPab** **05 44 36.6 +0.4**
comp=Z,19nm,1.1s,baz=127,slow=4.2,SNR=6.1
SAML Samuel 169.04 116 *e*P **PKPdf** **05 43 32.3 +0.3**
SAML *e*PKPab **PKPab** **05 44 43.8 +0.3**
SAML *e*PP **PP** **05 48 29.3 -3.5**
SAML LR LR
comp=Z,3μm,21.0s

IDC ***19*** *05:31:41.9±0.6,51°.60N×178°.99E,h0km,mb4.5/23, mb1 4.6/25,mb1mx4.5/35,mbtmp4.5/25,ML4.8/2,MS5.6/3, Ms1 5.6/3,ms1mx4.4/56,Error ellipse: s-maj=18.6km s-min=9.5km az=180.0*
BJI ***19*** *05:31:41.8,51°.70N×179°.00E,h24km,mB5.2/7,mb4.8/22, Ms5.2/11,MS7 5.0/11*
ISCJB ***19*** *05:31:44.5±0.4,51°.76N±0°.04×178°.95E±0°.03,h28km±2km, mb4.8/109,MS5.3/9,Error ellipse: s-maj=7.0km s-min=2.9km az=1.1*
NEIC ***19*** *05:31:44.1,51°.70N×178°.88E,h21km,mb4.9/69, ML5.1(AEIC),After AEIC.*
ISC 19 05:31:45.7±0.4,51°.68N±0°.05×178°.91E±0°.03,h23km±2km, n440,σ1°19/457,mb4.8/109,MS5.4/9,123C-111D,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSE	**Little Sitkin**	**0.33**	**320**	P	**Pb**	**05 31 51.6**	**-1.4**
LSSA	**Little Sitkin**	**0.36**	**318**	P	**Pb**	**05 31 52.1**	**-1.5**
LSNW	**Little Sitkin**	**0.38**	**320**	P	**Pb**	**05 31 52.2**	**-1.7**
AMKA	**Amchitka**	**0.39**	**141**	P	**Pb**	**05 31 53.2**	**-0.8**
AMKA				S	**Sb**	**05 31 59.3**	**-0.4**
CESW	**Semis' Southwe**	**0.46**	**61**	P	**Pb**	**05 31 54.1**	**-1.1**
CEAP	**Semis' Anvil P**	**0.53**	**52**	P	**Pb**	**05 31 55.1**	**-1.2**
CERAA	**Semis' Rag'd T**	**0.53**	**65**	P	**Pb**	**05 31 55.1**	**-1.4**
SMY	**Shemya**	**3.14**	**291**	P	**Pn**	**05 32 33.6**	**-0.1**
SMY				S	**Sn**	**05 33 11.0**	**+0.6**
FX1	**Attu Island--F**	**3.73**	**291**	Pn	**Pn**	**05 32 40.5**	**-1.2**
FX1				S	**Sn**	**05 33 24.2**	**-0.7**
FX1	**Attu Island--F**	**3.73**	**291**	Pn	**Pn**	**05 32 40.5**	**-1.2**
	374nm,0.3s,baz=107,slow=2.2,SNR=319						
FX1				Sn	**Sn**	**05 33 24.2**	**-0.7**
	902nm,0.3s,baz=275,slow=21,SNR=15						
FX1				LR	LR	05 34 02.7	
	comp=Z,3μm,20.8s,baz=120,slow=37						
KOKL	**Mount Kliuchef**	**4.31**	**79**	P	**Pn**	**05 32 49.6**	**-0.2**
KOKV	**Korovin Volcan**	**4.33**	**78**	P	**Pn**	**05 32 49.7**	**-0.4**
KOKV				S	**Sn**	**05 33 40.1**	**+0.2**
KOFP	**Korovin Flat P**	**4.37**	**79**	P	**Pn**	**05 32 50.9**	**+0.3**
KOSE	**Korovin Southe**	**4.40**	**79**	P	**Pn**	**05 32 52.0**	**+0.9**
OKSP	**Okmok Steepie**	**7.98**	**74**	P	**Pn**	**05 33 42.2**	**+2.1**
OKSO	**Okmok South**	**8.07**	**73**	P	**Pn**	**05 33 43.0**	**+1.6**
OKFG	**Magazine Ridge**	**8.22**	**73**	P	**Pn**	**05 33 44.5**	**+1.0**
MCIR	**Makushin Cirqu**	**8.90**	**70**	P	**Pn**	**05 33 53.3**	**+0.5**
MSW	**Makushin Switc**	**8.96**	**70**	P	**Pn**	**05 33 53.8**	**+0.3**
MTBL	**Makushin Table**	**9.03**	**70**	P	**Pn**	**05 33 54.8**	**+0.3**
UNV	**Unalaska Valle**	**9.11**	**71**	P	**Pn**	**05 33 56.2**	**+0.6**
AKRB	**Akutan Reef Bi**	**9.40**	**69**	P	**Pn**	**05 34 00.4**	**+0.7**
ZRO	**Akutan Zero**	**9.45**	**69**	P	**Pn**	**05 34 01.0**	**+0.7**
AKGG	**Akutan Green G**	**9.46**	**69**	P	**Pn**	**05 34 01.2**	**+0.8**
AKLV	**Akutan Long Va**	**9.48**	**69**	P	**Pn**	**05 34 01.3**	**+0.7**
AHB	**Akutan Harbor**	**9.55**	**69**	P	**Pn**	**05 34 02.6**	**+0.9**
AKUT	**Akutan**	**9.58**	**69**	P	**Pn**	**05 34 02.8**	**+0.8**
SDPT	**Sand Point**	**12.79**	**65**	*e*Pn	**Pn**	**05 34 46.3**	**+0.4**
PETK	**Petropavlovsk-**	**13.03**	**285**	Pn	**Pn**	**05 34 50.5**	**+1.3**
PETK				Sn	**Sn**	**05 37 08.7**	**-4.6**
PETK	**Petropavlovsk-**	**13.03**	**285**	Pn	**Pn**	**05 34 50.4**	**+1.3**
	1.5nm,0.3s,baz=94,slow=18,SNR=8.7						
PETK				Sn	**Sn**	**05 37 08.7**	**-4.6**
	1.6nm,0.3s,baz=330,slow=29,SNR=6.7						
GAMB	**Gambell**	**13.10**	**19**	*e*Pn	**Pn**	**05 34 47.6**	**-2.6**
	241nm,1.3s						
CHGN	**Chignik**	**14.09**	**62**	*e*Pn	**Pn**	**05 35 03.0**	**-0.7**
CHGN				*e*Sn	**Sn**	**05 37 42.1**	**+3.0**
KDAK	**Kodiak Island**	**17.47**	**58**	S	**Sn**	**05 38 56.9**	**-4.2**
	0.5nm,0.3s,baz=263,slow=17,SNR=3.2						
ILAR	**Eielson Array**	**21.92**	**40**	P	**P**	**05 36 37.7**	**+0.7**
ILAR	**Eielson Array**	**21.92**	**40**	P	**P**	**05 36 37.7**	**+0.7**
	27nm,1.0s,baz=255,slow=10,SNR=8.2						
ASAJ	**Asahikawa**	**25.28**	**267**	P	**P**	**05 37 10.6**	**+0.5**
ASAJ	**Asahikawa**	**25.28**	**267**	P	**P**	**05 37 10.6**	**+0.5**
	43nm,0.9s,baz=41,slow=8.1,SNR=15						
INK	**Inuvik**	**28.04**	**36**	P	P	05 37 38.2	+3.6
INK	**Inuvik**	**28.04**	**36**	P	P	05 37 38.2	+3.6
	8.0nm,0.8s,baz=258,slow=7.2,SNR=2.8						
USRK	**Ussuriysk Arra**	**31.83**	**275**	P	**P**	**05 38 07.9**	**-0.6**
	12nm,0.8s,baz=53,slow=8.9,SNR=13						
MJAR	**Matsushiro Arr**	**32.43**	**258**	P	**P**	**05 38 13.7**	**-0.1**
MJAR	**Matsushiro Arr**	**32.43**	**258**	P	**P**	**05 38 13.7**	**-0.1**
	5.0nm,0.8s,baz=54,slow=7.2,SNR=9.6						
MAJO	**Matsushiro**	**32.43**	**258**	*e*P	**P**	**05 38 14.7**	**+0.8**
	21nm,0.9s						
MAT	**Matsushiro**	**32.43**	**258**	P	**P**	**05 38 14.1**	**+0.3**
MDJ	**Mudanjiang**	**33.11**	**278**	P	**P**	**05 38 18.9**	**-0.8**
MDJ				pP	**pP**	**05 38 25.0**	**-1.7**
MDJ				sP	**sP**	**05 38 27.4**	**-2.1**
MDJ				S	**S**	**05 43 36.4**	**-0.9**
MDJ				sS	**sS**	**05 43 46.9**	**-2.0**
MDJ				ScP	**ScP**	**05 44 45.5**	**+0.6**
MDJ				PcS	**PcS**	**05 44 48.1**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,930nm,13.5s						
MDJ				LR	LR		
	comp=N,6μm,20.8s						
MDJ				LR	LR		
	comp=E,3μm,21.8s						
MDJ				LR	LR		
	comp=Z,8μm,18.2s						
YKW3	**Yellowknife Ar**	**36.04**	**46**	*e*P	**P**	**05 38 43.6**	**-1.1**
	comp=Z,0.1nm,0.7s						
YKA	**Yellowknife Ar**	**36.06**	**46**	P	**P**	**05 38 44.7**	**-0.2**
YKA	**Yellowknife Ar**	**36.06**	**46**	P	**P**	**05 38 44.7**	**-0.2**
	comp=Z,2.3nm,0.6s,baz=283,slow=8.2,SNR=10						
CN2	**Changchun**	**36.08**	**279**	*e*P	**P**	**05 38 46.0**	**+0.6**
CN2				*ep*P	**pP**	**05 38 53.4**	**+1.0**
CN2				*es*P	**sP**	**05 38 56.8**	**+1.5**
CN2				*e*S	**S**	**05 44 24.9**	**+1.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,4μm,14.0s						
CN2				LR	LR		
	comp=E,4μm,14.0s						
CN2				LR	LR		
	comp=Z,4μm,15.0s						
LON	**Longmire**	**38.11**	**73**	*e*P	**P**	**05 39 02.3**	**-0.3**
	comp=Z,13nm,1.4s						
KSRS	**Korea Array**	**38.21**	**269**	P	**P**	**05 39 04.1**	**+0.7**
	comp=Z,11nm,0.8s,baz=59,slow=8.4,SNR=33						
KSAR	**Wonju Array Be**	**38.24**	**269**	P	**P**	**05 39 04.1**	**+0.4**
INCN	**Inchon**	**38.99**	**270**	*e*P	**P**	**05 39 10.9**	**+0.8**
	comp=Z,26nm,0.8s						
JNU	**Nakatsue**	**39.20**	**261**	*e*P	**P**	**05 39 12.1**	**+0.2**
	comp=Z,9.1nm,0.9s						
JNU	**Nakatsue**	**39.20**	**261**	P	**P**	**05 39 12.4**	**+0.5**
	comp=Z,17nm,0.8s,baz=40,slow=8.2,SNR=11						
HUMO	**Hull Mountain**	**39.60**	**80**	*e*P	**P**	**05 39 16.2**	**+1.0**
	comp=Z,15nm,1.3s						
HAWA	**Hanford**	**39.64**	**73**	*e*P	**P**	**05 39 14.7**	**-0.7**
	comp=Z,15nm,1.0s						
RES	**Resolute Bay**	**40.06**	**24**	P	**P**	**05 39 19.4**	**+0.9**
	comp=Z,11nm,1.0s						
NEW	**Newport**	**40.11**	**69**	*e*P	**P**	**05 39 18.4**	**-1.0**
	comp=Z,14nm,1.3s						
KHMM	**Horse Mountain**	**40.11**	**82**	*e*P	**P**	**05 39 20.4**	**+0.9**
	comp=Z,16nm,0.9s						
YBH	**Yreka Blue Hor**	**40.25**	**81**	*e*P	**P**	**05 39 21.6**	**+1.0**
	comp=Z,17nm,0.8s						
WDC	**Whiskeytown Da**	**41.02**	**82**	*e*P	**P**	**05 39 27.0**	**+0.1**
	comp=Z,19nm,1.0s						
A13A	**Flathead Natio**	**41.34**	**66**	⇑P	**P**	**05 39 28.4**	**-1.1**
	baz=41						
WALA	**Waterton Lakes**	**41.56**	**66**	*e*P	**P**	**05 39 29.6**	**-1.8**
	comp=Z,0.3nm,1.0s						
B13A	**Whitefish**	**41.59**	**67**	⇓P	**P**	**05 39 30.9**	**-0.7**
	baz=41						
MOD	**Modoc**	**41.63**	**79**	*e*P	**P**	**05 39 32.2**	**+0.2**
	comp=Z,24nm,0.8s						
BSMT	**Bassoo Peak**	**41.67**	**68**	*e*P	**P**	**05 39 31.2**	**-1.2**
BMO	**Blue Mountains**	**41.78**	**73**	*e*P	**P**	**05 39 32.5**	**-0.7**
	comp=Z,11nm,1.0s						
BLMT	**Blacktail Moun**	**41.84**	**68**	*e*P	**P**	**05 39 32.4**	**-1.4**
A14A	**Double T Ranch**	**41.88**	**66**	⇑P	**P**	**05 39 32.9**	**-1.1**
	baz=42						
C13A	**Hot Springs**	**41.89**	**68**	⇑P	**P**	**05 39 33.3**	**-0.7**
	baz=42						
JTMT	**Jette**	**42.02**	**68**	*e*P	**P**	**05 39 35.3**	**+0.1**
D13A	**Huson**	**42.26**	**69**	⇑P	**P**	**05 39 35.1**	**-1.9**
	baz=42						
B14A	**Marquette Ranc**	**42.28**	**67**	⇑P	**P**	**05 39 36.2**	**-1.1**
	baz=42						
C14A	**Swan Lake**	**42.32**	**68**	⇑P	**P**	**05 39 35.9**	**-1.6**
	baz=42						
WVOR	**Wild Horse Val**	**42.34**	**77**	*e*P	**P**	**05 39 37.6**	**-0.1**
WVOR				*e*ScP	**ScP**	**05 45 17.6**	**-2.2**
OHCM	**Honcut**	**42.41**	**83**	*e*P	**P**	**05 39 38.4**	**+0.2**
F12A	**Elk City**	**42.51**	**71**	⇓P	**P**	**05 39 38.4**	**-0.7**
	baz=42,SNR=8.1						
MSO	**Missoula**	**42.70**	**69**	*e*P	**P**	**05 39 42.3**	**+1.6**
	comp=Z,4.1nm,0.7s						
MSO	**Missoula**	**42.70**	**69**	⇓P	**P**	**05 39 39.1**	**-1.5**
	baz=42						
B15A	**Bradely Ranch,**	**42.71**	**66**	⇓P	**P**	**05 39 39.4**	**-1.3**
	baz=42						
SLMT	**Seeley Lake**	**42.74**	**68**	*e*P	**P**	**05 39 38.8**	**-2.2**
BEKR	**Beckworth**	**42.79**	**81**	*e*P	**P**	**05 39 41.7**	**+0.2**
	comp=Z,4.3nm,0.8s						
G12A	**Big Creek, Yel**	**42.81**	**72**	⇑P	**P**	**05 39 40.9**	**-0.7**
	baz=43						
D14A	**Greenough**	**42.82**	**68**	⇑P	**P**	**05 39 40.6**	**-1.0**
	baz=43,SNR=6.4						
A16A	**West Butte Ran**	**42.93**	**65**	⇑P	**P**	**05 39 40.9**	**-1.7**
	baz=43						
C15A	**Salmond Ranch,**	**42.97**	**67**	⇑P	**P**	**05 39 42.5**	**-0.3**
	baz=43						
F13A	**Darby**	**43.03**	**70**	⇑P	**P**	**05 39 42.9**	**-0.5**
	baz=43						
B16A	**M & M Farms, S**	**43.15**	**66**	⇑P	**P**	**05 39 43.4**	**-0.8**
	baz=43						
E14A	**Clinton**	**43.18**	**69**	⇑P	**P**	**05 39 43.5**	**-1.1**
	baz=43						
D15A	**Lincoln**	**43.41**	**68**	⇑P	**P**	**05 39 46.6**	**+0.2**
	baz=43						
H12A	**Diamond D Ranc**	**43.41**	**72**	⇓P	**P**	**05 39 44.8**	**-1.7**
	baz=43						
A17A	**Triple J Farms**	**43.44**	**65**	⇑P	**P**	**05 39 44.6**	**-1.9**
	baz=43						
C16A	**Fuhringer Ranc**	**43.45**	**67**	⇓P	**P**	**05 39 44.7**	**-2.0**
	baz=43						
MFID	**Camas Ranch**	**43.47**	**74**	⇓P	**P**	**05 39 45.8**	**-1.1**
	baz=43						
G13A	**Cobalt**	**43.47**	**71**	⇓P	**P**	**05 39 46.3**	**-0.7**
	baz=43,SNR=5.6						
WCN	**Washoe City**	**43.50**	**82**	*e*P	**P**	**05 39 47.5**	**+0.3**
	comp=Z,17nm,1.0s						
I12A	**Atlanta**	**43.67**	**73**	⇑P	**P**	**05 39 47.8**	**-0.8**
	baz=44,SNR=10						
E15A	**Deer Lodge**	**43.67**	**69**	⇓P	**P**	**05 39 47.0**	**-1.5**
	baz=44						
B17A	**L&G Farms, Che**	**43.73**	**65**	⇓P	**P**	**05 39 46.9**	**-1.9**
	baz=44						
H13A	**Challis**	**43.76**	**72**	⇓P	**P**	**05 39 47.9**	**-1.4**
	baz=44						
G14A	**Jackson**	**43.84**	**71**	⇓P	**P**	**05 39 48.8**	**-1.2**
	baz=44						
CMB	**Columbia Colle**	**43.89**	**83**	*e*P	**P**	**05 39 50.3**	**+0.1**
	comp=Z,11nm,0.8s						
D16A	**Dana Ranch, Ca**	**43.97**	**67**	⇓P	**P**	**05 39 49.4**	**-1.5**
	baz=44						
HRY	**Holter Researc**	**43.98**	**68**	*e*P	**P**	**05 39 49.5**	**-1.5**
F15A	**Butte**	**44.08**	**69**	⇑P	**P**	**05 39 50.8**	**-1.1**
	baz=44						
C17A	**Wharram Farm,**	**44.10**	**66**	⇑P	**P**	**05 39 51.0**	**-0.8**
	baz=44						
LRM	**Limekiln Ridge**	**44.11**	**69**	*e*P	**P**	**05 39 50.6**	**-1.7**
E16A	**East Helena**	**44.17**	**68**	⇓P	**P**	**05 39 51.7**	**-0.8**
	baz=44						
I13A	**Wildhorse Cree**	**44.20**	**73**	⇓P	**P**	**05 39 52.0**	**-0.9**
	baz=44						
HLID	**Hailey**	**44.23**	**73**	*e*P	**P**	**05 39 51.7**	**-1.4**
	comp=Z,15nm,1.1s						
HLID	**Hailey**	**44.23**	**73**	⇓P	**P**	**05 39 52.2**	**-1.0**
	baz=44						
B18A	**Beardsley Farm**	**44.25**	**65**	⇑P	**P**	**05 39 52.4**	**-0.7**
	baz=44						
H14A	**Leadore**	**44.25**	**71**	⇑P	**P**	**05 39 52.0**	**-1.3**
	baz=44						
BMN	**Battle Mountai**	**44.37**	**79**	*e*P	**P**	**05 39 54.0**	**-0.2**
	comp=Z,31nm,1.4s						
D17A	**Six Diamond Ra**	**44.40**	**67**	⇓P	**P**	**05 39 53.5**	**-0.9**
	baz=44						
MCMT	**McKenzie Canyo**	**44.44**	**71**	*e*P	**P**	**05 39 52.6**	**-2.3**
	comp=Z,4.0nm,0.6s						
G15A	**Dillon**	**44.46**	**70**	⇓P	**P**	**05 39 53.2**	**-1.8**
	baz=44						
EGMT	**Eagleton**	**44.46**	**65**	*e*P	**P**	**05 39 56.7**	**+1.9**
	comp=Z,9.4nm,0.6s						
J13A	**Cove Ranch, Pi**	**44.47**	**73**	⇓P	**P**	**05 39 54.3**	**-0.6**
	baz=44,SNR=6.7						
I14A	**Mackay**	**44.59**	**72**	⇓P	**P**	**05 39 55.1**	**-0.9**
	baz=44						
E17A	**Martinsdale**	**44.68**	**68**	⇓P	**P**	**05 39 55.9**	**-0.8**
	baz=44						
BOZ	**Bozeman (W)**	**44.69**	**69**	*e*P	**P**	**05 39 54.8**	**-1.9**
	comp=Z,9.4nm,0.8s						
BOZ	**Bozeman (W)**	**44.69**	**69**	⇓P	**P**	**05 39 55.4**	**-1.3**
	baz=44,SNR=11						
G16A	**Moss Hill, Enn**	**44.82**	**70**	⇑P	**P**	**05 39 56.3**	**-1.5**
	baz=45,SNR=10						
J14A	**Carey**	**44.90**	**73**	⇑P	**P**	**05 39 58.1**	**-0.4**
	baz=45						
NVAR	**Mina Array Bea**	**44.93**	**82**	P	**P**	**05 39 59.1**	**+0.3**
NVAR	**Mina Array Bea**	**44.93**	**82**	P	**P**	**05 39 59.1**	**+0.3**
	comp=Z,5.5nm,0.7s,baz=296,slow=8.0,SNR=14						
C19A	**Slack Wire Ran**	**45.02**	**65**	⇓P	**P**	**05 39 57.9**	**-1.3**
	baz=45,SNR=7.1						
NV11	**Mina Array Sit**	**45.02**	**81**	*e*P	**P**	**05 39 59.4**	**-0.1**
A20A	**Cobblestone Ra**	**45.02**	**63**	⇑P	**P**	**05 39 57.4**	**-1.8**
	baz=45						
E18A	**Harlowton**	**45.17**	**67**	⇑P	**P**	**05 39 59.5**	**-1.0**
	baz=45,SNR=10.0						
B20A	**Solberg Farm,**	**45.21**	**64**	⇓P	**P**	**05 39 59.7**	**-1.0**
	baz=45						
SONM	**Songino Array**	**45.23**	**295**	P	**P**	**05 40 00.5**	**-0.4**
SONM	**Songino Array**	**45.23**	**295**	P	**P**	**05 40 00.5**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=46,slow=8.3,SNR=3.2						
QLMT	**Earthquake Lak**	**45.27**	**70**	*e*P	**P**	**05 40 00.5**	**-0.9**
ELK	**Elko**	**45.39**	**77**	*e*P	**P**	**05 40 02.4**	**0.0**
G17A	**Pierce Place,**	**45.39**	**69**	⇑P	**P**	**05 40 01.3**	**-1.0**
	baz=45						
MTUM	**Tungsten Hills**	**45.44**	**83**	*e*P	**P**	**05 40 03.7**	**+0.8**
H16A	**Russell Place,**	**45.45**	**70**	⇑P	**P**	**05 40 01.5**	**-1.3**
	baz=45,SNR=8.7						
PTRM	**Twissleman Ran**	**45.51**	**86**	*e*P	**P**	**05 40 04.0**	**+0.8**
C20A	**Veseth Ranch,**	**45.62**	**65**	⇑P	**P**	**05 40 02.3**	**-1.6**
	baz=45						
F18A	**Big Timber**	**45.65**	**68**	⇓P	**P**	**05 40 02.9**	**-1.4**
	baz=46						
SMMC	**Simmler**	**45.86**	**86**	⇑P	**P**	**05 40 05.9**	**-0.1**
	baz=46						
K15A	**Arbon**	**45.86**	**73**	⇑P	**P**	**05 40 06.2**	**+0.1**
	baz=46						
E19A	**Rath Farm, Rou**	**45.87**	**67**	⇑P	**P**	**05 40 05.6**	**-0.4**
	baz=46						
D20A	**Manuel Ranch,**	**45.89**	**65**	⇑P	**P**	**05 40 05.3**	**-0.8**
	baz=46						
H17A	**Grant Village**	**46.02**	**70**	⇓P	**P**	**05 40 07.5**	**+0.1**
	baz=46,SNR=9.0						
LKWY	**Lake**	**46.02**	**70**	*e*P	**P**	**05 40 07.4**	**-0.1**
	comp=Z,7.6nm,0.8s						
J16A	**Bone**	**46.06**	**72**	⇓P	**P**	**05 40 08.2**	**+0.5**
	baz=46						
C21A	**Desert Coulee**	**46.06**	**64**	⇓P	**P**	**05 40 07.1**	**-0.3**
	baz=46						
A22A	**Carney Farms,**	**46.07**	**62**	⇑P	**P**	**05 40 06.2**	**-1.3**
	baz=46					

I18A	Diamond G Ranc	46.87	70	⇑P		P	05 40 13.8	-0.3	
	baz=47								
G20A	Bridger	46.91	68	⇓P		P	05 40 13.1	-1.1	
	baz=47,SNR=8.3								
MPMC	Manual Prospec	46.93	83	⇑P		P	05 40 14.8	+0.2	
	baz=47,SNR=7.7								
HWUT	Hardware Ranch	47.08	74	eP		P	05 40 15.0	-0.7	
	comp=Z,6.4nm,0.8s								
OSI	Osito Adit	47.11	86	eP		P	05 40 15.9	+0.1	
	comp=Z,25nm,0.6s								
OSI	Osito Adit	47.11	86	⇓P		P	05 40 17.4	+1.6	
	baz=47,SNR=5.5								
A24A	Westby	47.16	61	⇓P		P	05 40 14.4	-1.7	
	baz=47								
DUG	Dugway	47.19	76	eP		P	05 40 16.1	-0.4	
	comp=Z,27nm,0.9s								
DUG	Dugway	47.19	76	⇑P		P	05 40 16.2	-0.3	
	baz=47,SNR=9.6								
L17A	Cokeville	47.20	73	⇓P		P	05 40 15.7	-0.9	
	baz=47								
M16A	Huntsville	47.22	74	⇑P		P	05 40 15.9	-0.8	
	baz=47								
EDW2	Edwards Air Fo	47.39	85	⇓P		P	05 40 17.8	-0.2	
	baz=47								
H20A	Greybull	47.46	68	⇓P		P	05 40 17.4	-1.1	
	baz=47								
G21A	Lodge Grass	47.48	67	⇓P		P	05 40 17.3	-1.4	
	baz=47								
D23A	Lindsay	47.49	64	⇑P		P	05 40 17.7	-0.9	
	baz=47								
J19A	Crowheart	47.57	70	⇓P		P	05 40 20.1	+0.6	
	baz=47								
BW06	Boulder Array	47.57	71	eP		P	05 40 18.3	-1.3	
	comp=Z,13nm,0.9s								
BW06	Boulder Array	47.57	71	⇑P		P	05 40 18.2	-1.3	
	baz=47,SNR=7.2								
PDAR	Pinedale Array	47.57	71	P		P	05 40 18.2	-1.4	
PDAR	Pinedale Array	47.57	71	P		P	05 40 18.2	-1.4	
	comp=Z,3.5nm,0.5s,baz=328,slow=3.0,SNR=29								
M17A	Scullys Gap (B	47.70	73	⇑P		P	05 40 19.3	-1.2	
	baz=48								
F22A	Rosebud	47.70	66	⇑P		P	05 40 19.3	-1.0	
	baz=48								
I20A	Worland	47.70	69	⇑P		P	05 40 19.2	-1.2	
	baz=48								
C24A	Savage	47.72	63	⇓P		P	05 40 19.7	-0.7	
	baz=48								
PASC	Pasadena Art C	47.73	86	eP		P	05 40 23.3	+2.7	
	comp=Z,53nm,0.7s								
JLU	Jordanelle	47.76	75	eP		P	05 40 20.9	-0.2	
	comp=Z,12nm,1.1s								
MWC	Mount Wilson	47.78	86	eP		P	05 40 20.6	-0.6	
	comp=Z,81nm,1.6s								
SHOC	Shoshone	47.78	83	⇓P		P	05 40 21.9	+1.0	
	baz=48,SNR=19								
E23A	Ismay	47.82	65	⇓P		P	05 40 20.3	-0.9	
	baz=48								
GSC	Goldstone	47.84	84	eP		P	05 40 21.6	0.0	
	comp=Z,18nm,0.6s								
N17A	Moffit Pass	47.92	74	⇑P		P	05 40 22.0	-0.4	
	baz=48								
K19A	Absolon Red Bu	47.96	71	⇑P		P	05 40 21.2	-1.3	
	baz=48,SNR=11								
DAU	Daniels Canyon	47.99	75	eP		P	05 40 23.1	+0.2	
G22A	Birney	48.01	67	⇑P		P	05 40 22.6	-0.1	
	baz=48								
BFSC	Mount Baldy Ra	48.01	85	⇑P		P	05 40 23.6	+0.6	
	baz=48								
D24A	Glendive	48.01	63	⇓P		P	05 40 21.5	-1.2	
	baz=48								
MPU	Maple Canyon	48.01	75	eP		P	05 40 22.8	-0.2	
	comp=Z,7.5nm,0.7s								
J20A	Shoshoni	48.09	70	⇑P		P	05 40 22.4	-1.0	
	baz=48								
L19A	Farson	48.09	72	⇑P		P	05 40 23.3	-0.3	
	baz=48								
F23A	Volborg	48.22	66	⇓P		P	05 40 23.0	-1.3	
	baz=48								
I21A	Big Trails, Te	48.27	69	⇑P		P	05 40 23.5	-1.3	
	baz=48								
ARUT	Antelope Range	48.31	79	eP		P	05 40 24.8	-0.4	
	comp=Z,10nm,1.0s								
E24A	Baker	48.35	64	⇑P		P	05 40 24.3	-1.0	
	baz=48								
H22A	Clearmont	48.35	67	⇑P		P	05 40 24.1	-1.3	
	baz=48								
HEC	Hector,Ludlow	48.45	84	⇑P		P	05 40 26.1	-0.1	
	baz=48								
CCUT	Cedar City	48.51	79	eP		P	05 40 26.5	-0.4	
	comp=Z,6.2nm,0.7s								
N18A	Larsen Ranch,	48.59	73	⇑P		P	05 40 27.4	0.0	
	baz=48								
MVU	Marysvale	48.61	77	eP		P	05 40 27.1	-0.5	
	comp=Z,7.5nm,0.8s								
MSU	Marysvale	48.62	77	eP		P	05 40 27.9	+0.2	
I22A	9 Mile Ranch,	48.69	68	⇑P		P	05 40 26.6	-1.5	
	baz=48								
TMUT	Trail Mountain	48.72	76	eP		P	05 40 28.4	-0.1	
	comp=Z,16nm,0.8s								
MURC	Murrieta	48.72	86	⇑P		P	05 40 28.5	+0.2	
	baz=49								
GMRC	Granite Mounta	48.90	83	⇑P		P	05 40 29.7	-0.1	
	baz=49,SNR=22								
N19A	John Jarvie Ra	48.94	73	⇓P		P	05 40 29.2	-0.8	
	baz=49								
Q16A	Castle Valley	48.98	76	⇑P		P	05 40 29.6	-0.8	
	baz=49								
J22A	Midwest	48.98	69	⇓P		P	05 40 28.9	-1.5	
	baz=49,SNR=5.2								
K21A	Alcova	49.01	70	⇑P		P	05 40 29.0	-1.6	
	baz=49,SNR=7.0								
LDFC	Landfair	49.04	83	eP		P	05 40 28.7	-2.1	
	comp=Z,30nm,0.6s								
P18A	Preston Nutter	49.09	75	⇓P		P	05 40 30.8	-0.5	
	baz=49								
M20A	Sweetwater, Wa	49.16	72	⇑P		P	05 40 31.0	-0.8	
	baz=49								
PFO	Pinyon Flat Ob	49.18	85	eP		P	05 40 32.1	+0.2	
	comp=Z,7.2nm,1.0s								
PFO	Pinyon Flat Ob	49.18	85	⇑P		P	05 40 31.8	-0.1	
	baz=49								
BELC	Belle Mtn. Jos	49.20	84	⇓P		P	05 40 31.4	-0.7	
	baz=49,SNR=6.4								
SRU	San Rafael	49.25	76	eP		P	05 40 32.4	-0.1	
	comp=Z,21nm,1.0s								
SRU	San Rafael	49.25	76	⇑P		P	05 40 31.9	-0.5	
	baz=49,SNR=7.4								
109C	Camp Elliot, M	49.26	86	⇓P		P	05 40 32.5	+0.2	
	baz=49								
O19A	Miners Draw (B	49.34	73	⇓P		P	05 40 32.1	-1.1	
	baz=49,SNR=8.9								
L21A	Rawlins	49.35	71	⇑P		P	05 40 31.5	-1.7	
	baz=49								
K22A	Casper	49.42	69	⇑P		P	05 40 32.5	-1.3	
	baz=49								
N20A	Spence Gulch,	49.52	72	⇓P		P	05 40 33.7	-0.8	
	baz=49								
M21A	Separation Pea	49.57	71	⇑P		P	05 40 33.7	-1.3	
	baz=49,SNR=6.9								
IRM	Iron Mountain	49.62	84	⇓P		P	05 40 35.2	0.0	
	baz=50								
BAR	Barrett	49.67	86	eP		P	05 40 35.1	-0.4	
	comp=Z,14nm,0.8s								
MONP	Monument Peak	49.68	86	⇓P		P	05 40 35.8	0.0	
	baz=50								
W13A	Hualapai Mount	49.78	82	⇑P		P	05 40 36.4	-0.2	
	baz=50,SNR=15								
P19A	Cripple Cowboy	49.84	74	⇓P		P	05 40 36.1	-1.0	
	baz=50,SNR=6.3								
L22A	Ellis Ranch, M	49.86	70	⇓P		P	05 40 36.5	-0.6	
	baz=50								
U15A	North Rim	49.89	79	⇓P		P	05 40 37.7	+0.2	
	baz=50,SNR=17								
RSSD	Black Hills	49.96	66	eP		P	05 40 39.6	+1.8	
	comp=Z,2.7nm,0.7s								
SPITS	Spitsbergen Ar	49.96	355	P		P	05 40 37.5	+0.3	
SPITS	Spitsbergen Ar	49.96	355	P		P	05 40 37.5	+0.3	
	comp=Z,3.9nm,0.7s,baz=342,slow=10,SNR=4.5								
O20A	White River Ci	49.97	73	⇑P		P	05 40 36.6	-1.3	
	baz=50								
N21A	Black Mountain	50.01	72	⇑P		P	05 40 37.4	-0.9	
	baz=50								
SWSC	Sam W. Stewart	50.04	85	⇑P		P	05 40 37.6	-0.6	
	baz=50								
Q19A	Hogan Spring (	50.11	75	⇑P		P	05 40 37.3	-1.6	
	baz=50,SNR=10.0								
M22A	Cedar Creek Ra	50.15	71	⇓P		P	05 40 37.7	-1.7	
	baz=50								
MDND	Maddock	50.17	60	⇓P		P	05 40 37.7	-1.5	
	baz=50								
L23A	Garrett	50.23	70	⇓P		P	05 40 38.7	-1.3	
	baz=50								
Y12C	Blythe	50.28	84	⇑P		P	05 40 40.9	+0.8	
	baz=50,SNR=5.8								
S18A	Hurst Farm, Bl	50.47	77	⇓P		P	05 40 40.9	-1.0	
	baz=50,SNR=13								
GLA	Glamis	50.56	85	eP		P	05 40 42.1	-0.2	
	comp=Z,23nm,0.6s								
GLA	Glamis	50.56	85	⇑P		P	05 40 41.6	-0.7	
	baz=50								
N22A	Wattenberg Ran	50.61	71	⇓P		P	05 40 41.9	-1.0	
	baz=50								
L24A	Wheatland	50.72	69	⇓P		P	05 40 42.5	-1.0	
	baz=50								
P21A	Newcastle	50.83	73	⇓P		P	05 40 44.5	0.0	
	baz=51								
N23A	Red Feather La	50.85	71	⇑P		P	05 40 43.3	-1.4	
	baz=51								
WUAZ	Wupatki	51.05	80	eP		P	05 40 45.7	-0.4	
	comp=Z,21nm,1.0s								
WUAZ	Wupatki	51.05	80	⇓P		P	05 40 46.4	+0.3	
	baz=51								
M24A	Cheyenne	51.15	70	⇑P		P	05 40 45.5	-1.3	
	baz=51								
WHN	Wuhan	51.21	272	P		P	05 40 46.8	-0.3	
O23A	Lake Granby, G	51.30	72	⇓P		P	05 40 46.8	-1.3	
	baz=51								
SMCO	Snowmass	51.33	73	eP		P	05 40 47.5	-1.0	
	comp=Z,4.5nm,0.9s								
M25A	Palm-Egli Farm	51.62	69	⇓P		P	05 40 48.6	-1.7	
	baz=51								
MVCO	Mesa Verde	51.69	76	eP		P	05 40 57.0	+6.0	
	comp=Z,13nm,0.8s								
MVCO	Mesa Verde	51.69	76	⇑P		P	05 40 51.1	+0.1	
	baz=52								
X16A	Lo Mia Camp, P	51.74	81	⇓P		P	05 40 51.7	+0.4	
	baz=52								
ISCO	Idaho Springs	51.74	72	eP		P	05 40 50.9	-0.6	
	comp=Z,4.3nm,0.8s								
P23A	Jefferson	51.88	72	⇓P		P	05 40 45.6	-6.9	
	baz=52								
AGMN	Agassiz Nation	51.90	58	eP		P	05 40 50.5	-1.6	
R22A	Saguache, Gunn	52.08	74	⇑P		P	05 40 53.1	-0.9	
	baz=52								
W18A	Petrified Fore	52.32	79	⇑P		P	05 40 56.0	+0.4	
	baz=52								
214A	Organ Pipe Nat	52.55	84	⇑P		P	05 40 58.0	+0.8	
	baz=52								
X18A	Snowflake	52.58	80	⇑P		P	05 40 57.8	+0.2	
	baz=52								
V20A	Brimhall	52.64	77	⇑P		P	05 40 58.0	0.0	
	baz=52								
R23A	Moffat	52.66	73	⇓P		P	05 40 58.0	-0.2	
	baz=52								
U21A	Nageezi	52.71	76	⇑P		P	05 40 58.2	-0.4	
	baz=53,SNR=9.9								
ZALV	Zalesovo Beam	52.77	312	P		P	05 41 01.7	+3.3	
ZALV	Zalesovo Beam	52.77	312	P		P	05 41 01.7	+3.3	
	comp=Z,1.2nm,0.5s,baz=59,slow=6.4,SNR=3.2								
W20A	Ramah	53.06	78	⇓P		P	05 41 01.7	+0.5	
	baz=53								
V21A	Milan	53.14	77	⇑P		P	05 41 07.0	+5.3	
	baz=53								
X20A	Quemado	53.46	79	⇓P		P	05 41 04.3	+0.2	
	baz=53,SNR=10								
TUC	Tucson	53.56	82	eP		P	05 41 04.7	-0.1	
	comp=Z,3.5nm,1.0s								
U23A	El Rito	53.66	75	⇓P		P	05 41 05.5	-0.1	
	baz=54								
S25A	Robets Cordova	53.83	73	⇓P		P	05 41 06.9	+0.1	
	baz=54								
T24A	Torres, Weston	53.85	74	⇓P		P	05 41 07.0	0.0	
	baz=54								
LZH	Lanzhou	53.92	284	eP		P	05 41 13.0	+5.6	
LZH				pP		sP	05 41 18.5	+1.0	
LZH				sP		sP	05 41 20.0	+2.5	
LZH				pmax		pmax			
	comp=Z,28nm,1.4s								
LZH	Lanzhou	53.92	284	eP		P	05 41 07.6	+0.2	
LZH				pP		pP	05 41 15.3	+0.6	
LZH				sP		sP	05 41 18.5	+1.0	
LZH				PP		PP	05 43 10.4	+2.0	
LZH				pmax		pmax			
	comp=Z,22nm,1.4s								
LZH				pmax		pmax			
	comp=Z,83nm,6.8s								
LZH				LR		LR			
	comp=N,540nm,14.6s								
LZH				LR		LR			
	comp=E,570nm,15.3s								
LZH				LR		LR			
	comp=Z,630nm,18.0s								
X21A	Alamocita Cree	53.96	78	⇑P		P	05 41 08.1	+0.3	
	baz=54,SNR=10								
Y20A	Horse Springs,	53.96	79	⇓P		P	05 41 08.2	+0.4	
	baz=54,SNR=10								
R26A	Arlington	54.00	72	⇑P		P	05 41 06.6	-1.3	
	baz=54,SNR=5.5								
V23A	Ortiz Mt. (NFS	54.06	76	⇑P		P	05 41 08.7	+0.3	
	baz=54								
GTA	Gaotai	54.12	290	⇑P		P	05 41 08.5	-0.3	
GTA				pP		pP	05 41 16.1	+0.1	
GTA				sP		sP	05 41 19.3	+0.5	
GTA				pmax		pmax			
	comp=Z,12nm,1.2s								
T25A	Trinidad	54.19	74	⇓P		P	05 41 08.7	-0.8	
	baz=54								
Y21A	Point of Rocks	54.32	79	⇑P		P	05 41 10.3	-0.1	
	baz=54								
Z20A	Nine Sixteen R	54.37	80	⇓P		P	05 41 10.6	0.0	
	baz=54,SNR=5.5								
LAZ	Ladron	54.38	78	eP		P	05 41 11.1	+0.3	
	comp=Z,12nm,1.2s								
X22A	Bernardo	54.39	78	⇓P		P	05 41 12.2	+1.4	
	baz=54								
R27A	Eads	54.39	71	⇑P		P	05 41 09.8	-0.9	
	baz=54								
ANMO	Albuquerque	54.43	77	eP		P	05 41 10.7	-0.4	
	comp=Z,4.9nm,0.9s								
S26A	Kim	54.43	72	⇑P		P	05 41 10.9	-0.2	
	baz=54								
V24A	Rampart Ranch,	54.62	75	⇑P		P	05 41 12.4	-0.2	
	baz=54								
U25A	Circle Dot Ran	54.69	74	⇓P		P	05 41 13.4	+0.4	
	baz=54,SNR=6.0								
120A	U Bar Ranch, L	54.73	81	⇓P		P	05 41 13.5	+0.2	
	baz=55,SNR=13								
Z21A	St. Cloud Mine	54.80	79	⇓P		P	05 41 14.8	+1.0	
	baz=55								
Y22A	Socorro	54.80	78	⇓P		P	05 41 14.2	+0.3	
	baz=55,SNR=8.6								
X23A	Hourglass Bar	54.84	77	⇓P		P	05 41 14.0	-0.1	
	baz=55								
BNM	Barren Site	54.86	78	eP		P	05 41 13.9	-0.5	
	comp=Z,7.2nm,1.0s								
BNM				ePcP		PcP	05 42 11.6	-4.7	
W24A	Lazy 6 Ranch,	54.88	76	⇑P		P	05 41 16.8	+2.3	
	baz=55								
V25A	Rancho No Teng	54.94	75	⇑P		P	05 41 15.3	+0.4	
	baz=55								
319A	Douglas	55.13	82	⇑P		P	05 41 16.1	-0.1	
	baz=55								
220A	Playas Peak, P	55.23	81	⇑P		P	05 41 17.0	+0.1	
	baz=55,SNR=26								
121A	Cookes Peak, D	55.26	80	⇑P		P	05 41 17.3	+0.2	
	baz=55,SNR=7.3								
Z22A	Elephant Butte	55.27	79	⇓P		P	05 41 17.2	0.0	
	baz=55								
Y23A	Lovelace Mesa,	55.36	78	⇓P		P	05 41 17.9	+0.1	
	baz=55,SNR=13								
W25A	X Bar L Ranch,	55.45	75	⇑P		P	05 41 18.0	-0.5	
	baz=55,SNR=9.0								
V26A	Tequesquite Ra	55.47	74	⇑P		P	05 41 18.4	-0.1	
	baz=55								
U27A	Thompson Grove	55.62	73	⇑P		P	05 41 25.5	+5.8	
	baz=56,SNR=7.0								
221A	Mesquite Ranch	55.62	80	⇓P		P	05 41 20.7	+1.0	
	baz=56								
122A	Conniff Cattle	55.62	79	⇑P		P	05 41 20.2	+0.5	
	baz=56								
320A	Kipp Ranch, An	55.62	82	⇓P		P	05 41 20.0	+0.2	
	baz=56,SNR=8.4								
Z23A	Rita Site, Whi	55.71	78	⇓P		P	05 41 20.3	0.0	
	baz=56								
Y24A	Capitan	55.74	77	⇑P		P	05 41 20.3	-0.3	
	baz=56,SNR=14								
123A	Bell Site, Whi	56.12	79	⇓P		P	05 41 24.4	+1.1	
	baz=56								
Z24A	Sheeppen Canyo	56.19	78	⇓P		P	05 41 24.6	+0.7	
	baz=56								
Y25A	Mesa, Roswell	56.19	77	⇑P		P	05 41 24.4	+0.7	
	baz=56								
124A	Stringfield Ra	56.57	78	⇑P		P	05 41 27.5	+0.9	
	baz=56								
Z25A	Roswell	56.62	77	⇓P		P	05 41 27.6	+0.8	
	baz=56								
Y27A	Causey	57.14	76	⇑P		P	05 41 30.5	0.0	
	baz=57								
324A	Moseley Ranch,	57.42	79	⇓P		P	05 41 32.0	-0.6	
	baz=57								
KSU1	Kansas State U	57.45	67	eP		P	05 41 36.6	+4.2	
	comp=Z,59nm,0.8s								
Z27A	Tatum	57.50	76	⇓P		P	05 41 32.1	-1.0	
	baz=57								
GDL2	Guadalupe Moun	57.58	78	eP		P	05 41 34.5	+0.9	
KURK	Kurchatov	57.77	312	P		P	05 41 34.1	-0.3	
226B	Tecolote Peak,	57.78	78	⇑P		P	05 41 35.5	+0.5	
	baz=58								
325A	Bean Ranch, Si	57.78	79	⇑P		P	05 41 34.8	-0.4	
	baz=58,SNR=14								
KURBB	Kurchatov Arra	57.87	312	P		P	05 41 34.1	-1.1	
	comp=Z,1.0nm,0.5s,baz=44,slow=6.8,SNR=9.4								
WMQ	Urumqi	57.97	301	P		P	05 41 39.0	+2.9	
WMQ				pmax		pmax			
	comp=Z,25nm,1.0s								
X30A	Coker Ranch, T	58.13	74	⇓P		P	05 41 37.0	-0.3	
	baz=58								
425A	Indio Mountain	58.18	79	⇑P		P	05 41 37.9	0.0	
	baz=58,SNR=10								
128A	Castleberry Fa	58.42	76	⇑P		P	05 41 39.9	+0.4	
	baz=58								
326A	Caldwell Ranch	58.43	78	⇓P		P	05 41 40.1	+0.6	
	baz=58								
MKAR	Makanchi Array	58.72	307	P		P	05 41 40.8	-0.5	
MKAR				PKKP		PKKPdf	06 02 52.5	-0.7	
MKAR	Makanchi Array	58.72	307	P		P	05 41 40.8	-0.5	
	comp=Z,1.9nm,0.8s,baz=34,slow=7.0,SNR=6.2								
MKAR				PKKP		PKKPdf	06 02 52.5	-0.7	
	comp=Z,1.2nm,1.0s,baz=252,slow=2.7,SNR=6.0								
426A	McDonald Obser	58.85	79	⇓P		P	05 41 41.8	-0.9	
	baz=59,SNR=18								
GYA	Guiyang	58.87	274	eP		P	05 41 44.0	+1.3	
GYA				pP		pP	05 41 51.8	+1.8	
GYA				PP		PP	05 43 55.0	+2.3	
GYA				ScP		ScP	05 46 31.4	+0.6	
GYA				S		S	05 49 46.5	-0.6	
GYA				SS		SS	05 53 41.4	+1.1	
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s								
GYA				pmax		pmax			
	comp=Z,90nm,5.2s								
GYA				LR		LR			
	comp=N,480nm,18.4s								
GYA				LR		LR			
	comp=E,410nm,19.0s								
GYA				LR		LR			
	comp=Z,490nm,18.0s								
427A	Hayter Ranch,	59.11	78	⇓P		P	05 41 44.5	+0.3	
	baz=59								
WMOK	Wichita Mounta	59.17	72	eP		P	05 41 43.5	-1.0	
	comp=Z,12nm,0.7s								
WMOK				ePP		PP	05 43 55.0	0.0	
527A	Woodward Ranch	59.48	79	⇓P		P	05 41 46.0	-0.9	
	baz=59								
626A	Big Bend Ranch	59.57	80	⇓P		P	05 41 46.8	-0.7	
	baz=59,SNR=25								
428A	Kincaid Ranch,	59.63	78	⇑P		P	05 41 47.6	-0.3	
	baz=60,SNR=17								
BVAR	Borovoye Array	59.72	318	P		P	05 41 47.4	-0.6	
BVAR	Borovoye Array	59.72	318	P		P	05 41 47.4	-0.6	
	comp=Z,2.3nm,0.4s,baz=58,slow=5.5,SNR=7.7								
BRVK	Borovoye	59.74	319	eP		P	05 41 50.5	+2.3	
	comp=Z,14nm,0.8s								
528A	Cox Ranch, San	59.97	78	⇓P		P	05 41 50.2	-0.1	
	baz=60,SNR=5.6								
TXAR	Lajitas Array	60.02	80	P		P	05 41 49.9	-0.7	
TXAR	Lajitas Array	60.02	80	P		P	05 41 49.9	-0.7	
	comp=Z,2.8nm,0.7s,baz=298,slow=5.4,SNR=20								
330A	Mertzon	60.07	76	⇑P		P	05 41 50.1	-0.7	
	baz=60								
627A	Terlingua Ranc	60.10	79	⇓P		P	05 41 50.7	-0.5	
	baz=60,SNR=9.5								
TUL1	Tulsa	60.11	69	⇓P		P	05 41 49.9	-1.0	
	baz=60								
ABTX	Abilene, Hawle	60.13	74	⇓P		P	05 41 51.4	+0.1	
	baz=60								
429A	Davenport Ranc	60.18	77	⇑P		P	05 41 54.9	+3.2	
	baz=60								
529A	Stev Forest Ra	60.34	78	⇑P		P	05 41 57.3	+4.6	
	baz=60								
628A	Black Gap, Mar	60.38	79	⇑P		P	05 41 52.6	-0.5	
	baz=60,SNR=6.9								
430A	Baggett Ranch,	60.47	77	⇓P		P	05 41 58.5	+4.9	
	baz=60,SNR=6.2								
331A	San Angelo	60.59	76	⇑P		P	05 41 54.0	-0.3	
	baz=60,SNR=6.1								
SCHQ	Schefferville	60.64	37	P		P	05 41 55.7	+1.3	
SCHQ	Schefferville	60.64	37	P		P	05 41 55.7	+1.3	
	comp=Z,2.9nm,0.6s,baz=325,slow=8.5,SNR=3.9								
232A	Coleman	60.65	75	⇑P		P	05 41 54.6	-0.2	
	baz=60								
530A	J-C Ranch, Com	60.86	77	⇓P		P	05 41 55.5	-0.7	
	baz=61								
431A	Sonora	60.92	76	⇑P		P	05 41 56.8	+0.2	
	baz=61								
332A	Millersview	60.95	75	⇑P		P	05 41 56.8	0.0	
	baz=61								
432A	Menard	61.28	76	⇓P		P	05 41 58.7	-0.4	
	baz=61								
531A	Rocksprings	61.33	77	⇑P		P	05 41 59.5	+0.1	
	baz=61								
JCT	Junction City	61.55	76	eP		P	05 42 00.1	-0.8	
	comp=Z,88nm,0

KSH	**Kashi**	**67.16**	**305**	*eP*		P		05 42 41.1 +3.5
KSH				pP		pP		05 42 49.4 +4.3
KSH				sP		sP		05 42 52.1 +4.3
KSH				PcP		**PcP**		**05 43 08.9 +3.3**
KSH				PP		PP		05 45 12.0 +6.8
KSH				ScP				05 47 09.0
KSH				PcS				05 47 12.3
KSH				S		**S**		**05 51 34.1 +3.5**
KSH				sS		sS		05 51 46.9 +4.1
KSH				ScS		**ScS**		**05 52 34.3 +0.4**
KSH				SS		**SS**		**05 55 56.0 +6.9**
KSH				pmax		pmax		
	comp=Z,6.0nm,1.2s							
KSH				pmax		pmax		
	comp=Z,510nm,5.0s							
KSH				LR		LR		
	comp=N,140nm,4.2s							
KSH				LR		LR		
	comp=E,440nm,5.1s							
KSH				LR		LR		
	comp=Z,3μm,12.6s							
NB2	**NORSAR Subarra**	**67.20**	**354**	P		P		05 42 42.1 +4.7
	comp=Z,8.2nm,0.8s,baz=8.2,slow=6.2							
NOA	**NORSAR Array B**	**67.20**	**354**	P		P		05 42 41.7 +4.3
NOA	**NORSAR Array B**	**67.20**	**354**	P		P		05 42 41.7 +4.3
	comp=Z,3.3nm,0.7s,baz=7.1,slow=6.2,SNR=6.2							
LRAL	**Lakeview Retre**	**67.22**	**65**	*eP*		**P**		**05 42 36.4 -1.5**
	comp=Z,150nm,1.5s							
BRNJ	**Basking Ridge**	**68.07**	**52**	P		P		05 42 35.8 -7.3
CMAR	**Chiang Mai Arr**	**69.56**	**274**	P		**P**		**05 42 52.4 -0.3**
CMAR	**Chiang Mai Arr**	**69.56**	**274**	P		**P**		**05 42 52.4 -0.3**
	comp=Z,5.2nm,0.9s,baz=27,slow=6.9,SNR=13							
EKA	**Eskdalemuir Ar**	**73.34**	**1**	P		P		05 43 18.6 +3.6
EKA	**Eskdalemuir Ar**	**73.34**	**1**	P		P		05 43 18.6 +3.6
	comp=Z,2.9nm,0.7s,baz=6.9,slow=4.6,SNR=3.6							
KBL	**Kabul**	**74.51**	**306**	*eP*		**P**		**05 43 21.1 -1.4**
	comp=Z,18nm,0.9s							
AKASG	**Malin Array Be**	**74.80**	**341**	P		**P**		**05 43 24.2 +0.7**
AKASG	**Malin Array Be**	**74.80**	**341**	P		**P**		**05 43 24.2 +0.7**
	comp=Z,0.9nm,0.5s,baz=21,slow=5.4,SNR=3.0							
AKASG				LR		LR		06 20 16.7
	comp=Z,6μm,21.1s,baz=85,slow=39							
MLR	**Muntele Rosu**	**80.44**	**341**	LR		LR		06 24 42.8
	comp=Z,3μm,21.8s,baz=61,slow=40							
WRA	**Warramunga Arr**	**81.26**	**222**	P		**P**		**05 43 59.4 -0.4**
WRA	**Warramunga Arr**	**81.26**	**222**	P		**P**		**05 43 59.4 -0.4**
	comp=Z,1.6nm,0.8s,baz=34,slow=5.6,SNR=5.0							
FITZ	**Fitzroy Crossi**	**83.54**	**230**	P		**P**		**05 44 11.8 +0.1**
FITZ	**Fitzroy Crossi**	**83.54**	**230**	P		**P**		**05 44 11.8 +0.1**
	comp=Z,5.9nm,0.8s,baz=25,slow=4.5,SNR=3.1							
BRTR	**Keskin Array B**	**84.06**	**334**	P		**P**		**05 44 14.5 +0.1**
BRTR	**Keskin Array B**	**84.06**	**334**	P		**P**		**05 44 14.5 +0.1**
	comp=Z,0.6nm,0.8s,baz=108,slow=4.7,SNR=2.2							
BRTR				LR		LR		06 23 51.2
	comp=Z,3μm,21.2s,baz=69,slow=37							
ASAR	**Alice Springs**	**84.76**	**221**	P		**P**		**05 44 18.0 +0.2**
ASAR	**Alice Springs**	**84.76**	**221**	P		**P**		**05 44 18.0 +0.2**
	comp=Z,1.4nm,0.8s,baz=26,slow=5.3,SNR=5.2							
TORD	**Torodi Ar. Bea**	**115.40**	**357**	PKP		**PKPdf**		**05 50 25.8 +0.2**
TORD				PKKPab		**PKKPab**		**06 01 03.2 -4.3**
TORD	**Torodi Ar. Bea**	**115.40**	**357**	PKP		**PKPdf**		**05 50 25.8 +0.2**
	comp=Z,0.3nm,0.5s,baz=2.3,slow=1.3,SNR=3.2							
TORD				PKKPab		**PKKPab**		**06 01 03.2 -4.3**
	comp=Z,0.4nm,0.5s,baz=185,slow=3.9,SNR=5.0							
QSPA	**South Pole Qui**	**141.43**	**180**	PKP		**PKPdf**		**05 51 11.4 -1.8**
QSPA	**South Pole Qui**	**141.43**	**180**	PKP		**PKPdf**		**05 51 11.4 -1.8**
	comp=Z,1.6nm,0.6s,baz=284,slow=0.7,SNR=8.1							
MAW	**Mawson**	**145.85**	**218**	PKPbc		**PKPbc**		**05 51 21.1 -0.3**
MAW	**Mawson**	**145.85**	**218**	PKPbc		**PKPbc**		**05 51 21.1 -0.3**
	comp=Z,2.9nm,0.7s,baz=55,slow=3.0,SNR=4.3							
BOSA	**Boshof**	**149.69**	**309**	PKPbc		**PKPbc**		**05 51 33.5 +0.1**
BOSA	**Boshof**	**149.69**	**309**	PKPbc		**PKPbc**		**05 51 33.5 +0.1**
	comp=Z,3.2nm,0.6s,baz=53,slow=3.0,SNR=7.7							

*DJA **19** 05:34:57.9±2.4,5.5°N±10.1°×12.8°E±.1°, h31km±29km, M5.2/8, mb5.2/5, MLv5.2/8*

*IDC **19** 05:35:05.7±0.6,4.1°N×126.3°E, h0km, mb4.4/21, mb1 4.5/21, mb1mx4.4/29, mbtmp4.4/21, MS5.0/2, Ms1 5.0/2, ms1mx4.5/46, Error ellipse: s-maj=29.3km s-min=12.8km az=72.0*

*ISCJB **19** 05:35:09.2±0.3,4.2°N±0.0°×127.0°E±0.0°, h36km, mb4.5/26, MS5.4/2, Error ellipse: s-maj=7.7km s-min=4.6km az=158.0*

*NEIC **19** 05:35:10.7±0.3,4.2°N×126.9°E, h35km, mb4.8/4, Error ellipse: s-maj=14.7km s-min=8.5km az=73.0*

*AUST **19** 05:35:45.2,2.0°N×127.5°E, h200km*

ISC 19 05:35:10.7±0.4,4.2°N±0.0°×126.9°E±0.0°,7,h36km,n88, σ1§30/88,mb4.6/26,1C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SGSI	**Sangihe**	**1.52**	**250**	P		**Pn**	**05 35 36.2**	**+0.7**
GAMI	**Galela, Maluku**	**2.51**	**161**	P		**Pn**	**05 35 49.9**	**+0.9**
GSPH	**General Santos**	**2.73**	**313§**	*eP*		**Pn**	**05 35 53.2**	**+1.1**
MATI	**Mati**	**2.79**	**346**	*eP*		Pn	05 35 59.6	+6.6
DAV	**Davao City (W)**	**3.15**	**334**	LR		LR	05 37 04.4	
	comp=Z,11μm,20.9s,baz=37,slow=38							
TNTI	**Ternate**	**3.45**	**173**	P		**Pn**	**05 36 03.3**	**+1.3**
MNI	**Manado**	**3.48**	**218**	P		**Pn**	**05 36 04.0**	**+1.6**
CTBH	**Cotabato--PC H**	**4.02**	**318§**	*iP*		**Pn**	**05 36 12.0**	**+2.2**
BUKP	**Musuan**	**4.09**	**333**	*eP*		Pn	05 36 15.4	+4.6
KMSI	**Cibinong**	**4.69**	**219**	P		Pn	05 36 25.5	+6.5
	351nm,0.6s,3.4nm							
LBMI	**Labuha**	**4.86**	**174**	P		**Pn**	**05 36 22.6**	**+1.3**
	101nm,0.7s,0.8nm							
BUTP	**Butuan**	**4.90**	**344**	*eP*		Pn	05 36 30.4	+8.6
PAGZ	**Pagadian**	**5.06**	**316**	*eP*		Pn	05 36 27.6	+3.4
MRSI	**Marisa**	**6.25**	**234**	P		**Pn**	**05 36 41.1**	**+0.7**
	123nm,0.6s,0.8nm							
LUWI	**Luwuk**	**6.70**	**219**	P		Pn	05 36 51.6	+5.0
	288nm,0.9s,0.9nm							
NLAI	**Namlea**	**7.41**	**179**	P		**Pn**	**05 36 56.2**	**-0.2**
MYLDM	**Lahad Datu**	**8.49**	**277**	P		Pn	05 37 05.8	-5.4
PCI	**Palu**	**8.75**	**235**	P		Pn	05 37 41.1	+26
	baz=8.2,SNR=3.1							
PCI				S		Sn	05 39 16.6	+24
	baz=8.2,SNR=4.5							
JAY	**Jayapura**	**15.28**	**116**	P		P	05 38 54.9	+6.6
	baz=14,SNR=5.3							
JAY				S		**Sn**	**05 41 29.6**	**-2.6**
	baz=14,SNR=4.6							
KSM	**Kuching**	**16.85**	**261**	*eP*		**P**	**05 39 06.4**	**+0.6**
	27nm,0.8s							
MTN	**Manton Dam**	**17.45**	**166**	P		**Pn**	**05 39 09.4**	**-2.1**
	baz=15,SNR=4.2							
KDU	**Kakadu**	**17.67**	**162**	P		**P**	**05 39 14.9**	**+0.2**
	baz=16,SNR=4.8							
FITZ	**Fitzroy Crossi**	**22.22**	**183**	P		**P**	**05 40 03.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**22.22**	**183**	P		**P**	**05 40 03.5**	**-0.8**
	6.2nm,0.6s,baz=6.1,slow=11,SNR=11							
FITZ	**Fitzroy Crossi**	**22.22**	**183**	P		**P**	**05 40 03.8**	**-0.5**
	baz=20,SNR=8.3							
WRAB	**Tennant Creek**	**25.08**	**163**	*eP*		**P**	**05 40 31.8**	**-0.3**
	27nm,0.9s							
WRA	**Warramunga Arr**	**25.09**	**163**	P		**P**	**05 40 32.0**	**-0.1**
WRA	**Warramunga Arr**	**25.09**	**163**	P		**P**	**05 40 32.0**	**-0.1**
	17nm,0.7s,baz=344,slow=10,SNR=16							
ASAR	**Alice Springs**	**28.54**	**167**	P		**P**	**05 41 03.2**	**0.0**
ASAR	**Alice Springs**	**28.54**	**167**	P		**P**	**05 41 03.2**	**0.0**
	1.4nm,0.6s,baz=348,slow=7.7,SNR=9.3							
NJ2	**Nanjing**	**28.71**	**346**	*eP*		**P**	**05 41 04.3**	**-0.3**
NJ2				pP		**pP**	**05 41 13.1**	**-1.8**
NJ2				sP		**sP**	**05 41 16.8**	**-2.5**
NJ2				PP		**PnPn**	**05 41 58.3**	**+2.2**
NJ2				S		**S**	**05 45 49.0**	**-2.4**
NJ2				sS		**sS**	**05 46 07.0**	**-1.4**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
NJ2				pmax		pmax		
	comp=Z,3μm,6.0s							
NJ2				LR		LR		
	comp=N,4μm,13.4s							
NJ2				LR		LR		
	comp=E,4μm,17.8s							
NJ2				LR		LR		
	comp=Z,7μm,14.1s							
CMAR	**Chiang Mai Arr**	**30.83**	**300**	P		**P**	**05 41 23.7**	**+0.1**
CMAR	**Chiang Mai Arr**	**30.83**	**300**	P		**P**	**05 41 23.7**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=120,slow=7.4,SNR=15							
MEEK	**Meekatharra**	**31.72**	**194**	P		**P**	**05 41 31.1**	**-0.2**
	baz=30,SNR=4.9							
KSAR	**Wonju Array Be**	**33.07**	**1**	P		**P**	**05 41 44.3**	**+1.3**
KSRS	**Korea Array**	**33.09**	**1**	P		**P**	**05 41 44.3**	**+1.2**
	comp=Z,1.5nm,0.6s,baz=178,slow=9.6,SNR=6.3							
XAN	**Xi'an**	**34.09**	**333**	P		**P**	**05 41 52.0**	**0.0**
XAN				pP		**pP**	**05 41 59.4**	**-2.9**
XAN				pmax		pmax		
	comp=Z,4.0nm,0.7s							
EIDS	**Eidsvold**	**37.60**	**143**	P		**P**	**05 42 23.2**	**+1.1**
	baz=36,SNR=4.7							
BBOO	**Buckleboo**	**37.83**	**167**	P		**P**	**05 42 24.4**	**+0.4**
	baz=36,SNR=12							
STKA	**Stephens Creek**	**38.51**	**160**	P		**P**	**05 42 30.4**	**+0.7**
STKA	**Stephens Creek**	**38.51**	**160**	P		**P**	**05 42 30.4**	**+0.7**
	comp=Z,8.6nm,0.6s,baz=302,slow=8.1,SNR=8.5							
STKA	**Stephens Creek**	**38.51**	**160**	P		**P**	**05 42 31.3**	**+1.6**
	baz=36,SNR=7.8							
ARMA	**Armidale**	**41.75**	**147**	P		**P**	**05 42 59.0**	**+2.2**
	baz=40,SNR=11							
SONM	**Songino Array**	**46.91**	**341**	P		**P**	**05 43 38.1**	**+0.4**
SONM	**Songino Array**	**46.91**	**341**	P		**P**	**05 43 38.2**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=159,slow=8.3,SNR=4.1							
PETK	**Petropavlovsk-**	**54.89**	**22**	P		**P**	**05 44 39.3**	**+1.7**
PETK	**Petropavlovsk-**	**54.89**	**22**	P		**P**	**05 44 39.3**	**+1.7**
	comp=Z,3.3nm,0.8s,baz=184,slow=4.6,SNR=4.2							
MK31	**Makanchi Array**	**57.28**	**325**	*eP*		**P**	**05 44 54.9**	**0.0**
MK31				*ePcP*		**PcP**	**05 45 50.3**	**+1.4**
MKAR	**Makanchi Array**	**57.28**	**325**	P		**P**	**05 44 55.0**	**+0.1**
MKAR				PcP		**PcP**	**05 45 49.9**	**+1.1**
MKAR	**Makanchi Array**	**57.28**	**325**	P		**P**	**05 44 55.0**	**+0.1**
	comp=Z,5.6nm,0.6s,baz=123,slow=8.3,SNR=20							
MKAR				PcP		**PcP**	**05 45 49.9**	**+1.1**
	comp=Z,2.5nm,0.7s,baz=118,slow=4.2,SNR=3.6							
ZALV	**Zalesovo Beam**	**60.26**	**333**	P		**P**	**05 45 15.0**	**-0.3**
ZALV	**Zalesovo Beam**	**60.26**	**333**	P		**P**	**05 45 15.0**	**-0.3**
	comp=Z,2.1nm,0.5s,baz=126,slow=6.2,SNR=6.0							
KURBB	**Kurchatov Arra**	**61.45**	**327**	P		**P**	**05 45 23.4**	**-0.1**
	comp=Z,7.1nm,0.6s,baz=128,slow=6.5,SNR=62							
KURK	**Kurchatov**	**61.45**	**327**	P		**P**	**05 45 23.4**	**-0.1**
BVAR	**Borovoye Array**	**67.04**	**327**	P		**P**	**05 46 00.1**	**0.0**
BVAR	**Borovoye Array**	**67.04**	**327**	P		**P**	**05 46 00.2**	**0.0**
	comp=Z,8.1nm,0.8s,baz=132,slow=8.4,SNR=15							
BRVK	**Borovoye**	**67.11**	**327**	*eP*		**P**	**05 46 00.7**	**+0.1**
	comp=Z,9.4nm,0.8s							
AKTO	**Aktyubinsk**	**73.42**	**321**	P		**P**	**05 46 39.0**	**-0.3**
AKTO	**Aktyubinsk**	**73.42**	**321**	P		**P**	**05 46 39.0**	**-0.3**
	comp=Z,4.8nm,0.7s,baz=198,slow=20							
KDAK	**Kodiak Island**	**81.35**	**32**	P		**P**	**05 47 25.6**	**+2.1**
KDAK	**Kodiak Island**	**81.35**	**32**	P		**P**	**05 47 25.6**	**+2.1**
	comp=Z,5.1nm,0.8s,baz=273,slow=8.1,SNR=3.8							
KDAK				LR		LR		06 17 50.9
	comp=Z,2μm,21.1s,baz=311,slow=32							
MCK	**McKinley**	**83.62**	**26**	*eP*		**P**	**05 47 36.4**	**+1.2**
	comp=Z,6.6nm,1.1s							
ILAR	**Eielson Array**	**84.56**	**25**	P		**P**	**05 47 41.4**	**+1.4**
ILAR	**Eielson Array**	**84.56**	**25**	P		**P**	**05 47 41.4**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=262,slow=4.5,SNR=9.9							
BRTR	**Keskin Array B**	**89.89**	**310**	P		**P**	**05 48 05.7**	**-0.8**
BRTR	**Keskin Array B**	**89.89**	**310**	P		**P**	**05 48 05.7**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=138,slow=4.1,SNR=4.1							
ARCES	**ARCESS Array B**	**90.07**	**340**	P		**P**	**05 48 06.2**	**-0.3**
ARCES	**ARCESS Array B**	**90.07**	**340**	P		**P**	**05 48 06.2**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=83,slow=5.9,SNR=12							
FINES	**FINESS Array B**	**91.51**	**332**	P		**P**	**05 48 13.5**	**+0.2**
FINES	**FINESS Array B**	**91.51**	**332**	P		**P**	**05 48 13.5**	**+0.2**
	comp=Z,3.0nm,0.9s,baz=57,slow=4.0,SNR=7.0							
AKASG	**Malin Array Be**	**91.66**	**321**	P		**P**	**05 48 13.9**	**-0.4**
AKASG	**Malin Array Be**	**91.66**	**321**	P		**P**	**05 48 13.9**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=68,slow=5.4,SNR=5.5							
HFS	**Hagfors**	**97.69**	**332**	P		**P**	**05 48 40.8**	**-0.9**
HFS	**Hagfors**	**97.69**	**332**	P		**P**	**05 48 40.8**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=95,slow=4.9,SNR=6.7							
NB2	**NORSAR Subarra**	**98.45**	**334**	P		**P**	**05 48 43.9**	**-1.2**
	comp=Z,1.7nm,0.9s,baz=70,slow=4.6							
NOA	**NORSAR Array B**	**98.45**	**334**	P		**P**	**05 48 44.3**	**-0.9**
NOA	**NORSAR Array B**	**98.45**	**334**	P		**P**	**05 48 44.3**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=63,slow=7.5,SNR=3.9							
GERES	**GERESS Array B**	**101.84**	**322**	P		**Pdif**	**05 49 01.1**	**+0.5**
GERES	**GERESS Array B**	**101.84**	**322**	P		**Pdif**	**05 49 01.1**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=57,slow=7.2,SNR=2.9							
BSMT	**Bassoo Peak**	**105.30**	**38**	*e*PKPdf		**PKiKP**	**05 53 29.3**	**-0.8**
WALA	**Waterton Lakes**	**105.32**	**37**	*e*PKPdf		**PKiKP**	**05 53 29.1**	**-0.9**
JTMT	**Jette**	**105.65**	**38**	*e*PKPdf		**PKiKP**	**05 53 28.1**	**-2.6**
YBMT	**Yellow Bay**	**105.77**	**38**	*e*PKPdf		**PKiKP**	**05 53 27.3**	**-3.5**
SWMT	**Swartz Lake**	**105.93**	**38**	*e*PKPdf		**PKiKP**	**05 53 26.8**	**-4.3**
TORD	**Torodi Ar. Bea**	**122.98**	**289**	PKP		**PKPdf**	**05 54 04.5**	**+0.2**
TORD	**Torodi Ar. Bea**	**122.98**	**289**	PKP		**PKPdf**	**05 54 04.6**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=71,slow=2.3,SNR=3.4							
CFAA	**Coronel Fontan**	**149.24**	**154**	PKPbc		**PKPbc**	**05 54 57.4**	**+1.1**
CFAA	**Coronel Fontan**	**149.24**	**154**	PKPbc		**PKPbc**	**05 54 57.4**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=196,slow=3.0,SNR=4.2							

IDC 19 05:41:51.2±2.0,4.1°N×126.5°E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/24, mbtmp3.4/4, Error ellipse: s-maj=121.7km s-min=23.9km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FITZ	**Fitzroy Crossi**	**22.17**	**182**	P		P	05 46 49.3	+0.3
	1.9nm,0.8s,baz=4.6,slow=12,SNR=4.1							
WRA	**Warramunga Arr**	**25.17**	**163**	P		P	05 47 18.4	-0.2
	0.6nm,0.7s,baz=341,slow=11,SNR=7.4							
ASAR	**Alice Springs**	**28.60**	**166**	P		P	05 47 49.3	-0.2
	0.3nm,0.7s,baz=344,slow=8.0,SNR=3.8							
MKAR	**Makanchi Array**	**57.09**	**325**	P		P	05 51 39.5	0.0
	0.3nm,0.6s,baz=135,slow=6.8,SNR=3.0							

*IDC **19** 05:43:15.8±0.7,4.1°N×126.8°E, h0km, mb4.1/12, mb1 4.2/12, mb1mx4.0/25, mbtmp4.1/12, Error ellipse: s-maj=41.4km s-min=13.7km az=72.0*

*ISCJB **19** 05:43:19.0±0.5,4.1°N±0.0°×126.7°E±0.2°, h36km, mb4.1/14, Error ellipse: s-maj=24.4km s-min=8.6km az=157.6*

*NEIC **19** 05:43:20.9±0.4,4.1°N×126.8°E, h35km, mb4.7/2, Error ellipse: s-maj=24.5km s-min=7.7km az=71.0*

ISC 19 05:43:21.1±0.7,4.2°N±0.1°×126.8°E±0.2°,h36km,n33, σ0§76/31,mb4.3/14,1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MATI	**Mati**	**2.82**	**350**	*eP*		Pn	05 44 09.2	+5.5
CTBH	**Cotabato--PC H**	**3.94**	**321§**	*iP*		Pn	05 44 26.8	+7.7
BUKP	**Musuan**	**4.07**	**336**	*eP*		Pn	05 44 28.0	+7.1
PAGZ	**Pagadian**	**4.97**	**318**	*eP*		Pn	05 44 38.5	+5.2
IPIL	**Ipil**	**5.51**	**311**	*eP*		**Pn**	**05 44 39.5**	**-1.2**
FITZ	**Fitzroy Crossi**	**22.14**	**183**	P		P	**05 48 13.1**	**-0.8**
FITZ	**Fitzroy Crossi**	**22.14**	**183**	P		P	**05 48 13.1**	**-0.8**
	2.7nm,0.7s,baz=6.2,slow=9.1,SNR=7.5							
WRAB	**Tennant Creek**	**25.07**	**163**	*eP*		**P**	**05 48 41.0**	**-1.5**
	7.4nm,0.7s							
WRA	**Warramunga Arr**	**25.08**	**163**	P		P	**05 48 41.8**	**-0.7**
WRA	**Warramunga Arr**	**25.08**	**163**	P		P	**05 48 41.8**	**-0.7**
	8.1nm,0.7s,baz=338,slow=11,SNR=21							
ASAR	**Alice Springs**	**28.52**	**166**	P		P	**05 49 12.9**	**-0.6**
ASAR	**Alice Springs**	**28.52**	**166**	P		P	**05 49 12.9**	**-0.6**
	0.3nm,0.5s,baz=346,slow=7.8,SNR=6.1							
CMAR	**Chiang Mai Arr**	**30.68**	**300**	P		P	**05 49 34.0**	**+1.3**
CMAR	**Chiang Mai Arr**	**30.68**	**300**	P		P	**05 49 34.0**	**+1.3**
	0.6nm,0.3s,baz=116,slow=7.0,SNR=6.4							
KSAR	**Wonju Array Be**	**33.15**	**2**	P		P	**05 49 53.9**	**-0.2**
KSRS	**Korea Array**	**33.16**	**2**	P		P	**05 49 53.9**	**-0.3**
	1.2nm,0.6s,baz=180,slow=10.0,SNR=7.4							
STKA	**Stephens Creek**	**38.51**	**160**	P		P	**05 50 41.3**	**+1.1**
STKA	**Stephens Creek**	**38.51**	**160**	P		P	**05 50 41.3**	**+1.1**
	4.3nm,0.7s,baz=344,slow=7.1,SNR=8.2							
ARMA	**Armidale**	**41.80**	**147**	*eP*		P	**05 51 07.6**	**0.0**
	62nm,1.6s							
SONM	**Songino Array**	**46.91**	**341**	P		P	**05 51 49.0**	**+0.8**
SONM	**Songino Array**	**46.91**	**341**	P		P	**05 51 49.0**	**+0.8**
	0.4nm,0.4s,baz=162,slow=7.3,SNR=2.2							
MKAR	**Makanchi Array**	**57.23**	**325**	P		P	**05 53 04.7**	**-0.2**
MKAR				PcP		**PcP**	**05 53 59.4**	**+0.3**
MKAR	**Makanchi Array**	**57.23**	**325**	P		P	**05 53 04.7**	**-0.2**
	2.2nm,0.6s,baz=124,slow=8.3,SNR=24							
MKAR				PcP		**PcP**	**05 53 59.4**	**+0.3**
	1.2nm,0.8s,baz=114,slow=4.5,SNR=2.8							
ZALV	**Zalesovo Beam**	**60.23**	**333**	P		P	**05 53 24.6**	**-0.9**
ZALV	**Zalesovo Beam**	**60.23**	**333**	P		P	**05 53 24.6**	**-0.9**
	0.9nm,0.5s,baz=134,slow=8.2,SNR=5.9							
KURBB	**Kurchatov Arra**	**61.40**	**327**	P		P	**05 53 33.1**	**-0.5**
	1.9nm,0.4s,baz=128,slow=6.0,SNR=30							
KURK	**Kurchatov**	**61.40**	**327**	*eP*		P	**05 53 33.3**	**-0.3**
ILAR	**Eielson Array**	**84.71**	**25**	P		P	**05 55 51.4**	**+0.2**
ILAR	**Eielson Array**	**84.71**	**25**	P		P	**05 55 51.4**	**+0.2**
	0.4nm,0.7s,baz=258,slow=4.5,SNR=3.9							
ARCES	**ARCESS Array B**	**90.06**	**340**	P		P	**05 56 16.6**	**-0.4**
ARCES	**ARCESS Array B**	**90.06**	**340**	P		P	**05 56 16.6**	**-0.4**
	1.9nm,0.9s,baz=76,slow=7.7,SNR=5.0							
TORD	**Torodi Ar. Bea**	**122.81**	**288**	PKP		**PKPdf**	**06 02 14.5**	**+0.1**
TORD	**Torodi Ar. Bea**	**122.81**	**288**	PKP		**PKPdf**	**06 02 14.5**	**+0.1**
	0.3nm,0.6s,baz=76,slow=1.8,SNR=2.5							

IDC 19 05:46:14.8±1.5,4.2°N×126.4°E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/25, mbtmp3.7/6, Error ellipse: s-maj=111.5km s-min=18.6km az=72.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FITZ	**Fitzroy Crossi**	**22.19**	**183**	P		P	05 51 12.7	-0.1
	1.7nm,0.8s,baz=10,slow=9.1,SNR=4.5							
WRA	**Warramunga Arr**	**25.10**	**163**	P		P	05 51 41.2	-0.2
	1.4nm,0.5s,baz=343,slow=10,SNR=4.6							
ASAR	**Alice Springs**	**28.54**	**166**	P		P	05 52 12.6	+0.1
	0.5nm,0.7s,baz=351,slow=7.7,SNR=4.3							
MKAR	**Makanchi Array**	**57.24**	**325**	P		P	05 56 03.6	-0.5
	0.5nm,0.5s,baz=118,slow=7.9,SNR=4.3							
ZALV	**Zalesovo Beam**	**60.23**	**333**	P		P	05 56 24.4	-0.3
	0.4nm,0.3s,baz=138,slow=7.1,SNR=3.0							
KURBB	**Kurchatov Arra**	**61.41**	**327**	P		P	05 56 33.3	+0.5
	0.7nm,0.4s,baz=128,slow=6.0,SNR=12							

IDC 19 05:59:15.9±1.9,4.0°N×126.6°E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/24, mbtmp3.5/4, Error ellipse: s-maj=108.6km s-min=25.1km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FITZ	**Fitzroy Crossi**	**22.04**	**183**	P		P	06 04 12.3	0.0
	0.6nm,0.4s,baz=9.3,slow=11,SNR=7.0							
WRA	**Warramunga Arr**	**25.02**	**163**	P		P	06 04 41.8	0.0
	0.9nm,0.6s,baz=342,slow=11,SNR=4.8							
ASAR	**Alice Springs**	**28.45**	**166**	P		P	06 05 12.6	-0.1
	0.3nm,0.5s,baz=344,slow=7.0,SNR=3.8							
MKAR	**Makanchi Array**	**57.24**	**325**	P		P	06 09 05.2	0.0
	0.4nm,0.5s,baz=127,slow=7.7,SNR=5.6							

*IDC **19** 06:01:08.4±0.4,4.0°N×126.7°E, h0km, mb4.4/27, mb1 4.4/27, mb1mx4.4/31, mbtmp4.3/27, Error ellipse: s-maj=20.8km s-min=9.6km az=77.0*

*NEIC **19** 06:01:13.5±0.2,4.0°N×126.8°E, h35km, mb4.5/19, Error ellipse: s-maj=8.1km s-min=4.4km az=74.0*

*BJI **19** 06:01:14.2,4.2°N×126.8°E, h36km, mB5.4/11, mb4.7/26, Ms4.9/7, Ms7 4.8/7*

*AUST **19** 06:01:15.9,4.5°N×127.5°E, h100km*

*ISCJB **19** 06:01:15.3±0.6,4.0°N±0.

CMAR Chiang Mai Arr 30.84 300 P **P** **06 07 25.9 -1.0**
comp=Z,2.8nm,0.8s,baz=113,slow=6.8,SNR=13
CHTO Chiang Mai 30.99 300 *e*P **P** **06 07 27.9 -0.3**
comp=Z,6.3nm,1.0s
MEEK Meekatharra 31.61 194 P **P** **06 07 32.7 -0.9**
baz=32,SNR=13
KSAR Wonju Array Be 33.18 1 P **P** **06 07 48.1 +1.0**
KSAR PcP **PcP** **06 10 30.9 +1.3**
KSRS Korea Array 33.19 1 P **P** **06 07 48.1 +0.9**
comp=Z,2.1nm,0.7s,baz=184,slow=9.3,SNR=6.0
KSRS PcP **PcP** **06 10 30.9 +1.3**
comp=Z,1.4nm,0.7s,baz=184,slow=2.5,SNR=7.1
MJAR Matsushiro Arr 33.90 16 P **P** **06 07 52.7 -0.9**
MJAR Matsushiro Arr 33.90 16 P **P** **06 07 52.7 -0.9**
comp=Z,1.6nm,0.8s,baz=194,slow=9.9,SNR=4.5
XAN Xi'an 34.16 333 P **P** **06 07 54.6 -1.3**
XAN pmax pmax
comp=Z,6.0nm,0.8s
CD2 Chengdu 34.45 323 P **P** **06 08 00.6 +2.2**
CD2 pP **pP** **06 08 10.8 +2.6**
CD2 sP **sP** **06 08 14.9 +2.6**
CD2 PP **PP** **06 09 17.5 +0.7**
CD2 S **S** **06 13 26.5 +1.9**
CD2 sS **sS** **06 13 43.3 +2.5**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,90nm,5.4s
MORW Morawa 34.61 197 P **P** **06 07 59.2 -0.5**
baz=35,SNR=5.4
FORT Forrest 34.72 178 P **P** **06 08 00.2 -0.4**
baz=35,SNR=7.5
KMBL Kambalda 35.61 187 P **P** **06 08 07.6 -0.7**
baz=36,SNR=7.0
BLDU Ballidu 35.89 195 P **P** **06 08 10.3 -0.4**
baz=37,SNR=10
KLBR Kellerberrin 36.57 193 P **P** **06 08 15.8 -0.7**
baz=37,SNR=9.8
BJI Beijing 37.06 346 P **P** **06 08 22.3 +1.7**
BJI pmax pmax
comp=Z,21nm,1.1s
EIDS Eidsvold 37.54 143 *e*P **P** **06 08 23.7 -1.2**
comp=Z,9.4nm,0.8s
EIDS Eidsvold 37.54 143 P **P** **06 08 25.4 +0.5**
baz=38,SNR=3.1
BBOO Buckleboo 37.73 167 P **P** **06 08 26.4 0.0**
baz=38,SNR=15
NWAO Narrogin (SRO) 37.97 193 *e*P **P** **06 08 27.3 -1.1**
comp=Z,5.9nm,0.7s
NWAO Narrogin (SRO) 37.97 193 P **P** **06 08 27.8 -0.6**
comp=Z,11nm,0.8s,baz=1.2,slow=7.9,SNR=9.0
LZH Lanzhou 38.27 329 *e*P **P** **06 08 31.5 +0.4**
LZH pP **pP** **06 08 42.0 +1.0**
LZH sP **sP** **06 08 46.1 +1.1**
LZH PP **PnPn** **06 10 03.6 +2.8**
LZH pmax pmax
comp=Z,21nm,1.1s
LZH pmax pmax
comp=Z,65nm,5.0s
LZH LR LR
comp=N,320nm,13.0s
LZH LR LR
comp=E,380nm,12.7s
LZH LR LR
comp=Z,500nm,17.5s
STKA Stephens Creek 38.42 160 *e*P **P** **06 08 32.3 +0.1**
comp=Z,3.5nm,0.8s
STKA Stephens Creek 38.42 160 P **P** **06 08 32.5 +0.3**
comp=Z,19nm,0.8s,baz=334,slow=8.3,SNR=18
STKA Stephens Creek 38.42 160 P **P** **06 08 32.4 +0.1**
baz=39,SNR=26
HHC Hu-ho-hao-te 39.09 341 *e*P **P** **06 08 38.0 +0.1**
HHC sP **sP** **06 08 51.4 -0.4**
HHC PP **PnPn** **06 10 12.9 +2.3**
HHC PcP **PcP** **06 10 47.1 -0.2**
HHC ScP **ScP** **06 14 31.4 -2.0**
HHC PcS **PcS** **06 14 35.3 -1.7**
HHC S **S** **06 14 36.4 +1.1**
HHC sS **sS** **06 14 52.4 +0.8**
HHC ScS **ScS** **06 18 42.8 -2.0**
HHC pmax pmax
comp=Z,23nm,0.6s
HHC pmax pmax
comp=Z,1μm,5.9s
HHC LR LR
comp=N,820nm,12.4s
HHC LR LR
comp=E,790nm,13.0s
HHC LR LR
comp=Z,570nm,12.7s
CN2 Changchun 39.54 358 *e*P **P** **06 08 39.3 -2.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
USRK Ussuriysk Arra 40.17 6 P **P** **06 08 47.8 +1.2**
comp=Z,0.6nm,0.4s,baz=250,slow=27,SNR=2.4
MDJ Mudanjiang 40.40 3 P **P** **06 08 49.3 +0.7**
MDJ pP **pP** **06 08 58.3 -0.2**
MDJ sP **sP** **06 09 02.0 -0.5**
MDJ ScP **ScP** **06 14 38.1 -0.2**
MDJ PcS **PcS** **06 14 41.8 +0.1**
MDJ S **S** **06 14 57.3 +2.7**
MDJ sS **sS** **06 15 12.5 +1.5**
MDJ pmax pmax
comp=Z,5.0nm,1.2s
MDJ pmax pmax
comp=Z,700nm,6.3s
MDJ LR LR
comp=N,490nm,18.8s
MDJ LR LR
comp=E,950nm,14.8s
MDJ LR LR
comp=Z,1μm,14.5s
ARMA Armidale 41.69 147 P **P** **06 09 00.8 +1.3**
baz=42,SNR=6.6
ASAJ Asahikawa 42.17 17 P **P** **06 09 03.9 +0.8**
ASAJ Asahikawa 42.17 17 P **P** **06 09 03.9 +0.8**
comp=Z,3.0nm,0.8s,baz=228,slow=14,SNR=3.5
GTA Gaotai 42.86 329 *e*P **P** **06 09 08.8 -0.2**
GTA pP **pP** **06 09 18.9 -0.1**
GTA sP **sP** **06 09 22.8 -0.2**
GTA pmax pmax
comp=Z,7.0nm,1.0s
ARPS Mount Arapiles 42.99 162 P **P** **06 09 11.1 +1.2**
baz=43,SNR=7.8
ULN Ulaanbaatar 46.81 342 *e*P **P** **06 09 39.8 -0.6**
comp=Z,4.8nm,1.0s
SONM Songino Array 46.99 341 P **P** **06 09 41.5 -0.2**
SONM PcP **PcP** **06 11 14.7 +0.9**
SONM Songino Array 46.99 341 P **P** **06 09 41.5 -0.2**
comp=Z,1.1nm,0.4s,baz=153,slow=7.6,SNR=4.2
SONM PcP **PcP** **06 11 14.7 +0.9**
comp=Z,2.2nm,0.7s,baz=158,slow=6.3,SNR=4.1
NFK Norfolk Island 51.35 133 P P 06 10 23.2 +8.0
baz=51,SNR=7.8
WMQ Urumqi 52.52 325 P **P** **06 10 25.5 +1.7**
WMQ pmax pmax
comp=Z,24nm,1.0s
PETK Petropavlovsk- 55.00 22 P **P** **06 10 42.8 +1.1**
PETK Petropavlovsk- 55.00 22 P **P** **06 10 42.8 +1.1**
comp=Z,1.7nm,0.6s,baz=198,slow=5.9,SNR=4.4
MK31 Makanchi Array 57.35 325 *e*P **P** **06 10 57.9 -0.7**
MKAR Makanchi Array 57.35 325 P **P** **06 10 57.7 -0.9**
MKAR Makanchi Array 57.35 325 P **P** **06 10 57.7 -0.9**
comp=Z,3.1nm,0.5s,baz=118,slow=7.8,SNR=23
KSH Kashi 57.90 315 *e*P P 06 11 05.6 +2.8
KSH pP pP 06 11 16.3 +3.2
KSH sP sP 06 11 20.3 +3.3
KSH PcP **PcP** **06 11 57.0 +2.1**
KSH PP PP 06 13 17.0 +5.6
KSH ScP **ScP** **06 15 53.0 +0.3**
KSH PcS **PcS** **06 15 56.9 +0.6**
KSH S **S** **06 19 04.0 +3.3**
KSH sS sS 06 19 21.0 +3.4
KSH ScS **ScS** **06 20 49.3 -0.9**
KSH pmax pmax
comp=Z,7.0nm,1.2s
KSH pmax pmax
comp=Z,160nm,4.9s
KSH LR LR
comp=N,170nm,8.1s
KSH LR LR
comp=E,120nm,4.0s
KSH LR LR
comp=Z,950nm,12.8s
TKM2 Tokmak 2 59.58 318 *e*P **P** **06 11 13.9 -0.6**
comp=Z,1.7nm,0.6s
ZALV Zalesovo Beam 60.33 333 P **P** **06 11 17.6 -1.5**
ZALV Zalesovo Beam 60.33 333 P **P** **06 11 17.6 -1.5**
comp=Z,2.0nm,0.6s,baz=121,slow=7.1,SNR=10.0
KURBB Kurchatov Arra 61.52 327 P **P** **06 11 26.4 -0.8**
comp=Z,3.5nm,0.6s,baz=128,slow=6.2,SNR=27
KURK Kurchatov 61.52 327 *e*P **P** **06 11 26.4 -0.8**
comp=Z,5.6nm,0.5s
KKAR Karatay Array 63.08 317 *e*P **P** **06 11 37.0 -1.0**
comp=Z,1.3nm,0.7s
BVAR Borovoye Array 67.10 327 P **P** **06 12 03.9 +0.1**
BVAR Borovoye Array 67.10 327 P **P** **06 12 03.9 +0.1**
comp=Z,4.2nm,0.7s,baz=124,slow=7.9,SNR=16
BRVK Borovoye 67.17 327 *e*P **P** **06 12 03.6 -0.6**
comp=Z,7.6nm,0.8s
ABKAR Akbulak array 71.97 321 *e*P **P** **06 12 32.8 -1.2**
comp=Z,2.7nm,0.8s
COLD Coldfoot 83.47 23 *e*P **P** **06 13 37.6 0.0**
comp=Z,9.0nm,1.3s
MCK McKinley 83.74 26 *e*P **P** **06 13 38.1 -1.0**
comp=Z,8.7nm,1.1s
VNDA Vanda 83.78 173 *e*P **P** **06 13 38.3 -0.7**
comp=Z,3.4nm,0.9s
VNDA Vanda 83.78 173 P **P** **06 13 38.6 -0.5**
comp=Z,3.2nm,0.9s,baz=233,slow=3.8,SNR=5.1
ILAR Eielson Array 84.68 25 P **P** **06 13 43.8 -0.1**
ILAR Eielson Array 84.68 25 P **P** **06 13 43.8 -0.1**
comp=Z,1.0nm,0.8s,baz=242,slow=6.7,SNR=12
JOF Joensuu 88.92 333 *ep* **P** **06 14 05.5 +1.0**
comp=Z,3.7nm,0.5s
KMBO Kilima Mbogo 89.75 269 P **P** **06 14 09.2 -0.6**
KMBO Kilima Mbogo 89.75 269 P **P** **06 14 09.2 -0.6**
comp=Z,1.4nm,0.8s,baz=51,slow=6.5,SNR=6.6
BRTR Keskin Array B 89.92 310 P **P** **06 14 07.7 -2.2**
BRTR Keskin Array B 89.92 310 P **P** **06 14 07.7 -2.2**
comp=Z,0.5nm,0.5s,baz=100,slow=6.9,SNR=4.7
ARCES ARCESS Array B 90.15 340 P **P** **06 14 09.4 -0.8**
ARCES ARCESS Array B 90.15 340 P **P** **06 14 09.4 -0.8**
comp=Z,2.7nm,0.7s,baz=86,slow=6.3,SNR=5.8
KAF Kangasniemi 91.34 332 *ep* **P** **06 14 16.9 +1.1**
comp=Z,2.3nm,0.5s,baz=85,slow=5.5
FINES FINESS Array B 91.58 332 P **P** **06 14 16.9 -0.1**
FINES FINESS Array B 91.58 332 P **P** **06 14 16.9 -0.1**
comp=Z,1.2nm,0.5s,baz=57,slow=5.1,SNR=8.1
AKASG Malin Array Be 91.71 321 P **P** **06 14 17.6 -0.2**
AKASG Malin Array Be 91.71 321 P **P** **06 14 17.6 -0.2**
comp=Z,0.4nm,0.4s,baz=70,slow=3.8,SNR=4.8
QSPA South Pole Qui 94.02 180 *e*P **P** **06 14 29.2 +1.0**
MLR Muntele Rosu 94.75 316 P **P** **06 14 31.1 -1.0**
MLR Muntele Rosu 94.75 316 P **P** **06 14 31.1 -1.0**
comp=Z,0.5nm,0.8s,baz=10,slow=11,SNR=4.5
BUR08 Bucovina Ar. S 94.84 318 *e*P **P** **06 14 32.0 -0.4**
KOLS Kolonicke sedl 96.47 320 *e*P **P** **06 14 39.0 -0.7**
CRVS Cervenica-Dubn 97.00 320 *e*P **P** **06 14 41.3 -0.8**
HFS Hagfors 97.77 332 P **P** **06 14 44.2 -1.1**
HFS Hagfors 97.77 332 P **P** **06 14 44.2 -1.1**
comp=Z,1.3nm,0.8s,baz=90,slow=5.8,SNR=5.7
YKA Yellowknife Ar 99.07 24 P **Pdif** **06 14 51.5 +0.3**
YKA PKiKP **PKiKP** **06 19 22.1 +0.8**
YKA Yellowknife Ar 99.07 24 P **Pdif** **06 14 51.4 +0.3**
comp=Z,0.2nm,0.7s,baz=296,slow=4.4,SNR=6.9
YKA PKiKP **PKiKP** **06 19 22.1 +0.8**
comp=Z,0.1nm,0.5s,baz=296,slow=1.8,SNR=4.5
NVAR Mina Array Bea 106.51 48 Pdif **Pdif** **06 15 26.0 +0.9**
NVAR Mina Array Bea 106.51 48 Pdiff **Pdif** **06 15 26.0 +0.9**
comp=Z,0.6nm,0.8s,baz=256,slow=5.5,SNR=2.9
PDAR Pinedale Array 110.94 41 PKKP **PKKPdf** **06 30 57.5 -2.9**
comp=Z,0.6nm,0.9s,baz=147,slow=1.8,SNR=4.6
SCHQ Schefferville 120.16 9 PKP **PKPdf** **06 20 02.1 +1.0**
SCHQ Schefferville 120.16 9 PKP **PKPdf** **06 20 02.1 +1.0**
comp=Z,2.9nm,1.0s,baz=8.1,slow=7.1,SNR=3.8
TXAR Lajitas Array 121.22 52 PKP **PKPdf** **06 20 05.1 +1.1**
TXAR Lajitas Array 121.22 52 PKP **PKPdf** **06 20 05.1 +1.1**
comp=Z,0.3nm,0.7s,baz=306,slow=3.1,SNR=4.1
TORD Torodi Ar. Bea 122.97 288 PKP **PKPdf** **06 20 07.0 -0.7**
TORD Torodi Ar. Bea 122.97 288 PKP **PKPdf** **06 20 07.0 -0.7**
comp=Z,0.9nm,0.7s,baz=92,slow=1.8,SNR=8.0
PLCA Paso Flores 140.30 159 PKP **PKPdf** **06 20 40.6 +1.0**
PLCA Paso Flores 140.30 159 PKP **PKPdf** **06 20 40.6 +1.0**
comp=Z,2.3nm,1.0s,baz=189,slow=2.0,SNR=3.8
CFAA Coronel Fontan 149.17 154 PKPbc **PKPbc** **06 20 59.2 -0.2**
CFAA Coronel Fontan 149.17 154 PKPbc **PKPbc** **06 20 59.2 -0.2**
comp=Z,1.3nm,0.7s,baz=192,slow=5.2,SNR=3.8
CPUP Villa Florida 157.54 170 PKPab **PKPab** **06 21 39.3 +0.4**
CPUP Villa Florida 157.54 170 PKPab **PKPab** **06 21 39.3 +0.4**
comp=Z,2.1nm,0.9s,baz=173,slow=9.7,SNR=4.5

IDC 19 06:09:19.9±1.2, 4.06N×126.53E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/25, mbtmpg3.7/7, Error ellipse: s-maj=95.4km s-min=16.2km az=69.0, Taiaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.04**	**182**	P	P	06 14 16.2	-0.1
	2.7nm,1.1s,baz=0.0,slow=9.1,SNR=2.7						
WRA	**Warramunga Arr**	**25.06**	**162**	P	P	06 14 45.4	-0.7
	1.2nm,0.6s,baz=342,slow=11,SNR=7.6						
ASAR	**Alice Springs**	**28.48**	**166**	P	P	06 15 18.6	+1.6
	0.2nm,0.6s,baz=336,slow=6.1,SNR=3.6						
STKA	**Stephens Creek**	**38.51**	**159**	P		06 16 43.1	-1.0
	1.0nm,0.6s,baz=345,slow=12,SNR=2.3						
MKAR	**Makanchi Array**	**57.17**	**325**	P	P	06 19 08.2	-0.6
	0.5nm,0.5s,baz=115,slow=7.8,SNR=9.1						
ZALV	**Zalesovo Beam**	**60.20**	**333**	P	P	06 19 30.5	+0.9
	0.4nm,0.3s,baz=132,slow=10,SNR=2.6						
KURBB	**Kurchatov Arra**	**61.35**	**327**	P	P	06 19 37.1	-0.4
	0.5nm,0.5s,baz=128,slow=5.9,SNR=9.9						

MEX 19 06:12:25.5±0.6, 14.85N×94.20W, h11km±11km, MD4.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.87**	**88**	*i* P	Pn	06 12 54.1	-3.3
THIG				*i* S	Sn	06 13 16.1	-4.9
TGIG		**2.18**	**28**	*e*P	Pn	06 12 58.2	-3.7
TGIG				*i* S	Sn	06 13 24.1	-4.8
CMIG	**Matias Romero**	**2.33**	**344**	*i* P	Pn	06 13 00.8	-3.0
CMIG				*i* S	Sn	06 13 28.1	-4.4
CCIG	**Comitan**	**2.44**	**54**	*e*P	Pn	06 13 02.5	-3.1
CCIG				*i* S	Sn	06 13 32.0	-3.7

BJI ***19*** *06:14:43.4, 3.55N×127.01E, h35km, mB5.2/20, mb4.8/38, Ms4.9/17, Ms7 4.6/17*
IDC ***19*** *06:14:45.0±0.3, 4.12N×126.65E, h0km, mb4.6/34, mb1 4.6/34, mb1mx4.6/36, mbtmpg4.5/34, Error ellipse: s-maj=17.2km s-min=8.5km az=78.0*
TEH ***19*** *06:14:50.0, 4.16N×126.93E, h35km, ML4.9*
ISCJB ***19*** *06:14:50.5±0.5, 4.14N±0.02×126.85E±0.04, h54km±4km, mb4.8/91, MS4.6/8, Error ellipse: s-maj=6.2km s-min=3.7km az=164.5*
NEIC ***19*** *06:14:50.1±0.2, 4.14N×126.81E, h35km, mb4.8/38, Error ellipse: s-maj=7.7km s-min=5.0km az=77.0*
DJA ***19*** *06:14:54.7±0.5, 4.1°N±4.4'×12.7°E±.°, h66km±4km, M5.1/34, mB5.7/9, mb4.9/34, MLv5.2/10, Mw(mB)5.2/9*
AUST ***19*** *06:14:56.0, 3.50N×126.50E, h60km*
ISC 19 06:14:50.4±0.3, 4.09N±0.03×126.78E±0.04, h41km±2km, n255, σ1°$49/289, mb4.8/90, MS4.6/8, 8C-1D, Taiaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**2.45**	**156**	P	**Pn**	**06 15 28.5**	**+0.6**
GSPH	**General Santos**	**2.70**	**318**	*e*P	**Pn**	**06 15 32.4**	**+0.9**
MATI	**Mati**	**2.89**	**350**	*e*P	Pn	06 15 37.8	+3.8
DAV	**Davao City (W)**	**3.20**	**338**	*e*Pn	**Pn**	**06 15 37.4**	**-0.9**
DAV					Sn	06 16 32.1	+17
DAV	**Davao City (W)**	**3.20**	**338**	P	Pn	06 15 45.9	+7.7
DAV	**Davao City (W)**	**3.20**	**338**	Pn	**Pn**	**06 15 38.3**	**+0.1**
	39nm,0.3s,baz=59,slow=17,SNR=2.3						
DAV					Sn	06 16 32.1	+17
	65nm,0.3s,baz=113,slow=22,SNR=3.6						
MNI	**Manado**	**3.26**	**217**	P	Pn	06 15 42.3	+3.2
TNTI	**Ternate**	**3.34**	**170**	P	Pn	06 15 43.4	+3.2
CTBH	**Cotabato--PC H**	**4.01**	**321**	*i*P	**Pn**	**06 15 50.4**	**+1.1**
BUKP	**Musuan**	**4.14**	**336**	*e*P	**Pn**	**06 15 54.1**	**+2.9**
KMSI	**Cibinong**	**4.47**	**219**	P	Pn	06 15 59.2	+3.5
LBMI	**Labuha**	**4.75**	**171**	P	Pn	06 16 03.0	+3.5
PAGZ	**Pagadian**	**5.04**	**318**	*e*P	**Pn**	**06 16 06.1**	**+2.6**
IPIL	**Ipil**	**5.57**	**312**	*e*P	**Pn**	**06 16 12.6**	**+1.8**
MRSI	**Marisa**	**6.02**	**234**	P	**Pn**	**06 16 19.3**	**+2.3**
	322nm,0.5s,4μm1.5nm						
LUWI	**Luwuk**	**6.48**	**218**	P	Pn	06 16 30.2	+6.9
	523nm,1.2s,6μm2.3nm						
SWI	**Sorong**	**6.65**	**138**	P	**Pn**	**06 16 27.9**	**+2.3**
	99nm,1.1s,0.3nm						
SWI	**Sorong**	**6.65**	**138**	P	**Pn**	**06 16 26.4**	**+0.8**
	baz=6.5,SNR=6.1						
NLAI	**Namlea**	**7.28**	**177**	P	**Pn**	**06 16 35.7**	**+1.4**
	69nm,0.8s,2μm0.9nm						
MYLDM	**Lahad Datu**	**8.32**	**278**	P	Pn	06 16 55.2	+6.6
MYLDM	**Lahad Datu**	**8.32**	**278**	P	Pn	06 16 56.1	+7.5
	109nm,1.5s						
PCI	**Palu**	**8.53**	**235**	P	Pn	06 16 45.6	-5.8
	baz=8.0,SNR=3.1						
TSM	**Tawau**	**8.89**	**272**	P	Pn	06 17 00.4	+4.0
KDI	**Kendari**	**9.01**	**208**	P	**Pn**	**06 16 58.9**	**+0.9**
	55nm,1.4s						
SDKM	**Sandakan**	**9.68**	**280**	P	Pn	06 17 15.3	+8.1
TTSI	**Tana Toraja**	**9.93**	**225**	P	Pn	06 17 14.5	+3.9
	104nm,1.7s,1μm						
SPSI	**Sidrap Palu**	**10.63**	**221**	P	Pn	06 17 24.1	+3.8
	42nm,0.9s						
KKM	**Kota Kinabalu**	**10.70**	**281**	*e*Pn	Pn	06 17 26.8	+5.5
	91nm,1.4s						
KKM	**Kota Kinabalu**	**10.70**	**281**	P	Pn	06 17 29.3	+8.0
KKM	**Kota Kinabalu**	**10.70**	**281**	P	Pn	06 17 29.0	+7.7
	39nm,1.2s						
KKM	**Kota Kinabalu**	**10.70**	**281**	P	Pn	06 17 27.7	+6.3
	baz=11,SNR=14						
KAPI	**Kappang**	**11.45**	**218**	Pn	**Pn**	**06 17 31.8**	**+0.4**
KAPI	**Kappang**	**11.45**	**218**	P	Pn	06 17 36.7	+5.3
	30nm,1.2s						
KAPI	**Kappang**	**11.45**	**218**	Pn	**Pn**	**06 17 31.8**	**+0.4**
	1.2nm,0.3s,baz=100,slow=6.1,SNR=3.1						
KBKI	**Kotabaru**	**12.89**	**235**	P	Pn	06 17 55.5	+4.3
	36nm,1.4s						
MMRI	**Maumere**	**13.42**	**200**	P	P	06 18 14.3	+7.3
BBKI	**Banjar Baru**	**14.09**	**238**	P	P	06 18 12.4	-2.1
	149nm,1.8s,8μm						
PLKI	**Palangkaraya**	**14.28**	**244**	P	**P**	**06 18 15.8**	**-0.7**
	158nm,0.8s,12μm						
SBUM	**Sibu**	**14.63**	**264**	P	Pn	06 18 18.7	+3.9
SBUM	**Sibu**	**14.63**	**264**	P	Pn	06 18 18.2	+3.4
	54nm,1.3s,1μm						
WSI	**Waingapu**	**15.11**	**205**	S	Sn	06 20 58.5	-9.0
	baz=14,SNR=6.6						
JAY	**Jayapura**	**15.38**	**115**	P	**P**	**06 18 31.7**	**+2.8**
	baz=15,SNR=4.5						
STKI	**Sintang**	**15.80**	**256**	P	**P**	**06 18 35.1**	**+1.6**
	42nm,1.2s						
KHKI	**Kahang-Kahang**	**16.65**	**222**	P	**P**	**06 18 43.4**	**+0.6**
	70nm,1.6s						
KSM	**Kuching**	**16.65**	**262**	*e*Pn	**Pn**	**06 18 43.1**	**+2.1**
	50nm,0.9s						
KSM	**Kuching**	**16.65**	**262**	P	**P**	**06 18 44.4**	**+1.4**
KSM	**Kuching**	**16.65**	**262**	P	**Pn**	**06 18 43.0**	**+2.0**
	66nm,0.9s						
KSM	**Kuching**	**16.65**	**262**	P	**P**	**06 18 44.2**	**+1.3**
	baz=16,SNR=14						
MTN	**Manton Dam**	**17.36**	**166**	P	**Pn**	**06 18 47.4**	**-2.4**
	baz=17,SNR=14						
KDU	**Kakadu**	**17.60**	**161**	P	**Pn**	**06 18 51.2**	**-1.4**
	baz=17,SNR=10						
KDU				S	Sn	06 21 54.7	-13
	baz=17,SNR=3.3						
BLJI	**Banyuglugur**	**17.64**	**228**	P	P	06 18 59.1	+5.3
	60nm,0.5s,3μm						
GMJI	**Gumukmas**	**18.10**	**227**	P	P	06 19 04.3	+5.4
	46nm,0.9s						
PWJI	**Pagerwojo**	**19.18**	**231**	P	**Pn**	**06 19 14.3**	**+2.3**
	37nm,0.9s						
YULB	**Yu-li**	**19.91**	**345**	*e*Pn	**P**	**06 19 18.3**	**-0.4**
	330nm,2.6s						
SSLB	**Suanglung**	**20.38**	**345**	*e*P	**P**	**06 19 23.3**	**-0.5**
	32nm,1.0s						
BJII	**Banjamegara**	**20.47**	**236**	P	Pn	06 19 30.9	+3.6
	47nm,1.8s						
NACB	**Ninganchiao**	**20.59**	**346**	*e*P	**P**	**06 19 25.8**	**-0.2**
	12nm,0.7s						
YHNB	**Yeheng**	**21.12**	**346**	*e*P	**P**	**06 19 32.1**	**+0.2**
	39nm,1.2s						
FITZ	**Fitzroy Crossi**	**22.07**	**183**	P	**P**	**06 19 41.7**	**-0.3**
	21nm,1.4s						
FITZ				*e*		06 23 39.9	
FITZ	**Fitzroy Crossi**	**22.07**	**183**	P	**P**	**06 19 41.7**	**-0.3**
	14nm,0.6s,baz=16,slow=10,SNR=27						
FITZ	**Fitzroy Crossi**	**22.07**	**183**	P	**P**	**06 19 40.8**	**-1.3**
	baz=22,SNR=21						
FITZ				S	**S**	**06 23 39.7**	**-3.5**
	baz=22,SNR=8.5						
QIZ	**Qiongzhong**	**22.23**	**313**	P	**P**	**06 19 45.3**	**+1.5**
QIZ				S	**S**	**06 23 52.3**	**+6.0**
QIZ				pmax	pmax		
	comp=Z,18nm,1.2s						
QIZ				LR	LR		
	comp=N,500nm,17.3s						
QIZ				LR	LR		
	comp=Z,980nm,16.1s						
CBJI	**Citeko**	**22.47**	**242**	P	**P**	**06 19 49.7**	**+3.3**
	comp=Z,194nm,0.5s						
DBJI	**Dramaga**	**22.62**	**242**	P	**P**	**06 19 50.4**	**+2.4**
	comp=Z,101nm,0.4s,comp=Z,13μm						
MYKOM	**Kota Tinggi**	**23.01**	**265**	P	**P**	**06 19 55.8**	**+3.7**
	comp=Z,36nm,1.0s						
BLSI	**Bandar Lampung**	**23.47**	**247**	P	**P**	**06 19 57.8**	**+1.2**
	comp=Z,75nm,0.4s						
UBPT	**Khong Chiam**	**23.74**	**299**	P	**P**	**06 20 01.3**	**+2.2**
	comp=Z,50nm,1.4s						
COEN	**Coen**	**24.20**	**138**	P	P	06 20 08.5	+5.0
	baz=24,SNR=3.8						
COEN				S	S	06 23 54.1	-25
	baz=24,SNR=5.1						
KASI	**Kota Agung**	**24.22**	**247**	P	**P**	**06 20 07.2**	**+3.7**
	comp=Z,29nm,0.8s						
WRAB	**Tennant Creek**	**25.00**	**163**	*e*P	**P**	**06 20 10.9**	**+0.3**
	comp=Z,108nm,1.3s						
WRA	**Warramunga Arr**	**25.01**	**163**	P	**P**	**06 20 11.2**	**+0.5**
WRA				S	**S**	**06 24 31.2**	**-0.9**
WRA	**Warramunga Arr**	**25.01**	**163**	P	**P**	**06 20 11.2**	**+0.5**
	comp=Z,25nm,0.6s,baz=341,slow=11,SNR=96						
WRA				S	**S**	**06 24 31.2**	**-0.9**
	comp=Z,5.1nm,1.0s,baz=344,slow=19,SNR=4.9						
IPM	**Ipoh**	**25.68**	**272**	*e*P	**P**	**06 20 17.3**	**+0.4**
	comp=Z,36nm,1.4s						
BKNI	**Bangkinang**	**25.99**	**262**	P	**P**	**06 20 20.0**	**+0.3**
	comp=Z,68nm,1.3s						
MBWA	**Marble Bar**	**26.02**	**195**	*e*P	**P**	**06 20 20.5**	**+0.7**
	comp=Z,34nm,0.8s						
KULM	**Kulim**	**26.07**	**274**	*e*P	**P**	**06 20 20.8**	**+0.4**
	comp=Z,10nm,0.9s						
PPI	**Padang Panjang**	**26.75**	**261**	P	**P**	**06 20 27.6**	**+1.1**
	comp=Z,30nm,1.5s						
QIS	**Mount Isa**	**27.54**	**153**	P	**P**	**06 20 37.0**	**+3.4**
	baz=27,SNR=5.7						
PSI	**Prapat**	**27.83**	**268**	P	**P**	**06 20 36.0**	**-0.4**
PSI	**Prapat**	**27.83**	**268**	P	**P**	**06 20 37.3**	**+0.9**
	comp=Z,23nm,1.0s						
PSI	**Prapat**	**27.83**	**268**	P	**P**	**06 20 36.0**	**-0.4**
	comp=Z,19nm,0.9s,baz=100,slow=2.6,SNR=17						
PSI	**Prapat**	**27.83**	**268**	P	**P**	**06 20 36.8**	**+0.4**
	baz=28,SNR=10						
AS31	**Alice Springs**	**28.44**	**166**	*e*P	**P**	**06 20 41.4**	**-0.2**
ASAR	**Alice Springs**	**28.44**	**166**	P	**P**	**06 20 41.8**	**+0.2**
ASAR				S	S	06 25 33.6	+7.2
ASAR	**Alice Springs**	**28.44**	**166**	P	**P**	**06 20 41.8**	**+0.2**
	comp=Z,2.2nm,0.6s,baz=352,slow=8.1,SNR=49						
ASAR				S	S	06 25 33.6	+7.2
	comp=Z,1.7nm,0.9s,baz=354,slow=18,SNR=4.4						
NJ2	**Nanjing**	**28.80**	**346**	*e*P	**P**	**06 20 43.6**	**-1.0**
NJ2				pP	**pP**	**06 20 52.3**	**-3.5**
NJ2				sP	**sP**	**06 20 56.0**	**-4.7**
NJ2				S	**S**	**06 25 28.5**	**-3.2**
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,190nm,4.6s						
NJ2				LR	LR		
	comp=N,930nm,11.2s						
NJ2				LR	LR		
	comp=E,530nm,11.2s						
NJ2				LR	LR		
	comp=Z,770nm,10.5s						
WHN	**Wuhan**	**28.82**	**337**	P	**P**	**06 20 46.3**	**+1.5**
JNU	**Nakatsue**	**29.14

GYA pP **pP** **06 21 02.5 +0.9**
GYA sP **sP** **06 21 08.3 +1.8**
GYA PP **PnPn** **06 21 50.0 +4.4**
GYA PcP **PcP** **06 23 57.8 +2.0**
GYA S **S** **06 25 44.8 +2.9**
GYA sS **sS** **06 26 01.4 +0.8**
GYA ScP **ScP** **06 27 35.3 +0.8**
GYA ScS **ScS** **06 31 29.0 -0.3**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,490nm,17.4s
GYA LR LR
comp=E,450nm,18.0s
GYA LR LR
comp=Z,460nm,17.0s
CTA Charters Tower 30.71 142 P **P** **06 21 04.0 +2.3**
CTA Charters Tower 30.71 142 P **P** **06 21 04.0 +2.3**
comp=Z,1.4nm,0.3s,baz=320,slow=12,SNR=3.6
CMAR Chiang Mai Arr 30.74 300 P **P** **06 21 02.5 +0.5**
CMAR Chiang Mai Arr 30.74 300 P **P** **06 21 02.5 +0.5**
comp=Z,4.8nm,0.8s,baz=121,slow=7.6,SNR=8.8
CHTO Chiang Mai 30.88 300 *eP* **P** **06 21 04.0 +0.7**
comp=Z,3.3nm,0.6s
KMI Kunming 31.17 314 P **P** **06 21 07.3 +1.3**
KMI pmax pmax
comp=Z,9.0nm,1.2s
MEEK Meekatharra 31.55 194 P **P** **06 21 09.4 +0.3**
baz=31,SNR=18
KSAR Wonju Array Be 33.21 2 P **P** **06 21 24.4 +1.0**
KSAR PcP **PcP** **06 24 07.8 +2.3**
KSRS Korea Array 33.23 2 P **P** **06 21 24.4 +0.9**
comp=Z,4.3nm,0.8s,baz=180,slow=10,SNR=25
KSRS PcP **PcP** **06 24 07.8 +2.3**
comp=Z,2.8nm,0.8s,baz=191,slow=1.9,SNR=9.4
MAJO Matsushiro 33.97 17 *eP* **P** **06 21 28.4 -1.7**
comp=Z,3.9nm,0.8s
MJAR Matsushiro Arr 33.97 17 P **P** **06 21 28.5 -1.6**
MJAR Matsushiro Arr 33.97 17 P **P** **06 21 28.5 -1.6**
comp=Z,2.5nm,0.9s,baz=194,slow=11,SNR=6.6
XAN Xi'an 34.12 333 P **P** **06 21 30.6 -0.9**
XAN pP pP 06 21 37.5 -5.3
XAN pmax pmax
comp=Z,12nm,0.8s
CD2 Chengdu 34.39 323 P **P** **06 21 33.8 -0.1**
CD2 pP **pP** **06 21 43.4 -1.8**
CD2 sP **sP** **06 21 47.3 -2.8**
CD2 PP **PnPn** **06 22 49.8 +0.3**
CD2 S **S** **06 26 58.3 -0.9**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.4s
MORW Morawa 34.54 197 P **P** **06 21 35.1 0.0**
baz=34,SNR=3.3
FORT Forrest 34.69 178 *eP* **P** **06 21 36.5 +0.1**
comp=Z,52nm,0.7s
FORT Forrest 34.69 178 P **P** **06 21 36.8 +0.4**
baz=34,SNR=9.7
QLP Quilpie 34.85 152 P **P** **06 21 39.6 +1.8**
baz=35,SNR=4.7
KMBL Kambalda 35.56 187 P **P** **06 21 44.3 +0.4**
baz=35,SNR=13
BLDU Ballidu 35.82 195 P **P** **06 21 46.4 +0.2**
baz=35,SNR=9.0
KLBR Kellerberrin 36.51 193 P **P** **06 21 52.4 +0.4**
baz=36,SNR=18
BJI Beijing 37.06 346 P **P** **06 21 58.5 +2.0**
BJI pmax pmax
comp=Z,25nm,1.2s
EIDS Eidsvold 37.60 142 *eP* **P** **06 22 01.2 -0.1**
comp=Z,16nm,0.9s
EIDS Eidsvold 37.60 142 P **P** **06 22 01.8 +0.5**
baz=37,SNR=6.3
BBOO Buckleboo 37.73 167 *eP* **P** **06 22 03.3 +0.9**
comp=Z,603nm,1.0s
BBOO Buckleboo 37.73 167 P **P** **06 22 02.9 +0.5**
baz=37,SNR=29
NWAO Narrogin (SRO) 37.91 193 *eP* **P** **06 22 03.5 -0.3**
NWAO Narrogin (SRO) 37.91 193 P **P** **06 22 03.1 -0.7**
comp=Z,17nm,0.7s,baz=20,slow=9.2,SNR=10
LZH Lanzhou 38.23 329 *eP* **P** **06 22 07.3 +0.6**
LZH pP **pP** **06 22 17.8 -0.3**
LZH sP **sP** **06 22 21.8 -1.2**
LZH *e*PP **PnPn** **06 23 39.5 +3.0**
LZH *e*S **S** **06 28 00.3 +2.4**
LZH sS **sS** **06 28 16.6 -0.2**
LZH pmax pmax
comp=Z,29nm,1.2s
LZH pmax pmax
comp=Z,140nm,5.0s
LZH LR LR
comp=N,510nm,14.6s
LZH LR LR
comp=E,680nm,13.0s
LZH LR LR
comp=Z,850nm,16.5s
STKA Stephens Creek 38.44 160 *eP* **P** **06 22 09.0 +0.6**
comp=Z,4.3nm,0.7s
STKA Stephens Creek 38.44 160 P **P** **06 22 09.4 +1.1**
comp=Z,25nm,0.7s,baz=338,slow=8.2,SNR=42
STKA Stephens Creek 38.44 160 P **P** **06 22 09.0 +0.6**
baz=38,SNR=40
HHC Hu-ho-hao-te 39.08 342 *eP* **P** **06 22 14.6 +0.9**
HHC sP **sP** **06 22 28.0 -2.0**
HHC PcP **PcP** **06 24 23.8 +0.7**
HHC ScP **ScP** **06 28 09.3 +0.8**
HHC S **S** **06 28 12.1 +1.6**
HHC sS **sS** **06 28 28.8 -0.7**
HHC ScS **ScS** **06 32 19.0 -0.9**
HHC pmax pmax
comp=Z,46nm,0.6s
HHC pmax pmax
comp=Z,930nm,5.9s
HHC LR LR
comp=N,660nm,12.9s
HHC LR LR
comp=E,1μm,14.9s
HHC LR LR
comp=Z,1μm,13.3s
CN2 Changchun 39.57 358 *eP* **P** **06 22 20.4 +2.8**
CMSA Cobar Meteorol 39.74 154 P **P** **06 22 21.0 +1.7**
baz=40,SNR=13
USRK Ussuriysk Arra 40.22 6 P **P** **06 22 24.3 +1.4**
comp=Z,3.3nm,0.7s,baz=199,slow=7.5,SNR=9.0
MDJ Mudanjiang 40.44 3 P **P** **06 22 25.8 +0.9**
MDJ pP **pP** **06 22 34.8 -1.5**
MDJ sP **sP** **06 22 38.3 -2.9**
MDJ ScP **ScP** **06 28 14.6 +1.1**
MDJ PcS **PcS** **06 28 18.8 +1.1**
MDJ S **S** **06 28 33.1 +2.5**
MDJ sS **sS** **06 28 48.3 -1.3**
MDJ pmax pmax
comp=Z,9.0nm,1.2s
MDJ pmax pmax
comp=Z,890nm,6.8s
MDJ LR LR
comp=N,420nm,13.3s
MDJ LR LR
comp=E,250nm,14.2s
MDJ LR LR
comp=Z,640nm,12.6s
ARMA Armidale 41.73 147 *eP* **P** **06 22 37.4 +1.6**
comp=Z,81nm,1.5s
ARMA Armidale 41.73 147 P **P** **06 22 37.7 +1.9**
baz=42,SNR=6.7
ASAJ Asahikawa 42.24 17 P **P** **06 22 40.2 +0.6**
ASAJ Asahikawa 42.24 17 P **P** **06 22 40.2 +0.6**
comp=Z,7.9nm,0.9s,baz=209,slow=10,SNR=3.0
GTA Gaotai 42.82 329 *eP* **P** **06 22 44.5 -0.1**
GTA S **S** **06 29 05.3 -1.0**
GTA pmax pmax
comp=Z,8.0nm,1.1s
GTA pmax pmax
comp=Z,430nm,5.5s
GTA LR LR
comp=N,450nm,16.1s
GTA LR LR
comp=E,580nm,15.7s
GTA LR LR
comp=Z,600nm,17.1s
ARPS Mount Arapiles 43.01 162 P **P** **06 22 47.5 +1.6**
baz=43,SNR=16
TAPN Taplejung 43.85 306 *eP* **P** **06 22 53.3 0.0**

RAMN Ramite 44.59 305 *eP* **P** **06 22 59.0 -0.2**
comp=Z,21nm,0.8s
GUN Gumba 45.56 306 *eP* **P** **06 23 06.2 -0.8**
comp=Z,27nm,0.7s
PKI Pulchoki 45.81 305 *eP* **P** **06 23 08.0 -0.9**
DMN Daman 46.07 305 *eP* **P** **06 23 10.1 -0.8**
comp=Z,29nm,1.1s
DZM Mont Dzumac 46.70 126 P **P** **06 23 17.2 +1.5**
DZM Mont Dzumac 46.70 126 P **P** **06 23 17.2 +1.5**
comp=Z,24nm,0.7s,baz=315,slow=20,SNR=3.3
ULN Ulaanbaatar 46.80 342 *eP* **P** **06 23 16.1 -0.1**
comp=Z,6.3nm,0.7s
ULN *e*PcP **PcP** **06 24 50.3 +1.4**
SONM Songino Array 46.98 341 P **P** **06 23 18.1 +0.6**
SONM PcP **PcP** **06 24 51.0 +1.5**
SONM Songino Array 46.98 341 P **P** **06 23 18.1 +0.6**
comp=Z,4.1nm,0.8s,baz=154,slow=9.3,SNR=11
SONM PcP **PcP** **06 24 51.0 +1.5**
comp=Z,2.1nm,0.8s,baz=162,slow=5.5,SNR=3.4
KOLN Koldanda 47.36 304 *eP* **P** **06 23 20.7 -0.3**
comp=Z,28nm,0.6s
DANN Dangsing 47.45 305 *eP* **P** **06 23 20.9 -0.9**
comp=Z,28nm,0.6s
PYUN Piuthan 47.99 305 *eP* **P** **06 23 25.7 -0.1**
comp=Z,55nm,0.9s
HYB Hyderabad 49.04 289 *i* P **P** **06 23 34.0 +0.1**
WMQ Urumqi 52.46 325 P **P** **06 24 02.0 +2.7**
WMQ pP **pP** **06 24 12.0 +0.9**
WMQ sP **sP** **06 24 16.0 +0.2**
WMQ PcP **PcP** **06 25 12.0 +2.4**
WMQ PP **PP** **06 26 02.0 +3.5**
WMQ ScP **ScP** **06 29 05.0 +1.3**
WMQ S **S** **06 31 25.0 +2.1**
WMQ ScS **ScS** **06 33 46.0 0.0**
WMQ SS **SS** **06 35 02.0 +0.6**
WMQ pmax pmax
comp=Z,24nm,1.0s
WMQ pmax pmax
comp=Z,90nm,5.0s
WMQ LR LR
comp=N,820nm,18.0s
WMQ LR LR
comp=E,760nm,18.0s
WMQ LR LR
comp=Z,670nm,18.0s
PETK Petropavlovsk- 55.09 22 P **P** **06 24 18.8 +0.5**
PETK Petropavlovsk- 55.09 22 P **P** **06 24 18.8 +0.5**
comp=Z,3.7nm,0.7s,baz=183,slow=5.7,SNR=8.6
MK31 Makanchi Array 57.29 325 *eP* **P** **06 24 33.8 -0.3**
MKAR Makanchi Array 57.29 325 *eP* **P** **06 24 34.2 +0.1**
MKAR Makanchi Array 57.29 325 P **P** **06 24 33.9 -0.2**
comp=Z,6.1nm,0.8s,baz=128,slow=8.0,SNR=59
KSH Kashi 57.83 315 *i* P **P** **06 24 39.0 +0.8**
KSH pP **pP** **06 24 48.9 -1.2**
KSH sP **sP** **06 24 52.9 -1.9**
KSH PcP **PcP** **06 25 30.0 -0.4**
KSH PP **PP** **06 26 49.0 +2.3**
KSH ScP **ScP** **06 29 27.0 -0.5**
KSH PcS **PcS** **06 29 30.0 -1.8**
KSH S **S** **06 32 35.1 +0.1**
KSH sS **sS** **06 32 52.3 -2.5**
KSH ScS **ScS** **06 34 21.9 -2.9**
KSH SS **SS** **06 36 28.0 +1.7**
KSH pmax pmax
comp=Z,3.0nm,0.5s
KSH pmax pmax
comp=Z,140nm,2.8s
KSH LR LR
comp=N,160nm,6.1s
KSH LR LR
comp=E,310nm,6.9s
KSH LR LR
comp=Z,670nm,9.8s
TKM2 Tokmak 2 59.52 318 *eP* **P** **06 24 50.1 +0.2**
comp=Z,15nm,1.7s
AAK Ala-Archa 60.13 318 *eP* **P** **06 24 54.4 +0.3**
AAK *e*PcP **PcP** **06 25 40.8 +1.2**
AAK Ala-Archa 60.13 318 P **P** **06 24 54.1 -0.1**
comp=Z,0.4nm,0.3s,baz=179,slow=18,SNR=5.3
ZAA0 Zalesovo Array 60.30 333 *eP* **P** **06 24 53.6 -1.2**
ZALV Zalesovo Beam 60.30 333 P **P** **06 24 53.8 -1.0**
ZALV Zalesovo Beam 60.30 333 P **P** **06 24 53.8 -1.0**
comp=Z,4.9nm,0.9s,baz=116,slow=6.8,SNR=19
EKS2 Erkin-Say 60.62 317 *eP* **P** **06 24 57.4 -0.1**
comp=Z,6.2nm,1.0s
KBL Kabul 61.35 307 *eP* **P** **06 25 02.0 -0.6**
comp=Z,5.6nm,0.7s
KURK Kurchatov 61.47 327 *eP* **P** **06 25 02.5 -0.3**
comp=Z,12nm,0.8s
KKAR Karatay Array 63.01 317 P **P** **06 25 11.3 -2.0**
comp=Z,3.5nm,0.8s
BVAR Borovoye Array 67.05 327 P **P** **06 25 39.4 0.0**
BVAR Borovoye Array 67.05 327 P **P** **06 25 39.4 0.0**
comp=Z,12nm,0.9s,baz=120,slow=8.8,SNR=56
BRVK Borovoye 67.12 327 *eP* **P** **06 25 39.5 -0.3**
comp=Z,13nm,0.8s
IMYA Miami 68.86 307 *eP* **P** **06 25 51.0 -0.4**
IMOG Moghan 69.43 307 *eP* **P** **06 25 54.0 -1.0**
ABKAR Akbulak array 71.91 321 *eP* **P** **06 26 09.0 -0.4**
comp=Z,2.6nm,0.6s
ISRV Sarvestan 73.78 299 *eP* **P** **06 26 21.1 -0.3**
GAMB Gambell 74.06 24 *eP* **P** **06 26 19.6 -2.2**
comp=Z,16nm,1.4s
RDF Al-Radifah 78.61 299 *eP* **P** **06 26 47.6 -0.9**
RDF AMb AMB 06 26 52.7
comp=Z,14nm,0.9s
MIB Mutribah 78.82 299 *eP* **P** **06 26 49.4 -0.2**
MIB AMb AMB 06 26 53.8
comp=Z,16nm,0.7s
NAY Al-Naaiem 78.89 299 *eP* **P** **06 26 49.4 -0.6**
NAY AMb AMB 06 26 52.6
comp=Z,6.7nm,1.5s
ABPO Ambohimpanom 81.48 250 *eP* **P** **06 27 04.5 +0.2**
comp=Z,17nm,1.0s
KDAK Kodiak Island 81.56 32 P **P** **06 27 05.0 +1.3**
KDAK Kodiak Island 81.56 32 P **P** **06 27 05.0 +1.3**
comp=Z,6.3nm,0.6s,baz=219,slow=1.6,SNR=6.3
PPLA Purkeypile 82.29 27 *eP* **P** **06 27 09.0 +1.4**
comp=Z,14nm,1.2s
TRF Thorofare Moun 83.20 27 *eP* **P** **06 27 12.1 -0.3**
comp=Z,9.6nm,1.0s
COLD Coldfoot 83.55 23 *eP* **P** **06 27 15.9 +2.0**
comp=Z,28nm,1.4s
PMR Palmer 83.61 29 *eP* **P** **06 27 15.1 +0.8**
comp=Z,9.7nm,0.8s
VNDA Vanda 83.77 173 P **P** **06 27 15.7 +0.8**
VNDA Vanda 83.77 173 P **P** **06 27 15.7 +0.8**
comp=Z,8.7nm,0.9s,baz=307,slow=5.8,SNR=12
MCK McKinley 83.83 26 *eP* **P** **06 27 16.5 +1.1**
comp=Z,16nm,0.9s
SML Sawmill 84.00 28 *eP* **P** **06 27 16.7 +0.3**
comp=Z,6.7nm,0.9s
MAW Mawson 84.10 200 P **P** **06 27 15.9 -0.7**
MAW Mawson 84.10 200 P **P** **06 27 15.9 -0.7**
comp=Z,2.6nm,0.7s,baz=31,slow=10,SNR=3.1
COLA College 84.36 25 *eP* **P** **06 27 18.3 +0.3**
comp=Z,4.5nm,0.9s
ILAR Eielson Array 84.76 25 P **P** **06 27 19.9 -0.2**
ILAR Eielson Array 84.76 25 P **P** **06 27 19.9 -0.2**
comp=Z,2.0nm,0.9s,baz=248,slow=5.0,SNR=22
MALT Malatya 86.20 308 *eP* **P** **06 27 28.3 +0.3**
comp=Z,11nm,1.4s
JOF Joensuu 88.89 333 *ep* **P** **06 27 41.8 +1.6**
comp=Z,5.2nm,0.6s
KMBO Kilima Mbogo 89.61 269 *eP* **P** **06 27 45.4 +0.5**
comp=Z,11nm,1.1s
KMBO Kilima Mbogo 89.61 269 P **P** **06 27 46.0 +1.0**
comp=Z,7.2nm,1.0s,baz=49,slow=5.2,SNR=14
INK Inuvik 89.82 21 P **P** **06 27 44.6 +0.2**
INK PKKPbc **PKKPdf** **06 45 17.6 +2.9**
INK Inuvik 89.82 21 P **P** **06 27 44.6 +0.2**
comp=Z,2.1nm,1.0s,baz=262,slow=6.8,SNR=6.7
INK PKKPbc **PKKPdf** **06 45 17.6 +2.9**
comp=Z,0.7nm,0.9s,baz=51,slow=2.6,SNR=3.1
BR131 Keskin Array S 89.83 310 *eP* **P** **06 27 45.2 -0.2**
comp=Z,1.1nm,0.7s
BRTR Keskin Array B 89.83 310 P **P** **06 27 44.0 -1.3**
BRTR Keskin Array B 89.83 310 P **P** **06 27 44.0 -1.3**
comp=Z,0.9nm,0.7s,baz=115,slow=5.6,SNR=6.9
ARCES ARCESS Array B 90.14 340 P **P** **06 27 45.9 -0.1**
ARCES ARCESS Array B 90.14 340 P **P** **06 27 45.9 -0.1**
comp=Z,2.0nm,0.6s,baz=57,slow=4.5,SNR=8.1
KAF Kangasniemi 91.31 332 *ep* **P** **06 27 54.2 +2.7**
comp=Z,2.8nm,0.7s
FINES FINESS Array B 91.55 332 P **P** **06 27 52.3 -0.3**
FINES FINESS Array B 91.55 332 P **P** **06 27 52.3 -0.3**
comp=Z,5.5nm,1.0s,baz=62,slow=6.5,SNR=6.7
AKASG Malin Array Be 91.65 321 P **P** **06 27 53.0 -0.3**
AKASG Malin Array Be 91.65 321 P **P** **06 27 53.0 -0.3**
comp=Z,2.7nm,0.8s,baz=74,slow=4.3,SNR=8.3
QSPA South Pole Qui 93.99 180 P **P** **06 28 02.9 -1.1**
QSPA South Pole Qui 93.99 180 P **P** **06 28 02.8 -1.1**
comp=Z,4.8nm,1.0s,baz=322,slow=4.1,SNR=7.4
VRI Vrincioaia 94.07 316 *i* P **P** **06 28 05.6 +0.9**
SUW Suwalki 94.66 325 *eP* **P** **06 28 07.4 +0.2**
comp=Z,34nm,1.0s
MLR Muntele Rosu 94.68 316 P **P** **06 28 07.5 -0.2**
MLR Muntele Rosu 94.68 316 *i* P **P** **06 28 08.1 +0.4**
MLR Muntele Rosu 94.68 316 P **P** **06 28 07.5 -0.2**
comp=Z,1.2nm,0.9s,baz=66,slow=3.5,SNR=11
BURAR Bucovina Array 94.77 318 *i* P **P** **06 28 08.8 +0.8**
BUR08 Bucovina Ar. S 94.78 318 *eP* **P** **06 28 08.6 +0.6**
ARR Arges 95.61 316 *i* P **P** **06 28 12.3 +0.5**
LOT Lotru 96.19 316 *i* P **P** **06 28 15.6 +1.1**
KOLS Kolonicke sedl 96.41 320 *eP* **P** **06 28 17.0 +1.7**
DRGR 96.61 318 *i* P **P** **06 28 16.5 +0.1**
CRVS Cervenica-Dubn 96.93 320 *eP* **P** **06 28 17.9 +0.2**
PSZ Piszkesteto 98.19 319 *eP* **P** **06 28 21.9 -1.5**
comp=Z,4.3nm,0.9s
NB2 NORSAR Subarra 98.49 334 P **P** **06 28 22.6 -1.9**
baz=66,slow=4.4
NB2 NORSAR Subarra 98.49 334 P **P** **06 28 22.6 -1.9**
comp=Z,2.5nm,1.0s,baz=66,slow=4.4
NOA NORSAR Array B 98.49 334 P **P** **06 28 23.0 -1.4**
NOA NORSAR Array B 98.49 334 P **P** **06 28 23.0 -1.4**
comp=Z,0.8nm,0.7s,baz=209,slow=13,SNR=3.1
YKA Yellowknife Ar 99.16 24 P **Pdif** **06 28 27.5 +0.2**
YKA PKiKP **PKiKP** **06 32 58.9 +1.6**
YKA Yellowknife Ar 99.16 24 P **Pdif** **06 28 27.5 +0.2**
comp=Z,0.4nm,0.7s,baz=302,slow=4.7,SNR=14
YKA PKiKP **PKiKP** **06 32 58.9 +1.6**
comp=Z,0.3nm,0.8s,baz=305,slow=1.7,SNR=6.7
BRG Berggiesshubel 100.98 324 *eP* **Pdif** **06 28 36.5 +0.8**
comp=Z,7.6nm,1.0s
GERES GERESS Array B 101.84 322 P **Pdif** **06 28 39.8 +0.1**
GERES GERESS Array B 101.84 322 P **Pdif** **06 28 39.8 +0.1**
comp=Z,0.4nm,0.4s,baz=70,slow=5.7,SNR=7.0
NVAR Mina Array Bea 106.63 48 Pdif **Pdif** **06 29 03.6 +2.2**
NVAR PKKPab **PKKPab** **06 44 47.4 -0.2**
NVAR Mina Array Bea 106.63 48 Pdiff **Pdif** **06 29 03.6 +2.2**
comp=Z,0.3nm,0.7s,baz=268,slow=4.5,SNR=3.3
NVAR PKKPab **PKKPab** **06 44 47.4 -0.2**
comp=Z,0.7nm,0.8s,baz=141,slow=4.6,SNR=5.3
PDAR Pinedale Array 111.06 41 PKKPab PKKPab 06 44 27.2 -0.8
PDAR Pinedale Array 111.06 41 PKKPab PKKPab 06 44 27.2 -0.8
comp=Z,1.1nm,0.9s,baz=112,slow=5.6,SNR=8.6
ULM Lac du Bonnet 114.63 29 PKP PKPdf 06 33 26.5 +0.1
ULM Lac du Bonnet 114.63 29 PKP PKPdf 06 33 26.5 +0.1
comp=Z,1.0nm,0.3s,baz=45,slow=2.2,SNR=3.7
SCHQ Schefferville 120.21 9 PKP **PKPdf** **06 33 37.8 +0.7**
SCHQ Schefferville 120.21 9 PKP **PKPdf** **06 33 37.8 +0.7**
comp=Z,2.1nm,0.6s,baz=25,slow=3.1,SNR=8.5
MDT Midelt 121.15 312 PKP **PKPdf** **06 33 41.0 +1.3**
MDT Midelt 121.15 312 PKP **PKPdf** **06 33 41.0 +1.3**
comp=Z,4.1nm,0.8s,baz=255,slow=10,SNR=4.2
TXAR Lajitas Array 121.34 52 PKP **PKPdf** **06 33 42.1 +2.0**
TXAR Lajitas Array 121.34 52 PKP **PKPdf** **06 33 42.1 +2.0**
comp=Z,0.6nm,0.7s,baz=293,slow=0.5,SNR=6.4
TORD Torodi Ar. Bea 122.86 288 PKP **PKPdf** **06 33 43.8 +0.6**
TORD Torodi Ar. Bea 122.86 288 PKP **PKPdf** **06 33 43.8 +0.6**
comp=Z,2.2nm,0.8s,baz=47,slow=2.0,SNR=13
MIAR Mount Ida 125.98 41 *e*PKPdf **PKPdf** **06 33 51.2 +2.5**
PLCA Paso Flores 140.32 159 PKP **PKPdf** **06 34 16.6 +1.0**
PLCA Paso Flores 140.32 159 PKP **PKPdf** **06 34 16.6 +1.0**
comp=Z,2.0nm,0.8s,baz=179,slow=4.0,SNR=4.3
CFAA Coronel Fontan 149.20 154 PKPbc **PKPbc** **06 34 36.0 +0.7**
CFAA Coronel Fontan 149.20 154 PKPbc **PKPbc** **06 34 36.0 +0.7**
comp=Z,0.5nm,0.6s,baz=230,slow=4.1,SNR=8.4
LCO Las Campanas 150.17 148 *e*PKPbc **PKPbc** **06 34 39.8 +1.8**
CPUP Villa Florida 157.53 170 PKPab **PKPab** **06 35 16.0 +1.3**
CPUP Villa Florida 157.53 170 PKPab **PKPab** **06 35 16.0 +1.3**
comp=Z,2.4nm,0.7s,baz=153,slow=2.3,SNR=7.1
LPAZ La Paz 160.98 131 PKP **PKPdf** **06 34 50.1 +2.0**
LPAZ La Paz 160.98 131 PKP **PKPdf** **06 34 50.1 +2.0**
comp=Z,1.9nm,1.1s,baz=249,slow=3.8,SNR=4.2

IDC 19 06:17:48.3±2.0, 44°21N×129°15W, h0km, mb3.5/6, mb1 3.7/8, mb1mx3.6/30, mbtmp3.5/8, ML3.5/2, MS3.8/1, Ms1 3.8/1, ms1mx3.5/36, Error ellipse: s-maj=46.9km s-min=18.3km az=41.0, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YBH	**Yreka Blue Hor**	**5.33**	**115**	Pn	Pn	06 19 10.1	+0.8
	0.1nm,0.3s,baz=248,slow=9.1,SNR=3.7						
YBH				LR	LR	06 20 57.1	
	comp=Z,1μm,21.6s,baz=249,slow=35						
NEW	**Newport**	**9.27**	**60**	Pn	Pn	06 20 08.4	+5.2
	0.1nm,0.3s,baz=264,slow=12,SNR=3.6						
PDAR	**Pinedale Array**	**14.30**	**89**	Pn	Pn	06 21 14.8	+2.6
	0.0nm,0.3s,baz=104,slow=1.1,SNR=4.2						
ANMO	**Albuquerque**	**19.73**	**110**	P	Pn	06 22 24.0	+2.9
	0.1nm,0.3s,baz=284,slow=7.9,SNR=3.2						
YKA	**Yellowknife Ar**	**20.18**	**20**	P	P	06 22 24.9	+0.8
	1.8nm,0.9s,baz=208,slow=9.9,SNR=12						
ILAR	**Eielson Array**	**22.88**	**340**	P	P	06 22 54.2	+1.2
	1.2nm,0.9s,baz=148,slow=8.0,SNR=7.8						
ULM	**Lac du Bonnet**	**23.26**	**63**	P	P	06 22 57.9	+0.8
	2.8nm,0.6s,baz=304,slow=15,SNR=2.4						
INK	**Inuvik**	**24.27**	**356**	P		06 23 06.1	-0.6
	1.1nm,1.0s,baz=140,slow=6.6,SNR=4.9						
TXAR	**Lajitas Array**	**25.10**	**118**	P	P	06 23 15.7	+0.9
	0.7nm,1.0s,baz=302,slow=7.4,SNR=3.7						
ZALV	**Zalesovo Beam**	**78.00**	**340**	P	P	06 29 47.3	-0.8
	0.2nm,0.3s,baz=39,slow=9.3,SNR=2.9						

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*IDC **19** 06:17:45.4±0.7, 4.07N×126.73E, h0km, mb4.3/16, mb1 4.4/16, mb1mx4.2/26, mbtmp4.3/16, Error ellipse: s-maj=29.1km s-min=14.2km az=72.0*
*ISCJB **19** 06:17:49.9±0.5, 4.08N±0.07×126.7E±0.1, h45km, mb4.3/19, Error ellipse: s-maj=20.1km s-min=8.3km az=166.0*
*NEIC **19** 06:17:50.5±0.4, 4.07N×126.76E, h35km, mb4.6/3, Error ellipse: s-maj=17.4km s-min=7.8km az=73.0*
*AUST **19** 06:18:00.6, 3.50N×126.00E, h100km*
ISC 19 06:17:51.8±0.6, 4.05N±0.09×126.7E±0.2, h45km, n43, σ0.87/44, mb4.4/19, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**8.46**	**235**	S	Sn	06 21 10.3	-16
	baz=7.6,SNR=14						
FITZ	**Fitzroy Crossi**	**22.04**	**183**	P	P	**06 22 42.1**	**-0.6**
FITZ	**Fitzroy Crossi**	**22.04**	**183**	P	P	**06 22 42.1**	**-0.6**
	8.2nm,0.7s,baz=356,slow=13,SNR=4.4						
WRAB	**Tennant Creek**	**24.98**	**163**	*e*P	P	**06 23 11.0**	**-0.5**
	10nm,0.6s						
WRA	**Warramunga Arr**	**24.99**	**163**	P	P	**06 23 11.7**	**+0.1**
WRA	**Warramunga Arr**	**24.99**	**163**	P	P	**06 23 11.7**	**+0.1**
	12nm,0.6s,baz=342,slow=11,SNR=8.7						
MBWA	**Marble Bar**	**25.97**	**195**	*e*P	P	**06 23 21.1**	**+0.7**
	13nm,0.9s						
PSI	**Prapat**	**27.77**	**268**	P	P	**06 23 38.5**	**+1.7**
PSI	**Prapat**	**27.77**	**268**	P	P	**06 23 38.5**	**+1.7**
	2.3nm,0.5s,baz=194,slow=4.2,SNR=3.6						
ASAR	**Alice Springs**	**28.42**	**166**	P	P	**06 23 40.9**	**-1.6**
ASAR	**Alice Springs**	**28.42**	**166**	P	P	**06 23 40.9**	**-1.6**
	1.6nm,0.6s,baz=347,slow=6.9,SNR=5.3						
CMAR	**Chiang Mai Arr**	**30.70**	**300**	P	P	**06 24 01.6**	**-1.1**
CMAR	**Chiang Mai Arr**	**30.70**	**300**	P	P	**06 24 01.6**	**-1.1**
	1.5nm,0.3s,baz=115,slow=6.2,SNR=4.3						
MEEK	**Meekatharra**	**31.50**	**194**	P	P	**06 24 09.9**	**+0.3**
	baz=31,SNR=6.5						
KMBL	**Kambalda**	**35.52**	**187**	P	P	**06 24 45.1**	**+0.6**
	baz=35,SNR=4.9						
KLBR	**Kellerberrin**	**36.45**	**193**	P	P	**06 24 53.2**	**+0.7**
	baz=36,SNR=7.9						
BBOO	**Buckleboo**	**37.71**	**167**	P	P	**06 25 03.8**	**+0.6**
	baz=38,SNR=7.8						
STKA	**Stephens Creek**	**38.43**	**159**	P	P	**06 25 09.6**	**+0.4**
STKA	**Stephens Creek**	**38.43**	**159**	P	P	**06 25 09.6**	**+0.4**
	8.1nm,0.9s,baz=352,slow=13,SNR=4.8						
STKA	**Stephens Creek**	**38.43**	**159**	P	P	**06 25 09.9**	**+0.7**
	baz=38,SNR=5.0						
SONM	**Songino Array**	**46.99**	**341**	P	P	**06 26 19.1**	**+0.5**
SONM	**Songino Array**	**46.99**	**341**	P	P	**06 26 19.1**	**+0.5**
	1.1nm,0.6s,baz=142,slow=6.3,SNR=3.0						
PETK	**Petropavlovsk-**	**55.14**	**22**	P	P	**06 27 20.0**	**+0.4**
PETK	**Petropavlovsk-**	**55.14**	**22**	P	P	**06 27 20.0**	**+0.4**

2.1nm,0.8s,baz=179,slow=6.4,SNR=2.5
MKAR Makanchi Array 57.29 325 P **P** **06 27 35.0 0.0**
MKAR PcP **PcP** **06 28 30.3 +1.3**
MKAR Makanchi Array 57.29 325 P **P** **06 27 35.0 0.0**
2.1nm,0.4s,baz=118,slow=8.0,SNR=10.0
MKAR PcP **PcP** **06 28 30.3 +1.3**
1.0nm,0.8s,baz=118,slow=4.8,SNR=2.1
ZALV Zalesovo Beam 60.30 333 P **P** **06 27 54.8 -0.9**
ZALV Zalesovo Beam 60.30 333 P **P** **06 27 54.8 -0.9**
1.1nm,0.4s,baz=124,slow=6.3,SNR=6.0
KURK Kurchatov 61.47 327 *eP* **P** **06 28 03.3 -0.4**
4.7nm,0.5s
BVAR Borovoye Array 67.05 327 P **P** **06 28 40.9 +0.6**
BVAR Borovoye Array 67.05 327 P **P** **06 28 40.9 +0.6**
2.3nm,0.7s,baz=128,slow=9.6,SNR=4.9
ILAR Eielson Array 84.82 25 P **P** **06 30 21.8 +0.4**
ILAR Eielson Array 84.82 25 P **P** **06 30 21.8 +0.4**
0.8nm,0.9s,baz=239,slow=7.3,SNR=4.9
KMBO Kilima Mbogo 89.55 269 P **P** **06 30 45.6 0.0**
KMBO Kilima Mbogo 89.55 269 P **P** **06 30 45.6 0.0**
2.0nm,1.0s,baz=9.5,slow=6.1,SNR=3.8
BRTR Keskin Array B 89.81 310 P **P** **06 30 45.6 -0.6**
BRTR Keskin Array B 89.81 310 P **P** **06 30 45.6 -0.6**
0.4nm,0.4s,baz=111,slow=3.7,SNR=3.0
ARCES ARCESS Array B 90.15 340 P **P** **06 30 46.0 -0.9**
ARCES ARCESS Array B 90.15 340 P **P** **06 30 46.0 -0.9**
3.4nm,0.8s,baz=60,slow=5.8,SNR=4.7
FINES FINESS Array B 91.55 332 P **P** **06 30 52.0 -1.5**
FINES FINESS Array B 91.55 332 P **P** **06 30 52.0 -1.5**
4.2nm,1.1s,baz=28,slow=6.3,SNR=2.5
TORD Torodi Ar. Bea 122.81 288 PKP **PKPdf** **06 36 44.1 +0.2**
TORD Torodi Ar. Bea 122.81 288 PKP **PKPdf** **06 36 44.1 +0.2**
0.5nm,0.7s,baz=82,slow=3.1,SNR=3.8

IDC 19 06:19:45.4±1.1, 4.36N×127.23E, h0km, mb4.2/7, mb1 4.3/7, mb1mx4.0/23, mbtmp4.2/7, Error ellipse: s-maj=105.6km s-min=17.9km az=73.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.38**	**184**	P	P	06 24 45.7	+0.3
	4.6nm,0.8s,baz=5.2,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**25.14**	**164**	P	P	06 25 11.4	-1.0
	11nm,0.9s,baz=344,slow=11,SNR=6.1						
STKA	**Stephens Creek**	**38.55**	**160**	P	P	06 27 10.2	+0.3
	5.9nm,0.9s,baz=354,slow=8.7,SNR=3.7						
SONM	**Songino Array**	**46.86**	**341**	P	P	06 28 16.3	-1.2
	0.6nm,0.4s,baz=157,slow=7.8,SNR=2.8						
SONM				PcP	PcP	06 29 52.0	+1.6
	1.0nm,0.6s,baz=158,slow=1.6,SNR=2.7						
MKAR	**Makanchi Array**	**57.33**	**325**	P	P	06 29 35.4	+0.1
	1.5nm,0.5s,baz=118,slow=8.0,SNR=7.4						
ZALV	**Zalesovo Beam**	**60.26**	**333**	P	P	06 29 54.9	-0.6
	0.6nm,0.4s,baz=118,slow=6.6,SNR=4.5						
FINES	**FINESS Array B**	**91.51**	**332**	P	P	06 32 54.1	+0.4
	0.8nm,0.6s,baz=44,slow=8.5,SNR=4.1						
TORD	**Torodi Ar. Bea**	**123.19**	**289**	PKP	PKPdf	06 38 44.7	-0.6
	0.2nm,0.4s,baz=105,slow=2.4,SNR=3.3						

IDC 19 06:21:31.2±3.1, 5.84S×149.46E, h127km±29km, mb3.4/8, mb1 3.6/9, mb1mx3.5/19, mbtmp3.4/9, Error ellipse: s-maj=55.3km s-min=21.3km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.21**	**213**	P	Pn	06 22 33.8	0.0
	31nm,0.3s,baz=26,slow=6.5,SNR=73						
PMG				S	Sn	06 23 22.5	+0.2
	38nm,0.3s,baz=136,slow=23,SNR=10						
WRA	**Warramunga Arr**	**20.31**	**225**	P	P	06 25 58.4	+1.0
	2.6nm,0.5s,baz=47,slow=10,SNR=3.7						
ASAR	**Alice Springs**	**23.20**	**219**	P	P	06 26 28.2	+1.0
	0.5nm,0.3s,baz=51,slow=8.6,SNR=4.9						
FITZ	**Fitzroy Crossi**	**26.25**	**240**	P	P	06 26 54.2	-0.6
	4.8nm,0.5s,baz=58,slow=8.7,SNR=9.3						
FITZ	**Fitzroy Crossi**	**26.25**	**240**	S	P	06 26 54.4	-0.4
	baz=22,SNR=9.3						
KSRS	**Korea Array**	**47.53**	**337**	P	P	06 29 54.3	+0.6
	1.2nm,0.7s,baz=151,slow=7.9,SNR=5.4						
PETK	**Petropavlovsk-**	**59.14**	**6**	P	P	06 31 19.6	+1.2
	1.2nm,0.8s,baz=161,slow=8.0,SNR=4.1						
MKAR	**Makanchi Array**	**78.94**	**320**	P	P	06 33 20.4	-0.5
	0.2nm,0.5s,baz=94,slow=7.5,SNR=3.6						
ZALV	**Zalesovo Beam**	**80.19**	**327**	P	P	06 33 27.0	-0.4
	0.4nm,0.4s,baz=124,slow=7.5,SNR=2.8						
ILAR	**Eielson Array**	**84.38**	**23**	P	P	06 33 48.0	-1.0
	0.1nm,0.6s,baz=251,slow=5.5,SNR=3.0						
TORD	**Torodi Ar. Bea**	**147.42**	**285**	PKPbc	PKPbc	06 41 00.7	-0.6
	0.3nm,0.3s,baz=88,slow=3.0,SNR=12						

MEX 19 06:21:50.5±1.2, 17.99N×98.03W, h61km±8km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UTMO	**Huajupan**	**0.27**	**126**	*eP*	Pn	06 21 58.8	-2.0
UTMO				*i* S	Sn	06 22 06.4	-1.8
HMTT	**Tlapaneco**	**0.54**	**250**	*eP*	Pn	06 22 01.9	-1.2
HMTT				*i* S	Sn	06 22 11.0	-1.3
TPIG	**Tehuac#an**	**0.77**	**56**	*i* P	Pn	06 22 04.5	-1.4
TPIG				*i* S	Sn	06 22 15.4	-1.8
YAIG	**Yautepec**	**1.31**	**312**	*i* P	Pn	06 22 11.5	-1.4
YAIG				*i* S	Sn	06 22 27.7	-2.1
VHO	**Vista Hermosa**	**1.54**	**126**	*eP*	Pn	06 22 15.2	-0.8
VHO				*i* S	Sn	06 22 32.8	-2.3
PNIG	**Pinotepa**	**1.59**	**183**	*i* P	Pn	06 22 15.7	-0.8
PNIG				*i* S	Sn	06 22 33.5	-2.5
ARIG	**Puente Sto Nin**	**2.22**	**278**	*i* P	Pn	06 22 24.7	-0.4
ARIG				*i* S	Sn	06 22 48.9	-2.6
CAIG	**El Cayaco**	**2.33**	**247**	*i* P	Pn	06 22 24.2	-2.3
CAIG				*i* S	Sn	06 22 51.8	-2.2

IDC 19 06:27:29.3±1.4, 4.03N×126.67E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/24, mbtmp3.7/6, Error ellipse: s-maj=96.3km s-min=18.0km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.01**	**183**	P	P	06 32 23.9	-1.5
	1.9nm,1.0s,baz=4.8,slow=12,SNR=2.5						
WRA	**Warramunga Arr**	**24.98**	**163**	P	P	06 32 55.4	+0.5
	1.6nm,0.5s,baz=344,slow=11,SNR=20						
ASAR	**Alice Springs**	**28.41**	**166**	P	P	06 33 25.2	-0.6
	0.3nm,0.7s,baz=357,slow=8.0,SNR=5.9						
STKA	**Stephens Creek**	**38.42**	**159**	P	P	06 34 53.7	+0.9
	2.7nm,0.7s,baz=336,slow=9.0,SNR=4.8						
MKAR	**Makanchi Array**	**57.28**	**325**	P	P	06 37 19.4	+0.5
	0.6nm,0.5s,baz=124,slow=8.4,SNR=7.7						
KURBB	**Kurchatov Arra**	**61.46**	**327**	P	P	06 37 47.1	-0.5
	0.2nm,0.4s,baz=127,slow=6.4,SNR=10						

IDC 19 06:29:45.3±1.7, 1.41S×128.13E, h0km, mb3.3/3, mb1 3.6/5, mb1mx3.5/22, mbtmp3.5/5, ML3.4/1, Error ellipse: s-maj=111.9km s-min=21.1km az=71.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**16.77**	**188**	Pn	P	06 33 43.6	-0.5
	0.1nm,0.3s,baz=4.1,slow=9.8,SNR=3.0						
WRA	**Warramunga Arr**	**19.39**	**162**	P	P	06 34 12.0	-1.1
	0.2nm,0.3s,baz=339,slow=10,SNR=7.6						
ASAR	**Alice Springs**	**22.82**	**166**	P	P	06 34 50.0	-0.1
	0.2nm,0.3s,baz=346,slow=9.1,SNR=3.4						
MKAR	**Makanchi Array**	**62.56**	**326**	P	P	06 40 11.0	-0.3
	0.2nm,0.5s,baz=129,slow=7.5,SNR=2.6						
KURBB	**Kurchatov Arra**	**66.81**	**328**	P	P	06 40 39.1	+0.4
	0.2nm,0.4s,baz=132,slow=5.4,SNR=4.7						

IDC 19 06:31:22.7±1.4, 4.05N×126.62E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.7/25, mbtmp3.9/7, MS4.1/2, Ms1 4.1/2, ms1mx3.3/38, 1D, Error ellipse: s-maj=109.7km s-min=16.6km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**3.94**	**323**	*i* P	Pb	06 32 34.0	+0.9
GUMO	**Guam**	**20.35**	**61**	LR	LR	06 43 35.1	
	comp=Z,233nm,19.1s,baz=82,slow=36						
FITZ	**Fitzroy Crossi**	**22.03**	**182**	P	P	06 36 18.9	-0.1
	2.3nm,0.8s,baz=0.5,slow=8.5,SNR=6.6						
WRA	**Warramunga Arr**	**25.02**	**163**	P	P	06 36 47.4	-1.2
	3.8nm,0.9s,baz=342,slow=10,SNR=21						
ASAR	**Alice Springs**	**28.45**	**166**	P	P	06 37 20.4	+0.9
	0.2nm,0.3s,baz=345,slow=8.1,SNR=4.7						
STKA	**Stephens Creek**	**38.47**	**159**	P	P	06 38 47.0	+0.5
	2.2nm,0.7s,baz=335,slow=12,SNR=3.7						
MKAR	**Makanchi Array**	**57.23**	**325**	P	P	06 41 11.6	-0.3
	0.8nm,0.5s,baz=127,slow=8.3,SNR=5.5						
KURBB	**Kurchatov Arra**	**61.41**	**327**	P	P	06 41 41.2	+0.4
	1.7nm,0.7s,baz=125,slow=6.7,SNR=13						
AFI	**Afiamalu**	**63.65**	**108**	LR	LR	07 03 46.0	
	comp=Z,283nm,20.6s,baz=233,slow=30						
BVAR	**Borovoye Array**	**67.00**	**327**	P	P	06 42 17.1	-0.3
	0.6nm,0.6s,baz=134,slow=8.2,SNR=3.8						

*IDC **19** 06:33:22.5±0.8, 25.67N×91.39E, h0km, mb3.8/11, mb1 3.9/12, mb1mx3.7/29, mbtmp3.7/12, Error ellipse: s-maj=32.8km s-min=16.2km az=58.0*
*ISCJB **19** 06:33:24.2±0.5, 25.6N±0.1×91.51E±0.05, h28km, mb3.8/11, Error ellipse: s-maj=15.8km s-min=4.5km az=19.2*
*DMN **19** 06:33:24.9±0.8, 25.26N×91.47E, h10km, Ml4.5/5, Error ellipse: s-maj=55.0km s-min=16.0km az=27.0*

ISC 19 06:33:25.8±1.1, 25.6N±0.2×91.50E±0.07, h28km, n27, σ1s49/28, mb3.9/11, 1C, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**0.35**	**94**	*i* PG	Pb	06 33 31.0	-3.0
SHL				*e* SG	**Sb**	**06 33 35.7**	**-3.8**
AGT	**Agartala**	**1.72**	**188**	*ex*	Pb	06 34 04.0	+7.3
IMP	**Imphal**	**2.35**	**110**	*ex*	**Pn**	**06 34 03.0**	**+0.4**
IMP				*ex*	Sn	06 34 35.0	+4.4
TAPN	**Taplejung**	**3.82**	**298**	*e* Pn	**Pn**	**06 34 24.1**	**+1.0**
TAPN				*e* Sn	**Sn**	**06 35 07.7**	**+0.5**
	375nm,0.4s						
ODAN	**Odare**	**3.90**	**290**	*e* Pn	**Pn**	**06 34 25.0**	**+0.9**
ODAN				*e* Sn	**Sn**	**06 35 09.1**	**0.0**
	623nm,0.5s						
RAMN	**Ramite**	**4.60**	**288**	*e* Pn	**Pn**	**06 34 34.6**	**+0.9**
GUN	**Gumba**	**5.53**	**296**	*e* Pn	**Pn**	**06 34 47.5**	**+0.9**
GUN				*e* Sn	**Sn**	**06 35 48.8**	**-0.6**
	120nm,0.5s						
PKI	**Pulchoki**	**5.80**	**291**	*e* Pn	**Pn**	**06 34 51.0**	**+0.7**
PKIN	**Phulchoki**	**5.81**	**291**	*e* Pn	**Pn**	**06 34 50.5**	**+0.1**
KKN	**Kakani**	**5.98**	**293**	*e* Pn	**Pn**	**06 34 53.6**	**+1.0**
DMN	**Daman**	**6.06**	**291**	*e* Pn	**Pn**	**06 34 53.8**	**-0.1**
KOLN	**Koldanda**	**7.39**	**289**	*e* Pn	**Pn**	**06 35 12.4**	**+0.4**
KOLN				*e* Sn	**Sn**	**06 36 31.7**	**-3.4**
	37nm,0.4s						
DANN	**Dangsing**	**7.43**	**293**	*e* Pn	**Pn**	**06 35 11.7**	**-1.0**
PYUN	**Piuthan**	**8.00**	**290**	*e* Pn	**Pn**	**06 35 19.2**	**-1.2**
PYUN				*e* Sn	**Sn**	**06 36 46.0**	**-4.1**
	42nm,0.4s						
CMAR	**Chiang Mai Arr**	**9.90**	**134**	Pn	Pn	06 35 48.1	+1.8
	baz=305,slow=11,SNR=5.3						
MKAR	**Makanchi Array**	**22.39**	**343**	P	**P**	**06 38 21.2**	**-0.7**
	1.8nm,0.7s,baz=156,slow=9.3,SNR=7.7						
SONM	**Songino Array**	**25.12**	**24**	P	**P**	**06 38 49.5**	**+1.1**
	2.3nm,0.5s,baz=213,slow=9.1,SNR=9.7						
KURBB	**Kurchatov Arra**	**26.91**	**342**	P	**P**	**06 39 04.3**	**-0.1**
	0.4nm,0.5s,baz=127,slow=6.4,SNR=3.5						
FINES	**FINESS Array B**	**56.13**	**328**	P	**P**	**06 43 02.4**	**-0.1**
	1.4nm,0.8s,baz=102,slow=13,SNR=3.5						
ARCES	**ARCESS Array B**	**57.90**	**338**	P	**P**	**06 43 15.6**	**+0.6**
	2.6nm,1.0s,baz=113,slow=6.9,SNR=2.7						
WRA	**Warramunga Arr**	**61.49**	**133**	P	P	06 43 42.1	+1.8
	1.1nm,0.7s,baz=322,slow=7.2,SNR=10						
GERES	**GERESS Array B**	**63.34**	**314**	P	**P**	**06 43 53.0**	**+0.5**
	0.2nm,0.3s,baz=66,slow=7.6,SNR=3.3						
ASAR	**Alice Springs**	**63.91**	**136**	P	P	06 43 58.5	+2.1
	0.5nm,0.5s,baz=316,slow=6.3,SNR=9.2						
INK	**Inuvik**	**80.71**	**15**	P	**P**	**06 45 36.7**	**+0.8**
	0.9nm,0.6s,baz=347,slow=3.3,SNR=8.6						
TORD	**Torodi Ar. Bea**	**84.25**	**282**	P	**P**	**06 45 56.3**	**+0.8**
	0.1nm,0.5s,baz=67,slow=4.5,SNR=2.6						
YKA	**Yellowknife Ar**	**89.77**	**12**	P	**P**	**06 46 21.2**	**-0.2**
	0.2nm,0.7s,baz=323,slow=4.4,SNR=4.7						
CPUP	**Villa Florida**	**151.99**	**262**	PKPbc	**PKPbc**	**06 53 19.8**	**+0.9**
	1.2nm,0.5s,baz=127,slow=5.1,SNR=7.9						

IDC 19 06:44:36.3±3.0, 31.71S×177.84W, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.7/19, mbtmp3.7/3, ML3.3/1, Error ellipse: s-maj=70.9km s-min=36.4km az=116.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.74**	**211**	Pn	Pn	06 46 29.6	-0.7
	0.4nm,0.3s,baz=341,slow=16,SNR=1.6						
URZ				Sn	Sn	06 47 57.7	-0.9
	1.8nm,0.3s,baz=190,slow=18,SNR=9.7						
ASAR	**Alice Springs**	**43.20**	**268**	P	P	06 52 39.4	+0.1
	0.2nm,0.3s,baz=109,slow=7.7,SNR=5.4						
WRA	**Warramunga Arr**	**44.30**	**273**	P	P	06 52 48.3	+0.1
	0.7nm,0.3s,baz=111,slow=8.0,SNR=27						
FINES	**FINESS Array B**	**146.41**	**339**	PKPbc	PKPdf	07 04 17.5	+0.3
	0.8nm,0.5s,baz=57,slow=2.6,SNR=8.4						

WEL 19 06:54:48.0±0.2, 40.40S×173.59E, h155km±2km, ML3.7/14, 15C-8D, Error ellipse: s-maj=1.4km s-min=0.6km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	**0.47**	**148**	PN	Pn	06 55 09.8	0.0
DUWZ				S	Sn	06 55 25.3	-1.3
NNZ	**Nelson**	**0.83**	**191**	↓PN	Pn	06 55 11.8	-0.1
NNZ				S	Sn	06 55 28.5	-1.8
QRZ	**Quartz Range**	**0.91**	**242**	PN	Pn	06 55 12.1	-0.4
TCW	**Tory Channel**	**0.96**	**148**	PN	Pn	06 55 13.2	+0.3
TUWZ	**Tuamarina**	**1.06**	**166**	PN	Pn	06 55 13.9	+0.1
NRZ	**Ngariki Road**	**1.10**	**14**	PN	Pn	06 55 14.0	-0.1
KIW	**Kapiti Island**	**1.10**	**115**	PN	Pn	06 55 14.1	-0.1
DFE	**Dawson Falls**	**1.14**	**20**	PN	Pn	06 55 14.5	-0.1
NWEZ	**Newall Road**	**1.15**	**11**	PN	Pn	06 55 14.6	0.0
NEZ	**North Egmont**	**1.19**	**19**	PN	Pn	06 55 15.2	+0.1
SNZO	**South Karori**	**1.24**	**137**	↑PN	Pn	06 55 15.4	+0.1
PKE	**Pukeiti**	**1.24**	**14**	PN	Pn	06 55 15.3	-0.2
WAZ	**Wanganui**	**1.25**	**59**	↑PN	Pn	06 55 15.9	+0.4
WEL	**Wellington**	**1.26**	**135**	PN	Pn	06 55 15.5	+0.1
OGWZ	**Otaki Gorge**	**1.27**	**110**	↑PN	Pn	06 55 15.7	+0.1
DREZ	**Durham Road**	**1.30**	**21**	PN	Pn	06 55 15.9	-0.1
DREZ				S	Sn	06 55 36.6	-0.7
CAW	**Cannon Point**	**1.33**	**123**	↑PN	Pn	06 55 16.2	0.0
BSWZ	**Blackbirch Sta**	**1.33**	**171**	PN	Pn	06 55 16.5	+0.3
BHW	**Baring Head**	**1.40**	**136**	PN	Pn	06 55 16.7	-0.1
MHEZ	**Mangahewa**	**1.44**	**23**	PN	Pn	06 55 17.2	-0.2
THZ	**Tophouse**	**1.46**	**201**	↓PN	Pn	06 55 17.3	-0.2
MRZ	**Mangatainoka R**	**1.54**	**100**	↑PN	Pn	06 55 18.1	-0.2
HOWZ	**Holdsworth Sta**	**1.55**	**109**	↑PN	Pn	06 55 18.3	-0.2
VRZ	**Vera Road**	**1.56**	**36**	↓PN	Pn	06 55 18.0	-0.6
MSWZ	**Moikau Station**	**1.61**	**129**	↑PN	Pn	06 55 19.1	-0.1
MTW	**Mount Morrison**	**1.64**	**118**	↑PN	Pn	06 55 19.3	-0.1
POWZ	**Post Office Ro**	**1.66**	**90**	PN	Pn	06 55 19.4	-0.3
PAWZ	**Paruwai Farm**	**1.70**	**126**	↑PN	Pn	06 55 20.0	-0.1
PLWZ	**Palliser**	**1.72**	**133**	↑PN	Pn	06 55 20.1	-0.2
MTVZ	**Mangateitei**	**1.77**	**56**	PN	Pn	06 55 20.5	-0.4
TIWZ	**Tintock**	**1.79**	**103**	PN	Pn	06 55 20.8	-0.2
TSZ	**Takapari Road**	**1.85**	**80**	↑PN	Pn	06 55 21.2	-0.5
TRVZ	**Turoa**	**1.87**	**54**	PN	Pn	06 55 21.4	-0.8
TRWZ	**Traveller**	**1.88**	**123**	↓PN	Pn	06 55 22.0	0.0
WNVZ	**Wahianoa**	**1.88**	**56**	PN	Pn	06 55 21.7	-0.6
TMWZ	**Te Maipa**	**1.88**	**113**	↑PN	Pn	06 55 22.0	-0.1
FWVZ	**Far West T-bar**	**1.90**	**53**	PN	Pn	06 55 21.7	-0.9
DSZ	**Denniston Nort**	**1.91**	**225**	↓PN	Pn	06 55 21.9	-0.5
WPVZ	**Whakapapa**	**1.92**	**52**	PN	Pn	06 55 21.9	-0.8
MOVZ	**Moawhango**	**1.94**	**60**	PN	Pn	06 55 21.8	-1.0
TWVZ	**Taurewa**	**1.95**	**48**	PN	Pn	06 55 22.3	-0.7
TUVZ	**Tukino**	**1.95**	**55**	PN	Pn	06 55 22.5	-0.5
DVHZ	**Dannevirke**	**1.97**	**88**	PN	Pn	06 55 22.5	-0.6
NGZ	**Ngauruhoe**	**1.97**	**52**	PN	Pn	06 55 22.5	-0.8
WTVZ	**West Tongariro**	**2.01**	**51**	PN	Pn	06 55 22.8	-0.8
KHZ	**Kahutara**	**2.02**	**181**	↓PN	Pn	06 55 23.6	0.0
OTVZ	**Oturere**	**2.02**	**53**	PN	Pn	06 55 23.3	-0.6
BFZ	**Birch Farm**	**2.04**	**99**	↓PN	Pn	06 55 23.5	-0.4
KRVZ	**Karewarewa**	**2.05**	**51**	PN	Pn	06 55 23.3	-0.9
PNHZ	**Pukenui**	**2.06**	**77**	PN	Pn	06 55 23.5	-0.7
BHHZ	**Black Hill Sta**	**2.11**	**65**	PN	Pn	06 55 23.7	-1.1
HIZ	**Hauiti**	**2.12**	**28**	PN	Pn	06 55 24.0	-0.9
KATZ	**Kakaramea**	**2.16**	**49**	PN	Pn	06 55 24.9	-0.5
WPHZ	**Waipukurau**	**2.21**	**82**	PN	Pn	06 55 25.4	-0.4
RATZ	**Rangitukua**	**2.28**	**48**	PN	Pn	06 55 26.4	-0.4
PRHZ	**Porangahau**	**2.33**	**88**	PN	Pn	06 55 27.0	-0.3
BKZ	**Black Stump Fm**	**2.55**	**62**	↑PN	Pn	06 55 28.7	-1.4
MCHZ	**McNeill Hill**	**2.57**	**69**	PN	Pn	06 55 29.8	-0.5
LTZ	**Lake Taylor**	**2.58**	**202**	↓PN	Pn	06 55 29.5	-0.8
KAHZ	**Kahuranaki**	**2.59**	**78**	PN	Pn	06 55 30.1	-0.4
NMHZ	**Naumai**	**2.80**	**63**	PN	Pn	06 55 32.5	-0.7
CRLZ	**Canterbury Las**	**3.25**	**193**	↑PN	Pn	06 55 37.1	-1.6
MQZ	**McQueen's Vall**	**3.38**	**192**	PN	Pn	06 55 38.3	-1.9
WVZ	**Waitaha Valley**	**3.42**	**218**	PN	Pn	06 55 39.5	-1.3
KNZ	**Kokohu**	**3.44**	**68**	PN	Pn	06 55 39.3	-1.8
URZ	**Urewera**	**3.47**	**53**	SN	Sn	06 56 18.7	-4.3
MWZ	**Matawai**	**3.68**	**57**	PN	Pn	06 55 42.4	-2.0
RPZ	**Rata Peaks**	**3.81**	**209**	PN	Pn	06 55 44.4	-1.6
FOZ	**Fox Glacier**	**4.29**	**221**	PN	Pn	06 55 49.3	-2.8
LBZ	**Lake Benmore**	**4.71**	**211**	PN	Pn	06 55 55.4	-2.3
ODZ	**Otahua Downs**	**5.12**	**204**	PN	Pn	06 56 01.1	-1.9
JCZ	**Jackson Bay**	**5.13**	**223**	PN	Pn	06 56 00.8	-2.5
JCZ				SN	Sn	06 56 56.1	-6.1

IDC 19 07:05:34.1±0.8, 3.76N×126.97E, h0km, mb3.7/9, mb1 3.9/9, mb1mx3.7/25, mbtmp3.7/9, Error ellipse: s-maj=47.6km s-min=16.0km az=75.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.76**	**183**	P	P	07 10 27.6	+0.1
	1.1nm,0.5s,baz=25,slow=5.8,SNR=5.1						
WRA	**Warramunga Arr**	**24.64**	**163**	P	P	07 10 56.0	-0.7
	1.5nm,0.6s,baz=343,slow=10,SNR=8.3						
ASAR	**Alice Springs**	**28.09**	**166**	P	P	07 11 28.1	+0.4
	0.4nm,0.9s,baz=344,slow=7.3,SNR=3.2						
STKA	**Stephens Creek**	**38.08**	**160**	P	P	07 12 54.8	+0.2
	1.6nm,0.7s,baz=340,slow=9.2,SNR=5.2						
PETK	**Petropavlovsk-**	**55.31**	**22**	P	P	07 15 10.1	+0.6
	2.1nm,0.8s,baz=151,slow=3.4,SNR=4.9						
MKAR	**Makanchi Array**	**57.66**	**325**	P	P	07 15 26.8	+0.4
	0.6nm,0.5s,baz=115,slow=9.4,SNR=6.9						
KURBB	**Kurchatov Arra**	**61.84**	**327**	P	P	07 15 54.9	-0.1
	0.7nm,0.5s,baz=128,slow=6.5,SNR=11						
BVAR	**Borovoye Array**	**67.42**	**327**	P	P	07 16 31.1	-0.3
	0.3nm,0.4s,baz=118,slow=8.6,SNR=4.1						
ILAR	**Eielson Array**	**84.97**	**25**	P	P	07 18 10.2	-0.9
	0.1nm,0.6s,baz=261,slow=5.4,SNR=4.5						

IDC 19 07:14:16.6±1.4, 2.97N×126.39E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/24, mbtmp3.9/6, Error ellipse: s-maj=104.8km s-min=18.2km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.96**	**182**	P	P	07 19 02.4	+1.1
	1.9nm,0.6s,baz=20,slow=7.7,SNR=11						
WRA	**Warramunga Arr**	**24.08**	**161**	P	P	07 19 33.4	-0.6
	1.5nm,0.3s,baz=338,slow=11,SNR=29						
ASAR	**Alice Springs**	**27.47**	**165**	P	P	07 20 05.3	+0.6
	0.8nm,0.4s,baz=342,slow=11,SNR=6.0						
STKA	**Stephens Creek**	**37.55**	**159**	P	P	07 21 32.3	-0.4
	1.3nm,0.5s,baz=344,slow=11,SNR=5.8						
MKAR	**Makanchi Array**	**57.38**	**326**	P	P	07 24 11.4	+0.3
	0.4nm,0.4s,baz=116,slow=8.4,SNR=6.7						
KURBB	**Kurchatov Arra**	**62.19**	**328**	P	P	07 24 39.2	-0.6
	0.5nm,0.6s,baz=124,slow=6.7,SNR=3.9						

IDC 19 07:15:24.1±1.6, 4.05N×126.62E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/25, mbtmp3.9/6, Error ellipse: s-maj=160.0km s-min=18.8km az=66.0, Talaud Islands

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mb1 3.9/4, mb1mx3.6/24, mbtmp3.8/4, MS3.0/1, Ms1 3.0/1, ms1mx2.8/37, Error ellipse: s-maj=128.8km s-min=22.6km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.40**	**208**	LR	LR	07 52 42.6	
	comp=Z,141nm,20.4s,baz=35,slow=40						
FITZ	**Fitzroy Crossi**	**18.86**	**172**	P	Pn	07 52 47.6	+0.6
	0.4nm,0.3s,baz=15,slow=9.7,SNR=12						
WRA	**Warramunga Arr**	**23.40**	**152**	P	P	07 53 35.6	+0.1
	2.6nm,0.9s,baz=326,slow=11,SNR=16						
ASAR	**Alice Springs**	**26.49**	**157**	P	P	07 54 03.2	-0.8
	0.4nm,0.5s,baz=344,slow=14,SNR=11						
MKAR	**Makanchi Array**	**57.94**	**328**	P	P	07 58 18.9	0.0
	0.7nm,0.6s,baz=123,slow=8.8,SNR=8.9						

IDC 19 07:54:38.5±1.4, 4.°07N×126.°61E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.7/25, mbtmp3.9/6, Error ellipse: s-maj=99.5km s-min=18.8km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.05**	**182**	P	P	07 59 35.0	0.0
	2.1nm,0.6s,baz=344,slow=7.4,SNR=5.9						
WRA	**Warramunga Arr**	**25.04**	**163**	P	P	08 00 03.9	-0.7
	5.8nm,0.8s,baz=343,slow=11,SNR=24						
ASAR	**Alice Springs**	**28.47**	**166**	P	P	08 00 35.5	0.0
	0.4nm,0.3s,baz=343,slow=12,SNR=12						
STKA	**Stephens Creek**	**38.49**	**159**	P	P	08 02 03.0	+0.5
	3.3nm,0.7s,baz=331,slow=5.5,SNR=5.0						
MKAR	**Makanchi Array**	**57.21**	**325**	P	P	08 04 27.5	0.0
	0.3nm,0.3s,baz=123,slow=7.6,SNR=4.1						
KURBB	**Kurchatov Arra**	**61.39**	**327**	P	P	08 04 56.4	0.0
	0.4nm,0.4s,baz=127,slow=5.9,SNR=11						

IDC 19 08:06:58.6±0.7, 4.°16N×126.°70E, h0km, mb4.0/16, mb1 4.1/16, mb1mx4.1/26, mbtmp4.0/16, 1C, Error ellipse: s-maj=36.6km s-min=13.2km az=73.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**3.90**	**321**	*i* P	Pb	08 08 06.3	-2.1
FITZ	**Fitzroy Crossi**	**22.14**	**183**	P	P	08 11 56.3	+0.2
	1.1nm,0.5s,baz=22,slow=11,SNR=5.4						
WRA	**Warramunga Arr**	**25.10**	**163**	P	P	08 12 25.4	+0.2
	5.5nm,0.7s,baz=344,slow=11,SNR=27						
ASAR	**Alice Springs**	**28.53**	**166**	P	P	08 12 56.2	0.0
	0.6nm,0.6s,baz=345,slow=6.8,SNR=11						
CMAR	**Chiang Mai Arr**	**30.63**	**300**	P	P	08 13 15.6	+0.7
	0.4nm,0.3s,baz=119,slow=5.4,SNR=3.6						
KSRS	**Korea Array**	**33.16**	**2**	P	P	08 13 36.6	-0.2
	0.7nm,0.5s,baz=180,slow=9.9,SNR=4.5						
STKA	**Stephens Creek**	**38.54**	**159**	P	P	08 14 22.8	-0.3
	3.9nm,0.7s,baz=334,slow=8.2,SNR=14						
USRK	**Ussuriysk Arra**	**40.15**	**6**	P	P	08 14 37.8	+1.5
	0.6nm,0.5s,baz=189,slow=10,SNR=4.3						
SONM	**Songino Array**	**46.89**	**341**	P	P	08 15 31.4	+0.5
	0.6nm,0.5s,baz=172,slow=9.2,SNR=3.9						
MKAR	**Makanchi Array**	**57.19**	**325**	P	P	08 16 47.9	+0.3
	0.8nm,0.4s,baz=118,slow=7.5,SNR=19						
ZALV	**Zalesovo Beam**	**60.20**	**333**	P	P	08 17 07.1	-1.2
	0.5nm,0.3s,baz=132,slow=4.4,SNR=5.2						
KURBB	**Kurchatov Arra**	**61.37**	**327**	P	P	08 17 15.7	-0.6
	0.5nm,0.4s,baz=128,slow=6.2,SNR=21						
ILAR	**Eielson Array**	**84.73**	**25**	P	P	08 19 34.0	-0.5
	0.7nm,0.9s,baz=244,slow=6.2,SNR=7.5						
ARCES	**ARCESS Array B**	**90.04**	**340**	P	P	08 19 58.3	-1.7
	5.0nm,0.9s,baz=78,slow=4.9,SNR=4.5						
FINES	**FINESS Array B**	**91.44**	**332**	P	P	08 20 06.7	0.0
	2.2nm,0.9s,baz=29,slow=4.8,SNR=4.8						
HFS	**Hagfors**	**97.63**	**332**	P	Pdif	08 20 35.8	+0.7
	1.7nm,0.9s,baz=122,slow=7.0,SNR=4.3						
YKA	**Yellowknife Ar**	**99.13**	**24**	P	Pdif	08 20 41.6	0.0
	0.1nm,0.7s,baz=296,slow=4.2,SNR=3.9						

*ISCJB **19** 08:13:03.7±0.5, 38.°15N±0.°02×37.°79E±0.°03, h3km±5km, Error ellipse: s-maj=4.6km s-min=3.5km az=39.6*
*CSEM **19** 08:13:03.8±0.2, 38.°19N×37.°79E, h10km, MD2.9, Error ellipse: s-maj=6.2km s-min=4.0km az=151.0*
*DDA **19** 08:13:03.4, 38.°13N×37.°84E, h7km, MD2.9*
*ISK **19** 08:13:03.0, 38.°17N×37.°77E, h9km, MD2.8*
ISC 19 08:13:03.8±0.9, 38.°16N±0.°03×37.°80E±0.°03, h11km±7km, n30, σ0s74/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.16**	**36**	*i* P	**Pg**	**08 13 07.6**	**0.0**
AKCD				*i* S	**Sg**	**08 13 10.9**	**+0.6**
AKCD	**Akcadag**	**0.16**	**36**	*i* P	**Pg**	**08 13 07.6**	**0.0**
AKCD				*i* S	**Sg**	**08 13 10.9**	**+0.6**
MALT	**Malatya**	**0.52**	**73**	*e*PG	**Pb**	**08 13 14.4**	**-0.6**
MALT				*e*SG	**Sb**	**08 13 22.2**	**-0.4**
MALT	**Malatya**	**0.52**	**73**	*e*Pg	**Pb**	**08 13 14.4**	**-0.6**
MALT				*e*Sg	**Sb**	**08 13 22.2**	**-0.4**
MYA	**Malataya**	**0.52**	**71**	*e*PG	**Pg**	**08 13 13.8**	**-0.2**
MYA				*e*SG	**Sb**	**08 13 21.6**	**-1.0**
MYA	**Malataya**	**0.52**	**71**	*e*Pg	**Pg**	**08 13 13.8**	**-0.2**
MYA				*e*Sg	**Sb**	**08 13 21.6**	**-1.0**
DARE	**Darende-Malaty**	**0.79**	**0**	*e*PG	Pg	08 13 11.6	-7.5
DARE				*e*SG	Sg	08 13 19.9	-9.5
DARE	**Darende-Malaty**	**0.79**	**0**	*e*Pg	Pg	08 13 11.6	-7.5
DARE				*e*Sg	Sg	08 13 19.9	-9.5
ATAB	**Bozova**	**0.80**	**150**	*i* P	**Pn**	**08 13 20.8**	**-0.3**
ATAB				*i* S	**Sb**	**08 13 32.1**	**+1.6**
ATAB	**Bozova**	**0.80**	**150**	*i* P	**Pn**	**08 13 20.8**	**-0.3**
ATAB				*i* S	**Sb**	**08 13 32.1**	**+1.6**
GZT	**Gaziantep**	**0.83**	**193**	*i* P	**Pg**	**08 13 19.3**	**-0.5**
GZT				*i* S	**Sg**	**08 13 30.3**	**-0.4**
KMRS	**Kahramanmaras**	**0.97**	**228**	*e*PG	**Pg**	**08 13 21.5**	**-1.0**
KMRS	**Kahramanmaras**	**0.97**	**228**	*e*Pg	**Pg**	**08 13 21.5**	**-1.0**
ELZG	**Elazig**	**0.99**	**70**	*i* P	**Pg**	**08 13 22.0**	**-0.9**
ELZG				*i* S	**Sb**	**08 13 36.0**	**-0.3**
ELZG	**Elazig**	**0.99**	**70**	*i* P	**Pg**	**08 13 22.0**	**-0.9**
ELZG				*i* S	**Sb**	**08 13 36.0**	**-0.3**
SARI	**SarD1z-Kayseri**	**1.01**	**301**	*e*PN	**Pn**	**08 13 24.2**	**0.0**
URFA	**Urfa**	**1.08**	**131**	*e*PN	**Pb**	**08 13 24.9**	**+0.2**
URFA	**Urfa**	**1.08**	**131**	*e*Pn	**Pb**	**08 13 24.9**	**+0.2**
GAZ	**Gaziantep**	**1.09**	**205**	*e*PN	**Pb**	**08 13 24.5**	**-0.4**
GAZ	**Gaziantep**	**1.09**	**205**	*e*Pn	**Pb**	**08 13 24.5**	**-0.4**
SVRC	**Sivrice-ELAZID**	**1.21**	**79**	*e*PN	**Pb**	**08 13 26.8**	**0.0**
SVRC	**Sivrice-ELAZID**	**1.21**	**79**	*e*Pn	**Pb**	**08 13 26.8**	**0.0**
PINB	**Pinarbasi**	**1.21**	**295**	*i* P	**Pn**	**08 13 26.8**	**-0.2**
PINB				*i* S	**Sn**	**08 13 44.8**	**+1.2**
PINB	**Pinarbasi**	**1.21**	**295**	*i* P	**Pn**	**08 13 26.8**	**-0.2**
PINB				*i* S	**Sn**	**08 13 44.8**	**+1.2**
KEMA	**Kemaliye**	**1.23**	**26**	*i* P	**Pb**	**08 13 26.8**	**-0.4**
KEMA				*i* S	**Sn**	**08 13 45.0**	**+1.2**
KEMA	**Kemaliye**	**1.23**	**26**	*i* P	**Pb**	**08 13 26.8**	**-0.4**
KEMA				*i* S	**Sn**	**08 13 45.0**	**+1.2**
ANDN	**Andirin**	**1.29**	**244**	*i* P	**Pn**	**08 13 28.1**	**+0.1**
ANDN				*i* S	**Sn**	**08 13 46.3**	**+1.0**
ANDN	**Andirin**	**1.29**	**244**	*i* P	**Pn**	**08 13 28.1**	**+0.1**
ANDN				*i* S	**Sn**	**08 13 46.3**	**+1.0**
KUZU	**Kuzuini**	**1.50**	**203**	*i* P	**Pg**	**08 13 32.5**	**-0.2**
KUZU				*i* S	**Sg**	**08 13 51.4**	**-0.8**
KUZU	**Kuzuini**	**1.50**	**203**	*i* P	**Pg**	**08 13 32.5**	**-0.2**
KUZU				*i* S	**Sg**	**08 13 51.4**	**-0.8**

IDC 19 08:14:09.9±1.2, 53.°62N×35.°26W, h0km, mb3.4/5, mb1 3.6/6, mb1mx3.4/32, mbtmp3.4/6, ML3.6/1, Error ellipse: s-maj=53.4km s-min=21.1km az=24.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKA	**Eskdalemuir Ar**	**18.65**	**72**	P	Pn	08 18 29.4	+0.2
	baz=282,slow=8.9,SNR=3.9						
ESDC	**Sonseca Array**	**25.37**	**111**	P	P	08 19 38.0	-0.6
	0.6nm,0.7s,baz=308,slow=7.2,SNR=4.1						
YKA	**Yellowknife Ar**	**40.31**	**315**	P	P	08 21 47.2	-1.2
	0.4nm,0.9s,baz=58,slow=9.4,SNR=6.6						
BRTR	**Keskin Array B**	**47.42**	**78**	P	P	08 22 46.4	+0.4
	0.4nm,0.6s,baz=298,slow=5.3,SNR=3.7						
PDAR	**Pinedale Array**	**48.54**	**289**	P	P	08 22 56.0	+1.1
	0.3nm,0.7s,baz=60,slow=8.8,SNR=3.7						
TORD	**Torodi Ar. Bea**	**49.82**	**130**	P	P	08 23 04.2	-0.3
	0.6nm,0.9s,baz=337,slow=6.6,SNR=3.5						
TXAR	**Lajitas Array**	**54.34**	**272**	P	P	08 23 43.2	+5.0
	0.5nm,0.9s,baz=52,slow=4.9,SNR=3.8						

*IDC **19** 08:18:15.9±0.8, 53.°46N×35.°32W, h0km, mb3.9/17, mb1 4.0/19, mb1mx3.9/35, mbtmp3.9/19, ML3.1/2, MS4.0/1, Ms1 4.0/1, ms1mx3.3/22, Error ellipse: s-maj=26.1km s-min=12.5km az=15.0*
*ISCJB **19** 08:18:16.8±0.4, 53.°56N±0.°08×35.°26W±0.°08, h16km, mb4.2/46, MS4.1/1, Error ellipse: s-maj=12.6km s-min=5.3km az=19.7*
*CSEM **19** 08:18:17.2±0.1, 53.°53N×35.°27W, h10km, mb4.5/28, Error ellipse: s-maj=9.6km s-min=3.9km az=17.0*
*NEIC **19** 08:18:17.4±0.3, 53.°51N×35.°28W, h10km, mb4.8/31, Error ellipse: s-maj=9.4km s-min=3.8km az=200.0*
ISC 19 08:18:18.3±0.6, 53.°5N±0.°1×35.°27W±0.°07, h16km, n177, σ0s67/165, mb4.3/46, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	**Kangerlussuaq**	**15.42**	**337**	*e*P	**Pn**	**08 21 53.7**	**-1.2**
	18nm,1.0s						
SCHQ	**Schefferville**	**18.44**	**287**	P	**Pn**	**08 22 32.1**	**-0.9**
SCHQ	**Schefferville**	**18.44**	**287**	P	**Pn**	**08 22 32.1**	**-0.9**
	0.4nm,0.3s,baz=104,slow=9.2,SNR=7.8						
SCHQ	**Schefferville**	**18.44**	**287**	P	**Pn**	**08 22 32.1**	**-0.9**
EKA	**Eskdalemuir Ar**	**18.68**	**72**	P	**Pn**	**08 22 35.6**	**-0.2**
EKA	**Eskdalemuir Ar**	**18.68**	**72**	P	**Pn**	**08 22 35.6**	**-0.2**
	baz=283,slow=9.3,SNR=6.6						
EKA	**Eskdalemuir Ar**	**18.68**	**72**	P	**Pn**	**08 22 35.6**	**-0.2**
SUMG	**Summit**	**19.16**	**357**	*e*P	**Pn**	**08 22 41.0**	**-1.0**
	8.5nm,1.1s						
SUMG	**Summit**	**19.16**	**357**	*e*P	**Pn**	**08 22 41.0**	**-1.0**
	8.5nm,1.1s						
ROSF	**Rostrenen**	**20.71**	**92**	*e*P	Pn	08 22 58.3	-1.8
	58nm,1.3s						
ROSF	**Rostrenen**	**20.71**	**92**	*e*P	Pn	08 22 58.3	-1.8
	58nm,1.3s						
ROSF	**Rostrenen**	**20.71**	**92**	*e*P	Pn	08 22 58.3	-1.8
	29nm,1.3s						
QUIF	**Quistinic**	**20.97**	**92**	*e*P	Pn	08 23 00.8	-2.3
	45nm,1.1s						
QUIF	**Quistinic**	**20.97**	**92**	*e*P	Pn	08 23 00.8	-2.3
	45nm,1.1s						
QUIF	**Quistinic**	**20.97**	**92**	*e*P	Pn	08 23 00.8	-2.3
	22nm,1.1s						
SGMF	**Saint Gilles**	**21.18**	**91**	*e*P	**P**	**08 23 02.6**	**-0.1**
	55nm,1.3s						
SGMF	**Saint Gilles**	**21.18**	**91**	*e*P	**P**	**08 23 02.6**	**-0.1**
	55nm,1.3s						
SGMF	**Saint Gilles**	**21.18**	**91**	*e*P	**P**	**08 23 02.6**	**-0.1**
	28nm,1.3s						
GRR	**Gorron**	**22.13**	**89**	*e*P	**P**	**08 23 13.4**	**+0.5**
GRR	**Gorron**	**22.13**	**89**	*e*P	**P**	**08 23 13.4**	**+0.5**
GRR	**Gorron**	**22.13**	**89**	*e*P	**P**	**08 23 13.4**	**+0.5**
FLN	**La Foliniere**	**22.19**	**88**	*e*P	**P**	**08 23 12.9**	**-0.7**
FLN	**La Foliniere**	**22.19**	**88**	*e*P	**P**	**08 23 12.9**	**-0.7**
FLN	**La Foliniere**	**22.19**	**88**	*e*P	**P**	**08 23 12.9**	**-0.7**
MFF	**Saint Martin d**	**23.41**	**93**	*e*P	**P**	**08 23 26.4**	**+0.1**
	71nm,1.7s						
MFF	**Saint Martin d**	**23.41**	**93**	*e*P	**P**	**08 23 26.4**	**+0.1**
	71nm,1.7s						
MFF	**Saint Martin d**	**23.41**	**93**	*e*P	**P**	**08 23 26.4**	**+0.1**
	36nm,1.7s						
EVOP	**Sao Brissos**	**23.89**	**118**	*e*P	**P**	**08 23 30.4**	**-0.7**
EVOP	**Sao Brissos**	**23.89**	**118**	*e*P	**P**	**08 23 30.4**	**-0.7**
EVO	**Evora**	**23.95**	**118**	*e*P	**P**	**08 23 30.4**	**-1.2**
BAIF	**Baives**	**24.44**	**82**	*e*P	**P**	**08 23 36.5**	**+0.5**
	23nm,1.1s						
BAIF	**Baives**	**24.44**	**82**	*e*P	**P**	**08 23 36.5**	**+0.5**
	23nm,1.1s						
BAIF	**Baives**	**24.44**	**82**	*e*P	**P**	**08 23 36.5**	**+0.5**
	12nm,1.1s						
SJPF	**Ste Jean**	**24.70**	**101**	*e*P	**P**	**08 23 38.2**	**-0.2**
SJPF	**Ste Jean**	**24.70**	**101**	*e*P	**P**	**08 23 38.2**	**-0.2**
SJPF	**Ste Jean**	**24.70**	**101**	*e*P	**P**	**08 23 38.2**	**-0.2**
GIVF	**Givet**	**24.79**	**82**	*e*P	**P**	**08 23 39.2**	**0.0**
GIVF	**Givet**	**24.79**	**82**	*e*P	**P**	**08 23 39.2**	**0.0**
GIVF	**Givet**	**24.79**	**82**	*e*P	**P**	**08 23 39.2**	**0.0**
TCF	**Toulx Ste Croi**	**24.97**	**92**	*e*P	**P**	**08 23 41.3**	**+0.4**
	70nm,1.7s						
TCF	**Toulx Ste Croi**	**24.97**	**92**	*e*P	**P**	**08 23 41.3**	**+0.4**
	70nm,1.7s						
TCF	**Toulx Ste Croi**	**24.97**	**92**	*e*P	**P**	**08 23 41.3**	**+0.4**
	35nm,1.7s						
RJF	**Les Rejaudoux**	**25.07**	**94**	*e*P	**P**	**08 23 41.3**	**-0.5**
	75nm,1.8s						
RJF	**Les Rejaudoux**	**25.07**	**94**	*e*P	**P**	**08 23 41.3**	**-0.5**
	75nm,1.8s						
RJF	**Les Rejaudoux**	**25.07**	**94**	*e*P	**P**	**08 23 41.3**	**-0.5**
	38nm,1.8s						
BGF	**Bois d'Agland**	**25.21**	**90**	*e*P	**P**	**08 23 43.5**	**+0.4**
	96nm,1.3s						
BGF	**Bois d'Agland**	**25.21**	**90**	*e*P	**P**	**08 23 43.5**	**+0.4**
	96nm,1.3s						
BGF	**Bois d'Agland**	**25.21**	**90**	*e*P	**P**	**08 23 43.5**	**+0.4**
	48nm,1.3s						
ETSF	**Etsaut**	**25.21**	**101**	*e*P	**P**	**08 23 44.6**	**+1.4**
	26nm,1.4s						
ETSF	**Etsaut**	**25.21**	**101**	*e*P	**P**	**08 23 44.6**	**+1.4**
	26nm,1.4s						
ETSF	**Etsaut**	**25.21**	**101**	*e*P	**P**	**08 23 44.6**	**+1.4**
	13nm,1.4s						
ESDC	**Sonseca Array**	**25.34**	**110**	P	**P**	**08 23 44.3**	**-0.1**
ESDC	**Sonseca Array**	**25.34**	**110**	P	**P**	**08 23 44.3**	**-0.1**
	4.2nm,0.9s,baz=313,slow=8.8,SNR=15						
ESDC	**Sonseca Array**	**25.34**	**110**	P	**P**	**08 23 44.3**	**-0.1**
ESLA	**Sonseca Array**	**25.34**	**110**	*e*P	**P**	**08 23 44.3**	**0.0**
	4.1nm,1.2s						
ESLA	**Sonseca Array**	**25.34**	**110**	*e*P	**P**	**08 23 44.3**	**0.0**
	4.1nm,1.2s						
SSF	**Saint Saulge**	**25.36**	**89**	*e*P	**P**	**08 23 43.9**	**-0.4**
	39nm,1.2s						
SSF	**Saint Saulge**	**25.36**	**89**	*e*P	**P**	**08 23 43.9**	**-0.4**
	39nm,1.2s						
SSF	**Saint Saulge**	**25.36**	**89**	*e*P	**P**	**08 23 43.9**	**-0.4**
	19nm,1.2s						
AVF	**Avril sur Loir**	**25.40**	**90**	*e*P	**P**	**08 23 43.9**	**-0.8**
	59nm,1.4s						
AVF	**Avril sur Loir**	**25.40**	**90**	*e*P	**P**	**08 23 43.9**	**-0.8**
	59nm,1.4s						
AVF	**Avril sur Loir**	**25.40**	**90**	*e*P	**P**	**08 23 43.9**	**-0.8**
	30nm,1.4s						
LOR	**Lormes**	**25.47**	**88**	*e*P	**P**	**08 23 45.2**	**-0.2**
	40nm,1.1s						
LOR	**Lormes**	**25.47**	**88**	*e*P	**P**	**08 23 45.2**	**-0.2**
	40nm,1.1s						
LOR	**Lormes**	**25.47**	**88**	*e*P	**P**	**08 23 45.2**	**-0.2**
	20nm,1.1s						
CAF	**Calviac**	**25.60**	**94**	*e*P	**P**	**08 23 45.9**	**-0.7**
	61nm,1.7s						
CAF	**Calviac**	**25.60**	**94**	*e*P	**P**	**08 23 45.9**	**-0.7**
	61nm,1.7s						
CAF	**Calviac**	**25.60**	**94**	*e*P	**P**	**08 23 45.9**	**-0.7**
	30nm,1.7s						
MEZF	**Maizieres J'vi**	**25.60**	**85**	*e*P	**P**	**08 23 46.9**	**+0.3**
	38nm,1.0s						
MEZF	**Maizieres J'vi**	**25.60**	**85**	*e*P	**P**	**08 23 46.9**	**+0.3**
	38nm,1.0s						
MEZF	**Maizieres J'vi**	**25.60**	**85**	*e*P	**P**	**08 23 46.9**	**+0.3**
	19nm,1.0s						
NB2	**NORSAR Subarra**	**25.72**	**54**	P	**P**	**08 23 47.4**	**-0.2**
	comp=Z,10nm,1.7s,baz=278,slow=9.3						
NB2	**NORSAR Subarra**	**25.72**	**54**	P	**P**	**08 23 47.4**	**-0.2**
	comp=Z,10nm,1.7s,SNR=5.1						
NOA	**NORSAR Array B**	**25.72**	**54**	P	**P**	**08 23 47.9**	**+0.3**
NOA	**NORSAR Array B**	**25.72**	**54**	P	**P**	**08 23 47.9**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=276,slow=10,SNR=4.6						
NOA	**NORSAR Array B**	**25.72**	**54**	P	**P**	**08 23 47.9**	**+0.3**
SFTF	**Sexfontaines**	**25.73**	**85**	*e*P	**P**	**08 23 48.0**	**+0.3**
	comp=Z,40nm,1.1s						
SFTF	**Sexfontaines**	**25.73**	**85**	*e*P	**P**	**08 23 48.0**	**+0.3**
	comp=Z,40nm,1.1s						
SFTF	**Sexfontaines**	**25.73**	**85**	*e*P	**P**	**08 23 48.0**	**+0.3**
	comp=Z,20nm,1.1s						
SMF	**Signal de Mont**	**25.76**	**90**	*e*P	**P**	**08 23 47.6**	**-0.5**
	comp=Z,10nm,0.8s						
SMF	**Signal de Mont**	**25.76**	**90**	*e*P	**P**	**08 23 47.6**	**-0.5**
	comp=Z,10nm,0.8s						
SMF	**Signal de Mont**	**25.76**	**90**	*e*P	**P**	**08 23 47.6**	**-0.5**
	comp=Z,5.2nm,0.8s						
PAGF	**Fort de Pagny**	**25.98**	**84**	*e*P	**P**	**08 23 49.1**	**-0.9**
	comp=Z,5.2nm,1.1s						
PAGF	**Fort de Pagny**	**25.98**	**84**	*e*P	**P**	**08 23 49.1**	**-0.9**
	comp=Z,5.2nm,1.1s						
PAGF	**Fort de Pagny**	**25.98**	**84**	*e*P	**P**	**08 23 49.1**	**-0.9**
	comp=Z,2.6nm,1.1s						
MTLF	**Montolieu**	**26.59**	**97**	*e*P	**P**	**08 23 55.5**	**0.0**
	comp=Z,20nm,1.4s						
MTLF	**Montolieu**	**26.59**	**97**	*e*P	**P**	**08 23 55.5**	**0.0**
	comp=Z,10nm,1.4s						
HAU	**Haudompre**	**26.60**	**85**	*e*P	**P**	**08 23 55.7**	**+0.1**
	comp=Z,41nm,1.2s						
HAU	**Haudompre**	**26.60**	**85**	*e*P	**P**	**08 23 55.7**	**+0.1**
	comp=Z,41nm,1.3s						
HAU	**Haudompre**	**26.60**	**85**	*e*P	**P**	**08 23 55.7**	**+0.1**
	comp=Z,20nm,1.2s						
CDF	**Champ du Feu**	**26.96**	**84**	*e*P	**P**	**08 23 57.7**	**-1.3**
	comp=Z,16nm,1.2s						
CDF	**Champ du Feu**	**26.96**	**84**	*e*P	**P**	**08 23 57.7**	**-1.3**
	comp=Z,16nm,1.2s						
CDF	**Champ du Feu**	**26.96**	**84**	*e*P	**P**	**08 23 57.7**	**-1.3**
	comp=Z,7.8nm,1.2s						
HINF	**Hinteralfeld**	**26.99**	**85**	*e*P	**P**	**08 23 59.2**	**0.0**
HINF	**Hinteralfeld**	**26.99**	**85**	*e*P	**P**	**08 23 59.2**	**0.0**
HINF	**Hinteralfeld**	**26.99**	**85**	*e*P	**P**	**08 23 59.2**	**0.0**
CABF	**La Chapelle**	**27.12**	**88**	*e*P	**P**	**08 24 00.8**	**+0.4**
CABF	**La Chapelle**	**27.12**	**88**	*e*P	**P**	**08 24 00.8**	**+0.4**
CABF	**La Chapelle**	**27.12**	**88**	*e*P	**P**	**08 24 00.8**	**+0.4**
LASF	**Ste Croix**	**27.14**	**94**	*e*P	**P**	**08 24 01.0**	**+0.5**
	comp=Z,43nm,1.6s						
LASF	**Ste Croix**	**27.14**	**94**	*e*P	**P**	**08 24 01.0**	**+0.5**
	comp=Z,43nm,1.6s						
LASF	**Ste Croix**	**27.14**	**94**	*e*P	**P**	**08 24 01.0**	**+0.5**
	comp=Z,22nm,1.6s						
ORIF	**Oris-en-Rattie**	**27.88**	**91**	*e*P	**P**	**08 24 07.5**	**+0.3**
ORIF	**Oris-en-Rattie**	**27.88**	**91**	*e*P	**P**	**08 24 07.5**	**+0.3**
ORIF	**Oris-en-Rattie**	**27.88**	**91**	*e*P	**P**	**08 24 07.5**	**+0.3**
CLL	**Collm**	**29.08**	**75**	*i* P	**P**	**08 24 17.5**	**-0.2**
	comp=Z,13nm,1.4s						
CLL				*i* sP	**sP**	**08 24 22.2**	**-2.4**
	comp=Z,7.0nm,0.9s						
BRG	**Berggiesshubel**	**29.80**	**75**	*e*P	**P**	**08 24 24.3**	**+0.2**
	comp=Z,4.8nm,1.1s						
BRG				*e*		08 26 14.7	
	comp=Z,26nm,1.9s						
BRG							
	comp=N,376nm,16.0s						
BRG							
	comp=E,566nm,15.5s						
BRG							
	comp=Z,893nm,13.1s						
GERES	**GERESS Array B**	**30.55**	**79**	P	**P**	**08 24 31.7**	**+0.8**
GERES	**GERESS Array B**	**30.55**	**79**	P	**P**	**08 24 31.7**	**+0.8**
	comp=Z,1.4nm,1.0s,baz=297,slow=8.8,SNR=7.4						
GERES	**GERESS Array B**	**30.55**	**79**	P	**P**	**08 24 31.7**	**+0.8**
RES	**Resolute Bay**	**31.39**	**334**	P	**P**	**08 24 38.9**	**+1.1**
	comp=Z,2.2nm,1.4s						
RES	**Resolute Bay**	**31.39**	**334**	P	**P**	**08 24 38.9**	**+1.1**
	comp=Z,2.4nm,0.9s,baz=70,slow=3.6,SNR=6.1						
RES	**Resolute Bay**	**31.39**	**334**	P	**P**	**08 24 38.9**	**+1.1**
	comp=Z,2.2nm,1.4s						
FINES	**FINESS Array B**	**32.74**	**51**	P	**P**	**08 24 49.9**	**0.0**
FINES	**FINESS Array B**	**32.74**	**51**	P	**P**	**08 24 49.9**	**0.0**
	comp=Z,3.8nm,0.9s,baz=284,slow=7.7,SNR=5.3						
FINES	**FINESS Array B**	**32.74**	**51**	P	**P**	**08 24 49.8**	**0.0**
VYHS	**Vyhne**	**33.71**	**76**	*e*P	**P**	**08 24 58.8**	**+0.3**
CRVS	**Cervenica-Dubn**	**35.02**	**74**	*e*P	**P**	**08 25 10.2**	**+0.3**
KOLS	**Kolonicke sedl**	**35.47**	**74**	*e*P	P	08 25 19.5	+5.8
KEST	**Kesra**	**35.69**	**102**	P	**P**	**08 25 16.0**	**+0.2**
KEST	**Kesra**	**35.69**	**102**	P	**P**	**08 25 16.0**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=358,slow=4.9,SNR=4.1						
KEST	**Kesra**	**35.69**	**102**	P	**P**	**08 25 16.0**	**+0.2**
AKASG	**Malin Array Be**	**38.50**	**67**	P	**P**	**08 25 39.0**	**-0.4**
AKASG	**Malin Array Be**	**38.50**	**67**	P	**P**	**08 25 39.0**	**-0.4**
	comp=Z,

*CSEM **19** 08:19:20.7±0.1,53˚.47N×35˚.32W,h10km,mb4.7/38, Mw5.0,Error ellipse: s-maj=8.5km s-min=3.2km az=7.0*
*ISCJB **19** 08:19:20.1±0.2,53˚.48N±0˚.07×35˚.33W±0˚.05,h16km, mb4.3/64,MS4.2/1,Error ellipse: s-maj=9.5km s-min=3.9km az=9.0*
*NEIC **19** 08:19:20.9±0.3,53˚.46N×35˚.33W,h10km,mb4.7/24,Error ellipse: s-maj=8.3km s-min=5.1km az=179.0*
*BJI **19** 08:19:42.0,53˚.60N×39˚.60W,h10km,mB5.2/11,mb5.0/16, Ms5.1/13,Ms7 4.8/13*

ISC 19 08:19:21.5±0.4,53˚.46N±0˚.09×35˚.28W±0˚.06,h16km,n194, σ1°16/185,**mb4.6**/72,**MS4.7**/10,**Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**13.35**	**27**	LR	LR	08 26 44.2	
	comp=Z,388nm,18.2s,baz=116,slow=33						
SFJD	**Kangerlussuaq**	**15.49**	**337**	*e*P	**Pn**	**08 22 57.6**	**-1.4**
	43nm,1.1s						
SFJD	**Kangerlussuaq**	**15.49**	**337**	Pn	**Pn**	**08 22 57.7**	**-1.4**
	0.2nm,0.3s,baz=166,slow=14,SNR=1.8						
SFJD				LR	LR	08 27 45.9	
	comp=Z,1μm,20.7s,baz=151,slow=33						
SCHQ	**Schefferville**	**18.46**	**287**	P	**P**	**08 23 35.8**	**-0.5**
	2.1nm,0.8s						
SCHQ	**Schefferville**	**18.46**	**287**	P	**P**	**08 23 35.8**	**-0.5**
	0.5nm,0.3s,baz=92,slow=10,SNR=8.7						
SCHQ	**Schefferville**	**18.46**	**287**	P	**P**	**08 23 35.8**	**-0.5**
	2.1nm,0.8s						
EKA	**Eskdalemuir Ar**	**18.71**	**71**	P	**Pn**	**08 23 39.9**	**+0.5**
	baz=277,slow=8.1,SNR=1.8						
SUMG	**Summit**	**19.24**	**357**	P	**P**	**08 23 45.4**	**+0.3**
	84nm,1.8s						
SUMG	**Summit**	**19.24**	**357**	P	**P**	**08 23 45.4**	**+0.3**
	84nm,1.8s						
FRB	**Frobisher Bay**	**19.91**	**314**	P	**P**	**08 23 52.4**	**+0.4**
FRB	**Frobisher Bay**	**19.91**	**314**	P	**P**	**08 23 52.4**	**+0.4**
	0.1nm,0.3s,baz=130,slow=11,SNR=2.1						
FRB	**Frobisher Bay**	**19.91**	**314**	P	**P**	**08 23 52.4**	**+0.4**
ROSF	**Rostrenen**	**20.72**	**91**	*e*P	**P**	**08 24 01.4**	**+0.5**
	106nm,1.6s						
ROSF	**Rostrenen**	**20.72**	**91**	*e*P	**P**	**08 24 01.4**	**+0.5**
	53nm,1.6s						
QUIF	**Quistinic**	**20.97**	**92**	*e*P	Pn	08 24 05.1	-1.2
	153nm,1.6s						
QUIF	**Quistinic**	**20.97**	**92**	*e*P	Pn	08 24 05.1	-1.2
	76nm,1.6s						
SGMF	**Saint Gilles**	**21.18**	**91**	*e*P	**P**	**08 24 06.0**	**0.0**
	70nm,1.1s						
SGMF	**Saint Gilles**	**21.18**	**91**	*e*P	**P**	**08 24 06.0**	**0.0**
	35nm,1.1s						
JMIC	**Jan Mayen**	**21.21**	**24**	LR	LR	08 30 08.9	
	comp=Z,926nm,19.1s,baz=225,slow=31						
GRR	**Gorron**	**22.14**	**89**	*e*P	**P**	**08 24 17.0**	**+0.8**
GRR	**Gorron**	**22.14**	**89**	*e*P	**P**	**08 24 17.0**	**+0.8**
FLN	**La Foliniere**	**22.20**	**88**	*e*P	**P**	**08 24 18.0**	**+1.1**
	115nm,1.6s						
FLN	**La Foliniere**	**22.20**	**88**	*e*P	**P**	**08 24 18.0**	**+1.1**
	58nm,1.6s						
EMMW	**East Machias**	**22.65**	**260**	*e*P	**P**	**08 24 20.7**	**-1.0**
	334nm,1.6s						
EMMW	**East Machias**	**22.65**	**260**	*e*P	**P**	**08 24 20.7**	**-1.0**
	334nm,1.6s						
MFF	**Saint Martin d**	**23.41**	**93**	*e*P	**P**	**08 24 30.8**	**+1.3**
MFF	**Saint Martin d**	**23.41**	**93**	*e*P	**P**	**08 24 30.8**	**+1.3**
EVOP	**Sao Brissos**	**23.86**	**118**	*e*P	**P**	**08 24 33.0**	**-1.0**
	50nm,1.8s						
EVO	**Evora**	**23.92**	**118**	*e*P	**P**	**08 24 33.0**	**-1.5**
	101nm,1.8s						
BAIF	**Baives**	**24.46**	**82**	*e*P	**P**	**08 24 40.1**	**+0.7**
	31nm,1.2s						
BAIF	**Baives**	**24.46**	**82**	*e*P	**P**	**08 24 40.1**	**+0.7**
	16nm,1.2s						
SJPF	**Ste Jean**	**24.68**	**101**	*e*P	**P**	**08 24 42.9**	**+1.4**
SJPF	**Ste Jean**	**24.68**	**101**	*e*P	**P**	**08 24 42.9**	**+1.4**
GIVF	**Givet**	**24.80**	**81**	*e*P	**P**	**08 24 42.4**	**-0.1**
GIVF	**Givet**	**24.80**	**81**	*e*P	**P**	**08 24 42.4**	**-0.1**
LFF	**La Frestale**	**24.80**	**95**	*e*P	**P**	**08 24 44.0**	**+1.4**
LFF	**La Frestale**	**24.80**	**95**	*e*P	**P**	**08 24 44.0**	**+1.4**
LFF	**La Frestale**	**24.80**	**95**	*e*P	**P**	**08 24 44.0**	**+1.4**
TCF	**Toulx Ste Croi**	**24.97**	**91**	*e*P	**P**	**08 24 44.0**	**-0.1**
	41nm,1.2s						
TCF	**Toulx Ste Croi**	**24.97**	**91**	*e*P	**P**	**08 24 44.0**	**-0.1**
	20nm,1.2s						
RJF	**Les Rejaudoux**	**25.07**	**94**	*e*P	**P**	**08 24 45.7**	**+0.7**
	84nm,1.8s						
RJF	**Les Rejaudoux**	**25.07**	**94**	*e*P	**P**	**08 24 45.7**	**+0.7**
	42nm,1.8s						
BGF	**Bois d'Agland**	**25.22**	**90**	*e*P	**P**	**08 24 46.8**	**+0.5**
BGF	**Bois d'Agland**	**25.22**	**90**	*e*P	**P**	**08 24 46.8**	**+0.5**
SSF	**Saint Saulge**	**25.36**	**89**	*e*P	**P**	**08 24 48.0**	**+0.4**
	98nm,1.6s						
SSF	**Saint Saulge**	**25.36**	**89**	*e*P	**P**	**08 24 48.0**	**+0.4**
	49nm,1.6s						
AVF	**Avril sur Loir**	**25.40**	**89**	*e*P	**P**	**08 24 48.3**	**+0.3**
	39nm,1.1s						
AVF	**Avril sur Loir**	**25.40**	**89**	*e*P	**P**	**08 24 48.3**	**+0.3**
	19nm,1.1s						
LOR	**Lormes**	**25.47**	**88**	*e*P	**P**	**08 24 48.9**	**+0.3**
	72nm,1.5s						
LOR	**Lormes**	**25.47**	**88**	*e*P	**P**	**08 24 48.9**	**+0.3**
	36nm,1.5s						
CAF	**Calviac**	**25.60**	**94**	*e*P	**P**	**08 24 50.5**	**+0.7**
	68nm,1.7s						
CAF	**Calviac**	**25.60**	**94**	*e*P	**P**	**08 24 50.5**	**+0.7**
	34nm,1.7s						
MEZF	**Maizieres J'vi**	**25.61**	**85**	*e*P	**P**	**08 24 50.4**	**+0.5**
	98nm,1.5s						
MEZF	**Maizieres J'vi**	**25.61**	**85**	*e*P	**P**	**08 24 50.4**	**+0.5**
	49nm,1.5s						
EPF	**Esparros**	**25.66**	**99**	*e*P	**P**	**08 24 51.9**	**+1.5**
EPF	**Esparros**	**25.66**	**99**	*e*P	**P**	**08 24 51.9**	**+1.5**
EPF	**Esparros**	**25.66**	**99**	*e*P	**P**	**08 24 51.9**	**+1.5**
SFTF	**Sexfontaines**	**25.74**	**85**	*e*P	**P**	**08 24 51.5**	**+0.5**
	31nm,0.9s						
SFTF	**Sexfontaines**	**25.74**	**85**	*e*P	**P**	**08 24 51.5**	**+0.5**
	15nm,0.9s						
SMF	**Signal de Mont**	**25.77**	**89**	*e*P	**P**	**08 24 51.7**	**+0.4**
	41nm,1.2s						
SMF	**Signal de Mont**	**25.77**	**89**	*e*P	**P**	**08 24 51.7**	**+0.4**
	20nm,1.2s						
NOA	**NORSAR Array B**	**25.77**	**54**	P	**P**	**08 24 51.0**	**-0.2**
NOA	**NORSAR Array B**	**25.77**	**54**	P	**P**	**08 24 51.0**	**-0.2**
	2.6nm,1.0s,baz=274,slow=9.1,SNR=4.4						
NOA	**NORSAR Array B**	**25.77**	**54**	P	**P**	**08 24 51.0**	**-0.2**
PAGF	**Fort de Pagny**	**25.99**	**84**	*e*P	**P**	**08 24 52.4**	**-0.9**
	26nm,1.6s						
PAGF	**Fort de Pagny**	**25.99**	**84**	*e*P	**P**	**08 24 52.4**	**-0.9**
	13nm,1.6s						
MTLF	**Montolieu**	**26.58**	**97**	*e*P	**P**	**08 24 59.7**	**+1.0**
	31nm,1.4s						
MTLF	**Montolieu**	**26.58**	**97**	*e*P	**P**	**08 24 59.7**	**+1.0**
	16nm,1.4s						
HAU	**Haudompre**	**26.61**	**85**	*e*P	**P**	**08 24 59.6**	**+0.6**
	18nm,1.0s						
HAU	**Haudompre**	**26.61**	**85**	*e*P	**P**	**08 24 59.6**	**+0.6**
	9.1nm,1.0s						
CDF	**Champ du Feu**	**26.98**	**83**	*e*P	**P**	**08 25 01.6**	**-0.7**
CDF	**Champ du Feu**	**26.98**	**83**	*e*P	**P**	**08 25 01.6**	**-0.7**
HINF	**Hinteralfeld**	**27.00**	**85**	*e*P	**P**	**08 25 03.3**	**+0.8**
HINF	**Hinteralfeld**	**27.00**	**85**	*e*P	**P**	**08 25 03.3**	**+0.8**
LASF	**Ste Croix**	**27.14**	**94**	*e*P	**P**	**08 25 04.9**	**+1.2**
	35nm,1.5s						
LASF	**Ste Croix**	**27.14**	**94**	*e*P	**P**	**08 25 04.9**	**+1.2**
	17nm,1.5s						
VIVF	**Saint-Julien-l**	**27.20**	**92**	*e*P	**P**	**08 25 05.8**	**+1.6**
	61nm,1.8s						
VIVF	**Saint-Julien-l**	**27.20**	**92**	*e*P	**P**	**08 25 05.8**	**+1.6**
	61nm,1.8s						
VIVF	**Saint-Julien-l**	**27.20**	**92**	*e*P	**P**	**08 25 05.8**	**+1.6**
	31nm,1.8s						
ORIF	**Oris-en-Rattie**	**27.88**	**91**	*e*P	**P**	**08 25 11.6**	**+1.1**
	79nm,1.8s						
ORIF	**Oris-en-Rattie**	**27.88**	**91**	*e*P	**P**	**08 25 11.6**	**+1.1**
	40nm,1.8s						
CLL	**Collm**	**29.11**	**74**	*e*P	**P**	**08 25 21.0**	**-0.1**
SADO	**Sadowa**	**29.58**	**271**	P	**P**	**08 25 25.5**	**+0.1**
SADO	**Sadowa**	**29.58**	**271**	P	**P**	**08 25 25.5**	**+0.1**
	2.3nm,0.5s,baz=333,slow=6.8,SNR=2.7						
SADO	**Sadowa**	**29.58**	**271**	P	**P**	**08 25 25.5**	**+0.1**
GERES	**GERESS Array B**	**30.57**	**79**	P	**P**	**08 25 34.2**	**0.0**
	2.0nm,1.0s,baz=325,slow=8.4,SNR=5.9						
RES	**Resolute Bay**	**31.45**	**334**	P	**P**	**08 25 42.2**	**+0.6**
RES	**Resolute Bay**	**31.45**	**334**	P	**P**	**08 25 42.2**	**+0.6**
	2.5nm,1.0s,baz=102,slow=12,SNR=2.7						
RES	**Resolute Bay**	**31.45**	**334**	P	**P**	**08 25 42.2**	**+0.6**
FINES	**FINESS Array B**	**32.79**	**51**	P	**P**	**08 25 52.9**	**-0.6**
FINES	**FINESS Array B**	**32.79**	**51**	P	**P**	**08 25 52.9**	**-0.6**
	1.4nm,0.7s,baz=274,slow=6.8,SNR=3.5						
FINES	**FINESS Array B**	**32.79**	**51**	P	**P**	**08 25 52.9**	**-0.6**
ACSO	**Alum Creek Sta**	**34.54**	**267**	*e*P	P	08 26 14.7	+5.7
	14nm,1.0s						
KEST	**Kesra**	**35.68**	**102**	P	**P**	**08 26 18.0**	**-0.9**
	1.4nm,0.8s,baz=350,slow=11,SNR=2.7						
ULM	**Lac du Bonnet**	**36.58**	**290**	P	**P**	**08 26 25.4**	**-1.0**
ULM	**Lac du Bonnet**	**36.58**	**290**	P	**P**	**08 26 25.4**	**-1.0**
	1.5nm,0.4s,baz=42,slow=2.7,SNR=3.0						
ULM	**Lac du Bonnet**	**36.58**	**290**	P	**P**	**08 26 25.4**	**-1.0**
WCI	**Wyandotte Cave**	**37.80**	**267**	*e*P	**P**	**08 26 37.4**	**+0.5**
	8.4nm,0.9s						
WCI	**Wyandotte Cave**	**37.80**	**267**	*e*P	**P**	**08 26 37.4**	**+0.5**
	8.4nm,0.9s						
AKASG	**Malin Array Be**	**38.53**	**67**	P	**P**	**08 26 41.9**	**-1.0**
AKASG	**Malin Array Be**	**38.53**	**67**	P	**P**	**08 26 41.9**	**-1.0**
	0.4nm,0.4s,baz=307,slow=7.7,SNR=6.6						
AKASG	**Malin Array Be**	**38.53**	**67**	P	**P**	**08 26 41.9**	**-1.0**
SIUC	**Southern Illin**	**39.88**	**269**	*e*P	**P**	**08 26 54.1**	**-0.1**
	19nm,0.9s						
SIUC	**Southern Illin**	**39.88**	**269**	*e*P	**P**	**08 26 54.1**	**-0.1**
	19nm,0.9s						
WVT	**Waverly**	**40.10**	**266**	*e*P	**P**	**08 26 55.6**	**-0.5**
	3.7nm,0.8s						
WVT	**Waverly**	**40.10**	**266**	*e*P	**P**	**08 26 55.7**	**-0.5**
	3.7nm,0.8s						
YKA	**Yellowknife Ar**	**40.42**	**315**	P	**P**	**08 26 57.8**	**-0.6**
YKA	**Yellowknife Ar**	**40.42**	**315**	P	**P**	**08 26 57.8**	**-0.6**
	0.6nm,0.8s,baz=64,slow=9.3,SNR=5.9						
YKA	**Yellowknife Ar**	**40.42**	**315**	P	**P**	**08 26 57.8**	**-0.6**
FVM	**French Village**	**40.42**	**270**	*e*P	**P**	**08 26 58.3**	**-0.5**
	9.9nm,1.1s						
FVM	**French Village**	**40.42**	**270**	*e*P	**P**	**08 26 58.3**	**-0.5**
	9.9nm,1.1s						
ECSD	**EROS Data Cent**	**40.53**	**282**	*e*P	**P**	**08 27 00.1**	**+0.4**
	5.6nm,0.9s						
ECSD	**EROS Data Cent**	**40.53**	**282**	*e*P	**P**	**08 27 00.1**	**+0.4**
	5.6nm,0.9s						
INK	**Inuvik**	**44.58**	**328**	P	**P**	**08 27 31.8**	**-0.4**
INK	**Inuvik**	**44.58**	**328**	P	**P**	**08 27 31.8**	**-0.4**
	1.0nm,1.0s,baz=109,slow=2.6,SNR=3.0						
INK	**Inuvik**	**44.58**	**328**	P	**P**	**08 27 31.8**	**-0.4**
MIAR	**Mount Ida**	**44.61**	**269**	*e*P	**P**	**08 27 33.1**	**+0.2**
	8.0nm,0.9s						
MIAR	**Mount Ida**	**44.61**	**269**	*e*P	**P**	**08 27 33.1**	**+0.2**
	8.0nm,0.9s						
EGMT	**Eagleton**	**45.45**	**295**	*e*P	**P**	**08 27 40.1**	**+0.6**
	16nm,1.1s						
EGMT	**Eagleton**	**45.45**	**295**	*e*P	**P**	**08 27 40.1**	**+0.6**
	16nm,1.1s						
BRTR	**Keskin Array B**	**47.46**	**78**	P	**P**	**08 27 56.6**	**+1.2**
	1.6nm,0.7s,baz=307,slow=5.2,SNR=6.7						
RFTA	**Plano**	**47.54**	**270**	*e*P	P	08 28 02.5	+6.5
BOZ	**Bozeman (W)**	**47.91**	**293**	*e*P	P	08 28 05.2	+6.2
	6.8nm,1.1s						
PDAR	**Pinedale Array**	**48.58**	**289**	P	**P**	**08 28 04.0**	**-0.1**
PDAR	**Pinedale Array**	**48.58**	**289**	P	**P**	**08 28 04.0**	**-0.1**
	1.5nm,0.6s,baz=80,slow=6.2,SNR=9.6						
PDAR	**Pinedale Array**	**48.58**	**289**	P	**P**	**08 28 04.1**	**-0.1**
MCMT	**McKenzie Canyo**	**49.10**	**293**	P	**P**	**08 28 09.2**	**+1.0**
	2.7nm,1.3s						
MCMT	**McKenzie Canyo**	**49.10**	**293**	P	**P**	**08 28 09.2**	**+1.0**
	2.7nm,1.3s						
AMTX	**Amarillo**	**49.22**	**276**	*e*P	P	08 28 15.1	+6.0
	27nm,1.2s						
NEW	**Newport**	**49.23**	**299**	*e*P	**P**	**08 28 08.1**	**-0.8**
	42nm,2.2s						
NEW	**Newport**	**49.23**	**299**	*e*P	**P**	**08 28 08.1**	**-0.8**
	42nm,2.2s						
TORD	**Torodi Ar. Bea**	**49.72**	**130**	P	**P**	**08 28 11.8**	**-1.0**
TORD	**Torodi Ar. Bea**	**49.72**	**130**	P	**P**	**08 28 11.8**	**-1.0**
	2.0nm,0.9s,baz=341,slow=6.4,SNR=6.4						
TORD	**Torodi Ar. Bea**	**49.72**	**130**	P	**P**	**08 28 11.9**	**-1.0**
COLD	**Coldfoot**	**50.19**	**333**	*e*P	**P**	**08 28 17.0**	**+1.1**
	1.8nm,1.0s						
COLD	**Coldfoot**	**50.19**	**333**	*e*P	**P**	**08 28 17.0**	**+1.1**
	1.8nm,1.0s						
HWUT	**Hardware Ranch**	**50.47**	**289**	*e*P	**P**	**08 28 18.7**	**+0.2**
	11nm,0.9s						
HWUT	**Hardware Ranch**	**50.47**	**289**	*e*P	**P**	**08 28 18.7**	**+0.2**
	11nm,0.9s						
ILAR	**Eielson Array**	**50.96**	**329**	P	**P**	**08 28 22.6**	**+0.8**
ILAR	**Eielson Array**	**50.96**	**329**	P	**P**	**08 28 22.6**	**+0.8**
	0.7nm,0.8s,baz=49,slow=5.1,SNR=5.3						
ILAR	**Eielson Array**	**50.96**	**329**	P	**P**	**08 28 22.5**	**+0.8**
ANMO	**Albuquerque**	**52.01**	**279**	P	**P**	**08 28 31.0**	**+0.8**
ANMO	**Albuquerque**	**52.01**	**279**	P	**P**	**08 28 31.0**	**+0.8**
	0.5nm,0.6s,baz=346,slow=4.2,SNR=2.8						
ANMO	**Albuquerque**	**52.01**	**279**	P	**P**	**08 28 31.0**	**+0.8**
MCK	**McKinley**	**52.33**	**329**	*e*P	**P**	**08 28 33.2**	**+1.2**
	7.8nm,1.0s						
MCK	**McKinley**	**52.33**	**329**	*e*P	**P**	**08 28 33.2**	**+1.2**
	7.8nm,1.0s						
BNM	**Barren Site**	**52.66**	**279**	P	**P**	**08 28 36.9**	**+1.8**
	15nm,1.8s						
BNM	**Barren Site**	**52.66**	**279**	P	**P**	**08 28 36.9**	**+1.8**
	15nm,1.8s						
MSU	**Marysvale**	**52.89**	**287**	*e*P	**P**	**08 28 36.8**	**+0.1**
MSU	**Marysvale**	**52.89**	**287**	*e*P	**P**	**08 28 36.8**	**+0.1**
CCUT	**Cedar City**	**54.23**	**287**	*e*P	**P**	**08 28 47.3**	**+0.7**
	3.0nm,1.0s						
CCUT	**Cedar City**	**54.23**	**287**	*e*P	**P**	**08 28 47.3**	**+0.7**
	3.0nm,1.0s						
TXAR	**Lajitas Array**	**54.34**	**272**	P	**P**	**08 28 47.1**	**-0.1**
TXAR	**Lajitas Array**	**54.34**	**272**	P	**P**	**08 28 47.1**	**-0.1**
	0.6nm,0.7s,baz=46,slow=8.9,SNR=5.0						
TXAR	**Lajitas Array**	**54.34**	**272**	P	**P**	**08 28 47.2**	**-0.1**
NVAR	**Mina Array Bea**	**56.41**	**291**	P	**P**	**08 29 03.7**	**+1.4**
NVAR	**Mina Array Bea**	**56.41**	**291**	P	**P**	**08 29 03.7**	**+1.4**
	0.4nm,0.8s,baz=69,slow=8.8,SNR=3.4						
NVAR	**Mina Array Bea**	**56.41**	**291**	P	**P**	**08 29 03.7**	**+1.4**
EKS2	**Erkin-Say**	**66.60**	**49**	*e*P	**P**	**08 30 12.5**	**+1.6**
	12nm,1.3s						
EKS2	**Erkin-Say**	**66.60**	**49**	*e*P	**P**	**08 30 12.5**	**+1.6**
	12nm,1.3s						
MKAR	**Makanchi Array**	**66.91**	**41**	P	**P**	**08 30 12.8**	**+0.1**
MKAR	**Makanchi Array**	**66.91**	**41**	P	**P**	**08 30 12.8**	**+0.1**
	0.3nm,0.5s,baz=346,slow=7.1,SNR=3.1						
MKAR	**Makanchi Array**	**66.91**	**41**	P	**P**	**08 30 12.8**	**+0.1**
AAK	**Ala-Archa**	**66.94**	**49**	*e*P	**P**	**08 30 14.8**	**+1.6**
	11nm,1.4s						
AAK	**Ala-Archa**	**66.94**	**49**	*e*P	**P**	**08 30 14.8**	**+1.6**
	11nm,1.4s						
BDFB	**Brasilia**	**69.69**	**193**	P	**P**	**08 30 30.9**	**+0.6**
BDFB	**Brasilia**	**69.69**	**193**	P	**P**	**08 30 30.9**	**+0.6**
	2.2nm,0.8s,baz=353,slow=4.4,SNR=4.3						
BDFB	**Brasilia**	**69.69**	**193**	P	**P**	**08 30 30.9**	**+0.6**
KSH	**Kashi**	**70.10**	**50**	*e*P	P	08 31 10.0	+37
KSH				*e*pP	PcP	08 31 14.0	+19
KSH				*e*sP	sP	08 31 17.3	+37
KSH				*e*PcP	pP	08 31 29.1	+51
KSH				*e*PP	PP	08 33 50.8	+43
KSH				S	**SKSac**	**08 40 27.0**	**-6.4**
KSH				SKS	ScS	08 41 09.1	+34
KSH				ScS	SKKSac	08 41 11.6	+38
KSH				SS	SS	08 45 03.4	+51
KSH				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KSH				LR	LR		
	comp=N,120nm,3.9s						
KSH				LR	LR		
	comp=E,160nm,7.3s						
KSH				LR	LR		
	comp=Z,410nm,7.4s						
WMQ	**Urumqi**	**71.49**	**40**	P	P	08 31 17.0	+36
WMQ				sP	sP	08 31 24.0	+36
WMQ				PcP	PcP	08 31 35.0	+34
WMQ				PP	PP	08 34 01.0	+42
WMQ				S	**SKSac**	**08 40 41.0**	**-2.6**
WMQ				sS	**ScS**	**08 40 49.0**	**+3.7**
WMQ				ScS	SKKSac	08 41 21.0	+37
WMQ				SS	SS	08 45 23.0	+50
WMQ				pmax	pmax		
	comp=Z,25nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,140nm,7.0s						
WMQ				LR	LR		
	comp=N,190nm,18.0s						
WMQ				LR	LR		
	comp=E,230nm,18.0s						
WMQ				LR	LR		
	comp=Z,170nm,18.0s						
SONM	**Songino Array**	**73.96**	**26**	P	**P**	**08 30 56.1**	**+0.2**
SONM	**Songino Array**	**73.96**	**26**	P	**P**	**08 30 56.1**	**+0.2**
	comp=Z,1.5nm,1.0s,baz=319,slow=5.9,SNR=6.1						
SONM	**Songino Array**	**73.96**	**26**	P	**P**	**08 30 56.1**	**+0.2**
ULN	**Ulaanbaatar**	**74.10**	**25**	*e*P	**P**	**08 30 57.5**	**+0.8**
	comp=Z,4.4nm,1.0s						
ULN	**Ulaanbaatar**	**74.10**	**25**	*e*P	**P**	**08 30 57.5**	**+0.8**
	comp=Z,4.4nm,1.0s						
LPAZ	**La Paz**	**74.99**	**213**	P	**P**	**08 31 02.5**	**-0.2**
LPAZ	**La Paz**	**74.99**	**213**	P	**P**	**08 31 02.5**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=350,slow=10,SNR=3.2						
LPAZ	**La Paz**	**74.99**	**213**	P	**P**	**08 31 02.5**	**-0.2**
GTA	**Gaotai**	**79.70**	**34**	*e*P	**P**	**08 31 28.0**	**-0.4**
GTA				pP	**pP**	**08 31 33.0**	**-0.7**
GTA				sP	**sP**	**08 31 36.6**	**+1.0**
MDJ	**Mudanjiang**	**81.44**	**11**	P	P	08 32 01.3	+24
MDJ				pP	PcP	08 32 04.3	+21
MDJ				S	S	08 42 10.3	+22
MDJ				ScS	ScS	08 42 27.8	+22
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,43nm,4.5s						
MDJ				LR	LR		
	comp=N,140nm,28.8s						
MDJ				LR	LR		
	comp=E,290nm,32.1s						
MDJ				LR	LR		
	comp=Z,290nm,31.0s						
CN2	**Changchun**	**81.71**	**14**	*e*P	P	08 32 00.5	+22
CN2				*e*S	S	08 42 10.5	+20
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,13.0s						
CN2				LR	LR		
	comp=E,200nm,13.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
HHC	**Hu-ho-hao-te**	**81.81**	**25**	*e*P	P	08 32 08.3	+29
HHC				sP	sP	08 32 15.0	+28
HHC				PP	PP	08 35 19.1	+33
HHC				S	ScS	08 42 20.6	+12
HHC				SKS	SKKSac	08 42 23.6	+22
HHC				pmax	pmax		
	comp=Z,35nm,0.7s						
HHC				pmax	pmax		
	comp=Z,230nm,6.8s						
HHC				LR	LR		
	comp=N,360nm,17.2s						
HHC				LR	LR		
	comp=E,550nm,17.7s						
HHC				LR	LR		
	comp=Z,530nm,17.4s						
BJI	**Beijing**	**83.66**	**22**	P	P	08 32 16.4	+27
BJI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BJI				LR	LR		
	comp=N,450nm,17.4s						
BJI				LR	LR		
	comp=E,580nm,20.3s						
BJI				LR	LR		
	comp=Z,380nm,32.3s						
LZH	**Lanzhou**	**84.04**	**32**	*e*P	**P**	**08 31 51.3**	**0.0**
LZH				pP	**PcP**	**08 31 55.8**	**+0.6**
LZH				sP	**sP**	**08 31 58.3**	**-0.2**
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH	**Lanzhou**	**84.04**	**32**	*e*P	P	08 32 21.0	+30
LZH				pP	pP	08 32 24.3	+28
LZH				sP	sP	08 32 25.8	+27
LZH				*e*PP	PP	08 35 38.5	+34
LZH				pmax	pmax		
	comp=Z,16nm,1.5s						
LZH				pmax	pmax		
	comp=Z,71nm,8.0s						
LZH				LR	LR		
	comp=N,280nm,16.5s						
LZH				LR	LR		
	comp=E,270nm,17.3s						
LZH				LR	LR		
	comp=Z,360nm,19.5s						
CD2	**Chengdu**	**88.76**	**34**	P	P	08 32 44.6	+30
CD2				pP	pP	08 32 49.4	+30
CD2				sP	sP	08 32 51.6	+30
CD2				PP	PP	08 36 18.3	+36
CD2				SKS	**ScS**	**08 43 12.8**	**+6.5**
CD2				S	S	08 43 32.9	+32
CD2				SS	SS	08 49 31.5	+40
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,90nm,5.4s						
CD2				LR	LR		
	comp=N,280nm,16.7s						
CD2				LR	LR		
	comp=E,680nm,17.6s						
CD2				LR	LR		
	comp=Z,600nm,24.0s						
NJ2	**Nanjing**	**91.92**	**22**	*e*P	P	08 32 58.8	+30
NJ2				pP	pP	08 33 02.5	+28

0.5nm,0.3s,baz=161,slow=12,SNR=2.8
SFJD Kangerlussuaq 15.45 337 *e*P **P** 08 23 49.3 -0.9
35nm,1.1s
SCHQ Schefferville 18.44 287 P **P** 08 24 22.1 -1.3
SCHQ Schefferville 18.44 287 P **P** 08 24 22.1 -1.3
0.5nm,0.3s,baz=84,slow=8.4,SNR=6.1
SCHQ Schefferville 18.44 287 P **P** 08 24 22.0 -1.3
ESK Eskdalemuir 18.68 71 P **P** 08 24 24.3 -1.7
ESK pmax pmax
comp=Z,14nm,1.0s
ESK Eskdalemuir 18.68 71 P **P** 08 24 24.3 -1.7
comp=Z,14nm,1.0s
ESK Eskdalemuir 18.68 71 P **P** 08 24 24.3 -1.7
comp=Z,14nm,1.0s
EKA Eskdalemuir Ar 18.70 71 P **Pn** 08 24 26.9 +0.2
EKA Eskdalemuir Ar 18.70 71 P **Pn** 08 24 26.9 +0.2
baz=282,slow=9.3,SNR=3.3
EKA Eskdalemuir Ar 18.70 71 P **Pn** 08 24 26.9 +0.2
FRB Frobisher Bay 19.87 314 P **P** 08 24 38.4 -0.5
FRB Frobisher Bay 19.87 314 P **P** 08 24 38.4 -0.5
comp=Z,0.1nm,0.3s,baz=111,slow=13,SNR=2.2
FRB Frobisher Bay 19.87 314 P **P** 08 24 38.4 -0.5
ROSF Rostrenen 20.73 91 *e*P **P** 08 24 48.2 -0.1
comp=Z,209nm,1.7s
ROSF Rostrenen 20.73 91 *e*P **P** 08 24 48.2 -0.1
ROSF pmax pmax
comp=Z,209nm,1.7s
ROSF Rostrenen 20.73 91 *e*P **P** 08 24 48.2 -0.1
comp=Z,209nm,1.7s
ROSF Rostrenen 20.73 91 *e*P **P** 08 24 48.2 -0.1
comp=Z,104nm,1.7s
QUIF Quistinic 20.98 92 *e*P **P** 08 24 51.1 0.0
comp=Z,64nm,1.0s
QUIF Quistinic 20.98 92 *e*P **P** 08 24 51.1 0.0
QUIF pmax pmax
comp=Z,64nm,1.0s
QUIF Quistinic 20.98 92 *e*P **P** 08 24 51.1 0.0
comp=Z,64nm,1.0s
QUIF Quistinic 20.98 92 *e*P **P** 08 24 51.1 0.0
comp=Z,32nm,1.0s
SGMF Saint Gilles 21.19 91 *e*P **P** 08 24 53.0 -0.3
comp=Z,51nm,0.9s
SGMF Saint Gilles 21.19 91 *e*P **P** 08 24 53.0 -0.3
SGMF pmax pmax
comp=Z,51nm,0.9s
SGMF Saint Gilles 21.19 91 *e*P **P** 08 24 53.0 -0.3
comp=Z,51nm,0.9s
SGMF Saint Gilles 21.19 91 *e*P **P** 08 24 53.0 -0.3
comp=Z,26nm,0.9s
POLO Lamas de Olo 22.05 112 *e*P **P** 08 25 04.4 +1.7
GRR Gorron 22.15 89 *e*P **P** 08 25 03.2 -0.4
comp=Z,74nm,1.2s
GRR Gorron 22.15 89 *e*P **P** 08 25 03.2 -0.4
GRR pmax pmax
comp=Z,74nm,1.2s
GRR Gorron 22.15 89 *e*P **P** 08 25 03.2 -0.4
comp=Z,74nm,1.2s
GRR Gorron 22.15 89 *e*P **P** 08 25 03.2 -0.4
comp=Z,37nm,1.2s
FLN La Foliniere 22.21 88 *e*P **P** 08 25 03.8 -0.4
baz=289
FLN *e*R
comp=Z,2µm,22.0s
FLN La Foliniere 22.21 88 *e*P **P** 08 25 03.8 -0.4
FLN La Foliniere 22.21 88 *e*P **P** 08 25 03.8 -0.4
FLN La Foliniere 22.21 88 *e*P **P** 08 25 03.8 -0.4
baz=289
PBRG Braganca 22.35 110 *e*P **P** 08 25 07.7 +1.8
MVO Moncorvo 22.61 112 *e*P **P** 08 25 10.2 +1.4
PCBR Castelo Branco 23.29 115 *e*P **P** 08 25 15.8 +0.2
MFF Saint Martin d 23.42 93 *e*P **P** 08 25 17.1 +0.2
comp=Z,197nm,1.9s
MFF Saint Martin d 23.42 93 *e*P **P** 08 25 17.1 +0.2
MFF pmax pmax
comp=Z,197nm,1.9s
MFF Saint Martin d 23.42 93 *e*P **P** 08 25 17.1 +0.2
comp=Z,197nm,1.9s
MFF Saint Martin d 23.42 93 *e*P **P** 08 25 17.1 +0.2
comp=Z,98nm,1.9s
PMTG Montargil 23.44 117 *e*P **P** 08 25 20.7 +3.6
EVOP Sao Brissos 23.89 118 *e*P **P** 08 25 18.0 -3.5
EVOP pmax pmax
comp=Z,126nm,1.7s
EVOP Sao Brissos 23.89 118 *e*P **P** 08 25 18.0 -3.5
comp=Z,126nm,1.7s
EVO Evora 23.95 118 *e*P **P** 08 25 18.0 -4.0
comp=Z,126nm,1.7s
EVO *e*R
comp=Z,2µm,23.0s
PBEJ Beja 24.40 118 *e*P **P** 08 25 26.5 +0.3
PBEJ Beja 24.40 118 *e*P **P** 08 25 26.5 +0.3
BAIF Baives 24.46 82 *e*P **P** 08 25 26.3 -0.4
comp=Z,115nm,1.6s
BAIF Baives 24.46 82 *e*P **P** 08 25 26.3 -0.4
BAIF pmax pmax
comp=Z,115nm,1.6s
BAIF Baives 24.46 82 *e*P **P** 08 25 26.3 -0.4
comp=Z,115nm,1.6s
BAIF Baives 24.46 82 *e*P **P** 08 25 26.3 -0.4
comp=Z,57nm,1.6s
SJPF Ste Jean 24.70 101 *e*P **P** 08 25 28.4 -0.6
SJPF Ste Jean 24.70 101 *e*P **P** 08 25 28.4 -0.6
SJPF Ste Jean 24.70 101 *e*P **P** 08 25 28.4 -0.6
SJPF Ste Jean 24.70 101 *e*P **P** 08 25 28.4 -0.6
HYF Humbligny 24.75 89 *e*P **P** 08 25 27.7 -1.7
HYF Humbligny 24.75 89 *e*P **P** 08 25 27.7 -1.7
HYF Humbligny 24.75 89 *e*P **P** 08 25 27.7 -1.7
GIVF Givet 24.81 81 *e*P **P** 08 25 28.8 -1.0
GIVF Givet 24.81 81 *e*P **P** 08 25 28.8 -1.0
GIVF Givet 24.81 81 *e*P **P** 08 25 28.8 -1.0
GIVF Givet 24.81 81 *e*P **P** 08 25 28.8 -1.0
LFF La Frestale 24.82 95 *e*P **P** 08 25 30.1 +0.1
LFF La Frestale 24.82 95 *e*P **P** 08 25 30.1 +0.1
LFF La Frestale 24.82 95 *e*P **P** 08 25 30.1 +0.1
LFF La Frestale 24.82 95 *e*P **P** 08 25 30.1 +0.1
TCF Toulx Ste Croi 24.98 91 *e*P **P** 08 25 32.0 +0.5
comp=Z,81nm,1.3s
TCF Toulx Ste Croi 24.98 91 *e*P **P** 08 25 32.0 +0.5
TCF pmax pmax
comp=Z,81nm,1.3s
TCF Toulx Ste Croi 24.98 91 *e*P **P** 08 25 32.0 +0.5
comp=Z,81nm,1.3s
TCF Toulx Ste Croi 24.98 91 *e*P **P** 08 25 32.0 +0.5
comp=Z,40nm,1.3s
RJF Les Rejaudoux 25.08 94 *e*P **P** 08 25 31.9 -0.5
comp=Z,94nm,1.5s
RJF *e*R
comp=Z,2µm,23.0s
RJF Les Rejaudoux 25.08 94 *e*P **P** 08 25 31.9 -0.5
RJF pmax pmax
comp=Z,94nm,1.5s
RJF Les Rejaudoux 25.08 94 *e*P **P** 08 25 31.9 -0.5
comp=Z,94nm,1.5s
RJF Les Rejaudoux 25.08 94 *e*P **P** 08 25 31.9 -0.5
comp=Z,47nm,1.5s
PAB San Pablo 25.21 111 *e*P **P** 08 25 35.9 +2.2
PAB pmax pmax
comp=Z,68nm,1.7s
PAB San Pablo 25.21 111 *e*P **P** 08 25 35.9 +2.2
comp=Z,68nm,1.7s
PAB San Pablo 25.21 111 *e*P **P** 08 25 35.9 +2.2
comp=Z,68nm,1.7s
ETSF Etsaut 25.22 101 *e*P **P** 08 25 34.7 +1.0
comp=Z,18nm,1.0s
ETSF Etsaut 25.22 101 *e*P **P** 08 25 34.7 +1.0
ETSF pmax pmax
comp=Z,18nm,1.0s
ETSF Etsaut 25.22 101 *e*P **P** 08 25 34.7 +1.0
comp=Z,18nm,1.0s
ETSF Etsaut 25.22 101 *e*P **P** 08 25 34.7 +1.0
comp=Z,8.8nm,1.0s
BGF Bois d'Agland 25.23 90 *e*P **P** 08 25 33.2 -0.5
comp=Z,137nm,1.2s
BGF Bois d'Agland 25.23 90 *e*P **P** 08 25 33.2 -0.5
BGF pmax pmax
comp=Z,137nm,1.2s
BGF Bois d'Agland 25.23 90 *e*P **P** 08 25 33.2 -0.5
comp=Z,137nm,1.2s
BGF Bois d'Agland 25.23 90 *e*P **P** 08 25 33.2 -0.5
comp=Z,69nm,1.2s
ESDC Sonseca Array 25.34 110 P **P** 08 25 34.8 -0.1
ESDC Sonseca Array 25.34 110 P **P** 08 25 34.8 -0.1
comp=Z,5.5nm,0.9s,baz=312,slow=8.9,SNR=7.1
ESDC Sonseca Array 25.34 110 P **P** 08 25 34.8 -0.1
ESLA Sonseca Array 25.34 110 *e*P **P** 08 25 34.5 -0.3
comp=Z,9.6nm,1.3s
ESLA Sonseca Array 25.34 110 *e*P **P** 08 25 34.5 -0.3
comp=Z,9.6nm,1.3s
SSF Saint Saulge 25.37 89 *e*P **P** 08 25 34.3 -0.7
comp=Z,64nm,1.1s
SSF Saint Saulge 25.37 89 *e*P **P** 08 25 34.3 -0.7
SSF pmax pmax
comp=Z,64nm,1.1s
SSF Saint Saulge 25.37 89 *e*P **P** 08 25 34.3 -0.7
comp=Z,64nm,1.1s
SSF Saint Saulge 25.37 89 *e*P **P** 08 25 34.3 -0.7
comp=Z,32nm,1.1s
AVF Avril sur Loir 25.41 90 *e*P **P** 08 25 34.6 -0.7
comp=Z,90nm,1.3s
AVF Avril sur Loir 25.41 90 *e*P **P** 08 25 34.6 -0.7
AVF pmax pmax
comp=Z,90nm,1.3s
AVF Avril sur Loir 25.41 90 *e*P **P** 08 25 34.6 -0.7
comp=Z,90nm,1.3s
AVF Avril sur Loir 25.41 90 *e*P **P** 08 25 34.6 -0.7
comp=Z,45nm,1.3s
LOR Lormes 25.48 88 *e*P **P** 08 25 35.2 -0.8
comp=Z,50nm,0.9s,baz=300
LOR *e*R
comp=Z,1µm,22.8s
LOR Lormes 25.48 88 *e*P **P** 08 25 35.2 -0.8
comp=Z,50nm,0.9s
LOR Lormes 25.48 88 *e*P **P** 08 25 35.2 -0.8
comp=Z,25nm,0.9s,baz=300
CAF Calviac 25.61 94 *e*P **P** 08 25 36.7 -0.5
comp=Z,79nm,1.5s
CAF Calviac 25.61 94 *e*P **P** 08 25 36.7 -0.5
CAF pmax pmax
comp=Z,79nm,1.5s
CAF Calviac 25.61 94 *e*P **P** 08 25 36.7 -0.5
comp=Z,79nm,1.5s
CAF Calviac 25.61 94 *e*P **P** 08 25 36.7 -0.5
comp=Z,39nm,1.5s
MEZF Maizieres J'vi 25.62 85 *e*P **P** 08 25 36.7 -0.5
comp=Z,56nm,0.9s,baz=310
MEZF Maizieres J'vi 25.62 85 *e*P **P** 08 25 36.7 -0.5
comp=Z,56nm,0.9s
MEZF Maizieres J'vi 25.62 85 *e*P **P** 08 25 36.7 -0.5
comp=Z,28nm,0.9s,baz=310
EPF Esparros 25.67 100 *e*P **P** 08 25 38.3 +0.5
EPF Esparros 25.67 100 *e*P **P** 08 25 38.3 +0.5
EPF Esparros 25.67 100 *e*P **P** 08 25 38.3 +0.5
EPF Esparros 25.67 100 *e*P **P** 08 25 38.3 +0.5
SFTF Sexfontaines 25.75 85 *e*P **P** 08 25 37.7 -0.7
comp=Z,78nm,1.2s
SFTF Sexfontaines 25.75 85 *e*P **P** 08 25 37.7 -0.7
comp=Z,78nm,1.2s
SFTF Sexfontaines 25.75 85 *e*P **P** 08 25 37.7 -0.7
comp=Z,39nm,1.2s
NB2 NORSAR Subarra 25.76 54 P **P** 08 25 37.7 -0.7
comp=Z,11nm,1.1s,baz=273,slow=9.3
NB2 NORSAR Subarra 25.76 54 P **P** 08 25 37.7 -0.7
comp=Z,11nm,1.1s,baz=273,slow=9.0,SNR=6.7
NOA NORSAR Array B 25.76 54 P **P** 08 25 37.9 -0.5
NOA NORSAR Array B 25.76 54 P **P** 08 25 37.9 -0.5
comp=Z,2.8nm,0.8s,baz=276,slow=9.5,SNR=4.1
NOA NORSAR Array B 25.76 54 P **P** 08 25 37.9 -0.5
SMF Signal de Mont 25.78 89 *e*P **P** 08 25 37.7 -1.0
comp=Z,38nm,1.0s
SMF Signal de Mont 25.78 89 *e*P **P** 08 25 37.7 -1.0
SMF pmax pmax
comp=Z,38nm,1.0s
SMF Signal de Mont 25.78 89 *e*P **P** 08 25 37.7 -1.0
comp=Z,38nm,1.0s
SMF Signal de Mont 25.78 89 *e*P **P** 08 25 37.7 -1.0
comp=Z,19nm,1.0s
PAGF Fort de Pagny 26.00 84 *e*P **P** 08 25 38.4 -2.2
PAGF Fort de Pagny 26.00 84 *e*P **P** 08 25 38.4 -2.2
PAGF Fort de Pagny 26.00 84 *e*P **P** 08 25 38.4 -2.2
MTLF Montolieu 26.60 97 *e*P **P** 08 25 45.9 -0.2
comp=Z,36nm,1.4s
MTLF Montolieu 26.60 97 *e*P **P** 08 25 45.9 -0.2
MTLF pmax pmax
comp=Z,36nm,1.4s
MTLF Montolieu 26.60 97 *e*P **P** 08 25 45.9 -0.2
comp=Z,36nm,1.4s
MTLF Montolieu 26.60 97 *e*P **P** 08 25 45.9 -0.2
comp=Z,18nm,1.4s
HAU Haudompre 26.62 85 *e*P **P** 08 25 45.9 -0.4
comp=Z,137nm,1.7s
HAU *e*R
comp=Z,1µm,22.2s
HAU Haudompre 26.62 85 *e*P **P** 08 25 45.9 -0.4
HAU pmax pmax
comp=Z,137nm,1.7s
HAU Haudompre 26.62 85 *e*P **P** 08 25 45.9 -0.4
comp=Z,137nm,1.7s
HAU Haudompre 26.62 85 *e*P **P** 08 25 45.9 -0.4
comp=Z,68nm,1.7s
CDF Champ du Feu 26.98 83 *e*P **P** 08 25 47.6 -2.0
comp=Z,21nm,1.3s
CDF Champ du Feu 26.98 83 *e*P **P** 08 25 47.6 -2.0
CDF pmax pmax
comp=Z,21nm,1.3s
CDF Champ du Feu 26.98 83 *e*P **P** 08 25 47.6 -2.0
comp=Z,21nm,1.3s
CDF Champ du Feu 26.98 83 *e*P **P** 08 25 47.6 -2.0
comp=Z,10nm,1.3s
HINF Hinteralfeld 27.01 85 *e*P **P** 08 25 49.5 -0.3
comp=Z,53nm,1.5s
HINF Hinteralfeld 27.01 85 *e*P **P** 08 25 49.5 -0.3
HINF pmax pmax
comp=Z,53nm,1.5s
HINF Hinteralfeld 27.01 85 *e*P **P** 08 25 49.5 -0.3
comp=Z,53nm,1.5s
HINF Hinteralfeld 27.01 85 *e*P **P** 08 25 49.5 -0.3
comp=Z,27nm,1.5s
HFS Hagfors 27.07 56 P **P** 08 25 50.4 +0.2
HFS Hagfors 27.07 56 P **P** 08 25 50.4 +0.2
comp=Z,1.8nm,0.7s,baz=318,slow=2.0,SNR=4.7
HFS Hagfors 27.07 56 P **P** 08 25 50.4 +0.2
LASF Ste Croix 27.15 94 *e*P **P** 08 25 51.2 +0.1
comp=Z,15nm,1.1s
LASF Ste Croix 27.15 94 *e*P **P** 08 25 51.2 +0.1
comp=Z,15nm,1.1s
LASF Ste Croix 27.15 94 *e*P **P** 08 25 51.2 +0.1
comp=Z,7.3nm,1.1s
VIVF Saint-Julien-l 27.21 92 *e*P **P** 08 25 51.9 +0.3
comp=Z,58nm,1.6s
VIVF Saint-Julien-l 27.21 92 *e*P **P** 08 25 51.9 +0.3
VIVF pmax pmax
comp=Z,58nm,1.6s
VIVF Saint-Julien-l 27.21 92 *e*P **P** 08 25 51.9 +0.3
comp=Z,58nm,1.6s
VIVF Saint-Julien-l 27.21 92 *e*P **P** 08 25 51.9 +0.3
comp=Z,29nm,1.6s
BFO Black Forest 27.65 83 *e*P **P** 08 25 55.9 +0.3
BFO pmax pmax
comp=Z,34nm,1.7s
BFO Black Forest 27.65 83 *e*P **P** 08 25 55.9 +0.3
comp=Z,34nm,1.7s
BFO Black Forest 27.65 83 *e*P **P** 08 25 55.8 +0.3
comp=Z,34nm,1.7s
ORIF Oris-en-Rattie 27.89 91 *e*P **P** 08 25 57.8 0.0
comp=Z,74nm,1.7s
ORIF *e*R
comp=Z,2µm,22.5s
ORIF Oris-en-Rattie 27.89 91 *e*P **P** 08 25 57.8 0.0
ORIF pmax pmax
comp=Z,74nm,1.7s
ORIF Oris-en-Rattie 27.89 91 *e*P **P** 08 25 57.8 0.0
comp=Z,74nm,1.7s
ORIF Oris-en-Rattie 27.89 91 *e*P **P** 08 25 57.8 0.0
comp=Z,37nm,1.7s
LPL La Plagne 28.08 89 *e*P **P** 08 25 58.4 -1.3
LPL La Plagne 28.08 89 *e*P **P** 08 25 58.4 -1.3
LPL La Plagne 28.08 89 *e*P **P** 08 25 58.4 -1.3
LPL La Plagne 28.08 89 *e*P **P** 08 25 58.4 -1.3
LPG La Plagne 28.11 89 *e*P **P** 08 26 00.2 +0.3
LPG La Plagne 28.11 89 *e*P **P** 08 26 00.2 +0.3
LPG La Plagne 28.11 89 *e*P **P** 08 26 00.2 +0.3
LPG La Plagne 28.11 89 *e*P **P** 08 26 00.2 +0.3
MBDF Montbardon 28.53 91 *e*P **P** 08 26 03.5 -0.1
comp=Z,12nm,1.2s
MBDF Montbardon 28.53 91 *e*P **P** 08 26 03.5 -0.1
MBDF pmax pmax
comp=Z,12nm,1.2s
MBDF Montbardon 28.53 91 *e*P **P** 08 26 03.5 -0.1
comp=Z,12nm,1.2s
MBDF Montbardon 28.53 91 *e*P **P** 08 26 03.5 -0.1
comp=Z,6.2nm,1.2s
CLL Collm 29.10 74 *e*P **P** 08 26 08.0 -0.4
CLL *i* 08 26 12.4
CLL pmax pmax
comp=Z,32nm,1.8s
CLL Collm 29.10 74 *e*P **P** 08 26 08.0 -0.4
comp=Z,32nm,1.8s
CLL *i* sP **sP** 08 26 12.4 -2.9
CLL *e*SS **SnSn** 08 32 24.0 +0.7
CLL Collm 29.10 74 *e*P **P** 08 26 08.0 -0.4
comp=Z,32nm,1.8s
FRF La Foret Royal 29.11 93 *e*P **P** 08 26 08.6 +0.1
comp=Z,89nm,1.7s
FRF La Foret Royal 29.11 93 *e*P **P** 08 26 08.6 +0.1
FRF pmax pmax
comp=Z,89nm,1.7s
FRF La Foret Royal 29.11 93 *e*P **P** 08 26 08.6 +0.1
comp=Z,89nm,1.7s
FRF La Foret Royal 29.11 93 *e*P **P** 08 26 08.6 +0.1
comp=Z,44nm,1.7s
NKC Novy Kostel 29.23 77 *e*P **P** 08 26 09.8 +0.2
NKC MLR MLR
comp=Z,800nm,14.2s
NKC Novy Kostel 29.23 77 *e*P **P** 08 26 09.8 +0.2
NKC AMS AMS 08 36 50.0
comp=Z,800nm,14.2s
NKC Novy Kostel 29.23 77 *e*P **P** 08 26 09.8 +0.2
comp=Z,800nm,14.2s
DAVOX Davos/Dischmat 29.31 85 P **P** 08 26 10.2 -0.3
DAVOX Davos/Dischmat 29.31 85 P **P** 08 26 10.2 -0.3
comp=Z,5.4nm,0.9s,baz=312,slow=15,SNR=4.2
DAVOX Davos/Dischmat 29.31 85 P **P** 08 26 10.2 -0.3
MDT Midelt 30.09 121 LR LR 08 36 42.2
comp=Z,307nm,19.2s,baz=336,slow=33
PVCC Panska Ves 30.33 75 *e*P **P** 08 26 19.2 -0.1
PVCC MLR MLR
comp=Z,900nm,14.9s
PVCC Panska Ves 30.33 75 *e*P **P** 08 26 19.2 -0.1
PVCC AMS AMS 08 37 40.0
comp=Z,900nm,14.9s
KHC Kasperske Hory 30.37 78 *e*P **P** 08 26 19.0 -0.7
KHC MLR MLR
comp=Z,700nm,18.2s
KHC Kasperske Hory 30.37 78 *e*P **P** 08 26 19.0 -0.7
KHC AMS AMS 08 36 50.0
comp=Z,700nm,18.2s
PRU Pruhonice 30.55 76 *e*P **P** 08 26 21.3 +0.1
PRU MLR MLR
comp=Z,1µm,20.9s
PRU Pruhonice 30.55 76 *e*P **P** 08 26 21.3 +0.1
PRU AMS AMS 08 36 30.0
comp=Z,1µm,20.9s
GEC2 GERESS Array S 30.57 79 *e*P **P** 08 26 22.0 +0.5
GEC2 GERESS Array S 30.57 79 *e*P **P** 08 26 22.0 +0.5
GEC2 GERESS Array S 30.57 79 *e*P **P** 08 26 22.0 +0.5
GERES GERESS Array B 30.57 79 P **P** 08 26 22.1 +0.5
GERES GERESS Array B 30.57 79 P **P** 08 26 22.1 +0.5
comp=Z,1.5nm,0.7s,baz=299,slow=9.0,SNR=7.0
GERES GERESS Array B 30.57 79 P **P** 08 26 22.1 +0.5
PGF Pioggiola 31.10 92 *e*P **P** 08 26 26.1 -0.2
comp=Z,65nm,1.4s
PGF Pioggiola 31.10 92 *e*P **P** 08 26 26.1 -0.2
PGF pmax pmax
comp=Z,65nm,1.4s
PGF Pioggiola 31.10 92 *e*P **P** 08 26 26.1 -0.2
comp=Z,65nm,1.4s
UPC Upice 31.17 74 *e*P **P** 08 26 26.9 +0.2
UPC Upice 31.17 74 *e*P **P** 08 26 26.9 +0.2
KSP Ksiaz 31.19 74 *e*P **P** 08 26 26.8 0.0
TREC Trest 31.41 77 AMS AMS 08 38 20.0
comp=Z,1µm,14.6s
RES Resolute Bay 31.41 334 P **P** 08 26 28.6 0.0
RES Resolute Bay 31.41 334 P **P** 08 26 28.6 0.0
comp=Z,3.0nm,0.8s,baz=68,slow=6.6,SNR=4.0
RES Resolute Bay 31.41 334 P **P** 08 26 28.6 0.0
DPC Dobruska-Polom 31.42 74 *e*P **P** 08 26 28.5 -0.4
DPC MLR MLR
comp=Z,700nm,13.1s
DPC Dobruska-Polom 31.42 74 *e*P **P** 08 26 29.0 +0.1
comp=Z,59nm,1.7s
DPC Dobruska-Polom 31.42 74 *e*P **P** 08 26 28.5 -0.4
DPC AMS AMS 08 38 30.0
comp=Z,700nm,13.1s
DPC Dobruska-Polom 31.42 74 *e*P **P** 08 26 29.0 +0.1
comp=Z,59nm,1.7s
MORC Moravsky Berou 32.38 75 *e*P **P** 08 26 37.8 +0.4
MORC pmax pmax
comp=Z,40nm,1.8s
MORC Moravsky Berou 32.38 75 *e*P **P** 08 26 37.8 +0.4
comp=Z,40nm,1.8s
MORC Moravsky Berou 32.38 75 *e*P **P** 08 26 37.8 +0.4
comp=Z,40nm,1.8s
OKC Ostrava-Krasne 32.70 74 *e*P **P** 08 26 40.7 +0.6
OKC MLR MLR
comp=Z,700nm,15.7s
OKC Ostrava-Krasne 32.70 74 *e*P **P** 08 26 40.7 +0.6
OKC AMS AMS 08 38 10.0
comp=Z,700nm,15.7s
FINES FINESS Array B 32.77 51 P **P** 08 26 39.7 -0.9
FINES FINESS Array B 32.77 51 P **P** 08 26 39.7 -0.9
comp=Z,3.4nm,0.7s,baz=308,slow=6.8,SNR=5.2
FINES FINESS Array B 32.77 51 P **P** 08 26 39.7 -0.9
OJC Ojcow 33.47 73 *e*P **P** 08 26 44.9 -2.0
OJC Ojcow 33.47 73 *e*P **P** 08 26 46.6 -0.3
comp=Z,26nm,1.4s
OJC Ojcow 33.47 73 *e*P **P** 08 26 44.9 -2.0
OJC Ojcow 33.47 73 *e*P **P** 08 26 46.6 -0.3
comp=Z,26nm,1.4s
VYHS Vyhne 33.73 76 *e*P **P** 08 26 49.5 +0.3
VYHS pmax pmax
comp=Z,11nm,1.5s
VYHS Vyhne 33.73 76 *e*P **P** 08 26 49.5 +0.3
VYHS Vyhne 33.73 76 *e*P **P** 08 26 49.5 +0.3
comp=Z,11nm,1.5s
AQU L'Aquila 33.84 89 *e*P **P** 08 26 49.5 -0.7
comp=Z,37nm,0.8s
AQU L'Aquila 33.84 89 *e*P **P** 08 26 49.5 -0.7
comp=Z,37nm,0.8s
CRVS Cervenica-Dubn 35.05 74 *e*P **P** 08 27 00.7 +0.1
CRVS pmax pmax
comp=Z,18nm,1.5s
CRVS Cervenica-Dubn 35.05 74 *e*P **P** 08 27 00.7 +0.1
CRVS Cervenica-Dubn 35.05 74 *e*P **P** 08 27 00.7 +0.1
comp=Z,18nm,1.5s
KOLS Kolonicke sedl 35.50 73 *e*P **P** 08 27 01.3 -3.1
KOLS Kolonicke sedl 35.50 73 *e*P **P** 08 27 01.3 -3.1
UZH Uzhgorod 35.66 74 *c i*P **P** 08 27 04.6 -1.2
UZH Uzhgorod 35.66 74 *i* P **P** 08 27 04.6 -1.2
KEST Kesra 35.70 102 P **P** 08 27 06.7 +0.3
KEST Kesra 35.70 102 P **P** 08 27 06.7 +0.3
comp=Z,4.4nm,0.9s,baz=347,slow=4.7,SNR=7.0
KEST Kesra 35.70 102 P **P** 08 27 06.7 +0.3
ULM Lac du Bonnet 36.56 290 P **P** 08 27 12.4 -1.1
ULM Lac du Bonnet 36.56 290 P **P** 08 27 12.4 -1.1
comp=Z,2.0nm,0.5s,baz=52,slow=8.6,SNR=3.3
ULM Lac du Bonnet 36.56 290 P **P** 08 27 12.4 -1.1
BZS Buzias 36.86 79⇑ *i*P **P** 08 27 16.4 +0.3
BZS Buzias 36.86 79⇑ *i*P **P** 08 27 16.4 +0.3
DRGR 36.86 76⇑ *i*P **P** 08 27 16.9 +0.8
DRGR 36.86 76⇑ *i*P **P** 08 27 16.9 +0.8
SFIN Scholer Farm 36.90 271 ⇓P **P** 08 27 16.7 +0.3
baz=37
SPMN St. Paul 37.42 281 ⇑P **P** 08 27 21.2 +0.3
baz=37
BUR08 Bucovina Ar. S 37.84 74 *e*P **P** 08 27 25.4 +0.9
BUR08 Bucovina Ar. S 37.84 74 *e*P **P** 08 27 25.4 +0.9
BURAR Bucovina Array 37.86 74⇑ *i*P **P** 08 27 26.4 +1.7
BURAR Bucovina Array 37.86 74⇑ *i*P **P** 08 27 26.4 +1.7
KIEV Kiev 38.52 67 *e*P **P** 08 27 29.1 -0.9
KIEV pmax pmax
comp=Z,7.0nm,0.9s
KIEV Kiev 38.52 67 *e*P **P** 08 27 29.1 -0.9
comp=Z,6.6nm,0.9s
KIEV Kiev 38.52 67 *e*P **P** 08 27 29.1 -0.9
comp=Z,7.0nm,0.9s
AK01 Malin Array Si 38.52 67 *e*P **P** 08 27 29.4 -0.7
AK01 Malin Array Si 38.52 67 *e*P **P** 08 27 29.4 -0.7
AKASG Malin Array Be 38.53 67 *i* P **P** 08 27 29.5 -0.6
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKASG Malin Array Be 38.53 67 P **P** 08 27 29.2 -0.9
AKASG Malin Array Be 38.53 67 P **P** 08 27 29.2 -0.9
comp=Z,2.6nm,0.8s,baz=300,slow=8.6,SNR=7.1
AKASG Malin Array Be 38.53 67 *i* P **P** 08 27 29.5 -0.6
comp=Z,3.0nm,0.8s
MLR Muntele Rosu 39.45 76⇓ *i*P **P** 08 27 40.3 +2.2
MLR Muntele Rosu 39.45 76⇓ *i*P **P** 08 27 40.3 +2.2
SIUC Southern Illin 39.87 269 *e*P **P** 08 27 41.5 +0.1

comp=Z,19nm,0.9s
SIUC Southern Illin 39.87 269 eP P 08 27 41.5 +0.1
comp=Z,19nm,0.9s
WVT Waverly 40.10 266 eP P 08 27 43.3 -0.1
WVT pmax pmax
comp=Z,18nm,1.4s
WVT Waverly 40.10 266 eP P 08 27 43.3 -0.1
comp=Z,18nm,1.4s
WVT Waverly 40.10 266 eP P 08 27 43.3 -0.1
comp=Z,18nm,1.4s
OBN Obninsk 40.25 58⇑ eP P 08 27 44.3 -0.1
OBN e 08 27 52.5
OBN pmax pmax
comp=Z,33nm,1.6s
OBN MLR MLR
comp=Z,500nm,15.0s
OBN Obninsk 40.25 58 eP P 08 27 44.3 -0.1
comp=Z,33nm,1.6s
YKA Yellowknife Ar 40.39 315 P P 08 27 45.0 -0.5
YKA PcP PcP 08 29 46.1 -2.1
YKA Yellowknife Ar 40.39 315 P P 08 27 45.0 -0.5
comp=Z,1.3nm,0.9s,baz=62,slow=8.8,SNR=8.4
YKA PcP PcP 08 29 46.1 -2.1
comp=Z,0.4nm,0.7s,baz=64,slow=3.7,SNR=3.7
YKA Yellowknife Ar 40.39 315 P P 08 27 45.0 -0.5
FVM French Village 40.41 270 eP P 08 27 46.1 +0.1
FVM pmax pmax
comp=Z,11nm,1.1s
FVM French Village 40.41 270 eP P 08 27 46.1 +0.1
comp=Z,11nm,1.1s
FVM French Village 40.41 270 eP P 08 27 46.1 +0.1
comp=Z,11nm,1.1s
ECSD EROS Data Cent 40.51 282 eP P 08 27 47.3 +0.5
comp=Z,6.7nm,1.0s
ECSD EROS Data Cent 40.51 282 eP P 08 27 47.3 +0.5
comp=Z,6.7nm,1.0s
TIGA Tifton 40.89 257 ⇑P P 08 27 51.3 +1.3
baz=41
B23A Brockton 42.57 293 ⇑P P 08 28 04.5 +0.9
baz=42
C24A Savage 42.78 291 ⇑P P 08 28 06.0 +0.6
baz=43
C23A Lambert 43.05 292 ⇓P P 08 28 08.4 +0.9
baz=43
D23A Lindsay 43.42 291 ⇑P P 08 28 11.3 +0.7
baz=43
C22A Vida 43.47 292 ⇑P P 08 28 11.3 +0.4
baz=43
VSR Storozhevoye 43.60 61 eP P 08 28 11.4 -0.5
VSR pmax pmax
comp=Z,20nm,1.4s
VSR pmax pmax
comp=N,20nm,1.2s
VSR pmax pmax
comp=E,10.0nm,0.9s
VORD Divnogorie 43.81 62 eP P 08 28 13.0 -0.5
VORD pmax pmax
comp=Z,20nm,1.2s
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
C21A Desert Coulee 44.09 293 ⇓P P 08 28 15.8 -0.1
baz=44
APE Apeiranthos 44.42 86⇓ iP P 08 28 17.9 -0.7
APE Apeiranthos 44.42 86⇓ iP P 08 28 17.9 -0.7
H24A Dirks Ranch, A 44.49 288 ⇑P P 08 28 19.5 +0.3
baz=44
INK Inuvik 44.55 328 P P 08 28 20.1 +0.8
INK Inuvik 44.55 328 P P 08 28 20.1 +0.8
comp=E,1.9nm,0.9s,baz=61,slow=10,SNR=3.2
INK Inuvik 44.55 328 P P 08 28 20.0 +0.8
MIAR Mount Ida 44.60 269 eP P 08 28 14.6 -5.5
MIAR pmax pmax
comp=Z,25nm,1.3s
MIAR Mount Ida 44.60 269 eP P 08 28 14.6 -5.5
comp=Z,25nm,1.3s
K26A Motz Farm, Whi 44.95 285 ⇓P P 08 28 21.7 -1.2
baz=45
VRHR Novokhopersk 44.96 60 eP P 08 28 22.6 -0.1
VRHR pmax pmax
comp=Z,10.0nm,0.9s
VRHR pmax pmax
comp=N,5.0nm,0.7s
VRHR pmax pmax
comp=E,8.0nm,0.5s
TUL1 Tulsa 45.00 272 ⇓P P 08 28 22.4 -0.9
baz=45
IDI Anoyia 45.24 89 eP P 08 28 25.3 +0.1
comp=E,4.2nm,0.7s
IDI Anoyia 45.24 89 eP P 08 28 25.3 +0.1
comp=E,4.2nm,0.7s
EGMT Eagleton 45.43 295 eP P 08 28 26.6 -0.1
comp=E,15nm,1.1s
EGMT Eagleton 45.43 295 ⇓P P 08 28 26.9 +0.3
baz=45
EGMT Eagleton 45.43 295 eP P 08 28 26.5 -0.1
comp=E,15nm,1.1s
D19A Cripps Ranch, 45.46 293 ⇑P P 08 28 26.8 0.0
baz=45
B17A L&G Farms, Che 45.83 296 ⇑P P 08 28 29.9 +0.1
baz=46
A16A West Butte Ran 45.87 297 ⇑P P 08 28 30.6 +0.4
baz=46
F20A Billings 45.87 291 ⇓P P 08 28 30.4 +0.2
baz=46
I22A 9 Mile Ranch, 46.11 288 ⇑P P 08 28 31.8 -0.2
baz=46
C17A Wharram Farm, 46.20 295 ⇓P P 08 28 33.2 +0.4
baz=46
B16A M & M Farms, S 46.25 296 ⇓P P 08 28 33.4 +0.3
baz=46
J22A Midwest 46.40 288 ⇓P P 08 28 34.4 0.0
baz=46
ANN Anapa 46.41 70 eP P 08 28 30.3 -4.0
ANN pmax pmax
comp=Z,84nm,1.1s
ANN MLR MLR
comp=N,449nm,23.0s
ANN MLR MLR
comp=E,1μm,23.0s
ANN MLR MLR
comp=Z,1μm,23.0s
D17A Six Diamond Ra 46.45 294 ⇑P P 08 28 34.8 0.0
baz=46
A15A Johnson Ranch, 46.46 297 ⇑P P 08 28 34.8 +0.1
baz=46
H20A Greybull 46.59 290 ⇑P P 08 28 36.0 +0.2
baz=46
I21A Big Trails, Te 46.62 289 ⇑P P 08 28 35.8 -0.3
baz=46
C16A Fuhringer Ranc 46.63 296 ⇓P P 08 28 36.2 +0.1
baz=46
A14A Double T Ranch 46.83 298 ⇓P P 08 28 38.9 +1.3
baz=47
K22A Casper 46.91 287 ⇓P P 08 28 38.1 -0.3
baz=47
G18A Lazy EL Ranch, 46.95 292 ⇓P P 08 28 39.0 +0.3
baz=47
E17A Martinsdale 46.97 294 ⇑P P 08 28 38.9 +0.1
baz=47
D16A Dana Ranch, Ca 46.99 295 ⇑P P 08 28 39.5 +0.5
baz=47
I20A Worland 47.00 289 ⇓P P 08 28 39.2 +0.1
baz=47
C15A Salmond Ranch, 47.11 296 ⇓P P 08 28 40.0 0.0
baz=47
F17A Fitzpatrick Pl 47.20 293 ⇑P P 08 28 41.3 +0.7
baz=47
K21A Alcova 47.33 287 ⇓P P 08 28 41.9 +0.1
baz=47
J20A Shoshoni 47.35 289 ⇓P P 08 28 42.1 +0.3
baz=47
A13A Flathead Natio 47.37 298 ⇑P P 08 28 41.8 0.0
baz=47
H18A Shoshone NF, C 47.41 291 ⇑P P 08 28 43.3 +0.9
baz=47
BRTR Keskin Array B 47.46 78 P P 08 28 43.9 +1.1
BRTR Keskin Array B 47.46 78 P P 08 28 43.9 +1.1
comp=Z,4.0nm,0.8s,baz=309,slow=4.9,SNR=9.1
BRTR Keskin Array B 47.46 78 P P 08 28 43.8 +1.1
R27A Eads 47.57 280 ⇑P P 08 28 43.7 +0.2
baz=48
N23A Red Feather La 47.70 285 ⇓P P 08 28 44.8 +0.1
baz=48
C14A Swan Lake 47.73 297 ⇑P P 08 28 44.3 -0.3
baz=48
B13A Whitefish 47.74 298 ⇓P P 08 28 45.0 +0.3
baz=48
L21A Rawlins 47.83 287 ⇑P P 08 28 46.1 +0.5
baz=48
BOZ Bozeman (W) 47.89 293 ⇑P P 08 28 46.4 +0.4
baz=48
K20A Yellowstone Ra 47.94 288 ⇑P P 08 28 46.5 +0.1
baz=48
R26A Arlington 47.94 280 ⇓P P 08 28 47.0 +0.5
baz=48
J19A Crowheart 47.95 289 ⇑P P 08 28 47.0 +0.4
baz=48
M21A Separation Pea 48.05 286 ⇑P P 08 28 47.4 0.0
baz=48
K19A Absolon Red Bu 48.12 289 ⇓P P 08 28 47.5 -0.3
baz=48
ISCO Idaho Springs 48.22 283 ⇑P P 08 28 49.2 +0.4
baz=48
C13A Hot Springs 48.22 297 ⇓P P 08 28 48.5 0.0
baz=48
L20A Wamsutter 48.35 287 ⇑P P 08 28 49.1 -0.7
baz=48
E14A Clinton 48.43 295 ⇑P P 08 28 50.5 +0.3
baz=48
D13A Huson 48.52 296 ⇓P P 08 28 51.3 +0.5
baz=48
J18A Kendall Valley 48.53 290 ⇑P P 08 28 51.4 +0.3
baz=48
R25A Fountain Ranch 48.53 281 ⇑P P 08 28 51.3 +0.3
baz=48
BW06 Boulder Array 48.56 289 ⇑P P 08 28 50.9 -0.4
baz=48
PDAR Pinedale Array 48.56 289 P P 08 28 50.7 -0.6
PDAR Pinedale Array 48.56 289 P P 08 28 50.7 -0.6
comp=Z,2.1nm,0.8s,baz=69,slow=8.1,SNR=5.7
PDAR Pinedale Array 48.56 289 P P 08 28 50.7 -0.6
G15A Dillon 48.66 293 ⇓P P 08 28 52.5 +0.5
baz=48
E13A Victor 48.79 296 ⇓P P 08 28 53.5 +0.7
baz=49
L19A Farson 48.87 288 ⇓P P 08 28 53.7 0.0
baz=49
Z32A Haskell 48.99 273 ⇑P P 08 28 55.6 +1.1
baz=49
X30A Coker Ranch, T 49.03 275 ⇓P P 08 28 55.6 +0.8
baz=49
N20A Spence Gulch, 49.07 286 ⇑P P 08 28 55.6 +0.4
baz=49
G14A Jackson 49.15 294 ⇑P P 08 28 55.8 0.0
baz=49
NEW Newport 49.20 299 P P 08 28 57.4 +1.4
NEW Newport 49.20 299 P P 08 28 57.4 +1.4
comp=Z,1.4nm,0.7s,baz=2.0,slow=10,SNR=3.4
NEW Newport 49.20 299 P P 08 28 57.3 +1.4
AMTX Amarillo 49.21 276 ⇑P P 08 28 56.7 +0.4
baz=49
T25A Trinidad 49.29 280 ⇓P P 08 28 58.1 +1.1
baz=49
L18A Fontenelle, Gr 49.37 288 ⇓P P 08 28 58.0 +0.5
baz=49
Z31A Sharp Cattle R 49.38 273 ⇓P P 08 28 58.4 +0.9
baz=49
P21A Newcastle 49.47 284 ⇑P P 08 28 59.3 +1.0
baz=49
H14A Leadore 49.50 293 ⇓P P 08 28 58.5 +0.1
baz=49
N19A John Jarvie Ra 49.56 287 ⇓P P 08 28 59.2 +0.3
baz=49
Q22A Crested Butte, 49.59 283 ⇑P P 08 28 59.4 +0.1
baz=50
G13A Cobalt 49.66 294 ⇑P P 08 28 59.7 +0.1
baz=50
TORD Torodi Ar. Bea 49.75 130 P P 08 28 59.4 -1.0
TORD Torodi Ar. Bea 49.75 130 P P 08 28 59.4 -1.0
comp=Z,6.3nm,0.9s,baz=332,slow=7.5,SNR=10.0
TORD Torodi Ar. Bea 49.75 130 P P 08 28 59.4 -1.0
J15A Blackfoot 49.76 291 ⇓P P 08 29 01.6 +1.2
baz=50
N18A Larsen Ranch, 49.78 287 ⇑P P 08 29 01.3 +0.6
baz=50
U25A Circle Dot Ran 49.78 279 ⇑P P 08 29 02.0 +1.3
baz=50
V26A Tequesquite Ra 49.83 278 ⇓P P 08 29 01.8 +0.8
baz=50
KIV Kislovodsk 49.87 67⇓ eP P 08 29 00.7 -0.4
KIV e 08 29 06.5
KIV pmax pmax
comp=Z,11nm,1.3s
KIV MLR MLR
comp=Z,100nm,13.0s
O19A Miners Draw (B 49.92 286 ⇑P P 08 29 01.9 +0.2
baz=50
R22A Saguache, Gunn 49.93 283 ⇓P P 08 29 03.4 +1.5
baz=50
I14A Makay 49.98 293 ⇑P P 08 29 03.3 +1.2
baz=50
L16A Fish Haven 50.10 289 ⇑P P 08 29 03.0 -0.1
baz=50
KBZ Khabaz 50.13 68 P P 08 29 04.7 +1.7
KBZ Khabaz 50.13 68 P P 08 29 04.7 +1.7
KBZ Khabaz 50.13 68 P P 08 29 04.7 +1.7
comp=Z,4.5nm,0.9s,baz=296,slow=8.2,SNR=5.9
KBZ Khabaz 50.13 68 P P 08 29 04.7 +1.7
S22A 4UR Ranch, Cre 50.29 282 ⇓P P 08 29 05.3 +0.6
baz=50
Q20A Ridgley Place, 50.33 284 ⇑P P 08 29 05.6 +0.8
baz=50
H12A Diamond D Ranc 50.35 294 ⇑P P 08 29 05.2 +0.3
baz=50
Z29A Hungry Hill Ra 50.35 274 ⇑P P 08 29 05.2 +0.3
baz=50
I13A Wildhorse Cree 50.36 293 ⇑P P 08 29 05.8 +0.7
baz=50
J14A Carey 50.41 292 ⇓P P 08 29 05.8 +0.4
baz=50
N17A Moffit Pass 50.47 288 ⇓P P 08 29 05.7 -0.3
baz=50
MSTX Muleshoe 50.49 276 ⇑P P 08 29 07.1 +1.1
baz=50
W25A X Bar L Ranch, 50.63 278 ⇓P P 08 29 07.5 +0.4
baz=50
L15A Malad City 50.65 290 ⇓P P 08 29 07.4 +0.2
baz=50
M16A Hutsville 50.67 289 ⇑P P 08 29 07.9 +0.5
baz=50
K14A Jones Ranch, D 50.73 291 ⇑P P 08 29 08.1 +0.3
baz=51
HLID Hailey 50.75 293 ⇑P P 08 29 08.7 +0.8
baz=51
DOT Dot Lake 50.81 327 eP P 08 29 09.1 +1.2
comp=Z,4.8nm,1.0s
DOT Dot Lake 50.81 327 eP P 08 29 09.1 +1.2
comp=Z,4.8nm,1.0s
S21A Coal Bank Pass 50.91 283 ⇓P P 08 29 10.5 +1.1
baz=51
ILAR Eielson Array 50.93 329 P P 08 29 09.4 +0.7
ILAR Eielson Array 50.93 329 P P 08 29 09.4 +0.7
comp=Z,1.3nm,0.8s,baz=41,slow=4.8,SNR=7.7
ILAR Eielson Array 50.93 329 P P 08 29 09.4 +0.7
I12A Atlanta 51.00 293 ⇑P P 08 29 10.1 +0.3
baz=51
MALT Malatya 51.18 76 eP P 08 29 11.9 +0.8
MALT pmax pmax
comp=Z,15nm,1.5s
MALT Malatya 51.18 76 eP P 08 29 11.9 +0.8
comp=Z,15nm,1.5s
MALT Malatya 51.18 76 eP P 08 29 11.9 +0.8
comp=Z,15nm,1.5s
W24A Lazy 6 Ranch, 51.19 279 ⇓P P 08 29 12.4 +1.0
baz=51
JCT Junction City 51.19 270 ⇓P P 08 29 11.2 0.0
baz=51
U22A Llaves 51.24 281 ⇑P P 08 29 13.3 +1.6
baz=51
ZEI Tsey 51.31 68 eP P 08 29 11.8 -0.4
ZEI pmax pmax
comp=Z,19nm,2.0s
330A Mertzon 51.35 272 ⇑P P 08 29 13.5 +1.1
baz=51
532A Rocksprings 51.51 270 ⇓P P 08 29 13.5 -0.1
baz=51
V22A San Miguel Ran 51.59 281 ⇑P P 08 29 15.0 +0.6
baz=52
Y25A Mesa, Roswell 51.66 277 ⇑P P 08 29 15.9 +1.1
baz=52
329A Wagon Wheel Ra 51.77 273 ⇓P P 08 29 16.3 +0.7
baz=52
430A Baggett Ranch, 51.83 272 ⇑P P 08 29 16.4 +0.4
baz=52
531A Rocksprings 51.86 271 ⇑P P 08 29 16.2 -0.1
baz=52
ANMO Albuquerque 51.99 279 P P 08 29 18.4 +1.0
ANMO Albuquerque 51.99 279 P P 08 29 18.4 +1.0
comp=Z,0.6nm,0.4s,baz=59,slow=8.1,SNR=2.6
ANMO Albuquerque 51.99 279 P P 08 29 18.4 +1.0
Q16A Castle Valley 52.02 286 ⇑P P 08 29 18.0 +0.5
baz=52
MCK McKinley 52.30 329 eP P 08 29 19.8 +0.8
MCK pmax pmax
comp=Z,12nm,1.0s
MCK McKinley 52.30 329 eP P 08 29 19.8 +0.8
comp=Z,12nm,1.0s
MCK McKinley 52.30 329 eP P 08 29 19.8 +0.8
comp=Z,12nm,1.0s
429A Davenport Ranc 52.34 272 ⇓P P 08 29 19.8 0.0
baz=52
530A J-C Ranch, Com 52.35 271 ⇑P P 08 29 20.0 +0.2
baz=52
BNM Barren Site 52.65 279 eP P 08 29 24.7 +2.4
comp=Z,1.1nm,0.7s
BNM Barren Site 52.65 279 eP P 08 29 24.7 +2.4
comp=Z,1.1nm,0.7s
GDL2 Guadalupe Moun 52.68 275 eP P 08 29 24.7 +2.3
GDL2 Guadalupe Moun 52.68 275 eP P 08 29 24.7 +2.3
428A Kincaid Ranch, 52.74 273 ⇑P P 08 29 22.8 0.0
baz=53
DBIC Dimbokro 52.83 141 P P 08 29 22.9 -0.6
DBIC Dimbokro 52.83 141 P P 08 29 22.9 -0.6
comp=Z,7.9nm,0.9s,baz=331,slow=7.3,SNR=5.6
DBIC Dimbokro 52.83 141 P P 08 29 22.9 -0.6
MSU Marysvale 52.87 287 eP P 08 29 24.7 +0.9
MSU Marysvale 52.87 287 eP P 08 29 24.7 +0.9
MSU Marysvale 52.87 287 eP P 08 29 24.7 +0.9
529A Stev Forest Ra 52.89 272 ⇓P P 08 29 24.1 +0.2
baz=53
MAK Makhachkala 53.17 66 eP P 08 29 20.3 -5.3
MAK e 08 31 29.9
MAK S S 08 37 00.9 +5.5
MAK e 08 39 10.0
MAK pmax pmax
comp=Z,17nm,0.2s
MAK MLR MLR
comp=Z,479nm,16.0s
LIC Lamto 53.18 141 eP P 08 29 25.7 -0.3
comp=Z,29nm,1.1s
LIC eR
comp=Z,884nm,23.0s
LIC Lamto 53.18 141 eP P 08 29 25.7 -0.3
comp=Z,29nm,1.1s
528A Cox Ranch, San 53.20 272 ⇓P P 08 29 26.2 -0.1
baz=53
GNI Garni 53.54 70 P P 08 29 30.4 +1.8
GNI Garni 53.54 70 P P 08 29 30.4 +1.8
comp=Z,3.0nm,0.3s,baz=225,slow=2.9,SNR=3.9
GNI Garni 53.54 70 P P 08 29 30.5 +1.8
MNTX Cornudas Mount 53.65 276 ⇑P P 08 29 30.3 +0.9
baz=54
CCUT Cedar City 54.21 287 eP P 08 29 33.9 +0.2
comp=Z,3.7nm,1.1s
CCUT Cedar City 54.21 287 eP P 08 29 33.9 +0.2
comp=Z,3.7nm,1.1s
TXAR Lajitas Array 54.33 272 P P 08 29 36.2 +1.7
TXAR Lajitas Array 54.33 272 P P 08 29 36.2 +1.7
comp=Z,0.9nm,0.9s,baz=43,slow=14,SNR=2.8
TXAR Lajitas Array 54.33 272 P P 08 29 36.2 +1.7
NVAR Mina Array Bea 56.39 291 P P 08 29 49.5 +0.1
NVAR Mina Array Bea 56.39 291 P P 08 29 49.5 +0.1
comp=Z,0.7nm,0.8s,baz=59,slow=6.7,SNR=3.9
NVAR Mina Array Bea 56.39 291 P P 08 29 49.5 +0.1
BEKR Beckworth 56.52 293 eP P 08 29 51.4 +1.1
comp=Z,10nm,1.5s
BEKR Beckworth 56.52 293 eP P 08 29 51.4 +1.1
comp=Z,10nm,1.5s
MPMC Manual Prospec 57.61 288 ⇑P P 08 29 57.0 -1.1
baz=58
ROSC El Rosal 58.00 228 P P 08 30 03.6 +2.4
ROSC El Rosal 58.00 228 P P 08 30 03.6 +2.4
comp=Z,12nm,1.0s,baz=358,slow=0.8,SNR=2.2
ROSC El Rosal 58.00 228 P P 08 30 03.6 +2.4
LRMC Laurel Mountai 58.14 288 ⇓P P 08 30 01.0 -0.6
baz=58
CMIG Matias Romero 58.44 255 P P 08 30 05.4 +1.7
CMIG Matias Romero 58.44 255 P P 08 30 05.4 +1.7
comp=Z,2.0nm,0.9s,baz=8.1,slow=7.1,SNR=2.8
CMIG Matias Romero 58.44 255 P P 08 30 05.4 +1.7
ZALV Zalesovo Beam 61.99 35 P P 08 30 28.1 +0.5
ZALV Zalesovo Beam 61.99 35 P P 08 30 28.1 +0.5
ZALV Zalesovo Beam 61.99 35 P P 08 30 28.1 +0.5
comp=Z,0.5nm,0.4s,baz=328,slow=5.1,SNR=4.3
ZALV Zalesovo Beam 61.99 35 P P 08 30 28.0 +0.5
KKAR Karatay Array 64.73 51 eP P 08 30 46.0 0.0
KKAR pmax pmax
comp=Z,2.0nm,0.9s
KKAR Karatay Array 64.73 51 eP P 08 30 46.0 0.0
comp=Z,2.5nm,0.9s
KKAR Karatay Array 64.73 51 eP P 08 30 46.0 0.0
comp=Z,2.5nm,0.9s
EKS2 Erkin-Say 66.58 49 eP P 08 30 59.4 +1.4
EKS2 pmax pmax
comp=Z,11nm,1.1s
EKS2 Erkin-Say 66.58 49 eP P 08 30 59.4 +1.4
comp=Z,11nm,1.1s
EKS2 Erkin-Say 66.58 49 eP P 08 30 59.4 +1.4
comp=Z,11nm,1.1s
MKAR Makanchi Array 66.88 41 P P 08 30 59.1 -0.7
MKAR Makanchi Array 66.88 41 P P 08 30 59.1 -0.7
MKAR Makanchi Array 66.88 41 P P 08 30 59.1 -0.7
comp=Z,1.0nm,0.8s,baz=326,slow=6.3,SNR=5.1
MKAR Makanchi Array 66.88 41 P P 08 30 59.1 -0.7
AAK Ala-Archa 66.93 49 eP P 08 31 01.3 +1.0
AAK pmax pmax
comp=Z,10.0nm,1.3s
AAK Ala-Archa 66.93 49 eP P 08 31 01.3 +1.0
comp=Z,9.6nm,1.3s
AAK Ala-Archa 66.93 49 eP P 08 31 01.3 +1.0
comp=Z,9.6nm,1.3s
BDFB Brasilia 69.72 193 P P 08 31 17.6 -0.3
BDFB Brasilia 69.72 193 P P 08 31 17.6 -0.3
comp=Z,2.7nm,0.6s,baz=20,slow=9.7,SNR=7.3
BDFB Brasilia 69.72 193 P P 08 31 17.6 -0.3
SONM Songino Array 73.93 26 P P 08 31 43.2 +0.2
SONM Songino Array 73.93 26 P P 08 31 43.2 +0.2
comp=Z,4.4nm,1.1s,baz=333,slow=6.2,SNR=6.3
SONM Songino Array 73.93 26 P P 08 31 43.2 +0.2
ULN Ulaanbaatar 74.08 25 eP P 08 31 44.2 +0.4
comp=Z,12nm,1.7s
ULN Ulaanbaatar 74.08 25 eP P 08 31 44.2 +0.4
comp=Z,12nm,1.7s
LPAZ La Paz 75.02 213 P P 08 31 49.4 -0.7
LPAZ La Paz 75.02 213 P P 08 31 49.4 -0.7
comp=Z,1.8nm,1.0s,baz=11,slow=12,SNR=2.9
LPAZ La Paz 75.02 213 P P 08 31 49.3 -0.7
GTA Gaotai 79.68 34 eP P 08 32 15.4 -0.1
GTA pP pP 08 32 20.3 -0.5
GTA sP sP 08 32 22.5 -0.2
GTA SKS SKKSac 08 42 34.1 +0.8
GTA S ScS 08 42 36.8 -2.0
GTA sS SKSac 08 42 45.0 +13
GTA SS SS 08 48 06.6 +42
GTA pmax pmax
comp=Z,6.0nm,1.3s
GTA pmax pmax
comp=Z,7.0nm,1.8s
GTA pmax pmax
comp=Z,170nm,7.1s
GTA LR LR
comp=N,210nm,19.0s
GTA LR LR
comp=E,250nm,18.1s
GTA LR LR
comp=Z,290nm,20.9s
WRA Warramunga Arr 145.56 17 PKPbc PKPdf 08 39 45.2 -0.9
WRA Warramunga Arr 145.56 17 PKPbc PKPdf 08 39 45.2 -0.9
comp=Z,1.4nm,1.0s,baz=338,slow=3.3,SNR=4.1
WRA Warramunga Arr 145.56 17 PKPbc PKPdf 08 39 45.2 -0.9
ASAR Alice Springs 149.11 20 PKPbc PKPbc 08 39 55.2 -0.9
ASAR Alice Springs 149.11 20 PKPbc PKPbc 08 39 55.2 -0.9
comp=Z,1.3nm,0.7s,baz=356,slow=2.4,SNR=9.7
ASAR Alice Springs 149.11 20 PKPbc PKPbc 08 39 55.2 -0.9

IDC 19 08:24:58.4±2.2, 4°43N×127°20E, h0km, mb 3.4/3, mb1 3.6/3, mb1mx3.3/23, mbtmp3.4/3, Error ellipse:

s-maj=165.3km s-min=27.0km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.21**	**164**	P	P	08 30 26.3	+0.2
	1.2nm,0.7s,baz=344,slow=11,SNR=6.9						
ASAR	**Alice Springs**	**28.68**	**167**	P	P	08 30 57.0	-0.3
	0.2nm,0.6s,baz=347,slow=7.7,SNR=2.9						
MKAR	**Makanchi Array**	**57.26**	**325**	P	P	08 34 47.8	0.0
	0.4nm,0.6s,baz=122,slow=9.0,SNR=5.0						

IDC 19 08:28:29.7±1.2, 20°.49N×145°.52E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/26, mbtmp3.6/7, Error ellipse: s-maj=48.1km s-min=19.6km az=91.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**22.80**	**322**	P	P	08 33 34.6	+0.6
	0.9nm,0.8s,baz=144,slow=8.5,SNR=5.4						
WRA	**Warramunga Arr**	**41.65**	**196**	P	P	08 36 19.8	-0.3
	0.5nm,0.6s,baz=12,slow=8.0,SNR=9.9						
FITZ	**Fitzroy Crossi**	**43.03**	**208**	P	P	08 36 31.5	+0.3
	0.8nm,0.4s,baz=37,slow=13,SNR=6.0						
ASAR	**Alice Springs**	**45.33**	**195**	P	P	08 36 49.3	-0.4
	0.3nm,0.4s,baz=12,slow=6.5,SNR=10						
MKAR	**Makanchi Array**	**57.12**	**313**	P	P	08 38 17.4	-0.6
	0.3nm,0.5s,baz=93,slow=7.4,SNR=5.0						
YKA	**Yellowknife Ar**	**76.49**	**28**	P	P	08 40 21.4	+0.1
	0.1nm,0.5s,baz=290,slow=5.6,SNR=5.5						
FINES	**FINESS Array B**	**85.20**	**335**	P	P	08 41 07.8	0.0
	1.0nm,0.7s,baz=65,slow=5.2,SNR=11						

*BJI **19** 08:45:44.6, 14°.75N×144°.76E, h4km, mB4.9/28, mb4.6/36, Ms4.6/26, Ms7 4.4/28*

*IDC **19** 08:45:46.5±0.5, 14°.84N×144°.69E, h0km, mb4.3/24, mb1 4.4/24, mb1mx4.3/32, mbtmp4.3/24, MS3.9/6, Ms1 4.0/6, ms1mx3.6/43, Error ellipse: s-maj=20.2km s-min=10.4km az=83.0*

*ISCJB **19** 08:45:47.5±1.5, 14°.78N±0°.04×144°.54E±0°.06, h14km±9km, mb4.4/56, MS4.1/13, Error ellipse: s-maj=10.9km s-min=5.3km az=161.3*

*NEIC **19** 08:45:48.4±0.2, 14°.84N×144°.57E, h10km, mb4.7/19, Error ellipse: s-maj=9.6km s-min=5.7km az=80.0*

*GCMT **19** 08:45:53.0±0.3, 14°.76N×144°.27E, h13km±1km, MW5.0, Moment Tensor Solution. s20,c22; s65,c98; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.40±.27; $M_{\theta\theta}$0.77±.15; $M_{\phi\phi}$2.63±.19; $M_{r\theta}$0.76±.55; $M_{\theta\phi}$1.08±.10; $M_{\phi r}$1.05±.42; Best double couple: M_o3.50000×10^{16} NP1:ϕ_s21.00000°, δ34.00000°, λ-96.00000°. NP2:ϕ_s208.00000°, δ56.00000°, λ-86.00000°. Principal axes: T 3.3700, Plg11.0000°, Azm296.0000°; N 0.2900, Plg3.0000°, Azm26.0000°; P -3.6500, Plg79.0000°, Azm133.0000°; Data Used: IU II IC CN G.*

ISC 19 08:45:49.6±0.5, 14°.79N±0°.05×144°.55E±0°.08, h17km±2km, n98, σ1s59/136, mb4.5/56, MS4.1/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.23**	**166**	*e*P	**Pn**	**08 46 10.9**	**-1.1**
GUMO				*e*S	**Sb**	**08 46 24.6**	**-3.5**
GUMO				Sn	**Sb**	**08 46 26.2**	**-1.8**
GUMO	**Guam**	**1.23**	**166**	Pn	**Pn**	**08 46 10.9**	**-1.1**
	824nm,0.3s,baz=307,slow=3.8,SNR=386						
GUMO				Sn	**Sb**	**08 46 26.2**	**-1.8**
	1µm,0.3s,baz=197,slow=19,SNR=80						
JHJ	**Hachijo jima 2**	**18.75**	**347**	LR	LR	08 56 17.4	
	comp=Z,546nm,19.6s,baz=204,slow=34						
DAV	**Davao City (W)**	**20.13**	**250**	LR	LR	08 57 07.8	
	comp=Z,166nm,20.6s,baz=76,slow=34						
JNU	**Nakatsue**	**22.07**	**328**	*e*P	**P**	**08 50 42.6**	**-1.2**
JNU	**Nakatsue**	**22.07**	**328**	P	**P**	**08 50 42.2**	**-1.6**
	25nm,1.2s,baz=103,slow=1.7,SNR=4.5						
MJAR	**Matsushiro Arr**	**22.39**	**346**	P	**P**	**08 50 46.2**	**-1.0**
MJAR	**Matsushiro Arr**	**22.39**	**346**	P	**P**	**08 50 46.2**	**-1.0**
	14nm,1.1s,baz=174,slow=10,SNR=20						
MAJO	**Matsushiro**	**22.39**	**346**	*e*P	**P**	**08 50 48.2**	**+1.0**
	48nm,1.4s						
MAT	**Matsushiro**	**22.39**	**346**	P	**P**	**08 50 46.1**	**-1.1**
MAT				S	**S**	**08 54 55.4**	**+2.8**
SSLB	**Suanglung**	**23.97**	**296**	*e*P	**P**	**08 51 03.0**	**-0.4**
	180nm,2.1s						
PMG	**Port Moresby**	**24.18**	**174**	P	**P**	**08 51 07.7**	**+2.5**
PMG	**Port Moresby**	**24.18**	**174**	P	**P**	**08 51 07.7**	**+2.5**
	17nm,0.9s,baz=327,slow=9.1,SNR=4.0						
KSRS	**Korea Array**	**26.98**	**330**	P	**P**	**08 51 31.2**	**+0.8**
	2.0nm,0.8s,baz=140,slow=9.9,SNR=8.5						
KSAR	**Wonju Array Be**	**26.98**	**330**	P	**P**	**08 51 31.2**	**+0.7**
NJ2	**Nanjing**	**29.06**	**311**	*e*P	**P**	**08 51 50.3**	**+1.2**
NJ2				pP	**pP**	**08 51 59.3**	**+5.0**
NJ2				sP	sP	08 52 02.8	+6.3
NJ2				PP	**PnPn**	**08 52 44.5**	**+3.1**
NJ2				S	**S**	**08 56 39.0**	**-1.0**
NJ2				sS	sS	08 56 56.0	+7.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,80nm,7.7s						
NJ2				LR	LR		
	comp=N,240nm,11.3s						
NJ2				LR	LR		
	comp=E,160nm,10.3s						
NJ2				LR	LR		
	comp=Z,190nm,10.8s						
ASAJ	**Asahikawa**	**29.27**	**357**	P	**P**	**08 51 51.3**	**+0.4**
ASAJ	**Asahikawa**	**29.27**	**357**	P	**P**	**08 51 51.3**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=193,slow=18,SNR=4.2						
USRK	**Ussuriysk Arra**	**31.20**	**342**	P	**P**	**08 52 09.8**	**+1.9**
	comp=Z,1.1nm,0.7s,baz=145,slow=7.0,SNR=4.8						
MDJ	**Mudanjiang**	**32.33**	**340**	P	**P**	**08 52 18.1**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,30nm,5.0s						
CN2	**Changchun**	**33.20**	**334**	*e*P	**P**	**08 52 24.3**	**-1.2**
CN2				*e*S	**S**	**08 57 42.6**	**-1.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,13.0s						
CN2				LR	LR		
	comp=E,300nm,13.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
QIZ	**Qiongzhong**	**33.44**	**282**	P	**P**	**08 52 26.8**	**-1.1**
QIZ				S	**S**	**08 57 46.0**	**-2.9**
QIZ				pmax	pmax		
	comp=Z,22nm,2.2s						
QIZ				LR	LR		
	comp=N,330nm,16.0s						
QIZ				LR	LR		
	comp=Z,490nm,30.0s						
CTA	**Charters Tower**	**34.70**	**177**	P	**P**	**08 52 39.9**	**+1.1**
CTA	**Charters Tower**	**34.70**	**177**	P	**P**	**08 52 39.9**	**+1.1**
	comp=Z,4.2nm,1.0s,baz=9.5,slow=11,SNR=3.3						
CTAO	**Charters Tower**	**34.70**	**177**	*e*P	**P**	**08 52 40.8**	**+2.0**
	comp=Z,6.1nm,1.1s						
WRAB	**Tennant Creek**	**35.94**	**196**	*e*P	**P**	**08 52 48.6**	**-0.8**
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	**35.95**	**197**	P	**P**	**08 52 48.9**	**-0.6**
WRA	**Warramunga Arr**	**35.95**	**197**	P	**P**	**08 52 48.9**	**-0.6**
	comp=Z,6.1nm,1.0s,baz=12,slow=9.7,SNR=31						
GYA	**Guiyang**	**37.18**	**294**	*e*P	**P**	**08 53 01.0**	**+0.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN	**Xi'an**	**37.42**	**307**	P	**P**	**08 53 02.8**	**+0.8**
XAN				pP	**pP**	**08 53 06.9**	**-0.4**
XAN				S	**S**	**08 58 44.8**	**-5.0**
XAN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,34nm,6.1s						
XAN				LR	LR		
	comp=N,180nm,16.4s						
XAN				LR	LR		
	comp=E,80nm,21.5s						
XAN				LR	LR		
	comp=Z,120nm,17.4s						
FITZ	**Fitzroy Crossi**	**37.63**	**210**	*e*P	**P**	**08 53 03.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**37.63**	**210**	P	**P**	**08 53 02.7**	**-1.1**
	comp=Z,4.4nm,1.0s,baz=44,slow=9.9,SNR=6.4						
FITZ				LR	LR	09 09 11.1	
	comp=Z,92nm,18.2s,baz=3.7,slow=37						
HHC	**Hu-ho-hao-te**	**38.67**	**319**	*e*P	**P**	**08 53 12.8**	**+0.3**
HHC				PP	**PnPn**	**08 54 45.1**	**+1.9**
HHC				PcP	**PcP**	**08 55 25.6**	**+1.1**
HHC				S	**S**	**08 59 08.6**	**-0.1**
HHC				ScP	**ScP**	**08 59 12.5**	**+0.5**
HHC				sS	**sS**	**08 59 15.3**	**-2.1**
HHC				SS	**SnSn**	**09 01 49.6**	**-7.6**
HHC				ScS	**ScS**	**09 03 21.5**	**-1.1**
HHC				pmax	pmax		
	comp=Z,51nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,6.0s						
HHC				LR	LR		
	comp=N,490nm,14.8s						
HHC				LR	LR		
	comp=E,570nm,14.9s						
HHC				LR	LR		
	comp=Z,450nm,14.5s						
ASAR	**Alice Springs**	**39.62**	**195**	P	**P**	**08 53 20.4**	**-0.1**
ASAR	**Alice Springs**	**39.62**	**195**	P	**P**	**08 53 20.4**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=21,slow=10,SNR=12						
CD2	**Chengdu**	**40.62**	**300**	P	**P**	**08 53 28.9**	**0.0**
CD2				pP	**pP**	**08 53 33.4**	**-0.8**
CD2				sP	**sP**	**08 53 35.9**	**-0.4**
CD2				PP	**PnPn**	**08 55 06.0**	**-0.5**
CD2				PcS	**PcS**	**08 59 21.4**	**-0.2**
CD2				S	**S**	**08 59 37.8**	**-0.3**
CD2				sS	**sS**	**08 59 44.8**	**-2.0**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.6s						
CD2				LR	LR		
	comp=N,310nm,16.6s						
CD2				LR	LR		
	comp=E,740nm,17.6s						
CD2				LR	LR		
	comp=Z,600nm,18.6s						
LZH	**Lanzhou**	**42.04**	**308**	*e*P	**P**	**08 53 42.5**	**+1.9**
LZH				pP	**pP**	**08 53 45.8**	**-0.1**
LZH				*e*PP	PP	08 55 23.5	+5.5
LZH				*e*S	**S**	**09 00 00.6**	**+1.3**
LZH				sS	**sS**	**09 00 07.5**	**-0.5**
LZH				pmax	pmax		
	comp=Z,28nm,1.3s						
LZH				pmax	pmax		
	comp=Z,120nm,8.0s						
LZH				LR	LR		
	comp=N,470nm,14.5s						
LZH				LR	LR		
	comp=E,430nm,13.2s						
LZH				LR	LR		
	comp=Z,550nm,16.7s						
DZM	**Mont Dzumac**	**42.46**	**149**	*e*LR	LR	09 05 00.1	
	comp=Z,488nm,25.3s						
DZM	**Mont Dzumac**	**42.46**	**149**	P	**P**	**08 53 44.1**	**+0.1**
DZM	**Mont Dzumac**	**42.46**	**149**	P	**P**	**08 53 44.1**	**+0.1**
	comp=Z,22nm,1.0s,baz=33,slow=6.9,SNR=6.1						
CMAR	**Chiang Mai Arr**	**43.77**	**281**	P	**P**	**08 53 56.5**	**+1.8**
CMAR	**Chiang Mai Arr**	**43.77**	**281**	P	**P**	**08 53 56.5**	**+1.8**
	comp=Z,8.0nm,1.1s,baz=79,slow=6.7,SNR=25						
CMAR				LR	LR	09 09 27.0	
	comp=Z,196nm,21.4s,baz=95,slow=32						
KULM	**Kulim**	**44.17**	**262**	*e*P	**P**	**08 53 59.2**	**+1.2**
	comp=Z,53nm,1.7s						
ULN	**Ulaanbaatar**	**45.23**	**325**	P	**P**	**08 54 05.0**	**-1.1**
	comp=Z,4.8nm,0.9s						
SONM	**Songino Array**	**45.58**	**324**	P	**P**	**08 54 09.9**	**+1.0**
SONM				PcP	**PcP**	**08 55 46.4**	**-0.9**
SONM	**Songino Array**	**45.58**	**324**	P	**P**	**08 54 09.9**	**+1.0**
	comp=Z,1.3nm,1.0s,baz=146,slow=11,SNR=6.4						
SONM				PcP	**PcP**	**08 55 46.4**	**-0.9**
	comp=Z,3.9nm,1.1s,baz=170,slow=0.7,SNR=5.3						
GTA	**Gaotai**	**46.15**	**311**	*e*P	**P**	**08 54 14.5**	**+1.0**
GTA				pP	**pP**	**08 54 19.1**	**+0.2**
GTA				sP	**sP**	**08 54 21.6**	**+0.6**
GTA				PcP	**PcP**	**08 55 50.6**	**+1.2**
GTA				S	**S**	**09 00 59.9**	**+0.8**
GTA				sS	**sS**	**09 01 07.3**	**-0.6**
GTA				SS	SS	09 04 16.8	-7.6
GTA				pmax	pmax		
	comp=Z,12nm,1.6s						
GTA				pmax	pmax		
	comp=Z,76nm,4.3s						
GTA				LR	LR		
	comp=N,210nm,19.9s						
GTA				LR	LR		
	comp=E,240nm,18.1s						
GTA				LR	LR		
	comp=Z,290nm,19.9s						
STKA	**Stephens Creek**	**46.49**	**183**	P	**P**	**08 54 16.1**	**+0.1**
STKA	**Stephens Creek**	**46.49**	**183**	P	**P**	**08 54 16.1**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=337,slow=13,SNR=4.2						
WMQ	**Urumqi**	**56.09**	**313**	P	**P**	**08 55 29.0**	**+0.9**
WMQ				sP	**sP**	**08 55 36.0**	**+0.4**
WMQ				PcP	**PcP**	**08 56 27.0**	**+0.9**
WMQ				PP	**PP**	**08 57 35.0**	**+1.9**
WMQ				ScP	**ScP**	**09 00 24.0**	**-0.7**
WMQ				S	**S**	**09 03 15.0**	**-1.4**
WMQ				ScS	**ScS**	**09 05 14.0**	**-2.9**
WMQ				SS	**SS**	**09 07 01.0**	**-1.7**
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,130nm,5.0s						
WMQ				LR	LR		
	comp=N,180nm,18.0s						
WMQ				LR	LR		
	comp=E,250nm,18.0s						
WMQ				LR	LR		
	comp=Z,280nm,18.0s						
MK31	**Makanchi Array**	**60.42**	**316**	*e*P	**P**	**08 55 57.4**	**-0.9**
MKAR	**Makanchi Array**	**60.42**	**316**	P	**P**	**08 55 58.4**	**+0.2**
MKAR	**Makanchi Array**	**60.42**	**316**	P	**P**	**08 55 58.4**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=89,slow=7.6,SNR=14						
ZAA0	**Zalesovo Array**	**60.47**	**324**	*e*P	**P**	**08 55 56.9**	**-1.6**
ZALV	**Zalesovo Beam**	**60.47**	**324**	P	**P**	**08 55 57.8**	**-0.6**
ZALV	**Zalesovo Beam**	**60.47**	**324**	P	**P**	**08 55 57.8**	**-0.6**
	comp=Z,2.6nm,0.9s,baz=90,slow=8.9,SNR=10						
KURK	**Kurchatov**	**63.47**	**320**	*e*P	**P**	**08 56 18.3**	**-0.4**
	comp=Z,21nm,1.1s						
KSH	**Kashi**	**64.28**	**307**	*e*P	P	08 56 27.6	+3.3
KSH				pP	pP	08 56 31.6	+1.7
KSH				sP	sP	08 56 34.3	+2.4
KSH				PcP	**PcP**	**08 57 01.5**	**+2.5**
KSH				PP	**PP**	**08 58 50.1**	**+4.4**
KSH				ScP		09 01 02.9	
KSH				PcS		09 01 04.8	
KSH				S	**S**	**09 05 04.0**	**+2.3**
KSH				sS	sS	09 05 11.6	+0.8
KSH				ScS	**SKSac**	**09 06 17.8**	**-0.3**
KSH				SS	**SS**	**09 09 15.1**	**+3.8**
KSH				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KSH				pmax	pmax		
	comp=Z,48nm,3.1s						
KSH				LR	LR		
	comp=N,180nm,5.1s						
KSH				LR	LR		
	comp=E,73nm,3.0s						
KSH				LR	LR		
	comp=Z,250nm,7.3s						
ILAR	**Eielson Array**	**67.62**	**26**	P	**P**	**08 56 42.5**	**-2.7**
ILAR	**Eielson Array**	**67.62**	**26**	P	**P**	**08 56 42.5**	**-2.7**
	comp=Z,1.2nm,1.0s,baz=264,slow=5.6,SNR=11						
KKAR	**Karatay Array**	**68.44**	**311**	*e*P	**P**	**08 56 50.2**	**-0.6**
	comp=Z,4.6nm,1.1s						
DOT	**Dot Lake**	**68.60**	**27**	*e*P	**P**	**08 56 52.2**	**+0.7**
	comp=Z,15nm,1.5s						
BVAR	**Borovoye Array**	**68.80**	**321**	P	**P**	**08 56 52.6**	**-0.2**
BVAR	**Borovoye Array**	**68.80**	**321**	P	**P**	**08 56 52.6**	**-0.2**
	comp=Z,15nm,1.2s,baz=95,slow=6.6,SNR=24						
BRVK	**Borovoye**	**68.86**	**321**	*e*P	**P**	**08 56 53.1**	**-0.2**
	comp=Z,21nm,1.3s						
PPT2	**Papeete2**	**72.48**	**114**	*e*LR	LR	09 18 48.9	
	comp=Z,651nm,31.2s						
INK	**Inuvik**	**73.38**	**23**	P	**P**	**08 57 19.2**	**-1.1**
INK	**Inuvik**	**73.38**	**23**	P	**P**	**08 57 19.2**	**-1.1**
	comp=Z,2.4nm,1.1s,baz=242,slow=5.6						
TBI	**Tubuai**	**74.82**	**120**	*e*LR	LR	09 19 53.5	
	comp=Z,406nm,32.5s						
ABKAR	**Akbulak array**	**75.45**	**318**	*e*P	**P**	**08 57 31.5**	**-1.2**
	comp=Z,0.6nm,0.3s						
AKTO	**Aktyubinsk**	**76.56**	**319**	P	**P**	**08 57 39.1**	**0.0**
AKTO	**Aktyubinsk**	**76.56**	**319**	P	**P**	**08 57 39.1**	**0.0**
	comp=Z,0.6nm,0.3s,baz=78,slow=10,SNR=4.2						
YKW3	**Yellowknife Ar**	**81.92**	**27**	*e*P	**P**	**08 58 07.7**	**-0.4**
	comp=Z,0.1nm,0.9s						
YKA	**Yellowknife Ar**	**81.94**	**27**	P	**P**	**08 58 07.6**	**-0.6**
YKA	**Yellowknife Ar**	**81.94**	**27**	P	**P**	**08 58 07.6**	**-0.6**
	comp=Z,2.5nm,1.1s,baz=287,slow=5.5,SNR=22						
RES	**Resolute Bay**	**83.46**	**13**	P	**P**	**08 58 15.7**	**-0.1**
	comp=Z,1.3nm,0.9s						
RES	**Resolute Bay**	**83.46**	**13**	P	**P**	**08 58 15.7**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=10,slow=2.5						
RES				LR	LR	09 37 22.9	
	comp=Z,86nm,21.9s,baz=266,slow=37						
NEW	**Newport**	**84.54**	**42**	LR	LR	09 30 03.9	
	comp=Z,117nm,19.1s,baz=289,slow=32						
ARCES	**ARCESS Array B**	**85.85**	**342**	P	**P**	**08 58 27.7**	**-0.4**
ARCES	**ARCESS Array B**	**85.85**	**342**	P	**P**	**08 58 27.7**	**-0.4**
	comp=Z,5.2nm,0.8s,baz=72,slow=5.6,SNR=9.6						
BSMT	**Bassoo Peak**	**86.16**	**42**	*e*P	**P**	**08 58 29.9**	**-0.4**
	comp=Z,9.4nm,1.2s						
NVAR	**Mina Array Bea**	**86.41**	**51**	P	**P**	**08 58 31.8**	**0.0**
NVAR	**Mina Array Bea**	**86.41**	**51**	P	**P**	**08 58 31.8**	**0.0**
	comp=Z,0.5nm,0.6s,baz=275,slow=4.6,SNR=5.3						
JTMT	**Jette**	**86.51**	**42**	*e*P	**P**	**08 58 31.2**	**-0.7**
	comp=Z,3.6nm,1.2s						
YBMT	**Yellow Bay**	**86.65**	**41**	*e*P	**P**	**08 58 32.8**	**+0.2**
	comp=Z,3.9nm,1.0s						
MFID	**Camas Ranch**	**86.79**	**46**	*e*P	**P**	**08 58 33.3**	**-0.1**
	comp=Z,11nm,1.2s						
SLMT	**Seeley Lake**	**87.18**	**42**	*e*P	**P**	**08 58 35.8**	**+0.5**
	comp=Z,4.5nm,1.2s						
RKT	**Rikitea**	**87.23**	**115**	*e*LR	LR	09 25 39.0	
	comp=Z,331nm,31.0s						
FINES	**FINESS Array B**	**89.95**	**335**	P	**P**	**08 58 46.3**	**-1.5**
FINES	**FINESS Array B**	**89.95**	**335**	P	**P**	**08 58 46.3**	**-1.5**
	comp=Z,1.9nm,0.6s,baz=51,slow=3.4,SNR=10						
HWUT	**Hardware Ranch**	**90.36**	**47**	*e*P	**P**	**08 58 51.2**	**+0.8**
	comp=Z,6.6nm,1.2s						
JLU	**Jordanelle**	**90.78**	**48**	*e*P	**P**	**08 58 53.1**	**+0.6**
	comp=Z,6.5nm,1.2s						
BRTR	**Keskin Array B**	**96.02**	**314**	P	**P**	**08 59 16.6**	**+0.2**
BRTR	**Keskin Array B**	**96.02**	**314**	P	**P**	**08 59 16.6**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=123,slow=3.4,SNR=6.1						
TORD	**Torodi Ar. Bea**	**133.93**	**305**	PKP	**PKPdf**	**09 05 06.6**	**-0.3**
TORD	**Torodi Ar. Bea**	**133.93**	**305**	PKP	**PKPdf**	**09 05 06.6**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=92,slow=1.1,SNR=4.5						
LPAZ	**La Paz**	**148.49**	**97**	PKPbc	**PKPbc**	**09 05 37.3**	**+0.1**
LPAZ	**La Paz**	**148.49**	**97**	PKPbc	**PKPbc**	**09 05 37.3**	**+0.1**
	comp=Z,5.3nm,1.1s,baz=323,slow=3.8,SNR=8.4						

*BJI **19** 08:54:40.6, 14°.41N×144°.94E, h6km, mB5.1/22, mb4.6/31, Ms4.8/21, Ms7 4.4/21*

*IDC **19** 08:54:44.9±0.5, 14°.84N×144°.65E, h0km, mb4.1/25, mb1 4.2/25, mb1mx4.2/32, mbtmp4.1/25, MS4.3/8, Ms1 4.3/8, ms1mx3.7/42, Error ellipse: s-maj=19.0km s-min=10.9km az=84.0*

*ISCJB **19** 08:54:45.3±1.6, 14°.78N±0°.04×144°.50E±0°.06, h11km±9km, mb4.3/52, MS4.4/14, Error ellipse: s-maj=10.4km s-min=6.4km az=164.4*

*NEIC **19** 08:54:46.6±0.2, 14°.82N×144°.56E, h10km, mb4.7/18, Error ellipse: s-maj=6.8km s-min=4.6km az=89.0*

*GCMT **19** 08:54:53.1±0.3, 14°.81N×144°.26E, h18km±1km, MW5.1, Moment Tensor Solution. s16,c17; s67,c99; Moment tensor: Scale 10^{16}Nm; M_{rr}-5.13±.37; $M_{\theta\theta}$1.26±.20; $M_{\phi\phi}$3.87±.26; $M_{r\theta}$1.99±.56; $M_{\theta\phi}$1.10±.12; $M_{\phi r}$0.15±.49; Best double couple: M_o5.00000×10^{16} NP1:ϕ_s7.00000°, δ42.00000°, λ-113.00000°. NP2:ϕ_s216.00000°, δ52.00000°, λ-71.00000°. Principal axes: T 4.3500, Plg5.0000°, Azm293.0000°; N 1.3500, Plg15.0000°, Azm24.0000°; P -5.7000, Plg74.0000°, Azm184.0000°; Data Used: IU CN II G IC.*

ISC 19 08:54:47.3±0.5, 14°.77N±0°.05×144°.57E±0°.08, h16km±2km, n106, σ1s16/128, mb4.4/52, MS4.5/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.21**	**166**	Pn	**Pn**	**08 55 09.2**	**-0.3**
GUMO				Sn	**Sb**	**08 55 24.6**	**-0.6**
GUMO				*e*Sn	**Sg**	**08 55 25.1**	**-1.4**
GUMO	**Guam**	**1.21**	**166**	Pn	**Pn**	**08 55 09.2**	**-0.3**
	264nm,0.3s,baz=298,slow=3.0,SNR=135						
GUMO				Sn	**Sb**	**08 55 24.6**	**-0.6**
	594nm,0.3s,baz=78,slow=20,SNR=41						
DAV	**Davao City (W)**	**20.15**	**250**	*e*P	**P**	**08 59 20.9**	**-0.1**
	129nm,0.5s						
DAV	**Davao City (W)**	**20.15**	**250**	LR	LR	09 06 27.1	
	comp=Z,189nm,18.6s,baz=68,slow=35						
JNU	**Nakatsue**	**22.10**	**328**	P	**P**	**08 59 41.8**	**-0.1**
	2.7nm,1.5s						
JNU	**Nakatsue**	**22.10**	**328**	P	**P**	**08 59 41.8**	**-0.1**
	3.9nm,0.7s,baz=144,slow=6.0,SNR=4.5						
MJAR	**Matsushiro Arr**	**22.41**	**346**	P	**P**	**08 59 45.7**	**+0.5**
MJAR	**Matsushiro Arr**	**22.41**	**346**	P	**P**	**08 59 45.7**	**+0.5**
	5.3nm,0.9s,baz=171,slow=9.3,SNR=13						
MAJO	**Matsushiro**	**22.41**	**346**	*e*P	**P**	**08 59 45.2**	**-0.1**
	28nm,1.1s						
MAT	**Matsushiro**	**22.41**	**346**	P	**P**	**08 59 45.5**	**+0.2**
MAT				S	**S**	**09 03 50.0**	**-0.9**
KSRS	**Korea Array**	**27.00**	**330**	P	**P**	**09 00 29.5**	**+1.0**
	2.8nm,0.8s,baz=141,slow=11,SNR=7.8						
KSAR	**Wonju Array Be**	**27.01**	**330**	P	**P**	**09 00 29.5**	**+0.9**
NJ2	**Nanjing**	**29.09**	**311**	*e*P	**P**	**09 00 44.3**	**-2.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
USRK	**Ussuriysk Arra**	**31.23**	**342**	P	**P**	**09 01 08.1**	**+2.2**
	comp=Z,1.8nm,0.9s,baz=158,slow=7.4,SNR=4.8						
MDJ	**Mudanjiang**	**32.35**	**340**	P	**P**	**09 01 15.5**	**-0.4**
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,35nm,2.8s						
CN2	**Changchun**	**33.22**	**334**	*e*P	P	09 01 26.1	+2.6
CN2				*e*S	**S**	**09 06 44.5**	**+1.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax

CD2					sP	**sP**	**09 02 34.0**	**0.0**	
CD2					PP	**PnPn**	**09 04 04.1**	**-0.5**	
CD2					PcP	**PcP**	**09 04 30.0**	**+1.3**	
CD2					PcS	**PcS**	**09 08 19.4**	**-0.2**	
CD2					S	**S**	**09 08 36.0**	**-0.4**	
CD2					pmax	pmax			
	comp=Z,20nm,0.5s								
CD2					pmax	pmax			
	comp=Z,120nm,5.4s								
CD2					LR	LR			
	comp=N,1μm,15.6s								
CD2					LR	LR			
	comp=E,520nm,15.7s								
CD2					LR	LR			
	comp=Z,560nm,20.6s								
LZH	**Lanzhou**	**42.07**	**308**	*e*P	P		09 02 41.3	+2.7	
LZH					pP	pP	09 02 44.5	+0.8	
LZH					sP	sP	09 02 45.9	+0.1	
LZH				*e*PP	PP		09 04 22.0	+5.9	
LZH				*e*S	**S**		**09 09 00.1**	**+2.5**	
LZH					sS	sS	09 09 06.5	+0.6	
LZH					pmax	pmax			
	comp=Z,32nm,1.4s								
LZH					pmax	pmax			
	comp=Z,150nm,6.5s								
LZH					LR	LR			
	comp=N,480nm,14.6s								
LZH					LR	LR			
	comp=E,440nm,11.4s								
LZH					LR	LR			
	comp=Z,560nm,16.2s								
DZM	**Mont Dzumac**	**42.43**	**149**	*e*LR	LR		09 14 10.5		
	comp=Z,474nm,25.2s								
DZM	**Mont Dzumac**	**42.43**	**149**	P	P		09 02 46.7	+5.1	
DZM	**Mont Dzumac**	**42.43**	**149**	P	P		09 02 46.7	+5.1	
	comp=Z,16nm,0.8s,baz=329,slow=13,SNR=7.2								
MBWA	**Marble Bar**	**43.24**	**215**	*e*P	**P**		**09 02 48.7**	**+0.6**	
	comp=Z,7.1nm,0.8s								
CM31	**Chiang Mai Arr**	**43.79**	**281**	*e*P	**P**		**09 02 52.5**	**-0.2**	
	comp=Z,1.0nm,0.4s								
CMAR	**Chiang Mai Arr**	**43.79**	**281**	P	**P**		**09 02 53.2**	**+0.5**	
CMAR	**Chiang Mai Arr**	**43.79**	**281**	P	**P**		**09 02 53.2**	**+0.5**	
	comp=Z,3.5nm,0.8s,baz=78,slow=6.3,SNR=19								
CMAR					LR	LR	09 22 38.7		
	comp=Z,254nm,18.3s,baz=338,slow=38								
SONM	**Songino Array**	**45.61**	**324**	P	**P**		**09 03 06.9**	**0.0**	
SONM					PcP	**PcP**	**09 04 45.2**	**0.0**	
SONM	**Songino Array**	**45.61**	**324**	P	**P**		**09 03 06.9**	**0.0**	
	comp=Z,0.7nm,0.7s,baz=120,slow=8.5,SNR=3.5								
SONM					PcP	**PcP**	**09 04 45.2**	**0.0**	
	comp=Z,1.1nm,0.8s,baz=151,slow=3.3,SNR=3.0								
GTA	**Gaotai**	**46.18**	**311**	*e*P	P		09 03 14.3	+2.7	
GTA					pP	pP	09 03 18.9	+2.2	
GTA					sP	sP	09 03 21.3	+2.6	
GTA					PcP	**PcP**	**09 04 47.8**	**+0.5**	
GTA					S	**S**	**09 10 01.6**	**+4.2**	
GTA					sS	sS	09 10 09.5	+3.6	
GTA					SS	**SS**	**09 13 20.8**	**-2.0**	
GTA					pmax	pmax			
	comp=Z,5.0nm,1.5s								
GTA					pmax	pmax			
	comp=Z,190nm,5.5s								
GTA					LR	LR			
	comp=N,350nm,17.1s								
GTA					LR	LR			
	comp=E,290nm,19.9s								
GTA					LR	LR			
	comp=Z,490nm,20.4s								
STKA	**Stephens Creek**	**46.47**	**183**	*e*P	**P**		**09 03 14.1**	**+0.5**	
STKA	**Stephens Creek**	**46.47**	**183**	P	**P**		**09 03 12.9**	**-0.7**	
	comp=Z,1.9nm,0.8s,baz=353,slow=11,SNR=6.2								
SHL	**Shillong**	**50.33**	**291**	*e*P	**P**		**09 03 44.5**	**+0.6**	
AFI	**Afiamalu**	**51.74**	**121**	LR	LR		09 20 11.2		
	comp=Z,318nm,20.6s,baz=316,slow=30								
UNV	**Unalaska Valle**	**54.50**	**33**	*e*P	**P**		**09 04 14.6**	**+0.5**	
	comp=Z,122nm,1.4s								
WMQ	**Urumqi**	**56.12**	**313**	P	**P**		**09 04 27.0**	**+0.9**	
WMQ				sP	**sP**		**09 04 34.0**	**+0.7**	
WMQ				PcP	**PcP**		**09 05 25.0**	**+1.0**	
WMQ				PP	**PP**		**09 06 33.0**	**+1.8**	
WMQ				ScP	**ScP**		**09 09 22.0**	**-0.8**	
WMQ				S	**S**		**09 12 13.0**	**-1.6**	
WMQ				ScS	**ScS**		**09 14 12.0**	**-3.0**	
WMQ				pmax	pmax				
	comp=Z,19nm,1.1s								
WMQ				pmax	pmax				
	comp=Z,130nm,5.0s								
WMQ				LR	LR				
	comp=N,180nm,18.0s								
WMQ				LR	LR				
	comp=E,250nm,18.0s								
WMQ				LR	LR				
	comp=Z,280nm,18.0s								
MK31	**Makanchi Array**	**60.45**	**316**	*e*P	**P**		**09 04 56.2**	**0.0**	
MKAR	**Makanchi Array**	**60.45**	**316**	*e*P	**P**		**09 04 56.6**	**+0.3**	
MKAR	**Makanchi Array**	**60.45**	**316**	P	**P**		**09 04 56.6**	**+0.3**	
	comp=Z,2.0nm,0.9s,baz=93,slow=8.5,SNR=12								
ZAA0	**Zalesovo Array**	**60.50**	**324**	*e*P	**P**		**09 04 57.1**	**+0.7**	
ZALV	**Zalesovo Beam**	**60.50**	**324**	P	**P**		**09 04 55.9**	**-0.6**	
ZALV	**Zalesovo Beam**	**60.50**	**324**	P	**P**		**09 04 55.9**	**-0.6**	
	comp=Z,1.4nm,0.8s,baz=104,slow=10,SNR=4.1								
RPZ	**Rata Peaks**	**63.04**	**159**	LR	LR		09 27 12.6		
	comp=Z,457nm,18.8s,baz=32,slow=31								
KURK	**Kurchatov**	**63.50**	**320**	P	**P**		**09 05 16.6**	**0.0**	
	comp=Z,1.4nm,1.1s								
KURBB	**Kurchatov Arra**	**63.54**	**319**	P	**P**		**09 05 16.6**	**-0.3**	
	comp=Z,6.3nm,0.9s,baz=100,slow=6.6,SNR=33								
KSH	**Kashi**	**64.30**	**307**	*e*P	**P**		**09 05 21.9**	**-0.4**	
KSH				pP	**pP**		**09 05 26.3**	**-1.3**	
KSH				sP	**sP**		**09 05 28.4**	**-1.2**	
KSH				PcP	**PcP**		**09 05 55.3**	**-1.7**	
KSH				PP	**PP**		**09 07 44.4**	**+0.7**	
KSH				ScP			09 09 55.8		
KSH				PcS			09 09 58.5		
KSH				S	**S**		**09 13 56.1**	**-3.9**	
KSH				ScS	**SKSac**		**09 15 11.3**	**-4.9**	
KSH				pmax	pmax				
	comp=Z,2.0nm,0.4s								
KSH				LR	LR				
	comp=N,77nm,3.8s								
KSH				LR	LR				
	comp=E,78nm,4.0s								
KSH				LR	LR				
	comp=Z,420nm,9.4s								
RAR	**Rarotonga**	**65.28**	**122**	LR	LR		09 26 40.6		
	comp=Z,368nm,20.9s,baz=147,slow=29								
AAK	**Ala-Archa**	**65.53**	**310**	*e*P	**P**		**09 05 29.6**	**-0.7**	
	comp=Z,2.5nm,1.0s								
ILAR	**Eielson Array**	**67.63**	**26**	P	**P**		**09 05 41.3**	**-1.8**	
ILAR	**Eielson Array**	**67.63**	**26**	P	**P**		**09 05 41.3**	**-1.8**	
	comp=Z,0.5nm,0.7s,baz=248,slow=5.8,SNR=7.2								
KKAR	**Karatay Array**	**68.47**	**311**	*e*P	**P**		**09 05 47.8**	**-1.1**	
	comp=Z,2.1nm,0.8s								
BVAR	**Borovoye Array**	**68.83**	**321**	P	**P**		**09 05 50.9**	**+0.1**	
BVAR	**Borovoye Array**	**68.83**	**321**	P	**P**		**09 05 50.9**	**+0.1**	
	comp=Z,7.5nm,1.0s,baz=103,slow=6.7,SNR=18								
BRVK	**Borovoye**	**68.89**	**321**	*e*P	**P**		**09 05 51.1**	**-0.1**	
	comp=Z,12nm,1.1s								
KBL	**Kabul**	**69.97**	**302**	*e*P	**P**		**09 05 58.6**	**+0.1**	
	comp=Z,3.1nm,0.5s								
PPT	**Papeete**	**72.45**	**114**	LR	LR		09 32 40.0		
	comp=Z,247nm,18.3s,baz=337,slow=31								
PPT2	**Papeete2**	**72.46**	**114**	*e*LR	LR		09 28 00.7		
	comp=Z,765nm,29.8s,baz=292								
INK	**Inuvik**	**73.39**	**23**	P	**P**		**09 06 18.9**	**+0.7**	
INK	**Inuvik**	**73.39**	**23**	P	**P**		**09 06 18.9**	**+0.7**	
	comp=Z,0.9nm,0.8s,baz=245,slow=7.1,SNR=3.4								
TBI	**Tubuai**	**74.80**	**120**	*e*LR	LR		09 28 58.1		
	comp=Z,378nm,29.5s								
DLBC	**Dease Lake**	**75.15**	**33**	P	**P**		**09 06 28.1**	**-0.7**	
DLBC	**Dease Lake**	**75.15**	**33**	P	**P**		**09 06 28.1**	**-0.7**	
	comp=Z,2.7nm,1.0s,baz=304,slow=14,SNR=3.3								
ABKAR	**Akbulak array**	**75.48**	**318**	*e*P	**P**		**09 06 29.8**	**-0.9**	
	comp=Z,0.7nm,0.5s								
AKTO	**Aktyubinsk**	**76.59**	**319**	P	**P**		**09 06 38.0**	**+0.9**	
AKTO	**Aktyubinsk**	**76.59**	**319**	P	**P**		**09 06 38.0**	**+0.9**	
	comp=Z,0.5nm,0.3s								
YKA	**Yellowknife Ar**	**81.95**	**27**	P	**P**		**09 07 05.9**	**-0.1**	
YKA	**Yellowknife Ar**	**81.95**	**27**	P	**P**		**09 07 05.9**	**-0.1**	
	comp=Z,1.0nm,0.9s,baz=268,slow=5.6,SNR=17								
RES	**Resolute Bay**	**83.47**	**13**	*e*P	**P**		**09 07 13.9**	**+0.2**	
RES	**Resolute Bay**	**83.47**	**13**	P	**P**		**09 07 13.7**	**0.0**	
	comp=Z,2.0nm,0.7s,baz=2.6,slow=5.6,SNR=6.4								
BMO	**Blue Mountains**	**85.36**	**45**	*e*P	**P**		**09 07 25.1**	**+1.0**	
	comp=Z,5.3nm,1.1s								

ARCES	**ARCESS Array B**	**85.88**	**342**	P	**P**		**09 07 25.6**	**-0.4**	
ARCES	**ARCESS Array B**	**85.88**	**342**	P	**P**		**09 07 25.6**	**-0.4**	
	comp=Z,3.0nm,0.7s,baz=77,slow=6.7,SNR=8.2								
BSMT	**Bassoo Peak**	**86.16**	**42**	*e*P	**P**		**09 07 28.9**	**+0.8**	
NVAR	**Mina Array Bea**	**86.41**	**51**	P	**P**		**09 07 29.6**	**0.0**	
NVAR	**Mina Array Bea**	**86.41**	**51**	P	**P**		**09 07 29.6**	**0.0**	
	comp=Z,0.5nm,0.8s,baz=261,slow=5.1,SNR=4.1								
NVAR					LR	LR	09 39 49.3		
	comp=Z,79nm,21.2s,baz=118,slow=31								
MFID	**Camas Ranch**	**86.79**	**46**	*e*P	**P**		**09 07 32.0**	**+0.8**	
	comp=Z,6.3nm,1.1s								
RKT	**Rikitea**	**87.20**	**115**	*e*LR	LR		09 34 52.1		
	comp=Z,362nm,27.5s								
HLID	**Hailey**	**87.73**	**46**	*e*P	**P**		**09 07 36.7**	**+0.9**	
	comp=Z,4.8nm,1.0s								
KBZ	**Khabaz**	**88.13**	**315**	P	**P**		**09 07 38.0**	**+0.5**	
KBZ	**Khabaz**	**88.13**	**315**	P	**P**		**09 07 38.0**	**+0.5**	
	comp=Z,0.7nm,0.4s,baz=2.5,slow=2.9,SNR=4.2								
FINES	**FINESS Array B**	**89.97**	**335**	P	**P**		**09 07 44.3**	**-1.4**	
FINES	**FINESS Array B**	**89.97**	**335**	P	**P**		**09 07 44.3**	**-1.4**	
	comp=Z,1.7nm,0.6s,baz=82,slow=4.8,SNR=8.4								
HWUT	**Hardware Ranch**	**90.35**	**47**	*e*P	**P**		**09 07 48.6**	**+0.4**	
	comp=Z,5.2nm,1.2s								
JLU	**Jordanelle**	**90.78**	**48**	*e*P	**P**		**09 07 50.8**	**+0.4**	
	comp=Z,6.5nm,1.5s								
PDAR	**Pinedale Array**	**91.34**	**45**	P	**P**		**09 07 53.0**	**+0.2**	
PDAR	**Pinedale Array**	**91.34**	**45**	P	**P**		**09 07 53.0**	**+0.2**	
	comp=Z,0.1nm,0.3s,baz=197,slow=0.9,SNR=2.2								
AKASG	**Malin Array Be**	**93.89**	**325**	LR	LR		09 51 48.8		
	comp=Z,238nm,20.7s,baz=50,slow=36								
MAIT	**Maitri**	**117.19**	**196**	*e*P		**PKKPdf**	**09 24 25.0**	**-0.4**	
TORD	**Torodi Ar. Bea**	**133.96**	**305**	PKP		**PKPdf**	**09 14 04.4**	**-0.4**	
TORD	**Torodi Ar. Bea**	**133.96**	**305**	PKP		**PKPdf**	**09 14 04.4**	**-0.4**	
	comp=Z,0.7nm,1.1s,baz=49,slow=2.0,SNR=2.3								
CFAA	**Coronel Fontan**	**145.68**	**125**	PKPbc		**PKPab**	**09 14 26.4**	**+0.2**	
CFAA	**Coronel Fontan**	**145.68**	**125**	PKPbc		**PKPab**	**09 14 26.4**	**+0.2**	
	comp=Z,0.3nm,0.8s,baz=191,slow=2.5,SNR=4.8								
LPAZ	**La Paz**	**148.47**	**97**	*e*PKPdf		**PKPdf**	**09 14 31.8**	**+0.4**	
LPAZ				PKPbc		**PKPbc**	**09 14 35.5**	**+0.6**	
LPAZ				*e*PKPbc		**PKiKP**	**09 14 36.3**	**-0.2**	
LPAZ				*e*PKPab		**PKPab**	**09 14 39.3**	**+1.0**	
LPAZ	**La Paz**	**148.47**	**97**	PKPbc		**PKPbc**	**09 14 35.5**	**+0.6**	
	comp=Z,1.3nm,0.7s,baz=24,slow=4.7,SNR=5.9								

ISCJB ***19*** *09:04:16.0±0.2, 18°.94N±0°.04×145°.30E±0°.04, h214km, mb4.2/74, Error ellipse: s-maj=6.4km s-min=5.7km az=31.0*

IDC ***19*** *09:04:21.7±1.8, 18°.94N×145°.29E, h260km±18km, mb3.9/32, mb1 4.0/36, mb1mx4.0/41, mbtmp3.9/36, Error ellipse: s-maj=11.5km s-min=7.6km az=85.0*

BJI ***19*** *09:04:22.6, 19°.09N×145°.57E, h291km, mB4.5/2, mb4.1/7*

NEIC ***19*** *09:04:22.7±1.0, 18°.95N×145°.32E, h268km±10km, mb4.3/47, Error ellipse: s-maj=7.0km s-min=6.1km az=77.0*

ISC 19 09:04:16.9±0.4, 18°.94N±0°.06×145°.46E±0°.09, h214km, n276, σ0°98/277, mb4.3/73, 82C-67D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.35**	**186**	*e*Pn		Pn		09 05 43.4	+7.2
GUMO				*e*Sn		**S**		**09 06 41.7**	**+3.1**
GUMO	**Guam**	**5.35**	**186**	P		Pn		09 05 40.6	+4.5
	10nm,0.3s,baz=0.0,slow=12,SNR=7.1								
GUMO				S		**S**		**09 06 37.4**	**-1.2**
	14nm,0.3s,baz=343,slow=19,SNR=3.6								
JHJ	**Hachijo jima 2**	**15.01**	**341**	P		**P**		**09 07 40.0**	**+1.1**
	12nm,0.3s,baz=72,slow=19,SNR=6.0								
JOW	**Kunigami**	**17.66**	**300**	*e*P		**Pn**		**09 08 11.1**	**+0.8**
	42nm,0.4s								
MJAR	**Matsushiro Arr**	**18.66**	**341**	P		**P**		**09 08 19.2**	**+0.2**
MJAR	**Matsushiro Arr**	**18.66**	**341**	P		**P**		**09 08 19.2**	**+0.2**
	1.9nm,0.3s,baz=176,slow=12,SNR=26								
MAJO	**Matsushiro**	**18.66**	**341**	*e*P		**P**		**09 08 19.6**	**+0.6**
	90nm,0.6s								
MAT	**Matsushiro**	**18.66**	**341**	P		**P**		**09 08 19.3**	**+0.3**
JNU	**Nakatsue**	**19.23**	**320**	*e*P		**P**		**09 08 26.5**	**+1.3**
	2.9nm,0.9s								
JNU	**Nakatsue**	**19.23**	**320**	P		**P**		**09 08 25.5**	**+0.3**
	0.1nm,0.3s,baz=66,slow=0.8,SNR=3.4								
YULB	**Yu-li**	**22.95**	**285**	*e*P		**P**		**09 09 04.4**	**+1.7**
	7.6nm,0.7s								
SSLB	**Suanglung**	**23.31**	**286**	*e*P		**P**		**09 09 07.0**	**+1.0**
	16nm,0.8s								
KSRS	**Korea Array**	**23.99**	**324**	P		**P**		**09 09 12.1**	**+0.1**
	3.7nm,0.6s,baz=142,slow=9.0,SNR=25								
KSAR	**Wonju Array Be**	**24.00**	**324**	P		**P**		**09 09 12.1**	**-0.1**
ASAJ	**Asahikawa**	**25.22**	**355**	*e*P		**P**		**09 09 24.5**	**+1.5**
	8.4nm,0.8s								
ASAJ	**Asahikawa**	**25.22**	**355**	P		**P**		**09 09 25.0**	**+2.0**
	14nm,0.5s,baz=217,slow=11,SNR=40								
USRK	**Ussuriysk Arra**	**27.60**	**339**	P		**P**		**09 09 44.9**	**+0.7**
	1.8nm,0.6s,baz=150,slow=9.6,SNR=12								
MDJ	**Mudanjiang**	**28.83**	**336**	P		**P**		**09 09 56.4**	**+1.2**
MDJ				S		**S**		**09 14 26.1**	**-3.0**
MDJ				sS		sS		09 15 58.8	+13
MDJ				ScP		**ScP**		**09 16 14.8**	**-5.5**
MDJ				PcS		**PcS**		**09 16 42.0**	**0.0**
MDJ				pmax		pmax			
	comp=Z,4.0nm,0.6s								
MDJ				pmax		pmax			
	comp=Z,120nm,13.9s								
PETK	**Petropavlovsk-**	**35.41**	**13**	P		**P**		**09 10 53.9**	**+1.6**
PETK	**Petropavlovsk-**	**35.41**	**13**	P		**P**		**09 10 53.9**	**+1.6**
	comp=Z,5.0nm,0.7s,baz=204,slow=9.2,SNR=11								
WRAB	**Tennant Creek**	**40.14**	**196**	*e*P		**P**		**09 11 32.3**	**+0.1**
	comp=Z,8.6nm,0.9s								
FX1	**Attu Island--F**	**40.14**	**26**	P		**P**		**09 11 34.1**	**+2.3**
FX1	**Attu Island--F**	**40.14**	**26**	P		**P**		**09 11 34.1**	**+2.3**
	comp=Z,22nm,0.7s,baz=288,slow=6.4,SNR=4.1								
WRA	**Warramunga Arr**	**40.15**	**196**	P		**P**		**09 11 32.9**	**+0.6**
WRA	**Warramunga Arr**	**40.15**	**196**	P		**P**		**09 11 32.9**	**+0.6**
	comp=Z,2.6nm,0.5s,baz=19,slow=9.0,SNR=76								
FITZ	**Fitzroy Crossi**	**41.64**	**209**	*e*P		**P**		**09 11 45.0**	**+0.6**
	comp=Z,4.1nm,1.0s								
FITZ	**Fitzroy Crossi**	**41.64**	**209**	P		**P**		**09 11 45.4**	**+0.9**
	comp=Z,1.6nm,0.3s,baz=49,slow=12,SNR=24								
ULN	**Ulaanbaatar**	**42.44**	**322**	*e*P		**P**		**09 11 50.8**	**-0.1**
	comp=Z,3.5nm,0.6s								
SONM	**Songino Array**	**42.82**	**321**	P		**P**		**09 11 53.9**	**+0.1**
SONM	**Songino Array**	**42.82**	**321**	P		**P**		**09 11 53.9**	**+0.1**
	comp=Z,3.5nm,0.5s,baz=137,slow=9.6,SNR=35								
AS31	**Alice Springs**	**43.82**	**195**	*e*P		**P**		**09 12 02.2**	**+0.2**
ASAR	**Alice Springs**	**43.82**	**195**	P		**P**		**09 12 02.2**	**+0.2**
ASAR	**Alice Springs**	**43.82**	**195**	P		**P**		**09 12 02.2**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=18,slow=6.3,SNR=24								
CMAR	**Chiang Mai Arr**	**43.96**	**277**	P		**P**		**09 12 05.2**	**+1.9**
CMAR	**Chiang Mai Arr**	**43.96**	**277**	P		**P**		**09 12 05.2**	**+1.9**
	comp=Z,2.1nm,0.6s,baz=64,slow=6.6,SNR=16								
DZM	**Mont Dzumac**	**45.63**	**152**	P		**P**		**09 12 16.2**	**-0.1**
DZM	**Mont Dzumac**	**45.63**	**152**	P		**P**		**09 12 16.2**	**-0.1**
	comp=Z,5.5nm,0.8s,baz=66,slow=20,SNR=7.6								
STKA	**Stephens Creek**	**50.66**	**184**	P		**P**		**09 12 53.7**	**-0.8**
STKA	**Stephens Creek**	**50.66**	**184**	P		**P**		**09 12 53.7**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=280,slow=19,SNR=4.5								
GAMB	**Gambell**	**53.32**	**22**	*e*P		**P**		**09 13 11.6**	**-2.1**
	comp=Z,9.5nm,0.8s								
TNA	**Tin City**	**55.68**	**21**	*e*P		**P**		**09 13 32.6**	**+2.0**
	comp=Z,9.7nm,1.1s								
ZAA0	**Zalesovo Array**	**57.69**	**322**	*e*P		**P**		**09 13 43.8**	**-1.2**
ZALV	**Zalesovo Beam**	**57.69**	**322**	P		**P**		**09 13 44.0**	**-0.9**
ZALV	**Zalesovo Beam**	**57.69**	**322**	P		**P**		**09 13 44.0**	**-0.9**
	comp=Z,3.8nm,0.6s,baz=107,slow=7.3,SNR=16								
MK31	**Makanchi Array**	**58.13**	**314**	*e*P		**P**		**09 13 48.1**	**-0.2**
MKAR	**Makanchi Array**	**58.13**	**314**	P		**P**		**09 13 48.2**	**-0.1**
MKAR	**Makanchi Array**	**58.13**	**314**	P		**P**		**09 13 48.2**	**-0.1**
	comp=Z,4.7nm,0.6s,baz=89,slow=9.1,SNR=41								
KDAK	**Kodiak Island**	**59.28**	**33**	P		**P**		**09 13 57.1**	**+1.2**
KDAK	**Kodiak Island**	**59.28**	**33**	P		**P**		**09 13 57.1**	**+1.2**
	comp=Z,4.0nm,0.5s,baz=122,slow=8.5,SNR=8.9								
KURK	**Kurchatov**	**60.94**	**318**	*e*P		**P**		**09 14 06.2**	**-1.0**
	comp=Z,6.6nm,0.8s								
KURBB	**Kurchatov Arra**	**60.99**	**318**	P		**P**		**09 14 06.9**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=92,slow=7.5,SNR=68								
TRF	**Thorofare Moun**	**61.77**	**27**	*e*P		**P**		**09 14 12.3**	**-0.5**
	comp=Z,13nm,0.9s								
PMR	**Palmer**	**61.86**	**30**	*e*P		**P**		**09 14 13.2**	**0.0**
	comp=Z,7.2nm,0.7s								
MCK	**McKinley**	**62.43**	**27**	*e*P		**P**		**09 14 17.3**	**+0.3**
	comp=Z,3.7nm,0.6s								
COLD	**Coldfoot**	**62.83**	**23**	*e*P		**P**		**09 14 20.7**	**+1.2**
	comp=Z,7.4nm,0.9s								
COLA	**College**	**63.15**	**26**	*e*P		**P**		**09 14 21.9**	**+0.3**
	comp=Z,6.0nm,0.8s								
ILAR	**Eielson Array**	**63.53**	**26**	P		**P**		**09 14 23.6**	**-0.7**

ILAR	**Eielson Array**	**63.53**	**26**	P		**P**		**09 14 23.6**	**-0.7**
	comp=Z,6.2nm,0.7s,baz=254,slow=4.9,SNR=125								
AAK	**Ala-Archa**	**63.54**	**309**	*e*P		**P**		**09 14 24.9**	**0.0**
	comp=Z,1.2nm,0.6s								
AAK	**Ala-Archa**	**63.54**	**309**	P		**P**		**09 14 25.1**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=109,slow=7.1,SNR=8.2								
PAX	**Paxson**	**63.80**	**28**	*e*P		**P**		**09 14 26.6**	**+0.4**
	comp=Z,6.6nm,0.4s								
DOT	**Dot Lake**	**64.54**	**28**	*e*P		**P**		**09 14 30.9**	**0.0**
	comp=Z,10nm,0.7s								
BVAR	**Borovoye Array**	**66.15**	**320**	P		**P**		**09 14 40.8**	**-0.5**
BVAR	**Borovoye Array**	**66.15**	**320**	P		**P**		**09 14 40.8**	**-0.5**
	comp=Z,12nm,0.5s,baz=95,slow=7.5,SNR=106								
BRVK	**Borovoye**	**66.21**	**320**	*e*P		**P**		**09 14 40.9**	**-0.8**
	comp=Z,8.9nm,0.6s								
KKAR	**Karatay Array**	**66.44**	**310**	*e*P		**P**		**09 14 42.9**	**-0.5**
	comp=Z,5.0nm,0.6s								
KBL	**Kabul**	**68.56**	**300**	*e*P		**P**		**09 14 57.3**	**+0.3**
	comp=Z,3.6nm,0.5s								
INK	**Inuvik**	**69.24**	**23**	P		**P**		**09 15 00.6**	**+0.3**
INK	**Inuvik**	**69.24**	**23**	P		**P**		**09 15 00.6**	**+0.3**
	comp=Z,7.0nm,0.7s,baz=277,slow=6.8,SNR=43								
DLBC	**Dease Lake**	**71.22**	**34**	*e*P		**P**		**09 15 14.0**	**+1.4**
ABKAR	**Akbulak array**	**73.01**	**317**	*e*P		**P**		**09 15 22.2**	**-1.0**
	comp=Z,6.4nm,0.5s								
AKTO	**Aktyubinsk**	**74.04**	**318**	P		**P**		**09 15 28.1**	**-1.2**
AKTO	**Aktyubinsk**	**74.04**	**318**	P		**P**		**09 15 28.1**	**-1.2**
	comp=Z,3.8nm,0.6s,baz=91,slow=10								
YKA	**Yellowknife Ar**	**77.88**	**28**	P		**P**		**09 15 50.8**	**0.0**
YKA	**Yellowknife Ar**	**77.88**	**28**	P		**P**		**09 15 50.7**	**0.0**
	comp=Z,4.5nm,0.6s,baz=290,slow=5.5,SNR=167								
LON	**Longmire**	**78.28**	**45**	*e*P		**P**		**09 15 53.6**	**+0.3**
	comp=Z,2.5nm,0.8s								
YBH	**Yreka Blue Hor**	**78.97**	**50**	P		**P**		**09 15 58.5**	**+1.3**
YBH	**Yreka Blue Hor**	**78.97**	**50**	P		**P**		**09 15 58.5**	**+1.3**
	comp=Z,1.6nm,0.5s,baz=290,slow=3.2,SNR=8.9								
RES	**Resolute Bay**	**79.25**	**14**	*e*P		**P**		**09 15 58.0**	**+0.2**
	comp=Z,4.2nm,0.8s								
RES	**Resolute Bay**	**79.25**	**14**	P		**P**		**09 15 58.1**	**+0.2**
	comp=Z,4.6nm,0.7s,baz=332,slow=6.4,SNR=21								
MOD	**Modoc**	**80.65**	**49**	*e*P		**P**		**09 16 07.2**	**+0.9**
	comp=Z,8.7nm,1.1s								
NEW	**Newport**	**80.89**	**42**	*e*P		**P**		**09 16 07.7**	**+0.4**
	comp=Z,4.1nm,0.6s								
NEW	**Newport**	**80.89**	**42**	⇑P		**P**		**09 16 08.0**	**+0.7**
	baz=81								
NEW	**Newport**	**80.89**	**42**	P		**P**		**09 16 07.9**	**+0.7**
	comp=Z,3.6nm,0.6s,baz=274,slow=5.0,SNR=12								
BEKR	**Beckworth**	**81.21**	**51**	*e

G16A	Moss Hill, Enn	85.37	44	⇑P		P	09 16 31.2	+0.8
	baz=85,SNR=14							
B18A	Beardsley Farm	85.43	40	⇑P		P	09 16 31.0	+0.5
	baz=85,SNR=9.4							
K14A	Jones Ranch, D	85.44	47	⇓P		P	09 16 31.9	+1.1
	baz=85							
E17A	Martinsdale	85.51	42	⇓P		P	09 16 31.9	+0.8
	baz=85							
L14A	Malta	85.58	47	⇑P		P	09 16 32.9	+1.3
	baz=86							
EGMT	Eagleton	85.59	41	*e*P		P	09 16 31.3	0.0
	comp=Z,5.1nm,1.2s							
EGMT	Eagleton	85.59	41	⇑P		P	09 16 31.8	+0.5
	baz=86							
J15A	Blackfoot	85.63	46	⇓P		P	09 16 33.3	+1.6
	baz=86,SNR=11							
QLMT	Earthquake Lak	85.76	44	*e*P		P	09 16 33.7	+1.3
	comp=Z,1.0nm,0.7s							
KBZ	Khabaz	85.81	315	P		P	09 16 32.1	-0.3
KBZ	Khabaz	85.81	315	P		P	09 16 32.1	-0.3
	comp=Z,1.2nm,0.7s,baz=91,slow=7.0,SNR=5.5							
A19A	Klindworth Far	85.84	40	⇑P		P	09 16 33.3	+0.7
	baz=86							
F17A	Fitzpatrick Pl	85.85	43	⇓P		P	09 16 33.1	+0.3
	baz=86							
H16A	Russell Place,	85.93	44	⇑P		P	09 16 34.8	+1.5
	baz=86,SNR=8.3							
G17A	Pierce Place,	86.03	43	⇓P		P	09 16 35.1	+1.4
	baz=86							
E18A	Harlowton	86.07	42	⇑P		P	09 16 35.3	+1.5
	baz=86							
I16A	Newdale	86.09	45	⇑P		P	09 16 35.6	+1.6
	baz=86							
YMR	Madison River	86.13	44	*e*P		P	09 16 35.6	+1.3
	comp=Z,8.1nm,0.7s							
C19A	Slack Wire Ran	86.14	41	⇓P		P	09 16 34.8	+0.8
	baz=86							
PFO	Pinyon Flat Ob	86.18	56	⇓P		P	09 16 35.3	+0.7
	baz=86							
L15A	Malad City	86.19	47	⇓P		P	09 16 35.2	+0.7
	baz=86							
J16A	Bone	86.23	46	⇑P		P	09 16 36.3	+1.5
	baz=86							
A20A	Cobblestone Ra	86.35	39	⇑P		P	09 16 35.6	+0.5
	baz=86							
GMRC	Granite Mounta	86.39	55	⇑P		P	09 16 36.5	+0.9
	baz=86							
BELC	Belle Mtn. Jos	86.40	55	⇓P		P	09 16 36.1	+0.4
	baz=86							
IMW	Indian Meadow	86.45	45	*e*P		P	09 16 36.8	+0.9
	comp=Z,2.6nm,0.8s							
MONP	Monument Peak	86.45	57	⇑P		P	09 16 36.4	+0.3
	baz=86							
D19A	Cripps Ranch,	86.47	41	⇑P		P	09 16 36.4	+0.7
	baz=86							
B20A	Solberg Farm,	86.48	40	⇑P		P	09 16 36.2	+0.5
	baz=86							
LKWY	Lake	86.54	44	*e*P		P	09 16 39.2	+2.9
	comp=Z,1.7nm,0.9s							
DUG	Dugway	86.56	49	*e*P		P	09 16 36.8	+0.4
	comp=Z,3.0nm,0.6s							
DUG	Dugway	86.56	49	⇓P		P	09 16 37.2	+0.9
	baz=86							
FINES	FINESS Array B	86.57	335	P		P	09 16 33.3	-2.4
FINES	FINESS Array B	86.57	335	P		P	09 16 33.3	-2.4
	comp=Z,4.3nm,0.4s,baz=64,slow=4.7,SNR=68							
C20A	Veseth Ranch,	86.79	40	⇑P		P	09 16 37.9	+0.8
	baz=87							
L16A	Fish Haven	86.84	47	⇑P		P	09 16 38.6	+0.9
	baz=87							
BC3	Big Chuckawall	86.95	56	⇓P		P	09 16 39.0	+0.7
	baz=87							
M16A	Huntsville	86.97	47	⇑P		P	09 16 38.7	+0.3
	baz=87							
ARUT	Antelope Range	86.99	51	*e*P		P	09 16 42.1	+3.6
	comp=Z,41nm,1.0s							
FFC	Flin Flon	87.01	32	*e*P		P	09 16 38.2	+0.2
	comp=Z,9.7nm,1.0s							
RLMT	Red Lodge	87.06	43	*e*P		P	09 16 40.4	+1.6
	comp=Z,1.7nm,0.6s							
RLMT	Red Lodge	87.06	43	⇑P		P	09 16 40.3	+1.6
	baz=87							
C21A	Desert Coulee	87.30	40	⇓P		P	09 16 40.3	+0.7
	baz=87							
J18A	Kendall Valley	87.33	45	⇓P		P	09 16 40.8	+0.7
	baz=87							
A22A	Carney Farms,	87.50	39	⇑P		P	09 16 40.4	-0.1
	baz=87							
K18A	Toltan Ranch,	87.55	46	⇑P		P	09 16 42.2	+1.1
	baz=88							
M17A	Scullys Gap (B	87.58	47	⇑P		P	09 16 41.4	+0.1
	baz=88							
Y12C	Blythe	87.64	55	⇑P		P	09 16 41.8	+0.4
	baz=88							
GLA	Glamis	87.65	56	⇓P		P	09 16 42.0	+0.4
	baz=88							
N17A	Moffit Pass	87.67	47	⇓P		P	09 16 41.9	+0.1
	baz=88							
PDMCI	Parker Dam,Lak	87.74	55	⇑P		P	09 16 42.0	+0.1
	baz=88							
BW06	Boulder Array	87.82	45	⇑P		P	09 16 42.3	-0.2
	baz=88							
PDAR	Pinedale Array	87.82	45	P		P	09 16 41.9	-0.6
PDAR	Pinedale Array	87.82	45	P		P	09 16 41.9	-0.6
	comp=Z,0.5nm,0.4s,baz=172,slow=2.5,SNR=6.4							
Q16A	Castle Valley	88.22	49	⇓P		P	09 16 44.8	+0.4
	baz=88							
L19A	Farson	88.22	46	⇑P		P	09 16 44.3	0.0
	baz=88							
K19A	Absolon Red Bu	88.27	45	⇑P		P	09 16 44.4	-0.1
	baz=88							
B23A	Brockton	88.28	39	⇑P		P	09 16 44.4	+0.1
	baz=88							
I20A	Worland	88.28	44	⇑P		P	09 16 44.6	+0.2
	baz=88							
P17A	Butcher Ranch,	88.31	49	⇑P		P	09 16 45.0	+0.3
	baz=88							
G21A	Lodge Grass	88.34	42	⇓P		P	09 16 44.9	+0.2
	baz=88							
N18A	Larsen Ranch,	88.46	47	⇓P		P	09 16 45.4	-0.1
	baz=88							
C23A	Lambert	88.47	40	⇑P		P	09 16 45.5	+0.4
	baz=88							
P18A	Preston Nutter	88.60	48	⇑P		P	09 16 46.4	+0.2
	baz=88							
E22A	Miles City	88.61	41	⇑P		P	09 16 46.1	+0.3
	baz=88							
SRU	San Rafael	88.61	49	⇓P		P	09 16 46.5	+0.4
	baz=89							
K20A	Yellowstone Ra	88.68	45	⇓P		P	09 16 46.5	+0.1
	baz=89							
H21A	Big Horn, Sher	88.70	43	⇓P		P	09 16 47.0	+0.6
	baz=89							
Y14A	Wickenburg	88.75	55	⇑P		P	09 16 47.6	+0.9
	baz=89							
I21A	Big Trails, Te	88.89	44	⇑P		P	09 16 47.5	+0.1
	baz=89							
G22A	Birney	88.93	42	⇓P		P	09 16 47.9	+0.5
	baz=89							
Z14A	Wintersburg	89.00	55	⇓P		P	09 16 48.4	+0.5
	baz=89							
O19A	Miners Draw (B	89.12	48	⇑P		P	09 16 48.5	0.0
	baz=89							
M20A	Sweetwater, Wa	89.27	46	⇓P		P	09 16 49.4	+0.2
	baz=89							
I22A	9 Mile Ranch,	89.38	43	⇓P		P	09 16 49.6	0.0
	baz=89							
WUAZ	Wupatki	89.39	53	*e*P		P	09 16 51.1	+1.3
	comp=Z,1.9nm,0.7s							
WUAZ	Wupatki	89.39	53	⇓P		P	09 16 50.0	+0.2
	baz=89							
K21A	Alcova	89.42	45	⇑P		P	09 16 50.0	+0.1
	baz=89							
P19A	Cripple Cowboy	89.49	48	⇑P		P	09 16 50.5	+0.2
	baz=89							
G23A	Biddle	89.51	42	⇑P		P	09 16 50.0	-0.1
	baz=89							
E24A	Baker	89.56	40	⇑P		P	09 16 50.4	+0.1
	baz=90							
J22A	Midwest	89.60	44	⇑P		P	09 16 50.7	0.0
	baz=90							
L21A	Rawlins	89.63	45	⇓P		P	09 16 50.9	0.0
	baz=90							
M21A	Separation Pea	89.78	46	⇓P		P	09 16 51.6	0.0
	baz=90							
H23A	Clabaugh Cattl	89.79	42	⇑P		P	09 16 51.1	-0.4
	baz=90							
O20A	White River Ci	89.80	47	⇓P		P	09 16 52.1	+0.3
	baz=90							
I23A	Meade Ranch, G	90.02	43	⇓P		P	09 16 52.7	+0.2
	baz=90							
N21A	Black Mountain	90.04	47	⇑P		P	09 16 52.9	+0.1
	baz=90							
Q20A	Ridgley Place,	90.26	48	⇑P		P	09 16 54.2	+0.4
	baz=90							
R20A	Redvale	90.52	49	⇓P		P	09 16 55.4	+0.2
	baz=90							
S20A	Disappointment	90.68	50	⇓P		P	09 16 56.1	+0.2
	baz=91							
Q21A	Lamborn Mesa,	90.82	48	⇑P		P	09 16 57.1	+0.7
	baz=91							
M23A	Laramie	90.95	45	⇓P		P	09 16 57.2	+0.1
	baz=91							
O22A	Kremmling	90.97	47	⇓P		P	09 16 57.4	+0.2
	baz=91							
P22A	Eagle	91.06	47	⇑P		P	09 16 57.9	+0.3
	baz=91							
SMCO	Snowmass	91.09	48	*e*P		P	09 16 58.5	+0.5
	comp=Z,1.8nm,0.9s							
S21A	Coal Bank Pass	91.16	49	⇑P		P	09 16 58.3	+0.1
	baz=91							
Q22A	Crested Butte,	91.27	48	⇑P		P	09 16 59.1	+0.4
	baz=91							
V20A	Brimhall	91.44	51	⇓P		P	09 16 59.9	+0.5
	baz=91							
K25A	Mack Ranch, Ha	91.66	44	⇓P		P	09 16 59.7	-0.6
	baz=92							
W20A	Ramah	91.70	52	⇑P		P	09 17 00.7	0.0
	baz=92							
P23A	Jefferson	91.80	47	⇑P		P	09 17 00.2	-1.0
	baz=92							
S22A	4UR Ranch, Cre	91.81	49	⇑P		P	09 17 02.2	+1.0
	baz=92							
X20A	Quemado	91.94	53	⇑P		P	09 17 02.9	+1.1
	baz=92							
T22A	Edith	92.07	50	⇑P		P	09 17 02.7	+0.4
	baz=92							
NB2	NORSAR Subarra	92.27	340	P		P	09 17 01.3	-1.2
	comp=Z,0.5nm,0.5s,baz=44,slow=5.1							
NOA	NORSAR Array B	92.27	340	P		P	09 17 00.4	-2.1
NOA	NORSAR Array B	92.27	340	P		P	09 17 00.4	-2.1
	comp=Z,0.5nm,0.8s,baz=46,slow=4.7,SNR=4.0							
R23A	Moffat	92.33	48	⇑P		P	09 17 04.3	+0.7
	baz=92							
U22A	Llaves	92.38	50	⇑P		P	09 17 03.6	-0.2
	baz=92							
Z20A	Nine Sixteen R	92.46	54	⇑P		P	09 17 04.9	+0.8
	baz=92							
120A	U Bar Ranch, L	92.66	54	⇑P		P	09 17 05.9	+0.8
	baz=93							
Z22A	Elephant Butte	93.64	53	⇑P		P	09 17 10.5	+1.0
	baz=94							
BRTR	Keskin Array B	93.78	314	P		P	09 17 07.7	-2.4
BRTR	Keskin Array B	93.78	314	P		P	09 17 07.7	-2.4
	comp=Z,1.3nm,0.8s,baz=92,slow=3.7,SNR=7.9							
V24A	Rampart Ranch,	93.82	50	⇑P		P	09 17 10.5	+0.1
	baz=94							
R26A	Arlington	93.95	47	⇓P		P	09 17 10.2	-0.6
	baz=94							
KSCO	Kaye Shedlock'	94.19	46	⇑P		P	09 17 12.6	+0.7
	baz=94							
T26A	Comanche Natio	94.37	48	⇑P		P	09 17 13.3	+0.4
	baz=94							
MNTX	Cornudas Mount	95.52	54	⇑P		P	09 17 17.5	-0.5
	baz=96							
626A	Big Bend Ranch	97.43	55	⇓P		P	09 17 26.2	-0.6
	baz=97							
Y30A	Stafford Cattl	97.86	50	⇓P		P	09 17 28.0	-0.6
	baz=98							
TXAR	Lajitas Array	97.89	55	P		Pdif	09 17 29.4	+0.5
TXAR	Lajitas Array	97.89	55	P		Pdif	09 17 29.4	+0.5
	comp=Z,0.1nm,0.5s,baz=302,slow=2.9,SNR=3.6							
TORD	Torodi Ar. Bea	132.13	309	PKP		PKPdf	09 23 05.0	-1.1
TORD	Torodi Ar. Bea	132.13	309	PKP		PKPdf	09 23 05.0	-1.1
	comp=Z,0.3nm,0.6s,baz=33,slow=1.7,SNR=2.8							
CFAA	Coronel Fontan	147.16	119	PKPbc		PKPbc	09 23 34.7	-0.6
CFAA	Coronel Fontan	147.16	119	PKPbc		PKPbc	09 23 34.7	-0.6
	comp=Z,0.3nm,0.8s,baz=249,slow=5.6,SNR=5.4							
LPAZ	La Paz	147.90	91	*e*PKPbc		PKPbc	09 23 38.5	+0.1
LPAZ	La Paz	147.90	91	PKPbc		PKPbc	09 23 38.8	+0.4
	comp=Z,2.0nm,0.9s,baz=354,slow=1.4,SNR=6.8							
SAML	Samuel	150.53	74	*e*PKPbc		PKPbc	09 23 43.3	-0.9
SAML				*e*PKPab		PKPab	09 23 50.4	-1.2

GEN ***19*** *09:05:24.6,46.74N×8.90E,h10km,ML2.3*
ISCJB ***19*** *09:05:31.4±0.3,46.36N±0.02×8.37E±0.02,h5km±3km, Error ellipse: s-maj=3.0km s-min=2.2km az=146.5*
CSEM ***19*** *09:05:32.7±0.1,46.31N×8.46E,h1km,ML2.8/24, Error ellipse: s-maj=2.9km s-min=2.3km az=141.0,Landslide*
LDG ***19*** *09:05:33.4±0.1,46.36N×8.47E,h6km,Ml2.8/26, Error ellipse: s-maj=1.6km s-min=1.2km az=111.0*
VIE ***19*** *09:05:33.1±0.2,46.24N×8.58E,h10km±12km, mb1.9/2, ML2.5/5, Error ellipse: s-maj=2.4km s-min=1.4km az=137.0 36 km SE of Biel*
STR ***19*** *09:05:34.7±0.6,46.42N×8.62E,h10km,Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
PRU ***19*** *09:05:38.6,46.45N×8.40E,h4km*

ISC 19 09:05:33.3±1.1,46.31N±0.02×8.40E±0.02,h9km±9km, n103,σ1$44/160,6C-3D,Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRAV	Traversella	0.92	210	P	Pg	09 05 49.4	-1.6
LSD	Lago del Serru	1.23	226	P	Pg	09 05 56.4	-0.5
BBS	Basel-Blauen	1.30	332	Pg	Pb	09 05 59.6	+1.7
BBS				Sg	Sn	09 06 17.8	+2.6
RSL	Roselend	1.39	244	Pg	Pb	09 06 04.5	+5.1
RSL				Sg	Sn	09 06 26.6	+9.2
DAVA	Damuels	1.41	46	⇓*e*Pg	Pb	09 05 59.8	0.0
	SNR=8.8						
DAVA				⇑*i*Sg	Sn	09 06 18.8	+0.9
	98nm,0.6s						
DAVA	Damuels	1.41	46	Pg	Pb	09 05 59.8	0.0
	SNR=8.8						
DAVA				Sg	Sn	09 06 18.8	+0.9
	98nm,0.6s						
RSP	Reno Superiore	1.41	215	P	Pn	09 05 57.1	-2.1
LPG	La Plagne	1.41	235	*e*Pn	Pn	09 05 59.1	-0.2
LPG	La Plagne	1.41	235	*e*Pg	Pg	09 06 01.2	+0.8
LPG				*e*Sg	Sn	09 06 21.2	+3.0
	106nm,0.9s						
LPG	La Plagne	1.41	235	*e*Pn	Pg	09 06 00.3	-0.1
LPG	La Plagne	1.41	235	*e*Pg	Pg	09 06 02.7	+2.3
LPG				*e*Sg	Sn	09 06 21.2	+3.0
	53nm,0.9s						
LPL	La Plagne	1.41	236	*e*Pn	Pn	09 05 59.0	-0.3
LPL	La Plagne	1.41	236	*e*Pg	Pg	09 06 01.0	+0.6
LPL				*e*Sg	Sn	09 06 21.0	+2.9
	59nm,0.8s						
LPL	La Plagne	1.41	236	*e*Pn	Pg	09 06 00.2	-0.2
LPL	La Plagne	1.41	236	*e*Pg	Pg	09 06 02.6	+2.2
LPL				*e*Sg	Sn	09 06 21.0	+2.9
	30nm,0.8s						
LOMF	Lomont	1.50	314	Pg	Pg	09 06 03.4	+1.4
LOMF				Sg	Sg	09 06 24.2	+2.7
LOMF	Lomont	1.50	314	Pg	Pg	09 06 03.4	+1.4
LOMF				Sg	Sg	09 06 24.2	+2.7
MOSI	Grossmontoni	1.52	78	*e*Pg	Pg	09 06 02.9	+0.6
MOSI				*e*Sg	Sn	09 06 24.6	+4.0
FELD	Feldberg im Sc	1.59	350	Pg	Pb	09 06 02.4	-0.4
FELD				Sg	Sg	09 06 25.0	+0.7
RNI	Roncone	1.59	101	⇑*e*Pg	Pg	09 06 03.5	-0.4
RNI	Roncone	1.59	101	*e*Pg	Pg	09 06 03.5	-0.4
CABF	La Chapelle	1.63	281	*e*Pn	Pn	09 06 01.3	-0.8
CABF	La Chapelle	1.63	281	*e*Pg	Pg	09 06 04.3	-0.2
CABF				*e*Sg	Sg	09 06 25.8	+0.2
	54nm,0.6s						
CABF	La Chapelle	1.63	281	*e*Pn	Pg	09 06 04.1	-0.4
CABF	La Chapelle	1.63	281	*e*Pg	Pg	09 06 07.9	+3.4
CABF				*e*Sg	Sg	09 06 27.7	+2.1
	27nm,0.6s						
FETA	Feichten	1.75	65	⇑*e*Pg	Pg	09 06 05.3	-1.6
	SNR=17						
FETA	Feichten	1.75	65	Pg	Pg	09 06 05.3	-1.6
	SNR=17						
MOF	Molkenrain	1.77	331	Pg	Pg	09 06 06.9	-0.2
MOF	Molkenrain	1.77	331	Pg	Pg	09 06 06.9	-0.2
SPAK	Spaichingen-Ko	1.81	8	Pg	Pg	09 06 06.7	-1.3
HINF	Hinteralfeld	1.84	325	*e*Pn	Pn	09 06 03.5	-1.5
HINF	Hinteralfeld	1.84	325	*e*Pg	Pg	09 06 07.5	-1.0
HINF				*e*Sg	Sn	09 06 30.0	+1.6
	33nm,0.6s						
HINF	Hinteralfeld	1.84	325	*e*Pn	Pn	09 06 05.9	+0.9
HINF	Hinteralfeld	1.84	325	*e*Pg	Pg	09 06 08.8	+0.3
HINF				*e*Sg	Sg	09 06 33.2	+0.8
	17nm,0.6s						
MBDF	Montbardon	1.96	216	*e*Pn	Pn	09 06 06.4	-0.3
MBDF	Montbardon	1.96	216	*e*Pg	Pg	09 06 11.0	+0.2
MBDF				*e*Sg	Sg	09 06 37.5	+1.4
	58nm,0.8s						
MBDF	Montbardon	1.96	216	*e*Pn	Pb	09 06 08.1	-1.0
MBDF				*e*Sg	Sg	09 06 37.5	+1.4
	29nm,0.8s						
RETA	Reutte	2.00	53	⇑*e*Pg	Pg	09 06 10.7	-0.9
	SNR=6.9						
RETA				⇓*i*Sg	Sg	09 06 38.2	+0.7
	23nm,0.5s						
RETA	Reutte	2.00	53	Pg	Pg	09 06 10.7	-0.9
	SNR=6.9						
RETA				Sg	Sg	09 06 38.2	+0.7
	23nm,0.5s						
MOTA	Moosalm	2.12	60	⇓*e*Pg	Pg	09 06 12.3	-1.6
	SNR=10.0						
MOTA	Moosalm	2.12	60	Pg	Pg	09 06 12.3	-1.6
	SNR=10.0						
HAU	Haudompre	2.20	321	*e*Pn	Pn	09 06 08.4	-1.5
HAU	Haudompre	2.20	321	*e*Pg	Pb	09 06 13.8	+0.6
HAU				*e*Sg	Sb	09 06 42.2	+1.7
	26nm,0.5s						
HAU	Haudompre	2.20	321	*e*Pn	Pn	09 06 10.3	+0.4
HAU				*e*Sg	Sg	09 06 44.3	+0.4
	13nm,0.5s						
CDF	Champ du Feu	2.23	340	*e*Pn	Pn	09 06 08.6	-1.9
CDF	Champ du Feu	2.23	340	*e*Pg	Pb	09 06 13.9	+0.1
CDF				*e*Sg	Sb	09 06 42.9	+1.3
	22nm,0.8s						
CDF	Champ du Feu	2.23	340	*e*Pn	Pn	09 06 10.4	-0.1
CDF	Champ du Feu	2.23	340	*e*Pg	Pg	09 06 16.1	0.0
CDF				*e*Sg	Sg	09 06 44.8	-0.3
	11nm,0.8s						
ORIF	Oris-en-Rattie	2.25	233	*e*Pn	Pn	09 06 10.3	-0.4
ORIF	Oris-en-Rattie	2.25	233	*e*Pg	Pg	09 06 16.5	+0.1
ORIF				*e*Sg	Sg	09 06 47.2	+1.6
	39nm,0.9s						
ORIF	Oris-en-Rattie	2.25	233	*e*Pn	Pb	09 06 12.9	-1.2
ORIF	Oris-en-Rattie	2.25	233	*e*Pg	Pg	09 06 17.4	+1.0
ORIF				*e*Sg	Sg	09 06 47.2	+1.6
	19nm,0.9s						
WTTA	Wattenberg	2.42	66	⇑*i*Pg	Pg	09 06 17.6	-2.0
WTTA				⇑*i*Sg	Sg	09 06 50.6	-0.3
	18nm,0.5s						
WTTA	Wattenberg	2.42	66	Pg	Pg	09 06 17.6	-2.0
WTTA				Sg	Sg	09 06 50.6	-0.3
	18nm,0.5s						
THEF	They Montfort	2.52	320	Pg	Pg	09 06 22.8	+1.2
THEF	They Montfort	2.52	320	Pg	Pg	09 06 22.8	+1.2
SBF	Sospel	2.54	196	*e*Pn	Pn	09 06 14.3	-0.4
SBF				*e*Sn	Sn	09 06 44.8	-1.0
	6.4nm,0.3s						
SBF	Sospel	2.54	196	*e*Pn	Pn	09 06 14.3	-0.4
SBF				*e*Sn	Sn	09 06 44.8	-1.0
	3.2nm,0.3s						
PAGF	Fort de Pagny	2.89	322	*e*Pn	Pn	09 06 17.9	-1.5
PAGF				*e*Sg	Sg	09 07 04.3	-1.6
	6.0nm,0.8s						
PAGF	Fort de Pagny	2.89	322	*e*Pn	Pn	09 06 19.7	+0.3
PAGF				*e*Sg	Sg	09 07 05.9	0.0
	3.0nm,0.8s						
SFTF	Sexfontaines	2.97	311	*e*Pn	Pn	09 06 19.0	-1.5
	baz=126						
SFTF	Sexfontaines	2.97	311	*e*Pg	Pg	09 06 28.4	-1.8
	baz=130						
SFTF				*e*Sg	Sg	09 07 06.8	-1.9
	18nm,0.6s						
SFTF	Sexfontaines	2.97	311	*e*Pn	Pn	09 06 21.1	+0.6
SFTF	Sexfontaines	2.97	311	*e*Pg	Pg	09 06 30.5	+0.3
SFTF				*e*Sg	Sg	09 07 08.9	+0.2
	8.8nm,0.6s						
VIVF	Saint-Julien-l	3.00	242	*e*Pn	Pn	09 06 19.9	-1.0
VIVF				*e*Sg	Sg	09 07 10.2	+0.7
	10nm,0.6s						
VIVF	Saint-Julien-l	3.00	242	*e*Pn	Pn	09 06 22.0	+1.1
VIVF				*e*Sg	Sg	09 07 10.2	+0.7
	5.2nm,0.6s						
FRF	La Foret Royal	3.02	205	*e*Pn	Pn	09 06 21.2	0.0
FRF	La Foret Royal	3.02	205	*e*Pg	Pg	09 06 29.6	-1.5
FRF				*e*Sg	Sg	09 07 09.8	-0.5
	5.5nm,0.6s						
FRF	La Foret Royal	3.02	205	*e*Pn	Pn	09 06 21.4	+0.2
FRF				*e*Sn	Sn	09 06 56.4	-1.1
	2.8nm,0.6s						
SMRF	Simiane la Rot	3.08	222	*e*Pn	Pn	09 06 21.7	-0.3
SMRF	Simiane la Rot	3.08	222	*e*Pg	Pg	09 06 31.1	-1.1
SMRF				*e*Sn	Sn	09 06 56.9	-2.0
	2.1nm,0.5s						
SMRF	Simiane la Rot	3.08	222	*e*Pn	Pn	09 06 22.5	+0.5
SMRF				*e*Sn	Sn	09 06 58.5	-0.4
	1.0nm,0.5s						
MEZF	Maizieres J'vi	3.16	315	*e*Pn	Pn	09 06 21.5	-1.6
MEZF	Maizieres J'vi	3.16	315	*e*Pg	Pg	09 06 31.6	-2.1
	baz=140						
MEZF				*e*Sg	Sg	09 07 11.7	-2.9
	16nm,0.5s						
MEZF	Maizieres J'vi	3.16	315	*e*Pn	Pn	09 06 23.1	0.0
MEZF				*e*Sg	Sg	09 07 14.6	0.0
	7.8nm,0.5s						
SMF	Signal de Mont	3.17	278	*e*Pn	Pn	09 06 22.2	-1.0
SMF	Signal de Mont	3.17	278	*e*Pg	Pg	09 06 33.1	-0.8
SMF				*e*Sg	Sg	09 07 14.4	-0.6
	12nm,0.6s						
SMF	Signal de Mont	3.17	278	*e*Pn	Pn	09 06 23.8	+0.6
SMF	Signal de Mont	3.17	278	*e*Pg	Pg	09 06 34.8	+0.9
SMF				*e*Sg	Sg	09 07 15.8

9.4nm,0.9s
BAIF Baives 4.68 325 *e*Pn **Pn** 09 06 42.4 -1.6
BAIF *e*Sn **Sn** 09 07 33.4 -5.0
2.0nm,0.5s
BAIF Baives 4.68 325 *e*Pn **Pn** 09 06 43.8 -0.2
BAIF *e*Sn **Sn** 09 07 36.1 -2.2
1.0nm,0.5s
CLL Collm 5.85 30 *e*Sn Pg 09 07 29.0 +3.8
CLL *e*Sg **Sg** 09 08 43.0 +2.1

SZGRF ***19*** *09:05:46.5,24.˚79N×142.˚93E,h33km,mb5.2, Volcano Islands, Japan, region*
ISCJB ***19*** *09:05:51.4±0.5,23.˚28N±0.˚02×142.˚18E±0.˚02, h122km±3km,mb5.2/268, Error ellipse: s-maj=3.6km s-min=2.9km az=169.2*
MOS ***19*** *09:05:53.4±0.9,23.˚21N×142.˚13E,h145km,mb5.2/81, MS4.3/4, Error ellipse: s-maj=7.3km s-min=4.4km az=103.3*
IDC ***19*** *09:05:53.8±0.5,23.˚18N×142.˚19E,h139km±4km,mb4.8/43, mb1 4.9/46,mb1mx4.9/47,mbtmp4.8/46,MS4.2/11, Ms1 4.2/11,ms1mx3.8/43, Error ellipse: s-maj=8.5km s-min=5.8km az=83.0*
JMA ***19*** *09:05:54.1±0.3,23.˚56N×142.˚67E,h180km,M5.5*
JMA Felt I J1.
BJI ***19*** *09:05:54.1,23.˚47N×142.˚39E,h155km,mB5.0/33, mb5.0/53*
NEIC ***19*** *09:05:54.1±0.1,23.˚16N×142.˚22E,mb5.3/154, Error ellipse: s-maj=3.4km s-min=2.9km az=133.0*
NEIC Recorded [1 JMA] in the Haha-jima-retto.
GCMT ***19*** *09:05:56.0±0.2,23.˚34N×142.˚17E,h122km±1km,MW5.2, Moment Tensor Solution. s49,c67; s87,c161; Moment tensor: Scale 10¹⁶Nm; Mrr7.24±.17; Mθθ-6.37±.21; Mφφ-0.88±.23; Mrθ-0.17±.18; Mθφ-6.31±.19; Mφr-0.49±.18; Best double couple: M₀8.90000×10¹⁶ NP1:φ₉61.00000°, δ44.00000°,λ97.00000°. NP2:φ₉232.00000°,δ47.00000°, λ84.00000°. Principal axes: T 7.3000, Plg85.0000°, Azm73.0000°; N 3.2000, Plg5.0000°, Azm237.0000°; P -10.5000, Plg1.0000°, Azm327.0000°; Data Used: ll IU G CN IC.*
DJA ***19*** *09:05:59.0±1.5,23.˚N±8.˚×14.˚2E±1.˚1,h185km±15km, M5.1/16,mB5.6/6,mb5.1/16,Mw(mB)5.1/6*
ISC 19 09:05:54.9±0.3,23.˚24N±0.˚03×142.˚29E±0.˚03,h149km±1km, h148km:pP-P,n1052,σ1s20/1198,mb5.2/267,232C-215D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**3.38**	**358**	P			**Pn**	**09 06 43.9**	**-3.1**
JHHJ				S			**Sn**	**09 07 22.9**	**-4.5**
CBIJ	**Chichi jima**	**3.84**	**359**	⇓P			**Pn**	**09 06 50.2**	**-2.8**
CBIJ				*e*S			**Sn**	**09 07 33.1**	**-5.1**
GUMO	**Guam**	**9.91**	**165**	*e*Pn			**Pn**	**09 08 14.1**	**+0.3**
GUMO	**Guam**	**9.91**	**165**	P			**Pn**	**09 08 14.0**	**+0.3**
	11nm,0.3s,baz=119,slow=2.2,SNR=7.6								
JHCJ	**Hachijojimakas**	**10.04**	**348**	P			Pn	09 08 10.9	-4.5
JHCJ				*e*S			Sn	09 09 58.6	-7.9
JHJ2	**Mitsune**	**10.07**	**348**	P			Pn	09 08 11.0	-4.8
JHJ2				*e*S			Sn	09 09 57.4	-10
JHJ	**Hachijo jima 2**	**10.09**	**348**	P			Pn	09 08 11.3	-4.7
	54nm,0.3s,baz=65,slow=22,SNR=46								
JHJ				S			Sn	09 09 56.8	-11
	52nm,0.3s,baz=248,slow=19,SNR=3.6								
JMZ	**Minamidaito 2**	**10.40**	**287**	P			**Pn**	**09 08 20.5**	**+0.3**
JMY	**Miyakejima3**	**11.06**	**348**	P			Pn	09 08 25.3	-3.7
JKO	**Kozu shima**	**11.25**	**346**	P			Pn	09 08 26.9	-4.5
JKO				*e*S			**Sn**	**09 10 31.9**	**-3.8**
BSO1	**Boso 1**	**11.43**	**355**	P			Pn	09 08 28.4	-4.8
BSO1				*e*S			Sn	09 10 30.2	-9.0
JWZ	**Kozaga**	**11.77**	**332**	P			**Pn**	**09 08 37.1**	**-1.1**
JSG	**Sagara**	**11.94**	**343**	P			Pn	09 08 36.4	-4.0
JIE	**Ise**	**12.14**	**338**	P			**Pn**	**09 08 40.2**	**-2.8**
JOD2	**Odawara 2**	**12.30**	**348**	P			Pn	09 08 39.9	-5.2
JOD2				*e*S			Sn	09 10 51.6	-9.4
JAM	**Amami Oshima**	**12.53**	**297**	P			P	09 08 50.3	-3.4
JTO	**Tosashimizu**	**12.72**	**321**	P			**Pn**	**09 08 50.4**	**-0.1**
JMN	**Monobe**	**12.79**	**327**	P			**Pn**	**09 08 51.2**	**-0.3**
JGF	**Kuroka**	**13.04**	**342**	P			Pn	09 08 51.0	-3.7
JRY	**Ryogami san**	**13.07**	**348**	P			Pn	09 08 49.6	-5.4
JRY				S			Sn	09 11 08.4	-11
JYT	**Yasato**	**13.07**	**352**	*e*S			Sn	09 11 04.7	-15
JOW	**Kunigami**	**13.20**	**289**	*e*Pn			**Pn**	**09 08 57.2**	**+0.5**
JOW	**Kunigami**	**13.20**	**289**	P			**Pn**	**09 08 57.1**	**+0.4**
JSU	**Suzuyama**	**13.35**	**311**	P			**Pn**	**09 08 59.0**	**+0.4**
JWT	**Wachi**	**13.41**	**335**	P			**Pn**	**09 08 57.3**	**-2.1**
JAD	**Aida**	**13.64**	**331**	P			**Pn**	**09 09 00.3**	**-2.0**
MJAR	**Matsushiro Arr**	**13.72**	**346**	P			Pn	09 08 57.4	-5.8
MJAR				S			Sn	09 11 23.7	-11
MJAR	**Matsushiro Arr**	**13.72**	**346**	P			Pn	09 08 57.4	-5.8
	4.7nm,0.3s,baz=166,slow=11,SNR=21								
MJAR				S			Sn	09 11 23.7	-11
	2.3nm,0.3s,baz=181,slow=21,SNR=4.4								
MAJO	**Matsushiro**	**13.72**	**346**	*e*P			Pn	09 08 58.3	-5.0
MAJO	**Matsushiro**	**13.72**	**346**	*e*Pn			Pn	09 08 58.3	-5.0
MAT	**Matsushiro**	**13.72**	**346**	P			Pn	09 08 59.1	-4.2
JSJ	**Shimokoshiki**	**13.96**	**310**	P			**Pn**	**09 09 06.8**	**+0.4**
JNU	**Nakatsue**	**14.07**	**317**	*e*Pn			**Pn**	**09 09 08.5**	**+0.8**
JNU	**Nakatsue**	**14.07**	**317**	P			**Pn**	**09 09 08.0**	**+0.3**
JNU	**Nakatsue**	**14.07**	**317**	P			**Pn**	**09 09 08.7**	**+1.0**
	2.3nm,0.3s,baz=118,slow=4.9,SNR=20								
JHS	**Saijyo**	**14.19**	**328**	P			**Pn**	**09 09 08.1**	**-1.1**
JKE	**Kume jima 2**	**14.41**	**285**	P			**P**	**09 09 13.7**	**-1.0**
JMM	**Marumori**	**14.63**	**355**	P			Pn	09 09 09.3	-5.5
JMM				S			Sn	09 11 40.0	-17
JSD	**Sado**	**15.15**	**348**	P			Pn	09 09 14.9	-6.2
JFU	**Fukue jima 2**	**15.19**	**311**	P			**P**	**09 09 22.4**	**-0.9**
JYA	**Atsumi**	**15.46**	**352**	P			**Pn**	**09 09 21.0**	**-4.0**
JYA				S			Sn	09 12 04.2	-13
JTM	**Tenmabayashi**	**17.53**	**357**	P			**P**	**09 09 49.0**	**0.0**
JOT	**Ohata**	**18.12**	**357**	P			**P**	**09 09 55.6**	**+0.2**
ERM	**Erimo**	**18.74**	**2**	*c*	*i*P		**Pn**	**09 10 03.7**	**-0.6**
ERM	**Erimo**	**18.74**	**2**	*e*P			**Pn**	**09 10 03.5**	**-0.8**
	114nm,0.8s								
ERM	**Erimo**	**18.74**	**2**	P			**Pn**	**09 10 04.8**	**+0.5**
	965nm,0.7s,SNR=8.7								
KSRS	**Korea Array**	**18.79**	**322**	P			**P**	**09 10 01.1**	**-1.7**
	1.0nm,0.3s,baz=129,slow=11,SNR=15								
KSRS				PcP			**PcP**	**09 14 23.1**	**-0.5**
	baz=146,slow=2.1,SNR=5.0								
KSRS				ScP			**ScP**	**09 17 47.3**	**+1.8**
	0.1nm,0.3s,baz=137,slow=2.0,SNR=9.0								
KSAR	**Wonju Array Be**	**18.81**	**322**	P			**P**	**09 10 01.1**	**-1.9**
KSAR				PcP			**PcP**	**09 14 23.1**	**-0.5**
KSAR				ScP			**ScP**	**09 17 47.3**	**+1.8**
NACB	**Ninganchiao**	**18.98**	**277**	*e*P			**Pn**	**09 10 08.1**	**+0.8**
	26nm,0.6s								
YHNB	**Yeheng**	**19.17**	**278**	*e*P			**P**	**09 10 07.3**	**+0.2**
	32nm,0.9s								
YULB	**Yu-li**	**19.28**	**275**	*e*P			**Pn**	**09 10 11.0**	**+0.1**
	41nm,1.0s								
TWG	**Pinlang**	**19.53**	**273**	*e*P			**Pn**	**09 10 12.2**	**-1.6**
	404nm,1.6s								
INCN	**Inchon**	**19.56**	**320**	*e*P			**Pn**	**09 10 14.6**	**+0.5**
	28nm,0.6s								
INCN	**Inchon**	**19.56**	**320**	P			**Pn**	**09 10 15.6**	**+1.6**
	SNR=10								
SSLB	**Suanglung**	**19.57**	**276**	*e*P			**Pn**	**09 10 14.4**	**0.0**
	62nm,0.8s								
SSE	**Sheshan**	**20.32**	**297**	P			**P**	**09 10 19.4**	**0.0**
SSE				sP			**sP**	**09 11 04.9**	**+0.6**
SSE				S			**S**	**09 13 58.9**	**-0.2**
SSE				sS			**sS**	**09 14 43.6**	**+0.7**
SSE				pmax			pmax		
	comp=Z,70nm,0.8s								
SSE				pmax			pmax		
	comp=Z,340nm,6.6s								
SSE				LR			LR		
	comp=N,420nm,16.3s								
SSE				LR			LR		
	comp=E,260nm,16.3s								
SSE				LR			LR		
	comp=Z,370nm,14.7s								
ASAJ	**Asahikawa**	**20.82**	**1**	*e*P			**P**	**09 10 25.7**	**+1.1**
	comp=Z,39nm,0.6s								
ASAJ				ScP			**ScP**	**09 17 51.5**	**+1.4**
ASAJ	**Asahikawa**	**20.82**	**1**	P			**P**	**09 10 26.1**	**+1.5**
	comp=Z,96nm,0.6s,baz=221,slow=13,SNR=23								
ASAJ				ScP			**ScP**	**09 17 51.5**	**+1.4**
	comp=Z,5.8nm,0.8s,baz=182,slow=2.3,SNR=4.2								
YUK	**Yuzh-Kuril'sk**	**20.95**		*c*	*i*P		**P**	**09 10 25.1**	**-0.8**
YUK					*i* S		**S**	**09 14 11.2**	**+0.2**
YUK					pmax		pmax		
	comp=Z,544nm,1.4s								
VLA	**Vladivostok**	**21.62**	**339**	⇓	*i*P		**P**	**09 10 30.2**	**-2.9**
VLA					*i* S		**S**	**09 14 23.1**	**+0.1**
VLA					pmax		pmax		
	comp=Z,96nm,0.8s								
NJ2	**Nanjing**	**22.50**	**298**	*e*P			**P**	**09 10 42.3**	**+0.1**
NJ2					pP		**pP**	**09 11 09.9**	**+0.5**
NJ2					PP		**PnPn**	**09 11 17.3**	**+2.2**
NJ2					sP		**sP**	**09 11 27.3**	**-0.7**
NJ2					S		**S**	**09 14 39.5**	**+1.5**
NJ2					sS		**sS**	**09 15 28.5**	**+1.8**
NJ2					pmax		pmax		
	comp=Z,40nm,0.7s								
NJ2					pmax		pmax		
	comp=Z,240nm,5.2s								
NJ2					LR		LR		
	comp=N,340nm,10.0s								
NJ2					LR		LR		
	comp=E,740nm,18.0s								
NJ2					LR		LR		
	comp=Z,460nm,12.0s								
USRK	**Ussuriysk Arra**	**22.55**	**340**	P			**P**	**09 10 40.6**	**-1.8**
	comp=Z,34nm,0.7s,baz=160,slow=11,SNR=113								
YSS	**Yuzh-Sakhalins**	**23.66**		1⇓	*e*P		**P**	**09 10 54.8**	**+2.1**
YSS					*e**PP		**pP**	**09 11 25.0**	**+3.3**
YSS					*e**SP		sP	09 11 45.5	+5.2
YSS					*e*S		**S**	**09 14 59.0**	**+2.7**
YSS					*e**SS		**sS**	**09 15 48.0**	**-1.4**
YSS					pmax		pmax		
	comp=Z,60nm,1.0s								
YSS					MLR		MLR		
	comp=Z,400nm,14.0s								
MDJ	**Mudanjiang**	**23.73**	**337**	P			**P**	**09 10 53.1**	**-0.2**
MDJ					pP		**pP**	**09 11 23.8**	**+1.4**
MDJ					sP		**sP**	**09 11 44.0**	**+3.0**
MDJ					S		**S**	**09 14 56.3**	**-1.1**
MDJ					ScP		**ScP**	**09 17 55.9**	**-1.7**
MDJ					PcS		**PcS**	**09 18 12.8**	**+0.2**
MDJ					pmax		pmax		
	comp=Z,12nm,1.4s								
MDJ					pmax		pmax		
	comp=Z,280nm,5.1s								
SNY	**Shenyang**	**24.25**	**324**	⇓	P		**P**	**09 10 56.8**	**-1.2**
SNY					S		**S**	**09 15 01.8**	**-4.0**
SNY					sS		sS	09 15 51.6	-8.6
SNY					SS		**SnSn**	**09 16 02.6**	**-4.4**
SNY					pmax		pmax		
	comp=Z,42nm,0.7s								
SNY					pmax		pmax		
	comp=Z,440nm,10.4s								
SNY					LR		LR		
	comp=N,310nm,13.5s								
SNY					LR		LR		
	comp=E,220nm,19.2s								
SNY					LR		LR		
	comp=Z,410nm,21.0s								
CN2	**Changchun**	**24.76**	**330**	*e*P			**P**	**09 11 01.8**	**-0.9**
CN2					*e*sP		**sP**	**09 11 53.1**	**+2.1**
CN2					PcP		**PcP**	**09 14 34.3**	**-1.1**
CN2					*e*S		**S**	**09 15 09.6**	**-4.3**
CN2					pmax		pmax		
	comp=Z,10.0nm,0.7s								
CN2					pmax		pmax		
	comp=Z,200nm,4.0s								
CN2					LR		LR		
	comp=N,300nm,16.0s								
CN2					LR		LR		
	comp=E,300nm,16.0s								
CN2					LR		LR		
	comp=Z,300nm,17.0s								
HABR	**Khabarovsk**	**25.83**	**349**	*e*P			**P**	**09 11 13.0**	**+0.7**
HABR					*e**PP		**pP**	**09 11 43.5**	**+0.2**
HABR					*e**SP		**sP**	**09 12 00.6**	**0.0**
HABR					*e*			09 14 35.9	
HABR					*e*S		**S**	**09 15 32.7**	**+2.0**
HABR					*e**SS		**sS**	**09 16 27.4**	**+1.8**
HABR					*e*			09 21 50.9	
HABR					pmax		pmax		
	comp=E,46nm,1.1s								
HABR					pmax		pmax		
	comp=Z,238nm,1.5s								
HABR					pmax		pmax		
	comp=N,94nm,1.4s								
HABR					MLR		MLR		
	comp=Z,120nm,20.0s								
HABR					pmax		pmax		
	comp=N,25nm,2.8s								
HABR					pmax		pmax		
	comp=E,61nm,1.8s								
HABR					pmax		pmax		
	comp=Z,22nm,1.8s								
WHN	**Wuhan**	**25.91**	**292**	P			**P**	**09 11 13.8**	**+0.6**
WHN					pP		**pP**	**09 11 42.0**	**-2.3**
WHN					S		**S**	**09 15 38.1**	**+5.7**
WHN					ScP		**ScP**	**09 18 05.8**	**+1.8**
WHN					LR		LR		
	comp=N,970nm,10.2s								
WHN					LR		LR		
	comp=E,670nm,8.7s								
WHN					LR		LR		
	comp=Z,1μm,18.3s								
SWI	**Sorong**	**26.25**	**206**	P			**P**	**09 11 17.9**	**+1.5**
	comp=Z,32nm,0.8s								
BJI	**Beijing**	**27.69**	**313**	P			**P**	**09 11 29.9**	**+0.9**
BJI					pP		**pP**	**09 12 01.4**	**+1.1**
BJI					sP		**sP**	**09 12 17.8**	**+0.3**
BJI					S		**S**	**09 16 01.6**	**+1.4**
BJI					pmax		pmax		
	comp=Z,18nm,0.6s								
LBMI	**Labuha**	**27.75**	**213**	P			**P**	**09 11 30.4**	**+0.6**
	comp=Z,127nm,0.8s,comp=Z,2μm								
MYLDM	**Lahad Datu**	**29.14**	**236**	P			**P**	**09 11 44.1**	**+2.0**
MYLDM	**Lahad Datu**	**29.14**	**236**	P			**P**	**09 11 44.0**	**+1.9**
	comp=Z,63nm,1.1s,comp=Z,816nm								
SDKM	**Sandakan**	**29.85**	**238**	P			**P**	**09 11 49.1**	**+0.6**
TSM	**Tawau**	**30.18**	**235**	P			**P**	**09 11 51.6**	**+0.3**
KKM	**Kota Kinabalu**	**30.38**	**240**	*e*P			**P**	**09 11 53.9**	**+0.7**
	comp=Z,27nm,0.8s								
KKM	**Kota Kinabalu**	**30.38**	**240**	P			**P**	**09 11 54.5**	**+1.3**
KKM	**Kota Kinabalu**	**30.38**	**240**	P			**P**	**09 11 54.6**	**+1.3**
	comp=Z,33nm,0.9s								
QIZ	**Qiongzhong**	**30.52**	**268**	P			**P**	**09 11 54.3**	**0.0**
QIZ					S		**S**	**09 16 44.5**	**-0.5**
LUWI	**Luwuk**	**30.71**	**221**	P			**P**	**09 11 55.8**	**-0.2**
	comp=Z,56nm,0.9s								
XAN	**Xi'an**	**31.07**	**298**	P			**P**	**09 11 58.8**	**-0.3**
XAN					pP		**pP**	**09 12 32.8**	**+2.1**
XAN					pmax		pmax		
	comp=Z,3.0nm,0.9s								
XAN					pmax		pmax		
	comp=Z,40nm,5.3s								
XAN					LR		LR		
	comp=N,490nm,20.5s								
XAN					LR		LR		
	comp=Z,160nm,24.6s								
HHC	**Hu-ho-hao-te**	**31.19**	**312**	*e*P			**P**	**09 12 00.8**	**+0.7**
HHC					PP		**PnPn**	**09 13 10.3**	**+1.8**
HHC					PcP		**PcP**	**09 14 51.6**	**+0.2**
HHC					S		**S**	**09 16 54.0**	**-1.3**
HHC					sS		**sS**	**09 17 53.1**	**+2.3**
HHC					ScP		**ScP**	**09 18 18.1**	**-2.4**
HHC					PcS		**PcS**	**09 18 34.9**	**-0.9**
HHC					SS		**SnSn**	**09 18 53.1**	**-2.6**
HHC					ScS		**ScS**	**09 22 13.4**	**-4.7**
HHC					pmax		pmax		
	comp=Z,64nm,0.6s								
HHC					pmax		pmax		
	comp=Z,320nm,5.7s								
PETK	**Petropavlovsk-**	**32.04**	**18**	P			**P**	**09 12 08.2**	**+0.9**
PETK								09 14 52.7	
PETK	**Petropavlovsk-**	**32.04**	**18**	P			**P**	**09 12 08.2**	**+0.9**
PETK					PcP		**PcP**	**09 14 52.7**	**-0.6**
PETK					ScP		**ScP**	**09 18 21.6**	**-1.4**
PETK	**Petropavlovsk-**	**32.04**	**18**	P			**P**	**09 12 08.2**	**+0.9**
	comp=Z,7.1nm,0.8s,baz=189,slow=8.6,SNR=7.1								
PETK					PcP		**PcP**	**09 14 52.7**	**-0.6**
	comp=Z,6.4nm,0.7s,baz=190,slow=5.4,SNR=10								
PETK					ScP		**ScP**	**09 18 21.6**	**-1.4**
	comp=Z,2.6nm,0.8s,baz=193,slow=7.7,SNR=3.6								
GYA	**Guiyang**	**32.42**	**283**	P			**P**	**09 12 11.8**	**+0.7**
GYA					pP		**pP**	**09 12 45.3**	**+2.5**
GYA					sP		sP	09 13 03.5	+3.6
GYA					PP		**PP**	**09 13 26.8**	**-0.5**
GYA					PcP		**PcP**	**09 14 56.4**	**+1.4**
GYA					S		**S**	**09 17 14.0**	**-0.9**
GYA					sS		**sS**	**09 18 11.5**	**+1.0**
GYA					ScP		**ScP**	**09 18 24.4**	**-0.6**
GYA					PcS		**PcS**	**09 18 41.8**	**+1.3**
GYA					ScS		**ScS**	**09 22 23.0**	**-1.9**
GYA					pmax		pmax		
	comp=Z,30nm,0.9s								
GYA					pmax		pmax		
	comp=Z,130nm,4.9s								
GYA					LR		LR		
	comp=N,640nm,17.4s								
GYA					LR		LR		
	comp=E,510nm,18.0s								
GYA					LR		LR		
	comp=Z,730nm,18.2s								
PMG	**Port Moresby**	**32.79**	**171**	*e*P			**P**	**09 12 14.2**	**+0.1**
	comp=Z,21nm,0.9s								
PMG	**Port Moresby**	**32.79**	**171**	P			**P**	**09 12 14.1**	**-0.1**
	comp=Z,13nm,0.5s,baz=112,slow=14,SNR=12								
KDI	**Kendari**	**33.15**	**218**	P			**P**	**09 12 17.8**	**+0.4**
	comp=Z,69nm,0.8s,comp=Z,945nm								
TTSI	**Tana Toraja**	**34.10**	**223**	P			**P**	**09 12 25.4**	**-0.1**
	comp=Z,21nm,0.8s,comp=Z,1μm								
BTM	**Bintulu**	**34.57**	**239**	P			**P**	**09 12 30.8**	**+1.1**
CD2	**Chengdu**	**35.02**	**291**	P			**P**	**09 12 34.0**	**+0.6**
CD2				pP			**pP**	**09 13 07.1**	**+1.7**
CD2				sP			**sP**	**09 13 24.8**	**+2.4**
CD2				PP			**PP**	**09 13 57.6**	**+1.8**
CD2				S			**S**	**09 17 53.5**	**-1.1**
CD2				PcS			**PcS**	**09 18 49.1**	**-0.3**
CD2				sS			**sS**	**09 18 51.3**	**+0.7**
CD2				SS			**SnSn**	**09 20 18.8**	**-9.2**
CD2				pmax			pmax		
	comp=Z,30nm,0.5s								
CD2				pmax			pmax		
	comp=Z,220nm,5.2s								
CD2				LR			LR		
	comp=N,270nm,17.1s								
CD2				LR			LR		
	comp=E,450nm,17.1s								
CD2				LR			LR		
	comp=Z,420nm,12.2s								
LZH	**Lanzhou**	**35.55**	**300**	⇓P			**P**	**09 12 37.9**	**-0.1**
LZH				pP			**pP**	**09 13 11.6**	**+1.5**
LZH				sP			**sP**	**09 13 30.0**	**+2.9**
LZH				PP			**PnPn**	**09 14 04.3**	**+1.9**
LZH				S			**S**	**09 18 00.3**	**-2.6**
LZH				sS			**sS**	**09 18 59.0**	**0.0**
LZH				SS			SnSn	09 20 28.8	-12
LZH				pmax			pmax		
	comp=Z,91nm,1.4s								
LZH				pmax			pmax		
	comp=Z,180nm,4.5s								
LZH				LR			LR		
	comp=N,670nm,15.0s								
LZH				LR			LR		
	comp=E,510nm,14.5s								
LZH				LR			LR		
	comp=Z,830nm,15.6s								
KAPI	**Kappang**	**35.68**	**221**	*e*P			**P**	**09 12 38.3**	**-0.8**
	comp=Z,25nm,0.8s								
KAPI	**Kappang**	**35.68**	**221**	P			**P**	**09 12 38.4**	**-0.8**
	comp=Z,24nm,0.8s,baz=60,slow=4.5,SNR=12								
SBUM	**Sibu**	**35.71**	**239**	P			**P**	**09 12 39.9**	**+0.6**
SBUM	**Sibu**	**35.71**	**239**	P			**P**	**09 12 40.0**	**+0.6**
	comp=Z,22nm,0.8s								
KMI	**Kunming**	**36.04**	**281**	P			**P**	**09 12 43.5**	**+1.1**
KMI				pP			**pP**	**09 13 12.9**	**-1.6**
KMI				pmax			pmax		
	comp=Z,13nm,0.9s								
KMI				LR			LR		
	comp=N,310nm,16.2s								
KMI				LR			LR		
	comp=E,250nm,16.7s								
KMI				LR			LR		
	comp=Z,340nm,16.2s								
KBKI	**Kotabaru**	**36.67**	**227**	P			**P**	**09 12 49.1**	**+1.6**
HNR	**Honiara**	**36.78**	**150**	LR			LR	09 26 20.1	
	comp=Z,167nm,18.8s,baz=323,slow=33								
COEN	**Coen**	**36.98**	**179**	*e*P			**P**	**09 12 49.7**	**-0.4**
	comp=Z,105nm,0.9s								
ULN	**Ulaanbaatar**	**37.26**	**320**	*e*P			**P**	**09 12 52.0**	**-0.3**
	comp=Z,24nm,1.2s								
ULN	**Ulaanbaatar**	**37.26**	**320**	P			**P**	**09 12 52.5**	**+0.2**
	SNR=14								
ULN	**Ulaanbaatar**	**37.26**	**320**	P			**P**	**09 12 52.5**	**+0.2**
	comp=Z,16nm,1.5s								
SONM	**Songino Array**	**37.63**	**320**	P			**P**	**09 12 54.9**	**-0.6**
SONM				PcP			**PcP**	**09 15 10.3**	**+0.4**
SONM				ScP			**ScP**	**09 18 45.1**	**+1.6**
SONM	**Songino Array**	**37.63**	**320**	P			**P**	**09 12 54.9**	**-0.6**
	comp=Z,4.9nm,0.7s,baz=132,slow=8.0,SNR=16								
SONM				PcP			**PcP**	**09 15 10.3**	**+0.4**
	comp=Z,6.0nm,0.7s,baz=116,slow=3.2,SNR=6.8								
SONM				ScP			**ScP**	**09 18 45.1**	**+1.6**
	comp=Z,4.0nm,1.0s,baz=110,slow=3.0,SNR=8.8								
FX1	**Attu Island--F**	**37.76**	**31**	*e*P			**P**	**09 12 58.5**	**+2.2**
FX1	**Attu Island--F**	**37.76**	**31**	P			**P**	**09 12 58.5**	**+2.2**
	comp=Z,78nm,0.7s,baz=248,slow=3.7,SNR=19								
FX1				LR			LR	09 25 38.3	
	comp=Z,121nm,21.9s,baz=243,slow=31								
KSM	**Kuching**	**37.82**	**240**	P			**P**	**09 12 56.2**	**-1.1**
GTA	**Gaotai**	**39.31**	**304**	⇓P			**P**	**09 13 10.3**	**+0.6**
GTA				pP			**pP**	**09 13 45.5**	**+3.3**
GTA				sP			sP	09 14 03.5	+4.5
GTA				PcP			**PcP**	**09 15 16.5**	**+1.2**
GTA				ScP			**ScP**	**09 18 52.0**	**+1.9**
GTA				S			**S**	**09 18 58.1**	**-1.6**
GTA				sS			**sS**	**09 19 59.4**	**+3.0**
GTA				SS			**SS**	**09 21 54.9**	**-4.5**
GTA				pmax			pmax		
	comp=Z,27nm,1.5s								
GTA				pmax			pmax		
	comp=Z,120nm,5.9s								
GTA				LR			LR		
	comp=N,460nm,17.6s								
GTA				LR			LR		
	comp=E,440nm,17.6s								
GTA				LR		

CMAR pP **pP** **09 13 50.0 -3.6**
comp=Z,3.4nm,0.6s,baz=61,slow=9.1,SNR=3.6
CMAR PcP **PcP** **09 15 20.4 +0.6**
comp=Z,5.9nm,0.7s,baz=103,slow=1.7,SNR=14
CMAR ScP **ScP** **09 18 56.8 +1.2**
comp=Z,0.6nm,0.4s,baz=66,slow=1.7,SNR=4.8
IRK **Irkutsk** **40.98 325** *eP* **P** **09 13 23.3 +0.3**
IRK pmax pmax
comp=Z,39nm,1.4s
TLY **Talaya** **41.03 324** *eP* **P** **09 13 21.9 -1.6**
TLY *e* 09 15 20.1
TLY *eS* **S** **09 19 22.2 -2.5**
TLY pmax pmax
comp=Z,14nm,1.1s
TLY MLR MLR
comp=Z,208nm,17.0s
BYJI **Banyuwangi** **41.52 224** P **P** **09 13 30.0 +2.2**
BLJI **Banyuglugur** **41.66 226** P **P** **09 13 29.4 +0.4**
comp=Z,194nm,0.9s,comp=Z,0.6nm
GMJI **Gumukmas** **42.16 225** P P 09 13 36.5 +3.5
comp=Z,48nm,0.9s,comp=Z,2µmcomp=Z,0.2nm
KRKI **Karangkates** **42.73 227** P **P** **09 13 37.5 -0.1**
comp=Z,390nm,0.7s,comp=Z,1.5nm
MYKOM **Kota Tinggi** **42.92 246** P **P** **09 13 39.8 +0.6**
PWJI **Pagerwojo** **43.06 227** P **P** **09 13 40.6 +0.3**
comp=Z,68nm,0.8s,comp=Z,0.2nm
CTA **Charters Tower** **43.24 175** P **P** **09 13 40.9 -0.6**
CTA ScP **ScP** **09 19 06.7 +1.1**
CTA **Charters Tower** **43.24 175** P **P** **09 13 40.9 -0.6**
comp=Z,17nm,0.6s,baz=1.5,slow=8.2,SNR=38
CTA ScP **ScP** **09 19 06.7 +1.1**
comp=Z,7.1nm,1.1s,baz=338,slow=4.2,SNR=4.8
CTAO **Charters Tower** **43.24 175** *eP* **P** **09 13 41.0 -0.6**
CTAO pmax pmax
comp=Z,21nm,0.7s
CTAO **Charters Tower** **43.24 175** *eP* **P** **09 13 41.0 -0.6**
comp=Z,21nm,0.7s
WRAB **Tennant Creek** **43.60 191** *eP* **P** **09 13 43.3 -1.2**
WRAB pmax pmax
comp=Z,114nm,0.6s
WRAB **Tennant Creek** **43.60 191** *eP* **P** **09 13 43.3 -1.2**
comp=Z,114nm,0.6s
WRAB **Tennant Creek** **43.60 191** P **P** **09 13 43.0 -1.5**
comp=Z,1µm,0.6s,SNR=60
WRA **Warramunga Arr** **43.62 191** P **P** **09 13 43.5 -1.1**
WRA PcP **PP** **09 15 28.8 -0.6**
WRA ScP **ScP** **09 19 08.2 +1.0**
WRA S **S** **09 20 00.9 -2.2**
WRA PKiKP **PKiKP** **09 22 30.0 -1.5**
WRA **Warramunga Arr** **43.62 191** P **P** **09 13 43.5 -1.1**
comp=Z,90nm,0.6s,baz=12,slow=8.6,SNR=177
WRA PcP **PP** **09 15 28.8 -0.6**
comp=Z,8.7nm,0.6s,baz=6.8,slow=3.6,SNR=4.8
WRA ScP **ScP** **09 19 08.2 +1.0**
comp=Z,5.0nm,0.8s,baz=9.6,slow=4.5,SNR=7.9
WRA S **S** **09 20 00.9 -2.2**
comp=Z,9.0nm,1.0s,baz=9.2,slow=14,SNR=10
WRA PKiKP **PKiKP** **09 22 30.0 -1.5**
comp=Z,0.3nm,0.4s,baz=322,slow=1.5,SNR=6.8
WRA LR LR 09 30 27.7
comp=Z,219nm,20.4s,baz=30,slow=34
KULM **Kulim** **43.91 253** *eP* **P** **09 13 47.3 +0.1**
comp=Z,10nm,0.8s
KULM **Kulim** **43.91 253** P **P** **09 13 48.4 +1.3**
IPM **Ipoh** **43.97 251** *eP* **P** **09 13 47.8 +0.1**
comp=Z,19nm,1.2s
IPM **Ipoh** **43.97 251** P **P** **09 13 48.7 +1.0**
IPM **Ipoh** **43.97 251** P **PcP** **09 15 31.8 +0.9**
FRIM **Kepong** **44.06 249** P **P** **09 13 49.8 +1.4**
FITZ **Fitzroy Crossi** **44.19 203** *eP* **P** **09 13 48.4 -0.9**
comp=Z,33nm,0.6s
FITZ PcP **PcP** **09 15 31.4 0.0**
FITZ **Fitzroy Crossi** **44.19 203** P **P** **09 13 48.6 -0.6**
comp=Z,36nm,0.6s,baz=24,slow=9.2,SNR=47
FITZ PcP **PcP** **09 15 31.4 0.0**
comp=Z,6.4nm,0.7s,baz=45,slow=2.9,SNR=2.8
LEM **Lembang** **45.18 233** P **P** **09 13 57.4 0.0**
comp=Z,254nm,0.8s,comp=Z,3µmcomp=Z,0.8nm
CBJI **Citeko** **45.48 234** P **P** **09 14 00.5 +1.0**
comp=Z,387nm,0.8s,comp=Z,2.1nm
DBJI **Dramaga** **45.64 234** P **P** **09 14 01.5 +0.7**
comp=Z,105nm,0.8s,comp=Z,0.5nm
SHL **Shillong** **45.74 284** *eP* **P** **09 14 02.0 +0.2**
LSA **Lhasa** **45.93 289** P **P** **09 14 05.4 +1.9**
CGJI **Cibinong** **46.47 235** P **P** **09 14 06.8 -0.5**
PSI **Prapat** **46.61 251** P **PcP** **09 15 40.8 +0.6**
PSI **Prapat** **46.61 251** LR LR 09 34 04.2
comp=Z,265nm,19.4s,baz=279,slow=36
BILL **Bilibino** **47.18 12**α *iP* **P** **09 14 13.0 +0.9**
BILL *e* 09 14 46.7
BILL *i* 09 15 41.6
BILL *eS* **S** **09 20 55.2 +2.0**
BILL *e* 09 21 05.9
BILL pmax pmax
comp=Z,36nm,1.1s
AS31 **Alice Springs** **47.33 190** *eP* **P** **09 14 12.3 -1.6**
ASAR **Alice Springs** **47.33 190** P **P** **09 14 12.4 -1.4**
ASAR ScP **ScP** **09 19 23.4 +0.9**
ASAR S **S** **09 20 53.9 -2.4**
ASAR **Alice Springs** **47.33 190** P **P** **09 14 12.4 -1.4**
comp=Z,22nm,0.6s,baz=16,slow=10,SNR=139
ASAR ScP **ScP** **09 19 23.4 +0.9**
comp=Z,2.2nm,0.8s,baz=9.8,slow=4.5,SNR=7.5
ASAR S **S** **09 20 53.9 -2.4**
comp=Z,12nm,0.8s,baz=18,slow=19,SNR=39
ASAR LR LR 09 32 44.6
comp=Z,294nm,19.1s,baz=107,slow=34
UNV **Unalaska Valle** **48.89 38** *eP* **P** **09 14 26.1 +0.6**
comp=Z,65nm,0.9s
WMQ **Urumqi** **48.97 309** P **P** **09 14 28.0 +1.6**
WMQ pP **pP** **09 15 00.0 -0.1**
WMQ sP **sP** **09 15 16.0 -0.7**
WMQ PcP **PcP** **09 15 50.0 +1.8**
WMQ PP **PP** **09 16 24.0 +2.9**
WMQ ScP **ScP** **09 19 31.0 +1.6**
WMQ S **S** **09 21 20.0 +0.8**
WMQ sS **sS** **09 22 17.0 -0.8**
WMQ ScS **ScS** **09 24 03.0 -0.4**
WMQ SS **SS** **09 24 49.0 -2.9**
WMQ pmax pmax
comp=Z,73nm,1.0s
WMQ pmax pmax
comp=Z,250nm,5.0s
WMQ LR LR
comp=N,370nm,16.0s
WMQ LR LR
comp=E,280nm,16.0s
WMQ LR LR
comp=Z,390nm,16.0s
TIXI **Tiksi** **49.04 354**⇑ *iP* **P** **09 14 26.7 +0.4**
TIXI pmax pmax
comp=Z,11nm,1.1s
EIDS **Eidsvold** **49.07 169** *eP* **P** **09 14 26.0 -1.0**
comp=Z,6.9nm,0.5s
TAPN **Taplejung** **49.20 287** *eP* **P** **09 14 29.6 +1.0**
comp=Z,61nm,0.8s
MBWA **Marble Bar** **49.30 208** *eP* **P** **09 14 28.5 -0.5**
comp=Z,18nm,1.0s
AKUT **Akutan** **49.39 38** *eP* **P** **09 14 29.6 +0.5**
comp=Z,144nm,0.6s
ODAN **Odare** **49.55 286** *eP* **P** **09 14 32.1 +0.9**
comp=Z,33nm,0.5s
RAMN **Ramite** **50.23 286** *eP* **P** **09 14 37.2 +0.8**
comp=Z,30nm,0.6s
GAMB **Gambell** **50.56 24** *eP* **P** **09 14 35.8 -2.1**
comp=Z,14nm,1.0s
GUN **Gumba** **50.73 288** *eP* **P** **09 14 41.4 +1.2**
comp=Z,59nm,0.5s
DZM **Mont Dzumac** **50.81 151** P **P** **09 14 40.5 +0.1**
DZM **Mont Dzumac** **50.81 151** P **P** **09 14 40.5 +0.1**
comp=Z,19nm,0.9s,baz=298,slow=7.0,SNR=14
DZM LR LR 09 32 09.1
comp=Z,320nm,18.5s,baz=23,slow=31
PKI **Pulchoki** **51.19 287** *eP* **P** **09 14 44.2 +0.6**
comp=Z,18nm,0.5s
KKN **Kakani** **51.27 288** *eP* **P** **09 14 45.0 +0.9**
comp=Z,32nm,0.6s
DMN **Daman** **51.45 288** *eP* **P** **09 14 46.3 +0.8**
comp=Z,9.3nm,0.3s
ZAA0 **Zalesovo Array** **52.49 321** *eP* **P** **09 14 51.9 -0.5**
ZALV **Zalesovo Beam** **52.49 321** P **P** **09 14 52.4 -0.1**
ZALV 09 16 00.6
ZALV S **S** **09 22 05.7 -1.7**
ZALV **Zalesovo Beam** **52.49 321** P **P** **09 14 52.4 -0.1**
ZALV PcP **PcP** **09 16 00.6 -0.3**
ZALV ScP **ScP** **09 19 44.8 +0.6**
ZALV S **S** **09 22 05.7 -1.7**
ZALV P'P' 09 45 24.2
ZALV **Zalesovo Beam** **52.49 321** P **P** **09 14 52.4 -0.1**
comp=Z,35nm,0.5s,baz=102,slow=7.2,SNR=110
ZALV PcP **PcP** **09 16 00.6 -0.3**
comp=Z,13nm,0.6s,baz=119,slow=3.9,SNR=7.5
ZALV ScP **ScP** **09 19 44.8 +0.6**
comp=Z,1.5nm,0.7s,baz=102,slow=3.0,SNR=4.4
ZALV S **S** **09 22 05.7 -1.7**
comp=Z,0.8nm,0.7s,baz=99,slow=9.2,SNR=4.0
ZALV PKPPKP **P'P'df** **09 45 24.2 +1.9**
comp=Z,0.5nm,0.4s,baz=252,slow=3.0,SNR=4.2
DANN **Dangsing** **52.51 289** *eP* **P** **09 14 54.4 +1.0**
comp=Z,208nm,0.8s
SDPT **Sand Point** **52.67 37** *eP* **P** **09 14 53.8 +0.1**
comp=Z,171nm,0.7s
KOLN **Koldanda** **52.74 288** *eP* **P** **09 14 55.8 +0.8**
comp=Z,49nm,0.6s
TNA **Tin City** **52.85 23** *eP* **P** **09 14 57.1 +2.2**
comp=Z,25nm,1.0s
MK31 **Makanchi Array** **53.05 312***ceP* **P** **09 14 57.5 +0.8**
MK31 pmax pmax
comp=Z,18nm,0.5s
MK31 **Makanchi Array** **53.05 312** *eP* **P** **09 14 57.4 +0.6**
MKAR **Makanchi Array** **53.05 312** *eP* **P** **09 14 57.6 +0.9**
MKAR 09 16 03.4
MKAR S **S** **09 22 15.4 +0.2**
MKAR **Makanchi Array** **53.05 312** *eP* **P** **09 14 57.6 +0.9**
MKAR PcP **PcP** **09 16 03.4 +0.1**
MKAR ScP **ScP** **09 19 48.2 +1.4**
MKAR S **S** **09 22 15.4 +0.2**
MKAR ⇑*e* 09 45 33.8
MKAR **Makanchi Array** **53.05 312** P **P** **09 14 57.4 +0.7**
comp=Z,19nm,0.5s,baz=87,slow=9.0,SNR=68
MKAR PcP **PcP** **09 16 03.4 +0.1**
comp=Z,5.1nm,0.6s,baz=75,slow=5.3,SNR=3.7
MKAR ScP **ScP** **09 19 48.2 +1.4**
comp=Z,2.0nm,0.7s,baz=77,slow=5.7,SNR=5.4
MKAR S **S** **09 22 15.4 +0.2**
comp=Z,0.3nm,0.6s,baz=98,slow=10,SNR=4.2
MKAR LR LR 09 36 36.8
comp=Z,190nm,19.5s,baz=253,slow=35
MKAR PKP2bc 09 45 33.8
comp=Z,0.6nm,0.8s,baz=268,slow=4.4,SNR=5.2
PYUN **Piuthan** **53.22 288** *eP* **P** **09 14 59.2 +0.7**
comp=Z,69nm,0.6s
NVS **Novosibirsk** **53.58 322** *eP* **P** **09 15 00.4 0.0**
NVS *eS* **S** **09 22 21.9 -0.1**
NVS pmax pmax
comp=Z,60nm,1.1s
NVS pmax pmax
comp=N,11nm,0.6s
NVS pmax pmax
comp=E,33nm,1.1s
NVS smax smax
comp=N,51nm,1.8s
NVS smax smax
comp=E,53nm,1.8s
MSVF **Nonsavu** **53.66 136** *eP* **P** **09 15 02.8 +1.3**
MSVF pmax pmax
comp=Z,187nm,2.4s
MSVF **Nonsavu** **53.66 136** *eP* **P** **09 15 02.8 +1.3**
comp=Z,212nm,2.4s
CHGN **Chignik** **54.02 36** *eP* **P** **09 15 03.3 -0.2**
ARMA **Armidale** **54.10 170** *eP* **P** **09 15 04.3 -0.2**
comp=Z,18nm,1.1s
STKA **Stephens Creek** **54.81 181** *eP* **P** **09 15 08.6 -0.9**
comp=Z,3.3nm,0.6s
STKA **Stephens Creek** **54.81 181** P **P** **09 15 08.6 -0.9**
comp=Z,15nm,0.7s,baz=348,slow=6.8,SNR=28
KIP **Kipapa** **54.91 79**⇓ *iP* **P** **09 15 11.1 +0.6**
KIP pmax pmax
comp=Z,77nm,0.6s
KIP **Kipapa** **54.91 79** *eP* **P** **09 15 11.7 +1.2**
comp=Z,118nm,0.8s
FORT **Forrest** **55.42 195** *eP* **P** **09 15 12.3 -1.6**
comp=Z,76nm,0.6s
KURK **Kurchatov** **55.79 316**⇓ *iP* **P** **09 15 15.5 -0.9**
KURK pmax pmax
comp=Z,127nm,1.7s
KURK **Kurchatov** **55.79 316** *eP* **P** **09 15 16.5 +0.1**
comp=Z,103nm,1.2s
KURK S **S** **09 22 52.9 +1.2**
KURK **Kurchatov** **55.79 316** P **P** **09 15 16.9 +0.5**
SNR=29
KURK **Kurchatov** **55.79 316** P **P** **09 15 16.5 +0.1**
comp=Z,384nm,0.6s,SNR=44
KURBB **Kurchatov Arra** **55.84 316** P **P** **09 15 16.9 +0.2**
comp=Z,51nm,0.6s,baz=93,slow=7.6,SNR=126
KURBB S **S** **09 22 52.9 +0.6**
comp=Z,0.4nm,0.7s,baz=86,slow=11,SNR=6.0
BBOO **Buckleboo** **56.05 186** *eP* **P** **09 15 17.5 -0.8**
comp=Z,298nm,0.6s
SVW2 **Sparrevohn** **56.51 31** *eP* **P** **09 15 22.9 +1.6**
comp=Z,23nm,0.9s
OHAK **Old Harbor** **56.96 36** *eP* **P** **09 15 25.1 +0.6**
comp=Z,38nm,0.7s
ULHL **Ulahol** **57.31 306** P **P** **09 15 29.4 +1.8**
SNR=18
KDAK **Kodiak Island** **57.41 35** *eP* **P** **09 15 27.8 +0.1**
comp=Z,35nm,0.8s
KDAK **Kodiak Island** **57.41 35** P **P** **09 15 28.3 +0.6**
comp=Z,276nm,0.6s,SNR=14
KDAK **Kodiak Island** **57.41 35** P **P** **09 15 27.5 -0.2**
comp=Z,23nm,0.5s,baz=260,slow=4.5,SNR=27
KDAK LR LR 09 36 59.5
comp=Z,286nm,21.9s,baz=264,slow=32
POHA **Pohakuloa** **57.58 81** *eP* **P** **09 15 30.9 +1.1**
comp=Z,200nm,1.2s
KSH **Kashi** **57.69 303** *eP* P 09 15 34.3 +4.1
KSH pP PcP 09 16 15.0 -6.5
KSH PcP sP 09 16 24.5 +3.2
KSH PP PP 09 17 46.8 +7.2
KSH ScP **ScP** **09 20 06.3 -1.3**
KSH PcS **PcS** **09 20 24.5 +1.5**
KSH S **S** **09 23 18.5 +1.2**
KSH ScS **ScS** **09 25 03.3 -2.0**
KSH SS **SS** **09 27 15.4 +5.6**
KSH pmax pmax
comp=Z,10.0nm,0.6s
KSH LR LR
comp=N,1µm,16.1s
KSH LR LR
comp=E,220nm,9.2s
KSH LR LR
comp=Z,370nm,12.2s
RSO **Redoubt South** **57.74 32** *eP* **P** **09 15 31.1 +0.9**
TKM2 **Tokmak 2** **57.75 307** *iP* **P** **09 15 32.2 +1.6**
TKM2 pmax pmax
comp=Z,14nm,0.8s
TKM2 **Tokmak 2** **57.75 307** *eP* **P** **09 15 32.4 +1.8**
comp=Z,15nm,0.8s
TKM2 **Tokmak 2** **57.75 307** P **P** **09 15 32.5 +1.8**
SNR=14
KZA **Kyzart** **58.06 306** P **P** **09 15 35.5 +2.5**
SNR=14
SPU **Mount Spurr** **58.20 31** *eP* **P** **09 15 34.7 +1.4**
KBK **Karagaybulak** **58.24 307** P **P** **09 15 35.6 +1.6**
SNR=7.4
PPLA **Purkeypile** **58.44 29** *eP* **P** **09 15 36.2 +1.2**
comp=Z,143nm,1.8s
FRU **Bishkek** **58.48 307** *eP* **P** **09 15 38.0 +2.5**
USP **Ospenovka** **58.54 308** P **P** **09 15 37.5 +1.6**
SNR=10
AAK **Ala-Archa** **58.58 307**⇓ *iP* **P** **09 15 38.0 +1.7**
AAK pmax pmax
comp=Z,13nm,0.6s
AAK **Ala-Archa** **58.58 307** *eP* **P** **09 15 37.7 +1.3**
comp=Z,1.5nm,0.8s
AAK ⇑*e* 09 45 21.4
AAK **Ala-Archa** **58.58 307** P **P** **09 15 37.2 +0.9**
comp=Z,58nm,0.6s,SNR=6.6
AAK **Ala-Archa** **58.58 307** P **P** **09 15 37.6 +1.3**
comp=Z,5.8nm,0.6s,baz=120,slow=6.3,SNR=16
AAK PKP2bc 09 45 21.4
comp=Z,1.7nm,0.7s,baz=165,slow=5.0,SNR=4.8
EKS2 **Erkin-Say** **59.11 307** *eP* **P** **09 15 41.6 +1.7**
EKS2 pmax pmax
comp=Z,7.0nm,0.8s
EKS2 **Erkin-Say** **59.11 307** *eP* **P** **09 15 41.6 +1.7**
comp=Z,6.7nm,0.8s
AML **Almayashu** **59.21 306** P **P** **09 15 43.0 +2.0**
SNR=14
SEW **Seward** **59.32 33** *eP* **P** **09 15 41.5 +0.7**
comp=Z,70nm,0.9s
TRF **Thorofare Moun** **59.39 29** *eP* **P** **09 15 41.4 -0.2**
comp=Z,67nm,0.7s
HYB **Hyderabad** **59.65 277** *iP* **P** **09 15 43.0 -0.9**
PMR **Palmer** **59.65 31** *eP* **P** **09 15 43.1 0.0**
PMR pmax pmax
comp=Z,49nm,0.8s
PMR **Palmer** **59.65 31** *eP* **P** **09 15 43.1 0.0**
comp=Z,49nm,0.8s
MCK **McKinley** **60.03 29** *eP* **P** **09 15 46.0 +0.2**
MCK pmax pmax
comp=Z,47nm,0.7s
MCK **McKinley** **60.03 29** *eP* **P** **09 15 46.0 +0.2**
comp=Z,47nm,0.7s
SML **Sawmill** **60.06 31** *eP* **P** **09 15 46.7 +0.7**
SML pmax pmax
comp=Z,20nm,0.8s
SML **Sawmill** **60.06 31** *eP* **P** **09 15 46.7 +0.7**
comp=Z,20nm,0.8s
COLD **Coldfoot** **60.11 25** *eP* **P** **09 15 47.9 +1.8**
comp=Z,24nm,0.7s
VOSK **Vostochnaya** **60.61 319** P **P** **09 15 49.9 0.0**
VOSK pmax pmax
comp=Z,55nm,1.5s
COLA **College** **60.66 27** *eP* **P** **09 15 50.5 +0.6**
COLA pmax pmax
comp=Z,25nm,0.6s
COLA **College** **60.66 27** *eP* **P** **09 15 50.5 +0.6**
comp=Z,6.8nm,0.6s
COLA *ep* **pP** **09 16 24.6 -0.4**
NWAO **Narrogin (SRO)** **60.76 204** *eP* **P** **09 15 50.8 -0.2**
comp=Z,17nm,0.7s
NWAO **Narrogin (SRO)** **60.76 204** P **P** **09 15 50.8 -0.2**
comp=Z,20nm,0.7s,baz=47,slow=7.7,SNR=23
BVA0 **Borovoye Array** **60.97 319** *iP* **P** **09 15 53.1 +0.8**
BVA0 pmax pmax
comp=Z,8.0nm,0.7s
BVAR **Borovoye Array** **60.97 319** P **P** **09 15 53.0 +0.8**
BVAR **Borovoye Array** **60.97 319** P **P** **09 15 53.0 +0.8**
BVAR **Borovoye Array** **60.97 319** P **P** **09 15 53.0 +0.8**
comp=Z,93nm,0.6s,baz=92,slow=7.8,SNR=171
BRVK **Borovoye** **61.03 319**⇑ *iP* **P** **09 15 53.5 +0.8**
BRVK pmax pmax
comp=Z,163nm,1.2s
BRVK **Borovoye** **61.03 319** *eP* **P** **09 15 53.5 +0.8**
comp=Z,95nm,0.7s
BRVK **Borovoye** **61.03 319** P **P** **09 15 53.9 +1.2**
SNR=38
BRVK **Borovoye** **61.03 319** P **P** **09 15 53.4 +0.8**
comp=Z,895nm,0.6s,SNR=59
ILAR **Eielson Array** **61.05 28** P **P** **09 15 52.3 -0.3**
ILAR pP **pP** **09 16 25.6 -2.2**
ILAR **Eielson Array** **61.05 28** P **P** **09 15 52.3 -0.3**
comp=Z,27nm,0.7s,baz=258,slow=5.4,SNR=130
ILAR pP **pP** **09 16 25.6 -2.2**
comp=Z,18nm,0.7s,baz=259,slow=5.7,SNR=8.6
DIV **Divide** **61.22 32** *eP* **P** **09 15 55.5 +1.7**
comp=Z,22nm,0.6s
KK31 **Karatay Array** **61.46 308***ceP* **P** **09 15 56.6 +0.8**
KK31 pmax pmax
comp=Z,10.0nm,0.6s
KKAR **Karatay Array** **61.46 308** *eP* **P** **09 15 57.0 +1.2**
KKAR **Karatay Array** **61.46 308** *eP* **P** **09 15 57.0 +1.2**
PAX **Paxson** **61.50 30** *eP* **P** **09 15 56.5 +0.7**
PAX pmax pmax
comp=Z,22nm,0.7s
PAX **Paxson** **61.50 30** *eP* **P** **09 15 56.5 +0.7**
comp=Z,22nm,0.7s
RAGM **Ragged Mountai** **61.72 33** *eP* **P** **09 15 58.6 +1.4**
comp=Z,36nm,0.8s
BMRM **Bremner River** **61.78 32** *eP* **P** **09 15 58.7 +1.1**
comp=Z,49nm,0.8s
ZRNK **Zerenda** **61.81 319** *iP* **P** **09 15 58.2 +0.3**
ZRNK pmax pmax
comp=Z,49nm,0.8s
DOT **Dot Lake** **62.18 29** *eP* **P** **09 16 00.6 +0.3**
comp=Z,90nm,0.8s
MENT **Mentasta** **62.29 30** *eP* **P** **09 16 01.8 +0.8**
EGAK **Eagle** **63.50 28** *eP* **P** **09 16 09.3 +0.4**
comp=Z,19nm,0.8s
POO **Poona** **63.60 280** *ex* x 09 16 08.0
KBL **Kabul** **63.88 298** *eP* **P** **09 16 13.0 +0.8**
KBL pmax pmax
comp=Z,34nm,0.8s
KBL **Kabul** **63.88 298** *eP* **P** **09 16 12.9 +0.8**
comp=Z,34nm,0.8s
TAU **Tasmania Unive** **65.98 176** *eP* **P** **09 16 25.2 +0.1**
TAU pmax pmax
comp=Z,13nm,0.8s
TAU **Tasmania Unive** **65.98 176** *eP* **P** **09 16 25.2 +0.1**
comp=Z,13nm,0.8s
SKAG **Skagway** **66.45 34** *eP* **P** **09 16 28.9 +1.0**
comp=Z,24nm,0.7s
INK **Inuvik** **66.49 24** P **P** **09 16 28.7 +0.6**
INK pP **pP** **09 17 02.4 -1.4**
INK **Inuvik** **66.49 24** P **P** **09 16 28.7 +0.6**
comp=Z,21nm,0.5s,baz=293,slow=6.3,SNR=86
INK pP **pP** **09 17 02.4 -1.4**
comp=Z,9.8nm,0.7s,baz=274,slow=13,SNR=2.8
ARU **Arti** **67.54 323***c iP* **P** **09 16 35.0 0.0**
ARU 09 19 02.3
ARU S **S** **09 25 22.0 +2.6**
ARU pmax pmax
comp=Z,67nm,0.8s
ARU **Arti** **67.54 323** P **P** **09 16 35.8 +0.8**
comp=Z,724nm,0.4s,SNR=30
AB31 **Akbulak array** **67.87 315***ceP* **P** **09 16 37.5 +0.3**
AB31 pmax pmax
comp=Z,20nm,0.6s
ABKAR **Akbulak array** **67.87 315** *eP* **P** **09 16 37.5 +0.3**
SOKR **Solikamsk** **68.01 327***d iP* **P** **09 16 38.5 +0.7**
SOKR pmax pmax
comp=Z,20nm,0.8s
WRAK **Wrangell Islan** **68.44 37** *eP* **P** **09 16 41.9 +1.4**
comp=Z,41nm,1.4s
AKTO **Aktyubinsk** **68.88 317** *iP* **P** **09 16 43.3 -0.2**
AKTO pmax pmax
comp=Z,2.0nm,0.7s
AKTO **Aktyubinsk** **68.88 317** P **P** **09 16 43.2 -0.2**
AKTO **Aktyubinsk** **68.88 317** P **P** **09 16 43.2 -0.2**
comp=Z,9.0nm,0.6s,baz=83,slow=7.1,SNR=23
DLBC **Dease Lake** **69.31 34** *eP* **P** **09 16 47.5 +1.5**
NNZ **Nelson** **70.33 156** P* **P** **09 16 51.4 -0.8**
RAR **Rarotonga** **71.67 124** P **P** **09 17 01.4 +0.7**
RAR **Rarotonga** **71.67 124** P **P** **09 17 01.4 +0.7**
comp=Z,12nm,1.0s,baz=239,slow=6.1,SNR=6.4
RPZ **Rata Peaks** **71.67 158** *eP* **P** **09 16 58.8 -1.6**
comp=Z,41nm,1.1s
RPZ **Rata Peaks** **71.67 158** LR LR 09 42 10.8
comp=Z,282nm,18.9s,baz=214,slow=30
ALE **Alert** **73.79 3** P **P** **09 17 13.6 +1.2**
comp=Z,334nm,0.7s,SNR=13
KBS **Kingsbay** **74.35 351** *eP* **P** **09 17 16.3 +0.7**
KBS pmax pmax
comp=Z,8.0nm,0.5s
KBS **Kingsbay** **74.35 351** *eP* **P** **09 17 16.3 +0.7**
comp=Z,8.0nm,0.5s
YKW3 **Yellowknife Ar** **75.45 28** *eP* **P** **09 17 22.5 +0.3**
comp=Z,0.8nm,0.7s
YKA **Yellowknife Ar** **75.48 28** P **P** **09 17 22.8 +0.3**
YKA pP **pP** **09 17 56.6 -2.3**
YKA PKKPbc **PKKPbc** **09 36 39.0 -3.4**
YKA **Yellowknife Ar** **75.48 28** P **P** **09 17 22.7 +0.3**
comp=Z,42nm,0.6s,baz=293,slow=5.7,SNR=264
YKA pP **pP** **09 17 56.6 -2.3**
comp=Z,8.4nm,0.6s,baz=293,slow=6.0,SNR=3.4
YKA PKKPbc **PKKPbc** **09 36 38.9 -3.4**
comp=Z,0.2nm,0.8s,baz=119,slow=1.8,SNR=3.9
PGC **Sidney** **75.62 43** *eP* **P** **09 17 24.7 +1.2**
comp=Z,0.8nm,0.6s
APA **Apatity** **75.64 338**⇑ *iP* **P** **09 17 24.0 +0.8**
APA MLR MLR
comp=Z,1µm,15.0s
NLWA **Neilton Lookou** **75.76 44** *eP* **P** **09 17 26.3 +1.9**
comp=Z,55nm,0.8s
RES **Resolute Bay** **75.77 13** *eP* **P** **09 17 24.2 +0.3**
comp=Z,34nm,0.8s
RES **Resolute Bay** **75.77 13** P **P** **09 17 24.4 +0.6**
comp=Z,29nm,0.7s,baz=310,slow=5.8,SNR=71
RES pP **pP** **09 17 57.7 -2.7**
comp=Z,6.4nm,0.9s,baz=347,slow=9.2,SNR=2.0
VDB **Vedder Mountai** **76.34 42** P **P** **09 17 28.4 +0.9**
F03A **Seaside** **76.44 46** P **P** **09 17 29.9 +1.7**
KEV **Kevo** **76.64 341** *eP* **P** **09 17 29.3 +0.5**
KEV pmax pmax
comp=Z,8.0nm,0.5s
KEV **Kevo** **76.64 341** *ep* **P** **09 17 29.3 +0.5**

comp=Z,7,9nm,0.5s
HOQ Hoqain 76.71 290 P P 09 17 30.7 +0.6
SNR=8.5
KEBM Edson Butte 76.93 49 eP P 09 17 33.3 +2.2
comp=Z,189nm,1.0s
RNO Roman Nose 76.99 48 P P 09 17 33.4 +2.0
COR Corvallis 77.06 47 eP P 09 17 33.6 +1.9
COR pmax pmax
comp=Z,71nm,0.9s
COR Corvallis 77.06 47 eP P 09 17 33.6 +1.9
comp=Z,12nm,0.9s
BSY Bisya 77.08 289 P P 09 17 33.1 +0.8
SNR=6.3
F04A Amboy 77.19 45 P P 09 17 33.5 +1.1
ARCES ARCESS Array B 77.20 341 P P 09 17 32.2 +0.1
ARCES ARCESS Array B 77.20 341 P P 09 17 32.2 +0.1
comp=Z,18nm,0.7s,baz=67,slow=4.9,SNR=24
LON Longmire 77.30 45 eP P 09 17 34.0 +0.9
LON pmax pmax
comp=Z,17nm,0.7s
LON Longmire 77.30 45 eP P 09 17 34.0 +0.9
comp=Z,17nm,0.7s
HATD Hatta, Dubai 77.30 292 P P 09 17 34.4 +1.0
SNR=5.9
ASHO Ashiyiah 77.41 292 P P 09 17 35.2 +1.1
SNR=7.4
ARQ Araqi 77.47 290 P P 09 17 35.0 +0.6
SNR=6.2
WPW White Pass 77.49 45 P P 09 17 35.4 +1.2
VLL Laurance Lake 77.83 46 P P 09 17 37.6 +1.4
MAK Makhachkala 77.87 312 eP P 09 17 31.0 -5.2
MAK eS **S 09 27 16.9 -0.1**
MAK MLR MLR
comp=Z,225nm,17.0s
TBM Table Mountain 77.93 44 P P 09 17 37.8 +1.2
PPT Papeete 77.93 115 P P 09 17 38.2 +1.3
PPT Papeete 77.93 115 P P 09 17 38.2 +1.3
comp=Z,37nm,0.8s,baz=0.0,slow=3.0,SNR=3.8
PPT LR LR 09 48 20.8
comp=Z,177nm,20.2s,baz=173,slow=33
ETW Entiat 77.94 43 P P 09 17 37.7 +1.0
HUMO Hull Mountain 77.97 49 eP P 09 17 38.2 +1.3
comp=Z,73nm,1.4s
VFP Flag Point 78.03 46 P P 09 17 38.5 +1.2
KHMM Horse Mountain 78.03 51 eP P 09 17 39.0 +1.6
comp=Z,92nm,0.8s
EBG Ellensburg 78.04 44 P P 09 17 38.6 +1.4
WTV Waterville 78.14 43 P P 09 17 38.5 +0.7
TRW Toppenish Ridg 78.28 45 P P 09 17 39.7 +1.2
YBH Yreka Blue Hor 78.45 50 eP P 09 17 41.0 +1.4
comp=Z,54nm,0.8s
YBH Yreka Blue Hor 78.45 50 P P 09 17 41.1 +1.4
comp=Z,51nm,0.7s,baz=341,slow=3.5,SNR=152
KCPM Cahto Peak 78.55 52 eP P 09 17 41.8 +1.6
comp=Z,66nm,0.8s
JOF Joensuu 78.57 334 eP P 09 17 40.4 +0.7
JOF Joensuu 78.57 334 ep P 09 17 40.4 +0.7
KIPM Iron Peak 78.58 52 eP P 09 17 41.6 +1.2
comp=Z,50nm,0.7s
VRHR Novokhopersk 78.63 321 eP P 09 17 39.7 -0.5
VRHR pmax pmax
comp=Z,30nm,0.7s
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
MDW Midway 78.67 44 P P 09 17 42.0 +1.4
MDW Midway 78.67 44 P P 09 17 42.0 +1.4
LHEM Herd Peak 78.83 50 P P 09 17 43.0 +1.1
VIPM Ingram Point 78.88 46 P P 09 17 43.2 +1.2
VIPM Ingram Point 78.88 46 P P 09 17 43.2 +1.2
HAWA Hanford 78.89 44 eP P 09 17 43.1 +1.3
comp=E,39nm,0.7s
MOS Moscow 78.94 326 eP P 09 17 40.6 -1.2
MOS pmax pmax
comp=Z,90nm,1.5s
WDC Whiskeytown Da 78.98 51 eP P 09 17 43.3 +0.9
WDC pmax pmax
comp=Z,49nm,1.0s
WDC Whiskeytown Da 78.98 51 eP P 09 17 43.3 +0.9
comp=Z,49nm,1.0s
OD2 Odessa Site #2 79.04 43 P P 09 17 43.4 +0.8
DAG Danmarks Havn 79.54 356 ⇑ iP P 09 17 44.4 -0.3
DAG pmax pmax
comp=Z,9,0nm,0.9s
DAG Danmarks Havn 79.54 356 ⇑ iP P 09 17 44.4 -0.3
comp=Z,11nm,0.9s
NEW Newport 79.69 42 eP P 09 17 47.1 +1.0
comp=Z,78nm,0.9s
NEW Newport 79.69 42 ⇑P P 09 17 47.1 +1.0
baz=80,SNR=108
NEW Newport 79.69 42 P P 09 17 47.1 +1.0
comp=Z,60nm,0.8s,baz=288,slow=4.3,SNR=152
OBN Obninsk 79.75 326 ceP P 09 17 46.3 +0.1
OBN e 09 17 53.3
OBN e*PP **pP 09 18 19.8 -3.3**
OBN pmax pmax
comp=Z,75nm,1.5s
OBN MLR MLR
comp=Z,100nm,17.0s
DGRG David-gareji 79.89 311 P P 09 17 52.8 +5.5
VSR Storozhevoye 80.00 322 eP P 09 17 47.9 +0.3
VSR pmax pmax
comp=Z,30nm,0.7s
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=E,20nm,0.9s
VORD Divnogorie 80.03 321 eP P 09 17 46.8 -1.0
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=Z,20nm,0.6s
VORD pmax pmax
comp=E,30nm,0.7s
MOD Modoc 80.06 49 eP P 09 17 49.2 +0.8
comp=E,18nm,0.8s
OHCM Honcut 80.19 51 eP P 09 17 49.5 +0.6
TBLG Delisi 80.23 311 eP P 09 17 53.2 +4.1
TBLG Delisi 80.23 311 P P 09 17 53.2 +4.1
A12A Yaak River Ran 80.31 41 ⇓P P 09 17 51.2 +1.7
baz=80
C11A Tepee Creek (N 80.39 42 ⇓P P 09 17 51.2 +1.2
baz=80
ZEI Tsey 80.41 312 eP P 09 17 49.3 -1.0
ZEI pmax pmax
comp=Z,16nm,0.9s
B12A Libby 80.54 41 ⇑P P 09 17 52.5 +1.8
baz=80,SNR=30
KIV Kislovodsk 80.76 314 ⇓ eP P 09 17 52.4 +0.4
KIV pmax pmax
comp=Z,45nm,1.8s
ONI Oni 80.78 312 P P 09 17 53.3 +1.2
BEKR Beckworth 80.80 51 eP P 09 17 52.9 +0.5
comp=Z,43nm,0.8s
GNI Garni 80.83 310 P P 09 17 51.4 -1.1
GNI Garni 80.83 310 P P 09 17 51.4 -1.1
comp=Z,2,3nm,0.3s,baz=340,slow=10,SNR=3.3
C12B Naegeli Ranch, 80.93 42 ⇑P P 09 17 54.2 +1.4
baz=81,SNR=15
BMO Blue Mountains 80.93 45 eP P 09 17 53.8 +0.9
BMO pmax pmax
comp=Z,62nm,0.6s
BMO Blue Mountains 80.93 45 eP P 09 17 53.8 +0.9
comp=Z,62nm,0.6s
KAF Kangasniemi 80.98 335 eP P 09 17 52.3 -0.3
KAF pmax pmax
comp=Z,20nm,0.6s
KAF Kangasniemi 80.98 335 ep P 09 17 52.3 -0.3
comp=Z,20nm,0.6s
WVOR Wild Horse Val 81.00 48 eP P 09 17 54.1 +0.7
WVOR pmax pmax
comp=Z,60nm,0.8s
WVOR Wild Horse Val 81.00 48 eP P 09 17 54.1 +0.7
comp=Z,60nm,0.8s
A13A Flathead Natio 81.06 41 ⇓P P 09 17 54.9 +1.4
baz=81
SAO San Andreas Ge 81.19 54 eP P 09 17 55.2 +0.9
SAO pmax pmax
comp=Z,39nm,1.1s
SAO San Andreas Ge 81.19 54 eP P 09 17 55.2 +0.9
comp=Z,39nm,1.1s
AKH Akhalkalaki 81.22 311 P P 09 17 54.2 -0.4
B13A Whitefish 81.26 41 ⇑P P 09 17 56.7 +2.1
baz=81,SNR=101
D12A Red Ives Fores 81.28 43 ⇑P P 09 17 55.5 +0.8
baz=81
BSMT Bassoo Peak 81.29 42 eP P 09 17 56.1 +1.3
WALA Waterton Lakes 81.30 40 eP P 09 17 56.1 +1.3
comp=Z,3.8nm,0.7s
FIA1 FINESS Array S 81.44 334 eP P 09 17 54.4 -0.6
FINES FINESS Array B 81.44 334 P P 09 17 54.5 -0.5
FINES FINESS Array B 81.44 334 P P 09 17 54.5 -0.5
comp=Z,28nm,0.6s,baz=66,slow=6.5,SNR=72
WCN Washoe City 81.44 51 eP P 09 17 56.6 +0.8
WCN pmax pmax
comp=Z,38nm,1.2s
WCN Washoe City 81.44 51 eP P 09 17 56.6 +0.8
comp=Z,38nm,1.2s
BLMT Blacktail Moun 81.48 41 eP P 09 17 57.1 +1.2
CMB Columbia Colle 81.48 52 eP P 09 17 56.6 +0.7
CMB pmax pmax
comp=Z,75nm,0.8s
CMB Columbia Colle 81.48 52 eP P 09 17 56.6 +0.7
comp=Z,75nm,0.8s
C13A Hot Springs 81.49 42 ⇑P P 09 17 56.8 +1.0
baz=81,SNR=103
RBK Rabkut 81.57 285 P P 09 17 56.9 +0.2
SNR=7.5
A14A Double T Ranch 81.63 40 ⇓P P 09 17 57.9 +1.4
baz=82,SNR=101
JTMT Jette 81.64 42 eP P 09 17 57.6 +1.0
YBMT Yellow Bay 81.76 41 eP P 09 17 58.2 +1.0
comp=Z,42nm,0.8s
D13A Huson 81.81 42 ⇓P P 09 17 57.8 +0.3
baz=82,SNR=11
F12A Elk City 81.88 44 ⇑P P 09 17 58.5 +0.6
baz=82,SNR=69
SWMT Swartz Lake 81.92 42 eP P 09 17 58.6 +0.5
C14A Swan Lake 81.96 41 ⇓P P 09 17 59.6 +1.4
baz=82,SNR=101
B14A Marquette Ranc 81.99 41 ⇓P P 09 17 59.8 +1.3
baz=82,SNR=22
A15A Johnson Ranch, 82.04 40 ⇑P P 09 18 00.0 +1.4
baz=82,SNR=153
G12A Big Creek, Yel 82.10 44 ⇑P P 09 17 59.7 +0.5
baz=82,SNR=46
MSO Missoula 82.25 42 eP P 09 17 60.0 +0.2
comp=Z,72nm,2.1s
MSO Missoula 82.25 42 ⇓P P 09 18 00.4 +0.6
baz=82,SNR=16
E13A Victor 82.26 43 ⇓P P 09 17 59.6 -0.2
baz=82,SNR=20
SLMT Seeley Lake 82.34 42 eP P 09 18 00.7 +0.3
D14A Greenough 82.40 42 ⇓P P 09 18 00.8 +0.1
baz=82,SNR=18
ABTO Aybut 82.43 286 P P 09 18 01.1 0.0
SNR=9.8
B15A Bradely Ranch, 82.43 41 ⇑P P 09 18 01.6 +0.8
baz=82,SNR=119
F13A Darby 82.45 43 ⇓P P 09 18 00.9 0.0
baz=82,SNR=42
MFID Camas Ranch 82.49 46 eP P 09 18 02.1 +1.0
comp=Z,89nm,0.8s
MFID Camas Ranch 82.49 46 ⇑P P 09 18 02.4 +1.3
baz=82,SNR=103
PTRM Twissleman Ran 82.53 55 eP P 09 18 02.6 +1.2
CHMT Chamberlain Mo 82.63 42 eP P 09 18 02.1 +0.2
C15A Salmond Ranch, 82.65 41 ⇓P P 09 18 02.5 +0.6
baz=83,SNR=119
H12A Diamond D Ranc 82.65 45 ⇓P P 09 18 02.6 +0.6
baz=83,SNR=36
E14A Clinton 82.70 43 ⇓P P 09 18 02.5 +0.3
baz=83,SNR=14
A16A West Butte Ran 82.72 40 ⇑P P 09 18 03.2 +1.0
baz=83
MLAC Mammoth Lakes 82.77 52 ⇑P P 09 18 04.0 +1.1
baz=83,SNR=30
KBD Kabd 82.77 299 eP P 09 18 02.4 -0.3
KBD AMb AMB 09 18 05.2
comp=Z,21nm,0.8s
BMN Battle Mountai 82.78 49 eP P 09 18 03.9 +1.1
BMN pmax pmax
comp=Z,138nm,1.8s
BMN Battle Mountai 82.78 49 eP P 09 18 03.9 +1.1
comp=Z,138nm,1.8s
I12A Atlanta 82.79 45 ⇑P P 09 18 03.3 +0.6
baz=83,SNR=33
G13A Cobalt 82.81 44 ⇑P P 09 18 03.3 +0.5
baz=83,SNR=127
NVAR Mina Array Bea 82.83 51 P P 09 18 04.1 +1.0
NVAR Mina Array Bea 82.83 51 P P 09 18 04.1 +1.0
comp=Z,66nm,0.8s,baz=268,slow=5.6,SNR=235
SOC Sochi 82.88 314 iP P 09 18 01.7 -1.2
SOC pmax pmax
comp=Z,28nm,0.6s
B16A M & M Farms, S 82.90 40 ⇑P P 09 18 04.0 +0.9
baz=83,SNR=126
NV11 Mina Array Sit 82.94 51 eP P 09 18 04.3 +0.7
RDF Al-Radifah 82.98 298 eP P 09 18 03.9 +0.1
RDF AMb AMB 09 18 09.9
comp=Z,38nm,1.2s
RCTC Rector, Farmer 83.00 54 ⇓P P 09 18 04.8 +1.1
baz=83,SNR=19
D15A Lincoln 83.03 42 ⇑P P 09 18 04.3 +0.4
baz=83,SNR=22
H13A Challis 83.03 44 ⇑P P 09 18 04.8 +0.9
baz=83,SNR=82
F14A Wisdom 83.05 43 ⇓P P 09 18 04.6 +0.6
baz=83
MTUM Tungsten Hills 83.08 52 eP P 09 18 05.1 +0.8
NAY Al-Naaiem 83.11 299 eP P 09 18 04.1 -0.4
NAY AMb AMB 09 18 08.3
comp=Z,30nm,0.7s
PKM Peak Mountain 83.13 55 ⇑P P 09 18 06.0 +1.3
baz=83,SNR=28
C16A Fuhringer Ranc 83.15 41 ⇓P P 09 18 04.7 +0.3
baz=83,SNR=141
E15A Deer Lodge 83.23 42 ⇓P P 09 18 05.5 +0.6
baz=83,SNR=121
G14A Jackson 83.24 44 ⇓P P 09 18 05.3 +0.2
baz=83,SNR=23
A17A Triple J Farms 83.25 39 ⇓P P 09 18 05.5 +0.7
baz=83,SNR=74
VES Vestal, Richgr 83.30 54 ⇓P P 09 18 05.0 -0.3
baz=83,SNR=49
HLID Hailey 83.36 45 eP P 09 18 06.6 +0.9
comp=Z,54nm,1.4s
HLID Hailey 83.36 45 ⇑P P 09 18 06.3 +0.6
baz=83,SNR=34
SBC Santa Barbara 83.39 55 ⇓P P 09 18 07.1 +1.3
baz=83,SNR=5.1
I13A Wildhorse Cree 83.40 45 ⇓P P 09 18 06.7 +0.8
baz=83,SNR=56
TIN Tinemaha 83.44 53 ⇓P P 09 18 07.3 +1.1
baz=83,SNR=18
B17A L&G Farms, Che 83.49 40 ⇓P P 09 18 06.8 +0.7
baz=83,SNR=166
H14A Leadore 83.58 44 ⇑P P 09 18 07.3 +0.5
baz=84,SNR=51
F15A Butte 83.58 43 ⇑P P 09 18 07.6 +0.8
baz=84,SNR=120
J13A Cove Ranch, Pi 83.59 45 ⇓P P 09 18 08.0 +1.2
baz=84,SNR=39
HRY Holter Researc 83.60 42 eP P 09 18 07.9 +1.2
LRM Limekiln Ridge 83.62 43 eP P 09 18 07.9 +0.9
D16A Dana Ranch, Ca 83.62 41 ⇑P P 09 18 07.1 +0.2
baz=84
BSC Santa Cruz Isl 83.63 56 ⇓P P 09 18 07.3 +0.3
baz=84
DLMT Dillon 83.73 43 eP P 09 18 08.2 +0.7
comp=Z,41nm,0.9s
A18A Metzger Ranch, 83.75 39 ⇓P P 09 18 07.8 +0.3
baz=84,SNR=152
E16A East Helena 83.77 42 ⇓P P 09 18 08.6 +0.9
baz=84,SNR=106
ARVC Arvin 83.78 55 ⇑P P 09 18 07.7 0.0
baz=84,SNR=13
BHD Baghdad 83.79 303 ex P 09 18 06.0 -1.8
BHD ex x 09 28 14.2
MCMT McKenzie Canyo 83.81 44 eP P 09 18 08.6 +0.5
comp=Z,6.0nm,0.6s
C17A Wharram Farm, 83.82 41 ⇑P P 09 18 08.5 +0.6
baz=84,SNR=76
I14A Mackay 83.83 45 ⇓P P 09 18 08.5 +0.5
baz=84,SNR=53
ISA Isabella 83.83 54 eP P 09 18 08.2 +0.1
ISA pmax pmax
comp=Z,82nm,1.5s
ISA Isabella 83.83 54 eP P 09 18 08.2 +0.1
comp=Z,20nm,1.5s
ISA Isabella 83.83 54 ⇑P P 09 18 08.0 -0.1
baz=84,SNR=30
G15A Dillon 83.89 43 ⇑P P 09 18 08.5 +0.1
baz=84,SNR=69
BLG Laguna Peak 84.01 56 ⇑P P 09 18 09.6 +0.6
baz=84,SNR=5.4
ELK Elko 84.02 48 eP P 09 18 10.2 +1.0
comp=Z,614nm,0.8s
H15A Lima 84.04 44 ⇑P P 09 18 09.6 +0.5
baz=84,SNR=34
B18A Beardsley Farm 84.05 40 ⇓P P 09 18 09.6 +0.6
baz=84,SNR=117
J14A Carey 84.05 45 ⇓P P 09 18 10.4 +1.2
baz=84,SNR=73
OSI Osito Adit 84.07 55 eP P 09 18 10.1 +0.8
comp=Z,57nm,0.6s
OSI Osito Adit 84.07 55 ⇑P P 09 18 09.9 +0.6
baz=84,SNR=27
D17A Six Diamond Ra 84.09 41 ⇓P P 09 18 10.2 +0.9
baz=84,SNR=103
GRAC Grapevine Rang 84.09 52 ⇓P P 09 18 10.0 +0.6
baz=84,SNR=12
F16A Kennard Place, 84.15 43 ⇑P P 09 18 09.8 +0.2
baz=84,SNR=78
BOZ Bozeman (W) 84.21 43 eP P 09 18 10.9 +0.9
BOZ pmax pmax
comp=Z,57nm,0.6s
BOZ Bozeman (W) 84.21 43 eP P 09 18 10.9 +0.9
comp=Z,73nm,0.6s
BOZ Bozeman (W) 84.21 43 ⇑P P 09 18 10.4 +0.5
baz=84,SNR=80
DAC Darwin (Calif) 84.23 53 eP P 09 18 10.7 +0.4
DAC pmax pmax
comp=Z,13nm,0.7s
DAC Darwin (Calif) 84.23 53 eP P 09 18 10.7 +0.4
comp=Z,13nm,0.7s
EGMT Eagleton 84.23 40 eP P 09 18 10.7 +0.8
comp=Z,90nm,0.9s
EGMT Eagleton 84.23 40 ⇓P P 09 18 10.5 +0.6
baz=84,SNR=67
G16A Moss Hill, Enn 84.29 43 ⇑P P 09 18 11.2 +0.8
baz=84,SNR=157
E17A Martinsdale 84.31 42 ⇓P P 09 18 11.3 +0.8
baz=84
A19A Klindworth Far 84.39 39 ⇑P P 09 18 11.3 +0.6
baz=84,SNR=14
MPMC Manual Prospec 84.39 53 ⇑P P 09 18 11.5 +0.4
baz=84,SNR=76
I15A Monteview 84.42 44 ⇑P P 09 18 11.5 +0.5
baz=84,SNR=31
SUMG Summit 84.43 0 iP P 09 18 11.8 +1.0
SUMG pmax pmax
comp=Z,25nm,0.7s
SUMG Summit 84.43 0 eP P 09 18 11.7 +0.9
comp=Z,33nm,0.8s
SUMG Summit 84.43 0 iP P 09 18 11.8 +1.0
comp=Z,25nm,0.7s
LRMC Laurel Mountai 84.49 54 ⇑P P 09 18 12.0 +0.5
baz=84,SNR=98
B19A Brinkman Farms 84.50 39 ⇓P P 09 18 12.2 +1.0
baz=84,SNR=40
EDW2 Edwards Air Fo 84.51 54 ⇓P P 09 18 12.1 +0.6
baz=84,SNR=38
D18A Linhart Farms, 84.60 41 ⇑P P 09 18 12.7 +0.9
baz=84,SNR=53
K14A Jones Ranch, D 84.62 46 ⇓P P 09 18 12.9 +0.9
baz=85,SNR=56
PASC Pasadena Art C 84.65 55 eP P 09 18 12.6 +0.4
comp=Z,173nm,1.0s
FURC Furnace Creek, 84.69 53 ⇓P P 09 18 13.3 +1.1
baz=85,SNR=97
F17A Fitzpatrick Pl 84.69 42 ⇓P P 09 18 12.9 +0.5
baz=85,SNR=81
QLMT Earthquake Lak 84.71 43 eP P 09 18 14.0 +1.4
J15A Blackfoot 84.72 45 ⇓P P 09 18 13.8 +1.2
baz=85,SNR=83
MWC Mount Wilson 84.73 55 eP P 09 18 13.2 +0.4
MWC pmax pmax
comp=Z,36nm,0.8s
MWC Mount Wilson 84.73 55 eP P 09 18 13.2 +0.4
comp=Z,36nm,0.8s
NACGM Naroch 84.75 328 e P 09 18 20.0 +7.8
FMP Fort Macarthur 84.76 56 ⇓P P 09 18 13.0 +0.3
baz=85,SNR=5.5
C19A Slack Wire Ran 84.79 40 ⇑P P 09 18 13.7 +1.0
baz=85,SNR=77
CIS Catalina Islan 84.80 56 ⇓P P 09 18 13.6 +0.6
baz=85,SNR=13
R11A Troy Canyon, C 84.81 51 ⇑P P 09 18 13.9 +0.8
baz=85,SNR=121
E18A Harlowton 84.83 41 ⇑P P 09 18 14.5 +1.4
baz=85
SCI San Clemente I 84.87 56 ⇑P P 09 18 13.9 +0.6
baz=85
A20A Cobblestone Ra 84.88 39 ⇑P P 09 18 13.9 +0.7
baz=85,SNR=50
H16A Russell Place, 84.88 43 ⇑P P 09 18 15.2 +1.8
baz=85,SNR=144
G17A Pierce Place, 84.91 43 ⇑P P 09 18 14.9 +1.4
baz=85,SNR=49
FFC Flin Flon 84.95 32 eP P 09 18 14.0 +0.7
FFC pmax pmax
comp=Z,81nm,0.8s
FFC Flin Flon 84.95 32 eP P 09 18 14.0 +0.7
comp=Z,36nm,0.8s
FFC Flin Flon 84.95 32 P P 09 18 14.5 +1.2
comp=Z,645nm,0.7s,SNR=66
K15A Arbon 84.98 46 ⇓P P 09 18 15.4 +1.5
baz=85,SNR=36
BFSC Mount Baldy Ra 85.02 55 ⇑P P 09 18 14.3 +0.1
baz=85,SNR=12
B20A Solberg Farm, 85.05 39 ⇓P P 09 18 14.6 +0.6
baz=85,SNR=47
YMR Madison River 85.08 43 eP P 09 18 16.0 +1.6
comp=Z,231nm,0.7s
I16A Newdale 85.11 44 ⇑P P 09 18 16.3 +1.7
baz=85,SNR=53
D19A Cripps Ranch, 85.17 40 ⇑P P 09 18 15.9 +1.3
baz=85,SNR=201
GSC Goldstone 85.22 54 eP P 09 18 16.0 +0.9
GSC pmax pmax
comp=Z,78nm,0.8s
GSC Goldstone 85.22 54 eP P 09 18 16.0 +0.9
comp=Z,78nm,0.8s
GSC Goldstone 85.22 54 ⇑P P 09 18 16.3 +1.2
baz=85,SNR=86
HVU Hansel Valley 85.23 46 eP P 09 18 16.4 +1.2
HVU pmax pmax
comp=Z,43nm,0.8s
HVU Hansel Valley 85.23 46 eP P 09 18 16.4 +1.2
comp=Z,44nm,0.8s
RRX Edison Barstow 85.25 54 ⇓P P 09 18 16.3 +1.1
baz=85
F18A Big Timber 85.27 42 ⇓P P 09 18 16.2 +1.0
baz=85,SNR=80
J16A Bone 85.31 45 ⇓P P 09 18 17.0 +1.5
baz=85
SHOC Shoshone 85.35 53 ⇑P P 09 18 16.7 +1.0
baz=85,SNR=46
GCMT Greycliff 85.36 42 eP P 09 18 16.6 +0.9
comp=Z,37nm,0.7s
L15A Malad City 85.39 46 ⇓P P 09 18 16.6 +0.7
baz=85,SNR=56
A21A Bergtoll Ranch 85.40 38 ⇓P P 09 18 16.4 +0.7
baz=85,SNR=36
C20A Veseth Ranch, 85.42 40 ⇓P P 09 18 17.0 +1.2
baz=85
DCID1 Drake Creek 85.44 44 eP P 09 18 17.6 +1.5
comp=Z,62nm,1.0s
H17A Grant Village 85.45 43 ⇑P P 09 18 19.1 +2.8
baz=85,SNR=62
IMW Indian Meadow 85.46 44 eP P 09 18 17.9 +1.6
comp=Z,100nm,0.8s
RRI2 Red Ridge 85.47 45 eP P 09 18 17.8 +1.3
comp=Z,52nm,0.8s
LKWY Lake 85.48 43 eP P 09 18 19.4 +2.9
LKWY pmax pmax
comp=Z,100nm,0.8s
LKWY Lake 85.48 43 eP P 09 18 19.4 +2.9
comp=Z,100nm,0.8s
K16A Soda Springs 85.53 45 ⇓P P 09 18 18.1 +1.5
baz=86,SNR=61
E19A Rath Farm, Rou 85.57 41 ⇑P P 09 18 17.9 +1.3
baz=86,SNR=81
BBRC Big Bear Solar 85.57 55 ⇑P P 09 18 16.0 -1.1
baz=86
B21A Ellsworth Farm 85.63 39 ⇑P P 09 18 17.8 +1.0
baz=86,SNR=6.6
MURC Murrieta 85.64 55 ⇑P P 09 18 17.8 +0.6
baz=86,SNR=32

TPAW **Teton Pass** 85.64 44 *e*P P 09 18 18.6 +1.4
comp=Z,35nm,0.8s
D20A **Manuel Ranch,** 85.65 40 ⇓P P 09 18 17.9 +1.0
baz=86,SNR=196
G18A **Lazy EL Ranch,** 85.65 42 ⇑P P 09 18 17.8 +0.7
baz=86,SNR=27
MOOW **Moose Ponds** 85.65 44 *e*P P 09 18 18.4 +1.1
comp=Z,24nm,0.7s
I17A **Pilgrim Ck.** 85.68 44 ⇑P P 09 18 19.2 +1.8
baz=86,SNR=50
REDW **Red Top Meadow** 85.76 44 *e*P P 09 18 18.9 +1.1
comp=Z,0.2nm,0.8s
F19A **Roth Farm, Mol** 85.77 42 ⇓P P 09 18 18.2 +0.6
baz=86,SNR=42
HEC **Hector,Ludlow** 85.77 54 ⇓P P 09 18 18.4 +0.6
baz=86,SNR=81
AKASG **Malin Array Be** 85.78 324 *ce*P P 09 18 16.5 -0.9
AKASG pmax pmax
comp=Z,6.0nm,0.5s
AKASG **Malin Array Be** 85.78 324 P P 09 18 16.5 -0.9
AKASG **Malin Array Be** 85.78 324 P P 09 18 16.5 -0.9
comp=Z,6.3nm,0.5s,baz=53,slow=4.8,SNR=26
SNOW **Snow King Moun** 85.78 44 *e*P P 09 18 19.1 +1.2
comp=Z,91nm,1.6s
AK01 **Malin Array Si** 85.79 324 *e*P P 09 18 16.7 -0.8
KIEV **Kiev** 85.79 324 *e*P P 09 18 16.2 -1.2
KIEV pmax pmax
comp=Z,11nm,0.7s
KIEV **Kiev** 85.79 324 *e*P P 09 18 16.2 -1.2
comp=Z,11nm,0.7s
LOHW **Long Hollow** 85.80 44 *e*P P 09 18 19.0 +1.0
comp=Z,23nm,0.9s
AK02 **Malin Array Si** 85.81 324 *e*P P 09 18 16.5 -1.1
TUQ **Turquoise Moun** 85.81 53 ⇓P P 09 18 19.3 +1.2
baz=86,SNR=12
SIM **Simferopol'** 85.84 317 P P 09 18 18.0 +0.1
SIM *e* 09 28 31.0
SIM *e*S S 09 28 42.0 +3.4
SIM *e*PS PnS 09 29 33.0 -22
SIM pmax pmax
comp=Z,11nm,0.8s
J17A **Brown Place, J** 85.85 44 ⇓P P 09 18 19.4 +1.2
baz=86,SNR=23
SCO **Scoresbysund** 85.87 355 *i* P P 09 18 17.7 +0.2
SCO pmax pmax
comp=Z,8.0nm,1.2s
SCO **Scoresbysund** 85.87 355 *i* P P 09 18 17.7 +0.2
comp=Z,7.8nm,1.2s
AHID **Auburn Hatcher** 85.88 45 *e*P P 09 18 19.3 +0.9
comp=Z,38nm,0.7s
C21A **Desert Coulee** 85.89 39 ⇑P P 09 18 19.1 +1.0
baz=86,SNR=92
H18A **Shoshone NF, C** 85.89 43 ⇓P P 09 18 19.9 +1.4
baz=86,SNR=46
DUG **Dugway** 85.92 48 *e*P P 09 18 19.4 +0.8
DUG pmax pmax
comp=Z,124nm,0.6s
DUG **Dugway** 85.92 48 *e*P P 09 18 19.4 +0.8
comp=Z,124nm,0.6s
DUG **Dugway** 85.92 48 ⇓P P 09 18 19.0 +0.5
baz=86,SNR=160
RLMT **Red Lodge** 85.92 42 *e*P P 09 18 19.9 +1.3
RLMT **Red Lodge** 85.92 42 ⇑P P 09 18 20.4 +1.8
baz=86,SNR=215
E20A **Meyer Farm, Mu** 85.94 41 ⇓P P 09 18 19.1 +0.7
baz=86,SNR=64
A22A **Carney Farms,** 85.97 38 ⇓P P 09 18 18.7 +0.2
baz=86
K17A **Gardner Place,** 86.01 45 ⇓P P 09 18 19.8 +0.7
baz=86,SNR=9.3
109C **Camp Elliot, M** 86.01 56 ⇑P P 09 18 19.9 +1.0
baz=86,SNR=22
L16A **Fish Haven** 86.01 46 ⇑P P 09 18 20.2 +1.1
baz=86,SNR=113
MALT **Malatya** 86.05 310 *e*P P 09 18 19.5 +0.3
MALT pmax pmax
comp=Z,5.0nm,0.6s
MALT **Malatya** 86.05 310 *e*P P 09 18 19.4 +0.3
comp=Z,4.6nm,0.6s
HWUT **Hardware Ranch** 86.12 46 *e*P P 09 18 20.3 +0.8
comp=Z,73nm,0.8s
PFO **Pinyon Flat Ob** 86.20 55 *e*P P 09 18 20.5 +0.5
comp=Z,96nm,0.8s
PFO **Pinyon Flat Ob** 86.20 55 P P 09 18 20.0 0.0
comp=Z,667nm,0.8s,SNR=50
PFO **Pinyon Flat Ob** 86.20 55 ⇓P P 09 18 20.8 +0.8
baz=86,SNR=78
M16A **Huntsville** 86.21 47 ⇓P P 09 18 20.4 +0.4
baz=86,SNR=21
I18A **Diamond G Ranc** 86.26 44 ⇑P P 09 18 21.4 +1.0
baz=86,SNR=19
F20A **Billings** 86.28 41 ⇑P P 09 18 21.1 +1.0
baz=86
B22A **Reddig Ranch S** 86.28 38 ⇓P P 09 18 20.5 +0.5
baz=86
GMRC **Granite Mounta** 86.29 54 ⇑P P 09 18 21.0 +0.6
baz=86,SNR=76
H19A **Powell** 86.32 43 ⇓P P 09 18 22.3 +1.9
baz=86,SNR=64
D21A **La Casta Ranch** 86.33 40 ⇓P P 09 18 21.3 +0.9
baz=86,SNR=72
L17A **Cokeville** 86.34 46 ⇑P P 09 18 20.3 -0.3
baz=86
J18A **Kendall Valley** 86.37 44 ⇑P P 09 18 21.7 +0.9
baz=86,SNR=94
BELC **Belle Mtn. Jos** 86.37 55 ⇑P P 09 18 21.3 +0.4
baz=86,SNR=63
CTU **Camp Tracy** 86.42 47 *e*P P 09 18 22.1 +1.1
comp=Z,67nm,0.9s
BAR **Barrett** 86.43 56 *e*P P 09 18 21.4 +0.4
comp=Z,50nm,0.7s
G20A **Bridger** 86.53 42 ⇑P P 09 18 21.9 +0.4
baz=86,SNR=74
MONP **Monument Peak** 86.53 56 ⇓P P 09 18 22.5 +0.7
baz=86,SNR=97
E21A **Keefer Ranch,** 86.55 40 ⇓P P 09 18 22.3 +0.9
baz=86,SNR=26
LDFC **Landfair** 86.57 53 *e*P P 09 18 22.9 +1.1
comp=Z,166nm,0.8s
A23A **Redstone** 86.57 37 ⇑P P 09 18 21.8 +0.4
baz=86
ARUT **Antelope Range** 86.57 50 *e*P P 09 18 22.5 +0.6
ARUT pmax pmax
comp=Z,72nm,0.9s
ARUT **Antelope Range** 86.57 50 *e*P P 09 18 22.5 +0.6
comp=Z,72nm,0.9s
I19A **Meeteetse** 86.62 43 ⇓P P 09 18 23.1 +1.0
baz=87,SNR=21
K18A **Toltan Ranch,** 86.63 45 ⇓P P 09 18 22.8 +0.7
baz=87,SNR=35
C22A **Vida** 86.63 39 ⇓P P 09 18 22.2 +0.4
baz=87,SNR=27
JLU **Jordanelle** 86.66 47 *e*P P 09 18 23.0 +0.7
comp=Z,74nm,1.0s
CCUT **Cedar City** 86.73 50 *e*P P 09 18 23.8 +1.1
comp=Z,80nm,1.4s
B23A **Brockton** 86.77 38 ⇑P P 09 18 22.9 +0.5
baz=87,SNR=21
D22A **Cohagen** 86.77 39 ⇓P P 09 18 23.2 +0.8
baz=87,SNR=36
M17A **Scullys Gap (B** 86.77 46 ⇑P P 09 18 23.1 +0.3
baz=87,SNR=65
MPU **Maple Canyon** 86.81 48 *e*P P 09 18 23.7 +0.7
comp=Z,53nm,0.8s
DVTC **Desert V Tower** 86.87 56 ⇑P P 09 18 24.0 +0.7
baz=87,SNR=70
DAU **Daniels Canyon** 86.88 47 *e*P P 09 18 24.3 +0.8
DAU **Daniels Canyon** 86.88 47 *e*P P 09 18 24.2 +0.8
BW06 **Boulder Array** 86.88 44 *e*P P 09 18 23.4 +0.1
BW06 **Boulder Array** 86.88 44 ⇓P P 09 18 23.3 0.0
baz=87,SNR=27
PDAR **Pinedale Array** 86.88 44 P P 09 18 23.4 0.0
PDAR PKKP PKKPbc 09 36 13.7 -2.7
PDAR **Pinedale Array** 86.88 44 P P 09 18 23.4 0.0
comp=Z,13nm,0.8s,baz=257,slow=2.5,SNR=75
PDAR PKKP PKKPbc 09 36 13.7 -2.7
comp=Z,0.5nm,0.8s,baz=134,slow=4.3,SNR=4.8
PDAR LR LR 09 53 46.9
comp=Z,100nm,19.2s,baz=295,slow=33
N17A **Moffit Pass** 86.91 47 ⇑P P 09 18 23.8 +0.2
baz=87,SNR=25
BC3 **Big Chuckawall** 86.93 55 ⇑P P 09 18 24.4 +0.8
baz=87,SNR=88
IRM **Iron Mountain** 86.94 54 ⇓P P 09 18 24.2 +0.7
baz=87,SNR=38
J19A **Crowheart** 86.96 44 ⇑P P 09 18 25.1 +1.4
baz=87,SNR=53

L18A **Fontenelle, Gr** 86.97 45 ⇑P P 09 18 24.9 +1.1
baz=87,SNR=22
SWSC **Sam W. Stewart** 86.98 55 ⇓P P 09 18 24.3 +0.6
baz=87,SNR=49
SUW **Suwalki** 86.98 329 *e*P P 09 18 22.5 -0.7
SUW pmax pmax
comp=Z,88nm,1.0s
SUW **Suwalki** 86.98 329 *e*P P 09 18 22.5 -0.7
comp=Z,88nm,1.0s
SUW **Suwalki** 86.98 329 *e*P P 09 18 22.6 -0.7
C23A **Lambert** 87.01 39 ⇓P P 09 18 24.4 +0.8
baz=87,SNR=18
H20A **Greybull** 87.02 42 ⇑P P 09 18 24.3 +0.5
baz=87,SNR=39
NEE2 **Needles Airpor** 87.06 53 ⇓P P 09 18 25.0 +0.9
baz=87,SNR=8.2
A24A **Westby** 87.08 37 ⇓P P 09 18 24.1 +0.3
baz=87,SNR=21
MVU **Marysvale** 87.11 49 *e*P P 09 18 25.5 +1.0
comp=Z,53nm,0.7s
MSU **Marysvale** 87.13 49 *e*P P 09 18 25.8 +1.2
MSU **Marysvale** 87.13 49 *e*P P 09 18 25.8 +1.2
G21A **Lodge Grass** 87.14 42 ⇓P P 09 18 24.8 +0.5
baz=87,SNR=9.7
M18A **Lyman** 87.19 46 ⇓P P 09 18 25.2 +0.3
baz=87,SNR=16
I20A **Worland** 87.21 43 ⇑P P 09 18 25.6 +0.8
baz=87,SNR=26
DGMT **Dagmar** 87.21 38 *e*P P 09 18 24.9 +0.4
comp=Z,37nm,0.8s
DGMT **Dagmar** 87.21 38 ⇓P P 09 18 24.1 -0.4
baz=87,SNR=15
NB2 **NORSAR Subarra** 87.21 338 P P 09 18 23.0 -1.3
baz=44,slow=5.1
NB2 **NORSAR Subarra** 87.21 338 P P 09 18 23.0 -1.3
comp=Z,26nm,1.2s,baz=44,slow=5.1
NOA **NORSAR Array B** 87.21 338 P P 09 18 22.9 -1.3
NOA PKKPbc PKKPbc 09 36 14.5 -1.5
NOA **NORSAR Array B** 87.21 338 P P 09 18 22.9 -1.3
comp=Z,8.6nm,0.7s,baz=47,slow=4.7,SNR=21
NOA PKKPbc PKKPbc 09 36 14.5 -1.5
comp=Z,0.7nm,0.7s,baz=229,slow=2.6,SNR=4.3
E22A **Miles City** 87.27 40 ⇑P P 09 18 25.1 +0.2
baz=87,SNR=23
K19A **Absolon Red Bu** 87.31 44 ⇑P P 09 18 25.0 -0.3
baz=87,SNR=29
D23A **Lindsay** 87.32 39 ⇑P P 09 18 26.1 +0.9
baz=87,SNR=22
L19A **Farson** 87.33 45 ⇑P P 09 18 26.3 +0.8
baz=87,SNR=28
F22A **Rosebud** 87.43 41 ⇑P P 09 18 26.1 +0.4
baz=87,SNR=16
TMUT **Trail Mountain** 87.44 48 *e*P P 09 18 27.2 +1.1
comp=Z,27nm,0.8s
W13A **Hualapai Mount** 87.46 53 ⇑P P 09 18 27.2 +1.0
baz=87,SNR=64
J20A **Shoshoni** 87.53 43 ⇓P P 09 18 26.4 +0.1
baz=88,SNR=14
H21A **Big Horn, Sher** 87.54 42 ⇑P P 09 18 27.6 +1.3
baz=88,SNR=27
Y12C **Blythe** 87.58 54 ⇓P P 09 18 27.9 +1.3
baz=88,SNR=27
C24A **Savage** 87.59 39 ⇓P P 09 18 27.3 +0.9
baz=88,SNR=12
E23A **Ismay** 87.62 40 ⇑P P 09 18 27.4 +0.9
baz=88,SNR=16
PDMCI **Parker Dam,Lak** 87.63 54 ⇓P P 09 18 27.7 +0.9
baz=88,SNR=46
Q16A **Castle Valley** 87.64 48 ⇓P P 09 18 27.7 +0.7
baz=88,SNR=88
GLA **Glamis** 87.67 55 *e*P P 09 18 28.3 +1.2
GLA pmax pmax
comp=Z,146nm,0.6s
GLA **Glamis** 87.67 55 *e*P P 09 18 28.2 +1.2
comp=Z,36nm,0.6s
GLA **Glamis** 87.67 55 ⇑P P 09 18 28.2 +1.2
baz=88,SNR=42
N18A **Larsen Ranch,** 87.67 46 ⇑P P 09 18 27.1 0.0
baz=88,SNR=42
P17A **Butcher Ranch,** 87.67 48 ⇓P P 09 18 27.8 +0.7
baz=88,SNR=27
G22A **Birney** 87.70 41 ⇓P P 09 18 28.2 +1.2
baz=88,SNR=16
K20A **Yellowstone Ra** 87.72 44 ⇑P P 09 18 27.6 +0.4
baz=88,SNR=25
I21A **Big Trails, Te** 87.80 43 ⇓P P 09 18 28.4 +0.7
baz=88,SNR=23
D24A **Glendive** 87.86 39 ⇑P P 09 18 28.6 +0.9
baz=88,SNR=13
P18A **Preston Nutter** 87.93 47 ⇓P P 09 18 29.7 +1.2
baz=88,SNR=34
J21A **Lysite** 87.94 43 ⇑P P 09 18 29.4 +1.0
baz=88,SNR=18
F23A **Volborg** 87.97 40 ⇓P P 09 18 29.0 +0.8
baz=88
H22A **Clearmont** 87.98 42 ⇓P P 09 18 29.2 +0.8
baz=88,SNR=7.6
SRU **San Rafael** 87.99 48 *e*P P 09 18 29.0 +0.4
SRU pmax pmax
comp=Z,40nm,0.7s
SRU **San Rafael** 87.99 48 *e*P P 09 18 29.0 +0.4
comp=Z,40nm,0.7s
SRU **San Rafael** 87.99 48 ⇓P P 09 18 29.3 +0.7
baz=88,SNR=52
U15A **North Rim** 88.01 51 ⇑P P 09 18 30.2 +1.3
baz=88,SNR=61
N19A **John Jarvie Ra** 88.04 46 ⇑P P 09 18 29.0 +0.2
baz=88,SNR=17
L20A **Wamsutter** 88.04 45 ⇓P P 09 18 29.8 +1.0
baz=88,SNR=12
E24A **Baker** 88.17 39 ⇓P P 09 18 29.8 +0.6
baz=88
G23A **Bidle** 88.25 41 ⇑P P 09 18 30.4 +0.8
baz=88,SNR=13
I22A **9 Mile Ranch,** 88.26 42 ⇓P P 09 18 30.5 +0.8
baz=88,SNR=22
O19A **Miners Draw (B** 88.36 46 ⇓P P 09 18 31.4 +1.1
baz=88,SNR=20
M20A **Sweetwater, Wa** 88.39 45 ⇓P P 09 18 30.1 -0.4
baz=88,SNR=13
K21A **Alcova** 88.42 44 ⇓P P 09 18 31.3 +0.7
baz=88,SNR=34
F24A **Ekalaka** 88.47 40 ⇑P P 09 18 31.1 +0.5
baz=88,SNR=11
J22A **Midwest** 88.51 43 ⇑P P 09 18 31.3 +0.4
baz=88,SNR=28
H23A **Clabaugh Cattl** 88.58 41 ⇑P P 09 18 32.6 +1.4
baz=88
Y14A **Wickenburg** 88.63 54 ⇑P P 09 18 32.4 +0.8
baz=89,SNR=123
N20A **Spence Gulch,** 88.67 46 ⇓P P 09 18 32.5 +0.6
baz=89,SNR=30
L21A **Rawlins** 88.69 44 ⇑P P 09 18 32.5 +0.6
baz=89
BR131 **Keskin Array S** 88.69 313 *e*P P 09 18 30.9 -1.0
comp=Z,6.3nm,0.7s
BRTR **Keskin Array B** 88.69 313 P P 09 18 30.9 -1.0
BRTR PKKPbc PKKPbc 09 36 11.3 -0.5
BRTR **Keskin Array B** 88.69 313 P P 09 18 30.9 -1.0
comp=Z,5.7nm,0.7s,baz=85,slow=3.1,SNR=30
BRTR PKKPbc PKKPbc 09 36 11.3 -0.5
comp=Z,1.9nm,0.6s,baz=211,slow=4.0,SNR=13
G24A **Alzada** 88.77 40 ⇑P P 09 18 32.5 +0.5
baz=89,SNR=7.1
P19A **Cripple Cowboy** 88.78 47 ⇑P P 09 18 32.7 +0.3
baz=89,SNR=58
M21A **Separation Pea** 88.87 45 ⇓P P 09 18 33.4 +0.6
baz=89,SNR=23
K22A **Casper** 88.88 43 ⇓P P 09 18 33.1 +0.4
baz=89,SNR=11
Q19A **Hoan Spring (** 88.93 48 ⇓P P 09 18 32.7 -0.3
baz=89,SNR=22
Z14A **Wintersburg** 88.94 54 ⇓P P 09 18 33.8 +0.9
baz=89,SNR=27
TLCR 88.95 320 ⇑*i*P P 09 18 32.4 -0.3
H24A **Dirks Ranch, A** 89.00 41 ⇑P P 09 18 33.2 +0.1
baz=89,SNR=11
O20A **White River Ci** 89.03 46 ⇓P P 09 18 34.2 +0.7
baz=89,SNR=18
LVV **L'vov** 89.03 325 *e*P P 09 18 32.1 -1.0
S18A **Hurst Farm, Bl** 89.03 49 ⇑P P 09 18 34.2 +0.6
baz=89,SNR=23
WUAZ **Wupatki** 89.09 52 *e*P P 09 18 34.8 +0.9
comp=Z,42nm,1.0s
WUAZ **Wupatki** 89.09 52 ⇓P P 09 18 34.5 +0.7
baz=89
J23A **Dilts Ranch, B** 89.09 42 ⇓P P 09 18 34.1 +0.4
baz=89

N21A **Black Mountain** 89.20 45 ⇓P P 09 18 33.5 -0.8
baz=89,SNR=52
P20A **De Beque** 89.25 47 ⇓P P 09 18 34.8 +0.3
baz=89,SNR=13
L22A **Ellis Ranch, M** 89.25 44 ⇓P P 09 18 35.9 +1.3
baz=89,SNR=8.8
CFR **Carcaliu** 89.36 320 ⇓*i*P P 09 18 33.9 -0.7
K23A **Bowen Ranch, D** 89.39 43 ⇑P P 09 18 35.1 0.0
baz=89,SNR=15
I24A **Kuemmerle Ranc** 89.42 42 ⇑P P 09 18 35.6 +0.4
baz=89,SNR=7.3
BEL **Belsk** 89.45 328 *e*P P 09 18 35.0 +0.1
M22A **Cedar Creek Ra** 89.47 45 ⇑P P 09 18 36.9 +1.3
baz=89,SNR=30
TESR 89.49 321 ⇓*i*P P 09 18 34.5 -0.8
O21A **Pagoda** 89.50 46 ⇓P P 09 18 36.7 +0.9
baz=89,SNR=6.6
SFJD **Kangerlussuaq** 89.52 5 *e*P P 09 18 34.6 -0.3
comp=Z,32nm,1.2s
SFJD **Kangerlussuaq** 89.52 5 *i* P P 09 18 34.8 -0.1
comp=Z,14nm,1.0s
X16A **Lo Mia Camp, P** 89.56 53 ⇑P P 09 18 37.3 +1.2
baz=90,SNR=14
Q20A **Ridgley Place,** 89.58 47 ⇑P P 09 18 37.1 +1.0
baz=90,SNR=115
RSSD **Black Hills** 89.64 41 *e*P P 09 18 36.3 0.0
RSSD pmax pmax
comp=Z,92nm,1.7s
RSSD **Black Hills** 89.64 41 *e*P P 09 18 36.3 0.0
comp=Z,23nm,1.7s
BUR08 **Bucovina Ar. S** 89.67 323 *e*P P 09 18 35.6 -0.6
BURAR **Bucovina Array** 89.67 323 ⇓*i*P P 09 18 36.1 -0.1
L23A **Garrett** 89.67 44 ⇑P P 09 18 36.8 +0.3
baz=90,SNR=34
214A **Organ Pipe Nat** 89.68 55 ⇓P P 09 18 38.0 +1.5
baz=90,SNR=55
J24A **Dixon Ranch, L** 89.69 42 ⇓P P 09 18 36.6 +0.2
baz=90,SNR=7.2
VRI **Vrincioaia** 89.81 321 ⇓*i*P P 09 18 37.3 +0.5
P21A **Newcastle** 89.87 47 ⇓P P 09 18 37.7 +0.2
baz=90,SNR=18
N22A **Wattenberg Ran** 89.87 45 ⇑P P 09 18 38.4 +0.9
baz=90,SNR=18
R20A **Redvale** 89.91 48 ⇓P P 09 18 38.3 +0.6
baz=90,SNR=39
K24A **Anderson Ranch** 89.91 43 ⇓P P 09 18 38.1 +0.6
baz=90
ASF **Jabal al Asfar** 89.95 305 P P 09 18 37.8 0.0
ASF **Jabal al Asfar** 89.95 305 P P 09 18 37.8 0.0
comp=Z,1.1nm,0.3s,baz=215,slow=5.3,SNR=3.4
M23A **Laramie** 90.00 44 ⇑P P 09 18 39.4 +1.3
baz=90,SNR=18
S20A **Disappointment** 90.10 48 ⇑P P 09 18 38.8 +0.2
baz=90,SNR=28
MDND **Maddock** 90.11 36 ⇑P P 09 18 38.7 +0.6
baz=90,SNR=7.7
Q21A **Lamborn Mesa,** 90.13 47 ⇑P P 09 18 40.0 +1.3
baz=90,SNR=51
O22A **Kremling** 90.14 46 ⇑P P 09 18 39.7 +0.8
baz=90,SNR=35
N23A **Red Feather La** 90.15 45 ⇑P P 09 18 40.1 +1.2
baz=90,SNR=29
L24A **Wheatland** 90.20 43 ⇑P P 09 18 40.0 +1.2
baz=90
PHWY **Pilot Hill** 90.25 44 *e*P P 09 18 40.0 +0.7
comp=Z,27nm,1.0s
P22A **Eagle** 90.29 46 ⇑P P 09 18 40.5 +1.1
baz=90,SNR=63
MVCO **Mesa Verde** 90.31 49 *e*P P 09 18 40.2 +0.6
comp=Z,96nm,1.6s
MVCO **Mesa Verde** 90.31 49 ⇓P P 09 18 40.2 +0.6
baz=90,SNR=11
SMCO **Snowmass** 90.36 47 *e*P P 09 18 40.8 +0.8
comp=Z,44nm,0.8s
R21A **Cimarron** 90.38 48 ⇓P P 09 18 41.1 +1.2
baz=90,SNR=108
W18A **Petrified Fore** 90.46 51 ⇑P P 09 18 41.1 +0.8
baz=90
KOLS **Kolonicke sedl** 90.49 325 *e*P P 09 18 39.2 -0.7
KOLS pmax pmax
comp=Z,9.0nm,1.3s
KOLS **Kolonicke sedl** 90.49 325 *e*P P 09 18 39.2 -0.7
O23A **Lake Granby, G** 90.53 45 ⇑P P 09 18 41.9 +1.2
baz=90,SNR=45
K25A **Mack Ranch, Ha** 90.56 42 ⇑P P 09 18 41.3 +0.8
baz=90,SNR=15
Q22A **Crested Butte,** 90.56 47 ⇓P P 09 18 41.7 +0.8
baz=90,SNR=152
S21A **Coal Bank Pass** 90.57 48 ⇑P P 09 18 41.7 +0.8
baz=90,SNR=73
M24A **Cheyenne** 90.57 44 ⇓P P 09 18 41.7 +1.0
baz=90,SNR=25
X18A **Snowflake** 90.59 52 ⇓P P 09 18 41.8 +0.9
baz=90,SNR=18
ULM **Lac du Bonnet** 90.61 33 *e*P P 09 18 40.5 +0.1
comp=Z,1.1nm,0.8s
ULM **Lac du Bonnet** 90.61 33 P P 09 18 40.5 +0.1
comp=Z,12nm,0.7s,baz=309,slow=5.4,SNR=14
UZH **Uzhgorod** 90.66 325 *e*P P 09 18 40.2 -0.4
MMAI **Mount Meron Ar** 90.67 306 P P 09 18 40.8 -0.4
MMAI **Mount Meron Ar** 90.67 306 P P 09 18 40.8 -0.4
comp=Z,0.6nm,0.2s,baz=41,slow=4.6,SNR=4.1
U20A **Newcomb** 90.71 50 ⇓P P 09 18 42.1 +0.8
baz=91,SNR=36
L25A **Engebretsen Ra** 90.75 43 ⇓P P 09 18 42.4 +1.0
baz=91,SNR=18
N24A **Carr** 90.88 44 ⇑P P 09 18 43.3 +1.3
baz=91,SNR=17
CRVS **Cervenica-Dubn** 90.93 325 *e*P P 09 18 41.1 -0.8
CRVS pmax pmax
comp=Z,20nm,1.3s
CRVS **Cervenica-Dubn** 90.93 325 *e*P P 09 18 41.1 -0.8
ISCO **Idaho Springs** 90.94 46 *e*P P 09 18 43.7 +1.1
ISCO pmax pmax
comp=Z,23nm,0.8s
ISCO **Idaho Springs** 90.94 46 *e*P P 09 18 43.7 +1.1
comp=Z,23nm,0.8s
ISCO **Idaho Springs** 90.94 46 ⇑P P 09 18 43.6 +1.1
baz=91,SNR=54
K26A **Motz Farm, Whi** 90.94 42 ⇑P P 09 18 42.7 +0.5
baz=91
OJC **Ojcow** 90.96 327 *e*P P 09 18 41.7 -0.3
OJC **Ojcow** 90.96 327 *e*P P 09 18 41.7 -0.3
comp=Z,17nm,1.1s
OJC **Ojcow** 90.96 327 *e*P P 09 18 41.7 -0.3
R22A **Saguache, Gunn** 90.99 47 ⇓P P 09 18 44.2 +1.4
baz=91,SNR=39
P23A **Jefferson** 91.01 46 ⇓P P 09 18 44.6 +1.7
baz=91,SNR=62
V20A **Brimhall** 91.03 50 ⇑P P 09 18 43.6 +0.7
baz=91,SNR=39
TUC **Tucson** 91.03 54 *e*P P 09 18 43.9 +1.0
TUC pmax pmax
comp=Z,4.0nm,0.7s
TUC **Tucson** 91.03 54 *e*P P 09 18 43.9 +1.0
comp=Z,3.7nm,0.7s
M25A **Palm-Egli Farm** 91.08 44 ⇓P P 09 18 44.0 +1.1
baz=91,SNR=9.4
O24A **Longmont** 91.12 45 ⇑P P 09 18 44.6 +1.4
baz=91,SNR=22
S22A **4UR Ranch, Cre** 91.19 48 ⇑P P 09 18 44.7 +1.0
baz=91,SNR=50
NIE **Niedzica** 91.20 326 *e*P P 09 18 43.2 0.0
NIE **Niedzica** 91.20 326 *e*P P 09 18 43.2 0.0
Q23A **Hartsel** 91.26 46 ⇓P P 09 18 45.3 +1.2
baz=91
U21A **Nageezi** 91.28 49 ⇓P P 09 18 44.8 +0.7
baz=91,SNR=36
W20A **Ramah** 91.34 51 ⇑P P 09 18 45.0 +0.6
baz=91,SNR=32
L26A **Underwood Farm** 91.36 43 ⇓P P 09 18 45.0 +0.8
baz=91,SNR=17
T22A **Edith** 91.51 48 ⇑P P 09 18 46.1 +0.9
baz=91,SNR=86
K27A **Fluecklinger Fa** 91.52 42 ⇑P P 09 18 45.2 +0.3
baz=91,SNR=24
DRGR 91.54 323 ⇑*i*P P 09 18 44.3 -0.6
P24A **Kohler Place,** 91.55 46 ⇑P P 09 18 46.6 +1.4
baz=92,SNR=34
V21A **Milan** 91.61 50 ⇓P P 09 18 46.3 +0.7
baz=92,SNR=14
X20A **Quemado** 91.63 51 ⇑P P 09 18 47.2 +1.5
baz=92,SNR=42
R23A **Moffat** 91.64 47 ⇑P P 09 18 47.0 +1.2
baz=92,SNR=62
M26A **McRoberts Ranc** 91.64 43 ⇑P P 09 18 46.5 +0.9
baz=92,SNR=8.8

Q24A	Divide	91.69	46	⇑P		P		09 18 46.8	+0.8
	baz=92,SNR=15								
O25A	Wiggins	91.75	45	⇑P		P		09 18 47.0	+1.0
	baz=92,SNR=44								
S23A	Nye Farm, Mont	91.77	47	⇓P		P		09 18 47.4	+1.0
	baz=92,SNR=12								
L27A	T5 Ranch, Ells	91.81	42	⇑P		P		09 18 46.8	+0.5
	baz=92								
AGMN	Agassiz Nation	91.84	35	*e*P		P		09 18 46.1	0.0
	comp=Z,25nm,0.7s								
U22A	Llaves	91.87	49	⇓P		P		09 18 47.8	+1.0
	baz=92,SNR=21								
W21A	San Fidel	91.95	50	⇑P		P		09 18 48.2	+1.0
	baz=92								
OKC	Ostrava-Krasne	92.02	328	*e*P		P		09 18 46.9	0.0
OKC	Ostrava-Krasne	92.02	328	*e*P		P		09 18 46.9	0.0
Y20A	Horse Springs,	92.03	52	⇓P		P		09 18 49.0	+1.4
	baz=92,SNR=33								
P25A	Willow Gulch B	92.04	45	⇓P		P		09 18 48.5	+1.0
	baz=92,SNR=28								
V22A	San Miguel Ran	92.06	49	⇑P		P		09 18 48.3	+0.5
	baz=92,SNR=22								
M27A	Reverse DX Ran	92.08	43	⇓P		P		09 18 48.4	+0.9
	baz=92								
T23A	Casias Ranch,	92.09	48	⇓P		P		09 18 48.9	+1.0
	baz=92,SNR=33								
R24A	Sanders Place,	92.10	47	⇑P		P		09 18 48.7	+0.9
	baz=92,SNR=96								
X21A	Alamocita Cree	92.19	51	⇑P		P		09 18 49.9	+1.6
	baz=92,SNR=27								
O26A	Horse Wrangler	92.20	44	⇑P		P		09 18 48.5	+0.3
	baz=92								
KSP	Ksiaz	92.25	329	*e*P		P		09 18 47.6	-0.4
KSP	Ksiaz	92.25	329	*e*P		P		09 18 47.8	-0.2
Z20A	Nine Sixteen R	92.26	53	⇑P		P		09 18 50.0	+1.3
	baz=92,SNR=71								
Q25A	Bedland, Calha	92.31	46	⇑P		P		09 18 49.4	+0.7
	baz=92,SNR=24								
S24A	Houchin Ranch,	92.34	47	⇑P		P		09 18 50.2	+1.1
	baz=92,SNR=33								
U23A	El Rito	92.35	49	⇑P		P		09 18 50.0	+0.9
	baz=92,SNR=66								
MORC	Moravsky Berou	92.36	328	*e*P		P		09 18 47.9	-0.7
MORC					pmax	pmax			
	comp=Z,22nm,1.8s								
MORC	Moravsky Berou	92.36	328	*e*P		P		09 18 47.9	-0.7
	comp=Z,22nm,1.8s								
PSZ	Piszkesteto	92.36	325	*e*P		P		09 18 48.3	-0.4
PSZ					pmax	pmax			
	comp=Z,3.0nm,0.6s								
PSZ	Piszkesteto	92.36	325	*e*P		P		09 18 48.3	-0.4
	comp=Z,2.8nm,0.6s								
N27A	Anderson Farm,	92.38	43	⇓P		P		09 18 49.3	+0.4
	baz=92,SNR=13								
BRSD	Miller	92.47	39	⇓P		P		09 18 49.3	+0.1
	baz=92,SNR=28								
Y21A	Point of Rocks	92.48	51	⇑P		P		09 18 50.9	+1.2
	baz=92,SNR=18								
120A	U Bar Ranch, L	92.51	53	⇓P		P		09 18 51.1	+1.3
	baz=92,SNR=38								
W22A	Albuquerque	92.52	50	⇑P		P		09 18 51.1	+1.3
	baz=92								
VYHS	Vyhne	92.54	326	*e*P		P		09 18 49.3	-0.1
VYHS					pmax	pmax			
	comp=Z,13nm,1.4s								
VYHS	Vyhne	92.54	326	*e*P		P		09 18 49.3	-0.1
P26A	Davis Ranch, A	92.55	45	⇑P		P		09 18 50.4	+0.6
	baz=92,SNR=15								
DPC	Dobruska-Polom	92.57	329	*e*P		P		09 18 49.4	-0.1
DPC	Dobruska-Polom	92.57	329	*e*P		P		09 18 49.3	-0.1
	comp=Z,39nm,1.5s								
DPC	Dobruska-Polom	92.57	329	*e*P		P		09 18 49.4	-0.1
319A	Douglas	92.60	54	⇑P		P		09 18 51.2	+1.0
	baz=93								
UPC	Upice	92.61	329	*e*P		P		09 18 49.5	-0.2
UPC	Upice	92.61	329	*e*P		P		09 18 49.5	-0.2
OGNE	Ogallala	92.62	43	*e*P		P		09 18 49.9	-0.2
	comp=Z,27nm,0.7s								
OGNE	Ogallala	92.62	43	⇓P		P		09 18 50.4	+0.4
	baz=92								
V23A	Ortiz Mt. (NFS	92.66	49	⇑P		P		09 18 50.3	-0.2
	baz=93,SNR=18								
LAZ	Ladron	92.67	51	*e*P		P		09 18 51.3	+0.8
	comp=Z,9.1nm,0.8s								
R25A	Fountain Ranch	92.69	46	⇓P		P		09 18 51.1	+0.6
	baz=93,SNR=35								
X22A	Bernardo	92.71	51	⇑P		P		09 18 53.0	+2.4
	baz=93,SNR=11								
BSEG	Bad Segeberg	92.71	334	*e*P		P		09 18 49.2	-0.8
BSEG					pmax	pmax			
	comp=Z,46nm,1.5s								
BSEG	Bad Segeberg	92.71	334	*e*P		P		09 18 49.2	-0.8
	comp=Z,46nm,1.5s								
T24A	Torres, Weston	92.75	48	⇑P		P		09 18 52.4	+1.5
	baz=93,SNR=26								
Q26A	Hugo	92.78	45	⇓P		P		09 18 52.2	+1.3
	baz=93,SNR=15								
Z21A	St. Cloud Mine	92.84	52	⇓P		P		09 18 52.6	+1.2
	baz=93,SNR=28								
S25A	Robets Cordova	92.85	47	⇑P		P		09 18 51.1	-0.1
	baz=93,SNR=18								
ANMO	Albuquerque	92.88	50	*e*P		P		09 18 52.1	+0.6
	comp=Z,24nm,0.8s								
220A	Playas Peak, P	92.91	54	⇑P		P		09 18 52.6	+1.0
	baz=93,SNR=47								
LENM	Lemitar	92.91	51	*e*P		P		09 18 52.7	+1.1
U24A	Moreno Valley	92.94	48	⇓P		P		09 18 53.3	+1.5
	baz=93,SNR=46								
W23A	Werner Place,	92.98	50	⇓P		P		09 18 52.5	+0.5
	baz=93,SNR=34								
Y22D	IRIS PASSCAL I	92.99	51	⇓P		P		09 18 53.3	+1.3
	baz=93,SNR=10								
Y22A	Socorro	93.03	51	⇑P		P		09 18 52.7	+0.6
	baz=93,SNR=26								
LPM	Los Pinos Moun	93.08	51	*e*P		P		09 18 53.1	+0.7
	comp=Z,11nm,0.8s								
121A	Cookes Peak, D	93.14	53	⇓P		P		09 18 53.6	+0.9
	baz=93,SNR=13								
T25A	Trinidad	93.14	47	⇓P		P		09 18 53.2	+0.5
	baz=93,SNR=20								
BNM	Barren Site	93.16	51	*e*P		P		09 18 53.5	+0.6
	comp=Z,10nm,0.8s								
R26A	Arlington	93.17	46	⇑P		P		09 18 52.9	+0.3
	baz=93,SNR=55								
320A	Kipp Ranch, An	93.18	54	⇑P		P		09 18 54.2	+1.3
	baz=93,SNR=27								
SMOL	Smolenice	93.24	327	*e*P		P		09 18 53.4	+0.8
SMOL	Smolenice	93.24	327	*e*P		P		09 18 53.4	+0.8
X23A	Hourglass Bar	93.25	50	⇓P		P		09 18 53.4	+0.2
	baz=93,SNR=7.6								
PVCC	Panska Ves	93.28	330	*e*P		P		09 18 52.5	-0.2
PVCC	Panska Ves	93.28	330	*e*P		P		09 18 52.5	-0.2
V24A	Rampart Ranch,	93.30	49	⇑P		P		09 18 55.0	+1.5
	baz=93,SNR=22								
KSCO	Kaye Shedlock'	93.31	45	⇑P		P		09 18 53.9	+0.6
	baz=93,SNR=6.9								
BRG	Berggiesshubel	93.33	330	*e*P		P		09 18 52.1	-0.8
	comp=Z,9.1nm,1.4s								
BRG				*e*				09 52 23.5	
	comp=Z,58nm,2.6s								
BRG									
	comp=N,155nm,13.9s								
BRG									
	comp=E,162nm,18.5s								
BRG									
	comp=Z,227nm,20.5s								
BRG	Berggiesshubel	93.33	330	*e*P		P		09 18 52.1	-0.8
BRG					pmax	pmax			
	comp=Z,9.0nm,1.4s								
BRG					pmax	pmax			
	comp=Z,58nm,2.6s								
BRG					MLR	MLR			
	comp=N,155nm,13.9s								
BRG					MLR	MLR			
	comp=E,162nm,18.5s								
BRG					MLR	MLR			
	comp=Z,227nm,20.5s								
BRG	Berggiesshubel	93.33	330	*e*P		P		09 18 52.2	-0.7
	comp=Z,9.0nm,1.5s								
Z22A	Elephant Butte	93.38	52	⇓P		P		09 18 55.0	+1.3
	baz=93,SNR=14								
CLL	Collm	93.45	331	*i* P		P		09 18 52.2	-1.3
CLL					pmax	pmax			
	comp=Z,19nm,1.5s								
CLL	Collm	93.45	331	*e*P		P		09 18 52.5	-1.0
	comp=Z,19nm,1.5s								
CLL	Collm	93.45	331	*i* P		P		09 18 52.2	-1.3
	comp=Z,19nm,1.5s								
CLL				*e*(sP)		sP		09 19 47.0	+0.2
W24A	Lazy 6 Ranch,	93.48	49	⇓P		P		09 18 54.8	+0.5
	baz=93,SNR=31								
S26A	Kim	93.52	47	⇓P		P		09 18 54.9	+0.6
	baz=93,SNR=16								
U25A	Circle Dot Ran	93.54	48	⇓P		P		09 18 55.7	+1.2
	baz=94,SNR=28								
FBE	Freiberg	93.56	330	*e*P		P		09 18 53.6	-0.4
	comp=Z,17nm,1.2s								
R27A	Eads	93.60	46	⇑P		P		09 18 55.3	+0.6
	baz=94,SNR=32								
122A	Conniff Cattle	93.63	52	⇑P		P		09 18 56.6	+1.7
	baz=94,SNR=18								
PRU	Pruhonice	93.66	329	*e*P		P		09 18 54.0	-0.5
PRU	Pruhonice	93.66	329	*e*P		P		09 18 54.0	-0.5
T26A	Comanche Natio	93.68	47	⇓P		P		09 18 56.0	+0.9
	baz=94,SNR=37								
Y23A	Lovelace Mesa,	93.68	51	⇓P		P		09 18 57.1	+1.9
	baz=94,SNR=30								
V25A	Rancho No Teng	93.69	49	⇑P		P		09 18 56.1	+0.9
	baz=94,SNR=26								
VTS	Vitosha	93.76	320	⇑*i*P		P		09 18 55.2	-0.1
222A	Williams Famil	93.86	53	⇓P		P		09 18 56.6	+0.6
	baz=94,SNR=13								
Z23A	Rita Site, Whi	93.90	51	⇓P		P		09 18 57.8	+1.7
	baz=94,SNR=11								
Y24A	Capitan	94.12	50	⇓P		P		09 18 58.1	+0.9
	baz=94,SNR=19								
W25A	X Bar L Ranch,	94.13	49	⇓P		P		09 18 58.8	+1.6
	baz=94,SNR=33								
123A	Bell Site, Whi	94.20	52	⇑P		P		09 18 56.0	-1.5
	baz=94								
ECSD	EROS Data Cent	94.25	38	*e*P		P		09 18 57.2	-0.2
	comp=Z,25nm,1.4s								
V26A	Tequesquite Ra	94.29	48	⇓P		P		09 18 59.2	+1.3
	baz=94,SNR=8.3								
T27A	Campo	94.32	47	⇑P		P		09 18 58.6	+0.6
	baz=94,SNR=7.5								
X25A	Clemmons Ranch	94.36	50	⇑P		P		09 18 58.8	+0.6
	baz=94,SNR=7.8								
PLN	Plauen	94.41	331	*e*P		P		09 18 57.1	-0.8
	comp=Z,107nm,1.8s								
NKC	Novy Kostel	94.46	330	*e*P		P		09 18 57.6	-0.6
NKC	Novy Kostel	94.46	330	*e*P		P		09 18 57.6	-0.6
Z24A	Sheeppen Canyo	94.48	51	⇓P		P		09 18 59.4	+0.5
	baz=94,SNR=19								
MOX	Moxa	94.54	331	*e*P		P		09 18 57.6	-0.9
MOX					pmax	pmax			
	comp=Z,12nm,1.3s								
MOX	Moxa	94.54	331	*e*P		P		09 18 57.6	-0.9
	comp=Z,12nm,1.3s								
U27A	Thompson Grove	94.60	47	⇓P		P		09 19 00.2	+0.9
	baz=94,SNR=8.8								
Y25A	Mesa, Roswell	94.65	50	⇑P		P		09 18 59.1	-0.5
	baz=95,SNR=18								
W26A	Owens Ranch, T	94.68	49	⇑P		P		09 19 00.7	+1.1
	baz=95								
T28A	Walsh	94.70	46	⇑P		P		09 19 00.3	+0.6
	baz=95,SNR=7.8								
KHC	Kasperske Hory	94.70	329	*e*P		P		09 18 58.3	-1.1
KHC					pmax	pmax			
	comp=Z,14nm,1.5s								
KHC	Kasperske Hory	94.70	329	*e*P		P		09 18 58.3	-1.1
	comp=Z,14nm,1.5s								
KHC	Kasperske Hory	94.70	329	*e*P		P		09 18 58.2	-1.1
124A	Stringfield Ra	94.75	52	⇑P		P		09 19 00.9	+0.8
	baz=95,SNR=18								
BGNE	Belgrade	94.75	41	⇑P		P		09 18 59.5	-0.2
	baz=95								
MANZ	Manzenberg	94.79	330	*e*P		P		09 18 59.1	-0.6
	comp=Z,40nm,2.1s								
GEC2	GERESS Array S	94.84	329	*e*P		P		09 18 59.0	-1.1
GEC2					pmax	pmax			
	comp=Z,7.0nm,1.3s								
GEC2	GERESS Array S	94.84	329	*e*P		P		09 18 59.0	-1.1
	comp=Z,7.0nm,1.3s								
GERES	GERESS Array B	94.84	329	P		P		09 18 59.4	-0.7
GERES				PKiKP		PKiKP		09 23 41.9	+0.6
GERES				PKKP		PKKPdf		09 35 54.8	-0.2
GERES	GERESS Array B	94.84	329	P		P		09 18 59.4	-0.7
	comp=Z,0.9nm,0.5s,baz=35,slow=4.9,SNR=9.3								
GERES				PKiKP		PKiKP		09 23 41.9	+0.6
	comp=Z,0.5nm,0.5s,baz=38,slow=3.8,SNR=2.9								
GERES				PKKP		PKKPdf		09 35 54.8	-0.2
	comp=Z,0.4nm,0.7s,baz=208,slow=2.6,SNR=4.7								
ROTZ	Rotzenmuhle	94.90	330	*e*P		P		09 18 59.9	-0.3
	comp=Z,9nm,1.8s								
X26A	CR and CF Fran	94.94	49	⇓P		P		09 19 01.8	+0.9
	baz=95,SNR=20								
IBBN	Ibbenburen	94.96	334	*e*P		P		09 18 59.3	-1.0
	comp=Z,21nm,1.4s								
V27A	Dan Oppiter Fa	94.96	48	⇑P		P		09 19 01.6	+0.7
	baz=95								
Z25A	Roswell	94.97	51	⇓P		P		09 19 01.6	+0.6
	baz=95,SNR=25								
224A	Cornudas Mount	95.02	52	⇓P		P		09 19 01.8	+0.5
	baz=95,SNR=22								
WET	Wettzell	95.02	329	*e*P		P		09 19 00.2	-0.6
WET					pmax	pmax			
	comp=Z,32nm,2.7s								
WET	Wettzell	95.02	329	*e*P		P		09 19 00.2	-0.6
	comp=Z,32nm,2.7s								
W27A	Bowe Ranch, En	95.18	48	⇑P		P		09 19 01.8	-0.1
	baz=95,SNR=16								
T29A	Hugoton	95.22	46	⇓P		P		09 19 03.1	+1.1
	baz=95,SNR=5.2								
MNTX	Cornudas Mount	95.32	52	*e*P		P		09 19 03.0	+0.5
	comp=Z,7.9nm,0.8s								
MNTX	Cornudas Mount	95.32	52	⇓P		P		09 19 03.9	+1.4
	baz=95,SNR=24								
125A	Gardner Draw,	95.34	51	⇑P		P		09 19 03.3	+0.6
	baz=95,SNR=14								
324A	Moseley Ranch,	95.38	53	⇑P		P		09 19 03.5	+0.5
	baz=95,SNR=15								
V28A	Channing	95.38	48	⇓P		P		09 19 03.4	+0.6
	baz=95,SNR=5.4								
X27A	F and S Farms,	95.38	49	⇑P		P		09 19 03.4	+0.6
	baz=95,SNR=15								
SPMN	St. Paul	95.42	36	⇑P		P		09 19 02.6	0.0
	baz=95								
GRB2	Grafenberg Arr	95.50	330	*e*P		P		09 19 02.4	-0.5
	comp=Z,8.0nm,1.1s								
Z26A	Caprock	95.50	50	⇓P		P		09 19 03.6	+0.2
	baz=95,SNR=24								
GRB5	Grafenberg Arr	95.61	330	*e*P		P		09 19 02.9	-0.5
	comp=Z,22nm,1.6s								
GRC4	Grafenberg Arr	95.69	330	*e*P		P		09 19 03.1	-0.7
	comp=Z,16nm,1.5s								
Y27A	Causey	95.75	50	⇑P		P		09 19 05.1	+0.5
	baz=96,SNR=14								
GRC1	Grafenberg Arr	95.76	330	*e*P		P		09 19 03.1	-1.0
	comp=Z,15nm,1.6s								
V29A	Stinett	95.78	47	⇑P		P		09 19 05.6	+0.9
	baz=96								
325A	Bean Ranch, Si	95.79	52	⇑P		P		09 19 06.0	+1.2
	baz=96,SNR=8.7								
126A	Clayton Basin,	95.81	51	⇓P		P		09 19 05.0	+0.2
	baz=96,SNR=7.3								
GRC3	Grafenberg Arr	95.81	330	*e*P		P		09 19 03.5	-0.8
	comp=Z,13nm,1.6s								
GRC2	Grafenberg Arr	95.92	330	*e*P		P		09 19 03.9	-0.9
	comp=Z,40nm,2.2s								
MSTX	Muleshoe	95.97	49	⇓P		P		09 19 06.5	+0.9
	baz=96								
U30A	WK&E Inc. Balk	96.00	46	⇓P		P		09 19 06.5	+0.9
	baz=96								
226B	Tecolote Peak,	96.00	51	⇓P		P		09 19 06.6	+0.9
	baz=96,SNR=9.3								
Z27A	Tatum	96.02	50	⇓P		P		09 19 06.0	+0.2
	baz=96,SNR=17								
RJOB	Jocberg	96.05	328	*e*P		P		09 19 04.8	-0.7
	comp=Z,8.0nm,1.4s								
X28A	Dimmitt	96.07	49	⇑P		P		09 19 06.9	+0.9
	baz=96,SNR=11								
425A	Indio Mountain	96.08	53	⇑P		P		09 19 07.4	+1.2
	baz=96,SNR=9.6								
CLNB	Carlsbad	96.11	51	*e*P		P		09 19 06.5	+0.3
	comp=Z,64nm,1.6s								
W29A	Amraillo	96.12	48	⇓P		P		09 19 04.3	-1.9
	baz=96								
AMTX	Amarillo	96.23	48	*e*P		P		09 19 07.1	+0.5
	comp=Z,26nm,0.9s								
AMTX	Amarillo	96.23	48	⇑P		P		09 19 06.9	+0.2
	baz=96,SNR=9.6								
Y28A	McKinney Farm,	96.37	49	⇓P		P		09 19 07.5	+0.2
	baz=96								
X29A	Tulia	96.46	48	⇓P		P		09 19 08.6	+0.9
	baz=96,SNR=47								
326A	Caldwell Ranch	96.54	52	⇑P		P		09 19 08.7	+0.6
	baz=96,SNR=23								
Z28A	Tucker Farm, M	96.61	50	⇑P		P		09 19 10.4	+1.9
	baz=97,SNR=9.9								
U31A	Nine Bar Ranch	96.62	46	⇑P		P		09 19 11.0	+2.7
	baz=96								
227A	Bennet, Jal	96.66	51	⇑P		P		09 19 09.6	+0.9
	baz=97								
Y29A	Porterfield Fa	96.80	49	⇑P		P		09 19 11.2	+1.9
	baz=97,SNR=5.5								
426A	McDonald Obser	96.84	53	⇓P		P		09 19 11.1	+1.4
	baz=97								
128A	Castleberry Fa	96.91	50	⇑P		P		09 19 11.4	+1.6
	baz=97								
X30A	Coker Ranch, T	97.02	48	⇑P		Pdif		09 19 10.8	+0.5
	baz=97								
KSU1	Kansas State U	97.08	42	*e*P		P		09 19 10.0	-0.3
	comp=Z,17nm,0.7s								
228A	UT Block 9, Go	97.11	51	⇓P		Pdif		09 19 10.9	+0.1
	baz=97								
Z29A	Hungry Hill Ra	97.11	49	⇓P		Pdif		09 19 11.5	+0.8
	baz=97,SNR=12								
526A	Mary Lane Ranc	97.12	53	⇑P		Pdif		09 19 11.3	+0.4
	baz=97,SNR=7.9								
427A	Hayter Ranch,	97.21	52	⇑P		Pdif		09 19 15.2	+4.0
	baz=97,SNR=17								
W31A	Holland Ranch,	97.23	47	⇑P		P		09 19 10.0	-1.2
	baz=97								
Y30A	Stafford Cattl	97.33	48	⇓P		P		09 19 10.7	-0.9
	baz=97								
626A	Big Bend Ranch	97.36	54	⇑P		Pdif		09 19 12.4	+0.5
	baz=97,SNR=7.4								
527A	Woodward Ranch	97.43	53	⇑P		Pdif		09 19 14.8	+2.5
	baz=97,SNR=10								
Z30A	Sanderson Ranc	97.50	49	⇓P		Pdif		09 19 13.6	+1.2
	baz=97,SNR=8.5								
X31A	McDonald Ranch	97.53	47	⇑P		Pdif		09 19 12.7	+0.2
	baz=98,SNR=7.2								
Y31A	Rekieta Farm,	97.71	48	⇑P		Pdif		09 19 14.9	+1.6
	baz=98,SNR=6.5								
428A	Kincaid Ranch,	97.79	52	⇑P		Pdif		09 19 16.7	+2.9
	baz=98,SNR=11								
TXAR	Lajitas Array	97.82	54	P		Pdif		09 19 14.4	+0.5
TXAR				PP		PP		09 23 10.9	-2.7
TXAR				PKiKP		PKiKP		09 23 46.7	-0.4
TXAR				PKKP		PKKPbc		09 35 48.2	+0.3
TXAR	Lajitas Array	97.82	54	P		Pdif		09 19 14.4	+0.5
	comp=Z,3.6nm,0.6s,baz=324,slow=2.8,SNR=43								
TXAR				PP		PP		09 23 10.9	-2.7
	comp=Z,1.3nm,1.0s,baz=282,slow=6.0,SNR=5.4								
TXAR				PKiKP		PKiKP		09 23 46.7	-0.4
	comp=Z,0.2nm,0.5s,baz=355,slow=1.6,SNR=5.5								
TXAR				PKKP		PKKPbc		09 35 48.2	+0.3
	comp=Z,0.4nm,0.6s,baz=120,slow=5.7,SNR=6.9								
329A	Wagon Wheel Ra	97.89	51	⇑P		Pdif		09 19 15.0	+0.8
	baz=98,SNR=23								
627A	Terlingua Ranc	97.96	53	⇓P		Pdif		09 19 16.5	+1.8
	baz=98,SNR=15								
130A	Snyder	97.99	50	⇑P		P		09 19 14.4	-0.2
	baz=98								
528A	Cox Ranch, San	98.02	52	⇑P		Pdif		09 19 16.4	+1.5
	baz=98,SNR=6.8								
Z31A	Sharp Cattle R	98.16	49	⇑P		Pdif		09 19 15.7	+0.4
	baz=98								
Y32A	R-V Farms, Ver	98.25	48	⇓P		P		09 19 15.8	+0.1
	baz=98								
WMOK	Wichita Mounta	98.27	47	*e*P		P		09 19 15.0	-0.8
WMOK					pmax	pmax			
	comp=Z,4.0nm,0.7s								
WMOK	Wichita Mounta	98.27	47	*e*P		P		09 19 15.0	-0.8
	comp=Z,4.4nm,0.7s								
230A	Sterling City	98.28	50	⇓P		Pdif		09 19 16.1	+0.1
	baz=98								
628A	Black Gap, Mar	98.31	53	⇓P		Pdif		09 19 18.0	+1.9
	baz=98,SNR=12								
SCHQ	Schefferville	98.33	17	P		P		09 19 15.4	-0.1
SCHQ	Schefferville	98.33	17	P		P		09 19 15.4	-0.1
	comp=Z,3.7nm,0.8s,baz=281,slow=4.5,SNR=4.8								
429A	Davenport Ranc	98.42	52	⇓P		Pdif		09 19 16.8	+0.2
	baz=98,SNR=9.6								
529A	Stev Forest Ra	98.45	52	⇓P		Pdif		09 19 17.2	+0.5
	baz=98,SNR=10								
330A	Mertzon	98.50	51	⇑P		P		09 19 15.3	-1.6
	baz=98,SNR=6.9								
Z32A	Haskell	98.62	48	⇓P		Pdif		09 19 17.9	+0.5
	baz=99,SNR=12								
430A	Baggett Ranch,	98.80	51	⇑P		Pdif		09 19 19.0	+0.7
	baz=99								
231A	Bronte	98.82	50	⇓P		P		09 19 18.3	0.0
	baz=99								
ABTX	Abilene, Hawle	98.90	49	⇑P		Pdif		09 19 19.1	+0.5
	baz=99								
530A	J-C Ranch, Com	99.08	52	⇓P		Pdif		09 19 20.1	+0.6
	baz=99								
331A	San Angelo	99.

comp=Z,7.5nm,0.7s,baz=230,slow=9.8,SNR=3.1
PLCA PKPbc **PKPbc** **09 25 21.9 +0.4**
comp=Z,97nm,0.6s,baz=236,slow=3.4,SNR=295
PLCA SKPbc **SKPbc** **09 28 46.1 +0.5**
comp=Z,2.6nm,0.7s,baz=207,slow=5.1,SNR=4.3
CLCH Cerro Calan 149.49 117⇑*iP* **PKPbc** **09 25 27.1 0.0**
LMEL Las Melosas 149.68 118 *iP* **PKPbc** **09 25 27.7 +0.1**
TLL Tololo Astrono 149.72 110 *iP* **PKPbc** **09 25 27.7 -0.2**
LCO Las Campanas 149.89 108 *e*PKPdf **PKPdf** **09 25 23.6 +0.2**
LCO *e*PKPbc **PKPbc** **09 25 28.8 +0.4**
LPAZ La Paz 150.59 82 *e*PKPdf **PKPdf** **09 25 25.5 +0.2**
LPAZ PKP **PKPdf** **09 25 25.9 +0.7**
LPAZ *e*PKPbc **PKiKP** **09 25 31.2 -0.2**
LPAZ PKPbc **PKiKP** **09 25 31.6 +0.2**
LPAZ La Paz 150.59 82 PKP **PKPdf** **09 25 25.9 +0.7**
comp=Z,48nm,0.6s,baz=337,slow=3.9,SNR=30
LPAZ PKPbc **PKiKP** **09 25 31.6 +0.2**
comp=Z,48nm,0.6s,baz=283,slow=4.3,SNR=136
CFAA Coronel Fontan 151.72 114 PKP **PKPdf** **09 25 25.6 -0.2**
CFAA PKPbc **PKPbc** **09 25 31.9 -0.4**
CFAA Coronel Fontan 151.72 114 PKP **PKPdf** **09 25 25.6 -0.2**
comp=Z,0.9nm,0.8s,baz=236,slow=4.1,SNR=14
CFAA PKPbc **PKPbc** **09 25 31.9 -0.4**
comp=Z,6.0nm,0.7s,baz=259,slow=2.6,SNR=58
SAML Samuel 151.77 64 *e*PKPdf **PKPdf** **09 25 26.3 0.0**
SAML *e*PKPbc **PKPbc** **09 25 32.1 -0.7**
SAML *e*PKPab **PKPab** **09 25 40.8 -1.4**
TRQA Tornquist 154.53 131 *e*PKPbc **PKPbc** **09 25 37.8 -0.5**
CPUP Villa Florida 161.92 104 PKP **PKPdf** **09 25 38.9 0.0**
CPUP PKPab **PKPab** **09 26 25.7 0.0**
CPUP Villa Florida 161.92 104 PKP **PKPdf** **09 25 38.9 0.0**
comp=Z,2.7nm,0.7s,baz=87,slow=4.0,SNR=8.5
CPUP PKPab **PKPab** **09 26 25.7 0.0**
comp=Z,5.3nm,0.7s,baz=254,slow=4.4,SNR=11
BDFB Brasilia 167.69 54 PKP **PKPdf** **09 25 44.7 +0.4**
BDFB PKPab **PKPab** **09 26 51.5 +0.1**
BDFB Brasilia 167.69 54 PKP **PKPdf** **09 25 44.7 +0.4**
comp=Z,5.3nm,0.6s,baz=39,slow=4.1,SNR=7.8
BDFB PKPab **PKPab** **09 26 51.5 +0.1**
comp=Z,14nm,0.7s,baz=278,slow=5.2,SNR=18

ROM 19 09:09:03.3±0.5, 42°.37N×13°.44E, h10km±1km, Md1.5/3, Ml1.0/2, Error ellipse: s-maj=8.7km s-min=2.3km az=99.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.03**	**246**	*e*Pdif	Pg	09 09 05.6	+0.3
AQU	**L'Aquila**	**0.03**	**246**	Pg	Pg	09 09 05.7	+0.4
AQU				Sg	Sg	09 09 07.1	+0.3
	293nm,0.2s						
CAMP	**Campotosto**	**0.17**	**351**	Pg	Pg	09 09 07.7	+0.5
CAMP				Sg	Sg	09 09 10.8	+0.9
	24nm,0.5s						
NRCA	**Norcia**	**0.53**	**332**	Pg	Pg	09 09 13.5	-0.2
NRCA				Sg	Sb	09 09 21.7	-0.8
	9.0nm,0.1s						

*CSEM **19** 09:16:11.2, 42°.37N×13°.36E, h10km, MD2.0/4, After ROM*
ROM 19 09:16:11.2±0.1, 42°.37N×13°.36E, h10km, Md2.0/4, Ml1.8/9, Error ellipse: s-maj=0.8km s-min=0.7km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**124**	Pg	Pg	09 16 13.7	+0.4
AQU				Sg	Sg	09 16 14.9	+0.2
	2μm,0.2s						
AQU	**L'Aquila**	**0.04**	**124**	Pg	Pg	09 16 13.7	+0.4
AQU				Sg	Sg	09 16 14.9	+0.2
	2μm,0.2s						
CAMP	**Campotosto**	**0.17**	**12**	Pg	Pg	09 16 15.6	+0.5
CAMP				Sg	Sg	09 16 18.4	+0.7
	207nm,0.5s						
CAMP	**Campotosto**	**0.17**	**12**	Pg	Pg	09 16 15.6	+0.5
CAMP				Sg	Sg	09 16 18.4	+0.7
	207nm,0.5s						
FAGN	**Fagnano**	**0.20**	**123**	Pg	Pg	09 16 16.2	+0.7
FAGN				Sg	Sg	09 16 19.7	+1.3
	414nm,0.3s						
FAGN	**Fagnano**	**0.20**	**123**	Pg	Pg	09 16 16.2	+0.7
FAGN				Sg	Sg	09 16 19.7	+1.3
	414nm,0.3s						
FIAM	**Fiamignano**	**0.21**	**240**	Pg	Pg	09 16 16.3	+0.5
FIAM				Sg	Sg	09 16 19.9	+1.0
	130nm,0.5s						
FIAM	**Fiamignano**	**0.21**	**240**	Pg	Pg	09 16 16.3	+0.5
FIAM				Sg	Sg	09 16 19.9	+1.0
	130nm,0.5s						
TERO	**Teramo**	**0.31**	**36**	Pg	Pg	09 16 17.7	+0.2
TERO				Sg	Sg	09 16 22.5	+0.8
	215nm,0.1s						
TERO	**Teramo**	**0.31**	**36**	Pg	Pg	09 16 17.7	+0.2
TERO				Sg	Sg	09 16 22.5	+0.8
	215nm,0.1s						
LNSS	**Leonessa**	**0.33**	**314**	Pg	Pg	09 16 18.4	+0.4
LNSS				Sg	Sb	09 16 23.9	-0.9
	99nm,0.5s						
LNSS	**Leonessa**	**0.33**	**314**	Pg	Pg	09 16 18.4	+0.4
LNSS				Sg	Sb	09 16 23.9	-0.9
	99nm,0.5s						
PTQR	**Pietraquaria**	**0.35**	**175**	Pg	Pg	09 16 18.8	+0.4
PTQR				Sg	Sg	09 16 24.1	+0.9
	9.0nm,0.2s						
PTQR	**Pietraquaria**	**0.35**	**175**	Pg	Pg	09 16 18.8	+0.4
PTQR				Sg	Sg	09 16 24.1	+0.9
	9.0nm,0.2s						
VCEL	**Villa Celiera**	**0.35**	**87**	Pg	Pg	09 16 19.0	+0.5
	69nm,0.3s						
VCEL	**Villa Celiera**	**0.35**	**87**	Pg	Pg	09 16 19.0	+0.5
	69nm,0.3s						
CERT	**Cerreto**	**0.51**	**214**	Pg	Pg	09 16 21.2	-0.1
CERT				Sg	Sg	09 16 28.9	+0.8
	68nm,0.5s						
CERT	**Cerreto**	**0.51**	**214**	Pg	Pg	09 16 21.2	-0.1
CERT				Sg	Sg	09 16 28.9	+0.8
	68nm,0.5s						
INTR	**Introdacqua**	**0.54**	**132**	Pg	Pg	09 16 22.1	+0.2
INTR				Sg	Sg	09 16 29.7	+0.6
	31nm,0.7s						
INTR	**Introdacqua**	**0.54**	**132**	Pg	Pg	09 16 22.1	+0.2
INTR				Sg	Sg	09 16 29.7	+0.6
	31nm,0.7s						
FDMO	**Fiordimonte**	**0.69**	**343**	Pg	Pg	09 16 24.6	-0.1
FDMO	**Fiordimonte**	**0.69**	**343**	Pg	Pg	09 16 24.6	-0.1
LPEL	**Lama dei Pelig**	**0.69**	**118**	Pg	Pb	09 16 25.1	-0.3
	23nm,0.2s						
LPEL	**Lama dei Pelig**	**0.69**	**118**	Pg	Pb	09 16 25.1	-0.3
	23nm,0.2s						

*CSEM **19** 09:17:09.4, 42°.46N×13°.41E, h10km, MD1.7/5, After ROM*
ROM 19 09:17:09.4±0.1, 42°.46N×13°.41E, h10km±1km, Md1.7/5, Ml1.5/5, Error ellipse: s-maj=2.0km s-min=1.3km az=97.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.08**	**0**	Pg	Pg	09 17 12.4	+0.5
CAMP				Sg	Sg	09 17 14.2	+0.5
CAMP	**Campotosto**	**0.08**	**0**	Pg	Pg	09 17 12.4	+0.5
CAMP				Sg	Sg	09 17 14.2	+0.5
AQU	**L'Aquila**	**0.10**	**183**	Pg	Pg	09 17 12.6	+0.5
AQU				Sg	Sg	09 17 14.5	+0.4
	112nm,0.3s						
AQU	**L'Aquila**	**0.10**	**183**	Pg	Pg	09 17 12.6	+0.5
AQU				Sg	Sg	09 17 14.5	+0.4
	112nm,0.3s						
TERO	**Teramo**	**0.22**	**41**	Pg	Pg	09 17 14.5	+0.5
TERO				Sg	Sg	09 17 18.1	+0.9
	75nm,0.1s						
TERO	**Teramo**	**0.22**	**41**	Pg	Pg	09 17 14.5	+0.5
TERO				Sg	Sg	09 17 18.1	+0.9
	75nm,0.1s						
FAGN	**Fagnano**	**0.23**	**146**	Pg	Pg	09 17 14.9	+0.6
	98nm,0.6s						
FAGN	**Fagnano**	**0.23**	**146**	Pg	Pg	09 17 14.9	+0.6
	98nm,0.6s						
LNSS	**Leonessa**	**0.31**	**298**	Pg	Pg	09 17 16.1	+0.3
LNSS				Sg	Sg	09 17 21.2	+1.2
	52nm,0.2s						
LNSS	**Leonessa**	**0.31**	**298**	Pg	Pg	09 17 16.1	+0.3
LNSS				Sg	Sg	09 17 21.2	+1.2
	52nm,0.2s						
VCEL	**Villa Celiera**	**0.33**	**101**	Pg	Pb	09 17 17.3	-0.2
	38nm,0.3s						
VCEL	**Villa Celiera**	**0.33**	**101**	Pg	Pb	09 17 17.3	-0.2
	38nm,0.3s						
NRCA	**Norcia**	**0.43**	**330**	Pg	Pg	09 17 18.3	+0.3
NRCA				Sg	Sb	09 17 25.1	-0.9
	10.0nm,0.2s						
NRCA	**Norcia**	**0.43**	**330**	Pg	Pg	09 17 18.3	+0.3
NRCA				Sg	Sb	09 17 25.1	-0.9
	10.0nm,0.2s						

*ATH **19** 09:19:43.7, 39°.10N×27°.79E, h21km±1km, MD3.2/5*
*ISCJB **19** 09:19:45.9±0.3, 39°.12N±0°.02×27°.54E±0°.03, h0km, Error ellipse: s-maj=3.6km s-min=2.5km az=41.4*
*CSEM **19** 09:19:45.9±0.1, 39°.12N×27°.54E, h1km, MD2.9, Error ellipse: s-maj=3.2km s-min=2.5km az=53.0*
*ISK **19** 09:19:45.9, 39°.08N×27°.54E, h13km, MD2.9*
*DDA **19** 09:19:46.0, 39°.10N×27°.56E, h7km, MD2.9*
ISC 19 09:19:46.2±0.7, 39°.12N±0°.02×27°.60E±0°.02, h0km, n55, σ0s92/83, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.29**	**145**	Pg	**Pg**	**09 19 52.2**	**+0.4**
AKS				*e*Sg	**Sb**	**09 19 57.8**	**-1.9**
AKS	**Akhisar**	**0.29**	**145**	*i* Pg	**Pg**	**09 19 52.2**	**+0.4**
AKS				*e*Sg	**Sb**	**09 19 57.8**	**-1.9**
AKHS	**Akhisar**	**0.29**	**145**	*i* P	**Pg**	**09 19 52.0**	**+0.2**
AKHS				*i* S	**Sg**	**09 19 57.5**	**+1.9**
AKHS	**Akhisar**	**0.29**	**145**	*i* P	**Pg**	**09 19 52.0**	**+0.2**
AKHS				*i* S	**Sg**	**09 19 57.5**	**+1.9**
BALB	**Balikesir**	**0.56**	**23**	*e*PG	**Pb**	**09 19 58.3**	**-0.7**
BALB				*e*SG	**Sb**	**09 20 08.5**	**+0.9**
BALB	**Balikesir**	**0.56**	**23**	*e*Pg	**Pb**	**09 19 58.3**	**-0.7**
IZM	**Izmir**	**0.77**	**200**	*e*PG	**Pg**	**09 20 00.5**	**-0.4**
IZM	**Izmir**	**0.77**	**200**	*e*Pg	**Pg**	**09 20 00.5**	**-0.4**
DURS	**Dursunbey**	**0.83**	**54**	*i* P	**Pg**	**09 20 03.0**	**+0.8**
DURS				*i* S	**Sn**	**09 20 17.2**	**-1.1**
DURS	**Dursunbey**	**0.83**	**54**	*i* P	**Pg**	**09 20 03.0**	**+0.8**
DURS				*i* S	**Sn**	**09 20 17.2**	**-1.1**
DEMI	**Demirci**	**0.87**	**95**	*i* P	**Pb**	**09 20 04.2**	**-0.1**
DEMI				*i* S	**Sb**	**09 20 17.2**	**+0.7**
DEMI	**Demirci**	**0.87**	**95**	*i* P	**Pb**	**09 20 04.2**	**-0.1**
DEMI				*i* S	**Sb**	**09 20 17.2**	**+0.7**
DST	**Dursunbey**	**0.93**	**58**	*e*PG	**Pb**	**09 20 05.0**	**-0.2**
DST	**Dursunbey**	**0.93**	**58**	*e*Pg	**Pb**	**09 20 05.0**	**-0.2**
GONE	**Gonen-Balikesi**	**0.93**	**4**	*e*PG	**Pg**	**09 20 04.5**	**+0.5**
GONE	**Gonen-Balikesi**	**0.93**	**4**	*e*Pg	**Pg**	**09 20 04.5**	**+0.5**
MANT	**Manisa**	**0.98**	**130**	*i* P	**Pg**	**09 20 04.9**	**0.0**
MANT				*i* S	**Sg**	**09 20 18.7**	**+1.1**
MANT	**Manisa**	**0.98**	**130**	*i* P	**Pg**	**09 20 04.9**	**0.0**
MANT				*i* S	**Sg**	**09 20 18.7**	**+1.1**
KULA	**Kula-Manisa**	**1.03**	**126**	*e*PG	**Pg**	**09 20 05.5**	**-0.4**
KULA	**Kula-Manisa**	**1.03**	**126**	*e*Pg	**Pg**	**09 20 05.5**	**-0.4**
PRK	**Paraskevi**	**1.04**	**277**	*e*PN	**Pg**	**09 20 06.6**	**+0.5**
PRK				*e*SN	**Sb**	**09 20 22.7**	**+1.5**
PRK	**Paraskevi**	**1.04**	**277**	*e*Pn	**Pg**	**09 20 06.6**	**+0.5**
PRK				*e*Sn	**Sb**	**09 20 22.7**	**+1.5**
URLA	**Izmir**	**1.09**	**226**	*i* P	**Pg**	**09 20 06.6**	**-0.5**
URLA				*i* S	**Sn**	**09 20 25.9**	**+1.4**
URLA	**Izmir**	**1.09**	**226**	*i* P	**Pg**	**09 20 06.6**	**-0.5**
URLA				*i* S	**Sn**	**09 20 25.9**	**+1.4**
BNT	**Bandirma**	**1.26**	**11**	*e*PN	**Pg**	**09 20 10.3**	**0.0**
BNT	**Bandirma**	**1.26**	**11**	*e*Pn	**Pg**	**09 20 10.3**	**0.0**
KCTX	**Karacabey (Bur**	**1.29**	**27**	*e*PN	**Pg**	**09 20 10.7**	**-0.1**
KCTX	**Karacabey (Bur**	**1.29**	**27**	*e*Pn	**Pg**	**09 20 10.7**	**-0.1**
KRBG	**Karabiga-Canak**	**1.29**	**350**	*e*PN	**Pg**	**09 20 10.7**	**-0.3**
KRBG	**Karabiga-Canak**	**1.29**	**350**	*e*Pn	**Pg**	**09 20 10.7**	**-0.3**
BOZC	**Bozcaada**	**1.40**	**302**	*i* P	**Pn**	**09 20 12.4**	**-0.6**
BOZC				*i* S	**Sg**	**09 20 31.4**	**+0.4**
LPK	**Lapseki**	**1.41**	**333**	*e*PN	**Pn**	**09 20 12.2**	**-0.9**
LPK	**Lapseki**	**1.41**	**333**	*e*Pn	**Pn**	**09 20 12.2**	**-0.9**
CHOS	**Chios island**	**1.41**	**239**	*e*PN	**Pn**	**09 20 11.5**	**-1.7**
CHOS				*e*SN	**Sn**	**09 20 32.8**	**+0.3**
CHOS	**Chios island**	**1.41**	**239**	*e*Pn	**Pn**	**09 20 11.5**	**-1.7**
CHOS				*e*Sn	**Sn**	**09 20 32.8**	**+0.3**
AYDN	**Tasoluk**	**1.47**	**171**	*i* P	**Pn**	**09 20 12.5**	**-1.5**
AYDN				*i* S	**Sn**	**09 20 35.7**	**+1.7**
AYDN	**Tasoluk**	**1.47**	**171**	*i* P	**Pn**	**09 20 12.5**	**-1.5**
AYDN				*i* S	**Sn**	**09 20 35.7**	**+1.7**
TVSB	**Tavsanli**	**1.48**	**77**	*e*PN	**Pn**	**09 20 13.7**	**-0.5**
TVSB	**Tavsanli**	**1.48**	**77**	*e*Pn	**Pn**	**09 20 13.7**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.54**	**326**	*e*PN	**Pn**	**09 20 14.5**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.54**	**326**	*e*Pn	**Pn**	**09 20 14.5**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.60**	**348**	*e*PN	**Pn**	**09 20 14.8**	**-1.0**
RKY	**Sarkoy-Tekirda**	**1.60**	**348**	*e*Pn	**Pn**	**09 20 14.8**	**-1.0**
SART	**Tekirdag**	**1.60**	**349**	*i* P	**Pn**	**09 20 15.2**	**-0.6**
SART				*i* S	**Sg**	**09 20 38.5**	**+0.9**
SART	**Tekirdag**	**1.60**	**349**	*i* P	**Pn**	**09 20 15.2**	**-0.6**
SART				*i* S	**Sg**	**09 20 38.5**	**+0.9**
KHAL	**Karahalli**	**1.66**	**116**	*i* P	**Pn**	**09 20 16.6**	**-0.1**
KHAL				*i* S	**Sg**	**09 20 39.6**	**+0.1**
KHAL	**Karahalli**	**1.66**	**116**	*i* P	**Pn**	**09 20 16.6**	**-0.1**
KHAL				*i* S	**Sg**	**09 20 39.6**	**+0.1**
ARMT	**Armutlu**	**1.74**	**34**	*e*PN	**Pn**	**09 20 16.9**	**-0.8**
ARMT	**Armutlu**	**1.74**	**34**	*e*Pn	**Pn**	**09 20 16.9**	**-0.8**
LIA	**Limnos Island**	**2.02**	**293**	*e*PN	**Pn**	**09 20 21.0**	**-0.5**
LIA	**Limnos Island**	**2.02**	**293**	*e*Pn	**Pn**	**09 20 21.0**	**-0.5**
SMTH	**Samothraki Isl**	**2.09**	**311**	*e*PN	**Pn**	**09 20 21.6**	**-0.9**
SMTH				*e*SN	**Sn**	**09 20 49.6**	**+0.4**
SMTH	**Samothraki Isl**	**2.09**	**311**	*e*Pn	**Pn**	**09 20 21.6**	**-0.9**
SMTH				*e*Sn	**Sn**	**09 20 49.6**	**+0.4**
ALN	**Alexandroupoli**	**2.14**	**327**	*e*PN	**Pn**	**09 20 22.1**	**-1.0**
ALN				*e*SN	**Sn**	**09 20 49.1**	**-1.3**
ALN	**Alexandroupoli**	**2.14**	**327**	*e*Pn	**Pn**	**09 20 22.1**	**-1.0**
ALN				*e*Sn	**Sn**	**09 20 49.1**	**-1.3**

*ISCJB **19** 09:23:37.4±0.5, 52°.20N±0°.07×156°.6E±0°.1, h213km±3km, mb3.2/8, Error ellipse: s-maj=15.5km s-min=7.3km az=44.1*
*KRSC **19** 09:23:37.3±0.2, 52°.10N×156°.88E, h216km±16km, ML3.7*
*IDC **19** 09:23:37.8±0.7, 52°.23N×156°.44E, h202km±4km, mb3.0/9, mb1 3.3/9, mb1mx3.1/27, mbtmp3.0/9, Error ellipse: s-maj=31.7km s-min=11.5km az=134.0*
ISC 19 09:23:38.4±0.7, 52°.17N±0°.09×156°.65E±0°.09, h209km±6km, n26, σ0s92/36, mb3.2/8, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**0.12**	**33**	*e*P	**Pn**	**09 24 06.0**	**+0.4**
MIPR				*e*S	**S**	**09 24 27.0**	**-0.1**
PAU	**Pauzhetka**	**0.71**	**172**	*e*P	**Pn**	**09 24 07.7**	**+0.3**
PAU				*e*S	**S**	**09 24 30.2**	**+0.3**
APC	**Apacha**	**0.81**	**22**	*i* P	**Pn**	**09 24 07.7**	**-0.1**
APC				*i* S	**S**	**09 24 30.2**	**-0.7**
MTVR	**Mutnovka**	**0.99**	**71**	*e*P	**Pn**	**09 24 09.4**	**+0.3**
MTVR				*e*S	**S**	**09 24 33.0**	**+0.1**
PETK	**Petropavlovsk-**	**1.13**	**34**	P	**Pn**	**09 24 10.1**	**+0.2**
	2.3nm,0.3s,baz=156,slow=7.7,SNR=97						
PETK				S	**S**	**09 24 33.2**	**-1.2**
	3.1nm,0.3s,baz=158,slow=7.1,SNR=15						
RUS	**Russkaya**	**1.17**	**76**	*e*P	**Pn**	**09 24 10.2**	**0.0**
RUS				*e*S	**S**	**09 24 34.4**	**-0.4**
PET	**Petropavlovsk**	**1.49**	**54**	*e*P	**Pn**	**09 24 13.1**	**+0.4**
PET				*e*S	**S**	**09 24 39.0**	**-0.2**
SKR	**Severo-Kuril's**	**1.53**	**193**	*e*P	**Pn**	**09 24 13.2**	**+0.1**
SKR				*e*S	**S**	**09 24 40.3**	**+0.5**
KOK	**Koryaka**	**1.65**	**46**	S	**S**	**09 24 43.5**	**+1.6**
AVH	**Avacha**	**1.68**	**48**	*e*P	**Pn**	**09 24 15.1**	**+0.7**
UGLR	**Uglovaya**	**1.68**	**51**	*e*P	**Pn**	**09 24 15.8**	**+1.3**
UGLR				*e*S	**S**	**09 24 43.6**	**+1.2**
SMAR	**Somma**	**1.70**	**49**	*e*P	**Pn**	**09 24 15.6**	**+0.7**
KRER	**Koryakskii**	**1.71**	**48**	*e*P	**Pn**	**09 24 14.5**	**-0.4**
SDLR	**Sedlovina**	**1.75**	**50**	*e*P	**Pn**	**09 24 16.2**	**+1.0**
SPN	**Mys Shipunski**	**2.25**	**64**	*e*P	**Pn**	**09 24 19.7**	**-0.4**
SPN				*e*S	**S**	**09 24 49.5**	**-2.8**
MKZ	**Mys Kozlova**	**3.87**	**50**	P	**Pn**	**09 24 39.7**	**+1.0**
FX1	**Attu Island--F**	**10.09**	**79**	S	**S**	**09 27 49.8**	**-1.9**
	3.2nm,0.3s,baz=54,slow=18,SNR=5.1						
MJAR	**Matsushiro Arr**	**20.35**	**227**	P	**P**	**09 27 58.3**	**-0.5**
	1.1nm,0.9s,baz=292,slow=40,SNR=3.2						
ILAR	**Eielson Array**	**30.95**	**44**	P	**P**	**09 29 35.5**	**+0.2**
	0.5nm,0.6s,baz=264,slow=6.6,SNR=17						
INK	**Inuvik**	**35.87**	**37**	P	**P**	**09 30 18.3**	**+0.6**
	0.6nm,0.5s,baz=231,slow=6.5,SNR=8.3						
YKA	**Yellowknife Ar**	**45.25**	**41**	P	**P**	**09 31 34.8**	**+0.4**
	0.4nm,0.5s,baz=302,slow=6.8,SNR=13						
MKAR	**Makanchi Array**	**46.64**	**294**	P	**P**	**09 31 44.1**	**-1.5**
	0.3nm,0.3s,baz=56,slow=6.8,SNR=4.8						
PDAR	**Pinedale Array**	**59.80**	**58**	P	**P**	**09 33 21.8**	**+0.1**
	0.4nm,0.6s,baz=316,slow=2.8,SNR=3.7						
TXAR	**Lajitas Array**	**72.93**	**64**	P	**P**	**09 34 45.3**	**+0.5**
	0.3nm,0.5s,baz=295,slow=4.9,SNR=8.5						
WRA	**Warramunga Arr**	**74.40**	**202**	P	**P**	**09 34 52.7**	**-0.5**
	0.2nm,0.5s,baz=16,slow=5.9,SNR=3.8						
ASAR	**Alice Springs**	**78.10**	**201**	P	**P**	**09 35 14.8**	**+0.9**
	0.2nm,0.5s,baz=8.6,slow=5.7,SNR=4.5						

IDC 19 09:30:43.0±1.7, 4°.09N×126°.66E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.6/24, mbtmp3.9/5, MS3.4/2, Ms1 3.4/2, ms1mx2.6/33, Error ellipse: s-maj=105.4km s-min=22.4km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**11.38**	**217**	LR	LR	09 38 00.7	
	comp=Z,132nm,21.0s,baz=89,slow=38						
FITZ	**Fitzroy Crossi**	**22.07**	**183**	P	P	09 35 40.9	+1.2
	2.1nm,0.5s,baz=1.5,slow=11,SNR=7.0						
WRA	**Warramunga Arr**	**25.05**	**163**	P	P	09 36 07.9	-1.3
	2.8nm,0.6s,baz=339,slow=11,SNR=17						
ASAR	**Alice Springs**	**28.48**	**166**	P	P	09 36 40.4	+0.3
	0.3nm,0.4s,baz=346,slow=7.8,SNR=6.8						
STKA	**Stephens Creek**	**38.49**	**159**	P	P	09 38 07.0	0.0
	2.5nm,0.8s,baz=341,slow=10,SNR=4.8						
SONM	**Songino Array**	**46.94**	**341**	LR	LR	09 59 05.3	
	comp=Z,63nm,19.1s,baz=339,slow=36						
MKAR	**Makanchi Array**	**57.22**	**325**	P	P	09 40 32.2	+0.1
	0.5nm,0.4s,baz=122,slow=8.7,SNR=10.0						

IDC 19 09:55:40.0±1.3, 4°.39N×127°.27E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/23, mbtmp3.7/6, MS3.8/3, Ms1 3.8/3, ms1mx2.9/35, Error ellipse: s-maj=97.0km s-min=17.9km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.41**	**184**	P	P	10 00 41.4	+1.0
	1.2nm,0.7s,baz=5.8,slow=8.6,SNR=5.7						
WRA	**Warramunga Arr**	**25.16**	**164**	P	P	10 01 07.4	+0.2
	1.4nm,0.6s,baz=343,slow=11,SNR=15						
ASAR	**Alice Springs**	**28.63**	**167**	P	P	10 01 36.9	-1.6
	0.3nm,0.6s,baz=350,slow=8.4,SNR=5.8						
STKA	**Stephens Creek**	**38.56**	**160**	P	P	10 03 04.9	+0.3
	1.0nm,0.5s,baz=340,slow=12,SNR=4.2						
MKAR	**Makanchi Array**	**57.33**	**325**	P	P	10 05 30.2	+0.3
	0.8nm,0.5s,baz=118,slow=8.0,SNR=17						
ZALV	**Zalesovo Beam**	**60.25**	**333**	P	P	10 05 49.6	-0.4
	0.5nm,0.4s,baz=108,slow=9.3,SNR=3.1						
FX1	**Attu Island--F**	**61.24**	**30**	LR	LR	10 29 11.6	
	comp=Z,52nm,20.4s,baz=162,slow=33						
PPT	**Papeete**	**84.81**	**108**	LR	LR	10 39 44.8	
	comp=Z,130nm,18.2s,baz=156,slow=31						
BRTR	**Keskin Array B**	**90.02**	**310**	LR	LR	10 57 56.2	
	comp=Z,25nm,20.5s,baz=285,slow=42						

*BJI **19** 09:58:25.3, 3°.79N×126°.86E, h37km, mB4.9/22, mb4.6/34, Ms4.3/17, Ms7 4.0/19*
*IDC **19** 09:58:25.7±3.2, 4°.12N×126°.68E, h12km±19km, mb4.3/23, mb1 4.4/23, mb1mx4.4/27, mbtmp4.3/23, MS3.6/4, Ms1 3.6/4, ms1mx3.0/34, Error ellipse: s-maj=23.7km s-min=12.0km az=79.0*
*ISCJB **19** 09:58:27.9±0.2, 4°.22N±0°.03×126°.89E±0°.05, h36km, mb4.5/53, MS3.9/12, Error ellipse: s-maj=7.1km s-min=4.0km az=160.8*
*NEIC **19** 09:58:29.3±0.3, 4°.20N×126°.88E, h35km, mb4.6/23, Error ellipse: s-maj=12.8km s-min=7.4km az=77.0*
*AUST **19** 09:58:31.8±0.8, 4°.20N×126°.95E, h66km, Error ellipse: s-maj=1.4km s-min=1.0km az=252.0*
*DJA **19** 09:58:32.6±0.5, 4°N±5°×12°.7E±°, h63km±12km, M4.8/9, mb4.8/7, mB5.4/4, MLv4.8/9, Mw(mB)4.8/4*
ISC 19 09:58:29.7±0.3, 4°.19N±0°.04×126°.88E±0°.07, h36km, n138, σ1s63/180, mb4.5/52, MS3.8/13, 3C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**2.50**	**159**	P	**Pn**	**09 59 09.3**	**+1.4**
GSPH	**General Santos**	**2.70**	**315**⇑	*e*P	**Pn**	**09 59 11.3**	**+0.7**
MATI	**Mati**	**2.81**	**347**	*e*P	Pn	09 59 17.8	+5.7
DAV	**Davao City (W)**	**3.14**	**336**	*e*Pn	**Pn**	**09 59 19.9**	**+3.1**
DAV				Sn	Sn	10 00 09.9	+17
DAV	**Davao City (W)**	**3.14**	**336**	P	Pn	09 59 22.8	+6.1
**DA

ASAR	Alice Springs	28.52	166	P		P	10 04 21.6	-0.4
	comp=Z,1.1nm,0.5s,baz=354,slow=8.1,SNR=28							
NJ2	Nanjing	28.73	346	*e*P		P	10 04 23.9	+0.2
NJ2				pP		pP	10 04 33.8	-0.2
NJ2				sP		sP	10 04 37.4	-1.0
NJ2				PP		PnPn	10 05 16.3	+1.0
NJ2				S		S	10 09 10.0	-0.6
NJ2				sS		sS	10 09 26.0	-1.7
NJ2				pmax	pmax			
	comp=Z,10.0nm,1.0s							
NJ2				pmax	pmax			
	comp=Z,100nm,8.4s							
NJ2				LR	LR			
	comp=N,140nm,11.0s							
NJ2				LR	LR			
	comp=E,170nm,10.5s							
NJ2				LR	LR			
	comp=Z,180nm,10.1s							
JNU	Nakatsue	29.03	7	P		P	10 04 26.3	-0.2
JNU	Nakatsue	29.03	7	P		P	10 04 26.3	-0.2
	comp=Z,5.6nm,0.9s,baz=210,slow=1.0,SNR=4.1							
GYA	Guiyang	29.41	321	*e*P		P	10 04 31.8	+1.8
GYA				pmax	pmax			
	comp=Z,10.0nm,0.8s							
CMAR	Chiang Mai Arr	30.78	300	P		P	10 04 41.3	-0.8
CMAR	Chiang Mai Arr	30.78	300	P		P	10 04 41.3	-0.8
	comp=Z,3.8nm,0.8s,baz=117,slow=7.3,SNR=19							
CMAR				LR	LR	10 17 27.0		
	comp=Z,44nm,19.3s,baz=170,slow=37							
CHTO	Chiang Mai	30.92	300	*e*P		P	10 04 43.1	-0.3
	comp=Z,8.0nm,0.6s							
MEEK	Meekatharra	31.67	194	P		P	10 04 48.8	-1.1
	baz=32,SNR=8.5							
KSAR	Wonju Array Be	33.11	1	P		P	10 05 02.9	+0.6
KSRS	Korea Array	33.12	2	P		P	10 05 02.9	+0.5
	comp=Z,3.7nm,0.8s,baz=180,slow=10.0,SNR=21							
MJAR	Matsushiro Arr	33.84	16	P		P	10 05 07.5	-1.3
MJAR	Matsushiro Arr	33.84	16	P		P	10 05 07.5	-1.3
	comp=Z,1.6nm,0.8s,baz=181,slow=10.0,SNR=5.1							
XAN	Xi'an	34.08	333	P		P	10 05 09.3	-1.6
XAN				pP		pP	10 05 16.9	-4.4
XAN				pmax	pmax			
	comp=Z,5.0nm,0.8s							
XAN				LR	LR			
	comp=N,83nm,15.4s							
XAN				LR	LR			
	comp=Z,36nm,18.4s							
CD2	Chengdu	34.37	323	P		P	10 05 14.8	+1.3
CD2				pP		pP	10 05 24.8	+1.0
CD2				sP		sP	10 05 29.0	+0.8
CD2				PP		PP	10 06 31.3	-0.5
CD2				S		S	10 10 39.9	+0.9
CD2				sS		sS	10 10 56.6	+0.5
CD2				PcS		PcS	10 11 30.8	-4.6
CD2				SS		SnSn	10 12 52.0	+1.2
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
CD2				pmax	pmax			
	comp=Z,120nm,5.4s							
CD2				LR	LR			
	comp=N,190nm,19.4s							
CD2				LR	LR			
	comp=Z,200nm,10.8s							
FORT	Forrest	34.79	178	*e*P		P	10 05 16.6	-0.3
	comp=Z,19nm,0.8s							
BLDU	Ballidu	35.95	195	P		P	10 05 27.6	+0.6
	baz=36,SNR=6.4							
BJI	Beijing	36.98	346	P		P	10 05 36.8	+1.2
BJI				pmax	pmax			
	comp=Z,38nm,1.1s							
BJI				LR	LR			
	comp=N,130nm,11.7s							
BJI				LR	LR			
	comp=E,150nm,13.8s							
BJI				LR	LR			
	comp=Z,42nm,19.1s							
EIDS	Eidsvold	37.62	143	*e*P		P	10 05 41.7	+0.4
	comp=Z,4.7nm,0.8s							
BBOO	Buckleboo	37.81	167	P		P	10 05 42.5	-0.2
	baz=38,SNR=9.6							
LZH	Lanzhou	38.19	329	*e*P		P	10 05 46.0	-0.2
LZH				pP		pP	10 05 56.5	-0.1
LZH				sP		sP	10 06 00.6	-0.4
LZH				*e*PP		PnPn	10 07 18.3	+2.6
LZH				pmax	pmax			
	comp=Z,21nm,1.3s							
LZH				pmax	pmax			
	comp=Z,54nm,5.1s							
LZH				LR	LR			
	comp=N,480nm,12.5s							
LZH				LR	LR			
	comp=E,460nm,13.3s							
LZH				LR	LR			
	comp=Z,610nm,17.0s							
STKA	Stephens Creek	38.50	160	*e*P		P	10 05 49.0	+0.3
	comp=Z,2.0nm,0.8s							
STKA	Stephens Creek	38.50	160	P		P	10 05 48.5	-0.1
	comp=Z,7.9nm,0.7s,baz=330,slow=8.1,SNR=16							
STKA				LR	LR	10 23 34.0		
	comp=Z,101nm,19.0s,baz=210,slow=39							
STKA	Stephens Creek	38.50	160	P		P	10 05 48.7	+0.1
	baz=39,SNR=15							
HHC	Hu-ho-hao-te	39.02	341	*e*P		P	10 05 53.8	+0.8
HHC				PP		PnPn	10 07 28.0	+2.5
HHC				PcP		PcP	10 08 03.9	+1.1
HHC				ScP		ScP	10 11 48.4	-0.2
HHC				S		S	10 11 51.3	+1.6
HHC				PcS		PcS	10 11 52.3	-0.1
HHC				sS		sS	10 12 07.6	+0.6
HHC				SS		SS	10 14 36.3	-6.4
HHC				ScS		ScS	10 15 58.3	-1.5
HHC				pmax	pmax			
	comp=Z,43nm,0.6s							
HHC				pmax	pmax			
	comp=Z,130nm,5.8s							
HHC				LR	LR			
	comp=N,270nm,14.8s							
HHC				LR	LR			
	comp=E,620nm,15.1s							
HHC				LR	LR			
	comp=Z,190nm,15.4s							
CN2	Changchun	39.47	358	*e*P		P	10 05 58.6	+2.0
CN2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
USRK	Ussuriysk Arra	40.10	6	P		P	10 06 02.7	+0.9
	comp=Z,1.1nm,0.6s,baz=222,slow=9.2,SNR=4.3							
MDJ	Mudanjiang	40.34	3	P		P	10 06 04.1	+0.4
MDJ				pmax	pmax			
	comp=Z,5.0nm,1.0s							
MDJ				pmax	pmax			
	comp=Z,31nm,5.2s							
ARMA	Armidale	41.76	147	P		P	10 06 17.3	+1.5
	baz=42,SNR=5.5							
ASAJ	Asahikawa	42.11	17	P		P	10 06 19.7	+1.3
ASAJ	Asahikawa	42.11	17	P		P	10 06 19.7	+1.3
	comp=Z,3.9nm,0.8s,baz=237,slow=24,SNR=3.8							
GTA	Gaotai	42.79	329	*e*P		P	10 06 23.3	-0.8
GTA				pP		pP	10 06 33.1	-1.6
GTA				sP		sP	10 06 37.0	-2.0
GTA				PcP		PcP	10 08 16.6	+1.5
GTA				S		S	10 12 45.9	0.0
GTA				sS		sS	10 13 02.3	-1.0
GTA				SS		SS	10 15 51.6	-6.2
GTA				pmax	pmax			
	comp=Z,5.0nm,0.9s							
GTA				pmax	pmax			
	comp=Z,82nm,5.0s							
GTA				LR	LR			
	comp=N,120nm,18.0s							
GTA				LR	LR			
	comp=E,100nm,17.1s							
GTA				LR	LR			
	comp=Z,160nm,19.5s							
TAPN	Taplejung	43.87	306	*e*P		P	10 06 31.9	-1.4
ODAN	Odare	43.93	305	*e*P		P	10 06 32.2	-1.5
	comp=Z,34nm,0.6s							
RAMN	Ramite	44.61	305	*e*P		P	10 06 38.0	-1.1
	comp=Z,22nm,0.6s							
GUN	Gumba	45.58	306	*e*P		P	10 06 45.2	-1.8
	comp=Z,34nm,0.6s							
KKN	Kakani	46.02	305	*e*P		P	10 06 48.6	-1.7
	comp=Z,14nm,0.5s							
ULN	Ulaanbaatar	46.73	342	*e*P		P	10 06 54.8	-0.7
	comp=Z,5.1nm,1.0s							
SONM	Songino Array	46.92	341	P		P	10 06 57.2	+0.3
SONM				PcP		PcP	10 08 29.6	+0.5
SONM	Songino Array	46.92	341	P		P	10 06 57.2	+0.3
	comp=Z,1.5nm,0.4s,baz=159,slow=8.7,SNR=15							
SONM				PcP		PcP	10 08 29.6	+0.5
	comp=Z,1.5nm,0.7s,baz=168,slow=3.5,SNR=5.7							
KOLN	Koldanda	47.39	304	*e*P		P	10 06 59.8	-1.2
	comp=Z,43nm,0.5s							
DANN	Dangsing	47.48	305	*e*P		P	10 07 00.3	-1.4
	comp=Z,54nm,0.5s							
PYUN	Piuthan	48.01	305	*e*P		P	10 07 04.1	-1.7
	comp=Z,66nm,0.8s							
WMQ	Urumqi	52.44	325	P		P	10 07 41.5	+2.6
WMQ				pP		pP	10 07 51.5	+1.8
WMQ				sP		sP	10 07 55.5	+1.6
WMQ				PcP		PcP	10 08 51.5	+2.2
WMQ				PP		PP	10 09 41.5	+3.5
WMQ				ScP		ScP	10 12 44.5	+0.5
WMQ				S		S	10 15 04.5	+1.7
WMQ				ScS		ScS	10 17 25.5	-0.7
WMQ				SS		SS	10 18 41.5	+0.4
WMQ				pmax	pmax			
	comp=Z,24nm,1.0s							
WMQ				pmax	pmax			
	comp=Z,90nm,5.0s							
WMQ				LR	LR			
	comp=N,820nm,18.0s							
WMQ				LR	LR			
	comp=E,760nm,18.0s							
WMQ				LR	LR			
	comp=Z,670nm,18.0s							
PETK	Petropavlovsk-	54.95	22	P		P	10 07 57.6	+0.6
PETK	Petropavlovsk-	54.95	22	P		P	10 07 57.6	+0.6
	comp=Z,1.6nm,0.6s,baz=196,slow=6.9,SNR=10							
MK31	Makanchi Array	57.27	325	*e*P		P	10 08 12.5	-1.2
MKAR	Makanchi Array	57.27	325	*e*P		P	10 08 12.7	-1.0
MKAR				PcP		PcP	10 09 07.0	-0.7
MKAR				ScP		ScP	10 13 07.5	+2.5
MKAR	Makanchi Array	57.27	325	P		P	10 08 12.8	-1.0
	comp=Z,5.8nm,0.6s,baz=125,slow=8.3,SNR=83							
MKAR				PcP		PcP	10 09 07.0	-0.7
	comp=Z,2.5nm,0.6s,baz=121,slow=4.0,SNR=5.3							
MKAR				ScP		ScP	10 13 07.5	+2.5
	comp=Z,0.3nm,0.7s,baz=113,slow=3.3,SNR=3.6							
MKAR				LR	LR	10 36 02.2		
	comp=Z,79nm,18.8s,baz=158,slow=39							
KSH	Kashi	57.83	315	*e*P		P	10 08 20.4	+2.4
KSH				pP		pP	10 08 31.4	+2.5
KSH				sP		sP	10 08 35.0	+1.9
KSH				PcP		PcP	10 09 12.6	+2.3
KSH				PP		PP	10 10 31.9	+5.5
KSH				ScP		ScP	10 13 07.9	+0.1
KSH				PcS		PcS	10 13 12.1	+0.4
KSH				S		S	10 16 17.1	+1.9
KSH				sS		sS	10 16 33.9	+0.7
KSH				ScS		ScS	10 18 04.0	-1.1
KSH				SS		SS	10 20 10.9	+4.5
KSH				pmax	pmax			
	comp=Z,1.0nm,0.1s							
KSH				pmax	pmax			
	comp=Z,80nm,3.7s							
KSH				LR	LR			
	comp=Z,260nm,5.3s							
TKM2	Tokmak 2	59.51	318	*e*P		P	10 08 27.8	-1.9
	comp=Z,2.0nm,0.6s							
ZAA0	Zalesovo Array	60.25	333	*e*P		P	10 08 31.6	-2.7
ZALV	Zalesovo Beam	60.25	333	P		P	10 08 32.8	-1.5
ZALV	Zalesovo Beam	60.25	333	P		P	10 08 32.8	-1.5
	comp=Z,2.0nm,0.4s,baz=116,slow=6.8,SNR=14							
ZALV				LR	LR	10 36 40.1		
	comp=Z,39nm,19.7s,baz=59,slow=38							
EKS2	Erkin-Say	60.62	317	*e*P		P	10 08 37.8	+0.5
	comp=Z,18nm,1.8s							
KURK	Kurchatov	61.44	327	*e*P		P	10 08 41.5	-1.0
	comp=Z,15nm,0.6s							
KKAR	Karatay Array	63.00	317	*e*P		P	10 08 52.1	-1.0
BRVK	Borovoye	67.09	327	*e*P		P	10 09 18.4	-1.1
	comp=Z,11nm,0.7s							
ABKAR	Akbulak array	71.89	321	*e*P		P	10 09 48.0	-1.2
GAMB	Gambell	73.92	24	*e*P		P	10 09 58.5	-2.4
	comp=Z,3.2nm,1.0s							
KDAK	Kodiak Island	81.42	32	P		P	10 10 43.1	+0.3
KDAK	Kodiak Island	81.42	32	P		P	10 10 43.1	+0.3
	comp=Z,7.3nm,0.7s,baz=221,slow=14,SNR=6.9							
TRF	Thorofare Moun	83.07	27	*e*P		P	10 10 51.9	+0.3
	comp=Z,7.8nm,1.0s							
COLD	Coldfoot	83.42	23	*e*P		P	10 10 54.9	+1.8
	comp=Z,8.0nm,1.0s							
PMR	Palmer	83.47	29	*e*P		P	10 10 53.4	0.0
	comp=Z,8.4nm,0.8s							
MCK	McKinley	83.69	26	*e*P		P	10 10 55.0	+0.4
	comp=Z,76nm,2.2s							
COLA	College	84.22	25	*e*P		P	10 10 56.2	-1.0
	comp=Z,2.6nm,0.8s							
ILAR	Eielson Array	84.63	25	P		P	10 10 58.9	-0.4
ILAR	Eielson Array	84.63	25	P		P	10 10 58.9	-0.4
	comp=Z,1.3nm,0.8s,baz=226,slow=5.2,SNR=18							
INK	Inuvik	89.69	22	P		P	10 11 23.3	-0.4
INK	Inuvik	89.69	22	P		P	10 11 23.3	-0.4
	comp=Z,1.3nm,1.0s,baz=299,slow=4.9,SNR=5.3							
BR131	Keskin Array S	89.85	310	*e*P		P	10 11 24.6	-0.7
	comp=Z,0.5nm,0.4s							
BRTR	Keskin Array B	89.85	310	P		P	10 11 24.1	-1.3
BRTR	Keskin Array B	89.85	310	P		P	10 11 24.1	-1.3
	comp=Z,0.8nm,0.5s,baz=130,slow=4.6,SNR=6.7							
ARCES	ARCESS Array B	90.08	340	P		P	10 11 24.6	-1.0
ARCES	ARCESS Array B	90.08	340	P		P	10 11 24.6	-1.0
	comp=Z,4.1nm,0.7s,baz=83,slow=6.5,SNR=11							
FINES	FINESS Array B	91.50	332	P		P	10 11 31.7	-0.6
FINES	FINESS Array B	91.50	332	P		P	10 11 31.7	-0.6
	comp=Z,3.1nm,0.7s,baz=71,slow=5.3,SNR=12							
AKASG	Malin Array Be	91.64	321	P		P	10 11 31.3	-1.9
AKASG	Malin Array Be	91.64	321	P		P	10 11 31.3	-1.9
	comp=Z,2.0nm,0.6s,baz=70,slow=4.5,SNR=9.5							
BUR08	Bucovina Ar. S	94.77	318	*e*P		P	10 11 47.4	-0.5
NOA	NORSAR Array B	98.45	334	P		P	10 12 02.0	-2.1
NOA	NORSAR Array B	98.45	334	P		P	10 12 02.0	-2.1
	comp=Z,0.9nm,0.7s,baz=67,slow=4.5,SNR=4.6							
YKA	Yellowknife Ar	99.02	24	P		Pdif	10 12 05.1	-1.5
YKA	Yellowknife Ar	99.02	24	P		Pdif	10 12 05.1	-1.5
	comp=Z,0.2nm,0.6s,baz=297,slow=4.3,SNR=8.1							
GERES	GERESS Array B	101.82	322	P		Pdif	10 12 18.6	-1.0
GERES	GERESS Array B	101.82	322	P		Pdif	10 12 18.6	-1.0
	comp=Z,0.5nm,0.5s,baz=32,slow=7.8,SNR=5.0							
SCHQ	Schefferville	120.09	9	PKP		PKPdf	10 17 17.4	+0.7
SCHQ	Schefferville	120.09	9	PKP		PKPdf	10 17 17.4	+0.7
	comp=Z,2.2nm,0.6s,baz=346,slow=2.3,SNR=6.4							
TXAR	Lajitas Array	121.20	52	PKP		PKPdf	10 17 20.1	+0.4
TXAR	Lajitas Array	121.20	52	PKP		PKPdf	10 17 20.1	+0.4
	comp=Z,0.3nm,0.8s,baz=34,slow=1.5,SNR=3.8							
TORD	Torodi Ar. Bea	122.92	288	PKP		PKPdf	10 17 22.8	-0.4
TORD	Torodi Ar. Bea	122.92	288	PKP		PKPdf	10 17 22.8	-0.4
	comp=Z,0.9nm,0.8s,baz=79,slow=1.5,SNR=5.6							
JTS	JuntasAbangare	145.19	65	PKPbc		PKPdf	10 18 06.2	+1.6
JTS	JuntasAbangare	145.19	65	PKPbc		PKPdf	10 18 06.2	+1.6
	comp=Z,2.4nm,0.6s,baz=333,slow=6.8,SNR=4.4							

MEX 19 10:12:28.3±0.5, 16.63N×99.83W, h3km±5km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
ACX	Acapulco	0.24	352	*i*	P		Pg	10 12 33.0	+0.1
ACX				*i*	S		Sg	10 12 36.5	+0.4
CAIG	El Cayaco	0.59	314	*e*	P		Pg	10 12 39.1	-0.6
CAIG				*i*	S		Sg	10 12 48.0	+0.6
PNIG	Pinotepa	1.65	98	*e*	P		Pn	10 12 54.1	-4.0
PNIG				*i*	S		Sn	10 13 15.0	-5.0
ARIG	Puente Sto Nin	1.71	343	*i*	P		Pn	10 12 56.2	-2.9
ARIG				*i*	S		Sn	10 13 16.4	-5.1

IDC 19 10:23:29.4±1.5, 4.35N×127.36E, h0km, mb3.8/7, mb1 3.8/7, mb1mx3.6/23, mbtmp3.8/7, MS3.1/1, Ms1 3.1/1, ms1mx2.3/45, Error ellipse: s-maj=194.1km s-min=16.7km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
WRA	Warramunga Arr	25.09	164	P		P		10 28 55.3	-0.7
	1.6nm,0.8s,baz=344,slow=11,SNR=14								
ASAR	Alice Springs	28.57	167	P		P		10 29 26.8	-0.5
	0.2nm,0.5s,baz=343,slow=6.6,SNR=3.8								
CTA	Charters Tower	30.57	143	LR		LR		10 41 28.0	
	comp=Z,37nm,19.0s,baz=5.8,slow=35								
STKA	Stephens Creek	38.49	160	P		P		10 30 54.7	+1.3
	2.1nm,0.8s,baz=340,slow=6.1,SNR=3.8								
SONM	Songino Array	46.92	341	P		P		10 32 01.3	-0.6
	0.2nm,0.5s,baz=174,slow=6.2,SNR=3.0								
MKAR	Makanchi Array	57.41	325	P		P		10 33 19.9	0.0
	1.1nm,0.5s,baz=119,slow=8.1,SNR=14								
ZALV	Zalesovo Beam	60.33	333	P		P		10 33 39.7	-0.2
	0.6nm,0.3s,baz=123,slow=7.3,SNR=3.7								
BVAR	Borovoye Array	67.15	327	P		P		10 34 25.5	+0.5
	1.4nm,0.8s,baz=133,slow=8.3,SNR=7.5								

*BJI **19** 10:26:17.3, 23.70S×179.80W, h508km, mB4.6/10, mb4.5/11*
*ISCJB **19** 10:26:18.3±0.7, 23.79S±0.04×179.93W±0.05, h518km±9km, mb4.3/42, Error ellipse: s-maj=8.0km s-min=5.5km az=20.5*
*NEIC **19** 10:26:18.7±0.8, 23.80S×179.86W, h518km±9km, mb4.6/23, Error ellipse: s-maj=9.4km s-min=7.7km az=125.0*
*IDC **19** 10:26:21.6±1.6, 23.75S×179.99W, h545km±16km, mb3.8/20, mb1 3.9/21, mb1mx3.8/25, mbtmp3.8/21, Error ellipse: s-maj=12.6km s-min=11.3km az=162.0*
*AUST **19** 10:26:22.6±0.0, 23.64S×179.78W, h571km, Error ellipse: s-maj=1.5km s-min=1.1km az=282.0*

ISC 19 10:26:18.1±0.4, 23.86S±0.06×179.86W±0.06, h511km±3km, h511km; pP-P, n169, σ1931/213, mb4.4/42, 14C-8D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
MSVF	Nonsavu	6.40	342	*e*Pn		P		10 27 58.8	-0.1
NIUE	Niue	10.40	65	P		P		10 28 39.3	-0.4
	baz=10,SNR=11								
NIUE				S		S		10 30 37.1	+0.8
	baz=10,SNR=11								
AFI	Afiamalu	12.50	39	*e*Pn		P		10 28 57.7	-4.4
AFI				*e*Sn		S		10 31 06.5	-11
AFI	Afiamalu	12.50	39	P		P		10 28 57.4	-4.7
	2.0nm,0.3s,baz=205,slow=18,SNR=4.0								
AFI				S		S		10 31 04.8	-12
	5.0nm,0.3s,baz=54,slow=21,SNR=6.2								
DZM	Mont Dzumac	12.75	275	P		P		10 29 08.3	+3.6
DZM	Mont Dzumac	12.75	275	P		P		10 29 08.3	+3.6
	0.6nm,0.3s,baz=67,slow=16,SNR=8.6								
URZ	Urewera	14.59	190	P		P		10 29 22.1	-1.5
URZ				*e*Pn		P		10 29 25.3	+1.8
URZ				S		S		10 31 54.4	-2.1
URZ	Urewera	14.59	190	*e*PN		P		10 29 21.9	-1.6
URZ	Urewera	14.59	190	P		P		10 29 22.1	-1.5
	3.4nm,0.3s,baz=326,slow=3.7,SNR=30								
URZ				S		S		10 31 54.4	-2.1
	1.5nm,0.3s,baz=109,slow=23,SNR=10								
MWZ	Matawai	14.60	188	PN		P		10 29 25.9	+2.1
BKZ	Black Stump Fm	15.57	191	PN		P		10 29 32.3	-1.7
FWVZ	Far West T-bar	15.84	193	PN		P		10 29 37.6	+0.7
TRVZ	Turoa	15.88	193	*e*PN		P		10 29 37.9	+0.6
BHHZ	Black Hill Sta	15.96	192	PN		P		10 29 37.5	-0.5
BHHZ				SN		S		10 32 20.9	-1.7
BFZ	Birch Farm	17.09	190	PN		P		10 29 48.9	-0.3
BFZ				SN		S		10 32 40.0	-2.0
MRZ	Mangatainoka R	17.19	192	PN		P		10 29 48.5	-1.7
MRZ				SN		S		10 32 40.9	-2.7
SNZO	South Karori	17.98	193	*e*P		P		10 29 57.9	+0.4
	41nm,1.0s								
QRZ	Quartz Range	18.09	199	PN		P		10 30 00.1	+1.6
NNZ	Nelson	18.21	197	PN		P		10 30 00.1	+0.5
THZ	Tophouse	18.85	197	PN		P		10 30 06.1	+0.6
DSZ	Denniston Nort	19.14	199	PN		P		10 30 09.4	+1.2
KHZ	Kahutara	19.30	195	*e*P		P		10 30 10.4	+0.8
	16nm,0.5s								
KHZ	Kahutara	19.30	195	PN		P		10 30 08.9	-0.7
LTZ	Lake Taylor	19.97	197	*e*PN		P		10 30 15.1	-0.5
RPZ	Rata Peaks	21.17	198	*e*P		P		10 30 28.1	+1.6
	22nm,0.8s								
RPZ	Rata Peaks	21.17	198	P		P		10 30 28.9	+2.4
	12nm,0.4s,baz=29,slow=4.4,SNR=22								
ARMA	Armidale	26.16	249	*e*P		P		10 31 13.1	+1.8
	13nm,0.6s								
ARMA	Armidale	26.16	249	P		P		10 31 13.8	+2.5
	baz=26,SNR=7.3								
EIDS	Eidsvold	26.44	261	*e*P		P		10 31 15.1	+1.4
	40nm,1.3s								
EIDS	Eidsvold	26.44	261	P		P		10 31 15.1	+1.4
	baz=26,SNR=8.9								
MGCD	Mangrove Creek	27.08	243	P		P		10 31 22.1	+2.8
	baz=27,SNR=7.3								
RMQ	Roma	28.49	258	P		P		10 31 34.0	+2.3
	baz=29,SNR=13								
CNB	Canberra Magne	28.98	240	P		P		10 31 38.6	+2.6
	baz=29,SNR=6.9								
YNG	Young	29.52	242	P		P		10 31 42.9	+2.2
	baz=30,SNR=6.3								
CMSA	Cobar Meteorol	31.35	248	P		P		10 31 57.8	+1.4
	baz=32,SNR=15								
CTA	Charters Tower	31.61	270	P		P		10 31 59.9	+1.1
CTA	Charters Tower	31.61	270	P		P		10 31 59.9	+1.1
	41nm,0.4s,baz=96,slow=11,SNR=149								
CTAO	Charters Tower	31.61	270	*e*P		P		10 31 59.9	+1.1
	43nm,0.5s								
QLP	Quilpie	32.53	258	P		P		10 32 07.7	+1.1
	baz=33,SNR=14								
TOO	Toolangi	32.58	237	P		P		10 32 08.6	+1.8
	baz=33,SNR=28								
TAU	Tasmania Unive	33.06	227	*e*P		P		10 32 12.4	+1.6
	17nm,0.6s								
PMG	Port Moresby	34.60	289	P		P		10 32 24.1	-0.1
PMG	Port Moresby	34.60	289	P		P		10 32 24.1	-0.1
	30nm,0.8s,baz=137,slow=11,SNR=7.4								
STKA	Stephens Creek	34.86	248	*e*P		P		10 32 27.4	+1.3
	2.7nm,0.9s								
STKA	Stephens Creek	34.86	248	P		P		10 32 27.4	+1.3
	8.2nm,0.6s,baz=87,slow=8.8,SNR=22								
STKA	Stephens Creek	34.86	248	P		P		10 32 27.4	+1.3
	baz=35,SNR=8.6								
ARPS	Mount Arapiles	35.25	240	P		P		10 32 30.8	+1.5
	baz=35,SNR=7.3								
COEN	Coen	36.24	279	*e*P		P		10 32 37.9	+0.1
	28nm,0.5s								
COEN	Coen	36.24	279	P		P

MEEK	**Meekatharra**	**55.25**	**253**	P		**P**	**10 35 02.6 -0.3**
	baz=55,SNR=7.3						
MBWA	**Marble Bar**	**55.51**	**260**	*e*P		**P**	**10 35 04.2 -0.5**
	13nm,0.7s						
BLDU	**Ballidu**	**56.16**	**248**	P		**P**	**10 35 09.1 -0.1**
	baz=56,SNR=18						
MORW	**Morawa**	**57.01**	**250**	P		**P**	**10 35 15.2 +0.2**
	baz=57,SNR=14						
CASY	**Casey**	**60.20**	**206**	*e*P		**P**	**10 35 36.3 +0.5**
	11nm,0.8s						
KAPI	**Kappang**	**60.95**	**278**	P		**P**	**10 35 40.4 -1.3**
KAPI	**Kappang**	**60.95**	**278**	P		**P**	**10 35 40.4 -1.3**
	8.6nm,0.8s,baz=101,slow=11,SNR=2.5						
QSPA	**South Pole Qui**	**66.22**	**180**	*e*P		**P**	**10 36 16.8 +2.0**
	13nm,1.1s						
QSPA	**South Pole Qui**	**66.22**	**180**	P		**P**	**10 36 16.7 +2.0**
	12nm,1.0s,baz=36,slow=1.7,SNR=28						
UGM	**Wanagama**	**68.23**	**271**	P		**P**	**10 36 27.8 -0.1**
	baz=68,SNR=3.3						
MJAR	**Matsushiro Arr**	**71.94**	**326**	P		**P**	**10 36 48.7 -0.7**
MJAR	**Matsushiro Arr**	**71.94**	**326**	P		**P**	**10 36 48.7 -0.7**
	2.2nm,0.8s,baz=161,slow=5.6,SNR=7.3						
ASAJ	**Asahikawa**	**75.89**	**333**	P		**P**	**10 37 12.3 +0.7**
ASAJ	**Asahikawa**	**75.89**	**333**	P		**P**	**10 37 12.3 +0.7**
	3.1nm,0.7s,baz=244,slow=23,SNR=4.7						
MAW	**Mawson**	**77.83**	**200**	P		**P**	**10 37 23.3 +1.3**
MAW	**Mawson**	**77.83**	**200**	P		**P**	**10 37 23.3 +1.3**
	8.1nm,0.8s,baz=174,slow=5.6,SNR=7.0						
KSRS	**Korea Array**	**78.30**	**320**	P		**P**	**10 37 25.2 +0.3**
	1.5nm,0.7s,baz=138,slow=5.6,SNR=8.7						
KSAR	**Wonju Array Be**	**78.32**	**320**	P		**P**	**10 37 25.2 +0.2**
PETK	**Petropavlovsk-**	**79.09**	**346**	P		**P**	**10 37 28.3 -0.5**
PETK	**Petropavlovsk-**	**79.09**	**346**	P		**P**	**10 37 28.3 -0.5**
	4.1nm,0.8s,baz=131,slow=8.1,SNR=9.4						
USRK	**Ussuriysk Arra**	**80.80**	**327**	P		**P**	**10 37 38.4 +0.5**
	1.4nm,0.5s,baz=144,slow=4.7,SNR=5.0						
IPM	**Ipoh**	**81.89**	**279**	*e*P		**P**	**10 37 44.1 -0.2**
	8.2nm,0.5s						
MDJ	**Mudanjiang**	**82.31**	**326**	P		**P**	**10 37 46.3 +0.6**
MDJ				pP		**pP**	**10 39 34.9 -2.0**
MDJ				sP		**sP**	**10 40 27.1 -2.1**
MDJ				S		**SKKSac**	**10 47 22.4 +0.2**
MDJ				sS		**sS**	**10 50 34.4 -2.6**
MDJ				SS		**SS**	**10 52 54.8 +0.2**
MDJ				pmax		pmax	
	comp=Z,5.0nm,1.0s						
MDJ				pmax		pmax	
	comp=Z,16nm,3.9s						
KULM	**Kulim**	**82.56**	**279**	*e*P		**P**	**10 37 47.4 -0.3**
	comp=Z,33nm,1.5s						
ISA	**Isabella**	**82.90**	**46**	*e*P		**P**	**10 37 49.2 +0.1**
	comp=Z,3.6nm,0.9s						
CMB	**Columbia Colle**	**83.08**	**43**	*e*P		**P**	**10 37 49.9 0.0**
	comp=Z,3.4nm,1.0s						
PSI	**Prapat**	**83.10**	**276**	P		**P**	**10 37 49.0 -1.6**
PSI	**Prapat**	**83.10**	**276**	P		**P**	**10 37 49.0 -1.6**
	comp=Z,4.6nm,0.8s,baz=159,slow=3.0,SNR=5.6						
CN2	**Changchun**	**83.94**	**324**	*e*P		**P**	**10 37 53.3 -0.6**
CN2				*es*P		**sP**	**10 40 35.8 -1.9**
CN2				*e*S		**SKSac**	**10 47 27.1 -0.7**
CN2				pmax		pmax	
	comp=Z,10.0nm,0.6s						
CN2				pmax		pmax	
	comp=Z,200nm,4.0s						
NVAR	**Mina Array Bea**	**84.63**	**44**	P		**P**	**10 37 57.7 -0.1**
NVAR	**Mina Array Bea**	**84.63**	**44**	P		**P**	**10 37 57.7 -0.1**
	comp=Z,0.8nm,0.8s,baz=224,slow=7.8,SNR=6.9						
TUC	**Tucson**	**86.39**	**52**	*e*P		**P**	**10 38 07.8 +1.6**
	comp=Z,0.6nm,0.9s						
GYA	**Guiyang**	**86.84**	**301**	*e*P		**P**	**10 38 09.0 +0.5**
GYA				pP		**pP**	**10 40 03.8 +2.6**
GYA				sP		**sP**	**10 40 55.0 +1.9**
GYA				PP		**PP**	**10 41 42.3 +1.5**
GYA				SKS		**SKSac**	**10 47 44.8 -2.1**
GYA				S		**S**	**10 48 02.9 -0.9**
GYA				pmax		pmax	
	comp=Z,10.0nm,1.0s						
BJI	**Beijing**	**87.09**	**316**	P		**P**	**10 38 09.8 +0.6**
BJI				pmax		pmax	
	comp=Z,8.0nm,0.5s						
MFID	**Camas Ranch**	**89.05**	**41**	*e*P		**P**	**10 38 18.7 +0.3**
	comp=Z,2.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**89.64**	**290**	P		**P**	**10 38 22.1 +0.6**
CMAR	**Chiang Mai Arr**	**89.64**	**290**	P		**P**	**10 38 22.1 +0.6**
	comp=Z,3.3nm,0.8s,baz=128,slow=3.2,SNR=19						
CHTO	**Chiang Mai**	**89.79**	**291**	*e*P		**P**	**10 38 23.3 +1.0**
	comp=Z,6.1nm,1.3s						
SRU	**San Rafael**	**90.08**	**47**	*e*P		**P**	**10 38 23.4 0.0**
	comp=Z,9.5nm,1.5s						
TXAR	**Lajitas Array**	**90.30**	**58**	P		**P**	**10 38 25.4 +0.9**
TXAR	**Lajitas Array**	**90.30**	**58**	P		**P**	**10 38 25.4 +0.9**
	comp=Z,1.0nm,0.8s,baz=213,slow=7.0,SNR=15						
HHC	**Hu-ho-hao-te**	**90.48**	**315**	*e*P		**P**	**10 38 25.6 +0.5**
HHC				pP		**pP**	**10 40 19.3 +0.6**
HHC				sP		**sP**	**10 41 10.1 -0.2**
HHC				PP		**PP**	**10 42 11.9 +2.7**
HHC				SKS		**SKSac**	**10 48 07.9 +0.4**
HHC				S		**S**	**10 48 35.8 -0.8**
HHC				sS		**sS**	**10 51 57.0 -2.6**
HHC				SS		**SS**	**10 54 56.4 +3.0**
HHC				pmax		pmax	
	comp=Z,30nm,0.7s						
HHC				pmax		pmax	
	comp=Z,240nm,7.0s						
PDAR	**Pinedale Array**	**92.57**	**44**	P		**P**	**10 38 34.8 -0.1**
PDAR	**Pinedale Array**	**92.57**	**44**	P		**P**	**10 38 34.8 -0.1**
	comp=Z,0.5nm,0.8s,baz=269,slow=5.9,SNR=4.4						
LZH	**Lanzhou**	**93.45**	**308**	⇑P		**P**	**10 38 40.0 +1.0**
LZH				pP		**pP**	**10 40 36.3 +3.6**
LZH				sP		**sP**	**10 41 26.5 +2.2**
LZH				PP		**PP**	**10 42 35.8 +3.4**
LZH				pmax		pmax	
	comp=Z,17nm,1.2s						
LZH				pmax		pmax	
	comp=Z,58nm,7.9s						
ZALV	**Zalesovo Beam**	**112.00**	**321**	PKiKP		**PKiKP**	**10 43 53.1 -1.4**
ZALV	**Zalesovo Beam**	**112.00**	**321**	PKiKP		**PKiKP**	**10 43 53.1 -1.4**
	comp=Z,0.4nm,0.4s,baz=163,slow=1.5,SNR=4.4						
MKAR	**Makanchi Array**	**112.22**	**313**	PKiKP		**PKiKP**	**10 43 54.0 -1.3**
MKAR	**Makanchi Array**	**112.22**	**313**	PKiKP		**PKiKP**	**10 43 54.0 -1.3**
	comp=Z,0.6nm,0.6s,baz=171,slow=0.7,SNR=9.0						
KSH	**Kashi**	**115.36**	**304**	*e*PKP		**PKPdf**	**10 44 05.0 +3.3**
KSH				PP		PP	10 45 20.8 +8.3
KSH				sPKP			10 46 45.0
KSH				PKS		**PKSdf**	**10 47 39.8 +1.3**
KSH				SS		SS	11 00 40.1 +8.0
KKAR	**Karatay Array**	**119.94**	**307**	*e*PKPdf		**PKPdf**	**10 44 09.5 -0.8**
ABKAR	**Akbulak array**	**127.27**	**315**	*e*PKPdf		**PKPdf**	**10 44 23.7 -0.3**
ARCES	**ARCESS Array B**	**131.88**	**348**	PKP		**PKPdf**	**10 44 32.0 -0.2**
ARCES	**ARCESS Array B**	**131.88**	**348**	PKP		**PKPdf**	**10 44 32.0 -0.2**
	comp=Z,8.6nm,1.1s,baz=85,slow=1.5,SNR=8.1						
FINES	**FINESS Array B**	**138.45**	**342**	PKPpre	PKPpre		10 44 35.0
FINES				SKP			10 47 29.6
FINES	**FINESS Array B**	**138.45**	**342**	PKhKP	PKPpre		10 44 35.0
	comp=Z,2.6nm,1.0s,baz=46,slow=5.5,SNR=5.3						
FINES				SKP			10 47 29.6
	comp=Z,2.6nm,0.6s,baz=52,slow=3.1,SNR=9.5						
NB2	**NORSAR Subarra**	**142.06**	**351**	PKP		**PKPdf**	**10 44 46.1 -5.1**
	comp=Z,0.7nm,0.5s,baz=13,slow=3.1						
NOA	**NORSAR Array B**	**142.06**	**351**	PKPpre	PKPpre		10 44 46.1
NOA	**NORSAR Array B**	**142.06**	**351**	PKhKP	PKPpre		10 44 46.1
	comp=Z,1.1nm,0.7s,baz=16,slow=4.7,SNR=6.3						
MALT	**Malatya**	**144.46**	**303**	*e*PKPdf		**PKPdf**	**10 44 56.4 +0.1**
MALT	**Malatya**	**144.46**	**303**	⇑P		**PKPab**	**10 44 56.7 +0.1**
AKASG	**Malin Array Be**	**145.01**	**327**	PKP		**PKPdf**	**10 44 55.9 -0.7**
AKASG				SKPbc		**SKPbc**	**10 47 46.5 -1.1**
AKASG	**Malin Array Be**	**145.01**	**327**	PKP		**PKPdf**	**10 44 55.9 -0.7**
	comp=Z,4.7nm,0.5s,baz=41,slow=4.3,SNR=22						
AKASG				SKPbc		**SKPbc**	**10 47 46.5 -1.1**
	comp=Z,1.1nm,0.6s,baz=45,slow=3.0,SNR=4.5						
KIEV	**Kiev**	**145.02**	**327**	*e*PKPdf		**PKPdf**	**10 44 55.8 -0.8**
AK02	**Malin Array Si**	**145.05**	**327**	*e*PKPdf		**PKPdf**	**10 44 56.0 -0.7**
SUW	**Suwalki**	**145.28**	**336**	*e*PKP		**PKPdf**	**10 44 57.1 +0.1**
BR131	**Keskin Array S**	**147.66**	**307**	*e*PKPbc		**PKPbc**	**10 45 04.4 -0.8**
BR131				*e*PKPab		**PKPab**	**10 45 09.2 0.0**
BRTR	**Keskin Array B**	**147.66**	**307**	PKPbc		**PKPbc**	**10 45 04.5 -0.8**
BRTR				PKPab		**PKPab**	**10 45 09.5 +0.2**
BRTR	**Keskin Array B**	**147.66**	**307**	PKPbc		**PKPbc**	**10 45 04.5 -0.8**
	comp=Z,2.3nm,0.7s,baz=142,slow=5.3,SNR=12						
BRTR				PKPab		**PKPab**	**10 45 09.5 +0.2**
	comp=Z,4.4nm,0.6s,baz=98,slow=3.4,SNR=20						
BEL	**Belsk**	**147.89**	**336**	*e*PKP		**PKPbc**	**10 45 05.5 +0.3**
ANTO	**Ankara**	**148.22**	**308**	⇑P		**PKPbc**	**10 45 06.2 -0.3**
TLCR		**148.48**	**320**	⇑P		**PKPbc**	**10 45 06.7 -0.1**
KWP	**Kalwaria Pacla**	**148.80**	**331**	*e*PKPbc		**PKPbc**	**10 45 07.2 -0.4**
KWP	**Kalwaria Pacla**	**148.80**	**331**	⇓P		**PKPbc**	**10 45 07.6 +0.1**
KWP	**Kalwaria Pacla**	**148.80**	**331**	*e*PKP		**PKPbc**	**10 45 07.3 -0.2**
CFR	**Carcaliu**	**148.89**	**320**	⇑P		**PKPbc**	**10 45 07.4 -0.4**
BUR08	**Bucovina Ar. S**	**149.00**	**326**	*e*PKPbc		**PKPbc**	**10 45 08.5 +0.2**
CSS	**Prodhromos**	**149.18**	**299**	*e*PKPbc		**PKPbc**	**10 45 08.2 -0.7**
KOLS	**Kolonicke sedl**	**149.50**	**331**	*e*PKP		**PKPbc**	**10 45 09.7 +0.4**
OJC	**Ojcow**	**149.56**	**335**	*e*PX		**PKPbc**	**10 45 09.3 0.0**
CRVS	**Cervenica-Dubn**	**149.89**	**331**	*e*PKP		**PKPbc**	**10 45 09.7 -0.5**
NIE	**Niedzica**	**149.98**	**333**	*e*PX		**PKPbc**	**10 45 10.9 +0.5**
KSP	**Ksiaz**	**150.30**	**339**	*e*PKP		**PKPbc**	**10 45 11.2 +0.1**
ISP	**Isparta**	**150.59**	**305**	⇓P		**PKPbc**	**10 45 11.4 -0.9**
UPC	**Upice**	**150.68**	**339**	⇑*e*PKP		**PKPbc**	**10 45 11.8 -0.2**
DPC	**Dobruska-Polom**	**150.71**	**339**	⇑*e*PKP		**PKPbc**	**10 45 12.0 -0.1**
ARR	**Arges**	**150.77**	**323**	⇓P		**PKPbc**	**10 45 13.2 +0.8**
MORC	**Moravsky Berou**	**150.77**	**337**	⇓P		**PKPbc**	**10 45 12.2 0.0**
DRGR		**150.83**	**327**	⇓P		**PKPbc**	**10 45 12.1 -0.4**
CLL	**Collm**	**150.86**	**343**	⇓PKPbc		**PKPbc**	**10 45 11.8 -0.5**
	comp=Z,10.0nm,0.8s						
CLL				*e*PKPab		**PKPab**	**10 45 21.0 -0.8**
CLL				*ep*PKPab		**pPKPab**	**10 47 17.0 -0.3**
BRG	**Berggiesshubel**	**150.99**	**342**	*i* PKP		**PKPbc**	**10 45 12.2 -0.4**
	comp=Z,11nm,1.3s						
PVCC	**Panska Ves**	**151.11**	**341**	⇑*e*PKP		**PKPbc**	**10 45 13.1 +0.2**
VYHS	**Vyhne**	**151.31**	**334**	*e*PKP		**PKPbc**	**10 45 13.4 -0.1**
VYHS				*e*		10 45 24.0	
PSZ	**Piszkesteto**	**151.31**	**332**	⇓*i*P		**PKPdf**	**10 45 08.2 +1.2**
VRAC	**Vranov**	**151.50**	**337**	⇓*i*P		**PKPab**	**10 45 25.0 +0.3**
PRU	**Pruhonice**	**151.60**	**340**	⇑*e*PKP		**PKPbc**	**10 45 14.3 +0.3**
GZR	**Gura Zlata**	**151.75**	**325**	⇑*i*P		**PKPbc**	**10 45 13.9 -0.7**
TREC	**Trest**	**151.90**	**338**	⇑*e*PKP		**PKPbc**	**10 45 12.0 -2.8**
BZS	**Buzias**	**152.19**	**327**	⇑*i*P		**PKPbc**	**10 45 15.0 -0.5**
KHC	**Kasperske Hory**	**152.65**	**341**	⇑*e*PKP		**PKPbc**	**10 45 15.8 -0.7**
KHC				*e*PKPAB		**PKPab**	**10 45 29.4 -0.2**
GERES	**GERESS Array B**	**152.87**	**340**	PKPbc		**PKPbc**	**10 45 15.3 -1.7**
GERES	**GERESS Array B**	**152.87**	**340**	PKPbc		**PKPbc**	**10 45 15.3 -1.7**
	comp=Z,0.6nm,0.4s,baz=28,slow=4.4,SNR=3.0						
VTS	**Vitosha**	**153.29**	**320**	⇑*i*P		**PKPab**	**10 45 33.2 +0.5**
TORD	**Torodi Ar. Bea**	**169.24**	**188**	PKP		**PKPdf**	**10 45 25.1 -2.1**
TORD				PKPab		**PKPab**	**10 46 41.9 -0.8**
TORD	**Torodi Ar. Bea**	**169.24**	**188**	PKP		**PKPdf**	**10 45 25.1 -2.1**
	comp=Z,0.8nm,0.9s,baz=28,slow=2.6,SNR=3.8						
TORD				PKPab		**PKPab**	**10 46 41.9 -0.8**
	comp=Z,1.3nm,0.8s,baz=180,slow=3.8,SNR=6.2						

DDA 19 10:28:21,37.39N×42.45E,h12km,MD2.5,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¯¯rnak**	**0.11**	**344**	*i* P	Pb	10 28 25.6	+0.3
SIRN				*i* S	Sg	10 28 26.5	+0.1
HAKT	**HAKKARI**	**1.01**	**80**	*i* P	Pb	10 28 40.3	-0.5
GEVA	**Gevas**	**1.04**	**27**	*i* P	Pb	10 28 40.8	-0.3
GEVA				*i* S	Sg	10 28 55.6	+0.6
BEST	**Besiri**	**1.06**	**298**	*i* P	Pn	10 28 41.8	-0.1
BEST				*i* S	Sn	10 28 56.2	-0.4
MARD	**Mardin**	**1.33**	**267**	*i* P	Pb	10 28 46.0	-0.1
MARD				*i* S	Sb	10 29 03.0	-0.3

IDC 19 10:40:27.5±1.9,4.23N×127.25E,h0km,mb3.3/4, mb1 3.5/4,mb1mx3.3/23,mbtmp3.4/4,MS3.2/1,Ms1 3.2/1, ms1mx2.2/26,Error ellipse: s-maj=105.6km s-min=24.0km az=70.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.25**	**184**	P	P	10 45 25.2	-0.9
	1.9nm,1.1s,baz=30,slow=8.1,SNR=2.3						
FITZ				LR	LR	10 54 51.6	
	comp=Z,55nm,18.5s,baz=279,slow=39						
WRA	**Warramunga Arr**	**25.02**	**164**	P	P	10 45 53.3	0.0
	0.8nm,0.7s,baz=345,slow=10,SNR=7.7						
ASAR	**Alice Springs**	**28.48**	**167**	P	P	10 46 25.2	+0.6
	0.2nm,0.8s,baz=342,slow=7.9,SNR=3.0						
MKAR	**Makanchi Array**	**57.44**	**325**	P	P	10 50 18.1	-0.1
	0.4nm,0.6s,baz=126,slow=8.4,SNR=7.6						

IDC 19 10:43:34.1±1.2,4.06N×126.52E,h0km,mb3.7/6, mb1 3.8/6,mb1mx3.6/23,mbtmp3.7/6,Error ellipse: s-maj=96.0km s-min=18.1km az=71.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.04**	**182**	P	P	10 48 30.8	+0.2
	2.0nm,0.9s,baz=354,slow=10,SNR=5.7						
WRA	**Warramunga Arr**	**25.06**	**162**	P	P	10 48 60.0	-0.5
	2.1nm,0.5s,baz=340,slow=11,SNR=14						
ASAR	**Alice Springs**	**28.48**	**166**	P	P	10 49 30.8	-0.5
	0.4nm,0.7s,baz=347,slow=7.5,SNR=5.2						
STKA	**Stephens Creek**	**38.51**	**159**	P	P	10 50 58.8	+0.4
	1.6nm,0.6s,baz=342,slow=8.8,SNR=5.4						
SONM	**Songino Array**	**46.92**	**341**	P	P	10 52 05.8	-0.8
	0.4nm,0.7s,baz=147,slow=8.1,SNR=3.2						
MKAR	**Makanchi Array**	**57.17**	**325**	P	P	10 53 23.6	+0.7
	0.7nm,0.6s,baz=127,slow=8.1,SNR=9.5						

*IDC **19** 10:51:31.0±1.2,32.02N×130.82E,h120km±13km,mb2.8/3, mb1 3.3/4,mb1mx3.0/26,mbtmp3.0/4,Error ellipse: s-maj=45.2km s-min=22.7km az=99.0*

JMA 19 10:51:32.3±0.1,32.09N×130.88E,h117km±1km,M3.0, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZO	**Okuchi**	**0.24**	**282**	P	Pn	10 51 48.7	0.0
JZO				*e*S	Sn	10 52 00.8	-0.3
JTZ	**Takazaki**	**0.26**	**137**	P	Pn	10 51 48.7	0.0
JTZ				*e*S	Sn	10 52 01.1	0.0
JIU2	**Izumi 2**	**0.46**	**353**	P	Pn	10 51 49.8	+0.1
JIU2				*e*S	Sn	10 52 02.8	0.0
JNU	**Nakatsue**	**1.03**	**360**	P	Pn	10 51 54.6	+0.2
	50nm,0.3s,baz=214,slow=1.8,SNR=800						
JNU				S	Sn	10 52 11.7	+0.5
	28nm,0.3s,baz=72,slow=24,SNR=19						
KSRS	**Korea Array**	**5.88**	**336**	P	Pn	10 52 56.5	-0.4
	0.1nm,0.3s,baz=132,slow=9.6,SNR=4.6						
MAT	**Matsushiro**	**7.51**	**52**	P	Pn	10 53 19.7	+0.5
MAT				S	Sn	10 54 41.7	-1.1
MJAR	**Matsushiro Arr**	**7.51**	**52**	P	Pn	10 53 19.9	+0.7
	4.3nm,0.3s,baz=248,slow=14,SNR=72						
WRA	**Warramunga Arr**	**51.84**	**176**	P	P	11 00 26.0	-2.5
	0.3nm,0.5s,baz=354,slow=7.9,SNR=5.0						
ASAR	**Alice Springs**	**55.52**	**177**	P	P	11 00 53.3	-2.0
	0.4nm,0.6s,baz=8.5,slow=14,SNR=8.0						
YKA	**Yellowknife Ar**	**72.26**	**26**	P	P	11 02 43.4	-1.1
	0.1nm,0.5s,baz=303,slow=5.9,SNR=3.8						

*BJI **19** 11:09:51.8,1.99N×99.02E,h175km,mB4.7/31,mb4.6/42*
*ISCJB **19** 11:09:59.2±0.2,2.81N±0.02×99.00E±0.02,h176km±1km, mb4.9/177,Error ellipse: s-maj=4.0km s-min=2.5km az=36.1*
*MOS **19** 11:09:59.0±1.0,2.85N×99.15E,h177km,mb5.1/57,Error ellipse: s-maj=9.6km s-min=4.6km az=120.9*
*IDC **19** 11:09:59.5±0.2,2.79N×99.13E,h169km±1km,mb4.5/41, mb1 4.6/42,mb1mx4.6/44,mbtmp4.5/42,Error ellipse: s-maj=8.6km s-min=5.4km az=49.0*
*SZGRF **19** 11:09:59.1,4.53N×96.75E,h33km,mb5.1,Northern Sumatera, Indonesia*
*NEIC **19** 11:10:00.3±0.5,2.80N×99.09E,h175km±4km,mb5.0/83, Error ellipse: s-maj=5.6km s-min=3.4km az=46.0*
*TEH **19** 11:10:00.0,2.79N×99.04E,h173km,ML5.0*
*DJA **19** 11:10:00.5±0.1,3.1N±2.2×9.9E±1.4,h162km±2km,M5.1/68, mb5.3/68,mB5.6/50,MLv5.4/19,Mw(mB)5.0/50,Mwp5.9/1*
*GCMT **19** 11:10:02.4±0.2,2.77N×99.00E,h176km±1km,MW5.1, Moment Tensor Solution. s45,c58; s82,c138; Moment tensor: Scale 10^16Nm; Mrr2.78±.17; Mθθ-4.30±.16; Mϕϕ1.52±.20; Mrθ-0.71±.13; Mθϕ1.05±.18; Mϕr-6.30±.14; Best double couple: M0:6.60000×10^16 NP1:ϕ1258.00000°, δ42.00000°,λ26.00000°. NP2:ϕ2148.00000°,δ73.00000°, λ128.00000°. Principal axes: T 8.6000, Plg47.0000°, Azm98.0000°; N -3.9700, Plg36.0000°, Azm314.0000°; P -4.6300, Plg19.0000°, Azm210.0000°; Data Used: II IU IC G CN.*

ISC 19 11:10:00.2±0.2,2.81N±0.03×99.04E±0.03,h178km±1km, h178km:pP-P,n833,σ1s56/1068,mb5.0/177,138C-149D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**0.12**	**267**	P	**Pn**	**11 10 23.4**	**-0.5**
PSI				S	**Sn**	**11 10 40.5**	**-1.4**
PSI	**Prapat**	**0.12**	**267**	P	**Pn**	**11 10 22.9**	**-0.9**
PSI	**Prapat**	**0.12**	**267**	P	**Pn**	**11 10 23.4**	**-0.5**
	2μm,0.3s,baz=218,slow=5.5,SNR=4179						
PSI				S	**Sn**	**11 10 40.5**	**-1.4**
	760nm,0.3s,baz=133,slow=22,SNR=116						
TSI	**Tuntungan**	**0.84**	**325**	P	**Pn**	**11 10 25.2**	**-1.3**
TSI				S	**Sn**	**11 10 46.8**	**-0.1**
KCSI	**Kotacane, Aceh**	**1.45**	**299**	P	**Pn**	**11 10 30.3**	**-1.2**
MNSI	**Mandailing Nat**	**2.07**	**165**	P	**Pn**	**11 10 37.3**	**-0.6**
GSI	**Gunungsitoli**	**2.09**	**224**	P	**Pn**	**11 10 36.6**	**-1.5**
GSI				S	**Sn**	**11 11 05.9**	**-1.6**
IPM	**Ipoh**	**2.59**	**50**	*e*Pn	**Pn**	**11 10 43.5**	**-0.3**
IPM				*e*Sn	**Sn**	**11 11 17.7**	**0.0**
IPM	**Ipoh**	**2.59**	**50**	P	**Pn**	**11 10 43.7**	**-0.1**
IPM	**Ipoh**	**2.59**	**50**	P	**Pn**	**11 10 43.3**	**-0.5**
FRIM	**Kepong**	**2.62**	**81**	P	**Pn**	**11 10 44.1**	**0.0**
SNSI	**Sinabang, Aceh**	**2.74**	**262**	P	**Pn**	**11 10 44.9**	**-0.7**
SNSI				S	**Sn**	**11 11 18.0**	**-2.9**
KULM	**Kulim**	**2.94**	**33**	*e*Pn	**Pn**	**11 10 46.4**	**-1.7**
KULM	**Kulim**	**2.94**	**33**	P	**Pn**	**11 10 47.5**	**-0.6**
KULM	**Kulim**	**2.94**	**33**	P	**Pn**	**11 10 47.1**	**-1.0**
MLSI	**Meulaboh, Aceh**	**3.00**	**299**	P	**Pn**	**11 10 48.1**	**-0.7**
MLSI				S	**Sn**	**11 11 23.7**	**-2.9**
BKNI	**Bangkinang**	**3.17**	**141**	P	**Pn**	**11 10 51.1**	**+0.2**
LHMI	**Lhok Sumawe**	**3.19**	**319**	P	**Pn**	**11 10 51.0**	**0.0**
LHMI				S	**Sn**	**11 11 30.0**	**-0.7**
PPI	**Padang Panjang**	**3.51**	**157**	P	**Pn**	**11 10 55.1**	**0.0**
PDSI	**Padang**	**3.96**	**159**	P	**Pn**	**11 11 00.6**	**-0.1**
SISI	**Saibi**	**4.11**	**179**	P	**Pn**	**11 11 00.4**	**-2.2**
KGM	**Kluang**	**4.35**	**100**	P	**Pn**	**11 11 05.2**	**-0.5**
RGRI	**Rengat**	**4.55**	**134**	P	**Pn**	**11 11 08.9**	**+0.6**
BSI	**Banda Aceh**	**4.59**	**306**	P	**Pn**	**11 11 08.1**	**-0.7**
KTGM	**Kuala Trenggan**	**4.79**	**58**	P	**Pn**	**11 11 10.9**	**-0.5**
MYKOM	**Kota Tinggi**	**4.91**	**102**	P	**Pn**	**11 11 12.9**	**-0.1**
MYKOM	**Kota Tinggi**	**4.91**	**102**	P	**Pn**	**11 11 13.5**	**+0.5**
BTDF	**Bukit Timah Da**	**4.94**	**107**	P	**Pn**	**11 11 12.9**	**-0.5**
	147nm,1.2s,4μm0.9nm						
KRJI	**Kerinci**	**5.43**	**154**	P	**Pn**	**11 11 20.1**	**+0.2**
	659nm,0.9s,26μm8.7nm						
CMBY	**CAMPBELL BAY**	**6.59**	**310**	*e*P	**Pn**	**11 11 33.3**	**-1.6**
CMBY				AMB	AMB	11 11 39.0	
	comp=Z,303nm,1.1s						
MASI	**Maura Aman, Be**	**6.72**	**152**	P	**Pn**	**11 11 35.9**	**-0.8**
	comp=Z,789nm,0.8s,comp=Z,11μmcomp=Z,3.4nm						
MBSI	**MBSI**	**7.28**	**154**	P	**Pn**	**11 11 43.4**	**-0.7**
	comp=Z,922nm,0.6s,comp=Z,25μmcomp=Z,4.6nm						
KSI	**Kapahiang**	**7.33**	**151**	P	**Pn**	**11 11 43.0**	**-1.8**
	comp=Z,1μm,0.7s,comp=Z,14μmcomp=Z,3.4nm						
MNAI	**Manna**	**8.12**	**151**	P	**Pn**	**11 11 52.1**	**-3.1**
	comp=Z,575nm,0.7s,comp=Z,9μm						
PPBI	**Pangkal Pinang**	**8.64**	**125**	P	**Pn**	**11 12 03.5**	**+1.5**
	comp=Z,162nm,1.4s,comp=Z,10μm						
EGSI	**Enggano, Bengk**	**8.73**	**158**	P	**Pn**	**11 12 02.6**	**-0.5**
	comp=Z,162nm,0.7s,comp=Z,8μm						
LWLI	**Liwa**	**9.25**	**147**	P	**Pn**	**11 12 08.0**	**-2.1**
	comp=Z,320nm,

comp=Z,816nm,1.0s,comp=Z,15µm
TSM Tawau 18.85 85 P **P** **11 14 08.0 +1.0**
QIZ Qiongzhong 19.28 32 P **P** **11 14 12.3 +0.8**
QIZ sP **sP** **11 15 04.5 +0.4**
QIZ S **S** **11 17 41.9 +1.6**
QIZ pmax pmax
comp=Z,26nm,1.2s
SRBI Singaraja 19.42 124 P **P** **11 14 14.6 +1.5**
comp=Z,675nm,0.8s,comp=Z,6µm
MYLDM Lahad Datu 19.55 82 P **Pn** **11 14 16.7 -1.2**
MYLDM Lahad Datu 19.55 82 P **Pn** **11 14 16.7 -1.2**
comp=Z,500nm,1.1s,comp=Z,6µm
DNP Denpasar 19.75 125 P Pn 11 14 26.5 +6.3
KHKI Kahang-Kahang 19.90 124 P **P** **11 14 19.2 +0.9**
comp=Z,578nm,0.9s,comp=Z,5µm
VIS Vishakhapatnam 21.38 315 *e*P **P** **11 14 35.0 +1.0**
TTSI Tana Toraja 21.57 105 P **P** **11 14 38.0 +2.0**
comp=Z,127nm,0.6s,comp=Z,2µm
SPSI Sidrap Palu 21.78 108 P **P** **11 14 39.0 +0.8**
comp=Z,106nm,1.0s,comp=Z,2µm
KAPI Kapang 22.10 111 *e*P **P** **11 14 41.0 -0.4**
comp=Z,385nm,1.0s
KAPI Kappang 22.10 111 P **P** **11 14 41.5 +0.1**
SNR=27
KAPI Kappang 22.10 111 P **P** **11 14 41.7 +0.3**
comp=Z,508nm,1.3s,comp=Z,7µm
KAPI Kappang 22.10 111 P **P** **11 14 41.5 +0.1**
comp=Z,182nm,0.7s,baz=312,slow=8.0,SNR=53
IMP Imphal 22.40 348 *ex* **S** **11 18 30.0 -7.0**
KMI Kunming 22.47 9 P **P** **11 14 47.0 +2.0**
KMI pP **pP** **11 15 19.4 +2.6**
KMI PP **PnPn** **11 15 24.1 +3.6**
KMI sP **sP** **11 15 39.1 +0.1**
KMI S **S** **11 18 38.3 -0.2**
KMI sS **sS** **11 19 32.9 -2.7**
KMI pmax pmax
comp=Z,14nm,1.4s
KMI LR LR
comp=N,410nm,11.8s
KMI LR LR
comp=E,350nm,9.4s
KMI LR LR
comp=Z,330nm,11.9s
BKSI Bulukumba 22.55 111 P **P** **11 14 47.0 +1.4**
comp=Z,2µm,0.7s,comp=Z,16µm
MRSI Marisa 23.01 95 P **P** **11 14 50.2 +0.5**
comp=Z,216nm,1.2s,comp=Z,2µm
SHL Shillong 23.65 344 *e*P **P** **11 14 55.5 -0.2**
SHL *ex* x 11 18 51.7
LUWI Luwuk 24.03 99 P **P** **11 15 00.3 +1.2**
comp=Z,190nm,1.3s,comp=Z,2µm
TGY Tagaytay City 24.36 61 P **P** **11 15 04.4 +2.3**
TGY Tagaytay City 24.36 61 P **P** **11 15 04.4 +2.3**
comp=Z,92nm,0.3s,baz=19,slow=6.7,SNR=4.8
BOK Bokaro 24.44 330 *e*P **P** **11 15 03.8 +1.1**
BOK AMB AMB 11 15 04.8
comp=Z,154nm,0.5s
KDI Kendari 24.50 106 P **P** **11 15 03.8 +0.4**
comp=Z,129nm,0.8s,comp=Z,1µm
GYA Guiyang 24.63 17 P **P** **11 15 07.0 +2.5**
GYA pP **pP** **11 15 41.3 +1.4**
GYA sP **sP** **11 16 02.8 +1.5**
GYA S **S** **11 19 14.6 +1.7**
GYA sS **sS** **11 20 15.5 -1.4**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,4.9s
HYB Hyderabad 24.80 307 *i* P **P** **11 15 06.0 -0.1**
HYB *e*pP **pP** **11 15 40.0 -1.8**
HYB Hyderabad 24.80 307 *e*P **P** **11 15 07.0 +0.9**
HYB AMB AMB 11 15 08.3
comp=Z,52nm,1.2s
BBSI Bau Bau 24.91 109 P **P** **11 15 09.7 +2.7**
comp=Z,694nm,1.0s,comp=Z,6µm
KMSI Cibinong 25.03 95 P **P** **11 15 10.4 +2.3**
comp=Z,696nm,1.0s
MNI Manado 25.82 92 P **P** **11 15 17.8 +2.5**
comp=Z,374nm,0.9s,comp=Z,4µm
ODAN Odare 26.39 336 *e*P **P** **11 15 20.7 +0.1**
comp=Z,128nm,0.9s
TAPN Taplejung 26.70 337 *e*P **P** **11 15 23.8 +0.4**
comp=Z,276nm,0.9s
DAV Davao City (W) 26.77 80 P **P** **11 15 26.2 +2.4**
DAV Davao City (W) 26.77 80 P **P** **11 15 26.2 +2.4**
comp=Z,97nm,0.4s,baz=290,slow=6.7,SNR=6.5
RAMN Ramite 26.80 335 *e*P **P** **11 15 24.6 +0.4**
comp=Z,32nm,0.6s
PKI Pulchoki 27.86 333 *e*P **P** **11 15 33.7 0.0**
GUN Gumba 27.95 335 *e*P **P** **11 15 34.4 -0.1**
comp=Z,33nm,0.3s
KKN Kakani 28.11 333 *e*P **P** **11 15 35.5 -0.3**
comp=Z,22nm,0.3s
CD2 Chengdu 28.31 9 P **P** **11 15 40.3 +3.0**
CD2 pP **pP** **11 16 15.9 +1.9**
CD2 sP **sP** **11 16 36.3 +1.8**
CD2 PP **PnPn** **11 16 39.8 +3.5**
CD2 S **S** **11 20 13.6 +3.0**
CD2 sS **sS** **11 21 16.8 +1.1**
CD2 pmax pmax
comp=Z,30nm,0.4s
CD2 pmax pmax
comp=Z,100nm,5.1s
CD2 LR LR
comp=N,310nm,8.4s
CD2 LR LR
comp=Z,360nm,11.2s
LBMI Labuha 28.66 96 P **P** **11 15 42.4 +1.8**
comp=Z,188nm,1.1s,comp=Z,2µm
KOLN Koldanda 28.88 331 *e*P **P** **11 15 42.6 0.0**
comp=Z,118nm,0.7s
BHPL Bhopal 29.17 316 *e*P **P** **11 15 45.9 +0.9**
POO Poona 29.20 304 *e*P **P** **11 15 46.6 +1.2**
POO AMB AMB 11 15 47.8
comp=Z,31nm,1.1s
DANN Dangsing 29.28 332 *e*P **P** **11 15 45.9 -0.4**
comp=Z,60nm,0.6s
PYUN Piuthan 29.45 330 *e*P **P** **11 15 47.4 -0.3**
comp=Z,106nm,1.0s
SSLB Suanglung 29.73 44 *e*P **P** **11 15 50.1 +0.1**
comp=Z,20nm,0.9s
AAI Ambon 29.84 102 P **P** **11 15 51.4 +0.3**
comp=Z,179nm,0.7s,comp=Z,2µm
MSAI Masohi 30.49 101 P **P** **11 15 57.5 +0.7**
comp=Z,23nm,0.7s,comp=Z,625nm
MBWA Marble Bar 31.27 141 *e*P **P** **11 16 03.1 -0.5**
comp=Z,12nm,0.9s
XAN Xi'an 32.41 15 P **P** **11 16 11.8 -1.6**
XAN pmax pmax
comp=Z,3.0nm,0.9s
XAN pmax pmax
comp=Z,20nm,4.2s
XAN LR LR
comp=N,140nm,11.1s
XAN LR LR
comp=Z,85nm,11.7s
SWI Sorong 32.42 96 P **P** **11 16 13.4 -0.3**
NDI New Delhi 33.08 323 *ex* **P** **11 16 16.5 -2.7**
LZH Lanzhou 33.41 7 ⇑P **P** **11 16 22.1 -0.1**
LZH pP **pP** **11 16 59.5 +0.1**
LZH sP **sP** **11 17 18.0 -1.8**
LZH PP **PP** **11 17 41.3 -0.3**
LZH S **S** **11 21 29.4 -0.9**
LZH sS **sS** **11 22 37.5 +1.5**
LZH pmax pmax
comp=Z,65nm,1.5s
LZH pmax pmax
comp=Z,160nm,5.4s
LZH LR LR
comp=N,260nm,14.7s
LZH LR LR
comp=E,510nm,14.5s
LZH LR LR
comp=Z,610nm,15.2s
FITZ Fitzroy Crossi 33.44 129 *e*P **P** **11 16 21.0 -1.5**
comp=Z,28nm,0.7s
FITZ Fitzroy Crossi 33.44 129 P **P** **11 16 21.4 -1.1**
comp=Z,32nm,0.7s,baz=299,slow=3.9,SNR=73
FAKI Fak Fak 33.68 99 P **P** **11 16 25.4 +0.8**
comp=Z,104nm,0.9s
NJ2 Nanjing 34.55 31 *e*P **P** **11 16 31.5 -0.3**
NJ2 pP **pP** **11 17 08.3 -0.9**
NJ2 sP **sP** **11 17 28.3 -1.3**
NJ2 PP **PP** **11 17 53.3 -0.7**
NJ2 S **S** **11 21 47.0 -0.6**
NJ2 sS **sS** **11 22 52.0 -1.5**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s
NJ2 pmax pmax
comp=Z,70nm,5.7s
NJ2 LR LR
comp=N,340nm,14.2s
NJ2 LR LR
comp=E,290nm,12.3s
NJ2 LR LR
comp=Z,270nm,15.3s
SMLA Simla 34.93 326 *e*P **P** **11 16 35.9 +0.8**
SMLA AMB AMB 11 16 37.9
comp=Z,31nm,0.5s
DHRM DHARAMSHALA 36.26 326 *e*P **P** **11 16 46.2 -0.5**
DHRM AMB AMB 11 16 47.8
comp=Z,83nm,1.4s
GTA Gaotai 36.44 1 ⇑P **P** **11 16 48.8 +0.8**
GTA pP **pP** **11 17 25.6 -0.1**
GTA sP **sP** **11 17 45.0 -1.0**
GTA S **S** **11 22 18.4 +1.8**
GTA sS **sS** **11 23 23.0 +0.1**
GTA ScS **ScS** **11 26 44.1 -0.9**
GTA pmax pmax
comp=Z,15nm,1.2s
GTA pmax pmax
comp=Z,61nm,6.4s
GTA LR LR
comp=N,130nm,13.8s
GTA LR LR
comp=E,120nm,15.4s
GTA LR LR
comp=Z,160nm,16.1s
THN Thein Dam 36.72 326 *e*P **P** **11 16 48.0 -2.3**
THN *e*S **S** **11 22 20.8 +0.1**
NWAO Narrogin (SRO) 39.49 156 *e*P **P** **11 17 13.7 +0.2**
comp=Z,33nm,0.9s
NWAO Narrogin (SRO) 39.49 156 P **P** **11 17 14.2 +0.7**
comp=Z,27nm,0.7s,baz=316,slow=9.4,SNR=13
HHC Hu-ho-hao-te 39.52 15 *e*P **P** **11 17 15.8 +2.0**
HHC pP **pP** **11 17 55.0 +3.1**
HHC sP **sP** **11 18 11.0 -1.1**
HHC PP **PnPn** **11 18 54.3 +1.0**
HHC PcP **PcP** **11 19 19.4 +1.6**
HHC ScP **ScP** **11 22 50.6 +0.8**
HHC S **S** **11 23 06.8 +3.9**
HHC PcS **PcS** **11 23 08.6 +0.6**
HHC sS **sS** **11 24 12.3 +2.5**
HHC SS **SS** **11 26 02.3 -3.0**
HHC ScS **ScS** **11 27 02.6 0.0**
HHC pmax pmax
comp=Z,29nm,0.6s
HHC pmax pmax
comp=Z,180nm,6.2s
WRA Warramunga Arr 41.38 125 P **P** **11 17 28.1 -1.1**
WRA pP **pP** **11 18 05.8 -1.9**
WRA PcP **PcP** **11 19 24.0 -0.1**
WRA S **S** **11 23 25.2 -5.6**
WRA Warramunga Arr 41.38 125 P **P** **11 17 28.1 -1.1**
comp=Z,57nm,0.7s,baz=303,slow=9.1,SNR=242
WRA pP **pP** **11 18 05.7 -1.9**
comp=Z,9.1nm,0.6s,baz=301,slow=9.3,SNR=2.6
WRA PcP **PcP** **11 19 24.0 -0.1**
comp=Z,5.3nm,0.6s,baz=310,slow=2.9,SNR=7.6
WRA S **S** **11 23 25.2 -5.6**
comp=Z,7.4nm,1.1s,baz=293,slow=16,SNR=11
WRAB Tennant Creek 41.38 125 *e*P **P** **11 17 28.3 -0.9**
WRAB pmax pmax
comp=Z,71nm,0.8s
WRAB Tennant Creek 41.38 125 *e*P **P** **11 17 28.3 -0.9**
comp=Z,71nm,0.8s
JAY Jayapura 41.98 97 P **P** **11 17 36.6 +2.3**
comp=Z,30nm,0.5s
WMQ Urumqi 42.06 348 P **P** **11 17 36.0 +1.5**
WMQ pP **pP** **11 18 14.0 +1.0**
WMQ sP **sP** **11 18 34.0 +0.9**
WMQ PP **PP** **11 19 19.0 +3.3**
WMQ S **S** **11 23 42.0 +1.7**
WMQ sS **sS** **11 24 48.0 +0.2**
WMQ ScS **ScS** **11 27 17.0 -0.8**
WMQ pmax pmax
comp=Z,29nm,1.0s
WMQ pmax pmax
comp=Z,150nm,5.0s
WMQ LR LR
comp=N,120nm,15.0s
WMQ LR LR
comp=E,110nm,15.0s
WMQ LR LR
comp=Z,130nm,16.0s
KSH Kashi 42.13 333 P **P** **11 17 33.9 -1.2**
KSH pP **pP** **11 18 12.0 -1.7**
KSH sP **sP** **11 18 32.3 -1.5**
KSH PP **PP** **11 19 17.0 +0.5**
KSH PcP **PcP** **11 19 26.0 -0.3**
KSH ScP **ScP** **11 22 58.0 -2.2**
KSH PcS **PcS** **11 23 16.1 -2.3**
KSH S **S** **11 23 38.4 -3.1**
KSH sS **sS** **11 24 47.0 -2.0**
KSH ScS **ScS** **11 27 15.0 -3.5**
KSH pmax pmax
comp=Z,30nm,0.7s
KSH LR LR
comp=N,340nm,7.5s
KSH LR LR
comp=E,250nm,6.4s
KSH LR LR
comp=Z,200nm,5.6s
KBL Kabul 42.14 322 *e*P **P** **11 17 36.6 +1.2**
KBL pmax pmax
comp=Z,203nm,2.5s
KBL Kabul 42.14 322 *e*P **P** **11 17 36.6 +1.2**
comp=Z,202nm,2.5s
ASAR Alice Springs 42.95 130 P **P** **11 17 40.6 -1.2**
ASAR pP **pP** **11 18 21.1 +0.5**
ASAR PcP **PcP** **11 19 29.7 +0.4**
ASAR ScP **ScP** **11 23 02.9 -0.8**
ASAR S **S** **11 23 49.0 -4.7**
ASAR Alice Springs 42.95 130 P **P** **11 17 40.6 -1.2**
comp=Z,19nm,0.4s,baz=300,slow=7.9,SNR=283
ASAR pP **pP** **11 18 21.1 +0.5**
comp=Z,3.1nm,0.7s,baz=299,slow=6.8,SNR=1.4
ASAR PcP **PcP** **11 19 29.7 +0.4**
comp=Z,5.3nm,0.7s,baz=312,slow=3.7,SNR=7.4
ASAR ScP **ScP** **11 23 02.9 -0.8**
comp=Z,1.7nm,0.7s,baz=311,slow=3.8,SNR=5.3
ASAR S **S** **11 23 49.0 -4.7**
comp=Z,2.0nm,0.9s,baz=298,slow=14,SNR=8.6
AS31 Alice Springs 42.95 130 *e*P **P** **11 17 41.2 -0.6**
FORT Forrest 43.37 143 *e*P **P** **11 17 44.4 -0.7**
comp=Z,97nm,0.6s
KSAR Wonju Array Be 43.46 34 P **P** **11 17 45.5 -0.3**
KSAR pP **pP** **11 18 24.4 -0.1**
KSAR sP **sP** **11 18 42.2 -2.3**
KSAR ScP **ScP** **11 23 06.5 +1.1**
KSRS Korea Array 43.49 34 P **P** **11 17 45.5 -0.5**
comp=Z,9.1nm,0.7s,baz=221,slow=9.1,SNR=61
KSRS pP **pP** **11 18 24.4 -0.4**
comp=Z,3.9nm,0.7s,baz=220,slow=8.6,SNR=3.1
KSRS sP **sP** **11 18 42.2 -2.5**
comp=Z,3.9nm,0.8s,baz=221,slow=8.6,SNR=2.5
KSRS ScP **ScP** **11 23 06.5 +0.9**
comp=Z,0.9nm,0.7s,baz=194,slow=4.6,SNR=4.7
WBK Wadi Bani Khal 43.54 300 P **P** **11 17 48.9 +2.3**
SNR=5.1
JMDO Jabal Madar 44.20 300 P **P** **11 17 53.7 +1.7**
SNR=8.0
ULHL Ulahol 44.25 336 P **P** **11 17 53.1 +0.8**
SNR=28
SMDO Samad 44.49 300 P **P** **11 17 56.2 +1.9**
SNR=8.2
KZA Kyzart 44.53 335 P **P** **11 17 55.4 +0.7**
SNR=22
UCH Uchtor 44.97 334 P **P** **11 17 58.7 +0.5**
SNR=8.1
TKM2 Tokmak 2 45.08 336 *i* P **P** **11 17 59.3 +0.6**
TKM2 Tokmak 2 45.08 336 *e*P **P** **11 17 59.3 +0.6**
comp=Z,88nm,1.4s
TKM2 Tokmak 2 45.08 336 P **P** **11 17 59.4 +0.6**
SNR=30
BSY Bisya 45.12 300 P **P** **11 18 01.2 +2.0**
SNR=8.6
KBK Karagaybulak 45.13 335 P **P** **11 18 00.5 +1.3**
SNR=47
AML Almayashu 45.25 333 P **P** **11 18 01.1 +0.7**
SNR=60
SONM Songino Array 45.30 7 P **P** **11 18 00.9 +0.5**
SONM pP **pP** **11 18 40.0 +0.6**
SONM PcP **PcP** **11 19 38.2 +1.3**
SONM ScP **ScP** **11 23 11.6 -1.4**
SONM Songino Array 45.30 7 P **P** **11 18 00.9 +0.5**
comp=Z,4.2nm,0.4s,baz=192,slow=9.5,SNR=24
SONM pP **pP** **11 18 40.0 +0.6**
comp=Z,6.2nm,0.7s,baz=190,slow=9.3,SNR=4.9
SONM PcP **PcP** **11 19 38.2 +1.3**
comp=Z,8.7nm,0.9s,baz=200,slow=4.0,SNR=7.3
SONM ScP **ScP** **11 23 11.6 -1.4**
comp=Z,1.7nm,0.7s,baz=202,slow=2.9,SNR=5.4
AAK Ala-Archa 45.31 334 *de*P **P** **11 18 01.4 +0.9**
AAK pmax pmax
comp=Z,164nm,1.8s
AAK Ala-Archa 45.31 334 *e*P **P** **11 18 01.4 +0.9**
comp=Z,8.1nm,1.0s
AAK ScP **ScP** **11 23 13.2 0.0**
AAK Ala-Archa 45.31 334 P **P** **11 18 02.0 +1.5**
SNR=32
AAK Ala-Archa 45.31 334 P **P** **11 18 01.8 +1.3**
comp=Z,16nm,0.7s,baz=142,slow=6.7,SNR=48
AAK ScP **ScP** **11 23 13.2 0.0**
comp=Z,6.1nm,0.8s,baz=150,slow=4.2,SNR=9.7
ULN Ulaanbaatar 45.42 8 *e*P **P** **11 18 01.4 +0.2**
comp=Z,8.1nm,1.0s
ULN Ulaanbaatar 45.42 8 P **P** **11 18 02.4 +1.1**
comp=Z,9.1nm,1.0s
FRU Bishkek 45.42 335 *e*P **P** **11 18 02.0 +0.8**
FRU pmax pmax
comp=Z,85nm,1.6s
CHMS Chumysh 45.49 335 P **P** **11 18 02.3 +0.4**
SNR=13
EKS2 Erkin-Say 45.64 334 *e*P **P** **11 18 04.5 +1.4**
EKS2 pmax pmax
comp=Z,43nm,0.8s
EKS2 Erkin-Say 45.64 334 *e*P **P** **11 18 04.5 +1.4**
comp=Z,43nm,0.8s
EKS2 Erkin-Say 45.64 334 P **P** **11 18 04.1 +1.0**
SNR=22
USP Ospenovka 45.82 335 P **P** **11 18 05.8 +1.5**
SNR=22
ARQ Araqi 45.91 300 P **P** **11 18 07.2 +1.8**
SNR=9.7
MK31 Makanchi Array 46.17 344 *e*P **P** **11 18 06.9 -0.1**
MK31 Makanchi Array 46.17 344 *e*P **P** **11 18 06.9 -0.1**
MKAR Makanchi Array 46.17 344 *ce*P **P** **11 18 07.0 0.0**
MKAR pmax pmax
comp=Z,7.0nm,0.4s
MKAR Makanchi Array 46.17 344 *e*P **P** **11 18 07.1 0.0**
MKAR pP **pP** **11 18 47.8 +1.5**
MKAR Makanchi Array 46.17 344 P **P** **11 18 07.0 0.0**
comp=Z,6.6nm,0.4s,baz=164,slow=7.1,SNR=156
MKAR pP **pP** **11 18 47.8 +1.5**
comp=Z,8.9nm,0.6s,baz=156,slow=7.6,SNR=5.1
RBK Rabkut 46.34 292 P **P** **11 18 10.4 +1.6**
SNR=6.6
HATD Hatta, Dubai 46.76 302 P **P** **11 18 13.7 +1.7**
SNR=5.5
ASHO Ashiyiah 46.77 302 P **P** **11 18 14.5 +2.4**
SNR=5.7
COEN Coen 46.82 112 *e*P **P** **11 18 12.0 -0.6**
comp=Z,136nm,0.7s
CN2 Changchun 47.06 26 *e*P **P** **11 18 13.3 -0.6**
CN2 *ep*P **pP** **11 18 52.3 -0.9**
CN2 *es*P **sP** **11 19 10.9 -2.2**
CN2 *e*S **S** **11 24 51.6 -0.6**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,200nm,4.0s
ABTO Aybut 47.15 291 P **P** **11 18 16.0 +0.9**
SNR=10.0
ASUD Al Ashush, Dub 47.37 301 P **P** **11 18 18.4 +1.7**
SNR=18
KKAR Karatay Array 47.48 332 *e*P **P** **11 18 17.5 +0.2**
KKAR pmax pmax
comp=Z,5.0nm,0.4s
KKAR Karatay Array 47.48 332 *e*P **P** **11 18 17.5 +0.2**
comp=Z,5.2nm,0.4s
ZAK Zakamensk 47.54 4 *e*P **P** **11 18 17.8 +0.1**
ZAK pmax pmax
comp=Z,3.0nm,0.9s
RER Riviere de l'E 48.62 239 *e*P **P** **11 18 29.4 +3.0**
comp=Z,72nm,0.9s
TLY Talaya 48.86 4 *e*P **P** **11 18 28.1 +0.5**
TLY *e*S **S** **11 25 13.4 -4.0**
TLY *e* 11 27 58.8
TLY pmax pmax
comp=Z,6.0nm,0.9s
TLY MLR MLR
comp=Z,82nm,16.0s
IMYA Miami 49.01 318 *e*P **P** **11 18 29.0 -0.3**
MAJO Matsushiro 49.27 42 *e*P **P** **11 18 31.1 0.0**
MAJO pmax pmax
comp=Z,12nm,1.1s
MAJO Matsushiro 49.27 42 *e*P **P** **11 18 31.1 0.0**
comp=Z,12nm,1.1s
MAT Matsushiro 49.27 42 P **P** **11 18 30.5 -0.6**
MAT S **S** **11 25 21.4 -2.2**
MJAR Matsushiro Arr 49.27 42 P **P** **11 18 31.6 +0.5**
MJAR pP **pP** **11 19 09.7 -1.0**
MJAR PcP **PcP** **11 19 51.7 +0.4**
MJAR ScP **ScP** **11 23 29.9 +0.1**
MJAR Matsushiro Arr 49.27 42 P **P** **11 18 31.6 +0.5**
comp=Z,4.5nm,0.8s,baz=227,slow=6.9,SNR=20
MJAR pP **pP** **11 19 09.7 -1.0**
comp=Z,3.3nm,0.8s,baz=222,slow=8.7,SNR=4.9
MJAR PcP **PcP** **11 19 51.7 +0.4**
comp=Z,2.4nm,0.9s,baz=235,slow=4.1,SNR=4.7
MJAR ScP **ScP** **11 23 29.9 +0.1**
comp=Z,1.3nm,0.9s,baz=197,slow=3.9,SNR=4.2
IMOG Moghan 49.40 317 *e*P **P** **11 18 33.1 +0.8**
ISRO Mashad 49.41 317 *e*P **P** **11 18 31.6 -0.7**
PMG Port Moresby 49.45 105 *e*P **P** **11 18 32.4 -0.4**
comp=Z,126nm,1.0s
PMG Port Moresby 49.45 105 P **P** **11 18 33.0 +0.2**
PMG Port Moresby 49.45 105 P **P** **11 18 32.8 0.0**
comp=Z,84nm,0.8s,baz=278,slow=3.3,SNR=19
MDJ Mudanjiang 49.58 28 P **P** **11 18 34.3 +1.1**
MDJ pP **pP** **11 19 14.1 +1.1**
MDJ sP **sP** **11 19 34.5 +1.8**
MDJ ScP **ScP** **11 23 30.8 -0.1**
MDJ S **S** **11 25 29.3 +1.7**
MDJ sS **sS** **11 26 40.0 +3.1**
MDJ pmax pmax
comp=Z,5.0nm,1.1s
MDJ pmax pmax
comp=Z,41nm,4.0s
BBOO Buckleboo 49.81 138 *e*P **P** **11 18 33.7 -1.4**
comp=Z,178nm,0.8s
IPAY Payeh 49.81 317 *e*P **P** **11 18 36.3 +0.9**
IBAF Bafgh 49.91 310 *e*P **P** **11 18 35.8 -0.4**
IAKL Akhelmad 50.06 317 *e*P **P** **11 18 37.6 +0.3**
IKRD Kardeh 50.31 317 *e*P **P** 11 18 34.2 -5.0
USRK Ussuriysk Arra 50.46 30 P **P** **11 18 39.9 0.0**
comp=Z,5.4nm,0.6s,baz=227,slow=6.3,SNR=14
USRK pP **pP** **11 19 19.6 0.0**
comp=Z,2.8nm,0.7s,baz=243,slow=8.4,SNR=2.0
KURBB Kurchatov Arra 50.70 343 P **P** **11 18 41.5 0.0**
comp=Z,8.4nm,0.6s,baz=164,slow=7.4,SNR=74
KURBB pP **pP** **11 19 22.2 +0.8**
comp=Z,3.3nm,0.6s,baz=153,slow=6.4,SNR=2.9
KURK Kurchatov 50.76 343 *c i*P **P** **11 18 42.2 +0.3**
KURK pmax pmax
comp=Z,24nm,1.0s
KURK Kurchatov 50.76 343 *e*P **P** **11 18 41.8 -0.1**
comp=Z,21nm,0.9s
KURK Kurchatov 50.76 343 P **P** **11 18 42.7 +0.8**
SNR=7.3
ISFR Sfrayin 50.81 317 *e*P **P** **11 18 43.3 +0.3**
ABKT Ailbek 51.20 318 P **P** **11 18 46.5 +0.9**
comp=Z,258nm,0.8s,SNR=14
ISHV Shirvan 51.27 318 *e*P **P** **11 18 47.1 +0.8**
CTA Charters Tower 51.60 118 P **P** **11 18 48.8 -0.1**
CTA pP **pP** **11 19 28.4 -0.4**
CTA ScP **ScP** **11 23 39.9 -0.3**
CTA Charters Tower 51.60 118 P **P** **11 18 48.8 -0.1**
comp=Z,11nm,0.8s,baz=288,slow=7.9,SNR=19
CTA pP **pP** **11 19 28.4 -0.4**
comp=Z,6.8nm,0.9s,baz=285,slow=9.3,SNR=3.0
CTA ScP **ScP** **11 23 39.9 -0.3**
comp=Z,1.3nm,0.4s,baz=263,slow=10,SNR=3.6
CTAO Charters Tower 51.60 118 *e*P **P** **11 18 48.7 -0.1**
CTAO pmax pmax
comp=Z,15nm,0.9s

CTAO Charters Tower 51.60 118 *e*P **P 11 18 48.7 -0.1**
comp=Z,15nm,0.9s
ZAA0 Zalesovo Array 52.30 349 *e*P **P 11 18 53.4 +0.1**
ZALV Zalesovo Beam 52.30 349 P **P 11 18 53.7 +0.4**
ZALV *PP **pP 11 19 33.5 0.0**
ZALV S **S 11 26 04.2 -0.4**
ZALV Zalesovo Beam 52.30 349 P **P 11 18 53.7 +0.4**
ZALV pP **pP 11 19 33.5 0.0**
ZALV S **S 11 26 04.2 -0.4**
ZALV Zalesovo Beam 52.30 349 P **P 11 18 53.7 +0.4**
comp=Z,17nm,0.6s,baz=173,slow=6.1,SNR=110
ZALV pP **pP 11 19 33.5 0.0**
comp=Z,8.9nm,0.6s,baz=178,slow=6.6,SNR=3.2
ZALV S **S 11 26 04.2 -0.4**
comp=Z,0.8nm,0.7s,baz=168,slow=24,SNR=4.8
STKA Stephens Creek 53.10 134 *e*P **P 11 18 58.7 -0.9**
comp=Z,8.9nm,0.7s
STKA Stephens Creek 53.10 134 P **P 11 18 59.4 -0.2**
comp=Z,42nm,0.6s,baz=312,slow=6.7,SNR=71
NVS Novosibirsk 53.45 349 *e*P **P 11 19 01.5 -0.2**
NVS *e*PP **pP 11 19 41.4 -0.6**
NVS *e*S **S 11 26 17.9 -2.2**
NVS pmax pmax
comp=Z,7.0nm,0.8s
NVS pmax pmax
comp=N,4.0nm,0.6s
NVS smax smax
comp=N,41nm,2.7s
NVS smax smax
comp=E,31nm,2.3s
KLR Kul'dur 54.01 26 *e*P **P 11 19 03.3 -2.6**
IDMV Damavand 54.31 313 *e*P **P 11 19 08.5 -0.2**
QRN Al-Qurain 54.98 303 *e*P **P 11 19 13.1 -0.2**
QRN AMb AMB 11 19 14.5
comp=Z,103nm,0.7s
IR3 Iran Long-Peri 55.01 312 *e*P **P 11 19 13.6 +0.1**
RDF Al-Radifah 55.35 304 *e*P **P 11 19 16.2 +0.3**
RDF AMb AMB 11 19 17.8
comp=Z,172nm,0.7s
ABPO Ambohimpanom 55.36 245 *e*P **P 11 19 18.2 +1.9**
ABPO pmax pmax
comp=Z,12nm,0.9s
ABPO Ambohimpanom 55.36 245 *e*P **P 11 19 18.2 +1.9**
comp=Z,12nm,0.9s
BVAR Borovoye Array 55.37 339 P **P 11 19 15.1 -0.6**
BVAR S **S 11 26 45.8 -0.3**
BVAR Borovoye Array 55.37 339 P **P 11 19 15.1 -0.6**
BVAR ScP **ScP 11 23 55.8 -0.1**
BVAR S **S 11 26 45.8 -0.3**
BVAR Borovoye Array 55.37 339 P **P 11 19 15.1 -0.6**
comp=Z,21nm,0.7s,baz=134,slow=8.5,SNR=116
BVAR ScP **ScP 11 23 55.8 -0.1**
comp=Z,2.7nm,1.0s,baz=139,slow=4.9,SNR=4.0
BVAR S **S 11 26 45.8 -0.3**
comp=Z,2.0nm,0.9s,baz=131,slow=18,SNR=6.9
UMR Umm Al-Rimmam 55.41 304 *e*P **P 11 19 16.4 +0.1**
UMR AMb AMB 11 19 17.6
comp=Z,95nm,0.5s
BRVK Borovoye 55.44 339*d* iP **P 11 19 15.4 -0.7**
BRVK pmax pmax
comp=Z,24nm,0.8s
BRVK Borovoye 55.44 339 *e*P **P 11 19 15.6 -0.5**
comp=Z,21nm,0.8s
BRVK Borovoye 55.44 339 P **P 11 19 16.3 +0.2**
SNR=6.9
NAY Al-Naaiem 55.70 304 *e*P **P 11 19 18.4 -0.1**
NAY AMb AMB 11 19 20.0
comp=Z,75nm,0.8s
IRAZ Razeghan 55.79 312 *e*P **P 11 19 18.9 -0.4**
MIB Mutribah 55.80 304 *e*P **P 11 19 19.2 +0.1**
MIB AMb AMB 11 19 20.8
comp=Z,312nm,0.7s
ASAJ Asahikawa 56.28 37 *e*P **P 11 19 22.4 +0.1**
comp=Z,13nm,1.5s
ABKAR Akbulak array 57.00 330 *e*P **P 11 19 26.7 -0.5**
comp=Z,15nm,0.6s
EIDS Eidsvold 57.65 122 *e*P **P 11 19 32.5 +0.2**
comp=Z,11nm,0.6s
YSS Yuzh-Sakhalins 58.00 34 *e*P **P 11 19 36.5 +2.3**
YSS *e* 11 20 16.0
YSS pmax pmax
comp=Z,30nm,1.0s
AKTO Aktyubinsk 58.72 331 P **P 11 19 38.7 -0.5**
AKTO S **S 11 27 28.8 -1.1**
AKTO Aktyubinsk 58.72 331 P **P 11 19 38.7 -0.5**
AKTO ScP **ScP 11 24 11.2 +0.5**
AKTO S **S 11 27 28.8 -1.1**
AKTO Aktyubinsk 58.72 331 P **P 11 19 38.7 -0.5**
comp=Z,16nm,0.9s,baz=136,slow=6.0,SNR=34
AKTO ScP **ScP 11 24 11.2 +0.5**
comp=Z,2.5nm,0.7s,baz=130,slow=5.9,SNR=5.1
AKTO S **S 11 27 28.8 -1.1**
comp=Z,0.7nm,0.5s,baz=333,slow=23,SNR=9.1
CAN Canberra 60.17 134 *e*P **P 11 19 48.5 -1.0**
CAN pmax pmax
comp=Z,24nm,0.8s
CAN Canberra 60.17 134 *e*P **P 11 19 48.5 -1.0**
comp=Z,24nm,0.8s
GNI Garni 61.44 315 *e*P **P 11 19 58.4 +0.2**
comp=Z,25nm,0.9s
GNI Garni 61.44 315 P **P 11 20 00.1 +1.9**
SNR=7.4
DGRG David-gareji 61.51 316 P **P 11 19 59.3 +0.8**
KMBO Kilima Mbogo 61.89 267 *e*P **P 11 20 03.1 +1.4**
comp=Z,8.9nm,0.8s
KMBO Kilima Mbogo 61.89 267 P **P 11 20 03.5 +1.8**
comp=Z,7.3nm,0.7s,baz=63,slow=10,SNR=25
SVE Sverdlovsk 61.91 337‖ *i*P **P 11 20 00.9 +0.2**
SVE pmax pmax
comp=Z,47nm,0.9s
TBLG Delisi 62.06 317 *e*P **P 11 20 01.6 -0.4**
TBLG Delisi 62.06 317 P **P 11 20 01.7 -0.4**
ARU Arti 62.45 336*d* iP **P 11 20 04.3 0.0**
ARU *PP **PcP 11 20 43.7 +1.7**
ARU 11 22 21.7
ARU S **S 11 28 19.4 +2.4**
ARU pmax pmax
comp=Z,30nm,1.0s
ARU Arti 62.45 336 P **P 11 20 04.8 +0.5**
comp=Z,152nm,0.9s,SNR=8.0
AKH Akhalkalaki 62.80 316 P **P 11 20 06.8 -0.4**
ZEI Tsey 63.05 317 *e*P **P 11 20 08.2 -0.6**
ZEI pmax pmax
comp=Z,33nm,0.8s
ONI Oni 63.28 317 P **P 11 20 10.7 +0.6**
YAK Yakutsk 63.38 16 *e*P **P 11 20 09.4 -0.9**
YAK *e* 11 20 43.7
YAK *e*PP **pP 11 20 50.9 -1.0**
YAK *e* 11 22 31.3
YAK *e*PPP PPP 11 24 05.3
YAK *e*S **S 11 28 26.7 -1.7**
YAK *e* 11 29 42.9
YAK *e*SS **SS 11 32 38.1 -0.4**
YAK *e*SSS SSS 11 35 33.3
YAK pmax pmax
comp=Z,10.0nm,0.9s
YAK pmax pmax
comp=Z,44nm,3.1s
YAK pmax pmax
comp=N,108nm,4.4s
YAK pmax pmax
comp=E,34nm,3.2s
YAK smax smax
comp=N,106nm,4.1s
YAK smax smax
comp=E,79nm,5.0s
DDEM Demirkent 63.84 315 *i*P **P 11 20 14.3 +0.4**
KBZ Khabaz 64.09 318 P **P 11 20 15.7 +0.4**
KBZ Khabaz 64.09 318 P **P 11 20 15.7 +0.4**
KBZ Khabaz 64.09 318 P **P 11 20 15.7 +0.4**
comp=E,24nm,0.9s,baz=126,slow=6.1,SNR=67
KIV Kislovodsk 64.32 318*de*P **P 11 20 16.1 -0.9**
KIV *i* 11 20 58.1
KIV S **S 11 28 44.0 +3.1**
KIV pmax pmax
comp=Z,41nm,1.1s
SOKR Solikamsk 65.28 338*c* iP **P 11 20 23.8 +1.2**
SOKR pmax pmax
comp=Z,40nm,1.0s
KELT Kelkit 65.38 313 *i*P **P 11 20 23.6 -0.4**
MALT Malatya 65.44 311 *e*P **P 11 20 25.1 +0.7**
MALT pmax pmax
comp=Z,24nm,1.1s
MALT Malatya 65.44 311 *e*P **P 11 20 25.1 +0.7**
comp=Z,24nm,1.1s

KEMA Kemaliye 65.67 312 *i*P **P 11 20 26.2 +0.4**
GZT Gaziantep 65.83 310 *i*P **P 11 20 27.5 +0.6**
SUSE Susehri 66.17 313 *i*P **P 11 20 27.8 -1.2**
EIL Elat 66.18 301 P **P 11 20 30.4 +1.3**
EIL Elat 66.18 301 P **P 11 20 30.4 +1.3**
comp=Z,29nm,0.7s,baz=28,slow=2.1,SNR=20
SOC Sochi 66.19 317 *e*P **P 11 20 28.1 -0.8**
SOC *e*S **S 11 29 05.8 +2.4**
SOC pmax pmax
comp=Z,43nm,0.6s
GRSN GIRESUNGRSN 66.34 314 *i*P **P 11 20 29.6 -0.3**
MMAI Mount Meron Ar 66.48 305 P **P 11 20 32.7 +1.7**
MMAI Mount Meron Ar 66.48 305 P **P 11 20 32.7 +1.7**
comp=Z,14nm,0.8s,baz=84,slow=8.5,SNR=7.5
VRHR Novokhopersk 67.86 325 *e*P **P 11 20 38.5 -0.7**
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=Z,70nm,0.7s
VRHR pmax pmax
comp=E,30nm,0.6s
GULE Gulek 67.96 309 *i*P **P 11 20 41.0 +0.6**
CSS Prodhromos 68.58 306 *e*P **P 11 20 44.7 +0.6**
comp=E,15nm,0.7s
VORD Divnogorie 69.15 324 *e*P **P 11 20 46.0 -1.2**
VORD pmax pmax
comp=Z,20nm,0.8s
VORD pmax pmax
comp=N,20nm,1.1s
VORD pmax pmax
comp=E,20nm,0.7s
VSR Storozhevoye 69.32 324 *e*P **P 11 20 47.4 -0.9**
VSR pmax pmax
comp=Z,40nm,0.7s
VSR pmax pmax
comp=N,9.0nm,0.6s
VSR pmax pmax
comp=E,30nm,0.8s
PETK Petropavlovsk- 69.39 33 P **P 11 20 49.1 +0.4**
PETK Petropavlovsk- 69.39 33 P **P 11 20 49.1 +0.4**
PETK Petropavlovsk- 69.39 33 P **P 11 20 49.1 +0.4**
comp=E,7.5nm,0.7s,baz=208,slow=5.9,SNR=12
BR131 Keskin Array S 69.41 311 *e*P **P 11 20 48.5 -0.8**
comp=E,14nm,0.7s
BRTR Keskin Array B 69.41 311 P **P 11 20 48.5 -0.8**
BRTR pP **pP 11 21 30.0 -1.6**
BRTR Keskin Array B 69.41 311 P **P 11 20 48.5 -0.8**
comp=E,17nm,0.7s,baz=128,slow=7.0,SNR=110
BRTR pP **pP 11 21 30.0 -1.6**
comp=E,7.5nm,0.9s,baz=131,slow=6.7,SNR=3.8
CASY Casey 69.42 175 *e*P **P 11 20 50.2 +1.7**
comp=E,24nm,0.7s
PET Petropavlovsk 69.88 34‖ *i*P **P 11 20 51.9 +0.2**
PET *e*SP **sP 11 21 54.4 +1.3**
PET *i*S **S 11 29 46.0 -0.8**
PET pmax pmax
comp=Z,54nm,0.7s
BALT Daday 70.05 313 *i*P **P 11 20 53.7 +0.5**
ANTO Ankara 70.08 311 *e*P **P 11 20 53.5 +0.2**
ANTO pmax pmax
comp=Z,20nm,0.9s
ANTO Ankara 70.08 311 *e*P **P 11 20 53.5 +0.2**
comp=Z,20nm,0.9s
ANTO Ankara 70.08 311 P **P 11 20 53.8 +0.5**
SNR=7.2
DZM Mont Dzumac 70.26 115 P **P 11 20 55.1 +0.4**
DZM Mont Dzumac 70.26 115 P **P 11 20 55.1 +0.4**
comp=Z,14nm,1.0s,baz=68,slow=17,SNR=4.6
SIM Simferopol' 70.44 317*ce*P **P 11 20 55.6 +0.4**
SIM *e*PP **pP 11 21 34.0 -3.7**
SIM *e*S **S 11 29 53.0 -0.7**
SIM pmax pmax
comp=Z,35nm,0.8s
ISP Isparta 71.38 309 *e*P **P 11 21 01.9 +0.7**
ISP pmax pmax
comp=Z,12nm,0.6s
ISP Isparta 71.38 309 *e*P **P 11 21 01.9 +0.7**
comp=Z,12nm,0.6s
SEY Seymchan 71.58 23‖ *i*P **P 11 21 01.3 -0.4**
GOLH Golhisar 72.02 308 *i*P **P 11 21 04.7 -0.3**
OBN Obninsk 72.24 328‖ *e*P **P 11 21 05.0 -0.8**
OBN 11 21 22.0
OBN *PP **pP 11 21 48.0 -0.4**
OBN *e*SP **sP 11 22 07.0 -0.5**
OBN 11 23 48.0
OBN *i*S **S 11 30 12.2 -1.7**
OBN pmax pmax
comp=Z,43nm,1.2s
LSZ Lusaka 72.33 253 *e*P **P 11 21 08.4 +1.1**
comp=Z,11nm,0.8s
LSZ Lusaka 72.33 253 P **P 11 21 08.6 +1.3**
comp=Z,8.9nm,0.7s,baz=63,slow=10
TLCR 74.14 316‖ *i*P **P 11 21 18.0 +0.9**
CFR Carcaliu 74.60 316‖ *i*P **P 11 21 19.7 -0.1**
AK02 Malin Array Si 75.13 322 *e*P **P 11 21 21.6 -1.1**
AKASG Malin Array Be 75.13 322 P **P 11 21 22.2 -0.5**
AKASG *PP **pP 11 22 03.6 -2.1**
AKASG 11 24 11.7
AKASG Malin Array Be 75.13 322 P **P 11 21 22.2 -0.5**
AKASG pP **pP 11 22 03.6 -2.1**
AKASG PP **PP 11 24 11.7 -1.6**
AKASG Malin Array Be 75.13 322 P **P 11 21 22.2 -0.5**
comp=Z,12nm,0.7s,baz=90,slow=4.5,SNR=28
AKASG pP **pP 11 22 03.6 -2.1**
comp=Z,1.4nm,0.5s,baz=93,slow=4.7,SNR=2.0
AKASG PP **PP 11 24 11.7 -1.6**
comp=Z,0.2nm,0.2s,baz=91,slow=6.8,SNR=4.5
AK01 Malin Array Si 75.13 322 *e*P **P 11 21 21.6 -1.1**
KIEV Kiev 75.13 322 *e*P **P 11 21 22.1 -0.7**
KIEV pmax pmax
comp=Z,14nm,0.8s
KIEV Kiev 75.13 322 *e*P **P 11 21 22.1 -0.7**
comp=Z,14nm,0.8s
IDI Anoyia 75.45 306 *e*P **P 11 21 25.3 +0.3**
comp=Z,22nm,0.8s
VRI Vrincioaia 75.71 317‖ *i*P **P 11 21 27.1 +0.9**
PLOR Plostina 75.76 317‖ *i*P **P 11 21 27.8 +1.3**
TESR 75.89 317‖ *i*P **P 11 21 27.9 +0.7**
MLR Muntele Rosu 76.18 316 P **P 11 21 29.6 +0.6**
MLR Muntele Rosu 76.18 316 P **P 11 21 29.6 +0.6**
comp=Z,6.0nm,0.8s,baz=147,slow=3.7,SNR=36
LBTB Lobatse 76.24 244 *e*P **P 11 21 31.2 +1.4**
comp=Z,21nm,0.8s
BUR08 Bucovina Ar. S 77.07 318 *e*P **P 11 21 34.7 +0.7**
ARR Arges 77.07 316‖ *i*P **P 11 21 33.8 -0.1**
MMB Musomiste 77.17 312 *e*P **P 11 21 33.4 -1.1**
BOSA Boshof 77.17 240 *e*P **P 11 21 35.6 +0.7**
comp=Z,14nm,0.7s
BOSA Boshof 77.17 240 P **P 11 21 36.5 +1.6**
comp=Z,13nm,0.6s,baz=97,slow=4.8,SNR=44
MPEP Malo Peshtene 77.40 314 *e*P **P 11 21 35.3 -0.4**
JOF Joensuu 77.50 334 *e*P **P 11 21 37.5 +1.7**
JOF Joensuu 77.50 334 *e*p **P 11 21 37.5 +1.7**
NACGM Naroch 77.56 326 *e* **P 11 21 34.0 -2.3**
VTS Vitosha 77.68 313‖ *i*P **P 11 21 37.4 -0.1**
VAY Valandovo 77.99 312 *e*P **P 11 21 37.7 -1.3**
LVV L'vov 78.20 320 *e*P **P 11 21 39.9 -0.1**
DRGR 78.61 317‖ *i*P **P 11 21 44.2 +1.8**
BIA Bitola 78.89 311 *e*P **P 11 21 42.5 -1.6**
SKO Skopje 78.91 312 *e*P **P 11 21 43.0 -1.0**
TRPA Tarpa 78.91 318‖ *e*P **P 11 21 44.7 +0.8**
BILL Bilibino 79.02 21 P **P 11 21 44.0 -0.1**
BILL *e* 11 21 49.4
BILL *e*S **S 11 31 25.6 -2.3**
BILL pmax pmax
comp=Z,9.0nm,2.2s
RPZ Rata Peaks 79.04 135 *e*P **P 11 21 44.6 -0.1**
comp=Z,24nm,0.7s
RPZ Rata Peaks 79.04 135 P **P 11 21 44.8 +0.1**
comp=Z,22nm,0.6s,baz=285,slow=3.0,SNR=10
UZH Uzhgorod 79.15 319*d* iP **P 11 21 46.2 +1.0**
UZH *i* 11 21 57.8
KOLS Kolonicke sedl 79.20 319 *e*P **P 11 21 46.7 +1.2**
KOLS pmax pmax
comp=Z,15nm,1.0s
KOLS Kolonicke sedl 79.20 319 *e*P **P 11 21 46.7 +1.2**
BZS Buzias 79.20 316‖ *i*P **P 11 21 45.8 +0.2**
FINES FINESS Array B 79.44 332 P **P 11 21 46.7 +0.3**
FINES PKKPbc **PKKPbc 11 40 33.7 -3.6**
FINES FINESS Array B 79.44 332 P **P 11 21 46.7 +0.3**
comp=Z,9.6nm,0.3s,baz=106,slow=5.5,SNR=164
FINES PKKPbc **PKKPbc 11 40 33.7 -3.6**
comp=Z,1.1nm,0.6s,baz=245,slow=4.0,SNR=5.5
SUW Suwalki 79.44 324 *e*P **P 11 21 46.5 -0.1**
SUW pmax pmax
comp=Z,72nm,1.0s
SUW Suwalki 79.44 324 *e*P **P 11 21 46.5 -0.1**
comp=Z,72nm,1.0s
KAF Kangasniemi 79.50 333 *e*P **P 11 21 47.5 +0.7**
KAF Kangasniemi 79.50 333 *e*p **P 11 21 47.5 +0.7**
baz=100,slow=5.0
CRVS Cervenica-Dubn 79.73 319 *e*P **P 11 21 49.3 +0.9**
CRVS pmax pmax
comp=Z,15nm,1.5s
CRVS Cervenica-Dubn 79.73 319 *e*P **P 11 21 49.3 +0.9**
NIE Niedzica 80.54 320 *e*P **P 11 21 54.2 +1.5**
NIE Niedzica 80.54 320 *e*P **P 11 21 54.2 +1.5**
PSZ Piszkesteto 80.65 318 *e*P **P 11 21 54.1 +0.7**
PSZ pmax pmax
comp=Z,28nm,1.5s
PSZ Piszkesteto 80.65 318 *e*P **P 11 21 54.1 +0.7**
comp=Z,28nm,1.5s
PSZ Piszkesteto 80.65 318‖ *i*P **P 11 21 54.4 +1.0**
PSZ Piszkesteto 80.65 318‖ *e*P **P 11 21 53.8 +0.4**
OJC Ojcow 80.96 320 *e*P **P 11 21 55.4 +0.5**
OJC Ojcow 80.96 320 *e*P **P 11 21 55.4 +0.5**
OJC Ojcow 80.96 320 *e*P **P 11 21 55.4 +0.5**
KEV Kevo 81.21 340 *e*P **P 11 21 56.7 +0.9**
KEV Kevo 81.21 340 *e*p **P 11 21 56.7 +0.9**
PKSM Moragy 81.33 316‖ *i*P **P 11 21 57.7 +0.8**
PKSM Moragy 81.33 316‖ *e* **P 11 21 57.4 +0.5**
VYHS Vyhne 81.41 318 *e*P **P 11 21 57.7 +0.4**
VYHS pmax pmax
comp=Z,8.0nm,1.6s
VYHS Vyhne 81.41 318 *e*P **P 11 21 57.7 +0.4**
ARCES ARCESS Array B 81.66 340 P **P 11 21 58.5 +0.4**
ARCES ARCESS Array B 81.66 340 P **P 11 21 58.5 +0.4**
comp=Z,2.4nm,0.5s,baz=104,slow=5.2,SNR=21
OKC Ostrava-Krasne 81.98 320 *e*P **P 11 22 01.0 +0.7**
OKC Ostrava-Krasne 81.98 320 *e*P **P 11 22 01.0 +0.7**
MORC Moravsky Berou 82.37 320 *e*P **P 11 22 02.8 +0.4**
MORC pmax pmax
comp=Z,7.0nm,0.8s
MORC Moravsky Berou 82.37 320 *e*P **P 11 22 02.8 +0.4**
comp=Z,7.1nm,0.8s
MORC Moravsky Berou 82.37 320‖ *i*P **P 11 22 03.0 +0.7**
URZ Urewera 82.38 129 *e*P **P 11 22 01.9 -0.7**
comp=Z,30nm,1.0s
URZ Urewera 82.38 129 P **P 11 22 01.8 -0.7**
comp=Z,18nm,0.6s,baz=287,slow=3.3,SNR=8.9
BEHE Becsehely 82.64 316‖ *e*P **P 11 22 05.7 +1.9**
SOP Sopron 82.87 318‖ *e*P **P 11 21 59.4 -5.5**
KRLC Kraliky 82.88 320 *e*P **P 11 22 06.1 +1.1**
KRLC *e* 11 22 47.7
KRLC Kraliky 82.88 320 *e*P **P 11 22 06.1 +1.1**
KRLC *e*pP **pP 11 22 47.7 -1.0**
KOGS Kog 83.00 316 *i*P **P 11 22 06.5 +0.9**
DPC Dobruska-Polom 83.20 320 *e*P **P 11 22 07.4 +0.8**
DPC *e* 11 22 49.3
DPC Dobruska-Polom 83.20 320 *e*P **P 11 22 07.4 +0.8**
DPC Dobruska-Polom 83.20 320 *e*P **P 11 22 07.4 +0.8**
DPC *e*pP **pP 11 22 49.3 -1.1**
KSP Ksiaz 83.25 321 *e*P **P 11 22 07.7 +0.9**
KSP *e*PP **pP 11 22 50.0 -0.6**
UPC Upice 83.41 320 *e*P **P 11 22 09.3 +1.7**
UPC Upice 83.41 320 *e*P **P 11 22 09.3 +1.7**
GROS Grobnik 83.52 316 *i*P **P 11 22 09.1 +0.7**
GROS *e*pP **pP 11 22 50.2 -2.0**
TREC Trest 83.67 319 *e*P **P 11 22 10.0 +1.0**
TREC Trest 83.67 319 *e*P **P 11 22 10.0 +1.0**
LJU Ljubljana 84.18 316 *i*P **P 11 22 12.7 +1.0**
LJU *e* 11 32 21.0
PRU Pruhonice 84.32 320 *e*P **P 11 22 12.5 +0.3**
PRU Pruhonice 84.32 320 *e*P **P 11 22 12.5 +0.3**
CRNS Crni Vrh 84.36 316 *i*P **P 11 22 13.2 +0.6**
BRG Berggiesshubel 84.74 321 *e*P **P 11 22 14.8 +0.5**
comp=Z,5.3nm,0.9s
BRG Berggiesshubel 84.74 321 *e*P **P 11 22 14.8 +0.5**
BRG pmax pmax
comp=Z,5.0nm,0.9s
GERES GERESS Array B 84.83 319 P **P 11 22 15.9 +1.0**
GERES pP **pP 11 22 57.0 -1.9**
GERES GERESS Array B 84.83 319 P **P 11 22 15.9 +1.0**
comp=Z,3.7nm,0.9s,baz=106,slow=5.7,SNR=14
GERES pP **pP 11 22 57.0 -1.9**
comp=Z,1.0nm,0.6s,baz=82,slow=4.7,SNR=3.0
KHC Kasperske Hory 84.92 319 *e*P **P 11 22 15.7 +0.4**
KHC Kasperske Hory 84.92 319 *e*P **P 11 22 15.7 +0.4**
comp=Z,4.1nm,0.9s
KHC Kasperske Hory 84.92 319 *e*P **P 11 22 15.7 +0.4**
HFS Hagfors 85.26 330 P **P 11 22 17.4 +0.8**
HFS pP **pP 11 23 01.0 +0.3**
HFS Hagfors 85.26 330 P **P 11 22 17.4 +0.8**
comp=Z,4.0nm,0.3s,baz=106,slow=4.5,SNR=59
HFS pP **pP 11 23 01.0 +0.3**
comp=Z,3.0nm,0.7s,baz=207,slow=0.3,SNR=1.7
CLL Collm 85.34 321 *i*P **P 11 22 18.2 +0.9**
CLL *e*PP **pP 11 23 00.0 -1.3**
CLL pmax pmax
comp=Z,7.0nm,1.1s
CLL Collm 85.34 321 *i*P **P 11 22 18.2 +0.9**
comp=Z,7.0nm,1.1s
CLL *e* 11 22 40.0
CLL *e*pP **pP 11 23 00.0 -1.3**
CLL *e*S **S 11 32 30.0 -3.0**
GRB5 Grafenberg Arr 86.17 319 *e*P **P 11 22 22.8 +1.4**
comp=Z,25nm,1.8s
GRB2 Grafenberg Arr 86.17 319 *e*P **P 11 22 23.1 +1.6**
comp=Z,12nm,0.8s
GRC3 Grafenberg Arr 86.23 319 *e*P **P 11 22 23.0 +1.3**
comp=Z,6.0nm,0.7s
GRC4 Grafenberg Arr 86.26 319 *e*P **P 11 22 23.3 +1.4**
comp=Z,7.0nm,0.7s
GRC1 Grafenberg Arr 86.27 319 *e*P **P 11 22 23.1 +1.2**
comp=Z,7.0nm,0.7s
GRC2 Grafenberg Arr 86.36 319 *e*P **P 11 22 23.5 +1.1**
comp=Z,31nm,2.1s
GRA2 Grafenberg Arr 86.37 319 *e*P **P 11 22 24.2 +1.8**
comp=Z,55nm,2.3s
GRF Grafenberg Arr 86.46 319 *e*P **P 11 22 24.8 +1.9**
GRF pmax pmax
comp=Z,46nm,2.1s
GRF Grafenberg Arr 86.46 319 *e*P **P 11 22 24.8 +1.9**
comp=Z,46nm,2.1s
NB2 NORSAR Subarra 86.51 331 P **P 11 22 22.5 -0.4**
comp=Z,1.6nm,0.6s,baz=93,slow=4.8
NOA NORSAR Array B 86.51 331 P **P 11 22 22.8 0.0**
NOA pP **pP 11 23 06.7 -0.3**
NOA PP **PP 11 25 48.6 +1.7**
NOA NORSAR Array B 86.51 331 P **P 11 22 22.8 0.0**
comp=Z,1.0nm,0.4s,baz=95,slow=5.0,SNR=12
NOA pP **pP 11 23 06.7 -0.3**
comp=Z,2.4nm,0.9s,baz=93,slow=4.8,SNR=2.7
NOA PP **PP 11 25 48.6 +1.7**
comp=Z,2.5nm,0.8s,baz=87,slow=7.7,SNR=7.1
KBS Kingsbay 86.70 349*ce*P **P 11 22 23.9 +0.5**
KBS pmax pmax
comp=Z,12nm,1.2s
GAMB Gambell 87.17 26 *e*P **P 11 22 23.0 -2.9**
comp=Z,9.4nm,1.2s
DAVOX Davos/Dischmat 87.40 317 P **P 11 22 28.6 +1.0**
DAVOX pP **pP 11 23 10.3 -1.5**
DAVOX Davos/Dischmat 87.40 317 P **P 11 22 28.6 +1.0**
comp=Z,12nm,0.6s,baz=113,slow=7.2,SNR=25
DAVOX pP **pP 11 23 10.3 -1.5**
comp=Z,6.5nm,0.8s,baz=180,slow=4.5,SNR=2.4
KEST Kesra 88.13 306 *e*P **P 11 22 33.0 +1.8**
KEST Kesra 88.13 306 P **P 11 22 32.7 +1.4**
comp=Z,6.6nm,0.8s,baz=353,slow=0.8,SNR=23
PGF Pioggiola 88.15 312 *e*P **P 11 22 31.7 +0.5**
comp=Z,35nm,1.3s
PGF Pioggiola 88.15 312 *e*P **P 11 22 31.7 +0.5**
PGF pmax pmax
comp=Z,35nm,1.3s
PGF Pioggiola 88.15 312 *e*P **P 11 22 31.7 +0.5**
comp=Z,35nm,1.3s
BFO Black Forest 88.40 318 *e*P **P 11 22 32.6 +0.5**
BFO pmax pmax
comp=Z,4.0nm,0.8s
BFO Black Forest 88.40 318 *e*P **P 11 22 32.6 +0.5**
comp=Z,4.2nm,0.8s
TNA Tin City 88.73 25 *e*P **P 11 22 34.5 +1.2**
comp=Z,5.7nm,1.2s
CDF Champ du Feu 89.09 318 *e*P **P 11 22 35.9 +0.4**
comp=Z,6.8nm,0.8s
CDF *e*pP **pP 11 23 16.7 -3.1**
CDF Champ du Feu 89.09 318 *e*P **P 11 22 35.9 +0.4**
CDF *e*PP **pP 11 23 16.7 -3.1**

CDF pmax pmax
comp=Z,7.0nm,0.8s
CDF Champ du Feu 89.09 318 eP P 11 22 35.9 +0.4
comp=Z,6.8nm,0.8s
CDF ePP pP 11 23 16.7 -3.1
SBF Sospel 89.23 314 eP P 11 22 36.8 +0.6
comp=Z,31nm,0.7s
SBF epP pP 11 23 19.0 -1.6
SBF Sospel 89.23 314 eP P 11 22 36.8 +0.6
SBF e*PP pP 11 23 19.0 -1.6
SBF pmax pmax
comp=Z,31nm,0.7s
SBF Sospel 89.23 314 eP P 11 22 36.8 +0.6
comp=Z,31nm,0.7s
SBF epP pP 11 23 19.0 -1.6
HINF Hinteralfeld 89.41 318 eP P 11 22 37.2 +0.3
HINF Hinteralfeld 89.41 318 eP P 11 22 37.2 +0.3
HINF Hinteralfeld 89.41 318 eP P 11 22 37.2 +0.3
LPG La Plagne 89.63 315 eP P 11 22 39.1 +0.8
comp=Z,32nm,0.8s
LPG La Plagne 89.63 315 eP P 11 22 39.1 +0.8
LPG pmax pmax
comp=Z,32nm,0.8s
LPG La Plagne 89.63 315 eP P 11 22 39.1 +0.8
comp=Z,32nm,0.8s
LPL La Plagne 89.64 315 eP P 11 22 39.1 +0.8
comp=Z,36nm,0.7s
LPL epP pP 11 23 22.0 -0.6
LPL La Plagne 89.64 315 eP P 11 22 39.1 +0.8
LPL e*PP pP 11 23 22.0 -0.6
LPL pmax pmax
comp=Z,36nm,0.7s
LPL La Plagne 89.64 315 eP P 11 22 39.1 +0.8
comp=Z,36nm,0.7s
LPL epP pP 11 23 22.0 -0.6
MBDF Montbardon 89.66 315 eP P 11 22 38.4 +0.1
comp=Z,11nm,0.9s
MBDF Montbardon 89.66 315 eP P 11 22 38.4 +0.1
MBDF pmax pmax
comp=Z,11nm,0.9s
MBDF Montbardon 89.66 315 eP P 11 22 38.4 +0.1
comp=Z,11nm,0.9s
BNI Bardonecchia 89.70 315 eP P 11 22 38.0 -0.5
BNI pmax pmax
comp=Z,9.0nm,0.9s
BNI Bardonecchia 89.70 315 eP P 11 22 38.0 -0.5
comp=Z,8.7nm,0.9s
HAU Haudompre 89.74 318 eP P 11 22 39.0 +0.6
comp=Z,21nm,0.7s
HAU epP pP 11 23 20.9 -1.9
HAU Haudompre 89.74 318 eP P 11 22 39.0 +0.6
HAU e*PP pP 11 23 20.9 -1.9
HAU pmax pmax
comp=Z,21nm,0.7s
HAU Haudompre 89.74 318 eP P 11 22 39.0 +0.6
comp=Z,21nm,0.7s
HAU epP pP 11 23 20.9 -1.9
WLF Walferdange 89.75 320 AP pP 11 23 22.5 -0.3
comp=Z,7.1nm,1.3s
MEM Membach 89.78 320 AP pP 11 23 24.0 +1.1
FRF La Foret Royal 89.82 313 eP P 11 22 39.7 +0.8
comp=Z,20nm,0.7s
FRF La Foret Royal 89.82 313 eP P 11 22 39.7 +0.8
FRF pmax pmax
comp=Z,20nm,0.7s
FRF La Foret Royal 89.82 313 eP P 11 22 39.7 +0.8
comp=Z,20nm,0.7s
LMR La Mourre 89.94 313 eP P 11 22 40.1 +0.7
comp=Z,11nm,1.0s
LMR La Mourre 89.94 313 eP P 11 22 40.1 +0.7
LMR pmax pmax
comp=Z,11nm,1.0s
LMR La Mourre 89.94 313 eP P 11 22 40.1 +0.7
comp=Z,11nm,1.0s
CABF La Chapelle 90.01 316 eP P 11 22 40.7 +0.9
comp=Z,17nm,0.7s
CABF La Chapelle 90.01 316 eP P 11 22 40.7 +0.9
CABF pmax pmax
comp=Z,17nm,0.7s
CABF La Chapelle 90.01 316 eP P 11 22 40.7 +0.9
comp=Z,17nm,0.7s
PAGF Fort de Pagny 90.11 318 eP P 11 22 41.6 +1.4
comp=Z,5.4nm,1.2s
PAGF Fort de Pagny 90.11 318 eP P 11 22 41.6 +1.4
comp=Z,5.4nm,1.2s
ORIF Oris-en-Rattie 90.28 315 eP P 11 22 42.2 +1.1
comp=Z,9.3nm,0.6s
ORIF Oris-en-Rattie 90.28 315 eP P 11 22 42.2 +1.1
ORIF pmax pmax
comp=Z,9.0nm,0.6s
ORIF Oris-en-Rattie 90.28 315 eP P 11 22 42.2 +1.1
comp=Z,9.3nm,0.6s
MEZF Maizieres J'vi 90.57 318 eP P 11 22 43.0 +0.8
comp=Z,14nm,1.0s
MEZF epP pP 11 23 24.0 -2.6
MEZF Maizieres J'vi 90.57 318 eP P 11 22 43.0 +0.8
comp=Z,14nm,1.0s
MEZF epP pP 11 23 24.0 -2.6
SMRF Simiane la Rot 90.57 314 eP P 11 22 43.7 +1.3
comp=Z,16nm,0.8s
SMRF Simiane la Rot 90.57 314 eP P 11 22 43.7 +1.3
comp=Z,16nm,0.8s
GIVF Givet 90.58 320 eP P 11 22 43.9 +1.7
GIVF epP pP 11 23 25.4 -1.2
GIVF Givet 90.58 320 eP P 11 22 43.9 +1.7
GIVF e*PP pP 11 23 25.4 -1.2
GIVF Givet 90.58 320 eP P 11 22 43.9 +1.7
GIVF epP pP 11 23 25.4 -1.2
SFTF Sexfontaines 90.60 318 eP P 11 22 43.2 +0.8
comp=Z,31nm,0.8s
SFTF epP pP 11 23 25.1 -1.7
SFTF Sexfontaines 90.60 318 eP P 11 22 43.2 +0.8
comp=Z,31nm,0.8s
SFTF epP pP 11 23 25.1 -1.7
DOU Dourbes 90.72 320 AP pP 11 23 27.5 +0.2
BAIF Baives 90.98 320 eP P 11 22 45.4 +1.3
comp=Z,21nm,0.9s
BAIF epP pP 11 23 27.4 -1.1
BAIF Baives 90.98 320 eP P 11 22 45.4 +1.3
BAIF e*PP pP 11 23 27.4 -1.1
BAIF pmax pmax
comp=Z,21nm,0.9s
BAIF Baives 90.98 320 eP P 11 22 45.4 +1.3
comp=Z,21nm,0.9s
BAIF epP pP 11 23 27.4 -1.1
VIVF Saint-Julien-l 91.14 315 eP P 11 22 45.8 +0.8
comp=Z,26nm,1.0s
VIVF Saint-Julien-l 91.14 315 eP P 11 22 45.8 +0.8
VIVF pmax pmax
comp=Z,26nm,1.0s
VIVF Saint-Julien-l 91.14 315 eP P 11 22 45.8 +0.8
comp=Z,26nm,1.0s
SSB Saint Sauveur 91.19 315 eP P 11 22 45.6 +0.3
SSB pmax pmax
comp=Z,11nm,0.9s
SSB Saint Sauveur 91.19 315 eP P 11 22 45.6 +0.3
comp=Z,11nm,0.9s
LOR Lormes 91.48 317 eP P 11 22 47.3 +0.8
comp=Z,19nm,0.8s
LOR epP pP 11 23 29.4 -1.5
LOR Lormes 91.48 317 eP P 11 22 47.3 +0.8
comp=Z,19nm,0.8s
LOR epP pP 11 23 29.4 -1.5
SMF Signal de Mont 91.55 317 eP P 11 22 47.6 +0.7
comp=Z,27nm,0.9s
SMF epP pP 11 23 29.7 -1.6
SMF Signal de Mont 91.55 317 eP P 11 22 47.6 +0.7
SMF e*PP pP 11 23 29.7 -1.6
SMF pmax pmax
comp=Z,27nm,0.9s
SMF Signal de Mont 91.55 317 eP P 11 22 47.6 +0.7
comp=Z,27nm,0.9s
SMF epP pP 11 23 29.7 -1.6
SSF Saint Saulge 91.74 317 eP P 11 22 48.4 +0.7
SSF epP pP 11 23 30.8 -1.3
SSF Saint Saulge 91.74 317 eP P 11 22 48.4 +0.7
SSF e*PP pP 11 23 30.8 -1.3
SSF Saint Saulge 91.74 317 eP P 11 22 48.4 +0.7
SSF epP pP 11 23 30.8 -1.3
LASF Ste Croix 91.79 314 eP P 11 22 48.4 +0.3
comp=Z,9.5nm,0.9s
LASF Ste Croix 91.79 314 eP P 11 22 48.4 +0.3
comp=Z,9.5nm,0.9s
AVF Avril sur Loir 91.87 317 eP P 11 22 49.0 +0.7
comp=Z,13nm,0.9s
AVF epP pP 11 23 31.2 -1.5
AVF Avril sur Loir 91.87 317 eP P 11 22 49.0 +0.7
AVF e*PP pP 11 23 31.2 -1.5
AVF pmax pmax
comp=Z,13nm,0.9s
AVF Avril sur Loir 91.87 317 eP P 11 22 49.0 +0.7
comp=Z,13nm,0.9s
AVF epP pP 11 23 31.2 -1.5
BGF Bois d'Agland 92.24 317 eP P 11 22 50.4 +0.3
BGF epP pP 11 23 33.4 -1.1
BGF Bois d'Agland 92.24 317 eP P 11 22 50.4 +0.3
BGF e*PP pP 11 23 33.4 -1.1
BGF Bois d'Agland 92.24 317 eP P 11 22 50.4 +0.3
BGF epP pP 11 23 33.4 -1.1
TCF Toulx Ste Croi 92.71 316 eP P 11 22 53.3 +1.0
comp=Z,8.5nm,1.0s
TCF epP pP 11 23 34.4 -2.3
TCF Toulx Ste Croi 92.71 316 eP P 11 22 53.3 +1.0
TCF e*PP pP 11 23 34.4 -2.3
TCF pmax pmax
comp=Z,9.0nm,1.0s
TCF Toulx Ste Croi 92.71 316 eP P 11 22 53.3 +1.0
comp=Z,8.5nm,1.0s
TCF epP pP 11 23 34.4 -2.3
QSPA South Pole Qui 92.74 180 eP P 11 22 52.6 +0.5
comp=Z,6.6nm,0.5s
QSPA South Pole Qui 92.74 180 P P 11 22 53.1 +1.1
comp=Z,6.2nm,0.5s,baz=280,slow=0.8,SNR=92
CAF Calviac 92.98 315 eP P 11 22 54.8 +1.3
comp=Z,12nm,1.0s
CAF epP pP 11 23 37.1 -0.9
CAF Calviac 92.98 315 eP P 11 22 54.8 +1.3
CAF e*PP pP 11 23 37.1 -0.9
CAF pmax pmax
comp=Z,12nm,1.0s
CAF Calviac 92.98 315 eP P 11 22 54.8 +1.3
comp=Z,12nm,1.0s
CAF epP pP 11 23 37.1 -0.9
MTLF Montolieu 93.06 313 eP P 11 22 54.8 +0.9
comp=Z,26nm,1.2s
MTLF Montolieu 93.06 313 eP P 11 22 54.8 +0.9
MTLF pmax pmax
comp=Z,26nm,1.2s
MTLF Montolieu 93.06 313 eP P 11 22 54.8 +0.9
comp=Z,26nm,1.2s
RJF Les Rejaudoux 93.31 316 eP P 11 22 56.1 +1.1
comp=Z,5.1nm,0.9s
RJF Les Rejaudoux 93.31 316 eP P 11 22 56.1 +1.1
RJF pmax pmax
comp=Z,5.0nm,0.9s
RJF Les Rejaudoux 93.31 316 eP P 11 22 56.1 +1.1
comp=Z,5.1nm,0.9s
FLN La Foliniere 94.18 319 eP P 11 22 59.3 +0.4
FLN La Foliniere 94.18 319 eP P 11 22 59.3 +0.4
FLN La Foliniere 94.18 319 eP P 11 22 59.3 +0.4
MFF Saint Martin d 94.28 317 eP P 11 23 00.0 +0.6
MFF Saint Martin d 94.28 317 eP P 11 23 00.0 +0.6
MFF Saint Martin d 94.28 317 eP P 11 23 00.0 +0.6
GRR Gorron 94.48 319 eP P 11 23 01.0 +0.7
GRR Gorron 94.48 319 eP P 11 23 01.0 +0.7
GRR Gorron 94.48 319 eP P 11 23 01.0 +0.7
EKA Eskdalemuir Ar 94.63 326 P P 11 23 01.5 +0.7
EKA pP pP 11 23 44.9 -0.4
EKA Eskdalemuir Ar 94.63 326 P P 11 23 01.5 +0.7
comp=Z,1.3nm,0.6s,baz=98,slow=6.0,SNR=6.2
EKA pP pP 11 23 44.9 -0.4
comp=Z,1.5nm,0.6s,baz=96,slow=5.3,SNR=4.7
ETSF Etsaut 95.13 313 eP P 11 23 03.9 +0.4
comp=Z,8.5nm,0.9s
ETSF Etsaut 95.13 313 eP P 11 23 03.9 +0.4
ETSF pmax pmax
comp=Z,9.0nm,0.9s
ETSF Etsaut 95.13 313 eP P 11 23 03.9 +0.4
comp=Z,8.5nm,0.9s
ROSF Rostrenen 96.08 319 eP P 11 23 08.4 +0.8
ROSF Rostrenen 96.08 319 eP P 11 23 08.4 +0.8
ROSF Rostrenen 96.08 319 eP P 11 23 08.4 +0.8
TORD Torodi Ar. Bea 96.51 283 P P 11 23 10.7 +0.5
TORD pP pP 11 23 53.2 -1.5
TORD PP PP 11 27 07.9 +1.0
TORD Torodi Ar. Bea 96.51 283 P P 11 23 10.7 +0.5
comp=Z,0.5nm,0.7s,baz=85,slow=4.1,SNR=3.3
TORD pP pP 11 23 53.2 -1.5
comp=Z,0.7nm,0.7s,baz=108,slow=3.7,SNR=5.0
TORD PP PP 11 27 07.9 +1.0
comp=Z,1.0nm,0.8s,baz=74,slow=7.6,SNR=6.4
ILAR Eielson Array 97.51 23 PKKPbc PKKPbc 11 39 49.2 -3.7
ILAR Eielson Array 97.51 23 PKKPbc PKKPbc 11 39 49.2 -3.7
comp=Z,0.2nm,0.7s,baz=169,slow=1.4,SNR=4.9
YKA Yellowknife Ar 110.06 16 PKiKP PKiKP 11 28 09.9 -0.4
YKA PKKPbc PKKPbc 11 39 12.5 -2.9
YKA Yellowknife Ar 110.06 16 PKiKP PKiKP 11 28 09.9 -0.4
comp=Z,0.1nm,0.4s,baz=331,slow=0.9,SNR=12
YKA PKKPbc PKKPbc 11 39 12.5 -2.9
comp=Z,0.2nm,0.6s,baz=142,slow=2.5,SNR=5.8
NEW Newport 120.17 27 ePKPdf PKPdf 11 28 30.4 +0.2
NEW Newport 120.17 27 ⇓P PKPdf 11 28 30.1 -0.1
baz=120
A13A Flathead Natio 120.86 25 ⇑P PKPdf 11 28 31.8 +0.2
baz=121
A13A ⇓SKP SKPdf 11 31 51.3 +0.9
baz=121
C11A Tepee Creek (N 120.88 27 ⇑P PKPdf 11 28 31.7 +0.1
baz=121
B13A Whitefish 121.27 26 ⇑P PKPdf 11 28 32.2 -0.2
baz=121
B13A ⇑SKP SKPdf 11 31 52.7 +1.5
baz=121
C12B Naegeli Ranch, 121.33 27 ⇑P PKPdf 11 28 32.2 -0.2
baz=121
SCHQ Schefferville 121.38 350 PKP PKPdf 11 28 32.1 -0.1
SCHQ Schefferville 121.38 350 PKP PKPdf 11 28 32.1 -0.1
comp=Z,1.2nm,0.4s,baz=205,slow=7.7,SNR=8.2
A15A Johnson Ranch, 121.53 24 ⇓P PKPdf 11 28 32.7 -0.2
baz=121
BSMT Bassoo Peak 121.53 26 ePKPdf PKPdf 11 28 32.7 -0.3
B14A Marquette Ranc 121.78 25 ⇓P PKPdf 11 28 33.4 0.0
baz=122
C14A Swan Lake 122.04 26 ⇓P PKPdf 11 28 34.0 +0.1
baz=122
B15A Bradely Ranch, 122.12 24 ⇓P PKPdf 11 28 33.9 -0.2
baz=122
SWMT Swartz Lake 122.13 26 ePKPdf PKPdf 11 28 33.5 -0.5
A17A Triple J Farms 122.36 23 ⇓P PKPdf 11 28 34.3 -0.1
baz=122
C15A Salmond Ranch, 122.52 25 ⇑P PKPdf 11 28 34.5 -0.4
baz=122
C15A ⇓SKP SKPdf 11 31 54.4 +0.7
baz=122
D14A Greenough 122.68 26 ⇑P PKPdf 11 28 34.8 -0.4
baz=122
MSO Missoula 122.68 26 ⇑P PKPdf 11 28 34.8 -0.3
baz=122
A18A Metzger Ranch, 122.70 22 ⇑P PKPdf 11 28 34.8 -0.2
baz=122
B17A L&G Farms, Che 122.85 23 ⇓P PKPdf 11 28 35.2 -0.1
baz=123
C16A Fuhringer Ranc 122.86 24 ⇑P PKPdf 11 28 35.2 -0.2
baz=123
E13A Victor 122.86 27 ⇓P PKPdf 11 28 35.3 -0.2
baz=123
MOD Modoc 122.97 34 ePKPdf PKPdf 11 28 36.7 +0.8
A19A Klindworth Far 123.11 22 ⇓P PKPdf 11 28 35.8 -0.1
baz=123
D15A Lincoln 123.13 25 ⇑P PKPdf 11 28 35.9 -0.1
baz=123
E14A Clinton 123.19 26 ⇓P PKPdf 11 28 36.2 0.0
baz=123
F13A Darby 123.29 27 ⇓P PKPdf 11 28 36.1 -0.3
baz=123
EGMT Eagleton 123.47 23 ⇑P PKPdf 11 28 36.5 -0.1
baz=123
D16A Dana Ranch, Ca 123.55 25 ⇓P PKPdf 11 28 36.4 -0.4
baz=123
D16A ⇓SKP SKPdf 11 31 57.6 +2.0
baz=123
B20A Solberg Farm, 123.78 21 ⇑P PKPdf 11 28 37.3 +0.2
baz=124
D17A Six Diamond Ra 123.81 24 ⇓P PKPdf 11 28 37.2 -0.2
baz=124
E16A East Helena 123.89 25 ⇓P PKPdf 11 28 37.7 +0.2
baz=124
A22A Carney Farms, 124.05 20 ⇓P PKPdf 11 28 37.8 +0.2
baz=124
F15A Butte 124.08 26 ⇓P PKPdf 11 28 37.9 -0.1
baz=124
G14A Jackson 124.11 27 ⇓P PKPdf 11 28 38.5 +0.4
baz=124
H13A Challis 124.25 28 ⇓P PKPdf 11 28 38.9 +0.6
baz=124
C20A Veseth Ranch, 124.39 22 ⇓P PKPdf 11 28 38.8 +0.4
baz=124
DLMT Dillon 124.41 27 ePKPdf PKPdf 11 28 39.3 +0.8
G15A Dillon 124.61 27 ⇑P PKPdf 11 28 39.5 +0.5
baz=124
BOZ Bozeman (W) 124.61 26 ePKIKP PKPdf 11 28 39.4 +0.5
BOZ Bozeman (W) 124.61 26 ePKPdf PKPdf 11 28 39.4 +0.5
MCMT McKenzie Canyo 124.70 27 ePKPdf PKPdf 11 28 39.8 +0.6
B23A Brockton 124.81 19 ⇑P PKPdf 11 28 39.3 +0.3
baz=125
F17A Fitzpatrick Pl 124.82 25 ⇑P PKPdf 11 28 39.7 +0.4
baz=125
G16A Moss Hill, Enn 124.86 26 ⇑P PKPdf 11 28 39.8 +0.3
baz=125
HLID Hailey 124.92 29 ⇓P PKPdf 11 28 39.9 +0.3
baz=125
H15A Lima 124.96 27 ⇓P PKPdf 11 28 39.9 +0.2
baz=125
C22A Vida 125.13 20 ⇓P PKPdf 11 28 40.1 +0.3
baz=125
J13A Cove Ranch, Pi 125.16 29 ⇓P PKPdf 11 28 40.6 +0.5
baz=125
D21A La Casta Ranch 125.31 22 ⇓P PKPdf 11 28 40.4 +0.3
baz=125
C23A Lambert 125.32 20 ⇓P PKPdf 11 28 40.9 +0.8
baz=125
H16A Russell Place, 125.52 26 ⇓P PKPdf 11 28 41.4 +0.6
baz=125
D22A Cohagen 125.53 21 ⇓P PKPdf 11 28 41.5 +1.0
baz=125
ULM Lac du Bonnet 125.61 12 PKP PKPdf 11 28 40.5 0.0
ULM Lac du Bonnet 125.61 12 PKP PKPdf 11 28 40.5 0.0
comp=Z,2.8nm,0.4s,baz=277,slow=0.9,SNR=7.0
E21A Keefer Ranch, 125.72 22 ⇑P PKPdf 11 28 41.6 +0.7
baz=126
D23A Lindsay 125.86 20 ⇑P PKPdf 11 28 42.2 +1.0
baz=126
J15A Blackfoot 125.99 28 ⇓P PKPdf 11 28 42.3 +0.7
baz=126
LKWY Lake 126.00 26 ePKIKP PKPdf 11 28 44.0 +2.2
LKWY Lake 126.00 26 ePKPdf PKPdf 11 28 44.0 +2.2
RLMT Red Lodge 126.03 25 ⇑P PKPdf 11 28 42.3 +0.6
baz=126
G20A Bridger 126.38 24 ⇓P PKPdf 11 28 42.6 +0.2
baz=126
NVAR Mina Array Bea 126.41 36 PKP PKPdf 11 28 44.2 +1.5
NVAR Mina Array Bea 126.41 36 PKP PKPdf 11 28 44.2 +1.5
comp=Z,2.5nm,0.8s,baz=274,slow=2.3,SNR=18
H19A Powell 126.52 25 ⇓P PKPdf 11 28 43.5 +0.9
baz=126
J17A Brown Place, J 126.81 27 ⇓P PKPdf 11 28 43.6 +0.4
baz=127
H20A Greybull 127.07 24 ⇓P PKPdf 11 28 44.2 +0.6
baz=127
J18A Kendall Valley 127.24 26 ⇓P PKPdf 11 28 44.3 +0.1
baz=127
F24A Ekalaka 127.27 20 ⇑P PKPdf 11 28 44.2 +0.3
baz=127
I20A Worland 127.46 25 ⇓P PKPdf 11 28 44.9 +0.5
baz=127
BW06 Boulder Array 127.80 26 ⇑P PKPdf 11 28 45.5 +0.3
baz=128
PDAR Pinedale Array 127.80 26 PKP PKPdf 11 28 45.4 +0.1
PDAR pPKP pPKPdf 11 29 31.9 +0.2
PDAR SKPbc SKiKP 11 31 46.3 -19
PDAR Pinedale Array 127.80 26 PKP PKPdf 11 28 45.4 +0.1
comp=Z,1.0nm,0.6s,baz=231,slow=1.0,SNR=9.0
PDAR pPKP pPKPdf 11 29 31.9 +0.2
comp=Z,0.5nm,0.6s,baz=251,slow=2.7,SNR=2.6
PDAR SKPbc SKiKP 11 31 46.3 -19
comp=Z,0.7nm,0.9s,baz=249,slow=2.5,SNR=4.2
I21A Big Trails, Te 127.92 24 ⇑P PKPdf 11 28 45.6 +0.3
baz=128
J20A Shoshoni 127.96 25 ⇑P PKPdf 11 28 45.8 +0.4
baz=128
K19A Absolon Red Bu 128.07 26 ⇓P PKPdf 11 28 45.4 -0.3
baz=128
H24A Dirks Ranch, A 128.18 21 ⇑P PKPdf 11 28 45.8 +0.1
baz=128
DUG Dugway 128.21 31 ePKIKP PKPdf 11 28 47.4 +1.4
DUG Dugway 128.21 31 ePKPdf PKPdf 11 28 47.4 +1.4
K20A Yellowstone Ra 128.42 26 ⇑P PKPdf 11 28 46.6 +0.2
baz=128
J22A Midwest 128.58 24 ⇓P PKPdf 11 28 46.2 -0.4
baz=128
RSSD Black Hills 128.91 21 ePKIKP PKPdf 11 28 47.5 +0.2
RSSD Black Hills 128.91 21 ePKPdf PKPdf 11 28 47.5 +0.2
I24A Kuemmerle Ranc 128.91 22 ⇑P PKPdf 11 28 47.5 +0.3
baz=129
K22A Casper 129.19 24 ⇓P PKPdf 11 28 48.1 +0.3
baz=129
L21A Rawlins 129.40 25 ⇑P PKPdf 11 28 48.5 +0.2
baz=129
N19A John Jarvie Ra 129.46 28 ⇓P PKPdf 11 28 48.8 +0.4
baz=129
M21A Separation Pea 129.70 26 ⇓P PKPdf 11 28 49.2 +0.3
baz=130
MSU Marysvale 129.79 32 ePKIKP PKPdf 11 28 52.1 +2.9
MSU Marysvale 129.79 32 ePKPdf PKPdf 11 28 52.0 +2.9
P17A Butcher Ranch, 129.81 30 ⇓SKP 11 31 55.2
baz=130
N20A Spence Gulch, 129.92 27 ⇓SKP SKPab 11 31 57.0 +1.8
baz=130
P18A Preston Nutter 129.93 30 ⇑P PKPdf 11 28 50.1 +0.6
baz=130
P18A ⇑SKP SKPab 11 31 56.2 +0.8
baz=130,SNR=15
L23A Garrett 129.97 24 ⇑P PKPdf 11 28 49.4 0.0
baz=130
Q16A Castle Valley 130.01 31 ⇑P PKPdf 11 28 50.0 +0.5
baz=130
SRU San Rafael 130.19 30 ePKIKP PKPdf 11 28 50.7 +0.9
SRU San Rafael 130.19 30 ePKPdf PKPdf 11 28 50.7 +0.9
SRU San Rafael 130.19 30 ⇓P PKPdf 11 28 50.4 +0.5
baz=130
SRU ⇓SKP SKPab 11 31 56.7 +0.4
baz=130,SNR=5.2
N21A Black Mountain 130.32 26 ⇓P PKPdf 11 28 50.5 +0.4
baz=130
N21A ⇑SKP SKPab 11 31 58.2 +1.4
baz=130
GMRC Granite Mounta 130.41 38 ⇓SKP SKPab 11 31 58.8 +1.5
baz=130
O20A White River Ci 130.49 28 ⇑P PKPdf 11 28 50.9 +0.5
baz=130
O20A ⇓SKP 11 31 58.5
baz=130
P19A Cripple Cowboy 130.54 29 ⇓P PKPdf 11 28 51.1 +0.6
baz=130
P19A ⇑SKP 11 31 59.0
baz=130,SNR=10.0
PFO Pinyon Flat Ob 130.68 40 ⇑SKP SKPab 11 32 00.3 +1.9
baz=130
BELC Belle Mtn. Jos 130.72 39 ⇓SKP SKPab 11 31 59.8 +1.2
baz=131
N22A Wattenberg Ran 130.75 26 ⇑SKP SKPab 11 31 58.5 -0.2
baz=131,SNR=10
O21A Pagoda 130.78 27 ⇓SKP SKPab 11 31 59.8 +0.9
baz=131
N23A Red Feather La 130.89 25 ⇓SKP SKPab 11 31 59.4 +0.1
baz=131,SNR=16
P20A De Beque 130.93 28 ⇓SKP SKPab 11 31 59.5 +0.2
baz=131,SNR=9.5
Q19A Hogan Spring (130.94 29 ⇓P PKPdf 11 28 52.4 +1.3
baz=131
Q19A ⇑SKP 11 31 59.6
baz=131,SNR=20
IRM Iron Mountain 131.14 38 ⇓SKP SKPab 11 32 02.0 +1.7
baz=131
MONP Monument Peak 131.16 40 ⇓SKP SKPab 11 32 01.3 +0.7
baz=131
O22A Kremmling 131.23 26 ⇑SKP SKPab 11 31 59.3 -1.5
baz=131,SNR=15
U15A North Rim 131.25 34 ⇓P PKPdf 11 28 53.0 +1.0
baz=131
U15A ⇓SKP 11 32 01.8
baz=131
W13A Hualapai Mount 131.27 36 ⇓SKP SKPab 11 32 01.1 +0.1
baz=131
BC3 Big Chuckawall 131.29 39 ⇓SKP SKPab 11 32 01.9 +0.9
baz=131
N24A Carr 131.39 24 ⇓SKP SKPab 11 32 01.4 +0.1
baz=131

Q20A	**Ridgley Place,** baz=131,SNR=14	**131.40**	**29**	⇓SKP		**SKPab**	**11 32 00.5**	**-0.9**
O23A	**Lake Granby, G** baz=131	**131.47**	**26**	⇓P		**PKPdf**	**11 28 53.1**	**+0.8**
O23A	baz=131,SNR=13			⇑SKP			11 32 01.9	
SWSC	**Sam W. Stewart** baz=131	**131.53**	**40**	⇑SKP		**SKPab**	**11 32 02.4**	**+0.6**
ECSD	**EROS Data Cent**	**131.58**	**15**	*e*PKPdf		**PKPdf**	**11 28 52.2**	**+0.1**
ECSD				*e*SKPbc		**SKPbc**	**11 32 00.7**	**-0.4**
P22A	**Eagle** baz=131,SNR=15	**131.60**	**27**	⇑SKP		**SKPab**	**11 32 01.6**	**-0.7**
PDMCI	**Parker Dam,Lak** baz=132	**131.66**	**37**	⇓SKP		**SKPab**	**11 32 02.2**	**-0.2**
Y12C	**Blythe** baz=132	**131.80**	**38**	⇑SKP		**SKPab**	**11 32 03.9**	**+0.9**
Q21A	**Lamborn Mesa,** baz=132,SNR=6.8	**131.84**	**28**	⇑SKP		**SKPab**	**11 32 04.1**	**+0.8**
ISCO	**Idaho Springs** baz=132,SNR=8.5	**131.94**	**26**	⇓SKP		**SKPab**	**11 32 03.7**	**-0.2**
R20A	**Redvale** baz=132,SNR=13	**131.97**	**29**	⇑SKP		**SKPab**	**11 32 03.6**	**-0.3**
GLA	**Glamis** baz=132	**132.08**	**39**	⇑SKP		**SKPab**	**11 32 05.4**	**+1.1**
Q22A	**Crested Butte,** baz=132,SNR=12	**132.13**	**27**	⇑SKP		**SKPab**	**11 32 04.0**	**-0.7**
P23A	**Jefferson** baz=132	**132.19**	**26**	⇓SKP		**SKPab**	**11 32 02.9**	**-2.1**
R21A	**Cimarron** baz=132,SNR=8.2	**132.22**	**28**	⇑SKP		**SKPab**	**11 32 04.6**	**-0.4**
S20A	**Disappointment** baz=132,SNR=8.3	**132.26**	**29**	⇓SKP		**SKPab**	**11 32 04.3**	**-0.9**
WUAZ	**Wupatki** baz=132	**132.42**	**34**	⇑SKP		**SKPab**	**11 32 05.8**	**0.0**
Q23A	**Hartsel** baz=132	**132.58**	**26**	⇓SKP		**SKPab**	**11 32 05.3**	**-1.2**
Y14A	**Wickenburg** baz=132	**132.60**	**37**	⇑P		**PKPdf**	**11 28 55.1**	**+0.8**
Y14A	baz=132			⇑SKP			11 32 06.3	
S21A	**Coal Bank Pass** baz=132	**132.67**	**29**	⇓P		**PKPdf**	**11 28 55.4**	**+0.7**
S21A	baz=132,SNR=31			⇓SKP			11 32 06.2	
MVCO	**Mesa Verde** baz=132,SNR=11	**132.67**	**30**	⇑SKP		**SKPab**	**11 32 05.8**	**-1.1**
R22A	**Saguache, Gunn** baz=132,SNR=18	**132.71**	**28**	⇓SKP		**SKPab**	**11 32 06.1**	**-1.1**
P25A	**Willow Gulch B** baz=133	**132.79**	**25**	⇓P		**PKPdf**	**11 28 55.5**	**+0.7**
P25A	baz=133			⇑SKP			11 32 06.7	
S22A	**4UR Ranch, Cre** baz=133,SNR=12	**133.06**	**28**	⇓SKP		**SKPab**	**11 32 07.1**	**-1.6**
P26A	**Davis Ranch, A** baz=133	**133.09**	**24**	⇑P		**PKPdf**	**11 28 55.7**	**+0.5**
R23A	**Moffat** baz=133,SNR=10	**133.17**	**27**	⇑SKP		**SKPab**	**11 32 08.5**	**-0.7**
X16A	**Lo Mia Camp, P** baz=133	**133.18**	**35**	⇓SKP		**SKPab**	**11 32 08.4**	**-0.8**
Q25A	**Bedland, Calha** baz=133	**133.26**	**25**	⇓SKP		**SKPab**	**11 32 08.1**	**-1.3**
U20A	**Newcomb** baz=133	**133.31**	**31**	⇑SKP		**SKPab**	**11 32 08.9**	**-0.7**
T21A	**Navajo Lake** baz=133	**133.32**	**29**	⇑SKP		**SKPab**	**11 32 07.9**	**-1.9**
Q26A	**Hugo** baz=133	**133.56**	**24**	⇑SKP		**SKPab**	**11 32 08.0**	**-2.6**
T22A	**Edith** baz=133,SNR=6.7	**133.61**	**29**	⇓SKP		**SKPab**	**11 32 09.0**	**-2.0**
U21A	**Nageezi** baz=134,SNR=32	**133.70**	**30**	⇓SKP		**SKPab**	**11 32 09.8**	**-1.6**
R25A	**Fountain Ranch** baz=134	**133.89**	**26**	⇓SKP		**SKPab**	**11 32 08.3**	**-3.8**
S24A	**Houchin Ranch,** baz=134,SNR=5.3	**133.90**	**27**	⇓SKP		**SKPab**	**11 32 09.8**	**-2.5**
X18A	**Snowflake** baz=134	**133.94**	**34**	⇓SKP		**SKPab**	**11 32 10.7**	**-1.7**
T23A	**Casias Ranch,** baz=134,SNR=15	**134.01**	**28**	⇑SKP		**SKPab**	**11 32 10.9**	**-1.9**
214A	**Organ Pipe Nat** baz=134	**134.07**	**39**	⇓SKP		**SKPab**	**11 32 11.5**	**-1.4**
U22A	**Llaves** baz=134,SNR=14	**134.14**	**29**	⇑SKP		**SKPab**	**11 32 11.2**	**-2.2**
S25A	**Robets Cordova** baz=134,SNR=6.4	**134.23**	**26**	⇑SKP		**SKPab**	**11 32 11.2**	**-2.4**
W20A	**Ramah** baz=134	**134.28**	**32**	⇓SKP		**SKPab**	**11 32 12.1**	**-1.9**
T24A	**Torres, Weston** baz=134,SNR=7.0	**134.43**	**27**	⇑SKP		**SKPab**	**11 32 11.5**	**-3.2**
V22A	**San Miguel Ran** baz=134,SNR=7.8	**134.48**	**30**	⇑SKP		**SKPab**	**11 32 12.5**	**-2.3**
U23A	**El Rito** baz=134,SNR=8.8	**134.50**	**29**	⇑SKP		**SKPab**	**11 32 12.2**	**-2.7**
T25A	**Trinidad** baz=134,SNR=8.1	**134.67**	**27**	⇑SKP		**SKPab**	**11 32 11.7**	**-3.9**
S26A	**Kim** baz=134	**134.68**	**25**	⇓SKP		**SKPab**	**11 32 12.2**	**-3.4**
X20A	**Quemado** baz=134	**134.72**	**32**	⇓SKP		**SKPab**	**11 32 13.9**	**-2.1**
U24A	**Moreno Valley** baz=135	**134.87**	**28**	⇑SKP		**SKPab**	**11 32 14.5**	**-2.2**
V23A	**Ortiz Mt. (NFS** baz=135,SNR=8.4	**134.97**	**29**	⇓SKP		**SKPab**	**11 32 13.6**	**-3.4**
T26A	**Comanche Natio** baz=135,SNR=14	**135.00**	**26**	⇓SKP		**SKPab**	**11 32 13.7**	**-3.3**
W22A	**Albuquerque** baz=135	**135.16**	**31**	⇓SKP		**SKPab**	**11 32 15.5**	**-2.3**
X21A	**Alamocita Cree** baz=135	**135.17**	**32**	⇓SKP		**SKPab**	**11 32 15.4**	**-2.5**
Y20A	**Horse Springs,** baz=135	**135.26**	**33**	⇓SKP		**SKPab**	**11 32 15.3**	**-3.1**
U25A	**Circle Dot Ran** baz=135	**135.28**	**27**	⇑SKP		**SKPab**	**11 32 14.6**	**-3.7**
V24A	**Rampart Ranch,** baz=135	**135.43**	**29**	⇓P		**PKPdf**	**11 29 00.7**	**+0.8**
V24A	baz=135,SNR=9.4			⇑SKP			11 32 14.8	
W23A	**Werner Place,** baz=135,SNR=5.4	**135.45**	**30**	⇓SKP		**SKPab**	**11 32 15.3**	**-3.8**
T27A	**Campo** baz=135	**135.47**	**25**	⇓SKP		**SKPab**	**11 32 14.7**	**-4.3**
X22A	**Bernardo** baz=135	**135.53**	**31**	⇑SKP		**SKPab**	**11 32 16.4**	**-3.0**
Y21A	**Point of Rocks** baz=135	**135.57**	**32**	⇑SKP		**SKPab**	**11 32 16.2**	**-3.5**
U26A	**Atchley Ranch,** baz=135	**135.58**	**27**	⇑SKP		**SKPab**	**11 32 14.9**	**-4.7**
V25A	**Rancho No Teng** baz=136	**135.65**	**28**	⇑P		**PKPdf**	**11 29 01.3**	**+1.0**
Z20A	**Nine Sixteen R** baz=136	**135.74**	**34**	⇓SKP		**SKPab**	**11 32 16.9**	**-3.5**
W24A	**Lazy 6 Ranch,** baz=136	**135.78**	**29**	⇓P		**PKPdf**	**11 29 01.3**	**+0.8**
W24A	baz=136,SNR=5.5			⇓SKP			11 32 16.1	
U27A	**Thompson Grove** baz=136	**135.97**	**26**	⇓SKP		**SKPab**	**11 32 15.8**	**-5.4**
Y22A	**Socorro** baz=136	**136.00**	**32**	⇓SKP		**SKPab**	**11 32 17.2**	**-4.3**
Z21A	**St. Cloud Mine** baz=136	**136.10**	**33**	⇓SKP		**SKPab**	**11 32 17.6**	**-4.4**
120A	**U Bar Ranch, L** baz=136	**136.14**	**34**	⇑SKP		**SKPab**	**11 32 18.0**	**-4.2**
W25A	**X Bar L Ranch,** baz=136	**136.22**	**28**	⇓SKP		**SKPab**	**11 32 17.9**	**-4.5**
Y23A	**Lovelace Mesa,** baz=136	**136.47**	**31**	⇑P		**PKPdf**	**11 29 01.6**	**-0.2**
Y23A	baz=136,SNR=22			⇑SKP			11 32 17.9	
Z22A	**Elephant Butte** baz=136	**136.52**	**32**	⇓SKP		**SKPab**	**11 32 18.5**	**-5.3**
319A	**Douglas** baz=136	**136.62**	**36**	⇓SKP		**SKPab**	**11 32 19.6**	**-4.6**
121A	**Cookes Peak, D** baz=136	**136.63**	**34**	⇓SKP		**SKPab**	**11 32 19.2**	**-5.1**
W26A	**Owens Ranch, T** baz=136	**136.66**	**28**	⇑P		**PKPdf**	**11 29 02.4**	**+0.3**
SFIN	**Scholer Farm** baz=136	**136.66**	**7**	⇑P		**PKPdf**	**11 29 03.3**	**+1.6**
220A	**Playas Peak, P** baz=136	**136.68**	**35**	⇓SKP		**SKPab**	**11 32 19.3**	**-5.2**
Y24A	**Capitan** baz=137	**136.79**	**30**	⇑P		**PKPdf**	**11 29 02.8**	**+0.4**
Y24A	baz=137,SNR=20			⇓SKP			11 32 18.5	
W27A	**Bowe Ranch, En** baz=137,SNR=8.8	**137.00**	**27**	⇑SKP		**SKPab**	**11 32 18.9**	**-6.9**
221A	**Mesquite Ranch** baz=137	**137.02**	**34**	⇓SKP		**SKPab**	**11 32 20.3**	**-5.7**
320A	**Kipp Ranch, An** baz=137	**137.09**	**36**	⇓P		**PKPdf**	**11 29 02.3**	**-0.6**
320A	baz=137			⇓SKP			11 32 20.6	
Y25A	**Mesa, Roswell** baz=137,SNR=9.4	**137.16**	**29**	⇑SKP		**SKiKP**	**11 32 19.3**	**-5.1**
Z24A	**Sheppen Canyo** baz=137,SNR=15	**137.30**	**31**	⇑SKP		**SKiKP**	**11 32 21.0**	**-3.8**
222A	**Williams Famil** baz=137	**137.33**	**33**	⇑SKP		**SKiKP**	**11 32 21.4**	**-3.4**
Y26A	**Elida** baz=137	**137.58**	**29**	⇑SKP		**SKiKP**	**11 32 21.3**	**-3.9**
Z25A	**Roswell** baz=138,SNR=11	**137.67**	**30**	⇓SKP		**SKiKP**	**11 32 21.3**	**-4.1**
124A	**Stringfield Ra** baz=138,SNR=6.4	**137.75**	**31**	⇓SKP		**SKiKP**	**11 32 22.5**	**-3.3**
Y27A	**Causey** baz=138	**137.93**	**28**	⇑SKP		**SKiKP**	**11 32 21.8**	**-4.1**
Z26A	**Caprock** baz=138,SNR=8.5	**138.04**	**29**	⇓SKP		**SKiKP**	**11 32 22.1**	**-4.0**
MSTX	**Muleshoe** baz=138,SNR=7.5	**138.04**	**28**	⇑SKP		**SKiKP**	**11 32 22.4**	**-3.8**
X29A	**Tulia** baz=138	**138.12**	**26**	⇑SKP		**SKiKP**	**11 32 22.5**	**-3.8**
125A	**Gardner Draw,** baz=138,SNR=10	**138.19**	**31**	⇓SKP		**SKiKP**	**11 32 22.8**	**-3.7**
224A	**Cornudas Mount** baz=138	**138.20**	**32**	⇑SKP		**SKiKP**	**11 32 23.0**	**-3.6**
Z27A	**Tatum** baz=138,SNR=29	**138.37**	**29**	⇓SKP		**SKiKP**	**11 32 23.4**	**-3.4**
126A	**Clayton Basin,** baz=138	**138.52**	**30**	⇑SKP		**SKiKP**	**11 32 23.2**	**-4.0**
MNTX	**Cornudas Mount** baz=138,SNR=5.3	**138.57**	**32**	⇓SKP		**SKiKP**	**11 32 23.9**	**-3.3**
Y29A	**Porterfield Fa** baz=138	**138.63**	**26**	⇑SKP		**SKiKP**	**11 32 23.7**	**-3.6**
X31A	**McDonald Ranch** baz=138	**138.69**	**24**	⇓SKP		**SKiKP**	**11 32 24.2**	**-3.1**
Z28A	**Tucker Farm, M** baz=139,SNR=8.8	**138.78**	**28**	⇑SKP		**SKiKP**	**11 32 24.5**	**-3.2**
226B	**Tecolote Peak,** baz=139,SNR=10	**138.91**	**31**	⇓SKP		**SKiKP**	**11 32 25.3**	**-2.7**
325A	**Bean Ranch, Si** baz=139,SNR=12	**139.04**	**32**	⇓SKP		**SKiKP**	**11 32 25.5**	**-2.9**
Z29A	**Hungry Hill Ra** baz=139,SNR=15	**139.12**	**27**	⇑SKP		**SKiKP**	**11 32 26.2**	**-2.2**
Y31A	**Rekieta Farm,** baz=139	**139.15**	**25**	⇓SKP		**SKiKP**	**11 32 25.2**	**-3.1**
128A	**Castleberry Fa** baz=139	**139.29**	**28**	⇓SKP		**SKiKP**	**11 32 25.6**	**-3.1**
Z30A	**Sanderson Ranc** baz=139,SNR=9.1	**139.36**	**26**	⇑SKP		**SKiKP**	**11 32 25.0**	**-3.8**
425A	**Indio Mountain** baz=139,SNR=9.1	**139.49**	**33**	⇑SKP		**SKiKP**	**11 32 26.7**	**-2.6**
129A	**Stewart Farms,** baz=139,SNR=9.1	**139.57**	**28**	⇑SKP		**SKiKP**	**11 32 26.1**	**-3.1**
326A	**Caldwell Ranch** baz=139	**139.61**	**31**	⇑SKP		**SKiKP**	**11 32 26.7**	**-2.8**
228A	**UT Block 9, Go** baz=140	**139.65**	**29**	⇑SKP		**SKiKP**	**11 32 27.0**	**-2.5**
Z31A	**Sharp Cattle R** baz=140	**139.76**	**25**	⇓SKP		**SKiKP**	**11 32 26.9**	**-2.7**
Z32A	**Haskell** baz=140	**140.04**	**24**	⇓SKP		**SKiKP**	**11 32 27.7**	**-2.5**
426A	**McDonald Obser** baz=140,SNR=11	**140.09**	**32**	⇓SKP		**SKiKP**	**11 32 28.0**	**-2.6**
328A	**Wristen Ranch,** baz=140,SNR=5.6	**140.15**	**30**	⇑SKP		**SKiKP**	**11 32 28.7**	**-1.7**
229A	**Bryant Ranch,** baz=140	**140.15**	**28**	⇑SKP		**SKiKP**	**11 32 28.5**	**-2.0**
131A	**Roby** baz=140	**140.20**	**26**	⇓P		**PKPdf**	**11 29 09.4**	**+0.9**
131A	baz=140			⇑SKP		**SKiKP**	**11 32 27.9**	**-2.6**
427A	**Hayter Ranch,** baz=140	**140.28**	**31**	⇑P		**PKPdf**	**11 29 10.3**	**+1.6**
427A	baz=140,SNR=8.4			⇓SKP		**SKiKP**	**11 32 28.6**	**-2.2**
329A	**Wagon Wheel Ra** baz=140,SNR=14	**140.47**	**29**	⇑SKP		**SKiKP**	**11 32 29.5**	**-1.6**
230A	**Sterling City** baz=140,SNR=17	**140.54**	**27**	⇑SKP		**SKiKP**	**11 32 29.8**	**-1.5**
526A	**Mary Lane Ranc** baz=140,SNR=6.3	**140.54**	**32**	⇓SKP		**SKiKP**	**11 32 29.4**	**-2.0**
ABTX	**Abilene, Hawle** baz=140	**140.57**	**25**	⇑SKP		**SKiKP**	**11 32 29.1**	**-2.2**
527A	**Woodward Ranch** baz=141	**140.73**	**32**	⇑P		**PKPdf**	**11 29 11.6**	**+1.9**
527A	baz=141,SNR=12			⇓SKP		**SKiKP**	**11 32 30.0**	**-1.9**
428A	**Kincaid Ranch,** baz=141,SNR=20	**140.74**	**30**	⇑SKP		**SKiKP**	**11 32 30.8**	**-1.0**
231A	**Bronte** baz=141,SNR=5.9	**140.86**	**27**	⇑SKP		**SKiKP**	**11 32 30.6**	**-1.3**
626A	**Big Bend Ranch** baz=141,SNR=7.5	**140.91**	**33**	⇑SKP		**SKiKP**	**11 32 30.4**	**-1.8**
330A	**Mertzon** baz=141	**140.91**	**28**	⇑SKP		**SKiKP**	**11 32 30.2**	**-1.8**
PLCA	**Paso Flores**	**141.09**	**193**	PKPpre		PKPpre	11 29 05.9	
PLCA				SKPbc		**SKPbc**	**11 32 30.8**	**+0.7**
PLCA	**Paso Flores** comp=Z,1.8nm,0.7s,baz=262,slow=0.3,SNR=5.4	**141.09**	**193**	PKhKP		PKPpre	11 29 05.9	
PLCA	comp=Z,3.2nm,0.8s,baz=182,slow=6.4,SNR=7.5			SKPbc		**SKPbc**	**11 32 30.8**	**+0.7**
429A	**Davenport Ranc** baz=141	**141.22**	**29**	⇓SKP		**SKiKP**	**11 32 30.8**	**-1.9**
TXAR	**Lajitas Array**	**141.34**	**33**	PKPpre		PKPpre	11 29 07.0	
TXAR				SKPbc		**SKPbc**	**11 32 31.5**	**+0.3**
TXAR	**Lajitas Array** comp=Z,1.2nm,0.7s,baz=212,slow=2.2,SNR=8.1	**141.34**	**33**	PKhKP		PKPpre	11 29 07.0	
TXAR	comp=Z,6.5nm,1.0s,baz=270,slow=1.3,SNR=17			SKPbc		**SKPbc**	**11 32 31.5**	**+0.3**
331A	**San Angelo** baz=141,SNR=13	**141.34**	**27**	⇑SKP		**SKiKP**	**11 32 31.2**	**-1.7**
627A	**Terlingua Ranc** baz=141	**141.39**	**32**	⇑P		**PKPdf**	**11 29 07.0**	**-3.8**
627A	baz=141,SNR=12			⇓SKP		**SKiKP**	**11 32 31.7**	**-1.5**
430A	**Baggett Ranch,** baz=141	**141.40**	**29**	⇑SKP		**SKiKP**	**11 32 31.3**	**-1.8**
529A	**Stev Forest Ra** baz=141,SNR=13	**141.46**	**30**	⇑SKP		**SKiKP**	**11 32 31.5**	**-1.7**
332A	**Millersview** baz=141,SNR=16	**141.59**	**26**	⇑SKP		**SKiKP**	**11 32 32.2**	**-1.2**
628A	**Black Gap, Mar** baz=142,SNR=8.5	**141.63**	**32**	⇓SKP		**SKiKP**	**11 32 31.8**	**-1.8**
431A	**Sonora** baz=142,SNR=8.4	**141.78**	**28**	⇓SKP		**SKiKP**	**11 32 32.7**	**-1.2**
530A	**J-C Ranch, Com** baz=142	**141.88**	**29**	⇑P		**PKPdf**	**11 29 07.4**	**-4.2**
530A	baz=142			⇓SKP		**SKiKP**	**11 32 33.5**	**-0.6**
432A	**Menard** baz=142,SNR=7.2	**142.00**	**27**	⇓SKP		**SKiKP**	**11 32 32.9**	**-1.4**
531A	**Rocksprings** baz=142	**142.25**	**28**	⇓P		**PKPdf**	**11 29 07.9**	**-4.3**
531A	baz=142			⇑SKP		**SKiKP**	**11 32 34.0**	**-0.8**
JCT	**Junction City** baz=142	**142.33**	**27**	⇓P		**PKPdf**	**11 29 08.5**	**-3.8**
JCT	baz=142,SNR=9.1			⇑SKP		**SKiKP**	**11 32 33.9**	**-1.1**
532A	**Rocksprings** baz=142	**142.58**	**28**	⇓SKP		**SKiKP**	**11 32 34.8**	**-0.7**
632A	**Uvalde** baz=143	**143.16**	**28**	⇑P		PKPbc	11 29 11.2	0.0
632A	baz=143,SNR=9.7			⇑SKP		**SKiKP**	**11 32 36.1**	**-0.6**
732A	**Laxson Ranch,** baz=144	**143.72**	**29**	⇑P		PKPbc	11 29 13.1	+0.4
BDFB	**Brasilia**	**145.14**	**246**	PKPbc		**PKPab**	**11 29 19.0**	**+1.2**
BDFB				pPKPbc		pPKPbc	11 30 02.8	-0.7
BDFB				SKPbc		**SKiKP**	**11 32 41.8**	**+0.6**
BDFB	**Brasilia** comp=Z,6.9nm,0.7s,baz=154,slow=4.2,SNR=14	**145.14**	**246**	PKPbc		**PKPab**	**11 29 19.0**	**+1.2**
BDFB	comp=Z,14nm,0.7s,baz=133,slow=3.3,SNR=8.0			pPKPbc		pPKPbc	11 30 02.8	-0.7
BDFB	comp=Z,6.6nm,1.1s,baz=82,slow=5.1,SNR=4.7			SKPbc		**SKiKP**	**11 32 41.8**	**+0.6**
CPUP	**Villa Florida**	**147.42**	**222**	PKPbc		**PKPbc**	**11 29 24.7**	**+0.9**
CPUP				pPKPbc		**pPKPbc**	**11 30 09.6**	**-0.3**
CPUP	**Villa Florida** comp=Z,2.1nm,0.6s,baz=150,slow=1.3,SNR=6.1	**147.42**	**222**	PKPbc		**PKPbc**	**11 29 24.7**	**+0.9**
CPUP	comp=Z,11nm,0.8s,baz=101,slow=3.2,SNR=6.2			pPKPbc		**pPKPbc**	**11 30 09.6**	**-0.3**
LPAZ	**La Paz**	**161.59**	**222**	PKP		**PKPdf**	**11 29 41.5**	**-0.1**
LPAZ				*e*PKPdf		**PKPdf**	**11 29 42.4**	**+0.8**
LPAZ				pPKP		**PKPab**	**11 30 27.3**	**0.0**
LPAZ	**La Paz** comp=Z,2.6nm,0.9s,baz=58,slow=4.0,SNR=9.0	**161.59**	**222**	PKP		**PKPdf**	**11 29 41.5**	**-0.1**
LPAZ	comp=Z,2.3nm,0.8s,baz=132,slow=3.1,SNR=4.3			pPKP		**PKPab**	**11 30 27.3**	**0.0**

IDC ***19*** *11:14:15.2±0.6,32°.05S×178°.67W,h0km,mb4.5/8, mb1 4.7/9,mb1mx4.4/20,mbtmp4.5/9,ML4.6/1,MS3.6/6, Ms1 3.6/6,ms1mx3.2/30,Error ellipse: s-maj=25.4km s-min=21.8km az=127.0*

ISCJB ***19*** *11:14:19.2±0.5,32°.40S±0°.04×178°.76W±0°.10,h33km, mb4.6/16,MS3.7/4,Error ellipse: s-maj=12.3km s-min=4.3km az=15.4*

AUST ***19*** *11:14:19.7±0.0,32°.48S×178°.22W,h40km,Error ellipse: s-maj=1.9km s-min=0.9km az=281.0*

NEIC ***19*** *11:14:23.1±1.3,32°.18S×178°.59W,h56km±11km,mb4.8/11, Error ellipse: s-maj=15.1km s-min=10.1km az=121.0*

ISC 19 11:14:20.2±0.5,32°.30S±0°.06×178°.59W±0°.10,h33km, n103,σ1°.26/89,mb4.6/16,MS3.6/4,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.10**	**11**	*e*Pn	**Pn**		**11 15 06.5**	**-0.3**
MXZ	**Matakaoa Point**	**5.83**	**205**	PN	**Pn**		**11 15 44.8**	**+0.5**
MXZ				SN	**Sn**		**11 16 52.7**	**+2.5**
PUZ	**Puketiti**	**6.31**	**203**	PN	**Pn**		**11 15 50.6**	**-0.3**
PUZ				SN	**Sn**		**11 16 59.3**	**-2.6**
MWZ	**Matawai**	**6.80**	**207**	PN	**Pn**		**11 15 57.3**	**-0.5**
MWZ				SN	**Sn**		**11 17 14.7**	**+0.6**
WCZ	**Waipu Caves**	**6.89**	**236**	PN	Pn		11 16 04.7	+5.8
URZ	**Urewera**	**6.91**	**209**	Pn	**Pn**		**11 16 01.0**	**+1.9**
URZ				*e*Sn	**Sn**		**11 17 19.1**	**+2.6**
URZ	**Urewera** 10nm,0.3s,baz=332,slow=3.0,SNR=39	**6.91**	**209**	Pn	**Pn**		**11 15 58.7**	**-0.4**
URZ	14nm,0.3s,baz=316,slow=22,SNR=10.0			Sn	**Sn**		**11 17 16.2**	**-0.3**
URZ	comp=Z,203nm,19.2s,baz=58,slow=38			LR	LR		11 18 41.2	
OUZ	**Omahuta** 53nm,0.4s	**7.13**	**244**	*e*Pn	Pn		11 16 07.6	+5.4
OUZ	**Omahuta**	**7.13**	**244**	PN	Pn		11 16 07.1	+4.9
KNZ	**Kokohu**	**7.36**	**203**	PN	**Pn**		**11 16 04.3**	**-1.1**
KNZ				SN	**Sn**		**11 17 26.4**	**-1.2**
NMHZ	**Naumai**	**7.75**	**208**	PN	**Pn**		**11 16 10.7**	**0.0**
NMHZ				SN	**Sn**		**11 17 37.2**	**-0.1**
BKZ	**Black Stump Fm**	**7.93**	**209**	PN	**Pn**		**11 16 11.6**	**-1.6**
MCHZ	**McNeill Hill**	**8.09**	**207**	*e*PN	**Pn**		**11 16 15.5**	**+0.2**
HIZ	**Hauiti**	**8.19**	**219**	*e*PN	Pn		11 16 20.5	+3.8
KAHZ	**Kahuranaki**	**8.33**	**205**	*e*PN	**Pn**		**11 16 16.3**	**-2.3**
BHHZ	**Black Hill Sta**	**8.38**	**210**	PN	**Pn**		**11 16 19.0**	**-0.4**
FWVZ	**Far West T-bar**	**8.41**	**213**	PN	**Pn**		**11 16 19.9**	**0.0**
TRVZ	**Turoa**	**8.45**	**213**	*e*PN	**Pn**		**11 16 21.0**	**+0.5**
PNHZ	**Pukenui**	**8.69**	**208**	PN	**Pn**		**11 16 21.2**	**-2.4**
TSZ	**Takapari Road**	**8.90**	**208**	*e*PN	Pn		11 16 22.8	-3.7
PRWZ	**Pori Road**	**9.33**	**206**	*e*PN	**Pn**		**11 16 30.3**	**-2.0**
BFZ	**Birch Farm**	**9.34**	**205**	*e*PN	Pn		11 16 28.9	-3.5
MRZ	**Mangatainoka R**	**9.57**	**208**	*e*PN	Pn		11 16 31.3	-4.3
MRZ				SN	Sn		11 18 13.8	-8.2
KIW	**Kapiti Island**	**10.01**	**210**	*e*PN	Pn		11 16 37.3	-4.4
KIW				SN	Sn		11 18 26.1	-6.7
NNZ	**Nelson**	**10.98**	**214**	*e*PN	Pn		11 16 50.9	-4.0
NNZ				SN	Sn		11 18 47.9	-8.6
THZ	**Tophouse**	**11.63**	**213**	*e*PN	Pn		11 16 59.0	-4.8
THZ				SN	Sn		11 19 04.5	-8.0
LTZ	**Lake Taylor**	**12.72**	**212**	*e*PN	Pn		11 17 13.6	-5.2
OXZ	**Oxford**	**13.25**	**211**	SN	Sn		11 19 38.2	-14
MQZ	**McQueen's Vall**	**13.30**	**209**	SN	Sn		11 19 40.9	-13
MSVF	**Nonsavu**	**14.82**	**347**	*e*Pn	**Pn**		**11 17 48.4**	**+0.9**
ODZ	**Otahua Downs** 18nm,0.4s	**15.23**	**210**	*e*P	P		11 18 04.8	+7.5
DZM	**Mont Dzumac** 549nm,25.4s	**16.75**	**304**	*e*LR	LR		11 21 55.9	
DZM	**Mont Dzumac** comp=Z,308nm,21.1s,baz=201,slow=31	**16.75**	**304**	LR	LR		11 22 46.7	
ARMA	**Armidale** 40nm,0.9s	**25.46**	**266**	*e*P	**P**		**11 19 48.8**	**+3.4**
TBI	**Tubuai** 143nm,27.2s	**27.19**	**78**	*e*LR	LR		11 26 53.8	
PPT2	**Papeete2** 151nm,28.8s	**29.99**	**68**	*e*LR	LR		11 28 04.8	
PPT	**Papeete** comp=Z,97nm,18.9s,baz=162,slow=31	**30.00**	**68**	LR	LR		11 29 44.1	
CTA	**Charters Tower**	**33.66**	**282**	P	**P**		**11 20 59.6**	**+1.4**
CTA	**Charters Tower** 12nm,0.5s,baz=116,slow=10,SNR=13	**33.66**	**282**	P	**P**		**11 20 59.6**	**+1.4**
CTA	comp=Z,82nm,19.7s,baz=328,slow=34			LR	LR		11 33 26.4	
CTAO	**Charters Tower** 9.6nm,0.5s	**33.66**	**282**	*e*P	**P**		**11 20 59.5**	**+1.4**
BBOO	**Buckleboo** baz=38,SNR=5.6	**38.00**	**257**	P	**P**		**11 21 36.8**	**+1.6**
QIS	**Mount Isa** baz=39,SNR=5.7	**38.99**	**277**	P	**P**		**11 21 45.0**	**+1.3**
COEN	**Coen** 54nm,0.4s	**39.35**	**289**	*e*P	**P**		**11 21 47.6**	**+0.9**
COEN	**Coen** baz=40,SNR=16	**39.35**	**289**	P	**P**		**11 21 47.9**	**+1.2**
AS31	**Alice Springs**	**42.54**	**269**	*e*P	**P**		**11 22 12.8**	**-0.2**
ASAR	**Alice Springs**	**42.54**	**269**	P	**P**		**11 22 12.8**	**-0.2**
ASAR	**Alice Springs** 5.1nm,0.6s,baz=106,slow=7.3,SNR=25	**42.54**	**269**	P	**P**		**11 22 12.8**	**-0.2**
WRAB	**Tennant Creek**	**43.70**	**274**	*e*P	**P**		**11 22 22.1**	**-0.2**
WRA	**Warramunga Arr**	**43.70**	**274**	P	**P**		**11 22 22.1**	**-0.2**
WRA	**Warramunga Arr** 14nm,0.3s,baz=112,slow=8.0,SNR=88	**43.70**	**274**	P	**P**		**11 22 22.1**	**-0.2**
JAY	**Jayapura** baz=49,SNR=4.2	**48.35**	**299**	P	**P**		**11 22 59.3**	**+0.2**
KDU	**Kakadu** baz=49,SNR=7.4

ZALV	Zalesovo Beam	119.11	318	PKP		PKPdf	11 33 03.7	-1.3	
ZALV	Zalesovo Beam	119.11	318	PKP		PKPdf	11 33 03.7	-1.3	
	0.4nm,0.4s,baz=146,slow=0.5,SNR=3.6								
BVAR	Borovoye Array	127.40	315	PKP		PKPdf	11 33 20.7	-0.3	
BVAR	Borovoye Array	127.40	315	PKP		PKPdf	11 33 20.7	-0.3	
	1.4nm,0.3s,baz=190,slow=16,SNR=16								
ARCES	ARCESS Array B	140.33	347	PKPpre		PKPpre	11 33 38.3		
ARCES				PKP		PKPdf	11 33 45.2	+0.4	
ARCES	ARCESS Array B	140.33	347	PKhKP		PKPpre	11 33 38.3		
	2.2nm,0.8s,baz=336,slow=2.7,SNR=5.0								
ARCES				PKP		PKPdf	11 33 45.2	+0.4	
	2.3nm,0.6s,baz=14,slow=1.5,SNR=5.0								
JOF	Joensuu	143.98	337	*ep*		PKPab	11 33 48.7	-0.1	
	2.3nm,0.5s								
KBZ	Khabaz	145.71	302	PKPbc		PKPdf	11 33 54.8	-0.2	
KBZ	Khabaz	145.71	302	PKPbc		PKPdf	11 33 54.8	-0.2	
	4.0nm,0.9s,baz=78,slow=2.1,SNR=11								
KAF	Kangasniemi	146.16	339	*ep*		PKPdf	11 33 55.0	-0.2	
	4.6nm,0.5s								
FIA1	FINESS Array S	146.74	339	*e*PKPdf		PKPdf	11 33 56.6	+0.4	
FINES	FINESS Array B	146.74	339	PKPbc		PKPdf	11 33 56.9	+0.7	
FINES	FINESS Array B	146.74	339	PKPbc		PKPdf	11 33 56.9	+0.7	
	5.0nm,0.5s,baz=57,slow=4.3,SNR=30								
NB2	NORSAR Subarra	150.54	350	PKP		PKPbc	11 34 07.1	-0.8	
	comp=Z,4.8nm,0.5s,baz=16,slow=2.6								
NOA	NORSAR Array B	150.54	350	PKPbc		PKPbc	11 34 07.4	-0.5	
NOA	NORSAR Array B	150.54	350	PKPbc		PKPbc	11 34 07.4	-0.5	
	comp=Z,4.5nm,0.5s,baz=15,slow=4.1,SNR=26								
HFS	Hagfors	150.99	347	PKPbc		PKPbc	11 34 08.1	-0.8	
HFS	Hagfors	150.99	347	PKPbc		PKPbc	11 34 08.1	-0.8	
	comp=Z,5.1nm,0.4s,baz=109,slow=2.5,SNR=69								
AKASG	Malin Array Be	152.47	320	PKPbc		PKPbc	11 34 10.6	-2.0	
AKASG	Malin Array Be	152.47	320	PKPbc		PKPbc	11 34 10.6	-2.0	
	comp=Z,2.9nm,0.7s,baz=66,slow=2.4,SNR=7.6								
BRTR	Keskin Array B	153.00	295	PKPbc		PKPbc	11 34 13.2	-1.1	
BRTR	Keskin Array B	153.00	295	PKPbc		PKPbc	11 34 13.2	-1.1	
	comp=Z,0.7nm,0.4s,baz=149,slow=4.6,SNR=5.8								
TORD	Torodi Ar. Bea	160.93	181	PKPab		PKPab	11 35 00.5	+0.4	
TORD	Torodi Ar. Bea	160.93	181	PKPab		PKPab	11 35 00.5	+0.4	
	comp=Z,2.6nm,0.7s,baz=179,slow=3.4,SNR=14								

WEL 19 11:17:02.4±0.9, 47°25S×165°28E, h33km, ML4.0/7, 1C-1D, Error ellipse: s-maj=8.9km s-min=6.4km az=90.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYZ	Puysegur Point	1.45	42	PN	Pn	11 17 25.4	-0.9
APZ	The Paps	1.90	78	PN	Pn	11 17 31.6	-0.9
APZ				SN	Sn	11 17 52.7	-2.7
DCZ	Deep Cove	2.19	37	PN	Pn	11 17 35.6	-1.0
SYZ	Scrubby Hill	2.74	76	PN	Pn	11 17 44.3	+0.3
SYZ				SN	Sn	11 18 15.5	-0.5
MLZ	Mavora Lakes	2.76	48	⇑PN	Pn	11 17 45.0	+0.6
MLZ				SN	Sn	11 18 15.0	-1.7
MSZ	Milford Sound	3.17	37	PN	Pn	11 17 50.8	+0.8
TUZ	Tuapeka	3.27	68	⇓PN	Pn	11 17 51.4	+0.1
TUZ				SN	Sn	11 18 27.0	-2.0
EAZ	Earnscleugh	3.45	56	PN	Pn	11 17 53.7	-0.1
EAZ				SN	Sn	11 18 33.8	+0.4
WKZ	Wanaka	3.55	48	PN	Pn	11 17 56.8	+1.4
JCZ	Jackson Bay	4.00	39	PN	Pn	11 18 03.6	+2.0
ODZ	Otahua Downs	4.33	61	PN	Pn	11 18 04.2	-1.7
LBZ	Lake Benmore	4.46	52	PN	Pn	11 18 06.5	-1.3
FOZ	Fox Glacier	4.82	42	*e*PN	Pn	11 18 14.1	+1.6
DSZ	Denniston Nort	7.21	43	*e*PN	Pn	11 18 44.2	-1.3

IDC 19 11:25:08.9±52.0, 15°00S×171°41W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/20, mbtmpb3.9/3, Error ellipse: s-maj=1017.0km s-min=195.0km az=78.0, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	45.90	240	P	P	11 33 33.7	+0.3
	1.2nm,0.7s,baz=107,slow=11,SNR=2.9						
WRA	Warramunga Arr	51.81	256	P	P	11 34 19.0	-0.1
	0.5nm,0.7s,baz=94,slow=6.9,SNR=16						
ASAR	Alice Springs	52.06	252	P	P	11 34 20.6	-0.4
	2.7nm,0.5s,baz=89,slow=7.8,SNR=76						

CSEM 19 11:25:20.5, 42°51N×13°40E, h10km, After ROM
ROM 19 11:25:20.5±0.1, 42°51N×13°40E, h10km±1km, Ml1.6/2, Error ellipse: s-maj=1.6km s-min=0.9km az=114.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	Campotosto	0.02	15	Pg	Pg	11 25 22.8	+0.3
CAMP				Sg	Sg	11 25 24.0	+0.1
	84nm,0.4s						
CAMP	Campotosto	0.02	15	Pg	Pg	11 25 22.8	+0.3
CAMP				Sg	Sg	11 25 24.0	+0.1
	84nm,0.4s						
AQU	L'Aquila	0.16	180	Pg	Pg	11 25 24.9	+0.8
AQU				Sg	Sg	11 25 27.3	+0.8
	349nm,0.2s						
AQU	L'Aquila	0.16	180	Pg	Pg	11 25 24.9	+0.8
AQU				Sg	Sg	11 25 27.3	+0.8
	349nm,0.2s						
TERO	Teramo	0.19	54	Pg	Pg	11 25 25.2	+0.7
TERO				Sg	Sg	11 25 28.3	+1.0
TERO	Teramo	0.19	54	Pg	Pg	11 25 25.2	+0.7
TERO				Sg	Sg	11 25 28.3	+1.0
LNSS	Leonessa	0.28	289	Pg	Pg	11 25 27.0	+0.6
LNSS				Sg	Sb	11 25 31.6	-1.2
	29nm,0.2s						
LNSS	Leonessa	0.28	289	Pg	Pg	11 25 27.0	+0.6
LNSS				Sg	Sb	11 25 31.6	-1.2
	29nm,0.2s						
NRCA	Norcia	0.38	327	Pg	Pg	11 25 28.7	+0.5
NRCA				Sg	Sb	11 25 34.6	-1.1
NRCA	Norcia	0.38	327	Pg	Pg	11 25 28.7	+0.5
NRCA				Sg	Sb	11 25 34.6	-1.1

CSEM 19 11:25:40.6, 42°41N×13°38E, h11km, After ROM
ROM 19 11:25:40.6±0.1, 42°41N×13°38E, h11km±1km, Ml1.7/1, Error ellipse: s-maj=2.2km s-min=1.6km az=101.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	L'Aquila	0.05	162	Pg	Pg	11 25 43.2	+0.4
AQU				Sg	Sg	11 25 44.6	+0.2
AQU	L'Aquila	0.05	162	Pg	Pg	11 25 43.2	+0.4
AQU				Sg	Sg	11 25 44.6	+0.2
CAMP	Campotosto	0.13	9	Pg	Pg	11 25 44.5	+0.5
CAMP				Sg	Sg	11 25 47.0	+0.7
CAMP	Campotosto	0.13	9	Pg	Pg	11 25 44.5	+0.5
CAMP				Sg	Sg	11 25 47.0	+0.7
FIAM	Fiamignano	0.24	235	Pg	Pg	11 25 46.1	+0.4
FIAM				Sg	Sg	11 25 50.1	+1.0
FIAM	Fiamignano	0.24	235	Pg	Pg	11 25 46.1	+0.4
FIAM				Sg	Sg	11 25 50.1	+1.0
TERO	Teramo	0.27	37	Pg	Pg	11 25 46.5	+0.2
TERO				Sg	Sg	11 25 50.6	+0.5
TERO	Teramo	0.27	37	Pg	Pg	11 25 46.5	+0.2
TERO				Sg	Sg	11 25 50.6	+0.5
VCEL	Villa Celiera	0.34	92	Pg	Pb	11 25 48.3	-0.6
VCEL	Villa Celiera	0.34	92	Pg	Pb	11 25 48.3	-0.6
NRCA	Norcia	0.47	335	Pg	Pg	11 25 50.3	+0.3
NRCA				Sg	Sb	11 25 57.8	-0.4
NRCA	Norcia	0.47	335	Pg	Pg	11 25 50.3	+0.3
NRCA				Sg	Sb	11 25 57.8	-0.4
LPEL	Lama dei Pelig	0.70	121	Pg	Pg	11 25 53.9	-0.3
LPEL				Sg	Sb	11 26 04.6	0.0
	25nm,0.4s						
LPEL	Lama dei Pelig	0.70	121	Pg	Pg	11 25 53.9	-0.3
LPEL				Sg	Sb	11 26 04.6	0.0
	25nm,0.4s						

IDC 19 11:26:23.5±2.2, 4°17N×126°87E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/22, mbtmpb3.2/3, Error ellipse: s-maj=176.6km s-min=25.8km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.06	163	P	P	11 31 49.4	-0.4
	0.3nm,0.5s,baz=343,slow=10,SNR=5.6						
ASAR	Alice Springs	28.50	166	P	P	11 32 21.1	+0.3
	0.5nm,1.1s,baz=346,slow=12,SNR=3.3						
MKAR	Makanchi Array	57.28	325	P	P	11 36 13.1	0.0
	0.1nm,0.5s,baz=132,slow=8.0,SNR=2.5						

GUC 19 11:36:46.2±0.5, 27°13S×69°12W, h100km, ML4.1, 1C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPCH	Copiapo	1.12	258	⇑*i*P	Pn	11 37 08.3	+0.2
CPCH				*i* S	Sn	11 37 25.0	+0.4
CPCH				AML	AML	11 37 26.5	
	comp=E,12μm,0.1s						
CDCH	Caldera	1.52	272	*e*P	Pn	11 37 14.8	+2.1
CDCH				*i* S	Sn	11 37 35.1	+2.3
CDCH				AML	AML	11 37 37.5	
	comp=N,681nm,0.2s						
VACH	Vallenar	2.05	225	*e*P	Pn	11 37 11.0	-8.4
VACH				*i* S	Sn	11 37 36.9	-8.0
VACH				AML	AML	11 37 38.0	
	comp=E,6μm,0.0s						
LCO	Las Campanas	2.34	216	⇓*i*P	Pn	11 37 24.4	+0.8
LCO				*i* S	Sn	11 37 52.9	+0.7
LCO				AML	AML	11 37 54.5	
	comp=N,356nm,0.3s						
LPAZ	La Paz	10.82	5	P	Px	11 37 30.9	
	comp=N,0.1nm,0.3s,baz=262,slow=7.1,SNR=1.3						
TORD	Torodi Ar. Bea	79.47	69	P	P	11 48 42.1	0.0
	comp=N,0.4nm,0.6s,baz=248,slow=6.1,SNR=2.7						
TORD				pP	pP	11 49 15.8	+7.9
	comp=N,0.1nm,0.5s,baz=230,slow=5.5,SNR=1.0						
ZALV	Zalesovo Beam	147.04	29	PKP	PKPbc	11 56 16.3	-0.7
	comp=N,0.5nm,0.4s,baz=298,slow=2.5,SNR=5.1						
ZALV				pPKP	pPKPdf	11 56 50.4	+8.1
	comp=N,0.7nm,0.7s,baz=307,slow=3.1,SNR=2.0						
MKAR	Makanchi Array	150.13	41	PKP	PKPbc	11 56 25.9	+0.7
	comp=N,0.7nm,0.7s,baz=329,slow=1.6,SNR=7.1						
MKAR				pPKP	pPKPdf	11 56 58.8	+11
	comp=N,0.2nm,0.7s,baz=291,slow=4.0,SNR=1.9						

IDC 19 11:50:29.5±1.1, 4°07N×126°64E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.7/23, mbtmpb3.8/7, MS3.3/2, Ms1 3.3/2, ms1mx2.6/34, Error ellipse: s-maj=108.3km s-min=15.6km az=71.0
ISCJB 19 11:50:32.3±0.8, 4°1N±0°1×126°8E±0°4, h36km, mb3.9/10, MS3.2/2, Error ellipse: s-maj=53.6km s-min=11.3km az=162.9
NEIC 19 11:50:34.2±0.7, 4°11N×126°81E, h35km, mb4.0/5, Error ellipse: s-maj=44.2km s-min=9.4km az=73.0
MAN 19 11:51:29, 7°38N×124°56E, h32km, mb4.2, ML3.1, MS2.8
ISC 19 11:50:34.8±1.0, 4°1N±0°2×126°8E±0°4, h36km, n22, σ0°76/19, mb3.9/10, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	Cotabato--PC H	3.99	321	⇓*i*P	Pn	11 51 39.2	+5.8
BUKP	Musuan	4.12	336	*e*P	Pn	11 51 43.8	+8.6
BUKP				*e*S	Sx	11 51 54.3	
PAGZ	Pagadian	5.02	318	*e*P	Pn	11 51 51.8	+4.3
PAGZ				*e*S	Sx	11 52 06.6	
FITZ	Fitzroy Crossi	22.09	183	*e*P	**P**	**11 55 26.6**	**-0.3**
	2.0nm,0.6s						
FITZ	Fitzroy Crossi	22.09	183	P	**P**	**11 55 26.2**	**-0.7**
	1.7nm,0.6s,baz=6.8,slow=3.9,SNR=13						
WRAB	Tennant Creek	25.02	163	*e*P	**P**	**11 55 53.9**	**-1.6**
	3.8nm,0.7s						
WRA	Warramunga Arr	25.02	163	P	**P**	**11 55 55.1**	**-0.5**
WRA	Warramunga Arr	25.02	163	P	**P**	**11 55 55.1**	**-0.5**
	5.4nm,0.7s,baz=342,slow=11,SNR=44						
MBWA	Marble Bar	26.03	195	*e*P	**P**	**11 56 04.7**	**0.0**
	7.2nm,0.8s						
ASAR	Alice Springs	28.46	166	P	**P**	**11 56 26.1**	**-0.5**
ASAR	Alice Springs	28.46	166	P	**P**	**11 56 26.1**	**-0.5**
	0.6nm,0.6s,baz=354,slow=7.7,SNR=17						
CTA	Charters Tower	30.73	142	LR	LR	12 10 15.4	
	comp=Z,54nm,18.0s,baz=246,slow=38						
MJAR	Matsushiro Arr	33.96	17	LR	LR	12 10 11.6	
	comp=Z,38nm,18.9s,baz=215,slow=35						
STKA	Stephens Creek	38.46	160	*e*P	**P**	**11 57 54.0**	**+0.7**
	0.9nm,0.8s						
STKA	Stephens Creek	38.46	160	P	**P**	**11 57 54.2**	**+0.9**
	4.5nm,0.8s,baz=322,slow=8.6,SNR=7.3						
SONM	Songino Array	46.96	341	P	**P**	**11 59 02.4**	**+0.2**
SONM	Songino Array	46.96	341	P	**P**	**11 59 02.4**	**+0.2**
	0.4nm,0.8s,baz=165,slow=9.1,SNR=4.4						
MKAR	Makanchi Array	57.28	325	P	**P**	**12 00 19.0**	**+0.1**
MKAR				PcP	**PcP**	**12 01 13.6**	**+0.8**
MKAR	Makanchi Array	57.28	325	P	**P**	**12 00 19.0**	**+0.1**
	0.5nm,0.5s,baz=124,slow=7.9,SNR=11						
MKAR				PcP	**PcP**	**12 01 13.6**	**+0.8**
	0.3nm,0.5s,baz=131,slow=3.1,SNR=3.8						
ZALV	Zalesovo Beam	60.28	333	P	**P**	**12 00 38.5**	**-1.0**
ZALV	Zalesovo Beam	60.28	333	P	**P**	**12 00 38.6**	**-1.0**
	0.3nm,0.4s,baz=122,slow=7.0,SNR=3.1						
KURK	Kurchatov	61.45	327	*e*P	**P**	**12 00 46.8**	**-0.8**
	0.9nm,0.5s						

IDC 19 12:25:11.4±1.8, 4°13N×126°65E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/23, mbtmpb3.5/5, MS2.9/2, Ms1 2.9/2, ms1mx2.4/22, Error ellipse: s-maj=98.1km s-min=24.5km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	Kappang	11.40	217	LR	LR	12 32 04.5	
	comp=Z,37nm,21.1s,baz=178,slow=36						
FITZ	Fitzroy Crossi	22.12	183	P	P	12 30 08.2	-0.4
	0.6nm,0.6s,baz=2.9,slow=10,SNR=4.2						
WRA	Warramunga Arr	25.09	163	P	P	12 30 36.8	-1.2
	1.4nm,0.7s,baz=343,slow=10,SNR=23						
ASAR	Alice Springs	28.52	166	P	P	12 31 10.1	+1.1
	0.3nm,0.4s,baz=344,slow=11,SNR=12						
CTA	Charters Tower	30.83	142	LR	LR	12 46 19.3	
	comp=Z,28nm,18.0s,baz=45,slow=41						
STKA	Stephens Creek	38.53	159	P	P	12 32 36.1	+0.3
	1.6nm,0.9s,baz=345,slow=10,SNR=3.8						
MKAR	Makanchi Array	57.18	325	P	P	12 35 00.2	-0.1
	0.2nm,0.3s,baz=109,slow=8.0,SNR=5.0						

MAN 19 12:27:52, 16°91N×119°61E, h13km, mb4.8, ML3.7, MS3.8, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOLP	Bolinao	0.60	151	*e*P	Pg	12 28 04.0	+0.3
BOLP				*e*S	Sb	12 28 13.3	+0.6
BCPH	Baguio City Da	1.07	119	⇓*i*P	Pn	12 28 19.6	+6.6
BCPH				*i* S	Sb	12 28 20.5	-6.2
CAUP	Cauayan	2.12	89	*e*P	Pn	12 28 27.8	+0.6
BALP	Baler	2.22	121	*e*P	Pn	12 28 29.2	+0.7

IDC 19 12:32:08.2±1.9, 4°12N×126°78E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.2/23, mbtmpb3.3/4, Error ellipse: s-maj=107.4km s-min=23.8km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	22.11	183	P	P	12 37 04.6	-0.8
	0.7nm,0.6s,baz=13,slow=18,SNR=3.2						
WRA	Warramunga Arr	25.04	163	P	P	12 37 33.3	-1.0
	0.8nm,0.7s,baz=343,slow=11,SNR=10.0						
ASAR	Alice Springs	28.47	166	P	P	12 38 06.8	+1.5
	0.2nm,0.8s,baz=348,slow=12,SNR=4.0						
MKAR	Makanchi Array	57.27	325	P	P	12 41 57.7	0.0
	0.2nm,0.4s,baz=129,slow=7.1,SNR=3.7						

IDC 19 12:35:22.5±2.0, 3°40N×127°42E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.3/23, mbtmpb3.3/4, Error ellipse: s-maj=121.4km s-min=22.8km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	21.44	185	P	P	12 40 12.3	-0.1
	1.0nm,0.7s,baz=0.0,slow=10,SNR=3.2						
WRA	Warramunga Arr	24.17	164	P	P	12 40 40.7	0.0
	0.4nm,0.4s,baz=344,slow=9.9,SNR=8.1						
ASAR	Alice Springs	27.63	167	P	P	12 41 12.0	0.0
	0.1nm,0.5s,baz=338,slow=8.1,SNR=3.3						
MKAR	Makanchi Array	58.22	325	P	P	12 45 18.6	0.0
	0.1nm,0.3s,baz=120,slow=6.9,SNR=4.3						

IDC 19 12:39:45.6±1.3, 44°67N×7°96E, h0km, mb3.4/2, mb1 3.9/8, mb1mx3.6/31, mbtmpb3.8/8, ML4.6/6, MS2.8/1, Ms1 2.8/1, ms1mx2.2/23, Error ellipse: s-maj=32.9km s-min=15.4km az=126.0
BGR 19 12:39:48.9±0.6, 44°70N×7°86E, h10km, ML4.3/14, Error ellipse: s-maj=8.9km s-min=6.7km az=27.0
SZGRF 19 12:39:48.9, 44°66N×7°86E, h10km, mb4.3, Northern Italy
ISCJB 19 12:39:49.5±0.1, 44°76N±0°01×7°92E±0°01, h65km±2km, mb3.5/4, Error ellipse: s-maj=1.9km s-min=1.5km az=152.9
STR 19 12:39:49.2±0.2, 44°75N×8°00E, h5km, Ml4.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0
ZUR 19 12:39:49.7, 44°66N×7°99E, h40km±1km, ML4.0/25
GEN 19 12:39:50.3, 44°76N×7°85E, h54km, ML4.2
ROM 19 12:39:50.0±0.1, 44°74N×7°87E, h45km±3km, Ml4.1/49, Error ellipse: s-maj=1.7km s-min=1.5km az=40.0
LDG 19 12:39:50.2±0.1, 44°76N×7°95E, h40km, Md3.7/2, Ml4.5/44, Error ellipse: s-maj=2.1km s-min=1.6km az=29.0
PRU 19 12:39:50.9, 45°20N×7°98E, h0km, M3.6
NEIC 19 12:39:50.0, 44°73N×7°85E, h40km, mb3.6/3, ML4.5(LDG), ML3.9(ROM), ML4.4(VIE), ML4.2(STR), ML4.0(ZUR), After ROM.
NEIC Felt [IV] at Boves, Canale, Carignano, Cavallermaggiore, Cherasco, Collegno, Fossano, Guarene, Racconigi, Savigliano and Vinovo; [III] at Alba, Alessandria, Alpignano, Asti, Beinasco, Biella, Borgo San Dalmazzo, Bra, Canelli, Carmagnola, Chieri, Cuneo, Giaveno, Grugliasco, Ivrea, Moncalieri, Nichelino, Orbassano, Rivoli, San Damiano d'Asti, Santena, Savona, Settimo Torinese, Turin and Venaria Reale; [II] at Genoa and Milan. Felt throughout Piemonte and in western Liguria, western Lombardia and Valle d'Aosta.
CSEM 19 12:39:51.0±0.1, 44°76N×7°95E, h40km, mb3.6/3, ML4.7/42, Error ellipse: s-maj=1.7km s-min=1.3km az=160.0
ISC 19 12:39:50.0±0.5, 44°74N±0°02×7°90E±0°02, h51km±5km, n654, σ1§73/907, mb3.5/4, 109C-31D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MONC	Moncucco Torin	0.33	3	Pg	**Pn**	**12 40 00.4**	**+0.9**
MONC				Sg	**Sn**	**12 40 07.6**	**+1.3**
	32μm,0.3s						
MONC	Moncucco Torin	0.33	3	Pg	**Pn**	**12 40 00.4**	**+0.9**
MONC				Sg	**Sn**	**12 40 07.6**	**+1.3**
	32μm,0.3s						
PCP	Piancastagn	0.50	114	P	**Pn**	**12 40 01.8**	**+0.4**
PCP				S	**Sn**	**12 40 09.6**	**0.0**
PCP	Piancastagn	0.50	114	Pg	**Pn**	**12 40 01.8**	**+0.4**
PCP				Sg	**Sn**	**12 40 09.6**	**0.0**
	9μm,0.3s						
PCP	Piancastagn	0.50	114	Pg	**Pn**	**12 40 01.8**	**+0.4**
PCP				Sg	**Sn**	**12 40 09.6**	**0.0**
	9μm,0.3s						
DOI	San Damiano	0.53	243	P	**Pn**	**12 40 01.4**	**-0.3**
DOI				S	**Sn**	**12 40 08.7**	**-1.4**
DOI	San Damiano	0.53	243	Pg	**Pn**	**12 40 01.4**	**-0.3**
DOI				Sg	**Sn**	**12 40 08.9**	**-1.2**
	11μm,0.3s						
DOI	San Damiano	0.53	243	Pg	**Pn**	**12 40 01.4**	**-0.3**
DOI				Sg	**Sn**	**12 40 08.9**	**-1.2**
	11μm,0.3s						
QLNO	Quiliano	0.53	143	P	**Pn**	**12 40 02.3**	**+0.6**
QLNO				S	**Sn**	**12 40 10.1**	**+0.1**
QLNO	Quiliano	0.53	143	⇓*e*Pg	**Pn**	**12 40 02.3**	**+0.6**
QLNO				Sg	**Sn**	**12 40 10.1**	**+0.1**
	8μm,0.4s						
QLNO	Quiliano	0.53	143	⇓*e*Pg	**Pn**	**12 40 02.3**	**+0.6**
QLNO				Sg	**Sn**	**12 40 10.1**	**+0.1**
	8μm,0.4s						
RSP	Reno Superiore	0.61	312	P	**Pn**	**12 40 02.2**	**-0.5**
RSP				S	**Sn**	**12 40 10.6**	**-1.3**
RSP	Reno Superiore	0.61	312	Pg	**Pn**	**12 40 02.2**	**-0.5**
RSP				Sg	**Sn**	**12 40 10.6**	**-1.3**
	5μm,0.2s						
RSP	Reno Superiore	0.61	312	Pg	**Pn**	**12 40 02.2**	**-0.5**
RSP				Sg	**Sn**	**12 40 10.6**	**-1.3**
	5μm,0.2s						
PZZ	Stroppo	0.61	247	P	**Pn**	**12 40 02.4**	**-0.3**
PZZ				S	**Sn**	**12 40 10.7**	**-1.2**
PZZ	Stroppo	0.61	247	Pg	**Pn**	**12 40 02.5**	**-0.3**
PZZ				Sg	**Sn**	**12 40 10.7**	**-1.2**
	20μm,0.3s						
FINB	Finale Ligure	0.64	152	Pg	**Pn**	**12 40 03.5**	**+0.5**
FINB				Sg	**Sn**	**12 40 12.7**	**+0.3**
	23μm,0.3s						
FINB	Finale Ligure	0.64	152	Pg	**Pn**	**12 40 03.5**	**+0.5**
FINB				Sg	**Sn**	**12 40 12.7**	**+0.3**
	23μm,0.3s						
RORO	Rocca Rossa	0.64	169	P	**Pn**	**12 40 03.5**	**+0.5**
RORO				S	**Sn**	**12 40 12.8**	**+0.3**
RORO	Rocca Rossa	0.64	169	Pg	**Pn**	**12 40 03.5**	**+0.5**
RORO				Sg	**Sn**	**12 40 12.8**	**+0.3**
	6μm,0.2s						
RORO	Rocca Rossa	0.64	169	Pg	**Pn**	**12 40 03.5**	**+0.5**
RORO				Sg	**Sn**	**12 40 12.8**	**+0.3**
	6μm,0.2s						
STV	Sant Anna di V	0.65	220	P	**Pn**	**12 40 03.2**	**0.0**
STV	Sant Anna di V	0.65	220	⇓*e*Pg	**Pn**	**12 40 03.2**	**0.0**
STV				Sg	**Sn**	**12 40 12.0**	**-0.7**
	5μm,0.2s						
STV	Sant Anna di V	0.65	220	⇓*e*Pg	**Pn**	**12 40 03.2**	**0.0**
STV				Sg	**Sn**	**12 40 12.0**	**-0.7**
	5μm,0.2s						
TRAV	Traversella	0.78	352	P	**Pn**	**12 40 04.5**	**-0.4**
TRAV				S	**Sn**	**12 40 08.0**	**-7.7**
TRAV	Traversella	0.78	352	⇓*e*Pg	**Pn**	**12 40 04.5**	**-0.4**
	8μm,0.1s						
TRAV	Traversella	0.78	352	⇓*e*Pg	**Pn**	**12 40 04.5**	**-0.4**
	8μm,0.1s						
SAOF	Saorge	0.80	198	Pg	**Pn**	**12 40 06.0**	**+

5µm,0.3s
MVIF Mont Vial 1.00 213 Pg Pn 12 40 08.7 +0.8
MVIF Mont Vial 1.00 213 Pg Pn 12 40 08.7 +0.8
MVIF Mont Vial 1.00 213 Pg Pn 12 40 08.7 +0.8
REVF Revere 1.07 201 Pg Pn 12 40 10.2 +1.4
REVF Sg Sn 12 40 24.8 +2.1
REVF Revere 1.07 201 Pg Pn 12 40 10.2 +1.4
REVF Sg Sn 12 40 24.8 +2.1
REVF Revere 1.07 201 Pg Pn 12 40 10.2 +1.4
REVF Sg Sn 12 40 24.8 +2.1
BOB Bobbio (Coli) 1.10 88⇓ePg Pn 12 40 10.2 +1.0
3µm,0.4s
BOB Bobbio (Coli) 1.10 88⇓ePg Pn 12 40 10.2 +1.0
3µm,0.4s
LPG La Plagne 1.11 313 eP Pn 12 40 10.4 +0.9
LPG eSn Sn 12 40 23.0 -0.9
2µm,0.3s
LPG La Plagne 1.11 313 ePn Pn 12 40 10.6 +1.1
LPG eSn Sn 12 40 25.1 +1.2
LPG La Plagne 1.11 313 ePn Pn 12 40 10.6 +1.1
LPG eSn Sn 12 40 25.1 +1.2
1µm,0.3s
LPL La Plagne 1.13 313 eP Pn 12 40 10.8 +1.1
LPL eSn Sn 12 40 23.1 -1.2
4µm,0.3s
LPL La Plagne 1.13 313 ePn Pn 12 40 10.9 +1.2
LPL eSn Sn 12 40 25.1 +0.8
LPL La Plagne 1.13 313 ePn Pn 12 40 10.9 +1.2
LPL eSn Sn 12 40 25.1 +0.8
2µm,0.3s
MRGE Morge 1.19 330⇓iPg Pn 12 40 11.2 +0.8
MRGE Sg Sn 12 40 25.8 +0.3
3µm,0.5s
MRGE Morge 1.19 330⇓iPg Pn 12 40 11.2 +0.8
MRGE Sg Sn 12 40 25.8 +0.3
3µm,0.5s
CALN Calern 1.23 217 Pg Pn 12 40 12.7 +1.7
CALN Sg Sn 12 40 29.7 +3.2
CALN Calern 1.23 217 Pg Pn 12 40 12.7 +1.7
CALN Sg Sn 12 40 29.7 +3.2
CALN Calern 1.23 217 Pg Pn 12 40 12.7 +1.7
CALN Sg Sn 12 40 29.7 +3.2
MSSA Maissana 1.23 110⇓ePg Pn 12 40 11.2 +0.3
1µm,0.6s
MSSA Maissana 1.23 110⇓ePg Pn 12 40 11.2 +0.3
1µm,0.6s
RSL Roselend 1.31 317 Pg Pn 12 40 14.9 +2.9
RSL Sg Sn 12 40 31.5 +3.1
RSL Roselend 1.31 317 Pg Pn 12 40 15.2 +3.2
RSL Sg Sn 12 40 31.8 +3.4
RSL Roselend 1.31 317 Pg Pn 12 40 14.9 +2.9
RSL Sg Sn 12 40 31.5 +3.1
MMK Mattmark 1.31 2⇑iP Pn 12 40 12.0 -0.1
3µm,0.2s
MMK Mattmark 1.31 2⇑iP Pn 12 40 12.0 -0.1
MMK Mattmark 1.31 2 Pg Pn 12 40 12.0 -0.1
MMK Mattmark 1.31 2⇑iP Pn 12 40 12.0 -0.1
3µm,0.2s
DIX Grande Dixence 1.38 346⇑iP Pn 12 40 13.7 +0.6
3µm,0.4s
DIX Grande Dixence 1.38 346⇑iP Pn 12 40 13.7 +0.6
DIX Grande Dixence 1.38 346⇑ePg Pn 12 40 13.8 +0.6
DIX Sg Sn 12 40 30.8 +0.4
DIX Grande Dixence 1.38 346⇑ePg Pn 12 40 13.8 +0.6
DIX Sg Sn 12 40 30.8 +0.4
MUGIO Muggio 1.43 34⇑iP Pn 12 40 13.7 +0.2
4µm,0.2s
MUGIO Muggio 1.43 34⇑iP Pn 12 40 13.7 +0.2
MUGIO Muggio 1.43 34 Pg Pn 12 40 13.8 +0.2
MUGIO Muggio 1.43 34 Pg Pn 12 40 13.8 +0.2
CODM Codolo 1.44 104 P Pn 12 40 14.1 +0.4
ORIF Oris-en-Rattie 1.45 278 eP Pn 12 40 16.6 +2.7
ORIF eSn Sn 12 40 30.7 -1.1
5µm,0.4s
ORIF Oris-en-Rattie 1.45 278 ePn Pn 12 40 16.9 +3.0
ORIF eSn Sn 12 40 35.0 +3.2
ORIF Oris-en-Rattie 1.45 278 ePn Pn 12 40 16.9 +3.0
ORIF eSn Sn 12 40 35.0 +3.2
3µm,0.4s
FRF La Foret Royal 1.49 218 eP Pn 12 40 15.5 +1.2
FRF eSn Sn 12 40 31.5 -1.1
2µm,0.3s
FRF La Foret Royal 1.49 218 ePn Pn 12 40 15.7 +1.4
FRF eSn Sn 12 40 33.5 +0.9
FRF La Foret Royal 1.49 218 ePn Pn 12 40 15.7 +1.4
FRF eSn Sn 12 40 33.5 +0.9
1µm,0.3s
SALAN Lac Salanfe 1.54 335 eP Pn 12 40 17.6 +2.3
1µm,0.4s
SALAN Lac Salanfe 1.54 335 eP Pn 12 40 17.6 +2.3
SALAN Lac Salanfe 1.54 335 eP Pn 12 40 17.6 +2.3
1µm,0.4s
GRAM Graiana 1.57 99 P Pn 12 40 16.8 +1.3
GRYON Gryon 1.61 340⇑iP Pn 12 40 18.3 +2.2
1µm,0.5s
GRYON Gryon 1.61 340⇑iP Pn 12 40 18.3 +2.2
GRYON Gryon 1.61 340⇑iP Pn 12 40 18.3 +2.2
1µm,0.5s
MDI Monti di Nese 1.64 50 Pg Pn 12 40 16.6 +0.1
MDI Sg Sn 12 40 36.3 -0.3
2µm,0.1s
MDI Monti di Nese 1.64 50 Pg Pn 12 40 16.6 +0.1
MDI Sg Sn 12 40 36.3 -0.3
2µm,0.1s
LKBD Leukerbad 1.66 353⇑iP Pn 12 40 18.3 +1.5
2µm,0.4s
LKBD Leukerbad 1.66 353⇑iP Pn 12 40 18.3 +1.5
LKBD Leukerbad 1.66 353⇑iP Pn 12 40 18.3 +1.5
2µm,0.4s
SENIN Lac Senin/Sane 1.67 346⇑iP Pn 12 40 18.4 +1.3
4µm,0.8s
SENIN Lac Senin/Sane 1.67 346⇑iP Pn 12 40 18.4 +1.3
SENIN Lac Senin/Sane 1.67 346⇑iP Pn 12 40 18.4 +1.3
4µm,0.8s
PRMA PARMA 1.72 88 Pg Pn 12 40 19.8 +2.4
1µm,0.6s
PRMA PARMA 1.72 88 Pg Pn 12 40 19.8 +2.4
1µm,0.6s
VALM Valbona 1.72 102 P Pn 12 40 18.6 +1.0
LMR La Mourre 1.73 216 eP Pn 12 40 18.5 +0.9
LMR eSn Sn 12 40 36.7 -1.8
2µm,0.2s
LMR La Mourre 1.73 216 ePn Pn 12 40 18.8 +1.2
LMR eSn Sn 12 40 40.3 +1.8
LMR La Mourre 1.73 216 ePn Pn 12 40 18.8 +1.2
LMR eSn Sn 12 40 40.3 +1.8
905nm,0.2s
AIGLE Aigle 1.73 338⇓iP Pn 12 40 19.0 +1.3
3µm,0.5s
AIGLE Aigle 1.73 338⇓iP Pn 12 40 19.0 +1.3
AIGLE Aigle 1.73 338⇓iP Pn 12 40 19.0 +1.3
3µm,0.5s
FUSIO Fusio 1.79 17⇑iP Pn 12 40 20.6 +2.0
2µm,0.3s
FUSIO Fusio 1.79 17⇑iP Pn 12 40 20.6 +2.0
FUSIO Fusio 1.79 17⇑ePg Pn 12 40 18.4 -0.2
FUSIO Fusio 1.79 17⇑ePg Pn 12 40 18.4 -0.2
FUSIO Fusio 1.79 17⇑iP Pn 12 40 20.6 +2.0
2µm,0.3s
ERBM Eremo 1.82 99 Pg Pn 12 40 21.2 +2.2
728nm,0.9s
ERBM Eremo 1.82 99 Pg Pn 12 40 21.2 +2.2
728nm,0.9s
SMRF Simiane la Rot 1.84 246 eP Pn 12 40 21.2 +2.1
SMRF eSn Sn 12 40 39.4 -1.8
4µm,0.4s
SMRF Simiane la Rot 1.84 246 ePn Pn 12 40 21.3 +2.1
SMRF eSn Sn 12 40 43.8 +2.6
SMRF Simiane la Rot 1.84 246 ePn Pn 12 40 21.3 +2.1
SMRF eSn Sn 12 40 43.8 +2.6
2µm,0.4s
OCF Saint Nazaire 1.86 266 Pg Pn 12 40 22.2 +2.7
OCF Saint Nazaire 1.86 266 Pg Pn 12 40 22.2 +2.7
OG26 St.-Nazaire-De 1.86 266 Pg Pn 12 40 22.2 +2.7
OG26 St.-Nazaire-De 1.86 266 Pg Pn 12 40 22.2 +2.7
WIMIS Wimmis 1.93 354⇑iP Pn 12 40 23.3 +2.9
5µm,0.8s
WIMIS Wimmis 1.93 354⇑iP Pn 12 40 23.3 +2.9
WIMIS Wimmis 1.93 354⇑iP Pn 12 40 23.3 +2.9
5µm,0.8s
GROG Isola di Gorgo 1.95 132 Pg Pn 12 40 20.5 -0.1
492nm,0.2s
GROG Isola di Gorgo 1.95 132 Pg Pn 12 40 20.5 -0.1
492nm,0.2s
GSCL Gusciola 1.96 101 Pg Pn 12 40 22.8 +2.0
2.0nm,0.5s
GSCL Gusciola 1.96 101 Pg Pn 12 40 22.8 +2.0
2.0nm,0.5s
CRDM Cardoso 1.98 110 P Pn 12 40 21.0 -0.1
NOVE Novellara 2.01 87 Pg Pn 12 40 23.0 +1.6
1µm,0.5s
NOVE Novellara 2.01 87 Pg Pn 12 40 23.0 +1.6
1µm,0.5s
HASLI Hasliberg/Brie 2.02 5⇑iP Pn 12 40 23.7 +2.0
4µm,0.4s
HASLI Hasliberg/Brie 2.02 5⇑iP Pn 12 40 23.7 +2.0
HASLI Hasliberg/Brie 2.02 5⇑iP Pn 12 40 23.7 +2.0
4µm,0.4s
MAIM Mastiano 2.04 113 Pg Pn 12 40 21.8 0.0
322nm,0.6s
MAIM Mastiano 2.04 113 P Pn 12 40 21.9 +0.1
BDI Bagni Di Lucca 2.05 108 Pg Pn 12 40 22.2 +0.2
527nm,0.7s
BDI Bagni Di Lucca 2.05 108 Pg Pn 12 40 22.2 +0.2
527nm,0.7s
SALO Salr 2.05 64⇓ePg Pn 12 40 22.5 +0.5
1µm,0.3s
SALO Salr 2.05 64⇓ePg Pn 12 40 22.5 +0.5
1µm,0.3s
VDL Val di Lei 2.05 31⇑iP Pn 12 40 23.5 +1.3
4µm,0.2s
VDL Val di Lei 2.05 31⇑iP Pn 12 40 23.5 +1.3
GIMEL St. Georges / 2.13 328⇓iP Pn 12 40 25.1 +2.0
1µm,0.4s
GIMEL St. Georges / 2.13 328⇓iP Pn 12 40 25.1 +2.0
GIMEL St. Georges / 2.13 328⇓iP Pn 12 40 25.1 +2.0
1µm,0.4s
TORNY Torny/Romont 2.13 342 eP Pn 12 40 25.2 +2.0
6µm,0.6s
TORNY Torny/Romont 2.13 342 eP Pn 12 40 25.2 +2.0
TORNY Torny/Romont 2.13 342 eP Pn 12 40 25.2 +2.0
6µm,0.6s
PII Pisa 2.15 118 Pg Pn 12 40 23.7 +0.4
220nm,0.2s
PII Pisa 2.15 118 Pg Pn 12 40 23.7 +0.4
220nm,0.2s
BNALP Bannalp 2.16 10⇑iP Pn 12 40 25.3 +1.7
1µm,0.5s
BNALP Bannalp 2.16 10⇑iP Pn 12 40 25.3 +1.7
BNALP Bannalp 2.16 10⇑iP Pn 12 40 25.3 +1.7
1µm,0.5s
SBPO S.Benedetto Po 2.17 81 Pg Pn 12 40 24.8 +1.2
1µm,0.4s
SBPO S.Benedetto Po 2.17 81 Pg Pn 12 40 24.8 +1.2
1µm,0.4s
ZCCA Zocca 2.23 99 Pg Pn 12 40 27.5 +2.9
501nm,0.6s
LLS Linth-Limmern 2.24 20⇑iP Pn 12 40 25.6 +0.8
968nm,0.3s
LLS Linth-Limmern 2.24 20⇑iP Pn 12 40 25.6 +0.8
CABF La Chapelle 2.26 326 eP Pn 12 40 26.9 +2.0
CABF eSn Sn 12 40 49.1 -2.5
370nm,0.2s
CABF La Chapelle 2.26 326 ePn Pn 12 40 27.0 +2.0
CABF eSn Sn 12 40 49.1 -2.5
CABF La Chapelle 2.26 326 ePn Pn 12 40 27.0 +2.0
CABF eSn Sn 12 40 52.7 +1.1
185nm,0.2s
MUO Muotathal 2.28 13⇑iP Pn 12 40 26.9 +1.5
2µm,0.5s
MUO Muotathal 2.28 13⇑iP Pn 12 40 26.9 +1.5
MUO Muotathal 2.28 13⇑iP Pn 12 40 26.9 +1.5
2µm,0.5s
RAVA Ravarino 2.29 89 Pg Pn 12 40 27.5 +2.2
1µm,0.7s
RAVA Ravarino 2.29 89 Pg Pn 12 40 27.5 +2.2
1µm,0.7s
VIVF Saint-Julien-l 2.30 274 eP Pn 12 40 27.0 +1.6
VIVF eSn Sn 12 40 50.0 -2.6
423nm,0.2s
VIVF Saint-Julien-l 2.30 274 ePn Pn 12 40 27.1 +1.6
VIVF eSn Sn 12 40 53.2 +0.6
VIVF Saint-Julien-l 2.30 274 ePn Pn 12 40 27.1 +1.6
VIVF eSn Sn 12 40 53.2 +0.6
212nm,0.2s
PGF Pioggiola 2.33 160 ePn Pn 12 40 25.6 -0.4
PGF eSn Sn 12 40 50.7 -2.8
433nm,0.2s
PGF Pioggiola 2.33 160 ePn Pn 12 40 25.7 -0.3
PGF Pioggiola 2.33 160 ePn Pn 12 40 25.7 -0.3
PGF eSn Sn 12 40 50.7 -2.8
217nm,0.2s
CRMI Carmignano 2.40 112 Pg Pn 12 40 26.9 +0.1
CRMI Carmignano 2.40 112 Pg Pn 12 40 26.9 +0.1
SSB Saint Sauveur 2.44 284 ePn Pn 12 40 28.6 +1.2
SSB eSn Sn 12 40 56.6 +0.5
SSB Saint Sauveur 2.44 284 ePn Pn 12 40 28.6 +1.2
SSB eSn Sn 12 40 56.6 +0.5
BRMO Bormio 2.45 44 Pg Pn 12 40 28.9 +1.3
219nm,0.4s
BRMO Bormio 2.45 44 Pg Pn 12 40 28.9 +1.3
219nm,0.4s
DAVOX Davos/Dischmat 2.46 34⇑iP Pn 12 40 29.4 +1.6
4µm,0.5s
DAVOX Davos/Dischmat 2.46 34 Pn Pn 12 40 29.4 +1.6
DAVOX eSn Sn 12 40 58.5 +1.7
DAVOX Davos/Dischmat 2.46 34 Pg Pn 12 40 29.5 +1.6
DAVOX Davos/Dischmat 2.46 34 Pn Pn 12 40 29.4 +1.6
101nm,0.3s,baz=227,slow=6.1,SNR=629
DAVOX Sn Sn 12 40 58.5 +1.7
97nm,0.3s,baz=338,slow=21,SNR=27
DAVOX Davos/Dischmat 2.46 34⇑iP Pn 12 40 29.4 +1.6
4µm,0.5s
DAVOX Sn Sn 12 40 58.5 +1.7
FUORN Ofenpass-Fuorn 2.50 41⇑iP Pn 12 40 30.0 +1.6
2µm,0.4s
FUORN Ofenpass-Fuorn 2.50 41⇑iP Pn 12 40 30.0 +1.6
FUORN Ofenpass-Fuorn 2.50 41⇑ePg Pn 12 40 30.1 +1.6
FUORN Ofenpass-Fuorn 2.50 41⇑iP Pn 12 40 30.0 +1.6
2µm,0.4s
PLONS Plons/SG 2.53 24 ePn Pn 12 40 30.0 +1.4
PLONS eSn Sn 12 40 58.6 +0.4
PLONS Plons/SG 2.53 24 ePn Pn 12 40 30.0 +1.4
PLONS eSn Sn 12 40 58.6 +0.4
PLONS Plons/SG 2.53 24⇑iP Pn 12 40 30.0 +1.4
2µm,0.2s
PLONS Plons/SG 2.53 24⇑iP Pn 12 40 30.0 +1.4
PLONS Plons/SG 2.53 24⇑iP Pn 12 40 30.0 +1.4
2µm,0.2s
PLONS Sn Sn 12 40 58.6 +0.4
MTRZ Monterenzio 2.58 97 Pg Pn 12 40 31.7 +2.5
474nm,0.6s
MTRZ Monterenzio 2.58 97 Pg Pn 12 40 31.7 +2.5
474nm,0.6s
BALST Balsthal 2.60 357 ePn Pn 12 40 31.0 +1.4
BALST eSn Sn 12 41 01.2 +1.3
BALST Balsthal 2.60 357 ePn Pn 12 40 31.0 +1.4
BALST eSn Sn 12 41 01.2 +1.3
BALST Balsthal 2.60 357⇑iP Pn 12 40 30.9 +1.4
2µm,0.4s
BALST Balsthal 2.60 357⇑iP Pn 12 40 30.9 +1.4
BALST Balsthal 2.60 357⇑iP Pn 12 40 30.9 +1.4
2µm,0.4s
BALST Sn Sn 12 41 01.2 +1.3
MOSI Grossmontoni 2.64 44 Pg Pn 12 40 32.1 +1.9
1µm,0.8s
MOSI Grossmontoni 2.64 44 Pg Pn 12 40 32.1 +1.9
1µm,0.8s
BOURR Bourrignon 2.69 350⇑iP Pn 12 40 32.3 +1.5
1µm,0.6s
BOURR Bourrignon 2.69 350⇑iP Pn 12 40 32.3 +1.5
BOURR Bourrignon 2.69 350⇑iP Pn 12 40 32.3 +1.5
1µm,0.6s
LOMF Lomont 2.71 344 Pn Pn 12 40 32.8 +1.7
LOMF Lomont 2.71 344 Pn Pn 12 40 32.8 +1.7
LOMF Lomont 2.71 344 Pn Pn 12 40 32.8 +1.7
BBS Basel-Blauen 2.73 354 Pn Pn 12 40 32.7 +1.3
BBS Basel-Blauen 2.73 354 Pn Pn 12 40 32.7 +1.3
CSNT Castellina Chi 2.75 116 Pg Pn 12 40 32.0 +0.3
CSNT Castellina Chi 2.75 116 Pg Pn 12 40 32.0 +0.3
WILA Wila 2.76 14 ePn Pn 12 40 33.4 +1.6
WILA Wila 2.76 14 ePn Pn 12 40 33.4 +1.6
WILA Wila 2.76 14⇑iP Pn 12 40 33.2 +1.4
3µm,0.3s
WILA Wila 2.76 14⇑iP Pn 12 40 33.2 +1.4
WILA Wila 2.76 14⇑iP Pn 12 40 33.2 +1.4
3µm,0.3s
LIENZ Kamor/St.Gall 2.78 23⇑iP Pn 12 40 33.3 +1.1
635nm,0.8s
LIENZ Kamor/St.Gall 2.78 23⇑iP Pn 12 40 33.3 +1.1
635nm,0.8s
SULZ Cheisacher 2.79 3 ePn Pn 12 40 33.3 +1.1
SULZ eSn Sn 12 41 05.6 +1.1
SULZ Cheisacher 2.79 3 ePn Pn 12 40 33.3 +1.1
SULZ eSn Sn 12 41 05.6 +1.1
SULZ Cheisacher 2.79 3⇑iP Pn 12 40 33.8 +1.7
2µm,0.8s
SULZ Cheisacher 2.79 3⇑iP Pn 12 40 33.8 +1.7
SULZ Cheisacher 2.79 3 Pn Pn 12 40 33.3 +1.1
SULZ Cheisacher 2.79 3⇑iP Pn 12 40 33.8 +1.7
2µm,0.8s
SULZ Sn Sn 12 41 05.6 +1.1
CMPO Campotto Po 2.79 92 Pg Pn 12 40 33.1 +1.0
678nm,1.1s
CMPO Campotto Po 2.79 92 Pg Pn 12 40 33.1 +1.0
678nm,1.1s
WEIN Weingarten 2.89 15⇑iP Pn 12 40 34.8 +1.3
WEIN Weingarten 2.89 15⇑iP Pn 12 40 34.8 +1.3
WEIN Weingarten 2.89 15⇑iP Pn 12 40 34.8 +1.3
DAVA Damuels 2.89 28 ePn Pn 12 40 35.5 +1.8
DAVA eSn Sn 12 41 08.6 +1.3
DAVA Damuels 2.89 28 ePn Pn 12 40 35.5 +1.8
DAVA eSn Sn 12 41 08.6 +1.3
DAVA Damuels 2.89 28⇑iPn Pn 12 40 35.5 +1.8
DAVA ⇑iSn Sn 12 41 08.9 +1.6
DAVA Damuels 2.89 28⇑iPn Pn 12 40 35.5 +1.8
DAVA iSn Sn 12 41 08.9 +1.6
DAVA Damuels 2.89 28 Pn Pn 12 40 35.5 +1.8
DAVA Sn Sn 12 41 08.6 +1.3
APPI Appiano 2.91 52 Pg Pn 12 40 35.2 +1.4
711nm,0.3s
APPI Appiano 2.91 52 Pg Pn 12 40 35.2 +1.4
711nm,0.3s
CTI Castel Tesino 2.95 62 Pg Pn 12 40 34.5 +0.1
1µm,0.2s
CTI Castel Tesino 2.95 62 Pg Pn 12 40 34.5 +0.1
1µm,0.2s
ASQU Asqua 2.95 107 Pg Pn 12 40 34.2 -0.2
104nm,0.5s
ASQU Asqua 2.95 107 Pg Pn 12 40 34.2 -0.2
104nm,0.5s
LASF Ste Croix 2.97 258 eP Pn 12 40 35.9 +1.2
LASF eSn Sn 12 41 06.3 -2.8
605nm,0.5s
LASF Ste Croix 2.97 258 ePn Pn 12 40 36.1 +1.4
LASF eSn Sn 12 41 06.3 -2.8
LASF Ste Croix 2.97 258 ePn Pn 12 40 36.1 +1.4
LASF eSn Sn 12 41 08.9 -0.2
303nm,0.5s
CGRP Cima Grappa 2.98 66 Pg Pn 12 40 34.8 0.0
729nm,0.3s
CGRP Cima Grappa 2.98 66 Pg Pn 12 40 34.8 0.0
729nm,0.3s
KOSI Kohlern 2.98 54 Pg Pn 12 40 35.7 +0.7
524nm,0.6s
KOSI Kohlern 2.98 54 Pg Pn 12 40 35.7 +0.7
524nm,0.6s
FETA Feichten 3.02 40⇑iPn Pn 12 40 37.3 +2.0
FETA ⇓iSn Sn 12 41 12.2 +1.9
FETA Feichten 3.02 40⇑iPn Pn 12 40 37.3 +2.0
FETA iSn Sn 12 41 12.2 +1.9
FETA Feichten 3.02 40⇑iPn Pn 12 40 37.3 +2.0
FETA iSn Sn 12 41 12.2 +1.9
SLE Schleitheim 3.05 8 ePn Pn 12 40 36.4 +0.7
SLE eSn Sn 12 41 11.1 +0.1
SLE Schleitheim 3.05 8 ePn Pn 12 40 36.4 +0.7
SLE eSn Sn 12 41 11.1 +0.1
SLE Schleitheim 3.05 8⇑iP Pn 12 40 36.2 +0.5
SLE Schleitheim 3.05 8⇑iP Pn 12 40 36.2 +0.5
SLE Schleitheim 3.05 8 Pn Pn 12 40 36.4 +0.7
SLE Sn Sn 12 41 11.1 +0.1
ABSI Aberstueckl 3.11 49 Pg Pn 12 40 38.1 +1.4
684nm,0.6s
ABSI Aberstueckl 3.11 49 Pg Pn 12 40 38.1 +1.4
684nm,0.6s
FELD Feldberg im Sc 3.13 1 Pn Pn 12 40 37.4 +0.4
FELD Feldberg im Sc 3.13 1 Pn Pn 12 40 37.4 +0.4
OBER Oberstdorf 3.14 31 ePn Pn 12 40 38.3 +1.3
OBER eSn Sn 12 41 13.6 +0.3
OBER Oberstdorf 3.14 31 ePn Pn 12 40 38.3 +1.3
OBER eSn Sn 12 41 13.6 +0.3
OBER Oberstdorf 3.14 31 Pn Pn 12 40 38.3 +1.3
OBER Sn Sn 12 41 13.6 +0.3
MOF Molkenrain 3.15 351 Pn Pn 12 40 38.2 +1.0
MOF Molkenrain 3.15 351 Pn Pn 12 40 38.2 +1.0
MOF Molkenrain 3.15 351 Pn Pn 12 40 38.2 +1.0
HINF Hinteralfeld 3.16 347 ePn Pn 12 40 38.3 +1.1
HINF eSn Sn 12 41 12.0 -1.7
303nm,0.3s
HINF Hinteralfeld 3.16 347 ePn Pn 12 40 38.3 +1.1
HINF eSn Sn 12 41 12.0 -1.7
HINF Hinteralfeld 3.16 347 ePn Pn 12 40 38.3 +1.1
HINF eSn Sn 12 41 13.0 -0.7
152nm,0.3s
ARCI Arcidosso 3.21 125 Pg Pn 12 40 38.4 +0.5
47nm,0.5s
ARCI Arcidosso 3.21 125 Pg Pn 12 40 38.4 +0.5
47nm,0.5s
CAFI Castiglion Fio 3.25 114 Pg Pn 12 40 38.9 +0.4
CAFI Castiglion Fio 3.25 114 Pg Pn 12 40 38.9 +0.4
ROSI Rosskopf 3.29 47 Pg Pn 12 40 40.8 +1.7
887nm,0.7s
ROSI Rosskopf 3.29 47 Pg Pn 12 40 40.8 +1.7
887nm,0.7s
AGOR Agordo 3.30 61 Pg Pn 12 40 40.0 +0.9
598nm,0.3s
MAON Monte Argentar 3.30 133 Pg Pn 12 40 39.2 +0.1
98nm,0.4s
MAON Monte Argentar 3.30 133 Pg Pn 12 40 39.2 +0.1
98nm,0.4s
LBL Lubilhac 3.34 280 Pn Pn 12 40 41.4 +1.7
LBL Lubilhac 3.34 280 Pn Pn 12 40 41.4 +1.7
LBL Lubilhac 3.34 280 Pn Pn 12 40 41.4 +1.7
RETA Reutte 3.39 35⇑iPn Pn 12 40 41.9 +1.5
RETA ⇓iSn Sn 12 41 21.0 +1.6
RETA Reutte 3.39 35⇑iPn Pn 12 40 41.9 +1.5
RETA iSn Sn 12 41 21.0 +1.6
RETA Reutte 3.39 35⇑iPn Pn 12 40 41.9 +1.5
RETA iSn Sn 12 41 21.0 +1.6
LIBD Limburg 3.41 357 Pn Pn 12 40 41.3 +0.6
LIBD Limburg 3.41 357 Pn Pn 12 40 41.3 +0.6
SPAK Spaichingen-Ko 3.42 10 Pn Pn 12 40 41.0 +0.2
SPAK Spaichingen-Ko 3.42 10 Pn Pn 12 40 41.0 +0.2
SMF Signal de Mont 3.42 305 eP Pn 12 40 42.5 +1.7
SMF eSn Sn 12 41 16.9 -3.2
246nm,0.3s
SMF Signal de Mont 3.42 305 ePn Pn 12 40 42.5 +1.7
SMF eSn Sn 12 41 19.7 -0.4
SMF Signal de Mont 3.42 305 ePn Pn 12 40 42.5 +1.7
SMF eSn Sn 12 41 19.7 -0.4
123nm,0.3s
MOTA Moosalm 3.43 39⇑iPn Pn 12 40 43.0 +2.0
MOTA ⇓iSn Sn 12 41 22.6 +2.2
MOTA Moosalm 3.43 39⇑iPn Pn 12 40 43.0 +2.0
MOTA iSn Sn 12 41 22.6 +2.2
MOTA Moosalm 3.43 39⇑iPn Pn 12 40 43.0 +2.0
MOTA iSn Sn 12 41 22.6 +2.2
HAU Haudompre 3.44 342 eP Pn 12 40 42.2 +1.2
HAU eSn Sn 12 41 17.3 -3.1
1µm,0.5s
HAU Haudompre 3.44 342 ePn Pn 12 40 42.2 +1.2
HAU eSn Sn 12 41 17.3 -3.1
HAU Haudompre 3.44 342 ePn Pn 12 40 42.2 +1.2
HAU eSn Sn 12 41 20.0 -0.4
553nm,0.5s
SACS San Casciano d 3.47 122 Pg Pn 12 40 42.5 +1.0
33nm,0.7s
POLC Polcenigo 3.48 67 Pg Pn 12 40 42.1 +0.5
859nm,0.3s
ECH Echery 3.51 352 ePn Pn 12 40 42.5 +0.5
ECH eSn Sn 12 41 22.1 -0.2
ECH Echery 3.51 352 Pn Pn 12 40 42.8 +0.8
ECH Echery 3.51 352 Pn Pn 12 40 42.8 +0.8
ECH eSn Sn 12 41 22.1 -0.2
CFF Clermont-Ferra 3.53 288 Pn Pn 12 40 43.5 +1.2
CFF Clermont-Ferra 3.53 288 Pn Pn 12 40 43.5 +1.2
CFF Clermont-Ferra 3.53 288 Pn Pn 12 40 43.5 +1.2
LATE Laterza 3.54 126 Pg Pn 12 40 43.5 +1.0
LATE Laterza 3.54 126 Pg Pn 12 40 43.5 +1.0
BFO Black Forest 3.60 5 ePn Pn 12 40 43.3 +0.1
BFO eSn Sn 12 41 23.1 -1.4

BFO Black Forest 3.60 5 *e*Pn **Pn 12 40 43.3 +0.1**
BFO *e*Sn **Sn 12 41 23.1 -1.4**
BFO Black Forest 3.60 5 *e*Pn **Pn 12 40 43.1 -0.2**
BFO *e*Sn **Sn 12 41 22.9 -1.5**
BFO Black Forest 3.60 5 Pn **Pn 12 40 43.3 +0.1**
BFO Sn **Sn 12 41 23.1 -1.4**
PYM Petit Puy Mans 3.60 288 Pn **Pn 12 40 44.8 +1.5**
PYM Petit Puy Mans 3.60 288 Pn **Pn 12 40 44.8 +1.5**
PYM Petit Puy Mans 3.60 288 Pn **Pn 12 40 44.8 +1.5**
AGO Saint Agoulin 3.61 293 Pn **Pn 12 40 45.0 +1.7**
AGO Saint Agoulin 3.61 293 Pn **Pn 12 40 45.0 +1.7**
AGO Saint Agoulin 3.61 293 Pn **Pn 12 40 45.0 +1.7**
WTTA Wattenberg 3.62 45⇑ *i*Pn **Pn 12 40 46.2 +2.5**
WTTA *i* Sn **Sn 12 41 28.1 +2.8**
WTTA Wattenberg 3.62 45⇑ *i*Pn **Pn 12 40 46.2 +2.5**
WTTA *i* Sn **Sn 12 41 28.1 +2.8**
WTTA Wattenberg 3.62 45⇑ *i*Pn **Pn 12 40 46.2 +2.5**
WTTA Sn **Sn 12 41 28.1 +2.8**
PESA Pesaro 3.63 101 Pg **Pn 12 40 43.3 -0.4**
235nm,0.4s
PESA Pesaro 3.63 101 Pg **Pn 12 40 43.3 -0.4**
235nm,0.4s
WATA Walderalm 3.64 43⇓ *i*Pn **Pn 12 40 46.0 +2.1**
WATA *i*Sn **Sn 12 41 27.4 +1.7**
WATA Walderalm 3.64 43⇓ *i*Pn **Pn 12 40 46.0 +2.1**
WATA *i* Sn **Sn 12 41 27.4 +1.7**
WATA Walderalm 3.64 43⇓ *i*Pn **Pn 12 40 46.0 +2.1**
WATA *i* Sn **Sn 12 41 27.4 +1.7**
CDF Champ du Feu 3.69 354 *e*Pn **Pn 12 40 45.1 +0.5**
CDF *e*Sn **Sn 12 41 24.3 -2.6**
169nm,0.3s
CDF Champ du Feu 3.69 354 *e*Pn **Pn 12 40 45.3 +0.7**
CDF *e*Sn **Sn 12 41 24.3 -2.6**
CDF Champ du Feu 3.69 354 *e*Pn **Pn 12 40 45.3 +0.7**
CDF *e*Sn **Sn 12 41 25.7 -1.2**
84nm,0.3s
THEF They Montfort 3.73 340 Pn **Pn 12 40 46.3 +1.3**
THEF They Montfort 3.73 340 Pn **Pn 12 40 46.3 +1.3**
THEF They Montfort 3.73 340 Pn **Pn 12 40 46.3 +1.3**
LOR Lormes 3.78 313 *e*P **Pn 12 40 47.4 +1.7**
baz=139
LOR *e*Sn **Sn 12 41 26.4 -2.6**
313nm,0.3s
LOR Lormes 3.78 313 *e*Pn **Pn 12 40 47.4 +1.7**
LOR *e*Sn **Sn 12 41 29.8 +0.8**
LOR Lormes 3.78 313 *e*Pn **Pn 12 40 47.4 +1.7**
LOR *e*Sn **Sn 12 41 29.8 +0.8**
156nm,0.3s
AVF Avril sur Loir 3.78 304 *e*P **Pn 12 40 47.3 +1.6**
AVF *e*Sn **Sn 12 41 26.0 -3.0**
121nm,0.4s
AVF Avril sur Loir 3.78 304 *e*Pn **Pn 12 40 47.6 +1.9**
AVF *e*Sn **Sn 12 41 29.8 +0.8**
AVF Avril sur Loir 3.78 304 *e*Pn **Pn 12 40 47.6 +1.9**
AVF *e*Sn **Sn 12 41 29.8 +0.8**
60nm,0.4s
ABTA Abfaltersbach 3.80 57⇑ *i*Pn **Pn 12 40 47.3 +1.3**
ABTA Abfaltersbach 3.80 57⇑ *i*Pn **Pn 12 40 47.3 +1.3**
ABTA Abfaltersbach 3.80 57⇑ *i*Pn **Pn 12 40 47.3 +1.3**
FRNF Fournols 3.84 282 Pn **Pn 12 40 48.2 +1.7**
FRNF Fournols 3.84 282 Pn **Pn 12 40 48.2 +1.7**
FRNF Fournols 3.84 282 Pn **Pn 12 40 48.2 +1.7**
SSF Saint Saulge 3.84 309 *e*P **Pn 12 40 48.1 +1.5**
SSF *e*Sn **Sn 12 41 27.1 -3.4**
142nm,0.5s
SSF Saint Saulge 3.84 309 *e*Pn **Pn 12 40 48.2 +1.6**
SSF *e*Sn **Sn 12 41 31.2 +0.7**
SSF Saint Saulge 3.84 309 *e*Pn **Pn 12 40 48.2 +1.6**
SSF *e*Sn **Sn 12 41 31.2 +0.7**
71nm,0.5s
BGF Bois d'Agland 3.98 299 *e*P **Pn 12 40 50.2 +1.7**
BGF *e*Sn **Sn 12 41 30.2 -3.6**
434nm,0.3s
BGF Bois d'Agland 3.98 299 *e*Pn **Pn 12 40 50.4 +1.9**
BGF *e*Sn **Sn 12 41 34.2 +0.4**
BGF Bois d'Agland 3.98 299 *e*Pn **Pn 12 40 50.4 +1.9**
BGF *e*Sn **Sn 12 41 34.2 +0.4**
217nm,0.3s
SFTF Sexfontaines 3.99 331 *e*P **Pn 12 40 50.1 +1.6**
baz=139
SFTF *e*Sn **Sn 12 41 31.2 -2.8**
128nm,0.2s
SFTF Sexfontaines 3.99 331 *e*Pn **Pn 12 40 50.6 +2.1**
SFTF *e*Sn **Sn 12 41 33.9 -0.1**
SFTF Sexfontaines 3.99 331 *e*Pn **Pn 12 40 50.6 +2.1**
SFTF *e*Sn **Sn 12 41 33.9 -0.1**
64nm,0.2s
GEPF Gemona 3.99 66 Pg **Pn 12 40 48.8 +0.3**
182nm,0.3s
CING Cingoli 4.05 108 Pg **Pn 12 40 50.8 +1.3**
39nm,0.4s
CING Cingoli 4.05 108 Pg **Pn 12 40 50.8 +1.3**
39nm,0.4s
VINO Villanova 4.07 66 Pg **Pn 12 40 49.7 -0.1**
261nm,0.3s
VINO Villanova 4.07 66 Pg **Pn 12 40 49.7 -0.1**
261nm,0.3s
PAGF Fort de Pagny 4.10 339 *e*P **Pn 12 40 49.6 -0.4**
baz=166
PAGF Fort de Pagny 4.10 339 *e*Pn **Pn 12 40 51.6 +1.6**
baz=165
PAGF *e*Sn **Sn 12 41 33.2 -3.4**
68nm,0.4s
PAGF Fort de Pagny 4.10 339 *e*P **Pn 12 40 49.6 -0.4**
PAGF *e*Sn **Sn 12 41 33.2 -3.4**
PAGF Fort de Pagny 4.10 339 *e*P **Pn 12 40 49.6 -0.4**
PAGF Fort de Pagny 4.10 339 *e*Pn **Pn 12 40 51.6 +1.6**
PAGF *e*Sn **Sn 12 41 35.9 -0.7**
34nm,0.4s
STU Stuttgart 4.13 12 *e*Pn **Pn 12 40 50.4 0.0**
STU *e*Sn **Sn 12 41 34.8 -2.6**
STU Stuttgart 4.13 12 *e*Pn **Pn 12 40 50.4 0.0**
STU *e*Sn **Sn 12 41 34.8 -2.6**
STU Stuttgart 4.13 12 *e*Pn **Pn 12 40 49.8 -0.6**
STU *e*Sn **Sn 12 41 37.6 +0.2**
STU Stuttgart 4.13 12 Pn **Pn 12 40 50.4 0.0**
STU *e*Sn **Sn 12 41 37.6 +0.2**
FUR Furstenfeldbru 4.14 33 *e*Pn **Pn 12 40 51.2 +0.5**
FUR *e*Sn **Sn 12 41 36.7 -1.1**
FUR Furstenfeldbru 4.14 33 *e*Pn **Pn 12 40 51.2 +0.5**
FUR *e*Sn **Sn 12 41 36.7 -1.1**
FUR Furstenfeldbru 4.14 33 Pn **Pn 12 40 51.2 +0.5**
FUR Sn **Sn 12 41 36.7 -1.1**
CAF Calviac 4.16 275 *e*P **Pn 12 40 52.8 +1.9**
CAF *e*Sn **Sn 12 41 34.2 -4.0**
53nm,0.3s
CAF Calviac 4.16 275 *e*Pn **Pn 12 40 53.0 +2.1**
CAF *e*Sn **Sn 12 41 39.4 +1.2**
CAF Calviac 4.16 275 *e*Pn **Pn 12 40 53.0 +2.1**
CAF *e*Sn **Sn 12 41 39.4 +1.2**
26nm,0.3s
PTCC Patocco-Chiusa 4.17 65 Pg **Pn 12 40 51.1 0.0**
121nm,0.3s
PTCC Patocco-Chiusa 4.17 65 Pg **Pn 12 40 51.1 0.0**
121nm,0.3s
SABO M.te Sabotino 4.20 71 Pg **Pn 12 40 51.4 -0.1**
546nm,0.2s
SABO M.te Sabotino 4.20 71 Pg **Pn 12 40 51.4 -0.1**
546nm,0.2s
ROBS Robic 4.22 67 *e*Pn **Pn 12 40 51.6 -0.1**
ROBS *i* Sn **Sn 12 41 35.7 -4.0**
ROBS
comp=Z,65nm,0.1s
ROBS Robic 4.22 67 Pn **Pn 12 40 51.6 -0.1**
ROBS *i* Sn **Sn 12 41 35.7 -4.0**
comp=Z,65nm,0.1s
LANF Langenberg 4.24 359 Pn **Pn 12 40 52.2 +0.2**
LANF Langenberg 4.24 359 Pn **Pn 12 40 52.2 +0.2**
LANF Langenberg 4.24 359 Pn **Pn 12 40 52.2 +0.2**
MEZF Maizieres J'vi 4.24 333 *e*Pn **Pn 12 40 51.2 -0.8**
baz=149
MEZF Maizieres J'vi 4.24 333 *e*P **Pn 12 40 54.1 +2.1**
baz=152
MEZF *e*Sn **Sn 12 41 37.8 -2.4**
comp=Z,103nm,0.2s
MEZF Maizieres J'vi 4.24 333 *e*Pn **Pn 12 40 53.8 +1.8**
MEZF *e*Sn **Sn 12 41 39.6 -0.6**
MEZF Maizieres J'vi 4.24 333 *e*Pn **Pn 12 40 53.8 +1.8**
MEZF *e*Sn **Sn 12 41 39.6 -0.6**
comp=Z,51nm,0.2s
TRI Trieste 4.25 75 *e*Pn **Pn 12 40 51.2 -0.9**
TRI *e*Sn **Sn 12 41 36.1 -4.4**
TRI Trieste 4.25 75 Pg **Pn 12 40 51.5 -0.7**
comp=Z,288nm,0.1s
TRI Trieste 4.25 75 *e*Pn **Pn 12 40 51.2 -0.9**
TRI Trieste 4.25 75 Pg **Pn 12 40 51.5 -0.7**
comp=Z,288nm,0.1s
TRI *e*Sn **Sn 12 41 36.1 -4.4**
LRDF Laroque-de-Fa 4.28 247 Pn **Pn 12 40 53.9 +1.4**
LRDF Laroque-de-Fa 4.28 247 Pn **Pn 12 40 53.9 +1.4**
LRDF Laroque-de-Fa 4.28 247 Pn **Pn 12 40 53.9 +1.4**
TCF Toulx Ste Croi 4.29 293 *e*P **Pn 12 40 54.4 +1.8**
TCF *e*Sn **Sn 12 41 37.8 -3.6**
comp=Z,179nm,0.4s
TCF Toulx Ste Croi 4.29 293 *e*Pn **Pn 12 40 54.5 +1.8**
TCF *e*Sn **Sn 12 41 42.2 +0.8**
TCF Toulx Ste Croi 4.29 293 *e*Pn **Pn 12 40 54.5 +1.8**
TCF *e*Sn **Sn 12 41 42.2 +0.8**
comp=Z,89nm,0.4s
MTLF Montolieu 4.33 253 *e*P **Pn 12 40 54.9 +1.7**
MTLF *e*Sn **Sn 12 41 38.3 -4.2**
comp=Z,201nm,0.2s
MTLF Montolieu 4.33 253 *e*Pn **Pn 12 40 55.0 +1.7**
MTLF *e*Sn **Sn 12 41 41.4 -1.1**
MTLF Montolieu 4.33 253 *e*Pn **Pn 12 40 55.0 +1.7**
MTLF *e*Sn **Sn 12 41 41.4 -1.1**
comp=Z,101nm,0.2s
CADS Cadrg 4.36 68 *i* Pn **Pn 12 40 53.6 -0.2**
CADS *i* Sn **Sn 12 41 39.7 -3.6**
CADS Cadrg 4.36 68 *i* Pn **Pn 12 40 53.6 -0.2**
CADS *i* Sn **Sn 12 41 39.7 -3.6**
VOJS Vojsko 4.41 71 *i* Pn **Pn 12 40 54.3 -0.1**
VOJS *i* Sn **Sn 12 41 40.6 -3.8**
VOJS
comp=Z,82nm,0.1s
VOJS Vojsko 4.41 71 *i* Pn **Pn 12 40 54.3 -0.1**
VOJS *i* Sn **Sn 12 41 40.6 -3.8**
comp=Z,82nm,0.1s
MYKA Terra Mystica 4.44 63⇑ *i*Pn **Pn 12 40 55.3 +0.5**
MYKA Terra Mystica 4.44 63⇑ *i*Pn **Pn 12 40 55.3 +0.5**
MYKA Terra Mystica 4.44 63⇑ *i*Pn **Pn 12 40 55.3 +0.5**
FILF Fillols 4.45 242 Pn **Pn 12 40 57.0 +2.1**
FILF Fillols 4.45 242 Pn **Pn 12 40 57.0 +2.1**
FILF Fillols 4.45 242 Pn **Pn 12 40 57.0 +2.1**
HYF Humbligny 4.45 306 *e*P **Pn 12 40 56.7 +1.9**
HYF *e*Sn **Sn 12 41 41.6 -3.8**
HYF Humbligny 4.45 306 *e*Pn **Pn 12 40 56.8 +1.9**
HYF *e*Sn **Sn 12 41 45.4 0.0**
HYF Humbligny 4.45 306 *e*Pn **Pn 12 40 56.8 +1.9**
HYF *e*Sn **Sn 12 41 45.4 0.0**
KBA Koelnbreinsper 4.46 57 *e*Pn **Pn 12 40 56.5 +1.3**
KBA Koelnbreinsper 4.46 57 *e*Pn **Pn 12 40 56.5 +1.3**
KBA Koelnbreinsper 4.46 57⇑ *i*Pn **Pn 12 40 56.4 +1.3**
KBA Koelnbreinsper 4.46 57⇑ *i*Pn **Pn 12 40 56.5 +1.3**
KBA Koelnbreinsper 4.46 57 Pn **Pn 12 40 56.5 +1.3**
RJOB Jochberg 4.53 47 *e*Pn **Pn 12 40 57.2 +1.2**
RJOB *e*Sn **Sn 12 41 47.6 +0.3**
RJOB Jochberg 4.53 47 *e*Pn **Pn 12 40 57.2 +1.2**
RJOB *e*Sn **Sn 12 41 47.6 +0.3**
RJOB Jochberg 4.53 47 Pn **Pn 12 40 57.2 +1.2**
RJOB Sn **Sn 12 41 47.6 +0.3**
RJF Les Rejaudoux 4.56 279 *e*P **Pn 12 40 58.1 +1.7**
RJF *e*Sn **Sn 12 41 43.6 -4.5**
comp=Z,73nm,0.4s
RJF Les Rejaudoux 4.56 279 *e*Pn **Pn 12 40 58.6 +2.2**
RJF *e*Sn **Sn 12 41 48.8 +0.7**
RJF Les Rejaudoux 4.56 279 *e*Pn **Pn 12 40 58.6 +2.2**
RJF *e*Sn **Sn 12 41 48.8 +0.7**
comp=Z,36nm,0.4s
KTD Kalmit 4.58 1 Pn **Pn 12 40 56.7 0.0**
KTD Kalmit 4.58 1 Pn **Pn 12 40 56.7 0.0**
AQU L'Aquila 4.66 119 *e*Pn Pn 12 41 01.1 +3.3
AQU L'Aquila 4.66 119 *e*Pn Pn 12 41 01.1 +3.3
CARF Carcanieres 4.66 246 Pn **Pn 12 40 59.5 +1.6**
CARF Carcanieres 4.66 246 Pn **Pn 12 40 59.5 +1.6**
CARF Carcanieres 4.66 246 Pn **Pn 12 40 59.5 +1.6**
CLLI Llivia 4.86 244 Pn **Pn 12 41 02.1 +1.4**
comp=Z,20nm,0.2s,SNR=18
CLLI Sn **Sn 12 41 54.7 -1.0**
comp=Z,136nm,0.4s,SNR=7.9
TOD Tromm 4.90 7 Pn **Pn 12 41 00.5 -0.6**
TOD Tromm 4.90 7 Pn **Pn 12 41 00.5 -0.6**
NVLJ Novalja 4.98 90 *e*Pn **Pn 12 41 01.5 -0.6**
NVLJ Sn **Sn 12 41 54.6 -3.7**
NVLJ Novalja 4.98 90 *e*Pn **Pn 12 41 01.5 -0.6**
NVLJ Sn **Sn 12 41 54.5 -3.7**
CFON Fontmartina 4.98 235 Pn **Pn 12 41 03.8 +1.5**
comp=Z,33nm,0.1s,SNR=18
CFON Sn **Sn 12 41 57.8 -0.8**
comp=Z,59nm,0.2s,SNR=6.8
OBKA Obir 4.99 67⇑ *i*Pn **Pn 12 41 02.8 +0.5**
OBKA Obir 4.99 67⇑ *i*Pn **Pn 12 41 02.8 +0.5**
OBKA Obir 4.99 67⇑ *i*Pn **Pn 12 41 02.8 +0.5**
RUP Ruppelstein 4.99 354 Pn **Pn 12 41 03.1 +0.7**
RUP Ruppelstein 4.99 354 Pn **Pn 12 41 03.1 +0.7**
WLF Walferdange 5.07 347 P **Pn 12 41 05.0 +1.7**
WLF S **Sn 12 41 54.8 -5.7**
comp=E,37nm,0.0s
WLF Walferdange 5.07 347 *e*Pn **Pn 12 41 04.9 +1.7**
WLF *e*Sn **Sn 12 41 58.2 -2.2**
WLF Walferdange 5.07 347 *e*Pn **Pn 12 41 04.9 +1.6**
WLF *e*Sn **Sn 12 41 58.2 -2.2**
WLF Walferdange 5.07 347 *e*Pn **Pn 12 41 04.8 +1.5**
comp=E,45nm,0.7s
WLF Walferdange 5.07 347 *e*Pn **Pn 12 41 04.8 +1.5**
comp=E,45nm,0.7s
WLF Sn **Sn 12 41 58.2 -2.2**
LFF La Frestale 5.10 275 *e*Pn **Pn 12 41 02.3 -1.4**
LFF La Frestale 5.10 275 *e*P **Pn 12 41 05.1 +1.8**
LFF *e*Sn **Sn 12 41 56.6 -4.6**
comp=E,106nm,0.5s
LFF La Frestale 5.10 275 *e*Pn **Pn 12 41 05.3 +1.6**
LFF *e*Sn **Sn 12 42 01.9 +0.7**
LFF La Frestale 5.10 275 *e*Pn **Pn 12 41 05.3 +1.6**
LFF *e*Sn **Sn 12 42 01.9 +0.7**
comp=E,53nm,0.5s
ABH Alteburg 5.15 357 Pn **Pn 12 41 05.2 +0.8**
ABH Alteburg 5.15 357 Pn **Pn 12 41 05.2 +0.8**
MLS Moulis 5.24 252 Pn **Pn 12 41 07.4 +1.7**
MLS Moulis 5.24 252 Pn **Pn 12 41 07.4 +1.7**
MLS Moulis 5.24 252 Pn **Pn 12 41 07.4 +1.7**
SOKA Soboth 5.36 66⇑ *i*Pn **Pn 12 41 07.6 +0.2**
SOKA Soboth 5.36 66⇑ *i*Pn **Pn 12 41 07.6 +0.2**
SOKA Soboth 5.36 66⇑ *i*Pn **Pn 12 41 07.6 +0.2**
VSL Villasalto 5.36 168 *e*Pn **Pn 12 41 08.4 +1.0**
comp=E,31nm,0.3s
VSL *e*Sn **Sn 12 42 05.4 -2.3**
VSL Villasalto 5.36 168 *e*Pn **Pn 12 41 08.4 +1.0**
comp=E,31nm,0.3s
VSL *e*Sn **Sn 12 42 05.4 -2.3**
MOA Molln 5.39 53 *e*Pn **Pn 12 41 08.1 +0.3**
MOA *e*Sn **Sn 12 42 06.5 -2.1**
MOA Molln 5.39 53 *e*Pn **Pn 12 41 08.1 +0.3**
MOA *e*Sn **Sn 12 42 06.5 -2.1**
MOA Molln 5.39 53⇑ *i*Pn **Pn 12 41 08.1 +0.3**
MOA Molln 5.39 53⇑ *i*Pn **Pn 12 41 08.1 +0.3**
MOA Molln 5.39 53 Pn **Pn 12 41 08.1 +0.3**
MOA Sn **Sn 12 42 06.5 -2.1**
GRFO Grafenberg 5.44 23 *e*Pn **Pn 12 41 06.8 -1.6**
comp=E,35nm,0.6s
GRFO Grafenberg 5.44 23 *e*Pn **Pn 12 41 06.8 -1.6**
comp=E,35nm,0.6s
EMIR Miracle 5.44 241 Pn **Pn 12 41 11.3 +2.7**
comp=E,66nm,0.3s,SNR=18
EMIR Sn **Sn 12 42 11.5 +1.6**
SNR=7.9
GRA1 Grafenberg Arr 5.44 23 Pn **Pn 12 41 06.9 -1.6**
GRF Grafenberg Arr 5.44 23 *e*Pn **Pn 12 41 06.9 -1.6**
GRF *e*Sn **Sn 12 42 06.1 -3.6**
GRF Grafenberg Arr 5.44 23 *e*Pn **Pn 12 41 06.9 -1.6**
GRF *e*Sn **Sn 12 42 06.1 -3.6**
CSOR Sort 5.46 247 Pn Pn 12 41 11.8 +3.0
comp=E,17nm,0.2s,SNR=133
CSOR Sn **Sn 12 42 11.4 +1.1**
comp=E,89nm,0.5s,SNR=7.9
TNS Taunus Mts 5.49 4 *e*Pn **Pn 12 41 09.3 +0.1**
TNS *e*Sn **Sn 12 42 09.4 -1.7**
TNS Taunus Mts 5.49 4 *e*Pn **Pn 12 41 09.3 +0.1**
TNS *e*Sn **Sn 12 42 09.4 -1.7**
TNS Taunus Mts 5.49 4 Pn **Pn 12 41 09.3 +0.1**
TNS Sn **Sn 12 42 09.4 -1.7**
WET Wettzell 5.57 36 *e*Pn **Pn 12 41 09.9 -0.3**
WET *e*Sn **Sn 12 42 07.6 -5.2**
WET Wettzell 5.57 36 *e*Pn **Pn 12 41 09.9 -0.3**
WET *e*Sn **Sn 12 42 07.6 -5.2**
WET Wettzell 5.57 36 Pn **Pn 12 41 09.9 -0.3**
GEC2 GERESS Array S 5.72 42 *e*Pn **Pn 12 41 12.6 +0.2**
GEC2 *e*Sn **Sn 12 42 13.2 -3.4**
GEC2 GERESS Array S 5.72 42 *e*Pn **Pn 12 41 12.6 +0.2**
GEC2 *e*Sn **Sn 12 42 13.2 -3.4**
GEC2 GERESS Array S 5.72 42 Pn **Pn 12 41 12.6 +0.2**
GERES GERESS Array B 5.72 42 Pn **Pn 12 41 12.5 +0.2**
GERES Sn **Sn 12 42 13.1 -3.5**
GERES GERESS Array B 5.72 42 Pn **Pn 12 41 12.5 +0.2**
comp=E,27nm,0.3s,baz=228,slow=13,SNR=679
GERES Sn **Sn 12 42 13.1 -3.5**
comp=E,58nm,0.3s,baz=238,slow=24,SNR=34
GERES GERESS Array B 5.72 42 Pn **Pn 12 41 12.5 +0.2**
EPF Esparros 5.73 255 *e*P **Pn 12 41 13.5 +1.1**
EPF *e*Sn **Sn 12 42 11.2 -5.6**
comp=E,101nm,0.6s
EPF Esparros 5.73 255 *e*Pn **Pn 12 41 13.5 +1.1**
EPF *e*Sn **Sn 12 42 14.5 -2.3**
EPF Esparros 5.73 255 *e*Pn **Pn 12 41 13.5 +1.1**
GIVF Givet 5.75 340 *e*P **Pn 12 41 14.4 +1.7**
GIVF *e*Sn **Sn 12 42 12.5 -4.8**
comp=E,72nm,0.6s
GIVF Givet 5.75 340 *e*Pn **Pn 12 41 13.9 +1.2**
GIVF *e*Sn **Sn 12 42 15.5 -1.8**
GIVF Givet 5.75 340 *e*Pn **Pn 12 41 13.9 +1.2**
DOU Dourbes 5.80 338 P **Pn 12 41 14.6 +1.2**
DOU S **Sn 12 42 16.3 -2.3**
comp=E,21nm,0.0s
DOU Dourbes 5.80 338 P **Pn 12 41 14.6 +1.2**
RESF Ens 5.81 253 Pn **Pn 12 41 15.1 +1.5**
RESF Ens 5.81 253 Pn **Pn 12 41 15.1 +1.5**
RESF Ens 5.81 253 Pn **Pn 12 41 15.1 +1.5**
KHC Kasperske Hory 5.86 40 *e*Pn **Pn 12 41 14.3 0.0**
comp=E,31nm,0.3s
KHC *e*Sn **Sn 12 42 17.5 -2.6**
KHC Kasperske Hory 5.86 40 *e*PN **Sn 12 41 14.3 0.0**
KHC *ex* x 12 41 20.0
KHC *e*SN **Sn 12 42 15.5 -4.3**
KHC *ex* x 12 42 30.0
KHC Kasperske Hory 5.86 40 Pn **Pn 12 41 14.3 0.0**
ARSA Arzberg 5.87 62⇑ *i*Pn **Pn 12 41 14.4 0.0**
ARSA Arzberg 5.87 62⇑ *i*Pn **Pn 12 41 14.4 0.0**
ARSA Arzberg 5.87 62⇑ *i*Pn **Pn 12 41 14.4 0.0**
BAIF Baives 5.88 336 *e*P **Pn 12 41 16.3 +1.9**
BAIF *e*Sn **Sn 12 42 15.5 -4.9**
comp=E,30nm,0.4s
BAIF Baives 5.88 336 *e*Pn **Pn 12 41 15.5 +1.1**
BAIF *e*Sn **Sn 12 42 18.7 -1.7**
BAIF Baives 5.88 336 *e*Pn **Pn 12 41 15.5 +1.1**
LABF Labassere 5.90 256 Pn **Pn 12 41 15.5 +0.6**
LABF Labassere 5.90 256 Pn **Pn 12 41 15.5 +0.6**
LABF Labassere 5.90 256 Pn **Pn 12 41 15.5 +0.6**
MFF Saint Martin d 5.94 291 *e*P **Pn 12 41 17.1 +1.8**
MFF *e*Sn **Sn 12 42 16.6 -5.3**
comp=E,44nm,0.4s
MFF Saint Martin d 5.94 291 *e*Pn **Pn 12 41 17.0 +1.8**
MFF *e*Sn **Sn 12 42 20.2 -1.7**
MFF Saint Martin d 5.94 291 *e*Pn **Pn 12 41 17.0 +1.8**
BCLA Clavier 5.94 344 P **Pn 12 41 16.9 +1.5**
BCLA S **Sn 12 42 23.0 +1.0**
comp=N,25nm,0.0s
BCLA Clavier 5.94 344 P **Pn 12 41 16.8 +1.5**
BCLA S **Sn 12 42 23.0 +1.0**
VIEF Viey 6.00 255 Pn **Pn 12 41 17.1 +0.9**
VIEF Viey 6.00 255 Pn **Pn 12 41 17.1 +0.9**
VIEF Viey 6.00 255 Pn **Pn 12 41 17.1 +0.9**
MEM Membach 6.01 348 P **Pn 12 41 17.9 +1.7**
MEM S **Sn 12 42 21.0 -2.5**
comp=E,29nm,0.0s
MEM Membach 6.01 348 P **Pn 12 41 17.9 +1.7**
EPOB Poblet 6.04 238 Pn **Pn 12 41 19.1 +2.4**
comp=E,4.0nm,0.4s,SNR=18
HGN Heimansgroeve 6.17 348 *e*Pn **Pn 12 41 20.0 +1.6**
comp=E,8.3nm,0.4s
HGN *e*Sn **Sn 12 42 21.7 -5.8**
HGN Heimansgroeve 6.17 348 *e*Pn **Pn 12 41 20.0 +1.6**
comp=E,8.3nm,0.4s
REYF Montagne du Re 6.22 257 Pn **Pn 12 41 20.2 +1.0**
REYF Montagne du Re 6.22 257 Pn **Pn 12 41 20.2 +1.0**
REYF Montagne du Re 6.22 257 Pn **Pn 12 41 20.2 +1.0**
SNF Seneffe 6.26 338 P **Pn 12 41 22.2 +2.5**
SNF Seneffe 6.26 338 P **Pn 12 41 22.2 +2.5**
NKC Novy Kostel 6.30 28 *e*PN **Pn 12 41 18.1 -2.1**
NKC *e*SN Sn 12 42 24.6 -6.1
CONA Conrad Observa 6.37 57⇑ *i*Pn **Pn 12 41 21.1 -0.1**
CONA Conrad Observa 6.37 57⇑ *i*Pn **Pn 12 41 21.1 -0.1**
CONA Conrad Observa 6.37 57⇑ *i*Pn **Pn 12 41 21.1 -0.1**
ETSF Etsaut 6.39 256 *e*P **Pn 12 41 23.1 +1.5**
ETSF *e*Sn **Sn 12 42 27.8 -5.4**
comp=E,184nm,0.7s
ETSF Etsaut 6.39 256 *e*Pn **Pn 12 41 22.9 +1.3**
ETSF *e*Sn **Sn 12 42 33.0 -0.2**
ETSF Etsaut 6.39 256 *e*Pn **Pn 12 41 22.9 +1.3**
ETSF *e*Sn **Sn 12 42 33.0 -0.2**
comp=E,92nm,0.7s
MOX Moxa 6.41 22 *e*Pn **Pn 12 41 19.7 -2.1**
MOX *e*Sn **Sn 12 42 29.4 -4.2**
MOX Moxa 6.41 22 *e*Pn **Pn 12 41 19.7 -2.1**
MOX *e*Sn **Sn 12 42 29.4 -4.2**
ORDF Ordiarp 6.56 260 Pn **Pn 12 41 25.0 +1.2**
ORDF Ordiarp 6.56 260 Pn **Pn 12 41 25.0 +1.2**
ORDF Ordiarp 6.56 260 Pn **Pn 12 41 25.0 +1.2**
LARF Larrau 6.64 258 Pn **Pn 12 41 25.9 +0.9**
LARF Larrau 6.64 258 Pn **Pn 12 41 25.9 +0.9**
LARF Larrau 6.64 258 Pn **Pn 12 41 25.9 +0.9**
SOP Sopron 6.69 61⇑ *e*Pn **Pn 12 41 25.6 +0.1**
SOP *e*Sn **Sn 12 42 37.5 -2.8**
SOP Sopron 6.69 61⇑ *e*P **Pn 12 41 25.6 +0.1**
ERTA Horta de San J 6.73 238 Pn **Pn 12 41 28.9 +2.8**
comp=E,13nm,0.2s,SNR=18
OSSF Osses 6.77 261 Pn **Pn 12 41 28.2 +1.5**
OSSF Osses 6.77 261 Pn **Pn 12 41 28.2 +1.5**
OSSF Osses 6.77 261 Pn **Pn 12 41 28.2 +1.5**
SJPF Ste Jean 6.79 259 *e*P **Pn 12 41 28.1 +1.1**
SJPF *e*Sn **Sn 12 42 37.1 -5.8**
comp=E,12nm,0.2s
SJPF Ste Jean 6.79 259 *e*Pn **Pn 12 41 27.5 +0.5**
SJPF Ste Jean 6.79 259 *e*Pn **Pn 12 41 27.5 +0.5**
ESAC San Caprasio 6.82 247 Pn **Pn 12 41 29.3 +1.9**
comp=E,28nm,0.4s,SNR=9.1
ESAC Sn **Sn 12 42 44.7 +1.0**
comp=E,43nm,0.3s,SNR=7.9
IELO Elcoad 6.88 257 Pn **Pn 12 41 31.0 +2.7**
comp=E,4.7nm,0.2s,SNR=7.9
IELO Sn **Sn 12 42 45.0 -0.2**
comp=E,39nm,0.5s,SNR=7.9
TREC Trest 6.90 46 *e*PN **Pn 12 41 28.2 -0.2**
TREC *e*SN Sn 12 42 39.7 -5.8
TREC Trest 6.90 46 Pn **Pn 12 41 28.2 -0.2**
PRU Pruhonice 6.92 38 *e*PN **Pn 12 41 28.3 -0.4**
PRU *e*SN **Sn 12 42 40.2 -5.7**
PRU Pruhonice 6.92 38 Pn **Pn 12 41 28.3 -0.4**
IEPA Eparoz 6.92 257 Sn **Sn 12 42 48.6 +2.4**
comp=E,25nm,0.2s,SNR=7.9
ELIZ Elizondo 6.99 260 Pn **Pn 12 41 31.2 +1.5**
comp=E,6.4nm,0.2s,SNR=7.9
FLN La Foliniere 7.02 308 *e*Pn **Pn 12 41 30.2 +0.1**
FLN La Foliniere 7.02 308 *e*P **Pn 12 41 32.1 +2.0**
FLN *e*Sn **Sn 12 42 42.6 -5.9**
comp=E,67nm,0.7s
FLN La Foliniere 7.02 308 *e*Pn **Pn 12 41 30.2 +0.1**
FLN *e*Sn **Sn 12 42 47.3 -1.2**
FLN La Foliniere 7.02 308 *e*Pn **Pn 12 41 30.5 +0.4**
GRR Gorron 7.05 304 *e*Pn **Pn 12 41 31.2 +0.7**
GRR Gorron 7.05 304 *e*P **Pn 12 41 32.8 +2.3**
GRR *e*Sn **Sn 12 42 43.6 -5.6**
comp=E,34nm,0.4s
GRR Gorron 7.05 304 *e*Pn **Pn 12 41 31.2 +0.7**
GRR *e*Sn **Sn 12 42 43.6 -5.6**
GRR Gorron 7.05 304 *e*Pn **Pn 12 41 31.2 +0.7**
IUNC Unciti 7.09 257 Pn Pn 12 41 35.0 +3.9
comp=E,14nm,0.3s,SNR=7.9
IUNC Sn **Sn 12 42 53.3 +2.9**
comp=E,48nm,0.4s,SNR=7.9
PVCC Panska Ves 7.33 36 *e*SN **Sn 12 42 50.4 -5.7**
STON Ston 7.33 101 *e*Pn **Pn 12 41 33.6 -0.7**
STON Sn Sn 12 42 49.9 -6.2
STON Ston 7.33 101 *e*Pn **Pn 12 41 33.6 -0.7**
BRG Berggiesshubel 7.36 31 PN **Sn 12 41 33.6 -1.1**
BRG SN **Sn 12 42 52.1 -4.6**
BRG *i* 12 43 36.3
comp=E,33nm,1.6s

CLL	**Collm**	**7.40**	**26**	*e*Pn	**Pn**	**12 41 33.0**	**-2.3**
CLL				*e*		12 41 37.0	
CLL				*e*Sn	**Sn**	**12 42 53.0**	**-4.8**
VRAC	**Vranov**	**7.49**	**49**	Pn	**Pn**	**12 41 35.5**	**-1.0**
VRAC				Sn	Sn	12 42 52.9	-7.2
VRAC	**Vranov**	**7.49**	**49**	Pn	**Pn**	**12 41 35.5**	**-1.0**
	comp=E,1.3nm,0.3s,baz=241,slow=13,SNR=8.5						
VRAC				Sn	Sn	12 42 52.9	-7.2
	comp=E,4.2nm,0.3s,baz=252,slow=19,SNR=13						
VRAC				LR	LR	12 44 58.2	
	comp=E,64nm,18.4s,baz=78,slow=42						
VRAC	**Vranov**	**7.49**	**49**	Pn	**Pn**	**12 41 35.5**	**-1.0**
PKST	**T"'s**	**7.49**	**67**	*e*Pn	**Pn**	**12 41 36.2**	**-0.4**
PKST				*e*Sn	**Sn**	**12 42 54.6**	**-5.5**
PKST	**T"'s**	**7.49**	**67**	*e*P	**Pn**	**12 41 36.2**	**-0.4**
EIBI	**Ibiza**	**7.52**	**223**	Pn	**Pn**	**12 41 39.4**	**+2.4**
	comp=E,6.3nm,0.3s,SNR=24						
SMOL	**Smolenice**	**7.56**	**57**	*e*PN	**Pn**	**12 41 38.3**	**+0.8**
SMOL				*e*SN	**Sn**	**12 42 58.2**	**-3.7**
SMOL	**Smolenice**	**7.56**	**57**	*e*Pn	**Pn**	**12 41 38.3**	**+0.8**
EMOS	**Mosqueruela**	**7.57**	**238**	Pn	Pn	12 41 41.1	+3.2
	comp=E,18nm,0.5s,SNR=18						
PKSM	**Moragy**	**7.69**	**75⇑**	*e*Pn	**Pn**	**12 41 37.7**	**-1.6**
PKSM				*e*		12 42 56.2	
PKSM	**Moragy**	**7.69**	**75⇑**	*e*P	**Pn**	**12 41 37.7**	**-1.6**
PKSG		**7.76**	**66⇓**	*e*Pn	**Pn**	**12 41 39.9**	**-0.3**
PKSG				*e*Sn	**Sn**	**12 43 01.4**	**-5.3**
PKSG		**7.76**	**66⇓**	*e*P	**Pn**	**12 41 39.9**	**-0.3**
DPC	**Dobruska-Polom**	**7.99**	**42**	*e*PN	**Pn**	**12 41 42.7**	**-0.7**
DPC				*e*SN	Sn	12 43 05.6	-6.8
DPC	**Dobruska-Polom**	**7.99**	**42**	Pn	**Pn**	**12 41 42.7**	**-0.7**
SGMF	**Saint Gilles**	**8.02**	**300**	*e*P	**Pn**	**12 41 44.6**	**+0.7**
SGMF				*e*Sn	Sn	12 43 06.7	-6.4
	comp=E,27nm,0.6s						
SGMF	**Saint Gilles**	**8.02**	**300**	*e*Pn	**Pn**	**12 41 44.5**	**+0.7**
SGMF				*e*Sn	**Sn**	**12 43 11.4**	**-1.7**
SGMF	**Saint Gilles**	**8.02**	**300**	*e*Pn	**Pn**	**12 41 44.5**	**+0.7**
MORC	**Moravsky Berou**	**8.27**	**49**	*e*Pn	**Pn**	**12 41 46.3**	**-0.9**
MORC				*e*Sn	**Sn**	**12 43 14.0**	**-5.1**
MORC	**Moravsky Berou**	**8.27**	**49**	*e*Pn	**Pn**	**12 41 46.3**	**-0.9**
QUIF	**Quistinic**	**8.29**	**296**	*e*Pn	**Pn**	**12 41 48.2**	**+0.8**
QUIF				*e*Sn	Sn	12 43 12.8	-6.8
	comp=E,13nm,0.3s						
QUIF	**Quistinic**	**8.29**	**296**	*e*Pn	**Pn**	**12 41 48.2**	**+0.8**
QUIF				*e*Sn	**Sn**	**12 43 17.9**	**-1.7**
QUIF	**Quistinic**	**8.29**	**296**	*e*Pn	**Pn**	**12 41 48.2**	**+0.8**
ETOR	**Torete**	**8.30**	**245**	Pn	Pn	12 41 51.0	+3.2
	comp=E,32nm,0.2s,SNR=50						
KSP	**Ksiaz**	**8.31**	**40**	*e*P	**Pn**	**12 41 47.8**	**0.0**
KSP	**Ksiaz**	**8.31**	**40**	*e*Pn	**Pn**	**12 41 48.1**	**+0.3**
ELAN	**Lanestosa**	**8.31**	**263**	Pn	**Pn**	**12 41 50.6**	**+2.8**
	comp=E,3.6nm,0.3s,SNR=17						
VYHS	**Vyhne**	**8.41**	**60**	*e*PN	**Pn**	**12 41 48.6**	**-0.5**
VYHS				*e*SN	Sn	12 43 15.8	-6.8
VYHS	**Vyhne**	**8.41**	**60**	*e*Pn	**Pn**	**12 41 48.6**	**-0.5**
ROSF	**Rostrenen**	**8.50**	**299**	*e*P	**Pn**	**12 41 51.2**	**+0.9**
ROSF				*e*Sn	Sn	12 43 18.1	-6.7
	comp=E,14nm,0.3s						
ROSF	**Rostrenen**	**8.50**	**299**	*e*Pn	**Pn**	**12 41 51.2**	**+0.9**
ROSF				*e*Sn	**Sn**	**12 43 22.9**	**-1.9**
ROSF	**Rostrenen**	**8.50**	**299**	*e*Pn	**Pn**	**12 41 51.2**	**+0.9**
PSZ	**Piszkesteto**	**8.88**	**65**	*e*Pn	**Pn**	**12 41 56.9**	**+1.2**
PSZ	**Piszkesteto**	**8.88**	**65⇓**	*e*Pn	**Pn**	**12 41 55.8**	**+0.1**
PSZ				*e*		12 43 28.2	
PSZ	**Piszkesteto**	**8.88**	**65⇓**	*e*P	**Pn**	**12 41 55.8**	**+0.1**
PSZ	**Piszkesteto**	**8.88**	**65**	*e*Pn	**Pn**	**12 41 56.9**	**+1.2**
KEST	**Kesra**	**9.07**	**173**	Pn	Pn	12 42 01.6	+3.3
KEST	**Kesra**	**9.07**	**173**	Pn	Pn	12 42 02.0	+3.7
	comp=E,0.7nm,0.3s,baz=303,slow=4.4,SNR=25						
KEST	**Kesra**	**9.07**	**173**	*e*Pn	Pn	12 42 01.6	+3.3
ETOB	**Tobarra**	**9.33**	**232**	Pn	**Pn**	**12 42 03.6**	**+1.8**
	comp=E,2.7nm,0.2s,SNR=22						
EARI	**Arriondas**	**9.56**	**266**	Pn	**Pn**	**12 42 06.7**	**+1.8**
	comp=E,5.7nm,0.4s,SNR=39						
GUD	**Guadarrama**	**9.77**	**249**	Pn	Pn	12 42 11.0	+3.0
	comp=E,1.7nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**10.15**	**244**	Pn	**Pn**	**12 42 14.7**	**+1.6**
ESDC				Sn	Sn	12 43 59.0	-6.4
ESDC	**Sonseca Array**	**10.15**	**244**	Pn	**Pn**	**12 42 14.7**	**+1.6**
	comp=E,2.5nm,0.3s,baz=59,slow=14,SNR=42						
ESDC				Sn	Sn	12 43 59.0	-6.4
	comp=E,0.8nm,0.3s,baz=58,slow=25,SNR=3.9						
ESDC	**Sonseca Array**	**10.15**	**244**	Pn	**Pn**	**12 42 14.8**	**+1.8**
	comp=E,8.3nm,0.2s,baz=58,SNR=53						
ESLA	**Sonseca Array**	**10.15**	**244**	*e*Pn	**Pn**	**12 42 14.4**	**+1.4**
ESLA	**Sonseca Array**	**10.15**	**244**	*e*Pn	**Pn**	**12 42 14.4**	**+1.4**
EPON	**Pontenova**	**10.93**	**268**	Pn	**Pn**	**12 42 26.3**	**+2.7**
	comp=E,1.1nm,0.2s,SNR=6.8						
ECAL	**Calabor**	**11.02**	**260**	Pn	**Pn**	**12 42 25.8**	**+0.8**
	comp=E,2.8nm,0.3s,SNR=9.4						
PBRG	**Braganca**	**11.07**	**260**	*e*P	**Pn**	**12 42 27.4**	**+1.8**
PBRG	**Braganca**	**11.07**	**260**	*e*P	**Pn**	**12 42 27.4**	**+1.8**
PMRV	**Marv??o**	**12.54**	**250**	*e*P	**Pn**	**12 42 47.1**	**+1.6**
PMRV				*e*S	**Sn**	**12 45 00.6**	**-3.0**
PMRV	**Marv??o**	**12.54**	**250**	*e*P	**Pn**	**12 42 47.1**	**+1.6**
EKA	**Eskdalemuir Ar**	**12.74**	**330**	Pn	**Pn**	**12 42 48.5**	**+0.3**
EKA				Sn	Sn	12 45 01.4	-7.1
EKA	**Eskdalemuir Ar**	**12.74**	**330**	Pn	**Pn**	**12 42 48.5**	**+0.3**
	baz=143,slow=14,SNR=19						
EKA				Sn	Sn	12 45 01.3	-7.1
	baz=144,slow=25,SNR=5.7						
EKA	**Eskdalemuir Ar**	**12.74**	**330**	Pn	**Pn**	**12 42 48.5**	**+0.3**
BR131	**Keskin Array S**	**19.67**	**96**	*e*P	**Pn**	**12 44 16.3**	**-0.2**
	comp=E,0.9nm,0.4s						
BR131	**Keskin Array S**	**19.67**	**96**	*e*P	**Pn**	**12 44 16.3**	**-0.2**
	comp=E,0.9nm,0.4s						
BRTR	**Keskin Array B**	**19.67**	**96**	P	**Pn**	**12 44 16.5**	**-0.1**
BRTR	**Keskin Array B**	**19.67**	**96**	P	**Pn**	**12 44 16.5**	**-0.1**
	comp=E,0.2nm,0.3s,baz=280,slow=7.1,SNR=11						
BRTR	**Keskin Array B**	**19.67**	**96**	P	**Pn**	**12 44 16.5**	**-0.1**
FINES	**FINESS Array B**	**19.85**	**26**	P	**P**	**12 44 16.4**	**+0.1**
FINES	**FINESS Array B**	**19.85**	**26**	P	**P**	**12 44 16.4**	**+0.1**
	comp=E,0.3nm,0.3s,baz=220,slow=9.2,SNR=11						
FINES	**FINESS Array B**	**19.85**	**26**	P	**P**	**12 44 16.4**	**+0.1**
BHD	**Baghdad**	**30.33**	**100**	*ex*	**pP**	**12 46 09.5**	**-0.2**
BHD				*ex*	x	12 51 16.0	
TORD	**Torodi Ar. Bea**	**31.93**	**191**	P	**P**	**12 46 12.2**	**+1.4**
TORD	**Torodi Ar. Bea**	**31.93**	**191**	P	**P**	**12 46 12.2**	**+1.4**
	comp=E,0.3nm,0.5s,baz=5.2,slow=9.8,SNR=3.6						
TORD	**Torodi Ar. Bea**	**31.93**	**191**	P	**P**	**12 46 12.2**	**+1.4**
KKAR	**Karatay Array**	**44.13**	**69**	*e*P	**P**	**12 47 53.9**	**+0.7**
	comp=E,0.4nm,0.4s						
KKAR	**Karatay Array**	**44.13**	**69**	*e*P	**P**	**12 47 53.9**	**+0.7**
	comp=E,0.4nm,0.4s						
KURK	**Kurchatov**	**46.28**	**56**	*e*P	**P**	**12 48 10.4**	**+0.3**
	comp=E,0.5nm,0.4s						
KURK	**Kurchatov**	**46.28**	**56**	*e*P	**P**	**12 48 10.4**	**+0.3**
	comp=E,0.5nm,0.4s						
MKAR	**Makanchi Array**	**50.10**	**60**	P	**P**	**12 48 40.6**	**+0.9**
MKAR	**Makanchi Array**	**50.10**	**60**	P	**P**	**12 48 40.6**	**+0.9**
	comp=E,0.2nm,0.4s,baz=297,slow=6.6,SNR=4.0						
MKAR	**Makanchi Array**	**50.10**	**60**	P	**P**	**12 48 40.6**	**+0.9**

*DJA **19** 12:48:44.2±1.8,6°S±8°×12°5E±1°8,h154km±29km, M4.3/9, mb4.4/5,mB4.6/2,MLv4.2/9,Mw(mB)3.8/2*
*IDC **19** 12:48:54.2±1.3,5.74S×124.05E,h0km,mb3.7/3, mb1 4.0/6,mb1mx3.7/23,mbtmp3.9/6,ML3.8/3,MS3.4/2, Ms1 3.4/2,ms1mx2.7/32, Error ellipse: s-maj=43.2km s-min=20.9km az=54.0*

ISC 19 12:48:53.6±1.2,5.55S±0.07×124.35E±0.08,h35km,n18, σ1s78/14,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSI	**Bau Bau**	**1.77**	**272**	P	**Pn**	**12 49 22.3**	**+0.6**
KDI	**Kendari**	**2.33**	**312**	P	Pn	12 49 35.1	+5.6
BSSI	**Bau Bau, Buton**	**3.88**	**261**	P	**Pn**	**12 49 50.4**	**-0.4**
BKSI	**Bulukumba**	**4.21**	**273**	P	**Pn**	**12 49 54.9**	**-0.4**
SKSI	**Soroako, Sulaw**	**4.24**	**315**	P	Pn	12 50 01.3	+5.5
KAPI	**Kappang**	**4.60**	**276**	Pn	**Pn**	**12 50 01.7**	**+0.9**
	4.2nm,0.3s,baz=150,slow=11,SNR=16						
KAPI				Sn	**Sn**	**12 50 52.6**	**-0.4**
	4.5nm,0.3s,baz=227,slow=20,SNR=7.6						
LUWI	**Luwuk**	**4.74**	**341**	P	**Pn**	**12 50 03.7**	**+1.1**
	81nm,0.8s,916nm0.3nm						
SPSI	**Sidrap Palu**	**4.82**	**289**	P	**Pn**	**12 50 04.5**	**+0.8**
	23nm,0.6s,0.1nm						
TTSI	**Tana Toraja**	**5.15**	**299**	P	**Pn**	**12 50 07.6**	**-0.6**
	22nm,0.7s,597nm0.1nm						
WSI	**Waingapu**	**5.73**	**224**	P	Pn	12 50 07.9	-8.4
	161nm,0.9s,0.7nm						
MRSI	**Marisa**	**6.45**	**338**	P	**Pn**	**12 50 23.5**	**-2.5**

FITZ	**Fitzroy Crossi**	**12.54**	**174**	Pn	**Pn**	**12 51 50.8**	**+1.2**
	0.5nm,0.3s,baz=31,slow=8.1,SNR=18						
FITZ				Sn	**Sn**	**12 54 03.8**	**-4.4**
	0.1nm,0.3s,baz=81,slow=24,SNR=2.6						
DAV	**Davao City (W)**	**12.59**	**6**	LR	LR	12 57 31.6	
	comp=Z,138nm,19.2s,baz=215,slow=40						
WRA	**Warramunga Arr**	**17.30**	**147**	P	**P**	**12 52 55.5**	**+1.8**
	0.3nm,0.3s,baz=318,slow=13,SNR=12						
WRA				S	**Sn**	**12 56 03.6**	**-0.5**
	0.1nm,0.3s,baz=314,slow=24,SNR=5.6						
ASAR	**Alice Springs**	**20.23**	**154**	P	Pn	12 53 32.1	+4.1
	4.1nm,0.8s,baz=332,slow=11,SNR=35						
ASAR				S	**S**	**12 57 11.7**	**+0.5**
	1.1nm,0.8s,baz=312,slow=18,SNR=7.0						
PSI	**Prapat**	**26.71**	**287**	LR	LR	13 06 42.8	
	comp=Z,96nm,20.1s,baz=229,slow=40						
MKAR	**Makanchi Array**	**64.02**	**329**	P	P	12 59 30.1	+6.4
	0.8nm,0.8s,baz=135,slow=7.6,SNR=9.1						
ZALV	**Zalesovo Beam**	**67.89**	**336**	P	P	12 59 54.3	+5.9
	0.6nm,0.8s,baz=131,slow=6.3,SNR=4.0						

IDC 19 12:54:18.3±1.4,3.78N×126.89E,h0km,mb3.4/5, mb1 3.6/5,mb1mx3.4/23,mbtmp3.5/5,Error ellipse: s-maj=97.4km s-min=19.3km az=73.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.78**	**183**	P	P	12 59 11.2	-0.7
	1.0nm,0.8s,baz=16,slow=13,SNR=2.7						
WRA	**Warramunga Arr**	**24.68**	**163**	P	P	12 59 40.1	-1.2
	0.9nm,0.6s,baz=344,slow=10,SNR=8.6						
ASAR	**Alice Springs**	**28.12**	**166**	P	P	13 00 14.2	+1.9
	0.2nm,0.5s,baz=344,slow=9.6,SNR=4.6						
SONM	**Songino Array**	**47.30**	**341**	P	P	13 02 53.8	0.0
	0.3nm,0.6s,baz=157,slow=7.8,SNR=3.2						
MKAR	**Makanchi Array**	**57.61**	**325**	P	P	13 04 10.0	-0.2
	0.6nm,0.4s,baz=115,slow=8.2,SNR=13						

IDC 19 13:16:22.0±1.3,55.64S×26.47W,h0km,mb3.9/1, mb1 3.5/2,mb1mx3.4/16,mbtmp3.5/2,ML1.9/1,Error ellipse: s-maj=68.8km s-min=40.3km az=82.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**18.96**	**157**	P	P	13 20 44.5	0.0
	0.0nm,0.3s,baz=306,slow=7.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**72.50**	**29**	P	P	13 27 50.3	-0.1
	0.8nm,0.6s,baz=193,slow=6.2,SNR=8.4						
YKA	**Yellowknife Ar**	**136.14**	**318**	PKP	PKPdf	13 35 43.7	0.0
	0.1nm,0.7s,baz=125,slow=2.0,SNR=3.1						
INK	**Inuvik**	**145.74**	**321**	PKPbc	PKPdf	13 36 00.6	-0.2
	0.4nm,0.4s,baz=125,slow=2.0,SNR=7.2						
ILAR	**Eielson Array**	**150.13**	**312**	PKPbc	PKPbc	13 36 12.6	-0.6
	0.4nm,0.8s,baz=134,slow=4.7,SNR=5.5						

IDC 19 13:16:23.4±2.3,4.06N×126.44E,h0km,mb3.2/3, mb1 3.4/3,mb1mx3.2/22,mbtmp3.2/3,Error ellipse: s-maj=199.8km s-min=25.8km az=65.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.08**	**162**	P	P	13 21 49.8	-0.1
	0.4nm,0.4s,baz=341,slow=11,SNR=9.5						
ASAR	**Alice Springs**	**28.50**	**166**	P	P	13 22 20.6	-0.1
	0.2nm,0.5s,baz=339,slow=9.2,SNR=4.2						
MKAR	**Makanchi Array**	**57.12**	**325**	P	P	13 26 11.9	+0.1
	0.1nm,0.5s,baz=128,slow=8.2,SNR=3.2						

IDC 19 13:18:13.6±4.9,45.90N×151.79E,h63km±31km,mb3.2/3, mb1 3.3/5,mb1mx3.0/26,mbtmp3.2/5,ML3.1/2,Error ellipse: s-maj=95.8km s-min=26.0km az=154.0,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**6.76**	**258**	P	Pn	13 19 49.4	-0.7
	0.5nm,0.3s,baz=84,slow=11,SNR=8.9						
PETK	**Petropavlovsk-**	**8.17**	**26**	P	Pn	13 20 09.6	+0.3
	0.1nm,0.3s,baz=176,slow=14,SNR=4.3						
MKAR	**Makanchi Array**	**46.52**	**298**	P	P	13 26 35.6	+1.2
	0.1nm,0.5s,baz=71,slow=9.4,SNR=3.1						
YKA	**Yellowknife Ar**	**52.15**	**36**	P	P	13 27 17.5	+0.5
	0.1nm,0.4s,baz=300,slow=7.0,SNR=5.5						
FINES	**FINESS Array B**	**64.42**	**334**	P	P	13 28 41.1	-1.4
	3.4nm,1.0s,baz=18,slow=5.8,SNR=2.9						

IDC 19 13:22:29.4±4.0,19.84S×177.03E,h0km,mb3.4/3, mb1 3.7/3,mb1mx3.5/17,mbtmp3.4/3,Error ellipse: s-maj=279.8km s-min=33.9km az=156.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.07**	**262**	P	P	13 30 07.0	+0.2
	0.1nm,0.3s,baz=97,slow=7.7,SNR=7.1						
ASAR	**Alice Springs**	**40.13**	**257**	P	P	13 30 06.8	-0.5
	0.4nm,0.8s,baz=89,slow=7.5,SNR=7.1						
NVAR	**Mina Array Bea**	**83.83**	**46**	P	P	13 35 01.2	0.0
	0.5nm,0.7s,baz=206,slow=6.0,SNR=4.0						

IDC 19 13:22:44.1±2.0,5.79N×126.45E,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.3/23,mbtmp3.4/4,Error ellipse: s-maj=122.8km s-min=24.1km az=69.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**23.76**	**182**	P	P	13 27 58.0	-0.3
	3.1nm,1.1s,baz=340,slow=12,SNR=4.6						
WRA	**Warramunga Arr**	**26.73**	**163**	P	P	13 28 25.1	-0.4
	0.3nm,0.4s,baz=344,slow=11,SNR=9.2						
ASAR	**Alice Springs**	**30.17**	**166**	P	P	13 28 56.9	+0.7
	0.4nm,1.0s,baz=346,slow=7.9,SNR=3.7						
MKAR	**Makanchi Array**	**55.72**	**325**	P	P	13 32 22.4	-0.1
	0.2nm,0.6s,baz=120,slow=5.7,SNR=2.0						

IDC 19 13:27:36.2±5.0,19.65S×70.29W,h83km±38km,mb3.6/3, mb1 3.8/6,mb1mx3.5/19,mbtmp3.6/6,MS3.2/4,Ms1 3.1/4, ms1mx2.9/19,Error ellipse: s-maj=55.3km s-min=27.0km az=73.0,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.92**	**32**	P	Pn	13 28 35.4	+0.5
	2.8nm,0.3s,baz=223,slow=7.3,SNR=32						
SIV	**San Ignacio**	**9.50**	**66**	P	Pn	13 29 49.4	-0.9
	1.8nm,0.3s,baz=269,slow=10.0,SNR=20						
SIV				LR	LR	13 34 13.3	
	comp=Z,192nm,19.0s,slow=42						
CPUP	**Villa Florida**	**13.66**	**122**	P	Pn	13 30 46.7	+0.4
	0.2nm,0.3s,baz=285,slow=12,SNR=5.1						
CPUP				LR	LR	13 36 08.1	
	comp=Z,18nm,19.6s,baz=352,slow=38						
BDFB	**Brasilia**	**21.59**	**83**	P	P	13 32 23.5	+3.9
	1.7nm,0.4s,baz=251,slow=13,SNR=4.1						
BDFB				LR	LR	13 42 34.0	
	comp=Z,61nm,18.8s,baz=350,slow=42						
SNAA	**Sanae**	**64.44**	**161**	P	P	13 38 03.5	+0.1
	0.5nm,0.9s,baz=296,slow=11,SNR=5.4						
TORD	**Torodi Ar. Bea**	**77.97**	**71**	P	P	13 39 25.7	-0.3
	1.5nm,0.7s,baz=252,slow=5.5,SNR=9.3						
TORD				LR	LR	14 11 56.8	
	comp=Z,48nm,19.7s,baz=160,slow=34						
YKA	**Yellowknife Ar**	**89.02**	**341**	P	P	13 40 20.1	-1.3
	0.6nm,0.6s,baz=134,slow=4.5,SNR=29						
MKAR	**Makanchi Array**	**144.85**	**33**	PKP	PKPdf	13 47 03.5	-0.1
	1.8nm,0.7s,baz=321,slow=3.3,SNR=28						
SONM	**Songino Array**	**151.75**	**5**	PKPab	PKPab	13 47 31.6	+1.2
	0.3nm,0.9s,baz=341,slow=3.1,SNR=2.7						

*NIED **19** 13:31:00,33.00N×140.30E,h35km,Mw3.6 Best double couple: M0 3.13000×10^14 NP1:ϕs286.00000°,δ65.00000°, λ83.00000°. NP2:ϕs122.00000°,δ26.00000°,λ104.00000°.*
*IDC **19** 13:31:22.1±1.1,32.59N×139.69E,h0km,mb3.4/3, mb1 3.7/4,mb1mx3.4/25,mbtmp3.5/4,ML4.0/1,Error ellipse: s-maj=45.0km s-min=15.1km az=96.0*
*ISCJB **19** 13:31:24.8±0.8,32.95N±0.04×140.39E±0.08,h51km±7km, mb3.5/3,Error ellipse: s-maj=11.5km s-min=6.9km az=6.6*
*JMA **19** 13:31:26.6±0.2,32.99N×140.30E,h48km±3km,M4.0*
JMA Felt I J1.

ISC 19 13:31:24.3±2.2,32.89N±0.08×140.45E±0.08,h32km±13km, n18,σ1s20/31,mb3.5/3,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.58**	**293**	P	**Pn**	**13 31 36.9**	**+0.7**
JHJ2				S	**Sb**	**13 31 44.1**	**0.0**
JHCJ	**Hachijojimakas**	**0.58**	**288**	P	**Pn**	**13 31 36.9**	**+0.6**
JHCJ				S	**Sb**	**13 31 43.6**	**-0.6**
JHJ	**Hachijo jima 2**	**0.60**	**292**	Pn	**Pn**	**13 31 36.8**	**+0.1**
	2μm,0.3s,baz=214,slow=4.5,SNR=2650						
JHJ				Sn	**Sb**	**13 31 44.5**	**-0.5**
	1μm,0.3s,baz=83,slow=22,SNR=27						
JMY	**Miyakejima3**	**1.42**	**327**	P	**Pn**	**13 31 48.3**	**+0.5**
JMY				*e*S	**Sn**	**13 32 04.0**	**-1.4**
JKO	**Kozu shima**	**1.70**	**320**	P	**Pn**	**13 31 52.9**	**+1.3**
JKO				*e*S	**Sn**	**13 32 11.4**	**-0.8**
BSO1	**Boso 1**	**1.81**	**14**	P	**Pn**	**13 31 52.8**	**+0.1**
BSO2	**Boso 2**	**1.87**	**8**	*e*S	**Sn**	**13 32 15.5**	**-0.7**
BSO3	**Boso 3**	**1.91**	**1**	P	**Pn**	**13 31 54.7**	**+0.4**
BSO3				S	**Sn**	**13 32 16.3**	**-0.8**
JIM2	**Oshima 3**	**2.01**	**335**	P	**Pn**	**13 31 56.4**	**+0.4**
JIM2				S	**Sn**	**13 32 18.1**	**-1.9**
BSO4	**Boso 4**	**2.10**	**357**	P	**Pn**	**13 31 58.0**	**+0.9**
BSO4				S	**Sn**	**13 32 21.7**	**-0.3**
JIZS	**Izushimoda**	**2.24**	**325**	P	**Pn**	**13 32 00.5**	**+1.3**
JIZS				S	**Sn**	**13 32 25.4**	**-0.4**
KTJJ	**Kamata 2**	**2.33**	**331**	P	**Pn**	**13 32 01.5**	**+1.1**
KTJJ				S	**Sn**	**13 32 26.6**	**-1.4**
JOD2	**Odawara 2**	**2.62**	**335**	P	**Pn**	**13 32 04.7**	**+0.3**
JOD2				S	**Sn**	**13 32 32.9**	**-2.3**
MJAR	**Matsushiro Arr**	**4.08**	**334**	Pn	**Pn**	**13 32 27.3**	**+2.8**
	9.1nm,0.3s,baz=163,slow=15,SNR=143						
MJAR				Sn	**Sn**	**13 33 12.1**	**+0.9**
	3.4nm,0.3s,baz=82,slow=9.2,SNR=6.4						
MAT	**Matsushiro**	**4.08**	**334**	P	**Pn**	**13 32 27.3**	**+2.8**
MAT				S	**Sn**	**13 33 12.0**	**+0.8**
MKAR	**Makanchi Array**	**45.76**	**305**	P	**P**	**13 39 42.4**	**-0.3**
	0.1nm,0.5s,baz=90,slow=10,SNR=2.9						
WRA	**Warramunga Arr**	**52.86**	**187**	P	**P**	**13 40 36.7**	**-0.3**
	0.7nm,0.4s,baz=3.0,slow=7.7,SNR=38						
ASAR	**Alice Springs**	**56.59**	**187**	P	**P**	**13 41 04.1**	**+0.1**
	0.2nm,0.4s,baz=0.6,slow=6.4,SNR=9.5						

*ISCJB **19** 13:34:52.6±0.3,38.27N±0.02×108.90W±0.03,h10km, Error ellipse: s-maj=2.9km s-min=2.4km az=163.6*
*NEIC **19** 13:34:54.0,38.37N×108.98W,h2km, ML2.6(SLC),After SLC.*

ISC 19 13:34:53.7±0.7,38.34N±0.02×108.93W±0.02,h10km,n42, σ1s77/53,22C-21D,Colorado

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R20A	**Redvale**	**0.46**	**109**	P	**Pg**	**13 35 00.8**	**-1.9**
	baz=0.4,SNR=147						
S20A	**Disappointment**	**0.67**	**138**	⇓P	Pg	13 35 04.1	-2.7
	baz=0.6						
S20A				⇑S	**Sg**	**13 35 12.6**	**-3.0**
	baz=0.6						
Q20A	**Ridgley Place,**	**0.79**	**38**	⇑P	**Pg**	**13 35 07.8**	**-1.2**
	baz=0.8,SNR=17						
Q20A				⇓S	**Sg**	**13 35 18.3**	**-1.0**
	baz=0.8						
S18A	**Hurst Farm, Bl**	**1.06**	**233**	⇓P	**Pg**	**13 35 11.9**	**-2.3**
	baz=1.0						
S18A				⇓S	**Sg**	**13 35 25.5**	**-2.5**
	baz=1.0						
R21A	**Cimarron**	**1.08**	**88**	⇓P	Pb	13 35 12.3	-2.4
	baz=1.1,SNR=25						
R21A				⇓S	**Sb**	**13 35 26.7**	**-2.3**
	baz=1.1						
Q21A	**Lamborn Mesa,**	**1.17**	**64**	⇑P	**Pb**	**13 35 14.5**	**-1.6**
	baz=1.2,SNR=30						
Q21A				⇑S	**Sb**	**13 35 30.1**	**-1.4**
	baz=1.2

DSZ	**Denniston Nort**	**0.34**	**214**	⇑P*	Pg	13 45 37.3	+0.2
DSZ				S*	Sg	13 45 42.2	+0.5
THZ	**Tophouse**	**0.70**	**115**	⇓P*	Pg	13 45 43.6	-0.3
QRZ	**Quartz Range**	**0.73**	**29**	⇓P*	Pg	13 45 43.6	-0.7
NNZ	**Nelson**	**1.03**	**77**	⇑P*	Pb	13 45 48.4	-1.4
LTZ	**Lake Taylor**	**1.33**	**173**	⇑PN	Pn	13 45 53.3	-1.2
BSWZ	**Blackbirch Sta**	**1.39**	**101**	PN	Pn	13 45 54.9	-0.5
TUWZ	**Tuamarina**	**1.42**	**89**	PN	Pn	13 45 55.1	-0.6
KHZ	**Kahutara**	**1.46**	**131**	PN	Pn	13 45 56.1	-0.2
DUWZ	**D'Urville Isla**	**1.56**	**65**	PN	Pn	13 45 56.9	-0.8
DUWZ				SN	Sn	13 46 17.6	-0.2
TCW	**Tory Channel**	**1.69**	**82**	PN	Pn	13 45 59.5	0.0
WVZ	**Waitaha Valley**	**1.88**	**211**	⇓PN	Pn	13 46 00.3	-1.8
SNZO	**South Karori**	**2.00**	**86**	PN	Pn	13 46 03.7	0.0
CRLZ	**Canterbury Las**	**2.15**	**169**	PN	Pn	13 46 03.6	-2.2
KIW	**Kapiti Island**	**2.24**	**75**	PN	Pn	13 46 07.3	+0.3
MQZ	**McQueen's Vall**	**2.28**	**169**	PN	Pn	13 46 05.6	-2.0
CAW	**Cannon Point**	**2.30**	**82**	PN	Pn	13 46 07.4	-0.5
RPZ	**Rata Peaks**	**2.37**	**198**	PN	Pn	13 46 07.5	-1.4
PLWZ	**Palliser**	**2.41**	**94**	PN	Pn	13 46 08.4	-0.9
OGWZ	**Otaki Gorge**	**2.44**	**76**	PN	Pn	13 46 09.7	-0.1
MTW	**Mount Morrison**	**2.61**	**84**	⇓PN	Pn	13 46 10.7	-1.5
HOWZ	**Holdsworth Sta**	**2.67**	**79**	PN	Pn	13 46 11.9	-1.2
NEZ	**North Egmont**	**2.69**	**36**	ePN	Pn	13 46 12.8	-0.5
PKE	**Pukeiti**	**2.71**	**34**	ePN	Pn	13 46 12.5	-1.0
FOZ	**Fox Glacier**	**2.73**	**219**	PN	Pn	13 46 10.5	-3.3
MRZ	**Mangatainoka R**	**2.78**	**74**	PN	Pn	13 46 13.5	-1.0
WAZ	**Wanganui**	**2.81**	**54**	ePN	Pn	13 46 14.9	0.0
TIWZ	**Tintock**	**2.97**	**78**	PN	Pn	13 46 15.5	-1.7
VRZ	**Vera Road**	**3.12**	**42**	PN	Pn	13 46 18.4	-0.8
LBZ	**Lake Benmore**	**3.23**	**205**	PN	Pn	13 46 19.1	-1.5
BFZ	**Birch Farm**	**3.26**	**77**	ePN	Pn	13 46 18.9	-2.3
TSZ	**Takapari Road**	**3.28**	**66**	PN	Pn	13 46 20.6	-0.9
PKVZ	**Pokaka**	**3.32**	**50**	PN	Pn	13 46 21.8	-0.2
MTVZ	**Mangateitei**	**3.33**	**53**	PN	Pn	13 46 21.9	-0.3
TRVZ	**Turoa**	**3.43**	**52**	PN	Pn	13 46 23.4	-0.4
WNVZ	**Wahianoa**	**3.45**	**53**	ePN	Pn	13 46 23.1	-0.7
FWVZ	**Far West T-bar**	**3.46**	**52**	PN	Pn	13 46 23.9	-0.3
WPVZ	**Whakapapa**	**3.50**	**51**	PN	Pn	13 46 24.8	+0.3
JCZ	**Jackson Bay**	**3.56**	**222**	PN	Pn	13 46 23.1	-2.2
BHHZ	**Black Hill Sta**	**3.64**	**58**	PN	Pn	13 46 25.4	-0.9
HIZ	**Hauiti**	**3.65**	**37**	PN	Pn	13 46 24.8	-1.6
ODZ	**Otahua Downs**	**3.72**	**196**	⇑PN	Pn	13 46 25.1	-2.3
WKZ	**Wanaka**	**4.03**	**212**	ePN	Pn	13 46 29.2	-2.5
MSZ	**Milford Sound**	**4.41**	**222**	ePN	Pn	13 46 35.3	-1.5
WTAZ	**Waiatarua**	**4.93**	**24**	PN	Pn	13 46 44.1	+0.1
MKAZ	**Moumakai**	**4.97**	**30**	PN	Pn	13 46 44.8	+0.1
RVAZ	**Riverhead Bore**	**5.08**	**24**	PN	Pn	13 46 45.6	-0.5
WCZ	**Waipu Caves**	**5.80**	**19**	PN	Pn	13 46 54.8	-1.2
OUZ	**Omahuta**	**6.35**	**11**	PN	Pn	13 47 03.2	-0.3

*IDC **19** 14:05:55.1±1.7, 6°.69S×129°.58E, h0km, mb3.9/2, mb1 3.8/5, mb1mx3.5/19, mbtmp3.7/5, ML3.5/2, MS3.1/2, Ms1 3.1/2, ms1mx2.5/25, Error ellipse: s-maj=78.9km s-min=24.9km az=78.0*

*AUST **19** 14:06:42.6±82.0, 9°.87S×129°.83E, h22km, Error ellipse: s-maj=1.8km s-min=0.9km az=250.0*

ISC 19 14:06:05.6±1.5, **7°.08S**±0°.08×**129°.2E**±0°.2, **h156km, n11, σ2970/9, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**6.04**	**162**	P	**Pn**	**14 07 35.4**	**+2.5**
	baz=3.2,SNR=46						
MTN				S	**Sn**	**14 08 38.1**	**-3.1**
	baz=3.2,SNR=9.6						
KDU	**Kakadu**	**6.44**	**150**	P	**Pn**	**14 07 39.0**	**+0.7**
	baz=3.8,SNR=104						
KDU				S	**Sn**	**14 08 48.8**	**-2.1**
	baz=3.8,SNR=4.8						
SWI	**Sorong**	**6.51**	**19**	P	**Sn**	**14 08 51.5**	**-1.3**
	baz=9.1,SNR=3.5						
KAPI	**Kappang**	**9.61**	**282**	LR	LR	14 13 02.1	
	comp=Z,44nm,20.8s,baz=101,slow=43						
FITZ	**Fitzroy Crossi**	**11.48**	**197**	Pn	P	14 08 48.3	-4.1
	0.2nm,0.3s,baz=17,slow=13,SNR=13						
FITZ				Sn	**Sn**	**14 10 50.1**	**-2.1**
	0.7nm,0.3s,baz=203,slow=16,SNR=6.9						
FITZ	**Fitzroy Crossi**	**11.48**	**197**	P	**P**	**14 08 51.2**	**-1.2**
	baz=9.2,SNR=6.4						
WRA	**Warramunga Arr**	**13.73**	**159**	Pn	**Pn**	**14 09 13.3**	**-0.6**
	0.3nm,0.3s,baz=339,slow=13,SNR=17						
WRA				Sn	Sn	14 11 35.5	-11
	0.5nm,0.3s,baz=337,slow=22,SNR=6.8						
ASAR	**Alice Springs**	**17.10**	**165**	P	**Pn**	**14 09 59.3**	**+3.8**
	0.2nm,0.3s,baz=344,slow=9.4,SNR=12						
CTA	**Charters Tower**	**21.00**	**130**	LR	LR	14 17 44.0	
	comp=Z,121nm,20.9s,baz=302,slow=34						
MKAR	**Makanchi Array**	**67.86**	**327**	P	P	14 16 55.2	+8.1
	0.7nm,0.4s,baz=118,slow=7.9,SNR=18						
ZALV	**Zalesovo Beam**	**71.30**	**334**	P	P	14 17 14.6	+6.7
	0.3nm,0.3s,baz=128,slow=4.0,SNR=2.6						

IDC 19 14:15:23.1±3.3, **10°.08S**×**151°.25E, h0km, mb3.3/2, mb1 3.6/4, mb1mx3.4/16, mbtmp3.4/4, ML4.0/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/10, Error ellipse: s-maj=108.7km s-min=31.0km az=111.0, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**11.05**	**205**	Pn	Pn	14 18 00.7	-2.0
	0.7nm,0.3s,baz=25,slow=15,SNR=4.2						
WRA	**Warramunga Arr**	**19.03**	**237**	P	Pn	14 19 47.3	-0.3
	0.1nm,0.3s,baz=62,slow=11,SNR=6.9						
ASAR	**Alice Springs**	**21.36**	**229**	P	P	14 20 12.7	+0.3
	0.3nm,0.5s,baz=56,slow=8.8,SNR=6.7						
STKA	**Stephens Creek**	**23.46**	**201**	LR	LR	14 29 59.0	
	comp=Z,124nm,19.1s,baz=204,slow=37						
KSRS	**Korea Array**	**52.10**	**336**	LR	LR	14 43 10.4	
	comp=Z,18nm,21.4s,baz=238,slow=32						
SONM	**Songino Array**	**70.01**	**330**	P	P	14 26 36.6	-0.3
	0.4nm,0.7s,baz=141,slow=5.2,SNR=4.1						
TORD	**Torodi Ar. Bea**	**150.03**	**279**	PKPbc	PKPbc	14 35 16.7	0.0
	0.5nm,0.7s,baz=98,slow=2.4,SNR=3.2						

IDC 19 14:16:53.6±3.2, **4°.19N**×**127°.58E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/22, mbtmp3.3/3, Error ellipse: s-maj=283.9km s-min=25.5km az=67.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.89**	**165**	P	P	14 22 16.9	-1.4
	0.3nm,0.3s,baz=344,slow=10,SNR=9.9						
ASAR	**Alice Springs**	**28.37**	**168**	P	P	14 22 51.2	+1.5
	0.1nm,0.3s,baz=344,slow=9.5,SNR=2.8						
MKAR	**Makanchi Array**	**57.66**	**325**	P	P	14 26 45.8	-0.1
	0.1nm,0.4s,baz=114,slow=8.1,SNR=3.6						

*CSEM **19** 14:17:31.7±0.2, 40°.07N×38°.92E, h10km, MD2.8, Error ellipse: s-maj=5.1km s-min=4.1km az=133.0*

*ISK **19** 14:17:31.0, 40°.08N×38°.87E, h9km, MD2.8*

*ISCJB **19** 14:17:32.3±0.7, 40°.09N±0°.04×38°.92E±0°.05, h21km±14km, Error ellipse: s-maj=7.2km s-min=6.1km az=145.5*

*DDA **19** 14:17:32.1, 40°.06N×38°.89E, h7km, MD2.8*

ISC 19 14:17:31.6±1.1, **40°.08N**±0°.04×**38°.90E**±0°.03, **h14**km±12km, **n14, σ048/24, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELT	**Kelkit**	**0.28**	**76**	*i* P	**Pb**	**14 17 38.5**	**-0.1**
KELT				*i* S	**Sg**	**14 17 42.6**	**+0.7**
KELT	**Kelkit**	**0.28**	**76**	*i* P	**Pb**	**14 17 38.5**	**-0.1**
KELT				*i* S	**Sg**	**14 17 42.6**	**+0.7**
SUSE	**Susehri**	**0.55**	**284**	*i* P	**Pb**	**14 17 43.1**	**0.0**
SUSE				*i* S	**Sb**	**14 17 50.9**	**0.0**
SUSE	**Susehri**	**0.55**	**284**	*i* P	**Pb**	**14 17 43.1**	**0.0**
SUSE				*i* S	**Sb**	**14 17 50.9**	**0.0**
GUMT	**Gumushane**	**0.58**	**50**	*e*PG	**Pb**	**14 17 44.1**	**+0.3**
GUMT				*e*SG	**Sg**	**14 17 51.2**	**+0.2**
GUMT	**Gumushane**	**0.58**	**50**	*e*Pg	**Pb**	**14 17 44.1**	**+0.3**
GUMT				*e*Sg	**Sg**	**14 17 51.2**	**+0.2**
ESPY	**Espiye-Giresun**	**0.84**	**351**	*e*PG	**Pg**	**14 17 48.0**	**0.0**
ESPY				*e*SG	**Sg**	**14 17 58.8**	**-0.4**
ESPY	**Espiye-Giresun**	**0.84**	**351**	*e*Pg	**Pg**	**14 17 48.0**	**0.0**
ESPY				*e*Sg	**Sg**	**14 17 58.8**	**-0.4**
KEMA	**Kemaliye**	**0.87**	**201**	*i* P	**Pb**	**14 17 48.3**	**-0.2**
KEMA				*i* S	**Sb**	**14 18 00.7**	**+0.7**
KEMA	**Kemaliye**	**0.87**	**201**	*i* P	**Pb**	**14 17 48.3**	**-0.2**
KEMA				*i* S	**Sb**	**14 18 00.7**	**+0.7**
BAYT	**Ayd¯–ntepe-Bay**	**1.00**	**71**	*e*Pg	**Pg**	**14 17 50.1**	**-1.0**
BAYT	**Ayd¯–ntepe-Bay**	**1.00**	**71**	*e*PN	**Pn**	**14 17 54.9**	**+0.1**
PTK	**Pertek**	**1.25**	**162**	*e*PN	**Pn**	**14 17 54.9**	**+0.1**
PTK	**Pertek**	**1.25**	**162**	*e*Pn	**Pn**	**14 17 54.9**	**+0.1**

IDC 19 14:31:03.6±2.6, **14°.32N**×**121°.37E, h139**km±20km, **mb3.0/4, mb1 3.1/4, mb1mx2.8/24, mbtmp3.0/4, Error ellipse: s-maj=137.9km s-min=18.2km az=67.0, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.48**	**243**	P	Pn	14 31 24.2	+0.6
	137nm,0.3s,baz=219,slow=2.0,SNR=6.3						
SONM	**Songino Array**	**35.66**	**343**	P	P	14 37 49.0	+0.7
	0.2nm,0.4s,baz=161,slow=8.9,SNR=4.2						
WRA	**Warramunga Arr**	**36.36**	**159**	P	P	14 37 54.1	-0.4
	0.2nm,0.5s,baz=344,slow=8.5,SNR=5.6						
ASAR	**Alice Springs**	**39.70**	**162**	P	P	14 38 22.5	+0.1
	0.3nm,0.4s,baz=333,slow=7.3,SNR=7.7						
MKAR	**Makanchi Array**	**45.93**	**323**	P	P	14 39 11.5	-0.9
	0.1nm,0.3s,baz=112,slow=8.9,SNR=5.0						

IDC 19 14:32:58.3±28.0, **22°.60S**×**174°.00W, h0**km, **mb3.8/4, mb1 4.0/4, mb1mx3.7/20, mbtmp3.8/4, Error ellipse: s-maj=518.6km s-min=158.0km az=77.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.04**	**266**	P	P	14 40 10.6	+0.4
	2.2nm,0.3s,baz=98,slow=10,SNR=8.8						
STKA	**Stephens Creek**	**40.32**	**247**	P	P	14 40 37.6	0.0
	1.3nm,0.8s,baz=104,slow=8.3,SNR=3.1						
ASAR	**Alice Springs**	**47.70**	**258**	P	P	14 41 36.4	-0.7
	0.4nm,0.8s,baz=93,slow=7.5,SNR=4.0						
WRA	**Warramunga Arr**	**48.03**	**263**	P	P	14 41 39.5	-0.2
	0.3nm,0.3s,baz=102,slow=8.4,SNR=31						

IDC 19 14:42:30.8±1.4, **4°.14N**×**126°.86E, h0**km, **mb3.2/5, mb1 3.4/5, mb1mx3.3/23, mbtmp3.3/5, Error ellipse: s-maj=112.0km s-min=19.9km az=74.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.14**	**183**	P	P	14 47 28.1	-0.2
	1.1nm,1.0s,baz=18,slow=13,SNR=2.2						
WRA	**Warramunga Arr**	**25.04**	**163**	P	P	14 47 56.0	-0.9
	0.6nm,0.7s,baz=346,slow=10,SNR=8.4						
ASAR	**Alice Springs**	**28.48**	**166**	P	P	14 48 29.0	+1.1
	0.1nm,0.6s,baz=334,slow=6.2,SNR=4.1						
SONM	**Songino Array**	**46.95**	**341**	P	P	14 51 04.6	+1.0
	0.1nm,0.6s,baz=165,slow=7.4,SNR=2.4						
MKAR	**Makanchi Array**	**57.29**	**325**	P	P	14 52 19.1	-1.5
	0.2nm,0.5s,baz=118,slow=7.7,SNR=3.7						

IDC 19 14:51:33.0±2.2, **4°.33N**×**127°.26E, h0**km, **mb3.3/3, mb1 3.5/3, mb1mx3.2/22, mbtmp3.3/3, Error ellipse: s-maj=175.1km s-min=25.4km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.10**	**164**	P	P	14 56 58.2	-1.5
	0.6nm,0.8s,baz=344,slow=11,SNR=6.0						
ASAR	**Alice Springs**	**28.57**	**167**	P	P	14 57 32.2	+1.3
	0.2nm,0.8s,baz=349,slow=12,SNR=2.7						
MKAR	**Makanchi Array**	**57.37**	**325**	P	P	15 01 23.2	0.0
	0.3nm,0.4s,baz=116,slow=8.4,SNR=9.2						

IDC 19 15:03:43.9±28.0, **18°.55S**×**178°.49W, h640**km±254km, **mb2.4/2, mb1 2.6/2, mb1mx2.4/18, mbtmp2.4/2, Error ellipse: s-maj=316.3km s-min=77.3km az=123.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.45**	**260**	P	P	15 11 00.9	+0.1
	0.1nm,0.3s,baz=96,slow=7.8,SNR=10						
WRA				PcP	PcP	15 12 29.8	-0.1
	0.5nm,1.1s,baz=93,slow=3.6,SNR=5.2						
ASAR	**Alice Springs**	**44.55**	**255**	P	P	15 11 01.6	0.0
	0.6nm,0.6s,baz=84,slow=8.2,SNR=12						
ASAR				PcP	PcP	15 12 29.6	-0.6
	0.4nm,0.6s,baz=103,slow=3.8,SNR=6.5						
GERES	**GERESS Array B**	**148.21**	**345**	PKPbc	PKPbc	15 22 19.2	-0.3
	0.3nm,0.6s,baz=20,slow=3.1,SNR=2.4						

*IDC **19** 15:23:39.7±0.4, 4°.04N×126°.66E, h0km, mb4.7/27, mb1 4.8/27, mb1mx4.7/29, mbtmp4.7/27, MS4.5/22, Ms1 4.5/22, ms1mx4.2/41, Error ellipse: s-maj=18.2km s-min=9.9km az=74.0*

*MOS **19** 15:23:43.0±1.0, 4°.00N×126°.67E, h33km, mb5.2/41, MS4.5/13, Error ellipse: s-maj=12.5km s-min=6.1km az=114.6*

*NEIC **19** 15:23:44.6±0.2, 4°.04N×126°.68E, h35km, mb5.0/42, Error ellipse: s-maj=7.2km s-min=4.2km az=75.0*

*ISCJB **19** 15:23:45.8±0.5, 4°.04N±0°.02×126°.86E±0°.03, h60km±4km, mb4.9/110, MS4.6/49, Error ellipse: s-maj=4.9km s-min=3.4km az=166.4*

*BJI **19** 15:23:46.8, 3°.74N×126°.75E, h93km, mB5.0/38, mb4.8/53*

*GCMT **19** 15:23:47.0±0.2, 4°.16N×126°.86E, h26km, MW5.2, Moment Tensor Solution. s75,c98; s72,c119; Moment tensor: Scale 10¹⁶Nm; Mrr6.56±.19; Mθθ0.06±.13; Mϕϕ-6.62±.15; Mrθ-1.84±.27; Mθϕ1.10±.10; Mϕr1.95±.26; Best double couple: Mo7.20000×10¹⁶ NP1:ϕ183.00000°, δ37.00000°, λ109.00000°. NP2:ϕ339.00000°, δ55.00000°, λ76.00000°. Principal axes: T 7.2400, Plg75.0000°, Azm207.0000°; N -0.0700, Plg12.0000°, Azm347.0000°; P -7.1600, Plg9.0000°, Azm79.0000°; Data Used: II IU IC G CN.*

*DJA **19** 15:23:49.4±0.4, 4°.N±3°×12°.7E±°, h71km±4km, M4.8/49, mB5.3/28, mb5.0/49, MLv5.1/7, Mw(mB)4.8/28, Mwp6.5/3*

*AUST **19** 15:23:50.5±0.3, 4°.00N×126°.92E, h97km, Error ellipse: s-maj=0.9km s-min=0.7km az=42.0*

ISC 19 15:23:44.4±0.6, **4°.09N**±0°.03×**126°.72E**±0°.05, **h31**km±3km, **n345, σ1870/371, mb4.9/108, MS4.5/51, 17C-9D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.25**	**252**	P	Sn	15 24 26.9	+5.4
GSPH	**General Santos**	**2.66**	**319**	⇑*i*P	**Pn**	**15 24 27.7**	**+2.5**
MATI	**Mati**	**2.88**	**351**	*e*P	**Pb**	**15 24 33.4**	**-1.7**
DAV	**Davao City (W)**	**3.17**	**339**	P	**Pb**	**15 24 40.3**	**+0.2**
DAV				Sn	Sb	15 25 26.1	+7.6
DAV	**Davao City (W)**	**3.17**	**339**	P	**Pb**	**15 24 40.8**	**+0.7**
DAV	**Davao City (W)**	**3.17**	**339**	Pn	**Pb**	**15 24 37.9**	**-2.2**
	33nm,0.3s,baz=255,slow=3.1,SNR=8.8						
DAV				Sn	Sb	15 25 26.0	+7.6
	92nm,0.3s,baz=312,slow=23,SNR=4.8						
DMPH	**Davao City--Mi**	**3.21**	**338**	*e*P	**Pb**	**15 24 40.1**	**-0.7**
DMPH				*e*S	**Sb**	**15 25 19.0**	**-0.5**
MNI	**Manado**	**3.23**	**216**	P	Pn	15 24 36.1	+3.2
TNTI	**Ternate**	**3.35**	**169**	P	**Pn**	**15 24 35.5**	**+0.8**
CTBH	**Cotabato--PC H**	**3.97**	**322**	⇑*i*P	Pn	15 24 46.5	+3.3
BUKP	**Musuan**	**4.11**	**336**	*e*P	Pn	15 24 50.2	+5.0
LBMI	**Labuha**	**4.76**	**171**	P	**Pn**	**15 24 55.5**	**+1.5**
CGP	**Cagayan de Oro**	**4.78**	**335**	*i*,*e*P	Pb	15 25 01.1	-6.5
CGP				*e*S	**Sb**	**15 26 02.0**	**-2.7**
PAGZ	**Pagadian**	**5.00**	**319**	*e*P	Pn	15 25 01.2	+3.9
ZMPH	**Zamboanga City**	**5.44**	**302**	⇑*i*P	Pn	15 25 05.8	+2.4
ZMPH				*i* S	**Sn**	**15 26 03.0**	**-1.9**
IPIL	**Ipil**	**5.53**	**312**	*e*P	Pn	15 25 08.1	+3.6
SNPH	**Sibulan**	**6.26**	**327**	*i*,*e*P	**Pn**	**15 25 13.5**	**-1.2**
LUWI	**Luwuk**	**6.44**	**218**	P	Pn	15 25 21.4	+4.2
	989nm,1.3s,14µm13µm3.4nm						
SWI	**Sorong**	**6.69**	**137**	P	**Pn**	**15 25 20.8**	**+0.2**
	122nm,0.7s,1µm0.4nm						
SWI	**Sorong**	**6.69**	**137**	P	**Pn**	**15 25 20.9**	**+0.4**
	baz=6.5,SNR=23						
SWI				S	**Sn**	**15 26 34.4**	**-1.4**
	baz=6.5,SNR=6.1						
MSAI	**Masohi**	**7.71**	**163**	P	Pn	15 25 37.0	+2.5
	20nm,0.7s,403nm0.1nm						
AAI	**Ambon**	**7.86**	**169**	P	Pn	15 25 43.3	+6.6
	baz=7.8,SNR=4.7						

MYLDM	**Lahad Datu**	**8.26**	**278**	P	Pn	15 25 49.3	+7.1
MYLDM	**Lahad Datu**	**8.26**	**278**	P	Pn	15 25 49.2	+7.1
	200nm,1.3s,4µm26µm						
PALU	**Palau**	**8.37**	**67**	P	**Pn**	**15 25 43.5**	**-0.1**
	baz=8.2,SNR=25						
RCP	**Roxas**	**8.40**	**332**	⇑*e*P	Pn	15 25 50.3	+6.2
PCI	**Palu**	**8.48**	**234**	S	x	15 27 59.3	
	baz=8.6,SNR=5.3						
TSM	**Tawau**	**8.82**	**272**	P	Pn	15 25 55.5	+5.6
KDI	**Kendari**	**8.98**	**207**	P	Pn	15 25 54.3	+2.3
	111nm,1.7s,2µm						
SDKM	**Sandakan**	**9.61**	**280**	P	Pn	15 26 08.7	+7.9
SMKI	**Samarinda**	**10.51**	**245**	P	x	15 26 25.0	
SPSI	**Sidrap Palu**	**10.59**	**221**	P	Pn	15 26 18.6	+4.5
	58nm,1.4s,1µm						
KKM	**Kota Kinabalu**	**10.64**	**281**	*e*P	Pn	15 26 20.6	+5.7
	87nm,1.3s						
KKM	**Kota Kinabalu**	**10.64**	**281**	P	Pn	15 26 22.7	+7.8
KKM	**Kota Kinabalu**	**10.64**	**281**	P	Pn	15 26 20.9	+6.0
	73nm,2.5s,2µm						
KKM	**Kota Kinabalu**	**10.64**	**281**	P	Pn	15 26 22.1	+7.2
	baz=11,SNR=7.8						
BAKI	**Biak**	**10.75**	**119**	P	x	15 26 27.0	
KAPI	**Kappang**	**11.41**	**218**	*e*P	Pn	15 26 28.9	+3.6
KAPI	**Kappang**	**11.41**	**218**	P	Pn	15 26 32.4	+7.1
KAPI	**Kappang**	**11.41**	**218**	Pn	Pn	15 26 27.8	+2.5
	1.4nm,0.3s,baz=48,slow=12,SNR=6.0						
KAPI				LR	LR	15 31 36.6	
	comp=Z,4µm,18.1s,baz=263,slow=42						
KBKI	**Kotabaru**	**12.84**	**235**	P	P	15 26 49.9	-5.5
	44nm,1.4s,1µm						
MMRI	**Maumere**	**13.40**	**199**	P	P	15 27 05.0	+3.3
BTM	**Bintulu**	**13.63**	**267**	P	**P**	**15 27 02.7**	**-1.6**
BBKI	**Banjar Baru**	**14.04**	**238**	P	**P**	**15 27 06.0**	**-2.7**
	232nm,2.1s,6µm						
SBUM	**Sibu**	**14.56**	**264**	P	**P**	**15 27 13.8**	**-0.8**
SBUM	**Sibu**	**14.56**	**264**	P	**P**	**15 27 12.9**	**-1.7**
	134nm,1.6s,3µm						
WSI	**Waingapu**	**15.09**	**205**	P	**Pn**	**15 27 16.5**	**+1.0**
	324nm,0.7s,5µm						
JAY	**Jayapura**	**15.44**	**115**	P	**P**	**15 27 24.6**	**+0.2**
JAY	**Jayapura**	**15.44**	**115**	P	**P**	**15 27 24.5**	**+0.1**
	baz=15,SNR=3.9						
STKI	**Sintang**	**15.74**	**256**	P	P	15 27 31.5	+3.8
PBKI	**Pangkalan Bun**	**16.48**	**246**	P	**P**	**15 27 37.0**	**+1.1**
	140nm,1.2s,2µm						
KSM	**Kuching**	**16.59**	**261**	*e*P	**P**	**15 27 39.2**	**+2.0**
	60nm,0.6s						
KSM	**Kuching**	**16.59**	**261**	P	**P**	**15 27 39.7**	**+2.6**
KSM	**Kuching**	**16.59**	**261**	P	**P**	**15 27 39.7**	**+2.6**
	104nm,0.7s,2µm						
KSM	**Kuching**	**16.59**	**261**	P	**P**	**15 27 38.9**	**+1.7**
	baz=17,SNR=20						
KSM				S	S	15 31 05.0	+16
	baz=17,SNR=3.7						
KHKI	**Kahang-Kahang**	**16.61**	**222**	P	**P**	**15 27 38.1**	**+0.9**
	87nm,1.3s,1µm						
KMMI	**Kalianget**	**16.86**	**229**	P	**P**	**15 27 40.9**	**+0.8**
	66nm,1.4s,1µm						
IGBI	**Denpasar**	**17.25**	**222**	P	**P**	**15 27 46.1**	**+1.8**
	79nm,0.7s,576µm						
MTN	**Manton Dam**	**17.38**	**165**	P	**Pn**	**15 27 41.9**	**-2.8**
	baz=17,SNR=99						
KDU	**Kakadu**	**17.62**	**161**	P	**Pn**	**15 27 44.6**	**-3.1**
	baz=18,SNR=35						
GMJI	**Gumukmas**	**18.05**	**227**	P	**P**	**15 27 56.1**	**+2.8**
	82nm,1.1s,1µm						
SJI	**Sawahan**	**18.98**	**232**	P	**P**	**15 28 03.3**	**-0.3**
	78nm,1.0s,1µm						
PWJI	**Pagerwojo**	**19.13**	**231**	P	**P**	**15 28 04.7**	**-0.4**
	53nm,1.1s						
TWG	**Pinlang**	**19.41**	**344**	*e*P	**P**	**15 28 06.8**	**-1.4**
	132nm,0.5s						
YULB	**Yu-li**	**19.90**	**345**	*e*P	**P**	**15 28 12.3**	**-1.1**
	20nm,0.5s						
TPUB	**Ta-pu**	**19.99**	**343**	*e*P	**Pn**	**15 28 15.6**	**-0.7**
	46nm,0.6s						
UGM	**Wanagama**	**20.08**	**234**	P	Pn	15 28 18.0	+0.6
	baz=20,SNR=3.7						
TPI	**Tanjungpandan**	**20.23**	**251**	P	Pn	15 28 19.6	+0.4
	27nm,1.0s,402nm						
SSLB	**Suanglung**	**20.36**	**345**	*e*P	**P**	**15 28 18.8**	**+0.2**
	38nm,0.6s						
BJII	**Banjamegara**	**20.41**	**236**	P	Pn	15 28 21.1	-0.4
	54nm,1.7s						
TGJI	**Tegal**	**20.66**	**238**	P	Pn	15 28 23.7	-0.6
	58nm,1.4s						
YHNB	**Yeheng**	**21.10**	**

SSE LR LR
comp=Z,1µm,21.0s
QIS Mount Isa 27.57 153 P **P** **15 29 28.1 -0.7**
baz=28,SNR=28
PSI Prapat 27.77 268 P **P** **15 29 30.7 -0.2**
PSI Prapat 27.77 268 P **P** **15 29 32.1 +1.2**
comp=Z,23nm,0.9s,comp=Z,458nm
PSI Prapat 27.77 268 P **P** **15 29 30.7 -0.2**
comp=Z,18nm,0.8s,baz=71,slow=3.5,SNR=17
PSI Prapat 27.77 268 P **P** **15 29 32.2 +1.2**
baz=28,SNR=10
ASAR Alice Springs 28.46 166 P **P** **15 29 35.7 -1.1**
ASAR S **S** **15 34 24.6 +2.1**
ASAR Alice Springs 28.46 166 P **P** **15 29 35.7 -1.1**
comp=Z,5.0nm,0.5s,baz=348,slow=7.9,SNR=59
ASAR S **S** **15 34 24.6 +2.1**
comp=Z,0.6nm,0.8s,baz=359,slow=17,SNR=4.0
NJ2 Nanjing 28.78 346 *e*P **P** **15 29 40.0 +0.5**
NJ2 S **S** **15 34 26.5 -0.7**
NJ2 pmax pmax
comp=Z,10.0nm,1.1s
NJ2 pmax pmax
comp=Z,120nm,7.5s
NJ2 LR LR
comp=N,1µm,20.8s
NJ2 LR LR
comp=E,310nm,14.4s
NJ2 LR LR
comp=Z,760nm,15.8s
WHN Wuhan 28.79 337 P P 15 29 42.4 +2.8
WHN S **S** **15 34 32.3 +4.9**
WHN LR LR
comp=N,5µm,19.5s
WHN LR LR
comp=E,2µm,16.3s
WHN LR LR
comp=Z,5µm,20.8s
JNU Nakatsue 29.15 7 P **P** **15 29 43.3 +0.5**
JNU PcP **PcP** **15 32 52.1 +2.0**
JNU Nakatsue 29.15 7 P **P** **15 29 43.3 +0.5**
comp=Z,5.6nm,0.6s,baz=243,slow=4.6,SNR=8.3
JNU PcP **PcP** **15 32 52.1 +2.0**
comp=Z,2.3nm,0.6s,baz=180,slow=2.3,SNR=5.3
JNU LR LR 15 41 59.8
comp=Z,474nm,19.5s,baz=300,slow=38
GYA Guiyang 29.38 321 P P 15 29 47.8 +2.7
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.8s
CM31 Chiang Mai Arr 30.68 300 *e*P **P** **15 29 57.4 +0.8**
comp=Z,7.7nm,0.6s
CMAR Chiang Mai Arr 30.68 300 P **P** **15 29 56.5 -0.1**
CMAR PcP **PcP** **15 32 56.4 +2.0**
CMAR ScP **ScP** **15 36 38.1 +3.2**
CMAR Chiang Mai Arr 30.68 300 P **P** **15 29 56.5 -0.1**
comp=Z,5.8nm,0.7s,baz=117,slow=7.2,SNR=39
CMAR PcP **PcP** **15 32 56.4 +2.0**
comp=Z,0.7nm,0.6s,baz=131,slow=1.1,SNR=5.4
CMAR ScP **ScP** **15 36 38.1 +3.2**
comp=Z,1.1nm,1.0s,baz=92,slow=1.8,SNR=5.1
CMAR LR LR 15 42 45.0
comp=Z,668nm,20.4s,baz=240,slow=37
CTA Charters Tower 30.75 142 P **P** **15 29 56.6 -0.5**
CTA Charters Tower 30.75 142 P **P** **15 29 56.6 -0.5**
comp=Z,1.9nm,0.8s,baz=265,slow=12,SNR=2.4
CMMT Chiang Mai 30.83 301 P **P** **15 29 59.2 +1.3**
comp=Z,21nm,0.7s,comp=Z,344nm
CHTO Chiang Mai 30.83 301 *e*P **P** **15 29 57.7 -0.2**
CHTO pmax pmax
comp=Z,13nm,0.6s
CHTO Chiang Mai 30.83 301 *e*P **P** **15 29 57.7 -0.2**
comp=Z,13nm,0.6s
CHTO Chiang Mai 30.83 301 P **P** **15 29 58.8 +0.9**
comp=Z,23nm,1.1s
KMI Kunming 31.12 315 P P 15 30 04.0 +3.4
KMI S **S** **15 35 03.5 -1.1**
KMI sS sS 15 35 36.0 +16
KMI SS **SnSn** **15 36 54.6 +7.0**
KMI pmax pmax
comp=Z,8.0nm,0.7s
KMI pmax pmax
comp=Z,190nm,4.0s
KMI LR LR
comp=N,710nm,16.9s
KMI LR LR
comp=E,370nm,25.9s
KMI LR LR
comp=Z,1µm,23.5s
MEEK Meekatharra 31.53 194 P **P** **15 30 03.5 -0.4**
baz=32,SNR=41
KSAR Wonju Array Be 33.22 2 P **P** **15 30 19.1 +0.5**
KSAR PcP **PcP** **15 33 01.9 +1.1**
KSRS Korea Array 33.23 2 P **P** **15 30 19.1 +0.4**
comp=Z,2.9nm,0.5s,baz=181,slow=9.6,SNR=24
KSRS PcP **PcP** **15 33 01.9 +1.0**
comp=Z,2.0nm,0.6s,baz=182,slow=2.5,SNR=11
KSRS LR LR 15 44 15.8
comp=Z,626nm,20.8s,baz=199,slow=37
MAT Matsushiro 33.99 17 P **P** **15 30 24.6 -0.7**
MAT S **S** **15 35 43.0 -5.6**
MJAR Matsushiro Arr 33.99 17 P **P** **15 30 24.3 -1.1**
MJAR Matsushiro Arr 33.99 17 P **P** **15 30 24.3 -1.1**
comp=Z,1.6nm,0.6s,baz=188,slow=8.7,SNR=10
MJAR LR LR 15 41 46.5
comp=Z,654nm,21.7s,baz=190,slow=32
XAN Xi'an 34.09 333 P **P** **15 30 26.3 0.0**
XAN pmax pmax
comp=Z,13nm,0.6s
XAN pmax pmax
comp=Z,23nm,5.6s
XAN LR LR
comp=N,690nm,19.5s
XAN LR LR
comp=E,410nm,19.5s
XAN LR LR
comp=Z,490nm,18.4s
CD2 Chengdu 34.35 324 P P 15 30 31.9 +3.3
CD2 pP pP 15 30 52.6 +15
CD2 sP sP 15 31 03.3 +22
CD2 PP **PP** **15 31 50.6 +3.8**
CD2 PcP **PcP** **15 33 05.3 +1.1**
CD2 S **S** **15 35 53.3 -1.1**
CD2 sS ScP 15 36 29.0 -18
CD2 PcS **PcS** **15 36 50.6 -0.1**
CD2 SS **SnSn** **15 38 09.9 +4.2**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,120nm,6.1s
CD2 LR LR
comp=N,1µm,19.8s
CD2 LR LR
comp=E,1µm,18.8s
CD2 LR LR
comp=Z,1µm,19.1s
MORW Morawa 34.52 197 P **P** **15 30 30.0 0.0**
baz=35,SNR=7.2
FORT Forrest 34.69 178 *e*P **P** **15 30 30.9 -0.5**
comp=Z,62nm,0.8s
FORT Forrest 34.69 178 P **P** **15 30 31.9 +0.5**
baz=35,SNR=20
QLP Quilpie 34.88 152 P **P** **15 30 33.3 +0.1**
baz=35,SNR=8.4
DL2 Dalian 34.97 353 *e*P **P** **15 30 35.8 +2.1**
DL2 pmax pmax
comp=Z,360nm,2.0s
DL2 LR LR
comp=E,500nm,14.7s
DL2 LR LR
comp=Z,260nm,14.7s
KMBL Kambalda 35.55 187 P **P** **15 30 38.5 -0.4**
baz=36,SNR=13
HNR Honiara 35.73 112 LR LR 15 44 39.6
comp=Z,435nm,19.2s,baz=291,slow=35
BLDU Ballidu 35.81 195 P **P** **15 30 41.6 +0.5**
baz=36,SNR=26
KLBR Kellerberrin 36.49 193 P **P** **15 30 46.7 -0.2**
baz=37,SNR=37
BJI Beijing 37.04 347 P **P** **15 30 52.5 +1.1**
BJI S **S** **15 36 30.3 -4.9**
BJI pmax pmax
comp=Z,33nm,0.5s
BJI pmax pmax
comp=Z,170nm,3.3s
BJI LR LR
comp=N,480nm,18.5s
BJI LR LR
comp=E,260nm,18.5s
BJI LR LR
comp=Z,510nm,22.2s
EIDS Eidsvold 37.64 142 *e*P **P** **15 30 56.3 -0.5**
comp=Z,16nm,0.7s
EIDS Eidsvold 37.64 142 P **P** **15 30 56.3 -0.5**
baz=38,SNR=9.6
SNY Shenyang 37.68 356 ||P **P** **15 30 59.0 +2.1**
SNY S **S** **15 36 47.1 +2.1**
SNY pmax pmax
comp=Z,1.0nm,0.6s
SNY LR LR
comp=N,480nm,19.2s
SNY LR LR
comp=E,610nm,17.8s
SNY LR LR
comp=Z,550nm,20.8s
BBOO Buckleboo 37.75 167 *e*P **P** **15 30 57.0 -0.6**
comp=Z,1µm,1.2s
BBOO Buckleboo 37.75 167 P **P** **15 30 57.2 -0.4**
baz=38,SNR=48
NWAO Narrogin (SRO) 37.89 193 *e*P **P** **15 30 57.6 -1.2**
comp=Z,98nm,1.4s
NWAO Narrogin (SRO) 37.89 193 P **P** **15 30 59.5 +0.7**
comp=Z,23nm,0.6s,baz=27,slow=7.8,SNR=25
LZH Lanzhou 38.19 329 *e*P **P** **15 31 01.6 +0.1**
LZH pP pP 15 31 24.0 +13
LZH sP sP 15 31 35.8 +21
LZH PP **PnPn** **15 32 35.5 +4.6**
LZH *e*S **S** **15 36 49.0 -4.2**
LZH sS sS 15 37 28.0 +20
LZH SS **SnSn** **15 39 33.6 -5.1**
LZH pmax pmax
comp=Z,28nm,1.1s
LZH pmax pmax
comp=Z,160nm,5.8s
LZH LR LR
comp=N,1µm,15.0s
LZH LR LR
comp=E,670nm,13.5s
LZH LR LR
comp=Z,2µm,18.2s
STKA Stephens Creek 38.47 159 *e*P **P** **15 31 02.8 -0.8**
comp=Z,11nm,0.8s
STKA Stephens Creek 38.47 159 P **P** **15 31 03.7 +0.1**
comp=Z,59nm,0.7s,baz=339,slow=8.3,SNR=39
STKA LR LR 15 48 40.5
comp=Z,251nm,20.5s,baz=104,slow=39
STKA Stephens Creek 38.47 159 P **P** **15 31 03.2 -0.4**
baz=38,SNR=85
HHC Hu-ho-hao-te 39.06 342 *e*P **P** **15 31 10.3 +1.7**
HHC pP pP 15 31 32.3 +14
HHC PP **PnPn** **15 32 45.4 +4.2**
HHC PcP **PcP** **15 33 18.3 0.0**
HHC ScP ScP 15 36 56.4 -8.2
HHC S **S** **15 37 02.6 -3.5**
HHC PcS **PcS** **15 37 06.4 -1.5**
HHC sS sS 15 37 41.6 +20
HHC SS **SS** **15 39 51.4 -7.8**
HHC ScS ScS 15 41 07.9 -8.1
HHC pmax pmax
comp=Z,19nm,0.6s
HHC pmax pmax
comp=Z,320nm,5.9s
HHC LR LR
comp=N,1µm,15.0s
HHC LR LR
comp=E,1µm,15.8s
HHC LR LR
comp=Z,1µm,15.7s
CN2 Changchun 39.57 359 *e*P **P** **15 31 12.3 -0.4**
CN2 *e*pP pP 15 31 31.6 +10
CN2 *e*sP sP 15 31 42.1 +16
CN2 *e*S **S** **15 37 10.6 -2.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,300nm,14.0s
CN2 LR LR
comp=E,400nm,14.0s
CN2 LR LR
comp=Z,400nm,16.0s
SHL Shillong 39.66 306 *e*P P 15 31 24.4 +10
SHL *e*S **S** **15 37 13.8 -1.8**
CMSA Cobar Meteorol 39.77 154 P **P** **15 31 15.8 +1.3**
baz=40,SNR=18
USRK Ussuriysk Arra 40.22 6 P **P** **15 31 20.0 +1.9**
comp=Z,2.6nm,0.5s,baz=179,slow=8.4,SNR=11
MDJ Mudanjiang 40.45 3 P **P** **15 31 21.5 +1.5**
MDJ pP pP 15 31 40.5 +11
MDJ sP sP 15 31 50.3 +17
MDJ PP **PnPn** **15 32 56.3 -1.1**
MDJ ScP **ScP** **15 37 04.1 -5.7**
MDJ PcS **PcS** **15 37 12.8 -0.1**
MDJ S **S** **15 37 25.8 -0.7**
MDJ sS sS 15 37 58.9 +17
MDJ pmax pmax
comp=Z,5.0nm,1.2s
MDJ pmax pmax
comp=Z,36nm,3.9s
ARMA Armidale 41.77 147 P **P** **15 31 33.0 +1.8**
baz=42,SNR=17
ASAJ Asahikawa 42.26 17 *e*P **P** **15 31 35.0 +0.2**
comp=Z,3.2nm,0.7s
ASAJ Asahikawa 42.26 17 LR LR 15 50 51.0
comp=Z,669nm,18.2s,baz=230,slow=39
GTA Gaotai 42.79 329 P **P** **15 31 39.1 -0.3**
GTA pP pP 15 32 00.1 +11
GTA sP sP 15 32 13.4 +21
GTA PcP **PcP** **15 33 28.4 -2.1**
GTA S **S** **15 37 56.8 -4.9**
GTA sS sS 15 38 36.6 +20
GTA SS SS 15 41 04.8 -8.6
GTA pmax pmax
comp=Z,11nm,1.3s
GTA pmax pmax
comp=Z,78nm,4.5s
GTA LR LR
comp=N,1µm,19.5s
GTA LR LR
comp=E,800nm,18.5s
GTA LR LR
comp=Z,2µm,19.5s
ARPS Mount Arapiles 43.03 162 P **P** **15 31 41.9 +0.7**
baz=43,SNR=21
YUK Yuzh-Kuril'sk 43.23 20 *d* P **P** **15 31 43.6 +0.9**
YUK *i* 15 33 32.8
YUK *e*S **S** **15 38 06.9 -0.7**
YUK *i* SS SS 15 41 10.9 -11
YUK pmax pmax
comp=Z,164nm,1.4s
YUK MLR MLR
comp=N,437nm,22.0s
YUK MLR MLR
comp=Z,427nm,22.0s
TAPN Taplejung 43.80 306 *e*P **P** **15 31 47.7 -0.3**
comp=Z,30nm,0.7s
ODAN Odare 43.85 305 *e*P **P** **15 31 48.1 -0.3**
comp=Z,33nm,0.6s
RAMN Ramite 44.54 305 *e*P **P** **15 31 53.7 -0.1**
comp=Z,20nm,0.5s
HABR Khabarovsk 44.80 8 *e*P **P** **15 31 54.3 -0.9**
HABR *e**PP **pP** **15 32 03.7 -0.9**
HABR *e**SP **sP** **15 32 07.9 -0.4**
HABR *e* 15 33 35.1
HABR PPP PPP 15 34 17.7
HABR S **S** **15 38 30.8 +0.4**
HABR *e**SS **sS** **15 38 46.8 +1.0**
HABR *e* 15 41 48.7
HABR *e*SSS SSS 15 42 38.6
HABR pmax pmax
comp=N,19nm,1.2s
HABR pmax pmax
comp=E,38nm,2.1s
HABR pmax pmax
comp=Z,77nm,2.7s
HABR MLR MLR
comp=Z,338nm,17.0s
YSS Yuzh-Sakhalins 44.91 16 *e*P **P** **15 31 58.4 +2.3**
YSS MLR MLR
comp=N,400nm,18.0s
YSS MLR MLR
comp=Z,400nm,18.0s
YSS MLR MLR
comp=E,300nm,19.0s
GUN Gumba 45.51 306 *e*P **P** **15 32 00.9 -0.8**
comp=E,33nm,0.5s
PKI Pulchoki 45.76 305 *e*P **P** **15 32 03.3 -0.3**
comp=E,15nm,0.5s
PKIN Phulchoki 45.77 305 *e*P **P** **15 32 03.5 -0.2**
comp=E,9.5nm,0.6s
KKN Kakani 45.95 305 *e*P **P** **15 32 04.7 -0.3**
comp=E,13nm,0.4s
DMN Daman 46.02 305 *e*P **P** **15 32 04.8 -0.8**
comp=E,37nm,1.0s
DZM Mont Dzumac 46.75 126 P **P** **15 32 11.2 0.0**
DZM Mont Dzumac 46.75 126 P **P** **15 32 11.2 0.0**
comp=E,3.5nm,0.6s,baz=284,slow=12,SNR=3.6
ULN Ulaanbaatar 46.78 342 *e*P **P** **15 32 11.8 +0.7**
comp=E,8.7nm,0.8s
ULN Ulaanbaatar 46.78 342 P **P** **15 32 12.0 +0.9**
SONM Songino Array 46.96 341 P **P** **15 32 12.7 +0.2**
SONM PcP **PcP** **15 33 46.0 +1.3**
SONM Songino Array 46.96 341 P **P** **15 32 12.7 +0.2**
comp=E,5.2nm,0.5s,baz=156,slow=8.7,SNR=58
SONM PcP **PcP** **15 33 46.0 +1.3**
comp=E,2.7nm,0.6s,baz=165,slow=4.2,SNR=4.8
SONM LR LR 15 53 26.0
comp=E,777nm,20.8s,baz=156,slow=38
KOLN Koldanda 47.31 305 *e*P **P** **15 32 15.6 -0.1**
comp=E,48nm,0.5s
DANN Dangsing 47.40 305 *e*P **P** **15 32 15.6 -0.9**
comp=E,58nm,0.5s
PYUN Piuthan 47.94 305 *e*P **P** **15 32 20.1 -0.4**
comp=E,41nm,0.5s
HYB Hyderabad 48.98 289 *i* P **P** **15 32 28.5 -0.1**
ZAK Zakamensk 50.19 341 *e*P **P** **15 32 38.3 +1.0**
ZAK *e* 15 32 55.0
ZAK *e* 15 33 57.0
ZAK pmax pmax
comp=Z,1.0nm,0.7s
TLY Talaya 51.19 342 *e*P **P** **15 32 46.8 +2.1**
TLY *e* 15 32 51.8
TLY *e*SS **ScS** **15 42 36.9 +4.0**
TLY pmax pmax
comp=Z,5.0nm,0.7s
TLY MLR MLR
comp=Z,50nm,20.0s
IRK Irkutsk 51.49 343 *e*P **P** **15 32 49.0 +2.1**
IRK pmax pmax
comp=Z,37nm,2.4s
MOY Mondy 52.05 340 *e*P **P** **15 32 52.4 +1.2**
MOY pmax pmax
comp=Z,39nm,2.9s
WMQ Urumqi 52.43 325 P **P** **15 32 55.0 +0.8**
WMQ pP pP 15 33 19.0 +15
WMQ sP sP 15 33 30.0 +23
WMQ PcP **PcP** **15 34 05.0 +0.3**
WMQ PP **PP** **15 34 57.0 +3.8**
WMQ ScP ScP 15 37 51.0 -8.8
WMQ S S 15 40 12.0 -6.4
WMQ sS sS 15 40 51.0 +17
WMQ ScS ScS 15 42 31.0 -11
WMQ SS SS 15 43 49.0 -7.6
WMQ pmax pmax
comp=Z,12nm,1.0s
WMQ pmax pmax
comp=Z,160nm,5.0s
WMQ LR LR
comp=N,1µm,18.0s
WMQ LR LR
comp=E,950nm,18.0s
WMQ LR LR
comp=Z,1µm,18.0s
CLNS Chul'man 52.62 359 *e*P P 15 33 00.4 +5.1
CLNS *e**PP pP 15 33 08.9 +4.1
CLNS *e* 15 34 09.2
CLNS *e* 15 34 57.6
CLNS *e*S **S** **15 40 24.9 +4.4**
CLNS *e*SS **SS** **15 43 59.1 -0.1**
CLNS pmax pmax
comp=E,5.0nm,0.8s
CLNS pmax pmax
comp=N,5.0nm,0.8s
CLNS pmax pmax
comp=Z,9.0nm,0.7s
CLNS pmax pmax
comp=Z,2.0nm,0.7s
CLNS pmax pmax
comp=N,2.0nm,0.6s
CLNS pmax pmax
comp=E,2.0nm,0.8s
CLNS smax smax
comp=N,113nm,23.3s
CLNS smax smax
comp=E,248nm,14.6s
CLNS MLR MLR
comp=E,188nm,15.0s
CLNS MLR MLR
comp=N,185nm,18.0s
CLNS MLR MLR
comp=Z,157nm,18.0s
DDI Dehra Dun 52.75 305 *ex* **P** **15 32 54.0 -2.8**
POO Poona 53.58 290 *ex* **P** **15 33 01.0 -2.1**
PEA0B Petropavlovsk- 55.11 22 *e*P **P** **15 33 14.3 +0.8**
PETK Petropavlovsk- 55.11 22 P **P** **15 33 14.7 +1.2**
PETK Petropavlovsk- 55.11 22 P **P** **15 33 14.7 +1.2**
PETK Petropavlovsk- 55.11 22 P **P** **15 33 14.7 +1.2**
comp=Z,6.2nm,0.6s,baz=185,slow=6.4,SNR=9.5
PETK LR LR 15 58 56.4
comp=Z,228nm,18.3s,baz=218,slow=38
PET Petropavlovsk 55.41 23 *e*P P 15 33 24.2 +8.6
PET *e*S **S** **15 41 02.6 +4.5**
PET pmax pmax
comp=Z,100nm,14.2s
PET MLR MLR
comp=Z,500nm,15.0s
MK31 Makanchi Array 57.26 325 *ce*P **P** **15 33 28.9 -0.1**
MK31 pmax pmax
comp=Z,7.0nm,0.4s
MK31 Makanchi Array 57.26 325 *e*P **P** **15 33 28.3 -0.7**
MKAR Makanchi Array 57.26 325 P **P** **15 33 28.5 -0.5**
MKAR 15 34 25.2
MKAR Makanchi Array 57.26 325 P **P** **15 33 28.5 -0.5**
MKAR PcP **PcP** **15 34 25.2 +2.1**
MKAR ScP **ScP** **15 38 22.6 +1.7**
MKAR Makanchi Array 57.26 325 P **P** **15 33 28.5 -0.5**
comp=Z,9.8nm,0.5s,baz=118,slow=8.2,SNR=134
MKAR PcP **PcP** **15 34 25.2 +2.1**
comp=Z,5.0nm,0.5s,baz=158,slow=3.0,SNR=6.0
MKAR ScP **ScP** **15 38 22.6 +1.7**
comp=Z,0.5nm,0.6s,baz=111,slow=4.7,SNR=2.8
MKAR LR LR 16 00 22.7
comp=Z,881nm,18.0s,baz=113,slow=38
KSH Kashi 57.78 315 *e*P **P** **15 33 33.8 +0.8**
KSH pP pP 15 33 57.4 +15
KSH sP sP 15 34 08.4 +22
KSH PcP **PcP** **15 34 24.1 -1.4**
KSH PP **PP** **15 35 44.3 +3.0**
KSH ScP ScP 15 38 12.9 -11
KSH PcS **PcS** **15 38 23.5 -3.4**
KSH S S 15 41 23.5 -6.9
KSH sS sS 15 42 06.3 +20
KSH ScS ScS 15 43 09.8 -11
KSH SS **SS** **15 45 17.3 -4.1**
KSH pmax pmax
comp=Z,1.0nm,0.3s
KSH LR LR
comp=N,180nm,4.4s
KSH LR LR
comp=E,270nm,5.0s
KSH LR LR
comp=Z,290nm,5.2s
YAK Yakutsk 57.86 2 *e*P **P** **15 33 31.2 -1.7**
YAK *e* 15 34 21.9
YAK *e* 15 35 40.6
YAK *e*PPP PPP 15 37 00.5
YAK *e*S S 15 41 24.0 -6.2
YAK *e* 15 43 12.4
YAK *e*SS **SS** **15 45 17.6 -3.7**
YAK pmax pmax
comp=Z,20nm,1.0s
YAK pmax pmax
comp=N,11nm,1.3s
YAK pmax pmax
comp=Z,55nm,4.3s

YAK				pmax	pmax		
	comp=N,42nm,4.1s						
YAK				pmax	pmax		
	comp=E,28nm,4.1s						
YAK				smax	smax		
	comp=N,80nm,3.8s						
YAK				smax	smax		
	comp=E,20nm,2.7s						
TKM2	**Tokmak 2**	**59.47**	**318**	*i* P	**P**	**15 33 44.9**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,15nm,1.4s						
TKM2	**Tokmak 2**	**59.47**	**318**	*e*P	**P**	**15 33 44.6**	**-0.2**
	comp=Z,4.6nm,0.5s						
AAK	**Ala-Archa**	**60.09**	**318**	*d i*P	**P**	**15 33 49.1**	**+0.1**
AAK				pmax	pmax		
	comp=E,36nm,1.6s						
AAK	**Ala-Archa**	**60.09**	**318**	*e*P	**P**	**15 33 48.1**	**-0.9**
	comp=Z,4.2nm,0.7s						
ZAA0	**Zalesovo Array**	**60.27**	**333**	*e*P	**P**	**15 33 48.4**	**-1.4**
ZALV	**Zalesovo Beam**	**60.27**	**333**	P	**P**	**15 33 48.7**	**-1.1**
ZALV	**Zalesovo Beam**	**60.27**	**333**	P	**P**	**15 33 48.7**	**-1.1**
ZALV	**Zalesovo Beam**	**60.27**	**333**	P	**P**	**15 33 48.7**	**-1.1**
	comp=Z,5.3nm,0.5s,baz=120,slow=6.6,SNR=39						
ZALV				LR	LR	16 01 19.0	
	comp=Z,321nm,18.5s,baz=283,slow=38						
EKS2	**Erkin-Say**	**60.58**	**317**	*e*P	**P**	**15 33 53.1**	**+0.8**
EKS2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
EKS2	**Erkin-Say**	**60.58**	**317**	*e*P	**P**	**15 33 53.1**	**+0.8**
	comp=Z,7.3nm,0.7s						
KBL	**Kabul**	**61.30**	**307**	P	**P**	**15 33 57.2**	**-0.2**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KBL	**Kabul**	**61.30**	**307**	P	**P**	**15 33 57.2**	**-0.2**
	comp=Z,8.8nm,0.8s						
KURK	**Kurchatov**	**61.44**	**327**	*i*P	**P**	**15 33 56.6**	**-1.2**
KURK				pmax	pmax		
	comp=Z,14nm,0.6s						
KURK	**Kurchatov**	**61.44**	**327**	*e*P	**P**	**15 33 57.0**	**-0.8**
	comp=Z,19nm,0.5s						
NVS	**Novosibirsk**	**61.55**	**333**	*e*P	**P**	**15 33 56.7**	**-1.7**
NVS				*e*		15 34 42.2	
NVS				*e*S	**S**	**15 42 19.7**	**+1.6**
NVS				*e*		15 43 45.1	
NVS				pmax	pmax		
	comp=Z,32nm,2.0s						
NVS				pmax	pmax		
	comp=N,7.0nm,1.5s						
NVS				smax	smax		
	comp=E,23nm,2.4s						
RPZ	**Rata Peaks**	**62.06**	**145**	P	**P**	**15 34 03.1**	**+1.1**
RPZ	**Rata Peaks**	**62.06**	**145**	P	**P**	**15 34 03.1**	**+1.1**
	comp=E,9.2nm,0.8s,baz=0.0,slow=6.1,SNR=3.3						
RPZ				LR	LR	16 00 56.9	
	comp=E,503nm,19.0s,baz=118,slow=36						
URZ	**Urewera**	**62.81**	**137**	LR	LR	16 00 26.6	
	comp=E,410nm,18.7s,baz=317,slow=35						
KKAR	**Karatay Array**	**62.97**	**317**	*e*P	**P**	**15 34 08.3**	**+0.1**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KKAR	**Karatay Array**	**62.97**	**317**	*e*P	**P**	**15 34 08.3**	**+0.1**
	comp=Z,3.0nm,0.6s						
AFI	**Afiamalu**	**63.56**	**108**	LR	LR	15 56 05.4	
	comp=Z,335nm,20.1s,baz=316,slow=31						
BVA0	**Borovoye Array**	**67.02**	**327**	*i*P	**P**	**15 34 34.1**	**-0.2**
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRVK	**Borovoye**	**67.09**	**327**	*c i*P	**P**	**15 34 34.3**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BRVK	**Borovoye**	**67.09**	**327**	*e*P	**P**	**15 34 34.6**	**-0.2**
	comp=Z,20nm,0.9s						
BILL	**Bilibino**	**69.22**	**15**	*e*P	P	15 34 56.6	+8.8
BILL				*e*		15 35 03.9	
BILL				*e*		15 35 08.0	
BILL				S	S	15 43 57.0	+5.4
BILL				pmax	pmax		
	comp=Z,29nm,2.5s						
BILL				MLR	MLR		
	comp=Z,100nm,18.0s						
AB31	**Akbulak array**	**71.87**	**321**	*ce*P	**P**	**15 35 04.4**	**0.0**
AB31				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ABKAR	**Akbulak array**	**71.87**	**321**	*e*P	**P**	**15 35 03.4**	**-1.0**
	comp=Z,4.2nm,0.6s						
AKUT	**Akutan**	**73.64**	**35**	*e*P	**P**	**15 35 15.1**	**+0.4**
SVE	**Sverdlovsk**	**73.65**	**328**	*e*P	**P**	**15 35 14.9**	**+0.1**
SVE				*e*S	**S**	**15 44 44.8**	**+1.6**
SVE				pmax	pmax		
	comp=Z,14nm,0.8s						
SVE				MLR	MLR		
	comp=Z,411nm,18.0s						
GAMB	**Gambell**	**74.08**	**24**	*e*P	**P**	**15 35 14.7**	**-2.4**
	comp=Z,3.9nm,0.8s						
ARU	**Arti**	**74.63**	**328**	*d i*P	**P**	**15 35 20.7**	**+0.2**
ARU						15 38 06.4	
ARU				S	**S**	**15 44 56.5**	**+2.3**
ARU				pmax	pmax		
	comp=Z,18nm,1.7s						
MAK	**Makhachkala**	**79.33**	**313**	*e*P	**P**	**15 35 47.3**	**0.0**
ABPO	**Ambohimpanom**	**81.42**	**250**	*e*P	**P**	**15 35 59.5**	**+0.3**
ABPO				pmax	pmax		
	comp=Z,13nm,0.6s						
ABPO	**Ambohimpanom**	**81.42**	**250**	*e*P	**P**	**15 35 59.5**	**+0.3**
	comp=Z,13nm,0.6s						
ZEI	**Tsey**	**81.97**	**312**	*e*P	**P**	**15 36 03.2**	**+1.4**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PPLA	**Purkeypile**	**82.32**	**27**	*e*P	**P**	**15 36 04.0**	**+1.0**
	comp=Z,6.6nm,0.6s						
KBZ	**Khabaz**	**82.73**	**313**	P	**P**	**15 36 06.8**	**+1.4**
KBZ	**Khabaz**	**82.73**	**313**	P	**P**	**15 36 06.8**	**+1.4**
KBZ	**Khabaz**	**82.73**	**313**	P	**P**	**15 36 06.8**	**+1.4**
	comp=Z,2.1nm,0.8s,baz=298,slow=3.9,SNR=4.0						
KBZ				LR	LR	16 19 07.3	
	comp=Z,348nm,19.2s,baz=73,slow=40						
TRF	**Thorofare Moun**	**83.23**	**27**	*e*P	**P**	**15 36 06.7**	**-1.1**
	comp=Z,23nm,1.3s						
COLD	**Coldfoot**	**83.57**	**23**	*e*P	**P**	**15 36 11.1**	**+1.9**
	comp=Z,8.1nm,0.9s						
PMR	**Palmer**	**83.64**	**29**	*e*P	**P**	**15 36 10.0**	**+0.3**
PMR				pmax	pmax		
	comp=Z,44nm,1.5s						
PMR	**Palmer**	**83.64**	**29**	*e*P	**P**	**15 36 10.0**	**+0.3**
	comp=Z,44nm,1.5s						
VRHR	**Novokhopersk**	**83.76**	**321**	*e*P	**P**	**15 36 10.1**	**-0.4**
VRHR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.6s						
MCK	**McKinley**	**83.85**	**26**	*e*P	**P**	**15 36 11.5**	**+0.7**
MCK				pmax	pmax		
	comp=Z,34nm,1.3s						
MCK	**McKinley**	**83.85**	**26**	*e*P	**P**	**15 36 11.5**	**+0.7**
	comp=Z,34nm,1.3s						
SML	**Sawmill**	**84.03**	**28**	*e*P	**P**	**15 36 11.1**	**-0.7**
SML				pmax	pmax		
	comp=Z,15nm,1.3s						
SML	**Sawmill**	**84.03**	**28**	*e*P	**P**	**15 36 11.1**	**-0.7**
	comp=Z,15nm,1.3s						
ILAR	**Eielson Array**	**84.79**	**25**	P	**P**	**15 36 14.8**	**-0.7**
ILAR	**Eielson Array**	**84.79**	**25**	P	**P**	**15 36 14.8**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=246,slow=5.4,SNR=26						
VORD	**Divnogorie**	**85.23**	**321**	*e*P	**P**	**15 36 17.0**	**-0.9**
VORD				pmax	pmax		
	comp=Z,7.0nm,0.5s						
VORD				pmax	pmax		
	comp=N,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,10.0nm,1.0s						
PPT2	**Papeete2**	**85.24**	**108**	*e*PP	PP	15 39 33.2	-3.6
	comp=E,40nm,24.5s						
PPT2				*e*S	**S**	**15 46 47.7**	**+0.2**
	comp=E,145nm,25.5s						
PPT2				*e*SS	**SS**	**15 52 20.9**	**-1.5**
	comp=E,165nm,28.0s						
PPT2				*e*LR	LR	16 03 15.7	
	comp=E,188nm,26.0s						
DIV	**Divide**	**85.24**	**29**	*e*P	**P**	**15 36 17.8**	**-0.2**
	comp=E,34nm,1.1s						
VSR	**Storozhevoye**	**85.31**	**321**	*e*P	**P**	**15 36 17.8**	**-0.5**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VSR				pmax	pmax		
	comp=N,10.0nm,0.9s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.2s						
PAX	**Paxson**	**85.39**	**27**	*e*P	**P**	**15 36 19.3**	**+0.6**
PAX				pmax	pmax		
	comp=Z,12nm,1.2s						
PAX	**Paxson**	**85.39**	**27**	*e*P	**P**	**15 36 19.3**	**+0.6**
	comp=Z,12nm,1.2s						
TMCR	**Tamitsa**	**85.78**	**334**	*e*P	**P**	**15 36 22.0**	**+1.6**
TMCR				pmax	pmax		
	comp=Z,59nm,1.7s						
TBI	**Tubuai**	**85.94**	**114**	*e*S	**S**	**15 46 53.8**	**-0.3**
	comp=Z,227nm,28.8s						
TBI				*e*SS	**SS**	**15 52 33.5**	**+1.1**
	comp=Z,128nm,29.2s						
TBI				*e*LR	LR	16 03 35.1	
	comp=Z,253nm,27.0s						
MOS	**Moscow**	**86.14**	**325**	*e*P	P	15 36 17.7	-4.7
MOS				pmax	pmax		
	comp=Z,116nm,2.0s						
MALT	**Malatya**	**86.15**	**308**	P	**P**	**15 36 21.6**	**-1.4**
MALT				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MALT	**Malatya**	**86.15**	**308**	P	**P**	**15 36 21.6**	**-1.4**
	comp=Z,2.5nm,0.6s						
OBN	**Obninsk**	**86.77**	**325**	*de*P	**P**	**15 36 25.8**	**+0.4**
OBN				*e*		15 36 33.6	
OBN				*e*		15 36 39.0	
OBN				*e*		15 47 00.4	
OBN				pmax	pmax		
	comp=Z,81nm,1.7s						
OBN				MLR	MLR		
	comp=Z,400nm,19.0s						
JOF	**Joensuu**	**88.86**	**333**	*e*P	**P**	**15 36 36.0**	**+0.7**
JOF				pmax	pmax		
	comp=Z,9.0nm,0.6s						
JOF	**Joensuu**	**88.86**	**333**	*e*p	**P**	**15 36 36.0**	**+0.7**
	comp=Z,8.5nm,0.6s						
KMBO	**Kilima Mbogo**	**89.55**	**269**	*e*P	**P**	**15 36 39.3**	**-0.6**
	comp=Z,14nm,1.1s						
KMBO	**Kilima Mbogo**	**89.55**	**269**	P	**P**	**15 36 39.3**	**-0.6**
	comp=Z,5.5nm,0.8s,baz=40,slow=8.0,SNR=13						
KMBO				LR	LR	16 13 22.1	
	comp=Z,172nm,20.6s,baz=92,slow=33						
BR131	**Keskin Array S**	**89.79**	**310**	*e*P	**P**	**15 36 38.8**	**-1.6**
	comp=Z,1.8nm,0.6s						
BRTR	**Keskin Array B**	**89.79**	**310**	P	**P**	**15 36 40.0**	**-0.4**
BRTR	**Keskin Array B**	**89.79**	**310**	P	**P**	**15 36 40.0**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=139,slow=4.4,SNR=16						
BRTR				LR	LR	16 23 58.0	
	comp=Z,128nm,22.0s,baz=339,slow=40						
ARCES	**ARCESS Array B**	**90.11**	**340**	P	**P**	**15 36 40.9**	**-0.2**
ARCES	**ARCESS Array B**	**90.11**	**340**	P	**P**	**15 36 40.9**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=81,slow=7.5,SNR=14						
ARCES				LR	LR	16 20 20.5	
	comp=Z,324nm,20.3s,baz=229,slow=38						
KAF	**Kangasniemi**	**91.28**	**332**	*e*P	**P**	**15 36 47.8**	**+1.2**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KAF	**Kangasniemi**	**91.28**	**332**	*e*p	**P**	**15 36 47.8**	**+1.2**
	comp=Z,5.8nm,0.5s						
FIA1	**FINESS Array S**	**91.51**	**332**	*e*P	**P**	**15 36 47.2**	**-0.5**
FINES	**FINESS Array B**	**91.52**	**332**	P	**P**	**15 36 46.9**	**-0.8**
FINES	**FINESS Array B**	**91.52**	**332**	P	**P**	**15 36 46.9**	**-0.8**
	comp=Z,3.6nm,0.5s,baz=57,slow=5.0,SNR=20						
FINES				LR	LR	16 21 59.2	
	comp=Z,466nm,19.8s,baz=166,slow=38						
AKASG	**Malin Array Be**	**91.61**	**321**	*ce*P	**P**	**15 36 48.7**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKASG	**Malin Array Be**	**91.61**	**321**	P	**P**	**15 36 48.1**	**-0.3**
AKASG	**Malin Array Be**	**91.61**	**321**	P	**P**	**15 36 48.1**	**-0.3**
	comp=Z,3.2nm,0.6s,baz=68,slow=5.0,SNR=11						
AKASG				LR	LR	16 20 32.8	
	comp=Z,250nm,20.2s,baz=60,slow=37						
AK01	**Malin Array Si**	**91.62**	**321**	*e*P	**P**	**15 36 45.9**	**-2.5**
KIEV	**Kiev**	**91.62**	**321**	*e*P	**P**	**15 36 47.8**	**-0.7**
KIEV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIEV	**Kiev**	**91.62**	**321**	*e*P	**P**	**15 36 47.8**	**-0.7**
	comp=Z,11nm,1.1s						
AK02	**Malin Array Si**	**91.63**	**321**	*e*P	**P**	**15 36 48.8**	**+0.3**
TESR		**93.97**	**317**	*i*P	**P**	**15 37 00.4**	**+1.0**
VRI	**Vrincioaia**	**94.03**	**316**	*i*P	**P**	**15 37 01.9**	**+2.2**
PLOR	**Plostina**	**94.09**	**316**	*i*P	**P**	**15 37 01.9**	**+1.9**
SUW	**Suwalki**	**94.63**	**325**	P	**P**	**15 37 02.1**	**-0.1**
SUW				pmax	pmax		
	comp=Z,39nm,0.8s						
SUW	**Suwalki**	**94.63**	**325**	P	**P**	**15 37 02.1**	**-0.1**
	comp=Z,39nm,0.8s						
SUW	**Suwalki**	**94.63**	**325**	*e*P	**P**	**15 37 03.4**	**+1.2**
MLR	**Muntele Rosu**	**94.64**	**316**	*i*P	**P**	**15 37 03.9**	**+1.2**
BURAR	**Bucovina Array**	**94.73**	**318**	*i*P	**P**	**15 37 04.5**	**+1.5**
BUR08	**Bucovina Ar. S**	**94.73**	**318**	*e*P	**P**	**15 37 02.8**	**-0.2**
LOT	**Lotru**	**96.15**	**316**	*i*P	**P**	**15 37 09.8**	**+0.2**
KOLS	**Kolonicke sedl**	**96.37**	**320**	*e*P	**P**	**15 37 11.5**	**+1.2**
KOLS	**Kolonicke sedl**	**96.37**	**320**	*e*P	**P**	**15 37 11.5**	**+1.2**
TRPA	**Tarpa**	**96.38**	**319**	*i*P	**P**	**15 37 11.3**	**+0.9**
UZH	**Uzhgorod**	**96.42**	**320**	*e*P	**P**	**15 37 10.0**	**-0.6**
UZH				*i*		15 37 17.4	
DRGR		**96.57**	**318**	*i*P	**P**	**15 37 11.7**	**+0.3**
CRVS	**Cervenica-Dubn**	**96.89**	**320**	*e*P	**P**	**15 37 12.4**	**-0.3**
CRVS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CRVS	**Cervenica-Dubn**	**96.89**	**320**	*e*P	**P**	**15 37 12.4**	**-0.3**
BZS	**Buzias**	**97.58**	**317**	*i*P	Pdif	15 37 16.4	+0.4
NB2	**NORSAR Subarra**	**98.47**	**334**	P	**P**	**15 37 19.0**	**-0.6**
	baz=67,slow=4.6						
NB2	**NORSAR Subarra**	**98.47**	**334**	P	**P**	**15 37 19.0**	**-0.6**
	comp=Z,6.8nm,1.2s,baz=67,slow=4.6						
NOA	**NORSAR Array B**	**98.47**	**334**	P	**P**	**15 37 19.2**	**-0.3**
NOA	**NORSAR Array B**	**98.47**	**334**	P	**P**	**15 37 19.2**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=67,slow=4.6,SNR=6.6						
NOA				LR	LR	16 27 30.3	
	comp=Z,284nm,18.4s,baz=55,slow=39						
VYHS	**Vyhne**	**98.68**	**320**	*e*P	Pdif	15 37 20.9	+0.1
VYHS	**Vyhne**	**98.68**	**320**	PDIF	Pdif	15 37 20.9	+0.1
YKA	**Yellowknife Ar**	**99.18**	**24**	P	**Pdif**	**15 37 23.3**	**+0.6**
YKA				PKiKP	**PKiKP**	**15 41 53.6**	**+1.0**
YKA	**Yellowknife Ar**	**99.18**	**24**	P	**Pdif**	**15 37 23.3**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=298,slow=4.3,SNR=14						
YKA				PKiKP	**PKiKP**	**15 41 53.6**	**+1.0**
	comp=Z,0.1nm,0.5s,baz=301,slow=1.9,SNR=6.7						
LSZ	**Lusaka**	**99.28**	**255**	*e*P	**Pdif**	**15 37 23.6**	**-0.6**
	comp=Z,4.2nm,0.8s						
KSP	**Ksiaz**	**99.55**	**323**	*e*P	**Pdif**	**15 37 25.7**	**+1.1**
DPC	**Dobruska-Polom**	**99.69**	**322**	*e*P	**Pdif**	**15 37 26.1**	**+0.8**
DPC				MLR	MLR		
	comp=Z,400nm,18.5s						
DPC	**Dobruska-Polom**	**99.69**	**322**	*e*PDIFF	**Pdif**	**15 37 26.1**	**+0.8**
DPC				AMS	AMS	16 24 50.0	
	comp=Z,400nm,18.5s						
UPC	**Upice**	**99.83**	**323**	*e*P	**Pdif**	**15 37 27.6**	**+1.7**
UPC	**Upice**	**99.83**	**323**	*e*PDIFF	**Pdif**	**15 37 27.6**	**+1.7**
PRU	**Pruhonice**	**100.89**	**323**	*e*P	**Pdif**	**15 37 31.0**	**+0.4**
PRU				MLR	MLR		
	comp=Z,400nm,16.6s						
PRU	**Pruhonice**	**100.89**	**323**	*e*PDIFF	**Pdif**	**15 37 31.0**	**+0.4**
PRU				AMS	AMS	16 25 40.0	
	comp=Z,400nm,16.6s						
BRG	**Berggiesshubel**	**100.95**	**323**	*e*P	**Pdif**	**15 37 32.4**	**+1.6**
	comp=Z,4.0nm,0.9s						
BRG				*i*		15 37 34.8	
	comp=Z,5.6nm,0.8s						
BRG							
	comp=N,249nm,14.8s						
BRG							
	comp=E,214nm,15.9s						
BRG							
	comp=Z,238nm,16.7s						
BRG	**Berggiesshubel**	**100.95**	**323**	*e*P	**Pdif**	**15 37 32.4**	**+1.6**
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRG				MLR	MLR		
	comp=N,249nm,14.8s						
BRG				MLR	MLR		
	comp=E,214nm,15.9s						
BRG				MLR	MLR		
	comp=Z,238nm,16.7s						
CLL	**Collm**	**101.34**	**324**	*e*P	**Pdif**	**15 37 32.0**	**-0.6**
CLL				MLR	MLR		
	comp=Z,300nm,21.4s						
CLL	**Collm**	**101.34**	**324**	*e*Pdif	**Pdif**	**15 37 32.0**	**-0.6**
CLL				LmH		16 23 00.0	
	comp=N,200nm,20.4s						
CLL				LmH		16 23 00.0	
	comp=E,100nm,21.8s						
CLL				LmV		16 29 00.0	
	comp=Z,300nm,21.4s						
KHC	**Kasperske Hory**	**101.78**	**322**	AMS	AMS	16 28 00.0	
	comp=Z,400nm,17.3s						
GERES	**GERESS Array B**	**101.80**	**322**	P	**Pdif**	**15 37 35.1**	**+0.4**
GERES	**GERESS Array B**	**101.80**	**322**	P	**Pdif**	**15 37 35.1**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=211,slow=1.6,SNR=5.4						
NVAR	**Mina Array Bea**	**106.68**	**48**	PKKPab	PKKPab	15 53 43.1	+0.5
NVAR	**Mina Array Bea**	**106.68**	**48**	PKKPab	PKKPab	15 53 43.1	+0.4
	comp=Z,0.6nm,0.6s,baz=115,slow=4.3,SNR=6.8						
PDAR	**Pinedale Array**	**111.10**	**41**	PKiKP	**PKiKP**	**15 42 16.9**	**+1.4**
PDAR				PKKPab	**PKKPab**	**15 53 21.7**	**-1.4**
PDAR	**Pinedale Array**	**111.10**	**41**	PKiKP	**PKiKP**	**15 42 16.9**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=288,slow=0.9,SNR=2.9						
PDAR				PKKPab	**PKKPab**	**15 53 21.7**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=110,slow=5.5,SNR=6.6						
SCHQ	**Schefferville**	**120.22**	**9**	PKP	**PKPdf**	**15 42 32.1**	**-0.2**
SCHQ	**Schefferville**	**120.22**	**9**	PKP	**PKPdf**	**15 42 32.1**	**-0.2**
	comp=Z,2.7nm,0.5s,baz=349,slow=2.2,SNR=11						
TXAR	**Lajitas Array**	**121.39**	**52**	PKP	**PKPdf**	**15 42 35.6**	**+0.1**
TXAR	**Lajitas Array**	**121.39**	**52**	PKP	**PKPdf**	**15 42 35.6**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=198,slow=2.7,SNR=3.1						
TOA0	**Torodi Ar. Sit**	**122.80**	**288**	*e*PKPdf	**PKPdf**	**15 42 38.1**	**-0.3**
TORD	**Torodi Ar. Bea**	**122.80**	**288**	PKP	**PKPdf**	**15 42 38.0**	**-0.4**
TORD	**Torodi Ar. Bea**	**122.80**	**288**	PKP	**PKPdf**	**15 42 38.0**	**-0.4**
	comp=Z,2.3nm,0.6s,baz=87,slow=1.7,SNR=14						
DBIC	**Dimbokro**	**130.49**	**282**	PKP	**PKPdf**	**15 42 53.3**	**+0.2**
DBIC	**Dimbokro**	**130.49**	**282**	PKP	**PKPdf**	**15 42 53.3**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=42,slow=2.2,SNR=5.6						
PLCA	**Paso Flores**	**140.34**	**159**	PKP	**PKPdf**	**15 43 11.2**	**+0.4**
PLCA	**Paso Flores**	**140.34**	**159**	PKP	**PKPdf**	**15 43 11.2**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=79,slow=5.2,SNR=3.3						
CPUP	**Villa Florida**	**157.54**	**170**	PKPab	**PKPab**	**15 44 09.4**	**-0.6**
CPUP	**Villa Florida**	**157.54**	**170**	PKPab	**PKPab**	**15 44 09.4**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=158,slow=7.4,SNR=2.3						
LPAZ	**La Paz**	**161.03**	**131**	PKPab	PKPab	15 44 31.4	+5.1
LPAZ	**La Paz**	**161.03**	**131**	PKPab	PKPab	15 44 31.4	+5.1
	comp=Z,1.8nm,0.9s,baz=249,slow=3.1,SNR=4.0						

IDC ***19*** *15:43:42.4±0.6, 3.00N×128.51E, h0km, mb3.8/15, mb1 4.0/16, mb1mx3.9/24, mbtmp3.8/16, ML4.2/1, Error ellipse: s-maj=28.0km s-min=12.1km az=85.0*

ISCJB ***19*** *15:43:45.9±0.4, 3.04N±0.04×128.34E±0.06, h33km, mb3.8/16, Error ellipse: s-maj=9.3km s-min=5.3km az=23.4*

DJA ***19*** *15:43:50.0±1.1, 3°N±5°×12°8E±°, h13km±9km, M4.5/5, mb4.6/3, mB5.1/1, MLv4.4/5, Mw(mB)4.5/1*

ISC 19 15:43:47.8±0.6, 2.96N±0.06×128.33E±0.09, h35km, n25, σ1°69/29, mb3.7/15, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**1.23**	**206**	P	**Pn**	**15 44 08.1**	**-0.5**
GAMI				S	**Sn**	**15 44 23.3**	**-0.8**
TNTI	**Ternate**	**2.37**	**204**	P	**Pn**	**15 44 26.6**	**+2.3**
TNTI				S	**Sn**	**15 44 55.0**	**+2.8**
LBMI	**Labuha**	**3.66**	**193**	P	**Pn**	**15 44 44.9**	**+2.8**
MNI	**Manado**	**3.79**	**247**	P	**Sn**	**15 44 44.5**	**+0.6**
MNI				S	**Sn**	**15 45 27.9**	**+0.6**
SWI	**Sorong**	**4.79**	**142**	P	Pn	15 45 01.3	+3.7
LUWI	**Luwuk**	**6.83**	**235**	P	**Pn**	**15 45 27.3**	**+1.8**
	41nm,0.6s,1μm						
MYLDM	**Lahad Datu**	**10.05**	**283**	P	**Pn**	**15 46 11.9**	**+2.1**
	38nm,0.9s						
BKSI	**Bulukumba**	**11.61**	**225**	P	**Pn**	**15 46 32.8**	**+1.7**
KAPI	**Kappang**	**11.66**	**227**	Pn	**Pn**	**15 46 32.2**	**+0.3**
	1.6nm,0.3s,baz=261,slow=6.0,SNR=5.8						
KAPI				Sn	**Sn**	**15 48 35.6**	**-5.4**
	0.3nm,0.3s,baz=252,slow=20,SNR=3.5						
FITZ	**Fitzroy Crossi**	**21.09**	**187**	P	**P**	**15 48 29.2**	**-0.2**
	1.0nm,0.6s,baz=51,slow=0.8,SNR=7.6						
WRA	**Warramunga Arr**	**23.51**	**166**	P	**P**	**15 48 54.5**	**-0.4**
	3.2nm,0.3s,baz=346,slow=11,SNR=118						
ASAR	**Alice Springs**	**27.01**	**169**	P	**P**	**15 49 25.9**	**-0.8**
	0.4nm,0.5s,baz=350,slow=7.3,SNR=12						
ASAR				PcP	**PcP**	**15 52 47.2**	**-0.6**
	0.4nm,0.7s,baz=355,slow=2.4,SNR=4.3						
CMAR	**Chiang Mai Arr**	**32.64**	**300**	P	**P**	**15 50 18.4**	**+1.7**
	0.3nm,0.3s,baz=107,slow=5.8,SNR=3.6						
KSRS	**Korea Array**	**34.33**	**359**	P	**P**	**15 50 31.1**	**-0.1**
	0.2nm,0.4s,baz=180,slow=10.0,SNR=3.1						
MJAR	**Matsushiro Arr**	**34.64**	**14**	P	**P**	**15 50 32.7**	**-1.2**
	0.8nm,0.8s,baz=185,slow=9.8,SNR=4.1						
STKA	**Stephens Creek**	**36.87**	**161**	P	**P**	**15 50 52.7**	**-0.3**
	1.7nm,0.4s,baz=350,slow=8.7,SNR=21						
NWAO	**Narrogin (SRO)**	**37.20**	**196**	P	**P**	**15 50 56.6**	**+0.8**
	5.6nm,0.9s,baz=34,slow=7.3,SNR=2.6						
USRK	**Usuriysk Arra**	**41.20**	**4**	P	**P**	**15 51 29.0**	**0.0**
	1.6nm,0.6s,baz=201,slow=7.9,SNR=5.4						
ASAJ	**Asahikawa**	**42.89**	**15**	P	**P**	**15

1.0nm,0.8s,baz=344,slow=11,SNR=7.8
ASAR Alice Springs 28.45 167 P P 16 07 47.2 +0.5
0.3nm,0.9s,baz=339,slow=7.1,SNR=2.8
MKAR Makanchi Array 57.40 325 P P 16 11 40.3 0.0
0.2nm,0.6s,baz=119,slow=8.9,SNR=2.9

IDC 19 16:05:55.0±2.3, 20°29S×70°78W, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.5/17, mbtmp3.7/3, ML3.7/1, MS2.7/1, Ms1 2.9/1, ms1mx2.4/16, Error ellipse: s-maj=69.7km s-min=57.7km az=165.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.71**	**33**	Pn	Pn	16 07 08.1	0.0
	2.2nm,0.3s,baz=230,slow=6.6,SNR=38						
LPAZ				Sn	Sb	16 08 12.2	-5.0
	0.3nm,0.3s,baz=315,slow=16,SNR=1.5						
LPAZ				LR	LR	16 09 15.9	
	comp=Z,85nm,18.5s,baz=12,slow=43						
TORD	**Torodi Ar. Bea**	**78.61**	**71**	P	P	16 17 58.7	-0.5
	0.5nm,0.6s,baz=244,slow=5.4,SNR=6.2						
YKA	**Yellowknife Ar**	**89.48**	**341**	P	P	16 18 52.8	-0.7
	0.2nm,0.6s,baz=133,slow=4.6,SNR=8.7						
MKAR	**Makanchi Array**	**145.64**	**33**	PKPbc	PKPab	16 25 36.1	+0.2
	0.5nm,0.5s,baz=318,slow=3.5,SNR=11						

IDC 19 16:06:18.9±1.9, 4°14N×126°72E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/23, mbtmp3.3/4, Error ellipse: s-maj=114.6km s-min=23.9km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.12**	**183**	P	P	16 11 16.5	+0.3
	0.5nm,0.5s,baz=19,slow=8.7,SNR=4.1						
WRA	**Warramunga Arr**	**25.07**	**163**	P	P	16 11 45.1	-0.3
	0.6nm,0.4s,baz=341,slow=11,SNR=14						
ASAR	**Alice Springs**	**28.51**	**166**	P	P	16 12 16.1	-0.2
	0.2nm,0.5s,baz=344,slow=7.1,SNR=4.3						
MKAR	**Makanchi Array**	**57.22**	**325**	P	P	16 16 08.1	+0.1
	0.2nm,0.6s,baz=123,slow=7.1,SNR=4.0						

*CSEM **19** 16:13:24.7±0.3, 39°92N×40°01E, h2km, MD2.8, Error ellipse: s-maj=7.4km s-min=5.2km az=162.0*
*ISK **19** 16:13:24.6, 39°99N×40°02E, h6km, MD2.8*
*DDA **19** 16:13:25.6, 40°13N×40°02E, h7km, MD2.8*
ISC 19 16:13:24.8±1.1, 39°98N±0°03×40°01E±0°03, h12km±13km, n14, σ0s95/26, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOPT	**Kop Dagi**	**0.38**	**84**	*i* P	**Pg**	**16 13 32.8**	**+0.2**
KOPT				*i* S	**Sb**	**16 13 39.7**	**+0.1**
KOPT	**Kop Dagi**	**0.38**	**84**	*i* P	**Pg**	**16 13 32.8**	**+0.2**
KOPT				*i* S	**Sb**	**16 13 39.7**	**+0.1**
BAYT	**Ayd¯–ntepe-Bay**	**0.43**	**14**	*e*PG	**Pg**	**16 13 33.2**	**-0.1**
BAYT				*e*SG	**Sb**	**16 13 39.5**	**-1.4**
BAYT	**Ayd¯–ntepe-Bay**	**0.43**	**14**	*e*Pg	**Pg**	**16 13 33.3**	**-0.1**
BAYT				*e*Sg	**Sb**	**16 13 39.5**	**-1.4**
ERZN	**Erzincan**	**0.45**	**209**	*e*PG	**Pg**	**16 13 34.0**	**+0.3**
ERZN				*e*SG	**Sb**	**16 13 40.9**	**-0.6**
EZC	**Erzincan**	**0.55**	**246**	*e*Pg	**Pg**	**16 13 34.1**	**-1.6**
EZC				*e*Sg	**Sb**	**16 13 40.9**	**-2.1**
KELT	**Kelkit**	**0.60**	**287**	*i* P	**Pb**	**16 13 37.2**	**-0.2**
KELT				*i* S	**Sb**	**16 13 46.7**	**+0.8**
KELT	**Kelkit**	**0.60**	**287**	*i* P	**Pb**	**16 13 37.2**	**-0.2**
KELT				*i* S	**Sb**	**16 13 46.7**	**+0.8**
GUMT	**Gumushane**	**0.63**	**320**	*e*PG	**Pb**	**16 13 37.7**	**-0.1**
GUMT				*e*SG	**Sb**	**16 13 46.5**	**-0.1**
GUMT	**Gumushane**	**0.63**	**320**	*e*Pg	**Pb**	**16 13 37.7**	**-0.1**
GUMT				*e*Sg	**Sb**	**16 13 46.5**	**-0.1**
PTK	**Pertek**	**1.19**	**204**	*e*PN	**Pg**	**16 13 47.9**	**+0.2**
PTK	**Pertek**	**1.19**	**204**	*e*Pn	**Pg**	**16 13 47.9**	**+0.2**
SUSE	**Susehri**	**1.40**	**280**	*i* P	**Pg**	**16 13 51.9**	**+0.1**
SUSE				*i* S	**Sg**	**16 14 11.9**	**+1.9**
SUSE	**Susehri**	**1.40**	**280**	*i* P	**Pg**	**16 13 51.9**	**+0.1**
SUSE				*i* S	**Sg**	**16 14 11.9**	**+1.9**

*IDC **19** 16:17:47.9±0.8, 4°15N×126°89E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.8/23, mbtmp3.8/9, MS3.2/1, Ms1 3.2/1, ms1mx2.2/28, Error ellipse: s-maj=51.6km s-min=14.4km az=72.0*
*ISCJB **19** 16:17:51.5±0.6, 4°12N±0°09×126°8E±0°2, h36km, mb3.7/9, Error ellipse: s-maj=27.1km s-min=8.4km az=156.0*
*AUST **19** 16:17:58.2, 4°00N×127°01E, h100km*
ISC 19 16:17:53.9±0.7, 4°17N±0°09×126°8E±0°2, h36km, n19, σ1s71/19, mb3.8/9, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**3.14**	**337**	LR	LR	16 20 17.2	
	comp=Z,340nm,18.2s,baz=44,slow=47						
CTBH	**Cotabato--PC H**	**3.97**	**320**	*i* P	**Pn**	**16 18 53.8**	**+1.5**
SWI	**Sorong**	**6.68**	**138**	P	**Pn**	**16 19 31.9**	**+2.4**
	baz=6.5,SNR=4.2						
PCI	**Palu**	**8.61**	**234**	S	Sn	16 21 17.8	-14
	baz=8.7,SNR=6.4						
KSM	**Kuching**	**16.71**	**261**	P	**P**	**16 21 48.9**	**+1.6**
	baz=17,SNR=3.3						
MTN	**Manton Dam**	**17.43**	**166**	P	**Pn**	**16 21 51.8**	**-2.6**
	baz=17,SNR=7.5						
MTN				S	**S**	**16 25 18.5**	**+3.6**
	baz=17,SNR=4.3						
KDU	**Kakadu**	**17.66**	**162**	P	**P**	**16 21 58.6**	**+0.8**
	baz=18,SNR=4.7						
FITZ	**Fitzroy Crossi**	**22.16**	**183**	P	**P**	**16 22 44.9**	**-1.9**
	2.2nm,0.5s,baz=40,slow=4.3,SNR=16						
FITZ	**Fitzroy Crossi**	**22.16**	**183**	P	**P**	**16 22 45.1**	**-1.6**
	baz=22,SNR=12						
WRA	**Warramunga Arr**	**25.07**	**163**	P	**P**	**16 23 13.5**	**-1.7**
	2.3nm,0.5s,baz=340,slow=11,SNR=22						
ASAR	**Alice Springs**	**28.51**	**166**	P	**P**	**16 23 44.7**	**-1.5**
	0.2nm,0.5s,baz=357,slow=7.8,SNR=14						
CMAR	**Chiang Mai Arr**	**30.73**	**300**	P	**P**	**16 24 06.7**	**+0.7**
	0.7nm,0.8s,baz=110,slow=6.1,SNR=4.6						
MEEK	**Meekatharra**	**31.64**	**194**	P	**P**	**16 24 13.1**	**-0.7**
	baz=32,SNR=3.8						
KSRS	**Korea Array**	**33.15**	**2**	P	**P**	**16 24 25.9**	**-0.9**
	0.8nm,0.8s,baz=172,slow=8.6,SNR=3.4						
STKA	**Stephens Creek**	**38.50**	**160**	P	**P**	**16 25 12.7**	**-0.2**
	2.9nm,0.7s,baz=323,slow=10,SNR=6.8						
STKA	**Stephens Creek**	**38.50**	**160**	P	**P**	**16 25 12.6**	**-0.2**
	baz=38,SNR=4.4						
SONM	**Songino Array**	**46.92**	**341**	P	**P**	**16 26 21.3**	**+0.3**
	0.2nm,0.5s,baz=152,slow=11,SNR=4.1						
SONM				PcP	**PcP**	**16 27 53.6**	**+0.2**
	0.3nm,0.7s,baz=169,slow=1.5,SNR=2.9						
MKAR	**Makanchi Array**	**57.25**	**325**	P	**P**	**16 27 37.0**	**-0.9**
	1.1nm,0.5s,baz=118,slow=7.6,SNR=21						
ZALV	**Zalesovo Beam**	**60.24**	**333**	P	**P**	**16 27 57.1**	**-1.3**
	0.3nm,0.4s,baz=127,slow=9.4,SNR=4.0						

IDC 19 16:21:05.6±2.0, 11°67S×121°65E, h0km, mb3.1/1, mb1 3.4/4, mb1mx3.2/18, mbtmp3.2/4, ML3.1/2, Error ellipse: s-maj=162.4km s-min=27.0km az=54.0, South of Timor

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**7.47**	**149**	P	Pn	16 22 55.3	-0.6
	0.2nm,0.3s,baz=334,slow=14,SNR=4.8						
FITZ				Sn	Sn	16 24 16.4	-4.9
	0.3nm,0.3s,baz=172,slow=22,SNR=6.0						
WRA	**Warramunga Arr**	**14.72**	**126**	Pn	Pn	16 24 35.4	+0.2
	baz=302,slow=13,SNR=2.2						
WRA				Sn	Sn	16 27 15.1	-4.1
	0.0nm,0.3s,baz=302,slow=24,SNR=3.2						
ASAR	**Alice Springs**	**16.68**	**137**	Pn	Pn	16 25 01.5	+0.6
	0.1nm,0.3s,baz=318,slow=14,SNR=5.4						
MKAR	**Makanchi Array**	**68.01**	**332**	P	P	16 32 06.7	0.0
	0.2nm,0.7s,baz=142,slow=7.3,SNR=3.1						

*FUNV **19** 16:32:57.3, 11°04N×62°24W, h96km, MW3.0*
*ISCJB **19** 16:32:59.3±0.6, 10°79N±0°06×62°44W±0°06, h89km, Error ellipse: s-maj=10.3km s-min=5.2km az=42.3*
ISC 19 16:33:00.3±1.3, 10°80N±0°07×62°43W±0°07, h89km, n16, σ1s24/20, 4C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.26**	**127**	*e*P	**Pn**	**16 33 11.5**	**-1.9**
GUIV				*e*S	**Sn**	**16 33 23.0**	**-0.2**
CRUV	**Carupano**	**0.80**	**261**	*e*P	**Pn**	**16 33 17.1**	**-0.6**
CRUV				*e*S	**Sn**	**16 33 31.8**	**+1.1**
ORIV	**Oritupano**	**1.97**	**209**	*e*P	**Pn**	**16 33 32.8**	**+0.7**
ORIV				*e*S	**Sn**	**16 33 58.8**	**+2.4**
PCRV	**Puerto La Cruz**	**2.25**	**254**	*e*P	**Pn**	**16 33 34.9**	**-1.0**
PCRV				*e*S	**Sn**	**16 34 02.5**	**-0.6**
GURV	**El Guri**	**3.09**	**192**	*e*P	**Pn**	**16 33 46.0**	**-1.2**
CUPV	**Cœpira**	**3.38**	**258**	*e*P	**Pn**	**16 33 50.2**	**-0.9**
MERV	**Las Mercedes**	**4.11**	**248**	*e*S	**Sn**	**16 34 47.5**	**-0.3**
TBG	**Guadaloupe-3**	**5.08**	**9**	*i*/*e*P	**Pn**	**16 34 13.9**	**-0.1**
HMG	**Houelmont**	**5.20**	**8**	*e*P	**Pn**	**16 34 16.2**	**+0.5**
MGG	**Marie-Galante**	**5.20**	**12**	*i*/*e*P	**Pn**	**16 34 18.4**	**+2.7**
PHG	**Guadaloupe-2**	**5.24**	**8**	*i*/*e*P	**Pn**	**16 34 16.7**	**+0.4**
SCG	**Saint Claude**	**5.25**	**8**	*i*/*e*P	**Pn**	**16 34 16.9**	**+0.5**
DOG	**Dongo Capester**	**5.26**	**9**	*i*/*e*P	**Pn**	**16 34 16.7**	**+0.2**
BCG	**Bois Riant Cap**	**5.31**	**8**	*e*P	**Pn**	**16 34 17.5**	**+0.3**
LZG	**Guadaloupe-1**	**5.34**	**7**	*e*P	**Pn**	**16 34 19.2**	**+1.6**
BAUV	**El Baul**	**5.83**	**252**	*e*P	**Pn**	**16 34 23.5**	**-0.8**

IDC 19 16:46:23.0±9.2, 5°31S×140°45E, h0km, mb3.4/1, mb1 3.2/3, mb1mx3.0/15, mbtmp3.0/3, ML2.8/1, Error ellipse: s-maj=352.3km s-min=34.9km az=91.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.71**	**202**	Pn	Pn	16 50 05.2	-0.7
	0.0nm,0.3s,baz=24,slow=12,SNR=4.8						
ASAR	**Alice Springs**	**19.31**	**198**	P	P	16 50 50.1	+0.2
	0.0nm,0.3s,baz=18,slow=9.2,SNR=5.8						
MKAR	**Makanchi Array**	**72.89**	**322**	P	P	16 57 54.1	0.0
	0.2nm,0.5s,baz=132,slow=6.4,SNR=5.2						

WEL 19 16:49:23.2±0.3, 38°44S×175°68E, h164km±3km, ML4.1/20, 17C-9D, Error ellipse: s-maj=1.6km s-min=1.2km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WATZ	**Wairara**	**0.27**	**171**	PN	Pn	16 49 45.5	+0.1
WATZ				SN	Sn	16 50 02.6	+0.1
RATZ	**Rangitukua**	**0.43**	**170**	PN	Pn	16 49 45.6	-0.4
KATZ	**Kakaramea**	**0.53**	**179**	PN	Pn	16 49 46.6	+0.1
ALRZ	**Allen Road**	**0.54**	**103**	PN	Pn	16 49 46.3	-0.1
RITZ	**Rihia Road**	**0.56**	**165**	PN	Pn	16 49 46.5	0.0
PRRZ	**Plateau Road**	**0.56**	**96**	PN	Pn	16 49 46.5	0.0
HIZ	**Hauiti**	**0.65**	**263**	↑PN	Pn	16 49 46.8	-0.1
KRVZ	**Karewarewa**	**0.65**	**182**	PN	Pn	16 49 47.1	0.0
TWVZ	**Taurewa**	**0.66**	**196**	PN	Pn	16 49 46.9	-0.2
RRRZ	**Republican Roa**	**0.67**	**82**	PN	Pn	16 49 46.9	-0.1
WTVZ	**West Tongariro**	**0.68**	**186**	PN	Pn	16 49 47.1	-0.2
WTVZ				SN	Sn	16 50 05.2	-0.7
OTVZ	**Oturere**	**0.72**	**181**	PN	Pn	16 49 47.7	+0.1
TOZ	**Tahuroa Road**	**0.72**	**349**	↓PN	Pn	16 49 47.6	+0.2
NGZ	**Ngauruhoe**	**0.74**	**185**	PN	Pn	16 49 47.5	-0.2
WPVZ	**Whakapapa**	**0.77**	**188**	↑PN	Pn	16 49 47.7	-0.1
FWVZ	**Far West T-bar**	**0.82**	**187**	PN	Pn	16 49 48.0	-0.3
TUVZ	**Tukino**	**0.83**	**181**	↓PN	Pn	16 49 48.3	+0.1
DRZ	**Dome Shelter**	**0.84**	**186**	PN	Pn	16 49 48.7	+0.2
TRVZ	**Turoa**	**0.86**	**187**	↓PN	Pn	16 49 48.4	-0.3
PKVZ	**Pokaka**	**0.89**	**197**	↑PN	Pn	16 49 48.4	-0.2
WNVZ	**Wahianoa**	**0.89**	**184**	PN	Pn	16 49 48.7	0.0
OPRZ	**Ohinepanea**	**0.91**	**50**	↓PN	Pn	16 49 48.7	0.0
MTVZ	**Mangateitei**	**0.96**	**190**	PN	Pn	16 49 48.9	-0.2
BKZ	**Black Stump Fm**	**0.96**	**139**	↓PN	Pn	16 49 48.9	-0.3
MOVZ	**Moawhango**	**0.97**	**177**	↑PN	Pn	16 49 48.8	-0.4
MOVZ				SN	Sn	16 50 06.8	-2.4
VRZ	**Vera Road**	**0.99**	**226**	↑PN	Pn	16 49 49.2	0.0
BHHZ	**Black Hill Sta**	**1.09**	**164**	↑PN	Pn	16 49 49.8	-0.4
NMHZ	**Naumai**	**1.10**	**127**	PN	Pn	16 49 51.0	+0.8
NMHZ				SN	Sn	16 50 11.7	+0.6
URZ	**Urewera**	**1.14**	**81**	PN	Pn	16 49 49.7	-0.8
MHEZ	**Mangahewa**	**1.23**	**239**	PN	Pn	16 49 51.8	+0.5
MCHZ	**McNeill Hill**	**1.28**	**142**	↓PN	Pn	16 49 52.6	+0.9
RAEZ	**Rainy Point**	**1.31**	**229**	PN	Pn	16 49 52.2	+0.2
DREZ	**Durham Road**	**1.37**	**237**	PN	Pn	16 49 52.8	+0.1
MKAZ	**Moumakai**	**1.39**	**343**	PN	Pn	16 49 52.9	+0.2
WAZ	**Wanganui**	**1.42**	**202**	↑PN	Pn	16 49 53.1	+0.1
MWZ	**Matawai**	**1.46**	**86**	↑PN	Pn	16 49 53.1	-0.4
NEZ	**North Egmont**	**1.49**	**236**	↓PN	Pn	16 49 54.1	+0.3
DFZ	**Dawson Falls**	**1.51**	**234**	PN	Pn	16 49 54.3	+0.3
PKE	**Pukeiti**	**1.52**	**240**	↑PN	Pn	16 49 54.2	+0.1
PNHZ	**Pukenui**	**1.53**	**165**	↑PN	Pn	16 49 53.8	-0.3
TSZ	**Takapari Road**	**1.63**	**172**	↑PN	Pn	16 49 54.8	-0.5
CKHZ	**Cape Kidnapper**	**1.63**	**139**	PN	Pn	16 49 56.0	+0.8
NWEZ	**Newall Road**	**1.64**	**239**	PN	Pn	16 49 55.3	0.0
KAHZ	**Kahuranaki**	**1.64**	**146**	PN	Pn	16 49 55.7	+0.3
KNZ	**Kokohu**	**1.67**	**111**	PN	Pn	16 49 55.5	0.0
KUZ	**Kuaotunu**	**1.69**	**1**	PN	Pn	16 49 55.9	0.0
WPHZ	**Waipukurau**	**1.73**	**160**	PN	Pn	16 49 55.9	-0.3
PRGZ	**Paritu Road**	**1.79**	**106**	PN	Pn	16 49 57.0	+0.1
PXZ	**Pawanui**	**1.84**	**150**	PN	Pn	16 49 57.2	-0.1
MHGZ	**Mahia Peninsul**	**1.88**	**113**	↓PN	Pn	16 49 58.1	+0.2
DVHZ	**Dannevirke**	**1.90**	**169**	↑PN	Pn	16 49 57.2	-0.8
POWZ	**Post Office Ro**	**1.95**	**178**	PN	Pn	16 49 57.7	-1.0
PRHZ	**Porangahau**	**1.97**	**158**	↑PN	Pn	16 49 58.4	-0.4
CNGZ	**Carnagh Static**	**1.99**	**92**	PN	Pn	16 49 59.6	+0.5
PUZ	**Puketiti**	**2.06**	**81**	↓PN	Pn	16 49 59.0	-0.4
MRZ	**Mangatainoka R**	**2.22**	**182**	↑PN	Pn	16 50 00.3	-1.4
MXZ	**Mataiaoa Point**	**2.25**	**68**	PN	Pn	16 50 02.2	+0.1
BFZ	**Birch Farm**	**2.28**	**169**	PN	Pn	16 50 01.2	-1.2
TIWZ	**Tintock**	**2.34**	**176**	PN	Pn	16 50 01.8	-1.3
OGWZ	**Otaki Gorge**	**2.41**	**189**	↑PN	Pn	16 50 02.4	-1.4
HOWZ	**Holdsworth Sta**	**2.46**	**183**	PN	Pn	16 50 02.7	-1.8
KIW	**Kapiti Island**	**2.49**	**194**	PN	Pn	16 50 03.1	-1.8
TMWZ	**Te Maipa**	**2.67**	**177**	PN	Pn	16 50 05.2	-1.8
CAW	**Cannon Point**	**2.71**	**190**	PN	Pn	16 50 05.5	-2.0
MTW	**Mount Morrison**	**2.72**	**183**	PN	Pn	16 50 05.5	-2.2
DUWZ	**D'Urville Isla**	**2.72**	**209**	PN	Pn	16 50 06.1	-1.6
WEL	**Wellington**	**2.93**	**194**	PN	Pn	16 50 07.7	-2.4
PAWZ	**Paruwai Farm**	**2.94**	**184**	PN	Pn	16 50 08.1	-2.3
TRWZ	**Traveller**	**2.96**	**180**	PN	Pn	16 50 08.5	-2.0
SNZO	**South Karori**	**2.96**	**194**	↑PN	Pn	16 50 08.2	-2.4
TCW	**Tory Channel**	**2.97**	**201**	PN	Pn	16 50 08.5	-2.2
MSWZ	**Moikau Station**	**2.99**	**196**	PN	Pn	16 50 08.5	-2.4
BHW	**Baring Head**	**3.03**	**192**	PN	Pn	16 50 08.9	-2.5
PLWZ	**Palliser**	**3.14**	**186**	PN	Pn	16 50 10.2	-2.8
TUWZ	**Tuamarina**	**3.27**	**204**	PN	Pn	16 50 12.0	-2.5
NNZ	**Nelson**	**3.29**	**212**	PN	Pn	16 50 11.9	-2.8
QRZ	**Quartz Range**	**3.40**	**225**	PN	Pn	16 50 13.1	-3.1
BSWZ	**Blackbirch Sta**	**3.55**	**202**	PN	Pn	16 50 15.5	-2.5
KHZ	**Kahutara**	**4.29**	**202**	↑PN	Pn	16 50 24.6	-2.9
LTZ	**Lake Taylor**	**5.05**	**210**	PN	Pn	16 50 33.4	-4.1
CRLZ	**Canterbury Las**	**5.63**	**203**	PN	Pn	16 50 40.5	-4.5
MQZ	**McQueen's Vall**	**5.74**	**203**	PN	Pn	16 50 41.4	-5.0
ODZ	**Otahua Downs**	**7.59**	**208**	PN	Pn	16 51 06.8	-4.3

IDC 19 16:50:42.6±1.2, 4°10N×126°59E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/23, mbtmp3.6/7, 1C, Error ellipse: s-maj=111.3km s-min=16.1km az=71.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**3.88**	**323**	*i*/*e*P	Pb	16 51 48.2	-3.7
FITZ	**Fitzroy Crossi**	**22.08**	**182**	P	P	16 55 39.7	+0.3
	0.6nm,0.4s,baz=353,slow=9.3,SNR=5.2						
WRA	**Warramunga Arr**	**25.08**	**163**	P	P	16 56 08.4	-0.6
	1.4nm,0.6s,baz=344,slow=11,SNR=15						
ASAR	**Alice Springs**	**28.51**	**166**	P	P	16 56 40.0	+0.1
	0.2nm,0.6s,baz=345,slow=8.2,SNR=5.0						
STKA	**Stephens Creek**	**38.52**	**159**	P	P	16 58 07.2	+0.3
	1.7nm,0.8s,baz=278,slow=11,SNR=3.3						
SONM	**Songino Array**	**46.90**	**341**	P	P	16 59 15.7	+0.8
	0.2nm,0.5s,baz=153,slow=7.1,SNR=3.7						
MKAR	**Makanchi Array**	**57.17**	**325**	P	P	17 00 31.5	+0.1
	0.6nm,0.5s,baz=114,slow=7.9,SNR=14						
ZALV	**Zalesovo Beam**	**60.20**	**333**	P	P	17 00 51.1	-1.1
	0.4nm,0.4s,baz=140,slow=7.6,SNR=3.0						

IDC 19 17:00:36.5±2.1, 4°23N×126°84E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/22, mbtmp3.4/3, Error ellipse: s-maj=161.8km s-min=26.6km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.12**	**163**	P	P	17 06 02.8	-0.5
	0.7nm,0.6s,baz=343,slow=11,SNR=4.0						
ASAR	**Alice Springs**	**28.57**	**166**	P	P	17 06 34.9	+0.5
	0.2nm,0.7s,baz=354,slow=7.6,SNR=2.8						
MKAR	**Makanchi Array**	**57.22**	**325**	P	P	17 10 25.6	0.0
	0.3nm,0.5s,baz=120,slow=7.7,SNR=5.6						
ONI	**Oni**	**82.29**	**312**	P	P	17 13 02.4	+2.1

*ISCJB **19** 17:01:03.0±0.6, 7°17S±0°06×125°36E±0°08, h511km, mb3.5/3, Error ellipse: s-maj=10.1km s-min=7.9km az=168.9*
*IDC **19** 17:01:03.6±2.7, 7°03S×125°57E, h537km±32km, mb3.0/3, mb1 3.1/7, mb1mx2.8/21, mbtmp3.0/7, Error ellipse: s-maj=87.7km s-min=15.4km az=57.0*
*AUST **19** 17:01:04.1±0.0, 7°01S×125°59E, h565km, Error ellipse: s-maj=1.5km s-min=1.2km az=5.0*
ISC 19 17:01:03.1±0.7, 7°18S±0°08×125°42E±0°09, h511km, n19, σ1s59/23, mb3.6/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**5.64**	**244**	P	P	17 02 46.3	+10
	baz=5.9,SNR=5.0						
KAPI	**Kappang**	**6.03**	**291**	P	**P**	**17 02 43.0**	**+2.8**
	1.0nm,0.3s,baz=115,slow=17,SNR=5.0						
TLE	**Tual**	**7.43**	**79**	P	**P**	**17 02 54.9**	**+0.8**
	baz=7.2,SNR=7.7						
TLE				S	**S**	**17 04 26.2**	**+1.2**
	baz=7.2,SNR=3.9						
MTN	**Manton Dam**	**7.96**	**135**	P	**P**	**17 03 01.3**	**+1.9**
	baz=8.0,SNR=52						
PCI	**Palu**	**8.35**	**318**	P	**P**	**17 03 04.5**	**+1.1**
	baz=8.4,SNR=14						
SWI	**Sorong**	**8.56**	**43**	P	**P**	**17 03 07.0**	**+1.4**
	baz=8.3,SNR=9.3						
SWI				S	S	17 04 21.5	-25
	baz=8.3,SNR=4.6						
KDU	**Kakadu**	**8.85**	**129**	P	**P**	**17 03 09.8**	**+1.2**
	baz=8.8,SNR=7.4						
FITZ	**Fitzroy Crossi**	**10.86**	**179**	P	**P**	**17 03 31.0**	**+1.4**
	0.2nm,0.3s,baz=23,slow=9.9,SNR=16						
FITZ				S	**S**	**17 05 29.7**	**-0.5**
	0.1nm,0.3s,baz=148,slow=19,SNR=4.5						
FITZ	**Fitzroy Crossi**	**10.86**	**179**	P	**P**	**17 03 31.3**	**+1.7**
	baz=11,SNR=8.8						
WRA	**Warramunga Arr**	**15.36**	**147**	P	**P**	**17 04 17.2**	**+0.2**
	1.0nm,0.3s,baz=340,slow=9.8,SNR=40						
WRA				S	**S**	**17 06 54.8**	**-2.1**
	0.1nm,0.3s,baz=325,slow=17,SNR=3.0						
ASAR	**Alice Springs**	**18.31**	**154**	P	**P**	**17 04 45.8**	**-0.1**
	1.5nm,0.3s,baz=346,slow=15,SNR=149						
ASAR				S	**S**	**17 07 46.1**	**-1.2**
	0.1nm,0.3s,baz=344,slow=23,SNR=14						
ASAR				PcP	**PcP**	**17 08 47.6**	**-3.0**
	0.0nm,0.3s,baz=2.2,slow=1.2,SNR=4.1						
COEN	**Coen**	**18.70**	**113**	P	**P**	**17 04 49.6**	**+0.1**
	baz=19,SNR=9.0						
MEEK	**Meekatharra**	**20.41**	**198**	P	**P**	**17 05 05.1**	**+0.2**
	baz=21,SNR=5.5						
STKA	**Stephens Creek**	**28.84**	**151**	P	**P**	**17 06 19.4**	**-0.3**
	1.2nm,0.3s,baz=334,slow=9.6,SNR=8.0						
STKA	**Stephens Creek**	**28.84**	**151**	P	**P**	**17 06 19.8**	**0.0**
	baz=29,SNR=6.5						
CMSA	**Cobar Meteorol**	**30.75**	**145**	P	**P**	**17 06 36.6**	**+0.3**
	baz=31,SNR=13						
MKAR	**Makanchi Array**	**65.96**	**329**	P	**P**	**17 10 56.7**	**-1.7**
	0.2nm,0.4s,baz=125,slow=7.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**69.80**	**336**	P	**P**	**17 11 19.1**	**-2.5**
	0.7nm,0.4s,baz=142,slow=6.3,SNR=5.3						
TORD	**Torodi Ar. Bea**	**124.38**	**281**	PKP	**PKPdf**	**17 19 03.0**	**-1.8**
	0.2nm,0.6s,baz=90,slow=1.4,SNR=2.9						

**IDC 19 17:16

0.1nm,0.4s,baz=138,slow=11,SNR=2.4

KRSC 19 17:22:06.6±0.0, 56°42N×163°13E, h10km±10km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.27	219	P	Pg	17 22 12.3	+0.2
SMKR	Semkarok	0.94	281	P	Pn	17 22 25.5	-0.4
SMKR				S	Sb	17 22 38.3	+0.7
BDR	Baidarnaya	1.08	279	P	Pn	17 22 28.0	+0.2
BDR				S	Sn	17 22 42.5	-0.4
SRKR	Sorokina	1.11	283	P	Pg	17 22 28.2	+0.1
SRKR				S	Sn	17 22 43.2	-0.6
ZLN	Zelenaya	1.36	254	P	Pb	17 22 32.1	-0.2
ZLN				S	Sg	17 22 51.0	+0.4
CIRR	Tsirk	1.36	258	P	Pn	17 22 31.8	-0.1
CIRR				S	Sb	17 22 49.9	-0.1
KLY	Klyuchi	1.38	267	P	Pn	17 22 30.2	-1.7
KLY				S	Sb	17 22 46.9	-3.3
LGNR	Loginova	1.40	257	P	Pn	17 22 32.8	+0.2
LGNR				S	Sb	17 22 51.8	+0.3
BZGR	Bezymyannyi-Gr	1.44	252	P	Pn	17 22 32.9	0.0
BZGR				S	Sn	17 22 52.0	0.0
KRSR	Krestovskiy	1.44	263	P	Pn	17 22 33.0	+0.1
KRSR				S	Sb	17 22 52.2	0.0
BZWR	Bezymyannyi-We	1.54	254	P	Pn	17 22 34.6	+0.2
BZWR				S	Sg	17 22 55.9	-0.7
BZMR	Bezymyannaya	1.55	253	P	Pn	17 22 34.9	+0.4
KIRR	Kirishev	1.63	254	P	Pb	17 22 36.7	-0.2
KIRR				S	Sb	17 22 57.9	+0.3
KPT	Kopyto	1.69	256	P	Pb	17 22 37.1	-0.8
KPT				S	Sb	17 22 59.9	+0.7
KMNR	Kamenistaya	1.75	249	P	Pb	17 22 38.2	-0.8
KMNR				S	Sb	17 23 01.7	+0.6
KOZ	Kozyrevsk	1.85	260	P	Pn	17 22 39.5	+1.1
KOZ				S	Sb	17 23 03.7	-0.1
SRDR	Sredinnyy	1.90	268	P	Pb	17 22 40.8	-0.7
SRDR				S	Sb	17 23 04.7	-0.6
BKI	Bering	2.02	126	S	Sb	17 23 08.1	-0.2
MKZ	Mys Kozlova	2.03	204	P	Pn	17 22 42.0	+1.2
MKZ				S	Sn	17 23 07.0	+0.8
TUMR	Tumrok	2.03	237	P	Pn	17 22 42.1	+1.1
TUMR				S	Sb	17 23 08.2	-1.0
ESO	Esso	2.53	261	P	Pb	17 22 49.9	-2.2
ESO				S	Sb	17 23 22.0	-1.2
SPN	Mys Shipunskiy	3.78	210	P	Pn	17 23 06.0	+1.1
SPN				S	Sn	17 23 48.9	-0.6
NLC	Nalytchevo	3.92	216	P	Pn	17 23 09.6	+2.8
NLC				S	Sn	17 23 53.9	+1.0
SDLR	Sedlovina	3.99	220	P	Pn	17 23 10.2	+2.2
SMAR	Somma	4.03	220	P	Pn	17 23 12.2	+3.6
UGLR	Uglovaya	4.07	220	P	Pn	17 23 11.5	+2.5

IDC 19 17:27:17.8±1.4, 56°27S×27°54W, h0km, mb3.8/2, mb1 3.8/2, mb1mx3.5/15, mbtmp3.7/2, Error ellipse: s-maj=87.5km s-min=53.5km az=103.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA3	Neumayer Olymp	16.85	160	*eP*	P	17 31 24.1	+7.2
SNAA	Sanae	18.63	156	*eP*	Pn	17 31 42.8	+6.1
TORD	Torodi Ar. Bea	73.34	30	P	P	17 38 51.2	+0.2
	0.2nm,0.5s,baz=202,slow=6.2,SNR=3.1						
ASAR	Alice Springs	98.84	163	P	Pdif	17 40 59.6	0.0
	0.2nm,0.6s,baz=188,slow=4.4,SNR=4.9						
ILAR	Eielson Array	150.11	311	PKPbc	PKPbc	17 47 08.3	-0.5
	0.3nm,0.6s,baz=132,slow=1.3,SNR=7.8						
SONM	Songino Array	150.94	87	PKPbc	PKPbc	17 47 11.0	-0.5
	0.5nm,0.5s,baz=222,slow=4.0,SNR=8.3						

IDC 19 17:36:18.1±4.3, 3°39S×100°24E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.2/22, mbtmp3.4/4, MS4.1/2, Ms1 4.1/2, ms1mx3.0/36, Error ellipse: s-maj=187.1km s-min=21.7km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	37.10	119	P	P	17 43 30.2	-0.4
	0.4nm,1.0s,baz=308,slow=8.8,SNR=4.3						
ASAR	Alice Springs	38.26	125	P	P	17 43 40.2	-0.1
	0.2nm,0.5s,baz=299,slow=7.8,SNR=3.9						
KSRS	Korea Array	48.09	30	LR	LR	18 07 04.1	
	comp=Z,144nm,18.6s,baz=185,slow=38						
SONM	Songino Array	51.29	5	P	P	17 45 24.0	0.0
	0.3nm,0.5s,baz=189,slow=6.8,SNR=4.2						
MKAR	Makanchi Array	52.42	345	P	P	17 45 32.4	+0.1
	0.3nm,0.6s,baz=152,slow=7.8,SNR=6.1						
ZALV	Zalesovo Beam	58.57	349	P	P	17 46 15.7	-0.7
	0.2nm,0.2s,baz=156,slow=11,SNR=2.6						
RPZ	Rata Peaks	73.84	135	LR	LR	18 20 57.2	
	comp=Z,144nm,21.9s,baz=178,slow=36						
TXAR	Lajitas Array	145.64	39	PKPbc	PKPab	17 55 59.9	0.0
	0.2nm,0.4s,baz=298,slow=1.9,SNR=3.7						

IDC 19 17:38:41.4±1.4, 4°20N×126°69E, h0km, mb3.5/6, mb1 3.6/6, mb1mx3.4/22, mbtmp3.5/6, 1C, Error ellipse: s-maj=77.1km s-min=17.1km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	Cotabato--PC H	3.86	321	↑*iP*	Pb	17 39 49.5	-1.0
FITZ	Fitzroy Crossi	22.19	183	P	P	17 43 39.5	+0.1
	0.5nm,0.5s,baz=1.8,slow=7.8,SNR=5.2						
WRA	Warramunga Arr	25.14	163	P	P	17 44 08.1	-0.4
	1.5nm,0.7s,baz=344,slow=11,SNR=10						
ASAR	Alice Springs	28.58	166	P	P	17 44 39.0	-0.4
	0.2nm,0.6s,baz=344,slow=7.1,SNR=5.4						
CMAR	Chiang Mai Arr	30.61	300	P	P	17 44 57.4	-0.1
	0.4nm,0.7s,baz=115,slow=5.8,SNR=4.6						
STKA	Stephens Creek	38.58	159	P	P	17 46 06.7	+0.4
	1.0nm,0.6s,baz=339,slow=9.9,SNR=2.2						
MKAR	Makanchi Array	57.15	325	P	P	17 48 30.5	+0.4
	0.6nm,0.6s,baz=132,slow=7.9,SNR=4.9						
ZALV	Zalesovo Beam	60.15	333	P	P	17 48 50.4	-0.4
	0.2nm,0.4s,baz=140,slow=5.6,SNR=2.4						

*IDC **19** 17:42:29.6±0.5, 4°05N×126°65E, h0km, mb4.3/25, mb1 4.3/26, mb1mx4.3/29, mbtmp4.3/26, ML4.7/1, MS3.9/21, Ms1 3.9/21, ms1mx3.6/44, Error ellipse: s-maj=21.0km s-min=10.7km az=83.0*

*BJI **19** 17:42:32.9, 4°20N×126°69E, h30km, mB4.9/12, mb4.5/25, Ms4.3/8, Ms7 4.1/9*

*ISCJB **19** 17:42:33.2±0.2, 4°17N±0°03×126°92E±0°03, h36km, mb4.5/42, MS3.9/26, Error ellipse: s-maj=4.8km s-min=3.8km az=174.4*

*DJA **19** 17:42:35.3±1.4, 4°N±4°×12°7E±°, h35km±12km, M4.7/22, mB5.2/10, mb4.7/22, MLv5.0/8, Mw(mB)4.5/10*

*AUST **19** 17:42:36.4, 4°00N×127°01E, h60km*

ISC 19 17:42:34.7±0.3, 4°16N±0°04×126°80E±0°05, h36km, n125, σ1s74/120, mb4.5/40, MS4.0/26, 1C-2D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	General Santos	2.66	316	↑*eP*	Pn	17 43 16.4	+1.3
MATI	Mati	2.82	349	*eP*	Pn	17 43 22.2	+5.0
DAV	Davao City (W)	3.13	337	P	Pn	17 43 23.1	+1.5
DAV	Davao City (W)	3.13	337	Pn	Pn	17 43 22.9	+1.3
	94nm,0.3s,baz=232,slow=2.4,SNR=4.2						
DAV				Lg	Lg	17 44 15.4	
	29nm,0.3s,baz=120,slow=22,SNR=8.0						
MNI	Manado	3.34	216	P	Pn	17 43 26.4	+2.0
TNTI	Ternate	3.42	171	P	Pn	17 43 27.0	+1.5
CTBH	Cotabato--PC H	3.96	320	↓*eP*	Pn	17 43 36.3	+3.3
BUKP	Musuan	4.08	335	*eP*	Pn	17 43 38.8	+4.1
KMSI	Cibinong	4.55	218	P	Pn	17 43 43.5	+2.5
LBMI	Labuha	4.82	172	P	Pn	17 43 45.7	+0.9
PAGZ	Pagadian	5.00	317	*eP*	Pn	17 43 50.8	+3.6
IPIL	Ipil	5.54	311	↓*eP*	Pn	17 43 57.1	+2.4
IPIL				*eS*	Sn	17 44 57.6	+0.5
MRSI	Marisa	6.08	233	P	Pn	17 44 04.4	+2.3
	280nm,0.5s,4μm1.3nm						
LUWI	Luwuk	6.55	218	P	Pn	17 44 13.4	+4.8
	296nm,0.9s,3μm1.0nm						
SWI	Sorong	6.69	138	P	Pn	17 44 10.6	+0.1
	44nm,0.8s,647nm0.2nm						
SWI	Sorong	6.69	138	P	Pn	17 44 10.7	+0.2
	baz=6.5,SNR=17						
PALU	Palau	8.26	67	P	Pn	17 44 33.1	+1.1
	baz=8.2,SNR=9.8						
PALU				S	Sn	17 46 05.1	+1.0
	baz=8.2,SNR=3.9						
MYLDM	Lahad Datu	8.34	277	P	Pn	17 44 39.3	+6.2
MYLDM	Lahad Datu	8.34	277	P	Pn	17 44 38.0	+4.9
	100nm,0.9s						
TSM	Tawau	8.91	271	P	Pn	17 44 42.5	+1.6
KDI	Kendari	9.09	207	P	Pn	17 44 46.0	+2.6
	40nm,0.8s,606nm						
SDKM	Sandakan	9.69	279	P	Pn	17 44 57.0	+5.4
TTSI	Tana Toraja	10.00	224	P	Pn	17 44 59.3	+3.4
	44nm,1.0s,562nm						
KDM	Kudat	10.29	286	P	Pn	17 45 09.1	+9.1
SPSI	Sidrap Palu	10.71	221	P	Pn	17 45 08.4	+2.8
	20nm,0.6s						
KKM	Kota Kinabalu	10.71	280	P	Pn	17 45 11.4	+5.6
KKM	Kota Kinabalu	10.71	280	P	Pn	17 45 09.5	+3.7
	46nm,1.1s,678nm						
KKM	Kota Kinabalu	10.71	280	P	Pn	17 45 12.9	+7.1
	baz=11,SNR=8.3						
KAPI	Kappang	11.52	218	Pn	Pn	17 45 19.3	+2.5
	2.0nm,0.3s,baz=92,slow=13,SNR=4.6						
KAPI				LR	LR	17 50 18.9	
	comp=Z,683nm,18.6s,baz=57,slow=41						
BBKI	Banjar Baru	14.15	238	P	P	17 45 57.4	-2.4
	97nm,2.0s,2μm						
SBUM	Sibu	14.66	264	P	P	17 46 03.9	-1.5
SBUM	Sibu	14.66	264	P	P	17 46 05.0	-0.4
	41nm,1.2s,634nm						
STKI	Sintang	15.85	255	P	P	17 46 20.5	+1.9
	24nm,2.0s						
KSM	Kuching	16.69	261	P	P	17 46 29.9	+2.0
KSM	Kuching	16.69	261	P	P	17 46 29.6	+1.6
	34nm,1.4s,482nm						
KSM	Kuching	16.69	261	P	P	17 46 29.8	+1.8
	baz=17,SNR=7.0						
SRBI	Singaraja	16.79	224	P	P	17 46 32.0	+3.0
	47nm,0.9s						
IGBI	Denpasar	17.36	222	P	P	17 46 45.9	+11
MTN	Manton Dam	17.43	166	P	Pn	17 46 31.7	-3.5
	baz=17,SNR=24						
KDU	Kakadu	17.66	161	P	Pn	17 46 34.9	-3.1
	baz=18,SNR=16						
SJI	Sawahan	19.10	232	P	P	17 46 53.5	-1.1
GUMO	Guam	20.14	61	LR	LR	17 53 20.7	
	comp=Z,208nm,20.5s,baz=230,slow=32						
LEM	Lembang	22.05	240	P	P	17 47 29.0	+2.4
	30nm,1.7s						
FITZ	Fitzroy Crossi	22.15	183	P	P	17 47 26.2	-1.4
	12nm,0.6s,baz=7.9,slow=5.9,SNR=57						
FITZ	Fitzroy Crossi	22.15	183	P	P	17 47 26.3	-1.2
	baz=22,SNR=56						
FITZ				S	S	17 51 25.0	-4.7
	baz=22,SNR=7.3						
QIZ	Qiongzhong	22.20	313	P	P	17 47 26.4	-1.7
QIZ				S	S	17 51 29.8	-0.8
QIZ				pmax	pmax		
	comp=Z,16nm,2.2s						
QIZ				LR	LR		
	comp=Z,360nm,23.0s						
TNG	Tangerang	22.59	243	P	P	17 47 36.0	+3.6
	comp=Z,2μm,0.5s,comp=Z,23μm						
MYKOM	Kota Tinggi	23.04	265	P	P	17 47 37.4	+0.3
MYKOM	Kota Tinggi	23.04	265	P	P	17 47 41.2	+4.2
	comp=Z,19nm,1.0s						
KGM	Kluang	23.55	266	P	P	17 47 43.4	+1.3
KTGM	Kluang Trenggan	23.62	274	P	P	17 47 43.4	+0.7
WRA	Warramunga Arr	25.07	163	P	P	17 47 55.0	-1.0
	comp=Z,13nm,0.7s,baz=336,slow=11,SNR=81						
WRA				S	S	17 52 19.9	+1.6
	comp=Z,183nm,0.5s,baz=337,slow=20,SNR=8.7						
FRIM	Kepong	25.14	269	P	P	17 47 58.7	+2.0
IPM	Ipoh	25.71	272	P	P	17 48 06.1	+4.2
	comp=Z,15nm,1.2s						
PPI	Padang Panjang	26.78	261	P	P	17 48 15.7	+4.1
	comp=Z,24nm,1.2s						
QIS	Mount Isa	27.59	153	P	P	17 48 19.7	+0.9
	baz=28,SNR=10						
PSI	Prapat	27.86	268	P	P	17 48 22.0	+0.6
PSI	Prapat	27.86	268	P	P	17 48 21.4	0.0
	comp=Z,3.7nm,0.4s,baz=120,slow=7.3,SNR=5.1						
PSI				LR	LR	17 59 14.2	
	comp=Z,229nm,21.7s,baz=265,slow=36						
ASAR	Alice Springs	28.52	166	P	P	17 48 25.6	-1.3
	comp=Z,1.5nm,0.6s,baz=348,slow=7.7,SNR=46						
ASAR				S	S	17 53 18.0	+5.4
	comp=Z,0.7nm,1.0s,baz=346,slow=17,SNR=2.8						
NJ2	Nanjing	28.73	346	*eP*	P	17 48 27.3	-1.4
NJ2				pP	pP	17 48 38.6	-0.4
NJ2				sP	sP	17 48 44.9	+1.5
NJ2				PP	PnPn	17 49 20.5	+0.2
NJ2				S	S	17 53 11.5	-4.2
NJ2				sS	sS	17 53 31.0	-1.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,130nm,5.7s						
NJ2				LR	LR		
	comp=N,420nm,19.3s						
NJ2				LR	LR		
	comp=E,190nm,15.4s						
NJ2				LR	LR		
	comp=Z,350nm,14.5s						
JNU	Nakatsue	29.06	7	P	P	17 48 33.4	+1.6
	comp=Z,5.0nm,0.8s,baz=225,slow=17,SNR=5.7						
GSI	Gunungsitoli	29.33	265	P	P	17 48 33.1	-1.3
GSI	Gunungsitoli	29.33	265	P	P	17 48 35.1	+0.7
	baz=30,SNR=6.0						
CMAR	Chiang Mai Arr	30.72	300	P	P	17 48 46.5	-0.1
	comp=Z,3.4nm,0.9s,baz=117,slow=7.0,SNR=16						
CMAR				ScP	ScP	17 55 26.9	+2.8
	comp=Z,0.5nm,0.9s,baz=189,slow=1.5,SNR=4.3						
CMAR				LR	LR	18 00 53.0	
	comp=Z,135nm,19.1s,baz=260,slow=36						
MEEK	Meekatharra	31.63	194	P	P	17 48 53.4	-1.1
	baz=32,SNR=16						
KSRS	Korea Array	33.15	2	P	P	17 49 09.1	+1.4
	comp=Z,1.0nm,0.6s,baz=181,slow=10,SNR=7.7						
MJAR	Matsushiro Arr	33.89	17	P	P	17 49 14.9	+0.8
	comp=Z,0.7nm,0.6s,baz=188,slow=10,SNR=4.4						
MJAR				LR	LR	18 02 54.3	
	comp=Z,161nm,19.1s,baz=195,slow=36						
XAN	Xi'an	34.06	333	P	P	17 49 14.8	-1.0
XAN				pP	pP	17 49 24.6	-1.5
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN				LR	LR		
	comp=N,110nm,14.3s						
XAN				LR	LR		
	comp=Z,77nm,17.4s						
CD2	Chengdu	34.34	323	P	P	17 49 18.4	+0.2
CD2				pP	pP	17 49 28.1	-0.5
CD2				sP	sP	17 49 32.0	-0.9
CD2				PP	PnPn	17 50 34.5	+1.1
CD2				PcP	PcP	17 51 53.8	0.0
CD2				S	S	17 54 43.3	-0.2
CD2				sS	sS	17 54 59.3	-1.4
CD2				PcS	PcS	17 55 39.1	-1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.4s						
CD2				LR	LR		
	comp=N,380nm,21.1s						
CD2				LR	LR		
	comp=E,440nm,22.5s						
CD2				LR	LR		
	comp=Z,390nm,20.6s						
MORW	Morawa	34.62	197	P	P	17 49 19.9	-0.7
	baz=35,SNR=4.5						
KMBL	Kambalda	35.64	187	P	P	17 49 28.8	-0.6
	baz=36,SNR=4.3						
HNR	Honiara	35.68	112	LR	LR	18 03 25.3	
	comp=Z,130nm,19.0s,baz=305,slow=35						
BLDU	Ballidu	35.90	195	P	P	17 49 30.7	-0.9
	baz=36,SNR=7.7						
KLBR	Kellerberrin	36.59	193	P	P	17 49 36.6	-0.8
	baz=37,SNR=8.2						
BJI	Beijing	36.98	346	P	P	17 49 43.5	+2.8
BJI				pmax	pmax		
	comp=Z,19nm,1.2s						
BBOO	Buckleboo	37.80	167	P	P	17 49 47.8	0.0
	baz=38,SNR=19						
NWAO	Narrogin (SRO)	37.99	193	P	P	17 49 48.2	-1.0
	comp=Z,4.4nm,0.7s,baz=28,slow=9.1,SNR=6.3						
LZH	Lanzhou	38.17	329	*eP*	P	17 49 51.5	+0.5
LZH				pP	pP	17 49 56.1	-5.4
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				pmax	pmax		
	comp=Z,56nm,6.0s						
LZH				LR	LR		
	comp=N,310nm,14.5s						
LZH				LR	LR		
	comp=E,290nm,15.0s						
LZH				LR	LR		
	comp=Z,320nm,17.6s						
STKA	Stephens Creek	38.51	160	P	P	17 49 53.4	-0.3
	comp=Z,6.3nm,0.5s,baz=331,slow=7.8,SNR=27						
STKA				LR	LR	18 04 44.7	
	comp=Z,132nm,20.9s,baz=216,slow=35						
STKA	Stephens Creek	38.51	160	P	P	17 49 53.5	-0.2
	baz=38,SNR=30						
HHC	Hu-ho-hao-te	39.01	342	*eP*	P	17 49 58.4	+0.5
HHC				S	S	17 55 53.8	-0.8
HHC				pmax	pmax		
	comp=Z,36nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,5.9s						
HHC				LR	LR		
	comp=N,330nm,14.5s						
HHC				LR	LR		
	comp=E,280nm,14.0s						
HHC				LR	LR		
	comp=Z,410nm,14.8s						
USRK	Ussuriysk Arra	40.13	6	P	P	17 50 09.1	+2.1
	comp=Z,0.5nm,0.4s,baz=179,slow=7.9,SNR=3.4						
ARMA	Armidale	41.79	147	P	P	17 50 22.1	+1.1
	baz=42,SNR=6.6						
ASAJ	Asahikawa	42.16	17	P	P	17 50 25.2	+1.5
	comp=Z,2.7nm,0.9s,baz=238,slow=13,SNR=2.9						
GTA	Gaotai	42.77	329	*eP*	P	17 50 29.3	+0.4
GTA				pP	pP	17 50 36.5	-3.0
GTA				sP	sP	17 50 40.3	-3.5
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TAPN	Taplejung	43.82	306	*eP*	P	17 50 37.1	-0.8
	comp=Z,9.5nm,0.6s						
ODAN	Odare	43.88	305	*eP*	P	17 50 37.9	-0.4
	comp=Z,11nm,0.6s						
RAMN	Ramite	44.56	305	*eP*	P	17 50 43.2	-0.5
	comp=Z,12nm,0.7s						
GUN	Gumba	45.53	306	*eP*	P	17 50 50.8	-0.8
	comp=Z,17nm,0.7s						
PKIN	Phulchoki	45.79	305	*eP*	P	17 50 52.7	-0.8
MILA	Mila	46.00	155	S	S	17 57 28.8	-8.7
	baz=46,SNR=5.3						
DMN	Daman	46.04	305	*eP*	P	17 50 55.3	-0.2
SONM	Songino Array	46.91	341	P	P	17 51 02.6	+0.8
	comp=Z,1.3nm,0.6s,baz=162,slow=9.9,SNR=17						
SONM				PcP	PcP	17 52 35.2	+1.1
	comp=Z,1.0nm,0.8s,baz=160,slow=4.5,SNR=2.9						
SONM				LR	LR	18 11 46.4	
	comp=Z,156nm,20.4s,baz=154,slow=37						
KOLN	Koldanda	47.34	304	*eP*	P	17 51 05.0	-0.6
	comp=Z,29nm,0.6s						
DANN	Dangsing	47.43	305	*eP*	P	17 51 05.5	-0.8
	comp=Z,25nm,0.5s						
PYUN	Piuthan	47.96	305	*eP*	P	17 51 09.6	-0.8
	comp=Z,27nm,0.7s						
PETK	Petropavlovsk-	55.00	22	P	P	17 52 04.5	+2.1
	comp=Z,2.9nm,0.7s,baz=189,slow=6.1,SNR=9.6						
MKAR	Makanchi Array	57.24	325	P	P	17 52 18.4	-0.2
	comp=Z,3.6nm,0.5s,baz=117,slow=7.7,SNR=60						
MKAR				ScP	ScP	17 57 14.8	+4.9
	comp=Z,0.3nm,0.6s,baz=120,slow=3.7,SNR=3.7						
MKAR				LR	LR	18 18 11.9	
	comp=Z,179nm,18.2s,baz=245,slow=37						
AAK	Ala-Archa	60.09	318	LR	LR	18 20 41.9	
	comp=Z,216nm,21.3s,baz=79,slow=38						
ZALV	Zalesovo Beam	60.24	333	P	P	17 52 38.3	-0.9
	comp=Z,2.1nm,0.4s,baz=119,slow=6.9,SNR=15						
ZALV				LR	LR	18 20 37.5	
	comp=Z,111nm,19.4s,baz=150,slow=38						
KURBB	Kurchatov Arra	61.42	327	LR	LR	18 21 39.0	
	comp=Z,42nm,19.4s,baz=120,slow=38						
URZ	Urewera	62.81	137	LR	LR	18 20 05.5	
	comp=Z,147nm,18.5s,baz=73,slow=36						
AFI	Afiamalu	63.51	108	LR	LR	18 14 56.4	
	comp=Z,33nm,19.7s,baz=170,slow=31						
BVAR	Borovoye Array	67.00	327	P	P	17 53 23.8	-0.1
	comp=Z,4.4nm,0.8s,baz=134,slow=8.5,SNR=29						
RDF	Al-Radifah	78.60	299	*eP*	P	17 54 33.0	-0.2
RDF				AMb	AMB	17 54 37.2	
	comp=Z,7.9nm,0.6s						
MIB	Mutribah	78.80	299	*eP*	P	17 54 34.0	-0.3
MIB				AMb	AMB	17 54 37.7	
	comp=Z,17nm,0.6s						
NAY	Al-Naaiem	78.87	299	*eP*	P	17 54 34.0	-0.7
NAY				AMb	AMB	17 54 37.5	
	comp=Z,6.4nm,0.6s						
KDAK	Kodiak Island	81.49	32	LR	LR	18 27 55.7	
	comp=Z,47nm,20.3s,baz=225,slow=33						
KBZ	Khabaz	82.74	313	LR	LR	18 33 12.7	
	comp=Z,52nm,18.5s,baz=65,slow=37						
ILAR	Eielson Array	84.68	25	P	P	17 55 05.3	+0.7
	comp=Z,0.9nm,0.9s,baz=248,slow=5.0,SNR=10.0						
ILAR				LR	LR	18 31 13.5	
	comp=Z,31nm,18.9s,baz=333,slow=34						
KMBO	Kilima Mbogo	89.63	269	P	P	17 55 30.6	+0.7
	comp=Z,1.5nm,0.6s,baz=67,slow=7.1,SNR=5.7						
BRTR	Keskin Array B	89.80	310	P	P	17 55 29.3	-0.8
	comp=Z,0.6nm,0.5s,baz=121,slow=5.1,SNR=5.8						
ARCES	ARCESS Array B	90.07	340	P	P	17 55 30.4	-0.1
	comp=Z,4.7nm,1.0s,baz=52,slow=6.3,SNR=6.4						
ARCES				LR	LR	18 44 40.2	
	comp=Z,66nm,18.5s,baz=176,slow=41						
FINES	FINESS Array B	91.49	332	P	P	17 55 37.5	+0.2
	comp=Z,2.4nm,0.8s,baz=46,slow=8.2,SNR=6.6						
FINES				LR	LR	18 40 24.5	
	comp=Z,52nm,18.1s,baz=139,slow=38						
AKASG	Malin Array Be	91.61	321	P	P	17 55 37.4	-0.6
	comp=Z,1.5nm,0.8s,baz=63,slow=5.5,SNR=5.5						
DLBC	Dease Lake	93.33	31	LR	LR	18 31 31.4	
	comp=Z,64nm,20.6s,baz=357,slow=32						
QSPA	South Pole Qui	94.07	180	P	P	17 55 49.5	+0.4
	comp=Z,0.9nm,0.3s,baz=45,slow=3.1,SNR=25						
CRVS	Cervenica-Dubn	96.89	320	*eP*	P	17 56 01.8	-0.5
NOA	NORSAR Array B	98.43	334	P	Pdif	17 56 10.6	+1.5
	comp=Z,0.9nm,0.8s,baz=69,slow=4.5,SN

0.3nm,0.3s,baz=331,slow=11,SNR=23
WRA S **S** **18 06 55.7 -2.2**
baz=327,slow=23,SNR=0.2
ASAR Alice Springs 18.32 162 P **P** **18 04 53.8 +0.7**
0.4nm,0.3s,baz=348,slow=12,SNR=33
ASAR S **S** **18 08 01.3 0.0**
0.1nm,0.3s,baz=344,slow=22,SNR=7.0
SONM Songino Array 57.03 343 P **P** **18 10 11.2 +0.2**
0.2nm,0.4s,baz=167,slow=8.0,SNR=6.1
MKAR Makanchi Array 66.41 328 P **P** **18 11 12.5 -0.2**
0.6nm,0.4s,baz=121,slow=8.0,SNR=16
ZALV Zalesovo Beam 69.94 335 P **P** **18 11 33.3 -0.8**
0.7nm,0.6s,baz=137,slow=5.6,SNR=4.6
KURBB Kurchatov Arra 70.73 329 P **P** **18 11 38.3 -0.7**
0.7nm,0.6s,baz=127,slow=5.3,SNR=13

*CSEM **19** 18:02:48.6,43˚.00N×12˚.94E,h10km,MD1.5/5,After ROM*
ROM 19 18:02:48.6±0.1,43˚.00N×12˚.94E,h10km,Md1.5/5,MI1.0/1, Error ellipse: s-maj=1.0km s-min=0.6km az=17.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CESI	**CESI - Serrava**	**0.02**	**280**	Pg	Pg	18 02 50.9	+0.4
CESI				Sg	Sg	18 02 52.0	+0.2
CESI	**CESI - Serrava**	**0.02**	**280**	Pg	Pg	18 02 50.9	+0.4
CESI				Sg	Sg	18 02 52.0	+0.2
FDMO	**Fiordimonte**	**0.12**	**72**	Pg	Pg	18 02 52.1	+0.6
FDMO				Sg	Sg	18 02 54.3	+0.8
FDMO	**Fiordimonte**	**0.12**	**72**	Pg	Pg	18 02 52.1	+0.6
FDMO				Sg	Sg	18 02 54.3	+0.8
ASSB	**Assisi San Ben**	**0.21**	**282**	Pg	Pg	18 02 53.7	+0.8
ASSB				Sg	Sg	18 02 57.3	+1.4
ASSB	**Assisi San Ben**	**0.21**	**282**	Pg	Pg	18 02 53.7	+0.8
ASSB				Sg	Sg	18 02 57.3	+1.4
NRCA	**Norcia**	**0.21**	**142**	Pg	Pg	18 02 53.8	+0.7
NRCA				Sg	Sg	18 02 57.4	+1.3
	23nm,0.1s						
NRCA	**Norcia**	**0.21**	**142**	Pg	Pg	18 02 53.8	+0.7
NRCA				Sg	Sg	18 02 57.4	+1.3
	23nm,0.1s						
SNTG	**Esanatoglia**	**0.25**	**1**	Pg	Pg	18 02 54.5	+0.7
SNTG				Sg	Sb	18 02 58.9	-0.9
	9.0nm,0.1s						
SNTG	**Esanatoglia**	**0.25**	**1**	Pg	Pg	18 02 54.5	+0.7
SNTG				Sg	Sb	18 02 58.9	-0.9
	9.0nm,0.1s						

IDC 19 18:07:03.3±7.8,2.87N×127.58E,h0km,mb3.5/3, mb1 3.7/3,mb1mx3.3/22,mbtmp3.6/3,Error ellipse: s-maj=125.1km s-min=94.9km az=141.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.93**	**185**	P	P	18 11 47.7	0.0
	1.6nm,0.9s,baz=2.9,slow=8.0,SNR=8.4						
WRA	**Warramunga Arr**	**23.62**	**164**	P	P	18 12 16.1	-0.1
	142nm,0.9s,baz=344,slow=11,SNR=1.3						
ASAR	**Alice Springs**	**27.08**	**167**	P	P	18 12 48.2	+0.3
	0.2nm,0.6s,baz=353,slow=8.6,SNR=7.4						
STKA	**Stephens Creek**	**37.03**	**160**	P	P	18 14 14.5	-0.5
	1.2nm,0.6s,baz=329,slow=7.3,SNR=4.0						

*IDC **19** 18:07:08.5±0.8,12˚.44N×95˚.02E,h0km,mb3.8/13, mb1 3.9/14,mb1mx3.7/27,mbtmp3.7/14,ML3.4/1,MS3.4/1, Ms1 3.4/1,ms1mx2.7/27,Error ellipse: s-maj=27.6km s-min=18.0km az=65.0*
*ISCJB **19** 18:07:09.4±0.6,12˚.45N±0˚.07×95˚.28E±0˚.08,h19km, mb4.3/27,Error ellipse: s-maj=11.9km s-min=10.1km az=169.9*
*NEIC **19** 18:07:10.2±0.4,12˚.50N×95˚.13E,h10km,mb4.7/12,Error ellipse: s-maj=10.7km s-min=8.1km az=114.0*
ISC 19 18:07:11.4±0.8,12˚.4N±0˚.1×95˚.2E±0˚.1,h19km,n73, σ0s89/43,mb4.4/27,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**7.01**	**31**	*e*Pn	**Pn**	**18 08 52.7**	**-0.5**
	3.1nm,0.6s						
CMAR	**Chiang Mai Arr**	**7.01**	**31**	Pn	**Pn**	**18 08 53.8**	**+0.6**
CMAR	**Chiang Mai Arr**	**7.01**	**31**	Pn	**Pn**	**18 08 53.8**	**+0.6**
	0.2nm,0.3s,baz=221,slow=15,SNR=5.0						
CHTO	**Chiang Mai**	**7.32**	**29**	*e*Pn	**Pn**	**18 08 55.3**	**-2.1**
PSI	**Prapat**	**10.26**	**158**	LR	LR	18 14 17.6	
	comp=Z,173nm,18.5s,baz=227,slow=41						
TAPN	**Taplejung**	**16.42**	**336**	*e*P	**P**	**18 11 04.6**	**+0.7**
	14nm,0.7s						
RAMN	**Ramite**	**16.54**	**332**	*e*P	**P**	**18 11 06.5**	**+1.3**
	93nm,1.3s						
PKI	**Pulchoki**	**17.63**	**330**	*e*P	**P**	**18 11 18.8**	**+1.5**
	44nm,1.1s						
PKIN	**Phulchoki**	**17.64**	**330**	*e*P	**P**	**18 11 18.1**	**+0.7**
	35nm,1.2s						
GUN	**Gumba**	**17.69**	**332**	*e*P	**P**	**18 11 19.7**	**+1.6**
KOLN	**Koldanda**	**18.72**	**326**	*e*P	**P**	**18 11 29.1**	**-0.1**
	16nm,0.6s						
DANN	**Dangsing**	**19.10**	**328**	*e*P	**P**	**18 11 33.5**	**0.0**
	25nm,0.7s						
PYUN	**Piuthan**	**19.31**	**326**	*e*P	**P**	**18 11 35.5**	**-0.2**
	61nm,1.4s						
TKM2	**Tokmak 2**	**34.80**	**334**	*e*P	**P**	**18 13 59.4**	**-1.8**
	4.6nm,0.8s						
AAK	**Ala-Archa**	**35.05**	**333**	*e*P	**P**	**18 14 03.9**	**+0.7**
	4.3nm,1.0s						
AAK	**Ala-Archa**	**35.05**	**333**	P	**P**	**18 14 03.1**	**-0.1**
	1.3nm,0.7s,baz=163,slow=6.3,SNR=5.1						
EKS2	**Erkin-Say**	**35.39**	**332**	*e*P	**P**	**18 14 05.3**	**-0.9**
	3.6nm,0.8s						
MK31	**Makanchi Array**	**35.94**	**345**	*e*P	**P**	**18 14 09.4**	**-1.4**
MKAR	**Makanchi Array**	**35.94**	**345**	P	**P**	**18 14 10.6**	**-0.1**
MKAR				PcP	**PcP**	**18 16 38.2**	**+0.8**
MKAR	**Makanchi Array**	**35.94**	**345**	P	**P**	**18 14 10.6**	**-0.1**
	4.1nm,0.8s,baz=163,slow=8.9,SNR=12						
MKAR				PcP	**PcP**	**18 16 38.2**	**+0.8**
	0.5nm,0.5s,baz=118,slow=7.7,SNR=8.8						
SONM	**Songino Array**	**36.53**	**13**	P	**P**	**18 14 16.0**	**+0.1**
SONM	**Songino Array**	**36.53**	**13**	P	**P**	**18 14 16.0**	**+0.1**
	0.6nm,1.0s,baz=207,slow=9.3,SNR=3.1						
KKAR	**Karatay Array**	**37.27**	**330**	*e*P	**P**	**18 14 22.0**	**-0.2**
KURBB	**Kurchatov Arra**	**40.45**	**344**	P	**P**	**18 14 48.5**	**-0.1**
	2.3nm,0.8s,baz=160,slow=8.0,SNR=21						
KURK	**Kurchatov**	**40.51**	**344**	*e*P	**P**	**18 14 48.0**	**-1.1**
	8.0nm,1.0s						
ZALV	**Zalesovo Beam**	**42.23**	**351**	P	**P**	**18 15 02.2**	**-1.0**
ZALV	**Zalesovo Beam**	**42.23**	**351**	P	**P**	**18 15 02.2**	**-1.0**
	4.8nm,0.7s,baz=170,slow=8.7,SNR=9.7						
ABKAR	**Akbulak array**	**46.82**	**329**	*e*P	**P**	**18 15 38.5**	**-1.4**
	3.3nm,0.7s						
WRA	**Warramunga Arr**	**50.20**	**129**	P	**P**	**18 16 07.5**	**+1.1**
WRA	**Warramunga Arr**	**50.20**	**129**	P	**P**	**18 16 07.5**	**+1.1**
	2um,1.3s,baz=310,slow=9.1,SNR=4.6						
ASAR	**Alice Springs**	**52.16**	**133**	P	P	18 16 21.4	+0.3
ASAR	**Alice Springs**	**52.16**	**133**	P	P	18 16 21.4	+0.3
	0.4nm,0.6s,baz=310,slow=6.2,SNR=8.6						
ABPO	**Ambohimpanom**	**56.64**	**237**	*e*P	P	18 16 54.4	+0.4
BRTR	**Keskin Array B**	**60.32**	**309**	P	P	18 17 16.6	-2.7
BRTR	**Keskin Array B**	**60.32**	**309**	P	P	18 17 16.6	-2.7
	0.5nm,0.7s,baz=108,slow=4.7,SNR=4.5						
FINES	**FINESS Array B**	**69.21**	**331**	P	**P**	**18 18 16.4**	**-0.3**
FINES	**FINESS Array B**	**69.21**	**331**	P	**P**	**18 18 16.4**	**-0.3**
	2.0nm,0.9s,baz=80,slow=8.6,SNR=2.2						
BRG	**Berggiesshubel**	**74.95**	**320**	*e*P	P	18 18 57.0	+5.7
	3.2nm,0.7s						
GERES	**GERESS Array B**	**75.16**	**317**	P	**P**	**18 18 52.1**	**-0.6**
GERES	**GERESS Array B**	**75.16**	**317**	P	**P**	**18 18 52.1**	**-0.6**
	0.8nm,0.7s,baz=91,slow=5.5,SNR=7.5						
NOA	**NORSAR Array B**	**76.31**	**330**	P	**P**	**18 18 58.4**	**-0.6**
NOA	**NORSAR Array B**	**76.31**	**330**	P	**P**	**18 18 58.4**	**-0.6**
	1.3nm,1.0s,baz=89,slow=5.8,SNR=3.3						
BOSA	**Boshof**	**78.87**	**237**	P	P	18 19 14.4	+0.5
BOSA	**Boshof**	**78.87**	**237**	P	P	18 19 14.4	+0.5
	3.0nm,0.9s,baz=246,slow=11,SNR=4.0						
CDF	**Champ du Feu**	**79.44**	**317**	*e*P	P	18 19 21.9	+5.2
CDF	**Champ du Feu**	**79.44**	**317**	*e*P	P	18 19 21.9	+5.2
LPG	**La Plagne**	**80.16**	**314**	*e*P	P	18 19 26.5	+5.6
	9.9nm,0.9s						
LPG	**La Plagne**	**80.16**	**314**	*e*P	P	18 19 26.5	+5.6
	9.9nm,0.9s						
LPL	**La Plagne**	**80.17**	**314**	*e*P	P	18 19 26.5	+5.6
	6.8nm,0.7s						
LPL	**La Plagne**	**80.17**	**314**	*e*P	P	18 19 26.5	+5.6
	6.8nm,0.7s						
CABF	**La Chapelle**	**80.47**	**316**	*e*P	P	18 19 27.9	+5.6
LMR	**La Mourre**	**80.63**	**312**	*e*P	P	18 19 28.5	+5.4
LMR	**La Mourre**	**80.63**	**312**	*e*P	P	18 19 28.5	+5.4
SFTF	**Sexfontaines**	**80.95**	**317**	*e*P	P	18 19 30.2	+5.5
BAIF	**Baives**	**81.21**	**319**	*e*P	P	18 19 31.8	+5.7
	12nm,1.0s						
BAIF	**Baives**	**81.21**	**319**	*e*P	P	18 19 31.8	+5.7
	12nm,1.0s						
LOR	**Lormes**	**81.88**	**317**	*e*P	P	18 19 34.9	+5.2
	13nm,1.2s						
LOR	**Lormes**	**81.88**	**317**	*e*P	P	18 19 34.9	+5.2
	13nm,1.2s						
SMF	**Signal de Mont**	**82.00**	**316**	*e*P	P	18 19 35.4	+5.1
	9.7nm,0.9s						
SSF	**Saint Saulge**	**82.15**	**316**	*e*P	P	18 19 36.6	+5.5
AVF	**Avril sur Loir**	**82.30**	**316**	*e*P	P	18 19 37.0	+5.1
CAF	**Calviac**	**83.52**	**314**	*e*P	P	18 19 44.1	+5.7
	4.0nm,0.8s						
CAF	**Calviac**	**83.52**	**314**	*e*P	P	18 19 44.1	+5.7
	4.0nm,0.8s						
MTLF	**Montolieu**	**83.72**	**313**	*e*P	P	18 19 45.0	+5.7
	4.8nm,0.9s						
MTLF	**Montolieu**	**83.72**	**313**	*e*P	P	18 19 45.0	+5.7
	4.8nm,0.9s						
RJF	**Les Rejaudoux**	**83.83**	**315**	*e*P	P	18 19 45.7	+5.8
	2.7nm,0.6s						
RJF	**Les Rejaudoux**	**83.83**	**315**	*e*P	P	18 19 45.7	+5.8
	2.7nm,0.6s						
FLN	**La Foliniere**	**84.46**	**319**	*e*P	P	18 19 48.6	+5.6
FLN	**La Foliniere**	**84.46**	**319**	*e*P	P	18 19 48.6	+5.6
ESDC	**Sonseca Array**	**89.07**	**310**	P	**P**	**18 20 05.8**	**+0.1**
ESDC	**Sonseca Array**	**89.07**	**310**	P	**P**	**18 20 05.8**	**+0.1**
	0.1nm,0.3s,baz=54,slow=4.2,SNR=2.3						
TORD	**Torodi Ar. Bea**	**90.54**	**284**	P	**P**	**18 20 13.0**	**0.0**
TORD				PP	**PP**	**18 23 48.9**	**+1.0**
TORD	**Torodi Ar. Bea**	**90.54**	**284**	P	**P**	**18 20 13.0**	**0.0**
	0.5nm,0.9s,baz=84,slow=4.5,SNR=2.7						
TORD				PP	**PP**	**18 23 48.9**	**+1.0**
	0.7nm,0.9s,baz=64,slow=4.4,SNR=3.7						

*CSEM **19** 18:17:35.4,42˚.45N×13˚.42E,h10km,MD1.8/3,After ROM*
ROM 19 18:17:35.4±0.1,42.45N×13.42E,h10km,Md1.8/3,MI1.5/3, Error ellipse: s-maj=1.1km s-min=0.6km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.10**	**186**	Pg	Pg	18 17 38.5	+0.4
AQU				Sg	Sg	18 17 40.5	+0.5
	101nm,0.2s						
AQU	**L'Aquila**	**0.10**	**186**	Pg	Pg	18 17 38.5	+0.4
AQU				Sg	Sg	18 17 40.5	+0.5
	101nm,0.2s						
FAGN	**Fagnano**	**0.22**	**146**	Pg	Pg	18 17 40.9	+0.8
	144nm,0.4s						
FAGN	**Fagnano**	**0.22**	**146**	Pg	Pg	18 17 40.9	+0.8
	144nm,0.4s						
VCEL	**Villa Celiera**	**0.32**	**100**	Pg	Pg	18 17 42.5	+0.5
VCEL				Sg	Sg	18 17 47.5	+1.1
	297nm,2.1s						
VCEL	**Villa Celiera**	**0.32**	**100**	Pg	Pg	18 17 42.5	+0.5
VCEL				Sg	Sg	18 17 47.5	+1.1
	297nm,2.1s						
NRCA	**Norcia**	**0.44**	**330**	Pg	Pg	18 17 44.4	+0.2
NRCA				Sg	Sb	18 17 51.4	-0.8
NRCA	**Norcia**	**0.44**	**330**	Pg	Pg	18 17 44.4	+0.2
NRCA				Sg	Sb	18 17 51.4	-0.8

IDC 19 18:24:11.9±2.2,4.00N×126.79E,h0km,mb3.1/2, mb1 3.2/2,mb1mx3.0/21,mbtmp3.1/2,Error ellipse: s-maj=180.8km s-min=26.0km az=66.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.92**	**163**	P	P	18 29 36.3	-0.7
	0.7nm,0.8s,baz=343,slow=10,SNR=8.3						
ASAR	**Alice Springs**	**28.36**	**166**	P	P	18 30 08.8	+0.8
	0.1nm,0.3s,baz=345,slow=7.4,SNR=4.3						
MKAR	**Makanchi Array**	**57.37**	**325**	P	P	18 34 02.1	-0.1
	0.1nm,0.4s,baz=117,slow=9.0,SNR=3.9						

*ISCJB **19** 18:33:39.0±0.6,40˚.16N±0˚.03×42˚.03E±0˚.04,h5km±5km, Error ellipse: s-maj=5.4km s-min=4.3km az=17.2*
*CSEM **19** 18:33:38.6±0.3,40˚.15N×41˚.99E,h5km,MD3.0,Error ellipse: s-maj=6.5km s-min=6.3km az=112.0*
*DDA **19** 18:33:38.6,40˚.16N×42˚.07E,h2km,MD3.0*
*ISK **19** 18:33:38.4,40˚.22N×42˚.02E,h4km,MD3.2*
ISC 19 18:33:38.6±1.2,40.16N±0˚.02×42.04E±0˚.03,h2km±12km, n31,σ0s78/43,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.15**	**220**	*i* P	**Pg**	**18 33 41.8**	**+0.1**
HOMI				*i* S	**Sg**	**18 33 43.7**	**0.0**
ERZM	**Erzurum**	**0.57**	**244**	*i* P	**Pg**	**18 33 50.4**	**+0.7**
ERZM				*i* S	**Sb**	**18 34 00.9**	**+0.6**
ERZM	**Erzurum**	**0.57**	**244**	*i* P	**Pg**	**18 33 50.4**	**+0.7**
EZM	**Erzurum**	**0.58**	**244**	*e*PG	**Pg**	**18 33 50.0**	**+0.3**
DDEM	**Demirkent**	**0.76**	**344**	*i* P	**Pg**	**18 33 53.5**	**+0.3**
DDEM				*i* S	**Sb**	**18 34 06.0**	**+0.4**
DDEM	**Demirkent**	**0.76**	**344**	*i* P	**Pg**	**18 33 53.5**	**+0.3**
DDEM				*i* S	**Sb**	**18 34 06.0**	**+0.4**
DBAD	**Bademkaya**	**0.89**	**343**	*i* P	**Pg**	**18 33 55.9**	**+0.1**
DBAD				*i* S	**Sn**	**18 34 11.9**	**-0.1**
DBAD	**Bademkaya**	**0.89**	**343**	*i* P	**Pg**	**18 33 55.9**	**+0.1**
DAGI	**Agillar**	**0.92**	**354**	*i* P	**Pg**	**18 33 56.6**	**+0.4**
DAGI				*i* S	**Sb**	**18 34 11.5**	**+1.3**
KARS	**Kars**	**0.92**	**59**	*e*PG	**Pg**	**18 33 56.4**	**+0.1**
KARS				*e*SG	**Sb**	**18 34 10.0**	**-0.3**
KARS	**Kars**	**0.92**	**59**	*e*Pg	**Pg**	**18 33 56.4**	**+0.1**
KARS				*e*Sg	**Sb**	**18 34 10.0**	**-0.3**
TUTA	**Tutak**	**0.97**	**141**	*i* P	**Pg**	**18 33 56.6**	**-0.6**
TUTA				*i* S	**Sb**	**18 34 12.7**	**+1.0**
TUTA	**Tutak**	**0.97**	**141**	*i* P	**Pg**	**18 33 56.6**	**-0.6**
TUTA				*i* S	**Sb**	**18 34 12.7**	**+1.0**
VRTB	**Varto-Mus**	**1.10**	**204**	*e*PN	**Pn**	**18 34 01.2**	**0.0**
VRTB	**Varto-Mus**	**1.10**	**204**	*e*Pn	**Pn**	**18 34 01.2**	**0.0**
BCA	**Borcka**	**1.32**	**346**	*e*PN	**Pg**	**18 34 03.3**	**-0.6**
BCA				*e*SN	**Sg**	**18 34 21.3**	**+0.3**
BCA	**Borcka**	**1.32**	**346**	*e*Pn	**Pg**	**18 34 03.3**	**-0.6**
BCA				*e*Sn	**Sg**	**18 34 21.3**	**+0.3**
PZAR	**Pazar-Rize**	**1.33**	**320**	*e*PN	**Pg**	**18 34 03.8**	**-0.4**
PZAR	**Pazar-Rize**	**1.33**	**320**	*e*Pn	**Pg**	**18 34 03.8**	**-0.4**
BAYT	**Ayd¨–ntepe-Bay**	**1.47**	**280**	*e*PN	**Pn**	**18 34 06.2**	**-0.2**
BAYT	**Ayd¨–ntepe-Bay**	**1.47**	**280**	*e*Pn	**Pn**	**18 34 06.2**	**-0.2**
BNGB	**Bing¶ll**	**1.57**	**222**	*e*PN	**Pb**	**18 34 08.3**	**-0.2**
BINT	**Bingol**	**1.76**	**223**	*e*Pn	**Pn**	**18 34 08.3**	**-2.0**
CLDR	**Caldiran**	**1.77**	**124**	*e*PN	**Pb**	**18 34 11.4**	**-0.6**
CLDR	**Caldiran**	**1.77**	**124**	*e*Pn	**Pb**	**18 34 11.4**	**-0.6**
ERZN	**Erzincan**	**1.87**	**253**	*e*PN	**Pn**	**18 34 12.3**	**+0.5**
GNI	**Garni**	**2.07**	**89**	*e*PN	**Pn**	**18 34 15.6**	**+0.9**
GNI	**Garni**	**2.07**	**89**	*e*Pn	**Pn**	**18 34 15.6**	**+0.9**
EZC	**Erzincan**	**2.10**	**260**	*e*Pn	**Pn**	**18 34 12.3**	**-2.8**
PTK	**Pertek**	**2.41**	**239**	*e*PN	**Pn**	**18 34 20.1**	**+0.8**
PTK	**Pertek**	**2.41**	**239**	*e*Pn	**Pn**	**18 34 20.1**	**+0.8**

IDC 19 18:52:31.7±7.4,11.93N×95.13E,h0km,mb3.3/5, mb1 3.3/6,mb1mx3.2/25,mbtmp3.2/6,ML3.3/1,Error ellipse: s-maj=161.0km s-min=38.1km az=145.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.46**	**29**	Pn	Pn	18 54 22.2	+0.3
	0.1nm,0.3s,baz=223,slow=15,SNR=3.8						
MKAR	**Makanchi Array**	**36.41**	**345**	P	P	18 59 37.4	-0.6
	0.5nm,0.9s,baz=144,slow=8.6,SNR=4.2						
SONM	**Songino Array**	**37.02**	**13**	P	P	18 59 43.3	-0.1
	0.2nm,0.8s,baz=194,slow=10,SNR=2.3						
ZALV	**Zalesovo Beam**	**42.71**	**351**	P	P	19 00 30.6	+0.2
	0.2nm,0.4s,baz=165,slow=6.9,SNR=2.2						
BRTR	**Keskin Array B**	**60.60**	**309**	P	P	19 02 45.2	+0.6
	0.1nm,0.4s,baz=98,slow=6.0,SNR=2.5						
GERES	**GERESS Array B**	**75.49**	**318**	P	P	19 04 17.6	-0.5
	0.1nm,0.3s,baz=96,slow=7.0,SNR=3.1						

*CSEM **19** 18:54:32.6±0.8,35˚.53N×22˚.35E,h2km,MD3.6,Error ellipse: s-maj=20.4km s-min=7.3km az=44.0*
*THE **19** 18:54:32.5,35˚.46N×22˚.23E,h9km±1km,ML2.6/2,Error ellipse: s-maj=2.3km s-min=1.0km az=215.0*
*ATH **19** 18:54:34.9,35˚.56N×22˚.44E,h28km±8km,MD3.6/17*
ISC 19 18:54:32.3±1.9,35.53N±0˚.07×22.32E±0˚.07,h5km±14km, n56,σ0s88/62,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.95**	**38**	P	**Pn**	**18 54 52.1**	**-0.2**
KYTH	**Kithira**	**0.95**	**38**	*e*PN	**Pn**	**18 54 52.1**	**-0.2**
KYTH	**Kithira**	**0.95**	**38**	P	**Pn**	**18 54 52.1**	**-0.2**
DYR	**Agios Nikonas**	**1.23**	**1**	P	**Pb**	**18 54 56.0**	**-0.1**
DYR				S	**Sn**	**18 55 14.1**	**+0.9**
DYR	**Agios Nikonas**	**1.23**	**1**	*e*PB	**Pn**	**18 54 56.4**	**+0.2**
DYR	**Agios Nikonas**	**1.23**	**1**	P	**Pb**	**18 54 56.0**	**-0.1**
DYR	**Agios Nikonas**	**1.23**	**1**	*e*Pb	**Pn**	**18 54 56.4**	**+0.2**
DYR				S	**Sn**	**18 55 14.1**	**+0.9**
VLI	**Veliai**	**1.29**	**23**	P	**Pb**	**18 54 57.1**	**+0.1**
VLI	**Veliai**	**1.29**	**23**	*e*PN	**Pb**	**18 54 57.8**	**+0.8**
VLI	**Veliai**	**1.29**	**23**	P	**Pb**	**18 54 57.1**	**+0.1**
VLI	**Veliai**	**1.29**	**23**	*e*Pn	**Pb**	**18 54 57.8**	**+0.8**
KARN	**Karanos**	**1.31**	**95**	P	**Pb**	**18 54 57.5**	**+0.1**
KARN	**Karanos**	**1.31**	**95**	*e*PN	**Pb**	**18 54 57.7**	**+0.3**
KARN	**Karanos**	**1.31**	**95**	P	**Pb**	**18 54 57.5**	**+0.1**
PYL	**PYLOS**	**1.45**	**341**	P	**Pn**	**18 54 58.2**	**-0.8**
PYL	**PYLOS**	**1.45**	**341**	*e*PN	**Pg**	**18 55 01.1**	**+1.1**
PYL	**PYLOS**	**1.45**	**341**	P	**Pg**	**18 54 58.2**	**-0.8**
PYL	**PYLOS**	**1.45**	**341**	*e*Pn	**Pg**	**18 55 01.1**	**+1.1**
VAM	**Vamos**	**1.54**	**94**	P	**Pn**	**18 54 59.7**	**-0.7**
VAM	**Vamos**	**1.54**	**94**	*e*PN	**Pg**	**18 55 01.9**	**+0.1**
VAM	**Vamos**	**1.54**	**94**	P	**Pn**	**18 54 59.7**	**-0.7**
VAM	**Vamos**	**1.54**	**94**	*e*Pn	**Pg**	**18 55 01.9**	**+0.1**
ITM	**Ithomi**	**1.68**	**349**	P	**Pn**	**18 55 02.1**	**-0.2**
ITM				S	**Sb**	**18 55 24.9**	**-0.3**
ITM	**Ithomi**	**1.68**	**349**	*e*PN	**Pg**	**18 55 04.9**	**+0.4**
ITM	**Ithomi**	**1.68**	**349**	P	**Pn**	**18 55 02.1**	**-0.2**
ITM	**Ithomi**	**1.68**	**349**	*e*Pn	**Pg**	**18 55 04.9**	**+0.4**
ITM				S	**Sb**	**18 55 24.9**	**-0.3**
VLX	**Vlachokerasia**	**1.84**	**2**	*e*PN	**Pg**	**18 55 07.6**	**0.0**
VLX	**Vlachokerasia**	**1.84**	**2**	*e*Pn	**Pg**	**18 55 07.6**	**0.0**
AMT	**Artemida-Makis**	**2.06**	**346**	P	**Pn**	**18 55 07.5**	**-0.1**
AMT	**Artemida-Makis**	**2.06**	**346**	*e*PN	**Pb**	**18 55 09.3**	**-0.9**
AMT	**Artemida-Makis**	**2.06**	**346**	P	**Pn**	**18 55 07.5**	**-0.1**
AMT	**Artemida-Makis**	**2.06**	**346**	*e*Pn	**Pb**	**18 55 09.3**	**-0.9**
DID	**Didima**	**2.11**	**20**	P	**Pn**	**18 55 08.0**	**-0.2**
DID				S	**Sb**	**18 55 36.6**	**-0.9**
DID	**Didima**	**2.11**	**20**	*e*PN	**Pn**	**18 55 08.9**	**+0.7**
DID	**Didima**	**2.11**	**20**	P	**Pn**	**18 55 08.0**	**-0.2**
DID	**Didima**	**2.11**	**20**	*e*Pn	**Pn**	**18 55 08.9**	**+0.7**
DID				S	**Sb**	**18 55 36.6**	**-0.9**
IDI	**Anoyia**	**2.11**	**96**	P	**Pn**	**18 55 08.0**	**-0.3**
IDI	**Anoyia**	**2.11**	**96**	*e*PN	**Pn**	**18 55 08.7**	**+0.4**
IDI	**Anoyia**	**2.11**	**96**	P	**Pn**	**18 55 08.0**	**-0.3**
IDI	**Anoyia**	**2.11**	**96**	*e*Pn	**Pn**	**18 55 08.7**	**+0.4**
GUR	**Goura**	**2.41**	**0**	P	**Pn**	**18 55 12.1**	**-0.3**
GUR	**Goura**	**2.41**	**0**	*e*PN	**Pn**	**18 55 14.2**	**+1.8**
GUR	**Goura**	**2.41**	**0**	P	**Pn**	**18 55 12.1**	**-0.3**
GUR	**Goura**	**2.41**	**0**	*e*Pn	**Pn**	**18 55 14.2**	**+1.8**
LTK	**Loutraki**	**2.55**	**12**	*e*PB	**Pb**	**18 55 16.9**	**-1.5**
LTK	**Loutraki**	**2.55**	**12**	*e*Pb	**Pb**	**18 55 16.9**	**-1.5**
LAKA	**Lakka**	**2.72**	**354**	*e*PN	**Pb**	**18 55 18.1**	**+1.4**
LAKA	**Lakka**	**2.72**	**354**	*e*Pn	**Pn**	**18 55 18.1**	**+1.4**
TRIZ	**Trizonia**	**2.84**	**356**	*e*PB	**Pb**	**18 55 21.4**	**-2.0**
TRIZ	**Trizonia**	**2.84**	**356**	*e*Pb	**Pb**	**18 55 21.4**	**-2.0**
KALE	**Kalithea**	**2.86**	**357**	*e*PN	**Pn**	**18 55 18.8**	**+0.2**
KALE	**Kalithea**	**2.86**	**357**	*e*Pn	**Pn**	**18 55 18.8**	**+0.2**
EFP	**Efpalio**	**2.92**	**354**	*e*PN	**Pn**	**18 55 21.0**	**+1.7**
EFP	**Efpalio**	**2.92**	**354**	*e*Pn	**Pn**	**18 55 21.0**	**+1.7**
AGG	**Agios Georgios**	**3.49**	**0**	P	**Pn**

URZ	Urewera	89.26	140	LR	LR	19 45 46.5		
	comp=Z,135nm,18.3s,baz=162,slow=32							
AKASG	Malin Array Be	89.92	346	LR	LR	19 52 20.2		
	comp=Z,42nm,19.9s,baz=140,slow=36							
KURBB	Kurchatov Arra	90.54	16	LR	LR	19 50 15.4		
	comp=Z,36nm,19.6s,baz=55,slow=34							
ZALV	Zalesovo Beam	95.12	19	P	P	19 11 46.9	-1.4	
ZALV	Zalesovo Beam	95.12	19	P	P	19 11 46.9	-1.4	
	0.6nm,0.6s,baz=241,slow=2.7,SNR=5.0							
ZALV				LR	LR	19 50 53.7		
	comp=Z,48nm,18.2s,baz=72,slow=33							
WCI	Wyandotte Cave	147.39	285	*e*PKPdf	PKPdf	19 18 07.2	+0.2	
WCI				*e*PKPbc	PKPbc	19 18 09.2	-0.3	
COLD	Coldfoot	147.41	16	*e*PKPab	PKPab	19 18 10.0	-0.6	
INK	Inuvik	148.76	4	PKPbc	PKPbc	19 18 12.8	+0.8	
INK	Inuvik	148.76	4	PKPbc	PKPbc	19 18 12.8	+0.8	
	1.4nm,0.6s,baz=10,slow=4.9,SNR=8.4							
ILAR	Eielson Array	150.22	16	PKPbc	PKPbc	19 18 15.8	0.0	
ILAR	Eielson Array	150.22	16	PKPbc	PKPbc	19 18 15.8	0.0	
	2.0nm,0.8s,baz=315,slow=3.3,SNR=22							
TRF	Thorofare Moun	150.45	20	*e*PKPbc	PKPbc	19 18 17.4	+0.7	
YKA	Yellowknife Ar	153.48	346	PKPbc	PKPbc	19 18 22.6	-0.7	
YKA	Yellowknife Ar	153.48	346	PKPbc	PKPbc	19 18 22.6	-0.7	
	0.4nm,0.7s,baz=24,slow=2.0,SNR=4.1							

IDC 19 19:11:35.9±0.6, 58.31°N×25.56°W, h0km, mb4.4/6, mb1 4.4/7, mb1mx4.1/16, mbtmp4.3/7, ML3.7/1, Error ellipse: s-maj=30.3km s-min=21.8km az=63.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	Sanae	16.31	154	Pn	P	19 15 27.6	-1.5
	0.3nm,0.3s,baz=321,slow=13,SNR=35						
QSPA	South Pole Qui	31.93	180	P	P	19 18 04.0	+1.0
	2.9nm,0.5s,baz=232,slow=2.5,SNR=40						
PLCA	Paso Flores	33.31	282	P	P	19 18 15.7	+0.6
	1.4nm,0.6s,baz=150,slow=13,SNR=8.0						
LPAZ	La Paz	52.41	305	P	P	19 20 50.4	-0.2
	1.3nm,0.5s,baz=134,slow=5.3,SNR=8.1						
TORD	Torodi Ar. Bea	74.62	28	P	P	19 23 17.5	+0.9
	3.8nm,0.7s,baz=199,slow=6.4,SNR=31						
STKA	Stephens Creek	89.51	169	P	P	19 24 34.1	-0.6
	2.0nm,1.0s,baz=58,slow=5.1,SNR=5.9						
ASAR	Alice Springs	96.56	161	P	P	19 25 06.3	-1.1
	0.9nm,0.7s,baz=185,slow=4.5,SNR=16						
PDAR	Pinedale Array	122.28	300	PKP	PKPdf	19 30 30.7	-1.4
	0.5nm,0.5s,baz=130,slow=4.6,SNR=4.1						
NVAR	Mina Array Bea	123.07	291	PKP	PKPdf	19 30 34.0	+0.2
	0.6nm,0.7s,baz=140,slow=3.2,SNR=6.3						
CMAR	Chiang Mai Arr	123.44	110	PKP	PKPdf	19 30 34.1	-0.6
	0.7nm,0.6s,baz=220,slow=3.8,SNR=6.2						
FINES	FINESS Array B	125.97	28	PKP	PKPdf	19 30 37.5	-0.7
	0.9nm,0.5s,baz=215,slow=2.3,SNR=7.7						
MKAR	Makanchi Array	136.74	73	PKP	PKPdf	19 30 59.2	+0.1
	0.2nm,0.7s,baz=288,slow=1.4,SNR=3.4						
KURBB	Kurchatov Arra	137.44	66	PKP	PKPdf	19 31 00.8	+0.6
	0.5nm,0.8s,baz=214,slow=2.1,SNR=5.2						
YKA	Yellowknife Ar	138.43	316	PKhKP	PKPpre	19 30 52.2	
	0.1nm,0.5s,baz=121,slow=2.9,SNR=3.8						
YKA				PKP	PKPdf	19 31 01.1	-0.5
	2.3nm,0.6s,baz=129,slow=2.2,SNR=40						
SONM	Songino Array	149.92	89	PKPbc	PKPbc	19 31 26.4	-0.7
	3.1nm,0.9s,baz=225,slow=3.3,SNR=18						
ILAR	Eielson Array	152.25	308	PKPbc	PKPbc	19 31 31.3	-0.6
	4.8nm,0.8s,baz=146,slow=2.6,SNR=45						

*ISK **19** 19:29:42.8, 40.44°N×37.92°E, h5km, MD3.1*
*ISCJB **19** 19:29:43.1±0.6, 40.40°N±0.04×37.91°E±0.03, h4km±6km, Error ellipse: s-maj=6.2km s-min=4.4km az=168.2*
*CSEM **19** 19:29:43.0±0.2, 40.39°N×37.92°E, h2km, MD3.1, Error ellipse: s-maj=5.1km s-min=3.6km az=171.0*
*DDA **19** 19:29:43.6, 40.40°N×37.99°E, h7km, MD3.1*
ISC 19 19:29:43.0±1.0, 40.38°N±0.03×37.92°E±0.03, h12km±11km, n30, σ0°75/41, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SUSE	Susehri	0.28	129	*i* P	Pg	19 29 48.9	+0.1
SUSE				*i* S	Sb	19 29 53.6	-1.2
SUSE	Susehri	0.28	129	*i* P	Pg	19 29 48.9	+0.1
SUSE				*i* S	Sb	19 29 53.6	-1.2
RSDY	Resadiye-TOKAT	0.46	272	*e*PG	Pg	19 29 51.4	-0.6
RSDY				*e*SG	Sg	19 29 58.0	-0.1
RSDY	Resadiye-TOKAT	0.46	272	*e*Pg	Pg	19 29 51.4	-0.6
RSDY				*e*Sg	Sg	19 29 58.0	-0.1
GRSN	GIRESUNGRSN	0.60	26	*i* P	Pb	19 29 54.8	-0.7
GRSN				*i* S	Sb	19 30 03.8	-0.2
GRSN	GIRESUNGRSN	0.60	26	*i* P	Pb	19 29 54.8	-0.7
GRSN				*i* S	Sb	19 30 03.8	-0.2
ESPY	Espiye-Giresun	0.81	49	*e*PG	Pb	19 29 58.7	-0.4
ESPY				*e*SG	Sb	19 30 10.0	0.0
ESPY	Espiye-Giresun	0.81	49	*e*Pg	Pb	19 29 58.7	-0.4
ESPY				*e*Sg	Sb	19 30 10.0	0.0
KELT	Kelkit	1.05	103	*i* P	Pg	19 30 02.6	-0.6
KELT				*i* S	Sb	19 30 16.5	-0.5
KELT	Kelkit	1.05	103	*i* P	Pg	19 30 02.6	-0.6
KELT				*i* S	Sb	19 30 16.5	-0.5
ILIC	ilic-Erzincan	1.05	152	*e*PN	Pn	19 30 04.6	+0.8
ILIC	ilic-Erzincan	1.05	152	*e*Pn	Pn	19 30 04.6	+0.8
GUMT	Gumushane	1.19	86	*e*PN	Pb	19 30 05.3	-0.3
GUMT	Gumushane	1.19	86	*e*Pn	Pb	19 30 05.3	-0.3
DARE	Darende-Malaty	1.43	184	*e*PN	Pg	19 30 16.5	+6.0
MACK	Trabzon	1.51	68	*i* P	Pg	19 30 11.1	-0.9
MACK				*i* S	Sg	19 30 32.6	+1.0
MACK	Trabzon	1.51	68	*i* P	Pg	19 30 11.1	-0.9
MACK				*i* S	Sg	19 30 32.6	+1.0
KVT	Kavak	1.59	297	*e*PN	Pn	19 30 11.9	+0.9
KVT	Kavak	1.59	297	*e*Pn	Pn	19 30 11.9	+0.9
ERZN	Erzincan	1.59	119	*e*PN	Pg	19 30 12.8	-0.8
BAYT	Ayd¨–ntepe-Bay	1.69	89	*e*PN	Pb	19 30 13.9	-0.3
BAYT	Ayd¨–ntepe-Bay	1.69	89	*e*Pn	Pb	19 30 13.9	-0.3
PTK	Pertek	1.87	142	*e*PN	Pb	19 30 17.1	-0.2
PTK	Pertek	1.87	142	*e*Pn	Pb	19 30 17.1	-0.2
MALT	Malatya	2.10	169	*e*PN	Pb	19 30 20.6	-0.6
MALT	Malatya	2.10	169	*e*Pn	Pb	19 30 20.6	-0.6
YOZ	Yozgat	2.13	250	*e*PN	Pn	19 30 20.1	+1.5
YOZ	Yozgat	2.13	250	*e*Pn	Pn	19 30 20.1	+1.5
CORM	Corum	2.53	266	*e*PN	Pn	19 30 25.1	+1.0
CORM	Corum	2.53	266	*e*Pn	Pn	19 30 25.1	+1.0

*IDC **19** 19:48:52.7±0.7, 53.53°N×35.10°W, h0km, mb3.8/16, mb1 3.9/18, mb1mx3.8/34, mbtmp3.8/18, ML3.1/2, MS3.2/12, Ms1 3.3/12, ms1mx3.0/50, Error ellipse: s-maj=23.3km s-min=12.3km az=14.0*
*ISCJB **19** 19:48:53.0±0.5, 53.6°N±0.1×35.23°W±0.08, h12km, mb4.1/32, MS3.2/10, Error ellipse: s-maj=19.2km s-min=6.2km az=11.1*
*CSEM **19** 19:48:54.0±0.2, 53.59°N×35.22°W, h10km, mb4.4/17, Ms3.0, Error ellipse: s-maj=18.2km s-min=6.4km az=11.0*
*NEIC **19** 19:48:54.2±0.4, 53.56°N×35.22°W, h10km, mb4.7/16, Error ellipse: s-maj=15.7km s-min=5.5km az=192.0*
ISC 19 19:48:54.3±0.6, 53.5°N±0.1×35.18°W±0.07, h12km, n137, σ1°93/128, mb4.2/32, MS3.3/10, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFJD	Kangerlussuaq	15.47	337	LR	LR	19 58 18.1	
	comp=Z,23nm,19.5s,baz=320,slow=36						
SCHQ	Schefferville	18.50	287	P	P	19 53 09.7	-0.5
SCHQ	Schefferville	18.50	287	P	P	19 53 09.7	-0.5
	0.2nm,0.3s,baz=78,slow=11,SNR=4.5						
SCHQ				LR	LR	19 58 52.9	
	comp=Z,104nm,20.9s,baz=6.9,slow=32						
SCHQ	Schefferville	18.50	287	P	P	19 53 09.6	-0.5
EKA	Eskdalemuir Ar	18.64	71	P	P	19 53 11.1	-0.4
EKA	Eskdalemuir Ar	18.64	71	P	P	19 53 11.1	-0.4
	baz=148,slow=18,SNR=2.6						
EKA	Eskdalemuir Ar	18.64	71	P	P	19 53 11.1	-0.4
ROSF	Rostrenen	20.66	92	*e*P	Pn	19 53 35.7	-0.3
	69nm,1.5s						
ROSF	Rostrenen	20.66	92	*e*P	Pn	19 53 35.7	-0.3
	69nm,1.5s						
ROSF	Rostrenen	20.66	92	*e*P	Pn	19 53 35.7	-0.3
	34nm,1.5s						
QUIF	Quistinic	20.91	92	*e*P	P	19 53 38.1	+1.7
	53nm,1.3s						
QUIF	Quistinic	20.91	92	*e*P	P	19 53 38.1	+1.7
	53nm,1.3s						
QUIF	Quistinic	20.91	92	*e*P	P	19 53 38.1	+1.7
	26nm,1.3s						
SGMF	Saint Gilles	21.12	91	*e*P	P	19 53 39.3	+0.6
	101nm,1.7s						
SGMF	Saint Gilles	21.12	91	*e*P	P	19 53 39.3	+0.6
	101nm,1.7s						
SGMF	Saint Gilles	21.12	91	*e*P	P	19 53 39.3	+0.6
	51nm,1.7s						
JMIC	Jan Mayen	21.15	24	LR	LR	19 59 20.2	
	comp=Z,39nm,20.7s,baz=222,slow=30						
GRR	Gorron	22.07	89	*e*P	P	19 53 49.4	+0.5
	40nm,1.4s						
GRR	Gorron	22.07	89	*e*P	P	19 53 49.4	+0.5
	40nm,1.4s						
GRR	Gorron	22.07	89	*e*P	P	19 53 49.4	+0.5
	20nm,1.4s						
FLN	La Foliniere	22.14	88	*e*P	P	19 53 50.2	+0.6
FLN				*e*R			
	106nm,18.0s						
FLN	La Foliniere	22.14	88	*e*P	P	19 53 50.2	+0.6
FLN	La Foliniere	22.14	88	*e*P	P	19 53 50.2	+0.6
MFF	Saint Martin d	23.35	93	*e*P	P	19 54 03.6	+1.3
	74nm,1.8s						
MFF	Saint Martin d	23.35	93	*e*P	P	19 54 03.6	+1.3
	74nm,1.8s						
MFF	Saint Martin d	23.35	93	*e*P	P	19 54 03.6	+1.3
	37nm,1.8s						
BAIF	Baives	24.39	82	*e*P	P	19 54 11.4	-0.8
	17nm,1.2s						
BAIF	Baives	24.39	82	*e*P	P	19 54 11.4	-0.8
	17nm,1.3s						
BAIF	Baives	24.39	82	*e*P	P	19 54 11.4	-0.8
	8.6nm,1.2s						
SJPF	Ste Jean	24.63	101	*e*P	P	19 54 15.5	+1.0
	78nm,1.6s						
SJPF	Ste Jean	24.63	101	*e*P	P	19 54 15.5	+1.0
	78nm,1.6s						
SJPF	Ste Jean	24.63	101	*e*P	P	19 54 15.5	+1.0
	39nm,1.6s						
GIVF	Givet	24.74	82	*e*P	P	19 54 15.2	-0.1
GIVF	Givet	24.74	82	*e*P	P	19 54 15.2	-0.1
GIVF	Givet	24.74	82	*e*P	P	19 54 15.2	-0.1
LFF	La Frestale	24.75	96	*e*P	P	19 54 16.5	+1.1
LFF	La Frestale	24.75	96	*e*P	P	19 54 16.5	+1.1
LFF	La Frestale	24.75	96	*e*P	P	19 54 16.5	+1.1
TCF	Toulx Ste Croi	24.91	92	*e*P	P	19 54 18.7	+1.7
	24nm,1.4s						
TCF	Toulx Ste Croi	24.91	92	*e*P	P	19 54 18.7	+1.7
	24nm,1.4s						
TCF	Toulx Ste Croi	24.91	92	*e*P	P	19 54 18.7	+1.7
	12nm,1.4s						
RJF	Les Rejaudoux	25.01	94	*e*P	P	19 54 18.4	+0.6
	35nm,1.5s						
RJF				*e*R			
	74nm,21.0s						
RJF	Les Rejaudoux	25.01	94	*e*P	P	19 54 18.4	+0.6
RJF	Les Rejaudoux	25.01	94	*e*P	P	19 54 18.4	+0.6
	17nm,1.5s						
BGF	Bois d'Agland	25.16	90	*e*P	P	19 54 20.5	+1.4
	72nm,1.4s						
BGF	Bois d'Agland	25.16	90	*e*P	P	19 54 20.5	+1.4
	72nm,1.4s						
BGF	Bois d'Agland	25.16	90	*e*P	P	19 54 20.5	+1.4
	36nm,1.4s						
ESDC	Sonseca Array	25.28	111	P	P	19 54 21.0	+0.6
ESDC	Sonseca Array	25.28	111	P	P	19 54 21.0	+0.6
	3.6nm,1.1s,baz=314,slow=8.9,SNR=10						
ESDC				LR	LR	20 01 46.9	
	comp=Z,91nm,19.4s,baz=310,slow=31						
ESDC	Sonseca Array	25.28	111	P	P	19 54 21.0	+0.6
SSF	Saint Saulge	25.30	89	*e*P	P	19 54 20.7	+0.3
	25nm,1.2s						
SSF	Saint Saulge	25.30	89	*e*P	P	19 54 20.7	+0.3
	25nm,1.2s						
SSF	Saint Saulge	25.30	89	*e*P	P	19 54 20.7	+0.3
	13nm,1.2s						
AVF	Avril sur Loir	25.34	90	*e*P	P	19 54 21.8	+1.0
	14nm,1.0s						
AVF	Avril sur Loir	25.34	90	*e*P	P	19 54 21.8	+1.0
	14nm,1.0s						
AVF	Avril sur Loir	25.34	90	*e*P	P	19 54 21.8	+1.0
	7.2nm,1.0s						
LOR	Lormes	25.41	88	*e*P	P	19 54 21.9	+0.4
	19nm,1.1s						
LOR				*e*R			
	69nm,21.8s						
LOR	Lormes	25.41	88	*e*P	P	19 54 21.9	+0.4
LOR	Lormes	25.41	88	*e*P	P	19 54 21.9	+0.4
	9.4nm,1.1s						
CAF	Calviac	25.54	94	*e*P	P	19 54 21.7	-1.0
	34nm,1.6s						
CAF	Calviac	25.54	94	*e*P	P	19 54 21.7	-1.0
	34nm,1.6s						
CAF	Calviac	25.54	94	*e*P	P	19 54 21.7	-1.0
	17nm,1.6s						
MEZF	Maizieres J'vi	25.55	85	*e*P	P	19 54 23.2	+0.5
	17nm,0.9s						
MEZF	Maizieres J'vi	25.55	85	*e*P	P	19 54 23.2	+0.5
	17nm,0.9s						
MEZF	Maizieres J'vi	25.55	85	*e*P	P	19 54 23.2	+0.5
	8.4nm,0.9s						
SFTF	Sexfontaines	25.68	85	*e*P	P	19 54 24.3	+0.5
SFTF	Sexfontaines	25.68	85	*e*P	P	19 54 24.3	+0.5
SFTF	Sexfontaines	25.68	85	*e*P	P	19 54 24.3	+0.5
NOA	NORSAR Array B	25.69	54	P	P	19 54 24.5	+0.6
NOA	NORSAR Array B	25.69	54	P	P	19 54 24.5	+0.6
	0.7nm,0.8s,baz=171,slow=1.8,SNR=2.7						
NOA				LR	LR	20 03 02.6	
	comp=Z,46nm,19.6s,baz=275,slow=33						
NOA	NORSAR Array B	25.69	54	P	P	19 54 24.5	+0.6
SMF	Signal de Mont	25.71	90	*e*P	P	19 54 24.3	+0.2
	22nm,1.3s						
SMF	Signal de Mont	25.71	90	*e*P	P	19 54 24.3	+0.2
	22nm,1.3s						
SMF	Signal de Mont	25.71	90	*e*P	P	19 54 24.3	+0.2
	11nm,1.3s						
HAU	Haudompre	26.55	85	*e*P	P	19 54 33.4	+1.6
	12nm,1.0s						
HAU				*e*R			
	83nm,18.0s						
HAU	Haudompre	26.55	85	*e*P	P	19 54 33.4	+1.6
HAU	Haudompre	26.55	85	*e*P	P	19 54 33.4	+1.6
	5.8nm,1.0s						
HINF	Hinteralfeld	26.94	85	*e*P	P	19 54 36.9	+1.6
HINF	Hinteralfeld	26.94	85	*e*P	P	19 54 36.9	+1.6
HINF	Hinteralfeld	26.94	85	*e*P	P	19 54 36.9	+1.6
HFS	Hagfors	27.00	56	LR	LR	20 03 43.6	
	comp=Z,42nm,21.3s,baz=192,slow=33						
ORIF	Oris-en-Rattie	27.82	91	*e*P	P	19 54 44.0	+0.7
ORIF				*e*R			
	98nm,21.5s						
ORIF	Oris-en-Rattie	27.82	91	*e*P	P	19 54 44.0	+0.7
ORIF	Oris-en-Rattie	27.82	91	*e*P	P	19 54 44.0	+0.7
CLL	Collm	29.03	75	*e*(P)	P	19 54 57.0	+3.1
DAVOX	Davos/Dischmat	29.24	85	LR	LR	20 05 28.4	
	comp=Z,71nm,20.1s,baz=266,slow=34						
SADO	Sadowa	29.64	271	LR	LR	20 05 58.9	
	comp=Z,117nm,19.6s,baz=52,slow=35						
GERES	GERESS Array B	30.50	79	P	P	19 55 07.5	+0.4
GERES	GERESS Array B	30.50	79	P	P	19 55 07.5	+0.4
	0.7nm,1.0s,baz=248,slow=5.6,SNR=4.4						
GERES				LR	LR	20 06 48.3	
	comp=Z,63nm,18.3s,baz=291,slow=35						
GERES	GERESS Array B	30.50	79	P	P	19 55 07.5	+0.4
FINES	FINESS Array B	32.71	51	P	P	19 55 24.5	-1.7
FINES	FINESS Array B	32.71	51	P	P	19 55 24.5	-1.7
	3.7nm,0.9s,baz=260,slow=8.3,SNR=3.1						
FINES				LR	LR	20 07 22.1	
	comp=Z,38nm,20.8s,baz=188,slow=34						
FINES	FINESS Array B	32.71	51	P	P	19 55 24.5	-1.7
KEST	Kesra	35.63	102	P	P	19 55 51.1	-0.7
KEST	Kesra	35.63	102	P	P	19 55 51.1	-0.7
	1.7nm,1.0s,baz=143,slow=4.9,SNR=4.9						
KEST	Kesra	35.63	102	P	P	19 55 51.2	-0.7
ULM	Lac du Bonnet	36.62	290	P	P	19 55 59.1	-1.0
ULM	Lac du Bonnet	36.62	290	P	P	19 55 59.1	-1.0
	1.7nm,0.6s,baz=70,slow=5.7,SNR=3.0						
ULM	Lac du Bonnet	36.62	290	P	P	19 55 59.1	-1.0
YKA	Yellowknife Ar	40.43	315	P	P	19 56 31.2	-0.7
YKA	Yellowknife Ar	40.43	315	P	P	19 56 31.2	-0.7
	0.6nm,0.8s,baz=63,slow=9.1,SNR=6.5						
YKA	Yellowknife Ar	40.43	315	P	P	19 56 31.2	-0.7
BR131	Keskin Array S	47.39	78	*e*P	P	19 57 27.6	-0.7
	0.6nm,0.8s						
BR131	Keskin Array S	47.39	78	*e*P	P	19 57 27.6	-0.7
	0.6nm,0.8s						
BRTR	Keskin Array B	47.39	78	P	P	19 57 28.5	+0.2
BRTR	Keskin Array B	47.39	78	P	P	19 57 28.5	+0.2
	1.0nm,0.8s,baz=318,slow=4.9,SNR=8.6						
BRTR	Keskin Array B	47.39	78	P	P	19 57 28.5	+0.2
PDAR	Pinedale Array	48.62	289	P	P	19 57 38.5	+0.5
PDAR	Pinedale Array	48.62	289	P	P	19 57 38.5	+0.5
	0.7nm,0.6s,baz=63,slow=7.5,SNR=5.8						
PDAR	Pinedale Array	48.62	289	P	P	19 57 38.5	+0.5
TORD	Torodi Ar. Bea	49.70	130	P	P	19 57 46.7	+0.6
TORD	Torodi Ar. Bea	49.70	130	P	P	19 57 46.7	+0.6
	1.8nm,0.7s,baz=333,slow=7.7,SNR=12						
TORD				LR	LR	20 17 31.1	
	comp=Z,39nm,20.6s,baz=285,slow=35						
TORD	Torodi Ar. Bea	49.70	130	P	P	19 57 46.7	+0.6
HWUT	Hardware Ranch	50.51	289	*e*P	P	19 57 51.4	-0.9
	2.9nm,0.8s						
HWUT	Hardware Ranch	50.51	289	*e*P	P	19 57 51.4	-0.9
	2.9nm,0.8s						
ILAR	Eielson Array	50.96	329	P	P	19 57 56.8	+1.7
ILAR	Eielson Array	50.96	329	P	P	19 57 56.8	+1.7
	1.0nm,1.1s,baz=38,slow=6.9,SNR=9.6						
ILAR	Eielson Array	50.96	329	P	P	19 57 56.8	+1.7
DBIC	Dimbokro	52.79	141	P	P	19 58 07.7	-1.6
DBIC	Dimbokro	52.79	141	P	P	19 58 07.7	-1.6
	3.0nm,1.0s,baz=342,slow=6.4,SNR=2.7						
DBIC	Dimbokro	52.79	141	P	P	19 58 07.7	-1.6
TXAR	Lajitas Array	54.40	272	P	P	19 58 23.0	+1.8
TXAR	Lajitas Array	54.40	272	P	P	19 58 23.0	+1.8
	0.4nm,0.8s,baz=54,slow=7.9,SNR=2.8						
TXAR	Lajitas Array	54.40	272	P	P	19 58 23.0	+1.8
NVAR	Mina Array Bea	56.46	291	P	P	19 58 36.8	+0.8
NVAR	Mina Array Bea	56.46	291	P	P	19 58 36.8	+0.8
	0.2nm,0.5s,baz=76,slow=3.8,SNR=2.9						
NVAR	Mina Array Bea	56.46	291	P	P	19 58 36.8	+0.8
MKAR	Makanchi Array	66.83	42	P	P	19 59 45.6	0.0
MKAR	Makanchi Array	66.83	42	P	P	19 59 45.6	0.0
	0.2nm,0.6s,baz=350,slow=5.5,SNR=4.6						
MKAR	Makanchi Array	66.83	42	P	P	19 59 45.6	0.0
PETK	Petropavlovsk-	73.21	352	LR	LR	20 33 15.1	
	comp=Z,30nm,21.5s,baz=61,slow=36						
SONM	Songino Array	73.90	26	P	P	20 00 28.0	-0.9
SONM	Songino Array	73.90	26	P	P	20 00 28.0	-0.9
	1.2nm,1.1s,baz=345,slow=5.2,SNR=7.6						
SONM	Songino Array	73.90	26	P	P	20 00 28.0	-0.9
ASAR	Alice Springs	149.08	20	PKPbc	PKPbc	20 08 41.9	-0.3
ASAR	Alice Springs	149.08	20	PKPbc	PKPbc	20 08 41.9	-0.3
	0.5nm,0.6s,baz=354,slow=2.2,SNR=8.7						
ASAR	Alice Springs	149.08	20	PKPbc	PKPbc	20 08 41.9	-0.3

IDC 19 19:56:18.7±2.1, 4.11°N×126.46°E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.2/21, mbtmp3.5/3, Error ellipse: s-maj=190.1km s-min=26.4km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.12	162	P	P	20 01 44.9	-0.7
	37nm,0.4s,baz=342,slow=9.9,SNR=1.9						
ASAR	Alice Springs	28.55	166	P	P	20 02 17.5	+1.1
	0.2nm,0.5s,baz=340,slow=7.9,SNR=5.1						
STKA	Stephens Creek	38.58	159	P	P	20 03 43.1	-0.4
	0.6nm,0.6s,baz=316,slow=11,SNR=2.6						
MKAR	Makanchi Array	57.09	325	P	P	20 06 07.0	0.0
	0.3nm,0.5s,baz=128,slow=8.6,SNR=3.9						

KRSC 19 20:04:54.1±0.2, 55.00°N×165.68°E, h26km±15km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.27	39	*i* P	Pb	20 05 00.7	0.0
BKI				*i* S	Sb	20 05 05.0	-0.2
KBTR	Krutoberegovo	2.02	308	P	Pn	20 05 26.0	-0.5
MKZ	Mys Kozlova	2.33	261	P	Pn	20 05 31.2	+0.5
MKZ				S	Sn	20 05 58.1	-0.3
SMKR	Semkarok	2.86	305	S	Sn	20 06 13.0	+1.3
ZLN	Zelenaya	2.95	292	S	Sn	20 06 16.9	+2.8
BDR	Baidarnaya	2.97	304	P	Pn	20 05 41.8	+2.1
BDR				S	Sn	20 06 17.1	+2.5
BZGR	Bezymyannyi-Gr	2.99	290	S	Sn	20 06 15.9	+0.9
SRKR	Sorokina	3.04	305	S	Sn	20 06 17.6	+1.5
KLY	Klyuchi	3.14	297	S	Sn	20 06 16.7	-1.7
TUMR	Tumrok	3.19	277	P	Pn	20 05 43.7	+1.0
KPT	Kopyto	3.25	290	S	Sn	20 06 23.4	+1.9
SPN	Mys Shipunski	3.84	243	S	Sn	20 06 34.0	-1.7
SDLR	Sedlovina	4.35	249	P	Pn	20 06 00.3	+1.6
SMAR	Somma	4.40	250	P	Pn	20 06 01.1	+1.6
UGLR	Uglovaya	4.

0.2nm,0.3s,baz=224,slow=7.5,SNR=5.9
GERES LR LR 21 03 02.5
comp=Z,36nm,18.7s,baz=29,slow=34
BOSA Boshof 63.57 124 LR LR 21 01 20.1
comp=Z,61nm,19.9s,baz=51,slow=30
NOA NORSAR Array B 66.04 21 P **P 20 40 05.9 +1.1**
NOA NORSAR Array B 66.04 21 P **P 20 40 05.9 +1.1**
0.5nm,0.7s,baz=231,slow=6.3,SNR=2.6
NOA LR LR 21 04 49.4
comp=Z,21nm,19.0s,baz=175,slow=32
632A Uvalde 68.94 300 ⇓P **P 20 40 24.4 +0.7**
baz=69
JCT Junction City 69.09 301 ⇑P **P 20 40 25.4 +0.7**
baz=69
532A Rocksprings 69.13 301 ⇓P **P 20 40 24.5 -0.4**
baz=69
BRTR Keskin Array B 69.22 49 P **P 20 40 25.9 +0.5**
BRTR Keskin Array B 69.22 49 P **P 20 40 25.9 +0.5**
0.3nm,0.8s,baz=265,slow=4.0,SNR=3.4
BRTR LR LR 21 09 38.3
comp=Z,31nm,21.2s,baz=305,slow=35
AKASG Malin Array Be 69.44 37 P **P 20 40 26.0 -0.3**
AKASG Malin Array Be 69.44 37 P **P 20 40 26.0 -0.3**
0.5nm,0.5s,baz=243,slow=8.4,SNR=4.3
431A Sonora 69.81 301 ⇓P **P 20 40 28.6 -0.4**
baz=70
530A J-C Ranch, Com 70.36 301 ⇓P **P 20 40 32.8 +0.3**
baz=70,SNR=7.5
429A Davenport Ranc 70.90 301 ⇑P **P 20 40 34.5 -1.3**
baz=71,SNR=6.3
529A Stev Forest Ra 71.11 301 ⇑P **P 20 40 36.8 -0.3**
baz=71
428A Kincaid Ranch, 71.59 301 ⇑P **P 20 40 41.0 +1.1**
baz=71,SNR=7.6
628A Black Gap, Mar 71.61 300 ⇓P **P 20 40 41.5 +1.4**
baz=71
627A Terlingua Ranc 72.05 300 ⇓P **P 20 40 43.8 +1.0**
baz=72
FINES FINESS Array B 72.20 25 LR LR 21 08 42.4
comp=Z,39nm,18.7s,baz=190,slow=33
TXAR Lajitas Array 72.27 300 P **P 20 40 43.4 -0.7**
TXAR Lajitas Array 72.27 300 P **P 20 40 43.4 -0.7**
0.1nm,0.3s,baz=118,slow=7.1,SNR=3.9
TXAR LR LR 21 13 16.5
comp=Z,26nm,19.7s,baz=180,slow=37
527A Woodward Ranch 72.31 300 ⇓P **P 20 40 46.0 +1.6**
baz=72,SNR=5.1
Z27A Tatum 72.36 304 ⇑P **P 20 40 44.5 -0.1**
baz=72,SNR=5.7
Y27A Causey 72.40 304 ⇓P **P 20 40 44.3 -0.5**
baz=72,SNR=5.4
626A Big Bend Ranch 72.70 300 ⇓P **P 20 40 47.0 +0.3**
baz=72
526A Mary Lane Ranc 72.72 300 ⇓P **P 20 40 48.7 +1.8**
baz=72
426A McDonald Obser 72.73 301 ⇑P **P 20 40 48.8 +1.8**
baz=72,SNR=8.4
326A Caldwell Ranch 72.76 302 ⇑P **P 20 40 48.8 +1.8**
baz=73
Z26A Caprock 72.99 304 ⇑P **P 20 40 47.5 -0.9**
baz=73
226B Tecolote Peak, 73.00 302 ⇑P **P 20 40 49.2 +0.7**
baz=73
U26A Atchley Ranch, 73.22 307 ⇓P **P 20 40 50.6 +0.9**
baz=73
125A Gardner Draw, 73.48 303 ⇓P **P 20 40 52.4 +1.1**
baz=73,SNR=5.7
425A Indio Mountain 73.56 301 ⇓P **P 20 40 53.7 +1.8**
baz=73
Z25A Roswell 73.61 304 ⇓P **P 20 40 52.9 +0.9**
baz=73
325A Bean Ranch, Si 73.61 302 ⇑P **P 20 40 53.4 +1.2**
baz=73
Y25A Mesa, Roswell 73.66 304 ⇑P **P 20 40 52.3 -0.1**
baz=74
U25A Circle Dot Ran 73.75 307 ⇑P **P 20 40 50.4 -2.4**
baz=74
324A Moseley Ranch, 74.05 302 ⇑P **P 20 40 55.1 +0.4**
baz=74
224A Cornudas Mount 74.15 302 ⇓P **P 20 40 55.9 +0.6**
baz=74,SNR=5.1
Y24A Capitan 74.28 304 ⇓P **P 20 40 56.9 +0.9**
baz=74,SNR=9.0
V24A Rampart Ranch, 74.36 306 ⇓P **P 20 40 55.7 -0.8**
baz=74
W24A Lazy 6 Ranch, 74.40 305 ⇓P **P 20 40 57.6 +0.9**
baz=74,SNR=6.1
R24A Sanders Place, 74.55 309 ⇑P P 20 40 54.2 -3.3
baz=74
Q24A Divide 74.69 309 ⇑P **P 20 40 55.7 -2.7**
baz=74
Z23A Rita Site, Whi 74.87 303 ⇓P **P 20 41 00.8 +1.4**
baz=75
R23A Moffat 75.11 308 ⇓P **P 20 41 01.8 +0.9**
baz=75
ISCO Idaho Springs 75.16 310 ⇓P **P 20 41 00.8 -0.4**
baz=75
D24A Glendive 75.43 318 ⇑P **P 20 41 02.4 +0.2**
baz=75
O23A Lake Granby, G 75.45 311 ⇓P **P 20 41 04.0 +1.2**
baz=75
Z22A Elephant Butte 75.48 303 ⇑P **P 20 41 04.9 +2.0**
baz=75,SNR=7.6
N23A Red Feather La 75.56 311 ⇓P **P 20 41 02.2 -1.2**
baz=75,SNR=6.1
DGMT Dagmar 75.60 319 ⇑P **P 20 41 04.4 +1.2**
baz=75
FFC Flin Flon 75.65 326 *eP* **P 20 41 02.3 -0.9**
6.1nm,1.3s
S22A 4UR Ranch, Cre 75.84 308 ⇑P **P 20 41 06.4 +1.3**
baz=76
ARCES ARCESS Array B 75.86 18 LR LR 21 12 44.8
comp=Z,40nm,18.3s,baz=16,slow=34
F23A Volborg 75.91 316 ⇑P **P 20 41 05.5 +0.5**
baz=76
D23A Lindsay 76.03 318 ⇓P **P 20 41 07.0 +1.4**
baz=76
Y21A Point of Rocks 76.14 304 ⇑P **P 20 41 09.2 +2.4**
baz=76
X21A Alamocita Cree 76.27 304 ⇑P **P 20 41 09.7 +2.2**
baz=76,SNR=5.5
U21A Nageezi 76.36 307 ⇑P **P 20 41 10.0 +2.0**
baz=76
I22A 9 Mile Ranch, 76.39 314 ⇑P **P 20 41 08.4 +0.5**
baz=76
320A Kipp Ranch, An 76.64 301 ⇓P **P 20 41 12.0 +2.5**
baz=76
120A U Bar Ranch, L 76.81 302 ⇓P **P 20 41 12.9 +2.3**
baz=77
Z20A Nine Sixteen R 76.82 303 ⇓P **P 20 41 12.9 +2.3**
baz=77,SNR=6.3
I21A Big Trails, Te 76.95 314 ⇓P **P 20 41 11.8 +0.7**
baz=77,SNR=8.3
J21A Lysite 77.00 314 ⇑P **P 20 41 12.4 +1.0**
baz=77
O20A White River Ci 77.20 310 ⇑P **P 20 41 14.4 +1.8**
baz=77
SNAA Sanae 77.37 171 P **P 20 41 15.1 +2.4**
SNAA Sanae 77.37 171 P **P 20 41 15.1 +2.4**
0.4nm,0.6s,baz=322,slow=4.6,SNR=7.8
PDAR Pinedale Array 78.47 313 P **P 20 41 18.5 -1.2**
PDAR Pinedale Array 78.47 313 P **P 20 41 18.5 -1.2**
0.8nm,0.8s,baz=87,slow=7.6,SNR=6.2
WUAZ Wupatki 79.29 305 *eP* **P 20 41 21.4 -2.9**
YKA Yellowknife Ar 83.49 332 P **P 20 41 45.7 0.0**
YKA Yellowknife Ar 83.49 332 P **P 20 41 45.7 0.0**
1.2nm,0.7s,baz=95,slow=5.4,SNR=30
NVAR Mina Array Bea 84.91 308 P **P 20 41 52.3 -1.5**
NVAR Mina Array Bea 84.91 308 P **P 20 41 52.3 -1.5**
1.0nm,0.7s,baz=93,slow=6.3,SNR=9.5
BVAR Borovoye Array 94.72 36 LR LR 21 30 05.8
comp=Z,31nm,18.9s,baz=79,slow=38
ILAR Eielson Array 97.20 337 P **P 20 42 50.4 -0.2**
ILAR Eielson Array 97.20 337 P **P 20 42 50.4 -0.2**
0.7nm,0.8s,baz=55,slow=4.2,SNR=9.7

IDC 19 20:32:54.4±1.8, 20°76S×67°50W, h180km±17km, mb3.4/3, mb1 3.5/7, mb1mx3.3/20, mbtmp3.4/7, Error ellipse: s-maj=21.1km s-min=16.9km az=69.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.49**	**352**	P	Pn	20 34 03.6	+1.0
	1.2nm,0.3s,baz=163,slow=6.5,SNR=28						
LPAZ				S	Sn	20 34 55.4	-0.5
	0.2nm,0.3s,baz=242,slow=19,SNR=2.4						
SIV	**San Ignacio**	**7.72**	**53**	P	Pn	20 34 44.5	+0.4
	2.5nm,0.3s,baz=252,slow=12,SNR=38						
SIV				S	Sn	20 36 09.7	-1.4
	0.6nm,0.3s,baz=92,slow=11,SNR=10						
CPUP	**Villa Florida**	**10.85**	**123**	P	Pn	20 35 24.2	-0.7
	0.8nm,0.3s,baz=271,slow=14,SNR=5.6						
BDFB	**Brasilia**	**19.19**	**78**	P	P	20 37 06.2	+1.5
	1.0nm,0.3s,baz=253,slow=8.6,SNR=7.2						
PLCA	**Paso Flores**	**20.08**	**187**	P	P	20 37 13.8	-0.2
	1.9nm,0.5s,baz=8.8,slow=12,SNR=8.1						
TORD	**Torodi Ar. Bea**	**75.86**	**70**	P	P	20 44 21.2	-0.1
	1.7nm,0.4s,baz=253,slow=5.5,SNR=35						
YKA	**Yellowknife Ar**	**90.93**	**340**	P	P	20 45 37.0	-0.2
	0.1nm,0.4s,baz=132,slow=4.8,SNR=6.7						

*ISCJB **19** 20:48:22.8±0.4, 39°.11N±0°.02×29°.02E±0°.02, h4km±3km, Error ellipse: s-maj=3.0km s-min=2.6km az=161.6*
*ISK **19** 20:48:22.7, 39°.13N×29°.03E, h5km, MD3.5*
*DDA **19** 20:48:22.4, 39°.09N×29°.04E, h8km, MD3.5*
*CSEM **19** 20:48:23.1±0.1, 39°.12N×29°.03E, h2km, MD3.5, Error ellipse: s-maj=1.4km s-min=1.4km az=42.0*
*THE **19** 20:48:24.7, 39°.09N×29°.02E, h7km±15km, ML3.1/2, Error ellipse: s-maj=15.1km s-min=0.9km az=45.0*

ISC 19 20:48:23.3±1.0, 39°.12N±0°.02×29°.03E±0°.02, h7km±9km, n149, d0°67'171, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEMI	**Demirci**	**0.25**	**253**	*i* P	**Pg**	**20 48 28.1**	**-0.2**
DEMI				*i* S	**Sg**	**20 48 31.6**	**-0.1**
DEMI	**Demirci**	**0.25**	**253**	*i* P	**Pg**	**20 48 28.1**	**-0.2**
DEMI				*i* S	**Sg**	**20 48 31.6**	**-0.1**
GDZ	**Gediz**	**0.35**	**94**	*i* P	**Pg**	**20 48 29.3**	**-1.0**
GDZ				*i* S	**Sg**	**20 48 35.1**	**+0.2**
GDZ	**Gediz**	**0.35**	**94**	*i* P	**Pg**	**20 48 29.3**	**-1.0**
GDZ				*i* S	**Sg**	**20 48 35.1**	**+0.2**
TVSB	**Tavsanli**	**0.47**	**45**	*e*PG	**Pg**	**20 48 32.3**	**-0.2**
TVSB				*e*SG	**Sg**	**20 48 38.8**	**+0.1**
TVSB	**Tavsanli**	**0.47**	**45**	*e*Pg	**Pg**	**20 48 32.3**	**-0.2**
TVSB				*e*Sg	**Sg**	**20 48 38.8**	**+0.1**
DST	**Dursunbey**	**0.58**	**327**	*e*PG	**Pg**	**20 48 34.4**	**-0.1**
DST				*e*SG	**Sg**	**20 48 41.9**	**-0.2**
DST	**Dursunbey**	**0.58**	**327**	*e*Pg	**Pg**	**20 48 34.4**	**-0.1**
DST				*e*Sg	**Sg**	**20 48 41.9**	**-0.2**
KULA	**Kula-Manisa**	**0.67**	**206**	*e*PG	**Pg**	**20 48 35.7**	**-0.4**
KULA				*e*SG	**Sg**	**20 48 44.1**	**-0.7**
KULA	**Kula-Manisa**	**0.67**	**206**	*e*Pg	**Pg**	**20 48 35.7**	**-0.4**
KULA				*e*Sg	**Sg**	**20 48 44.1**	**-0.7**
ALT	**Altintas**	**0.84**	**94**	*e*PG	**Pg**	**20 48 40.0**	**+0.5**
ALT				*e*SG	**Sg**	**20 48 51.3**	**+0.8**
ALT	**Altintas**	**0.84**	**94**	*e*Pg	**Pg**	**20 48 40.0**	**+0.5**
ALT				*e*Sg	**Sg**	**20 48 51.3**	**+0.8**
KHL	**Karahalli**	**0.88**	**154**	*e*PG	**Pg**	**20 48 40.2**	**0.0**
KHL	**Karahalli**	**0.88**	**154**	*e*Pg	**Pg**	**20 48 40.2**	**0.0**
ORLT	**Orhaneli**	**0.93**	**354**	*e*PG	**Pg**	**20 48 40.7**	**-0.5**
ORLT	**Orhaneli**	**0.93**	**354**	*e*Pg	**Pg**	**20 48 40.7**	**-0.5**
AKHS	**Akhisar**	**0.97**	**256**	*i* P	**Pg**	**20 48 42.1**	**+0.1**
AKHS				*i* S	**Sb**	**20 48 55.4**	**-0.2**
AKHS	**Akhisar**	**0.97**	**256**	*i* P	**Pg**	**20 48 42.1**	**+0.1**
AKHS				*i* S	**Sb**	**20 48 55.4**	**-0.2**
AKS	**Akhisar**	**0.98**	**256**	*e*Pg	**Pg**	**20 48 42.1**	**+0.1**
AKS	**Akhisar**	**0.98**	**256**	*e*Pg	**Pg**	**20 48 42.1**	**+0.1**
BALB	**Balikesir**	**1.03**	**301**	*e*PG	**Pb**	**20 48 43.7**	**+0.3**
BALB	**Balikesir**	**1.03**	**301**	*e*Pg	**Pb**	**20 48 43.7**	**+0.3**
CAVI	**Cavuskoy**	**1.25**	**30**	*e*PN	**Pg**	**20 48 46.6**	**-0.7**
CAVI	**Cavuskoy**	**1.25**	**30**	*e*Pn	**Pg**	**20 48 46.6**	**-0.7**
MDNY	**Mudanya-Bursa**	**1.25**	**355**	*e*PN	**Pg**	**20 48 46.5**	**-0.9**
MDNY	**Mudanya-Bursa**	**1.25**	**355**	*e*Pn	**Pg**	**20 48 46.5**	**-0.9**
KCTX	**Karacabey (Bur**	**1.26**	**336**	*e*PN	**Pg**	**20 48 47.1**	**-0.3**
KCTX	**Karacabey (Bur**	**1.26**	**336**	*e*Pn	**Pg**	**20 48 47.1**	**-0.3**
SHUT	**Suhut-Afyon**	**1.32**	**115**	*e*PN	**Pn**	**20 48 48.0**	**-0.2**
SHUT	**Suhut-Afyon**	**1.32**	**115**	*e*Pn	**Pn**	**20 48 48.0**	**-0.2**
GEMT	**Gemlik**	**1.32**	**5**	*e*PN	**Pg**	**20 48 48.8**	**+0.1**
GEMT	**Gemlik**	**1.32**	**5**	*e*Pn	**Pg**	**20 48 48.8**	**+0.1**
BORA	**Eskisehir**	**1.34**	**55**	*i* P	**Pn**	**20 48 46.8**	**-1.7**
BORA				*i* S	**Sb**	**20 49 06.3**	**+0.1**
BORA	**Eskisehir**	**1.34**	**55**	*i* P	**Pn**	**20 48 46.8**	**-1.7**
BORA				*i* S	**Sb**	**20 49 06.3**	**+0.1**
DENT	**Denizli**	**1.36**	**180**	*e*PN	**Pn**	**20 48 48.8**	**+0.1**
DENT	**Denizli**	**1.36**	**180**	*e*Pn	**Pn**	**20 48 48.8**	**+0.1**
GONE	**Gonen-Balikesi**	**1.39**	**312**	*e*PN	**Pn**	**20 48 49.6**	**+0.5**
GONE	**Gonen-Balikesi**	**1.39**	**312**	*e*Pn	**Pn**	**20 48 49.6**	**+0.5**
ARMT	**Armutlu**	**1.45**	**355**	*e*PN	**Pn**	**20 48 50.0**	**+0.1**
ARMT	**Armutlu**	**1.45**	**355**	*e*Pn	**Pn**	**20 48 50.1**	**+0.1**
ESKT	**Eskisehir**	**1.47**	**74**	*e*PN	**Pn**	**20 48 50.4**	**+0.1**
ESKT	**Eskisehir**	**1.47**	**74**	*e*Pn	**Pn**	**20 48 50.4**	**+0.1**
YLV	**Yalova**	**1.47**	**10**	*e*PN	**Pn**	**20 48 50.7**	**+0.4**
YLV	**Yalova**	**1.47**	**10**	*e*Pn	**Pn**	**20 48 50.7**	**+0.4**
BNT	**Bandirma**	**1.50**	**326**	*e*PN	**Pn**	**20 48 50.9**	**+0.3**
BNT	**Bandirma**	**1.50**	**326**	*e*Pn	**Pn**	**20 48 50.9**	**+0.3**
GPA	**Golpazari**	**1.53**	**40**	*e*PN	**Pn**	**20 48 51.1**	**+0.1**
GPA	**Golpazari**	**1.53**	**40**	*e*Pn	**Pn**	**20 48 51.2**	**+0.1**
IZM	**Izmir**	**1.56**	**243**	*e*PN	**Pn**	**20 48 51.3**	**-0.1**
IZM	**Izmir**	**1.56**	**243**	*e*Pn	**Pn**	**20 48 51.3**	**-0.1**
AYDN	**Tasoluk**	**1.71**	**212**	*i* P	**Pn**	**20 48 53.4**	**-0.1**
AYDN				*i* S	**Sb**	**20 49 17.2**	**+0.4**
AYDN	**Tasoluk**	**1.71**	**212**	*i* P	**Pn**	**20 48 53.4**	**-0.1**
AYDN				*i* S	**Sb**	**20 49 17.2**	**+0.4**
BLCB	**Balcova**	**1.72**	**245**	*e*PN	**Pn**	**20 48 53.8**	**+0.3**
BLCB	**Balcova**	**1.72**	**245**	*e*Pn	**Pn**	**20 48 53.8**	**+0.3**
BUY	**Buyukada**	**1.73**	**2**	*e*Pn	**Pn**	**20 48 53.9**	**+0.1**
GULT	**Gulveren**	**1.74**	**41**	*e*PN	**Pn**	**20 48 54.2**	**+0.2**
GULT	**Gulveren**	**1.74**	**41**	*e*Pn	**Pn**	**20 48 54.2**	**+0.2**
ISP	**Isparta**	**1.75**	**137**	*e*PN	**Pn**	**20 48 55.0**	**+0.9**
ISP	**Isparta**	**1.75**	**137**	P	**Pn**	**20 48 53.4**	**-0.7**
ISP				S	**Sn**	**20 49 14.8**	**-1.8**
ISP	**Isparta**	**1.75**	**137**	P	**Pn**	**20 48 53.4**	**-0.7**
ISP	**Isparta**	**1.75**	**137**	*e*Pn	**Pn**	**20 48 55.0**	**+0.9**
ISP				S	**Sn**	**20 49 14.8**	**-1.8**
KRBG	**Karabiga-Canak**	**1.84**	**314**	*e*PN	**Pn**	**20 48 56.0**	**+0.7**
KRBG	**Karabiga-Canak**	**1.84**	**314**	*e*Pn	**Pn**	**20 48 56.0**	**+0.7**
MRMT	**Marmara Adasi**	**1.85**	**324**	*e*PN	**Pn**	**20 48 55.7**	**+0.2**
MRMT	**Marmara Adasi**	**1.85**	**324**	*e*Pn	**Pn**	**20 48 55.7**	**+0.2**
SPNC	**Sapanca-Adapaz**	**1.85**	**32**	*e*PN	**Pn**	**20 48 55.8**	**+0.4**
SPNC	**Sapanca-Adapaz**	**1.85**	**32**	*e*Pn	**Pn**	**20 48 55.8**	**+0.4**
ISK	**Istanbul-Kandi**	**1.95**	**1**	*e*PN	**Pn**	**20 48 57.2**	**+0.5**
ISK	**Istanbul-Kandi**	**1.95**	**1**	*e*Pn	**Pn**	**20 48 57.2**	**+0.5**
SVRH	**Sivrihisar-ESK**	**1.96**	**80**	*e*PN	**Pn**	**20 48 57.3**	**+0.2**
SVRH	**Sivrihisar-ESK**	**1.96**	**80**	*e*Pn	**Pn**	**20 48 57.3**	**+0.2**
GLHS	**Glhisar (BURDU**	**1.99**	**169**	*e*PN	**Pn**	**20 48 58.0**	**+0.5**
GLHS	**Glhisar (BURDU**	**1.99**	**169**	*e*Pn	**Pn**	**20 48 58.0**	**+0.5**
BCK	**Bucak**	**2.06**	**143**	*e*PN	**Pn**	**20 48 59.0**	**+0.6**
BCK	**Bucak**	**2.06**	**143**	*e*Pn	**Pn**	**20 48 59.0**	**+0.6**
YER	**Yerkesik**	**2.06**	**197**	*e*PN	**Pn**	**20 48 58.8**	**+0.4**
YER	**Yerkesik**	**2.06**	**197**	*e*Pn	**Pn**	**20 48 58.8**	**+0.4**
MLSB	**Milas**	**2.07**	**209**	*e*PN	**Pn**	**20 48 58.9**	**+0.5**
MLSB	**Milas**	**2.07**	**209**	*e*Pn	**Pn**	**20 48 58.9**	**+0.5**
BGKT	**Bogazkoy**	**2.07**	**355**	*e*PN	**Pn**	**20 48 58.9**	**+0.5**
BGKT	**Bogazkoy**	**2.07**	**355**	*e*Pn	**Pn**	**20 48 58.9**	**+0.5**
SILT	**Sile**	**2.09**	**13**	*e*PN	**Pn**	**20 48 58.9**	**+0.2**
SILT	**Sile**	**2.09**	**13**	*e*Pn	**Pn**	**20 48 58.9**	**+0.2**
RKY	**Sarkoy-Tekirda**	**2.12**	**318**	*e*PN	**Pn**	**20 48 59.7**	**+0.6**
RKY	**Sarkoy-Tekirda**	**2.12**	**318**	*e*Pn	**Pn**	**20 48 59.7**	**+0.6**
MFT	**Murefte**	**2.14**	**322**	*e*PN	**Pn**	**20 49 00.7**	**+1.2**
MFT	**Murefte**	**2.14**	**322**	*e*Pn	**Pn**	**20 49 00.7**	**+1.2**
PRK	**Paraskevi**	**2.15**	**274**	P	**Pn**	**20 48 59.4**	**0.0**
PRK				S	**Sn**	**20 49 26.0**	**-0.3**
PRK	**Paraskevi**	**2.15**	**274**	P	**Pn**	**20 48 59.4**	**0.0**
MDUB	**Mudurnu**	**2.15**	**50**	*e*PN	**Pn**	**20 49 00.1**	**+0.4**
MDUB	**Mudurnu**	**2.15**	**50**	*e*Pn	**Pn**	**20 49 00.0**	**+0.4**
LPK	**Lapseki**	**2.15**	**306**	*e*PN	**Pn**	**20 49 00.2**	**+0.7**
LPK	**Lapseki**	**2.15**	**306**	*e*Pn	**Pn**	**20 49 00.3**	**+0.7**
CTKS	**Kestanelik-??a**	**2.15**	**349**	*e*PN	**Pn**	**20 49 00.5**	**+0.9**
CTKS	**Kestanelik-??a**	**2.15**	**349**	*e*Pn	**Pn**	**20 49 00.5**	**+0.9**
TKR	**Tekirdag**	**2.19**	**329**	*e*PN	**Pn**	**20 49 00.8**	**+0.7**
TKR	**Tekirdag**	**2.19**	**329**	*e*Pn	**Pn**	**20 49 00.8**	**+0.7**
SLVT	**Silivri**	**2.20**	**344**	*e*PN	**Pn**	**20 49 00.8**	**+0.6**
SLVT	**Silivri**	**2.20**	**344**	*e*Pn	**Pn**	**20 49 00.8**	**+0.6**
EZN	**Ezine**	**2.21**	**290**	*e*PN	**Pn**	**20 49 00.8**	**+0.5**
EZN	**Ezine**	**2.21**	**290**	*e*Pn	**Pn**	**20 49 00.8**	**+0.5**
KIZT	**Kizilcal**	**2.23**	**95**	*e*PN	**Pn**	**20 49 01.2**	**+0.4**
KIZT	**Kizilcal**	**2.23**	**95**	*e*Pn	**Pn**	**20 49 01.2**	**+0.4**
CRLT	**Corlu**	**2.24**	**334**	*e*PN	**Pn**	**20 49 01.4**	**+0.7**
CRLT	**Corlu**	**2.24**	**334**	*e*Pn	**Pn**	**20 49 01.5**	**+0.7**
GELI	**Tayfur-Gelibol**	**2.35**	**304**	*e*PN	**Pn**	**20 49 03.0**	**+0.8**
GELI	**Tayfur-Gelibol**	**2.35**	**304**	*e*Pn	**Pn**	**20 49 03.0**	**+0.8**
DALT	**Dalyan (Mudla)**	**2.36**	**188**	*e*PN	**Pn**	**20 49 03.3**	**+0.8**
DALT	**Dalyan (Mudla)**	**2.36**	**188**	*e*Pn	**Pn**	**20 49 03.3**	**+0.8**
CTYL	**Yal??k??y-??at**	**2.42**	**347**	*e*PN	**Pn**	**20 49 04.0**	**+0.7**
CTYL	**Yal??k??y-??at**	**2.42**	**347**	*e*Pn	**Pn**	**20 49 04.0**	**+0.7**
CHOS	**Chios island**	**2.44**	**254**	P	**Pn**	**20 49 03.4**	**-0.1**
CHOS				S	**Sn**	**20 49 32.3**	**-1.3**
CHOS	**Chios island**	**2.44**	**254**	P	**Pn**	**20 49 03.4**	**-0.1**
BODT	**Bodrum**	**2.46**	**214**	*e*PN	**Pn**	**20 49 04.6**	**+0.8**
BODT	**Bodrum**	**2.46**	**214**	*e*Pn	**Pn**	**20 49 04.6**	**+0.8**
ELL	**Elmali**	**2.46**	**163**	*e*PN	**Pn**	**20 49 05.0**	**+1.0**
ELL	**Elmali**	**2.46**	**163**	*e*Pn	**Pn**	**20 49 05.0**	**+1.0**
FETY	**Fethiye**	**2.48**	**179**	*e*PN	**Pn**	**20 49 04.8**	**+0.7**
FETY	**Fethiye**	**2.48**	**179**	*e*Pn	**Pn**	**20 49 04.8**	**+0.7**
ANTB	**Antalya**	**2.56**	**149**	*e*PN	**Pn**	**20 49 06.1**	**+1.0**
ANTB	**Antalya**	**2.56**	**149**	*e*Pn	**Pn**	**20 49 06.1**	**+1.0**
DAT	**Datca**	**2.65**	**206**	*e*PN	**Pn**	**20 49 07.2**	**+0.7**
DAT	**Datca**	**2.65**	**206**	*e*Pn	**Pn**	**20 49 07.2**	**+0.7**
ENEZ	**Enez**	**2.74**	**307**	*e*PN	**Pn**	**20 49 08.1**	**+0.5**
ENEZ	**Enez**	**2.74**	**307**	*e*Pn	**Pn**	**20 49 08.1**	**+0.5**
LADK	**Ladik-KONYA**	**2.77**	**108**	*e*PN	**Pn**	**20 49 08.9**	**+0.8**
LADK	**Ladik-KONYA**	**2.77**	**108**	*e*Pn	**Pn**	**20 49 08.9**	**+0.8**
KONT	**Konya--Tatoy**	**2.86**	**113**	*e*PN	**Pn**	**20 49 10.4**	**+1.0**
KONT	**Konya--Tatoy**	**2.86**	**113**	*e*Pn	**Pn**	**20 49 10.4**	**+1.0**
KDZE	**Karadeniz Ereo**	**2.87**	**39**	*e*PN	**Pn**	**20 49 10.3**	**+0.9**
KDZE	**Karadeniz Ereo**	**2.87**	**39**	*e*Pn	**Pn**	**20 49 10.3**	**+0.9**
ALN	**Alexandroupoli**	**2.90**	**309**	P	**Pn**	**20 49 10.0**	**+0.2**
ALN	**Alexandroupoli**	**2.90**	**309**	P	**Pn**	**20 49 10.0**	**+0.2**
LOD	**Lodumlu**	**2.99**	**74**	*e*PN	**Pn**	**20 49 12.1**	**+0.9**
LOD	**Lodumlu**	**2.99**	**74**	*e*Pn	**Pn**	**20 49 12.1**	**+0.9**
ANTO	**Ankara**	**3.01**	**74**	*e*PN	**Pn**	**20 49 12.7**	**+1.3**
ANTO	**Ankara**	**3.01**	**74**	*e*Pn	**Pn**	**20 49 12.7**	**+1.3**
LIA	**Limnos Island**	**3.07**	**286**	P	**Pn**	**20 49 12.7**	**+0.5**
LIA	**Limnos Island**	**3.07**	**286**	P	**Pn**	**20 49 12.7**	**+0.5**
AFSR	**Af˘ar-Bala (A**	**3.15**	**83**	*e*PN	**Pn**	**20 49 14.4**	**+1.0**
AFSR	**Af˘ar-Bala (A**	**3.15**	**83**	*e*Pn	**Pn**	**20 49 14.4**	**+1.0**
EDRB	**Edirne**	**3.23**	**328**	*e*PN	**Pn**	**20 49 15.5**	**+1.1**
EDRB	**Edirne**	**3.23**	**328**	*e*Pn	**Pn**	**20 49 15.5**	**+1.1**
APE	**Apeiranthos**	**3.43**	**235**	*e*PN	**Pn**	**20 49 18.4**	**+1.3**
APE	**Apeiranthos**	**3.43**	**235**	*e*Pn	**Pn**	**20 49 18.5**	**+1.3**
SAFT	**Safranbolu**	**3.52**	**52**	*e*PN	**Pn**	**20 49 19.0**	**+0.7**
SAFT	**Safranbolu**	**3.52**	**52**	*e*Pn	**Pn**	**20 49 19.0**	**+0.7**
CORM	**Corum**	**4.45**	**74**	*e*PN	**Pn**	**20 49 32.5**	**+1.2**
CORM	**Corum**	**4.45**	**74**	*e*Pn	**Pn**	**20 49 32.5**	**+1.2**

IDC 19 21:03:25.0±2.3, 0°68S×133°39E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.3/19, mbtmp3.5/3, ML5.3/1, Error ellipse: s-maj=117.0km s-min=26.6km az=72.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.17**	**177**	P	P	21 07 50.6	+0.4
	9.7nm,0.3s,baz=356,slow=11,SNR=1.7						
WRA				S	Sn	21 11 15.1	-12
	11nm,0.3s,baz=353,slow=24,SNR=1.6						
ASAR	**Alice Springs**	**22.86**	**179**	P	P	21 08 31.0	+0.9
	0.6nm,0.3s,baz=356,slow=12,SNR=12						
STKA	**Stephens Creek**	**31.98**	**167**	P	P	21 09 51.7	-1.3
	1.5nm,0.9s,baz=350,slow=11,SNR=3.3						
MKAR	**Makanchi Array**	**64.98**	**324**	P	P	21 14 06.9	0.0
	0.2nm,0.5s,baz=117,slow=7.1,SNR=3.8						

IDC 19 21:09:13.3±1.1, 4°17N×126°91E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/24, mbtmp3.8/7, 1D, Error ellipse: s-maj=88.4km s-min=15.0km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**4.03**	**319**	⇓*i* P	Pb	21 10 25.1	-0.1
FITZ	**Fitzroy Crossi**	**22.16**	**183**	P	P	21 14 10.8	-0.2
	2.4nm,0.5s,baz=1.7,slow=7.8,SNR=16						
WRA	**Warramunga Arr**	**25.05**	**163**	P	P	21 14 40.0	+0.5
	28nm,0.3s,baz=345,slow=11,SNR=1.6						
ASAR	**Alice Springs**	**28.49**	**166**	P	P	21 15 09.7	-0.8
	0.5nm,0.5s,baz=355,slow=8.2,SNR=11						
STKA	**Stephens Creek**	**38.47**	**160**	P	P	21 16 37.5	+0.3
	3.9nm,0.9s,baz=323,slow=10.0,SNR=5.3						
NOUC	**Port Laguerre**	**46.54**	**126**	*

1.3nm,0.8s,baz=140,slow=5.8,SNR=5.9
TORD Torodi Ar. Bea 77.03 28 P P 21 55 04.0 -0.1
2.3nm,0.7s,baz=197,slow=6.0,SNR=18
YKA Yellowknife Ar 139.69 314 PKP PKPdf 22 02 37.8 +0.3
0.2nm,0.6s,baz=130,slow=2.0,SNR=5.2
SONM Songino Array 150.47 94 PKPbc PKPbc 22 03 02.2 +0.2
0.5nm,0.9s,baz=200,slow=2.9,SNR=3.2
ILAR Eielson Array 153.19 305 PKPbc PKPbc 22 03 06.3 -1.2
0.2nm,0.6s,baz=150,slow=2.0,SNR=4.6

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*ISCJB **19** 21:43:59.3±0.3,46°40N±0°01×8°35E±0°02,h10km±2km, Error ellipse: s-maj=2.7km s-min=2.1km az=138.5*
*VIE **19** 21:43:59.3±0.5,46°40N×8°38E,h2km±2km,mb2.5/6, ML2.7/7, Error ellipse: s-maj=3.9km s-min=3.0km az=138.0 14 km ESE of Biel*
*GEN **19** 21:43:59.4,46°40N×8°46E,h0km,ML2.0*
*LDG **19** 21:44:00.3±0.1,46°38N×8°49E,h6km,Ml2.5/30, Error ellipse: s-maj=1.8km s-min=1.4km az=115.0*
*CSEM **19** 21:44:00.3±0.1,46°36N×8°45E,h10km,ML2.6/26, Error ellipse: s-maj=2.4km s-min=1.7km az=142.0*
*STR **19** 21:44:03.6±0.8,46°52N×8°43E,h5km,Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*PRU **19** 21:44:05.9,46°39N×8°65E,h11km*
ISC 19 21:44:01.4±0.7, 46°35N±0°02×8°46E±0°02, h8km±4km, n115, σ2s01/142, 14C-3D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUSIO	**Fusio**	**0.18**	**54**	*e*P	Pg	21 44 04.5	-0.7
FUSIO	852nm,0.5s			*e*S	**Sg**	**21 44 07.1**	**-0.6**
MMK	**Mattmark**	**0.46**	**229**	*e*P	Pg	21 44 09.7	-0.6
HASLI	129nm,0.6s **Hasliberg/Brie**	**0.46**	**333**	⇑*i*P	Pg	21 44 09.4	-0.9
	241nm,0.5s			*e*S	**Sg**	**21 44 15.7**	**-0.6**
BNALP	**Bannalp**	**0.52**	**358**	⇑*i*P	Pg	21 44 10.5	-1.0
BNALP	147nm,0.4s			*e*S	**Sg**	**21 44 17.3**	**-1.1**
LKBD2	**Leukerbad 2**	**0.56**	**273**	⇑*i*P	**Pg**	**21 44 11.5**	**-0.8**
LKBD	**Leukerbad**	**0.57**	**274**	⇑*i*P	**Pg**	**21 44 11.7**	**-0.8**
LKBD	143nm,0.7s			*e*S	**Sg**	**21 44 19.5**	**-0.6**
MUGIO	**Muggio**	**0.59**	**136**	*e*P	Pg	21 44 12.8	0.0
MUO	147nm,0.4s **Muotathal**	**0.63**	**11**	⇑*i*P	Pg	21 44 12.7	-0.9
WIMIS	245nm,0.6s **Wimmis**	**0.66**	**299**	⇑*i*P	**Pg**	**21 44 13.3**	**-0.7**
DIX	125nm,0.5s **Grande Dixence**	**0.78**	**250**	*e*P	Pb	21 44 15.1	-2.2
SENIN	54nm,0.4s **Lac Senin/Sane**	**0.80**	**271**	⇑*i*P	Pb	21 44 15.8	-1.9
TRAV	94nm,0.7s **Traversella**	**0.97**	**211**	P	Pb	21 44 18.5	-2.1
TRAV				S	**Sb**	**21 44 31.7**	**-1.9**
LSD	**Lago del Serru**	**1.28**	**226**	P	**Pn**	**21 44 24.3**	**-1.6**
LSD				S	**Sb**	**21 44 41.1**	**-1.6**
BBS	**Basel-Blauen**	**1.29**	**330**	Sg	**Sb**	**21 44 39.3**	**-3.4**
DAVA	**Damuels**	**1.35**	**46**	⇓*e*Pg	Pn	21 44 25.2	-1.5
DAVA	SNR=12			⇑*i*Sg	**Sn**	**21 44 44.9**	**-0.1**
DAVA	47nm,0.3s **Damuels**	**1.35**	**46**	Pg	Pn	21 44 25.2	-1.5
DAVA	SNR=12			Sg	**Sn**	**21 44 44.9**	**-0.1**
RSL	47nm,0.3s **Roselend**	**1.44**	**243**	Pg	**Pb**	**21 44 30.3**	**+1.8**
RSL				Sg	Sg	21 44 54.1	+6.5
RSL	**Roselend**	**1.44**	**243**	Pg	**Pb**	**21 44 30.3**	**+1.8**
LPG	**La Plagne**	**1.46**	**235**	*e*Pn	Pn	21 44 26.5	-1.9
LPG	**La Plagne**	**1.46**	**235**	*e*Pg	**Pn**	**21 44 28.4**	**0.0**
LPG	31nm,0.6s			*e*Sg	**Sn**	**21 44 48.4**	**+0.5**
LPG	**La Plagne**	**1.46**	**235**	*e*Pn	**Pn**	**21 44 27.1**	**-1.3**
LPG	**La Plagne**	**1.46**	**235**	*e*Pg	**Pn**	**21 44 29.6**	**+1.2**
LPG	15nm,0.6s			*e*Sg	**Sb**	**21 44 49.4**	**+1.5**
LPL	**La Plagne**	**1.46**	**236**	*e*Pn	Pn	21 44 26.3	-2.0
LPL	**La Plagne**	**1.46**	**236**	*e*Pg	**Pn**	**21 44 28.5**	**+0.2**
LPL	38nm,0.7s			*e*Sg	**Sn**	**21 44 47.8**	**0.0**
LPL	**La Plagne**	**1.46**	**236**	*e*Pn	**Pn**	**21 44 27.1**	**-1.2**
LPL	**La Plagne**	**1.46**	**236**	*e*Pg	**Pn**	**21 44 29.6**	**+1.3**
LPL	19nm,0.7s			*e*Sg	**Sb**	**21 44 49.3**	**+1.4**
RSP	**Reno Superiore**	**1.46**	**215**	P	Pn	21 44 26.1	-2.1
RSP				S	**Sn**	**21 44 44.3**	**-3.3**
LOMF	**Lomont**	**1.50**	**312**	Pg	**Pn**	**21 44 29.0**	**+0.3**
LOMF				Sg	**Sn**	**21 44 48.5**	**0.0**
FELD	**Feldberg im Sc**	**1.56**	**349**	Sg	**Sn**	**21 44 48.9**	**-1.1**
CABF	**La Chapelle**	**1.66**	**280**	*e*Pn	Pn	21 44 28.6	-2.3
CABF	**La Chapelle**	**1.66**	**280**	*e*Pg	**Pn**	**21 44 31.5**	**+0.6**
CABF	31nm,0.6s			*e*Sg	**Sn**	**21 44 52.8**	**+0.4**
CABF	**La Chapelle**	**1.66**	**280**	*e*Pn	**Pn**	**21 44 31.0**	**+0.1**
CABF	16nm,0.6s			*e*Sg	**Sg**	**21 44 55.3**	**+0.7**
FETA	**Feichten**	**1.70**	**66**	⇓*e*Pn	**Pn**	**21 44 31.3**	**-0.3**
FETA	SNR=9.6			⇑*i*Pg	**Pb**	**21 44 32.4**	**-0.6**
FETA				⇑*i*Sn	**Sn**	**21 44 54.5**	**+0.9**
FETA	**Feichten**	**1.70**	**66**	Pn	**Pn**	**21 44 31.3**	**-0.3**
MOF	SNR=9.6 **Molkenrain**	**1.75**	**329**	Pn	**Pn**	**21 44 32.2**	**0.0**
MOF	**Molkenrain**	**1.75**	**329**	Pg	**Pn**	**21 44 33.8**	**+1.6**
MOF				Sg	**Sb**	**21 44 57.4**	**+1.3**
MOF	**Molkenrain**	**1.75**	**329**	Pg	**Pn**	**21 44 33.8**	**+1.6**
MOF				Sg	**Sn**	**21 44 57.4**	**+1.3**
SPAK	**Spaichingen-Ko**	**1.77**	**7**	Pg	**Pn**	**21 44 34.0**	**+1.6**
HINF	**Hinteralfeld**	**1.83**	**324**	*e*Pn	Pn	21 44 30.5	-2.7
HINF	**Hinteralfeld**	**1.83**	**324**	*e*Pg	**Pn**	**21 44 34.5**	**+1.3**
HINF	25nm,0.7s			*e*Sg	**Sb**	**21 44 57.6**	**-0.6**
HINF	**Hinteralfeld**	**1.83**	**324**	*e*Sg	**Sb**	**21 44 59.3**	**+1.1**
MBDF	13nm,0.7s **Montbardon**	**2.01**	**217**	*e*Pn	Pn	21 44 33.9	-1.9
MBDF	**Montbardon**	**2.01**	**217**	*e*Pg	Pn	21 44 38.5	+2.7
MBDF	23nm,0.5s			*e*Sg	**Sb**	**21 45 04.8**	**+1.3**
MBDF	**Montbardon**	**2.01**	**217**	*e*Pn	**Pn**	**21 44 35.0**	**-0.8**
MBDF	12nm,0.5s			*e*Sg	**Sb**	**21 45 05.8**	**+2.3**
MOTA	**Moosalm**	**2.07**	**60**	⇑*i*Pg	**Pn**	**21 44 38.9**	**+2.3**
MOTA				⇑*i*Sn	**Sn**	**21 45 03.0**	**+0.3**
MOTA	12nm,0.6s			⇑*i*Sg	**Sb**	**21 45 08.2**	**+2.9**
MOTA	**Moosalm**	**2.07**	**60**	Pg	**Pn**	**21 44 38.9**	**+2.3**
MOTA				Sn	**Sn**	**21 45 03.0**	**+0.3**
MOTA	12nm,0.6s			Sg	**Sb**	**21 45 08.2**	**+2.9**
HAU	**Haudompre**	**2.19**	**320**	*e*Pn	Pn	21 44 35.5	-2.7
HAU	**Haudompre**	**2.19**	**320**	*e*Pg	**Pn**	**21 44 41.0**	**-0.3**
HAU	11nm,0.4s			*e*Sg	**Sb**	**21 45 08.4**	**-0.3**
HAU	**Haudompre**	**2.19**	**320**	*e*Sg	**Sb**	**21 45 10.9**	**+2.2**
CDF	5.6nm,0.4s **Champ du Feu**	**2.21**	**339**	*e*Pn	Pn	21 44 35.6	-2.9
CDF	**Champ du Feu**	**2.21**	**339**	*e*Pg	**Pn**	**21 44 41.0**	**+2.5**
CDF	8.6nm,0.5s			*e*Sg	**Sb**	**21 45 09.6**	**+0.3**
CDF	**Champ du Feu**	**2.21**	**339**	*e*Pg	**Pb**	**21 44 43.0**	**+1.3**
CDF	4.3nm,0.5s			*e*Sg	**Sb**	**21 45 10.7**	**+1.4**
ORIF	**Oris-en-Rattie**	**2.31**	**233**	*e*Pn	Pn	21 44 37.6	-2.2
ORIF	**Oris-en-Rattie**	**2.31**	**233**	*e*Pg	**Pb**	**21 44 44.0**	**+0.7**
ORIF	16nm,0.7s			*e*Sg	**Sb**	**21 45 13.6**	**+1.6**
ORIF	**Oris-en-Rattie**	**2.31**	**233**	*e*Pn	**Pn**	**21 44 39.8**	**0.0**
ORIF	8.1nm,0.7s			*e*Sg	**Sb**	**21 45 15.3**	**+3.3**
WTTA	**Wattenberg**	**2.37**	**66**	⇓*i*Pn	**Pn**	**21 44 40.0**	**-0.7**
WTTA	12nm,0.5s			⇑*i*Sg	**Sg**	**21 45 18.7**	**+1.3**
WTTA	**Wattenberg**	**2.37**	**66**	Pn	**Pn**	**21 44 40.0**	**-0.7**
WTTA	12nm,0.5s			Sg	**Sg**	**21 45 18.7**	**+1.3**
SBF	**Sospel**	**2.59**	**197**	*e*Pn	Pn	21 44 41.7	-2.0
SBF	**Sospel**	**2.59**	**197**	*e*Pg	**Pb**	**21 44 49.3**	**+1.1**
SBF				*e*Sn	**Sn**	**21 45 11.7**	**-3.7**
SBF	1.4nm,0.2s			*e*Sg	**Sb**	**21 45 23.1**	**+3.0**
SBF	**Sospel**	**2.59**	**197**	*e*Pn	**Pn**	**21 44 42.3**	**-1.4**
SBF	**Sospel**	**2.59**	**197**	*e*Pg	**Pb**	**21 44 49.2**	**+1.1**
SBF				*e*Sn	**Sn**	**21 45 12.8**	**-2.6**
SBF	0.7nm,0.2s			*e*Sg	**Sb**	**21 45 22.7**	**+2.6**
PAGF	**Fort de Pagny**	**2.88**	**321**	*e*Pn	Pn	21 44 44.9	-2.7
PAGF	**Fort de Pagny**	**2.88**	**321**	*e*Pg	**Pb**	**21 44 53.3**	**+0.3**
PAGF	1.6nm,0.5s			*e*Sg	**Sb**	**21 45 29.9**	**+1.5**
PAGF	**Fort de Pagny**	**2.88**	**321**	*e*Pg	**Pb**	**21 44 54.9**	**+1.9**
PAGF	0.8nm,0.5s			*e*Sg	**Sg**	**21 45 32.2**	**-1.7**
SFTF	**Sexfontaines**	**2.98**	**310**	*e*Pn	Pn	21 44 45.5	-3.4
SFTF	**Sexfontaines**	**2.98**	**310**	*e*Pg	**Pb**	**21 44 55.3**	**+0.7**
SFTF	6.8nm,0.5s			*e*Sg	**Sb**	**21 45 33.2**	**+2.1**
SFTF	**Sexfontaines**	**2.98**	**310**	*e*Sg	**Sg**	**21 45 35.7**	**-1.2**
VIVF	3.4nm,0.5s **Saint-Julien-l**	**3.05**	**242**	*e*Pn	Pn	21 44 47.7	-2.2
VIVF				*e*Sg	**Sb**	**21 45 36.5**	**+3.3**
VIVF	6.9nm,0.6s **Saint-Julien-l**	**3.05**	**242**	*e*Pn	**Pn**	**21 44 48.8**	**-1.1**
VIVF	3.5nm,0.6s			*e*Sg	**Sg**	**21 45 38.6**	**-0.6**
FRF	**La Foret Royal**	**3.07**	**205**	*e*Pn	**Pn**	**21 44 48.8**	**-1.4**
FRF	**La Foret Royal**	**3.07**	**205**	*e*Pg	**Pb**	**21 44 57.5**	**+1.2**
FRF	3.0nm,0.5s			*e*Sg	**Sb**	**21 45 37.4**	**+3.5**
SMRF	**Simiane la Rot**	**3.13**	**222**	*e*Pg	Pn	21 44 55.1	+4.0
MEZF	**Maizieres J'vi**	**3.16**	**314**	*e*Pn	Pn	21 44 48.6	-2.8
MEZF	**Maizieres J'vi**	**3.16**	**314**	*e*Pg	**Pb**	**21 44 58.6**	**+0.9**
MEZF	11nm,0.6s			*e*Sg	**Sb**	**21 45 38.6**	**+2.2**
MEZF	**Maizieres J'vi**	**3.16**	**314**	*e*Pg	**Pb**	**21 44 59.8**	**+2.1**
MEZF	5.3nm,0.6s			*e*Sg	**Sg**	**21 45 41.2**	**-1.6**
SMF	**Signal de Mont**	**3.20**	**277**	*e*Pn	Pn	21 44 49.3	-2.7
SMF	**Signal de Mont**	**3.20**	**277**	*e*Pg	**Pb**	**21 44 59.8**	**+1.3**
SMF	5.4nm,0.4s			*e*Sg	**Sb**	**21 45 40.9**	**+3.3**
SMF	**Signal de Mont**	**3.20**	**277**	*e*Pn	**Pn**	**21 44 50.7**	**-1.3**
SMF	2.7nm,0.4s			*e*Sg	**Sg**	**21 45 42.9**	**-1.3**
LOR	**Lormes**	**3.29**	**288**	*e*Pn	Pn	21 44 50.4	-2.8
LOR	**Lormes**	**3.29**	**288**	*e*Pg	**Pb**	**21 45 01.1**	**+1.1**
LOR	9.4nm,0.5s			*e*Sg	**Sb**	**21 45 43.3**	**+3.2**
LOR	**Lormes**	**3.29**	**288**	*e*Pn	**Pn**	**21 44 52.1**	**-1.1**
LOR	**Lormes**	**3.29**	**288**	*e*Pg	Pb	21 45 02.9	+2.9
LOR	4.7nm,0.5s			*e*Sg	**Sg**	**21 45 45.8**	**-1.1**
SSF	**Saint Saulge**	**3.48**	**284**	*e*Pn	Pn	21 44 53.4	-2.4
SSF	**Saint Saulge**	**3.48**	**284**	*e*Pg	**Pb**	**21 45 05.1**	**+1.9**
SSF	4.9nm,0.5s			*e*Sg	**Sb**	**21 45 48.8**	**+3.2**
SSF	**Saint Saulge**	**3.48**	**284**	*e*Pn	**Pn**	**21 44 54.8**	**-1.0**
SSF	**Saint Saulge**	**3.48**	**284**	*e*Pg	Pb	21 45 06.2	+3.0
SSF	2.5nm,0.5s			*e*Sg	**Sg**	**21 45 51.9**	**-1.2**
AVF	**Avril sur Loir**	**3.55**	**279**	*e*Pn	Pn	21 44 53.9	-2.8
AVF	**Avril sur Loir**	**3.55**	**279**	*e*Pg	**Pb**	**21 45 06.0**	**+1.6**
AVF	4.2nm,0.5s			*e*Sg	**Sb**	**21 45 51.6**	**+4.0**
AVF	**Avril sur Loir**	**3.55**	**279**	*e*Pn	**Pn**	**21 44 55.5**	**-1.2**
AVF	2.1nm,0.5s			*e*Sg	**Sg**	**21 45 54.1**	**-1.2**
BGF	**Bois d'Agland**	**3.88**	**275**	*e*Pn	Pn	21 44 59.0	-2.4
BGF	**Bois d'Agland**	**3.88**	**275**	*e*Pg	Pb	21 45 13.0	+2.9
BGF	6.8nm,0.4s			*e*Sg	**Sb**	**21 46 01.5**	**+4.2**
BGF	**Bois d'Agland**	**3.88**	**275**	*e*Pn	**Pn**	**21 44 59.8**	**-1.6**
BGF	3.4nm,0.4s			*e*Sg	**Sg**	**21 46 04.3**	**-1.7**
LASF	**Ste Croix**	**3.97**	**237**	*e*Pn	**Pn**	**21 45 00.9**	**-1.6**
LASF	2.3nm,0.6s			*e*Sn	**Sn**	**21 45 45.0**	**-4.3**
LASF	**Ste Croix**	**3.97**	**237**	*e*Pn	**Pn**	**21 45 01.3**	**-1.2**
LASF	1.1nm,0.6s			*e*Sn	**Sn**	**21 45 46.4**	**-2.9**
TCF	**Toulx Ste Croi**	**4.33**	**271**	*e*P	**Pn**	**21 45 08.6**	**+1.1**
TCF	4.3nm,0.7s			*e*Sg	**Sg**	**21 46 16.2**	**-4.1**
TCF	**Toulx Ste Croi**	**4.33**	**271**	*e*Pn	**Pn**	**21 45 06.3**	**-1.2**
TCF	2.2nm,0.7s			*e*Sg	**Sg**	**21 46 18.7**	**-1.6**
KHC	**Kasperske Hory**	**4.44**	**49**	*e*PN	**Pn**	**21 45 10.0**	**+1.0**
KHC				*e*PG	Pb	21 45 23.4	+3.9
KHC				*e*SN	**Sn**	**21 46 00.1**	**-0.7**
KHC				*e*SG	**Sg**	**21 46 22.9**	**-0.9**
KHC	**Kasperske Hory**	**4.44**	**49**	Pn	**Pn**	**21 45 10.0**	**+1.0**
GIVF	**Givet**	**4.47**	**328**	*e*Sn	Sn	21 45 55.2	-6.4
GIVF	1.4nm,0.2s **Givet**	**4.47**	**328**	*e*Sn	**Sn**	**21 45 57.4**	**-4.2**
BAIF	0.7nm,0.2s **Baives**	**4.67**	**324**	*e*Pn	Pn	21 45 09.1	-3.1
BAIF				*e*Sn	Sn	21 46 00.0	-6.6
BAIF	0.6nm,0.3s **Baives**	**4.67**	**324**	*e*Sn	**Sn**	**21 46 02.2**	**-4.4**
CAF	0.3nm,0.3s **Calviac**	**4.70**	**255**	*e*Pn	Pn	21 45 10.6	-2.1
CAF				*e*Sn	**Sn**	**21 46 02.5**	**-4.9**
CAF	1.0nm,0.4s **Calviac**	**4.70**	**255**	*e*Pn	**Pn**	**21 45 11.5**	**-1.2**
CAF	0.5nm,0.4s			*e*Sn	**Sn**	**21 46 04.3**	**-3.1**
NKC	**Novy Kostel**	**4.71**	**33**	*e*PN	Pn	21 45 16.5	+3.8
NKC				*e*SG	**Sg**	**21 46 31.5**	**-1.1**
NKC	**Novy Kostel**	**4.71**	**33**	Sg	**Sg**	**21 46 31.5**	**-1.1**
RJF	**Les Rejaudoux**	**4.96**	**260**	*e*Pn	**Pn**	**21 45 14.3**	**-1.9**
RJF	0.6nm,0.3s			*e*Sn	**Sn**	**21 46 08.2**	**-5.6**
RJF	**Les Rejaudoux**	**4.96**	**260**	*e*Pn	**Pn**	**21 45 14.8**	**-1.4**
RJF	0.3nm,0.3s			*e*Sn	**Sn**	**21 46 10.2**	**-3.6**
MTLF	**Montolieu**	**5.36**	**238**	*e*Pn	Pn	21 45 18.8	-2.9
MTLF				*e*Sn	Sn	21 46 17.7	-5.9
MTLF	0.3nm,0.2s **Montolieu**	**5.36**	**238**	*e*Pn	**Pn**	**21 45 20.2**	**-1.5**
PRU	**Pruhonice**	**5.46**	**46**	*e*SG	**Sg**	**21 46 56.9**	**+0.3**
PRU	**Pruhonice**	**5.46**	**46**	Sg	**Sg**	**21 46 56.9**	**+0.3**
LFF	**La Frestale**	**5.59**	**258**	*e*Pn	Pn	21 45 22.6	-2.2
LFF	1.4nm,0.4s			*e*Sn	**Sn**	**21 46 23.7**	**-5.5**
LFF	**La Frestale**	**5.59**	**258**	*e*Pn	Pn	21 45 22.6	-2.2
LFF	0.7nm,0.4s			*e*Sn	**Sn**	**21 46 25.4**	**-3.8**
CLL	**Collm**	**5.80**	**30**	*e*Sg	**Sg**	**21 47 05.0**	**-2.4**

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*ISCJB **19** 21:50:17.9±0.6,54°86N±0°04×165°68E±0°05,h20km, mb3.1/2, Error ellipse: s-maj=6.0km s-min=3.9km az=154.6*
*IDC **19** 21:50:17.0±1.6,55°07N×165°73E,h0km,mb3.2/2, mb1 3.6/4,mb1mx3.2/29,mbtmp3.3/4,ML3.0/2, Error ellipse: s-maj=29.7km s-min=17.4km az=21.0*
*KRSC **19** 21:50:20.0±0.2,54°97N×165°64E,h25km±15km,ML3.8*
ISC 19 21:50:18.8±0.9, 54°91N±0°06×165°70E±0°05, h20km, n24, σ1s61/39, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.33**	**28**	P	**Pb**	**21 50 25.9**	**-0.1**
BKI				S	**Sb**	**21 50 30.2**	**-0.7**
MKZ	**Mys Kozlova**	**2.33**	**263**	P	**Pn**	**21 50 57.0**	**+1.0**
MKZ				S	**Sn**	**21 51 23.1**	**-0.9**
BZGR	**Bezymyannyi-Gr**	**3.03**	**292**	P	**Pb**	**21 51 09.1**	**-3.1**
BZGR				S	**Sn**	**21 51 43.6**	**+2.1**
BZWR	**Bezymyannyi-We**	**3.15**	**292**	P	**Pn**	**21 51 08.4**	**+1.0**
BZWR				S	**Sn**	**21 51 43.9**	**-0.5**
KLY	**Klyuchi**	**3.19**	**298**	P	**Pn**	**21 51 08.0**	**+0.2**
KLY				S	**Sn**	**21 51 42.6**	**-2.6**
KRSR	**Krestovskiy**	**3.20**	**296**	S	**Sn**	**21 51 46.1**	**+0.6**
TUMR	**Tumrok**	**3.21**	**279**	P	**Pn**	**21 51 09.5**	**+1.2**
KIRR	**Kirishev**	**3.23**	**291**	S	**Sn**	**21 51 47.5**	**+1.1**
KMNR	**Kamenistaya**	**3.23**	**287**	P	**Pn**	**21 51 10.4**	**+1.9**
KMNR				S	**Sn**	**21 51 47.7**	**+1.2**
KPT	**Kopyto**	**3.30**	**291**	S	**Sn**	**21 51 49.3**	**+1.3**
SRDR	**Sredinnyy**	**3.67**	**295**	S	**Sn**	**21 51 56.9**	**-0.4**
SPN	**Mys Shipunski**	**3.81**	**244**	S	**Sn**	**21 51 59.6**	**-1.0**
SDLR	**Sedlovina**	**4.34**	**251**	P	**Pn**	**21 51 25.8**	**+2.1**
SDLR				S	**Sn**	**21 52 12.9**	**-0.7**
SMAR	**Somma**	**4.39**	**251**	P	**Pn**	**21 51 26.8**	**+2.3**
SMAR				S	**Sn**	**21 52 14.5**	**-0.5**
UGLR	**Uglovaya**	**4.40**	**250**	P	**Pn**	**21 51 26.4**	**+1.9**
UGLR				S	**Sn**	**21 52 13.9**	**-1.3**
KRER	**Koryakskii**	**4.40**	**251**	P	**Pn**	**21 51 27.2**	**+2.6**
KRER				S	**Sn**	**21 52 14.5**	**-0.8**
AVH	**Avacha**	**4.42**	**251**	P	**Pn**	**21 51 27.5**	**+2.7**
AVH				S	**Sn**	**21 52 15.5**	**-0.2**
KOK	**Koryaka**	**4.47**	**252**	P	**Pn**	**21 51 28.0**	**+2.6**
FX1	**Attu Island--F**	**4.86**	**112**	Pn	**Pn**	**21 51 30.6**	**-0.2**
FX1	1.8nm,0.3s,baz=306,slow=19,SNR=7.0			Sn	**Sn**	**21 52 24.6**	**-1.7**
RUS	2.4nm,0.3s,baz=174,slow=18,SNR=3.9 **Russkaya**	**4.94**	**243**	P	**Pn**	**21 51 33.6**	**+1.7**
RUS				S	**Sn**	**21 52 28.1**	**-0.3**
PETK	**Petropavlovsk-**	**5.05**	**252**	Pn	**Pn**	**21 51 35.3**	**+1.9**
PETK	0.8nm,0.3s,baz=73,slow=18,SNR=8.0			Sn	**Sn**	**21 52 32.8**	**+1.5**
MTVR	0.7nm,0.3s,baz=67,slow=30,SNR=3.8 **Mutnovka**	**5.09**	**244**	P	**Pn**	**21 51 36.3**	**+2.3**
MTVR				S	**Sn**	**21 52 30.7**	**-1.5**
ILAR	**Eielson Array**	**25.16**	**48**	P	**P**	**21 55 41.4**	**-0.9**
YKA	0.5nm,0.7s,baz=250,slow=8.1,SNR=8.6 **Yellowknife Ar**	**39.55**	**46**	P	**P**	**21 57 48.9**	**+1.1**
	0.1nm,0.3s,baz=298,slow=7.7,SNR=3.6						

IDC 19 21:56:01.3±2.2, 72°07N×3°57E, h0km, mb3.4/5, mb1 3.7/11, mb1mx3.4/33, mbtmp3.6/11, ML3.0/5, MS3.3/16, Ms1 3.3/16, ms1mx3.1/39, Error ellipse: s-maj=37.1km s-min=22.6km az=152.0, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**3.99**	**260**	LR	LR	21 58 12.7	
ARCES	comp=Z,327nm,18.7s,baz=354,slow=33 **ARCESS Array B**	**7.64**	**99**	Pn	Pn	21 57 53.1	-0.6
ARCES	0.2nm,0.3s,baz=311,slow=13,SNR=6.5			LR	LR	22 01 01.6	
NOA	comp=Z,104nm,18.6s,baz=54,slow=39 **NORSAR Array B**	**11.47**	**161**	Pn	Pn	21 58 47.0	+0.8
NOA	0.1nm,0.3s,baz=346,slow=12,SNR=3.7			LR	LR	22 02 33.9	
BORG	comp=Z,75nm,20.8s,baz=350,slow=34 **Borgarnes**	**11.64**	**243**	Pn	Pn	21 58 50.1	+1.7
HFS	1.5nm,0.3s,baz=340,slow=13,SNR=7.6 **Hagfors**	**12.63**	**156**	Pn	Pn	21 59 02.6	+0.6
HFS	0.2nm,0.3s,baz=354,slow=12,SNR=8.5			LR	LR	22 03 45.8	
FINES	comp=Z,124nm,19.0s,baz=17,slow=37 **FINESS Array B**	**13.74**	**129**	Pn	Pn	21 59 17.0	0.0
EKA	0.1nm,0.3s,baz=343,slow=13,SNR=2.8 **Eskdalemuir Ar**	**17.04**	**193**	P	Pn	21 59 59.9	-0.7
SFJD	baz=8.5,slow=12,SNR=4.7 **Kangerlussuaq**	**19.00**	**282**	LR	LR	22 06 29.3	
VRAC	comp=Z,144nm,18.7s,baz=73,slow=33 **Vranov**	**23.59**	**158**	LR	LR	22 11 09.8	
GERES	comp=Z,47nm,18.1s,baz=227,slow=38 **GERESS Array B**	**23.76**	**163**	P	P	22 01 16.1	+1.1
GERES	0.6nm,0.7s,baz=346,slow=9.6,SNR=4.4			LR	LR	22 10 49.9	
AKASG	comp=Z,44nm,20.0s,baz=262,slow=37 **Malin Array Be**	**24.30**	**138**	P	P	22 01 21.1	+1.1
RES	0.3nm,0.4s,baz=345,slow=9.9,SNR=3.5 **Resolute Bay**	**25.25**	**322**	LR	LR	22 10 59.3	
DAVOX	comp=Z,114nm,19.5s,baz=140,slow=36 **Davos/Dischmat**	**25.54**	**170**	LR	LR	22 12 06.4	
MLR	comp=Z,70nm,18.6s,baz=325,slow=38 **Muntele Rosu**	**28.68**	**146**	LR		22 13 58.3	
KBZ	comp=Z,31nm,18.0s,baz=124,slow=38 **Khabaz**	**34.04**	**125**	LR		22 16 50.0	
KSRS	comp=Z,100nm,20.8s,baz=140,slow=37 **Korea Array**	**64.11**	**47**	LR	LR	22 39 57.7	
TXAR	comp=Z,19nm,18.9s,baz=295,slow=41 **Lajitas Array**	**67.47**	**295**	LR	LR	22 37 43.2	
	comp=Z,65nm,18.1s,baz=0.0,slow=37						

IDC 19 22:02:58.8±1.1, 15°88S×176°22W, h0km, mb4.2/3, mb1 4.5/3, mb1mx3.8/18, mbtmp4.2/3, Error ellipse: s-maj=46.8km s-min=29.7km az=123.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.09**	**257**	P	P	22 11 32.1	-0.8
ASAR	6.9nm,0.3s,baz=91,slow=6.9,SNR=2.0 **Alice Springs**	**47.38**	**252**	P	P	22 11 35.8	+0.7
VNDA	6.2nm,0.5s,baz=85,slow=8.3,SNR=177 **Vanda**	**62.64**	**185**	P	P	22 13 24.8	+0.2
ILAR	2.8nm,1.0s,baz=0.7,slow=5.3 **Eielson Array**	**83.46**	**12**	P	P	22 15 29.3	+1.4
ARCES	0.7nm,0.8s,baz=231,slow=6.0,SNR=6.1 **ARCESS Array B**	**124.68**	**351**	PKP	PKPdf	22 21 58.8	-1.0
BRTR	5.0nm,1.1s,baz=321,slow=1.6,SNR=3.6 **Keskin Array B**	**144.76**	**318**	PKP	PKPab	22 22 35.3	-1.7
GERES	0.6nm,0.9s,baz=108,slow=4.0,SNR=4.6 **GERESS Array B**	**146.13**	**348**	PKPbc	PKPdf	22 22 39.5	-0.7
DAVOX	0.1nm,0.3s,baz=45,slow=5.8,SNR=4.0 **Davos/Dischmat**	**148.77**	**352**	PKPbc	PKPbc	22 22 47.8	-0.7
	1.2nm,0.6s,baz=56,slow=5.4,SNR=3.5						

IDC 19 22:12:43.5±2.4, 2°89N×127°37E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.5/23, mbtmp3.7/3, Error ellipse: s-maj=183.1km s-min=27.1km az=67.0, Northern Molucca Sea

MI1.7/4, Error ellipse: s-maj=5.5km s-min=3.0km az=94.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.09**	**143**	Pg	Pg	22 21 37.1	+0.5
AQU				Sg	Sg	22 21 38.4	-0.3
	539nm,0.3s						
AQU	**L'Aquila**	**0.09**	**143**	Pg	Pg	22 21 37.1	+0.5
AQU				Sg	Sg	22 21 38.4	-0.3
	539nm,0.3s						
CAMP	**Campotosto**	**0.12**	**30**	Pg	Pb	22 21 38.2	+0.1
CAMP				Sg	Sg	22 21 39.9	+0.4
	83nm,0.3s						
CAMP	**Campotosto**	**0.12**	**30**	Pg	Pb	22 21 38.2	+0.1
CAMP				Sg	Sg	22 21 39.9	+0.4
	83nm,0.3s						
FAGN	**Fagnano**	**0.25**	**130**	Pg	Pg	22 21 38.9	-0.1
	161nm,0.3s						
FAGN	**Fagnano**	**0.25**	**130**	Pg	Pg	22 21 38.9	-0.1
	161nm,0.3s						
TERO	**Teramo**	**0.28**	**46**	Pg	Pb	22 21 40.5	-0.2
TERO				Sg	Sg	22 21 44.1	+0.5
	37nm,0.1s						
TERO	**Teramo**	**0.28**	**46**	Pg	Pb	22 21 40.5	-0.2
TERO				Sg	Sg	22 21 44.1	+0.5
	37nm,0.1s						
PTQR	**Pietraquaria**	**0.41**	**172**	Pg	Pb	22 21 42.6	-0.3
	3.0nm,0.2s						
PTQR	**Pietraquaria**	**0.41**	**172**	Pg	Pb	22 21 42.6	-0.3
	3.0nm,0.2s						
NRCA	**Norcia**	**0.43**	**339**	Pg	Pg	22 21 42.6	+0.2
NRCA				Sg	Sg	22 21 48.0	-0.3
NRCA	**Norcia**	**0.43**	**339**	Pg	Pg	22 21 42.6	+0.2
NRCA				Sg	Sg	22 21 48.0	-0.3

*ISCJB **19** 22:24:11.5±0.5, 37.83N±0.02×27.55E±0.03, h2km±5km, Error ellipse: s-maj=5.0km s-min=2.9km az=144.1*
*ISK **19** 22:24:11.5, 37.83N×27.54E, h5km, MD3.3*
*DDA **19** 22:24:11.3, 37.83N×27.54E, h7km, MD3.2*
*CSEM **19** 22:24:12.1±0.1, 37.82N×27.56E, h2km, MD3.2, Error ellipse: s-maj=3.6km s-min=3.0km az=52.0*

ISC 19 22:24:11.4±1.0, 37.83N±0.02×27.55E±0.02, h8km±9km, n88, σ1§34/107, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.28**	**243**	*i* P	**Pg**	**22 24 17.2**	**+0.2**
GCAM				*i* S	**Sg**	**22 24 20.8**	**0.0**
GCAM	**G?zelcaml?**	**0.28**	**243**	*i* P	**Pg**	**22 24 17.2**	**+0.2**
GCAM				*i* S	**Sg**	**22 24 20.8**	**0.0**
AYDN	**Tasoluk**	**0.31**	**122**	*i* P	**Pb**	**22 24 18.6**	**-0.7**
AYDN				*i* S	**Sg**	**22 24 22.2**	**+0.5**
AYDN	**Tasoluk**	**0.31**	**122**	*i* P	**Pb**	**22 24 18.6**	**-0.7**
AYDN				*i* S	**Sg**	**22 24 22.2**	**+0.5**
MLSB	**Milas**	**0.56**	**161**	*e*PG	**Pb**	**22 24 22.9**	**-0.6**
IZM	**Izmir**	**0.61**	**338**	*e*PG	**Pb**	**22 24 23.6**	**-0.9**
IZM				*e*SG	**Sg**	**22 24 31.6**	**+0.3**
IZM	**Izmir**	**0.61**	**338**	*e*Pg	**Pb**	**22 24 23.6**	**-0.9**
IZM				*e*Sg	**Sg**	**22 24 31.6**	**+0.3**
BLCB	**Balcova**	**0.69**	**324**	*e*PG	**Pb**	**22 24 25.3**	**-0.4**
BLCB				*e*SG	**Sg**	**22 24 32.9**	**-0.7**
BLCB	**Balcova**	**0.69**	**324**	*e*Pg	**Pb**	**22 24 25.3**	**-0.4**
BLCB				*e*Sg	**Sg**	**22 24 32.9**	**-0.7**
BODT	**Bodrum**	**0.79**	**194**	*e*PG	**Pb**	**22 24 27.0**	**-0.4**
BODT	**Bodrum**	**0.79**	**194**	*e*Pg	**Pb**	**22 24 27.0**	**-0.4**
YER	**Yerkesik**	**0.90**	**140**	*e*PG	**Pb**	**22 24 29.8**	**+0.4**
YER				*e*SG	**Sb**	**22 24 42.4**	**+0.8**
URLA	**Izmir**	**0.92**	**306**	*i* P	**Pb**	**22 24 29.3**	**-0.4**
URLA				*i* S	**Sb**	**22 24 41.8**	**-0.4**
URLA	**Izmir**	**0.92**	**306**	*i* P	**Pb**	**22 24 29.3**	**-0.4**
URLA				*i* S	**Sb**	**22 24 41.8**	**-0.4**
AKHS	**Akhisar**	**1.07**	**11**	*i* P	**Pg**	**22 24 31.5**	**-0.5**
AKHS				*i* S	**Sn**	**22 24 47.6**	**-0.3**
AKHS	**Akhisar**	**1.07**	**11**	*i* P	**Pg**	**22 24 31.5**	**-0.5**
AKHS				*i* S	**Sn**	**22 24 47.6**	**-0.3**
AKS	**Akhisar**	**1.07**	**11**	*e*PG	**Pn**	**22 24 32.5**	**-0.3**
AKS	**Akhisar**	**1.07**	**11**	*e*Pg	**Pn**	**22 24 32.5**	**-0.3**
DAT	**Datca**	**1.10**	**179**	*e*PN	**Pn**	**22 24 33.0**	**-0.2**
DAT	**Datca**	**1.10**	**179**	*e*Pn	**Pn**	**22 24 33.0**	**-0.2**
KULA	**Kula-Manisa**	**1.11**	**52**	*e*PN	**Pb**	**22 24 32.8**	**-0.2**
KULA	**Kula-Manisa**	**1.11**	**52**	*e*Pn	**Pb**	**22 24 32.8**	**-0.2**
DENT	**Denizli**	**1.18**	**93**	*e*PN	**Pn**	**22 24 34.5**	**+0.2**
DNZL	**Cakiroluk**	**1.19**	**96**	*i* P	**Pn**	**22 24 35.1**	**+0.5**
DNZL				*i* S	**Sn**	**22 24 51.1**	**0.0**
DNZL	**Cakiroluk**	**1.19**	**96**	*i* P	**Pn**	**22 24 35.1**	**+0.5**
DNZL				*i* S	**Sn**	**22 24 51.1**	**0.0**
TURN	**Turunc**	**1.27**	**138**	*i* P	**Pn**	**22 24 33.3**	**-2.2**
TURN				*i* S	**Sb**	**22 24 50.7**	**-1.4**
DALT	**Dalyan (Mudla)**	**1.37**	**140**	*e*PN	**Pg**	**22 24 37.4**	**-0.2**
DEMI	**Demirci**	**1.52**	**37**	*i* P	**Pb**	**22 24 40.0**	**0.0**
DEMI				*i* S	**Sn**	**22 24 57.8**	**-1.2**
DEMI	**Demirci**	**1.52**	**37**	*i* P	**Pb**	**22 24 40.0**	**0.0**
KHAL	**Karahalli**	**1.62**	**70**	*i* P	**Pn**	**22 24 40.0**	**-0.5**
KHAL				*i* S	**Sb**	**22 25 02.3**	**-0.1**
KHAL	**Karahalli**	**1.62**	**70**	*i* P	**Pn**	**22 24 40.0**	**-0.5**
KHAL				*i* S	**Sb**	**22 25 02.3**	**-0.1**
KHL	**Karahalli**	**1.63**	**72**	*e*PN	**Pb**	**22 24 41.8**	**-0.1**
KHL	**Karahalli**	**1.63**	**72**	*e*Pn	**Pb**	**22 24 41.8**	**-0.1**
GLHS	**Glhisar (BURDU**	**1.69**	**113**	*e*PN	**Pb**	**22 24 42.4**	**-0.4**
FETY	**Fethiye**	**1.71**	**134**	*e*PN	**Pb**	**22 24 42.7**	**-0.4**
APE	**Apeiranthos**	**1.78**	**245**	*e*PN	**Pg**	**22 24 45.5**	**0.0**
APE	**Apeiranthos**	**1.78**	**245**	*e*Pn	**Pg**	**22 24 45.5**	**0.0**
DST	**Dursunbey**	**1.96**	**25**	*e*PN	**Pb**	**22 24 46.1**	**-1.4**
DST	**Dursunbey**	**1.96**	**25**	*e*Pn	**Pb**	**22 24 46.1**	**-1.4**
ELL	**Elmali**	**2.17**	**119**	*e*PN	**Pn**	**22 24 49.2**	**+1.3**
TVSB	**Tavsanli**	**2.21**	**42**	*e*PN	**Pb**	**22 24 49.8**	**-1.8**
TVSB	**Tavsanli**	**2.21**	**42**	*e*Pn	**Pb**	**22 24 49.8**	**-1.8**
GONE	**Gonen-Balikesi**	**2.22**	**3**	*e*PN	**Pb**	**22 24 50.4**	**-1.4**
GONE	**Gonen-Balikesi**	**2.22**	**3**	*e*Pn	**Pb**	**22 24 50.4**	**-1.4**
ISP	**Isparta**	**2.35**	**89**	*e*PN	**Pn**	**22 24 52.1**	**+1.6**
ISP	**Isparta**	**2.35**	**89**	*e*Pn	**Pn**	**22 24 52.1**	**+1.6**
ALT	**Altintas**	**2.35**	**58**	*e*PN	**Pn**	**22 24 52.0**	**+1.5**
ALT	**Altintas**	**2.35**	**58**	*e*Pn	**Pn**	**22 24 52.0**	**+1.5**
BCK	**Bucak**	**2.44**	**98**	*e*PN	**Pn**	**22 24 53.0**	**+1.3**
ORLT	**Orhaneli**	**2.45**	**25**	*e*PN	**Pb**	**22 24 53.5**	**-2.3**
ORLT	**Orhaneli**	**2.45**	**25**	*e*Pn	**Pb**	**22 24 53.5**	**-2.3**
KCTX	**Karacabey (Bur**	**2.51**	**14**	*e*PN	**Pn**	**22 24 53.9**	**+1.3**
KCTX	**Karacabey (Bur**	**2.51**	**14**	*e*Pn	**Pn**	**22 24 53.9**	**+1.3**
BNT	**Bandirma**	**2.54**	**6**	*e*PN	**Pn**	**22 24 54.6**	**+1.6**
BNT	**Bandirma**	**2.54**	**6**	*e*Pn	**Pn**	**22 24 54.6**	**+1.6**
KRBG	**Karabiga-Canak**	**2.57**	**356**	*e*PN	**Pn**	**22 24 55.1**	**+1.8**
KRBG	**Karabiga-Canak**	**2.57**	**356**	*e*Pn	**Pn**	**22 24 55.1**	**+1.8**
LPK	**Lapseki**	**2.62**	**347**	*e*PN	**Pn**	**22 24 55.5**	**+1.5**
LPK	**Lapseki**	**2.62**	**347**	*e*Pn	**Pn**	**22 24 55.5**	**+1.5**
GELI	**Tayfur-Gelibol**	**2.70**	**342**	*e*PN	**Pn**	**22 24 57.0**	**+1.9**
GELI	**Tayfur-Gelibol**	**2.70**	**342**	*e*Pn	**Pn**	**22 24 57.0**	**+1.9**
MDNY	**Mudanya-Bursa**	**2.74**	**22**	*e*PN	**Pn**	**22 24 57.4**	**+1.7**
MDNY	**Mudanya-Bursa**	**2.74**	**22**	*e*Pn	**Pn**	**22 24 57.4**	**+1.7**
MRMT	**Marmara Adasi**	**2.77**	**1**	*e*PN	**Pn**	**22 24 58.1**	**+1.9**
MRMT	**Marmara Adasi**	**2.77**	**1**	*e*Pn	**Pn**	**22 24 58.1**	**+1.9**
RKY	**Sarkoy-Tekirda**	**2.87**	**354**	*e*PN	**Pn**	**22 24 59.4**	**+1.8**
RKY	**Sarkoy-Tekirda**	**2.87**	**354**	*e*Pn	**Pn**	**22 24 59.4**	**+1.8**
GEMT	**Gemlik**	**2.90**	**26**	*e*PN	**Pn**	**22 24 59.6**	**+1.7**
GEMT	**Gemlik**	**2.90**	**26**	*e*Pn	**Pn**	**22 24 59.6**	**+1.7**
ARMT	**Armutlu**	**2.92**	**20**	*e*PN	**Pn**	**22 25 00.1**	**+1.9**
ARMT	**Armutlu**	**2.92**	**20**	*e*Pn	**Pn**	**22 25 00.1**	**+1.9**
MFT	**Murefte**	**2.96**	**356**	*e*PN	**Pn**	**22 25 00.8**	**+1.9**
MFT	**Murefte**	**2.96**	**356**	*e*Pn	**Pn**	**22 25 00.8**	**+1.9**
YLV	**Yalova**	**3.08**	**27**	*e*PN	**Pn**	**22 25 02.9**	**+2.5**
YLV	**Yalova**	**3.08**	**27**	*e*Pn	**Pn**	**22 25 02.9**	**+2.5**
ENEZ	**Enez**	**3.10**	**340**	*e*PN	**Pn**	**22 25 02.7**	**+2.0**
ENEZ	**Enez**	**3.10**	**340**	*e*Pn	**Pn**	**22 25 02.7**	**+2.0**
BUY	**Buyukada**	**3.26**	**21**	*e*Pn	**Pn**	**22 25 04.9**	**+2.1**
CRLT	**Corlu**	**3.30**	**2**	*e*PN	**Pn**	**22 25 05.4**	**+2.0**
CRLT	**Corlu**	**3.30**	**2**	*e*Pn	**Pn**	**22 25 05.4**	**+2.0**
GULT	**Gulveren**	**3.48**	**41**	*e*PN	**Pn**	**22 25 08.0**	**+2.1**
GULT	**Gulveren**	**3.48**	**41**	*e*Pn	**Pn**	**22 25 08.0**	**+2.1**
CTKS	**Kestanelik-??a**	**3.48**	**12**	*e*PN	**Pn**	**22 25 07.9**	**+2.0**
CTKS	**Kestanelik-??a**	**3.48**	**12**	*e*Pn	**Pn**	**22 25 07.9**	**+2.0**
KIZT	**Kizilcal**	**3.56**	**72**	*e*PN	**Pn**	**22 25 09.2**	**+2.1**
KIZT	**Kizilcal**	**3.56**	**72**	*e*Pn	**Pn**	**22 25 09.2**	**+2.1**
MDUB	**Mudurnu**	**3.87**	**46**	*e*PN	**Pn**	**22 25 13.4**	**+2.0**
MDUB	**Mudurnu**	**3.87**	**46**	*e*Pn	**Pn**	**22 25 13.4**	**+2.0**

*ISCJB **19** 22:25:39.4±0.6, 5.20N±0.08×94.63E±0.06, h50km, mb3.7/11, Error ellipse: s-maj=13.2km s-min=6.5km az=34.7*

*IDC **19** 22:25:41.9±4.7, 5.22N×94.73E, h56km±41km, mb3.5/10, mb1 3.6/11, mb1mx3.4/29, mbtmp3.5/11, ML3.4/1, Error ellipse: s-maj=55.4km s-min=15.9km az=54.0*
*DJA **19** 22:25:42.3±2.6, 5.7N±16.9×95.2E±2.2, h26km±12km, M3.8/5, mb4.0/2, MLv3.7/5*

ISC 19 22:25:41.4±0.8, 5.27N±0.09×94.70E±0.09, h50km, n19, σ0§86/23, mb3.7/11, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**0.64**	**70**	P	**Pn**	**22 25 54.5**	**+0.1**
BSI				S	**Sn**	**22 26 03.2**	**-0.5**
MLSI	**Meulaboh, Aceh**	**1.97**	**120**	P	**Pn**	**22 26 12.8**	**+0.4**
LHMI	**Lhok Sumawe**	**2.24**	**91**	P	**Pn**	**22 26 16.9**	**+0.8**
KCSI	**Kotacane, Aceh**	**3.53**	**119**	P	**Pn**	**22 26 34.2**	**+0.5**
PSI	**Prapat**	**4.88**	**120**	P	**Pn**	**22 26 53.0**	**+0.6**
PSI	**Prapat**	**4.88**	**120**	P	**Pn**	**22 26 54.4**	**+2.0**
	1.4nm,0.3s,baz=343,slow=17,SNR=3.9						
PSI				S	**Sn**	**22 27 48.2**	**+0.5**
	1.8nm,0.3s,baz=208,slow=6.7,SNR=2.4						
IPM	**Ipoh**	**6.36**	**97**	P	**Pn**	**22 27 12.0**	**-0.6**
	12nm,1.2s,0.0nm						
MNSI	**Mandailing Nat**	**6.60**	**132**	P	**Pn**	**22 27 14.7**	**-1.2**
AAK	**Ala-Archa**	**41.30**	**337**	P	**P**	**22 33 23.2**	**+0.9**
	0.6nm,0.4s,baz=90,slow=5.1,SNR=5.3						
MKAR	**Makanchi Array**	**42.73**	**347**	P	**P**	**22 33 33.8**	**+0.2**
	0.4nm,0.4s,baz=165,slow=7.5,SNR=10						
MKAR				PcP	**PcP**	**22 35 25.1**	**+0.6**
	0.1nm,0.4s,baz=176,slow=3.0,SNR=3.3						
SONM	**Songino Array**	**43.58**	**11**	P	**P**	**22 33 40.1**	**-0.5**
	0.2nm,0.5s,baz=199,slow=8.2,SNR=4.4						
SONM				PcP	**PcP**	**22 35 27.8**	**+0.2**
	0.2nm,0.5s,baz=186,slow=2.9,SNR=3.3						
WRA	**Warramunga Arr**	**46.34**	**124**	P	**P**	**22 34 02.0**	**-0.8**
	0.9nm,0.6s,baz=303,slow=9.2,SNR=11						
KURBB	**Kurchatov Arra**	**47.19**	**346**	P	**P**	**22 34 09.7**	**+0.7**
	1.1nm,0.6s,baz=166,slow=7.1,SNR=18						
ASAR	**Alice Springs**	**47.85**	**129**	P	**P**	**22 34 13.8**	**-0.8**
	0.5nm,0.5s,baz=297,slow=8.1,SNR=7.8						
ZALV	**Zalesovo Beam**	**49.19**	**352**	P	**P**	**22 34 24.4**	**0.0**
	1.4nm,0.4s,baz=180,slow=7.1,SNR=13						
BVAR	**Borovoye Array**	**51.61**	**342**	P	**P**	**22 34 42.6**	**-0.2**
	0.3nm,0.5s,baz=134,slow=8.4,SNR=6.2						
BRTR	**Keskin Array B**	**64.55**	**312**	P	**P**	**22 36 12.3**	**-1.4**
	0.6nm,1.1s,baz=110,slow=1.4,SNR=3.8						
FINES	**FINESS Array B**	**75.26**	**332**	P	**P**	**22 37 19.0**	**+0.3**
	4.6nm,1.1s,baz=110,slow=12,SNR=3.3						
GERES	**GERESS Array B**	**80.12**	**319**	P	**P**	**22 37 47.6**	**+1.3**
	0.2nm,0.4s,baz=128,slow=2.9,SNR=2.9						

IDC 19 22:30:02.6±5.0, 48.73S×9.42W, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.6/16, mbtmp3.8/2, MS3.6/4, Ms1 3.6/4, ms1mx3.3/21, Error ellipse: s-maj=219.3km s-min=38.1km az=139.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**33.30**	**66**	LR	LR	22 48 21.2	
	comp=Z,143nm,19.5s,baz=164,slow=33						
PLCA	**Paso Flores**	**43.1**	**257**	P	P	22 38 04.4	-0.1
	0.8nm,0.4s,baz=139,slow=9.3,SNR=2.7						
DBIC	**Dimbokro**	**55.31**	**6**	LR	LR	22 57 14.8	
	comp=Z,41nm,18.2s,baz=110,slow=30						
LPAZ	**La Paz**	**57.38**	**283**	LR	LR	23 00 42.1	
	comp=Z,52nm,19.5s,baz=85,slow=32						
KMBO	**Kilima Mbogo**	**62.04**	**55**	LR	LR	23 04 46.3	
	comp=Z,62nm,21.0s,baz=98,slow=34						
TORD	**Torodi Ar. Bea**	**62.38**	**12**	P	P	22 40 27.0	-0.1
	0.8nm,0.9s,baz=190,slow=7.8,SNR=4.3						
YKA	**Yellowknife Ar**	**138.09**	**318**	PKP	PKPdf	22 49 27.0	-1.0
	0.2nm,0.7s,baz=85,slow=3.0,SNR=5.8						
ILAR	**Eielson Array**	**152.40**	**321**	PKPbc	PKPbc	22 49 59.2	0.0
	1.0nm,0.7s,baz=21,slow=1.1,SNR=13						

*ISCJB **19** 22:40:05.3±0.5, 37.85N±0.02×27.56E±0.04, h2km±7km, Error ellipse: s-maj=6.3km s-min=3.7km az=156.5*
*CSEM **19** 22:40:05.7±0.2, 37.84N×27.57E, h5km, MD2.9, Error ellipse: s-maj=4.6km s-min=2.9km az=76.0*
*ISK **19** 22:40:05.2, 37.86N×27.54E, h5km, MD2.9*
*DDA **19** 22:40:05.3, 37.83N×27.56E, h7km, MD2.9*

ISC 19 22:40:05.3±0.9, 37.85N±0.02×27.56E±0.03, h12km±8km, n31, σ0§54/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.30**	**241**	*i* P	**Pg**	**22 40 11.1**	**-0.2**
GCAM				*i* S	**Sg**	**22 40 15.2**	**-0.2**
GCAM	**G?zelcaml?**	**0.30**	**241**	*i* P	**Pg**	**22 40 11.1**	**-0.2**
GCAM				*i* S	**Sg**	**22 40 15.2**	**-0.2**
AYDN	**Tasoluk**	**0.32**	**126**	*i* P	**Pg**	**22 40 12.3**	**+0.6**
AYDN				*i* S	**Sg**	**22 40 16.1**	**+0.1**
AYDN	**Tasoluk**	**0.32**	**126**	*i* P	**Pg**	**22 40 12.3**	**+0.6**
AYDN				*i* S	**Sg**	**22 40 16.1**	**+0.1**
MLSB	**Milas**	**0.58**	**162**	*e*PG	**Pg**	**22 40 17.2**	**+0.7**
MLSB				*e*SG	**Sb**	**22 40 25.8**	**+0.3**
MLSB	**Milas**	**0.58**	**162**	*e*Pg	**Pg**	**22 40 17.2**	**+0.7**
MLSB				*e*Sg	**Sb**	**22 40 25.8**	**+0.3**
IZM	**Izmir**	**0.60**	**337**	*e*PG	**Pg**	**22 40 17.4**	**+0.4**
IZM				*e*SG	**Sg**	**22 40 24.4**	**-0.5**
IZM	**Izmir**	**0.60**	**337**	*e*Pg	**Pg**	**22 40 17.4**	**+0.4**
IZM				*e*Sg	**Sg**	**22 40 24.4**	**-0.5**
BLCB	**Balcova**	**0.68**	**323**	*e*PG	**Pg**	**22 40 18.9**	**+0.5**
BLCB				*e*SG	**Sg**	**22 40 27.5**	**+0.2**
BLCB	**Balcova**	**0.68**	**323**	*e*Pg	**Pg**	**22 40 18.9**	**+0.5**
BLCB				*e*Sg	**Sg**	**22 40 27.5**	**+0.2**
BODT	**Bodrum**	**0.81**	**194**	*e*PG	**Pg**	**22 40 21.0**	**+0.1**
BODT	**Bodrum**	**0.81**	**194**	*e*Pg	**Pg**	**22 40 21.0**	**+0.1**
YER	**Yerkesik**	**0.92**	**141**	*e*PG	**Pg**	**22 40 22.9**	**-0.1**
YER	**Yerkesik**	**0.92**	**141**	*e*Pg	**Pg**	**22 40 22.9**	**-0.1**
AKHS	**Akhisar**	**1.05**	**11**	*i* P	**Pb**	**22 40 25.7**	**+0.3**
AKHS				*i* S	**Sn**	**22 40 41.3**	**+0.8**
AKHS	**Akhisar**	**1.05**	**11**	*i* P	**Pb**	**22 40 25.7**	**+0.3**
AKHS				*i* S	**Sn**	**22 40 41.3**	**+0.8**
AKS	**Akhisar**	**1.05**	**11**	*e*PG	**Pb**	**22 40 26.1**	**+0.7**
AKS	**Akhisar**	**1.05**	**11**	*e*Pg	**Pb**	**22 40 26.1**	**+0.7**
KULA	**Kula-Manisa**	**1.10**	**52**	*e*PN	**Pb**	**22 40 26.5**	**+0.3**
KULA	**Kula-Manisa**	**1.10**	**52**	*e*Pn	**Pb**	**22 40 26.5**	**+0.3**
DAT	**Datca**	**1.11**	**179**	*e*PN	**Pg**	**22 40 27.5**	**+0.7**
DAT	**Datca**	**1.11**	**179**	*e*Pn	**Pg**	**22 40 27.5**	**+0.7**
TURN	**Turunc**	**1.28**	**139**	*i* P	**Pn**	**22 40 27.4**	**-1.6**
TURN				*i* S	**Sb**	**22 40 45.1**	**-0.6**
DALT	**Dalyan (Mudla)**	**1.38**	**141**	*e*PN	**Pg**	**22 40 32.2**	**+0.4**
DALT	**Dalyan (Mudla)**	**1.38**	**141**	*e*Pn	**Pg**	**22 40 32.2**	**+0.4**
KHL	**Karahalli**	**1.62**	**72**	*e*PN	**Pb**	**22 40 35.4**	**+0.2**
KHL	**Karahalli**	**1.62**	**72**	*e*Pn	**Pb**	**22 40 35.4**	**+0.2**
APE	**Apeiranthos**	**1.79**	**245**	*e*PN	**Pb**	**22 40 38.7**	**+0.7**
APE	**Apeiranthos**	**1.79**	**245**	*e*Pn	**Pb**	**22 40 38.7**	**+0.7**
DST	**Dursunbey**	**1.94**	**25**	*e*PN	**Pb**	**22 40 40.0**	**-0.6**
DST	**Dursunbey**	**1.94**	**25**	*e*Pn	**Pb**	**22 40 40.1**	**-0.6**

*ISCJB **19** 22:51:09.8±0.7, 19.97S±0.07×178.44W±0.05, h551km±8km, mb4.4/51, Error ellipse: s-maj=10.6km s-min=6.4km az=161.3*
*NEIC **19** 22:51:12.4±0.9, 19.97S×178.40W, h577km±11km, mb4.4/15, Error ellipse: s-maj=11.4km s-min=8.3km az=143.0*
*AUST **19** 22:51:13.0±0.0, 19.81S×178.18W, h601km, Error ellipse: s-maj=2.6km s-min=1.7km az=357.0*
*IDC **19** 22:51:14.8±0.6, 20.17S×178.41W, h610km±6km, mb3.8/25, mb1 3.9/28, mb1mx3.9/29, mbtmp3.8/28, Error ellipse: s-maj=10.5km s-min=8.0km az=140.0*

ISC 19 22:51:13.8±0.5, 20.10S±0.07×178.35W±0.06, h599km±5km, h599km; pP-P, n239, σ1§13/258, mb4.4/51, 56C-43D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**8.00**	**84**	P	**P**	**22 53 11.2**	**-1.9**
	baz=7.8,SNR=3.7						
NIUE				S	S	22 54 59.0	+8.2
	baz=7.8,SNR=3.9						
AFI	**Afiamalu**	**8.79**	**47**	P	P	22 53 16.4	-4.5
AFI				S	S	22 54 56.7	-8.2
AFI	**Afiamalu**	**8.79**	**47**	P	P	22 53 16.4	-4.5
	13nm,0.3s,baz=80,slow=0.9,SNR=14						
AFI				S	S	22 54 56.7	-8.2
	17nm,0.3s,baz=78,slow=14,SNR=8.3						
DZM	**Mont Dzumac**	**14.33**	**259**	P	**P**	**22 54 17.3**	**+1.3**
DZM	**Mont Dzumac**	**14.33**	**259**	P	**P**	**22 54 17.3**	**+1.3**

	0.9nm,0.3s,baz=108,slow=20,SNR=3.7						
RAR	**Rarotonga**	**17.42**	**97**	P	**P**	**22 54 43.7**	**-0.5**
RAR	**Rarotonga**	**17.42**	**97**	P	**P**	**22 54 43.7**	**-0.5**
	0.9nm,0.3s,baz=245,slow=5.5,SNR=9.1						
URZ	**Urewera**	**18.52**	**191**	P	**P**	**22 54 53.0**	**-1.0**
URZ				S	**S**	**22 57 48.3**	**-4.3**
URZ	**Urewera**	**18.52**	**191**	P	**P**	**22 54 53.0**	**-1.0**
	4.1nm,0.3s,baz=284,slow=3.1,SNR=5.3						
URZ				S	**S**	**22 57 48.3**	**-4.3**
	2.8nm,0.3s,baz=288,slow=16,SNR=7.9						
TARA	**Tarawa**	**22.97**	**337**	*e*P	**P**	**22 55 31.9**	**-2.5**
	204nm,0.8s						
RPZ	**Rata Peaks**	**25.17**	**198**	P	**P**	**22 55 55.7**	**+2.4**
RPZ	**Rata Peaks**	**25.17**	**198**	P	**P**	**22 55 55.7**	**+2.4**
	12nm,0.9s,baz=18,slow=9.6,SNR=2.9						
TBI	**Tubuai**	**27.01**	**102**	*e*P	**P**	**22 56 09.6**	**-0.2**
	66nm,0.8s						
PAE	**Paea**	**27.31**	**90**	*e*P	**P**	**22 56 11.9**	**-0.6**
	11nm,1.2s						
PPT2	**Papeete2**	**27.33**	**90**	*e*P	**P**	**22 56 12.4**	**-0.3**
	58nm,1.2s						
PPT	**Papeete**	**27.33**	**90**	P	P	22 56 08.9	-3.7
PPT	**Papeete**	**27.33**	**90**	P	P	22 56 08.9	-3.7
	35nm,0.7s,baz=81,slow=22,SNR=7.6						
TIAR	**Tiarei**	**27.55**	**90**	*e*P	**P**	**22 56 14.1**	**-0.5**
	60nm,0.9s						
TVO	**Taravao**	**27.60**	**90**	*e*P	**P**	**22 56 14.5**	**-0.6**
	50nm,0.8s						
MEH	**Mehetia**	**28.70**	**91**	*e*P	**P**	**22 56 24.0**	**-0.6**
	56nm,0.9s						
PMOR	**Pomariorio Ree**	**29.45**	**85**	*e*P	**P**	**22 56 30.4**	**-0.6**
	92nm,1.0s						
QLP	**Quilpie**	**34.87**	**252**	P	**P**	**22 57 17.0**	**+0.2**
	baz=35,SNR=5.9						
PMG	**Port Moresby**	**34.94**	**283**	P	**P**	**22 57 17.7**	**+0.2**
PMG	**Port Moresby**	**34.94**	**283**	P	**P**	**22 57 17.7**	**+0.2**
	23nm,0.8s,baz=67,slow=9.8,SNR=5.1						
COEN	**Coen**	**37.23**	**273**	P	**P**	**22 57 36.7**	**+0.4**
	baz=37,SNR=9.7						
STKA	**Stephens Creek**	**37.67**	**244**	P	**P**	**22 57 39.9**	**+0.2**
STKA	**Stephens Creek**	**37.67**	**244**	P	**P**	**22 57 39.9**	**+0.2**
	3.1nm,0.6s,baz=112,slow=11,SNR=7.7						
STKA	**Stephens Creek**	**37.67**	**244**	P	**P**	**22 57 40.5**	**+0.9**
	baz=38,SNR=4.8						
RKT	**Rikitea**	**40.33**	**102**	*e*P	**P**	**22 58 00.4**	**-0.7**
	45nm,1.1s						
BBOO	**Buckleboo**	**42.44**	**243**	P	**P**	**22 58 17.7**	**+0.1**
	baz=43,SNR=6.1						
ASAR	**Alice Springs**	**44.30**	**256**	P	**P**	**22 58 32.0**	**-0.1**
ASAR				PcP	**PcP**	**23 00 02.7**	**-0.3**
ASAR				pP	**pP**	**23 00 16.2**	**-1.2**
ASAR				S	**S**	**23 04

	baz=87,SNR=18							
G12A	**Big Creek, Yel**	86.53	39	⇓P		P	23 02 55.3	+0.8
	baz=87,SNR=11							
Y22A	**Socorro**	86.58	52	⇑P		P	23 02 55.9	+0.9
	baz=87							
324A	**Moseley Ranch,**	86.59	55	⇑P		P	23 02 55.8	+0.7
	baz=87							
I13A	**Wildhorse Cree**	86.60	41	⇓P		P	23 02 55.9	+0.9
	baz=87,SNR=6.2							
MCK	**McKinley**	86.65	13	*e*P		P	23 02 53.8	-0.6
J14A	**Carey**	86.66	41	⇓P		P	23 02 56.7	+1.5
	baz=87							
425A	**Indio Mountain**	86.69	56	⇓P		P	23 02 57.0	+1.4
	baz=87							
626A	**Big Bend Ranch**	86.84	57	⇑P		P	23 02 57.6	+1.4
	baz=87							
F12A	**Elk City**	86.91	39	⇓P		P	23 02 56.9	+0.6
	baz=87,SNR=19							
I14A	**Mackay**	87.02	41	⇑P		P	23 02 58.7	+1.8
	baz=87,SNR=6.9							
526A	**Mary Lane Banc**	87.08	57	⇓P		P	23 02 58.7	+1.2
	baz=87							
TXAR	**Lajitas Array**	87.11	57	P		P	23 02 58.9	+1.4
TXAR	**Lajitas Array**	87.11	57	P		P	23 02 58.9	+1.4
	2.0nm,0.8s,baz=217,slow=6.6,SNR=21							
G13A	**Cobalt**	87.16	40	⇑P		P	23 02 58.3	+0.8
	baz=87,SNR=5.8							
U21A	**Nageezi**	87.21	50	⇑P		P	23 02 58.8	+0.8
	baz=87							
L16A	**Fish Haven**	87.31	43	⇑P		P	23 02 58.7	+0.4
	baz=87							
J15A	**Blackfoot**	87.38	42	⇑P		P	23 02 59.9	+1.4
	baz=88,SNR=7.3							
627A	**Terlingua Ranc**	87.38	57	⇑P		P	23 03 00.4	+1.5
	baz=88							
426A	**McDonald Obser**	87.39	56	⇓P		P	23 03 00.1	+1.1
	baz=88							
ANMO	**Albuquerque**	87.41	51	P		P	23 02 59.1	+0.2
ANMO	**Albuquerque**	87.41	51	P		P	23 02 59.1	+0.2
	0.8nm,0.7s,baz=332,slow=1.8,SNR=3.9							
H14A	**Leadore**	87.43	40	⇑P		P	23 02 59.7	+0.9
	baz=88,SNR=5.1							
F13A	**Darby**	87.47	39	⇓P		P	23 02 59.5	+0.6
	baz=88,SNR=8.5							
C11A	**Tepee Creek (N**	87.48	37	⇑P		P	23 02 59.6	+0.8
	baz=88							
527A	**Woodward Ranch**	87.50	57	⇓P		P	23 03 00.4	+1.1
	baz=88							
K16A	**Soda Springs**	87.62	43	⇓P		P	23 03 00.9	+1.1
	baz=88							
DOT	**Dot Lake**	87.66	15	*e*P		P	23 02 59.0	-0.1
G14A	**Jackson**	87.70	40	⇑P		P	23 03 01.3	+1.3
	baz=88							
Y24A	**Capitan**	87.71	53	⇓P		P	23 03 01.4	+1.0
	baz=88							
628A	**Black Gap, Mar**	87.79	58	⇓P		P	23 03 01.5	+0.8
	baz=88							
DLBC	**Dease Lake**	87.81	23	P		P	23 03 00.8	+0.8
DLBC	**Dease Lake**	87.81	23	P		P	23 03 00.8	+0.8
	3.4nm,0.8s,baz=226,slow=6.9,SNR=8.9							
J16A	**Bone**	87.83	42	⇓P		P	23 03 02.1	+1.4
	baz=88							
H15A	**Lima**	87.87	41	⇑P		P	23 03 02.2	+1.3
	baz=88							
226B	**Tecolote Peak,**	87.88	55	⇑P		P	23 03 02.2	+1.2
	baz=88							
COLA	**College**	87.89	13	*e*P		P	23 02 59.1	-1.0
427A	**Hayter Ranch,**	87.95	56	⇑P		P	23 03 02.7	+1.3
	baz=88,SNR=6.9							
Z25A	**Roswell**	87.97	54	⇑P		P	23 03 02.4	+0.9
	baz=88							
ILAR	**Eielson Array**	88.00	13	P		P	23 02 59.5	-1.2
ILAR				pP		pP	23 05 07.9	-1.7
ILAR				PP		PP	23 06 31.8	-7.1
ILAR	**Eielson Array**	88.00	13	P		P	23 02 59.5	-1.2
	7.5nm,0.9s,baz=227,slow=5.6,SNR=40							
ILAR				pP		pP	23 05 07.9	-1.7
	1.1nm,0.9s,baz=227,slow=6.0,SNR=3.3							
ILAR				PP		PP	23 06 31.8	-7.1
	0.8nm,0.9s,baz=222,slow=8.3,SNR=4.6							
I16A	**Newdale**	88.21	42	⇓P		P	23 03 04.1	+1.6
	baz=88,SNR=6.7							
G15A	**Dillon**	88.25	40	⇑P		P	23 03 03.6	+1.1
	baz=88,SNR=10							
MSO	**Missoula**	88.25	38	⇓P		P	23 03 03.5	+1.0
	baz=88							
DLMT	**Dillon**	88.29	40	*e*P		P	23 03 03.7	+1.0
	9.5nm,1.2s							
W24A	**Lazy 6 Ranch,**	88.30	52	⇓P		P	23 03 03.4	+0.3
	baz=88							
E14A	**Clinton**	88.30	39	⇓P		P	23 03 03.3	+0.6
	baz=88							
J17A	**Brown Place, J**	88.44	42	⇑P		P	23 03 04.8	+1.2
	baz=89,SNR=6.3							
SNOW	**Snow King Moun**	88.47	42	*e*P		P	23 03 05.0	+1.2
	7.6nm,1.0s							
IMW	**Indian Meadow**	88.57	42	*e*P		P	23 03 05.5	+1.3
	5.4nm,0.9s							
MOOW	**Moose Ponds**	88.61	42	*e*P		P	23 03 05.2	+0.8
	1.9nm,1.0s							
LOHW	**Long Hollow**	88.64	42	*e*P		P	23 03 05.5	+1.0
	8.9nm,1.4s							
L19A	**Farson**	88.70	44	⇑P		P	23 03 05.7	+0.9
	baz=89,SNR=5.6							
QLMT	**Earthquake Lak**	88.73	41	*e*P		P	23 03 06.5	+1.6
H16A	**Russell Place,**	88.78	41	⇓P		P	23 03 06.6	+1.5
	baz=89,SNR=12							
I17A	**Pilgrim Ck.**	88.81	42	⇓P		P	23 03 07.0	+1.7
	baz=89							
J18A	**Kendall Valley**	88.81	43	⇓P		P	23 03 06.2	+0.9
	baz=89,SNR=19							
BW06	**Boulder Array**	88.89	43	⇑P		P	23 03 06.2	+0.5
	baz=89							
PDAR	**Pinedale Array**	88.89	43	P		P	23 03 05.9	+0.2
PDAR	**Pinedale Array**	88.89	43	P		P	23 03 05.9	+0.2
	3.4nm,0.9s,baz=213,slow=3.2,SNR=21							
W25A	**X Bar L Ranch,**	89.00	52	⇓P		P	23 03 06.8	+0.6
	baz=89							
BOZ	**Bozeman (W)**	89.02	40	*e*P		P	23 03 07.0	+1.0
BOZ	**Bozeman (W)**	89.02	40	⇓P		P	23 03 07.6	+1.5
	baz=89,SNR=5.6							
429A	**Davenport Ranc**	89.05	57	⇑P		P	23 03 07.2	+0.7
	baz=89							
EGAK	**Eagle**	89.30	15	*e*P		P	23 03 06.5	-0.3
	13nm,0.9s							
G17A	**Pierce Place,**	89.40	41	⇓P		P	23 03 09.3	+1.5
	baz=90							
128A	**Castleberry Fa**	89.40	55	⇑P		P	23 03 08.8	+0.7
	baz=90							
C15A	**Salmond Ranch,**	89.52	38	⇓P		P	23 03 09.7	+1.3
	baz=90							
COLD	**Coldfoot**	89.54	11	*e*P		P	23 03 07.8	0.0
	9.6nm,1.0s							
631A	**Perdido Creek**	89.61	59	⇑P		P	23 03 09.9	+0.9
	baz=90							
CMAR	**Chiang Mai Arr**	89.67	290	P		P	23 03 11.3	+1.7
CMAR	**Chiang Mai Arr**	89.67	290	P		P	23 03 11.3	+1.7
	3.0nm,0.6s,baz=123,slow=3.6,SNR=17							
O22A	**Kremmling**	89.68	47	⇑P		P	23 03 10.4	+0.9
	baz=90							
F17A	**Fitzpatrick Pl**	89.73	40	⇓P		P	23 03 10.9	+1.6
	baz=90							
D16A	**Dana Ranch, Ca**	89.76	39	⇓P		P	23 03 10.6	+1.1
	baz=90							
PLCA	**Paso Flores**	89.78	134	P		P	23 03 11.0	+1.2
PLCA	**Paso Flores**	89.78	134	P		P	23 03 11.0	+1.2
	3.6nm,0.9s,baz=225,slow=2.8,SNR=5.0							
M21A	**Separation Pea**	89.79	45	⇑P		P	23 03 10.7	+0.8
	baz=90							
T25A	**Trinidad**	89.86	50	⇑P		P	23 03 11.4	+1.1
	baz=90							
N22A	**Wattenberg Ran**	90.03	46	⇓P		P	23 03 12.7	+1.6
	baz=90							
G18A	**Lazy EL Ranch,**	90.12	41	⇓P		P	23 03 12.2	+1.0
	baz=90							
J20A	**Shoshoni**	90.12	43	⇓P		P	23 03 12.3	+1.0
	baz=90,SNR=5.4							
D17A	**Six Diamond Ra**	90.33	39	⇑P		P	23 03 12.9	+0.8
	baz=90							
I20A	**Worland**	90.37	43	⇑P		P	23 03 13.2	+0.8
	baz=90							
O25A	**Wiggins**	91.33	48	⇓P		P	23 03 18.3	+1.4
	baz=91							
INK	**Inuvik**	93.97	15	P		P	23 03 27.0	-1.1
INK	**Inuvik**	93.97	15	P		P	23 03 27.0	-1.1
	1.8nm,0.7s,baz=222,slow=6.0,SNR=10							
SONM	**Songino Array**	95.24	319	P		P	23 03 35.6	+1.1
SONM				PP		PP	23 07 29.5	-6.0
SONM	**Songino Array**	95.24	319	P		P	23 03 35.6	+1.1
	0.5nm,0.8s,baz=149,slow=5.5,SNR=3.3							
SONM				PP		PP	23 07 29.5	-6.0
	0.5nm,0.9s,baz=120,slow=4.8,SNR=4.1							
YKA	**Yellowknife Ar**	96.28	25	P		P	23 03 38.0	-0.7
YKA				pP		pP	23 05 50.8	+2.1
YKA				PP		PP	23 07 39.8	-3.1
YKA	**Yellowknife Ar**	96.28	25	P		P	23 03 37.9	-0.7
	0.7nm,0.8s,baz=242,slow=4.5,SNR=15							
YKA				pP		pP	23 05 50.8	+2.1
	0.3nm,1.1s,baz=241,slow=7.2,SNR=2.6							
YKA				PP		PP	23 07 39.8	-3.1
	0.4nm,1.0s,baz=232,slow=7.6,SNR=3.9							
ZALV	**Zalesovo Beam**	109.98	321	PKiKP		PKiKP	23 08 35.5	-2.2
ZALV	**Zalesovo Beam**	109.98	321	PKiKP		PKiKP	23 08 35.6	-2.2
	0.7nm,0.7s,baz=136,slow=2.2,SNR=4.8							
MKAR	**Makanchi Array**	110.69	314	PKiKP		PKiKP	23 08 38.2	-1.2
MKAR	**Makanchi Array**	110.69	314	PKiKP		PKiKP	23 08 38.2	-1.2
	0.5nm,0.7s,baz=77,slow=2.6,SNR=7.7							
ARCES	**ARCESS Array B**	128.47	350	PKP		PKPdf	23 09 12.7	-0.1
ARCES	**ARCESS Array B**	128.47	350	PKP		PKPdf	23 09 12.7	-0.1
	3.2nm,0.8s,baz=112,slow=2.0,SNR=7.2							
FINES	**FINESS Array B**	135.30	344	PKPpre		PKPpre	23 09 22.0	
FINES	**FINESS Array B**	135.30	344	PKhKP		PKPpre	23 09 22.0	
	2.9nm,0.9s,baz=116,slow=4.4,SNR=5.2							
NB2	**NORSAR Subarra**	138.54	353	PKP		PKPdf	23 09 21.6	-10
	comp=Z,1.0nm,1.0s,baz=16,slow=3.2							
AKASG	**Malin Array Be**	142.51	331	PKPpre		PKPpre	23 09 35.2	
AKASG				SKPbc		SKPbc	23 12 22.0	+0.6
AKASG	**Malin Array Be**	142.51	331	PKhKP		PKPpre	23 09 35.2	
	comp=Z,2.0nm,0.3s,baz=44,slow=4.4,SNR=29							
AKASG				SKPbc		SKPbc	23 12 22.0	+0.6
	comp=Z,3.8nm,0.9s,baz=38,slow=2.4,SNR=8.0							
MUD	**Monsted U'grnd**	143.26	353	*i* P		PKPab	23 09 38.4	-0.3
	comp=Z,17nm,0.9s							
MALT	**Malatya**	143.43	308	⇑*i*P		PKPbc	23 09 40.9	+0.6
COP	**Copenhagen**	143.55	350	*i* P		PKPab	23 09 39.3	-0.5
	comp=Z,12nm,0.7s							
BSD	**Bornholm Skovb**	143.62	347	*i* P		PKPab	23 09 39.2	-0.9
	comp=Z,24nm,0.8s							
KWP	**Kalwaria Pacla**	146.08	335	⇑*i*P		PKPbc	23 09 47.6	-0.1
BRTR	**Keskin Array B**	146.33	313	PKPbc		PKPbc	23 09 48.2	-0.6
BRTR				pPKPbc		pPKPbc	23 12 07.6	+2.8
BRTR				SKPbc		SKiKP	23 12 32.1	+0.9
BRTR				SKPab		SKPbc	23 12 56.8	+26
BRTR	**Keskin Array B**	146.33	313	PKPbc		PKPbc	23 09 48.2	-0.6
	comp=Z,2.9nm,0.8s,baz=134,slow=5.3,SNR=26							
BRTR				pPKPbc		pPKPbc	23 12 07.6	+2.8
	comp=Z,0.7nm,0.9s,baz=101,slow=2.9,SNR=3.9							
BRTR				SKPbc		SKiKP	23 12 32.1	+0.9
	comp=Z,1.0nm,0.9s,baz=164,slow=4.9,SNR=5.4							
BRTR				SKPab		SKPbc	23 12 56.8	+26
	comp=Z,0.6nm,0.8s,baz=104,slow=5.2,SNR=4.0							
BURAR	**Bucovina Array**	146.55	331	⇑*i*P		PKPbc	23 09 49.5	+0.4
TESR		146.65	328	⇓*i*P		PKPbc	23 09 49.0	-0.3
OJC	**Ojcow**	146.67	339	*e*PX			23 09 50.0	
CFR	**Carcaliu**	146.77	325	⇓*i*P		PKPbc	23 09 49.9	+0.3
KOLS	**Kolonicke sedl**	146.81	335	*e*PKP		PKPbc	23 09 50.1	+0.4
VRI	**Vrincioaia**	147.05	327	⇑*i*P		PKPbc	23 09 50.0	-0.4
CRVS	**Cervenica-Dubn**	147.15	336	*e*PKP		PKPbc	23 09 50.5	-0.1
CRVS				*e*			23 09 54.0	
NIE	**Niedzica**	147.16	337	*e*PX			23 09 51.2	
TRPA	**Tarpa**	147.34	334	⇑*i*P		PKPbc	23 09 51.0	0.0
OKC	**Ostrava-Krasne**	147.54	340	⇑*e*PKP		PKPbc	23 09 51.6	+0.1
OKC				*e*PKPAB		PKPab	23 09 55.5	-0.3
UPC	**Upice**	147.59	343	⇑*e*PKP		PKPbc	23 09 51.8	+0.2
UPC				*e*PKPAB		PKPab	23 09 56.2	+0.2
CLL	**Collm**	147.60	347	⇓*i*PKPbc		PKPbc	23 09 51.5	-0.1
	comp=Z,19nm,0.8s							
CLL				*i* PKPab		PKPab	23 09 55.1	-0.9
	comp=Z,17nm,0.9s							
DPC	**Dobruska-Polom**	147.65	342	⇑*e*PKP		PKPbc	23 09 52.1	+0.3
DPC				*e*PKPAB		PKPab	23 09 56.6	+0.3
MLR	**Muntele Rosu**	147.71	327	⇓*i*P		PKPbc	23 09 51.8	-0.5
MORC	**Moravsky Berou**	147.79	341	⇑*i*P		PKPbc	23 09 52.3	+0.1
BRG	**Berggiesshubel**	147.79	345	*i* PKP		PKPbc	23 09 52.2	+0.1
	comp=Z,9.8nm,0.9s							
BRG				*i*			23 09 56.4	
	comp=Z,9.3nm,1.0s							
PVCC	**Panska Ves**	147.96	344	⇑*e*PKP		PKPbc	23 09 52.8	+0.3
DRGR		148.30	332	⇑*i*P		PKPbc	23 09 53.2	-0.4
ARR	**Arges**	148.46	328	⇑*i*P		PKPbc	23 09 54.9	+0.8
PRU	**Pruhonice**	148.46	344	⇑*e*PKP		PKPbc	23 09 53.7	-0.1
PRU				*e*PKPAB		PKPab	23 09 59.6	+0.1
VYHS	**Vyhne**	148.47	338	*e*PKP		PKPbc	23 09 54.0	+0.1
VYHS				*e*			23 09 59.8	
VRAC	**Vranov**	148.50	341	⇑*i*P		PKPbc	23 09 53.2	-0.7
NKC	**Novy Kostel**	148.73	347	⇑*e*PKP		PKPbc	23 09 54.6	+0.1
NKC				*e*PKPAB		PKPab	23 10 00.4	-0.3
TREC	**Trest**	148.83	342	⇑*e*PKP		PKPbc	23 09 54.7	-0.1
TREC				*e*PKPAB		PKPab	23 10 00.9	-0.3
GZR	**Gura Zlata**	149.33	330	⇑*i*P		PKPbc	23 09 56.2	0.0
MEM	**Membach**	149.36	355	PKPbc		PKPbc	23 09 56.1	+0.2
MEM				PKPab		PKPab	23 10 03.9	+0.7
KHC	**Kasperske Hory**	149.49	344	⇑*e*PKP		PKPbc	23 09 56.4	0.0
KHC				*e*PKPAB		PKPab	23 10 03.7	-0.2
BCLA	**Clavier**	149.60	355	PKPbc		PKPbc	23 09 56.5	-0.1
GERES	**GERESS Array B**	149.73	344	PKPbc		PKPbc	23 09 56.7	-0.4
GERES				pPKPbc		pPKPbc	23 12 15.9	+1.7
GERES	**GERESS Array B**	149.73	344	PKPbc		PKPbc	23 09 56.7	-0.4
	comp=Z,5.3nm,0.8s,baz=9.5,slow=1.6,SNR=36							
GERES				pPKPbc		pPKPbc	23 12 15.9	+1.7
	comp=Z,0.8nm,0.9s,baz=59,slow=0.8,SNR=3.1							
DOU	**Dourbes**	149.97	356	PKP		PKPdf	23 09 54.0	+2.2
DOU				PKPbc		PKPbc	23 09 57.4	0.0
WLF	**Walferdange**	150.28	354	PKPbc		PKPbc	23 09 58.9	+0.7
ESDC	**Sonseca Array**	159.90	13	PKPab		PKPab	23 10 47.2	-1.7
ESDC	**Sonseca Array**	159.90	13	PKPab		PKPab	23 10 47.2	-1.7
	comp=Z,2.3nm,0.9s,baz=337,slow=3.9,SNR=9.9							
DBIC	**Dimbokro**	165.23	154	PKPab		PKPab	23 11 13.2	+0.4
DBIC	**Dimbokro**	165.23	154	PKPab		PKPab	23 11 13.2	+0.4
	comp=Z,2.8nm,0.7s,baz=186,slow=6.2,SNR=5.5							
TORD	**Torodi Ar. Bea**	173.09	180	PKPab		PKPab	23 11 47.4	-0.1
TORD	**Torodi Ar. Bea**	173.09	180	PKPab		PKPab	23 11 47.4	-0.1
	comp=Z,1.0nm,0.9s,baz=181,slow=4.7,SNR=4.3							
NVAR	**Mina Array Bea**	83.37	52	P		P	23 18 43.5	+0.3
	0.5nm,0.5s,baz=248,slow=7.5,SNR=5.7							
FINES	**FINESS Array B**	86.40	335	P		P	23 18 56.7	-0.6
	4.0nm,1.0s,baz=68,slow=7.8,SNR=2.8							

IDC 19 22:58:23.8±1.9, 19.90S×178.36W, h559km±24km, mb3.1/6, mb1 3.3/7, mb1mx3.1/20, mbtmp3.1/7, Error ellipse: s-maj=30.7km s-min=15.4km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.67**	**48**	P	P	23 00 29.3	+0.7
	2.1nm,0.3s,baz=146,slow=11,SNR=4.3						
AFI				S	S	23 02 09.7	-1.4
	2.9nm,0.3s,baz=143,slow=23,SNR=4.1						
STKA	**Stephens Creek**	**37.74**	**243**	P	P	23 04 53.3	+0.7
	1.0nm,0.6s,baz=78,slow=14,SNR=2.3						
ASAR	**Alice Springs**	**44.33**	**256**	P	P	23 05 44.6	-0.3
	1.8nm,0.5s,baz=91,slow=7.6,SNR=30						
WRA	**Warramunga Arr**	**44.35**	**262**	P	P	23 05 44.6	-0.5
	0.9nm,0.3s,baz=96,slow=7.6,SNR=15						
QSPA	**South Pole Qui**	**70.16**	**180**	P	P	23 08 40.0	-0.4
	2.3nm,0.7s,baz=325,slow=0.5,SNR=7.6						
NVAR	**Mina Array Bea**	**80.83**	**44**	P	P	23 09 41.3	+1.2
	0.2nm,0.7s,baz=225,slow=8.9,SNR=4.1						
ILAR	**Eielson Array**	**87.81**	**13**	P	P	23 10 12.5	-0.9
	0.4nm,0.4s,baz=206,slow=5.8,SNR=5.1						
BRTR	**Keskin Array B**	**146.19**	**313**	PKPbc	PKPbc	23 17 01.4	-0.9
	0.2nm,0.4s,baz=102,slow=5.5,SNR=2.9						

IDC 19 23:06:57.2±14.0, 18.99N×145.15E, h381km±163km, mb3.0/8, mb1 3.3/8, mb1mx3.0/26, mbtmp3.0/8, Error ellipse: s-maj=50.8km s-min=22.5km az=86.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**18.52**	**342**	P	P	23 10 41.5	-6.5
	0.5nm,0.3s,baz=177,slow=11,SNR=6.2						
WRA	**Warramunga Arr**	**40.12**	**196**	P	P	23 13 57.7	-0.1
	1.3nm,0.5s,baz=5.2,slow=9.0,SNR=14						
FITZ	**Fitzroy Crossi**	**41.55**	**209**	P	P	23 14 09.1	-0.2
	1.2nm,0.3s,baz=43,slow=7.2,SNR=17						
SONM	**Songino Array**	**42.59**	**321**	P	P	23 14 17.7	+0.2
	0.2nm,0.4s,baz=122,slow=6.1,SNR=2.7						
ASAR	**Alice Springs**	**43.79**	**195**	P	P	23 14 27.0	-0.2
	0.5nm,0.5s,baz=16,slow=7.2,SNR=9.8						
ILAR	**Eielson Array**	**63.62**	**26**	P	P	23 16 47.7	-0.8
	0.2nm,0.5s,baz=276,slow=6.6,SNR=3.3						
YKA	**Yellowknife Ar**	**77.98**	**28**	P	P	23 18 14.6	+0.5
	0.1nm,0.6s,baz=290,slow=5.5,SNR=4.7						

*IDC **19** 23:15:38.4±0.5, 23.25S×174.69W, h0km, mb4.6/19, mb1 4.8/20, mb1mx4.7/27, mbtmp4.6/20, ML4.1/1, MS3.7/14, Ms1 3.7/14, ms1mx3.5/30, Error ellipse: s-maj=22.1km s-min=14.4km az=155.0*

*ISCJB **19** 23:15:42.5±0.3, 23.34S±0.08×174.77W±0.06, h33km, mb4.7/46, MS3.8/13, Error ellipse: s-maj=11.9km s-min=6.3km az=158.1*

*NEIC **19** 23:15:48.4±1.2, 23.32S×174.77W, h74km±10km, mb4.7/27, Error ellipse: s-maj=11.3km s-min=6.1km az=145.0*

*BJI **19** 23:15:55.5, 22.56S×175.17W, h112km, mB5.2/13, mb4.8/16*

ISC 19 23:15:43.9±0.4, 23.42S±0.10×174.63W±0.08, h35km, n207, ₙ0°93/204, mb4.7/46, MS3.8/13, 58C-48D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.89**	**308**	*e*Pn	**Pn**	**23 17 51.4**	**+1.4**
AFI	**Afiamalu**	**9.84**	**16**	*e*P	Pn	23 18 06.6	+3.5
AFI				Sn	Sn	23 19 29.7	-23
AFI	**Afiamalu**	**9.84**	**16**	Pn	Pn	23 17 53.1	-10
	3.8nm,0.3s,baz=104,slow=20,SNR=5.8						
AFI				Sn	Sn	23 19 29.7	-23
	2.6nm,0.3s,baz=240,slow=21,SNR=3.1						
RAR	**Rarotonga**	**13.92**	**84**	Pn	Pn	23 18 48.3	-10
RAR	**Rarotonga**	**13.92**	**84**	Pn	Pn	23 18 48.3	-10
	7.5nm,0.3s,baz=246,slow=7.4,SNR=32						
URZ	**Urewera**	**16.39**	**204**	Pn	**P**	**23 19 32.6**	**-1.2**
URZ	**Urewera**	**16.39**	**204**	Pn	**P**	**23 19 32.6**	**-1.2**
	0.7nm,0.3s,baz=336,slow=12,SNR=3.3						
DZM	**Mont Dzumac**	**17.51**	**271**	*e*P	**P**	**23 19 48.5**	**+2.1**
	94nm,1.4s						
DZM				*e*LR	LR	23 24 24.6	
	534nm,26.9s						
DZM	**Mont Dzumac**	**17.51**	**271**	*e*Pn	**P**	**23 19 48.1**	**+1.7**
	27nm,0.8s						
DZM	**Mont Dzumac**	**17.51**	**271**	P	**P**	**23 19 48.2**	**+1.9**
	0.6nm,0.3s,baz=104,slow=20,SNR=15						
DZM				LR	LR	23 24 12.2	
	comp=Z,156nm,18.5s,baz=24,slow=29						
TBI	**Tubuai**	**23.09**	**95**	*e*LR	LR	23 26 04.6	
	703nm,27.0s,baz=262						
PPT2	**Papeete2**	**24.15**	**81**	*e*LR	LR	23 26 28.4	
	796nm,26.0s,baz=257						
HNR	**Honiara**	**28.01**	**296**	LR	LR	23 30 57.6	
	comp=Z,103nm,19.7s,baz=125,slow=33						
RKT	**Rikitea**	**36.35**	**98**	*e*LR	LR	23 32 03.9	
	494nm,29.2s						
CTA	**Charters Tower**	**36.41**	**268**	P	**P**	**23 22 44.6**	**-0.8**
CTA	**Charters Tower**	**36.41**	**268**	P	**P**	**23 22 44.6**	**-0.8**
	20nm,0.7s,baz=95,slow=12,SNR=32						
CTAO	**Charters Tower**	**36.41**	**268**	*e*P	**P**	**23 22 44.5**	**-0.8**
	20nm,0.8s						
PMG	**Port Moresby**	**39.07**	**284**	*e*P	**P**	**23 23 07.9**	**0.0**
PMG	**Port Moresby**	**39.07**	**284**	P	**P**	**23 23 06.5**	**-1.3**
	21nm,0.7s,baz=102,slow=10,SNR=4.9						
STKA	**Stephens Creek**	**39.47**	**248**	*e*P	**P**	**23 23 12.5**	**+1.5**
STKA	**Stephens Creek**	**39.47**	**248**	P	**P**	**23 23 09.9**	**-1.1**
	2.7nm,0.8s,baz=71,slow=10,SNR=4.9						
STKA				LR	LR	23 36 45.2	
	comp=Z,159nm,18.1s,baz=190,slow=32						
COEN	**Coen**	**40.94**	**276**	P	**P**	**23 23 22.6**	**-0.8**
AS31	**Alice Springs**	**46.97**	**259**	*e*P	**P**	**23 24 12.4**	**+0.6**
**AS

GMRC	**Granite Mounta** baz=81	80.48	46	⇓P		P	23 27 52.7	+0.1
113A	**Mohawk Valley,** baz=81	80.57	48	⇑P		P	23 27 53.4	+0.6
YBH	**Yreka Blue Hor**	80.68	37	P		P	23 27 52.8	-0.6
YBH	**Yreka Blue Hor** 3.1nm,0.8s,baz=198,slow=4.6,SNR=4.5	80.68	37	P		P	23 27 52.8	-0.6
FURC	**Furnace Creek,** baz=81	80.74	44	⇓P		P	23 27 54.4	+0.7
GRAC	**Grapevine Rang** baz=81,SNR=5.5	80.74	43	⇑P		P	23 27 54.2	+0.4
NVAR	**Mina Array Bea**	81.06	41	P		P	23 27 55.8	+0.2
NVAR	**Mina Array Bea** 5.5nm,0.9s,baz=225,slow=8.9,SNR=32	81.06	41	P		P	23 27 55.8	+0.2
KSRS	**Korea Array** comp=Z,43nm,19.0s,baz=160,slow=31	81.14	317	LR		LR	23 57 31.7	
Y14A	**Wickenburg** baz=82	81.76	48	⇑P		P	23 28 00.0	+0.8
W13A	**Hualapai Mount** baz=82	81.84	46	⇓P		P	23 28 00.8	+0.9
TUC	**Tucson** 6.7nm,1.3s	82.38	50	*e*P		P	23 28 03.2	+0.6
R11A	**Troy Canyon, C** baz=83	82.69	43	⇑P		P	23 28 04.4	+0.2
319A	**Douglas** baz=83	82.94	52	⇓P		P	23 28 06.8	+1.3
X16A	**Lo Mia Camp, P** baz=83,SNR=6.4	83.10	48	⇑P		P	23 28 06.9	+0.5
USRK	**Ussuriysk Arra** 5.4nm,0.9s,baz=114,slow=3.8,SNR=9.4	83.13	324	P		P	23 28 07.1	+1.1
WVOR	**Wild Horse Val** 7.9nm,1.1s	83.42	38	*e*P		P	23 28 07.1	-0.7
320A	**Kipp Ranch, An** baz=84	83.46	52	⇓P		P	23 28 08.9	+0.6
CCUT	**Cedar City** 7.3nm,1.0s	83.62	45	*e*P		P	23 28 09.9	+0.8
U15A	**North Rim** baz=84,SNR=9.7	83.67	46	⇓P		P	23 28 10.1	+0.7
WUAZ	**Wupatki** baz=84	83.76	47	⇓P		P	23 28 10.3	+0.6
220A	**Playas Peak, P** baz=84,SNR=11	83.77	51	⇑P		P	23 28 10.5	+0.6
120A	**U Bar Ranch, L** baz=84,SNR=7.3	84.03	51	⇓P		P	23 28 11.8	+0.6
ELK	**Elko**	84.35	41	*e*P		P	23 28 12.9	+0.1
ELK	**Elko** 3.0nm,0.9s,baz=220,slow=9.4,SNR=7.3	84.35	41	P		P	23 28 11.8	-0.9
221A	**Mesquite Ranch** baz=85	84.36	52	⇑P		P	23 28 13.6	+0.7
Z20A	**Nine Sixteen R** baz=85,SNR=7.3	84.36	50	⇑P		P	23 28 13.5	+0.6
LON	**Longmire** 3.9nm,1.0s	84.56	33	*e*P		P	23 28 13.4	0.0
121A	**Cookes Peak, D** baz=85,SNR=5.1	84.63	51	⇑P		P	23 28 15.0	+0.8
W18A	**Petrified Fore** baz=85	84.66	48	⇑P		P	23 28 15.5	+1.2
MDJ	**Mudanjiang**	84.71	324	P		P	23 28 12.8	-1.3
MDJ	comp=Z,4.0nm,1.2s			pmax	pmax			
MDJ	comp=Z,66nm,5.6s			pmax	pmax			
MVU	**Marysvale** comp=Z,6.9nm,1.1s	84.91	44	*e*P		P	23 28 16.6	+1.0
MSU	**Marysvale**	84.94	44	*e*P		P	23 28 16.5	+0.8
Y20A	**Horse Springs,** baz=85,SNR=8.9	84.94	50	⇑P		P	23 28 16.9	+1.0
SNAA	**Sanae** comp=Z,3.1nm,0.8s	84.99	177	*e*P		P	23 28 16.1	+0.8
PLCA	**Paso Flores**	85.00	132	P		P	23 28 16.9	+0.9
PLCA	**Paso Flores** comp=Z,1.3nm,0.7s,baz=268,slow=4.6,SNR=2.9	85.00	132	P		P	23 28 16.9	+0.9
PLCA	comp=Z,69nm,21.0s,baz=93,slow=30			LR		LR	23 58 33.6	
Z21A	**St. Cloud Mine** baz=85,SNR=6.9	85.12	51	⇓P		P	23 28 17.6	+0.8
X20A	**Quemado** baz=85,SNR=7.8	85.20	49	⇓P		P	23 28 18.0	+0.8
Y21A	**Point of Rocks** baz=86,SNR=9.7	85.49	50	⇑P		P	23 28 19.5	+0.9
HAWA	**Hanford** comp=Z,9.4nm,1.2s	85.50	35	*e*P		P	23 28 18.4	+0.4
W20A	**Ramah** baz=86,SNR=10	85.51	49	⇑P		P	23 28 19.0	+0.3
Z22A	**Elephant Butte** baz=86	85.60	51	⇑P		P	23 28 19.6	+0.5
MFID	**Camas Ranch** comp=Z,4.7nm,1.1s	85.64	39	*e*P		P	23 28 19.5	+0.5
BMO	**Blue Mountains** comp=Z,4.7nm,1.2s	85.70	37	*e*P		P	23 28 18.3	-0.9
324A	**Moseley Ranch,** baz=86,SNR=16	85.74	53	⇓P		P	23 28 19.7	-0.1
425A	**Indio Mountain** baz=86,SNR=17	85.77	54	⇓P		P	23 28 20.1	+0.2
123A	**Bell Site, Whi** baz=86	85.78	52	⇓P		P	23 28 19.7	-0.2
626A	**Big Bend Ranch** baz=86,SNR=13	85.80	55	⇓P		P	23 28 20.3	+0.2
Q16A	**Castle Valley** baz=86	85.82	44	⇑P		P	23 28 20.6	+0.5
Y22A	**Socorro** baz=86,SNR=5.2	85.95	50	⇓P		P	23 28 21.5	+0.7
224A	**Cornudas Mount** baz=86,SNR=8.3	86.03	53	⇓P		P	23 28 21.7	+0.4
TXAR	**Lajitas Array**	86.04	56	P		P	23 28 21.4	+0.2
TXAR	**Lajitas Array** comp=Z,6.9nm,1.0s,baz=211,slow=7.0,SNR=41	86.04	56	P		P	23 28 21.4	+0.2
TXAR	comp=Z,46nm,20.3s,baz=0.0,slow=30			LR		LR	23 59 16.8	
LAZ	**Ladron** comp=Z,4.7nm,1.3s	86.07	50	*e*P		P	23 28 21.1	-0.4
325A	**Bean Ranch, Si** baz=86,SNR=12	86.08	54	⇑P		P	23 28 21.5	0.0
526A	**Mary Lane Ranc** baz=86,SNR=16	86.08	55	⇑P		P	23 28 21.9	+0.4
Z23A	**Rita Site, Whi** baz=86	86.12	51	⇑P		P	23 28 22.3	+0.7
X22A	**Bernardo** baz=86	86.22	50	⇑P		P	23 28 23.0	+0.9
I12A	**Atlanta** baz=86	86.27	39	⇑P		P	23 28 22.1	0.0
BNM	**Barren Site** comp=Z,2.9nm,1.0s	86.30	50	*e*P		P	23 28 22.3	-0.3
627A	**Terlingua Ranc** baz=86,SNR=15	86.31	56	⇑P		P	23 28 22.7	0.0
SRU	**San Rafael** comp=Z,8.2nm,1.3s	86.34	45	*e*P		P	23 28 22.8	+0.1
SRU	**San Rafael** baz=87	86.34	45	⇑P		P	23 28 22.6	-0.1
LPM	**Los Pinos Moun**	86.38	50	*e*P		P	23 28 23.5	+0.6
124A	**Stringfield Ra** baz=87,SNR=9.2	86.40	52	⇓P		P	23 28 23.6	+0.5
426A	**McDonald Obser** baz=87,SNR=20	86.43	55	⇓P		P	23 28 23.2	-0.1
527A	**Woodward Ranch** baz=87,SNR=14	86.48	55	⇓P		P	23 28 23.8	+0.3
CN2	**Changchun**	86.52	321	*e*P		P	23 28 23.9	+0.8
CN2				*ep*P		pP	23 28 52.8	+19
CN2				*es*P		sP	23 29 04.8	+27
CN2				*e*S		SKSac	23 38 47.6	+0.7
CN2	comp=Z,10.0nm,0.9s			pmax	pmax			
CN2	comp=Z,200nm,4.0s			pmax	pmax			
225A	**Deer Hill, Car** baz=87,SNR=8.1	86.56	53	⇓P		P	23 28 24.6	+0.7
Y23A	**Lovelace Mesa,** baz=87	86.60	51	⇑P		P	23 28 24.4	+0.4
628A	**Black Gap, Mar** baz=87	86.71	56	⇓P		P	23 28 24.6	0.0
Z24A	**Sheeppen Canyo** baz=87,SNR=7.8	86.78	52	⇑P		P	23 28 25.4	+0.4
U21A	**Nageezi** baz=87,SNR=7.3	86.78	48	⇑P		P	23 28 25.5	+0.6
P18A	**Preston Nutter** baz=87	86.81	44	⇓P		P	23 28 25.2	+0.1
ANMO	**Albuquerque** comp=Z,11nm,1.2s	86.84	50	*e*P		P	23 28 25.2	+0.1
J14A	**Carey** baz=87	86.93	40	⇑P		P	23 28 25.8	+0.4
GAMB	**Gambell** comp=Z,14nm,1.3s	86.94	1	*e*P		P	23 28 20.8	-3.8
GDL2	**Guadalupe Moun**	86.94	53	*e*P		P	23 28 26.1	+0.4
427A	**Hayter Ranch,** baz=87,SNR=21	86.99	55	⇑P		P	23 28 26.1	+0.2
226B	**Tecolote Peak,** baz=87,SNR=11	87.03	53	⇑P		P	23 28 26.1	+0.1
Y24A	**Capitan** baz=87,SNR=14	87.03	51	⇑P		P	23 28 26.6	+0.5
528A	**Cox Ranch, San** baz=87,SNR=12	87.11	55	⇓P		P	23 28 26.8	+0.2
Z25A	**Roswell** baz=87,SNR=8.0	87.22	52	⇓P		P	23 28 27.6	+0.6
L16A	**Fish Haven** baz=88	87.42	42	⇓P		P	23 28 27.8	-0.1
428A	**Kincaid Ranch,** baz=88,SNR=8.9	87.47	55	⇑P		P	23 28 28.7	+0.5
529A	**Stev Forest Ra** baz=88,SNR=8.9	87.53	56	⇓P		P	23 28 28.2	-0.2
Z26A	**Caprock** baz=88,SNR=9.7	87.75	52	⇓P		P	23 28 29.8	+0.2
PSI	**Prapat**	87.84	274	P		P	23 28 30.1	-0.3
PSI	**Prapat** comp=Z,15nm,1.2s,baz=192,slow=8.7,SNR=5.3	87.84	274	P		P	23 28 30.1	-0.3
X25A	**Clemmons Ranch** baz=88	87.89	51	⇑P		P	23 28 30.7	+0.5
429A	**Davenport Ranc** baz=88,SNR=28	88.01	55	⇓P		P	23 28 30.4	-0.3
V24A	**Rampart Ranch,** baz=88	88.07	50	⇓P		P	23 28 31.7	+0.6
C11A	**Tepee Creek (N** baz=88	88.14	35	⇓P		P	23 28 31.0	0.0
Y26A	**Elida** baz=88	88.19	52	⇑P		P	23 28 31.8	+0.2
329A	**Wagon Wheel Ra** baz=89,SNR=5.2	88.36	55	⇑P		P	23 28 32.3	-0.1
W25A	**X Bar L Ranch,** baz=89	88.38	50	⇑P		P	23 28 32.7	+0.2
128A	**Castleberry Fa** baz=89	88.53	53	⇓P		P	23 28 33.6	+0.3
V25A	**Rancho No Teng** baz=89	88.58	50	⇓P		P	23 28 33.8	+0.2
SKAG	**Skagway** comp=Z,20nm,1.5s	88.67	19	*e*P		P	23 28 35.1	+2.0
TRF	**Thorofare Moun** comp=Z,84nm,2.4s	88.69	11	*e*P		P	23 28 32.3	-1.0
531A	**Rocksprings** baz=89	88.82	56	⇓P		P	23 28 35.0	+0.4
TNA	**Tin City** comp=Z,23nm,2.1s	88.85	3	*e*P		P	23 28 33.1	-0.6
J18A	**Kendall Valley** baz=89	88.95	41	⇓P		P	23 28 35.4	+0.3
PDAR	**Pinedale Array**	88.99	42	P		P	23 28 34.4	-0.9
PDAR	**Pinedale Array** comp=Z,1.7nm,0.9s,baz=228,slow=3.6,SNR=10	88.99	42	P		P	23 28 34.4	-0.9
431A	**Sonora** baz=89	89.02	56	⇓P		P	23 28 37.0	+1.5
632A	**Uvalde** baz=89,SNR=7.9	89.10	57	⇑P		P	23 28 36.5	+0.7
532A	**Rocksprings** baz=90,SNR=12	89.30	57	⇑P		P	23 28 37.0	+0.1
DOT	**Dot Lake** comp=Z,16nm,1.0s	90.04	13	*e*P		P	23 28 39.6	+0.1
ILAR	**Eielson Array**	90.50	12	P		P	23 28 40.1	-1.4
ILAR	**Eielson Array** comp=Z,2.9nm,0.9s,baz=217,slow=5.0,SNR=19	90.50	12	P		P	23 28 40.1	-1.4
ILAR	comp=Z,21nm,19.9s,baz=103,slow=31			LR		LR	00 02 00.4	
R26A	**Arlington** baz=91	90.62	48	⇑P		P	23 28 43.3	+0.4
EGAK	**Eagle** comp=Z,25nm,1.9s	91.65	14	*e*P		P	23 28 46.6	-0.3
B18A	**Beardsley Farm** baz=92	91.98	37	⇓P		P	23 28 48.8	-0.1
D20A	**Manuel Ranch,** baz=92	92.19	39	⇑P		P	23 28 50.7	+0.8
A18A	**Metzger Ranch,** baz=92	92.23	37	⇑P		P	23 28 50.6	+0.5
HKT	**Hockley** comp=Z,46nm,2.0s	92.37	58	*e*P		P	23 28 51.1	+0.1
C20A	**Veseth Ranch,** baz=93	92.60	38	⇓P		P	23 28 52.0	+0.2
T31A	**Randall Ranch,** baz=93	92.68	51	⇓P		P	23 28 52.8	+0.4
G23A	**Biddle** baz=93	92.83	41	⇑P		P	23 28 53.3	+0.4
A19A	**Klindworth Far** baz=93	92.84	37	⇓P		P	23 28 53.3	+0.4
B20A	**Solberg Farm,** baz=93	92.98	38	⇑P		P	23 28 53.9	+0.4
H24A	**Dirks Ranch, A** baz=93	93.11	42	⇑P		P	23 28 54.2	0.0
A20A	**Cobblestone Ra** baz=94	93.27	37	⇓P		P	23 28 55.4	+0.6
HHC	**Hu-ho-hao-te**	93.63	313	*e*P		P	23 28 56.0	-0.7
HHC				PP		PP	23 32 43.6	+1.4
HHC				SKS		SKSac	23 39 18.5	-10
HHC				S		SKKSac	23 39 51.4	+2.8
HHC				sS		sS	23 40 40.3	+19
HHC	comp=Z,21nm,0.7s			pmax	pmax			
HHC	comp=Z,79nm,6.8s			pmax	pmax			
CMAR	**Chiang Mai Arr**	94.02	288	P		P	23 28 59.6	+0.6
CMAR	**Chiang Mai Arr** comp=Z,1.6nm,0.7s,baz=122,slow=3.5,SNR=11	94.02	288	P		P	23 28 59.6	+0.6
C23A	**Lambert** baz=94	94.27	39	⇑P		P	23 28 59.7	+0.3
D24A	**Glendive** baz=95	94.43	40	⇓P		P	23 29 01.0	+0.8
YKA	**Yellowknife Ar**	97.87	24	P		P	23 29 14.4	-1.0
YKA	**Yellowknife Ar** comp=Z,0.6nm,0.8s,baz=233,slow=4.3,SNR=12	97.87	24	P		P	23 29 14.4	-1.0
LPAZ	**La Paz** comp=Z,31nm,18.0s,baz=95,slow=30	98.07	112	LR		LR	00 04 19.7	
SONM	**Songino Array** comp=Z,36nm,20.4s,baz=257,slow=31	100.01	318	LR		LR	00 07 49.1	
TIGA	**Tifton** baz=103	102.67	61	⇑P		Pdif	23 29 37.9	+0.3
KSH	**Kashi**	119.11	303	*e*PKP		PKPdf	23 34 31.3	+1.9
KSH				sPKP			23 35 08.9	
KSH				PP		PP	23 35 57.0	+7.0
KSH				PKS		PKSdf	23 38 07.1	+1.0
KSH				SKS		SKSdf	23 41 32.0	-7.0
KSH				SKKS		SKKSac	23 42 38.0	-9.3
KSH	comp=N,24nm,4.4s			LR		LR		
KSH	comp=E,28nm,3.8s			LR		LR		
KSH	comp=Z,210nm,5.9s			LR		LR		
MUD	**Monsted U'grnd** comp=Z,11nm,1.0s	146.89	356	*i* P		PKPbc	23 35 21.6	-0.5
AKASG	**Malin Array Be**	147.07	332	PKPbc		PKPdf	23 35 20.4	-0.4
AKASG	**Malin Array Be** comp=Z,1.8nm,0.7s,baz=25,slow=2.7,SNR=8.1	147.07	332	PKPbc		PKPdf	23 35 20.4	-0.4
BRTR	**Keskin Array B**	151.11	311	PKPbc		PKPbc	23 35 32.9	-0.8
BRTR				PKPab		PKPab	23 35 42.0	+0.5
BRTR	**Keskin Array B** comp=Z,0.9nm,0.9s,baz=134,slow=3.6,SNR=8.1	151.11	311	PKPbc		PKPbc	23 35 32.9	-0.8
BRTR	comp=Z,1.8nm,0.9s,baz=159,slow=1.0,SNR=10			PKPab		PKPab	23 35 42.0	+0.5
DPC	**Dobruska-Polom**	151.79	345	*e*PKP		PKPbc	23 35 34.6	-0.2
DPC				ePKPAB		PKPab	23 35 44.4	+0.7
PVCC	**Panska Ves**	152.01	347	*e*PKP		PKPbc	23 35 36.1	+0.9
PVCC				ePKPAB		PKPab	23 35 44.0	-0.5
KHC	**Kasperske Hory**	153.54	348	*e*PKP		PKPbc	23 35 38.5	-0.2
KHC				ePKPAB		PKPab	23 35 50.2	-0.9
ESDC	**Sonseca Array**	161.97	24	PKPab		PKPab	23 36 27.4	-0.4
ESDC	**Sonseca Array** comp=Z,0.1nm,0.5s,baz=332,slow=7.4,SNR=4.2	161.97	24	PKPab		PKPab	23 36 27.4	-0.4
TORD	**Torodi Ar. Bea**	169.20	161	PKP		PKPdf	23 35 47.6	-0.6
TORD				PKPab		PKPab	23 36 60.0	-0.1
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,1.1s,baz=235,slow=0.8,SNR=3.6	169.20	161	PKP		PKPdf	23 35 47.6	-0.6
TORD	comp=Z,1.1nm,0.9s,baz=219,slow=3.9,SNR=4.2			PKPab		PKPab	23 36 60.0	-0.1

*IDC **19** 23:18:18.6±0.6, 4.°10N×126.°86E, h0km, mb4.2/14, mb1 4.3/14, mb1mx4.2/26, mbtmp4.2/14, MS3.4/5, Ms1 3.4/5, ms1mx2.9/30, Error ellipse: s-maj=27.5km s-min=13.9km az=71.0*

*ISCJB **19** 23:18:21.8±0.5, 4.°12N±0.°06×126.°87E±0.°10, h36km, mb4.2/19, MS3.3/3, Error ellipse: s-maj=14.6km s-min=6.8km az=160.0*

*NEIC **19** 23:18:22.5±3.4, 4.°10N×126.°91E, h28km±24km, mb4.3/9, Error ellipse: s-maj=13.3km s-min=6.8km az=69.0*

ISC 19 23:18:23.9±0.5, 4.°09N±0.°08×126.°8E±0.°1, h36km, n45, σ0.°80/46, mb4.1/18, MS3.3/3, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	3.21	337	*e*Pn	Pn	23 19 11.3	-0.6
DAV				*e*Sn	Sn	23 19 48.0	-0.9
DAV	**Davao City (W)** comp=Z,694nm,18.3s,baz=336,slow=47	3.21	337	LR	LR	23 20 48.6	
CTBH	**Cotabato--PC H**	4.04	320	⇓*i*P	Pn	23 19 26.3	+3.0
KAPI	**Kappang** comp=Z,156nm,18.9s,baz=54,slow=40	11.49	218	LR	LR	23 25 54.0	
KSM	**Kuching** 9.4nm,0.7s	16.71	262	*e*P	P	23 22 17.1	-0.4
FITZ	**Fitzroy Crossi** 7.5nm,0.9s	22.09	183	*e*P	P	23 23 14.5	-1.5
FITZ	**Fitzroy Crossi** 6.2nm,0.7s,baz=358,slow=9.4,SNR=17	22.09	183	P	P	23 23 14.9	-1.1
WRAB	**Tennant Creek** 18nm,0.8s	24.99	163	*e*P	P	23 23 44.2	-0.2
WRA	**Warramunga Arr**	25.00	163	P	P	23 23 43.9	-0.6
WRA	**Warramunga Arr** 11nm,0.7s,baz=343,slow=11,SNR=43	25.00	163	P	P	23 23 43.9	-0.6
PSI	**Prapat**	27.89	268	P	P	23 24 10.7	-0.2
PSI	**Prapat** 2.4nm,0.4s,baz=161,slow=14,SNR=3.6	27.89	268	P	P	23 24 10.7	-0.2
CMAR	**Chiang Mai Arr**	30.79	300	P	P	23 24 36.8	+0.5
CMAR	**Chiang Mai Arr** 1.0nm,0.5s,baz=113,slow=7.0,SNR=6.8	30.79	300	P	P	23 24 36.8	+0.5
CMAR	comp=Z,35nm,18.4s,baz=195,slow=40			LR	LR	23 39 01.2	
CHTO	**Chiang Mai** 2.1nm,0.6s	30.93	300	*e*P	P	23 24 37.3	-0.3
KSAR	**Wonju Array Be**	33.20	2	P	P	23 24 57.1	-0.2
KSRS	**Korea Array** 1.1nm,0.7s,baz=169,slow=8.6,SNR=4.2	33.22	2	P	P	23 24 57.1	-0.3
MJAR	**Matsushiro Arr** comp=Z,55nm,18.8s,baz=240,slow=32	33.95	17	LR	LR	23 36 36.5	
NWAO	**Narrogin (SRO)**	37.93	193	*e*P	P	23 25 38.1	+0.1
NWAO	**Narrogin (SRO)** 4.3nm,0.5s,baz=40,slow=7.9,SNR=5.0	37.93	193	P	P	23 25 38.2	+0.3
STKA	**Stephens Creek** 0.9nm,0.7s	38.43	160	*e*P	P	23 25 42.5	+0.3
STKA	**Stephens Creek** 6.5nm,0.9s,baz=347,slow=9.0,SNR=6.8	38.43	160	P	P	23 25 42.5	+0.3
DZM	**Mont Dzumac** 9.3nm,0.8s	46.66	126	*e*P	P	23 26 48.1	-1.3
DZM	**Mont Dzumac** 3.5nm,0.3s,baz=114,slow=20,SNR=3.3	46.66	126	P	P	23 26 49.2	-0.1
ULN	**Ulaanbaatar**	46.81	342	*e*P	P	23 26 50.9	+0.6
SONM	**Songino Array**	46.99	341	P	P	23 26 52.2	+0.6
SONM				PcP	PcP	23 28 24.5	+1.0
SONM	**Songino Array** 0.9nm,0.7s,baz=158,slow=8.3,SNR=11	46.99	341	P	P	23 26 52.2	+0.6
SONM	0.7nm,0.7s,baz=171,slow=2.7,SNR=5.8			PcP	PcP	23 28 24.5	+1.0
MK31	**Makanchi Array**	57.32	325	*e*P	P	23 28 07.8	-0.5
MKAR	**Makanchi Array**	57.32	325	P	P	23 28 07.8	-0.5
MKAR				PcP	PcP	23 29 03.2	+1.0
MKAR	**Makanchi Array** 2.2nm,0.5s,baz=121,slow=8.4,SNR=41	57.32	325	P	P	23 28 07.8	-0.5
MKAR	1.1nm,0.8s,baz=111,slow=4.8,SNR=3.8			PcP	PcP	23 29 03.2	+1.0
ZALV	**Zalesovo Beam**	60.32	333	P	P	23 28 27.8	-1.1
ZALV	**Zalesovo Beam** 0.9nm,0.6s,baz=126,slow=7.2,SNR=8.5	60.32	333	P	P	23 28 27.8	-1.1
ZALV	comp=Z,30nm,18.9s,baz=176,slow=42			LR	LR	00 00 28.4	
KURK	**Kurchatov** 3.9nm,0.5s	61.50	327	*e*P	P	23 28 35.8	-1.2
BRVK	**Borovoye** 3.8nm,0.8s	67.15	327	*e*P	P	23 29 13.2	-0.8
ABKAR	**Akbulak array** 1.1nm,0.6s	71.94	321	*e*P	P	23 29 42.9	-0.8
ILAR	**Eielson Array**	84.73	25	P	P	23 30 53.9	-0.1
ILAR	**Eielson Array** 0.6nm,0.8s,baz=240,slow=7.2,SNR=5.7	84.73	25	P	P	23 30 53.9	-0.1
BRTR	**Keskin Array B**	89.88	310	P	P	23 31 21.5	+1.9
BRTR	**Keskin Array B** 0.3nm,0.8s,baz=111,slow=7.9,SNR=3.1	89.88	310	P	P	23 31 21.5	+1.9
YKA	**Yellowknife Ar**	99.12	24	P	Pdif	23 32 01.9	+0.7
YKA	**Yellowknife Ar** 0.1nm,0.6s,baz=304,slow=4.7,SNR=4.0	99.12	24	P	Pdif	23 32 01.9	+0.7
TXAR	**Lajitas Array**	121.29	52	PKP	PKPdf	23 37 13.9	-0.2
TXAR	**Lajitas Array** 0.2nm,0.7s,baz=29,slow=2.1,SNR=2.5	121.29	52	PKP	PKPdf	23 37 13.9	-0.2
TORD	**Torodi Ar. Bea**	122.91	288	PKP	PKPdf	23 37 17.4	0.0
TORD	**Torodi Ar. Bea** 0.4nm,0.7s,baz=100,slow=2.0,SNR=5.7	122.91	288	PKP	PKPdf	23 37 17.4	0.0

PRU 19 23:15:48.7, 49.°89N×118.°49E, h0km, M4.7, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	0.23	257	*e*PG	Pg	23 15 53.3	+0.2
OKC	comp=Z,7.6nm,0.3s			*e*SG	Sg	23 15 56.1	+0.1
DPC	**Dobruska-Polom**	1.47	289	*e*PG	Pn	23 16 16.1	-0.4
DPC				*e*SG	Sg	23 16 35.3	-0.6

IDC 19 23:39:24.8±1.2, 4.°10N×126.°68E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.8/24, mbtmp3.9/7, MS3.3/1, Ms1 3.3/1, ms1mx2.3/30, 1D, Error ellipse: s-maj=107.6km s-min=16.3km az=71.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	3.15	340	LR	LR	23 41 52.4	
	comp=Z,428nm,18.1s,baz=355,slow=47						
CTBH	**Cotabato--PC H**	3.94	322	⇓*i*P	Pb	23 40 35.5	+0.4
FITZ	**Fitzroy Crossi** 3.1nm,0.5s,baz=7.3,slow=7.1,SNR=18	22.09	183	P	P	23 44 22.0	+0.3
WRA	**Warramunga Arr** 8.4nm,0.8s,baz=344,slow=11,SNR=48	25.05	163	P	P	23 44 50.4	-0.6
ASAR	**Alice Springs** 0.9nm,0.6s,baz=352,slow=7.3,SNR=17	28.48	166	P	P	23 45 21.9	-0.1
STKA	**Stephens Creek** 4.3nm,0.8s,baz=322,slow=8.5,SNR=8.1	38.49	159	P	P	23 46 49.2	+0.3
SONM	**Songino Array** 0.2nm,0.6s,baz=142,slow=7.3,SNR=3.2	46.93	341	P	P	23 47 58.2	+0.7
MKAR	**Makanchi Array** 0.9nm,0.7s,baz=124,slow=8.0,SNR=14	57.23	325	P	P	23 49 14.0	0.0
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=138,slow=9.1,SNR=4.3	60.24	333	P	P	23 49 34.0	-0.8

*AUST **19** 23:52:37.5±5.6, 2.°60S×129.°91E, h41km, Error ellipse: s-maj=1.6km s-min=1.2km az=264.0*

*IDC **19** 23:53:16.7±2.2, 6.°37S×129.°82E, h0km, mb3.8/1, mb1 3.7/4, mb1mx3.4/20, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=96.8km s-min=27.3km az=77.0*

ISC 19 23:53:30.3±1.6, 7.°0S±0.°1×129.°8E±0.°2, h139km, n8, σ2.°74/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTN	**Manton Dam** baz=10,SNR=21	5.92	167	P	Pn	23 55 01.8	+5.9
KDU	**Kakadu** baz=10,SNR=25	6.20	155	P	Pn	23 55 05.0	+5.5
WSI	**Waingapu** baz=12,SNR=3.5	9.77	254	S	Sn	23 57 09.1	-26
FITZ	**Fitzroy Crossi** 0.5nm,0.3s,baz=35,slow=13,SNR=22	11.73	200	Pn	Pn	23 56 15.0	+1.6
FITZ				Sn	Sn	23 58 21.6	-1.2
FITZ	**Fitzroy Crossi** baz=16,SNR=11	11.73	200	P	P	23 56 18.3	-2.6
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=340,slow=12,SNR=8.9

Ms1 3.0/1,ms1mx2.4/13,Error ellipse: s-maj=61.1km s-min=22.3km az=40.0

ISC 20 00:03:15.2±1.3,**44°2'N**±0'.1×**129°3'W**±0'.1,**h13**km,**n25,** σ1**9**41/24,**mb3.5**/3,**Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COR	**Corvallis**	**4.35**	**82**	*e*Pn	**Pn**	**00 04 18.4**	**-2.5**
HUMO	**Hull Mountain**	**4.90**	**106**	*e*Pn	**Pn**	**00 04 26.5**	**-2.0**
BROR	**Big Rock Looko**	**4.95**	**86**	P	**Pn**	**00 04 27.4**	**-1.8**
NLWA	**Neilton Lookou**	**5.01**	**48**	*e*Pn	**Pn**	**00 04 28.3**	**-1.8**
	3.4nm,0.5s						
OSR	**Olympics--Salm**	**5.04**	**46**	P	**Pn**	**00 04 30.2**	**-0.2**
OBC	**Olympics--Boni**	**5.33**	**41**	P	**Pn**	**00 04 33.5**	**-1.0**
YBH	**Yreka Blue Hor**	**5.43**	**114**	*e*Pn	Pn	00 04 39.4	+3.4
YBH				Sn	**Sn**	**00 05 39.3**	**+1.0**
YBH	**Yreka Blue Hor**	**5.43**	**114**	Pn	Pn	00 04 40.4	+4.4
	0.1nm,0.3s,baz=276,slow=10,SNR=5.0						
YBH				Sn	**Sn**	**00 05 39.3**	**+1.0**
	0.1nm,0.3s,baz=240,slow=20,SNR=2.3						
HDW	**Hoodsport**	**5.61**	**49**	P	**Pn**	**00 04 36.8**	**-1.5**
VFP	**Flag Point**	**5.73**	**76**	P	**Pn**	**00 04 39.0**	**-1.0**
LON	**Longmire**	**5.90**	**61**	*e*Pn	**Pn**	**00 04 40.5**	**-1.8**
	3.6nm,0.6s						
PGC	**Sidney**	**6.07**	**40**	*e*Pn	**Pn**	**00 04 44.6**	**+0.1**
MBW	**Mount Baker**	**6.91**	**45**	P	**Pn**	**00 04 55.8**	**-0.5**
NEW	**Newport**	**9.41**	**60**	*e*Pn	**Pn**	**00 05 29.7**	**-0.8**
NEW	**Newport**	**9.41**	**60**	LR	LR	00 08 43.4	
	comp=Z,79nm,18.9s,baz=191,slow=35						
ANMO	**Albuquerque**	**19.84**	**110**	P	**Pn**	**00 07 50.0**	**+2.5**
ANMO	**Albuquerque**	**19.84**	**110**	P	**Pn**	**00 07 50.0**	**+2.5**
	0.3nm,0.3s,baz=299,slow=13,SNR=3.9						
YKA	**Yellowknife Ar**	**20.28**	**20**	P	**P**	**00 07 49.5**	**-0.6**
YKA	**Yellowknife Ar**	**20.28**	**20**	P	**P**	**00 07 49.5**	**-0.6**
	0.7nm,0.8s,baz=208,slow=9.7,SNR=6.0						
ILAR	**Eielson Array**	**22.88**	**341**	P	**P**	**00 08 18.1**	**0.0**
ILAR	**Eielson Array**	**22.88**	**341**	P	**P**	**00 08 18.1**	**0.0**
	0.8nm,0.8s,baz=155,slow=9.0,SNR=12						
SONM	**Songino Array**	**76.12**	**325**	P	**P**	**00 15 02.9**	**+0.3**
SONM	**Songino Array**	**76.12**	**325**	P	**P**	**00 15 02.9**	**+0.3**
	0.3nm,0.7s,baz=53,slow=5.6,SNR=3.4						
ZALV	**Zalesovo Beam**	**78.00**	**340**	P	**P**	**00 15 12.3**	**-0.6**
ZALV	**Zalesovo Beam**	**78.00**	**340**	P	**P**	**00 15 12.3**	**-0.6**
	0.2nm,0.2s,baz=17,slow=1.5,SNR=2.7						

IDC 20 00:29:35.1±1.2,**8°48S**×**121°10E,h193**km±12km,**mb3.3**/5, **mb1 3.5**/9,**mb1mx3.3**/24,**mbtmp3.3**/9,**Error ellipse: s-maj=42.9km s-min=8.7km az=62.0,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.70**	**339**	P	Pn	00 30 34.3	+1.4
	2.0nm,0.3s,baz=155,slow=11,SNR=17						
KAPI				S	Sn	00 31 17.3	-1.0
	baz=65,slow=17,SNR=2.2						
FITZ	**Fitzroy Crossi**	**10.53**	**156**	P	Pn	00 32 02.3	+0.9
	0.5nm,0.3s,baz=352,slow=7.9,SNR=16						
FITZ				S	Sn	00 33 54.1	-4.8
	0.9nm,0.3s,baz=228,slow=14,SNR=7.6						
WRA	**Warramunga Arr**	**17.14**	**133**	P	P	00 33 22.6	+0.4
	0.5nm,0.3s,baz=307,slow=12,SNR=9.6						
WRA				S	S	00 36 27.9	-3.0
	0.4nm,0.3s,baz=295,slow=25,SNR=5.1						
ASAR	**Alice Springs**	**19.45**	**142**	P	P	00 33 48.8	+1.5
	0.7nm,0.3s,baz=328,slow=13,SNR=24						
ASAR				S	S	00 37 16.2	-0.5
	baz=321,slow=21,SNR=5.1						
TGY	**Tagaytay City**	**22.44**	**360**	P	P	00 34 19.2	+1.0
	214nm,0.4s,baz=185,slow=10,SNR=3.3						
STKA	**Stephens Creek**	**30.08**	**144**	P	P	00 35 28.2	+1.7
	0.8nm,0.3s,baz=335,slow=14,SNR=3.2						
SONM	**Songino Array**	**57.56**	**348**	P	P	00 39 03.6	-1.1
	0.2nm,0.5s,baz=170,slow=10,SNR=3.2						
MKAR	**Makanchi Array**	**64.97**	**332**	P	P	00 39 55.3	+1.0
	0.4nm,0.6s,baz=149,slow=7.0,SNR=5.5						
ZALV	**Zalesovo Beam**	**69.32**	**338**	P	P	00 40 20.7	-0.7
	0.6nm,0.4s,baz=133,slow=6.2,SNR=4.1						
VNDA	**Vanda**	**72.18**	**171**	P	P	00 40 37.5	-0.9
	1.5nm,0.7s,baz=324,slow=7.8,SNR=3.9						
TORD	**Torodi Ar. Bea**	**120.42**	**280**	PKP	PKPdf	00 48 04.9	+0.3
	0.3nm,0.8s,baz=95,slow=1.2,SNR=6.8						

*OMAN **20** 00:43:45.8±39.0,26°.54N×56°.32E,h30km,Error ellipse: s-maj=14.3km s-min=1.1km az=35.0*

CSEM 20 00:43:18.4±0.7,**28°29N×56°95E,h10**km,**ML3.8**/1,**1C-1D, Error ellipse: s-maj=36.6km s-min=15.1km az=99.0, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANOM	**Banah**	**2.43**	**194**	⇑P	Pn	00 43 58.0	-0.2
	SNR=84						
BANOM	**Banah**	**2.43**	**194**	P	Pn	00 43 58.0	-0.3
	SNR=84						
BANOM				S	Sn	00 44 28.0	-0.1
NAZ	**Nazwa, Dubai**	**3.49**	**200**	P	Pn	00 44 12.6	-0.1
HATD	**Hatta, Dubai**	**3.53**	**192**	P	Pn	00 44 13.3	-0.1
ASHO	**Ashiyiah**	**3.68**	**193**	P	Pn	00 44 15.7	+0.2
	SNR=6.4						
ASHO	**Ashiyiah**	**3.68**	**193**	P	Pn	00 44 15.7	+0.2
	SNR=6.4						
FAQ	**Al Faqa, Dubai**	**3.74**	**199**	P	Pn	00 44 15.9	-0.3
ASUD	**Al Ashush, Dub**	**3.93**	**202**	⇓P	Pn	00 44 19.0	+0.1
	SNR=9.6						
ASUD	**Al Ashush, Dub**	**3.93**	**202**	P	Pn	00 44 19.0	+0.2

*ISCJB **20** 00:45:32.9±0.2,22°.24S±0°.06×179°.68W±0°.04,h579km, mb4.1/36,Error ellipse: s-maj=8.8km s-min=3.6km az=154.9*

*IDC **20** 00:45:32.0±1.6,22°.23S×179°.53W,h558km±18km, mb3.6/20,mb1 3.7/23,mb1mx3.7/27,mbtmp3.6/23,Error ellipse: s-maj=15.6km s-min=10.1km az=156.0*

*NEIC **20** 00:45:35.1±1.2,22°.19S×179°.74W,h592km±12km, mb4.3/20,Error ellipse: s-maj=25.4km s-min=9.5km az=151.0*

*AUST **20** 00:45:35.6±1.8,21°.96S×179°.41W,h624km,Error ellipse: s-maj=2.6km s-min=1.3km az=355.0*

ISC 20 00:45:33.6±0.4,**22°31S**±0°.08×**179°59W**±0°.06,**h579**km, **n279,**σ0**66/283,mb4.2**/36,**88C-100D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.06**	**334**	*e*P	**P**	**00 47 06.2**	**+0.3**
MSVF				*e*S	**S**	**00 48 22.9**	**+1.8**
NIUE	**Niue**	**9.60**	**72**	P	**P**	**00 47 50.0**	**+1.9**
	baz=9.3,SNR=7.6						
NIUE				S	**S**	**00 49 38.4**	**0.0**
	baz=9.3,SNR=5.5						
AFI	**Afiamalu**	**11.18**	**43**	P	P	00 47 60.0	-4.1
	3.2nm,0.3s,baz=139,slow=9.0,SNR=5.2						
AFI				S	S	00 49 56.9	-11
	1.9nm,0.3s,baz=300,slow=22,SNR=4.2						
DZM	**Mont Dzumac**	**12.94**	**268**	*e*S	S	00 50 34.6	-6.0
	249nm,25.4s						
DZM	**Mont Dzumac**	**12.94**	**268**	P	P	00 48 26.4	+4.4
	2.1nm,0.3s,baz=71,slow=21,SNR=21						
URZ	**Urewera**	**16.15**	**189**	P	**P**	**00 48 52.1**	**-1.0**
	2.2nm,0.3s,baz=2.8,slow=5.0,SNR=9.1						
URZ				S	**S**	**00 51 35.0**	**-0.8**
	2.1nm,0.3s,baz=73,slow=19,SNR=10						
RAR	**Rarotonga**	**18.45**	**90**	P	**P**	**00 49 12.4**	**-1.9**
	1.1nm,0.3s,baz=323,slow=5.1,SNR=2.9						
EIDS	**Eidsvold**	**26.97**	**258**	P	**P**	**00 50 31.3**	**+1.0**
	baz=27,SNR=6.0						
MGCD	**Mangrove Creek**	**28.02**	**241**	P	**P**	**00 50 41.4**	**+2.1**
	baz=28,SNR=5.6						
PPT2	**Papeete2**	**28.58**	**86**	*e*LR	LR	00 58 51.3	
	30nm,22.8s						
RMQ	**Roma**	**29.08**	**255**	P	**P**	**00 50 50.7**	**+2.0**
	baz=29,SNR=4.9						
CNB	**Canberra Magne**	**30.00**	**238**	P	**P**	**00 50 58.1**	**+1.6**
	baz=30,SNR=9.8						
CTA	**Charters Tower**	**31.88**	**268**	P	**P**	**00 51 13.5**	**+0.7**
	9.2nm,0.4s,baz=90,slow=10,SNR=21						
CTAO	**Charters Tower**	**31.88**	**268**	*e*P	**P**	**00 51 13.4**	**+0.7**
	9.8nm,0.5s						
CMSA	**Cobar Meteorol**	**32.18**	**246**	P	**P**	**00 51 15.9**	**+0.9**
	baz=32,SNR=10.0						
QLP	**Quilpie**	**33.13**	**255**	P	**P**	**00 51 23.9**	**+0.7**
	baz=33,SNR=10.0						
TOO	**Toolangi**	**33.64**	**235**	P	**P**	**00 51 28.4**	**+1.1**
	baz=34,SNR=6.8						
PMG	**Port Moresby**	**34.36**	**287**	*e*P	**P**	**00 51 33.5**	**-0.2**
	28nm,0.9s						
PMG	**Port Moresby**	**34.36**	**287**	P	**P**	**00 51 33.8**	**+0.1**
	41nm,1.1s,baz=127,slow=5.1,SNR=4.4						
STKA	**Stephens Creek**	**35.68**	**246**	*e*P	**P**	**00 51 45.3**	**+0.9**
	1.7nm,0.6s						
STKA	**Stephens Creek**	**35.68**	**246**	P	**P**	**00 51 45.3**	**+0.9**
	5.2nm,0.3s,baz=88,slow=9.2,SNR=24						
STKA	**Stephens Creek**	**35.68**	**246**	P	**P**	**00 51 45.4**	**+0.9**
	baz=36,SNR=4.4						
COEN	**Coen**	**36.27**	**277**	P	**P**	**00 51 50.7**	**+1.3**
	baz=36,SNR=9.7						
BBOO	**Buckleboo**	**40.43**	**245**	P	**P**	**00 52 22.9**	**0.0**
	baz=41,SNR=25						
ASAR	**Alice Springs**	**42.69**	**259**	P	**P**	**00 52 41.0**	**+0.2**
	9.5nm,0.6s,baz=100,slow=7.5,SNR=181						
ASAR				PcP	**PcP**	**00 54 19.0**	**-0.2**
	1.4nm,0.6s,baz=109,slow=3.8,SNR=4.2						
ASAR				S	**S**	**00 58 22.5**	**-0.8**
	1.3nm,0.9s,baz=95,slow=14,SNR=7.4						
WRAB	**Tennant Creek**	**42.90**	**264**	*e*P	**P**	**00 52 41.9**	**-0.6**
	13nm,0.9s						
WRA	**Warramunga Arr**	**42.91**	**264**	P	**P**	**00 52 42.1**	**-0.4**
	4.3nm,0.3s,baz=99,slow=8.3,SNR=60						
WRA				ScP	**ScP**	**00 57 19.0**	**+2.6**
	0.8nm,0.8s,baz=90,slow=3.9,SNR=4.5						
WRA				S	**S**	**00 58 24.0**	**-2.5**
	0.3nm,0.6s,baz=100,slow=12,SNR=4.3						
KDU	**Kakadu**	**46.54**	**274**	P	**P**	**00 53 10.2**	**-0.2**
	baz=47,SNR=6.9						
FORT	**Forrest**	**47.23**	**248**	P	**P**	**00 53 15.2**	**-0.2**
	baz=48,SNR=10						
MTN	**Manton Dam**	**47.73**	**273**	P	**P**	**00 53 18.8**	**-0.4**
	baz=48,SNR=6.4						
FITZ	**Fitzroy Crossi**	**51.34**	**264**	*e*P	**P**	**00 53 45.9**	**+0.2**
	6.4nm,0.6s						
FITZ				*e*pP	**pP**	**00 55 33.5**	**+0.2**
FITZ	**Fitzroy Crossi**	**51.34**	**264**	P	**P**	**00 53 46.0**	**+0.3**
	baz=52,SNR=59						
MEEK	**Meekatharra**	**55.94**	**252**	P	**P**	**00 54 17.7**	**-0.5**
	baz=56,SNR=5.5						
VNDA	**Vanda**	**55.99**	**185**	P	**P**	**00 54 18.4**	**+0.9**
	3.4nm,1.0s,baz=344,slow=7.2,SNR=4.0						
MBWA	**Marble Bar**	**56.03**	**259**	*e*P	**P**	**00 54 18.1**	**-0.6**
	9.2nm,0.5s						
NWAO	**Narrogin (SRO)**	**56.24**	**245**	P	**P**	**00 54 20.1**	**0.0**
	2.3nm,0.4s,baz=108,slow=11,SNR=3.9						
BLDU	**Ballidu**	**56.98**	**247**	P	**P**	**00 54 24.8**	**-0.3**
	baz=57,SNR=8.0						
MORW	**Morawa**	**57.78**	**249**	P	**P**	**00 54 30.6**	**0.0**
	baz=58,SNR=4.3						
KAPI	**Kappang**	**60.99**	**277**	P	**P**	**00 54 52.0**	**-0.2**
	3.1nm,0.3s,baz=90,slow=12,SNR=3.2						
PCI	**Palu**	**62.55**	**281**	P	P	00 55 11.2	+8.9
	baz=63,SNR=3.6						
QSPA	**South Pole Qui**	**67.77**	**180**	*e*P	**P**	**00 55 34.6**	**+0.4**
	2.8nm,0.8s						
UGM	**Wanagama**	**68.46**	**270**	P	**P**	**00 55 39.1**	**-0.1**
	baz=69,SNR=3.6						
MJAR	**Matsushiro Arr**	**70.81**	**325**	P	**P**	**00 55 52.3**	**-0.3**
	3.3nm,0.8s,baz=164,slow=5.8,SNR=5.4						
PETK	**Petropavlovsk-**	**77.65**	**346**	P	**P**	**00 56 30.2**	**-0.5**
	3.7nm,0.7s,baz=134,slow=8.4,SNR=3.6						
MONP	**Monument Peak**	**81.51**	**49**	⇓P	**P**	**00 56 52.0**	**+0.2**
	baz=82						
EDW2	**Edwards Air Fo**	**81.53**	**47**	⇓P	**P**	**00 56 51.3**	**-0.3**
	baz=82						
ISA	**Isabella**	**81.65**	**46**	*e*P	**P**	**00 56 53.0**	**+0.7**
	5.3nm,0.9s						
ISA	**Isabella**	**81.65**	**46**	⇑P	**P**	**00 56 51.2**	**-1.0**
	baz=82						
CMB	**Columbia Colle**	**81.79**	**43**	*e*P	**P**	**00 56 53.2**	**+0.3**
	4.4nm,0.8s						
PFO	**Pinyon Flat Ob**	**81.88**	**49**	⇑P	**P**	**00 56 53.1**	**-0.4**
	baz=82						
BBRC	**Big Bear Solar**	**81.92**	**48**	⇑P	**P**	**00 56 52.8**	**-1.0**
	baz=82						
SWSC	**Sam W. Stewart**	**81.98**	**50**	⇓P	**P**	**00 56 54.2**	**+0.4**
	baz=82						
LRMC	**Laurel Mountai**	**82.07**	**47**	⇓P	**P**	**00 56 55.0**	**+0.5**
	baz=82						
CWC	**Cottonwood Cre**	**82.36**	**46**	⇑P	**P**	**00 56 56.0**	**+0.1**
	baz=83						
BELC	**Belle Mtn. Jos**	**82.41**	**49**	⇑P	**P**	**00 56 56.3**	**+0.1**
	baz=83						
MPMC	**Manual Prospec**	**82.54**	**46**	⇑P	**P**	**00 56 56.7**	**-0.2**
	baz=83						
MTUM	**Tungsten Hills**	**82.56**	**45**	*e*P	**P**	**00 56 57.7**	**+0.7**
GSC	**Goldstone**	**82.57**	**47**	⇓P	**P**	**00 56 56.5**	**-0.5**
	baz=83						
BC3	**Big Chuckawall**	**82.60**	**49**	⇑P	**P**	**00 56 57.4**	**+0.3**
	baz=83						
YBH	**Yreka Blue Hor**	**82.62**	**39**	P	**P**	**00 56 58.2**	**+1.1**
	3.2nm,0.7s,baz=225,slow=7.1,SNR=8.4						
HEC	**Hector,Ludlow**	**82.64**	**48**	⇓P	**P**	**00 56 57.3**	**0.0**
	baz=83						
GLA	**Glamis**	**82.72**	**50**	⇑P	**P**	**00 56 58.5**	**+0.8**
	baz=83						
WCN	**Washoe City**	**82.94**	**43**	*e*P	**P**	**00 56 59.1**	**+0.3**
	5.0nm,1.1s						
GMRC	**Granite Mounta**	**83.07**	**48**	⇓P	**P**	**00 56 59.8**	**+0.3**
	baz=83						
IRM	**Iron Mountain**	**83.09**	**49**	⇓P	**P**	**00 56 59.9**	**+0.4**
	baz=83						
GRAC	**Grapevine Rang**	**83.14**	**46**	⇓P	**P**	**00 57 00.6**	**+0.9**
	baz=83						
FURC	**Furnace Creek,**	**83.19**	**46**	⇓P	**P**	**00 57 00.0**	**+0.2**
	baz=83						
TUQ	**Turquoise Moun**	**83.25**	**47**	⇓P	**P**	**00 57 00.7**	**+0.4**
	baz=84						
NVAR	**Mina Array Bea**	**83.35**	**44**	P	**P**	**00 57 01.2**	**+0.3**
	3.9nm,0.9s,baz=225,slow=8.4,SNR=22						
PDMCI	**Parker Dam,Lak**	**83.87**	**49**	⇓P	**P**	**00 57 03.9**	**+0.6**
	baz=84						
Z14A	**Wintersburg**	**84.22**	**51**	⇓P	**P**	**00 57 06.1**	**+1.0**
	baz=84						
W13A	**Hualapai Mount**	**84.47**	**49**	⇓P	**P**	**00 57 06.8**	**+0.3**
	baz=85						
Y14A	**Wickenburg**	**84.48**	**50**	⇓P	**P**	**00 57 06.9**	**+0.5**
	baz=85						
TUC	**Tucson**	**85.25**	**52**	*e*P	**P**	**00 57 11.5**	**+1.3**
	4.8nm,0.9s						
319A	**Douglas**	**85.91**	**54**	⇑P	**P**	**00 57 14.1**	**+0.7**
	baz=86						
CCUT	**Cedar City**	**86.12**	**47**	*e*P	**P**	**00 57 15.6**	**+1.2**
	47nm,2.8s						
U15A	**North Rim**	**86.27**	**48**	⇑P	**P**	**00 57 15.5**	**+0.3**
	baz=86						
WUAZ	**Wupatki**	**86.44**	**49**	⇑P	**P**	**00 57 16.8**	**+0.9**
	baz=87						
320A	**Kipp Ranch, An**	**86.46**	**54**	⇓P	**P**	**00 57 16.7**	**+0.7**
	baz=87						
ELK	**Elko**	**86.61**	**43**	P	**P**	**00 57 16.8**	**+0.1**
	1.2nm,1.0s,baz=156,slow=8.1,SNR=3.8						
220A	**Playas Peak, P**	**86.73**	**54**	⇓P	**P**	**00 57 18.6**	**+1.3**
	baz=87						
120A	**U Bar Ranch, L**	**86.96**	**53**	⇑P	**P**	**00 57 19.3**	**+1.0**
	baz=87						
X18A	**Snowflake**	**86.96**	**51**	⇓P	**P**	**00 57 18.7**	**+0.3**
	baz=87						
Z20A	**Nine Sixteen R**	**87.26**	**53**	⇓P	**P**	**00 57 20.6**	**+0.8**
	baz=88						
HAWA	**Hanford**	**87.28**	**37**	*e*P	**P**	**00 57 20.2**	**+0.9**
	10.0nm,1.0s						
121A	**Cookes Peak, D**	**87.58**	**53**	⇑P	**P**	**00 57 22.0**	**+0.7**
	baz=88						
MFID	**Camas Ranch**	**87.72**	**41**	*e*P	**P**	**00 57 22.2**	**+0.6**
	5.6nm,1.0s						
MFID	**Camas Ranch**	**87.72**	**41**	⇓P	**P**	**00 57 22.0**	**+0.4**
	baz=88						
Y20A	**Horse Springs,**	**87.80**	**52**	⇑P	**P**	**00 57 23.1**	**+0.7**
	baz=88						
DUG	**Dugway**	**87.88**	**45**	⇑P	**P**	**00 57 22.3**	**-0.2**
	baz=88						
Z21A	**St. Cloud Mine**	**88.03**	**53**	⇓P	**P**	**00 57 24.2**	**+0.8**
	baz=88						
W20A	**Ramah**	**88.29**	**51**	⇑P	**P**	**00 57 25.2**	**+0.5**
	baz=88						
Q16A	**Castle Valley**	**88.31**	**47**	⇓P	**P**	**00 57 25.5**	**+1.0**
	baz=88						
I12A	**Atlanta**	**88.35**	**41**	⇑P	**P**	**00 57 25.1**	**+0.4**
	baz=88						
Y21A	**Point of Rocks**	**88.36**	**52**	⇑P	**P**	**00 57 25.4**	**+0.4**
	baz=89						
X21A	**Alamocita Cree**	**88.48**	**52**	⇑P	**P**	**00 57 26.1**	**+0.5**
	baz=89						
TRF	**Thorofare Moun**	**88.53**	**13**	*e*P	**P**	**00 57 23.3**	**-1.6**
	8.5nm,0.7s						
Z22A	**Elephant Butte**	**88.53**	**53**	⇑P	**P**	**00 57 25.5**	**-0.2**
	baz=89,SNR=7.7						
HLID	**Hailey**	**88.66**	**41**	*e*P	**P**	**00 57 26.9**	**+0.8**
	3.8nm,0.8s						
HLID	**Hailey**	**88.66**	**41**	⇓P	**P**	**00 57 26.7**	**+0.6**
	baz=89,SNR=5.7						
J13A	**Cove Ranch, Pi**	**88.72**	**42**	⇑P	**P**	**00 57 27.1**	**+0.8**
	baz=89,SNR=7.3						
324A	**Moseley Ranch,**	**88.81**	**55**	⇓P	**P**	**00 57 26.6**	**-0.4**
	baz=89,SNR=9.8						
SRU	**San Rafael**	**88.84**	**47**	*e*P	**P**	**00 57 27.5**	**+0.5**
	5.4nm,0.9s						
SRU	**San Rafael**	**88.84**	**47**	⇑P	**P**	**00 57 26.8**	**-0.3**
	baz=89						
Y22A	**Socorro**	**88.84**	**53**	⇓P	**P**	**00 57 27.6**	**+0.4**
	baz=89						
P17A	**Butcher Ranch,**	**88.88**	**46**	⇓P	**P**	**00 57 27.3**	**+0.1**
	baz=89						
K14A	**Jones Ranch, D**	**88.88**	**43**	⇓P	**P**	**00 57 27.5**	**+0.4**
	baz=89						
425A	**Indio Mountain**	**88.89**	**56**	⇓P	**P**	**00 57 27.3**	**-0.1**
	baz=89,SNR=7.4						
H12A	**Diamond D Ranc**	**88.93**	**40**	⇓P	**P**	**00 57 27.8**	**+0.5**
	baz=89,SNR=8.6						
G12A	**Big Creek, Yel**	**88.97**	**40**	⇓P	**P**	**00 57 27.5**	**+0.1**
	baz=89						
626A	**Big Bend Ranch**	**89.00**	**58**	⇑P	**P**	**00 57 28.4**	**+0.5**
	baz=89,SNR=5.8						
I13A	**Wildhorse Cree**	**89.03**	**41**	⇑P	**P**	**00 57 28.1**	**+0.3**
	baz=89						
224A	**Cornudas Mount**	**89.06**	**55**	⇓P	**P**	**00 57 28.4**	**+0.1**
	baz=89,SNR=5.8						
Z23A	**Rita Site, Whi**	**89.08**	**53**	⇓P	**P**	**00 57 28.8**	**+0.6**
	baz=89						
J14A	**Carey**	**89.08**	**42**	⇓P	**P**	**00 57 28.4**	**+0.3**
	baz=89						
L15A	**Malad City**	**89.10**	**43**	⇑P	**P**	**00 57 28.1**	**0.0**
	baz=89						
PLCA	**Paso Flores**	**89.10**	**134**	P	**P**	**00 57 29.4**	**+1.2**
	1.5nm,1.0s,baz=202,slow=4.8,SNR=3.3						
325A	**Bean Ranch, Si**	**89.17**	**56**	⇓P	**P**	**00 57 28.7**	**-0.1**
	baz=89,SNR=5.4						
M16A	**Huntsville**	**89.22**	**44**	⇑P	**P**	**00 57 29.1**	**+0.3**
	baz=89						
V21A	**Milan**	**89.23**	**51**	⇑P	**P**	**00 57 29.0**	**0.0**
	baz=89						
526A	**Mary Lane Ranc**	**89.26**	**57**	⇓P	**P**	**00 57 29.4**	**+0.3**
	baz=90						
TXAR	**Lajitas Array**	**89.27**	**58**	P	**P**	**00 57 30.1**	**+0.9**
	2.6nm,0.9s,baz=217,slow=5.6,SNR=20						
H13A	**Challis**	**89.30**	**41**	⇓P	**P**	**00 57 29.3**	**+0.4**
	baz=90						
CMAR	**Chiang Mai Arr**	**89.33**	**290**	P	**P**	**00 57 31.0**	**+1.5**
	3.2nm,0.9s,baz=133,slow=3.3,SNR=18						
F12A	**Elk City**	**89.35**	**39**	⇓P	**P**	**00 57 28.8**	**-0.4**
	baz=90,SNR=5.9						
K15A	**Arbon**	**89.36**	**43**	⇓P	**P**	**00 57 29.8**	**+0.5**
	baz=90						
124A	**Stringfield Ra**	**89.40**	**54**	⇑P	**P**	**00 57 30.1**	**+0.2**
	baz=90						
I14A	**Mackay**	**89.44**	**41**	⇓P	**P**	**00 57 30.2**	**+0.5**
	baz=90						
Y23A	**Lovelace Mesa,**	**89.51**	**53**	⇑P	**P**	**00 57 30.6**	**+0.3**
	baz=90						
U21A	**Nageezi**	**89.52**	**50**	⇑P	**P**	**00 57 30.3**	**0.0**
	baz=90,SNR=5.8						
627A	**Terlingua Ranc**	**89.54**	**58**	⇓P	**P**	**00 57 30.7**	**+0.3**
	baz=90						
N17A	**Moffit Pass**	**89.55**	**45**	⇓P	**P**	**00 57 30.5**	**+0.1**
	baz=90						
426A	**McDonald Obser**	**89.58**	**57**	⇑P	**P**	**00 57 31.0**	**+0.3**
	baz=90						
G13A	**Cobalt**	**89.59**	**40**	⇑P	**P**	**00 57 30.6**	**+0.2**
	baz=90						
225A	**Deer Hill, Car**	**89.61**	**55**	⇓P	**P**	**00 57 31.0**	**+0.2**
	baz=90,SNR=5.6						
Q19A	**Hogan Spring (**	**89.61**	**47**	⇓P	**P**	**00 57 30.8**	**+0.2**
	baz=90						
527A	**Woodward Ranch**	**89.67**	**57**	⇓P	**P**	**00 57 31.1**	**0.0**
	baz=90						
ANMO	**Albuquerque**	**89.69**	**52**	*e*P	**P**	**00 57 31.4**	**+0.3**
	3.3nm,1.0s						
S20A	**Disappointment**	**89.69**	**49**	⇑P	**P**	**00 57 31.0**	**-0.1**
	baz=90						
L16A	**Fish Haven**	**89.71**	**44**	⇑P	**P**	**00 57 30.5**	**-0.6**
	baz=90,SNR=8.6						
Z24A	**Sheeppen Canyo**	**89.75**	**54**	⇓P	**P**	**00 57 31.4**	**0.0**
	baz=90						
J15A	**Blackfoot**	**89.79**	**42**	⇓P	**P**	**00 57 32.2**	**+0.9**
	baz=90,SNR=7.0						
H14A	**Leadore**	**89.86**	**41**	⇑P	**P**	**00 57 32.1**	**+0.4**
	baz=90						
F13A	**Darby**	**89.

J17A	Brown Place, J	90.85	43	⇓P	P	00 57 36.6	+0.3
	baz=91						
V24A	Rampart Ranch,	90.90	52	⇓P	P	00 57 37.0	+0.2
	baz=91						
K18A	Toltan Ranch,	90.91	44	⇓P	P	00 57 37.0	+0.4
	baz=91,SNR=5.1						
IMW	Indian Meadow	90.98	42	*e*P	P	00 57 37.4	+0.5
	56nm,3.0s						
F15A	Butte	91.03	40	⇑P	P	00 57 36.9	-0.1
	baz=91						
D14A	Greenough	91.09	39	⇑P	P	00 57 37.3	+0.1
	baz=91						
L19A	Farson	91.09	44	⇑P	P	00 57 37.4	-0.1
	baz=91						
Q22A	Crested Butte,	91.18	48	⇓P	P	00 57 38.0	-0.1
	baz=91						
H16A	Russell Place,	91.20	42	⇑P	P	00 57 38.0	+0.2
	baz=91						
N20A	Spence Gulch,	91.20	46	⇓P	P	00 57 37.9	-0.1
	baz=91						
J18A	Kendall Valley	91.21	43	⇑P	P	00 57 37.6	-0.4
	baz=91,SNR=7.4						
429A	Davenport Ranc	91.22	57	⇓P	P	00 57 37.5	-0.5
	baz=91						
W25A	X Bar L Ranch,	91.27	52	⇓P	P	00 57 38.4	+0.1
	baz=92						
SMCO	Snowmass	91.29	48	*e*P	P	00 57 38.8	+0.2
	1.8nm,0.8s						
PDAR	Pinedale Array	91.29	44	P	P	00 57 38.0	-0.4
	1.4nm,0.8s,baz=202,slow=3.8,SNR=10						
V25A	Rancho No Teng	91.43	52	⇓P	P	00 57 39.1	0.0
	baz=92						
BOZ	Bozeman (W)	91.45	41	⇑P	P	00 57 39.0	+0.1
	baz=92						
M20A	Sweetwater, Wa	91.56	45	⇑P	P	00 57 39.7	0.0
	baz=92						
128A	Castleberry Fa	91.61	55	⇓P	P	00 57 39.6	-0.3
	baz=92						
R23A	Moffat	91.63	49	⇓P	P	00 57 39.9	-0.2
	baz=92						
Y27A	Causey	91.64	54	⇑P	P	00 57 40.1	+0.1
	baz=92						
N21A	Black Mountain	91.66	46	⇓P	P	00 57 40.2	+0.1
	baz=92						
L20A	Wamsutter	91.71	45	⇓P	P	00 57 40.6	+0.3
	baz=92						
631A	Perdido Creek	91.75	59	⇑P	P	00 57 39.5	-1.0
	baz=92						
S24A	Houchin Ranch,	91.81	50	⇑P	P	00 57 41.1	+0.2
	baz=92						
U25A	Circle Dot Ran	91.83	51	⇑P	P	00 57 40.7	-0.2
	baz=92						
MSTX	Muleshoe	91.97	54	⇓P	P	00 57 41.5	0.0
	baz=92						
O22A	Kremmling	92.03	47	⇓P	P	00 57 41.7	-0.2
	baz=92						
531A	Rocksprings	92.08	58	⇑P	P	00 57 42.4	+0.3
	baz=92						
330A	Mertzon	92.11	57	⇓P	P	00 57 41.7	-0.4
	baz=92						
R24A	Sanders Place,	92.15	49	⇓P	P	00 57 42.5	+0.2
	baz=92						
M21A	Separation Pea	92.16	46	⇑P	P	00 57 42.3	-0.1
	baz=92						
F17A	Fitzpatrick Pl	92.16	41	⇑P	P	00 57 42.4	+0.2
	baz=92						
U26A	Atchley Ranch,	92.31	52	⇑P	P	00 57 42.4	-0.7
	baz=92						
L21A	Rawlins	92.33	45	⇑P	P	00 57 42.4	-0.7
	baz=92						
S25A	Robets Cordova	92.37	50	⇓P	P	00 57 43.2	-0.2
	baz=93						
N22A	Wattenberg Ran	92.39	47	⇓P	P	00 57 43.5	0.0
	baz=93						
632A	Uvalde	92.41	59	⇑P	P	00 57 43.7	+0.2
	baz=93						
ISCO	Idaho Springs	92.51	48	⇓P	P	00 57 43.6	-0.5
	baz=93						
J20A	Shoshoni	92.52	44	⇑P	P	00 57 43.1	-0.7
	baz=93						
532A	Rocksprings	92.57	59	⇓P	P	00 57 44.6	+0.3
	baz=93						
R25A	Fountain Ranch	92.69	50	⇑P	P	00 57 44.2	-0.6
	baz=93						
I20A	Worland	92.77	43	⇑P	P	00 57 45.1	+0.1
	baz=93						
432A	Menard	92.96	58	⇓P	P	00 57 45.5	-0.6
	baz=93						
C17A	Wharram Farm,	92.97	39	⇓P	P	00 57 45.6	-0.1
	baz=93						
231A	Bronte	92.99	57	⇓P	P	00 57 45.8	-0.4
	baz=93						
S26A	Kim	93.04	51	⇓P	P	00 57 46.5	+0.1
	baz=93						
332A	Millersview	93.21	57	⇑P	P	00 57 46.5	-0.6
	baz=93						
R26A	Arlington	93.35	50	⇓P	P	00 57 47.5	-0.3
	baz=94						
L23A	Garrett	93.50	46	⇓P	P	00 57 48.1	-0.4
	baz=94						
SONM	Songino Array	96.14	319	P	P	00 58 00.5	+0.3
	0.1nm,0.4s,baz=125,slow=7.6,SNR=2.1						
YKA	Yellowknife Ar	98.77	25	P	Pdif	00 58 11.0	-0.3
	0.1nm,0.7s,baz=249,slow=4.0,SNR=3.1						
MKAR	Makanchi Array	111.35	313	PKiKP	PKiKP	01 03 01.3	-1.1
	0.3nm,0.6s,baz=67,slow=1.8,SNR=4.4						
KKAR	Karatay Array	119.19	308	*e*PKPdf	PKPdf	01 03 16.1	-1.5
ARCES	ARCESS Array B	130.41	349	PKP	PKPdf	01 03 36.5	-1.8
	6.0nm,1.0s,baz=20,slow=3.9,SNR=3.7						
FINES	FINESS Array B	137.06	342	PKP	PKPdf	01 03 51.5	+0.6
	2.1nm,0.9s,baz=70,slow=1.6,SNR=3.8						
NOA	NORSAR Array B	140.57	352	PKhKP	PKPpre	01 03 50.0	
	0.4nm,0.7s,baz=13,slow=4.0,SNR=2.5						
MALT	Malatya	143.79	305	⇑*i*P	PKPbc	01 04 03.0	-0.1
AKASG	Malin Array Be	143.82	329	PKP	PKPbc	01 04 01.1	-1.5
	2.3nm,0.4s,baz=43,slow=4.3,SNR=20						
SUW	Suwalki	143.96	337	*e*PKPdf	PKPbc	01 04 01.3	-1.6
ASF	Jabal al Asfar	146.24	295	PKPbc	PKPbc	01 04 10.9	+0.4
	1.5nm,0.6s,baz=307,slow=5.1,SNR=6.8						
BRTR	Keskin Array B	146.89	309	PKPbc	PKPbc	01 04 11.4	-0.6
	2.2nm,0.7s,baz=2.9,slow=2.9,SNR=21						
BRTR				PKPab	PKPab	01 04 15.2	-0.1
	0.9nm,0.5s,baz=98,slow=2.7,SNR=3.7						
ANTO	Ankara	147.44	310	*e*PKPdf	PKPbc	01 04 13.1	-0.2
ANTO	Ankara	147.44	310	⇓*i*P	PKPbc	01 04 13.2	-0.2
TLCR		147.44	321	⇓*i*P	PKPbc	01 04 12.8	-0.3
KWP	Kalwaria Pacla	147.54	333	⇓*i*P	PKPbc	01 04 12.8	-0.5
CFR	Carcaliu	147.84	322	⇑*i*P	PKPbc	01 04 13.5	-0.6
TESR		147.84	325	⇑*i*P	PKPbc	01 04 13.2	-0.9
BURAR	Bucovina Array	147.84	328	⇑*i*P	PKPdf	01 04 11.4	+1.0
EIL	Elat	148.18	291	PKPbc	PKPbc	01 04 15.4	-0.1
	4.4nm,0.7s,baz=58,slow=8.5,SNR=6.8						
VRI	Vrincioaia	148.21	324	⇓*i*P	PKPbc	01 04 14.6	-0.5
OJC	Ojcow	148.25	336	*e*PKPdf	PKPbc	01 04 14.4	-0.6
KOLS	Kolonicke sedl	148.26	332	*e*PKP	PKPbc	01 04 14.6	-0.5
CRVS	Cervenica-Dubn	148.63	333	*e*PKP	PKPbc	01 04 15.5	-0.5
NIE	Niedzica	148.69	335	*e*PX	PKPbc	01 04 16.4	+0.2
MLR	Muntele Rosu	148.87	324	⇑*i*P	PKPbc	01 04 16.0	-0.9
OKC	Ostrava-Krasne	149.17	337	⇑*e*PKP	PKPbc	01 04 16.9	-0.4
UPC	Upice	149.31	340	⇑*e*PKP	PKPbc	01 04 17.4	-0.2
DPC	Dobruska-Polom	149.35	340	*e*PKPdf	PKPbc	01 04 17.7	-0.1
DPC	Dobruska-Polom	149.35	340	⇑*i*PKP	PKPbc	01 04 17.7	-0.1
MORC	Moravsky Berou	149.43	338	*e*PKPdf	PKPbc	01 04 17.6	-0.3
MORC	Moravsky Berou	149.43	338	⇓*i*P	PKPbc	01 04 17.7	-0.3
CLL	Collm	149.44	344	⇓*i*PKPbc	PKPbc	01 04 17.3	-0.5
	comp=Z,13nm,0.8s						
CLL				⇑*i*PKPab	PKPab	01 04 24.5	-0.7
	comp=Z,5.0nm,0.8s						
BRG	Berggiesshubel	149.59	343	*i* PKP	PKPbc	01 04 17.9	-0.3
	comp=Z,9.0nm,0.8s						
BRG				*e*		01 04 25.4	
	comp=Z,4.6nm,0.8s						
DRGR		149.64	329	⇓*i*P	PKPbc	01 04 17.9	-0.7
ARR	Arges	149.65	325	⇑*i*P	PKPbc	01 04 19.2	+0.5
PVCC	Panska Ves	149.72	342	*e*PKP	PKPbc	01 04 18.5	-0.1
ISP	Isparta	149.86	308	*e*PKPdf	PKPbc	01 04 17.8	-1.7
VYHS	Vyhne	150.02	335	*e*PKP	PKPbc	01 04 18.8	-0.5
VYHS				*e*		01 04 27.6	
PSZ	Piszkesteto	150.05	333	⇑*i*P	PKPbc	01 04 18.8	-0.7
PRU	Pruhonice	150.21	341	⇑*e*PKP	PKPbc	01 04 19.2	-0.5
PRU				*e*PKPAB	PKPab	01 04 28.7	+0.2
TREC	Trest	150.53	340	⇑*e*PKP	PKPbc	01 04 20.1	-0.4
NKC	Novy Kostel	150.56	344	⇑*e*PKP	PKPbc	01 04 20.3	-0.3
BZS	Buzias	151.01	328	⇓*i*P	PKPbc	01 04 21.0	-0.7
KHC	Kasperske Hory	151.26	342	⇑*i*PKP	PKPbc	01 04 21.7	-0.5
KHC				*e*PKPAB	PKPab	01 04 32.8	-0.2
GERES	GERESS Array B	151.48	341	PKPbc	PKPbc	01 04 22.1	-0.7
	comp=Z,0.6nm,0.4s,baz=29,slow=3.0,SNR=9.3						
GERES				PKPab	PKPab	01 04 33.9	-0.1
	comp=Z,0.5nm,0.5s,baz=20,slow=4.3,SNR=4.4						
ESDC	Sonseca Array	162.29	11	PKPab	PKPab	01 05 21.1	+0.1
	comp=Z,0.2nm,0.5s,baz=344,slow=4.6,SNR=4.0						
TORD	Torodi Ar. Bea	170.81	188	PKP	PKPdf	01 04 35.3	-1.5
	comp=Z,1.0nm,0.9s,baz=186,slow=1.4,SNR=5.7						
TORD				PKPab	PKPab	01 05 58.5	-0.5
	comp=Z,0.7nm,0.7s,baz=173,slow=3.2,SNR=6.8						

IDC 20 00:55:28.4±1.5, 3°49N×126°46E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/23, mbtmp3.6/5, Error ellipse: s-maj=197.2km s-min=19.9km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.54	162	P	P	01 00 49.1	-0.9
	1.0nm,0.5s,baz=343,slow=10,SNR=5.2						
ASAR	Alice Springs	27.95	165	P	P	01 01 22.1	+1.3
	0.2nm,0.5s,baz=342,slow=7.8,SNR=3.5						
STKA	Stephens Creek	38.01	159	P	P	01 02 47.7	-0.6
	2.2nm,0.8s,baz=345,slow=12,SNR=3.9						
SONM	Songino Array	47.44	342	P	P	01 04 05.2	+0.3
	0.3nm,0.6s,baz=148,slow=8.2,SNR=4.4						
MKAR	Makanchi Array	57.60	325	P	P	01 05 19.9	-0.3
	0.4nm,0.5s,baz=126,slow=7.7,SNR=8.2						
TORD	Torodi Ar. Bea	122.74	288	PKP	PKPdf	01 14 27.0	-0.4
	0.3nm,1.0s,baz=100,slow=1.9,SNR=2.9						

IDC 20 01:11:54.1±2.2, 1°12N×127°11E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/21, mbtmp3.6/3, Error ellipse: s-maj=182.6km s-min=25.0km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.10	162	P	P	01 16 50.0	-1.2
	1.2nm,0.4s,baz=340,slow=12,SNR=9.4						
ASAR	Alice Springs	25.50	165	P	P	01 17 25.4	+0.9
	0.5nm,0.4s,baz=342,slow=11,SNR=8.6						
MKAR	Makanchi Array	59.91	326	P	P	01 22 01.9	-0.1
	0.4nm,0.3s,baz=124,slow=8.5,SNR=7.6						

*ISCJB **20** 01:20:19.2±0.3, 42°.31N±0°.02×13°.40E±0°.03, h10km±3km, Error ellipse: s-maj=3.3km s-min=2.7km az=162.4*
*CSEM **20** 01:20:19.5±0.1, 42°.31N×13°.41E, h2km, ML3.5/9, Error ellipse: s-maj=2.6km s-min=2.0km az=73.0*
*ROM **20** 01:20:19.4±0.1, 42°.31N×13°.42E, h11km, Ml2.9/12, Error ellipse: s-maj=1.2km s-min=0.9km az=69.0*

ISC 20 01:20:20.2±0.8, 42°.32N±0°.02×13°.42E±0°.02, h9km±4km, n84, σ1°07/114, 1C, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	L'Aquila	0.04	343	Pg	Pg	01 20 21.9	-0.2
AQU				Sg	Sg	01 20 23.3	-0.2
	10μm,0.2s						
AQU	L'Aquila	0.04	343	Pg	Pg	01 20 21.9	-0.2
AQU				Sg	Sg	01 20 23.3	-0.2
	10μm,0.2s						
FAGN	Fagnano	0.13	112	Pg	Pg	01 20 23.1	-0.1
FAGN				Sg	Sg	01 20 25.6	+0.2
FAGN	Fagnano	0.13	112	Pg	Pg	01 20 23.1	-0.1
FAGN				Sg	Sg	01 20 25.6	+0.2
CAMP	Campotosto	0.22	358	Pg	Pg	01 20 24.5	-0.3
CAMP				Sg	Sg	01 20 27.8	-0.1
	1μm,0.5s						
CAMP	Campotosto	0.22	358	Pg	Pg	01 20 24.5	-0.3
CAMP				Sg	Sg	01 20 27.8	-0.1
	1μm,0.5s						
FIAM	Fiamignano	0.23	258	Pg	Pg	01 20 24.8	-0.1
FIAM				Sg	Sg	01 20 28.7	+0.6
	2μm,0.5s						
FIAM	Fiamignano	0.23	258	Pg	Pg	01 20 24.8	-0.1
FIAM				Sg	Sg	01 20 28.7	+0.6
	2μm,0.5s						
PTQR	Pietraquaria	0.29	183	Pg	Pg	01 20 25.8	-0.3
PTQR				Sg	Sg	01 20 30.3	+0.3
PTQR	Pietraquaria	0.29	183	Pg	Pg	01 20 25.8	-0.3
PTQR				Sg	Sg	01 20 30.3	+0.3
VCEL	Villa Celiera	0.32	76	Pg	Pg	01 20 26.2	-0.4
VCEL				Sg	Sg	01 20 32.0	+1.0
	3μm,0.3s						
VCEL	Villa Celiera	0.32	76	Pg	Pg	01 20 26.2	-0.4
VCEL				Sg	Sg	01 20 32.0	+1.0
	3μm,0.3s						
TERO	Teramo	0.34	24	Pg	Pg	01 20 26.2	-0.7
TERO				Sg	Sg	01 20 30.8	-0.6
	1μm,0.4s						
TERO	Teramo	0.34	24	Pg	Pg	01 20 26.2	-0.7
TERO				Sg	Sg	01 20 30.8	-0.6
	1μm,0.4s						
VVLD	Villa Vallelon	0.47	161	Pg	Pg	01 20 28.6	-0.7
	1μm,0.7s						
VVLD	Villa Vallelon	0.47	161	Pg	Pg	01 20 28.6	-0.7
	1μm,0.7s						
INTR	Introdacqua	0.47	130	Pg	Pg	01 20 28.6	-0.8
INTR				Sg	Sg	01 20 36.4	+0.8
	1μm,0.4s						
INTR	Introdacqua	0.47	130	Pg	Pg	01 20 28.6	-0.8
INTR				Sg	Sg	01 20 36.4	+0.8
	1μm,0.4s						
CERT	Cerreto	0.49	222	Pg	Pg	01 20 29.1	-0.6
CERT				Sg	Sg	01 20 36.6	+0.5
	2μm,0.4s						
CERT	Cerreto	0.49	222	Pg	Pg	01 20 29.1	-0.6
CERT				Sg	Sg	01 20 36.6	+0.5
	2μm,0.4s						
GUAR	Guarcino	0.53	189	Pg	Pg	01 20 29.8	-0.6
	426nm,0.4s						
GUAR	Guarcino	0.53	189	Pg	Pg	01 20 29.8	-0.6
	426nm,0.4s						
MNS	Montasola	0.55	277	Pg	Pg	01 20 30.0	-0.9
MNS	Montasola	0.55	277	Pg	Pg	01 20 30.0	-0.9
NRCA	Norcia	0.56	337	Pg	Pg	01 20 30.3	-0.8
NRCA				Sg	Sg	01 20 39.0	+0.4
	431nm,0.1s						
NRCA	Norcia	0.56	337	Pg	Pg	01 20 30.3	-0.8
NRCA				Sg	Sg	01 20 39.0	+0.4
	431nm,0.1s						
MTCE	Montecelio	0.58	240	Pg	Pg	01 20 30.7	-0.7
	278nm,0.5s						
MTCE	Montecelio	0.58	240	Pg	Pg	01 20 30.7	-0.7
	278nm,0.5s						
TRTR	Tortoreto Alta	0.61	36	Pg	Pg	01 20 32.4	+0.3
TRTR	Tortoreto Alta	0.61	36	Pg	Pg	01 20 32.4	+0.3
LPEL	Lama dei Pelig	0.63	115	Pg	Pg	01 20 31.2	-1.1
LPEL				Sg	Sg	01 20 41.2	+0.6
	586nm,0.2s						
LPEL	Lama dei Pelig	0.63	115	Pg	Pg	01 20 31.2	-1.1
LPEL				Sg	Sg	01 20 41.2	+0.6
	586nm,0.2s						
POFI	Posta Fibreno	0.64	160	Pg	Pg	01 20 31.3	-1.2
	243nm,0.5s						
POFI	Posta Fibreno	0.64	160	Pg	Pg	01 20 31.3	-1.2
	243nm,0.5s						
OFFI	Offida	0.65	18	Pg	Pg	01 20 32.9	+0.1
OFFI	Offida	0.65	18	Pg	Pg	01 20 32.9	+0.1
SDI	San Donato	0.67	154	Pg	Pg	01 20 31.9	-1.3
SDI	San Donato	0.67	154	Pg	Pg	01 20 31.9	-1.3
CESX	Cesi	0.69	296	Pg	Pg	01 20 33.0	-0.4
CESX	Cesi	0.69	296	Pg	Pg	01 20 33.0	-0.4
CAFR	Castel Frentan	0.69	97	Pg	Pg	01 20 33.1	-0.5
CAFR	Castel Frentan	0.69	97	Pg	Pg	01 20 33.1	-0.5
FDMO	Fiordimonte	0.76	341	Pg	Pg	01 20 33.7	-1.2
FDMO	Fiordimonte	0.76	341	Pg	Pg	01 20 33.7	-1.2
GIUL	Giuliano Di Ro	0.77	189	Pg	Pg	01 20 34.1	-0.8
GIUL	Giuliano Di Ro	0.77	189	Pg	Pg	01 20 34.1	-0.8
MA9	Marino	0.79	226	Pg	Pg	01 20 34.6	-0.7
MA9	Marino	0.79	226	Pg	Pg	01 20 34.6	-0.7
CESI	CESI - Serrava	0.79	331	Pg	Pg	01 20 34.2	-1.1
CESI	CESI - Serrava	0.79	331	Pg	Pg	01 20 34.2	-1.1
RNI2	Rionero Sannit	0.82	138	Pg	Pg	01 20 35.2	-0.8
RNI2	Rionero Sannit	0.82	138	Pg	Pg	01 20 35.2	-0.8
LAV9	Lanuvio	0.83	220	Pg	Pg	01 20 36.1	-0.1
LAV9	Lanuvio	0.83	220	Pg	Pg	01 20 36.1	-0.1
GUMA	Gualdo di Mace	0.84	27	Pg	Pg	01 20 33.9	-2.4
GUMA	Gualdo di Mace	0.84	27	Pg	Pg	01 20 33.9	-2.4
CERA	Filignano	0.84	148	Pg	Pg	01 20 34.9	-1.5
CERA	Filignano	0.84	148	Pg	Pg	01 20 34.9	-1.5
ASSB	Assisi San Ben	0.92	323	Pg	Pg	01 20 36.5	-1.3
ASSB	Assisi San Ben	0.92	323	Pg	Pg	01 20 36.5	-1.3
MIDA	Miranda	0.92	137	Pg	Pg	01 20 36.1	-1.7
MIDA	Miranda	0.92	137	Pg	Pg	01 20 36.1	-1.7
SNTG	Esanatoglia	1.00	340	Pg	Pg	01 20 38.0	-1.5
SNTG	Esanatoglia	1.00	340	Pg	Pg	01 20 38.0	-1.5
CING	Cingoli	1.07	351	Pg	Pb	01 20 39.3	-1.6
CING	Cingoli	1.07	351	Pg	Pb	01 20 39.3	-1.6
VAGA	Valle Agricola	1.09	146	Pg	Pb	01 20 39.6	-1.5
VAGA	Valle Agricola	1.09	146	Pg	Pb	01 20 39.6	-1.5
MGAB	Montegabbione	1.13	302	Pg	Pb	01 20 41.3	-0.6
MGAB	Montegabbione	1.13	302	Pg	Pb	01 20 41.3	-0.6
MURB	Monte Urbino	1.15	326	Pg	Pb	01 20 41.6	-0.7
MURB	Monte Urbino	1.15	326	Pg	Pb	01 20 41.6	-0.7
ARVD	Arcevia	1.23	344	Pg	Pn	01 20 42.2	-1.4
ARVD	Arcevia	1.23	344	Pg	Pn	01 20 42.2	-1.4
NVLJ	Novalja	2.48	25	*i* Pn	Pn	01 21 00.1	-0.6
NVLJ				Sn	Sn	01 21 32.8	+1.7
NVLJ	Novalja	2.48	25	*i* Pn	Pn	01 21 00.1	-0.6
NVLJ				Sn	Sn	01 21 32.8	+1.7
STON	Ston	3.21	79	*e*Pn	Pn	01 21 12.0	+1.3
STON				Sn	Sn	01 21 48.9	-0.2
STON	Ston	3.21	79	*e*Pn	Pn	01 21 11.9	+1.3
STON				Sn	Sn	01 21 48.8	-0.2
BOJS	Bojanci	3.45	22	*i* Pn	Pn	01 21 15.7	+1.6
BOJS				*i* Sn	Sn	01 21 58.0	+2.9
BOJS	Bojanci	3.45	22	Pn	Pn	01 21 15.6	+1.6
BOJS				*i* Sn	Sn	01 21 58.0	+2.9
JAVS	Javornik	3.61	7	*i* Pn	Pn	01 21 17.1	+0.8
JAVS				*i* Sn	Sn	01 22 01.5	+2.5
JAVS	Javornik	3.61	7	*i* Pn	Pn	01 21 17.1	+0.8
JAVS				*i* Sn	Sn	01 22 01.5	+2.5
ABTA	Abfaltersbach	4.48	352	⇑*i*Pn	Pn	01 21 28.4	+0.1
ABTA	Abfaltersbach	4.48	352	Pn	Pn	01 21 28.4	+0.1

IDC 20 01:32:46.1±1.4, 2°67N×126°75E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.4/23, mbtmp3.4/5, MS2.6/1, Ms1 2.6/1, ms1mx2.1/23, Error ellipse: s-maj=113.8km s-min=19.9km az=73.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	20.67	183	P	Pn	01 37 29.7	-0.3
	0.7nm,0.4s,baz=11,slow=10,SNR=3.9						
WRA	Warramunga Arr	23.67	162	P	P	01 37 58.1	-1.5
	0.8nm,0.5s,baz=340,slow=11,SNR=4.7						
ASAR	Alice Springs	27.09	165	P	P	01 38 30.9	+0.1
	0.2nm,0.4s,baz=343,slow=12,SNR=3.2						
KSRS	Korea Array	34.64	2	LR	LR	01 53 01.7	
	comp=Z,9.8nm,18.8s,baz=240,slow=35						
SONM	Songino Array	48.31	342	P	P	01 41 30.7	+1.3
	0.4nm,0.8s,baz=166,slow=7.4,SNR=3.1						
MKAR	Makanchi Array	58.44	326	P	P	01 42 42.1	-1.8
	0.3nm,0.6s,baz=134,slow=6.2,SNR=4.6						

IDC 20 01:34:54.6±1.1, 4°25N×126°85E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/23, mbtmp3.6/5, Error ellipse: s-maj=73.0km s-min=21.8km az=71.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.14	163	P	P	01 40 20.7	-1.0
	1.9nm,0.7s,baz=343,slow=10,SNR=6.6						
STKA	Stephens Creek	38.57	160	P	P	01 42 20.5	+1.2
	2.5nm,0.8s,baz=344,slow=14,SNR=3.6						
SONM	Songino Array	46.85	341	P	P	01 43 27.5	+1.0
	0.1nm,0.3s,baz=168,slow=7.4,SNR=3.1						
MKAR	Makanchi Array	57.20	325	P	P	01 44 42.8	-0.8
	0.3nm,0.5s,baz=118,slow=8.3,SNR=5.4						
ILAR	Eielson Array	84.58	25	P	P	01 47 29.1	-0.5
	0.4nm,1.0s,baz=262,slow=4.2,SNR=4.1						

*IDC **20** 01:48:37.1±0.6, 4°.04N×126°.71E, h0km, mb4.2/15, mb1 4.3/15, mb1mx4.2/25, mbtmp4.2/15, MS3.3/7, Ms1 3.3/7, ms1mx3.0/39, Error ellipse: s-maj=31.5km s-min=12.6km az=77.0*
*ISCJB **20** 01:48:41.2±0.4, 4°.01N±0°.05×126°.7E±0°.1, h45km, mb4.2/23, MS3.2/5, Error ellipse: s-maj=15.3km s-min=6.3km az=162.4*
*NEIC **20** 01:48:42.0±0.3, 4°.03N×126°.73E, h35km, mb4.4/10, Error ellipse: s-maj=14.7km s-min=6.0km az=77.0*
*AUST **20** 01:50:05.5±2.4, 1°.91S×127°.30E, h449km, Error ellipse: s-maj=3.4km s-min=1.3km az=225.0*

ISC 20 01:48:43.1±0.5, 4°.01N±0°.08×126°.7E±0°.2, h45km, n61, σ0°96/58, mb4.2/22, MS3.0/5, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	3.25	340	LR	LR	01 51 07.7	
	comp=Z,725nm,18.1s,baz=188,slow=47						
CTBH	Cotabato--PC H	4.03	322	⇑*i*P	Pn	01 49 48.3	+5.9
PCI	Palu	8.43	235	P	Sn	01 51 55.1	-22
	baz=7

KOLN	**Koldanda**	**47.36**	**305**	*e*P	**P**		**01 57 13.0**	**-0.3**
	9.2nm,0.5s							
DANN	**Dangsing**	**47.45**	**305**	*e*P	**P**		**01 57 13.1**	**-0.9**
	13nm,0.6s							
PYUN	**Piuthan**	**47.98**	**305**	*e*P	**P**		**01 57 17.5**	**-0.6**
	40nm,1.3s							
MK31	**Makanchi Array**	**57.32**	**325**	*e*P	**P**		**01 58 26.3**	**-0.3**
MK31				*e*PcP	**PcP**		**01 59 16.9**	**-3.4**
MKAR	**Makanchi Array**	**57.32**	**325**	P	**P**		**01 58 26.4**	**-0.2**
MKAR	**Makanchi Array**	**57.32**	**325**	P	**P**		**01 58 26.4**	**-0.2**
	1.4nm,0.5s,baz=122,slow=8.4,SNR=21							
TKM2	**Tokmak 2**	**59.53**	**318**	*e*P	**P**		**01 58 42.2**	**-0.2**
	0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**60.34**	**333**	P	**P**		**01 58 46.5**	**-0.8**
ZALV	**Zalesovo Beam**	**60.34**	**333**	P	**P**		**01 58 46.5**	**-0.8**
	0.6nm,0.4s,baz=132,slow=8.2,SNR=6.5							
KURK	**Kurchatov**	**61.50**	**327**	*e*P	**P**		**01 58 54.7**	**-0.6**
	6.6nm,0.9s							
BRVK	**Borovoye**	**67.16**	**327**	*e*P	**P**		**01 59 32.2**	**-0.2**
	4.3nm,0.8s							
ABKAR	**Akbulak array**	**71.93**	**321**	*e*P	**P**		**02 00 01.0**	**-0.8**
	1.7nm,0.8s							
TRF	**Thorofare Moun**	**83.30**	**27**	*e*P	**P**		**02 01 03.9**	**-1.3**
	6.2nm,1.1s							
COLD	**Coldfoot**	**83.64**	**23**	*e*P	**P**		**02 01 08.1**	**+1.4**
	5.6nm,1.0s							
ILAR	**Eielson Array**	**84.86**	**25**	P	**P**		**02 01 13.2**	**+0.3**
ILAR	**Eielson Array**	**84.86**	**25**	P	**P**		**02 01 13.2**	**+0.3**
	1.2nm,0.9s,baz=249,slow=6.3,SNR=8.2							
KMBO	**Kilima Mbogo**	**89.55**	**269**	P	**P**		**02 01 37.1**	**+0.2**
KMBO	**Kilima Mbogo**	**89.55**	**269**	P	**P**		**02 01 37.1**	**+0.2**
	1.5nm,0.8s,baz=44,slow=11,SNR=5.1							
BRTR	**Keskin Array B**	**89.84**	**310**	P	**P**		**02 01 37.6**	**-0.1**
BRTR	**Keskin Array B**	**89.84**	**310**	P	**P**		**02 01 37.6**	**-0.1**
	0.8nm,0.8s,baz=116,slow=4.8,SNR=9.5							
NOA	**NORSAR Array B**	**98.54**	**334**	LR	LR		02 48 27.3	
	comp=Z,14nm,19.1s,baz=140,slow=36							
YKA	**Yellowknife Ar**	**99.25**	**24**	P	**Pdif**		**02 02 20.9**	**+0.9**
YKA	**Yellowknife Ar**	**99.25**	**24**	P	**Pdif**		**02 02 20.9**	**+0.9**
	0.2nm,0.8s,baz=299,slow=4.6,SNR=4.1							
TORD	**Torodi Ar. Bea**	**122.82**	**288**	PKP	**PKPdf**		**02 07 35.5**	**+0.2**
TORD	**Torodi Ar. Bea**	**122.82**	**288**	PKP	**PKPdf**		**02 07 35.5**	**+0.2**
	0.6nm,1.0s,baz=90,slow=1.6,SNR=8.1							

*ISCJB **20** 02:22:15.7±0.2, 42°.39N±0°.02×13°.30E±0°.02, h10km±2km, Error ellipse: s-maj=2.9km s-min=2.8km az=136.2*
*LDG **20** 02:22:15.7±1.6, 42°.43N×13°.56E, h2km, Ml3.0/3, Error ellipse: s-maj=34.6km s-min=16.3km az=111.0*
*CSEM **20** 02:22:16.1±0.1, 42°.39N×13°.31E, h2km, ML3.5/7, Error ellipse: s-maj=2.5km s-min=2.1km az=56.0*
*ROM **20** 02:22:16.0±0.1, 42°.38N×13°.32E, h10km±1km, Ml3.0/13, Error ellipse: s-maj=1.2km s-min=1.0km az=77.0*

ISC 20 02:22:17.0±0.8, 42°.39N±0°.02×13°.33E±0°.02, h11km±4km, n115, σ1s22/140, 1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**124**	Pg	**Pg**	**02 22 18.7**	**-0.6**
AQU				Sg	**Sg**	**02 22 20.5**	**-0.5**
	20μm,0.2s						
AQU	**L'Aquila**	**0.06**	**124**	Pg	**Pg**	**02 22 18.7**	**-0.6**
AQU				Sg	**Sg**	**02 22 20.5**	**-0.5**
	20μm,0.2s						
CAMP	**Campotosto**	**0.16**	**21**	Pg	**Pg**	**02 22 20.3**	**-0.4**
CAMP				Sg	**Sg**	**02 22 23.3**	**0.0**
	4μm,0.4s						
CAMP	**Campotosto**	**0.16**	**21**	Pg	**Pg**	**02 22 20.3**	**-0.4**
CAMP				Sg	**Sg**	**02 22 23.3**	**0.0**
	4μm,0.4s						
FIAM	**Fiamignano**	**0.20**	**233**	Pg	**Pg**	**02 22 20.7**	**-0.6**
FIAM				Sg	**Sg**	**02 22 23.9**	**-0.4**
	4μm,0.6s						
FIAM	**Fiamignano**	**0.20**	**233**	Pg	**Pg**	**02 22 20.7**	**-0.6**
FIAM				Sg	**Sg**	**02 22 23.9**	**-0.4**
	4μm,0.6s						
FAGN	**Fagnano**	**0.22**	**123**	Pg	**Pg**	**02 22 21.2**	**-0.5**
FAGN				Sg	**Sg**	**02 22 24.9**	**0.0**
	7μm,0.5s						
FAGN	**Fagnano**	**0.22**	**123**	Pg	**Pg**	**02 22 21.2**	**-0.5**
FAGN				Sg	**Sg**	**02 22 24.9**	**0.0**
	7μm,0.5s						
TERO	**Teramo**	**0.31**	**41**	Pg	**Pg**	**02 22 22.5**	**-0.7**
TERO				Sg	**Sg**	**02 22 27.3**	**-0.1**
	3μm,0.5s						
TERO	**Teramo**	**0.31**	**41**	Pg	**Pg**	**02 22 22.5**	**-0.7**
TERO				Sg	**Sg**	**02 22 27.3**	**-0.1**
	3μm,0.5s						
PTQR	**Pietraquaria**	**0.37**	**172**	Pg	**Pg**	**02 22 23.4**	**-1.0**
PTQR				Sg	**Sg**	**02 22 29.0**	**-0.3**
PTQR	**Pietraquaria**	**0.37**	**172**	Pg	**Pg**	**02 22 23.4**	**-1.0**
PTQR				Sg	**Sg**	**02 22 29.0**	**-0.3**
VCEL	**Villa Celiera**	**0.38**	**89**	Pg	**Pb**	**02 22 24.1**	**-1.7**
	2μm,0.5s						
VCEL	**Villa Celiera**	**0.38**	**89**	Pg	**Pb**	**02 22 24.1**	**-1.7**
	2μm,0.5s						
NRCA	**Norcia**	**0.47**	**340**	Pg	**Pg**	**02 22 25.4**	**-0.9**
	704nm,0.2s						
NRCA	**Norcia**	**0.47**	**340**	Pg	**Pg**	**02 22 25.4**	**-0.9**
	704nm,0.2s						
MNS	**Montasola**	**0.48**	**270**	Pg	**Pg**	**02 22 25.4**	**-1.0**
	983nm,0.7s						
MNS	**Montasola**	**0.48**	**270**	Pg	**Pg**	**02 22 25.4**	**-1.0**
	983nm,0.7s						
CERT	**Cerreto**	**0.51**	**211**	Pg	**Pg**	**02 22 25.7**	**-1.2**
CERT				Sg	**Sg**	**02 22 33.0**	**-0.7**
	1μm,0.4s						
CERT	**Cerreto**	**0.51**	**211**	Pg	**Pg**	**02 22 25.7**	**-1.2**
CERT				Sg	**Sg**	**02 22 33.0**	**-0.7**
	1μm,0.4s						
VVLD	**Villa Vallelon**	**0.56**	**157**	Pg	**Pg**	**02 22 26.6**	**-1.3**
	744nm,0.6s						
VVLD	**Villa Vallelon**	**0.56**	**157**	Pg	**Pg**	**02 22 26.6**	**-1.3**
	744nm,0.6s						
INTR	**Introdacqua**	**0.57**	**131**	Pg	**Pg**	**02 22 27.0**	**-1.1**
INTR				Sg	**Sb**	**02 22 36.3**	**-0.8**
	889nm,0.6s						
INTR	**Introdacqua**	**0.57**	**131**	Pg	**Pg**	**02 22 27.0**	**-1.1**
INTR				Sg	**Sb**	**02 22 36.3**	**-0.8**
	889nm,0.6s						
MTCE	**Montecelio**	**0.57**	**230**	Pg	**Pg**	**02 22 26.9**	**-1.2**
	481nm,0.9s						
MTCE	**Montecelio**	**0.57**	**230**	Pg	**Pg**	**02 22 26.9**	**-1.2**
	481nm,0.9s						
GUAR	**Guarcino**	**0.59**	**181**	Pg	**Pg**	**02 22 28.1**	**-0.4**
	460nm,0.5s						
GUAR	**Guarcino**	**0.59**	**181**	Pg	**Pg**	**02 22 28.1**	**-0.4**
	460nm,0.5s						
CESX	**Cesi**	**0.60**	**292**	Pg	**Pg**	**02 22 27.2**	**-1.4**
	414nm,0.3s						
CESX	**Cesi**	**0.60**	**292**	Pg	**Pg**	**02 22 27.2**	**-1.4**
	414nm,0.3s						
TRTR	**Tortoreto Alta**	**0.60**	**46**	Pg	**Pb**	**02 22 29.0**	**-0.5**
TRTR	**Tortoreto Alta**	**0.60**	**46**	Pg	**Pb**	**02 22 29.0**	**-0.5**
OFFI	**Offida**	**0.60**	**25**	Pg	**Pb**	**02 22 28.7**	**-0.9**
OFFI	**Offida**	**0.60**	**25**	Pg	**Pb**	**02 22 28.7**	**-0.9**
FDMO	**Fiordimonte**	**0.67**	**345**	Pg	**Pg**	**02 22 28.8**	**-1.2**
FDMO	**Fiordimonte**	**0.67**	**345**	Pg	**Pg**	**02 22 28.8**	**-1.2**
CESI	**CESI - Serrava**	**0.69**	**333**	Pg	**Pg**	**02 22 29.3**	**-1.1**
CESI	**CESI - Serrava**	**0.69**	**333**	Pg	**Pg**	**02 22 29.3**	**-1.1**
LPEL	**Lama dei Pelig**	**0.72**	**118**	Pg	**Pg**	**02 22 29.6**	**-1.3**
LPEL				Sg	**Sb**	**02 22 40.6**	**-0.8**
LPEL	**Lama dei Pelig**	**0.72**	**118**	Pg	**Pg**	**02 22 29.6**	**-1.3**
LPEL				Sg	**Sb**	**02 22 40.6**	**-0.8**
POFI	**Posta Fibreno**	**0.73**	**157**	Pg	**Pg**	**02 22 29.7**	**-1.4**
POFI	**Posta Fibreno**	**0.73**	**157**	Pg	**Pg**	**02 22 29.7**	**-1.4**
SDI	**San Donato**	**0.77**	**152**	Pg	**Pg**	**02 22 30.3**	**-1.5**
SDI	**San Donato**	**0.77**	**152**	Pg	**Pg**	**02 22 30.3**	**-1.5**
CAFR	**Castel Frentan**	**0.77**	**102**	Pg	**Pb**	**02 22 31.4**	**-1.0**
CAFR	**Castel Frentan**	**0.77**	**102**	Pg	**Pb**	**02 22 31.4**	**-1.0**
MA9	**Marino**	**0.80**	**219**	Pg	**Pg**	**02 22 30.9**	**-1.4**
MA9	**Marino**	**0.80**	**219**	Pg	**Pg**	**02 22 30.9**	**-1.4**
GUMA	**Gualdo di Mace**	**0.81**	**33**	Pg	Pg	02 22 29.3	-3.3
GUMA	**Gualdo di Mace**	**0.81**	**33**	Pg	Pg	02 22 29.3	-3.3
ASSB	**Assisi San Ben**	**0.82**	**323**	Pg	**Pg**	**02 22 31.6**	**-1.2**
ASSB	**Assisi San Ben**	**0.82**	**323**	Pg	**Pg**	**02 22 31.6**	**-1.2**
GIUL	**Giuliano Di Ro**	**0.83**	**184**	Pg	**Pb**	**02 22 32.5**	**-0.9**
GIUL	**Giuliano Di Ro**	**0.83**	**184**	Pg	**Pb**	**02 22 32.5**	**-0.9**
SNTG	**Esanatoglia**	**0.91**	**342**	Pg	**Pg**	**02 22 33.1**	**-1.5**
SNTG	**Esanatoglia**	**0.91**	**342**	Pg	**Pg**	**02 22 33.1**	**-1.5**
RNI2	**Rionero Sannit**	**0.92**	**138**	Pg	**Pg**	**02 22 33.8**	**-0.9**
RNI2	**Rionero Sannit**	**0.92**	**138**	Pg	**Pg**	**02 22 33.8**	**-0.9**
CERA	**Filignano**	**0.94**	**147**	Pg	**Pg**	**02 22 33.6**	**-1.5**
CERA	**Filignano**	**0.94**	**147**	Pg	**Pg**	**02 22 33.6**	**-1.5**
CING	**Cingoli**	**0.99**	**354**	Pg	**Pg**	**02 22 34.5**	**-1.6**
CING	**Cingoli**	**0.99**	**354**	Pg	**Pg**	**02 22 34.5**	**-1.6**
MIDA	**Miranda**	**1.01**	**137**	Pg	**Pg**	**02 22 34.4**	**-2.1**
MIDA	**Miranda**	**1.01**	**137**	Pg	**Pg**	**02 22 34.4**	**-2.1**
MGAB	**Montegabbione**	**1.04**	**301**	Pg	**Pg**	**02 22 35.9**	**-1.1**
MGAB	**Montegabbione**	**1.04**	**301**	Pg	**Pg**	**02 22 35.9**	**-1.1**
TOLF	**Tolfa**	**1.04**	**252**	Pg	**Pg**	**02 22 35.9**	**-1.1**
TOLF	**Tolfa**	**1.04**	**252**	Pg	**Pg**	**02 22 35.9**	**-1.1**
MURB	**Monte Urbino**	**1.06**	**326**	Pg	**Pg**	**02 22 35.6**	**-1.7**
MURB	**Monte Urbino**	**1.06**	**326**	Pg	**Pg**	**02 22 35.6**	**-1.7**
ARVD	**Arcevia**	**1.15**	**346**	Pg	**Pg**	**02 22 37.3**	**-1.7**
ARVD	**Arcevia**	**1.15**	**346**	Pg	**Pg**	**02 22 37.3**	**-1.7**
SACS	**San Casciano d**	**1.15**	**294**	Pg	**Pb**	**02 22 38.3**	**-0.5**
LATE	**Laterza**	**1.15**	**282**	Pg	**Pb**	**02 22 38.3**	**-0.6**
LATE	**Laterza**	**1.15**	**282**	Pg	**Pb**	**02 22 38.3**	**-0.6**
AOI	**Ancona**	**1.18**	**10**	Pg	**Pb**	**02 22 38.5**	**-0.9**
AOI	**Ancona**	**1.18**	**10**	Pg	**Pb**	**02 22 38.5**	**-0.9**
PIEI	**Pieia**	**1.29**	**333**	Pg	**Pg**	**02 22 40.0**	**-1.7**
PIEI	**Pieia**	**1.29**	**333**	Pg	**Pg**	**02 22 40.0**	**-1.7**
FSSB	**Fossombrone**	**1.36**	**343**	Pg	**Pn**	**02 22 41.5**	**-0.5**
FSSB	**Fossombrone**	**1.36**	**343**	Pg	**Pn**	**02 22 41.5**	**-0.5**
PARC	**Parchiule**	**1.49**	**328**	Pg	**Pb**	**02 22 43.8**	**-0.9**
PARC	**Parchiule**	**1.49**	**328**	Pg	**Pb**	**02 22 43.8**	**-0.9**
NVLJ	**Novalja**	**2.45**	**27**	*e*Pn	**Pn**	**02 22 56.5**	**-0.4**
NVLJ				Sn	**Sn**	**02 23 26.8**	**+0.2**
NVLJ	**Novalja**	**2.45**	**27**	*e*Pn	**Pn**	**02 22 56.4**	**-0.4**
NVLJ				Sn	**Sn**	**02 23 26.8**	**+0.2**
PGF	**Pioggiola**	**3.21**	**274**	*e*Pn	**Pn**	**02 23 07.6**	**+0.2**
PGF				*e*Sn	**Sn**	**02 23 47.7**	**+2.0**
	7.4nm,0.6s						
PGF	**Pioggiola**	**3.21**	**274**	*e*Pn	**Pn**	**02 23 07.6**	**+0.2**
PGF				*e*Sn	**Sn**	**02 23 47.7**	**+2.0**
	3.7nm,0.6s						
STON	**Ston**	**3.26**	**80**	*i* Pn	**Pn**	**02 23 08.4**	**+0.4**
STON				Sn	**Sn**	**02 23 46.3**	**-0.4**
STON	**Ston**	**3.26**	**80**	*i* Pn	**Pn**	**02 23 08.3**	**+0.4**
STON				Sn	**Sn**	**02 23 46.3**	**-0.4**
BOJS	**Bojanci**	**3.41**	**23**	*i* Pn	**Pn**	**02 23 11.4**	**+1.4**
BOJS				*i* Sn	**Sn**	**02 23 51.5**	**+1.1**
BOJS	**Bojanci**	**3.41**	**23**	Pn	**Pn**	**02 23 11.4**	**+1.4**
BOJS				*i* Sn	**Sn**	**02 23 51.5**	**+1.1**
ABTA	**Abfaltersbach**	**4.40**	**353**	‖ *i* Pn	**Pn**	**02 23 24.7**	**+1.0**
ABTA	**Abfaltersbach**	**4.40**	**353**	Pn	**Pn**	**02 23 24.7**	**+1.0**
PERS	**Pernice**	**4.43**	**16**	*i* Pn	Pn	02 23 27.9	+3.7
PERS				*i* Sn	**Sn**	**02 24 17.6**	**+1.8**
PERS	**Pernice**	**4.43**	**16**	*i* Pn	Pn	02 23 27.9	+3.7
PERS				*i* Sn	**Sn**	**02 24 17.6**	**+1.8**
SBF	**Sospel**	**4.56**	**291**	*e*Pn	**Pn**	**02 23 25.9**	**0.0**
SBF	**Sospel**	**4.56**	**291**	*e*Pn	**Pn**	**02 23 25.9**	**0.0**
TEKS	**Tekeris**	**5.00**	**62**	*e*P	**Pn**	**02 23 34.1**	**+2.2**
FRF	**La Foret Royal**	**5.04**	**286**	*e*Pn	**Pn**	**02 23 32.2**	**-0.3**
FRF	**La Foret Royal**	**5.04**	**286**	*e*Pn	**Pn**	**02 23 32.2**	**-0.3**
LMR	**La Mourre**	**5.10**	**283**	*e*Pn	**Pn**	**02 23 32.8**	**-0.5**
LMR	**La Mourre**	**5.10**	**283**	*e*Pn	**Pn**	**02 23 32.8**	**-0.5**
IVAS	**Ivanjica**	**5.14**	**74**	*e*P	**Pn**	**02 23 35.6**	**+1.7**
MBDF	**Montbardon**	**5.31**	**298**	*e*P	**Pn**	**02 23 38.1**	**+1.8**
MBDF	**Montbardon**	**5.31**	**298**	*e*P	**Pn**	**02 23 38.1**	**+1.8**
LPG	**La Plagne**	**5.68**	**305**	*e*P	**Pn**	**02 23 44.0**	**+2.5**
LPL	**La Plagne**	**5.70**	**306**	*e*P	**Pn**	**02 23 44.1**	**+2.4**
LPL	**La Plagne**	**5.70**	**306**	*e*P	**Pn**	**02 23 44.1**	**+2.4**
SMRF	**Simiane la Rot**	**5.89**	**288**	*e*P	**Pn**	**02 23 45.5**	**+1.3**
SMRF	**Simiane la Rot**	**5.89**	**288**	*e*P	**Pn**	**02 23 45.5**	**+1.3**
BARS	**Barje**	**6.28**	**83**	*e*P	**Pn**	**02 23 50.9**	**+1.4**
CDF	**Champ du Feu**	**7.38**	**327**	*e*Pn	**Pn**	**02 24 03.6**	**-1.0**
CDF				*e*Sn	**Sn**	**02 25 23.5**	**-4.8**
	3.7nm,0.6s						
CDF	**Champ du Feu**	**7.38**	**327**	*e*Pn	**Pn**	**02 24 03.6**	**-1.0**
HAU	**Haudompre**	**7.47**	**321**	*e*Pn	**Pn**	**02 24 05.3**	**-0.6**
HAU				*e*Sn	Sn	02 25 24.1	-6.5
	3.2nm,0.5s						
HAU	**Haudompre**	**7.47**	**321**	*e*Pn	**Pn**	**02 24 05.3**	**-0.6**

*ISCJB **20** 02:33:54.0±0.8, 14°.60N±0°.07×93°.92W±0°.03, h10km, mb3.8/5, MS3.5/2, Error ellipse: s-maj=9.8km s-min=4.7km az=4.8*
*MEX **20** 02:33:57.7±1.1, 14°.46N×93°.93W, h16km±16km, MD4.2*
*IDC **20** 02:34:02.2±3.5, 14°.90N×93°.72W, h44km±27km, mb3.5/5, mb1 3.9/8, mb1mx3.5/27, mbtmp3.6/8, ML3.8/3, MS3.4/3, Ms1 3.4/3, ms1mx2.7/28, Error ellipse: s-maj=34.2km s-min=17.3km az=28.0*

ISC 20 02:33:56.3±1.1, 14°.62N±0°.09×93°.93W±0°.04, h10km, n19, σ1s56/24, mb3.9/5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.63**	**80**	*i* P	Pn	02 34 22.0	-3.1
THIG				*i* S	**Sn**	**02 34 42.2**	**-4.0**
TGIG		**2.28**	**20**	*e*P	**Pn**	**02 34 34.4**	**+0.3**
TGIG				*i* S	**Sn**	**02 35 02.2**	**-0.1**
CCIG	**Comitan**	**2.39**	**46**	*e*P	**Pn**	**02 34 35.9**	**+0.2**
CCIG				*i* S	**Sn**	**02 35 03.7**	**-1.5**
HUIG	**Huatulco**	**2.40**	**299**	*e*P	**Pn**	**02 34 34.3**	**-1.4**
HUIG				*i* S	**Sn**	**02 35 02.7**	**-2.4**
CMIG	**Matias Romero**	**2.62**	**340**	*e*P	**Pn**	**02 34 38.4**	**-0.4**
CMIG				*i* S	**Sn**	**02 35 09.6**	**-1.1**
CMIG	**Matias Romero**	**2.62**	**340**	P	**Pn**	**02 34 38.7**	**-0.1**
	11nm,0.3s,baz=148,slow=11,SNR=85						
CMIG				S	**Sn**	**02 35 09.1**	**-1.6**
	9.2nm,0.3s,baz=116,slow=13,SNR=6.0						
VHO	**Vista Hermosa**	**3.64**	**312**	*i* P	**Pn**	**02 34 53.4**	**+0.4**
VHO				*i* S	**Sn**	**02 35 36.1**	**0.0**
PNIG	**Pinotepa**	**4.42**	**294**	*e*P	**Pn**	**02 35 03.1**	**-0.4**
PNIG				*i* S	**Sn**	**02 35 52.9**	**-2.1**
UTMO	**Huajuapan**	**4.90**	**311**	*i* P	**Pn**	**02 35 10.4**	**0.0**
UTMO				*i* S	**Sn**	**02 36 06.1**	**-1.2**
TEIG	**Tepich**	**7.75**	**43**	*i* P	Pn	02 35 47.5	-1.8
TEIG				*i* S	**Sn**	**02 37 15.6**	**-1.7**
TEIG	**Tepich**	**7.75**	**43**	P	Pn	02 35 47.3	-2.0
	5.8nm,0.3s,baz=45,slow=2.8,SNR=35						
TEIG				S	Sn	02 37 12.7	-4.5
	3.0nm,0.3s,baz=63,slow=19,SNR=5.5						
TEIG				LR	LR	02 39 07.8	
	comp=Z,134nm,18.4s,baz=263,slow=41						
TXAR	**Lajitas Array**	**17.19**	**330**	P	**Pn**	**02 37 57.3**	**+0.5**
	0.0nm,0.3s,baz=168,slow=9.2,SNR=3.3						
TKL	**Tuckaleechee C**	**22.84**	**22**	LR	LR	02 50 12.9	
	comp=Z,36nm,19.1s,baz=306,slow=43						
NVAR	**Mina Array Bea**	**32.03**	**322**	P	**P**	**02 40 25.9**	**+2.5**
	0.8nm,0.7s,baz=143,slow=8.7,SNR=8.8						
SIV	**San Ignacio**	**44.48**	**132**	P	**P**	**02 42 10.2**	**+1.9**
	0.9nm,0.7s,baz=252,slow=6.4,SNR=3.5						
YKA	**Yellowknife Ar**	**50.01**	**348**	P	**P**	**02 42 49.8**	**-0.9**
	1.4nm,0.7s,baz=154,slow=7.3,SNR=29						
PLCA	**Paso Flores**	**59.19**	**159**	LR	LR	03 05 01.2	
	comp=Z,149nm,20.9s,baz=338,slow=31						
INK	**Inuvik**	**59.32**	**344**	P	**P**	**02 43 57.4**	**-0.8**
	0.6nm,0.6s,baz=127,slow=1.2,SNR=6.6						
ILAR	**Eielson Array**	**61.54**	**337**	P	**P**	**02 44 12.8**	**-0.6**
	0.7nm,0.7s,baz=153,slow=3.8,SNR=11						

IDC 20 02:46:04.2±1.7, 1°.54N×127°.39E, h0km, mb4.1/4, mb1 4.3/5, mb1mx3.8/22, mbtmp4.1/5, ML4.1/1, Error ellipse: s-maj=98.7km s-min=22.6km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.59**	**185**	P	Pn	02 50 35.0	-0.3
	0.4nm,0.3s,baz=24,slow=8.7,SNR=18						
WRA	**Warramunga Arr**	**22.41**	**163**	P	P	02 51 05.0	+0.5
	5.5nm,0.5s,baz=340,slow=11,SNR=37						
ASAR	**Alice Springs**	**25.84**	**166**	P	P	02 51 37.0	-0.5
	2.3nm,0.5s,baz=351,slow=7.3,SNR=33						
STKA	**Stephens Creek**	**35.86**	**159**	P	P	02 53 05.4	-0.5
	2.9nm,0.5s,baz=323,slow=8.2,SNR=8.8						
MKAR	**Makanchi Array**	**59.72**	**326**	P	P	02 56 10.8	+0.1
	0.3nm,0.4s,baz=124,slow=6.6,SNR=7.3						

IDC 20 02:50:40.6±0.9, 3°.36N×126°.27E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/22, mbtmp3.7/7, Error ellipse: s-maj=64.7km s-min=17.1km az=74.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.33**	**182**	P	P	02 55 31.2	+1.8
	1.2nm,0.6s,baz=20,slow=10,SNR=5.6						
WRA	**Warramunga Arr**	**24.47**	**161**	P	P	02 56 00.9	-0.7
	5.3nm,0.9s,baz=343,slow=10,SNR=20						
ASAR	**Alice Springs**	**27.87**	**165**	P	P	02 56 32.2	-0.1
	0.2nm,0.4s,baz=346,slow=7.1,SNR=4.2						
STKA	**Stephens Creek**	**37.95**	**159**	P	P	02 57 59.5	-0.6
	2.5nm,0.6s,baz=332,slow=8.8,SNR=8.9						
SONM	**Songino Array**	**47.50**	**342**	P	P	02 59 17.1	-0.5
	0.7nm,0.6s,baz=156,slow=8.6,SNR=6.0						
MKAR	**Makanchi Array**	**57.60**	**326**	P	P	03 00 32.5	0.0
	0.6nm,0.5s,baz=120,slow=8.0,SNR=12						
ILAR	**Eielson Array**	**85.63**	**25**	P	P	03 03 21.8	+0.8
	0.2nm,0.8s,baz=246,slow=4.4,SNR=3.3						
TORD	**Torodi Ar. Bea**	**122.60**	**288**	PKP	PKPdf	03 09 38.4	-0.9
	0.4nm,0.7s,baz=92,slow=2.1,SNR=4.0						

*ISCJB **20** 03:11:58.0±0.5, 37°.85N±0°.03×27°.53E±0°.04, h3km±6km, Error ellipse: s-maj=5.8km s-min=3.7km az=149.7*
*DDA **20** 03:11:57.8, 37°.84N×27°.55E, h7km, MD3.0*
*ISK **20** 03:11:57.7, 37°.86N×27°.53E, h5km, MD3.0*
*CSEM **20** 03:11:58.3±0.1, 37°.83N×27°.52E, h8km, MD3.0, Error ellipse: s-maj=3.9km s-min=2.7km az=71.0*

ISC 20 03:11:58.2±1.0, 37°.85N±0°.02×27°.54E±0°.02, h4km±10km, n42, σ0s51/58, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.29**	**240**	*i* P	**Pg**	**03 12 03.7**	**0.0**
GCAM				*i* S	**Sg**	**03 12 08.1**	**+0.6**
GCAM	**G?zelcaml?**	**0.29**	**240**	*i* P	**Pg**	**03 12 03.7**	**0.0**
GCAM				*i* S	**Sg**	**03 12 08.1**	**+0.6**
AYDN	**Tasoluk**	**0.32**	**125**	*i* P	**Pg**	**03 12 05.1**	**+0.6**
AYDN				*i* S	**Sg**	**03 12 09.1**	**+0.3**
AYDN	**Tasoluk**	**0.32**	**125**	*i* P	**Pg**	**03 12 05.1**	**+0.6**
AYDN				*i* S	**Sg**	**03 12 09.1**	**+0.3**
MLSB	**Milas**	**0.58**	**161**	*e*PG	**Pg**	**03 12 09.6**	**+0.3**
MLSB	**Milas**	**0.58**	**161**	*e*Pg	**Pg**	**03 12 09.6**	**+0.3**
IZM	**Izmir**	**0.59**	**338**	*e*PG	**Pg**	**03 12 09.9**	**+0.3**
IZM				*e*SG	**Sg**	**03 12 17.7**	**+0.3**
IZM	**Izmir**	**0.59**	**338**	*e*Pg	**Pg**	**03 12 09.9**	**+0.3**
IZM				*e*Sg	**Sg**	**03 12 17.7**	**+0.3**
BLCB	**Balcova**	**0.67**	**324**	*e*PG	**Pb**	**03 12 11.5**	**-0.9**
BLCB				*e*SG	**Sg**	**03 12 19.5**	**-0.2**
BLCB	**Balcova**	**0.67**	**324**	*e*Pg	**Pb**	**03 12 11.5**	**-0.9**
BLCB				*e*Sg	**Sg**	**03 12 19.5**	**-0.2**
BODT	**Bodrum**	**0.80**	**193**	*e*PG	**Pg**	**03 12 13.6**	**0.0**
BODT	**Bodrum**	**0.80**	**193**	*e*Pg	**Pg**	**03 12 13.6**	**0.0**
YER	**Yerkesik**	**0.92**	**140**	*e*PG	**Pg**	**03 12 16.0**	**+0.1**
YER				*e*SG	**Sb**	**03 12 29.2**	**-0.1**
YER	**Yerkesik**	**0.92**	**140**	*e*Pg	**Pg**	**03 12 16.0**	**+0.1**
YER				*e*Sg	**Sb**	**03 12 29.3**	**-0.1**
AKHS	**Akhisar**	**1.05**	**12**	*i* P	**Pg**	**03 12 18.4**	**0.0**
AKHS				*i* S	**Sb**	**03 12 33.2**	**+0.1**
AKHS	**Akhisar**	**1.05**	**12**	*i* P	**Pg**	**03 12 18.4**	**0.0**

comp=Z,12nm,1.6s
TESR 145.67 333 ||iP PKPab 03 31 53.7 +0.5
BRTR Keskin Array B 146.47 318 PKPbc PKPbc 03 31 55.9 +0.6
comp=Z,2.1nm,0.7s,baz=136,slow=4.2,SNR=19
MLR Muntele Rosu 146.77 333 ⇑iP PKPbc 03 31 56.5 +0.6
DRGR 147.03 337 ⇑iP PKPbc 03 31 57.3 +0.8
ARR Arges 147.44 334 ⇑iP PKPab 03 31 59.5 -0.8
GERES GERESS Array B 147.64 349 PKPbc PKPbc 03 31 59.0 +0.9
comp=Z,1.1nm,0.7s,baz=27,slow=3.3,SNR=9.0

IDC 20 03:18:21.0±1.8, 4°36N×127°15E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/24, mbtmp3.6/5, Error ellipse: s-maj=105.8km s-min=23.2km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	22.37	184	P	P	03 23 21.3	+0.4
	0.7nm,0.4s,baz=352,slow=7.1,SNR=3.6						
WRA	Warramunga Arr	25.16	164	P	P	03 23 48.7	+0.5
	1.3nm,0.5s,baz=344,slow=10,SNR=7.7						
ASAR	Alice Springs	28.62	167	P	P	03 24 17.9	-1.4
	0.1nm,0.4s,baz=342,slow=7.9,SNR=1.6						
STKA	Stephens Creek	38.57	160	P	P	03 25 45.7	+0.1
	1.3nm,0.9s,baz=324,slow=9.8,SNR=1.7						
MKAR	Makanchi Array	57.29	325	P	P	03 28 10.6	0.0
	0.5nm,0.5s,baz=124,slow=7.4,SNR=9.2						

IDC 20 03:30:31.6±2.8, 1°82N×126°74E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/21, mbtmp3.5/3, Error ellipse: s-maj=273.2km s-min=25.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.88	161	P	P	03 35 36.8	-0.2
	0.8nm,0.3s,baz=337,slow=9.7,SNR=14						
ASAR	Alice Springs	26.27	165	P	P	03 36 08.3	-0.6
	0.5nm,0.5s,baz=347,slow=7.7,SNR=8.5						
MKAR	Makanchi Array	59.12	326	P	P	03 40 34.7	+0.6
	0.2nm,0.4s,baz=132,slow=6.3,SNR=4.9						

IDC 20 03:35:34.1±3.9, 17°53S×63°87W, h20km±24km, mb3.8/9, mb1 4.1/11, mb1mx3.9/21, mbtmp3.8/11, ML3.9/2, MS3.0/3, Ms1 3.1/3, ms1mx2.7/23, Error ellipse: s-maj=21.2km s-min=18.9km az=92.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIV	San Ignacio	3.08	61	Pn	Pn	03 36 22.3	+0.6
	13nm,0.3s,baz=263,slow=12,SNR=190						
SIV				Pg	Pb	03 36 31.8	+3.4
	97nm,0.3s,baz=263,slow=14,SNR=63						
SIV				Lg	Lg	03 37 09.9	
	40nm,0.3s,baz=163,slow=20,SNR=3.4						
LPAZ	La Paz	4.26	286	Pn	Pn	03 36 40.3	+1.5
	2.9nm,0.3s,baz=100,slow=8.5,SNR=66						
LPAZ				Lg	Lg	03 37 46.6	
	11nm,0.3s,baz=248,slow=21,SNR=7.3						
LPAZ				LR	LR	03 38 23.5	
	comp=Z,107nm,18.3s,baz=290,slow=40						
CPUP	Villa Florida	10.65	146	Lg	Lg	03 41 14.0	
	0.4nm,0.3s,baz=35,slow=16,SNR=3.3						
CFAA	Coronel Fontan	14.57	195	Pn	P	03 39 05.5	-0.2
	0.0nm,0.3s,baz=13,slow=10,SNR=12						
BDFB	Brasilia	15.31	85	Lg	Lg	03 43 35.9	
	0.3nm,0.3s,baz=170,slow=20,SNR=4.8						
ATAH	Atahualpa	17.54	304	LR	LR	03 47 51.3	
	comp=Z,48nm,21.9s,baz=193,slow=42						
PLCA	Paso Flores	23.84	193	P	P	03 40 45.0	-1.0
	1.9nm,1.0s,baz=344,slow=7.9,SNR=4.5						
RCBR	Riachuelo	29.70	70	LR	LR	03 54 06.4	
	comp=Z,62nm,18.0s,baz=169,slow=37						
TXAR	Lajitas Array	60.38	320	P	P	03 45 41.2	-1.1
	0.1nm,0.4s,baz=130,slow=9.9,SNR=2.1						
SNAA	Sanae	64.52	162	P	P	03 46 09.2	-0.2
	0.6nm,0.7s,baz=320,slow=5.7,SNR=4.9						
TORD	Torodi Ar. Bea	71.53	69	P	P	03 46 53.8	-0.4
	1.1nm,0.9s,baz=256,slow=4.5,SNR=8.6						
SCHQ	Schefferville	72.11	358	P	P	03 46 56.0	-0.8
	2.2nm,0.7s,baz=188,slow=4.9,SNR=4.1						
PDAR	Pinedale Array	73.24	327	P	P	03 47 03.7	-0.5
	0.8nm,0.6s,baz=125,slow=8.3,SNR=7.2						
NVAR	Mina Array Bea	75.49	319	P	P	03 47 17.3	-0.1
	0.7nm,0.8s,baz=142,slow=7.6,SNR=4.9						
ESDC	Sonseca Array	79.69	43	P	P	03 47 41.7	+1.1
	1.0nm,0.8s,baz=258,slow=5.5,SNR=5.0						
YKA	Yellowknife Ar	89.12	339	P	P	03 48 27.5	-0.2
	1.9nm,0.7s,baz=121,slow=4.5,SNR=38						
ASAR	Alice Springs	135.53	204	PKP	PKPdf	03 54 53.5	-0.3
	0.4nm,0.8s,baz=183,slow=2.2,SNR=4.6						
ZALV	Zalesovo Beam	136.32	26	PKP	PKPdf	03 54 54.7	+0.5
	0.5nm,0.4s,baz=323,slow=2.2,SNR=4.3						
WRA	Warramunga Arr	138.70	206	PKP	PKPdf	03 54 59.3	-0.4
	0.8nm,0.9s,baz=163,slow=1.4,SNR=4.2						
SONM	Songino Array	148.73	13	PKPbc	PKPbc	03 55 20.6	+0.3
	1.6nm,0.8s,baz=344,slow=3.2,SNR=7.6						
USRK	Ussuriysk Arra	150.24	337	PKPbc	PKPbc	03 55 24.6	+0.7
	3.5nm,0.8s,baz=44,slow=2.0,SNR=7.5						

IDC 20 04:08:31.6±0.8, 4°08N×126°61E, h0km, mb4.0/10, mb1 4.2/10, mb1mx3.9/26, mbtmp4.0/10, MS3.2/4, Ms1 3.2/4, ms1mx2.9/32, 1C, Error ellipse: s-maj=50.3km s-min=14.2km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	3.14	341	LR	LR	04 10 57.8	
	comp=Z,410nm,18.3s,baz=39,slow=47						
CTBH	Cotabato--PC H	3.91	323	⇑iP	Pb	04 09 39.2	-2.3
KAPI	Kappang	11.34	217	LR	LR	04 16 00.9	
	comp=Z,113nm,19.7s,baz=198,slow=40						
FITZ	Fitzroy Crossi	22.07	182	P	P	04 13 28.4	+0.1
	4.9nm,0.8s,baz=4.1,slow=7.5,SNR=19						
WRA	Warramunga Arr	25.05	163	P	P	04 13 57.2	-0.7
	8.3nm,0.8s,baz=342,slow=10,SNR=45						
ASAR	Alice Springs	28.48	166	P	P	04 14 28.7	-0.1
	0.8nm,0.5s,baz=348,slow=7.6,SNR=15						
CMAR	Chiang Mai Arr	30.59	300	P	P	04 14 48.3	+0.7
	0.9nm,0.3s,baz=129,slow=7.3,SNR=4.9						
STKA	Stephens Creek	38.50	159	P	P	04 15 56.4	+0.6
	10nm,1.0s,baz=354,slow=6.5,SNR=12						
ASAJ	Asahikawa	42.29	17	LR	LR	04 34 04.9	
	comp=Z,18nm,21.1s,baz=102,slow=36						
SONM	Songino Array	46.93	341	P	P	04 17 05.4	+1.2
	0.3nm,0.4s,baz=152,slow=10,SNR=3.8						
MKAR	Makanchi Array	57.20	325	P	P	04 18 20.3	-0.4
	0.9nm,0.7s,baz=127,slow=8.0,SNR=11						
MKAR				LR	LR	04 44 21.7	
	comp=Z,35nm,19.0s,baz=359,slow=38						
KURBB	Kurchatov Arra	61.38	327	P		04 18 48.5	-1.0
	1.4nm,0.6s,baz=125,slow=5.9,SNR=14						
BVAR	Borovoye Array	66.96	327	P	P	04 19 26.2	+0.1
	1.3nm,0.8s,baz=120,slow=8.8,SNR=6.9						
ILAR	Eielson Array	84.83	25	P	P	04 21 08.0	0.0
	0.7nm,1.1s,baz=241,slow=7.2,SNR=4.1						
TORD	Torodi Ar. Bea	122.70	288	PKP	PKPdf	04 27 30.1	-0.4
	0.5nm,1.0s,baz=162,slow=1.4,SNR=3.1						

IDC 20 04:15:34.6±2.2, 6°02S×129°75E, h0km, mb3.6/1, mb1 3.9/4, mb1mx3.7/20, mbtmp3.7/4, ML3.9/3, Error ellipse: s-maj=92.5km s-min=28.1km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.66	198	Pn	Pn	04 18 36.8	+0.6
	0.2nm,0.3s,baz=2.7,slow=20,SNR=19						
FITZ				Sn	Sn	04 20 41.4	-17
	0.8nm,0.3s,baz=75,slow=18,SNR=8.7						
WRA	Warramunga Arr	14.54	163	Pn	Pn	04 19 01.7	-0.2
	0.8nm,0.3s,baz=344,slow=13,SNR=27						
WRA				Sn	Sn	04 21 31.0	-13
	0.5nm,0.3s,baz=336,slow=23,SNR=5.2						
ASAR	Alice Springs	18.00	168	P	Pn	04 19 46.1	-0.3
	0.5nm,0.3s,baz=340,slow=8.1,SNR=22						
ASAR				S	Sn	04 22 53.1	-15
	0.1nm,0.3s,baz=330,slow=16,SNR=4.3						
MKAR	Makanchi Array	67.27	327	P	P	04 26 31.2	0.0
	0.2nm,0.3s,baz=117,slow=8.0,SNR=5.6						

*IDC **20** 04:41:59.9±1.4, 10°46S×116°12E, h0km, mb3.9/5, mb1 3.8/8, mb1mx3.7/23, mbtmp3.8/8, ML3.5/3, MS2.9/1, Ms1 2.9/1, ms1mx2.2/32, Error ellipse: s-maj=52.0km s-min=20.1km az=49.0*
*ISCJB **20** 04:42:00.9±0.9, 10°76S±0°09×116°44E±0°07, h33km, mb3.9/5, Error ellipse: s-maj=15.4km s-min=6.3km az=36.3*
*DJA **20** 04:42:03.2±3.2, 11°S±10°×11°6E±°, h25km±47km, M4.5/6, mb4.9/3, mB5.5/2, MLv4.4/6, Mw(mB)5.0/2*
ISC 20 04:42:02.9±0.9, 10°77S±0°10×116°42E±0°08, h35km, n16, σ2s96/19, mb3.9/5, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGBI	Denpasar	2.31	327	P	Pn	04 42 36.7	-1.8
IGBI				S	Sn	04 43 05.5	-0.3
DNP	Denpasar	2.40	330	P	Pn	04 42 39.6	-0.1
DNP				S	Sn	04 43 08.5	+0.6
KHKI	Kahang-Kahang	2.52	341	P	Pn	04 42 39.5	-1.9
SRBI	Singaraja	2.92	336	P	Pn	04 42 47.0	+0.1
GMJI	Gumukmas	3.85	310	P	Pn	04 42 58.9	-0.7
GMJI				S	Sn	04 43 43.4	-0.2
SJI	Sawahan	5.50	303	P	Pn	04 43 23.3	+0.9
	72nm,0.3s,5µm0.6nm						
BKSI	Bulukumba	6.54	34	P	Pn	04 43 37.7	+1.1
	35nm,0.8s,0.1nm						
KAPI	Kappang	6.60	30	Pn	Pn	04 43 38.5	+1.0
	2.9nm,0.3s,baz=211,slow=9.0,SNR=7.2						
KAPI				LR	LR	04 46 21.0	
	comp=Z,100nm,20.4s,baz=177,slow=40						
KBKI	Kotabaru	7.43	358	P	Pn	04 43 47.3	-1.6
FITZ	Fitzroy Crossi	11.52	130	Pn	Pn	04 44 50.1	+5.2
	0.3nm,0.3s,baz=292,slow=11,SNR=14						
FITZ				Sn	Sn	04 46 49.9	-2.5
	0.2nm,0.3s,baz=180,slow=20,SNR=4.7						
WRA	Warramunga Arr	19.52	120	P	Pn	04 46 33.4	+4.6
	0.1nm,0.3s,baz=281,slow=12,SNR=6.2						
WRA				S	S	04 50 01.4	-4.7
	0.1nm,0.3s,baz=295,slow=25,SNR=4.3						
ASAR	Alice Springs	21.02	130	P	P	04 46 50.6	+6.9
	1.8nm,0.6s,baz=307,slow=10,SNR=21						
SONM	Songino Array	59.02	352	P	P	04 51 58.4	-1.0
	0.7nm,0.7s,baz=168,slow=8.8,SNR=4.3						
MKAR	Makanchi Array	64.92	335	P	P	04 52 38.9	0.0
	0.6nm,0.6s,baz=154,slow=7.8,SNR=8.6						
ZALV	Zalesovo Beam	69.83	341	P	P	04 53 09.0	-0.7
	1.1nm,0.4s,baz=148,slow=4.4,SNR=6.2						
BRTR	Keskin Array B	91.32	310	P	P	04 55 07.3	+1.9
	0.6nm,0.8s,baz=133,slow=6.9,SNR=3.5						

IDC 20 04:58:00.3±1.9, 5°50N×126°32E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/24, mbtmp3.4/4, Error ellipse: s-maj=112.4km s-min=23.7km az=69.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	23.46	182	P	P	05 03 11.5	-0.1
	0.5nm,0.5s,baz=30,slow=8.1,SNR=3.9						
WRA	Warramunga Arr	26.49	163	P	P	05 03 38.4	-1.1
	0.8nm,0.5s,baz=343,slow=10,SNR=11						
ASAR	Alice Springs	29.92	166	P	P	05 04 11.4	+1.2
	0.2nm,0.5s,baz=344,slow=7.2,SNR=3.3						
MKAR	Makanchi Array	55.88	325	P	P	05 07 39.8	-0.1
	0.6nm,0.6s,baz=119,slow=8.3,SNR=8.5						

IDC 20 04:59:26.1±1.4, 5°43N×126°33E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.7/23, mbtmp3.8/6, 1C, Error ellipse: s-maj=114.4km s-min=18.6km az=69.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIP	Pasuquin	13.97	337	⇑iP	Pn	05 02 43.6	-2.0
FITZ	Fitzroy Crossi	23.39	182	P	P	05 04 36.2	-0.5
	1.2nm,0.8s,baz=41,slow=7.1,SNR=1.8						
WRA	Warramunga Arr	26.42	163	P	P	05 05 04.9	+0.2
	2.1nm,0.5s,baz=344,slow=9.9,SNR=12						
ASAR	Alice Springs	29.85	166	P	P	05 05 33.9	-1.6
	0.6nm,0.9s,baz=356,slow=6.2,SNR=2.7						
STKA	Stephens Creek	39.85	160	P	P	05 07 02.9	+1.4
	1.9nm,0.8s,baz=346,slow=9.0,SNR=4.0						
MKAR	Makanchi Array	55.94	325	P	P	05 09 05.8	-0.4
	1.2nm,0.6s,baz=118,slow=7.5,SNR=9.4						
ZALV	Zalesovo Beam	58.90	333	P	P	05 09 27.0	+0.2
	0.4nm,0.4s,baz=120,slow=8.5,SNR=2.5						

*ISCJB **20** 05:02:53.5±0.8, 36°32N±0°04×71°2E±0°1, h188km, mb3.4/1, Error ellipse: s-maj=14.3km s-min=5.3km az=169.4*
*IDC **20** 05:02:56.9±8.2, 36°66N×70°88E, h107km±72km, mb3.2/1, mb1 3.2/4, mb1mx3.0/28, mbtmp3.2/4, ML4.0/2, Error ellipse: s-maj=127.2km s-min=48.0km az=134.0*
*NNC **20** 05:02:57.5±11.0, 36°70N×70°68E, h86km±287km, mb3.6, mpv3.9, Error ellipse: s-maj=94.0km s-min=78.4km az=172.0*
ISC 20 05:02:52.8±1.1, 36°33N±0°06×71°1E±0°1, h188km, n24, σ1s84/26, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.59	165	⇓P	Pn	05 03 37.1	-0.1
CEP				S	Sn	05 04 08.0	-3.8
THW	Thamme Wali	3.57	171	P	Pn	05 03 49.5	+0.6
AML	Almayashu	6.13	18	P	Pn	05 04 22.6	+0.6
	SNR=50						
KZA	Kyzart	6.58	28	P	Pn	05 04 29.0	+1.1
	SNR=7.8						
EKS2	Erkin-Say	6.65	17	P	Pn	05 04 29.4	+0.9
	SNR=6.5						
KK31	Karatay Array	6.78	356	⇓P	Pn	05 04 30.4	+0.5
	2.6nm,0.2s,baz=184,slow=14,SNR=215						
KK31				⇑S	Sn	05 05 41.7	-5.2
	3.1nm,0.3s,baz=182,slow=22,SNR=7.3						
AAK	Ala-Archa	6.82	22	P	Pn	05 04 32.3	+1.6
	5.0nm,0.3s,baz=162,slow=6.1,SNR=38						
AAK				S	Sn	05 05 45.0	-3.1
	1.1nm,0.3s,baz=304,slow=23,SNR=12						
CHMS	Chumysh	7.23	22	P	Pn	05 04 37.5	+1.6
	SNR=6.8						
USP	Ospenovka	7.41	20	P	Pn	05 04 39.2	+1.0
	SNR=6.7						
TKM2	Tokmak 2	7.44	27	⇑P	Pn	05 04 40.0	+1.2
	3.2nm,0.5s						
TKM2				⇑S	Sn	05 06 02.0	-0.9
	2.0nm,0.7s						
TKM2	Tokmak 2	7.44	27	P	Pn	05 04 40.4	+1.6
	SNR=12						
PYUN	Piuthan	12.99	126	eP	Pn	05 05 51.1	+0.3
	5.4nm,0.4s						
DANN	Dangsing	13.34	123	eP	Pn	05 05 56.4	+1.1
MKAR	Makanchi Array	13.39	35	P	P	05 05 58.5	+0.1
	0.0nm,0.3s,baz=218,slow=7.7,SNR=3.7						
KOLN	Koldanda	13.61	125	eP	Pn	05 05 58.0	-0.6
	3.6nm,0.3s						
KKN	Kakani	14.73	121	eP	Pn	05 06 12.5	0.0
PKIN	Phulchoki	14.95	122	eP	Pn	05 06 15.9	+0.7
	4.4nm,0.3s						
PKI	Pulchoki	14.96	122	eP	Pn	05 06 16.1	+0.7
GUN	Gumba	15.08	120	eP	Pn	05 06 17.0	+0.2
	8.0nm,0.4s						
AB31	Akbulak array	15.26	331	⇑P	P	05 06 22.4	+3.2
	0.9nm,0.4s,baz=169,slow=11,SNR=21						
RAMN	Ramite	16.17	121	eP	P	05 06 29.4	-0.3
	4.5nm,0.3s						
ODAN	Odare	16.78	120	eP	P	05 06 36.6	+0.3
	7.7nm,0.5s						
ZALV	Zalesovo Beam	20.04	24	P	Pn	05 07 19.7	+4.4
	0.3nm,0.3s,baz=213,slow=11,SNR=2.2						
TORD	Torodi Ar. Bea	65.78	269	P	P	05 13 29.6	+12
	0.3nm,0.5s,baz=49,slow=6.2,SNR=9.1						

*IDC **20** 05:08:54.7±2.1, 61°83N×152°23W, h82km±25km, mb3.0/2, mb1 3.6/6, mb1mx3.3/29, mbtmp3.3/6, Error ellipse: s-maj=33.1km s-min=14.5km az=105.0*
*ISCJB **20** 05:08:55.9±0.3, 61°82N±0°02×151°63W±0°06, h114km±4km, mb3.1/3, Error ellipse: s-maj=5.1km s-min=3.7km az=24.3*
*NEIC **20** 05:08:57.7, 61°82N×151°70W, h104km, MG3.2(AEIC), After AEIC.*
ISC 20 05:08:57.6±0.8, 61°82N±0°03×151°68W±0°04, h108km±6km, n71, σ1s40/86, mb3.1/3, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKT	Skwentna	0.18	24	P	Pn	05 09 12.2	-0.5
SKT				S	Sn	05 09 23.4	-0.6
STLK	Strandline Lak	0.33	193	P	Pn	05 09 12.8	-0.5
STLK				S	Sn	05 09 24.5	-0.6
CRP	Crater Peak	0.60	203	P	Pn	05 09 14.7	-0.4
CRP				S	Sn	05 09 27.5	-0.7
SPBG	Spurr Blockage	0.65	211	P	Pn	05 09 15.1	-0.4
BGL	Barrier Glacie	0.65	212	P	Pn	05 09 15.1	-0.4
SPU	Mount Spurr	0.66	196	P	Pn	05 09 14.8	-0.7
SPU				S	Sn	05 09 28.0	-0.9
CUT	Chulitna	0.89	48	P	Pn	05 09 17.2	-0.2
PPLA	Purkeypile	1.11	348	P	Pn	05 09 19.4	-0.5
PPLA				S	Sn	05 09 35.6	-1.1
PMR	Palmer	1.24	99	P	Pn	05 09 20.0	-1.1
PMR				S	Sn	05 09 38.5	-0.4
DFR	Drift River	1.32	202	P	Pn	05 09 21.9	-0.3
RSO	Redoubt South	1.46	201	ePn	Pn	05 09 23.5	-0.5
RSO				eSn	Sn	05 09 43.9	0.0
SLKM	Skilak Lake	1.49	151	P	Pn	05 09 23.9	-0.3
SML	Sawmill	1.59	89	P	Pn	05 09 24.8	-0.6
SML				S	Sn	05 09 46.3	-0.2
TRF	Thorofare Moun	1.76	21	P	Pn	05 09 26.7	-0.9
TRF				S	Sn	05 09 49.5	-1.0
SVW2	Sparrevohn	2.01	251	P	Pn	05 09 29.7	-0.8
SEW	Seward	2.04	147	P	Pn	05 09 30.4	-0.5
SEW				S	Sn	05 09 53.6	-2.7
RND	Reindeer	2.06	38	P	Pn	05 09 30.7	-0.6
CHUM	Lake Minchumin	2.09	352	P	Pn	05 09 30.9	-0.7
BRLK	Bradley Lake	2.10	169	P	Pn	05 09 33.1	+1.4
MCK	McKinley	2.30	32	P	Pn	05 09 33.2	-0.4
TT01	Tatalina	2.30	300	P	Pn	05 09 33.2	-1.0
OPT	Oil Point	2.30	200	P	Pn	05 09 34.2	-0.2
DHY	Denali Highway	2.37	56	P	Pn	05 09 34.7	-0.6
AUW	Augustine West	2.61	201	P	Pn	05 09 38.2	-0.2
VLZ	Valdez	2.66	103	P	Pn	05 09 37.3	-1.6
DIV	Divide	2.92	101	P	Pn	05 09 40.7	-1.7
NEA	Nenana	3.01	22	P	Pn	05 09 42.5	-1.2
PAX	Paxson	3.12	65	P	Pn	05 09 44.8	-0.3
HARP	HAARP	3.12	76	P	Pn	05 09 45.4	+0.3
WRH	Wood River Hil	3.12	30	P	Pn	05 09 44.1	-1.0
EYAK	Cordova Ski Ar	3.14	111	P	Pn	05 09 43.2	-2.1
MLY	Manley	3.25	7	P	Pn	05 09 46.1	-0.8
DDM	Donnelly Dome	3.32	51	P	Pn	05 09 48.5	+0.7
CCB	Clear Creek Bu	3.34	30	P	Pn	05 09 46.8	-1.2
HDA	Harding Lake	3.37	38	P	Pn	05 09 47.8	-0.6
BMRM	Bremner River	3.51	101	P	Pn	05 09 48.1	-2.2
MDM	Murphy Dome	3.52	25	P	Pn	05 09 49.4	-0.9
COLA	College	3.52	28	P	Pn	05 09 49.7	-0.7
GOAT	Goat Mountain	3.59	107	P	Pn	05 09 49.5	-1.8
ILAR	Eielson Array	3.67	34	P	Pn	05 09 51.4	-1.1
ILAR				S	Sn	05 10 31.1	-3.7
ILAR	Eielson Array	3.67	34	P	Pn	05 09 51.4	-1.1
	4.9nm,0.3s,baz=218,slow=14,SNR=202						
ILAR				S	Sn	05 10 31.1	-3.7
	6.4nm,0.3s,baz=211,slow=15,SNR=7.3						
IL1	Eielson Array	3.67	34	P	Pn	05 09 51.4	-1.1
KAKN	Katmai Knife C	3.92	207	P	Pn	05 09 55.3	-0.5
DOT	Dot Lake	3.96	59	ePn	Pn	05 09 55.8	-0.5
DOT				eSn	Sn	05 10 41.7	-0.1
KABU	Katmai Buttres	3.99	208	P	Pn	05 09 56.6	-0.2
KCE	Katmai Mt Cerb	3.99	208	P	Pn	05 09 57.1	+0.3
KDAK	Kodiak Island	4.07	187	P	Pn	05 09 56.2	-1.6
KDAK				S	Sn	05 10 40.7	-3.7
KDAK	Kodiak Island	4.07	187	P	Pn	05 09 56.2	-1.6
	2.3nm,0.3s,baz=32,slow=8.7,SNR=78						
KDAK				S	Sn	05 10 40.7	-3.7
	3.2nm,0.3s,baz=339,slow=23,SNR=7.6						
IM3	Indian Mountai	4.28	349	P	Pn	05 09 59.9	-0.7
BALM	Baldy	4.55	96	P	Pn	05 10 03.1	-1.2
PRP	Porcupine Dome	4.62	34	P	Pn	05 10 05.4	+0.1
OHAK	Old Harbor	4.68	191	P	Pn	05 10 04.3	-1.7
BCA3	Beaver Creek A	4.76	70	P	Pn	05 10 06.5	-0.7
COLD	Coldfoot	5.47	6	P	Pn	05 10 16.4	-0.2
SAMH	Samovar Hills	5.57	103	P	Pn	05 10 18.1	0.0
EGAK	Eagle	5.60	53	ePn	Pn	05 10 17.4	-0.9
	26nm,0.5s						
DAWY	Dawson	6.04	63	P	Pn	05 10 24.0	-0.5
BM3	Burnt Mountain	6.39	25	P	Pn	05 10 28.2	-0.9
PNL	Peninsula	6.40	104	P	Pn	05 10 28.1	-1.1
HYT	Haines Junctio	6.90	92	P	Pn	05 10 35.4	-0.7
TNA	Tin City	8.12	305	ePn	Pn	05 10 54.0	+1.5
	2.0nm,0.6s						
INK	Inuvik	10.02	42	P	Pn	05 11 17.4	-0.8
INK	Inuvik	10.02	42	P	Pn	05 11 17.4	-0.8
	0.9nm,0.3s,baz=252,slow=18,SNR=54						
YKA	Yellowknife Ar	17.18	71	P	Pn	05 12 50.4	-0.3
YKA	Yellowknife Ar	17.18	71	P	Pn	05 12 50.3	-0.3
	0.0nm,0.3s,baz=282,slow=12,SNR=13						
RES	Resolute Bay	23.42	34	P	P	05 13 59.8	+3.2
RES	Resolute Bay	23.42	34	P	P	05 13 59.8	+3.2
	0.5nm,0.4s,baz=230,slow=7.9,SNR=5.5						
NVAR	Mina Array Bea	31.11	123	P	P	05 15 08.2	+2.3
NVAR	Mina Array Bea	31.11	123	P	P	05 15 08.2	+2.3
	0.2nm,0.6s,baz=312,slow=10,SNR=2.5						
MKAR	Makanchi Array	63.41	322	P	P	05 19 13.7	-1.6
MKAR	Makanchi Array	63.41	322	P	P	05 19 13.7	-1.6
	0.1nm,0.4s,baz=62,slow=5.6,SNR=2.4						

MAN 20 05:18:23, 12°68N×123°00E, h1km, mb4.0, ML2.8, MS2.5, 1C-1D, Luzon

| Code | Station Name | Δ

mb3.5/1, Error ellipse: s-maj=31.2km s-min=5.9km az=169.7

GUC ***20*** *05:35:33.2±0.6, 20°.65S×69°.90W, h50km±4km, ML3.8*

ISC 20 05:35:33.8±1.2, 20°.62S±0°.06×69°.9W±0°.2, h55km±10km, n9, σ1°09/13, 1C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.34**	**358**	*i*P	**Pn**	**05 35 43.5**	**-0.4**
HMBC				*i* S	**Sn**	**05 35 51.0**	**-0.2**
HMBC				AML	AML	05 35 51.1	
	comp=N,12μm,0.1s						
PSGC	**Pisagua**	**1.04**	**347**	*i*P	**Pn**	**05 35 52.3**	**-0.1**
PSGC				*e*S	**Sn**	**05 36 06.5**	**+0.4**
PSGC				AML	AML	05 36 08.8	
	comp=N,2μm,0.2s						
PB09	**Plate Boundary**	**1.31**	**153**	*e*P	**Pn**	**05 35 56.0**	**0.0**
PB09				*i* S	**Sn**	**05 36 12.8**	**+0.1**
PB09				AML	AML	05 36 13.6	
	comp=N,11μm,0.5s						
MNMC	**Miæe Miæ**	**1.50**	**10**	*i*P	**Pn**	**05 35 59.4**	**+0.7**
MNMC				*i* S	**Sn**	**05 36 19.4**	**+2.0**
MNMC				AML	AML	05 36 28.0	
	comp=N,3μm,0.4s						
PB04	**Plate Boundary**	**1.68**	**168**	*i*P	**Pn**	**05 36 01.5**	**+0.6**
PB04				*e*S	**Sn**	**05 36 22.8**	**+1.6**
PB04				AML	AML	05 36 30.1	
	comp=E,1μm,0.3s						
ARCH	**Arica**	**2.15**	**349**	*e*P	**Pn**	**05 36 08.1**	**+0.8**
ARCH				AML	AML	05 36 38.0	
	comp=N,942nm,0.4s						
LPAZ	**La Paz**	**4.62**	**21**	Pn	Pn	05 36 45.9	+4.2
	comp=N,0.6nm,0.3s,baz=221,slow=7.6,SNR=22						
TORD	**Torodi Ar. Bea**	**77.92**	**71**	P	**P**	**05 47 24.9**	**-1.5**
	comp=N,0.3nm,0.5s,baz=239,slow=5.1,SNR=7.7						
MKAR	**Makanchi Array**	**145.44**	**34**	PKPbc	**PKPab**	**05 55 06.1**	**+0.1**
	comp=N,0.3nm,0.7s,baz=336,slow=3.2,SNR=3.9						

IDC 20 05:42:35.4±2.4, 15°.44N×104°.00W, h0km, mb3.4/3, mb1 3.8/5, mb1mx3.6/21, mbtmp3.4/5, ML3.1/2, MS3.2/5, Ms1 3.3/5, ms1mx2.9/19, Error ellipse: s-maj=109.7km s-min=27.1km az=58.0, Off coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**8.91**	**78**	LR	LR	05 48 13.1	
	comp=Z,95nm,18.6s,baz=11,slow=38						
LPIG	**La Paz**	**10.46**	**326**	Pn	Pn	05 45 08.7	+2.0
	0.1nm,0.3s,baz=233,slow=5.0,SNR=3.9						
TXAR	**Lajitas Array**	**13.84**	**1**	Pn	Pn	05 45 57.0	+4.0
	0.0nm,0.3s,baz=181,slow=11,SNR=10.0						
TXAR				LR	LR	05 51 17.1	
	comp=Z,106nm,18.7s,baz=180,slow=38						
ANMO	**Albuquerque**	**19.55**	**354**	P	Pn	05 47 09.8	+3.6
	baz=159,slow=14,SNR=5.2						
TKL	**Tuckaleechee C**	**27.07**	**38**	LR	LR	05 59 54.8	
	comp=Z,34nm,20.8s,baz=89,slow=38						
LPAZ	**La Paz**	**47.41**	**130**	P	P	05 51 12.9	+0.3
	1.0nm,0.8s,baz=294,slow=5.9,SNR=4.1						
LPAZ				LR	LR	06 08 49.1	
	comp=Z,58nm,19.9s,baz=227,slow=33						
YKA	**Yellowknife Ar**	**47.59**	**353**	P	P	05 51 11.4	-1.3
	0.3nm,0.7s,baz=165,slow=7.3,SNR=5.9						
ILAR	**Eielson Array**	**57.19**	**340**	P	P	05 52 23.8	-0.2
	0.4nm,0.9s,baz=177,slow=5.0,SNR=3.9						
NOA	**NORSAR Array B**	**88.22**	**26**	LR	LR	06 35 30.4	
	comp=Z,16nm,21.4s,baz=0.0,slow=36						

GUC 20 05:49:49.2±0.8, 31°.62S×69°.55W, h145km±14km, ML3.5, 5C-2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.32**	**289**	*i*P	Pn	05 50 16.9	+0.3
CMCH				*e*S	Sn	05 50 38.0	+0.5
CMCH				AML	AML	05 50 39.6	
	comp=N,2μm,0.5s						
CHNG	**Los Chungos**	**1.68**	**261**	*i*P	Pn	05 50 20.9	+0.6
CHNG				*i* S	Sn	05 50 44.4	+0.2
CHNG				AML	AML	05 50 54.2	
	comp=E,354nm,0.6s						
PEL	**Peldehue**	**1.80**	**212**	*i*P	Pn	05 50 22.4	+0.6
PEL				*i* S	Sn	05 50 47.1	+0.4
PEL				AML	AML	05 50 48.9	
	comp=E,599nm,0.5s						
TLL	**Tololo Astrono**	**1.81**	**323**	*i*P	Pn	05 50 23.0	+0.8
TLL				*i* S	Sn	05 50 48.3	+0.9
TLL				AML	AML	05 50 51.0	
	comp=N,290nm,0.4s						
ROCH	**El Roble**	**1.83**	**222**	*e*P	Pn	05 50 22.7	+0.4
ROCH				*e*S	Sn	05 50 48.2	+0.5
CLCH	**Cerro Calan**	**1.96**	**205**	*i*P	Pn	05 50 24.2	+0.6
CLCH				*i* S	Sn	05 50 50.7	+0.6
CLCH				AML	AML	05 50 58.9	
	comp=N,237nm,0.4s						
ANTU	**Antumapu**	**2.15**	**205**	*e*P	Pn	05 50 26.0	+0.2
ANTU				*i* S	Sn	05 50 54.3	+0.3
ANTU				AML	AML	05 50 57.1	
	comp=E,212nm,0.3s						
LMEL	**Las Melosas**	**2.29**	**194**	*i*P	Pn	05 50 28.2	+0.5
LMEL				AML	AML	05 51 08.8	
	comp=N,121nm,0.1s						
LCO	**Las Campanas**	**2.79**	**339**	*i*P	Pn	05 50 34.4	+0.3
LCO				AML	AML	05 51 12.1	
	comp=E,197nm,0.4s						
VACH	**Vallenar**	**3.21**	**341**	*i*P	Pn	05 50 30.1	-9.1
VACH				*i* S	Sn	05 51 08.0	-10

IDC 20 06:04:50.3±5.7, 30°.69S×179°.38W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/17, mbtmp3.8/3, Error ellipse: s-maj=216.4km s-min=54.2km az=152.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.09**	**200**	Sn	Sn	06 08 23.3	+2.2
	3.4nm,0.3s,baz=87,slow=23,SNR=16						
STKA	**Stephens Creek**	**33.25**	**258**	P	P	06 11 29.3	-0.1
	1.3nm,0.8s,baz=90,slow=6.1,SNR=2.4						
ASAR	**Alice Springs**	**41.91**	**268**	P	P	06 12 41.8	-1.0
	0.3nm,0.8s,baz=98,slow=7.0,SNR=4.4						
WRA	**Warramunga Arr**	**42.92**	**273**	P	P	06 12 51.0	0.0
	0.7nm,0.3s,baz=111,slow=8.1,SNR=18						
FINES	**FINESS Array B**	**145.00**	**339**	PKPbc	PKPbc	06 24 27.9	-0.3
	1.3nm,0.5s,baz=90,slow=3.8,SNR=5.6						

JMA 20 06:08:18.1±0.2, 36°.84N×141°.44E, h53km±2km, M1.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.58**	**297**	P	Pn	06 08 30.4	-0.1
ONAJ				*e*S	Sn	06 08 39.6	+0.1
JFK	**Kawauchi**	**0.69**	**319**	P	Pn	06 08 31.9	-0.1
JFK				*e*S	Sn	06 08 41.7	-0.3
JHO	**Hitachi**	**0.74**	**252**	P	Pn	06 08 32.2	-0.2
JHO				*e*S	Sn	06 08 42.9	0.0
JMM	**Marumori**	**1.15**	**333**	*e*S	Sn	06 08 53.0	+0.5

NIED ***20*** *06:08:00, 37°.20N×142°.00E, h32km, Mw3.5 Best double couple: M₀1.78000×10¹⁴ NP1:φs55.00000°, δ69.00000°, λ80.00000°. NP2:φs261.00000°, δ23.00000°, λ114.00000°.*

ISCJB ***20*** *06:08:50.3±1.2, 37°.08N±0°.05×142°.12E±0°.09, h43km±11km, mb3.4/5, Error ellipse: s-maj=12.4km s-min=7.8km az=1.2*

JMA ***20*** *06:08:51.7±0.1, 37°.17N×142°.02E, h49km±4km, M3.5*

IDC ***20*** *06:08:53.5±4.1, 36°.93N×142°.18E, h66km±45km, mb3.3/5, mb1 3.4/7, mb1mx3.2/27, mbtmp3.4/7, ML3.5/2, Error ellipse: s-maj=34.2km s-min=30.7km az=90.0*

ISC 20 06:08:51.5±1.5, 37°.12N±0°.05×142°.1E±0°.1, h36km±3km, n16, σ0°82/22, mb3.5/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.02**	**285**	P	**Pn**	**06 09 08.6**	**-0.7**
JFK				S	**Sn**	**06 09 20.8**	**-1.6**
ONAJ	**Iwakimizuishiy**	**1.05**	**270**	P	**Pn**	**06 09 09.4**	**-0.3**
ONAJ				*e*S	**Sn**	**06 09 22.3**	**-0.9**
JMM	**Marumori**	**1.29**	**306**	P	**Pn**	**06 09 12.4**	**-0.6**
JMM				S	**Sn**	**06 09 27.6**	**-1.4**
JFT	**Otama**	**1.48**	**286**	P	**Pn**	**06 09 15.8**	**+0.3**
JFT				S	**Sn**	**06 09 33.6**	**0.0**
JOU	**Okura**	**1.70**	**318**	P	**Pn**	**06 09 18.6**	**0.0**
JFY	**Yanaizu**	**1.95**	**279**	*e*S	**Sn**	**06 09 45.8**	**+0.6**
JMK	**Ichinoseki**	**1.97**	**339**	P	**Pn**	**06 09 22.6**	**+0.4**
JMK				*e*S	**Sn**	**06 09 45.6**	**0.0**
JYS	**Shirataka**	**1.97**	**305**	P	**Pn**	**06 09 23.0**	**+0.7**
JYS				*e*S	**Sn**	**06 09 46.7**	**+1.0**
JYK	**Kaneyama**	**2.27**	**323**	P	**Pn**	**06 09 26.7**	**+0.2**
MJAR	**Matsushiro Arr**	**3.19**	**261**	P	**Pn**	**06 09 40.7**	**+1.7**
	2.7nm,0.3s,baz=92,slow=14,SNR=11						
JHJ	**Hachijo jima 2**	**4.42**	**206**	P	**Pn**	**06 09 56.3**	**+0.3**
	14nm,0.3s,baz=252,slow=21,SNR=5.2						
JHJ				S	**Sn**	**06 10 45.5**	**-0.7**
	27nm,0.3s,baz=251,slow=22,SNR=4.6						
SONM	**Songino Array**	**28.21**	**304**	P	**P**	**06 14 40.7**	**-0.1**
	0.6nm,0.7s,baz=97,slow=8.9,SNR=5.5						
ZALV	**Zalesovo Beam**	**42.28**	**312**	P	P	06 16 42.1	+0.9
	0.4nm,0.3s,baz=87,slow=8.8,SNR=2.4						
MKAR	**Makanchi Array**	**44.55**	**302**	P	**P**	**06 16 59.6**	**-0.1**
	0.5nm,0.7s,baz=84,slow=9.7,SNR=6.9						
KURBB	**Kurchatov Arra**	**46.40**	**308**	P	**P**	**06 17 14.1**	**0.0**
	0.4nm,0.5s,baz=81,slow=7.8,SNR=9.9						
ILAR	**Eielson Array**	**49.12**	**32**	P	**P**	**06 17 34.8**	**-0.4**
	0.2nm,0.7s,baz=263,slow=5.3,SNR=4.6						

IDC 20 06:20:55.0±1.6, 3°.85N×124°.46E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.5/24, mbtmp3.5/4, MS3.0/1, Ms1 3.0/1, ms1mx2.0/21, Error ellipse: s-maj=202.1km s-min=21.3km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.55**	**158**	P	P	06 26 25.4	-0.3
	0.4nm,0.4s,baz=336,slow=10,SNR=11						
ASAR	**Alice Springs**	**28.85**	**162**	P	P	06 26 55.8	+0.4
	0.2nm,0.3s,baz=342,slow=8.2,SNR=3.8						
KSRS	**Korea Array**	**33.60**	**5**	LR	LR	06 40 02.4	
	comp=Z,22nm,19.6s,baz=140,slow=34						
MKAR	**Makanchi Array**	**56.19**	**326**	P	P	06 30 37.0	+0.2
	0.4nm,0.5s,baz=122,slow=7.5,SNR=11						
KURBB	**Kurchatov Arra**	**60.44**	**328**	P	P	06 31 06.0	-0.3
	0.2nm,0.3s,baz=122,slow=6.0,SNR=8.0						

CASC 20 06:23:16.4±3.0, 8°.95N×82°.86W, h6km±14km, MD3.5, 1C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.23**	**134**	*i*P	Pg	06 23 22.0	+0.9
BRU2				*e*S	Sg	06 23 26.1	+1.8
TBS2		**0.25**	**129**	*e*P	Pb	06 23 22.8	-0.8
TBS2				*e*S	Sg	06 23 26.1	+1.0
BRU	**Baru**	**0.33**	**116**	*e*P	Pg	06 23 23.5	+0.2
ACR	**Cerro Adams**	**0.43**	**226**	*i*P	Pg	06 23 24.6	-0.2
ACR				*i*P	Pb	06 23 24.6	-1.8
ACR				*e*S	Sg	06 23 30.6	+0.1
ACR				*e*S	Sb	06 23 31.7	-1.5
BUS	**Buena Vista**	**1.07**	**304**	*e*P	Pg	06 23 37.5	-0.1
BUS				*e*S	Sb	06 23 53.4	+0.7
QCR	**Quepos**	**1.37**	**290**	*e*P	Pn	06 23 39.9	-2.3
QCR				*e*S	Sb	06 23 57.0	-3.4
SJS	**Escuela Geolog**	**1.54**	**310**	*e*S	Sb	06 24 05.3	0.0
CGA2	**Cerro Gallo 2**	**1.91**	**304**	*e*P	Pn	06 23 50.6	+0.9

IDC 20 06:25:22.8±0.9, 16°.89N×147°.16E, h0km, mb3.8/13, mb1 4.0/13, mb1mx3.9/25, mbtmp3.8/13, MS2.9/1, Ms1 2.9/1, ms1mx2.5/34, Error ellipse: s-maj=28.0km s-min=17.9km az=100.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.95**	**214**	Pn	Pn	06 26 27.6	+2.8
	9.0nm,0.3s,baz=169,slow=23,SNR=6.6						
GUMO				Sn	Sn	06 27 14.6	+2.7
	27nm,0.3s,baz=174,slow=23,SNR=5.8						
GUMO				LR	LR	06 27 58.3	
	comp=Z,155nm,18.7s,baz=33,slow=39						
MJAR	**Matsushiro Arr**	**21.12**	**340**	P	P	06 30 09.5	+0.2
	1.8nm,0.5s,baz=168,slow=11,SNR=6.1						
KSRS	**Korea Array**	**26.59**	**324**	P	P	06 31 02.8	0.0
	1.1nm,0.6s,baz=148,slow=9.1,SNR=3.8						
PETK	**Petropavlovsk-**	**37.08**	**11**	P	P	06 32 35.2	+0.6
	4.4nm,1.0s,baz=166,slow=6.5,SNR=3.2						
WRA	**Warramunga Arr**	**38.71**	**199**	P	P	06 32 48.6	-0.2
	0.9nm,0.6s,baz=30,slow=9.0,SNR=19						
ASAR	**Alice Springs**	**42.34**	**198**	P	P	06 33 18.2	-0.6
	0.3nm,0.5s,baz=17,slow=9.3,SNR=7.4						
SONM	**Songino Array**	**45.42**	**322**	P	P	06 33 41.6	-1.9
	0.2nm,0.4s,baz=134,slow=6.9,SNR=4.4						
CMAR	**Chiang Mai Arr**	**45.86**	**280**	P	P	06 33 49.0	+1.7
	0.4nm,0.3s,baz=81,slow=7.8,SNR=3.9						
ZALV	**Zalesovo Beam**	**60.29**	**323**	P	P	06 35 33.3	+0.1
	0.7nm,0.5s,baz=114,slow=10.0,SNR=3.7						
MKAR	**Makanchi Array**	**60.71**	**315**	P	P	06 35 35.8	-0.4
	0.2nm,0.4s,baz=93,slow=7.5,SNR=4.0						
ILAR	**Eielson Array**	**64.66**	**26**	P	P	06 36 01.5	-0.7
	0.5nm,0.7s,baz=247,slow=5.5,SNR=7.3						
YKA	**Yellowknife Ar**	**78.93**	**28**	P	P	06 37 28.1	+0.1
	0.5nm,0.7s,baz=285,slow=5.6,SNR=8.8						
NVAR	**Mina Array Bea**	**83.16**	**52**	P	P	06 37 52.5	+1.1
	0.3nm,0.6s,baz=296,slow=9.0,SNR=3.4						
ARCES	**ARCESS Array B**	**84.63**	**342**	P	P	06 37 58.0	-0.1
	7.7nm,1.1s,baz=52,slow=7.9,SNR=4.0						

IDC ***20*** *06:28:30.2±1.1, 54°.93N×164°.11E, h0km, mb3.4/5, mb1 3.7/7, mb1mx3.5/29, mbtmp3.4/7, ML3.2/2, Error ellipse: s-maj=30.1km s-min=17.3km az=163.0*

KRSC ***20*** *06:28:33.4±0.3, 54°.80N×163°.98E, h39km±28km, ML3.7*

ISC 20 06:28:29.2±2.1, 54°.82N±0°.04×164°.15E±0°.04, h2km±15km, n35, σ2°18/51, mb3.4/5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.12**	**69**	P	**Pn**	**06 28 51.8**	**-0.1**
BKI				S	**Sg**	**06 29 05.8**	**+0.7**
MKZ	**Mys Kozlova**	**1.43**	**260**	P	**Pb**	**06 28 55.9**	**-0.7**
MKZ				S	**Sn**	**06 29 12.1**	**-3.5**
KBTR	**Krutoberegovo**	**1.59**	**332**	S	**Sn**	**06 29 16.4**	**-3.1**
ZLN	**Zelenaya**	**2.26**	**304**	S	**Sn**	**06 29 35.5**	**-0.6**
BZGR	**Bezymyannyi-Gr**	**2.27**	**301**	P	**Pb**	**06 29 09.4**	**-1.6**
BZGR				S	**Sn**	**06 29 35.8**	**-0.7**
SMKR	**Semkarok**	**2.33**	**320**	S	**Sn**	**06 29 36.2**	**-1.8**
CIRR	**Tsirk**	**2.34**	**305**	S	**Sn**	**06 29 37.7**	**-0.4**
TUMR	**Tumrok**	**2.35**	**283**	P	**Pb**	**06 29 10.4**	**-2.0**
TUMR				S	**Sn**	**06 29 37.8**	**-0.7**
BZMR	**Bezymyannaya**	**2.37**	**300**	P	**Pb**	**06 29 11.0**	**-1.7**
BZMR				S	**Sn**	**06 29 37.5**	**-1.5**
BZWR	**Bezymyannyi-We**	**2.38**	**300**	P	**Pb**	**06 29 11.2**	**-1.7**
BZWR				S	**Sn**	**06 29 38.3**	**-1.0**
KMNR	**Kamenistaya**	**2.43**	**294**	P	**Pb**	**06 29 11.3**	**-2.4**
KMNR				S	**Sn**	**06 29 38.3**	**-2.1**
KIRR	**Kirishev**	**2.46**	**299**	S	**Sn**	**06 29 40.4**	**-0.7**
KLY	**Klyuchi**	**2.49**	**308**	P	**Pn**	**06 29 10.0**	**-0.8**
KLY				S	**Sn**	**06 29 37.7**	**-4.0**
SRKR	**Sorokina**	**2.50**	**319**	S	**Sn**	**06 29 41.4**	**-0.6**
KPT	**Kopyto**	**2.52**	**299**	P	**Pb**	**06 29 13.4**	**-1.9**
KPT				S	**Sn**	**06 29 41.7**	**-0.9**
KOZ	**Kozyrevsk**	**2.74**	**299**	S	**Sn**	**06 29 44.5**	**-3.4**
KII	**Karymskiy**	**2.86**	**256**	S	**Sn**	**06 29 48.4**	**-2.5**
SRDR	**Sredinnyy**	**2.93**	**303**	P	**Pn**	**06 29 18.4**	**+1.5**
SRDR				S	**Sn**	**06 29 51.7**	**-1.1**
SPN	**Mys Shipunski**	**2.99**	**236**	S	**Sn**	**06 29 50.3**	**-3.6**
ESO	**Esso**	**3.31**	**292**	S	**Sn**	**06 29 59.4**	**-2.4**
SDLR	**Sedlovina**	**3.47**	**246**	P	**Pn**	**06 29 26.4**	**+2.1**
SDLR				S	**Sn**	**06 30 04.6**	**-1.4**
SMAR	**Somma**	**3.52**	**246**	S	**Sn**	**06 30 04.8**	**-2.6**
KRER	**Koryakskii**	**3.53**	**247**	S	**Sn**	**06 30 04.4**	**-3.2**
UGLR	**Uglovaya**	**3.53**	**245**	P	**Pn**	**06 29 27.2**	**+2.0**
AVH	**Avacha**	**3.55**	**246**	P	**Pn**	**06 29 27.1**	**+1.7**
AVH				S	**Sn**	**06 30 05.4**	**-2.6**
KOK	**Koryaka**	**3.59**	**247**	S	**Sn**	**06 30 07.2**	**-1.8**
RUS	**Russkaya**	**4.12**	**237**	P	**Pn**	**06 29 33.8**	**+0.7**
RUS				S	**Sn**	**06 30 18.4**	**-3.5**
PETK	**Petropavlovsk-**	**4.18**	**248**	Pn	**Pn**	**06 29 36.3**	**+2.3**
	0.7nm,0.3s,baz=79,slow=15,SNR=9.3						
PETK				Sn	**Sn**	**06 30 24.7**	**+1.3**
	1.4nm,0.3s,baz=40,slow=22,SNR=6.0						
MTVR	**Mutnovka**	**4.25**	**239**	P	**Pn**	**06 29 35.7**	**+0.6**
MTVR				S	**Sn**	**06 30 22.0**	**-3.4**
FX1	**Attu Island--F**	**5.67**	**106**	Pn	**Pn**	**06 29 55.1**	**+0.6**
	2.8nm,0.3s,baz=290,slow=19,SNR=9.8						
FX1				Sn	**Sn**	**06 30 55.0**	**-5.1**
	2.5nm,0.3s,baz=350,slow=16,SNR=9.4						
ILAR	**Eielson Array**	**25.89**	**48**	P	**P**	**06 34 02.0**	**-0.1**
	0.4nm,0.7s,baz=264,slow=8.2,SNR=6.9						
YKA	**Yellowknife Ar**	**40.26**	**45**	P	**P**	**06 36 07.3**	**+0.4**
	0.2nm,0.6s,baz=298,slow=8.2,SNR=5.4						
TXAR	**Lajitas Array**	**67.78**	**70**	P	**P**	**06 39 30.8**	**+2.3**
	0.3nm,0.6s,baz=305,slow=5.2,SNR=5.6						
WRA	**Warramunga Arr**	**78.70**	**208**	P	**P**	**06 40 33.5**	**+0.7**
	0.3nm,0.8s,baz=22,slow=6.0,SNR=3.2						
ASAR	**Alice Springs**	**82.36**	**208**	P	**P**	**06 40 54.6**	**+2.2**
	0.4nm,0.8s,baz=12,slow=5.3,SNR=4.7						

ISK ***20*** *06:30:01.7, 38°.65N×39°.04E, h8km, MD2.7*

CSEM ***20*** *06:30:02.3±0.2, 38°.66N×39°.11E, h15km, MD2.4, Error ellipse: s-maj=6.0km s-min=5.0km az=73.0*

DDA ***20*** *06:30:02.8, 38°.69N×39°.08E, h7km, MD2.4*

ISCJB ***20*** *06:30:03.0±0.7, 38°.66N±0°.04×39°.12E±0°.08, h10km±9km, Error ellipse: s-maj=10.7km s-min=5.7km az=25.1*

ISC 20 06:30:02.4±0.9, 38°.66N±0°.04×39°.12E±0°.05, h17km±8km, n12, σ0°34/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.20**	**212**	*i*P	**Pg**	**06 30 07.3**	**-0.1**
ELZG				*i* S	**Sg**	**06 30 11.0**	**+0.2**
ELZG	**Elazig**	**0.20**	**212**	*i*P	**Pg**	**06 30 07.3**	**-0.1**
ELZG				*i* S	**Sg**	**06 30 11.0**	**+0.2**
PTK	**Pertek**	**0.31**	**43**	*e*PG	**Pg**	**06 30 09.4**	**+0.1**
PTK				*e*SG	**Sb**	**06 30 15.1**	**+0.5**
PTK	**Pertek**	**0.31**	**43**	*e*Pg	**Pg**	**06 30 09.4**	**+0.1**
PTK				*e*Sg	**Sb**	**06 30 15.1**	**+0.5**
SVRC	**Sivrice-ELAZID**	**0.32**	**153**	*e*PG	**Pg**	**06 30 09.0**	**-0.4**
SVRC				*e*SG	**Sg**	**06 30 14.1**	**0.0**
SVRC	**Sivrice-ELAZID**	**0.32**	**153**	*e*Pg	**Pg**	**06 30 09.0**	**-0.4**
SVRC				*e*Sg	**Sg**	**06 30 14.1**	**0.0**
KEMA	**Kemaliye**	**0.78**	**321**	*i*P	**Pb**	**06 30 17.3**	**-0.2**
KEMA				*i* S	**Sn**	**06 30 29.6**	**-0.4**
KEMA	**Kemaliye**	**0.78**	**321**	*i*P	**Pb**	**06 30 17.3**	**-0.2**
KEMA				*i* S	**Sn**	**06 30 29.6**	**-0.4**
ILIC	**ilic-Erzincan**	**0.90**	**332**	*e*PG	**Pb**	**06 30 19.1**	**-0.5**
ILIC	**ilic-Erzincan**	**0.90**	**332**	*e*Pg	**Pb**	**06 30 19.1**	**-0.5**
AKCD	**Akcadag**	**1.01**	**249**	*i*P	**Pb**	**06 30 21.5**	**0.0**
AKCD				*i* S	**Sn**	**06 30 36.1**	**+0.3**
AKCD	**Akcadag**	**1.01**	**249**	*i*P	**Pb**	**06 30 21.5**	**0.0**
AKCD				*i* S	**Sn**	**06 30 36.1**	**+0.3**

CSEM ***20*** *06:32:17.3, 42°.32N×13°.48E, h7km, MD2.0/5, After ROM*

ROM 20 06:32:17.3±0.1, 42°.32N×13°.48E, h7km, Md2.0/5, Ml1.8/4, Error ellipse: s-maj=1.0km s-min=0.7km az=171.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**303**	Pg	Pg	06 32 19.6	+0.4
AQU				Sg	Sg	06 32 21.2	+0.6
	597nm,0.4s						
AQU	**L'Aquila**	**0.07**	**303**	Pg	Pg	06 32 19.6	+0.4
AQU				Sg	Sg	06 32 21.2	+0.6
	597nm,0.4s						
FAGN	**Fagnano**	**0.10**	**123**	Pg	Pg	06 32 20.0	+0.4
FAGN				Sg	Sg	06 32 21.8	+0.5
	732nm,0.3s						
FAGN	**Fagnano**	**0.10**	**123**	Pg	Pg	06 32 20.0	+0.4
FAGN				Sg	Sg	06 32 21.8	+0.5
	732nm,0.3s						
CAMP	**Campotosto**	**0.22**	**347**	Pg	Pg	06 32 22.3	+0.3
	98nm,1.0s						
CAMP	**Campotosto**	**0.22**	**347**	Pg	Pg	06 32 22.3	+0.3
	98nm,1.0s						
FIAM	**Fiamignano**	**0.27**	**259**	Pg	Pg	06 32 23.4	+0.6
FIAM				Sg	Sg	06 32 28.0	+1.4
	98nm,0.5s						
FIAM	**Fiamignano**	**0.27**	**259**	Pg	Pg	06 32 23.4	+0.6
FIAM				Sg	Sg	06 32 28.0	+1.4
	98nm,0.5s						
VCEL	**Villa Celiera**	**0.28**	**74**	Pg	Pg	06 32 23.7	+0.7
VCEL				Sg	Sg	06 32 28.3	+1.4
	171nm,0.3s						
VCEL	**Villa Celiera**	**0.28**	**74**	Pg	Pg	06 32 23.7	+0.7
VCEL				Sg	Sg	06 32 28.3	+1.4
	171nm,0.3s						
PTQR	**Pietraquaria**	**0.30**	**191**	Pg	Pb	06 32 24.5	-0.6
PTQR				Sg	Sg	06 32 28.9	+1.4
	14nm,0.3s						
PTQR	**Pietraquaria**	**0.30**	**191**	Pg	Pb	06 32 24.5	-0.6
PTQR				Sg	Sg	06 32 28.9	+1.4
	14nm,0.3s						
INTR	**Introdacqua**	**0.44**	**134**	Pg	Pg	06 32 26.6	+0.6
INTR				Sg	Sb	06 32 34.0	-0.4
INTR	**Introdacqua**	**0.44**	**134**	Pg	Pg	06 32 26.6	+0.6
INTR				Sg	Sb	06 32 34.0	-0.4
VVLD	**Villa Vallelon**	**0.46**	**166**	Pg	Pb

KBA *i* Sg **Sg** **06 34 10.0 +0.3**
SOKA **Soboth** **0.94 155** ⇑*i* Pg **Pg** **06 33 59.3 +0.1**
84nm,0.4s
SOKA ⇑*i* Sg **Sg** **06 34 10.9 -0.4**
318nm,0.3s
SOKA **Soboth** **0.94 155** *e* Pg **Pg** **06 33 59.2 +0.1**
baz=339
SOKA *i* Sg **Sg** **06 34 10.8 -0.5**
PERS **Pernice** **1.00 153** ⇑*i* Pg **Pb** **06 34 00.4 -0.5**
PERS *i* Sg **Sg** **06 34 13.2 -0.2**
PERS
comp=Z,604nm,0.2s
PERS **Pernice** **1.00 153** ⇑*i* Pg **Pb** **06 34 00.4 -0.5**
PERS *i* Sg **Sg** **06 34 13.1 -0.2**
OBKA **Obir** **1.02 177** *e* Pg **Pb** **06 34 01.4 0.0**
SNR=126
OBKA *e* Sg **Sg** **06 34 14.6 +0.6**
OBKA **Obir** **1.02 177** ⇓*e* Pg **Pb** **06 34 01.3 0.0**
comp=Z,192nm,0.2s,SNR=223
OBKA ⇓*e* Sg **Sg** **06 34 14.0 -0.1**
comp=Z,654nm,0.2s
OBKA **Obir** **1.02 177** *e* Pg **Pb** **06 34 01.3 0.0**
baz=0.8
OBKA Sg **Sg** **06 34 14.0 -0.1**
comp=Z,654nm,0.2s
CONA **Conrad Observa** **1.02 67** *e* Pg **Pg** **06 34 01.9 +1.0**
comp=Z,58nm,0.1s,SNR=301
CONA ⇓*i* Sg **Sg** **06 34 15.9 +1.8**
comp=Z,424nm,0.2s
CONA **Conrad Observa** **1.02 67** *e* Pg **Pg** **06 34 01.8 +1.0**
baz=244
CONA Sg **Sg** **06 34 15.9 +1.8**
comp=Z,424nm,0.2s
MYKA **Terra Mystica** **1.06 212** ⇓*i* Pg **Pb** **06 34 01.8 -0.1**
comp=Z,306nm,0.3s
MYKA ⇓*i* Sg **Sb** **06 34 15.6 -0.5**
comp=Z,237nm,0.2s
MYKA **Terra Mystica** **1.06 212** Pg **Pb** **06 34 01.8 -0.1**
comp=Z,306nm,0.3s
MYKA Sg **Sb** **06 34 15.6 -0.5**
comp=Z,237nm,0.2s
RJOB **Jochberg** **1.15 281** *e* Pg **Pg** **06 34 04.9 +1.8**
SNR=289
RJOB *e* Sg **Sn** **06 34 21.0 +1.2**
RJOB **Jochberg** **1.15 281** Pg **Pg** **06 34 04.9 +1.8**
SNR=289
RJOB Sg **Sn** **06 34 21.0 +1.2**
ACOM **Acomizza, Ital** **1.18 214** ⇑*e* Pg **Pb** **06 34 03.9 -0.1**
ACOM *e* Sg **Sb** **06 34 19.4 -0.1**
ACOM **Acomizza, Ital** **1.18 214** *e* Pg **Pb** **06 34 03.9 -0.1**
ACOM *e* Sg **Sb** **06 34 19.4 -0.1**
LSR **Lussari** **1.23 212** ⇓*e* Pg **Pg** **06 34 05.3 +0.5**
LSR *e* Sg **Sn** **06 34 21.3 -0.8**
LSR **Lussari** **1.23 212** *e* Pg **Pg** **06 34 05.3 +0.5**
LSR *e* Sg **Sn** **06 34 21.2 -0.8**
MOZS **Mozjanca** **1.24 181** ⇓*i* Pg **Pb** **06 34 05.1 +0.2**
MOZS *i* Sg **Sb** **06 34 20.5 -0.6**
MOZS
comp=Z,272nm,0.2s
MOZS **Mozjanca** **1.24 181** ⇓*i* Pg **Pb** **06 34 05.1 +0.2**
MOZS *i* Sg **Sb** **06 34 20.5 -0.6**
comp=Z,272nm,0.2s
GROS **Grobnik** **1.28 146** ⇑*i* Pg **Pn** **06 34 05.4 -0.2**
GROS
comp=Z,232nm,0.2s
GROS **Grobnik** **1.28 146** ⇑*i* Pg **Pn** **06 34 05.4 -0.2**
comp=Z,232nm,0.2s
PLRO **Paularo** **1.33 223** ⇓*e* Pg **Pg** **06 34 07.1 +0.4**
PLRO *e* Sg **Sn** **06 34 24.1 -0.3**
PLRO **Paularo** **1.33 223** *e* Pg **Pg** **06 34 07.1 +0.4**
PLRO *e* Sg **Sn** **06 34 24.0 -0.3**
CADS **Cadrg** **1.40 201** ⇓*i* Pg **Pb** **06 34 07.9 +0.3**
CADS *i* Sg **Sg** **06 34 26.4 +0.4**
CADS
comp=Z,686nm,0.4s
CADS **Cadrg** **1.40 201** ⇓*i* Pg **Pb** **06 34 07.9 +0.3**
CADS *i* Sg **Sg** **06 34 26.4 +0.4**
comp=Z,686nm,0.4s
GERES **GERESS Array B** **1.41 339** Pg **Pg** **06 34 09.4 +1.2**
comp=Z,204nm,0.3s,baz=158,slow=15,SNR=2522
GERES Lg Lg 06 34 28.6
comp=Z,1µm,0.3s,baz=152,slow=28,SNR=119
GERES Rg Rg 06 34 36.0
comp=Z,302nm,0.4s,baz=155,slow=29,SNR=3.9
GERES **GERESS Array B** **1.41 339** *e* P **Pg** **06 34 09.2 +1.0**
ZOU **Zoufplan** **1.41 227** ⇑*e* Pg **Pb** **06 34 08.3 +0.4**
ZOU *e* Sg **Sg** **06 34 27.6 +1.1**
SOP **Sopron** **1.43 83** ⇓*e* Pn **Pg** **06 34 09.1 +0.6**
SOP *e* Sn **Sg** **06 34 27.5 +0.5**
SOP **Sopron** **1.43 83** ⇓*e* Pn **Pg** **06 34 09.1 +0.6**
SOP *e* Sn **Sg** **06 34 27.5 +0.5**
DRE **Drenchia** **1.47 203** ⇓*e* Pg **Pb** **06 34 09.2 +0.3**
DRE *e* Sg **Sg** **06 34 28.4 0.0**
DRE **Drenchia** **1.47 203** *e* Pg **Pb** **06 34 09.2 +0.3**
DRE *e* Sg **Sg** **06 34 28.3 0.0**
LJU **Ljubljana** **1.49 178** *i* Pg **Pg** **06 34 10.0 +0.3**
LJU *i* 06 34 11.9
LJU *i* Sg **Sg** **06 34 29.4 +0.5**
LJU
comp=Z,90nm,0.2s
LJU **Ljubljana** **1.49 178** *i* Pg **Pg** **06 34 10.0 +0.3**
LJU *i* Sg **Sg** **06 34 29.4 +0.5**
comp=Z,90nm,0.2s
FUSE **Fusea** **1.50 222** ⇑*e* Pg **Pg** **06 34 09.9 0.0**
FUSE *e* Sg **Sg** **06 34 30.5 +1.1**
FUSE **Fusea** **1.50 222** *e* Pg **Pg** **06 34 09.9 0.0**
FUSE *e* Sg **Sg** **06 34 30.4 +1.1**
VINO **Villanova** **1.51 213** ⇓*e* Pg **Pg** **06 34 10.3 +0.2**
VINO *e* Sg **Sg** **06 34 31.0 +1.4**
VINO **Villanova** **1.51 213** *e* Pg **Pg** **06 34 10.3 +0.2**
VINO *e* Sg **Sg** **06 34 31.0 +1.4**
BOO **Bordano** **1.53 218** ⇓*i* Pg **Pg** **06 34 10.7 +0.2**
BOO **Bordano** **1.53 218** *i* Pg **Pg** **06 34 10.7 +0.2**
BAD **Bernadia** **1.54 213** ⇑*e* Pg **Pg** **06 34 10.9 +0.2**
BAD *e* Sg **Sg** **06 34 30.4 -0.3**
BAD **Bernadia** **1.54 213** *e* Pg **Pg** **06 34 10.9 +0.2**
BAD *e* Sg **Sg** **06 34 30.4 -0.3**
ABTA **Abfaltersbach** **1.54 240** ⇑*e* Pg **Pg** **06 34 11.0 +0.2**
comp=Z,53nm,0.3s,SNR=32
ABTA ⇑*e* Sg **Sg** **06 34 31.8 +1.0**
comp=Z,296nm,0.2s
ABTA **Abfaltersbach** **1.54 240** ⇑*e* Pg **Pg** **06 34 11.0 +0.2**
ABTA *e* Sg **Sg** **06 34 31.8 +1.0**
comp=Z,296nm,0.2s
DOBS **Dobrina** **1.54 153** *i* Pg **Pb** **06 34 10.6 +0.5**
DOBS **Dobrina** **1.54 153** *i* Pg **Pb** **06 34 10.6 +0.5**
VOY **Vojsko** **1.55 195** *e* Pn **Pb** **06 34 10.1 -0.2**
VOY *e* Sn **Sg** **06 34 31.3 +0.4**
VOY **Vojsko** **1.55 195** *e* Pn **Pb** **06 34 10.1 -0.2**
VOY *e* Sn **Sg** **06 34 31.3 +0.4**
COLI **Coloredo** **1.58 208** ⇑*e* Pg **Pg** **06 34 11.9 +0.4**
COLI *e* Sg **Sg** **06 34 34.4 +2.4**
COLI **Coloredo** **1.58 208** *e* Pg **Pg** **06 34 11.9 +0.4**
COLI *e* Sg **Sg** **06 34 34.4 +2.4**
CSMI **Casera Mimoias** **1.60 231** ⇓*e* Pg **Pg** **06 34 11.9 0.0**
CSMI *e* Sg **Sg** **06 34 33.3 +0.6**
CSMI **Casera Mimoias** **1.60 231** *e* Pg **Pg** **06 34 11.9 0.0**
CSMI *e* Sg **Sg** **06 34 33.2 +0.6**
MPRI **Monte Prat** **1.64 219** ⇑*e* Pg **Pg** **06 34 12.5 0.0**
MPRI *e* Sg **Sg** **06 34 34.3 +0.4**
MPRI **Monte Prat** **1.64 219** *e* Pg **Pg** **06 34 12.5 0.0**
MPRI *e* Sg **Sg** **06 34 34.2 +0.4**
JAVS **Javornik** **1.66 190** *i* Pn **Pb** **06 34 11.8 -0.3**
JAVS *i* Sg **Sg** **06 34 36.0 +1.5**
JAVS
comp=Z,292nm,0.3s
JAVS **Javornik** **1.66 190** *i* Pn **Pb** **06 34 11.8 -0.3**
JAVS *i* Sg **Sg** **06 34 36.0 +1.5**
comp=Z,292nm,0.3s
SABO **M.te Sabotino** **1.66 201** ⇓*e* Pg **Pb** **06 34 12.6 +0.5**
SABO **M.te Sabotino** **1.66 201** *e* Pg **Pb** **06 34 12.6 +0.5**
KHC **Kasperske Hory** **1.71 340** *e* P **Pb** **06 34 13.3 +0.4**
KHC *e* 06 34 36.7
KHC smax smax
comp=N,2µm,0.5s
KHC **Kasperske Hory** **1.71 340** *e* PN **Pb** **06 34 13.3 +0.4**
KHC *e* PG **Pg** **06 34 15.2 +1.3**
KHC *e* SG **Sg** **06 34 36.7 +0.7**
comp=N,2µm,0.5s
KHC **Kasperske Hory** **1.71 340** *e* Pn **Pb** **06 34 13.0 +0.1**
baz=158
RISI **Rein** **1.73 251** ⇓*e* Pg **Pb** **06 34 13.9 +0.6**
CIMO **Cimolais** **1.85 229** ⇓*e* Pg **Pb** **06 34 15.4 +0.1**
CIMO **Cimolais** **1.85 229** *e* Pg **Pb** **06 34 15.4 +0.1**
TLI **Talmassons** **1.86 211** ⇑*e* Pg **Pb** **06 34 15.6 +0.1**
TLI **Talmassons** **1.86 211** *e* Pg **Pb** **06 34 15.6 +0.1**
MLNI **Malnisio** **1.88 223** ⇓*e* Pg **Pb** **06 34 15.9 +0.1**
MLNI *e* Sg **Sb** **06 34 39.8 +0.2**
MLNI **Malnisio** **1.88 223** *e* Pg **Pb** **06 34 15.9 +0.1**
MLNI *e* Sn **Sb** **06 34 39.7 +0.2**
TRI **Trieste** **1.89 195** ⇓*e* Pg **Pb** **06 34 16.4 +0.5**
TRI **Trieste** **1.89 195** *e* Pg **Pb** **06 34 16.4 +0.5**
TREC **Trest** **1.89 21** *e* P **Pb** **06 34 15.5 -0.6**
TREC *e* 06 34 39.2
TREC smax smax
comp=N,617nm,0.3s
TREC **Trest** **1.89 21** *e* PN **Pb** **06 34 15.5 -0.6**
TREC *e* SG **Sb** **06 34 39.2 -0.7**
comp=N,617nm,0.3s
TREC **Trest** **1.89 21** *e* Pn **Pb** **06 34 15.4 -0.6**
baz=199
TREC Sg **Sb** **06 34 39.2 -0.7**
comp=N,617nm,0.3s
ZST **Bratislava** **1.90 68** *e* P **Pb** **06 34 16.2 +0.1**
ZST *e* 06 34 42.2
ZST **Bratislava** **1.90 68** *e* PN **Pb** **06 34 16.2 +0.1**
ZST *e* SN **Sg** **06 34 42.2 +0.1**
ZST **Bratislava** **1.90 68** *e* P **Pb** **06 34 16.2 +0.1**
ZST *e* S **Sg** **06 34 42.2 +0.1**
BEHE **Becsehely** **1.91 123** ⇓*e* Pn **Pb** **06 34 16.0 -0.3**
BEHE *e* Sn **Sg** **06 34 47.0 +4.7**
BEHE **Becsehely** **1.91 123** ⇓*e* Pn **Pb** **06 34 16.0 -0.3**
WET **Wettzell** **1.93 327** *e* Pn **Pb** **06 34 16.2 -0.5**
SNR=54
WET *e* Pg **Pg** **06 34 19.7 +1.5**
SNR=8.1
WET *e* Sg **Sg** **06 34 44.7 +1.6**
WET **Wettzell** **1.93 327** *e* P **Pb** **06 34 16.2 -0.5**
WET *e* 06 34 44.7
WET **Wettzell** **1.93 327** *e* P **Pb** **06 34 16.2 -0.5**
WTTA **Wattenberg** **1.94 263** ⇑*i* Pn **Pb** **06 34 17.3 +0.3**
comp=N,8.3nm,0.3s
WTTA ⇑*i* Pg **Pg** **06 34 19.0 +0.7**
comp=N,178nm,0.2s
WTTA ⇓*i* Sg **Sg** **06 34 45.2 +1.8**
comp=N,1µm,0.3s
WTTA **Wattenberg** **1.94 263** *e* Pn **Pb** **06 34 17.2 +0.3**
baz=82
WATA **Walderalm** **1.97 265** ⇓*i* Pn **Pb** **06 34 17.9 +0.4**
WATA ⇓*e* Pg **Pg** **06 34 19.3 +0.4**
comp=N,76nm,0.2s,SNR=52
WATA *e* Sg **Sg** **06 34 47.0 +2.6**
comp=N,723nm,0.2s
WATA **Walderalm** **1.97 265** Pn **Pb** **06 34 17.9 +0.4**
WATA **Walderalm** **1.97 265** Pg **Pg** **06 34 19.3 +0.4**
comp=N,76nm,0.2s,SNR=52
WATA Sg **Sg** **06 34 47.0 +2.6**
comp=N,723nm,0.2s
KRUC **Moravsky** **2.00 39** *e* Pn **Pn** **06 34 16.6 +1.1**
baz=219
KRUC *e* Sn **Sb** **06 34 42.4 -0.7**
comp=N,298nm,0.3s,baz=219
POLC **Polcenigo** **2.02 223** *e* Pn **Pb** **06 34 18.1 -0.1**
CAE **Caneva** **2.06 223** ⇑*e* Pg **Pb** **06 34 18.3 -0.7**
CAE **Caneva** **2.06 223** *e* Pg **Pb** **06 34 18.3 -0.7**
AGOR **Agordo** **2.07 234** ⇑*e* Pg **Pb** **06 34 19.4 +0.2**
ROSI **Rosskopf** **2.17 255** ⇓*e* Pn **Pb** **06 34 21.3 +0.5**
SMOL **Smolenice** **2.22 63** *e* P **Pb** **06 34 20.3 -1.3**
SMOL *e* 06 34 53.9
SMOL **Smolenice** **2.22 63** *e* PN **Pb** **06 34 20.3 -1.3**
SMOL *e* SG **Sg** **06 34 53.9 +1.4**
SMOL **Smolenice** **2.22 63** *e* P **Pb** **06 34 20.3 -1.3**
SMOL *e* Sg **Sg** **06 34 53.9 +1.4**
VARN **Col Varnada, M** **2.23 227** ⇓*e* Pg **Pb** **06 34 20.1 -1.8**
VARN **Col Varnada, M** **2.23 227** ⇓*e* Pn **Pb** **06 34 20.1 -1.8**
FUR **Furstenfeldbru** **2.24 288** *e* Pg **Pg** **06 34 25.7 +1.7**
SNR=16
FUR *e* Sg **Sg** **06 34 54.2 +1.2**
FUR **Furstenfeldbru** **2.24 288** *e* P **Pg** **06 34 25.7 +1.7**
FUR *e* 06 34 54.2
FUR **Furstenfeldbru** **2.24 288** *e* Pn **Pb** **06 34 21.7 -0.2**
baz=105
FUR **Furstenfeldbru** **2.24 288** Pg **Pg** **06 34 25.7 +1.7**
SNR=16
FUR Sg **Sg** **06 34 54.2 +1.2**
VRAC **Vranov** **2.28 38** ⇓*i* P **Pn** **06 34 20.2 +1.0**
VRAC **Vranov** **2.28 38** Pn **Pb** **06 34 22.7 +0.1**
comp=N,67nm,0.3s,baz=226,slow=14,SNR=80
VRAC Lg Lg 06 34 50.8
comp=N,77nm,0.3s,baz=317,slow=18,SNR=17
VRAC **Vranov** **2.28 38** ⇓*i* P **Pn** **06 34 20.2 +1.0**
VRAC S **Sn** **06 34 48.9 +1.4**
VRAC *e* Sg **Sb** **06 34 51.4 +0.5**
MOTA **Moosalm** **2.29 267** ⇓*e* Pg **Pg** **06 34 25.8 +0.8**
comp=N,41nm,0.1s,SNR=43
MOTA **Moosalm** **2.29 267** ⇓*e* Pg **Pg** **06 34 25.8 +0.8**
ABSI **Aberstueckl** **2.29 251** *e* Pn **Pb** **06 34 23.0 +0.1**
KOSI **Kohlern** **2.37 244** *e* Pn **Pb** **06 34 23.7 -0.5**
MTLO **Montello** **2.37 224** *e* Pg **Pb** **06 34 22.3 -1.8**
MTLO **Montello** **2.37 224** *e* Pn **Pb** **06 34 22.3 -1.8**
PKST **T^'s** **2.44 95** ⇑*i* Pn **Pn** **06 34 22.5 +1.0**
PKST *e* Sn **Sn** **06 34 51.5 -0.1**
PKST **T^'s** **2.44 95** ⇑*e* Pn **Pn** **06 34 22.5 +1.0**
PKST *e* Sn **Sn** **06 34 51.5 -0.1**
PRU **Pruhonice** **2.46 1** *e* P **Pn** **06 34 23.2 +1.5**
PRU *e* 06 34 58.3
PRU smax smax
comp=N,754nm,0.5s
PRU **Pruhonice** **2.46 1** *e* PN **Pn** **06 34 23.2 +1.5**
PRU *e* PG **Pb** **06 34 26.5 +0.8**
PRU *e* SG **Sb** **06 34 58.3 +2.1**
comp=N,754nm,0.5s
PRU **Pruhonice** **2.46 1** *e* Pn **Pn** **06 34 23.0 +1.3**
baz=180
RETA **Reutte** **2.51 270** *e* Pn **Pb** **06 34 24.6 -2.0**
baz=88
FETA **Feichten** **2.59 260** ⇓*e* Pn **Pb** **06 34 26.5 -1.5**
SNR=32
FETA ⇓*i* Pg **Pg** **06 34 31.1 +0.3**
FETA ⇓*i* Sg **Sg** **06 35 03.9 -0.5**
comp=N,146nm,0.4s
FETA **Feichten** **2.59 260** ⇑*e* Pn **Pb** **06 34 26.2 -1.9**
PANI **Panarotta** **2.63 237** *e* Pg **Pb** **06 34 26.8 -1.8**
PANI **Panarotta** **2.63 237** *e* Pn **Pb** **06 34 26.8 -1.8**
PKSG **2.67 92** ⇑*e* Pn **Pn** **06 34 25.8 +1.2**
PKSG *e* Sn **Sn** **06 34 59.7 +2.5**
PKSG **2.67 92** ⇑*e* Pn **Pn** **06 34 25.8 +1.2**
PKSG *e* Sn **Sn** **06 34 59.7 +2.5**
ROTZ **Rotzenmuhle** **2.69 327** *e* Pn **Pn** **06 34 26.5 +1.6**
SNR=34
ROTZ *e* Pg **Pg** **06 34 34.4 +1.7**
SNR=92
ROTZ *e* Sg **Sg** **06 35 08.8 +1.2**
ROTZ **Rotzenmuhle** **2.69 327** Pn **Pn** **06 34 26.5 +1.6**
SNR=34
PKS9 **Tamasi** **2.77 108** *e* Pn **Pn** **06 34 28.2 +2.2**
PKS9 *e* Sn **Sg** **06 35 11.0 +0.8**
PKS9 **Tamasi** **2.77 108** *e* Pn **Pn** **06 34 28.2 +2.2**
DDS **Dosso del Somm** **2.79 235** *e* Pg **Pb** **06 34 28.9 -2.6**
DDS **Dosso del Somm** **2.79 235** *e* Pn **Pb** **06 34 28.9 -2.6**
MOSI **Grossmontoni** **2.83 253** *e* Pn **Pb** **06 34 31.0 -1.1**
MANZ **Manzenberg** **2.91 329** *e* Pn **Pn** **06 34 29.5 +1.5**
SNR=39
MANZ *e* Sg **Sg** **06 35 15.4 +0.8**
MANZ **Manzenberg** **2.91 329** Pn **Pn** **06 34 29.5 +1.5**
SNR=39
MANZ Sg **Sg** **06 35 15.4 +0.8**
KRLC **Kraliky** **2.97 30** *e* P **Pn** **06 34 30.3 +1.5**
KRLC **Kraliky** **2.97 30** *e* PN **Pn** **06 34 30.3 +1.5**
KRLC **Kraliky** **2.97 30** Pn **Pn** **06 34 30.3 +1.5**
NVLJ **Novalja** **2.98 174** *e* Pn **Pn** **06 34 31.6 +2.7**
NVLJ Sn **Sg** **06 35 15.8 -1.1**
NVLJ **Novalja** **2.98 174** *e* Pn **Pn** **06 34 31.6 +2.7**
PVCC **Panska Ves** **3.00 1** *e* P **Pn** **06 34 30.1 +0.9**
PVCC *e* 06 35 17.3
PVCC smax smax
comp=N,865nm,0.3s
PVCC **Panska Ves** **3.00 1** *e* PN **Pn** **06 34 30.1 +0.9**
PVCC *e* SG **Sg** **06 35 17.3 -0.2**
comp=N,865nm,0.3s
PVCC **Panska Ves** **3.00 1** Pn **Pn** **06 34 30.1 +0.9**
PVCC Sg **Sg** **06 35 17.3 -0.2**
comp=N,865nm,0.3s
NKC **Novy Kostel** **3.01 335** *e* SG **Sg** **06 35 17.8 -0.1**
comp=N,761nm,0.3s
NKC **Novy Kostel** **3.01 335** Sg **Sg** **06 35 17.8 -0.1**
comp=N,761nm,0.3s
MORC **Moravsky Berou** **3.04 41** ⇓P **Pn** **06 34 30.6 +0.9**
MORC S **Sn** **06 35 07.6 +1.3**
MORC **Moravsky Berou** **3.04 41** ⇓*i* P **Pn** **06 34 30.6 +0.9**
MORC **Moravsky Berou** **3.04 41** P **Pn** **06 34 30.6 +0.9**
MORC **Moravsky Berou** **3.04 41** *e* Pg **Pg** **06 34 38.4 -0.9**
MORC S **Sn** **06 35 07.6 +1.3**
RNI **Roncone** **3.05 241** *e* Pg **Pb** **06 34 32.9 -2.9**
RNI **Roncone** **3.05 241** *e* Pn **Pb** **06 34 32.9 -2.9**
GRA1 **Grafenberg Arr** **3.05 316** Pn **Pn** **06 34 32.1 +2.2**
SNR=7.1
GRA1 **Grafenberg Arr** **3.05 316** Pg **Pg** **06 34 40.9 +1.4**
SNR=34
GRA1 Sg **Sg** **06 35 21.0 +1.9**
GRF **Grafenberg Arr** **3.05 316** *e* Pn **Pn** **06 34 32.1 +2.2**
SNR=7.1
GRF *e* Pg **Pg** **06 34 40.9 +1.4**
SNR=34
GRF *e* Sg **Sg** **06 35 21.0 +1.9**
GRF **Grafenberg Arr** **3.05 316** *e* P **Pn** **06 34 32.1 +2.2**
DPC **Dobruska-Polom** **3.08 23** *e* P **Pn** **06 34 31.0 +0.8**
DPC *e* 06 35 18.3
DPC smax smax
comp=N,436nm,0.6s
DPC **Dobruska-Polom** **3.08 23** *e* PN **Pn** **06 34 31.0 +0.8**
DPC *e* PG **Pb** **06 34 36.0 -0.3**
DPC *e* SG **Sg** **06 35 18.3 -1.6**
comp=N,436nm,0.6s
DPC **Dobruska-Polom** **3.08 23** Pn **Pn** **06 34 31.0 +0.8**
DPC **Dobruska-Polom** **3.08 23** Pg **Pb** **06 34 36.0 -0.3**
DPC Sg **Sg** **06 35 18.3 -1.6**
comp=N,436nm,0.6s
WERN **Wernitzgruen** **3.08 334** *e* Pn **Pn** **06 34 31.6 +1.3**
SNR=16
WERN *e* Pg **Pg** **06 34 41.5 +1.3**
SNR=33
WERN *e* Sg **Sg** **06 35 20.2 +0.1**
WERN **Wernitzgruen** **3.08 334** Pn **Pn** **06 34 31.6 +1.3**
SNR=16
VYHS **Vyhne** **3.09 70** *e* P **Pn** **06 34 31.0 +0.6**
VYHS pmax pmax
comp=N,62nm,0.7s
VYHS **Vyhne** **3.09 70** *e* PN **Pn** **06 34 31.0 +0.6**
VYHS *e* PG **Pg** **06 34 40.4 +0.1**
VYHS *e* SG **Sg** **06 35 19.2 -1.2**
VYHS **Vyhne** **3.09 70** *e* Pn **Pn** **06 34 30.7 +0.3**
baz=252
VYHS **Vyhne** **3.09 70** *e* P **Pn** **06 34 31.0 +0.6**
comp=N,62nm,0.7s
BUD **Budapest** **3.09 89** ⇓*e* Pn **Pg** **06 34 40.3 -0.1**
BUD *e* Sn Sg 06 35 27.4 +7.0
DAVA **Damuels** **3.12 267** ⇓*i* Pn **Pn** **06 34 33.5 +2.6**
comp=N,25nm,0.1s,SNR=35
DAVA ⇓*i* Pg **Pg** **06 34 41.6 +0.6**
comp=N,56nm,0.2s
DAVA ⇓*i* Sg **Sg** **06 35 21.5 +0.2**
comp=N,810nm,0.3s
DAVA **Damuels** **3.12 267** *e* Pn **Pn** **06 34 33.3 +2.3**
baz=84
UPC **Upice** **3.15 18** *e* P **Pn** **06 34 32.6 +1.4**
UPC *e* 06 35 21.5
UPC **Upice** **3.15 18** *e* PN **Pn** **06 34 32.6 +1.4**
UPC *e* SG **Sg** **06 35 21.5 -0.7**
UPC **Upice** **3.15 18** Pn **Pn** **06 34 32.6 +1.4**
UPC Sg **Sg** **06 35 21.5 -0.7**
TANN **Tannenbergstha** **3.17 336** *e* Pn **Pn** **06 34 32.8 +1.2**
SNR=40
TANN **Tannenbergstha** **3.17 336** Pn **Pn** **06 34 32.8 +1.2**
SNR=40
DAVOX **Davos/Dischmat** **3.22 258** Pn Pb 06 34 35.4 -3.3
comp=N,4.4nm,0.3s,baz=57,slow=12,SNR=40
DAVOX Pg **Pg** **06 34 42.9 +0.1**
comp=N,15nm,0.3s,baz=76,slow=16,SNR=22
DAVOX Lg Lg 06 35 25.3
comp=N,51nm,0.3s,baz=327,slow=20,SNR=13
PLN **Plauen** **3.32 334** *e* Pn **Pn** **06 34 35.2 +1.6**
SNR=10
PLN *e* Pg **Pg** **06 34 45.5 +0.7**
SNR=19
PLN *e* Sg **Sg** **06 35 27.6 -0.3**
PLN **Plauen** **3.32 334** Pn **Pn** **06 34 35.2 +1.6**
SNR=10
OKC **Ostrava-Krasne** **3.36 45** *e* P **Pn** **06 34 35.0 +0.9**
OKC **Ostrava-Krasne** **3.36 45** *e* PN **Pn** **06 34 35.0 +0.9**
OKC *e* PG **Pb** **06 34 42.8 +1.8**
OKC **Ostrava-Krasne** **3.36 45** Pn **Pn** **06 34 35.0 +0.9**
BRG **Berggiesshubel** **3.36 354** PN **Pn** **06 34 34.9 +0.8**
BRG PG **Pg** **06 34 46.1 +0.5**
BRG SG **Sg** **06 35 28.5 -0.6**
comp=N,393nm,0.5s
BRG
comp=N,274nm,5.3s
BRG
comp=E,912nm,3.5s
BRG
comp=Z,247nm,7.7s
BRG **Berggiesshubel** **3.36 354** P **Pn** **06 34 34.9 +0.8**
BRG MLR MLR
comp=N,274nm,5.3s
BRG MLR MLR
comp=E,912nm,3.5s
BRG MLR MLR
comp=Z,247nm,7.6s
BRG **Berggiesshubel** **3.36 354** P **Pn** **06 34 34.9 +0.8**
comp=Z,247nm,7.6s
KSP **Ksiaz** **3.53 19** *e* P **Pb** **06 34 41.3 -2.6**
KSP *e* 06 35 18.4
KSP **Ksiaz** **3.53 19** *e* Pn **Pn** **06 34 37.9 +1.5**
KSP *e* Pg **Pg** **06 34 48.2 -0.5**
KSP *e* Sg **Sg** **06 35 33.7 -0.9**
KSP **Ksiaz** **3.53 19** *e* Sn **Sn** **06 35 18.9 +0.6**
KSP **Ksiaz** **3.53 19** *e* Pn **Pn** **06 34 37.9 +1.5**
KSP **Ksiaz** **3.53 19** *e* P **Pb** **06 34 41.3 -2.6**
KSP **Ksiaz** **3.53 19** *e* Pg **Pg** **06 34 48.2 -0.5**
KSP *e* S **Sn** **06 35 18.4 +0.1**
KSP *e* Sg **Sg** **06 35 33.4 -0.9**
MOX **Moxa** **3.63 330** *e* Pn **Pn** **06 34 39.5 +1.6**
SNR=46
MOX *e* Sg **Sg** **06 35 38.3 +0.5**
MOX **Moxa** **3.63 330** *e* P **Pn** **06 34 39.5 +1.6**
MOX **Moxa** **3.63 330** Pn **Pn** **06 34 39.5 +1.6**
SNR=46
MOX Sg **Sg** **06 35 38.3 +0.5**
PSZ **Piszkesteto** **3.69 82** ⇓P **Pn** **06 34 39.8 +1.1**
PSZ S **Sn** **06 35 19.8 -2.6**
PSZ **Piszkesteto** **3.69 82** ⇓*i* P **Pn** **06 34 39.8 +1.1**
PSZ **Piszkesteto** **3.69 82** ⇑*e* Pn **Pn** **06 34 40.1 +1.4**
PSZ *e* Sn **Sn** **06 35 21.5 -0.9**
PSZ **Piszkesteto** **3.69 82** ⇓*i* P **Pn** **06 34 39.8 +1.1**
PSZ **Piszkesteto** **3.69 82** ⇑*e* Pn **Pn** **06 34 40.1 +1.4**
PSZ S **Sn** **06 35 19.8 -2.6**
PSZ *e* Sn Sb 06 35 21.5 -10
SPAK **Spaichingen-Ko** **3.87 281** Pn **Pn** **06 34 42.8 +1.7**
SPAK Sg **Sg** **06 35 44.6 -0.7**
CLL **Collm** **3.90 346** *e* Pn **Pn** **06 34 43.1 +1.6**
SNR=4.3
CLL **Collm** **3.90 346** *e* P **Pn** **06 34 43.0 +1.5**
CLL **Collm** **3.90 346** *e* Pn **Pn** **06 34 43.0 +1.5**
CLL *e* Pg **Pg** **06 34 56.0 +0.2**
CLL *i* Sn Sn 06 35 10.8 -17
CLL *e* 06 35 29.0
CLL *e* 06 35 40.0
CLL *e* Sg **Sg** **06 35 45.0 -1.3**
comp=Z,654nm,0.7s
CLL **Collm** **3.90 346** *e* P **Pn** **06 34 43.0 +1.5**
BFO **Black Forest** **4.20 283** *e* Pn **Pn** **06 34 47.3 +1.6**
SNR=42
BFO *e* Sn **Sn** **06 35 33.3 -1.7**
BFO *e* Sg **Sg** **06 35 55.8 -0.2**
BFO **Black Forest** **4.20 283** *e* P **Pn** **06 34 47.3 +1.6**
BFO *e* 06 35 33.3
BFO **Black Forest** **4.20 283** Pn **Pn** **06 34 47.3 +1.6**
SNR=42
BFO Sn **Sn** **06 35 33.3 -1.7**
BFO Sg **Sg** **06 35 55.8 -0.2**
TOD **Tromm** **4.29 301** Pn **Pn** **06 34 48.7 +1.8**
NIE **Niedzica** **4.33 62** *e* P **Pn** **06 34 50.0 +2.6**
NIE *e* S **Sn** **06 35 38.0 -0.1**
NIE **Niedzica** **4.33 62** *e* P **Pn** **06 34 50.0 +2.6**
NIE *e* S **Sn** **06 35 38.0 -0.1**
NIE **Niedzica** **4.33 62** *e* P **Pn** **06 34 50.0 +2.6**
NIE *e* S **Sn** **06 35 38.0 -0.1**
FELD **Feldberg im Sc** **4.38 277** Pn **Pn** **06 34 49.5 +1.3**
OJC **Ojcow** **4.43 51** *e* P **Pn** **06 34 51.5 +2.7**

OJC	**Ojcow**	**4.43**	**51**	*e*Pn	**Pn**	**06 34 51.5 +2.7**
OJC				*e*Pg	**Pg**	**06 35 06.6 +0.6**
OJC				*e*Sg	**Sg**	**06 36 02.9 -0.5**
OJC	**Ojcow**	**4.43**	**51**	*e*P	**Pn**	**06 34 51.5 +2.7**
MAIM	**Mastiano**	**4.56**	**219**	P	**Pn**	**06 34 52.0 +1.4**
LANF	**Langenberg**	**4.68**	**291**	Pn	**Pn**	**06 34 53.8 +1.6**
LANF	**Langenberg**	**4.68**	**291**	Pn	**Pn**	**06 34 53.8 +1.6**
BBS	**Basel-Blauen**	**4.71**	**272**	Pn	**Pn**	**06 34 53.9 +1.2**
BBS				Sg	**Sg**	**06 36 11.7 -0.8**
TNS	**Taunus Mts**	**4.80**	**306**	*e*Pn	**Pn**	**06 34 56.2 +2.3**
	SNR=33					
TNS				*e*Sn	**Sn**	**06 35 49.7 0.0**
TNS				*e*Sg	**Sg**	**06 36 16.8 +1.7**
TNS	**Taunus Mts**	**4.80**	**306**	*e*P	**Pn**	**06 34 56.2 +2.3**
TNS				*e*		06 35 49.7
TNS	**Taunus Mts**	**4.80**	**306**	Pn	**Pn**	**06 34 56.2 +2.3**
	SNR=33					
TNS				Sn	**Sn**	**06 35 49.7 0.0**
TNS				Sg	**Sg**	**06 36 16.8 +1.7**
CRVS	**Cervenica-Dubn**	**4.88**	**71**	*e*P	**Pn**	**06 34 55.9 +1.0**
CRVS				pmax	pmax	
	comp=N,33nm,1.4s					
CRVS	**Cervenica-Dubn**	**4.88**	**71**	*e*PN	**Pn**	**06 34 55.9 +1.0**
CRVS				*e*SG	**Sg**	**06 36 19.9 +2.3**
CRVS	**Cervenica-Dubn**	**4.88**	**71**	*e*P	**Pn**	**06 34 55.9 +1.0**
	comp=N,33nm,1.4s					
CRVS				*e*Sg	**Sg**	**06 36 19.9 +2.3**
CDF	**Champ du Feu**	**4.91**	**283**	*e*Pn	**Pn**	**06 34 56.4 +1.0**
CDF				*e*Sg	**Sg**	**06 36 17.2 -1.5**
	comp=N,252nm,0.7s					
CDF	**Champ du Feu**	**4.91**	**283**	*e*Pn	**Pn**	**06 34 56.4 +1.0**
CDF				*e*Sg	**Sg**	**06 36 17.2 -1.5**
	comp=N,126nm,0.7s					
MOF	**Molkenrain**	**4.96**	**276**	Sg	**Sg**	**06 36 18.8 -1.6**
MOF	**Molkenrain**	**4.96**	**276**	Sg	**Sg**	**06 36 18.8 -1.6**
ECH	**Echery**	**4.96**	**281**	Pn	**Pn**	**06 34 57.3 +1.2**
ECH	**Echery**	**4.96**	**281**	Pn	**Pn**	**06 34 57.3 +1.2**
PCP	**Piancastagn**	**5.09**	**236**	P	**Pn**	**06 34 59.7 +1.8**
ABH	**Alteburg**	**5.15**	**300**	Pn	**Pn**	**06 35 00.8 +2.1**
HINF	**Hinteralfeld**	**5.15**	**276**	*e*Pn	**Pn**	**06 34 59.4 +0.7**
HINF				*e*Sn	**Sn**	**06 36 56.2 -2.2**
HINF				*e*Sg	**Sg**	**06 36 25.2 -1.2**
	comp=N,106nm,0.4s					
HINF	**Hinteralfeld**	**5.15**	**276**	*e*Pn	**Pn**	**06 34 59.4 +0.7**
HINF				*e*Sn	**Sn**	**06 36 56.2 -2.2**
HINF				*e*Sg	**Sg**	**06 36 25.2 -1.2**
	comp=N,53nm,0.4s					
LOMF	**Lomont**	**5.18**	**271**	Pn	**Pn**	**06 35 00.2 +1.0**
LOMF	**Lomont**	**5.18**	**271**	Pn	**Pn**	**06 35 00.2 +1.0**
BZS	**Buzias**	**5.29**	**109**	⇑P	**Pn**	**06 35 01.3 +0.7**
BZS	**Buzias**	**5.29**	**109**	⇑*i*P	**Pn**	**06 35 01.3 +0.7**
BZS	**Buzias**	**5.29**	**109**	⇑*i*P	**Pn**	**06 35 01.3 +0.7**
BZS				S	**Sn**	**06 36 10.0 +0.2**
KOE	**Koeppel**	**5.29**	**306**	*e*Pn	**Pn**	**06 35 03.4 +2.7**
KOE	**Koeppel**	**5.29**	**306**	Pn	**Pn**	**06 35 03.4 +2.7**
UZH	**Uzhgorod**	**5.36**	**75**	*e*P	**Pn**	**06 35 03.8 +2.2**
UZH				*e*S	**Sn**	**06 36 05.9 +2.3**
UZH	**Uzhgorod**	**5.36**	**75**	*e*P	**Pn**	**06 35 03.8 +2.2**
UZH				*e*S	**Sn**	**06 36 05.9 +2.3**
RUP	**Ruppelstein**	**5.37**	**297**	Pn	**Pn**	**06 35 04.1 +2.4**
KOLS	**Kolonicke sedl**	**5.41**	**72**	*e*P	**Pn**	**06 35 03.0 +0.8**
KOLS	**Kolonicke sedl**	**5.41**	**72**	*e*PN	**Pn**	**06 35 03.0 +0.8**
KOLS	**Kolonicke sedl**	**5.41**	**72**	*e*P	**Pn**	**06 35 03.0 +0.8**
BGG	**Burgeitz**	**5.41**	**302**	*e*Pn	**Pn**	**06 35 05.1 +2.9**
BGG	**Burgeitz**	**5.41**	**302**	Pn	**Pn**	**06 35 05.1 +2.9**
LSD	**Lago del Serru**	**5.47**	**250**	P	**Pn**	**06 35 05.4 +2.1**
TRPA	**Tarpa**	**5.47**	**81**	⇑*i*P	**Pn**	**06 35 03.4 +0.3**
TRPA	**Tarpa**	**5.47**	**81**	⇑*i*P	**Pn**	**06 35 03.4 +0.3**
HAU	**Haudompre**	**5.49**	**278**	*e*Pn	**Pn**	**06 35 04.7 +1.3**
HAU				*e*Sg	**Sg**	**06 36 35.5 -1.9**
	comp=N,146nm,0.5s					
HAU	**Haudompre**	**5.49**	**278**	*e*Pn	**Pn**	**06 35 04.7 +1.3**
DRGR		**5.67**	**94**	⇑P	**Pn**	**06 35 06.5 +0.5**
DRGR				S	**Sn**	**06 36 08.7 -2.7**
DRGR		**5.67**	**94**	⇑*i*P	**Pn**	**06 35 06.5 +0.5**
DRGR		**5.67**	**94**	⇑*i*P	**Pn**	**06 35 06.5 +0.5**
LPG	**La Plagne**	**5.70**	**252**	*e*Pn	Pn	06 35 09.4 +2.9
LPG				*e*Sn	**Sn**	**06 36 09.8 -2.5**
LPG				*e*Sg	**Sg**	**06 36 43.6 -0.4**
	comp=N,66nm,1.0s					
LPG	**La Plagne**	**5.70**	**252**	*e*Pn	Pn	06 35 09.4 +2.9
LPG				*e*Sg	**Sg**	**06 36 43.6 -0.4**
	comp=N,33nm,1.0s					
LPL	**La Plagne**	**5.70**	**252**	*e*Pn	**Pn**	**06 35 09.2 +2.7**
LPL				*e*Sn	**Sn**	**06 36 09.6 -2.7**
LPL				*e*Sg	**Sg**	**06 36 43.6 -0.6**
	comp=N,68nm,0.9s					
LPL	**La Plagne**	**5.70**	**252**	*e*Pn	**Pn**	**06 35 09.2 +2.7**
LPL				*e*Sg	**Sg**	**06 36 43.6 -0.6**
	comp=N,34nm,0.9s					
THEF	**They Montfort**	**5.75**	**280**	Pn	**Pn**	**06 35 08.1 +1.2**
THEF	**They Montfort**	**5.75**	**280**	Pn	**Pn**	**06 35 08.1 +1.2**
CABF	**La Chapelle**	**5.79**	**264**	*e*Pn	**Pn**	**06 35 08.2 +0.6**
CABF				*e*Sg	**Sg**	**06 36 45.9 -1.3**
	comp=N,124nm,0.7s					
CABF	**La Chapelle**	**5.79**	**264**	*e*Pn	**Pn**	**06 35 08.2 +0.6**
CABF				*e*Sg	**Sg**	**06 36 45.9 -1.3**
	comp=N,62nm,0.7s					
HOBG	**Hohbusch**	**5.81**	**309**	*e*Pn	**Pn**	**06 35 10.5 +2.8**
HOBG	**Hohbusch**	**5.81**	**309**	Pn	**Pn**	**06 35 10.5 +2.8**
HILG	**Hillesheim**	**5.83**	**301**	*e*Pn	Pn	06 35 10.9 +2.9
HILG	**Hillesheim**	**5.83**	**301**	Pn	Pn	06 35 10.9 +2.9
STB	**Steinbach**	**5.87**	**304**	*e*Pn	**Pn**	**06 35 11.3 +2.7**
STB				*e*Sn	**Sn**	**06 36 10.8 -5.3**
	comp=N,27nm,0.7s					
STB	**Steinbach**	**5.87**	**304**	Pn	**Pn**	**06 35 11.3 +2.7**
BNS	**Bensberg**	**5.88**	**308**	*e*Pn	**Pn**	**06 35 11.4 +2.8**
BNS	**Bensberg**	**5.88**	**308**	Pn	**Pn**	**06 35 11.4 +2.8**
WLF	**Walferdange**	**5.91**	**294**	Pn	**Pn**	06 35 12.2 +3.1
WLF				SN	**Sn**	**06 36 15.2 -2.0**
	comp=N,33nm,0.8s					
WLF	**Walferdange**	**5.91**	**294**	Pn	Pn	06 35 12.2 +3.1
PAGF	**Fort de Pagny**	**5.95**	**283**	*e*Pn	**Pn**	**06 35 11.6 +1.9**
PAGF				*e*Sg	**Sg**	**06 36 49.7 -2.4**
	comp=N,26nm,0.6s					
PAGF	**Fort de Pagny**	**5.95**	**283**	*e*Pn	**Pn**	**06 35 11.6 +1.9**
MBDF	**Montbardon**	**6.04**	**245**	*e*Pn	**Pn**	**06 35 12.0 +1.0**
MBDF				*e*Sn	**Sn**	**06 36 18.3 -2.1**
	comp=N,17nm,0.5s					
MBDF	**Montbardon**	**6.04**	**245**	*e*Pn	**Pn**	**06 35 12.0 +1.0**
GZR	**Gura Zlata**	**6.13**	**107**	⇑P	**Pn**	**06 35 13.0 +0.8**
GZR	**Gura Zlata**	**6.13**	**107**	⇑*i*P	**Pn**	**06 35 13.0 +0.8**
GZR	**Gura Zlata**	**6.13**	**107**	⇑*i*P	**Pn**	**06 35 13.0 +0.8**
SBF	**Sospel**	**6.14**	**236**	*e*Pn	**Pn**	**06 35 13.7 +1.4**
SBF				*e*Sn	**Sn**	**06 36 20.7 -2.1**
	comp=N,9.5nm,0.4s					
SBF	**Sospel**	**6.14**	**236**	*e*Pn	**Pn**	**06 35 13.7 +1.4**
KLL	**Kalltalsperre**	**6.20**	**303**	*e*Pn	**Pn**	**06 35 15.9 +2.9**
KLL	**Kalltalsperre**	**6.20**	**303**	Pn	**Pn**	**06 35 15.9 +2.9**
LAUG	**Laupendahl**	**6.22**	**311**	*e*Pn	**Pn**	**06 35 16.0 +2.7**
LAUG	**Laupendahl**	**6.22**	**311**	Pn	**Pn**	**06 35 16.0 +2.7**
DREG	**Dreilaegerbach**	**6.25**	**303**	*e*Pn	Pn	06 35 16.7 +3.0
DREG	**Dreilaegerbach**	**6.25**	**303**	Pn	Pn	06 35 16.7 +3.0
PGF	**Pioggiola**	**6.31**	**220**	*e*Pn	**Pn**	**06 35 15.7 +1.0**
PGF				*e*Sn	**Sn**	**06 36 24.8 -2.2**
	comp=N,7.5nm,0.5s					
PGF	**Pioggiola**	**6.31**	**220**	*e*Pn	**Pn**	**06 35 15.7 +1.0**
MEM	**Membach**	**6.35**	**302**	PN	Pn	06 35 18.3 +3.1
MEM				SN	**Sn**	**06 36 27.6 -0.4**
	comp=E,30nm,0.8s					
MEM	**Membach**	**6.35**	**302**	Pn	Pn	06 35 18.3 +3.1
MEM				Sn	**Sn**	**06 36 27.5 -0.4**
	comp=E,30nm,0.8s					
SFTF	**Sexfontaines**	**6.38**	**280**	*e*Pn	**Pn**	**06 35 16.4 +0.9**
SFTF				*e*Sn	**Sn**	**06 36 25.0 -3.6**
SFTF				*e*Sg	**Sg**	**06 37 03.3 -2.5**
	comp=E,64nm,0.6s					
SFTF	**Sexfontaines**	**6.38**	**280**	*e*Pn	**Pn**	**06 35 16.4 +0.9**
MEZF	**Maizieres J'vi**	**6.39**	**282**	*e*Pn	**Pn**	**06 35 16.0 +0.3**
MEZF				*e*Sg	**Sg**	**06 37 03.6 -2.5**
	comp=E,73nm,0.5s					
MEZF	**Maizieres J'vi**	**6.39**	**282**	*e*Pn	**Pn**	**06 35 16.0 +0.3**
HGN	**Heimansgroeve**	**6.46**	**303**	*e*Pn	Pn	06 35 19.6 +3.0
	comp=E,11nm,0.5s					
HGN				*e*Sn	**Sn**	**06 36 32.4 +1.7**
	comp=E,14nm,0.2s					
ORIF	**Oris-en-Rattie**	**6.50**	**249**	*e*Pn	**Pn**	**06 35 19.8 +2.5**
ORIF				*e*Sn	**Sn**	**06 36 29.1 -2.7**
	comp=E,27nm,0.4s					
ORIF	**Oris-en-Rattie**	**6.50**	**249**	*e*Pn	**Pn**	**06 35 19.8 +2.5**
WTSB	**Winterswijk**	**6.66**	**315**	*e*Sn	**Sb**	**06 36 52.1 -4.8**
	comp=E,20nm,0.3s					

BCLA	**Clavier**	**6.69**	**299**	PN	Pn	06 35 23.0 +3.2
BCLA				SN	**Sn**	**06 36 33.5 -2.6**
	comp=N,15nm,0.0s					
BCLA	**Clavier**	**6.69**	**299**	Pn	Pn	06 35 22.9 +3.2
FRF	**La Foret Royal**	**6.77**	**237**	*e*Pn	**Pn**	**06 35 21.6 +0.6**
FRF				*e*Sn	**Sn**	**06 36 35.6 -2.7**
	comp=N,9.3nm,0.6s					
FRF	**La Foret Royal**	**6.77**	**237**	*e*Pn	**Pn**	**06 35 21.6 +0.6**
GIVF	**Givet**	**6.87**	**296**	*e*Pn	**Pn**	**06 35 24.5 +2.3**
GIVF				*e*Sn	**Sn**	**06 36 36.1 -4.5**
GIVF				*e*Sg	**Sg**	**06 37 17.7 -3.7**
	comp=N,96nm,0.9s					
GIVF	**Givet**	**6.87**	**296**	*e*Pn	**Pn**	**06 35 24.5 +2.3**
LMR	**La Mourre**	**6.99**	**236**	*e*Pn	**Pn**	**06 35 24.6 +0.6**
LMR				*e*Sn	**Sn**	**06 36 41.0 -2.7**
	comp=N,7.5nm,0.5s					
LMR	**La Mourre**	**6.99**	**236**	*e*Pn	**Pn**	**06 35 24.6 +0.6**
DOU	**Dourbes**	**7.00**	**295**	PN	Pn	06 35 27.4 +3.3
DOU				SN	**Sn**	**06 36 41.4 -2.6**
	comp=N,18nm,0.0s					
DOU	**Dourbes**	**7.00**	**295**	Pn	Pn	06 35 27.4 +3.3
SMRF	**Simiane la Rot**	**7.16**	**243**	*e*Pn	**Pn**	**06 35 28.6 +2.3**
SMRF				*e*Sn	**Sn**	**06 36 44.9 -3.0**
	comp=N,17nm,0.8s					
SMRF	**Simiane la Rot**	**7.16**	**243**	*e*Pn	**Pn**	**06 35 28.6 +2.3**
LOR	**Lormes**	**7.20**	**272**	*e*Pn	**Pn**	**06 35 27.9 +1.0**
LOR				*e*Sg	**Sg**	**06 37 29.4 -2.9**
	comp=N,34nm,0.6s					
LOR	**Lormes**	**7.20**	**272**	*e*Pn	**Pn**	**06 35 27.9 +1.0**
BAIF	**Baives**	**7.23**	**294**	*e*Pn	**Pn**	**06 35 29.8 +2.6**
BAIF				*e*Sn	**Sn**	**06 36 44.8 -4.7**
BAIF				*e*Sg	**Sg**	**06 37 29.2 -3.9**
	comp=N,35nm,0.8s					
BAIF	**Baives**	**7.23**	**294**	*e*Pn	**Pn**	**06 35 29.8 +2.6**
BURAR	**Bucovina Array**	**7.28**	**85**	⇓*i*P	**Pn**	**06 35 28.4 +0.4**
BURAR	**Bucovina Array**	**7.28**	**85**	⇓*i*P	**Pn**	**06 35 28.4 +0.4**
VIVF	**Saint-Julien-l**	**7.30**	**252**	*e*Pn	**Pn**	**06 35 28.8 +0.5**
VIVF				*e*Sn	**Sn**	**06 36 48.0 -3.4**
	comp=N,17nm,0.4s					
VIVF	**Saint-Julien-l**	**7.30**	**252**	*e*Pn	**Pn**	**06 35 28.8 +0.5**
SMF	**Signal de Mont**	**7.31**	**267**	*e*Pn	**Pn**	**06 35 28.5 +0.2**
SMF				*e*Sn	**Sn**	**06 36 47.8 -3.7**
SMF				*e*Sg	**Sg**	**06 37 32.9 -2.7**
	comp=N,24nm,0.5s					
SMF	**Signal de Mont**	**7.31**	**267**	*e*Pn	**Pn**	**06 35 28.5 +0.2**
SSF	**Saint Saulge**	**7.47**	**270**	*e*Pn	**Pn**	**06 35 31.5 +1.0**
SSF				*e*Sg	**Sg**	**06 37 37.9 -2.8**
	comp=N,22nm,0.5s					
SSF	**Saint Saulge**	**7.47**	**270**	*e*Pn	**Pn**	**06 35 31.5 +1.0**
BSD	**Bornholm Skovb**	**7.60**	**2**	*i*P	**Pn**	**06 35 34.9 +2.7**
BSD				*i*S	**Sn**	**06 36 53.0 -5.6**
AVF	**Avril sur Loir**	**7.61**	**269**	*e*Pn	**Pn**	**06 35 32.9 +0.5**
AVF				*e*Sg	**Sg**	**06 37 42.4 -2.9**
	comp=N,40nm,1.0s					
AVF	**Avril sur Loir**	**7.61**	**269**	*e*Pn	**Pn**	**06 35 32.9 +0.5**
BGF	**Bois d'Agland**	**8.00**	**267**	*e*Pn	**Pn**	**06 35 37.8 0.0**
BGF				*e*Sn	**Sn**	**06 37 04.3 -4.1**
BGF				*e*Sg	**Sg**	**06 37 54.3 -3.4**
	comp=N,36nm,0.5s					
BGF	**Bois d'Agland**	**8.00**	**267**	*e*Pn	**Pn**	**06 35 37.8 0.0**
HYF	**Humbligny**	**8.03**	**272**	*e*Pn	**Pn**	**06 35 39.9 +1.7**
HYF				*e*Sn	**Sn**	**06 37 04.7 -4.5**
HYF				*e*Sg	**Sg**	**06 37 55.1 -3.6**
HYF	**Humbligny**	**8.03**	**272**	*e*Pn	**Pn**	**06 35 39.9 +1.7**
LASF	**Ste Croix**	**8.18**	**249**	*e*Pn	**Pn**	**06 35 40.6 +0.4**
LASF				*e*Sn	**Sn**	**06 37 08.9 -4.0**
	comp=N,15nm,0.4s					
LASF	**Ste Croix**	**8.18**	**249**	*e*Pn	**Pn**	**06 35 40.6 +0.4**
TCF	**Toulx Ste Croi**	**8.48**	**266**	*e*Pn	**Pn**	**06 35 44.9 +0.4**
TCF				*e*Sn	**Sn**	**06 37 15.6 -4.8**
TCF				*e*Sg	**Sg**	**06 38 09.7 -3.6**
	comp=N,17nm,0.6s					
TCF	**Toulx Ste Croi**	**8.48**	**266**	*e*Pn	**Pn**	**06 35 44.9 +0.4**
CAF	**Calviac**	**8.98**	**258**	*e*Pn	**Pn**	**06 35 52.0 +0.7**
CAF				*e*Sn	**Sn**	**06 37 28.3 -4.4**
CAF				*e*Sg	**Sg**	**06 38 25.7 -3.5**
	comp=N,7.9nm,0.6s					
CAF	**Calviac**	**8.98**	**258**	*e*Pn	**Pn**	**06 35 52.0 +0.7**
RJF	**Les Rejaudoux**	**9.22**	**261**	*e*Pn	**Pn**	**06 35 54.5 0.0**
RJF				*e*Sn	**Sn**	**06 37 33.6 -4.8**
RJF	**Les Rejaudoux**	**9.22**	**261**	*e*Pn	**Pn**	**06 35 54.5 0.0**
MTLF	**Montolieu**	**9.57**	**249**	*e*Pn	**Pn**	**06 35 59.4 0.0**
MTLF				*e*Sn	**Sn**	**06 37 42.3 -4.8**
	comp=N,4.1nm,0.5s					
MTLF	**Montolieu**	**9.57**	**249**	*e*Pn	**Pn**	**06 35 59.4 0.0**
LFF	**La Frestale**	**9.86**	**260**	*e*Pn	**Pn**	**06 36 03.3 +0.1**
LFF	**La Frestale**	**9.86**	**260**	*e*Pn	**Pn**	**06 36 03.3 +0.1**
MFF	**Saint Martin d**	**10.02**	**270**	*e*Pn	**Pn**	**06 36 05.3 -0.1**
MFF				*e*Sn	Sn	06 37 51.8 -6.2
MFF	**Saint Martin d**	**10.02**	**270**	*e*Pn	**Pn**	**06 36 05.3 -0.1**
FLN	**La Foliniere**	**10.07**	**283**	*e*Pn	**Pn**	**06 36 05.8 -0.3**
FLN	**La Foliniere**	**10.07**	**283**	*e*Pn	**Pn**	**06 36 05.8 -0.3**
KIEV	**Kiev**	**10.17**	**66**	*e*P	**Pn**	**06 36 10.5 +3.0**
KIEV	**Kiev**	**10.17**	**66**	*e*P	**Pn**	**06 36 10.5 +3.0**
AKASG	**Malin Array Be**	**10.18**	**66**	Pn	**Pn**	**06 36 10.0 +2.3**
	comp=N,0.4nm,0.3s,baz=256,slow=13,SNR=4.2					
GRR	**Gorron**	**10.32**	**280**	*e*Pn	**Pn**	**06 36 09.0 -0.5**
GRR	**Gorron**	**10.32**	**280**	*e*Pn	**Pn**	**06 36 09.0 -0.5**
EPF	**Esparros**	**10.92**	**251**	*e*Pn	**Pn**	**06 36 17.9 +0.1**
EPF	**Esparros**	**10.92**	**251**	*e*Pn	**Pn**	**06 36 17.9 +0.1**
SGMF	**Saint Gilles**	**11.45**	**280**	*e*Pn	**Pn**	**06 36 24.5 -0.6**
SGMF	**Saint Gilles**	**11.45**	**280**	*e*Pn	**Pn**	**06 36 24.5 -0.6**
ETSF	**Etsaut**	**11.56**	**252**	*e*Pn	**Pn**	**06 36 26.8 +0.2**
ETSF	**Etsaut**	**11.56**	**252**	*e*Pn	**Pn**	**06 36 26.8 +0.2**
QUIF	**Quistinic**	**11.88**	**278**	*e*Pn	**Pn**	**06 36 30.6 -0.3**
QUIF	**Quistinic**	**11.88**	**278**	*e*Pn	**Pn**	**06 36 30.6 -0.3**
ROSF	**Rostrenen**	**11.93**	**280**	*e*Pn	**Pn**	**06 36 31.2 -0.4**
ROSF	**Rostrenen**	**11.93**	**280**	*e*Pn	**Pn**	**06 36 31.2 -0.4**
EKA	**Eskdalemuir Ar**	**13.46**	**312**	Pn	**Pn**	**06 36 54.7 +2.3**
	baz=121,slow=13,SNR=8.3					
FINES	**FINESS Array B**	**15.45**	**21**	Pn	**Pn**	**06 37 18.4 -0.9**
	comp=N,0.1nm,0.3s,baz=200,slow=16,SNR=2.7					
FINES	**FINESS Array B**	**15.45**	**21**	*e*P	**P**	**06 37 23.4 -0.5**
ESDC	**Sonseca Array**	**15.46**	**246**	Pn	**P**	**06 37 22.4 -1.9**
	baz=54,slow=12,SNR=3.6					
OBN	**Obninsk**	**15.72**	**53**	*i*P	**Pn**	**06 37 23.8 +1.0**
OBN				*e*S	**Sn**	**06 40 19.1 +2.0**
OBN				pmax	pmax	
	comp=Z,11nm,0.6s					
TORD	**Torodi Ar. Bea**	**35.90**	**202**	P	**P**	06 40 46.0 +4.0
	comp=Z,0.4nm,0.7s,baz=20,slow=9.5,SNR=2.9					
YKA	**Yellowknife Ar**	**63.06**	**336**	P	**P**	**06 44 10.2 +1.6**
	comp=Z,0.6nm,1.1s,baz=38,slow=6.7,SNR=6.2					
ABPO	**Ambohimpanom**	**72.49**	**148**	*i*P	P	06 45 14.6 +5.9
KWAJ	**Kwajalein Atol**	**119.06**	**31**	*i* PKIKP	**PKPdf**	**06 52 35.7 +4.7**

IDC ***20*** *06:36:26.5±3.5, 53.°82N×162.°60W, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.3/29, mbtmp3.4/3, ML3.5/1, MS2.6/1, Ms1 2.7/1, ms1mx2.4/38, Error ellipse: s-maj=82.2km s-min=26.9km az=160.0*

ISCJB ***20*** *06:36:29.5±1.5, 54.°13N±0.°08×162.°42W±0.°07, h20km±10km, mb3.5/2, Error ellipse: s-maj=13.9km s-min=4.1km az=155.4*

NEIC ***20*** *06:36:29.8, 54.°22N×162.°49W, h8km, ML3.2(AEIC), After AEIC.*

ISC 20 06:36:30.4±1.9, 54.°22N±0.°08×162.°53W±0.°04, h13km±10km, n30, σ0.°77/39, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRIA	**Deer Island**	**0.77**	**12**	P	**Pg**	**06 36 45.1**	**-0.1**
DRIA				S	**Sg**	**06 36 55.4**	**+0.1**
FALS	**False Pass**	**0.82**	**322**	P	**Pb**	**06 36 46.5**	**0.0**
FALS				S	**Sb**	**06 36 58.2**	**+0.7**
DT1	**Dutton Round H**	**0.90**	**9**	P	**Pg**	**06 36 47.2**	**-0.6**
DTNA	**Dutton South F**	**0.95**	**10**	P	**Pg**	**06 36 48.1**	**-0.6**
DTNA				S	**Sg**	**06 37 01.0**	**-0.1**
ISNN	**Isanotski Nort**	**0.95**	**311**	P	**Pn**	**06 36 49.2**	**-0.3**
SSLS	**Shishaldin Sou**	**0.99**	**301**	P	**Pn**	**06 36 49.6**	**-0.5**
SSLS				S	**Sn**	**06 37 03.9**	**0.0**
SSLW	**Shishaldin Wes**	**1.08**	**302**	P	**Pb**	**06 36 50.7**	**-0.3**
SSLW				S	**Sn**	**06 37 06.5**	**+0.3**
HAG	**Hague Volcano**	**1.16**	**18**	P	**Pn**	**06 36 51.9**	**-0.5**
PS4A	**Pavlof South-4**	**1.20**	**19**	P	**Pn**	**06 36 52.1**	**-0.7**
WESE	**West Dahl East**	**1.23**	**283**	P	**Pn**	**06 36 52.6**	**-0.8**
WESE				S	**Sg**	**06 37 11.9**	**+1.8**
PVV	**Pavlof Volcano**	**1.23**	**20**	P	**Pn**	**06 36 52.8**	**-0.6**
WESN	**West Dahl Nort**	**1.25**	**287**	P	**Pn**	**06 36 53.2**	**-0.4**
SDPT	**Sand Point**	**1.64**	**46**	P	**Pn**	**06 36 58.4**	**-0.6**
SDPT				S	**Sn**	**06 37 19.7**	**-0.2**

AKUT	**Akutan**	**1.91**	**269**	P	**Pn**	**06 37 01.8**	**-0.8**
AKUT				S	**Sn**	**06 37 27.1**	**+0.7**
AHB	**Akutan Harbor**	**1.93**	**268**	P	**Pn**	**06 37 02.9**	**-0.1**
AKLV	**Akutan Long Va**	**2.01**	**270**	P	**Pn**	**06 37 03.4**	**-0.7**
AKGG	**Akutan Green G**	**2.03**	**271**	P	**Pn**	**06 37 04.5**	**+0.2**
UNV	**Unalaska Valle**	**2.37**	**263**	P	**Pn**	**06 37 07.9**	**-1.1**
UNV				S	**Sn**	**06 37 37.5**	**-0.4**
MTBL	**Makushin Table**	**2.46**	**266**	P	**Pn**	**06 37 10.0**	**-0.2**
MREP	**Makushin Rep't**	**2.52**	**262**	P	**Pn**	**06 37 11.7**	**+0.6**
VNWF	**Veniaminof 8**	**2.58**	**40**	P	**Pn**	**06 37 13.3**	**+1.3**
MSOM	**Makushin Julie**	**2.64**	**263**	P	**Pn**	**06 37 12.9**	**+0.3**
VNHG	**Veniaminof 1**	**2.78**	**42**	P	**Pn**	**06 37 15.2**	**+0.4**
CHGN	**Chignik**	**3.15**	**47**	P	**Pn**	**06 37 20.5**	**+0.9**
NIKO	**Nikolski**	**3.97**	**254**	P	**Pn**	**06 37 30.5**	**-0.4**
KDAK	**Kodiak Island**	**6.62**	**53**	Pn	**Pn**	**06 38 05.5**	**-1.9**
	0.6nm,0.3s,baz=210,slow=8.1,SNR=10						
KDAK				Sn	Sn	06 39 16.1	-6.5
	0.7nm,0.3s,baz=343,slow=19,SNR=9.3						
ILAR	**Eielson Array**	**13.18**	**30**	Pn	**Pn**	**06 39 37.1**	**+0.1**
	0.1nm,0.3s,baz=227,slow=12,SNR=4.5						
ILAR				LR	LR	06 44 25.1	
	comp=Z,27nm,20.1s,baz=323,slow=35						
COLD	**Coldfoot**	**14.33**	**20**	*e*Pn	**Pn**	**06 39 53.5**	**+0.8**
	1.7nm,0.8s						
PETK	**Petropavlovsk-**	**23.38**	**284**	P	**P**	**06 41 37.1**	**-1.5**
	3.1nm,0.9s,baz=91,slow=12,SNR=5.5						
YKA	**Yellowknife Ar**	**25.90**	**52**	P	**P**	**06 42 02.3**	**+0.7**
	0.3nm,0.4s,baz=272,slow=9.3,SNR=15						

MEX 20 06:41:01.3±0.7, 16.°53N×91.°77W, h8km±5km, MD4.0, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	**0.43**	**235**	*e*P	Pg	06 41 07.0	-3.0
CCIG				*i* S	Sg	06 41 15.7	-0.3
TGIG		**1.32**	**281**	*i* P	Pn	06 41 22.6	-3.6
TGIG				*i* S	Sb	06 41 39.2	-4.5
THIG		**1.69**	**197**	*i* P	Pn	06 41 27.4	-3.7
THIG				*i* S	Sn	06 41 48.2	-4.7
CMIG	**Matias Romero**	**3.04**	**281**	*e*P	Pn	06 41 45.2	-4.5
CMIG				*i* S	Sn	06 42 21.8	-4.5

NIED ***20*** *07:22:00, 27.°10N×130.°00E, h5km, Mw4.9 Best double couple: M0 2.92000×10^16 NP1:φs 7.00000°, δ53.00000°, λ-120.00000°. NP2:φs 230.00000°, δ

NJ2					S	**Sn**	**07 27 11.0**	**-1.2**	
NJ2					pmax	pmax			
	comp=Z,150nm,0.9s								
NJ2					pmax	pmax			
	comp=Z,840nm,3.9s								
NJ2					LR	LR			
	comp=N,2μm,9.9s								
NJ2					LR	LR			
	comp=E,7μm,11.7s								
NJ2					LR	LR			
	comp=Z,8μm,11.2s								
MAJO	**Matsushiro**	**11.71**	**35**	*e*P	Pn	Pn	07 25 26.7	+1.2	
MAJO	**Matsushiro**	**11.71**	**35**	*e*Pn	Pn	Pn	07 25 26.6	+1.2	
MAT	**Matsushiro**	**11.71**	**35**	P	Pn	Pn	07 25 33.0	+7.5	
MJAR	**Matsushiro Arr**	**11.71**	**35**	Pn	Pn	Pn	07 25 27.7	+2.2	
MJAR	**Matsushiro Arr**	**11.71**	**35**	Pn	Pn	Pn	07 25 27.7	+2.2	
	comp=Z,0.6nm,0.3s,baz=222,slow=14,SNR=4.3								
DL2	**Dalian**	**13.59**	**331**	*e*P	P	P	07 25 56.4	-3.5	
DL2				*e*S	Sn	Sn	07 28 29.1	+7.9	
DL2					pmax	pmax			
	comp=Z,60nm,1.0s								
DL2					LR	LR			
	comp=N,2μm,17.7s								
DL2					LR	LR			
	comp=Z,2μm,12.8s								
WHN	**Wuhan**	**14.03**	**288**		P	**Pn**	**07 25 56.8**	**-0.5**	
WHN					LR	LR			
	comp=N,10μm,12.4s								
WHN					LR	LR			
	comp=E,11μm,14.3s								
WHN					LR	LR			
	comp=Z,12μm,12.2s								
TIA	**Tai'an**	**14.11**	**313**	*e*P		**P**	**07 26 05.9**	**+0.2**	
TGY	**Tagaytay City**	**15.46**	**215**	Pn		**P**	**07 26 16.8**	**-4.0**	
TGY	**Tagaytay City**	**15.46**	**215**	Pn		**P**	**07 26 16.8**	**-4.0**	
	comp=Z,65nm,0.3s,baz=10,slow=2.6,SNR=3.7								
SNY	**Shenyang**	**15.51**	**342**	⇑P		**Pn**	**07 26 17.1**	**0.0**	
SNY				S		**S**	**07 29 16.6**	**-6.4**	
SNY					pmax	pmax			
	comp=Z,35nm,2.3s								
SNY					pmax	pmax			
	comp=Z,370nm,10.4s								
SNY					LR	LR			
	comp=N,2μm,19.2s								
SNY					LR	LR			
	comp=Z,4μm,11.4s								
VLA	**Vladivostok**	**15.99**	**5**	P		**P**	**07 26 24.2**	**-2.3**	
VLA					pmax	pmax			
	comp=Z,189nm,1.6s								
CN2	**Changchun**	**16.98**	**349**	*e*P		**P**	**07 26 37.3**	**-0.1**	
CN2				*e*pP		**pP**	**07 26 46.4**	**+1.2**	
CN2				*e*sP		**sP**	**07 26 52.6**	**+3.7**	
CN2				*e*S		**Sn**	**07 29 45.0**	**+1.4**	
CN2					pmax	pmax			
	comp=Z,10.0nm,0.7s								
CN2					pmax	pmax			
	comp=Z,200nm,4.0s								
CN2					LR	LR			
	comp=N,4μm,15.0s								
CN2					LR	LR			
	comp=E,5μm,15.0s								
CN2					LR	LR			
	comp=Z,4μm,13.0s								
USRK	**Ussuriysk Arra**	**17.08**	**5**	P		**P**	**07 26 38.9**	**+0.4**	
	comp=Z,0.9nm,0.3s,baz=189,slow=11,SNR=43								
BJI	**Beijing**	**17.16**	**322**		P	**P**	**07 26 39.3**	**-0.1**	
BJI					pmax	pmax			
	comp=Z,480nm,0.9s								
BJI					LR	LR			
	comp=N,3μm,13.2s								
BJI					LR	LR			
	comp=E,2μm,15.4s								
BJI					LR	LR			
	comp=Z,1μm,25.7s								
MDJ	**Mudanjiang**	**17.41**	**359**		P	**P**	**07 26 41.0**	**-1.2**	
MDJ					pP	**pP**	**07 26 52.1**	**+2.2**	
MDJ					sP	**sP**	**07 26 57.3**	**+3.6**	
MDJ					S	**S**	**07 29 58.9**	**-2.9**	
MDJ					pmax	pmax			
	comp=Z,9.0nm,1.6s								
MDJ					pmax	pmax			
	comp=Z,280nm,14.2s								
MDJ					LR	LR			
	comp=N,1μm,14.6s								
MDJ					LR	LR			
	comp=E,810nm,14.6s								
MDJ					LR	LR			
	comp=Z,2μm,14.6s								
ERM	**Erimo**	**18.36**	**33**	*i* P		**Pn**	**07 26 52.7**	**-0.1**	
ERM	**Erimo**	**18.36**	**33**	*e*P		**Pn**	**07 26 54.5**	**+1.7**	
	comp=Z,20nm,0.8s								
XAN	**Xi'an**	**19.29**	**296**		P	**Pn**	**07 27 03.6**	**-0.6**	
XAN					pP	**pP**	**07 27 13.9**	**+3.1**	
XAN					S	**S**	**07 30 36.3**	**-3.5**	
XAN					pmax	pmax			
	comp=Z,29nm,0.7s								
XAN					LR	LR			
	comp=N,2μm,16.3s								
XAN					LR	LR			
	comp=E,7μm,18.4s								
GUMO	**Guam**	**19.45**	**131**		P	**Pn**	**07 27 02.5**	**-3.7**	
GUMO	**Guam**	**19.45**	**131**		P	**Pn**	**07 27 02.4**	**-3.7**	
	comp=E,3.5nm,0.3s,baz=2.2,slow=17,SNR=2.6								
GUMO					LR	LR	07 33 07.9		
	comp=E,419nm,18.2s,baz=136,slow=33								
ASAJ	**Asahikawa**	**19.77**	**28**		P	**Pn**	**07 27 07.1**	**-2.6**	
ASAJ	**Asahikawa**	**19.77**	**28**		P	**Pn**	**07 27 07.1**	**-2.6**	
	comp=E,0.7nm,0.3s,baz=210,slow=8.1,SNR=11								
QIZ	**Qiongzhong**	**20.13**	**250**		P	**P**	**07 27 10.8**	**-1.4**	
QIZ					pP	**pP**	**07 27 20.4**	**+0.4**	
QIZ					S	**S**	**07 30 53.4**	**-3.6**	
QIZ					pmax	pmax			
	comp=Z,20nm,1.8s								
QIZ					LR	LR			
	comp=N,1μm,20.3s								
QIZ					LR	LR			
	comp=E,300nm,21.3s								
QIZ					LR	LR			
	comp=Z,2μm,17.1s								
HHC	**Hu-ho-hao-te**	**20.37**	**317**	*e*P		**P**	**07 27 14.4**	**-0.4**	
HHC					PP	**PnPn**	**07 27 36.0**	**+3.8**	
HHC					S	**S**	**07 30 54.9**	**-6.7**	
HHC					sS	**sS**	**07 31 10.8**	**-3.2**	
HHC					SS	**SnSn**	**07 31 24.9**	**+4.5**	
HHC					PcP	**PcP**	**07 31 26.4**	**-0.5**	
HHC					ScP	**ScP**	**07 34 58.0**	**-3.4**	
HHC					PcS	**PcS**	**07 35 03.3**	**-1.3**	
HHC					pmax	pmax			
	comp=Z,88nm,0.8s								
HHC					pmax	pmax			
	comp=Z,480nm,5.1s								
HHC					LR	LR			
	comp=N,3μm,13.0s								
HHC					LR	LR			
	comp=E,3μm,12.8s								
HHC					LR	LR			
	comp=Z,4μm,13.1s								
GYA	**Guiyang**	**20.75**	**273**	⇑*i*P		Pn	07 27 19.8	-1.7	
GYA					pP	pP	07 27 29.4	+2.6	
GYA					sP	sP	07 27 36.0	+5.5	
GYA					PP	**PnPn**	**07 27 41.3**	**+3.8**	
GYA					S	**S**	**07 31 02.6**	**-6.7**	
GYA					sS	sS	07 31 19.0	-2.8	
GYA					SS	**SnSn**	**07 31 33.4**	**+3.6**	
GYA					pmax	pmax			
	comp=Z,20nm,0.9s								
GYA					pmax	pmax			
	comp=Z,150nm,4.8s								
GYA					LR	LR			
	comp=N,680nm,18.4s								
GYA					LR	LR			
	comp=E,560nm,19.0s								
GYA					LR	LR			
	comp=Z,780nm,18.8s								
YUK	**Yuzh-Kuril'sk**	**21.19**	**33**	*i* P		**P**	**07 27 20.3**	**-3.1**	
YUK				*i* S		**S**	**07 31 13.4**	**-4.1**	
YUK					pmax	pmax			
	comp=N,282nm,1.8s								
YUK					pmax	pmax			
	comp=Z,916nm,1.6s								
YUK					pmax	pmax			
	comp=E,435nm,1.5s								
YUK					pmax	pmax			
	comp=Z,916nm,1.6s								
YUK					MLR	MLR			
	comp=Z,843nm,21.0s								
YUK					MLR	MLR			
	comp=E,292nm,21.0s								
YUK					MLR	MLR			
	comp=N,306nm,21.0s								
BTO	**Baotou**	**21.19**	**314**	*e*P		**P**	**07 27 24.6**	**+0.9**	
HABR	**Khabarovsk**	**21.64**	**9**	*e*P		**P**	**07 27 26.9**	**-1.4**	
HABR				*e**SP		**sP**	**07 27 40.2**	**+0.4**	
HABR				*e*			07 27 48.1		
HABR				*e*			07 31 27.6		
HABR				*e**SS		**sS**	**07 31 39.8**	**+1.0**	
HABR				*e*SS		**SnSn**	**07 31 51.6**	**+0.2**	
HABR				*e*			07 38 46.2		
HABR					pmax	pmax			
	comp=N,48nm,1.9s								
HABR					pmax	pmax			
	comp=Z,32nm,1.0s								
HABR					pmax	pmax			
	comp=E,37nm,1.1s								
HABR					MLR	MLR			
	comp=Z,1μm,16.0s								
YSS	**Yuzh-Sakhalins**	**22.20**	**24**⇑	*e*P		**P**	**07 27 34.7**	**+0.5**	
YSS				*e*			07 28 07.0		
YSS				*e*S		S	07 31 29.6	-7.4	
YSS					pmax	pmax			
	comp=Z,70nm,1.4s								
YSS					MLR	MLR			
	comp=Z,200nm,15.0s								
YSS					MLR	MLR			
	comp=E,400nm,14.0s								
CD2	**Chengdu**	**23.14**	**285**	⇑P		**P**	**07 27 43.0**	**-1.4**	
CD2					pP	**pP**	**07 27 53.5**	**+1.1**	
CD2					sP	**sP**	**07 27 58.5**	**+2.5**	
CD2					PP	**PnPn**	**07 28 13.8**	**+3.7**	
CD2					PcP	**PcP**	**07 31 33.3**	**+0.8**	
CD2					S	S	07 31 46.5	-7.6	
CD2					sS	**sS**	**07 32 03.9**	**-4.1**	
CD2					SS	**SnSn**	**07 32 32.5**	**+4.3**	
CD2					PcS	**PcS**	**07 35 11.1**	**-0.7**	
CD2					pmax	pmax			
	comp=Z,80nm,0.8s								
CD2					LR	LR			
	comp=N,5μm,19.6s								
CD2					LR	LR			
	comp=E,6μm,14.7s								
CD2					LR	LR			
	comp=Z,6μm,11.1s								
LZH	**Lanzhou**	**23.84**	**298**	*e*P		**P**	**07 27 51.8**	**+0.4**	
LZH					pP	**pP**	**07 28 02.1**	**+2.4**	
LZH					sP	sP	07 28 08.0	+4.7	
LZH					S	S	07 31 54.0	-12	
LZH					SS	**SnSn**	**07 32 48.0**	**+2.4**	
LZH					pmax	pmax			
	comp=Z,43nm,1.0s								
LZH					pmax	pmax			
	comp=Z,330nm,4.0s								
LZH					LR	LR			
	comp=N,5μm,14.8s								
LZH					LR	LR			
	comp=E,5μm,13.1s								
LZH					LR	LR			
	comp=Z,6μm,13.6s								
MYLDM	**Lahad Datu**	**24.42**	**208**		P	P	07 27 59.7	+3.1	
MYLDM	**Lahad Datu**	**24.42**	**208**		P	**P**	**07 27 58.0**	**+1.4**	
	comp=Z,118nm,1.4s,comp=Z,2μm								
KMI	**Kunming**	**24.45**	**271**		P	**P**	**07 27 58.5**	**+1.4**	
KMI					pP	pP	07 28 09.6	+4.0	
KMI					sP	sP	07 28 13.0	+3.9	
KMI					PP	**PnPn**	**07 28 32.9**	**+4.6**	
KMI					S	**S**	**07 32 11.0**	**-4.7**	
KMI					sS	**sS**	**07 32 28.9**	**-0.6**	
KMI					SS	**SnSn**	**07 33 04.6**	**+3.9**	
KMI					pmax	pmax			
	comp=Z,81nm,1.0s								
KMI					pmax	pmax			
	comp=Z,300nm,3.1s								
KMI					LR	LR			
	comp=N,3μm,14.9s								
KMI					LR	LR			
	comp=E,3μm,11.6s								
KMI					LR	LR			
	comp=Z,4μm,11.3s								
KKM	**Kota Kinabalu**	**24.72**	**214**	*e*P		**P**	**07 28 00.8**	**+1.3**	
	comp=Z,141nm,1.4s								
KKM	**Kota Kinabalu**	**24.72**	**214**		P	**P**	**07 28 01.5**	**+2.0**	
KKM	**Kota Kinabalu**	**24.72**	**214**		P	**P**	**07 28 00.5**	**+1.0**	
	comp=Z,79nm,1.5s,comp=Z,1μm								
TSM	**Tawau**	**25.48**	**209**		P	P	07 28 08.7	+2.5	
UBPT	**Khong Chiam**	**25.61**	**247**		P	P	07 28 11.5	+4.1	
	comp=Z,62nm,1.5s								
TNTI	**Ternate**	**26.36**	**186**		P	**P**	**07 28 15.4**	**+1.2**	
	comp=Z,149nm,1.2s								
ULN	**Ulaanbaatar**	**27.30**	**325**	*e*P		**P**	**07 28 21.5**	**-1.1**	
ULN	**Ulaanbaatar**	**27.30**	**325**	P		**P**	**07 28 23.8**	**+1.3**	
	SNR=9.5								
ULN	**Ulaanbaatar**	**27.30**	**325**	P		**P**	**07 28 22.9**	**+0.3**	
	comp=Z,22nm,1.1s								
SONM	**Songino Array**	**27.61**	**325**	P		**P**	**07 28 24.7**	**-0.7**	
SONM					PcP	**PcP**	**07 31 43.7**	**+1.3**	
SONM	**Songino Array**	**27.61**	**325**	P		**P**	**07 28 24.7**	**-0.7**	
	comp=Z,19nm,1.1s,baz=135,slow=9.4,SNR=46								
SONM					PcP	**PcP**	**07 31 43.7**	**+1.3**	
	comp=Z,1.1nm,0.6s,baz=134,slow=4.2,SNR=3.2								
SONM					LR	LR	07 40 30.7		
	comp=Z,1μm,18.9s,baz=115,slow=39								
MRSI	**Marisa**	**27.62**	**197**	P		**P**	**07 28 25.8**	**+0.3**	
	comp=Z,47nm,1.5s,comp=Z,786nm								
GTA	**Gaotai**	**27.82**	**304**	⇑P		**P**	**07 28 26.4**	**-0.9**	
GTA					PP	**PnPn**	**07 29 16.0**	**+1.9**	
GTA					S	**S**	**07 33 05.5**	**-3.2**	
GTA					SS	**SnSn**	**07 34 26.0**	**+3.3**	
GTA					pmax	pmax			
	comp=Z,16nm,1.1s								
GTA					pmax	pmax			
	comp=Z,110nm,4.3s								
GTA					LR	LR			
	comp=N,2μm,14.0s								
GTA					LR	LR			
	comp=E,3μm,13.5s								
GTA					LR	LR			
	comp=Z,4μm,13.5s								
BTM	**Bintulu**	**28.76**	**217**	P		P	07 28 37.8	+2.1	
CMMT	**Chiang Mai**	**29.62**	**260**	P		P	07 28 45.4	+2.0	
	comp=Z,59nm,1.1s,comp=Z,620nm								
CHTO	**Chiang Mai**	**29.62**	**260**	*e*P		**P**	**07 28 44.5**	**+1.1**	
CHTO					pmax	pmax			
	comp=Z,55nm,1.0s								
CHTO	**Chiang Mai**	**29.62**	**260**	*e*P		**P**	**07 28 44.5**	**+1.1**	
	comp=Z,55nm,1.0s								
CHTO	**Chiang Mai**	**29.62**	**260**	P		P	07 28 45.4	+2.0	
	SNR=15								
CHTO	**Chiang Mai**	**29.62**	**260**	P		**P**	**07 28 44.8**	**+1.4**	
	comp=Z,65nm,1.1s,comp=Z,525nm								
CM31	**Chiang Mai Arr**	**29.76**	**260**	*e*P		P	07 28 46.5	+1.9	
	comp=Z,4.8nm,0.3s								
CMAR	**Chiang Mai Arr**	**29.76**	**260**	P		**P**	**07 28 46.0**	**+1.4**	
CMAR					PcP	**PcP**	**07 31 49.4**	**+1.3**	
CMAR	**Chiang Mai Arr**	**29.76**	**260**	P		**P**	**07 28 46.0**	**+1.4**	
	comp=Z,12nm,0.9s,baz=61,slow=6.3,SNR=28								
CMAR					PcP	**PcP**	**07 31 49.4**	**+1.3**	
	comp=Z,1.7nm,0.7s,baz=138,slow=0.7,SNR=4.4								
CMAR					LR	LR	07 42 54.3		
	comp=Z,810nm,19.6s,baz=67,slow=41								
SBUM	**Sibu**	**29.85**	**218**	P		P	07 28 48.2	+2.8	
FAKI	**Fak Fak**	**30.00**	**175**	P		**P**	**07 28 46.2**	**-0.5**	
	comp=Z,77nm,1.2s								
ZAK	**Zakamensk**	**30.81**	**326**	*e*P		P	07 28 50.2	-3.5	
ZAK					pmax	pmax			
	comp=Z,2.0nm,1.1s								
TLY	**Talaya**	**31.47**	**328**	*e*P		**P**	**07 28 57.9**	**-1.5**	
TLY				*e*S		S	07 33 49.9	-16	
TLY					pmax	pmax			
	comp=Z,4.0nm,0.7s								
TLY					MLR	MLR			
	comp=Z,946nm,19.0s								
TTSI	**Tana Toraja**	**31.58**	**199**	P		P	07 29 03.2	+2.6	
	comp=Z,23nm,1.3s,comp=Z,2μm								
KSM	**Kuching**	**31.72**	**220**	*e*P		P	07 29 02.9	+1.0	
	comp=Z,15nm,0.9s								
KSM	**Kuching**	**31.72**	**220**	P		P	07 29 04.3	+2.4	
KSM	**Kuching**	**31.72**	**220**	P		P	07 29 02.9	+1.0	
	comp=Z,31nm,1.3s,comp=Z,574nm								
MOY	**Mondy**	**32.74**	**326**	*e*P		P	07 29 18.9	+8.2	
PETK	**Petropavlovsk-**	**33.12**	**31**	P		**P**	**07 29 13.3**	**-0.5**	
PETK	**Petropavlovsk-**	**33.12**	**31**	P		**P**	**07 29 13.3**	**-0.5**	
PETK	**Petropavlovsk-**	**33.12**	**31**	P		**P**	**07 29 13.3**	**-0.5**	
	comp=Z,6.6nm,0.8s,baz=204,slow=3.3,SNR=5.4								
PETK					LR	LR	07 42 24.1		
	comp=Z,275nm,19.5s,baz=338,slow=36								
SHL	**Shillong**	**34.01**	**276**	*e*P		**P**	**07 29 22.0**	**-0.1**	
SHL				*ex*		x	07 34 26.0		
LSA	**Lhasa**	**34.06**	**284**	P		**P**	**07 29 23.8**	**+0.9**	
YAK	**Yakutsk**	**34.86**	**360**	*e*P		**P**	**07 29 27.9**	**-0.8**	
YAK				*e*			07 29 38.4		
YAK					pmax	pmax			
	comp=E,4.0nm,0.9s								
YAK					pmax	pmax			
	comp=N,44nm,1.4s								
YAK					pmax	pmax			
	comp=Z,83nm,1.1s								
KULM	**Kulim**	**35.35**	**237**	*e*P		P	07 29 35.0	+1.5	
	comp=Z,82nm,1.3s								
KULM	**Kulim**	**35.35**	**237**	P		P	07 29 35.6	+2.1	
KULM	**Kulim**	**35.35**	**237**	P		P	07 29 34.9	+1.4	
	comp=Z,54nm,1.2s,comp=Z,784nm								
MYKOM	**Kota Tinggi**	**35.50**	**229**	P		P	07 29 36.9	+2.1	
MYKOM	**Kota Tinggi**	**35.50**	**229**	P		P	07 29 36.6	+1.8	
	comp=Z,34nm,1.3s,comp=Z,539nm								
IPM	**Ipoh**	**35.61**	**236**	*e*P		**P**	**07 29 36.5**	**+0.8**	
	comp=Z,85nm,1.3s								
IPM	**Ipoh**	**35.61**	**236**	P		P	07 29 37.5	+1.8	
IPM	**Ipoh**	**35.61**	**236**	P		**P**	**07 29 36.8**	**+1.0**	
	comp=Z,51nm,1.4s,comp=Z,689nm								
KGM	**Kluang**	**35.70**	**230**	P		P	07 29 38.9	+2.4	
FRIM	**Kepong**	**36.02**	**234**	P		P	07 29 41.4	+2.2	
PPBI	**Pangkal Pinang**	**37.08**	**222**	P		P	07 29 50.9	+2.6	
TAPN	**Taplejung**	**37.37**	**280**	*e*P		**P**	**07 29 51.4**	**+0.3**	
	comp=Z,114nm,0.8s								
WMQ	**Urumqi**	**37.71**	**307**		P	**P**	**07 29 55.0**	**+1.5**	
WMQ					pP	pP	07 30 07.0	+4.9	
WMQ					sP	sP	07 30 13.0	+7.4	
WMQ					PcP	**PcP**	**07 32 12.0**	**+1.7**	
WMQ					S	**S**	**07 35 42.0**	**0.0**	
WMQ					ScP	**ScP**	**07 35 55.0**	**-0.7**	
WMQ					SS	**SnSn**	**07 38 17.0**	**-5.7**	
WMQ					ScS	**ScS**	**07 40 03.0**	**-1.4**	
WMQ					pmax	pmax			
	comp=Z,18nm,1.0s								
WMQ					pmax	pmax			
	comp=Z,140nm,5.0s								
WMQ					LR	LR			
	comp=N,1μm,14.0s								
WMQ					LR	LR			
	comp=E,2μm,14.0s								
WMQ					LR	LR			
	comp=Z,2μm,14.0s								
ODAN	**Odare**	**37.74**	**280**	*e*P		**P**	**07 29 54.3**	**+0.2**	
	comp=Z,304nm,0.9s								
WSI	**Waingapu**	**37.79**	**196**	P		P	07 29 54.9	+0.7	
	comp=Z,2μm,0.5s								
PSI	**Prapat**	**38.28**	**236**	P		**P**	**07 29 59.3**	**+0.7**	
PSI	**Prapat**	**38.28**	**236**	P		P	07 30 00.0	+1.4	
	comp=Z,33nm,1.4s								
PSI	**Prapat**	**38.28**	**236**	P		**P**	**07 29 59.3**	**+0.7**	
	comp=Z,9.4nm,0.7s,baz=84,slow=2.5,SNR=11								
RAMN	**Ramite**	**38.41**	**280**	*e*P		**P**	**07 29 59.8**	**0.0**	
	comp=Z,105nm,0.8s								
SEY	**Seymchan**	**38.70**	**16**⇑	*e*P		**P**	**07 30 01.3**	**-0.1**	
GUN	**Gumba**	**38.88**	**282**	*e*P		**P**	**07 30 04.6**	**+0.7**	
	comp=Z,213nm,1.0s								
SJI	**Sawahan**	**38.89**	**209**	P		**P**	**07 30 03.5**	**-0.2**	
	comp=Z,72nm,1.7s								
PWJI	**Pagerwojo**	**39.13**	**209**	P		**P**	**07 30 05.9**	**+0.3**	
	comp=Z,45nm,1.2s								
PKI	**Pulchoki**	**39.35**	**281**	*e*P		**P**	**07 30 07.8**	**0.0**	
	comp=Z,93nm,0.7s								
PKIN	**Phulchoki**	**39.36**	**281**	*e*P		**P**	**07 30 08.1**	**+0.3**	
	comp=Z,73nm,0.6s								
KKN	**Kakani**	**39.42**	**282**	*e*P		**P**	**07 30 08.6**	**+0.4**	
	comp=Z,171nm,0.9s								
BJII	**Banjamegara**	**39.48**	**213**	P		P	07 30 11.5	+2.9	
	comp=Z,43nm,2.0s,comp=Z,2μm								
PPI	**Padang Panjang**	**39.49**	**231**	P		P	07 30 10.8	+2.2	
	comp=Z,33nm,1.6s,comp=Z,790nm								
DMN	**Daman**	**39.61**	**281**	*e*P		**P**	**07 30 10.1**	**+0.3**	
	comp=Z,221nm,0.9s								
UGM	**Wanagama**	**39.61**	**211**	*e*P		P	07 30 10.4	+0.8	
PMG	**Port Moresby**	**40.03**	**153**	P		P	07 30 12.9	-0.1	
PMG	**Port Moresby**	**40.03**	**153**	P		P	07 30 12.9	-0.1	
	comp=Z,17nm,0.9s,baz=50,slow=6.7,SNR=3.9								
GSI	**Gunungsitoli**	**40.28**	**236**	P		**P**	**07 30 15.6**	**+0.4**	
	comp=Z,80nm,1.4s								
DANN	**Dangsing**	**40.65**	**283**	*e*P		**P**	**07 30 19.0**	**+0.5**	
	comp=Z,137nm,0.6s								
KOLN	**Koldanda**	**40.89**	**282**	*e*P		**P**	**07 30 20.8**	**+0.4**	
	comp=Z,167nm,0.9s								
PYUN	**Piuthan**	**41.37**	**283**	*e*P		**P**	**07 30 24.9**	**+0.6**	
	comp=Z,360nm,1.0s								
MK31	**Makanchi Array**	**42.04**	**311**	*i* P		**P**	**07 30 28.3**	**-1.0**	
MK31					pmax	pmax			
	comp=Z,12nm,0.8s								
MK31	**Makanchi Array**	**42.04**	**311**	*e*P		**P**	**07 30 28.6**	**-0.7**	
MKAR	**Makanchi Array**	**42.04**	**311**	P		**P**	**07 30 28.4**	**-1.0**	
MKAR							07 32 08.4		
MKAR							07 32 23.6		
MKAR	**Makanchi Array**	**42.04**	**311**	P		**P**	**07 30 28.4**	**-1.0**	
MKAR					PP	**PP**	**07 32 08.4**	**+1.6**	
MKAR					PcP	**PcP**	**07 32 23.6**	**-0.4**	
MKAR	**Makanchi Array**	**42.04**	**311**	P		**P**	**07 30 28.4**	**-1.0**	
	comp=Z,6.6nm,0.8s,baz=94,slow=11,SNR=33								
MKAR					PP	**PP**	**07 32 08.4**	**+1.6**	
	comp=Z,5.4nm,1.0s,baz=104,slow=8.6,SNR=3.6								
MKAR					PcP	**PcP**	**07 32 23.6**	**-0.4**	
	comp=Z,3.1nm,0.9s,baz=99,slow=4.5,SNR=3.7								
MKAR					LR	LR	07 49 36.5		
	comp=Z,248nm,19.0s,baz=210,slow=38								
ZAA0	**Zalesovo Array**	**42.42**	**322**	*e*P		**P**	**07 30 31.4**	**-0.9**	
ZALV	**Zalesovo Beam**	**42.42**	**322**	P		**P**	**07 30 31.2**	**-1.1**	
ZALV							07 32 16.1		
ZALV							07 32 24.8		
ZALV	**Zalesovo Beam**	**42.42**	**322**	P		**P**	**07 30 31.2**	**-1.1**	
ZALV					PP	PP	07 32 16.1	+5.4	
ZALV					PcP	**PcP**	**07 32 24.8**	**-0.2**	
ZALV	**Zalesovo Beam**	**42.42**	**322**	P		**P**	**07 30 31.2**	**-1.1**	
	comp=Z,3.9nm,0.4s,baz=110,slow=8.7,SNR=16								
ZALV					PP	PP	07 32 16.1	+5.4	
	comp=Z,0.9nm,0.5s,baz=120,slow=7.5,SNR=2.2								
ZALV					PcP	**PcP**	**07 32 24.8**	**-0.2**	
	comp=Z,6.9nm,0.8s,baz=117,slow=5.2,SNR=6.5								
ZALV					LR	LR	07 50 04.1		
	comp=Z,479nm,18.9s,baz=107,slow=39								
COEN	**Coen**	**42.87**	**161**	*e*P		**P**	**07 30 36.1**	**-0.2**	

KSH S **S** **07 37 47.8 +1.9**
KSH sS sS 07 38 08.9 +8.6
KSH ScS **ScS** **07 40 53.5 -2.3**
KSH SS **SS** **07 41 06.5 -4.5**
KSH pmax pmax
comp=Z,3.0nm,0.5s
KSH pmax pmax
comp=Z,110nm,3.1s
KSH LR LR
comp=N,290nm,6.4s
KSH LR LR
comp=E,440nm,8.4s
KSH LR LR
comp=Z,280nm,8.8s
NDI New Delhi 46.26 285 *e*P **P** **07 31 03.0 -0.4**
BILL Bilibino 46.32 18⇑*e*P **P** **07 31 03.9 +0.6**
BILL *e**PP **pP** **07 31 14.7 +2.7**
BILL *e* 07 32 39.4
BILL pmax pmax
comp=Z,20nm,1.2s
BILL MLR MLR
comp=Z,400nm,14.0s
BILL Bilibino 46.32 18 *e*P **P** **07 31 03.7 +0.5**
comp=Z,45nm,1.4s
BILL *e*PcP **PcP** **07 32 39.5 +1.4**
TKM2 Tokmak 2 46.36 304 *e*P **P** **07 31 05.0 +0.7**
TKM2 Tokmak 2 46.36 304 *e*P **P** **07 31 05.0 +0.7**
THN Thein Dam 46.90 290 *e*P **P** **07 31 07.0 -1.3**
WRAB Tennant Creek 47.02 174 *e*P **P** **07 31 08.1 -1.2**
WRAB pmax pmax
comp=Z,28nm,1.1s
WRAB Tennant Creek 47.02 174 *e*P **P** **07 31 08.1 -1.2**
comp=Z,28nm,1.1s
WRAB Tennant Creek 47.02 174 P **P** **07 31 08.5 -0.8**
comp=Z,138nm,1.2s,SNR=11
WRA Warramunga Arr 47.03 174 P **P** **07 31 08.2 -1.2**
WRA Warramunga Arr 47.03 174 P **P** **07 31 08.2 -1.2**
comp=Z,32nm,1.1s,baz=354,slow=8.6,SNR=78
WRA LR LR 07 48 42.1
comp=Z,203nm,21.6s,baz=10.0,slow=33
AAK Ala-Archa 47.17 304 *e*P **P** **07 31 11.2 +0.6**
AAK pmax pmax
comp=Z,6.0nm,0.9s
AAK Ala-Archa 47.17 304 *e*P **P** **07 31 11.2 +0.6**
comp=Z,6.2nm,0.9s
AAK Ala-Archa 47.17 304 P **P** **07 31 11.2 +0.6**
comp=Z,1.6nm,0.5s,baz=112,slow=7.6,SNR=3.3
BHPL Bhopal 47.36 277 *e*P **P** **07 31 12.8 +0.7**
BHPL AMb AMB 07 31 17.6
comp=Z,24nm,1.2s
EKS2 Erkin-Say 47.70 304 *e*P P 07 31 21.8 +7.2
EKS2 pmax pmax
comp=Z,4.0nm,0.9s
EKS2 Erkin-Say 47.70 304 *e*P P 07 31 21.8 +7.2
comp=Z,3.6nm,0.9s
HYB Hyderabad 48.21 270 *i*P **P** **07 31 19.0 +0.2**
MDRS Chennai 48.39 263 *ex* **pP** **07 31 30.1 +1.2**
MDRS AMb AMB 07 31 31.5
comp=Z,44nm,0.5s
MBWA Marble Bar 49.04 193 *e*P **P** **07 31 24.7 -0.2**
comp=Z,42nm,1.1s
CTA Charters Tower 49.58 160 LR LR 07 52 28.9
comp=Z,267nm,18.6s,baz=344,slow=36
CTAO Charters Tower 49.58 160 *e*P **P** **07 31 28.5 -0.5**
CTAO pmax pmax
comp=Z,37nm,0.9s
CTAO Charters Tower 49.58 160 *e*P **P** **07 31 28.5 -0.5**
comp=Z,37nm,0.9s
KK31 Karatay Array 50.09 305 *i*P **P** **07 31 33.7 +0.9**
KK31 pmax pmax
comp=Z,7.0nm,0.6s
KKAR Karatay Array 50.09 305 *e*P **P** **07 31 34.0 +1.2**
KKAR Karatay Array 50.09 305 *e*P **P** **07 31 34.0 +1.2**
BVA0 Borovoye Array 50.58 318 *i*P **P** **07 31 35.7 -0.6**
BVA0 pmax pmax
comp=Z,8.0nm,1.3s
BVAR Borovoye Array 50.58 318 P **P** **07 31 36.1 -0.2**
BVAR 07 32 54.1
BVAR Borovoye Array 50.58 318 P **P** **07 31 36.1 -0.2**
BVAR PcP **PcP** **07 32 54.1 +0.4**
BVAR Borovoye Array 50.58 318 P **P** **07 31 36.1 -0.2**
comp=Z,15nm,0.9s,baz=91,slow=8.9,SNR=30
BVAR PcP **PcP** **07 32 54.1 +0.4**
comp=Z,5.7nm,0.8s,baz=99,slow=4.9,SNR=3.6
BRVK Borovoye 50.64 318 *e*P **P** **07 31 36.6 -0.2**
BRVK pmax pmax
comp=Z,39nm,0.9s
BRVK Borovoye 50.64 318 *e*P **P** **07 31 36.6 -0.2**
comp=Z,39nm,0.9s
BRVK Borovoye 50.64 318 P P 07 31 39.2 +2.4
SNR=24
BRVK Borovoye 50.64 318 P **P** **07 31 36.1 -0.7**
comp=Z,274nm,1.0s,SNR=12
AS31 Alice Springs 50.69 175 *e*P **P** **07 31 36.8 -0.7**
ASAR Alice Springs 50.69 175 P **P** **07 31 36.5 -0.9**
ASAR PcP **PcP** **07 32 54.5 0.0**
ASAR Alice Springs 50.69 175 P **P** **07 31 36.5 -0.9**
comp=Z,4.5nm,0.5s,baz=6.6,slow=13,SNR=84
ASAR PcP **PcP** **07 32 54.5 0.0**
comp=Z,6.3nm,1.0s,baz=355,slow=3.5,SNR=6.3
ASAR LR LR 07 52 16.5
comp=Z,144nm,20.0s,baz=252,slow=35
POO Poona 52.01 273 *e*P **P** **07 31 45.8 -1.8**
POO *e*P pP 07 31 46.0 -10
POO AMb AMB 07 31 52.2
comp=Z,61nm,1.8s
KBL Kabul 52.08 294 *e*P **P** **07 31 49.5 +1.4**
KBL pmax pmax
comp=Z,213nm,1.6s
KBL Kabul 52.08 294 *e*P **P** **07 31 49.5 +1.4**
comp=Z,213nm,1.6s
GAMB Gambell 52.10 29 *e*P **P** **07 31 44.9 -2.6**
comp=Z,36nm,1.4s
TNA Tin City 54.12 27 *e*P P 07 32 04.4 +2.0
comp=Z,56nm,1.2s
SVE Sverdlovsk 56.44 322⇑*i*P **P** **07 32 20.6 +1.4**
SVE pmax pmax
comp=Z,79nm,1.1s
SVE MLR MLR
comp=Z,1μm,14.0s
AB31 Akbulak array 57.10 313 *i*P **P** **07 32 24.0 0.0**
AB31 pmax pmax
comp=Z,13nm,0.6s
ABKAR Akbulak array 57.10 313 *e*P **P** **07 32 24.4 +0.4**
ARU Arti 57.58 321*d*/P **P** **07 32 28.1 +0.8**
ARU 07 33 18.5
ARU 07 34 29.5
ARU S **S** **07 40 25.8 +2.5**
ARU SS **SS** **07 44 08.1 -5.0**
ARU pmax pmax
comp=Z,55nm,1.0s
ARU MLR MLR
comp=Z,1μm,16.0s
FORT Forrest 57.65 182 *e*P **P** **07 32 27.6 -0.4**
comp=Z,26nm,0.8s
SOKR Solikamsk 58.48 325*c*/P **P** **07 32 35.1 +1.6**
SOKR pmax pmax
comp=Z,30nm,0.9s
SOKR MLR MLR
comp=Z,1μm,15.0s
STKA Stephens Creek 59.77 168 *e*P **P** **07 32 42.4 -0.4**
STKA Stephens Creek 59.77 168 P **P** **07 32 41.8 -1.0**
comp=Z,2.4nm,0.6s,baz=316,slow=11,SNR=9.9
STKA LR LR 07 55 59.5
comp=Z,252nm,20.1s,baz=9.6,slow=34
BBOO Buckleboo 59.94 174 *e*P **P** **07 32 43.3 -0.6**
DZM Mont Dzumac 60.38 141 *e*S **S** **07 41 02.2 +1.7**
comp=Z,384nm,27.1s
DZM *e*LR LR 07 50 42.2
comp=Z,558nm,30.9s
DZM Mont Dzumac 60.38 141 P **P** **07 32 47.0 -0.2**
DZM Mont Dzumac 60.38 141 P **P** **07 32 47.0 -0.2**
comp=Z,3.6nm,0.8s,baz=92,slow=17,SNR=5.3
RSO Redoubt South 60.58 34 *e*P P 07 32 51.1 +2.8
PPLA Purkeypile 60.71 31 *e*P P 07 32 50.2 +1.2
comp=Z,107nm,1.5s
SPU Mount Spurr 60.87 33 *e*P **P** **07 32 50.6 +0.5**
KDAK Kodiak Island 60.88 37 *e*P **P** **07 32 50.3 +0.3**
comp=Z,60nm,1.2s
NWAO Narrogin (SRO) 60.97 192 *e*P **P** **07 32 50.9 -0.1**
comp=Z,44nm,1.3s
COLD Coldfoot 61.37 26 *e*P P 07 32 54.3 +1.0
comp=Z,74nm,2.1s
TRF Thorofare Moun 61.54 30 *e*P **P** **07 32 54.8 +0.1**
comp=Z,35nm,1.5s
MCK McKinley 62.12 30 *e*P **P** **07 32 58.5 +0.1**
MCK pmax pmax
comp=Z,60nm,1.2s
MCK McKinley 62.12 30 *e*P **P** **07 32 58.5 +0.1**
comp=Z,60nm,1.2s
PMR Palmer 62.24 32 *e*P **P** **07 32 58.9 -0.3**
PMR pmax pmax
comp=Z,31nm,1.2s
PMR Palmer 62.24 32 *e*P **P** **07 32 58.9 -0.3**
comp=Z,31nm,1.2s
SEW Seward 62.25 34 *e*P **P** **07 32 59.1 -0.2**
comp=Z,48nm,1.0s
COLA College 62.48 28 *e*P **P** **07 33 01.2 +0.4**
COLA pmax pmax
comp=Z,14nm,1.0s
COLA College 62.48 28 *e*P **P** **07 33 01.2 +0.4**
comp=Z,14nm,1.0s
SML Sawmill 62.59 32 *e*P **P** **07 33 01.8 +0.2**
SML pmax pmax
comp=Z,11nm,1.2s
SML Sawmill 62.59 32 *e*P **P** **07 33 01.8 +0.2**
comp=Z,10nm,1.2s
ILAR Eielson Array 62.90 29 P **P** **07 33 02.9 -0.7**
ILAR Eielson Array 62.90 29 P **P** **07 33 02.9 -0.7**
comp=Z,3.3nm,0.7s,baz=270,slow=6.6,SNR=25
ILAR LR LR 08 03 08.2
comp=Z,82nm,18.1s,baz=308,slow=39
WBK Wadi Bani Khal 63.73 283 P P 07 33 12.3 +2.5
SNR=5.6
PAX Paxson 63.76 30 *e*P **P** **07 33 09.7 +0.3**
PAX pmax pmax
comp=Z,23nm,1.1s
PAX Paxson 63.76 30 *e*P **P** **07 33 09.7 +0.3**
comp=Z,24nm,1.1s
DIV Divide 63.91 33 *e*P **P** **07 33 10.9 +0.5**
comp=Z,50nm,1.2s
DOT Dot Lake 64.28 30 *e*P **P** **07 33 12.6 -0.2**
comp=Z,44nm,1.1s
SMDO Samad 64.37 284 P P 07 33 15.9 +1.8
SNR=11
MENT Mentasta 64.56 30 *e*P **P** **07 33 15.4 +0.8**
JMDO Jabal Madar 64.56 283 P **P** **07 33 15.9 +0.6**
SNR=8.1
MSVF Nonsavu 64.60 128 *e*P P 07 33 16.3 +0.8
MSVF pmax pmax
comp=Z,34nm,1.2s
MSVF Nonsavu 64.60 128 *e*P P 07 33 16.3 +0.8
comp=Z,34nm,1.2s
MSVF Nonsavu 64.60 128 P P 07 33 16.6 +1.1
comp=Z,152nm,1.2s,SNR=6.1
HOQ Hoqain 64.83 285 P **P** **07 33 18.5 +1.4**
SNR=13
BSY Bisya 65.22 284 P P 07 33 21.2 +1.7
SNR=12
EGAK Eagle 65.33 28 *e*P **P** **07 33 19.5 0.0**
comp=Z,7.4nm,0.8s
HATD Hatta, Dubai 65.42 286 P P 07 33 25.4 +4.5
SNR=8.5
ASHO Ashiyiah 65.53 286 P P 07 33 23.6 +2.0
SNR=13
ARQ Araqi 65.59 285 P P 07 33 23.7 +1.7
SNR=9.9
TMCR Tamitsa 66.69 332 *e*P **P** **07 33 28.4 +0.1**
TMCR pmax pmax
comp=Z,81nm,1.1s
LVZ Lovozero 67.07 336 *i*P **P** **07 33 31.3 +0.6**
PNL Peninsula 67.31 33 *e*P **P** **07 33 33.0 +0.7**
comp=Z,42nm,1.2s
INK Inuvik 67.44 24 LR LR 08 05 31.0
comp=Z,143nm,21.2s,baz=320,slow=38
APA Apatity 67.62 336⇓*i*P **P** **07 33 35.0 +0.9**
APA pmax pmax
comp=Z,72nm,1.2s
APA MLR MLR
comp=Z,900nm,20.0s
VRHR Novokhopersk 68.32 317 *e*P **P** **07 33 38.1 -0.7**
VRHR *e*SP **sP** **07 33 47.6 -3.7**
VRHR pmax pmax
comp=Z,60nm,0.9s
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,40nm,1.3s
KBS Kingsbay 68.60 349 *e*P **P** **07 33 41.3 +1.2**
KBS pmax pmax
comp=Z,17nm,1.0s
KBS Kingsbay 68.60 349 *e*P **P** **07 33 41.3 +1.2**
comp=Z,16nm,1.0s
DGRG David-gareji 68.69 307 P P 07 33 43.1 +1.7
TBLG Delisi 69.05 307 *e*P P 07 33 46.9 +3.3
TBLG Delisi 69.05 307 P P 07 33 47.0 +3.3
KEV Kevo 69.11 339 *e*P **P** **07 33 43.1 -0.3**
KEV pmax pmax
comp=Z,14nm,0.9s
KEV Kevo 69.11 339 *e*p **P** **07 33 43.1 -0.3**
comp=Z,14nm,0.9s
MOS Moscow 69.23 323 *e*P **P** **07 33 43.2 -1.2**
MOS *e* 07 33 54.6
MOS *e* 07 36 24.1
MOS *e*S **S** **07 42 46.6 -1.8**
MOS pmax pmax
comp=Z,32nm,0.8s
MOS MLR MLR
comp=Z,1μm,20.0s
SKAG Skagway 69.35 33 *e*P P 07 33 46.0 +1.0
comp=Z,38nm,1.2s
GOR Gori 69.42 307 P P 07 33 55.2 +9.2
GNI Garni 69.55 305 *e*P P 07 33 49.3 +2.4
comp=Z,60nm,1.1s
GNI Garni 69.55 305 P P 07 33 49.8 +2.9
SNR=10
ARCES ARCESS Array B 69.68 339 P **P** **07 33 46.5 -0.4**
ARCES ARCESS Array B 69.68 339 P **P** **07 33 46.5 -0.4**
comp=Z,18nm,1.0s,baz=57,slow=6.8,SNR=7.1
ARCES LR LR 08 08 57.7
comp=Z,312nm,19.0s,baz=237,slow=40
ONI Oni 69.69 308 P P 07 33 49.5 +1.9
KBZ Khabaz 69.72 309 P P 07 33 49.4 +1.8
KBZ Khabaz 69.72 309 P P 07 33 49.4 +1.8
KBZ Khabaz 69.72 309 P P 07 33 49.4 +1.8
comp=Z,77nm,0.9s,baz=75,slow=4.6,SNR=40
KBZ LR LR 08 07 59.2
comp=Z,432nm,19.7s,baz=59,slow=39
VSR Storozhevoye 69.76 318 *e*P **P** **07 33 48.6 +0.9**
VSR *e*SP **sP** **07 33 58.7 -1.5**
VSR pmax pmax
comp=Z,80nm,1.2s
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,40nm,0.8s
VORD Divnogorie 69.76 318 *e*P **P** **07 33 47.6 -0.1**
VORD *e*SP **sP** **07 33 57.5 -2.8**
VORD pmax pmax
comp=Z,50nm,1.2s
VORD pmax pmax
comp=N,10.0nm,0.3s
VORD pmax pmax
comp=E,70nm,1.2s
RBK Rabkut 69.77 280 P **P** **07 33 49.8 +1.4**
SNR=8.8
KIV Kislovodsk 69.79 310*d*/P P 07 33 50.0 +1.8
KIV *e* 07 33 58.7
KIV *e*S **S** **07 42 54.2 -1.5**
KIV *e*PS **PnS** **07 43 16.9 -7.1**
KIV pmax pmax
comp=Z,182nm,1.2s
KIV MLR MLR
comp=Z,400nm,20.0s
JOF Joensuu 69.94 331 *e*P **P** **07 33 48.8 +0.2**
JOF pmax pmax
comp=Z,16nm,0.6s
JOF Joensuu 69.94 331 *e*p **P** **07 33 48.8 +0.2**
comp=Z,16nm,0.6s
OBN Obninsk 70.00 322⇑*e*P **P** **07 33 49.9 +0.8**
OBN *e**PP **pP** **07 34 00.4 +2.2**
OBN *e*S **S** **07 42 57.6 +0.1**
OBN pmax pmax
comp=Z,57nm,1.2s
OBN MLR MLR
comp=Z,700nm,14.0s
AKH Akhalkalaki 70.04 307 P P 07 33 52.6 +2.7
ALE Alert 70.37 2 P **P** **07 33 52.0 +1.0**
comp=Z,176nm,0.9s,SNR=16
ABTO Aybut 70.62 280 P **P** **07 33 54.6 +0.9**
SNR=12
UMR Umm Al-Rimmam 70.82 294 *e*P **P** **07 33 55.6 +0.9**
UMR AMb AMB 07 33 58.7
comp=Z,109nm,1.1s
MIB Mutribah 71.04 294 *e*P **P** **07 33 56.3 +0.3**
MIB AMb AMB 07 34 00.0
comp=Z,67nm,0.9s
NAY Al-Naaiem 71.32 294 *e*P **P** **07 33 58.0 +0.3**
NAY AMb AMB 07 34 01.6
comp=Z,60nm,1.0s
SOC Sochi 71.94 310*c*/P **P** **07 34 02.2 +1.1**
SOC *e**SP **sP** **07 34 12.7 -1.0**
SOC *e* 07 34 17.9
SOC *e* 07 36 49.4
SOC *e*S **S** **07 43 17.7 -2.8**
SOC *e**SS **sS** **07 43 39.2 +3.6**
SOC pmax pmax
comp=Z,70nm,1.0s
BHD Baghdad 72.16 299 *ex* **P** **07 34 03.0 +0.4**
BHD *ex* x 07 43 24.0
DLBC Dease Lake 72.28 33 *e*P P 07 34 04.3 +1.3
DLBC Dease Lake 72.28 33 LR LR 08 06 01.9
comp=Z,88nm,18.0s,baz=328,slow=36
KAF Kangasniemi 72.39 331 *e*P **P** **07 34 03.3 -0.2**
KAF pmax pmax
comp=Z,17nm,0.7s
KAF Kangasniemi 72.39 331 *e*p **P** **07 34 03.3 -0.2**
comp=Z,17nm,0.7s
FIA1 FINESS Array S 72.78 331 *e*P **P** **07 34 06.9 +1.2**
FINES FINESS Array B 72.78 331 P **P** **07 34 06.4 +0.6**
FINES FINESS Array B 72.78 331 P **P** **07 34 06.4 +0.6**
comp=Z,12nm,0.5s,baz=69,slow=6.3,SNR=26
FINES LR LR 08 10 06.0
comp=Z,337nm,18.8s,baz=74,slow=39
ANN Anapa 73.04 312 *e*P **P** **07 34 07.3 -0.3**
ANN *e**PP PcP 07 34 18.9 -5.5
ANN *e* 07 36 49.7
ANN *e*PPP PPP 07 38 31.6
ANN *e*S **S** **07 43 33.6 +0.6**
ANN pmax pmax
comp=Z,130nm,1.2s
ANN pmax pmax
comp=N,31nm,1.3s
ANN pmax pmax
comp=E,228nm,3.2s
RES Resolute Bay 74.34 11 *e*P **P** **07 34 15.3 +0.5**
comp=E,16nm,0.7s
DAG Danmarks Havn 74.52 353 *i*P **P** **07 34 15.1 -0.6**
DAG pmax pmax
comp=Z,8.0nm,1.0s
DAG Danmarks Havn 74.52 353 *i*P **P** **07 34 15.1 -0.6**
comp=Z,7.7nm,1.0s
MALT Malatya 74.78 305⇑P P 07 34 20.0 +1.8
MALT Malatya 74.78 305 *e*P P 07 34 20.3 +2.2
comp=Z,38nm,1.0s
MALT Malatya 74.78 305⇑*i*P P 07 34 20.0 +1.8
SIM Simferopol' 75.16 313*d*/P **P** **07 34 20.8 +0.7**
SIM *e* 07 34 29.0
SIM pmax pmax
comp=Z,34μm,1.1s
AKASG Malin Array Be 75.78 320 P **P** **07 34 24.3 +0.8**
AKASG Malin Array Be 75.78 320 P **P** **07 34 24.3 +0.8**
AKASG Malin Array Be 75.78 320 P **P** **07 34 24.3 +0.8**
comp=Z,14nm,0.7s,baz=58,slow=6.3,SNR=40
AKASG LR LR 08 10 35.5
comp=Z,826nm,19.6s,baz=60,slow=38
AK01 Malin Array Si 75.79 320 *e*P **P** **07 34 23.6 +0.1**
KIEV Kiev 75.79 320 *e*P **P** **07 34 23.6 +0.1**
KIEV pmax pmax
comp=Z,20nm,0.8s
KIEV Kiev 75.79 320 *e*P **P** **07 34 23.6 +0.1**
comp=Z,20nm,0.8s
AK02 Malin Array Si 75.81 320 *e*P **P** **07 34 23.8 +0.1**
YKW3 Yellowknife Ar 77.00 25 *e*P **P** **07 34 30.3 +0.1**
comp=Z,0.4nm,1.0s
YKA Yellowknife Ar 77.04 25 P **P** **07 34 30.5 +0.1**
YKA Yellowknife Ar 77.04 25 P **P** **07 34 30.5 +0.1**
comp=Z,5.8nm,0.7s,baz=300,slow=5.5,SNR=53
SUW Suwalki 77.56 325 *e*P P 07 34 35.6 +2.1
SUW pmax pmax
comp=Z,35nm,0.6s
SUW Suwalki 77.56 325 *e*P P 07 34 35.6 +2.1
comp=Z,35nm,0.6s
BR131 Keskin Array S 77.63 308 *e*P **P** **07 34 35.4 +1.0**
comp=Z,11nm,0.8s
BRTR Keskin Array B 77.63 308 P **P** **07 34 35.4 +1.0**
BRTR Keskin Array B 77.63 308 P **P** **07 34 35.4 +1.0**
comp=Z,12nm,0.8s,baz=94,slow=5.2,SNR=63
BRTR LR LR 08 14 21.0
comp=Z,172nm,19.8s,baz=50,slow=40
KIS Kishinev 77.64 317 *e*P **P** **07 34 35.0 +0.9**
KIS *e* 07 34 44.0
KIS MLR MLR
comp=N,400nm,16.0s
KIS MLR MLR
comp=Z,500nm,16.0s
KIS MLR MLR
comp=E,400nm,14.0s
KIS MLR MLR
comp=Z,500nm,16.0s
KIS Kishinev 77.64 317 *e*P **P** **07 34 35.0 +0.9**
KIS *e*LQ LQ 08 06 00.0
KIS *e*LR LR 08 08 56.0
comp=Z,400nm,16.0s
ANTO Ankara 78.16 309⇑P P 07 34 38.7 +1.5
ANTO Ankara 78.16 309 *e*P P 07 34 38.8 +1.5
comp=Z,37nm,1.3s
ANTO Ankara 78.16 309⇑*i*P P 07 34 38.7 +1.5
ANTO Ankara 78.16 309 P P 07 34 38.8 +1.6
SNR=9.7
ASF Jabal al Asfar 78.40 300 P P 07 34 40.4 +1.7
ASF Jabal al Asfar 78.40 300 P P 07 34 40.4 +1.7
comp=Z,7.9nm,0.8s,baz=288,slow=3.8,SNR=5.9
CFR Carcaliu 78.89 315⇑P **P** **07 34 41.7 +0.7**
CFR Carcaliu 78.89 315⇑*i*P **P** **07 34 41.7 +0.7**
PRAR RASCA 79.05 318⇑*i*P P 07 34 43.9 +2.0
NB2 NORSAR Subarra 79.12 334 P **P** **07 34 41.5 -0.6**
comp=Z,11nm,0.8s,baz=53,slow=5.9
NOA NORSAR Array B 79.12 334 P **P** **07 34 41.9 -0.2**
NOA NORSAR Array B 79.12 334 P **P** **07 34 41.9 -0.2**
comp=Z,4.5nm,0.5s,baz=51,slow=5.5,SNR=27
NOA LR LR 08 13 42.7
comp=Z,145nm,18.2s,baz=65,slow=39
LVV L'vov 79.15 321 *e*P P 07 34 45.1 +2.7
LVV MLR MLR
comp=Z,600nm,20.0s
LVV MLR MLR
comp=N,300nm,19.0s
LVV MLR MLR
comp=E,500nm,20.0s
TESR 79.19 317⇑*i*P **P** **07 34 43.6 +0.9**
PETR 79.20 316⇓*i*P P 07 34 45.0 +2.3
VRI Vrincioaia 79.45 316⇑P P 07 34 46.6 +2.5
VRI Vrincioaia 79.45 316⇑*i*P P 07 34 46.6 +2.5
PLOR Plostina 79.50 316⇑P P 07 34 46.1 +1.6
PLOR Plostina 79.50 316⇑*i*P P 07 34 46.0 +1.6
BUR08 Bucovina Ar. S 79.53 318 *e*P **P** **07 34 45.6 +1.0**
BURAR Bucovina Array 79.53 318⇑*i*P **P** **07 34 45.4 +0.8**
PGOR Pogoanele 79.74 315⇓*i*P P 07 34 47.8 +2.1
CSS Prodhromos 79.90 304 *e*P **P** **07 34 47.3 +0.5**
comp=E,36nm,1.1s
ISR Istrita 79.92 316⇓P P 07 34 48.6 +1.9
ISR Istrita 79.92 316⇓*i*P P 07 34 48.6 +1.9
KWP Kalwaria Pacla 79.99 321⇓P **P** **07 34 48.2 +1.3**
KWP Kalwaria Pacla 79.99 321 *e*P **P** **07 34 48.1 +1.2**
comp=E,66nm,1.0s
KWP Kalwaria Pacla 79.99 321⇓*i*P **P** **07 34 48.2 +1.3**
KWP Kalwaria Pacla 79.99 321 *e*P P 07 34 48.5 +1.6
MLR Muntele Rosu 80.11 316⇑*i*P **P** **07 34 49.2 +1.3**
SUMG Summit 80.20 356 *i*P **P** **07 34 49.2 +1.1**
SUMG pmax pmax
comp=Z,37nm,0.9s
SUMG Summit 80.20 356 *e*P **P** **07 34 49.4 +1.2**
comp=Z,32nm,0.6s
SUMG Summit 80.20 356 *i*P **P** **07 34 49.2 +1.1**
comp=Z,37nm,0.9s
DOPR Dopca 80.22 317⇓*i*P P 07 34 50.3 +2.0
SECR 80.25 316⇑*i*P **P** **07 34 49.0 +0.5**
BMR Baia Mare 80.52 319⇓P P 07 34 51.3 +1.5
BMR Baia Mare 80.52 319⇓*i*P P 07 34 51.3 +1.5
SCO Scoresbysund 80.57 351 *i*P **P** **07 34 50.9 +1.3**
SCO pmax pmax
comp=Z,15nm,0.9s
SCO Scoresbysund 80.57 351 *i*P **P** **07 34 50.9 +1.3**
comp=Z,15nm,0.9s
KOLS Kolonicke sedl 80.58 320 *e*P **P** **07 34 51.3 +1.1**
KOLS pmax pmax

	comp=Z,2.0nm,0.9s								
KOLS	**Kolonicke sedl**	**80.58**	**320**	*e*P		**P**		**07 34 51.2**	**+1.1**
KOLS				*ep*P		**PcP**		**07 34 56.4**	**-0.6**
UZH	**Uzhgorod**	**80.73**	**320**	*e*P		**P**		**07 34 52.1**	**+1.2**
UZH				*i*				07 34 59.9	
TRPA	**Tarpa**	**80.84**	**320**	⇓*i*P		**P**		**07 34 52.9**	**+1.4**
ARR	**Arges**	**80.98**	**316**	⇑*i*P		**P**		07 34 54.2	+1.8
BSD	**Bornholm Skovb**	**81.05**	**328**	*i* P		**P**		**07 34 53.3**	**+0.8**
BSD					pmax	pmax			
	comp=Z,26nm,0.9s								
BSD	**Bornholm Skovb**	**81.05**	**328**	*i* P		**P**		**07 34 53.3**	**+0.8**
	comp=Z,26nm,0.9s								
CRVS	**Cervenica-Dubn**	**81.06**	**321**	*e*P		**P**		**07 34 53.5**	**+0.8**
CRVS					pmax	pmax			
	comp=Z,9.0nm,1.3s								
CRVS	**Cervenica-Dubn**	**81.06**	**321**	*e*P		**P**		**07 34 53.5**	**+0.8**
CRVS				*ep*P		**pP**		**07 35 01.0**	**-1.0**
SZH	**Strazhica**	**81.19**	**314**	*e*P		**P**		**07 34 54.3**	**+0.8**
DRGR		**81.42**	**318**	⇑P		**P**		**07 34 55.8**	**+1.0**
DRGR		**81.42**	**318**	⇑*i*P		**P**		**07 34 55.8**	**+1.0**
LOT	**Lotru**	**81.47**	**317**	⇓*i*P		**P**		**07 34 56.2**	**+1.1**
DEV	**Deva**	**81.77**	**318**	⇑P		P		07 34 58.2	+1.7
DEV	**Deva**	**81.77**	**318**	⇑*i*P		P		07 34 58.2	+1.7
ATD	**Arta Tunnel**	**82.23**	**279**	P		**P**		**07 35 00.3**	**+0.7**
ATD	**Arta Tunnel**	**82.23**	**279**	P		**P**		**07 35 00.3**	**+0.7**
	comp=Z,10.0nm,0.3s,baz=76,slow=8.3,SNR=3.4								
OKC	**Ostrava-Krasne**	**82.39**	**323**	*e*P		P		07 35 02.1	+2.4
OKC					MLR	MLR			
	comp=Z,500nm,13.5s								
OKC	**Ostrava-Krasne**	**82.39**	**323**	*e*P		P		07 35 02.1	+2.4
OKC					AMS	AMS		08 17 10.0	
	comp=Z,500nm,13.5s								
PSZ	**Piszkesteto**	**82.47**	**320**	⇓P		P		07 35 01.7	+1.5
PSZ	**Piszkesteto**	**82.47**	**320**	*e*P		**P**		**07 35 01.1**	**+0.8**
	comp=Z,35nm,1.4s								
PSZ	**Piszkesteto**	**82.47**	**320**	⇓*i*P		P		07 35 01.7	+1.5
MPEP	**Malo Peshtene**	**82.54**	**315**	*e*P		**P**		**07 35 00.0**	**-0.6**
BZS	**Buzias**	**82.68**	**318**	⇑P		**P**		**07 35 02.6**	**+1.3**
BZS	**Buzias**	**82.68**	**318**	⇑*i*P		**P**		**07 35 02.6**	**+1.3**
RZN	**Rozhen**	**82.75**	**313**	*e*P		**P**		**07 35 02.3**	**+0.3**
VYHS	**Vyhne**	**82.75**	**321**	*e*P		P		07 35 03.3	+1.7
VYHS					pmax	pmax			
	comp=Z,3.0nm,0.9s								
VYHS	**Vyhne**	**82.75**	**321**	*e*P		P		07 35 03.3	+1.7
MORC	**Moravsky Berou**	**82.75**	**323**	⇑P		**P**		**07 35 03.1**	**+1.4**
MORC	**Moravsky Berou**	**82.75**	**323**	*e*P		**P**		**07 35 03.0**	**+1.4**
	comp=Z,22nm,1.4s								
MORC	**Moravsky Berou**	**82.75**	**323**	⇑*i*P		**P**		**07 35 03.1**	**+1.4**
KSP	**Ksiaz**	**82.81**	**324**	*e*P		**P**		**07 35 02.6**	**+0.7**
KSP					MLR	MLR			
	comp=Z,1μm,16.8s								
KSP	**Ksiaz**	**82.81**	**324**	*e*P		P		07 35 03.5	+1.6
MUD	**Monsted U'grnd**	**82.81**	**331**	*e*P		P		07 35 03.3	+1.6
MUD					pmax	pmax			
	comp=Z,18nm,1.0s								
MUD	**Monsted U'grnd**	**82.81**	**331**	*i* P		P		07 35 03.3	+1.6
	comp=Z,18nm,1.0s								
DPC	**Dobruska-Polom**	**83.08**	**324**	*e*P		P		07 35 05.0	+1.7
DPC				*e*				07 35 15.4	
DPC					MLR	MLR			
	comp=Z,600nm,13.9s								
DPC	**Dobruska-Polom**	**83.08**	**324**	*e*P		P		07 35 05.0	+1.7
DPC				*ex*		x		07 35 15.4	
DPC					AMS	AMS		08 16 30.0	
	comp=Z,600nm,13.9s								
UPC	**Upice**	**83.15**	**324**	*e*P		P		07 35 05.6	+1.9
UPC				*e*				07 35 15.6	
UPC	**Upice**	**83.15**	**324**	*e*P		P		07 35 05.6	+1.9
UPC				*ex*		x		07 35 15.6	
VTS	**Vitosha**	**83.26**	**315**	⇑P		**P**		**07 35 05.8**	**+1.2**
VTS	**Vitosha**	**83.26**	**315**	⇑*i*P		**P**		**07 35 05.8**	**+1.2**
VTS	**Vitosha**	**83.26**	**315**	*e*P		**P**		**07 35 04.2**	**-0.4**
MMB	**Musomiste**	**83.44**	**314**	*e*P		**P**		**07 35 03.8**	**-1.6**
SMOL	**Smolenice**	**83.52**	**322**	*e*P		P		07 35 08.9	+3.3
SMOL	**Smolenice**	**83.52**	**322**	*e*P		P		07 35 08.9	+3.3
VRAC	**Vranov**	**83.53**	**323**	⇓*i*P		**P**		**07 35 05.9**	**+0.3**
KKB	**Krupnik**	**83.71**	**314**	*e*P		**P**		**07 35 04.7**	**-2.0**
PVCC	**Panska Ves**	**83.89**	**325**	*e*P		**P**		**07 35 08.5**	**+1.1**
PVCC				*e*				07 35 19.4	
PVCC					MLR	MLR			
	comp=Z,900nm,16.6s								
PVCC	**Panska Ves**	**83.89**	**325**	*e*P		**P**		**07 35 08.5**	**+1.1**
PVCC				*ex*		x		07 35 19.4	
PVCC					AMS	AMS		08 17 20.0	
	comp=Z,900nm,16.6s								
BSEG	**Bad Segeberg**	**83.90**	**329**	*e*P		**P**		**07 35 08.7**	**+1.3**
BSEG				*e**PP		**pP**		**07 35 18.9**	**+2.3**
BSEG					pmax	pmax			
	comp=Z,30nm,1.0s								
BSEG	**Bad Segeberg**	**83.90**	**329**	*e*P		**P**		**07 35 08.7**	**+1.3**
	comp=Z,30nm,1.0s								
BSEG				*ep*P		**pP**		**07 35 18.9**	**+2.3**
NEW	**Newport**	**83.94**	**38**	*e*P		**P**		**07 35 08.4**	**+0.6**
	comp=Z,12nm,1.2s								
NEW	**Newport**	**83.94**	**38**	⇓P		**P**		**07 35 08.1**	**+0.3**
	baz=84								
BRG	**Berggiesshubel**	**84.01**	**325**	*e*P		**P**		**07 35 09.2**	**+1.1**
	comp=Z,8.8nm,0.9s								
BRG				*e*				07 35 19.3	
	comp=Z,20nm,1.1s								
BRG				S		**S**		**07 45 28.0**	**-2.2**
BRG				SS		SS		07 51 20.0	+22
BRG									
	comp=N,528nm,16.8s								
BRG									
	comp=E,583nm,13.8s								
BRG									
	comp=Z,996nm,14.5s								
BRG	**Berggiesshubel**	**84.01**	**325**	*e*P		**P**		**07 35 09.1**	**+1.1**
BRG				*e*				07 35 19.3	
BRG				S		**S**		**07 45 28.0**	**-2.2**
BRG					pmax	pmax			
	comp=Z,9.0nm,0.9s								
BRG					pmax	pmax			
	comp=Z,20nm,1.0s								
BRG					MLR	MLR			
	comp=N,528nm,16.8s								
BRG					MLR	MLR			
	comp=E,583nm,13.8s								
BRG					MLR	MLR			
	comp=Z,996nm,14.5s								
BRG	**Berggiesshubel**	**84.01**	**325**	*e*P		**P**		**07 35 09.3**	**+1.3**
	comp=Z,9.0nm,0.9s								
BRG				*ep*P		**pP**		**07 35 19.4**	**+2.1**
TREC	**Trest**	**84.13**	**323**	*e*P		**P**		**07 35 10.0**	**+1.3**
TREC				*e*				07 35 20.5	
TREC				*e*				07 45 35.9	
TREC					MLR	MLR			
	comp=Z,600nm,15.4s								
TREC	**Trest**	**84.13**	**323**	*e*P		**P**		**07 35 10.0**	**+1.3**
TREC				*ex*		x		07 35 20.5	
TREC				*e*S		**S**		**07 45 35.9**	**+4.3**
TREC					AMS	AMS		08 16 10.0	
	comp=Z,600nm,15.4s								
PRU	**Pruhonice**	**84.22**	**324**	*e*P		**P**		**07 35 10.4**	**+1.3**
PRU				*e*				07 35 20.8	
PRU				*e*				07 45 30.0	
PRU					MLR	MLR			
	comp=Z,700nm,16.1s								
PRU	**Pruhonice**	**84.22**	**324**	*e*P		**P**		**07 35 10.4**	**+1.3**
PRU				*ex*		x		07 35 20.8	
PRU				*e*SKS		**S**		**07 45 30.0**	**-2.4**
PRU					AMS	AMS		08 17 00.0	
	comp=Z,700nm,16.1s								
CLL	**Collm**	**84.22**	**326**	*i* P		**P**		**07 35 10.0**	**+0.9**
CLL				*i*				07 35 19.8	
CLL				*e*S		**S**		**07 45 36.0**	**+3.6**
CLL					pmax	pmax			
	comp=Z,15nm,1.0s								
CLL	**Collm**	**84.22**	**326**	*e*P		**P**		**07 35 10.2**	**+1.1**
	comp=Z,15nm,1.0s								
CLL				*ep*P		**pP**		**07 35 20.1**	**+1.7**
CLL	**Collm**	**84.22**	**326**	*i* P		**P**		**07 35 10.0**	**+0.9**
	comp=Z,15nm,1.0s								
CLL				*i*				07 35 19.8	
	comp=Z,33nm,1.1s								
CLL				*e*S		**S**		**07 45 36.0**	**+3.6**
CLL				*e*SS		SS		07 51 12.0	+11
CLL				*e*SSS		SSS		07 54 36.0	
CLL				*e*				07 56 12.0	
CLL				LmH				08 10 00.0	
	comp=N,1μm,18.4s								
CLL				LmH				08 10 00.0	
	comp=E,1μm,18.5s								

FBE	**Freiberg**	**84.28**	**325**	*e*P		P		07 35 11.0	+1.6
	comp=Z,21nm,1.2s								
FBE				*ep*P		pP		07 35 20.8	+2.1
VAY	**Valandovo**	**84.32**	**314**	*e*P		**P**		**07 35 09.8**	**0.0**
A12A	**Yaak River Ran**	**84.36**	**37**	⇓P		**P**		**07 35 10.4**	**+0.5**
	baz=84								
B12A	**Libby**	**84.66**	**37**	⇓P		**P**		**07 35 11.9**	**+0.4**
	baz=84								
SKO	**Skopje**	**84.70**	**315**	*e*P		**P**		**07 35 11.8**	**0.0**
CONA	**Conrad Observa**	**84.71**	**322**	⇑*i*pP		P		07 35 13.5	+1.7
	comp=Z,37nm,1.1s,SNR=11								
CONA	**Conrad Observa**	**84.71**	**322**	⇑*i*P		P		07 35 13.5	+1.7
	comp=Z,37nm,1.1s								
NEUB	**Neuenburg**	**84.90**	**326**	*e*P		**P**		**07 35 13.7**	**+1.2**
	comp=Z,14nm,0.9s								
NEUB				*ep*P		**pP**		**07 35 23.8**	**+2.0**
NRDL	**Niedersach Rie**	**84.90**	**328**	*e*P		**P**		**07 35 13.7**	**+1.3**
	comp=Z,14nm,1.4s								
NRDL				*ep*P		**pP**		**07 35 23.6**	**+1.9**
A13A	**Flathead Natio**	**85.02**	**37**	⇑P		**P**		**07 35 13.6**	**+0.3**
	baz=85								
TANN	**Tannenbergstha**	**85.04**	**325**	*e*P		**P**		**07 35 14.6**	**+1.3**
	comp=Z,5.0nm,1.4s								
TANN				*ep*P		**pP**		**07 35 24.2**	**+1.6**
WERD	**Werda**	**85.10**	**325**	*e*P		**P**		**07 35 14.6**	**+1.0**
	comp=Z,19nm,1.8s								
WERD				*ep*P		**pP**		**07 35 24.6**	**+1.7**
GUNZ	**Gunzen**	**85.14**	**325**	*e*P		P		07 35 15.2	+1.4
	comp=Z,13nm,1.4s								
GUNZ				*ep*P		pP		07 35 24.9	+1.8
PLN	**Plauen**	**85.15**	**325**	*e*P		**P**		**07 35 15.1**	**+1.3**
	comp=Z,42nm,1.6s								
PLN				*ep*P		**pP**		**07 35 24.7**	**+1.6**
NKC	**Novy Kostel**	**85.16**	**325**	AMS		AMS		08 18 00.0	
	comp=Z,1μm,15.1s								
WERN	**Wernitzgruen**	**85.16**	**325**	*e*P		**P**		**07 35 15.1**	**+1.2**
	comp=Z,20nm,1.7s								
WERN				*ep*P		**pP**		**07 35 25.2**	**+2.0**
CLZ	**Clausthal**	**85.19**	**327**	*e*P		P		07 35 15.6	+1.6
CLZ				*e**PP		pP		07 35 25.4	+2.1
CLZ					pmax	pmax			
	comp=Z,15nm,1.2s								
CLZ	**Clausthal**	**85.19**	**327**	*e*P		P		07 35 15.6	+1.6
	comp=Z,15nm,1.2s								
CLZ				*ep*P		pP		07 35 25.4	+2.1
KHC	**Kasperske Hory**	**85.24**	**324**	*e*P		P		07 35 19.7	+5.4
KHC				*e*				07 35 25.9	
KHC				*e*				07 45 47.3	
KHC					MLR	MLR			
	comp=Z,700nm,14.3s								
KHC	**Kasperske Hory**	**85.24**	**324**	*e*P		P		07 35 15.9	+1.6
	comp=Z,9.8nm,1.0s								
KHC	**Kasperske Hory**	**85.24**	**324**	*e*P		P		07 35 19.7	+5.4
KHC				*ex*		x		07 35 25.9	
KHC				*e*S		**S**		**07 45 47.3**	**+4.6**
KHC					AMS	AMS		08 16 50.0	
	comp=Z,700nm,14.3s								
BIA	**Bitola**	**85.28**	**314**	*e*P		**P**		**07 35 15.1**	**+0.4**
B13A	**Whitefish**	**85.32**	**37**	⇑P		**P**		**07 35 15.3**	**+0.5**
	baz=85								
MOX	**Moxa**	**85.32**	**326**	*e*P		**P**		**07 35 15.9**	**+1.2**
MOX				*e**PP		**pP**		**07 35 25.7**	**+1.7**
MOX					pmax	pmax			
	comp=Z,4.0nm,1.1s								
MOX	**Moxa**	**85.32**	**326**	*e*P		**P**		**07 35 15.9**	**+1.2**
	comp=Z,4.0nm,1.1s								
MOX				*ep*P		**pP**		**07 35 25.7**	**+1.7**
GEC2	**GERESS Array S**	**85.34**	**324**	*e*P		**P**		**07 35 16.1**	**+1.2**
GEC2				*e**PP		**pP**		**07 35 26.0**	**+1.8**
GEC2					pmax	pmax			
	comp=Z,4.0nm,0.9s								
GEC2	**GERESS Array S**	**85.34**	**324**	*e*P		**P**		**07 35 16.1**	**+1.2**
	comp=Z,4.0nm,0.9s								
GEC2				*ep*P		**pP**		**07 35 26.0**	**+1.8**
GERES	**GERESS Array B**	**85.34**	**324**	P		**P**		**07 35 16.2**	**+1.2**
GERES	**GERESS Array B**	**85.34**	**324**	P		**P**		**07 35 16.2**	**+1.2**
	comp=Z,8.4nm,0.8s,baz=35,slow=4.9,SNR=21								
GERES					LR	LR		08 15 54.9	
	comp=Z,387nm,19.2s,baz=257,slow=38								
BSMT	**Bassoo Peak**	**85.46**	**38**	*e*P		P		07 35 16.6	+0.9
	comp=Z,13nm,1.3s								
MANZ	**Manzenberg**	**85.48**	**325**	*e*P		**P**		**07 35 16.8**	**+1.3**
	comp=Z,7.0nm,1.2s								
MANZ				*ep*P		**pP**		**07 35 26.8**	**+2.0**
A14A	**Double T Ranch**	**85.52**	**36**	⇑P		**P**		**07 35 16.3**	**+0.4**
	baz=85,SNR=12								
ROTZ	**Rotzenmuhle**	**85.56**	**325**	*e*P		P		07 35 17.7	+1.8
	comp=Z,5.0nm,1.0s								
ROTZ				*ep*P		pP		07 35 27.4	+2.2
MOD	**Modoc**	**85.59**	**45**	*e*P		**P**		**07 35 17.0**	**+0.6**
	comp=Z,11nm,1.0s								
WET	**Wettzell**	**85.59**	**324**	*e*P		**P**		**07 35 17.5**	**+1.4**
WET				*e**PP		**pP**		**07 35 27.2**	**+1.8**
WET					pmax	pmax			
	comp=Z,4.0nm,0.9s								
WET	**Wettzell**	**85.59**	**324**	*e*P		**P**		**07 35 17.5**	**+1.4**
	comp=Z,4.0nm,0.9s								
WET				*ep*P		**pP**		**07 35 27.2**	**+1.8**
D12A	**Red Ives Fores**	**85.62**	**39**	⇓P		**P**		**07 35 16.3**	**-0.1**
	baz=85								
C13A	**Hot Springs**	**85.68**	**38**	⇓P		**P**		**07 35 16.8**	**+0.2**
	baz=86								
BMO	**Blue Mountains**	**85.77**	**41**	*e*P		**P**		**07 35 17.7**	**+0.5**
BMO					pmax	pmax			
	comp=Z,12nm,1.3s								
BMO	**Blue Mountains**	**85.77**	**41**	*e*P		**P**		**07 35 17.6**	**+0.5**
	comp=Z,12nm,1.3s								
JTMT	**Jette**	**85.80**	**38**	*e*P		P		07 35 18.3	+1.0
	comp=Z,11nm,1.2s								
IDI	**Anoyia**	**85.84**	**308**	*e*P		P		07 35 19.7	+2.1
	comp=Z,71nm,1.4s								
A15A	**Johnson Ranch,**	**85.88**	**36**	⇓P		**P**		**07 35 17.7**	**0.0**
	baz=86,SNR=5.9								
SOKA	**Soboth**	**85.90**	**321**	⇓*i*PcP		**PcP**		**07 35 18.6**	**-1.8**
	comp=Z,32nm,1.2s								
SOKA	**Soboth**	**85.90**	**321**	⇓*i*P		**PcP**		**07 35 18.6**	**-1.8**
	comp=Z,32nm,1.2s								
B14A	**Marquette Ranc**	**85.97**	**37**	⇓P		**P**		**07 35 18.5**	**+0.4**
	baz=86,SNR=9.1								
UBBA	**Unterbreizbach**	**86.02**	**327**	*e*P		**P**		**07 35 18.8**	**+0.8**
	comp=Z,6.0nm,1.0s								
C14A	**Swan Lake**	**86.07**	**37**	⇑P		**P**		**07 35 18.7**	**+0.2**
	baz=86								
D13A	**Huson**	**86.09**	**38**	⇓P		**P**		**07 35 18.1**	**-0.6**
	baz=86								
SWMT	**Swartz Lake**	**86.09**	**38**	*e*P		**P**		**07 35 19.1**	**+0.4**
	comp=Z,12nm,1.3s								
GRF	**Grafenberg Arr**	**86.11**	**325**	*e*L		L		08 17 37.9	
	comp=Z,349nm,19.1s								
SFJD	**Kangerlussuaq**	**86.13**	**0**	*e*P		**P**		**07 35 18.3**	**0.0**
	comp=Z,35nm,0.8s								
SFJD	**Kangerlussuaq**	**86.13**	**0**	*i* P		**P**		**07 35 15.8**	**-2.5**
	comp=Z,24nm,0.8s								
WVOR	**Wild Horse Val**	**86.33**	**44**	*e*P		**P**		**07 35 20.6**	**+0.6**
WVOR					pmax	pmax			
	comp=Z,7.0nm,1.0s								
WVOR	**Wild Horse Val**	**86.33**	**44**	*e*P		**P**		**07 35 20.6**	**+0.6**
	comp=Z,7.2nm,1.0s								
B15A	**Bradely Ranch,**	**86.38**	**36**	⇓P		**P**		**07 35 20.0**	**-0.1**
	baz=86,SNR=5.5								
F12A	**Elk City**	**86.43**	**40**	⇓P		**P**		**07 35 20.5**	**+0.1**
	baz=86,SNR=16								
RJOB	**Jochberg**	**86.49**	**323**	*e*P		P		07 35 22.4	+1.8
	comp=Z,7.0nm,0.9s								
SLMT	**Seeley Lake**	**86.53**	**38**	*e*P		**P**		**07 35 21.3**	**+0.4**
	comp=Z,6.8nm,0.7s								
MSO	**Missoula**	**86.53**	**38**	*e*P		**P**		**07 35 21.4**	**+0.6**
	comp=Z,6.0nm,1.2s								
MSO	**Missoula**	**86.53**	**38**	⇑P		**P**		**07 35 20.4**	**-0.5**
	baz=86								
D14A	**Greenough**	**86.62**	**38**	⇓P		**P**		**07 35 21.1**	**-0.3**
	baz=86								
E13A	**Victor**	**86.62**	**39**	⇑P		**P**		**07 35 20.2**	**-1.1**
	baz=86								
BEKR	**Beckworth**	**86.65**	**47**	*e*P		**P**		**07 35 22.1**	**+0.4**
	comp=Z,6.8nm,1.4s								
C15A	**Salmond Ranch,**	**86.68**	**37**	⇓P		**P**		**07 35 22.3**	**+0.7**
	baz=86,SNR=15								
G12A	**Big Creek, Yel**	**86.76**	**40**	⇓P		**P**		**07 35 22.2**	**0.0**
	baz=87								
B16A	**M & M Farms, S**	**86.76**	**36**	⇓P		**P**		**07 35 21.9**	**-0.1**
	baz=87								
CHMT	**Chamberlain Mo**	**86.86**	**38**	*e*P		**P**		**07 35 22.6**	**0.0**
	comp=Z,3.1nm,1.1s								
F13A	**Darby**	**86.93**	**39**	⇑P		**P**		**07 35 22.4**	**-0.5**
	baz=87								

A17A	**Triple J Farms**	**86.95**	**35**	⇑P		**P**		**07 35 22.9**	**+0.1**
	baz=87,SNR=5.6								
E14A	**Clinton**	**87.03**	**38**	⇑P		**P**		**07 35 22.9**	**-0.5**
	baz=87								
FFC	**Flin Flon**	**87.08**	**27**	*e*P		**P**		**07 35 23.0**	**-0.3**
FFC					pmax	pmax			
	comp=Z,28nm,1.1s								
FFC	**Flin Flon**	**87.08**	**27**	*e*P		**P**		**07 35 22.9**	**-0.3**
	comp=Z,28nm,1.1s								
FFC	**Flin Flon**	**87.08**	**27**	P		**P**		**07 35 23.8**	**+0.6**
	comp=Z,107nm,0.9s,SNR=13								
C16A	**Fuhringer Ranc**	**87.12**	**36**	⇓P		**P**		**07 35 23.7**	**0.0**
	baz=87,SNR=12								
B17A	**L&G Farms, Che**	**87.31**	**36**	⇓P		**P**		**07 35 25.0**	**+0.4**
	baz=87,SNR=6.3								
H12A	**Diamond D Ranc**	**87.37**	**40**	⇑P		**P**		**07 35 25.1**	**0.0**
	baz=87,SNR=10								
A18A	**Metzger Ranch,**	**87.40**	**35**	⇑P		**P**		**07 35 25.0**	**-0.1**
	baz=87,SNR=7.2								
G13A	**Cobalt**	**87.40**	**40**	⇓P		**P**		**07 35 24.8**	**-0.4**
	baz=87								
MFID	**Camas Ranch**	**87.47**	**42**	⇑P		**P**		**07 35 26.2**	**+0.7**
	baz=87,SNR=5.8								
E15A	**Deer Lodge**	**87.49**	**38**	⇑P		**P**		**07 35 25.6**	**+0.1**
	baz=87,SNR=6.8								
I12A	**Atlanta**	**87.66**	**41**	⇓P		**P**		**07 35 26.4**	**-0.1**
	baz=88								
D16A	**Dana Ranch, Ca**	**87.70**	**37**	⇓P		**P**		**07 35 26.9**	**+0.3**
	baz=88,SNR=8.9								
H13A	**Challis**	**87.71**	**40**	⇓P		**P**		**07 35 26.9**	**+0.2**
	baz=88,SNR=12								
C17A	**Wharram Farm,**	**87.75**	**36**	⇑P		**P**		**07 35 26.5**	**-0.2**
	baz=88								
G14A	**Jackson**	**87.75**	**39**	⇑P		**P**		**07 35 26.2**	**-0.8**
	baz=88								
HRY	**Holter Researc**	**87.75**	**37**	*e*P		P		07 35 27.8	+1.0
	comp=Z,6.6nm,0.6s								
B18A	**Beardsley Farm**	**87.77**	**35**	⇑P		**P**		**07 35 27.1**	**+0.3**
	baz=88,SNR=8.6								
F15A	**Butte**	**87.93**	**38**	⇓P		**P**		**07 35 28.2**	**+0.5**
	baz=88,SNR=8.2								
E16A	**East Helena**	**87.94**	**37**	⇑P		**P**		**07 35 27.9**	**+0.2**
	baz=88,SNR=8.4								
A19A	**Klindworth Far**	**87.95**	**34**	⇑P		**P**		**07 35 27.8**	**+0.1**
	baz=88,SNR=8.7								
LRM	**Limekiln Ridge**	**87.96**	**38**	*e*P		P		07 35 28.9	+0.9
	comp=Z,77nm,1.2s								
EGMT	**Eagleton**	**88.02**	**35**	*e*P		**P**		**07 35 28.5**	**+0.4**
	comp=Z,28nm,1.1s								
EGMT	**Eagleton**	**88.02**	**35**	⇓P		**P**		**07 35 28.2**	**+0.1**
	baz=88,SNR=7.3								
FETA	**Feichten**	**88.04**	**323**	*i* sP		P		07 35 33.8	+5.6
	comp=Z,16nm,0.9s,SNR=8.2								
FETA	**Feichten**	**88.04**	**323**	*i* P		P		07 35 33.8	+5.6
	comp=Z,16nm,0.9s								
D17A	**Six Diamond Ra**	**88.09**	**37**	⇑P		**P**		**07 35 28.7**	**+0.3**
	baz=88,SNR=10								
B19A	**Brinkman Farms**	**88.16**	**35**	⇑P		**P**		**07 35 29.2**	**+0.5**
	baz=88,SNR=6.0								
DLMT	**Dillon**	**88.16**	**39**	*e*P		P		07 35 29.6	+0.8
	comp=Z,14nm,0.9s								
I13A	**Wildhorse Cree**	**88.17**	**41**	⇓P		P		07 35 29.8	+0.8
	baz=88,SNR=13								
H14A	**Leadore**	**88.18**	**40**	⇓P		**P**		**07 35 28.6**	**-0.4**
	baz=88								
HLID	**Hailey**	**88.21**	**41**	*e*P		P		07 35 30.5	+1.4
	comp=Z,18nm,1.4s								
HLID	**Hailey**	**88.21**	**41**	⇑P		P		07 35 30.1	+1.0
	baz=88,SNR=9.4								
DAVA	**Damuels**	**88.32**	**324**	⇑*i* sP		P		07 35 33.6	+4.0
	comp=Z,14nm,0.7s								
DAVA	**Damuels**	**88.32**	**324**	⇑*i*P		P		07 35 33.6	+4.0
	comp=Z,14nm,0.7s								
G15A	**Dillon**	**88.34**	**39**	⇑P		**P**		**07 35 30.1**	**+0.3**
	baz=88,SNR=18								
A20A	**Cobblestone Ra**	**88.39**	**34**	⇑P		**P**		**07 35 29.8**	**0.0**
	baz=88,SNR=5.3								
E17A	**Martinsdale**	**88.43**	**37**	⇓P		**P**		**07 35 30.7**	**+0.6**
	baz=88,SNR=9.2								
F16A	**Kennard Place,**	**88.44**	**38**	⇑P		**P**		**07 35 30.

HAU Haudompre 89.66 326 eP P 07 35 39.6 +3.9
HAU Haudompre 89.66 326 eP P 07 35 39.6 +3.9
I16A Newdale 89.70 39 ⇓P P 07 35 36.9 +0.7
baz=90
PPT Papeete 89.79 110 LR LR 08 05 56.0
comp=Z,199nm,21.6s,baz=169,slow=29
PPT2 Papeete2 89.80 110 eSS SS 07 52 23.5 -1.8
comp=Z,81nm,25.0s
PPT2 eLR LR 08 04 24.7
comp=Z,508nm,32.5s
F19A Roth Farm, Mol 89.84 37 ⇓P P 07 35 36.5 -0.2
baz=90
E20A Meyer Farm, Mu 89.85 36 ⇓P P 07 35 37.4 +0.7
baz=90,SNR=5.9
LKWY Lake 89.88 38 eP P 07 35 39.9 +2.8
LKWY pmax pmax
comp=Z,23nm,1.3s
LKWY Lake 89.88 38 eP P 07 35 39.9 +2.8
comp=Z,22nm,1.3s
H17A Grant Village 89.89 39 ⇓P P 07 35 38.8 +1.7
baz=90,SNR=6.9
MEZF Maizieres J'vi 89.96 327 eP P 07 35 41.6 +4.6
MEZF Maizieres J'vi 89.96 327 eP P 07 35 41.6 +4.6
IMW Indian Meadow 90.00 39 eP P 07 35 39.2 +1.5
comp=Z,7.1nm,0.9s
DCID1 Drake Creek 90.05 39 eP P 07 35 40.3 +2.5
comp=Z,18nm,1.1s
D21A La Casta Ranch 90.06 35 ⇑P P 07 35 37.7 +0.1
baz=90,SNR=9.7
B23A Brockton 90.12 33 ⇑P P 07 35 37.6 -0.2
baz=90
RLMT Red Lodge 90.14 37 eP P 07 35 39.1 +0.9
comp=Z,16nm,1.2s
RLMT Red Lodge 90.14 37 ⇑P P 07 35 39.1 +0.9
baz=90,SNR=6.0
C22A Vida 90.17 34 ⇓P P 07 35 37.8 -0.2
baz=90
SFTF Sexfontaines 90.17 327 eP P 07 35 42.2 +4.2
comp=Z,46nm,1.0s
SFTF Sexfontaines 90.17 327 eP P 07 35 42.2 +4.2
comp=Z,48nm,1.0s
I17A Pilgrim Ck. 90.19 39 ⇑P P 07 35 39.5 +1.0
baz=90
H18A Shoshone NF, C 90.21 38 ⇑P P 07 35 39.1 +0.5
baz=90
ISA Isabella 90.22 49 ⇓P P 07 35 38.4 -0.2
baz=90
TPAW Teton Pass 90.25 39 eP P 07 35 40.3 +1.4
comp=Z,8.3nm,1.1s
A24A Westby 90.28 32 ⇑P P 07 35 38.7 +0.1
baz=90
K16A Soda Springs 90.30 40 ⇑P P 07 35 40.0 +1.0
baz=90,SNR=5.2
F20A Billings 90.30 36 ⇓P P 07 35 39.0 +0.2
baz=90
L15A Malad City 90.34 41 ⇑P P 07 35 39.2 +0.1
baz=90
LOHW Long Hollow 90.37 39 eP P 07 35 40.6 +1.3
comp=Z,3.7nm,1.1s
D22A Cohagen 90.42 34 ⇑P P 07 35 39.5 +0.2
baz=90,SNR=5.2
J17A Brown Place, J 90.46 39 ⇓P P 07 35 39.6 -0.1
baz=90
C23A Lambert 90.47 34 ⇓P P 07 35 39.7 +0.2
baz=90
DGMT Dagmar 90.50 33 eP P 07 35 40.1 +0.6
comp=Z,24nm,1.1s
DGMT Dagmar 90.50 33 ⇓P P 07 35 39.3 -0.2
baz=90
R11A Troy Canyon, C 90.57 46 ⇑P P 07 35 40.4 0.0
baz=90
H19A Powell 90.59 38 ⇓P P 07 35 40.7 +0.5
baz=90,SNR=7.0
G20A Bridger 90.65 37 ⇓P P 07 35 40.1 -0.4
baz=90
CABF La Chapelle 90.73 325 eP P 07 35 44.7 +3.9
comp=Z,9.9nm,1.0s
CABF La Chapelle 90.73 325 eP P 07 35 44.7 +3.9
CABF pmax pmax
comp=Z,10.0nm,1.0s
CABF La Chapelle 90.73 325 eP P 07 35 44.7 +3.9
comp=Z,9.9nm,1.0s
I18A Diamond G Ranc 90.75 39 ⇑P P 07 35 41.1 0.0
baz=91
FURC Furnace Creek, 90.83 48 ⇑P P 07 35 41.6 +0.3
baz=91
LRMC Laurel Mountai 90.85 49 ⇑P P 07 35 41.7 +0.1
baz=91
D23A Lindsay 90.89 34 ⇓P P 07 35 41.8 +0.3
baz=91
L16A Fish Haven 90.89 41 ⇓P P 07 35 42.0 +0.2
baz=91
J18A Kendall Valley 90.95 39 ⇓P P 07 35 42.8 +0.7
baz=91,SNR=12
EDW2 Edwards Air Fo 90.98 50 ⇓P P 07 35 42.7 +0.5
baz=91
E22A Miles City 91.02 35 ⇑P P 07 35 42.5 +0.5
baz=91
C24A Savage 91.04 33 ⇑P P 07 35 42.3 +0.2
baz=91
HWUT Hardware Ranch 91.07 41 eP P 07 35 44.0 +1.4
comp=Z,15nm,1.0s
LPL La Plagne 91.13 324 eP P 07 35 47.0 +4.2
comp=Z,18nm,1.0s
LPL La Plagne 91.13 324 eP P 07 35 47.0 +4.2
LPL pmax pmax
comp=Z,18nm,1.0s
LPL La Plagne 91.13 324 eP P 07 35 47.0 +4.2
comp=Z,18nm,1.0s
LPG La Plagne 91.13 324 eP P 07 35 47.1 +4.2
comp=Z,19nm,0.9s
LPG La Plagne 91.13 324 eP P 07 35 47.1 +4.2
LPG pmax pmax
comp=Z,19nm,0.9s
LPG La Plagne 91.13 324 eP P 07 35 47.1 +4.2
comp=Z,19nm,0.9s
DUG Dugway 91.20 43 eP P 07 35 44.0 +0.8
DUG pmax pmax
comp=Z,10.0nm,1.0s
DUG Dugway 91.20 43 eP P 07 35 44.0 +0.8
comp=Z,9.9nm,1.0s
DUG Dugway 91.20 43 ⇑P P 07 35 43.3 +0.2
baz=91
M16A Huntsville 91.22 41 ⇓P P 07 35 43.5 +0.3
baz=91
H20A Greybull 91.24 37 ⇑P P 07 35 43.3 +0.1
baz=91
K18A Toltan Ranch, 91.30 40 ⇑P P 07 35 44.2 +0.5
baz=91
E23A Ismay 91.31 35 ⇑P P 07 35 43.6 +0.2
baz=91
F22A Rosebud 91.31 36 ⇓P P 07 35 43.7 +0.3
baz=91
D24A Glendive 91.37 34 ⇓P P 07 35 43.6 0.0
baz=91
J19A Crowheart 91.46 39 ⇓P P 07 35 44.5 +0.1
baz=91,SNR=5.3
BW06 Boulder Array 91.50 39 ⇓P P 07 35 44.4 -0.2
baz=91,SNR=6.1
PDAR Pinedale Array 91.50 39 P P 07 35 44.9 +0.3
PDAR Pinedale Array 91.50 39 P P 07 35 44.9 +0.3
comp=Z,3.1nm,0.9s,baz=299,slow=1.2,SNR=22
I20A Worland 91.52 38 ⇓P P 07 35 44.8 +0.2
baz=91
GSC Goldstone 91.54 49 ⇓P P 07 35 44.6 -0.1
baz=91
M17A Scullys Gap (B 91.68 41 ⇓P P 07 35 45.5 +0.1
baz=92
L18A Fontenelle, Gr 91.76 40 ⇓P P 07 35 45.9 +0.1
baz=92
E24A Baker 91.76 34 ⇑P P 07 35 45.6 +0.1
baz=92
JLU Jordanelle 91.76 42 eP P 07 35 47.0 +1.1
comp=Z,6.7nm,1.0s
F23A Volborg 91.78 35 ⇑P P 07 35 45.8 +0.2
baz=92
PGF Pioggiola 91.83 321 eP P 07 35 50.4 +4.4
PGF Pioggiola 91.83 321 eP P 07 35 50.4 +4.4
PGF Pioggiola 91.83 321 eP P 07 35 50.4 +4.4
SMF Signal de Mont 91.83 326 eP P 07 35 49.8 +4.0
comp=Z,19nm,1.2s
SMF Signal de Mont 91.83 326 eP P 07 35 49.8 +4.0
SMF pmax pmax
comp=Z,19nm,1.2s
SMF Signal de Mont 91.83 326 eP P 07 35 49.8 +4.0
comp=Z,19nm,1.2s
N17A Moffit Pass 91.92 41 ⇑P P 07 35 46.3 -0.4
baz=92

J20A Shoshoni 91.94 38 ⇑P P 07 35 46.6 +0.1
baz=92
AVF Avril sur Loir 91.97 326 eP P 07 35 50.5 +4.1
comp=Z,19nm,1.2s
AVF Avril sur Loir 91.97 326 eP P 07 35 50.5 +4.1
AVF pmax pmax
comp=Z,19nm,1.2s
AVF Avril sur Loir 91.97 326 eP P 07 35 50.5 +4.1
comp=Z,19nm,1.2s
DAU Daniels Canyon 92.00 42 eP P 07 35 48.6 +1.6
DAU pmax pmax
comp=Z,7.0nm,0.8s
DAU Daniels Canyon 92.00 42 eP P 07 35 48.6 +1.6
comp=Z,7.1nm,0.8s
L19A Farson 92.04 40 ⇓P P 07 35 47.7 +0.6
baz=92,SNR=8.0
M18A Lyman 92.06 41 ⇑P P 07 35 47.3 +0.1
baz=92
I21A Big Trails, Te 92.07 38 ⇓P P 07 35 46.4 -0.7
baz=92
HEC Hector,Ludlow 92.13 49 ⇑P P 07 35 47.6 +0.1
baz=92
G23A Biddle 92.14 36 ⇑P P 07 35 47.2 -0.1
baz=92
F24A Ekalaka 92.19 35 ⇓P P 07 35 47.8 +0.2
baz=92
K20A Yellowstone Ra 92.25 39 ⇓P P 07 35 47.6 -0.4
baz=92
J21A Lysite 92.29 38 ⇑P P 07 35 48.3 +0.1
baz=92
FLN La Foliniere 92.37 330 eP P 07 35 52.4 +4.2
comp=Z,30nm,1.1s
FLN eR
comp=Z,356nm,22.8s
FLN La Foliniere 92.37 330 eP P 07 35 52.4 +4.2
FLN pmax pmax
comp=Z,30nm,1.1s
FLN La Foliniere 92.37 330 eP P 07 35 52.4 +4.2
comp=Z,30nm,1.1s
I22A 9 Mile Ranch, 92.45 37 ⇓P P 07 35 48.9 +0.1
baz=92
N18A Larsen Ranch, 92.58 41 ⇑P P 07 35 49.4 -0.2
baz=92
GMRC Granite Mounta 92.61 49 ⇑P P 07 35 49.6 -0.2
baz=92
MSU Marysvale 92.62 44 eP P 07 35 51.6 +1.7
MSU pmax pmax
comp=Z,2.0nm,0.3s
MSU Marysvale 92.62 44 eP P 07 35 51.6 +1.7
comp=Z,2.1nm,0.3s
TBI Tubuai 92.63 115 eLR LR 08 05 31.3
comp=Z,212nm,33.2s
PFO Pinyon Flat Ob 92.75 50 ⇑P P 07 35 50.2 -0.2
baz=93
SMRF Simiane la Rot 92.77 323 eP P 07 35 54.6 +4.4
comp=Z,27nm,1.1s
SMRF Simiane la Rot 92.77 323 eP P 07 35 54.6 +4.4
comp=Z,27nm,1.1s
J22A Midwest 92.78 37 ⇓P P 07 35 50.5 +0.1
baz=93
GRR Gorron 92.81 330 eP P 07 35 54.8 +4.6
comp=Z,70nm,1.3s
GRR Gorron 92.81 330 eP P 07 35 54.8 +4.6
GRR pmax pmax
comp=Z,70nm,1.3s
GRR Gorron 92.81 330 eP P 07 35 54.8 +4.6
comp=Z,70nm,1.3s
BELC Belle Mtn. Jos 92.83 49 ⇓P P 07 35 51.1 +0.3
baz=93
KMBO Kilima Mbogo 92.86 270 P P 07 35 52.3 +0.9
KMBO Kilima Mbogo 92.86 270 P P 07 35 52.3 +0.9
comp=Z,3.0nm,0.9s,baz=46,slow=8.4,SNR=5.6
KMBO LR LR 08 15 35.2
comp=Z,134nm,20.2s,baz=92,slow=34
K21A Alcova 92.87 38 ⇓P P 07 35 50.7 -0.2
baz=93
H24A Dirks Ranch, A 92.89 35 ⇑P P 07 35 50.8 0.0
baz=93
P17A Butcher Ranch, 92.89 42 ⇓P P 07 35 51.3 +0.2
baz=93
ULM Lac du Bonnet 92.90 27 P P 07 35 50.8 +0.2
ULM Lac du Bonnet 92.90 27 P P 07 35 50.8 +0.2
comp=Z,4.5nm,0.9s,baz=283,slow=4.6,SNR=5.0
ULM LR LR 08 19 09.6
comp=Z,98nm,20.6s,baz=343,slow=36
N19A John Jarvie Ra 92.92 41 ⇑P P 07 35 51.4 +0.2
baz=93
Q16A Castle Valley 92.98 43 ⇑P P 07 35 51.7 +0.2
baz=93
P18A Preston Nutter 93.09 42 ⇓P P 07 35 52.7 +0.6
baz=93,SNR=8.2
MONP Monument Peak 93.19 51 ⇑P P 07 35 52.7 +0.2
baz=93
L21A Rawlins 93.25 39 ⇓P P 07 35 52.5 -0.2
baz=93
SRU San Rafael 93.25 43 eP P 07 35 53.4 +0.7
SRU pmax pmax
comp=Z,3.0nm,0.6s
SRU San Rafael 93.25 43 eP P 07 35 53.4 +0.7
comp=Z,2.7nm,0.6s
SRU San Rafael 93.25 43 ⇑P P 07 35 53.2 +0.5
baz=93
K22A Casper 93.26 38 ⇑P P 07 35 52.9 +0.2
baz=93
IRM Iron Mountain 93.31 49 ⇓P P 07 35 53.1 +0.2
baz=93
O19A Miners Draw (B 93.33 41 ⇑P P 07 35 53.4 +0.4
baz=93
BC3 Big Chuckawall 93.40 49 ⇓P P 07 35 53.7 +0.3
baz=93
N20A Spence Gulch, 93.48 40 ⇓P P 07 35 54.1 +0.3
baz=93
DVTC Desert V Tower 93.54 51 ⇓P P 07 35 54.1 +0.1
baz=93
SWSC Sam W. Stewart 93.58 50 ⇑P P 07 35 54.3 +0.2
baz=93
W13A Hualapai Mount 93.59 47 ⇑P P 07 35 54.5 0.0
baz=93
SGMF Saint Gilles 93.67 330 eP P 07 35 58.9 +4.7
comp=Z,49nm,1.1s
SGMF Saint Gilles 93.67 330 eP P 07 35 58.9 +4.7
SGMF pmax pmax
comp=Z,49nm,1.1s
SGMF Saint Gilles 93.67 330 eP P 07 35 58.9 +4.7
comp=Z,49nm,1.1s
MFF Saint Martin d 93.80 328 eP P 07 35 59.4 +4.6
comp=Z,28nm,1.2s
MFF Saint Martin d 93.80 328 eP P 07 35 59.4 +4.6
MFF pmax pmax
comp=Z,28nm,1.2s
MFF Saint Martin d 93.80 328 eP P 07 35 59.4 +4.6
comp=Z,28nm,1.2s
U15A North Rim 93.82 46 ⇓P P 07 35 55.5 -0.1
baz=94
P19A Cripple Cowboy 93.84 41 ⇑P P 07 35 55.7 +0.3
baz=94
PDMCI Parker Dam,Lak 93.90 48 ⇑P P 07 35 55.7 +0.2
baz=94
ROSF Rostrenen 93.92 331 eP P 07 36 00.1 +4.8
comp=Z,74nm,1.2s
ROSF Rostrenen 93.92 331 eP P 07 36 00.1 +4.8
ROSF pmax pmax
comp=Z,74nm,1.2s
ROSF Rostrenen 93.92 331 eP P 07 36 00.1 +4.8
comp=Z,74nm,1.2s
RJF Les Rejaudoux 93.93 326 eP P 07 35 59.9 +4.4
RJF eR
comp=Z,557nm,18.2s
RJF Les Rejaudoux 93.93 326 eP P 07 35 59.9 +4.4
RJF Les Rejaudoux 93.93 326 eP P 07 35 59.9 +4.4
O20A White River Ci 93.95 41 ⇑P P 07 35 55.7 -0.2
baz=94
N21A Black Mountain 93.96 40 ⇓P P 07 35 55.9 -0.1
baz=94
Y12C Blythe 93.97 49 ⇑P P 07 35 56.1 +0.2
baz=94
L23A Garrett 94.07 38 ⇓P P 07 35 56.1 -0.4
baz=94
Q19A Hogan Spring (94.11 42 ⇓P P 07 35 56.8 +0.3
baz=94
QUIF Quistinic 94.19 330 eP P 07 36 00.9 +4.3
comp=Z,17nm,0.8s
QUIF Quistinic 94.19 330 eP P 07 36 00.9 +4.3
QUIF pmax pmax
comp=Z,17nm,0.8s
QUIF Quistinic 94.19 330 eP P 07 36 00.9 +4.3
comp=Z,17nm,0.8s
AGMN Agassiz Nation 94.41 29 eP P 07 35 57.3 -0.3

comp=Z,11nm,1.3s
S18A Hurst Farm, Bl 94.47 44 ⇑P P 07 35 58.3 -0.2
baz=94
Q20A Ridgley Place, 94.69 42 ⇑P P 07 35 59.2 -0.1
baz=94
N23A Red Feather La 94.76 39 ⇑P P 07 35 59.9 +0.2
baz=95
Y14A Wickenburg 94.87 48 ⇓P P 07 36 00.7 +0.6
baz=95,SNR=9.0
O22A Kremmling 94.91 40 ⇑P P 07 36 00.1 -0.4
baz=95
WUAZ Wupatki 94.97 46 ⇑P P 07 36 01.2 +0.6
baz=95
R20A Redvale 95.13 42 ⇑P P 07 36 01.5 +0.1
baz=95
P22A Eagle 95.16 40 ⇑P P 07 36 01.6 +0.1
baz=95
Q21A Lamborn Mesa, 95.19 41 ⇑P P 07 36 01.6 0.0
baz=95
R21A Cimarron 95.51 42 ⇓P P 07 36 02.8 -0.3
baz=95
Q22A Crested Butte, 95.56 41 ⇑P P 07 36 03.6 +0.1
baz=95
X16A Lo Mia Camp, P 95.61 47 ⇓P P 07 36 04.1 +0.5
baz=95
KEST Kesra 95.99 315 LR LR 08 28 25.8
comp=Z,77nm,18.9s,baz=6.4,slow=41
214A Organ Pipe Nat 96.20 49 ⇑P P 07 36 06.5 +0.3
baz=96
SCHQ Schefferville 97.07 10 P Pdif 07 36 11.3 +1.6
SCHQ Schefferville 97.07 10 P Pdif 07 36 11.3 +1.6
comp=Z,1.6nm,0.7s,baz=351,slow=8.9,SNR=5.2
SCHQ LR LR 08 21 04.0
comp=Z,178nm,20.9s,baz=57,slow=36
U23A El Rito 97.67 43 ⇑P Pdif 07 36 13.4 +0.4
baz=98
Z20A Nine Sixteen R 98.27 46 ⇑P Pdif 07 36 15.9 +0.2
baz=98
ANMO Albuquerque 98.42 44 LR LR 08 13 06.5
comp=Z,84nm,21.3s,baz=314,slow=31
ESDC Sonseca Array 100.81 325 P Pdif 07 36 27.5 +0.8
ESDC PP PP 07 40 36.5 +2.8
ESDC Sonseca Array 100.81 325 P Pdif 07 36 27.5 +0.8
comp=Z,0.5nm,0.5s,baz=7.6,slow=3.9,SNR=2.9
ESDC PP PP 07 40 36.5 +2.8
comp=Z,0.9nm,0.4s,baz=38,slow=7.5,SNR=7.6
TXAR Lajitas Array 103.92 46 Pdif Pdif 07 36 43.5 +2.7
TXAR PP PKiKP 07 40 57.8 -0.6
TXAR Lajitas Array 103.92 46 Pdiff Pdif 07 36 43.5 +2.7
comp=Z,0.2nm,0.7s,baz=318,slow=5.3,SNR=3.1
TXAR PP PKiKP 07 40 57.8 -0.6
comp=Z,0.2nm,0.7s,baz=352,slow=5.6,SNR=2.0
TORD Torodi Ar. Bea 115.72 302 PKP PKPdf 07 41 20.0 -0.8
TORD PP PP 07 42 24.8 +1.4
TORD PKKPbc PKKPbc 07 51 52.5 +0.3
TORD Torodi Ar. Bea 115.72 302 PKP PKPdf 07 41 20.0 -0.8
comp=Z,1.5nm,1.0s,baz=7.7,slow=3.1,SNR=4.5
TORD PP PP 07 42 24.8 +1.4
comp=Z,0.9nm,0.9s,baz=58,slow=4.8,SNR=3.0
TORD PKKPbc PKKPbc 07 51 52.5 +0.3
comp=Z,1.8nm,1.2s,baz=273,slow=1.9,SNR=4.4
DBIC Dimbokro 124.80 301 PKP PKPdf 07 41 39.2 +1.0
DBIC Dimbokro 124.80 301 PKP PKPdf 07 41 39.2 +1.0
comp=Z,0.8nm,0.5s,baz=225,slow=1.4,SNR=2.6
SNAA Sanae 128.47 197 eP PKPdf 07 41 43.4 -0.2
VNA3 Neumayer Olymp 130.48 196 eP PKPdf 07 41 42.3 -5.1
ROSC El Rosal 140.47 40 PKP PKPdf 07 42 09.2 +1.0
ROSC El Rosal 140.47 40 PKP PKPdf 07 42 09.2 +1.0
comp=Z,2.6nm,0.7s,baz=12,slow=0.3,SNR=2.7
ATAH Atahualpa 146.56 59 PKPbc PKPab 07 42 20.5 -0.9
ATAH Atahualpa 146.56 59 PKPbc PKPab 07 42 20.5 -0.9
comp=Z,6.9nm,0.8s,baz=260,slow=8.7,SNR=4.5
NNA Nana 150.72 64 PKPbc PKPbc 07 42 30.2 -0.4
NNA Nana 150.72 64 PKPbc PKPbc 07 42 30.2 -0.4
comp=Z,11nm,0.8s,baz=294,slow=5.9,SNR=5.1
RCBR Riachuelo 154.83 325 PKPab PKPab 07 42 52.3 -2.6
RCBR Riachuelo 154.83 325 PKPab PKPab 07 42 52.3 -2.6
comp=Z,7.5nm,0.8s,baz=31,slow=8.2,SNR=3.0
CFAA Coronel Fontan 163.59 110 PKPab PKPab 07 43 31.7 -1.0
CFAA Coronel Fontan 163.59 110 PKPab PKPab 07 43 31.7 -1.0
comp=Z,0.4nm,1.0s,baz=279,slow=6.0,SNR=2.8
SIV San Ignacio 164.92 45 PKP PKPdf 07 42 42.4 0.0
SIV PKPab PKPab 07 43 37.8 -0.8
SIV San Ignacio 164.92 45 PKP PKPdf 07 42 42.4 0.0
comp=Z,2.2nm,0.9s,baz=307,slow=2.4,SNR=5.7
SIV PKPab PKPab 07 43 37.8 -0.8
comp=Z,1.5nm,0.9s,baz=50,slow=2.9,SNR=2.7
BDFB Brasilia 168.36 350 PKPab PKPab 07 43 53.0 -0.7
BDFB Brasilia 168.36 350 PKPab PKPab 07 43 53.0 -0.7
comp=Z,2.2nm,0.9s,baz=198,slow=4.5,SNR=2.7
CPUP Villa Florida 173.49 84 PKPab PKPab 07 44 15.8 -0.7
CPUP Villa Florida 173.49 84 PKPab PKPab 07 44 15.8 -0.7
comp=Z,4.6nm,1.0s,baz=262,slow=6.2,SNR=2.6

*ISCJB **20** 07:28:33.1±0.5,36°12N±0°10×135°24E±0°07, h367km±5km, mb3.1/5, Error ellipse: s-maj=16.3km s-min=8.5km az=162.3*
*IDC **20** 07:28:33.9±1.1,36°07N×135°20E, h363km±12km, mb2.9/5, mb1 3.2/10, mb1mx3.0/31, mbtmp3.0/10, Error ellipse: s-maj=19.7km s-min=16.8km az=115.0*
*JMA **20** 07:28:33.4±0.2,36°15N×135°21E, h366km±2km, M2.9*
ISC 20 07:28:33.6±0.8, 36°2N±0°1×135°24E±0°07, h358km±7km, n19, σ1°52/27, mb3.1/5, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JKY	Yasaka	0.60	190	P	P	Pn		07 29 19.7	+0.6
JKY				S	S	S		07 29 55.6	0.0
JKSM	Kasumi	0.78	217	P	P	Pn		07 29 19.8	+0.2
JKSM				S	S	S		07 29 56.1	-0.3
JWT	Wachi	0.94	172	P	P	Pn		07 29 20.7	+0.5
JWT				S	S	S		07 29 56.8	-0.6
JGM	Miyama	1.31	113	P	P	Pn		07 29 22.6	+0.9
JGM				S	S	S		07 30 00.9	+0.6
JNY	Yasuok	2.30	111	P	P	Pn		07 29 28.7	+0.7
MAT	Matsushiro	2.42	81	P	P	Pn		07 29 30.0	+1.2
MJAR	Matsushiro Arr	2.42	81	P	P	Pn		07 29 30.2	+1.4
	3.2nm,0.3s,baz=264,slow=8.6,SNR=17								
JAG	Ashikaga	3.41	85	P	P	Pn		07 29 37.3	-0.1
JAG				S	S	S		07 30 29.9	+1.2
JHO	Hitachi	4.32	83	P	P	Pn		07 29 45.8	-0.6
JHO				S	S	S		07 30 42.0	-3.1
JNU	Nakatsue	4.74	231	P	P	Pn		07 29 51.0	0.0
	0.4nm,0.3s,baz=63,slow=2.3,SNR=2.4								
JMM	Marumori	4.74	68	P	P	Pn		07 29 51.3	+0.6
JMM				S	S	S		07 30 54.0	+0.9
KSRS	Korea Array	5.99	284	P	P	Pn		07 30 05.5	+1.0
	1.2nm,0.3s,baz=104,slow=12,SNR=21								
USRK	Ussuriysk Arra	8.35	344	P	P	Pn		07 30 33.4	+1.6
	0.5nm,0.3s,baz=159,slow=11,SNR=4.3								
ASAJ	Asahikawa	9.69	33	P	P	Pn		07 30 48.6	+0.9
	2.9nm,0.3s,baz=229,slow=11,SNR=8.3								
ASAJ				S	S	S		07 32 32.6	-5.0
	0.4nm,0.3s,baz=248,slow=19,SNR=4.0								
MKAR	Makanchi Array	40.34	302	P	P			07 35 37.6	0.0
	0.7nm,0.6s,baz=84,slow=11,SNR=7.1								
ILAR	Eielson Array	52.82	32	P	P			07 37 13.6	+0.6
	0.2nm,0.5s,baz=263,slow=6.3,SNR=3.8								
WRA	Warramunga Arr	55.86	181	P	P			07 37 33.7	-1.6
	0.4nm,0.3s,baz=0.4,slow=7.7,SNR=13								
NVAR	Mina Array Bea	79.39	50	P	P			07 40 02.4	+1.4
	0.1nm,0.5s,baz=308,slow=6.1,SNR=2.1								
TXAR	Lajitas Array	94.47	49	P	P			07 41 14.3	+0.1
	0.5nm,0.9s,baz=322,slow=5.7,SNR=3.7								

*IDC **20** 07:36:50.0±1.2,27°16N×130°26E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/24, mbtmp3.5/4, Error ellipse: s-maj=65.7km s-min=27.3km az=85.0*
*JMA **20** 07:36:53.2±0.2,27°08N×129°97E, h47km, M3.7*
ISC 20 07:36:52.0±1.7, 27°12N±0°05×129°99E±0°05, h17km±12km, n14, σ0°91/24, mb3.7/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JTK	Tokunoshima	1.14	306	P	P	Pn		07 37 13.2	0.0
JTK				eS	S	Sb		07 37 27.6	-0.2
JZK	Kikaishima	1.19	359	P	P	Pg		07 37 15.1	+0.1
JZK				eS	S	Sg		07 37 31.3	+0.7
JAM	Amami Oshima	1.33	345	P	P	Pn		07 37 15.9	0.0
JAM				eS	S	Sb		07 37 32.2	-1.2
JAMN	Amaminishikomi	1.34	327	P	P	Pn		07 37 15.5	-0.4
JAMN				eS	S	Sb		07 37 32.4	-1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**1.56**	**260**	P	**Pb**	**07 37 19.4**	**-1.0**
JOW				eS	**Sn**	**07 37 37.9**	**-0.9**
JMZ	**Minamidaito 2**	**1.70**	**139**	P	**Pn**	**07 37 20.4**	**-0.4**
JMZ				eS	**Sn**	**07 37 40.6**	**-1.6**
JIH	**Iheya**	**1.81**	**268**	P	**Pn**	**07 37 22.9**	**+0.5**
JIH				eS	**Sn**	**07 37 43.9**	**-1.0**
JJT2	**Tamagusuku 2**	**2.23**	**245**	P	**Pn**	**07 37 28.5**	**+0.3**
JJT2				eS	**Sn**	**07 37 55.0**	**-0.4**
JAGN	**Aguni-jima**	**2.51**	**259**	P	**Pn**	**07 37 32.4**	**+0.3**
JAGN				eS	**Sn**	**07 38 00.8**	**-1.5**
JKE	**Kume jima 2**	**2.98**	**255**	P	**Pn**	**07 37 38.5**	**+0.1**
JKE				eS	**Sn**	**07 38 13.0**	**-0.7**
WRA	**Warramunga Arr**	**46.97**	**174**	P	**P**	**07 45 22.8**	**+0.6**
	0.4nm,0.5s,baz=354,slow=8.6,SNR=6.8						
ASAR	**Alice Springs**	**50.63**	**175**	P	**P**	**07 45 51.1**	**+0.9**
	0.5nm,0.5s,baz=4.8,slow=15,SNR=12						
YKA	**Yellowknife Ar**	**77.05**	**25**	P	**P**	**07 48 43.9**	**0.0**
	0.2nm,0.7s,baz=300,slow=5.6,SNR=5.1						
BRTR	**Keskin Array B**	**77.73**	**308**	P	**P**	**07 48 50.0**	**+1.7**
	0.8nm,0.7s,baz=76,slow=6.1,SNR=4.0						

*ISCJB **20** 07:39:19.8±0.7, 24°.03S±0°.05×66°.72W±0°.09, h201km±12km, mb3.1/2, Error ellipse: s-maj=12.8km s-min=8.8km az=179.7*
*IDC **20** 07:39:20.0±1.5, 24°.07S×66°.71W, h191km±14km, mb3.1/2, mb1 3.2/6, mb1mx3.1/19, mbtmp3.0/6, Error ellipse: s-maj=23.1km s-min=13.8km az=96.0*
*GUC **20** 07:39:24.5±0.6, 23°.65S×67°.19W, h230km, ML4.3*
ISC 20 07:39:20.0±0.8**, 24°.02S**±0°.06×**66°.70W**±0°.08**, h192**km±11km**, n17,** σ**1.59**/21**, 4C-1D, Salta Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**3.10**	**304**	⇑iP	Pn	07 40 17.3	+6.9
PB04				i S	Sn	07 40 58.7	+8.8
PB04				AML	AML	07 41 05.7	
	comp=N,319nm,0.4s						
PB09	**Plate Boundary**	**3.23**	**313**	⇑iP	**Pn**	**07 40 13.8**	**+1.7**
PB09				eS	**Sn**	**07 40 51.4**	**-1.4**
PB09				AML	AML	07 40 56.1	
	comp=E,582nm,0.4s						
CEN1	**Los Morros**	**3.27**	**280**	⇓iP	Pn	07 40 16.8	+4.2
CEN1				eS	**Sn**	**07 40 55.9**	**+2.2**
CEN1				AML	AML	07 40 58.8	
	comp=N,187nm,0.6s						
ANCH	**Antofagasta**	**3.41**	**275**	⇑iP	**Pn**	**07 40 15.7**	**+1.5**
ANCH				i S	**Sn**	**07 40 55.2**	**-1.4**
ANCH				AML	AML	07 40 57.7	
	comp=E,624nm,0.1s						
PB01	**Plate Boundary**	**3.93**	**318**	⇑iP	**Pn**	**07 40 21.1**	**+0.4**
PB01				i S	**Sn**	**07 41 05.5**	**-2.9**
PSGC	**Pisagua**	**5.43**	**324**	eP	**Pn**	**07 40 38.1**	**-1.8**
PSGC				eS	Sn	07 41 36.2	-6.7
CFAA	**Coronel Fontan**	**7.67**	**190**	P	**Pn**	**07 41 10.0**	**+1.0**
	comp=E,0.0nm,0.3s,baz=11,slow=16,SNR=18						
CFAA				S	**Sn**	**07 42 32.3**	**-3.3**
	comp=E,0.3nm,0.3s,baz=144,slow=18,SNR=19						
LPAZ	**La Paz**	**7.81**	**350**	P	**Pn**	**07 41 12.4**	**+0.9**
	comp=E,0.5nm,0.3s,baz=144,slow=3.3,SNR=16						
LPAZ				S	**Sn**	**07 42 40.9**	**+1.1**
	comp=E,0.2nm,0.3s,baz=42,slow=16,SNR=3.3						
CPUP	**Villa Florida**	**8.79**	**107**	P	**Pn**	**07 41 24.6**	**+1.0**
	comp=E,0.5nm,0.3s,baz=264,slow=15,SNR=7.6						
SIV	**San Ignacio**	**9.58**	**35**	P	**Pn**	**07 41 33.9**	**-0.1**
	comp=E,0.3nm,0.3s,baz=211,slow=10,SNR=5.9						
PLCA	**Paso Flores**	**16.97**	**190**	P	**Pn**	**07 43 07.7**	**+1.4**
	comp=E,0.1nm,0.3s,baz=15,slow=9.4,SNR=5.3						
BDFB	**Brasilia**	**19.44**	**68**	P	**P**	**07 43 32.7**	**+0.5**
	comp=E,0.2nm,0.3s,baz=241,slow=13,SNR=5.5						
TORD	**Torodi Ar. Bea**	**76.32**	**69**	P	**P**	**07 50 47.7**	**-0.6**
	comp=E,0.2nm,0.3s,baz=242,slow=5.1,SNR=4.5						
YKA	**Yellowknife Ar**	**94.24**	**340**	P	**P**	**07 52 16.6**	**0.0**
	comp=E,0.1nm,0.5s,baz=135,slow=4.5,SNR=5.6						
ASAR	**Alice Springs**	**128.55**	**204**	PKP	**PKPdf**	**07 58 04.9**	**+0.1**
	comp=E,0.3nm,0.5s,baz=96,slow=1.0,SNR=5.5						
WRA	**Warramunga Arr**	**131.73**	**207**	PKP	**PKPdf**	**07 58 10.6**	**-0.3**
	comp=E,0.4nm,1.1s,baz=157,slow=1.8,SNR=7.4						
MKAR	**Makanchi Array**	**146.37**	**40**	PKPbc	**PKPbc**	**07 58 38.5**	**+0.4**
	comp=E,0.5nm,0.5s,baz=297,slow=3.6,SNR=8.7						

CASC 20 07:40:44.9±2.6**, 13°.04N**×**91°.62W, h36**km±58km**, MD3.7, ML3.3, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**1.28**	**359**	eP	Pn	07 41 07.0	+0.8
JAT				eS	Sn	07 41 22.5	+0.5
FUG	**Fuego 3**	**1.59**	**28**	eP	Pn	07 41 09.8	-1.0
FUG				eS	Sn	07 41 30.8	+0.4
NBG	**Las Nubes**	**1.98**	**38**	eP	Pn	07 41 17.0	+0.8
NBG				eS	Sn	07 41 40.9	+0.9
SBLS	**San Blas**	**2.10**	**67**	eP	Pn	07 41 17.1	-0.7
RTR	**El Retiro**	**2.10**	**66**	eP	Pn	07 41 18.1	+0.3
RBDL	**Robledal**	**2.16**	**60**	eP	Pn	07 41 18.5	-0.1
SNET	**Serv Nac Est T**	**2.41**	**74**	eS	Sn	07 41 49.5	-0.8
SNET				AML	AML	07 42 01.6	
	comp=Z,197nm,0.3s						
LFU	**La Fuente**	**2.54**	**73**	eP	Pn	07 41 24.5	+0.8
LFRS	**El Faro**	**2.56**	**76**	eP	Pn	07 41 24.8	+0.9
MTO2	**Montecristo 2**	**2.58**	**58**	eP	Pn	07 41 24.2	-0.2
LBRS	**Las Brisas**	**2.60**	**74**	eP	Pn	07 41 24.3	-0.2
MRL	**Marmol**	**2.75**	**43**	eP	Pn	07 41 29.6	+2.9
MRL				eS	Sn	07 42 01.8	+2.9
CAHU	**Cacacuatique**	**3.39**	**77**	eP	Pn	07 41 36.9	+1.3

IDC 20 07:51:48.5±0.9**, 18°.35N**×**147°.36E, h0**km**, mb3.6**/8**, mb1 3.8**/9**, mb1mx3.7**/25**, mbtmp3.6**/9**, ML4.0**/1**, MS4.5**/1**, Ms1 4.5**/1**, ms1mx2.6**/35**, Error ellipse: s-maj=31.0km s-min=17.7km az=95.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.31**	**207**	Pn	Pn	07 53 11.1	+2.0
	4.8nm,0.3s,baz=3.6,slow=19,SNR=3.1						
GUMO				Sn	Sn	07 54 11.5	+0.5
	7.2nm,0.3s,baz=15,slow=20,SNR=2.9						
DAV	**Davao City (W)**	**24.00**	**245**	LR	LR	08 06 10.3	
	comp=Z,960nm,18.5s,baz=174,slow=36						
KSRS	**Korea Array**	**25.54**	**322**	P	P	07 57 18.6	-0.3
	2.5nm,0.8s,baz=144,slow=9.1,SNR=5.7						
WRA	**Warramunga Arr**	**40.15**	**199**	P	P	07 59 25.9	-0.5
	0.5nm,0.5s,baz=22,slow=8.5,SNR=8.1						
ASAR	**Alice Springs**	**43.78**	**198**	P	P	07 59 55.6	-0.5
	0.4nm,0.5s,baz=17,slow=10.0,SNR=5.0						
SONM	**Songino Array**	**44.40**	**321**	P	P	08 00 01.6	+0.5
	0.8nm,0.5s,baz=132,slow=8.7,SNR=8.1						
ZALV	**Zalesovo Beam**	**59.25**	**322**	P	P	08 01 50.6	-1.0
	0.5nm,0.3s,baz=94,slow=8.7,SNR=4.0						
MKAR	**Makanchi Array**	**59.84**	**314**	P	P	08 01 56.6	+0.7
	0.2nm,0.6s,baz=94,slow=8.2,SNR=2.8						
YKA	**Yellowknife Ar**	**77.55**	**28**	P	P	08 03 45.8	-0.2
	0.1nm,0.7s,baz=286,slow=5.4,SNR=3.4						
NVAR	**Mina Array Bea**	**82.10**	**52**	P	P	08 04 12.1	+0.5
	0.2nm,0.6s,baz=251,slow=4.5,SNR=2.9						

*CASC **20** 07:52:13.4±1.8, 13°.13N×91°.51W, h20km±12km, MD3.7, ML3.3*
*IDC **20** 07:52:18.3±5.5, 13°.45N×91°.41W, h34km±42km, mb3.1/3, mb1 3.6/7, mb1mx3.5/25, mbtmp3.3/7, ML3.4/4, Error ellipse: s-maj=63.0km s-min=25.9km az=39.0*
ISC 20 07:52:15.4±3.2**, 13°.2N**±0°.1×**91°.48W**±0°.06**, h25**km±21km**, n21,** σ**1.09**/30**, mb3.4**/3**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**1.11**	**352**	eP	**Pn**	**07 52 35.0**	**-0.3**
JAT				eS	**Sb**	**07 52 51.3**	**+1.5**
FUG	**Fuego 3**	**1.37**	**27**	eP	**Pn**	**07 52 37.9**	**-1.2**
FUG				eS	**Sb**	**07 52 59.0**	**+1.3**
NBG	**Las Nubes**	**1.75**	**39**	eP	**Pn**	**07 52 44.1**	**-0.4**
NBG				eS	**Sb**	**07 53 07.9**	**-0.9**
RTR	**El Retiro**	**1.91**	**69**	eP	**Pn**	**07 52 46.4**	**-0.2**
SBLS	**San Blas**	**1.91**	**71**	eP	**Pn**	**07 52 45.7**	**-0.9**
SNJE	**San Jose**	**1.94**	**70**	eP	**Pn**	**07 52 46.5**	**-0.5**
RBDL	**Robledal**	**1.96**	**63**	eP	**Pn**	**07 52 46.4**	**-0.9**
RBDL				eS	**Sb**	**07 53 13.4**	**-1.2**
BOQS	**Boqueron**	**2.20**	**76**	eP	**Pn**	**07 52 49.5**	**-1.1**
SNET	**Serv Nac Est T**	**2.24**	**78**	eP	**Pn**	**07 52 50.6**	**-0.4**
SNET				eS	**Sn**	**07 53 18.5**	**+0.6**
SNET				AML	AML	07 53 29.4	
	comp=Z,212nm,0.5s						
LFU	**La Fuente**	**2.36**	**77**	eP	**Pn**	**07 52 52.5**	**-0.2**
MTO2	**Montecristo 2**	**2.37**	**60**	eP	**Pn**	**07 52 52.3**	**-0.7**
MTO2				eS	**Sn**	**07 53 23.3**	**+1.9**
LFRS	**El Faro**	**2.39**	**80**	eP	**Pn**	**07 52 52.6**	**-0.5**
LBRS	**Las Brisas**	**2.43**	**77**	eP	**Pn**	**07 52 53.0**	**-0.6**
MRL	**Marmol**	**2.53**	**43**	eP	**Pn**	**07 52 53.7**	**-1.4**
MRL				eS	**Sn**	**07 53 24.7**	**-0.5**
CMIG	**Matias Romero**	**5.06**	**320**	Pn	**Pn**	**07 53 29.0**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=131,slow=8.9,SNR=13						
CMIG				Sn	**Sn**	**07 54 27.9**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=166,slow=17,SNR=2.6						
JTS	**JuntasAbangare**	**7.02**	**114**	Pn	**Pn**	**07 53 58.7**	**+2.0**
	comp=Z,0.6nm,0.3s,baz=304,slow=15,SNR=11						
TEIG	**Tepich**	**7.62**	**23**	Pn	**Pn**	**07 54 05.4**	**+0.5**
	comp=Z,1.9nm,0.3s,baz=164,slow=15,SNR=21						
TXAR	**Lajitas Array**	**19.62**	**327**	P	**P**	**07 56 42.6**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=148,slow=11,SNR=7.4						
PDAR	**Pinedale Array**	**33.34**	**335**	P	**P**	**07 58 51.4**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=148,slow=8.2,SNR=3.4						
PDAR				PcP	**PcP**	**08 01 34.9**	**+1.5**
	comp=Z,0.8nm,1.1s,baz=354,slow=0.9,SNR=4.3						
NVAR	**Mina Array Bea**	**34.59**	**321**	P	**P**	**07 59 04.0**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=130,slow=8.4,SNR=5.1						
YKA	**Yellowknife Ar**	**51.90**	**347**	P	**P**	**08 01 19.8**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=152,slow=7.7,SNR=6.1						

*BJI **20** 08:02:58.9, 7°.70N×127°.10E, h20km, mB5.2/5, mb4.8/7, Ms4.7/2, Ms7 4.3/2*
*MAN **20** 08:02:59, 7°.38N×127°.33E, h49km, mb5.0, ML3.9, MS4.0*
*IDC **20** 08:03:00.9±4.0, 7°.52N×126°.88E, h28km±27km, mb4.1/24, mb1 4.2/24, mb1mx4.1/31, mbtmp4.1/24, MS3.6/5, Ms1 3.6/5, ms1mx3.1/45, Error ellipse: s-maj=22.4km s-min=11.7km az=81.0*
*ISCJB **20** 08:03:02.0±0.3, 7°.58N±0°.04×127°.20E±0°.04, h52km, mb4.3/34, MS3.7/5, Error ellipse: s-maj=5.8km s-min=5.6km az=172.6*
*NEIC **20** 08:03:02.1±0.4, 7°.62N×127°.11E, h35km, mb4.3/11, Error ellipse: s-maj=13.5km s-min=10.0km az=91.0*
*AUST **20** 08:03:04.0±3.1, 7°.58N×127°.21E, h64km, Error ellipse: s-maj=3.2km s-min=1.4km az=231.0*
ISC 20 08:03:03.5±0.4**, 7°.56N**±0°.05×**127°.18E**±0°.07**, h52**km**, n86,** σ**1.42**/92**, mb4.3**/34**, MS3.6**/5**, 3C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.10**	**236**	eP	**Pn**	**08 03 19.9**	**-2.7**
DAV	**Davao City (W)**	**1.66**	**253**	ePn	**Pn**	**08 03 31.1**	**+0.8**
DAV				eSn	**Sn**	**08 03 48.1**	**-2.3**
DAV	**Davao City (W)**	**1.66**	**253**	Pn	**Pn**	**08 03 30.1**	**-0.1**
	146nm,0.3s,baz=82,slow=7.1,SNR=16						
DAV				Sn	**Sn**	**08 03 54.6**	**+4.2**
	196nm,0.3s,baz=111,slow=23,SNR=13						
DMPH	**Davao City--Mi**	**1.72**	**254**	⇑eP	**Pn**	**08 03 32.0**	**+0.9**
DMPH				eS	**Sn**	**08 03 54.0**	**+2.0**
BUTP	**Butuan**	**2.08**	**312**	eP	**Pn**	**08 03 36.0**	**-0.1**
BUKP	**Musuan**	**2.12**	**279**	eP	**Pn**	**08 03 36.9**	**+0.3**
CTBH	**Cotabato--PC H**	**2.93**	**264**	⇓iP	**Pn**	**08 03 47.4**	**-0.3**
MSLP	**Maasin**	**3.44**	**318**	eP	**Pn**	**08 03 54.7**	**+0.1**
PAGZ	**Pagadian**	**3.77**	**275**	eP	**Pn**	**08 03 58.9**	**-0.3**
TBP	**Tagbilaran**	**3.90**	**303**	eP	**Pn**	**08 04 01.4**	**+0.4**
DCPH	**Dipolog City**	**3.92**	**285**	⇑eP	**Pn**	**08 04 03.0**	**+1.7**
PLP	**Palo**	**4.19**	**329**	⇑eP	Pn	08 04 09.0	+4.0
KSM	**Kuching**	**17.86**	**251**	ePn	**P**	**08 07 10.2**	**+1.5**
	6.6nm,0.4s						
KSM	**Kuching**	**17.86**	**251**	P	**P**	**08 07 10.1**	**+1.5**
	baz=18,SNR=3.6						
GUMO	**Guam**	**18.39**	**70**	LR	LR	08 13 25.3	
	comp=Z,100nm,18.4s,baz=278,slow=33						
WSI	**Waingapu**	**18.43**	**202**	S	Sn	08 10 19.5	-21
	baz=19,SNR=5.4						
MTN	**Manton Dam**	**20.65**	**169**	P	Pn	08 07 39.8	-2.0
	baz=21,SNR=6.5						
KDU	**Kakadu**	**20.79**	**165**	P	Pn	08 07 42.4	-1.1
	baz=21,SNR=3.5						
FITZ	**Fitzroy Crossi**	**25.54**	**183**	eP	**P**	**08 08 28.7**	**+1.1**
	5.8nm,0.8s						
FITZ	**Fitzroy Crossi**	**25.54**	**183**	P	**P**	**08 08 27.8**	**+0.2**
	3.5nm,0.7s,baz=15,slow=12,SNR=11						
FITZ	**Fitzroy Crossi**	**25.54**	**183**	P	**P**	**08 08 27.8**	**+0.2**
	baz=26,SNR=9.1						
JNU	**Nakatsue**	**25.67**	**7**	P	**P**	**08 08 29.1**	**+0.5**
JNU	**Nakatsue**	**25.67**	**7**	P	**P**	**08 08 29.1**	**+0.5**
	14nm,0.9s,baz=198,slow=3.2,SNR=3.7						
JNU				LR	LR	08 19 39.7	
	comp=Z,117nm,18.2s,baz=122,slow=39						
WRAB	**Tennant Creek**	**28.22**	**166**	eP	**P**	**08 08 52.8**	**+1.1**
	2.8nm,0.8s						
WRA	**Warramunga Arr**	**28.22**	**166**	P	**P**	**08 08 50.6**	**-1.1**
WRA	**Warramunga Arr**	**28.22**	**166**	P	**P**	**08 08 50.6**	**-1.1**
	4.2nm,1.0s,baz=349,slow=9.8,SNR=15						
CMAR	**Chiang Mai Arr**	**29.52**	**294**	P	**P**	**08 09 01.3**	**-2.0**
CMAR				PcP	**PcP**	**08 12 09.4**	**+1.6**
CMAR	**Chiang Mai Arr**	**29.52**	**294**	P	**P**	**08 09 01.3**	**-2.0**
	0.6nm,0.3s,baz=127,slow=10,SNR=3.7						
CMAR				PcP	**PcP**	**08 12 09.4**	**+1.6**
	1.0nm,0.8s,baz=134,slow=2.6,SNR=4.5						
CMAR				LR	LR	08 21 14.6	
	comp=Z,68nm,18.1s,baz=130,slow=37						
KSAR	**Wonju Array Be**	**29.75**	**1**	P	**P**	**08 09 04.2**	**-0.9**
KSRS	**Korea Array**	**29.77**	**1**	P	**P**	**08 09 04.2**	**-1.0**
	0.8nm,0.4s,baz=184,slow=8.4,SNR=4.1						
QIS	**Mount Isa**	**30.50**	**157**	P	**P**	**08 09 12.7**	**+0.8**
	baz=31,SNR=8.8						
MJAR	**Matsushiro Arr**	**30.56**	**18**	P	**P**	**08 09 11.7**	**-0.6**
MJAR	**Matsushiro Arr**	**30.56**	**18**	P	**P**	**08 09 11.7**	**-0.6**
	0.9nm,0.3s,baz=193,slow=10,SNR=5.3						
MJAR				LR	LR	08 20 38.9	
	comp=Z,117nm,18.9s,baz=120,slow=34						
ASAR	**Alice Springs**	**31.72**	**168**	P	**P**	**08 09 23.4**	**+0.8**
ASAR				PcP	**PcP**	**08 12 13.9**	**+0.5**
ASAR				ScP	**ScP**	**08 15 55.0**	**+2.3**
ASAR	**Alice Springs**	**31.72**	**168**	P	**P**	**08 09 23.4**	**+0.8**
	0.8nm,0.6s,baz=344,slow=7.1,SNR=12						
ASAR				PcP	**PcP**	**08 12 13.9**	**+0.5**
	0.8nm,0.7s,baz=348,slow=2.3,SNR=5.5						
ASAR				ScP	**ScP**	**08 15 55.0**	**+2.3**
	1.2nm,1.0s,baz=3.8,slow=3.2,SNR=5.8						
CTAO	**Charters Tower**	**33.27**	**146**	eP	**P**	**08 09 37.5**	**+1.2**
	23nm,1.4s						
MEEK	**Meekatharra**	**34.99**	**193**	P	**P**	**08 09 50.8**	**-0.3**
	baz=35,SNR=5.0						
HHC	**Hu-ho-hao-te**	**35.95**	**340**	eP	P	08 10 02.1	+2.8
HHC				S	**S**	**08 15 37.8**	**+3.5**
HHC				pmax	pmax		
	comp=Z,31nm,0.6s						
HHC				pmax	pmax		
	comp=Z,360nm,6.0s						
HHC				LR	LR		
	comp=N,300nm,14.3s						
HHC				LR	LR		
	comp=E,460nm,15.4s						
HHC				LR	LR		
	comp=Z,240nm,13.9s						
USRK	**Ussuriysk Arra**	**36.74**	**6**	P	**P**	**08 10 07.7**	**+1.9**
	comp=Z,5.3nm,0.7s,baz=186,slow=6.2,SNR=19						
MORW	**Morawa**	**37.96**	**196**	P	**P**	**08 10 16.4**	**0.0**
	baz=38,SNR=4.2						
ASAJ	**Asahikawa**	**38.83**	**18**	P	**P**	**08 10 25.8**	**+2.3**
ASAJ	**Asahikawa**	**38.83**	**18**	P	**P**	**08 10 25.8**	**+2.3**
	comp=Z,4.7nm,0.6s,baz=207,slow=16,SNR=5.5						
BLDU	**Ballidu**	**39.26**	**194**	P	**P**	**08 10 27.2**	**-0.1**
	baz=40,SNR=6.9						
BBOO	**Buckleboo**	**41.02**	**169**	P	**P**	**08 10 42.9**	**+1.1**
	baz=41,SNR=8.0						
STKA	**Stephens Creek**	**41.56**	**161**	P	**P**	**08 10 45.6**	**-0.6**
STKA	**Stephens Creek**	**41.56**	**161**	P	**P**	**08 10 45.6**	**-0.6**
	comp=Z,2.1nm,1.0s,baz=349,slow=13,SNR=3.0						
SONM	**Songino Array**	**43.86**	**340**	P	**P**	**08 11 02.7**	**-2.1**
SONM	**Songino Array**	**43.86**	**340**	P	**P**	**08 11 02.7**	**-2.1**
	comp=Z,1.0nm,0.8s,baz=156,slow=9.0,SNR=7.0						
DZM	**Mont Dzumac**	**48.46**	**128**	LR	LR	08 30 47.7	
	comp=Z,118nm,19.1s,baz=25,slow=34						
PETK	**Petropavlovsk-**	**51.75**	**23**	P	**P**	**08 12 06.7**	**+1.0**
PETK	**Petropavlovsk-**	**51.75**	**23**	P	**P**	**08 12 06.7**	**+1.0**
	comp=Z,4.8nm,1.0s,baz=297,slow=9.5,SNR=4.1						
MK31	**Makanchi Array**	**54.72**	**324**	eP	**P**	**08 12 27.3**	**-0.4**
MKAR	**Makanchi Array**	**54.72**	**324**	P	**P**	**08 12 27.3**	**-0.4**
MKAR				PcP	**PcP**	**08 13 29.8**	**-0.1**
MKAR	**Makanchi Array**	**54.72**	**324**	P	**P**	**08 12 27.3**	**-0.4**
	comp=Z,3.8nm,0.6s,baz=124,slow=8.0,SNR=54						
MKAR				PcP	**PcP**	**08 13 29.8**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=128,slow=4.0,SNR=3.0						
ZALV	**Zalesovo Beam**	**57.42**	**332**	P	**P**	**08 12 44.9**	**-1.9**
ZALV	**Zalesovo Beam**	**57.42**	**332**	P	**P**	**08 12 44.9**	**-1.9**
	comp=Z,1.5nm,0.8s,baz=98,slow=7.6,SNR=5.1						
KURK	**Kurchatov**	**58.80**	**326**	P	**P**	**08 12 55.8**	**-0.7**
KURBB	**Kurchatov Arra**	**58.80**	**326**	P	**P**	**08 12 55.8**	**-0.8**
	comp=Z,3.2nm,0.8s,baz=121,slow=6.8,SNR=38						
KKAR	**Karatay Array**	**60.79**	**315**	eP	**P**	**08 13 09.6**	**-0.8**
	comp=Z,2.1nm,0.7s						
BVAR	**Borovoye Array**	**64.40**	**326**	P	**P**	**08 13 33.8**	**-0.4**
BVAR				PcP	**PcP**	**08 14 08.1**	**-0.2**
BVAR	**Borovoye Array**	**64.40**	**326**	P	**P**	**08 13 33.8**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=119,slow=9.2,SNR=13						
BVAR				PcP	**PcP**	**08 14 08.1**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=129,slow=4.0,SNR=5.3						
GAMB	**Gambell**	**70.74**	**24**	eP	**P**	**08 14 13.7**	**-0.2**
	comp=Z,4.7nm,1.0s						
AKTO	**Aktyubinsk**	**70.97**	**321**	P	**P**	**08 14 15.3**	**-0.4**
AKTO	**Aktyubinsk**	**70.97**	**321**	P	**P**	**08 14 15.3**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=78,slow=9.8,SNR=4.4						
KDAK	**Kodiak Island**	**78.44**	**33**	P	P	08 15 01.2	+2.5
KDAK	**Kodiak Island**	**78.44**	**33**	P	P	08 15 01.2	+2.5
	comp=Z,3.2nm,0.6s,baz=231,slow=6.0,SNR=6.6						
RSO	**Redoubt South**	**78.57**	**30**	eP	**P**	**08 14 59.2**	**-0.4**
	comp=Z,69nm,0.4s						
COLD	**Coldfoot**	**80.22**	**23**	eP	P	08 15 11.9	+3.6
	comp=Z,2.1nm,0.8s						
MCK	**McKinley**	**80.56**	**27**	eP	**P**	**08 15 12.4**	**+2.2**
	comp=Z,10nm,1.0s						
SML	**Sawmill**	**80.78**	**29**	eP	P	08 15 14.4	+3.0
	comp=Z,2.9nm,1.0s						
ILAR	**Eielson Array**	**81.48**	**26**	P	**P**	**08 15 15.8**	**+0.8**
ILAR				pP	**pP**	**08 15 29.0**	**-1.0**
ILAR	**Eielson Array**	**81.48**	**26**	P	**P**	**08 15 15.8**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=245,slow=5.0,SNR=18						
ILAR				pP	**pP**	**08 15 29.0**	**-1.0**
	comp=Z,1.5nm,0.9s,baz=248,slow=5.6,SNR=7.5						
EGAK	**Eagle**	**83.93**	**26**	eP	P	08 15 30.6	+2.8
	comp=Z,2.6nm,0.8s						
ARCES	**ARCESS Array B**	**87.03**	**340**	P	**P**	**08 15 42.5**	**-0.6**
ARCES	**ARCESS Array B**	**87.03**	**340**	P	**P**	**08 15 42.5**	**-0.6**
	comp=Z,3.4nm,0.8s,baz=80,slow=6.7,SNR=3.8						
BR131	**Keskin Array S**	**87.94**	**310**	eP	**P**	**08 15 47.3**	**-1.0**
	comp=Z,1.4nm,0.7s						
BRTR	**Keskin Array B**	**87.94**	**310**	P	**P**	**08 15 47.2**	**-1.1**
BRTR	**Keskin Array B**	**87.94**	**310**	P	**P**	**08 15 47.2**	**-1.1**
	comp=Z,2.0nm,0.8s,baz=105,slow=4.3,SNR=9.5						
FINES	**FINESS Array B**	**88.69**	**332**	P	**P**	**08 15 50.6**	**-0.6**
FINES	**FINESS Array B**	**88.69**	**332**	P	**P**	**08 15 50.6**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=42,slow=3.1,SNR=7.1						
AKASG	**Malin Array Be**	**89.22**	**321**	P	**P**	**08 15 52.8**	**-1.1**
AKASG	**Malin Array Be**	**89.22**	**321**	P	**P**	**08 15 52.8**	**-1.1**
	comp=Z,1.6nm,0.6s,baz=71,slow=4.5,SNR=6.9						
YKA	**Yellowknife Ar**	**95.85**	**24**	P	**P**	**08 16 24.3**	**+0.1**
YKA	**Yellowknife Ar**	**95.85**	**24**	P	**P**	**08 16 24.3**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=301,slow=4.5,SNR=7.2						
TORD	**Torodi Ar. Bea**	**122.08**	**291**	PKP	**PKPdf**	**08 21 52.3**	**-1.1**
TORD				pPKP	**pPKPdf**	**08 22 05.2**	**-3.9**
TORD	**Torodi Ar. Bea**	**122.08**	**291**	PKP	**PKPdf**	**08 21 52.3**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=55,slow=1.9,SNR=7.0						
TORD				pPKP	**pPKPdf**	**08 22 05.2**	**-3.9**
	comp=Z,1.2nm,0.8s,baz=35,slow=2.7,SNR=6.4						

*ISCJB **20** 08:32:58.5±0.9, 39°.34N±0°.04×33°.20E±0°.04, h2km±8km, Error ellipse: s-maj=6.9km s-min=5.4km az=177.5*
*CSEM **20** 08:32:58.4±0.2, 39°.35N×33°.19E, h8km, MD2.6, Error ellipse: s-maj=4.7km s-min=3.4km az=151.0*
*DDA **20** 08:32:58.4, 39°.36N×33°.17E, h7km, MD2.6*
*ISK **20** 08:32:58.2, 39°.42N×33°.21E, h8km, MD2.5*
ISC 20 08:32:58.5±1.1**, 39°.34N**±0°.03×**33°.19E**±0°.03**, h6**km±11km**, n15,** σ**0.45**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFSR	**Af¯ar-Bala (A**	**0.14**	**319**	ePG	**Pg**	**08 33 01.2**	**-0.3**
AFSR				eSG	**Sg**	**08 33 03.2**	**-0.3**
AFSR	**Af¯ar-Bala (A**	**0.14**	**319**	ePg	**Pg**	**08 33 01.2**	**-0.3**
AFSR				eSg	**Sg**	**08 33 03.2**	**-0.3**
BBAL	**Bala**	**0.21**	**345**	i P	**Pg**	**08 33 03.4**	**+0.7**
BBAL				i S	**Sg**	**08 33 05.7**	**+0.2**
BBAL	**Bala**	**0.21**	**345**	i P	**Pg**	**08 33 03.4**	**+0.7**
BBAL				i S	**Sg**	**08 33 05.7**	**+0.2**
KAMT	**Kaman**	**0.41**	**86**	ePG	**Pg**	**08 33 06.5**	**+0.1**
KAMT				eSG	**Sg**	**08 33 12.3**	**+0.6**
CDAG	**Cicekdag**	**0.96**	**72**	i P	**Pg**	**08 33 16.6**	**-0.3**
CDAG				i S	**Sb**	**08 33 31.1**	**+0.6**
CDAG	**Cicekdag**	**0.96**	**72**	i P	**Pg**	**08 33 16.6**	**-0.3**
CDAG				i S	**Sb**	**08 33 31.1**	**+0.6**
ELDT	**Eldivan**	**1.16**	**9**	i P	**Pg**	**08 33 21.0**	**+0.2**
ELDT				i S	**Sb**	**08 33 36.8**	**+0.2**
ELDT	**Eldivan**	**1.16**	**9**	i P	**Pg**	**08 33 21.0**	**+0.2**
ELDT				i S	**Sb**	**08 33 36.8**	**+0.2**
KDHN	**Kadinhani**	**1.17**	**226**	i P	**Pg**	**08 33 21.3**	**+0.3**
KDHN				i S	**Sb**	**08 33 37.0**	**+0.3**
KDHN	**Kadinhani**	**1.17**	**226**	i P	**Pg**	**08 33 21.3**	**+0.3**
KDHN				i S	**Sb**	**08 33 37.0**	**+0.3**
CORM	**Corum**	**1.39**	**52**	ePN	**Pn**	**08 33 24.0**	**-0.6**
CORM	**Corum**	**1.39**	**52**	ePn	**Pn**	**08 33 24.0**	**-0.6**
YOZ	**Yozgat**	**1.67**	**79**	ePN	**Pn**	**08 33 28.0**	**-0.5**
YOZ	**Yozgat**	**1.67**	**79**	ePn	**Pn**	**08 33 28.0**	**-0.5**

KRSC 20 08:42:40.2±1.6**, 48°.52N**×**156°.66E, h10**km±10km**, ML4.1, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**2.95**	**2**	P	Pn	08 43 28.1	+1.0
PAU				eS	Sn	08 44 02.8	+0.2
MTVR	**Mutnovka**	**4.08**	**13**	eP	Pn	08 43 45.2	+2.3
MTVR				eS	Sn	08 44 33.4	+2.5
RUS	**Russkaya**	**4.09**	**16**	eP	Pn	08 43 45.0	+2.2
RUS				eS	Sn	08 44 32.8	+2.1
SMAR	**Somma**	**4.94**	**15**	P	Pn	08 43 57.1	+2.4
SDLR	**Sedlovina**	**4.97**	**16**	P	Pn	08 43 57.5	+2.5
SPN	**Mys Shipunski**	**5.05**	**24**	S	Sn	08 44 58.0	+3.6
MKZ	**Mys Kozlova**	**6.82**	**26**	P	Pn	08 44 22.6	+2.4

IDC 20 08:44:25.9±8.3**, 17°.05N**×**95°.07E, h84**km±73km**, mb3.1**/3**, mb1 3.4**/4**, mb1mx3.0**/27**, mbtmp3.1**/4**, ML4.0**/1**, MS3.0**/2**, Ms1 3.0**/2**, ms1mx2.7**/12**, Error ellipse: s-maj=63.7km s-min=23.7km az=57.0, Myanmar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**3.95**	**69**	P	Pn	08 45 24.1	-0.1
	2.7nm,0.3s,baz=252,slow=15,SNR=40						
CMAR				S	Sn	08 46 10.1	+0.7
	1.4nm,0.3s,baz=253,slow=27,SNR=5.2						
AAK	**Ala-Archa**	**30.96**	**330**	LR	LR	09 03 52.1	
	comp=Z,19nm,21.4s,baz=174,slow=38						
MKAR	**Makanchi Array**	**31.50**	**343**	P	P	08 50 40.3	+0.4
	0.2nm,0.6s,baz=148,slow=8.5,SNR=2.3						
SONM	**Songino Array**	**32.08**	**14**	LR	LR	09 03 34.2	
	comp=Z,51nm,21.5s,baz=87,slow=36						
WRA	**Warramunga Arr**	**53.28**	**132**	P	P	08 53 36.4	-0.2
	0.6nm,0.8s,baz=315,slow=7.2,SNR=5.5						
ASAR	**Alice Springs**	**55.46**	**136**	P	P	08 53 52.1	-0.3
	0.3nm,0.6s,baz=318,slow=7.2,SNR=5.9						

*NIED **20** 08:46:00, 45°.80N×151°.90E, h32km, Mw3.8 Best double couple: M0 5.01000×10^14 NP1: φs 314.00000°, δ83.00000°, λ34.00000°. NP2: φs 220.00000°, δ56.00000°, λ172.00000°.*
*ISCJB **20** 08:46:05.1±0.7, 45°.6N±0°.1×151°.8E±0°.1, h30km, mb3.4/7, Error ellipse: s-maj=20.9km s-min=5.0km az=150.4*
*JMA **20** 08:46:07.2±0.7, 45°.80N×151°.89E, h30km, M4.5*
*MOS **20** 08:46:09.7±1.1, 46°.61N×151°.23E, h31km, mb4.1/1, Error ellipse: s-maj=43.5km s-min=17.5km az=56.7*
*IDC **20** 08:46:18.0±9.6, 46°.18N×151°.49E, h116km±110km, mb2.9/6, mb1 3.2/7, mb1mx3.1/27, mbtmp2.9/7, ML3.4/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/6, Error ellipse: s-maj=74.3km s-min=22.9km az=171.0*
ISC 20 08:46:06.7±1.0**, 45°.5N**±0°.1×**151°.92E**±0°.10**, h30**km**, n36,** σ**1.76**/40**, mb3.4**/7**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.87**	**265**	ePN	**Pn**	**08 46 51.0**	**+0.6**
KUR				eS	**Sn**	**08 47 23.0**	**-0.9**

KUR				pmax	pmax			
	comp=Z,240nm,0.5s							
KUR				smax	smax			
	comp=N,480nm,0.5s							
KUR				smax	smax			
	comp=E,210nm,0.6s							
NEM2	**Nemuro 2**	**4.93**	**246**	P	**Pn**	**08 47 19.4**	**+0.8**	
NEM2				*e*S	**Sn**	**08 48 12.9**	**-1.7**	
JRA	**Rausu**	**5.10**	**254**	P	**Pn**	08 47 24.4	+3.4	
JNK	**Nakash**	**5.50**	**252**	P	**Pn**	**08 47 28.7**	**+2.2**	
JNK				*e*S	**Sn**	**08 48 29.3**	**+0.5**	
JAK	**Akkeshi**	**5.78**	**246**	P	**Pn**	**08 47 31.1**	**+0.8**	
JAK				*e*S	**Sn**	**08 48 33.8**	**-1.7**	
SKR	**Severo-Kuril's**	**5.86**	**27**	*e*PN	Pn	08 47 27.5	-3.9	
SKR				*e*S	Sn	08 48 28.2	-9.3	
SKR				pmax	pmax			
	comp=Z,70nm,0.7s							
SKR				smax	smax			
	comp=E,50nm,0.5s							
JTKR	**Abashiri--Toko**	**5.92**	**257**	P	**Pn**	**08 47 34.9**	**+2.7**	
JAR	**Ashorobuto**	**6.25**	**252**	P	**Pn**	**08 47 39.1**	**+2.3**	
JAR				*e*S	**Sn**	**08 48 50.0**	**+2.8**	
JMP	**Maruseppu**	**6.28**	**259**	P	Pn	08 47 40.4	+3.1	
JOB	**Onbets**	**6.38**	**248**	P	**Pn**	**08 47 40.1**	**+1.6**	
JOB				*e*S	**Sn**	**08 48 50.7**	**+0.4**	
JKK2	**Kamakawa 2**	**6.75**	**259**	P	**Pn**	**08 47 46.4**	**+2.8**	
ASAJ	**Asahikawa**	**6.78**	**261**	P	Pn	08 47 47.2	+3.1	
JCH	**Churui**	**6.82**	**248**	P	**Pn**	**08 47 45.5**	**+0.9**	
JCH				*e*S	**Sn**	**08 48 59.3**	**-1.9**	
JWK2	**Keihoku**	**7.06**	**272**	P	Pn	08 47 52.9	+5.1	
JFR	**Furan**	**7.10**	**254**	P	Pn	08 47 52.9	+4.5	
JEM	**Erimo**	**7.25**	**244**	P	**Pn**	**08 47 53.1**	**+2.6**	
JEM				*e*S	**Sn**	**08 49 11.4**	**-0.4**	
JNBK	**Urakawa-nobuka**	**7.38**	**247**	P	**Pn**	**08 47 52.7**	**+0.4**	
JBT2	**Biratori 2**	**7.41**	**251**	P	**Pn**	**08 47 53.8**	**+1.2**	
JBT2				*e*S	**Sn**	**08 49 15.3**	**-0.3**	
JEW	**Eniwo**	**8.00**	**254**	P	**Pn**	**08 48 03.3**	**+2.6**	
JNB	**Noboribetsu**	**8.42**	**252**	P	**Pn**	**08 48 07.5**	**+0.9**	
JNB				*e*S	**Sn**	**08 49 39.1**	**-1.5**	
JKB	**Kayabe**	**8.69**	**249**	P	**Pn**	**08 48 10.6**	**+0.4**	
JKB				*e*S	**Sn**	**08 49 42.7**	**-4.4**	
JYM2	**Yakumo 2**	**9.02**	**252**	P	**Pn**	**08 48 16.5**	**+1.7**	
JTM	**Tenmabayashi**	**9.24**	**243**	P	**Pn**	**08 48 18.0**	**+0.2**	
JSR	**Shiriuchi**	**9.27**	**248**	P	**Pn**	**08 48 19.2**	**+1.1**	
JTH	**Tanohata**	**9.28**	**236**	*e*S	Sn	08 49 54.0	-7.5	
JOSM	**Okushiri--Mats**	**9.64**	**253**	P	**Pn**	**08 48 23.6**	**+0.4**	
OFUJ	**Ofunato**	**9.96**	**233**	P	**Pn**	**08 48 27.1**	**-0.6**	
MJAR	**Matsushiro Arr**	**13.69**	**234**	P	**P**	**08 49 29.1**	**+2.1**	
	comp=E,0.2nm,0.3s,baz=32,slow=7.8,SNR=5.1							
MJAR				LR	LR	08 54 27.1		
	comp=E,33nm,20.4s,baz=20,slow=35							
ILAR	**Eielson Array**	**38.01**	**38**	P	**P**	**08 53 21.3**	**-0.3**	
	comp=E,0.1nm,0.4s,baz=272,slow=9.3,SNR=3.8							
INK	**Inuvik**	**43.12**	**32**	P	**P**	**08 54 03.2**	**-0.5**	
	comp=E,0.3nm,0.6s,baz=288,slow=5.1,SNR=3.6							
MKAR	**Makanchi Array**	**46.77**	**298**	P	**P**	**08 54 31.5**	**-1.6**	
MKAR	**Makanchi Array**	**46.77**	**298**	P	**P**	**08 54 31.5**	**-1.6**	
	comp=E,0.2nm,0.5s,baz=67,slow=6.6,SNR=4.6							
KURK	**Kurchatov**	**47.35**	**304**	P	**P**	**08 54 35.3**	**-2.2**	
KURK				pmax	pmax			
	comp=Z,1.0nm,0.3s							
KURBB	**Kurchatov Arra**	**47.44**	**304**	P	**P**	**08 54 35.3**	**-2.9**	
	comp=Z,0.5nm,0.3s,baz=73,slow=8.6,SNR=8.1							
YKA	**Yellowknife Ar**	**52.39**	**36**	P	**P**	**08 55 15.2**	**-0.4**	
	comp=Z,0.1nm,0.5s,baz=299,slow=6.8,SNR=4.9							
NVAR	**Mina Array Bea**	**63.74**	**61**	P	**P**	**08 56 37.1**	**+1.4**	
	comp=Z,0.2nm,0.5s,baz=303,slow=8.5,SNR=3.1							

*IDC **20** 08:50:17.7±0.7, 11°.66N×125°.88E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.8/25, mbtmp3.8/9, Error ellipse: s-maj=55.1km s-min=17.3km az=71.0*
*ISCJB **20** 08:50:23.5±0.6, 11°.62N±0°.08×125°.81E±0°.08, h53km, mb3.9/9, Error ellipse: s-maj=13.9km s-min=7.8km az=140.8*
*MAN **20** 08:50:27, 11°.75N×125°.47E, h55km, mb4.7, ML3.6, MS3.5 MAN INTENSITY II - BORONGAN CITY & CAN-AVID EASTERN SAMAR.*
ISC 20 08:50:25.1±0.8, 11°.58N±0°.09×125°.69E±0°.10, h53km, n15, σ2§00/20, mb3.7/9, 2C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.81**	**240**	⇓	*e*P	**Pn**	**Pn**	**08 50 40.9**	**+0.5**
PLP					*i* S	**Sn**	**Sn**	**08 50 50.8**	**-0.8**
OCLP	**Ormoc**	**1.18**	**244**		*e*P	**Pn**	**Pn**	**08 50 48.3**	**+2.9**
OCLP					*e*S	**Sn**	**Sn**	**08 50 56.1**	**-4.3**
MSLP	**Maasin**	**1.65**	**210**		*e*P	Pn	Pn	08 50 56.4	+4.6
MSLP					*e*S	**Sn**	**Sn**	**08 51 07.5**	**-4.4**
LLP	**Lapu-Lapu**	**2.11**	**234**	⇑	*e*P	**Pn**	**Pn**	**08 50 59.8**	**+1.8**
LLP					*e*S	**Sn**	**Sn**	**08 51 25.1**	**+2.0**
TBP	**Tagbilaran**	**2.60**	**224**		*e*P	**Pn**	**Pn**	**08 51 07.8**	**+3.1**
RCP	**Roxas**	**2.89**	**270**	⇑	*e*P	**Pn**	**Pn**	**08 51 09.2**	**+0.6**
WRA	**Warramunga Arr**	**32.46**	**165**	P		**P**	**P**	**08 56 49.4**	**-1.2**
	2.0nm,0.5s,baz=344,slow=9.7,SNR=2.2								
WRA				PcP		**PcP**	**PcP**	**08 59 36.7**	**-0.2**
	0.3nm,0.6s,baz=341,slow=3.1,SNR=5.6								
ASAR	**Alice Springs**	**35.94**	**167**	P		**P**	**P**	**08 57 20.5**	**-0.2**
	0.4nm,0.4s,baz=353,slow=7.5,SNR=11								
ASAR				PcP		**PcP**	**PcP**	**08 59 46.6**	**-0.2**
	0.3nm,0.5s,baz=347,slow=3.4,SNR=5.2								
STKA	**Stephens Creek**	**45.82**	**161**	P		**P**	**P**	**08 58 42.7**	**+0.8**
	1.3nm,0.6s,baz=334,slow=7.6,SNR=6.2								
MKAR	**Makanchi Array**	**50.65**	**322**	P		**P**	**P**	**08 59 19.3**	**+0.3**
	0.3nm,0.3s,baz=118,slow=7.5,SNR=5.5								
KURBB	**Kurchatov Arra**	**54.68**	**325**	P		**P**	**P**	**08 59 49.2**	**+0.5**
	1.1nm,0.4s,baz=121,slow=6.8,SNR=12								
ILAR	**Eielson Array**	**78.52**	**26**	P		**P**	**P**	**09 02 19.6**	**-0.8**
	0.4nm,0.8s,baz=255,slow=6.3,SNR=5.0								
ARCES	**ARCESS Array B**	**82.78**	**340**	P		**P**	**P**	**09 02 43.1**	**-0.1**
	8.6nm,1.1s,baz=79,slow=6.3,SNR=8.7								
FINES	**FINESS Array B**	**84.48**	**332**	P		**P**	**P**	**09 02 51.7**	**-0.2**
	2.8nm,0.9s,baz=85,slow=7.7,SNR=3.8								
YKA	**Yellowknife Ar**	**92.80**	**24**	P		**P**	**P**	**09 03 31.8**	**+0.2**
	0.1nm,0.7s,baz=300,slow=4.5,SNR=3.0								

*ISK **20** 08:50:25.4, 37°.27N×28°.24E, h16km, ML1.8*
*ISCJB **20** 08:50:27.6±0.6, 37°.23N±0°.04×28°.16E±0°.05, h0km, Error ellipse: s-maj=6.2km s-min=4.7km az=138.0*
*CSEM **20** 08:50:27.6±0.3, 37°.23N×28°.17E, h2km, MD2.8, Error ellipse: s-maj=6.7km s-min=5.0km az=43.0*
*DDA **20** 08:50:27.7, 37°.26N×28°.19E, h7km, MD2.8*
ISC 20 08:50:27.9±1.1, 37°.23N±0°.03×28°.15E±0°.03, h0km, n12, σ1§16/21, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.14**	**132**		*e*PG	**Pg**	**Pg**	**08 50 29.6**	**-1.0**
YER					*e*SG	**Sg**	**Sg**	**08 50 32.6**	**+0.2**
YER	**Yerkesik**	**0.14**	**132**		*e*Pg	**Pg**	**Pg**	**08 50 29.6**	**-1.0**
YER					*e*Sg	**Sg**	**Sg**	**08 50 32.6**	**+0.2**
MLSB	**Milas**	**0.31**	**282**		*e*PG	**Pg**	**Pg**	**08 50 33.4**	**-0.3**
MLSB	**Milas**	**0.31**	**282**		*e*Pg	**Pg**	**Pg**	**08 50 33.4**	**-0.3**
AYDN	**Tasoluk**	**0.48**	**333**		*i* P	**Pg**	**Pg**	**08 50 36.9**	**-0.2**
AYDN					*i* S	**Sg**	**Sg**	**08 50 44.2**	**+0.8**
AYDN	**Tasoluk**	**0.48**	**333**		*i* P	**Pg**	**Pg**	**08 50 36.9**	**-0.2**
AYDN					*i* S	**Sg**	**Sg**	**08 50 44.2**	**+0.8**
BODT	**Bodrum**	**0.69**	**256**		*e*PG	**Pg**	**Pg**	**08 50 40.8**	**-0.4**
BODT					*e*SG	**Sb**	**Sb**	**08 50 52.0**	**-0.9**
BODT	**Bodrum**	**0.69**	**256**		*e*Pg	**Pg**	**Pg**	**08 50 40.8**	**-0.4**
BODT					*e*Sg	**Sb**	**Sb**	**08 50 52.0**	**-0.9**
MANT	**Manisa**	**1.30**	**14**		*i* P	**Pg**	**Pg**	**08 50 51.9**	**-0.9**
MANT					*i* S	**Sb**	**Sb**	**08 51 10.5**	**-0.2**
MANT	**Manisa**	**1.30**	**14**		*i* P	**Pg**	**Pg**	**08 50 51.9**	**-0.9**
MANT					*i* S	**Sb**	**Sb**	**08 51 10.5**	**-0.2**
AKAS	**Kas**	**1.53**	**130**		*i* P	**Pg**	**Pg**	**08 50 56.8**	**-0.5**
AKAS					*i* S	**Sg**	**Sg**	**08 51 21.2**	**+4.0**
AKAS	**Kas**	**1.53**	**130**		*i* P	**Pg**	**Pg**	**08 50 56.8**	**-0.5**

*ISCJB **20** 08:53:01.8±0.6, 59°.24N±0°.02×27°.05E±0°.08, h0km, Error ellipse: s-maj=5.8km s-min=3.6km az=179.7*
*BER **20** 08:53:04.5±4.7, 59°.25N×27°.15E, h0km, ML2.3(NAO), Suspected explosion*
*CSEM **20** 08:53:04.7±0.4, 59°.28N×27°.00E, h1km, ML2.0, Error ellipse: s-maj=10.0km s-min=5.8km az=102.0, Mining explosion.*
*HEL **20** 08:53:05.3±0.7, 59°.32N×27°.11E, h0km, ML2.0, Explosion*
*NAO **20** 08:53:06.5±2.1, 59°.39N×26°.97E, ML2.3*

*IDC **20** 08:53:06.5±1.2, 59°.39N×26°.97E, h0km, mb1 3.5/3, mb1mx3.0/27, mbtmp3.3/3, ML2.6/3, Error ellipse: s-maj=32.6km s-min=9.4km az=80.0*
ISC 20 08:53:03.2±0.8, 59°.25N±0°.03×26°.98E±0°.04, h0km, n47, σ1§51/82, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**1.33**	**12**		PG	**Pg**	**Pg**	**08 53 28.2**	**-0.5**
VJF					MSG	**Sg**	**Sg**	**08 53 45.1**	**-0.7**
	comp=Z,5.5nm,0.2s								
VJF					SG	**Sg**	**Sg**	**08 53 45.1**	**-0.7**
VJF					RG	Rg	Rg	08 53 49.5	
VJF	**Virojoki**	**1.33**	**12**		PG	**Pg**	**Pg**	**08 53 28.2**	**-0.5**
VJF					SG	**Sg**	**Sg**	**08 53 45.1**	**-0.7**
VJF					MSG			08 53 45.1	
	comp=Z,5.5nm,0.2s								
VJF					RG	Rg	Rg	08 53 49.5	
VJF	**Virojoki**	**1.33**	**12**		Pg	**Pg**	**Pg**	**08 53 28.2**	**-0.5**
	comp=Z,5.5nm,0.2s,SNR=90								
VJF					Sg	**Sg**	**Sg**	**08 53 45.1**	**-0.7**
PVF	**Pernaja**	**1.42**	**337**		PG	**Pb**	**Pb**	**08 53 30.7**	**+0.2**
PVF					SG	**Sg**	**Sg**	**08 53 48.7**	**-0.1**
PVF					MSG			08 53 48.7	
	comp=Z,3.3nm,0.1s								
PVF	**Pernaja**	**1.42**	**337**		PG	**Pb**	**Pb**	**08 53 30.7**	**+0.2**
PVF					SG	**Sg**	**Sg**	**08 53 48.7**	**-0.1**
PVF					MSG			08 53 48.7	
	comp=Z,3.3nm,0.1s								
PVF	**Pernaja**	**1.42**	**337**		Pg	**Pb**	**Pb**	**08 53 30.7**	**+0.2**
PVF					Sg	**Sg**	**Sg**	**08 53 48.7**	**-0.1**
	comp=Z,3.3nm,0.1s,SNR=90								
MEF	**Metsahovi**	**1.63**	**308**		PG	**Pg**	**Pg**	**08 53 35.1**	**+0.7**
MEF					SG	**Sb**	**Sb**	**08 53 56.3**	**+1.0**
MEF					MSG			08 53 56.3	
	comp=Z,10nm,0.2s								
MEF	**Metsahovi**	**1.63**	**308**		PG	**Pg**	**Pg**	**08 53 35.1**	**+0.7**
MEF					SG	**Sb**	**Sb**	**08 53 56.3**	**+1.0**
MEF					MSG			08 53 56.3	
	comp=Z,10nm,0.2s								
MEF	**Metsahovi**	**1.63**	**308**	*e*P		**Pg**	**Pg**	**08 53 35.1**	**+0.7**
	SNR=50								
MEF					eS	**Sn**	**Sn**	**08 53 56.1**	**+1.3**
	comp=Z,48nm,0.6s,SNR=50								
MTSE	**Matsula**	**1.73**	**253**		PG	**Pb**	**Pb**	**08 53 36.6**	**+0.9**
MTSE					SG	**Sb**	**Sb**	**08 53 59.1**	**+1.2**
MTSE	**Matsula**	**1.73**	**253**		PG	**Pb**	**Pb**	**08 53 36.6**	**+0.9**
MTSE					SG	**Sb**	**Sb**	**08 53 59.1**	**+1.2**
MTSE	**Matsula**	**1.73**	**253**		Pg	**Pb**	**Pb**	**08 53 36.6**	**+0.9**
MTSE					Sg	**Sb**	**Sb**	**08 53 59.1**	**+1.2**
FIA0	**FINESS Array S**	**2.25**	**349**		Pn	**Pn**	**Pn**	**08 53 42.8**	**+1.2**
	baz=162,slow=16								
FIA0					Sn	**Sn**	**Sn**	**08 54 10.6**	**+0.5**
	baz=171,slow=18								
FIA0					Lg	Lg	Lg	08 54 13.4	
	baz=163,slow=28								
FIA0	**FINESS Array S**	**2.25**	**349**		Pn	**Pn**	**Pn**	**08 53 42.8**	**+1.2**
	baz=162,slow=16								
FIA0					Sn	**Sn**	**Sn**	**08 54 10.6**	**+0.5**
	baz=171,slow=18								
FIA0					Lg	Lg	Lg	08 54 13.4	
	baz=163,slow=28								
FIA0	**FINESS Array S**	**2.25**	**349**		PN	**Pn**	**Pn**	**08 53 42.6**	**+1.0**
	baz=164								
FIA0					SG	**Sn**	**Sn**	**08 54 11.4**	**+1.3**
FIA0					MSG			08 54 11.4	
	comp=Z,9.2nm,0.5s								
FIA0					RG	Rg	Rg	08 54 25.5	
FIA0	**FINESS Array S**	**2.25**	**349**		PN	**Pn**	**Pn**	**08 53 42.6**	**+1.0**
	baz=164								
FIA0					SG	**Sn**	**Sn**	**08 54 11.4**	**+1.3**
FIA0					MSG			08 54 11.4	
	comp=Z,9.2nm,0.5s								
FIA0					RG	Rg	Rg	08 54 25.5	
FIA0	**FINESS Array S**	**2.25**	**349**		Pn	**Pn**	**Pn**	**08 53 42.8**	**+1.2**
	baz=162,slow=16,SNR=4.9								
FIA0					Sn	**Sn**	**Sn**	**08 54 10.6**	**+0.5**
	baz=171,slow=18								
FIA0					Sg	**Sn**	**Sn**	**08 54 11.4**	**+1.3**
	comp=Z,9.2nm,0.5s,SNR=90								
FIA0					Lg	Lg	Lg	08 54 13.4	
	baz=163,slow=26,SNR=6.0								
FINES	**FINESS Array B**	**2.25**	**349**		Pn	**Pn**	**Pn**	**08 53 42.8**	**+1.2**
	comp=Z,1.9nm,0.3s,baz=166,slow=15,SNR=33								
FINES					Pg	**Pb**	**Pb**	**08 53 44.1**	**-0.5**
	comp=Z,1.9nm,0.3s,baz=165,slow=16,SNR=38								
FINES					Lg	Lg	Lg	08 54 13.1	
	comp=Z,3.4nm,0.3s,baz=167,slow=28,SNR=27								
FINES					Rg	Rg	Rg	08 54 26.0	
	comp=Z,6.1nm,0.3s,baz=168,slow=34,SNR=5.6								
KAF	**Kangasniemi**	**2.90**	**354**		PN	**Pn**	**Pn**	**08 53 52.5**	**+2.0**
KAF					SG	**Sn**	**Sn**	**08 54 26.5**	**+0.5**
KAF					MSG			08 54 26.5	
	comp=Z,8.4nm,0.4s								
KAF	**Kangasniemi**	**2.90**	**354**		PN	**Pn**	**Pn**	**08 53 52.5**	**+2.0**
KAF					SG	**Sn**	**Sn**	**08 54 26.5**	**+0.5**
KAF					MSG			08 54 26.5	
	comp=Z,8.4nm,0.4s								
KAF	**Kangasniemi**	**2.90**	**354**		Pn	**Pn**	**Pn**	**08 53 52.5**	**+2.0**
KAF					Sg	**Sn**	**Sn**	**08 54 26.5**	**+0.5**
	comp=Z,8.4nm,0.4s,SNR=90								
SLIT	**Slitere, Latvi**	**2.95**	**239**	*e*P		**Pb**	**Pb**	**08 53 57.2**	**+0.6**
	SNR=50								
SLIT					eS	**Sb**	**Sb**	**08 54 36.6**	**+3.4**
	comp=Z,250nm,0.7s,SNR=50								
KEF	**Keuruu**	**3.11**	**341**		PN	**Pn**	**Pn**	**08 53 56.3**	**+2.9**
KEF					SG	**Sb**	**Sb**	**08 54 39.2**	**+1.5**
KEF					MSG			08 54 39.2	
	comp=Z,6.0nm,0.4s								
KEF	**Keuruu**	**3.11**	**341**		PN	**Pn**	**Pn**	**08 53 56.3**	**+2.9**
KEF					SG	**Sb**	**Sb**	**08 54 39.2**	**+1.5**
KEF					MSG			08 54 39.2	
	comp=Z,6.0nm,0.4s								
KEF	**Keuruu**	**3.11**	**341**		Pn	**Pn**	**Pn**	**08 53 56.3**	**+2.9**
RAF	**Rauma**	**3.16**	**307**		PN	**Pb**	**Pb**	**08 53 57.8**	**-2.4**
	baz=116								
RAF					SG	**Sb**	**Sb**	**08 54 41.9**	**+2.7**
RAF					MSG			08 54 41.9	
	comp=Z,5.0nm,0.4s								
RAF	**Rauma**	**3.16**	**307**		PN	**Pb**	**Pb**	**08 53 57.8**	**-2.4**
	baz=116								
RAF					SG	**Sb**	**Sb**	**08 54 41.9**	**+2.7**
RAF					MSG			08 54 41.9	
	comp=Z,5.0nm,0.4s								
RAF	**Rauma**	**3.16**	**307**	*e*P		**Pb**	**Pb**	**08 53 57.8**	**-2.4**
	SNR=50								
RAF					eS	**Sn**	**Sn**	**08 54 35.4**	**+2.9**
	comp=Z,11nm,0.9s,SNR=50								
SUF	**Sumiainen**	**3.51**	**354**		PN	**Pn**	**Pn**	**08 54 01.1**	**+2.2**
SUF					SG	**Sb**	**Sb**	**08 54 51.2**	**+2.0**
SUF					MSG			08 54 51.2	
	comp=Z,5.5nm,0.4s								
SUF	**Sumiainen**	**3.51**	**354**		PN	**Pn**	**Pn**	**08 54 01.1**	**+2.2**
SUF					SG	**Sb**	**Sb**	**08 54 51.2**	**+2.0**
SUF					MSG			08 54 51.2	
	comp=Z,5.5nm,0.4s								
SUF	**Sumiainen**	**3.51**	**354**		Pn	**Pn**	**Pn**	**08 54 01.1**	**+2.2**
ISAL	**Salakas**	**3.71**	**188**	*e*P		**Pn**	**Pn**	**08 54 02.1**	**+0.4**
ISAL					eS	**Sn**	**Sn**	**08 54 46.1**	**0.0**
ISAL					AML	AML	AML	08 55 11.8	
	comp=Z,8.6nm,0.4s								
ISAL	**Salakas**	**3.71**	**188**	*e*P		**Pn**	**Pn**	**08 54 02.1**	**+0.4**
	SNR=48								
ISAL					eS	**Sn**	**Sn**	**08 54 46.1**	**0.0**
	comp=Z,8.6nm,0.4s,SNR=48								
IIGN	**Ignalina**	**3.93**	**186**	*e*P		Pn	Pn	08 54 08.8	+4.1
IIGN					eS	**Sn**	**Sn**	**08 54 53.1**	**+1.7**
IIGN					AML	AML	AML	08 55 18.1	
	comp=Z,8.2nm,0.3s								
IIGN	**Ignalina**	**3.93**	**186**	*e*P		Pn	Pn	08 54 08.8	+4.1
	SNR=45								
IIGN					eS	**Sn**	**Sn**	**08 54 53.1**	**+1.7**
	comp=Z,8.2nm,0.3s,SNR=45								
HFS	**Hagfors**	**6.79**	**283**		Pn	**Pn**	**Pn**	**08 54 45.2**	**+1.3**
	baz=127,slow=12								
HFS					Sn	**Sn**	**Sn**	**08 55 59.5**	**-2.3**
	baz=105,slow=28								
HFS					Lg	Lg	Lg	08 56 35.0	
	baz=87,slow=22								
HFS	**Hagfors**	**6.79**	**283**		Pn	**Pn**	**Pn**	**08 54 45.2**	**+1.3**
	baz=127,slow=12								
HFS					Sn	**Sn**	**Sn**	**08 55 59.5**	**-2.3**
	baz=105,slow=28								
HFS					Lg	Lg	Lg	08 56 35.0	
	baz=87,slow=22								
HFS	**Hagfors**	**6.79**	**283**		Pn	**Pn**	**Pn**	**08 54 45.2**	**+1.3**
	baz=127,slow=12,SNR=4.8								
HFS					Sn	**Sn**	**Sn**	**08 55 59.5**	**-2.3**
	baz=105,slow=24,SNR=7.8								
HFS					Lg	Lg	Lg	08 56 35.0	
	baz=87,slow=22,SNR=5.3								
NB2	**NORSAR Subarra**	**8.07**	**290**		Pn	**Pn**	**Pn**	**08 55 02.4**	**+0.8**
NB2					Lg	Lg	Lg	08 57 16.6	
	baz=94,slow=37								
NB2	**NORSAR Subarra**	**8.07**	**290**		Pn	**Pn**	**Pn**	**08 55 02.4**	**+0.8**
NB2					Lg	Lg	Lg	08 57 16.6	
	baz=94,slow=37								
NB2	**NORSAR Subarra**	**8.07**	**290**		Pn	**Pn**	**Pn**	**08 55 02.4**	**+0.8**
NB2					Lg	Lg	Lg	08 57 16.6	
	baz=94,slow=32,SNR=2.9								
NOA	**NORSAR Array B**	**8.07**	**290**		Lg	Lg	Lg	08 57 14.0	
	comp=Z,0.6nm,0.3s,baz=94,slow=12,SNR=4.3								
AKASG	**Malin Array Be**	**8.66**	**170**		Pn	**Pn**	**Pn**	**08 55 10.3**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=354,slow=13,SNR=4.1								
AKASG					Lg	Lg	Lg	08 57 34.9	
	comp=Z,0.8nm,0.3s,baz=351,slow=30,SNR=4.4								
ARA0	**ARCESS Array S**	**10.35**	**357**		Pn	**Pn**	**Pn**	**08 55 31.5**	**-1.2**
	baz=171,slow=16								
ARA0					Sn	Sn	Sn	08 57 20.8	-8.5
	baz=171,slow=28								
ARA0	**ARCESS Array S**	**10.35**	**357**		Pn	**Pn**	**Pn**	**08 55 31.5**	**-1.2**
	baz=171,slow=16								
ARA0					Sn	Sn	Sn	08 57 20.8	-8.5
	baz=171,slow=28								
ARA0	**ARCESS Array S**	**10.35**	**357**		Pn	**Pn**	**Pn**	**08 55 31.5**	**-1.2**
	baz=171,slow=15,SNR=0.5								
ARCES	**ARCESS Array B**	**10.35**	**357**		Pn	**Pn**	**Pn**	**08 55 31.4**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=173,slow=14,SNR=6.6								
ARCES					Sn	Sn	Sn	08 57 21.3	-8.0
	comp=Z,0.2nm,0.3s,baz=172,slow=24,SNR=4.0								

*MOS **20** 08:53:57.7±0.9, 7°.82N×73°.30W, h92km, mb5.1/89, Error ellipse: s-maj=5.9km s-min=4.4km az=74.2*
*IDC **20** 08:54:00.7±0.5, 7°.69N×73°.38W, h116km±3km, mb4.7/24, mb1 4.8/29, mb1mx4.8/31, mbtmp4.7/29, MS3.7/20, Ms1 3.7/20, ms1mx3.6/29, Error ellipse: s-maj=12.8km s-min=7.7km az=63.0*
*ISCJB **20** 08:54:01.5±0.3, 7°.77N±0°.02×73°.36W±0°.01, h131km±2km, mb4.8/259, Error ellipse: s-maj=3.7km s-min=2.3km az=9.3*
*NEIC **20** 08:54:01.8±0.1, 7°.71N×73°.27W, mb5.0/184, Error ellipse: s-maj=3.4km s-min=3.0km az=192.0*
NEIC Felt [II] at Medellin. Also felt at Bucaramanga and San Gil. Felt [III] at San Cristobal, Venezuela. Also felt at Merida and San Antonio del Tachira.
*FUNV **20** 08:54:03.3, 7.81N×73.55W, h119km, MW5.4*
*BGS **20** 08:54:05.8±1.4, 8°.44N×73°.11W, h123km, mb5.2*
*GCMT **20** 08:54:05.5±0.2, 7°.81N×73°.53W, h130km±2km, MW5.1, Moment Tensor Solution. s36,c45; s78,c123; Moment tensor: Scale 10^16Nm; Mrr2.90±.15; Mθθ-0.61±.16; Mϕϕ-2.29±.20; Mrθ-0.16±.11; Mθϕ2.14±.17; Mϕr-4.14±.13; Best double couple: M☉5.40000×10^16 NP1:ϕs300.00000°, δ28.00000°, λ40.00000°. NP2:ϕs173.00000°, δ73.00000°, λ112.00000°. Principal axes: T 5.4300, Plg57.0000°, Azm112.0000°; N -0.1500, Plg21.0000°, Azm346.0000°; P -5.2900, Plg24.0000°, Azm246.0000°; Data Used: IU II CN G IC.*
*SZGRF **20** 08:54:11.0, 8°.39N×71°.88W, h128km, mb5.4, Venezuela*
ISC 20 08:54:01.7±0.2, 7°.71N±0°.03×73°.45W±0°.03, h125km±1km, h125km:pP-P, n1205, σ1§18/1799, mb5.0/259, 491C-320D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.14**	**82**	⇓	*e*P	**Pn**	**Pn**	**08 54 27.4**	**+1.7**
CAPV					*e*S	**Sn**	**Sn**	**08 54 44.4**	**+0.4**
VIGV	**El Vigia**	**2.35

CDVI St. Croix 13.09 39 *e*Pn **Pn 08 57 00.7 -2.2**
STVI Saint Thomas 13.43 37 *e*Pn **Pn 08 57 05.3 -2.0**
GRTK Grand Turk 13.90 9 *e*Pn **Pn 08 57 12.7 -0.7**
GRTK *e*Sn **Sn 08 59 49.3 +2.3**
FDF Fort de France 13.93 59 *e*P Pn 08 57 10.4 -3.5
FDF *e* 08 59 44.7
FDF pmax pmax
comp=Z,112nm,0.4s
FDF Fort de France 13.93 59 *e*Pn Pn 08 57 10.4 -3.5
comp=Z,112nm,0.4s
FDF *e*Sn **Sn 08 59 44.7 -3.1**
FDF Fort de France 13.93 59 *e*P Pn 08 57 10.4 -3.5
PHG Guadaloupe-2 14.19 53 *e*P **Pn 08 57 16.3 -1.0**
BBGH Gun Hill 14.69 67 *e*Pn **Pn 08 57 22.9 -0.5**
TGUH Tegucigalpa,Un 14.96 296 *e*Pn **Pn 08 57 26.4 -0.6**
comp=Z,569nm,0.9s
ATAH Atahualpa 15.55 199 P **Pn 08 57 34.8 +0.2**
ATAH S **S 09 00 34.7 +1.6**
ATAH Atahualpa 15.55 199 P **Pn 08 57 34.8 +0.2**
comp=Z,1.4nm,0.3s,baz=17,slow=7.5,SNR=22
ATAH S **S 09 00 34.7 +1.6**
comp=Z,0.2nm,0.3s,baz=82,slow=14,SNR=6.3
PAYG Puerto Ayora 18.74 244 *e*P **Pn 08 58 13.0 +0.1**
comp=Z,89nm,0.7s
TEIG Tepich 19.00 312 *e*P **Pn 08 58 15.2 -0.7**
comp=Z,122nm,1.7s
TEIG S **S 09 01 45.0 +2.0**
TEIG Tepich 19.00 312 P **P 08 58 14.7 +0.9**
comp=Z,3.8nm,0.3s,baz=298,slow=0.9,SNR=22
TEIG S **S 09 01 45.0 +2.0**
comp=Z,0.9nm,0.3s,baz=45,slow=20,SNR=3.2
TEIG LR LR 09 05 27.9
comp=Z,253nm,20.6s,baz=303,slow=36
SAML Samuel 19.45 148 *e*P **P 08 58 18.2 -0.5**
comp=Z,12nm,0.8s
NNA Nana 19.86 190 *e*P **Pn 08 58 25.1 -0.8**
comp=Z,38nm,0.7s
NNA S **S 09 02 04.6 +4.6**
NNA Nana 19.86 190 P **P 08 58 23.7 +0.6**
comp=Z,1.4nm,0.3s,baz=352,slow=10,SNR=11
NNA S **S 09 02 04.6 +4.6**
comp=Z,0.4nm,0.3s,baz=60,slow=8.1,SNR=3.9
CMIG Matias Romero 22.89 296 P **P 08 58 51.8 -3.1**
CMIG Matias Romero 22.89 296 P **P 08 58 51.8 -3.1**
comp=Z,2.7nm,0.4s,baz=96,slow=7.3,SNR=7.1
CMIG LR LR 09 07 56.1
comp=Z,212nm,20.9s,baz=256,slow=36
LPAZ La Paz 24.42 168 *e*P **P 08 59 08.9 -0.4**
comp=Z,28nm,0.7s
LPAZ S **S 09 03 19.1 -1.7**
LPAZ La Paz 24.42 168 P **P 08 59 09.0 -0.4**
comp=Z,24nm,0.6s,baz=359,slow=8.2,SNR=76
LPAZ S **S 09 03 19.1 -1.7**
comp=Z,9.3nm,1.0s,baz=346,slow=4.2,SNR=4.2
LPAZ LR LR 09 09 06.3
comp=Z,127nm,19.9s,baz=184,slow=37
TIGA Tifton 25.44 339 ⇓P **P 08 59 19.5 +1.6**
baz=26
SIV San Ignacio 26.55 153 P **P 08 59 26.6 -1.5**
SIV PcP **PcP 09 02 49.3 -0.4**
SIV San Ignacio 26.55 153 P **P 08 59 26.6 -1.5**
comp=Z,8.6nm,0.9s,baz=339,slow=9.2,SNR=21
SIV PcP **PcP 09 02 49.3 -0.4**
comp=Z,16nm,0.8s,baz=359,slow=2.7,SNR=4.5
SIV LR LR 09 10 12.9
comp=Z,234nm,19.2s,slow=37
GOGA Godfrey 27.21 341 *e*P **P 08 59 34.8 +1.0**
GOGA *e**PP **pP 09 00 01.5 +0.8**
GOGA pmax pmax
comp=Z,21nm,0.9s
GOGA Godfrey 27.21 341 *e*P **P 08 59 34.8 +1.0**
comp=Z,20nm,0.9s
GOGA *e*pP **pP 09 00 01.5 +0.8**
JSC Jenkinsville 27.41 346 *e*P **P 08 59 37.1 +1.5**
JSC Jenkinsville 27.41 346 *e*P **P 08 59 37.0 +1.5**
LRAL Lakeview Retre 28.16 335 *e*P **P 08 59 44.2 +2.0**
comp=Z,23nm,1.0s
KMSC Kings Mountain 28.25 346 ⇑P **P 08 59 44.6 +1.5**
baz=28
VBMS Vicksburg 29.10 329 *e*P **P 08 59 53.1 +2.5**
comp=Z,25nm,0.6s
TKL Tuckaleechee C 29.38 343 P **P 08 59 54.1 +1.0**
TKL Tuckaleechee C 29.38 343 P **P 08 59 54.1 +1.0**
comp=Z,3.2nm,0.7s,baz=154,slow=15,SNR=8.1
TKL LR LR 09 11 18.2
comp=Z,172nm,19.9s,baz=107,slow=35
CPCT Cooper Cave 29.42 341 *e*P **P 08 59 55.2 +1.8**
TZTN Tazewell 30.15 344 *e*P **P 09 00 01.6 +1.8**
comp=Z,24nm,1.0s
TZTN *e*pP **pP 09 00 27.8 +0.7**
WVT Waverly 31.19 337 *e*P **P 09 00 09.5 +0.5**
WVT pmax pmax
comp=Z,29nm,0.9s
WVT Waverly 31.19 337 *e*P **P 09 00 09.5 +0.5**
comp=Z,29nm,0.9s
MVL Millersville 32.26 356 *e*P **P 09 00 20.1 +1.8**
comp=Z,12nm,0.6s
MVL *e*PcP **PcP 09 03 05.2 +1.4**
MIAR Mount Ida 32.50 328 *e*ScP **ScP 09 06 37.7 +0.6**
WCI Wyandotte Cave 32.53 341 *e*P **P 09 00 21.9 +1.1**
WCI pmax pmax
comp=Z,23nm,0.8s
WCI Wyandotte Cave 32.53 341 *e*P **P 09 00 21.9 +1.1**
comp=Z,22nm,0.8s
732A Laxson Ranch, 32.59 313 ⇑P **P 09 00 21.5 +0.1**
baz=33
732A ⇑ScP **ScP 09 06 37.9 +0.4**
baz=33,SNR=5.4
USIN University of 32.76 339 *e*P **P 09 00 24.1 +1.3**
comp=Z,78nm,0.9s
USIN *e*pP **pP 09 00 50.4 +0.3**
632A Uvalde 32.91 315 ⇑P **P 09 00 24.7 +0.5**
baz=33
632A ⇑ScP **ScP 09 06 39.3 +0.7**
baz=33,SNR=8.2
WHTX Lake Whitney 32.91 320 ⇑P **P 09 00 25.3 +1.2**
baz=33
WHTX ⇓ScP **ScP 09 06 37.5 -1.0**
baz=33
SSPA Standing Stone 33.03 354 *e*P **P 09 00 26.9 +1.9**
comp=Z,35nm,1.3s
SSPA *e*PcP **PcP 09 03 07.0 +1.1**
SIUC Southern Illin 33.12 337 *e*P **P 09 00 26.8 +1.0**
comp=Z,48nm,0.8s
SIUC *e*pP **pP 09 00 52.8 -0.4**
SIUC *e*ScP **ScP 09 06 39.1 0.0**
532A Rocksprings 33.36 315 ⇑P **P 09 00 28.6 +0.4**
baz=34,SNR=12
532A ⇓ScP **ScP 09 06 40.9 +0.7**
baz=34
631A Perdido Creek 33.41 314 ⇑P **P 09 00 28.7 +0.1**
baz=34
631A ⇑ScP **ScP 09 06 41.1 +0.8**
baz=34,SNR=12
BLO Bloomington 33.46 341 *e*P **P 09 00 30.1 +1.3**
BLO *e* 09 03 08.2
BLO pmax pmax
comp=Z,46nm,0.7s
BLO Bloomington 33.46 341 *e*P **P 09 00 30.1 +1.3**
comp=Z,46nm,0.7s
BLO *e*PcP **PcP 09 03 08.2 +1.0**
BLO *e*ScP **ScP 09 06 40.2 -0.1**
ACSO Alum Creek Sta 33.49 347 *e*P **P 09 00 30.8 +1.7**
comp=Z,30nm,0.9s
JCT Junction City 33.50 316 *e*P **P 09 00 30.0 +0.7**
JCT pmax pmax
comp=Z,3.0nm,0.3s
JCT Junction City 33.50 316 *e*P **P 09 00 30.0 +0.7**
comp=Z,3.2nm,0.3s
JCT Junction City 33.50 316 ⇓P **P 09 00 29.5 +0.2**
baz=34
JCT ⇑ScP **ScP 09 06 40.9 +0.2**
baz=34
OLIL Olney 33.60 339 *e*pP **pP 09 00 57.5 +0.1**
OLIL *e*PcP **PcP 09 03 08.8 +1.2**
432A Menard 33.73 317 ⇓P **P 09 00 31.3 -0.1**
baz=34,SNR=6.8
432A ⇑ScP **ScP 09 06 42.0 +0.4**
baz=34
531A Rocksprings 33.83 315 ⇑P **P 09 00 32.1 -0.1**
baz=34,SNR=8.9
531A ⇑ScP **ScP 09 06 42.4 +0.6**
baz=34,SNR=6.8
FVM French Village 33.83 336 *e*P **P 09 00 32.6 +0.5**
FVM *e* 09 03 09.3
FVM pmax pmax
comp=Z,33nm,0.6s
FVM French Village 33.83 336 *e*P **P 09 00 32.6 +0.5**
comp=Z,33nm,0.6s
FVM *e*PcP **PcP 09 03 09.3 +1.0**
332A Millersview 34.01 317 ⇓P **P 09 00 33.7 0.0**
baz=34,SNR=11
332A ⇓ScP **ScP 09 06 42.7 +0.2**
baz=34
431A Sonora 34.17 316 ⇓P **P 09 00 35.2 0.0**
baz=34,SNR=6.6
431A ⇓ScP **ScP 09 06 43.2 +0.1**
baz=34,SNR=5.2
BDFB Brasilia 34.25 133 P **P 09 00 35.7 -0.4**
BDFB PcP **PcP 09 03 10.2 +0.2**
BDFB Brasilia 34.25 133 P **P 09 00 35.7 -0.4**
comp=Z,40nm,0.9s,baz=297,slow=11,SNR=42
BDFB PcP **PcP 09 03 10.2 +0.2**
comp=Z,12nm,0.7s,baz=349,slow=1.8,SNR=5.9
BDFB LR LR 09 16 30.3
comp=Z,276nm,18.6s,baz=135,slow=40
232A Coleman 34.26 318 ⇑P **P 09 00 35.6 -0.3**
baz=34,SNR=14
232A ⇓ScP **ScP 09 06 43.9 +0.6**
baz=34
530A J-C Ranch, Com 34.38 314 ⇓P **P 09 00 37.2 +0.3**
baz=35,SNR=19
530A ⇑ScP **ScP 09 06 44.3 +0.5**
baz=35,SNR=11
331A San Angelo 34.42 317 ⇓P **P 09 00 37.4 +0.1**
baz=35,SNR=7.4
331A ⇑ScP **ScP 09 06 44.4 +0.4**
baz=35,SNR=9.6
BINY Binghamton 34.42 357 *e*P **P 09 00 38.8 +1.6**
comp=Z,32nm,1.0s
BINY *e*PcP **PcP 09 03 11.3 +1.4**
430A Baggett Ranch, 34.67 315 ⇓P **P 09 00 39.7 +0.1**
baz=35
430A ⇑ScP **ScP 09 06 45.7 +0.8**
baz=35
TUL1 Tulsa 34.72 327 ⇑P **P 09 00 39.9 +0.2**
baz=35
TUL1 ⇑ScP **ScP 09 06 43.8 -1.0**
baz=35
ABTX Abilene, Hawle 34.72 319 ⇓P **P 09 00 40.3 +0.5**
baz=35,SNR=11
ABTX ⇓ScP **ScP 09 06 45.9 +0.9**
baz=35
231A Bronte 34.73 318 ⇓P **P 09 00 39.9 -0.1**
baz=35,SNR=7.9
231A ⇓ScP **ScP 09 06 45.2 +0.2**
baz=35
SFIN Scholer Farm 34.74 342 ⇑P **P 09 00 40.5 +0.6**
baz=35,SNR=26
330A Mertzon 34.99 316 ⇓P **P 09 00 42.3 0.0**
baz=35
330A ⇓ScP **ScP 09 06 46.0 0.0**
baz=35
529A Stev Forest Ra 35.00 313 ⇑P **P 09 00 42.5 +0.2**
baz=35,SNR=9.7
529A ⇓ScP **ScP 09 06 46.9 +0.8**
baz=35,SNR=6.4
429A Davenport Ranc 35.04 314 ⇑P **P 09 00 42.4 -0.3**
baz=35
429A ⇓ScP **ScP 09 06 47.1 +0.9**
baz=35
Z32A Haskell 35.05 320 ⇑P **P 09 00 43.6 +0.9**
baz=35,SNR=18
Z32A ⇓ScP **ScP 09 06 47.1 +0.9**
baz=35
628A Black Gap, Mar 35.14 312 ⇓P **P 09 00 43.6 +0.1**
baz=35
628A ⇑ScP **ScP 09 06 47.5 +0.9**
baz=35
131A Roby 35.24 319 ⇓P **P 09 00 44.6 +0.3**
baz=35
131A ⇓ScP **ScP 09 06 47.7 +0.8**
baz=35
230A Sterling City 35.24 317 ⇑P **P 09 00 44.9 +0.5**
baz=35
230A ⇓ScP **ScP 09 06 48.0 +1.1**
baz=35,SNR=10.0
528A Cox Ranch, San 35.43 313 ⇑P **P 09 00 46.2 +0.2**
baz=36,SNR=15
528A ⇑ScP **ScP 09 06 48.4 +0.7**
baz=36
Z31A Sharp Cattle R 35.49 320 ⇑P **P 09 00 47.0 +0.6**
baz=36
Z31A ⇑ScP **ScP 09 06 48.8 +1.0**
baz=36
627A Terlingua Ranc 35.49 311 ⇑P **P 09 00 47.1 +0.5**
baz=36,SNR=32
627A ⇓ScP **ScP 09 06 48.5 +0.5**
baz=36
Y32A R-V Farms, Ver 35.49 321 ⇓P **P 09 00 46.8 +0.4**
baz=36
Y32A ⇓ScP **ScP 09 06 48.9 +1.1**
baz=36
ACCN Adirondack Com 35.54 360 *e*P **P 09 00 48.6 +2.0**
comp=Z,14nm,0.9s
ACCN *e*PcP **PcP 09 03 14.2 +1.1**
130A Snyder 35.57 318 ⇓P **P 09 00 47.8 +0.7**
baz=36,SNR=7.4
130A ⇑ScP **ScP 09 06 48.5 +0.4**
baz=36
WMOK Wichita Mounta 35.58 323 *e*P **P 09 00 46.8 -0.4**
WMOK *e*S **S 09 06 10.1 -3.9**
WMOK pmax pmax
comp=Z,14nm,0.8s
WMOK Wichita Mounta 35.58 323 *e*P **P 09 00 46.8 -0.4**
comp=Z,14nm,0.8s
WMOK *e*S **S 09 06 10.1 -3.9**
329A Wagon Wheel Ra 35.60 315 ⇑P **P 09 00 47.7 +0.2**
baz=36,SNR=12
329A ⇓ScP **ScP 09 06 49.0 +0.8**
baz=36
AAM Ann Arbor 35.61 347 *e*P **P 09 00 49.7 +2.4**
AAM pmax pmax
comp=Z,40nm,0.6s
AAM Ann Arbor 35.61 347 *e*P **P 09 00 49.7 +2.4**
comp=Z,40nm,0.6s
TXAR Lajitas Array 35.64 311 P **P 09 00 48.3 +0.5**
TXAR pP **pP 09 01 14.4 -1.1**
TXAR PcP **PcP 09 03 15.1 +1.2**
TXAR ScP **ScP 09 06 48.5 0.0**
TXAR PKiKP **PKiKP 09 10 33.9 -0.6**
TXAR Lajitas Array 35.64 311 P **P 09 00 48.3 +0.5**
comp=Z,3.2nm,0.6s,baz=123,slow=8.3,SNR=66
TXAR pP **pP 09 01 14.4 -1.1**
comp=Z,4.6nm,0.6s,baz=126,slow=8.8,SNR=6.8
TXAR PcP **PcP 09 03 15.1 +1.2**
comp=Z,6.4nm,0.7s,baz=148,slow=5.3,SNR=12
TXAR ScP **ScP 09 06 48.5 0.0**
comp=Z,2.2nm,0.9s,baz=122,slow=6.1,SNR=6.0
TXAR PKiKP **PKiKP 09 10 33.9 -0.6**
comp=Z,0.1nm,0.4s,baz=134,slow=3.6,SNR=3.5
TXAR LR LR 09 17 30.3
comp=Z,50nm,20.1s,baz=0.0,slow=40
FFD Franklin Falls 35.66 2 *e*P **P 09 00 49.4 +1.8**
comp=Z,7.9nm,0.5s
FFD *e*PcP **PcP 09 03 14.6 +1.2**
428A Kincaid Ranch, 35.66 314 ⇓P **P 09 00 48.7 +0.7**
baz=36,SNR=20
428A ⇑ScP **ScP 09 06 49.4 +0.9**
baz=36,SNR=9.9
229A Bryant Ranch, 35.76 316 ⇓P **P 09 00 49.2 +0.4**
baz=36,SNR=9.1
229A ⇑ScP **ScP 09 06 49.5 +0.7**
baz=36
HNH Hanover 35.87 1 *e*P **P 09 00 51.5 +2.0**
Y31A Rekieta Farm, 35.98 320 ⇑P **P 09 00 51.4 +0.8**
baz=36,SNR=19
Y31A ⇑ScP **ScP 09 06 50.7 +1.2**
baz=36
527A Woodward Ranch 36.02 312 ⇑P **P 09 00 51.8 +0.6**
baz=36,SNR=9.7
527A ⇓ScP **ScP 09 06 50.9 +0.9**
baz=36
626A Big Bend Ranch 36.10 311 ⇓P **P 09 00 52.2 +0.4**
baz=36,SNR=14
626A ⇑ScP **ScP 09 06 50.9 +0.7**
baz=36
Z30A Sanderson Ranc 36.10 319 ⇓P **P 09 00 52.0 +0.3**
baz=36,SNR=8.0
Z30A ⇑ScP **ScP 09 06 50.5 +0.4**
baz=36,SNR=6.1
328A Wristen Ranch, 36.12 315 ⇓P **P 09 00 51.9 0.0**
baz=36,SNR=12
328A ⇓ScP **ScP 09 06 50.6 +0.5**
baz=36
NCB Newcomb 36.13 359 *e*P **P 09 00 53.5 +1.8**
comp=Z,27nm,0.9s
MDV Middlebury 36.15 0 *e*P **P 09 00 53.4 +1.5**
comp=Z,87µm,0.7s
MDV *e*PcP **PcP 09 03 15.7 +0.8**
129A Stewart Farms, 36.20 317 ⇑P **P 09 00 53.3 +0.7**
baz=36
129A ⇑ScP **ScP 09 06 50.8 +0.4**
baz=36,SNR=12
X31A McDonald Ranch 36.24 321 ⇑P **P 09 00 53.4 +0.6**
baz=36
X31A ⇑ScP **ScP 09 06 51.5 +1.1**
baz=36
427A Hayter Ranch, 36.24 313 ⇑P **P 09 00 53.2 +0.2**
baz=36,SNR=23
427A ⇓ScP **ScP 09 06 51.8 +1.2**
baz=36
526A Mary Lane Ranc 36.33 312 ⇓P **P 09 00 53.9 +0.1**
baz=36,SNR=7.3
526A ⇓ScP **ScP 09 06 51.9 +0.9**
baz=36
Y30A Stafford Cattl 36.33 320 ⇓P **P 09 00 54.0 +0.4**
baz=36,SNR=11
Y30A ⇓ScP **ScP 09 06 51.7 +0.8**
baz=36
228A UT Block 9, Go 36.39 316 ⇓ScP **ScP 09 06 51.5 +0.4**
baz=37
Z29A Hungry Hill Ra 36.47 318 ⇓P **P 09 00 55.1 +0.2**
baz=37,SNR=18
Z29A ⇑ScP **ScP 09 06 51.4 0.0**
baz=37,SNR=7.4
W31A Holland Ranch, 36.59 322 ⇓P **P 09 00 55.6 -0.2**
baz=37,SNR=9.3
W31A ⇓ScP **ScP 09 06 51.9 +0.2**
baz=37
327A Balmorhea Ranc 36.59 314 ⇓P **P 09 00 56.8 +0.8**
baz=37
LCO Las Campanas 36.60 176 *e*P **P 09 00 55.9 -0.2**
comp=Z,35nm,0.9s
426A McDonald Obser 36.60 313 ⇓P **P 09 00 56.7 +0.5**
baz=37,SNR=21
426A ⇓ScP **ScP 09 06 53.4 +1.2**
baz=37
128A Castleberry Fa 36.61 317 ⇑P **P 09 00 56.4 +0.3**
baz=37,SNR=18
128A ⇓ScP **ScP 09 06 52.5 +0.6**
baz=37
X30A Coker Ranch, T 36.68 320 ⇓P **P 09 00 57.5 +0.9**
baz=37,SNR=24
X30A ⇑ScP **ScP 09 06 53.0 +0.9**
baz=37
LONY Lake Ozonia 36.78 359 *e*P **P 09 00 58.6 +1.3**
comp=Z,26nm,1.1s
LONY *e*PcP **PcP 09 03 18.0 +1.2**
227A Bennet, Jal 36.81 315 ⇓P **P 09 00 57.9 +0.1**
baz=37
Y29A Porterfield Fa 36.82 319 ⇑P **P 09 00 58.7 +0.9**
baz=37,SNR=12
Y29A ⇓ScP **ScP 09 06 53.6 +0.9**
baz=37
326A Caldwell Ranch 36.91 314 ⇓P **P 09 00 59.2 +0.5**
baz=37
326A ⇑ScP **ScP 09 06 55.0 +1.9**
baz=37
V31A Spring Creek L 36.92 323 ⇓P **P 09 00 59.4 +0.8**
baz=37
V31A ⇓ScP **ScP 09 06 53.2 +0.2**
baz=37
Z28A Tucker Farm, M 36.94 318 ⇑P **P 09 00 59.1 +0.2**
baz=37,SNR=7.6
Z28A ⇓ScP **ScP 09 06 54.1 +0.9**
baz=37
FRNY Flat Rock 36.99 360 *e*P **P 09 01 00.2 +1.3**
comp=Z,20nm,1.0s
FRNY *e*PcP **PcP 09 03 18.2 +0.8**
MSNY Massena 37.17 358 *e*P **P 09 01 02.1 +1.7**
comp=Z,145nm,0.8s
X29A Tulia 37.20 320 ⇓P **P 09 01 01.5 +0.5**
baz=37,SNR=5.8
X29A ⇓ScP **ScP 09 06 55.0 +0.9**
baz=37
Y28A McKinney Farm, 37.22 319 ⇑P **P 09 01 01.6 +0.3**
baz=37,SNR=8.4
Y28A ⇓ScP **ScP 09 06 55.4 +1.1**
baz=37
EMMW East Machias 37.23 7 *e*P **P 09 01 02.4 +1.5**
comp=Z,52nm,0.8s
EMMW *e*PcP **PcP 09 03 18.9 +0.8**
127A Arkansas Junct 37.24 316 ⇓P **P 09 01 02.0 +0.5**
baz=37
127A ⇑ScP **ScP 09 06 54.9 +0.6**
baz=37
CPUP Villa Florida 37.28 156 P P 09 00 58.1 -3.5
CPUP PcP **PcP 09 03 19.2 +0.6**
CPUP pPcP 09 03 53.3
CPUP ScP **ScP 09 06 53.8 -0.6**
CPUP Villa Florida 37.28 156 P P 09 00 58.1 -3.5
comp=Z,5.3nm,0.7s,baz=323,slow=8.6,SNR=14
CPUP PcP **PcP 09 03 19.2 +0.6**
comp=Z,8.4nm,0.7s,baz=302,slow=3.3,SNR=8.8
CPUP pPcP 09 03 53.3
comp=Z,9.0nm,0.7s,baz=306,slow=2.8,SNR=7.4
CPUP ScP **ScP 09 06 53.8 -0.6**
comp=Z,1.1nm,0.6s,baz=22,slow=6.7,SNR=3.0
CPUP LR LR 09 16 51.3
comp=Z,101nm,18.1s,baz=224,slow=37
425A Indio Mountain 37.36 312 ⇓P **P 09 01 02.9 +0.3**
baz=38,SNR=11
CLNB Carlsbad 37.37 315 *e*P **P 09 01 03.1 +0.6**
comp=Z,4.5nm,1.2s
226B Tecolote Peak, 37.46 315 ⇑P **P 09 01 04.2 +0.9**
baz=38,SNR=9.9
226B ⇓ScP **ScP 09 06 55.5 +0.3**
baz=38
AMTX Amarillo 37.47 320 *e*P **P 09 01 05.5 +2.2**
comp=Z,29nm,0.8s
AMTX *e*ScP **ScP 09 06 56.3 +1.2**
AMTX Amarillo 37.47 320 ⇑P **P 09 01 03.9 +0.6**
baz=38,SNR=11
AMTX ⇓ScP **ScP 09 06 55.9 +0.8**
baz=38
AMTX ⇓ScP **ScP 09 06 55.9 +0.8**
baz=38
Z27A Tatum 37.51 317 ⇑P **P 09 01 04.1 +0.4**
baz=38,SNR=33
Z27A ⇑ScP **ScP 09 06 55.8 +0.5**
baz=38,SNR=10
KSU1 Kansas State U 37.56 330 *e*P **P 09 01 03.7 -0.2**
comp=Z,23nm,0.8s
X28A Dimmitt 37.57 319 ⇓P **P 09 01 04.6 +0.4**
baz=38,SNR=8.9
X28A ⇓ScP **ScP 09 06 56.9 +1.4**
baz=38
W29A Amarillo 37.60 321 ⇑P **P 09 01 05.1 +0.7**
baz=38
W29A ⇓ScP **ScP 09 06 56.1 +0.5**
baz=38
MSTX Muleshoe 37.61 318 ⇑P **P 09 01 04.8 +0.3**
baz=38,SNR=10
MSTX ⇓ScP **ScP 09 06 56.3 +0.6**
baz=38,SNR=10
325A Bean Ranch, Si 37.66 313 ⇓P **P 09 01 05.9 +0.8**
baz=38,SNR=11
325A ⇑ScP **ScP 09 06 53.5 -2.6**
baz=38
GDL2 Guadalupe Moun 37.67 315 *e*P **P 09 01 06.8 +1.7**
126A Clayton Basin, 37.68 315 ⇑P **P 09 01 05.7 +0.5**
baz=38
126A ⇓ScP **ScP 09 06 56.6 +0.6**
baz=38
T31A Randall Ranch, 37.73 325 ⇓P **P 09 01 05.7 +0.2**
baz=38
T31A ⇑ScP **ScP 09 06 56.3 +0.2**
baz=38
Y27A Causey 37.81 318 ⇑P **P 09 01 06.7 +0.4**
baz=38,SNR=9.7
Y27A ⇑ScP **ScP 09 06 53.6 -2.9**
baz=38
U30A WK&E Inc. Balk 37.91 323 ⇑P **P 09 01 06.9 -0.1**
baz=38
U30A ⇑ScP **ScP 09 06 57.0 +0.2**
baz=38
225A Deer Hill, Car 37.95 314 ⇑P **P 09 01 08.4 +0.9**
baz=38,SNR=16
225A ⇑ScP **ScP 09 06 57.3 +0.1**
baz=38
V29A Stinnett 38.00 322 ⇑P **P 09 01 08.9 +1.1**

baz=38
Z26A Caprock 38.01 316 ⇑P P 09 01 08.3 +0.4
baz=38,SNR=22
Z26A ⇑ScP ScP 09 06 57.1 -0.2
baz=38
324A Moseley Ranch, 38.07 313 ⇑P P 09 01 08.7 +0.2
baz=38,SNR=18
324A ⇓ScP ScP 09 06 57.4 -0.1
baz=38
MNTX Cornudas Mount 38.13 313 *e*P P 09 01 09.2 +0.4
comp=Z,9.6nm,0.6s
MNTX Cornudas Mount 38.13 313 ⇓P P 09 01 09.7 +0.8
baz=38,SNR=47
MNTX ⇑ScP ScP 09 06 57.8 +0.2
baz=38
MNTX ⇑ScP ScP 09 06 57.8 +0.2
baz=38
125A Gardner Draw, 38.13 315 ⇑P P 09 01 09.5 +0.5
baz=38,SNR=23
GLMI Grayling 38.23 347 *e*P P 09 01 11.1 +1.7
comp=Z,62nm,0.8s
X27A F and S Farms, 38.23 319 ⇓P P 09 01 10.5 +0.8
baz=38
Y26A Elida 38.28 317 ⇑P P 09 01 10.8 +0.6
baz=38,SNR=11
SCIA State Center 38.29 336 *e*P P 09 01 10.2 +0.2
comp=Z,41nm,0.6s
V28A Channing 38.36 321 ⇓ScP ScP 09 06 59.2 +0.7
baz=38
224A Cornudas Mount 38.43 314 ⇓P P 09 01 12.6 +1.1
baz=39,SNR=52
224A ⇓ScP ScP 09 06 59.9 +0.9
baz=39
W27A Bowe Ranch, En 38.46 319 ⇑P P 09 01 12.1 +0.4
baz=39,SNR=17
W27A ⇓ScP ScP 09 06 59.3 +0.4
baz=39
Z25A Roswell 38.52 316 ⇓P P 09 01 13.2 +1.0
baz=39,SNR=20
Z25A ⇑ScP ScP 09 06 59.4 +0.2
baz=39
X26A CR and CF Fran 38.64 318 ⇑P P 09 01 14.1 +0.9
baz=39,SNR=13
X26A ⇓ScP ScP 09 07 00.1 +0.5
baz=39
124A Stringfield Ra 38.72 314 ⇓P P 09 01 15.1 +1.1
baz=39,SNR=11
124A ⇓ScP S 09 07 01.4 -0.6
baz=39
T29A Hugoton 38.72 323 ⇓ScP ScP 09 07 00.6 +0.8
baz=39
V27A Dan Oppiter Fa 38.75 320 ⇓P P 09 01 20.0 +5.9
baz=39
V27A ⇑ScP S 09 07 01.5 -0.7
baz=39
Y25A Mesa, Roswell 38.87 317 ⇑P P 09 01 16.0 +0.9
baz=39,SNR=18
Y25A ⇑ScP ScP 09 07 00.9 +0.3
baz=39,SNR=5.4
W26A Owens Ranch, T 38.94 319 ⇓P P 09 01 16.5 +0.9
baz=39,SNR=8.2
Z24A Sheeppen Canyo 39.00 315 ⇑P P 09 01 17.4 +1.1
baz=39,SNR=14
Z24A ⇑ScP S 09 07 04.4 -1.7
baz=39
223A Chaparral, Ant 39.05 313 ⇑P P 09 01 17.3 +0.7
baz=39
U27A Thompson Grove 39.16 321 ⇓P P 09 01 18.2 +0.7
baz=39
U27A ⇓ScP ScP 09 07 02.4 +0.8
baz=39,SNR=10
T28A Walsh 39.18 323 ⇓P P 09 01 18.2 +0.6
baz=39
T28A ⇓ScP ScP 09 07 02.1 +0.5
baz=39
X25A Clemmons Ranch 39.20 317 ⇓P P 09 01 19.4 +1.6
baz=39,SNR=9.0
123A Bell Site, Whi 39.26 314 ⇓P P 09 01 19.7 +1.3
baz=39
Y24A Capitan 39.38 316 ⇑P P 09 01 20.7 +1.3
baz=40,SNR=40
Y24A ⇓ScP ScP 09 07 03.7 +1.1
baz=40
V26A Tequesquite Ra 39.38 320 ⇓P P 09 01 20.5 +1.1
baz=40,SNR=9.2
V26A ⇑ScP ScP 09 07 02.8 +0.3
baz=40,SNR=6.8
W25A X Bar L Ranch, 39.47 318 ⇓P P 09 01 20.9 +0.9
baz=40,SNR=18
W25A ⇑ScP ScP 09 07 03.7 +0.9
baz=40
T27A Campo 39.51 322 ⇑P P 09 01 20.9 +0.5
baz=40
T27A ⇑ScP ScP 09 07 03.3 +0.4
baz=40
Z23A Rita Site, Whi 39.57 315 ⇓P P 09 01 22.0 +1.1
baz=40,SNR=12
Z23A ⇓ScP ScP 09 07 05.0 +1.7
baz=40
222A Williams Famil 39.59 312 ⇑P P 09 01 22.1 +0.9
baz=40,SNR=13
222A ⇓ScP ScP 09 07 04.6 +1.2
baz=40
U26A Atchley Ranch, 39.72 320 ⇓ScP ScP 09 07 04.2 +0.3
baz=40
RCBR Riachuelo 39.80 109 *e*P P 09 01 22.9 0.0
comp=Z,10nm,0.8s
Y23A Lovelace Mesa, 39.81 316 ⇑P P 09 01 24.5 +1.5
baz=40,SNR=14
Y23A ⇑ScP ScP 09 07 06.2 +1.9
baz=40
122A Conniff Cattle 39.82 313 ⇑P P 09 01 23.8 +0.8
baz=40
V25A Rancho No Teng 39.94 319 ⇑P P 09 01 25.6 +1.5
baz=40,SNR=9.4
V25A ⇓ScP ScP 09 07 06.0 +1.3
baz=40
221A Mesquite Ranch 40.04 312 ⇓P P 09 01 26.5 +1.7
baz=40,SNR=9.8
221A ⇑ScP ScP 09 07 06.9 +1.8
baz=40
Z22A Elephant Butte 40.08 314 ⇓P P 09 01 26.8 +1.5
baz=40,SNR=15
Z22A ⇑ScP ScP 09 07 07.1 +1.8
baz=40
BGNE Belgrade 40.09 331 ⇑P P 09 01 25.2 +0.2
baz=40
BGNE ⇓ScP ScP 09 07 05.4 +0.5
baz=40
W24A Lazy 6 Ranch, 40.09 318 ⇑P P 09 01 26.2 +0.9
baz=40
W24A ⇑ScP ScP 09 07 06.6 +1.2
baz=40
T26A Comanche Natio 40.12 322 ⇑P P 09 01 26.6 +1.1
baz=40
T26A ⇑ScP ScP 09 07 06.5 +1.1
baz=40,SNR=8.3
U25A Circle Dot Ran 40.15 320 ⇓P P 09 01 27.0 +1.3
baz=40
U25A ⇓ScP ScP 09 07 06.4 +0.8
baz=40
V24A Rampart Ranch, 40.30 318 ⇑P P 09 01 28.7 +1.6
baz=40,SNR=17
V24A ⇑ScP ScP 09 07 07.9 +1.7
baz=40
121A Cookes Peak, D 40.30 313 ⇓P P 09 01 28.2 +1.1
baz=40,SNR=16
121A ⇓ScP ScP 09 07 08.6 +2.4
baz=40
BNM Barren Site 40.33 315 *e*P P 09 01 29.4 +2.1
comp=Z,7.0nm,1.0s
S26A Kim 40.33 322 ⇑P P 09 01 27.9 +0.8
baz=40
S26A ⇑ScP ScP 09 07 07.2 +1.0
baz=40,SNR=5.4
R27A Eads 40.36 323 ⇑P P 09 01 27.7 +0.3
baz=40,SNR=10
R27A ⇑ScP ScP 09 07 07.0 +0.8
baz=40
LPM Los Pinos Moun 40.42 316 *e*P P 09 01 30.2 +2.2
LPM *e*pP pP 09 01 56.1 0.0
Y22A Socorro 40.45 315 ⇓P P 09 01 29.8 +1.5
baz=41,SNR=9.7
Y22A ⇑ScP ScP 09 07 09.0 +2.2
baz=41
Y22D IRIS PASSCAL I 40.49 315 ⇑P P 09 01 29.1 +0.6
baz=41
220A Playas Peak, P 40.54 311 ⇓P P 09 01 30.5 +1.5
baz=41,SNR=22
220A ⇑ScP ScP 09 07 08.6 +1.5
baz=41
W23A Werner Place, 40.56 317 ⇑P P 09 01 31.1 +1.9
baz=41,SNR=9.1
W23A ⇑ScP ScP 09 07 09.1 +1.8
baz=41
LENM Lemitar 40.58 315 *e*P P 09 01 31.5 +2.2
LENM *e*pP pP 09 01 57.4 0.0
T25A Trinidad 40.60 321 ⇓P P 09 01 30.8 +1.3
baz=41
T25A ⇑ScP ScP 09 07 08.3 +1.0
baz=41,SNR=5.2
Z21A St. Cloud Mine 40.62 314 ⇓P P 09 01 31.0 +1.3
baz=41
Z21A ⇑ScP ScP 09 07 10.0 +2.5
baz=41
ANMO Albuquerque 40.65 317 *e*P P 09 01 32.7 +2.8
comp=Z,61nm,1.9s
ANMO *e*pP pP 09 01 58.8 +0.7
KSCO Kaye Shedlock' 40.74 324 ⇓P P 09 01 31.3 +0.8
baz=41
KSCO ⇑ScP ScP 09 07 08.0 +0.3
baz=41
R26A Arlington 40.75 323 ⇑P P 09 01 31.9 +1.3
baz=41,SNR=6.8
R26A ⇓ScP ScP 09 07 08.8 +1.0
baz=41
X22A Bernardo 40.78 316 ⇑P P 09 01 31.7 +0.7
baz=41
LAZ Ladron 40.82 315 *e*P P 09 01 32.9 +1.6
comp=Z,10nm,0.7s
LAZ *e*pP pP 09 01 59.7 +0.2
LAZ *e*ScP ScP 09 07 10.5 +2.2
319A Douglas 40.86 310 ⇑P P 09 01 33.5 +1.9
baz=41,SNR=8.9
319A ⇓ScP ScP 09 07 09.8 +1.5
baz=41
V23A Ortiz Mt. (NFS 40.92 318 ⇓P P 09 01 34.6 +2.5
baz=41,SNR=12
V23A ⇑ScP ScP 09 07 10.1 +1.5
baz=41
120A U Bar Ranch, L 40.93 312 ⇓P P 09 01 34.2 +2.0
baz=41,SNR=15
120A ⇑ScP ScP 09 07 10.4 +1.7
baz=41
S25A Robets Cordova 40.94 321 ⇑P P 09 01 33.7 +1.4
baz=41,SNR=6.7
S25A ⇑ScP ScP 09 07 09.7 +1.1
baz=41,SNR=11
SPMN St. Paul 40.97 339 ⇑P P 09 01 32.6 +0.5
baz=41,SNR=7.9
T24A Torres, Weston 40.97 320 ⇑P P 09 01 34.1 +1.6
baz=41,SNR=6.9
T24A ⇑ScP ScP 09 07 10.0 +1.1
baz=41
Y21A Point of Rocks 40.98 315 ⇑P P 09 01 34.5 +1.8
baz=41,SNR=6.8
Y21A ⇑ScP ScP 09 07 10.1 +1.2
baz=41
R25A Fountain Ranch 41.16 322 ⇑P P 09 01 35.1 +1.1
baz=41
R25A ⇑ScP ScP 09 07 10.0 +0.5
baz=41
Z20A Nine Sixteen R 41.18 313 ⇓P P 09 01 36.4 +2.1
baz=41,SNR=7.4
Z20A ⇓ScP ScP 09 07 11.2 +1.6
baz=41
Q26A Hugo 41.20 324 ⇑P P 09 01 35.7 +1.4
baz=41
Q26A ⇓ScP ScP 09 07 10.8 +1.2
baz=41
ECSD EROS Data Cent 41.21 334 *e*ScP ScP 09 07 09.8 +0.5
U23A El Rito 41.26 319 ⇑P P 09 01 37.0 +2.1
baz=41,SNR=11
U23A ⇑ScP ScP 09 07 11.4 +1.4
baz=41
X21A Alamocita Cree 41.29 315 ⇑P P 09 01 36.9 +1.7
baz=42,SNR=21
X21A ⇑ScP ScP 09 07 12.2 +2.1
baz=42
S24A Houchin Ranch, 41.41 321 ⇓P P 09 01 37.6 +1.3
baz=42
S24A ⇓ScP ScP 09 07 11.8 +1.1
baz=42
Y20A Horse Springs, 41.43 314 ⇓P P 09 01 37.9 +1.5
baz=42,SNR=17
Y20A ⇑ScP ScP 09 07 13.9 +3.1
baz=42
O27A Beecher Island 41.46 326 ⇓P P 09 01 37.3 +0.9
baz=42
O27A ⇑ScP ScP 09 07 10.4 -0.1
baz=42
V22A San Miguel Ran 41.50 318 ⇑P P 09 01 38.3 +1.4
baz=42,SNR=6.1
V22A ⇑ScP ScP 09 07 12.8 +1.9
baz=42
P26A Davis Ranch, A 41.52 324 ⇓P P 09 01 37.8 +0.9
baz=42
P26A ⇑ScP ScP 09 07 11.6 +0.8
baz=42
W21A San Fidel 41.56 316 ⇑P P 09 01 38.7 +1.3
baz=42,SNR=10
T23A Casias Ranch, 41.57 319 ⇑P P 09 01 39.3 +1.8
baz=42,SNR=10
T23A ⇑ScP ScP 09 07 12.9 +1.6
baz=42
Q25A Bedland, Calha 41.63 323 ⇓P P 09 01 38.9 +1.0
baz=42
Q25A ⇓ScP ScP 09 07 11.9 +0.6
baz=42
R24A Sanders Place, 41.71 322 ⇑P P 09 01 40.4 +1.8
baz=42
R24A ⇓ScP ScP 09 07 12.5 +0.8
baz=42
U22A Llaves 41.72 318 ⇑P P 09 01 40.2 +1.5
baz=42,SNR=9.5
X20A Quemado 41.84 315 ⇓P P 09 01 41.0 +1.3
baz=42,SNR=16
N27A Anderson Farm, 41.91 326 ⇑P P 09 01 40.6 +0.6
baz=42
N27A ⇑ScP ScP 09 07 12.4 0.0
baz=42
V21A Milan 41.93 317 ⇑P P 09 01 42.2 +1.8
baz=42,SNR=12
S23A Nye Farm, Mont 41.95 320 ⇑P P 09 01 41.5 +1.0
baz=42
O26A Horse Wrangler 41.96 325 ⇓P P 09 01 42.0 +1.5
baz=42
P25A Willow Gulch B 41.97 324 ⇓P P 09 01 41.8 +1.2
baz=42
P25A ⇓ScP ScP 09 07 13.7 +1.0
baz=42,SNR=5.5
T22A Edith 42.12 319 ⇑P P 09 01 43.5 +1.6
baz=42,SNR=5.9
T22A ⇓ScP ScP 09 07 15.4 +1.9
baz=42
R23A Moffat 42.13 321 ⇓P P 09 01 43.3 +1.2
baz=42
R23A ⇓ScP ScP 09 07 14.7 +1.2
baz=42
W20A Ramah 42.15 315 ⇓P P 09 01 44.0 +1.8
baz=42
Q24A Divide 42.20 322 ⇑P P 09 01 44.5 +1.9
baz=42
Q24A ⇓ScP ScP 09 07 14.8 +1.0
baz=42
U21A Nageezi 42.29 318 ⇓P P 09 01 44.7 +1.4
baz=42
U21A ⇑ScP ScP 09 07 15.4 +1.4
baz=42
N26A Koester Ranch, 42.30 326 ⇑P P 09 01 45.3 +2.0
baz=42
O25A Wiggins 42.33 324 ⇓ScP ScP 09 07 15.0 +0.9
baz=42
P24A Kohler Place, 42.40 323 ⇑ScP ScP 09 07 15.4 +0.9
baz=43
TUC Tucson 42.43 310 *e*P P 09 01 44.9 +0.6
TUC *e**PP pP 09 02 12.6 0.0
TUC pmax pmax
comp=Z,3.0nm,0.9s
TUC Tucson 42.43 310 *e*P P 09 01 44.9 +0.6
comp=Z,2.9nm,0.9s
TUC *e*pP pP 09 02 12.6 0.0
TUC *e*ScP ScP 09 07 15.8 +1.3
V20A Brimhall 42.49 316 ⇑P P 09 01 45.9 +1.0
baz=43
V20A ⇓ScP ScP 09 07 17.0 +2.1
baz=43
S22A 4UR Ranch, Cre 42.50 320 ⇑P P 09 01 46.5 +1.4
baz=43,SNR=11
T21A Navajo Lake 42.52 318 ⇓P P 09 01 46.9 +1.7
baz=43
CAM4 Nova Friburgo 42.52 135 (P) pP 09 02 11.3 -2.4
CAM4 *i* 09 02 13.0
CAM4 *i* 09 02 18.1
CAM4 *i* 09 02 22.6
CAM4 *i* 09 02 29.9
CAM4 *i* 09 02 30.1
CAM4 *i* 09 02 39.9
Q23A Hartsel 42.58 322 ⇑P P 09 01 47.1 +1.4
baz=43
Q23A ⇑ScP ScP 09 07 16.2 +0.9
baz=43
M26A McRoberts Ranc 42.70 327 ⇑P P 09 01 48.6 +2.2
baz=43
R22A Saguache, Gunn 42.74 320 ⇓P P 09 01 48.8 +1.7
baz=43
R22A ⇑ScP ScP 09 07 17.9 +1.9
baz=43
BRSD Miller 42.80 333 ⇑P P 09 01 47.0 0.0
baz=43,SNR=13
X18A Snowflake 42.87 314 ⇑P P 09 01 49.5 +1.6
baz=43,SNR=8.4
P23A Jefferson 42.87 322 ⇑ScP ScP 09 07 17.5 +1.0
baz=43
O24A Longmont 42.89 324 ⇓P P 09 01 49.4 +1.3
baz=43
O24A ⇑ScP ScP 09 07 17.1 +0.8
baz=43
EYMN Ely 42.93 342 *e*P P 09 01 48.0 0.0
comp=Z,39nm,0.6s
EYMN *e*pP pP 09 02 15.7 -0.7
ISCO Idaho Springs 43.01 323 *e*P P 09 01 50.7 +1.6
ISCO *e**PP pP 09 02 17.5 0.0
ISCO pmax pmax
comp=Z,11nm,0.8s
ISCO Idaho Springs 43.01 323 *e*P P 09 01 50.7 +1.6
comp=Z,11nm,0.8s
ISCO *e*pP pP 09 02 17.5 0.0
ISCO Idaho Springs 43.01 323 ⇑P P 09 01 50.8 +1.6
baz=43,SNR=8.5
ISCO ⇓ScP ScP 09 07 18.1 +1.1
baz=43,SNR=6.5
W18A Petrified Fore 43.01 315 ⇓P P 09 01 50.6 +1.4
baz=43,SNR=11
S21A Coal Bank Pass 43.07 319 ⇑P P 09 01 51.4 +1.7
baz=43,SNR=9.3
S21A ⇑ScP ScP 09 07 18.4 +1.1
baz=43
K27A Flueckinger Fa 43.09 329 ⇓P P 09 01 49.8 +0.3
baz=43
K27A ⇑ScP ScP 09 07 16.6 -0.4
baz=43
M25A Palm-Egli Farm 43.18 326 ⇑ScP ScP 09 07 18.1 +0.7
baz=43
Q22A Crested Butte, 43.22 321 ⇓P P 09 01 52.6 +1.7
baz=43,SNR=7.7
Q22A ⇓ScP ScP 09 07 19.1 +1.2
baz=43,SNR=6.0
N24A Carr 43.24 325 ⇑P P 09 01 51.4 +0.6
baz=43
N24A ⇑ScP ScP 09 07 18.3 +0.6
baz=43
MVCO Mesa Verde 43.28 318 *e*P P 09 01 53.3 +1.9
comp=Z,14nm,0.9s
MVCO *e*pP pP 09 02 19.4 -0.3
MVCO *e*ScP ScP 09 07 19.4 +1.4
MVCO Mesa Verde 43.28 318 ⇓P P 09 01 52.9 +1.5
baz=44,SNR=8.6
MVCO ⇓ScP ScP 09 07 19.7 +1.6
baz=44
R21A Cimarron 43.33 320 ⇓P P 09 01 53.2 +1.6
baz=44
O23A Lake Granby, G 43.45 323 ⇓P P 09 01 54.0 +1.3
baz=44
SMCO Snowmass 43.45 321 *e*P P 09 01 55.6 +2.8
comp=Z,5.6nm,0.8s
SMCO *e*pP pP 09 02 20.2 -1.0
S20A Disappointment 43.54 319 ⇑P P 09 01 55.2 +1.8
baz=44,SNR=22
S20A ⇓ScP ScP 09 07 21.1 +2.0
baz=44
P22A Eagle 43.57 322 ⇓P P 09 01 54.8 +1.2
baz=44,SNR=7.5
P22A ⇓ScP ScP 09 07 19.9 +0.8
baz=44,SNR=9.8
K26A Motz Farm, Whi 43.58 328 ⇑P P 09 01 55.0 +1.6
baz=44
Q21A Lamborn Mesa, 43.62 321 ⇓P P 09 01 55.3 +1.4
baz=44
L25A Engebretsen Ra 43.62 327 ⇓ScP ScP 09 07 20.8 +1.6
baz=44
M24A Cheyenne 43.63 325 ⇓P P 09 01 55.7 +1.7
baz=44
M24A ⇓ScP ScP 09 07 20.1 +0.7
baz=44,SNR=8.0
R20A Redvale 43.76 319 ⇓P P 09 01 56.7 +1.6
baz=44,SNR=10.0
R20A ⇑ScP ScP 09 07 21.7 +1.8
baz=44
O22A Kremmling 43.79 323 ⇓P P 09 01 56.8 +1.4
baz=44,SNR=11
O22A ⇑ScP ScP 09 07 20.5 +0.3
baz=44,SNR=9.6
214A Organ Pipe Nat 43.82 309 ⇓P P 09 01 57.0 +1.5
baz=44,SNR=6.6
PHWY Pilot Hill 43.88 325 *e*P P 09 01 56.9 +0.8
comp=Z,4.0nm,0.8s
PHWY *e*pP pP 09 02 26.9 +2.3
PHWY *e*ScP ScP 09 07 21.3 +0.8
K25A Mack Ranch, Ha 43.88 327 ⇓P P 09 01 57.0 +1.1
baz=44
K25A ⇓ScP ScP 09 07 20.7 +0.5
baz=44
X16A Lo Mia Camp, P 43.89 313 ⇑P P 09 01 57.8 +1.6
baz=44,SNR=9.6
N23A Red Feather La 43.90 324 ⇑P P 09 01 57.1 +0.8
baz=44,SNR=8.9
N23A ⇑ScP ScP 09 07 22.0 +1.5
baz=44
P21A Newcastle 43.95 321 ⇑P P 09 01 57.8 +1.2
baz=44
P21A ⇓ScP ScP 09 07 23.1 +2.4
baz=44
L24A Wheatland 44.07 326 ⇓P P 09 01 58.8 +1.4
baz=44
L24A ⇑ScP ScP 09 07 22.1 +1.1
baz=44
N22A Wattenberg Ran 44.14 324 ⇓P P 09 01 60.0 +1.8
baz=44
N22A ⇑ScP ScP 09 07 23.1 +1.5
baz=44
M23A Laramie 44.14 325 ⇑P P 09 01 59.4 +1.2
baz=44
M23A ⇓ScP ScP 09 07 22.5 +1.0
baz=44
Q20A Ridgley Place, 44.14 320 ⇑P P 09 01 59.4 +1.3
baz=44,SNR=13
WUAZ Wupatki 44.37 314 *e*P P 09 02 01.7 +1.8
comp=Z,27nm,0.8s
WUAZ *e*pP pP 09 02 28.8 +0.3
WUAZ *e*sP sP 09 02 40.6 -2.1
WUAZ Wupatki 44.37 314 ⇑P P 09 02 01.4 +1.4
baz=44,SNR=18
WUAZ ⇓ScP ScP 09 07 23.9 +1.4
baz=44
K24A Anderson Ranch 44.47 327 ⇑ScP ScP 09 07 23.1 +0.4
baz=45,SNR=9.7
P20A De Beque 44.52 321 ⇑P P 09 02 02.5 +1.4
baz=45
Z14A Wintersburg 44.52 311 ⇑P P 09 02 02.6 +1.6
baz=45
S18A Hurst Farm, Bl 44.54 318 ⇓P P 09 02 03.0 +1.6
baz=45
L23A Garrett 44.55 326 ⇓P P 09 02 02.6 +1.2
baz=45
L23A ⇑ScP ScP 09 07 23.4 +0.2
baz=45,SNR=5.5
M22A Cedar Creek Ra 44.60 324 ⇑P P 09 02 03.1 +1.3
baz=45
AGMN Agassiz Nation 44.69 339 *e*P P 09 02 02.1 0.0
comp=Z,17nm,0.6s
AGMN *e*pP pP 09 02 30.1 -0.6
N21A Black Mountain 44.74 323 ⇓P P 09 02 04.1 +1.2

	baz=45								
Q19A	**Hogan Spring (**	44.76	320	⇓P		P	09 02 04.3	+1.3	
	baz=45,SNR=15								
Q19A				⇑ScP		ScP	09 07 25.4	+1.5	
	baz=45								
J24A	**Dixon Ranch, L**	44.80	328	⇑P		P	09 02 05.1	+1.9	
	baz=45								
O20A	**White River Ci**	44.80	322	⇓P		P	09 02 04.6	+1.2	
	baz=45								
Y14A	**Wickenburg**	44.82	311	⇑P		P	09 02 04.3	+0.9	
	baz=45,SNR=15								
Y14A				⇑ScP		ScP	09 07 26.4	+2.1	
	baz=45								
L22A	**Ellis Ranch, M**	44.91	325	⇓ScP		ScP	09 07 25.5	+0.9	
	baz=45								
K23A	**Bowen Ranch, D**	44.93	326	⇓P		P	09 02 04.9	+0.6	
	baz=45								
K23A				⇓ScP		ScP	09 07 25.2	+0.6	
	baz=45								
P19A	**Cripple Cowboy**	44.97	321	⇓P		P	09 02 05.7	+0.9	
	baz=45								
P19A				⇑ScP		ScP	09 07 26.6	+1.6	
	baz=45								
RSSD	**Black Hills**	45.02	329	eP		P	09 02 05.8	+0.8	
RSSD				pmax		pmax			
	comp=Z,5.0nm,0.7s								
RSSD	**Black Hills**	45.02	329	eP		P	09 02 05.8	+0.8	
	comp=Z,5.4nm,0.7s								
RSSD				eScP		ScP	09 07 25.4	+0.3	
I24A	**Kuemmerle Ranc**	45.14	328	⇓P		P	09 02 07.2	+1.3	
	baz=45								
M21A	**Separation Pea**	45.18	324	⇑ScP		ScP	09 07 26.3	+0.5	
	baz=45,SNR=6.1								
N20A	**Spence Gulch,**	45.23	322	⇑P		P	09 02 06.7	-0.2	
	baz=45								
N20A				⇑ScP		ScP	09 07 26.4	+0.4	
	baz=45,SNR=5.6								
K22A	**Casper**	45.36	326	⇑P		P	09 02 08.1	+0.4	
	baz=46								
K22A				⇓ScP		ScP	09 07 26.2	-0.3	
	baz=46,SNR=5.8								
O19A	**Miners Draw (B**	45.45	321	⇓P		P	09 02 09.0	+0.6	
	baz=46,SNR=6.0								
O19A				⇑ScP		ScP	09 07 27.5	+0.7	
	baz=46								
U15A	**North Rim**	45.47	315	⇓P		P	09 02 09.3	+0.5	
	baz=46,SNR=14								
U15A				⇑ScP		ScP	09 07 28.6	+1.5	
	baz=46								
M20A	**Sweetwater, Wa**	45.59	323	⇑P		P	09 02 10.1	+0.5	
	baz=46								
M20A				⇓ScP		ScP	09 07 28.0	+0.5	
	baz=46								
SRU	**San Rafael**	45.66	319	eP		P	09 02 12.0	+1.8	
SRU				e*PP		pP	09 02 38.8	-0.1	
SRU				pmax		pmax			
	comp=Z,14nm,0.9s								
SRU	**San Rafael**	45.66	319	eP		P	09 02 12.0	+1.8	
	comp=Z,14nm,0.9s								
SRU				epP		pP	09 02 38.8	-0.1	
SRU	**San Rafael**	45.66	319	⇓P		P	09 02 10.7	+0.6	
	baz=46								
SRU				⇓ScP		ScP	09 07 28.6	+0.8	
	baz=46								
H24A	**Dirks Ranch, A**	45.72	329	⇓P		P	09 02 10.3	-0.1	
	baz=46								
H24A				⇓ScP		ScP	09 07 27.3	-0.5	
	baz=46								
MDND	**Maddock**	45.76	336	⇓P		P	09 02 10.6	+0.1	
	baz=46,SNR=12								
K21A	**Alcova**	45.76	325	⇓P		P	09 02 11.6	+0.8	
	baz=46,SNR=12								
K21A				⇓ScP		ScP	09 07 28.5	+0.4	
	baz=46								
P18A	**Preston Nutter**	45.77	320	⇓P		P	09 02 12.6	+1.4	
	baz=46,SNR=7.2								
P18A				⇓ScP		ScP	09 07 29.7	+1.4	
	baz=46								
GLA	**Glamis**	45.82	309	eP		P	09 02 14.2	+2.9	
GLA				e*PP		pP	09 02 40.2	+0.1	
GLA				pmax		pmax			
	comp=Z,151nm,2.1s								
GLA	**Glamis**	45.82	309	eP		P	09 02 14.2	+2.9	
	comp=Z,151nm,2.1s								
GLA				epP		pP	09 02 40.2	+0.1	
PDMCI	**Parker Dam,Lak**	45.83	311	⇓P		P	09 02 12.0	+0.7	
	baz=46								
N19A	**John Jarvie Ra**	45.83	322	⇓P		P	09 02 11.8	+0.4	
	baz=46								
J22A	**Midwest**	45.83	326	⇑P		P	09 02 12.1	+0.7	
	baz=46,SNR=11								
J22A				⇑ScP		ScP	09 07 27.6	-0.7	
	baz=46,SNR=5.6								
Y12C	**Blythe**	45.88	310	⇓P		P	09 02 12.2	+0.5	
	baz=46								
Q16A	**Castle Valley**	45.98	318	⇓P		P	09 02 13.5	+0.8	
	baz=46								
W13A	**Hualapai Mount**	45.99	312	⇓P		P	09 02 13.9	+1.1	
	baz=46								
L20A	**Wamsutter**	46.00	324	⇓ScP		ScP	09 07 29.9	+0.8	
	baz=46								
G24A	**Alzada**	46.06	330	⇑P		P	09 02 13.5	+0.4	
	baz=46								
G24A				⇓ScP		ScP	09 07 28.8	-0.4	
	baz=46								
I22A	**9 Mile Ranch,**	46.15	327	⇑P		P	09 02 14.6	+0.7	
	baz=46,SNR=5.7								
I22A				⇑ScP		ScP	09 07 29.3	-0.3	
	baz=46,SNR=5.4								
N18A	**Larsen Ranch,**	46.18	322	⇑P		P	09 02 14.9	+0.7	
	baz=46,SNR=5.9								
N18A				⇓ScP		ScP	09 07 30.0	+0.2	
	baz=46								
TMUT	**Trail Mountain**	46.21	319	eP		P	09 02 17.9	+3.3	
	comp=Z,11nm,1.0s								
TMUT				epP		pP	09 02 44.1	+0.8	
TMUT				eSP		sP	09 02 59.1	+1.7	
J21A	**Lysite**	46.33	326	⇑P		P	09 02 15.9	+0.6	
	baz=46								
J21A				⇓ScP		ScP	09 07 30.5	+0.1	
	baz=46,SNR=5.9								
ULM	**Lac du Bonnet**	46.35	340	eP		P	09 02 14.7	-0.4	
	comp=Z,26nm,0.6s								
ULM				pP		pP	09 02 41.8	-2.1	
ULM				ScP		ScP	09 07 28.9	-1.2	
ULM				S		S	09 08 49.5	-3.3	
ULM	**Lac du Bonnet**	46.35	340	P		P	09 02 14.7	-0.4	
	comp=Z,24nm,0.5s,baz=149,slow=7.7,SNR=40								
ULM				pP		pP	09 02 41.8	-2.1	
	comp=Z,12nm,0.7s,baz=142,slow=7.9,SNR=4.6								
ULM				ScP		ScP	09 07 28.9	-1.2	
	comp=Z,3.5nm,0.7s,baz=123,slow=2.9,SNR=3.1								
ULM				S		S	09 08 49.5	-3.3	
	comp=Z,1.9nm,0.8s,baz=63,slow=18,SNR=2.5								
ULM				LR		LR	09 23 06.5		
	comp=Z,151nm,18.3s,baz=119,slow=38								
K20A	**Yellowstone Ra**	46.40	324	⇓P		P	09 02 16.4	+0.5	
	baz=47								
K20A				⇓ScP		ScP	09 07 30.7	-0.1	
	baz=47,SNR=6.3								
MSU	**Marysvale**	46.44	317	eP		P	09 02 17.9	+1.6	
MSU				e*PP		pP	09 02 45.0	-0.1	
MSU	**Marysvale**	46.44	317	eP		P	09 02 17.9	+1.6	
MSU				epP		pP	09 02 45.0	-0.1	
MSU				eScP		ScP	09 07 32.7	+1.6	
F24A	**Ekalaka**	46.44	330	⇑P		P	09 02 15.9	-0.1	
	baz=47,SNR=6.2								
F24A				⇑ScP		ScP	09 07 30.9	+0.1	
	baz=47								
MVU	**Marysvale**	46.45	317	eP		P	09 02 18.0	+1.6	
	comp=Z,18nm,1.0s								
MVU				epP		pP	09 02 45.6	+0.4	
MVU				eScP		ScP	09 07 32.7	+1.5	
G23A	**Biddle**	46.46	329	⇓P		P	09 02 17.0	+0.8	
	baz=47								
G23A				⇓ScP		ScP	09 07 30.4	-0.4	
	baz=47,SNR=6.4								
IRM	**Iron Mountain**	46.52	311	⇓P		P	09 02 17.9	+1.1	
	baz=47,SNR=5.2								
SWSC	**Sam W. Stewart**	46.52	309	⇑P		P	09 02 17.9	+1.2	
	baz=47,SNR=5.6								
I21A	**Big Trails, Te**	46.54	326	⇑P		P	09 02 17.2	+0.3	
	baz=47,SNR=13								
I21A				⇓ScP		ScP	09 07 30.9	-0.4	
	baz=47								
BC3	**Big Chuckawall**	46.55	310	⇓P		P	09 02 18.2	+1.2	
	baz=47								
H22A	**Clearmont**	46.55	328	⇑P		P	09 02 18.2	+1.3	
	baz=47								
H22A				⇑ScP		ScP	09 07 31.0	-0.3	
	baz=47								
L19A	**Farson**	46.66	323	⇓P		P	09 02 18.1	+0.2	
	baz=47								
L19A				⇑ScP		ScP	09 07 32.2	+0.4	
	baz=47								
M18A	**Lyman**	46.69	322	⇓P		P	09 02 18.1	-0.1	
	baz=47								
J20A	**Shoshoni**	46.69	325	⇑P		P	09 02 18.5	+0.4	
	baz=47,SNR=8.9								
J20A				⇑ScP		ScP	09 07 33.0	+1.1	
	baz=47,SNR=9.6								
CCUT	**Cedar City**	46.76	316	eP		P	09 02 20.7	+1.9	
	comp=Z,5.3nm,1.0s								
CCUT				epP		pP	09 02 47.7	+0.1	
TRQA	**Tornquist**	46.77	168	eP		P	09 02 16.8	-1.8	
	comp=Z,7.8nm,1.5s								
TRQA				ePcP		PcP	09 03 50.5	+0.6	
K19A	**Absolon Red Bu**	46.80	324	⇓P		P	09 02 19.3	+0.4	
	baz=47								
K19A				⇑ScP		ScP	09 07 32.3	-0.1	
	baz=47,SNR=6.0								
F23A	**Volborg**	46.83	329	⇑P		P	09 02 19.4	+0.3	
	baz=47,SNR=10								
F23A				⇑ScP		ScP	09 07 32.2	-0.1	
	baz=47,SNR=12								
DAU	**Daniels Canyon**	46.85	320	eP		P	09 02 21.2	+1.6	
DAU	**Daniels Canyon**	46.85	320	eP		P	09 02 21.1	+1.6	
DAU				epP		pP	09 02 48.6	+0.2	
MPU	**Maple Canyon**	46.87	319	eP		P	09 02 21.4	+1.8	
	comp=Z,14nm,0.9s								
N17A	**Moffit Pass**	46.88	321	⇑P		P	09 02 21.0	+1.2	
	baz=47,SNR=12								
N17A				⇑ScP		ScP	09 07 34.0	+1.0	
	baz=47								
E24A	**Baker**	46.88	331	⇓P		P	09 02 20.5	+1.1	
	baz=47								
E24A				⇓ScP		ScP	09 07 33.4	+0.9	
	baz=47								
G22A	**Birney**	46.94	328	⇑P		P	09 02 20.6	+0.6	
	baz=47,SNR=8.7								
G22A				⇑ScP		ScP	09 07 32.9	+0.1	
	baz=47								
H21A	**Big Horn, Sher**	46.94	327	⇓P		P	09 02 20.5	+0.5	
	baz=47								
L18A	**Fontenelle, Gr**	46.96	323	⇑P		P	09 02 21.0	+0.7	
	baz=47,SNR=13								
MONP	**Monument Peak**	46.99	308	⇓P		P	09 02 21.6	+0.9	
	baz=47								
JLU	**Jordanelle**	47.08	320	eP		P	09 02 23.0	+1.8	
	comp=Z,7.8nm,1.1s								
JLU				epP		pP	09 02 49.9	-0.2	
JLU				eScP		ScP	09 07 34.0	+0.3	
M17A	**Scullys Gap (B**	47.08	322	⇑P		P	09 02 21.7	+0.4	
	baz=47								
I20A	**Worland**	47.09	326	⇑P		P	09 02 21.8	+0.6	
	baz=47,SNR=17								
I20A				⇑ScP		ScP	09 07 33.4	-0.1	
	baz=47,SNR=5.8								
BELC	**Belle Mtn. Jos**	47.10	310	⇓P		P	09 02 22.3	+0.9	
	baz=47								
GMRC	**Granite Mounta**	47.16	311	⇓P		P	09 02 22.8	+0.9	
	baz=47								
GMRC				⇑ScP		ScP	09 07 36.1	+2.0	
	baz=47								
BW06	**Boulder Array**	47.17	324	eP		P	09 02 22.6	+0.6	
	comp=Z,6.7nm,0.8s								
BW06				eScP		ScP	09 07 34.4	+0.3	
BW06	**Boulder Array**	47.17	324	⇑P		P	09 02 22.5	+0.6	
	baz=47,SNR=11								
BW06				⇓ScP		ScP	09 07 33.8	-0.3	
	baz=47								
BW06				⇓ScP		ScP	09 07 33.8	-0.3	
	baz=47								
PDAR	**Pinedale Array**	47.17	324	P		P	09 02 22.2	+0.3	
PDAR				pP		pP	09 02 49.4	-1.5	
PDAR				PcP		PcP	09 03 51.5	0.0	
PDAR				pPcP			09 04 24.1		
PDAR				ScP		ScP	09 07 34.0	0.0	
PDAR	**Pinedale Array**	47.17	324	P		P	09 02 22.2	+0.3	
	comp=Z,5.8nm,0.9s,baz=127,slow=9.4,SNR=31								
PDAR				pP		pP	09 02 49.4	-1.5	
	comp=Z,5.0nm,0.8s,baz=119,slow=11,SNR=5.9								
PDAR				PcP		PcP	09 03 51.6	0.0	
	comp=Z,2.3nm,0.5s,baz=127,slow=7.0,SNR=5.9								
PDAR				pPcP			09 04 24.1		
	comp=Z,2.3nm,0.6s,baz=124,slow=6.0,SNR=5.7								
PDAR				ScP		ScP	09 07 34.0	0.0	
	comp=Z,3.5nm,0.9s,baz=126,slow=5.9,SNR=8.9								
PDAR				LR		LR	09 24 27.2		
	comp=Z,40nm,19.6s,baz=307,slow=39								
J19A	**Crowheart**	47.19	325	⇓P		P	09 02 22.4	+0.4	
	baz=47,SNR=8.1								
D24A	**Glendive**	47.29	332	⇓P		P	09 02 23.2	+0.6	
	baz=48,SNR=16								
D24A				⇑ScP		ScP	09 07 35.4	+1.2	
	baz=48								
SCHQ	**Schefferville**	47.29	5	eP		P	09 02 23.3	+0.9	
	comp=Z,74nm,0.7s								
SCHQ				epP		pP	09 02 51.5	+0.2	
SCHQ				esP		sP	09 03 05.6	+0.3	
SCHQ				ScP		ScP	09 07 33.9	-0.1	
SCHQ	**Schefferville**	47.29	5	P		P	09 02 23.2	+0.9	
	comp=Z,74nm,0.6s,baz=193,slow=6.6,SNR=246								
SCHQ				ScP		ScP	09 07 33.9	-0.1	
	comp=Z,2.9nm,0.8s,baz=140,slow=4.6,SNR=3.7								
SCHQ				LR		LR	09 22 47.3		
	comp=Z,39nm,19.6s,baz=74,slow=36								
PFO	**Pinyon Flat Ob**	47.29	309	eP		P	09 02 23.9	+1.0	
	comp=Z,5.9nm,0.9s								
PFO				epP		pP	09 02 51.7	-0.1	
PFO	**Pinyon Flat Ob**	47.29	309	⇓P		P	09 02 23.2	+0.3	
	baz=48								
PFO				⇑ScP		ScP	09 07 36.8	+2.2	
	baz=48								
F22A	**Rosebud**	47.30	329	⇑P		P	09 02 23.3	+0.6	
	baz=48,SNR=8.0								
F22A				⇑ScP		ScP	09 07 33.8	-0.5	
	baz=48								
E23A	**Ismay**	47.32	330	⇓ScP		ScP	09 07 34.1	-0.2	
	baz=48								
H20A	**Greybull**	47.37	327	⇑P		P	09 02 23.4	+0.1	
	baz=48,SNR=11								
K18A	**Toltan Ranch,**	47.38	323	⇑P		P	09 02 24.4	+0.8	
	baz=48,SNR=8.5								
K18A				⇑ScP		ScP	09 07 35.6	+0.6	
	baz=48								
G21A	**Lodge Grass**	47.42	328	⇑P		P	09 02 23.8	+0.1	
	baz=48,SNR=6.8								
L17A	**Cokeville**	47.56	322	⇓P		P	09 02 25.8	+0.8	
	baz=48								
L17A				⇓ScP		ScP	09 07 36.5	+0.8	
	baz=48								
M16A	**Huntsville**	47.59	321	⇑P		P	09 02 25.9	+0.8	
	baz=48								
E22A	**Miles City**	47.60	330	⇓P		P	09 02 25.1	+0.1	
	baz=48,SNR=5.1								
I19A	**Meeteetse**	47.63	325	⇓P		P	09 02 26.3	+0.9	
	baz=48,SNR=7.3								
C24A	**Savage**	47.64	332	⇓P		P	09 02 26.7	+1.5	
	baz=48								
C24A				⇓ScP		ScP	09 07 36.4	+0.8	
	baz=48								
HEC	**Hector,Ludlow**	47.69	311	⇑P		P	09 02 26.8	+1.0	
	baz=48								
HEC				⇓ScP		ScP	09 07 39.0	+2.8	
	baz=48								
HWUT	**Hardware Ranch**	47.71	321	eP		P	09 02 26.6	+0.6	
	comp=Z,7.8nm,0.8s								
HWUT				eScP		ScP	09 07 36.8	+0.5	
J18A	**Kendall Valley**	47.71	324	⇓P		P	09 02 26.4	+0.3	
	baz=48,SNR=13								
J18A				⇓ScP		ScP	09 07 36.1	-0.2	
	baz=48								
DUG	**Dugway**	47.73	319	eP		P	09 02 28.1	+1.9	
DUG				e*PP		pP	09 02 55.1	-0.1	
DUG				pmax		pmax			
	comp=Z,10.0nm,0.8s								
DUG	**Dugway**	47.73	319	eP		P	09 02 28.1	+1.9	
	comp=Z,10nm,0.8s								
DUG				epP		pP	09 02 55.1	-0.1	
DUG	**Dugway**	47.73	319	⇓P		P	09 02 28.0	+1.7	
	baz=48,SNR=15								
DUG				⇑ScP		ScP	09 07 37.8	+1.4	
	baz=48								
D23A	**Lindsay**	47.75	331	⇓P		P	09 02 27.0	+0.8	
	baz=48,SNR=8.1								
D23A				⇑ScP		ScP	09 07 36.7	+0.6	
	baz=48,SNR=9.3								
L16A	**Fish Haven**	47.86	322	⇓P		P	09 02 27.8	+0.6	
	baz=48,SNR=11								
L16A				⇑ScP		ScP	09 07 36.8	-0.1	
	baz=48								
MURC	**Murrieta**	47.86	309	⇑P		P	09 02 27.8	+0.6	
	baz=48								
I18A	**Diamond G Ranc**	47.89	325	⇓P		P	09 02 28.3	+0.8	
	baz=48								
I18A				⇓ScP		ScP	09 07 37.4	+0.3	
	baz=48								
BBRC	**Big Bear Solar**	47.91	310	⇓P		P	09 02 27.1	-0.6	
	baz=48								
G20A	**Bridger**	47.96	327	⇓P		P	09 02 27.9	+0.1	
	baz=48,SNR=18								
K17A	**Gardner Place,**	47.97	323	⇑P		P	09 02 28.8	+0.7	
	baz=48,SNR=6.9								
K17A				⇑ScP		ScP	09 07 37.9	+0.6	
	baz=48								
H19A	**Powell**	48.03	326	⇑P		P	09 02 28.6	+0.2	
	baz=48								
H19A				⇓ScP		ScP	09 07 37.7	+0.2	
	baz=48								
AHID	**Auburn Hatcher**	48.09	323	eP		P	09 02 26.7	-2.3	
	comp=Z,9.4nm,0.8s								
AHID				epP		pP	09 02 58.1	+0.2	
SHOC	**Shoshone**	48.09	312	⇓P		P	09 02 30.8	+1.9	
	baz=48,SNR=11								
C23A	**Lambert**	48.19	332	⇑P		P	09 02 30.5	+1.0	
	baz=48,SNR=6.0								
C23A				⇑ScP		ScP	09 07 38.5	+0.5	
	baz=48,SNR=6.0								
D22A	**Cohagen**	48.21	330	⇑P		P	09 02 30.8	+1.2	
	baz=48,SNR=19								
D22A				⇑ScP		ScP	09 07 38.3	+0.2	
	baz=48								
J17A	**Brown Place, J**	48.21	324	⇑P		P	09 02 31.1	+1.2	
	baz=48,SNR=18								
DGMT	**Dagmar**	48.22	333	eP		P	09 02 30.6	+0.9	
	comp=Z,34nm,1.0s								
DGMT				epP		pP	09 02 59.3	+0.6	
DGMT				eScP		ScP	09 07 40.0	+1.9	
DGMT	**Dagmar**	48.22	333	⇓P		P	09 02 30.4	+0.7	
	baz=48,SNR=8.6								
DGMT				⇑ScP		ScP	09 07 38.3	+0.2	
	baz=48								
GSC	**Goldstone**	48.24	311	eP		P	09 02 31.3	+1.2	
GSC				e*PP		pP	09 02 59.0	-0.1	
GSC				pmax		pmax			
	comp=Z,11nm,0.8s								
GSC	**Goldstone**	48.24	311	eP		P	09 02 31.3	+1.2	
	comp=Z,11nm,0.8s								
GSC				epP		pP	09 02 59.0	-0.1	
GSC	**Goldstone**	48.24	311	⇓P		P	09 02 31.2	+1.0	
	baz=48,SNR=6.5								
GSC				⇓ScP		ScP	09 07 39.7	+1.2	
	baz=48								
E21A	**Keefer Ranch,**	48.24	329	⇓P		P	09 02 30.6	+0.7	
	baz=48,SNR=9.3								
PLCA	**Paso Flores**	48.27	177	eP		P	09 02 29.6	-0.6	
	comp=Z,66nm,0.9s								
PLCA				PcP		PcP	09 03 55.5	+0.2	
PLCA	**Paso Flores**	48.27	177	P		P	09 02 29.6	-0.6	
	comp=Z,59nm,0.8s,baz=353,slow=8.7,SNR=138								
PLCA				PcP		PcP	09 03 55.5	+0.2	
	comp=Z,21nm,0.8s,baz=355,slow=3.9,SNR=6.4								
SNOW	**Snow King Moun**	48.29	324	eP		P	09 02 32.4	+1.8	
	comp=Z,13nm,0.8s								
SNOW				epP		pP	09 03 01.1	+1.5	
LOHW	**Long Hollow**	48.29	324	eP		P	09 02 31.5	+0.9	
	comp=Z,7.4nm,0.8s								
LOHW				epP		pP	09 02 60.0	+0.4	
LOHW				eScP		ScP	09 07 39.1	+0.4	
F20A	**Billings**	48.30	328	⇑P		P	09 02 31.1	+0.6	
	baz=48,SNR=12								
H18A	**Shoshone NF, C**	48.41	326	⇑P		P	09 02 31.6	+0.2	
	baz=49								
H18A				⇓ScP		ScP	09 07 39.3	+0.1	
	baz=49								
K16A	**Soda Springs**	48.42	323	⇑P		P	09 02 32.5	+0.9	
	baz=49								
TPAW	**Teton Pass**	48.42	324	eP		P	09 02 32.6	+1.0	
	comp=Z,10nm,0.8s								
TPAW				epP		pP	09 03 01.0	+0.4	
L15A	**Malad City**	48.44	321	⇓P		P	09 02 32.1	+0.5	
	baz=49,SNR=9.8								
MOOW	**Moose Ponds**	48.46	324	eP		P	09 02 32.3	+0.5	
	comp=Z,8.9nm,0.8s								
MOOW				epP		pP	09 03 01.0	+0.2	
I17A	**Pilgrim Ck.**	48.46	324	⇓P		P	09 02 32.9	+1.1	
	baz=49								
A24A	**Westby**	48.47	333	⇓P		P	09 02 33.0	+1.5	
	baz=49,SNR=20								
RLMT	**Red Lodge**	48.47	326	eP		P	09 02 32.2	+0.4	
	comp=Z,26nm,1.4s								
RLMT				epP		pP	09 03 01.8	+0.9	
RLMT				eScP		ScP	09 07 39.9	+0.4	
RLMT	**Red Lodge**	48.47	326	⇓P		P	09 02 32.3	+0.4	
	baz=49,SNR=7.5								
RLMT				⇑ScP		ScP	09 07 39.5	0.0	
	baz=49,SNR=7.2								
RLMT				⇑ScP		ScP	09 07 39.5	0.0	
	baz=49,SNR=7.2								
C22A	**Vida**	48.48	331	⇑P		P	09 02 32.4	+0.7	
	baz=49,SNR=12								
C22A				⇑ScP		ScP	09 07 38.5	-0.7	
	baz=49								
D21A	**La Casta Ranch**	48.55	330	⇓P		P	09 02 33.5	+1.2	
	baz=49,SNR=18								
D21A				⇓ScP		ScP	09 07 39.8	+0.2	
	baz=49,SNR=5.5								
RRI2	**Red Ridge**	48.56	323	eP		P	09 02 33.6	+1.0	
	comp=Z,14nm,0.8s								
RRI2				epP		pP	09 03 02.3	+0.6	
HVU	**Hansel Valley**	48.56	321	eP		P	09 02 33.5	+1.0	
HVU				pmax		pmax			
	comp=Z,9.0nm,0.9s								
HVU	**Hansel Valley**	48.56	321	eP		P	09 02 33.5	+1.0	
	comp=Z,9.4nm,0.9s								
B23A	**Brockton**	48.58	332	⇑P		P	09 02 33.5	+1.1	
	baz=49,SNR=7.3								
B23A				⇑ScP		Sc

baz=49
L14A Malta 48.99 321 ⇓P P 09 02 37.1 +1.2
baz=49
MPMC Manual Prospec 49.05 312 ⇓P P 09 02 38.1 +1.6
baz=49,SNR=5.5
MPMC ⇑ScP ScP 09 07 43.4 +1.3
baz=49
E19A Rath Farm, Rou 49.07 328 ⇑P P 09 02 37.2 +0.9
baz=49,SNR=15
E19A ⇑ScP ScP 09 07 41.7 -0.1
baz=49,SNR=6.1
C21A Desert Coulee 49.13 330 ⇓P P 09 02 37.3 +0.7
baz=49,SNR=12
C21A ⇑ScP ScP 09 07 42.4 +0.4
baz=49,SNR=6.2
YMR Madison River 49.14 325 *e*P P 09 02 38.6 +1.6
comp=Z,8.4nm,0.7s
YMR *ep*P pP 09 03 07.4 +1.3
D20A Manuel Ranch, 49.15 329 ⇑P P 09 02 37.9 +1.0
baz=49,SNR=18
D20A ⇑ScP ScP 09 07 42.2 +0.1
baz=49,SNR=5.6
F18A Big Timber 49.21 327 ⇑P P 09 02 38.1 +0.7
baz=49,SNR=18
F18A ⇑ScP ScP 09 07 42.4 -0.1
baz=49
K14A Jones Ranch, D 49.23 321 ⇑P P 09 02 38.2 +0.6
baz=49,SNR=9.6
J15A Blackfoot 49.25 323 ⇑P P 09 02 38.8 +1.0
baz=49,SNR=7.1
H16A Russell Place, 49.32 325 ⇑P P 09 02 39.6 +1.2
baz=50,SNR=7.7
A22A Carney Farms, 49.38 332 ⇓P P 09 02 39.9 +1.3
baz=50
A22A ⇓ScP ScP 09 07 43.2 +0.1
baz=50
G17A Pierce Place, 49.41 326 ⇓P P 09 02 40.2 +1.3
baz=50
C20A Veseth Ranch, 49.50 330 ⇑P P 09 02 39.9 +0.4
baz=50
C20A ⇓ScP ScP 09 07 43.4 -0.2
baz=50
QLMT Earthquake Lak 49.50 325 *e*P P 09 02 41.8 +2.1
B21A Ellsworth Farm 49.50 331 ⇑P P 09 02 40.4 +1.0
baz=50,SNR=11
B21A ⇓ScP ScP 09 07 44.0 +0.4
baz=50,SNR=8.4
D19A Cripps Ranch, 49.58 329 ⇑P P 09 02 40.9 +0.8
baz=50,SNR=34
D19A ⇓ScP ScP 09 07 44.2 +0.2
baz=50,SNR=6.3
ELK Elko 49.60 318 *e*P P 09 02 43.2 +2.5
comp=Z,11nm,1.4s
ELK PcP PcP 09 04 00.9 +0.5
ELK Elko 49.60 318 P P 09 02 40.5 -0.2
comp=Z,2.0nm,0.7s,baz=112,slow=5.7,SNR=11
ELK PcP PcP 09 04 00.9 +0.5
comp=Z,4.1nm,0.8s,baz=113,slow=2.7,SNR=3.7
I15A Monteview 49.62 323 ⇓P P 09 02 41.9 +1.3
baz=50
I15A ⇑ScP ScP 09 07 45.6 +1.2
baz=50
ISA Isabella 49.63 311 *e*P P 09 02 42.2 +1.5
ISA *e**PP pP 09 03 09.3 -0.5
ISA pmax pmax
comp=Z,6.0nm,0.8s
ISA Isabella 49.63 311 *e*P P 09 02 42.2 +1.5
comp=Z,5.5nm,0.8s
ISA *ep*P pP 09 03 09.3 -0.5
ISA *e*ScP ScP 09 07 45.3 +0.9
ISA Isabella 49.63 311 ⇓P P 09 02 41.5 +0.8
baz=50,SNR=5.1
ISA ⇑ScP ScP 09 07 45.4 +0.9
baz=50
F17A Fitzpatrick Pl 49.72 326 ⇑P P 09 02 42.2 +0.9
baz=50,SNR=14
F17A ⇑ScP ScP 09 07 44.5 -0.2
baz=50
E18A Harlowton 49.73 327 ⇓P P 09 02 42.2 +0.8
baz=50,SNR=8.1
A21A Bergtoll Ranch 49.85 332 ⇑P P 09 02 43.1 +0.9
baz=50,SNR=7.1
J14A Carey 49.87 322 ⇑P P 09 02 43.4 +1.0
baz=50,SNR=12
G16A Moss Hill, Enn 49.95 325 ⇓P P 09 02 44.2 +1.1
baz=50,SNR=11
B20A Solberg Farm, 50.00 330 ⇑P P 09 02 44.3 +1.1
baz=50
TIN Tinemaha 50.00 313 ⇑P P 09 02 45.7 +2.1
baz=50
C19A Slack Wire Ran 50.04 329 ⇑P P 09 02 44.4 +0.8
baz=50,SNR=16
C19A ⇑ScP ScP 09 07 45.8 -0.1
baz=50
H15A Lima 50.07 324 ⇓P P 09 02 45.5 +1.4
baz=50,SNR=19
H15A ⇑ScP ScP 09 07 47.1 +0.8
baz=50
D18A Linhart Farms, 50.08 328 ⇑P P 09 02 44.3 +0.3
baz=50,SNR=5.3
BOZ Bozeman (W) 50.10 326 *e*P P 09 02 44.8 +0.6
BOZ *e**PP pP 09 03 14.1 +0.7
BOZ pmax pmax
comp=Z,7.0nm,0.9s
BOZ Bozeman (W) 50.10 326 *e*P P 09 02 44.8 +0.6
comp=Z,7.3nm,0.9s
BOZ *ep*P pP 09 03 14.1 +0.7
BOZ Bozeman (W) 50.10 326 ⇑P P 09 02 44.8 +0.6
baz=50
VES Vestal, Richgr 50.15 311 ⇑P P 09 02 45.7 +1.1
baz=50
I14A Mackay 50.16 323 ⇓P P 09 02 45.7 +0.9
baz=50,SNR=10
I14A ⇑ScP ScP 09 07 47.2 +0.5
baz=50
E17A Martinsdale 50.17 327 ⇑P P 09 02 45.3 +0.5
baz=50,SNR=15
F16A Kennard Place, 50.18 326 ⇓P P 09 02 46.1 +1.3
baz=50
A20A Cobblestone Ra 50.25 331 ⇑P P 09 02 46.3 +1.2
baz=50,SNR=34
A20A ⇓ScP ScP 09 07 46.5 -0.2
baz=50,SNR=11
G15A Dillon 50.30 325 ⇑P P 09 02 46.7 +0.9
baz=50,SNR=10.0
G15A ⇑ScP ScP 09 07 47.9 +0.6
baz=50
J13A Cove Ranch, Pi 50.31 322 ⇓P P 09 02 46.4 +0.6
baz=50,SNR=9.9
J13A ⇑ScP ScP 09 07 49.0 +1.8
baz=50
MCMT McKenzie Canyo 50.31 324 *e*P P 09 02 47.3 +1.3
comp=Z,4.5nm,0.8s
MCMT *ep*P pP 09 03 16.1 +1.0
MTUM Tungsten Hills 50.37 313 *e*P P 09 02 49.1 +2.6
B19A Brinkman Farms 50.46 330 ⇓P P 09 02 48.0 +1.3
baz=51
DLMT Dillon 50.48 325 *e*P P 09 02 48.2 +1.2
comp=Z,12nm,1.2s
DLMT *e*ScP ScP 09 07 49.1 +1.2
H14A Leadore 50.50 324 ⇓P P 09 02 48.3 +1.0
baz=51
D17A Six Diamond Ra 50.51 328 ⇑P P 09 02 47.9 +0.7
baz=51,SNR=11
D17A ⇓ScP ScP 09 07 48.6 +0.6
baz=51
HLID Hailey 50.54 322 *e*P P 09 02 48.6 +1.0
comp=Z,6.3nm,0.8s
HLID Hailey 50.54 322 ⇓P P 09 02 48.1 +0.6
baz=51,SNR=6.8
I13A Wildhorse Cree 50.55 322 ⇓P P 09 02 48.6 +0.9
baz=51
I13A ⇓ScP ScP 09 07 50.0 +1.6
baz=51
EGMT Eagleton 50.59 329 *e*P P 09 02 48.4 +0.6
comp=Z,14nm,0.7s
EGMT *ep*P pP 09 03 17.8 +0.9
EGMT Eagleton 50.59 329 ⇑P P 09 02 48.9 +1.1
baz=51
NVAR Mina Array Bea 50.63 314 P P 09 02 49.1 +0.7
NVAR pP pP 09 03 16.5 -1.1
NVAR PcP PcP 09 04 04.9 +0.6
NVAR pPcP 09 04 36.1
NVAR ScP ScP 09 07 49.0 +0.1
NVAR Mina Array Bea 50.63 314 P P 09 02 49.1 +0.7
comp=Z,2.2nm,0.6s,baz=119,slow=6.7,SNR=18
NVAR pP pP 09 03 16.5 -1.1
comp=Z,4.3nm,0.7s,baz=118,slow=6.4,SNR=6.9
NVAR PcP PcP 09 04 04.9 +0.6
comp=Z,8.2nm,0.7s,baz=135,slow=4.3,SNR=11
NVAR pPcP 09 04 36.1
comp=Z,4.5nm,0.7s,baz=136,slow=4.3,SNR=4.4
NVAR ScP ScP 09 07 49.0 +0.1
comp=Z,1.5nm,0.7s,baz=129,slow=4.8,SNR=5.9
E16A East Helena 50.66 326 ⇑P P 09 02 49.2 +0.8
baz=51,SNR=9.7
E16A ⇑ScP ScP 09 07 48.4 -0.3
baz=51
LRM Limekiln Ridge 50.67 325 *e*P P 09 02 49.7 +1.1
A19A Klindworth Far 50.68 330 ⇑P P 09 02 49.1 +0.6
baz=51,SNR=8.8
A19A ⇓ScP ScP 09 07 48.8 +0.2
baz=51
F15A Butte 50.70 325 ⇓P P 09 02 49.5 +0.7
baz=51,SNR=8.5
F15A ⇓ScP ScP 09 07 49.7 +0.7
baz=51
BMN Battle Mountai 50.78 317 *e*P P 09 02 50.0 +0.6
BMN *e**PP pP 09 03 18.1 -0.5
BMN pmax pmax
comp=Z,13nm,1.2s
BMN Battle Mountai 50.78 317 *e*P P 09 02 50.0 +0.6
comp=Z,13nm,1.2s
BMN *ep*P pP 09 03 18.1 -0.5
B18A Beardsley Farm 50.84 329 ⇑P P 09 02 50.5 +0.9
baz=51,SNR=22
B18A ⇑ScP ScP 09 07 49.2 -0.1
baz=51
HRY Holter Researc 50.86 327 *e*P P 09 02 50.5 +0.7
HRY *ep*P pP 09 03 21.7 +2.6
C17A Wharram Farm, 50.86 328 ⇓P P 09 02 50.2 +0.5
baz=51,SNR=11
C17A ⇑ScP ScP 09 07 48.8 -0.7
baz=51
D16A Dana Ranch, Ca 50.90 327 ⇑P P 09 02 51.1 +0.9
baz=51,SNR=9.5
G14A Jackson 50.91 324 ⇑P P 09 02 51.1 +0.8
baz=51,SNR=5.9
H13A Challis 50.99 323 ⇑P P 09 02 51.8 +0.8
baz=51
I12A Atlanta 51.11 322 ⇑P P 09 02 52.5 +0.7
baz=51,SNR=14
E15A Deer Lodge 51.13 326 ⇑P P 09 02 52.7 +0.8
baz=51,SNR=14
F14A Wisdom 51.18 325 ⇑P P 09 02 52.9 +0.6
baz=51,SNR=5.7
A18A Metzger Ranch, 51.22 330 ⇑P P 09 02 53.2 +0.8
baz=51,SNR=18
A18A ⇓ScP ScP 09 07 50.4 -0.5
baz=51,SNR=6.3
G13A Cobalt 51.27 324 ⇑P P 09 02 53.6 +0.6
baz=51,SNR=11
B17A L&G Farms, Che 51.29 329 ⇓P P 09 02 53.4 +0.4
baz=52,SNR=6.3
B17A ⇓ScP ScP 09 07 51.1 -0.2
baz=52
MFID Camas Ranch 51.34 321 *ep*P pP 09 03 22.4 -0.4
MFID Camas Ranch 51.34 321 ⇓P P 09 02 54.1 +0.6
baz=52
H12A Diamond D Ranc 51.34 323 ⇓P P 09 02 54.3 +0.7
baz=52,SNR=16
D15A Lincoln 51.43 327 ⇓P P 09 02 54.9 +0.7
baz=52,SNR=6.8
C16A Fuhringer Ranc 51.48 328 ⇑P P 09 02 54.9 +0.4
baz=52,SNR=8.9
E14A Clinton 51.60 325 ⇓P P 09 02 55.5 +0.1
baz=52,SNR=8.9
A17A Triple J Farms 51.66 329 ⇑P P 09 02 56.2 +0.5
baz=52,SNR=20
A17A ⇓ScP ScP 09 07 53.4 +0.5
baz=52,SNR=6.9
F13A Darby 51.72 324 ⇑P P 09 02 56.7 +0.4
baz=52,SNR=12
B16A M & M Farms, S 51.84 328 ⇑P P 09 02 57.3 +0.2
baz=52
C15A Salmond Ranch, 51.92 327 ⇑P P 09 02 58.8 +1.0
baz=52
G12A Big Creek, Yel 51.94 323 ⇑P P 09 02 58.4 +0.4
baz=52,SNR=21
CMB Columbia Colle 51.97 313 *e*P P 09 02 59.6 +1.4
CMB *e**PP pP 09 03 26.6 -0.9
CMB pmax pmax
comp=Z,88nm,3.0s
CMB Columbia Colle 51.97 313 *e*P P 09 02 59.6 +1.4
comp=Z,88nm,3.0s
CMB *ep*P pP 09 03 26.6 -0.9
D14A Greenough 52.00 326 ⇓P P 09 02 59.1 +0.8
baz=52
E13A Victor 52.01 325 ⇑P P 09 02 59.4 +1.0
baz=52
WCN Washoe City 52.03 315 *e*P P 09 03 01.5 +2.7
WCN *e**PP pP 09 03 27.9 -0.2
WCN pmax pmax
comp=Z,7.0nm,0.9s
WCN Washoe City 52.03 315 *e*P P 09 03 01.5 +2.7
comp=Z,7.4nm,0.9s
WCN *ep*P pP 09 03 27.9 -0.2
WCN *e*ScP ScP 09 07 56.0 +1.2
SLMT Seeley Lake 52.09 326 *e*P P 09 02 59.4 +0.4
MSO Missoula 52.09 326 *e*P P 09 02 59.2 +0.2
comp=Z,2.6nm,0.8s
MSO Missoula 52.09 326 ⇑P P 09 02 59.7 +0.7
baz=52
FFC Flin Flon 52.15 339 *e*P P 09 02 58.9 -0.2
FFC pmax pmax
comp=Z,14nm,0.6s
FFC Flin Flon 52.15 339 *i* P P 09 02 59.1 0.0
FFC Flin Flon 52.15 339 *e*P P 09 02 58.9 -0.2
comp=Z,14nm,0.6s
B15A Bradely Ranch, 52.23 328 ⇓P P 09 03 00.2 +0.2
baz=52,SNR=6.9
F12A Elk City 52.24 324 ⇑P P 09 03 00.5 +0.4
baz=52,SNR=12
SWMT Swartz Lake 52.52 326 *e*P P 09 03 03.2 +1.1
SWMT *e*ScP ScP 09 07 57.5 +0.8
C14A Swan Lake 52.53 327 ⇓P P 09 03 03.0 +0.8
baz=53
D13A Huson 52.54 326 ⇓P P 09 03 02.6 +0.3
baz=53,SNR=11
B14A Marquette Ranc 52.63 327 ⇓P P 09 03 03.3 +0.3
baz=53,SNR=6.6
WVOR Wild Horse Val 52.65 319 *e*P P 09 03 04.1 +0.9
WVOR *e**PP pP 09 03 32.7 +0.1
WVOR pmax pmax
comp=Z,12nm,0.8s
WVOR Wild Horse Val 52.65 319 *e*P P 09 03 04.1 +0.9
comp=Z,12nm,0.8s
WVOR *ep*P pP 09 03 32.7 +0.1
BEKR Beckworth 52.69 315 *e*P P 09 03 04.4 +0.8
comp=Z,2.2nm,1.0s
BEKR *ep*P pP 09 03 32.4 -0.7
BEKR *es*P sP 09 03 47.4 +0.4
A15A Johnson Ranch, 52.72 328 ⇑P P 09 03 03.8 +0.2
baz=53,SNR=13
YBMT Yellow Bay 52.73 327 *e*P P 09 03 05.2 +1.4
comp=Z,7.8nm,0.9s
YBMT *ep*P pP 09 03 34.0 +0.8
JTMT Jette 52.81 326 *e*P P 09 03 05.7 +1.3
C13A Hot Springs 52.94 326 ⇓P P 09 03 05.9 +0.7
baz=53
BMO Blue Mountains 52.99 322 *e*P P 09 03 04.0 -1.7
BMO *e**PP pP 09 03 32.4 -2.7
BMO pmax pmax
comp=Z,3.0nm,1.0s
BMO Blue Mountains 52.99 322 *e*P P 09 03 04.0 -1.7
comp=Z,3.4nm,1.0s
BMO *ep*P pP 09 03 32.4 -2.7
BLMT Blacktail Moun 53.01 327 *e*P P 09 03 07.0 +1.1
BLMT *ep*P pP 09 03 36.1 +0.8
D12A Red Ives Fores 53.02 325 ⇑P P 09 03 06.2 +0.4
baz=53
A14A Double T Ranch 53.08 328 ⇓P P 09 03 06.4 +0.1
baz=53,SNR=5.4
BSMT Bassoo Peak 53.15 326 *e*P P 09 03 08.2 +1.3
OHCM Honcut 53.27 314 *e*P P 09 03 09.5 +1.9
OHCM *ep*P pP 09 03 36.7 -0.4
B13A Whitefish 53.28 327 ⇑P P 09 03 07.9 +0.2
baz=53,SNR=6.2
C12B Naegeli Ranch, 53.45 326 ⇑P P 09 03 09.5 +0.6
baz=54,SNR=9.9
MOD Modoc 53.52 317 *e*P P 09 03 10.5 +0.8
comp=Z,7.4nm,1.0s
MOD *ep*P pP 09 03 39.6 +0.5
A13A Flathead Natio 53.58 328 ⇑P P 09 03 10.4 +0.5
baz=54
B12A Libby 53.95 326 ⇓P P 09 03 13.6 +1.1
baz=54
A12A Yaak River Ran 54.25 327 ⇓P P 09 03 15.6 +0.9
baz=54,SNR=11
NEW Newport 54.68 326 *e*P P 09 03 17.8 0.0
comp=Z,12nm,1.1s
NEW Newport 54.68 326 ⇑P P 09 03 17.8 0.0
baz=55,SNR=7.3
NEW Newport 54.68 326 P P 09 03 17.9 0.0
comp=Z,6.1nm,1.0s,baz=132,slow=5.7,SNR=7.5
KIPM Iron Peak 54.88 314 *e*P P 09 03 21.2 +1.7
KIPM *ep*P pP 09 03 48.9 -0.3
YBH Yreka Blue Hor 55.08 316 P P 09 03 19.8 -1.1
YBH pP pP 09 03 48.2 -2.3
YBH ScP ScP 09 08 10.5 +2.5
YBH Yreka Blue Hor 55.08 316 P P 09 03 19.8 -1.1
comp=Z,2.0nm,0.5s,baz=42,slow=1.8,SNR=18
YBH pP pP 09 03 48.2 -2.3
comp=Z,9.6nm,0.8s,baz=77,slow=6.9,SNR=9.8
YBH ScP ScP 09 08 10.5 +2.5
comp=Z,2.5nm,0.9s,baz=199,slow=11,SNR=3.7
KHMM Horse Mountain 55.45 315 *e*P P 09 03 23.4 -0.2
comp=Z,25nm,0.9s
KHMM *ep*P pP 09 03 53.4 0.0
LON Longmire 56.66 322 *e*P P 09 03 32.8 +0.7
LON pmax pmax
comp=Z,5.0nm,0.9s
LON Longmire 56.66 322 *e*P P 09 03 32.8 +0.7
comp=Z,5.3nm,0.9s
NLWA Neilton Lookou 58.21 322 *e*P P 09 03 44.3 +1.4
comp=Z,26nm,1.3s
SFJD Kangerlussuaq 61.22 10 *i* P P 09 04 02.6 -0.3
comp=Z,13nm,1.0s
YKA Yellowknife Ar 62.32 340 P P 09 04 10.6 +0.1
YKA pP pP 09 04 39.6 -1.2
YKA ScP ScP 09 08 39.5 0.0
YKA ⇑*e* 09 33 18.2
YKA Yellowknife Ar 62.32 340 P P 09 04 10.5 +0.1
comp=Z,42nm,0.6s,baz=132,slow=6.9,SNR=1388
YKA pP pP 09 04 39.6 -1.2
comp=Z,18nm,0.7s,baz=129,slow=7.2,SNR=6.8
YKA ScP ScP 09 08 39.5 0.0
comp=Z,1.4nm,0.8s,baz=123,slow=4.4,SNR=3.9
YKA PKP2bc 09 33 18.2
comp=Z,0.7nm,0.9s,baz=303,slow=2.3,SNR=8.8
YKW3 Yellowknife Ar 62.37 340 *e*P P 09 04 10.9 +0.1
comp=Z,0.8nm,0.6s
YKW3 *ep*P pP 09 04 40.2 -0.9
MORF Marmelete 65.36 53 *e*P P 09 04 30.6 -0.4
PCVE Castro Verde 65.89 52 *e*P P 09 04 33.5 -0.8
EVOP Sao Brissos 65.97 51 *e*P P 09 04 33.3 -1.5
EVOP pmax pmax
comp=Z,13nm,0.7s
EVOP Sao Brissos 65.97 51 *e*P P 09 04 33.3 -1.5
comp=Z,13nm,0.7s
PMTG Montargil 65.99 51 *e*P P 09 04 33.5 -1.4
EVO Evora 66.06 51 *e*P P 09 04 33.3 -2.1
comp=Z,13nm,0.7s
EVO *e*R
comp=Z,54nm,20.8s
PBEJ Beja 66.09 52 *e*P P 09 04 34.5 -1.1
DLBC Dease Lake 66.39 331 P P 09 04 38.2 +1.0
DLBC Dease Lake 66.39 331 P P 09 04 38.2 +1.0
baz=104,slow=4.2
PESTR Estremoz 66.44 51 *e*P P 09 04 36.1 -1.7
comp=Z,18nm,1.6s
PGAV Gavieira, Arco 66.48 48 *e*P P 09 04 37.0 -1.1
PVIS Viseu 66.53 49 *e*P P 09 04 37.2 -1.2
PMRV Marv??o 66.68 50 *e*P P 09 04 37.5 -1.9
POLO Lamas de Olo 66.72 48 *e*P P 09 04 38.5 -1.1
MTE Manteigas 66.73 49 *e*P P 09 04 38.4 -1.3
PBAR Barrancos 66.76 52 *e*P P 09 04 38.7 -1.1
PVRL Vila Real 66.76 48 *e*P P 09 04 38.8 -1.0
MVO Moncorvo 67.25 49 *e*P P 09 04 42.0 -1.0
PBRG Braganca 67.57 48 *e*P P 09 04 43.8 -1.2
LIC Lamto 67.87 86 *e*P P 09 04 44.5 -2.7
comp=Z,29nm,0.7s,baz=273
LIC *ep*P pP 09 05 18.2 +0.2
LIC Lamto 67.87 86 *e*P P 09 04 44.5 -2.7
comp=Z,29nm,0.7s
LIC *ep*P pP 09 05 18.2 +0.2
DBIC Dimbokro 67.99 86 *e*P P 09 04 45.1 -2.9
comp=Z,18nm,0.8s
DBIC pP pP 09 05 19.3 +0.5
DBIC Dimbokro 67.99 86 P P 09 04 45.2 -2.9
comp=Z,14nm,0.7s,baz=263,slow=6.1,SNR=20
DBIC pP pP 09 05 19.3 +0.5
comp=Z,16nm,0.9s,baz=264,slow=6.0,SNR=6.8
RES Resolute Bay 68.06 354 *e*P P 09 04 47.4 0.0
comp=Z,9.8nm,0.8s
RES *e*PcP PcP 09 05 13.8 +1.3
SUMG Summit 68.18 11⇑*i*P P 09 04 49.1 +0.5
SUMG *i* *PP pP 09 05 18.9 -0.5
SUMG pmax pmax
comp=Z,63nm,1.0s
SUMG Summit 68.18 11 *e*P P 09 04 48.9 +0.3
comp=Z,77nm,0.9s
SUMG Summit 68.18 11⇑*i*P P 09 04 49.1 +0.5
comp=Z,63nm,1.0s
SUMG *i* pP pP 09 05 18.9 -0.5
ESDC Sonseca Array 69.34 51 P P 09 04 54.3 -1.7
ESDC PcP PcP 09 05 18.9 +0.2
ESDC Sonseca Array 69.34 51 P P 09 04 54.3 -1.7
comp=Z,2.2nm,0.5s,baz=264,slow=6.3,SNR=18
ESDC PcP PcP 09 05 18.9 +0.2
comp=Z,1.7nm,0.7s,baz=283,slow=4.3,SNR=5.7
SCO Scoresbysund 70.56 16 *i* P P 09 05 03.5 +0.8
SCO pmax pmax
comp=Z,5.0nm,0.9s
SCO Scoresbysund 70.56 16 *i* P P 09 05 03.5 +0.8
comp=Z,5.1nm,0.9s
QUIF Quistinic 71.12 42⇑*i*P P 09 05 07.2 +0.6
comp=Z,44nm,1.1s
QUIF *ep*P pP 09 05 39.4 +1.8
QUIF Quistinic 71.12 42⇑*i*P P 09 05 07.2 +0.6
QUIF *e**PP pP 09 05 39.4 +1.8
QUIF pmax pmax
comp=Z,44nm,1.0s
QUIF Quistinic 71.12 42⇑*i*P P 09 05 07.2 +0.6
comp=Z,44nm,1.0s
QUIF *ep*P pP 09 05 39.4 +1.8
ROSF Rostrenen 71.12 42⇑*i*P P 09 05 06.5 -0.1
comp=Z,23nm,0.9s
ROSF *ep*P pP 09 05 38.3 +0.7
ROSF Rostrenen 71.12 42⇑*i*P P 09 05 06.5 -0.1
ROSF *e**PP pP 09 05 38.3 +0.7
ROSF pmax pmax
comp=Z,23nm,0.9s
ROSF Rostrenen 71.12 42⇑*i*P P 09 05 06.5 -0.1
comp=Z,23nm,0.9s
ROSF *ep*P pP 09 05 38.3 +0.7
YRC Rhoscolyn 71.27 36⇑*i*P P 09 05 07.3 -0.1
YRC Rhoscolyn 71.27 36 P P 09 05 07.3 -0.1
YRE Yr Eifl 71.30 37⇑*i*P P 09 05 07.7 +0.2
YRE Yr Eifl 71.30 37 P P 09 05 07.7 +0.2
PNL Peninsula 71.35 331 *e*P P 09 05 09.4 +1.7
comp=Z,34nm,1.0s
WLF1 Llynfaes 71.38 36 *e*P P 09 05 07.7 -0.3
WLF1 Llynfaes 71.38 36 P P 09 05 07.7 -0.3
WME Myndd Eilian 71.46 36⇑*e*P P 09 05 08.3 -0.2
WME Myndd Eilian 71.46 36 P P 09 05 08.3 -0.2
YLL Llanberis 71.48 36⇑*e*P P 09 05 08.6 -0.1
YLL Llanberis 71.48 36 P P 09 05 08.6 -0.1
GAL1 Galloway 71.55 35⇑*e*P P 09 05 09.0 0.0
GAL1 AMB AMB 09 05 10.3
comp=Z,89nm,1.1s
GAL1 Galloway 71.55 35 P P 09 05 09.0 0.0
GAL1 AMB AMB 09 05 10.3
comp=Z,89nm,1.1s
SGMF Saint Gilles 71.58 42⇑*i*P P 09 05 09.1 -0.3
comp=Z,21nm,0.8s
SGMF Saint Gilles 71.58 42⇑*i*P P 09 05 09.1 -0.3
SGMF pmax pmax
comp=Z,21nm,0.8s
SGMF Saint Gilles 71.58 42⇑*i*P P 09 05 09.1 -0.3
comp=Z,21nm,0.8s
KPL Plockton 71.64 32⇑*e*P P 09 05 08.9 -0.6
KPL AMB AMB 09 05 08.9
comp=Z,70nm,2.0s
KPL Plockton 71.64 32 P P 09 05 08.9 -0.6
KPL AMB AMB 09 05 08.9
comp=Z,70nm,2.0s
WPM1 Penmaenmawr 71.66 36⇑*e*P P 09 05 09.6 -0.2

WPM1 Penmaenmawr 71.66 36 P **P 09 05 09.6 -0.2**
KSB Sheil Bridge 71.72 32⇑*eP* **P 09 05 09.8 -0.2**
KSB Sheil Bridge 71.72 32 P **P 09 05 09.8 -0.2**
SJPF Ste Jean 71.80 47⇑*iP* **P 09 05 10.4 -0.4**
comp=Z,41nm,0.7s
SJPF Ste Jean 71.80 47⇑*iP* **P 09 05 10.4 -0.4**
SJPF pmax pmax
comp=Z,41nm,0.7s
SJPF Ste Jean 71.80 47⇑*iP* **P 09 05 10.4 -0.4**
comp=Z,41nm,0.7s
KAC Achnashellach 71.86 32⇑*iP* **P 09 05 10.7 -0.2**
KAC Achnashellach 71.86 32 P **P 09 05 10.7 -0.2**
PGBU Glenifferbraes 71.89 34⇑*eP* **P 09 05 11.1 +0.1**
PGBU AMB AMB 09 05 11.8
comp=Z,83nm,1.0s
PGBU Glenifferbraes 71.89 34 P **P 09 05 11.1 +0.1**
PGBU AMB AMB 09 05 11.8
comp=Z,83nm,1.0s
MCH1 Michaelchurch 71.95 38⇑*eP* **P 09 05 11.1 -0.4**
MCH1 AMB AMB 09 05 11.8
comp=Z,56nm,1.3s
MCH1 Michaelchurch 71.95 38 P **P 09 05 11.1 -0.4**
MCH1 AMB AMB 09 05 11.8
comp=Z,56nm,1.3s
EAB Aberfoyle 72.06 33⇑*iP* **P 09 05 11.9 -0.2**
EAB Aberfoyle 72.06 33 P **P 09 05 11.9 -0.2**
INK Inuvik 72.09 340 P **P 09 05 12.1 +0.1**
INK Inuvik 72.09 340 P **P 09 05 12.1 +0.1**
comp=Z,14nm,0.6s,baz=103,slow=6.0,SNR=115
HLM1 Long Mynd 72.12 37⇑*eP* **P 09 05 12.3 -0.2**
HLM1 AMB AMB 09 05 13.0
comp=Z,35nm,1.1s
HLM1 Long Mynd 72.12 37 P **P 09 05 12.3 -0.2**
HLM1 AMB AMB 09 05 13.0
comp=Z,35nm,1.1s
ETSF Etsaut 72.26 48 *eP* **P 09 05 13.1 -0.6**
comp=Z,8.5nm,0.7s
ETSF Etsaut 72.26 48 *eP* **P 09 05 13.1 -0.6**
ETSF pmax pmax
comp=Z,9.0nm,0.7s
ETSF Etsaut 72.26 48 *eP* **P 09 05 13.1 -0.6**
comp=Z,8.5nm,0.7s
MDO Dochfour 72.34 32⇑*iP* **P 09 05 13.5 -0.2**
MDO Dochfour 72.34 32 P **P 09 05 13.5 -0.2**
KESW Keswick, Cumbr 72.40 35⇑*eP* **P 09 05 13.7 -0.4**
KESW AMB AMB 09 05 15.4
comp=Z,53nm,1.2s
KESW Keswick, Cumbr 72.40 35 P **P 09 05 13.7 -0.4**
KESW AMB AMB 09 05 15.4
comp=Z,53nm,1.2s
ESK Eskdalemuir 72.49 34⇑*eP* **P 09 05 14.6 -0.1**
ESK AMB AMB 09 05 15.7
comp=Z,57nm,0.9s
ESK Eskdalemuir 72.49 34 P **P 09 05 14.6 -0.1**
ESK AMB AMB 09 05 15.7
comp=Z,57nm,0.9s
ESK Eskdalemuir 72.49 34 *eP* **P 09 05 14.8 +0.1**
ESK pmax pmax
comp=Z,48nm,0.8s
ESK Eskdalemuir 72.49 34 *eP* **P 09 05 14.8 +0.1**
comp=Z,48nm,0.8s
ECK Cauldkaine Hil 72.51 34⇑*eP* **P 09 05 14.4 -0.3**
ECK Cauldkaine Hil 72.51 34 P **P 09 05 14.4 -0.3**
MVH1 Achvaich 72.55 32⇑*iP* **P 09 05 14.9 0.0**
MVH1 Achvaich 72.55 32 P **P 09 05 14.9 0.0**
EBL Broad Law 72.68 34⇑*iP* **P 09 05 15.3 -0.4**
EBL Broad Law 72.68 34 P **P 09 05 15.3 -0.4**
GRR Gorron 72.72 42⇑*iP* **P 09 05 15.9 -0.3**
comp=Z,49nm,0.7s
GRR *eP* **pP 09 05 47.9 +0.6**
GRR Gorron 72.72 42⇑*iP* **P 09 05 15.9 -0.3**
GRR *e**PP **pP 09 05 47.9 +0.6**
GRR pmax pmax
comp=Z,49nm,0.7s
GRR Gorron 72.72 42⇑*iP* **P 09 05 15.9 -0.3**
comp=Z,49nm,0.7s
GRR *eP* **pP 09 05 47.9 +0.6**
LHO Holmfirth 72.92 36⇑*eP* **P 09 05 17.2 0.0**
LHO Holmfirth 72.92 36 P **P 09 05 17.2 0.0**
EPF Esparros 72.93 47⇑*iP* **P 09 05 17.2 -0.4**
comp=Z,18nm,0.5s
EPF *eP* **pP 09 05 49.7 +1.0**
EPF Esparros 72.93 47⇑*iP* **P 09 05 17.2 -0.4**
EPF *e**PP **pP 09 05 49.7 +1.0**
EPF pmax pmax
comp=Z,18nm,0.5s
EPF Esparros 72.93 47⇑*iP* **P 09 05 17.2 -0.4**
comp=Z,18nm,0.5s
EPF *eP* **pP 09 05 49.7 +1.0**
ESY Stoneypath 72.94 34⇑*iP* **P 09 05 17.2 -0.1**
ESY Stoneypath 72.94 34 P **P 09 05 17.2 -0.1**
MCD Coleburn Disti 72.95 32⇑*iP* **P 09 05 17.4 +0.1**
MCD Coleburn Disti 72.95 32 P **P 09 05 17.4 +0.1**
MFF Saint Martin d 72.97 44⇑*iP* **P 09 05 17.5 -0.2**
comp=Z,41nm,0.6s
MFF *eP* **pP 09 05 49.5 +0.7**
MFF Saint Martin d 72.97 44⇑*iP* **P 09 05 17.5 -0.2**
MFF *e**PP **pP 09 05 49.5 +0.7**
MFF pmax pmax
comp=Z,41nm,0.6s
MFF Saint Martin d 72.97 44⇑*iP* **P 09 05 17.5 -0.2**
comp=Z,41nm,0.6s
MFF *eP* **pP 09 05 49.5 +0.7**
FLN La Foliniere 73.02 41 *eP* **P 09 05 17.9 0.0**
comp=Z,50nm,0.7s
FLN *eR*
comp=Z,61nm,18.8s
FLN La Foliniere 73.02 41 *eP* **P 09 05 17.9 0.0**
FLN pmax pmax
comp=Z,50nm,0.7s
FLN La Foliniere 73.02 41 *eP* **P 09 05 17.9 0.0**
comp=Z,50nm,0.7s
MME1 Meikle Cairn 73.05 32⇑*iP* **P 09 05 17.7 -0.2**
MME1 Meikle Cairn 73.05 32 P **P 09 05 17.7 -0.2**
LFF La Frestale 73.41 45 *eP* **P 09 05 19.7 -0.5**
comp=Z,26nm,0.6s
LFF *eP* **pP 09 05 52.1 +0.7**
LFF La Frestale 73.41 45 *eP* **P 09 05 19.7 -0.5**
LFF *e**PP **pP 09 05 52.1 +0.7**
LFF pmax pmax
comp=Z,26nm,0.6s
LFF La Frestale 73.41 45 *eP* **P 09 05 19.7 -0.5**
comp=Z,26nm,0.6s
LFF *eP* **pP 09 05 52.1 +0.7**
EGAK Eagle 73.65 336 *eP* **P 09 05 21.9 +0.6**
comp=Z,20nm,0.9s
TOA0 Torodi Ar. Sit 73.88 79 *eP* **P 09 05 20.7 -2.9**
TOA0 *eP* **pP 09 05 56.5 +1.7**
TORD Torodi Ar. Bea 73.88 79 P **P 09 05 20.8 -2.8**
TORD pP **pP 09 05 55.8 +1.0**
TORD Torodi Ar. Bea 73.88 79 P **P 09 05 20.8 -2.8**
comp=Z,4.5nm,0.6s,baz=288,slow=6.0,SNR=64
TORD pP **pP 09 05 55.8 +1.0**
comp=Z,3.5nm,0.6s,baz=289,slow=6.4,SNR=8.4
RJF Les Rejaudoux 73.99 45⇑*iP* **P 09 05 23.0 -0.7**
RJF *eR*
comp=Z,55nm,22.0s
RJF Les Rejaudoux 73.99 45⇑*iP* **P 09 05 23.0 -0.7**
RJF Les Rejaudoux 73.99 45⇑*iP* **P 09 05 23.0 -0.7**
RAGM Ragged Mountai 74.09 331 *eP* **P 09 05 25.6 +1.5**
comp=Z,62nm,1.2s
BMRM Bremner River 74.19 331 *eP* **P 09 05 26.0 +1.5**
comp=Z,94nm,1.4s
MENT Mentasta 74.25 333 *eP* **P 09 05 26.1 +1.2**
MTLF Montolieu 74.33 47⇑*iP* **P 09 05 24.7 -1.0**
comp=Z,18nm,0.9s
MTLF *eP* **pP 09 05 57.3 +0.4**
MTLF Montolieu 74.33 47⇑*iP* **P 09 05 24.7 -1.0**
MTLF *e**PP **pP 09 05 57.3 +0.4**
MTLF pmax pmax
comp=Z,18nm,0.9s
MTLF Montolieu 74.33 47⇑*iP* **P 09 05 24.7 -1.0**
comp=Z,18nm,0.9s
MTLF *eP* **pP 09 05 57.3 +0.4**
CAF Calviac 74.34 46⇑*iP* **P 09 05 25.2 -0.6**
comp=Z,23nm,0.8s
CAF *eP* **pP 09 05 57.5 +0.5**
CAF Calviac 74.34 46⇑*iP* **P 09 05 25.2 -0.6**
CAF *e**PP **pP 09 05 57.5 +0.5**
CAF pmax pmax
comp=Z,23nm,0.8s
CAF Calviac 74.34 46⇑*iP* **P 09 05 25.2 -0.6**
comp=Z,23nm,0.8s
CAF *eP* **pP 09 05 57.5 +0.5**

LRW Lerwick 74.55 30⇑*eP* **P 09 05 26.8 +0.2**
LRW AMB AMB 09 05 27.4
comp=Z,65nm,1.0s
LRW Lerwick 74.55 30 P **P 09 05 26.8 +0.2**
LRW AMB AMB 09 05 27.4
comp=Z,65nm,1.0s
TCF Toulx Ste Croi 74.56 44 *eP* **P 09 05 26.3 -0.7**
comp=Z,15nm,0.9s
TCF *eP* **pP 09 05 58.6 +0.3**
TCF Toulx Ste Croi 74.56 44 *eP* **P 09 05 26.3 -0.7**
TCF *e**PP **pP 09 05 58.6 +0.3**
TCF pmax pmax
comp=Z,15nm,0.9s
TCF Toulx Ste Croi 74.56 44 *eP* **P 09 05 26.3 -0.7**
comp=Z,15nm,0.9s
TCF *eP* **pP 09 05 58.6 +0.3**
DOT Dot Lake 74.57 334 *eP* **P 09 05 27.9 +1.2**
comp=Z,60nm,0.7s
DOT *eP* **pP 09 05 58.5 +0.5**
DIV Divide 74.78 331 *eP* **P 09 05 29.1 +1.2**
comp=Z,15nm,0.8s
DAG Danmarks Havn 74.86 11⇑*iP* **P 09 05 27.8 -0.2**
DAG pmax pmax
comp=Z,15nm,0.8s
DAG Danmarks Havn 74.86 11⇑*iP* **P 09 05 27.8 -0.2**
comp=Z,20nm,0.8s
ALE Alert 74.94 2 P **P 09 05 28.0 -0.5**
comp=Z,439nm,0.8s,SNR=32
BGF Bois d'Agland 75.02 44⇑*iP* **P 09 05 29.1 -0.5**
comp=Z,40nm,0.8s
BGF *eP* **pP 09 06 01.3 +0.4**
BGF Bois d'Agland 75.02 44⇑*iP* **P 09 05 29.1 -0.5**
BGF *e**PP **pP 09 06 01.3 +0.4**
BGF pmax pmax
comp=Z,40nm,0.8s
BGF Bois d'Agland 75.02 44⇑*iP* **P 09 05 29.1 -0.5**
comp=Z,40nm,0.8s
BGF *eP* **pP 09 06 01.3 +0.4**
PAX Paxson 75.03 333 *eP* **P 09 05 30.2 +0.7**
PAX pmax pmax
comp=Z,28nm,1.0s
PAX Paxson 75.03 333 *eP* **P 09 05 30.2 +0.7**
comp=Z,28nm,1.0s
PYM Petit Puy Mans 75.07 45 *eP* **P 09 05 30.0 0.0**
PYM Petit Puy Mans 75.07 45 *eP* **P 09 05 30.0 0.0**
PYM Petit Puy Mans 75.07 45 *eP* **P 09 05 30.0 0.0**
AVF Avril sur Loir 75.39 44⇑*iP* **P 09 05 30.9 -0.8**
comp=Z,15nm,0.8s
AVF *eP* **pP 09 06 03.1 +0.1**
AVF Avril sur Loir 75.39 44⇑*iP* **P 09 05 30.9 -0.8**
AVF *e**PP **pP 09 06 03.1 +0.1**
AVF pmax pmax
comp=Z,15nm,0.8s
AVF Avril sur Loir 75.39 44⇑*iP* **P 09 05 30.9 -0.8**
comp=Z,15nm,0.8s
AVF *eP* **pP 09 06 03.1 +0.1**
SSF Saint Saulge 75.51 43⇑*iP* **P 09 05 31.6 -0.8**
comp=Z,21nm,1.0s
SSF Saint Saulge 75.51 43⇑*iP* **P 09 05 31.6 -0.8**
SSF pmax pmax
comp=Z,21nm,1.0s
SSF Saint Saulge 75.51 43⇑*iP* **P 09 05 31.6 -0.8**
comp=Z,21nm,1.0s
LASF Ste Croix 75.56 47 *eP* **P 09 05 32.6 -0.2**
LASF Ste Croix 75.56 47 *eP* **P 09 05 32.6 -0.2**
SMF Signal de Mont 75.71 44⇑*iP* **P 09 05 32.9 -0.7**
comp=Z,28nm,1.0s
SMF *eP* **pP 09 06 05.1 +0.2**
SMF Signal de Mont 75.71 44⇑*iP* **P 09 05 32.9 -0.7**
SMF *e**PP **pP 09 06 05.1 +0.2**
SMF pmax pmax
comp=Z,29nm,1.0s
SMF Signal de Mont 75.71 44⇑*iP* **P 09 05 32.9 -0.7**
comp=Z,28nm,1.0s
SMF *eP* **pP 09 06 05.1 +0.2**
ILAR Eielson Array 76.03 335 P **P 09 05 35.4 +0.4**
ILAR pP **pP 09 06 05.3 -1.0**
ILAR Eielson Array 76.03 335 P **P 09 05 35.4 +0.4**
comp=Z,13nm,0.8s,baz=101,slow=4.6,SNR=194
ILAR pP **pP 09 06 05.3 -1.0**
comp=Z,2.9nm,0.7s,baz=112,slow=5.1,SNR=2.7
ILAR LR LR 09 39 07.7
comp=Z,62nm,20.4s,baz=106,slow=36
SML Sawmill 76.11 332 *eP* **P 09 05 36.5 +0.9**
SML pmax pmax
comp=Z,19nm,1.6s
SML Sawmill 76.11 332 *eP* **P 09 05 36.5 +0.9**
comp=Z,19nm,1.6s
VIVF Saint-Julien-l 76.19 46 *eP* **P 09 05 36.4 +0.1**
comp=Z,25nm,1.0s
VIVF Saint-Julien-l 76.19 46 *eP* **P 09 05 36.4 +0.1**
VIVF pmax pmax
comp=Z,25nm,1.0s
VIVF Saint-Julien-l 76.19 46 *eP* **P 09 05 36.4 +0.1**
comp=Z,25nm,1.0s
BAIF Baives 76.21 40 *eP* **P 09 05 36.0 -0.3**
BAIF Baives 76.21 40 *eP* **P 09 05 36.0 -0.3**
BAIF Baives 76.21 40 *eP* **P 09 05 36.0 -0.3**
SNF Seneffe 76.29 40 P **P 09 05 37.0 +0.3**
comp=Z,17nm,1.6s
SEW Seward 76.38 330 *eP* **P 09 05 37.5 +0.5**
comp=Z,42nm,1.3s
COLA College 76.45 335 *eP* **P 09 05 38.1 +0.8**
COLA pmax pmax
comp=Z,14nm,0.9s
COLA College 76.45 335 *eP* **P 09 05 38.1 +0.8**
comp=Z,14nm,0.9s
PMR Palmer 76.45 332 *eP* **P 09 05 38.0 +0.6**
PMR pmax pmax
comp=Z,16nm,0.8s
PMR Palmer 76.45 332 *eP* **P 09 05 38.0 +0.6**
comp=Z,16nm,0.8s
DOU Dourbes 76.46 40 P **P 09 05 37.6 0.0**
comp=Z,15nm,1.3s
DOU AP **pP 09 06 08.4 -0.7**
GIVF Givet 76.61 40⇑*iP* **P 09 05 38.5 0.0**
comp=Z,104nm,1.1s
GIVF *eP* **pP 09 06 10.6 +0.7**
GIVF Givet 76.61 40⇑*iP* **P 09 05 38.5 0.0**
GIVF *e**PP **pP 09 06 10.6 +0.7**
GIVF pmax pmax
comp=Z,104nm,1.1s
GIVF Givet 76.61 40⇑*iP* **P 09 05 38.5 0.0**
comp=Z,104nm,1.1s
GIVF *eP* **pP 09 06 10.6 +0.7**
SFTF Sexfontaines 76.62 42⇑*iP* **P 09 05 38.3 -0.4**
comp=Z,44nm,0.7s
SFTF *eP* **pP 09 06 10.3 +0.2**
SFTF Sexfontaines 76.62 42⇑*iP* **P 09 05 38.3 -0.4**
comp=Z,44nm,0.7s
SFTF *eP* **pP 09 06 10.3 +0.2**
MEZF Maizieres J'vi 76.65 42 *eP* **P 09 05 38.7 -0.1**
MEZF *eP* **pP 09 06 10.9 +0.7**
MEZF Maizieres J'vi 76.65 42 *eP* **P 09 05 38.7 -0.1**
MEZF *eP* **pP 09 06 10.9 +0.7**
MCK McKinley 76.71 334 *eP* **P 09 05 39.7 +0.8**
MCK pmax pmax
comp=Z,75nm,1.7s
MCK McKinley 76.71 334 *eP* **P 09 05 39.7 +0.8**
comp=Z,75nm,1.7s
TAM Tamanrasset 76.92 68 *eP* **P 09 05 41.0 0.0**
TAM pmax pmax
comp=Z,10.0nm,0.9s
TAM Tamanrasset 76.92 68 *eP* **P 09 05 41.0 0.0**
comp=Z,9.7nm,0.9s
BCLA Clavier 76.93 40 P **P 09 05 40.8 +0.4**
BCLA AP **pP 09 06 11.4 -0.4**
ORIF Oris-en-Rattie 77.05 46 *eP* **P 09 05 41.6 +0.4**
comp=Z,42nm,0.9s
ORIF *eP* **pP 09 06 14.1 +1.4**
ORIF *eR*
comp=Z,48nm,21.8s
ORIF Oris-en-Rattie 77.05 46 *eP* **P 09 05 41.6 +0.4**
ORIF *e**PP **pP 09 06 14.1 +1.4**
ORIF pmax pmax
comp=Z,42nm,0.9s
ORIF Oris-en-Rattie 77.05 46 *eP* **P 09 05 41.6 +0.4**
comp=Z,42nm,0.9s
ORIF *eP* **pP 09 06 14.1 +1.4**
PAGF Fort de Pagny 77.10 42⇑*iP* **P 09 05 41.3 0.0**
comp=Z,5.4nm,0.6s
PAGF *eP* **pP 09 06 13.5 +0.7**
PAGF Fort de Pagny 77.10 42⇑*iP* **P 09 05 41.3 0.0**
comp=Z,5.4nm,0.6s
PAGF *eP* **pP 09 06 13.5 +0.7**

BEBN Eben Emael 77.19 40 P **P 09 05 42.1 +0.4**
comp=Z,13nm,1.3s
CABF La Chapelle 77.25 44⇑*iP* **P 09 05 42.0 -0.4**
comp=Z,26nm,0.9s
CABF La Chapelle 77.25 44⇑*iP* **P 09 05 42.0 -0.4**
CABF pmax pmax
comp=Z,26nm,0.9s
CABF La Chapelle 77.25 44⇑*iP* **P 09 05 42.0 -0.4**
comp=Z,26nm,0.9s
THEF They Montfort 77.26 42 *eP* **P 09 05 42.3 +0.1**
THEF They Montfort 77.26 42 *eP* **P 09 05 42.3 +0.1**
THEF They Montfort 77.26 42 *eP* **P 09 05 42.3 +0.1**
TRF Thorofare Moun 77.27 333 *eP* **P 09 05 42.4 +0.3**
comp=Z,23nm,0.7s
HGN Heimansgroeve 77.36 40 *eP* **P 09 05 42.7 0.0**
comp=Z,92nm,1.4s
HGN *epP* **pP 09 06 13.9 -0.2**
MEM Membach 77.39 40 P **P 09 05 43.1 +0.2**
comp=Z,28nm,1.4s
WLF Walferdange 77.44 41 P **P 09 05 43.5 +0.3**
comp=Z,43nm,1.3s
WLF Walferdange 77.44 41 *eP* **P 09 05 44.2 +1.0**
WLF pmax pmax
comp=Z,64nm,1.1s
WLF Walferdange 77.44 41 *eP* **P 09 05 43.7 +0.5**
comp=Z,98nm,1.4s
WLF Walferdange 77.44 41 *eP* **P 09 05 44.1 +1.0**
comp=Z,64nm,1.1s
LMR La Mourre 77.45 47 *eP* **P 09 05 42.7 -0.7**
LMR La Mourre 77.45 47 *eP* **P 09 05 42.7 -0.7**
LMR La Mourre 77.45 47 *eP* **P 09 05 42.7 -0.7**
HAU Haudompre 77.49 43 *eP* **P 09 05 43.1 -0.5**
HAU *eR*
comp=Z,53nm,19.8s
HAU Haudompre 77.49 43 *eP* **P 09 05 43.1 -0.5**
HAU Haudompre 77.49 43 *eP* **P 09 05 43.1 -0.5**
FRF La Foret Royal 77.56 47 *eP* **P 09 05 44.3 +0.3**
FRF La Foret Royal 77.56 47 *eP* **P 09 05 44.3 +0.3**
FRF La Foret Royal 77.56 47 *eP* **P 09 05 44.3 +0.3**
BNI Bardonecchia 77.62 46 *eP* **P 09 05 45.2 +0.7**
BNI pmax pmax
comp=Z,10.0nm,0.9s
BNI Bardonecchia 77.62 46 *eP* **P 09 05 45.2 +0.7**
comp=Z,10nm,0.9s
LPL La Plagne 77.67 45⇑*iP* **P 09 05 45.2 +0.3**
comp=Z,27nm,1.0s
LPL *epP* **pP 09 06 17.5 +1.2**
LPL La Plagne 77.67 45⇑*iP* **P 09 05 45.2 +0.3**
LPL *e**PP **pP 09 06 17.5 +1.2**
LPL pmax pmax
comp=Z,27nm,1.0s
LPL La Plagne 77.67 45⇑*iP* **P 09 05 45.2 +0.3**
comp=Z,27nm,1.0s
LPL *epP* **pP 09 06 17.5 +1.2**
MBDF Montbardon 77.67 46 *eP* **P 09 05 44.8 0.0**
comp=Z,18nm,0.9s
MBDF Montbardon 77.67 46 *eP* **P 09 05 44.8 0.0**
MBDF pmax pmax
comp=Z,18nm,0.9s
MBDF Montbardon 77.67 46 *eP* **P 09 05 44.8 0.0**
comp=Z,18nm,0.9s
LPG La Plagne 77.68 45⇑*iP* **P 09 05 45.4 +0.4**
comp=Z,29nm,1.0s
LPG La Plagne 77.68 45⇑*iP* **P 09 05 45.4 +0.4**
LPG pmax pmax
comp=Z,29nm,1.0s
LPG La Plagne 77.68 45⇑*iP* **P 09 05 45.4 +0.4**
comp=Z,29nm,1.0s
LOMF Lomont 77.79 43 *eP* **P 09 05 45.2 -0.1**
LOMF Lomont 77.79 43 *eP* **P 09 05 45.2 -0.1**
LOMF Lomont 77.79 43 *eP* **P 09 05 45.2 -0.1**
SPU Mount Spurr 77.79 331 *eP* **P 09 05 45.4 +0.3**
COLD Coldfoot 77.81 337 *eP* **P 09 05 46.2 +1.3**
comp=Z,20nm,0.9s
HINF Hinteralfeld 77.82 43⇑*iP* **P 09 05 44.8 -0.6**
comp=Z,23nm,0.6s
HINF Hinteralfeld 77.82 43⇑*iP* **P 09 05 44.8 -0.6**
HINF pmax pmax
comp=Z,23nm,0.6s
HINF Hinteralfeld 77.82 43⇑*iP* **P 09 05 44.8 -0.6**
comp=Z,23nm,0.6s
WTSB Winterswijk 77.96 39 *eP* **P 09 05 46.3 +0.3**
comp=Z,93nm,0.9s
MOF Molkenrain 78.01 43 *eP* **P 09 05 46.1 -0.4**
MOF Molkenrain 78.01 43 *eP* **P 09 05 46.1 -0.4**
MOF Molkenrain 78.01 43 *eP* **P 09 05 46.1 -0.4**
RUP Ruppelstein 78.03 41 *eP* **P 09 05 46.8 +0.3**
RUP Ruppelstein 78.03 41 *eP* **P 09 05 46.8 +0.3**
ECH Echery 78.04 42 *eP* **P 09 05 46.7 +0.1**
ECH pmax pmax
comp=Z,53nm,1.5s
ECH Echery 78.04 42 *eP* **P 09 05 46.7 +0.1**
comp=Z,53nm,1.5s
ECH Echery 78.04 42 *eP* **P 09 05 46.3 -0.3**
PPLA Purkeypile 78.05 333 *eP* **P 09 05 47.1 +0.6**
comp=Z,41nm,0.6s
RSO Redoubt South 78.06 330 *eP* **P 09 05 47.2 +0.5**
SENIN Lac Senin/Sane 78.08 44 *eP* **P 09 05 47.7 +0.6**
comp=Z,14nm,0.7s
SENIN *epP* **pP 09 06 20.2 +1.6**
CDF Champ du Feu 78.12 42⇑*iP* **P 09 05 46.8 -0.4**
CDF *epP* **pP 09 06 19.1 +0.4**
CDF Champ du Feu 78.12 42⇑*iP* **P 09 05 46.8 -0.4**
CDF *e**PP **pP 09 06 19.1 +0.4**
CDF Champ du Feu 78.12 42⇑*iP* **P 09 05 46.8 -0.4**
CDF *epP* **pP 09 06 19.1 +0.4**
SBF Sospel 78.14 47 *eP* **P 09 05 46.6 -0.7**
comp=Z,43nm,0.9s
SBF Sospel 78.14 47 *eP* **P 09 05 46.6 -0.7**
SBF pmax pmax
comp=Z,43nm,0.9s
SBF Sospel 78.14 47 *eP* **P 09 05 46.6 -0.7**
comp=Z,43nm,0.9s
BUG Bochum--Univer 78.23 39 *eP* **P 09 05 47.9 +0.4**
comp=Z,52nm,0.9s
BBS Basel-Blauen 78.25 43 *eP* **P 09 05 47.1 -0.7**
BBS Basel-Blauen 78.25 43 *eP* **P 09 05 47.1 -0.7**
ABH Alteburg 78.35 41 *eP* **P 09 05 48.6 +0.3**
LANF Langenberg 78.49 42 *eP* **P 09 05 49.5 +0.4**
LANF Langenberg 78.49 42 *eP* **P 09 05 49.5 +0.4**
LANF Langenberg 78.49 42 *eP* **P 09 05 49.5 +0.4**
IBBN Ibbenburen 78.57 38 *eP* **P 09 05 49.9 +0.5**
comp=Z,71nm,1.0s
FELD Feldberg im Sc 78.60 43 *eP* **P 09 05 49.6 -0.2**
BFO Black Forest 78.82 42 *eP* **P 09 05 50.6 -0.3**
BFO *e**PP **pP 09 06 22.4 -0.1**
BFO pmax pmax
comp=Z,34nm,1.6s
BFO Black Forest 78.82 42 *eP* **P 09 05 50.6 -0.3**
comp=Z,34nm,1.6s
BFO *epP* **pP 09 06 22.4 -0.1**
BFO Black Forest 78.82 42 *eP* **P 09 05 50.7 -0.2**
comp=Z,49nm,1.7s
TNS Taunus Mts 78.94 40 *eP* **P 09 05 52.0 +0.5**
TNS pmax pmax
comp=Z,66nm,1.2s
TNS Taunus Mts 78.94 40 *eP* **P 09 05 52.0 +0.5**
comp=Z,66nm,1.2s
PPT Papeete 79.24 251 LR LR 09 32 26.7
comp=Z,140nm,20.9s,baz=11,slow=29
PGF Pioggiola 79.28 48 *eP* **P 09 05 52.8 -0.8**
comp=Z,61nm,1.1s
PGF Pioggiola 79.28 48 *eP* **P 09 05 52.8 -0.8**
PGF pmax pmax
comp=Z,61nm,1.1s
PGF Pioggiola 79.28 48 *eP* **P 09 05 52.8 -0.8**
comp=Z,61nm,1.1s
STU Stuttgart 79.41 42 *eP* **P 09 05 54.0 0.0**
comp=Z,56nm,1.2s
SVW2 Sparrevohn 79.49 331 *eP* **P 09 05 54.0 -0.2**
comp=Z,25nm,0.6s
TUE Stuetta 79.50 44 *eP* **P 09 05 54.7 -0.2**
comp=Z,16nm,0.8s
TUE *epP* **pP 09 06 28.0 +1.5**
MUD Monsted U'grnd 79.54 34⇑*iP* **P 09 05 55.8 +1.2**
MUD pmax pmax
comp=Z,76nm,0.9s
MUD Monsted U'grnd 79.54 34⇑*iP* **P 09 05 55.8 +1.2**
comp=Z,76nm,0.8s
VSL Villasalto 79.62 51 *eP* **P 09 05 55.4 0.0**
comp=Z,34nm,0.8s
KEST Kesra 79.71 55 *eP* **P 09 05 56.6 +0.5**
KEST *epP* **pP 09 06 30.3 +2.6**
DAVA Damuels 79.86 43⇑*iP* **P 09 05 57.0 +0.2**
comp=Z,30nm,0.9s,SNR=12

DAVA	**Damuels**	**79.86**	**43**	⇑	*i*	P	**P**	**09 05 57.0**	**+0.2**
	comp=Z,30nm,0.9s								
UBBA	**Unterbreizbach**	**79.94**	**40**		*e*	P	**P**	**09 05 57.4**	**+0.7**
	comp=Z,50nm,1.7s								
NRDL	**Niedersach Rie**	**80.01**	**38**		*e*	P	**P**	**09 05 58.0**	**+0.9**
	comp=Z,60nm,1.2s								
NRDL					*e*	pP	**pP**	**09 06 30.0**	**+1.2**
FUORN	**Ofenpass-Fuorn**	**80.13**	**44**		*e*	P	**P**	**09 05 58.6**	**+0.2**
	comp=Z,14nm,0.8s								
BSEG	**Bad Segeberg**	**80.15**	**37**		*e*	P	**P**	**09 05 58.5**	**+0.6**
BSEG					*e*	*PP	**pP**	**09 06 30.5**	**+1.0**
BSEG						pmax	pmax		
	comp=Z,120nm,0.9s								
BSEG	**Bad Segeberg**	**80.15**	**37**		*e*	P	**P**	**09 05 58.5**	**+0.6**
	comp=Z,120nm,0.9s								
BSEG					*e*	pP	**pP**	**09 06 30.5**	**+1.0**
CLZ	**Clausthal**	**80.17**	**39**		*e*	P	**P**	**09 05 58.9**	**+0.7**
CLZ					*e*	*PP	**pP**	**09 06 31.0**	**+1.2**
CLZ						pmax	pmax		
	comp=Z,52nm,0.9s								
CLZ	**Clausthal**	**80.17**	**39**		*e*	P	**P**	**09 05 58.9**	**+0.7**
	comp=Z,52nm,0.9s								
CLZ					*e*	pP	**pP**	**09 06 31.0**	**+1.2**
FETA	**Feichten**	**80.45**	**44**	⇑	*i*	P	**P**	**09 05 59.9**	**0.0**
	comp=Z,47nm,1.5s,SNR=14								
FETA	**Feichten**	**80.45**	**44**	⇑	*i*	P	**P**	**09 05 59.9**	**0.0**
	comp=Z,47nm,1.5s								
NAO01	**NORSAR Array S**	**80.56**	**30**		*e*	P	**P**	**09 06 01.3**	**+1.3**
	comp=Z,101nm,0.9s								
NAO01					*e*	pP	**pP**	**09 06 31.2**	**-0.5**
MOTA	**Moosalm**	**80.70**	**43**		P	P	**P**	**09 06 01.0**	**-0.2**
	comp=Z,6.5nm,0.6s								
NB2	**NORSAR Subarra**	**80.72**	**29**		P	P	**P**	**09 06 02.0**	**+1.1**
	baz=269,slow=5.6								
NB2	**NORSAR Subarra**	**80.72**	**29**		P	P	**P**	**09 06 02.0**	**+1.1**
	comp=Z,99nm,0.9s,baz=269,slow=5.6								
NOA	**NORSAR Array B**	**80.72**	**29**		P	P	**P**	**09 06 02.0**	**+1.1**
NOA					pP		**pP**	**09 06 32.8**	**+0.2**
NOA	**NORSAR Array B**	**80.72**	**29**		P	P	**P**	**09 06 02.0**	**+1.1**
	comp=Z,64nm,0.9s,baz=269,slow=5.5,SNR=196								
NOA					pP		**pP**	**09 06 32.8**	**+0.2**
	comp=Z,8.0nm,0.6s,baz=271,slow=5.3,SNR=3.5								
NOA					LR		LR	09 36 32.5	
	comp=Z,34nm,18.1s,baz=260,slow=32								
GRF	**Grafenberg Arr**	**80.73**	**41**		*e*	P	**P**	**09 06 01.6**	**+0.4**
GRF						pmax	pmax		
	comp=Z,60nm,1.5s								
GRF	**Grafenberg Arr**	**80.73**	**41**		*e*	P	**P**	**09 06 01.6**	**+0.4**
	comp=Z,60nm,1.5s								
FUR	**Furstenfeldbru**	**80.79**	**42**		*e*	P	**P**	**09 06 02.0**	**+0.5**
FUR						pmax	pmax		
	comp=Z,77nm,1.4s								
FUR	**Furstenfeldbru**	**80.79**	**42**		*e*	P	**P**	**09 06 02.0**	**+0.5**
	comp=Z,77nm,1.4s								
MOX	**Moxa**	**80.97**	**40**		*e*	P	**P**	**09 06 02.8**	**+0.4**
MOX					*e*	*PP	**pP**	**09 06 35.0**	**+0.9**
MOX						pmax	pmax		
	comp=Z,40nm,1.6s								
MOX	**Moxa**	**80.97**	**40**		*e*	P	**P**	**09 06 02.8**	**+0.4**
	comp=Z,40nm,1.6s								
MOX					*e*	pP	**pP**	**09 06 35.0**	**+0.9**
NEUB	**Neuenburg**	**81.06**	**39**		*e*	P	**P**	**09 06 03.4**	**+0.6**
	comp=Z,77nm,1.4s								
WTTA	**Wattenberg**	**81.06**	**43**		P	P	**P**	**09 06 03.2**	**0.0**
	comp=Z,23nm,0.9s								
WTTA	**Wattenberg**	**81.06**	**43**					00 00 46.3	
LLD	**Lille Linde**	**81.25**	**35**		*i*	P	**P**	**09 06 04.6**	**+0.9**
LLD						pmax	pmax		
	comp=Z,67nm,0.7s								
LLD	**Lille Linde**	**81.25**	**35**		*i*	P	**P**	**09 06 04.6**	**+0.9**
	comp=Z,67nm,0.7s								
MANZ	**Manzenberg**	**81.30**	**41**		*e*	P	**P**	**09 06 04.9**	**+0.7**
	comp=Z,54nm,1.2s								
MANZ					*e*	pP	**pP**	**09 06 36.7**	**+0.8**
PLN	**Plauen**	**81.31**	**40**		*e*	P	**P**	**09 06 04.8**	**+0.6**
	comp=Z,197nm,1.1s								
PLN					*e*	pP	**pP**	**09 06 36.9**	**+0.9**
COP	**Copenhagen**	**81.36**	**35**		*i*	P	**P**	**09 06 05.7**	**+1.4**
COP						pmax	pmax		
	comp=Z,31nm,0.8s								
COP	**Copenhagen**	**81.36**	**35**		*i*	P	**P**	**09 06 05.7**	**+1.4**
	comp=Z,31nm,0.8s								
ROTZ	**Rotzenmuhle**	**81.37**	**41**		*e*	P	**P**	**09 06 05.4**	**+0.9**
	comp=Z,40nm,1.5s								
WERD	**Werda**	**81.41**	**40**		*e*	P	**P**	**09 06 05.3**	**+0.5**
	comp=Z,39nm,1.1s								
WERD					*e*	pP	**pP**	**09 06 37.2**	**+0.7**
GUNZ	**Gunzen**	**81.43**	**40**		*e*	P	**P**	**09 06 05.5**	**+0.6**
	comp=Z,29nm,1.2s								
GUNZ					*e*	pP	**pP**	**09 06 37.6**	**+1.0**
WERN	**Wernitzgruen**	**81.46**	**40**		*e*	P	**P**	**09 06 05.8**	**+0.8**
	comp=Z,38nm,1.1s								
NKC	**Novy Kostel**	**81.51**	**40**		*e*	P	**P**	**09 06 06.0**	**+0.7**
NKC	**Novy Kostel**	**81.51**	**40**	⇑	*e*	P	**P**	**09 06 06.0**	**+0.7**
TANN	**Tannenbergstha**	**81.51**	**40**		*e*	P	**P**	**09 06 06.0**	**+0.7**
	comp=Z,49nm,1.1s								
TANN					*e*	pP	**pP**	**09 06 37.9**	**+0.8**
KBS	**Kingsbay**	**81.60**	**11**	*c*	*i*	P	**P**	**09 06 06.8**	**+1.7**
KBS						pmax	pmax		
	comp=Z,18nm,0.7s								
KBS	**Kingsbay**	**81.60**	**11**		*e*	P	**P**	**09 06 06.8**	**+1.7**
	comp=Z,24nm,0.9s								
ABTA	**Abfaltersbach**	**81.68**	**44**		P	P	**P**	**09 06 06.4**	**+0.1**
	comp=Z,29nm,0.8s								
CLL	**Collm**	**81.82**	**39**	⇑	*i*	P	**P**	**09 06 07.2**	**+0.3**
CLL					*e*	S	S	09 16 17.0	+7.2
CLL						pmax	pmax		
	comp=Z,51nm,1.4s								
CLL	**Collm**	**81.82**	**39**		*e*	P	**P**	**09 06 07.4**	**+0.6**
	comp=Z,53nm,1.5s								
CLL					*e*	pP	**pP**	**09 06 39.3**	**+0.7**
CLL	**Collm**	**81.82**	**39**	⇑	*i*	P	**P**	**09 06 07.2**	**+0.3**
	comp=Z,51nm,1.4s								
CLL					*e*	PcP	**PcP**	**09 06 12.0**	**-0.2**
CLL					*e*	pP	**pP**	**09 06 39.0**	**+0.4**
CLL					*e*	S	S	09 16 17.0	+7.2
CLL					*e*	PPS	PPS	09 17 32.0	
CLL					*e*	SSSS	S	09 27 24.0	
WET	**Wettzell**	**81.83**	**41**		*e*	P	**P**	**09 06 07.6**	**+0.6**
WET						pmax	pmax		
	comp=Z,46nm,1.3s								
WET	**Wettzell**	**81.83**	**41**		*e*	P	**P**	**09 06 07.6**	**+0.6**
	comp=Z,46nm,1.3s								
RJOB	**Jochberg**	**81.83**	**43**		*e*	P	**P**	**09 06 07.2**	**+0.1**
	comp=Z,16nm,1.1s								
RJOB					*e*	pP	**pP**	**09 06 40.5**	**+1.7**
RGN	**Rugen**	**81.90**	**36**		*e*	P	**P**	**09 06 08.5**	**+1.3**
	comp=Z,118nm,1.1s								
RGN					*e*	pP	**pP**	**09 06 40.6**	**+1.7**
FBE	**Freiberg**	**82.06**	**40**		*e*	P	**P**	**09 06 08.9**	**+0.8**
	comp=Z,35nm,1.0s								
KBA	**Koelnbreinsper**	**82.23**	**44**	⇑	*i*	P	**P**	**09 06 09.1**	**-0.2**
KBA						pmax	pmax		
	comp=Z,33nm,1.1s								
KBA	**Koelnbreinsper**	**82.23**	**44**	⇑	*i*	P	**P**	**09 06 09.1**	**-0.2**
	comp=Z,33nm,1.1s,SNR=7.4								
KBA	**Koelnbreinsper**	**82.23**	**44**	⇑	*i*	P	**P**	**09 06 09.1**	**-0.2**
	comp=Z,33nm,1.1s								
RUE	**Ruedersdorf**	**82.26**	**38**		*e*	P	**P**	**09 06 09.7**	**+0.6**
	comp=Z,46nm,1.0s								
KHC	**Kasperske Hory**	**82.29**	**41**	⇑	*i*	P	**P**	**09 06 09.7**	**+0.3**
KHC					*e*	*PP	**pP**	**09 06 42.3**	**+1.1**
KHC	**Kasperske Hory**	**82.29**	**41**		*e*	P	**P**	**09 06 09.6**	**+0.2**
	comp=Z,40nm,1.0s								
KHC					*e*	pP	**pP**	**09 06 42.6**	**+1.4**
KHC	**Kasperske Hory**	**82.29**	**41**	⇑	*i*	P	**P**	**09 06 09.7**	**+0.3**
KHC					*e*	pP	**pP**	**09 06 42.3**	**+1.1**
GEC2	**GERESS Array S**	**82.38**	**42**		*e*	P	**P**	**09 06 10.2**	**+0.2**
GEC2					*e*	*PP	**pP**	**09 06 42.1**	**+0.3**
GEC2						pmax	pmax		
	comp=Z,38nm,1.0s								
GEC2	**GERESS Array S**	**82.38**	**42**		*e*	P	**P**	**09 06 10.2**	**+0.2**
	comp=Z,38nm,1.0s								
GEC2					*e*	pP	**pP**	**09 06 42.1**	**+0.3**
GERES	**GERESS Array B**	**82.38**	**42**		P	P	**P**	**09 06 10.1**	**+0.1**
GERES					P	P	**pP**	**09 06 41.6**	**-0.2**
GERES	**GERESS Array B**	**82.38**	**42**		P	P	**P**	**09 06 10.1**	**+0.1**
	comp=Z,16nm,0.9s,baz=258,slow=3.8,SNR=76								
GERES					P	P	**pP**	**09 06 41.6**	**-0.2**
	comp=Z,4.3nm,0.7s,baz=262,slow=4.0,SNR=4.2								
GERES					LR		LR	09 42 25.4	
	comp=Z,28nm,18.1s,baz=266,slow=35								
BRG	**Berggiesshubel**	**82.43**	**40**		*e*	P	**P**	**09 06 10.5**	**+0.4**
	comp=Z,25nm,0.9s								
BRG					*e*			09 06 18.4	
BRG									
	comp=Z,8μm,0.9s								
BRG	**Berggiesshubel**	**82.43**	**40**		*e*	P		09 06 43.1	+33
	comp=Z,7.8nm,0.8s								
BRG	**Berggiesshubel**	**82.43**	**40**		*e*	P	**P**	**09 06 10.5**	**+0.4**
BRG					*e*			09 06 43.1	
BRG						pmax	pmax		
	comp=Z,25nm,0.9s								
BRG						pmax	pmax		
	comp=Z,8.0nm,0.8s								
BRG	**Berggiesshubel**	**82.43**	**40**		*e*	P	**P**	**09 06 10.7**	**+0.6**
	comp=Z,27nm,1.0s								
BRG					*e*	pP	**pP**	**09 06 42.9**	**+1.0**
MYKA	**Terra Mystica**	**82.46**	**44**		P	P	**P**	**09 06 10.3**	**-0.1**
	comp=Z,22nm,0.8s								
BSD	**Bornholm Skovb**	**82.80**	**35**	⇑	*i*	P	**P**	**09 06 12.5**	**+0.7**
BSD						pmax	pmax		
	comp=Z,38nm,0.8s								
BSD	**Bornholm Skovb**	**82.80**	**35**	⇑	*i*	P	**P**	**09 06 12.5**	**+0.7**
	comp=Z,38nm,0.8s								
MOA	**Molln**	**82.81**	**43**	⇑	*i*	P	**P**	**09 06 11.6**	**-0.6**
	comp=Z,37nm,1.1s,SNR=10								
MOA	**Molln**	**82.81**	**43**	⇑	*i*	P	**P**	**09 06 11.6**	**-0.6**
	comp=Z,37nm,1.1s								
PVCC	**Panska Ves**	**82.85**	**40**		*e*	P	**P**	**09 06 12.9**	**+0.7**
PVCC	**Panska Ves**	**82.85**	**40**	⇑	*e*	P	**P**	**09 06 12.9**	**+0.7**
PRU	**Pruhonice**	**82.86**	**41**	⇑	*i*	P	**P**	**09 06 13.1**	**+0.8**
PRU					*e*	*PP	**pP**	**09 06 45.1**	**+0.9**
PRU	**Pruhonice**	**82.86**	**41**	⇑	*i*	P	**P**	**09 06 13.1**	**+0.8**
PRU					*e*	pP	**pP**	**09 06 45.1**	**+0.9**
TREC	**Trest**	**83.53**	**41**		*e*	P	**P**	**09 06 16.6**	**+0.8**
TREC					*e*	*PP	**pP**	**09 06 50.0**	**+2.4**
TREC	**Trest**	**83.53**	**41**	⇑	*e*	P	**P**	**09 06 16.6**	**+0.8**
TREC					*e*	pP	**pP**	**09 06 50.0**	**+2.4**
ARSA	**Arzberg**	**83.70**	**43**		*i*	P	**P**	**09 06 16.6**	**-0.1**
	comp=Z,26nm,1.0s,SNR=12								
ARSA	**Arzberg**	**83.70**	**43**		*i*	P	**P**	**09 06 16.6**	**-0.1**
	comp=Z,26nm,1.0s								
UPC	**Upice**	**83.77**	**40**		*e*	P	**P**	**09 06 18.0**	**+1.0**
UPC					*e*	*PP	**pP**	**09 06 53.7**	**+4.8**
UPC	**Upice**	**83.77**	**40**	⇑	*e*	P	**P**	**09 06 18.0**	**+1.0**
UPC					*e*	pP	**pP**	**09 06 53.7**	**+4.8**
CONA	**Conrad Observa**	**83.88**	**43**		P	P	**P**	**09 06 17.9**	**+0.2**
	comp=Z,42nm,0.9s								
KSP	**Ksiaz**	**83.92**	**40**	⇑	*e*	P	**P**	**09 06 18.5**	**+0.8**
KSP	**Ksiaz**	**83.92**	**40**		*e*	P	**P**	**09 06 18.5**	**+0.8**
DPC	**Dobruska-Polom**	**83.98**	**40**	⇑	*i*	P	**P**	**09 06 18.9**	**+0.8**
DPC					*e*	*PP	**pP**	**09 06 51.7**	**+1.7**
DPC	**Dobruska-Polom**	**83.98**	**40**		*e*	P	**P**	**09 06 18.7**	**+0.6**
	comp=Z,77nm,1.1s								
DPC	**Dobruska-Polom**	**83.98**	**40**	⇑	*i*	P	**P**	**09 06 18.9**	**+0.8**
DPC					*e*	pP	**pP**	**09 06 51.7**	**+1.7**
VRAC	**Vranov**	**84.25**	**41**	⇑	*i*	P	**P**	**09 06 19.9**	**+0.5**
GKP	**Gorka Klasztor**	**84.30**	**37**		*e*	P	**P**	**09 06 21.0**	**+1.5**
KRLC	**Kraliky**	**84.30**	**40**	⇑	*i*	P	**P**	**09 06 20.8**	**+1.1**
KRLC	**Kraliky**	**84.30**	**40**	⇑	*i*	P	**P**	**09 06 20.8**	**+1.1**
MORC	**Moravsky Berou**	**84.82**	**41**	⇑		P	**P**	**09 06 22.6**	**+0.2**
MORC	**Moravsky Berou**	**84.82**	**41**		*e*	P	**P**	**09 06 23.3**	**+1.0**
	comp=Z,35nm,0.8s								
MORC	**Moravsky Berou**	**84.82**	**41**	⇑	*i*	P	**P**	**09 06 22.5**	**+0.2**
TNA	**Tin City**	**84.89**	**335**		*e*	P	**P**	**09 06 24.6**	**+2.3**
	comp=Z,18nm,1.1s								
TNA					*e*	pP	**pP**	**09 06 55.7**	**+1.4**
OKC	**Ostrava-Krasne**	**85.20**	**41**		*e*	P	**P**	**09 06 25.5**	**+1.4**
OKC	**Ostrava-Krasne**	**85.20**	**41**	⇑	*e*	P	**P**	**09 06 25.5**	**+1.4**
VYHS	**Vyhne**	**85.80**	**42**		*e*	P	**P**	**09 06 27.9**	**+0.7**
VYHS						pmax	pmax		
	comp=Z,14nm,1.0s								
VYHS	**Vyhne**	**85.80**	**42**		*e*	P	**P**	**09 06 27.9**	**+0.7**
VYHS					*e*	pP	**pP**	**09 07 00.1**	**+0.9**
ARCES	**ARCESS Array B**	**85.96**	**20**		P	P	**P**	**09 06 28.0**	**+0.4**
ARCES	**ARCESS Array B**	**85.96**	**20**		P	P	**P**	**09 06 28.0**	**+0.4**
	comp=Z,31nm,0.8s,baz=262,slow=3.4,SNR=86								
OJC	**Ojcow**	**86.21**	**40**		*e*	P	**P**	**09 06 30.2**	**+1.0**
OJC						pmax	pmax		
	comp=Z,64nm,1.0s								
OJC	**Ojcow**	**86.21**	**40**		*e*	P	**P**	**09 06 30.2**	**+1.0**
	comp=Z,64nm,1.0s								
OJC	**Ojcow**	**86.21**	**40**		*e*	P	**P**	**09 06 30.1**	**+0.9**
KEV	**Kevo**	**86.43**	**20**		*e*	P	**P**	**09 06 29.2**	**-0.6**
KEV						pmax	pmax		
	comp=Z,14nm,0.8s								
KEV	**Kevo**	**86.43**	**20**		*ep*	P	**P**	**09 06 29.2**	**-0.6**
	comp=Z,14nm,0.8s								
PSZ	**Piszkesteto**	**86.58**	**42**	⇓	P	P	**P**	**09 06 31.5**	**+0.4**
PSZ	**Piszkesteto**	**86.58**	**42**		*e*	P	**P**	**09 06 31.7**	**+0.6**
	comp=Z,18nm,1.0s								
PSZ	**Piszkesteto**	**86.58**	**42**	⇓	*i*	P	**P**	**09 06 31.5**	**+0.4**
BEL	**Belsk**	**86.62**	**38**		*e*	P	**P**	**09 06 32.8**	**+1.7**
NIE	**Niedzica**	**86.65**	**41**		*e*	P	**P**	**09 06 33.5**	**+2.1**
NIE	**Niedzica**	**86.65**	**41**		*e*	P	**P**	**09 06 33.5**	**+2.1**
GAMB	**Gambell**	**86.78**	**334**		*e*	P	**P**	**09 06 29.4**	**-2.2**
	comp=Z,21nm,0.8s								
GAMB					*e*	pP	**pP**	**09 07 00.5**	**-3.2**
CRVS	**Cervenica-Dubn**	**87.47**	**41**		*e*	P	**P**	**09 06 36.5**	**+1.2**
CRVS						pmax	pmax		
	comp=Z,27nm,1.1s								
CRVS	**Cervenica-Dubn**	**87.47**	**41**		*e*	P	**P**	**09 06 36.5**	**+1.2**
CRVS					*e*	pP	**pP**	**09 07 07.9**	**+0.4**
SUW	**Suwalki**	**87.71**	**36**		*e*	P	**P**	**09 06 37.3**	**+1.0**
SUW						pmax	pmax		
	comp=Z,74nm,0.7s								
SUW	**Suwalki**	**87.71**	**36**		*e*	P	**P**	**09 06 37.3**	**+1.0**
	comp=Z,74nm,0.7s								
SUW	**Suwalki**	**87.71**	**36**		*e*	P	**P**	**09 06 37.2**	**+1.0**
KAF	**Kangasniemi**	**87.78**	**28**		*e*	P	**P**	**09 06 35.4**	**-1.1**
KAF						pmax	pmax		
	comp=Z,18nm,0.9s								
KAF	**Kangasniemi**	**87.78**	**28**		*ep*	P	**P**	**09 06 35.4**	**-1.1**
	comp=Z,18nm,0.9s								
FINES	**FINESS Array B**	**87.82**	**28**		P	P	**P**	**09 06 37.1**	**+0.5**
FINES	**FINESS Array B**	**87.82**	**28**		P	P	**P**	**09 06 37.1**	**+0.5**
	comp=Z,35nm,0.8s,baz=318,slow=2.6,SNR=45								
FINES					LR		LR	09 40 27.8	
	comp=Z,39nm,18.0s,baz=172,slow=32								
FIA1	**FINESS Array S**	**87.82**	**28**		*e*	P	**P**	**09 06 37.4**	**+0.8**
KOLS	**Kolonicke sedl**	**87.99**	**41**		*e*	P	**P**	**09 06 39.2**	**+1.4**
KOLS						pmax	pmax		
	comp=Z,17nm,1.2s								
KOLS	**Kolonicke sedl**	**87.99**	**41**		*e*	P	**P**	**09 06 39.2**	**+1.4**
UZH	**Uzhgorod**	**88.06**	**41**	⇓	*i*	P	**P**	**09 06 38.5**	**+0.5**
BZS	**Buzias**	**88.08**	**44**	⇑	P	P	**P**	**09 06 39.0**	**+0.8**
BZS	**Buzias**	**88.08**	**44**	⇑	*i*	P	**P**	**09 06 39.0**	**+0.8**
KWP	**Kalwaria Pacla**	**88.16**	**40**		*e*	P	**P**	**09 06 40.3**	**+1.8**
KWP						pmax	pmax		
	comp=Z,86nm,0.9s								
KWP	**Kalwaria Pacla**	**88.16**	**40**		*e*	P	**P**	**09 06 40.3**	**+1.8**
	comp=Z,86nm,0.9s								
KWP	**Kalwaria Pacla**	**88.16**	**40**	⇓	*i*	P	**P**	**09 06 40.4**	**+1.8**
KWP	**Kalwaria Pacla**	**88.16**	**40**		*e*	P	**P**	**09 06 40.3**	**+1.8**
TRPA	**Tarpa**	**88.30**	**42**	⇑	*i*	P	**P**	**09 06 40.0**	**+0.8**
SKO	**Skopje**	**88.52**	**48**		*e*	P	**P**	**09 06 40.5**	**0.0**
BIA	**Bitola**	**88.58**	**49**		*e*	P	**P**	**09 06 40.8**	**0.0**
DRGR		**88.64**	**43**		P	P	**P**	**09 06 42.0**	**+1.0**
DRGR		**88.64**	**43**	⇑	*i*	P	**P**	**09 06 41.4**	**+0.4**
GZR	**Gura Zlata**	**88.92**	**44**	⇑	P	P	**P**	**09 06 43.1**	**+0.8**
GZR	**Gura Zlata**	**88.92**	**44**	⇑	*i*	P	**P**	**09 06 43.1**	**+0.8**
LVV	**L'vov**	**88.97**	**40**	⇓	*i*	P	**P**	**09 06 43.3**	**+1.0**
BMR	**Baia Mare**	**89.01**	**42**	⇓	P	P	**P**	**09 06 43.4**	**+0.8**
BMR	**Baia Mare**	**89.01**	**42**	⇓	*i*	P	**P**	**09 06 43.4**	**+0.8**
ISAL	**Salakas**	**89.08**	**34**		*e*	P	**P**	**09 06 43.9**	**+1.2**
ISAL						AMB	AMB	09 06 45.7	
	comp=Z,43nm,1.1s								
VNA3	**Neumayer Olymp**	**89.11**	**163**		*e*	P	**P**	**09 06 42.9**	**+0.4**
VNA3	**Neumayer Olymp**	**89.11**	**163**		*e*	northern	pP	09 07 16.8	+2.1
IZAR	**Zarasai**	**89.11**	**34**		*e*	P	**P**	**09 06 44.1**	**+1.3**
IZAR						AMB	AMB	09 06 45.9	
	comp=Z,55nm,1.1s								
IIGN	**Ignalina**	**89.18**	**34**		*e*	P	**P**	**09 06 44.4**	**+1.2**
IIGN						AMB	AMB	09 06 46.2	
	comp=Z,75nm,1.0s								
VNA1	**Neumayer--Stat**	**89.25**	**162**		*e*	P	**P**	**09 06 44.3**	**+1.2**
VNA1	**Neumayer--Stat**	**89.25**	**162**		*e*	northern	pP	09 07 18.0	+2.7
VAY	**Valandovo**	**89.46**	**49**		*e*	P	**P**	**09 06 45.2**	**+0.4**
NACGM	**Naroch**	**89.59**	**35**		*e*	P	**P**	**09 06 43.0**	**-2.1**
VTS	**Vitosha**	**89.71**	**47**	⇑	P	P	**P**	**09 06 46.6**	**+0.4**
VTS	**Vitosha**	**89.71**	**47**	⇑	*i*	P	**P**	**09 06 46.6**	**+0.4**
JOF	**Joensuu**	**89.83**	**26**		*e*	P	**P**	**09 06 43.9**	**-2.2**
JOF						pmax	pmax		
	comp=Z,17nm,0.7s								
JOF	**Joensuu**	**89.83**	**26**		*ep*	P	**P**	**09 06 43.9**	**-2.2**
	comp=Z,17nm,0.7s								
MDB	**Medias**	**89.89**	**44**	⇓	P	P	**P**	**09 06 48.4**	**+1.7**
MDB	**Medias**	**89.89**	**44**	⇓	*i*	P	**P**	**09 06 48.4**	**+1.7**
BUR08	**Bucovina Ar. S**	**90.15**	**42**		*e*	P	**P**	**09 06 49.3**	**+1.2**
BUR08					*e*	pP	**pP**	**09 07 23.4**	**+3.0**
BURAR	**Bucovina Array**	**90.17**	**42**	⇑	*i*	P	**P**	**09 06 49.5**	**+1.4**
ARR	**Arges**	**90.21**	**44**	⇓	*i*	P	**P**	**09 06 49.1**	**+0.8**
VOIR		**90.49**	**44**	⇑	P	P	**P**	**09 06 51.0**	**+1.4**
VOIR		**90.49**	**44**	⇑	*i*	P	**P**	**09 06 51.0**	**+1.4**
HUMR	**Humele**	**90.62**	**45**	⇑	*i*	P	**P**	**09 06 50.8**	**+0.7**
PRAR	**RASCA**	**90.89**	**42**	⇑	*i*	P	**P**	**09 06 52.4**	**+1.0**
ZIMR		**91.06**	**46**		P	P	**P**	**09 06 53.7**	**+1.5**
MLR	**Muntele Rosu**	**91.09**	**44**	⇑	*i*	P	**P**	**09 06 53.1**	**+0.6**
SNAA	**Sanae**	**91.28**	**163**		*e*	P	**P**	**09 06 52.7**	**0.0**
SNAA	**Sanae**	**91.28**	**163**		*e*	northern	pP	09 07 26.7	+1.8
SNAA	**Sanae**	**91.28**	**163**		*e*	P	**P**	**09 06 52.6**	**0.0**
	comp=Z,19nm,0.7s								
TESR		**91.36**	**43**	⇑	*i*	P	**P**	**09 06 53.8**	**+0.3**
PLOR	**Plostina**	**91.50**	**43**	⇑	P	P	**P**	**09 06 55.1**	**+0.8**
PLOR	**Plostina**	**91.50**	**43**	⇑	*i*	P	**P**	**09 06 55.1**	**+0.8**
VRI	**Vrincioaia**	**91.55**	**43**	⇑	P	P	**P**	**09 06 56.6**	**+2.1**
VRI	**Vrincioaia**	**91.55**	**43**	⇑	*i*	P	**P**	**09 06 56.6**	**+2.1**
ISR	**Istrita**	**91.58**	**44**	⇓	P	P	**P**	**09 06 55.7**	**+1.0**
ISR	**Istrita**	**91.58**	**44**	⇓	*i*	P	**P**	**09 06 55.7**	**+1.0**
KIEV	**Kiev**	**92.02**	**38**		*e*	P	**P**	**09 06 56.7**	**+0.2**
KIEV						pmax	pmax		
	comp=Z,11nm,0.8s								
KIEV	**Kiev**	**92.02**	**38**		*e*	P	**P**	**09 06 56.7**	**+0.2**
	comp=Z,11nm,0.8s								
AK01	**Malin Array Si**	**92.03**	**38**		*e*	P	**P**	**09 06 56.5**	**0.0**
AK01					*e*	pP	**pP**	**09 07 30.2**	**+1.4**
AK02	**Malin Array Si**	**92.03**	**38**		*e*	P	**P**	**09 06 56.7**	**+0.2**
AK02					*e*	pP	**pP**	**09 07 30.5**	**+1.7**
AKASG	**Malin Array Be**	**92.03**	**38**		P	P	**P**	**09 06 56.6**	**0.0**
AKASG						*PP	**pP**	**09 07 30.5**	**+1.7**
AKASG	**Malin Array Be**	**92.03**	**38**		P	P	**P**	**09 06 56.5**	**0.0**
AKASG						pP	**pP**	**09 07 30.5**	**+1.7**
AKASG	**Malin Array Be**	**92.03**	**38**		P	P	**P**	**09 06 56.5**	**0.0**
	comp=Z,9.2nm,0.8s,baz=274,slow=3.6,SNR=25								
AKASG					pP		**pP**	**09 07 30.5**	**+1.7**
	comp=Z,3.3nm,0.8s,baz=268,slow=4.4,SNR=3.4								
AKASG					LR		LR	09 44 14.2	
	comp=Z,43nm,18.4s,baz=345,slow=33					

SONM					PP	**PP**	**09 14 34.4**	**0.0**	
	comp=Z,2.0nm,1.1s,baz=349,slow=6.0,SNR=4.3								
SONM					PKKPbc	**PKKPab**	**09 22 27.6**	**-2.3**	
	comp=Z,1.4nm,0.8s,baz=183,slow=3.2,SNR=11								
KSH	**Kashi**	**125.14**	**29**	*e*PKP	**PKPdf**		**09 12 49.3**	**+1.3**	
KSH				PP	**PP**		**09 14 42.1**	**+4.3**	
KSH				PKS	**PKSdf**		**09 16 23.3**	**-1.5**	
KSH				SKS	**SKSdf**		**09 19 51.8**	**+3.1**	
KSH				SKKS	**SKKSac**		**09 21 23.5**	**-1.6**	
KSH				SS	**SS**		**09 31 28.3**	**+4.0**	
KSH				AMB	AMB				
	comp=Z,260nm,5.5s								
KSH				LR	LR				
	comp=Z,170nm,5.0s								
WMQ	**Urumqi**	**125.94**	**17**	PKP	**PKPdf**		**09 12 52.0**	**+2.7**	
CN2	**Changchun**	**125.95**	**343**	*e*PKP	**PKPdf**		**09 12 51.9**	**+2.7**	
MJAR	**Matsushiro Arr**	**126.90**	**328**	PKP	**PKPdf**		**09 12 51.7**	**+0.4**	
MJAR				pPKP	**pPKPdf**		**09 13 24.0**	**-1.0**	
MJAR	**Matsushiro Arr**	**126.90**	**328**	PKP	**PKPdf**		**09 12 51.7**	**+0.4**	
	comp=Z,8.6nm,0.7s,baz=116,slow=0.6,SNR=34								
MJAR				pPKP	**pPKPdf**		**09 13 24.0**	**-1.0**	
	comp=Z,2.2nm,0.6s,baz=54,slow=1.9,SNR=3.4								
MAJO	**Matsushiro**	**126.90**	**328**	*e*PKIKP	**PKPdf**		**09 12 51.9**	**+0.6**	
MAJO	**Matsushiro**	**126.90**	**328**	*e*PKPdf	**PKPdf**		**09 12 51.9**	**+0.6**	
MAT	**Matsushiro**	**126.90**	**328**	PKP	**PKPdf**		**09 12 51.6**	**+0.3**	
KSRS	**Korea Array**	**130.83**	**337**	PKP	**PKPdf**		**09 12 58.6**	**-0.1**	
	comp=Z,6.4nm,0.6s,baz=15,slow=1.9,SNR=18								
KSAR	**Wonju Array Be**	**130.85**	**337**	PKP	**PKPdf**		**09 12 58.6**	**-0.2**	
HHC	**Hu-ho-hao-te**	**131.46**	**355**	*e*PKP	**PKPdf**		**09 12 58.8**	**-1.2**	
HHC				PP	**PP**		**09 15 22.8**	**+4.1**	
HHC				PKS	**PKSdf**		**09 16 34.0**	**-2.6**	
HHC				SKS	**SKSdf**		**09 19 57.9**	**-2.3**	
HHC				SKKS	**SKKSac**		**09 22 02.0**	**-2.4**	
HHC				SS	**SS**		**09 32 43.0**	**+1.5**	
HHC				AMB	AMB				
	comp=Z,96nm,9.2s								
BJI	**Beijing**	**131.67**	**350**	PKP	**PKPdf**		**09 13 00.8**	**+0.6**	
GTA	**Gaotai**	**132.71**	**7**	PKP	**PKPdf**		**09 13 03.3**	**+0.9**	
GTA				PP	PP		09 15 32.0	+5.3	
GTA				SKS	**SKSdf**		**09 20 03.1**	**+0.6**	
GTA				SKKS	**SKKSac**		**09 22 11.9**	**-0.2**	
GTA				SS	**SS**		**09 33 00.0**	**+3.3**	
GTA				AMB	AMB				
	comp=Z,34nm,4.7s								
LZH	**Lanzhou**	**136.37**	**3**	*e*PKP	**PKPdf**		**09 13 10.0**	**+0.6**	
LZH				sPKP			09 13 49.5		
PYUN	**Piuthan**	**137.74**	**32**	*e*P	PKPdf		09 13 02.0	-10	
	comp=Z,55nm,1.0s								
DANN	**Dangsing**	**137.94**	**31**	*e*P	PKPdf		09 13 02.2	-10	
	comp=Z,51nm,0.7s								
DANN	**Dangsing**	**137.94**	**31**	*e*P	**SKPdf**		**09 16 35.9**	**-0.3**	
	comp=Z,33nm,0.8s								
KOLN	**Koldanda**	**138.32**	**31**	*e*P	PKPdf		09 13 03.6	-10	
	comp=Z,14nm,0.7s								
KOLN	**Koldanda**	**138.32**	**31**	*e*P	**SKPdf**		**09 16 36.3**	**-0.5**	
	comp=Z,6.8nm,0.7s								
XAN	**Xi'an**	**138.42**	**357**	PKP	**PKPdf**		**09 13 13.8**	**+0.7**	
KKN	**Kakani**	**139.15**	**29**	*e*P	PKPdf		09 13 06.1	-8.7	
	comp=Z,29nm,0.6s								
KKN	**Kakani**	**139.15**	**29**	*e*P	**SKPdf**		**09 16 39.5**	**+1.2**	
DMN	**Daman**	**139.22**	**30**	*e*P	PKPdf		09 13 06.0	-9.0	
GUN	**Gumba**	**139.34**	**29**	*e*P	PKPdf		09 13 06.5	-8.8	
	comp=Z,18nm,0.5s								
GUN	**Gumba**	**139.34**	**29**	*e*P	**SKiKP**		**09 16 40.0**	**-2.4**	
	comp=Z,47nm,1.0s								
PKIN	**Phulchoki**	**139.38**	**29**	*e*P	**SKiKP**		**09 16 40.0**	**-2.4**	
	comp=Z,9.8nm,0.6s								
PKI	**Pulchoki**	**139.40**	**29**	*e*P	PKPdf		09 13 07.0	-8.4	
	comp=Z,39nm,0.9s								
PKI	**Pulchoki**	**139.40**	**29**	*e*P	**SKiKP**		**09 16 39.6**	**-2.9**	
STKA	**Stephens Creek**	**139.50**	**229**	PKPpre	PKPpre		09 13 07.7		
STKA				PKP	**PKPdf**		**09 13 15.0**	**0.0**	
STKA	**Stephens Creek**	**139.50**	**229**	PKhKP	PKPpre		09 13 07.7		
	comp=Z,1.8nm,0.7s,baz=171,slow=7.4,SNR=5.1								
STKA				PKP	**PKPdf**		**09 13 15.0**	**0.0**	
	comp=Z,11nm,0.8s,baz=116,slow=3.2,SNR=20								
RAMN	**Ramite**	**140.49**	**29**	*e*P	PKPdf		09 13 10.9	-6.4	
	comp=Z,45nm,0.7s								
RAMN	**Ramite**	**140.49**	**29**	*e*P	**SKiKP**		**09 16 42.4**	**-2.3**	
ODAN	**Odare**	**140.94**	**28**	*e*P	PKPdf		09 13 12.2	-5.9	
	comp=Z,24nm,0.7s								
ODAN	**Odare**	**140.94**	**28**	*e*P	**SKiKP**		**09 16 43.6**	**-2.0**	
WHN	**Wuhan**	**141.24**	**349**	PKP	**PKPdf**		**09 13 21.1**	**+2.9**	
WHN				PP	**PP**		**09 16 20.1**	**+0.3**	
CD2	**Chengdu**	**141.51**	**4**	PKP	**PKPdf**		**09 13 17.0**	**-1.8**	
CD2				sPKP			09 14 02.3		
CD2				PP	**PP**		**09 16 24.4**	**+3.0**	
CD2				PKS	**PKSdf**		**09 16 51.4**	**-3.4**	
CD2				SKS	**SKSdf**		**09 20 13.1**	**-4.6**	
CD2				SKKS	**SKKSac**		**09 23 01.3**	**-3.2**	
CD2				SS	**SS**		**09 34 41.1**	**+0.2**	
CD2				AMB	AMB				
	comp=Z,120nm,6.4s								
HYB	**Hyderabad**	**142.73**	**48**	*i* PKP	PKPdf		09 13 16.0	-5.3	
BBOO	**Buckleboo**	**142.96**	**224**	*e*PKPdf	**PKPdf**		**09 13 18.5**	**-2.7**	
COEN	**Coen**	**143.53**	**257**	*e*PKPdf	**PKPdf**		**09 13 23.6**	**+0.9**	
SSLB	**Suanglung**	**145.68**	**336**	*e*PKPbc	**PKPab**		**09 13 27.3**	**+0.1**	
GYA	**Guiyang**	**146.04**	**360**	*e*PKPbc	**PKPdf**		**09 13 26.0**	**-0.9**	
GYA				sPKP			09 14 11.6		
GYA				PP	**PP**		**09 16 52.3**	**+3.7**	
GYA				AMB	AMB				
	comp=Z,90nm,8.0s								
TPUB	**Ta-pu**	**146.25**	**336**	*e*PKPbc	**PKPab**		**09 13 29.2**	**-0.1**	
KMI	**Kunming**	**147.16**	**6**	PKPbc	**PKPdf**		**09 13 29.5**	**+0.5**	
KMI				pPKP	**pPKPdf**		**09 14 05.0**	**+2.2**	
KMI				LR	LR				
	comp=Z,41nm,18.1s								
AS31	**Alice Springs**	**149.35**	**236**	*e*PKPdf	**PKPdf**		**09 13 33.0**	**+0.7**	
AS31				*e*PKPbc	**PKPbc**		**09 13 36.4**	**-0.4**	
AS31				*e*PKPab	**PKPab**		**09 13 42.9**	**+1.1**	
ASAR	**Alice Springs**	**149.35**	**236**	PKP	**PKPdf**		**09 13 32.4**	**0.0**	
ASAR				PKPbc	**PKPbc**		**09 13 36.5**	**-0.3**	
ASAR				pPKPbc	**pPKPbc**		**09 14 06.2**	**-4.1**	
ASAR	**Alice Springs**	**149.35**	**236**	PKP	**PKPdf**		**09 13 32.4**	**0.0**	
	comp=Z,20nm,0.6s,baz=108,slow=1.7,SNR=76								
ASAR				PKPbc	**PKPbc**		**09 13 36.5**	**-0.3**	
	comp=Z,23nm,0.6s,baz=126,slow=3.2,SNR=163								
ASAR				pPKPbc	**pPKPbc**		**09 14 06.2**	**-4.1**	
	comp=Z,7.8nm,0.6s,baz=113,slow=2.9,SNR=2.6								
FORT	**Forrest**	**149.48**	**218**	*e*PKPdf	**PKPdf**		**09 13 32.7**	**+0.4**	
FORT				*e*PKPbc	**PKPbc**		**09 13 36.7**	**-0.1**	
FORT				*e*PKPab	**PKPab**		**09 13 42.5**	**+0.5**	
WRAB	**Tennant Creek**	**150.46**	**243**	*e*PKIKP	**PKPdf**		**09 13 34.5**	**+0.4**	
WRAB				*e*			09 13 47.0		
WRAB	**Tennant Creek**	**150.46**	**243**	*e*PKPdf	**PKPdf**		**09 13 34.5**	**+0.4**	
WRAB				*e*PKPbc	**PKPbc**		**09 13 39.7**	**+0.1**	
WRAB				*e*PKPab	**PKPab**		**09 13 47.0**	**+0.6**	
WRA	**Warramunga Arr**	**150.46**	**243**	PKP	**PKPdf**		**09 13 34.6**	**+0.4**	
WRA				PKPbc	**PKPbc**		**09 13 39.5**	**-0.1**	
WRA				pPKPbc	**pPKPbc**		**09 14 09.9**	**-3.2**	
WRA	**Warramunga Arr**	**150.46**	**243**	PKP	**PKPdf**		**09 13 34.6**	**+0.4**	
	comp=Z,35nm,0.4s,baz=105,slow=3.0,SNR=226								
WRA				PKPbc	**PKPbc**		**09 13 39.5**	**-0.1**	
	comp=Z,34nm,0.4s,baz=103,slow=3.2,SNR=376								
WRA				pPKPbc	**pPKPbc**		**09 14 09.9**	**-3.2**	
	comp=Z,12nm,0.5s,baz=104,slow=2.1,SNR=3.0								
CHTO	**Chiang Mai**	**152.60**	**16**	*e*PKIKP	**PKPdf**		**09 13 38.0**	**+0.6**	
CHTO				*e*			09 13 55.0		
CHTO	**Chiang Mai**	**152.60**	**16**	*e*PKPdf	**PKPdf**		**09 13 38.0**	**+0.6**	
CHTO				*e*PKPbc	**PKPbc**		**09 13 44.3**	**-0.2**	
CHTO				*e*PKPab	**PKPab**		**09 13 55.0**	**-0.2**	
CM31	**Chiang Mai Arr**	**152.94**	**16**	*e*PKPbc	**PKPbc**		**09 13 45.6**	**+0.4**	
CMAR	**Chiang Mai Arr**	**152.94**	**16**	PKP	**PKPdf**		**09 13 38.3**	**+0.4**	
CMAR				PKPbc	**PKiKP**		**09 13 45.8**	**+0.4**	
CMAR				pPKPbc	**pPKPbc**		**09 14 20.2**	**+1.4**	
CMAR	**Chiang Mai Arr**	**152.94**	**16**	PKP	**PKPdf**		**09 13 38.3**	**+0.4**	
	comp=Z,6.4nm,0.8s,baz=308,slow=2.2,SNR=38								
CMAR				PKPbc	**PKiKP**		**09 13 45.8**	**+0.4**	
	comp=Z,32nm,0.7s,baz=322,slow=2.9,SNR=59								
CMAR				pPKPbc	**pPKPbc**		**09 14 20.2**	**+1.4**	
	comp=Z,6.2nm,0.5s,baz=322,slow=3.2,SNR=2.8								
FITZ	**Fitzroy Crossi**	**158.74**	**239**	PKP	**PKPdf**		**09 13 45.1**	**-0.4**	
FITZ				PKPab	**PKPab**		**09 14 20.1**	**-1.6**	
FITZ	**Fitzroy Crossi**	**158.74**	**239**	PKP	**PKPdf**		**09 13 45.1**	**-0.4**	
	comp=Z,8.8nm,0.8s,baz=154,slow=4.5,SNR=20								
FITZ				PKPab	**PKPab**		**09 14 20.1**	**-1.6**	
	comp=Z,3.9nm,0.8s,baz=165,slow=6.9,SNR=5.2								
PSI	**Prapat**	**167.08**	**36**	PKP	**PKPdf**		**09 13 53.8**	**-0.2**	
PSI				PKPab	**PKPab**		**09 14 58.1**	**-0.3**	
PSI	**Prapat**	**167.08**	**36**	PKP	**PKPdf**		**09 13 53.8**	**-0.2**	
	comp=Z,6.8nm,1.0s,baz=342,slow=16,SNR=4.3								
PSI				PKPab	**PKPab**		**09 14 58.1**	**-0.3**	
	comp=Z,14nm,0.7s,baz=250,slow=5.8,SNR=10								

IDC 20 08:57:25.0±3.2, 33°95S×179°34E, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.6/17, mbtmp3.5/3, ML3.6/1, MS3.2/2, Ms1 3.2/2, ms1mx2.8/10, Error ellipse: s-maj=68.8km s-min=35.4km az=97.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**4.67**	**202**	Pn		Pn		08 58 37.5	+0.8
	2.8nm,0.3s,baz=45,slow=5.7,SNR=16								
URZ				Sn		Sn		08 59 31.1	-0.5
	1.8nm,0.3s,baz=336,slow=20,SNR=2.4								
DZM	**Mont Dzumac**	**16.41**	**313**	LR		LR		09 05 34.4	
	comp=Z,117nm,18.1s,baz=229,slow=30								
HNR	**Honiara**	**30.22**	**319**	LR		LR		09 12 43.7	
	comp=Z,29nm,19.7s,baz=300,slow=30								
ASAR	**Alice Springs**	**40.83**	**272**	P		P		09 05 08.0	-0.7
	0.3nm,0.7s,baz=126,slow=7.6,SNR=4.2								
WRA	**Warramunga Arr**	**42.15**	**278**	P		P		09 05 19.7	+0.3
	1.3nm,0.9s,baz=118,slow=7.5,SNR=4.9								
FINES	**FINESS Array B**	**147.59**	**336**	PKPbc		PKPbc		09 17 09.7	-0.8
	2.8nm,0.8s,baz=35,slow=3.4,SNR=2.7								

*ISCJB **20** 09:04:44.5±0.5, 21°.96N±0°.03×121°.43E±0°.03, h88km±4km, mb3.3/5, Error ellipse: s-maj=5.1km s-min=4.2km az=141.2*
*TAP **20** 09:04:46.0, 22°.05N×121°.45E, h72km±1km, ML4.1, D*
*JMA **20** 09:04:47.6±0.2, 22°.21N×121°.60E, h152km, M3.2*
*IDC **20** 09:04:48.2±9.5, 21°.87N×121°.48E, h116km±94km, mb3.1/6, mb1 3.3/6, mb1mx3.1/24, mbtmp3.1/6, Error ellipse: s-maj=39.6km s-min=19.8km az=73.0*

ISC 20 09:04:45.3±0.9, 21°.96N±0°.05×121°.41E±0°.04, h84km±6km, n56, σ1s01/101, mb3.3/5, 4C-5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin**	**0.47**	**263**	⇓*i*P		**Pn**		**09 05 00.1**	**+0.8**
	baz=255								
TSEB				S		**Sn**		**09 05 10.8**	**+1.2**
	baz=255								
TWK1	**Hengchun**	**0.56**	**268**	⇓*i*P		**Pn**		**09 05 00.4**	**+0.4**
	baz=259								
TWK1				S		**Sn**		**09 05 11.0**	**+0.1**
	baz=259								
TAW	**Tawu**	**0.62**	**310**	⇓*i*P		**Pn**		**09 05 00.2**	**-0.3**
	baz=301								
TAW				S		**Sn**		**09 05 10.6**	**-1.3**
	baz=301								
HEN	**Hengchun**	**0.62**	**274**	P		**Pn**		**09 05 01.0**	**+0.4**
	baz=266								
HEN				*e*S		**Sn**		**09 05 12.0**	**+0.1**
	baz=266								
EAST	**Anshuo**	**0.67**	**309**	⇓*i*P		**Pn**		**09 05 00.9**	**-0.2**
	baz=301								
EAST				S		**Sn**		**09 05 11.8**	**-1.0**
	baz=301								
ECL	**Taimali**	**0.76**	**327**	P		**Pn**		**09 05 01.2**	**-0.7**
	baz=320								
ECL				*e*S		**Sn**		**09 05 12.5**	**-1.9**
	baz=320								
TTN	**Taitung**	**0.83**	**343**	*e*P		**Pn**		**09 05 02.2**	**-0.5**
	baz=339								
TTN				*e*S		**Sn**		**09 05 16.9**	**+1.3**
	baz=339								
SCZT	**Fangliau**	**0.84**	**300**	⇓*i*P		**Pn**		**09 05 02.9**	**+0.1**
	baz=292								
SCZT				*e*S		**Sn**		**09 05 14.7**	**-1.1**
	baz=292								
TWG	**Pinlang**	**0.91**	**340**	⇑*i*P		**Pn**		**09 05 03.1**	**-0.6**
	baz=336								
TWG				*e*S		**Sn**		**09 05 15.8**	**-1.6**
	baz=336								
TWP	**Hsiaoliuchiu**	**1.04**	**292**	P		**Pn**		**09 05 06.6**	**+1.4**
	baz=286								
TWP				*e*S		**Sn**		**09 05 22.0**	**+2.0**
	baz=286								
CHKT	**Chengkung**	**1.14**	**358**	*e*P		**Pn**		**09 05 06.6**	**+0.4**
	baz=356								
CHKT				S		**Sn**		**09 05 21.9**	**0.0**
	baz=356								
SGLT	**Jiouru**	**1.14**	**312**	*e*P		**Pn**		**09 05 07.1**	**+0.8**
	baz=307								
SGLT				*e*S		**Sn**		**09 05 23.5**	**+1.4**
	baz=307								
TWM1	**Shoushan**	**1.25**	**314**	*e*P		**Pn**		**09 05 08.9**	**+1.1**
	baz=309								
TWM1				*e*S		**Sn**		**09 05 27.2**	**+2.6**
	baz=309								
ELDTW	**Lidau**	**1.27**	**344**	P		**Pn**		**09 05 07.8**	**-0.3**
	baz=341								
ELDTW				*e*S		**Sn**		**09 05 26.2**	**+0.9**
	baz=341								
TWF1	**Yuli**	**1.39**	**356**	P		**Pn**		**09 05 09.1**	**-0.4**
	baz=354								
TWF1				*e*S		**Sn**		**09 05 26.2**	**-1.4**
	baz=354								
CHN1	**Nanshi**	**1.47**	**327**	⇑*i*P		**Pn**		**09 05 10.6**	**+0.2**
	baz=323								
CHN1				*e*S		**Sn**		**09 05 28.5**	**-0.9**
	baz=323								
CHN3	**Shinhua**	**1.47**	**319**	*e*P		**Pn**		**09 05 11.8**	**+1.3**
	baz=315								
CHN3				*e*S		**Sn**		**09 05 31.0**	**+1.6**
	baz=315								
WTP	**Ta-pu**	**1.48**	**330**	*e*P		**Pn**		**09 05 10.9**	**+0.3**
	baz=327								
TAI1	**Yung-k'ang**	**1.53**	**315**	*e*S		**Sn**		**09 05 30.1**	**-0.7**
	baz=311								
EHY	**Hungye**	**1.54**	**357**	P		**Pn**		**09 05 11.0**	**-0.4**
	baz=355								
EHY				*e*S		**Sn**		**09 05 29.7**	**-1.4**
	baz=355								
TWK	**Hsinying**	**1.55**	**327**	P		**Pn**		**09 05 11.5**	**-0.1**
	baz=324								
TWK				S		**Sn**		**09 05 30.9**	**-0.5**
	baz=324								
CHN4	**Tsaushan**	**1.57**	**332**	⇑*i*P		**Pn**		**09 05 12.0**	**+0.2**
	baz=328								
CHN4				*e*S		**Sn**		**09 05 31.5**	**-0.4**
	baz=328								
ALS	**Alishan**	**1.64**	**340**	⇑*i*P		**Pn**		**09 05 13.6**	**+0.6**
	baz=338								
ALS				*e*S		**Sn**		**09 05 34.1**	**+0.3**
	baz=338								
SCLT	**Jiali**	**1.65**	**317**	P		**Pn**		**09 05 13.1**	**+0.4**
	baz=314								
SCLT				S		**Sn**		**09 05 33.2**	**-0.4**
	baz=314								
CHN5	**Tsauling**	**1.76**	**338**	P		**Pn**		**09 05 14.4**	**+0.1**
	baz=335								
CHN5				*e*S		**Sn**		**09 05 35.4**	**-1.0**
	baz=335								
CHN8	**Yiju**	**1.77**	**322**	P		**Pn**		**09 05 14.2**	**-0.1**
	baz=318								
CHN8				*e*S		**Sn**		**09 05 34.6**	**-1.7**
	baz=318								
CHY	**Chiayi**	**1.78**	**330**	*e*P		**Pn**		**09 05 14.4**	**0.0**
	baz=327								
CHY				S		**Sn**		**09 05 36.0**	**-0.6**
	baz=327								
ESL	**Shilin**	**1.85**	**1**	*e*P		**Pn**		**09 05 15.4**	**+0.1**
	baz=359								
ESL				*e*S		**Sn**		**09 05 36.6**	**-1.6**
	baz=359								
WGK	**Gukeng**	**1.89**	**336**	*e*P		**Pn**		**09 05 16.0**	**+0.2**
	baz=333								
WGK				*e*S		**Sn**		**09 05 38.4**	**-0.7**
	baz=333								
SMLT	**Sun Moon Lake**	**1.97**	**346**	P		**Pn**		**09 05 17.6**	**+0.5**
	baz=344								
SMLT				*e*S		**Sn**		**09 05 41.2**	**0.0**
	baz=344								
WSF	**Szhu**	**2.00**	**327**	P		**Pn**		**09 05 16.7**	**-0.6**
	baz=324								
WSF				*e*S		**Sn**		**09 05 40.2**	**-1.5**
	baz=324								
TYC	**Yuchr**	**2.00**	**345**	P		**Pn**		**09 05 17.8**	**+0.4**
	baz=344								
TYC				*e*S		**Sn**		**09 05 42.2**	**+0.4**
	baz=344								
WDGT	**Dungji**	**2.07**	**309**	P		**Pn**		**09 05 17.4**	**-0.8**
	baz=306								
WHF	**Hehuan Shan**	**2.18**	**357**	P		**Pn**		**09 05 21.3**	**+1.1**
	baz=355								
WHF				*e*S		**Sn**		**09 05 46.8**	**+0.1**
	baz=355								
TCU	**Taichung**	**2.28**	**343**	*e*P		**Pn**		**09 05 21.3**	**+0.2**
	baz=341								
TCU				*e*S		**Sn**		**09 05 48.3**	**-0.1**
	baz=341								
TWT	**Tachien**	**2.29**	**355**	*e*P		**Pn**		**09 05 23.5**	**+2.1**
	baz=353								
TWT				*e*S		**Sn**		**09 05 50.6**	**+1.6**
	baz=353								
PNG	**Penghu**	**2.34**	**313**	P		**Pn**		**09 05 21.0**	**-0.9**
	baz=311								
PNG				*e*S		**Sn**		**09 05 46.3**	**-3.5**
	baz=311								
TWQ1	**Liyutan**	**2.45**	**346**	*e*P		**Pn**		**09 05 23.9**	**+0.5**
	baz=345								
TWQ1				*e*S		**Sn**		**09 05 53.3**	**+0.8**
	baz=345								
NNS	**Nan Shan**	**2.47**	**359**	*e*P		**Pn**		**09 05 25.4**	**+1.6**
	baz=358								
NNS				*e*S		**Sn**		**09 05 53.8**	**+0.7**
	baz=358								
ENA	**Nanau**	**2.48**	**7**	*e*P		**Pn**		**09 05 24.5**	**+0.8**
	baz=6.0								
NSY	**Sanyi**	**2.52**	**346**	*e*P		**Pn**		**09 05 25.2**	**+1.0**
	baz=345								
ENTT	**Nioudou**	**2.67**	**3**	*e*P		**Pn**		**09 05 27.5**	**+1.1**
	baz=2.0								
ENTT				*e*S		**Sn**		**09 05 57.6**	**-0.3**
	baz=2.0								
NSK	**Sanguang**	**2.70**	**359**	P		**Pn**		**09 05 28.6**	**+1.8**
	baz=358								
NSK				*e*S		**Sn**		**09 05 59.2**	**+0.5**
	baz=358								
YOJ	**Yonaguni jima**	**2.90**	**30**	P		**Pn**		**09 05 30.4**	**+1.1**
YOJ				*e*S		**Sn**		**09 06 03.1**	**-0.1**
HATJ	**Hateruma jima**	**3.04**	**46**	P		**Pn**		**09 05 32.2**	**+0.9**
HATJ				*e*S		**Sn**		**09 06 06.2**	**-0.5**
IRIF	**Iriomote-Funau**	**3.19**	**42**	P		**Pn**		**09 05 34.1**	**+0.8**
IRIF				*e*S		**Sn**		**09 06 09.9**	**-0.4**
JKRS	**Kuro-shima**	**3.30**	**46**	P		**Pn**		**09 05 35.3**	**+0.5**
JKRS				*e*S		**Sn**		**09 06 12.8**	**-0.2**
JIJ	**Ishigaki jima**	**3.47**	**46**	P		**Pn**		**09 05 37.9**	**+0.7**
JIJ				*e*S		**Sn**		**09 06 16.0**	**-1.2**
KNM	**Kinmen**	**3.67**	**312**	*e*P		**Pn**		**09 05 40.4**	**+0.6**
	baz=308								
KNM				*e*S		**Sn**		**09 06 21.6**	**-0.4**
	baz=308								
JTJ	**Tarama**	**4.04**	**48**	P		**Pn**		**09 05 44.9**	**+0.1**
JTJ				*e*S		**Sn**		**09 06 30.3**	**-0.6**
MJAR	**Matsushiro Arr**	**20.59**	**41**	P		**P**		**09 09 18.6**	**+1.0**
	1.2nm,0.8s,baz=237,slow=8.8,SNR=6.0								
SONM	**Songino Array**	**28.50**	**339**	P		**P**		**09 10 33.3**	**+0.6**
	0.4nm,0.3s,baz=156,slow=9.9,SNR=4.7								
MKAR	**Makanchi Array**	**40.09**	**318**	P		**P**		**09 12 13.3**	**+0.8**
	0.3nm,0.5s,baz=108,slow=9.3,SNR=4.5								
WRA	**Warramunga Arr**	**43.52**	**162**	P		**P**		**09 12 39.0**	**-1.7**
	0.5nm,0.9s,baz=345,slow=9.0,SNR=3.4								
ASAR	**Alice Springs**	**46.95**	**164**	P		**P**		**09 13 06.9**	**-1.0**
	0.1nm,0.3s,baz=339,slow=7.0,SNR=5.3								
YKA	**Yellowknife Ar**	**84.93**	**23**	P		**P**		**09 17 10.3**	**-0.5**
	0.2nm,0.5s,baz=306,slow=5.2,SNR=5.8								

*CSEM **20** 09:04:46.0, 41°.45N×14°.54E, h10km, MD1.7/4, After ROM*

ROM 20 09:04:46.0±0.2, 41°.45N×14°.54E, h10km, Md1.7/4, MI0.9/2, Error ellipse: s-maj=3.7km s-min=2.1km az=123.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PTRJ	**Pietraroja**	**0.08**	**184**			Pg	Pg	09 04 48.8	+0.3
PTRJ						Sg	Sg	09 04 50.6	+0.3
	115nm,0.5s								
PTRJ	**Pietraroja**	**0.08**	**184**			Pg	Pg	09 04 48.8	+0.3
PTRJ						Sg	Sg	09 04 50.6	+0.3
	115nm,0.5s								
BSSO	**Busso**	**0.11**	**24**			Pg	Pg	09 04 49.6	+0.7
BSSO						Sg	Sg	09 04 50.7	-0.2
	29nm,0.3s								
BSSO	**Busso**	**0.11**	**24**			Pg	Pg	09 04 49.6	+0.7
BSSO						Sg	Sg	09 04 50.7	-0.2
	29nm,0.3s

comp=Z,123nm,0.3s
YUK pmax pmax
comp=E,83nm,0.3s
YUK pmax pmax
comp=N,88nm,0.4s
NEM2 Nemuro 2 5.00 245 P **Pn** **09 33 59.0 +0.5**
NEM2 *e*S **Sn** **09 34 53.2 -2.0**
JRA Rausu 5.16 253 P **Pn** **09 34 03.8 +3.1**
JNK Nakash 5.56 251 P **Pn** **09 34 07.9 +1.6**
JNK *e*S **Sn** **09 35 09.2 0.0**
SKR Severo-Kuril's 5.76 27 *e*PN Pn 09 34 05.0 -3.9
JAK Akkeshi 5.84 246 P **Pn** **09 34 10.5 +0.4**
JAK *e*S **Sn** **09 35 13.8 -2.3**
JTKR Abashiri--Toko 5.97 257 P **Pn** **09 34 13.9 +2.1**
JAR Ashorobuto 6.31 251 P **Pn** **09 34 18.9 +2.3**
JAR *e*S **Sn** **09 35 27.9 +0.3**
JMP Maruseppu 6.33 258 P Pn 09 34 20.2 +3.3
JOB Onbets 6.44 248 P **Pn** **09 34 20.0 +1.6**
JOB *e*S **Sn** **09 35 28.9 -1.9**
YSS Yuzh-Sakhalins 6.51 285↑ *e*PN **Pn** **09 34 20.5 +1.2**
YSS pmax pmax
comp=Z,20nm,0.6s
YSS MLR MLR
comp=E,200nm,14.0s
YSS MLR MLR
comp=Z,200nm,14.0s
JKK2 Kamakawa 2 6.79 258 P Pn 09 34 26.9 +3.7
ASAJ Asahikawa 6.83 260 P Pn 09 34 27.6 +4.0
ASAJ Asahikawa 6.83 260 P Pn 09 34 27.1 +3.5
comp=Z,3.2nm,0.3s,baz=89,slow=11,SNR=21
ASAJ LR LR 09 37 03.1
comp=Z,160nm,20.2s,baz=25,slow=37
JCH Churui 6.89 247 P **Pn** **09 34 25.3 +0.8**
JCH *e*S **Sn** **09 35 39.7 -2.1**
JWK2 Keihoku 7.08 271 P Pn 09 34 32.1 +5.0
ERM Erimo 7.33 243 *c* *i*PN **Pn** **09 34 35.2 +2.7**
JEM Erimo 7.33 243 P **Pn** **09 34 32.5 +2.1**
JEM *e*S **Sn** **09 35 51.1 -1.4**
JNBK Urakawa-nobuka 7.45 246 P **Pn** **09 34 32.3 +0.2**
JBT2 Biratori 2 7.47 251 P **Pn** **09 34 33.6 +1.2**
JBT2 *e*S **Sn** **09 35 52.8 -3.2**
JEW Eniwo 8.05 253 P **Pn** **09 34 42.6 +2.2**
PETK Petropavlovsk- 8.35 25 *e*PN **Pn** **09 34 45.9 +1.4**
PETK Petropavlovsk- 8.35 25 P Pn 09 34 42.1 -2.4
comp=Z,0.1nm,0.3s,baz=185,slow=13,SNR=3.0
JNB Noboribetsu 8.48 252 P **Pn** **09 34 47.9 +1.6**
JNB *e*S **Sn** **09 36 18.3 -2.6**
JKB Kayabe 8.75 248 P **Pn** **09 34 50.5 +0.5**
JKB *e*S Sn 09 36 21.3 -6.3
JYM2 Yakumo 2 9.08 251 P **Pn** **09 34 55.4 +0.9**
JANG Nango 9.29 239 P **Pn** **09 34 56.3 -1.1**
JTM Tenmabayashi 9.31 242 P **Pn** **09 34 57.3 -0.4**
JTH Tanohata 9.36 236 P **Pn** **09 34 57.9 -0.4**
JTH *e*S Sn 09 36 33.4 -9.0
JOSM Okushiri--Mats 9.69 253 P **Pn** **09 35 01.7 -1.2**
OFUJ Ofunato 10.04 233 P **Pn** **09 35 06.4 -1.4**
OFUJ *e*S Sn 09 36 50.3 -9.1
MJAR Matsushiro Arr 13.78 234 P **Pn** **09 35 59.0 +0.2**
comp=Z,0.2nm,0.3s,baz=22,slow=9.8,SNR=4.0
USRK Ussuriysk Arra 14.22 271 P **Pn** **09 36 04.4 -0.3**
comp=Z,0.2nm,0.3s,baz=76,slow=14,SNR=3.2
KSRS Korea Array 19.71 254 P **Pn** **09 37 14.7 +0.7**
comp=Z,0.3nm,0.3s,baz=60,slow=11,SNR=6.3
JNU Nakatsue 20.47 240 LR LR 09 45 36.3
comp=Z,35nm,20.0s,baz=54,slow=37
YAK Yakutsk 20.85 330 *e*P **P** **09 37 26.8 +2.2**
YAK pmax pmax
comp=Z,10.0nm,0.8s
BILL Bilibino 23.65 13 *e*P **P** **09 37 52.9 -1.1**
BILL *e* 09 38 21.8
BILL *e*SS **S** **09 42 02.1 -4.3**
BILL pmax pmax
comp=Z,9.0nm,1.1s
ILAR Eielson Array 37.91 38 P **P** **09 39 58.8 -1.0**
comp=Z,0.2nm,0.7s,baz=266,slow=7.1,SNR=4.4
ZALV Zalesovo Beam 42.62 306 PcP **PcP** **09 42 30.2 -0.2**
comp=Z,1.1nm,0.8s,baz=35,slow=5.4,SNR=4.4
ZALV LR LR 09 59 31.8
comp=Z,58nm,19.4s,baz=246,slow=38
MKAR Makanchi Array 46.74 298 P **P** **09 41 12.0 +0.2**
MKAR 09 42 43.5
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR MLR MLR
comp=Z,41nm,19.3s
MKAR Makanchi Array 46.74 298 P **P** **09 41 12.0 +0.2**
comp=Z,0.6nm,0.6s,baz=71,slow=7.3,SNR=11
MKAR PcP **PcP** **09 42 43.5 -1.3**
comp=Z,0.6nm,0.7s,baz=62,slow=2.9,SNR=5.3
MKAR LR LR 10 01 41.3
comp=Z,41nm,19.3s,baz=261,slow=37
CMAR Chiang Mai Arr 51.33 256 P **P** **09 41 48.7 +1.5**
comp=Z,0.7nm,0.3s,baz=32,slow=14,SNR=4.5
YKA Yellowknife Ar 52.29 36 P **P** **09 41 53.8 +0.1**
comp=Z,0.2nm,0.6s,baz=300,slow=7.0,SNR=6.5
GUN Gumba 54.30 275 *e*P **P** **09 42 09.9 +0.4**
DANN Dangsing 55.51 277 *e*P **P** **09 42 18.2 0.0**
KOLN Koldanda 55.98 276 *e*P **P** **09 42 21.6 +0.2**
comp=Z,14nm,0.9s
PYUN Piuthan 56.20 277 *e*P **P** **09 42 22.7 -0.3**
comp=Z,31nm,1.1s
SUMG Summit 61.86 4 *i* P **P** **09 43 01.0 -0.8**
SUMG pmax pmax
comp=Z,5.0nm,0.9s
SUMG Summit 61.86 4 *i* P **P** **09 43 01.0 -0.8**
comp=Z,5.1nm,0.9s
NVAR Mina Array Bea 63.66 61 P **P** **09 43 15.5 +1.3**
comp=Z,0.2nm,0.5s,baz=295,slow=8.6,SNR=3.0
FINES FINESS Array B 64.70 334 P P 09 43 16.9 -3.4
comp=Z,1.4nm,0.7s,baz=46,slow=9.9,SNR=2.5
WRA Warramunga Arr 67.21 198 P **P** **09 43 38.6 +1.7**
comp=Z,0.4nm,0.8s,baz=23,slow=7.0,SNR=2.5
NOA NORSAR Array B 69.01 341 P P 09 43 45.5 -2.2
comp=Z,0.4nm,0.5s,baz=28,slow=6.5,SNR=4.2
NOA LR LR 10 19 32.6
comp=Z,11nm,18.2s,baz=120,slow=41
ASAR Alice Springs 70.91 198 P **P** **09 44 02.1 +2.3**
comp=Z,0.4nm,1.0s,baz=14,slow=6.0,SNR=3.4
AKASG Malin Array Be 72.02 326 P P 09 44 03.5 -2.7
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 72.02 326 P P 09 44 03.5 -2.7
comp=Z,0.8nm,0.4s,baz=38,slow=6.3,SNR=4.4
BRTR Keskin Array B 78.64 316 P **P** **09 44 44.1 -0.6**
comp=Z,1.2nm,0.9s,baz=57,slow=4.6,SNR=6.7
TXAR Lajitas Array 78.74 60 P **P** **09 44 45.3 -0.1**
comp=Z,0.3nm,1.0s,baz=327,slow=4.5,SNR=2.9
GERES GERESS Array B 79.09 333 P P 09 44 44.5 -2.4
comp=Z,0.1nm,0.3s,baz=14,slow=9.1,SNR=3.4

IDC 20 09:58:33.2±1.7, 1°.94N×127°.78E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/21, mbtmp3.4/4, Error ellipse: s-maj=143.0km s-min=24.6km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.68**	**164**	P	P	10 03 38.0	+1.5
	1.2nm,0.7s,baz=343,slow=11,SNR=8.7						
WRA				PcP	PcP	10 07 28.2	-1.3
	0.1nm,0.9s,baz=335,slow=2.2,SNR=4.7						
ASAR	**Alice Springs**	**26.14**	**167**	P	P	10 04 09.0	-0.4
	0.1nm,0.4s,baz=346,slow=7.6,SNR=4.1						
STKA	**Stephens Creek**	**36.10**	**160**	P	P	10 05 36.3	-0.7
	1.2nm,0.8s,baz=337,slow=7.7,SNR=2.1						
MKAR	**Makanchi Array**	**59.62**	**325**	P	P	10 08 39.6	+0.5
	0.2nm,0.5s,baz=125,slow=7.9,SNR=5.2						

IDC 20 10:16:54.4±1.0, 4°.04N×126°.43E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.6/24, mbtmp3.6/7, Error ellipse: s-maj=61.3km s-min=18.0km az=78.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.01**	**182**	P	P	10 21 51.4	+0.9
	1.2nm,1.1s,baz=7.4,slow=11,SNR=2.0						
WRA	**Warramunga Arr**	**25.06**	**162**	P	P	10 22 20.4	-0.3
	1.4nm,0.7s,baz=339,slow=9.7,SNR=14						
ASAR	**Alice Springs**	**28.48**	**166**	P	P	10 22 52.0	+0.5
	0.1nm,0.3s,baz=341,slow=11,SNR=3.8						
STKA	**Stephens Creek**	**38.52**	**159**	P	P	10 24 17.7	-1.0
	1.6nm,0.7s,baz=354,slow=9.2,SNR=4.2						
SONM	**Songino Array**	**46.91**	**342**	P	P	10 25 26.1	-0.8
	0.1nm,0.3s,baz=166,slow=7.4,SNR=2.8						
PETK	**Petropavlovsk-**	**55.26**	**22**	P	P	10 26 29.8	+0.4
	4.8nm,1.0s,baz=226,slow=7.7,SNR=6.3						
MKAR	**Makanchi Array**	**57.13**	**325**	P	P	10 26 43.0	0.0
	0.3nm,0.4s,baz=121,slow=7.9,SNR=5.8						

*CSEM **20** 10:18:09.5±0.6, 47°.10N×9°.52E, h1km, ML0.9/5, Error ellipse: s-maj=12.6km s-min=10.5km az=173.0, Suspected Mining explosion.*
*ZUR **20** 10:18:09.7, 47°.17N×9°.46E, h8km±2km, ML0.9/4*
*ISCJB **20** 10:18:10.2±0.7, 47°.16N±0°.03×9°.48E±0°.06, h0km, Error ellipse: s-maj=5.8km s-min=4.8km az=27.2*
*VIE **20** 10:18:10.2±0.2, 47°.16N×9°.47E, h0km, ML1.0/1, Error ellipse: s-maj=1.5km s-min=0.9km az=107.0 6 km WNW of Vaduz Suspected Mining explosion.*

ISC 20 10:18:10.4±1.0, 47°.17N±0°.03×9°.46E±0°.03, h0km, n14, σ0s94/19, 3C-6D, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIENZ	**Kamor/St.Gall**	**0.13**	**10**↑	*i*Pg	**Pg**	**10 18 12.8**	**-0.1**
	56nm,0.6s						
LIENZ				*e*Sg	**Sg**	**10 18 15.1**	**+0.5**
	56nm,0.6s						
LIENZ	**Kamor/St.Gall**	**0.13**	**10**↑	*i*Pg	**Pg**	**10 18 12.8**	**-0.1**
	56nm,0.6s						
PLONS	**Plons/SG**	**0.13**	**205**↓	*i*Pg	**Pg**	**10 18 12.9**	**0.0**
	85nm,0.2s						
PLONS				*i* Sg	**Sg**	**10 18 15.2**	**+0.6**
	85nm,0.2s						
PLONS	**Plons/SG**	**0.13**	**205**↓	*i*Pg	**Pg**	**10 18 12.9**	**0.0**
	85nm,0.2s						
DAVA	**Damuels**	**0.31**	**67**↓	*i*Pg	**Pg**	**10 18 16.5**	**+0.1**
DAVA				↑ *i*Sg	**Sg**	**10 18 20.7**	**+0.3**
	3.4nm,0.2s						
DAVA	**Damuels**	**0.31**	**67**	Pg	**Pg**	**10 18 16.5**	**+0.1**
DAVA				Sg	**Sg**	**10 18 20.7**	**+0.3**
	3.4nm,0.2s						
LLS	**Linth-Limmern**	**0.45**	**224**	*e*Sg	**Pg**	**10 18 19.2**	**+0.2**
	8.9nm,0.2s						
WILA	**Wila**	**0.45**	**303**	*i* Sg	**Pg**	**10 18 19.4**	**+0.3**
	49nm,0.2s						
WILA	**Wila**	**0.45**	**303**↓	*i*Pg	**Pn**	**10 18 26.0**	**+1.7**
	49nm,0.2s						
WILA	**Wila**	**0.45**	**303**↓	*i*Pg	**Pb**	**10 18 19.2**	**-2.1**
	49nm,0.2s						
WILA				*i* Sg	**Pn**	**10 18 26.0**	**+1.7**
	49nm,0.2s						
DAVOX	**Davos/Dischmat**	**0.48**	**143**	*i* Sg	**Sg**	**10 18 24.4**	**-1.5**
	9.3nm,0.2s						
DAVOX	**Davos/Dischmat**	**0.48**	**143**	*e*Pg	**Sg**	**10 18 26.3**	**+0.4**
	9.3nm,0.2s						
DAVOX	**Davos/Dischmat**	**0.48**	**143**	*i* Sg	**Pg**	**10 18 19.8**	**+0.1**
	9.3nm,0.2s						
WEIN	**Weingarten**	**0.48**	**318**↓	*i*Pg	**Pg**	**10 18 19.4**	**-0.3**
	9.3nm,0.4s						

IDC 20 10:23:04.4±0.8, 19°.53S×70°.47W, h0km, mb3.9/8, mb1 4.2/9, mb1mx4.0/18, mbtmp3.9/9, ML4.5/1, MS3.3/5, Ms1 3.3/5, ms1mx3.0/28, Error ellipse: s-maj=31.6km s-min=22.3km az=35.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.91**	**35**	Pn	Pb	10 24 14.0	-1.2
	4.5nm,0.3s,baz=195,slow=5.7,SNR=40						
LPAZ				Lg	Lg	10 25 18.0	
	baz=235,slow=18,SNR=1.7						
LPAZ				LR	LR	10 25 58.8	
	comp=Z,555nm,19.2s,baz=222,slow=45						
SIV	**San Ignacio**	**9.62**	**70**	Pn	Pn	10 25 29.0	+4.7
	5.0nm,0.3s,baz=277,slow=9.6,SNR=53						
SIV				LR	LR	10 29 52.9	
	comp=Z,482nm,18.4s,slow=42						
CFAA	**Coronel Fontan**	**12.20**	**171**	Pn	Pn	10 26 03.9	+4.3
	0.0nm,0.3s,baz=350,slow=10,SNR=3.4						
CPUP	**Villa Florida**	**13.87**	**122**	Pn	Pn	10 26 23.9	+1.6
	0.6nm,0.3s,baz=280,slow=11,SNR=9.2						
CPUP				LR	LR	10 32 56.5	
	comp=Z,91nm,21.3s,baz=44,slow=43						
PLCA	**Paso Flores**	**21.14**	**180**	P	P	10 27 50.6	-0.4
	1.6nm,0.6s,baz=2.9,slow=12,SNR=6.2						
PLCA				LR	LR	10 36 12.7	
	comp=Z,20nm,18.7s,baz=151,slow=37						
BDFB	**Brasilia**	**21.75**	**83**	P	P	10 27 58.0	+0.2
	2.4nm,0.5s,baz=255,slow=12,SNR=4.2						
BDFB				LR	LR	10 38 03.0	
	comp=Z,133nm,20.5s,baz=236,slow=41						
TXAR	**Lajitas Array**	**58.18**	**326**	P	P	10 32 59.0	-1.5
	0.3nm,0.7s,baz=164,slow=9.9,SNR=3.4						
DBIC	**Dimbokro**	**69.60**	**75**	P	P	10 34 15.1	-1.0
	1.9nm,0.5s,baz=228,slow=7.2,SNR=4.8						
PDAR	**Pinedale Array**	**71.68**	**331**	P	P	10 34 28.2	-0.2
	0.4nm,0.5s,baz=124,slow=9.6,SNR=4.0						
NVAR	**Mina Array Bea**	**73.05**	**323**	P	P	10 34 38.1	+1.5
	0.3nm,0.8s,baz=160,slow=8.5,SNR=2.8						
TORD	**Torodi Ar. Bea**	**78.09**	**71**	P	P	10 35 06.0	+0.2
	4.0nm,0.6s,baz=251,slow=5.5,SNR=44						
YKA	**Yellowknife Ar**	**88.85**	**341**	P	P	10 36 00.4	+0.4
	2.7nm,0.6s,baz=135,slow=4.6,SNR=107						
ASAR	**Alice Springs**	**130.93**	**210**	PKP	PKPdf	10 42 18.3	-0.5
	0.5nm,0.5s,baz=123,slow=1.7,SNR=16						
WRA	**Warramunga Arr**	**133.85**	**213**	PKP	PKPdf	10 42 24.0	-0.4
	0.6nm,0.6s,baz=148,slow=1.8,SNR=11						
MKAR	**Makanchi Array**	**144.84**	**33**	PKP	PKPdf	10 42 43.6	+0.1
	5.9nm,0.6s,baz=318,slow=3.5,SNR=75						
SONM	**Songino Array**	**151.65**	**4**	PKPbc	PKPbc	10 43 00.7	-0.3
	0.3nm,0.5s,baz=331,slow=0.6,SNR=5.0						

*IDC **20** 10:24:52.0±3.1, 52°.53N×174°.56W, h128km±29km, mb2.9/7, mb1 3.3/10, mb1mx3.1/31, mbtmp3.0/10, Error ellipse: s-maj=35.1km s-min=13.6km az=162.0*
*NEIC **20** 10:24:51.3, 51°.38N×173°.65W, h8km, ML3.0(AEIC), After AEIC.*

ISC 20 10:24:50.5±0.8, 52°.6N±0°.1×174°.74W±0°.06, h100km, n20, σ2s33/19, mb3.3/7, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOWE	**Korovin West**	**0.40**	**133**	P	Pn	10 25 10.4	+4.7
KOKV	**Korovin Volcan**	**0.45**	**129**	P	Pn	10 25 10.6	+4.6
KOKL	**Mount Kliuchef**	**0.46**	**134**	P	Pn	10 25 10.5	+4.4
KOKL				S	Sn	10 25 24.8	+7.1
ATKA	**Atka Island**	**0.55**	**143**	P	**Pn**	**10 25 09.2**	**+2.5**
ATKA				S	**Sn**	**10 25 22.4**	**+3.8**
NIKO	**Nikolski**	**3.58**	**82**	P	**Pn**	**10 25 44.1**	**+0.1**
NIKO				S	**Sn**	**10 26 24.0**	**-1.4**
OKSP	**Okmok Steeple**	**3.95**	**79**	P	**Pn**	**10 25 51.3**	**+2.4**
OKTU	**Okmok Mt. Tuli**	**4.11**	**77**	P	**Pn**	**10 25 53.8**	**+2.6**
MSOM	**Makushin Julie**	**4.82**	**73**	P	**Pn**	**10 26 02.9**	**+2.2**
MREP	**Makushin Rep't**	**4.94**	**73**	P	**Pn**	**10 26 04.6**	**+2.2**
UNV	**Unalaska Valle**	**5.09**	**73**	P	**Pn**	**10 26 06.6**	**+2.3**
FX1	**Attu Island--F**	**7.35**	**277**	P	Pn	10 26 39.5	+4.5
	0.7nm,0.3s,baz=191,slow=5.2,SNR=3.8						
FX1				S	**Sn**	**10 28 00.1**	**+3.3**
	0.4nm,0.3s,baz=297,slow=18,SNR=2.4						
KDAK	**Kodiak Island**	**13.62**	**59**	P	**Pn**	**10 27 58.8**	**-0.4**
	1.1nm,0.3s,baz=324,slow=19,SNR=15						
KDAK				S	**Sn**	**10 30 32.1**	**+3.1**
	0.1nm,0.3s,baz=288,slow=20,SNR=3.0						
ILAR	**Eielson Array**	**18.69**	**39**	P	**P**	**10 28 59.7**	**-0.8**
	0.2nm,0.3s,baz=236,slow=9.6,SNR=29						
INK	**Inuvik**	**24.98**	**35**	P	**P**	**10 30 03.9**	**-0.4**
	0.5nm,0.7s,baz=260,slow=8.0,SNR=5.1						
YKA	**Yellowknife Ar**	**32.53**	**48**	P	P	10 31 08.3	-3.1
	0.1nm,0.6s,baz=281,slow=8.0,SNR=3.4						
PDAR	**Pinedale Array**	**43.55**	**76**	P	**P**	**10 32 42.7**	**-1.7**
	0.5nm,0.7s,baz=284,slow=4.6,SNR=4.7						
TXAR	**Lajitas Array**	**56.01**	**85**	P	**P**	**10 34 16.7**	**-2.0**
	0.2nm,0.7s,baz=282,slow=4.5,SNR=3.3						
MKAR	**Makanchi Array**	**61.18**	**310**	P	**P**	**10 34 54.3**	**0.0**
	0.3nm,0.3s,baz=46,slow=4.4,SNR=7.5						
WRA	**Warramunga Arr**	**84.69**	**227**	P	**P**	**10 37 10.8**	**-2.3**
	0.2nm,0.5s,baz=36,slow=6.0,SNR=4.7						
ASAR	**Alice Springs**	**88.14**	**226**	P	**P**	**10 37 28.1**	**-1.7**
	0.3nm,0.5s,baz=25,slow=5.2,SNR=5.7						

IDC 20 10:24:57.3±8.2, 17°.47S×178°.83W, h610km±110km, mb3.0/8, mb1 3.3/9, mb1mx3.1/21, mbtmp3.0/9, Error ellipse: s-maj=89.0km s-min=32.8km az=159.0, Fiji

Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**14.60**	**249**	P	P	10 28 02.8	+1.1
	0.3nm,0.3s,baz=142,slow=19,SNR=4.0						
STKA	**Stephens Creek**	**38.50**	**241**	P	P	10 31 28.7	-0.5
	5.3nm,1.1s,baz=69,slow=6.4,SNR=5.6						
WRA	**Warramunga Arr**	**44.32**	**259**	P	P	10 32 14.8	-0.4
	0.9nm,0.3s,baz=92,slow=7.4,SNR=68						
ASAR	**Alice Springs**	**44.53**	**254**	P	P	10 32 16.6	-0.1
	10.0nm,0.6s,baz=88,slow=8.5,SNR=175						
FITZ	**Fitzroy Crossi**	**52.71**	**260**	P	P	10 33 17.6	+0.6
	1.4nm,0.8s,baz=121,slow=5.9,SNR=5.6						
NVAR	**Mina Array Bea**	**79.39**	**44**	P	P	10 36 01.1	-0.7
	0.5nm,0.6s,baz=228,slow=9.3,SNR=4.8						
ILAR	**Eielson Array**	**85.55**	**13**	P	P	10 36 31.8	0.0
	0.1nm,0.4s,baz=222,slow=5.2,SNR=7.6						
TXAR	**Lajitas Array**	**86.10**	**58**	P	P	10 36 36.0	+0.7
	0.5nm,0.7s,baz=222,slow=5.2,SNR=6.6						
PDAR	**Pinedale Array**	**87.31**	**44**	P	P	10 36 41.0	+0.1
	0.4nm,0.6s,baz=199,slow=4.8,SNR=2.6						

*ISCJB **20** 10:32:35.8±0.4, 40°.39N±0°.02×25°.94E±0°.02, h9km±3km, Error ellipse: s-maj=2.8km s-min=2.4km az=142.2*
*ISK **20** 10:32:35.5, 40°.37N×25°.93E, h13km, ML3.7*
*SOF **20** 10:32:36.5, 40°.47N×25°.87E, h12km, MD3.0*
*ATH **20** 10:32:36.1, 40°.40N×25°.93E, h30km, MD3.4/8*
*THE **20** 10:32:36.8, 40°.38N×25°.95E, h11km, ML3.1/5, Error ellipse: s-maj=0.8km s-min=0.4km az=81.0*
*CSEM **20** 10:32:36.3±0.1, 40°.37N×25°.94E, h10km, MD3.4, Error ellipse: s-maj=1.9km s-min=1.6km az=21.0*
*DDA **20** 10:32:37.1, 40°.35N×26°.08E, h3km, MD3.5*

ISC 20 10:32:36.8±0.9, 40°.37N±0°.02×25°.95E±0°.02, h13km±8km, n175, σ0s68/211, 3C-15D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMTH	**Samothraki Isl**	**0.33**	**288**	*e*PB	**Pg**	**10 32 43.6**	**0.0**
SMTH				*e*SB	**Sb**	**10 32 49.5**	**-0.3**
SMTH	**Samothraki Isl**	**0.33**	**288**	*e*Pb	**Pg**	**10 32 43.6**	**0.0**
ENEZ	**Enez**	**0.40**	**23**	*e*PG	**Pg**	**10 32 44.6**	**-0.1**
ENEZ				*e*SG	**Sg**	**10 32 50.7**	**+0.6**
ENEZ	**Enez**	**0.40**	**23**	*e*Pg	**Pg**	**10 32 44.6**	**-0.1**
ENEZ				*e*Sg	**Sg**	**10 32 50.7**	**+0.6**
GELI	**Tayfur-Gelibol**	**0.41**	**86**	*e*PG	**Pg**	**10 32 44.2**	**-0.7**
GELI				*e*SG	**Sg**	**10 32 50.7**	**+0.4**
GELI	**Tayfur-Gelibol**	**0.41**	**86**	*e*Pg	**Pg**	**10 32 44.2**	**-0.7**
GELI				*e*Sg	**Sg**	**10 32 50.7**	**+0.4**
ALN	**Alexandroupoli**	**0.53**	**8**	P	**Pg**	**10 32 46.8**	**-0.4**
ALN				S	**Sg**	**10 32 54.0**	**-0.3**
ALN	**Alexandroupoli**	**0.53**	**8**	*e*PB	**Pg**	**10 32 46.8**	**-0.4**
ALN				*e*SB	**Sg**	**10 32 54.3**	**0.0**
ALN	**Alexandroupoli**	**0.53**	**8**	P	**Pg**	**10 32 46.8**	**-0.4**
ALN				S	**Sg**	**10 32 54.0**	**-0.3**
ALN				*e*Sb	**Sg**	**10 32 54.3**	**0.0**
BOZC	**Bozcaada**	**0.53**	**171**	*i* P	**Pg**	**10 32 47.3**	**0.0**
BOZC				*i* S	**Sg**	**10 32 54.8**	**+0.5**
EZN	**Ezine**	**0.62**	**152**	*e*PG	**Pg**	**10 32 48.2**	**-0.6**
EZN				*e*SG	**Sg**	**10 32 57.2**	**+0.3**
EZN	**Ezine**	**0.62**	**152**	*e*Pg	**Pg**	**10 32 48.2**	**-0.6**
EZN				*e*Sg	**Sg**	**10 32 57.2**	**+0.3**
LPK	**Lapseki**	**0.62**	**89**	*e*PG	**Pg**	**10 32 48.3**	**-0.6**
LPK	**Lapseki**	**0.62**	**89**	*e*Pg	**Pg**	**10 32 48.3**	**-0.6**
LIA	**Limnos Island**	**0.75**	**231**	P	**Pg**	**10 32 51.3**	**0.0**
LIA				S	**Sb**	**10 33 02.4**	**+0.6**
LIA	**Limnos Island**	**0.75**	**231**	*e*PN	**Pg**	**10 32 51.3**	**0.0**
LIA				*e*SN	**Sb**	**10 33 02.9**	**+1.1**
LIA	**Limnos Island**	**0.75**	**231**	P	**Pg**	**10 32 51.3**	**0.0**
LIA				S	**Sb**	**10 33 02.4**	**+0.6**
LIA				*e*Sn	**Sb**	**10 33 02.9**	**+1.1**
RKY	**Sarkoy-Tekirda**	**0.99**	**71**	*e*PG	**Pb**	**10 32 54.7**	**-1.2**
RKY	**Sarkoy-Tekirda**	**0.99**	**71**	*e*Pg	**Pb**	**10 32 54.7**	**-1.2**
SART	**Tekirdag**	**0.99**	**71**	*i* P	**Pb**	**10 32 54.6**	**-1.3**
SART				*i* S	**Sg**	**10 33 09.7**	**+0.8**
SART	**Tekirdag**	**0.99**	**71**	*i* P	**Pb**	**10 32 54.6**	**-1.3**
SART				*i* S	**Sg**	**10 33 09.7**	**+0.8**
KRBG	**Karabiga-Canak**	**1.03**	**88**	*e*PG	**Pb**	**10 32 55.4**	**-1.1**
KRBG	**Karabiga-Canak**	**1.03**	**88**	*e*Pg	**Pb**	**10 32 55.4**	**-1.1**
MFT	**Murefte**	**1.10**	**67**	*e*PN	**Pb**	**10 32 58.0**	**+0.3**
MFT	**Murefte**	**1.10**	**67**	*e*Pn	**Pb**	**10 32 58.0**	**+0.3**
PRK	**Paraskevi**	**1.15**	**167**	P	**Pb**	**10 32 58.1**	**-0.4**
PRK				S	**Sb**	**10 33 14.1**	**+0.8**
PRK	**Paraskevi**	**1.15**	**167**	*e*PN	**Pb**	**10 32 58.4**	**-0.1**
PRK				*e*SN	**Sg**	**10 33 14.5**	**+0.6**
PRK	**Paraskevi**	**1.15**	**167**	P	**Pb**	**10 32 58.1**	**-0.4**
PRK	**Paraskevi**	**1.15**	**167**	*e*Pn	**Pb**	**10 32 58.4**	**-0.1**
PRK				S	**Sb**	**10 33 14.1**	**+0.8**
PRK				*e*Sn	**Sg**	**10 33 14.5**	**+0.6**
AYVA	**Ayvalik**	**1.21**	**151**	*i* P	**Pn**	**10 32 59.6**	**+0.3**
AYVA				*i* S	**Sb**	**10 33 15.3**	**+0.4**
AYVA	**Ayvalik**	**1.21**	**151**	*i* P	**Pn**	**10 32 59.6**	**+0.3**
AYVA				*i* S	**Sb**	**10 33 15.3**	**+0.4**
KAVA	**Kavala**	**1.26**	**300**	P	**Pn**	**10 32 59.2**	**-0.8**
KAVA				S	**Sn**	**10 33 16.9**	**+0.1**
KAVA	**Kavala**	**1.26**	**300**	P	**Pn**	**10 32 59.2**	**-0.8**
KAVA				S	**Sn**	**10 33 16.9**	**+0.1**
MRMT	**Marmara Adasi**	**1.28**	**79**	*e*PN	**Pn**	**10 32 59.2**	**-1.2**
MRMT	**Marmara Adasi**	**1.28**	**79**	*e*Pn	**Pn**	**10 32 59.2**	**-1.2**
KDZ	**Kurdzhali**	**1.34**	**343**	*i* P	**Pn**	**10 33 01.5**	**+0.3**
KDZ	**Kurdzhali**	**1.34**	**343**	*i* P	**Pn**	**10 33 01.5**	**+0.3**
TKR	**Tekirdag**	**1.36**	**62**	*e*PN	**Pn**	**10 33 01.1**	**-0.4**
TKR	**Tekirdag**	**1.36**	**62**	*e*P

CTYL	**Yal??k??y-??at**	**2.09**	**57**	*e*Pn		**Pn**	**10 33 10.1**	**-1.4**
CTKS	**Kestanelik-??a**	**2.13**	**65**	*e*PN		**Pn**	**10 33 12.5**	**+0.5**
CTKS	**Kestanelik-??a**	**2.13**	**65**	*e*Pn		**Pn**	**10 33 12.5**	**+0.5**
JMB	**Yambol**	**2.15**	**13**	*i* P		**Pn**	**10 33 13.0**	**+0.7**
JMB	**Yambol**	**2.15**	**13**	*i* Pn		**Pn**	**10 33 13.0**	**+0.7**
BLCB	**Balcova**	**2.16**	**156**	*e*PN		**Pn**	**10 33 11.8**	**-0.6**
BLCB	**Balcova**	**2.16**	**156**	*e*Pn		**Pn**	**10 33 11.8**	**-0.6**
HORT	**Hortiatis**	**2.18**	**277**	P		**Pn**	**10 33 12.2**	**-0.7**
HORT	**Hortiatis**	**2.18**	**277**	P		**Pn**	**10 33 12.2**	**-0.7**
DST	**Dursunbey**	**2.19**	**110**	*e*PN		**Pn**	**10 33 13.3**	**+0.4**
DST	**Dursunbey**	**2.19**	**110**	*e*Pn		**Pn**	**10 33 13.3**	**+0.4**
IZM	**Izmir**	**2.22**	**152**	*e*PN		**Pn**	**10 33 12.8**	**-0.5**
IZM	**Izmir**	**2.22**	**152**	*e*Pn		**Pn**	**10 33 12.8**	**-0.5**
ARMT	**Armutlu**	**2.23**	**84**	*e*PN		**Pn**	**10 33 13.1**	**-0.4**
ARMT	**Armutlu**	**2.23**	**84**	*e*Pn		**Pn**	**10 33 13.1**	**-0.4**
MDNY	**Mudanya-Bursa**	**2.25**	**89**	*e*PN		**Pn**	**10 33 13.2**	**-0.4**
MDNY	**Mudanya-Bursa**	**2.25**	**89**	*e*Pn		**Pn**	**10 33 13.2**	**-0.4**
ORLT	**Orhaneli**	**2.28**	**97**	*e*PN		**Pn**	**10 33 14.4**	**+0.2**
ORLT	**Orhaneli**	**2.28**	**97**	*e*Pn		**Pn**	**10 33 14.4**	**+0.2**
BGKT	**Bogazkoy**	**2.29**	**68**	*e*PN		**Pn**	**10 33 14.3**	**0.0**
BGKT	**Bogazkoy**	**2.29**	**68**	*e*Pn		**Pn**	**10 33 14.3**	**0.0**
XOR	**Xorichti**	**2.34**	**246**	P		**Pn**	**10 33 14.6**	**-0.4**
XOR	**Xorichti**	**2.34**	**246**	P		**Pn**	**10 33 14.6**	**-0.4**
KNT	**Kendrikon**	**2.45**	**290**	P		**Pn**	**10 33 16.2**	**-0.2**
KNT	**Kendrikon**	**2.45**	**290**	P		**Pn**	**10 33 16.2**	**-0.2**
BUY	**Buyukada**	**2.46**	**78**	*e*Pn		**Pn**	**10 33 17.1**	**+0.5**
ISK	**Istanbul-Kandi**	**2.47**	**73**	*e*PN		**Pn**	**10 33 17.5**	**+0.8**
ISK	**Istanbul-Kandi**	**2.47**	**73**	*e*Pn		**Pn**	**10 33 17.5**	**+0.8**
GEMT	**Gemlik**	**2.48**	**87**	*e*PN		**Pn**	**10 33 17.1**	**+0.3**
GEMT	**Gemlik**	**2.48**	**87**	*e*Pn		**Pn**	**10 33 17.2**	**+0.3**
YLV	**Yalova**	**2.62**	**85**	*e*PN		**Pn**	**10 33 19.4**	**+0.5**
YLV	**Yalova**	**2.62**	**85**	*e*Pn		**Pn**	**10 33 19.4**	**+0.5**
KKB	**Krupnik**	**2.63**	**306**	*i* P		**Pn**	**10 33 18.7**	**-0.2**
KKB	**Krupnik**	**2.63**	**306**	*i* P		**Pn**	**10 33 18.7**	**-0.2**
VAY	**Valandovo**	**2.73**	**291**	P		**Pn**	**10 33 20.0**	**-0.3**
VAY	**Valandovo**	**2.73**	**291**	*e*Pn		**Pn**	**10 33 20.2**	**-0.1**
VAY	**Valandovo**	**2.73**	**291**	P		**Pn**	**10 33 20.0**	**-0.3**
VAY	**Valandovo**	**2.73**	**291**	*e*Pn		**Pn**	**10 33 20.7**	**+0.4**
GRG	**Griva**	**2.76**	**283**	P		**Pn**	**10 33 20.4**	**-0.3**
GRG	**Griva**	**2.76**	**283**	P		**Pn**	**10 33 20.4**	**-0.3**
KULA	**Kula-Manisa**	**2.80**	**131**	*e*PN		**Pn**	**10 33 21.4**	**+0.1**
KULA	**Kula-Manisa**	**2.80**	**131**	*e*Pn		**Pn**	**10 33 21.5**	**+0.1**
TVSB	**Tavsanli**	**2.86**	**108**	*e*PN		**Pn**	**10 33 22.5**	**+0.4**
TVSB	**Tavsanli**	**2.86**	**108**	*e*Pn		**Pn**	**10 33 22.5**	**+0.4**
SILT	**Sile**	**2.92**	**73**	*e*PN		**Pn**	**10 33 23.5**	**+0.7**
SILT	**Sile**	**2.92**	**73**	*e*Pn		**Pn**	**10 33 23.5**	**+0.7**
CAVI	**Cavuskoy**	**2.99**	**92**	*e*PN		**Pn**	**10 33 24.2**	**+0.4**
CAVI	**Cavuskoy**	**2.99**	**92**	*e*Pn		**Pn**	**10 33 24.2**	**+0.4**
VTS	**Vitosha**	**3.03**	**318**	P		**Pn**	**10 33 24.2**	**-0.3**
VTS	**Vitosha**	**3.03**	**318**	*i* P		**Pn**	**10 33 25.0**	**+0.5**
VTS	**Vitosha**	**3.03**	**318**	*i* P		**Pn**	**10 33 25.5**	**+1.0**
VTS	**Vitosha**	**3.03**	**318**	P		**Pn**	**10 33 24.2**	**-0.3**
VTS				S		**Sn**	**10 34 02.8**	**+2.1**
PRD	**Provadia**	**3.03**	**21**	*i* P		**Pn**	**10 33 23.9**	**-0.5**
PRD	**Provadia**	**3.03**	**21**	*i* P		**Pn**	**10 33 23.9**	**-0.5**
APE	**Apeiranthos**	**3.31**	**186**	*e*PN		**Pn**	**10 33 27.9**	**-0.5**
APE	**Apeiranthos**	**3.31**	**186**	*i* P		**Pn**	**10 33 27.7**	**-0.7**
APE	**Apeiranthos**	**3.31**	**186**	*e*Pn		**Pn**	**10 33 27.9**	**-0.5**
MPEP	**Malo Peshtene**	**3.41**	**332**	*e*P		**Pn**	**10 33 29.8**	**+0.2**
KHL	**Karahalli**	**3.44**	**125**	*e*PN		**Pn**	**10 33 30.8**	**+0.6**
KHL	**Karahalli**	**3.44**	**125**	*e*Pn		**Pn**	**10 33 30.8**	**+0.6**
ALT	**Altintas**	**3.47**	**111**	*e*PN		**Pn**	**10 33 31.0**	**+0.4**
ALT	**Altintas**	**3.47**	**111**	*e*Pn		**Pn**	**10 33 31.0**	**+0.4**
BODT	**Bodrum**	**3.47**	**162**	*e*PN		**Pn**	**10 33 30.8**	**+0.3**
BODT	**Bodrum**	**3.47**	**162**	*e*Pn		**Pn**	**10 33 30.8**	**+0.3**
GULT	**Gulveren**	**3.49**	**87**	*e*PN		**Pn**	**10 33 31.8**	**+1.0**
GULT	**Gulveren**	**3.49**	**87**	*e*Pn		**Pn**	**10 33 31.8**	**+1.0**
BIA	**Bitola**	**3.57**	**282**	*e*Pn		**Pb**	**10 33 37.7**	**-2.2**
YER	**Yerkesik**	**3.71**	**150**	*e*PN		**Pn**	**10 33 34.3**	**+0.5**
YER	**Yerkesik**	**3.71**	**150**	*e*Pn		**Pn**	**10 33 34.3**	**+0.5**
SVRH	**Sivrihisar-ESK**	**4.39**	**100**	*e*PN		**Pn**	**10 33 44.3**	**+1.1**
SVRH	**Sivrihisar-ESK**	**4.39**	**100**	*e*Pn		**Pn**	**10 33 44.3**	**+1.1**
ISR	**Istrita**	**4.77**	**5**	*i* P		**Pn**	**10 33 48.6**	**+0.2**
ISR	**Istrita**	**4.77**	**5**	*i* P		**Pn**	**10 33 48.6**	**+0.2**
KIZT	**Kizilcal**	**4.82**	**106**	*e*PN		**Pn**	**10 33 50.5**	**+1.4**
KIZT	**Kizilcal**	**4.82**	**106**	*e*Pn		**Pn**	**10 33 50.5**	**+1.4**
CFR	**Carcaliu**	**5.07**	**18**	*i* P		**Pn**	**10 33 52.2**	**-0.2**
CFR	**Carcaliu**	**5.07**	**18**	*i* P		**Pn**	**10 33 52.2**	**-0.2**
ARR	**Arges**	**5.09**	**350**	*i* P		**Pn**	**10 33 53.1**	**+0.3**
ARR	**Arges**	**5.09**	**350**	*i* P		**Pn**	**10 33 53.1**	**+0.3**
MLR	**Muntele Rosu**	**5.12**	**360**	*i* P		**Pn**	**10 33 54.8**	**+1.5**
MLR	**Muntele Rosu**	**5.12**	**360**	*i* P		**Pn**	**10 33 54.8**	**+1.5**
PLOR	**Plostina**	**5.50**	**5**	*i* P		**Pn**	**10 33 58.8**	**+0.3**
PLOR	**Plostina**	**5.50**	**5**	*i* P		**Pn**	**10 33 58.8**	**+0.3**
VRI	**Vrincioaia**	**5.52**	**6**	*i* P		**Pn**	**10 34 00.0**	**+1.3**
VRI	**Vrincioaia**	**5.52**	**6**	*i* P		**Pn**	**10 34 00.0**	**+1.3**
GZR	**Gura Zlata**	**5.53**	**336**	*i* P		**Pn**	**10 33 59.1**	**+0.2**
GZR	**Gura Zlata**	**5.53**	**336**	*i* P		**Pn**	**10 33 59.1**	**+0.2**
BZS	**Buzias**	**6.13**	**330**	*i* P		**Pn**	**10 34 06.8**	**-0.2**
BZS	**Buzias**	**6.13**	**330**	*i* P		**Pn**	**10 34 06.8**	**-0.2**

*ISCJB **20** 10:35:07.3±0.6,37.°96N±0.°03×29.°45E±0.°04,h9km±6km, Error ellipse: s-maj=5.8km s-min=4.9km az=19.0*
*CSEM **20** 10:35:07.3±0.2,37.°95N×29.°43E,h12km,MD2.7, Error ellipse: s-maj=3.8km s-min=3.3km az=127.0*
*ISK **20** 10:35:07.2,37.°98N×29.°40E,h18km, MD2.7*
*DDA **20** 10:35:07.4,37.°96N×29.°41E,h7km, MD3.0*

ISC 20 10:35:07.5±1.0,37.°94N±0.°03×29.°43E±0.°03,h12km±10km, n20,σ0°45/34,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.37**	**239**	*e*PG	**Pg**	**10 35 14.5**	**-0.4**
DENT				*e*SG	**Sb**	**10 35 21.8**	**+0.1**
DENT	**Denizli**	**0.37**	**239**	*e*Pg	**Pg**	**10 35 14.5**	**-0.4**
DENT				*e*Sg	**Sb**	**10 35 21.8**	**+0.1**
KHL	**Karahalli**	**0.39**	**11**	*e*PG	**Pg**	**10 35 14.8**	**-0.5**
KHL				*e*SG	**Sg**	**10 35 21.0**	**+0.5**
KHL	**Karahalli**	**0.39**	**11**	*e*Pg	**Pg**	**10 35 14.8**	**-0.5**
KHL				*e*Sg	**Sg**	**10 35 21.0**	**+0.5**
DNZL	**Cakiroluk**	**0.40**	**231**	*i* P	**Pg**	**10 35 15.1**	**-0.3**
DNZL				*i* S	**Sg**	**10 35 21.3**	**+0.5**
DNZL	**Cakiroluk**	**0.40**	**231**	*i* P	**Pg**	**10 35 15.1**	**-0.3**
DNZL				*i* S	**Sg**	**10 35 21.3**	**+0.5**
GOLH	**Golhisar**	**0.71**	**172**	*i* P	**Pg**	**10 35 20.7**	**-0.6**
GOLH				*i* S	**Sb**	**10 35 32.3**	**+0.6**
GOLH	**Golhisar**	**0.71**	**172**	*i* P	**Pg**	**10 35 20.7**	**-0.6**
GOLH				*i* S	**Sb**	**10 35 32.3**	**+0.6**
KULA	**Kula-Manisa**	**0.83**	**313**	*e*PG	**Pg**	**10 35 23.9**	**+0.3**
KULA				*e*SG	**Sg**	**10 35 34.3**	**-0.3**
KULA	**Kula-Manisa**	**0.83**	**313**	*e*Pg	**Pg**	**10 35 23.9**	**+0.3**
KULA				*e*Sg	**Sg**	**10 35 34.3**	**-0.3**
ISP	**Isparta**	**0.87**	**98**	*e*PG	**Pb**	**10 35 25.1**	**+0.5**
ISP	**Isparta**	**0.87**	**98**	*e*Pg	**Pb**	**10 35 25.1**	**+0.5**
MANT	**Manisa**	**0.88**	**309**	*i* P	**Pg**	**10 35 24.3**	**-0.2**
MANT				*i* S	**Sg**	**10 35 35.9**	**-0.2**
MANT	**Manisa**	**0.88**	**309**	*i* P	**Pg**	**10 35 24.3**	**-0.2**
MANT				*i* S	**Sg**	**10 35 35.9**	**-0.2**
SHUT	**Suhut-Afyon**	**1.07**	**55**	*e*PG	**Pb**	**10 35 28.1**	**0.0**
SHUT	**Suhut-Afyon**	**1.07**	**55**	*e*Pg	**Pb**	**10 35 28.1**	**0.0**
YER	**Yerkesik**	**1.22**	**229**	*e*PN	**Pn**	**10 35 29.7**	**-0.8**
YER	**Yerkesik**	**1.22**	**229**	*e*Pn	**Pn**	**10 35 29.7**	**-0.8**
AYDN	**Tasoluk**	**1.26**	**258**	*i* P	**Pn**	**10 35 31.0**	**0.0**
AYDN				*i* S	**Sg**	**10 35 48.7**	**+0.5**
AYDN	**Tasoluk**	**1.26**	**258**	*i* P	**Pn**	**10 35 31.0**	**0.0**
AYDN				*i* S	**Sg**	**10 35 48.7**	**+0.5**

IDC 20 10:39:01.3±5.9,21.°61N×143.°09E,h271km±57km,mb3.2/8, mb1 3.4/9,mb1mx3.1/27,mbtmp3.1/9,Error ellipse: s-maj=30.8km s-min=15.5km az=94.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**15.47**	**345**	P	Pn	10 42 26.0	-0.2
	0.5nm,0.3s,baz=167,slow=10,SNR=6.0						
WRA	**Warramunga Arr**	**42.18**	**192**	P	P	10 46 27.6	-0.3
	0.9nm,0.3s,baz=16,slow=9.3,SNR=14						
FITZ	**Fitzroy Crossi**	**43.01**	**205**	P	P	10 46 34.5	-0.1
	2.1nm,0.9s,baz=18,slow=9.6,SNR=2.7						
ZALV	**Zalesovo Beam**	**54.22**	**322**	PcP	PcP	10 48 58.6	-1.2
	0.5nm,0.3s,baz=106,slow=4.7,SNR=3.1						
MKAR	**Makanchi Array**	**54.69**	**313**	P	P	10 48 02.8	+0.1
	0.2nm,0.6s,baz=91,slow=7.5,SNR=3.3						
MKAR				PcP	pP	10 49 01.6	0.0
	0.1nm,0.3s,baz=70,slow=5.2,SNR=3.8						
ILAR	**Eielson Array**	**62.16**	**27**	P	P	10 48 52.8	-1.0
	0.1nm,0.5s,baz=275,slow=5.4,SNR=4.7						

YKA	**Yellowknife Ar**	**76.57**	**28**	P		P	10 50 21.8	+0.2
	0.4nm,0.6s,baz=292,slow=5.9,SNR=9.9							
ARCES	**ARCESS Array B**	**78.97**	**341**	P		P	10 50 35.1	+0.3
	1.5nm,0.6s,baz=71,slow=8.0,SNR=7.7							
FINES	**FINESS Array B**	**83.22**	**334**	P		P	10 50 56.2	-1.0
	1.5nm,0.6s,baz=66,slow=4.6,SNR=3.7							
NVAR	**Mina Array Bea**	**83.27**	**51**	P		P	10 50 58.5	+0.3
	0.2nm,0.5s,baz=274,slow=3.1,SNR=4.4							
PLCA	**Paso Flores**	**145.77**	**132**	PKPbc		PKPbc	10 58 08.3	-0.5
	1.0nm,0.6s,baz=255,slow=1.3,SNR=5.3							
LPAZ	**La Paz**	**150.03**	**85**	PKPbc		PKPbc	10 58 21.5	+0.1
	0.9nm,0.5s,baz=293,slow=2.1,SNR=6.6							

IDC 20 10:40:36.3±1.9,3.°94N×126.°39E,h0km,mb3.3/4, mb1 3.6/4,mb1mx3.4/24,mbtmp3.4/4,Error ellipse: s-maj=115.6km s-min=23.9km az=69.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.92**	**182**	P	P	10 45 31.4	0.0
	0.4nm,0.3s,baz=359,slow=12,SNR=4.1						
WRA	**Warramunga Arr**	**24.99**	**162**	P	P	10 46 01.9	0.0
	1.5nm,0.7s,baz=341,slow=10,SNR=16						
ASAR	**Alice Springs**	**28.40**	**165**	P	P	10 46 32.6	-0.1
	0.1nm,0.3s,baz=346,slow=7.3,SNR=4.8						
MKAR	**Makanchi Array**	**57.19**	**325**	P	P	10 50 25.2	0.0
	0.2nm,0.5s,baz=120,slow=8.7,SNR=3.2						

*TAP **20** 10:44:15.9,25.°23N×122.°67E,h184km,ML4.0,C*
*ISCJB **20** 10:44:17.4±0.7,25.°11N±0.°05×122.°69E±0.°03, h173km±5km, Error ellipse: s-maj=9.1km s-min=3.5km az=169.0*
*JMA **20** 10:44:17.5±0.3,25.°28N×122.°68E,h165km, M3.1*

ISC 20 10:44:17.3±1.7,25.°13N±0.°07×122.°68E±0.°03, h177km±11km,n37,σ0°60/67,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.64**	**259**	*i* P	**Pn**	**10 44 42.4**	**0.0**
	baz=255						
TWB1				S	**Sn**	**10 45 01.7**	**+0.1**
	baz=255						
YOJ	**Yonaguni jima**	**0.73**	**155**	P	**Pn**	**10 44 42.8**	**-0.1**
YOJ				*e*S	**Sn**	**10 45 03.0**	**+0.3**
NWF	**Wu-fen Shan**	**0.81**	**266**	*e*P	**Pn**	**10 44 43.5**	**0.0**
	baz=259						
NWF				*e*S	**Sn**	**10 45 03.6**	**0.0**
	baz=259						
TWC	**Suao**	**0.91**	**236**	P	**Pn**	**10 44 44.1**	**+0.1**
	baz=238						
TWC				*e*S	**Sn**	**10 45 04.1**	**-0.6**
	baz=238						
TWY	**Chenhua**	**0.98**	**279**	*e*P	**Pn**	**10 44 44.4**	**-0.1**
	baz=275						
TWE	**Neicheng**	**1.00**	**246**	P	**Pn**	**10 44 44.7**	**0.0**
	baz=234						
TWE				*e*S	**Sn**	**10 45 05.8**	**0.0**
	baz=234						
ENA	**Nanau**	**1.10**	**231**	P	**Pn**	**10 44 45.6**	**+0.1**
	baz=220						
ENA				S	**Sn**	**10 45 07.3**	**+0.1**
	baz=220						
ENTT	**Nioudou**	**1.12**	**244**	P	**Pn**	**10 44 45.5**	**-0.1**
	baz=236						
ENTT				*e*S	**Sn**	**10 45 08.2**	**+0.6**
	baz=236						
TWS1	**Kuangyinshan**	**1.14**	**269**	*e*P	**Pn**	**10 44 47.5**	**+1.8**
	baz=257						
IRIF	**Iriomote-Funau**	**1.24**	**129**	P	**Pn**	**10 44 46.6**	**-0.1**
IRIF				*e*S	**Sn**	**10 45 09.0**	**-0.3**
NSK	**Sanguang**	**1.28**	**250**	P	**Pn**	**10 44 47.1**	**0.0**
	baz=238						
NSK				S	**Sn**	**10 45 08.7**	**-1.3**
	baz=238						
NCU	**National Centr**	**1.36**	**264**	*e*S	**Sn**	**10 45 11.8**	**+0.6**
	baz=267						
NNS	**Nan Shan**	**1.37**	**240**	P	**Pn**	**10 44 48.3**	**+0.4**
	baz=236						
NNS				*e*S	**Sn**	**10 45 11.5**	**-0.1**
	baz=236						
TWD	**Chiawan**	**1.44**	**223**	*e*P	**Pn**	**10 44 48.1**	**-0.3**
	baz=218						
TWD				S	**Sn**	**10 45 11.8**	**-0.7**
	baz=218						
HATJ	**Hateruma jima**	**1.48**	**136**	P	**Pn**	**10 44 49.6**	**+0.8**
HATJ				*e*S	**Sn**	**10 45 14.0**	**+0.8**
JKRS	**Kuro-shima**	**1.50**	**126**	P	**Pn**	**10 44 49.5**	**+0.5**
JKRS				*e*S	**Sn**	**10 45 13.6**	**0.0**
JIJ	**Ishigaki jima**	**1.54**	**119**	P	**Pn**	**10 44 49.3**	**-0.1**
JIJ				*e*S	**Sn**	**10 45 13.1**	**-1.0**
NSTT	**Nanjuang**	**1.60**	**252**	*e*P	**Pn**	**10 44 49.6**	**-0.3**
	baz=243						
NSTT				S	**Sn**	**10 45 13.7**	**-1.6**
	baz=243						
WHF	**Hehuan Shan**	**1.61**	**233**	P	**Pn**	**10 44 51.1**	**+0.5**
	baz=233						
WHF				*e*S	**Sn**	**10 45 16.0**	**-0.3**
	baz=233						
TWT	**Tachien**	**1.62**	**238**	*e*P	**Pn**	**10 44 51.2**	**+0.8**
	baz=239						
TWT				*e*S	**Sn**	**10 45 15.7**	**-0.3**
	baz=239						
ESL	**Shilin**	**1.73**	**221**	*e*P	**Pn**	**10 44 51.7**	**+0.3**
	baz=223						
ESL				*e*S	**Sn**	**10 45 16.5**	**-1.2**
	baz=223						
NSY	**Sanyi**	**1.88**	**248**	*e*S	**Sn**	**10 45 20.3**	**-0.1**
	baz=245						
TWQ1	**Liyutan**	**1.90**	**246**	*e*P	**Pn**	**10 44 54.5**	**+1.4**
	baz=243						
TWQ1				S	**Sn**	**10 45 19.8**	**-1.0**
	baz=243						
JTJ	**Tarama**	**1.90**	**104**	P	**Pn**	**10 44 53.5**	**+0.4**
JTJ				*e*S	**Sn**	**10 45 20.7**	**-0.1**
EHY	**Hungye**	**2.03**	**218**	*e*P	**Pn**	**10 44 55.0**	**+0.5**
	baz=222						
EHY				*e*S	**Sn**	**10 45 23.5**	**0.0**
	baz=222						
SMLT	**Sun Moon Lake**	**2.04**	**233**	*e*P	**Pn**	**10 44 55.5**	**+0.8**
	baz=230						
SMLT				*e*S	**Sn**	**10 45 23.2**	**-0.5**
	baz=230						
TYC	**Yuchr**	**2.06**	**234**	P	**Pn**	**10 44 55.0**	**+0.3**
	baz=231						
TYC				*e*S	**Sn**	**10 45 23.6**	**-0.3**
	baz=231						
TWF1	**Yuli**	**2.17**	**216**	*e*P	**Pn**	**10 44 55.8**	**-0.3**
	baz=214						
TWF1				*e*S	**Sn**	**10 45 26.3**	**+0.1**
	baz=214						
CHN5	**Tsauling**	**2.38**	**230**	P	**Pn**	**10 44 58.6**	**+0.1**
	baz=235						
CHN5				*e*S	**Sn**	**10 45 31.1**	**+0.6**
	baz=235						
JMJ	**Miyako jima 2**	**2.40**	**97**	*e*S	**Sn**	**10 45 30.2**	**-0.5**
ELDTW	**Lidau**	**2.46**	**218**	*e*P	**Pn**	**10 44 59.8**	**+0.3**
	baz=213						
JOGS	**Gusukube**	**2.51**	**98**	P	**Pn**	**10 45 00.6**	**+0.7**
JOGS				*e*S	**Sn**	**10 45 32.7**	**-0.2**
CHN4	**Tsaushan**	**2.60**	**227**	*e*P	**Pn**	**10 45 01.0**	**0.0**
	baz=226						
CHN4				*e*S	**Sn**	**10 45 34.7**	**-0.3**
	baz=226						
WTP	**Ta-pu**	**2.66**	**226**	*e*P	**Pn**	**10 45 01.4**	**-0.3**
	baz=223						
WTP				*e*S	**Sn**	**10 45 35.7**	**-0.6**
	baz=223						
TWK	**Hsinying**	**2.73**	**228**	*e*S	**Sn**	**10 45 37.0**	**-0.8**
	baz=226						
CHN1	**Nanshi**	**2.76**	**226**	*e*P	**Pn**	**10 45 03.5**	**+0.6**
	baz=224						
CHN1				*e*S	**Sn**	**10 45 38.3**	**-0.1**
	baz=224						
JKE	**Kume jima 2**	**3.89**	**71**	P	**Pn**	**10 45 16.9**	**0.0**
JKE				*e*S	**Sn**	**10 46 02.7**	**-0.9**

*SOF **20** 10:44:16.3,40.°70N×27.°36E,h6km,MD3.0*
*CSEM **20** 10:44:17.4±0.1,40.°71N×27.°50E,h13km,MD3.1, Error ellipse: s-maj=1.8km s-min=1.4km az=3.0*
*DDA **20** 10:44:17.2,40.°72N×27.°51E,h7km,ML3.8*
*ATH **20** 10:44:17.9,40.°65N×27.°45E,h35km±10km,MD3.1/4*
*ISCJB **20** 10:44:17.6±0.3,40.°71N±0.°02×27.°48E±0.°02,h18km±3km, Error ellipse: s-maj=3.7km s-min=2.7km az=1.2*
*ISK **20** 10:44:17.0,40.°71N×27.°50E,h16km,MD3.1*
*THE **20** 10:44:20.0,40.°63N×27.°30E,h9km±1km,ML3.1/4,Error ellipse: s-maj=1.9km s-min=0.7km az=45.0*

ISC 20 10:44:17.6±0.8,40.°71N±0.°02×27.°51E±0.°02,h15km±5km, n125,σ0°71/145,5C-6D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRMT	**Marmara Adasi**	**0.12**	**148**	PG	**Pg**	**10 44 21.0**	**-0.3**
MRMT				*e*SG	**Sg**	**10 44 23.3**	**-0.4**
MRMT	**Marmara Adasi**	**0.12**	**148**	*i* Pg	**Pg**	**10 44 21.0**	**-0.3**
MRMT				*e*Sg	**Sg**	**10 44 23.3**	**-0.4**
SART	**Tekirdag**	**0.25**	**266**	*i* P	**Pg**	**10 44 22.9**	**-0.3**
SART				*i* S	**Sg**	**10 44 26.9**	**-0.1**
SART	**Tekirdag**	**0.25**	**266**	*i* P	**Pg**	**10 44 22.9**	**-0.3**
SART				*i* S	**Sg**	**10 44 26.9**	**-0.1**
RKY	**Sarkoy-Tekirda**	**0.26**	**266**	PG	**Pg**	**10 44 22.9**	**-0.3**
RKY				*e*SG	**Sg**	**10 44 26.8**	**-0.2**
RKY	**Sarkoy-Tekirda**	**0.26**	**266**	*i* Pg	**Pg**	**10 44 22.9**	**-0.3**
RKY				*e*Sg	**Sg**	**10 44 26.8**	**-0.2**
TKR	**Tekirdag**	**0.28**	**4**	PG	**Pg**	**10 44 24.0**	**+0.3**
TKR				*e*SG	**Sg**	**10 44 28.1**	**+0.2**
TKR	**Tekirdag**	**0.28**	**4**	*i* Pg	**Pg**	**10 44 24.0**	**+0.3**
TKR				*e*Sg	**Sg**	**10 44 28.1**	**+0.2**
CRLT	**Corlu**	**0.46**	**22**	PG	**Pg**	**10 44 26.0**	**+0.1**
CRLT	**Corlu**	**0.46**	**22**	*i* Pg	**Pg**	**10 44 26.9**	**+0.1**
BNT	**Bandirma**	**0.47**	**138**	*e*PG	**Pg**	**10 44 27.1**	**+0.1**
BNT				*e*SG	**Sb**	**10 44 34.5**	**+0.2**
BNT	**Bandirma**	**0.47**	**138**	*e*Pg	**Pg**	**10 44 27.1**	**+0.1**
BNT				*e*Sg	**Sb**	**10 44 34.5**	**+0.2**
LPK	**Lapseki**	**0.66**	**240**	*e*PG	**Pg**	**10 44 30.2**	**-0.4**
LPK	**Lapseki**	**0.66**	**240**	*e*Pg	**Pg**	**10 44 30.2**	**-0.4**
GONE	**Gonen-Balikesi**	**0.67**	**169**	*e*PG	**Pg**	**10 44 31.0**	**+0.2**
GONE				*e*SG	**Sb**	**10 44 40.9**	**+0.8**
GONE	**Gonen-Balikesi**	**0.67**	**169**	*e*Pg	**Pg**	**10 44 31.0**	**+0.2**
GONE				*e*Sg	**Sb**	**10 44 40.9**	**+0.8**
SLVT	**Silivri**	**0.74**	**45**	*e*PG	**Pg**	**10 44 31.9**	**-0.2**
SLVT	**Silivri**	**0.74**	**45**	*e*Pg	**Pg**	**10 44 32.0**	**-0.2**
KCTX	**Karacabey (Bur**	**0.78**	**124**	*e*PG	**Pg**	**10 44 32.4**	**-0.4**
KCTX	**Karacabey (Bur**	**0.78**	**124**	*e*Pg	**Pg**	**10 44 32.4**	**-0.4**
ELBA	**Catalca**	**0.82**	**57**	*i* P	**Pg**	**10 44 33.5**	**-0.2**
ELBA				*i* S	**Sg**	**10 44 44.6**	**+0.1**
ELBA	**Catalca**	**0.82**	**57**	*i* P	**Pg**	**10 44 33.5**	**-0.2**
ELBA				*i* S	**Sg**	**10 44 44.6**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.85**	**249**	*e*PG	**Pg**	**10 44 33.1**	**-1.0**
GELI	**Tayfur-Gelibol**	**0.85**	**249**	*e*Pg	**Pg**	**10 44 33.1**	**-1.0**
CTKS	**Kestanelik-??a**	**0.92**	**55**	*e*PG	**Pb**	**10 44 34.7**	**-0.6**
CTKS	**Kestanelik-??a**	**0.92**	**55**	*e*Pg	**Pb**	**10 44 34.7**	**-0.6**
CTYL	**Yal??k??y-??at**	**0.97**	**37**	*e*PG	**Pb**	**10 44 35.8**	**-0.3**
CTYL	**Yal??k??y-??at**	**0.97**	**37**	*e*Pg	**Pb**	**10 44 35.8**	**-0.3**
ENEZ	**Enez**	**1.03**	**272**	*e*PG	**Pb**	**10 44 36.8**	**-0.4**
ENEZ	**Enez**	**1.03**	**272**	*e

DRGR		**7.00**	**332**	⇓*i*P	Pn	10 46 04.5	+4.8

IDC 20 10:53:57.3±0.8, 12°37S×65°22E, h0km, mb4.0/10, mb1 4.2/10, mb1mx3.9/26, mbtmp4.0/10, MS3.8/13, Ms1 3.8/13, ms1mx3.5/40, Error ellipse: s-maj=29.3km s-min=20.4km az=13.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**18.43**	**248**	P	P	10 58 18.3	+3.7
	0.4nm,0.3s,baz=80,slow=17,SNR=3.1						
OPO				LR	LR	11 03 49.7	
	comp=Z,352nm,18.4s,baz=8.2,slow=32						
KMBO	**Kilima Mbogo**	**29.89**	**290**	LR	LR	11 10 40.4	
	comp=Z,154nm,18.9s,baz=94,slow=34						
LSZ	**Lusaka**	**36.04**	**261**	P	P	11 01 01.3	+0.4
	2.9nm,0.9s,baz=67,slow=12,SNR=5.2						
BOSA	**Boshof**	**40.54**	**240**	LR	LR	11 16 35.7	
	comp=Z,162nm,18.5s,baz=265,slow=34						
CMAR	**Chiang Mai Arr**	**45.23**	**48**	P	P	11 02 17.1	+0.4
	0.5nm,0.3s,baz=233,slow=8.2,SNR=6.8						
CMAR				LR	LR	11 17 30.3	
	comp=Z,82nm,21.3s,baz=186,slow=31						
KAPI	**Kappang**	**54.32**	**87**	LR	LR	11 23 11.6	
	comp=Z,124nm,19.9s,baz=92,slow=32						
MAW	**Mawson**	**55.20**	**181**	LR	LR	11 23 19.4	
	comp=Z,56nm,19.5s,baz=198,slow=32						
AAK	**Ala-Archa**	**55.39**	**8**	LR	LR	11 24 10.7	
	comp=Z,66nm,21.5s,baz=270,slow=33						
MKAR	**Makanchi Array**	**60.85**	**13**	P	P	11 04 10.8	-0.8
	0.5nm,0.9s,baz=209,slow=5.8,SNR=3.0						
MKAR				LR	LR	11 29 38.6	
	comp=Z,35nm,19.0s,baz=83,slow=35						
ASAR	**Alice Springs**	**65.76**	**110**	P	P	11 04 44.0	-0.6
	2.8nm,0.9s,baz=273,slow=5.8,SNR=19						
WRA	**Warramunga Arr**	**66.44**	**106**	P	P	11 04 49.0	0.0
	4.6nm,1.1s,baz=272,slow=6.0,SNR=18						
TORD	**Torodi Ar. Bea**	**67.90**	**290**	P	P	11 04 58.4	+0.1
	1.2nm,1.1s,baz=99,slow=4.5,SNR=4.0						
TORD				LR	LR	11 31 27.4	
	comp=Z,56nm,19.8s,baz=160,slow=33						
ZALV	**Zalesovo Beam**	**68.14**	**12**	P	P	11 04 59.0	0.0
	0.6nm,0.4s,baz=212,slow=7.8,SNR=4.4						
ZALV				LR	LR	11 35 44.4	
	comp=Z,43nm,18.5s,baz=197,slow=37						
AKASG	**Malin Array Be**	**70.22**	**337**	P	P	11 05 10.9	-1.1
	0.6nm,0.5s,baz=155,slow=4.7,SNR=4.8						
SONM	**Songino Array**	**70.24**	**28**	P	P	11 05 12.3	-0.1
	1.6nm,1.1s,baz=208,slow=5.9,SNR=7.9						
SONM				LR	LR	11 35 06.1	
	comp=Z,128nm,19.0s,baz=83,slow=35						
KSRS	**Korea Array**	**76.84**	**47**	LR	LR	11 36 31.6	
	comp=Z,74nm,21.8s,baz=330,slow=33						
VNDA	**Vanda**	**79.44**	**167**	LR	LR	11 36 35.5	
	comp=Z,73nm,18.8s,baz=59,slow=32						
MJAR	**Matsushiro Arr**	**84.03**	**51**	P	P	11 06 32.0	+2.0
	1.3nm,0.8s,baz=238,slow=6.3,SNR=4.2						
YKA	**Yellowknife Ar**	**129.96**	**360**	PKP	PKPdf	11 13 07.2	-1.4
	0.2nm,0.6s,baz=346,slow=2.0,SNR=6.0						
PDAR	**Pinedale Array**	**149.38**	**352**	PKP	PKPdf	11 13 43.8	-0.8
	0.3nm,0.7s,baz=44,slow=4.0,SNR=3.1						
PDAR				PKPbc	PKPbc	11 13 49.0	+0.1
	1.7nm,0.9s,baz=47,slow=1.8,SNR=9.7						
NVAR	**Mina Array Bea**	**153.86**	**6**	PKP	PKPdf	11 13 54.3	+2.9
	0.1nm,0.5s,baz=345,slow=6.5,SNR=2.8						
NVAR				PKPbc	PKiKP	11 14 00.0	+0.6
	1.0nm,0.8s,baz=304,slow=1.1,SNR=10						
TXAR	**Lajitas Array**	**160.21**	**330**	PKPab	PKPab	11 14 39.4	-0.2
	0.4nm,0.8s,baz=32,slow=5.4,SNR=5.2						

*ROM **20** 10:54:27.9±0.1, 46°45N×13°37E, h6km±1km, Md2.4/7, Ml2.2/7, Error ellipse: s-maj=1.6km s-min=1.0km az=129.0*
*LJU **20** 10:54:27.7, 46°47N×13°40E, h18km, ML1.7*
*CSEM **20** 10:54:28.4±0.1, 46°46N×13°40E, h5km, ML2.6/12, Error ellipse: s-maj=1.8km s-min=1.5km az=8.0*
*VIE **20** 10:54:28.2±0.1, 46°46N×13°41E, h10km±1km, mb1.9/6, ML2.3/8, Error ellipse: s-maj=1.1km s-min=0.9km az=32.0*
10 km SE of Pontebba

ISC 20 10:54:28.8±0.9, 46°45N±0°01×13°40E±0°01, h3km±7km, n67, σ0s83/116, 15C-18D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTCC	**Patocco-Chiusa**	**0.05**	**216**	Pg	**Pg**	**10 54 29.6**	**-0.3**
PTCC				Sg	**Sg**	**10 54 30.5**	**-0.2**
	2μm,0.2s						
PTCC	**Patocco-Chiusa**	**0.05**	**216**	Pg	**Pg**	**10 54 29.6**	**-0.3**
PTCC				Sg	**Sg**	**10 54 30.5**	**-0.2**
	2μm,0.2s						
LSR	**Lussari**	**0.09**	**72**	⇑*i*Pg	**Pg**	**10 54 30.7**	**0.0**
LSR				*i* Sg	**Sg**	**10 54 32.8**	**+0.8**
LSR	**Lussari**	**0.09**	**72**	⇑*i*Pg	**Pg**	**10 54 30.7**	**0.0**
LSR				*i* Sg	**Sg**	**10 54 32.8**	**+0.8**
ACOM	**Acomizza, Ital**	**0.13**	**38**	⇓*i*Pg	**Pg**	**10 54 31.3**	**0.0**
ACOM				*i* Sg	**Sg**	**10 54 33.7**	**+0.6**
ACOM	**Acomizza, Ital**	**0.13**	**38**	Pg	**Pg**	**10 54 31.3**	**0.0**
ACOM				Sg	**Sg**	**10 54 33.8**	**+0.6**
	1um,0.8s						
ACOM	**Acomizza, Ital**	**0.13**	**38**	Pg	**Pg**	**10 54 31.3**	**0.0**
ACOM				*i* Sg	**Sg**	**10 54 33.7**	**+0.6**
PLRO	**Paularo**	**0.20**	**301**	⇓*e*Pg	**Pg**	**10 54 32.4**	**-0.3**
PLRO				*e*Sg	**Sg**	**10 54 35.5**	**+0.2**
PLRO	**Paularo**	**0.20**	**301**	⇓*e*Pg	**Pg**	**10 54 32.4**	**-0.3**
PLRO				*e*Sg	**Sg**	**10 54 35.5**	**+0.2**
VINO	**Villanova**	**0.21**	**203**	⇓*i*Pg	**Pg**	**10 54 32.6**	**-0.2**
VINO				*i* Sg	**Sg**	**10 54 36.2**	**+0.7**
VINO	**Villanova**	**0.21**	**203**	Pg	**Pg**	**10 54 32.6**	**-0.2**
VINO				Sg	**Sg**	**10 54 36.4**	**+0.9**
	452nm,0.4s						
VINO	**Villanova**	**0.21**	**203**	Pg	**Pg**	**10 54 32.6**	**-0.2**
VINO				*i* Sg	**Sg**	**10 54 36.2**	**+0.7**
ROBS	**Robic**	**0.22**	**159**	⇓*i*Pg	**Pg**	**10 54 32.7**	**-0.2**
ROBS				*i* Sg	**Sg**	**10 54 36.6**	**+0.8**
ROBS							
	comp=Z,106nm,0.2s						
ROBS	**Robic**	**0.22**	**159**	Pg	**Pg**	**10 54 32.7**	**-0.2**
ROBS				*i* Sg	**Sg**	**10 54 36.6**	**+0.8**
	comp=Z,106nm,0.2s						
BAD	**Bernadia**	**0.24**	**207**	⇓*e*Pg	**Pg**	**10 54 33.0**	**-0.3**
BAD				*e*Sg	**Sg**	**10 54 36.5**	**+0.1**
BAD	**Bernadia**	**0.24**	**207**	⇓*e*Pg	**Pg**	**10 54 33.0**	**-0.3**
BAD				*e*Sg	**Sg**	**10 54 36.5**	**+0.1**
BOO	**Bordano**	**0.24**	**238**	⇓*i*Pg	**Pg**	**10 54 33.1**	**-0.3**
BOO	**Bordano**	**0.24**	**238**	⇓*i*Pg	**Pg**	**10 54 33.1**	**-0.3**
MYKA	**Terra Mystica**	**0.25**	**43**	⇓*i*Pg	**Pg**	**10 54 33.5**	**0.0**
MYKA				⇑*i*Sg	**Sg**	**10 54 37.2**	**+0.4**
	comp=Z,239nm,0.3s						
MYKA	**Terra Mystica**	**0.25**	**43**	Pg	**Pg**	**10 54 33.5**	**0.0**
MYKA				Sg	**Sg**	**10 54 37.2**	**+0.4**
	comp=Z,239nm,0.3s						
GEPF	**Gemona**	**0.25**	**226**	Pg	**Pg**	**10 54 33.2**	**-0.3**
GEPF				Sg	**Sg**	**10 54 37.4**	**+0.6**
	comp=Z,322nm,0.6s						
FUSE	**Fusea**	**0.28**	**263**	⇑*e*Pg	**Pg**	**10 54 34.0**	**-0.1**
FUSE				*e*Sg	**Sg**	**10 54 38.4**	**+0.7**
FUSE	**Fusea**	**0.28**	**263**	⇑*e*Pg	**Pg**	**10 54 34.0**	**-0.1**
FUSE				*e*Sg	**Sg**	**10 54 39.4**	**+1.7**
ZOU	**Zoufplan**	**0.31**	**291**	⇑*e*Pg	**Pg**	**10 54 34.5**	**-0.3**
ZOU				*e*Sg	**Sg**	**10 54 39.4**	**+0.5**
COLI	**Coloredo**	**0.31**	**182**	⇑*e*Pg	**Pg**	**10 54 34.7**	**-0.1**
COLI				*e*Sg	**Sg**	**10 54 40.0**	**+1.1**
COLI	**Coloredo**	**0.31**	**182**	⇑*e*Pg	**Pg**	**10 54 34.7**	**-0.1**
COLI				*e*Sg	**Sg**	**10 54 40.0**	**+1.1**
DRE	**Drenchia**	**0.32**	**148**	⇑*e*Pg	**Pg**	**10 54 34.6**	**-0.4**
DRE				*e*Sg	**Sg**	**10 54 39.8**	**+0.6**
DRE	**Drenchia**	**0.32**	**148**	⇑*e*Pg	**Pg**	**10 54 34.6**	**-0.4**
DRE				*e*Sg	**Sg**	**10 54 39.8**	**+0.6**
MPRI	**Monte Prat**	**0.35**	**234**	⇓*e*Pg	**Pg**	**10 54 35.0**	**-0.5**
MPRI				*e*Sg	**Sg**	**10 54 40.8**	**+0.7**
MPRI	**Monte Prat**	**0.35**	**234**	⇓*e*Pg	**Pg**	**10 54 35.0**	**-0.5**
MPRI				*e*Sg	**Sg**	**10 54 40.8**	**+0.7**
GORS	**Gorjuse**	**0.43**	**107**	*i* Pg	**Pg**	**10 54 36.9**	**-0.2**
GORS				*i* Sg	**Sg**	**10 54 44.1**	**+1.4**
GORS							
	comp=Z,54nm,0.2s						
GORS	**Gorjuse**	**0.43**	**107**	*i* Pg	**Pg**	**10 54 36.9**	**-0.2**
GORS				*i* Sg	**Sg**	**10 54 44.1**	**+1.4**
	comp=Z,54nm,0.2s						
FVI	**Forni Avoltri**	**0.45**	**290**	Pg	**Pg**	**10 54 37.1**	**-0.3**
	comp=Z,69nm,0.2s						
FVI	**Forni Avoltri**	**0.45**	**290**	Pg	**Pg**	**10 54 37.1**	**-0.3**
	comp=Z,69nm,0.2s						

SABO	**M.te Sabotino**	**0.49**	**163**	⇑*e*Pg	**Pg**	**10 54 38.2**	**+0.1**
SABO				*e*Sg	**Sg**	**10 54 46.0**	**+1.6**
SABO	**M.te Sabotino**	**0.49**	**163**	Pg	**Pg**	**10 54 38.2**	**+0.1**
SABO				Sg	**Sb**	**10 54 46.5**	**-1.1**
	comp=Z,423nm,0.5s						
SABO	**M.te Sabotino**	**0.49**	**163**	Pg	**Pg**	**10 54 38.2**	**+0.1**
SABO				*e*Sg	**Sg**	**10 54 46.0**	**+1.6**
VOJS	**Vojsko**	**0.54**	**141**	*i* Pg	**Pg**	**10 54 38.5**	**-0.5**
VOJS				*i* Sg	**Sg**	**10 54 47.5**	**+1.5**
VOJS							
	comp=Z,49nm,0.4s						
VOJS	**Vojsko**	**0.54**	**141**	*i* Pg	**Pg**	**10 54 38.5**	**-0.5**
VOJS				*i* Sg	**Sg**	**10 54 47.5**	**+1.5**
	comp=Z,49nm,0.4s						
KBA	**Koelnbreinsper**	**0.63**	**357**	⇓*e*Pg	**Pg**	**10 54 40.3**	**-0.6**
	SNR=7.8						
KBA				⇑*i*Sg	**Sg**	**10 54 49.5**	**+0.4**
	comp=Z,12nm,0.2s						
KBA	**Koelnbreinsper**	**0.63**	**357**	Pg	**Pg**	**10 54 40.3**	**-0.6**
	SNR=7.8						
KBA				Sg	**Sg**	**10 54 49.5**	**+0.4**
	comp=Z,12nm,0.2s						
ABTA	**Abfaltersbach**	**0.68**	**296**	⇓*i*Pg	**Pg**	**10 54 41.1**	**-0.7**
ABTA				⇑*i*Sg	**Sg**	**10 54 51.2**	**+0.6**
ABTA	**Abfaltersbach**	**0.68**	**296**	Pg	**Pg**	**10 54 41.1**	**-0.7**
ABTA				Sg	**Sg**	**10 54 51.2**	**+0.6**
CRNS	**Crni Vrh**	**0.70**	**121**	*i* Pg	**Pg**	**10 54 42.1**	**-0.1**
CRNS				*i* Sg	**Sb**	**10 54 53.2**	**-0.5**
CRNS							
	comp=Z,15nm,0.2s						
JAVS	**Javornik**	**0.72**	**140**	*i* Pg	**Pg**	**10 54 41.8**	**-0.8**
JAVS				*i* Sg	**Sb**	**10 54 53.3**	**-1.1**
JAVS							
	comp=Z,29nm,0.4s						
JAVS	**Javornik**	**0.72**	**140**	*i* Pg	**Pg**	**10 54 41.8**	**-0.8**
JAVS				*i* Sg	**Sb**	**10 54 53.3**	**-1.1**
	comp=Z,29nm,0.4s						
OBKA	**Obir**	**0.80**	**85**	⇓*e*Pg	**Pg**	**10 54 43.5**	**-0.5**
	SNR=7.1						
OBKA				⇓*i*Sg	**Sg**	**10 54 54.2**	**-0.2**
	comp=Z,45nm,0.3s						
OBKA	**Obir**	**0.80**	**85**	Pg	**Pg**	**10 54 43.5**	**-0.5**
	SNR=7.1						
OBKA				Sg	**Sg**	**10 54 54.2**	**-0.2**
	comp=Z,45nm,0.3s						
VARN	**Col Varnada, M**	**1.01**	**244**	*e*Pg	**Pb**	**10 54 48.9**	**0.0**
VARN	**Col Varnada, M**	**1.01**	**244**	*e*Pg	**Pb**	**10 54 48.9**	**0.0**
RISI	**Rein**	**1.04**	**299**	Pg	**Pg**	**10 54 47.6**	**-1.0**
RISI				Sg	**Sg**	**10 55 01.8**	**-0.3**
	comp=Z,71nm,0.6s						
RISI	**Rein**	**1.04**	**299**	Pg	**Pg**	**10 54 47.6**	**-1.0**
RISI				Sg	**Sg**	**10 55 01.8**	**-0.3**
	comp=Z,71nm,0.6s						
SOKA	**Soboth**	**1.15**	**78**	⇑*i*Pg	**Pg**	**10 54 50.2**	**-0.6**
SOKA				⇓*i*Sg	**Sg**	**10 55 05.5**	**-0.3**
	comp=Z,8.6nm,0.2s						
SOKA	**Soboth**	**1.15**	**78**	Pg	**Pg**	**10 54 50.2**	**-0.6**
SOKA				Sg	**Sg**	**10 55 05.5**	**-0.3**
	comp=Z,8.6nm,0.2s						
CGRP	**Cima Grappa**	**1.25**	**244**	*e*Pg	**Pn**	**10 54 53.5**	**+0.2**
CGRP	**Cima Grappa**	**1.25**	**244**	*e*Pg	**Pn**	**10 54 53.5**	**+0.2**
KOSI	**Kohlern**	**1.40**	**271**	*e*Pg	**Pg**	**10 54 56.3**	**+0.8**
FETA	**Feichten**	**1.92**	**288**	⇓*e*Pg	**Pb**	**10 55 05.2**	**+0.6**
	SNR=11						
FETA				⇑*i*Sg	**Sg**	**10 55 32.1**	**+1.6**
	comp=Z,6.1nm,0.4s						
FETA	**Feichten**	**1.92**	**288**	Pg	**Pb**	**10 55 05.2**	**+0.6**
	SNR=11						
FETA				Sg	**Sg**	**10 55 32.1**	**+1.6**
	comp=Z,6.1nm,0.4s						
BRG	**Berggiesshubel**	**4.44**	**4**	SG	**Sg**	**10 56 55.9**	**+4.5**
	comp=Z,3.6nm,0.7s						
BCI	**Bajram Curri**	**6.28**	**128**	*e*PG	**Pn**	**10 56 02.3**	**0.0**
BCI				*i* SG	Pb	10 56 15.0	-3.7
PUK	**Puka**	**6.41**	**131**	*e*PG	Pb	10 56 24.4	+3.4
PUK				*i* SG	**Sb**	**10 57 37.3**	**-0.8**
TIR	**Tirane**	**6.91**	**135**	*e*PG	**Pn**	**10 56 12.8**	**+1.9**
TIR				*i* SG	Sn	10 57 14.9	-15
PHP	**Peshkopia**	**6.96**	**131**	*e*PG	Pn	10 56 20.0	+8.4
PHP				*i* SG	**Sn**	**10 57 30.7**	**-0.5**
SKO	**Skopje**	**7.31**	**125**	*e*Pg	**Pb**	**10 56 34.7**	**-1.5**
SKO				*e*Sg	Pg	10 56 53.6	+5.0
SKO				*e*Lg	Lg	10 56 53.8	
	comp=N,24nm,0.4s						
SKO				*e*Lg	Lg	10 56 55.4	
	comp=E,28nm,0.7s						
BIA	**Bitola**	**7.89**	**131**	*e*Pg	Pn	10 56 29.8	+5.3
BIA				*e*Sg	**Pb**	**10 56 44.9**	**-1.3**
VAY	**Valandovo**	**8.37**	**124**	*e*Pn	Pb	10 56 45.3	-9.0
VAY				*e*Sg	Sn	10 57 14.6	-51
VAY				*e*Lg	Lg	10 57 15.7	
	comp=E,15nm,1.3s						
VAY				*e*Lg	Lg	10 57 16.0	
	comp=N,14nm,0.8s						

IDC 20 10:59:14.8±2.2, 0°73S×133°27E, h0km, mb3.6/3, mb1 3.7/5, mb1mx3.5/22, mbtmp3.5/5, ML3.2/2, Error ellipse: s-maj=81.7km s-min=27.1km az=75.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.82**	**203**	P	P	11 03 36.2	0.0
	0.0nm,0.3s,baz=12,slow=9.3,SNR=3.7						
WRA	**Warramunga Arr**	**19.12**	**177**	P	P	11 03 39.9	+0.3
	0.1nm,0.3s,baz=355,slow=11,SNR=12						
ASAR	**Alice Springs**	**22.81**	**179**	P	P	11 04 20.1	+0.7
	0.7nm,0.3s,baz=358,slow=11,SNR=31						
STKA	**Stephens Creek**	**31.96**	**167**	P	P	11 05 41.4	-1.2
	1.8nm,0.8s,baz=333,slow=9.0,SNR=3.2						
MKAR	**Makanchi Array**	**64.95**	**324**	P	P	11 09 56.5	+0.1
	0.1nm,0.5s,baz=138,slow=9.4,SNR=2.7						

IDC 20 11:10:49.8±2.4, 3°91N×126°57E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/23, mbtmp3.3/3, MS3.6/1, Ms1 3.6/1, ms1mx2.5/20, Error ellipse: s-maj=210.4km s-min=25.5km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.90**	**182**	LR	LR	11 24 38.6	
	comp=Z,136nm,18.3s,baz=344,slow=38						
WRA	**Warramunga Arr**	**24.91**	**162**	P	P	11 16 15.6	+0.9
	0.9nm,0.7s,baz=342,slow=10,SNR=9.1						
ASAR	**Alice Springs**	**28.33**	**166**	P	P	11 16 44.6	-1.0
	0.2nm,0.7s,baz=349,slow=8.9,SNR=3.6						
MKAR	**Makanchi Array**	**57.32**	**325**	P	P	11 20 39.6	0.0
	0.2nm,0.6s,baz=116,slow=7.0,SNR=2.9						

IDC 20 11:12:01.6±1.4, 27°53N×100°80E, h0km, mb3.2/5, mb1 3.4/5, mb1mx3.2/27, mbtmp3.2/5, Error ellipse: s-maj=112.7km s-min=22.6km az=59.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**24.12**	**328**	P	P	11 17 19.6	+0.5
	0.4nm,0.5s,baz=137,slow=11,SNR=6.0						
KURBB	**Kurchatov Arra**	**28.61**	**330**	P	P	11 17 58.9	-0.5
	0.1nm,0.3s,baz=147,slow=9.4,SNR=3.3						
WRA	**Warramunga Arr**	**57.29**	**142**	P	P	11 21 51.4	0.0
	0.3nm,0.7s,baz=330,slow=7.7,SNR=5.7						
ASAR	**Alice Springs**	**60.10**	**145**	P	P	11 22 10.8	-0.1
	0.1nm,0.7s,baz=328,slow=7.0,SNR=4.4						
YKA	**Yellowknife Ar**	**85.92**	**16**	P	P	11 24 43.1	-0.1
	0.2nm,0.7s,baz=322,slow=5.8,SNR=5.6						

*CSEM **20** 11:14:49.4, 42°25N×13°51E, h7km, MD2.0/4, After ROM*
ROM 20 11:14:49.4±0.2, 42°25N×13°51E, h7km±2km, Md2.0/4, Ml1.7/1, Error ellipse: s-maj=1.2km s-min=1.1km az=130.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.06**	**77**	Pg	Pg	11 14 51.5	+0.3
FAGN				Sg	Sg	11 14 52.8	+0.3
FAGN	**Fagnano**	**0.06**	**77**	Pg	Pg	11 14 51.5	+0.3
FAGN				Sg	Sg	11 14 52.8	+0.3
AQU	**L'Aquila**	**0.13**	**323**	Pg	Pg	11 14 52.5	+0.3
AQU				Sg	Sg	11 14 54.8	+0.6
AQU	**L'Aquila**	**0.13**	**323**	Pg	Pg	11 14 52.5	+0.3
AQU				Sg	Sg	11 14 54.8	+0.6
PTQR	**Pietraquaria**	**0.24**	**199**	Pg	Pg	11 14 55.2	+0.8
PTQR				Sg	Sg	11 14 58.9	+1.2
PTQR	**Pietraquaria**	**0.24**	**199**	Pg	Pg	11 14 55.2	+0.8
PTQR				Sg	Sg	11 14 58.9	+1.2
VCEL	**Villa Celiera**	**0.29**	**60**	Pg	Pb	11 14 56.2	-0.9
VCEL				Sg	Sg	11 15 00.4	+1.2
VCEL	**Villa Celiera**	**0.29**	**60**	Pg	Pb	11 14 56.2	-0.9
VCEL				Sg	Sg	11 15 00.4	+1.2

*CSEM **20** 11:15:41.0, 42°41N×13°42E, h9km, MD2.2/8, After ROM*
ROM 20 11:15:41.0±0.1, 42°41N×13°42E, h9km±1km, Md2.2/8, Ml1.8/4, Error ellipse: s-maj=1.4km s-min=0.9km az=96.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**192**	Pg	Pg	11 15 43.0	0.0
AQU				Sg	Sg	11 15 44.7	+0.3
	2μm,0.8s						
AQU	**L'Aquila**	**0.06**	**192**	Pg	Pg	11 15 43.0	0.0
AQU				Sg	Sg	11 15 44.7	+0.3
	2μm,0.8s						
CAMP	**Campotosto**	**0.13**	**357**	Pg	Pg	11 15 44.4	+0.3
CAMP				Sg	Sg	11 15 47.0	+0.8
	189nm,0.8s						
CAMP	**Campotosto**	**0.13**	**357**	Pg	Pg	11 15 44.4	+0.3
CAMP				Sg	Sg	11 15 47.0	+0.8
	189nm,0.8s						
FAGN	**Fagnano**	**0.19**	**139**	Pg	Pg	11 15 45.7	+0.7
FAGN				Sg	Sg	11 15 49.5	+1.7
	402nm,0.6s						
FAGN	**Fagnano**	**0.19**	**139**	Pg	Pg	11 15 45.7	+0.7
FAGN				Sg	Sg	11 15 49.5	+1.7
	402nm,0.6s						
TERO	**Teramo**	**0.25**	**33**	Pg	Pg	11 15 46.6	+0.4
TERO				Sg	Sb	11 15 51.2	-1.3
	118nm,0.4s						
TERO	**Teramo**	**0.25**	**33**	Pg	Pg	11 15 46.6	+0.4
TERO				Sg	Sb	11 15 51.2	-1.3
	118nm,0.4s						
FIAM	**Fiamignano**	**0.26**	**238**	Pg	Pb	11 15 47.6	-0.5
FIAM				Sg	Sb	11 15 51.6	-1.3
FIAM	**Fiamignano**	**0.26**	**238**	Pg	Pb	11 15 47.6	-0.5
FIAM				Sg	Sb	11 15 51.6	-1.3
VCEL	**Villa Celiera**	**0.31**	**93**	Pg	Pg	11 15 47.7	+0.3
VCEL				Sg	Sb	11 15 53.7	-0.6
	289nm,1.2s						
VCEL	**Villa Celiera**	**0.31**	**93**	Pg	Pg	11 15 47.7	+0.3
VCEL				Sg	Sb	11 15 53.7	-0.6
	289nm,1.2s						
PTQR	**Pietraquaria**	**0.39**	**182**	Pg	Pg	11 15 49.1	+0.3
	7.0nm,0.3s						
PTQR	**Pietraquaria**	**0.39**	**182**	Pg	Pg	11 15 49.1	+0.3
	7.0nm,0.3s						
NRCA	**Norcia**	**0.48**	**332**	Pg	Pg	11 15 50.7	+0.2
NRCA				Sg	Sb	11 15 58.6	-0.4
	7.0nm,0.3s						
NRCA	**Norcia**	**0.48**	**332**	Pg	Pg	11 15 50.7	+0.2
NRCA				Sg	Sb	11 15 58.6	-0.4
	7.0nm,0.3s						
INTR	**Introdacqua**	**0.54**	**138**	Pg	Pg	11 15 51.9	+0.3
INTR	**Introdacqua**	**0.54**	**138**	Pg	Pg	11 15 51.9	+0.3

IDC 20 11:17:19.5±1.2, 3°27N×126°92E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.6/25, mbtmp3.6/7, MS3.4/1, Ms1 3.4/1, ms1mx2.7/34, Error ellipse: s-maj=95.3km s-min=16.4km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.27**	**183**	P	P	11 22 08.5	+0.9
	0.5nm,0.4s,baz=14,slow=10,SNR=5.4						
WRA	**Warramunga Arr**	**24.19**	**163**	P	P	11 22 37.7	-0.1
	1.5nm,0.8s,baz=339,slow=10,SNR=18						
ASAR	**Alice Springs**	**27.62**	**166**	P	P	11 23 09.2	+0.2
	0.3nm,0.5s,baz=349,slow=7.3,SNR=9.4						
CTA	**Charters Tower**	**29.98**	**141**	LR	LR	11 36 28.8	
	comp=Z,69nm,18.3s,baz=146,slow=38						
STKA	**Stephens Creek**	**37.63**	**159**	P	P	11 24 35.8	-0.5
	1.2nm,0.7s,baz=329,slow=12,SNR=3.9						
SONM	**Songino Array**	**47.80**	**341**	P	P	11 25 58.3	-0.5
	0.2nm,0.3s,baz=157,slow=7.8,SNR=3.2						
MKAR	**Makanchi Array**	**58.04**	**325**	P	P	11 27 14.7	+0.2
	0.4nm,0.4s,baz=125,slow=6.7,SNR=6.7						
KURBB	**Kurchatov Arra**	**62.23**	**327**	P	P	11 27 42.9	-0.2
	0.4nm,0.6s,baz=125,slow=6.4,SNR=8.8						

*ISCJB **20** 11:32:08.7±1.0, 0°.5S±0°.1×132°.9E±0°.3, h10km, mb3.9/4, MS4.5/1, Error ellipse: s-maj=44.8km s-min=15.3km az=178.8*
*I

OPRZ	**Ohinepanea**	**1.97 218**	PN	**Pn**	**11 55 20.3**	**-0.2**			
OPRZ	**Ohinepanea**	**1.97 218**	Pn	**Pn**	**11 55 20.3**	**-0.2**			
TGRZ	**Tauranga**	**2.04 225**	PN	**Pn**	**11 55 21.2**	**-0.1**			
TGRZ	**Tauranga**	**2.04 225**	Pn	**Pn**	**11 55 21.2**	**-0.1**			
MWZ	**Matawai**	**2.08 192**	PN	**Pn**	**11 55 21.3**	**-0.4**			
MWZ			SN	**S**	**11 55 55.0**	**+0.8**			
MWZ	**Matawai**	**2.08 192**	Pn	**Pn**	**11 55 21.4**	**-0.3**			
EDRZ	**Edgecumbe**	**2.10 210**	PN	**Pn**	**11 55 22.2**	**+0.3**			
EDRZ	**Edgecumbe**	**2.10 210**	Pn	**Pn**	**11 55 22.3**	**+0.3**			
URZ	**Urewera**	**2.10 201**	P	**Pn**	**11 55 21.4**	**-0.4**			
URZ			S	**S**	**11 55 56.7**	**+2.2**			
URZ	**Urewera**	**2.10 201**	P	**Pn**	**11 55 21.4**	**-0.4**			
	150nm,0.3s,baz=4.5,slow=2.4,SNR=836								
URZ			S	**S**	**11 55 56.7**	**+2.2**			
	315nm,0.3s,baz=321,slow=3.4,SNR=6.8								
CNGZ	**Carnagh Statio**	**2.19 177**	PN	**Pn**	**11 55 22.5**	**-0.2**			
CNGZ	**Carnagh Statio**	**2.19 177**	Pn	**Pn**	**11 55 22.7**	**0.0**			
TARZ	**Mount Tarawera**	**2.31 212**	Pn	**Pn**	**11 55 26.1**	**+2.1**			
RRRZ	**Republican Roa**	**2.39 211**	PN	**Pn**	**11 55 25.5**	**+0.7**			
RRRZ	**Republican Roa**	**2.39 211**	Pn	**Pn**	**11 55 25.8**	**+1.0**			
TOZ	**Tahuroa Road**	**2.51 234**	PN	**Pn**	**11 55 26.7**	**+0.8**			
TOZ	**Tahuroa Road**	**2.51 234**	Pn	**Pn**	**11 55 26.5**	**+0.5**			
HRRZ	**Handcock Road**	**2.53 214**	PN	**Pn**	**11 55 27.6**	**+1.3**			
HRRZ	**Handcock Road**	**2.53 214**	Pn	**Pn**	**11 55 27.4**	**+1.1**			
PRRZ	**Plateau Road**	**2.57 211**	PN	**Pn**	**11 55 27.3**	**+0.6**			
PRRZ	**Plateau Road**	**2.57 211**	Pn	**Pn**	**11 55 27.6**	**+0.9**			
PRGZ	**Paritu Road**	**2.63 183**	PN	**Pn**	**11 55 26.8**	**-0.4**			
PRGZ	**Paritu Road**	**2.63 183**	Pn	**Pn**	**11 55 27.1**	**-0.1**			
ALRZ	**Allen Road**	**2.65 211**	PN	**Pn**	**11 55 28.3**	**+0.8**			
ALRZ	**Allen Road**	**2.65 211**	Pn	**Pn**	**11 55 28.3**	**+0.8**			
KNZ	**Kokohu**	**2.74 187**	PN	**Pn**	**11 55 28.1**	**-0.2**			
KNZ	**Kokohu**	**2.74 187**	Pn	**Pn**	**11 55 28.1**	**-0.2**			
MHGZ	**Mahia Peninsul**	**2.85 183**	PN	**Pn**	**11 55 29.8**	**0.0**			
MHGZ	**Mahia Peninsul**	**2.85 183**	Pn	**Pn**	**11 55 29.8**	**0.0**			
NMHZ	**Naumai**	**2.97 199**	PN	**Pn**	**11 55 31.8**	**+0.8**			
NMHZ	**Naumai**	**2.97 199**	Pn	**Pn**	**11 55 31.9**	**+0.8**			
BKZ	**Black Stump Fm**	**3.13 203**	SN	**S**	**11 56 16.7**	**+2.4**			
BKZ	**Black Stump Fm**	**3.13 203**	Pn	**Pn**	**11 55 32.9**	**0.0**			
RITZ	**Rihia Road**	**3.20 213**	PN	**Pn**	**11 55 34.8**	**+1.1**			
RITZ	**Rihia Road**	**3.20 213**	Pn	**Pn**	**11 55 34.8**	**+1.1**			
MCHZ	**McNeill Hill**	**3.33 199**	PN	**Pn**	**11 55 35.4**	**+0.4**			
MCHZ	**McNeill Hill**	**3.33 199**	Pn	**Pn**	**11 55 35.5**	**+0.5**			
HIZ	**Hauiti**	**3.39 228**	PN	**Pn**	**11 55 38.0**	**+2.3**			
HIZ	**Hauiti**	**3.39 228**	Pn	**Pn**	**11 55 38.0**	**+2.3**			
OTVZ	**Oturere**	**3.44 213**	PN	**Pn**	**11 55 37.2**	**+0.7**			
OTVZ	**Oturere**	**3.44 213**	Pn	**Pn**	**11 55 37.3**	**+0.7**			
CKHZ	**Cape Kidnapper**	**3.45 193**	PN	**Pn**	**11 55 36.5**	**+0.1**			
CKHZ	**Cape Kidnapper**	**3.45 193**	Pn	**Pn**	**11 55 36.9**	**+0.4**			
TUVZ	**Tukino**	**3.53 212**	PN	**Pn**	**11 55 38.1**	**+0.5**			
TUVZ	**Tukino**	**3.53 212**	Pn	**Pn**	**11 55 38.1**	**+0.5**			
BHHZ	**Black Hill Sta**	**3.56 206**	Pn	**Pn**	**11 55 37.7**	**-0.1**			
FWVZ	**Far West T-bar**	**3.57 213**	PN	**Pn**	**11 55 38.7**	**+0.7**			
FWVZ	**Far West T-bar**	**3.57 213**	Pn	**Pn**	**11 55 38.8**	**+0.7**			
DRZ	**Dome Shelter**	**3.58 213**	PN	**Pn**	**11 55 38.8**	**+0.5**			
DRZ	**Dome Shelter**	**3.58 213**	Pn	**Pn**	**11 55 38.8**	**+0.5**			
TRVZ	**Turoa**	**3.60 213**	PN	**Pn**	**11 55 39.4**	**+0.9**			
TRVZ	**Turoa**	**3.60 213**	Pn	**Pn**	**11 55 39.3**	**+0.7**			
WNVZ	**Wahianoa**	**3.61 212**	PN	**Pn**	**11 55 38.7**	**+0.3**			
WNVZ	**Wahianoa**	**3.61 212**	Pn	**Pn**	**11 55 38.7**	**+0.3**			
MOVZ	**Moawhango**	**3.61 210**	⇓PN	**Pn**	**11 55 38.1**	**-0.3**			
MOVZ	**Moawhango**	**3.61 210**	Pn	**Pn**	**11 55 38.1**	**-0.3**			
KAHZ	**Kahuranaki**	**3.62 195**	PN	**Pn**	**11 55 38.7**	**+0.2**			
KAHZ	**Kahuranaki**	**3.62 195**	Pn	**Pn**	**11 55 38.8**	**+0.2**			
OUZ	**Omahuta**	**3.80 285**	*e*Pn	**Pn**	11 55 36.8	-3.9			
PXZ	**Pawanui**	**3.85 194**	⇓PN	**Pn**	**11 55 40.7**	**-0.4**			
PXZ			SN	**S**	**11 56 30.8**	**+1.5**			
PXZ	**Pawanui**	**3.85 194**	Pn	**Pn**	**11 55 40.8**	**-0.4**			
PXZ			Sn	**S**	**11 56 31.2**	**+1.9**			
PNHZ	**Pukenui**	**3.90 202**	PN	**Pn**	**11 55 41.1**	**-0.8**			
PNHZ	**Pukenui**	**3.90 202**	Pn	**Pn**	**11 55 41.3**	**-0.6**			
WPHZ	**Waipukurau**	**3.98 198**	PN	**Pn**	**11 55 42.4**	**-0.3**			
WPHZ	**Waipukurau**	**3.98 198**	Pn	**Pn**	**11 55 42.4**	**-0.3**			
TSZ	**Takapari Road**	**4.11 203**	PN	**Pn**	**11 55 43.5**	**-0.9**			
TSZ	**Takapari Road**	**4.11 203**	Pn	**Pn**	**11 55 43.5**	**-0.9**			
PRHZ	**Porangahau**	**4.12 196**	PN	**Pn**	**11 55 44.3**	**-0.2**			
PRHZ	**Porangahau**	**4.12 196**	Pn	**Pn**	**11 55 44.3**	**-0.2**			
WAZ	**Wanganui**	**4.23 214**	PN	**Pn**	**11 55 46.4**	**+0.6**			
WAZ	**Wanganui**	**4.23 214**	Pn	**Pn**	**11 55 46.3**	**+0.6**			
DVHZ	**Dannevirke**	**4.27 200**	PN	**Pn**	**11 55 45.5**	**-0.7**			
DVHZ	**Dannevirke**	**4.27 200**	Pn	**Pn**	**11 55 45.5**	**-0.7**			
POWZ	**Post Office Ro**	**4.47 203**	PN	**Pn**	**11 55 48.3**	**-0.4**			
POWZ	**Post Office Ro**	**4.47 203**	Pn	**Pn**	**11 55 48.1**	**-0.6**			
BFZ	**Birch Farm**	**4.61 198**	PN	**Pn**	**11 55 49.8**	**-0.6**			
BFZ	**Birch Farm**	**4.61 198**	Pn	**Pn**	**11 55 49.6**	**-0.8**			
MRZ	**Mangatainoka R**	**4.78 203**	PN	**Pn**	**11 55 50.1**	**-2.4**			
MRZ	**Mangatainoka R**	**4.78 203**	Pn	**Pn**	**11 55 50.8**	**-1.6**			
TIWZ	**Tintock**	**4.79 200**	PN	**Pn**	**11 55 52.1**	**-0.6**			
TIWZ	**Tintock**	**4.79 200**	Pn	**Pn**	**11 55 52.1**	**-0.6**			
HOWZ	**Holdsworth Sta**	**5.01 203**	PN	**Pn**	**11 55 54.0**	**-1.4**			
HOWZ	**Holdsworth Sta**	**5.01 203**	Pn	**Pn**	**11 55 54.1**	**-1.4**			
OGWZ	**Otaki Gorge**	**5.05 206**	PN	**Pn**	**11 55 54.9**	**-1.0**			
OGWZ	**Otaki Gorge**	**5.05 206**	Pn	**Pn**	**11 55 54.9**	**-1.0**			
TMWZ	**Te Maipa**	**5.10 199**	PN	**Pn**	**11 55 55.6**	**-0.9**			
TMWZ	**Te Maipa**	**5.10 199**	Pn	**Pn**	**11 55 55.6**	**-0.9**			
KIW	**Kapiti Island**	**5.19 208**	PN	**Pn**	**11 55 56.4**	**-1.2**			
KIW	**Kapiti Island**	**5.19 208**	Pn	**Pn**	**11 55 56.5**	**-1.2**			
MTW	**Mount Morrison**	**5.25 202**	PN	**Pn**	**11 55 56.8**	**-1.6**			
MTW	**Mount Morrison**	**5.25 202**	Pn	**Pn**	**11 55 57.1**	**-1.4**			
CAW	**Cannon Point**	**5.35 205**	PN	**Pn**	**11 55 58.0**	**-1.4**			
CAW	**Cannon Point**	**5.35 205**	Pn	**Pn**	**11 55 58.2**	**-1.4**			
TRWZ	**Traveller**	**5.42 199**	PN	**Pn**	**11 55 59.5**	**-1.0**			
TRWZ	**Traveller**	**5.42 199**	Pn	**Pn**	**11 55 59.5**	**-1.0**			
PAWZ	**Paruwai Farm**	**5.48 201**	PN	**Pn**	**11 55 59.9**	**-1.4**			
PAWZ			SN	**S**	**11 57 06.3**	**+0.6**			
PAWZ	**Paruwai Farm**	**5.48 201**	Pn	**Pn**	**11 55 59.9**	**-1.4**			
PAWZ			Sn	**S**	**11 57 06.3**	**+0.6**			
DUWZ	**D'Urville Isla**	**5.55 215**	PN	**Pn**	**11 56 00.7**	**-1.4**			
DUWZ	**D'Urville Isla**	**5.55 215**	Pn	**Pn**	**11 56 00.7**	**-1.4**			
MSWZ	**Moikau Station**	**5.57 202**	PN	**Pn**	**11 56 00.4**	**-1.9**			
MSWZ	**Moikau Station**	**5.57 202**	Pn	**Pn**	**11 56 00.8**	**-1.5**			
SNZO	**South Karori**	**5.66 207**	PN	**Pn**	**11 56 01.6**	**-1.8**			
SNZO	**South Karori**	**5.66 207**	Pn	**Pn**	**11 56 01.9**	**-1.5**			
BHW	**Baring Head**	**5.68 205**	PN	**Pn**	**11 56 02.4**	**-1.4**			
BHW	**Baring Head**	**5.68 205**	Pn	**Pn**	**11 56 02.3**	**-1.4**			
PLWZ	**Palliser**	**5.71 202**	PN	**Pn**	**11 56 02.5**	**-1.6**			
PLWZ	**Palliser**	**5.71 202**	Pn	**Pn**	**11 56 02.5**	**-1.6**			
TCW	**Tory Channel**	**5.74 210**	PN	**Pn**	**11 56 02.7**	**-1.7**			
TCW	**Tory Channel**	**5.74 210**	Pn	**Pn**	**11 56 02.8**	**-1.7**			
TUWZ	**Tuamarina**	**6.05 211**	PN	**Pn**	**11 56 06.7**	**-1.8**			
TUWZ	**Tuamarina**	**6.05 211**	Pn	**Pn**	**11 56 06.7**	**-1.8**			
NNZ	**Nelson**	**6.13 215**	PN	**Pn**	**11 56 07.7**	**-1.7**			
NNZ	**Nelson**	**6.13 215**	Pn	**Pn**	**11 56 07.8**	**-1.7**			
QRZ	**Quartz Range**	**6.27 222**	PN	**Pn**	**11 56 09.2**	**-2.0**			
QRZ	**Quartz Range**	**6.27 222**	Pn	**Pn**	**11 56 09.2**	**-2.0**			
BSWZ	**Blackbirch Sta**	**6.32 210**	PN	**Pn**	**11 56 10.4**	**-1.5**			
BSWZ	**Blackbirch Sta**	**6.32 210**	Pn	**Pn**	**11 56 10.4**	**-1.5**			
THZ	**Tophouse**	**6.78 215**	PN	**Pn**	**11 56 16.1**	**-1.7**			
THZ	**Tophouse**	**6.78 215**	Pn	**Pn**	**11 56 16.1**	**-1.7**			
KHZ	**Kahutara**	**7.05 209**	PN	**Pn**	**11 56 19.6**	**-1.5**			
KHZ	**Kahutara**	**7.05 209**	*e*Pn	**Pn**	**11 56 19.6**	**-1.5**			
LTZ	**Lake Taylor**	**7.88 213**	PN	**Pn**	**11 56 29.5**	**-2.3**			
LTZ	**Lake Taylor**	**7.88 213**	Pn	**Pn**	**11 56 29.2**	**-2.6**			
CRLZ	**Canterbury Las**	**8.39 208**	PN	**Pn**	**11 56 36.0**	**-2.3**			
CRLZ	**Canterbury Las**	**8.39 208**	Pn	**Pn**	**11 56 36.4**	**-1.8**			
WVZ	**Waitaha Valley**	**8.82 218**	PN	**Pn**	**11 56 42.8**	**-0.9**			
WVZ	**Waitaha Valley**	**8.82 218**	Pn	**Pn**	**11 56 42.7**	**-1.1**			
RPZ	**Rata Peaks**	**9.16 214**	PN	**Pn**	**11 56 45.8**	**-2.3**			
RPZ	**Rata Peaks**	**9.16 214**	P	**Pn**	**11 56 46.4**	**-1.7**			
RPZ			S	**S**	**11 58 27.4**	**-3.8**			
RPZ	**Rata Peaks**	**9.16 214**	P	**Pn**	**11 56 46.4**	**-1.7**			
	2.0nm,0.3s,baz=349,slow=19,SNR=14								
RPZ			S	**S**	**11 58 27.4**	**-3.8**			
	8.5nm,0.3s,baz=27,slow=18,SNR=13								
FOZ	**Fox Glacier**	**9.70 219**	Pn	**Pn**	**11 56 52.1**	**-2.9**			
ODZ	**Otahua Downs**	**10.40 211**	PN	**Pn**	**11 57 02.9**	**-1.0**			
ODZ	**Otahua Downs**	**10.40 211**	Pn	**Pn**	**11 57 03.0**	**-0.9**			
JCZ	**Jackson Bay**	**10.54 220**	PN	**Pn**	**11 57 04.5**	**-1.3**			
JCZ	**Jackson Bay**	**10.54 220**	Pn	**Pn**	**11 57 04.5**	**-1.3**			
WKZ	**Wanaka**	**10.95 216**	PN	**Pn**	**11 57 09.2**	**-1.8**			
MSVF	**Nonsavu**	**18.49 360**	*e*Pn	P	11 58 29.2	-10			
	13nm,0.7s								
RMQ	**Roma**	**26.78 283**	P	**P**	**12 00 01.1**	**+1.9**			
	baz=35,SNR=5.1								
QLP	**Quilpie**	**30.32 279**	P	**P**	**12 00 31.5**	**+1.0**			
	baz=38,SNR=8.6								
STKA	**Stephens Creek**	**30.42 268**	P	**P**	**12 00 32.0**	**+0.7**			
STKA	**Stephens Creek**	**30.42 268**	P	**P**	**12 00 32.0**	**+0.7**			
	4.4nm,0.8s,baz=87,slow=10,SNR=10								
STKA	**Stephens Creek**	**30.42 268**	P	**P**	**12 00 33.6**	**+2.3**			
	baz=38,SNR=7.8								

CTA	**Charters Tower**	**32.18 291**	P	**P**	**12 00 45.4**	**-1.4**			
CTA	**Charters Tower**	**32.18 291**	P	**P**	**12 00 45.4**	**-1.4**			
	14nm,0.8s,baz=122,slow=9.4,SNR=27								
CTAO	**Charters Tower**	**32.18 291**	*e*P	**P**	**12 00 44.2**	**-2.6**			
	15nm,0.8s								
QIS	**Mount Isa**	**37.02 284**	P	**P**	**12 01 28.0**	**-0.2**			
	baz=45,SNR=6.0								
COEN	**Coen**	**38.33 296**	P	**P**	**12 01 38.7**	**-0.5**			
	baz=46,SNR=6.4								
AS31	**Alice Springs**	**39.96 276**	*e*P	**P**	**12 01 51.4**	**-1.2**			
ASAR	**Alice Springs**	**39.96 276**	P	**P**	**12 01 52.6**	**0.0**			
ASAR	**Alice Springs**	**39.96 276**	P	**P**	**12 01 52.6**	**0.0**			
	10nm,0.9s,baz=118,slow=7.6,SNR=108								
WRAB	**Tennant Creek**	**41.50 281**	*e*P	**P**	**12 02 03.4**	**-1.8**			
	13nm,0.7s								
WRA	**Warramunga Arr**	**41.50 281**	P	**P**	**12 02 04.5**	**-0.7**			
WRA	**Warramunga Arr**	**41.50 281**	P	**P**	**12 02 04.5**	**-0.7**			
	12nm,0.7s,baz=120,slow=7.7,SNR=114								
FITZ	**Fitzroy Crossi**	**49.43 277**	P	**P**	**12 03 07.0**	**-0.2**			
FITZ	**Fitzroy Crossi**	**49.43 277**	P	**P**	**12 03 07.0**	**-0.2**			
	1.1nm,0.3s,baz=148,slow=10,SNR=5.1								
QSPA	**South Pole Qui**	**53.83 180**	P	P	12 03 44.8	+5.6			
QSPA	**South Pole Qui**	**53.83 180**	P	P	12 03 44.8	+5.6			
	11nm,0.7s,baz=32,slow=2.3,SNR=83								
SNAA	**Sanae**	**72.33 180**	*e*P	**P**	**12 05 43.4**	**+3.0**			
VNA3	**Neumayer Olymp**	**72.62 177**	*e*P	P	12 05 45.5	+3.4			
PLCA	**Paso Flores**	**80.83 134**	P	**P**	**12 06 29.6**	**+1.0**			
PLCA	**Paso Flores**	**80.83 134**	P	**P**	**12 06 29.6**	**+1.0**			
	3.5nm,0.9s,baz=218,slow=4.1,SNR=6.6								
NVAR	**Mina Array Bea**	**94.76 45**	P	P	12 07 32.0	-3.7			
NVAR	**Mina Array Bea**	**94.76 45**	P	P	12 07 32.0	-3.7			
	1.4nm,0.8s,baz=221,slow=8.4,SNR=15								
FINES	**FINESS Array B**	**149.28 334**	PKPbc	**PKPdf**	**12 13 57.1**	**+0.9**			
FINES	**FINESS Array B**	**149.28 334**	PKPbc	**PKPdf**	**12 13 57.1**	**+0.9**			
	5.6nm,0.7s,baz=60,slow=3.4,SNR=5.2								
DBIC	**Dimbokro**	**150.39 174**	PKPbc	**PKPbc**	**12 14 05.0**	**0.0**			
DBIC	**Dimbokro**	**150.39 174**	PKPbc	**PKPbc**	**12 14 05.0**	**0.0**			
	7.6nm,0.7s,baz=178,slow=3.4,SNR=13								
BRTR	**Keskin Array B**	**151.89 288**	PKPbc	**PKPbc**	**12 14 05.7**	**-2.2**			
BRTR	**Keskin Array B**	**151.89 288**	PKPbc	**PKPbc**	**12 14 05.7**	**-2.2**			
	1.9nm,0.9s,baz=134,slow=3.6,SNR=9.4								
TORD	**Torodi Ar. Bea**	**156.72 189**	PKP	**PKPdf**	**12 14 08.0**	**-0.4**			
TORD			PKPab	**PKPab**	**12 14 40.1**	**+1.3**			
TORD	**Torodi Ar. Bea**	**156.72 189**	PKP	**PKPdf**	**12 14 08.0**	**-0.4**			
	0.9nm,0.9s,baz=87,slow=0.5,SNR=4.4								
TORD			PKPab	**PKPab**	**12 14 40.1**	**+1.3**			
	4.8nm,0.8s,baz=168,slow=3.3,SNR=19								

IDC 20 11:59:14.0±2.2, 6.76S×129.80E, h0km, mb3.6/1, mb1 3.9/4, mb1mx3.6/20, mbtmp3.7/4, ML3.9/3, Error ellipse: s-maj=86.5km s-min=28.5km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.98**	**199**	Pn	Pn	12 02 05.7	-0.4
	0.3nm,0.3s,baz=26,slow=13,SNR=18						
FITZ				Sn	Sn	12 04 05.4	-15
	1.3nm,0.3s,baz=104,slow=12,SNR=8.8						
WRA	**Warramunga Arr**	**13.82**	**162**	Pn	Pn	12 02 31.5	+0.1
	0.8nm,0.3s,baz=345,slow=13,SNR=15						
WRA				Sn	Sn	12 04 53.9	-12
	1.3nm,0.3s,baz=340,slow=19,SNR=12						
ASAR	**Alice Springs**	**17.26**	**167**	P	Pn	12 03 17.0	+0.3
	0.4nm,0.3s,baz=344,slow=9.9,SNR=13						
ASAR				S	Sn	12 06 14.5	-15
	0.2nm,0.3s,baz=355,slow=27,SNR=6.2						
MKAR	**Makanchi Array**	**67.92**	**327**	P	P	12 10 14.6	0.0
	0.3nm,0.5s,baz=122,slow=7.9,SNR=5.2						

NIED ***20*** *12:02:00,46.10N×151.80E,h38km,Mw4.6 Best double couple: M0 9.27000×1015 NP1:ϕ,δ,λ 18.00000°,58.00000°,72.00000°. NP2:ϕ,δ,λ 230.00000°,36.00000°,116.00000°.*

BJI ***20*** *12:02:22.9,46.22N×151.98E,h46km,mB4.9/26,mb4.8/43,Ms4.5/23,Ms7 4.3/23*

MOS ***20*** *12:02:24.8±0.8,46.09N×151.44E,h38km,mb5.2/62,Error ellipse: s-maj=7.1km s-min=4.3km az=91.1*

ISCJB ***20*** *12:02:25.9±0.4,46.08N±0.03×151.46E±0.02,h47km±4km, mb4.8/188,MS4.0/14,Error ellipse: s-maj=5.3km s-min=2.4km az=166.1*

JMA ***20*** *12:02:25.5±0.6,46.07N×151.81E,h30km,M5.1*

IDC ***20*** *12:02:26.9±0.5,46.12N×151.45E,h42km±4km,mb4.3/37, mb1 4.5/43,mb1mx4.4/46,mbtmp4.3/43,ML3.7/6,MS3.7/12, Ms1 3.7/12,ms1mx3.5/46,Error ellipse: s-maj=11.8km s-min=8.1km az=145.0*

SKHL ***20*** *12:02:26.7±0.5,46.09N×151.85E,h53km±17km, mb5.6/1, Ms3.9/2*

NEIC ***20*** *12:02:27.6±0.5,46.12N×151.39E,h47km±4km,mb4.9/103, Error ellipse: s-maj=4.6km s-min=2.4km az=161.0*

BGS ***20*** *12:02:29.2±1.8,46.78N×151.45E,h33km,mb4.8*

SZGRF ***20*** *12:02:36.0,47.92N×151.38E,h33km,mb4.9,MS4.2,Kuril Islands, Russia*

ISC 20 12:02:26.6±0.4, 46.07N±0.05×151.52E±0.04, h44km±3km, h43km: pP-P, n941, σ0 86/888, mb4.8/188, MS4.0/14, 264C-187D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.69**	**253**	*e*PN	Pn	12 03 09.5	+2.1
KUR				*e*S	Sn	12 03 42.5	+3.8
KUR				pmax	pmax		
	comp=Z,2μm,0.9s						
KUR				smax	smax		
	comp=N,12μm,2.0s						
KUR				smax	smax		
	comp=E,8μm,1.6s						
KUR				smax	smax		
	comp=E,1μm,0.9s						
KUR	**Kuril'sk**	**2.69**	**253**	*e*P	Pn	12 03 09.5	+2.1
KUR				AMB	AMB	12 03 11.0	
	comp=E,2μm,0.9s						
KUR				*e*S	Sn	12 03 42.0	+3.3
KUR				A	A	12 03 48.0	
	comp=E,12μm,1.8s						
KUR				A	A	12 03 48.0	
	comp=E,8μm,1.8s						
KUR				A	A	12 03 58.0	
	comp=E,3μm,0.8s						
KUR				A	A	12 03 58.0	
	comp=E,1μm,0.8s						
YUK	**Yuzh-Kuril'sk**	**4.50**	**245**	*i* PN	Pn	12 03 35.4	+3.3
YUK				*i* S	Sn	12 04 26.6	+3.5
YUK				pmax	pmax		
	comp=E,124nm,0.3s						
YUK				pmax	pmax		
	comp=Z,280nm,0.3s						
YUK				pmax	pmax		
	comp=N,76nm,0.1s						
YUK				smax	smax		
	comp=E,821nm,0.7s						
YUK				smax	smax		
	comp=N,292nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.50**	**245**	⇓*i* P	Pn	12 03 35.5	+3.3
YUK				AMB	AMB	12 03 41.2	
	comp=N,80nm,0.3s						
YUK				AMB	AMB	12 03 41.2	
	comp=N,120nm,0.3s						
YUK				AMB	AMB	12 03 41.2	
	comp=N,280nm,0.3s						
YUK				*i* S	Sn	12 04 26.7	+3.6
YUK				A	A	12 04 47.2	
	comp=N,290nm,0.7s						
YUK				A	A	12 04 47.2	
	comp=N,820nm,0.7s						
NEM2	**Nemuro 2**	**4.92**	**239**	P	Pn	12 03 39.1	+1.1
NEM2				*e*S	**Sn**	**12 04 33.2**	**-0.5**
JRA	**Rausu**	**5.01**	**247**	P	Pn	12 03 43.0	+3.8
JRA				*e*S	Sn	12 04 41.4	+5.6
JNK	**Nakash**	**5.44**	**245**	P	Pn	12 03 47.9	+2.9
JNK				*e*S	Sn	12 04 49.3	+3.0
SKR	**Severo-Kuril's**	**5.54**	**32**	*e*PN	**Pn**	**12 03 44.2**	**-2.2**
SKR				pmax	pmax		
	comp=Z,100nm,0.4s						
SKR				pmax	pmax		
	comp=N,60nm,0.3s						
SKR				pmax	pmax		
	comp=E,60nm,0.3s						
SKR	**Severo-Kuril's**	**5.54**	**32**	*e*P	**Pn**	**12 03 44.2**	**-2.2**
SKR				AMB	AMB	12 03 46.0	
	comp=E,100nm,0.4s						
SKR				AMB	AMB	12 03 46.0	
	comp=E,60nm,0.3s						
SKR				*e*S	**Sn**	**12 04 43.5**	**-5.2**
SKR				A	A	12 04 55.5	
	comp=E,320nm,0.5s						
SKR				A	A	12 04 55.5	
	comp=E,110nm,0.5s						
SKR				A	A	12 04 55.5	
	comp=E,80nm,0.5s						
JAK	**Akkeshi**	**5.76**	**240**	P	Pn	12 03 50.5	+1.0
JTKR	**Abashiri--Toko**	**5.79**	**251**	P	Pn	12 03 53.7	+3.9
YSS	**Yuzh-Sakhalins**	**6.11**	**281**	⇓*e*PN	Pn	12 03 59.0	+4.7
YSS				*e*S	**Sn**	**12 05 04.0**	**+1.2**
YSS				pmax	pmax		
	comp=Z,110nm,0.9s						
YSS				smax	smax		
	comp=E,80nm,0.9s						
YSS				MLR	MLR		
	comp=Z,600nm,16.0s						
YSS				MLR	MLR		
	comp=E,500nm,15.0s						
YSS	**Yuzh-Sakhalins**	**6.11**	**281**	⇓*e*P	Pn	12 03 59.0	+4.7
YSS				AMB	AMB	12 04 03.0	
	comp=E,110nm,0.9s						
YSS				*e*S	**Sn**	**12 05 04.0**	**+1.2**
YSS				A	A	12 05 06.0	
	comp=E,80nm,0.9s						
YSS				*e*LQ	LQ	12 05 30.0	
YSS				AMS	AMS	12 06 18.0	
	comp=E,500nm,15.0s						
YSS				AMS	AMS	12 06 18.0	
	comp=E,600nm,16.0s						
JMP	**Maruseppu**	**6.14**	**253**	P	Pn	12 03 59.1	+4.4
JAR	**Ashorobuto**	**6.18**	**246**	P	Pn	12 03 58.4	+3.1
JAR				*e*S	**Sn**	**12 05 05.6**	**+1.0**
JOB	**Onbets**	**6.34**	**243**	P	Pn	12 03 59.4	+1.9
JOB				*e*S	**Sn**	**12 05 08.7**	**+0.2**
JKK2	**Kamakawa 2**	**6.60**	**254**	P	Pn	12 04 05.3	+4.3
ASAJ	**Asahikawa**	**6.61**	**256**	P	**Pn**	**12 04 01.0**	**-0.1**
ASAJ	**Asahikawa**	**6.61**	**256**	P	Pn	12 04 06.0	+4.9
ASAJ	**Asahikawa**	**6.61**	**256**	P	**Pn**	**12 04 01.0**	**-0.1**
	comp=E,0.2nm,0.3s,baz=145,slow=16,SNR=2.8						
ASAJ				LR	LR	12 06 39.4	
	comp=E,793nm,21.9s,baz=95,slow=38						
JWK2	**Keihoku**	**6.78**	**267**	P	Pn	12 04 10.3	+6.9
JCH	**Churui**	**6.79**	**242**	P	Pn	12 04 04.6

CN2	**Changchun**	**18.57**	**272**	*e*P		**Pn**	**12 06 41.4 +1.1**
CN2				*ep*P		**pP**	**12 06 51.0 +0.9**
CN2				*es*P		sP	12 06 57.3 +1.7
CN2				*e*S		**S**	**12 10 11.1 +2.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,500nm,22.0s						
CN2				LR	LR		
	comp=E,400nm,22.0s						
CN2				LR	LR		
	comp=Z,600nm,15.0s						
KSRS	**Korea Array**	**19.54**	**252**	P		**Pn**	**12 06 51.8 -0.1**
	comp=Z,1.0nm,0.3s,baz=57,slow=11,SNR=31						
KSRS				LR	LR		12 13 25.6
	comp=Z,186nm,21.7s,baz=335,slow=34						
KSAR	**Wonju Array Be**	**19.57**	**252**	P		**Pn**	**12 06 51.8 -0.5**
CLNS	**Chul'man**	**19.64**	**313**	*e*P		**Pn**	**12 06 54.2 +1.1**
CLNS				*e*			12 10 27.2
CLNS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.8s						
CLNS				smax	smax		
	comp=N,75nm,13.3s						
CLNS				smax	smax		
	comp=E,74nm,14.6s						
CLNS				MLR	MLR		
	comp=Z,252nm,18.0s						
CLNS				MLR	MLR		
	comp=E,173nm,13.0s						
CLNS				MLR	MLR		
	comp=N,156nm,16.0s						
YAK	**Yakutsk**	**20.32**	**330**	*e*P		Pn	12 07 03.6 +2.7
YAK				*e**PP		pP	12 07 20.6 +11
YAK				*eS*		Sn	12 10 49.2 +0.6
YAK				*e*			12 11 11.8
YAK				*e**SS		sS	12 11 19.1 +18
YAK				pmax	pmax		
	comp=E,37nm,0.9s						
YAK				pmax	pmax		
	comp=N,38nm,0.9s						
YAK				pmax	pmax		
	comp=Z,116nm,0.8s						
YAK				smax	smax		
	comp=N,108nm,4.9s						
YAK				smax	smax		
	comp=E,117nm,5.7s						
JNU	**Nakatsue**	**20.42**	**238**	P		**P**	**12 07 00.9 +0.8**
JNU	**Nakatsue**	**20.42**	**238**	P		**P**	**12 07 00.9 +0.8**
	comp=E,19nm,0.9s,baz=236,slow=3.6,SNR=2.6						
JNU				LR	LR		12 15 15.1
	comp=E,110nm,21.9s,baz=159,slow=38						
BILL	**Bilibino**	**23.31**	**14**	*i* P		**P**	**12 07 31.4 +1.1**
BILL				*e*			12 07 57.3
BILL				*e*			12 11 12.6
BILL				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BILL	**Bilibino**	**23.31**	**14**	*e*P		**P**	**12 07 30.5 +0.2**
	comp=Z,4.2nm,0.7s						
BJI	**Beijing**	**26.36**	**270**	P		P	12 08 01.1 +2.6
BJI				S		**S**	**12 12 24.8 -3.8**
BJI				pmax	pmax		
	comp=Z,15nm,0.6s						
BJI				LR	LR		
	comp=N,210nm,18.3s						
BJI				LR	LR		
	comp=E,330nm,24.0s						
BJI				LR	LR		
	comp=Z,180nm,21.5s						
GAMB	**Gambell**	**27.02**	**36**	*e*P		**P**	**12 08 01.4 -2.7**
	comp=Z,6.0nm,0.9s						
TIXI	**Tiksi**	**27.82**	**345**	*i* P		**P**	**12 08 10.1 -1.1**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NJ2	**Nanjing**	**28.74**	**252**	*e*P		P	12 08 22.0 +2.2
NJ2				pmax	pmax		
	comp=Z,40nm,1.2s						
HHC	**Hu-ho-hao-te**	**29.24**	**274**	*e*P		**P**	**12 08 24.8 +0.5**
HHC				sP		sP	12 08 42.8 +1.6
HHC				PP		**PnPn**	**12 09 19.4 +0.8**
HHC				PcP		**PcP**	**12 11 32.1 +1.7**
HHC				S		**S**	**12 13 11.0 -3.1**
HHC				ScP		**ScP**	**12 15 08.9 +0.5**
HHC				PcS		**PcS**	**12 15 13.8 +0.4**
HHC				ScS		**ScS**	**12 19 01.5 -1.2**
HHC				pmax	pmax		
	comp=Z,31nm,0.5s						
HHC				pmax	pmax		
	comp=Z,200nm,4.9s						
HHC				LR	LR		
	comp=N,460nm,11.1s						
HHC				LR	LR		
	comp=E,520nm,11.2s						
HHC				LR	LR		
	comp=Z,430nm,12.6s						
ULN	**Ulaanbaatar**	**30.08**	**290**	*e*P		**P**	**12 08 30.8 -1.0**
	comp=Z,27nm,2.3s						
SONM	**Songino Array**	**30.52**	**290**	P		P	12 08 36.5 +0.9
SONM				PcP		**PcP**	**12 11 34.1 +0.4**
SONM	**Songino Array**	**30.52**	**290**	P		P	12 08 36.5 +0.9
	comp=Z,1.1nm,0.6s,baz=73,slow=7.7,SNR=6.6						
SONM				PcP		**PcP**	**12 11 34.1 +0.4**
	comp=Z,1.7nm,0.8s,baz=135,slow=1.6,SNR=6.6						
SONM				LR	LR		12 22 05.2
	comp=Z,185nm,18.4s,baz=83,slow=39						
ZAK	**Zakamensk**	**31.97**	**296**	*e*P		**P**	**12 08 47.5 -0.8**
ZAK				*e*			12 09 57.7
ZAK				*e*			12 11 37.5
CHGN	**Chignik**	**32.32**	**53**	*e*P		**P**	**12 08 52.1 +0.9**
CHGN				*ep*P		**pP**	**12 09 04.5 +1.7**
WHN	**Wuhan**	**32.69**	**255**	P		P	12 08 55.8 +1.1
WHN				pmax	pmax		
	comp=Z,66nm,0.8s						
TPUB	**Ta-pu**	**33.73**	**238**	*e*P		P	12 09 05.1 +1.2
	comp=Z,38nm,1.0s						
XAN	**Xi'an**	**34.35**	**265**	P		**P**	**12 09 09.8 +0.6**
XAN				pP		**pP**	**12 09 19.3 -1.7**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,21nm,3.7s						
KDAK	**Kodiak Island**	**35.38**	**50**	P		**P**	**12 09 17.4 -0.3**
KDAK	**Kodiak Island**	**35.38**	**50**	P		**P**	**12 09 17.4 -0.3**
	comp=Z,6.2nm,0.7s,baz=293,slow=4.4,SNR=6.2						
PPLA	**Purkeypile**	**35.40**	**41**	*e*P		P	12 09 19.7 +1.6
	comp=Z,28nm,1.6s						
SPU	**Mount Spurr**	**35.46**	**44**	*e*P		**P**	**12 09 19.3 +0.9**
COLD	**Coldfoot**	**36.51**	**34**	*e*P		**P**	**12 09 27.9 +0.6**
	comp=Z,8.8nm,1.0s						
LZH	**Lanzhou**	**36.80**	**272**	*e*P		P	12 09 32.4 +2.1
LZH				pP		pP	12 09 45.1 +2.9
LZH				sP		sP	12 09 50.0 +2.7
LZH				pmax	pmax		
	comp=Z,37nm,1.0s						
LZH				pmax	pmax		
	comp=Z,140nm,4.0s						
PMR	**Palmer**	**36.85**	**43**	*e*P		**P**	**12 09 30.9 +0.7**
PMR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PMR	**Palmer**	**36.85**	**43**	*e*P		**P**	**12 09 30.9 +0.7**
	comp=Z,4.4nm,0.7s						
MCK	**McKinley**	**36.88**	**40**	*e*P		**P**	**12 09 31.0 +0.5**
MCK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MCK	**McKinley**	**36.88**	**40**	*e*P		**P**	**12 09 31.0 +0.5**
	comp=Z,9.2nm,1.0s						
SML	**Sawmill**	**37.22**	**43**	*e*P		**P**	**12 09 34.2 +0.8**
SML				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SML	**Sawmill**	**37.22**	**43**	*e*P		**P**	**12 09 34.2 +0.8**
	comp=Z,5.1nm,0.7s						
COLA	**College**	**37.35**	**38**	*e*P		**P**	**12 09 35.5 +1.1**
COLA				pmax	pmax		
	comp=Z,21nm,0.9s						
COLA	**College**	**37.35**	**38**	*e*P		**P**	**12 09 35.5 +1.1**
	comp=Z,21nm,0.9s						
ILAR	**Eielson Array**	**37.76**	**38**	P		**P**	**12 09 37.7 -0.3**
ILAR				PcP		**PcP**	**12 11 52.7 -1.2**
ILAR	**Eielson Array**	**37.76**	**38**	P		**P**	**12 09 37.7 -0.3**
	comp=Z,4.5nm,0.9s,baz=258,slow=6.5,SNR=47						
ILAR				PcP		**PcP**	**12 11 52.7 -1.2**
	comp=Z,0.9nm,0.8s,baz=279,slow=3.7,SNR=4.1						
GTA	**Gaotai**	**37.98**	**279**	*e*P		P	12 09 42.3 +2.0
GTA				pP		pP	12 09 54.4 +2.3
GTA				sP		sP	12 09 59.9 +2.6
GTA				PP		PnPn	12 11 13.6 +4.5
GTA				PcP		**PcP**	**12 11 56.9 +1.7**
GTA				S		**S**	**12 15 32.4 +3.1**
GTA				sS		sS	12 15 52.6 +3.5
GTA				SS		**SnSn**	**12 18 12.3 -1.6**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,120nm,5.0s						
GTA				LR	LR		
	comp=N,140nm,14.3s						
GTA				LR	LR		
	comp=E,80nm,14.7s						
GTA				LR	LR		
	comp=Z,120nm,15.9s						
PAX	**Paxson**	**38.47**	**41**	*e*P		**P**	**12 09 45.2 +1.2**
PAX				pmax	pmax		
	comp=Z,58nm,2.9s						
PAX	**Paxson**	**38.47**	**41**	*e*P		**P**	**12 09 45.2 +1.2**
	comp=Z,58nm,2.9s						
CD2	**Chengdu**	**39.72**	**265**	P		P	12 09 55.9 +1.1
CD2				pP		pP	12 10 08.4 +1.7
CD2				sP		sP	12 10 14.0 +2.2
CD2				PP		**PnPn**	**12 11 31.8 +1.9**
CD2				ScP		**ScP**	**12 15 46.8 +1.1**
CD2				PcS		**PcS**	**12 15 52.1 +1.2**
CD2				S		**S**	**12 15 54.9 -0.6**
CD2				sS		sS	12 16 16.0 +0.7
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
CD2				pmax	pmax		
	comp=Z,230nm,5.6s						
EGAK	**Eagle**	**40.21**	**38**	*e*P		**P**	**12 09 58.3 -0.1**
	comp=Z,13nm,0.8s						
GYA	**Guiyang**	**40.49**	**257**	*e*P		P	12 10 02.1 +0.8
GYA				pP		pP	12 10 15.8 +2.6
GYA				sP		sP	12 10 21.3 +3.0
GYA				PP		**PnPn**	**12 11 39.8 +0.7**
GYA				ScP		**ScP**	**12 15 49.5 +0.6**
GYA				S		**S**	**12 16 07.3 +0.2**
GYA				sS		sS	12 16 26.8 -0.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,80nm,4.9s						
GYA				LR	LR		
	comp=N,480nm,16.4s						
GYA				LR	LR		
	comp=E,360nm,17.0s						
GYA				LR	LR		
	comp=Z,460nm,17.8s						
ZALV	**Zalesovo Beam**	**42.11**	**306**	P		**P**	**12 10 12.9 -1.2**
ZALV							12 12 08.2
ZALV	**Zalesovo Beam**	**42.11**	**306**	P		**P**	**12 10 12.9 -1.2**
ZALV				PcP		**PcP**	**12 12 08.2 +0.3**
ZALV	**Zalesovo Beam**	**42.11**	**306**	P		**P**	**12 10 12.9 -1.2**
	comp=Z,0.6nm,0.5s,baz=92,slow=8.8,SNR=2.9						
ZALV				PcP		**PcP**	**12 12 08.2 +0.3**
	comp=Z,6.6nm,0.8s,baz=68,slow=3.1,SNR=20						
ZALV				LR	LR		12 28 55.9
	comp=Z,345nm,18.1s,baz=34,slow=38						
INK	**Inuvik**	**42.81**	**32**	P		**P**	**12 10 20.6 +1.1**
INK	**Inuvik**	**42.81**	**32**	P		**P**	**12 10 20.6 +1.1**
	comp=Z,19nm,0.6s,baz=299,slow=7.2,SNR=213						
KMI	**Kunming**	**44.03**	**259**	P		P	12 10 31.1 +0.9
KMI				pmax	pmax		
	comp=Z,11nm,1.6s						
WMQ	**Urumqi**	**44.14**	**291**	P		P	12 10 31.8 +1.1
WMQ				pmax	pmax		
	comp=Z,13nm,1.0s						
MK31	**Makanchi Array**	**46.27**	**297**	*e*P		**P**	**12 10 46.8 -0.7**
MK31	**Makanchi Array**	**46.27**	**297**	*e*P		**P**	**12 10 46.8 -0.7**
MKAR	**Makanchi Array**	**46.27**	**297**	*e*P		**P**	**12 10 47.1 -0.4**
MKAR							12 12 22.8
MKAR	**Makanchi Array**	**46.27**	**297**	*e*P		**P**	**12 10 47.1 -0.4**
MKAR				PcP		**PcP**	**12 12 22.8 +0.4**
MKAR				ScP		**ScP**	**12 16 09.9 -2.0**
MKAR	**Makanchi Array**	**46.27**	**297**	P		**P**	**12 10 46.4 -1.1**
	comp=Z,2.7nm,0.7s,baz=72,slow=7.8,SNR=32						
MKAR				PcP		**PcP**	**12 12 22.8 +0.4**
	comp=Z,4.4nm,0.8s,baz=61,slow=3.1,SNR=9.4						
MKAR				ScP		**ScP**	**12 16 09.9 -2.0**
	comp=Z,0.6nm,0.8s,baz=52,slow=4.9,SNR=3.9						
MKAR				LR	LR		12 31 15.1
	comp=Z,222nm,19.1s,baz=20,slow=37						
KURK	**Kurchatov**	**46.82**	**304**	P		**P**	**12 10 51.3 -0.4**
KURK							12 12 24.6
KURK	**Kurchatov**	**46.82**	**304**	P		**P**	**12 10 51.3 -0.4**
KURK				PcP		**PcP**	**12 12 24.6 +0.4**
DLBC	**Dease Lake**	**46.85**	**45**	*e*P		**P**	**12 10 53.3 +1.3**
DLBC	**Dease Lake**	**46.85**	**45**	P		**P**	**12 10 53.0 +1.0**
	comp=Z,5.4nm,0.8s,baz=289,slow=7.8,SNR=16						
KURBB	**Kurchatov Arra**	**46.91**	**303**	P		**P**	**12 10 51.3 -1.1**
	comp=Z,1.0nm,0.2s,baz=68,slow=8.4,SNR=7.3						
KURBB				PcP		**PcP**	**12 12 24.6 +0.1**
	comp=Z,2.7nm,0.8s,baz=70,slow=3.8,SNR=8.5						
KURBB				LR	LR		12 31 21.2
	comp=Z,82nm,19.0s,baz=105,slow=37						
LSA	**Lhasa**	**49.20**	**273**	P		P	12 11 12.8 +1.8
BBB	**Bella Bella**	**50.40**	**52**	LR		LR	12 32 18.7
	comp=Z,13nm,21.2s,baz=347,slow=36						
BVAR	**Borovoye Array**	**50.43**	**309**	P		**P**	**12 11 18.0 -1.5**
BVAR							12 12 37.6
BVAR	**Borovoye Array**	**50.43**	**309**	P		**P**	**12 11 18.0 -1.5**
BVAR				PcP		**PcP**	**12 12 37.6 +0.4**
BVAR	**Borovoye Array**	**50.43**	**309**	P		**P**	**12 11 18.0 -1.5**
	comp=Z,1.7nm,0.7s,baz=62,slow=10,SNR=7.9						
BVAR				PcP		**PcP**	**12 12 37.6 +0.4**
	comp=Z,3.3nm,0.7s,baz=80,slow=3.6,SNR=9.6						
BRVK	**Borovoye**	**50.47**	**309**	⇑*e*P		**P**	**12 11 19.7 -0.1**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	**Borovoye**	**50.47**	**309**	*e*P		**P**	**12 11 19.1 -0.7**
	comp=Z,3.0nm,0.8s						
CHTO	**Chiang Mai**	**50.88**	**256**	*e*P		**P**	**12 11 23.9 +0.6**
CHTO				*e**PP		pP	12 11 38.6 +3.0
CHTO				pmax	pmax		
	comp=Z,20nm,0.8s						
CHTO	**Chiang Mai**	**50.88**	**256**	*e*P		**P**	**12 11 23.9 +0.6**
	comp=Z,20nm,0.8s						
CHTO				*ep*P		pP	12 11 38.5 +3.0
CMAR	**Chiang Mai Arr**	**51.13**	**255**	P		P	12 11 26.8 +1.6
CMAR	**Chiang Mai Arr**	**51.13**	**255**	P		P	12 11 26.8 +1.6
	comp=Z,8.3nm,0.8s,baz=36,slow=7.5,SNR=51						
RES	**Resolute Bay**	**51.82**	**18**	*e*P		**P**	**12 11 29.2 -0.4**
	comp=Z,5.7nm,0.9s						
RES	**Resolute Bay**	**51.82**	**18**	P		**P**	**12 11 29.5 -0.1**
	comp=Z,5.2nm,0.8s,baz=314,slow=6.1,SNR=15						
YKW3	**Yellowknife Ar**	**52.09**	**36**	*e*P		**P**	**12 11 31.9 +0.3**
	comp=Z,0.2nm,0.9s						
YKA	**Yellowknife Ar**	**52.12**	**36**	P		**P**	**12 11 32.5 +0.6**
YKA				PcP		**PcP**	**12 12 43.8 +0.5**
YKA	**Yellowknife Ar**	**52.12**	**36**	P		**P**	**12 11 32.5 +0.6**
	comp=Z,10nm,0.8s,baz=298,slow=7.0,SNR=134						
YKA				PcP		**PcP**	**12 12 43.7 +0.5**
	comp=Z,1.7nm,0.8s,baz=298,slow=4.5,SNR=6.2						
TAPN	**Taplejung**	**53.03**	**273**	*e*P		P	12 11 40.9 +1.4
	comp=Z,49nm,1.0s						
AAK	**Ala-Archa**	**53.14**	**296**	⇓*e*P		**P**	**12 11 40.7 +0.7**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AAK	**Ala-Archa**	**53.14**	**296**	*e*P		**P**	**12 11 40.3 +0.3**
AAK	**Ala-Archa**	**53.14**	**296**	P		**P**	**12 11 39.9 -0.1**
	comp=Z,3.4nm,0.7s,baz=132,slow=3.3,SNR=11						
ODAN	**Odare**	**53.56**	**272**	*e*P		P	12 11 44.3 +1.0
	comp=Z,20nm,0.8s						
EKS2	**Erkin-Say**	**53.57**	**296**	*e*P		**P**	**12 11 43.0 -0.2**
EKS2	**Erkin-Say**	**53.57**	**296**	*e*P		**P**	**12 11 43.0 -0.2**
KSH	**Kashi**	**53.88**	**292**	P		P	12 11 49.0 +3.5
KSH				pP		pP	12 12 02.0 +4.2
KSH				sP		sP	12 12 07.9 +5.1
KSH				PcP		PcP	12 12 55.1 +4.6
KSH				PP		PP	12 13 52.4 +5.7
KSH				ScP		**ScP**	**12 16 48.0 +3.2**
KSH				PcS		**PcS**	**12 16 52.1 +2.2**
KSH				S		**S**	**12 19 20.1 +2.6**
KSH				sS		sS	12 19 42.6 +4.6
KSH				ScS		**ScS**	**12 21 31.6 +0.5**
KSH				SS		**SS**	**12 23 02.0 +3.5**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KSH				LR	LR		
	comp=E,110nm,4.3s						
KSH				LR	LR		
	comp=Z,210nm,4.8s						
GUN	**Gumba**	**53.95**	**274**	*e*P		P	12 11 47.3 +0.9
	comp=Z,46nm,0.8s						
RAMN	**Ramite**	**54.05**	**273**	*e*P		P	12 11 47.8 +0.8
	comp=Z,74nm,0.7s						
KKN	**Kakani**	**54.45**	**275**	*e*P		P	12 11 50.8 +1.0
	comp=Z,73nm,1.0s						
PKI	**Pulchoki**	**54.49**	**274**	*e*P		P	12 11 51.1 +0.8
PKIN	**Phulchoki**	**54.50**	**274**	*e*P		P	12 11 51.4 +1.2
	comp=Z,22nm,0.7s						
DMN	**Daman**	**54.68**	**275**	*e*P		P	12 11 52.7 +1.2
	comp=Z,75nm,0.9s						
ARU	**Arti**	**54.76**	**317**	*c i*P		**P**	**12 11 51.2 -0.2**
ARU				*PP		**pP**	**12 12 04.3 +0.6**
ARU							12 12 52.9
ARU							12 13 51.0
ARU				S		**S**	**12 19 29.4 +0.9**
ARU				SS		**SS**	**12 23 11.6 +0.3**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DANN	**Dangsing**	**55.15**	**276**	*e*P		P	12 11 56.4 +1.4
	comp=Z,123nm,0.9s						
KKAR	**Karatay Array**	**55.35**	**298**	*e*P		**P**	**12 11 55.3 -0.6**
KKAR	**Karatay Array**	**55.35**	**298**	*e*P		**P**	**12 11 55.3 -0.6**
KOLN	**Koldanda**	**55.62**	**276**	*e*P		P	12 11 59.5 +1.2
	comp=Z,67nm,0.9s						
PYUN	**Piuthan**	**55.84**	**277**	*e*P		P	12 12 00.8 +1.0
	comp=Z,160nm,1.0s						
TDL	**Tradedollar La**	**56.69**	**56**	P		P	12 12 07.2 +1.6
DAG	**Danmarks Havn**	**57.27**	**357**	*i* P		**P**	**12 12 08.2 -0.8**
DAG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DAG	**Danmarks Havn**	**57.27**	**357**	*i* P		**P**	**12 12 08.2 -0.8**
	comp=Z,4.1nm,0.7s						
VLL	**Laurance Lake**	**57.50**	**56**	P		P	12 12 13.2 +1.9
KEV	**Kevo**	**57.61**	**340**	*e*P		**P**	**12 12 10.7 -0.8**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KEV	**Kevo**	**57.61**	**340**	*ep*		**P**	**12 12 10.7 -0.8**
	comp=Z,0.7nm,0.3s						
VFP	**Flag Point**	**57.70**	**56**	P		P	12 12 14.7 +1.9
ABKAR	**Akbulak array**	**58.01**	**309**	*e*P		**P**	**12 12 13.9 -0.7**
ARCES	**ARCESS Array B**	**58.12**	**340**	P		**P**	**12 12 14.8 -0.3**
ARCES				PcP		**PcP**	**12 13 06.9 +0.6**
ARCES	**ARCESS Array B**	**58.12**	**340**	P		**P**	**12 12 14.8 -0.3**
	comp=Z,3.5nm,0.8s,baz=45,slow=7.3,SNR=5.4						
ARCES				PcP		**PcP**	**12 13 06.9 +0.6**
	comp=Z,5.1nm,0.9s,baz=77,slow=5.2,SNR=4.4						
CROR	**Criterion Ridg**	**58.17**	**57**	P		P	12 12 17.6 +1.7
HAWA	**Hanford**	**58.20**	**55**	*e*P		**P**	**12 12 17.4 +1.4**
	comp=Z,7.7nm,1.0s						
AKTO	**Aktyubinsk**	**58.35**	**311**	P		P	12 12 18.4 +1.4
AKTO							12 13 07.4
AKTO	**Aktyubinsk**	**58.35**	**311**	P		P	12 12 18.4 +1.4
AKTO				PcP		**PcP**	**12 13 07.4 -0.1**
AKTO	**Aktyubinsk**	**58.35**	**311**	P		P	12 12 18.4 +1.4
	comp=Z,1.3nm,0.6s,baz=55,slow=5.5,SNR=5.6						
AKTO				PcP		**PcP**	**12 13 07.4 -0.1**
	comp=Z,4.1nm,0.8s,baz=81,slow=3.2,SNR=7.8						
AKTO				LR		LR	12 39 48.0
	comp=Z,295nm,19.2s,baz=232,slow=38						
NEW	**Newport**	**58.46**	**52**	⇑P		**P**	**12 12 18.5 +0.6**
	baz=58,SNR=7.9						
VIPM	**Ingram Point**	**58.66**	**57**	P		P	12 12 21.2 +1.7
VIPM	**Ingram Point**	**58.66**	**57**	P		P	12 12 21.2 +1.7
YBH	**Yreka Blue Hor**	**59.04**	**61**	P		**P**	**12 12 22.8 +0.8**
YBH	**Yreka Blue Hor**	**59.04**	**61**	P		**P**	**12 12 22.8 +0.8**
	comp=Z,3.1nm,0.8s,baz=320,slow=1.8,SNR=8.8						
C11A	**Tepee Creek (N**	**59.18**	**52**	⇑P		**P**	**12 12 23.8 +0.9**
	baz=59						
A13A	**Flathead Natio**	**59.53**	**50**	⇓P		**P**	**12 12 26.1 +0.8**
	baz=59						
C12B	**Naegeli Ranch,**	**59.68**	**51**	⇓P		**P**	**12 12 27.4 +1.1**
	baz=60						
B13A	**Whitefish**	**59.83**	**50**	⇓P		**P**	**12 12 28.4 +1.0**
	baz=60,SNR=16						
BSMT	**Bassoo Peak**	**59.97**	**51**	*e*P		**P**	**12 12 29.6 +1.1**
A14A	**Double T Ranch**	**60.03**	**49**	⇓P		**P**	**12 12 29.7 +0.9**
	baz=60,SNR=6.9						
BLMT	**Blacktail Moun**	**60.11**	**51**	*e*P		**P**	**12 12 30.2 +0.7**
D12A	**Red Ives Fores**	**60.14**	**52**	⇓P		**P**	**12 12 30.5 +0.9**
	baz=60						
JTMT	**Jette**	**60.31**	**51**	*e*P		**P**	**12 12 31.4 +0.6**
BMO	**Blue Mountains**	**60.37**	**55**	*e*P		**P**	**12 12 32.4 +1.2**
BMO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BMO	**Blue Mountains**	**60.37**	**55**	*e*P		**P**	**12 12 32.4 +1.2**
	comp=Z,2.2nm,0.6s						
YBMT	**Yellow Bay**	**60.38**	**51**	*e*P		**P**	**12 12 32.2 +1.0**
	comp=Z,1.5nm,0.6s						
MOD	**Modoc**	**60.38**	**59**	*e*P		**P**	**12 12 32.8 +1.4**
	comp=Z,15nm,0.8s						
A15A	**Johnson Ranch,**	**60.39**	**49**	⇓P		**P**	**12 12 32.1 +0.8**
	baz=60						
B14A	**Marquette Ranc**	**60.48**	**50**	⇑P		**P**	**12 12 32.8 +0.9**
	baz=60						
SWMT	**Swartz Lake**	**60.60**	**51**	*e*P		**P**	**12 12 34.1 +1.3**
D13A	**Huson**	**60.61**	**51**	⇑P		**P**	**12 12 33.6 +0.9**
	baz=60,SNR=8.5						
B15A	**Bradely Ranch,**	**60.88**	**49**	⇓P		**P**	**12 12 35.4 +0.7**
	baz=61,SNR=7.9						
F12A	**Elk City**	**60.98**	**53**	⇓P		**P**	**12 12 36.5 +1.2**
	baz=61,SNR=14						
A16A	**West Butte Ran**	**61.00**	**48**	⇑P		**P**	**12 12 35.8 +0.3**
	baz=61						
SLMT	**Seeley Lake**	**61.04**	**51**	*e*P		**P**	**12 12 36.8 +1.0**
MSO	**Missoula**	**61.05**	**51**	*e*P		**P**	**12 12 36.8 +1.0**
	comp=Z,9.9nm,0.9s						
MSO	**Missoula**	**61.05**	**51**	⇓P		**P**	**12 12 36.7 +1.0**
	baz=61,SNR=15						
WVOR	**Wild Horse Val**	**61.05**	**58**	*e*P		**P**	**12 12 37.1 +1.2**
WVOR				pmax	pmax		
	comp=Z,13nm,1.0s						
WVOR	**Wild Horse Val**	**61.05**	**58**	*e*P		**P**	**12 12 37.1 +1.2**
	comp=Z,13nm,1.0s						
D14A	**Greenough**	**61.13**	**51**	⇑P		**P**	**12 12 37.2 +0.8**
	baz=61,SNR=28						
E13A	**Victor**	**61.15**	**52**	⇓P		**P**	**12 12 37.4 +1.0**
	baz=61,SNR=7.5						
C15A	**Salmond Ranch,**	**61.19**	**50**	⇓P		**P**	**12 12 38.1 +1.4**
	baz=61,SNR=21						
**O

G13A	**Cobalt** baz=62,SNR=19	61.95	53	⇓P		P	12 12 42.7 +0.8
FFC	**Flin Flon**	61.96	39	*e*P		P	12 12 41.7 +0.1
FFC	comp=Z,7.0nm,0.8s			pmax		pmax	
FFC	**Flin Flon** comp=Z,6.5nm,0.8s	61.96	39	*e*P		P	12 12 41.7 +0.1
F14A	**Wisdom** baz=62	61.99	52	⇑P		P	12 12 42.9 +0.7
E15A	**Deer Lodge** baz=62,SNR=14	62.00	51	⇑P		P	12 12 43.1 +0.8
MFID	**Camas Ranch** comp=Z,3.9nm,0.8s	62.09	55	*e*P		P	12 12 43.9 +1.1
MFID				*e*pP		pP	12 12 57.8 +2.4
MFID	**Camas Ranch** baz=62,SNR=5.2	62.09	55	⇑P		P	12 12 43.8 +1.0
D16A	**Dana Ranch, Ca** baz=62,SNR=13	62.21	50	⇑P		P	12 12 44.6 +0.9
I12A	**Atlanta** baz=62,SNR=15	62.25	55	⇑P		P	12 12 45.2 +1.2
C17A	**Wharram Farm,** baz=62,SNR=18	62.26	49	⇑P		P	12 12 44.6 +0.8
HRY	**Holter Researc**	62.26	51	*e*P		P	12 12 44.9 +0.9
H13A	**Challis** baz=62,SNR=14	62.27	54	⇑P		P	12 12 45.1 +1.1
G14A	**Jackson** baz=62	62.29	53	⇓P		P	12 12 44.8 +0.5
B18A	**Beardsley Farm** baz=62,SNR=13	62.29	48	⇓P		P	12 12 45.0 +0.9
WCN	**Washoe City**	62.30	61	*e*P		P	12 12 45.8 +1.4
WCN	comp=Z,8.0nm,1.0s			pmax		pmax	
WCN	**Washoe City** comp=Z,7.9nm,1.0s	62.30	61	*e*P		P	12 12 45.8 +1.4
F15A	**Butte** baz=62,SNR=12	62.45	52	⇑P		P	12 12 46.6 +1.2
E16A	**East Helena** baz=62,SNR=8.3	62.46	51	⇓P		P	12 12 46.4 +1.1
LRM	**Limekiln Ridge**	62.48	52	*e*P		P	12 12 46.7 +1.1
LRM				*e*pP		pP	12 12 58.8 +0.6
A19A	**Klindworth Far** baz=62,SNR=9.1	62.49	47	⇓P		P	12 12 46.5 +1.2
EGMT	**Eagleton** comp=Z,15nm,1.0s	62.54	48	*e*P		P	12 12 46.8 +1.1
EGMT	**Eagleton** baz=62,SNR=10	62.54	48	⇓P		P	12 12 46.7 +1.1
D17A	**Six Diamond Ra** baz=62,SNR=11	62.60	50	⇑P		P	12 12 47.3 +1.1
B19A	**Brinkman Farms** baz=62	62.68	48	⇓P		P	12 12 47.9 +1.2
DLMT	**Dillon** comp=Z,15nm,1.5s	62.69	52	*e*P		P	12 12 48.0 +1.1
CMB	**Columbia Colle**	62.70	63	*e*P		P	12 12 48.1 +1.2
CMB	comp=Z,5.0nm,0.8s			pmax		pmax	
CMB	**Columbia Colle** comp=Z,4.5nm,0.8s	62.70	63	*e*P		P	12 12 48.1 +1.2
H14A	**Leadore** baz=62	62.73	53	⇑P		P	12 12 48.1 +0.9
I13A	**Wildhorse Cree** baz=63,SNR=8.5	62.75	54	⇓P		P	12 12 48.5 +1.1
LCCM	**Lewis and Clar**	62.78	51	P		P	12 12 48.6 +1.1
PSI	**Prapat**	62.79	243	P		P	12 12 48.9 +1.0
PSI	**Prapat** comp=Z,6.5nm,0.8s,baz=62,slow=8.3,SNR=5.9	62.79	243	P		P	12 12 48.9 +1.0
HLID	**Hailey** baz=63,SNR=7.6	62.80	55	⇑P		P	12 12 48.9 +1.3
G15A	**Dillon** baz=63,SNR=15	62.87	52	⇓P		P	12 12 49.1 +1.0
MCMT	**McKenzie Canyo** comp=Z,2.1nm,0.9s	62.89	53	*e*P		P	12 12 48.9 +0.5
A20A	**Cobblestone Ra** baz=63,SNR=9.6	62.93	47	⇑P		P	12 12 49.4 +1.1
E17A	**Martinsdale** baz=63,SNR=13	62.94	50	⇑P		P	12 12 49.9 +1.3
F16A	**Kennard Place,** baz=63	62.95	51	⇑P		P	12 12 49.6 +1.0
D18A	**Linhart Farms,** baz=63	63.04	49	⇑P		P	12 12 50.3 +1.2
BOZ	**Bozeman (W)**	63.04	51	*e*P		P	12 12 50.5 +1.3
BOZ	comp=Z,4.0nm,0.5s			pmax		pmax	
BOZ	**Bozeman (W)** comp=Z,3.6nm,0.5s	63.04	51	*e*P		P	12 12 50.5 +1.3
BOZ	**Bozeman (W)** baz=63,SNR=14	63.04	51	⇓P		P	12 12 50.4 +1.2
J13A	**Cove Ranch, Pi** baz=63,SNR=7.2	63.04	55	⇑P		P	12 12 50.5 +1.3
C19A	**Slack Wire Ran** baz=63,SNR=12	63.09	48	⇑P		P	12 12 50.8 +1.4
I14A	**Mackay** baz=63,SNR=20	63.12	54	⇓P		P	12 12 51.5 +1.8
BMN	**Battle Mountai**	63.12	59	*e*P		P	12 12 50.6 +0.7
BMN	comp=Z,10.0nm,0.8s			pmax		pmax	
BMN	**Battle Mountai** comp=Z,10nm,0.8s	63.12	59	*e*P		P	12 12 50.6 +0.7
H15A	**Lima** baz=63	63.13	53	⇑P		P	12 12 50.8 +0.9
B20A	**Solberg Farm,** baz=63,SNR=8.4	63.17	47	⇓P		P	12 12 51.1 +1.2
G16A	**Moss Hill, Enn** baz=63,SNR=20	63.21	52	⇓P		P	12 12 51.7 +1.4
A21A	**Bergtoll Ranch** baz=63	63.37	46	⇑P		P	12 12 52.3 +1.1
E18A	**Harlowton** baz=63	63.38	50	⇑P		P	12 12 52.8 +1.4
F17A	**Fitzpatrick Pl** baz=63,SNR=7.3	63.40	51	⇑P		P	12 12 52.9 +1.3
J14A	**Carey** baz=63,SNR=13	63.46	54	⇓P		P	12 12 54.1 +2.1
D19A	**Cripps Ranch,** baz=63	63.54	49	⇓P		P	12 12 53.6 +1.2
KAF	**Kangasniemi**	63.58	335	*e*P		P	12 12 50.9 -1.4
KAF	comp=Z,7.0nm,0.8s			pmax		pmax	
KAF	**Kangasniemi** comp=Z,7.0nm,0.8s	63.58	335	*e*p		P	12 12 50.9 -1.4
I15A	**Monteview** baz=63	63.61	53	⇓P		P	12 12 54.3 +1.4
C20A	**Veseth Ranch,** baz=63,SNR=19	63.64	48	⇑P		P	12 12 54.4 +1.4
SCO	**Scoresbysund**	63.66	358	*i* P		P	12 12 52.8 +0.2
SCO	comp=Z,9.0nm,0.9s			pmax		pmax	
SCO	**Scoresbysund** comp=Z,8.6nm,0.9s	63.66	358	*i* P		P	12 12 52.8 +0.2
QLMT	**Earthquake Lak**	63.67	52	*e*P		P	12 12 55.0 +1.6
NVAR	**Mina Array Bea**	63.73	61	P		P	12 12 55.2 +1.2
NVAR				pP		pP	12 13 08.1 +1.5
NVAR	**Mina Array Bea** comp=Z,5.0nm,0.8s,baz=286,slow=7.3,SNR=50	63.73	61	P		P	12 12 55.2 +1.2
NVAR				pP		pP	12 13 08.1 +1.5
G17A	**Pierce Place,** comp=Z,2.2nm,0.7s,baz=297,slow=7.4,SNR=7.3 baz=64,SNR=6.2	63.73	51	⇑P		P	12 12 55.2 +1.5
H16A	**Russell Place,** baz=64,SNR=9.2	63.85	52	⇓P		P	12 12 55.9 +1.2
A22A	**Carney Farms,** baz=64,SNR=16	63.87	46	⇑P		P	12 12 55.6 +1.1
MLAC	**Mammoth Lakes** baz=64	63.90	62	⇓P		P	12 12 56.7 +1.6
F18A	**Big Timber** baz=64,SNR=15	63.91	50	⇑P		P	12 12 56.3 +1.4
D20A	**Manuel Ranch,** baz=64,SNR=15	63.98	48	⇑P		P	12 12 56.6 +1.3
J15A	**Blackfoot** baz=64,SNR=8.8	64.02	54	⇑P		P	12 12 57.5 +1.8
C21A	**Desert Coulee** baz=64,SNR=6.4	64.04	47	⇑P		P	12 12 56.7 +1.1
E19A	**Rath Farm, Rou** baz=64,SNR=9.0	64.04	49	⇓P		P	12 12 57.1 +1.4
ELK	**Elko** comp=Z,2.6nm,0.8s	64.10	57	*e*P		P	12 12 58.0 +1.6
K14A	**Jones Ranch, D** baz=64,SNR=7.5	64.15	55	⇑P		P	12 12 58.2 +1.7
FIA1	**FINESS Array S**	64.17	334	*e*P		P	12 12 55.6 -0.6
FINES	**FINESS Array B**	64.17	334	P		P	12 12 54.9 -1.3
FINES	**FINESS Array B** comp=Z,10nm,0.7s,baz=32,slow=7.6,SNR=20	64.17	334	P		P	12 12 54.9 -1.3
I16A	**Newdale** baz=64,SNR=5.4	64.25	53	⇑P		P	12 12 58.9 +1.7
B22A	**Reddig Ranch S** baz=64	64.28	46	⇓P		P	12 12 58.2 +1.0
F19A	**Roth Farm, Mol** baz=64,SNR=9.7	64.35	50	⇓P		P	12 12 59.4 +1.6
E20A	**Meyer Farm, Mu** baz=64	64.36	49	⇑P		P	12 12 59.2 +1.4
G18A	**Lazy EL Ranch,** baz=64	64.37	51	⇓P		P	12 12 59.0 +1.0
LKWY	**Lake**	64.40	52	*e*P		P	12 12 59.6 +1.3
LKWY	comp=Z,6.0nm,0.8s			pmax		pmax	
LKWY	**Lake** comp=Z,6.4nm,0.8s	64.40	52	*e*P		P	12 12 59.6 +1.3
H17A	**Grant Village** baz=64,SNR=9.4	64.41	52	⇑P		P	12 13 00.9 +2.5
K15A	**Arbon** baz=64,SNR=5.9	64.42	54	⇑P		P	12 13 00.2 +1.8
L14A	**Malta** baz=64	64.44	55	⇓P		P	12 12 59.9 +1.5
IMW	**Indian Meadow** comp=Z,6.8nm,1.0s	64.54	53	*e*P		P	12 13 01.0 +1.7
D21A	**La Casta Ranch** baz=64	64.58	48	⇑P		P	12 13 00.5 +1.2
RLMT	**Red Lodge** comp=Z,13nm,1.3s	64.66	51	*e*P		P	12 13 01.3 +1.4
RLMT	**Red Lodge** baz=64,SNR=9.1	64.66	51	⇑P		P	12 13 01.5 +1.6
RRI2	**Red Ridge** comp=Z,21nm,0.8s	64.68	53	*e*P		P	12 13 01.5 +1.3
B23A	**Brockton** baz=64	64.68	46	⇑P		P	12 13 01.0 +1.2
C22A	**Vida** baz=64	64.71	47	⇑P		P	12 13 00.6 +0.7
I17A	**Pilgrim Ck.** baz=64,SNR=9.7	64.72	52	⇑P		P	12 13 02.6 +2.3
H18A	**Shoshone NF, C** baz=64,SNR=5.9	64.73	51	⇓P		P	12 13 01.9 +1.5
MOOW	**Moose Ponds** comp=Z,14nm,1.4s	64.74	53	*e*P		P	12 13 02.0 +1.5
TPAW	**Teton Pass** comp=Z,9.6nm,0.6s	64.79	53	*e*P		P	12 13 02.4 +1.5
F20A	**Billings** baz=65	64.81	50	⇑P		P	12 13 01.8 +1.0
K16A	**Soda Springs** baz=65,SNR=6.5	64.86	54	⇓P		P	12 13 03.3 +2.1
A24A	**Westby** baz=65	64.86	45	⇑P		P	12 13 01.8 +0.8
HVU	**Hansel Valley**	64.87	55	*e*P		P	12 13 02.1 +0.9
HVU	comp=Z,7.0nm,0.8s			pmax		pmax	
HVU	**Hansel Valley** comp=Z,7.0nm,0.8s	64.87	55	*e*P		P	12 13 02.1 +0.9
VES	**Vestal, Richgr** baz=65	64.89	64	⇑P		P	12 13 01.7 +0.5
LOHW	**Long Hollow** comp=Z,24nm,1.6s	64.91	53	*e*P		P	12 13 03.1 +1.6
SNOW	**Snow King Moun** comp=Z,7.6nm,0.8s	64.92	53	*e*P		P	12 13 03.7 +2.0
L15A	**Malad City** baz=65,SNR=5.6	64.94	55	⇑P		P	12 13 02.7 +0.9
D22A	**Cohagen** baz=65	64.95	47	⇓P		P	12 13 02.3 +0.8
J17A	**Brown Place, J** baz=65,SNR=8.8	65.01	53	⇑P		P	12 13 03.7 +1.5
C23A	**Lambert** baz=65	65.02	46	⇓P		P	12 13 02.9 +0.8
PKM	**Peak Mountain** baz=65	65.03	65	⇑P		P	12 13 03.6 +1.2
DGMT	**Dagmar** baz=65	65.07	45	⇓P		P	12 13 03.2 +0.9
H19A	**Powell** baz=65	65.10	51	⇓P		P	12 13 03.7 +1.0
CWC	**Cottonwood Cre** baz=65	65.13	63	⇓P		P	12 13 04.0 +1.0
G20A	**Bridger** baz=65,SNR=5.3	65.16	50	⇓P		P	12 13 03.6 +0.5
GRAC	**Grapevine Rang** baz=65	65.21	62	⇓P		P	12 13 04.5 +1.1
I18A	**Diamond G Ranc** baz=65,SNR=6.1	65.28	52	⇓P		P	12 13 05.4 +1.4
K17A	**Gardner Place,** baz=65	65.29	53	⇑P		P	12 13 05.1 +1.1
F21A	**Absaloka Mine,** baz=65	65.34	49	⇓P		P	12 13 05.5 +1.3
R11A	**Troy Canyon, C** baz=65,SNR=11	65.42	60	⇓P		P	12 13 06.0 +1.0
D23A	**Lindsay** baz=65	65.43	47	⇑P		P	12 13 05.7 +1.0
L16A	**Fish Haven** baz=65,SNR=7.2	65.48	54	⇓P		P	12 13 06.3 +1.0
J18A	**Kendall Valley** baz=65	65.49	53	⇓P		P	12 13 06.5 +1.1
I19A	**Meeteetse** baz=65,SNR=5.5	65.51	51	⇓P		P	12 13 06.7 +1.2
E22A	**Miles City** baz=65	65.54	48	⇑P		P	12 13 06.7 +1.2
HWUT	**Hardware Ranch** comp=Z,4.1nm,0.7s	65.67	55	*e*P		P	12 13 07.3 +0.8
G21A	**Lodge Grass** baz=66	65.69	50	⇓P		P	12 13 07.2 +0.7
H20A	**Greybull** baz=66	65.75	51	⇓P		P	12 13 07.6 +0.7
F22A	**Rosebud** baz=66,SNR=5.5	65.82	49	⇑P		P	12 13 08.2 +1.0
M16A	**Huntsville** baz=66	65.82	55	⇑P		P	12 13 08.6 +1.1
E23A	**Ismay** baz=66	65.83	47	⇓P		P	12 13 08.4 +1.1
K18A	**Toltan Ranch,** baz=66,SNR=6.8	65.85	53	⇓P		P	12 13 08.8 +1.1
FURC	**Furnace Creek,** baz=66	65.86	62	⇑P		P	12 13 09.3 +1.8
DUG	**Dugway**	65.87	57	*e*P		P	12 13 09.0 +1.2
DUG	comp=Z,10.0nm,0.9s			pmax		pmax	
DUG	**Dugway** comp=Z,9.8nm,0.9s	65.87	57	*e*P		P	12 13 09.0 +1.2
DUG	**Dugway** baz=66,SNR=12	65.87	57	⇑P		P	12 13 09.2 +1.5
HYB	**Hyderabad**	65.90	270	*i* P		P	12 13 07.5 -0.6
D24A	**Glendive** baz=66,SNR=6.3	65.91	47	⇓P		P	12 13 08.9 +1.1
J19A	**Crowheart** baz=66,SNR=7.2	65.99	52	⇓P		P	12 13 09.6 +1.1
LRMC	**Laurel Mountai** baz=66	65.99	63	⇓P		P	12 13 09.3 +0.7
BLG	**Laguna Peak** baz=66	66.01	65	⇑P		P	12 13 09.4 +0.8
CTA	**Charters Tower** comp=Z,4µm,18.5s,baz=56,slow=34	66.02	185	LR		LR	12 39 52.9
BW06	**Boulder Array** baz=66,SNR=12	66.04	53	⇑P		P	12 13 09.4 +0.5
PDAR	**Pinedale Array**	66.04	53	P		P	12 13 09.6 +0.6
PDAR	**Pinedale Array** comp=Z,7.3nm,0.8s,baz=284,slow=1.7,SNR=60	66.04	53	P		P	12 13 09.6 +0.6
I20A	**Worland** baz=66,SNR=5.6	66.04	51	⇓P		P	12 13 09.8 +1.0
H21A	**Big Horn, Sher** baz=66,SNR=8.9	66.17	50	⇓P		P	12 13 10.5 +0.9
G22A	**Birney** baz=66	66.17	49	⇑P		P	12 13 10.4 +0.8
EDW2	**Edwards Air Fo** baz=66	66.19	64	⇑P		P	12 13 10.9 +1.1
M17A	**Scuys Gap (B** baz=66	66.27	54	⇓P		P	12 13 11.6 +1.2
F23A	**Volborg** baz=66,SNR=8.4	66.30	48	⇓P		P	12 13 11.2 +0.8
L18A	**Fontenelle, Gr** baz=66	66.32	54	⇑P		P	12 13 11.8 +1.1
DECC	**Green Verdugo** baz=66	66.38	65	⇓P		P	12 13 12.3 +1.3
JLU	**Jordanelle**	66.39	56	*e*P		P	12 13 12.1 +0.8
K19A	**Absolon Red Bu** baz=66	66.39	52	⇑P		P	12 13 11.9 +0.8
J20A	**Shoshoni** baz=66,SNR=9.8	66.46	51	⇑P		P	12 13 12.4 +0.9
N17A	**Moffit Pass** baz=66,SNR=13	66.52	55	⇑P		P	12 13 13.0 +1.0
I21A	**Big Trails, Te** baz=66,SNR=13	66.58	51	⇑P		P	12 13 13.4 +1.1
L19A	**Farson** baz=66	66.59	53	⇑P		P	12 13 13.3 +0.9
DAU	**Daniels Canyon**	66.63	56	*e*P		P	12 13 13.9 +1.1
DAU	**Daniels Canyon**	66.63	56	*e*P		P	12 13 13.9 +1.1
M18A	**Lyman** baz=66	66.64	54	⇓P		P	12 13 13.7 +0.9
GSC	**Goldstone** baz=66	66.65	63	⇑P		P	12 13 13.7 +1.0
G23A	**Biddle** baz=66	66.66	49	⇑P		P	12 13 13.6 +0.9
MPU	**Maple Canyon** comp=Z,5.4nm,0.8s	66.67	56	*e*P		P	12 13 14.1 +1.1
MPU				*e*pP		pP	12 13 26.5 +0.9
F24A	**Ekalaka** baz=66	66.71	48	⇓P		P	12 13 13.8 +0.8
K20A	**Yellowstone Ra** baz=67,SNR=5.7	66.78	52	⇓P		P	12 13 13.8 +0.3
J21A	**Lysite** baz=67,SNR=5.9	66.81	51	⇓P		P	12 13 14.5 +0.7
BFSC	**Mount Baldy Ra** baz=67	66.81	64	⇑P		P	12 13 14.7 +0.9
I22A	**9 Mile Ranch,** baz=67,SNR=5.2	66.96	50	⇓P		P	12 13 15.5 +0.8
G24A	**Alzada** baz=67	67.08	48	⇑P		P	12 13 15.8 +0.4
N18A	**Larsen Ranch,** baz=67	67.16	54	⇓P		P	12 13 16.7 +0.7
HEC	**Hector,Ludlow** baz=67	67.25	63	⇓P		P	12 13 17.7 +1.1
BBRC	**Big Bear Solar** baz=67	67.26	64	⇓P		P	12 13 17.8 +1.0
CCUT	**Cedar City**	67.28	59	*e*P		P	12 13 18.4 +1.5
J22A	**Midwest** baz=67,SNR=6.1	67.29	51	⇓P		P	12 13 17.5 +0.7
MSU	**Marysvale**	67.34	58	*e*P		P	12 13 18.7 +1.4
MSU				*e**PP		pP	12 13 31.0 +1.0
MSU	**Marysvale**	67.34	58	*e*P		P	12 13 18.7 +1.4
MSU				*e*pP		pP	12 13 31.0 +1.0
TMUT	**Trail Mountain** comp=Z,8.1nm,0.9s	67.39	56	*e*P		P	12 13 19.1 +1.4
K21A	**Alcova** baz=67,SNR=11	67.39	52	⇑P		P	12 13 17.7 +0.2
H24A	**Dirks Ranch, A** baz=67,SNR=6.0	67.40	49	⇓P		P	12 13 17.7 +0.3
N19A	**John Jarvie Ra** baz=67	67.49	54	⇓P		P	12 13 18.7 +0.6
MURC	**Murrieta** baz=67	67.52	65	⇓P		P	12 13 18.7 +0.5
WRA	**Warramunga Arr**	67.53	197	P		P	12 13 18.1 -0.1
WRA				pP		pP	12 13 30.8 0.0
WRA	**Warramunga Arr** comp=Z,6.4nm,0.8s,baz=16,slow=6.8,SNR=44	67.53	197	P		P	12 13 18.1 -0.1
WRA				pP		pP	12 13 30.8 0.0
P17A	**Butcher Ranch,** comp=Z,4.0nm,0.8s,baz=18,slow=6.9,SNR=10 baz=67	67.55	56	⇓P		P	12 13 19.2 +0.8
M20A	**Sweetwater, Wa** baz=67,SNR=5.3	67.65	53	⇑P		P	12 13 20.0 +0.9
Q16A	**Castle Valley** baz=68,SNR=5.8	67.66	57	⇓P		P	12 13 20.0 +0.7
GMRC	**Granite Mounta** baz=68	67.70	63	⇓P		P	12 13 20.4 +0.9
P18A	**Preston Nutter** baz=68	67.73	56	⇑P		P	12 13 20.6 +0.8
ULM	**Lac du Bonnet**	67.75	40	P		P	12 13 19.1 -0.2
ULM	**Lac du Bonnet** comp=Z,4.3nm,0.7s,baz=320,slow=7.5,SNR=7.8	67.75	40	P		P	12 13 19.1 -0.2
K22A	**Casper** baz=68	67.78	51	⇓P		P	12 13 20.4 +0.5
L21A	**Rawlins** baz=68	67.78	52	⇓P		P	12 13 20.6 +0.6
SRU	**San Rafael**	67.91	56	*e*P		P	12 13 21.8 +1.0
SRU	comp=Z,8.0nm,0.7s			pmax		pmax	
SRU	**San Rafael** comp=Z,8.0nm,0.7s	67.91	56	*e*P		P	12 13 21.8 +1.0
SRU	**San Rafael** baz=68,SNR=9.3	67.91	56	⇑P		P	12 13 21.5 +0.6
BELC	**Belle Mtn. Jos** baz=68	68.01	64	⇑P		P	12 13 22.2 +0.8
M21A	**Separation Pea** baz=68,SNR=5.5	68.02	53	⇓P		P	12 13 22.1 +0.6
FITZ	**Fitzroy Crossi** comp=Z,5.5nm,0.9s	68.04	207	*e*P		P	12 13 22.0 +0.6
FITZ	**Fitzroy Crossi** comp=Z,6.3nm,0.8s,baz=20,slow=5.7,SNR=13	68.04	207	P		P	12 13 22.0 +0.6
N20A	**Spence Gulch,** baz=68	68.05	54	⇑P		P	12 13 22.4 +0.7
RSSD	**Black Hills**	68.10	49	*e*P		P	12 13 22.5 +0.5
RSSD	comp=Z,8.0nm,0.9s			pmax		pmax	
RSSD	**Black Hills** comp=Z,8.3nm,0.9s	68.10	49	*e*P		P	12 13 22.5 +0.5
K23A	**Bowen Ranch, D** baz=68	68.19	51	⇑P		P	12 13 22.8 +0.3
L22A	**Ellis Ranch, M** baz=68	68.25	52	⇑P		P	12 13 23.7 +0.8
POO	**Poona**	68.42	275	*ex*		P	12 13 22.0 -2.0
POO				*ex*		x	12 17 16.0
IRM	**Iron Mountain** baz=68,SNR=5.1	68.43	63	⇑P		P	12 13 24.8 +0.9
P19A	**Cripple Cowboy** baz=68	68.45	55	⇓P		P	12 13 25.2 +0.9
NB2	**NORSAR Subarra** comp=Z,4.1nm,0.6s,baz=28,slow=6.5	68.50	340	P		P	12 13 23.2 -0.7
NOA	**NORSAR Array B**	68.50	340	P		P	12 13 24.1 +0.2
NOA	**NORSAR Array B** comp=Z,2.8nm,0.5s,baz=29,slow=6.3,SNR=17	68.50	340	P		P	12 13 24.1 +0.2
BC3	**Big Chuckawall** baz=68	68.57	63	⇓P		P	12 13 25.6 +0.7
W13A	**Hualapai Mount** baz=68	68.58	61	⇓P		P	12 13 26.1 +1.0
M22A	**Cedar Creek Ra** baz=68,SNR=5.9	68.59	52	⇑P		P	12 13 25.8 +0.7
L23A	**Garrett** baz=68	68.59	51	⇑P		P	12 13 25.3 +0.3
U15A	**North Rim** baz=68,SNR=7.9	68.66	59	⇓P		P	12 13 26.8 +1.1
HFS	**Hagfors**	68.69	339	P		P	12 13 24.9 -0.2
HFS	**Hagfors** comp=Z,8.2nm,0.5s,baz=57,slow=5.5,SNR=28	68.69	339	P		P	12 13 24.9 -0.2
HFS				LR		LR	12 48 41.4
Q19A	**Hogan Spring (** comp=Z,36nm,21.9s,baz=4.5,slow=40 baz=69,SNR=6.7	68.74	56	⇓P		P	12 13 26.4 +0.4
O21A	**Pagoda** baz=69	68.91	54	⇓P		P	12 13 27.6 +0.5
PDMC	**Parker Dam,Lak** baz=69	68.96	62	⇓P		P	12 13 28.0 +0.8
N22A	**Wattenberg Ran** baz=69	69.07	53	⇓P		P	12 13 28.9 +0.7
Y12C	**Blythe** baz=69	69.09	63	⇑P		P	12 13 29.0 +1.0
AGMN	**Agassiz Nation** comp=Z,9.1nm,0.9s	69.17	41	*e*P		P	12 13 28.0 -0.2
S18A	**Hurst Farm, Bl** baz=69,SNR=7.3	69.17	57	⇓P		P	12 13 29.2 +0.4
N23A	**Red Feather La** baz=69,SNR=5.1	69.29	52	⇑P		P	12 13 30.1 +0.6
Q20A	**Ridgley Place,** baz=69	69.30	55	⇓P		P	12 13 30.3 +0.8
GLA	**Glamis** baz=69	69.37	64	⇑P		P	12 13 31.0 +1.2
P21A	**Newcastle** baz=69,SNR=6.1	69.39	54	⇑P		P	12 13 30.8 +0.7
O22A	**Kremmling** baz=69	69.46	53	⇓P		P	12 13 31.3 +0.7
M24A	**Cheyenne** baz=69	69.51	51	⇓P		P	12 13 31.4 +0.7
K26A	**Motz Farm, Whi** baz=69	69.53	49	⇓P		P	12 13 31.5 +0.8
P22A	**Eagle** baz=70	69.73	54	⇓P		P	12 13 32.8 +0.6
R20A	**Redvale** baz=70	69.77	56	⇓P		P	12 13 33.4 +1.0
O23A	**Lake Granby, G** baz=70,SNR=7.4	69.78	53	⇓P		P	12 13 33.7 +1.2
Q21A	**Lamborn Mesa,** baz=70	69.79	55	⇑P		P	12 13 33.4 +0.9
WUAZ	**Wupatki** baz=70	69.82	60	⇑P		P	12 13 33.9 +1.2
SMCO	**Snowmass** comp=Z,6.1nm,0.9s	69.90	54	*e*P		P	12 13 33.8 +0.4
M25A	**Palm-Egli Farm** baz=70	69.95	51	⇓P		P	12 13 34.6 +1.2
S20A	**Disappointment** baz=70	70.03	56	⇑P		P	12 13 34.6 +0.6
R21A	**Cimarron** baz=70,SNR=9.4	70.12	55	⇓P		P	12 13 35.6 +1.0
Q22A	**Crested Butte,** baz=70	70.15	54	⇓P		P	12 13 35.7 +0.8
ISCO	**Idaho Springs**	70.23	53	*e*P		P	12 13 36.3 +1.0
ISCO	comp=Z,3.0nm,0.6s			pmax		pmax	
ISCO	**Idaho Springs** comp=Z,3.2nm,0.6s	70.23	53	*e*P		P	12 13 36.3 +1.0
ISCO	**Idaho Springs** baz=70,SNR=8.5	70.23	53	⇓P		P	12 13 36.1 +0.8
MVCO	**Mesa Verde** comp=Z,6.0nm,0.9s	70.37	57	*e*P		P	12 13 36.9 +0.7
MVCO	**Mesa Verde**	70.37	57	⇑P		P	12 13 37.1 +1.0

	baz=70									
KIV	**Kislovodsk**	**70.47**	**314**	*i*	P		P		12 13 38.3	+1.9
KIV				*e*					12 13 50.1	
KIV					pmax		pmax			
	comp=Z,13nm,0.9s									
KIV					MLR		MLR			
	comp=Z,100nm,13.0s									
S21A	**Coal Bank Pass**	**70.47**	**56**	⇑	P		**P**		**12 13 37.7**	**+0.9**
	baz=70,SNR=6.3									
KBZ	**Khabaz**	**70.53**	**313**		P		P		12 13 38.0	+1.3
KBZ	**Khabaz**	**70.53**	**313**		P		P		12 13 38.0	+1.3
KBZ	**Khabaz**	**70.53**	**313**		P		P		12 13 38.0	+1.3
	comp=Z,12nm,0.8s,baz=64,slow=3.1,SNR=20									
X16A	**Lo Mia Camp, P**	**70.53**	**60**	⇑	P		**P**		**12 13 38.2**	**+1.2**
	baz=70,SNR=8.1									
R22A	**Saguache, Gunn**	**70.67**	**55**	⇓	P		**P**		**12 13 39.3**	**+1.2**
	baz=70,SNR=7.1									
Q23A	**Hartsel**	**70.73**	**54**	⇓	P		**P**		**12 13 39.4**	**+1.0**
	baz=70									
N26A	**Koester Ranch,**	**70.82**	**51**	⇑	P		**P**		**12 13 39.7**	**+1.1**
	baz=71									
O25A	**Wiggins**	**70.84**	**52**	⇓	P		**P**		**12 13 39.8**	**+1.0**
	baz=71									
S22A	**4UR Ranch, Cre**	**70.97**	**55**	⇑	P		**P**		**12 13 40.8**	**+1.0**
	baz=71,SNR=9.9									
T21A	**Navajo Lake**	**71.08**	**56**	⇑	P		**P**		**12 13 41.3**	**+0.9**
	baz=71									
O26A	**Horse Wrangler**	**71.19**	**51**	⇓	P		**P**		**12 13 41.4**	**+0.5**
	baz=71									
N27A	**Anderson Farm,**	**71.21**	**50**	⇑	P		**P**		**12 13 41.7**	**+0.7**
	baz=71,SNR=6.3									
AS31	**Alice Springs**	**71.23**	**197**		*e*P		**P**		**12 13 42.1**	**+1.0**
R23A	**Moffat**	**71.23**	**54**	⇓	P		**P**		**12 13 42.2**	**+0.8**
	baz=71,SNR=6.5									
ASAR	**Alice Springs**	**71.23**	**197**		P		**P**		**12 13 42.1**	**+1.1**
ASAR					pP		**pP**		**12 13 54.7**	**+0.9**
ASAR	**Alice Springs**	**71.23**	**197**		P		**P**		**12 13 42.1**	**+1.1**
	comp=Z,2.8nm,0.9s,baz=9.3,slow=5.5,SNR=25									
ASAR					pP		**pP**		**12 13 54.7**	**+0.9**
	comp=Z,2.6nm,0.8s,baz=13,slow=6.1,SNR=8.7									
P25A	**Willow Gulch B**	**71.23**	**52**	⇓	P		**P**		**12 13 42.0**	**+0.7**
	baz=71									
X18A	**Snowflake**	**71.35**	**60**	⇓	P		**P**		**12 13 43.1**	**+1.0**
	baz=71									
V20A	**Brimhall**	**71.36**	**58**	⇑	P		**P**		**12 13 43.1**	**+1.0**
	baz=71									
OGNE	**Ogallala**	**71.38**	**50**	*e*P			**P**		**12 13 42.4**	**+0.3**
	comp=Z,33nm,0.8s									
OGNE	**Ogallala**	**71.38**	**50**	⇑	P		**P**		**12 13 42.6**	**+0.6**
	baz=71									
U21A	**Nageezi**	**71.40**	**57**	⇑	P		**P**		**12 13 43.4**	**+1.0**
	baz=71									
T22A	**Edith**	**71.43**	**56**	⇑	P		**P**		**12 13 43.6**	**+1.0**
	baz=71									
S23A	**Nye Farm, Mont**	**71.46**	**55**	⇓	P		**P**		**12 13 43.9**	**+1.1**
	baz=71									
AKASG	**Malin Array Be**	**71.48**	**325**		P		**P**		**12 13 41.7**	**-0.7**
AKASG	**Malin Array Be**	**71.48**	**325**		P		**P**		**12 13 41.6**	**-0.7**
AKASG	**Malin Array Be**	**71.48**	**325**		P		**P**		**12 13 41.6**	**-0.7**
	comp=Z,5.1nm,0.5s,baz=37,slow=6.1,SNR=7.2									
KIEV	**Kiev**	**71.50**	**325**	*e*P			**P**		**12 13 41.5**	**-0.9**
KIEV					pmax		pmax			
	comp=Z,5.0nm,0.5s									
KIEV	**Kiev**	**71.50**	**325**	*e*P			**P**		**12 13 41.5**	**-0.9**
	comp=Z,5.1nm,0.5s									
AK01	**Malin Array Si**	**71.50**	**325**	*e*P			**P**		**12 13 41.3**	**-1.1**
AK02	**Malin Array Si**	**71.53**	**325**	*e*P			**P**		**12 13 42.1**	**-0.5**
R24A	**Sanders Place,**	**71.60**	**54**	⇑	P		**P**		**12 13 44.5**	**+0.9**
	baz=71,SNR=5.6									
Q25A	**Bedland, Calha**	**71.61**	**53**	⇑	P		**P**		**12 13 44.4**	**+0.8**
	baz=71									
P26A	**Davis Ranch, A**	**71.65**	**52**	⇑	P		**P**		**12 13 44.4**	**+0.7**
	baz=71									
O27A	**Beecher Island**	**71.67**	**51**	⇑	P		**P**		**12 13 44.2**	**+0.4**
	baz=72									
T23A	**Casias Ranch,**	**71.91**	**55**	⇑	P		**P**		**12 13 46.4**	**+0.9**
	baz=72									
S24A	**Houchin Ranch,**	**71.96**	**54**	⇓	P		**P**		**12 13 46.5**	**+0.6**
	baz=72									
Q26A	**Hugo**	**72.00**	**52**	⇓	P		**P**		**12 13 46.4**	**+0.5**
	baz=72									
R25A	**Fountain Ranch**	**72.12**	**53**	⇑	P		**P**		**12 13 47.2**	**+0.6**
	baz=72									
ECSD	**EROS Data Cent**	**72.15**	**45**	*e*P			**P**		**12 13 46.4**	**-0.1**
	comp=Z,15nm,1.0s									
V22A	**San Miguel Ran**	**72.19**	**57**	⇑	P		**P**		**12 13 47.7**	**+0.5**
	baz=72									
X20A	**Quemado**	**72.21**	**59**	⇓	P		**P**		**12 13 48.3**	**+1.1**
	baz=72,SNR=5.0									
U23A	**El Rito**	**72.32**	**56**	⇑	P		**P**		**12 13 48.9**	**+1.0**
	baz=72,SNR=11									
TUC	**Tucson**	**72.37**	**62**	*e*P			**P**		**12 13 48.6**	**+0.5**
TUC	**Tucson**	**72.37**	**62**	*e*P			**P**		**12 13 48.6**	**+0.5**
S25A	**Robets Cordova**	**72.38**	**54**	⇓	P		**P**		**12 13 48.8**	**+0.6**
	baz=72									
KSCO	**Kaye Shedlock'**	**72.43**	**52**	⇑	P		**P**		**12 13 49.1**	**+0.7**
	baz=72									
T24A	**Torres, Weston**	**72.45**	**55**	⇑	P		**P**		**12 13 49.3**	**+0.6**
	baz=72									
R26A	**Arlington**	**72.48**	**53**	⇑	P		**P**		**12 13 49.0**	**+0.3**
	baz=72,SNR=6.6									
X21A	**Alamocita Cree**	**72.70**	**58**	⇓	P		**P**		**12 13 51.5**	**+1.3**
	baz=72									
Y20A	**Horse Springs,**	**72.72**	**59**	⇑	P		**P**		**12 13 51.3**	**+1.0**
	baz=73									
V23A	**Ortiz Mt. (NFS**	**72.73**	**56**	⇑	P		**P**		**12 13 51.6**	**+1.3**
	baz=72									
T25A	**Trinidad**	**72.76**	**54**	⇓	P		**P**		**12 13 50.9**	**+0.4**
	baz=73,SNR=5.7									
R27A	**Eads**	**72.85**	**52**	⇓	P		**P**		**12 13 51.3**	**+0.4**
	baz=73									
SPMN	**St. Paul**	**72.86**	**42**	⇑	P		**P**		**12 13 50.5**	**-0.1**
	baz=73									
S26A	**Kim**	**72.95**	**53**	⇓	P		**P**		**12 13 51.8**	**+0.3**
	baz=73									
BGNE	**Belgrade**	**73.08**	**47**	⇑	P		**P**		**12 13 52.2**	**+0.2**
	baz=73									
LAZ	**Ladron**	**73.11**	**58**	*e*P			**P**		**12 13 54.0**	**+1.4**
	comp=Z,0.9nm,0.8s									
ANMO	**Albuquerque**	**73.13**	**57**	*e*P			**P**		**12 13 53.6**	**+0.9**
ANMO				*e*pP			**pP**		**12 14 05.7**	**+0.2**
Z20A	**Nine Sixteen R**	**73.14**	**60**	⇑	P		**P**		**12 13 53.7**	**+0.9**
	baz=73									
W23A	**Werner Place,**	**73.16**	**57**	⇓	P		**P**		**12 13 53.6**	**+0.7**
	baz=73									
T26A	**Comanche Natio**	**73.20**	**54**	⇑	P		**P**		**12 13 53.4**	**+0.3**
	baz=73									
V24A	**Rampart Ranch,**	**73.27**	**56**	⇑	P		**P**		**12 13 54.5**	**+1.0**
	baz=73									
U25A	**Circle Dot Ran**	**73.29**	**55**	⇑	P		**P**		**12 13 54.0**	**+0.4**
	baz=73,SNR=5.7									
120A	**U Bar Ranch, L**	**73.51**	**60**	⇑	P		**P**		**12 13 56.2**	**+1.2**
	baz=73									
Y22A	**Socorro**	**73.54**	**58**	⇑	P		**P**		**12 13 56.1**	**+1.0**
	baz=73									
W24A	**Lazy 6 Ranch,**	**73.56**	**56**	⇑	P		**P**		**12 13 56.1**	**+0.8**
	baz=73,SNR=7.3									
Z21A	**St. Cloud Mine**	**73.56**	**59**	⇓	P		**P**		**12 13 56.6**	**+1.3**
	baz=73									
V25A	**Rancho No Teng**	**73.57**	**55**	⇓	P		**P**		**12 13 56.0**	**+0.7**
	baz=73									
U26A	**Atchley Ranch,**	**73.67**	**54**	⇑	P		**P**		**12 13 56.5**	**+0.6**
	baz=74									
319A	**Douglas**	**73.94**	**61**	⇑	P		**P**		**12 13 58.3**	**+0.9**
	baz=74,SNR=7.7									
Z22A	**Elephant Butte**	**74.02**	**59**	⇓	P		**P**		**12 13 58.8**	**+0.9**
	baz=74									
220A	**Playas Peak, P**	**74.03**	**61**	⇓	P		**P**		**12 13 58.7**	**+0.8**
	baz=74									
121A	**Cookes Peak, D**	**74.03**	**60**	⇑	P		**P**		**12 13 59.1**	**+1.1**
	baz=74									
T28A	**Walsh**	**74.06**	**53**	⇓	P		**P**		**12 13 58.4**	**+0.4**
	baz=74									
V26A	**Tequesquite Ra**	**74.07**	**55**	⇓	P		**P**		**12 13 58.6**	**+0.5**
	baz=74									
Y23A	**Lovelace Mesa,**	**74.08**	**58**	⇑	P		**P**		**12 13 59.0**	**+0.7**
	baz=74									
W25A	**X Bar L Ranch,**	**74.10**	**56**	⇑	P		**P**		**12 13 58.8**	**+0.5**
	baz=74,SNR=6.9									
U27A	**Thompson Grove**	**74.17**	**54**	⇑	P		**P**		**12 13 58.9**	**+0.2**
	baz=74									
SCHQ	**Schefferville**	**74.35**	**22**	*e*P			**P**		**12 13 59.4**	**+0.1**
	comp=Z,10nm,0.9s									
SCHQ					pP		**pP**		**12 14 12.0**	**-0.1**
SCHQ	**Schefferville**	**74.35**	**22**		P		**P**		**12 13 59.5**	**+0.1**
	comp=Z,4.2nm,0.5s,baz=352,slow=5.6,SNR=29									
SCHQ					pP		**pP**		**12 14 12.0**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=344,slow=6.7,SNR=3.4									

221A	**Mesquite Ranch**	**74.41**	**60**	⇓	P		**P**		**12 14 01.1**	**+1.0**
	baz=74									
Y24A	**Capitan**	**74.45**	**57**	⇑	P		**P**		**12 14 01.0**	**+0.6**
	baz=74,SNR=5.7									
MCD	**Coleburn Disti**	**74.59**	**346**	*e*P			**P**		**12 14 00.2**	**-0.4**
MCD	**Coleburn Disti**	**74.59**	**346**		P		**P**		**12 14 00.2**	**-0.4**
222A	**Williams Famil**	**74.75**	**60**	⇑	P		**P**		**12 14 02.9**	**+0.8**
	baz=75									
KWP	**Kalwaria Pacla**	**74.83**	**328**	⇑	P		**P**		**12 14 02.7**	**+0.6**
KWP	**Kalwaria Pacla**	**74.83**	**328**	*e*P			**P**		**12 14 02.6**	**+0.5**
	comp=Z,57nm,1.0s									
KWP	**Kalwaria Pacla**	**74.83**	**328**	⇑	*i*P		**P**		**12 14 02.7**	**+0.6**
KWP	**Kalwaria Pacla**	**74.83**	**328**	*e*P			**P**		**12 14 02.6**	**+0.5**
Y25A	**Mesa, Roswell**	**74.88**	**57**	⇑	P		**P**		**12 14 03.6**	**+0.8**
	baz=75									
MDO	**Dochfour**	**74.91**	**347**	*e*P			**P**		**12 14 02.1**	**-0.3**
MDO	**Dochfour**	**74.91**	**347**		P		**P**		**12 14 02.1**	**-0.3**
Z24A	**Sheeppen Canyo**	**74.91**	**58**	⇑	P		**P**		**12 14 04.0**	**+0.9**
	baz=75									
KAC	**Achnashellach**	**75.00**	**347**	*e*P			**P**		**12 14 02.2**	**-0.8**
KAC	**Achnashellach**	**75.00**	**347**		P		**P**		**12 14 02.2**	**-0.8**
W27A	**Bowe Ranch, En**	**75.01**	**55**	⇑	P		**P**		**12 14 04.2**	**+0.6**
	baz=75									
KPL	**Plockton**	**75.21**	**347**	*e*P			**P**		**12 14 04.0**	**-0.1**
KPL					AMB		AMB		12 14 05.0	
	comp=Z,29nm,1.2s									
KPL	**Plockton**	**75.21**	**347**		P		**P**		**12 14 04.0**	**-0.1**
KPL					AMB		AMB		12 14 05.0	
	comp=Z,29nm,1.2s									
LEOM	**Leova**	**75.23**	**323**	⇓	P		**P**		**12 14 04.1**	**-0.3**
LEOM	**Leova**	**75.23**	**323**	⇓	*i*P		**P**		**12 14 04.1**	**-0.3**
KSB	**Sheil Bridge**	**75.30**	**347**	*e*P			**P**		**12 14 04.5**	**-0.1**
KSB	**Sheil Bridge**	**75.30**	**347**		P		**P**		**12 14 04.5**	**-0.1**
124A	**Stringfield Ra**	**75.31**	**58**	⇓	P		**P**		**12 14 06.4**	**+1.0**
	baz=75									
Z25A	**Roswell**	**75.33**	**57**	⇓	P		**P**		**12 14 06.3**	**+0.9**
	baz=75									
OJC	**Ojcow**	**75.37**	**330**	*e*P			**P**		**12 14 05.3**	**+0.1**
OJC	**Ojcow**	**75.37**	**330**	*e*P			**P**		**12 14 05.8**	**+0.6**
OJC	**Ojcow**	**75.37**	**330**	*e*P			**P**		**12 14 05.3**	**+0.1**
BUR08	**Bucovina Ar. S**	**75.52**	**326**	*e*P			**P**		**12 14 06.6**	**+0.4**
BURAR	**Bucovina Array**	**75.53**	**326**	⇑	*i*P		**P**		**12 14 06.3**	**0.0**
KOLS	**Kolonicke sedl**	**75.56**	**328**	*e*P			**P**		**12 14 06.7**	**+0.3**
KOLS					pmax		pmax			
	comp=Z,10.0nm,0.9s									
KOLS	**Kolonicke sedl**	**75.56**	**328**	*e*P			**P**		**12 14 06.7**	**+0.3**
224A	**Cornudas Mount**	**75.71**	**59**	⇓	P		**P**		**12 14 08.5**	**+0.8**
	baz=76									
Z26A	**Caprock**	**75.76**	**57**	⇓	P		**P**		**12 14 08.6**	**+0.7**
	baz=76,SNR=9.1									
Y27A	**Causey**	**75.80**	**56**	⇑	P		**P**		**12 14 08.7**	**+0.6**
	baz=76									
125A	**Gardner Draw,**	**75.81**	**58**	⇓	P		**P**		**12 14 09.0**	**+0.8**
	baz=76									
UZH	**Uzhgorod**	**75.81**	**328**	*e*P			**P**		**12 14 08.3**	**+0.6**
UZH				*e*					12 14 13.9	
TESR		**75.86**	**324**	⇑	*i*P		**P**		**12 14 08.1**	**0.0**
U31A	**Nine Bar Ranch**	**75.86**	**52**	⇓	P		**P**		**12 14 09.1**	**+0.7**
	baz=76									
NIE	**Niedzica**	**75.86**	**330**	*e*P			P		12 14 09.2	+1.1
NIE	**Niedzica**	**75.86**	**330**	*e*P			P		12 14 09.2	+1.1
CRVS	**Cervenica-Dubn**	**75.89**	**329**	*e*P			**P**		**12 14 08.2**	**0.0**
CRVS					pmax		pmax			
	comp=Z,8.0nm,1.0s									
CRVS	**Cervenica-Dubn**	**75.89**	**329**	*e*P			**P**		**12 14 08.2**	**0.0**
X28A	**Dimmitt**	**75.89**	**55**	⇓	P		**P**		**12 14 09.5**	**+0.8**
	baz=76									
AMTX	**Amarillo**	**75.92**	**54**	⇑	P		**P**		**12 14 09.6**	**+0.8**
	baz=76									
MSTX	**Muleshoe**	**75.96**	**56**	⇑	P		**P**		**12 14 09.8**	**+0.8**
	baz=76									
KSP	**Ksiaz**	**76.00**	**333**	*e*P			**P**		**12 14 09.1**	**+0.3**
KSP	**Ksiaz**	**76.00**	**333**	*e*P			**P**		**12 14 09.1**	**+0.3**
TLCR		**76.02**	**322**	⇓	P		**P**		**12 14 09.5**	**+0.5**
TLCR		**76.02**	**322**	⇓	*i*P		**P**		**12 14 09.5**	**+0.5**
MNTX	**Cornudas Mount**	**76.06**	**59**	⇑	P		**P**		**12 14 10.2**	**+0.7**
	baz=76									
ESY	**Stoneypath**	**76.07**	**345**	*e*P			**P**		**12 14 08.3**	**-0.8**
ESY	**Stoneypath**	**76.07**	**345**		P		**P**		**12 14 08.3**	**-0.8**
225A	**Deer Hill, Car**	**76.10**	**58**	⇑	P		**P**		**12 14 10.3**	**+0.4**
	baz=76									
EAB	**Aberfoyle**	**76.11**	**346**	*e*P			**P**		**12 14 08.7**	**-0.6**
EAB	**Aberfoyle**	**76.11**	**346**		P		**P**		**12 14 08.7**	**-0.6**
TRPA	**Tarpa**	**76.13**	**328**	⇑	*i*P		**P**		**12 14 10.1**	**+0.5**
BMR	**Baia Mare**	**76.15**	**327**	⇓	P		**P**		**12 14 09.3**	**-0.4**
BMR	**Baia Mare**	**76.15**	**327**	⇓	*i*P		**P**		**12 14 09.3**	**-0.4**
Z27A	**Tatum**	**76.18**	**56**	⇑	P		**P**		**12 14 10.7**	**+0.4**
	baz=76,SNR=10.0									
324A	**Moseley Ranch,**	**76.18**	**59**	⇓	P		**P**		**12 14 11.0**	**+0.6**
	baz=76									
X29A	**Tulia**	**76.23**	**55**	⇑	P		**P**		**12 14 11.2**	**+0.7**
	baz=76									
OKC	**Ostrava-Krasne**	**76.26**	**331**	*e*P			**P**		**12 14 11.0**	**+0.7**
OKC	**Ostrava-Krasne**	**76.26**	**331**	*e*P			**P**		**12 14 11.0**	**+0.7**
V31A	**Spring Creek L**	**76.30**	**52**	⇑	P		**P**		**12 14 11.6**	**+0.8**
	baz=76									
GDL2	**Guadalupe Moun**	**76.31**	**58**	*e*P			**P**		**12 14 11.8**	**+0.8**
	comp=Z,8.7nm,0.7s									
VRI	**Vrincioaia**	**76.35**	**324**	⇑	P		**P**		**12 14 11.2**	**+0.3**
VRI	**Vrincioaia**	**76.35**	**324**	⇑	*i*P		**P**		**12 14 11.2**	**+0.3**
UPC	**Upice**	**76.38**	**333**	*e*P			**P**		**12 14 11.3**	**+0.3**
UPC	**Upice**	**76.38**	**333**	*e*P			**P**		**12 14 11.3**	**+0.3**
NRDL	**Niedersach Rie**	**76.38**	**337**	*e*P			**P**		**12 14 10.9**	**+0.1**
	comp=Z,9.0nm,0.9s									
PLOR	**Plostina**	**76.39**	**324**	⇓	P		**P**		**12 14 11.0**	**-0.2**
PLOR	**Plostina**	**76.39**	**324**	⇓	*i*P		**P**		**12 14 11.0**	**-0.2**
DPC	**Dobruska-Polom**	**76.42**	**332**	*e*P			**P**		**12 14 12.0**	**+0.7**
DPC	**Dobruska-Polom**	**76.42**	**332**	*e*P			**P**		**12 14 12.0**	**+0.7**
KRLC	**Kraliky**	**76.51**	**332**	*e*P			**P**		**12 14 11.8**	**0.0**
KRLC	**Kraliky**	**76.51**	**332**	*e*P			**P**		**12 14 11.8**	**0.0**
226B	**Tecolote Peak,**	**76.51**	**58**	⇑	P		**P**		**12 14 13.0**	**+0.9**
	baz=76									
MORC	**Moravsky Berou**	**76.51**	**331**	⇓	P		**P**		**12 14 12.5**	**+0.7**
MORC	**Moravsky Berou**	**76.51**	**331**	*e*P			**P**		**12 14 12.0**	**+0.2**
	comp=Z,15nm,0.9s									
MORC	**Moravsky Berou**	**76.51**	**331**	⇓	*i*P		**P**		**12 14 12.5**	**+0.7**
325A	**Ben Ranch, Si**	**76.54**	**59**	⇓	P		**P**		**12 14 12.4**	**-0.1**
	baz=76									
CLL	**Collm**	**76.61**	**335**	*i*	P		**P**		**12 14 12.1**	**-0.2**
CLL				*e*	*PP		**pP**		**12 14 28.0**	**+2.9**
CLL					pmax		pmax			
	comp=Z,25nm,1.2s									
CLL	**Collm**	**76.61**	**335**	*e*P			**P**		**12 14 12.1**	**-0.2**
	comp=Z,26nm,1.2s									
CLL	**Collm**	**76.61**	**335**	*i*	P		**P**		**12 14 12.1**	**-0.2**
	comp=Z,25nm,1.2s									
CLL					epP		**pP**		**12 14 28.0**	**+2.9**
W31A	**Holland Ranch,**	**76.67**	**53**	⇑	P		**P**		**12 14 13.4**	**+0.4**
	baz=76									
Z28A	**Tucker Farm, M**	**76.67**	**56**	⇑	P		**P**		**12 14 13.6**	**+0.5**
	baz=76									
BRG	**Berggiesshubel**	**76.71**	**334**	*e*P			**P**		**12 14 12.8**	**0.0**
	comp=Z,5.0nm,0.9s									
BRG	**Berggiesshubel**	**76.71**	**334**	*e*P			**P**		**12 14 12.8**	**0.0**
BRG					pmax		pmax			
	comp=Z,3.0nm,0.9s									
BRG	**Berggiesshubel**	**76.71**	**334**	*e*P			**P**		**12 14 12.8**	**0.0**
	comp=Z,6.0nm,1.0s									
ESK	**Eskdalemuir**	**76.75**	**345**	*i*	P		**P**		**12 14 13.7**	**+0.8**
MALT	**Malatya**	**76.79**	**312**	⇓	P		P		12 14 14.7	+1.0
MALT	**Malatya**	**76.79**	**312**	⇓	*i*P		P		12 14 14.7	+1.0
FBE	**Freiberg**	**76.85**	**334**	*e*P			**P**		**12 14 13.8**	**+0.2**
	comp=Z,12nm,0.8s									
ECK	**Cauldkaine Hil**	**76.86**	**345**	*e*P			**P**		**12 14 13.4**	**-0.2**
ECK	**Cauldkaine Hil**	**76.86**	**345**		P		**P**		**12 14 13.4**	**-0.2**
CLZ	**Clausthal**	**76.89**	**336**	*e*P			**P**		**12 14 14.4**	**+0.5**
CLZ					pmax		pmax			
	comp=Z,18nm,1.3s									
CLZ	**Clausthal**	**76.89**	**336**	*e*P			**P**		**12 14 14.4**	**+0.5**
	comp=Z,18nm,1.3s									
425A	**Indio Mountain**	**76.95**	**59**	⇓	P		**P**		**12 14 15.1**	**+0.4**
	baz=77,SNR=7.2									
MLR	**Muntele Rosu**	**76.97**	**324**		P		**P**		**12 14 15.1**	**+0.5**
MLR	**Muntele Rosu**	**76.97**	**324**		P		**P**		**12 14 15.1**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=133,slow=19,SNR=5.1									
ISR	**Istrita**	**77.03**	**323**	⇑	P		**P**		**12 14 15.0**	**+0.2**
ISR	**Istrita**	**77.03**	**323**	⇑	*i*P		**P**		**12 14 15.0**	**+0.2**
X31A	**McDonald Ranch**	**77.06**	**53**	⇑	P		**P**		**12 14 15.4**	**+0.3**
	baz=77									
NEUB	**Neuenburg**	**77.06**	**335**	*e*P			**P**		**12 14 14.4**	**-0.4**
	comp=Z,16nm,0.6s									
Z29A	**Hungry Hill Ra**	**77.08**	**55**	⇓	P		**P**		**12 14 16.1**	**+0.7**
	baz=77									
128A	**Castleberry Fa**	**77.10**	**56**	⇓	P		**P**		**12 14 15.7**	**+0.3**
	baz=77,SNR=5.4									

VYHS	**Vyhne**	**77.17**	**330**	*e*P			**P**		**12 14 15.9**	**+0.4**
VYHS					pmax		pmax			
	comp=Z,7.0nm,1.0s									
VYHS	**Vyhne**	**77.17**	**330**	*e*P			**P**		**12 14 15.9**	**+0.4**
326A	**Caldwell Ranch**	**77.17**	**58**	⇓	P		**P**		**12 14 16.4**	**+0.5**
	baz=77									
DRGR		**77.18**	**327**	⇓	P		**P**		**12 14 15.7**	**0.0**
DRGR		**77.18**	**327**	⇓	*i*P		**P**		**12 14 15.7**	**0.0**
VRAC	**Vranov**	**77.23**	**332**		P		**P**		**12 14 16.3**	**+0.5**
VRAC	**Vranov**	**77.23**	**332**	⇓	*i*P		**P**		**12 14 16.4**	**+0.5**
VRAC	**Vranov**	**77.23**	**332**		P		**P**		**12 14 16.3**	**+0.5**
	comp=Z,11nm,0.7s,baz=92,slow=6.1,SNR=8.2									
PSZ	**Piszkesteto**	**77.28**	**329**	⇑	P		**P**		**12 14 17.1**	**+0.9**
PSZ	**Piszkesteto**	**77.28**	**329**	⇑	*i*P		**P**		**12 14 17.1**	**+0.9**
PRU	**Pruhonice**	**77.30**	**333**	*e*P			**P**		**12 14 16.8**	**+0.6**
PRU	**Pruhonice**	**77.30**	**333**	*e*P			**P**		**12 14 16.8**	**+0.6**
VOIR		**77.38**	**325**	⇓	P		P		12 14 18.0	+1.2
VOIR		**77.38**	**325**	⇓	*i*P		P		12 14 18.0	+1.2
Y31A	**Rekieta Farm,**	**77.39**	**54**	⇓	P		**P**		**12 14 17.3**	**+0.3**
	baz=77									
Z30A	**Sanderson Ranc**	**77.40**	**55**	⇓	P		**P**		**12 14 17.4**	**+0.4**
	baz=77,SNR=5.9									
228A	**UT Block 9, Go**	**77.40**	**57**	⇓	P		**P**		**12 14 17.5**	**+0.4**
	baz=77									
KESW	**Keswick, Cumbr**	**77.42**	**345**	*e*P			**P**		**12 14 16.9**	**+0.1**
KESW					AMB		AMB		12 14 17.6	
	comp=Z,24nm,0.9s									
KESW	**Keswick, Cumbr**	**77.42**	**345**		P		**P**		**12 14 16.9**	**+0.1**
KESW					AMB		AMB		12 14 17.6	
	comp=Z,24nm,0.9s									
GAL1	**Galloway**	**77.44**	**346**	*e*P			**P**		**12 14 16.2**	**-0.5**
GAL1					AMB		AMB		12 14 20.3	
	comp=Z,21

TNS					pmax	pmax				
	comp=Z,12nm,0.9s									
TNS	**Taunus Mts**	**78.89**	**337**	*eP*	**P**	**12 14 25.2 +0.2**				
	comp=Z,12nm,0.9s									
429A	**Davenport Ranc**	**78.90**	**57**	⇓P	**P**	**12 14 25.8 +0.3**				
	baz=79									
YLL	**Llanberis**	**79.00**	**345**	*eP*	**P**	**12 14 25.2 -0.3**				
YLL	**Llanberis**	**79.00**	**345**	P	**P**	**12 14 25.2 -0.3**				
529A	**Stev Forest Ra**	**79.07**	**58**	⇓P	**P**	**12 14 26.8 +0.4**				
	baz=79									
628A	**Black Gap, Mar**	**79.14**	**59**	⇑P	**P**	**12 14 27.0 +0.2**				
	baz=79									
430A	**Baggett Ranch,**	**79.16**	**57**	⇑P	**P**	**12 14 27.0 +0.1**				
	baz=79									
SFIN	**Scholer Farm**	**79.26**	**42**	⇓P	**P**	**12 14 26.8 -0.4**				
	baz=79									
232A	**Coleman**	**79.27**	**55**	⇑P	**P**	**12 14 27.5 +0.1**				
	baz=79,SNR=8.0									
BCLA	**Clavier**	**79.53**	**339**	P	**P**	**12 14 28.8 +0.4**				
	comp=Z,7.7nm,1.1s									
530A	**J-C Ranch, Com**	**79.57**	**57**	⇑P	**P**	**12 14 29.6 +0.4**				
	baz=79									
332A	**Millersview**	**79.59**	**55**	⇓P	**P**	**12 14 29.7 +0.5**				
	baz=79									
431A	**Sonora**	**79.61**	**56**	⇑P	**P**	**12 14 29.4 +0.1**				
	baz=79									
RJOB	**Jochberg**	**79.83**	**333**	*eP*	**P**	**12 14 30.8 +0.6**				
	comp=Z,9.0nm,0.6s									
MCH1	**Michaelchurch**	**79.88**	**344**	*eP*	**P**	**12 14 30.1 -0.2**				
MCH1				AMB	AMB	12 14 31.5				
	comp=Z,16nm,1.1s									
MCH1	**Michaelchurch**	**79.88**	**344**	P	**P**	**12 14 30.1 -0.2**				
MCH1				AMB	AMB	12 14 31.5				
	comp=Z,16nm,1.1s									
GIVF	**Givet**	**79.94**	**339**	*eP*	**P**	**12 14 30.8 +0.1**				
GIVF	**Givet**	**79.94**	**339**	*eP*	**P**	**12 14 30.8 +0.1**				
GIVF	**Givet**	**79.94**	**339**	*eP*	**P**	**12 14 30.8 +0.1**				
531A	**Rocksprings**	**80.02**	**57**	⇑P	**P**	**12 14 31.8 +0.2**				
	baz=80									
SOKA	**Soboth**	**80.03**	**331**	⇑*iP*	**P**	**12 14 31.4 0.0**				
	comp=Z,16nm,1.0s									
SOKA	**Soboth**	**80.03**	**331**	⇑*iP*	**P**	**12 14 31.4 0.0**				
	comp=Z,16nm,1.0s									
BAIF	**Baives**	**80.14**	**339**	*eP*	**P**	**12 14 31.9 +0.2**				
BAIF	**Baives**	**80.14**	**339**	*eP*	**P**	**12 14 31.9 +0.2**				
BAIF	**Baives**	**80.14**	**339**	*eP*	**P**	**12 14 31.9 +0.2**				
JCT	**Junction City**	**80.22**	**56**	⇓P	**P**	**12 14 33.0 +0.4**				
	baz=80									
KBA	**Koelnbreinsper**	**80.24**	**332**	⇑*iP*	**P**	**12 14 33.1 +0.5**				
KBA				pmax	pmax					
	comp=Z,34nm,1.1s									
KBA	**Koelnbreinsper**	**80.24**	**332**	⇑*iP*	**P**	**12 14 33.1 +0.5**				
	comp=Z,34nm,1.1s									
KBA	**Koelnbreinsper**	**80.24**	**332**	⇑*iP*	**P**	**12 14 33.1 +0.5**				
	comp=Z,34nm,1.1s									
532A	**Rocksprings**	**80.42**	**56**	⇑P	**P**	**12 14 33.9 +0.2**				
	baz=80									
WHTX	**Lake Whitney**	**80.43**	**54**	⇑P	**P**	**12 14 34.0 +0.3**				
	baz=80									
VTS	**Vitosha**	**80.48**	**324**	⇑P	**P**	**12 14 34.3 +0.4**				
VTS	**Vitosha**	**80.48**	**324**	⇑*iP*	**P**	**12 14 34.3 +0.4**				
631A	**Perdido Creek**	**80.56**	**57**	⇓P	**P**	**12 14 34.7 +0.3**				
	baz=80									
WATA	**Walderalm**	**80.57**	**334**	⇑*iP*	**P**	**12 14 34.8 +0.5**				
WATA				pmax	pmax					
	comp=Z,12nm,0.5s									
WATA	**Walderalm**	**80.57**	**334**	⇑*iP*	**P**	**12 14 34.8 +0.5**				
	comp=Z,12nm,0.5s									
WATA	**Walderalm**	**80.57**	**334**	⇑*iP*	**P**	**12 14 34.8 +0.5**				
	comp=Z,12nm,0.5s									
MIAR	**Mount Ida**	**80.61**	**49**	*eP*	**P**	**12 14 34.5 -0.1**				
MIAR				pmax	pmax					
	comp=Z,9.0nm,0.9s									
MIAR	**Mount Ida**	**80.61**	**49**	*eP*	**P**	**12 14 34.5 -0.1**				
	comp=Z,8.9nm,0.9s									
WTTA	**Wattenberg**	**80.61**	**334**	⇑*iP*	**P**	**12 14 35.0 +0.4**				
WTTA				pmax	pmax					
	comp=Z,48nm,1.3s									
WTTA	**Wattenberg**	**80.61**	**334**	⇑*iP*	**P**	**12 14 35.0 +0.4**				
	comp=Z,48nm,1.3s									
WTTA	**Wattenberg**	**80.61**	**334**	⇑*iP*	**P**	**12 14 35.0 +0.4**				
	comp=Z,48nm,1.3s									
BFO	**Black Forest**	**80.63**	**336**	*eP*	**P**	**12 14 34.4 -0.1**				
BFO				pmax	pmax					
	comp=Z,16nm,1.0s									
BFO	**Black Forest**	**80.63**	**336**	*eP*	**P**	**12 14 34.4 -0.1**				
	comp=Z,16nm,1.0s									
BFO	**Black Forest**	**80.63**	**336**	*eP*	**P**	**12 14 34.3 -0.2**				
	comp=Z,10nm,0.9s									
MOTA	**Moosalm**	**80.70**	**334**	⇑*iP*	**P**	**12 14 35.5 +0.4**				
MOTA				pmax	pmax					
	comp=Z,22nm,0.9s									
MOTA	**Moosalm**	**80.70**	**334**	⇑*iP*	**P**	**12 14 35.5 +0.4**				
	comp=Z,22nm,0.9s									
MOTA	**Moosalm**	**80.70**	**334**	⇑*iP*	**P**	**12 14 35.5 +0.4**				
	comp=Z,22nm,0.9s									
CDF	**Champ du Feu**	**80.85**	**337**	⇑*iP*	**P**	**12 14 35.9 +0.2**				
	comp=Z,34nm,1.0s									
CDF	**Champ du Feu**	**80.85**	**337**	⇑*iP*	**P**	**12 14 35.9 +0.2**				
CDF				pmax	pmax					
	comp=Z,34nm,1.0s									
CDF	**Champ du Feu**	**80.85**	**337**	⇑*iP*	**P**	**12 14 35.9 +0.2**				
	comp=Z,34nm,1.0s									
HEX	**Exmoor**	**80.92**	**345**	*eP*	**P**	**12 14 35.6 -0.3**				
HEX	**Exmoor**	**80.92**	**345**	P	**P**	**12 14 35.6 -0.3**				
632A	**Uvalde**	**80.95**	**57**	⇑P	**P**	**12 14 37.0 +0.5**				
	baz=81									
ECH	**Echery**	**81.06**	**337**	*eP*	**P**	**12 14 36.4 -0.4**				
ECH				pmax	pmax					
	comp=Z,16nm,0.9s									
ECH	**Echery**	**81.06**	**337**	*eP*	**P**	**12 14 36.4 -0.4**				
	comp=Z,16nm,0.9s									
FETA	**Feichten**	**81.11**	**334**	⇑*iP*	**P**	**12 14 37.0 -0.3**				
	comp=Z,7.2nm,0.9s									
FETA	**Feichten**	**81.11**	**334**	⇑*iP*	**P**	**12 14 37.0 -0.3**				
	comp=Z,7.2nm,0.9s									
HTL	**Hartland**	**81.11**	**345**	*eP*	**P**	**12 14 37.1 +0.2**				
HTL				AMB	AMB	12 14 42.3				
	comp=Z,29nm,3.6s									
HTL	**Hartland**	**81.11**	**345**	P	**P**	**12 14 37.1 +0.2**				
HTL				AMB	AMB	12 14 42.3				
	comp=Z,29nm,3.6s									
PAGF	**Fort de Pagny**	**81.14**	**338**	⇑*iP*	**P**	**12 14 37.8 +0.7**				
	comp=Z,19nm,0.8s									
PAGF	**Fort de Pagny**	**81.14**	**338**	⇑*iP*	**P**	**12 14 37.8 +0.7**				
	comp=Z,19nm,0.8s									
MEZF	**Maizieres J'vi**	**81.36**	**338**	*eP*	**P**	**12 14 38.9 +0.6**				
	comp=Z,54nm,0.9s									
MEZF	**Maizieres J'vi**	**81.36**	**338**	*eP*	**P**	**12 14 38.9 +0.6**				
	comp=Z,54nm,0.9s									
HAU	**Haudompre**	**81.48**	**337**	⇑*iP*	**P**	**12 14 39.0 0.0**				
	comp=Z,16nm,0.8s									
HAU				*eR*						
	comp=Z,96nm,22.0s									
HAU	**Haudompre**	**81.48**	**337**	⇑*iP*	**P**	**12 14 39.0 0.0**				
HAU				pmax	pmax					
	comp=Z,16nm,0.8s									
HAU	**Haudompre**	**81.48**	**337**	⇑*iP*	**P**	**12 14 39.0 0.0**				
	comp=Z,16nm,0.8s									
HINF	**Hinteralfeld**	**81.51**	**337**	⇑*iP*	**P**	**12 14 39.0 -0.2**				
	comp=Z,18nm,0.9s									
HINF	**Hinteralfeld**	**81.51**	**337**	⇑*iP*	**P**	**12 14 39.0 -0.2**				
HINF				pmax	pmax					
	comp=Z,18nm,0.9s									
HINF	**Hinteralfeld**	**81.51**	**337**	⇑*iP*	**P**	**12 14 39.0 -0.2**				
	comp=Z,18nm,0.9s									
DAVOX	**Davos/Dischmat**	**81.58**	**334**	P	**P**	**12 14 40.0 +0.3**				
DAVOX	**Davos/Dischmat**	**81.58**	**334**	P	**P**	**12 14 40.0 +0.3**				
	comp=Z,8.1nm,0.8s,baz=6.7,slow=1.4									
SFTF	**Sexfontaines**	**81.64**	**338**	⇑*iP*	**P**	**12 14 40.1 +0.3**				
	comp=Z,55nm,0.8s									
SFTF	**Sexfontaines**	**81.64**	**338**	⇑*iP*	**P**	**12 14 40.1 +0.3**				
	comp=Z,55nm,0.8s									
SKO	**Skopje**	**81.71**	**325**	*eP*	**P**	**12 14 39.8 -0.5**				
VAY	**Valandovo**	**81.80**	**324**	*eP*	**P**	**12 14 40.4 -0.3**				
TUE	**Stuetta**	**82.02**	**335**	*eP*	**P**	**12 14 42.6 +0.5**				
	comp=Z,13nm,0.8s									
FLN	**La Foliniere**	**82.44**	**342**	⇑*iP*	**P**	**12 14 44.1 +0.1**				
	comp=Z,44nm,1.0s									
FLN				*eR*						
	comp=Z,130nm,19.8s									
FLN	**La Foliniere**	**82.44**	**342**	⇑*iP*	**P**	**12 14 44.1 +0.1**				
FLN				pmax	pmax					
	comp=Z,44nm,1.0s									
FLN	**La Foliniere**	**82.44**	**342**	⇑*iP*	**P**	**12 14 44.1 +0.1**				
	comp=Z,44nm,1.0s									
LDF	**La Druitiere**	**82.52**	**341**	⇑*iP*	**P**	**12 14 44.5 +0.1**				
	comp=Z,29nm,0.9s									
LDF	**La Druitiere**	**82.52**	**341**	⇑*iP*	**P**	**12 14 44.5 +0.1**				
LDF				pmax	pmax					
	comp=Z,29nm,0.9s									
LDF	**La Druitiere**	**82.52**	**341**	⇑*iP*	**P**	**12 14 44.5 +0.1**				
	comp=Z,29nm,0.9s									
LOR	**Lormes**	**82.81**	**338**	⇑*iP*	**P**	**12 14 46.1 +0.1**				
	comp=Z,31nm,0.9s									
LOR				*eR*						
	comp=Z,195nm,22.5s									
LOR	**Lormes**	**82.81**	**338**	⇑*iP*	**P**	**12 14 46.1 +0.1**				
	comp=Z,31nm,0.9s									
CABF	**La Chapelle**	**82.83**	**337**	*eP*	**P**	**12 14 46.4 +0.2**				
	comp=Z,25nm,1.1s									
CABF	**La Chapelle**	**82.83**	**337**	*eP*	**P**	**12 14 46.4 +0.2**				
CABF				pmax	pmax					
	comp=Z,25nm,1.1s									
CABF	**La Chapelle**	**82.83**	**337**	*eP*	**P**	**12 14 46.4 +0.2**				
	comp=Z,25nm,1.1s									
GRR	**Gorron**	**82.88**	**342**	⇑*iP*	**P**	**12 14 46.7 +0.5**				
	comp=Z,58nm,1.0s									
GRR	**Gorron**	**82.88**	**342**	⇑*iP*	**P**	**12 14 46.7 +0.5**				
GRR				pmax	pmax					
	comp=Z,59nm,1.0s									
GRR	**Gorron**	**82.88**	**342**	⇑*iP*	**P**	**12 14 46.7 +0.5**				
	comp=Z,58nm,1.0s									
SSF	**Saint Saulge**	**83.09**	**339**	⇑*iP*	**P**	**12 14 47.7 +0.3**				
	comp=Z,18nm,0.8s									
SSF	**Saint Saulge**	**83.09**	**339**	⇑*iP*	**P**	**12 14 47.7 +0.3**				
SSF				pmax	pmax					
	comp=Z,18nm,0.8s									
SSF	**Saint Saulge**	**83.09**	**339**	⇑*iP*	**P**	**12 14 47.7 +0.3**				
	comp=Z,18nm,0.8s									
SGMF	**Saint Gilles**	**83.36**	**343**	*eP*	**P**	**12 14 49.2 +0.5**				
SGMF	**Saint Gilles**	**83.36**	**343**	*eP*	**P**	**12 14 49.2 +0.5**				
SGMF	**Saint Gilles**	**83.36**	**343**	*eP*	**P**	**12 14 49.2 +0.5**				
AVF	**Avril sur Loir**	**83.38**	**339**	⇑*iP*	**P**	**12 14 49.3 +0.4**				
	comp=Z,53nm,1.1s									
AVF	**Avril sur Loir**	**83.38**	**339**	⇑*iP*	**P**	**12 14 49.3 +0.4**				
AVF				pmax	pmax					
	comp=Z,53nm,1.1s									
AVF	**Avril sur Loir**	**83.38**	**339**	⇑*iP*	**P**	**12 14 49.3 +0.4**				
	comp=Z,53nm,1.1s									
SMF	**Signal de Mont**	**83.39**	**338**	⇑*iP*	**P**	**12 14 49.4 +0.4**				
	comp=Z,69nm,1.0s									
SMF	**Signal de Mont**	**83.39**	**338**	⇑*iP*	**P**	**12 14 49.4 +0.4**				
SMF				pmax	pmax					
	comp=Z,69nm,1.0s									
SMF	**Signal de Mont**	**83.39**	**338**	⇑*iP*	**P**	**12 14 49.4 +0.4**				
	comp=Z,69nm,1.0s									
ROSF	**Rostrenen**	**83.43**	**343**	⇑*iP*	**P**	**12 14 49.6 +0.5**				
	comp=Z,34nm,1.0s									
ROSF	**Rostrenen**	**83.43**	**343**	⇑*iP*	**P**	**12 14 49.6 +0.5**				
ROSF				pmax	pmax					
	comp=Z,34nm,1.0s									
ROSF	**Rostrenen**	**83.43**	**343**	⇑*iP*	**P**	**12 14 49.6 +0.5**				
	comp=Z,34nm,1.0s									
LPL	**La Plagne**	**83.65**	**336**	⇑*iP*	**P**	**12 14 51.4 +0.8**				
	comp=Z,32nm,0.9s									
LPL	**La Plagne**	**83.65**	**336**	⇑*iP*	**P**	**12 14 51.4 +0.8**				
LPL				pmax	pmax					
	comp=Z,32nm,0.9s									
LPL	**La Plagne**	**83.65**	**336**	⇑*iP*	**P**	**12 14 51.4 +0.8**				
	comp=Z,32nm,0.9s									
LPG	**La Plagne**	**83.66**	**336**	⇑*iP*	**P**	**12 14 51.6 +0.9**				
	comp=Z,32nm,0.9s									
LPG	**La Plagne**	**83.66**	**336**	⇑*iP*	**P**	**12 14 51.6 +0.9**				
LPG				pmax	pmax					
	comp=Z,32nm,0.9s									
LPG	**La Plagne**	**83.66**	**336**	⇑*iP*	**P**	**12 14 51.6 +0.9**				
	comp=Z,32nm,0.9s									
BGF	**Bois d'Agland**	**83.73**	**339**	*eP*	**P**	**12 14 51.2 +0.5**				
BGF	**Bois d'Agland**	**83.73**	**339**	*eP*	**P**	**12 14 51.2 +0.5**				
BGF	**Bois d'Agland**	**83.73**	**339**	*eP*	**P**	**12 14 51.2 +0.5**				
QUIF	**Quistinic**	**83.81**	**343**	*eP*	P	12 14 52.3 +1.3				
	comp=Z,17nm,0.9s									
QUIF	**Quistinic**	**83.81**	**343**	*eP*	P	12 14 52.3 +1.3				
QUIF				pmax	pmax					
	comp=Z,17nm,0.9s									
QUIF	**Quistinic**	**83.81**	**343**	*eP*	P	12 14 52.3 +1.3				
	comp=Z,17nm,0.9s									
APE	**Apeiranthos**	**84.05**	**319**	⇑P	**P**	**12 14 52.4 -0.1**				
APE	**Apeiranthos**	**84.05**	**319**	⇑*iP*	**P**	**12 14 52.4 -0.1**				
TCF	**Toulx Ste Croi**	**84.14**	**339**	⇑*iP*	**P**	**12 14 53.5 +0.7**				
	comp=Z,34nm,1.0s									
TCF	**Toulx Ste Croi**	**84.14**	**339**	⇑*iP*	**P**	**12 14 53.5 +0.7**				
TCF				pmax	pmax					
	comp=Z,34nm,1.0s									
TCF	**Toulx Ste Croi**	**84.14**	**339**	⇑*iP*	**P**	**12 14 53.5 +0.7**				
	comp=Z,34nm,1.0s									
MBDF	**Montbardon**	**84.36**	**336**	⇑*iP*	**P**	**12 14 54.2 +0.1**				
	comp=Z,20nm,0.9s									
MBDF	**Montbardon**	**84.36**	**336**	⇑*iP*	**P**	**12 14 54.2 +0.1**				
MBDF				pmax	pmax					
	comp=Z,20nm,0.9s									
MBDF	**Montbardon**	**84.36**	**336**	⇑*iP*	**P**	**12 14 54.2 +0.1**				
	comp=Z,20nm,0.9s									
MFF	**Saint Martin d**	**84.40**	**341**	⇑*iP*	**P**	**12 14 54.2 +0.1**				
	comp=Z,22nm,1.0s									
MFF	**Saint Martin d**	**84.40**	**341**	⇑*iP*	**P**	**12 14 54.2 +0.1**				
MFF				pmax	pmax					
	comp=Z,22nm,1.0s									
MFF	**Saint Martin d**	**84.40**	**341**	⇑*iP*	**P**	**12 14 54.2 +0.1**				
	comp=Z,22nm,1.0s									
ORIF	**Oris-en-Rattie**	**84.44**	**336**	⇑*iP*	**P**	**12 14 55.3 +0.9**				
	comp=Z,34nm,0.7s									
ORIF				*eR*						
	comp=Z,120nm,20.5s									
ORIF	**Oris-en-Rattie**	**84.44**	**336**	⇑*iP*	**P**	**12 14 55.3 +0.9**				
ORIF				pmax	pmax					
	comp=Z,34nm,0.7s									
ORIF	**Oris-en-Rattie**	**84.44**	**336**	⇑*iP*	**P**	**12 14 55.3 +0.9**				
	comp=Z,34nm,0.7s									
NWAO	**Narrogin (SRO)**	**84.53**	**208**	P	**P**	**12 14 53.7 -0.9**				
NWAO	**Narrogin (SRO)**	**84.53**	**208**	P	**P**	**12 14 53.7 -0.9**				
	comp=Z,7.6nm,0.8s,baz=44,slow=6.2,SNR=3.7									
VIVF	**Saint-Julien-l**	**84.83**	**337**	*eP*	**P**	**12 14 57.2 +0.9**				
	comp=Z,23nm,0.9s									
VIVF	**Saint-Julien-l**	**84.83**	**337**	*eP*	**P**	**12 14 57.2 +0.9**				
VIVF				pmax	pmax					
	comp=Z,23nm,0.9s									
VIVF	**Saint-Julien-l**	**84.83**	**337**	*eP*	**P**	**12 14 57.2 +0.9**				
	comp=Z,23nm,0.9s									
SBF	**Sospel**	**84.95**	**335**	*eP*	**P**	**12 14 56.8 -0.2**				
	comp=Z,53nm,1.1s									
SBF	**Sospel**	**84.95**	**335**	*eP*	**P**	**12 14 56.8 -0.2**				
SBF				pmax	pmax					
	comp=Z,53nm,1.1s									
SBF	**Sospel**	**84.95**	**335**	*eP*	**P**	**12 14 56.8 -0.2**				
	comp=Z,53nm,1.1s									
RJF	**Les Rejaudoux**	**85.23**	**339**	*eP*	**P**	**12 14 59.1 +0.8**				
	comp=Z,23nm,0.9s									
RJF				*eR*						
	comp=Z,135nm,20.8s									
RJF	**Les Rejaudoux**	**85.23**	**339**	*eP*	**P**	**12 14 59.1 +0.8**				
RJF				pmax	pmax					
	comp=Z,23nm,0.9s									
RJF	**Les Rejaudoux**	**85.23**	**339**	*eP*	**P**	**12 14 59.1 +0.8**				
	comp=Z,23nm,0.9s									
SMRF	**Simiane la Rot**	**85.39**	**336**	*eP*	P	12 15 00.3 +1.1				
SMRF	**Simiane la Rot**	**85.39**	**336**	*eP*	P	12 15 00.3 +1.1				
CAF	**Calviac**	**85.45**	**339**	⇑*iP*	P	12 15 00.6 +1.2				
	comp=Z,42nm,1.0s									
CAF	**Calviac**	**85.45**	**339**	⇑*iP*	P	12 15 00.6 +1.2				
CAF				pmax	pmax					
	comp=Z,42nm,1.0s									
CAF	**Calviac**	**85.45**	**339**	⇑*iP*	P	12 15 00.6 +1.2				
	comp=Z,42nm,1.0s									
PGF	**Pioggiola**	**85.67**	**333**	*eP*	**P**	**12 15 00.6 -0.1**				
PGF	**Pioggiola**	**85.67**	**333**	*eP*	**P**	**12 15 00.6 -0.1**				
PGF	**Pioggiola**	**85.67**	**333**	*eP*	**P**	**12 15 00.6 -0.1**				
LMR	**La Mourre**	**85.71**	**335**	*eP*	**P**	**12 15 01.0 +0.3**				
	comp=Z,59nm,1.1s									
LMR	**La Mourre**	**85.71**	**335**	*eP*	**P**	**12 15 01.0 +0.3**				
LMR				pmax	pmax					
	comp=Z,59nm,1.1s									
LMR	**La Mourre**	**85.71**	**335**	*eP*	**P**	**12 15 01.0 +0.3**				
	comp=Z,59nm,1.1s									
LFF	**La Frestale**	**85.76**	**340**	*eP*	**P**	**12 15 01.0 +0.1**				
LFF	**La Frestale**	**85.76**	**340**	*eP*	**P**	**12 15 01.0 +0.1**				
LFF	**La Frestale**	**85.76**	**340**	*eP*	**P**	**12 15 01.0 +0.1**				
LASF	**Ste Croix**	**85.77**	**337**	*eP*	P	12 15 02.2 +1.2				
	comp=Z,17nm,0.9s									
LASF	**Ste Croix**	**85.77**	**337**	*eP*	P	12 15 02.2 +1.2				
	comp=Z,17nm,0.9s									
MTLF	**Montolieu**	**86.89**	**338**	*eP*	**P**	**12 15 06.5 0.0**				
	comp=Z,46nm,1.3s									
MTLF	**Montolieu**	**86.89**	**338**	*eP*	**P**	**12 15 06.5 0.0**				
MTLF				pmax	pmax					
	comp=Z,46nm,1.3s									
MTLF	**Montolieu**	**86.89**	**338**	*eP*	**P**	**12 15 06.5 0.0**				
	comp=Z,46nm,1.3s									
ETSF	**Etsaut**	**88.00**	**340**	*eP*	**P**	**12 15 11.5 -0.5**				
ETSF	**Etsaut**	**88.00**	**340**	*eP*	**P**	**12 15 11.5 -0.5**				
ETSF	**Etsaut**	**88.00**	**340**	*eP*	**P**	**12 15 11.5 -0.5**				
ESDC	**Sonseca Array**	**91.85**	**341**	P	**P**	**12 15 28.9 -1.1**				
ESDC	**Sonseca Array**	**91.85**	**341**	P	**P**	**12 15 28.9 -1.1**				
	comp=Z,0.2nm,0.3s,baz=140,slow=3.3,SNR=5.8									
TORD	**Torodi Ar. Bea**	**115.08**	**327**	PKP	**PKPdf**	**12 21 02.7 -0.6**				
TORD	**Torodi Ar. Bea**	**115.08**	**327**	PKP	**PKPdf**	**12 21 02.7 -0.6**				
	comp=Z,0.6nm,0.8s,baz=14,slow=0.8,SNR=5.2									
DBIC	**Dimbokro**	**123.41**	**332**	PKP	**PKPdf**	**12 21 17.6 -1.7**				
DBIC	**Dimbokro**	**123.41**	**332**	PKP	**PKPdf**	**12 21 17.6 -1.7**				
	comp=Z,3.0nm,0.9s,baz=322,slow=5.8,SNR=3.8									
LPAZ	**La Paz**	**135.63**	**61**	PKP	**PKPdf**	**12 21 42.5 -0.6**				
LPAZ	**La Paz**	**135.63**	**61**	PKP	**PKPdf**	**12 21 42.5 -0.6**				
	comp=Z,1.5nm,0.8s,baz=354,slow=6.7,SNR=5.6									
BDFB	**Brasilia**	**145.53**	**35**	PKPbc	**PKPdf**	**12 21 59.3 -1.0**				
BDFB	**Brasilia**	**145.53**	**35**	PKPbc	**PKPdf**	**12 21 59.3 -1.0**				
	comp=Z,4.4nm,0.8s,baz=270,slow=3.7,SNR=5.2									
PLCA	**Paso Flores**	**149.25**	**95**	PKP	**PKPdf**	**12 22 05.2 -0.6**				
PLCA				PKPbc	**PKPbc**	**12 22 10.5 +0.5**				
PLCA				pPKPbc	**pPKPbc**	**12 22 22.7 -0.8**				
PLCA	**Paso Flores**	**149.25**	**95**	PKP	**PKPdf**	**12 22 05.2 -0.6**				
	comp=Z,7.5nm,0.7s,baz=252,slow=3.5,SNR=9.1									
PLCA				PKPbc	**PKPbc**	**12 22 10.5 +0.5**				
	comp=Z,7.5nm,0.7s,baz=243,slow=4.3,SNR=23									
PLCA				pPKPbc	**pPKPbc**	**12 22 22.7 -0.8**				
	comp=Z,4.5nm,0.8s,baz=249,slow=3.3,SNR=5.4									
CPUP	**Villa Florida**	**149.76**	**59**	PKPbc	**PKPbc**	**12 22 11.3 -0.2**				
CPUP	**Villa Florida**	**149.76**	**59**	PKPbc	**PKPbc**	**12 22 11.3 -0.2**				
	baz=302,slow=3.1									
SNAA	**Sanae**	**151.59**	**197**	*eP*	**PKPbc**	**12 22 14.3 -0.4**				
SNAA	**Sanae**	**151.59**	**197**	*e*PKPbc	**PKPbc**	**12 22 14.2 -0.4**				
SNAA	**Sanae**	**151.59**	**197**	PKPbc	**PKPbc**	**12 22 14.3 -0.4**				
	comp=Z,1.9nm,0.7s,baz=234,slow=0.6,SNR=12									
VNA2	**Neumayer--Watz**	**153.07**	**195**	*eP*	**PKPbc**	**12 22 18.3 +0.4**				
VNA3	**Neumayer Olymp**	**153.19**	**193**	*eP*	**PKPbc**	**12 22 18.2 0.0**				

BJI **20** *12:21:15.3,5.°09S×130.°11E,h45km,mB5.6/46,mb5.2/55, Ms5.2/59,Ms7 4.9/54*

IDC **20** *12:21:18.4±0.3,4.°17S×129.°72E,h0km,mb5.0/34, mb1 5.1/37,mb1mx5.0/39,mbtmp5.0/37,ML4.6/3,MS5.1/19, Ms1 5.1/19,ms1mx4.8/34,Error ellipse

FITZ Fitzroy Crossi 14.39 196 *e*Pn Pn 12 24 43.5 -3.0
181nm,1.0s
FITZ Fitzroy Crossi 14.39 196 Pn Pn 12 24 43.0 -3.5
1.9nm,0.3s,baz=23,slow=10,SNR=74
FITZ LR LR 12 30 59.7
comp=Z,6μm,19.4s,baz=17,slow=40
FITZ Fitzroy Crossi 14.39 196 P Pn 12 24 43.7 -2.7
baz=14,SNR=73
MYLDM Lahad Datu 14.60 310 P P 12 24 58.2 +3.5
KHKI Kahang-Kahang 14.65 253 P **Pn** **12 24 52.0 +2.0**
544nm,1.1s,11μm
BBKI Banjar Baru 14.89 272 P **Pn** **12 24 55.2 +2.0**
306nm,2.4s,10μm
SRBI Singaraja 14.96 254 P **Pn** **12 24 55.8 +1.8**
414nm,1.1s,11μm
DNP Denpasar 15.11 252 P **P** **12 25 02.8 +2.4**
IGBI Denpasar 15.21 252 P **P** **12 25 02.5 +1.0**
322nm,1.1s,70μm
BYJI Banyuwangi 15.81 255 P **P** **12 25 08.8 +0.6**
1μm,2.4s,24μm
PLKI Palangkaraya 15.90 277 P **P** **12 25 08.3 -0.9**
203nm,0.9s,4μm
KMMI Kalianget 15.96 259 P **P** **12 25 12.2 +2.4**
599nm,1.5s,10μm
WRAB Tennant Creek 16.27 164 *e*P Pn 12 25 06.5 -4.3
WRAB *e* 12 28 09.0
WRAB pmax pmax
comp=Z,94nm,0.7s
WRAB Tennant Creek 16.27 164 *e*Pn Pn 12 25 06.5 -4.3
comp=Z,94nm,0.7s
WRAB *e*Sn **Sn** **12 28 09.0 -1.4**
WRAB Tennant Creek 16.27 164 Pn Pn 12 25 06.2 -4.6
comp=Z,785nm,0.6s,SNR=14
WRA Warramunga Arr 16.27 164 Pn Pn 12 25 06.4 -4.5
WRA Sn **Sn** **12 28 09.3 -1.2**
WRA Warramunga Arr 16.27 164 Pn Pn 12 25 06.4 -4.5
comp=Z,2.4nm,0.3s,baz=350,slow=13,SNR=64
WRA Sn **Sn** **12 28 09.3 -1.2**
comp=Z,2.4nm,0.3s,baz=348,slow=22,SNR=5.9
COEN Coen 16.41 127 *e*Pn **Pn** **12 25 10.0 -2.7**
comp=Z,1μm,0.8s
COEN Coen 16.41 127 P **Pn** **12 25 10.4 -2.3**
baz=16,SNR=37
BLJI Banyuglugur 16.45 257 P **P** **12 25 17.4 +2.2**
comp=Z,616nm,1.2s,comp=Z,11μm
GMJI Gumukmas 16.70 255 P **P** **12 25 20.4 +2.4**
comp=Z,263nm,1.0s,comp=Z,7μm
KKM Kota Kinabalu 16.92 307 *e*Pn **Pn** **12 25 16.9 -2.2**
comp=Z,187nm,0.9s
KKM Kota Kinabalu 16.92 307 P **Pn** **12 25 19.3 +0.1**
KKM Kota Kinabalu 16.92 307 P **P** **12 25 20.8 +0.2**
comp=Z,256nm,1.3s,comp=Z,5μm
KKM Kota Kinabalu 16.92 307 P **Pn** **12 25 19.4 +0.3**
baz=17,SNR=14
RCP Roxas 17.14 336⇓ *e*P **P** **12 25 24.4 +1.5**
KRKI Karangkates 17.64 256 P P 12 25 38.1 +10
PMG Port Moresby 18.04 108 *e*P **Pn** **12 25 32.4 -0.4**
comp=Z,546nm,1.2s
PMG Port Moresby 18.04 108 P **P** **12 25 33.4 +0.6**
comp=Z,400nm,1.7s,comp=Z,8μm
PMG Port Moresby 18.04 108 P **Pn** **12 25 32.5 -0.4**
comp=Z,1.7nm,0.3s,baz=317,slow=6.9,SNR=28
PBKI Pangkalan Bun 18.11 274 P **P** **12 25 37.3 +3.7**
comp=Z,264nm,1.1s,comp=Z,5μm
SJI Sawahan 18.22 258 P **Pn** **12 25 37.1 +1.9**
comp=Z,591nm,1.5s,comp=Z,9μm
PWJI Pagerwojo 18.24 257 P **Pn** **12 25 38.1 +2.8**
comp=Z,291nm,1.1s,comp=Z,8μm
NGJI Ngawi 18.46 259 P Pn 12 25 46.9 +8.9
SBUM Sibu 18.72 290 P **Pn** **12 25 42.9 +1.8**
SBUM Sibu 18.72 290 P **P** **12 25 40.8 +0.4**
comp=Z,182nm,1.9s,comp=Z,5μm
STKI Sintang 18.74 283 P **P** **12 25 40.9 +0.3**
comp=Z,124nm,0.8s,comp=Z,22μm
QIS Mount Isa 18.88 150 P **P** **12 25 40.6 -1.4**
baz=19,SNR=123
PCJI Pacitan 18.88 257 P **Pn** **12 25 43.5 +0.4**
comp=Z,492nm,1.4s,comp=Z,5μm
SMRI Semarang 19.42 261 P Pn 12 25 54.6 +5.1
comp=Z,295nm,1.8s,comp=Z,13μm
MBWA Marble Bar 19.46 209 *e*P **P** **12 25 48.7 +0.2**
comp=Z,255nm,1.0s
MBWA Marble Bar 19.46 209 P **P** **12 25 49.1 +0.7**
SNR=36
UGM Wanagama 19.47 258 *e*Pn **Pn** **12 25 52.4 +2.2**
UGM Wanagama 19.47 258 P Pn 12 25 59.4 +9.3
UGM Wanagama 19.47 258 P **Pn** **12 25 51.4 +1.3**
baz=19,SNR=7.9
AS31 Alice Springs 19.76 169 *e*P **P** **12 25 51.9 +0.2**
ASAR Alice Springs 19.76 169 P **P** **12 25 51.8 +0.1**
ASAR S **S** **12 29 34.4 +2.4**
ASAR Alice Springs 19.76 169 P **P** **12 25 51.8 +0.1**
comp=Z,14nm,0.3s,baz=346,slow=9.8,SNR=333
ASAR S **S** **12 29 34.4 +2.4**
comp=Z,1.1nm,0.3s,baz=351,slow=23,SNR=5.7
ASAR LR LR 12 34 03.0
comp=Z,7μm,20.1s,baz=340,slow=39
BJII Banjamegara 20.18 260 P Pn 12 26 02.5 +3.9
comp=Z,162nm,1.9s,comp=Z,9μm
KSM Kuching 20.23 286⇓ *e*P **P** **12 25 56.2 -0.6**
comp=Z,217nm,0.8s
KSM LR LR
comp=Z,4μm,19.0s
KSM Kuching 20.23 286 P **P** **12 25 56.8 0.0**
KSM Kuching 20.23 286 P **P** **12 25 56.2 -0.6**
comp=Z,284nm,0.8s,comp=Z,4μm
KSM Kuching 20.23 286 P **P** **12 25 56.4 -0.4**
baz=20,SNR=35
TGJI Tegal 20.70 262 P **P** **12 26 03.5 +1.6**
comp=Z,183nm,1.6s,comp=Z,5μm
KPJI Karang Pucung 20.94 261 P Pn 12 26 13.5 +5.9
CISI Cisompet, Garu 22.07 260 P **P** **12 26 18.1 +1.4**
comp=Z,103nm,0.8s,comp=Z,3μm
TPI Tanjungpandan 22.10 273 P **P** **12 26 20.3 +3.3**
comp=Z,32nm,1.2s,comp=Z,588nm
LEM Lembang 22.18 262 P **P** **12 26 21.3 +3.3**
comp=Z,81nm,0.8s,comp=Z,5μm
CTA Charters Tower 22.54 136 P **P** **12 26 21.9 +0.4**
CTA Charters Tower 22.54 136 P **P** **12 26 21.9 +0.4**
comp=Z,56nm,0.6s,baz=318,slow=11,SNR=71
CTAO Charters Tower 22.54 136 *e*P **P** **12 26 21.8 +0.2**
CTAO pmax pmax
comp=Z,133nm,1.0s
CTAO MLR MLR
comp=Z,3μm,19.0s
CTAO Charters Tower 22.54 136 *e*P **P** **12 26 21.8 +0.2**
comp=Z,133nm,1.0s
CTAO LR LR
comp=Z,3μm,19.0s
CBJI Citeko 22.91 263 P P 12 26 35.0 +9.5
GUMO Guam 23.19 40 LR LR 12 35 15.1
comp=Z,4μm,18.6s,baz=236,slow=36
PPBI Pangkal Pinang 23.66 274 P pP 12 26 43.8 -1.2
GIRL Giralia 23.70 218 P **P** **12 26 34.0 +0.9**
baz=24,SNR=12
CGJI Cibinong 24.07 263 P **P** **12 26 37.0 +0.4**
comp=Z,62nm,1.0s,comp=Z,1μm
XMI Christmas Isla 24.65 254 P **P** **12 26 44.4 +2.5**
baz=24,SNR=4.6
XMIS Christmas Isla 24.69 254 P **P** **12 26 44.0 +1.7**
baz=24,SNR=4.9
MEEK Meekatharra 24.72 204 P **P** **12 26 42.0 -0.5**
baz=25,SNR=20
KASI Kota Agung 25.20 266 P pP 12 26 59.3 0.0
QLP Quilpie 26.22 150 P **P** **12 26 56.3 +0.3**
baz=26,SNR=24
FORT Forrest 26.48 183 *e*P **P** **12 26 58.3 -0.1**
comp=Z,178nm,0.9s
MYKOM Kota Tinggi 26.56 282 P **P** **12 27 02.4 +3.2**
MYKOM Kota Tinggi 26.56 282 P **P** **12 27 01.4 +2.2**
comp=Z,101nm,1.4s,comp=Z,2μm
KSI Kapahiang 27.10 270 P **P** **12 27 01.8 -2.4**
comp=Z,77nm,0.5s,comp=Z,7μm
MORW Morawa 27.94 206 P P 12 27 14.8 +3.3
baz=28,SNR=7.1
KMBL Kambalda 28.02 194 P **P** **12 27 12.1 -0.1**
baz=28,SNR=11
RMQ Roma 28.67 143 P P 12 27 21.3 +3.3
baz=29,SNR=8.5
TPUB Ta-pu 28.75 342 *e*P **P** **12 27 18.3 -0.4**
comp=Z,46nm,0.9s
BLDU Ballidu 29.01 204 P **P** **12 27 23.5 +2.5**
baz=29,SNR=4.7
BKNI Bangkinang 29.04 278 P pP 12 27 34.2 +0.2
FRIM Kepong 29.06 284 P **P** **12 27 22.7 +1.0**
BBOO Buckleboo 29.07 169 *e*P **P** **12 27 21.3 -0.1**
comp=Z,1μm,1.2s
BBOO Buckleboo 29.07 169 P **P** **12 27 21.6 +0.2**
baz=29,SNR=24
SSLB Suanglung 29.11 343 *e*P **P** **12 27 19.5 -2.4**
comp=Z,52nm,0.9s
EIDS Eidsvold 29.37 138 *e*P **P** **12 27 24.9 +0.7**
comp=Z,30nm,1.0s
EIDS Eidsvold 29.37 138 P P 12 27 31.1 +6.9
baz=30,SNR=4.0
KLBR Kellerberrin 29.49 201 P **P** **12 27 26.6 +1.4**
baz=29,SNR=7.5
STKA Stephens Creek 29.69 159 *e*P **P** **12 27 27.0 0.0**
comp=Z,6.8nm,0.8s
STKA Stephens Creek 29.69 159 P **P** **12 27 26.4 -0.6**
comp=Z,4.5nm,0.4s,baz=333,slow=9.8,SNR=24
STKA LR LR 12 40 31.3
comp=Z,5μm,20.1s,baz=330,slow=39
STKA Stephens Creek 29.69 159 P **P** **12 27 27.1 +0.1**
baz=30,SNR=16
YHNB Yeheng 29.83 345 *e*P **P** **12 27 26.9 -1.4**
comp=Z,65nm,1.3s
YHNB LR LR
comp=Z,1μm,20.0s
IPM Ipoh 29.96 286 *e*P **P** **12 27 28.8 -0.9**
comp=Z,146nm,0.8s
IPM Ipoh 29.96 286 P **P** **12 27 29.1 -0.6**
QIZ Qiongzhong 30.28 320 P **P** **12 27 33.0 +0.6**
QIZ pP **pP** **12 27 43.9 -1.1**
QIZ S **S** **12 32 28.3 -0.9**
QIZ pmax pmax
comp=Z,43nm,1.8s
QIZ LR LR
comp=N,2μm,16.1s
QIZ LR LR
comp=E,500nm,13.9s
QIZ LR LR
comp=Z,1μm,14.4s
HNR Honiara 30.42 101 *e*P **P** **12 27 33.6 0.0**
comp=Z,120nm,1.0s
HNR LR LR
comp=Z,2μm,19.0s
HNR Honiara 30.42 101 P **P** **12 27 33.1 -0.5**
comp=Z,16nm,0.4s,baz=291,slow=8.6,SNR=2.6
PATS Pohnpei 30.55 69 P pP 12 27 44.8 -2.6
baz=31,SNR=3.9
KULM Kulim 30.56 288 *e*P **P** **12 27 33.6 -1.3**
KULM LR LR
comp=Z,4μm,21.0s
KULM Kulim 30.56 288 P **P** **12 27 36.4 +1.5**
SISI Saibi 30.75 274 P **P** **12 27 39.0 +2.4**
comp=Z,142nm,0.9s,comp=Z,12μm
UBPT Khong Chiam 30.87 309 P P 12 27 41.0 +3.4
comp=Z,51nm,1.6s
NWAO Narrogin (SRO) 30.88 201 P **P** **12 27 37.0 -0.4**
NWAO Narrogin (SRO) 30.88 201 P **P** **12 27 37.0 -0.4**
comp=Z,7.2nm,0.6s,baz=32,slow=9.3,SNR=10
NWAO LR LR 12 41 26.4
comp=Z,4μm,19.1s,baz=26,slow=39
QZH Quanzhou 30.93 340⇓ *i*P **P** **12 27 41.0 +3.0**
QZH LR LR
comp=N,2μm,10.8s
QZH LR LR
comp=E,2μm,12.0s
QZH LR LR
comp=Z,3μm,12.0s
CMSA Cobar Meteorol 31.05 153 P **P** **12 27 41.1 +2.1**
baz=31,SNR=18
PSI Prapat 31.58 282 P **P** **12 27 42.8 -1.3**
PSI Prapat 31.58 282 P **P** **12 27 44.7 +0.7**
comp=Z,50nm,0.9s,comp=Z,872nm
PSI Prapat 31.58 282 P **P** **12 27 42.8 -1.3**
comp=Z,12nm,0.7s,baz=72,slow=6.4,SNR=11
PSI Prapat 31.58 282 P **P** **12 27 42.3 -1.7**
baz=31,SNR=10
CHBT CHBT 32.03 302 P **P** **12 27 49.4 +1.6**
comp=Z,101nm,1.2s,comp=Z,2μm
GSI Gunungsitoli 32.61 279 P P 12 28 02.6 +10
comp=Z,59nm,1.4s
GSI Gunungsitoli 32.61 279 P P 12 28 00.2 +7.3
baz=32,SNR=3.8
ARMA Armidale 33.26 144 *e*P P 12 28 04.2 +5.6
comp=Z,189nm,1.8s
ARMA Armidale 33.26 144 P P 12 28 04.2 +5.6
baz=33,SNR=5.7
COCO West Island 33.50 254 PFAKE 12 28 10.0 +9.3
COCO LR LR
comp=Z,4μm,21.0s
ARPS Mount Arapiles 34.26 163 P **P** **12 28 08.3 +1.3**
baz=34,SNR=11
YNG Young 34.60 152 P **P** **12 28 10.2 +0.2**
baz=35,SNR=14
CAN Canberra 35.72 152 *e*P **P** **12 28 20.5 +0.8**
CAN pmax pmax
comp=Z,207nm,1.7s
CAN MLR MLR
comp=Z,3μm,19.0s
CAN Canberra 35.72 152 *e*P **P** **12 28 20.4 +0.8**
comp=Z,206nm,1.7s
CAN LR LR
comp=Z,3μm,19.0s
BSI Banda Aceh 35.73 285 P **P** **12 28 22.2 +2.1**
comp=Z,57nm,0.9s
SSE Sheshan 36.04 347 P **P** **12 28 23.0 +0.7**
SSE S **S** **12 34 01.3 +3.2**
SSE pmax pmax
comp=Z,39nm,0.7s
SSE pmax pmax
comp=Z,670nm,5.5s
SSE LR LR
comp=N,1μm,11.0s
SSE LR LR
comp=E,1μm,11.0s
SSE LR LR
comp=Z,760nm,24.6s
TOO Toolangi 36.20 159 P **P** **12 28 25.9 +2.1**
baz=36,SNR=5.6
JNU Nakatsue 37.14 2 P **P** **12 28 31.0 -0.8**
JNU Nakatsue 37.14 2 P **P** **12 28 31.0 -0.8**
comp=Z,31nm,0.9s,baz=191,slow=9.2,SNR=4.4
JNU LR LR 12 43 42.0
comp=Z,4μm,19.6s,baz=168,slow=36
NJ2 Nanjing 37.52 345 *e*P **P** **12 28 34.4 -0.5**
NJ2 pP **pP** **12 28 48.5 +0.8**
NJ2 sP **sP** **12 28 54.9 +1.5**
NJ2 PP **PnPn** **12 30 03.3 +0.8**
NJ2 S **S** **12 34 22.0 +1.4**
NJ2 sS **sS** **12 34 44.0 +1.9**
NJ2 pmax pmax
comp=Z,40nm,0.8s
NJ2 pmax pmax
comp=Z,950nm,5.0s
NJ2 LR LR
comp=N,570nm,19.3s
NJ2 LR LR
comp=E,820nm,21.1s
NJ2 LR LR
comp=Z,2μm,20.0s
WHN Wuhan 37.56 338 P **P** **12 28 36.0 +0.7**
WHN S **S** **12 34 22.4 +1.1**
WHN LR LR
comp=N,2μm,4.8s
WHN LR LR
comp=E,1μm,4.1s
WHN LR LR
comp=Z,3μm,15.6s
GYA Guiyang 37.80 325⇑ *i*P **P** **12 28 39.8 +2.3**
GYA pP **pP** **12 28 52.3 +2.0**
GYA PP **PnPn** **12 30 09.3 +3.2**
GYA S **S** **12 34 27.8 +2.5**
GYA sS **sS** **12 34 49.6 +2.8**
GYA pmax pmax
comp=Z,40nm,0.9s
GYA pmax pmax
comp=Z,150nm,5.0s
GYA LR LR
comp=N,880nm,17.4s
GYA LR LR
comp=E,760nm,18.0s
GYA LR LR
comp=Z,960nm,17.8s
CM31 Chiang Mai Arr 37.80 308 *e*P **P** **12 28 37.2 -0.3**
comp=Z,63nm,0.9s
CMAR Chiang Mai Arr 37.80 308 P **P** **12 28 37.5 -0.1**
CMAR PcP **PcP** **12 30 54.4 +0.8**
CMAR ScP **ScP** **12 34 42.5 +5.2**
CMAR Chiang Mai Arr 37.80 308 P **P** **12 28 37.5 -0.1**
comp=Z,26nm,0.8s,baz=139,slow=7.5,SNR=66
CMAR PcP **PcP** **12 30 54.4 +0.8**
comp=Z,7.4nm,0.8s,baz=158,slow=3.1,SNR=4.4
CMAR ScP **ScP** **12 34 42.5 +5.2**
comp=Z,4.5nm,1.0s,baz=148,slow=3.1,SNR=7.4
CMMT Chiang Mai 37.99 308 P **P** **12 28 39.4 +0.2**
comp=Z,115nm,1.6s,comp=Z,2μm
CHTO Chiang Mai 37.99 308 *e*P **P** **12 28 38.8 -0.4**
CHTO pmax pmax
comp=Z,117nm,1.0s
CHTO MLR MLR
comp=Z,1μm,19.0s
CHTO Chiang Mai 37.99 308 *e*P **P** **12 28 38.8 -0.4**
comp=Z,117nm,1.0s
CHTO LR LR
comp=Z,1μm,19.0s
CHTO Chiang Mai 37.99 308 P **P** **12 28 39.4 +0.2**
SNR=28
CHTO Chiang Mai 37.99 308 P **P** **12 28 38.9 -0.3**
JHJ Hachijo jima 2 38.32 14 LR LR 12 42 38.4
comp=Z,5μm,19.7s,baz=76,slow=33
KMI Kunming 39.22 319 P **P** **12 28 49.9 +0.3**
KMI pP **pP** **12 29 03.5 +1.0**
KMI sP **sP** **12 29 09.5 +1.3**
KMI PP **PnPn** **12 30 23.4 +0.1**
KMI S **S** **12 34 48.3 +1.3**
KMI sS sS 12 35 11.8 +3.2
KMI pmax pmax
comp=Z,370nm,3.7s
KMI LR LR
comp=N,980nm,15.4s
KMI LR LR
comp=E,1μm,16.6s
KMI LR LR
comp=Z,850nm,23.8s
DZM Mont Dzumac 39.74 120 *e*P **P** **12 28 53.6 -0.3**
comp=Z,123nm,1.4s
DZM *e*LQ LQ 12 38 00.1
comp=Z,2μm,25.4s
DZM *e*LR LR 12 39 48.3
comp=Z,2μm,24.8s
MJAR Matsushiro Arr 41.30 10 P **P** **12 29 04.6 -1.8**
MJAR Matsushiro Arr 41.30 10 P **P** **12 29 04.6 -1.8**
comp=Z,23nm,0.8s,baz=191,slow=10,SNR=54
MJAR LR LR 12 43 25.5
comp=Z,1μm,21.1s,baz=200,slow=32
MAJO Matsushiro 41.30 10 *e*P **P** **12 29 04.3 -2.1**
MAJO pmax pmax
comp=Z,43nm,0.7s
MAJO MLR MLR
comp=Z,2μm,19.0s
MAJO Matsushiro 41.30 10 *e*P **P** **12 29 04.3 -2.1**
comp=Z,43nm,0.7s
MAJO LR LR
comp=Z,2μm,19.0s
MAT Matsushiro 41.30 10 P **P** **12 29 04.4 -2.0**
MAT S **S** **12 35 16.4 -0.9**
KSAR Wonju Array Be 41.47 358 P **P** **12 29 07.2 -0.5**
KSRS Korea Array 41.48 358 P **P** **12 29 07.2 -0.6**
comp=Z,12nm,0.8s,baz=175,slow=9.1,SNR=14
KSRS LR LR 12 44 53.8
comp=Z,2μm,21.5s,baz=171,slow=34
INCN Inchon 41.57 356 PFAKE 12 29 20.0 +11
INCN LR LR
comp=Z,2μm,19.0s
TAU Tasmania Unive 41.59 160 PFAKE 12 29 20.0 +11
TAU LR LR
comp=Z,6μm,19.0s
XAN Xi'an 42.82 334 P **P** **12 29 17.0 -1.9**
XAN pP pP 12 29 26.3 -5.6
XAN SS SS 12 38 54.8 +2.1
XAN pmax pmax
comp=Z,6.0nm,1.0s
XAN pmax pmax
comp=Z,76nm,4.9s
XAN LR LR
comp=N,960nm,29.6s
XAN LR LR
comp=E,370nm,21.5s
XAN LR LR
comp=Z,350nm,32.7s
CD2 Chengdu 42.84 326 P **P** **12 29 20.8 +1.7**
CD2 pP **pP** **12 29 33.9 +1.8**
CD2 sP **sP** **12 29 39.8 +2.1**
CD2 PP **PP** **12 31 03.5 +4.2**
CD2 S **S** **12 35 41.9 +1.6**
CD2 sS **sS** **12 36 04.3 +2.3**
CD2 pmax pmax
comp=Z,40nm,0.9s
CD2 pmax pmax
comp=Z,650nm,7.4s
CD2 LR LR
comp=N,2μm,12.2s
CD2 LR LR
comp=E,2μm,14.2s
CD2 LR LR
comp=Z,2μm,14.2s
WAKE Wake Island 43.16 56 PFAKE 12 29 30.0 +8.2
WAKE LR LR
comp=Z,3μm,21.0s
TARA Tarawa 43.49 84 PFAKE 12 29 40.0 +15
TARA LR LR
comp=Z,2μm,22.0s
DL2 Dalian 43.55 351 P P 12 29 31.3 +6.7
DL2 S S 12 36 02.5 +12
DL2 pmax pmax
comp=Z,80nm,1.4s
DL2 pmax pmax
comp=Z,1μm,3.1s
DL2 LR LR
comp=N,1μm,18.6s
DL2 LR LR
comp=Z,720nm,20.6s
BJI Beijing 45.76 345 P **P** **12 29 41.4 -0.8**
BJI PP **PP** **12 31 31.3 +1.0**
BJI S **S** **12 36 24.8 +2.4**
BJI SS **SS** **12 39 41.5 -6.1**
BJI pmax pmax
comp=Z,30nm,0.7s
BJI pmax pmax
comp=Z,280nm,5.2s
BJI LR LR
comp=N,660nm,21.8s
BJI LR LR
comp=E,650nm,25.4s
BJI LR LR
comp=Z,490nm,32.3s
SNY Shenyang 46.16 354⇑ P **P** **12 29 47.8 +2.5**
SNY pmax pmax
comp=Z,37nm,2.5s
SNY pmax pmax
comp=Z,480nm,5.1s
SNY LR LR
comp=N,2μm,21.0s
SNY LR LR
comp=E,600nm,21.0s
SNY LR LR
comp=Z,1μm,21.0s
LZH Lanzhou 46.84 331 P **P** **12 29 50.9 -0.2**
LZH pP **pP** **12 30 03.8 -0.4**
LZH sP **sP** **12 30 08.5 -1.3**
LZH S **S** **12 36 37.1 -1.4**
LZH sS **sS** **12 36 59.0 -1.4**
LZH pmax pmax
comp=Z,49nm,1.0s
LZH pmax pmax
comp=Z,370nm,4.0s
LZH LR LR
comp=N,1μm,11.6s
LZH LR LR
comp=E,850nm,13.6s
LZH LR LR
comp=Z,1μm,16.8s
VLA Vladivostok 47.14 2⇑ *e*P **P** **12 29 51.9 -1.1**
VLA 12 31 21.7
VLA 12 31 43.1
VLA *e*S **S** **12 36 43.5 +1.4**
VLA pmax pmax
comp=Z,20nm,1.0s
ERM Erimo 47.59 14 *i* P **P** **12 29 58.4 +1.9**
ERM Erimo 47.59 14 *e*P **P** **12 29 56.4 -0.1**
comp=Z,34nm,1.0s
ERM LR LR
comp=Z,2μm,22.0s
HHC Hu-ho-hao-te 47.83 341 *e*P **P** **12 29 57.4 -1.2**
HHC sP **sP** **12 30 14.5 -2.8**
HHC PcP **PcP** **12 31 25.1 -1.7**
HHC PP **PP** **12 31 48.8 -2.1**

HHC ScP **ScP** **12 35 14.4 -3.0**
HHC PcS **PcS** **12 35 19.6 -2.8**
HHC S **S** **12 36 50.5 -1.7**
HHC ScS **ScS** **12 39 43.5 -4.5**
HHC pmax pmax
comp=Z,50nm,0.6s
HHC pmax pmax
comp=Z,1μm,6.2s
HHC LR LR
comp=N,1μm,16.2s
HHC LR LR
comp=E,880nm,16.1s
HHC LR LR
comp=Z,1μm,16.1s
CN2 Changchun 47.94 356 *e*P **P** **12 30 00.3 +1.1**
CN2 *ep*P **pP** **12 30 12.8 +0.4**
CN2 *es*P **sP** **12 30 17.9 -0.1**
CN2 *e*S **S** **12 36 56.3 +2.9**
CN2 SS **SS** **12 40 17.9 -5.0**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,2μm,17.0s
CN2 LR LR
comp=E,1μm,17.0s
CN2 LR LR
comp=Z,1μm,17.0s
BTO Baotou 48.12 340 *e*P **P** **12 30 00.8 0.0**
USRK Ussuriysk Arra 48.23 2 P **P** **12 30 00.7 -0.7**
comp=Z,11nm,0.7s,baz=179,slow=6.1,SNR=15
USRK LR LR 12 48 23.6
comp=Z,1μm,21.2s,baz=158,slow=34
MDJ Mudanjiang 48.60 360 P **P** **12 30 05.4 +1.1**
MDJ pP **pP** **12 30 16.0 -1.5**
MDJ sP **sP** **12 30 21.5 -1.6**
MDJ S **S** **12 37 03.0 +0.3**
MDJ SS **SS** **12 40 33.8 +0.3**
MDJ pmax pmax
comp=Z,23nm,2.2s
MDJ pmax pmax
comp=Z,410nm,4.6s
MDJ LR LR
comp=N,1μm,39.9s
MDJ LR LR
comp=E,880nm,45.8s
MDJ LR LR
comp=Z,2μm,37.0s
MSVF Nonsavu 49.13 110 *e*P **P** **12 30 09.2 +0.2**
MSVF pmax pmax
comp=Z,40nm,1.4s
MSVF MLR MLR
comp=Z,1μm,20.0s
MSVF Nonsavu 49.13 110 *e*P **P** **12 30 09.2 +0.2**
comp=Z,40nm,1.4s
MSVF LR LR
comp=Z,1μm,20.0s
FUNA Funafuti 49.30 98 PFAKE 12 30 20.0 +10
FUNA LR LR
comp=Z,8μm,19.0s
ASAJ Asahikawa 49.47 12 P **P** **12 30 11.3 +0.4**
ASAJ Asahikawa 49.47 12 P **P** **12 30 11.3 +0.4**
comp=Z,8.0nm,0.6s,baz=193,slow=13,SNR=8.2
LSA Lhasa 50.04 315 P **P** **12 30 15.6 -0.5**
YUK Yuzh-Kuril'sk 50.16 15 *i* P **P** **12 30 15.0 -1.2**
YUK *i* 12 32 09.4
YUK *i* PPP PPP 12 33 14.3
YUK *i* S **S** **12 37 21.6 -2.9**
YUK *i* SSS SSS 12 42 26.6
YUK pmax pmax
comp=E,851nm,1.5s
YUK pmax pmax
comp=Z,688nm,1.5s
YUK pmax pmax
comp=N,573nm,1.5s
YUK pmax pmax
comp=Z,854nm,1.5s
YUK MLR MLR
comp=E,160nm,20.0s
YUK MLR MLR
comp=Z,696nm,20.0s
YUK MLR MLR
comp=N,279nm,20.0s
ODAN Odare 51.27 310 *e*P **P** **12 30 24.1 -1.1**
comp=N,250nm,0.9s
TAPN Taplejung 51.28 310 *e*P **P** **12 30 24.4 -0.9**
comp=N,86nm,0.5s
GTA Gaotai 51.43 330 ⇑P **P** **12 30 25.4 -0.6**
GTA pP **pP** **12 30 38.3 -1.0**
GTA sP **sP** **12 30 43.3 -1.6**
GTA PP **PP** **12 32 23.9 +0.2**
GTA S **S** **12 37 41.5 -1.1**
GTA sS **sS** **12 38 02.8 -2.0**
GTA pmax pmax
comp=Z,16nm,1.3s
GTA pmax pmax
comp=Z,240nm,5.2s
GTA LR LR
comp=N,690nm,22.3s
GTA LR LR
comp=E,690nm,22.3s
GTA LR LR
comp=Z,1μm,21.9s
RAMN Ramite 51.93 309 *e*P **P** **12 30 29.4 -0.7**
comp=Z,219nm,0.6s
YSS Yuzh-Sakhalins 52.22 11 *e*P **P** **12 30 33.0 +1.4**
YSS *e**SP **sP** **12 30 50.0 -0.4**
YSS *e* 12 31 46.8
YSS *e*S **S** **12 37 54.0 +1.1**
YSS *e*PS **pS** **12 38 05.0 -3.2**
YSS *e* 12 40 16.0
YSS *e*SSS SSS 12 43 12.0
YSS MLR MLR
comp=Z,1μm,18.0s
YSS MLR MLR
comp=N,700nm,19.0s
YSS MLR MLR
comp=E,600nm,20.0s
HABR Khabarovsk 52.66 4 *e*P **P** **12 30 36.3 +1.5**
HABR *e**SP sP 12 30 47.2 -6.5
HABR *e* 12 32 33.1
HABR *e*PPP PPP 12 33 37.7
HABR *e*S **S** **12 38 03.1 +4.2**
HABR *e**SS **sS** **12 38 17.1 -4.0**
HABR *e* 12 40 20.1
HABR pmax pmax
comp=N,13nm,0.9s
HABR pmax pmax
comp=E,36nm,1.9s
HABR pmax pmax
comp=Z,68nm,2.1s
HABR MLR MLR
comp=Z,1μm,17.0s
GUN Gumba 52.96 310 *e*P **P** **12 30 36.7 -1.2**
comp=Z,190nm,0.7s
PKI Pulchoki 53.15 309 *e*P **P** **12 30 37.9 -1.4**
PKIN Phulchoki 53.17 309 *e*P **P** **12 30 38.4 -0.9**
KKN Kakani 53.36 309 *e*P **P** **12 30 39.3 -1.4**
comp=Z,132nm,0.8s
DMN Daman 53.41 309 *e*P **P** **12 30 40.1 -1.0**
RPZ Rata Peaks 53.60 144 LR LR 12 54 01.1
comp=Z,2μm,19.2s,baz=305,slow=37
SNZO South Karori 54.58 139 PFAKE 12 31 00.0 +11
SNZO LR LR
comp=Z,3μm,19.0s
KOLN Koldanda 54.66 308 *e*P **P** **12 30 49.2 -0.9**
comp=Z,191nm,0.7s
DANN Dangsing 54.80 309 *e*P **P** **12 30 50.0 -1.3**
comp=Z,266nm,0.9s
HYB Hyderabad 54.90 295 *i* P P 12 30 48.0 -3.8
HYB *e*S **S** **12 38 28.0 -2.3**
PYUN Piuthan 55.29 308 *e*P **P** **12 30 53.7 -1.0**
comp=Z,627nm,1.1s
ULN Ulaanbaatar 55.55 342 *e*P **P** **12 30 56.0 -0.1**
comp=Z,52nm,0.9s
ULN LR LR
comp=Z,867nm,20.0s
ULN Ulaanbaatar 55.55 342 P **P** **12 30 56.4 +0.3**
SNR=29
JBP Jabalpur 55.64 302 *e*P **P** **12 30 56.0 -1.0**
JBP *ex* x 12 36 40.2
JBP *i* x x 12 55 36.1
comp=Z,3μm,22.1s
SONM Songino Array 55.73 341 P **P** **12 30 57.2 -0.2**
SONM ⇑*e* 13 01 11.1
SONM Songino Array 55.73 341 P **P** **12 30 57.2 -0.2**
comp=Z,24nm,0.9s,baz=158,slow=5.1,SNR=85
SONM PKP2bc 13 01 11.1
comp=Z,0.3nm,0.6s,baz=134,slow=4.3,SNR=3.6
DGAR Diego Garcia 57.06 264 PFAKE 12 31 20.0 +13
DGAR LR LR
comp=Z,2μm,21.0s
CIT Chita 57.68 348 *e*P **P** **12 31 11.4 +0.3**
CIT *e* 12 32 01.9
ZAK Zakamensk 58.96 341 *e*P **P** **12 31 19.3 -0.8**
ZAK pmax pmax
comp=Z,17nm,1.4s
TLY Talaya 59.96 342 *e*P **P** **12 31 26.8 0.0**
TLY *e*S **S** **12 39 39.8 +4.2**
TLY pmax pmax
comp=Z,17nm,0.9s
MIDW Midway 60.20 54 PFAKE 12 31 40.0 +11
MIDW LR LR
comp=Z,2μm,20.0s
IRK Irkutsk 60.25 342 ⇑*i* P **P** **12 31 28.4 -0.4**
IRK pmax pmax
comp=Z,119nm,3.4s
MOY Mondy 60.82 340 *e*P **P** **12 31 33.1 +0.3**
MOY pmax pmax
comp=Z,102nm,1.6s
WMQ Urumqi 60.94 326 P **P** **12 31 34.0 +0.3**
WMQ pP **pP** **12 31 47.0 -0.3**
WMQ sP **sP** **12 31 52.0 -0.8**
WMQ PcP **PcP** **12 32 17.0 +0.2**
WMQ PP **PP** **12 33 50.0 +1.5**
WMQ ScP **ScP** **12 36 13.0 -1.5**
WMQ S **S** **12 39 47.0 -1.5**
WMQ sS **sS** **12 40 09.0 -2.2**
WMQ ScS SKKSac 12 41 17.0 -3.9
WMQ SS **SS** **12 43 49.0 +0.3**
WMQ pmax pmax
comp=Z,54nm,1.0s
WMQ pmax pmax
comp=Z,460nm,6.0s
WMQ LR LR
comp=N,780nm,18.0s
WMQ LR LR
comp=E,570nm,18.0s
WMQ LR LR
comp=Z,640nm,18.0s
CLNS Chul'man 60.97 357 *e*P **P** **12 31 32.1 -1.5**
CLNS *e**PP pP 12 31 39.6 -7.6
CLNS *e* 12 33 50.5
CLNS *e* 12 35 18.9
CLNS *e* 12 41 18.2
CLNS pmax pmax
comp=N,11nm,1.4s
CLNS pmax pmax
comp=Z,18nm,0.9s
CLNS pmax pmax
comp=E,3.0nm,0.7s
CLNS pmax pmax
comp=N,6.0nm,1.0s
CLNS pmax pmax
comp=Z,14nm,1.8s
CLNS pmax pmax
comp=E,12nm,2.1s
CLNS MLR MLR
comp=Z,599nm,16.0s
CLNS MLR MLR
comp=N,408nm,17.0s
CLNS MLR MLR
comp=E,226nm,12.0s
SMLA Simla 61.17 309 *i* P **P** **12 31 34.5 -1.0**
SMLA AMb AMB 12 31 35.8
comp=Z,241nm,0.5s
SMLA *i* x x 12 39 49.3
PETK Petropavlovsk- 61.77 19 P **P** **12 31 38.7 -0.4**
PETK Petropavlovsk- 61.77 19 P **P** **12 31 38.7 -0.4**
PETK Petropavlovsk- 61.77 19 P **P** **12 31 38.7 -0.4**
comp=Z,12nm,0.7s,baz=189,slow=4.7,SNR=10
PETK LR LR 12 56 21.6
comp=Z,709nm,21.7s,baz=205,slow=34
PET Petropavlovsk 62.01 19 *e*P **P** **12 31 41.2 +0.6**
PET *e*S **S** **12 40 05.3 +3.8**
PET *e*SS **SS** **12 44 07.2 +2.3**
CASY Casey 63.41 189 PFAKE 12 32 00.0 +10
CASY LR LR
comp=Z,3μm,20.0s
MK31 Makanchi Array 65.77 326*ce*P **P** **12 32 05.1 -0.5**
MK31 pmax pmax
comp=Z,77nm,1.0s
MK31 Makanchi Array 65.77 326 *e*P **P** **12 32 05.0 -0.5**
MKAR Makanchi Array 65.77 326 P **P** **12 32 05.1 -0.5**
MKAR Makanchi Array 65.77 326 P **P** **12 32 05.1 -0.5**
MKAR P'P'ab **P'P'ab** **13 00 52.4 +2.1**
MKAR Makanchi Array 65.77 326 P **P** **12 32 05.1 -0.5**
comp=Z,24nm,0.7s,baz=116,slow=8.0,SNR=95
MKAR PKP2ab 13 00 52.4
comp=Z,0.8nm,0.9s,baz=284,slow=4.9,SNR=5.2
KSH Kashi 65.81 317 ⇑*i* P **P** **12 32 06.0 -0.2**
KSH pP **pP** **12 32 19.1 -0.7**
KSH sP **sP** **12 32 24.0 -1.3**
KSH PcP **PcP** **12 32 35.5 -1.5**
KSH PP **PP** **12 34 33.9 +2.3**
KSH ScP 12 36 34.0
KSH PcS 12 36 40.6
KSH S S 12 40 43.3 -6.3
KSH sS **sS** **12 41 12.8 +0.3**
KSH ScS **SKSac** **12 41 53.8 -4.4**
KSH pmax pmax
comp=Z,5.0nm,0.7s
KSH LR LR
comp=N,390nm,7.2s
KSH LR LR
comp=E,870nm,13.3s
KSH LR LR
comp=Z,910nm,8.7s
YAK Yakutsk 66.05 360 *e*P **P** **12 32 05.9 -1.1**
YAK *e**PP **pP** **12 32 19.0 -1.7**
YAK *e* 12 32 37.5
YAK *e* 12 34 27.9
YAK *e*PPP PPP 12 36 09.1
YAK *e*S **S** **12 40 50.0 -1.3**
YAK *e**SS sS 12 41 07.2 -7.0
YAK *e* 12 42 01.8
YAK *e*SS **SS** **12 45 05.7 -1.9**
YAK pmax pmax
comp=Z,31nm,0.7s
YAK pmax pmax
comp=Z,219nm,5.6s
YAK smax smax
comp=N,717nm,6.6s
YAK smax smax
comp=E,568nm,5.0s
YAK MLR MLR
comp=Z,1μm,18.0s
YAK MLR MLR
comp=E,428nm,19.0s
YAK MLR MLR
comp=N,756nm,16.0s
MIR Mirnyy 67.26 195 ⇓*i* P P 12 32 18.0 +3.3
MIR *e* 12 34 40.0
MIR pmax pmax
comp=Z,42nm,1.0s
PAF Port-aux-Franc 67.31 218 PFAKE 12 32 30.0 +15
PAF LR LR
comp=Z,3μm,19.0s
KZA Kyzart 67.51 319 P **P** **12 32 17.4 +0.1**
SNR=24
TKM2 Tokmak 2 67.69 320 *i* P **P** **12 32 17.7 -0.5**
TKM2 Tokmak 2 67.69 320 PFAKE 12 32 30.0 +12
TKM2 LR LR
comp=Z,483nm,21.0s
TKM2 Tokmak 2 67.69 320 P **P** **12 32 17.7 -0.5**
SNR=49
KBK Karagaybulak 67.98 319 P **P** **12 32 19.8 -0.1**
SNR=6.3
AAK Ala-Archa 68.26 319 *e*P **P** **12 32 21.3 -0.4**
AAK pmax pmax
comp=Z,19nm,0.9s
AAK MLR MLR
comp=Z,457nm,22.0s
AAK Ala-Archa 68.26 319 *e*P **P** **12 32 21.3 -0.4**
comp=Z,19nm,0.9s
AAK LR LR
comp=Z,457nm,22.0s
AAK Ala-Archa 68.26 319 P **P** **12 32 21.9 +0.2**
SNR=17
AAK Ala-Archa 68.26 319 P **P** **12 32 22.0 +0.2**
SNR=10
FRU Bishkek 68.28 319 *e*P **P** **12 32 22.0 +0.4**
FRU *e* 12 32 44.0
FRU pmax pmax
comp=Z,80nm,2.0s
AML Almayashu 68.56 318 P **P** **12 32 23.6 -0.2**
SNR=44
USP Osepenovka 68.56 320 P **P** **12 32 22.9 -0.5**
SNR=30
EKS2 Erkin-Say 68.75 319 PFAKE 12 32 40.0 +15
EKS2 LR LR
comp=Z,581nm,22.0s
EKS2 Erkin-Say 68.75 319 P **P** **12 32 24.5 -0.2**
SNR=11
KBL Kabul 68.79 309 *e*P **P** **12 32 24.5 -0.8**
KBL pmax pmax
comp=Z,28nm,0.9s
KBL Kabul 68.79 309 *e*P **P** **12 32 24.5 -0.8**
comp=Z,28nm,0.9s
ZAA0 Zalesovo Array 68.98 333 *e*P **P** **12 32 24.3 -1.4**
ZALV Zalesovo Beam 68.98 333 P **P** **12 32 24.6 -1.1**
ZALV Zalesovo Beam 68.98 333 P **P** **12 32 24.6 -1.1**
ZALV ⇑*e* 13 00 44.5
ZALV Zalesovo Beam 68.98 333 P **P** **12 32 24.6 -1.1**
comp=Z,15nm,0.6s,baz=107,slow=5.1,SNR=58
ZALV PKP2bc 13 00 44.5
comp=Z,0.7nm,0.6s,baz=264,slow=3.0,SNR=5.4
SEY Seymchan 69.12 11 ⇓*e*P **P** **12 32 27.2 +0.8**
KURBB Kurchatov Arra 70.02 328 P **P** **12 32 31.6 -0.5**
comp=Z,43nm,0.8s,baz=131,slow=5.2,SNR=145
KURK Kurchatov 70.02 328*c* *i*P **P** **12 32 31.6 -0.6**
KURK pmax pmax
comp=Z,92nm,0.8s
KURK Kurchatov 70.02 328 *e*P **P** **12 32 31.3 -0.8**
comp=Z,149nm,0.8s
KURK LR LR
comp=Z,685nm,20.0s
KURK Kurchatov 70.02 328 P **P** **12 32 32.0 -0.1**
SNR=77
NVS Novosibirsk 70.27 334 ⇑*i* P **P** **12 32 32.5 -1.1**
NVS *i* S **S** **12 41 38.8 -3.1**
NVS *e* 12 42 32.4
NVS pmax pmax
comp=Z,174nm,2.1s
NVS pmax pmax
comp=N,93nm,2.0s
NVS pmax pmax
comp=E,86nm,2.0s
NVS smax smax
comp=N,14nm,1.9s
NVS smax smax
comp=E,66nm,2.6s
KK31 Karatay Array 71.09 318*ce*P **P** **12 32 38.0 -1.0**
KK31 pmax pmax
comp=Z,39nm,1.2s
KKAR Karatay Array 71.09 318 *e*P **P** **12 32 38.1 -0.9**
KKAR pmax pmax
comp=Z,13nm,0.8s
KKAR Karatay Array 71.09 318 *e*P **P** **12 32 38.1 -0.9**
comp=Z,13nm,0.8s
SMDO Samad 74.93 295 P **P** **12 33 03.6 +1.5**
SNR=7.5
VOSK Vostochnaya 75.12 327 P **P** **12 33 01.6 -0.9**
VOSK pmax pmax
comp=Z,70nm,1.3s
VNDA Vanda 75.24 173 P **P** **12 33 03.5 +0.7**
VNDA Vanda 75.24 173 P **P** **12 33 03.5 +0.7**
comp=Z,2.9nm,0.7s,baz=308,slow=8.1,SNR=6.2
VNDA LR LR 13 06 34.3
comp=Z,2μm,18.9s,baz=337,slow=36
BVA0 Borovoye Array 75.58 328 *i* P **P** **12 33 04.6 -0.6**
BVA0 pmax pmax
comp=Z,16nm,1.1s
BVAR Borovoye Array 75.58 328 P **P** **12 33 04.7 -0.4**
BVAR Borovoye Array 75.58 328 P **P** **12 33 04.7 -0.4**
BVAR Borovoye Array 75.58 328 P **P** **12 33 04.7 -0.4**
comp=Z,25nm,0.8s,baz=133,slow=6.5,SNR=84
BSY Bisya 75.64 295 P **P** **12 33 05.6 -0.5**
SNR=7.4
BRVK Borovoye 75.65 328*c* *i*P **P** **12 33 05.1 -0.4**
BRVK pmax pmax
comp=Z,71nm,1.0s
BRVK Borovoye 75.65 328 *e*P **P** **12 33 05.2 -0.3**
comp=Z,83nm,1.0s
BRVK LR LR
comp=Z,474nm,19.0s
BRVK Borovoye 75.65 328 P **P** **12 33 05.5 -0.1**
SNR=50
BRVK Borovoye 75.65 328 P **P** **12 33 05.9 +0.4**
comp=Z,333nm,1.0s,SNR=26
HOQ Hoqain 75.69 295 P **P** **12 33 06.3 -0.1**
SNR=12
IMYA Miami 76.28 309 *e*P **P** **12 33 09.1 -0.7**
ZRNK Zerenda 76.29 327 *i* P **P** **12 33 08.7 -0.5**
ZRNK pmax pmax
comp=Z,70nm,0.9s
ARQ Araqi 76.36 295 P **P** **12 33 10.0 -0.3**
SNR=9.0
BILL Bilibino 76.47 13 *i* P **P** **12 33 10.7 +0.8**
BILL *e* 12 33 21.3
BILL pmax pmax
comp=Z,19nm,2.7s
BILL MLR MLR
comp=Z,300nm,21.0s
BILL Bilibino 76.47 13 PFAKE 12 33 20.0 +10
BILL LR LR
comp=Z,935nm,20.0s
ISRO Mashad 76.77 309 *e*P **P** **12 33 11.8 -0.6**
HATD Hatta, Dubai 76.98 297 P **P** **12 33 13.3 -0.4**
SNR=19
ASHO Ashiyiah 77.03 296 P **P** **12 33 14.2 +0.2**
SNR=16
IAKL Akhelmad 77.40 309 *e*P P 12 33 12.3 -3.9
NAZ Nazwa, Dubai 77.44 297 P **P** **12 33 15.7 -0.5**
SNR=12
MAW Mawson 77.45 201 P **P** **12 33 15.7 +0.3**
MAW Mawson 77.45 201 P **P** **12 33 15.7 +0.3**
comp=Z,4.8nm,0.7s,baz=77,slow=10,SNR=7.6
MAW LR LR 13 03 53.0
comp=Z,1μm,21.8s,baz=66,slow=33
MAW Mawson 77.45 201 P **P** **12 33 18.3 +2.9**
baz=77,SNR=5.1
IKRD Kardeh 77.63 309 *e*P P 12 33 12.5 -4.9
ASUD Al Ashush, Dub 77.67 296 P **P** **12 33 17.9 +0.4**
SNR=8.5
ABKT Ailbek 78.23 310 P **P** **12 33 20.5 0.0**
comp=Z,160nm,0.8s,SNR=8.3
ABTO Aybut 78.37 289 P **P** **12 33 21.1 -0.5**
SNR=13
IBAF Bafgh 78.81 303 *e*P **P** **12 33 22.4 -1.5**
IMEH Mehriz 79.57 303 *e*P **P** **12 33 26.8 -1.4**
PPT2 Papeete2 79.86 107 *e*S **S** **12 43 27.2 -2.9**
comp=Z,1μm,28.0s
PPT2 *e*LQ LQ 12 54 56.0
comp=Z,498nm,27.0s
PPT2 *e*LR LR 12 58 10.8
comp=Z,657nm,23.0s
TBI Tubuai 79.90 113 *e*S **S** **12 43 29.1 -1.1**
comp=Z,618nm,28.0s
TBI *e*LQ LQ 12 54 57.5
comp=Z,601nm,31.2s
TBI *e*LR LR 12 58 23.5
comp=Z,833nm,38.5s
ICHK Chekchek 79.91 304 *e*P **P** **12 33 28.5 -1.5**
AB31 Akbulak array 80.18 321*ce*P **P** **12 33 30.1 -0.7**
AB31 pmax pmax
comp=Z,42nm,0.7s
ABKAR Akbulak array 80.18 321 *e*P **P** **12 33 29.9 -0.8**
comp=Z,26nm,0.6s
GAMB Gambell 80.45 23 *e*P P 12 33 29.0 -2.8
comp=Z,26nm,1.1s
ISRV Sarvestan 80.47 301 *e*P **P** **12 33 32.3 -0.9**
ABPO Ambohimpanom 81.58 251 PFAKE 12 33 50.0 +11
ABPO LR LR
comp=Z,1μm,22.0s
OPO Ambohidratompo 81.63 252 P **P** **12 33 39.1 -0.3**
OPO Ambohidratompo 81.63 252 P **P** **12 33 39.1 -0.3**
comp=Z,3.7nm,0.8s,baz=40,slow=3.5,SNR=6.7
AKTO Aktyubinsk 81.72 322 P **P** **12 33 38.3 -0.7**
AKTO Aktyubinsk 81.72 322 P **P** **12 33 38.3 -0.7**
AKTO Aktyubinsk 81.72 322 P **P** **12 33 38.3 -0.7**
comp=Z,33nm,0.8s,baz=115,slow=5.2,SNR=45
IZEF Zefreh 81.76 304 *e*P **P** **12 33 38.4 -1.5**
IALA Alasht 81.96 307 *e*P **P** **12 33 39.1 -1.8**
SVE Sverdlovsk 82.26 329 ⇑*i*P **P** **12 33 41.6 0.0**

SVE eS S 12 43 55.5 +2.1
SVE pmax pmax
comp=Z,56nm,1.4s
IDMV Damavand 82.48 307 eP P 12 33 41.2 -2.5
IVRN Varamin 82.62 306 eP P 12 33 42.8 -1.4
TNA Tin City 82.73 22 eP P 12 33 44.8 +0.9
comp=Z,18nm,1.1s
ARU Arti 83.22 328 d iP P 12 33 45.3 -1.3
ARU 12 36 53.9
ARU PPP PPP 12 38 53.4
ARU S S 12 44 03.3 +0.1
ARU SS SS 12 49 28.7 +0.1
ARU pmax pmax
comp=Z,122nm,2.5s
ARU Arti 83.22 328 P P 12 33 46.8 +0.2
comp=Z,244nm,0.9s,SNR=9.7
IR3 Iran Long-Peri 83.28 306 eP P 12 33 46.0 -1.6
IGZV Ghazvin 84.08 307 eP P 12 33 51.7 -0.1
IRAZ Razeghan 84.15 306 eP P 12 33 51.3 -0.9
QRN Al-Qurain 84.86 299 eP P 12 33 54.7 -0.9
QRN AMb AMB 12 33 59.7
comp=Z,149nm,1.4s
SOKR Solikamsk 85.06 331 d iP P 12 33 56.2 +0.3
SOKR S S 12 44 19.4 -2.0
SOKR pmax pmax
comp=Z,30nm,0.8s
KBD Kabd 85.11 300 eP P 12 33 56.0 -0.8
KBD AMb AMB 12 34 02.7
comp=Z,57nm,1.3s
UMR Umm Al-Rimmam 85.14 300 eP P 12 33 56.1 -0.9
UMR AMb AMB 12 34 01.1
comp=Z,124nm,1.4s
MIB Mutribah 85.50 300 eP P 12 33 57.8 -1.0
MIB AMb AMB 12 34 03.0
comp=Z,132nm,1.0s
NAY Al-Naaiem 85.51 300 eP P 12 33 57.4 -1.5
NAY AMb AMB 12 34 02.9
comp=Z,82nm,1.1s
QSPA South Pole Qui 85.75 180 eP P 12 33 58.3 -1.2
comp=Z,190nm,2.3s
QSPA LR LR
comp=Z,1µm,22.0s
OHAK Old Harbor 86.49 32 eP P 12 34 02.7 -0.3
comp=Z,28nm,0.9s
IGHG Ghaleghazi 86.72 305 eP P 12 34 03.1 -2.0
IHRS Heris 86.87 309 eP P 12 34 03.7 -2.0
IDHR Dehrash 86.92 305 eP P 12 34 03.6 -2.4
KDAK Kodiak Island 86.98 32 eP P 12 34 04.8 -0.6
comp=Z,27nm,0.9s
KDAK LR LR
comp=Z,821nm,20.0s
KDAK Kodiak Island 86.98 32 P P 12 34 05.2 -0.2
comp=Z,16nm,0.8s,baz=1.6,slow=5.1,SNR=8.3
MAK Makhachkala 87.17 313 eP P 12 34 03.4 -3.3
MAK e 12 37 28.5
MAK ePPP PPP 12 39 27.3
MAK eS S 12 44 27.8 -15
MAK e 12 44 49.0
MAK pmax pmax
comp=Z,31nm,0.4s
RSO Redoubt South 87.49 29 eP P 12 34 07.8 -0.3
comp=Z,50nm,1.0s
IAZR Azarshahr 87.62 308 eP P 12 34 08.9 -0.4
ATD Arta Tunnel 87.80 282 P P 12 34 10.9 +0.5
ATD Arta Tunnel 87.80 282 P P 12 34 10.9 +0.5
comp=Z,5.5nm,0.3s,baz=247,slow=23,SNR=6.4
IMRD Marand 87.96 309 eP P 12 34 10.9 0.0
PPLA Purkeypile 88.29 27 eP P 12 34 11.6 -0.2
comp=Z,60nm,1.8s
BHD Baghdad 88.41 303 i x P 12 34 08.0 -4.9
BHD i x x 12 44 38.8
BHD i x x 12 44 54.5
BHD i x x 12 45 10.0
DGRG David-gareji 88.54 312 P P 12 34 14.1 +0.8
GNI Garni 88.87 310 eP P 12 34 15.3 +0.2
comp=Z,19nm,0.8s
GNI LR LR
comp=Z,249nm,19.0s
GNI Garni 88.87 310 P P 12 34 16.4 +1.3
SNR=5.5
GNI Garni 88.87 310 P P 12 34 14.0 -1.1
comp=Z,4.1nm,0.3s,baz=360,slow=19,SNR=2.8
SEW Seward 89.03 30 eP P 12 34 14.8 -0.3
comp=Z,30nm,1.1s
TBLG Delisi 89.05 312 eP P 12 34 16.0 +0.3
TBLG Delisi 89.05 312 P P 12 34 16.1 +0.3
TRF Thorofare Moun 89.25 26 eP P 12 34 16.8 +0.4
comp=Z,9.8nm,1.1s
PMR Palmer 89.44 28 eP P 12 34 16.0 -1.0
PMR pmax pmax
comp=Z,11nm,0.9s
PMR Palmer 89.44 28 eP P 12 34 16.0 -1.0
comp=Z,11nm,0.9s
GOR Gori 89.54 312 P P 12 34 19.6 +1.6
SML Sawmill 89.86 28 eP P 12 34 18.9 -0.2
SML pmax pmax
comp=Z,6.0nm,0.8s
SML Sawmill 89.86 28 eP P 12 34 18.9 -0.2
comp=Z,5.7nm,0.8s
MCK McKinley 89.90 26 eP P 12 34 19.3 +0.1
MCK pmax pmax
comp=Z,30nm,1.2s
MCK McKinley 89.90 26 eP P 12 34 19.3 +0.1
comp=Z,30nm,1.2s
AKH Akhalkalaki 89.94 311 P P 12 34 21.1 +1.0
COLD Coldfoot 90.00 23 eP P 12 34 19.2 -0.3
comp=Z,8.4nm,0.8s
ONI Oni 90.09 313 P P 12 34 20.9 +0.2
COLA College 90.55 25 eP P 12 34 22.8 +0.7
COLA pmax pmax
comp=Z,4.0nm,0.8s
COLA MLR MLR
comp=Z,693nm,21.0s
COLA College 90.55 25 eP P 12 34 22.8 +0.7
comp=Z,3.9nm,0.8s
COLA LR LR
comp=Z,693nm,21.0s
KBZ Khabaz 90.60 314 P P 12 34 24.3 +1.4
KBZ Khabaz 90.60 314 P P 12 34 24.2 +1.4
KBZ Khabaz 90.60 314 P P 12 34 24.2 +1.4
comp=Z,8.7nm,0.8s,baz=84,slow=3.6,SNR=14
KIV Kislovodsk 90.77 314 i P P 12 34 23.5 -0.3
KIV ePS S 12 45 22.9 +6.1
KIV pmax pmax
comp=Z,18nm,2.9s
KIV MLR MLR
comp=Z,300nm,24.0s
ILAR Eielson Array 90.94 25 P P 12 34 22.7 -1.3
ILAR Eielson Array 90.94 25 P P 12 34 22.7 -1.3
comp=Z,1.4nm,0.6s,baz=257,slow=4.7,SNR=22
ILAR LR LR 13 10 13.9
comp=Z,652nm,21.8s,baz=86,slow=32
PAX Paxson 91.34 27 eP P 12 34 25.9 -0.1
PAX pmax pmax
comp=Z,26nm,1.5s
PAX Paxson 91.34 27 eP P 12 34 25.9 -0.1
comp=Z,26nm,1.5s
MENT Mentasta 92.13 27 eP P 12 34 29.8 +0.2
KMBO Kilima Mbogo 92.41 269 eP P 12 34 32.1 -0.1
comp=Z,11nm,1.0s
KMBO Kilima Mbogo 92.41 269 P P 12 34 31.6 -0.7
SNR=5.8
KMBO Kilima Mbogo 92.41 269 P P 12 34 31.6 -0.7
comp=Z,5.8nm,0.9s,baz=54,slow=6.3,SNR=13
KMBO LR LR 13 12 37.2
comp=Z,1µm,20.3s,baz=96,slow=33
SOC Sochi 92.89 313 eP P 12 34 32.6 -0.9
SOC e 12 38 14.2
SOC eS SKSac 12 45 03.2 -0.4
SOC e 12 45 33.2
SOC eSS SS 12 51 50.4 +0.2
SOC eSSS SSS 12 55 32.8
SOC pmax pmax
comp=Z,11nm,0.6s
SOC MLR MLR
comp=Z,361nm,22.0s
RKT Rikitea 93.21 113 eS S 12 45 36.2 -3.2
comp=Z,368nm,28.5s
RKT eLQ LQ 13 00 35.3
comp=Z,365nm,35.8s
RKT eLR LR 13 04 34.1
comp=Z,486nm,32.2s
EGAK Eagle 93.38 25 eP P 12 34 34.7 -0.6
comp=Z,11nm,1.1s
EGAK LR LR
comp=Z,612nm,20.0s
MALT Malatya 93.61 308 eP P 12 34 37.2 +0.1
MALT pmax pmax
comp=Z,19nm,1.4s
MALT MLR MLR
comp=Z,347nm,20.0s
MALT Malatya 93.61 308 eP P 12 34 37.2 +0.1
comp=Z,19nm,1.4s
MALT LR LR
comp=Z,347nm,20.0s
ANN Anapa 94.58 314 eP P 12 34 35.9 -5.3
ANN pmax pmax
comp=Z,50nm,1.2s
ASF Jabal al Asfar 94.63 302 P P 12 34 41.0 -0.9
ASF Jabal al Asfar 94.63 302 P P 12 34 41.0 -0.9
comp=Z,6.5nm,0.8s,baz=261,slow=0.7,SNR=7.5
OBN Obninsk 95.24 325‖ eP P 12 34 43.9 -0.1
OBN pmax pmax
comp=Z,18nm,0.7s
OBN MLR MLR
comp=Z,400nm,24.0s
EIL Elat 96.23 299 P P 12 34 49.0 -0.1
EIL Elat 96.23 299 P P 12 34 49.0 -0.1
comp=Z,4.0nm,0.7s,baz=353,slow=11,SNR=3.6
INK Inuvik 96.38 22 P P 12 34 47.3 -1.6
INK PKKPbc PKKPbc 12 51 34.7 -2.3
INK Inuvik 96.38 22 P P 12 34 47.3 -1.6
comp=Z,2.8nm,0.4s,baz=288,slow=4.3,SNR=30
INK PKKPbc PKKPbc 12 51 34.7 -2.3
comp=Z,0.7nm,0.8s,baz=127,slow=3.0,SNR=3.7
BR131 Keskin Array S 97.37 309 eP P 12 34 53.4 -0.8
comp=Z,5.5nm,1.0s
BRTR Keskin Array B 97.37 309 P P 12 34 53.1 -1.1
BRTR PP PP 12 38 49.9 -1.7
BRTR Keskin Array B 97.37 309 P P 12 34 53.1 -1.1
comp=Z,2.6nm,0.8s,baz=127,slow=5.3,SNR=12
BRTR PP PP 12 38 49.9 -1.7
comp=Z,2.1nm,0.9s,baz=100,slow=6.1,SNR=4.3
BRTR LR LR 13 26 10.7
comp=Z,173nm,18.3s,baz=282,slow=40
CSS Prodhromos 97.65 305 PFAKE 12 35 10.0 +14
CSS LR LR
comp=Z,406nm,19.0s
WRAK Wrangell Islan 97.86 34 PFAKE 12 35 10.0 +14
WRAK LR LR
comp=Z,718nm,20.0s
ANTO Ankara 98.02 310 PFAKE 12 35 10.0 +13
ANTO LR LR
comp=Z,273nm,21.0s
SNAA Sanae 98.31 194 P P 12 34 57.6 -0.1
SNAA Sanae 98.31 194 P P 12 34 57.6 -0.1
comp=Z,0.8nm,0.8s,baz=162,slow=17,SNR=4.0
KEV Kevo 98.33 340 PFAKE 12 35 10.0 +12
KEV LR LR
comp=Z,1µm,22.0s
ARCES ARCESS Array B 98.89 340 P P 12 34 58.8 -1.4
ARCES ARCESS Array B 98.89 340 P P 12 34 58.8 -1.4
comp=Z,7.7nm,0.7s,baz=90,slow=7.1,SNR=12
ARCES LR LR 13 25 17.2
comp=Z,933nm,21.4s,baz=82,slow=39
KBS Kingsbay 99.29 350 PFAKE 12 35 10.0 +8.2
KBS LR LR
comp=Z,657nm,21.0s
ISP Isparta 99.85 308 PFAKE 12 35 20.0 +15
ISP LR LR
comp=Z,416nm,22.0s
KIEV Kiev 99.92 321 PFAKE 12 35 20.0 +15
KIEV LR LR
comp=Z,599nm,21.0s
LSZ Lusaka 100.01 254 P Pdif 12 35 06.4 -0.2
LSZ LR LR
comp=Z,951nm,21.0s
LSZ Lusaka 100.01 254 P Pdif 12 35 06.4 -0.2
comp=Z,2.9nm,0.8s,baz=35,slow=8.9,SNR=5.2
FINES FINESS Array B 100.20 332 P Pdif 12 35 04.2 -1.9
FINES PKiKP PKiKP 12 39 32.3 -1.0
FINES FINESS Array B 100.20 332 P Pdif 12 35 04.2 -1.9
comp=Z,3.1nm,0.7s,baz=56,slow=7.8,SNR=6.2
FINES PKiKP PKiKP 12 39 32.3 -1.0
comp=Z,2.2nm,0.9s,baz=146,slow=3.7,SNR=5.6
TESR 102.05 317‖ iP Pdif 12 35 14.2 -0.6
VRI Vrincioaia 102.07 316‖ iP Pdif 12 35 18.4 +3.5
MLR Muntele Rosu 102.66 316 P Pdif 12 35 16.8 -0.9
MLR Muntele Rosu 102.66 316‖ iP Pdif 12 35 18.7 +1.0
MLR Muntele Rosu 102.66 316 P Pdif 12 35 16.8 -0.9
comp=Z,0.6nm,0.7s,baz=169,slow=8.0,SNR=5.5
BURAR Bucovina Array 102.88 318⇑ iP Pdif 12 35 18.6 0.0
SUR Sutherland 103.60 235 PFAKE 12 35 30.0 +7.7
SUR LR LR
comp=Z,2µm,22.0s
NLWA Neilton Lookou 104.15 42 PFAKE 12 35 40.0 +16
NLWA LR LR
comp=Z,744nm,21.0s
KWP Kalwaria Pacla 104.20 320 PFAKE 12 35 40.0 +16
KWP LR LR
comp=Z,699nm,20.0s
UZH Uzhgorod 104.65 319 eP Pdif 12 35 27.7 +1.4
UZH i 12 39 41.1
CRVS Cervenica-Dubn 105.14 320 eP Pdif 12 35 27.4 -1.1
CRVS pmax pmax
comp=Z,6.0nm,1.6s
CRVS Cervenica-Dubn 105.14 320 PDIF Pdif 12 35 30.5 +2.0
CRVS Cervenica-Dubn 105.14 320 PDIF Pdif 12 35 27.4 -1.1
YKA Yellowknife Ar 105.36 26 Pdif Pdif 12 35 28.9 -0.2
YKA PKiKP PKiKP 12 39 42.5 -0.2
YKA PKKPbc PKKPbc 12 51 08.4 -2.4
YKA Yellowknife Ar 105.36 26 Pdiff Pdif 12 35 28.9 -0.2
comp=Z,0.4nm,0.8s,baz=294,slow=4.6,SNR=4.5
YKA PKiKP PKiKP 12 39 42.5 -0.2
comp=Z,0.6nm,0.6s,baz=303,slow=1.7,SNR=8.2
YKA PKKPbc PKKPbc 12 51 08.4 -2.4
comp=Z,0.3nm,0.6s,baz=114,slow=3.0,SNR=7.1
PSZ Piszkesteto 106.36 319 PFAKE 12 40 00.0
PSZ LR LR
comp=Z,544nm,20.0s
HFS Hagfors 106.40 332 Pdif Pdif 12 35 31.6 -2.2
HFS Hagfors 106.40 332 Pdiff Pdif 12 35 31.6 -2.2
comp=Z,2.1nm,0.9s,baz=197,slow=4.6,SNR=4.7
NB2 NORSAR Subarra 107.19 333 P Pdif 12 35 35.6 -1.8
comp=Z,2.3nm,0.9s,baz=71,slow=4.6
NOA NORSAR Array B 107.19 333 Pdif Pdif 12 35 36.0 -1.3
NOA PP PP 12 40 09.8 +5.5
NOA PKKPbc PKKPbc 12 51 05.0 -0.3
NOA NORSAR Array B 107.19 333 Pdiff Pdif 12 35 36.0 -1.3
comp=Z,1.2nm,0.8s,baz=68,slow=4.7,SNR=5.6
NOA PP PP 12 40 09.8 +5.5
comp=Z,1.5nm,0.9s,baz=47,slow=8.4,SNR=3.3
NOA PKKPbc PKKPbc 12 51 05.0 -0.3
comp=Z,0.7nm,0.7s,baz=66,slow=2.6,SNR=3.6
HAWA Hanford 107.26 43 PFAKE 12 40 00.0
HAWA LR LR
comp=Z,928nm,19.0s
TIR Tirane 107.66 312 PFAKE 12 40 00.0
TIR LR LR
comp=Z,519nm,22.0s
NEW Newport 108.42 40 PFAKE 12 40 00.0
NEW LR LR
comp=Z,941nm,22.0s
KONO Kongsberg 108.49 332 PFAKE 12 40 00.0
KONO LR LR
comp=Z,940nm,22.0s
WVOR Wild Horse Val 108.72 47 PFAKE 12 40 00.0
WVOR LR LR
comp=Z,729nm,20.0s
BMO Blue Mountains 109.13 44 PFAKE 12 40 00.0
BMO LR LR
comp=Z,1µm,21.0s
TSUM Tsumeb 109.38 248 PFAKE 12 40 00.0
TSUM LR LR
comp=Z,958nm,20.0s
NVAR Mina Array Bea 109.74 51 Pdif Pdif 12 35 53.1 +3.6
NVAR PKiKP PKiKP 12 39 51.0 -1.0
NVAR PKKPbc PKKPbc 12 50 56.4 -0.3
NVAR Mina Array Bea 109.74 51 Pdiff Pdif 12 35 53.1 +3.6
comp=Z,0.1nm,0.3s,baz=297,slow=4.0,SNR=3.1
NVAR PKiKP PKiKP 12 39 51.0 -1.0
comp=Z,0.3nm,0.7s,baz=225,slow=1.1,SNR=2.3
NVAR PKKPbc PKKPbc 12 50 56.4 -0.3
comp=Z,0.4nm,0.8s,baz=132,slow=2.9,SNR=3.9
CLL Collm 109.78 323 eP Pdif 12 35 42.0 -7.0
CLL MLR MLR
comp=Z,600nm,19.0s
KHC Kasperske Hory 110.11 321 ePKP PKiKP 12 39 53.5 +1.4
GERES GERESS Array B 110.12 321 PKiKP PKiKP 12 39 51.0 -1.1
GERES GERESS Array B 110.12 321 PKiKP PKiKP 12 39 51.0 -1.1
comp=Z,1.0nm,0.5s,baz=80,slow=1.5,SNR=6.1
BMN Battle Mountai 110.17 48 PFAKE 12 40 00.0
BMN LR LR
comp=Z,658nm,19.0s
TIP Timpagrande 110.40 310 PFAKE 12 40 00.0
TIP LR LR
comp=Z,211nm,19.0s
PMSA Palmer Station 110.44 174 PFAKE 12 40 00.0
PMSA LR LR
comp=Z,1µm,20.0s
TPH Tonopah 110.65 51 PFAKE 12 40 10.0
TPH LR LR
comp=Z,674nm,20.0s
DAC Darwin (Calif) 110.69 53 PFAKE 12 40 10.0
DAC LR LR
comp=Z,1µm,20.0s
MSO Missoula 110.88 41 PFAKE 12 40 10.0
MSO LR LR
comp=Z,480nm,21.0s
CUC Castrocucco 110.94 311 PFAKE 12 40 10.0
CUC LR LR
comp=Z,241nm,19.0s
D14A Greenough 111.09 41 ⇑P PKiKP 12 39 55.2 +1.1
baz=111
H13A Challis 111.31 44 ⇓P PKiKP 12 39 55.3 +0.6
baz=111
B15A Bradely Ranch, 111.32 39 ⇑P PKiKP 12 39 55.0 +0.6
baz=111
C15A Salmond Ranch, 111.46 40 ⇓P PKiKP 12 39 55.2 +0.4
baz=111
HLID Hailey 111.47 45 PFAKE 12 40 10.0
HLID LR LR
comp=Z,674nm,22.0s
HLID Hailey 111.47 45 ⇓P PKiKP 12 39 55.3 +0.3
baz=111
I13A Wildhorse Cree 111.58 44 ⇑P PKiKP 12 39 55.2 -0.1
baz=112
WTTA Wattenberg 111.92 320⇑ iPKiKP PKiKP 12 39 55.1 -0.6
WTTA Wattenberg 111.92 320⇑ iPKiKP PKiKP 12 39 55.1 -0.6
comp=Z,8.1nm,0.6s
WTTA Wattenberg 111.92 320⇑ iP PKiKP 12 39 55.1 -0.6
C16A Fuhringer Ranc 112.00 40 ⇑P PKiKP 12 39 56.9 +1.1
baz=112
PFO Pinyon Flat Ob 112.08 55 PFAKE 12 40 10.0
PFO LR LR
comp=Z,2µm,20.0s
AQU L'Aquila 112.15 314 PFAKE 12 40 10.0
AQU LR LR
comp=Z,658nm,20.0s
MCMT McKenzie Canyo 112.20 43 ePKPdf PKiKP 12 39 57.9 +1.4
A17A Triple J Farms 112.27 38 ⇑P PKiKP 12 39 56.8 +0.6
baz=112
D16A Dana Ranch, Ca 112.38 40 ⇓P PKiKP 12 39 57.1 +0.5
baz=112
FETA Feichten 112.59 320⇑ iPKiKP PKiKP 12 39 56.1 -0.9
comp=Z,2.9nm,0.8s
FETA Feichten 112.59 320⇑ iP PKiKP 12 39 56.1 -0.9
BOZ Bozeman (W) 112.77 42 PFAKE 12 40 10.0
BOZ LR LR
comp=Z,539nm,20.0s
WDD Wield Dalam 112.81 307 PFAKE 12 40 10.0
WDD LR LR
comp=Z,244nm,20.0s
EGMT Eagleton 113.19 39 ePKPdf PKiKP 12 39 58.5 +0.5
EGMT LR LR
comp=Z,611nm,21.0s
EGMT Eagleton 113.19 39 ⇑P PKiKP 12 39 58.2 +0.2
baz=113
DAVOX Davos/Dischmat 113.22 320 PKiKP PKiKP 12 39 58.0 -0.2
DAVOX Davos/Dischmat 113.22 320 PKiKP PKiKP 12 39 58.0 -0.2
comp=Z,4.2nm,0.5s,baz=342,slow=5.2,SNR=6.5
F17A Fitzpatrick Pl 113.33 41 ⇑P PKiKP 12 39 58.9 +0.4
baz=113
DUG Dugway 113.50 48 PFAKE 12 40 10.0
DUG LR LR
comp=Z,668nm,19.0s
BFO Black Forest 113.65 322 PFAKE 12 40 10.0
BFO LR LR
comp=Z,319nm,20.0s
TUE Stuetta 113.67 319 PFAKE 12 40 10.0
TUE LR LR
comp=Z,545nm,19.0s
VLC Villacollemand 113.74 317 PFAKE 12 40 10.0
VLC LR LR
comp=Z,344nm,20.0s
IMW Indian Meadow 113.78 44 ePKPdf PKiKP 12 40 00.8 +1.2
LKWY Lake 113.94 43 PFAKE 12 40 10.0
LKWY LR LR
comp=Z,966nm,21.0s
AHID Auburn Hatcher 114.02 45 PFAKE 12 40 10.0 +10
AHID LR LR
comp=Z,922nm,20.0s
HWUT Hardware Ranch 114.03 46 PFAKE 12 40 10.0 +10
HWUT LR LR
comp=Z,974nm,21.0s
SNOW Snow King Moun 114.04 44 ePKPdf PKPdf 12 40 01.1 +1.0
LOHW Long Hollow 114.10 44 ePKPdf PKPdf 12 40 00.9 +0.8
B20A Solberg Farm, 114.11 38 ⇑P PKPdf 12 40 00.1 +0.4
baz=114
E19A Rath Farm, Rou 114.36 40 ⇓P PKPdf 12 40 01.3 +1.0
baz=114
MVU Marysvale 114.39 49 PFAKE 12 40 10.0 +9.2
MVU LR LR
comp=Z,808nm,20.0s
ECH Echery 114.42 322 PFAKE 12 40 10.0 +10
ECH LR LR
comp=Z,404nm,20.0s
WLF Walferdange 114.45 324 PFAKE 12 40 10.0 +10
WLF LR LR
comp=Z,661nm,20.0s
RLMT Red Lodge 114.51 42 PFAKE 12 40 10.0 +9.2
RLMT LR LR
comp=Z,749nm,22.0s
FFC Flin Flon 114.69 30 PFAKE 12 40 10.0 +9.4
FFC LR LR
comp=Z,1µm,22.0s
U15A North Rim 114.84 52 ⇑P PKPdf 12 40 02.1 +0.2
baz=115
C21A Desert Coulee 114.92 38 ⇑P PKPdf 12 40 01.4 +0.1
baz=115
BW06 Boulder Array 115.10 44 PFAKE 12 40 10.0 +8.0
BW06 LR LR
comp=Z,1µm,20.0s
PDAR Pinedale Array 115.10 44 PKP PKPdf 12 40 01.9 -0.1
PDAR PKKPbc PKKPbc 12 50 38.0 -0.9
PDAR Pinedale Array 115.10 44 PKP PKPdf 12 40 01.9 -0.1
comp=Z,1.3nm,1.0s,baz=208,slow=2.9,SNR=7.2
PDAR PKKPbc PKKPbc 12 50 38.0 -0.9
comp=Z,0.9nm,0.8s,baz=114,slow=4.8,SNR=6.6
PAGF Fort de Pagny 115.16 323 ePKIKP PKPdf 12 40 01.1 -0.6
comp=Z,3.6nm,0.5s
PAGF Fort de Pagny 115.16 323 ePKPdf PKPdf 12 40 01.1 -0.6
G20A Bridger 115.18 41 ⇓P PKPdf 12 40 01.9 -0.1
baz=115
J19A Crowheart 115.28 44 ⇓P PKPdf 12 40 02.6 +0.3
baz=115
K19A Absolon Red Bu 115.57 44 ⇓P PKPdf 12 40 03.2 +0.3
baz=116
I20A Worland 115.68 43 ⇑P PKPdf 12 40 02.5 -0.5
baz=116
LPG La Plagne 115.71 319 ePKIKP PKPdf 12 40 02.5 -0.7
comp=Z,9.1nm,0.6s
LPG La Plagne 115.71 319 ePKIKP PKPdf 12 40 02.5 -0.7
LPG La Plagne 115.71 319 ePKPdf PKPdf 12 40 02.5 -0.7
CABF La Chapelle 115.71 320 ePKIKP PKPdf 12 40 02.5 -0.4
comp=Z,7.6nm,0.7s
CABF La Chapelle 115.71 320 ePKIKP PKPdf 12 40 02.5 -0.4
CABF La Chapelle 115.71 320 ePKPdf PKPdf 12 40 02.5 -0.4
LPL La Plagne 115.71 319 ePKIKP PKPdf 12 40 02.5 -0.6
comp=Z,7.1nm,0.6s
LPL La Plagne 115.71 319 ePKIKP PKPdf 12 40 02.5 -0.6
LPL La Plagne 115.71 319 ePKPdf PKPdf 12 40 02.5 -0.6
D22A Cohagen 115.76 39 ⇑P PKPdf 12 40 03.4 +0.4
baz=116
WUAZ Wupatki 115.79 52 ePKPdf PKPdf 12 40 04.3 +0.8
WUAZ LR LR
comp=Z,1µm,20.0s
VSL Villasalto 115.87 312 PFAKE 12 40 10.0 +6.7
VSL LR LR
comp=Z,317nm,19.0s
BNI Bardonecchia 115.92 319 PFAKE 12 40 10.0 +6.6
BNI LR LR
comp=Z,588nm,20.0s
MBDF Montbardon 115.98 318 ePKIKP PKPdf 12 40 03.1 -0.5
MBDF Montbardon 115.98 318 ePKIKP PKPdf 12 40 03.1 -0.5
MBDF Montbardon 115.98 318 ePKPdf PKPdf 12 40 03.1 -0.5

C23A	Lambert	116.11	38	⇓P		PKPdf	12 40 04.8	+1.2		
	baz=116									
I21A	Big Trails, Te	116.30	43	⇓P		PKPdf	12 40 04.3	+0.1		
	baz=116									
DGMT	Dagmar	116.42	37	PFAKE			12 40 20.0	+16		
DGMT				LR	LR					
	comp=Z,807nm,22.0s									
ORIF	Oris-en-Rattie	116.50	319	*e*PKIKP		PKPdf	12 40 03.7	-0.8		
	comp=Z,17nm,0.8s									
ORIF				*e*R						
	comp=Z,424nm,19.8s									
ORIF	Oris-en-Rattie	116.50	319	*e*PKIKP		PKPdf	12 40 03.7	-0.8		
ORIF	Oris-en-Rattie	116.50	319	*e*PKPdf		PKPdf	12 40 03.7	-0.8		
EKA	Eskdalemuir Ar	116.60	332	PKP		PKPdf	12 40 03.6	-0.6		
EKA	Eskdalemuir Ar	116.60	332	PKP		PKPdf	12 40 03.6	-0.6		
	comp=Z,2.0nm,0.8s,baz=26,slow=2.6,SNR=6.5									
ESK	Eskdalemuir	116.63	332	PFAKE			12 40 20.0	+16		
ESK				LR	LR					
	comp=Z,857nm,20.0s									
N20A	Spence Gulch,	116.64	46	⇑P		PKPdf	12 40 05.1	0.0		
	baz=117									
K21A	Alcova	116.74	44	⇓P		PKPdf	12 40 05.0	-0.1		
	baz=117									
F23A	Volborg	116.82	40	⇑P		PKPdf	12 40 05.5	+0.5		
	baz=117									
LOR	Lormes	116.84	322	*e*PKIKP		PKPdf	12 40 04.3	-0.7		
LOR				*e*R						
	comp=Z,385nm,22.5s									
LOR	Lormes	116.84	322	*e*PKPdf		PKPdf	12 40 04.3	-0.7		
O20A	White River Ci	116.87	47	⇑P		PKPdf	12 40 06.0	+0.5		
	baz=117									
J22A	Midwest	116.99	43	⇑P		PKPdf	12 40 05.0	-0.5		
	baz=117									
TUC	Tucson	117.01	56	PFAKE			12 40 20.0	+14		
TUC				LR	LR					
	comp=Z,873nm,20.0s									
SMRF	Simiane la Rot	117.05	318	*e*PKIKP		PKPdf	12 40 04.7	-0.8		
SMRF	Simiane la Rot	117.05	318	*e*PKPdf		PKPdf	12 40 04.7	-0.8		
SSF	Saint Saulge	117.15	322	*e*PKIKP		PKPdf	12 40 05.0	-0.5		
	comp=Z,7.0nm,0.7s									
SSF	Saint Saulge	117.15	322	*e*PKIKP		PKPdf	12 40 05.0	-0.5		
SSF	Saint Saulge	117.15	322	*e*PKPdf		PKPdf	12 40 05.0	-0.5		
SSB	Saint Sauveur	117.23	320	PFAKE			12 40 20.0	+14		
SSB				LR	LR					
	comp=Z,319nm,20.0s									
VIVF	Saint-Julien-l	117.31	319	*e*PKIKP		PKPdf	12 40 05.3	-0.7		
VIVF	Saint-Julien-l	117.31	319	*e*PKIKP		PKPdf	12 40 05.3	-0.7		
VIVF	Saint-Julien-l	117.31	319	*e*PKPdf		PKPdf	12 40 05.3	-0.7		
SFJD	Kangerlussuaq	117.32	0	PFAKE			12 40 20.0	+15		
SFJD				LR	LR					
	comp=Z,686nm,19.0s									
MVCO	Mesa Verde	117.57	50	*e*PKPdf		PKPdf	12 40 08.2	+1.2		
MVCO				LR	LR					
	comp=Z,573nm,22.0s									
H24A	Dirks Ranch, A	117.76	41	⇑P		PKPdf	12 40 07.7	+0.8		
	baz=118									
BGF	Bois d'Agland	117.77	321	*e*PKIKP		PKPdf	12 40 06.4	-0.4		
	comp=Z,9.9nm,0.6s									
BGF	Bois d'Agland	117.77	321	*e*PKIKP		PKPdf	12 40 06.4	-0.4		
BGF	Bois d'Agland	117.77	321	*e*PKPdf		PKPdf	12 40 06.4	-0.4		
Q21A	Lamborn Mesa,	117.78	48	⇓P		PKPdf	12 40 08.2	+1.0		
	baz=118									
S21A	Coal Bank Pass	117.97	49	⇓P		PKPdf	12 40 09.0	+1.1		
	baz=118									
SMCO	Snowmass	118.11	47	*e*PKPdf		PKPdf	12 40 08.8	+0.6		
Q22A	Crested Butte,	118.26	48	⇓P		PKPdf	12 40 08.8	+0.4		
	baz=118									
TCF	Toulx Ste Croi	118.28	321	*e*PKIKP		PKPdf	12 40 07.3	-0.5		
	comp=Z,12nm,0.9s									
TCF	Toulx Ste Croi	118.28	321	*e*PKIKP		PKPdf	12 40 07.3	-0.5		
TCF	Toulx Ste Croi	118.28	321	*e*PKPdf		PKPdf	12 40 07.3	-0.5		
RSSD	Black Hills	118.35	41	*e*PKIKP		PKPdf	12 40 06.9	-1.4		
RSSD	Black Hills	118.35	41	*e*PKPdf		PKPdf	12 40 06.9	-1.4		
319A	Douglas	118.47	57	⇓P		PKPdf	12 40 09.2	+0.5		
	baz=118									
Y20A	Horse Springs,	118.58	54	⇑P		PKPdf	12 40 09.2	+0.2		
	baz=118									
V21A	Milan	118.64	51	⇓P		PKPdf	12 40 09.1	0.0		
	baz=119									
S22A	4UR Ranch, Cre	118.67	49	⇓P		PKPdf	12 40 09.4	+0.2		
	baz=119									
ISCO	Idaho Springs	118.89	46	*e*PKIKP		PKPdf	12 40 10.5	+1.0		
ISCO				MLR	MLR					
	comp=Z,1μm,20.0s									
ISCO	Idaho Springs	118.89	46	*e*PKPdf		PKPdf	12 40 10.5	+1.0		
ISCO				LR	LR					
	comp=Z,1μm,20.0s									
ISCO	Idaho Springs	118.89	46	⇓P		PKPdf	12 40 10.1	+0.6		
	baz=119									
X21A	Alamocita Cree	118.91	53	⇓P		PKPdf	12 40 10.7	+1.0		
	baz=119									
220A	Playas Peak, P	118.97	56	⇓P		PKPdf	12 40 10.8	+1.1		
	baz=119									
CAF	Calviac	118.97	320	*e*PKIKP		PKPdf	12 40 08.4	-0.8		
CAF	Calviac	118.97	320	*e*PKIKP		PKPdf	12 40 08.4	-0.8		
CAF	Calviac	118.97	320	*e*PKPdf		PKPdf	12 40 08.4	-0.8		
Y21A	Point of Rocks	119.12	53	⇓P		PKPdf	12 40 09.4	-0.7		
	baz=119									
V22A	San Miguel Ran	119.18	51	⇓P		PKPdf	12 40 10.7	+0.6		
	baz=119									
R23A	Moffat	119.28	48	⇑P		PKPdf	12 40 11.1	+0.8		
	baz=119									
MTLF	Montolieu	119.54	318	*e*PKIKP		PKPdf	12 40 09.8	-0.5		
MTLF	Montolieu	119.54	318	*e*PKIKP		PKPdf	12 40 09.8	-0.5		
MTLF	Montolieu	119.54	318	*e*PKPdf		PKPdf	12 40 09.8	-0.5		
MFF	Saint Martin d	119.59	323	*e*PKIKP		PKPdf	12 40 09.7	-0.5		
	comp=Z,14nm,0.8s									
MFF	Saint Martin d	119.59	323	*e*PKIKP		PKPdf	12 40 09.7	-0.5		
MFF	Saint Martin d	119.59	323	*e*PKPdf		PKPdf	12 40 09.7	-0.5		
ANMO	Albuquerque	119.82	52	*e*PKPdf		PKPdf	12 40 11.1	-0.2		
ANMO				LR	LR					
	comp=Z,954nm,20.0s									
Z22A	Elephant Butte	119.89	54	⇑P		PKPdf	12 40 12.1	+0.6		
	baz=120									
BNM	Barren Site	119.91	53	*e*PKPdf		PKPdf	12 40 12.4	+0.8		
S24A	Houchin Ranch,	119.92	49	⇑P		PKPdf	12 40 11.9	+0.3		
	baz=120									
SGMF	Saint Gilles	120.19	325	*e*PKIKP		PKPdf	12 40 11.1	-0.2		
	comp=Z,8.2nm,0.6s									
SGMF	Saint Gilles	120.19	325	*e*PKIKP		PKPdf	12 40 11.1	-0.2		
SGMF	Saint Gilles	120.19	325	*e*PKPdf		PKPdf	12 40 11.1	-0.2		
T24A	Torres, Weston	120.23	49	⇓P		PKPdf	12 40 13.6	+1.5		
	baz=120									
Z23A	Rita Site, Whi	120.48	54	⇑P		PKPdf	12 40 13.7	+1.1		
	baz=120									
S25A	Robets Cordova	120.50	48	⇓P		PKPdf	12 40 13.5	+1.0		
	baz=120									
V24A	Rampart Ranch,	120.50	51	⇓P		PKPdf	12 40 13.3	+0.7		
	baz=120									
ROSF	Rostrenen	120.55	325	*e*PKIKP		PKPdf	12 40 11.4	-0.6		
ROSF	Rostrenen	120.55	325	*e*PKIKP		PKPdf	12 40 11.4	-0.6		
ROSF	Rostrenen	120.55	325	*e*PKPdf		PKPdf	12 40 11.4	-0.6		
W24A	Lazy 6 Ranch,	120.56	51	⇑P		PKPdf	12 40 13.0	+0.2		
	baz=120									
P26A	Davis Ranch, A	120.61	46	⇓P		PKPdf	12 40 13.4	+0.7		
	baz=120									
T25A	Trinidad	120.69	49	⇓P		PKPdf	12 40 13.2	+0.2		
	baz=121									
N27A	Anderson Farm,	120.70	44	⇓P		PKPdf	12 40 14.0	+1.3		
	baz=121									
QUIF	Quistinic	120.71	325	*e*PKIKP		PKPdf	12 40 12.1	-0.2		
	comp=Z,8.2nm,0.6s									
QUIF	Quistinic	120.71	325	*e*PKIKP		PKPdf	12 40 12.1	-0.2		
QUIF	Quistinic	120.71	325	*e*PKPdf		PKPdf	12 40 12.1	-0.2		
EPF	Esparros	120.92	319	*e*PKIKP		PKPdf	12 40 11.4	-1.6		
EPF	Esparros	120.92	319	*e*PKIKP		PKPdf	12 40 11.4	-1.6		
EPF	Esparros	120.92	319	*e*PKPdf		PKPdf	12 40 11.4	-1.6		
Y24A	Capitan	120.92	53	⇓P		PKPdf	12 40 13.4	0.0		
	baz=121									
U25A	Circle Dot Ran	120.94	50	⇑P		PKPdf	12 40 13.9	+0.5		
	baz=121									
V25A	Rancho No Teng	120.97	50	⇑P		PKPdf	12 40 13.7	+0.2		
	baz=121									
OGNE	Ogallala	120.99	44	PFAKE			12 40 20.0	+6.7		
OGNE				LR	LR					
	comp=Z,1μm,22.0s									
Z24A	Sheeppen Canyo	121.16	53	⇑P		PKPdf	12 40 14.6	+0.7		
	baz=121									
S26A	Kim	121.23	48	⇑P		PKPdf	12 40 14.1	+0.2		
	baz=121									
124A	Stringfield Ra	121.27	54	⇓P		PKPdf	12 40 14.7	+0.5		
	baz=121									
W25A	X Bar L Ranch,	121.29	51	⇓P		PKPdf	12 40 14.4	+0.3		
	baz=121									
T26A	Comanche Natio	121.29	49	⇓P		PKPdf	12 40 14.6	+0.5		
	baz=121									
AGMN	Agassiz Nation	121.34	34	PFAKE			12 40 20.0	+6.4		
AGMN				LR	LR					
	comp=Z,1μm,20.0s									
224A	Cornudas Mount	121.39	55	⇑P		PKPdf	12 40 15.0	+0.7		
	baz=121									
R27A	Eads	121.48	47	⇑P		PKPdf	12 40 15.2	+0.9		
	baz=121									
Y25A	Mesa, Roswell	121.51	53	⇓P		PKPdf	12 40 14.8	+0.3		
	baz=122									
ETSF	Etsaut	121.57	319	*e*PKIKP		PKPdf	12 40 14.3	0.0		
ETSF	Etsaut	121.57	319	*e*PKIKP		PKPdf	12 40 14.3	0.0		
ETSF	Etsaut	121.57	319	*e*PKPdf		PKPdf	12 40 14.3	0.0		
324A	Moseley Ranch,	121.59	56	⇓P		PKPdf	12 40 15.3	+0.6		
	baz=122									
MNTX	Cornudas Mount	121.61	55	*e*PKPdf		PKPdf	12 40 15.0	+0.4		
MNTX				LR	LR					
	comp=Z,827nm,21.0s									
MNTX	Cornudas Mount	121.61	55	⇑P		PKPdf	12 40 15.0	+0.4		
	baz=122									
SJPF	Ste Jean	121.90	319	*e*PKIKP		PKPdf	12 40 14.2	-0.6		
SJPF	Ste Jean	121.90	319	*e*PKIKP		PKPdf	12 40 14.2	-0.6		
SJPF	Ste Jean	121.90	319	*e*PKPdf		PKPdf	12 40 14.2	-0.6		
125A	Gardner Draw,	121.92	54	⇑P		PKPdf	12 40 15.5	+0.1		
	baz=122									
325A	Bean Ranch, Si	122.03	55	⇓P		PKPdf	12 40 15.7	0.0		
	baz=122									
425A	Indio Mountain	122.18	56	⇓P		PKPdf	12 40 15.8	-0.1		
	baz=122									
226B	Tecolote Peak,	122.49	54	⇑P		PKPdf	12 40 16.5	+0.2		
	baz=122									
Y27A	Causey	122.73	52	⇓P		PKPdf	12 40 17.2	+0.4		
	baz=123									
326A	Caldwell Ranch	122.86	55	⇓P		PKPdf	12 40 17.0	-0.1		
	baz=123									
TAM	Tamanrasset	123.08	294	*e*PKIKP		PKPdf	12 40 18.9	+1.1		
TAM				MLR	MLR					
	comp=Z,321nm,20.0s									
TAM	Tamanrasset	123.08	294	*e*PKPdf		PKPdf	12 40 18.9	+1.1		
TAM				LR	LR					
	comp=Z,321nm,20.0s									
526A	Mary Lane Ranc	123.12	57	⇑P		PKPdf	12 40 17.8	0.0		
	baz=123									
626A	Big Bend Ranch	123.23	57	⇓P		PKPdf	12 40 17.4	-0.5		
	baz=123									
ECSD	EROS Data Cent	123.30	39	*e*PKPdf		PKPdf	12 40 17.0	-0.5		
ECSD				LR	LR					
	comp=Z,801nm,22.0s									
427A	Hayter Ranch,	123.47	56	⇓P		PKPdf	12 40 18.2	-0.1		
	baz=123									
527A	Woodward Ranch	123.50	56	⇓P		PKPdf	12 40 18.0	-0.5		
	baz=124									
AMTX	Amarillo	123.55	50	PFAKE			12 40 30.0	+12		
AMTX				LR	LR					
	comp=Z,1μm,20.0s									
TXAR	Lajitas Array	123.68	57	PKP		PKPdf	12 40 19.2	+0.4		
TXAR	Lajitas Array	123.68	57	PKP		PKPdf	12 40 19.2	+0.4		
	comp=Z,1.2nm,0.8s,baz=277,slow=2.5,SNR=9.0									
X29A	Tulia	123.69	51	⇓P		PKPdf	12 40 19.6	+1.0		
	baz=124									
328A	Wristen Ranch,	123.80	55	⇑P		PKPdf	12 40 18.8	-0.1		
	baz=124									
627A	Terlingua Ranc	123.88	57	⇓P		PKPdf	12 40 19.0	-0.2		
	baz=124									
Y29A	Porterfield Fa	123.91	52	⇑P		PKPdf	12 40 19.2	+0.2		
	baz=124									
EYMN	Ely	123.92	32	PFAKE			12 40 30.0	+11		
EYMN				LR	LR					
	comp=Z,1μm,22.0s									
EFI	East Falkland	123.94	174	PFAKE			12 40 30.0	+12		
EFI				LR	LR					
	comp=Z,1μm,21.0s									
428A	Kincaid Ranch,	124.10	56	⇑P		PKPdf	12 40 20.1	+0.6		
	baz=124									
528A	Cox Ranch, San	124.18	56	⇑P		PKPdf	12 40 20.2	+0.5		
	baz=124									
628A	Black Gap, Mar	124.29	57	⇓P		PKPdf	12 40 20.2	+0.4		
	baz=124									
329A	Wagon Wheel Ra	124.44	54	⇑P		PKPdf	12 40 19.9	-0.2		
	baz=124									
529A	Stev Forest Ra	124.66	56	⇓P		PKPdf	12 40 20.9	+0.3		
	baz=125									
W31A	Holland Ranch,	124.77	49	⇓P		PKPdf	12 40 21.1	+0.5		
	baz=125									
429A	Davenport Ranc	124.78	55	⇑P		PKPdf	12 40 20.8	0.0		
	baz=125									
330A	Mertzon	125.12	54	⇓P		PKPdf	12 40 21.8	+0.4		
	baz=125									
430A	Baggett Ranch,	125.27	55	⇑P		PKPdf	12 40 21.8	+0.1		
	baz=125									
ESDC	Sonseca Array	125.33	317	PKP		PKPdf	12 40 21.9	+0.3		
ESDC				PP		PP	12 42 13.8	+2.0		
ESDC	Sonseca Array	125.33	317	PKP		PKPdf	12 40 21.9	+0.3		
	comp=Z,0.2nm,0.3s,baz=21,slow=2.5,SNR=7.4									
ESDC				PP		PP	12 42 13.8	+2.0		
	comp=Z,0.4nm,0.3s,baz=46,slow=8.5,SNR=6.2									
530A	J-C Ranch, Com	125.38	56	⇓P		PKPdf	12 40 22.5	+0.6		
	baz=125									
KSU1	Kansas State U	125.54	44	PFAKE			12 40 30.0	+8.1		
KSU1				LR	LR					
	comp=Z,942nm,22.0s									
PAB	San Pablo	125.65	317	*e*PKIKP		PKPdf	12 40 22.8	+0.6		
PAB				MLR	MLR					
	comp=Z,581nm,21.0s									
PAB	San Pablo	125.65	317	*e*PKPdf		PKPdf	12 40 22.8	+0.6		
PAB				LR	LR					
	comp=Z,581nm,21.0s									
431A	Sonora	125.81	55	⇓P		PKPdf	12 40 22.7	0.0		
	baz=126									
WMOK	Wichita Mounta	125.82	50	*e*PKIKP		PKPdf	12 40 22.9	+0.3		
WMOK				MLR	MLR					
	comp=Z,1μm,21.0s									
WMOK	Wichita Mounta	125.82	50	*e*PKPdf		PKPdf	12 40 22.9	+0.3		
WMOK				LR	LR					
	comp=Z,1μm,21.0s									
Z32A	Haskell	125.82	51	⇓P		PKPdf	12 40 23.5	+0.8		
	baz=126									
531A	Rocksprings	126.03	55	⇑P		PKPdf	12 40 22.7	-0.5		
	baz=126									
232A	Coleman	126.19	53	⇓P		PKPdf	12 40 23.8	+0.4		
	baz=126									
631A	Perdido Creek	126.24	56	⇑P		PKPdf	12 40 23.7	+0.1		
	baz=126									
332A	Millersview	126.28	54	⇓P		PKPdf	12 40 23.9	+0.3		
	baz=126									
SCIA	State Center	126.39	39	PFAKE			12 40 40.0	+17		
SCIA				LR	LR					
	comp=Z,675nm,21.0s									
JCT	Junction City	126.54	55	*e*PKIKP		PKPdf	12 40 24.4	+0.3		
JCT				MLR	MLR					
	comp=Z,729nm,20.0s									
JCT	Junction City	126.54	55	*e*PKPdf		PKPdf	12 40 24.4	+0.3		
JCT				LR	LR					
	comp=Z,729nm,20.0s									
532A	Rocksprings	126.57	55	⇑P		PKPdf	12 40 23.8	-0.4		
	baz=126									
POLO	Lamas de Olo	127.00	320	*e*PKPdf		PKPdf	12 40 25.3	+0.5		
PVRL	Vila Real	127.00	320	*e*PKPdf		PKPdf	12 40 26.4	+1.7		
MTE	Manteigas	127.35	319	PFAKE			12 40 40.0	+15		
MTE				LR	LR					
	comp=Z,728nm,21.0s									
PCBR	Castelo Branco	127.60	319	*e*PKPdf		PKPdf	12 40 27.3	+1.5		
SCHQ	Schefferville	127.76	12	PKP		PKPdf	12 40 25.1	-0.6		
SCHQ	Schefferville	127.76	12	PKP		PKPdf	12 40 25.1	-0.6		
	comp=Z,6.4nm,1.2s,baz=264,slow=8.2,SNR=7.1									
TOA0	Torodi Ar. Sit	127.98	283	*e*PKPdf		PKPdf	12 40 27.1	-0.1		
TORD	Torodi Ar. Bea	127.98	283	PKP		PKPdf	12 40 26.9	-0.2		
TORD				SKPbc	SKiKP		12 43 44.9	-15		
TORD	Torodi Ar. Bea	127.98	283	PKP		PKPdf	12 40 26.9	-0.2		
	comp=Z,6.9nm,0.7s,baz=74,slow=1.8,SNR=26									
TORD				SKPbc	SKiKP		12 43 44.9	-15		
	comp=Z,4.5nm,1.0s,baz=90,slow=3.1,SNR=4.7									
EVO	Evora	128.63	318	*e*PKIKP		PKPdf	12 40 28.3	+0.5		
	comp=Z,24nm,1.2s									
EVO				*e*R						
	comp=Z,689nm,21.8s									
EVOP	Sao Brissos	128.71	318	*e*PKIKP		PKPdf	12 40 28.3	+0.4		
EVOP	Sao Brissos	128.71	318	*e*PKPdf		PKPdf	12 40 28.3	+0.4		
MDT	Midelt	128.79	309	PKP		PKPdf	12 40 28.5	0.0		
MDT	Midelt	128.79	309	PKP		PKPdf	12 40 28.5	0.0		
	comp=Z,1.1nm,0.6s,baz=315,slow=7.1,SNR=3.5									
PCVE	Castro Verde	129.10	317	*e*PKPdf		PKPdf	12 40 31.1	+2.3		
MESJ	Messejana	129.12	317	*e*P		PKPdf	12 40 29.6	+0.8		
MESJ				*e*PP		PP	12 42 38.7	+1.9		
MESJ				AMS	AMS		13 46 09.1			
	comp=Z,388nm,19.0s									
MESJ	Messejana	129.12	317	*e*PP		PP	12 42 38.7	+1.9		
MESJ				A	A		13 46 09.1			
	comp=Z,388nm,19.0s									
MESJ	Messejana	129.12	317	*e*PKIKP		PKPdf	12 40 29.5	+0.8		
MESJ				*e*			12 42 38.6			
LIS	Lisbon	129.29	318	*e*PP		PP	12 42 39.1	+1.3		
LIS				AMS	AMS		13 46 36.6			
	comp=N,886nm,18.4s									
LIS	Lisbon	129.29	318	*e*PP		PP	12 42 39.1	+1.3		
GLMI	Grayling	129.57	31	PFAKE			12 40 40.0	+11		
GLMI				LR	LR					
	comp=Z,845nm,20.0s									
MORF	Marmelete	129.69	317	*e*PKIKP		PKPdf	12 40 30.1	+0.2		
MORF				*e*			12 42 41.0			
MIAR	Mount Ida	129.79	47	*e*PKIKP		PKPdf	12 40 30.6	+0.4		
MIAR				MLR	MLR					
	comp=Z,1μm,22.0s									
MIAR	Mount Ida	129.79	47	*e*PKPdf		PKPdf	12 40 30.6	+0.4		
MIAR				LR	LR					
	comp=Z,1μm,22.0s									
RTC	Rabat Centre	129.99	312	PFAKE			12 40 40.0	+9.5		
RTC				LR	LR					
	comp=Z,414nm,21.0s									
SHEL	Horse Pasture	131.63	244	PFAKE			12 40 50.0	+16		
SHEL				LR	LR					
	comp=Z,1μm,21.0s									
AAM	Ann Arbor	131.79	33	PFAKE			12 40 50.0	+16		
AAM				LR	LR					
	comp=Z,1μm,21.0s									
OXF	Oxford	132.82	45	PFAKE			12 40 50.0	+14		
OXF				LR	LR					
	comp=Z,888nm,22.0s									
VBMS	Vicksburg	133.13	49	PFAKE			12 40 50.0	+13		
VBMS				LR	LR					
	comp=Z,1μm,22.0s									
PLAL	Pickwick Lake	133.51	44	PFAKE			12 40 50.0	+13		
PLAL				LR	LR					
	comp=Z,1μm,21.0s									
ACSO	Alum Creek Sta	133.56	35	PFAKE			12 40 50.0	+13		
ACSO				LR	LR					
	comp=Z,829nm,21.0s									
ERPA	Erie	133.86	31	PFAKE			12 40 50.0	+12		
ERPA				LR	LR					
	comp=Z,1μm,21.0s									
LONY	Lake Ozonia	134.42	24	PFAKE			12 40 50.0	+11		
LONY				LR	LR					
	comp=Z,637nm,20.0s									
DBIC	Dimbokro	134.76	275	PKPpre	PKPpre		12 40 30.4			
DBIC				PKP	PKPdf		12 40 39.9	-0.1		
DBIC	Dimbokro	134.76	275	PKhKP	PKPpre		12 40 30.4			
	comp=Z,2.4nm,0.7s,baz=111,slow=5.7,SNR=5.8									
DBIC				PKP	PKPdf		12 40 39.9	-0.1		
	comp=Z,4.3nm,0.8s,baz=144,slow=2.0,SNR=5.9									
LIC	Lamto	134.93	275	*e*PKIKP		PKPdf	12 40 40.5	+0.1		
LIC				*e*R						
	comp=Z,899nm,21.0s									
LIC	Lamto	134.93	275	*e*PKPdf		PKPdf	12 40 40.5	+0.1		
NCB	Newcomb	135.10	25	PFAKE			12 40 50.0	+10		
NCB				LR	LR					
	comp=Z,679nm,22.0s									
LRAL	Lakeview Retre	135.30	46	*e*PKPdf		PKPdf	12 40 41.8	+1.2		
LRAL				LR	LR					
	comp=Z,1μm,22.0s									
BINY	Binghamton	135.75	28	PFAKE			12 40 50.0	+8.8		
BINY				LR	LR					
	comp=Z,837nm,22.0s									
LBNH	Lisbon	135.79	22	PFAKE			12 40 50.0	+8.8		
LBNH				LR	LR					
	comp=Z,810nm,22.0s									
TKL	Tuckaleechee C	136.00	40	*e*PKPdf		PKPdf	12 40 42.5	+0.7		
BRAL	Brewton	136.30	48	PFAKE			12 40 50.0	+7.5		
BRAL				LR	LR					
	comp=Z,1μm,21.0s								

*DDA **20** 12:22:48.0, 39°.10N×29°.04E, h5km, ML3.8*
*ISK **20** 12:22:47.9, 39°.12N×29°.02E, h9km, ML3.8*
*IDC **20** 12:22:47.1±1.1, 39°.05N×28°.92E, h0km, mb3.8/8, mb1 3.9/11, mb1mx3.7/30, mbtmp3.8/11, ML3.3/3, MS2.5/1, Ms1 2.5/1, ms1mx2.0/42, Error ellipse: s-maj=21.4km s-min=16.2km az=4.0*
*ISCJB **20** 12:22:48.3±0.4, 39°.12N±0°.02×29°.01E±0°.02, h10km±3km, mb3.9/8, Error ellipse: s-maj=3.0km s-min=2.8km az=152.2*
*CSEM **20** 12:22:48.4±0.1, 39°.10N×29°.02E, h5km, ML3.8, Error ellipse: s-maj=1.8km s-min=1.7km az=30.0*
*THE **20** 12:22:50.0, 39°.09N×29°.00E, h6km±2km, ML4.1/1, Error ellipse: s-maj=2.3km s-min=0.6km az=24.0*

ISC 20 12:22:48.8±1.0, 39°.11N±0°.02×29°.03E±0°.02, h8km±7km, n182, σ0ᵗ75/200, mb3.8/8, 12C-6D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEMI	**Demirci**	**0.25**	**255**	*i* P	**Pg**	**12 22 53.8**	**0.0**
DEMI				*i* S	**Sg**	**12 22 57.2**	**0.0**
DEMI	**Demirci**	**0.25**	**255**	*i* P	**Pg**	**12 22 53.8**	**0.0**
DEMI				*i* S	**Sg**	**12 22 57.2**	**0.0**
TVSB	**Tavsanli**	**0.48**	**44**	PG	**Pg**	**12 22 57.7**	**-0.4**
TVSB				eSG	**Sg**	**12 23 04.3**	**-0.1**
TVSB	**Tavsanli**	**0.48**	**44**	*i* Pg	**Pg**	**12 22 57.7**	**-0.4**
TVSB				eSg	**Sg**	**12 23 04.3**	**-0.1**
DURS	**Dursunbey**	**0.66**	**319**	*i* P	**Pg**	**12 23 01.1**	**-0.3**
DURS	**Dursunbey**	**0.66**	**319**	*i* P	**Pg**	**12 23 01.1**	**-0.3**
KULA	**Kula-Manisa**	**0.66**	**206**	*e*PG	**Pg**	**12 23 01.1**	**-0.3**
KULA				eSG	**Sg**	**12 23 09.6**	**-0.4**
KULA	**Kula-Manisa**	**0.66**	**206**	*e*Pg	**Pg**	**12 23 01.1**	**-0.3**
KULA				eSg	**Sg**	**12 23 09.6**	**-0.4**
MANT	**Manisa**	**0.72**	**211**	*i* P	**Pg**	**12 23 02.1**	**-0.5**
MANT	**Manisa**	**0.72**	**211**	*i* P	**Pg**	**12 23 02.1**	**-0.5**
ALT	**Altintas**	**0.84**	**93**	*e*PG	**Pg**	**12 23 04.4**	**-0.6**
ALT	**Altintas**	**0.84**	**93**	*e*Pg	**Pg**	**12 23 04.4**	**-0.6**
KHL	**Karahalli**	**0.87**	**153**	*e*PG	**Pg**	**12 23 05.4**	**-0.1**
KHL	**Karahalli**	**0.87**	**153**	*e*Pg	**Pg**	**12 23 05.4**	**-0.1**
ORLT	**Orhaneli**	**0.94**	**354**	*e*PG	**Pg**	**12 23 06.4**	**-0.5**
ORLT	**Orhaneli**	**0.94**	**354**	*e*Pg	**Pg**	**12 23 06.4**	**-0.5**
AKHS	**Akhisar**	**0.97**	**257**	*i* P	**Pg**	**12 23 07.3**	**-0.1**
AKHS				*i* S	**Sg**	**12 23 20.5**	**+0.4**
AKHS	**Akhisar**	**0.97**	**257**	*i* P	**Pg**	**12 23 07.3**	**-0.1**
AKHS				*i* S	**Sg**	**12 23 20.5**	**+0.4**
AKS	**Akhisar**	**0.97**	**257**	*e*PG	**Pg**	**12 23 07.6**	**+0.1**
AKS	**Akhisar**	**0.97**	**257**	*e*Pg	**Pg**	**12 23 07.6**	**+0.1**
BALB	**Balikesir**	**1.04**	**301**	*e*PG	**Pb**	**12 23 08.9**	**0.0**
BALB	**Balikesir**	**1.04**	**301**	*e*Pg	**Pb**	**12 23 08.9**	**0.0**
BALY	**Balya**	**1.26**	**301**	*i* P	**Pn**	**12 23 12.5**	**-0.3**
BALY				*i* S	**Sn**	**12 23 31.4**	**+1.5**
BALY	**Balya**	**1.26**	**301**	*i* P	**Pn**	**12 23 12.5**	**-0.3**
BALY				*i* S	**Sn**	**12 23 31.4**	**+1.5**
CAVI	**Cavuskoy**	**1.26**	**30**	*e*PN	**Pn**	**12 23 11.9**	**-0.9**
CAVI	**Cavuskoy**	**1.26**	**30**	*e*Pn	**Pn**	**12 23 11.9**	**-0.9**
MDNY	**Mudanya-Bursa**	**1.27**	**355**	*e*PN	**Pn**	**12 23 12.1**	**-0.6**
MDNY	**Mudanya-Bursa**	**1.27**	**355**	*e*Pn	**Pn**	**12 23 12.1**	**-0.6**
KCTX	**Karacabey (Bur**	**1.27**	**336**	*e*PN	**Pn**	**12 23 12.4**	**-0.4**
KCTX	**Karacabey (Bur**	**1.27**	**336**	*e*Pn	**Pn**	**12 23 12.4**	**-0.4**
SHUT	**Suhut-Afyon**	**1.31**	**114**	*e*PN	**Pb**	**12 23 13.9**	**+0.2**
SHUT	**Suhut-Afyon**	**1.31**	**114**	*e*Pn	**Pb**	**12 23 13.9**	**+0.2**
GEMT	**Gemlik**	**1.33**	**5**	*e*PN	**Pn**	**12 23 13.3**	**-0.4**
GEMT	**Gemlik**	**1.33**	**5**	*e*Pn	**Pn**	**12 23 13.3**	**-0.4**
BORA	**Eskisehir**	**1.35**	**55**	*i* P	**Pn**	**12 23 13.2**	**-0.8**
BORA				*i* S	**Sb**	**12 23 32.0**	**+0.3**
BORA	**Eskisehir**	**1.35**	**55**	*i* P	**Pn**	**12 23 13.2**	**-0.8**
BORA				*i* S	**Sb**	**12 23 32.0**	**+0.3**
DENT	**Denizli**	**1.35**	**180**	*e*PN	**Pn**	**12 23 14.0**	**+0.1**
DENT	**Denizli**	**1.35**	**180**	*e*Pn	**Pn**	**12 23 14.0**	**+0.1**
GONE	**Gonen-Balikesi**	**1.40**	**313**	*e*PN	**Pn**	**12 23 14.2**	**-0.3**
GONE	**Gonen-Balikesi**	**1.40**	**313**	*e*Pn	**Pn**	**12 23 14.3**	**-0.3**
DNZL	**Cakiroluk**	**1.41**	**179**	*i* P	**Pn**	**12 23 14.6**	**-0.4**
DNZL				*i* S	**Sg**	**12 23 36.0**	**+1.8**
DNZL	**Cakiroluk**	**1.41**	**179**	*i* P	**Pn**	**12 23 14.6**	**-0.4**
ARMT	**Armutlu**	**1.46**	**355**	*e*PN	**Pn**	**12 23 15.1**	**-0.4**
ARMT	**Armutlu**	**1.46**	**355**	*e*Pn	**Pn**	**12 23 15.1**	**-0.4**
ESKT	**Eskisehir**	**1.47**	**73**	*e*PN	**Pn**	**12 23 15.9**	**+0.2**
ESKT	**Eskisehir**	**1.47**	**73**	*e*Pn	**Pn**	**12 23 15.9**	**+0.2**
SEYT	**Eskypehyr**	**1.47**	**73**	*i* P	**Pn**	**12 23 15.5**	**-0.2**
SEYT	**Eskypehyr**	**1.47**	**73**	*i* P	**Pn**	**12 23 15.5**	**-0.2**
YLV	**Yalova**	**1.48**	**10**	*e*PN	**Pb**	**12 23 16.3**	**-0.3**
YLV	**Yalova**	**1.48**	**10**	*e*Pn	**Pb**	**12 23 16.3**	**-0.3**
BNT	**Bandirma**	**1.51**	**326**	*e*PN	**Pn**	**12 23 15.9**	**-0.3**
BNT	**Bandirma**	**1.51**	**326**	*e*Pn	**Pn**	**12 23 15.9**	**-0.3**
GPA	**Golpazari**	**1.54**	**40**	*e*PN	**Pn**	**12 23 16.3**	**-0.3**
GPA	**Golpazari**	**1.54**	**40**	*e*Pn	**Pn**	**12 23 16.3**	**-0.3**
IZM	**Izmir**	**1.55**	**243**	*e*PN	**Pn**	**12 23 16.0**	**-0.7**
IZM	**Izmir**	**1.55**	**243**	*e*Pn	**Pn**	**12 23 16.0**	**-0.7**
AYDN	**Tasoluk**	**1.70**	**212**	*i* P	**Pn**	**12 23 18.3**	**-0.5**
AYDN				*i* S	**Sg**	**12 23 44.0**	**+0.5**
AYDN	**Tasoluk**	**1.70**	**212**	*i* P	**Pn**	**12 23 18.3**	**-0.5**
BLCB	**Balcova**	**1.71**	**246**	*e*PN	**Pn**	**12 23 17.9**	**-1.0**
BLCB	**Balcova**	**1.71**	**246**	*e*Pn	**Pn**	**12 23 17.9**	**-1.0**
ISP	**Isparta**	**1.74**	**137**	P	**Pn**	**12 23 18.8**	**-0.5**
ISP				S	**Sn**	**12 23 41.6**	**-0.1**
ISP	**Isparta**	**1.74**	**137**	||*i*P	**Pn**	**12 23 18.9**	**-0.4**
ISP	**Isparta**	**1.74**	**137**	S	**Sn**	**12 23 42.0**	**+0.3**
ISP	**Isparta**	**1.74**	**137**	P	**Pn**	**12 23 18.8**	**-0.5**
ISP				S	**Sn**	**12 23 41.6**	**-0.1**
BUY	**Buyukada**	**1.75**	**2**	*e*PN	**Pn**	**12 23 18.4**	**-0.9**
GULT	**Gulveren**	**1.75**	**40**	*e*PN	**Pn**	**12 23 19.5**	**0.0**
GULT	**Gulveren**	**1.75**	**40**	*e*Pn	**Pn**	**12 23 19.5**	**0.0**
KRBG	**Karabiga-Canak**	**1.85**	**314**	*e*PN	**Pn**	**12 23 20.3**	**-0.5**
KRBG	**Karabiga-Canak**	**1.85**	**314**	*e*Pn	**Pn**	**12 23 20.3**	**-0.5**
MRMT	**Marmara Adasi**	**1.86**	**324**	*e*PN	**Pn**	**12 23 20.6**	**-0.3**
MRMT	**Marmara Adasi**	**1.86**	**324**	*e*Pn	**Pn**	**12 23 20.7**	**-0.3**
SPNC	**Sapanca-Adapaz**	**1.86**	**32**	*e*PN	**Pn**	**12 23 21.1**	**+0.1**
SPNC	**Sapanca-Adapaz**	**1.86**	**32**	*e*Pn	**Pn**	**12 23 21.1**	**+0.1**
ISK	**Istanbul-Kandi**	**1.96**	**1**	*e*PN	**Pn**	**12 23 21.2**	**-1.1**
ISK	**Istanbul-Kandi**	**1.96**	**1**	*e*Pn	**Pn**	**12 23 21.2**	**-1.1**
SVRH	**Sivrihisar-ESK**	**1.97**	**79**	*e*PN	**Pn**	**12 23 23.3**	**+0.8**
SVRH	**Sivrihisar-ESK**	**1.97**	**79**	*e*Pn	**Pn**	**12 23 23.3**	**+0.8**
GLHS	**Glhisar (BURDU**	**1.98**	**169**	*e*PN	**Pn**	**12 23 22.5**	**-0.2**
GLHS	**Glhisar (BURDU**	**1.98**	**169**	*e*Pn	**Pn**	**12 23 22.5**	**-0.2**
BCK	**Bucak**	**2.05**	**143**	*e*PN	**Pn**	**12 23 23.4**	**-0.2**
BCK	**Bucak**	**2.05**	**143**	*e*Pn	**Pn**	**12 23 23.5**	**-0.2**
YER	**Yerkesik**	**2.05**	**197**	*e*PN	**Pn**	**12 23 23.5**	**-0.1**
YER	**Yerkesik**	**2.05**	**197**	*e*Pn	**Pn**	**12 23 23.5**	**-0.1**
MLSB	**Milas**	**2.06**	**209**	*e*PN	**Pn**	**12 23 23.8**	**+0.1**
MLSB	**Milas**	**2.06**	**209**	*e*Pn	**Pn**	**12 23 23.8**	**+0.1**
BGKT	**Bogazkoy**	**2.08**	**355**	*e*PN	**Pn**	**12 23 23.3**	**-0.6**
BGKT	**Bogazkoy**	**2.08**	**355**	*e*Pn	**Pn**	**12 23 23.3**	**-0.6**
SILT	**Sile**	**2.10**	**13**	*e*PN	**Pn**	**12 23 23.9**	**-0.3**
SILT	**Sile**	**2.10**	**13**	*e*Pn	**Pn**	**12 23 23.9**	**-0.3**
RKY	**Sarkoy-Tekirda**	**2.13**	**319**	*e*PN	**Pn**	**12 23 23.5**	**-1.1**
RKY	**Sarkoy-Tekirda**	**2.13**	**319**	*e*Pn	**Pn**	**12 23 23.5**	**-1.1**
PRK	**Paraskevi**	**2.15**	**275**	P	**Pn**	**12 23 24.9**	**0.0**
PRK				S	**Sn**	**12 23 51.6**	**-0.1**
PRK	**Paraskevi**	**2.15**	**275**	P	**Pn**	**12 23 24.9**	**0.0**
PRK				S	**Sn**	**12 23 51.6**	**-0.1**
MFT	**Murefte**	**2.15**	**322**	*e*PN	**Pn**	**12 23 25.6**	**+0.6**
MFT	**Murefte**	**2.15**	**322**	*e*Pn	**Pn**	**12 23 25.6**	**+0.6**
MDUB	**Mudurnu**	**2.16**	**50**	*e*PN	**Pn**	**12 23 24.7**	**-0.4**
MDUB	**Mudurnu**	**2.16**	**50**	*e*Pn	**Pn**	**12 23 24.7**	**-0.4**
LPK	**Lapseki**	**2.16**	**307**	*e*PN	**Pn**	**12 23 25.0**	**0.0**
LPK	**Lapseki**	**2.16**	**307**	*e*Pn	**Pn**	**12 23 25.0**	**0.0**
CTKS	**Kestanelik-??a**	**2.17**	**350**	*e*PN	**Pn**	**12 23 25.2**	**+0.1**
CTKS	**Kestanelik-??a**	**2.17**	**350**	*e*Pn	**Pn**	**12 23 25.2**	**+0.1**
TKR	**Tekirdag**	**2.20**	**329**	*e*PN	**Pn**	**12 23 25.9**	**+0.3**
TKR	**Tekirdag**	**2.20**	**329**	*e*Pn	**Pn**	**12 23 25.9**	**+0.3**
EZN	**Ezine**	**2.21**	**290**	*e*PN	**Pn**	**12 23 24.7**	**-1.0**
EZN	**Ezine**	**2.21**	**290**	*e*Pn	**Pn**	**12 23 24.7**	**-1.0**
SLVT	**Silivri**	**2.21**	**344**	*e*PN	**Pn**	**12 23 25.9**	**+0.1**
SLVT	**Silivri**	**2.21**	**344**	*e*Pn	**Pn**	**12 23 25.9**	**+0.1**
KIZT	**Kizilcal**	**2.23**	**95**	*e*PN	**Pn**	**12 23 26.9**	**+0.7**
KIZT	**Kizilcal**	**2.23**	**95**	*e*Pn	**Pn**	**12 23 26.9**	**+0.7**
GELI	**Tayfur-Gelibol**	**2.35**	**304**	*e*PN	**Pn**	**12 23 27.2**	**-0.5**
GELI	**Tayfur-Gelibol**	**2.35**	**304**	*e*Pn	**Pn**	**12 23 27.2**	**-0.5**
CHOS	**Chios island**	**2.43**	**254**	P	**Pn**	**12 23 28.5**	**-0.4**
CHOS	**Chios island**	**2.43**	**254**	P	**Pn**	**12 23 28.5**	**-0.4**
CTYL	**Yal??k??y-??at**	**2.43**	**347**	*e*PN	**Pn**	**12 23 28.8**	**0.0**
CTYL	**Yal??k??y-??at**	**2.43**	**347**	*e*Pn	**Pn**	**12 23 28.8**	**0.0**
FETY	**Fethiye**	**2.47**	**179**	*e*PN	**Pn**	**12 23 29.6**	**+0.3**
FETY	**Fethiye**	**2.47**	**179**	*e*Pn	**Pn**	**12 23 29.6**	**+0.3**
DAT	**Datca**	**2.64**	**206**	*e*PN	**Pn**	**12 23 31.4**	**-0.3**
DAT	**Datca**	**2.64**	**206**	*e*Pn	**Pn**	**12 23 31.4**	**-0.3**
ENEZ	**Enez**	**2.75**	**307**	*e*PN	**Pn**	**12 23 33.5**	**+0.4**
ENEZ	**Enez**	**2.75**	**307**	*e*Pn	**Pn**	**12 23 33.5**	**+0.4**
LADK	**Ladik-KONYA**	**2.77**	**108**	*e*PN	**Pn**	**12 23 34.1**	**+0.7**
LADK	**Ladik-KONYA**	**2.77**	**108**	*e*Pn	**Pn**	**12 23 34.2**	**+0.7**
ALN	**Alexandroupoli**	**2.91**	**309**	P	**Pn**	**12 23 35.1**	**-0.2**
ALN	**Alexandroupoli**	**2.91**	**309**	P	**Pn**	**12 23 35.1**	**-0.2**
LOD	**Lodumlu**	**3.00**	**74**	*e*PN	**Pn**	**12 23 37.8**	**+1.2**
LOD	**Lodumlu**	**3.00**	**74**	*e*Pn	**Pn**	**12 23 37.8**	**+1.2**
ANTO	**Ankara**	**3.01**	**74**	*e*PN	**Pn**	**12 23 37.8**	**+0.9**
ANTO	**Ankara**	**3.01**	**74**	||*i*P	**Pb**	**12 23 40.9**	**-1.8**
ANTO	**Ankara**	**3.01**	**74**	S	**Sg**	**12 24 26.0**	**+0.5**
ANTO	**Ankara**	**3.01**	**74**	*e*Pn	**Pn**	**12 23 37.8**	**+0.9**
ANTO	**Ankara**	**3.01**	**74**	||*i*P	**Pb**	**12 23 40.9**	**-1.8**
LIA	**Limnos Island**	**3.08**	**286**	P	**Pn**	**12 23 37.9**	**+0.2**
LIA	**Limnos Island**	**3.08**	**286**	P	**Pn**	**12 23 37.9**	**+0.2**
AFSR	**Af'ar-Bala (A**	**3.16**	**83**	*e*PN	**Pn**	**12 23 40.3**	**+1.4**
AFSR	**Af'ar-Bala (A**	**3.16**	**83**	*e*Pn	**Pn**	**12 23 40.3**	**+1.4**
EDRB	**Edirne**	**3.25**	**328**	*e*PN	**Pn**	**12 23 39.8**	**-0.2**
EDRB	**Edirne**	**3.25**	**328**	*e*Pn	**Pn**	**12 23 39.8**	**-0.2**
APE	**Apeiranthos**	**3.43**	**235**	P	**Pn**	**12 23 42.3**	**-0.2**
APE	**Apeiranthos**	**3.43**	**235**	||*i*P	**Pn**	**12 23 42.1**	**-0.4**
APE	**Apeiranthos**	**3.43**	**235**	P	**Pn**	**12 23 42.3**	**-0.2**
APE				S	**Sn**	**12 24 19.7**	**-3.7**
SAFT	**Safranbolu**	**3.52**	**52**	*e*PN	**Pn**	**12 23 44.0**	**+0.2**
SAFT	**Safranbolu**	**3.52**	**52**	*e*Pn	**Pn**	**12 23 44.0**	**+0.2**
BRTR	**Keskin Array B**	**3.62**	**79**	Pn	**Pn**	**12 23 46.0**	**+0.6**
	1.7nm,0.3s,baz=254,slow=14,SNR=28						
BRTR				Lg	Lg	12 24 46.2	
	3.2nm,0.3s,baz=255,slow=27,SNR=6.7						
SULT	**Sultanhani-AKS**	**3.63**	**103**	*e*PN	**Pn**	**12 23 46.0**	**+0.7**
SULT	**Sultanhani-AKS**	**3.63**	**103**	*e*Pn	**Pn**	**12 23 46.0**	**+0.7**
JMB	**Yambol**	**3.84**	**332**	P	**Pn**	**12 23 49.5**	**+1.4**
JMB	**Yambol**	**3.84**	**332**	P	**Pn**	**12 23 49.5**	**+1.4**
KAVA	**Kavala**	**3.94**	**300**	P	**Pn**	**12 23 49.6**	**0.0**
KAVA	**Kavala**	**3.94**	**300**	P	**Pn**	**12 23 49.6**	**0.0**
CORM	**Corum**	**4.46**	**74**	*e*PN	**Pn**	**12 23 58.2**	**+1.4**
CORM	**Corum**	**4.46**	**74**	*e*Pn	**Pn**	**12 23 58.2**	**+1.4**
CSS	**Prodhromos**	**5.38**	**139**	P	**Pn**	**12 24 09.5**	**+0.1**
CSS	**Prodhromos**	**5.38**	**139**	P	**Pn**	**12 24 09.5**	**+0.1**
KOZT	**Kozan**	**5.59**	**105**	PG	Pg	12 24 43.7	+7.9
VTS	**Vitosha**	**5.62**	**310**	||*i*P	**Pn**	**12 24 13.2**	**+0.4**
VTS	**Vitosha**	**5.62**	**310**	S	**Sn**	**12 25 16.5**	**-1.1**
VTS	**Vitosha**	**5.62**	**310**	||*i*P	**Pn**	**12 24 13.2**	**+0.4**
TLCR		**6.08**	**359**	||*i*P	**Pn**	**12 24 19.6**	**+0.7**
CFR	**Carcaliu**	**6.10**	**354**	||*i*P	**Pn**	**12 24 19.2**	**0.0**
CFR	**Carcaliu**	**6.10**	**354**	||*i*P	**Pn**	**12 24 19.2**	**0.0**
CFR				S	**Sn**	**12 25 28.1**	**-1.1**
MLR	**Muntele Rosu**	**6.78**	**341**	||*i*P	**Pn**	**12 24 29.9**	**+1.3**
MLR	**Muntele Rosu**	**6.78**	**341**	S	**Sn**	**12 25 47.1**	**+1.1**
MLR	**Muntele Rosu**	**6.78**	**341**	Pn	**Pn**	**12 24 29.9**	**+1.3**
	0.1nm,0.3s,baz=222,slow=7.9,SNR=9.6						
MLR	**Muntele Rosu**	**6.78**	**341**	||*i*P	**Pn**	**12 24 29.9**	**+1.3**
PLOR	**Plostina**	**6.97**	**346**	||*i*P	**Pn**	**12 24 34.2**	**+3.1**
VRI	**Vrincioaia**	**6.97**	**347**	||*i*P	**Pn**	**12 24 31.8**	**+0.7**
VRI	**Vrincioaia**	**6.97**	**347**	||*i*P	**Pn**	**12 24 31.8**	**+0.7**
MMAI	**Mount Meron Ar**	**7.97**	**138**	Pn	**Pn**	**12 24 44.6**	**-0.4**
	3.8nm,0.3s,baz=331,slow=13,SNR=9.2						
BZS	**Buzias**	**8.51**	**322**	||*i*P	**Pn**	**12 24 52.2**	**0.0**
BZS	**Buzias**	**8.51**	**322**	||*i*P	**Pn**	**12 24 52.2**	**0.0**
BURAR	**Bucovina Array**	**8.95**	**343**	||*i*P	**Pn**	**12 24 59.9**	**+1.6**
BURAR	**Bucovina Array**	**8.95**	**343**	||*i*P	**Pn**	**12 24 59.9**	**+1.6**
ASF	**Jabal al Asfar**	**9.42**	**135**	LR	LR	12 29 06.0	
	comp=Z,31nm,20.2s,baz=191,slow=40						
FINES	**FINESS Array B**	**22.44**	**356**	P	**P**	**12 27 48.2**	**+0.4**
	4.5nm,0.9s,baz=182,slow=19,SNR=3.6						
AKTO	**Aktyubinsk**	**23.34**	**51**	P	**P**	**12 27 58.0**	**+0.6**
	1.7nm,0.7s,baz=244,slow=12,SNR=5.2						
TORD	**Torodi Ar. Bea**	**35.38**	**231**	P	**P**	**12 29 44.5**	**-0.5**
	0.5nm,0.6s,baz=35,slow=8.0,SNR=6.2						
KURBB	**Kurchatov Arra**	**36.28**	**55**	P	**P**	**12 29 53.4**	**+1.0**
	1.0nm,0.5s,baz=277,slow=8.5,SNR=4.4						
MKAR	**Makanchi Array**	**39.09**	**61**	P	**P**	**12 30 15.5**	**-0.8**
	0.8nm,0.6s,baz=283,slow=8.0,SNR=6.5						
ZALV	**Zalesovo Beam**	**40.07**	**49**	P	**P**	**12 30 23.9**	**-0.4**
	0.9nm,0.5s,baz=258,slow=6.7,SNR=5.8						
SCHQ	**Schefferville**	**62.20**	**319**	P	**P**	**12 33 08.3**	**-2.2**
	3.9nm,1.1s,baz=90,slow=2.0,SNR=4.8						
KSRS	**Korea Array**	**73.46**	**55**	P	**P**	**12 34 22.6**	**+0.9**
	1.7nm,0.8s,baz=316,slow=5.4,SNR=4.1						

IDC 20 12:30:37.5±5.4, 3°.37S×131°.64E, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.5/19, mbtmp3.6/3, ML3.1/1, Error ellipse: s-maj=376.3km s-min=28.8km az=73.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.68**	**171**	Pn	Pn	12 34 31.4	-1.4
	0.1nm,0.3s,baz=351,slow=13,SNR=4.2						
ASAR	**Alice Springs**	**20.30**	**174**	P	P	12 35 15.8	+0.6
	1.7nm,0.8s,baz=351,slow=11,SNR=5.9						
MKAR	**Makanchi Array**	**66.14**	**325**	P	P	12 41 26.8	0.0
	0.3nm,0.4s,baz=109,slow=7.8,SNR=3.4						

TAP 20 12:50:29.5, 21°.94N×121°.59E, h125km, ML2.9, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSEB	**Hengchuen, Pin**	**0.64**	**267**	*e*P	Pn	12 50 50.0	+1.2
	baz=267						
TSEB				*e*S	Sn	12 51 05.0	+1.5
	baz=267						
TWK1	**Hengchun**	**0.73**	**271**	P	Pn	12 50 50.3	+0.8
	baz=270						
TWK1				*e*S	Sn	12 51 05.6	+0.9
	baz=270						
EAST	**Anshuo**	**0.82**	**303**	P	Pn	12 50 50.5	+0.2
	baz=306						
EAST				*e*S	Sn	12 51 06.8	+0.7
	baz=306						
ECL	**Taimali**	**0.88**	**318**	P	Pn	12 50 50.6	-0.2
	baz=315						
ECL				S	Sn	12 51 06.1	-0.9
	baz=315						
SCZT	**Fangliau**	**1.00**	**296**	P	Pn	12 50 52.4	+0.5
	baz=296						
SCZT				*e*S	Sn	12 51 08.8	0.0
	baz=296						
TWG	**Pinlang**	**1.00**	**332**	P	Pn	12 50 52.0	0.0
	baz=332						
TWG				*e*S	Sn	12 51 08.0	-1.0
	baz=332						
ELDTW	**Lidau**	**1.35**	**337**	*e*P	Pn	12 50 56.1	+0.3
	baz=338						
ELDTW				*e*S	Sn	12 51 15.4	-0.4
	baz=338						
TWM1	**Shoushan**	**1.39**	**309**	*e*P	Pn	12 50 57.9	+1.8
	baz=317						
TWF1	**Yuli**	**1.43**	**349**	*e*P	Pn	12 50 57.7	+1.1
	baz=344						
CHN1	**Nanshi**	**1.58**	**322**	*e*P	Pn	12 50 59.0	+0.8
	baz=322						
CHN1				S	Sn	12 51 20.1	0.0
	baz=322						
WTP	**Ta-pu**	**1.58**	**326**	*e*P	Pn	12 50 58.0	-0.2
	baz=318						
WTP				S	Sn	12 51 20.4	+0.1
	baz=318						
TWK	**Hsinying**	**1.67**	**323**	*e*S	Sn	12 51 22.2	+0.1
	baz=323						
CHN4	**Tsaushan**	**1.68**	**327**	*e*P	Pn	12 51 00.2	+0.8
	baz=321						
CHN4				S	Sn	12 51 22.1	-0.1
	baz=321						
CHN5	**Tsauling**	**1.85**	**333**	*e*P	Pn	12 51 01.8	+0.3
	baz=326						
CHN5				*e*S	Sn	12 51 26.4	+0.4
	baz=326						
TYC	**Yuchr**	**2.07**	**341**	*e*P	Pn	12 51 05.8	+1.8
	baz=334						
TYC				*e*S	Sn	12 51 32.1	+1.5
	baz=334						

TAP 20 12:50:51.3, 23°.16N×120°.53E, h13km±1km, ML0.8, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHN1	**Nanshi**	**0.02**	**350**	P	Pg	12 50 54.0	+0.4
	baz=352						
CHN1				S	Sg	12 50 56.1	+0.9
	baz=352						
WTP	**Ta-pu**	**0.11**	**42**	*e*P	Pb	12 50 55.0	-0.4
	baz=45						
CHN4	**Tsaushan**	**0.20**	**17**	*e*P	Pb	12 50 56.9	+0.1
	baz=16						

*IDC **20** 12:51:17.0±1.1, 4°.29S×129°.59E, h0km, mb3.9/5, mb1 3.9/8, mb1mx3.7/23, mbtmp3.8/8, ML3.5/3, Error ellipse: s-maj=57.2km s-min=17.0km az=61.0*
*ISCJB **20** 12:51:19.6±0.5, 4°.24S±0°.06×129°.69E±0°.07, h36km, mb3.8/5, Error ellipse: s-maj=10.6km s-min=8.4km az=147.6*
*DJA **20** 12:51:19.8±0.4, 4°.S±10°×13°0E±°, h23km±11km, M3.4/6, MLv3.4/6*

ISC 20 12:51:21.4±0.8, 4°.21S±0°.07×129°.66E±0°.07, h36km, n14, σ1ᵗ31/14, mb3.9/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.39**	**142**	P	**Pn**	**12 51 29.7**	**-0.6**
MSAI	**Masohi**	**1.13**	**320**	P	**Pn**	**12 51 38.7**	**-2.1**
AAI	**Ambon**	**1.56**	**290**	P	**Pn**	**12 51 45.8**	**-0.8**
FAKI	**Fak Fak**	**2.88**	**64**	P	**Pn**	**12 52 04.1**	**-0.8**
SWI	**Sorong**	**3.69**	**26**	P	**Pn**	**12 52 15.3**	**-0.7**
KMPI	**Kaimana, Papua**	**4.07**	**82**	P	**Pn**	**12 52 20.3**	**-0.9**
FITZ	**Fitzroy Crossi**	**14.35**	**196**	Pn	**Pn**	**12 54 42.2**	**0.0**
	0.1nm,0.3s,baz=15,slow=17,SNR=5.8						
WRA	**Warramunga Arr**	**16.28**	**164**	Pn	**Pn**	**12 55 04.9**	**-2.7**
	0.2nm,0.3s,baz=340,slow=14,SNR=9.9						
ASAR	**Alice Springs**	**19.77**	**168**	P	**P**	**12 55 47.9**	**-0.7**
	0.3nm,0.3s,baz=348,slow=10,SNR=47						
CTA	**Charters Tower**	**22.59**	**136**	P	**P**	**12 56 18.9**	**-0.1**
	1.1nm,0.5s,baz=319,slow=12,SNR=5.1						
STKA	**Stephens Creek**	**29.71**	**159**	P	**P**	**12 57 25.0**	**+0.8**
	1.4nm,0.8s,baz=342,slow=13,SNR=2.7						
CMAR	**Chiang Mai Arr**	**37.74**	**308**	P	**P**	**12 58 35.2**	**+1.1**
	0.9nm,0.6s,baz=128,slow=7.0,SNR=5.7						
MKAR	**Makanchi Array**	**65.73**	**326**	P	**P**	**13 02 03.8**	**+1.2**

LZG	Guadaloupe-1	5.73	3	*e*P	Pn	13 06 51.0	+0.8
SEG	Port Louis	6.00	5	*e*P	Pn	13 06 56.4	+2.4
BAUV	El Baul	6.07	257	*e*P	Pn	13 06 53.5	-1.5
BAUV				*e*S	Sn	13 08 00.8	-3.4
MAPV	Macapo	6.33	266	*e*P	Pn	13 06 57.2	-1.3
SIV	San Ignacio	26.23	178	P	P	13 10 59.1	-1.1
	1.2nm,0.6s,baz=15,slow=11,SNR=6.4						
TXAR	Lajitas Array	43.15	302	P	P	13 13 22.4	-3.6
	0.1nm,0.4s,baz=113,slow=7.0,SNR=3.0						
SCHQ	Schefferville	44.49	356	P	P	13 13 34.7	-1.6
	1.6nm,0.7s,baz=180,slow=13,SNR=4.6						
PDAR	Pinedale Array	52.37	317	P	P	13 14 35.0	-2.5
	0.7nm,0.6s,baz=115,slow=8.2,SNR=6.7						
TORD	Torodi Ar. Bea	62.33	81	P	P	13 15 46.8	-1.3
	0.6nm,0.7s,baz=292,slow=6.8,SNR=5.1						
YKA	Yellowknife Ar	64.12	336	P	P	13 15 55.3	-3.8
	0.3nm,0.5s,baz=109,slow=7.5,SNR=7.8						
ILAR	Eielson Array	78.47	334	P	P	13 17 22.6	-3.2
	0.3nm,0.5s,baz=91,slow=4.8,SNR=11						
ARCES	ARCESS Array B	79.49	21	P	P	13 17 28.8	-2.5
	4.0nm,1.0s,baz=270,slow=3.6,SNR=3.3						
FINES	FINESS Array B	80.07	29	P	P	13 17 33.9	-0.7
	2.3nm,0.8s,baz=263,slow=2.6,SNR=5.0						
CMAR	Chiang Mai Arr	145.75	33	PKPbc	PKPdf	13 25 05.0	+0.4
	0.4nm,0.3s,baz=314,slow=4.9,SNR=6.0						
WRA	Warramunga Arr	161.56	237	PKPab	PKPab	13 26 09.0	-2.5
	0.3nm,0.6s,baz=107,slow=4.1,SNR=4.6						

IDC 20 13:05:47.5±5.4, 3°51S×131°69E, h0km, mb3.1/2, mb1 3.4/3, mb1mx3.2/19, mbtmp3.2/3, ML2.9/1, Error ellipse: s-maj=379.3km s-min=28.6km az=73.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.53	171	Pn	Pn	13 09 40.5	-0.5
	0.1nm,0.3s,baz=352,slow=13,SNR=4.8						
ASAR	Alice Springs	20.15	174	P	P	13 10 23.7	+0.2
	0.5nm,0.5s,baz=350,slow=10,SNR=20						
MKAR	Makanchi Array	66.29	325	P	P	13 16 37.8	0.0
	0.1nm,0.4s,baz=118,slow=7.7,SNR=2.5						

*ISK **20** 13:05:59.6, 39°10N×29°04E, h5km, MD2.9*
*CSEM **20** 13:06:00.3±0.1, 39°10N×29°05E, h5km, MD2.9, Error ellipse: s-maj=2.2km s-min=2.1km az=144.0*
*DDA **20** 13:06:00.4, 39°08N×29°04E, h7km, MD2.9*
ISC 20 13:06:00.2±1.1, 39°10N±0°02×29°06E±0°02, h5km±10km, n52, σ0s46/66, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEMI	Demirci	0.27	259	*i* P	Pg	13 06 05.7	+0.2
DEMI				*i* S	Sg	13 06 09.2	+0.2
DEMI	Demirci	0.27	259	*i* P	Pg	13 06 05.7	+0.2
DEMI				*i* S	Sg	13 06 09.2	+0.2
TVSB	Tavsanli	0.47	42	*e*PG	Pg	13 06 09.6	+0.3
TVSB				*e*SG	Sg	13 06 15.8	+0.3
TVSB	Tavsanli	0.47	42	*e*Pg	Pg	13 06 09.6	+0.3
TVSB				*e*Sg	Sg	13 06 15.8	+0.3
KULA	Kula-Manisa	0.66	208	*e*PG	Pg	13 06 12.9	0.0
KULA				*e*SG	Sg	13 06 21.3	-0.1
KULA	Kula-Manisa	0.66	208	*e*Pg	Pg	13 06 12.9	0.0
KULA				*e*Sg	Sg	13 06 21.3	-0.1
MANT	Manisa	0.72	213	*i* P	Pg	13 06 14.0	0.0
MANT	Manisa	0.72	213	*i* P	Pg	13 06 14.0	0.0
KHAL	Karahalli	0.80	155	*i* P	Pb	13 06 16.3	-0.4
KHAL				*i* S	Sb	13 06 27.1	-0.8
KHAL	Karahalli	0.80	155	*i* P	Pb	13 06 16.3	-0.4
KHAL				*i* S	Sb	13 06 27.1	-0.8
ALT	Altintas	0.82	93	*e*PG	Pg	13 06 16.6	+0.6
ALT				*e*SG	Sb	13 06 28.2	-0.3
ALT	Altintas	0.82	93	*e*Pg	Pg	13 06 16.6	+0.6
ALT				*e*Sg	Sb	13 06 28.2	-0.3
KHL	Karahalli	0.85	154	*e*PG	Pg	13 06 16.3	-0.3
KHL	Karahalli	0.85	154	*e*Pg	Pg	13 06 16.3	-0.3
ORLT	Orhaneli	0.96	353	*e*PG	Pg	13 06 17.6	-0.9
ORLT	Orhaneli	0.96	353	*e*Pg	Pg	13 06 17.6	-0.9
AKHS	Akhisar	0.99	258	*i* P	Pg	13 06 19.3	+0.1
AKHS				*i* S	Sg	13 06 32.6	+0.5
AKHS	Akhisar	0.99	258	*i* P	Pg	13 06 19.3	+0.1
AKHS				*i* S	Sg	13 06 32.6	+0.5
AKS	Akhisar	0.99	258	*e*PG	Pg	13 06 19.3	+0.1
AKS	Akhisar	0.99	258	*e*Pg	Pg	13 06 19.3	+0.1
BALB	Balikesir	1.06	301	*e*PG	Pg	13 06 20.5	-0.1
BALB	Balikesir	1.06	301	*e*Pg	Pg	13 06 20.5	-0.1
CAVI	Cavuskoy	1.26	29	*e*PG	Pg	13 06 24.2	-0.2
CAVI	Cavuskoy	1.26	29	*e*Pn	Pg	13 06 24.2	-0.2
MDNY	Mudanya-Bursa	1.28	354	*e*PN	Pn	13 06 24.3	-0.5
MDNY	Mudanya-Bursa	1.28	354	*e*Pn	Pn	13 06 24.3	-0.5
BALY	Balya	1.28	300	*i* P	Pg	13 06 25.0	+0.1
BALY				*i* S	Sn	13 06 43.5	+0.9
BALY	Balya	1.28	300	*i* P	Pg	13 06 25.0	+0.1
BALY				*i* S	Sn	13 06 43.5	+0.9
KCTX	Karacabey (Bur	1.29	335	*e*PN	Pn	13 06 23.9	-1.1
KCTX	Karacabey (Bur	1.29	335	*e*Pn	Pn	13 06 23.9	-1.1
SHUT	Suhut-Afyon	1.29	114	*e*PN	Pn	13 06 25.0	-0.1
SHUT	Suhut-Afyon	1.29	114	*e*Pn	Pn	13 06 25.0	-0.1
BORA	Eskisehir	1.33	54	*i* P	Pn	13 06 25.6	-0.1
BORA	Eskisehir	1.33	54	*i* P	Pn	13 06 25.6	-0.1
GEMT	Gemlik	1.34	4	*e*PN	Pn	13 06 25.4	-0.3
GEMT	Gemlik	1.34	4	*e*Pn	Pn	13 06 25.4	-0.3
GONE	Gonen-Balikesi	1.42	312	*e*PN	Pn	13 06 26.5	-0.3
GONE	Gonen-Balikesi	1.42	312	*e*Pn	Pn	13 06 26.5	-0.3
ARMT	Armutlu	1.48	354	*e*PN	Pn	13 06 27.4	-0.1
ARMT	Armutlu	1.48	354	*e*Pn	Pn	13 06 27.4	-0.1
YLV	Yalova	1.49	9	*e*PN	Pn	13 06 27.7	-0.1
YLV	Yalova	1.49	9	*e*Pn	Pn	13 06 27.7	-0.1
GULT	Gulveren	1.75	40	*e*PN	Pn	13 06 31.6	+0.3
GULT	Gulveren	1.75	40	*e*Pn	Pn	13 06 31.6	+0.3
MRMT	Marmara Adasi	1.88	324	*e*PN	Pn	13 06 33.5	+0.4
MRMT	Marmara Adasi	1.88	324	*e*Pn	Pn	13 06 33.5	+0.4
MDUB	Mudurnu	2.15	50	*e*PN	Pn	13 06 37.6	+0.8
MDUB	Mudurnu	2.15	50	*e*Pn	Pn	13 06 37.6	+0.8
RKY	Sarkoy-Tekirda	2.15	318	*e*PN	Pn	13 06 37.2	+0.4
RKY	Sarkoy-Tekirda	2.15	318	*e*Pn	Pn	13 06 37.2	+0.4
MFT	Murefte	2.17	322	*e*PN	Pn	13 06 37.7	+0.6
MFT	Murefte	2.17	322	*e*Pn	Pn	13 06 37.7	+0.6

*ISCJB **20** 13:06:38.5±0.6, 38°03N±0°03×38°18E±0°05, h8km±7km, Error ellipse: s-maj=7.3km s-min=5.0km az=144.7*
*CSEM **20** 13:06:38.7±0.1, 38°04N×38°19E, h12km, MD2.8, Error ellipse: s-maj=2.7km s-min=2.2km az=101.0*
*DDA **20** 13:06:38.3, 38°04N×38°23E, h2km, MD2.9*
*ISK **20** 13:06:38.0, 38°04N×38°17E, h8km, MD2.8*
ISC 20 13:06:38.5±1.1, 38°04N±0°03×38°16E±0°04, h9km±11km, n20, σ0s50/29, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKCD	Akcadag	0.31	323	*i* P	Pb	13 06 45.9	-0.5
AKCD				*i* S	Sb	13 06 50.9	-0.8
AKCD	Akcadag	0.31	323	*i* P	Pb	13 06 45.9	-0.5
AKCD				*i* S	Sb	13 06 50.9	-0.8
MALT	Malatya	0.34	38	*e*PG	Pg	13 06 45.3	0.0
MALT				*e*SG	Sg	13 06 50.6	+0.7
MALT	Malatya	0.34	38	*e*Pg	Pg	13 06 45.3	0.0
MALT				*e*Sg	Sg	13 06 50.6	+0.7
ATAB	Bozova	0.58	169	*i* P	Pg	13 06 49.7	-0.1
ATAB	Bozova	0.58	169	*i* P	Pg	13 06 49.7	-0.1
DARE	Darende-Malaty	0.75	315	*e*PG	Pb	13 06 53.5	-0.2
DARE				*e*SG	Sg	13 07 02.9	+0.2
URFA	Urfa	0.80	139	*e*PG	Pb	13 06 54.1	-0.5
URFA				*e*SG	Sg	13 07 04.4	+0.1
URFA	Urfa	0.80	139	*e*Pg	Pb	13 06 54.1	-0.5
URFA				*e*Sg	Sg	13 07 04.4	+0.1
KMRS	Kahramanmaras	1.13	242	*e*PN	Pn	13 07 00.3	-0.3
KMRS	Kahramanmaras	1.13	242	*e*Pn	Pn	13 07 00.3	-0.3
GAZ	Gaziantep	1.15	221	*e*PN	Pn	13 07 00.8	0.0
GAZ				*e*SN	Sn	13 07 17.7	+1.0
GAZ	Gaziantep	1.15	221	*e*Pn	Pn	13 07 00.8	0.0
GAZ				*e*Sn	Sn	13 07 17.7	+1.0
PTK	Pertek	1.29	48	*e*PN	Pb	13 07 02.7	-0.3
PTK	Pertek	1.29	48	*e*Pn	Pb	13 07 02.7	-0.3
SARI	SarD1z-Kayseri	1.42	285	*e*PN	Pn	13 07 04.6	0.0
ILIC	ilic-Erzincan	1.44	13	*e*PN	Pn	13 07 04.9	0.0
ILIC	ilic-Erzincan	1.44	13	*e*Pn	Pn	13 07 04.9	0.0
KOZT	Kozan	1.93	254	*e*PN	Pn	13 07 12.1	+0.6
KOZT	Kozan	1.93	254	*e*Pn	Pn	13 07 12.1	+0.6

*IDC **20** 13:14:07.9±3.0, 40°.73S×175°.52E, h0km, mb3.6/3, mb1 3.7/5, mb1mx3.7/18, mbtmp3.5/5, ML2.5/2, Error ellipse: s-maj=72.7km s-min=28.5km az=138.0*
*ISCJB **20** 13:14:14.0±0.3, 40°.71S±0°.03×175°.51E±0°.04, h42km±5km, mb3.6/3, Error ellipse: s-maj=6.4km s-min=3.6km az=38.1*
*WEL **20** 13:14:14.6±0.1, 40°.69S×175°.53E, h31km, ML3.8/36, Error ellipse: s-maj=1.0km s-min=0.8km az=90.0*
WEL Felt from Manawatu to Wellington, maximum reported intensity MM 5.
ISC 20 13:14:13.3±0.9, 40°.72S±0°.03×175°.53E±0°.04, h36km±5km, n56, σ1s50/63, mb3.9/3, 5C-8D, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRZ	Mangatainoka R	0.07	33	⇓P*	Pn	13 14 19.5	+0.1
MRZ				S*	Sn	13 14 23.4	0.0
HOWZ	Holdsworth Sta	0.18	184	⇓P*	Pn	13 14 21.4	-0.4
HOWZ				S*	Sn	13 14 25.4	-3.9
TIWZ	Tintock	0.28	102	⇑P*	Pn	13 14 22.7	+1.4
OGWZ	Otaki Gorge	0.29	250	⇓P*	Pn	13 14 21.7	+0.4
OGWZ				S*	Sn	13 14 27.0	-0.7
MTW	Mount Morrison	0.44	183	⇑P*	Pn	13 14 25.2	+2.2
KIW	Kapiti Island	0.49	253	P*	Pn	13 14 24.5	+0.7
KIW				S*	Sn	13 14 31.9	+0.7
CAW	Cannon Point	0.52	222	P*	Pn	13 14 25.7	+1.4
CAW				S*	Sn	13 14 34.0	+2.0
BFZ	Birch Farm	0.55	86	⇑P*	Pn	13 14 26.3	+1.6
DVHZ	Dannevirke	0.64	49	P*	Pn	13 14 26.7	+0.7
PAWZ	Paruwai Farm	0.67	187	P*	Pn	13 14 28.1	+1.8
TRWZ	Traveller	0.69	170	P*	Pn	13 14 28.4	+1.8
MSWZ	Moikau Station	0.73	197	P*	Pn	13 14 28.9	+1.7
WEL	Wellington	0.81	225	P*	Pn	13 14 30.0	+1.8
BHW	Baring Head	0.85	216	P*	Pn	13 14 30.6	+1.8
SNZO	South Karori	0.86	226	⇓P*	Pn	13 14 30.6	+1.8
PLWZ	Palliser	0.88	194	P*	Pn	13 14 30.7	+1.5
PNHZ	Pukenui	0.95	33	⇓P*	Pn	13 14 31.1	+0.9
WPHZ	Waipukurau	0.95	47	P*	Pn	13 14 31.2	+1.0
PRHZ	Porangahau	0.95	62	P*	Pn	13 14 31.4	+1.2
WAZ	Wanganui	1.05	336	⇑PN	Pn	13 14 32.8	+1.3
TCW	Tory Channel	1.07	242	⇓P*	Pn	13 14 33.1	+1.4
DUWZ	D'Urville Isla	1.23	266	P*	Pn	13 14 34.9	+1.0
DUWZ				S*	Sn	13 14 51.2	+1.9
PXZ	Pawanui	1.23	56	P*	Pn	13 14 34.5	+0.6
BHHZ	Black Hill Sta	1.29	19	PN	Pn	13 14 35.8	+0.9
MOVZ	Moawhango	1.32	7	PN	Pn	13 14 36.3	+1.0
MTVZ	Mangateitei	1.33	358	PN	Pn	13 14 37.0	+1.6
KAHZ	Kahuranaki	1.38	49	PN	Pn	13 14 36.8	+0.7
WNVZ	Wahianoa	1.39	2	PN	Pn	13 14 37.6	+1.3
TUWZ	Tuamarina	1.40	239	⇓PN	Pn	13 14 37.2	+1.0
TRVZ	Turoa	1.42	1	PN	Pn	13 14 38.2	+1.4
PKVZ	Pokaka	1.43	354	PN	Pn	13 14 38.2	+1.4
DRZ	Dome Shelter	1.44	1	PN	Pn	13 14 38.8	+1.6
TUVZ	Tukino	1.45	4	PN	Pn	13 14 39.0	+1.8
FWVZ	Far West T-bar	1.46	1	PN	Pn	13 14 38.9	+1.5
WPVZ	Whakapapa	1.51	0	PN	Pn	13 14 39.7	+1.7
OTVZ	Oturere	1.56	4	PN	Pn	13 14 40.2	+1.6
MCHZ	McNeill Hill	1.56	35	PN	Pn	13 14 39.1	+0.6
BSWZ	Blackbirch Sta	1.60	231	PN	Pn	13 14 40.2	+1.1
TWVZ	Taurewa	1.65	357	PN	Pn	13 14 41.5	+1.7
RAEZ	Rainy Point	1.68	328	PN	Pn	13 14 42.3	+2.2
VRZ	Vera Road	1.70	339	⇑PN	Pn	13 14 41.8	+1.4
NNZ	Nelson	1.70	252	PN	Pn	13 14 41.5	+1.1
BKZ	Black Stump Fm	1.72	26	⇓PN	Pn	13 14 41.0	+0.3
DFE	Dawson Falls	1.77	321	PN	Pn	13 14 43.7	+2.3
THZ	Tophouse	2.24	241	PN	Pn	13 14 48.1	+0.2
KHZ	Kahutara	2.26	221	PN	Pn	13 14 48.5	+0.4
HIZ	Hauiti	2.26	346	PN	Pn	13 14 49.7	+1.5
QRZ	Quartz Range	2.28	266	PN	Pn	13 14 49.0	+0.6
URZ	Urewera	2.74	27	Pn	Pn	13 14 53.5	-1.3
	1.0nm,0.3s,baz=44,slow=9.6,SNR=4.2						
DSZ	Dennistone Nort	2.99	249	PN	Pn	13 14 58.7	+0.4
LTZ	Lake Taylor	3.19	229	PN	Pn	13 15 00.9	-0.2
RPZ	Rata Peaks	4.47	227	Pn	Pn	13 15 16.9	-1.7
	0.2nm,0.3s,baz=314,slow=17,SNR=5.4						
RPZ				Sn	Sn	13 16 05.3	-4.0
	1.8nm,0.3s,baz=29,slow=16,SNR=16						
ASAR	Alice Springs	38.71	283	P	P	13 21 33.8	-0.2
	0.2nm,0.5s,baz=124,slow=6.8,SNR=4.3						
WRA	Warramunga Arr	40.67	288	P	P	13 21 49.9	-0.4
	0.7nm,0.3s,baz=125,slow=8.4,SNR=9.6						
FITZ	Fitzroy Crossi	48.21	283	P	P	13 22 50.0	-0.5
	0.7nm,0.5s,baz=139,slow=9.3,SNR=3.0						
ARCES	ARCESS Array B	147.13	341	PKPbc	PKPbc	13 33 50.8	-0.5
	3.0nm,1.0s,baz=50,slow=1.9,SNR=5.0						

IDC 20 13:21:53.1±2.5, 16°.41S×174°.54W, h142km±31km, mb3.6/4, mb1 3.8/5, mb1mx3.4/20, mbtmp3.6/5, MS4.5/1, Ms1 4.5/1, ms1mx3.2/29, Error ellipse: s-maj=155.5km s-min=19.8km az=138.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.65	47	P	Pn	13 22 50.4	+1.7
	11nm,0.3s,baz=49,slow=19,SNR=15						
AFI				S	Sn	13 23 31.6	-0.2
	31nm,0.3s,baz=62,slow=19,SNR=21						
RPZ	Rata Peaks	29.84	201	LR	LR	13 38 07.2	
	comp=Z,856nm,18.5s,baz=18,slow=33						
STKA	Stephens Creek	42.58	241	P	P	13 29 34.8	-0.4
	2.6nm,0.9s,baz=95,slow=11,SNR=7.6						
WRA	Warramunga Arr	48.55	258	P	P	13 30 22.4	+0.1
	0.5nm,0.5s,baz=94,slow=7.4,SNR=25						
ASAR	Alice Springs	48.76	253	P	P	13 30 23.4	-0.5
	6.8nm,0.7s,baz=89,slow=8.3,SNR=143						
ILAR	Eielson Array	83.65	12	P	P	13 34 05.2	0.0
	0.4nm,0.9s,baz=210,slow=5.7,SNR=9.3						
BRTR	Keskin Array B	146.22	319	PKPbc	PKPbc	13 41 16.8	-0.5
	0.8nm,0.8s,baz=98,slow=6.0,SNR=3.7						

IDC 20 13:28:11.4±0.7, 2°.49N×84°.62W, h0km, mb4.0/9, mb1 4.3/14, mb1mx4.1/27, mbtmp4.1/14, ML3.5/5, MS4.0/9, Ms1 4.1/9, ms1mx3.8/29, Error ellipse: s-maj=35.4km s-min=14.2km az=55.0, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTS	JuntasAbangare	7.76	358	Pn	Pn	13 30 05.5	-0.3
	4.5nm,0.3s,baz=106,slow=16,SNR=12						
JTS				Sn	Sn	13 31 30.6	-3.8
	1.4nm,0.3s,baz=312,slow=18,SNR=2.5						
JTS				LR	LR	13 32 36.9	
	comp=Z,603nm,20.9s,baz=242,slow=34						
ROSC	El Rosal	10.53	77	Pn	Pn	13 30 44.9	+0.6
	1.8nm,0.3s,baz=182,slow=1.3,SNR=5.4						
ATAH	Atahualpa	11.40	147	Pn	Pn	13 30 56.1	-0.1
	0.3nm,0.3s,baz=341,slow=6.8,SNR=8.1						
ATAH				LR	LR	13 34 46.3	
	comp=Z,904nm,18.3s,baz=305,slow=35						
NNA	Nana	16.32	152	Pn	P	13 32 04.2	-1.2
	0.4nm,0.3s,baz=300,slow=12,SNR=3.6						
CMIG	Matias Romero	17.68	326	P	P	13 32 21.2	+0.9
	0.1nm,0.3s,baz=110,slow=9.7,SNR=6.2						
CMIG				LR	LR	13 37 53.2	
	comp=Z,451nm,21.5s,baz=234,slow=33						
TEIG	Tepich	17.99	349	LR	LR	13 38 46.5	
	comp=Z,506nm,18.8s,baz=317,slow=35						
LPAZ	La Paz	24.77	139	P	P	13 33 34.6	-1.3
	12nm,1.1s,baz=327,slow=10.0,SNR=18						
SIV	San Ignacio	29.65	129	P	P	13 34 18.6	-0.4
	0.9nm,0.7s,baz=323,slow=8.3,SNR=4.3						
TXAR	Lajitas Array	32.26	328	P	P	13 34 42.3	+0.2
	0.7nm,0.6s,baz=145,slow=8.5,SNR=8.4						
TXAR				LR	LR	13 46 02.1	
	comp=Z,263nm,21.8s,baz=270,slow=33						
PDAR	Pinedale Array	45.87	334	P	P	13 36 35.6	-0.3
	0.8nm,0.8s,baz=126,slow=9.3,SNR=7.9						
PDAR				PcP	PcP	13 38 12.8	-0.5
	0.6nm,0.9s,baz=134,slow=6.4,SNR=3.6						
PDAR				LR	LR	13 56 33.4	
	comp=Z,239nm,18.7s,baz=162,slow=37						
NVAR	Mina Array Bea	47.19	324	P	P	13 36 47.5	+1.2
	2.2nm,0.7s,baz=132,slow=7.1,SNR=24						
ULM	Lac du Bonnet	48.54	350	P	P	13 36 56.0	-0.2
	4.1nm,0.7s,baz=162,slow=8.9,SNR=7.3						
YKA	Yellowknife Ar	63.90	345	P	P	13 38 44.6	-1.2
	1.2nm,0.7s,baz=140,slow=6.4,SNR=39						
PPT	Papeete	67.02	250	LR	LR	13 59 17.2	
	comp=Z,143nm,19.9s,baz=82,slow=28						
PPT2	Papeete2	67.02	250	*e*S	S	13 47 51.1	-11
	184nm,25.0s						
PPT2				*e*LR	LR	13 59 20.4	
	258nm,25.8s						
TBI	Tubuai	68.08	244	*e*LR	LR	13 59 46.5	
	133nm,26.8s						
ILAR	Eielson Array	76.22	337	P	P	13 40 00.4	-1.1
	1.2nm,0.9s,baz=124,slow=3.6,SNR=9.7						
ILAR				LR	LR	14 14 58.0	
	comp=Z,132nm,20.0s,baz=102,slow=37						
ESDC	Sonseca Array	81.22	50	LR	LR	14 13 21.0	
	comp=Z,80nm,18.6s,baz=245,slow=33						
TORD	Torodi Ar. Bea	85.85	77	P	P	13 40 55.8	+1.9
	0.5nm,0.6s,baz=289,slow=6.2,SNR=6.6						
STKA	Stephens Creek	127.65	231	PKP	PKPdf	13 47 19.9	+0.4
	0.8nm,0.6s,baz=236,slow=13,SNR=3.5						
ASAR	Alice Springs	137.22	237	PKP	PKPdf	13 47 37.5	-0.3
	0.4nm,0.8s,baz=111,slow=1.6,SNR=4.9						
WRA	Warramunga Arr	138.21	243	PKP	PKPdf	13 47 40.0	+0.4
	0.6nm,0.8s,baz=103,slow=2.4,SNR=9.9						
FITZ	Fitzroy Crossi	146.53	240	PKPbc	PKPdf	13 47 54.9	+0.5
	2.5nm,1.0s,baz=116,slow=2.2,SNR=4.0						

IDC 20 13:34:12.6±1.7, 3°.96N×126°.50E, h0km, mb3.3/5, mb1 3.5/5, mb1mx3.3/24, mbtmp3.3/5, Error ellipse: s-maj=98.3km s-min=23.1km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	21.94	182	P	P	13 39 07.9	0.0
	0.4nm,0.6s,baz=14,slow=7.2,SNR=2.5						
WRA	Warramunga Arr	24.97	162	P	P	13 39 36.9	-1.2
	0.8nm,0.6s,baz=342,slow=11,SNR=9.1						
ASAR	Alice Springs	28.39	166	P	P	13 40 09.0	+0.1
	2.0nm,0.8s,baz=345,slow=7.1,SNR=3.6						
STKA	Stephens Creek	38.42	159	P	P	13 41 37.2	+1.1
	1.0nm,0.8s,baz=0.0,slow=13,SNR=3.0						
MKAR	Makanchi Array	57.24	325	P	P	13 44 01.8	0.0
	0.2nm,0.6s,baz=114,slow=7.5,SNR=3.0						

IDC 20 13:35:00.2±1.7, 4°.08N×126°.98E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/24, mbtmp3.5/5, Error ellipse: s-maj=96.7km s-min=23.1km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	22.08	183	P	P	13 39 57.1	0.0
	0.4nm,0.4s,baz=24,slow=10,SNR=2.7						
WRA	Warramunga Arr	24.94	163	P	P	13 40 24.5	-0.9
	2.1nm,0.7s,baz=343,slow=11,SNR=8.3						
ASAR	Alice Springs	28.39	167	P	P	13 40 57.4	+0.9
	0.1nm,0.4s,baz=345,slow=11,SNR=3.2						
STKA	Stephens Creek	38.37	160	P	P	13 42 23.0	-0.2
	1.9nm,0.7s,baz=333,slow=9.4,SNR=5.0						
MKAR	Makanchi Array	57.41	325	P	P	13 44 50.7	0.0
	0.1nm,0.4s,baz=119,slow=7.4,SNR=3.3						

IDC 20 13:54:55.8±11.0, 5°.55S×130°.56E, h0km, mb3.9/1, mb1 3.6/4, mb1mx3.4/19, mbtmp3.4/4, ML2.9/3, Error ellipse: s-maj=166.7km s-min=80.6km az=155.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	13.37	201	Pn	Pn	13 58 06.7	-0.2
	0.0nm,0.3s,baz=25,slow=17,SNR=2.0						
WRA	Warramunga Arr	14.77	166	Pn	Pn	13 58 25.8	-0.4
	0.0nm,0.3s,baz=349,slow=13,SNR=5.0						
ASAR	Alice Springs	18.30	170	P	Pn	13 59 11.2	-0.1
	0.1nm,0.3s,baz=351,slow=11,SNR=19						
STKA	Stephens Creek	28.16	160	P	P	14 00 50.0	+0.1
	0.8nm,0.5s,baz=326,slow=11,SNR=3.8						

IDC 20 13:57:33.4±1.0, 55°.99S×26°.17W, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.7/17, mbtmp3.6/4, ML3.0/1, Error ellipse: s-maj=44.0km s-min=26.6km az=74.0, South Sandwich Islands region

| Code | Station Name | Δ° | AZ° | Phase |

HLM1				AML	AML	14 09 09.3	
	comp=E,5.4nm,0.5s						
HLM1				AML	AML	14 09 27.1	
	comp=E,7.6nm,0.5s						
HLM1	**Long Mynd**	**3.18**	**338**	*eP*	Pn	14 08 28.2	-1.1
HLM1				AML	AML	14 09 09.3	
	comp=N,5.4nm,0.5s						
HLM1				AML	AML	14 09 27.1	
	comp=E,7.6nm,0.5s						

IDC 20 14:09:57.6±5.2, 3°50.5′N×131°28.6′E, h0km, mb3.1/2, mb1 3.2/3, mb1mx3.2/19, mbtmp3.1/3, ML2.8/1, Error ellipse: s-maj=380.7km s-min=28.5km az=72.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.61**	**170**	Pn	Pn	14 13 50.4	-1.7
	0.0nm,0.3s,baz=350,slow=13,SNR=3.2						
ASAR	**Alice Springs**	**20.21**	**173**	P	P	14 14 35.0	+0.7
	0.3nm,0.5s,baz=347,slow=10.0,SNR=14						
MKAR	**Makanchi Array**	**66.05**	**325**	P	P	14 20 46.3	0.0
	0.2nm,0.5s,baz=128,slow=7.7,SNR=3.1						

IDC 20 14:22:56.4±1.7, 4°25.N×126°.91E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/24, mbtmp3.7/5, 1C, Error ellipse: s-maj=94.1km s-min=23.2km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**3.97**	**318**	*iP*	Pb	14 24 05.6	-1.6
FITZ	**Fitzroy Crossi**	**22.25**	**183**	P	P	14 27 54.7	-0.2
	1.0nm,0.5s,baz=22,slow=11,SNR=7.7						
WRA	**Warramunga Arr**	**25.12**	**163**	P	P	14 28 23.3	+0.1
	2.9nm,0.8s,baz=344,slow=11,SNR=17						
ASAR	**Alice Springs**	**28.57**	**167**	P	P	14 28 54.1	-0.2
	0.3nm,0.6s,baz=351,slow=7.9,SNR=10.0						
STKA	**Stephens Creek**	**38.55**	**160**	P	P	14 30 20.9	0.0
	2.8nm,0.9s,baz=0.0,slow=9.1,SNR=4.5						
MKAR	**Makanchi Array**	**57.24**	**325**	P	P	14 32 45.6	0.0
	0.3nm,0.4s,baz=131,slow=8.5,SNR=7.3						

IDC 20 14:27:46.0±1.9, 4°.15N×126°.77E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/24, mbtmp3.4/4, Error ellipse: s-maj=104.9km s-min=25.6km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.13**	**183**	P	P	14 32 43.6	+0.2
	0.8nm,0.6s,baz=20,slow=7.9,SNR=3.6						
WRA	**Warramunga Arr**	**25.07**	**163**	P	P	14 33 12.8	+0.5
	1.5nm,0.8s,baz=343,slow=11,SNR=8.6						
ASAR	**Alice Springs**	**28.51**	**166**	P	P	14 33 42.5	-0.9
	0.3nm,0.6s,baz=351,slow=7.2,SNR=6.4						
MKAR	**Makanchi Array**	**57.24**	**325**	P	P	14 37 35.3	0.0
	0.3nm,0.7s,baz=122,slow=8.1,SNR=4.7						

*NAO **20** 14:34:33.1±3.4, 72°.67N×2°.34E, ML3.4*
*BJI **20** 14:34:36.8, 72°.60N×2°.70E, h5km, mB5.0/1, mb4.5/3*
*MOS **20** 14:34:36.9±2.6, 72°.56N×2°.76E, h10km, mb4.3/11, Error ellipse: s-maj=30.5km s-min=8.7km az=102.4*
*CSEM **20** 14:34:37.9±0.3, 72°.50N×3°.20E, h2km, mb4.1/9, Error ellipse: s-maj=12.1km s-min=8.4km az=58.0*
*IDC **20** 14:34:37.1±0.9, 72°.38N×2°.76E, h0km, mb3.6/8, mb1 3.8/11, mb1mx3.7/30, mbtmp3.7/11, ML3.2/3, MS3.8/24, Ms1 3.8/24, ms1mx3.6/45, Error ellipse: s-maj=23.2km s-min=15.2km az=43.0*
*ISCJB **20** 14:34:38.5±0.5, 72°.54N±0°.05×4°.0E±0°.1, h10km, mb3.9/15, MS3.8/22, Error ellipse: s-maj=7.1km s-min=5.9km az=37.0*
*BER **20** 14:34:39.4±3.5, 72°.56N×2°.74E, h10km, ML2.6, ML3.4(NAO)*

ISC 20 14:34:38.8±0.6, 72°.51N±0°.06×3°.43E±0°.05, h10km, n105, σ1§60/76, mb4.0/15, MS3.7/22, 3C, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJO	**Bjornoya**	**4.91**	**59**	*eP*	Pn	14 35 50.0	-2.5
BJO				*eS*	**Sn**	**14 36 45.8**	**-3.5**
TRO	**Tromso**	**5.80**	**112**	*eP*	**Pn**	**14 36 05.1**	**+0.3**
TRO				*eS*	**Sn**	**14 37 09.1**	**-2.2**
TRO				AML	AML	14 37 10.3	
	comp=Z,11nm,0.5s						
TRO	**Tromso**	**5.80**	**112**	*eP*	**Pn**	**14 36 05.1**	**+0.3**
	SNR=49						
STEI	**Steigen**	**6.09**	**133**	*eP*	**Pn**	**14 36 09.6**	**+0.8**
STEI				*eS*	**Sn**	**14 37 16.4**	**-2.0**
KBS	**Kingsbay**	**6.77**	**14**	Pn	Pn	14 36 11.8	-6.2
KBS	**Kingsbay**	**6.77**	**14**	*eP*	**Pn**	**14 36 18.3**	**+0.2**
KBS	**Kingsbay**	**6.77**	**14**	*eP*	**Pn**	**14 36 18.3**	**+0.2**
	SNR=47						
KONS	**Konsvik**	**6.92**	**146**	*eP*	Pn	14 36 15.7	-4.4
KONS				*e*		14 37 30.3	
STOK	**Stokkvaagen**	**7.06**	**147**	*eP*	**Pn**	**14 36 22.2**	**+0.2**
FLOS	**Flostrand**	**7.11**	**146**	*eP*	**Pn**	**14 36 22.7**	**0.0**
DAG	**Danmarks Havn**	**7.21**	**316**	*eP*	Pn	14 36 17.9	-6.1
DAG	**Danmarks Havn**	**7.21**	**316**	*iP*	Pn	14 36 17.9	-6.1
KTK1	**Kautokeino**	**7.40**	**109**	*eP*	**Pn**	**14 36 28.8**	**+2.1**
KTK1				*eS*	**Sn**	**14 37 50.7**	**+0.1**
KTK1				AML	AML	14 37 57.9	
	comp=Z,8.8nm,0.6s						
KTK1	**Kautokeino**	**7.40**	**109**	*eP*	**Pn**	**14 36 28.8**	**+2.1**
	SNR=47						
KTK1				*eS*	**Sn**	**14 37 50.7**	**+0.1**
	comp=Z,8.8nm,0.6s						
MOR8	**Moi Rana**	**7.45**	**143**	*eP*	**Pn**	**14 36 27.7**	**+0.3**
MOR8				*eS*	**Sn**	**14 37 47.9**	**-4.0**
MOR8				AML	AML	14 37 50.8	
	comp=Z,9.2nm,0.5s						
MOR8	**Moi Rana**	**7.45**	**143**	*eP*	**Pn**	**14 36 27.7**	**+0.3**
	SNR=47						
ARA0	**ARCESS Array S**	**7.76**	**102**	Pn	**Pn**	**14 36 32.5**	**+0.8**
	baz=294,slow=11						
ARA0				Sn	**Sn**	**14 37 59.0**	**-0.5**
	baz=307,slow=22						
ARA0	**ARCESS Array S**	**7.76**	**102**	Pn	**Pn**	**14 36 32.5**	**+0.8**
	baz=294,slow=11						
ARA0				Sn	**Sn**	**14 37 59.0**	**-0.5**
	baz=307,slow=22						
ARA0	**ARCESS Array S**	**7.76**	**102**	Pn	**Pn**	**14 36 32.5**	**+0.8**
	baz=294,slow=10,SNR=50						
ARA0				Sn	**Sn**	**14 37 59.0**	**-0.5**
	baz=307,slow=20,SNR=50						
ARCES	**ARCESS Array B**	**7.76**	**102**	Pn	**Pn**	**14 36 32.4**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=296,slow=11,SNR=62						
ARCES				Sn	**Sn**	**14 37 59.1**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=310,slow=21,SNR=5.7						
ARCES				LR	LR	14 39 41.3	
	comp=Z,406nm,19.3s,baz=321,slow=38						
ARCES	**ARCESS Array B**	**7.76**	**102**	P	**Pn**	**14 36 32.4**	**+0.7**
	comp=Z,1.0nm,0.3s						
ARCES				S	**Sn**	**14 37 59.1**	**-0.4**
	comp=Z,406nm,19.3s						
KEV	**Kevo**	**8.09**	**98**	*eP*	**Pn**	**14 36 36.4**	**+0.2**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KEV	**Kevo**	**8.09**	**98**	*ep*	**Pn**	**14 36 36.4**	**+0.2**
	comp=Z,0.8nm,0.4s						
KEV	**Kevo**	**8.09**	**98**	*eP*	**Pn**	**14 36 36.4**	**+0.2**
	comp=Z,1.0nm,0.4s						
SCO	**Scoresbysund**	**8.29**	**268**	*iP*	Pn	14 36 33.0	-5.8
SCO	**Scoresbysund**	**8.29**	**268**	*iP*	Pn	14 36 33.0	-5.8
BORG	**Borgarnes**	**11.81**	**241**	LR	LR	14 40 52.6	
	comp=Z,281nm,21.7s,baz=1.9,slow=32						
NB2	**NORSAR Subarra**	**11.91**	**161**	Pn	**Pn**	**14 37 28.8**	**+0.3**
NB2	**NORSAR Subarra**	**11.91**	**161**	Pn	**Pn**	**14 37 28.8**	**+0.3**
NB2	**NORSAR Subarra**	**11.91**	**161**	Pn	**Pn**	**14 37 28.8**	**+0.3**
	SNR=50						
NOA	**NORSAR Array B**	**11.91**	**161**	LR	LR	14 41 58.7	
	comp=Z,294nm,19.2s,baz=350,slow=37						
HFS	**Hagfors**	**13.06**	**157**	Pn	**Pn**	**14 37 42.2**	**-2.0**
	baz=350,slow=16						
HFS	**Hagfors**	**13.06**	**157**	Pn	**Pn**	**14 37 42.2**	**-2.0**
	baz=350,slow=16						
HFS	**Hagfors**	**13.06**	**157**	Pn	**Pn**	**14 37 42.6**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=7.5,slow=13,SNR=14						
HFS				LR	LR	14 42 26.1	
	comp=Z,245nm,21.5s,baz=340,slow=36						
HFS	**Hagfors**	**13.06**	**157**	Pn	**Pn**	**14 37 42.2**	**-2.0**
	baz=350,slow=15,SNR=50						
HFS	**Hagfors**	**13.06**	**157**	P	**Pn**	**14 37 42.6**	**-1.5**
	comp=Z,245nm,21.5s						
KAF	**Kangasniemi**	**13.53**	**129**	*eP*	**Pn**	**14 37 48.1**	**-2.4**
KAF	**Kangasniemi**	**13.53**	**129**	*ep*	**Pn**	**14 37 48.1**	**-2.4**
FIA0	**FINESS Array S**	**14.06**	**130**	Pn	**Pn**	**14 37 58.0**	**+0.2**
	baz=334,slow=7.9						
FIA0	**FINESS Array S**	**14.06**	**130**	Pn	**Pn**	**14 37 58.0**	**+0.2**
	baz=334,slow=7.9						
FIA0	**FINESS Array S**	**14.06**	**130**	Pn	**Pn**	**14 37 58.0**	**+0.2**
	baz=334,slow=7.6,SNR=50						
FINES	**FINESS Array B**	**14.06**	**130**	Pn	**Pn**	**14 37 57.3**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=336,slow=9.0,SNR=7.4						
FINES				LR	LR	14 43 01.3	
	comp=Z,790nm,18.4s,baz=339,slow=36						
JOF	**Joensuu**	**14.11**	**119**	*eP*	**Pn**	**14 37 56.8**	**-1.7**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
JOF	**Joensuu**	**14.11**	**119**	*ep*	**Pn**	**14 37 56.8**	**-1.7**
	comp=Z,2.6nm,0.6s						
CLL	**Collm**	**21.69**	**164**	*eP*	P	14 39 34.0	+4.5
CLL				*e*		14 39 39.0	
CLL				*eS*	Sn	14 43 38.0	-0.2
CLL				pmax	pmax		
	comp=Z,18nm,2.0s						
CLL	**Collm**	**21.69**	**164**	*eP*	P	14 39 34.0	+4.5
	comp=Z,18nm,2.0s						
CLL				*e*		14 39 39.0	
CLL				*ePPP*	PPP	14 40 02.0	
CLL				*eS*	Sn	14 43 38.0	-0.2
BRG	**Berggiesshubel**	**22.21**	**162**	*eP*	P	14 39 41.4	+6.3
	comp=Z,8.0nm,1.2s						
BRG							
	comp=N,171nm,13.8s						
BRG							
	comp=E,141nm,13.3s						
BRG							
	comp=Z,254nm,15.0s						
BRG	**Berggiesshubel**	**22.21**	**162**	*eP*	P	14 39 41.3	+6.3
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BRG				MLR	MLR		
	comp=N,8μm,13.8s						
BRG				MLR	MLR		
	comp=E,171nm,13.3s						
BRG				MLR	MLR		
	comp=Z,141nm,15.0s						
OBN	**Obninsk**	**22.24**	**124**	*eP*	**P**	**14 39 38.3**	**+3.1**
OBN				*e*		14 43 31.7	
OBN				pmax	pmax		
	comp=Z,48nm,2.5s						
OBN				MLR	MLR		
	comp=Z,600nm,18.0s						
OBN	**Obninsk**	**22.24**	**124**	*eP*	**P**	**14 39 38.3**	**+3.1**
	comp=Z,48nm,2.5s						
OBN	**Obninsk**	**22.24**	**124**	*ePcP*	**PcP**	**14 43 31.7**	**+0.9**
	comp=Z,600nm,18.0s						
KHC	**Kasperske Hory**	**23.90**	**163**	*iP*	**P**	**14 39 54.9**	**+2.5**
KHC	**Kasperske Hory**	**23.90**	**163**	*iP*	**P**	**14 39 54.9**	**+2.5**
VRAC	**Vranov**	**24.02**	**159**	LR	LR	14 49 42.5	
	comp=Z,156nm,18.4s,baz=350,slow=38						
GERES	**GERESS Array B**	**24.20**	**163**	P	**P**	**14 39 55.6**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=353,slow=9.4,SNR=6.8						
GERES				LR	LR	14 48 54.9	
	comp=Z,72nm,18.9s,baz=82,slow=36						
GERES	**GERESS Array B**	**24.20**	**163**	P	**P**	**14 39 55.6**	**+0.4**
	comp=Z,72nm,18.9s						
BFO	**Black Forest**	**24.36**	**172**	*iP*	**P**	**14 39 59.3**	**+2.6**
BFO	**Black Forest**	**24.36**	**172**	*iP*	**P**	**14 39 59.3**	**+2.6**
AKASG	**Malin Array Be**	**24.67**	**138**	*cePP*	**P**	**14 40 01.9**	**+2.6**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**24.67**	**138**	P	**P**	**14 39 59.1**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=341,slow=9.5,SNR=7.3						
AKASG	**Malin Array Be**	**24.67**	**138**	*eP*	**P**	**14 40 01.9**	**+2.6**
	comp=Z,3.0nm,0.7s						
KIEV	**Kiev**	**24.67**	**138**	*iP*	**P**	**14 40 00.6**	**+1.3**
KIEV	**Kiev**	**24.67**	**138**	*iP*	**P**	**14 40 00.6**	**+1.3**
RES	**Resolute Bay**	**24.87**	**321**	LR	LR	14 49 38.8	
	comp=Z,367nm,19.6s,baz=59,slow=36						
UZH	**Uzhgorod**	**25.44**	**150**	*eP*	**P**	**14 40 09.0**	**+2.7**
UZH	**Uzhgorod**	**25.44**	**150**	*eP*	**P**	**14 40 09.0**	**+2.7**
DAVOX	**Davos/Dischmat**	**25.98**	**170**	LR	LR	14 50 46.6	
	comp=Z,209nm,19.9s,baz=82,slow=37						
FRB	**Frobisher Bay**	**26.45**	**288**	LR	LR	14 50 08.6	
	comp=Z,212nm,19.1s,baz=100,slow=35						
ARU	**Arti**	**27.30**	**96**	*eP*	P	14 40 31.0	+7.9
ARU						14 41 13.0	
MLR	**Muntele Rosu**	**29.07**	**146**	LR	LR	14 52 38.2	
	comp=Z,114nm,18.1s,baz=181,slow=37						
SCHQ	**Schefferville**	**33.22**	**276**	LR	LR	14 53 10.5	
	comp=Z,139nm,21.2s,baz=75,slow=34						
BRVK	**Borovoye**	**33.73**	**88**	*iP*	P	14 41 22.0	+2.2
BRVK	**Borovoye**	**33.73**	**88**	*iP*	P	14 41 22.0	+2.2
KBZ	**Khabaz**	**34.33**	**125**	LR	LR	14 55 29.2	
	comp=Z,399nm,18.6s,baz=5.3,slow=36						
ZEI	**Tsey**	**35.48**	**125**	*eP*	P	14 41 38.2	+2.8
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ZEI	**Tsey**	**35.48**	**125**	*eP*	P	14 41 38.2	+2.8
	comp=Z,4.0nm,1.3s						
BRTR	**Keskin Array B**	**36.07**	**139**	P	**P**	**14 41 41.1**	**+0.8**
	comp=Z,1.9nm,1.0s,baz=341,slow=5.7,SNR=5.7						
BRTR				LR	LR	14 57 22.2	
	comp=Z,91nm,20.9s,baz=311,slow=38						
BRTR	**Keskin Array B**	**36.07**	**139**	P	**P**	**14 41 41.2**	**+0.8**
	comp=Z,91nm,20.9s						
MAK	**Makhachkala**	**36.22**	**120**	*eP*	**P**	**14 41 39.2**	**-2.2**
MAK				MLR	MLR		
	comp=Z,414nm,22.0s						
INK	**Inuvik**	**36.61**	**335**	LR	LR	14 56 02.9	
	comp=Z,134nm,21.2s,baz=319,slow=35						
ZALV	**Zalesovo Beam**	**37.29**	**75**	P	P	14 41 53.0	+2.6
ZALV	**Zalesovo Beam**	**37.29**	**75**	P	P	14 41 53.0	+2.6
	comp=Z,0.3nm,0.3s,baz=273,slow=2.7,SNR=3.9						
ZALV				LR	LR	15 02 28.9	
	comp=Z,64nm,18.5s,baz=326,slow=45						
ZALV	**Zalesovo Beam**	**37.29**	**75**	P	P	14 41 53.0	+2.6
KURK	**Kurchatov**	**38.29**	**83**	*iP*	P	14 42 01.0	+2.2
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	**Kurchatov**	**38.29**	**83**	*iP*	P	14 42 01.0	+2.2
	comp=Z,3.0nm,1.0s						
YKA	**Yellowknife Ar**	**38.90**	**319**	P	**P**	**14 42 02.3**	**-1.6**
	comp=Z,0.5nm,0.9s,baz=27,slow=9.3,SNR=6.2						
YKA	**Yellowknife Ar**	**38.90**	**319**	P	**P**	**14 42 02.3**	**-1.6**
	comp=Z,1.0nm,0.9s						
BILL	**Bilibino**	**39.24**	**10**	*eP*	P	14 42 08.8	+2.2
BILL				pmax	pmax		
	comp=Z,13nm,1.2s						
BILL	**Bilibino**	**39.24**	**10**	*eP*	P	14 42 08.8	+2.2
	comp=Z,13nm,1.2s						
ILAR	**Eielson Array**	**41.53**	**341**	P	**P**	**14 42 25.9**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=3.1,slow=7.5,SNR=6.7						
ILAR	**Eielson Array**	**41.53**	**341**	P	**P**	**14 42 25.9**	**+0.3**
MKAR	**Makanchi Array**	**42.89**	**82**	P	**P**	**14 42 38.8**	**+1.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,80nm,19.2s						
MKAR	**Makanchi Array**	**42.89**	**82**	P	**P**	**14 42 38.8**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=326,slow=10,SNR=9.2						
MKAR				LR	LR	15 05 08.5	
	comp=Z,80nm,19.2s,baz=344,slow=42						
MKAR	**Makanchi Array**	**42.89**	**82**	P	**P**	**14 42 38.8**	**+1.9**
	comp=Z,80nm,19.2s						
FFC	**Flin Flon**	**43.13**	**305**	*iP*	**P**	**14 42 38.7**	**0.0**
FFC	**Flin Flon**	**43.13**	**305**	*iP*	**P**	**14 42 38.7**	**0.0**
AAK	**Ala-Archa**	**44.30**	**92**	*eP*	P	14 42 53.2	+4.6
AAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DLBC	**Dease Lake**	**45.47**	**328**	LR	LR	15 03 14.8	
	comp=Z,276nm,19.0s,baz=149,slow=38						
ULM	**Lac du Bonnet**	**45.62**	**298**	LR	LR	15 01 34.4	
	comp=Z,220nm,19.2s,baz=344,slow=36						
SADO	**Sadowa**	**45.82**	**280**	LR	LR	15 01 03.4	
	comp=Z,92nm,18.1s,baz=331,slow=35						
TKL	**Tuckaleechee C**	**55.58**	**280**	LR	LR	15 06 47.7	
	comp=Z,88nm,18.9s,baz=307,slow=35						
PDAR	**Pinedale Array**	**56.09**	**305**	LR	LR	15 07 52.7	
	comp=Z,77nm,18.5s,baz=52,slow=36						
TORD	**Torodi Ar. Bea**	**59.35**	**182**	P	**P**	**14 44 39.4**	**-1.4**
	comp=Z,1.2nm,0.9s,baz=355,slow=6.3,SNR=5.9						
TORD				LR	LR	15 10 33.2	
	comp=Z,50nm,18.7s,baz=340,slow=36						
TXAR	**Lajitas Array**	**67.23**	**295**	LR	LR	15 14 29.6	
	comp=Z,64nm,18.6s,baz=180,slow=36						
ASAR	**Alice Springs**	**124.09**	**57**	PKP	**PKPdf**	**14 53 36.8**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=12,slow=1.6,SNR=5.9						

*IDC **20** 14:36:08.9±1.0, 4°.16S×129°.77E, h0km, mb3.8/6, mb1 4.0/8, mb1mx3.8/21, mbtmp3.8/8, ML3.7/2, Error ellipse: s-maj=43.0km s-min=19.1km az=67.0*
*ISCJB **20** 14:36:11.8±0.4, 4°.24S±0°.05×129°.66E±0°.05, h36km, mb3.7/6, Error ellipse: s-maj=7.9km s-min=4.9km az=42.9*
*DJA **20** 14:36:11.0±0.5, 4°.S×3°.13°.0E±°, h7km±4km, M3.9/9, mb4.3/3, mB5.2/1, MLv3.7/9, Mw(mB)4.5/1*
*AUST **20** 14:36:14.9±0.0, 4°.31S×129°.51E, h53km, Error ellipse: s-maj=1.2km s-min=1.1km az=234.0*

ISC 20 14:36:13.9±0.7, 4°.23S±0°.07×129°.62E±0°.05, h36km, n27, σ1§85/29, mb3.8/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.41**	**135**	P	Pn	14 36 19.9	-3.2
BNDI				S	**Sn**	**14 36 25.8**	**-4.0**
MSAI	**Masohi**	**1.11**	**322**	P	**Pn**	**14 36 31.7**	**-1.3**
AAI	**Ambon**	**1.52**	**291**	P	**Pn**	**14 36 37.0**	**-1.5**
AAI	**Ambon**	**1.52**	**291**	P	**Pn**	**14 36 37.3**	**-1.2**
	baz=1.4,SNR=11						
AAI				S	**Sn**	**14 36 57.2**	**+0.2**
	baz=1.4,SNR=7.0						
FAKI	**Fak Fak**	**2.93**	**64**	P	**Pn**	**14 36 56.0**	**-2.0**
FAKI				S	Sn	14 37 21.8	-10
TLE	**Tual**	**3.41**	**114**	P	**Pn**	**14 37 05.6**	**+1.0**
TLE				S	**Sn**	**14 37 45.4**	**+1.6**
TLE	**Tual**	**3.41**	**114**	P	**Pn**	**14 37 05.6**	**+1.0**
	baz=3.5,SNR=21						
SWI	**Sorong**	**3.73**	**26**	P	**Pn**	**14 37 07.0**	**-1.9**
SWI	**Sorong**	**3.73**	**26**	P	**Pn**	**14 37 10.1**	**+1.2**
	baz=3.9,SNR=4.8						
KMPI	**Kaimana, Papua**	**4.12**	**82**	P	**Pn**	**14 37 13.2**	**-1.1**
LBMI	**Labuha**	**4.15**	**329**	P	**Pn**	**14 37 14.6**	**-0.1**
RKPI	**Ransiki, Papua**	**5.30**	**59**	P	**Pn**	**14 37 28.4**	**-2.1**
	121nm,0.7s,2μm0.6nm						
MTN	**Manton Dam**	**8.69**	**170**	P	**Pn**	**14 38 18.8**	**+1.6**
	baz=8.7,SNR=4.2						
KDU	**Kakadu**	**8.86**	**162**	P	**Pn**	**14 38 19.1**	**-0.4**
	baz=8.9,SNR=8.6						
MMPI	**Merauke**	**11.50**	**112**	S	**Sn**	**14 41 07.8**	**+4.9**
	baz=12,SNR=3.8						
FITZ	**Fitzroy Crossi**	**14.32**	**195**	Pn	**Pn**	**14 39 33.6**	**-0.6**
	0.1nm,0.3s,baz=33,slow=11,SNR=4.9						
FITZ	**Fitzroy Crossi**	**14.32**	**195**	P	**Pn**	**14 39 34.6**	**+0.3**
	baz=14,SNR=7.5						
WRA	**Warramunga Arr**	**16.28**	**164**	Pn	**Pn**	**14 39 56.1**	**-3.9**
	0.3nm,0.3s,baz=350,slow=13,SNR=18						
COEN	**Coen**	**16.50**	**127**	P	**P**	**14 40 05.2**	**+0.1**
	baz=17,SNR=5.2						
QIS	**Mount Isa**	**18.92**	**150**	P	**P**	**14 40 32.0**	**+0.3**
	baz=19,SNR=5.7						
ASAR	**Alice Springs**	**19.76**	**168**	P	**P**	**14 40 41.9**	**+0.9**
	0.9nm,0.3s,baz=349,slow=10,SNR=105						
CTA	**Charters Tower**	**22.61**	**136**	P	**P**	**14 41 10.6**	**-1.1**
	3.0nm,0.7s,baz=301,slow=12,SNR=10.0						
CMAR	**Chiang Mai Arr**	**37.71**	**308**	P	**P**	**14 43 27.0**	**+0.7**
	0.5nm,0.3s,baz=142,slow=7.4,SNR=4.3						
MJAR	**Matsushiro Arr**	**41.35**	**10**	P	**P**	**14 43 55.4**	**-1.0**
	1.3nm,0.9s,baz=192,slow=10,SNR=3.8						
SONM	**Songino Array**	**55.71**	**341**	P	**P**	**14 45 48.0**	**+1.1**
	0.7nm,0.9s,baz=158,slow=7.0,SNR=3.7						
MKAR	**Makanchi Array**	**65.72**	**326**	P	**P**	**14 46 55.5**	**+0.5**
	0.9nm,0.5s,baz=116,slow=8.6,SNR=18						
ZALV	**Zalesovo Beam**	**68.95**	**333**	P	**P**	**14 47 15.7**	**+0.5**
	0.2nm,0.3s,baz=134,slow=4.2,SNR=2.5						

*ISCJB **20** 14:49:57.8±0.5, 36°.66N±0°.02×25°.61E±0°.04, h13km±4km, Error ellipse: s-maj=5.2km s-min=3.5km az=174.9*
*CSEM **20** 14:49:57.6±0.2, 36°.65N×25°.61E, h12km, ML3.0/1, Error ellipse: s-maj=6.5km s-min=4.5km az=70.0*
*ATH **20** 14:49:57.5, 36°.64N×25°.60E, h23km±1km, MD3.5/16, ML3.0*
*THE **20** 14:49:57.5, 36°.63N×25°.70E, h14km±1km, ML3.0/1, Error ellipse: s-maj=2.1km s-min=0.5km az=277.0*

ISC 20 14:49:57.6±1.0, 36°.63N±0°.02×25°.61E±0°.02, h17km±7km, n59, σ1§78/81, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THR2	**Thira island,**	**0.23**	**218**	P	**Pb**	**14 50 03.5**	**+0.1**
THR2	**Thira island,**	**0.23**	**218**	P	**Pb**	**14 50 03.5**	**+0.1**
THR3	**Thira Island,**	**0.28**	**218**	P	**Pb**	**14 50 04.2**	**0.0**
THR3	**Thira Island,**	**0.28**	**218**	P	**Pb**	**14 50 04.2**	**0.0**
THR1	**Thera Island**	**0.29**	**206**	P	**Pg**	**14 50 04.0**	**+0.1**
THR1				S	**Sb**	**14 50 09.1**	**+0.2**
THR6	**Thira Island,**	**0.33**	**212**	P	**Pb**	**14 50 05.1**	**+0.2**
THR6				S	**Sb**	**14 50 10.5**	**+0.6**
THR6	**Thira Island,**	**0.33**	**212**	P	**Pb**	**14 50 05.1**	**+0.2**
THR6				S	**Sb**	**14 50 10.5**	**+0.6**
APE	**Apeiranthos**	**0.44**	**351**	P	**Pg**	**14 50 06.7**	**+0.1**
APE				S	**Sb**	**14 50 13.7**	**+0.4**
APE

KYTH	Kithira	2.11	261	P	Pn	14 50 32.7	+0.6
KYTH	Kithira	2.11	261	*e*Pb	Pn	14 50 33.0	+0.9
LTK	Loutraki	2.53	304	*e*PN	Pn	14 50 39.0	+1.2
LTK	Loutraki	2.53	304	*e*Pn	Pn	14 50 39.0	+1.2

*IDC **20** 14:55:07.8±0.7,4˚.08S×129˚.69E, h0km, mb3.9/12, mb1 1.4/15, mb1mx4.0/26, mbtmp4.0/15, ML3.9/3, Error ellipse: s-maj=30.1km s-min=14.9km az=67.0*
*ISCJB **20** 14:55:11.5±0.3,4˚.08S±0˚.04×129˚.66E±0˚.04, h36km, mb3.9/13, Error ellipse: s-maj=6.7km s-min=4.3km az=136.7*
*DJA **20** 14:55:11.4±0.5,4˚S±2˚×13˚0E±˚, h10km, M4.4/15, mB5.1/2, mb4.4/15, MLv4.3/12, Mw(mB)4.4/2*
*AUST **20** 14:55:12.5,3˚.99S×129˚.51E, h35km*

ISC 20 14:55:13.3±0.5,4˚.09S±0˚.06×129˚.65E±0˚.06, h36km, n49, σ1°03/49, mb4.0/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.50	150	P	Pn	14 55 22.1	-1.9
BNDI				S	Sn	14 55 30.7	-0.7
MSAI	Masohi	1.03	316	P	Pn	14 55 29.6	-1.6
MSAI				S	Sn	14 55 43.4	-1.0
AAI	Ambon	1.51	285	P	Pn	14 55 36.3	-1.5
AAI				S	Sn	14 55 56.0	-0.2
AAI	Ambon baz=1.3,SNR=24	1.51	285	P	Pn	14 55 36.2	-1.5
AAI	baz=1.3,SNR=4.9			S	Sn	14 55 47.4	-8.8
FAKI	Fak Fak	2.84	66	P	Pn	14 55 55.7	-0.5
TLE	Tual	3.44	117	P	Pn	14 56 06.0	+1.6
TLE	Tual baz=3.6,SNR=8.7	3.44	117	P	Pn	14 56 06.8	+2.4
SWI	Sorong	3.58	27	P	Pn	14 56 05.6	-0.8
SWI	Sorong baz=3.6,SNR=49	3.58	27	P	Pn	14 56 06.3	-0.1
LBMI	Labuha	4.04	328	P	Pn	14 56 12.2	-0.5
RKPI	Ransiki, Papua 262nm,0.7s,4μm1.1nm	5.20	61	P	Pn	14 56 28.6	0.0
TNTI	Ternate 73nm,1.6s,0.3nm	5.34	335	P	Pn	14 56 30.3	-0.2
KDI	Kendari 27nm,1.2s,582nm0.1nm	7.01	271	P	Pn	14 56 53.5	-0.1
BAKI	Biak 66nm,1.0s,0.3nm	7.06	66	P	Pn	14 56 54.8	+0.6
MTN	Manton Dam baz=9.0,SNR=32	8.82	171	P	Pn	14 57 20.6	+2.3
KDU	Kakadu baz=9.2,SNR=20	8.99	162	P	Pn	14 57 20.5	-0.2
KAPI	Kappang	9.91	264	P	Pn	14 57 43.1	+10
KAPI	Kappang 0.8nm,0.3s,baz=324,slow=19,SNR=4.3	9.91	264	Pn	Pn	14 57 33.5	+0.2
FITZ	Fitzroy Crossi 0.3nm,0.3s,baz=51,slow=11,SNR=12	14.47	195	Pn	Pn	14 58 33.8	-1.8
FITZ	Fitzroy Crossi baz=15,SNR=3.5	14.47	195	P	Pn	14 58 35.7	0.0
KHKI	Kahang-Kahang	14.59	252	P	P	14 58 44.5	+1.3
WRA	Warramunga Arr 0.3nm,0.3s,baz=349,slow=13,SNR=22	16.41	164	Pn	Pn	14 58 56.3	-4.7
SJI	Sawahan 36nm,1.1s	18.15	258	P	P	14 59 24.7	+1.9
SBUM	Sibu 12nm,2.4s	18.59	290	P	Pn	14 59 28.8	+0.7
QIS	Mount Isa baz=19,SNR=5.2	19.02	150	P	P	14 59 32.6	+0.3
ASAR	Alice Springs 0.8nm,0.3s,baz=347,slow=9.8,SNR=119	19.89	168	P	P	14 59 41.7	-0.1
KSM	Kuching 29nm,1.1s	20.10	286	P	Pn	14 59 45.1	-1.1
CISI	Cisompet, Garu 32nm,1.6s	21.99	260	P	P	15 00 06.9	+2.3
CTA	Charters Tower 3.0nm,0.6s,baz=316,slow=10,SNR=12	22.69	136	P	P	15 00 11.6	-0.3
STKA	Stephens Creek 0.7nm,0.5s,baz=300,slow=11,SNR=4.9	29.83	159	P	P	15 01 16.6	-0.6
CMAR	Chiang Mai Arr 1.5nm,0.6s,baz=134,slow=7.2,SNR=11	37.65	307	P	P	15 02 25.6	+0.3
MJAR	Matsushiro Arr 2.6nm,0.8s,baz=186,slow=9.2,SNR=10.0	41.20	10	P	P	15 02 53.6	-1.1
ODAN	Odare 10nm,0.7s	51.12	309	*e*P	P	15 04 13.6	+0.5
TAPN	Taplejung 7.5nm,0.6s	51.13	310	*e*P	P	15 04 13.4	+0.1
RAMN	Ramite 16nm,0.6s	51.78	309	*e*P	P	15 04 18.2	+0.1
GUN	Gumba 18nm,0.7s	52.81	310	*e*P	P	15 04 25.3	-0.5
DMN	Daman	53.26	309	*e*P	P	15 04 28.5	-0.5
KOLN	Koldanda 11nm,0.7s	54.51	308	*e*P	P	15 04 38.4	+0.3
DANN	Dangsing 14nm,0.8s	54.66	309	*e*P	P	15 04 39.1	-0.2
PYUN	Piuthan 20nm,0.9s	55.14	308	*e*P	P	15 04 43.0	+0.3
SONM	Songino Array 1.2nm,0.8s,baz=159,slow=6.8,SNR=5.8	55.59	341	P	P	15 04 45.0	-0.4
MKAR	Makanchi Array 0.8nm,0.5s,baz=122,slow=8.1,SNR=19	65.62	326	P	P	15 05 54.5	+0.7
ZALV	Zalesovo Beam 0.4nm,0.3s,baz=106,slow=5.3,SNR=5.9	68.84	333	P	P	15 06 13.7	-0.3
KURBB	Kurchatov Arra 1.8nm,0.6s,baz=133,slow=6.0,SNR=2.9	69.86	328	P	P	15 06 20.5	+0.1
BVAR	Borovoye Array 0.9nm,0.7s,baz=140,slow=4.8,SNR=7.0	75.43	328	P	P	15 06 53.7	+0.2
AKTO	Aktyubinsk 0.6nm,0.5s,baz=153,slow=9.0,SNR=3.6	81.57	322	P	P	15 07 27.4	0.0
QSPA	South Pole Qui 0.6nm,0.5s,baz=224,slow=1.8,SNR=5.3	85.87	180	P	P	15 07 48.3	-0.9
ILAR	Eielson Array 0.2nm,0.9s,baz=230,slow=7.0,SNR=2.6	90.17	25	P	P	15 08 14.4	+1.5
TORD	Torodi Ar. Bea 0.6nm,1.0s,baz=58,slow=1.7,SNR=2.7	127.85	283	PKP	PKPdf	15 14 16.0	-0.2

IDC 20 14:57:31.3±5.5,55.98S×27.69W, h140km±50km, mb4.0/7, mb1 4.1/9, mb1mx3.9/18, mbtmp4.0/9, Error ellipse: s-maj=26.5km s-min=15.3km az=58.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA3	Neumayer Olymp	17.15	160	*e*P	P	15 01 21.3	-0.2
SNAA	Sanae	18.92	156	*e*P	P	15 01 40.6	-0.3
SNAA	Sanae 2.3nm,0.3s,baz=315,slow=11,SNR=114	18.92	156	P	P	15 01 40.4	-0.5
PMSA	Palmer Station 1.1nm,0.3s,baz=36,slow=6.6,SNR=4.4	19.73	229	P	P	15 01 50.4	+0.8
QSPA	South Pole Qui 3.7nm,0.4s,baz=244,slow=0.4,SNR=48	34.27	180	P	P	15 04 04.0	+0.3
CPUP	Villa Florida 1.2nm,0.5s,baz=132,slow=6.8,SNR=4.1	36.56	317	P	P	15 04 22.2	-1.1
CPUP				PcP	PcP	15 06 42.9	-0.7
MAW	Mawson 2.1nm,0.7s,baz=244,slow=10,SNR=4.4	40.37	144	P	P	15 04 54.2	-0.4
VNDA	Vanda 4.7nm,0.6s,baz=187,slow=6.3,SNR=14	46.63	183	P	P	15 05 44.5	-0.2
LPAZ	La Paz 2.0nm,0.3s,baz=160,slow=6.6,SNR=18	50.11	306	P	P	15 06 12.8	0.0
LPAZ				PcP	PcP	15 07 30.4	+0.2
TORD	Torodi Ar. Bea 1.0nm,0.5s,baz=293,slow=0.5,SNR=3.2	73.14	30	P	P	15 08 46.8	+0.5
TORD	2.6nm,0.8s,baz=199,slow=6.9,SNR=22 0.5nm,0.5s,baz=197,slow=6.5,SNR=4.2			pP	pP	15 09 19.1	-1.5
ASAR	Alice Springs 0.9nm,0.9s,baz=187,slow=3.9,SNR=15	99.14	163	P	Pdif	15 10 55.7	-0.9
FINES	FINESS Array B 1.5nm,1.0s,baz=145,slow=5.1,SNR=4.4	124.46	28	PKP	PKPdf	15 16 11.5	-0.7
YKA	Yellowknife Ar 0.8nm,0.6s,baz=125,slow=2.4,SNR=16	135.93	318	PKP	PKPdf	15 16 33.4	-0.5
ZALV	Zalesovo Beam 0.2nm,0.3s,baz=224,slow=4.3,SNR=4.0	142.59	64	PKP	PKPdf	15 16 47.1	+0.8
ILAR	Eielson Array 7.0nm,0.8s,baz=131,slow=2.9,SNR=105	149.86	312	PKPbc	PKPbc	15 17 02.8	-0.5
SONM	Songino Array 2.9nm,0.6s,baz=223,slow=3.4,SNR=13	151.00	87	PKPbc	PKPbc	15 17 06.4	-0.3

*IDC **20** 15:05:26.2±1.1,4˚.18N×126˚.89E, h0km, mb3.7/9, mb1 3.8/9, mb1mx3.7/26, mbtmp3.7/9, Error ellipse: s-maj=106.1km s-min=14.5km az=70.0*
*ISCJB **20** 15:05:29.5±0.6,4˚.29N±0˚.06×126˚.97E±0˚.06, h36km, mb3.7/9, Error ellipse: s-maj=8.5km s-min=8.1km az=162.2*
*DJA **20** 15:05:29.1±0.6,5˚N±4˚×12˚7E±˚, h58km±14km, M4.3/9, mb4.4/4, mB4.5/1, MLv4.3/9, Mw(mB)3.6/1*

ISC 20 15:05:31.4±0.9,4˚.35N±0˚.08×126˚.97E±0˚.07, h36km, n19, σ1°93/21, mb3.8/9, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.58	245	P	Pn	15 05 55.2	-1.8
SGSI				S	Sn	15 06 15.4	-0.8
GAMI	Galela, Maluku	2.63	162	P	Pn	15 06 08.7	-2.7
DAV	Davao City (W)	3.03	333	P	Pn	15 06 11.7	-5.2
TNTI	Ternate	3.58	174	P	Pn	15 06 25.2	+0.7
MNI	Manado	3.59	216	P	Pn	15 06 24.3	-0.3
MNI				S	Sn	15 07 11.5	+5.8
KMSI	Cibinong	4.80	219	P	Pn	15 06 41.1	-0.1
LBMI	Labuha 40nm,0.9s,0.2nm	4.99	174	P	Pn	15 06 45.4	+1.6
MRSI	Marisa 23nm,0.9s,340nm0.1nm	6.33	233	P	Pn	15 07 02.2	-0.1
MRSI				S	Sn	15 08 11.7	-1.6
SWI	Sorong	6.72	140	P	Pn	15 07 07.7	0.0
LUWI	Luwuk 81nm,1.0s,0.3nm	6.80	218	P	Pn	15 07 08.3	-0.5
FITZ	Fitzroy Crossi 0.9nm,0.5s,baz=342,slow=7.5,SNR=7.9	22.35	183	P	P	15 10 24.6	-1.9
WRA	Warramunga Arr 3.8nm,0.8s,baz=344,slow=11,SNR=23	25.21	164	P	P	15 10 51.6	-2.4
ASAR	Alice Springs 0.3nm,0.5s,baz=344,slow=7.1,SNR=10	28.66	167	P	P	15 11 24.0	-1.0
STKA	Stephens Creek 2.2nm,0.8s,baz=351,slow=9.4,SNR=5.7	38.63	160	P	P	15 12 50.5	-1.0
SONM	Songino Array 0.2nm,0.4s,baz=145,slow=10,SNR=2.1	46.79	341	P	P	15 13 59.5	+2.0
MKAR	Makanchi Array 0.3nm,0.3s,baz=118,slow=7.6,SNR=16	57.18	325	P	P	15 15 15.8	+1.0
ZALV	Zalesovo Beam 0.4nm,0.5s,baz=122,slow=7.0,SNR=2.9	60.15	333	P	P	15 15 35.9	+0.6
KURBB	Kurchatov Arra 0.4nm,0.3s,baz=132,slow=6.7,SNR=5.3	61.35	327	P	P	15 15 44.3	+0.8
BVAR	Borovoye Array 0.7nm,0.7s,baz=122,slow=7.3,SNR=4.9	66.93	327	P	P	15 16 20.3	+0.1

*IDC **20** 15:09:34.7±1.2,8˚.71N×127˚.49E, h0km, mb4.0/4, mb1 4.0/5, mb1mx3.7/26, mbtmp4.0/5, ML4.1/1, Error ellipse: s-maj=47.9km s-min=21.0km az=72.0*
*ISCJB **20** 15:09:37.7±1.1,8˚.7N±0˚.1×127˚.4E±0˚.1, h34km, mb3.6/4, Error ellipse: s-maj=19.1km s-min=15.5km az=147.2*

ISC 20 15:09:40.0±1.2,8˚.7N±0˚.1×127˚.3E±0˚.1, h34km, n10, σ1°27/11, mb3.8/4, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	1.66	281	*e*P	Sn	15 10 19.8	-7.1
MATI	Mati	1.98	211	*e*P	Pb	15 10 19.4	+4.0
DAV	Davao City (W) 37nm,0.3s,baz=61,slow=19,SNR=2.1	2.30	227	Pn	Pn	15 10 16.7	+1.1
DAV				Sn	Sn	15 10 40.9	-1.9
BUKP	Musuan	2.32	251	*e*P	Pb	15 10 21.2	-0.1
CTBH	Cotabato--PC H	3.32	245	*e*P	Pn	15 10 31.4	+1.9
TBP	Tagbilaran	3.52	287	*e*P	Pn	15 10 32.3	0.0
WRA	Warramunga Arr 0.1nm,0.3s,baz=345,slow=9.2,SNR=7.2	29.26	166	P	P	15 15 38.6	-0.6
ASAR	Alice Springs 0.4nm,0.4s,baz=349,slow=7.1,SNR=10	32.78	169	P	P	15 16 10.3	+0.2
ASAR				PcP	PcP	15 18 54.5	-0.6
MKAR	Makanchi Array 0.8nm,0.6s,baz=121,slow=7.9,SNR=9.8	53.90	323	P	P	15 19 01.7	+1.6
MKAR				PcP	PcP	15 20 04.2	-1.2
KURBB	Kurchatov Arra 0.3nm,0.6s,baz=124,slow=1.8,SNR=3.9	57.95	326	P	P	15 19 29.1	+0.1
	0.4nm,0.2s,baz=128,slow=6.5,SNR=4.2						

*IDC **20** 15:10:33.4±2.7,3˚.86S×130˚.32E, h0km, mb3.1/1, mb1 3.3/3, mb1mx3.2/20, mbtmp3.1/3, ML3.0/2, Error ellipse: s-maj=184.1km s-min=28.7km az=71.0*
*ISCJB **20** 15:10:37.5±0.6,4˚.15S±0˚.06×129˚.64E±0˚.05, h33km, mb3.1/1, Error ellipse: s-maj=10.0km s-min=6.0km az=31.5*
*DJA **20** 15:10:37.8±0.6,4˚S±4˚×13˚0E±˚, h10km±6km, M3.7/10, mb4.2/3, MLv3.5/10*

ISC 20 15:10:38.8±1.1,4˚.20S±0˚.08×129˚.59E±0˚.06, h35km, n13, σ0°91/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	0.45	136	P	Pn	15 10 47.9	-0.9
MSAI	Masohi	1.07	322	P	Pn	15 10 56.1	-1.2
MSAI				S	Sn	15 11 09.9	-1.0
AAI	Ambon	1.48	290	P	Pn	15 11 02.6	-0.3
AAI				S	Sn	15 11 22.5	+1.5
FAKI	Fak Fak	2.94	65	P	Pn	15 11 22.7	-0.4
TLE	Tual	3.45	115	P	Pn	15 11 33.8	+3.8
SWI	Sorong	3.71	27	P	Pn	15 11 33.0	-0.6
LBMI	Labuha	4.10	329	P	Pn	15 11 38.5	-0.5
KMPI	Kaimana, Papua	4.14	83	P	Pn	15 11 40.3	+0.8
RKPI	Ransiki, Papua 32nm,0.9s,0.1nm	5.30	60	P	Pn	15 11 54.9	-0.6
TNTI	Ternate 36nm,1.3s,0.2nm	5.41	336	P	Pn	15 11 57.0	0.0
WRA	Warramunga Arr 0.0nm,0.3s,baz=349,slow=13,SNR=3.3	16.32	164	Pn	Pn	15 14 24.4	-1.0
ASAR	Alice Springs 0.1nm,0.3s,baz=351,slow=9.1,SNR=9.5	19.80	168	P	Pn	15 15 08.5	+0.4
MKAR	Makanchi Array 0.1nm,0.5s,baz=121,slow=8.0,SNR=2.9	65.67	326	P	P	15 21 20.5	+0.8

*IDC **20** 15:18:05.0±0.5,4˚.05N×126˚.74E, h0km, mb4.2/24, mb1 4.3/24, mb1mx4.3/30, mbtmp4.2/24, Error ellipse: s-maj=26.4km s-min=8.7km az=74.0*
*ISCJB **20** 15:18:08.6±0.2,4˚.15N±0˚.03×126˚.96E±0˚.04, h36km, mb4.3/36, Error ellipse: s-maj=5.8km s-min=3.9km az=159.0*
*NEIC **20** 15:18:10.4±0.3,4˚.07N×126˚.82E, h35km, mb4.5/12, Error ellipse: s-maj=14.7km s-min=6.2km az=75.0*
*DJA **20** 15:18:12.0±1.3,4˚N±6˚×12˚7E±˚, h26km±12km, M4.7/17, mB5.4/7, mb4.6/17, MLv4.7/9, Mw(mB)4.9/7*
*AUST **20** 15:18:12.7,4˚.00N×127˚.01E, h60km*

ISC 20 15:18:10.6±0.4,4˚.18N±0˚.05×126˚.98E±0˚.06, h36km, n114, σ1°16/115, mb4.3/35, 2C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.53	251	P	Pn	15 18 34.9	-0.5
SGSI				S	Sn	15 18 53.7	-0.3
GAMI	Galela, Maluku	2.46	161	P	Pn	15 18 47.5	-0.6
GSPH	General Santos	2.78	313	*e*P	Pn	15 18 53.3	+0.7
DAV	Davao City (W)	3.20	334	Pn	Pn	15 19 02.8	+4.5
DAV	Davao City (W) baz=257,slow=19,SNR=2.4	3.20	334	Pn	Pn	15 19 02.8	+4.5
TNTI	Ternate	3.40	174	P	Pn	15 19 02.1	+1.0
MNI	Manado	3.46	218	P	Pn	15 19 03.9	+2.0
CTBH	Cotabato--PC H	4.07	318	*e*P	Pn	15 19 09.5	-0.8
BUKP	Musuan	4.14	333	*e*P	Pn	15 19 17.0	+5.6
KMSI	Cibinong	4.67	220	P	Pn	15 19 18.2	-0.3
LBMI	Labuha	4.81	174	P	Pn	15 19 18.2	-2.3
BUTP	Butuan	4.95	344	*e*P	Pn	15 19 29.3	+6.9
PAGZ	Pagadian	5.11	316	*e*P	Pn	15 19 26.1	+1.5
IPIL	Ipil	5.67	309	*e*P	Pn	15 19 33.6	+1.4
MRSI	Marisa 133nm,0.7s,2μm	6.24	234	P	Pn	15 19 40.5	+0.4
SWI	Sorong 48nm,0.8s,0.4nm	6.58	139	P	Pn	15 19 45.7	+0.9
SWI	Sorong baz=6.5,SNR=4.7	6.58	139	P	Pn	15 19 46.9	+2.0
LUWI	Luwuk 209nm,1.1s,2μm0.7nm	6.68	219	P	Pn	15 19 46.4	+0.2
AAI	Ambon 42nm,0.8s,0.2nm	7.90	171	P	Pn	15 20 03.2	+0.2
PALU	Palau baz=8.2,SNR=3.0	8.09	67	P	Pn	15 20 11.0	+5.5
PALU				S	Sn	15 21 32.5	-3.3
MYLDM	Lahad Datu 45nm,1.3s	8.51	277	P	Pn	15 20 12.9	+1.5
SKSI	Soroako, Sulaw 52nm,0.8s,426nm	8.73	220	P	Pn	15 20 14.6	+0.2

FAKI	Fak Fak 49nm,1.5s	8.80	143	P	Pn	15 20 15.9	+0.6
RKPI	Ransiki, Papua 40nm,0.5s,6μm	9.14	128	P	Pn	15 20 20.3	+0.3
KDI	Kendari 23nm,0.8s,585nm	9.18	208	P	Pn	15 20 19.6	-1.0
SBUM	Sibu 20nm,1.1s	14.84	264	P	P	15 21 44.6	+1.4
MTN	Manton Dam baz=17,SNR=22	17.40	166	P	Pn	15 22 08.1	-2.6
KDU	Kakadu baz=18,SNR=4.8	17.62	162	P	P	15 22 14.8	+0.7
GMJI	Gumukmas 25nm,1.4s	18.31	228	P	Pn	15 22 23.9	+2.0
PWJI	Pagerwojo 14nm,1.6s	19.39	231	P	P	15 22 31.9	-1.7
PCJI	Pacitan 29nm,1.4s	19.99	232	P	P	15 22 39.6	-0.5
FITZ	Fitzroy Crossi	22.18	183	*e*P	P	15 23 02.4	-1.3
FITZ	Fitzroy Crossi 2.5nm,0.4s,baz=0.9,slow=7.4,SNR=18	22.18	183	P	P	15 23 00.9	-2.8
FITZ	Fitzroy Crossi baz=22,SNR=7.7	22.18	183	P	P	15 23 02.6	-1.1
CBJI	Citeko	22.69	242	P	P	15 23 18.1	+8.9
UBPT	Khong Chiam	23.87	299	P	P	15 23 21.9	+1.0
WRAB	Tennant Creek 23nm,0.8s	25.03	163	*e*P	P	15 23 30.6	-0.8
WRA	Warramunga Arr	25.04	163	P	P	15 23 30.9	-0.6
WRA				S	S	15 27 56.1	+2.6
WRA	Warramunga Arr 23nm,0.8s,baz=343,slow=10,SNR=84	25.04	163	P	P	15 23 30.9	-0.6
WRA	0.8nm,0.9s,baz=349,slow=17,SNR=3.8			S	S	15 27 56.1	+2.6
MBWA	Marble Bar 8.2nm,0.8s	26.16	196	*e*P	P	15 23 41.2	-0.5
QIS	Mount Isa baz=28,SNR=5.8	27.53	154	P	P	15 23 55.5	+1.5
AS31	Alice Springs	28.48	167	*e*P	P	15 24 03.0	+0.4
ASAR	Alice Springs	28.48	167	P	P	15 24 02.0	-0.5
ASAR				S	S	15 28 50.5	+2.5
ASAR	Alice Springs 0.8nm,0.4s,baz=343,slow=7.2,SNR=15	28.48	167	P	P	15 24 02.0	-0.5
ASAR	0.4nm,0.9s,baz=353,slow=24,SNR=2.6			S	S	15 28 50.5	+2.5
GSI	Gunungsitoli baz=30,SNR=4.8	29.51	265	S	S	15 29 16.6	+12
CMAR	Chiang Mai Arr	30.87	300	P	P	15 24 23.2	-0.6
CMAR	Chiang Mai Arr 1.3nm,0.7s,baz=114,slow=7.3,SNR=9.5	30.87	300	P	P	15 24 23.2	-0.6
CHTO	Chiang Mai 4.6nm,0.9s	31.01	300	*e*P	P	15 24 24.4	-0.7
MEEK	Meekatharra baz=32,SNR=6.3	31.68	194	P	P	15 24 30.1	-0.7
KSAR	Wonju Array Be	33.12	1	P	P	15 24 44.6	+1.4
KSRS	Korea Array 0.7nm,0.6s,baz=172,slow=8.3,SNR=2.9	33.13	1	P	P	15 24 44.6	+1.3
QLP	Quilpie baz=35,SNR=4.2	34.84	152	P	P	15 25 00.1	+1.8
BBOO	Buckleboo baz=38,SNR=15	37.78	167	P	P	15 25 23.7	+0.3
NWAO	Narrogin (SRO)	38.04	193	P	P	15 25 23.9	-1.7
NWAO	Narrogin (SRO) 14nm,1.1s,baz=330,slow=6.1,SNR=3.0	38.04	193	P	P	15 25 23.9	-1.7
STKA	Stephens Creek	38.46	160	*e*P	P	15 25 29.5	+0.4
STKA	Stephens Creek 7.1nm,0.7s,baz=334,slow=8.3,SNR=26	38.46	160	P	P	15 25 29.4	+0.2
STKA	Stephens Creek baz=38,SNR=23	38.46	160	P	P	15 25 29.3	+0.2
USRK	Ussuriysk Arra 2.3nm,0.9s,baz=161,slow=12,SNR=2.6	40.10	6	P	P	15 25 43.4	+0.8
TAPN	Taplejung 8.7nm,0.6s	43.96	306	*e*P	P	15 26 14.0	-0.8
ODAN	Odare 13nm,0.7s	44.02	305	*e*P	P	15 26 14.2	-1.0
RAMN	Ramite	44.70	305	*e*P	P	15 26 20.1	-0.6
GUN	Gumba 19nm,0.8s	45.67	306	*e*P	P	15 26 27.2	-1.3
KKN	Kakani	46.11	305	*e*P	P	15 26 30.5	-1.3
DMN	Daman	46.18	305	*e*P	P	15 26 31.5	-0.9
ULN	Ulaanbaatar 3.2nm,0.8s	46.78	342	*e*P	P	15 26 37.0	+0.4
SONM	Songino Array	46.96	341	P	P	15 26 39.2	+1.2
SONM				PcP	PcP	15 28 10.7	+0.6
SONM	Songino Array 0.8nm,0.5s,baz=157,slow=8.3,SNR=5.5	46.96	341	P	P	15 26 39.2	+1.2
SONM	1.0nm,0.9s,baz=155,slow=3.5,SNR=3.6			PcP	PcP	15 28 10.7	+0.6
KOLN	Koldanda 17nm,0.5s	47.48	304	*e*P	P	15 26 41.8	-0.7
DANN	Dangsing 18nm,0.5s	47.56	305	*e*P	P	15 26 42.2	-1.1
PYUN	Piuthan	48.10	304	*e*P	P	15 26 46.7	-0.7
PETK	Petropavlovsk-	54.92	22	P	P	15 27 39.5	+1.8
PETK	Petropavlovsk- 4.4nm,1.0s,baz=320,slow=6.3,SNR=2.4	54.92	22	P	P	15 27 39.5	+1.8
MK31	Makanchi Array	57.34	325	*e*P	P	15 27 54.2	-0.9
MKAR	Makanchi Array	57.34	325	P	P	15 27 54.8	-0.3
MKAR	Makanchi Array 1.1nm,0.3s,baz=120,slow=8.5,SNR=40	57.34	325	P	P	15 27 54.8	-0.3
AAK	Ala-Archa	60.20	318	P	P	15 28 14.2	-1.0
AAK	Ala-Archa 0.5nm,0.6s,baz=163,slow=9.7,SNR=3.7	60.20	318	P	P	15 28 14.2	-1.0
ZAA0	Zalesovo Array	60.31	333	*e*P	P	15 28 14.6	-0.9
ZALV	Zalesovo Beam	60.31	333	P	P	15 28 14.7	-0.8
ZALV	Zalesovo Beam 0.8nm,0.3s,baz=116,slow=6.9,SNR=8.8	60.31	333	P	P	15 28 14.7	-0.8
EKS2	Erkin-Say 1.3nm,0.9s	60.69	317	*e*P	P	15 28 18.2	-0.4
KURBB	Kurchatov Arra 2.6nm,0.5s,baz=130,slow=6.6,SNR=33	61.50	327	P	P	15 28 23.3	-0.4
KURK	Kurchatov 4.9nm,0.5s	61.50	327	*e*P	P	15 28 22.7	-1.0
KKAR	Karatay Array 2.5nm,1.0s	63.08	317	*e*P	P	15 28 34.6	+0.1
BVAR	Borovoye Array	67.09	327	P	P	15 29 00.5	+0.3
BVAR	Borovoye Array 3.3nm,0.6s,baz=133,slow=8.3,SNR=22	67.09	327	P	P	15 29 00.5	+0.3
BRVK	Borovoye 8.8nm,1.0s	67.16	327	*e*P	P	15 29 01.0	+0.3
ABKAR	Akbulak array 1.7nm,0.6s	71.97	321	*e*P	P	15 29 30.1	-0.3
AKTO	Aktyubinsk	73.47	321	P	P	15 29 38.5	-0.8
AKTO	Aktyubinsk 1.7nm,0.6s,baz=101,slow=8.9,SNR=6.4	73.47	321	P	P	15 29 38.5	-0.8
TRF	Thorofare Moun 7.2nm,1.1s	83.03	27	*e*P	P	15 30 32.1	-0.1
MCK	McKinley 10nm,1.1s	83.65	26	*e*P	P	15 30 35.5	+0.2
SML	Sawmill 5.5nm,1.4s	83.83	28	*e*P	P	15 30 37.4	+1.2
VNDA	Vanda	83.83	173	P	P	15 30 36.5	+0.7
VNDA	Vanda 2.3nm,0.8s,baz=329,slow=9.0,SNR=3.8	83.83	173	P	P	15 30 36.5	+0.7
ILAR	Eielson Array	84.59	25	P	P	15 30 40.4	+0.4
ILAR	Eielson Array 1.1nm,0.9s,baz=235,slow=6.0,SNR=12	84.59	25	P	P	15 30 40.4	+0.4
KMBO	Kilima Mbogo	89.81	269	P	P	15 31 04.7	-2.0
KMBO	Kilima Mbogo 1.2nm,0.6s,baz=190,slow=6.1,SNR=3.3	89.81	269	P	P	15 31 04.7	-2.0

az=166.3
*JMA **20** 15:24:55.1±0.2,25°.26N×122°.60E,h210km,M3.6*
ISC 20 15:24:54.1±1.9,25°.28N±0°.08×122°.53E±0°.04,
h213km±11km,n44,σ0s54/76,10C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.56**	**241**	*i*	P		**Pn**	**15 25 23.1**	**+0.2**
	baz=238								
TWB1					eS		**S**	**15 25 45.4**	**+0.1**
	baz=238								
NWF	**Wu-fen Shan**	**0.71**	**253**	⇑*i*	P		**Pn**	**15 25 23.9**	**+0.2**
	baz=250								
NWF					S		**S**	**15 25 46.7**	**+0.1**
	baz=250								
TWY	**Chenhua**	**0.84**	**270**		P		**Pn**	**15 25 24.5**	**+0.3**
	baz=258								
TWC	**Suao**	**0.91**	**223**		P		**Pn**	**15 25 24.2**	**-0.4**
	baz=229								
TWC					eS		**S**	**15 25 47.6**	**-0.7**
	baz=229								
YOJ	**Yonaguni jima**	**0.93**	**152**		P		**Pn**	**15 25 25.3**	**+0.5**
YOJ					eS		**S**	**15 25 48.5**	**-0.1**
TWE	**Neicheng**	**0.96**	**235**		P		**Pn**	**15 25 24.5**	**-0.4**
	baz=228								
TWE					eS		**S**	**15 25 49.8**	**+1.0**
	baz=228								
TWS1	**Kuangyinshan**	**1.02**	**260**		P		**Pn**	**15 25 25.4**	**+0.1**
	baz=252								
ENTT	**Nioudou**	**1.08**	**234**	*i*	P		**Pn**	**15 25 25.6**	**-0.1**
	baz=231								
ENTT					eS		**S**	**15 25 51.4**	**+1.1**
	baz=231								
ENA	**Nanau**	**1.11**	**220**	⇑*i*	P		**Pn**	**15 25 26.0**	**+0.1**
	baz=220								
ENA					eS		**S**	**15 25 51.1**	**+0.5**
	baz=220								
NSK	**Sanguang**	**1.22**	**241**	*i*	P		**Pn**	**15 25 26.3**	**-0.5**
	baz=233								
NSK					S		**S**	**15 25 51.3**	**-0.8**
	baz=233								
NNS	**Nan Shan**	**1.34**	**232**	⇑*i*	P		**Pn**	**15 25 27.7**	**-0.1**
	baz=233								
NNS					eS		**S**	**15 25 54.6**	**+0.8**
	baz=233								
IRIF	**Iriomote-Funau**	**1.44**	**130**		P		**Pn**	**15 25 28.3**	**-0.2**
IRIF					eS		**S**	**15 25 54.6**	**-0.4**
TWD	**Chiawan**	**1.47**	**215**		P		**Pn**	**15 25 28.1**	**-0.6**
	baz=213								
TWD					eS		**S**	**15 25 54.9**	**-0.5**
	baz=213								
NSTT	**Nanjuang**	**1.53**	**245**	*i*	P		**Pn**	**15 25 28.8**	**-0.4**
	baz=247								
NSTT					S		**S**	**15 25 55.9**	**-0.4**
	baz=247								
HWA	**Hwalien**	**1.54**	**213**	*eP*			**Pn**	**15 25 28.5**	**-0.9**
	baz=219								
TWT	**Tachien**	**1.60**	**230**		P		**Pn**	**15 25 30.3**	**+0.3**
	baz=226								
TWT					S		**S**	**15 25 58.5**	**+0.8**
	baz=226								
WHF	**Hehuan Shan**	**1.61**	**226**	⇑*i*	P		**Pn**	**15 25 30.5**	**+0.1**
	baz=225								
WHF					S		**S**	**15 25 58.2**	**-0.2**
	baz=225								
HATJ	**Hateruma jima**	**1.69**	**136**		P		**Pn**	**15 25 31.2**	**+0.6**
HATJ					eS		**S**	**15 25 58.9**	**+0.1**
JKRS	**Kuro-shima**	**1.70**	**127**		P		**Pn**	**15 25 31.2**	**+0.4**
JKRS					eS		**S**	**15 25 59.1**	**+0.1**
JIJ	**Ishigaki jima**	**1.73**	**122**		P		**Pn**	**15 25 30.8**	**-0.2**
JIJ					S		**S**	**15 25 58.4**	**-1.1**
ESL	**Shilin**	**1.77**	**215**		P		**Pn**	**15 25 30.4**	**-1.0**
	baz=214								
ESL					eS		**S**	**15 25 59.6**	**-0.6**
	baz=214								
NSY	**Sanyi**	**1.82**	**242**		P		**Pn**	**15 25 31.8**	**-0.1**
	baz=235								
NSY					eS		**S**	**15 26 01.1**	**+0.1**
	baz=235								
TWQ1	**Liyutan**	**1.84**	**240**	⇑*i*	P		**Pn**	**15 25 31.8**	**-0.3**
	baz=239								
TWQ1					eS		**S**	**15 26 01.1**	**-0.3**
	baz=239								
TCU	**Taichung**	**2.03**	**237**	*eP*			**Pn**	**15 25 33.6**	**-0.2**
	baz=240								
SMLT	**Sun Moon Lake**	**2.03**	**227**		P		**Pn**	**15 25 33.9**	**-0.1**
	baz=226								
SMLT					eS		**S**	**15 26 05.0**	**+0.1**
	baz=226								
TYC	**Yuchr**	**2.05**	**228**	⇑*i*	P		**Pn**	**15 25 33.9**	**-0.2**
	baz=227								
TYC					eS		**S**	**15 26 04.9**	**0.0**
	baz=227								
JTJ	**Tarama**	**2.08**	**107**		P		**Pn**	**15 25 34.6**	**+0.3**
JTJ					S		**S**	**15 26 05.6**	**+0.3**
EHY	**Hungye**	**2.08**	**212**	*eP**			**Pn**	**15 25 33.7**	**-0.8**
	baz=216								
TWF1	**Yuli**	**2.22**	**211**		P		**Pn**	**15 25 34.6**	**-1.4**
	baz=214								
ALS	**Alishan**	**2.36**	**222**	*i*	P		**Pn**	**15 25 37.5**	**-0.1**
	baz=228								
ALS					eS		**S**	**15 26 11.2**	**0.0**
	baz=228								
CHN5	**Tsauling**	**2.38**	**226**	⇑*i*	P		**Pn**	**15 25 37.3**	**-0.3**
	baz=228								
CHN5					eS		**S**	**15 26 12.0**	**+0.8**
	baz=228								
ELDTW	**Lidau**	**2.50**	**214**		P		**Pn**	**15 25 38.3**	**-0.7**
	baz=211								
JMJ	**Miyako jima 2**	**2.55**	**100**		P		**Pn**	**15 25 39.8**	**+0.4**
JMJ					eS		**S**	**15 26 14.2**	**-0.2**
CHN4	**Tsaushan**	**2.61**	**223**	⇑*i*	P		**Pn**	**15 25 39.8**	**-0.3**
	baz=217								
CHN4					eS		**S**	**15 26 15.9**	**+0.4**
	baz=217								
JOGS	**Gusukube**	**2.66**	**101**		P		**Pn**	**15 25 41.1**	**+0.5**
JOGS					eS		**S**	**15 26 16.6**	**0.0**
WTP	**Ta-pu**	**2.67**	**221**	⇑*i*	P		**Pn**	**15 25 40.3**	**-0.5**
	baz=220								
WTP					eS		**S**	**15 26 16.6**	**-0.3**
	baz=220								
TWK	**Hsinying**	**2.73**	**223**		P		**Pn**	**15 25 41.0**	**-0.5**
	baz=218								
TWK					eS		**S**	**15 26 18.1**	**-0.1**
	baz=218								
CHN1	**Nanshi**	**2.77**	**222**	⇑*i*	P		**Pn**	**15 25 41.6**	**-0.3**
	baz=221								
CHN1					eS		**S**	**15 26 18.8**	**-0.1**
	baz=221								
TWG	**Pinlang**	**2.79**	**209**	*eP**			**Pn**	**15 25 43.0**	**+0.9**
	baz=207								
TWM1	**Shoushan**	**3.11**	**219**	*eP**			**Pn**	**15 25 46.7**	**+0.9**
	baz=211								
SGLT	**Jiouru**	**3.15**	**217**	*eP**			**Pn**	**15 25 47.4**	**+1.2**
	baz=216								
EAST	**Anshuo**	**3.27**	**208**	*eP**			**Pn**	**15 25 47.9**	**+0.3**
	baz=214								
SCZT	**Fangliau**	**3.38**	**211**	*eP**			**Pn**	**15 25 48.9**	**0.0**
	baz=205								
JKE	**Kume jima 2**	**3.98**	**74**		P		**Pn**	**15 25 56.1**	**0.0**
JKE					eS		**S**	**15 26 43.4**	**-1.1**

*AUST **20** 15:28:31.6±2.4,4°.12S×129°.63E,h0km,Error ellipse: s-maj=0.9km s-min=0.8km az=225.0*
*DJA **20** 15:28:33.8±0.5,4°.5S±3°×13°.0E±°,h10km,M4.5/13,mB5.3/2, mb4.7/13,MLv4.4/12,Mw(mB)4.7/2*
*NEIC **20** 15:28:34.8±0.3,4°.08S×129°.81E,mb4.5/11,Error ellipse: s-maj=9.5km s-min=5.0km az=65.0*
*ISCJB **20** 15:28:34.1±0.5,4°.10S±0°.03×129°.66E±0°.04,h33km±5km, mb4.2/21,MS3.4/4,Error ellipse: s-maj=7.0km s-min=4.3km az=142.6*
*IDC **20** 15:28:34.3±0.6,4°.13S×129°.75E,h24km±3km,mb4.0/12, mb1 4.1/15,mb1mx4.0/24,mbtmp4.0/15,ML4.0/3,MS3.3/5, Ms1 3.3/5,ms1mx3.0/35,Error ellipse: s-maj=30.1km s-min=9.7km az=74.0*
*BJI **20** 15:28:39.5,4°.00S×129°.40E,h44km,mB5.1/3,mb4.5/10*
ISC 20 15:28:34.6±0.6,4°.10S±0°.05×129°.65E±0°.05,h25km±4km,
h25km:pP-P,n90,σ1s08/103,mb4.3/21,MS3.5/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.49**	**149**		P		**Pb**	**15 28 44.3**	**-0.4**
BNDI					S		**Sn**	**15 28 52.7**	**-0.9**
MSAI	**Masohi**		**1.04**	**316**	P		**Pn**	**15 28 51.9**	**-1.7**
MSAI					S		**Sb**	**15 29 05.6**	**-1.7**
AAI	**Ambon**		**1.51**	**286**	P		**Pn**	**15 28 58.7**	**-1.4**
AAI	**Ambon**		**1.51**	**286**	P		**Pn**	**15 28 59.0**	**-1.1**
	baz=1.5,SNR=45								
AAI					S		**Sn**	**15 29 18.7**	**-0.2**
	baz=1.5,SNR=5.0								
FAKI	**Fak Fak**		**2.85**	**66**	P		**Pn**	**15 29 18.6**	**+0.1**
TLE	**Tual**		**3.43**	**116**	P		**Pn**	**15 29 29.1**	**+2.6**
TLE	**Tual**		**3.43**	**116**	P		Pn	15 29 29.9	+3.3
	baz=3.4,SNR=23								
SWI	**Sorong**		**3.60**	**27**	P		**Pn**	**15 29 28.6**	**-0.2**
SWI	**Sorong**		**3.60**	**27**	P		**Pn**	**15 29 29.1**	**+0.3**
	baz=3.6,SNR=32								
LBMI	**Labuha**		**4.06**	**328**	P		**Pn**	**15 29 35.4**	**+0.3**
RKPI	**Ransiki, Papua**		**5.20**	**60**	P		**Pn**	**15 29 51.9**	**+1.0**
	440nm,0.8s,5μm1.6nm								
RKPI					S		Sn	15 30 20.6	-30
	440nm,0.8s,5μm1.6nm								
TNTI	**Ternate**		**5.35**	**335**	P		**Pn**	**15 29 52.9**	**-0.1**
	79nm,1.1s,0.3nm								
KDI	**Kendari**		**7.02**	**271**	P		**Pn**	**15 30 16.7**	**+0.9**
	23nm,1.4s,0.1nm								
BAKI	**Biak**		**7.07**	**66**	P		**Pn**	**15 30 17.8**	**+1.3**
	67nm,1.6s,0.3nm								
LUWI	**Luwuk**		**7.51**	**294**	P		**Pn**	**15 30 23.1**	**+0.5**
	86nm,1.1s,1μm								
MTN	**Manton Dam**		**8.81**	**171**	P		**Pn**	**15 30 43.4**	**+3.0**
	baz=8.8,SNR=8.9								
KDU	**Kakau**		**8.97**	**162**	P		**Pn**	**15 30 42.9**	**+0.2**
	baz=9.0,SNR=15								
BKSI	**Bulukumba**		**9.57**	**262**	P		**Pn**	**15 30 53.6**	**+2.7**
	24nm,0.9s								
KAPI	**Kappang**		**9.91**	**264**	*eP**		Pn	15 30 59.9	+4.3
KAPI	**Kappang**		**9.91**	**264**	P		**Pn**	**15 30 56.3**	**+0.8**
	28nm,1.1s								
KAPI	**Kappang**		**9.91**	**264**	Pn		Pn	15 30 59.5	+4.0
	1.7nm,0.3s,baz=126,slow=13,SNR=10								
PCI	**Palu**		**10.31**	**288**	S		Sn	15 32 43.1	-13
	baz=10,SNR=7.1								
FITZ	**Fitzroy Crossi**		**14.46**	**195**	*eP**		**Pn**	**15 31 57.2**	**-0.5**
FITZ	**Fitzroy Crossi**		**14.46**	**195**	Pn		**Pn**	**15 31 55.6**	**-2.2**
	0.6nm,0.3s,baz=32,slow=9.3,SNR=20								
FITZ					LR		LR	15 37 49.6	
	comp=Z,57nm,20.1s,baz=14,slow=38								
FITZ	**Fitzroy Crossi**		**14.46**	**195**	P		**Pn**	**15 32 00.3**	**+2.5**
	baz=14,SNR=4.5								
KHKI	**Kahang-Kahang**		**14.59**	**252**	P		**P**	**15 32 06.0**	**+0.3**
	34nm,1.3s								
SRBI	**Sinaraja**		**14.89**	**254**	P		**P**	**15 32 09.0**	**-0.1**
	44nm,1.2s								
WRAB	**Tennant Creek**		**16.39**	**164**	*eP**		**Pn**	**15 32 21.5**	**-1.5**
	12nm,0.8s								
WRA	**Warramunga Arr**		**16.39**	**164**	Pn		**Pn**	**15 32 20.4**	**-2.8**
WRA					Sn		**Sn**	**15 35 26.2**	**+1.7**
WRA	**Warramunga Arr**		**16.39**	**164**	Pn		**Pn**	**15 32 20.4**	**-2.8**
	0.4nm,0.3s,baz=348,slow=13,SNR=21								
WRA					Sn		**Sn**	**15 35 26.2**	**+1.7**
	0.2nm,0.3s,baz=348,slow=23,SNR=4.6								
COEN	**Coen**		**16.55**	**127**	*eP**		**Pn**	**15 32 24.8**	**-0.4**
	131nm,1.0s								
COEN	**Coen**		**16.55**	**127**	P		**Pn**	**15 32 25.8**	**+0.7**
	baz=17,SNR=5.0								
QIS	**Mount Isa**		**19.01**	**150**	P		**P**	**15 32 54.8**	**+0.1**
	baz=19,SNR=7.3								
MBWA	**Marble Bar**		**19.50**	**209**	*eP**		**Pn**	**15 33 01.6**	**+0.2**
	39nm,1.0s								
AS31	**Alice Springs**		**19.88**	**168**	*eP**		**P**	**15 33 04.5**	**+0.3**
ASAR	**Alice Springs**		**19.88**	**168**	P		**P**	**15 33 04.3**	**+0.2**
ASAR					S		**S**	**15 36 45.7**	**-1.2**
ASAR	**Alice Springs**		**19.88**	**168**	P		**P**	**15 33 04.3**	**+0.2**
	1.8nm,0.3s,baz=348,slow=11,SNR=118								
ASAR					S		**S**	**15 36 45.7**	**-1.2**
	0.0nm,0.3s,baz=347,slow=15,SNR=3.3								
CTA	**Charters Tower**		**22.68**	**136**	P		**P**	**15 33 33.6**	**-0.8**
CTA	**Charters Tower**		**22.68**	**136**	P		**P**	**15 33 33.6**	**-0.8**
	3.8nm,0.7s,baz=319,slow=11,SNR=9.2								
CTAO	**Charters Tower**		**22.68**	**136**	*eP**		**P**	**15 33 34.8**	**+0.4**
	6.9nm,0.7s								
STKA	**Stephens Creek**		**29.82**	**159**	*eP**		**P**	**15 34 40.2**	**+0.4**
STKA	**Stephens Creek**		**29.82**	**159**	P		**P**	**15 34 39.6**	**-0.1**
	0.8nm,0.3s,baz=359,slow=9.5,SNR=5.6								
STKA					LR		LR	15 47 33.1	
	comp=Z,111nm,21.7s,baz=228,slow=38								
CM31	**Chiang Mai Arr**		**37.66**	**307**	*eP**		**P**	**15 35 49.5**	**+1.5**
	1.8nm,0.6s								
CMAR	**Chiang Mai Arr**		**37.66**	**307**	P		**P**	**15 35 49.3**	**+1.3**
CMAR	**Chiang Mai Arr**		**37.66**	**307**	P		**P**	**15 35 49.3**	**+1.3**
	2.7nm,0.6s,baz=132,slow=7.0,SNR=24								
CHTO	**Chiang Mai**		**37.85**	**308**	*eP**		**P**	**15 35 51.0**	**+1.3**
	7.0nm,0.9s								
MJAR	**Matsushiro Arr**		**41.22**	**10**	P		**P**	**15 36 16.6**	**-0.9**
MJAR	**Matsushiro Arr**		**41.22**	**10**	P		**P**	**15 36 16.6**	**-0.9**
	3.6nm,0.7s,baz=186,slow=9.6,SNR=12								
MJAR					LR		LR	15 49 39.2	
	comp=Z,83nm,19.9s,baz=175,slow=31								
MAT	**Matsushiro**		**41.22**	**10**	P		**P**	**15 36 16.7**	**-0.8**
KSAR	**Wonju Array Be**		**41.37**	**358**	P		**P**	**15 36 18.9**	**+0.3**
KSRS	**Korea Array**		**41.38**	**358**	P		**P**	**15 36 18.9**	**+0.2**
	1.4nm,0.6s,baz=176,slow=11,SNR=4.1								
KSRS					LR		LR	15 52 29.8	
	comp=Z,7.2nm,19.3s,baz=333,slow=35								
HHC	**Hu-ho-hao-te**		**47.70**	**341**	*eP**		**P**	**15 37 11.8**	**+2.4**
HHC					S		**S**	**15 44 02.8**	**-1.3**
HHC					pmax		pmax		
	comp=Z,28nm,0.6s								
HHC					pmax		pmax		
	comp=Z,170nm,6.4s								
USRK	**Ussuriysk Arra**		**48.13**	**2**	P		**P**	**15 37 11.2**	**-1.2**
	comp=Z,1.6nm,0.7s,baz=138,slow=42,SNR=3.6								
ODAN	**Odare**		**51.13**	**310**	*eP**		**P**	**15 37 36.2**	**+0.2**
	comp=Z,12nm,0.6s								
TAPN	**Taplejung**		**51.14**	**310**	*eP**		**P**	**15 37 35.8**	**-0.3**
	comp=Z,10.0nm,0.5s								
GTA	**Gaotai**		**51.29**	**330**	*eP**		**P**	**15 37 38.1**	**+1.3**
GTA					pmax		pmax		
	comp=Z,3.0nm,1.7s								
RAMN	**Ramite**		**51.79**	**309**	*eP**		**P**	**15 37 41.3**	**+0.4**
	comp=Z,29nm,0.6s								
GUN	**Gumba**		**52.82**	**310**	*eP**		**P**	**15 37 48.7**	**0.0**
	comp=Z,26nm,0.7s								
PKI	**Pulchoki**		**53.01**	**309**	*eP**		**P**	**15 37 50.3**	**+0.2**
KKN	**Kakani**		**53.22**	**309**	*eP**		**P**	**15 37 51.9**	**+0.4**
	comp=Z,20nm,0.9s								
DMN	**Daman**		**53.27**	**309**	*eP**		**P**	**15 37 52.4**	**+0.5**
KOLN	**Koldanda**		**54.52**	**308**	*eP**		**P**	**15 38 01.0**	**+0.1**
	comp=Z,16nm,0.7s								
DANN	**Dangsing**		**54.67**	**309**	*eP**		**P**	**15 38 02.0**	**-0.1**
	comp=Z,15nm,0.7s								
PYUN	**Puthan**		**55.15**	**308**	*eP**		**P**	**15 38 05.7**	**+0.2**
	comp=Z,33nm,0.9s								
ULN	**Ulaanbaatar**		**55.42**	**342**	*eP**		**P**	**15 38 08.1**	**+1.0**
	comp=Z,7.2nm,0.8s								
SONM	**Songino Array**		**55.60**	**341**	P		**P**	**15 38 08.8**	**+0.5**
SONM					pP		**pP**	**15 38 17.2**	**+1.0**
SONM	**Songino Array**		**55.60**	**341**	P		**P**	**15 38 08.8**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=155,slow=6.3,SNR=9.9								
SONM					pP		**pP**	**15 38 17.2**	**+1.0**
	comp=Z,4.6nm,1.0s,baz=159,slow=7.7,SNR=9.5								
MK31	**Makanchi Array**		**65.63**	**326**	*eP**		**P**	**15 39 16.7**	**+0.1**
MKAR	**Makanchi Array**		**65.63**	**326**	P		**P**	**15 39 16.9**	**+0.3**
MKAR					pP		**pP**	**15 39 24.7**	**0.0**
MKAR	**Makanchi Array**		**65.63**	**326**	P		**P**	**15 39 16.9**	**+0.3**
	comp=Z,3.0nm,0.7s,baz=126,slow=7.7,SNR=44								
MKAR					pP		**pP**	**15 39 24.7**	**0.0**
	comp=Z,5.8nm,0.7s,baz=127,slow=7.8,SNR=26								
TKM2	**Tokmak 2**		**67.55**	**320**	*eP**		**P**	**15 39 29.6**	**+0.4**
	comp=Z,2.6nm,0.7s								
AAK	**Ala-Archa**		**68.12**	**319**	P		**P**	**15 39 32.6**	**-0.2**
AAK	**Ala-Archa**		**68.12**	**319**	P		**P**	**15 39 32.6**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=157,slow=6.5,SNR=5.0								
EKS2	**Erkin-Say**		**68.61**	**319**	*eP**		**P**	**15 39 36.7**	**+1.0**
	comp=Z,5.4nm,1.4s								
ZALV	**Zalesovo Beam**		**68.85**	**333**	P		**P**	**15 39 36.3**	**-0.5**
ZALV					pP		**pP**	**15 39 44.2**	**-0.7**
ZALV	**Zalesovo Beam**		**68.85**	**333**	P		**P**	**15 39 36.3**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=108,slow=4.8,SNR=10								
ZALV					pP		**pP**	**15 39 44.2**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=104,slow=6.3,SNR=7.1								
KURBB	**Kurchatov Arra**		**69.88**	**328**	P		**P**	**15 39 43.8**	**+0.5**
	comp=Z,5.1nm,0.7s,baz=132,slow=5.8,SNR=58								
KURBB					pP		**pP**	**15 39 51.4**	**0.0**
	comp=Z,6.7nm,0.6s,baz=130,slow=5.8,SNR=17								
KURK	**Kurchatov**		**69.88**	**328**	*eP**		**P**	**15 39 43.6**	**+0.3**
KURK					pP		**pP**	**15 39 51.4**	**0.0**
VNDA	**Vanda**		**75.34**	**173**	LR		LR	16 13 18.7	
	comp=Z,49nm,19.5s,baz=98,slow=36								
BRVK	**Borovoye**		**75.52**	**328**	*eP**		**P**	**15 40 17.1**	**+0.4**
	comp=Z,6.9nm,0.9s								
MAW	**Mawson**		**77.50**	**201**	P		**P**	**15 40 25.0**	**-2.7**
	baz=78,SNR=5.4								
ABKAR	**Akbulak array**		**80.04**	**321**	*eP**		**P**	**15 40 41.8**	**-0.2**
	comp=Z,3.1nm,0.6s								
ILAR	**Eielson Array**		**90.89**	**25**	P		**P**	**15 41 35.9**	**+0.1**
ILAR	**Eielson Array**		**90.89**	**25**	P		**P**	**15 41 35.9**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=293,slow=5.3,SNR=2.8								
TORD	**Torodi Ar. Bea**		**127.86**	**283**	PKP		**PKPdf**	**15 47 39.5**	**+0.3**
TORD					pPKP		**pPKPdf**	**15 47 46.9**	**-0.8**
TORD	**Torodi Ar. Bea**		**127.86**	**283**	PKP		**PKPdf**	**15 47 39.5**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=45,slow=1.9,SNR=3.3								
TORD					pPKP		**pPKPdf**	**15 47 46.9**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=41,slow=1.7,SNR=5.5								
CPUP	**Villa Florida**		**149.00**	**168**	PKPbc		**PKPbc**	**15 48 20.8**	**-0.4**
CPUP	**Villa Florida**		**149.00**	**168**	PKPbc		**PKPbc**	**15 48 20.8**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=251,slow=6.4,SNR=3.6								
LPAZ	**La Paz**		**153.17**	**139**	PKPbc		**PKPbc**	**15 48 32.5**	**+0.5**
LPAZ	**La Paz**		**153.17**	**139**	PKPbc		**PKPbc**	**15 48 32.5**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=220,slow=7.9,SNR=5.1								

*ISCJB **20** 15:43:32.0±0.9,36°.45N±0°.04×7°.58W±0°.04,h5km±4km, Error ellipse: s-maj=6.8km s-min=5.0km az=20.0*
*CSEM **20** 15:43:32.4±0.3,36°.38N×7°.66W,h10km,ML2.7/7,Error ellipse: s-maj=6.4km s-min=3.9km az=22.0*
*MDD **20** 15:43:32.9±1.2,36°.36N×7°.72W,h7km±7km,mbLg2.1/12, Error ellipse: s-maj=8.8km s-min=6.3km az=12.0,PRXIMO*
*INMG **20** 15:43:34.4±1.1,36°.37N×7°.67W,h18km±4km,ML2.0,Error ellipse: s-maj=4.2km s-min=4.0km az=5.0*
*LDG **20** 15:43:34.0±0.2,36°.38N×7°.75W,h10km,Ml2.8/2*
*IGIL **20** 15:43:34.8,36°.36N×7°.75W,h15km,ML2.0*
ISC 20 15:43:32.4±1.8,36°.32N±0°.07×7°.72W±0°.04,h16km±10km,
n54,σ1s02/74,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.93**	**350**	*eP*			**Pg**	**15 43 50.8**	**+0.3**
PBDV					eS		**Sg**	**15 44 02.8**	**0.0**
PBDV					A		A	15 44 03.8	
	18nm,0.2s								
PBDV	**Barranco-do-Ve**	**0.93**	**350**	Pg			**Pg**	**15 43 50.8**	**+0.3**
PBDV					Lg		Lg	15 44 02.8	
	18nm,0.2s								
PBDV	**Barranco-do-Ve**	**0.93**	**350**	*eP*			**Pg**	**15 43 50.8**	**+0.3**
PBDV					Lg		Lg	15 44 02.8	
	18nm,0.2s								
PVAQ	**Vaqueiros**	**1.08**	**0**	*eP*			**Pg**	**15 43 52.3**	**-0.9**
PVAQ					eS		**Sg**	**15 44 06.4**	**-1.0**
PVAQ					A		A	15 44 07.6	
	34nm,0.2s								
PVAQ	**Vaqueiros**	**1.08**	**0**	Pg			**Pg**	**15 43 52.3**	**-0.9**
PVAQ					Lg		Lg	15 44 06.4	
	34nm,0.2s								
PVAQ	**Vaqueiros**	**1.08**	**0**	*eP*			**Pg**	**15 43 52.3**	**-0.9**
PVAQ					Lg		Lg	15 44 06.4	
	34nm,0.2s								
PFVI	**Vila Bisbo**	**1.20**	**313**	*eP*			**Pb**	**15 43 54.8**	**0.0**
PFVI					eS		**Sb**	**15 44 10.2**	**+0.1**
PFVI					A		A	15 44 13.5	
	13nm,0.2s								
PFVI	**Vila Bisbo**	**1.20**	**313**	Pg			**Pb**	**15 43 54.6**	**-0.1**
	3.6nm,0.1s,SNR=7.6								
PFVI					Lg		Lg	15 44 09.8	
	8.7nm,0.1s,SNR=8.4								
PFVI	**Vila Bisbo**	**1.20**	**313**	*eP*			**Pb**	**15 43 54.8**	**0.0**
PFVI					Lg		Lg	15 44 09.8	
	8.7nm,0.1s,SNR=8.4								
PFVI					eS		**Sb**	**15 44 10.2**	**+0.1**
	13nm,0.2s								
EGRO	**El Granado**	**1.22**	**9**	Pg			**Pb**	**15 43 54.4**	**-0.8**
	0.7nm,0.1s,SNR=7.9								
EGRO					Lg		Lg	15 44 11.6	
	19nm,0.1s,SNR=7.9								
EGRO	**El Granado**	**1.22**	**9**	Pg			**Pb**	**15 43 54.4**	**-0.8**
	0.7nm,0.1s,SNR=7.9								
EGRO					Lg		Lg	15 44 11.6	
	19nm,0.1s,SNR=7.9								
MORF	**Marmelete**	**1.23**	**323**	*eP*			**Pb**	**15 43 55.4**	**+0.1**
MORF					eS		**Sb**	**15 44 10.8**	**-0.2**
MORF					A		A	15 44 11.6	
	29nm,0.1s						

comp=E,0.8nm,0.1s,SNR=7.9
EBAD Lg Lg 15 44 49.7
comp=E,6.4nm,0.2s,SNR=6.0
EBAD Badajoz 2.49 13 Pn **Pn 15 44 13.2 +0.8**
comp=E,0.3nm,0.1s,SNR=7.9
PESTR Estremoz 2.54 2 *e*Sg **Sb 15 44 50.4 +1.7**
PESTR Estremoz 2.54 2 Lg Lg 15 44 50.4
PESTR Estremoz 2.54 2 *e*Sg **Sb 15 44 50.4 +1.7**
PESTR Lg 15 44 50.4
PMRV Marv??o 3.11 5 *e*Pn **Pn 15 44 20.4 -0.5**
PMRV *e*Sg **Sb 15 45 08.5 +3.4**
PMRV A A 15 45 15.4
comp=E,4.5nm,0.4s
PMRV Marv??o 3.11 5 Pn **Pn 15 44 20.4 -0.5**
PMRV Lg Lg 15 45 08.5
comp=E,4.5nm,0.4s
PMRV Marv??o 3.11 5 *e*Pn **Pn 15 44 20.4 -0.5**
PMRV Lg Lg 15 45 08.5
comp=E,4.5nm,0.4s
EADA Adamuz 3.11 53 Pn **Pn 15 44 20.8 -0.1**
comp=E,0.3nm,0.1s,SNR=7.9
EADA Sn **Sn 15 44 56.0 -1.8**
comp=E,0.5nm,0.1s,SNR=7.9
EADA Lg Lg 15 45 10.9
comp=E,0.9nm,0.1s,SNR=7.9
EADA Adamuz 3.11 53 Pn **Pn 15 44 20.8 -0.1**
comp=E,0.3nm,0.1s,SNR=7.9
EADA Sn **Sn 15 44 56.0 -1.8**
comp=E,0.5nm,0.1s,SNR=7.9
EADA Lg Lg 15 45 10.9
comp=E,0.9nm,0.1s,SNR=7.9
EGUA Guajares 3.39 80 Pn **Pn 15 44 26.0 +1.4**
comp=E,2.1nm,0.2s,SNR=4.0
EGUA Guajares 3.39 80 Pn **Pn 15 44 26.0 +1.4**
comp=E,2.1nm,0.2s,SNR=4.0
SJPF Ste Jean 8.43 34 *e*Pn **Pn 15 45 33.5 -0.4**
SJPF *e*Sn Sn 15 47 03.6 -5.1
comp=E,1.5nm,0.5s
SJPF Ste Jean 8.43 34 *e*Pn **Pn 15 45 33.5 -0.4**
ETSF Etsaut 8.58 38 *e*Pn **Pn 15 45 35.3 -0.7**
ETSF Etsaut 8.58 38 *e*Pn **Pn 15 45 35.3 -0.7**
EPF Esparros 9.13 40 *e*Pn **Pn 15 45 42.9 -0.7**
EPF Esparros 9.13 40 *e*Pn **Pn 15 45 42.9 -0.7**

IDC 20 15:51:50.7±1.4, 12°41′S×73°55′W, h0km, mb3.8/3, mb1 3.9/6, mb1mx3.7/22, mbtmp3.7/6, ML3.6/3, MS3.1/2, Ms1 3.1/2, ms1mx2.6/33, Error ellipse: s-maj=50.0km s-min=16.9km az=14.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.25**	**277**	Pn	Pn	15 52 43.5	+0.4
	9.3nm,0.3s,baz=132,slow=11,SNR=11						
NNA				Lg	Lg	15 53 34.4	
	21nm,0.3s,baz=210,slow=15,SNR=5.7						
LPAZ	**La Paz**	**6.51**	**127**	Pn	Pn	15 53 27.2	-1.4
	1.0nm,0.3s,baz=296,slow=4.7,SNR=28						
SIV	**San Ignacio**	**12.61**	**108**	Pn	Pn	15 54 51.0	-0.5
	0.1nm,0.3s,baz=298,slow=15,SNR=2.2						
JTS	**JuntasAbangare**	**25.24**	**333**	LR	LR	16 07 33.6	
	comp=Z,37nm,19.4s,baz=111,slow=37						
CMIG	**Matias Romero**	**36.11**	**324**	LR	LR	16 11 20.9	
	comp=Z,32nm,20.5s,baz=4.4,slow=32						
TXAR	**Lajitas Array**	**50.67**	**325**	P	P	16 00 51.2	-1.0
	0.4nm,0.6s,baz=144,slow=6.7,SNR=3.9						
TORD	**Torodi Ar. Bea**	**78.80**	**74**	P	P	16 03 56.9	+0.8
	1.9nm,0.8s,baz=261,slow=5.2,SNR=8.5						
YKA	**Yellowknife Ar**	**81.21**	**342**	P	P	16 04 08.1	+0.1
	0.5nm,0.7s,baz=138,slow=5.2,SNR=15						

*ISCJB **20** 15:54:24.7±0.4, 51°52N±0°02×16°11E±0°03, h0km, Error ellipse: s-maj=3.3km s-min=2.2km az=14.7*
*CSEM **20** 15:54:26.4±0.2, 51°55N×16°14E, h2km, ML3.4/10, Error ellipse: s-maj=3.7km s-min=2.2km az=17.0*
*IPEC **20** 15:54:26.6±0.3, 51°58N×16°18E, h0km, ML2.3/3, Error ellipse: s-maj=1.9km s-min=1.5km az=41.0*
*PRU **20** 15:54:27.8, 51°51N×16°11E, h0km*
*BGR **20** 15:54:27.7±0.3, 51°54N×16°11E, h1km, ML3.0/17, Error ellipse: s-maj=4.4km s-min=2.2km az=18.0*
*WAR **20** 15:54:27.3, 51°57N×16°00E*
*IDC **20** 15:54:28.9±0.8, 51°50N×16°06E, h0km, mb1 3.3/5, mb1mx3.1/26, mbtmp3.2/5, ML3.0/4, Error ellipse: s-maj=14.8km s-min=7.9km az=113.0*
*VIE **20** 15:54:30.5±0.5, 51°26N×16°12E, h0km, mb2.5/6, ML2.9/6, Error ellipse: s-maj=3.5km s-min=3.2km az=127.0 64 km WNW of Wroclaw Suspected Mining induced.*

ISC 20 15:54:26.8±0.7, 51°57N±0°03×16°07E±0°02, h0km, n88, σ1s08/153, 8C-10D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.74**	**169**	*e*Pg	**Pg**	**15 54 41.3**	**+0.2**
KSP				*e*Sg	**Sg**	**15 54 50.8**	**+0.1**
KSP	**Ksiaz**	**0.74**	**169**	*e*Pg	**Pg**	**15 54 41.2**	**+0.2**
KSP				*e*Sg	**Sg**	**15 54 50.9**	**+0.3**
KSP	**Ksiaz**	**0.74**	**169**	*e*	**Sg**	**15 54 55.6**	**+5.0**
KSP	**Ksiaz**	**0.74**	**169**	*e*Pg	**Pg**	**15 54 41.1**	**+0.1**
	baz=354						
KSP				*e*Sg	**Sg**	**15 54 49.3**	**-1.3**
	baz=354						
UPC	**Upice**	**1.07**	**182**	*e*PG	**Pg**	**15 54 47.3**	**0.0**
UPC	**Upice**	**1.07**	**182**	*e*Pg	**Pg**	**15 54 47.2**	**0.0**
	baz=5.4						
DPC	**Dobruska-Polom**	**1.23**	**172**	*e*Pg	**Pg**	**15 54 50.1**	**-0.4**
DPC				*e*Sg	**Sg**	**15 55 06.3**	**-0.1**
DPC	**Dobruska-Polom**	**1.23**	**172**	*e*PG	**Pg**	**15 54 50.0**	**-0.4**
DPC				*e*SG	**Sg**	**15 55 05.1**	**-1.3**
	comp=Z,62nm,0.5s						
DPC	**Dobruska-Polom**	**1.23**	**172**	*e*Pg	**Pg**	**15 54 49.9**	**-0.5**
	baz=356						
DPC				*e*Sg	**Sg**	**15 55 04.9**	**-1.5**
	baz=356						
PVCC	**Panska Ves**	**1.41**	**223**	*e*PG	**Pg**	**15 54 53.1**	**-0.7**
PVCC				*e*SG	**Sn**	**15 55 12.9**	**-0.1**
	comp=Z,184nm,0.3s						
PVCC	**Panska Ves**	**1.41**	**223**	Pg	**Pg**	**15 54 53.1**	**-0.7**
PVCC	**Panska Ves**	**1.41**	**223**	*e*Pn	**Pb**	**15 54 54.0**	**0.0**
	baz=43						
PVCC				*e*Sg	**Sn**	**15 55 12.5**	**-0.5**
	baz=43						
BRG	**Berggiesshubel**	**1.51**	**243**	PN	**Pn**	**15 54 54.8**	**-0.3**
BRG				PG	**Pb**	**15 54 55.9**	**+0.2**
BRG				SG	**Sn**	**15 55 15.9**	**+0.4**
	108nm,0.4s						
BRG	**Berggiesshubel**	**1.51**	**243**	*e*Pn	**Pn**	**15 54 54.9**	**-0.2**
BRG				*e*Pg	**Pb**	**15 54 56.2**	**+0.5**
BRG				*e*Sg	**Sn**	**15 55 16.1**	**+0.7**
BRG	**Berggiesshubel**	**1.51**	**243**	Pn	**Pn**	**15 54 54.9**	**-0.2**
KRLC	**Kraliky**	**1.56**	**163**	*e*PG	**Pn**	**15 54 55.3**	**-0.6**
KRLC				*e*SG	**Sn**	**15 55 15.0**	**-1.9**
KRLC	**Kraliky**	**1.56**	**163**	Pg	**Pn**	**15 54 55.3**	**-0.6**
KRLC				Sg	**Sn**	**15 55 15.0**	**-1.9**
FBE	**Freiberg**	**1.83**	**250**	*e*Pg	**Pg**	**15 55 01.9**	**+0.1**
FBE				*e*Sg	**Sg**	**15 55 26.0**	**+0.5**
FBE	**Freiberg**	**1.83**	**250**	Pg	**Pg**	**15 55 01.9**	**+0.1**
FBE				Sg	**Sg**	**15 55 26.0**	**+0.5**
PRU	**Pruhonice**	**1.86**	**212**	*e*PN	**Pn**	**15 54 59.4**	**-0.5**
PRU				*e*PG	**Pb**	**15 55 01.5**	**-0.1**
PRU				*e*SG	**Sb**	**15 55 25.1**	**-0.3**
	comp=Z,38nm,0.3s						
PRU	**Pruhonice**	**1.86**	**212**	Pn	**Pn**	**15 54 59.4**	**-0.5**
PRU	**Pruhonice**	**1.86**	**212**	Pg	**Pb**	**15 55 01.5**	**-0.1**
PRU				Sg	**Sb**	**15 55 25.1**	**-0.3**
	38nm,0.3s						
CLL	**Collm**	**1.94**	**263**	*e*Pn	**Pn**	**15 55 00.2**	**-0.8**
CLL				*e*Pg	**Pg**	**15 55 03.5**	**-0.5**
CLL				*e*Sg	**Sg**	**15 55 29.4**	**+0.4**
CLL	**Collm**	**1.94**	**263**	*e*Pn	**Pn**	**15 55 00.0**	**-1.0**
CLL				*i* Pg	**Pg**	**15 55 03.4**	**-0.5**
CLL				*i*		15 55 06.5	
CLL				*i*		15 55 07.3	
CLL				*e*		15 55 19.0	
CLL				*e*Sg	**Sg**	**15 55 29.0**	**0.0**
	comp=Z,36nm,0.5s						
CLL	**Collm**	**1.94**	**263**	Pn	**Pn**	**15 55 00.2**	**-0.8**
MORC	**Moravsky Berou**	**2.03**	**152**	*e*Pn	**Pn**	**15 55 01.5**	**-0.8**
MORC				*e*Sg	**Sb**	**15 55 30.5**	**+0.2**
MORC	**Moravsky Berou**	**2.03**	**152**	⇓*i*P	**Pn**	**15 55 01.0**	**-1.2**
MORC	**Moravsky Berou**	**2.03**	**152**	⇓*i*P	**Pn**	**15 55 01.0**	**-1.2**
MORC	**Moravsky Berou**	**2.03**	**152**	Pn	**Pn**	**15 55 01.5**	**-0.8**
MORC				*e*Sg	**Sn**	**15 55 29.7**	**+1.4**
	comp=Z,23nm,0.3s,baz=335						
MORC				S	**Sb**	**15 55 30.2**	**-0.1**
OKC	**Ostrava-Krasne**	**2.18**	**142**	*e*Pg	**Pb**	**15 55 07.6**	**+0.5**
OKC				*e*Sg	**Sb**	**15 55 35.0**	**+0.3**
OKC	**Ostrava-Krasne**	**2.18**	**142**	*e*PG	**Pb**	**15 55 07.2**	**+0.1**
OKC				*e*SG	**Sb**	**15 55 34.3**	**-0.4**
OKC	**Ostrava-Krasne**	**2.18**	**142**	Pg	**Pb**	**15 55 07.6**	**+0.5**
OKC				Sg	**Sb**	**15 55 35.0**	**+0.3**
VRAC	**Vranov**	**2.29**	**171**	⇓*i*P	**Pn**	**15 55 06.3**	**+0.5**
VRAC	**Vranov**	**2.29**	**171**	S	**Sb**	**15 55 38.8**	**+0.9**
VRAC	**Vranov**	**2.29**	**171**	Pn	**Pn**	**15 55 06.4**	**+0.6**
	comp=Z,2.8nm,0.3s,baz=337,slow=14,SNR=7.4						
VRAC				Lg	Lg	15 55 38.9	
	comp=Z,4.1nm,0.3s,baz=86,slow=23,SNR=7.5						
VRAC	**Vranov**	**2.29**	**171**	*e*Pn	**Pn**	**15 55 05.6**	**-0.2**
	baz=354						
VRAC	**Vranov**	**2.29**	**171**	⇓*i*P	**Pn**	**15 55 06.3**	**+0.5**
VRAC				*e*Sg	**Sb**	**15 55 38.3**	**+0.4**
	comp=Z,13nm,0.4s,baz=354						
KRUC	**Moravsky**	**2.52**	**175**	*e*Pn	**Pn**	**15 55 09.2**	**+0.2**
	baz=357						
KRUC				*e*Sg	**Sb**	**15 55 45.6**	**+1.1**
	comp=Z,14nm,0.4s,baz=357						
TANN	**Tannenbergstha**	**2.56**	**244**	*e*Pn	**Pn**	**15 55 09.6**	**0.0**
TANN				*e*Pg	**Pg**	**15 55 16.5**	**+0.7**
TANN				*e*Sg	**Sg**	**15 55 48.8**	**-0.2**
TANN	**Tannenbergstha**	**2.56**	**244**	Pn	**Pn**	**15 55 09.6**	**0.0**
WERD	**Werda**	**2.63**	**246**	*e*Pg	**Pg**	**15 55 16.7**	**-0.5**
WERD				*e*Sg	**Sg**	**15 55 50.4**	**-0.9**
WERD	**Werda**	**2.63**	**246**	Pg	**Pg**	**15 55 16.7**	**-0.5**
WERD				Sg	**Sg**	**15 55 50.4**	**-0.9**
NKC	**Novy Kostel**	**2.66**	**241**	*e*PN	**Pn**	**15 55 11.2**	**+0.3**
NKC				*e*PG	**Pg**	**15 55 17.4**	**-0.3**
NKC				*e*SG	**Sg**	**15 55 52.9**	**+0.8**
	comp=Z,64nm,0.4s						
NKC	**Novy Kostel**	**2.66**	**241**	Pn	**Pn**	**15 55 11.2**	**+0.3**
OJC	**Ojcow**	**2.72**	**118**	*e*Pg	**Pb**	**15 55 18.0**	**+1.7**
OJC				*e*Sg	**Sb**	**15 55 52.9**	**+2.7**
OJC	**Ojcow**	**2.72**	**118**	*e*PG	**Pb**	**15 55 17.4**	**+1.1**
OJC				*e*SG	**Sb**	**15 55 52.7**	**+2.5**
OJC	**Ojcow**	**2.72**	**118**	Pg	**Pb**	**15 55 18.0**	**+1.7**
OJC				Sg	**Sb**	**15 55 52.9**	**+2.7**
KHC	**Kasperske Hory**	**2.92**	**214**	*e*PN	**Pn**	**15 55 14.1**	**-0.4**
KHC				*e*PG	**Pb**	**15 55 20.5**	**+0.8**
KHC				*e*SN	**Sn**	**15 55 48.0**	**-2.3**
KHC				*e*SG	**Sg**	**15 55 59.3**	**-1.2**
	comp=Z,12nm,0.4s						
KHC	**Kasperske Hory**	**2.92**	**214**	Pn	**Pn**	**15 55 14.1**	**-0.4**
MOX	**Moxa**	**2.96**	**253**	*e*Pn	**Pn**	**15 55 14.7**	**-0.3**
MOX				*e*Pg	**Pg**	**15 55 23.4**	**0.0**
MOX				*e*Sg	**Sg**	**15 56 03.2**	**+1.5**
MOX	**Moxa**	**2.96**	**253**	Pn	**Pn**	**15 55 14.7**	**-0.3**
MANZ	**Manzenberg**	**2.97**	**239**	*e*Pn	**Pn**	**15 55 15.7**	**+0.4**
MANZ				*e*Pg	**Pg**	**15 55 23.8**	**0.0**
MANZ				*e*Sg	**Sg**	**15 56 02.3**	**0.0**
MANZ	**Manzenberg**	**2.97**	**239**	Pn	**Pn**	**15 55 15.7**	**+0.4**
ROTZ	**Rotzenmuhle**	**3.05**	**235**	*e*Pn	**Pn**	**15 55 16.6**	**+0.3**
ROTZ				*e*Pg	**Pg**	**15 55 26.0**	**+0.8**
ROTZ				*e*Sg	**Sg**	**15 56 03.8**	**-1.0**
ROTZ	**Rotzenmuhle**	**3.05**	**235**	Pn	**Pn**	**15 55 16.6**	**+0.3**
GEC2	**GERESS Array S**	**3.13**	**210**	*e*Pn	**Pn**	**15 55 17.8**	**+0.4**
GEC2				*e*Pg	**Pg**	**15 55 25.7**	**-0.9**
GEC2				*e*Sg	**Sg**	**15 56 05.1**	**-2.1**
GEC2	**GERESS Array S**	**3.13**	**210**	Pn	**Pn**	**15 55 17.8**	**+0.4**
GERES	**GERESS Array B**	**3.13**	**210**	Pn	**Pn**	**15 55 17.9**	**+0.4**
	comp=Z,1.9nm,0.3s,baz=30,slow=13,SNR=26						
GERES				Pg	**Pg**	**15 55 25.4**	**-1.3**
	comp=Z,3.7nm,0.3s,baz=27,slow=16,SNR=19						
GERES				Lg	Lg	15 56 05.7	
	comp=Z,4.7nm,0.3s,baz=30,slow=29,SNR=14						
WET	**Wettzell**	**3.18**	**221**	*e*Pn	**Pn**	**15 55 18.2**	**+0.2**
WET				*e*Sg	**Sg**	**15 56 09.3**	**+0.5**
WET	**Wettzell**	**3.18**	**221**	Pn	**Pn**	**15 55 18.2**	**+0.2**
WET				Sg	**Sg**	**15 56 09.3**	**+0.5**
CLZ	**Clausthal**	**3.56**	**277**	*e*Pn	**Pn**	**15 55 23.9**	**+0.6**
CLZ				*e*Pg	**Pg**	**15 55 34.3**	**-0.6**
CLZ				*e*Sg	**Sg**	**15 56 20.7**	**-0.2**
CLZ	**Clausthal**	**3.56**	**277**	Pn	**Pn**	**15 55 23.9**	**+0.6**
VYHS	**Vyhne**	**3.56**	**149**	*e*PG	**Pb**	**15 55 32.1**	**+1.5**
VYHS				*e*SG	**Sg**	**15 56 20.4**	**-0.7**
VYHS	**Vyhne**	**3.56**	**149**	*e*Pg	**Pb**	**15 55 32.1**	**+1.5**
VYHS				*e*Sg	**Sg**	**15 56 20.4**	**-0.7**
BSD	**Bornholm Skovb**	**3.62**	**349**	*i* P	**Pn**	**15 55 22.8**	**-1.2**
BSD				*i* S	**Sn**	**15 56 04.8**	**-2.5**
BSD	**Bornholm Skovb**	**3.62**	**349**	*i* P	**Pn**	**15 55 22.8**	**-1.2**
BSD				*i* S	**Sn**	**15 56 04.8**	**-2.5**
GRA1	**Grafenberg Arr**	**3.62**	**241**	Pn	**Pn**	**15 55 24.4**	**+0.3**
GRA1	**Grafenberg Arr**	**3.62**	**241**	Pg	**Pg**	**15 55 37.2**	**+1.1**
GRA1				Sg	**Sg**	**15 56 23.2**	**+0.3**
GRF	**Grafenberg Arr**	**3.62**	**241**	*e*Pn	**Pn**	**15 55 24.4**	**+0.3**
GRF				*e*Pg	**Pg**	**15 55 37.2**	**+1.1**
GRF				*e*Sg	**Sg**	**15 56 23.2**	**+0.3**
CONA	**Conrad Observa**	**3.65**	**182**	⇓*i*Pn	**Pn**	**15 55 24.8**	**+0.2**
CONA				⇓*i*Sg	**Sg**	**15 56 21.4**	**-2.6**
	comp=Z,28nm,0.6s						
CONA	**Conrad Observa**	**3.65**	**182**	Pn	**Pn**	**15 55 24.8**	**+0.2**
CONA				Sg	**Sg**	**15 56 21.4**	**-2.6**
	comp=Z,28nm,0.6s						
MOA	**Molln**	**3.91**	**198**	⇑*i*Pn	**Pn**	**15 55 28.3**	**+0.2**
MOA				⇑*i*Sg	**Sg**	**15 56 30.2**	**-2.0**
	comp=Z,16nm,0.5s						
MOA	**Molln**	**3.91**	**198**	Pn	**Pn**	**15 55 28.3**	**+0.2**
MOA				Sg	**Sg**	**15 56 30.2**	**-2.0**
	comp=Z,16nm,0.5s						
ARSA	**Arzberg**	**4.34**	**185**	⇓*i*Pn	**Pn**	**15 55 33.9**	**-0.1**
ARSA				⇑*i*Sg	**Sg**	**15 56 44.1**	**-2.1**
	comp=Z,11nm,0.7s						
ARSA	**Arzberg**	**4.34**	**185**	Pn	**Pn**	**15 55 33.9**	**-0.1**
ARSA				Sg	**Sg**	**15 56 44.1**	**-2.1**
	comp=Z,11nm,0.7s						
CRVS	**Cervenica-Dubn**	**4.37**	**126**	*e*PG	Pb	15 55 48.0	+3.5
CRVS	**Cervenica-Dubn**	**4.37**	**126**	*e*Pg	Pb	15 55 48.0	+3.5
KBA	**Koelnbreinsper**	**4.84**	**203**	⇑*i*Pn	**Pn**	**15 55 41.2**	**+0.2**
KBA				⇓*i*Sg	**Sg**	**15 57 00.7**	**-1.5**
	comp=Z,16nm,0.6s						
KBA	**Koelnbreinsper**	**4.84**	**203**	Pn	**Pn**	**15 55 41.2**	**+0.2**
KBA				Sg	**Sg**	**15 57 00.7**	**-1.5**
	comp=Z,16nm,0.6s						
TRPA	**Tarpa**	**5.42**	**127**	⇑*i*P	Pn	15 55 45.8	-3.0
TRPA	**Tarpa**	**5.42**	**127**	⇑*i*P	Pn	15 55 45.8	-3.0
DRGR		**6.47**	**135**	⇑*i*P	**Pn**	**15 56 01.8**	**-1.5**
DRGR		**6.47**	**135**	⇑*i*P	**Pn**	**15 56 01.8**	**-1.5**
BURAR	**Bucovina Array**	**7.14**	**120**	⇓*i*P	Pn	15 56 09.9	-2.6
BURAR	**Bucovina Array**	**7.14**	**120**	⇓*i*P	Pn	15 56 09.9	-2.6
AKASG	**Malin Array Be**	**8.32**	**91**	Pn	**Pn**	**15 56 27.6**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=282,slow=12,SNR=5.2						
HFS	**Hagfors**	**8.69**	**352**	Pn	**Pn**	**15 56 34.4**	**+0.8**
	comp=Z,0.0nm,0.3s,baz=170,slow=12,SNR=1.0						
FINES	**FINESS Array B**	**11.32**	**25**	Pn	**Pn**	**15 57 08.1**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=208,slow=11,SNR=1.5						
FINES				Sn	Sn	15 59 08.7	-7.9
	comp=Z,0.2nm,0.3s,baz=208,slow=20,SNR=4.4						

IDC 20 16:00:03.4±2.0, 4°27N×127°32E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/23, mbtmp3.7/4, Error ellipse: s-maj=139.9km s-min=26.4km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.03**	**164**	P	P	16 05 28.1	-1.3
	3.8nm,0.7s,baz=344,slow=10,SNR=21						
ASAR	**Alice Springs**	**28.50**	**167**	P	P	16 06 02.6	+1.9
	0.2nm,0.3s,baz=347,slow=12,SNR=6.7						
STKA	**Stephens Creek**	**38.43**	**160**	P	P	16 07 26.5	-0.5
	3.2nm,0.7s,baz=331,slow=10,SNR=8.7						
MKAR	**Makanchi Array**	**57.45**	**325**	P	P	16 09 54.2	0.0
	0.3nm,0.7s,baz=123,slow=7.8,SNR=3.8						

*IDC **20** 16:01:59.9±1.0, 4°12S×129°75E, h0km, mb3.7/5, mb1 3.9/8, mb1mx3.8/23, mbtmp3.8/8, ML3.7/2, Error ellipse: s-maj=55.1km s-min=16.1km az=62.0*
*AUST **20** 16:02:01.8±0.0, 3°94S×129°34E, h146km, Error ellipse: s-maj=1.4km s-min=1.1km az=34.0*
*ISCJB **20** 16:02:03.3±0.5, 4°17S±0°05×129°59E±0°06, h36km, mb3.7/5, Error ellipse: s-maj=9.5km s-min=5.9km az=139.4*
*DJA **20** 16:02:03.0±0.8, 4°S±10°×13°0E±°, h12km±13km, M3.9/6, MLv3.9/6*

ISC 20 16:02:04.9±0.8, 4°14S±0°07×129°57E±0°06, h36km, n19, σ1s31/20, mb3.8/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.51**	**138**	P	**Pn**	**16 02 13.2**	**-2.5**
MSAI	**Masohi**	**1.01**	**321**	P	**Pn**	**16 02 20.9**	**-1.7**
AAI	**Ambon**	**1.44**	**288**	P	**Pn**	**16 02 28.2**	**-0.3**
AAI	**Ambon**	**1.44**	**288**	P	**Pn**	**16 02 28.2**	**-0.3**
	baz=1.2,SNR=31						
AAI				S	**Sn**	**16 02 46.7**	**+0.5**
	baz=1.2,SNR=6.5						
FAKI	**Fak Fak**	**2.94**	**66**	P	**Pn**	**16 02 48.8**	**-0.3**
TLE	**Tual**	**3.49**	**115**	P	**Pn**	**16 02 58.1**	**+1.4**
	baz=3.8,SNR=28						
SWI	**Sorong**	**3.67**	**27**	P	**Pn**	**16 02 58.3**	**-0.8**
SWI	**Sorong**	**3.67**	**27**	P	**Pn**	**16 02 58.4**	**-0.8**
	baz=3.6,SNR=16						
MTN	**Manton Dam**	**8.78**	**170**	P	**Pn**	**16 04 11.3**	**+1.8**
	baz=9.1,SNR=7.3						
KDU	**Kakadu**	**8.96**	**161**	P	**Pn**	**16 04 12.0**	**+0.1**
	baz=9.3,SNR=13						
PCI	**Palu**	**10.24**	**288**	P	Pn	16 04 21.3	-8.1
	baz=10.0,SNR=3.8						
FITZ	**Fitzroy Crossi**	**14.40**	**195**	Pn	**Pn**	**16 05 24.9**	**-1.4**
	0.2nm,0.3s,baz=21,slow=10,SNR=5.2						
WRA	**Warramunga Arr**	**16.38**	**164**	Pn	**Pn**	**16 05 49.9**	**-2.3**
	0.4nm,0.3s,baz=346,slow=13,SNR=9.6						
WRA				Sn	**Sn**	**16 08 54.1**	**+1.0**
	0.1nm,0.3s,baz=350,slow=24,SNR=3.7						
ASAR	**Alice Springs**	**19.86**	**168**	P	**P**	**16 06 33.0**	**-0.1**
	0.6nm,0.3s,baz=346,slow=11,SNR=37						
CTA	**Charters Tower**	**22.71**	**136**	P	**P**	**16 07 03.2**	**-0.6**
	2.5nm,0.6s,baz=324,slow=12,SNR=6.4						
STKA	**Stephens Creek**	**29.81**	**159**	P	**P**	**16 08 08.1**	**-0.6**
	0.6nm,0.5s,baz=324,slow=8.7,SNR=2.6						
CMAR	**Chiang Mai Arr**	**37.62**	**308**	P	**P**	**16 09 18.3**	**+1.7**
	0.5nm,0.5s,baz=142,slow=7.8,SNR=3.2						
MKAR	**Makanchi Array**	**65.62**	**326**	P	**P**	**16 12 46.0**	**+0.7**
	0.3nm,0.3s,baz=116,slow=8.1,SNR=14						
KURBB	**Kurchatov Arra**	**69.87**	**328**	P	**P**	**16 13 12.8**	**+0.8**
	0.5nm,0.5s,baz=125,slow=5.5,SNR=11						

*ISCJB **20** 16:05:22.8±0.5, 39°10N±0°04×29°02E±0°04, h10km±6km, Error ellipse: s-maj=6.8km s-min=4.8km az=153.4*
*CSEM **20** 16:05:22.9±0.2, 39°09N×28°99E, h12km, MD2.9, Error ellipse: s-maj=4.3km s-min=3.7km az=167.0*
*DDA **20** 16:05:23.0, 39°09N×29°02E, h7km, MD2.9*
*ISK **20** 16:05:22.2, 39°14N×28°97E, h8km, MD2.8*

ISC 20 16:05:22.9±0.9, 39°11N±0°03×29°01E±0°02, h17km±8km, n22, σ0s59/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.23**	**254**	*i* P	**Pg**	**16 05 28.7**	**+0.3**
DEMI				*i* S	**Sg**	**16 05 32.1**	**0.0**
DEMI	**Demirci**	**0.23**	**254**	*i* P	**Pg**	**16 05 28.7**	**+0.3**
DEMI				*i* S	**Sg**	**16 05 32.1**	**0.0**
GDZ	**Gediz**	**0.37**	**93**	*i* P	**Pg**	**16 05 30.5**	**-0.2**
GDZ				*i* S	**Sg**	**16 05 35.4**	**-0.6**
GDZ	**Gediz**	**0.37**	**93**	*i* P	**Pg**	**16 05 30.5**	**-0.2**
GDZ				*i* S	**Sg**	**16 05 35.4**	**-0.6**
TVSB	**Tavsanli**	**0.49**	**46**	*e*PG	**Pg**	**16 05 32.5**	**-0.4**
TVSB				*e*SG	**Sg**	**16 05 38.8**	**-0.8**
TVSB	**Tavsanli**	**0.49**	**46**	*e*Pg	**Pg**	**16 05 32.5**	**-0.4**
TVSB				*e*Sg	**Sg**	**16 05 38.8**	**-0.8**
DURS	**Dursunbey**	**0.64**	**320**	*i* P	**Pb**	**16 05 36.3**	**+0.6**
DURS				*i* S	**Sb**	**16 05 45.1**	**+0.7**
DURS	**Dursunbey**	**0.64**	**320**	*i* P	**Pb**	**16 05 36.3**	**+0.6**
DURS				*i* S	**Sb**	**16 05 45.1**	**+0.7**
MANT	**Manisa**	**0.71**	**210**	*i* P	**Pg**	**16 05 36.9**	**0.0**
MANT				*i* S	**Sg**	**16 05 46.3**	**-0.1**
MANT	**Manisa**	**0.71**	**210**	*i* P	**Pg**	**16 05 36.9**	**0.0**
MANT				*i* S	**Sg**	**16 05 46.3**	**-0.1**
ALT	**Altintas**	**0.86**	**93**	*e*PG	**Pb**	**16 05 40.2**	**+0.8**
ALT	**Altintas**	**0.86**	**93**	*e*Pg	**Pb**	**16 05 40.2**	**+0.8**
KHL	**Karahalli**	**0.88**	**153**	*e*PG	**Pb**	**16 05 40.1**	**+0.3**
KHL	**Karahalli**	**0.88**	**153**	*e*Pg	**Pb**	**16 05 40.1**	**+0.3**
AKS	**Akhisar**	**0.96**	**257**	*e*PG	**Pg**	**16 05 40.1**	**-1.4**
AKS	**Akhisar**	**0.96**	**257**	*e*Pg	**Pg**	**16 05 40.1**	**-1.4**
**K

NBG				*e*S		**Sn**	**16 10 32.2**	**+3.6**
TGIG		**2.46**	**347**	*i* P		**Pn**	**16 10 08.5**	**+0.9**
TGIG				*i* S		**Sn**	**16 10 37.4**	**+0.8**
RBDL	**Robledal**	**2.77**	**95**	*e*P		**Pn**	**16 10 12.8**	**+0.8**
MRL	**Marmol**	**2.83**	**76**	*e*P		**Pn**	**16 10 13.1**	**+0.3**
RTR	**El Retiro**	**2.84**	**99**	*e*P		**Pn**	**16 10 13.4**	**+0.5**
RTR				*e*S		**Sn**	**16 10 44.0**	**-2.0**
SBLS	**San Blas**	**2.87**	**100**	*e*P		**Pn**	**16 10 14.2**	**+0.8**
SBLS				*e*S		**Sn**	**16 10 44.4**	**-2.4**
SNJE	**San Jose**	**2.88**	**100**	*e*P		**Pn**	**16 10 13.6**	**+0.1**
SNJE				*e*S		**Sn**	**16 10 44.6**	**-2.5**
MTO2	**Montecristo 2**	**3.07**	**89**	*e*P		**Pn**	**16 10 16.5**	**+0.4**
BOQS	**Boqueron**	**3.22**	**101**	*e*P		**Pn**	**16 10 18.8**	**+0.7**
BOQS				*e*S		**Sn**	**16 10 53.1**	**-2.3**
LFRS	**El Faro**	**3.45**	**102**	*e*P		**Pn**	**16 10 21.2**	**0.0**
LFRS				*e*S		**Sn**	**16 10 57.7**	**-3.2**
CMIG	**Matias Romero**	**3.53**	**320**	*i* P		**Pn**	**16 10 23.4**	**+1.1**
CMIG				*i* S		**Sn**	**16 11 03.0**	**+0.3**
CMIG	**Matias Romero**	**3.53**	**320**	P		**Pn**	**16 10 23.2**	**+1.1**
	10nm,0.3s,baz=126,slow=9.6,SNR=43							
CMIG				S		**Sn**	**16 11 05.5**	**+2.8**
	40nm,0.3s,baz=280,slow=23,SNR=9.8							
SNVI	**San Vicente**	**3.66**	**101**	*e*P		**Pn**	**16 10 24.6**	**+0.4**
HUIG	**Huatulco**	**3.73**	**292**	*i* P		**Pn**	**16 10 23.4**	**-1.5**
HUIG				*i* S		**Sn**	**16 11 05.7**	**-1.8**
VHO	**Vista Hermosa**	**4.86**	**304**	*e*P		**Pn**	**16 10 41.1**	**+0.5**
VHO				*i* S		**Sn**	**16 11 35.7**	**0.0**
UTMO	**Huajuapan**	**6.12**	**305**	*e*P		**Pn**	**16 10 58.2**	**+0.2**
TPIG	**Tehuac#an**	**6.14**	**312**	*i* S		**Sn**	**16 12 08.3**	**+1.2**
TEIG	**Tepich**	**7.10**	**34**	P		**Pn**	**16 11 08.3**	**-2.8**
	31nm,0.3s,baz=235,slow=1.7,SNR=43							
TEIG				S		Sn	16 12 20.8	-10
	baz=98,slow=24,SNR=3.3							
TEIG				LR		LR	16 14 08.2	
	comp=Z,130nm,19.9s,baz=285,slow=42							
CAIG	**El Cayaco**	**7.91**	**291**	*i* P		**Pn**	**16 11 21.9**	**-0.4**
CAIG				*i* S		**Sn**	**16 12 50.6**	**+0.1**
JTS	**JuntasAbangare**	**8.44**	**118**	P		**Pn**	**16 11 31.8**	**+2.2**
	1.9nm,0.3s,baz=317,slow=16,SNR=5.8							
JTS				S		**Sn**	**16 13 06.6**	**+3.1**
	0.7nm,0.3s,baz=207,slow=23,SNR=2.3							
TXAR	**Lajitas Array**	**18.11**	**327**	P		**Pn**	**16 13 37.4**	**-0.2**
	0.2nm,0.3s,baz=153,slow=12,SNR=9.0							
TKL	**Tuckaleechee C**	**22.61**	**19**	LR		LR	16 23 20.1	
	comp=Z,43nm,20.3s,baz=356,slow=37							
ANMO	**Albuquerque**	**24.03**	**331**	P		**P**	**16 14 39.9**	**0.0**
	2.6nm,1.0s,baz=145,slow=9.8,SNR=3.8							
NVAR	**Mina Array Bea**	**33.06**	**321**	P		**P**	**16 16 02.8**	**+2.3**
	1.1nm,0.7s,baz=135,slow=9.0,SNR=10							
YKA	**Yellowknife Ar**	**50.55**	**347**	P		**P**	**16 18 20.1**	**-2.3**
	0.7nm,0.4s,baz=151,slow=7.2,SNR=20							
YKA				PcP		**PcP**	**16 19 38.2**	**-1.3**
	0.4nm,0.9s,baz=155,slow=3.4,SNR=5.6							
ILAR	**Eielson Array**	**62.30**	**337**	P		**P**	**16 19 45.2**	**-0.7**
	1.7nm,0.9s,baz=128,slow=4.9,SNR=18							
CMAR	**Chiang Mai Arr**	**145.47**	**341**	PKPbc		**PKPbc**	**16 29 02.2**	**-0.4**
	2.5nm,0.9s,baz=338,slow=4.0,SNR=14							

GUC 20 16:23:14.1±0.8, 31°.60S×71°.67W, h32km±2km, ML3.6, 3C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.31**	**153**	*i*P	Pb	16 23 21.8	-0.2
CHNG				*i* S	Sb	16 23 27.2	-0.1
CHNG				AML	AML	16 23 27.6	
	comp=N,7μm,0.3s						
JACH	**Jahuel**	**1.41**	**140**	*i*P	Pb	16 23 39.0	-1.0
JACH				*i* S	Sb	16 23 57.4	-0.3
ROCH	**El Roble**	**1.48**	**158**	*i*P	Pn	16 23 39.3	+0.5
ROCH				*i* S	Sb	16 23 59.4	-0.5
ROCH				AML	AML	16 24 03.5	
	comp=N,1μm,0.4s						
TLL	**Tololo Astrono**	**1.61**	**28**	*i*P	Pn	16 23 42.0	+1.4
TLL				*i* S	Sb	16 24 03.2	-0.5
TLL				AML	AML	16 24 08.4	
	comp=E,867nm,0.3s						
PEL	**Peldehue**	**1.75**	**152**	*i*P	Pn	16 23 43.7	+1.4
PEL				*i* S	Sb	16 24 06.0	-1.3
PEL				AML	AML	16 24 09.3	
	comp=E,2μm,0.4s						
RCDM	**Rinconada Maip**	**2.02**	**159**	*e*P	Pn	16 23 47.0	+1.0
RCDM				AML	AML	16 24 20.4	
	comp=E,629nm,0.4s						
CLCH	**Cerro Calan**	**2.03**	**152**	*i*P	Pn	16 23 47.7	+1.5
CLCH				*i* S	Sb	16 24 12.9	-2.4
CLCH				AML	AML	16 24 24.9	
	comp=E,1μm,0.5s						
FCH	**Farellones**	**2.08**	**146**	*e*P	Pn	16 23 46.1	-1.1
FCH				*e*S	Sn	16 24 12.1	-0.2
FCH				AML	AML	16 24 15.4	
	comp=E,587nm,0.3s						
PCH	**Pirque**	**2.24**	**155**	*e*P	Pn	16 23 50.6	+1.5
LCO	**Las Campanas**	**2.71**	**18**	*e*P	Pn	16 23 56.6	+0.8
LCO				*e*S	Sn	16 24 30.0	+2.2
LCO				AML	AML	16 24 44.3	
	comp=E,255nm,0.4s						

IDC 20 16:27:25.9±6.9, 4°.59S×129°.41E, h0km, mb3.1/1, mb1 2.8/2, mb1mx2.8/18, mbtmp2.8/2, ML3.4/2, Error ellipse: s-maj=686.5km s-min=31.3km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.00**	**163**	Pn	Pn	16 31 14.0	+1.5
	0.3nm,0.3s,baz=360,slow=36,SNR=51						
ASAR	**Alice Springs**	**19.45**	**168**	P	P	16 31 53.6	-0.8
	0.0nm,0.3s,baz=350,slow=10,SNR=4.4						
MKAR	**Makanchi Array**	**65.90**	**327**	P	P	16 38 13.8	0.0
	0.1nm,0.4s,baz=122,slow=7.6,SNR=4.1						

*ISCJB **20** 16:29:53.0±0.6, 39°.51N±0°.06×33°.50E±0°.04, h10km±7km, Error ellipse: s-maj=10.0km s-min=4.8km az=7.0*
*CSEM **20** 16:29:52.7±0.1, 39°.52N×33°.49E, h10km, MD2.6, Error ellipse: s-maj=4.4km s-min=3.0km az=2.0*
*ISK **20** 16:29:52.3, 39°.50N×33°.50E, h10km, MD2.6*
*DDA **20** 16:29:53.0, 39°.53N×33°.48E, h7km, MD2.8*

ISC 20 16:29:52.8±0.9, 39°.51N±0°.04×33°.49E±0°.02, h11km±9km, n18, σ0°.47/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMT	**Kaman**	**0.23**	**129**	PG	**Pg**	**16 29 57.2**	**-0.4**
KAMT				SG	**Sg**	**16 30 00.6**	**-0.2**
KAMT	**Kaman**	**0.23**	**129**	Pg	**Pg**	**16 29 57.2**	**-0.4**
KAMT				Sg	**Sg**	**16 30 00.6**	**-0.2**
BBAL	**Bala**	**0.28**	**276**	*i* P	**Pg**	**16 29 58.8**	**+0.2**
BBAL				*i* S	**Sb**	**16 30 03.7**	**-1.1**
BBAL	**Bala**	**0.28**	**276**	*i* P	**Pg**	**16 29 58.8**	**+0.2**
BBAL				*i* S	**Sb**	**16 30 03.7**	**-1.1**
AFSR	**Af˙ar-Bala (A**	**0.33**	**259**	*e*PG	**Pg**	**16 29 59.5**	**+0.1**
AFSR				*e*SG	**Sg**	**16 30 04.7**	**+0.8**
AFSR	**Af˙ar-Bala (A**	**0.33**	**259**	*e*Pg	**Pg**	**16 29 59.5**	**+0.1**
AFSR				*e*Sg	**Sg**	**16 30 04.7**	**+0.8**
CDAG	**Cicekdag**	**0.69**	**80**	*i* P	**Pg**	**16 30 06.5**	**+0.3**
CDAG				*i* S	**Sb**	**16 30 16.8**	**+0.3**
CDAG	**Cicekdag**	**0.69**	**80**	*i* P	**Pg**	**16 30 06.5**	**+0.3**
CDAG				*i* S	**Sb**	**16 30 16.8**	**+0.3**
ELDT	**Eldivan**	**0.98**	**357**	*i* P	**Pg**	**16 30 11.5**	**-0.1**
ELDT	**Eldivan**	**0.98**	**357**	*i* P	**Pg**	**16 30 11.5**	**-0.1**
CORM	**Corum**	**1.10**	**52**	*e*PN	**Pb**	**16 30 13.8**	**-0.1**
CORM	**Corum**	**1.10**	**52**	*e*Pn	**Pb**	**16 30 13.8**	**-0.1**
AVNT	**Avonos**	**1.29**	**124**	*i* P	**Pg**	**16 30 17.8**	**+0.2**
AVNT	**Avonos**	**1.29**	**124**	*i* P	**Pg**	**16 30 17.8**	**+0.2**
SULT	**Sultanhani-AKS**	**1.31**	**179**	*e*PN	**Pn**	**16 30 17.3**	**+0.2**
SULT	**Sultanhani-AKS**	**1.31**	**179**	*e*Pn	**Pn**	**16 30 17.3**	**+0.2**
YOZ	**Yozgat**	**1.42**	**84**	*e*PN	**Pn**	**16 30 18.6**	**-0.1**
YOZ	**Yozgat**	**1.42**	**84**	*e*Pn	**Pn**	**16 30 18.6**	**-0.1**

DJA 20 16:31:48.5±0.7, 6°.5S×107°.5E±°, h23km±7km, M3.8/10, MLv3.8/10, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**0.82**	**348**	P	Pb	16 32 03.5	-0.6
KASI				S	Sb	16 32 14.3	-0.4
CGJI	**Cibinong**	**1.05**	**106**	P	Pn	16 32 07.2	-0.7
CGJI				S	Sn	16 32 22.0	+0.1
BLSI	**Bandar Lampung**	**1.11**	**31**	P	Pn	16 32 08.2	-0.5
BLSI				S	Sb	16 32 22.8	-0.4
LWLI	**Liwa**	**1.44**	**335**	P	Pn	16 32 13.1	-0.2
LWLI				S	Sn	16 32 31.9	+0.3
DBJI	**Dramaga**	**2.08**	**96**	P	Pn	16 32 22.4	+0.4
CBJI	**Citeko**	**2.17**	**92**	P	Pn	16 32 24.0	+0.8
MNAI	**Manna**	**2.60**	**319**	P	Pn	16 32 29.0	-0.1
LEM	**Lembang**	**2.97**	**100**	P	Pn	16 32 34.0	-0.5
CISI	**Cisompet, Garu**	**3.35**	**111**	P	Pn	16 32 39.3	-0.3
KSI	**Kapahiang**	**3.37**	**322**	P	Pn	16 32 40.1	+0.2

IDC 20 16:31:52.5±2.1, 6°.13N×125°.04E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/25, mbtmp3.4/4, Error ellipse: s-maj=150.6km s-min=24.2km az=68.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**24.09**	**179**	P	P	16 37 09.4	-0.5
	1.3nm,1.0s,baz=0.0,slow=8.1,SNR=2.9						
WRA	**Warramunga Arr**	**27.48**	**161**	P	P	16 37 39.4	-1.3
	0.4nm,0.4s,baz=340,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**30.86**	**164**	P	P	16 38 12.3	+1.6
	0.1nm,0.6s,baz=354,slow=7.5,SNR=4.2						
MKAR	**Makanchi Array**	**54.63**	**325**	P	P	16 41 23.0	-0.1
	0.2nm,0.4s,baz=143,slow=8.8,SNR=8.4						

IDC 20 16:35:08.0±4.6, 27°.22N×111°.41W, h0km, mb3.5/2, mb1 3.8/5, mb1mx3.6/27, mbtmp3.4/5, ML3.2/2, MS3.8/17, Ms1 3.8/17, ms1mx3.6/39, Error ellipse: s-maj=66.8km s-min=20.1km az=11.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**3.26**	**162**	LR	LR	16 37 16.5	
	comp=Z,221nm,18.9s,baz=340,slow=39						
TXAR	**Lajitas Array**	**7.14**	**71**	Pn	Pn	16 36 54.9	+0.9
	0.2nm,0.3s,baz=254,slow=11,SNR=6.6						
TXAR				Pg	Pb	16 37 16.9	+3.7
	0.2nm,0.3s,baz=252,slow=12,SNR=4.6						
TXAR				Lg	Lg	16 38 52.3	
	1.0nm,0.3s,baz=261,slow=28,SNR=7.0						
ANMO	**Albuquerque**	**8.79**	**28**	LR	LR	16 40 47.1	
	comp=Z,323nm,18.3s,baz=5.2,slow=39						
NVAR	**Mina Array Bea**	**12.59**	**334**	Pn	Pn	16 38 10.3	+1.6
	0.1nm,0.3s,baz=159,slow=15,SNR=6.1						
NVAR				LR	LR	16 42 54.6	
	comp=Z,370nm,18.5s,baz=216,slow=37						
ELK	**Elko**	**13.86**	**348**	LR	LR	16 43 38.3	
	comp=Z,564nm,18.9s,baz=166,slow=37						
PDAR	**Pinedale Array**	**15.59**	**5**	Pn	P	16 38 53.5	-0.4
	0.0nm,0.3s,baz=172,slow=13,SNR=5.8						
PDAR				LR	LR	16 44 51.9	
	comp=Z,443nm,20.5s,baz=187,slow=38						
YBH	**Yreka Blue Hor**	**17.20**	**330**	LR	LR	16 45 15.9	
	comp=Z,234nm,20.6s,baz=155,slow=35						
CMIG	**Matias Romero**	**18.30**	**120**	LR	LR	16 46 44.6	
	comp=Z,575nm,19.6s,baz=134,slow=38						
NEW	**Newport**	**21.48**	**350**	P	P	16 39 59.4	+1.1
	1.9nm,0.6s,baz=178,slow=10,SNR=5.5						
NEW				LR	LR	16 47 48.5	
	comp=Z,217nm,19.4s,baz=169,slow=35						
TEIG	**Tepich**	**22.27**	**103**	LR	LR	16 50 31.2	
	comp=Z,228nm,18.2s,baz=168,slow=42						
TKL	**Tuckaleechee C**	**24.97**	**63**	LR	LR	16 51 00.9	
	comp=Z,262nm,18.8s,baz=86,slow=38						
ULM	**Lac du Bonnet**	**25.89**	**23**	LR	LR	16 51 42.7	
	comp=Z,99nm,18.8s,baz=72,slow=38						
BBB	**Bella Bella**	**27.92**	**338**	LR	LR	16 51 29.3	
	comp=Z,171nm,18.8s,baz=214,slow=35						
SADO	**Sadowa**	**31.16**	**47**	LR	LR	16 54 28.0	
	comp=Z,171nm,18.1s,baz=278,slow=37						
INK	**Inuvik**	**43.19**	**348**	LR	LR	17 02 15.2	
	comp=Z,207nm,18.1s,baz=148,slow=38						
ILAR	**Eielson Array**	**43.79**	**339**	P	P	16 43 14.6	-0.7
	0.5nm,1.0s,baz=132,slow=9.5,SNR=4.2						
RES	**Resolute Bay**	**48.28**	**6**	LR	LR	17 04 24.8	
	comp=Z,118nm,20.4s,baz=223,slow=36						
JMIC	**Jan Mayen**	**68.61**	**20**	LR	LR	17 16 44.4	
	comp=Z,91nm,18.3s,baz=260,slow=36						
ESDC	**Sonseca Array**	**85.22**	**48**	LR	LR	17 26 47.4	
	comp=Z,41nm,18.4s,baz=170,slow=36						

IDC 20 16:35:44.3±1.4, 4°.18S×129°.38E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.6/21, mbtmp3.7/5, ML3.5/2, Error ellipse: s-maj=65.2km s-min=21.8km az=59.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**14.32**	**195**	Pn	Pn	16 39 08.1	-0.4
	0.1nm,0.3s,baz=26,slow=8.0,SNR=6.4						
WRA	**Warramunga Arr**	**16.40**	**163**	Pn	Pn	16 39 31.3	-4.8
	0.2nm,0.3s,baz=345,slow=13,SNR=4.7						
ASAR	**Alice Springs**	**19.86**	**168**	P	P	16 40 16.1	-1.1
	0.3nm,0.3s,baz=350,slow=9.8,SNR=27						
CTA	**Charters Tower**	**22.81**	**135**	P	P	16 40 50.2	+1.2
	2.1nm,0.8s,baz=330,slow=11,SNR=4.3						
CMAR	**Chiang Mai Arr**	**37.49**	**308**	P	P	16 43 01.3	+1.2
	0.5nm,0.5s,baz=132,slow=6.9,SNR=6.3						
MKAR	**Makanchi Array**	**65.54**	**326**	P	P	16 46 28.9	-0.9
	0.5nm,0.6s,baz=117,slow=8.0,SNR=9.3						

*IDC **20** 16:36:25.7±0.6, 4°.09S×129°.76E, h0km, mb4.2/9, mb1 4.3/13, mb1mx4.2/23, mbtmp4.2/13, ML4.1/4, MS3.3/7, Ms1 3.3/7, ms1mx3.1/31, Error ellipse: s-maj=28.7km s-min=13.9km az=68.0*
*BJI **20** 16:36:27.8, 4°.20S×129°.70E, h33km, mB4.8/3, mb4.5/7*
*ISCJB **20** 16:36:28.9±0.2, 4°.12S±0°.03×129°.66E±0°.03, h36km, mb4.3/18, MS3.3/4, Error ellipse: s-maj=5.3km s-min=3.4km az=149.2*
*DJA **20** 16:36:28.2±0.6, 4°.5S±3°×113°.0E±°, h10km, M4.6/10, mb5.0/4, mB5.1/2, MLv4.4/10, Mw(mB)4.5/2*
*AUST **20** 16:36:28.4, 3°.99S×129°.51E, h15km*
*NEIC **20** 16:36:30.8±1.5, 4°.13S×129°.78E, h37km±15km, mb4.5/12, Error ellipse: s-maj=14.1km s-min=6.5km az=45.0*

ISC 20 16:36:30.6±0.4, 4°.14S±0°.04×129°.62E±0°.05, h36km, n83, σ1°.26/86, mb4.4/18, MS3.3/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.48**	**143**	P	**Pn**	**16 36 38.9**	**-1.9**
BNDI				S	**Sn**	**16 36 46.9**	**-1.0**
MSAI	**Masohi**	**1.05**	**319**	P	**Pn**	**16 36 46.7**	**-2.0**
MSAI				S	**Sn**	**16 37 00.4**	**-1.7**
AAI	**Ambon**	**1.49**	**287**	P	**Pn**	**16 36 54.1**	**-0.7**
AAI	**Ambon**	**1.49**	**287**	S	**Sn**	**16 37 12.9**	**-0.1**
	baz=1.3,SNR=5.2						
FAKI	**Fak Fak**	**2.89**	**65**	P	**Pn**	**16 37 13.8**	**-0.3**
TLE	**Tual**	**3.44**	**116**	P	**Pn**	**16 37 23.3**	**+1.6**
TLE	**Tual**	**3.44**	**116**	P	Pn	16 37 25.1	+3.4
	baz=3.6,SNR=9.4						
SWI	**Sorong**	**3.64**	**27**	P	**Pn**	**16 37 23.1**	**-1.3**
SWI				S	**Sn**	**16 38 06.8**	**+0.6**
SWI	**Sorong**	**3.64**	**27**	P	**Pn**	**16 37 24.2**	**-0.2**
	baz=3.6,SNR=9.0						
LBMI	**Labuha**	**4.07**	**329**	P	**Pn**	**16 37 30.6**	**+0.3**
KMPI	**Kaimana, Papua**	**4.10**	**84**	P	**Pn**	**16 37 31.1**	**+0.4**
RKPI	**Ransiki, Papua**	**5.25**	**60**	P	**Pn**	**16 37 46.1**	**-0.4**
	494nm,0.7s,5μm1.8nm						
TNTI	**Ternate**	**5.37**	**335**	P	**Pn**	**16 37 48.2**	**0.0**
	100nm,1.0s,0.3nm						
KDI	**Kendari**	**6.99**	**271**	P	Pn	16 38 16.6	+6.2
MTN	**Manton Dam**	**8.78**	**170**	P	**Pn**	**16 38 38.0**	**+3.0**
	baz=9.0,SNR=6.9						
KDU	**Kakadu**	**8.95**	**162**	P	**Pn**	**16 38 38.0**	**+0.7**
	baz=9.2,SNR=5.7						
BKSI	**Bulukumba**	**9.54**	**263**	P	Pn	16 38 49.4	+4.0
KAPI	**Kappang**	**9.88**	**265**	*e*P	Pn	16 38 54.0	+4.0
KAPI				*e*		16 39 02.4	
KAPI	**Kappang**	**9.88**	**265**	Pn	**Pn**	**16 38 52.7**	**+2.7**
	1.3nm,0.3s,baz=120,slow=6.8,SNR=10.0						
KAPI				LR	LR	16 43 24.8	
	comp=Z,112nm,18.0s,baz=274,slow=42						
FITZ	**Fitzroy Crossi**	**14.41**	**195**	*e*P	**Pn**	**16 39 53.0**	**+0.9**
FITZ				*e*		16 40 00.9	
FITZ	**Fitzroy Crossi**	**14.41**	**195**	Pn	**Pn**	**16 39 51.4**	**-0.7**
	0.4nm,0.3s,baz=22,slow=14,SNR=7.6						
FITZ				LR	LR	16 44 42.9	
	comp=Z,143nm,18.6s,baz=331,slow=34						
FITZ	**Fitzroy Crossi**	**14.41**	**195**	P	**Pn**	**16 39 53.3**	**+1.2**
	baz=15,SNR=6.8						
WRAB	**Tennant Creek**	**16.36**	**164**	*e*P	**Pn**	**16 40 16.1**	**-1.5**
	49nm,1.4s						
WRA	**Warramunga Arr**	**16.37**	**164**	Pn	**Pn**	**16 40 16.2**	**-1.5**
WRA					Sn	**16 43 18.8**	**+0.4**
WRA	**Warramunga Arr**	**16.37**	**164**	Pn	**Pn**	**16 40 16.2**	**-1.5**
	0.8nm,0.3s,baz=345,slow=13,SNR=8.5						
WRA					Sn		
	0.4nm,0.3s,baz=342,slow=25,SNR=3.4						
COEN	**Coen**	**16.55**	**127**	*e*P	**Pn**	**16 40 18.7**	**-1.4**
	212nm,1.0s						
COEN	**Coen**	**16.55**	**127**	P	P	16 40 31.2	+8.9
	baz=17,SNR=4.5						
QIS	**Mount Isa**	**19.00**	**150**	P	**Pn**	**16 40 49.9**	**-0.3**
	baz=19,SNR=5.2						
MBWA	**Marble Bar**	**19.46**	**209**	*e*P	**Pn**	**16 40 55.4**	**-0.2**
	54nm,0.9s						
ASAR	**Alice Springs**	**19.85**	**168**	P	**P**	**16 40 59.1**	**+0.6**
ASAR				S	**S**	**16 44 37.0**	**-3.3**
ASAR	**Alice Springs**	**19.85**	**168**	P	**P**	**16 40 59.1**	**+0.6**
	0.9nm,0.3s,baz=350,slow=11,SNR=18						
ASAR				S	**S**	**16 44 37.0**	**-3.3**
	0.0nm,0.3s,baz=346,slow=26,SNR=2.8						
ASAR				LR	LR	16 47 59.4	
	comp=Z,68nm,19.7s,baz=349,slow=35						
KSM	**Kuching**	**20.09**	**286**	*e*P	Pn	16 41 02.7	-0.5
	48nm,1.0s						
CTA	**Charters Tower**	**22.67**	**136**	P	**P**	**16 41 29.3**	**+0.3**
CTA	**Charters Tower**	**22.67**	**136**	P	**P**	**16 41 29.3**	**+0.3**
	8.0nm,0.8s,baz=310,slow=11,SNR=12						
CTAO	**Charters Tower**	**22.67**	**136**	*e*P	**P**	**16 41 29.1**	**+0.1**
	10nm,0.8s						
GUMO	**Guam**	**23.22**	**40**	LR	LR	16 50 32.3	
	comp=Z,30nm,18.4s,baz=98,slow=37						
STKA	**Stephens Creek**	**29.80**	**159**	P	**P**	**16 42 32.5**	**-1.7**
STKA	**Stephens Creek**	**29.80**	**159**	P	**P**	**16 42 32.5**	**-1.7**
	0.7nm,0.3s,baz=324,slow=14,SNR=2.9						
STKA				LR	LR	16 54 36.3	
	comp=Z,142nm,19.1s,baz=205,slow=37						
GSI	**Gunungsitoli**	**32.48**	**279**	S	**S**	**16 48 11.8**	**+1.0**
	baz=32,SNR=11						
JNU	**Nakatsue**	**37.08**	**2**	LR	LR	16 57 36.7	
	comp=Z,74nm,19.9s,baz=238,slow=34						
CMAR	**Chiang Mai Arr**	**37.66**	**308**	P	**P**	**16 43 43.9**	**+1.4**
CMAR	**Chiang Mai Arr**	**37.66**	**308**	P	**P**	**16 43 43.9**	**+1.4**
	4.1nm,0.8s,baz=133,slow=6.9,SNR=29						
CHTO	**Chiang Mai**	**37.85**	**308**	*e*P	**P**	**16 43 45.2**	**+1.1**
	7.7nm,0.8s						
MAT	**Matsushiro**	**41.26**	**11**	P	**P**	**16 44 10.9**	**-1.4**
MJAR	**Matsushiro Arr**	**41.26**	**11**	P	**P**	**16 44 11.2**	**-1.1**
MJAR	**Matsushiro Arr**	**41.26**	**11**	P	**P**	**16 44 11.2**	**-1.1**
	2.5nm,0.6s,baz=191,slow=10,SNR=9.1						
KSRS	**Korea Array**	**41.41**	**358**	LR	LR	17 00 41.1	
	comp=Z,27nm,18.2s,baz=190,slow=35						
HHC	**Hu-ho-hao-te**	**47.73**	**341**	*e*P	**P**	**16 45 05.0**	**+1.0**
HHC				S	**S**	**16 51 54.3**	**-3.7**
HHC				pmax	pmax		
	comp=Z,35nm,0.6s						
HHC				pmax	pmax		
	comp=Z,270nm,6.3s						
USRK	**Ussuriysk Array**	**48.17**	**2**	P	**P**	**16 45 07.7**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=197,slow=10,SNR=5.4						
LSA	**Lhasa**	**49.90**	**315**	P	**P**	**16 45 22.1**	**+0.7**
ODAN	**Odare**	**51.13**	**310**	*e*P	**P**	**16 45 30.8**	**+0.4**
	comp=Z,16nm,0.7s						
TAPN	**Taplejung**	**51.13**	**310**	*e*P	**P**	**16 45 30.6**	**+0.1**
	comp=Z,13nm,0.7s						
GTA	**Gaotai**	**51.31**	**330**	*e*P	**P**	**16 45 32.3**	**+0.9**
GTA				pP	**pP**	**16 45 39.5**	**-2.7**
GTA				sP	**sP**	**16 45 43.4**	**-3.0**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
RAMN	**Ramite**	**51.78**	**309**	*e*P	**P**	**16 45 35.7**	**+0.4**
	comp=Z,29nm,0.6s						
GUN	**Gumba**	**52.82**	**310**	*e*P	**P**	**16 45 43.2**	**+0.1**
	comp=Z,26nm,0.6s						
PKI	**Pulchoki**	**53.01**	**309**	*e*P	**P**	**16 45 44.2**	**-0.3**
KKN	**Kakani**	**53.22**	**309**	*e*P	**P**	**16 45 46.0**	**+0.1**
DMN	**Daman**	**53.27**	**309**	*e*P	**P**	**16 45 46.5**	**+0.2**
KOLN	**Koldanda**	**54.51**	**308**	*e*P	**P**	**16 45 55.5**	**+0.1**
	comp=Z,23nm,0.7s						
DANN	**Dangsing**	**54.66**	**309**	*e*P	**P**	**16 45 56.7**	**+0.1**
	comp=Z,25nm,0.8s						
PYUN	**Piuthan**	**55.14**	**309**	*e*P	**P**	**16 46 00.1**	**+0.1**
	comp=Z,52nm,0.9s		

CMIG	**Matias Romero** comp=Z,584nm,19.2s,baz=350,slow=38	**18.38**	**120**	LR	LR	16 59 41.5		
NEW	**Newport** 3.3nm,0.7s,baz=169,slow=9.4,SNR=4.6	**21.38**	**350**	P	P	16 52 54.9	+1.6	
ULM	**Lac du Bonnet** comp=Z,61nm,20.7s,baz=13,slow=38	**25.82**	**23**	LR	LR	17 04 38.2		
JTS	**JuntasAbangare** comp=Z,168nm,21.5s,baz=244,slow=38	**30.15**	**119**	LR	LR	17 07 09.8		
YKA	**Yellowknife Ar** 0.6nm,1.0s,baz=178,slow=9.3,SNR=6.6	**35.24**	**357**	P	P	16 55 01.7	+1.6	
INK	**Inuvik** 1.7nm,1.1s,baz=159,slow=5.4,SNR=2.4	**43.10**	**348**	P	P	16 56 04.8	-0.9	
ILAR	**Eielson Array** 0.5nm,0.8s,baz=135,slow=7.0,SNR=4.9	**43.70**	**339**	P	P	16 56 09.3	-1.3	
ATAH	**Atahualpa** comp=Z,52nm,18.4s,baz=291,slow=35	**46.86**	**132**	LR	LR	17 15 04.6		
SFJD	**Kangerlussuaq** comp=Z,94nm,18.2s,baz=169,slow=37	**53.83**	**25**	LR	LR	17 21 02.0		
LPAZ	**La Paz** comp=Z,52nm,19.6s,baz=248,slow=34	**60.36**	**131**	LR	LR	17 22 46.8		

JMA 20 16:55:20.4,34.34N×133.45E,h19km±1km,M3.5,3C-1D Broadband fault plane solution: P waves. NP1: ϕ_S191.00000°,δ85.00000°,λ123.00000°. **NP2:** ϕ_D289.00000°,δ33.00000°,λ9.00000°. **Principal axes:** T Plg41.0000°, Azm132.0000°; N Plg33.0000°, Azm8.0000°; P Plg32.0000°, Azm254.0000°; **Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJG	**Jouge**	**0.39**	**321**	⇑P	Pg	16 55 28.6	0.0
JJG				S	Sg	16 55 34.3	+0.2
JJS	**Sakaide**	**0.40**	**85**	⇓P	Pg	16 55 28.4	-0.3
JJS				S	Sg	16 55 34.1	-0.3
JET	**Tanbara**	**0.65**	**211**	P	Pb	16 55 32.8	-0.3
JET				S	Sb	16 55 41.2	-0.6
JMN	**Monobe**	**0.71**	**150**	⇑P	Pb	16 55 34.0	-0.2
JHS	**Saijyo**	**0.71**	**337**	⇑P	Pb	16 55 33.8	-0.5
JHS				S	Sb	16 55 43.5	-0.2
JHM	**Kurahashi**	**0.79**	**256**	P	Pb	16 55 34.9	-0.6
JHM				S	Sb	16 55 45.7	-0.1

IDC 20 17:06:40.5±2.4,4.12S×129.71E,h0km,mb3.2/1, mb1 3.2/1,mb1mx3.0/18,mbtmp3.2/1,ML3.4/1 Error ellipse: s-maj=164.9km s-min=28.5km az=69.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** baz=347,slow=13,SNR=1.8	**16.36**	**164**	Pn	Pn	17 10 29.9	-1.8
ASAR	**Alice Springs** 0.1nm,0.3s,baz=350,slow=11,SNR=21	**19.85**	**169**	P	P	17 11 14.0	+0.8
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=110,slow=6.3,SNR=3.3	**65.68**	**326**	P	P	17 17 26.8	0.0

ISCJB ***20*** *17:06:49.3±0.3,67.03N±0.02×21.04E±0.06,h0km, Error ellipse: s-maj=3.5km s-min=2.7km az=13.0*
CSEM ***20*** *17:06:50.3±0.1,67.06N×20.98E,h2km,ML1.7, Error ellipse: s-maj=3.0km s-min=2.5km az=99.0, Mining explosion.*
UPP ***20*** *17:06:50.3,67.07N×20.98E,h0km,ML1.7, Mining explosion.*
HEL ***20*** *17:06:51.1±0.1,67.06N×20.91E,h0km,ML1.8, ML1.7(UPP), Explosion*
NAO ***20*** *17:06:51.0±1.1,67.03N×21.31E,ML2.3*
IDC ***20*** *17:06:52.1±0.9,67.08N×21.40E,h0km,mb1 2.9/4, mb1mx2.8/28,mbtmp2.8/4,ML2.2/4, Error ellipse: s-maj=17.4km s-min=7.9km az=117.0*
BER ***20*** *17:06:53.1±5.2,67.03N×21.04E,h0km,ML2.7, ML2.3(NAO), Suspected explosion*
ISC 20 17:06:50.2±0.7,67.06N±0.02×21.00E±0.03,h0km,n66, σ1§**03**/102,**Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAJU	**Pajala**	**0.83**	**92**	*i* P	**Pg**	**17 07 06.0**	**-0.1**
PAJU				*i* S	**Sg**	**17 07 18.2**	**+1.4**
PAJU	**Pajala**	**0.83**	**92**	P	**Pg**	**17 07 06.0**	**-0.1**
PAJU				S	**Sg**	**17 07 18.2**	**+1.4**
HARU	**Harads**	**0.90**	**181**	*e*P	**Pg**	**17 07 07.2**	**-0.3**
HARU	**Harads**	**0.90**	**181**	P	**Pg**	**17 07 07.1**	**-0.3**
KUA	**Kurravaara**	**0.93**	**344**	*e*P	**Pg**	**17 07 07.4**	**-0.6**
KUA				*e*S	**Sb**	**17 07 22.7**	**+0.6**
KUA	**Kurravaara**	**0.93**	**344**	P	**Pg**	**17 07 07.4**	**-0.6**
SALU	**Saltoluokta**	**1.02**	**289**	*e*P	**Pg**	**17 07 09.4**	**-0.3**
SALU	**Saltoluokta**	**1.02**	**289**	P	**Pg**	**17 07 09.4**	**-0.3**
LANU	**Lannavaara** baz=216	**1.06**	**20**	*e*P	**Pg**	**17 07 08.8**	**-1.7**
LANU				*e*SB	**Sg**	**17 07 25.2**	**+0.9**
LANU				*e*RG	Rg	17 07 29.3	
LANU	**Lannavaara**	**1.06**	**20**	P	**Pg**	**17 07 10.0**	**-0.5**
LANU				Sb	**Sg**	**17 07 25.2**	**+0.9**
NIKU	**Nikkaluokta**	**1.11**	**318**	*e*P	**Pg**	**17 07 10.6**	**-0.8**
NIKU	**Nikkaluokta**	**1.11**	**318**	P	**Pg**	**17 07 10.6**	**-0.8**
KALU	**Kalix**	**1.53**	**141**	*e*P	**Pn**	**17 07 18.5**	**-0.3**
KALU	**Kalix**	**1.53**	**141**	P	**Pn**	**17 07 18.5**	**-0.3**
SJUU	**Sjulsmark**	**1.58**	**171**	*e*P	**Pn**	**17 07 19.3**	**-0.2**
SJUU	**Sjulsmark**	**1.58**	**171**	P	**Pn**	**17 07 19.2**	**-0.2**
HEF	**Hetta**	**1.69**	**36**	*e*P	**Pn**	**17 07 21.0**	**+0.1**
HEF	comp=Z,12nm,0.2s			MSG	**Sg**	**17 07 46.0**	**+1.6**
HEF				*e*SN	**Sg**	**17 07 46.0**	**+1.6**
HEF	**Hetta**	**1.69**	**36**	P	**Pn**	**17 07 21.0**	**+0.1**
HEF				Sn	**Sg**	**17 07 46.0**	**+1.6**
LILU	**Lilltraesk**	**1.84**	**195**	*e*P	**Pn**	**17 07 23.4**	**+0.3**
LILU	**Lilltraesk**	**1.84**	**195**	P	**Pn**	**17 07 23.3**	**+0.3**
KIF	**Kilpisjarvi**	**1.95**	**358**	*e*PB	**Pb**	**17 07 26.1**	**-0.5**
KIF	comp=Z,31nm,0.2s			MSG	**Sg**	**17 07 53.1**	**+0.2**
KIF				*e*SG	**Sg**	**17 07 53.1**	**+0.2**
KIF	**Kilpisjarvi**	**1.95**	**358**	Pb	**Pb**	**17 07 26.0**	**-0.5**
KIF				Sg	**Sg**	**17 07 53.0**	**+0.2**
RNF	**Rovaniemi**	**2.03**	**101**	*e*PB	**Pb**	**17 07 27.1**	**-0.9**
RNF				*e*SG	**Sg**	**17 07 55.3**	**-0.2**
RNF	comp=Z,4.9nm,0.4s			MSG		17 07 55.3	
RNF	**Rovaniemi**	**2.03**	**101**	Pb	**Pb**	**17 07 27.1**	**-0.9**
RNF	comp=Z,4.9nm,0.4s			Sg	**Sg**	**17 07 55.3**	**-0.2**
KTK1	**Kautokeino**	**2.13**	**22**	*e*P	**Pn**	**17 07 28.1**	**+1.1**
KTK1				*e*		17 07 48.2	
KTK1				*e*S	**Sb**	**17 07 55.6**	**-1.0**
KTK1	comp=Z,109nm,0.2s			AMP		17 08 01.2	
KTK1	**Kautokeino** SNR=50	**2.13**	**22**	*e*P	**Pn**	**17 07 28.1**	**+1.1**
KTK1	comp=Z,109nm,0.2s,SNR=50			*e*S	**Sb**	**17 07 55.6**	**-1.0**
SGF	**Sodankyl**	**2.18**	**77**	*e*P	**Pb**	**17 07 29.2**	**-1.3**
SGF	comp=Z,6.5nm,0.4s			MSG	**Sb**	**17 07 59.5**	**+1.5**
SGF				*e*SG	**Sb**	**17 07 59.5**	**+1.5**
SGF	**Sodankyl**	**2.18**	**77**	P	**Pb**	**17 07 29.2**	**-1.3**
SGF				Sg	**Sb**	**17 07 59.5**	**+1.5**
BURU	**Burvik**	**2.50**	**176**	*e*P	**Pn**	**17 07 33.1**	**+1.2**
BURU	**Burvik**	**2.50**	**176**	P	**Pn**	**17 07 33.1**	**+1.2**
SVAU	**Svanoeiden**	**2.65**	**193**	*e*P	**Pn**	**17 07 34.9**	**+0.9**
SVAU	**Svanoeiden**	**2.65**	**193**	P	**Pn**	**17 07 34.9**	**+0.9**
MOR8	**Moi Rana**	**2.77**	**254**	*e*P	**Pn**	**17 07 35.8**	**0.0**
MOR8	**Moi Rana** SNR=50	**2.77**	**254**	*e*P	**Pn**	**17 07 35.8**	**0.0**
OUL	**Oulu**	**2.81**	**133**	*e*PB	**Pb**	**17 07 39.6**	**-1.7**
OUL	comp=Z,0.7nm,0.4s			MSG	**Sb**	**17 08 18.4**	**+2.2**
OUL				*e*SG	**Sb**	**17 08 18.4**	**+2.2**
OUL	**Oulu**	**2.81**	**133**	Pb	**Pb**	**17 07 39.6**	**-1.7**
OUL				Sg	**Sb**	**17 08 18.4**	**+2.2**
ARA0	**ARCESS Array S** baz=216,slow=14	**3.00**	**32**	Pn	**Pn**	**17 07 39.5**	**+0.6**
ARA0	baz=216,slow=28			Sn	**Sn**	**17 08 16.1**	**+0.7**
ARA0	**ARCESS Array S** baz=216,slow=14	**3.00**	**32**	Pn	**Pn**	**17 07 39.5**	**+0.6**
ARA0	baz=216,slow=28			Sn	**Sn**	**17 08 16.1**	**+0.7**
ARA0	**ARCESS Array S** baz=214	**3.00**	**32**	*e*P	**Pn**	**17 07 39.0**	**+0.1**
ARA0				*e*SB	**Sb**	**17 08 22.5**	**+1.1**
ARA0	comp=Z,4.2nm,0.2s			MSG		17 08 22.5	
ARA0	**ARCESS Array S**	**3.00**	**32**	P	**Pn**	**17 07 39.0**	**+0.1**
ARA0	**ARCESS Array S** baz=216,slow=14,SNR=50	**3.00**	**32**	Pn	**Pn**	**17 07 39.5**	**+0.6**
ARA0	baz=216,slow=24,SNR=50			Sn	**Sn**	**17 08 16.1**	**+0.7**
ARA0	comp=Z,4.2nm,0.2s			Sb	**Sb**	**17 08 22.5**	**+1.1**
ARCES	**ARCESS Array B** comp=Z,0.5nm,0.3s,baz=212,slow=13,SNR=32	**3.00**	**32**	Pn	**Pn**	**17 07 39.5**	**+0.6**
ARCES	comp=Z,0.6nm,0.3s,baz=212,slow=11,SNR=5.2			Sn	**Sn**	**17 08 16.6**	**+1.2**
BREU	**Bredtraesk**	**3.34**	**199**	*e*P	**Pn**	**17 07 44.0**	**+0.4**
BREU	**Bredtraesk**	**3.34**	**199**	P	**Pn**	**17 07 44.0**	**+0.4**
VRF	**Varrio**	**3.39**	**74**	*e*SG	**Sg**	**17 08 36.6**	**-2.5**
VRF	comp=Z,1.1nm,0.4s			MSG		17 08 36.6	
VRF	**Varrio** comp=Z,1.1nm,0.4s	**3.39**	**74**	Sg	**Sg**	**17 08 36.6**	**-2.5**
MSF	**Maaselka**	**3.42**	**106**	*e*SG	**Sg**	**17 08 39.3**	**-0.7**
MSF	comp=Z,0.6nm,0.4s			MSG		17 08 39.3	
MSF	**Maaselka** comp=Z,0.6nm,0.4s	**3.42**	**106**	Sg	**Sg**	**17 08 39.3**	**-0.7**
KEV	**Kevo** baz=230	**3.50**	**37**	*e*P	**Pn**	**17 07 47.2**	**+1.5**
KEV	**Kevo**	**3.50**	**37**	P	**Pn**	**17 07 47.2**	**+1.5**
VAF	**Ylistaro** baz=345	**4.10**	**169**	*e*P	**Pn**	**17 07 55.5**	**+1.5**
APA0	**Apatity Array** baz=266,slow=12	**4.67**	**78**	Pn	**Pn**	**17 08 01.9**	**+0.1**
APA0	baz=290,slow=28			Sn	**Sn**	**17 08 56.7**	**0.0**
APA0	baz=279,slow=28			Lg	Lg	17 09 13.9	
APA0	**Apatity Array** baz=266,slow=12	**4.67**	**78**	Pn	**Pn**	**17 08 01.9**	**+0.1**
APA0	baz=290,slow=28			Sn	**Sn**	**17 08 56.7**	**0.0**
APA0	baz=279,slow=28			Lg	Lg	17 09 13.9	
APA0	**Apatity Array** baz=266,slow=11,SNR=50	**4.67**	**78**	Pn	**Pn**	**17 08 02.0**	**+0.1**
APA0	baz=290,slow=28,SNR=50			Sn	**Sn**	**17 08 56.7**	**0.0**
APA0	baz=279,slow=26			Lg	Lg	17 09 13.9	
FIA0	**FINESS Array S** baz=346,slow=16	**6.06**	**156**	Pn	**Pn**	**17 08 20.9**	**0.0**
FIA0	baz=349,slow=28			Sn	**Sn**	**17 09 29.9**	**-0.9**
FIA0	**FINESS Array S** baz=346,slow=16	**6.06**	**156**	Pn	**Pn**	**17 08 20.9**	**0.0**
FIA0	baz=349,slow=28			Sn	**Sn**	**17 09 29.9**	**-0.9**
FIA0	**FINESS Array S** baz=346,slow=15,SNR=50	**6.06**	**156**	Pn	**Pn**	**17 08 20.9**	**0.0**
FIA0	baz=349,slow=25,SNR=50			Sn	**Sn**	**17 09 29.9**	**-0.9**
FINES	**FINESS Array B** comp=Z,0.1nm,0.3s,baz=356,slow=11,SNR=7.6	**6.06**	**156**	Pn	**Pn**	**17 08 21.9**	**+1.0**
FINES	comp=Z,0.3nm,0.3s,baz=345,slow=23,SNR=9.3			Sn	**Sn**	**17 09 32.4**	**+1.6**
NB2	**NORSAR Subarra**	**7.41**	**220**	Pn	**Pn**	**17 08 38.9**	**-0.5**
NB2	**NORSAR Subarra**	**7.41**	**220**	Pn	**Pn**	**17 08 38.9**	**-0.5**
NB2	**NORSAR Subarra** SNR=50	**7.41**	**220**	Pn	**Pn**	**17 08 38.9**	**-0.5**
NOA	**NORSAR Array B** comp=Z,0.1nm,0.3s,baz=75,slow=3.6,SNR=2.3	**7.41**	**220**	Pn	**Pn**	**17 08 41.3**	**+1.9**
NOA	comp=Z,0.1nm,0.3s,baz=334,slow=14,SNR=2.3			Sn	**Sn**	**17 10 05.1**	**+1.1**
HFS	**Hagfors** baz=49,slow=11	**7.67**	**208**	Pn	**Pn**	**17 08 42.6**	**-0.5**
HFS	**Hagfors** baz=49,slow=11	**7.67**	**208**	Pn	**Pn**	**17 08 42.6**	**-0.5**
HFS	**Hagfors** comp=Z,0.1nm,0.3s,baz=32,slow=13,SNR=5.0	**7.67**	**208**	Pn	**Pn**	**17 08 44.7**	**+1.6**
HFS	comp=Z,0.1nm,0.3s,baz=184,slow=39,SNR=6.6			Sn	**Sn**	**17 10 08.8**	**-1.8**
HFS	**Hagfors** baz=49,slow=11,SNR=50	**7.67**	**208**	Pn	**Pn**	**17 08 42.6**	**-0.5**

ISCJB ***20*** *17:12:46.9±0.8,27.53N±0.07×111.20W±0.07,h10km, mb3.9/11,MS4.1/22, Error ellipse: s-maj=11.6km s-min=7.1km az=37.8*
IDC ***20*** *17:12:46.7±1.1,27.52N×111.24W,h0km,mb3.8/6, mb1 4.0/12,mb1mx3.9/31,mbtmp3.8/12,ML3.6/6,MS4.0/30, Ms1 4.0/30,ms1mx4.0/39, Error ellipse: s-maj=24.1km s-min=14.2km az=59.0*
NEIC ***20*** *17:12:48.8±0.7,27.50N×111.22W,h10km,mb4.0/23, Error ellipse: s-maj=11.0km s-min=6.9km az=223.0*
ISC 20 17:12:48.3±0.9,27.52N±0.10×111.3W±0.1,h10km,n99, σ1§**39**/65,**mb4.0**/11,**MS4.1**/22,**Gulf of California**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**3.52**	**165**	Pn	Pn	17 13 36.3	-6.7
LPIG				Lg	Lg	17 14 41.4	
LPIG	**La Paz** 0.9nm,0.3s,baz=353,slow=3.6,SNR=4.1	**3.52**	**165**	Pn	Pn	17 13 36.3	-6.7
LPIG	1.4nm,0.3s,baz=181,slow=21,SNR=3.7			Lg	Lg	17 14 41.4	
LPIG	comp=Z,419nm,18.6s,baz=349,slow=37			LR	LR	17 14 55.1	
TUC	**Tucson**	**4.80**	**5**	*e*P	**Pn**	**17 13 59.1**	**-1.6**
GLA	**Glamis** 27nm,0.4s	**6.29**	**332**	*e*P	**Pn**	**17 14 18.4**	**-2.8**
BAR	**Barrett** 8.5nm,0.6s	**6.92**	**319**	*e*P	**Pn**	**17 14 30.5**	**+0.7**
TXAR	**Lajitas Array** 1.1nm,0.6s	**6.98**	**73**	Pn	**Pn**	**17 14 29.6**	**-1.2**
TXAR				Lg	Lg	17 16 30.2	
TXAR	**Lajitas Array** 0.3nm,0.3s,baz=250,slow=12,SNR=12	**6.98**	**73**	Pn	**Pn**	**17 14 29.6**	**-1.2**
TXAR	1.2nm,0.3s,baz=289,slow=12,SNR=6.1			Lg	Lg	17 16 30.2	
TXAR	comp=Z,934nm,20.3s,baz=260,slow=43			LR	LR	17 17 40.7	
LENM	**Lemitar** 4.1nm,0.8s	**7.61**	**28**	*e*P	**Pn**	**17 14 40.3**	**+0.9**
GDL2	**Guadalupe Moun** 15nm,0.8s	**7.64**	**51**	*e*P	**Pn**	**17 14 41.1**	**+1.4**
LAZ	**Ladron** 8.8nm,1.0s	**7.75**	**27**	*e*P	**Pn**	**17 14 41.5**	**+0.2**
BNM	**Barren Site** 1.1nm,0.6s	**7.75**	**30**	*e*P	Pn	17 14 45.6	+4.3
WUAZ	**Wupatki** 12nm,0.8s	**7.98**	**360**	*e*P	**Pn**	**17 14 44.2**	**-0.2**
ANMO	**Albuquerque** 5.6nm,1.1s	**8.50**	**28**	*e*Pn	Pn	17 14 47.9	-3.7
ANMO				Lg	Lg	17 17 18.4	
ANMO	**Albuquerque** 0.1nm,0.3s,baz=187,slow=9.2,SNR=3.8	**8.50**	**28**	Pn	**Pn**	**17 14 52.4**	**+0.8**
ANMO	0.5nm,0.3s,baz=343,slow=21,SNR=8.0			Lg	Lg	17 17 18.4	
ANMO	comp=Z,494nm,18.4s,baz=200,slow=40			LR	LR	17 18 23.7	
MVCO	**Mesa Verde** 10nm,0.8s	**9.96**	**13**	*e*Pn	**Pn**	**17 15 12.6**	**+1.0**
MVCO				*e*Sn	Sn	17 17 58.1	+54
JCT	**Junction City** 5.9nm,0.6s	**10.51**	**71**	P	Pn	17 15 15.5	-3.5
PV01	**Paradox Valley** 282nm,0.3s	**10.84**	**12**	*e*P	**Pn**	**17 15 26.3**	**+2.6**
MVU	**Marysvale** 8.9nm,1.3s	**10.98**	**356**	*e*Pn	**Pn**	**17 15 28.4**	**+2.7**
PV04	**Paradox Valley**	**11.04**	**10**	*e*Pn	**Pn**	**17 15 23.9**	**-2.4**
SRU	**San Rafael** 8.1nm,0.8s	**11.58**	**3**	*e*P	**Pn**	**17 15 34.3**	**+0.4**
TMUT	**Trail Mountain** 8.7nm,1.0s	**11.75**	**0**	*e*P	**Pn**	**17 15 36.6**	**+0.4**
SMCO	**Snowmass** 9.8nm,1.3s	**12.18**	**16**	*e*P	**Pn**	**17 15 42.3**	**+0.1**
NV11	**Mina Array Sit**	**12.30**	**334**	*e*P	**Pn**	**17 15 46.0**	**+2.4**
NVAR	**Mina Array Bea**	**12.35**	**334**	Pn	**Pn**	**17 15 46.7**	**+2.3**
NVAR				Lg	Lg	17 19 28.7	
NVAR	**Mina Array Bea** 0.2nm,0.3s,baz=160,slow=15,SNR=11	**12.35**	**334**	Pn	**Pn**	**17 15 46.7**	**+2.3**
NVAR	0.1nm,0.3s,baz=337,slow=25,SNR=2.4			Lg	Lg	17 19 28.7	
NVAR	comp=Z,764nm,20.3s,baz=164,slow=38			LR	LR	17 20 33.4	
DUG	**Dugway** 21nm,1.4s	**12.71**	**355**	*e*Pn	**Pn**	**17 15 48.9**	**-0.2**

WMOK	**Wichita Mounta** 3.7nm,1.0s	**12.93**	**53**	*e*Pn	**Pn**	**17 15 50.0**	**-2.0**	
ISCO	**Idaho Springs** 3.0nm,1.0s	**13.14**	**20**	Pn	**Pn**	**17 15 54.4**	**-0.9**	
ELK	**Elko**	**13.59**	**347**	Pn	**Pn**	**17 16 04.0**	**+2.8**	
ELK				Lg	Lg	17 20 03.1		
ELK	**Elko** 0.1nm,0.3s,baz=191,slow=12,SNR=5.6	**13.59**	**347**	Pn	**Pn**	**17 16 04.0**	**+2.8**	
ELK	0.1nm,0.3s,baz=196,slow=22,SNR=3.8			Lg	Lg	17 20 03.1		
ELK	comp=Z,885nm,19.6s,baz=167,slow=38			LR	LR	17 21 16.2		
WCN	**Washoe City** 19nm,1.4s	**13.69**	**331**	*e*Pn	**Pn**	**17 16 04.6**	**+2.0**	
HWUT	**Hardware Ranch** 26nm,1.4s	**14.06**	**359**	*e*Pn	**Pn**	**17 16 08.7**	**+1.0**	
HVU	**Hansel Valley** 6.2nm,1.2s	**14.28**	**356**	Pn	**Pn**	**17 16 08.4**	**-2.3**	
BEKR	**Beckworth** 16nm,1.6s	**14.42**	**331**	Pn	Pn	17 16 09.1	-3.5	
PDAR	**Pinedale Array**	**15.28**	**5**	Pn	**Pn**	**17 16 26.7**	**+2.4**	
PDAR				Lg	Lg	17 21 00.9		
PDAR	**Pinedale Array** 0.1nm,0.3s,baz=188,slow=9.0,SNR=14	**15.28**	**5**	Pn	**Pn**	**17 16 26.7**	**+2.4**	
PDAR	0.0nm,0.3s,baz=171,slow=14,SNR=7.5			Lg	Lg	17 21 00.9		
PDAR	comp=Z,680nm,20.1s,baz=192,slow=38			LR	LR	17 22 29.4		
WVOR	**Wild Horse Val** 5.5nm,0.8s	**16.03**	**340**	*e*P	**Pn**	**17 16 33.8**	**-0.2**	
LOHW	**Long Hollow** 14nm,1.4s	**16.07**	**2**	*e*Pn	**Pn**	**17 16 35.6**	**+1.1**	
MOD	**Modoc** 86nm,1.5s	**16.12**	**335**	*e*Pn	**P**	**17 16 38.8**	**+0.4**	
MOOW	**Moose Ponds** 13nm,1.4s	**16.20**	**2**	*e*Pn	**Pn**	**17 16 34.2**	**-2.0**	
HLID	**Hailey** 16nm,1.5s	**16.20**	**352**	*e*Pn	**P**	**17 16 38.5**	**-0.9**	
MFID	**Camas Ranch** 21nm,1.5s	**16.28**	**348**	*e*P	**Pn**	**17 16 38.3**	**+1.3**	
IMW	**Indian Meadow** 16nm,1.2s	**16.35**	**1**	*e*P	**Pn**	**17 16 38.3**	**+0.1**	
KSU1	**Kansas State U** 12nm,0.7s	**16.85**	**43**	*e*P	**Pn**	**17 16 42.8**	**-1.5**	
YBH	**Yreka Blue Hor** comp=Z,495nm,18.2s,baz=153,slow=39	**16.97**	**330**	LR	LR	17 23 45.5		
QLMT	**Earthquake Lak** 0.4nm,0.6s	**17.28**	**360**	*e*P	**P**	**17 16 51.7**	**+0.4**	
MCMT	**McKenzie Canyo** 3.1nm,1.1s	**17.32**	**356**	*e*P	**Pn**	**17 16 50.2**	**-0.1**	
RSSD	**Black Hills** 7.4nm,0.9s	**17.58**	**18**	*e*P	**P**	**17 16 54.3**	**-0.3**	
DLMT	**Dillon** 9.7nm,1.1s	**17.84**	**357**	*e*P	**Pn**	**17 16 57.0**	**+0.3**	
CMIG	**Matias Romero**	**18.39**	**121**	P	**P**	**17 17 04.3**	**+0.8**	
CMIG	**Matias Romero** 0.3nm,0.3s,baz=333,slow=12,SNR=3.9	**18.39**	**121**	P	**P**	**17 17 04.3**	**+0.8**	
CMIG	comp=Z,1µm,19.8s,baz=353,slow=38			LR	LR	17 24 22.8		
CHMT	**Chamberlain Mo** 8.7nm,1.0s	**19.42**	**356**	*e*P	**P**	**17 17 15.3**	**+0.4**	
SLMT	**Seeley Lake** 13nm,1.2s	**19.77**	**356**	*e*P	**P**	**17 17 19.2**	**+0.6**	
SWMT	**Swartz Lake** 11nm,1.3s	**20.07**	**355**	*e*P	Pn	17 17 23.1	-0.5	
JTMT	**Jette** 12nm,1.4s	**20.33**	**354**	*e*P	Pn	17 17 25.6	-1.1	
YBMT	**Yellow Bay** 16nm,1.5s	**20.42**	**355**	*e*P	Pn	17 17 26.8	-1.0	
EGMT	**Eagleton** 32nm,1.3s	**20.51**	**3**	*e*P	Pn	17 17 27.7	-1.1	
LON	**Longmire** 20nm,1.5s	**20.90**	**339**	*e*P	**P**	**17 17 31.9**	**+1.1**	
PLAL	**Pickwick Lake** 20nm,1.1s	**21.20**	**64**	*e*P	**P**	**17 17 35.5**	**+1.5**	
NEW	**Newport**	**21.20**	**349**	*e*P	**P**	**17 17 33.9**	**-0.1**	
NEW	**Newport** 8.4nm,0.8s,baz=165,slow=12,SNR=8.0	**21.20**	**349**	P	**P**	**17 17 35.0**	**+1.0**	
NEW	comp=Z,501nm,18.2s,baz=174,slow=39			LR	LR	17 26 41.3		
WALA	**Waterton Lakes** 1.2nm,1.5s	**21.60**	**355**	*e*P	**P**	**17 17 39.2**	**+0.8**	
DGMT	**Dagmar** 40nm,1.4s	**21.64**	**13**	*e*P	**P**	**17 17 39.3**	**+0.6**	
WVT	**Waverly** 15nm,1.4s	**21.69**	**61**	*e*P	P	17 17 30.1	-9.2	
TEIG	**Tepich** comp=Z,519nm,20.4s,baz=285,slow=42	**22.27**	**104**	LR	LR	17 28 09.5		
TKL	**Tuckaleechee C** comp=Z,289nm,20.1s,baz=79,slow=38	**24.77**	**64**	LR	LR	17 28 17.0		
ULM	**Lac du Bonnet**	**25.59**	**23**	P	**P**	**17 18 16.9**	**-0.5**	
ULM	**Lac du Bonnet** 2.2nm,0.6s,baz=204,slow=6.2,SNR=4.8	**25.59**	**23**	P	**P**	**17 18 16.9**	**-0.5**	
BBB	**Bella Bella** comp=Z,580nm,18.7s,baz=174,slow=37	**27.67**	**337**	LR	LR	17 29 59.4		
FFC	**Flin Flon** 3.0nm,1.2s	**28.03**	**12**	*e*P	**P**	**17 18 40.1**	**+0.7**	
JTS	**JuntasAbangare** comp=Z,304nm,21.0s,baz=224,slow=38	**30.16**	**120**	LR	LR	17 31 41.6		
YKA	**Yellowknife Ar**	**35.04**	**357**	P	**P**	**17 19 40.9**	**-0.1**	
YKA	**Yellowknife Ar** 0.4nm,0.9s,baz=182,slow=7.8,SNR=6.8	**35.04**	**357**	P	**P**	**17 19 40.8**	**-0.1**	
SCHQ	**Schefferville** comp=Z,52nm,18.6s,baz=302,slow=37	**42.15**	**37**	LR	LR	17 38 54.1		
ILAR	**Eielson Array**	**43.54**	**339**	P	**P**	**17 20 51.7**	**-0.2**	
ILAR	**Eielson Array** 0.7nm,0.8s,baz=156,slow=7.2,SNR=7.7	**43.54**	**339**	P	**P**	**17 20 51.7**	**-0.2**	
ILAR	comp=Z,215nm,21.9s,baz=120,slow=34			LR	LR	17 37 44.9		
PPT2	**Papeete2** 4µm,34.2s	**58.18**	**224**	*e*LQ	LQ	17 37 22.5		
PPT2	154nm,28.0s			*e*LR	LR	17 39 38.1		
LPAZ	**La Paz** comp=Z,94nm,18.9s,baz=251,slow=35	**60.41**	**131**	LR	LR	17 47 38.6		
TBI	**Tubuai** 70nm,27.8s	**62.55**	**220**	*e*LR	LR	17 41 46.8		
SIV	**San Ignacio**	**65.14**	**125**	P	**P**	**17 23 28.6**	**-1.1**	
SIV	**San Ignacio** 1.7nm,0.8s,baz=327,slow=8.2,SNR=6.0	**65.14**	**125**	P	**P**	**17 23 28.6**	**-1.1**	
PETK	**Petropavlovsk-** comp=Z,29nm,18.7s,baz=260,slow=32	**69.05**	**320**	LR	LR	17 49 32.9		
CPUP	**Villa Florida**	**74.58**	**131**	P	**P**	**17 24 28.6**	**+0.9**	
CPUP	**Villa Florida** 0.2nm,0.3s,baz=321,slow=7.0,SNR=3.5	**74.58**	**131**	P	**P**	**17 24 28.6**	**+0.9**	
CPUP	comp=Z,56nm,21.5s,baz=195,slow=35			LR	LR	17 56 23.3		
BDFB	**Brasilia** comp=Z,110nm,18.6s,baz=202,slow=38	**74.86**	**117**	LR	LR	18 00 38.7		
PLCA	**Paso Flores** comp=Z,114nm,21.2s,baz=360,slow=32	**77.74**	**149**	LR	LR	17 54 21.7	

*AUST **20** 17:18:45.8, 11°.45S×165°.97E, h200km*
ISC 20 17:18:36.1±0.8, 11°.16S±0°.09×166°.34E±0°.08, h146km, n48, σ1§15/47, mb4.3/12, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.52**	**285**	P	**Pn**	**17 20 07.5**	**-2.3**
HNR				S	**Sn**	**17 21 25.1**	**+2.0**
HNR	**Honiara**	**6.52**	**285**	P	**Pn**	**17 20 07.5**	**-2.3**
	10nm,0.3s,baz=193,slow=1.3,SNR=12						
HNR				S	**Sn**	**17 21 25.1**	**+2.0**
	29nm,0.3s,baz=86,slow=21,SNR=6.5						
HNR				LR	LR	17 22 16.5	
	comp=Z,144nm,21.4s,baz=103,slow=34						
DZM	**Mont Dzumac**	**10.85**	**179**	*eP*	**Pn**	**17 21 07.5**	**0.0**
DZM				eS	**Sn**	**17 23 04.5**	**-3.0**
DZM	**Mont Dzumac**	**10.85**	**179**	P	**Pn**	**17 21 08.5**	**+1.0**
DZM	**Mont Dzumac**	**10.85**	**179**	P	**Pn**	**17 21 08.5**	**+1.0**
	2.8nm,0.3s,baz=326,slow=16,SNR=81						
MSVF	**Nonsavu**	**13.09**	**121**	*eP*	**P**	**17 21 42.1**	**+0.6**
	44nm,1.0s						
PMG	**Port Moresby**	**18.95**	**274**	P	**P**	**17 22 46.9**	**+0.7**
PMG	**Port Moresby**	**18.95**	**274**	P	**P**	**17 22 46.9**	**+0.7**
	0.2nm,0.3s,baz=343,slow=14,SNR=4.1						
EIDS	**Eidsvold**	**20.21**	**224**	*eP*	**P**	**17 23 01.0**	**+1.4**
	32nm,1.0s						
EIDS	**Eidsvold**	**20.21**	**224**	P	**P**	**17 23 01.3**	**+1.6**
	baz=20,SNR=12						
CTA	**Charters Tower**	**21.26**	**243**	P	**P**	**17 23 11.4**	**+0.4**
CTA	**Charters Tower**	**21.26**	**243**	P	**P**	**17 23 11.4**	**+0.4**
	11nm,0.8s,baz=66,slow=11,SNR=17						
CTAO	**Charters Tower**	**21.26**	**243**	*eP*	**P**	**17 23 11.4**	**+0.4**
	11nm,0.8s						
RMQ	**Roma**	**22.52**	**225**	P	**P**	**17 23 25.1**	**+1.2**
	baz=22,SNR=9.7						
COEN	**Coen**	**22.78**	**261**	*eP*	**P**	**17 23 26.6**	**+0.3**
	147nm,0.8s						
COEN	**Coen**	**22.78**	**261**	P	**P**	**17 23 27.0**	**+0.7**
	baz=22,SNR=9.2						
NIUE	**Niue**	**24.20**	**112**	P	P	17 23 47.2	+7.8
	baz=24,SNR=3.6						
QLP	**Quilpie**	**25.87**	**231**	P	**P**	**17 23 55.3**	**+1.0**
	baz=25,SNR=9.3						
STKA	**Stephens Creek**	**30.76**	**224**	*eP*	**P**	**17 24 38.5**	**+0.7**
	0.8nm,0.8s						
STKA	**Stephens Creek**	**30.76**	**224**	P	**P**	**17 24 38.8**	**+1.0**
	6.1nm,0.8s,baz=44,slow=7.4,SNR=13						
STKA	**Stephens Creek**	**30.76**	**224**	P	**P**	**17 24 39.0**	**+1.3**
	baz=30,SNR=6.2						
WRAB	**Tennant Creek**	**31.98**	**250**	*eP*	**P**	**17 24 47.9**	**-0.7**
	3.0nm,0.6s						
WRA	**Warramunga Arr**	**31.99**	**250**	P	**P**	**17 24 48.4**	**-0.4**
WRA	**Warramunga Arr**	**31.99**	**250**	P	**P**	**17 24 48.4**	**-0.4**
	6.8nm,0.6s,baz=83,slow=8.9,SNR=80						
KDU	**Kakadu**	**33.16**	**264**	P	**P**	**17 24 58.7**	**-0.2**
	baz=33,SNR=4.1						
ASAR	**Alice Springs**	**33.26**	**244**	P	**P**	**17 24 59.0**	**-0.8**
ASAR	**Alice Springs**	**33.26**	**244**	P	**P**	**17 24 59.0**	**-0.8**
	4.3nm,0.8s,baz=75,slow=9.6,SNR=40						
MTN	**Manton Dam**	**34.46**	**264**	S	S	17 30 00.9	-27
	baz=34,SNR=3.3						
BBOO	**Buckleboo**	**35.18**	**227**	P	**P**	**17 25 16.8**	**+0.6**
	baz=35,SNR=20						
FITZ	**Fitzroy Crossi**	**39.91**	**255**	*eP*	**P**	**17 25 55.9**	**-0.3**
	19nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.91**	**255**	P	**P**	**17 25 56.3**	**+0.1**
	19nm,0.8s,baz=90,slow=7.5,SNR=54						
FITZ	**Fitzroy Crossi**	**39.91**	**255**	P	**P**	**17 25 56.1**	**-0.1**
	baz=40,SNR=22						
KMBL	**Kambalda**	**45.67**	**237**	P	**P**	**17 26 43.2**	**+0.7**
	baz=45,SNR=5.4						
MBWA	**Marble Bar**	**45.71**	**251**	*eP*	**P**	**17 26 43.4**	**+0.5**
	17nm,1.0s						
PCI	**Palu**	**47.28**	**279**	S	**S**	**17 33 34.8**	**-3.1**
	baz=47,SNR=4.4						
MEEK	**Meekatharra**	**47.42**	**244**	P	**P**	**17 26 56.8**	**+0.6**
	baz=47,SNR=5.4						
NWAO	**Narrogin (SRO)**	**49.88**	**236**	P	**P**	**17 27 15.2**	**+0.3**
NWAO	**Narrogin (SRO)**	**49.88**	**236**	P	**P**	**17 27 15.2**	**+0.3**
	9.8nm,0.8s,baz=85,slow=6.2,SNR=5.9						
CMAR	**Chiang Mai Arr**	**72.69**	**293**	P	**P**	**17 29 49.5**	**+0.9**
CMAR	**Chiang Mai Arr**	**72.69**	**293**	P	**P**	**17 29 49.5**	**+0.9**
	1.3nm,0.8s,baz=119,slow=4.8,SNR=7.5						
ILAR	**Eielson Array**	**83.44**	**18**	P	**P**	**17 30 46.5**	**-0.3**
ILAR	**Eielson Array**	**83.44**	**18**	P	**P**	**17 30 46.5**	**-0.3**
	0.3nm,0.6s,baz=245,slow=5.1,SNR=8.2						
PDAR	**Pinedale Array**	**93.20**	**47**	LR	LR	18 05 09.3	
	comp=Z,74nm,21.4s,baz=164,slow=30						
MKAR	**Makanchi Array**	**94.00**	**317**	P	**P**	**17 31 37.3**	**-0.4**
MKAR	**Makanchi Array**	**94.00**	**317**	P	**P**	**17 31 37.3**	**-0.4**
	0.6nm,0.6s,baz=96,slow=6.5,SNR=9.1						
AAK	**Ala-Archa**	**98.81**	**312**	LR	LR	18 18 34.7	
	comp=Z,76nm,19.0s,baz=351,slow=36						
ARCES	**ARCESS Array B**	**116.59**	**346**	PKP	**PKPdf**	**17 37 01.6**	**-0.7**
ARCES	**ARCESS Array B**	**116.59**	**346**	PKP	**PKPdf**	**17 37 01.6**	**-0.7**
	4.0nm,1.0s,baz=72,slow=2.9,SNR=3.8						

*AUST **20** 17:37:06.4, 0°.01N×133°.50E, h450km*
*IDC **20** 17:37:40.8±2.5, 3°.91S×130°.10E, h0km, mb3.3/1, mb1 3.3/2, mb1mx3.2/19, mbtmp3.2/2, ML6.0/1, Error ellipse: s-maj=159.0km s-min=30.0km az=70.0*
ISC 20 17:37:41.9±1.6, 3°.9S±0°.2×130°.3E±0°.2, h10km, n8, σ1§00/5, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**3.01**	**126**	P	**Pg**	**17 38 39.5**	**0.0**
	baz=5.7,SNR=3.3						
MTN	**Manton Dam**	**8.95**	**175**	P	Pn	17 39 55.5	+4.2
	baz=13,SNR=3.5						
KDU	**Kakadu**	**9.02**	**166**	P	**Pn**	**17 39 53.0**	**+0.8**
	baz=13,SNR=4.5						
PCI	**Palu**	**10.84**	**286**	S	Sn	17 42 28.8	+10
	baz=14,SNR=5.5						
WSI	**Waingapu**	**11.46**	**239**	P	Pn	17 40 34.1	+8.4
	baz=16,SNR=5.7						
WRA	**Warramunga Arr**	**16.45**	**166**	Pn	**Pn**	**17 41 32.3**	**-0.7**
	66nm,0.3s,baz=349,slow=14,SNR=8.4						
ASAR	**Alice Springs**	**19.98**	**170**	P	**Pn**	**17 42 15.4**	**-0.9**
	0.1nm,0.3s,baz=349,slow=11,SNR=24						
MKAR	**Makanchi Array**	**65.80**	**326**	P	**P**	**17 48 27.4**	**+0.1**
	0.2nm,0.5s,baz=113,slow=7.5,SNR=4.1						

*CSEM **20** 17:46:06.0, 42°.27N×13°.65E, h8km, MD2.0/7, After ROM*
ROM 20 17:46:06.0±0.1, 42°.27N×13°.65E, h8km±1km, Md2.0/7, Ml1.4/5, 4C, Error ellipse: s-maj=1.8km s-min=1.4km az=142.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.05**	**264**	↑*iP*	Pg	17 46 08.0	+0.2
FAGN					Sg	17 46 09.4	+0.2
FAGN	**Fagnano**	**0.05**	**264**	↑*iP*	Pg	17 46 08.0	+0.2
FAGN					Sg	17 46 09.4	+0.2
VCEL	**Villa Celiera**	**0.19**	**50**		Pg	17 46 10.4	+0.3
VCEL					Sg	17 46 13.9	+1.0
	131nm,0.4s						
VCEL	**Villa Celiera**	**0.19**	**50**		Pg	17 46 10.4	+0.3
VCEL					Sg	17 46 13.9	+1.0
	131nm,0.4s						
AQU	**L'Aquila**	**0.20**	**295**		Pg	17 46 10.9	+0.7
AQU					Sg	17 46 14.9	+1.9
	63nm,0.3s						
AQU	**L'Aquila**	**0.20**	**295**		Pg	17 46 10.9	+0.7
AQU					Sg	17 46 14.9	+1.9
	63nm,0.3s						
PTQR	**Pietraquaria**	**0.31**	**216**	Pg	Pb	17 46 13.2	-0.7
PTQR				Sg	Sb	17 46 18.0	-1.1
	5.0nm,0.2s						
PTQR	**Pietraquaria**	**0.31**	**216**	Pg	Pb	17 46 13.2	-0.7
PTQR				Sg	Sb	17 46 18.0	-1.1
	5.0nm,0.2s						
INTR	**Introdacqua**	**0.32**	**143**	↑Pg	Pg	17 46 13.1	+0.6
INTR				Sg	Sb	17 46 19.7	+0.1
	37nm,0.3s						
INTR	**Introdacqua**	**0.32**	**143**	↑Pg	Pg	17 46 13.1	+0.6
INTR				Sg	Sb	17 46 19.7	+0.1
	37nm,0.3s						
VVLD	**Villa Vallelon**	**0.40**	**182**	Pg	Pg	17 46 14.5	+0.5
VVLD				Sg	Sb	17 46 21.1	-0.7
	28nm,0.6s						
VVLD	**Villa Vallelon**	**0.40**	**182**	Pg	Pg	17 46 14.5	+0.5
VVLD				Sg	Sb	17 46 21.1	-0.7
	28nm,0.6s						
LPEL	**Lama dei Pelig**	**0.46**	**119**	Pg	Pg	17 46 15.6	+0.6
LPEL				Sg	Sb	17 46 22.7	-0.7
	33nm,0.7s						
LPEL	**Lama dei Pelig**	**0.46**	**119**	Pg	Pg	17 46 15.6	+0.6
LPEL				Sg	Sb	17 46 22.7	-0.7
	33nm,0.7s						

*ISCJB **20** 17:54:16.1±0.5, 37°.86N±0°.03×27°.54E±0°.04, h2km±7km, Error ellipse: s-maj=5.7km s-min=4.1km az=145.9*
*CSEM **20** 17:54:16.5±0.3, 37°.84N×27°.55E, h2km, MD2.8, Error ellipse: s-maj=6.8km s-min=5.6km az=9.0*
*ISK **20** 17:54:16.0, 37°.86N×27°.50E, h5km, MD2.8*
*DDA **20** 17:54:16.6, 37°.89N×27°.60E, h7km, MD2.8*
ISC 20 17:54:16.4±1.1, 37°.86N±0°.02×27°.54E±0°.02, h3km±10km, n24, σ0§45/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.29**	**237**	*iP*	**Pg**	**17 54 21.8**	**-0.2**
GCAM				*i* S	**Sg**	**17 54 25.6**	**-0.2**
GCAM	**G?zelcaml?**	**0.29**	**237**	*iP*	**Pg**	**17 54 21.8**	**-0.2**
GCAM				*i* S	**Sg**	**17 54 25.6**	**-0.2**
AYDN	**Tasoluk**	**0.33**	**127**	*iP*	**Pg**	**17 54 22.9**	**+0.1**
AYDN				*i* S	**Sg**	**17 54 27.8**	**+0.7**
AYDN	**Tasoluk**	**0.33**	**127**	*iP*	**Pg**	**17 54 22.9**	**+0.1**
AYDN				*i* S	**Sg**	**17 54 27.1**	**0.0**
AYDN	**Tasoluk**	**0.33**	**127**	*iP*	**Pg**	**17 54 22.9**	**+0.1**
AYDN				*i* S	**Sg**	**17 54 27.1**	**0.0**
IZM	**Izmir**	**0.58**	**338**	*e*PG	**Pg**	**17 54 27.7**	**+0.2**
IZM				*e*SG	**Sg**	**17 54 35.4**	**+0.3**
MLSB	**Milas**	**0.59**	**162**	*e*PG	**Pg**	**17 54 27.5**	**-0.2**
BLCB	**Balcova**	**0.66**	**323**	*e*PG	**Pg**	**17 54 29.0**	**0.0**
BODT	**Bodrum**	**0.82**	**193**	*e*PG	**Pg**	**17 54 31.9**	**-0.2**
URLA	**Izmir**	**0.90**	**304**	*iP*	**Pg**	**17 54 34.0**	**+0.4**
URLA				*i* S	**Sb**	**17 54 46.7**	**-0.3**
URLA	**Izmir**	**0.90**	**304**	*iP*	**Pg**	**17 54 34.0**	**+0.4**
URLA				*i* S	**Sb**	**17 54 46.7**	**-0.3**
YER	**Yerkesik**	**0.93**	**141**	*e*PG	**Pb**	**17 54 35.0**	**-0.2**
MANT	**Manisa**	**1.02**	**51**	*iP*	**Pg**	**17 54 35.7**	**-0.2**
MANT				*i* S	**Sg**	**17 54 48.3**	**-0.8**
MANT	**Manisa**	**1.02**	**51**	*iP*	**Pg**	**17 54 35.7**	**-0.2**
MANT				*i* S	**Sg**	**17 54 48.3**	**-0.8**
AKHS	**Akhisar**	**1.04**	**12**	*iP*	**Pb**	**17 54 36.8**	**-0.2**
AKHS				*i* S	**Sb**	**17 54 51.2**	**+0.2**
AKHS	**Akhisar**	**1.04**	**12**	*iP*	**Pb**	**17 54 36.8**	**-0.2**
AKHS				*i* S	**Sb**	**17 54 51.2**	**+0.2**
AKS	**Akhisar**	**1.04**	**12**	*e*PG	**Pg**	**17 54 36.6**	**+0.3**
DAT	**Datca**	**1.13**	**179**	*e*PN	**Pg**	**17 54 37.8**	**-0.3**
DNZL	**Cakiroluk**	**1.20**	**98**	*iP*	**Pg**	**17 54 39.2**	**-0.2**
DNZL				*i* S	**Sn**	**17 54 57.9**	**+0.7**
DNZL	**Cakiroluk**	**1.20**	**98**	*iP*	**Pg**	**17 54 39.2**	**-0.2**
DNZL				*i* S	**Sn**	**17 54 57.9**	**+0.7**
KHL	**Karahalli**	**1.63**	**73**	*e*PN	**Pb**	**17 54 47.3**	**+0.2**
APE	**Apeiranthos**	**1.79**	**244**	*e*PN	**Pn**	**17 54 48.6**	**+0.5**
DURS	**Dursunbey**	**1.88**	**22**	*iP*	**Pb**	**17 54 51.6**	**+0.2**
DURS				*i* S	**Sn**	**17 55 12.7**	**-1.1**
DURS	**Dursunbey**	**1.88**	**22**	*iP*	**Pb**	**17 54 51.6**	**+0.2**
DURS				*i* S	**Sn**	**17 55 12.7**	**-1.1**

*ISCJB **20** 17:56:27.1±0.6, 26°.40S±0°.03×27°.48E±0°.03, h6km±4km, Error ellipse: s-maj=5.3km s-min=4.3km az=44.7*
*PRE **20** 17:56:27.2±2.2, 26°.41S×27°.47E, h2km, ML3.2*
ISC 20 17:56:27.4±1.0, 26°.38S±0°.03×27°.46E±0°.03, h9km±7km, n15, σ1§47/28, 3C-4D, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLOF	**Kloof**	**0.14**	**79**	↓*iP*	**Pg**	**17 56 30.7**	**+0.1**
KLOF				*e*S	**Sg**	**17 56 32.2**	**-0.7**
KLOF				AML	AML	17 56 32.5	
	comp=Z,14μm,0.3s						
PRYS	**Parys**	**0.55**	**189**	*eP*	**Pg**	**17 56 37.6**	**-0.6**
PRYS				*e*S	**Sg**	**17 56 44.6**	**-0.9**
PRYS				AML	AML	17 56 49.8	
	comp=Z,494nm,0.5s						
ERPM	**east rand prop**	**0.70**	**87**	↑*iP*	**Pg**	**17 56 41.0**	**0.0**
ERPM				*e*S	**Sg**	**17 56 48.8**	**-1.5**
ERPM				AML	AML	17 56 49.9	
	comp=Z,394nm,0.5s						
KSR	**Koster**	**0.73**	**316**	↑*iP*	**Pg**	**17 56 42.1**	**+0.7**
KSR				*e*S	**Sg**	**17 56 50.9**	**-0.1**
KSR				AML	AML	17 56 52.5	
	comp=Z,888nm,0.7s						
SLR	**Silverton**	**0.98**	**49**	*eP*	**Pg**	**17 56 46.3**	**+0.1**
SLR				*e*S	**Sg**	**17 56 59.3**	**+0.4**
SLR				AML	AML	17 57 05.3	
	comp=Z,192nm,0.2s						
SEK	**Senekal**	**1.94**	**176**	↑*iP*	**Pb**	**17 57 02.7**	**-0.4**
SEK				*e*S	**Sn**	**17 57 26.3**	**+0.9**
SEK				AML	AML	17 57 28.0	
	comp=Z,241nm,0.6s						
SWZ	**Schweizer**	**2.06**	**247**	↓*iP*	**Pn**	**17 57 03.3**	**+0.9**
SWZ				*e*S	**Sb**	**17 57 31.4**	**+0.5**
SWZ				AML	AML	17 57 32.3	
	comp=Z,420nm,0.5s						
LBTB	**Lobatse**	**2.16**	**309**	↓*iP*	**Pn**	**17 57 06.0**	**+2.4**
LBTB				*e*S	**Sb**	**17 57 34.0**	**+0.4**
LBTB				AML	AML	17 57 37.6	
	comp=Z,516nm,0.5s						
BOSA	**Boshof**	**2.97**	**221**	↓*iP*	**Pn**	**17 57 15.3**	**+0.5**
BOSA				*e*S	**Sn**	**17 57 50.0**	**-0.5**
BOSA				AML	AML	17 58 05.7	
	comp=Z,42nm,0.5s						
POGA	**Pongola**	**3.84**	**106**	*eP*	**Pn**	**17 57 29.1**	**+2.5**
POGA				*e*S	**Sn**	**17 58 13.5**	**+1.6**
POGA				AML	AML	17 58 31.3	
	comp=Z,110nm,0.5s						
KSD	**Kokstad**	**4.49**	**158**	*e*S	**Sn**	**17 58 26.4**	**-1.7**
KSD				AML	AML	17 58 51.0	
	comp=Z,93nm,0.7s						
MSNA	**Messina**	**4.64**	**31**	*eP*	**Pn**	**17 57 39.3**	**+1.5**
MSNA				*e*S	**Sn**	**17 58 29.6**	**-2.2**
MSNA				AML	AML	17 58 45.8	
	comp=Z,16nm,0.5s						
UPI	**Upington**	**5.86**	**249**	*eP*	**Pn**	**17 57 55.2**	**+0.7**
UPI				*e*S	**Sn**	**17 58 59.2**	**-2.7**
BLWY	**Bulawayo**	**6.30**	**10**	*iP*	**Pn**	**17 58 01.4**	**+0.9**
BLWY				*i*		17 58 02.1	
	baz=4.4,slow=28						
BLWY				*i* S	**Sn**	**17 59 10.4**	**-2.3**
SUR	**Sutherland**	**8.33**	**223**	*eP*	**Pn**	**17 58 30.9**	**+2.4**

*AUST **20** 17:59:07.7±3.3, 4°.13S×129°.83E, h0km, Error ellipse: s-maj=1.1km s-min=0.7km az=234.0*
*IDC **20** 17:59:07.8±0.5, 4°.20S×129°.65E, h0km, mb4.4/17, mb1 4.5/20, mb1mx4.5/25, mbtmp4.4/20, ML4.0/3, MS3.7/10, Ms1 3.7/10, ms1mx3.4/35, Error ellipse: s-maj=24.3km s-min=9.5km az=72.0*
*BJI **20** 17:59:08.8, 3°.90S×129°.90E, h10km, mB5.0/8, mb4.6/16, Ms4.7/1, Ms7 4.7/1*
*ISCJB **20** 17:59:10.6±0.2, 4°.19S±0°.03×129°.74E±0°.04, h33km, mb4.5/33, MS3.7/8, Error ellipse: s-maj=6.8km s-min=4.1km az=149.8*
*DJA **20** 17:59:11.6±0.3, 4°.5S±3°×13°.0E±°, h10km, M4.6/13, mB5.2/9, mb4.6/13, MLv4.6/9, Mw(mB)4.7/9*
*NEIC **20** 17:59:13.0±1.4, 4°.16S×129°.74E, h38km±14km, mb4.8/18, Error ellipse: s-maj=11.3km s-min=6.9km az=224.0*
ISC 20 17:59:12.5±0.3, 4°.16S±0°.05×129°.78E±0°.06, h35km, n129, σ1§47/126, mb4.6/33, MS3.5/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.39**	**161**	P	**Pn**	**17 59 19.2**	**-2.4**
MSAI	**Masohi**	**1.17**	**313**	P	Pn	17 59 29.4	-3.0
AAI	**Ambon**	**1.65**	**286**	P	**Pn**	**17 59 36.8**	**-2.2**
AAI	**Ambon**	**1.65**	**286**	P	**Pn**	**17 59 36.6**	**-2.3**
	baz=1.7,SNR=71						
FAKI	**Fak Fak**	**2.76**	**64**	P	**Pn**	**17 59 54.7**	**+0.4**
TLE	**Tual**	**3.30**	**117**	P	Pn	18 00 05.1	+3.4
TLE	**Tual**	**3.30**	**117**	P	Pn	18 00 05.0	+3.2
	baz=3.3,SNR=134						
SWI	**Sorong**	**3.59**	**24**	P	**Pn**	**18 00 05.3**	**-0.4**
SWI	**Sorong**	**3.59**	**24**	P	**Pn**	**18 00 06.0**	**+0.2**
	baz=3.6,SNR=19						
LBMI	**Labuha**	**4.17**	**327**	P	**Pn**	**18 00 14.1**	**+0.4**
KDI	**Kendari**	**7.14**	**271**	P	**Pn**	**18 00 56.3**	**+1.7**
	37nm,1.4s,0.1nm						
KMSI	**Cibinong**	**7.46**	**309**	P	Pn	18 01 12.2	+13
MTN	**Manton Dam**	**8.74**	**171**	P	**Pn**	**18 01 17.8**	**+1.3**
	baz=8.8,SNR=29						
KDU	**Kakadu**	**8.89**	**163**	P	**Pn**	**18 01 18.5**	**0.0**
	baz=8.9,SNR=48						
MRSI	**Marisa**	**9.08**	**300**	P	**Pn**	**18 01 23.4**	**+2.2**
	29nm,1.0s,374nm						
BKSI	**Bulukumba**	**9.69**	**263**	P	Pn	18 01 36.1	+6.5
	29nm,1.7s,742nm						
KAPI	**Kappang**	**10.03**	**265**	Pn	**Pn**	**18 01 36.0**	**+1.8**
KAPI	**Kappang**	**10.03**	**265**	P	Pn	18 01 42.6	+8.4
	27nm,1.2s						
KAPI	**Kappang**	**10.03**	**265**	Pn	**Pn**	**18 01 36.0**	**+1.8**
	1.2nm,0.3s,baz=205,slow=20,SNR=9.0						
KAPI				LR	LR	18 05 11.0	
	comp=Z,685nm,21.9s,baz=102,slow=37						
PCI	**Palu**	**10.44**	**288**	S	Sn	18 03 56.8	+21
	baz=10,SNR=3.3						
FITZ	**Fitzroy Crossi**	**14.44**	**196**	Pn	**Pn**	**18 02 32.0**	**-2.5**
FITZ				Sn	Sn	18 05 08.3	-5.2
FITZ	**Fitzroy Crossi**	**14.44**	**196**	Pn	**Pn**	**18 02 32.0**	**-2.5**
	0.6nm,0.3s,baz=23,slow=11,SNR=14						
FITZ				Sn	Sn	18 05 08.3	-5.2
	0.1nm,0.3s,baz=224,slow=13,SNR=2.2						
FITZ				LR	LR	18 08 47.6	
	comp=Z,258nm,19.6s,baz=15,slow=40						
FITZ	**Fitzroy Crossi**	**14.44**	**196**	P	**Pn**	**18 02 34.3**	**-0.3**
	baz=15,SNR=28						
KHKI	**Kahang-Kahang**	**14.69**	**253**	P	**P**	**18 02 43.1**	**-0.5**
	61nm,1.5s,1μm						
BBKI	**Banjar Baru**	**14.92**	**272**	P	P	18 02 54.2	+8.0
IGBI	**Denpasar**	**15.25**	**252**	P	P	18 02 57.8	+7.9
WRAB	**Tennant Creek**	**16.30**	**165**	*eP*	**Pn**	**18 02 54.7**	**-4.3**
	121nm,1.5s						
WRA	**Warramunga Arr**	**16.31**	**165**	Pn	**Pn**	**18 02 55.6**	**-3.4**
WRA				Sn	**Sn**	**18 05 57.8**	**-1.2**
WRA	**Warramunga Arr**	**16.31**	**165**	Pn	**Pn**	**18 02 55.6**	**-3.4**
	0.9nm,0.3s,baz=351,slow=13,SNR=39						
WRA				Sn	**Sn**	**18 05 57.8**	**-1.2**
	0.4nm,0.3s,baz=340,slow=22,SNR=4.8						
COEN	**Coen**	**16.42**	**127**	*eP*	**Pn**	**18 02 59.9**	**-0.5**
	272nm,0.9s						
COEN	**Coen**	**16.42**	**127**	P	**Pn**	**18 03 00.2**	**-0.2**
	baz=16,SNR=13						
KKM	**Kota Kinabalu**	**16.91**	**307**	P	**Pn**	**18 03 06.3**	**-0.4**
	baz=17,SNR=4.1						
PMG	**Port Moresby**	**18.03**	**108**	*eP*	**P**	**18 03 21.6**	**+0.9**
	147nm,1.5s						
PMG	**Port Moresby**	**18.03**	**108**	P	**P**	**18 03 23.2**	**+2.5**
	63nm,1.7s,1μm						
PMG	**Port Moresby**	**18.03**	**108**	P	**P**	**18 03 21.8**	**+1.1**
	0.4nm,0.3s,baz=327,slow=10,SNR=6.8						
SJI	**Sawahan**	**18.26**	**258**	P	**Pn**	**18 03 28.2**	**+4.8**
	48nm,1.6s,1μm						
PWJI	**Pagerwojo**	**18.28**	**257**	P	Pn	18 03 31.8	+8.3
	31nm,1.4s,1μm						
STKI	**Sintang**	**18.76**	**282**	P	**Pn**	**18 03 31.4**	**+2.0**
QIS	**Mount Isa**	**18.90**	**150**	P	**P**	**18 03 29.6**	**-0.7**
	baz=19,SNR=26						
MBWA	**Marble Bar**	**19.52**	**209**	*eP*	**P**	**18 03 37.7**	**+0.7**
	79nm,1.5s						
AS31	**Alice Springs**	**19.80**	**169**	*eP*	**P**	**18 03 40.9**	**+0.8**
ASAR	**Alice Springs**	**19.80**	**169**	P	**P**	**18 03 40.9**	**+0.8**
ASAR				S	**Sn**	**18 07 23.2**	**-0.3**
ASAR	**Alice Springs**	**19.80**	**169**	P	**P**	**18 03 40.9**	**+0.8**
	2.6nm,0.3s,baz=346,slow=10,SNR=205						
ASAR				S	**Sn**	**18 07 23.2**	**-0.3**
	baz=351,slow=18,SNR=5.4						
KSM	**Kuching**	**20.24**	**286**	*eP*	**P**	**18 03 45.4**	**+0.5**
	58nm,1.0s						
KSM	**Kuching**	**20.24**	**286**	P	**P**	**18 03 45.9**	**+0.9**
	baz=20,SNR=4.9						
CTA	**Charters Tower**	**22.55**	**136**	P	**P**	**18 04 11.1**	**+1.3**
CTA	**Charters Tower**	**22.55**	**136**	P	**P**	**18 04 11.1**	**+1.3**
	14nm,0.6s,baz=318,slow=11,SNR=16						
CTAO	**Charters Tower**	**22.55**	**136**	*eP*	**P**	**18 04 10.9**	**+1.1**
	28nm,0.8s						
GUMO	**Guam**	**23.13**	**40**	LR	LR	18 11 30.5	
	comp=Z,148nm,19.1s,baz=74,slow=32						
QLP	**Quilpie**	**26.24**	**150**	P	**P**	**18 04 47.2**	**+2.7**
	baz=26,SNR=6.9						
STKA	**Stephens Creek**	**29.73**	**159**	P	**P**	**18 05 16.4**	**+0.8**
STKA	**Stephens Creek**	**29.73**	**159**	P	**P**	**18 05 16.4**	**+0.8**
	1.3nm,0.3s,baz=326,slow=10,SNR=9.4						
STKA	**Stephens Creek**	**29.73**	**159**	P	**P**	**18 05 16.4**	**+0.8**
	baz=30,SNR=8.1						
IPM	**Ipoh**	**29.98**	**286**	*eP*	**P**	**18 05 16.1**	**-2.0**
	29nm,0.8s						
WHN	**Wuhan**	**37.52**	**338**	*eP*	**P**	**18 06 24.6**	**+1.3**
CM31	**Chiang Mai Arr**	**37.79**	**307**	*eP*	**P**	**18 06 24.5**	**-1.3**
	3.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**37.79**	**307**	P	**P**	**18 06 26.6**	**+0.9**
CMA

MK31	**Makanchi Array**	65.75	326	*e*P		P	18 09 54.0	0.0
MKAR	**Makanchi Array**	65.75	326	P		P	18 09 54.1	+0.2
MKAR	**Makanchi Array**	65.75	326	P		P	18 09 54.1	+0.2
	comp=Z,7.7nm,0.6s,baz=123,slow=8.0,SNR=81							
KZA	**Kyzart**	67.49	319	P		P	18 10 06.4	+0.7
	SNR=5.5							
TKM2	**Tokmak 2**	67.67	320	P		P	18 10 06.7	+0.2
	SNR=5.4							
AAK	**Ala-Archa**	68.25	319	*e*P		P	18 10 09.8	-0.2
	comp=Z,5.2nm,1.0s							
AAK	**Ala-Archa**	68.25	319	P		P	18 10 10.8	+0.7
	comp=Z,3.5nm,0.9s,baz=176,slow=4.0,SNR=13							
AML	**Almayashu**	68.54	318	P		P	18 10 12.9	+0.8
	SNR=12							
USP	**Ospenovka**	68.54	320	P		P	18 10 12.2	+0.5
	SNR=14							
EKS2	**Erkin-Say**	68.73	319	*e*P		P	18 10 13.5	+0.5
	comp=Z,5.0nm,0.8s							
EKS2	**Erkin-Say**	68.73	319	P		P	18 10 13.7	+0.7
	SNR=7.6							
ZAA0	**Zalesovo Array**	68.95	333	*e*P		P	18 10 13.5	-0.5
ZALV	**Zalesovo Beam**	68.95	333	P		P	18 10 13.9	-0.1
ZALV	**Zalesovo Beam**	68.95	333	P		P	18 10 13.9	-0.1
	comp=Z,7.3nm,0.9s,baz=117,slow=4.4,SNR=26							
KURK	**Kurchatov**	69.99	328	*e*P		P	18 10 20.6	+0.1
	comp=Z,32nm,0.9s							
KKAR	**Karatay Array**	71.08	318	*e*P		P	18 10 27.2	-0.1
	comp=Z,4.6nm,0.9s							
VNDA	**Vanda**	75.28	173	P		P	18 10 52.3	+0.8
VNDA	**Vanda**	75.28	173	P		P	18 10 52.3	+0.8
	comp=Z,0.6nm,0.7s,baz=331,slow=5.7,SNR=3.1							
VNDA				LR		LR	18 41 35.7	
	comp=Z,64nm,18.4s,baz=217,slow=34							
BVAR	**Borovoye Array**	75.56	328	P		P	18 10 53.7	+0.2
BVAR	**Borovoye Array**	75.56	328	P		P	18 10 53.7	+0.2
	comp=Z,9.6nm,0.9s,baz=121,slow=7.4,SNR=27							
BRVK	**Borovoye**	75.63	328	*e*P		P	18 10 53.0	-0.9
	comp=Z,19nm,1.0s							
MAW	**Mawson**	77.50	201	LR		LR	18 41 05.0	
	comp=Z,98nm,21.2s,baz=143,slow=32							
ABKAR	**Akbulak array**	80.16	321	*e*P		P	18 11 19.1	-0.1
	comp=Z,6.1nm,0.7s							
GAMB	**Gambell**	80.39	23	*e*P		P	18 11 19.1	-1.0
	comp=Z,4.7nm,1.2s							
KBZ	**Khabaz**	90.58	314	P		P	18 12 11.6	+0.3
KBZ	**Khabaz**	90.58	314	P		P	18 12 11.6	+0.3
	comp=Z,1.7nm,0.7s,baz=61,slow=8.3,SNR=5.0							
ILAR	**Eielson Array**	90.88	25	P		P	18 12 12.3	+0.1
ILAR	**Eielson Array**	90.88	25	P		P	18 12 12.3	+0.1
	comp=Z,0.5nm,0.8s,baz=278,slow=4.7,SNR=6.2							
ILAR				LR		LR	18 48 22.0	
	comp=Z,23nm,20.2s,baz=104,slow=32							
KMBO	**Kilima Mbogo**	92.44	269	LR		LR	18 49 45.1	
	comp=Z,76nm,18.8s,baz=95,slow=33							
INK	**Inuvik**	96.32	22	P		P	18 12 36.5	-0.6
INK	**Inuvik**	96.32	22	P		P	18 12 36.5	-0.6
	comp=Z,0.6nm,0.7s,baz=308,slow=4.7,SNR=4.5							
BRTR	**Keskin Array B**	97.36	309	P		P	18 12 42.2	-0.6
BRTR	**Keskin Array B**	97.36	309	P		P	18 12 42.2	-0.6
	comp=Z,0.7nm,0.8s,baz=141,slow=8.0,SNR=4.4							
TORD	**Torodi Ar. Bea**	127.99	283	PKP		PKPdf	18 18 15.9	+0.1
TORD	**Torodi Ar. Bea**	127.99	283	PKP		PKPdf	18 18 15.9	+0.1
	comp=Z,1.8nm,0.7s,baz=70,slow=1.8,SNR=13							
CPUP	**Villa Florida**	148.92	168	PKPbc		PKPbc	18 18 56.5	-1.0
CPUP	**Villa Florida**	148.92	168	PKPbc		PKPbc	18 18 56.5	-1.0
	comp=Z,0.9nm,0.5s,baz=155,slow=3.1,SNR=5.5							
ATAH	**Atahualpa**	149.73	112	PKPbc		PKPab	18 19 03.4	-2.3
ATAH	**Atahualpa**	149.73	112	PKPbc		PKPab	18 19 03.4	-2.3
	comp=Z,3.7nm,0.7s,baz=33,slow=8.3,SNR=3.9							
LPAZ	**La Paz**	153.05	139	*e*PKPdf		PKPdf	18 18 59.5	-1.4
LPAZ				PKPbc		PKPbc	18 19 09.4	+1.2
LPAZ				PKPab		PKPab	18 19 19.9	+0.4
LPAZ	**La Paz**	153.05	139	PKPbc		PKPbc	18 19 09.4	+1.2
	comp=Z,1.5nm,0.8s,baz=209,slow=3.8,SNR=5.8							
LPAZ				PKPab		PKPab	18 19 19.9	+0.4
	comp=Z,3.3nm,1.0s,baz=181,slow=3.1,SNR=4.4							

*ISCJB **20** 18:02:21.3±0.4,50.13°N±0.03°×18.38°E±0.03°,h0km, Error ellipse: s-maj=4.4km s-min=2.4km az=15.1*
*WAR **20** 18:02:22.6,50.06°N×18.44°E*
*IPEC **20** 18:02:22.4±0.2,50.05°N×18.46°E,h0km±2km,ML2.0/3, Error ellipse: s-maj=2.1km s-min=1.1km az=160.0*
*CSEM **20** 18:02:22.6±0.2,50.10°N×18.35°E,h2km,ML2.8/8, Error ellipse: s-maj=5.9km s-min=3.1km az=10.0*
*VIE **20** 18:02:22.8±0.6,49.68°N×18.54°E,h0km,mb2.0/2,ML2.5/4, Error ellipse: s-maj=3.9km s-min=2.1km az=88.0 27 km SE of Ostrava Suspected Mining induced.*
*PRU **20** 18:02:23.8,50.06°N×18.34°E,h0km*

ISC 20 18:02:22.5±0.8,50.06°N±0.03°×18.40°E±0.02,h0km,n51,
σ1s02/84,14C-4D,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	0.13	280	⇓*i*Pg	Pg	18 02 26.6	+1.6
RAC				*e*Sg	Sg	18 02 29.4	+2.8
OKC	**Ostrava-Krasne**	0.28	216	*e*PG	Pg	18 02 28.6	+0.9
OKC				*e*SG	Sg	18 02 32.5	+1.2
	comp=Z,317nm,0.9s						
OKC	**Ostrava-Krasne**	0.28	216	*e*Pg	Pg	18 02 28.3	+0.6
	baz=43						
OKC				Sg	Sg	18 02 32.5	+1.2
	317nm,0.9s						
MORC	**Moravsky Berou**	0.62	243	⇓*i*P	Pg	18 02 34.7	+0.4
MORC				S	Sb	18 02 44.4	-1.1
MORC	**Moravsky Berou**	0.62	243	⇓*i*P	Pg	18 02 34.7	+0.4
MORC				*e*Sg	Sg	18 02 42.6	+0.2
	19nm,0.3s,baz=65						
MORC				S	Sb	18 02 44.4	-1.1
OJC	**Ojcow**	0.92	80	*e*Pg	Pg	18 02 39.4	-0.6
OJC				*e*Sg	Sg	18 02 52.2	+0.3
OJC	**Ojcow**	0.92	80	*e*Pg	Pg	18 02 39.3	-0.7
	baz=260						
OJC				*e*Sg	Sg	18 02 52.2	+0.3
KRLC	**Kraliky**	1.04	271	*e*PG	Pg	18 02 41.8	-0.6
KRLC				*e*SG	Sg	18 02 56.0	+0.2
KRLC	**Kraliky**	1.04	271	Pg	Pg	18 02 41.8	-0.6
KRLC				Sg	Sg	18 02 56.0	+0.2
DPC	**Dobruska-Polom**	1.36	283	*e*PG	Pg	18 02 48.2	-0.4
DPC				*e*SG	Sb	18 03 06.6	-0.3
	comp=Z,58nm,0.5s						
DPC	**Dobruska-Polom**	1.36	283	Pg	Pg	18 02 48.2	-0.4
DPC				*e*Sg	Sb	18 03 06.5	-0.3
	baz=102						
VRAC	**Vranov**	1.39	238	⇑*i*P	Pn	18 02 48.4	-0.7
VRAC	**Vranov**	1.39	238	⇑*i*P	Pn	18 02 48.4	-0.7
VRAC				S	Sg	18 03 07.1	0.0
NIE	**Niedzica**	1.40	117	*e*Pg	Pb	18 02 49.8	+0.3
NIE				*e*		18 03 09.2	
NIE				*e*Sg	Sn	18 03 09.7	+1.2
NIE	**Niedzica**	1.40	117	*e*Pg	Pb	18 02 49.8	+0.3
NIE				*e*Sg	Sn	18 03 09.7	+1.2
KSP	**Ksiaz**	1.56	301	*e*Pn	Pn	18 02 50.8	-0.6
KSP				*e*Sn	Sg	18 03 13.5	+1.1
KSP	**Ksiaz**	1.56	301	*e*Pg	Pg	18 02 52.7	+0.5
KSP	**Ksiaz**	1.56	301	*e*Pn	Pn	18 02 50.7	-0.6
KSP	**Ksiaz**	1.56	301	*e*Pg	Pg	18 02 52.7	+0.5
KSP				*e*Sg	Sg	18 03 12.9	+0.5
UPC	**Upice**	1.59	287	*e*PG	Pn	18 02 52.0	+0.1
UPC				*e*SG	Sn	18 03 12.8	-0.4
	comp=Z,14nm,0.5s						
UPC	**Upice**	1.59	287	Pg	Pn	18 02 52.0	+0.1
UPC				Sg	Sn	18 03 12.8	-0.4
	14nm,0.5s						
VYHS	**Vyhne**	1.60	169	*e*PN	Pg	18 02 53.5	+0.5
VYHS				*e*SN	Sg	18 03 13.6	-0.1
VYHS	**Vyhne**	1.60	169	*e*Pn	Pg	18 02 53.5	+0.5
VYHS				*e*Sn	Sg	18 03 13.6	-0.1
KRUC	**Moravsky**	1.64	233	*e*Pn	Pn	18 02 52.6	0.0
	baz=53						
KRUC				*e*Sg	Sb	18 03 14.7	-0.1
	16nm,0.5s,baz=53						
CRVS	**Cervenica-Dubn**	2.31	119	*e*PN	Pb	18 03 04.9	-0.1
CRVS	**Cervenica-Dubn**	2.31	119	*e*Pn	Pb	18 03 04.9	-0.1
PSZ	**Piszkesteto**	2.36	155	⇑*i*P	Pn	18 03 03.5	+1.0
PSZ	**Piszkesteto**	2.36	155	⇑*i*P	Pn	18 03 03.5	+1.0
PSZ				S	Sg	18 03 37.3	-1.0
PRU	**Pruhonice**	2.49	270	*e*PN	Pn	18 03 02.9	-1.3
PRU				*e*PG	Pb	18 03 07.1	-0.9
PRU				*e*SG	Sg	18 03 40.8	-1.5
	comp=Z,6.9nm,0.5s						
PRU	**Pruhonice**	2.49	270	Pn	Pn	18 03 02.9	-1.3
PRU				Sg	Sg	18 03 40.8	-1.5
	6.9nm,0.5s						
CONA	**Conrad Observa**	2.71	219	⇓*i*Pg	Pb	18 03 10.6	-1.2
CONA				⇑*i*Sg	Sb	18 03 45.1	-0.5
	4.2nm,0.4s						
CONA	**Conrad Observa**	2.71	219	Pg	Pb	18 03 10.6	-1.2
KOLS	**Kolonicke sedl**	2.77	113	*e*PN	Pb	18 03 13.0	+0.2
KOLS	**Kolonicke sedl**	2.77	113	*e*Pn	Pb	18 03 13.0	+0.2
KWP	**Kalwaria Pacla**	2.82	97	⇑*i*P	Pn	18 03 06.7	-2.1
KWP	**Kalwaria Pacla**	2.82	97	⇑*i*P	Pn	18 03 06.7	-2.1
BRG	**Berggiesshubel**	2.96	288	PG	Pb	18 03 17.3	+1.3
BRG				SG	Sg	18 03 59.7	+2.3
	5.5nm,0.7s						
KHC	**Kasperske Hory**	3.27	255	*e*PN	Pn	18 03 14.3	-0.7
KHC				*e*PG	Pb	18 03 22.6	+1.3
KHC				*e*SN	Sn	18 03 56.0	+1.4
KHC				*e*SG	Sg	18 04 05.3	-2.1
	comp=Z,9.7nm,0.5s						
KHC	**Kasperske Hory**	3.27	255	Pn	Pn	18 03 14.3	-0.7
KHC	**Kasperske Hory**	3.27	255	Pg	Pb	18 03 22.6	+1.3
KHC				Sg	Sg	18 04 05.3	-2.1
	9.7nm,0.5s						
MOA	**Molln**	3.51	232	⇑*i*Sg	Sg	18 04 13.6	-1.5
	11nm,0.6s						
MOA	**Molln**	3.51	232	Sg	Sg	18 04 13.6	-1.5
	11nm,0.6s						
CLL	**Collm**	3.65	292	*i*Pg	Pg	18 03 32.8	+0.5
CLL				*e*Sg	Sg	18 04 20.0	+0.4
	comp=Z,5.0nm,0.5s						
NKC	**Novy Kostel**	3.83	275	*e*SG	Sg	18 04 24.2	-1.2
	comp=Z,10.0nm,0.6s						
NKC	**Novy Kostel**	3.83	275	Sg	Sg	18 04 24.2	-1.2
	comp=Z,10.0nm,0.6s						
DRGR		4.35	137	⇑*i*P	Pn	18 03 29.6	-0.3
DRGR		4.35	137	⇑*i*P	Pn	18 03 29.6	-0.3
BZS	**Buzias**	4.95	153	⇑*i*P	Pn	18 03 39.2	+1.2
BZS	**Buzias**	4.95	153	⇑*i*P	Pn	18 03 39.2	+1.2
BURAR	**Bucovina Array**	5.13	116	⇑*i*P	Pn	18 03 41.3	+0.8
BURAR	**Bucovina Array**	5.13	116	⇑*i*P	Pn	18 03 41.3	+0.8

*ISCJB **20** 18:03:02.4±0.2,43.73°N±0.01°×105.33°W±0.02,h0km, mb4.1/3,MS3.0/1,Error ellipse: s-maj=2.3km s-min=1.9km az=171.0*
*NEIC **20** 18:03:02.5±0.4,43.76°N×105.19°W,h0km,ML3.4, Error ellipse: s-maj=4.9km s-min=4.4km az=90.0,Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
*IDC **20** 18:03:02.5±1.7,43.76°N×105.52°W,h0km,mb4.0/3, mb1 3.8/8,mb1mx3.6/30,mbtmp3.6/8,ML3.0/4,MS3.1/6, Ms1 3.1/6,ms1mx2.7/47,Error ellipse: s-maj=51.6km s-min=7.9km az=148.0*

ISC 20 18:03:02.2±0.6,43.75N±0.02×105.28W±0.02,h0km,n134,
σ1s00/144,mb4.0/3,41C-43D,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I23A	**Meade Ranch, G**	0.25	328	⇓P	Pb	18 03 09.1	-0.7
	baz=0.3,SNR=117						
J23A	**Dilts Ranch, B**	0.40	210	⇓P	Pg	18 03 10.1	+0.2
	baz=0.4,SNR=118						
J23A				⇓S	Sg	18 03 14.6	-0.3
	baz=0.4						
I24A	**Kuemmerle Ranc**	0.49	76	P	Pb	18 03 13.2	-0.5
	baz=0.4,SNR=67						
I24A				⇑S	Sb	18 03 20.8	-0.8
	baz=0.4						
J24A	**Dixon Ranch, L**	0.61	133	⇓P	Pg	18 03 14.4	+0.4
	baz=0.6,SNR=18						
J24A				⇑S	Sb	18 03 23.9	-1.2
	baz=0.6						
H23A	**Clabaugh Cattl**	0.82	354	⇓P	Pb	18 03 19.1	-0.4
	baz=0.8,SNR=21						
H23A				⇑S	Sb	18 03 30.9	-0.2
	baz=0.8						
I22A	**9 Mile Ranch,**	0.88	280	⇓P	Pg	18 03 19.4	+0.2
	baz=0.9,SNR=96						
I22A				⇑S	Sg	18 03 30.7	+0.1
	baz=0.9						
J22A	**Midwest**	0.93	249	⇑P	Pg	18 03 19.5	-0.6
	baz=1.0,SNR=39						
K23A	**Bowen Ranch, D**	1.02	194	⇓P	Pg	18 03 22.0	+0.1
	baz=1.1						
K23A				⇑S	Sg	18 03 34.9	-0.2
	baz=1.1						
K24A	**Anderson Ranch**	1.08	162	⇑P	Pg	18 03 22.6	-0.3
	baz=1.1,SNR=103						
K24A				⇓S	Sb	18 03 38.2	-0.4
	baz=1.1						
H24A	**Dirks Ranch, A**	1.13	27	⇓P	Pb	18 03 24.5	-0.2
	baz=1.1,SNR=46						
H24A				⇑S	Sn	18 03 41.5	-0.2
	baz=1.1						
H22A	**Clearmont**	1.15	318	⇓P	Pb	18 03 24.8	-0.2
	baz=1.2,SNR=45						
K22A	**Casper**	1.43	220	⇑P	Pn	18 03 28.1	-1.5
	baz=1.5,SNR=57						
K22A				⇑S	Sb	18 03 48.1	-0.4
	baz=1.5						
G23A	**Biddle**	1.46	357	⇓P	Pb	18 03 30.3	0.0
	baz=1.4,SNR=77						
I21A	**Big Trails, Te**	1.46	273	⇑P	Pn	18 03 28.8	-1.2
	baz=1.5,SNR=43						
I21A				⇑S	Sg	18 03 48.9	-0.2
	baz=1.5						
K25A	**Mack Ranch, Ha**	1.53	137	⇑P	Pb	18 03 31.5	-0.1
	baz=1.5,SNR=46						
H21A	**Big Horn, Sher**	1.54	305	⇑P	Pb	18 03 31.5	-0.3
	baz=1.6,SNR=27						
H21A				⇓S	Sg	18 03 52.8	+1.0
	baz=1.6						
J21A	**Lysite**	1.62	256	⇑P	Pn	18 03 31.5	-0.8
	baz=1.7,SNR=26						
J21A				⇓S	Sn	18 03 53.7	-0.3
	baz=1.7						
G22A	**Birney**	1.64	334	⇑P	Pg	18 03 33.6	-0.1
	baz=1.7,SNR=34						
L23A	**Garrett**	1.66	191	P	Pn	18 03 32.4	-0.4
	baz=1.7,SNR=61						
L23A				⇑Sb	Sg	18 03 56.1	+0.5
	baz=1.7						
G24A	**Alzada**	1.70	21	⇓P	Pg	18 03 34.7	0.0
	baz=1.7,SNR=19						
L24A	**Wheatland**	1.72	171	⇓P	Pn	18 03 33.6	-0.1
	baz=1.7,SNR=23						
K21A	**Alcova**	1.82	233	P	Pn	18 03 35.3	+0.3
	baz=1.9,SNR=100						
K21A				⇓S	Sn	18 03 58.7	-0.2
	baz=1.9						
K26A	**Motz Farm, Whi**	1.86	124	⇑P	Pb	18 03 37.0	-0.1
	baz=1.8,SNR=9.2						
L25A	**Engebretsen Ra**	1.86	148	⇑P	Pb	18 03 36.6	-0.6
	baz=1.8,SNR=31						
L25A				⇓Sb	Sg	18 04 02.9	+0.9
	baz=1.8						
L22A	**Ellis Ranch, M**	1.91	207	⇑P	Pn	18 03 36.6	+0.3
	baz=2.0,SNR=33						
F23A	**Volborg**	1.98	357	⇓P	Pb	18 03 38.3	-0.8
	baz=2.0,SNR=32						
F23A				⇓S	Sb	18 04 05.2	+0.8
	baz=2.0						
G21A	**Lodge Grass**	2.02	318	⇑P	Pb	18 03 38.8	-1.1
	baz=2.1,SNR=25						
I20A	**Worland**	2.07	277	⇓P	Pn	18 03 39.3	+0.9
	baz=2.1,SNR=96						
J20A	**Shoshoni**	2.08	260	⇑Pb	Pb	18 03 40.5	-0.3
	baz=2.1						
H20A	**Greybull**	2.09	292	⇑P	Pn	18 03 39.4	+0.7
	baz=2.1,SNR=23						
H20A				⇑S	Sb	18 04 07.2	-0.5
	baz=2.1						
F22A	**Rosebud**	2.15	341	⇑P	Pn	18 03 40.5	+1.1
	baz=2.2,SNR=34						
F24A	**Ekalaka**	2.18	16	⇓P	Pb	18 03 42.1	-0.5
	baz=2.2						
M23A	**Laramie**	2.30	188	⇑Pb	Pb	18 03 43.5	-1.2
	baz=2.3						
M24A	**Cheyenne**	2.30	171	⇓Pb	Pb	18 03 44.6	-0.1
	baz=2.3						
L21A	**Rawlins**	2.35	221	⇓P	Pn	18 03 43.1	+0.7
	baz=2.4,SNR=25						
L26A	**Underwood Farm**	2.35	136	⇓Pb	Pb	18 03 45.5	-0.1
	baz=2.3						
PHWY	**Pilot Hill**	2.45	183	*e*P	Pn	18 03 44.5	+0.8
F21A	**Absaloka Mine,**	2.46	328	⇓P	Pn	18 03 44.3	+0.7
	baz=2.5						
K27A	**Flueckinger Fa**	2.46	114	⇓P	Pb	18 03 45.6	-1.7
	baz=2.4						
M25A	**Palm-Egli Farm**	2.48	158	⇓P	Pn	18 03 45.3	+1.2
	baz=2.5						
K20A	**Yellowstone Ra**	2.49	245	⇑Pb	Pb	18 03 46.8	-1.2
	baz=2.5						
M22A	**Cedar Creek Ra**	2.54	203	⇑P	Pn	18 03 46.4	+1.5
	baz=2.6						
G20A	**Bridger**	2.56	306	⇓P	Pn	18 03 45.5	+0.4
	baz=2.6,SNR=18						
M21A	**Separation Pea**	2.63	216	⇓P	Pn	18 03 47.8	+1.6
	baz=2.7						
I19A	**Meeteetse**	2.70	277	⇑P	Pn	18 03 48.4	+1.3
	baz=2.8,SNR=30						
E22A	**Miles City**	2.73	350	⇓P	Pn	18 03 48.3	+0.9
	baz=2.7						
E23A	**Ismay**	2.75	360	⇑P	Pn	18 03 48.8	+1.2
	baz=2.7,SNR=6.3						
K19A	**Absolon Red Bu**	2.76	252	⇓P	Pn	18 03 49.4	+1.4
	baz=2.8						
J19A	**Crowheart**	2.79	261	⇓Pb	Pb	18 03 52.3	-0.7
	baz=2.8						
J19A				⇑Sb	Sb	18 04 28.9	+1.1
	baz=2.8						
H19A	**Powell**	2.82	290	⇓P	Pn	18 03 49.5	+0.8
	baz=2.9						
N23A	**Red Feather La**	2.89	190	⇓Sb	Sb	18 04 31.9	+1.0
	baz=2.9						
E24A	**Baker**	2.90	13	⇓P	Pn	18 03 51.2	+1.5
	baz=2.9,SNR=19						
F20A	**Billings**	2.90	316	⇑P	Pn	18 03 50.3	+0.5
	baz=2.9,SNR=6.5						
E21A	**Keefer Ranch,**	3.07	336	⇓P	Pn	18 03 52.7	+0.7
	baz=3.1						
M20A	**Sweetwater, Wa**	3.11	225	⇑Sb	Sb	18 04 38.4	+1.2
	baz=3.2						
RLMT	**Red Lodge**	3.17	297	*e*P	Pn	18 03 54.3	+0.7
RLMT	**Red Lodge**	3.17	297	⇑P	Pn	18 03 54.2	+0.7
	baz=3.2						
PDAR	**Pinedale Array**	3.27	254	Pn	Pn	18 03 56.1	+1.1
PDAR				Lg	Lg	18 04 39.2	
PDAR	**Pinedale Array**	3.27	254	Pn	Pn	18 03 56.1	+1.1
	10nm,0.3s,baz=74,slow=16,SNR=17						
PDAR				Lg	Lg	18 04 39.2	
	15nm,0.3s,baz=64,slow=10,SNR=11						
H18A	**Shoshone NF, C**	3.29	288	⇑P	Pn	18 03 55.7	+0.5
	baz=3.3						
F19A	**Roth Farm, Mol**	3.35	310	⇑P	Pn	18 03 57.0	+1.0
	baz=3.4,SNR=20						
E20A	**Meyer Farm, Mu**	3.42	325	⇓P	Pn	18 03 57.6	+0.8
	baz=3.4						
D23A	**Lindsay**	3.43	1	⇓P	Pn	18 03 58.5	+1.5
	baz=3.4,SNR=8.7						
D24A	**Glendive**	3.43	11	⇑P	Pn	18 03 59.2	+2.1
	baz=3.4						
G18A	**Lazy EL Ranch,**	3.44	299	⇓P	Pn	18 03 58.1	+0.8
	baz=3.5,SNR=13						
D22A	**Cohagen**	3.46	350	⇓P	Pn	18 03 58.3	+0.9
	baz=3.5						
D21A	**La Casta Ranch**	3.53	341	⇓P	Pn	18 03 59.5	+1.0
	baz=3.5						
E19A	**Rath Farm, Rou**	3.68	319	⇑P	Pn	18 04 00.6	+0.2
	baz=3.7						
OGNE	**Ogallala**	3.69	138	*e*P	Pn	18 04 01.5	+0.9
LKWY	**Lake**	3.77	284	*e*P	Pn	18 04 02.9	+1.0
LOHW	**Long Hollow**	3.86	270	*e*P	Pn	18 04 04.0	+0.9
ISCO	**Idaho Springs**	3.95	184	*e*P	Pn	18 04 05.0	+0.5
MOOW	**Moose Ponds**	3.96	272	*e*P	Pn	18 04 03.8	-0.6
SNOW	**Snow King Moun**	3.99	268	*e*P	Pn	18 04 06.9	+2.1
C23A	**Lambert**	4.06	1	⇑P	Pn	18 04 07.6	+2.0
	baz=4.0,SNR=17						
REDW	**Red Top Meadow**	4.07	266	*e*P	Pg	18 04 18.2	-2.0
IMW	**Indian Meadow**	4.10	274	*e*P	Pn	18 04 06.6	+0.2
TPAW	**Teton Pass**	4.13	268	*e*P	Pn	18 04 07.8	+1.0
YMR	**Madison River**	4.19	285	*e*P	Pn	18 04 07.8	+0.2
AHID	**Auburn Hatcher**	4.36	259	*e*P	Pb	18 04 22.2	+2.3
RRI2	**Red Ridge**	4.41	267	*e*P	Pn	18 04 11.6	+0.9
P26A	**Davis Ranch, A**	4.43	160	⇑P	Pn	18 04 11.5	+0.7
	baz=4.4,SNR=11						
QLMT	**Earthquake Lak**	4.55	286	*e*P	Pn	18 04 15.0	+2.5
SMCO	**Snowmass**	4.74	196	*e*P	Pb	18 04 27.5	+1.0
BOZ	**Bozeman (W)**	4.91	295	*e*P	Pn	18 04 08.9	-8.5
HWUT	**Hardware Ranch**	5.10	247	*e*P	Pn	18 04 20.4	+0.3
	18nm,0.5s						
D17A	**Six Diamond Ra**	5.11	314	⇓P	Pn	18 04 20.7	+0.6
	baz=5.1,SNR=25						
EGMT	**Eagleton**	5.30	325	*e*P	Pn	18 04 19.2	-3.4
	32nm,0.5s						
DLMT	**Dillon**	5.47	290	*e*P	Pn	18 04 27.1	+1.9
	6.3nm,0.4s						
HRY	**Holter Researc**	5.49	305	*e*P	Pn	18 04 26.7	+1.3
	23nm,0.5s						
LRM	**Limekiln Ridge**	5.51	295	*e*P	Pn	18 04 27.9	+2.1
	36nm,0.4s						
DAU	**Daniels Canyon**	5.56	235	*e*P	Pn

comp=Z,37nm,18.2s,baz=18,slow=37

ARCES	**ARCES Array B**	61.41	18	P	**P**	18 13 19.0	-0.7
ARCES	**ARCES Array B**	61.41	18	P	**P**	18 13 19.0	-0.7
	3.4nm,0.9s,baz=339,slow=6.5,SNR=8.8						
ZALV	**Zalesovo Beam**	82.30	354	P	**P**	18 15 25.1	-0.1
ZALV	**Zalesovo Beam**	82.30	354	P	**P**	18 15 25.1	-0.1
	0.6nm,0.5s,baz=353,slow=4.6,SNR=5.1						
MKAR	**Makanchi Array**	89.59	355	P	**P**	18 16 01.3	-0.3
MKAR	**Makanchi Array**	89.59	355	P	**P**	18 16 01.3	-0.3
	0.3nm,0.6s,baz=20,slow=3.7,SNR=4.6						

*CSEM **20** 18:04:05.9±0.1,38.52N±21.64E,h9km,ML2.9/9, Error ellipse: s-maj=3.1km s-min=2.7km az=121.0*
*ATH **20** 18:04:05.6,38.51N±21.60E,h15km,MD3.4/23*
*ISCJB **20** 18:04:06.4±0.4,38.52N±0.02×21.66E±0.03,h16km±5km, Error ellipse: s-maj=3.6km s-min=3.1km az=25.0*
*THE **20** 18:04:06.3,38.52N±21.68E,h16km,ML2.9/9, Error ellipse: s-maj=0.9km s-min=0.6km az=129.0*

ISC 20 18:04:06.0±0.9,**38.52N**±0.02×**21.65E**±0.02,**h18**km±3km, **n91**,σ0§**54**/139, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EFP	**Efpalio**	**0.22**	**114**	P	**Pg**	**18 04 11.0**	**-0.3**
EFP				S	**Sb**	**18 04 15.0**	**+0.3**
EFP	**Efpalio**	**0.22**	**114**	*e*PB	**Pg**	**18 04 11.0**	**-0.3**
EFP				*e*SB	**Sb**	**18 04 15.1**	**+0.3**
EFP	**Efpalio**	**0.22**	**114**	P	**Pg**	**18 04 11.0**	**-0.3**
EFP				S	**Sb**	**18 04 15.0**	**+0.3**
UPR	**University Cam**	**0.26**	**155**	P	**Pg**	**18 04 11.6**	**-0.2**
UPR				S	**Sb**	**18 04 16.4**	**+0.4**
UPR	**University Cam**	**0.26**	**155**	*e*PB	**Pg**	**18 04 11.8**	**0.0**
UPR				*e*SB	**Sb**	**18 04 16.1**	**+0.1**
UPR	**University Cam**	**0.26**	**155**	P	**Pg**	**18 04 11.8**	**0.0**
UPR				S	**Sg**	**18 04 15.9**	**+0.1**
PSA1	**Psathopyrgos**	**0.27**	**136**	*e*PB	**Pg**	**18 04 11.7**	**-0.3**
PSA1				*e*SB	**Sb**	**18 04 16.4**	**+0.1**
TRIZ	**Trizonia**	**0.36**	**114**	P	**Pg**	**18 04 13.2**	**-0.4**
TRIZ				S	**Sg**	**18 04 18.9**	**+0.1**
TRIZ	**Trizonia**	**0.36**	**114**	*e*PB	**Pg**	**18 04 13.3**	**-0.4**
TRIZ				*e*SB	**Sb**	**18 04 19.5**	**+0.1**
TRIZ	**Trizonia**	**0.36**	**114**	*e*Pb	**Pg**	**18 04 13.3**	**-0.4**
TRIZ				S	**Sg**	**18 04 18.9**	**+0.1**
TRIZ				*e*Sb	**Sb**	**18 04 19.5**	**+0.1**
LAKA	**Lakka**	**0.38**	**137**	P	**Pg**	**18 04 13.4**	**-0.5**
LAKA				S	**Sg**	**18 04 19.6**	**+0.3**
LAKA	**Lakka**	**0.38**	**137**	*e*PB	**Pg**	**18 04 13.4**	**-0.5**
LAKA				*e*SB	**Sg**	**18 04 19.6**	**+0.3**
LAKA	**Lakka**	**0.38**	**137**	P	**Pg**	**18 04 13.6**	**-0.3**
LAKA				S	**Sg**	**18 04 19.2**	**-0.1**
LAKA				*e*Sb	**Sg**	**18 04 19.6**	**+0.3**
KALE	**Kalithea**	**0.41**	**108**	P	**Pg**	**18 04 13.8**	**-0.6**
KALE				S	**Sg**	**18 04 19.8**	**-0.3**
KALE	**Kalithea**	**0.41**	**108**	*e*PB	**Pg**	**18 04 13.9**	**-0.5**
KALE				*e*SB	**Sb**	**18 04 20.6**	**0.0**
KALE	**Kalithea**	**0.41**	**108**	P	**Pg**	**18 04 13.9**	**-0.5**
KALE				S	**Sg**	**18 04 19.8**	**-0.3**
KALE				*e*Sb	**Sb**	**18 04 20.6**	**0.0**
EVR	**Evrytania**	**0.42**	**17**	P	**Pg**	**18 04 14.2**	**-0.4**
EVR				S	**Sg**	**18 04 20.7**	**+0.1**
EVR	**Evrytania**	**0.42**	**17**	*e*PB	**Pg**	**18 04 14.3**	**-0.4**
EVR				*e*SB	**Sg**	**18 04 20.6**	**0.0**
EVR	**Evrytania**	**0.42**	**17**	P	**Pg**	**18 04 14.2**	**-0.4**
EVR				*e*Sb	**Sg**	**18 04 20.6**	**0.0**
RLS	**Riolos of Patr**	**0.48**	**197**	P	**Pb**	**18 04 15.9**	**0.0**
RLS				S	**Sb**	**18 04 23.8**	**+1.2**
RLS	**Riolos of Patr**	**0.48**	**197**	*e*PB	**Pg**	**18 04 15.1**	**-0.6**
RLS				*e*SB	**Sg**	**18 04 21.9**	**-0.3**
RLS	**Riolos of Patr**	**0.48**	**197**	*e*Pb	**Pg**	**18 04 15.1**	**-0.6**
RLS	**Riolos of Patr**	**0.48**	**197**	P	**Pb**	**18 04 15.9**	**0.0**
RLS				*e*Sb	**Sg**	**18 04 21.9**	**-0.3**
RLS				S	**Sb**	**18 04 23.5**	**+0.9**
KLV	**Kalavryta, Ach**	**0.61**	**140**	*e*PB	**Pg**	**18 04 17.2**	**-1.0**
KLV				*e*SN	**Sg**	**18 04 24.6**	**-1.9**
KLV	**Kalavryta, Ach**	**0.61**	**140**	*e*Pn	**Pg**	**18 04 17.2**	**-1.0**
KLV				*e*Sn	**Sg**	**18 04 24.6**	**-1.9**
MAKR	**Makrakomi, Fth**	**0.62**	**37**	P	**Pg**	**18 04 18.3**	**-0.1**
MAKR	**Makrakomi, Fth**	**0.62**	**37**	P	**Pb**	**18 04 18.3**	**-0.1**
DSF	**Desfina**	**0.70**	**98**	P	**Pg**	**18 04 18.9**	**-0.9**
DSF				S	**Sg**	**18 04 19.1**	**0.0**
DSF	**Desfina**	**0.70**	**98**	P	**Pg**	**18 04 18.9**	**-0.9**
DSF				S	**Sg**	**18 04 29.1**	**0.0**
AGG	**Agios Georgios**	**0.73**	**46**	P	**Pg**	**18 04 19.6**	**-0.9**
AGG				S	**Sg**	**18 04 29.9**	**-0.3**
AGG	**Agios Georgios**	**0.73**	**46**	*e*PN	**Pg**	**18 04 20.3**	**-0.2**
AGG				*e*SN	**Sb**	**18 04 31.2**	**+1.2**
AGG	**Agios Georgios**	**0.73**	**46**	P	**Pg**	**18 04 20.1**	**-0.4**
AGG				S	**Sg**	**18 04 29.9**	**-0.3**
AGG				*e*Sn	**Sb**	**18 04 31.2**	**+1.2**
KFL	**Anninata**	**0.79**	**239**	P	**Pb**	**18 04 21.3**	**+0.1**
KFL				S	**Sn**	**18 04 33.4**	**-0.2**
KFL	**Anninata**	**0.79**	**239**	P	**Pb**	**18 04 21.3**	**+0.1**
KFL				S	**Sn**	**18 04 33.4**	**-0.2**
GUR	**Goura**	**0.80**	**136**	P	**Pg**	**18 04 20.8**	**-0.8**
GUR				S	**Sg**	**18 04 31.9**	**-0.3**
GUR	**Goura**	**0.80**	**136**	*e*PN	**Pg**	**18 04 21.2**	**-0.4**
GUR				*e*SN	**Sb**	**18 04 33.0**	**+1.2**
GUR	**Goura**	**0.80**	**136**	P	**Pg**	**18 04 20.9**	**-0.7**
GUR	**Goura**	**0.80**	**136**	*e*Pn	**Pg**	**18 04 21.2**	**-0.4**
GUR				S	**Sg**	**18 04 31.9**	**-0.3**
GUR				*e*Sn	**Sb**	**18 04 33.0**	**+1.2**
LKD2	**Lefkada island**	**0.82**	**290**	P	**Pg**	**18 04 21.7**	**-0.4**
LKD2	**Lefkada island**	**0.82**	**290**	P	**Pg**	**18 04 21.7**	**-0.4**
AXAR	**Agios Charalam**	**0.83**	**72**	P	**Pb**	**18 04 21.2**	**-0.7**
AXAR	**Agios Charalam**	**0.83**	**72**	P	**Pb**	**18 04 21.2**	**-0.7**
VLS	**Valsamata**	**0.90**	**248**	P	**Pb**	**18 04 22.7**	**-0.4**
VLS				S	**Sn**	**18 04 36.2**	**-0.1**
VLS	**Valsamata**	**0.90**	**248**	*e*PN	**Pb**	**18 04 22.4**	**-0.7**
VLS	**Valsamata**	**0.90**	**248**	*e*Pn	**Pb**	**18 04 22.4**	**-0.7**
VLS	**Valsamata**	**0.90**	**248**	P	**Pb**	**18 04 22.7**	**-0.4**
VLS				S	**Sn**	**18 04 36.2**	**-0.1**
AMT	**Artemida-Makis**	**0.98**	**177**	P	**Pb**	**18 04 24.1**	**-0.4**
AMT				S	**Sg**	**18 04 38.4**	**+0.4**
AMT	**Artemida-Makis**	**0.98**	**177**	*e*PN	**Pb**	**18 04 24.7**	**+0.2**
AMT	**Artemida-Makis**	**0.98**	**177**	P	**Pb**	**18 04 24.6**	**+0.1**
AMT				S	**Sg**	**18 04 38.4**	**+0.4**
LKR	**Lokris**	**1.07**	**82**	P	**Pb**	**18 04 25.9**	**0.0**
LKR	**Lokris**	**1.07**	**82**	*e*PN	**Pg**	**18 04 26.5**	**-0.2**
LKR	**Lokris**	**1.07**	**82**	P	**Pb**	**18 04 25.9**	**0.0**
LKR	**Lokris**	**1.07**	**82**	*e*Pn	**Pg**	**18 04 26.5**	**-0.2**
THL	**Klokotos Trika**	**1.09**	**15**	P	**Pb**	**18 04 26.0**	**-0.3**
THL				S	**Sg**	**18 04 40.8**	**-0.5**
THL	**Klokotos Trika**	**1.09**	**15**	*e*PN	**Pb**	**18 04 26.4**	**+0.1**
THL	**Klokotos Trika**	**1.09**	**15**	P	**Pb**	**18 04 26.0**	**-0.3**
THL	**Klokotos Trika**	**1.09**	**15**	*e*Pn	**Pb**	**18 04 26.4**	**+0.1**
THL				S	**Sg**	**18 04 40.8**	**-0.5**
ATAL	**Atalanti**	**1.09**	**80**	P	**Pg**	**18 04 27.2**	**+0.1**
ATAL				S	**Sn**	**18 04 41.5**	**+0.5**
ATAL	**Atalanti**	**1.09**	**80**	P	**Pg**	**18 04 27.2**	**+0.1**
ATAL				S	**Sn**	**18 04 41.5**	**+0.5**
LTK	**Loutraki**	**1.15**	**115**	P	**Pb**	**18 04 27.6**	**+0.3**
LTK	**Loutraki**	**1.15**	**115**	*e*PN	**Pg**	**18 04 28.3**	**+0.1**
LTK	**Loutraki**	**1.15**	**115**	P	**Pb**	**18 04 27.6**	**+0.3**
LTK	**Loutraki**	**1.15**	**115**	*e*Pn	**Pg**	**18 04 28.3**	**+0.1**
VLX	**Vlachokerasia**	**1.28**	**153**	P	**Pn**	**18 04 28.8**	**-0.3**
VLX	**Vlachokerasia**	**1.28**	**153**	*e*PN	**Pb**	**18 04 29.9**	**+0.3**
VLX	**Vlachokerasia**	**1.28**	**153**	P	**Pn**	**18 04 28.8**	**-0.3**
VLX	**Vlachokerasia**	**1.28**	**153**	*e*Pn	**Pb**	**18 04 29.9**	**+0.3**
ITM	**Ithomi**	**1.35**	**171**	P	**Pb**	**18 04 31.5**	**+0.7**
ITM	**Ithomi**	**1.35**	**171**	P	**Pb**	**18 04 31.5**	**+0.7**
IGT	**Igoumenitsa**	**1.44**	**315**	P	**Pn**	**18 04 31.8**	**+0.6**
IGT	**Igoumenitsa**	**1.44**	**315**	P	**Pn**	**18 04 31.8**	**+0.6**
NEO	**Neokhori**	**1.46**	**57**	*e*PN	**Pb**	**18 04 33.3**	**+0.6**
NEO	**Neokhori**	**1.46**	**57**	*e*Pn	**Pb**	**18 04 33.3**	**+0.6**
XOR	**Xorichti**	**1.47**	**54**	P	**Pb**	**18 04 32.8**	**-0.1**
XOR	**Xorichti**	**1.47**	**54**	P	**Pb**	**18 04 32.8**	**-0.1**
MRKA	**Markates**	**1.53**	**82**	P	**Pb**	**18 04 33.9**	**0.0**
MRKA	**Markates**	**1.53**	**82**	P	**Pb**	**18 04 33.9**	**0.0**
DID	**Didima**	**1.61**	**128**	P	**Pb**	**18 04 34.9**	**-0.3**
DID	**Didima**	**1.61**	**128**	*e*PN	**Pb**	**18 04 36.2**	**+1.0**
DID	**Didima**	**1.61**	**128**	P	**Pb**	**18 04 34.9**	**-0.3**
DID	**Didima**	**1.61**	**128**	*e*Pn	**Pb**	**18 04 36.2**	**+1.0**
PYL	**PYLOS**	**1.62**	**177**	P	**Pb**	**18 04 35.9**	**+0.6**
PYL	**PYLOS**	**1.62**	**177**	*e*PN	**Pb**	**18 04 36.0**	**+0.6**
PYL	**PYLOS**	**1.62**	**177**	P	**Pb**	**18 04 35.9**	**+0.6**
PTL	**Penteli**	**1.81**	**104**	*e*PN	**Pb**	**18 04 38.0**	**-0.5**
PTL	**Penteli**	**1.81**	**104**	*e*Pn	**Pb**	**18 04 38.0**	**-0.5**
DYR	**Agios Nikonas**	**1.83**	**163**	*e*PN	**Pb**	**18 04 38.8**	**-0.2**

DYR	**Agios Nikonas**	**1.83**	**163**	*e*Pn	**Pb**	**18 04 38.8**	**-0.2**
VLI	**Veliai**	**2.07**	**150**	*e*PN	**Pb**	**18 04 42.4**	**-0.6**
VLI	**Veliai**	**2.07**	**150**	*e*Pn	**Pb**	**18 04 42.4**	**-0.6**
VAY	**Valandovo**	**2.89**	**14**	*e*Pn	**Pb**	**18 04 55.8**	**-1.2**

*ISCJB **20** 18:14:04.3±0.7,6.06N±0.05×126.35E±0.07, h68km, mb3.6/5, Error ellipse: s-maj=10.4km s-min=6.0km az=162.0*
*IDC **20** 18:14:07.4±1.6,6.24N×126.24E, h102km±15km, mb3.4/4, mb1 3.6/5, mb1mx3.2/25, mbtmp3.6/5, Error ellipse: s-maj=61.6km s-min=18.9km az=71.0*

ISC 20 18:14:05.9±0.9,**6.08N**±0.06×**126.32E**±0.08,**h68**km,**n17**, σ0§**97**/21,**mb3.6**/5,**3D**,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.86**	**356**	*e*P	**Pn**	**18 14 21.6**	**-1.0**
MATI				*e*S	**Sn**	**18 14 35.1**	**+0.2**
DAV	**Davao City (W)**	**1.23**	**323**	P	**Pn**	**18 14 27.0**	**-0.3**
	166nm,0.3s,baz=332,slow=0.2,SNR=22						
DAV				S	**Sn**	**18 14 45.0**	**+1.8**
	239nm,0.3s,baz=289,slow=20,SNR=24						
DMPH	**Davao City--Mi**	**1.28**	**321**	*i*P	**Pn**	**18 14 27.5**	**-0.5**
DMPH				*i* S	**Sn**	**18 14 43.6**	**-0.8**
GSPH	**General Santos**	**1.36**	**270**	*e*P	**Pn**	**18 14 27.9**	**-1.1**
GSPH				*e*S	**Sn**	**18 14 45.8**	**-0.6**
BUKP	**Musuan**	**2.18**	**325**	*e*P	**Pn**	**18 14 39.4**	**-0.5**
CTBH	**Cotabato--PC H**	**2.35**	**299**	*e*P	**Pn**	**18 14 41.3**	**-1.0**
BUTP	**Butuan**	**2.95**	**347**	*e*P	**Pn**	**18 14 50.3**	**-0.1**
PAGZ	**Pagadian**	**3.40**	**301**	*e*P	**Pn**	**18 14 56.5**	**-0.1**
MSLP	**Maasin**	**4.28**	**340**	*e*P	**Pn**	**18 15 08.1**	**-0.5**
TBP	**Tagbilaran**	**4.33**	**326**	*e*P	**Pn**	**18 15 08.2**	**-1.1**
OCLP	**Ormoc**	**5.22**	**341**	*e*P	**Pn**	**18 15 21.8**	**+0.3**
KAPI	**Kappang**	**12.82**	**211**	P	**Pn**	**18 17 07.6**	**+2.2**
	1.0nm,0.3s,baz=88,slow=0.9,SNR=7.8						
FITZ	**Fitzroy Crossi**	**24.04**	**182**	P	**P**	**18 19 15.0**	**+0.3**
	1.2nm,0.4s,baz=354,slow=9.2,SNR=9.8						
WRA	**Warramunga Arr**	**27.04**	**163**	P	**P**	**18 19 41.2**	**-0.7**
	0.8nm,0.5s,baz=339,slow=10,SNR=23						
ASAR	**Alice Springs**	**30.48**	**166**	P	**P**	**18 20 12.1**	**-0.4**
	0.4nm,0.3s,baz=339,slow=7.5,SNR=20						
ASAR				PcP	**PcP**	**18 23 09.3**	**-1.2**
	0.2nm,0.6s,baz=349,slow=2.3,SNR=4.2						
STKA	**Stephens Creek**	**40.46**	**160**	P	**P**	**18 21 37.7**	**-0.2**
	1.8nm,0.7s,baz=339,slow=8.8,SNR=6.0						
MKAR	**Makanchi Array**	**55.41**	**325**	P	P	18 23 29.3	-4.0
	0.1nm,0.3s,baz=129,slow=8.4,SNR=4.6						

IDC 20 18:24:54.1±1.7,**4.00S**×**130.00E**,**h0**km,**mb3.6**/3, **mb1 3.7**/5,**mb1mx3.6**/20,**mbtmp3.6**/5,**ML3.4**/3,**MS3.9**/1, **Ms1 3.9**/1,**ms1mx2.4**/30,**Error ellipse: s-maj=78.3km s-min=23.0km az=72.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**14.65**	**197**	Pn	Pn	18 28 22.1	-0.7
	0.1nm,0.3s,baz=30,slow=14,SNR=4.1						
WRA	**Warramunga Arr**	**16.40**	**165**	Pn	Pn	18 28 44.0	-2.0
	0.1nm,0.3s,baz=348,slow=13,SNR=5.2						
ASAR	**Alice Springs**	**19.91**	**169**	P	Pn	18 29 28.6	-0.5
	0.4nm,0.3s,baz=348,slow=11,SNR=40						
CMAR	**Chiang Mai Arr**	**37.87**	**307**	P	P	18 32 13.3	+0.1
	0.4nm,0.5s,baz=131,slow=6.9,SNR=5.5						
DZM	**Mont Dzumac**	**39.62**	**120**	LR	LR	18 47 34.5	
	comp=Z,152nm,18.1s,baz=202,slow=34						
MKAR	**Makanchi Array**	**65.74**	**326**	P	P	18 35 41.1	+0.3
	0.4nm,0.6s,baz=128,slow=7.7,SNR=8.3						
ZALV	**Zalesovo Beam**	**68.91**	**333**	P	P	18 36 00.3	-0.5
	0.3nm,0.4s,baz=134,slow=6.2,SNR=2.6						

*ISCJB **20** 18:28:35.3±0.4,7.49S±0.05×124.78E±0.06,h371km, mb3.6/4, Error ellipse: s-maj=8.4km s-min=6.1km az=148.2*
*IDC **20** 18:28:37.5±3.6,7.41S×124.99E,h384km±41km,mb3.2/4, mb1 3.4/6,mb1mx3.1/20,mbtmp3.3/6, Error ellipse: s-maj=87.1km s-min=11.9km az=59.0*
*AUST **20** 18:28:39.0±0.0,7.93S×124.74E,h363km, Error ellipse: s-maj=1.4km s-min=1.0km az=359.0*

ISC 20 18:28:36.4±0.7,**7.46S**±0.07×**124.87E**±0.09,**h371**km,**n26**, σ0§**67**/27,**mb3.6**/4,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**5.03**	**244**	P	**Pn**	**18 29 56.5**	**-0.9**
	baz=4.7,SNR=3.1						
WSI				S	S	18 30 55.7	-7.2
	baz=4.7,SNR=8.4						
TLE	**Tual**	**8.02**	**77**	P	P	18 30 37.4	+4.5
	baz=8.3,SNR=3.7						
TLE				S	S	18 31 58.6	-6.4
	baz=8.3,SNR=5.5						
MTN	**Manton Dam**	**8.16**	**131**	P	**Pn**	**18 30 33.5**	**+0.8**
	baz=8.0,SNR=23						
PCI	**Palu**	**8.22**	**322**	P	P	18 30 41.4	+6.2
	baz=8.6,SNR=6.9						
KDU	**Kakadu**	**9.11**	**125**	P	**Pn**	**18 30 44.0**	**+0.1**
	baz=9.0,SNR=14						
SWI	**Sorong**	**9.13**	**44**	P	**Pn**	**18 30 44.8**	**+0.5**
	baz=9.6,SNR=16						
SWI				S	**S**	**18 32 27.5**	**-1.6**
	baz=9.6,SNR=5.8						
FITZ	**Fitzroy Crossi**	**10.61**	**176**	P	**P**	**18 31 01.4**	**-0.2**
	2.2nm,0.3s,baz=13,slow=8.5,SNR=125						
FITZ				S	S	18 33 15.7	+15
	0.2nm,0.3s,baz=135,slow=18,SNR=1.9						
FITZ	**Fitzroy Crossi**	**10.61**	**176**	P	**P**	**18 31 01.4**	**-0.2**
	baz=10,SNR=24						
WRA	**Warramunga Arr**	**15.44**	**144**	P	**P**	**18 31 54.9**	**+0.1**
	0.8nm,0.3s,baz=323,slow=13,SNR=24						
WRA				S	**S**	**18 34 38.3**	**-1.0**
	baz=316,slow=22,SNR=5.4						
ASAR	**Alice Springs**	**18.30**	**153**	P	**P**	**18 32 26.2**	**+0.7**
	1.0nm,0.3s,baz=340,slow=15,SNR=32						
ASAR				S	**S**	**18 35 35.5**	**+0.1**
	baz=340,slow=24,SNR=4.4						
QIS	**Mount Isa**	**19.31**	**134**	P	**P**	**18 32 36.3**	**+0.1**
	baz=19,SNR=11						
MEEK	**Meekatharra**	**19.98**	**197**	P	**P**	**18 32 41.7**	**-1.1**
	baz=20,SNR=24						
BLDU	**Ballidu**	**24.27**	**197**	P	**P**	**18 33 21.1**	**-0.5**
	baz=24,SNR=4.8						
STKA	**Stephens Creek**	**28.86**	**150**	P	**P**	**18 34 03.1**	**+0.8**
	0.9nm,0.3s,baz=342,slow=9.6,SNR=3.9						
CMAR	**Chiang Mai Arr**	**36.30**	**315**	P	**P**	**18 35 07.2**	**+0.8**
	0.3nm,0.4s,baz=144,slow=6.5,SNR=5.8						
ODAN	**Odare**	**49.83**	**315**	*e*P	**P**	**18 36 53.9**	**+0.2**
	4.8nm,0.5s						
TAPN	**Taplejung**	**49.91**	**315**	*e*P	**P**	**18 36 54.6**	**+0.2**
	7.8nm,0.3s						
RAMN	**Ramite**	**50.45**	**314**	*e*P	**P**	**18 36 59.0**	**+0.7**
	13nm,0.5s						
GUN	**Gumba**	**51.54**	**315**	*e*P	**P**	**18 37 06.7**	**+0.3**
	10nm,0.5s						
PKI	**Pulchoki**	**51.67**	**314**	*e*P	**P**	**18 37 07.3**	**0.0**
	5.3nm,0.3s						
PKIN	**Phulchoki**	**51.68**	**314**	*e*P	**P**	**18 37 07.5**	**+0.1**
	2.7nm,0.4s						
KKN	**Kakani**	**51.89**	**314**	*e*P	**P**	**18 37 09.5**	**+0.7**
KOLN	**Koldanda**	**53.08**	**313**	*e*P	**P**	**18 37 17.8**	**+0.3**
	4.7nm,0.4s						
DANN	**Dangsing**	**53.30**	**314**	*e*P	**P**	**18 37 19.2**	**0.0**
	12nm,0.7s						
MKAR	**Makanchi Array**	**65.92**	**329**	P	**P**	**18 38 44.0**	**+0.3**
	2.2nm,0.4s,baz=125,slow=7.4,SNR=54						
ZALV	**Zalesovo Beam**	**69.84**	**336**	P	**P**	**18 39 06.7**	**-0.9**
	0.9nm,0.5s,baz=149,slow=3.5,SNR=5.8						

*ISCJB **20** 18:43:18.5±0.3,4.10S±0.05×129.59E±0.06,h10km, mb4.2/12, Error ellipse: s-maj=8.9km s-min=5.3km az=146.7*
*IDC **20** 18:43:18.7±0.6,3.99S×129.78E,h0km,mb4.1/10, mb1 4.3/13,mb1mx4.2/22,mbtmp4.2/13,ML4.0/3,MS3.1/1, Ms1 3.1/1,ms1mx2.6/39, Error ellipse: s-maj=27.7km s-min=10.4km az=75.0*
*AUST **20** 18:43:18.4±3.0,4.06S×129.64E,h0km, Error ellipse: s-maj=1.0km s-min=0.8km az=44.0*
*DJA **20** 18:43:21.3±0.8,4°S±7°×13°0E±°,h5km±9km,M4.2/7, MLv4.2/7*

ISC 20 18:43:19.9±0.5,**4.09S**±0.06×**129.60E**±0.07,**h10**km,**n45**, σ1§**21**/43,**mb4.3**/12,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.53**	**145**	P	**Pn**	**18 43 31.7**	**-1.8**
MSAI	**Masohi**	**1.00**	**318**	P	**Pn**	**18 43 39.4**	**-0.6**
AAI	**Ambon**	**1.46**	**286**	P	**Pb**	**18 43 46.4**	**-0.8**
AAI	**Ambon**	**1.46**	**286**	P	**Pb**	**18 43 46.4**	**-0.8**
	baz=1.5,SNR=73						
FAKI	**Fak Fak**	**2.89**	**66**	P	**Pn**	**18 44 06.3**	**+0.3**
TLE	**Tual**	**3.48**	**116**	P	Pb	18 44 16.9	-4.8
TLE	**Tual**	**3.48**	**116**	P	Pb	18 44 16.8	-4.9
	baz=3.5,SNR=38						
SWI	**Sorong**	**3.61**	**27**	P	**Pn**	**18 44 16.8**	**+0.9**
SWI	**Sorong**	**3.61**	**27**	P	**Pn**	**18 44 16.4**	**+0.5**
	baz=3.6,SNR=38						
LBMI	**Labuha**	**4.02**	**328**	P	Pn	18 44 23.7	+2.1
MTN	**Manton Dam**	**8.83**	**170**	P	**Pn**	**18 45 29.5**	**+1.9**
	baz=8.9,SNR=50						
KDU	**Kakadu**	**9.00**	**162**	P	**Pn**	**18 45 30.5**	**+0.5**
	baz=9.1,SNR=13						
KAPI	**Kappang**	**9.86**	**264**	Pn	Pn	18 45 45.7	+3.9
	0.8nm,0.3s,baz=79,slow=6.7,SNR=7.1						
FITZ	**Fitzroy Crossi**	**14.46**	**195**	Pn	**Pn**	**18 46 46.2**	**+1.5**
	0.4nm,0.3s,baz=42,slow=13,SNR=12						
FITZ				LR	LR	18 52 35.2	
	comp=Z,88nm,21.7s,baz=237,slow=38						
FITZ	**Fitzroy Crossi**	**14.46**	**195**	P	**Pn**	**18 46 45.9**	**+1.2**
	baz=15,SNR=18						
WRA	**Warramunga Arr**	**16.42**	**164**	Pn	**Pn**	**18 47 07.4**	**-3.2**
	18nm,0.3s,baz=339,slow=13,SNR=4.6						
WRA				Sn	**Sn**	**18 50 08.8**	**-4.2**
	110nm,0.3s,baz=345,slow=23,SNR=16						
COEN	**Coen**	**16.60**	**127**	P	**P**	**18 47 14.9**	**-0.4**
	baz=17,SNR=4.8						
QIS	**Mount Isa**	**19.05**	**150**	P	**Pn**	**18 47 42.6**	**-0.6**
	baz=19,SNR=8.4						
ASAR	**Alice Springs**	**19.90**	**168**	P	**P**	**18 47 51.8**	**0.0**
	1.0nm,0.3s,baz=348,slow=9.9,SNR=161						
ASAR				S	**Sn**	**18 51 40.4**	**+3.1**
	0.1nm,0.3s,baz=355,slow=25,SNR=3.4						
CTA	**Charters Tower**	**22.72**	**136**	P	**P**	**18 48 22.5**	**+0.3**
	7.2nm,0.7s,baz=316,slow=12,SNR=15						
STKA	**Stephens Creek**	**29.85**	**159**	P	**P**	**18 49 26.6**	**-0.9**
	1.5nm,0.9s,baz=339,slow=12,SNR=4.8						
STKA	**Stephens Creek**	**29.85**	**159**	P	**P**	**18 49 27.4**	**-0.2**
	baz=30,SNR=4.2						
CMAR	**Chiang Mai Arr**	**37.61**	**308**	P	**P**	**18 50 36.6**	**+1.4**
	2.8nm,0.7s,baz=135,slow=6.9,SNR=22						
MJAR	**Matsushiro Arr**	**41.21**	**11**	P	**P**	**18 51 03.7**	**-1.3**
	4.3nm,0.8s,baz=184,slow=9.8,SNR=13						
MAT	**Matsushiro**	**41.21**	**11**	P	**P**	**18 51 03.8**	**-1.2**
KSRS	**Korea Array**	**41.36**	**358**	P	**P**	**18 51 06.6**	**+0.5**
	1.6nm,0.8s,baz=174,slow=8.8,SNR=3.6						
USRK	**Ussuriysk Arra**	**48.12**	**2**	P	**P**	**18 52 00.3**	**+0.4**
	2.8nm,0.8s,baz=180,slow=8.3,SNR=4.6						
ODAN	**Odare**	**51.08**	**310**	*e*P	**P**	**18 52 23.5**	**+0.3**
	15nm,0.7s						
TAPN	**Taplejung**	**51.09**	**310**	*e*P	**P**	**18 52 23.3**	**0.0**
	11nm,0.6s						
RAMN	**Ramite**	**51.74**	**309**	*e*P	**P**	**18 52 28.4**	**+0.3**
	23nm,0.5s						
GUN	**Gumba**	**52.77**	**310**	*e*P	**P**	**18 52 35.8**	**-0.1**

s-maj=49.0km s-min=46.7km az=112.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**5.15**	**15**	Pn	Pb	18 59 19.6	-6.0
	1.3nm,0.3s,baz=203,slow=12,SNR=4.4						
PLCA				Pg	Pg	18 59 30.9	-2.3
	2.9nm,0.3s,baz=208,slow=17,SNR=5.3						
PLCA				Lg	Lg	19 00 42.4	
	0.8nm,0.3s,baz=99,slow=22,SNR=3.2						
CPUP	**Villa Florida**	**22.75**	**37**	P	P	19 02 58.4	+0.2
	0.8nm,0.4s,baz=183,slow=12,SNR=3.5						
LPAZ	**La Paz**	**29.55**	**8**	P	P	19 04 01.5	-0.2
	2.4nm,0.8s,baz=142,slow=4.1,SNR=5.2						
TXAR	**Lajitas Array**	**79.95**	**333**	P	P	19 10 05.7	+0.4
	0.6nm,0.7s,baz=155,slow=7.0,SNR=5.4						
TORD	**Torodi Ar. Bea**	**88.46**	**70**	P	P	19 10 48.0	-0.8
	1.1nm,1.0s,baz=228,slow=3.2,SNR=4.2						
ILAR	**Eielson Array**	**124.40**	**330**	PKP	PKPdf	19 16 52.9	-1.3
	0.5nm,0.9s,baz=177,slow=2.0,SNR=6.1						
KURBB	**Kurchatov Arra**	**160.01**	**65**	PKP	PKPdf	19 17 55.8	+1.0
	0.5nm,1.0s,baz=273,slow=1.5,SNR=4.7						
MKAR	**Makanchi Array**	**162.41**	**77**	PKPab	PKPab	19 18 45.4	+0.1
	0.4nm,0.8s,baz=257,slow=2.1,SNR=3.9						

*ISCJB **20** 19:08:43.0±0.8, 39.54N±0.03×24.13E±0.03, h11km±6km, Error ellipse: s-maj=5.3km s-min=3.3km az=42.1*
*ATH **20** 19:08:42.9, 39.52N×24.11E, h27km, MD3.3/11, ML2.3*
*CSEM **20** 19:08:43.3±0.1, 39.53N×24.12E, h15km, MD3.3, Error ellipse: s-maj=3.9km s-min=2.7km az=132.0*
*THE **20** 19:08:43.5, 39.52N×24.11E, h8km, ML2.0/6, Error ellipse: s-maj=0.9km s-min=0.3km az=325.0*

ISC 20 19:08:43.6±1.0, 39.53N±0.02×24.10E±0.02, h13km±8km, n43, σ0°48/74, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.40**	**206**	P	Pg	**19 08 51.4**	**-0.3**
AOS				S	Sg	**19 08 57.4**	**+0.3**
AOS	**Alonnisos**	**0.40**	**206**	*e*PB	Pg	**19 08 51.4**	**-0.3**
AOS				*e*SB	Sg	**19 08 57.9**	**+0.8**
AOS	**Alonnisos**	**0.40**	**206**	P	Pg	**19 08 51.4**	**-0.3**
AOS				S	Sg	**19 08 57.4**	**+0.3**
AOS				*e*Sb	Sg	**19 08 57.9**	**+0.8**
PAIG	**Paliouri**	**0.51**	**320**	P	Pg	**19 08 53.6**	**-0.1**
PAIG				S	Sg	**19 09 01.4**	**+0.9**
PAIG	**Paliouri**	**0.51**	**320**	P	Pg	**19 08 53.6**	**-0.1**
PAIG				S	Sg	**19 09 01.4**	**+0.9**
SKIA	**Skiathos**	**0.61**	**234**	P	Pg	**19 08 55.2**	**-0.5**
SKIA				S	Sg	**19 09 04.2**	**+0.4**
SKIA	**Skiathos**	**0.61**	**234**	P	Pg	**19 08 55.2**	**-0.5**
SKIA				S	Sg	**19 09 04.2**	**+0.4**
NEO	**Neokhori**	**0.72**	**252**	*e*PN	Pg	**19 08 57.4**	**-0.2**
NEO				*e*SN	Sg	**19 09 07.2**	**+0.1**
NEO	**Neokhori**	**0.72**	**252**	*e*Pn	Pg	**19 08 57.4**	**-0.2**
NEO				*e*Sn	Sg	**19 09 07.2**	**+0.1**
XOR	**Xorichti**	**0.72**	**257**	P	Pg	**19 08 57.4**	**-0.3**
XOR				S	Sg	**19 09 07.8**	**+0.5**
XOR	**Xorichti**	**0.72**	**257**	P	Pg	**19 08 57.4**	**-0.3**
XOR				S	Sg	**19 09 07.8**	**+0.5**
OUR	**Ouranopolis**	**0.81**	**353**	P	Pb	**19 08 58.8**	**-0.7**
OUR				S	Sb	**19 09 10.7**	**+0.4**
OUR	**Ouranopolis**	**0.81**	**353**	P	Pb	**19 08 58.8**	**-0.7**
OUR				S	Sb	**19 09 10.7**	**+0.4**
LIA	**Limnos Island**	**0.91**	**66**	P	Pb	**19 09 00.7**	**-0.5**
LIA				S	Sb	**19 09 13.5**	**+0.3**
LIA	**Limnos Island**	**0.91**	**66**	*e*PN	Pb	**19 09 00.9**	**-0.3**
LIA				*e*SN	Sb	**19 09 13.5**	**+0.3**
LIA	**Limnos Island**	**0.91**	**66**	P	Pb	**19 09 00.7**	**-0.5**
LIA				S	Sb	**19 09 13.5**	**+0.3**
MRKA	**Markates**	**0.92**	**206**	P	Pb	**19 09 00.8**	**-0.6**
MRKA				S	Sb	**19 09 13.5**	**0.0**
MRKA	**Markates**	**0.92**	**206**	P	Pb	**19 09 00.8**	**-0.6**
MRKA				S	Sb	**19 09 13.5**	**0.0**
SMIA	**Simia**	**0.95**	**227**	P	Pb	**19 09 02.0**	**0.0**
SMIA				S	Sb	**19 09 15.1**	**+0.6**
SMIA	**Simia**	**0.95**	**227**	P	Pb	**19 09 02.0**	**0.0**
SMIA				S	Sb	**19 09 15.1**	**+0.6**
PLG	**Polygyros**	**0.98**	**329**	*e*PN	Pb	**19 09 01.9**	**-0.6**
PLG				*e*SN	Sb	**19 09 15.3**	**0.0**
PLG	**Polygyros**	**0.98**	**329**	*e*Pn	Pb	**19 09 01.9**	**-0.6**
PLG				*e*Sn	Sb	**19 09 15.3**	**0.0**
LKR	**Lokris**	**1.23**	**225**	P	Pn	**19 09 05.8**	**-0.7**
LKR				S	Sn	**19 09 23.9**	**+1.0**
LKR	**Lokris**	**1.23**	**225**	*e*PN	Pn	**19 09 05.9**	**-0.6**
LKR				*e*SN	Sb	**19 09 23.0**	**+0.5**
LKR	**Lokris**	**1.23**	**225**	*e*Pn	Pn	**19 09 05.9**	**-0.6**
LKR				*e*Sn	Sb	**19 09 23.0**	**+0.5**
LKR				S	Sn	**19 09 23.9**	**+1.0**
SMTH	**Samothraki Isl**	**1.44**	**49**	*e*PN	Pn	**19 09 09.4**	**0.0**
SMTH				*e*SN	Sn	**19 09 28.3**	**+0.1**
SMTH	**Samothraki Isl**	**1.44**	**49**	*e*Pn	Pn	**19 09 09.4**	**0.0**
SMTH				*e*Sn	Sn	**19 09 28.3**	**+0.1**
AGG	**Agios Georgios**	**1.47**	**250**	P	Pn	**19 09 09.2**	**-0.6**
AGG	**Agios Georgios**	**1.47**	**250**	*e*PN	Pn	**19 09 09.2**	**-0.6**
AGG				*e*SN	Sn	**19 09 29.3**	**+0.4**
AGG	**Agios Georgios**	**1.47**	**250**	P	Pn	**19 09 09.2**	**-0.6**
AGG				*e*Sn	Sn	**19 09 29.3**	**+0.4**
PTL	**Penteli**	**1.49**	**187**	P	Pn	**19 09 09.8**	**-0.4**
PTL	**Penteli**	**1.49**	**187**	*e*PN	Pn	**19 09 09.7**	**-0.4**
PTL	**Penteli**	**1.49**	**187**	*e*Pn	Pn	**19 09 09.7**	**-0.4**
ATH	**Athens Observa**	**1.59**	**191**	*e*PN	Pn	**19 09 10.8**	**-0.6**
ATH	**Athens Observa**	**1.59**	**191**	*e*Pn	Pn	**19 09 10.8**	**-0.6**
THL	**Klokotos Trika**	**1.61**	**272**	*e*PN	Pn	**19 09 11.5**	**-0.3**
THL	**Klokotos Trika**	**1.61**	**272**	*e*Pn	Pn	**19 09 11.5**	**-0.3**
PRK	**Paraskevi**	**1.71**	**99**	*e*PN	Pn	**19 09 13.2**	**+0.2**
PRK	**Paraskevi**	**1.71**	**99**	*e*Pn	Pn	**19 09 13.3**	**+0.2**
CHOS	**Chios island**	**1.91**	**126**	*e*PB	Pn	**19 09 15.5**	**-0.3**
CHOS	**Chios island**	**1.91**	**126**	*e*Pb	Pn	**19 09 15.5**	**-0.3**
ALN	**Alexandroupoli**	**2.02**	**47**	*e*PN	Pn	**19 09 17.0**	**-0.3**
ALN	**Alexandroupoli**	**2.02**	**47**	*e*Pn	Pn	**19 09 17.0**	**-0.3**

*MAN **20** 19:12:34, 15.27N×119.73E, h14km, mb5.8, ML4.8, MS5.3*
MAN INTENSITY IV - IBA ZAMBALES; INTENSITY III - STA CRUZ ZAMBALES; BAGUIO CITY;CLARKFIELD PAMPANGA; LINGAYEN PANGASINAN.
*IDC **20** 19:12:36.6±4.1, 15.44N×120.26E, h18km±25km, mb4.4/41, mb1 4.5/41, mb1mx4.5/45, mbtmp4.5/41, MS4.3/26, Ms1 4.3/26, ms1mx4.2/39, Error ellipse: s-maj=13.3km s-min=9.8km az=71.0*
*MOS **20** 19:12:37.3±0.8, 15.47N×120.30E, h33km, mb5.2/58, MS4.5/13, Error ellipse: s-maj=10.0km s-min=4.6km az=121.7*
*NEIC **20** 19:12:40.8±0.6, 15.39N×120.24E, h50km±4km, mb5.1/60, Error ellipse: s-maj=5.4km s-min=3.8km az=86.0*
NEIC Felt [IV PIVS] at Iba; [III PIVS] at Baguio, Clark Field, Dagupan, Lingayen, Manila and Santa Cruz; [II PIVS] at Makati, Mandaluyong, Quezon City, San Fernando and San Rafael. Felt [II] at Angeles and Olongapo. Also felt at Abucay, Bacoor, Balibago, Binalonan, Binmaley, Botolan, Capas, Cavite, Mabalacat, Masinloc, Palauig, Paniqui, Rizal, San Antonio, Santa Ana and Tarlac.
*GCMT **20** 19:12:40.8±0.2, 15.60N×120.03E, h30km, MW5.2, Moment Tensor Solution. s61,c94; s77,c141; Moment tensor: Scale 10^{16}Nm; M_{rr}=2.64±.21; $M_{\theta\theta}$=9.16±.15; $M_{\phi\phi}$=-6.52±.20; $M_{r\theta}$=0.49±.23; $M_{\theta\phi}$=-1.06±.13; $M_{r\phi}$=2.18±.33; Best double couple: M_0=8.40000×10^{16} NP1:ϕ_s316.00000°, δ72.00000°, λ-16.00000°. NP2:ϕ_s52.00000°, δ74.00000°, λ-161.00000°. Principal axes: T 9.2400, Plg2.0000°, Azm184.0000°; N -1.6600, Plg66.0000°, Azm90.0000°; P -7.5800, Plg24.0000°, Azm274.0000°; Data Used: II IU IC G CN.*
*BJI **20** 19:12:40.1, 15.42N×120.23E, h60km, mB5.1/38, mb4.8/52, Ms4.8/52, MS7 4.5/49*
*ISCJB **20** 19:12:40.7±0.3, 15.52N±0.02×120.20E±0.03, h57km±3km, mb4.9/163, MS4.5/53, Error ellipse: s-maj=4.3km s-min=2.8km az=177.9*
*TEH **20** 19:12:42.0, 15.44N×120.24E, h62km, ML4.9*
*DJA **20** 19:12:46.2±0.6, 16°N±4°×12°0E±°, h62km±7km, M4.9/48, mb5.1/48, mB5.4/37, Mw(mB)4.9/37*
*AUST **20** 19:14:06.1, 9.00N×120.99E, h450km*
ISC 20 19:12:38.8±0.6, 15.47N±0.03×120.28E±0.04, h33km±3km, n547, σ1°43/528, mb5.0/163, MS4.4/53, 122C-19D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.47**	**311**	*e*P	Pb	19 12 45.7	-3.3
SCZP				*e*S	**Sb**	**19 12 51.3**	**-4.7**
PCPH	**Palayan**	**0.79**	**83**	*e*P	Pn	19 12 56.9	+3.2
PCPH				*i* S	Sn	19 13 11.4	+7.0
BCPH	**Baguio City Da**	**0.95**	**17**	*i*P	**Pb**	**19 12 57.7**	**+0.7**
BOLP	**Bolinao**	**0.98**	**339**	*e*P	**Pn**	**19 12 54.9**	**-1.4**
BOLP				*e*S	**Sn**	**19 13 09.0**	**0.0**
BALP	**Baler**	**1.28**	**78**	*e*P	Pb	19 13 05.2	+2.9
BALP				*e*S	**Sn**	**19 13 14.4**	**-2.0**
TGY	**Tagaytay City**	**1.50**	**155**	*e*P	Pb	19 13 10.5	+4.4
TGY				*e*S	**Sn**	**19 13 18.5**	**-3.4**
ABRA	**Dolores**	**2.21**	**11**	*e*P	**Pn**	**19 13 15.7**	**+2.5**
ABRA				*e*S	**Sb**	**19 13 46.7**	**+1.6**
PALP	**Palanan**	**2.60**	**52**	*e*P	**Pb**	**19 13 25.3**	**+0.6**
CVP	**Callao Caves**	**2.67**	**33**	*e*P	**Pb**	**19 13 23.7**	**-2.3**
PIP	**Pasuquin**	**2.86**	**6**	*i*P	**Pn**	**19 13 24.0**	**+1.8**
PIP				*i* S	Sb	19 14 09.9	+6.1
RCP	**Roxas**	**4.56**	**148**	*e*P	Pn	19 13 50.9	+5.3
SNPH	**Sibulan**	**6.74**	**154**	*i*P	Pn	19 14 09.9	-5.6
TWG	**Pinlang**	**7.35**	**6**	*e*P	Pn	19 14 27.6	+3.7
	298nm,0.5s						
DCPH	**Dipolog City**	**7.47**	**156**	*e*P	Pn	19 14 31.3	+5.7
TPUB	**Ta-pu**	**7.80**	**2**	*e*P	Pn	19 14 32.9	+2.8
	262nm,1.1s						
YULB	**Yu-li**	**7.94**	**7**	*e*P	Pn	19 14 35.2	+3.1
	230nm,1.0s						
SSLB	**Suanglung**	**8.30**	**4**	*e*P	Pn	19 14 39.7	+2.7
	178nm,1.0s						
NACB	**Ninganchiao**	**8.75**	**8**	*e*P	**Pn**	**19 14 44.0**	**+0.9**
	306nm,1.3s						
CTBH	**Cotabato--PC H**	**9.07**	**154**	*i*P	Pn	19 14 52.0	+4.5
YHNB	**Yeheng**	**9.21**	**6**	*e*P	Pn	19 14 53.0	+3.5
	232nm,1.0s						
TATO	**Taipei**	**9.53**	**7**	*e*P	Pn	19 14 58.2	+4.5
	124nm,0.9s						
DAV	**Davao City (W)**	**9.83**	**148**	Pn	Pn	19 15 05.0	+7.0
DAV	**Davao City (W)**	**9.83**	**148**	P	Pn	19 15 08.1	+10
	SNR=11						
DAV	**Davao City (W)**	**9.83**	**148**	Pn	Pn	19 15 05.0	+7.0
	47nm,0.3s,baz=70,slow=22,SNR=10						
DAV				LR	LR	19 19 52.7	
	comp=Z,2μm,19.4s,baz=116,slow=44						
GZH	**Guangzhou**	**10.02**	**320**	P	**Pn**	**19 15 02.1**	**+1.6**
GZH				S	**Sn**	**19 16 48.5**	**-3.3**
GZH				LR	LR		
	comp=N,4μm,13.9s						
GZH				LR	LR		
	comp=E,4μm,12.7s						
KKM	**Kota Kinabalu**	**10.18**	**204**	*e*P	**Pn**	**19 15 02.2**	**-0.6**
SDKM	**Sandakan**	**10.22**	**198**	P	Pn	19 15 05.8	+2.3
MYLDM	**Lahad Datu**	**10.37**	**190**	P	Pn	19 15 09.3	+4.0
MYLDM	**Lahad Datu**	**10.37**	**190**	P	Pn	19 15 09.4	+4.0
	comp=E,143nm,1.2s,comp=E,1μm						
QIZ	**Qiongzhong**	**10.58**	**291**	P	Pn	19 15 10.3	+2.0
QIZ				S	**Sn**	**19 17 06.8**	**+1.1**
QIZ				pmax	pmax		
	comp=Z,84nm,1.5s						
QIZ				LR	LR		
	comp=N,2μm,13.8s						
QIZ				LR	LR		
	comp=Z,2μm,13.4s						
TSM	**Tawau**	**11.35**	**192**	P	Pn	19 15 22.5	+3.7
BTM	**Bintulu**	**14.10**	**211**	P	**Pn**	**19 15 58.5**	**+2.0**
UBPT	**Khong Chiam**	**14.29**	**271**	P	**Pn**	**19 15 58.5**	**-0.5**
	comp=Z,71nm,1.4s,comp=Z,1μm						
MNI	**Manado**	**14.64**	**162**	P	P	19 16 14.3	+4.6
	comp=Z,197nm,0.8s,comp=Z,2μm						
MRSI	**Marisa**	**14.98**	**174**	P	**P**	**19 16 12.3**	**-1.2**
	comp=Z,126nm,1.6s,comp=Z,2μm						
SBUM	**Sibu**	**15.18**	**212**	P	**Pn**	**19 16 12.7**	**+1.7**
SBUM	**Sibu**	**15.18**	**212**	P	**Pn**	**19 16 12.2**	**+1.2**
	comp=Z,140nm,1.6s,comp=Z,2μm						
KMSI	**Cibinong**	**15.24**	**166**	P	P	19 16 20.7	+4.4
	comp=Z,299nm,1.2s,comp=Z,3μm						
SSE	**Sheshan**	**15.58**	**3**	P	**P**	**19 16 19.8**	**-0.2**
SSE				S	**Sn**	**19 19 12.9**	**+5.2**
SSE				pmax	pmax		
	comp=Z,86nm,1.0s						
SSE				pmax	pmax		
	comp=Z,780nm,5.1s						
SSE				LR	LR		
	comp=N,520nm,27.9s						
SSE				LR	LR		
	comp=E,1μm,27.9s						
SSE				LR	LR		
	comp=Z,1μm,14.7s						
WHN	**Wuhan**	**15.96**	**341**	P	**P**	**19 16 23.8**	**-0.5**
WHN				LR	LR		
	comp=Z,3μm,16.1s						
SMKI	**Samarinda**	**16.10**	**191**	P	**P**	**19 16 27.7**	**+1.8**
	comp=Z,134nm,1.7s						
TNTI	**Ternate**	**16.19**	**154**	P	pP	19 16 44.2	+8.7
PCI	**Palu**	**16.27**	**182**	P	pP	19 16 42.4	+5.9
	baz=10.0,SNR=4.7						
NJ2	**Nanjing**	**16.56**	**356**	*e*P	**P**	**19 16 32.4**	**+1.5**
NJ2				sP	sP	19 16 47.3	+3.6
NJ2				S	**S**	**19 19 38.5**	**-3.9**
NJ2				pmax	pmax		
	comp=Z,110nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,1μm,4.3s						
NJ2				LR	LR		
	comp=N,1μm,14.0s						
NJ2				LR	LR		
	comp=E,610nm,10.0s						
NJ2				LR	LR		
	comp=Z,1μm,13.0s						
LUWI	**Luwuk**	**16.59**	**171**	P	P	19 16 35.3	+4.0
	comp=Z,195nm,0.8s,comp=Z,3μm						
GYA	**Guiyang**	**16.76**	**313**	*i*P	**P**	**19 16 34.5**	**+1.2**
GYA				pP	pP	19 16 44.8	+2.9
GYA				sP	sP	19 16 55.3	+9.3
GYA				S	**Sn**	**19 19 37.6**	**+1.0**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.6s						
GYA				LR	LR		
	comp=N,3μm,14.4s						
GYA				LR	LR		
	comp=E,2μm,15.0s						
GYA				LR	LR		
	comp=Z,4μm,14.8s						
KSM	**Kuching**	**17.04**	**216**	*e*P	**P**	**19 16 37.9**	**+1.6**
	comp=Z,82nm,0.9s						
KSM	**Kuching**	**17.04**	**216**	P	**P**	**19 16 39.0**	**+2.7**
KSM	**Kuching**	**17.04**	**216**	P	**P**	**19 16 38.6**	**+2.3**
	comp=Z,116nm,1.0s,comp=Z,1μm						
KSM	**Kuching**	**17.04**	**216**	P	**P**	**19 16 37.9**	**+1.6**
	baz=13,SNR=7.1						
STKI	**Sintang**	**17.60**	**210**	P	**P**	**19 16 44.7**	**+2.2**
	comp=Z,53nm,1.7s,comp=Z,1μm						
CHBT	**CHBT**	**17.62**	**263**	P	**P**	**19 16 45.5**	**+2.8**
	comp=Z,59nm,1.3s,comp=Z,1μm						
KMI	**Kunming**	**19.03**	**303**	P	**Pn**	**19 17 01.8**	**+2.4**
KMI				pP	pP	19 17 12.9	+5.7
KMI				sP	sP	19 17 18.3	+7.0
KMI				S	**Sn**	**19 20 28.8**	**-3.1**
KMI				sS	sS	19 20 47.1	+0.3
KMI				SS	SnSn	19 20 55.3	+9.2
KMI				pmax	pmax		
	comp=Z,21nm,1.2s						
KMI				pmax	pmax		
	comp=Z,580nm,4.0s						
KMI				LR	LR		
	comp=N,1μm,15.6s						
KMI				LR	LR		
	comp=E,980nm,11.0s						
KMI				LR	LR		
	comp=Z,890nm,11.0s						
KBKI	**Kotabaru**	**19.09**	**193**	P	**Pn**	**19 17 01.7**	**+1.9**
	comp=Z,59nm,0.9s,comp=Z,2μm						
KDI	**Kendari**	**19.44**	**173**	P	Pn	19 17 08.0	+4.0
	comp=Z,45nm,1.4s,comp=Z,1μm						
SWI	**Sorong**	**19.52**	**145**	P	Pn	19 17 14.0	+9.0
	comp=Z,58nm,0.9s,comp=Z,981nm						
SWI	**Sorong**	**19.52**	**145**	P	Pn	19 17 11.1	+6.1
	baz=14,SNR=4.3						
BBKI	**Banjar Baru**	**19.56**	**196**	P	**Pn**	**19 17 05.8**	**+0.2**
	comp=Z,222nm,1.4s,comp=Z,4μm						
KTGM	**Kuala Trenggan**	**19.63**	**241**	P	**Pn**	**19 17 07.2**	**+0.9**
PBKI	**Pangkalan Bun**	**19.97**	**206**	P	**Pn**	**19 17 10.2**	**-0.1**
	comp=Z,445nm,1.1s,comp=Z,4μm						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNU	**Nakatsue**	**20.03**	**27**	P	Pn	19 17 10.9	-0.1
JNU	**Nakatsue**	**20.03**	**27**	P	Pn	19 17 10.9	-0.1
	comp=Z,49nm,0.9s,baz=186,slow=10,SNR=10						
JNU				LR	LR	19 25 01.2	
	comp=Z,703nm,21.0s,baz=208,slow=37						
KAPI	**Kappang**	**20.36**	**182**	*e*P	**P**	**19 17 13.0**	**+0.3**
	comp=Z,91nm,1.0s						
KAPI	**Kappang**	**20.36**	**182**	P	**P**	**19 17 14.2**	**+1.5**
	SNR=14						
KAPI	**Kappang**	**20.36**	**182**	P	Pn	19 17 15.9	+1.0
	comp=Z,79nm,1.4s,comp=Z,1μm						
KAPI	**Kappang**	**20.36**	**182**	P	**P**	**19 17 13.3**	**+0.6**
	comp=Z,18nm,0.6s,baz=191,slow=19,SNR=9.2						
MSAI	**Masohi**	**20.56**	**155**	P	sP	19 17 33.1	+5.3
CM31	**Chiang Mai Arr**	**20.62**	**281**	*e*P	**P**	**19 17 16.6**	**+0.9**
	comp=Z,54nm,0.9s						
CMAR	**Chiang Mai Arr**	**20.62**	**281**	P	**P**	**19 17 16.4**	**+0.7**
CMAR				ScP	**ScP**	**19 25 01.2**	**+1.3**
CMAR	**Chiang Mai Arr**	**20.62**	**281**	P	**P**	**19 17 16.4**	**+0.7**
	comp=Z,97nm,1.1s,baz=93,slow=9.1,SNR=137						
CMAR				ScP	**ScP**	**19 25 01.2**	**+1.3**
	comp=Z,1.3nm,1.1s,baz=0.0,slow=0.9,SNR=4.1						
CMAR				LR	LR	19 25 33.7	
	comp=Z,1μm,18.6s,baz=96,slow=38						
CMMT	**Chiang Mai**	**20.66**	**282**	P	**P**	**19 17 17.0**	**+1.0**
	comp=Z,32nm,1.2s,comp=Z,574nm						
BKSI	**Bulukumba**	**20.66**	**180**	P	Pn	19 17 19.2	+0.8
	comp=Z,55nm,0.8s,comp=Z,712nm						
CHTO	**Chiang Mai**	**20.66**	**282**	*e*P	**P**	**19 17 16.1**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,33nm,1.1s						
CHTO	**Chiang Mai**	**20.66**	**282**	*e*P	**P**	**19 17 16.1**	**+0.1**
	comp=Z,33nm,1.1s						
CHTO	**Chiang Mai**	**20.66**	**282**	P	**P**	**19 17 16.7**	**+0.6**
	SNR=10						
CHTO	**Chiang Mai**	**20.66**	**282**	P	**P**	**19 17 16.5**	**+0.5**
	comp=Z,35nm,1.2s,comp=Z,696nm						
TIA	**Tai'an**	**20.85**	**353**	*e*P	Pn	19 17 28.5	+8.0
BBSI	**Bau Bau**	**20.94**	**174**	P	pP	19 17 34.9	+7.1
XAN	**Xi'an**	**21.14**	**333**	P	**P**	**19 17 24.4**	**+3.2**
XAN				pP	pP	19 17 36.3	+6.4
XAN				S	**S**	**19 21 10.8**	**-3.9**
XAN				pmax	pmax		
	comp=Z,13nm,1.3s						
XAN				LR	LR		
	comp=N,1μm,16.4s						
XAN				LR	LR		
	comp=Z,470nm,13.3s						
MYKOM	**Kota Tinggi**	**21.15**	**232**	P	**P**	**19 17 24.2**	**+2.8**
MYKOM	**Kota Tinggi**	**21.15**	**232**	P	P	19 17 24.8	+3.5
	comp=Z,59nm,1.4s,comp=Z,823nm						
CD2	**Chengdu**	**21.57**	**318**	P	**P**	**19 17 26.9**	**+1.2**
CD2				pP	pP	19 17 40.8	+6.3
CD2				sP	sP	19 17 48.3	+10
CD2				PP	PnPn	19 17 53.8	+7.0
CD2				S	**S**	**19 21 18.1**	**-5.0**
CD2				sS	Sn	19 21 40.8	+8.3
CD2				SS	SnSn	19 21 58.0	+10
CD2				pmax	pmax		
	comp=Z,120nm,0.7s						
CD2				pmax	pmax		
	comp=Z,390nm,6.2s						
CD2				LR	LR		
	comp=N,3μm,14.1s						
CD2				LR	LR		
	comp=E,3μm,12.1s						
CD2				LR	LR		
	comp=Z,2μm,15.2s						
IPM	**Ipoh**	**21.86**	**242**	*e*P	**P**	**19 17 28.1**	**-0.8**
	comp=Z,96nm,1.4s						
IPM	**Ipoh**	**21.86**	**242**	P	P	19 17 32.6	+3.6
TPI	**Tanjungpandan**	**22.00**	**216**	P	**P**	**19 17 33.3**	**+2.9**
	comp=Z,36nm,1.4s,comp=Z,497nm						
PPBI	**Pangkal Pinang**	**22.42**	**220**	P	**P**	**19 17 37.3**	**+2.3**
	comp=Z,32nm,1.6s,comp=Z,516nm						
KSAR	**Wonju Array Be**	**22.90**	**16**	P	**P**	**19 17 39.7**	**-0.2**
KSRS	**Korea Array**	**22.92**	**16**	P	**P**	**19 17 39.7**	**-0.4**
	comp=Z,10nm,0.9s,baz=193,slow=11,SNR=10						
KMMI	**Kalianget**	**23.23**	**196**	P	**P**	**19 17 46.1**	**+2.8**
	comp=Z,147nm,1.7s,comp=Z,3μm						
GUMO	**Guam**	**23.87**	**91**	LR	LR	19 25 36.8	
	comp=Z,458nm,18.4s,baz=262,slow=33						
SRBI	**Singaraja**	**23.93**	**192**	P	**P**	**19 17 51.8**	**+1.7**
	comp=Z,169nm,1.3s,comp=Z,2μm						
BLJI	**Banyuglugur**	**24.00**	**196**	P	**P**	**19 17 53.3**	**+2.6**
	comp=Z,102nm,1.5s						
MMRI	**Maumere**	**24.03**	**175**	P	P	19 17 57.5	+6.5
	comp=Z,91nm,0.9s,comp=Z,1μm						
KHKI	**Kahang-Kahang**	**24.13**	**191**	P	**P**	**19 17 53.4**	**+1.5**
	comp=Z,86nm,1.4s,comp=Z,1μm						
BKNI	**Bangkinang**	**24.24**	**233**	P	**P**	**19 17 54.2**	**+1.2**
	comp=Z,109nm,1.4s,comp=Z,1μm						
TLE	**Tual**	**24.33**	**149**	P	sP	19 18 14.7	+7.5
TSI	**Tuntungan**	**24.46**	**243**	P	**P**	**19 17 56.5**	**+1.4**
	comp=Z,183nm,1.1s						
PSI	**Prapat**	**24.52**	**241**	P	**P**	**19 17 55.4**	**-0.3**
PSI	**Prapat**	**24.52**	**241**	P	**P**	**19 17 57.1**	**+1.4**
	comp=Z,31nm,1.1s						
PSI	**Prapat**	**24.52**	**241**	P	**P**	**19 17 55.4**	**-0.3**
	comp=Z,22nm,1.0s,baz=30,slow=8.4,SNR=8.8						
PSI				LR	LR	19 25 38.7	
	comp=Z,999nm,21.6s,baz=50,slow=32						
GMJI	**Gumukmas**	**24.54**	**196**	P	**P**	**19 17 58.3**	**+2.6**
	comp=Z,72nm,1.4s						
SJI	**Sawahan**	**24.55**	**201**	P	**P**	**19 17 57.4**	**+1.5**
	comp=Z,65nm,1.8s,comp=Z,1μm						
IGBI	**Denpasar**	**24.66**	**192**	P	**P**

CGJI	**Cibinong**	**26.27**	**214**		P	**P**	**19 18 14.1**	**+2.7**		
MAT	**Matsushiro**	**26.37**	**34**		P	**P**	**19 18 10.1**	**-2.0**		
MJAR	**Matsushiro Arr**	**26.37**	**34**		P	**P**	**19 18 10.7**	**-1.4**		
MJAR	**Matsushiro Arr**	**26.37**	**34**		P	**P**	**19 18 10.7**	**-1.4**		
	comp=Z,0.6nm,0.4s,baz=204,slow=12,SNR=4.2									
MJAR					LR	LR	19 28 48.7			
	comp=Z,474nm,21.2s,baz=215,slow=37									
HHC	**Hu-ho-hao-te**	**26.40**	**345**	*e*P		P	19 18 22.6	+10		
HHC					sP	sP	19 18 44.3	+18		
HHC					PP	**PP**	**19 19 08.4**	**-4.3**		
HHC					PcP	PcP	19 21 46.8	+9.3		
HHC					S	**S**	**19 22 49.8**	**+5.9**		
HHC					sS	sS	19 23 15.8	+16		
HHC					SS	SnSn	19 24 04.1	+18		
HHC					ScP	**ScP**	**19 25 20.0**	**+4.8**		
HHC					PcS	PcS	19 25 26.3	+7.6		
HHC					pmax	pmax				
	comp=Z,66nm,0.9s									
HHC					pmax	pmax				
	comp=Z,560nm,5.1s									
HHC					LR	LR				
	comp=N,2μm,12.9s									
HHC					LR	LR				
	comp=E,2μm,13.5s									
HHC					LR	LR				
	comp=Z,2μm,12.5s									
SNY	**Shenyang**	**26.42**	**6**	⇓P		**P**	**19 18 12.5**	**0.0**		
SNY					pmax	pmax				
	comp=Z,34nm,2.2s									
SNY					LR	LR				
	comp=N,820nm,21.4s									
SNY					LR	LR				
	comp=E,1μm,19.0s									
SNY					LR	LR				
	comp=Z,810nm,14.9s									
GSI	**Gunungsitoli**	**26.46**	**240**		S	S	19 22 38.0	-7.1		
	baz=24,SNR=19									
BTO	**Baotou**	**26.59**	**342**	*e*P		**P**	**19 18 10.3**	**-3.9**		
CN2	**Changchun**	**28.58**	**8**	*e*P		P	19 18 36.4	+4.5		
CN2				*e*S		**S**	**19 23 20.0**	**+2.0**		
CN2					pmax	pmax				
	comp=Z,10.0nm,0.6s									
CN2					pmax	pmax				
	comp=Z,200nm,5.0s									
CN2					LR	LR				
	comp=N,1μm,17.0s									
CN2					LR	LR				
	comp=E,600nm,17.0s									
CN2					LR	LR				
	comp=Z,1μm,20.0s									
GTA	**Gaotai**	**29.84**	**327**	⇑P		**P**	**19 18 44.3**	**+1.0**		
GTA					pP	pP	19 18 59.0	+6.3		
GTA					sP	sP	19 19 06.3	+10		
GTA					S	**S**	**19 23 36.3**	**-1.8**		
GTA					sS	sS	19 24 01.4	+7.6		
GTA					SS	**SnSn**	**19 25 16.9**	**+6.8**		
GTA					pmax	pmax				
	comp=Z,11nm,1.7s									
GTA					pmax	pmax				
	comp=Z,83nm,6.4s									
GTA					LR	LR				
	comp=N,1μm,19.9s									
GTA					LR	LR				
	comp=E,1μm,23.3s									
GTA					LR	LR				
	comp=Z,1μm,21.4s									
MDJ	**Mudanjiang**	**30.11**	**13**		P	**P**	**19 18 43.8**	**-1.6**		
MDJ					pP	pP	19 18 59.3	+4.4		
MDJ					sP	sP	19 19 03.8	+5.0		
MDJ					PcP	**PcP**	**19 21 45.5**	**-1.0**		
MDJ					S	**S**	**19 23 40.3**	**-1.6**		
MDJ					sS	sS	19 24 08.8	+11		
MDJ					pmax	pmax				
	comp=Z,230nm,3.8s									
MDJ					LR	LR				
	comp=N,290nm,19.7s									
MDJ					LR	LR				
	comp=E,330nm,19.7s									
MDJ					LR	LR				
	comp=Z,330nm,21.0s									
MTN	**Manton Dam**	**30.11**	**159**		P	P	19 18 49.1	+3.5		
	baz=24,SNR=3.5									
LSA	**Lhasa**	**30.29**	**303**		P	**P**	**19 18 47.8**	**0.0**		
USRK	**Ussuriysk Arra**	**30.32**	**17**		P	**P**	**19 18 47.5**	**+0.3**		
	comp=Z,3.4nm,0.9s,baz=201,slow=10,SNR=5.0									
USRK					LR	LR	19 31 46.3			
	comp=Z,627nm,20.0s,baz=326,slow=38									
KDU	**Kakadu**	**30.46**	**156**		P	**P**	**19 18 48.5**	**-0.3**		
	baz=24,SNR=7.2									
TAPN	**Taplejung**	**32.45**	**297**	*e*P		**P**	**19 19 06.1**	**-0.5**		
ODAN	**Odare**	**32.60**	**296**	*e*P		**P**	**19 19 06.8**	**-1.1**		
	comp=Z,51nm,0.7s									
RAMN	**Ramite**	**33.31**	**296**	*e*P		**P**	**19 19 13.4**	**-0.7**		
FITZ	**Fitzroy Crossi**	**33.77**	**171**	*e*P		**P**	**19 19 17.3**	**-0.5**		
	comp=Z,3.1nm,0.4s									
FITZ					S	S	19 24 34.4	-5.1		
FITZ	**Fitzroy Crossi**	**33.77**	**171**		P	**P**	**19 19 17.5**	**-0.3**		
	baz=28,SNR=8.6									
ULN	**Ulaanbaatar**	**34.11**	**344**	*e*P		**P**	**19 19 20.0**	**-0.6**		
	comp=Z,6.9nm,0.8s									
GUN	**Gumba**	**34.16**	**297**	*e*P		**P**	**19 19 20.7**	**-0.9**		
	comp=Z,68nm,0.8s									
SONM	**Songino Array**	**34.26**	**343**		P	**P**	**19 19 22.1**	**+0.2**		
SONM	**Songino Array**	**34.26**	**343**		P	**P**	**19 19 22.1**	**+0.2**		
	comp=Z,6.2nm,0.5s,baz=163,slow=9.9,SNR=65									
SONM					LR	LR	19 34 20.5			
	comp=Z,684nm,18.9s,baz=155,slow=38									
ASAJ	**Asahikawa**	**34.27**	**29**		P	**P**	**19 19 23.8**	**+1.9**		
ASAJ	**Asahikawa**	**34.27**	**29**		P	**P**	**19 19 23.8**	**+1.9**		
	comp=Z,6.6nm,0.6s,baz=237,slow=10,SNR=7.5									
ASAJ					LR	LR	19 34 21.1			
	comp=Z,609nm,19.2s,baz=227,slow=38									
PKI	**Pulchoki**	**34.49**	**296**	*e*P		**P**	**19 19 23.0**	**-1.4**		
	comp=Z,31nm,0.8s									
PKIN	**Phulchoki**	**34.50**	**296**	*e*P		**P**	**19 19 23.2**	**-1.2**		
	comp=Z,12nm,0.6s									
KKN	**Kakani**	**34.65**	**297**	*e*P		**P**	**19 19 24.4**	**-1.3**		
	comp=Z,32nm,1.0s									
DMN	**Daman**	**34.76**	**296**	*e*P		**P**	**19 19 25.4**	**-1.2**		
	comp=Z,26nm,0.8s									
HABR	**Khabarovsk**	**35.09**	**17**	*ce*P		**P**	**19 19 28.1**	**-0.7**		
HABR				*e**PP		pP	19 19 43.0	+4.6		
HABR				*e*			19 21 57.6			
HABR				*e*S		**S**	**19 24 57.5**	**-1.7**		
HABR				*e*SS		**SnSn**	**19 27 19.8**	**+2.8**		
HABR				*e*			19 29 41.9			
HABR					pmax	pmax				
	comp=Z,65nm,2.8s									
HABR					pmax	pmax				
	comp=E,50nm,1.8s									
HABR					pmax	pmax				
	comp=N,50nm,2.8s									
HABR					pmax	pmax				
	comp=Z,59nm,3.2s									
HABR					MLR	MLR				
	comp=Z,424nm,18.0s									
DANN	**Dangsing**	**36.08**	**297**	*e*P		**P**	**19 19 36.5**	**-1.6**		
	comp=Z,48nm,0.7s									
KOLN	**Koldanda**	**36.09**	**296**	*e*P		**P**	**19 19 36.7**	**-1.4**		
	comp=Z,15nm,0.8s									
PMG	**Port Moresby**	**36.33**	**131**	*e*P		**P**	**19 19 40.7**	**+0.8**		
	comp=Z,83nm,1.3s									
PMG	**Port Moresby**	**36.33**	**131**		P	**P**	**19 19 41.4**	**+1.5**		
	comp=Z,10.0nm,0.7s,baz=346,slow=8.3,SNR=5.0									
MBWA	**Marble Bar**	**36.40**	**181**	*e*P		**P**	**19 19 39.6**	**-0.8**		
	comp=Z,11nm,0.7s									
YSS	**Yuzh-Sakhalins**	**36.54**	**26**	*e*P		**P**	**19 19 43.0**	**+1.7**		
YSS				*e*S		**S**	**19 25 23.0**	**+1.5**		
YSS					pmax	pmax				
	comp=Z,40nm,1.1s									
YSS					MLR	MLR				
	comp=Z,600nm,19.0s									
PYUN	**Piuthan**	**36.69**	**296**	*e*P		**P**	**19 19 42.0**	**-1.2**		
	comp=Z,65nm,0.9s									
COEN	**Coen**	**36.98**	**141**		P	P	19 19 55.9	+10		
	baz=32,SNR=4.9									
ZAK	**Zakamensk**	**37.45**	**342**	*e*P		**P**	**19 19 49.1**	**-0.1**		
ZAK					pmax	pmax				
	comp=Z,6.0nm,1.2s									
WRAB	**Tennant Creek**	**37.80**	**158**	*e*P		**P**	**19 19 51.3**	**-1.1**		
WRAB					pmax	pmax				
	comp=Z,37nm,0.9s									
WRAB	**Tennant Creek**	**37.80**	**158**	*e*P		**P**	**19 19 51.3**	**-1.1**		
	comp=Z,37nm,0.9s									
WRA	**Warramunga Arr**	**37.80**	**158**		P	**P**	**19 19 51.1**	**-1.3**		
WRA	**Warramunga Arr**	**37.80**	**158**		P	**P**	**19 19 51.1**	**-1.3**		
	comp=Z,737nm,0.7s,baz=336,slow=9.5,SNR=18									
IRK	**Irkutsk**	**38.84**	**344**	*e*P		P	19 20 08.3	+7.5		
IRK				*e*			19 21 41.6			
IRK					pmax	pmax				
	comp=Z,32nm,1.2s									
MOY	**Mondy**	**39.27**	**341**	*e*P		**P**	**19 20 05.2**	**+0.7**		
WMQ	**Urumqi**	**39.56**	**322**		P	P	19 20 01.0	-6.0		
WMQ					pmax	pmax				
	comp=Z,15nm,1.0s									
WMQ	**Urumqi**	**39.56**	**322**		P	**P**	**19 20 09.0**	**+2.0**		
WMQ					pP	pP	19 20 24.0	+7.4		
WMQ					sP	sP	19 20 32.0	+11		
WMQ					PP	**PnPn**	**19 21 45.0**	**+3.7**		
WMQ					PcP	**PcP**	**19 22 14.0**	**0.0**		
WMQ					ScP	**ScP**	**19 25 58.0**	**-2.5**		
WMQ					S	**S**	**19 26 08.0**	**+0.4**		
WMQ					sS	sS	19 26 34.0	+10		
WMQ					SS	**SS**	**19 28 58.0**	**-5.1**		
WMQ					ScS	**ScS**	**19 30 09.0**	**-3.8**		
WMQ					pmax	pmax				
	comp=Z,14nm,0.8s									
WMQ					pmax	pmax				
	comp=Z,240nm,5.0s									
WMQ					LR	LR				
	comp=N,2μm,15.0s									
WMQ					LR	LR				
	comp=E,1μm,15.0s									
WMQ					LR	LR				
	comp=Z,2μm,15.0s									
HYB	**Hyderabad**	**40.02**	**279**	*i* P		**P**	**19 20 11.0**	**-0.1**		
QIS	**Mount Isa**	**40.52**	**151**		P	**P**	**19 20 15.6**	**+0.5**		
	baz=35,SNR=13									
AS31	**Alice Springs**	**41.11**	**161**	*e*P		**P**	**19 20 19.2**	**-0.7**		
ASAR	**Alice Springs**	**41.11**	**161**		P	**P**	**19 20 19.2**	**-0.7**		
ASAR					S	**S**	**19 26 28.2**	**-2.7**		
ASAR	**Alice Springs**	**41.11**	**161**		P	**P**	**19 20 19.2**	**-0.7**		
	comp=Z,6.0nm,0.6s,baz=340,slow=7.6,SNR=207									
ASAR					S	**S**	**19 26 28.2**	**-2.7**		
	comp=Z,1.7nm,1.1s,baz=348,slow=18,SNR=6.7									
DDI	**Dehra Dun**	**41.37**	**298**	*e*P		P	19 20 18.0	-4.1		
MEEK	**Meekatharra**	**41.88**	**182**		P	**P**	**19 20 25.4**	**-0.8**		
	baz=36,SNR=8.4									
TRD	**Trivandrum**	**42.88**	**266**	⇓*e*P		sS	19 27 24.4	+11		
CTA	**Charters Tower**	**43.59**	**143**		P	**P**	**19 20 40.3**	**+0.1**		
CTA	**Charters Tower**	**43.59**	**143**		P	**P**	**19 20 40.3**	**+0.1**		
	comp=Z,4.4nm,0.7s,baz=307,slow=9.0,SNR=5.4									
CTAO	**Charters Tower**	**43.59**	**143**	*e*P		**P**	**19 20 40.9**	**+0.7**		
CTAO					pmax	pmax				
	comp=Z,16nm,0.8s									
CTAO	**Charters Tower**	**43.59**	**143**	*e*P		**P**	**19 20 40.9**	**+0.7**		
	comp=Z,16nm,0.8s									
MK31	**Makanchi Array**	**44.38**	**323**	*e*P		**P**	**19 20 46.6**	**+0.3**		
MK31	**Makanchi Array**	**44.38**	**323**	*e*P		**P**	**19 20 46.6**	**+0.3**		
MKAR	**Makanchi Array**	**44.38**	**323**		P	**P**	**19 20 46.7**	**+0.4**		
MKAR							19 22 31.7			
MKAR	**Makanchi Array**	**44.38**	**323**		P	**P**	**19 20 46.6**	**+0.4**		
MKAR					PcP	**PP**	**19 22 31.6**	**+1.6**		
MKAR	**Makanchi Array**	**44.38**	**323**		P	**P**	**19 20 46.7**	**+0.4**		
	comp=Z,6.6nm,0.7s,baz=126,slow=9.6,SNR=95									
MKAR					PcP	**PP**	**19 22 31.7**	**+1.6**		
	comp=Z,2.4nm,0.7s,baz=106,slow=4.8,SNR=3.5									
MORW	**Morawa**	**44.46**	**185**		P	**P**	**19 20 46.4**	**-0.6**		
	baz=38,SNR=6.3									
KSH	**Kashi**	**45.44**	**311**	⇑*i*P		**P**	**19 20 57.1**	**+2.2**		
KSH					pP	pP	19 21 12.9	+8.2		
KSH					sP	sP	19 21 21.1	+13		
KSH					PcP	**PcP**	**19 22 35.3**	**+1.6**		
KSH					PP	**PP**	**19 22 45.1**	**+3.6**		
KSH					ScP	**ScP**	**19 26 21.0**	**-3.2**		
KSH					PcS	**PcS**	**19 26 27.6**	**-0.2**		
KSH					S	**S**	**19 27 33.1**	**-1.3**		
KSH					sS	sS	19 28 01.1	+11		
KSH					ScS	**ScS**	**19 30 45.6**	**-3.7**		
KSH					SS	SS	19 30 49.3	-8.9		
KSH					pmax	pmax				
	comp=Z,16nm,1.0s									
KSH					LR	LR				
	comp=N,260nm,7.7s									
KSH					LR	LR				
	comp=E,230nm,6.5s									
KSH					LR	LR				
	comp=Z,320nm,8.3s									
ULHL	**Ulahol**	**46.20**	**314**		P	**P**	**19 21 02.2**	**+1.2**		
	SNR=18									
HNR	**Honiara**	**46.43**	**120**		LR	LR	19 37 25.3			
	comp=Z,299nm,21.1s,baz=169,slow=32									
KMBL	**Kambalda**	**46.59**	**178**		P	**P**	**19 21 04.0**	**+0.2**		
	baz=40,SNR=5.4									
KZA	**Kyzart**	**46.82**	**314**		P	**P**	**19 21 07.4**	**+1.3**		
	SNR=21									
KLBR	**Kellerberrin**	**46.85**	**183**		P	**P**	**19 21 05.4**	**-0.5**		
	baz=41,SNR=16									
TKM2	**Tokmak 2**	**46.89**	**315**	*e*P		**P**	**19 21 07.1**	**+0.7**		
TKM2					pmax	pmax				
	comp=Z,11nm,1.0s									
TKM2	**Tokmak 2**	**46.89**	**315**	*e*P		**P**	**19 21 07.1**	**+0.7**		
	comp=Z,11nm,1.0s									
YAK	**Yakutsk**	**46.98**	**6**	*e*P		**P**	**19 21 06.2**	**-0.3**		
YAK				*e**PP		**pP**	**19 21 15.6**	**-0.7**		
YAK				*e*			19 22 40.5			
YAK				*e*			19 22 58.5			
YAK				*e*PPP		PPP	19 23 40.0			
YAK				*e*S		**S**	**19 27 53.4**	**-2.2**		
YAK				*e**SS		**sS**	**19 28 09.6**	**-2.1**		
YAK				*e*			19 31 01.0			
YAK					pmax	pmax				
	comp=E,3.0nm,1.7s									
YAK					pmax	pmax				
	comp=Z,17nm,1.2s									
YAK					pmax	pmax				
	comp=N,5.0nm,1.2s									
YAK					pmax	pmax				
	comp=Z,92nm,3.8s									
YAK					smax	smax				
	comp=E,119nm,3.8s									
YAK					smax	smax				
	comp=N,514nm,6.7s									
YAK					MLR	MLR				
	comp=E,282nm,18.0s									
YAK					MLR	MLR				
	comp=N,146nm,14.0s									
YAK					MLR	MLR				
	comp=Z,311nm,16.0s									
KBK	**Karagaybulak**	**47.24**	**314**		P	**P**	**19 21 10.4**	**+1.3**		
	SNR=17									
ZAA0	**Zalesovo Array**	**47.31**	**332**	*e*P		**P**	**19 21 08.9**	**-0.3**		
ZALV	**Zalesovo Beam**	**47.31**	**332**		P	**P**	**19 21 08.6**	**-0.6**		
ZALV	**Zalesovo Beam**	**47.31**	**332**		P	**P**	**19 21 08.6**	**-0.6**		
ZALV	**Zalesovo Beam**	**47.31**	**332**		P	**P**	**19 21 08.6**	**-0.6**		
	comp=Z,5.0nm,0.8s,baz=124,slow=6.5,SNR=30									
ZALV					LR	LR	19 41 52.3			
	comp=Z,512nm,18.8s,baz=131,slow=37									
CHMS	**Chumysh**	**47.49**	**315**		P	**P**	**19 21 11.6**	**+0.7**		
	SNR=7.9									
FRU	**Bishkek**	**47.53**	**314**	*e*P		**P**	**19 21 11.0**	**-0.2**		
FRU				*e*			19 22 40.0			
AAK	**Ala-Archa**	**47.54**	**314**	*d*P		**P**	**19 21 11.9**	**+0.5**		
AAK					pmax	pmax				
	comp=Z,38nm,1.7s									
AAK	**Ala-Archa**	**47.54**	**314**	*e*P		**P**	**19 21 12.3**	**+0.8**		
	comp=Z,8.0nm,0.9s									
AAK	**Ala-Archa**	**47.54**	**314**		P	**P**	**19 21 12.9**	**+1.5**		
	SNR=9.5									
AAK	**Ala-Archa**	**47.54**	**314**		P	**P**	**19 21 12.2**	**+0.8**		
	SNR=9.0									
AAK	**Ala-Archa**	**47.54**	**314**		P	**P**	**19 21 11.8**	**+0.3**		
	comp=Z,6.5nm,1.1s,baz=116,slow=8.5,SNR=15									
AAK					LR	LR	19 40 04.6			
	comp=Z,346nm,21.4s,baz=80,slow=35									
PETK	**Petropavlovsk-**	**47.69**	**30**		P	**P**	**19 21 13.7**	**+1.5**		
PETK	**Petropavlovsk-**	**47.69**	**30**		P	**P**	**19 21 13.7**	**+1.5**		
PETK	**Petropavlovsk-**	**47.69**	**30**		P	**P**	**19 21 13.7**	**+1.5**		
	comp=Z,15nm,0.7s,baz=204,slow=5.7,SNR=7.9									
PETK					LR	LR	19 44 17.0			
	comp=Z,202nm,18.0s,baz=230,slow=40									
USP	**Ospenovka**	**47.76**	**315**		P	**P**	**19 21 13.7**	**+0.7**		
	SNR=14									
QLP	**Quilpie**	**47.84**	**151**		P	**P**	**19 21 14.2**	**+0.5**		
	baz=42,SNR=5.4									
AML	**Almayashu**	**47.93**	**313**		P	**P**	**19 21 16.0**	**+1.3**		
	SNR=26									
EKS2	**Erkin-Say**	**48.05**	**314**	*e*P		**P**	**19 21 16.3**	**+1.0**		
EKS2					pmax	pmax				
	comp=Z,30nm,1.3s									
EKS2	**Erkin-Say**	**48.05**	**314**	*e*P		**P**	**19 21 16.3**	**+1.2**		
	comp=Z,30nm,1.3s									
EKS2	**Erkin-Say**	**48.05**	**314**		P	**P**	**19 21 16.6**	**+1.2**		
	SNR=7.5									
NWAO	**Narrogin (SRO)**	**48.21**	**183**		P	**P**	**19 21 14.2**	**-2.2**		
NWAO	**Narrogin (SRO)**	**48.21**	**183**		P	**P**	**19 21 14.2**	**-2.2**		
	comp=Z,4.7nm,0.6s,baz=22,slow=6.6,SNR=3.2									
KURK	**Kurchatov**	**48.51**	**326**	*e*P		**P**	**19 21 19.0**	**+0.5**		
KURK					pmax	pmax				
	comp=Z,32nm,0.7s									
KURK	**Kurchatov**	**48.51**	**326**	*e*P		**P**	**19 21 19.0**	**+0.5**		
	comp=Z,32nm,0.7s									
KURBB	**Kurchatov Arra**	**48.51**	**326**		P	**P**	**19 21 18.6**	**0.0**		
	comp=Z,15nm,0.9s,baz=123,slow=8.7,SNR=158									
NVS	**Novosibirsk**	**48.60**	**332**	⇑*i*P		**P**	**19 21 18.8**	**-0.3**		
NVS					pmax	pmax				
	comp=N,8.0nm,1.2s									
NVS					pmax	pmax				
	comp=E,7.0nm,1.2s									
NVS					pmax	pmax				
	comp=Z,16nm,1.2s									
KBL	**Kabul**	**49.62**	**302**	*e*P		**P**	**19 21 27.3**	**-0.3**		
KBL					pmax	pmax				
	comp=Z,33nm,1.3s									
KBL	**Kabul**	**49.62**	**302**	*e*P		**P**	**19 21 27.2**	**-0.3**		
	comp=Z,34nm,1.3s									
BBOO	**Buckleboo**	**50.32**	**163**	*e*P		**P**	**19 21 31.3**	**-1.3**		
	comp=Z,212nm,0.6s									
BBOO	**Buckleboo**	**50.32**	**163**		P	**P**	**19 21 31.6**	**-0.9**		
	baz=44,SNR=14									
KKAR	**Karatay Array**	**50.47**	**314**	*e*P		**P**	**19 21 33.4**	**-0.3**		
KKAR					pmax	pmax				
	comp=Z,16nm,0.8s									
KKAR	**Karatay Array**	**50.47**	**314**	*e*P		**P**	**19 21 33.4**	**-0.3**		
	comp=Z,16nm,0.8s									
EIDS	**Eidsvold**	**50.48**	**143**		P	P	19 21 43.5	+10		
	baz=45,SNR=3.3									
STKA	**Stephens Creek**	**51.32**	**157**	*e*P		**P**	**19 21 40.2**	**+0.2**		
	comp=Z,1.2nm,0.7s									
STKA	**Stephens Creek**	**51.32**	**157**		P	**P**	**19 21 38.9**	**-1.2**		
	comp=Z,1.2nm,0.4s,baz=348,slow=8.7,SNR=10									
STKA	**Stephens Creek**	**51.32**	**157**		P	**P**	**19 21 40.4**	**+0.3**		
	baz=45,SNR=7.0									
SEY	**Seymchan**	**52.46**	**18**	⇑*e*P		**P**	**19 21 50.4**	**+2.2**		
CMSA	**Cobar Meteorol**	**52.72**	**153**		P	**P**	**19 21 51.5**	**+1.0**		
	baz=47,SNR=6.9									
BVAR	**Borovoye Array**	**54.10**	**325**		P	**P**	**19 22 00.5**	**+0.1**		
BVAR							19 23 05.4			
BVAR	**Borovoye Array**	**54.10**	**325**		P	**P**	**19 22 00.5**	**+0.1**		
BVAR					PcP	**PcP**	**19 23 05.4**	**+0.5**		
BVAR	**Borovoye Array**	**54.10**	**325**		P	**P**	**19 22 00.5**	**+0.1**		
	comp=Z,4.1nm,0.8s,baz=120,slow=8.7,SNR=26									
BVAR					PcP	**PcP**	**19 23 05.4**	**+0.5**		
	comp=Z,6.9nm,0.8s,baz=140,slow=5.0,SNR=6.0									
BRVK	**Borovoye**	**54.17**	**325**	*c i*P		**P**	**19 22 01.4**	**+0.5**		
BRVK					pmax	pmax				
	comp=Z,31nm,1.7s									
BRVK	**Borovoye**	**54.17**	**325**	*e*P		**P**	**19 22 01.2**	**+0.3**		
	comp=Z,10nm,0.6s									
BRVK	**Borovoye**	**54.17**	**325**		P	**P**	**19 22 01.3**	**+0.5**		
	SNR=9.7									
ARMA	**Armidale**	**54.70**	**147**		P	P	19 22 16.2	+11		
	baz=49,SNR=5.4									
ARPS	**Mount Arapiles**	**55.80**	**159**		P	**P**	**19 22 12.3**	**-0.5**		
	baz=50,SNR=5.4									
IDAH	**Dahanechah**	**57.05**	**299**	*e*P		**P**	**19 22 22.0**	**-0.3**		
IMYA	**Miami**	**57.08**	**303**	*e*P		**P**	**19 22 21.7**	**-0.7**		
ISRO	**Mashad**	**57.58**	**303**	*e*P		**P**	**19 22 24.8**	**-1.0**		
IMOG	**Moghan**	**57.67**	**303**	*e*P		**P**	**19 22 26.6**	**-0.1**		
IKOO	**Kooshah**	**57.77**	**299**	*e*P		**P**	**19 22 27.7**	**+0.3**		
TOO	**Toolangi**	**57.84**	**156**		P	**P**	**19 22 28.7**	**+1.4**		
	baz=52,SNR=3.9									
IKRD	**Kardeh**	**58.38**	**304**	*e*P		P	19 22 26.1	-5.5		
DZM	**Mont Dzumac**	**58.63**	**128**	*e*LR		LR	19 40 02.4			
	comp=Z,249nm,26.6s									
ABKT	**Ailbek**	**58.78**	**305**		P	**P**	**19 22 34.3**	**+0.2**		
	comp=Z,174nm,1.1s,SNR=7.4									
ABKAR	**Akbulak array**	**59.15**	**318**	*e*P		**P**	**19 22 36.5**	**+0.2**		
	comp=Z,4.5nm,0.4s									
BILL	**Bilibino**	**60.16**	**18**	*e*P		**P**	**19 22 43.8**	**+0.8**		
BILL				*e*			19 22 51.8			
BILL					pmax	pmax				
	comp=Z,79nm,0.7s									
BILL					MLR	MLR				
	comp=Z,100nm,18.0s									
BILL	**Bilibino**	**60.16**	**18**	*e*P		**P**	**19 22 43.5**	**+0.5**		
	comp=Z,14nm,0.6s									
AKTO	**Aktyubinsk**	**60.61**	**319**		P	**P**	**19 22 46.2**	**-0.2**		
AKTO	**Aktyubinsk**	**60.61**	**319**		P	**P**	**19 22 46.2**	**-0.2**		
AKTO	**Aktyubinsk**	**60.61**	**319**		P	**P**	**19 22 46.2**	**-0.2**		
	comp=Z,6.0nm,0.8s,baz=95,slow=9.8,SNR=26									
IBAF	**Bafgh**	**60.69**	**298**	*e*P		**P**	**19 22 46.8**	**-0.7**		
SVE	**Sverdlovsk**	**60.71**	**327**	⇓*i*P		**P**	**19 22

VRHR e*PP **pP** **19 24 03.6 0.0**
VRHR pmax pmax
comp=Z,10.0nm,1.0s
VRHR pmax pmax
comp=N,8.0nm,1.5s
VRHR pmax pmax
comp=E,10.0nm,1.7s
VORD Divnogorie 72.49 319 *e*P **P** **19 24 00.5 -1.8**
VORD e*PP pP 19 24 13.1 +0.6
VORD pmax pmax
comp=Z,6.0nm,0.6s
VORD pmax pmax
comp=N,5.0nm,0.4s
VORD pmax pmax
comp=E,20nm,0.6s
VSR Storozhevoye 72.56 319 *e*P **P** **19 24 02.0 -0.7**
VSR e*PP **pP** **19 24 12.8 -0.1**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VSR pmax pmax
comp=N,10.0nm,1.5s
VSR pmax pmax
comp=E,10.0nm,1.1s
SOC Sochi 72.73 311 *i*P **P** **19 24 02.7 -1.1**
SOC *e* 19 26 49.4
SOC *e*S S 19 33 22.4 -4.8
SOC *e*SS **SS** **19 38 10.8 +3.8**
SOC *e*SSS SSS 19 41 20.5
SOC pmax pmax
comp=Z,9.0nm,0.7s
SOC MLR MLR
comp=Z,294nm,15.0s
TMCR Tamitsa 72.83 333 *e*P **P** **19 24 03.3 -0.7**
TMCR pmax pmax
comp=Z,26nm,0.8s
MOS Moscow 73.25 324 *e*P **P** **19 24 05.6 -1.0**
MOS *e* 19 24 21.7
MOS pmax pmax
comp=Z,30nm,1.2s
OBN Obninsk 73.88 324⇑ *e*P **P** **19 24 09.8 -0.6**
OBN pmax pmax
comp=Z,31nm,1.7s
OBN MLR MLR
comp=Z,200nm,18.0s
MALT Malatya 74.27 306 ⇓P **P** **19 24 14.5 +1.3**
MALT Malatya 74.27 306 *e*P **P** **19 24 14.3 +1.1**
comp=Z,6.2nm,0.9s
MALT Malatya 74.27 306 ⇓*i*P **P** **19 24 14.5 +1.3**
APA Apatity 74.64 337 ⇓*i*P **P** **19 24 15.0 +0.4**
APA pmax pmax
comp=Z,81nm,1.4s
APA MLR MLR
comp=Z,900nm,17.0s
ATD Arta Tunnel 75.04 278 P **P** **19 24 19.1 +1.2**
ATD Arta Tunnel 75.04 278 P **P** **19 24 19.1 +1.2**
comp=Z,8.1nm,0.7s,baz=124,slow=7.3,SNR=4.6
RSO Redoubt South 75.20 31 *e*P **P** **19 24 19.0 +0.8**
KDAK Kodiak Island 75.55 34 P **P** **19 24 19.6 -0.4**
KDAK Kodiak Island 75.55 34 P **P** **19 24 19.6 -0.4**
comp=Z,3.7nm,0.5s,baz=304,slow=13,SNR=8.7
JOF Joensuu 75.90 332 *e*P **P** **19 24 21.3 -0.6**
JOF pmax pmax
comp=Z,4.0nm,0.4s
JOF Joensuu 75.90 332 *e*p **P** **19 24 21.3 -0.6**
comp=Z,4.4nm,0.4s
TRF Thorofare Moun 76.05 28 *e*P **P** **19 24 23.2 +0.2**
comp=Z,45nm,1.7s
ASF Jabal al Asfar 76.43 300 P **P** **19 24 26.3 +0.6**
ASF Jabal al Asfar 76.43 300 P **P** **19 24 26.3 +0.6**
comp=Z,5.6nm,1.1s,baz=356,slow=2.0,SNR=7.7
SIM Simferopol' 76.56 313 *e*P **P** **19 24 26.4 +0.3**
SIM *e* 19 24 41.0
SIM pmax pmax
comp=Z,11nm,0.8s
RC01 Rabbit Creek A 76.60 30 *e*P **P** **19 24 26.1 +0.2**
comp=Z,5.9nm,0.6s
MCK McKinley 76.61 27 *e*P **P** **19 24 26.2 +0.2**
MCK pmax pmax
comp=Z,19nm,1.0s
MCK McKinley 76.61 27 *e*P **P** **19 24 26.2 +0.2**
comp=Z,19nm,1.0s
KEV Kevo 76.75 339 *e*P **P** **19 24 26.0 -0.6**
KEV pmax pmax
comp=Z,6.0nm,0.7s
KEV Kevo 76.75 339 *e*p **P** **19 24 26.0 -0.6**
comp=Z,6.1nm,0.7s
PMR Palmer 76.82 29 *e*P **P** **19 24 27.4 +0.2**
PMR pmax pmax
comp=Z,10.0nm,0.8s
PMR Palmer 76.82 29 *e*P **P** **19 24 27.4 +0.2**
comp=Z,10.0nm,0.8s
ARCES ARCESS Array B 77.30 339 P **P** **19 24 28.7 -1.1**
ARCES ARCESS Array B 77.30 339 P **P** **19 24 28.7 -1.1**
comp=Z,6.8nm,0.6s,baz=82,slow=6.6,SNR=46
ARCES LR LR 19 58 21.6
comp=Z,280nm,21.4s,baz=270,slow=36
ARE0 ARCESS Array S 77.30 339 *e*P **P** **19 24 29.6 -0.1**
ILAR Eielson Array 77.35 26 P **P** **19 24 29.1 -1.0**
ILAR Eielson Array 77.35 26 P **P** **19 24 29.1 -1.0**
comp=Z,0.7nm,0.7s,baz=278,slow=5.5,SNR=11
ILAR LR LR 20 03 11.0
comp=Z,107nm,19.3s,baz=285,slow=39
MMAI Mount Meron Ar 77.52 301 P **P** **19 24 31.2 -0.6**
MMAI Mount Meron Ar 77.52 301 P **P** **19 24 31.2 -0.6**
comp=Z,2.2nm,0.8s,baz=67,slow=11,SNR=4.0
BRTR Keskin Array B 77.75 308 P **P** **19 24 32.2 -0.8**
BRTR Keskin Array B 77.75 308 P **P** **19 24 32.2 -0.8**
comp=Z,0.5nm,0.6s,baz=92,slow=4.5,SNR=4.8
BRTR LR LR 20 05 06.5
comp=Z,84nm,19.6s,baz=248,slow=40
PAX Paxson 78.28 28 *e*P **P** **19 24 35.7 +0.2**
PAX pmax pmax
comp=Z,8.0nm,0.8s
PAX Paxson 78.28 28 *e*P **P** **19 24 35.7 +0.2**
comp=Z,7.8nm,0.8s
KAF Kangasniemi 78.32 331 *e*P **P** **19 24 34.3 -1.2**
KAF pmax pmax
comp=Z,8.0nm,0.9s
KAF Kangasniemi 78.32 331 *e*p **P** **19 24 34.3 -1.2**
comp=Z,8.0nm,0.9s
EIL Elat 78.53 298 P **P** **19 24 38.4 +1.1**
EIL Elat 78.53 298 P **P** **19 24 38.4 +1.1**
comp=Z,12nm,1.0s,baz=96,slow=3.7,SNR=13
FIA1 FINESS Array S 78.55 331 *e*P **P** **19 24 36.5 -0.3**
FINES FINESS Array B 78.55 331 P **P** **19 24 36.4 -0.4**
FINES FINESS Array B 78.55 331 P **P** **19 24 36.4 -0.4**
comp=Z,5.3nm,0.6s,baz=73,slow=6.7,SNR=20
FINES LR LR 20 01 34.6
comp=Z,242nm,18.8s,baz=293,slow=37
CSS Prodhromos 78.86 303 *e*P **P** **19 24 39.1 0.0**
comp=Z,23nm,0.8s
AKASG Malin Array Be 78.86 320 *i*P **P** **19 24 38.0 -0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 78.86 320 P **P** **19 24 37.4 -1.3**
AKASG Malin Array Be 78.86 320 P **P** **19 24 37.4 -1.3**
comp=Z,2.4nm,0.7s,baz=63,slow=5.8,SNR=10
AKASG LR LR 20 01 04.7
comp=Z,150nm,19.9s,baz=75,slow=37
AK01 Malin Array Si 78.87 320 *e*P **P** **19 24 38.1 -0.7**
KIEV Kiev 78.87 320 *e*P **P** **19 24 37.7 -1.1**
KIEV pmax pmax
comp=Z,6.0nm,0.8s
KIEV Kiev 78.87 320 *e*P **P** **19 24 37.7 -1.1**
comp=Z,5.5nm,0.8s
AK02 Malin Array Si 78.88 320 *e*P **P** **19 24 38.0 -0.9**
NACGM Naroch 79.50 324 *e* P 19 24 39.0 -3.1
EGAK Eagle 79.75 26 *e*P **P** **19 24 43.5 +0.1**
comp=Z,4.7nm,0.8s
TLCR 80.22 314⇑P **P** **19 24 46.5 +0.3**
TLCR 80.22 314⇑*i*P **P** **19 24 46.5 +0.3**
CFR Carcaliu 80.69 314 ⇓P **P** **19 24 48.5 -0.2**
CFR Carcaliu 80.69 314 ⇓*i*P **P** **19 24 48.5 -0.2**
TESR 81.40 316⇑*i*P **P** **19 24 53.1 +0.5**
GRER 81.44 315⇑*i*P **P** **19 24 53.2 +0.4**
VRI Vrincioaia 81.50 315⇑P **P** **19 24 53.7 +0.6**
VRI Vrincioaia 81.50 315⇑*i*P **P** **19 24 53.7 +0.6**
PLOR Plostina 81.56 315 ⇓P **P** **19 24 54.5 +1.1**
PLOR Plostina 81.56 315 ⇓*i*P **P** **19 24 54.5 +1.1**
INK Inuvik 81.60 21 P **P** **19 24 52.0 -1.1**
INK Inuvik 81.60 21 P **P** **19 24 52.0 -1.1**
comp=Z,2.4nm,0.8s,baz=301,slow=3.0,SNR=12
INK LR LR 20 02 51.3
comp=Z,172nm,20.4s,baz=302,slow=37
SUW Suwalki 81.74 324 *e*P **P** **19 24 53.2 -1.0**
SUW Suwalki 81.74 324 *e*P **P** **19 24 53.2 -1.0**
ISR Istrita 81.80 314⇑P **P** **19 24 55.1 +0.3**
ISR Istrita 81.80 314⇑*i*P **P** **19 24 55.1 +0.3**
BURAR Bucovina Array 82.09 317⇑*i*P **P** **19 24 56.9 +0.6**
BUR08 Bucovina Ar. S 82.10 317 *e*P **P** **19 24 56.7 +0.4**
MLR Muntele Rosu 82.12 315 P **P** **19 24 57.2 +0.7**
MLR Muntele Rosu 82.12 315 ⇓*i*P **P** **19 24 57.3 +0.7**
MLR Muntele Rosu 82.12 315 P **P** **19 24 57.2 +0.7**
comp=Z,1.1nm,0.7s,baz=180,slow=2.0
LVV L'vov 82.31 319 *e*P **P** **19 24 56.7 -0.5**
LVV MLR MLR
comp=Z,100nm,18.0s
LVV MLR MLR
comp=N,30nm,15.0s
LVV MLR MLR
comp=E,100nm,17.0s
PVL Pavlikeni 83.11 313 *i*P **P** **19 25 02.0 +0.5**
KWP Kalwaria Pacla 83.18 320⇑P **P** **19 25 02.5 +0.7**
KWP Kalwaria Pacla 83.18 320 *e*P **P** **19 25 02.2 +0.4**
comp=E,12nm,0.6s
KWP Kalwaria Pacla 83.18 320⇑*i*P **P** **19 25 02.5 +0.7**
KWP Kalwaria Pacla 83.18 320 *e*P **P** **19 25 02.1 +0.3**
KMBO Kilima Mbogo 83.58 267 *e*P **P** **19 25 06.2 +1.3**
comp=E,29nm,1.5s
KMBO Kilima Mbogo 83.58 267 P **P** **19 25 06.8 +2.0**
SNR=5.6
KMBO Kilima Mbogo 83.58 267 P **P** **19 25 04.9 +0.1**
comp=E,7.8nm,1.1s,baz=43,slow=9.1,SNR=16
KMBO LR LR 20 00 44.5
comp=E,100nm,19.2s,baz=280,slow=35
KOLS Kolonicke sedl 83.65 319 *e*P **P** **19 25 04.1 -0.1**
KOLS pmax pmax
comp=Z,4.0nm,1.3s
KOLS Kolonicke sedl 83.65 319 *e*P **P** **19 25 04.1 -0.1**
KOLS *e*pP pP 19 25 20.7 +6.1
SKAG Skagway 83.94 30 *e*P **P** **19 25 08.0 +2.5**
comp=Z,11nm,1.0s
DRGR 83.96 317⇑P **P** **19 25 06.4 +0.4**
DRGR 83.96 317⇑*i*P **P** **19 25 06.4 +0.4**
CRVS Cervenica-Dubn 84.17 319 *e*P **P** **19 25 07.0 +0.1**
CRVS pmax pmax
comp=Z,8.0nm,1.4s
CRVS Cervenica-Dubn 84.17 319 *e*P **P** **19 25 07.0 +0.1**
CRVS *e*pP pP 19 25 22.9 +5.6
MPEP Malo Peshtene 84.19 313 *i*P **P** **19 25 07.1 0.0**
MMB Musomiste 84.68 312 *i*P P 19 25 07.1 -2.6
NIE Niedzica 84.74 320 *e*P **P** **19 25 10.9 +1.1**
NIE Niedzica 84.74 320 *e*P **P** **19 25 10.9 +1.1**
VTS Vitosha 84.78 313⇑P **P** **19 25 10.3 0.0**
VTS Vitosha 84.78 313⇑*i*P **P** **19 25 10.3 0.0**
VTS Vitosha 84.78 313 *i*P **P** **19 25 08.6 -1.7**
DAG Danmarks Havn 84.81 351 *i*P **P** **19 25 09.1 -0.5**
DAG pmax pmax
comp=Z,7.0nm,0.8s
DAG Danmarks Havn 84.81 351 *i*P **P** **19 25 09.1 -0.5**
comp=Z,9.3nm,0.8s
OJC Ojcow 84.81 321 *e*P **P** **19 25 10.0 -0.1**
OJC Ojcow 84.81 321 *e*P **P** **19 25 10.0 -0.1**
BZS Buzias 85.02 316 ⇓P **P** **19 25 11.1 -0.1**
BZS Buzias 85.02 316 ⇓*i*P **P** **19 25 11.1 -0.1**
KKB Krupnik 85.07 312 *i*P **P** **19 25 10.7 -0.9**
PSZ Piszkesteto 85.46 318⇑P **P** **19 25 13.1 -0.4**
PSZ Piszkesteto 85.46 318 *e*P **P** **19 25 12.4 -1.1**
comp=Z,11nm,1.0s
PSZ Piszkesteto 85.46 318⇑*i*P **P** **19 25 13.1 -0.4**
PSZ Piszkesteto 85.46 318 ⇓*e*P **P** **19 25 13.2 -0.3**
NB2 NORSAR Subarra 85.51 333 P **P** **19 25 12.7 -0.8**
baz=65,slow=4.8
NB2 NORSAR Subarra 85.51 333 P **P** **19 25 12.7 -0.8**
comp=Z,19nm,0.8s,baz=65,slow=4.8
NOA NORSAR Array B 85.51 333 P **P** **19 25 13.0 -0.5**
NOA NORSAR Array B 85.51 333 P **P** **19 25 13.0 -0.5**
comp=Z,14nm,0.8s,baz=67,slow=4.9,SNR=61
NOA LR LR 20 05 42.0
comp=Z,372nm,19.8s,baz=55,slow=37
VAY Valandovo 85.59 312 *e*P **P** **19 25 13.5 -0.6**
NAO01 NORSAR Array S 85.74 332 *e*P **P** **19 25 13.9 -0.6**
comp=Z,12nm,0.8s
OKC Ostrava-Krasne 85.94 321 *e*P **P** **19 25 15.6 -0.2**
OKC *e* 19 35 43.0
OKC MLR MLR
comp=Z,200nm,25.3s
OKC Ostrava-Krasne 85.94 321 *e*P **P** **19 25 15.6 -0.2**
OKC *e*S **S** **19 35 43.0 -4.2**
OKC AMS AMS 20 03 10.0
comp=Z,200nm,25.3s
VYHS Vyhne 85.95 319 *e*P **P** **19 25 15.3 -0.6**
VYHS pmax pmax
comp=Z,7.0nm,1.3s
VYHS Vyhne 85.95 319 *e*P **P** **19 25 15.3 -0.6**
BSD Bornholm Skovb 85.98 326 *i*P **P** **19 25 15.8 0.0**
BSD pmax pmax
comp=Z,17nm,0.9s
BSD Bornholm Skovb 85.98 326 *i*P **P** **19 25 15.8 0.0**
comp=Z,17nm,0.8s
BUD Budapest 86.16 318⇑*e*P **P** **19 25 17.4 +0.6**
SKO Skopje 86.21 312 *e*P **P** **19 25 16.2 -1.1**
MORC Moravsky Berou 86.33 321 *e*P **P** **19 25 17.7 -0.1**
MORC pmax pmax
comp=Z,8.0nm,1.1s
MORC Moravsky Berou 86.33 321 *e*P **P** **19 25 17.7 -0.1**
comp=Z,8.2nm,1.1s
MORC Moravsky Berou 86.33 321⇑*i*P **P** **19 25 16.4 -1.4**
PKS2 Kecel 86.35 317⇑*e*P **P** **19 25 18.6 +0.8**
PKSG 86.59 318⇑*e*P **P** **19 25 19.5 +0.5**
KRLC Kraliky 86.70 321 *e*P **P** **19 25 20.1 +0.6**
KRLC Kraliky 86.70 321 *e*P **P** **19 25 20.1 +0.6**
KSP Ksiaz 86.72 322 *e*P **P** **19 25 20.0 +0.4**
KSP *e**PP pP 19 25 30.3 +0.3
KSP Ksiaz 86.72 322 *e*P **P** **19 25 20.6 +1.0**
PKST T"s 86.86 318⇑*e*P **P** **19 25 20.7 +0.3**
DLBC Dease Lake 86.88 30 *e*P **P** **19 25 22.9 +2.6**
DLBC Dease Lake 86.88 30 LR LR 20 03 27.8
comp=Z,118nm,20.3s,baz=333,slow=35
DPC Dobruska-Polom 86.88 321 *e*P **P** **19 25 21.3 +0.9**
DPC MLR MLR
comp=Z,200nm,16.5s
DPC Dobruska-Polom 86.88 321 *e*P **P** **19 25 21.3 +0.9**
DPC AMS AMS 20 06 00.0
comp=Z,200nm,16.5s
PKS9 Tamasi 86.93 318⇑*e*P **P** **19 25 21.1 +0.4**
UPC Upice 87.01 322 *e*P **P** **19 25 21.3 +0.3**
UPC Upice 87.01 322 *e*P **P** **19 25 21.3 +0.3**
RES Resolute Bay 87.36 9 P **P** **19 25 20.3 -1.9**
comp=Z,7.6nm,0.8s
RES Resolute Bay 87.36 9 P **P** **19 25 21.3 -0.9**
comp=Z,2.3nm,0.7s,baz=317,slow=1.9,SNR=4.3
TREC Trest 87.76 321 AMS AMS 20 07 10.0
comp=Z,300nm,15.3s
PRU Pruhonice 88.08 322 *e*P **P** **19 25 25.4 -0.7**
PRU *e* 19 25 38.6
PRU *e* 19 36 00.2
PRU MLR MLR
comp=Z,300nm,17.0s
PRU Pruhonice 88.08 322 *e*P **P** **19 25 25.4 -0.7**
PRU *e*pP pP 19 25 38.6 +2.0
PRU *e*SKKS S 19 36 00.2 -7.6
PRU AMS AMS 20 06 50.0
comp=Z,300nm,17.0s
BRG Berggiesshubel 88.10 323 *e*P **P** **19 25 26.5 +0.3**
comp=Z,13nm,1.2s
BRG
comp=N,156nm,21.5s
BRG
comp=E,255nm,23.1s
BRG
comp=Z,253nm,17.3s
BRG Berggiesshubel 88.10 323 *e*P **P** **19 25 26.5 +0.3**
BRG pmax pmax
comp=Z,6.0nm,1.2s
BRG MLR MLR
comp=N,13μm,21.5s
BRG MLR MLR
comp=E,156nm,23.1s
BRG MLR MLR
comp=Z,255nm,17.3s
CLL Collm 88.48 323 *i*P **P** **19 25 27.7 -0.3**
CLL *i**PP pP 19 25 41.8 +3.4
CLL pmax pmax
comp=Z,4.0nm,0.8s
CLL MLR MLR
comp=Z,200nm,18.2s
CLL Collm 88.48 323 *i*P **P** **19 25 27.7 -0.3**
comp=Z,4.0nm,0.8s
CLL *i*pP pP 19 25 41.8 +3.4
CLL *e*SP **SP** **19 37 08.0 -6.1**
CLL *e*SSSS 19 48 35.0
CLL LmV 20 11 00.0
comp=Z,200nm,18.2s
KHC Kasperske Hory 88.98 321 *e*P **P** **19 25 30.8 +0.3**
KHC *e* 19 25 41.2
KHC MLR MLR
comp=Z,300nm,25.9s
KHC Kasperske Hory 88.98 321 *e*P **P** **19 25 30.8 +0.3**
KHC *e*pP pP 19 25 41.2 +0.3
KHC AMS AMS 20 04 40.0
comp=Z,300nm,25.9s
GERES GERESS Array B 89.02 321 P **P** **19 25 30.4 -0.3**
GERES GERESS Array B 89.02 321 P **P** **19 25 30.4 -0.3**
comp=Z,2.2nm,0.9s,baz=79,slow=5.1,SNR=16
GERES LR LR 20 05 50.7
comp=Z,153nm,21.2s,baz=253,slow=36
MOA Molln 89.04 320⇑*i*PcP **P** **19 25 31.5 +0.7**
comp=Z,17nm,1.4s
MOA Molln 89.04 320⇑*i*P **P** **19 25 31.5 +0.7**
comp=Z,17nm,1.4s
ABTA Abfaltersbach 90.57 319⇑*i*PcP **P** **19 25 37.4 -0.6**
comp=Z,7.8nm,1.1s
ABTA Abfaltersbach 90.57 319⇑*i*P **P** **19 25 37.4 -0.6**
comp=Z,7.8nm,1.1s
WTTA Wattenberg 90.91 320⇑*i*P **P** **19 25 39.9 +0.2**
WTTA pmax pmax
comp=Z,16nm,0.9s
WTTA Wattenberg 90.91 320⇑*i*PcP **P** **19 25 39.9 +0.2**
comp=Z,16nm,0.9s
WTTA Wattenberg 90.91 320⇑*i*P **P** **19 25 39.9 +0.2**
comp=Z,16nm,0.9s
WATA Walderalm 90.92 320⇑*i*P **P** **19 25 39.6 -0.1**
WATA pmax pmax
comp=Z,5.0nm,0.7s
WATA Walderalm 90.92 320⇑*i*PcP **P** **19 25 39.6 -0.1**
comp=Z,5.1nm,0.7s
WATA Walderalm 90.92 320⇑*i*P **P** **19 25 39.6 -0.1**
comp=Z,5.1nm,0.7s
MOTA Moosalm 91.21 320⇑*i*P **P** **19 25 40.9 -0.2**
MOTA pmax pmax
comp=Z,17nm,1.1s
MOTA Moosalm 91.21 320⇑*i*PcP **P** **19 25 40.8 -0.2**
comp=Z,17nm,1.1s
MOTA Moosalm 91.21 320⇑*i*P **P** **19 25 40.9 -0.2**
comp=Z,17nm,1.1s
YKW3 Yellowknife Ar 91.26 22 *e*P **P** **19 25 40.3 -0.4**
comp=Z,0.1nm,0.9s
YKA Yellowknife Ar 91.31 22 P **P** **19 25 41.7 +0.8**
YKA PKKPbc PKKPbc 19 43 11.2 +6.5
YKA Yellowknife Ar 91.31 22 P **P** **19 25 41.7 +0.8**
comp=Z,1.8nm,0.8s,baz=309,slow=4.4,SNR=47
YKA PKKPbc PKKPbc 19 43 11.1 +6.5
comp=Z,0.2nm,0.6s,baz=129,slow=2.5,SNR=4.7
FETA Feichten 91.58 320⇑*i*PcP **P** **19 25 43.0 +0.2**
comp=Z,20nm,1.0s
FETA Feichten 91.58 320⇑*i*P **P** **19 25 43.0 +0.2**
comp=Z,20nm,1.0s
DAVOX Davos/Dischmat 92.21 320 P **P** **19 25 45.8 0.0**
DAVOX Davos/Dischmat 92.21 320 P **P** **19 25 45.8 0.0**
comp=Z,12nm,0.9s,baz=45,slow=1.4,SNR=15
TUE Stuetta 92.67 320 *e*P **P** **19 25 48.3 +0.4**
comp=Z,24nm,1.4s
CDF Champ du Feu 93.06 322⇑*i*P **P** **19 25 49.8 +0.3**
comp=Z,33nm,1.1s
CDF Champ du Feu 93.06 322⇑*i*P **P** **19 25 49.8 +0.3**
CDF pmax pmax
comp=Z,33nm,1.1s
CDF Champ du Feu 93.06 322⇑*i*P **P** **19 25 49.8 +0.3**
comp=Z,33nm,1.1s
ECH Echery 93.22 322 *e*P **P** **19 25 49.7 -0.5**
ECH pmax pmax
comp=Z,5.0nm,1.0s
ECH Echery 93.22 322 *e*P **P** **19 25 49.7 -0.5**
comp=Z,5.2nm,1.0s
HINF Hinteralfeld 93.59 322⇑*i*P **P** **19 25 51.8 -0.1**
comp=Z,16nm,1.1s
HINF Hinteralfeld 93.59 322⇑*i*P **P** **19 25 51.8 -0.1**
HINF pmax pmax
comp=Z,16nm,1.0s
HINF Hinteralfeld 93.59 322⇑*i*P **P** **19 25 51.8 -0.1**
comp=Z,16nm,1.0s
GIVF Givet 93.68 324⇑*i*P **P** **19 25 52.6 +0.4**
GIVF Givet 93.68 324⇑*i*P **P** **19 25 52.6 +0.4**
GIVF Givet 93.68 324⇑*i*P **P** **19 25 52.6 +0.4**
PAGF Fort de Pagny 93.91 323⇑*i*P **P** **19 25 53.8 +0.5**
PAGF Fort de Pagny 93.91 323⇑*i*P **P** **19 25 53.8 +0.5**
BAIF Baives 94.05 325⇑*i*P **P** **19 25 54.3 +0.4**
BAIF Baives 94.05 325⇑*i*P **P** **19 25 54.3 +0.4**
BAIF Baives 94.05 325⇑*i*P **P** **19 25 54.3 +0.4**
MEZF Maizieres J'vi 94.33 323⇑*i*P **P** **19 25 55.6 +0.4**
MEZF Maizieres J'vi 94.33 323⇑*i*P **P** **19 25 55.6 +0.4**
SFTF Sexfontaines 94.48 323⇑*i*P **P** **19 25 56.1 +0.2**
SFTF Sexfontaines 94.48 323⇑*i*P **P** **19 25 56.1 +0.2**
PPT2 Papeete2 94.70 107 *e*LR LR 19 56 47.1
comp=Z,208nm,24.5s
LPG La Plagne 94.72 320⇑*i*P **P** **19 25 58.0 +0.5**
comp=Z,18nm,0.8s
LPG La Plagne 94.72 320⇑*i*P **P** **19 25 58.0 +0.5**
LPG pmax pmax
comp=Z,18nm,0.8s
LPG La Plagne 94.72 320⇑*i*P **P** **19 25 58.0 +0.5**
comp=Z,18nm,0.8s
LPL La Plagne 94.73 320⇑*i*P **P** **19 25 57.9 +0.5**
comp=Z,16nm,0.8s
LPL La Plagne 94.73 320⇑*i*P **P** **19 25 57.9 +0.5**
LPL pmax pmax
comp=Z,16nm,0.8s
LPL La Plagne 94.73 320⇑*i*P **P** **19 25 57.9 +0.5**
comp=Z,16nm,0.8s
ORIF Oris-en-Rattie 95.54 319⇑*i*P **P** **19 26 01.2 +0.2**
comp=Z,15nm,0.9s
ORIF *e*R
comp=Z,366nm,23.0s
ORIF Oris-en-Rattie 95.54 319⇑*i*P **P** **19 26 01.2 +0.2**
ORIF pmax pmax
comp=Z,15nm,0.9s
ORIF Oris-en-Rattie 95.54 319⇑*i*P **P** **19 26 01.2 +0.2**
comp=Z,15nm,0.9s
LOR Lormes 95.63 322⇑*i*P **P** **19 26 01.2 0.0**
comp=Z,9.3nm,1.0s
LOR *e*R
comp=Z,318nm,20.5s
LOR Lormes 95.63 322⇑*i*P **P** **19 26 01.2 0.0**
comp=Z,9.3nm,1.0s
FRF La Foret Royal 95.68 318⇑*i*P **P** **19 26 01.5 0.0**
comp=Z,43nm,1.4s
FRF La Foret Royal 95.68 318⇑*i*P **P** **19 26 01.5 0.0**
FRF pmax pmax
comp=Z,43nm,1.4s
FRF La Foret Royal 95.68 318⇑*i*P **P** **19 26 01.5 0.0**
comp=Z,43nm,1.4s
SSF Saint Saulge 95.94 322⇑*i*P **P** **19 26 02.6 0.0**
SSF Saint Saulge 95.94 322⇑*i*P **P** **19 26 02.6 0.0**
SSF Saint Saulge 95.94 322⇑*i*P **P** **19 26 02.6 0.0**
SMF Signal de Mont 95.95 322⇑*i*P **P** **19 26 02.5 -0.2**
SMF Signal de Mont 95.95 322⇑*i*P **P** **19 26 02.5 -0.2**
SMF Signal de Mont 95.95 322⇑*i*P **P** **19 26 02.5 -0.2**
AVF Avril sur Loir 96.17 322⇑*i*P **P** **19 26 03.6 -0.1**
comp=Z,12nm,1.0s
AVF Avril sur Loir 96.17 322⇑*i*P **P** **19 26 03.6 -0.1**
AVF pmax pmax
comp=Z,12nm,1.0s
AVF Avril sur Loir 96.17 322⇑*i*P **P** **19 26 03.6 -0.1**
comp=Z,12nm,1.0s
TBI Tubuai 96.22 112 *e*LR LR 19 57 28.6
comp=Z,172nm,35.2s
VIVF Saint-Julien-l 96.32 320 *e*P **P** **19 26 04.3 -0.2**
comp=Z,29nm,1.3s
VIVF Saint-Julien-l 96.32 320 *e*P **P** **19 26 04.3 -0.2**
VIVF pmax pmax
comp=Z,29nm,1.3s
VIVF Saint-Julien-l 96.32 320 *e*P **P** **19 26 04.3 -0.2**
comp=Z,29nm,1.3s
BGF Bois d'Agland 96.59 322⇑*i*P **P** **19 26 05.7 +0.1**
BGF Bois d'Agland 96.59 322⇑*i*P **P** **19 26 05.7 +0.1**
BGF Bois d'Agland 96.59 322⇑*i*P **P** **19 26 05.7 +0.1**
TCF Toulx Ste Croi 97.11 322⇑*i*P **P** **19 26 08.1 +0.1**
TCF Toulx Ste Croi 97.11 322⇑*i*P **P** **19 26 08.1 +0.1**
TCF Toulx Ste Croi 97.11 322⇑*i*P **P** **19 26 08.1 +0.1**
LASF Ste Croix 97.21 319⇑*i*P **P** **19 26 08.6 +0.1**
comp=Z,18nm,1.1s
LASF Ste Croix 97.21 319⇑*i*P **P** **19 26 08.6 +0.1**
comp=Z,18nm,1.1s
LDF La Druitiere 97.23 325⇑*i*P **P** **19 26 08.4 0.0**

LDF	La Druitiere	97.23	325	⇑	*i*	P	P	19 26 08.4	0.0
LDF	La Druitiere	97.23	325	⇑	*i*	P	P	19 26 08.4	0.0
GRR	Gorron	97.75	325	⇑	*i*	P	P	19 26 11.1	+0.4
GRR	Gorron	97.75	325	⇑	*i*	P	P	19 26 11.1	+0.4
GRR	Gorron	97.75	325	⇑	*i*	P	P	19 26 11.1	+0.4
CAF	Calviac	97.89	321	⇑	*i*	P	P	19 26 12.0	+0.4
	comp=Z,11nm,1.1s								
CAF	Calviac	97.89	321	⇑	*i*	P	P	19 26 12.0	+0.4
CAF					pmax	pmax			
	comp=Z,11nm,1.1s								
CAF	Calviac	97.89	321	⇑	*i*	P	P	19 26 12.0	+0.4
	comp=Z,11nm,1.1s								
RJF	Les Rejaudoux	98.03	321	⇑	*i*	P	Pdif	19 26 12.8	+0.6
RJF	comp=Z,12nm,1.0s				*e*	R			
	comp=Z,185nm,22.0s								
RJF	Les Rejaudoux	98.03	321	⇑	*i*	P	Pdif	19 26 12.8	+0.6
RJF					pmax	pmax			
	comp=Z,12nm,1.0s								
RJF	Les Rejaudoux	98.03	321	⇑	*i*	P	Pdif	19 26 12.8	+0.6
	comp=Z,12nm,1.0s								
MFF	Saint Martin d	98.32	323	⇑	*i*	P	P	19 26 13.6	+0.2
	comp=Z,28nm,1.6s								
MFF	Saint Martin d	98.32	323	⇑	*i*	P	P	19 26 13.6	+0.2
MFF					pmax	pmax			
	comp=Z,28nm,1.6s								
MFF	Saint Martin d	98.32	323	⇑	*i*	P	P	19 26 13.6	+0.2
	comp=Z,28nm,1.6s								
YBH	Yreka Blue Hor	98.74	42		LR	LR		20 03 29.4	
	comp=Z,152nm,21.2s,baz=303,slow=31								
ROSF	Rostrenen	99.10	326	⇑	*i*	P	Pdif	19 26 16.5	-0.3
ROSF	Rostrenen	99.10	326	⇑	*i*	P	Pdif	19 26 16.5	-0.3
ROSF	Rostrenen	99.10	326	⇑	*i*	P	Pdif	19 26 16.5	-0.3
TXAR	Lajitas Array	118.49	44		PKP	PKPdf	PKPdf	19 31 24.9	+0.9
TXAR	Lajitas Array	118.49	44		PKP	PKPdf	PKPdf	19 31 24.9	+0.9
	comp=Z,0.3nm,0.6s,baz=59,slow=3.5,SNR=2.5								
PLCA	Paso Flores	153.12	162		PKPbc	PKPbc	PKPbc	19 32 35.1	+1.5
PLCA	Paso Flores	153.12	162		PKPbc	PKPbc	PKPbc	19 32 35.1	+1.5
	comp=Z,1.7nm,0.7s,baz=186,slow=3.0,SNR=5.3								

*IDC **20** 19:20:02.4±6.8, 35.°68S×179.°91E, h48km±56km, mb4.1/4, mb1 4.2/5, mb1mx3.9/18, mbtmp4.2/5, ML4.1/1, MS2.8/2, Ms1 2.8/2, ms1mx2.7/26, Error ellipse: s-maj=49.9km s-min=27.4km az=46.0*

*WEL **20** 19:20:03.3±0.8, 35.°69S×179.°59E, h153km±17km, ML4.6/11, Error ellipse: s-maj=8.5km s-min=8.4km az=90.0*

*NEIC **20** 19:20:04.7, 35.°71S×179.°40E, h5km, ML4.5(WEL), After WEL.*

ISC 20 19:20:04.8±2.3, 35.°7S±0.°1×179.°7E±0.°1, h66km±18km, n75, σ1842/72, mb4.5/5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.19	211	PN	Pn	19 20 40.4	+1.4
MXZ				SN	Sn	19 21 07.8	+2.7
MXZ	Matakaoa Point	2.19	211	P*	Pn	19 20 40.4	+1.4
PUZ	Puketiti	2.66	206	PN	Pn	19 20 45.0	-0.3
PUZ	Puketiti	2.66	206	Pn	Pn	19 20 46.0	+0.7
PUZ				Sn	Sn	19 21 15.9	-0.5
CNGZ	Carnagh Statio	3.05	203	PN	Pn	19 20 51.2	+0.6
CNGZ				SN	Sn	19 21 27.2	+1.3
CNGZ	Carnagh Statio	3.05	203	Pn	Pn	19 20 51.3	+0.7
CNGZ				Sn	Sn	19 21 26.4	+0.6
MWZ	Matawai	3.17	213	PN	Pn	19 20 52.3	0.0
MWZ				SN	Sn	19 21 30.2	+1.2
MWZ	Matawai	3.17	213	P*	Pn	19 20 52.4	0.0
URZ	Urewera	3.31	218	PN	Pn	19 20 54.0	-0.2
URZ				SN	Sn	19 21 33.1	+0.7
URZ	Urewera	3.31	218	P*	Pn	19 20 54.0	-0.2
URZ				S	Sn	19 21 32.2	-0.1
URZ	Urewera	3.31	218	P	Pn	19 20 54.0	-0.2
	19nm,0.3s,baz=42,slow=6.7,SNR=39						
URZ				S	Sn	19 21 32.2	-0.1
	30nm,0.3s,baz=143,slow=20,SNR=7.6						
OPRZ	Ohinepanea	3.33	229	P*	Pn	19 20 53.3	-1.2
PRGZ	Paritu Road	3.55	204	PN	Pn	19 20 57.7	+0.2
PRGZ	Paritu Road	3.55	204	Pn	Pn	19 20 57.7	+0.2
KNZ	Kokohu	3.71	205	PN	Pn	19 20 58.7	-0.9
KNZ	Kokohu	3.71	205	Pn	Pn	19 20 58.7	-0.9
MHGZ	Mahia Peninsul	3.75	202	PN	Pn	19 20 59.5	-0.8
MKAZ	Moumakai	3.94	247	PN	Pn	19 21 02.1	-0.6
MKAZ	Moumakai	3.94	247	Pn	Pn	19 21 02.0	-0.7
TOZ	Tahuroa Road	3.95	238	PN	Pn	19 21 02.3	-0.6
TOZ	Tahuroa Road	3.95	238	P*	Pn	19 21 02.4	-0.6
BKZ	Black Stump Fm	4.32	215	PN	Pn	19 21 06.8	-1.3
BKZ	Black Stump Fm	4.32	215	P*	Pn	19 21 06.8	-1.3
MCHZ	McNeill Hill	4.46	212	PN	Pn	19 21 09.8	-0.1
MCHZ	McNeill Hill	4.46	212	Pn	Pn	19 21 09.6	-0.2
KAHZ	Kahuranaki	4.68	208	PN	Pn	19 21 11.6	-1.3
KAHZ	Kahuranaki	4.68	208	Sn	Sn	19 22 04.3	-1.7
BHHZ	Black Hill Sta	4.78	216	PN	Pn	19 21 13.4	-0.9
OUZ	Omahuta	5.01	273	PN	Pn	19 21 15.8	-1.7
OUZ	Omahuta	5.01	273	Pn	Pn	19 21 15.5	-1.9
PNHZ	Pukenui	5.06	212	PN	Pn	19 21 15.7	-2.4
TSZ	Takapari Road	5.28	213	PN	Pn	19 21 18.6	-2.6
TSZ	Takapari Road	5.28	213	Pn	Pn	19 21 18.4	-2.8
BFZ	Birch Farm	5.69	208	SN	Sn	19 22 26.0	-4.7
BFZ	Birch Farm	5.69	208	Sn	Sn	19 22 26.0	-4.7
MRZ	Mangatainoka R	5.94	212	PN	Pn	19 21 27.3	-2.9
MRZ	Mangatainoka R	5.94	212	Pn	Pn	19 21 27.3	-2.9
HOWZ	Holdsworth Sta	6.17	211	PN	Pn	19 21 29.2	-4.0
OGWZ	Otaki Gorge	6.25	214	PN	Pn	19 21 30.9	-3.4
DZM	Mont Dzumac	17.83	316	*e*	LR	LR		19 28 19.1	
	236nm,24.9s								
DZM	Mont Dzumac	17.83	316		LR	LR		19 28 24.0	
	comp=Z,36nm,20.8s,baz=25,slow=28								
TBI	Tubuai	29.38	74	*e*	LR	LR		19 33 32.0	
	106nm,27.8s								
STKA	Stephens Creek	31.78	266		P	P	P	19 26 25.4	+2.5
STKA	Stephens Creek	31.78	266		P	P	P	19 26 25.4	+2.5
	3.4nm,0.8s,baz=97,slow=11,SNR=3.4								
PPT2	Papeete2	32.64	65	*e*	LR	LR		19 35 03.3	
	107nm,26.8s								
PPT	Papeete	32.66	65		LR	LR		19 36 47.9	
	comp=Z,18nm,20.2s,baz=349,slow=31								
CTA	Charters Tower	33.21	289		P	P	P	19 26 37.1	+1.6
CTA	Charters Tower	33.21	289		P	P	P	19 26 37.1	+1.6
	5.5nm,0.8s,baz=122,slow=9.5,SNR=8.4								
ASAR	Alice Springs	41.23	274		P	P	P	19 27 44.0	+0.6
ASAR	Alice Springs	41.23	274		P	P	P	19 27 44.0	+0.6
	2.9nm,0.5s,baz=118,slow=7.7,SNR=47								
WRA	Warramunga Arr	42.70	279		P	P	P	19 27 56.0	+0.6
WRA	Warramunga Arr	42.70	279		P	P	P	19 27 56.0	+0.6
	347nm,0.5s,baz=118,slow=7.8,SNR=3.8								
FITZ	Fitzroy Crossi	50.68	275		P	P	P	19 28 58.1	+0.4
FITZ	Fitzroy Crossi	50.68	275		P	P	P	19 28 58.1	+0.4
	4.6nm,0.9s,baz=111,slow=8.6,SNR=5.8								
PSI	Prapat	84.15	278		LR	LR		20 10 43.6	
	comp=Z,653nm,20.3s,baz=54,slow=36								
MKAR	Makanchi Array	119.62	308		PKP	PKPdf	PKPdf	19 38 44.8	-1.9
MKAR	Makanchi Array	119.62	308		PKP	PKPdf	PKPdf	19 38 44.8	-1.9
	0.3nm,0.8s,baz=58,slow=0.5,SNR=3.6								
KURK	Kurchatov	123.22	312		PKP	PKPdf	PKPdf	19 38 51.9	-1.4
KURBB	Kurchatov Arra	123.25	312		PKP	PKPdf	PKPdf	19 38 51.9	-1.5
	0.8nm,0.8s,baz=119,slow=1.8,SNR=11								
ARCES	ARCESS Array B	143.26	345		PKP	PKPdf		19 39 29.0	-1.4
ARCES	ARCESS Array B	143.26	345		PKP	PKPdf		19 39 29.0	-1.4
	1.7nm,0.7s,baz=64,slow=2.1,SNR=3.5								
JOF	Joensuu	146.48	334	*ep*		PKPbc		19 39 37.1	-0.4
	6.9nm,0.6s								
KAF	Kangasniemi	148.74	336	*ep*		PKPbc		19 39 42.4	-1.3
	3.0nm,0.6s								
FINES	FINESS Array B	149.29	335		PKPbc	PKPbc		19 39 45.0	0.0
FINES	FINESS Array B	149.29	335		PKPbc	PKPbc		19 39 45.0	0.0
	5.1nm,0.7s,baz=57,slow=5.1,SNR=15								
DBIC	Dimbokro	150.82	171		PKPbc	PKPbc		19 39 51.3	+1.1
DBIC	Dimbokro	150.82	171		PKPbc	PKPbc		19 39 51.3	+1.1
	3.5nm,0.9s,baz=176,slow=5.0,SNR=6.1								
BRTR	Keskin Array B	152.95	289		PKPbc	PKPbc		19 39 53.5	-1.1
BRTR	Keskin Array B	152.95	289		PKPbc	PKPbc		19 39 53.5	-1.1
	0.8nm,0.6s,baz=128,slow=2.4,SNR=7.0								
NOA	NORSAR Array B	153.58	347		PKPbc	PKPbc		19 39 55.2	+0.2
NOA	NORSAR Array B	153.58	347		PKPbc	PKPbc		19 39 55.2	+0.2
	1.4nm,0.9s,baz=29,slow=2.0,SNR=5.3								
AKASG	Malin Array Be	153.99	314		PKPbc	PKPbc		19 39 55.4	-0.8
AKASG	Malin Array Be	153.99	314		PKPbc	PKPbc		19 39 55.4	-0.8
	0.6nm,0.5s,baz=58,slow=3.5,SNR=4.0								
TORD	Torodi Ar. Bea	157.49	185		PKPab	PKPab		19 40 26.4	+0.7
TORD	Torodi Ar. Bea	157.49	185		PKPab	PKPab		19 40 26.4	+0.7
	1.5nm,0.9s,baz=175,slow=3.7,SNR=6.6								

*IDC **20** 19:20:54.5±2.5, 3.°36S×100.°35E, h0km, mb4.3/10, mb1 4.3/10, mb1mx4.1/27, mbtmp4.3/10, Error ellipse: s-maj=55.5km s-min=38.5km az=2.0*

*NEIC **20** 19:20:55.0±0.9, 3.°975S×100.°71E, h35km, mb4.7/4, Error ellipse: s-maj=34.3km s-min=13.8km az=54.0*

ISC 20 19:20:58.6±1.2, 3.°4S±0.°2×100.°4E±0.°2, h29km, n57, σ0965/53, mb4.6/14, 13C-10D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPI	Padang Panjang	2.93	360	S	Pn	19 21 43.4	+0.2
	baz=23,SNR=9.1						
CMAR	Chiang Mai Arr	21.77	356	P	P	19 25 47.5	-0.6
CMAR	Chiang Mai Arr	21.77	356	P	P	19 25 47.5	-0.6
	3.8nm,0.8s,baz=186,slow=10,SNR=16						
ODAN	Odare	32.61	338	*eP*	P	19 27 29.4	+1.2
	9.2nm,0.8s						
TAPN	Taplejung	32.94	339	*eP*	P	19 27 32.0	+0.9
	22nm,1.0s						
GUN	Gumba	34.13	337	*eP*	P	19 27 41.0	-0.6
	38nm,1.1s						
KKN	Kakani	34.27	336	*eP*	P	19 27 43.5	+0.9
	9.5nm,0.8s						
KOLN	Koldanda	34.97	333	*eP*	P	19 27 49.6	+1.0
	12nm,0.8s						
DANN	Dangsing	35.40	334	*eP*	P	19 27 51.2	-1.2
	46nm,1.2s						
WRAB	Tennant Creek	36.96	119	*eP*	P	19 27 55.4	-10
	8.9nm,0.7s						
STKA	Stephens Creek	47.93	131	*eP*	P	19 29 26.1	-8.6
KSAR	Wonju Array Be	48.00	30	P	P	19 29 34.1	-1.0
KSRS	Korea Array	48.03	30	P	P	19 29 34.1	-1.2
	5.3nm,1.1s,baz=219,slow=7.5,SNR=6.3						
SONM	Songino Array	51.30	5	P	P	19 30 01.1	+0.9
SONM	Songino Array	51.30	5	P	P	19 30 01.1	+0.9
	12nm,0.9s,baz=188,slow=9.7,SNR=60						
ULN	Ulaanbaatar	51.39	6	*eP*	P	19 30 01.6	+0.7
	9.3nm,1.1s						
AAK	Ala-Archa	51.48	336	P	P	19 30 02.0	+0.4
AAK	Ala-Archa	51.48	336	P	P	19 30 02.0	+0.4
	0.3nm,0.2s,baz=141,slow=6.5,SNR=3.9						
MK31	Makanchi Array	52.48	344	*eP*	P	19 30 09.3	+0.4
MKAR	Makanchi Array	52.48	344	P	P	19 30 09.3	+0.4
MKAR	Makanchi Array	52.48	344	P	P	19 30 09.3	+0.4
	5.4nm,0.7s,baz=153,slow=8.3,SNR=63						
USRK	Ussuriysk Arra	55.21	27	P	P	19 30 28.5	-0.3
	8.8nm,0.8s,baz=225,slow=5.6,SNR=16						
KURBB	Kurchatov Arra	57.00	344	P	P	19 30 41.4	-0.2
	4.2nm,0.9s,baz=162,slow=6.7,SNR=38						
KURK	Kurchatov	57.06	344	*eP*	P	19 30 42.1	+0.2
	9.2nm,1.0s						
ZAA0	Zalesovo Array	58.61	349	*eP*	P	19 30 52.5	-0.3
ZALV	Zalesovo Beam	58.61	349	P	P	19 30 52.8	-0.1
ZALV	Zalesovo Beam	58.61	349	P	P	19 30 52.8	-0.1
	8.3nm,0.9s,baz=163,slow=5.4,SNR=36						
BVAR	Borovoye Array	61.63	340	P	P	19 31 12.7	-0.9
BVAR	Borovoye Array	61.63	340	P	P	19 31 12.7	-0.9
	1.6nm,0.6s,baz=153,slow=9.7,SNR=9.6						
ABKAR	Akbulak array	63.06	332	*eP*	P	19 31 22.8	-0.4
	3.5nm,0.7s						
BRTR	Keskin Array B	74.56	313	P	P	19 32 34.6	-0.6
BRTR	Keskin Array B	74.56	313	P	P	19 32 34.6	-0.6
	0.6nm,0.6s,baz=113,slow=5.5,SNR=4.8						
W24A	Lazy 6 Ranch,	140.33	34	⇑	P	PKPdf	19 40 41.0	+15
	baz=140							
Z27A	Tatum	142.95	34	⇑	P	PKPdf	19 40 31.8	+1.5
	baz=143							
325A	Bean Ranch, Si	143.33	38	⇓	P	PKPdf	19 40 29.8	-1.4
	baz=144							
X31A	McDonald Ranch	143.61	29	⇑	P	PKPdf	19 40 44.4	+13
	baz=144							
425A	Indio Mountain	143.72	39	⇓	P	PKPdf	19 40 31.7	-0.1
	baz=144							
426A	McDonald Obser	144.40	38	⇑	P	PKPdf	19 40 32.8	-0.3
	baz=144							
526A	Mary Lane Ranc	144.78	39	⇑	P	PKPdf	19 40 33.7	0.0
	baz=145,SNR=5.1							
329A	Wagon Wheel Ra	145.01	35	⇓	P	PKPab	19 40 32.9	-0.3
	baz=145							
527A	Woodward Ranch	145.02	38	⇓	P	PKPdf	19 40 34.4	+0.3
	baz=145,SNR=14							
626A	Big Bend Ranch	145.11	39	⇓	P	PKPdf	19 40 34.7	+0.5
	baz=145,SNR=12							
428A	Kincaid Ranch,	145.16	36	⇑	P	PKPdf	19 40 34.8	+0.6
	baz=145,SNR=9.6							
528A	Cox Ranch, San	145.51	37	⇑	P	PKPab	19 40 35.7	+0.6
	baz=146,SNR=5.4							
330A	Mertzon	145.52	34	⇓	P	PKPab	19 40 35.1	0.0
	baz=146							
TXAR	Lajitas Array	145.55	39		PKPbc	PKPab	19 40 35.8	+0.4
TXAR	Lajitas Array	145.55	39		PKPbc	PKPab	19 40 35.8	+0.4
	3.9nm,0.8s,baz=318,slow=1.2,SNR=30							
627A	Terlingua Ranc	145.64	39	⇓	P	PKPab	19 40 36.1	+0.4
	baz=146,SNR=18							
429A	Davenport Ranc	145.70	35	⇑	P	PKPbc	19 40 35.5	0.0
	baz=146							
529A	Stev Forest Ra	145.88	36	⇑	P	PKPab	19 40 36.6	+0.1
	baz=146							
628A	Black Gap, Mar	145.93	38	⇑	P	PKPab	19 40 37.3	+0.6
	baz=146,SNR=6.0							
430A	Baggett Ranch,	145.96	35	⇑	P	PKPbc	19 40 36.0	-0.3
	baz=146							
232A	Coleman	145.97	31	⇓	P	PKPab	19 40 36.6	-0.2
	baz=146,SNR=5.1							
332A	Millersview	146.32	32	⇑	P	PKPbc	19 40 37.4	+0.1
	baz=146,SNR=5.4							
530A	J-C Ranch, Com	146.37	35	⇑	P	PKPab	19 40 38.1	-0.2
	baz=146							
JCT	Junction City	146.99	33	⇓	P	PKPbc	19 40 39.6	+0.3
	baz=147,SNR=6.5							
631A	Perdido Creek	147.36	35	⇓	P	PKPbc	19 40 40.9	+0.6
	baz=148							

*ISCJB **20** 19:21:48.7±0.3, 54.°38N±0.°02×161.°29E±0.°05, h80km±4km, mb3.9/12, Error ellipse: s-maj=5.5km s-min=2.4km az=23.1*

*MOS **20** 19:21:48.2±0.8, 54.°36N×161.°32E, h75km, mb4.1/6, Error ellipse: s-maj=18.4km s-min=8.4km az=69.5*

*KRSC **20** 19:21:49.5±0.3, 54.°41N×161.°07E, h64km±52km, ML4.3*

*IDC **20** 19:21:51.1±2.5, 54.°63N×160.°58E, h92km±24km, mb3.5/11, mb1 3.8/12, mb1mx3.5/29, mbtmp3.5/12, Error ellipse: s-maj=22.4km s-min=15.3km az=137.0*

ISC 20 19:21:49.3±0.8, 54.°38N±0.°02×161.°27E±0.°03, h74km±7km, n64, σ1907/106, mb3.9/12, 1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	Mys Kozlova	0.32	56	*i* P	Pn	19 22 01.3	+0.3
MKZ				*i* S	Sn	19 22 09.4	+0.3
TUMR	Tumrok	1.11	325	*i* P	Pn	19 22 09.4	-0.1
TUMR				*i* S	Sn	19 22 22.8	-1.8
SPN	Mys Shipunski	1.48	210	PN	Pn	19 22 13.7	-0.4
SPN				S	Sn	19 22 31.6	-1.3
SPN	Mys Shipunski	1.48	210	*i* P	Pn	19 22 13.7	-0.4
SPN				*i* S	Sn	19 22 31.6	-1.3
KMNR	Kamenistaya	1.50	337	*i* P	Pn	19 22 15.0	+0.5
KMNR				*i* S	Sn	19 22 33.9	+0.4
BZGR	Bezymyannyi-Gr	1.60	348	*i* P	Pn	19 22 16.2	+0.4
BZGR				*i* S	Sn	19 22 35.6	-0.2
BZMR	Bezymyannaya	1.62	344	*i* P	Pn	19 22 16.7	+0.6
BZMR				*i* S	Sn	19 22 35.8	-0.6
BZWR	Bezymyannyi-We	1.65	345	*i* P	Pn	19 22 17.1	+0.6
BZWR				*i* S	Sn	19 22 37.3	+0.3
ZLN	Zelenaya	1.66	351	*i* P	Pn	19 22 17.2	+0.6
ZLN				*i* S	Sn	19 22 37.7	+0.4
KIRR	Kirishev	1.66	342	*i* P	Pn	19 22 17.1	+0.4
KIRR				*i* S	Sn	19 22 36.9	-0.5
NLC	Nalytchevo	1.67	224	PN	Sn	19 22 16.6	+0.1
NLC				S	Sn	19 22 36.1	-1.0
NLC	Nalytchevo	1.67	224	*i* P	Pn	19 22 16.6	+0.1
NLC				*i* S	Sn	19 22 36.1	-1.0
KPT	Kopyto	1.70	340	*i* P	Pn	19 22 17.3	+0.2
KPT				*i* S	Sn	19 22 38.0	-0.1
LGNR	Loginova	1.74	349	*eP*	Pn	19 22 18.7	+0.9
LGNR				*i* S	Sn	19 22 40.0	+0.7
CIRR	Tsirk	1.77	350	*i* P	Pn	19 22 18.6	+0.6
CIRR				*i* S	Sn	19 22 39.4	-0.4
SDLR	Sedlovina	1.79	233	*eP*	Pn	19 22 18.9	+0.5
SDLR				*i* S	Sn	19 22 40.4	0.0
KRER	Koryakskii	1.84	235	*eP*	Pn	19 22 19.9	+0.8
KRER				*i* S	Sn	19 22 41.9	+0.2
SMAR	Somma	1.84	234	*i* P	Pn	19 22 19.8	+0.7
SMAR				*i* S	Sn	19 22 41.4	-0.3
KOZ	Kozyrevsk	1.86	335	*i* P	Pn	19 22 19.5	+0.3
KOZ				*i* S	Sn	19 22 41.8	-0.1
KOZR	Kozyr	1.86	336	PN	Pn	19 22 19.5	+0.3
KOZR				S	Sn	19 22 41.8	-0.1
UGLR	Uglovaya	1.87	232	*i* P	Pn	19 22 20.1	+0.8
UGLR				*i* S	Sn	19 22 42.0	-0.1
AVH	Avacha	1.87	234	*eP*	Pn	19 22 20.5	+1.1
AVH				*i* S	Sn	19 22 42.9	+0.7
KRSR	Krestovskiy	1.89	348	*eP*	Pn	19 22 19.9	+0.3
KOK	Koryaka	1.90	236	*eP*	Pn	19 22 20.7	+0.9
KOK				*i* S	Sn	19 22 43.5	+0.5
KLY	Klyuchi	1.97	350	PN	Pn	19 22 20.8	+0.2
KLY				S	Sn	19 22 43.4	-1.0
KLY	Klyuchi	1.97	350	*i* P	Pn	19 22 20.8	+0.2
KLY				*i* S	Sn	19 22 43.4	-1.0
KBTR	Krutoberegovo	2.04	25	PN	Pn	19 22 22.3	+0.8
KBTR				S	Sn	19 22 46.7	+0.7
KBTR	Krutoberegovo	2.04	25	*eP*	Pn	19 22 22.3	+0.8
KBTR				*eS*	Sn	19 22 46.7	+0.7
PET	Petropavlovsk	2.07	230	⇓	*i* PN	Pn	19 22 22.4	+0.6
PET				*eS*	Sn	19 22 46.8	+0.1
PET				pmax	pmax		
	comp=Z,164nm,0.3s						
PET				smax	smax		
	comp=N,971nm,0.5s						
PET				smax	smax		
	comp=E,586nm,0.5s						
PET	Petropavlovsk	2.07	230	*eP*	Pn	19 22 22.5	+0.6
PET				*i* S	Sn	19 22 46.2	-0.5
SRDR	Sredinnyy	2.13	336	*i* P	Pn	19 22 22.6	-0.3
SRDR				*i* S	Sn	19 22 47.0	-1.5
ESO	Esso	2.14	317	PN	Pn	19 22 22.6	-0.3
ESO				S	Sn	19 22 47.2	-1.3
ESO	Esso	2.14	317	*eP*	Pn	19 22 22.6	-0.3
ESO				*i* S	Sn	19 22 47.2	-1.3
BDR	Baidarnaya	2.19	359	*eP*	Pn	19 22 24.5	+0.8
BDR				*i* S	Sn	19 22 50.2	+0.3
SMKR	Semkarok	2.21	3	*i* P	Pn	19 22 24.7	+0.8
SMKR				*i* S	Sn	19 22 51.1	+0.8
SRKR	Sorokina	2.28	359	*i* P	Pn	19 22 25.5	+0.7
SRKR				*i* S	Sn	19 22 52.6	+0.6
PETK	Petropavlovsk-	2.48	240	PN	Pn	19 22 27.5	+0.1
PETK				S	Sn	19 22 59.4	+2.8
PETK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
PETK				smax	smax		
	comp=N,19nm,0.3s						
PETK	Petropavlovsk-	2.48	240	P	Pn	19 22 27.5	+0.1
	comp=N,6.5nm,0.3s,baz=71,slow=18,SNR=53						
PETK				S	Sn	19 22 59.4	+2.8
	comp=N,18nm,0.3s,baz=69,slow=20,SNR=5.6						
RUS	Russkaya	2.56	221	PN	Pn	19 22 28.4	-0.1
RUS				S	Sn	19 22 57.4	-1.1
RUS	Russkaya	2.56	221	*eP*	Pn	19 22 28.4	-0.1
RUS				*i* S	Sn	19 22 57.4	-1.1
GRL	Gorelyy	2.65	228	*eP*	Pn	19 22 31.2	+1.3
GRL				*eS*	Sn	19 23 01.5	+0.5
MTVR	Mutnovka	2.65	225	*eP*	Pn	19 22 30.7	+0.8
MTVR				*i* S	Sn	19 23 01.1	0.0
BKI	Bering	2.84	71	PN	Pn	19 22 32.4	0.0
BKI				S	Sn	19 23 04.1	-1.4
BKI	Bering	2.84	71	P	Pn	19 22 32.4	0.0
BKI				*i* S	Sn	19 23 04.1	-1.4
APC	Apacha	2.85	241	*eP*	Pn	19 22 33.0	+0.6
PAU	Pauzhetka	3.98	225	PN	Pn	19 22 50.2	+2.4
PAU	Pauzhetka	3.98	225	P	Pn	19 22 50.2	+2.4
SKR	Severo-Kuril's	4.86	222	P	Pn	19 23 00.6	+0.8
SKR				*i* S	Sn	19 23 53.1	-1.6
FX1	Attu Island--F	7.23	97	P	Pn	19 23 32.2	0.0
	comp=N,3.9nm,0.3s,baz=330,slow=9.3,SNR=28						
F

baz=240
WHF Hehuan Shan 1.23 293⇑ *i*P Pn 19 38 04.1 -0.4
baz=291
WHF *e*S Sb 19 38 18.5 -1.9
baz=291
HATJ Hateruma jima 1.25 72 P Pn 19 38 04.8 +0.5
HATJ *e*S Sb 19 38 20.0 -0.6
NNS Nan Shan 1.29 307 P Pn 19 38 05.3 +0.3
baz=295
NNS S Sn 19 38 20.8 -1.0
baz=295
ENTT Nioudou 1.29 319 *i* P Pb 19 38 05.7 0.0
baz=303
ENTT *e*S Sn 19 38 21.1 -0.6
baz=303
TWE Neicheng 1.30 324⇓ *i*P Pb 19 38 05.9 +0.2
baz=321
TWE *e*S Sn 19 38 21.4 -0.4
baz=321
IRIF Iriomote-Funau 1.30 59 P Pn 19 38 05.6 +0.6
IRIF *e*S Sb 19 38 22.5 +0.5
TWT Tachien 1.35 296⇑ *i*P Pn 19 38 06.6 +0.7
baz=293
TWT *e*S Sn 19 38 22.4 -1.0
baz=293
TWB1 Santiao Chiao 1.41 341 P Pn 19 38 06.8 +0.2
baz=339
ELDTW Lidau 1.45 251⇑ *i*P Pn 19 38 07.2 0.0
baz=237
ELDTW *e*S Sn 19 38 23.9 -1.8
baz=237
NSK Sanguang 1.45 314 P Pn 19 38 08.0 +0.8
baz=311
NSK *e*S Sn 19 38 24.8 -0.9
baz=311
JKRS Kuro-shima 1.49 67 P Pn 19 38 08.3 +0.7
JKRS *e*S Sn 19 38 26.6 +0.1
SMLT Sun Moon Lake 1.49 278⇑ *i*P Pn 19 38 08.5 +0.7
baz=277
SMLT *e*S Sn 19 38 26.7 0.0
baz=277
TYC Yuchr 1.53 279 P Pn 19 38 08.9 +0.7
baz=278
TYC S Sn 19 38 27.3 -0.2
baz=278
NWF Wu-fen Shan 1.54 335 *e*P Pn 19 38 09.1 +0.6
baz=330
NWF *e*S Sn 19 38 28.3 +0.3
baz=330
TTN Taitung 1.55 234 *e*P Pb 19 38 09.8 -0.2
baz=233
TTN *e*S Sn 19 38 27.5 -0.5
baz=233
TWG Pinlang 1.57 238 *e*P Pn 19 38 08.9 +0.1
baz=226
TWG *e*S Sn 19 38 27.4 -1.1
baz=226
ALS Alishan 1.57 264⇑ *i*P Pb 19 38 10.4 -0.2
baz=263
ALS *e*S Sn 19 38 29.8 +0.8
baz=263
TAP1 Taipei 1.63 327 *e*P Pb 19 38 10.7 -0.7
baz=322
TAP1 *e*S Sb 19 38 31.8 +0.2
baz=322
TAP Taipei 1.64 326 *e*P Pb 19 38 11.1 -0.4
baz=322
TAP *e*S Sn 19 38 30.6 +0.4
baz=322
JIJ Ishigaki jima 1.65 65 P Pn 19 38 10.0 +0.2
JIJ *e*S Sn 19 38 29.3 -1.2
NSTT Nanjuang 1.68 305 P Pb 19 38 12.1 -0.1
baz=292
NSTT S Sn 19 38 31.7 +0.6
baz=292
CHN5 Tsauling 1.68 268 P Pb 19 38 12.4 +0.1
baz=267
CHN5 S Sb 19 38 32.9 -0.1
baz=267
WNT Mingjian 1.68 277 *e*P Pb 19 38 12.4 +0.1
baz=276
WNT *e*S Sb 19 38 33.2 +0.2
baz=276
TWQ1 Liyutan 1.72 293 P Pb 19 38 13.1 +0.1
baz=292
TWQ1 *e*S Sb 19 38 33.8 -0.4
baz=292
TWS1 Kuangyinshan 1.74 325 P Pb 19 38 12.7 -0.5
baz=320
TWS1 *e*S Sb 19 38 33.8 -0.8
baz=320
TCU Taichung 1.74 286 P Pb 19 38 13.5 +0.2
baz=285
TCU *e*S Sb 19 38 35.4 +0.6
baz=285
NSY Sanyi 1.76 295 *e*P Pb 19 38 13.9 +0.2
baz=294
NSY *e*S Sb 19 38 35.7 +0.4
baz=294
NCU National Centr 1.77 317 *e*P Pb 19 38 14.1 +0.3
baz=313
NCU *e*S Sn 19 38 34.5 +1.0
baz=313
WGK Gukeng 1.78 271 *e*P Pb 19 38 13.9 -0.1
baz=270
WGK *e*S Sb 19 38 36.2 +0.3
baz=270
CHN4 Tsaushan 1.79 260 P Pb 19 38 14.1 0.0
baz=259
CHN4 *e*S Sb 19 38 36.1 +0.1
baz=259
ECL Taimali 1.79 234 *e*P Pn 19 38 11.6 -0.1
baz=233
ECL *e*S Sn 19 38 31.5 -2.3
baz=233
WTP Ta-pu 1.79 257 P Pb 19 38 13.7 -0.5
baz=255
WTP *e*S Sb 19 38 36.2 +0.1
baz=255
HSN Hsinchu 1.80 309 *e*P Pn 19 38 11.8 -0.1
baz=307
HSN *e*S Sb 19 38 36.0 -0.4
baz=307
TWY Chenhua 1.80 333 *e*P Pb 19 38 13.4 -0.8
baz=328
TWY *e*S Sn 19 38 34.9 +0.7
baz=328
CHN1 Nanshi 1.88 255 P Pb 19 38 15.2 -0.4
baz=255
CHN1 *e*S Sb 19 38 38.6 -0.2
baz=255
TWK Hsinying 1.90 258 *e*P Pb 19 38 15.9 -0.1
baz=257
TWK *e*S Sb 19 38 39.3 0.0
baz=257
CHY Chiayi 1.92 265 *e*P Pb 19 38 16.0 -0.3
baz=264
EAST Anshuo 1.99 230 *e*P Pn 19 38 15.2 +0.6
baz=240
WTCT Ta-ch'eng 2.05 276 *e*P Pb 19 38 17.9 -0.6
baz=275
WTCT *e*S Sb 19 38 44.2 +0.6
baz=275
CHN3 Shinhua 2.06 254 *e*P Pb 19 38 18.8 +0.1
baz=253
CHN3 *e*S Sb 19 38 46.0 +2.2
baz=253
TWM1 Shoushan 2.09 247 *e*P Pb 19 38 20.0 +0.6
baz=245
TWM1 *e*S Sg 19 38 48.8 -0.7
baz=245
WSF Szhu 2.10 270 *e*P Pb 19 38 18.1 -1.2
baz=268
WSF *e*S Sb 19 38 44.0 -0.9
baz=268
CHN8 Yiju 2.13 262 *e*P Pb 19 38 18.9 -1.1
baz=261
CHN8 *e*S Sb 19 38 45.2 -0.8
baz=261
SCZT Fangliau 2.17 234 *e*P Pb 19 38 19.9 -0.6
baz=225
SCZT *e*S Sn 19 38 45.6 +2.4
baz=225
JTJ Tarama 2.23 64 P Pn 19 38 18.2 +0.4
TSEB Hengchuen, Pin 2.30 220 *e*S Sn 19 38 49.4 +2.7
baz=232
HEN Hengchun 2.33 225 *e*P Pb 19 38 23.3 0.0
baz=215
TWK1 Hengchun 2.33 223 *e*P Pb 19 38 22.9 -0.4
baz=223
TWK1 *e*S Sn 19 38 48.2 +0.9
baz=223
PNG Penghu 2.71 268 P Pn 19 38 25.9 +1.5
baz=257
PNG *e*S Sn 19 38 57.7 +1.1
baz=257
KNM Kinmen 3.80 282 *e*P Pn 19 38 42.0 +2.7
baz=280

IDC 20 19:39:24.5±2.4, 4°26S×129°36E, h0km, mb3.6/1, mb1 3.7/2, mb1mx3.3/19, mbtmp3.6/2, ML5.5/1, Error ellipse: s-maj=172.6km s-min=28.6km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.33**	**163**	Pn	Pn	19 43 13.6	-1.8
	20nm,0.3s,baz=345,slow=13,SNR=1.8						
ASAR	**Alice Springs**	**19.79**	**168**	P	Pn	19 43 57.4	-0.7
	0.2nm,0.3s,baz=351,slow=10,SNR=12						
MKAR	**Makanchi Array**	**65.60**	**326**	P	P	19 50 10.3	0.0
	0.3nm,0.5s,baz=112,slow=7.8,SNR=7.8						

*BJI **20** 19:49:04.3, 4°.92S×129°.78E, h20km, mB5.2/7, mb4.5/15, Ms4.8/1*
*AUST **20** 19:49:06.3±1.7, 4°.11S×129°.40E, h0km, Error ellipse: s-maj=0.9km s-min=0.7km az=39.0*
*IDC **20** 19:49:07.6±0.5, 4°.29S×129°.66E, h0km, mb4.5/18, mb1 4.7/21, mb1mx4.6/25, mbtmp4.6/21, ML5.1/3, MS4.3/1, Ms1 4.3/1, ms1mx3.3/29, Error ellipse: s-maj=23.0km s-min=9.2km az=73.0*
*ISCJB **20** 19:49:11.1±0.2, 4°.16S±0°.03×129°.80E±0°.04, h33km, mb4.6/39, Error ellipse: s-maj=5.6km s-min=3.9km az=148.6*
*NEIC **20** 19:49:11.1±2.1, 4°.19S×129°.72E, h22km±15km, mb4.8/19, Error ellipse: s-maj=7.5km s-min=4.9km az=46.0*
*DJA **20** 19:49:12.4±0.6, 4°.5±3°×13°.0E±°, h10km, M4.7/29, mB5.2/15, mb5.0/29, MLv4.9/12, Mw(mB)4.6/15, Mwp6.0/1*

ISC 20 19:49:12.7±0.3, 4°.21S±0°.05×129°.79E±0°.05, h35km, n150, σ1§58/140, mb4.6/38, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.33**	**160**	P	**Pn**	**19 49 19.5**	**-1.6**
MSAI	**Masohi**	**1.21**	**315**	P	**Pn**	**19 49 30.9**	**-2.3**
FAKI	**Fak Fak**	**2.77**	**63**	P	**Pn**	**19 49 55.5**	**+0.9**
TLE	**Tual**	**3.26**	**116**	P	Pn	19 50 05.0	+3.6
TLE	**Tual**	**3.26**	**116**	P	Pn	19 50 05.1	+3.6
	baz=3.7,SNR=109						
TLE				S	Sn	19 50 47.6	+8.6
	baz=3.7,SNR=5.8						
SWI	**Sorong**	**3.63**	**24**	P	**Pn**	**19 50 06.3**	**-0.2**
SWI	**Sorong**	**3.63**	**24**	P	**Pn**	**19 50 06.2**	**-0.3**
	baz=3.7,SNR=129						
LBMI	**Labuha**	**4.22**	**327**	P	**Pn**	**19 50 15.8**	**+1.2**
RKPI	**Ransiki, Papua**	**5.14**	**59**	P	**Pn**	**19 50 28.6**	**+1.4**
	2μm,0.7s,19μm7.8nm						
SRPI	**Serui, Papua**	**6.85**	**70**	P	**Pn**	**19 50 51.3**	**+0.6**
	414nm,0.7s,5μm1.6nm						
KDI	**Kendari**	**7.16**	**272**	P	Pn	19 50 59.5	+4.6
	39nm,1.0s,608nm0.1nm						
MNI	**Manado**	**7.48**	**319**	P	Pn	19 51 07.4	+8.0
	166nm,0.6s,2μm0.7nm						
LUWI	**Luwuk**	**7.68**	**294**	P	**Pn**	**19 51 03.1**	**+1.0**
	132nm,0.8s,1μm0.5nm						
MTN	**Manton Dam**	**8.68**	**171**	P	**Pn**	**19 51 17.5**	**+1.6**
	baz=8.9,SNR=133						
KDU	**Kakadu**	**8.83**	**163**	P	**Pn**	**19 51 18.4**	**+0.5**
	baz=9.1,SNR=106						
KDU				S	Sn	19 53 03.3	+7.0
	baz=9.1,SNR=4.8						
MRSI	**Marisa**	**9.12**	**301**	P	**Pn**	**19 51 22.6**	**+0.7**
	49nm,0.8s,505nm						
BKSI	**Bulukumba**	**9.70**	**263**	P	Pn	19 51 42.9	+13
TTSI	**Tana Toraja**	**10.02**	**276**	P	Pn	19 51 42.1	+7.9
	39nm,0.8s,433nm						
KAPI	**Kappang**	**10.04**	**265**	*e*Pn	**Pn**	**19 51 33.5**	**-1.0**
KAPI	**Kappang**	**10.04**	**265**	P	Pn	19 51 39.6	+5.1
	46nm,0.7s,622nm						
KAPI	**Kappang**	**10.04**	**265**	Pn	**Pn**	**19 51 36.5**	**+2.0**
	2.1nm,0.3s,baz=87,slow=10,SNR=10						
KAPI				LR	LR	19 55 11.4	
	comp=Z,2μm,21.6s,baz=103,slow=37						
FITZ	**Fitzroy Crossi**	**14.39**	**196**	Pn	**Pn**	**19 52 31.6**	**-2.5**
FITZ	**Fitzroy Crossi**	**14.39**	**196**	Pn	**Pn**	**19 52 31.6**	**-2.5**
	1.4nm,0.3s,baz=43,slow=11,SNR=44						
FITZ	**Fitzroy Crossi**	**14.39**	**196**	P	**Pn**	**19 52 31.8**	**-2.2**
	baz=14,SNR=64						
KHKI	**Kahang-Kahang**	**14.68**	**253**	P	**P**	**19 52 42.1**	**-1.7**
	89nm,1.1s,1μm						
BBKI	**Banjar Baru**	**14.93**	**272**	P	**P**	**19 52 47.5**	**+1.0**
	60nm,1.1s,1μm						
SRBI	**Singaraja**	**14.99**	**254**	P	**P**	**19 52 45.9**	**-1.3**
	105nm,1.0s						
BYJI	**Banyuwangi**	**15.85**	**255**	P	P	19 53 05.6	+8.9
WRAB	**Tennant Creek**	**16.25**	**164**	*e*P	**Pn**	**19 52 53.8**	**-4.6**
	29nm,0.8s						
WRA	**Warramunga Arr**	**16.26**	**165**	Pn	**Pn**	**19 52 56.0**	**-2.5**
WRA				Sn	**Sn**	**19 55 53.0**	**-5.0**
WRA	**Warramunga Arr**	**16.26**	**165**	Pn	**Pn**	**19 52 56.0**	**-2.5**
	21nm,0.3s,baz=349,slow=13,SNR=2.0						
WRA				Sn	**Sn**	**19 55 53.0**	**-5.0**
	20nm,0.3s,baz=349,slow=24,SNR=1.9						
COEN	**Coen**	**16.38**	**127**	*e*P	**Pn**	**19 52 59.5**	**-0.6**
	622nm,0.8s						
COEN	**Coen**	**16.38**	**127**	P	**Pn**	**19 52 59.9**	**-0.1**
	baz=17,SNR=20						
BLJI	**Banyuglugur**	**16.48**	**257**	P	**P**	**19 53 08.3**	**+4.6**
	77nm,0.7s						
GMJI	**Gumukmas**	**16.74**	**255**	P	P	19 53 16.6	+10
KKM	**Kota Kinabalu**	**16.95**	**307**	P	P	19 53 24.2	+15
KKM	**Kota Kinabalu**	**16.95**	**307**	P	P	19 53 19.4	+10
	baz=17,SNR=4.2						
PMG	**Port Moresby**	**18.00**	**108**	*e*P	**P**	**19 53 22.0**	**+1.5**
	57nm,1.0s						
PMG	**Port Moresby**	**18.00**	**108**	P	**P**	**19 53 23.0**	**+2.4**
	64nm,1.2s						
PMG	**Port Moresby**	**18.00**	**108**	P	**P**	**19 53 21.5**	**+0.9**
	0.8nm,0.3s,baz=295,slow=10,SNR=11						
SJI	**Sawahan**	**18.26**	**258**	P	**Pn**	**19 53 26.4**	**+2.8**
	104nm,1.2s,1μm						
PWJI	**Pagerwojo**	**18.28**	**257**	P	**Pn**	**19 53 27.4**	**+3.7**
	61nm,0.9s						
SBUM	**Sibu**	**18.76**	**290**	P	**Pn**	**19 53 33.0**	**+3.4**
	28nm,1.4s,683nm						
STKI	**Sintang**	**18.78**	**283**	P	**Pn**	**19 53 32.6**	**+2.8**
	22nm,1.7s,4μm						
QIS	**Mount Isa**	**18.85**	**150**	P	**P**	**19 53 30.2**	**+0.3**
	baz=19,SNR=58						
PCJI	**Pacitan**	**18.92**	**257**	P	Pn	19 53 41.0	+10
MBWA	**Marble Bar**	**19.48**	**209**	*e*P	**Pn**	**19 53 37.4**	**-0.7**
	35nm,0.9s						
AS31	**Alice Springs**	**19.75**	**169**	*e*P	**P**	**19 53 40.5**	**+0.8**
ASAR	**Alice Springs**	**19.75**	**169**	P	**P**	**19 53 40.3**	**+0.6**
ASAR				S	**S**	**19 57 20.5**	**-0.1**
ASAR	**Alice Springs**	**19.75**	**169**	P	**P**	**19 53 40.3**	**+0.6**
	3.5nm,0.3s,baz=351,slow=8.9,SNR=218						
ASAR				S	**S**	**19 57 20.5**	**-0.1**
	0.4nm,0.3s,baz=353,slow=22,SNR=4.2						
BJI	**Banjamegara**	**20.21**	**260**	P	Pn	19 53 57.0	+10
KSM	**Kuching**	**20.27**	**286**	*e*P	**P**	**19 53 45.0**	**-0.4**
	64nm,0.9s						
KSM	**Kuching**	**20.27**	**286**	P	**P**	**19 53 46.3**	**+0.9**
	79nm,1.0s,740nm28μm						
KSM	**Kuching**	**20.27**	**286**	P	**P**	**19 53 45.4**	**0.0**
	baz=20,SNR=5.0						
TGJI	**Tegal**	**20.74**	**262**	P	Pn	19 54 04.6	+12
CTA	**Charters Tower**	**22.51**	**136**	P	**P**	**19 54 10.8**	**+1.3**
CTA	**Charters Tower**	**22.51**	**136**	P	**P**	**19 54 10.8**	**+1.3**
	52nm,0.7s,baz=312,slow=12,SNR=86						
CTAO	**Charters Tower**	**22.51**	**136**	*e*P	**P**	**19 54 10.8**	**+1.3**
	54nm,0.8s						
XMIS	**Christmas Isla**	**24.72**	**254**	P	P	19 54 44.6	+14
	baz=24,SNR=3.7						
MEEK	**Meekatharra**	**24.73**	**204**	P	**P**	**19 54 32.8**	**+1.7**
	baz=25,SNR=5.5						
QLP	**Quilpie**	**26.19**	**150**	P	**P**	**19 54 45.9**	**+1.7**
	baz=27,SNR=7.3						
MORW	**Morawa**	**27.95**	**206**	P	**P**	**19 55 03.9**	**+3.9**
	baz=28,SNR=3.0						
KMBL	**Kambalda**	**28.02**	**195**	P	**P**	**19 55 01.7**	**+1.1**
	baz=28,SNR=5.7						
BBOO	**Buckleboo**	**29.05**	**169**	P	**P**	**19 55 10.7**	**+0.9**
	baz=29,SNR=6.2						
PPI	**Padang Panjang**	**29.60**	**276**	S	**S**	**20 00 09.3**	**+1.4**
	baz=29,SNR=4.2						
STKA	**Stephens Creek**	**29.67**	**159**	*e*P	**P**	**19 55 15.5**	**+0.2**
	2.7nm,1.0s						
STKA	**Stephens Creek**	**29.67**	**159**	P	**P**	**19 55 15.8**	**+0.5**
	2.7nm,0.5s,baz=336,slow=9.8,SNR=15						
STKA	**Stephens Creek**	**29.67**	**159**	P	**P**	**19 55 16.2**	**+1.0**
	baz=30,SNR=14						
IPM	**Ipoh**	**30.00**	**286**	*e*P	**P**	**19 55 17.6**	**-0.8**
	16nm,0.7s						
NWAO	**Narrogin (SRO)**	**30.89**	**201**	*e*P	**P**	**19 55 26.4**	**+0.4**
CMSA	**Cobar Meteorol**	**31.03**	**153**	P	**P**	**19 55 29.4**	**+2.2**
	baz=31,SNR=5.8						
ARPS	**Mount Arapiles**	**34.25**	**163**	P	**P**	**19 55 58.0**	**+2.7**
	baz=35,SNR=7.8						
WHN	**Wuhan**	**37.58**	**338**	*e*P	P	19 56 35.8	+12
CM31	**Chiang Mai Arr**	**37.83**	**307**	*e*P	**P**	**19 56 26.6**	**+0.4**
	5.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**37.83**	**307**	P	**P**	**19 56 26.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**37.83**	**307**	P	**P**	**19 56 26.7**	**+0.5**
	5.5nm,0.8s,baz=133,slow=6.7,SNR=38						
CMMT	**Chiang Mai**	**38.02**	**308**	P	**P**	**19 56 29.2**	**+1.3**
	21nm,1.1s						
CHTO	**Chiang Mai**	**38.03**	**308**	*e*P	**P**	**19 56 28.1**	**+0.2**
	16nm,0.8s						
CHTO	**Chiang Mai**	**38.03**	**308**	P	**P**	**19 56 28.6**	**+0.7**
	24nm,1.1s						
KMI	**Kunming**	**39.25**	**319**	P	**P**	**19 56 39.3**	**+0.9**
KMI				pmax	pmax		
	comp=Z,12nm,1.3s						
DZM	**Mont Dzumac**	**39.70**	**120**	P	**P**	**19 56 42.5**	**+0.4**
DZM	**Mont Dzumac**	**39.70**	**120**	P	**P**	**19 56 42.5**	**+0.4**
	comp=Z,7.1nm,0.8s,baz=265,slow=12,SNR=3.1						
MJAR	**Matsushiro Arr**	**41.30**	**10**	P	**P**	**19 56 54.0**	**-0.9**
MJAR	**Matsushiro Arr**	**41.30**	**10**	P	**P**	**19 56 54.0**	**-0.9**
	comp=Z,3.8nm,0.7s,baz=186,slow=9.6,SNR=11						
MAJO	**Matsushiro**	**41.30**	**10**	*e*P	**P**	**19 56 54.0**	**-0.9**
	comp=Z,19nm,0.8s						
MAT	**Matsushiro**	**41.30**	**10**	P	**P**	**19 56 54.1**	**-0.8**
KSAR	**Wonju Array Be**	**41.47**	**358**	P	**P**	**19 56 57.6**	**+1.3**
KSRS	**Korea Array**	**41.48**	**358**	P	**P**	**19 56 57.6**	**+1.2**
	comp=Z,1.6nm,0.6s,baz=176,slow=9.2,SNR=7.0						
XAN	**Xi'an**	**42.84**	**334**	P	**P**	**19 57 07.0**	**-0.6**
XAN				pP	**pP**	**19 57 17.3**	**-0.6**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LZH	**Lanzhou**	**46.87**	**331**	*e*P	**P**	**19 57 41.5**	**+1.7**
LZH				pP	**pP**	**19 57 47.1**	**-3.1**
LZH				sP	**sP**	**19 57 50.4**	**-3.9**
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
LZH				pmax	pmax		
	comp=Z,160nm,7.2s						
HHC	**Hu-ho-hao-te**	**47.84**	**341**	*e*P	P	19 57 50.6	+3.4
HHC				S	**S**	**20 04 43.4**	**+1.4**
HHC				pmax	pmax		
	comp=Z,28nm,0.6s						
HHC				pmax	pmax		
	comp=Z,350nm,6.0s						
USRK	**Ussuriysk Arra**	**48.23**	**2**	P	**P**	**19 57 51.2**	**+1.3**
	comp=Z,2.2nm,0.7s,baz=194,slow=7.6,SNR=6.4						
LSA	**Lhasa**	**50.07**	**315**	P	**P**	**19 58 05.3**	**+0.4**
ODAN	**Odare**	**51.30**	**309**	*e*P	**P**	**19 58 13.4**	**-0.6**
	comp=Z,35nm,0.8s						
TAPN	**Taplejung**	**51.31**	**310**	*e*P	**P**	**19 58 13.5**	**-0.6**
	comp=Z,12nm,0.4s						
GTA	**Gaotai**	**51.45**	**330**	*e*P	**P**	**19 58 15.3**	**+0.6**
GTA				pP	**pP**	**19 58 21.6**	**-3.6**
GTA				sP	**sP**	**19 58 25.6**	**-3.8**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.6s						
RAMN	**Ramite**	**51.96**	**309**	*e*P	**P**	**19 58 18.7**	**-0.2**
	comp=Z,32nm,0.7s						
GUN	**Gumba**	**52.99**	**310**	*e*P	**P**	**19 58 26.1**	**-0.6**
	comp=Z,29nm,0.6s						
PKI	**Pulchoki**	**53.19**	**309**	*e*P	**P**	**19 58 27.3**	**-0.8**
PKIN	**Phulchoki**	**53.20**	**309**	*e*P	**P**	**19 58 27.4**	**-0.7**
KKN	**Kakani**	**53.39**	**309**	*e*P	**P**	**19 58 28.8**	**-0.7**
	comp=Z,18nm,0.9s						
DMN	**Daman**	**53.44**	**309**	*e*P	**P**	**19 58 29.2**	**-0.7**
	comp=Z,26nm,0.8s						
KOLN	**Koldanda**	**54.69**	**308**	*e*P	**P**	**19 58 38.6**	**-0.3**
	comp=Z,38nm,0.8s						
DANN	**Dangsing**	**54.84**	**309**	*e*P	**P**	**19 58 39.4**	**-0.7**
	comp=Z,40nm,0.8s						
HYB	**Hyderabad**	**54.93**	**295**	*i* P	**P**	**19 58 38.0**	**-2.7**
PYUN	**Piuthan**	**55.32**	**308**	*e*P	**P**	**19 58 43.2**	**-0.3**
	comp=Z,78nm,0.9s						
ULN	**Ulaanbaatar**	**55.56**	**342**	*e*P	**P**	**19 58 45.4**	**+0.6**
	comp=Z,13nm,0.8s						
ULN	**Ulaanbaatar**	**55.56**	**342**	P	**P**	**19 58 45.7**	**+0.9**
	comp=Z,18nm,0.9s						
SONM	**Songino Array**	**55.75**	**341**	P	**P**	**19 58 46.4**	**+0.3**
SONM	**Songino Array**	**55.75**	**341**	P	**P**	**19 58 46.4**	**+0.3**
	comp=Z,6.6nm,0.8s,baz=145,slow=7.8,SNR=26						
MK31	**Makanchi Array**	**65.79**	**326**	*e*P	**P**	**19 59 54.1**	**-0.3**
MKAR	**Makanchi Array**	**65.79**	**326**	P	**P**	**19 59 54.4**	**-0.1**
MKAR	**Makanchi Array**	**65.79**	**326**	P	**P**	**19 59 54.4**	**-0.1**
	comp=Z,4.5nm,0.5s,baz=125,slow=7.9,SNR=74						
TKM2	**Tokmak 2**	**67.72**	**320**	*e*P	P	20 00 03.6	-3.4
	comp=Z,8.3nm,0.8s						
AAK	**Ala-Archa**	**68.29**	**319**	*e*P	**P**	**20 00 10.7**	**+0.1**
	comp=Z,5.4nm,0.9s						
KBL	**Kabul**	**68.83**	**309**	*e*P	**P**	**20 00 13.3**	**-0.8**
	comp=Z,7.3nm,0.7s						
ZAA0	**Zalesovo Array**	**69.00**	**333**	*e*P	**P**	**20 00 13.5**	**-1.0**
ZALV	**Zalesovo Beam**	**69.00**	**333**	P	**P**	**20 00 13.8**	**-0.6**
ZALV	**Zalesovo Beam**	**69.00**	**333**	P	**P**	**20 00 13.8**	**-0.6**
	comp=Z,4.7nm,0.8s,baz=117,slow=5.1,SNR=23						
KURK	**Kurchatov**	**70.04**	**328**	*e*P	**P**	**20 00 20.8**	**-0.2**
	comp=Z,27nm,0.9s						
KKAR	**Karatay Array**	**71.12**	**318**	*e*P	**P**	**20 00 26.9**	**-0.8**
	comp=Z,3.4nm,0.8s						
VNDA	**Vanda**	**75.23**	**173**	P	**P**	**20 00 51.3**	**0.0**
VNDA	**Vanda**	**75.23**	**173**	P	**P**	**20 00 51.3**	**0.0**
	comp=Z,1.9nm,0.8s,baz=334,slow=7.5,SNR=6.6						
BRVK	**Borovoye**	**75.68**	**328**	*e*P	**P**	**20 00 54.4**	**0.0**
	comp=Z,16nm,1.1s						
MAW	**Mawson**	**77.46**	**201**	P	**P**	**20 01 04.4**	**+0.3**
MAW	**Mawson**	**77.46**	**201**	P	**P**	**20 01 04.4**	**+0.3**
	comp=Z,3.8nm,0.9s,baz=58,slow=6.8,SNR=3.5						
ABKAR	**Akbulak array**	**80.21**	**321**	*e*P	**P**	**20 01 19.3**	**-0.3**
	comp=Z,5.2nm,0.7s						
RDF	**Al-Radifah**	**85.24**	**299**	*e*P	**P**	**20 01 45.8**	**-0.4**
RDF				AMb	AMB	20 01 49.0	
	comp=Z,22nm,1.1s						
MIB	**Mutribah**	**85.53**	**300**	*e*P	**P**	**20 01 47.1**	**-0.5**
MIB				AMb	AMB	20 01 58.2	
	comp=Z,27nm,1.0s						
NAY	**Al-Naaiem**	**85.55**	**300**	*e*P	**P**	**20 01 47.1**	**-0.6**
NAY				AMb	AMB	20 01 50.7	
	comp=Z,16nm,0.6s						
KBZ	**Khabaz**	**90.63**	**314**	P	**P**	**20 02 12.3**	**+0.6**
KBZ	**Khabaz**	**90.63**	**314**	P	**P**	**20 02 12.3**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=98,slow=5.4,SNR=5.2						
ILAR	**Eielson Array**	**90.93**	**25**	P	**P**	**20 02 13.3**	**+0.6**
ILAR	**Eielson Array**	**90.93**	**25**	P	**P**	**20 02 13.3**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=258,slow=4.5,SNR=8.4						
KMBO	**Kilima Mbogo**	**92.45**	**269**	P	**P**	**20 02 20.4**	**-0.8**
KMBO	**Kilima Mbogo**	**92.45**	**269**	P	**P**	**20 02 20.4**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=54,slow=1.8,SNR=4.9						
INK	**Inuvik**	**96.37**	**22**	P	**P**	**20 02 37.0**	**-0.5**
INK	**Inuvik**	**96.37**	**22**	P	**P**	**20 02 37.0**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=296,slow=3.6,SNR=6.9						
DLBC	**Dease Lake**	**98.90**	**32**	P	Pdif	20 02 50.8	+1.4
DLBC	**Dease Lake**	**98.90**	**32**	P	Pdif	20 02 50.8	+1.4
	comp=Z,1.1nm,0.3s,baz=6.3,slow=9.2,SNR=5.4						
ARCES	**ARCESS Array B**	**98.90**	**340**	P	**P**	**20 02 48.8**	**-0.2**
ARCES	**ARCESS Array B**	**98.90**	**340**	P	**P**	**20 02 48.8**	**-0.2**
	comp=Z,3.9nm,0.8s,baz=98,slow=6.5,SNR=4.1						
TORD	**Torodi Ar. Bea**	**128.01**	**283**	PKP	**PKPdf**	**20 08 16.4**	**+0.3**
TORD	**Torodi Ar. Bea**	**128.01**	**283**	PKP	**PKPdf**	**20 08 16.4**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=71,slow=1.9,SNR=9.2						
PLCA	**Paso Flores**	**131.55**	**159**	PKP	**PKPdf**	**20 08 23.4**	**+1.1**
PLCA	**Paso Flores**	**131.55**	**159**	PKP	**PKPdf**	**20 08 23.4**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=181,slow=7.9,SNR=3.4						
CPUP	**Villa Florida**	**148.87**	**168**	PKPbc	**PKPbc**	**20 08 57.8**	**+0.2**
CPUP	**Villa Florida**	**148.87**	**168**	PKPbc	**PKPbc**	**20 08 57.8**	**+0.2**
	comp=Z,2.3

*ISCJB **20** 20:02:20.7±2.8, 15°.19S±0°.05×173°.64W±0°.03, h2km±17km, mb5.1/131, MS5.0/45, Error ellipse: s-maj=8.6km s-min=5.0km az=157.3*

*IDC **20** 20:02:21.4±0.4, 15°.18S×173°.60W, h0km, mb4.7/19, mb1 4.9/21, mb1mx4.8/25, mbtmp4.7/21, ML4.1/2, MS4.9/22, Ms1 4.9/22, ms1mx4.8/28, Error ellipse: s-maj=19.5km s-min=12.3km az=131.0*

*BJI **20** 20:02:23.5, 15°.12S×173°.74W, h10km, mB5.6/25, mb5.1/26, Ms5.3/26, Ms7 5.0/27*

*MOS **20** 20:02:26.6±1.2, 15°.06S×173°.59W, h33km, mb5.4/40, MS5.3/10, Error ellipse: s-maj=13.1km s-min=7.2km az=59.4*

*NEIC **20** 20:02:27.2±0.2, 15°.17S×173°.72W, h35km, mb5.2/87, MW5.4, Error ellipse: s-maj=10.0km s-min=4.2km az=143.0, Moment Tensor Solution. s32 Moment tensor: Scale 10^{17}Nm; M_{rr}0.23; $M_{\theta\theta}$-0.28; $M_{\phi\phi}$0.05; $M_{r\theta}$-1.66; $M_{\theta\phi}$-0.54; $M_{r\phi}$0.21; Best double couple: $M_0$1.80000×10^{17} NP1:ϕ_s275.00000°, δ86.00000°, λ109.00000°. NP2: ϕ_s15.00000°, δ19.00000°, λ11.00000°. Principal axes: T 1.8000, Plg45.0000°, Azm203.0000°; N -0.0500, Plg18.0000°, Azm93.0000°; P -1.7500, Plg38.0000°, Azm348.0000°;*

NEIC Felt at Nuku'alofa. Felt at Apia, Samoa and at Tafuna, American Samoa.

*AUST **20** 20:02:29.5±0.0, 15°.10S×172°.82W, h106km Error ellipse: s-maj=1.4km s-min=1.2km az=235.0*

*GCMT **20** 20:02:33.4±0.1, 15°.20S×173°.33W, h57km±1km, MW5.6, Moment Tensor Solution. s76,c135; s98,c172; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.08±.04; $M_{\theta\theta}$0.67±.05; $M_{\phi\phi}$-0.59±.04; $M_{r\theta}$-2.69±.06; $M_{\theta\phi}$0.61±.04; $M_{r\phi}$0.60±.03; Best double couple: $M_0$2.90000×10^{17} NP1:ϕ_s200.00000°, δ17.00000°, λ-174.00000°. NP2:ϕ_s104.00000°, δ88.00000°, λ-73.00000°. Principal axes: T 3.0100, Plg41.0000°, Azm179.0000°; N -0.2600, Plg17.0000°, Azm284.0000°; P -2.7600, Plg44.0000°, Azm31.0000°; Data Used: ll IU IC G CN.*

ISC 20 20:02:24.9±0.4, 15°.28S±0°.05×173°.47W±0°.05, h20km±2km, h20km:pP-P, n851, σ1§06/872, mb5.2/131**, MS5.1**/45**, 267C-211D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.13**	**51**	Pn	**Pn**	**20 02 57.3**	**-2.1**
AFI				Sn	Sn	20 03 16.3	-9.1
AFI	**Afiamalu**	**2.13**	**51**	Pn	**Pn**	**20 02 57.3**	**-2.1**
	1μm,0.3s,baz=234,slow=17,SNR=204						
AFI				Sn	Sn	20 03 16.3	-9.1
	4μm,0.3s,baz=72,slow=20,SNR=25						
AFI				LR	LR	20 03 41.4	
	comp=Z,32μm,20.2s,baz=302,slow=37						
NIUE	**Niue**	**5.08**	**139**	P	**Pn**	**20 03 39.8**	**-0.1**
	baz=4.8,SNR=139						
NIUE				S	**Sn**	**20 04 34.4**	**-3.5**
	baz=4.8,SNR=6.9						
MSVF	**Nonsavu**	**8.49**	**252**	*e*P	Pn	20 04 35.0	+8.1
MSVF				pmax	pmax		
	comp=Z,55nm,0.7s						
MSVF	**Nonsavu**	**8.49**	**252**	*e*P	Pn	20 04 35.0	+8.1
	comp=Z,55nm,0.7s						
MSVF	**Nonsavu**	**8.49**	**252**	Pn	Pn	20 04 35.3	+8.4
	comp=Z,561nm,0.7s,SNR=15						
RAR	**Rarotonga**	**14.29**	**116**	*e*P	**Pn**	**20 05 45.1**	**-1.1**
	comp=Z,72nm,0.8s						
RAR				Sn	Sn	20 08 16.6	-7.5
RAR				TT		20 20 14.2	
RAR	**Rarotonga**	**14.29**	**116**	Pn	**Pn**	**20 05 45.5**	**-0.7**
	comp=Z,2.7nm,0.3s,baz=257,slow=8.5,SNR=15						
RAR				Sn	Sn	20 08 16.5	-7.5
	comp=Z,2.1nm,0.3s,baz=108,slow=20,SNR=3.9						
RAR				LR	LR	20 09 57.2	
	comp=Z,2μm,18.4s,baz=296,slow=32						
RAR				T	T	20 20 14.2	
	comp=Z,21nm,0.3s,baz=76,slow=13,SNR=5.1						
DZM	**Mont Dzumac**	**20.18**	**247**	*e*P	Pn	20 06 59.9	-0.6
	comp=Z,144nm,1.4s						
DZM				*e*LQ	LQ	20 10 56.2	
	comp=Z,7μm,25.4s						
DZM				*e*LR	LR	20 11 48.6	
	comp=Z,15μm,26.4s						
DZM	**Mont Dzumac**	**20.18**	**247**	*e*P	Pn	20 07 00.5	0.0
DZM	**Mont Dzumac**	**20.18**	**247**	*e*P	**P**	**20 06 58.0**	**-0.5**
	comp=Z,108nm,1.4s						
DZM	**Mont Dzumac**	**20.18**	**247**	P	**P**	**20 06 57.4**	**-1.1**
	comp=Z,8.0nm,0.8s,baz=83,slow=12,SNR=2.8						
DZM				LR	LR	20 12 41.9	
	comp=Z,1μm,20.1s,baz=79,slow=31						
PAE	**Paea**	**23.03**	**99**	*e*P	**P**	**20 07 31.4**	**+2.4**
	comp=Z,9.5nm,1.3s						
PPT2	**Papeete2**	**23.03**	**99**	*e*P	**P**	**20 07 32.0**	**+2.9**
	comp=Z,54nm,1.5s						
PPT2				*e*LQ	LQ	20 12 07.9	
	comp=Z,5μm,30.8s						
PPT2				*e*LR	LR	20 12 45.6	
	comp=Z,2μm,26.2s						
TIAR	**Tiarei**	**23.25**	**99**	*e*P	**P**	**20 07 33.1**	**+1.8**
	comp=Z,51nm,1.1s						
TVO	**Taravao**	**23.35**	**100**	*e*P	**P**	**20 07 34.9**	**+2.6**
	comp=Z,95nm,1.4s						
TBI	**Tubuai**	**24.02**	**113**	*e*P	**P**	**20 07 40.7**	**+2.1**
	comp=Z,290nm,1.2s						
TBI				*e*LQ	LQ	20 12 36.7	
	comp=Z,4μm,27.8s						
TBI				*e*LR	LR	20 13 22.3	
	comp=Z,3μm,27.2s						
URZ	**Urewera**	**24.36**	**198**	*e*P	**P**	**20 07 42.8**	**+1.1**
	comp=Z,24nm,0.6s						
URZ	**Urewera**	**24.36**	**198**	P	**P**	**20 07 42.4**	**+0.8**
	comp=Z,17nm,0.5s,baz=354,slow=3.2,SNR=13						
URZ				LR	LR	20 16 28.3	
	comp=Z,7μm,19.4s,baz=38,slow=35						
MEH	**Mehetia**	**24.48**	**100**	*e*P	**P**	**20 07 45.2**	**+2.2**
	comp=Z,67nm,1.1s						
PMOR	**Pomariorio Ree**	**24.69**	**93**	*e*P	**P**	**20 07 46.9**	**+2.1**
	comp=Z,294nm,1.2s						
HNR	**Honiara**	**26.59**	**280**	LR	LR	20 15 26.3	
	comp=Z,429nm,18.9s,baz=257,slow=30						
RPZ	**Rata Peaks**	**31.27**	**202**	P	**P**	**20 08 43.8**	**+0.4**
RPZ	**Rata Peaks**	**31.27**	**202**	P	**P**	**20 08 43.8**	**+0.4**
	comp=Z,14nm,0.6s,baz=39,slow=5.0,SNR=8.5						
ARMA	**Armidale**	**35.35**	**239**	P	**P**	**20 09 20.4**	**+1.1**
	baz=36,SNR=6.2						
RKT	**Rikitea**	**37.10**	**108**	*e*S	**S**	**20 15 21.1**	**+1.5**
RKT				*e*LQ	LQ	20 18 16.7	
	comp=Z,2μm,24.8s						
CTA	**Charters Tower**	**38.60**	**257**	P	**P**	**20 09 45.6**	**-1.4**
CTA	**Charters Tower**	**38.60**	**257**	P	**P**	**20 09 45.6**	**-1.4**
	comp=Z,3.6nm,0.7s,baz=89,slow=9.8,SNR=5.6						
CNB	**Canberra Magne**	**38.77**	**232**	P	**P**	**20 09 48.3**	**0.0**
	baz=39,SNR=4.8						
KIP	**Kipapa**	**39.50**	**23**	*ce*P	**P**	**20 09 55.4**	**+1.1**
KIP				pmax	pmax		
	comp=Z,357nm,2.5s						
CMSA	**Cobar Meteorol**	**40.56**	**239**	P	**P**	**20 10 02.8**	**-0.4**
	baz=41,SNR=22						
COEN	**Coen**	**41.92**	**266**	*e*P	**P**	**20 10 14.9**	**+0.3**
COEN	**Coen**	**41.92**	**266**	P	**P**	**20 10 15.2**	**+0.6**
	baz=42,SNR=4.2						
TOO	**Toolangi**	**42.49**	**231**	P	**P**	**20 10 17.3**	**-1.7**
	baz=43,SNR=3.8						
STKA	**Stephens Creek**	**44.04**	**240**	P	**P**	**20 10 30.4**	**-1.2**
STKA	**Stephens Creek**	**44.04**	**240**	P	**P**	**20 10 30.4**	**-1.2**
	comp=Z,9.4nm,0.7s,baz=78,slow=8.4,SNR=24						
STKA				LR	LR	20 26 10.5	
	comp=Z,2μm,21.1s,baz=71,slow=32						
STKA	**Stephens Creek**	**44.04**	**240**	P	**P**	**20 10 31.2**	**-0.3**
	baz=45,SNR=17						
QIS	**Mount Isa**	**44.84**	**256**	P	**P**	**20 10 37.6**	**-0.5**
	baz=46,SNR=5.3						
BBOO	**Buckleboo**	**48.81**	**240**	*e*P	**P**	**20 11 08.1**	**-0.9**
	comp=Z,281nm,1.1s						
BBOO	**Buckleboo**	**48.81**	**240**	P	**P**	**20 11 08.3**	**-0.7**
	baz=49,SNR=8.5						
WRAB	**Tennant Creek**	**49.80**	**257**	*e*P	**P**	**20 11 13.7**	**-3.0**
WRAB				pmax	pmax		
	comp=Z,12nm,0.8s						
WRAB	**Tennant Creek**	**49.80**	**257**	*e*P	**P**	**20 11 13.7**	**-3.0**
	comp=Z,12nm,0.8s						
WRAB	**Tennant Creek**	**49.80**	**257**	P	**P**	**20 11 15.9**	**-0.8**
	comp=Z,76nm,0.6s,SNR=6.1						
WRA	**Warramunga Arr**	**49.80**	**257**	P	**P**	**20 11 13.7**	**-3.1**
	comp=Z,40nm,0.3s,baz=90,slow=6.9,SNR=2.9						
WRA				LR	LR	20 31 13.0	
	comp=Z,636nm,20.8s,baz=95,slow=35						
AS31	**Alice Springs**	**50.08**	**252**	*e*P	**P**	20 11 15.6	-3.3
ASAR	**Alice Springs**	**50.08**	**252**	P	**P**	**20 11 15.9**	**-3.0**
ASAR	**Alice Springs**	**50.08**	**252**	P	**P**	**20 11 15.9**	**-3.0**
	comp=Z,36nm,0.7s,baz=85,slow=8.0,SNR=109						
ASAR				LR	LR	20 30 57.5	
	comp=Z,2μm,21.6s,baz=91,slow=34						
FORT	**Forrest**	**55.41**	**243**	P	**P**	**20 11 57.0**	**-1.2**
	baz=56,SNR=8.0						
FITZ	**Fitzroy Crossi**	**58.17**	**258**	P	**P**	**20 12 19.0**	**+1.0**
	baz=59,SNR=5.3						
MBWA	**Marble Bar**	**63.33**	**254**	P	**P**	**20 12 51.1**	**-1.9**
VNDA	**Vanda**	**63.49**	**186**	P	**P**	**20 12 54.0**	**+0.8**
VNDA	**Vanda**	**63.49**	**186**	P	**P**	**20 12 54.0**	**+0.8**
	comp=Z,10nm,0.8s,baz=8.9,slow=7.1,SNR=44						
VNDA				LR	LR	20 33 13.5	
	comp=Z,420nm,20.9s,baz=31,slow=29						
MEEK	**Meekatharra**	**63.80**	**248**	P	**P**	**20 12 55.0**	**-1.1**
	baz=64,SNR=3.1						
MJAR	**Matsushiro Arr**	**68.80**	**320**	P	**P**	**20 13 27.0**	**-0.9**
MJAR	**Matsushiro Arr**	**68.80**	**320**	P	**P**	**20 13 27.0**	**-0.9**
	comp=Z,3.1nm,0.9s,baz=121,slow=4.7,SNR=5.9						
MJAR				LR	LR	20 37 23.3	
	comp=Z,1μm,22.0s,baz=130,slow=31						
YUK	**Yuzh-Kuril'sk**	**69.72**	**330**	*i* P	**P**	**20 13 31.0**	**-2.3**
YUK				*i*		20 16 11.5	
YUK				*i* S	**S**	**20 22 36.2**	**-4.9**
YUK				pmax	pmax		
	comp=N,153nm,1.5s						
YUK				pmax	pmax		
	comp=Z,206nm,1.5s						
YUK				pmax	pmax		
	comp=E,86nm,1.5s						
YUK				pmax	pmax		
	comp=Z,330nm,1.5s						
BSC	**Santa Cruz Isl**	**70.89**	**45**	P	**P**	**20 13 41.4**	**+0.6**
	baz=71						
SBC	**Santa Barbara**	**71.08**	**45**	P	**P**	**20 13 43.1**	**+1.2**
	baz=71						
PKM	**Peak Mountain**	**71.27**	**44**	P	**P**	**20 13 44.0**	**+0.7**
	baz=72,SNR=6.5						
SAO	**San Andreas Ge**	**71.29**	**42**	*e*P	**P**	**20 13 44.3**	**+1.2**
SAO				pmax	pmax		
	comp=Z,28nm,1.3s						
SAO	**San Andreas Ge**	**71.29**	**42**	*e*P	**P**	**20 13 44.3**	**+1.2**
	comp=Z,28nm,1.3s						
BLG	**Laguna Peak**	**71.34**	**45**	P	**P**	**20 13 44.4**	**+0.8**
	baz=72						
SMMC	**Simmler**	**71.39**	**44**	P	**P**	**20 13 45.1**	**+1.3**
	baz=72						
CIS	**Catalina Islan**	**71.41**	**46**	P	**P**	**20 13 44.7**	**+0.7**
	baz=72						
HOPS	**Hopland**	**71.62**	**39**	*e*P	**P**	**20 13 46.2**	**+1.1**
	comp=Z,33nm,1.2s						
FMP	**Fort Macarthur**	**71.66**	**46**	P	**P**	**20 13 46.1**	**+0.7**
	baz=72						
OSI	**Osito Adit**	**71.86**	**45**	P	**P**	**20 13 47.5**	**+0.8**
	baz=72						
KIPM	**Iron Peak**	**71.88**	**38**	*e*P	**P**	**20 13 47.7**	**+0.9**
	comp=Z,112nm,1.7s						
DECC	**Green Verdugo**	**71.93**	**46**	P	**P**	**20 13 47.8**	**+0.7**
	baz=72						
ARVC	**Arvin**	**72.07**	**45**	P	**P**	**20 13 48.4**	**+0.5**
	baz=72						
MWC	**Mount Wilson**	**72.10**	**46**	*e*P	**P**	**20 13 49.0**	**+0.7**
MWC				pmax	pmax		
	comp=Z,21nm,1.2s						
MWC	**Mount Wilson**	**72.10**	**46**	*e*P	**P**	**20 13 49.0**	**+0.7**
	comp=Z,21nm,1.2s						
PET	**Petropavlovsk**	**72.14**	**343**	*e*P	P	20 13 53.4	+5.6
PET				*e*S	**S**	**20 23 07.0**	**-1.9**
PET				*e*PS	**PnS**	**20 23 40.0**	**-0.4**
PET				MLR	MLR		
	comp=Z,500nm,18.0s						
PET				MLR	MLR		
	comp=Z,700nm,18.0s						
VES	**Vestal, Richgr**	**72.30**	**44**	P	**P**	**20 13 49.7**	**+0.4**
	baz=73						
MURC	**Murrieta**	**72.36**	**47**	P	**P**	**20 13 50.7**	**+1.0**
	baz=73						
BFSC	**Mount Baldy Ra**	**72.39**	**46**	P	**P**	**20 13 50.0**	**0.0**
	baz=73						
RCTC	**Rector, Farmer**	**72.47**	**43**	P	**P**	**20 13 50.6**	**+0.4**
	baz=73						
PETK	**Petropavlovsk-**	**72.49**	**342**	P	**P**	**20 13 48.2**	**-1.8**
PETK	**Petropavlovsk-**	**72.49**	**342**	P	**P**	**20 13 48.1**	**-1.8**
PETK	**Petropavlovsk-**	**72.49**	**342**	P	**P**	**20 13 48.1**	**-1.8**
	comp=Z,9.1nm,0.8s,baz=153,slow=7.3,SNR=6.7						
PETK				LR	LR	20 38 19.3	
	comp=Z,419nm,21.9s,baz=168,slow=30						
EDW2	**Edwards Air Fo**	**72.51**	**45**	P	**P**	**20 13 51.2**	**+0.6**
	baz=73,SNR=11						
MONP	**Monument Peak**	**72.53**	**48**	P	**P**	**20 13 51.3**	**+0.4**
	baz=73,SNR=7.1						
ISA	**Isabella**	**72.61**	**44**	*e*P	**P**	**20 13 51.9**	**+0.7**
ISA				pmax	pmax		
	comp=Z,30nm,1.3s						
ISA	**Isabella**	**72.61**	**44**	*e*P	**P**	**20 13 51.9**	**+0.7**
	comp=Z,30nm,1.3s						
ISA	**Isabella**	**72.61**	**44**	P	**P**	**20 13 51.6**	**+0.4**
	baz=73,SNR=18						
DVTC	**Desert V Tower**	**72.64**	**48**	P	**P**	**20 13 52.2**	**+0.8**
	baz=73,SNR=6.0						
CMB	**Columbia Colle**	**72.72**	**41**	*e*P	**P**	**20 13 51.6**	**-0.2**
CMB				pmax	pmax		
	comp=Z,81nm,1.8s						
CMB	**Columbia Colle**	**72.72**	**41**	*e*P	**P**	**20 13 51.6**	**-0.2**
	comp=Z,81nm,1.8s						
PFO	**Pinyon Flat Ob**	**72.89**	**47**	*e*P	**P**	**20 13 53.6**	**+0.7**
	comp=Z,56nm,1.9s						
PFO	**Pinyon Flat Ob**	**72.89**	**47**	P	**P**	**20 13 53.8**	**+0.8**
	baz=73						
BBRC	**Big Bear Solar**	**72.91**	**46**	P	**P**	**20 13 53.6**	**+0.4**
	baz=73						
WDC	**Whiskeytown Da**	**72.92**	**38**	*e*P	**P**	**20 13 53.2**	**+0.3**
WDC				pmax	pmax		
	comp=Z,79nm,1.6s						
WDC	**Whiskeytown Da**	**72.92**	**38**	*e*P	**P**	**20 13 53.1**	**+0.3**
	comp=Z,79nm,1.6s						
SWSC	**Sam W. Stewart**	**73.01**	**48**	P	**P**	**20 13 54.4**	**+0.9**
	baz=73						
LRMC	**Laurel Mountai**	**73.04**	**45**	P	**P**	**20 13 54.8**	**+1.0**
	baz=73						
RRX	**Edison Barstow**	**73.19**	**46**	P	**P**	**20 13 55.3**	**+0.7**
	baz=74						
CWC	**Cottonwood Cre**	**73.31**	**44**	P	**P**	**20 13 56.0**	**+0.6**
	baz=74						
YSS	**Yuzh-Sakhalins**	**73.34**	**330**	*i* P	**P**	**20 13 56.8**	**+1.7**
YSS				*e*		20 14 10.0	
YSS				*e*S	**S**	**20 23 22.0**	**-0.9**
YSS				*e*PPS	PPS	20 24 06.0	
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
BELC	**Belle Mtn. Jos**	**73.42**	**47**	P	**P**	**20 13 56.3**	**+0.2**
	baz=74,SNR=9.6						
MLAC	**Mammoth Lakes**	**73.48**	**42**	P	**P**	**20 13 56.9**	**+0.4**
	baz=74						
MPMC	**Manual Prospec**	**73.50**	**44**	P	**P**	**20 13 57.0**	**+0.4**
	baz=74,SNR=18						
YBH	**Yreka Blue Hor**	**73.54**	**37**	*e*P	**P**	**20 13 55.9**	**-0.7**
	comp=Z,92nm,1.6s						
DAC	**Darwin (Calif)**	**73.55**	**44**	*e*P	**P**	**20 13 57.8**	**+0.9**
DAC				pmax	pmax		
	comp=Z,29nm,1.6s						
DAC	**Darwin (Calif)**	**73.55**	**44**	*e*P	**P**	**20 13 57.8**	**+0.9**
	comp=Z,29nm,1.6s						
GSC	**Goldstone**	**73.55**	**45**	*e*P	**P**	**20 13 57.5**	**+0.7**
GSC				pmax	pmax		
	comp=Z,39nm,1.4s						
GSC	**Goldstone**	**73.55**	**45**	*e*P	**P**	**20 13 57.5**	**+0.7**
	comp=Z,39nm,1.4s						
GSC	**Goldstone**	**73.55**	**45**	P	**P**	**20 13 57.3**	**+0.5**
	baz=74,SNR=8.5						
TIN	**Tinemaha**	**73.56**	**43**	P	**P**	**20 13 57.6**	**+0.7**
	baz=74						
BC3	**Big Chuckawall**	**73.62**	**48**	P	**P**	**20 13 57.9**	**+0.6**
	baz=74,SNR=11						
HEC	**Hector,Ludlow**	**73.63**	**46**	P	**P**	**20 13 57.9**	**+0.7**
	baz=74						
GLA	**Glamis**	**73.76**	**48**	*e*P	**P**	**20 13 59.3**	**+1.2**
GLA				pmax	pmax		
	comp=Z,37nm,1.4s						
GLA	**Glamis**	**73.76**	**48**	*e*P	**P**	**20 13 59.2**	**+1.2**
	comp=Z,37nm,1.4s						
GLA	**Glamis**	**73.76**	**48**	P	**P**	**20 13 59.1**	**+1.0**
	baz=74						
BEKR	**Beckworth**	**73.82**	**40**	*e*P	**P**	**20 13 58.5**	**+0.1**
	comp=Z,26nm,1.4s						
WCN	**Washoe City**	**73.86**	**41**	*e*P	**P**	**20 13 59.6**	**+1.0**
WCN				pmax	pmax		
	comp=Z,37nm,1.3s						
WCN	**Washoe City**	**73.86**	**41**	*e*P	**P**	**20 13 59.6**	**+1.0**
	comp=Z,37nm,1.3s						
HUMO	**Hull Mountain**	**73.95**	**36**	*e*P	**P**	**20 14 00.1**	**+1.2**
	comp=Z,49nm,1.3s						
GMRC	**Granite Mounta**	**74.07**	**46**	P	**P**	**20 14 00.1**	**+0.3**
	baz=74,SNR=14						
GRAC	**Grapevine Rang**	**74.10**	**44**	P	**P**	**20 14 00.7**	**+0.8**
	baz=74,SNR=8.5						
IRM	**Iron Mountain**	**74.10**	**47**	P	**P**	**20 14 00.6**	**+0.6**
	baz=74,SNR=22						
FURC	**Furnace Creek,**	**74.15**	**44**	P	**P**	**20 14 01.0**	**+0.9**
	baz=74						
TUQ	**Turquoise Moun**	**74.23**	**46**	P	**P**	**20 14 01.7**	**+0.9**
	baz=74						
SHOC	**Shoshone**	**74.23**	**45**	P	**P**	**20 14 01.0**	**+0.3**
	baz=74						
NVAR	**Mina Array Bea**	**74.28**	**42**	P	**P**	**20 14 01.3**	**+0.1**
NVAR	**Mina Array Bea**	**74.28**	**42**	P	**P**	**20 14 01.3**	**+0.1**
	comp=Z,8.9nm,0.7s,baz=224,slow=7.6,SNR=76						
NVAR				LR	LR	20 39 37.9	
	comp=Z,2μm,20.2s,baz=97,slow=30						
Y12C	**Blythe**	**74.34**	**48**	P	**P**	**20 14 01.7**	**+0.4**
	baz=75						
NV11	**Mina Array Sit**	**74.38**	**42**	*e*P	**P**	**20 14 00.7**	**-1.0**
LDFC	**Landfair**	**74.61**	**46**	*e*P	**P**	**20 14 04.2**	**+1.1**
214A	**Organ Pipe Nat**	**74.69**	**50**	P	**P**	**20 14 04.0**	**+0.6**
	baz=75,SNR=14						
NEE2	**Needles Airpor**	**74.79**	**47**	P	**P**	**20 14 04.4**	**+0.5**
	baz=75						
PDMCI	**Parker Dam,Lak**	**74.89**	**48**	P	**P**	**20 14 05.3**	**+0.8**
	baz=75,SNR=7.8						
MOD	**Modoc**	**75.07**	**38**	*e*P	**P**	**20 14 04.7**	**-0.9**
	comp=Z,148nm,1.5s						
Z14A	**Wintersburg**	**75.28**	**49**	P	**P**	**20 14 07.6**	**+0.8**
	baz=76						
BROR	**Big Rock Looko**	**75.28**	**35**	P	**P**	**20 14 07.3**	**+0.7**
W13A	**Hualapai Mount**	**75.48**	**47**	P	**P**	**20 14 08.8**	**+0.6**
	baz=76,SNR=13						
Y14A	**Wickenburg**	**75.52**	**48**	P	**P**	**20 14 08.9**	**+0.6**
	baz=76,SNR=5.3						
R11A	**Troy Canyon, C**	**76.02**	**43**	P	**P**	**20 14 11.8**	**+0.6**
	baz=76						
KSRS	**Korea Array**	**76.02**	**316**	P	**P**	**20 14 10.4**	**-0.5**
	comp=Z,3.6nm,0.9s,baz=122,slow=5.9,SNR=5.4						
KSRS				LR	LR	20 41 31.2	
	comp=Z,456nm,21.7s,baz=122,slow=31						
KSAR	**Wonju Array Be**	**76.04**	**316**	P	**P**	**20 14 10.4**	**-0.6**
BMN	**Battle Mountai**	**76.11**	**41**	*e*P	**P**	**20 14 12.2**	**+0.7**
BMN				pmax	pmax		
	comp=Z,113nm,1.8s						
BMN	**Battle Mountai**	**76.11**	**41**	*e*P	**P**	**20 14 12.2**	**+0.7**
	comp=Z,113nm,1.8s						
WVOR	**Wild Horse Val**	**76.38**	**39**	*e*P	**P**	**20 14 13.8**	**+0.7**
WVOR				pmax	pmax		
	comp=Z,64nm,1.5s						
WVOR	**Wild Horse Val**	**76.38**	**39**	*e*P	**P**	**20 14 13.8**	**+0.7**
	comp=Z,64nm,1.5s						
VIPM	**Ingram Point**	**76.46**	**36**	P	**P**	**20 14 14.0**	**+0.5**
VIPM	**Ingram Point**	**76.46**	**36**	P	**P**	**20 14 14.0**	**+0.5**
FL2	**Flat Top 2**	**76.56**	**34**	P	**P**	**20 14 14.9**	**+0.9**
TDL	**Tradedollar La**	**76.73**	**34**	P	**P**	**20 14 15.8**	**+0.9**
X16A	**Lo Mia Camp, P**	**76.89**	**49**	P	**P**	**20 14 17.2**	**+1.0**
	baz=77,SNR=16						
319A	**Douglas**	**77.07**	**52**	P	**P**	**20 14 18.1**	**+0.9**
	baz=77,SNR=13						
CCUT	**Cedar City**	**77.09**	**45**	*e*P	**P**	**20 14 18.6**	**+1.3**
	comp=Z,67nm,1.7s						
ARUT	**Antelope Range**	**77.16**	**45**	*e*P	**P**	**20 14 18.6**	**+1.0**
ARUT				pmax	pmax		
	comp=Z,67nm,1.7s						
ARUT	**Antelope Range**	**77.16**	**45**	*e*P	**P**	**20 14 18.6**	**+1.0**
	comp=Z,67nm,1.7s						
USRK	**Ussuriysk Arra**	**77.24**	**323**	LR	LR	20 41 48.1	
	comp=Z,1μm,21.5s,baz=103,slow=31						
U15A	**North Rim**	**77.27**	**46**	P	**P**	**20 14 19.4**	**+1.0**
	baz=78,SNR=26						
WPW	**White Pass**	**77.31**	**34**	P	**P**	**20 14 18.6**	**+0.5**
WUAZ	**Wupatki**	**77.47**	**48**	*e*P	**P**	**20 14 20.7**	**+1.3**
	comp=Z,57nm,1.5s						
WUAZ	**Wupatki**	**77.47**	**48**	P	**P**	**20 14 20.2**	**+0.9**
	baz=78,SNR=11						
MIR	**Mirnyy**	**77.51**	**204**	*e*P	**P**	**20 14 18.5**	**-0.3**
MIR				*e*		20 14 33.0	
MIR				pmax	pmax		
	comp=Z,90nm,2.0s						
ELK	**Elko**	**77.54**	**41**	*e*P	**P**	**20 14 19.8**	**0.0**
	comp=Z,29nm,1.4s						
SSE	**Sheshan**	**77.83**	**307**	P	**P**	**20 14 21.5**	**+0.3**
SSE				S	**S**	**20 24 15.1**	**+1.9**
SSE				sS	**sS**	**20 24 20.6**	**-3.6**
SSE				pmax	pmax		
	comp=Z,56nm,1.0s						
SSE				pmax	pmax		
	comp=Z,580nm,4.0s						
SSE				LR	LR		
	comp=N,470nm,20.0s						
SSE				LR	LR		
	comp=E,550nm,20.0s						
SSE				LR	LR		
	comp=Z,790nm,20.0s						
220A	**Playas Peak, P**	**77.88**	**52**	P	**P**	**20 14 22.7**	**+1.0**
	baz=78,SNR=26						
X18A	**Snowflake**	**78.02**	**49**	P	**P**	**20 14 23.4**	**+0.9**
	baz=78						
120A	**U Bar Ranch, L**	**78.09**	**51**	P	**P**	**20 14 23.9**	**+1.0**
	baz=78,SNR=8.0						
HABR	**Khabarovsk**	**78.20**	**328**	P	**P**	**20 14 20.6**	**-2.3**
HABR				*e**SP	**sP**	**20 14 35.0**	**+3.1**
HABR				*e*PPP	PPP	20 19 04.6	
HABR				*e*S	**S**	**20 24 11.9**	**-4.5

MDJ SS SS 20 29 34.3 +4.6
MDJ pmax pmax
comp=Z,15nm,2.3s
MDJ pmax pmax
comp=Z,190nm,4.4s
MDJ LR LR
comp=N,700nm,36.1s
MDJ LR LR
comp=E,900nm,35.1s
MDJ LR LR
comp=Z,2µm,32.0s
Y20A Horse Springs, 78.89 50 ⇑P P 20 14 28.7 +1.3
baz=79,SNR=26
PMR Palmer 79.02 12 eP P 20 14 26.3 -0.8
PMR pmax pmax
comp=Z,20nm,1.2s
PMR Palmer 79.02 12 eP P 20 14 26.3 -0.8
comp=Z,20nm,1.2s
222A Williams Famil 79.06 52 ⇑P P 20 14 29.3 +1.1
baz=79,SNR=6.8
X20A Quemado 79.09 50 ⇓P P 20 14 29.9 +1.4
baz=79
Z21A St. Cloud Mine 79.15 51 ⇓P P 20 14 30.3 +1.5
baz=79,SNR=33
Q16A Castle Valley 79.27 45 ⇑P P 20 14 30.3 +1.0
baz=80
DIV Divide 79.29 13 eP P 20 14 28.4 -0.4
comp=Z,19nm,1.0s
W20A Ramah 79.36 49 ⇓P P 20 14 30.7 +0.8
baz=80,SNR=22
SML Sawmill 79.37 12 eP P 20 14 28.7 -0.4
SML pmax pmax
comp=Z,16nm,2.0s
SML Sawmill 79.37 12 eP P 20 14 28.6 -0.4
comp=Z,16nm,2.0s
122A Conniff Cattle 79.39 52 ⇓P P 20 14 31.5 +1.4
baz=80
BMRM Bremner River 79.42 14 eP P 20 14 28.8 -0.6
comp=Z,48nm,1.3s
TMUT Trail Mountain 79.43 44 eP P 20 14 31.6 +1.2
comp=Z,55nm,1.4s
Y21A Point of Rocks 79.46 50 ⇑P P 20 14 31.8 +1.2
baz=80
S18A Hurst Farm, Bl 79.48 46 ⇑P P 20 14 31.2 +0.6
baz=80
L14A Malta 79.50 41 ⇑P P 20 14 30.7 +0.3
baz=80
MPU Maple Canyon 79.51 44 eP P 20 14 29.9 -0.7
comp=Z,10nm,1.0s
223A Chaparral, Ant 79.53 53 ⇓P P 20 14 31.5 +0.7
baz=80
X21A Alamocita Cree 79.57 50 ⇑P P 20 14 32.4 +1.3
baz=80,SNR=19
HLID Hailey 79.58 39 eP P 20 14 31.7 +0.8
comp=Z,70nm,1.6s
HLID Hailey 79.58 39 ⇑P P 20 14 31.7 +0.8
baz=80,SNR=19
J13A Cove Ranch, Pi 79.64 40 ⇓P P 20 14 31.9 +0.7
baz=80,SNR=9.5
HVU Hansel Valley 79.66 42 eP P 20 14 32.0 +0.7
HVU pmax pmax
comp=Z,66nm,1.6s
HVU Hansel Valley 79.66 42 eP P 20 14 32.0 +0.7
comp=Z,66nm,1.6s
Z22A Elephant Butte 79.66 51 ⇓P P 20 14 32.5 +0.9
baz=80,SNR=25
V20A Brimhall 79.69 48 ⇑P P 20 14 32.5 +0.9
baz=80
K14A Jones Ranch, D 79.80 41 ⇑P P 20 14 32.1 +0.1
baz=80,SNR=13
SRU San Rafael 79.81 45 eP P 20 14 33.3 +1.1
SRU pmax pmax
comp=Z,58nm,1.5s
SRU San Rafael 79.81 45 eP P 20 14 33.3 +1.1
comp=Z,58nm,1.5s
SRU San Rafael 79.81 45 ⇑P P 20 14 33.0 +0.8
baz=80
P17A Butcher Ranch, 79.84 44 ⇑P P 20 14 33.1 +0.8
baz=80
H12A Diamond D Ranc 79.85 38 ⇑P P 20 14 32.1 -0.1
baz=80,SNR=12
U20A Newcomb 79.91 48 ⇑P P 20 14 33.6 +0.8
baz=80
JLU Jordanelle 79.92 43 eP P 20 14 33.5 +0.6
comp=Z,49nm,1.6s
123A Bell Site, Whi 79.93 52 ⇓P P 20 14 34.0 +1.1
baz=80
I13A Wildhorse Cree 79.95 39 ⇑P P 20 14 33.3 +0.4
baz=80
DAU Daniels Canyon 79.95 43 eP P 20 14 34.1 +0.9
DAU pmax pmax
comp=Z,7.0nm,0.3s
DAU Daniels Canyon 79.95 43 eP P 20 14 34.1 +0.9
comp=Z,6.8nm,0.3s
Y22A Socorro 79.96 51 ⇓P P 20 14 33.7 +0.6
baz=80,SNR=8.7
W21A San Fidel 79.97 49 ⇓P P 20 14 34.3 +1.0
baz=80
324A Moseley Ranch, 80.02 54 ⇑P P 20 14 33.9 +0.4
baz=80,SNR=17
L15A Malad City 80.03 41 ⇓P P 20 14 33.2 -0.1
baz=80
LAZ Ladron 80.03 50 eP P 20 14 34.9 +1.3
comp=Z,28nm,1.6s
NJ2 Nanjing 80.04 307 eP P 20 14 34.4 +1.1
NJ2 S S 20 24 37.5 +0.8
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 LR LR
comp=N,740nm,24.3s
NJ2 LR LR
comp=E,820nm,23.0s
NJ2 LR LR
comp=Z,150nm,24.5s
Y22D IRIS PASSCAL I 80.05 51 ⇑P P 20 14 34.3 +0.7
baz=80
LENM Lemitar 80.05 51 eP P 20 14 34.9 +1.2
comp=Z,17nm,1.2s
425A Indio Mountain 80.14 54 ⇑P P 20 14 34.9 +0.7
baz=80,SNR=35
X22A Bernardo 80.17 50 ⇑P P 20 14 35.7 +1.4
baz=80
H13A Challis 80.21 39 ⇓P P 20 14 34.5 +0.2
baz=80,SNR=11
Z23A Rita Site, Whi 80.22 52 ⇓P P 20 14 35.3 +0.8
baz=80,SNR=6.3
P18A Preston Nutter 80.25 44 ⇑P P 20 14 35.5 +0.7
baz=80,SNR=7.2
224A Cornudas Mount 80.26 53 ⇑P P 20 14 35.5 +0.7
baz=80,SNR=20
F12A Elk City 80.28 37 ⇑P P 20 14 34.5 -0.1
baz=80,SNR=37
K15A Arbon 80.28 41 ⇑P P 20 14 35.0 +0.3
baz=80
V21A Milan 80.29 49 ⇑P P 20 14 35.9 +0.9
baz=80
BNM Barren Site 80.30 51 eP P 20 14 36.2 +1.1
comp=Z,25nm,1.4s
MVCO Mesa Verde 80.31 47 ⇓P P 20 14 35.6 +0.6
baz=81
626A Big Bend Ranch 80.32 56 ⇑P P 20 14 35.9 +0.8
baz=81,SNR=21
HWUT Hardware Ranch 80.35 42 eP P 20 14 33.5 -1.6
comp=Z,39nm,1.6s
I14A Mackay 80.36 39 ⇑P P 20 14 36.0 +0.9
baz=81
LPM Los Pinos Moun 80.37 51 eP P 20 14 36.2 +0.8
comp=Z,26nm,1.3s
325A Bean Ranch, Si 80.39 54 ⇑P P 20 14 36.0 +0.4
baz=81,SNR=26
N17A Moffit Pass 80.50 43 ⇓P P 20 14 36.6 +0.6
baz=81
G13A Cobalt 80.51 38 ⇑P P 20 14 36.0 +0.1
baz=81,SNR=14
TRF Thorofare Moun 80.52 10 eP P 20 14 33.5 -2.0
comp=Z,14nm,0.9s
W22A Albuquerque 80.53 50 ⇑P P 20 14 37.5 +1.3
baz=81
526A Mary Lane Ranc 80.55 55 ⇑P P 20 14 37.3 +0.9
baz=81,SNR=27
U21A Nageezi 80.56 48 ⇑P P 20 14 37.3 +0.9
baz=81,SNR=20
124A Stringfield Ra 80.57 52 ⇓P P 20 14 37.4 +0.9
baz=81,SNR=11
PV04 Paradox Valley 80.58 46 eP P 20 14 37.4 +1.0
Q19A Hogan Spring (80.59 45 ⇓P P 20 14 37.0 +0.7
baz=81,SNR=10
TXAR Lajitas Array 80.60 56 P P 20 14 37.8 +1.2
comp=Z,13nm,1.1s,baz=237,slow=5.0,SNR=32
TXAR LR LR 20 43 53.0
comp=Z,910nm,19.1s,baz=115,slow=31
Y23A Lovelace Mesa, 80.64 51 ⇑P P 20 14 37.5 +0.6
baz=81
L16A Fish Haven 80.64 42 ⇑P P 20 14 36.9 +0.2
baz=81
NEW Newport 80.65 34 ⇑P P 20 14 35.6 -0.7
baz=81
SKAG Skagway 80.65 19 eP P 20 14 36.1 +0.1
comp=Z,18nm,1.2s
PV01 Paradox Valley 80.69 46 eP P 20 14 37.9 +0.8
comp=Z,2µm,1.3s
S20A Disappointment 80.69 47 ⇑P P 20 14 37.8 +0.7
baz=81,SNR=17
TNA Tin City 80.70 2 eP P 20 14 36.1 0.0
comp=Z,12nm,0.9s
J15A Blackfoot 80.71 40 ⇓P P 20 14 37.8 +0.8
baz=81,SNR=17
ANMO Albuquerque 80.78 50 eP P 20 14 38.4 +0.9
comp=Z,70nm,1.8s
H14A Leadore 80.78 39 ⇓P P 20 14 37.7 +0.4
baz=81,SNR=24
225A Deer Hill, Car 80.81 53 ⇑P P 20 14 38.8 +1.1
baz=81,SNR=16
X23A Hourglass Bar 80.82 50 ⇑P P 20 14 38.7 +0.9
baz=81,SNR=9.1
F13A Darby 80.83 37 ⇑P P 20 14 37.6 0.0
baz=81,SNR=9.6
426A McDonald Obser 80.84 55 ⇑P P 20 14 38.7 +0.7
baz=81,SNR=35
R20A Redvale 80.85 46 ⇑P P 20 14 38.4 +0.5
baz=81
V22A San Miguel Ran 80.87 49 ⇑P P 20 14 38.7 +0.6
baz=81,SNR=5.8
M17A Scullys Gap (B 80.87 43 ⇓P P 20 14 37.9 0.0
baz=81
627A Terlingua Ranc 80.87 56 ⇓P P 20 14 38.7 +0.7
baz=81,SNR=33
T21A Navajo Lake 80.90 48 ⇓P P 20 14 39.1 +1.0
baz=81,SNR=7.1
Z24A Sheeppen Canyo 80.90 52 ⇑P P 20 14 39.0 +0.7
baz=81,SNR=6.3
CN2 Changchun 80.95 320 eP P 20 14 40.3 +2.3
CN2 eS S 20 24 48.0 +2.2
CN2 SS SS 20 30 04.8 +4.1
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,700nm,24.0s
CN2 LR LR
comp=E,700nm,24.0s
CN2 LR LR
comp=Z,800nm,25.0s
K16A Soda Springs 80.95 41 ⇑P P 20 14 38.9 +0.6
baz=81,SNR=11
527A Woodward Ranch 80.97 55 ⇓P P 20 14 38.8 +0.1
baz=81,SNR=21
I15A Monteview 80.99 40 ⇓P P 20 14 39.1 +0.7
baz=81
MCK McKinley 81.02 11 eP P 20 14 37.4 -0.5
MCK pmax pmax
comp=Z,26nm,1.0s
MCK McKinley 81.02 11 eP P 20 14 37.4 -0.5
comp=Z,26nm,1.0s
S21A Coal Bank Pass 81.02 47 ⇓P P 20 14 39.8 +0.9
baz=81,SNR=31
L17A Cokeville 81.05 42 ⇓P P 20 14 38.6 -0.2
baz=81
G14A Jackson 81.06 38 ⇓P P 20 14 39.1 +0.3
baz=81
W23A Werner Place, 81.10 50 ⇑P P 20 14 40.0 +0.7
baz=81,SNR=11
Y24A Capitan 81.10 51 ⇑P P 20 14 40.0 +0.7
baz=81,SNR=23
P19A Cripple Cowboy 81.11 45 ⇑P P 20 14 39.7 +0.4
baz=81
U22A Llaves 81.11 49 ⇑P P 20 14 39.9 +0.5
baz=81
326A Caldwell Ranch 81.14 54 ⇓P P 20 14 40.0 +0.5
baz=81
125A Gardner Draw, 81.17 53 ⇑P P 20 14 40.2 +0.7
baz=81,SNR=11
GDL2 Guadalupe Moun 81.20 53 eP P 20 14 41.1 +1.4
comp=Z,46nm,1.2s
MCMT McKenzie Canyo 81.20 39 eP P 20 14 40.2 +0.6
comp=Z,8.5nm,1.1s
H15A Lima 81.22 39 ⇓P P 20 14 40.4 +0.8
baz=82,SNR=12
C12B Nageli Ranch, 81.24 35 ⇓P P 20 14 39.7 +0.2
baz=82
M18A Lyman 81.24 43 ⇓P P 20 14 40.0 +0.1
baz=82
Q20A Ridgley Place, 81.26 46 ⇑P P 20 14 40.9 +0.9
baz=82,SNR=11
E13A Victor 81.27 37 ⇑P P 20 14 39.4 -0.4
baz=82
N18A Larsen Ranch, 81.28 43 ⇓P P 20 14 40.1 0.0
baz=82
628A Black Gap, Mar 81.29 56 ⇑P P 20 14 41.2 +1.0
baz=82,SNR=22
226B Tecolote Peak, 81.31 53 ⇑P P 20 14 41.3 +1.0
baz=82,SNR=18
O19A Miners Draw (B 81.32 44 ⇑P P 20 14 40.7 +0.4
baz=82
V23A Ortiz Mt. (NFS 81.33 49 ⇓P P 20 14 41.9 +1.4
baz=82,SNR=5.8
K17A Gardner Place, 81.34 41 ⇓P P 20 14 40.7 +0.3
baz=82
MENT Mentasta 81.35 13 eP P 20 14 39.4 -0.3
T22A Edith 81.36 48 ⇓P P 20 14 41.3 +0.7
baz=82,SNR=11
X24A Lazy VL Ranch, 81.37 51 ⇑P P 20 14 41.1 +0.4
baz=82
Z25A Roswell 81.38 52 ⇓P P 20 14 42.0 +1.3
baz=82,SNR=12
RRI2 Red Ridge 81.39 41 eP P 20 14 41.4 +0.7
comp=Z,96nm,1.6s
427A Hayter Ranch, 81.41 55 ⇑P P 20 14 41.7 +0.8
baz=82,SNR=14
F14A Wisdom 81.41 38 ⇓P P 20 14 40.7 +0.1
baz=82
P20A De Beque 81.45 45 ⇑P P 20 14 41.4 +0.5
baz=82
D13A Huson 81.47 36 ⇑P P 20 14 39.8 -1.0
baz=82,SNR=13
L18A Fontenelle, Gr 81.50 42 ⇑P P 20 14 41.8 +0.5
baz=82
R21A Cimarron 81.51 47 ⇓P P 20 14 42.3 +0.8
baz=82,SNR=20
327A Balmorhea Ranc 81.55 54 ⇑P P 20 14 42.3 +0.8
baz=82
I16A Newdale 81.55 40 ⇓P P 20 14 42.3 +0.9
baz=82,SNR=8.4
N19A John Jarvie Ra 81.57 44 ⇓P P 20 14 42.6 +1.0
baz=82
U23A El Rito 81.57 49 ⇓P P 20 14 42.7 +0.9
baz=82,SNR=6.1
DCID1 Drake Creek 81.59 41 eP P 20 14 42.7 +1.0
comp=Z,25nm,0.9s
G15A Dillon 81.60 39 ⇓P P 20 14 41.8 +0.2
baz=82,SNR=14
B12A Libby 81.60 35 ⇑P P 20 14 41.3 -0.2
baz=82
MSO Missoula 81.62 37 eP P 20 14 41.3 -0.4
comp=Z,19nm,1.4s
MSO Missoula 81.62 37 ⇓P P 20 14 41.5 -0.2
baz=82
528A Cox Ranch, San 81.63 56 ⇓P P 20 14 43.0 +0.9
baz=82,SNR=22
DLMT Dillon 81.64 38 eP P 20 14 42.4 +0.6
comp=Z,77nm,1.8s
126A Clayton Basin, 81.65 53 ⇓P P 20 14 42.7 +0.5
baz=82
Y25A Mesa, Roswell 81.66 52 ⇑P P 20 14 42.5 +0.3
baz=82,SNR=18
E14A Clinton 81.66 37 ⇓P P 20 14 41.7 -0.3
baz=82,SNR=12
W24A Lazy 6 Ranch, 81.67 50 ⇑P P 20 14 42.8 +0.5
baz=82,SNR=14
TPAW Teton Pass 81.69 41 eP P 20 14 43.0 +0.7
comp=Z,27nm,1.2s
BSMT Bassoo Peak 81.70 36 eP P 20 14 41.7 -0.4
comp=Z,54nm,1.8s
Q21A Lamborn Mesa, 81.70 46 ⇑P P 20 14 43.0 +0.6
baz=82
C13A Hot Springs 81.73 36 ⇓P P 20 14 41.7 -0.5
baz=82,SNR=7.7
S22A 4UR Ranch, Cre 81.74 47 ⇓P P 20 14 43.6 +0.8
baz=82,SNR=14
J17A Brown Place, J 81.78 41 ⇓P P 20 14 43.2 +0.6
baz=82
SNOW Snow King Moun 81.80 41 eP P 20 14 43.4 +0.5
comp=Z,18nm,0.9s
A12A Yaak River Ran 81.83 34 ⇓P P 20 14 42.8 +0.2
baz=82
O20A White River Ci 81.84 45 ⇓P P 20 14 43.5 +0.4
baz=82
K18A Toltan Ranch, 81.85 42 ⇓P P 20 14 43.6 +0.5
baz=82,SNR=8.1
M19A Rock Springs 81.88 43 ⇑P P 20 14 43.2 0.0
baz=82
DOT Dot Lake 81.90 13 eP P 20 14 42.1 -0.5
comp=Z,20nm,1.2s
IMW Indian Meadow 81.90 40 eP P 20 14 43.4 0.0
comp=Z,37nm,1.3s
JTMT Jette 81.93 36 eP P 20 14 42.4 -0.9
comp=Z,3.6nm,1.0s
428A Kincaid Ranch, 81.93 55 ⇑P P 20 14 44.6 +1.0
baz=82,SNR=14
X25A Clemmons Ranch 81.94 51 ⇓P P 20 14 43.9 +0.3
baz=82
Z26A Caprock 81.94 52 ⇑P P 20 14 43.9 +0.3
baz=82,SNR=31
F15A Butte 81.95 38 ⇑P P 20 14 43.5 0.0
baz=82,SNR=8.1
MOOW Moose Ponds 81.95 41 eP P 20 14 43.0 -0.6
comp=Z,30nm,1.5s
227A Bennet, Jal 81.96 54 ⇑P P 20 14 44.4 +0.6
baz=82
LRM Limekiln Ridge 81.96 38 eP P 20 14 43.4 -0.2
comp=Z,389nm,1.7s
LOHW Long Hollow 81.97 41 eP P 20 14 43.6 -0.1
comp=Z,62nm,1.8s
V24A Rampart Ranch, 81.99 50 ⇓P P 20 14 45.0 +1.0
baz=82,SNR=8.7
T23A Casias Ranch, 81.99 48 ⇓P P 20 14 44.9 +0.8
baz=82
R22A Saguache, Gunn 82.00 47 ⇓P P 20 14 45.1 +1.0
baz=82,SNR=12
D14A Greenough 82.01 37 ⇑P P 20 14 43.0 -0.7
baz=82,SNR=6.1
L19A Farson 82.03 43 ⇑P P 20 14 44.4 +0.4
baz=82
G16A Moss Hill, Enn 82.04 39 ⇓P P 20 14 44.2 +0.2
baz=82,SNR=7.8
529A Stev Forest Ra 82.07 56 ⇑P P 20 14 44.7 +0.3
baz=82,SNR=17
CHMT Chamberlain Mo 82.07 37 eP P 20 14 43.4 -0.7
comp=Z,7.2nm,1.1s
QLMT Earthquake Lak 82.07 39 eP P 20 14 44.4 +0.2
comp=Z,11nm,1.7s
328A Wristen Ranch, 82.09 55 ⇑P P 20 14 45.2 +0.8
baz=82,SNR=6.3
P21A Newcastle 82.10 46 ⇓P P 20 14 44.6 +0.1
baz=82
H16A Russell Place, 82.12 40 ⇓P P 20 14 45.4 +0.9
baz=82,SNR=34
I17A Pilgrim Ck. 82.14 40 ⇓P P 20 14 45.5 +0.9
baz=82
J18A Kendall Valley 82.14 41 ⇑P P 20 14 44.8 +0.1
baz=82,SNR=30
N20A Spence Gulch, 82.15 44 ⇑P P 20 14 45.3 +0.5
baz=82,SNR=7.4
E15A Deer Lodge 82.17 38 ⇑P P 20 14 44.6 0.0
baz=82
B13A Whitefish 82.17 35 ⇑P P 20 14 44.2 -0.2
baz=82
Q22A Crested Butte, 82.18 46 ⇑P P 20 14 45.9 +0.9
baz=82,SNR=14
BW06 Boulder Array 82.22 42 ⇑P P 20 14 44.8 -0.3
baz=82,SNR=10
PDAR Pinedale Array 82.22 42 P P 20 14 44.7 -0.4
PDAR Pinedale Array 82.22 42 P P 20 14 44.7 -0.4
comp=Z,8.0nm,1.1s,baz=197,slow=2.8,SNR=17
PDAR LR LR 20 45 38.8
comp=Z,1µm,19.5s,baz=250,slow=32
C14A Swan Lake 82.24 36 ⇓P P 20 14 44.6 -0.3
baz=82
COLA College 82.25 11 eP P 20 14 44.0 -0.4
COLA pmax pmax
comp=Z,21nm,0.8s
COLA College 82.25 11 eP P 20 14 44.0 -0.4
comp=Z,21nm,0.8s
YMR Madison River 82.27 40 eP P 20 14 46.6 +1.3
comp=Z,46nm,1.3s
SMCO Snowmass 82.28 46 eP P 20 14 46.1 +0.5
comp=Z,76nm,1.7s
S23A Nye Farm, Mont 82.31 48 ⇑P P 20 14 46.8 +1.1
baz=83
Y26A Elida 82.32 52 ⇑P P 20 14 45.9 +0.3
baz=83
ILAR Eielson Array 82.34 11 P P 20 14 43.5 -1.4
ILAR PP PP 20 17 48.3 -5.7
ILAR Eielson Array 82.34 11 P P 20 14 43.5 -1.4
comp=Z,3.4nm,0.8s,baz=224,slow=5.0,SNR=25
ILAR PP PP 20 17 48.3 -5.7
comp=Z,1.1nm,0.9s,baz=216,slow=7.9,SNR=4.5
ILAR LR LR 20 44 27.4
comp=Z,839nm,21.9s,baz=215,slow=31
BOZ Bozeman (W) 82.36 39 eP P 20 14 45.9 +0.2
BOZ pmax pmax
comp=Z,61nm,1.8s
BOZ Bozeman (W) 82.36 39 eP P 20 14 45.9 +0.2
comp=Z,61nm,1.8s
BOZ Bozeman (W) 82.36 39 ⇑P P 20 14 45.8 +0.2
baz=83,SNR=11
W25A X Bar L Ranch, 82.37 50 ⇑P P 20 14 46.1 +0.2
baz=83,SNR=14
H17A Grant Village 82.38 40 ⇑P P 20 14 47.5 +1.6
baz=83
SEY Seymchan 82.38 345 ⇓eP P 20 14 44.2 -0.9
F16A Kennard Place, 82.44 38 ⇑P P 20 14 46.2 +0.2
baz=83
I18A Diamond G Ranc 82.51 41 ⇑P P 20 14 46.9 +0.4
baz=83
M20A Sweetwater, Wa 82.51 43 ⇓P P 20 14 47.2 +0.5
baz=83
V25A Rancho No Teng 82.52 50 ⇓P P 20 14 47.2 +0.5
baz=83,SNR=28
429A Davenport Ranc 82.52 56 ⇓P P 20 14 46.8 +0.1
baz=83,SNR=30
Z27A Tatum 82.54 53 ⇓P P 20 14 46.7 -0.1
baz=83,SNR=10
228A UT Block 9, Go 82.55 54 ⇓P P 20 14 46.9 +0.1
baz=83
LKWY Lake 82.57 40 eP P 20 14 48.8 +1.9
LKWY pmax pmax
comp=Z,24nm,1.0s
LKWY Lake 82.57 40 eP P 20 14 48.8 +1.9
comp=Z,24nm,1.0s
X26A CR and CF Fran 82.58 51 ⇓P P 20 14 46.9 -0.1
baz=83,SNR=11
P22A Eagle 82.61 46 ⇓P P 20 14 47.9 +0.7
baz=83
N21A Black Mountain 82.62 44 ⇑P P 20 14 47.7 +0.5
baz=83
R23A Moffat 82.64 47 ⇓P P 20 14 48.2 +0.7
baz=83,SNR=8.4
L20A Wamsutter 82.65 43 ⇑P P 20 14 47.5 +0.2
baz=83,SNR=17
K19A Absolon Red Bu 82.71 42 ⇑P P 20 14 47.1 -0.5
baz=83
T24A Torres, Weston 82.72 49 ⇓P P 20 14 48.8 +0.9
baz=83,SNR=15
G17A Pierce Place, 82.74 39 ⇑P P 20 14 48.5 +0.9
baz=83
329A Wagon Wheel Ra 82.78 55 ⇓P P 20 14 48.1 +0.1
baz=83,SNR=11
530A J-C Ranch, Com 82.78 56 ⇓P P 20 14 48.3 +0.2
baz=83,SNR=12
J19A Crowheart 82.78 42 ⇑P P 20 14 47.8 -0.1
baz=83,SNR=6.4
E16A East Helena 82.79 38 ⇑P P 20 14 48.0 +0.2
baz=83
HRY Holter Researc 82.79 38 eP P 20 14 48.0 +0.2
comp=Z,18nm,0.9s
QIZ Qiongzhong 82.80 292 P P 20 14 50.4 +2.1
QIZ S S 20 25 02.8 -3.1
QIZ LR LR
comp=Z,540nm,25.4s
Y27A Causey 82.81 52 ⇑P P 20 14 48.3 +0.1
baz=83

128A	**Castleberry Fa**	82.83	54	⇑P		P		20 14 48.7	+0.4		
	baz=83,SNR=12											
B14A	**Marquette Ranc**	82.83	36	⇑P		P		20 14 47.6	-0.4		
	baz=83											
W26A	**Owens Ranch, T**	82.84	51	⇓P		P		20 14 48.6	+0.3		
	baz=83											
S24A	**Houchin Ranch,**	82.84	48	⇑P		P		20 14 49.3	+0.8		
	baz=83,SNR=19											
C15A	**Salmond Ranch,**	82.90	36	⇑P		P		20 14 48.2	-0.1		
	baz=83											
U25A	**Circle Dot Ran**	82.90	49	⇑P		P		20 14 49.1	+0.4		
	baz=83,SNR=16											
Q23A	**Hartsel**	82.95	47	⇑P		P		20 14 49.6	+0.6		
	baz=83											
K20A	**Yellowstone Ra**	82.96	42	⇑P		P		20 14 48.3	-0.5		
	baz=83											
O22A	**Kremmling**	83.01	45	⇓P		P		20 14 49.7	+0.4		
	baz=83,SNR=22											
A14A	**Double T Ranch**	83.08	35	⇑P		P		20 14 49.8	+0.5		
	baz=83											
F17A	**Fitzpatrick Pl**	83.08	39	⇑P		P		20 14 50.1	+0.8		
	baz=83											
H18A	**Shoshone NF, C**	83.08	40	⇑P		P		20 14 50.3	+0.8		
	baz=83,SNR=7.1											
229A	**Bryant Ranch,**	83.10	54	⇓P		P		20 14 50.2	+0.5		
	baz=83											
430A	**Baggett Ranch,**	83.11	56	⇓P		P		20 14 49.8	+0.1		
	baz=83,SNR=6.4											
M21A	**Separation Pea**	83.11	44	⇓P		P		20 14 49.6	-0.1		
	baz=83,SNR=20											
V26A	**Tequesquite Ra**	83.11	50	⇓P		P		20 14 49.5	-0.2		
	baz=83											
631A	**Perdido Creek**	83.12	57	⇓P		P		20 14 50.0	+0.2		
	baz=83,SNR=17											
D16A	**Dana Ranch, Ca**	83.12	37	⇑P		P		20 14 49.5	0.0		
	baz=83,SNR=8.6											
MSTX	**Muleshoe**	83.14	52	⇓P		P		20 14 50.4	+0.5		
	baz=83,SNR=12											
X27A	**F and S Farms,**	83.16	51	⇓P		P		20 14 50.3	+0.3		
	baz=83											
Z28A	**Tucker Farm, M**	83.17	53	⇓P		P		20 14 50.0	0.0		
	baz=83											
R24A	**Sanders Place,**	83.17	48	⇑P		P		20 14 51.3	+1.2		
	baz=83,SNR=16											
I19A	**Meeteetse**	83.19	41	⇑P		P		20 14 50.3	+0.3		
	baz=83											
B15A	**Bradely Ranch,**	83.21	36	⇑P		P		20 14 48.8	-1.1		
	baz=83,SNR=5.3											
T25A	**Trinidad**	83.21	49	⇑P		P		20 14 50.6	+0.2		
	baz=84,SNR=5.6											
E17A	**Martinsdale**	83.24	38	⇓P		P		20 14 50.5	+0.3		
	baz=84,SNR=6.6											
L21A	**Rawlins**	83.27	43	⇑P		P		20 14 50.2	-0.3		
	baz=84,SNR=9.2											
129A	**Stewart Farms,**	83.31	54	⇑P		P		20 14 51.3	+0.5		
	baz=84											
W27A	**Bowe Ranch, En**	83.36	51	⇑P		P		20 14 50.8	-0.2		
	baz=84,SNR=15											
N22A	**Wattenberg Ran**	83.36	45	⇑P		P		20 14 51.6	+0.5		
	baz=84,SNR=11											
732A	**Laxson Ranch,**	83.37	58	⇓P		P		20 14 51.1	+0.1		
	baz=84											
330A	**Mertzon**	83.39	55	⇓P		P		20 14 50.9	-0.3		
	baz=84											
U26A	**Atchley Ranch,**	83.39	50	⇓P		P		20 14 51.6	+0.4		
	baz=84,SNR=18											
C16A	**Fuhringer Ranc**	83.41	37	⇓P		P		20 14 50.3	-0.6		
	baz=84											
S25A	**Robets Cordova**	83.41	48	⇑P		P		20 14 51.7	+0.4		
	baz=84											
J20A	**Shoshoni**	83.45	42	⇑P		P		20 14 51.6	+0.3		
	baz=84,SNR=18											
G18A	**Lazy EL Ranch,**	83.46	40	⇑P		P		20 14 51.4	+0.1		
	baz=84,SNR=8.5											
Q24A	**Divide**	83.46	47	⇓P		P		20 14 52.2	+0.5		
	baz=84											
O23A	**Lake Granby, G**	83.47	45	⇑P		P		20 14 51.8	+0.1		
	baz=84,SNR=7.2											
ISCO	**Idaho Springs**	83.50	46	*e*P		P		20 14 52.5	+0.7		
ISCO				pmax		pmax						
	comp=Z,5.0nm,0.4s											
ISCO	**Idaho Springs**	83.50	46	*e*P		P		20 14 52.5	+0.7		
	comp=Z,4.9nm,0.4s											
ISCO	**Idaho Springs**	83.50	46	⇓P		P		20 14 51.7	-0.2		
	baz=84,SNR=6.9											
H19A	**Powell**	83.50	40	⇓P		P		20 14 52.4	+0.9		
	baz=84,SNR=9.1											
Y28A	**McKinney Farm,**	83.51	52	⇑P		P		20 14 51.9	+0.1		
	baz=84											
EGAK	**Eagle**	83.52	13	*e*P		P		20 14 49.4	-1.6		
	comp=Z,6.6nm,0.9s											
M22A	**Cedar Creek Ra**	83.53	44	⇑P		P		20 14 52.0	+0.1		
	baz=84											
RLMT	**Red Lodge**	83.55	40	⇓P		P		20 14 52.4	+0.5		
	baz=84											
431A	**Sonora**	83.57	56	⇑P		P		20 14 52.4	+0.3		
	baz=84											
230A	**Sterling City**	83.62	55	⇓P		P		20 14 52.3	0.0		
	baz=84											
F18A	**Big Timber**	83.65	39	⇑P		P		20 14 52.7	+0.4		
	baz=84,SNR=6.1											
K21A	**Alcova**	83.66	43	⇑P		P		20 14 52.3	-0.2		
	baz=84,SNR=14											
Z29A	**Hungry Hill Ra**	83.68	53	⇑P		P		20 14 52.5	-0.1		
	baz=84,SNR=5.8											
D17A	**Six Diamond Ra**	83.69	38	⇓P		P		20 14 52.8	+0.3		
	baz=84,SNR=8.9											
I20A	**Worland**	83.70	41	⇑P		P		20 14 52.7	+0.1		
	baz=84,SNR=15											
R25A	**Fountain Ranch**	83.72	48	⇑P		P		20 14 52.6	-0.3		
	baz=84,SNR=12											
B16A	**M & M Farms, S**	83.75	36	⇑P		P		20 14 51.8	-0.8		
	baz=84											
N23A	**Red Feather La**	83.75	45	⇓P		P		20 14 53.6	+0.5		
	baz=84											
X28A	**Dimmitt**	83.79	52	⇑P		P		20 14 53.2	0.0		
	baz=84											
632A	**Uvalde**	83.80	57	⇓P		P		20 14 53.6	+0.3		
	baz=84,SNR=8.0											
V27A	**Dan Oppiter Fa**	83.80	51	⇑P		P		20 14 53.4	+0.1		
	baz=84											
T26A	**Comanche Natio**	83.82	49	⇓P		P		20 14 53.3	-0.1		
	baz=84,SNR=7.8											
J21A	**Lysite**	83.86	42	⇓P		P		20 14 53.4	0.0		
	baz=84,SNR=10											
E18A	**Harlowton**	83.86	38	⇑P		P		20 14 53.6	+0.3		
	baz=84											
P24A	**Kohler Place,**	83.86	46	⇓P		P		20 14 54.3	+0.7		
	baz=84											
C17A	**Wharram Farm,**	83.89	37	⇑P		P		20 14 53.4	0.0		
	baz=84											
L22A	**Ellis Ranch, M**	83.92	44	⇓P		P		20 14 54.4	+0.5		
	baz=84,SNR=7.9											
532A	**Rocksprings**	83.93	57	⇑P		P		20 14 53.9	-0.1		
	baz=84,SNR=9.3											
Y29A	**Porterfield Fa**	83.94	53	⇑P		P		20 14 54.2	+0.2		
	baz=84											
331A	**San Angelo**	83.94	55	⇑P		P		20 14 53.8	-0.2		
	baz=84											
130A	**Snyder**	84.00	54	⇓P		P		20 14 54.3	0.0		
	baz=84											
O24A	**Longmont**	84.01	46	⇑P		P		20 14 54.9	+0.6		
	baz=84											
COLD	**Coldfoot**	84.03	9	*e*P		P		20 14 54.1	+0.5		
	comp=Z,14nm,1.2s											
H20A	**Greybull**	84.04	41	⇓P		P		20 14 54.0	-0.3		
	baz=84											
Q25A	**Bedland, Calha**	84.07	47	⇓P		P		20 14 54.2	-0.5		
	baz=84											
W28A	**Vega**	84.08	51	⇓P		P		20 14 54.6	-0.1		
	baz=84											
U27A	**Thompson Grove**	84.08	50	⇓P		P		20 14 54.3	-0.3		
	baz=84											
S26A	**Kim**	84.09	49	⇑P		P		20 14 54.6	-0.2		
	baz=84,SNR=13											
F19A	**Roth Farm, Mol**	84.10	39	⇑P		P		20 14 54.6	0.0		
	baz=84,SNR=5.8											
Z30A	**Sanderson Ranc**	84.14	53	⇓P		P		20 14 54.5	-0.5		
	baz=84,SNR=16											
JCT	**Junction City**	84.14	56	*e*P		P		20 14 56.1	+1.1		
JCT				pmax		pmax						
	comp=Z,10.0nm,1.0s											
JCT	**Junction City**	84.14	56	*e*P		P		20 14 56.1	+1.1		
	comp=Z,10nm,1.0s											
JCT	**Junction City**	84.14	56	⇓P		P		20 14 54.8	-0.2		
	baz=84											
X29A	**Tulia**	84.14	52	⇓P		P		20 14 55.4	+0.4		
	baz=84											
K22A	**Casper**	84.14	43	⇑P		P		20 14 54.8	-0.2		
	baz=84											
M23A	**Laramie**	84.15	44	⇑P		P		20 14 55.3	+0.2		
	baz=84											
I21A	**Big Trails, Te**	84.17	42	⇑P		P		20 14 54.2	-0.9		
	baz=84,SNR=16											
B17A	**L&G Farms, Che**	84.20	37	⇓P		P		20 14 54.0	-0.9		
	baz=84											
D18A	**Linhart Farms,**	84.24	38	⇓P		P		20 14 55.7	+0.5		
	baz=84											
G20A	**Bridger**	84.25	40	⇑P		P		20 14 55.6	+0.2		
	baz=84											
V28A	**Channing**	84.26	51	⇑P		P		20 14 55.6	0.0		
	baz=84											
231A	**Bronte**	84.26	55	⇓P		P		20 14 55.2	-0.4		
	baz=84											
432A	**Menard**	84.29	56	⇑P		P		20 14 55.3	-0.4		
	baz=84											
AMTX	**Amarillo**	84.33	52	*e*P		P		20 14 56.1	+0.1		
	comp=Z,47nm,1.2s											
AMTX	**Amarillo**	84.33	52	⇑P		P		20 14 55.5	-0.5		
	baz=85,SNR=9.2											
BILL	**Bilibino**	84.38	352	*e*P		P		20 14 55.4	+0.1		
BILL				pmax		pmax						
	comp=Z,35nm,0.8s											
BILL	**Bilibino**	84.38	352	*e*P		P		20 14 54.1	-1.2		
	comp=Z,18nm,1.4s											
P25A	**Willow Gulch B**	84.38	47	⇑P		P		20 14 56.5	+0.3		
	baz=85,SNR=11											
R26A	**Arlington**	84.39	48	⇓P		P		20 14 55.9	-0.3		
	baz=85,SNR=23											
T27A	**Campo**	84.41	49	⇑P		P		20 14 55.8	-0.6		
	baz=85,SNR=8.6											
N24A	**Carr**	84.44	45	⇑P		P		20 14 57.2	+0.8		
	baz=85											
W29A	**Amraillo**	84.44	51	⇓P		P		20 14 56.4	-0.1		
	baz=85,SNR=7.6											
L23A	**Garrett**	84.45	44	⇓P		P		20 14 56.4	-0.1		
	baz=85,SNR=14											
131A	**Roby**	84.48	54	⇓P		P		20 14 56.7	0.0		
	baz=85											
E19A	**Rath Farm, Rou**	84.49	39	⇑P		P		20 14 56.8	+0.3		
	baz=85,SNR=15											
332A	**Millersview**	84.52	56	⇓P		P		20 14 57.1	+0.2		
	baz=85,SNR=8.1											
J22A	**Midwest**	84.52	42	⇓P		P		20 14 56.5	-0.3		
	baz=85,SNR=18											
S27A	**Las Animas**	84.53	49	⇓P		P		20 14 57.0	0.0		
	baz=85											
Y30A	**Stafford Cattl**	84.54	53	⇑P		P		20 14 56.9	-0.1		
	baz=85											
A17A	**Triple J Farms**	84.59	36	⇑P		P		20 14 57.0	0.0		
	baz=85,SNR=8.8											
Q26A	**Hugo**	84.59	47	⇑P		P		20 14 57.2	-0.1		
	baz=85											
O25A	**Wiggins**	84.67	46	⇓P		P		20 14 57.7	+0.1		
	baz=85											
EGMT	**Eagleton**	84.67	37	⇓P		P		20 14 57.2	-0.1		
	baz=85											
H21A	**Big Horn, Sher**	84.71	41	⇓P		P		20 14 57.7	+0.1		
	baz=85											
I22A	**9 Mile Ranch,**	84.73	42	⇑P		P		20 14 57.5	-0.3		
	baz=85,SNR=16											
M24A	**Chnne**	84.76	45	⇑P		P		20 14 58.2	+0.1		
	baz=85,SNR=6.4											
D19A	**Cripps Ranch,**	84.77	38	⇓P		P		20 14 58.3	+0.5		
	baz=85											
X30A	**Coker Ranch, T**	84.77	52	⇑P		P		20 14 58.4	+0.3		
	baz=85											
232A	**Coleman**	84.78	55	⇓P		P		20 14 58.0	-0.2		
	baz=85,SNR=11											
K23A	**Bowen Ranch, D**	84.78	43	⇑P		P		20 14 58.2	+0.1		
	baz=85											
V29A	**Stinnett**	84.83	51	⇑P		P		20 14 58.5	0.0		
	baz=85											
B18A	**Beardsley Farm**	84.84	37	⇓P		P		20 14 58.1	-0.1		
	baz=85											
R27A	**Eads**	84.85	48	⇑P		P		20 14 58.4	-0.2		
	baz=85,SNR=6.2											
G21A	**Lodge Grass**	84.88	41	⇓P		P		20 14 58.7	+0.2		
	baz=85											
T28A	**Walsh**	84.88	50	⇑P		P		20 14 58.4	-0.3		
	baz=85,SNR=6.4											
E20A	**Meyer Farm, Mu**	84.91	39	⇑P		P		20 14 58.5	-0.1		
	baz=85,SNR=8.2											
Z31A	**Sharp Cattle R**	84.91	54	⇑P		P		20 14 58.6	-0.2		
	baz=85,SNR=9.2											
L24A	**Wheatland**	84.93	44	⇑P		P		20 14 59.0	+0.1		
	baz=85											
C19A	**Slack Wire Ran**	84.95	38	⇑P		P		20 14 58.6	-0.1		
	baz=85,SNR=15											
P26A	**Davis Ranch, A**	84.98	47	⇑P		P		20 14 59.3	+0.1		
	baz=85											
N25A	**Grover**	84.98	45	⇓P		P		20 14 59.2	0.0		
	baz=85											
ABTX	**Abilene, Hawle**	85.05	54	⇑P		P		20 14 59.4	-0.1		
	baz=85,SNR=16											
Y31A	**Rekieta Farm,**	85.06	53	⇑P		P		20 14 59.6	0.0		
	baz=85,SNR=6.0											
A18A	**Metzger Ranch,**	85.07	36	⇓P		P		20 14 59.2	-0.1		
	baz=85											
J23A	**Dilts Ranch, B**	85.12	43	⇓P		P		20 14 59.4	-0.4		
	baz=85											
H22A	**Clearmont**	85.13	41	⇓P		P		20 14 59.8	+0.1		
	baz=85											
D20A	**Manuel Ranch,**	85.18	39	⇑P		P		20 15 00.1	+0.2		
	baz=85											
F21A	**Absaloka Mine,**	85.21	40	⇓P		P		20 15 00.2	+0.1		
	baz=85											
KSCO	**Kaye Shedlock'**	85.26	48	⇑P		P		20 15 00.7	+0.1		
	baz=86											
M25A	**Palm-Egli Farm**	85.27	45	⇑P		P		20 15 01.5	+0.9		
	baz=86											
W30A	**Crocket Farms**	85.28	52	⇓P		P		20 15 01.1	+0.4		
	baz=86											
O26A	**Horse Wrangler**	85.28	46	⇑P		P		20 15 01.3	+0.6		
	baz=86											
K24A	**Anderson Ranch**	85.31	44	⇓P		P		20 15 01.1	+0.3		
	baz=86											
BJI	**Beijing**	85.33	313	P		P		20 15 01.4	+0.7		
BJI				SKS		S		20 25 24.0	-6.5		
BJI				S		**SKKSac**		**20 25 32.8**	**+1.5**		
BJI				SS		**SS**		**20 31 00.8**	**-5.0**		
BJI				LR		LR						
	comp=N,360nm,26.9s											
BJI				LR		LR						
	comp=E,370nm,28.5s											
BJI				LR		LR						
	comp=Z,480nm,35.8s											
B19A	**Brinkman Farms**	85.36	37	⇓P		P		20 15 01.3	+0.5		
	baz=86,SNR=6.3											
V30A	**Spur Ranch, Mi**	85.41	51	⇑P		P		20 15 01.6	+0.3		
	baz=86											
Z32A	**Haskell**	85.42	54	⇓P		P		20 15 01.5	+0.1		
	baz=86,SNR=29											
G22A	**Birney**	85.45	41	⇑P		P		20 15 01.4	+0.1		
	baz=86											
T29A	**Hugoton**	85.50	50	⇑P		P		20 15 01.7	-0.1		
	baz=86											
X31A	**McDonald Ranch**	85.53	52	⇑P		P		20 15 01.9	0.0		
	baz=86											
C20A	**Veseth Ranch,**	85.56	38	⇓P		P		20 15 02.5	+0.7		
	baz=86,SNR=12											
E21A	**Keefer Ranch,**	85.57	39	⇓P		P		20 15 02.5	+0.7		
	baz=86											
L25A	**Engebretsen Ra**	85.63	44	⇓P		P		20 15 02.9	+0.6		
	baz=86											
J24A	**Dixon Ranch, L**	85.67	43	⇓P		P		20 15 02.9	+0.4		
	baz=86											
A19A	**Klindworth Far**	85.70	37	⇑P		P		20 15 02.2	-0.3		
	baz=86,SNR=7.1											
Y32A	**R-V Farms, Ver**	85.71	53	⇑P		P		20 15 02.6	-0.2		
	baz=86,SNR=7.7											
F22A	**Rosebud**	85.72	40	⇓P		P		20 15 02.6	-0.1		
	baz=86											
H23A	**Clabaugh Cattl**	85.72	42	⇓P		P		20 15 02.5	-0.2		
	baz=86											
U30A	**WK&E Inc. Balk**	85.73	51	⇓P		P		20 15 03.0	0.0		
	baz=86											
W31A	**Holland Ranch,**	85.76	52	⇑P		P		20 15 03.3	+0.3		
	baz=86,SNR=7.7											
O27A	**Beecher Island**	85.84	47	⇓P		P		20 15 03.7	+0.2		
	baz=86											
D21A	**La Casta Ranch**	85.86	39	⇓P		P		20 15 03.8	+0.5		
	baz=86											
K25A	**Mack Ranch, Ha**	85.89	44	⇓P		P		20 15 04.1	+0.4		
	baz=86											
B20A	**Solberg Farm,**	85.89	37	⇑P		P		20 15 03.6	+0.2		
	baz=86											
M26A	**McRoberts Ranc**	85.90	45	⇓P		P		20 15 03.4	-0.3		
	baz=86											
I24A	**Kuemmerle Ranc**	85.92	43	⇑P		P		20 15 03.7	0.0		
	baz=86											
G23A	**Biddle**	86.01	41	⇑P		P		20 15 04.5	+0.3		
	baz=86											
T30A	**Plains**	86.02	50	⇓P		P		20 15 04.0	-0.3		
	baz=86											
N27A	**Anderson Farm,**	86.05	46	⇑P		P		20 15 04.1	-0.4		
	baz=86											
V31A	**Spring Creek L**	86.05	51	⇑P		P		20 15 04.9	+0.4		
	baz=86											
C21A	**Desert Coulee**	86.15	38	⇓P		P		20 15 04.7	0.0		
	baz=86											
A20A	**Cobblestone Ra**	86.16	37	⇓P		P		20 15 04.8	+0.1		
	baz=86											
L26A	**Underwood Farm**	86.18	45	⇓P		P		20 15 05.5	+0.4		
	baz=86											
E22A	**Miles City**	86.21	40	⇑P		P		20 15 05.1	0.0		
	baz=86											
F23A	**Volborg**	86.23	41	⇑P		P		20 15 05.2	0.0		
	baz=86											
U31A	**Nine Bar Ranch**	86.27	51	⇓P		P		20 15 05.5	-0.1		
	baz=86											
H24A	**Dirks Ranch, A**	86.35	42	⇓P		P		20 15 05.4	-0.5		
	baz=87,SNR=9.8											
K26A	**Motz Farm, Whi**	86.39	44	⇑P		P		20 15 06.1	+0.1		
	baz=87											
D22A	**Cohagen**	86.39	39	⇑P		P		20 15 06.2	+0.3		
	baz=87											
RSSD	**Black Hills**	86.42	43	*e*P		P		20 15 07.2	+0.9		
RSSD				pmax		pmax						
	comp=Z,22nm,1.3s											
RSSD	**Black Hills**	86.42	43	*e*P		P		20 15 07.2	+0.9		
	comp=Z,22nm,1.3s											
M27A	**Reverse DX Ran**	86.45	45	⇑P		P		20 15 06.8	+0.4		
	baz=87											
OGNE	**Ogallala**	86.46	46	⇑P		P		20 15 05.7	-0.7		
	baz=87											
B21A	**Ellsworth Farm**	86.47	38	⇓P		P		20 15 06.6	+0.4		
	baz=87											
WHTX	**Lake Whitney**	86.55	56	⇑P		P		20 15 07.3	+0.3		
	baz=87											
E23A	**Ismay**	86.64	40	⇑P		P		20 15 07.3	+0.1		
	baz=87											
G24A	**Alzada**	86.69	41	⇑P		P		20 15 07.6	+0.2		
	baz=87											
L27A	**T5 Ranch, Ells**	86.72	45	⇑P		P		20 15 08.0	+0.3		
	baz=87											
C22A	**Vida**	86.84	39	⇑P		P		20 15 08.0	-0.1		
	baz=87											
F24A	**Ekalaka**	86.89	41	⇓P		P		20 15 08.5	+0.1		
	baz=87											
D23A	**Lindsay**	87.00	39	⇑P		P		20 15 09.1	+0.2		
	baz=87											
B22A	**Reddig Ranch S**	87.02	38	⇑P		P		20 15 09.3	+0.3		
	baz=87											
K27A	**Flueckinger Fa**	87.02	44	⇑P		P		20 15 09.5	+0.3		
	baz=87											
HKT	**Hockley**	87.18	58	*e*P		P		20 15 10.6	+0.6		
HKT				pmax		pmax						
	comp=Z,46nm,1.7s											
HKT	**Hockley**	87.18	58	*e*P		P		20 15 10.6	+0.6		
	comp=Z,46nm,1.7s											
C23A	**Lambert**	87.29	39	⇓P		P		20 15 11.0	+0.8		
	baz=88											
A22A	**Carney Farms,**	87.38	38	⇑P		P		20 15 11.4	+0.7		
	baz=88											
B23A	**Brockton**	87.70	38	⇑P		P		20 15 12.7	+0.5		
	baz=88											
MAW	**Mawson**	87.89	199	P		P		20 15 12.0	-0.8		
MAW	**Mawson**	87.89	199	P		P		20 15 12.0	-0.8		
	comp=Z,10.0nm,0.6s,baz=148,slow=6.6,SNR=27											
MAW				LR		LR		20 51 55.7				
	comp=Z,2µm,20.4s,baz=132,slow=34											
GYA	**Guiyang**	87.92	298	P		P		20 15 14.8	+0.9			
GYA				SKS		**SKSac**		**20 25 40.8**	**-0.9**			
GYA				S		**S**		**20 25 57.3**	**+0.8**			
GYA				pmax		pmax						
	comp=Z,30nm,1.0s											
GYA				pm

CD2				sP	sP		20 15 46.3	+5.8
CD2				PP	**PP**		**20 19 12.3**	**+2.0**
CD2				SKS	**SKSac**		**20 25 59.8**	**-3.6**
CD2				S	**S**		**20 26 26.3**	**-4.9**
CD2				sS	**sS**		**20 26 44.0**	**+1.6**
CD2				SS	**SS**		**20 32 36.4**	**-2.5**
CD2				pmax	pmax			
	comp=Z,20nm,0.5s							
CD2				pmax	pmax			
	comp=Z,260nm,4.7s							
CD2				LR	LR			
	comp=N,560nm,25.9s							
CD2				LR	LR			
	comp=E,490nm,22.0s							
CD2				LR	LR			
	comp=Z,580nm,26.9s							
FFC	**Flin Flon**	**92.04**	**33**	*i* P	**P**		**20 15 34.0**	**+1.7**
CMAR	**Chiang Mai Arr**	**92.51**	**288**	P	**P**		**20 15 35.9**	**+0.5**
CMAR	**Chiang Mai Arr**	**92.51**	**288**	P	**P**		**20 15 35.9**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=90,slow=2.1,SNR=6.5							
CMAR				LR	LR		20 51 24.0	
	comp=Z,305nm,19.8s,baz=276,slow=32							
VNA3	**Neumayer Olymp**	**92.98**	**175**	*e*P	**P**		**20 15 37.1**	**+0.5**
SNAA	**Sanae**	**93.03**	**177**	*e*P	**P**		**20 15 37.8**	**+1.0**
SNAA	**Sanae**	**93.03**	**177**	*e*P	**P**		**20 15 37.1**	**+0.3**
	comp=Z,25nm,1.5s							
LZH	**Lanzhou**	**93.10**	**306**	*e*P	**P**		**20 15 37.0**	**-0.9**
LZH				pP	**PcP**		**20 15 41.1**	**+2.6**
LZH				sP	**sP**		**20 15 43.5**	**-3.5**
LZH				*e*S	**S**		**20 26 42.4**	**-1.4**
LZH				sS	**ScS**		**20 26 49.0**	**+3.4**
LZH				pmax	pmax			
	comp=Z,32nm,1.6s							
LZH				pmax	pmax			
	comp=Z,140nm,4.0s							
LZH				LR	LR			
	comp=N,260nm,18.2s							
LZH				LR	LR			
	comp=E,280nm,15.1s							
LZH				LR	LR			
	comp=Z,370nm,19.6s							
VNA1	**Neumayer--Stat**	**93.68**	**175**	*e*P	**P**		**20 15 40.6**	**+0.9**
VNA1	**Neumayer--Stat**	**93.68**	**175**	*e*Pn	P		20 15 50.5	+11
ULM	**Lac du Bonnet**	**93.88**	**39**	LR	LR		20 52 57.8	
	comp=Z,2μm,19.5s,baz=225,slow=32							
SONM	**Songino Array**	**94.71**	**318**	P	**P**		**20 15 45.2**	**+0.3**
SONM	**Songino Array**	**94.71**	**318**	P	**P**		**20 15 45.2**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=94,slow=5.9,SNR=4.0							
SONM				LR	LR		20 53 24.5	
	comp=Z,302nm,20.8s,baz=89,slow=32							
TIXI	**Tiksi**	**94.87**	**344**	*i* P	**P**		**20 15 44.4**	**-0.5**
TIXI				pmax	pmax			
	comp=Z,4.0nm,1.3s							
GTA	**Gaotai**	**97.05**	**309**	*e*P	Pdif		20 15 57.1	+1.2
GTA				pP	pP		20 16 01.8	-0.8
GTA				sP	sP		20 16 04.3	-0.7
GTA				SKS	**SKSac**		**20 26 33.6**	**+1.4**
GTA				S	**ScS**		**20 27 19.4**	**+1.1**
GTA				sS	sS		20 27 27.5	-1.7
GTA				pmax	pmax			
	comp=Z,3.0nm,1.7s							
GTA				pmax	pmax			
	comp=Z,83nm,4.7s							
GTA				LR	LR			
	comp=N,200nm,20.9s							
GTA				LR	LR			
	comp=E,400nm,20.9s							
GTA				LR	LR			
	comp=Z,620nm,22.8s							
WMQ	**Urumqi**	**106.73**	**312**	Pdif	**Pdif**		**20 16 39.4**	**+0.6**
WMQ				PP	**PP**		**20 21 08.0**	**+3.3**
WMQ				S	**Sdif**		**20 28 38.0**	**-0.8**
WMQ				SS	**SS**		**20 36 10.0**	**+1.0**
WMQ				AMB	AMB			
	comp=Z,57nm,10.0s							
WMQ				LR	LR			
	comp=N,330nm,24.0s							
WMQ				LR	LR			
	comp=E,260nm,24.0s							
WMQ				LR	LR			
	comp=Z,260nm,24.0s							
MKAR	**Makanchi Array**	**110.69**	**315**	PKIKP	**PKiKP**		**20 20 55.5**	**-0.9**
MKAR	**Makanchi Array**	**110.69**	**315**	PKiKP	**PKiKP**		**20 20 55.5**	**-0.9**
MKAR	**Makanchi Array**	**110.69**	**315**	PKiKP	**PKiKP**		**20 20 55.5**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=72,slow=4.0,SNR=7.0							
KURK	**Kurchatov**	**113.00**	**319**	PKIKP	**PKiKP**		**20 21 00.5**	**-0.1**
KURK	**Kurchatov**	**113.00**	**319**	PKiKP	**PKiKP**		**20 21 00.5**	**-0.1**
KURBB	**Kurchatov Arra**	**113.07**	**319**	PKiKP	**PKiKP**		**20 21 00.4**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=105,slow=1.8,SNR=6.4							
KSH	**Kashi**	**115.34**	**307**	*e*PKP	**PKPdf**		**20 21 08.3**	**+2.7**
KSH				*e*PP	PP		20 22 15.1	+8.2
KSH				PKS	**PKSdf**		**20 24 44.3**	**+1.9**
KSH				SKS	**SKSdf**		**20 28 18.9**	**+2.0**
KSH				SKKS	**SKKSac**		**20 29 08.1**	**+0.8**
KSH				AMB	AMB			
	comp=Z,89nm,3.7s							
KSH				LR	LR			
	comp=N,250nm,6.4s							
KSH				LR	LR			
	comp=E,190nm,5.4s							
KSH				LR	LR			
	comp=Z,230nm,6.2s							
BVAR	**Borovoye Array**	**117.74**	**322**	PKIKP	**PKPdf**		**20 21 08.8**	**-0.8**
BVAR	**Borovoye Array**	**117.74**	**322**	PKP	**PKPdf**		**20 21 08.8**	**-0.8**
BVAR	**Borovoye Array**	**117.74**	**322**	PKP	**PKPdf**		**20 21 08.8**	**-0.8**
	comp=Z,2.1nm,0.8s,baz=90,slow=1.4,SNR=11							
ARCES	**ARCESS Array B**	**124.48**	**352**	PKP	**PKPdf**		**20 21 22.2**	**0.0**
ARCES	**ARCESS Array B**	**124.48**	**352**	PKP	**PKPdf**		**20 21 22.2**	**0.0**
	comp=Z,8.3nm,0.7s,baz=15,slow=3.7,SNR=14							
FINES	**FINESS Array B**	**131.81**	**348**	PKP	**PKPdf**		**20 21 36.3**	**0.0**
FINES	**FINESS Array B**	**131.81**	**348**	PKP	**PKPdf**		**20 21 36.3**	**0.0**
	comp=Z,3.2nm,0.8s,baz=48,slow=2.1,SNR=7.6							
NB2	**NORSAR Subarra**	**134.18**	**357**	PKPdf	**PKPdf**		**20 21 40.1**	**-0.8**
	comp=Z,6.1nm,1.4s,baz=14,slow=1.8							
NOA	**NORSAR Array B**	**134.18**	**357**	PKP	**PKPdf**		**20 21 40.4**	**-0.4**
NOA	**NORSAR Array B**	**134.18**	**357**	PKP	**PKPdf**		**20 21 40.4**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=13,slow=3.9,SNR=7.2							
MAK	**Makhachkala**	**135.45**	**317**	PKHKP	PKPpre		20 21 32.8	
MAK				*e*PS	**PS**		**20 34 46.3**	**+2.5**
MAK				pmax	pmax			
	comp=Z,13nm,0.4s							
MAK				MLR	MLR			
	comp=Z,880nm,23.0s							
KIV	**Kislovodsk**	**138.06**	**320**	*e*PKHKP	PKPpre		20 21 18.2	
KIV				pmax	pmax			
	comp=Z,3.0nm,0.9s							
KIV				MLR	MLR			
	comp=Z,500nm,21.0s							
AKASG	**Malin Array Be**	**140.20**	**337**	PKIKP	**PKPdf**		**20 21 52.2**	**0.0**
AKASG	**Malin Array Be**	**140.20**	**337**	PKP	**PKPdf**		**20 21 52.2**	**0.0**
AKASG	**Malin Array Be**	**140.20**	**337**	PKP	**PKPdf**		**20 21 52.2**	**0.0**
	comp=Z,2.0nm,0.8s,baz=25,slow=2.2,SNR=4.3							
KWP	**Kalwaria Pacla**	**143.28**	**342**	||PKHKP	PKPab	20 21 52.0	-1.6
KWP	**Kalwaria Pacla**	**143.28**	**342**	||*i*P	PKPab	20 21 52.0	-1.6
CLL	**Collm**	**143.68**	**353**	*i* PKIKP	PKPbc		20 21 56.4	+0.5
CLL				*e*			20 22 09.0	
CLL				pmax	pmax			
	comp=Z,5.0nm,0.8s							
CLL				pmax	pmax			
	comp=Z,7.0nm,1.0s							
CLL				MLR	MLR			
	comp=Z,500nm,21.0s							
CLL	**Collm**	**143.68**	**353**	*i* PKPdf	PKPbc		20 21 56.4	+0.5
	comp=Z,5.0nm,0.8s							
CLL				*e*PKiKP	**PKPdf**		**20 21 59.0**	**+0.6**
	comp=Z,7.0nm,1.0s							
CLL				*ep*PKPdf	pPKPdf		20 22 09.0	+3.6
CLL				*ep*PKiKP	pPKiKP		20 22 14.0	+5.3
CLL				*e*PP	**PP**		**20 25 14.0**	**+4.0**
CLL				*e*SKKSac	SKKSac		20 31 59.0	-3.5
CLL				*e*PSKS			20 35 24.0	
CLL				*e*(PPS)			20 37 53.0	
CLL				*e*SS	**SS**		**20 43 48.0**	**-2.6**
CLL				*e*SKSSKSac	8'S'ac		20 45 34.0	+17
CLL				*e*SSS	SSS		20 49 00.0	
CLL				*e*			20 54 00.0	
CLL				*e*(PSSrev)			20 57 48.0	
CLL				Lm	MLR		21 26 00.0	
	comp=Z,500nm,21.0s							
BRG	**Berggiesshubel**	**143.99**	**352**	*e*PKP	PKPbc		20 21 57.7	+0.9
	comp=Z,2.8nm,1.0s							
BRG				*e*			20 25 16.0	
BRG				*e*			20 35 19.0	
BRG	**Berggiesshubel**	**143.99**	**352**	*e*PKIKP	PKPbc		20 21 57.7	+0.9
BRG				*e*			20 25 16.0	

UPC	**Upice**	**144.03**	**350**	*e*PKIKP	PKPbc		20 21 57.9	+0.9
UPC	**Upice**	**144.03**	**350**	*e*PKP	PKPbc		20 21 57.9	+0.9
KOLS	**Kolonicke sedl**	**144.04**	**342**	*e*PKIKP	**PKPdf**		**20 21 59.3**	**+0.1**
KOLS	**Kolonicke sedl**	**144.04**	**342**	*e*PKP	**PKPdf**		**20 21 59.3**	**+0.1**
DPC	**Dobruska-Polom**	**144.13**	**349**	*e*PKIKP	**PKPdf**		**20 21 58.8**	**-0.5**
DPC				MLR	MLR			
	comp=Z,900nm,24.8s							
DPC	**Dobruska-Polom**	**144.13**	**349**	*e*PKP	**PKPdf**		**20 21 58.8**	**-0.5**
DPC				AMS	AMS		21 21 40.0	
	comp=Z,900nm,24.8s							
NIE	**Niedzica**	**144.13**	**345**	*e*PKIKP	**PKPdf**		**20 21 58.8**	**-0.5**
NIE	**Niedzica**	**144.13**	**345**	*e*PKP	**PKPdf**		**20 21 58.8**	**-0.5**
BUR08	**Bucovina Ar. S**	**144.21**	**338**	*e*PKPdf	PKPbc		20 21 58.3	+0.5
BURAR	**Bucovina Array**	**144.23**	**338**	||*i*P	**PKPdf**	**20 21 59.1**	**-0.6**
PVCC	**Panska Ves**	**144.24**	**351**	*e*PKIKP	PKPbc		20 21 58.5	+0.9
PVCC				MLR	MLR			
	comp=Z,1μm,21.6s							
PVCC	**Panska Ves**	**144.24**	**351**	*e*PKP	PKPbc		20 21 58.5	+0.9
PVCC				AMS	AMS		21 24 00.0	
	comp=Z,1μm,21.6s							
OKC	**Ostrava-Krasne**	**144.26**	**347**	*e*PKIKP	PKPbc		20 21 58.5	+0.8
OKC				*e*			20 22 11.4	
OKC				MLR	MLR			
	comp=Z,900nm,28.5s							
OKC	**Ostrava-Krasne**	**144.26**	**347**	*e*PKP	PKPbc		20 21 58.5	+0.8
OKC				*ep*PKP	pPKPdf		20 22 11.4	+5.0
OKC				AMS	AMS		21 20 50.0	
	comp=Z,900nm,28.5s							
CRVS	**Cervenica-Dubn**	**144.30**	**343**	*e*PKIKP	PKPbc		20 21 57.9	0.0
CRVS	**Cervenica-Dubn**	**144.30**	**343**	*e*PKP	PKPbc		20 21 57.9	0.0
UZH	**Uzhgorod**	**144.30**	**342**	*c i*PKIKP	PKPbc		20 21 58.1	+0.3
UZH				*e*			20 22 07.7	
KRLC	**Kraliky**	**144.31**	**349**	*e*PKIKP	PKPbc		20 21 58.3	+0.4
KRLC	**Kraliky**	**144.31**	**349**	*e*PKP	PKPbc		20 21 58.3	+0.4
MORC	**Moravsky Berou**	**144.44**	**348**	||PKIKP	**PKPdf**	**20 22 00.4**	**+0.5**
MORC	**Moravsky Berou**	**144.44**	**348**	*e*PKPdf	**PKPdf**	**20 21 59.3**	**-0.6**
MORC	**Moravsky Berou**	**144.44**	**348**	||*i*P	**PKPdf**	**20 22 00.4**	**+0.5**
MOX	**Moxa**	**144.48**	**354**	*e*PKIKP	PKPbc		20 21 59.1	+0.7
MOX	**Moxa**	**144.48**	**354**	*e*PKP	PKPbc		20 21 59.1	+0.7
PLN	**Plauen**	**144.59**	**354**	*e*PKP	PKPbc		20 21 59.4	+0.7
WERD	**Werda**	**144.61**	**354**	*e*PKPbc	**PKPdf**	**20 21 59.6**	**-0.5**
TESR		**144.61**	**336**	||*i*P	**PKPab**	**20 21 57.9**	**-0.9**
TANN	**Tannenbergstha**	**144.62**	**353**	*e*PKPbc	**PKPdf**	**20 21 59.8**	**-0.4**
TRPA	**Tarpa**	**144.67**	**341**	||*i*P	PKPbc	20 21 59.5	+0.5
TRPA	**Tarpa**	**144.67**	**341**	||*e*PKPdf	**PKPdf**	**20 21 59.9**	**-0.3**
GUNZ	**Gunzen**	**144.69**	**354**	*e*PKPbc	**PKPdf**	**20 22 00.0**	**-0.3**
TLCR		**144.75**	**332**	||PKIKP	PKPbc	20 21 59.8	+0.4
TLCR		**144.75**	**332**	||*i*P	PKPbc	20 21 59.8	+0.4
MEM	**Membach**	**144.76**	**1**	PKP	**PKPdf**	**20 22 00.4**	**+0.1**
WERN	**Wernitzgruen**	**144.76**	**353**	*e*PKPbc	**PKPdf**	**20 22 00.4**	**0.0**
BMR	**Baia Mare**	**144.77**	**340**	||PKIKP	**PKPdf**	**20 22 00.0**	**-0.4**
BMR	**Baia Mare**	**144.77**	**340**	||*i*P	**PKPdf**	**20 22 00.0**	**-0.4**
PRU	**Pruhonice**	**144.77**	**351**	*e*PKIKP	**PKPdf**	**20 22 00.6**	**+0.2**
PRU				*e*			20 22 10.6	
PRU				MLR	MLR			
	comp=Z,1μm,21.7s							
PRU	**Pruhonice**	**144.77**	**351**	*e*PKP	**PKPdf**	**20 22 00.6**	**+0.2**
PRU				*ep*PKP	**pPKPdf**	**20 22 10.6**	**+3.3**
PRU				AMS	AMS		21 24 50.0	
	comp=Z,1μm,21.7s							
NKC	**Novy Kostel**	**144.81**	**353**	*e*PKIKP	**PKPdf**	**20 22 00.6**	**+0.1**
NKC	**Novy Kostel**	**144.81**	**353**	*e*PKP	**PKPdf**	**20 22 00.6**	**+0.1**
SNF	**Seneffe**	**144.81**	**2**	PKP	**PKPdf**	**20 22 00.3**	**-0.1**
BCLA	**Clavier**	**144.94**	**1**	PKP	**PKPab**	**20 21 59.6**	**-0.2**
CFR	**Carcaliu**	**145.06**	**333**	||PKIKP	**PKPdf**	**20 22 00.9**	**-0.1**
CFR	**Carcaliu**	**145.06**	**333**	||*i*P	**PKPdf**	**20 22 00.9**	**-0.1**
VRAC	**Vranov**	**145.08**	**348**	||*i*P	**PKPdf**	**20 22 00.9**	**-0.1**
MANZ	**Manzenberg**	**145.09**	**354**	*e*PKPbc	**PKPdf**	**20 22 01.0**	**0.0**
VRI	**Vrincioaia**	**145.10**	**335**	||PKIKP	**PKPdf**	**20 22 01.1**	**0.0**
VRI	**Vrincioaia**	**145.10**	**335**	||*i*P	**PKPdf**	**20 22 01.1**	**0.0**
TNS	**Taunus Mts**	**145.11**	**358**	*e*PKIKP	**PKPbc**	**20 22 00.5**	**0.0**
TNS	**Taunus Mts**	**145.11**	**358**	*e*PKPbc	**PKPbc**	**20 22 00.5**	**0.0**
PLOR	**Plostina**	**145.15**	**335**	||*i*P	**PKPbc**	**20 22 00.1**	**-0.6**
DOU	**Dourbes**	**145.24**	**2**	PKP	**PKPdf**	**20 22 01.1**	**0.0**
TREC	**Trest**	**145.29**	**350**	*e*PKIKP	**PKPab**	**20 22 01.2**	**0.0**
TREC				MLR	MLR			
	comp=Z,800nm,23.8s							
TREC	**Trest**	**145.29**	**350**	*e*PKP	**PKPab**	**20 22 01.2**	**0.0**
TREC				AMS	AMS		21 23 50.0	
	comp=Z,800nm,23.8s							
ROTZ	**Rotzenmuhle**	**145.29**	**354**	*e*PKPbc	**PKPab**	**20 22 01.2**	**+0.1**
VYHS	**Vyhne**	**145.36**	**346**	*e*PKIKP	**PKPdf**	**20 22 02.0**	**+0.5**
VYHS	**Vyhne**	**145.36**	**346**	*e*PKP	**PKPdf**	**20 22 02.0**	**+0.5**
GRER		**145.40**	**334**	||*i*P	**PKPab**	**20 22 03.7**	**+2.0**
GRF	**Grafenberg Arr**	**145.46**	**355**	*e*PKIKP	**PKPab**	**20 22 02.0**	**+0.2**
GRF	**Grafenberg Arr**	**145.46**	**355**	*e*PKPbc	**PKPab**	**20 22 02.0**	**+0.2**
ABH	**Alteburg**	**145.48**	**359**	PKP	**PKPab**	**20 22 02.2**	**+0.3**
KMBO	**Kilima Mbogo**	**145.53**	**244**	PKPbc	**PKPab**	**20 22 03.6**	**+0.2**
KMBO				*e*PKPdf	PKPbc	**20 22 04.1**	**+0.9**
KMBO	**Kilima Mbogo**	**145.53**	**244**	PKPbc	**PKPab**	**20 22 03.6**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=127,slow=5.5,SNR=10.0							
DOPR	**Dopca**	**145.55**	**337**	||*i*P	**PKPdf**	**20 22 01.8**	**-0.1**
PSZ	**Piszkesteto**	**145.62**	**344**	||PKIKP	**PKPab**	**20 22 03.4**	**+0.9**
PSZ	**Piszkesteto**	**145.62**	**344**	*e*PKPdf	**PKPab**	**20 22 02.8**	**+0.3**
PSZ	**Piszkesteto**	**145.62**	**344**	||*i*P	**PKPab**	**20 22 03.4**	**+0.9**
PSZ	**Piszkesteto**	**145.62**	**344**	||*e*PKPbc	**PKPab**	**20 22 03.4**	**+0.9**
SMOL	**Smolenice**	**145.66**	**347**	*e*PKIKP	**PKPab**	**20 22 03.4**	**+0.9**
SMOL	**Smolenice**	**145.66**	**347**	*e*PKP	**PKPab**	**20 22 03.4**	**+0.9**
RUP	**Ruppelstein**	**145.66**	**359**	PKIKP	**PKPab**	**20 22 02.9**	**+0.3**
RUP	**Ruppelstein**	**145.66**	**359**	PKP	**PKPab**	**20 22 02.9**	**+0.3**
WLF	**Walferdange**	**145.70**	**0**	PKP	**PKPab**	**20 22 02.8**	**+0.2**
WLF	**Walferdange**	**145.70**	**0**	*e*PKIKP	**PKPab**	**20 22 02.8**	**+0.2**
WLF	**Walferdange**	**145.70**	**0**	*e*PKPbc	**PKPab**	**20 22 03.1**	**+0.5**
WLF	**Walferdange**	**145.70**	**0**	*e*PKPdf	**PKPab**	**20 22 02.8**	**+0.2**
TOD	**Tromm**	**145.71**	**357**	PKIKP	**PKPab**	**20 22 02.9**	**+0.2**
TOD	**Tromm**	**145.71**	**357**	PKP	**PKPab**	**20 22 02.9**	**+0.2**
MLR	**Muntele Rosu**	**145.73**	**335**	||*i*P	**PKPdf**	**20 22 02.3**	**0.0**
KHC	**Kasperske Hory**	**145.75**	**352**	*e*PKP2	**PKPdf**	**20 22 02.2**	**+0.1**
KHC				MLR	MLR			
	comp=Z,1μm,22.4s							
KHC	**Kasperske Hory**	**145.75**	**352**	*e*PKPdf	**PKPdf**	**20 22 02.0**	**-0.1**
KHC	**Kasperske Hory**	**145.75**	**352**	*e*PKP	**PKPdf**	**20 22 02.2**	**+0.1**
KHC				*ep*PKP	**pPKPdf**	**20 22 15.0**	**+5.9**
KHC				AMS	AMS		21 24 10.0	
	comp=Z,1μm,22.4s							
PGOR	**Pogoanele**	**145.77**	**334**	||*i*P	**PKPbc**	**20 22 02.5**	**-0.2**
CVD	**Cernavoda**	**145.78**	**332**	||*i*P	**PKPab**	**20 22 03.7**	**+0.6**
ISR	**Istrita**	**145.79**	**334**	||PKP2	**PKPdf**	**20 22 02.3**	**-0.1**
ISR	**Istrita**	**145.79**	**334**	||*i*P	**PKPdf**	**20 22 02.3**	**-0.1**
DRGR		**145.80**	**340**	PKP2	**PKPab**	**20 22 04.2**	**+1.0**
DRGR		**145.80**	**340**	||*i*P	**PKPdf**	**20 22 02.3**	**-0.1**
WET	**Wettzell**	**145.83**	**353**	*e*PKP2	**PKPab**	**20 22 03.5**	**+0.3**
WET	**Wettzell**	**145.83**	**353**	*e*PKPbc	**PKPab**	**20 22 03.5**	**+0.3**
GEC2	**GERESS Array S**	**146.01**	**352**	*e*PKP2	**PKPab**	**20 22 03.8**	**-0.2**
GEC2	**GERESS Array S**	**146.01**	**352**	*e*PKPbc	**PKPab**	**20 22 03.8**	**-0.2**
GERES	**GERESS Array B**	**146.01**	**352**	PKPbc	**PKPdf**	**20 22 02.9**	**+0.2**
GERES	**GERESS Array B**	**146.01**	**352**	PKPbc	**PKPdf**	**20 22 02.9**	**+0.2**
	comp=Z,6.2nm,0.8s,baz=20,slow=3.1,SNR=46							
BR131	**Keskin Array S**	**146.02**	**321**	*e*PKPdf	**PKPdf**	**20 22 03.3**	**+0.3**
BRTR	**Keskin Array B**	**146.02**	**321**	PKPbc	**PKPdf**	**20 22 03.1**	**+0.1**
BRTR	**Keskin Array B**	**146.02**	**321**	PKPbc	**PKPdf**	**20 22 03.1**	**+0.1**
	comp=Z,17nm,0.8s,baz=108,slow=2.4,SNR=66							
VOIR		**146.12**	**336**	||PKP2	**PKPbc**	**20 22 03.9**	**0.0**
VOIR		**146.12**	**336**	||*i*P	**PKPbc**	**20 22 03.9**	**0.0**
BUD	**Budapest**	**146.25**	**345**	||*e*PKPdf	**PKPab**	**20 22 05.0**	**+0.2**
SULR		**146.26**	**334**	||*i*P	**PKPdf**	**20 22 01.2**	**-1.9**
ARR	**Arges**	**146.34**	**337**	||*i*P	**PKPbc**	**20 22 04.2**	**-0.3**
LANF	**Langenberg**	**146.37**	**358**	PKP2	**PKPab**	**20 22 05.2**	**0.0**
LANF	**Langenberg**	**146.37**	**358**	PKP	**PKPab**	**20 22 05.2**	**0.0**
LANF	**Langenberg**	**146.37**	**358**	PKP	**PKPab**	**20 22 05.2**	**0.0**
ANTO	**Ankara**	**146.44**	**322**	||PKP2	**PKPdf**	**20 22 03.7**	**0.0**
ANTO	**Ankara**	**146.44**	**322**	*e*PKPbc	**PKPab**	**20 22 06.2**	**+0.3**
ANTO	**Ankara**	**146.44**	**322**	||*i*P	**PKPdf**	**20 22 03.7**	**0.0**
STU	**Stuttgart**	**146.53**	**357**	*e*PKPbc	**PKPab**	**20 22 05.8**	**0.0**
CONA	**Conrad Observa**	**146.54**	**349**	||*i*PKPab	**PKPdf**	**20 22 03.9**	**+0.3**
	comp=Z,12nm,0.9s,SNR=12							
CONA	**Conrad Observa**	**146.54**	**349**	||*i*P	**PKPdf**	**20 22 03.9**	**+0.3**
LOT	**Lotru**	**146.60**	**338**	||*i*P	**PKPdf**	**20 22 04.3**	**+0.5**
CIOR	**Ciorogarla**	**146.61**	**334**	||*i*P	**PKPab**	**20 22 06.3**	**+0.1**
SOP	**Sopron**	**146.63**	**348**	||*e*PKPdf	**PKPdf**	**20 22 04.4**	**+0.8**
MOA	**Molln**	**146.90**	**350**	||*i*PKPab	**PKPbc**	**20 22 06.0**	**+0.1**
	comp=Z,16nm,0.9s,SNR=15							
MOA	**Molln**	**146.90**	**350**	||*i*P	**PKPbc**	**20 22 06.0**	**+0.1**
HUMR	**Humele**	**146.91**	**336**	||*i*P	**PKPbc**	**20 22 06.5**	**+0.4**
FUR	**Furstenfeldbru**	**146.97**	**354**	*e*PKP2	**PKPab**	**20 22 07.0**	**-0.6**
FUR	**Furstenfeldbru**	**146.97**	**354**	*e*PKPbc	**PKPab**	**20 22 07.0**	**-0.6**
GZR	**Gura Zlata**	**147.00**	**339**	||PKIKP	**PKPbc**	**20 22 05.6**	**-0.8**
GZR	**Gura Zlata**	**147.00**	**339**	||*i*P	**PKPbc**	**20 22 05.6**	**-0.8**
BFO	**Black Forest**	**147.01**	**358**	*e*PKP2	**PKPbc**	**20 22 06.6**	**+0.3**
BFO	**Black Forest**	**147.01**	**358**	*e*PKPbc	**PKPbc**	**20 22 06.9**	**+0.6**
BFO	**Black Forest**	**147.01**	**358**	*e*PKPbc	**PKPbc**	**20 22 06.6**	**+0.3**

THEF	**They Montfort**	**147.14**	**1**	PKP2	**PKPbc**		**20 22 06.7**	**+0.1**
THEF	**They Montfort**	**147.14**	**1**	PKP	**PKPbc**		**20 22 06.7**	**+0.1**
THEF	**They Montfort**	**147.14**	**1**	PKP	**PKPbc**		**20 22 06.7**	**+0.1**
ECH	**Echery**	**147.15**	**359**	*e*PKP2	**PKPab**		**20 22 07.7**	**-0.6**
ECH	**Echery**	**147.15**	**359**	*e*PKPbc	**PKPab**		**20 22 07.7**	**-0.6**
ECH	**Echery**	**147.15**	**359**	PKP	**PKPbc**		**20 22 07.2**	**+0.5**
BZS	**Buzias**	**147.20**	**340**	PKIKP	**PKPdf**		**20 22 05.3**	**+0.7**
BZS	**Buzias**	**147.20**	**340**	||*i*P	**PKPbc**		**20 22 07.1**	**+0.2**
SPAK	**Spaichingen-Ko**	**147.22**	**357**	PKP	**PKPbc**		**20 22 06.2**	**-0.7**
RJOB	**Jochberg**	**147.22**	**352**	*e*PKPbc	**PKPbc**		**20 22 07.8**	**+0.9**
ARSA	**Arzberg**	**147.25**	**349**	||*i*PKPab	**PKPbc**		**20 22 07.4**	**+0.4**
	comp=Z,11nm,1.1s,SNR=6.3							
ARSA	**Arzberg**	**147.25**	**349**	||*i*P	**PKPbc**		**20 22 07.4**	**+0.4**
ZIMR		**147.47**	**334**	||*i*P	**PKPab**		**20 22 08.9**	**-0.7**
FELD	**Feldberg im Sc**	**147.47**	**358**	PKP	**PKPbc**		**20 22 07.8**	**+0.1**
BEHE	**Becsehely**	**147.74**	**347**	||*e*PKPdf	**PKPbc**		**20 22 09.2**	**+0.9**
MOTA	**Moosalm**	**147.80**	**354**	||*e*PKP2	**PKPbc**		**20 22 08.4**	**-0.3**
MOTA	**Moosalm**	**147.80**	**354**	||*i*PKPab	**PKPbc**		**20 22 08.4**	**-0.3**
	comp=Z,8.4nm,0.8s,SNR=8.1							
MOTA	**Moosalm**	**147.80**	**354**	||*i*P	**PKPbc**		**20 22 08.4**	**-0.3**
BBS	**Basel-Blauen**	**147.90**	**359**	PKHKP	PKPbc		20 22 03.6	-5.2
BBS	**Basel-Blauen**	**147.90**	**359**	PKP	PKPdf		20 22 03.6	-2.2
SOKA	**Soboth**	**147.90**	**349**	||*i*PKPbc	**PKPdf**		**20 22 07.4**	**+1.5**
	comp=Z,14nm,0.9s							
SOKA	**Soboth**	**147.90**	**349**	||*i*P	**PKPdf**		**20 22 07.4**	**+1.5**
PERS	**Pernice**	**147.92**	**349**	*i* P	**PKPbc**		**20 22 09.2**	**+0.3**
DAVA	**Damuels**	**147.96**

ISCJB ***20*** *21:07:50.6±0.7,31.99N±0.07×104.67E±0.09,h15km, mb3.8/5,Error ellipse: s-maj=14.5km s-min=5.7km az=41.3*

IDC ***20*** *21:07:51.0±1.1,32.12N×104.92E,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.3/25,mbtmp3.4/4,Error ellipse: s-maj=73.6km s-min=20.8km az=60.0*

BJI ***20*** *21:07:53.3,32.02N×104.51E,h21km,ML3.5/12,Ms3.3/2, Ms7 3.0/2*

ISC 20 21:07:52.6±0.8,32°06'N±0°06'×104°68'E±0°06',h15km,n10, σ1§82/15,mb3.6/5,1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.38**	**215**	⇓Pg	**Pn**	**21 08 16.8**	**-0.6**
CD2				Sg	**Sn**	**21 08 34.4**	**-1.1**
CD2				smax	smax		
	comp=N,1μm,0.8s						
CD2				smax	smax		
	comp=E,730nm,0.7s						
XAN	**Xi'an**	**4.08**	**60**	Pn	**Pn**	**21 08 56.5**	**+2.0**
XAN				Pg	**Pg**	**21 09 09.6**	**-1.2**
XAN				Sn	**Sn**	**21 09 42.3**	**+0.3**
XAN				Sg	**Sg**	**21 09 59.4**	**-4.2**
XAN				smax	smax		
	comp=N,74nm,0.6s						
XAN				smax	smax		
	comp=E,56nm,0.5s						
XAN				LR	LR		
	comp=N,150nm,5.3s						
XAN				LR	LR		
	comp=E,43nm,4.9s						
XAN				LR	LR		
	comp=Z,55nm,6.8s						
LZH	**Lanzhou**	**4.08**	**351**	Pg	**Pg**	**21 09 09.3**	**-1.5**
LZH				Sg	**Sg**	**21 10 01.5**	**-2.2**
LZH				smax	smax		
	comp=N,160nm,0.7s						
LZH				smax	smax		
	comp=E,150nm,0.8s						
LZH				LR	LR		
	comp=N,310nm,7.0s						
LZH				LR	LR		
	comp=E,280nm,4.4s						
LZH				LR	LR		
	comp=Z,310nm,8.0s						
CMAR	**Chiang Mai Arr**	**14.49**	**202**	Pn	**P**	**21 11 24.2**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=8.6,slow=8.7,SNR=13						
SONM	**Songino Array**	**15.81**	**4**	Pn	**P**	**21 11 40.5**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=187,slow=10,SNR=5.2						
MKAR	**Makanchi Array**	**22.60**	**317**	P	**P**	**21 12 54.5**	**+1.9**
	comp=Z,0.3nm,0.7s,baz=119,slow=13,SNR=4.1						
ZALV	**Zalesovo Beam**	**26.09**	**333**	P	**P**	**21 13 26.0**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=134,slow=10,SNR=5.6						
WRA	**Warramunga Arr**	**59.00**	**147**	P	**P**	**21 17 52.1**	**+0.3**
	comp=Z,39nm,0.4s,baz=340,slow=7.5,SNR=2.0						
ASAR	**Alice Springs**	**62.06**	**150**	P	**P**	**21 18 13.2**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=336,slow=6.5,SNR=4.1						
YKA	**Yellowknife Ar**	**80.64**	**17**	P	**P**	**21 20 05.0**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=330,slow=5.3,SNR=3.4						

IDC 20 21:10:31.5±1.2,4.12N×126.83E,h0km,mb3.5/7, mb1 3.6/7,mb1mx3.5/25,mbtmp3.5/7,Error ellipse: s-maj=99.5km s-min=16.0km az=70.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.11**	**183**	P	P	21 15 28.7	+0.1
	0.8nm,0.5s,baz=18,slow=11,SNR=4.6						
WRA	**Warramunga Arr**	**25.02**	**163**	P	P	21 15 57.0	-0.4
	43nm,0.4s,baz=344,slow=9.5,SNR=1.8						
ASAR	**Alice Springs**	**28.46**	**166**	P	P	21 16 28.2	-0.2
	0.1nm,0.4s,baz=354,slow=8.4,SNR=3.5						
STKA	**Stephens Creek**	**38.45**	**160**	P	P	21 17 55.5	+0.3
	1.5nm,0.9s,baz=357,slow=13,SNR=3.1						
SONM	**Songino Array**	**46.97**	**341**	P	P	21 19 05.5	+1.1
	0.2nm,0.7s,baz=170,slow=6.1,SNR=1.9						
MKAR	**Makanchi Array**	**57.30**	**325**	P	P	21 20 20.5	-0.7
	0.4nm,0.5s,baz=117,slow=8.1,SNR=7.4						
KURBB	**Kurchatov Arra**	**61.47**	**327**	P	P	21 20 49.2	-0.7
	0.4nm,0.4s,baz=130,slow=5.6,SNR=16						
BVAR	**Borovoye Array**	**67.05**	**327**	P	P	21 21 27.0	+0.5
	0.4nm,0.5s,baz=111,slow=6.3,SNR=4.1						

BJI ***20*** *21:18:48.6,3.22N×126.69E,h10km,mB5.0/6,mb4.4/15, Ms4.7/1,Ms7 4.3/1*

IDC ***20*** *21:18:53.0±0.6,3.83N×126.58E,h0km,mb4.2/19, mb1 4.3/19,mb1mx4.2/26,mbtmp4.2/19,MS3.5/4, Ms1 3.5/4,ms1mx3.2/45,Error ellipse: s-maj=37.7km s-min=12.8km az=70.0*

NEIC ***20*** *21:18:58.0±1.1,3.77N×126.51E,h35km±10km,mb4.4/12, Error ellipse: s-maj=15.3km s-min=4.9km az=71.0*

DJA ***20*** *21:19:09.1±0.7,4.1°N±5.1°×127.7E±1.1°,h110km±6km,M4.6/18, mB5.0/3,mb4.5/18,MLv4.6/6,Mw(mB)4.3/3*

AUST ***20*** *21:19:12.5,3.00N×127.00E,h100km*

ISC 20 21:18:56.5±0.5,4.05N±0.05°×126.77E±0.09,h20km±4km, n109,σ1§61/105,mb4.4/36,MS3.7/4,4C-1D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**3.23**	**339**	Pn	**Pn**	**21 19 48.7**	**+2.6**
DAV				Sn	**Sb**	**21 20 28.1**	**-3.9**
MNI	**Manado**	**3.23**	**217**	P	**Pn**	**21 19 47.9**	**+1.8**
TNTI	**Ternate**	**3.31**	**170**	P	Pn	21 19 51.3	+4.1
CTBH	**Cotabato--PC H**	**4.03**	**322**	⇓*i*P	Pb	21 20 02.2	-4.6
LBMI	**Labuha**	**4.71**	**171**	P	**Pb**	**21 20 21.0**	**+2.5**
MRSI	**Marisa**	**5.99**	**234**	P	**Pn**	**21 20 26.1**	**+2.1**
	106nm,1.0s,898nm0.3nm						
LUWI	**Luwuk**	**6.45**	**218**	P	Pn	21 20 36.7	+6.4
	118nm,1.1s,2μm0.7nm						
SWI	**Sorong**	**6.63**	**137**	P	**Pn**	**21 20 33.9**	**+1.0**
	baz=5.7,SNR=4.0						
MYLDM	**Lahad Datu**	**8.32**	**278**	P	Pb	21 21 08.8	-11
	90nm,1.1s,0.3nm						
TTSI	**Tana Toraja**	**9.89**	**225**	P	Pn	21 21 23.6	+5.9
	30nm,1.2s						
KAPI	**Kappang**	**11.41**	**218**	LR	LR	21 26 19.5	
	comp=Z,268nm,19.4s,baz=61,slow=40						
KBKI	**Kotabaru**	**12.87**	**236**	P	P	21 22 04.2	-4.8
	19nm,1.4s,943nm						
BBKI	**Banjar Baru**	**14.06**	**238**	P	**P**	**21 22 21.4**	**-1.0**
	45nm,1.9s						
SBUM	**Sibu**	**14.61**	**264**	P	P	21 22 32.2	+3.7
	21nm,1.3s						
WSI	**Waingapu**	**15.08**	**205**	P	**P**	**21 22 35.4**	**+1.8**
	155nm,0.6s						
STKI	**Sintang**	**15.78**	**256**	P	P	21 22 51.5	+10
KHKI	**Kahang-Kahang**	**16.61**	**222**	P	**P**	**21 22 52.1**	**+1.4**
	30nm,1.1s						
SRBI	**Singaraja**	**16.68**	**224**	P	**P**	**21 22 52.6**	**+1.2**
	49nm,1.4s						
MTN	**Manton Dam**	**17.33**	**166**	P	**Pn**	**21 22 56.1**	**-1.3**
	baz=16,SNR=4.2						
KDU	**Kakadu**	**17.57**	**161**	P	**Pn**	**21 23 00.3**	**+0.1**
	baz=17,SNR=4.7						
GUMO	**Guam**	**20.22**	**61**	LR	LR	21 29 54.0	
	comp=Z,42nm,18.6s,baz=260,slow=32						
FITZ	**Fitzroy Crossi**	**22.04**	**183**	*e*P	**P**	**21 23 46.9**	**-3.1**
	7.6nm,0.9s						
FITZ	**Fitzroy Crossi**	**22.04**	**183**	P	**P**	**21 23 46.8**	**-3.2**
	3.2nm,0.4s,baz=9.8,slow=11,SNR=14						
FITZ	**Fitzroy Crossi**	**22.04**	**183**	P	**P**	**21 23 48.0**	**-1.9**
	baz=21,SNR=5.7						
QIZ	**Qiongzhong**	**22.25**	**313**	P	**P**	**21 23 54.9**	**+2.6**
QIZ				S	**S**	**21 27 55.3**	**-1.1**
QIZ				pmax	pmax		
	comp=Z,30nm,1.9s						
QIZ				pmax	pmax		
	comp=Z,88nm,3.9s						
CBJI	**Citeko**	**22.44**	**242**	P	**P**	**21 23 56.3**	**+1.9**
	comp=Z,151nm,0.8s						
UBPT	**Khong Chiam**	**23.75**	**299**	P	**P**	**21 24 11.4**	**+3.7**
	comp=Z,24nm,1.1s						
WRAB	**Tennant Creek**	**24.97**	**163**	*e*P	**P**	**21 24 16.1**	**-2.8**
	comp=Z,30nm,0.9s						
WRA	**Warramunga Arr**	**24.98**	**163**	P	**P**	**21 24 16.3**	**-2.6**
WRA	**Warramunga Arr**	**24.98**	**163**	P	**P**	**21 24 16.3**	**-2.6**
	comp=Z,43nm,0.4s,baz=343,slow=10,SNR=1.9						
MBWA	**Marble Bar**	**25.99**	**195**	*e*P	**P**	**21 24 24.8**	**-3.2**
	comp=Z,10nm,0.8s						
QIS	**Mount Isa**	**27.51**	**153**	P	**P**	**21 24 40.7**	**-1.2**
	baz=27,SNR=5.8						
AS31	**Alice Springs**	**28.41**	**166**	*e*P	**P**	**21 24 47.3**	**-2.7**
ASAR	**Alice Springs**	**28.41**	**166**	P	**P**	**21 24 47.9**	**-2.0**
ASAR	**Alice Springs**	**28.41**	**166**	P	**P**	**21 24 47.9**	**-2.0**
	comp=Z,0.9nm,0.5s,baz=344,slow=7.0,SNR=12						
GSI	**Gununggsitoli**	**29.29**	**265**	P	P	21 25 06.1	+8.3
	baz=30,SNR=4.9						
CMAR	**Chiang Mai Arr**	**30.75**	**300**	P	**P**	**21 25 11.3**	**+0.7**
CMAR	**Chiang Mai Arr**	**30.75**	**300**	P	**P**	**21 25 11.3**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=117,slow=6.7,SNR=12						
CMMT	**Chiang Mai**	**30.89**	**301**	P	P	21 25 15.3	+3.4
	comp=Z,11nm,1.6s						
CHTO	**Chiang Mai**	**30.89**	**301**	*e*P	**P**	**21 25 10.3**	**-1.7**
	comp=Z,5.9nm,0.9s						
CHTO	**Chiang Mai**	**30.89**	**301**	P	P	21 25 14.8	+2.8
	comp=Z,9.9nm,1.2s						
MEEK	**Meekatharra**	**31.51**	**194**	P	**P**	**21 25 16.7**	**-0.6**
	baz=31,SNR=8.2						
PATS	**Pohnpei**	**31.52**	**84**	P	P	21 25 25.6	+8.0
	baz=31,SNR=3.3						
XAN	**Xi'an**	**34.15**	**333**	P	**P**	**21 25 39.8**	**-0.6**
XAN				pP	**pP**	**21 25 48.4**	**+1.7**
XAN				sP	**sP**	**21 25 51.5**	**+2.3**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BBOO	**Buckleboo**	**37.70**	**167**	P	**P**	**21 26 09.4**	**-1.4**
	baz=37,SNR=7.5						
LZH	**Lanzhou**	**38.25**	**329**	*e*P	**P**	**21 26 17.0**	**+1.5**
LZH				pP	**pP**	**21 26 22.0**	**+0.1**
LZH				sP	**sP**	**21 26 24.3**	**-0.1**
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
STKA	**Stephens Creek**	**38.41**	**159**	*e*P	**P**	**21 26 15.4**	**-1.4**
	comp=Z,1.9nm,0.7s						
STKA				*e*PcP	**PcP**	**21 28 28.7**	**-1.3**
STKA	**Stephens Creek**	**38.41**	**159**	P	**P**	**21 26 15.3**	**-1.4**
	comp=Z,11nm,0.7s,baz=334,slow=9.0,SNR=33						
STKA	**Stephens Creek**	**38.41**	**159**	P	**P**	**21 26 15.6**	**-1.2**
	baz=38,SNR=15						
HHC	**Hu-ho-hao-te**	**39.11**	**342**	*e*P	**P**	**21 26 23.8**	**+1.2**
HHC				S	**S**	**21 32 18.6**	**-2.7**
HHC				pmax	pmax		
	comp=Z,27nm,0.5s						
HHC				pmax	pmax		
	comp=Z,220nm,6.0s						
HHC				LR	LR		
	comp=N,420nm,14.6s						
HHC				LR	LR		
	comp=E,350nm,14.6s						
HHC				LR	LR		
	comp=Z,290nm,14.2s						
USRK	**Ussuriysk Arra**	**40.25**	**6**	P	**P**	**21 26 33.6**	**+1.7**
	comp=Z,1.4nm,0.9s,baz=186,slow=10,SNR=3.1						
LSA	**Lhasa**	**42.26**	**311**	P	**P**	**21 26 50.3**	**+1.0**
GTA	**Gaotai**	**42.84**	**329**	*e*P	**P**	**21 26 54.1**	**+0.6**
GTA				pP	**pP**	**21 26 57.8**	**-2.1**
GTA				sP	**sP**	**21 27 00.3**	**-2.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TAPN	**Taplejung**	**43.86**	**306**	*e*P	**P**	**21 27 02.3**	**+0.2**
	comp=Z,9.7nm,0.6s						
ODAN	**Odare**	**43.92**	**305**	*e*P	**P**	**21 27 02.5**	**0.0**
	comp=Z,17nm,0.7s						
RAMN	**Ramite**	**44.60**	**305**	*e*P	**P**	**21 27 08.1**	**+0.2**
	comp=Z,12nm,0.7s						
GUN	**Gumba**	**45.57**	**306**	*e*P	**P**	**21 27 15.7**	**-0.1**
	comp=Z,11nm,0.5s						
PKIN	**Phulchoki**	**45.83**	**305**	*e*P	**P**	**21 27 17.7**	**0.0**
KKN	**Kakani**	**46.01**	**305**	*e*P	**P**	**21 27 18.7**	**-0.4**
ULN	**Ulaanbaatar**	**46.83**	**342**	*e*P	**P**	**21 27 26.0**	**+0.9**
	comp=Z,4.0nm,0.9s						
ULN				*e*PcP	**PcP**	**21 28 57.9**	**-0.1**
ULN	**Ulaanbaatar**	**46.83**	**342**	P	P	21 27 30.2	+5.1
SONM	**Songino Array**	**47.01**	**341**	P	**P**	**21 27 27.5**	**+1.0**
SONM				PcP	**PcP**	**21 28 59.7**	**+1.1**
SONM	**Songino Array**	**47.01**	**341**	P	**P**	**21 27 27.5**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=161,slow=7.9,SNR=9.5						
SONM				PcP	**PcP**	**21 28 59.7**	**+1.1**
	comp=Z,1.4nm,0.9s,baz=158,slow=1.7,SNR=4.9						
SONM				LR	LR	21 48 41.1	
	comp=Z,114nm,20.0s,baz=87,slow=38						
KOLN	**Koldanda**	**47.38**	**305**	*e*P	**P**	**21 27 28.9**	**-0.9**
	comp=Z,19nm,0.6s						
DANN	**Dangsing**	**47.46**	**305**	*e*P	**P**	**21 27 29.1**	**-1.5**
	comp=Z,27nm,0.6s						
PYUN	**Piuthan**	**48.00**	**305**	*e*P	**P**	**21 27 33.1**	**-1.5**
	comp=Z,31nm,0.8s						
KAAM	**Kaadhehdhoo**	**53.84**	**268**	P	P	21 28 29.2	+11
	baz=54,SNR=3.2						
PETK	**Petropavlovsk-**	**55.12**	**22**	LR	LR	21 51 55.0	
	comp=Z,51nm,18.6s,baz=65,slow=36						
MK31	**Makanchi Array**	**57.32**	**325**	*e*P	**P**	**21 28 42.7**	**-0.4**
MKAR	**Makanchi Array**	**57.32**	**325**	P	**P**	**21 28 43.3**	**+0.2**
MKAR				ScP	**ScP**	**21 33 40.0**	**+4.0**
MKAR	**Makanchi Array**	**57.32**	**325**	P	**P**	**21 28 43.3**	**+0.2**
	comp=Z,1.5nm,0.4s,baz=121,slow=8.2,SNR=30						
MKAR				ScP	**ScP**	**21 33 40.0**	**+4.0**
	comp=Z,0.5nm,0.7s,baz=116,slow=5.5,SNR=4.7						
ZALV	**Zalesovo Beam**	**60.32**	**333**	P	**P**	**21 29 03.5**	**-0.3**
ZALV	**Zalesovo Beam**	**60.32**	**333**	P	**P**	**21 29 03.5**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=136,slow=7.2,SNR=8.2						
KBL	**Kabul**	**61.36**	**307**	*e*P	**P**	**21 29 10.6**	**-0.9**
	comp=Z,4.1nm,0.9s						
KURBB	**Kurchatov Arra**	**61.49**	**327**	P	**P**	**21 29 11.7**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=128,slow=6.2,SNR=29						
KURK	**Kurchatov**	**61.49**	**327**	*e*P	**P**	**21 29 11.7**	**-0.1**
	comp=Z,3.9nm,0.6s						
KKAR	**Karatay Array**	**63.03**	**317**	*e*P	**P**	**21 29 22.0**	**-0.3**
	comp=Z,1.5nm,0.7s						
BVAR	**Borovoye Array**	**67.08**	**327**	P	**P**	**21 29 49.0**	**+0.7**
BVAR	**Borovoye Array**	**67.08**	**327**	P	**P**	**21 29 49.0**	**+0.7**
	comp=Z,2.9nm,0.8s,baz=120,slow=8.5,SNR=16						
BRVK	**Borovoye**	**67.15**	**327**	*e*P	**P**	**21 29 48.6**	**-0.2**
	comp=Z,3.7nm,0.7s						
ABKAR	**Akbulak array**	**71.93**	**321**	*e*P	**P**	**21 30 17.8**	**-0.6**
	comp=Z,2.6nm,0.6s						
AKTO	**Aktyubinsk**	**73.43**	**322**	P	**P**	**21 30 27.1**	**-0.3**
AKTO	**Aktyubinsk**	**73.43**	**322**	P	**P**	**21 30 27.1**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=94,slow=8.7,SNR=13						
VNDA	**Vanda**	**83.74**	**173**	P	**P**	**21 31 22.8**	**-0.7**
VNDA	**Vanda**	**83.74**	**173**	P	**P**	**21 31 22.8**	**-0.7**
	comp=Z,1.8nm,0.9s,baz=303,slow=5.8,SNR=5.9						
ILAR	**Eielson Array**	**84.80**	**25**	P	**P**	**21 31 30.7**	**+1.4**
ILAR	**Eielson Array**	**84.80**	**25**	P	**P**	**21 31 30.7**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=243,slow=6.0,SNR=5.6						
BR131	**Keskin Array S**	**89.85**	**310**	*e*P	**P**	**21 31 53.0**	**-1.4**
	comp=Z,1.3nm,0.8s						
BRTR	**Keskin Array B**	**89.85**	**310**	P	**P**	**21 31 53.3**	**-1.1**
BRTR	**Keskin Array B**	**89.85**	**310**	P	**P**	**21 31 53.3**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=122,slow=5.6,SNR=9.2						
ARCES	**ARCESS Array B**	**90.16**	**340**	P	**P**	**21 31 55.0**	**-0.1**
ARCES	**ARCESS Array B**	**90.16**	**340**	P	**P**	**21 31 55.0**	**-0.1**
	comp=Z,1nm,1.1s,baz=90,slow=5.4,SNR=5.4						
FINES	**FINESS Array B**	**91.57**	**332**	P	**P**	**21 32 01.9**	**+0.2**
FINES	**FINESS Array B**	**91.57**	**332**	P	**P**	**21 32 01.9**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=64,slow=6.3,SNR=5.8						
AKASG	**Malin Array Be**	**91.67**	**321**	P	**P**	**21 32 01.5**	**-0.9**
AKASG	**Malin Array Be**	**91.67**	**321**	P	**P**	**21 32 01.5**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=71,slow=5.3,SNR=5.8						
TESR		**94.03**	**317**	⇑*i*P	**P**	**21 32 13.6**	**+0.2**
VRI	**Vrincioaia**	**94.09**	**316**	⇑*i*P	P	21 32 18.1	+4.4
MLR	**Muntele Rosu**	**94.70**	**316**	⇑*i*P	**P**	**21 32 15.2**	**-1.5**
BURAR	**Bucovina Array**	**94.79**	**318**	⇑*i*P	**P**	**21 32 17.4**	**+0.4**
BUR08	**Bucovina Ar. S**	**94.80**	**318**	*e*P	**P**	**21 32 16.3**	**-0.7**
CRVS	**Cervenica-Dubn**	**96.95**	**320**	*e*P	**P**	**21 32 26.6**	**-0.1**
NOA	**NORSAR Array B**	**98.52**	**334**	P	**P**	**21 32 33.2**	**-0.3**
NOA	**NORSAR Array B**	**98.52**	**334**	P	**P**	**21 32 33.2**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=67,slow=4.6,SNR=3.4						
VYHS	**Vyhne**	**98.74**	**320**	PDIF	Pdif	21 32 34.9	+0.1
YKA	**Yellowknife Ar**	**99.19**	**24**	P	**Pdif**	**21 32 38.8**	**+2.3**
YKA	**Yellowknife Ar**	**99.19**	**24**	P	**Pdif**	**21 32 38.7**	**+2.3**
	comp=Z,0.1nm,0.6s,baz=295,slow=4.7,SNR=2.4						
TORD	**Torodi Ar. Bea**	**122.86**	**288**	PKP	**PKPdf**	**21 37 52.1**	**-0.1**
TORD	**Torodi Ar. Bea**	**122.86**	**288**	PKP	**PKPdf**	**21 37 52.1**	**-0.1**
	comp=Z,0.5nm,0.9s,baz=48,slow=2.1,SNR=3.9						

ISCJB ***20*** *21:41:52.0±0.3,45.12N±0.02×120.87W±0.02,h24km±3km, Error ellipse: s-maj=3.1km s-min=2.6km az=164.2*

PNSN ***20*** *21:41:52.4,45.13N×120.96W,h16km,MD3.6,Fault plane solution: NP1:*ϕ_{S}*80.00000°,*δ*90.00000°, NP2:* ϕ_{S}*350.00000°,*δ*70.00000°, Principal axes: T Plg14.0000°, Azm307.0000°; P Plg14.0000°, Azm213.0000°;*

NEIC ***20*** *21:41:52.4,45.13N×120.96W,h16km,MD3.6(SEA),After SEA.*

ISC 20 21:41:51.8±1.0,45.13N±0.02×120.95W±0.02,h16km±8km, n101,σ1§12/141,28C-37D,Washington-Oregon border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CROR	**Criterion Ridg**	**0.15**	**192**	P	**Pb**	**21 41 56.8**	**+0.5**
G06A	**Carlson Farm,**	**0.24**	**64**	⇓P	**Pg**	**21 41 58.0**	**+0.7**
VTHM	**Trough**	**0.28**	**79**	⇑P	**Pg**	**21 41 58.5**	**+0.7**
VGB	**Gordon Butte**	**0.41**	**17**	⇓P	**Pg**	**21 42 00.7**	**+0.6**
VFP	**Flag Point**	**0.41**	**298**	⇑P	**Pb**	**21 42 00.9**	**+0.1**
VBEM	**Beaver Butte**	**0.46**	**262**	⇑P	**Pb**	**21 42 01.8**	**+0.2**
HOOD	**Mount Hood Mea**	**0.54**	**291**	⇑P	**Pg**	**21 42 02.6**	**+0.1**
VLL	**Laurance Lake**	**0.62**	**303**	⇑P	**Pg**	**21 42 04.2**	**+0.2**
TDH	**Tom, Dick, Har**	**0.62**	**285**	⇓P	**Pg**	**21 42 04.0**	**0.0**
VIPM	**Ingram Point**	**0.66**	**159**	⇑P	**Pg**	**21 42 05.1**	**+0.3**
GMO	**Grizzlie Mount**	**0.69**	**181**	⇓P	**Pg**	**21 42 05.5**	**+0.1**
BPO	**Bald Peter**	**0.71**	**228**	⇓P	**Pb**	**21 42 06.0**	**0.0**
APM	**Augspurger Mou**	**0.80**	**320**	⇑P	**Pg**	**21 42 07.6**	**+0.2**
GL2	**New Goldendale**	**0.84**	**6**	⇓P	**Pg**	**21 42 08.3**	**+0.3**
JBO	**Jordan Butte**	**0.85**	**67**	⇓P	**Pb**	**21 42 08.4**	**+0.1**
GULW	**Guler Mountain**	**0.92**	**330**	⇑P	**Pb**	**21 42 09.4**	**0.0**
GT2	**Goat Mountain**	**0.94**	**272**	P	**Pb**	**21 42 09.6**	**0.1**
BLTW	**Bickleton**	**0.95**	**34**	⇓P	**Pb**	**21 42 09.9**	**-0.1**
BKCOR	**Black Crater**	**0.99**	**213**	⇓P	**Pb**	**21 42 10.7**	**+0.1**
H04A	**Detroit Lake**	**0.99**	**244**	⇓P	**Pb**	**21 42 10.1**	**-0.5**
F07A	**Phinny Hill Vi**	**1.05**	**43**	⇓P	**Pb**	**21 42 11.5**	**-0.1**
G04A	**Mulino**	**1.09**	**275**	⇑P	**Pb**	**21 42 12.2**	**-0.1**
SSOR	**Sweet Springs**	**1.11**	**256**	⇓P	**Pb**	**21 42 12.8**	**+0.1**
ASR	**Mount Adams--S**	**1.12**	**336**	⇑P	**Pb**	**21 42 12.8**	**-0.1**
PAT2	**Paterson 2**	**1.13**	**47**	⇓P	**Pb**	**21 42 12.9**	**0.0**
PRLK	**Prince Lake**	**1.17**	**219**	⇓P	**Pn**	**21 42 13.7**	**0.0**
HUOR	**Husband**	**1.20**	**213**	P	**Pn**	**21 42 14.0**	**-0.1**
TRW	**Toppenish Ridg**	**1.20**	**13**	⇓P	**Pn**	**21 42 13.9**	**-0.1**
CDFW	**Cedar Flats**	**1.25**	**322**	P	**Pn**	**21 42 14.7**	**-0.1**
F04A	**Amboy**	**1.31**	**308**	⇑P	**Pn**	**21 42 15.6**	**+0.1**
PINOR	**Pine Mountain**	**1.32**	**178**	⇑P	**Pn**	**21 42 15.4**	**-0.1**
JLK	**June Lake**	**1.32**	**321**	P	**Pn**	**21 42 16.0**	**+0.2**
HSR	**South Ridge**	**1.36**	**321**	⇓P	**Pn**	**21 42 17.0**	**+0.7**
ESD	**East Dome**	**1.36**	**322**	⇓P	**Pn**	**21 42 17.0**	**+0.7**
BROR	**Big Rock Looko**	**1.38**	**232**	⇓P	**Pn**	**21 42 16.7**	**+0.3**
SEPW	**September Lobe**	**1.38**	**321**	⇓P	**Pn**	**21 42 17.4**	**+0.7**
LVP	**Lakeview Peak**	**1.39**	**313**	P	**Pn**	**21 42 16.7**	**0.0**
LVP				S	**Sb**	**21 42 35.8**	**+0.7**
SOSW	**Source of Smit**	**1.39**	**324**	⇓P	**Pn**	**21 42 17.0**	**+0.2**
SHW	**Mount Saint He**	**1.40**	**320**	⇑P	**Pn**	**21 42 17.4**	**+0.6**
PRW	**Prosser**	**1.40**	**39**	P	**Pn**	**21 42 17.0**	**+0.3**
G08A	**Pilot Rock**	**1.41**	**83**	P	**Pn**	**21 42 17.0**	**0.0**
STD	**Studebaker Rid**	**1.43**	**322**	P	**Pn**	**21 42 17.5**	**+0.3**
YA2	**Yakima**	**1.43**	**12**	⇑P	**Pn**	**21 42 17.7**	**+0.5**
NCOR	**Newberry Crate**	**1.43**	**186**	P	**Pb**	**21 42 18.2**	**0.0**
FL2	**Flat Top 2**	**1.45**	**318**	P	**Pn**	**21 42 17.8**	**+0.3**
IRO	**Indian Ridge**	**1.46**	**220**	⇓P	**Pn**	**21 42 18.2**	**+0.5**
I07A	**Izee**	**1.47**	**135**	⇑P	**Pn**	**21 42 18.4**	**+0.6**
TDL	**Tradedollar La**	**1.51**	**324**	P	**Pn**	**21 42 18.5**	**+0.1**
BRVW	**Black Rock Val**	**1.51**	**26**	⇓P	**Pn**	**21 42 18.5**	**+0.2**
MXC	**Moxie City**	**1.52**	**17**	⇓P	**Pn**	**21 42 18.3**	**+0.3**
H2OWA	**Red Mountain**	**1.58**	**42**	P	**Pn**	**21 42 19.0**	**-0.1**
RSW	**Rattlesnake Hi**	**1.58**	**36**	P	**Pn**	**21 42 19.3**	**0.0**
HAWA	**Hanford**	**1.60**	**38**	*e*Pn	**Pn**	**21 42 19.1**	**-0.4**
HAWA				*e*Sn	**Sn**	**21 42 40.2**	**+0.2**
SNIWA	**Snively Ranch**	**1.61**	**34**	⇓P	**Pn**	**21 42 19.7**	**+0.1**
E07A	**Sunnyside**	**1.62**	**28**	⇓P	**Pn**	**21 42 19.8**	**0.0**
H2OWA	**Water**	**1.66**	**40**	⇓P	**Pn**	**21 42 20.3**	**+0.1**
MDW	**Midway**	**1.70**	**29**	⇓P

3.0nm,0.6s

MCMT				*e*Sg	**Sg**	**21 44 52.8**	**-3.6**
DLMT	**Dillon**	**5.90**	**85**	*e*Pn	**Pn**	**21 43 19.8**	**+1.1**
DLMT				*e*Sg	**Sg**	**21 44 57.4**	**-3.8**
LRM	**Limekiln Ridge**	**6.01**	**80**	*e*Pn	**Pn**	**21 43 19.5**	**-0.8**
LRM				*e*Sg	**Sg**	**21 45 04.9**	**+0.1**
ELK	**Elko**	**6.06**	**134**	*e*Pn	**Pn**	**21 43 20.6**	**-0.4**
ELK				*e*Sg	**Sg**	**21 45 04.2**	**-2.1**

IDC 20 21:43:12.9±8.6, 36°.99N×96°.31E, h0km, mb1 3.2/5, mb1mx3.1/31, mbtmp3.2/5, ML3.2/5, Error ellipse: s-maj=115.5km s-min=47.3km az=170.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**13.14**	**31**	Pn	Pn	21 46 21.2	+0.3
	0.1nm,0.3s,baz=215,slow=14,SNR=2.6						
MKAR	**Makanchi Array**	**14.30**	**318**	Pn	Pn	21 46 34.0	-2.5
	0.1nm,0.3s,baz=126,slow=14,SNR=7.0						
MKAR				Sn	Sn	21 49 04.3	-12
	0.1nm,0.3s,baz=117,slow=24,SNR=4.1						
AAK	**Ala-Archa**	**17.66**	**295**	P	Pn	21 47 20.7	+0.2
	0.1nm,0.3s,baz=121,slow=5.9,SNR=2.5						
KURBB	**Kurchatov Arra**	**18.65**	**323**	P	P	21 47 30.9	-1.2
	0.0nm,0.3s,baz=135,slow=11,SNR=3.6						
ZALV	**Zalesovo Beam**	**18.73**	**338**	P	P	21 47 32.8	-0.2
	0.1nm,0.3s,baz=153,slow=13,SNR=3.0						

*AUST **20** 21:43:39.6±0.0, 2°.20S×129°.30E, h159km, Error ellipse: s-maj=1.5km s-min=1.1km az=253.0*
*IDC **20** 21:43:55.8±0.8, 3°.99S×129°.85E, h0km, mb4.0/10, mb1 4.1/11, mb1mx4.0/23, mbtmp4.0/11, ML4.3/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/31, Error ellipse: s-maj=47.2km s-min=16.5km az=62.0*
*ISCJB **20** 21:43:58.5±0.4, 4°.21S±0°.04×129°.59E±0°.08, h33km, mb4.0/13, Error ellipse: s-maj=11.9km s-min=5.1km az=159.7*
*DJA **20** 21:43:58.3±0.8, 4°S±7°×12°9E±°, h10km, M4.3/5, mb4.7/1, MLv4.2/5*
*NEIC **20** 21:44:00.3±0.4, 4°.18S×129°.74E, h35km, mb4.1/6, Error ellipse: s-maj=15.3km s-min=5.9km az=71.0*

ISC 20 21:44:00.0±0.6, 4°.32S±0°.06×129°.7E±0°.1, h35km, n47, σ1ŝ46/42, mb4.1/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.27**	**139**	P	**Pn**	**21 44 06.8**	**-0.8**
MSAI	**Masohi**	**1.25**	**320**	P	Pn	21 44 16.4	-4.6
FAKI	**Fak Fak**	**2.87**	**61**	P	**Pn**	**21 44 44.9**	**+1.5**
TLE	**Tual**	**3.27**	**114**	P	Pn	21 44 54.9	+6.1
TLE	**Tual**	**3.27**	**114**	P	Pn	21 44 53.0	+4.1
	baz=4.9,SNR=11						
SWI	**Sorong**	**3.76**	**24**	P	Pn	21 45 00.6	+5.1
LBMI	**Labuha**	**4.28**	**329**	P	Pn	21 45 10.4	+7.7
MTN	**Manton Dam**	**8.59**	**171**	P	Pn	21 46 07.6	+5.7
	baz=11,SNR=4.4						
KDU	**Kakadu**	**8.75**	**162**	P	Pn	21 46 07.8	+3.7
	baz=11,SNR=10						
KAPI	**Kappang**	**9.97**	**266**	LR	LR	21 49 56.9	
	comp=Z,110nm,21.1s,baz=81,slow=36						
FITZ	**Fitzroy Crossi**	**14.27**	**196**	*e*Pn	**Pn**	**21 47 20.9**	**+1.2**
	6.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**14.27**	**196**	Pn	**Pn**	**21 47 21.2**	**+1.5**
	0.2nm,0.3s,baz=8.3,slow=11,SNR=9.1						
FITZ	**Fitzroy Crossi**	**14.27**	**196**	P	**Pn**	**21 47 21.5**	**+1.8**
	baz=16,SNR=4.1						
WRAB	**Tennant Creek**	**16.16**	**164**	*e*Pn	**Pn**	**21 47 45.5**	**+0.8**
	16nm,1.2s						
WRAB				Sn	**Sn**	**21 50 45.4**	**+2.5**
WRA	**Warramunga Arr**	**16.17**	**164**	Pn	**Pn**	**21 47 44.9**	**+0.2**
WRA				Sn	**Sn**	**21 50 39.1**	**-3.9**
WRA	**Warramunga Arr**	**16.17**	**164**	Pn	**Pn**	**21 47 44.9**	**+0.2**
	24nm,0.3s,baz=344,slow=14,SNR=3.9						
WRA				Sn	**Sn**	**21 50 39.1**	**-3.9**
	21nm,0.3s,baz=349,slow=22,SNR=6.2						
SJI	**Sawahan**	**18.18**	**258**	P	P	21 48 21.4	+11
MBWA	**Marble Bar**	**19.36**	**209**	*e*P	**Pn**	**21 48 24.8**	**+0.8**
	11nm,1.1s						
AS31	**Alice Springs**	**19.65**	**169**	*e*P	**Pn**	**21 48 28.5**	**+0.9**
ASAR	**Alice Springs**	**19.66**	**169**	P	**Pn**	**21 48 28.6**	**+1.0**
ASAR				S	**S**	**21 52 04.8**	**-1.2**
ASAR	**Alice Springs**	**19.66**	**169**	P	**Pn**	**21 48 28.6**	**+1.0**
	0.9nm,0.3s,baz=353,slow=10,SNR=49						
ASAR				S	**S**	**21 52 04.8**	**-1.2**
	0.1nm,0.3s,baz=352,slow=20,SNR=3.1						
CTA	**Charters Tower**	**22.47**	**136**	P	**P**	**21 48 58.7**	**+2.3**
CTA	**Charters Tower**	**22.47**	**136**	P	**P**	**21 48 58.7**	**+2.3**
	7.5nm,0.6s,baz=304,slow=13,SNR=13						
CTAO	**Charters Tower**	**22.47**	**136**	*e*P	**P**	**21 48 58.2**	**+1.8**
	6.4nm,0.6s						
STKA	**Stephens Creek**	**29.59**	**159**	P	P	21 50 06.7	+4.8
	1.8nm,0.8s,baz=333,slow=11,SNR=3.3						
CMAR	**Chiang Mai Arr**	**37.85**	**308**	P	**P**	**21 51 14.3**	**+0.6**
CMAR	**Chiang Mai Arr**	**37.85**	**308**	P	**P**	**21 51 14.3**	**+0.6**
	1.0nm,0.6s,baz=133,slow=7.5,SNR=8.3						
CHTO	**Chiang Mai**	**38.05**	**308**	*e*P	**P**	**21 51 15.2**	**-0.2**
	2.2nm,0.7s						
MJAR	**Matsushiro Arr**	**41.41**	**10**	P	**P**	**21 51 40.8**	**-2.3**
MJAR	**Matsushiro Arr**	**41.41**	**10**	P	**P**	**21 51 40.8**	**-2.3**
	1.7nm,0.8s,baz=195,slow=9.9,SNR=4.3						
ULN	**Ulaanbaatar**	**55.65**	**342**	*e*P	**P**	**21 53 31.8**	**-0.9**
SONM	**Songino Array**	**55.83**	**341**	P	**P**	**21 53 34.0**	**0.0**
SONM	**Songino Array**	**55.83**	**341**	P	**P**	**21 53 34.0**	**0.0**
	0.7nm,0.6s,baz=157,slow=7.0,SNR=5.1						
MK31	**Makanchi Array**	**65.85**	**326**	*e*P	**P**	**21 54 41.3**	**-0.7**
MKAR	**Makanchi Array**	**65.85**	**326**	P	**P**	**21 54 42.0**	**-0.1**
MKAR	**Makanchi Array**	**65.85**	**326**	P	**P**	**21 54 42.0**	**-0.1**
	0.9nm,0.4s,baz=116,slow=7.7,SNR=23						
AAK	**Ala-Archa**	**68.33**	**319**	*e*P	**P**	**21 54 58.2**	**+0.1**
AAK	**Ala-Archa**	**68.33**	**319**	P	**P**	**21 54 58.4**	**+0.3**
	0.3nm,0.3s,baz=150,slow=7.2,SNR=3.7						
ZALV	**Zalesovo Beam**	**69.07**	**333**	P	**P**	**21 55 01.3**	**-0.9**
ZALV	**Zalesovo Beam**	**69.07**	**333**	P	**P**	**21 55 01.3**	**-0.9**
	0.9nm,0.8s,baz=118,slow=5.2,SNR=5.5						
KURBB	**Kurchatov Arra**	**70.10**	**328**	P	**P**	**21 55 08.4**	**-0.2**
	2.2nm,0.6s,baz=132,slow=5.5,SNR=32						
KURK	**Kurchatov**	**70.10**	**328**	*e*P	**P**	**21 55 08.1**	**-0.6**
	4.8nm,0.9s						
BVAR	**Borovoye Array**	**75.67**	**328**	P	**P**	**21 55 41.8**	**+0.2**
BVAR	**Borovoye Array**	**75.67**	**328**	P	**P**	**21 55 41.8**	**+0.2**
	1.7nm,0.8s,baz=124,slow=7.2,SNR=10						
ABKAR	**Akbulak array**	**80.25**	**321**	*e*P	**P**	**21 56 06.8**	**-0.3**
	1.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**127.98**	**283**	PKP	**PKPdf**	**22 03 03.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**127.98**	**283**	PKP	**PKPdf**	**22 03 03.1**	**-0.2**
	0.3nm,0.7s,baz=104,slow=0.8,SNR=2.4						

IDC 20 21:47:59.9±1.8, 17°.74S×178°.65W, h557km±21km, mb3.3/7, mb1 3.5/9, mb1mx3.3/21, mbtmp3.4/9, 3C, Error ellipse: s-maj=28.0km s-min=14.5km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.63**	**61**	P	P	21 49 54.3	-0.1
	8.8nm,0.3s,baz=162,slow=3.2,SNR=7.1						
DZM	**Mont Dzumac**	**14.67**	**250**	P	P	21 51 06.7	+0.7
	1.3nm,0.3s,baz=92,slow=20,SNR=9.9						
CTA	**Charters Tower**	**33.25**	**260**	P	P	21 53 50.2	-1.7
	2.9nm,0.3s,baz=90,slow=7.1,SNR=6.6						
STKA	**Stephens Creek**	**38.51**	**241**	P	P	21 54 35.6	+0.5
	12nm,0.5s,baz=91,slow=8.1,SNR=54						
WRA	**Warramunga Arr**	**44.44**	**259**	P	P	21 55 21.5	-0.6
	105nm,0.5s,baz=92,slow=7.6,SNR=4.9						
WRA				PcP	PcP	21 56 53.8	+0.2
	20nm,0.3s,baz=94,slow=3.8,SNR=3.6						
ASAR	**Alice Springs**	**44.62**	**254**	P	P	21 55 23.6	+0.1
	45nm,0.5s,baz=88,slow=8.3,SNR=515						
ASAR				PcP	PcP	21 56 53.8	-0.5
	1.0nm,0.4s,baz=104,slow=3.8,SNR=4.0						
FITZ	**Fitzroy Crossi**	**52.83**	**260**	P	P	21 56 24.6	+0.3
	1.3nm,0.3s,baz=90,slow=3.0,SNR=13						
VNDA	**Vanda**	**60.59**	**185**	P	P	21 57 16.0	-0.5
	0.6nm,0.7s,baz=359,slow=6.9,SNR=3.2						
NVAR	**Mina Array Bea**	**79.46**	**44**	P	P	21 59 10.3	+1.1
	0.5nm,0.6s,baz=219,slow=6.5,SNR=3.7						
MAW	**Mawson**	**83.94**	**200**	P	P	21 59 31.0	-0.2
	1.7nm,0.5s,baz=140,slow=7.5,SNR=4.2						
ILAR	**Eielson Array**	**85.78**	**13**	P	P	21 59 39.1	-1.0
	0.3nm,0.4s,baz=229,slow=5.0,SNR=6.0						
ZALV	**Zalesovo Beam**	**107.96**	**322**	PKiKP	PKiKP	22 05 23.4	-0.9
	0.4nm,0.6s,baz=101,slow=3.7,SNR=3.0						
MKAR	**Makanchi Array**	**108.86**	**314**	PKiKP	PKiKP	22 05 24.8	-1.4
	0.2nm,0.5s,baz=214,slow=1.2,SNR=6.4						
BRTR	**Keskin Array B**	**144.50**	**315**	PKP	PKPdf	22 06 33.6	0.0
	0.7nm,0.5s,baz=129,slow=2.2,SNR=8.3						
DRGR		**146.09**	**333**	∥P	PKPdf	22 06 37.0	+1.0
ARR	**Arges**	**146.30**	**330**	∥P	PKPab	22 06 40.0	-1.0
GERES	**GERESS Array B**	**147.39**	**345**	PKPbc	PKPbc	22 06 41.1	-0.3
	0.7nm,0.5s,baz=35,slow=3.6,SNR=8.8						
VTS	**Vitosha**	**149.03**	**328**	∥P	PKPbc	22 06 46.3	+0.5
TORD	**Torodi Ar. Bea**	**175.42**	**184**	PKPab	PKPab	22 08 46.8	-1.0
	0.6nm,0.9s,baz=175,slow=4.5,SNR=4.2						

*IDC **20** 21:55:22.8±1.0, 3°.91S×130°.00E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.9/20, mbtmp4.0/7, ML4.3/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/31, Error ellipse: s-maj=69.9km s-min=17.7km az=60.0*
*ISCJB **20** 21:55:26.2±0.4, 4°.23S±0°.04×129°.65E±0°.06, h36km, mb4.0/8, Error ellipse: s-maj=9.2km s-min=5.5km az=160.7*
*DJA **20** 21:55:26.2±0.8, 4°S±7°×13°0E±°, h7km±10km, M4.5/7, mb5.4/1, mB5.9/1, MLv4.0/7, Mw(mB)5.5/1*
*NEIC **20** 21:55:27.7±0.6, 4°.17S×129°.73E, h35km, mb4.1/4, Error ellipse: s-maj=25.9km s-min=9.1km az=68.0*
*AUST **20** 21:56:00.3±1.5, 6°.48S×129°.92E, h219km, Error ellipse: s-maj=2.3km s-min=0.9km az=34.0*

ISC 20 21:55:28.0±0.7, 4°.18S±0°.06×129°.68E±0°.07, h36km, n38, σ1ŝ75/40, mb4.0/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.40**	**146**	P	**Pn**	**21 55 34.9**	**-2.2**
MSAI	**Masohi**	**1.12**	**318**	P	**Pn**	**21 55 46.5**	**-0.6**
FAKI	**Fak Fak**	**2.86**	**64**	P	**Pn**	**21 56 11.0**	**0.0**
TLE	**Tual**	**3.37**	**115**	P	**Pn**	**21 56 20.5**	**+2.4**
SWI	**Sorong**	**3.66**	**26**	P	**Pn**	**21 56 22.0**	**0.0**
KMPI	**Kaimana, Papua**	**4.05**	**83**	P	**Pn**	**21 56 28.1**	**+0.7**
LBMI	**Labuha**	**4.14**	**328**	P	**Pn**	**21 56 29.6**	**+0.9**
RKPI	**Ransiki, Papua**	**5.22**	**60**	P	**Pn**	**21 56 43.5**	**0.0**
MTN	**Manton Dam**	**8.72**	**171**	P	**Pn**	**21 57 34.1**	**+2.5**
	baz=6.5,SNR=12						
KDU	**Kakadu**	**8.89**	**162**	P	**Pn**	**21 57 35.2**	**+1.3**
	baz=6.7,SNR=7.2						
KAPI	**Kappang**	**9.93**	**265**	LR	LR	22 01 13.1	
	comp=Z,104nm,21.7s,baz=90,slow=34						
FITZ	**Fitzroy Crossi**	**14.39**	**196**	*e*Pn	**Pn**	**21 58 49.1**	**-0.1**
	3.9nm,0.7s						
FITZ	**Fitzroy Crossi**	**14.39**	**196**	Pn	**Pn**	**21 58 48.8**	**-0.4**
	0.3nm,0.3s,baz=26,slow=11,SNR=9.5						
FITZ				LR	LR	22 04 04.8	
	comp=Z,60nm,20.8s,baz=339,slow=35						
FITZ	**Fitzroy Crossi**	**14.39**	**196**	P	**Pn**	**21 58 49.3**	**+0.1**
	baz=12,SNR=5.6						
WRAB	**Tennant Creek**	**16.30**	**164**	*e*Pn	**Pn**	**21 59 12.2**	**-2.1**
	16nm,1.2s						
WRA	**Warramunga Arr**	**16.31**	**164**	Pn	**Pn**	**21 59 10.1**	**-4.3**
WRA				Sn	**Sn**	**22 02 10.4**	**-3.9**
WRA	**Warramunga Arr**	**16.31**	**164**	Pn	**Pn**	**21 59 10.1**	**-4.3**
	11nm,0.3s,baz=347,slow=12,SNR=2.0						
WRA				Sn	**Sn**	**22 02 10.4**	**-3.9**
	15nm,0.3s,baz=355,slow=18,SNR=2.2						
COEN	**Coen**	**16.48**	**127**	P	**Pn**	**21 59 17.4**	**+0.9**
	baz=15,SNR=8.8						
QIS	**Mount Isa**	**18.93**	**150**	P	**Pn**	**21 59 46.6**	**-0.1**
	baz=17,SNR=5.4						
AS31	**Alice Springs**	**19.79**	**168**	*e*P	**P**	**21 59 55.7**	**+0.3**
ASAR	**Alice Springs**	**19.79**	**168**	P	**P**	**21 59 56.0**	**+0.6**
ASAR				S	**Sn**	**22 03 39.0**	**+0.4**
ASAR	**Alice Springs**	**19.79**	**168**	P	**P**	**21 59 56.0**	**+0.6**
	0.9nm,0.3s,baz=350,slow=10,SNR=37						
ASAR				S	**Sn**	**22 03 39.0**	**+0.4**
	0.1nm,0.3s,baz=351,slow=20,SNR=5.6						
CTA	**Charters Tower**	**22.60**	**136**	P	**P**	**22 00 26.4**	**+0.7**
CTA	**Charters Tower**	**22.60**	**136**	P	**P**	**22 00 26.4**	**+0.7**
	3.8nm,0.6s,baz=316,slow=12,SNR=14						
CTAO	**Charters Tower**	**22.60**	**136**	*e*P	**P**	**22 00 25.1**	**-0.5**
	5.5nm,0.7s						
STKA	**Stephens Creek**	**29.73**	**159**	P	**P**	**22 01 31.6**	**+0.7**
	1.4nm,0.8s,baz=349,slow=10,SNR=3.0						
GSI	**Gunungsitoli**	**32.54**	**279**	S	S	22 07 16.8	+7.6
	baz=33,SNR=4.1						
CMAR	**Chiang Mai Arr**	**37.73**	**308**	P	**P**	**22 02 42.2**	**+1.6**
CMAR	**Chiang Mai Arr**	**37.73**	**308**	P	**P**	**22 02 42.2**	**+1.6**
	1.2nm,0.9s,baz=133,slow=6.7,SNR=7.6						
ULN	**Ulaanbaatar**	**55.51**	**342**	*e*P	**P**	**22 05 00.1**	**+0.5**
	1.0nm,0.5s						
SONM	**Songino Array**	**55.69**	**341**	P	**P**	**22 04 58.3**	**-2.5**
SONM	**Songino Array**	**55.69**	**341**	P	**P**	**22 04 58.3**	**-2.5**
	0.8nm,0.5s,baz=152,slow=6.5,SNR=4.4						
MK31	**Makanchi Array**	**65.72**	**326**	*e*P	**P**	**22 06 09.2**	**+0.2**
MKAR	**Makanchi Array**	**65.72**	**326**	P	**P**	**22 06 09.5**	**+0.4**
MKAR	**Makanchi Array**	**65.72**	**326**	P	**P**	**22 06 09.5**	**+0.4**
	1.1nm,0.7s,baz=113,slow=7.6,SNR=15						
ZALV	**Zalesovo Beam**	**68.94**	**333**	P	**P**	**22 06 29.0**	**-0.2**
ZALV	**Zalesovo Beam**	**68.94**	**333**	P	**P**	**22 06 29.0**	**-0.2**
	1.5nm,0.9s,baz=123,slow=5.3,SNR=5.4						
KURK	**Kurchatov**	**69.97**	**328**	*e*P	**P**	**22 06 35.3**	**-0.3**
	2.8nm,0.8s						

IDC 20 22:05:42.6±3.1, 13°.84S×174°.78E, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.8/18, mbtmp3.9/3, MS3.6/5, Ms1 3.6/5, ms1mx3.3/24, Error ellipse: s-maj=138.0km s-min=35.9km az=139.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**13.05**	**92**	LR	LR	22 12 54.0	
	comp=Z,213nm,19.9s,baz=121,slow=33						
HNR	**Honiara**	**15.18**	**285**	LR	LR	22 13 54.6	
	comp=Z,101nm,21.7s,baz=163,slow=32						
CTA	**Charters Tower**	**27.96**	**253**	LR	LR	22 20 35.0	
	comp=Z,88nm,20.3s,baz=235,slow=32						
RPZ	**Rata Peaks**	**29.94**	**185**	LR	LR	22 21 58.7	
	comp=Z,244nm,20.8s,baz=297,slow=33						
ASAR	**Alice Springs**	**39.80**	**250**	P	P	22 13 17.1	-0.7
	1.1nm,0.8s,baz=78,slow=8.9,SNR=9.6						
ASAR				PcP	PcP	22 15 24.6	+0.4
	0.7nm,1.0s,baz=92,slow=2.8,SNR=4.7						
FITZ	**Fitzroy Crossi**	**47.33**	**258**	LR	LR	22 31 16.6	
	comp=Z,85nm,18.7s,baz=358,slow=32						
CMAR	**Chiang Mai Arr**	**81.33**	**291**	P	P	22 18 02.2	+0.6
	0.9nm,0.7s,baz=132,slow=2.7,SNR=5.6						
ILAR	**Eielson Array**	**83.58**	**16**	P	P	22 18 12.1	-0.3
	1.2nm,0.9s,baz=230,slow=6.2,SNR=14						

IDC 20 22:12:44.5±2.6, 4°.33S×129°.35E, h0km, mb3.5/1, mb1 3.6/2, mb1mx3.3/19, mbtmp3.5/2, ML2.9/1, Error ellipse: s-maj=198.1km s-min=29.2km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.26**	**163**	Pn	Pn	22 16 32.9	-1.7
	0.1nm,0.3s,baz=345,slow=14,SNR=3.7						
ASAR	**Alice Springs**	**19.72**	**168**	P	Pn	22 17 16.6	-0.7
	0.3nm,0.3s,baz=351,slow=10,SNR=12						
MKAR	**Makanchi Array**	**65.65**	**326**	P	P	22 23 30.7	0.0
	0.2nm,0.4s,baz=118,slow=8.1,SNR=6.2						

IDC 20 22:19:02.9±5.7, 3°.33S×132°.07E, h0km, mb3.4/2, mb1 4.0/3, mb1mx3.6/19, mbtmp3.8/3, Error ellipse: s-maj=380.8km s-min=28.4km az=74.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.66**	**173**	Pn	Pn	22 22 55.9	-2.0
	baz=352,slow=13,SNR=0.8						
ASAR	**Alice Springs**	**20.29**	**175**	P	P	22 23 41.3	+0.8
	1.9nm,0.9s,baz=354,slow=11,SNR=9.8						
MKAR	**Makanchi Array**	**66.36**	**325**	P	P	22 29 53.6	0.0
	0.2nm,0.4s,baz=115,slow=8.3,SNR=9.6						

IDC 20 22:37:53.0±3.1, 17°.71S×173°.60W, h0km, mb3.8/5, mb1 4.2/5, mb1mx3.8/20, mbtmp3.8/5, Error ellipse: s-maj=177.7km s-min=25.3km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.16**	**259**	P	P	22 46 42.1	-1.0
	0.4nm,0.4s,baz=96,slow=8.2,SNR=7.2						
ASAR	**Alice Springs**	**49.25**	**254**	P	P	22 46 43.7	0.0
	1.3nm,0.5s,baz=91,slow=8.4,SNR=21						
NVAR	**Mina Array Bea**	**76.17**	**42**	P	P	22 49 43.4	0.0
	0.4nm,0.7s,baz=232,slow=7.2,SNR=3.9						
PDAR	**Pinedale Array**	**84.11**	**42**	P	P	22 50 25.4	-0.8
	0.5nm,0.7s,baz=198,slow=3.0,SNR=4.1						
ILAR	**Eielson Array**	**84.74**	**11**	P	P	22 50 27.9	-0.6
	0.4nm,0.6s,baz=225,slow=6.2,SNR=8.8						
BRTR	**Keskin Array B**	**147.78**	**319**	PKPbc	PKPbc	22 57 40.9	+0.6
	0.5nm,0.8s,baz=30,slow=3.4,SNR=3.8						
GERES	**GERESS Array B**	**148.38**	**351**	PKPbc	PKPbc	22 57 42.0	+0.5
	0.4nm,0.6s,baz=22,slow=1.4,SNR=6.0						

*NIED **20** 22:54:00, 36°.00N×140°.90E, h44km, Mw4.7 Best double couple: M0 1.16000×10^16 NP1:φs17.00000°, δ76.00000°, λ85.00000°. NP2:φs218.00000°, δ15.00000°, λ110.00000°.*
*BJI **20** 22:54:18.2, 35°.93N×140°.82E, h12km, mB4.9/23, mb4.8/43, Ms4.3/37, Ms7 4.2/37*
*TEH **20** 22:54:21.0, 35°.87N×140°.65E, h6km, ML4.9*
*JMA **20** 22:54:24.6±0.1, 35°.90N×140°.84E, h41km±1km, M4.6 Broadband fault plane solution: P waves. NP1: φs0.00000°, δ76.00000°, λ70.00000°. NP2:φs236.00000°, δ25.00000°, λ144.00000°. Principal axes: T Plg55.0000°, Azm244.0000°; N Plg20.0000°, Azm5.0000°; P Plg28.0000°, Azm106.0000°;*
JMA Felt III J1.
*ISCJB **20** 22:54:24.2±0.3, 35°.87N±0°.02×140°.81E±0°.03, h48km±2km, mb4.7/103, MS4.0/36 Error ellipse: s-maj=4.4km s-min=4.1km az=171.5*
*MOS **20** 22:54:24.7±0.7, 36°.27N×140°.61E, h33km, mb5.2/44, Error ellipse: s-maj=10.4km s-min=5.0km az=108.2*
*IDC **20** 22:54:25.2±0.6, 35°.86N×140°.81E, h44km±5km, mb4.3/21, mb1 4.5/24, mb1mx4.4/29, mbtmp4.4/24, ML4.2/3, MS3.9/25, Ms1 3.9/25, ms1mx3.8/42, Error ellipse: s-maj=13.5km s-min=7.9km az=103.0*
*NEIC **20** 22:54:27.4±0.7, 35°.80N×140°.66E, h63km±6km, mb4.8/47, MW4.7(NIED), Error ellipse: s-maj=5.3km s-min=4.4km az=135.0*
NEIC Felt [II] at Tokyo. Also felt Kawasaki, Mito and Tsukuba. Recorded [3 JMA] in Chiba and Ibaraki; [2 JMA] in Tochigi; [1 JMA] in Fukushima, Gumma, Saitama and Tokyo.

ISC 20 22:54:24.4±0.5, 35°.91N±0°.03×140°.83E±0°.04, h35km±3km, n404, σ1ŝ15/450, mb4.8/104, MS4.0/38, 52C-9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.20**	**173**	⇑P	**Pb**	**22 54 31.7**	**+0.4**
CHOJ				S	**Sb**	**22 54 37.7**	**+1.8**
JYT	**Yasato**	**0.60**	**302**	⇓P	**Pb**	**22 54 36.9**	**+0.1**
JYT				S	**Sb**	**22 54 45.4**	**+0.1**
JHO	**Hitachi**	**0.73**	**344**	⇓P	**Pb**	**22 54 38.6**	**-0.3**
JHO				S	**Sb**	**22 54 49.1**	**+0.3**
BSO4	**Boso 4**	**1.00**	**204**	P	**Pb**	**22 54 43.4**	**+0.2**
BSO4				S	**Sn**	**22 54 54.8**	**+0.2**
BSO3	**Boso 3**	**1.13**	**193**	P	**Pb**	**22 54 44.4**	**-1.0**
BSO3				S	**Sn**	**22 54 58.1**	**+0.4**
JAG	**Ashikaga**	**1.23**	**295**	⇓P	**Pn**	**22 54 45.6**	**+0.5**
JAG				S	**Sn**	**22 55 01.8**	**+1.3**
MJAR	**Matsushiro Arr**	**2.21**	**287**	P	**Pn**	**22 55 00.2**	**+1.6**
MJAR	**Matsushiro Arr**	**2.21**	**287**	P	**Pn**	**22 55 00.2**	**+1.6**
	121nm,0.3s,baz=112,slow=8.0,SNR=421						
MJAR				LR	LR	22 56 00.4	
	comp=Z,3μm,19.6s,baz=120,slow=44						
MAJO	**Matsushiro**	**2.21**	**287**	*e*P	**Pn**	**22 55 00.5**	**+1.8**
MAJO				*e*S	**Sn**	**22 55 27.8**	**+3.0**
MAJO	**Matsushiro**	**2.21**	**287**	*e*Pn	**Pn**	**22 55 00.5**	**+1.8**
MAJO				*e*S	**Sn**	**22 55 27.8**	**+3.0**
MAT	**Matsushiro**	**2.21**	**287**	P	**Pn**	**22 55 00.5**	**+1.8**
MAT				S	**Sn**	**22 55 27.3**	**+2.5**
JHJ	**Hachijo jima 2**	**2.91**	**198**	P	**Pn**	**22 55 08.3**	**+0.1**
	108nm,0.3s,baz=266,slow=9.5,SNR=28						
JHJ				S	**Sn**	**22 55 42.4**	**+0.3**
	598nm,0.3s,baz=222,slow=23,SNR=14						
ERM	**Erimo**	**6.36**	**16**	*e*P	**Pn**	**22 55 54.8**	**-0.9**
ERM				*e*		22 57 02.7	
ERM	**Erimo**	**6.36**	**16**	*e*Pn	**Pn**	**22 55 54.8**	**-0.9**
ERM				*e*Sn	**Sn**	**22 57 02.7**	**-4.3**
ASAJ	**Asahikawa**	**8.31**	**9**	P	**Pn**	**22 56 21.3**	**-1.1**
ASAJ				S	**Sn**	**22 57 56.3**	**+1.3**
ASAJ	**Asah

SNY Shenyang 14.67 299 ⇑P P 22 57 55.8 +0.7
SNY pmax pmax
comp=Z,31nm,0.7s
NJ2 Nanjing 18.62 264 eP P 22 58 37.6 -1.3
NJ2 S Sn 23 02 04.0 -2.5
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
NJ2 LR LR
comp=N,600nm,20.3s
NJ2 LR LR
comp=E,580nm,19.7s
NJ2 LR LR
comp=Z,2µm,22.4s
BJI Beijing 19.85 289 P P 22 58 50.3 -1.9
BJI S Sn 23 02 35.3 -0.7
BJI pmax pmax
comp=Z,30nm,0.7s
BJI pmax pmax
comp=Z,210nm,4.3s
BJI LR LR
comp=N,240nm,20.0s
BJI LR LR
comp=E,200nm,22.4s
BJI LR LR
comp=Z,250nm,31.0s
YHNB Yeheng 20.15 242 eP P 22 58 54.5 -1.2
comp=Z,197nm,1.9s
PETK Petropavlovsk- 20.90 29 LR LR 23 06 28.7
comp=Z,108nm,20.1s,baz=224,slow=34
SSLB Suanglung 21.00 240 eP P 22 59 02.6 -2.3
comp=Z,144nm,2.1s
YULB Yu-li 21.02 239 eP P 22 59 01.6 -3.5
WHN Wuhan 22.75 264 eP P 22 59 24.9 +1.3
WHN eS S 23 03 27.3 -2.7
WHN LR LR
comp=Z,1µm,13.0s
HHC Hu-ho-hao-te 23.41 291 eP P 22 59 26.8 -3.5
HHC PP PnPn 22 59 57.3 +0.2
HHC PcP PcP 23 03 16.3 +0.3
HHC S S 23 03 35.6 -5.5
HHC SS SnSn 23 04 20.5 +2.6
HHC ScP ScP 23 06 54.6 +3.3
HHC pmax pmax
comp=Z,37nm,0.5s
HHC pmax pmax
comp=Z,260nm,4.8s
HHC LR LR
comp=N,380nm,11.9s
HHC LR LR
comp=E,450nm,11.1s
HHC LR LR
comp=Z,500nm,12.0s
CLNS Chul'man 23.53 338 eP P 22 59 31.5 +0.2
CLNS pmax pmax
comp=Z,23nm,1.0s
CLNS pmax pmax
comp=N,10.0nm,0.9s
CLNS pmax pmax
comp=E,10.0nm,1.0s
XAN Xi'an 26.15 275 P P 22 59 53.9 -1.6
XAN pP pP 22 59 56.9 -8.5
XAN S S 23 04 19.9 -5.1
XAN pmax pmax
comp=Z,5.0nm,0.9s
XAN pmax pmax
comp=Z,32nm,4.1s
XAN LR LR
comp=N,160nm,20.7s
XAN LR LR
comp=E,51nm,29.0s
XAN LR LR
comp=Z,90nm,25.9s
YAK Yakutsk 27.07 348d iP P 23 00 02.2 -1.1
YAK e*PP pP 23 00 09.5 -3.8
YAK e 23 00 46.0
YAK ePPP PPP 23 00 54.7
YAK e 23 03 23.7
YAK eS S 23 04 40.9 +2.2
YAK e*SS sS 23 04 55.4 +0.2
YAK eSS SnSn 23 05 43.2 -3.6
YAK eSSS SSS 23 06 03.6
YAK e 23 10 53.1
YAK pmax pmax
comp=Z,24nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.1s
YAK pmax pmax
comp=N,14nm,1.1s
YAK pmax pmax
comp=Z,14nm,0.9s
YAK smax smax
comp=E,118nm,3.5s
YAK smax smax
comp=N,61nm,2.3s
YAK MLR MLR
comp=Z,235nm,21.0s
YAK MLR MLR
comp=N,63nm,12.0s
YAK MLR MLR
comp=E,171nm,25.0s
ULN Ulaanbaatar 27.62 306 eP P 23 00 08.1 -0.5
comp=E,23nm,1.4s
SEY Seymchan 27.99 11 iP P 23 00 12.5 +1.0
SONM Songino Array 28.04 306 P P 23 00 12.1 -0.3
SONM Songino Array 28.04 306 P P 23 00 12.1 -0.3
comp=E,6.7nm,0.6s,baz=105,slow=9.0,SNR=36
SONM LR LR 23 11 48.9
comp=E,282nm,18.8s,baz=86,slow=37
FX1 Attu Island--F 28.34 43 LR LR 23 09 42.4
comp=E,89nm,21.3s,baz=99,slow=32
LZH Lanzhou 29.81 281 eP P 23 00 27.0 -1.3
LZH pP pP 23 00 29.8 -8.5
LZH pmax pmax
comp=Z,16nm,1.1s
LZH LR LR
comp=E,1µm,19.8s
LZH LR LR
comp=Z,390nm,13.7s
GYA Guiyang 30.58 262 P P 23 00 35.8 +0.7
GYA PP PnPn 23 01 34.5 -0.4
GYA S S 23 05 34.8 -0.1
GYA SS SnSn 23 07 13.3 +0.1
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,110nm,4.8s
GYA LR LR
comp=N,580nm,17.4s
GYA LR LR
comp=E,460nm,18.0s
GYA LR LR
comp=Z,560nm,17.8s
ZAK Zakamensk 30.61 310 eP P 23 00 33.3 -1.8
ZAK pmax pmax
comp=Z,2.0nm,1.3s
CD2 Chengdu 31.22 272 P P 23 00 40.3 -0.3
CD2 pP pP 23 00 44.8 -5.8
CD2 sP sP 23 00 47.3 -7.6
CD2 PP PnPn 23 01 42.3 -0.8
CD2 PcP PcP 23 03 36.3 +1.6
CD2 S S 23 05 44.5 -0.2
CD2 sS sS 23 05 50.9 -10
CD2 PcS PcS 23 07 19.3 +0.2
CD2 SS SnSn 23 07 28.0 -0.6
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,230nm,5.1s
CD2 LR LR
comp=E,500nm,22.0s
CD2 LR LR
comp=Z,510nm,20.8s
QIZ Qiongzhong 32.04 247 P P 23 00 47.8 -0.1
QIZ S S 23 06 00.4 +2.8
QIZ pmax pmax
comp=Z,10.0nm,1.8s
QIZ pmax pmax
comp=Z,140nm,3.9s
QIZ LR LR
comp=Z,240nm,20.2s
GTA Gaotai 32.46 289 eP P 23 00 51.0 -0.5
GTA pP pP 23 00 55.8 -5.8
GTA sP sP 23 00 58.0 -7.8
GTA S S 23 06 04.4 +0.3
GTA sS sS 23 06 11.3 -9.4
GTA SS SnSn 23 07 59.1 +0.4
GTA pmax pmax
comp=Z,13nm,1.3s
GTA pmax pmax
comp=Z,45nm,4.5s
GTA LR LR
comp=N,89nm,16.9s
GTA LR LR
comp=E,140nm,17.1s
GTA LR LR
comp=Z,140nm,18.1s
KMI Kunming 34.34 262 P P 23 01 06.8 -1.3
KMI pP pP 23 01 08.9 -9.3
KMI PP PnPn 23 02 21.9 -1.2
KMI S S 23 06 33.3 -0.2
KMI SS SnSn 23 08 41.8 -2.8
KMI pmax pmax
comp=Z,9.0nm,0.9s
KMI LR LR
comp=N,250nm,18.0s
KMI LR LR
comp=E,220nm,15.7s
KMI LR LR
comp=Z,250nm,20.2s
BILL Bilibino 35.24 16 eP P 23 01 15.3 +0.1
BILL e 23 03 46.8
BILL pmax pmax
comp=Z,42nm,1.1s
BILL MLR MLR
comp=Z,100nm,19.0s
CMAR Chiang Mai Arr 40.76 256 P P 23 02 01.9 -0.3
CMAR Chiang Mai Arr 40.76 256 P P 23 02 01.9 -0.3
comp=Z,1.3nm,0.5s,baz=48,slow=7.6,SNR=5.7
CMAR LR LR 23 19 52.3
comp=Z,177nm,18.1s,baz=60,slow=38
WMQ Urumqi 40.94 298 P P 23 02 03.8 +0.2
WMQ PP PnPn 23 03 41.0 -1.6
WMQ PcP PcP 23 04 06.0 +2.5
WMQ ScP ScP 23 07 56.0 +5.6
WMQ S S 23 08 15.0 +2.0
WMQ SS SS 23 11 11.0 -4.2
WMQ ScS ScS 23 12 08.0 +2.4
WMQ pmax pmax
comp=Z,35nm,1.0s
WMQ pmax pmax
comp=Z,150nm,5.0s
WMQ LR LR
comp=N,170nm,16.0s
WMQ LR LR
comp=E,97nm,16.0s
WMQ LR LR
comp=Z,130nm,15.0s
LSA Lhasa 41.85 276 P P 23 02 11.3 -0.4
TNA Tin City 42.07 29 eP P 23 02 15.3 +2.9
comp=Z,4.5nm,0.8s
TNA ePcP PcP 23 04 07.0 +0.4
ZAA0 Zalesovo Array 42.33 313 eP P 23 02 14.3 -0.4
ZAA0 ePcP PcP 23 04 07.2 -0.5
ZALV Zalesovo Beam 42.33 313 P P 23 02 14.9 +0.2
ZALV 23 04 06.6
ZALV Zalesovo Beam 42.33 313 P P 23 02 14.9 +0.2
ZALV PcP PcP 23 04 06.5 -1.2
ZALV Zalesovo Beam 42.33 313 P P 23 02 14.9 +0.2
comp=Z,7.5nm,0.4s,baz=101,slow=8.3,SNR=67
ZALV PcP PcP 23 04 06.5 -1.2
comp=Z,3.1nm,0.5s,baz=102,slow=3.7,SNR=6.3
ZALV LR LR 23 20 43.1
comp=Z,125nm,18.3s,baz=103,slow=37
NVS Novosibirsk 43.28 315⇑iP P 23 02 22.3 -0.1
NVS i 23 02 34.0
NVS e 23 04 12.2
NVS eS S 23 08 43.6 -3.6
NVS pmax pmax
comp=N,5.0nm,1.7s
NVS pmax pmax
comp=Z,37nm,1.7s
NVS pmax pmax
comp=E,22nm,1.5s
NVS smax smax
comp=N,47nm,3.8s
NVS smax smax
comp=E,18nm,2.8s
MK31 Makanchi Array 44.33 303 eP P 23 02 30.9 -0.1
MK31 Makanchi Array 44.33 303 eP P 23 02 30.9 -0.1
MKAR Makanchi Array 44.33 303 P P 23 02 31.1 +0.1
MKAR pmax pmax
comp=Z,24nm,0.6s
MKAR MLR MLR
comp=Z,174nm,18.2s
MKAR Makanchi Array 44.33 303 eP P 23 02 31.1 +0.1
MKAR Makanchi Array 44.33 303 P P 23 02 31.1 +0.1
comp=Z,24nm,0.6s,baz=90,slow=9.8,SNR=367
MKAR LR LR 23 21 43.6
comp=Z,174nm,18.2s,baz=127,slow=37
TAPN Taplejung 45.55 275 eP P 23 02 41.3 0.0
comp=Z,17nm,0.4s
ODAN Odare 46.02 274 eP P 23 02 44.2 -0.7
comp=Z,14nm,0.5s
KURK Kurchatov 46.26 309c iP P 23 02 45.8 -0.4
KURK pmax pmax
comp=Z,61nm,1.2s
KURK MLR MLR
comp=Z,195nm,18.0s
KURK Kurchatov 46.26 309 eP P 23 02 45.6 -0.6
comp=Z,39nm,0.6s
KURBB Kurchatov Arra 46.33 309 LR LR 23 22 52.1
comp=Z,115nm,20.5s,baz=75,slow=37
RAMN Ramite 46.62 275 eP P 23 02 48.4 -1.3
comp=Z,37nm,0.7s
GUN Gumba 46.80 276 eP P 23 02 51.7 +0.5
comp=Z,25nm,0.5s
PKI Pulchoki 47.32 276 eP P 23 02 54.2 -1.0
comp=Z,15nm,0.6s
PKIN Phulchoki 47.33 276 eP P 23 02 55.6 +0.4
comp=Z,19nm,0.6s
KKN Kakani 47.34 277 eP P 23 02 55.1 -0.1
comp=Z,13nm,0.4s
KDAK Kodiak Island 48.25 41 P P 23 03 01.0 -0.6
KDAK Kodiak Island 48.25 41 P P 23 03 01.0 -0.6
comp=Z,9.7nm,0.7s,baz=240,slow=7.6,SNR=8.6
DANN Dangsing 48.33 278 eP P 23 03 02.6 -0.4
comp=Z,66nm,0.6s
PPLA Purkeypile 48.36 34 eP P 23 03 03.6 +1.0
comp=Z,25nm,1.5s
KOLN Koldanda 48.70 277 eP P 23 03 05.3 -0.4
PYUN Piuthan 49.05 278 eP P 23 03 08.2 -0.2
comp=Z,108nm,0.8s
TRF Thorofare Moun 49.23 34 eP P 23 03 11.1 +1.9
comp=Z,74nm,2.8s
ULHL Ulahol 49.47 298 P P 23 03 11.8 +0.3
SNR=11
TKM2 Tokmak 2 49.76 299 eP P 23 03 14.5 +0.9
TKM2 pmax pmax
comp=Z,21nm,0.6s
TKM2 Tokmak 2 49.76 299 eP P 23 03 14.5 +0.9
comp=Z,21nm,0.6s
TKM2 Tokmak 2 49.76 299 P P 23 03 14.5 +0.9
SNR=17
SML Sawmill 50.18 36 eP P 23 03 17.6 +1.3
SML pmax pmax
comp=Z,2.0nm,0.8s
SML Sawmill 50.18 36 eP P 23 03 17.6 +1.3
comp=Z,2.2nm,0.8s
KZA Kyzart 50.23 298 P P 23 03 18.8 +1.3
SNR=29
COLA College 50.28 32 eP P 23 03 18.7 +1.7
COLA pmax pmax
comp=Z,10.0nm,0.4s
COLA College 50.28 32 eP P 23 03 18.6 +1.7
comp=Z,9.6nm,0.4s
KBK Karagaybulak 50.29 299 P P 23 03 18.3 +0.6
SNR=18
CHMS Chumysh 50.34 299 P P 23 03 18.1 +0.3
SNR=6.0
KSH Kashi 50.44 295⇑iP P 23 03 22.4 +3.6
KSH PcP PcP 23 04 40.6 +3.9
KSH PP PP 23 05 19.4 +5.0
KSH PcS PcS 23 08 36.3 +2.3
KSH S S 23 10 35.5 +5.5
KSH ScS ScS 23 13 10.6 +3.4
KSH SS SS 23 14 08.4 +4.5
KSH pmax pmax
comp=Z,3.0nm,0.5s
KSH pmax pmax
comp=Z,150nm,3.3s
KSH LR LR
comp=N,170nm,4.2s
KSH LR LR
comp=E,110nm,5.3s
KSH LR LR
comp=Z,190nm,5.3s
USP Ospenovka 50.44 300 P P 23 03 18.9 +0.3
SNR=10
AAK Ala-Archa 50.62 299 iP P 23 03 20.3 +0.2
AAK Ala-Archa 50.62 299 eP P 23 03 19.8 -0.3
comp=Z,10nm,0.9s
AAK Ala-Archa 50.62 299 P P 23 03 20.4 +0.2
SNR=5.8
AAK Ala-Archa 50.62 299 LR LR 23 25 55.3
comp=Z,218nm,20.4s,baz=70,slow=37
ILAR Eielson Array 50.70 32 P P 23 03 20.4 +0.3
ILAR pP pP 23 03 33.1 +2.5
ILAR Eielson Array 50.70 32 P P 23 03 20.4 +0.3
comp=Z,4.2nm,0.7s,baz=266,slow=5.7,SNR=40
ILAR pP pP 23 03 33.1 +2.5
comp=Z,5.9nm,0.7s,baz=268,slow=5.4,SNR=17
BVAR Borovoye Array 50.99 313 LR LR 23 26 10.8
comp=Z,118nm,18.6s,baz=298,slow=37
BRVK Borovoye 51.04 313c iP P 23 03 22.9 0.0
BRVK pmax pmax
comp=Z,12nm,0.8s
BRVK MLR MLR
comp=Z,115nm,16.0s
BRVK Borovoye 51.04 313 eP P 23 03 23.0 +0.1
comp=Z,9.8nm,0.7s
EKS2 Erkin-Say 51.12 299 eP P 23 03 23.5 -0.3
EKS2 e 23 04 37.8
EKS2 pmax pmax
comp=Z,6.0nm,0.8s
EKS2 Erkin-Say 51.12 299 eP P 23 03 23.5 -0.3
comp=Z,5.8nm,0.8s
EKS2 ePcP PcP 23 04 37.8 -1.3
AML Almayashu 51.33 299 P P 23 03 26.1 +0.4
SNR=66
DOT Dot Lake 52.00 33 eP P 23 03 30.3 +0.3
comp=Z,2.5nm,0.7s
BMRM Bremner River 52.04 37 eP P 23 03 31.9 +1.6
comp=Z,8.7nm,1.0s
EGAK Eagle 53.14 32 eP P 23 03 38.8 +0.4
comp=Z,4.9nm,0.8s
KKAR Karatay Array 53.29 301 eP P 23 03 39.8 0.0
KKAR Karatay Array 53.29 301 eP P 23 03 39.8 0.0
FITZ Fitzroy Crossi 55.61 198 eP P 23 03 56.5 -0.2
comp=Z,8.7nm,0.7s
SVE Sverdlovsk 55.68 319⇓eP P 23 03 57.3 +0.4
SVE pmax pmax
comp=Z,29nm,1.0s
WRAB Tennant Creek 55.87 187 eP P 23 03 57.3 -1.3
WRAB pmax pmax
comp=Z,17nm,0.9s
WRAB Tennant Creek 55.87 187 eP P 23 03 57.3 -1.3
comp=Z,17nm,0.9s
WRA Warramunga Arr 55.88 187 P P 23 03 57.4 -1.4
WRA Warramunga Arr 55.88 187 P P 23 03 57.4 -1.4
comp=Z,13nm,0.8s,baz=3.1,slow=7.6,SNR=130
ARU Arti 56.89 319c iP P 23 04 05.4 -0.2
ARU 23 04 59.5
ARU 23 06 11.0
ARU S S 23 11 59.9 +3.2
ARU SS SS 23 15 36.2 -8.5
ARU pmax pmax
comp=Z,37nm,1.0s
KBL Kabul 57.38 291 eP P 23 04 09.1 -0.5
KBL pmax pmax
comp=Z,6.0nm,0.6s
KBL Kabul 57.38 291 eP P 23 04 09.1 -0.5
comp=Z,6.2nm,0.6s
HYB Hyderabad 57.70 269 iP P 23 04 10.5 -1.4
ABKAR Akbulak array 58.31 311 eP P 23 04 15.5 -0.1
AS31 Alice Springs 59.61 187 eP P 23 04 24.0 -0.9
ASAR Alice Springs 59.61 187 P P 23 04 24.1 -0.8
ASAR Alice Springs 59.61 187 P P 23 04 24.1 -0.8
comp=Z,5.0nm,0.8s,baz=14,slow=7.9,SNR=50
MBWA Marble Bar 60.17 203 eP P 23 04 27.7 -1.0
comp=Z,19nm,0.8s
POO Poona 60.94 273 ex P 23 04 31.0 -3.3
KBS Kingsbay 61.68 350⇑eP P 23 04 39.3 +1.0
KBS pmax pmax
comp=Z,33nm,2.5s
TMCR Tamitsa 63.51 331 eP P 23 04 42.1 -8.6
TMCR pmax pmax
comp=Z,28nm,1.2s
APA Apatity 63.52 336⇑eP P 23 04 51.0 +0.3
IMOG Moghan 63.90 297 eP P 23 04 55.3 +1.1
IKRD Kardeh 64.20 298 eP P 23 04 51.8 -4.2
KEV Kevo 64.33 339 eP P 23 04 55.3 -0.7
KEV pmax pmax
comp=Z,7.0nm,0.8s
KEV Kevo 64.33 339 ep P 23 04 55.3 -0.7
comp=Z,7.2nm,0.8s
ISFR Sfrayin 64.44 298 eP P 23 04 58.3 +0.6
ARCES ARCESS Array B 64.88 339 P P 23 04 59.4 -0.3
ARCES ARCESS Array B 64.88 339 P P 23 04 59.4 -0.3
comp=Z,6.7nm,0.7s,baz=55,slow=8.5,SNR=26
ARCES LR LR 23 36 20.2
comp=Z,83nm,19.2s,baz=35,slow=39
YKA Yellowknife Ar 65.02 30 P P 23 05 00.8 +0.1
YKA Yellowknife Ar 65.02 30 P P 23 05 00.7 +0.1
comp=Z,1.1nm,0.7s,baz=302,slow=6.7,SNR=21
IDAH Dahanechah 65.05 293 eP P 23 05 01.0 -0.7
JOF Joensuu 66.73 332 eP P 23 05 10.5 -1.1
JOF pmax pmax
comp=Z,6.0nm,0.4s
JOF Joensuu 66.73 332 ep P 23 05 10.5 -1.1
comp=Z,6.3nm,0.4s
FORT Forrest 67.41 192 eP P 23 05 15.1 -1.1
comp=Z,29nm,0.6s
STKA Stephens Creek 67.43 179 P P 23 05 15.2 -1.1
STKA PcP PcP 23 05 44.2 +0.6
STKA Stephens Creek 67.43 179 P P 23 05 15.2 -1.1
comp=Z,2.7nm,0.7s,baz=325,slow=6.6,SNR=6.0
STKA PcP PcP 23 05 44.2 +0.6
comp=Z,1.8nm,0.6s,baz=325,slow=14,SNR=3.3
IGLO Ghaloghah 67.66 300 eP P 23 05 18.8 +0.5
VRHR Novokhopersk 68.20 318 eP P 23 05 19.4 -1.7
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.7s
OBN Obninsk 68.72 323⇓eP P 23 05 24.3 +0.1
OBN e 23 05 35.7
OBN pmax pmax
comp=Z,15nm,1.7s
OBN MLR MLR
comp=Z,100nm,15.0s
IBAF Bafgh 68.80 294 eP P 23 05 25.1 -0.3
KAF Kangasniemi 69.09 333 eP P 23 05 24.9 -1.6
KAF pmax pmax
comp=Z,7.0nm,0.7s
KAF Kangasniemi 69.09 333 ep P 23 05 24.9 -1.6
comp=Z,7.3nm,0.7s
IDMV Damavand 69.38 299 eP P 23 05 29.5 +0.4
VSR Storozhevoye 69.47 319 eP P 23 05 28.1 -0.9
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VORD Divnogorie 69.53 319 eP P 23 05 28.6 -0.8
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
VORD pmax pmax
comp=Z,7.0nm,0.6s
FINES FINESS Array B 69.59 332 P P 23 05 29.6 +0.1
FINES FINESS Array B 69.59 332 P P 23 05 29.6 +0.1
comp=Z,8.7nm,0.8s,baz=83,slow=6.3,SNR=20
FINES LR LR 23 37 46.0
comp=Z,72nm,19.1s,baz=314,slow=37
IGZV Ghazvin 70.25 301 eP P 23 05 34.9 +0.5
IZEF Zefreh 70.52 297 eP P 23 05 36.3 +0.2
IKLH Kolahrood 70.84 298 eP P 23 05 38.2 +0.1
DGRG David-gareji 70.91 308 P P 23 05 38.5 +0.4
IRAZ Razeghan 70.95 300 eP P 23 05 38.2 -0.5
ZEI Tsey 71.16 309 eP P 23 05 38.7 -1.1
ZEI pmax pmax
comp=Z,7.0nm,0.9s

TBLG	**Delisi**	**71.17 308**	*e*P	**P**	**23 05 39.2**	**-0.4**
TBLG	**Delisi**	**71.17 308**	P	**P**	**23 05 39.2**	**-0.4**
ISRB	**Sarab**	**71.27 303**	*e*P	**P**	**23 05 40.6**	**+0.1**
KBZ	**Khabaz**	**71.28 311**	P	**P**	**23 05 40.8**	**+0.6**
KBZ	**Khabaz**	**71.28 311**	P	**P**	**23 05 40.8**	**+0.6**
KBZ	**Khabaz**	**71.28 311**	P	**P**	**23 05 40.8**	**+0.6**
	comp=Z,7.9nm,0.8s,baz=46,slow=2.2,SNR=22					
KBZ			LR	LR	23 43 41.2	
	comp=Z,38nm,18.9s,baz=316,slow=42					
KIV	**Kislovodsk**	**71.29 311**	*c*P	**P**	**23 05 40.3**	**-0.1**
KIV			*e*		23 05 50.9	
KIV			*e*S	S	23 13 48.3	-7.2
KIV			*e*		23 15 16.7	
KIV			pmax	pmax		
	comp=Z,30nm,1.2s					
KIV			MLR	MLR		
	comp=Z,100nm,18.0s					
IHRS	**Heris**	**71.44 304**	*e*P	**P**	**23 05 41.1**	**-0.5**
ONI	**Oni**	**71.53 309**	P	**P**	**23 05 42.8**	**+0.9**
IPIR	**Pirpir**	**71.67 297**	*e*P	**P**	**23 05 43.7**	**+0.6**
GNI	**Garni**	**72.00 307**	*e*P	**P**	**23 05 45.0**	**+0.2**
	comp=Z,13nm,0.9s					
GNI	**Garni**	**72.00 307**	LR	LR	23 40 08.1	
	comp=Z,86nm,18.7s,baz=98,slow=38					
ITBZ	**Tabriz**	**72.08 304**	*e*P	**P**	**23 05 45.0**	**-0.4**
IMRD	**Marand**	**72.12 305**	*e*P	**P**	**23 05 45.7**	**+0.1**
AKH	**Akhalkalaki**	**72.14 308**	P	**P**	**23 05 46.3**	**+0.7**
IAZR	**Azarshahr**	**72.49 304**	*e*P	**P**	**23 05 48.2**	**+0.3**
JTMT	**Jette**	**73.14 43**	*e*P	**P**	**23 05 52.6**	**+1.1**
ILIN	**Lien**	**73.28 301**	*e*P	**P**	**23 05 52.1**	**-0.5**
IKOM	**Komasi**	**73.29 300**	*e*P	**P**	**23 05 51.7**	**-0.9**
DAGI	**Agillar**	**73.32 309**	*i* P	**P**	**23 05 52.9**	**+0.3**
DBAD	**Bademkaya**	**73.49 309**	*i* P	**P**	**23 05 53.5**	**-0.1**
DDEM	**Demirkent**	**73.52 309**	*i* P	**P**	**23 05 53.5**	**-0.3**
IVIS	**Veis**	**73.56 301**	*e*P	**P**	**23 05 53.7**	**-0.5**
TUTA	**Tutak**	**73.65 307**	*i* P	**P**	**23 05 55.7**	**+0.9**
IDHR	**Dehrash**	**73.79 301**	*e*P	**P**	**23 05 54.9**	**-0.7**
SLMT	**Seeley Lake**	**73.81 43**	*e*P	**P**	**23 05 56.4**	**+0.7**
IGHG	**Ghaleghazi**	**73.87 301**	*e*P	**P**	**23 05 55.4**	**-0.7**
HOMI	**Horasan**	**73.89 308**	*i* P	**P**	**23 05 56.4**	**+0.2**
BEKR	**Beckworth**	**73.92 52**	*e*P	**P**	**23 05 57.5**	**+1.3**
	comp=Z,1.3nm,0.8s					
HAKT	**HAKKARI**	**74.07 305**	*i* P	**P**	**23 05 57.1**	**-0.1**
TATV	**Tatvan**	**74.50 306**	*i* P	P	23 05 55.7	-4.0
AKASG	**Malin Array Be**	**74.90 322**	P	**P**	**23 06 00.7**	**-0.7**
AKASG	**Malin Array Be**	**74.90 322**	P	**P**	**23 06 00.7**	**-0.7**
AKASG	**Malin Array Be**	**74.90 322**	P	**P**	**23 06 00.7**	**-0.7**
	comp=Z,5.4nm,0.5s,baz=47,slow=5.7,SNR=34					
AKASG			LR	LR	23 41 56.7	
	comp=Z,196nm,19.2s,baz=80,slow=38					
FFC	**Flin Flon**	**74.91 32**	*i* P	**P**	**23 06 02.4**	**+0.9**
FFC	**Flin Flon**	**74.91 32**	*e*P	**P**	**23 06 01.2**	**-0.3**
AK01	**Malin Array Si**	**74.91 322**	*e*P	**P**	**23 06 00.4**	**-1.1**
AK01			*e*		23 06 13.8	
KIEV	**Kiev**	**74.91 322**	*e*P	**P**	**23 06 01.0**	**-0.5**
KIEV			pmax	pmax		
	comp=Z,10.0nm,0.7s					
KIEV	**Kiev**	**74.91 322**	*e*P	**P**	**23 06 01.0**	**-0.5**
	comp=Z,10nm,0.7s					
AK02	**Malin Array Si**	**74.94 322**	*e*P	**P**	**23 06 00.9**	**-0.7**
NB2	**NORSAR Subarra**	**75.04 337**	P	**P**	**23 06 01.7**	**-0.5**
	comp=Z,6.6nm,0.7s,baz=41,slow=5.9					
NOA	**NORSAR Array B**	**75.04 337**	P	**P**	**23 06 01.9**	**-0.3**
NOA			pP	**PcP**	**23 06 14.4**	**-1.4**
NOA	**NORSAR Array B**	**75.04 337**	P	**P**	**23 06 01.9**	**-0.3**
	comp=Z,5.9nm,1.0s,baz=47,slow=5.2,SNR=28					
NOA			pP	**PcP**	**23 06 14.4**	**-1.4**
	comp=Z,3.7nm,0.7s,baz=40,slow=5.8,SNR=6.2					
NOA			LR	LR	23 41 52.4	
	comp=Z,114nm,18.6s,baz=0.0,slow=38					
LRM	**Limekiln Ridge**	**75.28 44**	*e*P	**P**	**23 06 05.5**	**+1.4**
DLMT	**Dillon**	**75.47 44**	*e*P	P	23 06 07.7	+2.6
MIB	**Mutribah**	**75.77 296**	*e*P	**P**	**23 06 05.9**	**-0.9**
MIB			AMb	AMB	23 06 07.1	
	comp=Z,23nm,1.6s					
SIM	**Simferopol'**	**75.80 315**	*e*P	**P**	**23 06 06.8**	**0.0**
SIM			pmax	pmax		
	comp=Z,14nm,0.7s					
SIM			MLR	MLR		
	comp=Z,40nm,15.1s					
BOZ	**Bozeman (W)**	**75.85 44**	*e*P	**P**	**23 06 08.4**	**+1.2**
BOZ	**Bozeman (W)**	**75.85 44**	*e*P	**P**	**23 06 08.4**	**+1.2**
KBD	**Kabd**	**75.86 296**	*e*P	**P**	**23 06 06.8**	**-0.5**
KBD			AMb	AMB	23 06 08.2	
	comp=Z,14nm,0.7s					
NVAR	**Mina Array Bea**	**76.04 53**	P	**P**	**23 06 09.1**	**+0.6**
NVAR	**Mina Array Bea**	**76.04 53**	P	**P**	**23 06 09.1**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=289,slow=5.5,SNR=9.3					
RDF	**Al-Radifah**	**76.10 296**	*e*P	**P**	**23 06 08.2**	**-0.5**
RDF			AMb	AMB	23 06 10.8	
	comp=Z,31nm,0.7s					
MARD	**Mardin**	**76.14 306**	*i* P	**P**	**23 06 09.7**	**+0.6**
NAY	**Al-Naaiem**	**76.14 296**	*e*P	**P**	**23 06 08.1**	**-0.9**
NAY			AMb	AMB	23 06 11.2	
	comp=Z,17nm,0.6s					
ERBA	**Erbaa**	**76.76 311**	*i* P	**P**	**23 06 12.6**	**+0.2**
MALT	**Malatya**	**77.09 308**	*e*P	**P**	**23 06 13.8**	**-0.6**
MALT			pmax	pmax		
	comp=Z,5.0nm,1.0s					
MALT	**Malatya**	**77.09 308**	*e*P	**P**	**23 06 13.8**	**-0.6**
	comp=Z,4.7nm,1.0s					
MALT	**Malatya**	**77.09 308**	||*i*P	**P**	**23 06 15.3**	**+0.9**
CTKT	**Corum**	**78.00 312**	*i* P	**P**	**23 06 18.4**	**-1.1**
GZT	**Gaziantep**	**78.21 308**	*i* P	**P**	**23 06 19.0**	**-1.6**
HWUT	**Hardware Ranch**	**78.34 47**	*e*P	**P**	**23 06 22.6**	**+1.2**
	comp=Z,2.8nm,0.9s					
ILGA	**Ilgaz**	**78.39 312**	*i* P	**P**	**23 06 21.6**	**-0.1**
DUG	**Dugway**	**78.45 49**	*e*P	**P**	**23 06 23.3**	**+1.4**
DUG			pmax	pmax		
	comp=Z,3.0nm,0.9s					
DUG	**Dugway**	**78.45 49**	*e*P	**P**	**23 06 23.3**	**+1.4**
	comp=Z,2.8nm,0.9s					
KWP	**Kalwaria Pacla**	**78.77 324**	*e*P	**P**	**23 06 23.6**	**+0.3**
KWP			pmax	pmax		
	comp=Z,14nm,0.9s					
KWP	**Kalwaria Pacla**	**78.77 324**	*e*P	**P**	**23 06 23.6**	**+0.3**
	comp=Z,14nm,0.9s					
KWP	**Kalwaria Pacla**	**78.77 324**	||*i*P	**P**	**23 06 23.9**	**+0.6**
KWP	**Kalwaria Pacla**	**78.77 324**	*e*P	**P**	**23 06 23.7**	**+0.3**
PDAR	**Pinedale Array**	**78.79 45**	P	**P**	**23 06 23.7**	**-0.2**
PDAR	**Pinedale Array**	**78.79 45**	P	**P**	**23 06 23.7**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=80,slow=3.3,SNR=12					
ANDN	**Andirin**	**78.86 308**	*i* P	**P**	**23 06 24.7**	**+0.5**
BUR08	**Bucovina Ar. S**	**78.89 322**	*e*P	**P**	**23 06 23.9**	**-0.3**
TESR		**78.89 320**	||*i*P	**P**	**23 06 23.9**	**-0.2**
BURAR	**Bucovina Array**	**78.90 322**	||*i*P	**P**	**23 06 24.5**	**+0.3**
CFR	**Carcaliu**	**78.97 318**	||*i*P	**P**	**23 06 24.0**	**-0.5**
AVNT	**Avonos**	**79.07 310**	*i* P	**P**	**23 06 25.2**	**-0.2**
PETR		**79.11 319**	||*i*P	**P**	**23 06 25.5**	**+0.3**
BR131	**Keskin Array S**	**79.24 311**	*e*P	**P**	**23 06 25.6**	**-0.7**
	comp=Z,2.1nm,0.7s					
BRTR	**Keskin Array B**	**79.24 311**	P	**P**	**23 06 26.2**	**-0.1**
BRTR	**Keskin Array B**	**79.24 311**	P	**P**	**23 06 26.2**	**-0.1**
	comp=Z,3.2nm,0.7s,baz=101,slow=3.9,SNR=23					
BRTR			LR	LR	23 48 59.7	
	comp=Z,30nm,18.0s,baz=181,slow=41					
VRI	**Vrincioaia**	**79.28 320**	||*i*P	**P**	**23 06 26.0**	**-0.2**
KOLS	**Kolonicke sedl**	**79.45 324**	*e*P	**P**	**23 06 27.0**	**-0.1**
KOLS			pmax	pmax		
	comp=Z,3.0nm,1.1s					
KOLS	**Kolonicke sedl**	**79.45 324**	*e*P	**P**	**23 06 27.0**	**-0.1**
KOLS			*e*PCP	**pP**	**23 06 36.5**	**-1.5**
UZH	**Uzhgorod**	**79.65 324**	*e*P	**P**	**23 06 28.3**	**+0.2**
UZH			*e*		23 06 34.3	
UZH			*e*		23 06 43.0	
OJC	**Ojcow**	**79.71 326**	*e*P	**P**	**23 06 28.8**	**+0.4**
OJC	**Ojcow**	**79.71 326**	*e*P	**P**	**23 06 28.6**	**+0.2**
OJC	**Ojcow**	**79.71 326**	*e*P	**P**	**23 06 28.8**	**+0.4**
CRVS	**Cervenica-Dubn**	**79.86 324**	*e*P	**P**	**23 06 29.1**	**-0.2**
CRVS			pmax	pmax		
	comp=Z,32nm,2.5s					
CRVS	**Cervenica-Dubn**	**79.86 324**	*e*P	**P**	**23 06 29.1**	**-0.2**
CRVS			*e*PCP	**PcP**	**23 06 36.9**	**0.0**
ISR	**Istrita**	**79.87 319**	||*i*P	**P**	**23 06 30.1**	**+0.6**
TRPA	**Tarpa**	**79.88 323**	||*i*P	**P**	**23 06 29.7**	**+0.3**
NIE	**Niedzica**	**80.04 325**	*e*P	**P**	**23 06 31.3**	**+1.0**
NIE	**Niedzica**	**80.04 325**	*e*P	**P**	**23 06 31.3**	**+1.0**
SRU	**San Rafael**	**80.51 48**	*e*P	**P**	**23 06 34.3**	**+1.0**
SRU	**San Rafael**	**80.51 48**	*e*P	**P**	**23 06 34.2**	**+1.0**
ARR	**Arges**	**80.71 320**	||*i*P	**P**	**23 06 34.6**	**+0.6**
OKC	**Ostrava-Krasne**	**80.73 326**	*e*P	**P**	**23 06 34.0**	**+0.1**
OKC	**Ostrava-Krasne**	**80.73 326**	*e*P	**P**	**23 06 34.0**	**+0.1**
MORC	**Moravsky Berou**	**81.04 327**	*e*P	**P**	**23 06 35.7**	**+0.1**
MORC			pmax	pmax		
	comp=Z,3.0nm,0.8s					
MORC	**Moravsky Berou**	**81.04 327**	*e*P	**P**	**23 06 35.7**	**+0.1**
	comp=Z,2.5nm,0.8s					
MORC	**Moravsky Berou**	**81.04 327**	||*i*P	**P**	**23 06 35.8**	**+0.1**
DPC	**Dobruska-Polom**	**81.16 328**	*e*P	**P**	**23 06 36.7**	**+0.4**
DPC			*e*		23 06 48.8	
DPC	**Dobruska-Polom**	**81.16 328**	*e*P	**P**	**23 06 36.9**	**+0.6**
DPC	**Dobruska-Polom**	**81.16 328**	*e*P	**P**	**23 06 36.7**	**+0.4**
DPC			*ex*	x	23 06 48.8	
KRLC	**Kraliky**	**81.16 327**	*e*P	**P**	**23 06 36.7**	**+0.4**
KRLC	**Kraliky**	**81.16 327**	*e*P	**P**	**23 06 36.7**	**+0.4**
UPC	**Upice**	**81.18 328**	*e*P	**P**	**23 06 36.7**	**+0.4**
UPC	**Upice**	**81.18 328**	*e*P	**P**	**23 06 36.7**	**+0.4**
PSZ	**Piszkesteto**	**81.30 324**	||*i*P	**P**	**23 06 38.1**	**+1.0**
VYHS	**Vyhne**	**81.38 325**	*e*P	**P**	**23 06 37.9**	**+0.4**
VYHS			pmax	pmax		
	comp=Z,2.0nm,0.8s					
VYHS	**Vyhne**	**81.38 325**	*e*P	**P**	**23 06 37.9**	**+0.4**
VYHS			*e*PCP	**PcP**	**23 06 43.1**	**-0.4**
PVCC	**Panska Ves**	**81.78 329**	*e*P	**P**	**23 06 39.8**	**+0.3**
PVCC	**Panska Ves**	**81.78 329**	*e*P	**P**	**23 06 39.8**	**+0.3**
BRG	**Berggiesshubel**	**81.78 329**	*e*P	**P**	**23 06 39.5**	**0.0**
	comp=Z,5.9nm,0.9s					
BRG			*i*		23 06 54.3	
	comp=Z,4.7nm,1.0s					
BRG	**Berggiesshubel**	**81.78 329**	*e*P	**P**	**23 06 39.5**	**0.0**
BRG			*i*		23 06 54.3	
BRG			pmax	pmax		
	comp=Z,3.0nm,0.9s					
BRG			pmax	pmax		
	comp=Z,6.0nm,1.0s					
CLL	**Collm**	**81.83 330**	||*i*P	**P**	**23 06 39.4**	**-0.4**
CLL			pmax	pmax		
	comp=Z,9.0nm,0.8s					
SMOL	**Smolenice**	**82.01 326**	*e*P	**P**	**23 06 41.7**	**+0.9**
SMOL	**Smolenice**	**82.01 326**	*e*P	**P**	**23 06 41.7**	**+0.9**
PRU	**Pruhonice**	**82.19 328**	*e*P	**P**	**23 06 41.8**	**+0.1**
PRU	**Pruhonice**	**82.19 328**	*e*P	**P**	**23 06 41.8**	**+0.1**
MMAI	**Mount Meron Ar**	**82.23 305**	LR	LR	23 47 00.6	
	comp=Z,86nm,19.4s,baz=10.0,slow=38					
TREC	**Trest**	**82.30 327**	*e*P	**P**	**23 06 42.4**	**+0.1**
TREC	**Trest**	**82.30 327**	*e*P	**P**	**23 06 42.4**	**+0.1**
CSS	**Prodhromos**	**82.38 308**	*e*P	**P**	**23 06 42.9**	**-0.1**
	comp=Z,4.4nm,0.7s					
CONA	**Conrad Observa**	**83.15 326**	||*i*PcP	**P**	**23 06 47.6**	**+0.8**
	comp=Z,8.6nm,1.4s					
CONA	**Conrad Observa**	**83.15 326**	||*i*P	**P**	**23 06 47.6**	**+0.8**
	comp=Z,8.6nm,1.4s					
KHC	**Kasperske Hory**	**83.25 328**	*e*P	**P**	**23 06 47.3**	**0.0**
KHC			*e*		23 07 00.1	
KHC	**Kasperske Hory**	**83.25 328**	*e*P	**P**	**23 06 47.3**	**0.0**
	comp=Z,2.9nm,0.8s					
KHC	**Kasperske Hory**	**83.25 328**	*e*P	**P**	**23 06 47.3**	**0.0**
KHC			*ex*	x	23 07 00.1	
VTS	**Vitosha**	**83.35 319**	||*i*P	**P**	**23 06 48.4**	**+0.4**
GERES	**GERESS Array B**	**83.42 328**	P	**P**	**23 06 47.9**	**-0.3**
GERES			pP	**pP**	**23 07 00.9**	**+1.7**
GERES	**GERESS Array B**	**83.42 328**	P	**P**	**23 06 47.9**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=38,slow=5.7,SNR=17					
GERES			pP	**pP**	**23 07 00.9**	**+1.7**
	comp=Z,1.0nm,0.5s,baz=40,slow=5.6,SNR=5.9					
GERES			LR	LR	23 48 04.9	
	comp=Z,68nm,19.2s,baz=71,slow=39					
PMOR	**Pomariorio Ree**	**84.17 113**	*e*T	T	00 39 22.2	
	comp=Z,5.9nm,0.2s					
PERS	**Pernice**	**84.46 326**	*i* P	**P**	**23 06 53.1**	**-0.4**
SOKA	**Soboth**	**84.46 326**	||*i*P	**P**	**23 06 53.4**	**-0.2**
	comp=Z,9.5nm,1.1s					
SOKA	**Soboth**	**84.46 326**	||*i*P	**P**	**23 06 53.4**	**-0.2**
	comp=Z,9.5nm,1.1s					
PPT	**Papeete**	**84.56 116**	LR	LR	23 41 55.1	
	comp=Z,124nm,19.7s,baz=340,slow=34					
PPT2	**Papeete2**	**84.57 116**	*e*LR	LR	23 33 33.4	
	comp=Z,174nm,26.0s					
VAY	**Valandovo**	**84.57 318**	*e*P	**P**	**23 06 53.6**	**-0.5**
KBA	**Koelnbreinsper**	**84.92 327**	||*i*P	**P**	**23 06 56.5**	**+0.6**
KBA			pmax	pmax		
	comp=Z,4.0nm,0.8s					
KBA	**Koelnbreinsper**	**84.92 327**	||*i*PcP	**P**	**23 06 56.5**	**+0.6**
	comp=Z,4.0nm,0.8s					
KBA	**Koelnbreinsper**	**84.92 327**	||*i*P	**P**	**23 06 56.5**	**+0.6**
	comp=Z,4.3nm,0.8s					
LJU	**Ljubljana**	**85.17 326**	*i* P	**P**	**23 06 56.4**	**-0.6**
BOJS	**Bojanci**	**85.24 325**	*i* P	**P**	**23 06 57.2**	**-0.2**
JAVS	**Javornik**	**85.50 326**	*i* P	**P**	**23 06 57.3**	**-1.5**
BFO	**Black Forest**	**86.05 330**	*e*P	**P**	**23 07 00.2**	**-1.2**
BFO			*e*		23 07 13.6	
BFO			pmax	pmax		
	comp=Z,4.0nm,0.7s					
BFO	**Black Forest**	**86.05 330**	*e*P	**P**	**23 07 00.1**	**-1.2**
	comp=Z,4.0nm,0.7s					
BFO			*e*		23 07 13.6	
CDF	**Champ du Feu**	**86.40 331**	||*i*P	**P**	**23 07 02.7**	**-0.5**
	comp=Z,10nm,0.8s					
CDF	**Champ du Feu**	**86.40 331**	||*i*P	**P**	**23 07 02.7**	**-0.5**
CDF			pmax	pmax		
	comp=Z,10.0nm,0.8s					
CDF	**Champ du Feu**	**86.40 331**	||*i*P	**P**	**23 07 02.7**	**-0.5**
	comp=Z,10nm,0.8s					
SCHQ	**Schefferville**	**86.55 16**	P	**P**	**23 07 04.2**	**+0.5**
SCHQ	**Schefferville**	**86.55 16**	P	**P**	**23 07 04.2**	**+0.5**
	comp=Z,35nm,0.8s,baz=359,slow=7.6,SNR=4.3					
PAGF	**Fort de Pagny**	**86.89 332**	*e*P	**P**	**23 07 05.2**	**-0.3**
PAGF	**Fort de Pagny**	**86.89 332**	*e*P	**P**	**23 07 05.2**	**-0.3**
HINF	**Hinteralfeld**	**87.05 331**	*e*P	**P**	**23 07 04.6**	**-1.7**
HINF	**Hinteralfeld**	**87.05 331**	*e*P	**P**	**23 07 04.6**	**-1.7**
HINF	**Hinteralfeld**	**87.05 331**	*e*P	**P**	**23 07 04.6**	**-1.7**
HAU	**Haudompre**	**87.10 331**	*e*P	**P**	**23 07 05.8**	**-0.7**
HAU			*e*R			
	comp=Z,74nm,20.5s					
HAU	**Haudompre**	**87.10 331**	*e*P	**P**	**23 07 05.8**	**-0.7**
HAU	**Haudompre**	**87.10 331**	*e*P	**P**	**23 07 05.8**	**-0.7**
SFTF	**Sexfontaines**	**87.44 332**	*e*P	**P**	**23 07 07.8**	**-0.3**
	comp=Z,17nm,0.8s					
SFTF	**Sexfontaines**	**87.44 332**	*e*P	**P**	**23 07 07.8**	**-0.3**
	comp=Z,17nm,0.8s					
TBI	**Tubuai**	**88.36 120**	*e*LR	LR	23 35 19.0	
	comp=Z,148nm,25.8s					
LOR	**Lormes**	**88.66 332**	*e*P	**P**	**23 07 13.5**	**-0.5**
	comp=Z,3.2nm,0.8s					
LOR			*e*R			
	comp=Z,82nm,22.8s					
LOR	**Lormes**	**88.66 332**	*e*P	**P**	**23 07 13.5**	**-0.5**
	comp=Z,3.2nm,0.8s					
FLN	**La Foliniere**	**88.94 336**	*e*P	**P**	**23 07 13.9**	**-1.3**
FLN			*e*R			
	comp=Z,92nm,20.0s					
FLN	**La Foliniere**	**88.94 336**	*e*P	**P**	**23 07 13.9**	**-1.3**
FLN	**La Foliniere**	**88.94 336**	*e*P	**P**	**23 07 13.9**	**-1.3**
LDF	**La Druitiere**	**88.96 335**	*e*P	**P**	**23 07 14.6**	**-0.7**
LDF	**La Druitiere**	**88.96 335**	*e*P	**P**	**23 07 14.6**	**-0.7**
LDF	**La Druitiere**	**88.96 335**	*e*P	**P**	**23 07 14.6**	**-0.7**
SSF	**Saint Saulge**	**88.96 332**	*e*P	**P**	**23 07 15.0**	**-0.4**
	comp=Z,2.3nm,0.7s					
SSF	**Saint Saulge**	**88.96 332**	*e*P	**P**	**23 07 15.0**	**-0.4**
SSF			pmax	pmax		
	comp=Z,2.0nm,0.6s					
SSF	**Saint Saulge**	**88.96 332**	*e*P	**P**	**23 07 15.0**	**-0.4**
	comp=Z,2.3nm,0.6s					
LPL	**La Plagne**	**88.97 330**	*e*P	**P**	**23 07 15.2**	**-0.5**
LPL	**La Plagne**	**88.97 330**	*e*P	**P**	**23 07 15.2**	**-0.5**
LPL	**La Plagne**	**88.97 330**	*e*P	**P**	**23 07 15.2**	**-0.5**
LPG	**La Plagne**	**88.98 330**	*e*P	**P**	**23 07 15.3**	**-0.5**
	comp=Z,6.7nm,0.7s					
LPG	**La Plagne**	**88.98 330**	*e*P	**P**	**23 07 15.3**	**-0.5**
LPG			pmax	pmax		
	comp=Z,7.0nm,0.7s					
LPG	**La Plagne**	**88.98 330**	*e*P	**P**	**23 07 15.3**	**-0.5**
	comp=Z,6.7nm,0.7s					
SMF	**Signal de Mont**	**89.18 332**	*e*P	**P**	**23 07 17.0**	**+0.6**
SMF	**Signal de Mont**	**89.18 332**	*e*P	**P**	**23 07 17.0**	**+0.6**
SMF	**Signal de Mont**	**89.18 332**	*e*P	**P**	**23 07 17.0**	**+0.6**
AVF	**Avril sur Loir**	**89.25 332**	*e*P	**P**	**23 07 16.5**	**-0.2**
	comp=Z,12nm,0.8s					
AVF	**Avril sur Loir**	**89.25 332**	*e*P	**P**	**23 07 16.5**	**-0.2**
AVF			pmax	pmax		
	comp=Z,12nm,0.8s					
AVF	**Avril sur Loir**	**89.25 332**	*e*P	**P**	**23 07 16.5**	**-0.2**
	comp=Z,12nm,0.8s					
GRR	**Gorron**	**89.39 336**	||*i*P	**P**	**23 07 17.0**	**-0.3**
GRR	**Gorron**	**89.39 336**	||*i*P	**P**	**23 07 17.0**	**-0.3**
GRR	**Gorron**	**89.39 336**	||*i*P	**P**	**23 07 17.0**	**-0.3**
MBDF	**Montbardon**	**89.59 329**	*e*P	**P**	**23 07 17.4**	**-1.2**
MBDF	**Montbardon**	**89.59 329**	*e*P	**P**	**23 07 17.4**	**-1.2**
ATD	**Arta Tunnel**	**89.69 284**	LR	LR	23 46 43.5	
	comp=Z,35nm,20.8s,baz=150,slow=35					
ORIF	**Oris-en-Rattie**	**89.81 330**	*e*P	**P**	**23 07 18.2**	**-1.3**
	comp=Z,5.2nm,0.8s					
ORIF			*e*R			
	comp=Z,69nm,18.2s					
ORIF	**Oris-en-Rattie**	**89.81 330**	*e*P	**P**	**23 07 18.2**	**-1.3**
ORIF			pmax	pmax		
	comp=Z,5.0nm,0.8s					
ORIF	**Oris-en-Rattie**	**89.81 330**	*e*P	**P**	**23 07 18.2**	**-1.3**
	comp=Z,5.2nm,0.8s					
SGMF	**Saint Gilles**	**90.07 337**	||*i*P	**P**	**23 07 20.2**	**-0.3**
	comp=Z,15nm,1.0s					
SGMF	**Saint Gilles**	**90.07 337**	||*i*P	**P**	**23 07 20.2**	**-0.3**
SGMF			pmax	pmax		
	comp=Z,15nm,1.0s					
SGMF	**Saint Gilles**	**90.07 337**	||*i*P	**P**	**23 07 20.2**	**-0.3**
	comp=Z,15nm,1.0s					
TCF	**Toulx Ste Croi**	**90.10 333**	||*i*P	**P**	**23 07 20.5**	**-0.2**
TCF	**Toulx Ste Croi**	**90.10 333**	||*i*P	**P**	**23 07 20.5**	**-0.2**
TCF	**Toulx Ste Croi**	**90.10 333**	||*i*P	**P**	**23 07 20.5**	**-0.2**
ROSF	**Rostrenen**	**90.22 337**	||*i*P	**P**	**23 07 21.0**	**-0.2**
	comp=Z,6.5nm,0.7s					
ROSF	**Rostrenen**	**90.22 337**	||*i*P	**P**	**23 07 21.0**	**-0.2**
ROSF			pmax	pmax		
	comp=Z,7.0nm,0.7s					
ROSF	**Rostrenen**	**90.22 337**	||*i*P	**P**	**23 07 21.0**	**-0.2**
	comp=Z,6.5nm,0.7s					
VIVF	**Saint-Julien-l**	**90.34 330**	*e*P	**P**	**23 07 21.4**	**-0.5**
VIVF	**Saint-Julien-l**	**90.34 330**	*e*P	**P**	**23 07 21.4**	**-0.5**
VIVF	**Saint-Julien-l**	**90.34 330**	*e*P	**P**	**23 07 21.4**	**-0.5**
QUIF	**Quistinic**	**90.56 337**	*e*P	**P**	**23 07 22.3**	**-0.5**
QUIF	**Quistinic**	**90.56 337**	*e*P	**P**	**23 07 22.3**	**-0.5**
QUIF	**Quistinic**	**90.56 337**	*e*P	**P**	**23 07 22.3**	**-0.5**
MFF	**Saint Martin d**	**90.69 334**	||*i*P	**P**	**23 07 23.3**	**-0.1**
	comp=Z,13nm,0.9s					
MFF	**Saint Martin d**	**90.69 334**	||*i*P	**P**	**23 07 23.3**	**-0.1**
MFF			pmax	pmax		
	comp=Z,13nm,0.9s					
MFF	**Saint Martin d**	**90.69 334**	||*i*P	**P**	**23 07 23.3**	**-0.1**
	comp=Z,13nm,0.9s					
TXAR	**Lajitas Array**	**91.18 52**	P	**P**	**23 07 26.9**	**+0.6**
TXAR	**Lajitas Array**	**91.18 52**	P	**P**	**23 07 26.9**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=290,slow=3.6,SNR=14					
RJF	**Les Rejaudoux**	**91.19 333**	*e*P	**P**	**23 07 25.7**	**-0.1**
RJF			*e*R			
	comp=Z,73nm,23.0s					
RJF	**Les Rejaudoux**	**91.19 333**	*e*P	**P**	**23 07 25.7**	**-0.1**
RJF	**Les Rejaudoux**	**91.19 333**	*e*P	**P**	**23 07 25.7**	**-0.1**
CAF	**Calviac**	**91.30 332**	||*i*P	**P**	**23 07 26.5**	**+0.1**
CAF	**Calviac**	**91.30 332**	||*i*P	**P**	**23 07 26.5**	**+0.1**
CAF	**Calviac**	**91.30 332**	||*i*P	**P**	**23 07 26.5**	**+0.1**
LFF	**La Frestale**	**91.79 333**	||*i*P	**P**	**23 07 28.7**	**+0.1**
	comp=Z,9.1nm,0.9s					
LFF	**La Frestale**	**91.79 333**	||*i*P	**P**	**23 07 28.7**	**+0.1**
LFF			pmax	pmax		
	comp=Z,9.0nm,0.9s					
LFF	**La Frestale**	**91.79 333**	||*i*P	**P**	**23 07 28.7**	**+0.1**
	comp=Z,9.1nm,0.9s					
MTLF	**Montolieu**	**92.58 331**	*e*P	**P**	**23 07 32.1**	**-0.2**
MTLF	**Montolieu**	**92.58 331**	*e*P	**P**	**23 07 32.1**	**-0.2**
MTLF	**Montolieu**	**92.58 331**	*e*P	**P**	**23 07 32.1**	**-0.2**
ETSF	**Etsaut**	**94.02 333**	*e*P	**P**	**23 07 39.1**	**+0.1**
**

BNT	**Bandirma**	**1.52**	**326**	*e*PN	**Pg**	**23 03 33.5**	**-0.5**
BNT	**Bandirma**	**1.52**	**326**	*e*Pn	**Pg**	**23 03 33.5**	**-0.5**
BLCB	**Balcova**	**1.71**	**246**	*e*PN	**Pb**	**23 03 36.0**	**-0.1**
BLCB	**Balcova**	**1.71**	**246**	*e*Pn	**Pb**	**23 03 36.0**	**-0.1**
GULT	**Gulveren**	**1.75**	**40**	*e*PN	**Pn**	**23 03 35.6**	**+0.6**
GULT	**Gulveren**	**1.75**	**40**	*e*Pn	**Pn**	**23 03 35.6**	**+0.6**
URLA	**Izmir**	**2.05**	**250**	*i* P	**Pn**	**23 03 39.1**	**+0.2**
URLA				*i* S	**Sg**	**23 04 09.5**	**-1.1**
URLA	**Izmir**	**2.05**	**250**	*i* P	**Pn**	**23 03 39.1**	**+0.2**

IDC 20 23:17:27.9±1.0, 30°31′N × 67°63′E, h0km, mb3.6/9, mb1 3.8/11, mb1mx3.5/32, mbtmp3.6/11, ML3.9/1, MS3.7/4, Ms1 3.8/4, ms1mx2.9/41, Error ellipse: s-maj=25.5km s-min=21.6km az=115.0, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**13.47**	**22**	Pn	Pn	23 20 40.0	-0.5
	0.5nm,0.3s,baz=177,slow=2.8,SNR=17						
AAK				Sn	Sn	23 23 03.9	-7.2
	0.0nm,0.3s,baz=310,slow=16,SNR=2.0						
MKAR	**Makanchi Array**	**20.00**	**31**	P	P	23 22 00.9	-1.2
	0.2nm,0.3s,baz=210,slow=10,SNR=18						
AKTO	**Aktyubinsk**	**21.36**	**343**	P	P	23 22 16.9	+0.3
	1.7nm,0.7s,baz=147,slow=13,SNR=5.6						
KURBB	**Kurchatov Arra**	**21.87**	**19**	P	P	23 22 21.4	-0.7
	2.4nm,0.9s,baz=212,slow=10,SNR=9.9						
BVAR	**Borovoye Array**	**22.78**	**4**	P	P	23 22 32.2	+0.3
	0.7nm,0.5s,baz=181,slow=8.9,SNR=8.1						
ZALV	**Zalesovo Beam**	**26.70**	**23**	P	P	23 23 09.9	+1.3
	2.0nm,0.7s,baz=222,slow=10,SNR=13						
SONM	**Songino Array**	**34.37**	**48**	LR	LR	23 39 18.9	
	comp=Z,41nm,18.3s,baz=84,slow=38						
JNU	**Nakatsue**	**53.15**	**69**	LR	LR	23 52 19.2	
	comp=Z,188nm,18.1s,baz=39,slow=39						
ESDC	**Sonseca Array**	**57.99**	**300**	P	P	23 27 22.8	+0.3
	0.2nm,0.5s,baz=72,slow=7.7,SNR=4.0						
ESDC				LR	LR	23 55 31.3	
	comp=Z,66nm,19.4s,baz=155,slow=39						
MJAR	**Matsushiro Arr**	**58.04**	**64**	LR	LR	23 56 53.6	
	comp=Z,72nm,19.9s,baz=185,slow=41						
TORD	**Torodi Ar. Bea**	**62.80**	**270**	P	P	23 27 55.1	-0.6
	0.4nm,0.6s,baz=51,slow=6.7,SNR=8.5						
WRA	**Warramunga Arr**	**81.29**	**119**	P	P	23 29 46.2	-0.2
	0.1nm,0.3s,baz=321,slow=5.1,SNR=5.6						
ASAR	**Alice Springs**	**83.19**	**122**	P	P	23 29 56.7	+0.4
	0.4nm,0.8s,baz=303,slow=4.7,SNR=4.2						
YKA	**Yellowknife Ar**	**87.50**	**1**	P	P	23 30 17.4	+0.2
	0.4nm,0.7s,baz=352,slow=4.9,SNR=9.0						

*BJI **20** 23:31:47.4, 4°70S × 129°95E, h20km, mB5.2/12, mb4.8/18, Ms5.2/3, Ms7 4.8/2*

*IDC **20** 23:31:50.5±0.5, 4°16S × 129°63E, h0km, mb4.6/18, mb1 4.7/21, mb1mx4.7/25, mbtmp4.6/21, ML4.2/3, MS3.8/15, Ms1 3.8/15, ms1mx3.6/36, Error ellipse: s-maj=24.3km s-min=11.6km az=62.0*

*NEIC **20** 23:31:52.0±3.6, 4°12S × 129°74E, h10km±22km, mb4.9/17, Error ellipse: s-maj=9.4km s-min=5.9km az=47.0*

*ISCJB **20** 23:31:53.3±0.2, 4°17S±0°03 × 129°86E±0°04, h33km, mb4.8/47, MS3.8/13, Error ellipse: s-maj=6.3km s-min=4.4km az=165.0*

*MOS **20** 23:31:53.6±0.8, 4°14S × 129°71E, h33km, mb5.1/18, Error ellipse: s-maj=16.9km s-min=7.4km az=116.4*

*DJA **20** 23:31:54.5±0.7, 4°S±3′ × 13°0E±°, h10km, M4.3/12, mB5.4/3, mb4.9/12, MLv3.9/1, Mw(mB)4.8/3*

ISC 20 23:31:55.5±0.3, 4°17S±0°04 × 129°77E±0°05, h35km, n172, σ1§60/159, mb4.9/47, MS3.8/13, 1C-2D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.38**	**159**	P	**Pn**	**23 32 01.8**	**-2.6**
MSAI	**Masohi**	**1.17**	**314**	P	**Pn**	**23 32 13.2**	**-2.2**
FAKI	**Fak Fak**	**2.77**	**63**	P	**Pn**	**23 32 37.4**	**0.0**
NLAI	**Namlea**	**2.82**	**289**	P	**Pn**	**23 32 40.6**	**+2.5**
TLE	**Tual**	**3.30**	**116**	P	**Pn**	**23 32 47.3**	**+2.7**
SWI	**Sorong**	**3.60**	**24**	P	**Pn**	**23 32 49.2**	**+0.3**
LBMI	**Labuha**	**4.18**	**327**	P	**Pn**	**23 32 57.1**	**+0.4**
LUWI	**Luwuk**	**7.65**	**294**	P	Pn	23 33 49.0	+4.5
MRSI	**Marisa**	**9.08**	**300**	P	**Pn**	**23 34 05.5**	**+1.3**
BKSI	**Bulukumba**	**9.68**	**263**	P	Pn	23 34 15.9	+3.5
SPSI	**Sidrap Palu**	**9.98**	**271**	P	Pn	23 34 26.1	+10
TTSI	**Tana Toraja**	**9.99**	**276**	P	Pn	23 34 25.8	+9.1
KAPI	**Kappang**	**10.02**	**265**	*e*Pn	**Pn**	**23 34 14.9**	**-2.1**
KAPI				*e*Sn	**Sn**	**23 36 05.9**	**-2.5**
KAPI	**Kappang**	**10.02**	**265**	P	Pn	23 34 20.5	+3.5
KAPI	**Kappang**	**10.02**	**265**	Pn	**Pn**	**23 34 18.5**	**+1.5**
	1.9nm,0.3s,baz=112,slow=3.7,SNR=9.2						
KAPI				LR	LR	23 38 03.1	
	comp=Z,1μm,19.8s,baz=104,slow=38						
PCI	**Palu**	**10.44**	**288**	P	Pn	23 34 38.8	+16
KBKI	**Kotabaru**	**13.60**	**273**	P	**P**	**23 35 15.5**	**+1.0**
FITZ	**Fitzroy Crossi**	**14.43**	**196**	*e*Pn	**Pn**	**23 35 16.5**	**-0.8**
FITZ				*e*Sn	**Sn**	**23 37 56.6**	**+0.6**
FITZ	**Fitzroy Crossi**	**14.43**	**196**	Pn	**Pn**	**23 35 16.3**	**-1.0**
	1.2nm,0.3s,baz=33,slow=11,SNR=26						
FITZ				LR	LR	23 40 55.1	
	comp=Z,446nm,19.5s,baz=20,slow=38						
KHKI	**Kahang-Kahang**	**14.68**	**253**	P	**P**	**23 35 26.1**	**-0.4**
BBKI	**Banjar Baru**	**14.91**	**272**	P	P	23 35 33.3	+4.2
SRBI	**Singaraja**	**14.99**	**254**	P	**P**	**23 35 29.9**	**0.0**
IGBI	**Denpasar**	**15.24**	**252**	P	P	23 35 39.3	+6.5
BYJI	**Banyuwangi**	**15.84**	**255**	P	P	23 35 47.7	+8.3
KMMI	**Kalianget**	**15.99**	**259**	P	P	23 35 48.8	+7.8
WRAB	**Tennant Creek**	**16.29**	**164**	*e*P	**Pn**	**23 35 38.5**	**-3.2**
WRAB				*e*		23 38 32.1	
WRAB				pmax	pmax		
	comp=Z,159nm,1.6s						
WRAB	**Tennant Creek**	**16.29**	**164**	*e*Pn	**Pn**	**23 35 38.5**	**-3.2**
	comp=Z,159nm,1.6s						
WRAB				*e*Sn	Sn	23 38 32.1	-9.5
WRAB	**Tennant Creek**	**16.29**	**164**	Pn	**Pn**	**23 35 37.3**	**-4.5**
	comp=Z,192nm,0.5s,SNR=7.6						
WRA	**Warramunga Arr**	**16.30**	**165**	Pn	**Pn**	**23 35 37.4**	**-4.5**
WRA	**Warramunga Arr**	**16.30**	**165**	Pn	**Pn**	**23 35 37.4**	**-4.5**
	comp=Z,2.9nm,0.3s,baz=351,slow=13,SNR=50						
COEN	**Coen**	**16.41**	**127**	*e*Pn	**Pn**	**23 35 40.8**	**-2.6**
	comp=Z,592nm,0.7s						
COEN				*e*Sn	Sn	23 38 34.6	-10
BLJI	**Banyuglugur**	**16.47**	**257**	P	**P**	**23 35 49.7**	**+3.3**
	comp=Z,192nm,1.5s,comp=Z,4μm						
GMJI	**Gumukmas**	**16.73**	**255**	P	P	23 35 55.6	+6.3
	comp=Z,61nm,1.7s						
PMG	**Port Moresby**	**18.03**	**108**	*e*P	**P**	**23 36 04.5**	**+0.9**
	comp=Z,118nm,1.1s						
PMG	**Port Moresby**	**18.03**	**108**	P	**P**	**23 36 05.0**	**+1.4**
PMG	**Port Moresby**	**18.03**	**108**	P	**P**	**23 36 04.3**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=286,slow=10,SNR=10						
SJI	**Sawahan**	**18.25**	**258**	P	**Pn**	**23 36 11.0**	**+4.7**
PWJI	**Pagerwojo**	**18.27**	**257**	P	**Pn**	**23 36 08.3**	**+1.9**
	comp=Z,62nm,1.4s,comp=Z,1μm						
SBUM	**Sibu**	**18.73**	**290**	P	**Pn**	**23 36 15.8**	**+3.8**
STKI	**Sintang**	**18.75**	**283**	P	Pn	23 36 19.9	+7.6
PCJI	**Pacitan**	**18.91**	**257**	P	Pn	23 36 22.0	+7.8
MBWA	**Marble Bar**	**19.50**	**209**	*e*P	**Pn**	**23 36 21.2**	**0.0**
	comp=Z,47nm,1.2s						
AS31	**Alice Springs**	**19.79**	**169**	*e*P	**P**	**23 36 23.1**	**+0.1**
ASAR	**Alice Springs**	**19.79**	**169**	P	**P**	**23 36 23.2**	**+0.2**
ASAR	**Alice Springs**	**19.79**	**169**	P	**P**	**23 36 23.2**	**+0.2**
	comp=Z,6.9nm,0.3s,baz=349,slow=10,SNR=192						
ASAR				LR	LR	23 44 05.6	
	comp=Z,238nm,18.9s,baz=346,slow=37						
BJII	**Banjamegara**	**20.20**	**260**	P	Pn	23 36 36.6	+6.9
KSM	**Kuching**	**20.24**	**286**	*e*P	**P**	**23 36 27.9**	**0.0**
	comp=Z,62nm,1.1s						
KSM	**Kuching**	**20.24**	**286**	P	**P**	**23 36 29.1**	**+1.2**
	comp=Z,59nm,0.9s,comp=Z,801nm						
TGJI	**Tegal**	**20.73**	**262**	P	Pn	23 36 46.1	+10
	comp=Z,42nm,1.3s						
KPJI	**Karang Pucung**	**20.97**	**260**	P	Pn	23 36 40.7	+2.2
CTA	**Charters Tower**	**22.55**	**136**	P	**P**	**23 36 53.6**	**+1.0**
CTA	**Charters Tower**	**22.55**	**136**	P	**P**	**23 36 53.6**	**+1.0**
	comp=Z,42nm,0.9s,baz=318,slow=12,SNR=47						
CTAO	**Charters Tower**	**22.55**	**136**	*e*P	**P**	**23 36 53.4**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,45nm,0.8s						
CTAO	**Charters Tower**	**22.55**	**136**	*e*P	**P**	**23 36 53.4**	**+0.7**
	comp=Z,45nm,0.8s						
GUMO	**Guam**	**23.15**	**40**	LR	LR	23 44 15.0	
	comp=Z,150nm,21.3s,baz=88,slow=32						
FORT	**Forrest**	**26.52**	**183**	*e*P	**P**	**23 37 31.1**	**+1.2**
	comp=Z,41nm,0.8s						
BBOO	**Buckleboo**	**29.10**	**169**	*e*P	**P**	**23 37 53.2**	**+0.3**
	comp=Z,603nm,1.5s						
STKA	**Stephens Creek**	**29.72**	**159**	*e*P	**P**	**23 37 59.2**	**+0.8**
	comp=Z,39nm,2.7s						
STKA	**Stephens Creek**	**29.72**	**159**	P	**P**	**23 37 59.2**	**+0.8**
	comp=Z,4.2nm,0.5s,baz=332,slow=9.6,SNR=23						
STKA				LR	LR	23 50 35.4	
	comp=Z,196nm,21.6s,baz=351,slow=38						
IPM	**Ipoh**	**29.98**	**286**	*e*P	**P**	**23 38 02.2**	**+1.2**
	comp=Z,28nm,0.7s						
IPM	**Ipoh**	**29.98**	**286**	P	**P**	**23 38 02.2**	**+1.2**
	comp=Z,42nm,0.8s						
QIZ	**Qiongzhong**	**30.27**	**320**	P	**P**	**23 38 02.1**	**-1.4**
QIZ				S	**S**	**23 43 02.0**	**+0.8**
PSI	**Prapat**	**31.59**	**282**	LR	LR	23 50 32.3	
	comp=Z,144nm,21.8s,baz=218,slow=36						
CMAR	**Chiang Mai Arr**	**37.79**	**307**	P	**P**	**23 39 09.4**	**+0.7**
CMAR	**Chiang Mai Arr**	**37.79**	**307**	P	**P**	**23 39 09.4**	**+0.7**
	comp=Z,7.2nm,0.6s,baz=137,slow=7.6,SNR=27						
CMMT	**Chiang Mai**	**37.98**	**308**	P	**P**	**23 39 12.0**	**+1.6**
CHTO	**Chiang Mai**	**37.99**	**308**	*e*P	**P**	**23 39 10.8**	**+0.4**
CHTO	**Chiang Mai**	**37.99**	**308**	*e*P	**P**	**23 39 10.8**	**+0.4**
CHTO	**Chiang Mai**	**37.99**	**308**	P	**P**	**23 39 11.5**	**+1.1**
KMI	**Kunming**	**39.21**	**319**	P	**P**	**23 39 23.5**	**+2.7**
KMI				pmax	pmax		
	comp=Z,12nm,1.5s						
DZM	**Mont Dzumac**	**39.73**	**120**	P	**P**	**23 39 25.4**	**+0.3**
DZM	**Mont Dzumac**	**39.73**	**120**	P	**P**	**23 39 25.4**	**+0.3**
	comp=Z,4.0nm,0.7s,baz=282,slow=16,SNR=4.5						
MJAR	**Matsushiro Arr**	**41.26**	**10**	P	**P**	**23 39 36.4**	**-1.0**
MJAR	**Matsushiro Arr**	**41.26**	**10**	P	**P**	**23 39 36.4**	**-1.0**
	comp=Z,12nm,0.8s,baz=187,slow=9.7,SNR=28						
MAJO	**Matsushiro**	**41.26**	**10**	*e*P	**P**	**23 39 37.0**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,23nm,0.8s						
MAJO	**Matsushiro**	**41.26**	**10**	*e*P	**P**	**23 39 37.0**	**-0.4**
	comp=Z,23nm,0.8s						
MAT	**Matsushiro**	**41.26**	**10**	P	**P**	**23 39 36.4**	**-1.0**
KSAR	**Wonju Array Be**	**41.43**	**358**	P	**P**	**23 39 39.5**	**+0.8**
KSRS	**Korea Array**	**41.44**	**358**	P	**P**	**23 39 39.5**	**+0.7**
	comp=Z,3.1nm,0.7s,baz=176,slow=9.8,SNR=9.5						
KSRS				LR	LR	23 55 11.9	
	comp=Z,117nm,19.8s,baz=170,slow=34						
XAN	**Xi'an**	**42.80**	**334**	P	**P**	**23 39 49.9**	**-0.1**
XAN				pP	**pP**	**23 39 57.9**	**-2.4**
LZH	**Lanzhou**	**46.82**	**331**	*e*P	**P**	**23 40 24.0**	**+1.8**
LZH				pP	**pP**	**23 40 29.5**	**-3.1**
LZH				sP	**sP**	**23 40 33.0**	**-3.8**
LZH				pmax	pmax		
	comp=Z,28nm,1.6s						
LZH				pmax	pmax		
	comp=Z,180nm,4.0s						
HHC	**Hu-ho-hao-te**	**47.80**	**341**	*e*P	**P**	**23 40 31.4**	**+1.7**
HHC				S	**S**	**23 47 23.3**	**-0.9**
HHC				pmax	pmax		
	comp=Z,22nm,0.6s						
HHC				pmax	pmax		
	comp=Z,370nm,6.4s						
USRK	**Ussuriysk Arra**	**48.19**	**2**	P	**P**	**23 40 33.0**	**+0.6**
	comp=Z,4.1nm,0.7s,baz=174,slow=7.8,SNR=6.5						
LSA	**Lhasa**	**50.03**	**315**	P	**P**	**23 40 48.1**	**+0.7**
YUK	**Yuzh-Kuril'sk**	**50.12**	**15**	P	**P**	**23 40 45.6**	**-1.6**
YUK				*i*		23 42 50.6	
YUK				*i* PPP	PPP	23 43 43.5	
YUK				S	S	23 48 04.8	+8.4
YUK				pmax	pmax		
	comp=N,200nm,1.6s						
YUK				pmax	pmax		
	comp=Z,205nm,1.6s						
YUK				pmax	pmax		
	comp=E,177nm,1.6s						
YUK				pmax	pmax		
	comp=Z,291nm,1.6s						
YUK				MLR	MLR		
	comp=Z,79nm,24.0s						
YUK				MLR	MLR		
	comp=N,191nm,24.0s						
YUK				MLR	MLR		
	comp=E,323nm,24.0s						
ODAN	**Odare**	**51.27**	**309**	*e*P	**P**	**23 40 56.3**	**-0.2**
TAPN	**Taplejung**	**51.27**	**310**	*e*P	**P**	**23 40 55.5**	**-1.1**
	comp=E,27nm,0.5s						
GTA	**Gaotai**	**51.41**	**330**	*e*P	**P**	**23 40 57.8**	**+0.6**
GTA				pP	**pP**	**23 41 04.9**	**-2.8**
GTA				sP	**sP**	**23 41 08.8**	**-3.0**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
RAMN	**Ramite**	**51.92**	**309**	*e*P	**P**	**23 41 00.9**	**-0.5**
	comp=Z,61nm,0.6s						
GUN	**Gumba**	**52.95**	**310**	*e*P	**P**	**23 41 08.1**	**-1.1**
	comp=Z,48nm,0.6s						
KKN	**Kakani**	**53.35**	**309**	*e*P	**P**	**23 41 11.5**	**-0.5**
	comp=Z,28nm,0.8s						
KOLN	**Koldanda**	**54.65**	**308**	*e*P	**P**	**23 41 20.7**	**-0.7**
	comp=Z,39nm,0.7s						
DANN	**Dangsing**	**54.80**	**309**	*e*P	**P**	**23 41 21.6**	**-1.0**
	comp=Z,49nm,0.8s						
PYUN	**Piuthan**	**55.28**	**308**	*e*P	**P**	**23 41 25.2**	**-0.8**
	comp=Z,94nm,0.9s						
ULN	**Ulaanbaatar**	**55.52**	**342**	*e*P	**P**	**23 41 27.3**	**0.0**
	comp=Z,13nm,0.8s						
ULN	**Ulaanbaatar**	**55.52**	**342**	P	**P**	**23 41 27.6**	**+0.3**
	comp=Z,20nm,1.1s						
SONM	**Songino Array**	**55.70**	**341**	P	**P**	**23 41 29.3**	**+0.7**
SONM	**Songino Array**	**55.70**	**341**	P	**P**	**23 41 29.3**	**+0.7**
	comp=Z,5.4nm,0.8s,baz=150,slow=7.0,SNR=24						
SONM				LR	LR	00 04 56.7	
	comp=Z,70nm,19.0s,baz=263,slow=36						
AFI	**Afiamalu**	**58.40**	**104**	LR	LR	00 02 59.4	
	comp=Z,86nm,20.7s,baz=17,slow=32						
ZAK	**Zakamensk**	**58.93**	**341**	*e*P	**P**	**23 41 51.2**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MOY	**Mondy**	**60.79**	**340**	*e*P	**P**	**23 42 04.6**	**+0.6**
PETK	**Petropavlovsk-**	**61.73**	**19**	P	**P**	**23 42 12.2**	**+2.0**
PETK	**Petropavlovsk-**	**61.73**	**19**	P	**P**	**23 42 12.2**	**+2.0**
PETK	**Petropavlovsk-**	**61.73**	**19**	P	**P**	**23 42 12.2**	**+2.0**
	comp=Z,3.8nm,0.9s,baz=172,slow=6.2,SNR=4.3						
PETK				LR	LR	00 06 30.3	
	comp=Z,31nm,19.6s,baz=326,slow=34						
MK31	**Makanchi Array**	**65.75**	**326**	*e*P	**P**	**23 42 36.2**	**-0.7**
MK31	**Makanchi Array**	**65.75**	**326**	*e*P	**P**	**23 42 36.2**	**-0.7**
MKAR	**Makanchi Array**	**65.75**	**326**	P	**P**	**23 42 36.5**	**-0.4**
MKAR	**Makanchi Array**	**65.75**	**326**	P	**P**	**23 42 36.5**	**-0.4**
MKAR	**Makanchi Array**	**65.75**	**326**	P	**P**	**23 42 36.5**	**-0.4**
	comp=Z,7.9nm,0.5s,baz=119,slow=7.8,SNR=88						
YAK	**Yakutsk**	**66.01**	**360**	*e*P	**P**	**23 42 39.0**	**+0.8**
YAK				*e*		23 42 46.0	
YAK				*e*		23 43 05.3	
YAK				*e*		23 45 08.0	
YAK				*e*PPP	PPP	23 46 43.4	
YAK				*e*S	**S**	**23 51 23.6**	**+0.2**
YAK				*e**SS	sS	23 52 01.2	+20
YAK				*e*		23 52 28.9	
YAK				*e*SS	**SS**	**23 55 32.6**	**-6.7**
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,19nm,1.0s						
YAK				pmax	pmax		
	comp=Z,74nm,3.0s						
YAK				smax	smax		
	comp=E,155nm,6.1s						
YAK				smax	smax		
	comp=N,132nm,5.1s						
FX1	**Attu Island--F**	**67.56**	**27**	LR	LR	00 07 38.3	
	comp=N,57nm,21.5s,baz=238,slow=32						
TKM2	**Tokmak 2**	**67.67**	**320**	*e*P	**P**	**23 42 48.8**	**-0.7**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TKM2	**Tokmak 2**	**67.67**	**320**	*e*P	**P**	**23 42 48.8**	**-0.7**
	comp=Z,6.0nm,0.7s						
AAK	**Ala-Archa**	**68.25**	**319**	*e*P	**P**	**23 42 52.5**	**-0.6**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AAK	**Ala-Archa**	**68.25**	**319**	*e*P	**P**	**23 42 52.5**	**-0.6**
	comp=Z,4.6nm,0.9s						
AAK	**Ala-Archa**	**68.25**	**319**	P	**P**	**23 42 52.5**	**-0.6**
	comp=Z,3.1nm,0.8s,baz=114,slow=5.1,SNR=15						
EKS2	**Erkin-Say**	**68.73**	**319**	*e*P	**P**	**23 42 55.1**	**-0.9**
EKS2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
EKS2	**Erkin-Say**	**68.73**	**319**	*e*P	**P**	**23 42 55.1**	**-0.9**
	comp=Z,5.8nm,0.8s						
ZAA0	**Zalesovo Array**	**68.96**	**333**	*e*P	**P**	**23 42 56.2**	**-0.8**
ZALV	**Zalesovo Beam**	**68.96**	**333**	P	**P**	**23 42 56.8**	**-0.2**
ZALV	**Zalesovo Beam**	**68.96**	**333**	P	**P**	**23 42 56.8**	**-0.2**
ZALV	**Zalesovo Beam**	**68.96**	**333**	P	**P**	**23 42 56.8**	**-0.2**
	comp=Z,6.6nm,0.7s,baz=113,slow=5.0,SNR=34						
ZALV				LR	LR	00 13 12.3	
	comp=Z,37nm,20.7s,baz=197,slow=36						
SEY	**Seymchan**	**69.08**	**11**	*i* P	**P**	**23 42 59.0**	**+1.4**
KURBB	**Kurchatov Arra**	**70.00**	**328**	P	**P**	**23 43 03.1**	**-0.3**
	comp=Z,19nm,0.7s,baz=130,slow=5.5,SNR=124						
KURK	**Kurchatov**	**70.00**	**328**	*e*P	**P**	**23 43 03.2**	**-0.3**
KURK				pmax	pmax		
	comp=Z,22nm,0.7s						
KURK	**Kurchatov**	**70.00**	**328**	*e*P	**P**	**23 43 03.2**	**-0.3**
	comp=Z,22nm,0.7s						
NVS	**Novosibirsk**	**70.25**	**334**	*i* P	**P**	**23 43 04.7**	**-0.2**
NVS				*e*S	**S**	**23 52 15.7**	**+1.5**
NVS				pmax	pmax		
	comp=N,12nm,1.7s						
NVS				pmax	pmax		
	comp=E,18nm,1.7s						
NVS				pmax	pmax		
	comp=Z,33nm,1.7s						
NVS				smax	smax		
	comp=N,29nm,3.0s						
NVS				smax	smax		
	comp=E,20nm,3.2s						
VNDA	**Vanda**	**75.27**	**173**	P	**P**	**23 43 34.5**	**+0.2**
VNDA	**Vanda**	**75.27**	**173**	P	**P**	**23 43 34.5**	**+0.2**
	comp=E,1.5nm,0.8s,baz=315,slow=8.8,SNR=6.3						
BVAR	**Borovoye Array**	**75.56**	**328**	P	**P**	**23 43 36.3**	**-0.2**
BVAR	**Borovoye Array**	**75.56**	**328**	P	**P**	**23 43 36.3**	**-0.2**
BVAR	**Borovoye Array**	**75.56**	**328**	P	**P**	**23 43 36.3**	**-0.2**
	comp=E,7.2nm,0.8s,baz=124,slow=7.4,SNR=32						
BRVK	**Borovoye**	**75.64**	**328**	*e*P	**P**	**23 43 36.0**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,23nm,1.1s						
BRVK	**Borovoye**	**75.64**	**328**	*e*P	**P**	**23 43 36.0**	**-0.9**
	comp=Z,23nm,1.1s						
BILL	**Bilibino**	**76.43**	**13**	*e*P	**P**	**23 43 42.2**	**+1.1**
BILL				*e*		23 43 52.7	
BILL				*e*		23 46 32.9	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MAW	**Mawson**	**77.49**	**201**	LR	LR	00 13 25.2	
	comp=Z,111nm,18.6s,baz=229,slow=32						
AB31	**Akbulak array**	**80.17**	**321**	*i* P	**P**	**23 44 01.6**	**-0.5**
AB31				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ABKAR	**Akbulak array**	**80.17**	**321**	*e*P	**P**	**23 44 01.3**	**-0.8**
	comp=Z,7.7nm,0.6s						
AKTO	**Aktyubinsk**	**81.71**	**322**	*i* P	**P**	**23 44 09.9**	**-0.5**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SVE	**Sverdlovsk**	**82.24**	**329**	*e*P	**P**	**23 44 13.2**	**+0.2**
SVE				pmax	pmax		
	comp=Z,16nm,1.1s						
ARU	**Arti**	**83.20**	**328**	*d i* P	**P**	**23 44 17.6**	**-0.4**
ARU						23 47 27.4	
ARU				S	**S**	**23 54 37.0**	**+1.4**
ARU				pmax	pmax		
	comp=Z,25nm,2.5s						
RDF	**Al-Radifah**	**85.20**	**299**	*e*P	**P**	**23 44 28.0**	**-0.8**
RDF				AMb	AMB	23 44 33.8	
	comp=Z,62nm,1.5s						
MIB	**Mutribah**	**85.50**	**300**	*e*P	**P**	**23 44 29.6**	**-0.6**
MIB				AMb	AMB	23 44 39.5	
	comp=Z,31nm,1.3s						
NAY	**Al-Naaiem**	**85.51**	**300**	*e*P	**P**	**23 44 29.6**	**-0.8**
NAY				AMb	AMB	23 44 39.4	
	comp=Z,23nm,1.6s						
ZEI	**Tsey**	**89.77**	**313**	*e*P	**P**	**23 44 51.3**	**+0.5**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	**Khabaz**	**90.59**	**314**	P	P	23 44 57.9	+3.6
KBZ	**Khabaz**	**90.59**	**314**	P	P	23 44 57.9	+3.6
KBZ	**Khabaz**	**90.59**	**314**	P	P	23 44 57.9	+3.6
	comp=Z,1.4nm,0.7s,baz=75,slow=3.7,SNR=4.5						
ILAR	**Eielson Array**	**90.90**	**25**	P	**P**	**23 44 54.9**	**-0.4**
ILAR	**Eielson Array**	**90.90**	**25**	P	**P**	**23 44 54.9**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=262,slow=5.1,SNR=6.9						
KMBO	**Kilima Mbogo**	**92.43**	**269**	LR	LR	00 22 47.3	
	comp=Z,124nm,19.3s,baz=97,slow=33						
OBN	**Obninsk**	**95.23**	**325**	*i* P	**P**

EVR	**Evrytania**	**0.94**	**190**	*e*PB	**Pg**	**23 34 23.1**	**-0.2**
EVR				*e*SB	**Sg**	**23 34 36.1**	**+0.5**
EVR	**Evrytania**	**0.94**	**190**	P	**Pg**	**23 34 22.8**	**-0.5**
EVR	**Evrytania**	**0.94**	**190**	*e*Pb	**Pg**	**23 34 23.1**	**-0.2**
EVR				*e*Sb	**Sg**	**23 34 36.1**	**+0.5**
EVR				S	**Sb**	**23 34 36.7**	**0.0**
XOR	**Xorichti**	**1.03**	**117**	P	**Pg**	**23 34 24.2**	**-0.7**
XOR				S	**Sb**	**23 34 39.2**	**+0.1**
XOR	**Xorichti**	**1.03**	**117**	P	**Pg**	**23 34 24.2**	**-0.7**
XOR				S	**Sb**	**23 34 39.2**	**+0.1**
NEO	**Neokhori**	**1.08**	**120**	*e*PG	**Pg**	**23 34 25.4**	**-0.5**
NEO	**Neokhori**	**1.08**	**120**	*e*Pg	**Pg**	**23 34 25.4**	**-0.5**
SOH	**Sokhos**	**1.41**	**46**	*e*PG	**Pn**	**23 34 31.4**	**0.0**
SOH	**Sokhos**	**1.41**	**46**	*e*Pg	**Pn**	**23 34 31.4**	**0.0**

IDC ***20*** *23:34:43.2±0.8,4˝.14S×129˝.71E, h0km, mb4.3/12, mb1 4.5/14,mb1mx4.3/24,mbtmp4.3/14, ML4.4/2, Error ellipse: s-maj=32.9km s-min=17.0km az=65.0*

ISCJB ***20*** *23:34:46.1±0.4,4˝.23S±0˝.08×129˝.6E±0˝.1, h36km, mb4.3/17, Error ellipse: s-maj=19.3km s-min=8.7km az=152.7*

NEIC ***20*** *23:34:48.1±0.4,4˝.20S×129˝.65E, h35km, mb4.5/7, Error ellipse: s-maj=20.7km s-min=7.5km az=64.0*

ISC 20 23:34:48.1±0.6,4˚2S±0˚.1×129˚.7E±0˚.2,h36km,n46,σ0§90/46,mb4.4/17,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.28**	**164**	Pn		**Pn**	**23 38 32.5**		**-1.6**
WRA	**Warramunga Arr**	**16.28**	**164**	Pn		**Pn**	**23 38 32.6**		**-1.6**
	1.1nm,0.3s,baz=348,slow=13,SNR=4.0								
ASAR	**Alice Springs**	**19.76**	**169**	P		**Pn**	**23 39 16.5**		**-0.4**
ASAR	**Alice Springs**	**19.76**	**169**	P		**Pn**	**23 39 16.5**		**-0.4**
	1.7nm,0.3s,baz=358,slow=9.9,SNR=9.2								
CTA	**Charters Tower**	**22.57**	**136**	P		**P**	**23 39 46.4**		**+0.9**
CTA	**Charters Tower**	**22.57**	**136**	P		**P**	**23 39 46.4**		**+0.9**
	15nm,0.7s,baz=320,slow=12,SNR=8.0								
CTAO	**Charters Tower**	**22.57**	**136**	*e*P		**P**	**23 39 46.6**		**+1.2**
	12nm,0.6s								
STKA	**Stephens Creek**	**29.70**	**159**	*e*P		**P**	**23 40 51.1**		**+0.3**
	1.0nm,0.8s								
CMAR	**Chiang Mai Arr**	**37.76**	**308**	P		**P**	**23 42 02.0**		**+1.1**
CMAR	**Chiang Mai Arr**	**37.76**	**308**	P		**P**	**23 42 02.0**		**+1.1**
	3.6nm,0.6s,baz=134,slow=7.3,SNR=6.7								
CHTO	**Chiang Mai**	**37.95**	**308**	*e*P		**P**	**23 42 01.4**		**-1.3**
	4.6nm,0.7s								
MJAR	**Matsushiro Arr**	**41.32**	**10**	P		**P**	**23 42 28.9**		**-1.5**
MJAR	**Matsushiro Arr**	**41.32**	**10**	P		**P**	**23 42 28.9**		**-1.5**
	5.6nm,0.8s,baz=185,slow=9.2,SNR=7.6								
KSAR	**Wonju Array Be**	**41.48**	**358**	P		**P**	**23 42 32.2**		**+0.6**
KSRS	**Korea Array**	**41.49**	**358**	P		**P**	**23 42 32.2**		**+0.5**
	1.9nm,0.7s,baz=172,slow=11,SNR=4.6								
TAPN	**Taplejung**	**51.24**	**310**	*e*P		**P**	**23 43 48.3**		**-0.6**
	11nm,0.4s								
RAMN	**Ramite**	**51.89**	**309**	*e*P		**P**	**23 43 53.5**		**-0.2**
	26nm,0.5s								
GUN	**Gumba**	**52.92**	**310**	*e*P		**P**	**23 44 00.7**		**-0.8**
	29nm,0.6s								
KKN	**Kakani**	**53.32**	**309**	*e*P		**P**	**23 44 03.5**		**-0.8**
	6.6nm,0.6s								
DMN	**Daman**	**53.37**	**309**	*e*P		**P**	**23 44 04.7**		**+0.1**
	10nm,0.3s								
KOLN	**Koldanda**	**54.62**	**308**	*e*P		**P**	**23 44 13.4**		**-0.3**
	11nm,0.6s								
DANN	**Dangsing**	**54.77**	**309**	*e*P		**P**	**23 44 14.6**		**-0.3**
	17nm,0.8s								
PYUN	**Piuthan**	**55.25**	**309**	*e*P		**P**	**23 44 18.5**		**+0.2**
	29nm,0.9s								
ULN	**Ulaanbaatar**	**55.54**	**342**	*e*P		**P**	**23 44 19.5**		**-0.4**
	3.2nm,0.6s								
SONM	**Songino Array**	**55.72**	**341**	P		**P**	**23 44 22.2**		**+1.0**
SONM	**Songino Array**	**55.72**	**341**	P		**P**	**23 44 22.2**		**+1.0**
	1.6nm,0.6s,baz=151,slow=7.0,SNR=4.9								
PETK	**Petropavlovsk-**	**61.80**	**19**	P		**P**	**23 45 04.7**		**+1.5**
PETK	**Petropavlovsk-**	**61.80**	**19**	P		**P**	**23 45 04.7**		**+1.5**
	2.8nm,0.7s,baz=184,slow=5.8,SNR=2.6								
MK31	**Makanchi Array**	**65.75**	**326**	*e*P		**P**	**23 45 29.0**		**-0.4**
MKAR	**Makanchi Array**	**65.75**	**326**	P		**P**	**23 45 29.2**		**-0.1**
MKAR	**Makanchi Array**	**65.75**	**326**	P		**P**	**23 45 29.2**		**-0.1**
	3.7nm,0.5s,baz=115,slow=7.6,SNR=21								
AAK	**Ala-Archa**	**68.23**	**319**	*e*P		**P**	**23 45 45.8**		**+0.3**
	3.0nm,1.1s								
AAK	**Ala-Archa**	**68.23**	**319**	P		**P**	**23 45 46.1**		**+0.7**
	0.7nm,0.4s,baz=108,slow=6.9,SNR=4.4								
ZALV	**Zalesovo Beam**	**68.97**	**333**	P		**P**	**23 45 49.0**		**-0.5**
ZALV	**Zalesovo Beam**	**68.97**	**333**	P		**P**	**23 45 49.0**		**-0.5**
	1.9nm,0.8s,baz=110,slow=6.7,SNR=4.6								
KURBB	**Kurchatov Arra**	**69.99**	**328**	P		**P**	**23 45 56.0**		**+0.1**
	3.8nm,0.4s,baz=118,slow=5.4,SNR=17								
KURK	**Kurchatov**	**70.00**	**328**	*e*P		**P**	**23 45 55.9**		**-0.1**
	6.3nm,0.6s								
BVAR	**Borovoye Array**	**75.56**	**328**	P		**P**	**23 46 28.5**		**-0.5**
BVAR	**Borovoye Array**	**75.56**	**328**	P		**P**	**23 46 28.5**		**-0.5**
	1.9nm,0.5s,baz=127,slow=10,SNR=6.4								
ABKAR	**Akbulak array**	**80.15**	**321**	*e*P		**P**	**23 46 54.2**		**-0.3**
	2.3nm,0.4s								
ILAR	**Eielson Array**	**90.97**	**25**	P		**P**	**23 47 46.5**		**-1.6**
ILAR	**Eielson Array**	**90.97**	**25**	P		**P**	**23 47 46.5**		**-1.6**
	0.2nm,0.7s,baz=317,slow=5.2,SNR=4.4								
TORD	**Torodi Ar. Bea**	**127.92**	**283**	PKP		**PKPdf**	**23 53 51.1**		**0.0**
TORD	**Torodi Ar. Bea**	**127.92**	**283**	PKP		**PKPdf**	**23 53 51.1**		**0.0**
	0.8nm,0.7s,baz=103,slow=1.5,SNR=4.5								
CPUP	**Villa Florida**	**148.88**	**168**	PKPbc		**PKPbc**	**23 54 33.8**		**+1.0**
CPUP	**Villa Florida**	**148.88**	**168**	PKPbc		**PKPbc**	**23 54 33.8**		**+1.0**
	2.4nm,0.8s,baz=100,slow=1.5,SNR=3.2								

CASC ***20*** *23:54:12.8±3.9, 10˚.46N×86˚.30W, h9km±15km, MD4.1, mb4.6(NEIC)*

ISCJB ***20*** *23:54:13.0±0.3, 10˚.52N±0˚.04×86˚.21W±0˚.02, h21km, mb4.5/72, MS4.1/20, Error ellipse: s-maj=6.4km s-min=2.5km az=21.1*

IDC ***20*** *23:54:13.7±0.8, 10˚.78N×85˚.75W, h18km±4km, mb4.2/22, mb1 4.4/23,mb1mx4.3/32, mbtmp4.3/23, ML3.8/1, MS4.1/21, Ms1 4.1/21,ms1mx3.9/46, Error ellipse: s-maj=22.2km s-min=11.5km az=54.0*

NEIC ***20*** *23:54:18.5±0.9, 10˚.63N×85˚.81W, h61km±8km, mb4.6/54, Error ellipse: s-maj=11.6km s-min=5.7km az=49.0*

NEIC Felt at Belen, Liberia, Santa Cruz and Tilaran.

BJI ***20*** *23:54:27.3, 11˚.20N×86˚.20W, h107km, mB4.9/5*

ISC 20 23:54:13.3±0.7,10˚42N±0˚.05×86˚24W±0˚.03,h17km±4km, n489,σ1§13/488,mb4.6/72,MS4.1/20,157C-137D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.73**	**71**	⇑*i*P			**Pb**	**23 54 28.0**	**+0.4**
NY14				*i* S			**Sn**	**23 54 40.3**	**+0.7**
GBS3	**Finca Las Im˜¡**	**0.85**	**65**	*i* P			**Pb**	**23 54 29.5**	**-0.2**
LAPC	**Finca la Perla**	**0.86**	**66**	*i* P			**Pg**	**23 54 29.5**	**-0.6**
GBS2	**Las Lilas**	**0.88**	**61**	*i* P			**Pg**	**23 54 29.8**	**-0.6**
GB1A	**Borinquen Arri**	**0.92**	**64**	*i* P			**Pg**	**23 54 30.5**	**-0.6**
GB1A				*i* S			**Sb**	**23 54 44.6**	**+1.9**
GPS3	**Bodega del ICE**	**0.92**	**68**	*i* P			**Pg**	**23 54 30.5**	**-0.7**
GPS3				*i* S			**Sn**	**23 54 44.9**	**+0.4**
GPS2	**Hotel Rinc˜‡n**	**0.93**	**69**	*i* P			**Pg**	**23 54 30.6**	**-0.8**
GPS1	**Guardaparques**	**0.94**	**68**	*i* P			**Pg**	**23 54 30.7**	**-0.9**
LIM1	**Limonal**	**1.01**	**74**	*i* P			**Pg**	**23 54 31.6**	**-1.3**
LIM1				*i* S			**Sn**	**23 54 47.4**	**+0.8**
GUAB	**Guayabo de Bag**	**1.03**	**74**	*i* S			**Sg**	**23 54 47.0**	**+0.2**
COLC	**Colonia**	**1.04**	**76**	*i* P			**Pg**	**23 54 32.2**	**-1.4**
MESS	**Mesas**	**1.07**	**72**	*i* P			**Pb**	**23 54 32.6**	**-0.9**
CUI	**Cuipilapa**	**1.08**	**77**	*i* P			**Pb**	**23 54 32.6**	**-1.0**
AMAS	**Alto Masis**	**1.24**	**81**	*i* P			**Pn**	**23 54 34.0**	**-2.0**
PTEN	**Parque Tenorio**	**1.26**	**76**	*i* P			**Pn**	**23 54 35.6**	**-0.7**
JTS	**JuntasAbangare**	**1.27**	**95**	*e*Pn			**Pn**	**23 54 34.7**	**-1.6**
JTS	**JuntasAbangare**	**1.27**	**95**	Pg			**Pn**	**23 54 34.8**	**-1.5**
	164nm,0.3s,baz=287,slow=8.4,SNR=445								
FORC	**Fortuna**	**1.54**	**88**	*e*P			**Pn**	**23 54 40.0**	**0.0**
CGA2	**Cerro Gallo 2**	**1.79**	**103**	*e*P			**Pn**	**23 54 42.8**	**-0.7**
LAJ	**Bijagual**	**2.15**	**105**	*e*P			Pn	23 54 41.9	-6.8
LAJ				*e*S			Sn	23 55 10.2	-5.0
SJS	**Escuela Geolog**	**2.20**	**102**	*e*P			**Pn**	**23 54 48.9**	**-0.3**
SJS				*e*S			**Sg**	**23 55 25.0**	**+0.9**
QCR	**Quepos**	**2.27**	**116**	⇑*e*P			**Pb**	**23 54 52.8**	**-0.9**
QCR				*e*S			**Sg**	**23 55 27.3**	**+1.1**
BUS	**Buena Vista**	**2.58**	**109**	*e*P			**Pn**	**23 54 54.3**	**-0.5**
CNCH	**Conchagua**	**3.25**	**331**	*e*P			**Pn**	**23 55 04.3**	**+0.7**
CNCH				*e*S			**Sn**	**23 55 41.0**	**-1.1**
ACR	**Cerro Adams**	**3.50**	**120**	*e*P			**Pn**	**23 55 06.6**	**-0.4**
BLLM	**Bellamira**	**3.59**	**327**	*e*P			**Pn**	**23 55 09.4**	**+1.1**
BLLM				*e*S			**Sn**	**23 55 48.8**	**-1.6**
TGUH	**Tegucigalpa,Un**	**3.76**	**344**	*e*Pn			**Pn**	**23 55 12.1**	**+1.5**
TGUH	**Tegucigalpa,Un**	**3.76**	**344**	*e*P			**Pn**	**23 55 11.8**	**+1.3**
CAHU	**Cacaocuatique**	**3.85**	**330**	*e*P			**Pn**	**23 55 13.4**	**+1.3**
CAHU				*e*S			**Sn**	**23 55 57.1**	**0.0**
SNVI	**San Vicente**	**4.07**	**322**	*e*P			**Pn**	**23 55 15.9**	**+0.9**
SNVI				*e*S			**Sn**	**23 56 01.4**	**-1.1**
LFRS	**El Faro**	**4.22**	**319**	*e*P			**Pn**	**23 55 18.0**	**+0.9**
SBLS	**San Blas**	**4.75**	**316**	*e*P			Pn	23 55 26.2	+1.8
SBLS				*e*S			**Sn**	**23 56 17.6**	**-1.7**
BCIP	**Isla Barro Col**	**6.43**	**101**	*e*Pn			**Pn**	**23 55 46.0**	**-1.2**
TEIG	**Tepich**	**9.95**	**349**	*e*Pn			Pn	23 56 39.9	+4.3
TEIG	**Tepich**	**9.95**	**349**	Pn			Pn	23 56 39.5	+3.9
	0.3nm,0.3s,baz=153,slow=16,SNR=7.0								
TEIG				LR			LR	00 00 46.4	
	comp=Z,2µm,18.8s,baz=205,slow=40								
CMIG	**Matias Romero**	**10.70**	**309**	Pn			Pn	23 56 47.9	+2.0
CMIG	**Matias Romero**	**10.70**	**309**	Pn			Pn	23 56 47.9	+2.0
	0.7nm,0.3s,baz=126,slow=11,SNR=12								
ROSC	**El Rosal**	**13.03**	**114**	*e*Pn			P	23 57 33.0	+4.5
ROSC	**El Rosal**	**13.03**	**114**	LR			LR	00 01 37.7	
	comp=Z,380nm,18.3s,baz=8.1,slow=35								
SDV	**Santo Domingo**	**15.46**	**94**	*e*P			pP	23 58 07.3	+7.2
ATAH	**Atahualpa**	**19.10**	**156**	LR			LR	00 04 59.6	
	comp=Z,996nm,20.7s,baz=157,slow=34								
AOPR	**Arecibo Observ**	**20.44**	**65**	*e*Pn			Pn	23 58 55.6	+3.4
	47nm,0.7s								
CELP	**Cerrillos**	**20.50**	**66**	*e*P			**P**	**23 58 50.4**	**-0.4**
SJG	**San Juan**	**20.90**	**66**	P			P	23 58 50.2	-4.9
SJG	**San Juan**	**20.90**	**66**	P			P	23 58 50.2	-4.9
	11nm,0.7s,baz=342,slow=20,SNR=2.5								
TIGA	**Tifton**	**21.07**	**6**	⇑P			**P**	**23 58 55.5**	**-1.2**
	baz=21								
HKT	**Hockley**	**21.40**	**337**	*e*P			**P**	**23 59 00.7**	**+0.5**
	56nm,1.3s								
732A	**Laxson Ranch,**	**22.31**	**327**	⇓P			**P**	**23 59 11.0**	**+0.8**
	baz=22,SNR=33								
LRAL	**Lakeview Retre**	**22.52**	**358**	*e*P			**P**	**23 59 12.7**	**+0.3**
	42nm,0.8s								
632A	**Uvalde**	**22.83**	**328**	⇑P			**P**	**23 59 15.9**	**+0.2**
	baz=23,SNR=16								
GOGA	**Godfrey**	**23.03**	**6**	*e*P			**P**	**23 59 18.0**	**+0.3**
	16nm,0.9s								
631A	**Perdido Creek**	**23.17**	**327**	⇑P			**P**	**23 59 19.1**	**-0.1**
	baz=23,SNR=8.5								
532A	**Rocksprings**	**23.39**	**329**	⇓P			**P**	**23 59 20.8**	**-0.6**
	baz=24,SNR=12								
JCT	**Junction City**	**23.62**	**330**	*e*P			**P**	**23 59 23.3**	**-0.4**
	11nm,0.6s								
JCT	**Junction City**	**23.62**	**330**	⇓P			**P**	**23 59 23.0**	**-0.7**
	baz=24								
WHTX	**Lake Whitney**	**23.85**	**336**	⇑P			**P**	**23 59 24.4**	**-1.5**
	baz=24,SNR=5.5								
432A	**Menard**	**23.94**	**330**	⇑P			**P**	**23 59 25.6**	**-1.2**
	baz=24,SNR=7.0								
NNA	**Nana**	**24.13**	**157**	LR			LR	00 07 58.5	
	comp=Z,186nm,20.9s,baz=328,slow=34								
530A	**J-C Ranch, Com**	**24.16**	**327**	⇑P			**P**	**23 59 28.0**	**-0.8**
	baz=24,SNR=15								
JSC	**Jenkinsville**	**24.19**	**10**	*e*P			**P**	**23 59 28.0**	**-1.0**
431A	**Sonora**	**24.19**	**329**	⇑P			**P**	**23 59 28.0**	**-1.1**
	baz=24,SNR=13								
332A	**Millersview**	**24.34**	**331**	⇓P			**P**	**23 59 29.2**	**-1.2**
	baz=24,SNR=38								
628A	**Black Gap, Mar**	**24.54**	**323**	⇑P			**P**	**23 59 32.2**	**-0.1**
	baz=25,SNR=17								
430A	**Baggett Ranch,**	**24.60**	**328**	⇓P			**P**	**23 59 32.2**	**-0.7**
	baz=25,SNR=8.8								
331A	**San Angelo**	**24.61**	**330**	⇑P			**P**	**23 59 31.8**	**-1.1**
	baz=25,SNR=25								
529A	**Stev Forest Ra**	**24.63**	**325**	⇓P			**P**	**23 59 33.0**	**-0.1**
	baz=25								
SWET	**Sewanee**	**24.69**	**1**	*e*P			**P**	**23 59 32.6**	**-1.0**
	77nm,1.3s								
232A	**Coleman**	**24.71**	**332**	⇓P			**P**	**23 59 32.3**	**-1.6**
	baz=25,SNR=45								
627A	**Terlingua Ranc**	**24.81**	**322**	⇓P			**P**	**23 59 34.9**	**0.0**
	baz=25,SNR=17								
429A	**Davenport Ranc**	**24.83**	**326**	⇓P			**P**	**23 59 34.5**	**-0.4**
	baz=25,SNR=30								
UALR	**University of**	**24.88**	**348**	*e*P			**P**	**23 59 33.9**	**-1.4**
	46nm,0.8s								
TXAR	**Lajitas Array**	**24.90**	**322**	P			**P**	**23 59 35.9**	**+0.3**
TXAR				PcP			**PcP**	**00 03 13.3**	**+2.0**
TXAR				pPcP				00 03 20.2	
TXAR	**Lajitas Array**	**24.90**	**322**	P			**P**	**23 59 35.9**	**+0.3**
	9.2nm,0.7s,baz=139,slow=9.0,SNR=99								
TXAR				PcP			**PcP**	**00 03 13.3**	**+2.0**
	3.2nm,0.8s,baz=142,slow=4.7,SNR=13								
TXAR				pPcP				00 03 20.2	
	1.8nm,0.8s,baz=139,slow=5.9,SNR=5.5								
MIAR	**Mount Ida**	**24.94**	**346**	*e*P			**P**	**23 59 34.5**	**-1.4**
	38nm,0.8s								
CPCT	**Cooper Cave**	**24.97**	**3**	*e*P			**P**	**23 59 35.8**	**-0.3**
528A	**Cox Ranch, San**	**24.98**	**324**	⇑P			**P**	**23 59 36.1**	**-0.2**
	baz=25,SNR=5.1								
KMSC	**Kings Mountain**	**25.02**	**10**	⇑P			**P**	**23 59 34.4**	**-2.1**
	baz=25,SNR=7.2								
330A	**Mertzon**	**25.06**	**329**	⇑P			**P**	**23 59 36.7**	**-0.4**
	baz=25,SNR=23								
231A	**Bronte**	**25.07**	**331**	⇓P			**P**	**23 59 36.5**	**-0.6**
	baz=25,SNR=13								
TKL	**Tuckaleechee C**	**25.23**	**5**	*e*P			**P**	**23 59 37.9**	**-0.5**
TKL	**Tuckaleechee C**	**25.23**	**5**	P			**P**	**23 59 37.0**	**-1.5**
	18nm,1.0s,baz=184,slow=11,SNR=8.8								
TKL				LR			LR	00 09 54.0	
	comp=Z,292nm,18.6s,baz=125,slow=38								
ABTX	**Abilene, Hawle**	**25.33**	**333**	⇓P			**P**	**23 59 38.7**	**-0.7**
	baz=25,SNR=15								
626A	**Big Bend Ranch**	**25.34**	**321**	⇑P			**P**	**23 59 40.6**	**+1.0**
	baz=26,SNR=14								
428A	**Kincaid Ranch,**	**25.34**	**325**	⇓P			**P**	**23 59 40.1**	**+0.4**
	baz=26,SNR=16								
230A	**Sterling City**	**25.42**	**329**	⇑P			**P**	**23 59 40.0**	**-0.2**
	baz=26								
527A	**Woodward Ranch**	**25.45**	**323**	⇓P			**P**	**23 59 41.2**	**+0.5**
	baz=26,SNR=11								
526A	**Mary Lane Ranc**	**25.67**	**322**	⇓P			**P**	**23 59 43.0**	**+0.3**
	baz=26,SNR=9.1								
131A	**Roby**	**25.71**	**332**	⇑P			**P**	**23 59 42.3**	**-0.6**
	baz=26,SNR=13								
Z32A	**Haskell**	**25.83**	**334**	⇑P			**P**	**23 59 43.7**	**-0.2**
	baz=26,SNR=32								
229A	**Bryant Ranch,**	**25.84**	**328**	⇑P			**P**	**23 59 43.3**	**-0.7**
	baz=26,SNR=6.2								
427A	**Hayter Ranch,**	**25.84**	**324**	⇑P			**P**	**23 59 44.3**	**+0.2**
	baz=26								
328A	**Wristen Ranch,**	**25.91**	**326**	⇓P			**P**	**23 59 45.2**	**+0.5**
	baz=26,SNR=26								
130A	**Snyder**	**25.92**	**331**	⇑P			**P**	**23 59 44.2**	**-0.6**
	baz=26								
426A	**McDonald Obser**	**26.07**	**323**	⇑P			**P**	**23 59 47.1**	**+0.7**
	baz=26,SNR=12								
TZTN	**Tazewell**	**26.13**	**5**	*e*P			**P**	**23 59 45.8**	**-0.8**
	32nm,1.2s								
Z31A	**Sharp Cattle R**	**26.14**	**333**	⇓P			**P**	**23 59 46.4**	**-0.3**
	baz=26,SNR=15								
228A	**UT Block 9, Go**	**26.36**	**327**	⇓P			**P**	**23 59 48.5**	**-0.4**
	baz=26,SNR=11								
129A	**Stewart Farms,**	**26.39**	**329**	⇓P			**P**	**23 59 48.1**	**-1.0**
	baz=26								
Y32A	**R-V Farms, Ver**	**26.41**	**335**	⇑P			**P**	**23 59 48.1**	**-1.2**
	baz=26,SNR=7.9								
Z30A	**Sanderson Ranc**	**26.56**	**331**	⇓P			**P**	**23 59 49.7**	**-0.9**
	baz=27,SNR=15								
LPIG	**La Paz**	**26.66**	**304**	LR			LR	00 11 40.0	
	comp=Z,220nm,18.7s,baz=206,slow=39								
227A	**Bennet, Jal**	**26.66**	**326**	⇓P			**P**	**23 59 50.9**	**-0.6**
	baz=27								
128A	**Castleberry Fa**	**26.70**	**328**	⇓P			**P**	**23 59 50.9**	**-1.0**
	baz=27								
425A	**Indio Mountain**	**26.73**	**322**	⇑P			**P**	**23 59 52.1**	**-0.2**
	baz=27,SNR=6.5								
Y31A	**Rekieta Farm,**	**26.73**	**333**	⇑P			**P**	**23 59 51.1**	**-1.0**
	baz=27,SNR=5.3								
Z29A	**Hungry Hill Ra**	**26.82**	**330**	⇑P			**P**	**23 59 51.7**	**-1.3**
	baz=27,SNR=8.1								
TUL1	**Tulsa**	**26.82**	**343**	⇓P			**P**	**23 59 51.5**	**-1.4**
	baz=27,SNR=5.4								
Y30A	**Stafford Cattl**	**26.95**	**332**	⇑P			**P**	**23 59 52.9**	**-1.2**
	baz=27,SNR=7.0								
325A	**Bean Ranch, Si**	**27.14**	**323**	⇑P			**P**	**23 59 56.3**	**+0.3**
	baz=27								
X31A	**McDonald Ranch**	**27.18**	**335**	⇑P			**P**	**23 59 54.6**	**-1.5**
	baz=27,SNR=5.5								
Z28A	**Tucker Farm, M**	**27.18**	**329**	⇑P			**P**	**23 59 55.9**	**-0.4**
	baz=27								
226B	**Tecolote Peak,**	**27.19**	**325**	⇑P			**P**	**23 59 56.9**	**+0.6**
	baz=27,SNR=19								
X30A	**Coker Ranch, T**	**27.41**	**333**	⇑P			**P**	**23 59 58.4**	**+0.1**
	baz=28,SNR=8.6								
324A	**Moseley Ranch,**	**27.50**	**322**	⇑P			**P**	**23 59 59.5**	**+0.4**
	baz=28,SNR=9.6								
126A	**Clayton Basin,**	**27.54**	**326**	⇓P			**P**	**23 59 59.9**	**+0.4**
	baz=28,SNR=5.5								
225A	**Deer Hill, Car**	**27.59**	**324**	⇓P			**P**	**00 00 01.4**	**+1.3**
	baz=28,SNR=12								
Z27A	**Tatum**	**27.62**	**328**	⇓P			**P**	**00 00 00.1**	**-0.1**
	baz=28,SNR=6.8								
W31A	**Holland Ranch,**	**27.64**	**335**	⇓P			**P**	**23 59 59.8**	**-0.5**
	baz=28								
X29A	**Tulia**	**27.79**	**332**	⇓P			**P**	**00 00 01.9**	**+0.2**
	baz=28,SNR=5.4								
125A	**Gardner Draw,**	**27.90**	**325**	⇑P			**P**	**00 00 03.4**	**+0.6**
	baz=28,SNR=12								
MSTX	**Muleshoe**	**27.92**	**330**	⇑P			**P**	**00 00 02.5**	**-0.3**
	baz=28,SNR=14								
224A	**Cornudas Mount**	**27.97**	**323**	⇓P			**P**	**00 00 04.0**	**+0.6**
	baz=28,SNR=11								
Z26A	**Caprock**	**27.99**	**327**	⇑P			**P**	**00 00 04.2**	**+0.7**
	baz=28,SNR=7.5								
Y27A	**Causey**	**28.05**	**329**	⇓P			**P**	**00 00 03.9**	**-0.1**
	baz=28,SNR=8.5								
V31A	**Spring Creek L**	**28.11**	**336**	⇓P			**P**	**00 00 04.2**	**-0.3**
	baz=28,SNR=9.6								
AMTX	**Amarillo**	**28.14**	**332**	*e*P			**P**	**00 00 04.3**	**-0.5**
	8.8nm,0.8s								
OLIL	**Olney**	**28.25**	**357**	*e*P			**P**	**00 00 04.3**	**-1.3**
	20nm,0.8s								
124A	**Stringfield Ra**	**28.38**	**324**	⇑P			**P**	**00 00 07.9**	**+0.8**
	baz=28,SNR=16								
Z25A	**Roswell**	**28.40**	**326**	⇓P			**P**	**00 00 07.7**	**+0.5**
	baz=28,SNR=9.6								
Y26A	**Elida**	**28.41**	**328**	⇓P			**P**	**00 00 07.6**	**+0.2**
	baz=28								
Z24A	**Sheeppen Canyo**	**28.80**	**325**	⇑P			**P**	**00 00 11.1**	**+0.3**
	baz=29,SNR=7.8								
Y25A	**Mesa, Roswell**	**28.87**	**327**	⇑P			**P**	**00 00 11.7**	**+0.3**
	baz=29,SNR=11								
X26A	**CR and CF Fran**	**28.90**	**329**	⇑P			**P**	**00 00 11.1**	**-0.5**
	baz=29								
W27A	**Bowe Ranch, En**	**28.94**	**331**	⇑P			**P**	**00 00 11.7**	**-0.3**
	ba

U20A **Newcomb** 32.79 326 ⇓P P 00 00 46.7 +0.8
baz=33
BINY **Binghamton** 32.91 14 *eP* P 00 00 45.8 -1.0
20nm,0.8s
S22A **4UR Ranch, Cre** 32.91 329 ⇓P P 00 00 47.5 +0.3
baz=33,SNR=7.1
P25A **Willow Gulch B** 33.09 334 ⇓P P 00 00 48.5 -0.1
baz=33
X16A **Lo Mia Camp, P** 33.19 320 ⇓P P 00 00 51.3 +1.8
baz=33,SNR=9.3
S21A **Coal Bank Pass** 33.34 328 ⇓P P 00 00 51.5 +0.6
baz=34,SNR=5.8
MVCO **Mesa Verde** 33.38 327 *eP* P 00 00 52.2 +0.9
6.1nm,0.8s
MVCO **Mesa Verde** 33.38 327 ⇑P P 00 00 51.8 +0.5
baz=34
P23A **Jefferson** 33.72 332 ⇑P P 00 00 54.2 -0.1
baz=34
S20A **Disappointment** 33.77 328 ⇓P P 00 00 56.0 +1.4
baz=34,SNR=6.4
Q22A **Crested Butte,** 33.82 330 ⇑P P 00 00 54.9 -0.2
baz=34,SNR=9.0
WUAZ **Wupatki** 33.86 322 ⇑P P 00 00 56.5 +1.2
baz=34
Y14A **Wickenburg** 33.90 318 ⇑P P 00 00 57.7 +2.1
baz=34
ISCO **Idaho Springs** 33.96 333 *eP* P 00 00 57.9 +1.6
6.2nm,1.3s
ISCO *ePcP* PcP 00 03 35.1 +0.6
ISCO **Idaho Springs** 33.96 333 ⇓P P 00 00 55.9 -0.4
baz=34
SMCO **Snowmass** 34.10 331 *eP* P 00 00 59.4 +1.8
5.4nm,1.0s
P22A **Eagle** 34.32 331 ⇓P P 00 00 59.6 +0.3
baz=34
ECSD **EROS Data Cent** 34.40 347 *eP* P 00 00 57.0 -2.7
10.0nm,1.1s
O23A **Lake Granby, G** 34.43 333 ⇓P P 00 01 00.6 +0.3
baz=34
PV04 **Paradox Valley** 34.48 328 *eP* P 00 01 01.5 +0.8
N24A **Carr** 34.48 335 ⇑P P 00 01 00.9 +0.3
baz=35
S18A **Hurst Farm, Bl** 34.55 326 ⇑P P 00 01 01.9 +0.5
baz=35,SNR=14
P21A **Newcastle** 34.60 330 ⇑P P 00 01 02.4 +0.6
baz=35
O22A **Kremmling** 34.67 332 ⇓P P 00 01 02.1 -0.4
baz=35,SNR=7.0
SADO **Sadowa** 34.77 9 P P 00 00 59.1 -3.8
SADO **Sadowa** 34.77 9 P P 00 00 59.1 -3.8
11nm,0.8s,baz=195,slow=10,SNR=3.9
SADO LR LR 00 15 50.2
comp=Z,410nm,18.1s,baz=248,slow=38
PDMCI **Parker Dam,Lak** 34.87 317 ⇑P P 00 01 05.9 +2.1
baz=35,SNR=7.0
M24A **Cheyenne** 34.99 335 ⇓P P 00 01 04.3 -0.8
baz=35
N23A **Red Feather La** 34.99 334 ⇑P P 00 01 05.0 -0.2
baz=35
U15A **North Rim** 35.02 322 ⇓P P 00 01 07.0 +1.5
baz=35
Q19A **Hogan Spring (** 35.08 328 ⇑P P 00 01 05.8 0.0
baz=35
PHWY **Pilot Hill** 35.12 334 *eP* P 00 01 07.9 +1.6
12nm,0.9s
SPMN **St. Paul** 35.14 352 ⇑P P 00 01 03.4 -2.7
baz=35
W13A **Hualapai Mount** 35.18 319 ⇑P P 00 01 08.9 +2.0
baz=35,SNR=14
SWSC **Sam W. Stewart** 35.24 314 ⇑P P 00 01 10.0 +3.0
baz=35
BC3 **Big Chuckawall** 35.39 315 ⇓P P 00 01 10.7 +2.2
baz=36,SNR=5.8
P19A **Cripple Cowboy** 35.44 329 ⇓P P 00 01 09.2 +0.1
baz=36
O20A **White River Ci** 35.46 330 ⇑P P 00 01 09.4 +0.3
baz=36
IRM **Iron Mountain** 35.47 316 ⇑P P 00 01 11.3 +2.2
baz=36
N21A **Black Mountain** 35.60 332 ⇓P P 00 01 11.0 +0.6
baz=36
BRSD **Miller** 35.64 344 ⇓P P 00 01 08.9 -1.5
baz=36
M22A **Cedar Creek Ra** 35.70 333 ⇓P P 00 01 11.2 0.0
baz=36
SRU **San Rafael** 35.86 327 *eP* P 00 01 13.2 +0.7
8.3nm,0.9s
SRU **San Rafael** 35.86 327 ⇑P P 00 01 13.0 +0.4
baz=36,SNR=8.0
L23A **Garrett** 35.89 335 ⇓P P 00 01 12.7 -0.2
baz=36
BELC **Belle Mtn. Jos** 35.96 315 ⇓P P 00 01 15.7 +2.3
baz=36,SNR=6.3
N20A **Spence Gulch,** 36.01 331 ⇓P P 00 01 13.0 -0.9
baz=36
PFO **Pinyon Flat Ob** 36.06 314 *eP* P 00 01 17.6 +3.2
5.1nm,1.1s
PFO **Pinyon Flat Ob** 36.06 314 ⇑P P 00 01 16.7 +2.3
baz=36
Q16A **Castle Valley** 36.08 326 ⇓P P 00 01 15.7 +1.3
baz=36
L22A **Ellis Ranch, M** 36.13 334 ⇑P P 00 01 14.6 -0.4
baz=36
GMRC **Granite Mounta** 36.17 317 ⇓P P 00 01 17.5 +2.3
baz=36
SIV **San Ignacio** 36.18 136 LR LR 00 16 33.6
comp=Z,390nm,18.1s,slow=37
M21A **Separation Pea** 36.20 333 ⇓P P 00 01 15.4 -0.2
baz=36,SNR=5.5
P17A **Butcher Ranch,** 36.24 327 ⇓P P 00 01 16.0 +0.2
baz=36,SNR=7.4
MSU **Marysvale** 36.35 325 *eP* P 00 01 19.2 +2.3
TMUT **Trail Mountain** 36.36 326 *eP* P 00 01 19.1 +2.0
87nm,2.3s
TMUT *ePcP* PcP 00 03 43.8 +2.3
CCUT **Cedar City** 36.40 322 *eP* P 00 01 21.3 +4.0
5.0nm,1.4s
CCUT *ePcP* PcP 00 03 44.4 +2.8
M20A **Sweetwater, Wa** 36.48 332 ⇓P P 00 01 17.7 -0.3
baz=37
L21A **Rawlins** 36.49 333 ⇓P P 00 01 17.7 -0.3
baz=37,SNR=10
N19A **John Jarvie Ra** 36.49 330 ⇑P P 00 01 18.0 +0.1
baz=37
J24A **Dixon Ranch, L** 36.50 337 ⇓P P 00 01 16.9 -1.0
baz=37
MURC **Murrieta** 36.59 314 ⇓P P 00 01 21.2 +2.5
baz=37
HEC **Hector,Ludlow** 36.65 316 ⇓P P 00 01 21.7 +2.5
baz=37
K22A **Casper** 36.68 335 ⇑P P 00 01 18.7 -0.9
baz=37
I24A **Kuemmerle Ranc** 36.94 338 ⇑P P 00 01 21.6 0.0
baz=37
RSSD **Black Hills** 36.95 339 *eP* P 00 01 21.6 -0.2
4.4nm,0.9s
L20A **Wamsutter** 36.96 332 ⇓P P 00 01 21.4 -0.6
baz=37
K21A **Alcova** 36.98 334 ⇓P P 00 01 21.8 -0.3
baz=37
MPU **Maple Canyon** 37.11 327 *eP* P 00 01 24.0 +0.8
7.5nm,0.8s
DAU **Daniels Canyon** 37.19 328 *eP* P 00 01 24.8 +0.7
DAU *ePcP* PcP 00 03 45.8 +1.8
GSC **Goldstone** 37.24 317 ⇑P P 00 01 26.1 +1.8
baz=37
BFSC **Mount Baldy Ra** 37.25 314 ⇑P P 00 01 26.6 +2.1
baz=37
J22A **Midwest** 37.29 335 ⇑P P 00 01 24.3 -0.4
baz=37,SNR=7.3
K20A **Yellowstone Ra** 37.48 333 ⇓P P 00 01 25.9 -0.5
baz=38
L19A **Farson** 37.51 331 ⇑P P 00 01 26.0 -0.6
baz=38
J21A **Lysite** 37.64 334 ⇑P P 00 01 27.5 -0.2
baz=38,SNR=5.3
M17A **Scullys Gap (B** 37.67 329 ⇓P P 00 01 27.8 -0.2
baz=38
H24A **Dirks Ranch, A** 37.68 339 ⇓P P 00 01 27.3 -0.6
baz=38,SNR=7.1
I22A **9 Mile Ranch,** 37.69 336 ⇓P P 00 01 27.1 -0.9
baz=38
L18A **Fontenelle, Gr** 37.70 330 ⇑P P 00 01 28.2 0.0
baz=38
EDW2 **Edwards Air Fo** 37.82 315 ⇑P P 00 01 31.4 +2.3
baz=38,SNR=7.1
K19A **Absolon Red Bu** 37.84 333 ⇑P P 00 01 28.6 -0.8
baz=38
DUG **Dugway** 37.87 326 *eP* P 00 01 31.6 +1.9
3.5nm,0.9s
DUG *ePcP* PcP 00 03 47.2 +1.3
DUG **Dugway** 37.87 326 ⇑P P 00 01 30.2 +0.6
baz=38
J20A **Shoshoni** 37.92 334 ⇓P P 00 01 29.6 -0.4
baz=38,SNR=5.8
LRMC **Laurel Mountai** 37.94 316 ⇑P P 00 01 32.4 +2.2
baz=38
FURC **Furnace Creek,** 37.94 318 ⇓P P 00 01 32.5 +2.4
baz=38
I21A **Big Trails, Te** 37.95 335 ⇑P P 00 01 29.8 -0.5
baz=38
BW06 **Boulder Array** 38.12 332 ⇑P P 00 01 31.4 -0.4
baz=38
PDAR **Pinedale Array** 38.12 332 P P 00 01 30.7 -1.1
PDAR PcP PcP 00 03 46.7 0.0
PDAR **Pinedale Array** 38.12 332 P P 00 01 30.7 -1.1
2.4nm,0.7s,baz=123,slow=10,SNR=20
PDAR PcP PcP 00 03 46.7 0.0
1.6nm,0.7s,baz=142,slow=5.7,SNR=6.9
MPMC **Manual Prospec** 38.12 317 ⇓P P 00 01 33.6 +1.7
baz=38,SNR=9.5
HWUT **Hardware Ranch** 38.22 329 *eP* P 00 01 32.5 -0.1
8.5nm,0.7s
HWUT *ePcP* PcP 00 03 47.8 +0.8
K18A **Toltan Ranch,** 38.24 331 ⇓P P 00 01 33.1 +0.3
baz=38,SNR=7.5
R11A **Troy Canyon, C** 38.26 322 ⇑P P 00 01 34.4 +1.4
baz=38
J19A **Crowheart** 38.28 333 ⇑P P 00 01 33.0 -0.1
baz=38
I20A **Worland** 38.42 334 ⇑P P 00 01 33.9 -0.3
baz=38,SNR=7.3
L16A **Fish Haven** 38.45 329 ⇑P P 00 01 34.0 -0.6
baz=39
H21A **Big Horn, Sher** 38.52 336 ⇓P P 00 01 34.5 -0.5
baz=39
BSC **Santa Cruz Isl** 38.53 313 ⇓P P 00 01 38.1 +2.9
baz=39
ARVC **Arvin** 38.53 315 ⇓P P 00 01 37.6 +2.5
baz=39
ISA **Isabella** 38.57 316 ⇑P P 00 01 37.8 +2.2
baz=39
GRAC **Grapevine Rang** 38.58 318 ⇑P P 00 01 38.1 +2.6
baz=39
AGMN **Agassiz Nation** 38.62 350 *eP* P 00 01 32.8 -2.8
16nm,1.0s
J18A **Kendall Valley** 38.68 332 ⇓P P 00 01 35.6 -1.0
baz=39,SNR=17
H20A **Greybull** 38.80 335 ⇓P P 00 01 37.1 -0.3
baz=39
F23A **Volborg** 38.82 338 ⇑P P 00 01 36.7 -0.8
baz=39
I19A **Meeteetse** 38.86 334 ⇑P P 00 01 38.0 0.0
baz=39
L15A **Malad City** 38.93 328 ⇑P P 00 01 38.2 -0.4
baz=39,SNR=6.4
I18A **Diamond G Ranc** 38.96 333 ⇑P P 00 01 38.7 -0.2
baz=39
HVU **Hansel Valley** 38.97 328 *eP* P 00 01 40.3 +1.4
5.7nm,1.0s
MDND **Maddock** 38.98 346 ⇓P P 00 01 37.6 -1.1
baz=39
VES **Vestal, Richgr** 39.09 316 ⇓P P 00 01 42.4 +2.6
baz=39
PKM **Peak Mountain** 39.11 314 ⇓P P 00 01 41.9 +1.7
baz=39,SNR=8.6
J17A **Brown Place, J** 39.12 331 ⇑P P 00 01 39.4 -0.7
baz=39,SNR=6.8
K16A **Soda Springs** 39.14 330 ⇑P P 00 01 40.4 +0.1
baz=39
E24A **Baker** 39.17 340 ⇓P P 00 01 40.2 -0.1
baz=39
SNOW **Snow King Moun** 39.21 331 *eP* P 00 01 42.0 +1.0
8.9nm,0.8s
LOHW **Long Hollow** 39.26 332 *eP* P 00 01 41.6 +0.2
46nm,2.5s
TPAW **Teton Pass** 39.33 331 *eP* P 00 01 43.6 +1.7
7.6nm,1.0s
H19A **Powell** 39.36 334 ⇓P P 00 01 42.2 +0.1
baz=39
MOOW **Moose Ponds** 39.43 332 *eP* P 00 01 42.1 -0.6
4.6nm,1.1s
RCTC **Rector, Farmer** 39.44 316 ⇑P P 00 01 45.0 +2.3
baz=40
E23A **Ismay** 39.45 339 ⇑P P 00 01 42.5 -0.3
baz=40
I17A **Pilgrim Ck.** 39.48 332 ⇑P P 00 01 43.0 -0.2
baz=40
G20A **Bridger** 39.48 335 ⇓P P 00 01 42.1 -1.0
baz=40,SNR=6.3
K15A **Arbon** 39.50 329 ⇓P P 00 01 43.3 0.0
baz=40
MTUM **Tungsten Hills** 39.56 318 *eP* P 00 01 46.6 +2.6
ELK **Elko** 39.60 325 *eP* P 00 01 45.2 +0.9
ELK *ePcP* PcP 00 03 53.0 +1.6
ELK **Elko** 39.60 325 P P 00 01 44.8 +0.5
6.0nm,0.8s,baz=112,slow=4.2,SNR=25
ELK PcP PcP 00 03 52.7 +1.3
2.7nm,0.7s,baz=100,slow=5.9,SNR=6.6
E22A **Miles City** 39.63 339 ⇑P P 00 01 43.3 -0.9
baz=40,SNR=5.9
D24A **Glendive** 39.66 341 ⇓P P 00 01 43.3 -1.1
baz=40,SNR=6.1
H18A **Shoshone NF, C** 39.66 334 ⇓P P 00 01 44.3 -0.4
baz=40
K14A **Jones Ranch, D** 39.73 328 ⇓P P 00 01 44.7 -0.4
baz=40,SNR=7.3
RLMT **Red Lodge** 39.84 334 *eP* P 00 01 45.8 -0.4
6.3nm,0.8s
RLMT **Red Lodge** 39.84 334 ⇑P P 00 01 45.3 -0.9
baz=40,SNR=6.5
J15A **Blackfoot** 39.97 330 ⇑P P 00 01 46.9 -0.4
baz=40,SNR=5.1
D23A **Lindsay** 40.00 340 ⇑P P 00 01 46.2 -1.1
baz=40
NVAR **Mina Array Bea** 40.01 320 P P 00 01 48.8 +1.1
NVAR PcP PcP 00 03 54.5 +1.8
NVAR pPcP 00 04 01.8
NVAR **Mina Array Bea** 40.01 320 P P 00 01 48.8 +1.1
13nm,0.8s,baz=136,slow=7.5,SNR=100
NVAR PcP PcP 00 03 54.5 +1.8
5.3nm,0.8s,baz=138,slow=4.6,SNR=15
NVAR pPcP 00 04 01.8
3.1nm,0.7s,baz=139,slow=4.7,SNR=8.0
C24A **Savage** 40.06 341 ⇑P P 00 01 46.9 -0.9
baz=40
G18A **Lazy EL Ranch,** 40.13 334 ⇓P P 00 01 47.6 -0.9
baz=40,SNR=5.6
E21A **Keefer Ranch,** 40.13 338 ⇑P P 00 01 47.6 -0.8
baz=40
F19A **Roth Farm, Mol** 40.30 335 ⇓P P 00 01 48.8 -1.1
baz=40,SNR=5.9
D22A **Cohagen** 40.32 339 ⇑P P 00 01 49.2 -0.7
baz=40
H16A **Russell Place,** 40.39 332 ⇑P P 00 01 50.1 -0.7
baz=40
E20A **Meyer Farm, Mu** 40.50 337 ⇑P P 00 01 50.6 -0.9
baz=41,SNR=8.8
ULM **Lac du Bonnet** 40.51 350 *eP* P 00 01 47.9 -3.5
9.4nm,0.9s
ULM PcP PcP 00 03 53.3 -0.4
ULM pPcP 00 04 00.5
ULM **Lac du Bonnet** 40.51 350 P P 00 01 47.8 -3.5
11nm,0.9s,baz=169,slow=7.9,SNR=10
ULM PcP PcP 00 03 53.3 -0.4
4.5nm,0.7s,baz=166,slow=3.6,SNR=5.9
ULM pPcP 00 04 00.5
2.8nm,0.7s,baz=178,slow=9.2,SNR=3.2
ULM LR LR 00 20 21.8
comp=Z,124nm,18.1s,baz=40,slow=39
D21A **La Casta Ranch** 40.54 338 ⇓P P 00 01 51.7 -0.1
baz=41
C23A **Lambert** 40.54 340 ⇓P P 00 01 50.4 -1.3
baz=41,SNR=11
BMN **Battle Mountai** 40.55 323 *eP* P 00 01 53.3 +1.2
15nm,1.1s
G17A **Pierce Place,** 40.64 333 ⇓P P 00 01 52.8 +0.1
baz=41
F18A **Big Timber** 40.66 335 ⇓P P 00 01 52.3 -0.5
baz=41
C22A **Vida** 40.73 340 ⇓P P 00 01 52.8 -0.5
baz=41
J13A **Cove Ranch, Pi** 40.85 329 ⇓P P 00 01 54.9 +0.4
baz=41
I14A **Mackay** 40.87 330 ⇓P P 00 01 54.9 +0.2
baz=41,SNR=6.4
H15A **Lima** 40.98 331 ⇓P P 00 01 55.8 +0.2
baz=41,SNR=10
D20A **Manuel Ranch,** 40.99 337 ⇑P P 00 01 54.5 -1.0
baz=41,SNR=6.1
G16A **Moss Hill, Enn** 41.05 332 ⇑P P 00 01 56.0 -0.1
baz=41,SNR=8.1
B23A **Brockton** 41.06 341 ⇑P P 00 01 55.0 -1.0
baz=41,SNR=5.7
F17A **Fitzpatrick Pl** 41.06 334 ⇑P P 00 01 55.7 -0.5
baz=41
HLID **Hailey** 41.09 329 *eP* P 00 01 56.5 0.0
5.3nm,1.0s
HLID *ePcP* PcP 00 03 58.0 +2.0
HLID **Hailey** 41.09 329 ⇓P P 00 01 56.4 -0.1
baz=41,SNR=8.0
CMB **Columbia Colle** 41.15 318 *eP* P 00 01 58.6 +1.8
51nm,2.5s
A24A **Westby** 41.16 342 ⇓P P 00 01 56.1 -0.6
baz=41
I13A **Wildhorse Cree** 41.19 329 ⇑P P 00 01 56.9 -0.5
baz=41,SNR=9.6
C21A **Desert Coulee** 41.22 339 ⇓P P 00 01 56.5 -0.8
baz=41
BOZ **Bozeman (W)** 41.29 333 *eP* P 00 01 52.0 -6.0
5.9nm,0.8s
BOZ **Bozeman (W)** 41.29 333 ⇑P P 00 01 57.4 -0.6
baz=41,SNR=7.8
G15A **Dillon** 41.32 332 ⇓P P 00 01 58.1 -0.2
baz=41,SNR=8.6
H14A **Leadore** 41.33 330 ⇑P P 00 01 58.6 +0.2
baz=41,SNR=6.1
D19A **Cripps Ranch,** 41.34 337 ⇑P P 00 01 57.9 -0.5
baz=41
C20A **Veseth Ranch,** 41.46 338 ⇑P P 00 01 58.7 -0.6
baz=42
DLMT **Dillon** 41.51 332 *eP* P 00 02 00.9 +1.0
11nm,1.2s
E17A **Martinsdale** 41.59 334 ⇓P P 00 02 00.4 -0.2
baz=42
H13A **Challis** 41.72 330 ⇓P P 00 02 01.8 +0.2
baz=42
MFID **Camas Ranch** 41.73 327 ⇑P P 00 02 02.3 +0.6
baz=42
LRM **Limekiln Ridge** 41.79 332 *eP* P 00 02 02.8 +0.5
A22A **Carney Farms,** 41.82 341 ⇑P P 00 02 01.4 -0.8
baz=42,SNR=5.6
F15A **Butte** 41.83 332 ⇑P P 00 02 02.1 -0.4
baz=42,SNR=6.3
C19A **Slack Wire Ran** 41.87 337 ⇓P P 00 02 02.3 -0.5
baz=42
E16A **East Helena** 41.99 334 ⇑P P 00 02 03.6 -0.2
baz=42
H12A **Diamond D Ranc** 42.01 329 ⇑P P 00 02 04.0 -0.1
baz=42,SNR=6.4
D17A **Six Diamond Ra** 42.06 335 ⇓P P 00 02 03.8 -0.5
baz=42,SNR=7.0
G13A **Cobalt** 42.09 330 ⇑P P 00 02 04.5 -0.1
baz=42
D16A **Dana Ranch, Ca** 42.33 334 ⇑P P 00 02 06.2 -0.3
baz=42
E15A **Deer Lodge** 42.34 333 ⇓P P 00 02 06.0 -0.6
baz=42,SNR=7.9
EGMT **Eagleton** 42.38 337 ⇓P P 00 02 06.5 -0.5
baz=42
B19A **Brinkman Farms** 42.43 338 ⇓P P 00 02 06.6 -0.6
baz=42,SNR=6.2
C17A **Wharram Farm,** 42.47 335 ⇓P P 00 02 06.9 -0.8
baz=42
OHCM **Honcut** 42.57 319 *eP* P 00 02 10.4 +2.0
F13A **Darby** 42.65 331 ⇑P P 00 02 08.5 -0.7
baz=43,SNR=8.2
G12A **Big Creek, Yel** 42.66 329 ⇑P P 00 02 08.9 -0.5
baz=43
E14A **Clinton** 42.72 332 ⇓P P 00 02 09.3 -0.4
baz=43,SNR=5.8
A19A **Klindworth Far** 42.75 338 ⇓P P 00 02 08.9 -0.9
baz=43
CHMT **Chamberlain Mo** 42.98 333 *eP* P 00 02 11.5 -0.4
E13A **Victor** 43.06 332 ⇓P P 00 02 11.9 -0.6
baz=43,SNR=6.4
F12A **Elk City** 43.07 330 ⇑P P 00 02 11.7 -0.8
baz=43,SNR=11
A18A **Metzger Ranch,** 43.15 337 ⇓P P 00 02 11.9 -1.2
baz=43
D14A **Greenough** 43.22 333 ⇑P P 00 02 13.7 -0.1
baz=43
MSO **Missoula** 43.23 332 *eP* P 00 02 13.4 -0.4
18nm,1.8s
MSO **Missoula** 43.23 332 ⇑P P 00 02 13.6 -0.2
baz=43
MOD **Modoc** 43.30 322 *eP* P 00 02 15.2 +0.7
5.4nm,0.8s
C15A **Salmond Ranch,** 43.36 334 ⇑P P 00 02 14.6 -0.3
baz=43
BMO **Blue Mountains** 43.48 328 *eP* P 00 02 14.4 -1.4
6.0nm,0.9s
A17A **Triple J Farms** 43.50 337 ⇓P P 00 02 15.1 -0.8
baz=44
RPN **Rapa Nui** 43.53 211 LR LR 00 15 56.3
comp=Z,211nm,18.4s,baz=313,slow=30
D13A **Huson** 43.67 332 ⇑P P 00 02 16.7 -0.6
baz=44
B15A **Bradely Ranch,** 43.76 335 ⇓P P 00 02 17.5 -0.6
baz=44
D12A **Red Ives Fores** 44.05 331 ⇑P P 00 02 20.1 -0.4
baz=44
KCPM **Cahto Peak** 44.13 318 *eP* P 00 02 22.8 +1.6
C13A **Hot Springs** 44.15 333 ⇑P P 00 02 20.6 -0.6
baz=44
B13A **Whitefish** 44.62 333 ⇑P P 00 02 24.2 -0.8
baz=45
A14A **Double T Ranch** 44.63 335 ⇑P P 00 02 24.5 -0.6
baz=45,SNR=9.8
YBH **Yreka Blue Hor** 44.67 321 P P 00 02 24.7 -0.7
YBH **Yreka Blue Hor** 44.67 321 P P 00 02 24.7 -0.7
1.6nm,0.4s,baz=172,slow=1.7,SNR=5.7
A13A **Flathead Natio** 45.02 334 ⇓P P 00 02 27.7 -0.4
baz=45
CFAA **Coronel Fontan** 45.20 158 P P 00 02 30.4 +0.7
CFAA **Coronel Fontan** 45.20 158 P P 00 02 30.4 +0.7
0.1nm,0.5s,baz=270,slow=3.0,SNR=2.9
HAWA **Haford** 45.67 328 *eP* P 00 02 32.2 -1.0
8.4nm,0.8s
NEW **Newport** 45.76 331 ⇓P P 00 02 33.3 -0.6
baz=46
BDFB **Brasilia** 45.85 124 P P 00 02 35.1 -0.1
BDFB **Brasilia** 45.85 124 P P 00 02 35.1 -0.1
5.0nm,0.8s,baz=281,slow=8.7,SNR=7.7
FFC **Flin Flon** 45.93 347 *eP* P 00 02 32.6 -2.5
3.6nm,1.0s
CPUP **Villa Cripida** 46.08 143 P P 00 02 35.1 -1.6
CPUP **Villa Florida** 46.08 143 P P 00 02 35.1 -1.6
0.6nm,0.5s,baz=328,slow=9.5,SNR=3.1
KEBM **Edson Butte** 46.30 321 *eP* P 00 02 40.4 +2.1
SCHQ **Schefferville** 46.90 15 *eP* P 00 02 39.5 -3.2
13nm,0.8s
SCHQ **Schefferville** 46.90 15 P P 00 02 39.5 -3.2
11nm,0.8s,baz=215,slow=5.5,SNR=17
SCHQ LR LR 00 22 34.0
comp=Z,190nm,19.5s,baz=138,slow=37
LON **Longmire** 47.11 327 *eP* P 00 02 44.6 0.0
4.9nm,0.9s
RCBR **Riachuelo** 52.66 106 LR LR 00 28 07.0
comp=Z,182nm,18.8s,baz=292,slow=39
BBB **Bella Bella** 53.67 329 LR LR 00 29 38.5
comp=Z,126nm,19.2s,baz=286,slow=40
FRB **Frobisher Bay** 54.71 10 LR LR 00 27 42.7
comp=Z,335nm,18.8s,baz=190,slow=37
YKA **Yellowknife Ar** 55.88 345 P P 00 03 47.2 -2.6
YKA pP pP 00 03 54.0 -1.2
YKA PcP PcP 00 04 47.8 -0.7
YKA **Yellowknife Ar** 55.88 345 P P 00 03 47.2 -2.6
2.8nm,0.9s,baz=138,slow=7.2,SNR=41
YKA pP pP 00 03 53.9 -1.2
1.4nm,0.7s,baz=138,slow=7.3,SNR=9.8
YKA PcP PcP 00 04 47.8 -0.7
1.0nm,0.8s,baz=144,slow=4.4,SNR=8.5
TAOE **Nuku Hiva Isla** 56.96 252 *eT* T 01 05 22.7
102nm,0.2s
RKT **Rikitea** 58.19 235 *eT* T 01 06 54.2
3.6nm,0.2s
DLBC **Dease Lake** 58.25 335 *eP* P 00 04 06.4 -0.5
DLBC pP pP 00 04 13.4 +1.3
DLBC PcP PcP 00 04 57.4 -0.6
DLBC *ePcP* PcP 00 04 59.2 +1.2
DLBC **Dease Lake** 58.25 335 P P 00 04 06.3 -0.5
6.3nm,1.0s,baz=109,slow=5.6,SNR=9.0

DLBC pP **pP** **00 04 13.4 +1.3**
4.3nm,0.9s,baz=125,slow=8.1,SNR=4.4
DLBC PcP **PcP** **00 04 57.4 -0.6**
1.9nm,0.8s,baz=121,slow=4.9,SNR=3.1
SFJD Kangerlussuaq 61.35 15 LR LR 00 30 53.1
comp=Z,326nm,18.0s,baz=213,slow=36
RES Resolute Bay 64.43 357 P P 00 04 44.8 -3.5
RES Resolute Bay 64.43 357 P P 00 04 44.8 -3.5
2.8nm,0.7s,baz=153,slow=6.8,SNR=8.8
INK Inuvik 65.49 343 P **P** **00 04 53.5 -1.8**
INK Inuvik 65.49 343 P **P** **00 04 53.5 -1.8**
4.8nm,1.0s,baz=135,slow=7.6,SNR=16
INK LR LR 00 37 07.6
comp=Z,93nm,18.4s,baz=136,slow=39
PMOR Pomariorio Ree 66.10 248 *e*T T 01 16 48.5
3.0nm,0.3s
EGAK Eagle 66.14 337 *e*P **P** **00 04 58.1 -1.4**
26nm,2.1s
ILAR Eielson Array 68.35 336 P **P** **00 05 12.2 -1.4**
ILAR pP **pP** **00 05 18.4 -0.6**
ILAR Eielson Array 68.35 336 P **P** **00 05 12.2 -1.4**
2.7nm,0.9s,baz=109,slow=4.7,SNR=25
ILAR pP **pP** **00 05 18.4 -0.6**
1.9nm,0.8s,baz=125,slow=4.4,SNR=8.9
ILAR LR LR 00 38 52.7
comp=Z,149nm,20.7s,baz=117,slow=39
PPT2 Papeete2 68.47 246 *e*LR LR 00 26 01.8
130nm,25.6s
MCK McKinley 68.80 335 *e*P **P** **00 05 15.6 -0.9**
9.5nm,1.0s
TRF Thorofare Moun 69.28 334 *e*P **P** **00 05 18.1 -1.5**
7.6nm,0.9s
SPU Mount Spurr 69.37 332 *e*P **P** **00 05 19.4 -0.7**
RSO Redoubt South 69.50 331 *e*P P 00 05 26.7 +5.6
TBI Tubuai 70.33 241 *e*LR LR 00 27 09.0
145nm,27.2s
COLD Coldfoot 70.52 338 *e*P **P** **00 05 26.9 -0.1**
4.9nm,1.0s
ESDC Sonseca Array 77.51 52 P P 00 06 05.2 -3.2
ESDC Sonseca Array 77.51 52 P P 00 06 05.2 -3.2
1.8nm,0.8s,baz=288,slow=5.8,SNR=17
NOA NORSAR Array B 84.56 29 P **P** **00 06 42.8 -2.8**
NOA NORSAR Array B 84.56 29 P **P** **00 06 42.8 -2.8**
0.3nm,0.7s,baz=283,slow=5.1,SNR=3.6
NOA LR LR 00 38 35.7
comp=Z,64nm,21.4s,baz=180,slow=32
TORD Torodi Ar. Bea 85.69 77 P P 00 06 48.4 -3.7
TORD Torodi Ar. Bea 85.69 77 P P 00 06 48.4 -3.7
0.9nm,1.0s,baz=261,slow=3.3,SNR=3.6
TORD LR LR 00 42 19.2
comp=Z,114nm,21.8s,baz=275,slow=34
ARCES ARCESS Array B 87.71 19 LR LR 00 47 21.9
comp=Z,69nm,20.7s,baz=334,slow=37
FINES FINESS Array B 91.26 26 LR LR 00 45 24.3
comp=Z,114nm,19.1s,baz=318,slow=34
ZALV Zalesovo Beam 115.44 6 PKP **PKPdf** **00 12 53.0 -1.2**
ZALV pPKP **PKiKP** **00 12 59.3 +5.0**
ZALV Zalesovo Beam 115.44 6 PKP **PKPdf** **00 12 53.0 -1.2**
0.4nm,0.5s,baz=254,slow=2.8,SNR=3.8
ZALV pPKP **PKiKP** **00 12 59.3 +5.0**
0.3nm,0.4s,baz=338,slow=3.4,SNR=2.2
SONM Songino Array 120.93 350 PKP **PKPdf** **00 13 04.1 -1.1**
SONM Songino Array 120.93 350 PKP **PKPdf** **00 13 04.1 -1.1**
1.1nm,1.0s,baz=344,slow=3.2,SNR=4.3
MKAR Makanchi Array 122.13 9 PKP **PKPdf** **00 13 05.7 -1.7**
MKAR Makanchi Array 122.13 9 PKP **PKPdf** **00 13 05.7 -1.7**
0.9nm,0.8s,baz=358,slow=2.1,SNR=9.8
KSRS Korea Array 122.62 328 PKP **PKPdf** **00 13 08.4 -0.2**
3.8nm,0.7s,baz=327,slow=1.7,SNR=8.9
KSAR Wonju Array Be 122.65 328 PKP **PKPdf** **00 13 08.4 -0.3**
EKS2 Erkin-Say 124.10 18 *e*PKPdf **PKPdf** **00 13 11.1 -0.4**
WMQ Urumqi 125.74 5 P **PKPdf** **00 13 15.3 +0.8**
WMQ pmax pmax
comp=Z,12nm,1.0s
WMQ Urumqi 125.74 5 PKP **PKPdf** **00 13 15.3 +0.8**
HHC Hu-ho-hao-te 126.41 343 *e*PKP **PKPdf** **00 13 16.4 +0.5**
HHC sPKP 00 13 53.6
HHC PP **PP** **00 15 12.8 +2.9**
HHC PKS **PKSdf** **00 16 52.0 -0.6**
HHC SKS SKSdf 00 20 16.6 -11
HHC SKKS SKKSac 00 21 53.8 -15
HHC SS SS 00 31 59.8 -13
HHC AMB AMB
comp=Z,150nm,9.2s
HHC Hu-ho-hao-te 126.41 343 *e*PKP **PKPdf** **00 13 16.4 +0.5**
HHC sPKP 00 13 53.6
HHC PP **PP** **00 15 12.8 +2.9**
HHC PKS **PKSdf** **00 16 52.0 -0.6**
HHC SKS SKSdf 00 20 16.6 -11
HHC SKKS SKKSac 00 21 53.8 -15
HHC SS SS 00 31 59.8 -13
HHC AMB AMB
comp=Z,150nm,9.2s
KSH Kashi 127.64 17 PKPbc **PKPdf** **00 13 19.0 +0.6**
KSH sPKP 00 13 57.5
KSH PP **PP** **00 15 17.4 -0.7**
KSH PKS **PKSdf** **00 16 55.3 +0.2**
KSH SKS SKSdf 00 20 20.6 -9.2
KSH SKKS SKKSac 00 22 03.4 -13
KSH SS SS 00 32 17.3 -11
KSH AMB AMB
comp=Z,150nm,5.1s
KSH LR LR
comp=N,29nm,1.2s
KSH LR LR
comp=E,15nm,0.6s
KSH LR LR
comp=Z,330nm,4.4s
KSH Kashi 127.64 17 PKP **PKPdf** **00 13 19.0 +0.6**
KSH sPKP 00 13 57.5
KSH PP **PP** **00 15 17.4 -0.7**
KSH PKS **PKSdf** **00 16 55.3 +0.2**
KSH SKS SKSdf 00 20 20.6 -9.2
KSH SKKS SKKSac 00 22 03.4 -13
KSH SS SS 00 32 17.3 -11
KSH AMB AMB
comp=Z,150nm,5.1s
GTA Gaotai 130.11 354 *e*PKP **PKPdf** **00 13 23.5 +0.4**
GTA sPKP 00 14 00.8
GTA PP **PP** **00 15 36.8 +2.7**
GTA SKS SKSdf 00 20 23.9 -10
GTA SKKS SKKSac 00 22 16.7 -15
GTA SS SS 00 32 45.0 -13
GTA AMB AMB
comp=Z,80nm,6.6s
GTA LR LR
comp=N,290nm,18.5s
GTA LR LR
comp=E,240nm,17.1s
GTA LR LR
comp=Z,93nm,17.6s
STKA Stephens Creek 131.01 237 PKP **PKPdf** **00 13 24.8 0.0**
STKA Stephens Creek 131.01 237 PKP **PKPdf** **00 13 24.8 0.0**
comp=Z,0.8nm,0.6s,baz=96,slow=1.0,SNR=5.3
LZH Lanzhou 132.78 349 *e*PKP **PKPdf** **00 13 31.5 +3.2**
LZH sPKP 00 14 10.3
LZH Lanzhou 132.78 349 *e*PKP **PKPdf** **00 13 31.5 +3.2**
LZH sPKP 00 14 10.3
ASAR Alice Springs 139.57 246 PKPpre PKPpre 00 13 34.1
ASAR PKP **PKPdf** **00 13 41.0 0.0**
ASAR Alice Springs 139.57 246 PKhKP PKPpre 00 13 34.1
comp=Z,0.2nm,0.6s,baz=135,slow=3.1,SNR=2.8
ASAR PKP **PKPdf** **00 13 41.0 0.0**
comp=Z,0.7nm,0.6s,baz=95,slow=1.5,SNR=7.1
WRA Warramunga Arr 139.80 251 PKP **PKPdf** **00 13 40.8 -0.7**
WRA Warramunga Arr 139.80 251 PKP **PKPdf** **00 13 40.8 -0.7**
comp=Z,1.2nm,0.7s,baz=90,slow=2.5,SNR=13
GYA Guiyang 141.26 341 *e*PKP **PKPdf** **00 13 44.0 -0.1**
GYA sPKP 00 14 37.8
GYA PP **PP** **00 16 47.5 +2.9**
GYA AMB AMB
comp=Z,70nm,8.0s
GYA Guiyang 141.26 341 *e*PKP **PKPdf** **00 13 44.0 -0.1**
GYA PP **PP** **00 16 47.5 +2.9**
GYA AMB AMB
comp=Z,70nm,8.0s
KMI Kunming 143.61 346 P **PKPdf** **00 13 47.0 -1.5**
KMI pmax pmax
comp=Z,9.0nm,0.5s
KMI Kunming 143.61 346 PKP **PKPdf** **00 13 47.0 -1.5**
CMAR Chiang Mai Arr 150.86 350 PKPbc **PKPbc** **00 14 05.3 -0.7**
CMAR Chiang Mai Arr 150.86 350 PKPbc **PKPbc** **00 14 05.3 -0.7**
comp=Z,6.7nm,0.9s,baz=332,slow=2.8,SNR=21

2009 APR

*UCR **21** 00:11:19.2, 10°.26N×86°.99W, h0km, MD4.1*
*CASC **21** 00:11:26.0±3.3, 10°.63N×86°.45W, h0km±53km, MD3.8, mb4.3(NEIC)*
*IDC **21** 00:11:32.0±3.7, 11°.19N×85°.61W, h15km±24km, mb3.9/14, mb1 4.1/15, mb1mx3.9/26, mbtmp3.9/15, ML3.5/1, MS3.6/2, Ms1 3.6/2, ms1mx2.7/45, Error ellipse: s-maj=34.8km s-min=10.4km az=54.0*
*NEIC **21** 00:11:35.2±0.8, 11°.08N×85°.60W, h47km±9km, mb4.3/12, Error ellipse: s-maj=21.1km s-min=6.6km az=54.0*
ISC 21 00:11:30.9±1.7, 10°.40N±0°.06×86°.17W±0°.06, h26km±12km, n250, σ1°32/260, mb4.2/26, 96C-79D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.68**	**68**	*i*	P		**Pn**	**00 11 44.9**	**+0.2**
NY14				*i*	S		**Sn**	**00 11 57.5**	**+3.1**
GBS3	**Finca Las Im˜¡**	**0.80**	**62**	*i*	P		**Pn**	**00 11 46.0**	**-0.5**
GBS3				*i*	S		**Sn**	**00 11 59.5**	**+1.9**
LAPC	**Finca la Perla**	**0.81**	**63**	*i*	P		**Pn**	**00 11 46.3**	**-0.4**
LAPC				*i*	S		**Sn**	**00 12 00.2**	**+2.3**
GBS2	**Las Lilas**	**0.83**	**58**	*i*	P		**Pn**	**00 11 46.9**	**0.0**
GB1A	**Borinquen Arri**	**0.87**	**61**	*i*	P		**Pn**	**00 11 47.3**	**-0.2**
GB1A				*i*	S		**Sn**	**00 12 01.7**	**+2.3**
GPS3	**Bodega del ICE**	**0.87**	**66**	*i*	P		**Pn**	**00 11 47.3**	**-0.1**
GPS3				*i*	S		**Sn**	**00 12 02.2**	**+2.8**
GPS2	**Hotel Rinc˜‡n**	**0.88**	**66**	*i*	P		**Pn**	**00 11 47.7**	**0.0**
GPS2				*i*	S		**Sn**	**00 12 02.4**	**+2.7**
GPS1	**Guardaparques**	**0.89**	**65**	*i*	P		**Pn**	**00 11 47.5**	**-0.3**
LIM1	**Limonal**	**0.95**	**72**	*i*	P		**Pn**	**00 11 48.6**	**0.0**
COLC	**Colonia**	**0.99**	**74**	*i*	P		**Pn**	**00 11 49.0**	**-0.1**
MESS	**Mesas**	**1.02**	**70**	*i*	P		**Pb**	**00 11 49.7**	**-0.3**
CUI	**Cuipilapa**	**1.02**	**75**	*i*	P		**Pb**	**00 11 49.5**	**-0.5**
JTS	**JuntasAbangare**	**1.21**	**95**	*e*	P		**Pn**	**00 11 51.6**	**-0.5**
JTS				*e*	S		**Sn**	**00 12 05.7**	**-1.9**
JTS					Lg		Lg	00 12 10.0	
JTS	**JuntasAbangare**	**1.21**	**95**		Pg		**Pn**	**00 11 51.6**	**-0.5**
	38nm,0.3s,baz=290,slow=14,SNR=94								
JTS					Lg		Lg	00 12 10.0	
	94nm,0.3s,baz=329,slow=22,SNR=12								
PTEN	**Parque Tenorio**	**1.21**	**75**	*i*	P		**Pb**	**00 11 52.5**	**-0.6**
CGA2	**Cerro Gallo 2**	**1.72**	**103**	*e*	P		**Pn**	**00 12 00.0**	**+0.7**
CGA2				*e*	S		Sb	00 12 31.9	+8.7
LAJ	**Bijagual**	**2.09**	**105**	*e*	P		Pn	00 11 59.4	-5.0
LAJ				*e*	S		**Sn**	**00 12 29.9**	**+0.2**
SJS	**Escuela Geolog**	**2.14**	**102**	*e*	P		**Pb**	**00 12 10.6**	**+1.6**
SJS				*e*	S		Sb	00 12 43.3	+8.1
QCR	**Quepos**	**2.20**	**116**	*e*	P		**Pb**	**00 12 09.2**	**-0.8**
BUS	**Buena Vista**	**2.52**	**109**	*e*	P		**Pb**	**00 12 14.0**	**-1.7**
ACR	**Cerro Adams**	**3.43**	**120**	*e*	P		**Pn**	**00 12 23.6**	**+0.8**
TGUH	**Tegucigalpa,Un**	**3.79**	**344**	*e*	Pn		**Pn**	**00 12 27.4**	**-0.2**
TGUH				*e*	S		**Sn**	**00 13 11.6**	**+0.2**
TEIG	**Tepich**	**9.98**	**349**		Pn		**Pn**	**00 13 54.5**	**+1.8**
TEIG	**Tepich**	**9.98**	**349**		Pn		**Pn**	**00 13 54.5**	**+1.8**
	0.2nm,0.3s,baz=189,slow=13,SNR=3.3								
TEIG					LR		LR	00 18 02.8	
	comp=Z,380nm,18.6s,baz=16,slow=42								
CMIG	**Matias Romero**	**10.76**	**309**		Pn		**Pn**	**00 14 04.9**	**+1.5**
CMIG	**Matias Romero**	**10.76**	**309**		Pn		**Pn**	**00 14 04.9**	**+1.5**
	0.3nm,0.3s,baz=104,slow=12,SNR=4.2								
OTAV	**Otavalo**	**12.68**	**142**	*e*	P		P	00 14 36.7	-4.5
	1.9nm,0.5s								
ATAH	**Atahualpa**	**19.06**	**156**		LR		LR	00 21 52.5	
	comp=Z,141nm,20.6s,baz=104,slow=32								
HKT	**Hockley**	**21.44**	**337**	*e*	P		**P**	**00 16 15.8**	**-1.3**
	24nm,1.4s								
732A	**Laxson Ranch,**	**22.36**	**327**	⇑	P		**P**	**00 16 28.3**	**+1.4**
	baz=22,SNR=14								
LRAL	**Lakeview Retre**	**22.54**	**358**	*e*	P		**P**	**00 16 28.8**	**-0.2**
	10nm,0.7s								
632A	**Uvalde**	**22.87**	**328**	⇑	P		**P**	**00 16 32.7**	**+0.2**
	baz=23								
532A	**Rocksprings**	**23.43**	**329**	⇑	P		**P**	**00 16 38.0**	**-0.2**
	baz=23,SNR=5.6								
JCT	**Junction City**	**23.67**	**330**	*e*	P		**P**	**00 16 39.0**	**-1.5**
	6.1nm,0.6s								
JCT	**Junction City**	**23.67**	**330**	⇑	P		**P**	**00 16 40.6**	**+0.1**
	baz=24								
WHTX	**Lake Whitney**	**23.89**	**336**	⇑	P		**P**	**00 16 43.3**	**+0.8**
	baz=24								
432A	**Menard**	**23.99**	**330**	⇑	P		**P**	**00 16 43.8**	**+0.3**
	baz=24								
JSC	**Jenkinsville**	**24.19**	**10**	*e*	P		**P**	**00 16 44.7**	**-0.6**
530A	**J-C Ranch, Com**	**24.20**	**326**	⇓	P		**P**	**00 16 45.9**	**+0.4**
	baz=24,SNR=6.5								
431A	**Sonora**	**24.24**	**328**	⇑	P		**P**	**00 16 45.8**	**0.0**
	baz=24,SNR=7.7								
332A	**Millersview**	**24.38**	**331**	⇓	P		**P**	**00 16 46.8**	**-0.3**
	baz=24,SNR=18								
628A	**Black Gap, Mar**	**24.59**	**323**	⇓	P		**P**	**00 16 49.5**	**+0.5**
	baz=24,SNR=6.8								
430A	**Baggett Ranch,**	**24.65**	**328**	⇑	P		**P**	**00 16 49.9**	**+0.4**
	baz=24								
331A	**San Angelo**	**24.65**	**330**	⇑	P		**P**	**00 16 49.8**	**+0.2**
	baz=24,SNR=13								
529A	**Stev Forest Ra**	**24.68**	**325**	⇓	P		**P**	**00 16 50.0**	**+0.2**
	baz=24								
SWET	**Sewanee**	**24.71**	**0**	*e*	P		**P**	**00 16 46.5**	**-3.5**
	25nm,1.2s								
232A	**Coleman**	**24.75**	**332**	⇑	P		**P**	**00 16 50.4**	**-0.1**
	baz=24,SNR=18								
627A	**Terlingua Ranc**	**24.86**	**322**	⇑	P		**P**	**00 16 52.2**	**+0.6**
	baz=25,SNR=6.7								
429A	**Davenport Ranc**	**24.88**	**326**	⇓	P		**P**	**00 16 52.0**	**+0.4**
	baz=25,SNR=7.9								
UALR	**University of**	**24.91**	**348**	*e*	P		**P**	**00 16 48.5**	**-3.3**
	16nm,0.9s								
TXAR	**Lajitas Array**	**24.95**	**322**		P		**P**	**00 16 53.2**	**+0.9**
TXAR					PcP		**PcP**	**00 20 30.5**	**+3.0**
TXAR	**Lajitas Array**	**24.95**	**322**		P		**P**	**00 16 53.2**	**+0.9**
	4.1nm,0.6s,baz=141,slow=10,SNR=40								
TXAR					PcP		**PcP**	**00 20 30.5**	**+3.0**
	1.1nm,0.8s,baz=147,slow=5.1,SNR=8.8								
MIAR	**Mount Ida**	**24.97**	**345**	*e*	P		**P**	**00 16 49.8**	**-2.6**
	11nm,0.7s								
528A	**Cox Ranch, San**	**25.03**	**324**	⇑	P		**P**	**00 16 53.6**	**+0.6**
	baz=25								
330A	**Mertzon**	**25.11**	**329**	⇓	P		**P**	**00 16 53.9**	**+0.2**
	baz=25,SNR=7.7								
231A	**Bronte**	**25.11**	**331**	⇓	P		**P**	**00 16 54.3**	**+0.6**
	baz=25								
TKL	**Tuckaleechee C**	**25.24**	**5**	*e*	P		P	00 16 49.3	-5.5
TKL	**Tuckaleechee C**	**25.24**	**5**		P		**P**	**00 16 53.2**	**-1.6**
	2.3nm,0.5s,baz=198,slow=15,SNR=4.5								
ABTX	**Abilene, Hawle**	**25.37**	**333**	⇑	P		**P**	**00 16 56.8**	**+0.8**
	baz=25,SNR=6.2								
626A	**Big Bend Ranch**	**25.39**	**321**	⇓	P		**P**	**00 16 57.5**	**+1.2**
	baz=25,SNR=7.4								
428A	**Kincaid Ranch,**	**25.39**	**325**	⇓	P		**P**	**00 16 57.0**	**+0.7**
	baz=25,SNR=5.3								
230A	**Sterling City**	**25.46**	**329**	⇑	P		**P**	**00 16 57.3**	**+0.4**
	baz=25								
527A	**Woodward Ranch**	**25.50**	**323**	⇑	P		**P**	**00 16 58.5**	**+1.2**
	baz=25								
526A	**Mary Lane Ranc**	**25.72**	**322**	⇓	P		**P**	**00 17 00.4**	**+1.0**
	baz=26								
131A	**Roby**	**25.75**	**332**	⇓	P		**P**	**00 16 59.7**	**+0.1**
	baz=26								
Z32A	**Haskell**	**25.87**	**334**	⇑	P		**P**	**00 17 01.0**	**+0.4**
	baz=26,SNR=15								
229A	**Bryant Ranch,**	**25.88**	**328**	⇑	P		**P**	**00 17 00.3**	**-0.4**
	baz=26								
427A	**Hayter Ranch,**	**25.89**	**324**	⇓	P		**P**	**00 17 00.4**	**-0.5**
	baz=26								
328A	**Wristen Ranch,**	**25.96**	**326**	⇓	P		**P**	**00 17 02.1**	**+0.6**
	baz=26,SNR=9.6								
426A	**McDonald Obser**	**26.12**	**323**	⇑	P		**P**	**00 17 03.7**	**+0.6**
	baz=26								
Z31A	**Sharp Cattle R**	**26.18**	**333**	⇓	P		**P**	**00 17 03.7**	**+0.3**
	baz=26,SNR=5.7								
228A	**UT Block 9, Go**	**26.41**	**327**	⇑	P		**P**	**00 17 06.2**	**+0.6**
	baz=26								
Y32A	**R-V Farms, Ver**	**26.46**	**335**	⇓	P		**P**	**00 17 06.6**	**+0.8**
	baz=26								
Z30A	**Sanderson Ranc**	**26.61**	**331**	⇑	P		**P**	**00 17 07.2**	**-0.1**
	baz=26								
128A	**Castleberry Fa**	**26.75**	**328**	⇓	P		**P**	**00 17 09.0**	**+0.4**
	baz=27								
Y31A	**Rekieta Farm,**	**26.77**	**333**	⇑	P		**P**	**00 17 09.6**	**+0.8**
	baz=26								
425A	**Indio Mountain**	**26.78**	**322**	⇑	P		**P**	**00 17 10.3**	**+1.3**
	baz=27								
WMOK	**Wichita Mounta**	**26.82**	**337**	*e*	P		**P**	**00 17 08.0**	**-1.2**
	14nm,0.9s								
Z29A	**Hungry Hill Ra**	**26.86**	**330**	⇑	P		**P**	**00 17 10.1**	**+0.4**
	baz=27								
Y30A	**Stafford Cattl**	**26.99**	**332**	⇑	P		**P**	**00 17 11.1**	**+0.4**
	baz=27								
325A	**Bean Ranch, Si**	**27.19**	**323**	⇑	P		**P**	**00 17 13.7**	**+1.0**
	baz=27								
X31A	**McDonald Ranch**	**27.22**	**335**	⇑	P		**P**	**00 17 14.1**	**+1.3**
	baz=27								
Z28A	**Tucker Farm, M**	**27.23**	**329**	⇑	P		**P**	**00 17 13.0**	**+0.1**
	baz=27								
226B	**Tecolote Peak,**	**27.24**	**325**	⇑	P		**P**	**00 17 14.4**	**+1.4**
	baz=27,SNR=7.4								
X30A	**Coker Ranch, T**	**27.45**	**333**	⇓	P		**P**	**00 17 15.6**	**+0.7**
	baz=27								
324A	**Moseley Ranch,**	**27.55**	**322**	⇑	P		**P**	**00 17 16.6**	**+0.8**
	baz=27								
225A	**Deer Hill, Car**	**27.64**	**324**	⇓	P		**P**	**00 17 18.5**	**+1.8**
	baz=28								
Z27A	**Tatum**	**27.67**	**328**	⇑	P		**P**	**00 17 17.4**	**+0.5**
	baz=28,SNR=5.0								
X29A	**Tulia**	**27.83**	**332**	⇓	P		**P**	**00 17 19.1**	**+0.8**
	baz=28								
W30A	**Crocket Farms**	**27.95**	**334**	⇓	P		**P**	**00 17 20.5**	**+1.2**
	baz=28								
125A	**Gardner Draw,**	**27.95**	**325**	⇓	P		**P**	**00 17 20.2**	**+0.8**
	baz=28,SNR=6.8								
MSTX	**Muleshoe**	**27.96**	**330**	⇓	P		**P**	**00 17 19.8**	**+0.3**
	baz=28,SNR=6.8								
224A	**Cornudas Mount**	**28.02**	**323**	⇓	P		**P**	**00 17 20.9**	**+0.8**
	baz=28								
Z26A	**Caprock**	**28.04**	**327**	⇑	P		**P**	**00 17 20.1**	**-0.1**
	baz=28								
Y27A	**Causey**	**28.09**	**329**	⇑	P		**P**	**00 17 20.9**	**+0.2**
	baz=28,SNR=8.8								
AMTX	**Amarillo**	**28.18**	**332**	⇑	P		**P**	**00 17 22.3**	**+0.9**
	baz=28								
124A	**Stringfield Ra**	**28.43**	**324**	⇓	P		**P**	**00 17 25.1**	**+1.3**
	baz=28,SNR=6.3								
Z25A	**Roswell**	**28.45**	**326**	⇑	P		**P**	**00 17 24.7**	**+0.8**
	baz=28								
Y26A	**Elida**	**28.46**	**328**	⇑	P		**P**	**00 17 25.0**	**+1.1**
	baz=28								
Z24A	**Sheeppen Canyo**	**28.84**	**325**	⇓	P		**P**	**00 17 29.4**	**+1.9**
	baz=29								
Y25A	**Mesa, Roswell**	**28.92**	**327**	⇑	P		**P**	**00 17 28.8**	**+0.7**
	baz=29								
X26A	**CR and CF Fran**	**28.95**	**329**	⇑	P		**P**	**00 17 28.6**	**+0.3**
	baz=29								
W27A	**Bowe Ranch, En**	**28.98**	**331**	⇓	P		**P**	**00 17 29.0**	**+0.4**
	baz=29								
U30A	**WK&E Inc. Balk**	**29.13**	**336**	⇓	P		**P**	**00 17 31.1**	**+1.3**
	baz=29								
Z23A	**Rita Site, Whi**	**29.29**	**324**	⇓	P		**P**	**00 17 33.0**	**+1.7**
	baz=29								
Y24A	**Capitan**	**29.33**	**326**	⇑	P		**P**	**00 17 32.8**	**+1.1**
	baz=29,SNR=5.5								
X25A	**Clemmons Ranch**	**29.37**	**328**	⇓	P		**P**	**00 17 32.4**	**+0.4**
	baz=29								
Y23A	**Lovelace Mesa,**	**29.68**	**325**	⇑	P		**P**	**00 17 35.5**	**+0.7**
	baz=30								
220A	**Playas Peak, P**	**29.75**	**319**	⇓	P		**P**	**00 17 36.4**	**+0.9**
	baz=30								
W25A	**X Bar L Ranch,**	**29.80**	**329**	⇑	P		**P**	**00 17 36.2**	**+0.4**
	baz=30								
319A	**Douglas**	**29.91**	**318**	⇓	P		**P**	**00 17 39.5**	**+2.7**
	baz=30								
V26A	**Tequesquite Ra**	**29.92**	**330**	⇑	P		**P**	**00 17 37.5**	**+0.6**
	baz=30								
U27A	**Thompson Grove**	**29.98**	**332**	⇑	P		**P**	**00 17 38.2**	**+0.8**
	baz=30								
Y22A	**Socorro**	**30.20**	**324**	⇓	P		**P**	**00 17 40.8**	**+1.4**
	baz=30								
V25A	**Rancho No Teng**	**30.36**	**329**	⇓	P		**P**	**00 17 41.8**	**+0.9**
	baz=30								
U26A	**Atchley Ranch,**	**30.38**	**331**	⇑	P		**P**	**00 17 41.9**	**+0.9**
	baz=30								
V24A	**Rampart Ranch,**	**30.61**	**328**	⇓	P		**P**	**00 17 44.5**	**+1.4**
	baz=30								
W23A	**Werner Place,**	**30.64**	**327**	⇑	P		**P**	**00 17 44.7**	**+1.3**
	baz=30								
ANMO	**Albuquerque**	**30.65**	**326**	*e*	P		**P**	**00 17 42.6**	**-0.9**
	1.5nm,0.6s								
ANMO	**Albuquerque**	**30.65**	**326**		P		**P**	**00 17 45.0**	**+1.5**
	1.8nm,0.7s,baz=144,slow=5.6,SNR=9.5								
U25A	**Circle Dot Ran**	**30.70**	**330**	⇑	P		**P**	**00 17 45.6**	**+1.7**
	baz=30								
X21A	**Alamocita Cree**	**31.04**	**324**	⇓	P		**P**	**00 17 48.3**	**+1.4**
	baz=31								
V23A	**Ortiz Mt. (NFS**	**31.10**	**327**	⇓	P		**P**	**00 17 48.5**	**+1.1**
	baz=31								
S26A	**Kim**	**31.26**	**333**	⇑	P		**P**	**00 17 49.3**	**+0.6**
	baz=31								
T25A	**Trinidad**	**31.30**	**331**	⇑	P		**P**	**00 17 50.7**	**+1.5**
	baz=31								
R27A	**Eads**	**31.52**	**334**	⇓	P		**P**	**00 17 52.6**	**+1.6**
	baz=31								
U23A	**El Rito**	**31.55**	**328**	⇓	P		**P**	**00 17 52.7**	**+1.4**
	baz=31,SNR=6.0								
V22A	**San Miguel Ran**	**31.61**	**327**	⇓	P		**P**	**00 17 52.9**	**+1.0**
	baz=31								
S25A	**Robets Cordova**	**31.73**	**332**	⇑	P		**P**	**00 17 53.8**	**+0.9**
	baz=32								
V21A	**Milan**	**31.93**	**326**	⇓	P		**P**	**00 17 56.0**	**+1.3**
	baz=32								
W20A	**Ramah**	**31.93**	**324**	⇓	P		**P**	**00 17 56.4**	**+1.6**
	baz=32								
R25A	**Fountain Ranch**	**32.05**	**332**	⇓	P		**P**	**00 17 56.9**	**+1.2**
	baz=32								
S24A	**Houchin Ranch,**	**32.08**	**331**	⇓	P		**P**	**00 17 57.5**	**+1.3**
	baz=32								
Q26A	**Hugo**	**32.36**	**334**	⇓	P		**P**	**00 17 59.6**	**+1.2**
	baz=32								
X18A	**Snowflake**	**32.38**	**322**	⇑	P		**P**	**00 18 00.3**	**+1.6**
	baz=32								
U21A	**Nageezi**	**32.40**	**327**	⇑	P		**P**	**00 18 00.1**	**+1.3**
	baz=32								
214A	**Organ Pipe Nat**	**32.65**	**315**	⇑	P		**P**	**00 18 03.5**	**+2.6**
	baz=33								
R23A	**Moffat**	**32.81**	**331**	⇑	P		**P**	**00 18 03.6**	**+1.0**
	baz=33								
S22A	**4UR Ranch, Cre**	**32.96**	**329**	⇓	P		**P**	**00 18 05.0**	**+1.2**
	baz=33								
**X16A

baz=36
M21A Separation Pea 36.24 333 ⇓P P 00 18 33.6 +1.5
baz=36
P17A Butcher Ranch, 36.28 327 ⇑P P 00 18 34.0 +1.6
baz=36
N19A John Jarvie Ra 36.54 330 ⇓P P 00 18 35.5 +0.9
baz=36
MURC Murrieta 36.64 314 ⇑P P 00 18 38.7 +3.3
baz=37
HEC Hector,Ludlow 36.70 316 ⇓P P 00 18 38.8 +2.9
baz=37
TUQ Turquoise Moun 36.78 317 ⇓P P 00 18 39.1 +2.4
baz=37
M19A Rock Springs 37.00 331 ⇑P P 00 18 39.4 +0.9
baz=37
J22A Midwest 37.33 335 ⇓P P 00 18 41.6 +0.4
baz=37
N17A Moffit Pass 37.41 329 ⇑P P 00 18 43.6 +1.5
baz=37
J21A Lysite 37.68 334 ⇑P P 00 18 45.5 +1.2
baz=37
M17A Scullys Gap (B 37.71 329 ⇓P P 00 18 45.6 +1.0
baz=38
L18A Fontenelle, Gr 37.74 330 ⇑P P 00 18 45.7 +0.9
baz=38
EDW2 Edwards Air Fo 37.87 315 ⇑P P 00 18 48.1 +2.3
baz=38
K19A Absolon Red Bu 37.88 332 ⇑P P 00 18 46.2 +0.2
baz=38
J20A Shoshoni 37.96 334 ⇑P P 00 18 47.2 +0.6
baz=38
LRMC Laurel Mountai 37.99 316 ⇑P P 00 18 49.1 +2.2
baz=38
BW06 Boulder Array 38.16 332 ⇓P P 00 18 49.8 +1.4
baz=38
PDAR Pinedale Array 38.16 332 P P 00 18 47.6 -0.8
PDAR PcP PcP 00 21 01.4 -1.5
PDAR Pinedale Array 38.16 332 P P 00 18 47.6 -0.8
0.9nm,0.7s,baz=126,slow=9.2,SNR=9.8
PDAR PcP PcP 00 21 01.4 -1.5
0.4nm,0.7s,baz=129,slow=7.1,SNR=4.0
MPMC Manual Prospec 38.18 317 ⇓P P 00 18 50.5 +1.9
baz=38
HWUT Hardware Ranch 38.27 329 *eP* P 00 18 48.3 -0.9
7.6nm,1.1s
L17A Cokeville 38.28 330 ⇑P P 00 18 50.1 +0.7
baz=38
K18A Toltan Ranch, 38.29 331 ⇓P P 00 18 50.0 +0.5
baz=38
R11A Troy Canyon, C 38.31 321 ⇓P P 00 18 51.6 +2.0
baz=38
I20A Worland 38.46 334 ⇑P P 00 18 51.4 +0.6
baz=38
J18A Kendall Valley 38.72 332 ⇑P P 00 18 53.9 +0.8
baz=38
L15A Malad City 38.98 328 ⇑P P 00 18 55.6 +0.5
baz=39
J17A Brown Place, J 39.16 331 ⇓P P 00 18 57.1 +0.3
baz=39
G20A Bridger 39.52 335 ⇑P P 00 18 59.1 -0.5
baz=39
K14A Jones Ranch, D 39.77 328 ⇓P P 00 19 02.2 +0.4
baz=40
NV11 Mina Array Sit 39.97 320 *eP* P 00 19 04.1 +0.6
J15A Blackfoot 40.02 330 ⇑P P 00 19 03.8 0.0
baz=40
NVAR Mina Array Bea 40.06 320 P P 00 19 07.0 +2.7
NVAR PcP PcP 00 21 09.9 +1.0
NVAR Mina Array Bea 40.06 320 P P 00 19 07.0 +2.7
3.9nm,0.8s,baz=133,slow=7.6,SNR=32
NVAR PcP PcP 00 21 09.9 +1.0
1.5nm,0.7s,baz=140,slow=4.7,SNR=10
G18A Lazy EL Ranch, 40.17 334 ⇓P P 00 19 04.7 -0.3
baz=40
H16A Russell Place, 40.43 332 ⇑P P 00 19 08.4 +1.0
baz=40
ULM Lac du Bonnet 40.53 350 P P 00 19 04.6 -3.1
ULM Lac du Bonnet 40.53 350 P P 00 19 04.6 -3.1
1.9nm,0.6s,baz=157,slow=5.5,SNR=3.7
E20A Meyer Farm, Mu 40.54 337 ⇑P P 00 19 08.5 +0.5
baz=40
F18A Big Timber 40.70 335 ⇓P P 00 19 09.5 +0.1
baz=40
I14A Mackay 40.91 330 ⇑P P 00 19 12.2 +0.9
baz=41
D20A Manuel Ranch, 41.03 337 ⇑P P 00 19 11.9 -0.1
baz=41
G16A Moss Hill, Enn 41.09 332 ⇑P P 00 19 13.5 +0.8
baz=41
F17A Fitzpatrick Pl 41.10 334 ⇓P P 00 19 13.5 +0.8
baz=41
HLID Hailey 41.13 328 ⇓P P 00 19 13.4 +0.3
baz=41
I13A Wildhorse Cree 41.23 329 ⇑P P 00 19 14.3 +0.4
baz=41
BOZ Bozeman (W) 41.33 333 ⇓P P 00 19 14.7 +0.1
baz=41
G15A Dillon 41.36 332 ⇓P P 00 19 15.2 +0.3
baz=41
H14A Leadore 41.37 330 ⇑P P 00 19 15.6 +0.5
baz=41
C20A Veseth Ranch, 41.50 338 ⇓P P 00 19 16.1 +0.3
baz=41
F15A Butte 41.87 332 ⇑P P 00 19 20.3 +1.2
baz=42
C19A Slack Wire Ran 41.91 337 ⇓P P 00 19 19.6 +0.4
baz=42
D17A Six Diamond Ra 42.10 335 ⇓P P 00 19 21.9 +1.0
baz=42
BEKR Beckworth 42.20 320 *eP* P 00 19 22.3 +0.4
1.9nm,0.8s
E15A Deer Lodge 42.38 333 ⇑P P 00 19 23.7 +0.5
baz=42
WVOR Wild Horse Val 42.69 324 *eP* P 00 19 25.5 -0.3
2.9nm,0.6s
F13A Darby 42.69 331 ⇑P P 00 19 25.7 0.0
baz=42
G12A Big Creek, Yel 42.70 329 ⇓P P 00 19 25.9 0.0
baz=42
E14A Clinton 42.76 332 ⇓P P 00 19 26.4 +0.1
baz=42
E13A Victor 43.10 332 ⇑P P 00 19 29.1 0.0
baz=43
F12A Elk City 43.12 330 ⇑P P 00 19 29.0 -0.1
baz=43,SNR=5.7
D14A Greenough 43.27 333 ⇑P P 00 19 29.8 -0.5
baz=43
C15A Salmond Ranch, 43.40 334 ⇑P P 00 19 31.4 0.0
baz=43
BMO Blue Mountains 43.53 328 *eP* P 00 19 30.7 -1.7
2.3nm,0.9s
A17A Triple J Farms 43.54 337 ⇓P P 00 19 32.5 +0.1
baz=43
D13A Huson 43.71 332 ⇓P P 00 19 34.5 +0.6
baz=44
A14A Double T Ranch 44.67 335 ⇑P P 00 19 41.7 +0.2
baz=44
BDFB Brasilia 45.80 124 P P 00 19 52.7 +1.8
BDFB Brasilia 45.80 124 P P 00 19 52.7 +1.8
1.6nm,0.6s,baz=294,slow=9.7,SNR=3.0
SCHQ Schefferville 46.90 15 *eP* P 00 19 54.4 -4.5
SCHQ Schefferville 46.90 15 P P 00 19 56.3 -2.6
3.9nm,0.8s,baz=231,slow=6.5,SNR=6.8
PLCA Paso Flores 52.88 165 P P 00 20 52.3 +7.7
2.7nm,0.9s,baz=335,slow=6.5,SNR=4.3
YKA Yellowknife Ar 55.91 345 P P 00 21 04.1 -2.2
YKA PcP PcP 00 22 04.4 -0.3
YKA Yellowknife Ar 55.91 345 P P 00 21 04.1 -2.2
0.6nm,0.7s,baz=142,slow=6.8,SNR=18
YKA PcP PcP 00 22 04.4 -0.3
0.5nm,0.6s,baz=144,slow=4.2,SNR=10.0
DLBC Dease Lake 58.29 335 P P 00 21 22.0 -1.3
0.8nm,0.6s,baz=212,slow=10,SNR=4.1
INK Inuvik 65.53 343 P P 00 22 10.3 -1.4
INK Inuvik 65.53 343 P P 00 22 10.3 -1.4
0.7nm,0.7s,baz=130,slow=5.5,SNR=4.9
ILAR Eielson Array 68.39 336 P P 00 22 29.1 -0.9
ILAR Eielson Array 68.39 336 P P 00 22 29.1 -0.9
0.9nm,0.9s,baz=122,slow=4.7,SNR=8.8
ESDC Sonseca Array 77.47 52 P P 00 23 22.1 -2.3
ESDC Sonseca Array 77.47 52 P P 00 23 22.1 -2.3
0.3nm,0.7s,baz=284,slow=6.9,SNR=5.6
MKAR Makanchi Array 122.14 9 PKP PKPdf 00 30 23.1 -0.4
MKAR Makanchi Array 122.14 9 PKP PKPdf 00 30 23.1 -0.4
0.2nm,0.7s,baz=46,slow=4.2,SNR=3.7
KSRS Korea Array 122.67 328 PKP PKPdf 00 30 26.3 +1.6
1.4nm,0.6s,baz=346,slow=1.7,SNR=4.3
KSAR Wonju Array Be 122.69 328 PKP PKPdf 00 30 26.3 +1.5

CMAR Chiang Mai Arr 150.89 350 PKPbc **PKPbc** 00 31 22.8 +0.7
CMAR PKPab **PKPab** 00 31 29.7 +0.5
CMAR Chiang Mai Arr 150.89 350 PKPbc **PKPbc** 00 31 22.8 +0.7
1.5nm,0.3s,baz=345,slow=3.1,SNR=8.7
CMAR PKPab **PKPab** 00 31 29.7 +0.5
1.0nm,0.4s,baz=336,slow=3.4,SNR=5.4

*CSEM **21** 00:15:44.8±0.2,33.32N×35.43E,h10km,ML1.6,Error ellipse: s-maj=3.2km s-min=2.4km az=75.0*
*NSSC **21** 00:15:44.5±0.8,33.33N×35.44E,h3km±7km,MD1.1,ML1.7*
*ISCJB **21** 00:15:45.0±1.1,33.32N±0.04×35.45E±0.06,h9km±6km, Error ellipse: s-maj=8.6km s-min=6.9km az=166.8*
*GRAL **21** 00:15:45.5±0.3,33.29N×35.44E,h4km±2km,MD2.8*
ISC 21 00:15:45.1±1.2,33.32N±0.03×35.45E±0.05,h13km±10km, n17,σ0s31/30,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATL	**Matarih**	**0.19**	**330**	*eP*	**Pg**	**00 15 49.4**	**0.0**
MATL	**Matarih**	**0.19**	**330**	*eP*	**Pg**	**00 15 49.4**	**0.0**
RCY	**Rachaya**	**0.37**	**62**	*eP*	**Pg**	**00 15 52.6**	**0.0**
RCY				*eS*	**Sg**	**00 15 57.8**	**+0.2**
BRBR	**Barbar**	**0.43**	**78**	*eP*	**Pg**	**00 15 53.5**	**-0.2**
BRBR				*eS*	**Sg**	**00 15 59.8**	**+0.2**
BRBR				AML	AML	00 16 03.8	
	comp=N,48nm,0.6s						
BRBR				AML	AML	00 16 04.0	
	comp=E,55nm,0.3s						
BRBR	**Barbar**	**0.43**	**78**	*eP*	**Pg**	**00 15 53.5**	**-0.2**
	SNR=75						
BRBR				*eS*	**Sg**	**00 15 59.8**	**+0.2**
	comp=E,55nm,0.3s,SNR=59						
QASN	**Qassioun**	**0.72**	**73**	*eP*	**Pg**	**00 15 59.0**	**-0.2**
QASN				*eS*	**Sg**	**00 16 08.5**	**-0.3**
QASN				AML	AML	00 16 11.9	
	comp=E,134nm,0.5s						
QASN				AML	AML	00 16 13.6	
	comp=N,94nm,0.8s						
QASN	**Qassioun**	**0.72**	**73**	*eP*	**Pg**	**00 15 59.0**	**-0.2**
	SNR=75						
QASN				*eS*	**Sg**	**00 16 08.5**	**-0.3**
	comp=N,94nm,0.8s,SNR=59						
TCHB	**Talchebab**	**0.79**	**146**	*eP*	**Pg**	**00 16 00.1**	**-0.2**
TCHB				*eS*	**Sg**	**00 16 10.5**	**-0.1**
TCHB				AML	AML	00 16 11.9	
	comp=N,62nm,0.6s						
TCHB				AML	AML	00 16 17.7	
	comp=E,49nm,0.3s						
TCHB	**Talchebab**	**0.79**	**146**	*eP*	**Pg**	**00 16 00.1**	**-0.2**
	SNR=67						
TCHB				*eS*	**Sg**	**00 16 10.5**	**-0.1**
	comp=E,49nm,0.3s,SNR=59						
TOTH	**TOTAH**	**0.82**	**87**	*eP*	**Pg**	**00 16 01.0**	**-0.1**
TOTH				*eS*	**Sg**	**00 16 11.7**	**-0.1**
TOTH				AML	AML	00 16 18.1	
	comp=E,12nm,0.5s						
TOTH				AML	AML	00 16 21.9	
	comp=N,7.9nm,0.8s						
TOTH	**TOTAH**	**0.82**	**87**	*eP*	**Pg**	**00 16 01.0**	**-0.1**
	SNR=67						
TOTH				*eS*	**Sg**	**00 16 11.7**	**-0.1**
	comp=N,7.9nm,0.8s,SNR=59						
HWQ	**Hawqa**	**1.04**	**23**	*eP*	**Pg**	**00 16 04.7**	**-0.5**
HWQ				*eS*	**Sb**	**00 16 18.8**	**+0.1**
HWQ	**Hawqa**	**1.04**	**23**	*eP*	**Pg**	**00 16 04.7**	**-0.5**
HWQ				*eS*	**Sb**	**00 16 18.8**	**+0.1**
SALA	**Sala**	**1.24**	**119**	*eP*	**Pn**	**00 16 08.1**	**-0.3**
SALA				*eS*	**Sg**	**00 16 25.3**	**+0.1**
SALA				AML	AML	00 16 26.3	
	comp=N,21nm,0.5s						
SALA				AML	AML	00 16 27.0	
	comp=E,1.9nm,0.2s						
SALA	**Sala**	**1.24**	**119**	*eP*	**Pn**	**00 16 08.1**	**-0.3**
	SNR=57						
SALA				*eS*	**Sg**	**00 16 25.3**	**+0.1**
	comp=E,1.9nm,0.2s,SNR=49						
ZALF	**Zalf**	**1.63**	**104**	*eP*	**Pn**	**00 16 14.4**	**+0.8**
ZALF	**Zalf**	**1.63**	**104**	*eP*	**Pn**	**00 16 14.4**	**+0.8**
	SNR=45						

*NSSC **21** 00:17:50.8±1.2,33.16N×35.37E,h0km±15km,ML1.4*
*ISCJB **21** 00:17:51.4±1.4,33.18N±0.05×35.37E±0.08,h9km±7km, Error ellipse: s-maj=11.0km s-min=7.6km az=164.1*
*CSEM **21** 00:17:51.2±0.5,33.16N×35.36E,h12km,ML1.4,Error ellipse: s-maj=8.7km s-min=5.3km az=69.0*
*GRAL **21** 00:17:54.9±0.3,33.30N×35.43E,h0km±66km,MD2.7*
ISC 21 00:17:51.2±1.8,33.16N±0.04×35.37E±0.07,h0km±22km, n13,σ0s91/24,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATL	**Matarih**	**0.33**	**354**	*eP*	**Pg**	**00 17 58.6**	**+1.0**
MATL	**Matarih**	**0.33**	**354**	*eP*	**Pg**	**00 17 58.6**	**+1.0**
RCY	**Rachaya**	**0.52**	**49**	*eP*	**Pg**	**00 18 01.9**	**+0.8**
RCY				*eS*	**Sg**	**00 18 07.3**	**-0.6**
BRBR	**Barbar**	**0.55**	**63**	*eP*	**Pg**	**00 18 01.9**	**+0.1**
BRBR				*eS*	**Sg**	**00 18 09.7**	**+0.8**
BRBR				AML	AML	00 18 10.8	
	comp=E,29nm,0.3s						
BRBR				AML	AML	00 18 12.2	
	comp=N,28nm,0.4s						
BRBR	**Barbar**	**0.55**	**63**	*eP*	**Pg**	**00 18 01.9**	**+0.1**
	SNR=92						
BRBR				*eS*	**Sg**	**00 18 09.7**	**+0.8**
	comp=N,28nm,0.4s,SNR=59						
TCHB	**Talchebab**	**0.70**	**134**	*eP*	**Pg**	**00 18 04.0**	**-0.7**
TCHB				*eS*	**Sg**	**00 18 14.8**	**+0.9**
TCHB				AML	AML	00 18 18.6	
	comp=N,24nm,0.4s						
TCHB				AML	AML	00 18 27.4	
	comp=E,25nm,0.7s						
TCHB	**Talchebab**	**0.70**	**134**	*eP*	**Pg**	**00 18 04.0**	**-0.7**
	SNR=75						
TCHB				*eS*	**Sg**	**00 18 14.8**	**+0.9**
	comp=E,25nm,0.7s,SNR=59						
TOTH	**TOTAH**	**0.91**	**77**	*eP*	**Pg**	**00 18 09.3**	**+0.6**
TOTH				*eS*	**Sg**	**00 18 20.7**	**+0.2**
TOTH				AML	AML	00 18 26.9	
	comp=E,121nm,0.7s						
TOTH				AML	AML	00 18 30.5	
	comp=N,9.3nm,0.6s						
TOTH	**TOTAH**	**0.91**	**77**	*eP*	**Pg**	**00 18 09.3**	**+0.6**
	SNR=67						
TOTH				*eS*	**Sg**	**00 18 20.7**	**+0.2**
	comp=N,9.3nm,0.6s,SNR=59						
HWQ	**Hawqa**	**1.21**	**23**	*eP*	**Pg**	**00 18 14.2**	**-0.4**
HWQ				*eS*	**Sg**	**00 18 28.3**	**-2.0**
HWQ	**Hawqa**	**1.21**	**23**	*eP*	**Pg**	**00 18 14.1**	**-0.4**
HWQ				*eS*	**Sg**	**00 18 28.3**	**-2.0**
SALA	**Sala**	**1.23**	**111**	*eP*	**Pg**	**00 18 14.6**	**-0.3**
SALA				*eS*	**Sb**	**00 18 32.1**	**+0.1**
SALA				AML	AML	00 18 36.3	
	comp=E,0.8nm,0.3s						
SALA				AML	AML	00 18 39.0	
	comp=N,9.2nm,0.4s						
SALA	**Sala**	**1.23**	**111**	*eP*	**Pg**	**00 18 14.6**	**-0.3**
	SNR=57						
SALA				*eS*	**Sb**	**00 18 32.1**	**+0.1**
	comp=N,9.2nm,0.4s,SNR=49						

*ISCJB **21** 00:18:03.4±0.8,38.15N±0.03×22.69E±0.05,h23km±9km, Error ellipse: s-maj=6.9km s-min=5.8km az=9.7*
*CSEM **21** 00:18:03.3±0.2,38.16N×22.69E,h20km,ML1.5/2,Error ellipse: s-maj=4.3km s-min=3.6km az=107.0*
*THE **21** 00:18:03.5,38.14N×22.68E,h19km±2km,ML1.5/2,Error ellipse: s-maj=2.1km s-min=0.6km az=193.0*
*ATH **21** 00:18:03.8,38.19N×22.67E,h4km,MD2.8/6*
ISC 21 00:18:03.0±0.9,38.16N±0.03×22.68E±0.03,h25km±8km, n28,σ0s42/44,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LTK	**Loutraki**	**0.26**	**121**	P	**Pb**	**00 18 09.4**	**0.0**
LTK				S	**Sb**	**00 18 13.7**	**-0.1**
LTK	**Loutraki**	**0.26**	**121**	*eP*	**Pb**	**00 18 09.1**	**-0.3**
LTK				*eSG*	**Sb**	**00 18 13.2**	**-0.6**
LTK	**Loutraki**	**0.26**	**121**	*eP*	**Pb**	**00 18 09.1**	**-0.3**
LTK	**Loutraki**	**0.26**	**121**	P	**Pb**	**00 18 09.4**	**0.0**
LTK				*eSg*	**Sb**	**00 18 13.2**	**-0.6**
LTK				S	**Sb**	**00 18 13.7**	**-0.1**
DSF Desfina	**0.28**	**334**	P	**Pb**	**00 18 09.9**	**+0.2**
DSF			S	**Sb**	**00 18 14.7**	**+0.4**
DSF Desfina	**0.28**	**334**	P	**Pb**	**00 18 09.9**	**+0.2**
DSF			S	**Sb**	**00 18 14.7**	**+0.4**
GUR Goura	**0.35**	**230**	P	**Pb**	**00 18 10.9**	**+0.1**
GUR			S	**Sb**	**00 18 16.1**	**0.0**
GUR Goura	**0.35**	**230**	*e*PG	**Pb**	**00 18 11.1**	**+0.3**
GUR			*e*SG	**Sb**	**00 18 15.6**	**-0.5**
GUR Goura	**0.35**	**230**	P	**Pb**	**00 18 10.9**	**+0.1**
GUR			*e*Sg	**Sb**	**00 18 15.6**	**-0.5**
GUR			S	**Sb**	**00 18 16.1**	**0.0**
KLV Kalavryta, Ach	**0.44**	**255**	*e*PG	**Pn**	**00 18 13.8**	**0.0**
KLV Kalavryta, Ach	**0.44**	**255**	*e*Pg	**Pn**	**00 18 13.8**	**0.0**
TRIZ Trizonia	**0.52**	**293**	*e*PG	**Pb**	**00 18 13.4**	**-0.1**
TRIZ Trizonia	**0.52**	**293**	*e*Pg	**Pb**	**00 18 13.4**	**-0.1**
LKR Lokris	**0.55**	**27**	P	**Pb**	**00 18 14.1**	**+0.1**
LKR			S	**Sn**	**00 18 22.7**	**-0.9**
LKR Lokris	**0.55**	**27**	*e*PG	**Pb**	**00 18 14.0**	**+0.1**
LKR			*e*SG	**Sb**	**00 18 21.5**	**0.0**
LKR Lokris	**0.55**	**27**	P	**Pb**	**00 18 14.1**	**+0.1**
LKR			*e*Sg	**Sb**	**00 18 21.5**	**0.0**
LKR			S	**Sn**	**00 18 22.7**	**-0.9**
ATAL Atalanti	**0.59**	**26**	P	**Pb**	**00 18 14.8**	**0.0**
ATAL Atalanti	**0.59**	**26**	P	**Pb**	**00 18 14.8**	**0.0**
AXAR Agios Charalam	**0.61**	**358**	P	**Pb**	**00 18 15.0**	**0.0**
AXAR			S	**Sn**	**00 18 25.1**	**0.0**
AXAR Agios Charalam	**0.61**	**358**	P	**Pb**	**00 18 15.0**	**0.0**
AXAR			S	**Sn**	**00 18 25.1**	**0.0**
DID Didima	**0.79**	**146**	*e*PB	**Pn**	**00 18 19.6**	**+1.1**
DID Didima	**0.79**	**146**	*e*Pb	**Pn**	**00 18 19.6**	**+1.1**
SMIA Simia	**0.83**	**30**	P	**Pn**	**00 18 19.6**	**+0.5**
SMIA Simia	**0.83**	**30**	P	**Pn**	**00 18 19.6**	**+0.5**
AGG Agios Georgios	**0.90**	**342**	*e*PG	**Pb**	**00 18 19.7**	**-0.3**
AGG Agios Georgios	**0.90**	**342**	*e*Pg	**Pb**	**00 18 19.7**	**-0.3**
AOS Alonnisos	**1.38**	**43**	P	**Pn**	**00 18 26.9**	**+0.3**
AOS Alonnisos	**1.38**	**43**	P	**Pn**	**00 18 26.9**	**+0.3**

IDC 21 00:20:07.0±1.9,4.24S×129.31E,h0km,mb3.4/1, mb1 3.6/3,mb1mx3.4/20,mbtmp3.4/3,ML3.2/1,Error ellipse: s-maj=87.4km s-min=29.9km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Ar**	**16.36**	**163**		Pn	00 23 56.2	-2.1
	0.1nm,0.3s,baz=342,slow=14,SNR=3.9						
ASAR	**Alice Springs**	**19.82**	**168**	P	Pn	00 24 40.4	-0.5
	0.2nm,0.3s,baz=353,slow=10,SNR=6.7						
MKAR	**Makanchi Array**	**65.56**	**326**	P	P	00 30 52.5	0.0
	0.3nm,0.5s,baz=129,slow=7.9,SNR=5.3						

*IDC **21** 00:23:51.4±1.2,45.29N×151.52E,h0km,mb3.7/5, mb1 3.8/6,mb1mx3.5/25,mbtmp3.7/6,ML3.1/1,Error ellipse: s-maj=47.6km s-min=25.6km az=103.0*
*MOS **21** 00:23:53.9±1.9,45.22N×152.30E,h33km,mb4.2/1,Error ellipse: s-maj=38.5km s-min=23.8km az=78.9*
ISC 21 00:23:56.3±1.3,45.3N±0.2×151.7E±0.1,h32km,n10, σ0s45/10,mb4.0/5,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.69**	**270**	PN	**Pb**	**00 24 43.8**	**0.0**
PETK	**Petropavlovsk-**	**8.75**	**25**	PN	**Pn**	**00 26 00.4**	**-0.1**
PETK	**Petropavlovsk-**	**8.75**	**25**	Pn	**Pn**	**00 26 00.4**	**-0.1**
	0.2nm,0.3s,baz=187,slow=12,SNR=3.9						
YKA	**Yellowknife Ar**	**52.69**	**36**	P	**P**	**00 33 07.3**	**+0.2**
	0.1nm,0.7s,baz=292,slow=6.2,SNR=2.8						
FINES	**FINESS Array B**	**64.93**	**334**	P	**P**	**00 34 31.2**	**-1.0**
	1.1nm,0.4s,baz=30,slow=9.7,SNR=9.9						
WRA	**Warramunga Ar**	**66.82**	**198**	P	**P**	**00 34 44.6**	**-0.1**
	0.1nm,0.5s,baz=13,slow=7.0,SNR=2.4						
NB2	**NORSAR Subarra**	**69.28**	**341**	P	**P**	**00 35 00.1**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**69.28**	**341**	P	**P**	**00 34 60.0**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=28,slow=6.3,SNR=8.6						
AKASG	**Malin Array Be**	**72.19**	**326**	P	**P**	**00 35 18.0**	**+0.4**
AKASG	**Malin Array Be**	**72.19**	**326**	P	**P**	**00 35 18.0**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=37,slow=5.9,SNR=3.4						

*MOS **21** 00:27:40.1±0.9,34.90S×71.56W,h33km,mb5.4/32,Error ellipse: s-maj=16.7km s-min=7.7km az=103.4*
*ISCJB **21** 00:27:43.8±0.2,35.09S±0.02×71.56W±0.05,h70km±2km, mb5.0/96,Error ellipse: s-maj=6.7km s-min=3.0km az=27.3*
*NEIC **21** 00:27:44.1,35.09S×71.57W,h64km,mb5.2/71,After GUC.*
NEIC Felt [V] at Talca; [IV] at Constitucion, Curico, Graneros, Melipilla, Pichilemu, Rancagua, San Bernardo, San Fernando and Santa Cruz; [III] at Colina, Lampa, Maria Pinto, Puente Alto, San Jose and Santiago; [II] at Casablanca, El Tabo, Isla de Maipo, Talagante and Valparaiso. Also felt at Buin, San Bernardo and Vina del Mar.
*IDC **21** 00:27:44.2±0.3,35.04S×71.54W,h60km±2km,mb4.5/21, mb1 4.6/25,mb1mx4.6/25,mbtmp4.5/25,MS3.8/8, Ms1 3.8/8,ms1mx3.7/29,Error ellipse: s-maj=12.4km s-min=8.9km az=97.0*
*GUC **21** 00:27:44.1±0.6,35.09S×71.57W,h64km±3km,ML5.4*
*BJI **21** 00:27:45.1,34.39S×71.64W,h73km,mB5.2/11,Ms5.4/8, Ms7 5.2/9*
ISC 21 00:27:44.1±0.2,35.06S±0.03×71.60W±0.04,h63km±1km, h62km:pP-P,n814,σ1s03/953,mb5.1/96,251C-239D, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TALC	**Talca**	**0.34**	**184**	⇑*i*P	**Pn**	**00 27 55.1**	**+0.4**
TALC				*i* S	**Sn**	**00 28 02.9**	**+0.3**
TALC	**Talca**	**0.34**	**184**	⇑*i*P	**Pn**	**00 27 55.1**	**+0.4**
TALC				*i* S	**Sn**	**00 28 02.9**	**+0.3**
TALC				AML	AML	00 28 05.0	
	comp=E,267μm,0.5s						
CTCH	**Constitucion**	**0.71**	**248**	⇑*i*P	**Pn**	**00 27 59.0**	**+0.4**
CTCH				*i* S	**Sn**	**00 28 10.6**	**+1.2**
CTCH	**Constitucion**	**0.71**	**248**	⇑*i*P	**Pn**	**00 27 59.0**	**+0.4**
CTCH				*i* S	**Sn**	**00 28 10.6**	**+1.2**
CTCH				AML	AML	00 28 20.5	
	comp=E,304μm,0.7s						
CACH	**El Canelo**	**1.25**	**42**	⇓*i*P	**Pn**	**00 28 06.1**	**+0.5**
CACH	**El Canelo**	**1.25**	**42**	⇓*i*P	**Pn**	**00 28 06.1**	**+0.5**
CHCH	**Chadas Angostu**	**1.37**	**35**	⇑*i*P	**Pn**	**00 28 07.6**	**+0.4**
CHCH	**Chadas Angostu**	**1.37**	**35**	⇑*i*P	**Pn**	**00 28 07.6**	**+0.4**
COCH	**Cobquecura**	**1.44**	**222**	⇑*i*P	**Pn**	**00 28 07.5**	**-0.5**
COCH				*i* S	**Sn**	**00 28 26.0**	**0.0**
COCH	**Cobquecura**	**1.44**	**222**	⇑*i*P	**Pn**	**00 28 07.5**	**-0.5**
COCH				*i* S	**Sn**	**00 28 26.0**	**0.0**
TACH	**Talagante**	**1.51**	**22**	⇑*i*P	**Pn**	**00 28 09.2**	**+0.3**
TACH	**Talagante**	**1.51**	**22**	⇑*i*P	**Pn**	**00 28 09.2**	**+0.3**
CCHI	**Chillan**	**1.58**	**194**	⇓*i*P	**Pn**	**00 28 10.4**	**+0.5**
CCHI				*i* S	**Sn**	**00 28 29.9**	**+0.4**
CCHI	**Chillan**	**1.58**	**194**	⇓*i*P	**Pn**	**00 28 10.4**	**+0.5**
CCHI				*i* S	**Sn**	**00 28 29.9**	**+0.4**
LMEL	**Las Melosas**	**1.67**	**44**	⇓*i*P	**Pn**	**00 28 12.4**	**+1.1**
LMEL				*i* S	**Sn**	**00 28 33.7**	**+1.8**
LMEL	**Las Melosas**	**1.67**	**44**	⇓*i*P	**Pn**	**00 28 12.4**	**+1.1**
LMEL				*i* S	**Sn**	**00 28 33.7**	**+1.8**
LMEL				AML	AML	00 28 36.5	
	comp=E,35μm,0.2s						
ANTU	**Antumapu**	**1.69**	**29**	⇓*i*P	**Pn**	**00 28 12.2**	**+0.7**
ANTU				*i* S	**Sn**	**00 28 33.1**	**+0.9**
ANTU	**Antumapu**	**1.69**	**29**	⇓*i*P	**Pn**	**00 28 12.2**	**+0.7**
ANTU				*i* S	**Sn**	**00 28 33.1**	**+0.9**
ANTU				AML	AML	00 28 34.5	
	comp=N,86μm,0.4s						
PCH	**Pirque**	**1.70**	**32**	⇑*i*P	**Pn**	**00 28 12.2**	**+0.6**
PCH				*i* S	**Sn**	**00 28 33.6**	**+1.3**
PCH	**Pirque**	**1.70**	**32**	⇑*i*P	**Pn**	**00 28 12.2**	**+0.6**
PCH				*i* S	**Sn**	**00 28 33.6**	**+1.3**
SJCH	**San Jose de Ma**	**1.75**	**36**	⇓*i*P	**Pn**	**00 28 12.3**	**-0.1**
SJCH				*i* S	**Sn**	**00 28 34.1**	**+0.4**
SJCH	**San Jose de Ma**	**1.75**	**36**	⇓*i*P	**Pn**	**00 28 12.3**	**-0.1**
SJCH				*i* S	**Sn**	**00 28 34.1**	**+0.4**
SAN	**Santiago**	**1.78**	**26**	⇑*i*P	**Pn**	**00 28 13.3**

comp=N,21µm,0.5s
STL Santa Lucia 1.81 26 ⇓*i* P **Pn 00 28 13.3 +0.3**
STL *i* S **Sn 00 28 35.7 +0.8**
FSR Penalolen 1.81 30 ⇓*i* P **Pn 00 28 13.8 +0.6**
FSR *i* S **Sn 00 28 36.6 +1.5**
FSR Penalolen 1.81 30 ⇓*i* P **Pn 00 28 13.8 +0.6**
FSR *i* S **Sn 00 28 36.6 +1.5**
CLCH Cerro Calan 1.88 28 ⇓*i* P **Pn 00 28 14.7 +0.7**
CLCH *i* S **Sn 00 28 38.0 +1.2**
CLCH AML AML 00 28 47.9
comp=E,48µm,0.4s
FCH Farellones 2.04 33 ⇓*i* P **Pn 00 28 17.5 +1.0**
FCH *i* S **Sn 00 28 42.9 +1.8**
FCH AML AML 00 28 48.0
comp=N,27µm,0.2s
PEL Peldehue 2.06 22 ⇑*i* P **Pn 00 28 17.2 +0.7**
PEL *i* S **Sn 00 28 42.3 +1.2**
PEL AML AML 00 28 51.4
comp=N,62µm,0.4s
ROCH El Roble 2.14 13 AML AML 00 28 49.8
comp=E,52µm,0.5s
AGCH Angol 2.88 198 *i* P **Pn 00 28 28.1 +0.5**
AGCH Angol 2.88 198 *i* P **Pn 00 28 28.1 +0.5**
AGCH AML AML 00 29 19.2
comp=E,18µm,0.4s
CHNG Los Chungos 3.17 2 AML AML 00 29 27.7
comp=E,5µm,0.6s
TMU Temuco 3.75 192 ⇑*i* P **Pn 00 28 39.6 +0.2**
TMU *i* S **Sn 00 29 21.8 -0.5**
TMU Temuco 3.75 192 ⇑*i* P **Pn 00 28 39.6 +0.2**
TMU *i* S **Sn 00 29 21.8 -0.5**
CFAA Coronel Fontan 4.45 40 P **Pn 00 28 49.6 +0.5**
CFAA S **Sn 00 29 41.2 +1.5**
CFAA Coronel Fontan 4.45 40 P **Pn 00 28 49.6 +0.5**
comp=E,12nm,0.3s,baz=209,slow=12,SNR=304
CFAA S **Sn 00 29 41.2 +1.5**
comp=E,5.7nm,0.3s,baz=202,slow=8.6,SNR=3.9
CFAA LR LR 00 30 56.3
comp=E,124nm,21.0s,baz=218,slow=44
PLCA Paso Flores 5.72 172 P **Pn 00 29 07.7 +1.2**
PLCA Sn **Sn 00 30 16.2 +5.4**
PLCA Paso Flores 5.72 172 P **Pn 00 29 07.7 +1.2**
comp=E,125nm,0.3s,baz=340,slow=11,SNR=1435
PLCA LR LR 00 31 29.2
comp=E,1µm,21.7s,baz=350,slow=39
LCO Las Campanas 6.08 7 e Pn **Pn 00 29 10.0 -1.6**
LCO e Sn **Sn 00 30 17.2 -2.7**
TRQA Tornquist 8.30 114 e Pn **Pn 00 29 43.5 +1.8**
TRQA e Sn Sn 00 31 07.4 -6.5
CPUP Villa Florida 15.04 59 P **Pn 00 31 11.1 -1.7**
CPUP Villa Florida 15.04 59 P **Pn 00 31 11.1 -1.7**
comp=E,0.5nm,0.3s,baz=213,slow=12,SNR=8.2
CPUP LR LR 00 38 00.5
comp=E,232nm,21.6s,baz=221,slow=41
LPAZ La Paz 18.95 10 e Pn **Pn 00 32 02.4 +0.4**
comp=E,499nm,1.5s
LPAZ *e* 00 32 23.1
LPAZ La Paz 18.95 10 P **Pn 00 32 02.4 +0.4**
comp=E,1.5nm,0.3s,baz=170,slow=8.3,SNR=92
USHA Ushuaia 19.89 175 P **Pn 00 32 11.3 -0.9**
USHA Ushuaia 19.89 175 P **Pn 00 32 11.3 -0.9**
comp=E,2.5nm,0.3s,baz=340,slow=10,SNR=22
USHA LR LR 00 40 42.2
comp=E,303nm,19.8s,baz=290,slow=39
SIV San Ignacio 21.21 29 P **P 00 32 23.7 -0.9**
SIV San Ignacio 21.21 29 P **P 00 32 23.7 -0.9**
comp=E,29nm,0.7s,baz=214,slow=11,SNR=69
NNA Nana 23.46 347 *e* P **P 00 32 48.0 -0.1**
NNA Nana 23.46 347 P **P 00 32 47.8 -0.3**
comp=E,30nm,0.7s,baz=202,slow=13,SNR=14
NNA LR LR 00 39 55.1
comp=E,264nm,21.1s,baz=165,slow=31
SAML Samuel 27.11 19 *e* P **P 00 33 20.4 -0.7**
comp=E,27nm,0.9s
SAML *e* 00 33 38.7
ATAH Atahualpa 28.49 346 P **P 00 33 35.9 +2.0**
ATAH Atahualpa 28.49 346 P **P 00 33 35.9 +2.0**
comp=E,7.8nm,0.9s,baz=206,slow=14,SNR=4.9
BDFB Brasilia 28.65 54 P **P 00 33 33.6 -1.4**
BDFB Brasilia 28.65 54 P **P 00 33 33.6 -1.4**
comp=E,5.3nm,0.8s,baz=240,slow=9.9,SNR=6.4
BDFB LR LR 00 46 04.3
comp=E,156nm,19.4s,baz=54,slow=38
PMSA Palmer Station 30.09 174 LR LR 00 44 52.8
comp=E,129nm,20.0s,baz=205,slow=34
OTAV Otavalo 35.70 348 *e* P **P 00 34 38.0 +0.9**
comp=E,17nm,1.6s
OTAV *e* 00 35 01.6
OTAV *e* PcP **PcP 00 37 03.2 -1.0**
PAYG Puerto Ayora 38.40 329 *e* P **P 00 34 59.9 +0.5**
comp=E,69nm,1.2s
ROSC El Rosal 39.79 356 *e* P P 00 35 15.0 +3.5
ROSC *e* pP pP 00 35 24.8 -2.5
ROSC El Rosal 39.79 356 P P 00 35 14.8 +3.3
comp=E,14nm,0.5s,baz=100,slow=13,SNR=7.5
ROSC LR LR 00 49 58.9
comp=E,132nm,21.4s,baz=20,slow=34
SDV Santo Domingo 43.72 1 *e* P **P 00 35 42.9 -0.5**
comp=E,24nm,0.8s
SDV *e* pP **pP 00 35 59.2 -0.1**
RCBR Riachuelo 43.91 57 P **P 00 35 45.6 +0.8**
RCBR pP **pP 00 36 00.4 -0.3**
RCBR Riachuelo 43.91 57 P **P 00 35 45.6 +0.8**
comp=E,4.5nm,1.0s,baz=264,slow=15,SNR=3.4
RCBR pP **pP 00 36 00.4 -0.3**
comp=E,2.8nm,0.6s,baz=189,slow=11,SNR=2.0
JTS JuntasAbangare 46.84 342 P **P 00 36 09.4 +1.5**
comp=E,2.8nm,1.8s
JTS JuntasAbangare 46.84 342 P **P 00 36 09.4 +1.5**
comp=E,8.9nm,0.6s,baz=282,slow=6.3,SNR=7.3
VNA3 Neumayer Olymp 48.24 158 *e* P **P 00 36 19.2 +1.1**
VNA3 Neumayer Olymp 48.24 158 *e* pP pP 00 36 35.8 +1.5
VNA3 Neumayer Olymp 48.24 158 *e* PcP **PcP 00 37 45.1 +0.9**
VNA2 Neumayer--Watz 48.90 157 *e* P **P 00 36 24.4 +1.3**
VNA2 Neumayer--Watz 48.90 157 *e* pP pP 00 36 41.2 +1.9
SNAA Sanae 50.47 158 *e* P **P 00 36 35.7 +0.6**
SNAA Sanae 50.47 158 *e* pP pP 00 36 53.4 +2.0
SNAA Sanae 50.47 158 *e* PcP **PcP 00 37 52.4 0.0**
SNAA Sanae 50.47 158 *e* P **P 00 36 35.8 +0.6**
comp=E,115nm,2.1s
TGUH Tegucigalpa,Un 51.06 340 *e* P **P 00 36 40.3 +0.2**
comp=E,64nm,0.8s
QSPA South Pole Qui 55.18 180 *e* P **P 00 37 10.9 +0.9**
comp=E,24nm,0.9s
QSPA pP **pP 00 37 26.5 0.0**
QSPA sP **sP 00 37 32.8 -0.8**
QSPA South Pole Qui 55.18 180 P **P 00 37 11.5 +1.5**
comp=E,7.5nm,0.8s,baz=142,slow=4.3,SNR=38
QSPA pP **pP 00 37 26.5 0.0**
comp=E,15nm,0.8s,baz=137,slow=2.3,SNR=11
QSPA sP **sP 00 37 32.8 -0.8**
comp=E,29nm,1.0s,baz=141,slow=5.5,SNR=8.6
RKT Rikitea 55.82 264 *e* T T 01 37 02.4
comp=E,1.2nm,0.3s
TEIG Tepich 57.22 341 *e* P **P 00 37 25.1 +0.3**
comp=E,78nm,1.2s
TEIG *e* pP **pP 00 37 40.2 -1.2**
VNDA Vanda 63.13 191 P **P 00 38 06.3 +1.7**
VNDA Vanda 63.13 191 P **P 00 38 06.3 +1.7**
comp=E,1.1nm,0.9s,baz=121,slow=5.3,SNR=3.2
SYO Syowa Base 64.75 158 ⇑*es* P sP 00 38 35.0 -4.2
SYO Syowa Base 64.75 158 ⇑*e* PcP **PcP 00 38 44.0 -4.4**
TIGA Tifton 67.10 349 ⇓P **P 00 38 30.4 -0.4**
baz=68
TBI Tubuai 67.42 257 *e* LR LR 00 59 04.9
comp=E,238nm,29.2s
HKT Hockley 68.58 338 *e* P **P 00 38 41.0 +1.0**
HKT *e**PP **pP 00 38 56.0 -1.0**
HKT pmax pmax
comp=Z,10.0nm,1.1s
HKT Hockley 68.58 338 *e* P **P 00 38 41.0 +1.0**
comp=Z,10nm,1.1s
HKT *e* pP **pP 00 38 56.0 -1.0**
732A Laxson Ranch, 68.87 333 ⇑P **P 00 38 42.5 +0.5**
baz=69,SNR=25
GOGA Godfrey 69.02 349 *e* P **P 00 38 42.0 -0.7**
GOGA pmax pmax
comp=Z,13nm,0.6s
GOGA Godfrey 69.02 349 *e* P **P 00 38 42.0 -0.7**
comp=Z,13nm,0.6s
MEH Mehetia 69.06 262 *e* P P 00 38 47.6 +4.0
comp=Z,46nm,1.0s
MEH *e* T T 01 53 35.1
comp=Z,46nm,0.2s
LRAL Lakeview Retre 69.26 346 *e* P **P 00 38 44.0 -0.3**
comp=Z,11nm,0.9s
632A Uvalde 69.51 334 ⇑P **P 00 38 46.6 +0.6**
baz=70,SNR=22
631A Perdido Creek 69.71 333 ⇑P **P 00 38 47.1 0.0**
baz=70,SNR=9.2
532A Rocksprings 70.11 334 ⇑P **P 00 38 50.4 +0.7**
baz=70,SNR=28
TIAR Tiarei 70.27 262 *e* P P 00 38 55.1 +4.1
comp=Z,29nm,0.8s
531A Rocksprings 70.38 334 ⇓P **P 00 38 52.1 +0.8**
baz=71
JCT Junction City 70.40 334 *e* P **P 00 38 52.0 +0.6**
JCT *e**PP **pP 00 39 08.4 0.0**
JCT *e**SP **sP 00 39 16.3 +0.9**
JCT pmax pmax
comp=E,35nm,0.9s
JCT Junction City 70.40 334 *e* P **P 00 38 52.0 +0.6**
comp=Z,35nm,0.9s
JCT *e* pP **pP 00 39 08.4 0.0**
JCT *es* P **sP 00 39 16.3 +0.9**
JCT Junction City 70.40 334 ⇓P **P 00 38 51.8 +0.4**
baz=71,SNR=16
PAE Paea 70.41 262 *e* P P 00 38 55.4 +3.6
comp=Z,9.7nm,1.1s
KMSC Kings Mountain 70.43 352 ⇓P **P 00 38 51.3 -0.1**
baz=71
PPT2 Papeete2 70.44 262 *e* P **P 00 38 54.3 +2.2**
comp=Z,68nm,1.2s
PPT2 *e* LR LR 01 00 19.0
comp=Z,374nm,27.0s
PPT Papeete 70.45 262 P **P 00 38 53.8 +1.7**
PPT Papeete 70.45 262 P **P 00 38 53.8 +1.7**
comp=Z,20nm,0.3s,baz=205,slow=6.7,SNR=5.9
530A J-C Ranch, Com 70.66 333 ⇑P **P 00 38 53.6 +0.6**
baz=71,SNR=30
628A Black Gap, Mar 70.66 331 ⇓P **P 00 38 53.7 +0.6**
baz=71,SNR=24
432A Menard 70.75 335 ⇓P **P 00 38 53.6 +0.1**
baz=71,SNR=9.3
627A Terlingua Ranc 70.83 331 ⇑P **P 00 38 54.5 +0.4**
baz=71,SNR=16
TXAR Lajitas Array 70.83 331 P **P 00 38 54.7 +0.6**
TXAR pP **pP 00 39 11.7 +0.5**
TXAR Lajitas Array 70.83 331 P **P 00 38 54.7 +0.6**
comp=Z,6.7nm,0.6s,baz=155,slow=8.4,SNR=153
TXAR pP **pP 00 39 11.7 +0.5**
comp=Z,3.7nm,0.5s,baz=158,slow=8.9,SNR=8.5
431A Sonora 70.87 334 ⇓P **P 00 38 54.2 0.0**
baz=71,SNR=16
529A Stev Forest Ra 70.97 332 ⇓P **P 00 38 55.5 +0.6**
baz=71,SNR=25
WHTX Lake Whitney 70.99 337 ⇓P **P 00 38 55.1 +0.2**
baz=71,SNR=16
CPCT Cooper Cave 71.18 349 *e* P **P 00 38 55.7 -0.2**
CPCT *e* pP **PcP 00 39 16.0 +0.4**
SWET Sewanee 71.19 348 *e* P **P 00 38 56.1 0.0**
comp=Z,50nm,0.9s
SWET *e* pP **pP 00 39 12.2 -0.9**
SWET *es* P **sP 00 39 20.1 0.0**
OXF Oxford 71.19 345 *e* P **P 00 38 54.8 -1.2**
OXF *e**PP **pP 00 39 13.0 -0.1**
OXF *e**SP **sP 00 39 20.3 +0.2**
OXF pmax pmax
comp=Z,74nm,1.1s
OXF Oxford 71.19 345 *e* P **P 00 38 54.8 -1.2**
comp=Z,74nm,1.1s
OXF *e* pP **pP 00 39 13.0 -0.1**
OXF *es* P **sP 00 39 20.3 +0.2**
430A Baggett Ranch, 71.19 333 ⇑P **P 00 38 56.6 +0.3**
baz=72,SNR=29
332A Millersview 71.20 335 ⇓P **P 00 38 56.3 +0.1**
baz=72,SNR=18
626A Big Bend Ranch 71.22 330 ⇓P **P 00 38 57.4 +1.0**
baz=72,SNR=28
528A Cox Ranch, San 71.22 332 ⇓P **P 00 38 56.8 +0.3**
baz=72,SNR=29
TKL Tuckaleechee C 71.27 350 P **P 00 38 55.8 -0.7**
TKL Tuckaleechee C 71.27 350 P **P 00 38 55.8 -0.7**
baz=177,slow=12
429A Davenport Ranc 71.29 333 ⇑P **P 00 38 57.5 +0.6**
baz=72,SNR=29
331A San Angelo 71.37 334 ⇑P **P 00 38 57.3 0.0**
baz=72,SNR=28
527A Woodward Ranch 71.53 331 ⇑P **P 00 38 58.8 +0.4**
baz=72,SNR=16
232A Coleman 71.62 335 ⇑P **P 00 38 58.9 +0.1**
baz=72,SNR=16
526A Mary Lane Ranc 71.65 331 ⇑P **P 00 38 59.8 +0.7**
baz=72,SNR=34
428A Kincaid Ranch, 71.69 332 ⇑P **P 00 38 59.5 +0.3**
baz=72,SNR=9.2
330A Mertzon 71.73 334 ⇑P **P 00 38 59.4 -0.1**
baz=72,SNR=15
231A Bronte 71.90 335 ⇑P **P 00 39 00.4 -0.1**
baz=72,SNR=32
MAW Mawson 72.06 163 P **P 00 39 02.2 +1.2**
MAW Mawson 72.06 163 P **P 00 39 02.2 +1.2**
comp=Z,5.0nm,0.8s,baz=255,slow=10.0,SNR=4.8
427A Hayter Ranch, 72.07 332 ⇑P **P 00 39 02.0 +0.4**
baz=72,SNR=11
329A Wagon Wheel Ra 72.10 333 ⇑P **P 00 39 02.1 +0.4**
baz=72
UALR University of 72.13 342 *e* P **P 00 39 01.9 +0.2**
comp=Z,13nm,0.8s
230A Sterling City 72.14 334 ⇓P **P 00 39 01.7 -0.2**
baz=72,SNR=6.9
426A McDonald Obser 72.16 331 ⇑P **P 00 39 03.0 +0.7**
baz=72,SNR=47
MIAR Mount Ida 72.23 341 *e* P **P 00 39 02.2 -0.1**
MIAR pmax pmax
comp=Z,9.0nm,0.7s
MIAR Mount Ida 72.23 341 *e* P **P 00 39 02.2 -0.1**
comp=Z,8.9nm,0.7s
ABTX Abilene, Hawle 72.29 335 ⇓P **P 00 39 02.9 +0.1**
baz=73,SNR=20
328A Wristen Ranch, 72.32 332 ⇓P **P 00 39 03.1 +0.1**
baz=73,SNR=15
WVT Waverly 72.42 346 *e* P **P 00 39 03.1 -0.3**
WVT *e**PP **pP 00 39 20.1 -0.4**
WVT pmax pmax
comp=Z,92nm,0.8s
WVT Waverly 72.42 346 *e* P **P 00 39 03.1 -0.3**
comp=Z,92nm,0.8s
WVT *e* pP **pP 00 39 20.1 -0.4**
WVT *es* P **sP 00 39 27.4 -0.1**
229A Bryant Ranch, 72.47 333 ⇓P **P 00 39 03.8 0.0**
baz=73,SNR=7.1
131A Roby 72.60 335 ⇓P **P 00 39 04.7 +0.1**
baz=73,SNR=14
425A Indio Mountain 72.65 330 ⇓P **P 00 39 05.0 0.0**
baz=73,SNR=11
326A Caldwell Ranch 72.71 331 ⇑P **P 00 39 05.6 +0.2**
baz=73,SNR=12
130A Snyder 72.73 334 ⇑P **P 00 39 05.4 0.0**
baz=73,SNR=10.0
Z32A Haskell 72.86 336 ⇓P **P 00 39 06.3 +0.2**
baz=73,SNR=22
228A UT Block 9, Go 72.89 333 ⇓P **P 00 39 06.5 +0.1**
baz=73,SNR=18
227A Bennet, Jal 73.06 332 ⇓P **P 00 39 08.1 +0.7**
baz=73,SNR=9.0
129A Stewart Farms, 73.08 334 ⇑P **P 00 39 07.3 -0.2**
baz=73
Z31A Sharp Cattle R 73.10 335 ⇑P **P 00 39 07.8 +0.3**
baz=74,SNR=22
325A Bean Ranch, Si 73.16 331 ⇓P **P 00 39 07.9 -0.3**
baz=74,SNR=29
128A Castleberry Fa 73.30 333 ⇓P **P 00 39 09.0 +0.2**
baz=74,SNR=13
Z30A Sanderson Ranc 73.41 334 ⇑P **P 00 39 09.1 -0.3**
baz=74,SNR=19
324A Moseley Ranch, 73.43 330 ⇓P **P 00 39 09.1 -0.5**
baz=74,SNR=20
226B Tecolote Peak, 73.46 332 ⇑P **P 00 39 10.5 +0.7**
baz=74,SNR=13
Y32A R-V Farms, Ver 73.48 336 ⇓P **P 00 39 09.9 +0.1**
baz=74,SNR=9.1
Z29A Hungry Hill Ra 73.59 334 ⇑P **P 00 39 10.3 -0.2**
baz=74,SNR=26
GDL2 Guadalupe Moun 73.65 331 *e* P **P 00 39 11.7 +0.8**
GDL2 *e* pP **pP 00 39 30.0 +2.0**
Y31A Rekieta Farm, 73.72 335 ⇓P **P 00 39 11.3 +0.2**
baz=74,SNR=11
225A Deer Hill, Car 73.75 331 ⇓P **P 00 39 11.4 -0.2**
baz=74,SNR=5.2
Y30A Stafford Cattl 73.86 335 ⇓P **P 00 39 11.8 -0.2**
baz=74,SNR=6.1
Z28A Tucker Farm, M 73.86 333 ⇓P **P 00 39 11.8 -0.3**
baz=74,SNR=6.1
126A Clayton Basin, 73.91 332 ⇓P **P 00 39 12.4 +0.1**
baz=74,SNR=11
WMOK Wichita Mounta 73.94 337 *e* P **P 00 39 11.6 -0.8**
WMOK *e* 00 39 27.7
WMOK pmax pmax
comp=Z,23nm,1.2s
WMOK Wichita Mounta 73.94 337 *e* P **P 00 39 11.6 -0.8**
comp=Z,23nm,1.2s
WMOK *e* 00 39 27.7
WMOK *es* P **sP 00 39 36.4 -0.1**
224A Cornudas Mount 74.00 330 ⇑P **P 00 39 12.8 -0.2**
baz=74,SNR=23
Y29A Porterfield Fa 74.12 334 ⇑P **P 00 39 13.4 -0.2**
baz=74
TUL1 Tulsa 74.12 340 ⇓P **P 00 39 13.1 -0.4**
baz=74,SNR=11
125A Gardner Draw, 74.17 331 ⇑P **P 00 39 13.7 -0.2**
baz=74,SNR=12
USIN University of 74.17 347 *e* P **P 00 39 13.1 -0.6**
comp=Z,46nm,0.9s
USIN *e* pP **pP 00 39 31.6 +0.7**
Z27A Tatum 74.19 333 ⇓P **P 00 39 13.9 -0.2**
baz=74,SNR=8.1
X31A McDonald Ranch 74.24 336 ⇓P **P 00 39 14.2 0.0**
baz=75,SNR=13
223A Chaparral, Ant 74.31 330 ⇑P **P 00 39 15.2 +0.4**
baz=75
Y28A McKinney Farm, 74.37 334 ⇑P **P 00 39 14.9 -0.1**
baz=75,SNR=5.5
X30A Coker Ranch, T 74.37 335 ⇓P **P 00 39 15.1 +0.1**
baz=75
Z26A Caprock 74.45 332 ⇑P **P 00 39 15.9 +0.4**
baz=75,SNR=52
124A Stringfield Ra 74.52 331 ⇑P **P 00 39 16.6 +0.4**
baz=75,SNR=30
MSTX Muleshoe 74.62 334 ⇓P **P 00 39 16.5 0.0**
baz=75,SNR=13
X29A Tulia 74.66 335 ⇓P **P 00 39 17.0 +0.2**
baz=75
222A Williams Famil 74.67 329 ⇑P **P 00 39 18.0 +1.1**
baz=75,SNR=9.0
Y27A Causey 74.68 333 ⇓P **P 00 39 16.8 -0.1**
baz=75,SNR=5.8
W31A Holland Ranch, 74.73 336 ⇑P **P 00 39 16.9 -0.1**
baz=75,SNR=5.6
Z25A Roswell 74.74 332 ⇑P **P 00 39 17.5 +0.3**
baz=75,SNR=11
123A Bell Site, Whi 74.79 330 ⇑P **P 00 39 18.4 +0.9**
baz=75
221A Mesquite Ranch 74.88 329 ⇑P **P 00 39 19.6 +1.5**
baz=75,SNR=17
X28A Dimmitt 74.90 334 ⇑P **P 00 39 18.3 +0.2**
baz=75
W30A Crocket Farms 74.94 336 ⇓P **P 00 39 18.2 -0.1**
baz=75
Y26A Elida 74.97 333 ⇑P **P 00 39 18.7 +0.2**
baz=75,SNR=6.8
319A Douglas 74.99 327 ⇑P **P 00 39 20.0 +1.3**
baz=75,SNR=20
Z24A Sheeppen Canyo 75.04 331 ⇑P **P 00 39 19.7 +0.6**
baz=75,SNR=19
AMTX Amarillo 75.05 335 *e* P **P 00 39 19.2 +0.3**
comp=Z,72nm,1.2s
AMTX *e* pP **pP 00 39 36.4 +0.2**
AMTX *es* P **sP 00 39 43.5 +0.4**
AMTX Amarillo 75.05 335 ⇑P **P 00 39 19.2 +0.3**
baz=75,SNR=23
220A Playas Peak, P 75.11 328 ⇑P **P 00 39 20.4 +1.0**
baz=75,SNR=40
BLO Bloomington 75.14 348 *e* P **P 00 39 18.5 -0.8**
BLO pmax pmax
comp=Z,17nm,0.6s
BLO Bloomington 75.14 348 *e* P **P 00 39 18.4 -0.8**
comp=Z,17nm,0.6s
122A Conniff Cattle 75.15 330 ⇑P **P 00 39 20.9 +1.2**
baz=76
V31A Spring Creek L 75.23 337 ⇓P **P 00 39 20.9 +0.9**
baz=76,SNR=10
W29A Amraillo 75.25 335 ⇑P **P 00 39 20.4 +0.2**
baz=76,SNR=14
Y25A Mesa, Roswell 75.30 332 ⇓P **P 00 39 20.4 -0.1**
baz=76,SNR=5.3
Z23A Rita Site, Whi 75.32 331 ⇓P **P 00 39 22.0 +1.4**
baz=76,SNR=22
121A Cookes Peak, D 75.33 329 ⇓P **P 00 39 22.0 +1.3**
baz=76,SNR=41
SLM Saint Louis 75.33 345 *e* P **P 00 39 19.2 -1.1**
SLM pmax pmax
comp=Z,44nm,0.8s
SLM Saint Louis 75.33 345 *e* P **P 00 39 19.2 -1.1**
comp=Z,44nm,0.8s
X27A F and S Farms, 75.34 334 ⇑P **P 00 39 20.9 +0.2**
baz=76
V30A Spur Ranch, Mi 75.50 336 ⇑P **P 00 39 22.4 +0.9**
baz=76,SNR=5.4
X26A CR and CF Fran 75.52 333 ⇑P **P 00 39 22.3 +0.5**
baz=76,SNR=13
W28A Vega 75.57 335 ⇑P **P 00 39 22.3 +0.3**
baz=76
Y24A Capitan 75.59 331 ⇑P **P 00 39 22.7 +0.5**
baz=76,SNR=12
Z22A Elephant Butte 75.61 330 ⇓P **P 00 39 23.6 +1.3**
baz=76,SNR=8.7
ACSO Alum Creek Sta 75.66 351 *e* P **P 00 39 21.6 -0.6**
comp=Z,38nm,0.7s
ACSO *e* pP **pP 00 39 38.6 -0.8**
W27A Bowe Ranch, En 75.70 334 ⇑P **P 00 39 23.1 +0.3**
baz=76,SNR=30
120A U Bar Ranch, L 75.70 328 ⇓P **P 00 39 24.1 +1.3**
baz=76,SNR=16
U31A Nine Bar Ranch 75.78 337 ⇓P **P 00 39 23.4 +0.4**
baz=76
X25A Clemmons Ranch 75.82 332 ⇓P **P 00 39 23.7 +0.3**
baz=76
Y23A Lovelace Mesa, 75.84 331 ⇑P **P 00 39 24.7 +1.1**
baz=76,SNR=11
V29A Stinnett 75.89 335 ⇓P **P 00 39 24.2 +0.5**
baz=76
Z21A St. Cloud Mine 75.95 329 ⇑P **P 00 39 25.5 +1.2**
baz=76,SNR=12
W26A Owens Ranch, T 75.98 333 ⇑P **P 00 39 24.9 +0.6**
baz=76,SNR=16
V28A Channing 76.02 335 ⇓P **P 00 39 25.3 +0.8**
baz=76,SNR=6.6
X24A Lazy VL Ranch, 76.15 332 ⇑P **P 00 39 26.2 +0.8**
baz=76,SNR=6.9
Z20A Nine Sixteen R 76.17 329 ⇑P **P 00 39 26.7 +1.2**
baz=76,SNR=20
U30A WK&E Inc. Balk 76.19 336 ⇓P **P 00 39 25.9 +0.5**
baz=77,SNR=11
Y22A Socorro 76.21 330 ⇓P **P 00 39 26.6 +0.8**
baz=77,SNR=6.3
V27A Dan Oppiter Fa 76.24 334 ⇓P **P 00 39 26.4 +0.6**
baz=77,SNR=6.1
BNM Barren Site 76.26 331 *e* P **P 00 39 25.7 -0.3**
comp=Z,11nm,1.0s
W25A X Bar L Ranch, 76.36 333 ⇑P **P 00 39 26.7 +0.2**
baz=77,SNR=19
T31A Randall Ranch, 76.39 337 ⇑P **P 00 39 26.7 +0.2**
baz=77
LPM Los Pinos Moun 76.40 331 *e* P **P 00 39 28.2 +1.4**
LENM Lemitar 76.41 330 *e* P **P 00 39 28.2 +1.4**
SFIN Scholer Farm 76.42 348 ⇑P **P 00 39 25.3 -1.2**
baz=77
X23A Hourglass Bar 76.46 331 ⇑P **P 00 39 28.4 +1.2**
baz=77,SNR=22
Y21A Point of Rocks 76.56 330 ⇓P **P 00 39 29.3 +1.5**
baz=77,SNR=29
V26A Tequesquite Ra 76.62 334 ⇑P **P 00 39 28.0 0.0**
baz=77,SNR=10
T30A Plains 76.63 337 ⇓P **P 00 39 28.3 +0.4**
baz=77
LAZ Ladron 76.68 330 *e* P **P 00 39 28.2 -0.2**
comp=Z,15nm,1.3s
LAZ *e* pP **pP 00 39 46.7 +1.0**
LAZ *es* P **sP 00 39 52.8 +0.2**
W24A Lazy 6 Ranch, 76.71 332 ⇓P **P 00 39 29.2 +0.6**
baz=77,SNR=12
X22A Bernardo 76.72 331 ⇓P **P 00 39 30.3 +1.7**
baz=77,SNR=5.3
Y20A Horse Springs, 76.77 329 ⇓P **P 00 39 30.1 +1.1**
baz=77,SNR=23
U27A Thompson Grove 76.83 335 ⇑P **P 00 39 29.7 +0.5**
baz=77,SNR=10
ANMO Albuquerque 76.89 331 *e* P **P 00 39 29.2 -0.3**
comp=Z,17nm,1.0s

W23A **Werner Place,** 76.95 332 ⇑P P 00 39 30.9 +0.9
baz=77,SNR=8.0
V25A **Rancho No Teng** 76.96 333 ⇓P P 00 39 30.4 +0.4
baz=77,SNR=29
T29A **Hugoton** 76.97 336 ⇓P P 00 39 30.1 +0.3
baz=77,SNR=8.2
X21A **Alamocita Cree** 76.98 330 ⇓P P 00 39 31.4 +1.3
baz=77,SNR=34
HDIL **Hopedale** 76.99 346 *e*P P 00 39 29.4 -0.4
comp=Z,42nm,1.0s
HDIL *ep*P pP 00 39 46.8 -0.2
214A **Organ Pipe Nat** 77.09 325 ⇑P P 00 39 31.8 +1.2
baz=77,SNR=20
V24A **Rampart Ranch,** 77.11 332 ⇓P P 00 39 31.4 +0.6
baz=78,SNR=10
U26A **Atchley Ranch,** 77.14 334 ⇓P P 00 39 31.1 +0.2
baz=78,SNR=15
W22A **Albuquerque** 77.16 331 ⇓P P 00 39 32.3 +1.2
baz=78
T28A **Walsh** 77.22 335 ⇑P P 00 39 31.5 +0.3
baz=78
KSU1 **Kansas State U** 77.33 340 *e*P P 00 39 31.7 0.0
comp=Z,19nm,0.7s
X20A **Quemado** 77.36 329 ⇓P P 00 39 33.4 +1.2
baz=78,SNR=16
T27A **Campo** 77.37 335 ⇑P P 00 39 32.5 +0.4
baz=78,SNR=27
U25A **Circle Dot Ran** 77.39 333 ⇑P P 00 39 33.0 +0.7
baz=78,SNR=19
V23A **Ortiz Mt. (NFS** 77.48 332 ⇑P P 00 39 34.0 +1.2
baz=78,SNR=8.2
W21A **San Fidel** 77.51 330 ⇓P P 00 39 34.4 +1.3
baz=78,SNR=5.6
U24A **Moreno Valley** 77.72 333 ⇑P P 00 39 35.5 +1.2
baz=78
T26A **Comanche Natio** 77.78 334 ⇑P P 00 39 35.2 +0.7
baz=78,SNR=21
W20A **Ramah** 77.87 330 ⇓P P 00 39 36.3 +1.2
baz=78,SNR=22
V22A **San Miguel Ran** 77.91 331 ⇑P P 00 39 36.8 +1.5
baz=78,SNR=31
X18A **Snowflake** 77.97 328 ⇑P P 00 39 36.9 +1.3
baz=78,SNR=9.6
S27A **Las Animas** 77.99 335 ⇓P P 00 39 36.2 +0.6
baz=78
U23A **El Rito** 77.99 332 ⇓P P 00 39 37.1 +1.4
baz=78,SNR=10
T25A **Trinidad** 78.04 334 ⇓P P 00 39 37.2 +1.2
baz=78,SNR=48
V21A **Milan** 78.10 331 ⇓P P 00 39 37.1 +0.7
baz=78
S26A **Kim** 78.14 335 ⇑P P 00 39 37.4 +1.1
baz=78,SNR=36
113A **Mohawk Valley,** 78.22 325 ⇓P P 00 39 37.9 +1.2
baz=78
T24A **Torres, Weston** 78.22 333 ⇑P P 00 39 38.1 +1.1
baz=79,SNR=14
U22A **Llaves** 78.29 332 ⇓P P 00 39 38.8 +1.5
baz=79,SNR=6.0
Z14A **Wintersburg** 78.32 326 ⇑P P 00 39 38.3 +1.0
baz=79
W18A **Petrified Fore** 78.38 329 ⇑P P 00 39 39.0 +1.2
baz=79,SNR=6.5
V20A **Brimhall** 78.43 330 ⇑P P 00 39 39.0 +0.9
baz=79,SNR=12
R27A **Eads** 78.50 335 ⇑P P 00 39 38.8 +0.5
baz=79,SNR=22
S25A **Robets Cordova** 78.52 334 ⇑P P 00 39 39.6 +1.0
baz=79,SNR=15
X16A **Lo Mia Camp, P** 78.52 327 ⇓P P 00 39 40.0 +1.4
baz=79,SNR=36
T23A **Casias Ranch,** 78.56 333 ⇑P P 00 39 39.6 +0.7
baz=79
U21A **Nageezi** 78.65 331 ⇑P P 00 39 40.5 +1.1
baz=79,SNR=18
MDV **Middlebury** 78.70 359 *e*pP pP 00 40 00.2 +3.7
R26A **Arlington** 78.74 335 ⇓P P 00 39 40.3 +0.7
baz=79,SNR=13
S24A **Houchin Ranch,** 78.78 333 ⇓P P 00 39 41.5 +1.3
baz=79,SNR=35
Y14A **Wickenburg** 78.83 326 ⇓P P 00 39 41.4 +1.2
baz=79,SNR=16
T22A **Edith** 78.87 332 ⇑P P 00 39 42.0 +1.4
baz=79,SNR=20
R25A **Fountain Ranch** 78.89 334 ⇑P P 00 39 41.3 +0.7
baz=79,SNR=7.2
U20A **Newcomb** 78.95 330 ⇓P P 00 39 41.8 +0.8
baz=79
GLA **Glamis** 78.95 324 *e*P P 00 39 42.5 +1.6
GLA pmax pmax
comp=Z,74nm,1.8s
GLA **Glamis** 78.95 324 *e*P P 00 39 42.5 +1.6
comp=Z,74nm,1.8s
GLA **Glamis** 78.95 324 ⇑P P 00 39 42.3 +1.4
baz=79,SNR=7.1
T21A **Navajo Lake** 79.09 331 ⇑P P 00 39 43.0 +1.3
baz=79,SNR=7.6
KSCO **Kaye Shedlock'** 79.10 336 ⇓P P 00 39 42.6 +1.0
baz=80,SNR=5.4
S23A **Nye Farm, Mont** 79.13 333 ⇑P P 00 39 43.4 +1.4
baz=80
DVTC **Desert V Tower** 79.25 323 ⇑P P 00 39 44.0 +1.5
baz=80,SNR=6.8
BOSA **Boshof** 79.26 117 P P 00 39 42.1 -0.9
BOSA *ep*P pP 00 39 59.5 -0.9
BOSA **Boshof** 79.26 117 P P 00 39 42.1 -0.9
comp=Z,10nm,0.7s,baz=224,slow=4.3,SNR=24
BOSA *ep*P pP 00 39 59.5 -0.9
comp=Z,12nm,0.6s,baz=248,slow=4.7,SNR=6.3
R24A **Sanders Place,** 79.27 334 ⇓P P 00 39 44.0 +1.3
baz=80,SNR=35
Q26A **Hugo** 79.32 335 ⇑P P 00 39 43.9 +1.0
baz=80,SNR=10
SWSC **Sam W. Stewart** 79.33 323 ⇑P P 00 39 44.4 +1.5
baz=80
Y12C **Blythe** 79.38 325 ⇑P P 00 39 44.7 +1.6
baz=80,SNR=12
WUAZ **Wupatki** 79.42 328 *e*P P 00 39 43.6 +0.1
WUAZ=Z,24nm,1.1s
WUAZ *ep*P pP 00 40 01.2 +0.4
WUAZ *es*P sP 00 40 08.1 +0.3
WUAZ **Wupatki** 79.42 328 ⇑P P 00 39 45.0 +1.5
baz=80,SNR=14
S22A **4UR Ranch, Cre** 79.48 332 ⇓P P 00 39 45.0 +1.0
baz=80,SNR=20
R23A **Moffat** 79.49 333 ⇑P P 00 39 44.9 +0.9
baz=80,SNR=16
BAR **Barrett** 79.56 323 *e*P P 00 39 45.9 +1.7
Q25A **Bedland, Calha** 79.56 335 ⇓P P 00 39 44.9 +0.6
baz=80,SNR=6.7
MONP **Monument Peak** 79.60 323 ⇓P P 00 39 46.0 +1.4
baz=80,SNR=6.7
PDMCI **Parker Dam,Lak** 79.65 325 ⇑P P 00 39 45.9 +1.3
baz=80,SNR=5.0
MVCO **Mesa Verde** 79.67 331 *e*P P 00 39 45.9 +1.0
comp=Z,18nm,0.9s
MVCO **Mesa Verde** 79.67 331 ⇑P P 00 39 46.0 +1.0
baz=80,SNR=11
BC3 **Big Chuckawall** 79.75 324 ⇓P P 00 39 46.6 +1.4
baz=80,SNR=20
S21A **Coal Bank Pass** 79.78 332 ⇑P P 00 39 46.7 +1.1
baz=80,SNR=14
P26A **Davis Ranch, A** 79.83 336 ⇓P P 00 39 46.4 +0.7
baz=80,SNR=9.1
BGNE **Belgrade** 79.91 340 ⇓P P 00 39 46.0 +0.2
baz=80
Q24A **Divide** 79.93 334 ⇑P P 00 39 47.3 +0.9
baz=80,SNR=12
IRM **Iron Mountain** 80.01 325 ⇑P P 00 39 47.9 +1.3
baz=80,SNR=16
P25A **Willow Gulch B** 80.07 335 ⇑P P 00 39 48.2 +1.2
baz=80,SNR=18
O27A **Beecher Island** 80.11 336 ⇓P P 00 39 48.1 +1.0
baz=80
Q23A **Hartsel** 80.12 334 ⇑P P 00 39 48.4 +1.0
baz=80
S20A **Disappointment** 80.15 331 ⇑P P 00 39 48.9 +1.3
baz=80,SNR=19
W13A **Hualapai Mount** 80.19 326 ⇑P P 00 39 49.3 +1.5
baz=80,SNR=25
PFO **Pinyon Flat Ob** 80.20 323 *e*P P 00 39 49.5 +1.7
comp=Z,21nm,1.0s
PFO *ep*P pP 00 40 13.7 +8.6
PFO **Pinyon Flat Ob** 80.20 323 P P 00 39 49.0 +1.3
comp=Z,148nm,0.8s,SNR=13
PFO **Pinyon Flat Ob** 80.20 323 ⇓P P 00 39 49.4 +1.6
baz=80,SNR=21
NEE2 **Needles Airpor** 80.26 325 ⇓P P 00 39 49.3 +1.4
baz=81
BELC **Belle Mtn. Jos** 80.29 324 ⇓P P 00 39 49.6 +1.4
baz=81,SNR=12
R21A **Cimarron** 80.30 332 ⇓P P 00 39 49.3 +1.0
baz=81,SNR=8.6
P24A **Kohler Place,** 80.33 334 ⇓P P 00 39 49.2 +0.8
baz=81
O26A **Horse Wrangler** 80.43 336 ⇑P P 00 39 50.0 +1.2
baz=81,SNR=7.4
R20A **Redvale** 80.46 331 ⇓P P 00 39 50.6 +1.4
baz=81,SNR=6.9
Q22A **Crested Butte,** 80.49 333 ⇓P P 00 39 50.5 +1.1
baz=81,SNR=19
PV01 **Paradox Valley** 80.49 331 *e*P P 00 39 49.3 0.0
comp=Z,1μm,1.0s
PV01 *ep*P pP 00 40 06.5 -0.2
PV01 *es*P sP 00 40 13.9 +0.4
P23A **Jefferson** 80.54 334 ⇑P P 00 39 51.0 +1.3
baz=81
MURC **Murrieta** 80.56 323 ⇑P P 00 39 51.1 +1.6
baz=81,SNR=6.9
U15A **North Rim** 80.59 328 ⇑P P 00 39 51.4 +1.4
baz=81,SNR=27
O25A **Wiggins** 80.59 335 ⇓P P 00 39 51.1 +1.4
baz=81
OGNE **Ogallala** 80.65 337 ⇓P P 00 39 50.9 +0.9
baz=81
S18A **Hurst Farm, Bl** 80.68 330 ⇓P P 00 39 51.6 +1.2
baz=81,SNR=34
N27A **Anderson Farm,** 80.69 337 ⇑P P 00 39 51.0 +0.8
baz=81,SNR=5.8
Q21A **Lamborn Mesa,** 80.71 332 ⇓P P 00 39 51.4 +0.9
baz=81
SCI **San Clemente I** 80.74 322 ⇓P P 00 39 51.7 +1.2
baz=81
LDFC **Landfair** 80.75 325 *e*P P 00 39 52.5 +1.9
GMRC **Granite Mounta** 80.76 325 ⇑P P 00 39 52.3 +1.6
baz=81,SNR=24
SMCO **Snowmass** 80.79 333 *e*P P 00 39 52.2 +1.1
comp=Z,26nm,0.8s
ISCO **Idaho Springs** 80.84 334 *e*P P 00 39 52.0 +0.8
ISCO pmax pmax
comp=Z,9.0nm,0.8s
ISCO **Idaho Springs** 80.84 334 *e*P P 00 39 52.0 +0.8
comp=Z,9.5nm,0.8s
ISCO **Idaho Springs** 80.84 334 ⇓P P 00 39 52.0 +0.8
baz=81,SNR=16
PV04 **Paradox Valley** 80.85 331 *e*P P 00 39 52.4 +1.2
N26A **Koester Ranch,** 80.93 336 ⇑P P 00 39 52.3 +0.8
baz=81
O24A **Longmont** 80.93 335 ⇓P P 00 39 52.4 +0.8
baz=81
CIS **Catalina Islan** 81.01 322 ⇑P P 00 39 53.1 +1.1
baz=81
P22A **Eagle** 81.07 333 ⇓P P 00 39 53.3 +0.9
baz=81
Q20A **Ridgley Place,** 81.09 332 ⇓P P 00 39 53.5 +1.1
baz=82
HEC **Hector,Ludlow** 81.12 324 ⇓P P 00 39 54.1 +1.5
baz=82,SNR=16
N25A **Grover** 81.21 336 ⇑P P 00 39 54.0 +1.0
baz=82
P21A **Newcastle** 81.27 333 ⇓P P 00 39 54.5 +1.0
baz=82,SNR=13
M27A **Reverse DX Ran** 81.29 337 ⇑P P 00 39 54.4 +1.0
baz=82
BFSC **Mount Baldy Ra** 81.30 323 ⇓P P 00 39 54.9 +1.3
baz=82,SNR=22
O23A **Lake Granby, G** 81.31 334 ⇑P P 00 39 54.7 +1.0
baz=82,SNR=21
TUQ **Turquoise Moun** 81.42 325 ⇑P P 00 39 55.6 +1.4
baz=82,SNR=26
Q19A **Hogan Spring (** 81.47 331 ⇑P P 00 39 55.3 +0.9
baz=82,SNR=11
M26A **McRoberts Ranc** 81.48 337 ⇓P P 00 39 55.1 +0.8
baz=82
MWC **Mount Wilson** 81.48 323 *e*P P 00 39 56.4 +1.7
MWC **Mount Wilson** 81.48 323 *e*P P 00 39 56.4 +1.7
MWC *ep*P pP 00 40 15.8 +3.8
N24A **Carr** 81.49 335 ⇓P P 00 39 55.7 +1.2
baz=82
O22A **Kremmling** 81.49 334 ⇓P P 00 39 55.3 +0.6
baz=82,SNR=22
PASC **Pasadena Art C** 81.50 322 *e*P P 00 39 56.6 +2.1
LBTB **Lobatse** 81.53 114 *e*P P 00 39 49.8 -5.5
comp=Z,11nm,0.7s
P20A **De Beque** 81.60 332 ⇓P P 00 39 56.1 +1.0
baz=82,SNR=12
DECC **Green Verdugo** 81.64 322 ⇓P P 00 39 56.6 +1.3
baz=82
ECSD **EROS Data Cent** 81.67 342 *e*P P 00 39 55.2 0.0
comp=Z,45nm,1.0s
GSC **Goldstone** 81.73 324 *e*P P 00 39 57.3 +1.5
GSC pmax pmax
comp=Z,12nm,0.8s
GSC **Goldstone** 81.73 324 *e*P P 00 39 57.3 +1.5
comp=Z,12nm,0.8s
GSC **Goldstone** 81.73 324 ⇓P P 00 39 57.2 +1.4
baz=82,SNR=15
M25A **Palm-Egli Farm** 81.75 336 ⇓P P 00 39 56.6 +0.7
baz=82
L27A **T5 Ranch, Ells** 81.77 337 ⇓P P 00 39 56.9 +1.1
baz=82
BLG **Laguna Peak** 81.90 322 ⇓P P 00 39 58.1 +1.5
baz=82
N23A **Red Feather La** 81.92 334 ⇓P P 00 39 57.7 +0.8
baz=82,SNR=11
P19A **Cripple Cowboy** 81.95 332 ⇑P P 00 39 58.1 +1.1
baz=82
SHOC **Shoshone** 81.97 325 ⇓P P 00 39 57.8 +0.9
baz=82
L26A **Underwood Farm** 81.97 337 ⇓P P 00 39 57.8 +0.9
baz=82
EDW2 **Edwards Air Fo** 81.97 323 ⇑P P 00 39 58.0 +1.0
baz=82,SNR=19
CCUT **Cedar City** 81.99 328 *e*P P 00 39 59.2 +1.9
comp=Z,27nm,1.0s
N22A **Wattenberg Ran** 82.02 334 ⇑P P 00 39 58.5 +1.1
baz=82,SNR=14
M24A **Cheyenne** 82.04 335 ⇑P P 00 39 58.3 +0.9
baz=82,SNR=5.7
BSC **Santa Cruz Isl** 82.10 321 ⇓P P 00 39 59.0 +1.3
baz=82
O20A **White River Ci** 82.10 332 ⇑P P 00 39 58.2 +0.5
baz=82,SNR=8.5
PHWY **Pilot Hill** 82.11 335 *e*P P 00 39 59.0 +1.1
SRU **San Rafael** 82.11 330 *e*P P 00 39 58.8 +1.0
SRU pmax pmax
comp=Z,19nm,0.8s
SRU **San Rafael** 82.11 330 *e*P P 00 39 58.8 +1.0
comp=Z,19nm,0.8s
SRU **San Rafael** 82.11 330 ⇓P P 00 39 58.4 +0.6
baz=82,SNR=15
Q16A **Castle Valley** 82.21 330 ⇓P P 00 39 59.5 +1.1
baz=83,SNR=11
MSU **Marysvale** 82.29 329 *e*P P 00 40 00.1 +1.3
MSU **Marysvale** 82.29 329 *e*P P 00 40 00.1 +1.3
MVU **Marysvale** 82.30 329 *e*P P 00 39 59.0 +0.2
comp=Z,13nm,0.8s
MVU *ep*P pP 00 40 24.9 +8.6
LRMC **Laurel Mountai** 82.30 324 ⇑P P 00 40 00.1 +1.3
baz=83,SNR=7.4
K27A **Flueckinger Fa** 82.31 338 ⇓P P 00 39 59.6 +1.0
baz=83
M23A **Laramie** 82.35 335 ⇑P P 00 40 00.2 +1.1
baz=83
L25A **Engebretsen Ra** 82.37 336 ⇑P P 00 40 00.3 +1.3
baz=83
N21A **Black Mountain** 82.37 333 ⇑P P 00 40 00.3 +1.1
baz=83
SBC **Santa Barbara** 82.49 322 ⇓P P 00 40 00.9 +1.3
baz=83
P17A **Butcher Ranch,** 82.51 330 ⇓P P 00 40 00.4 +0.6
baz=83,SNR=11
TMUT **Trail Mountain** 82.55 330 *e*P P 00 40 01.5 +1.3
comp=Z,40nm,1.4s
O19A **Miners Draw (B** 82.58 332 ⇓P P 00 40 00.9 +0.7
baz=83,SNR=5.9
ARVC **Arvin** 82.58 323 ⇓P P 00 40 01.4 +1.3
baz=83
L24A **Wheatland** 82.59 336 ⇓P P 00 40 01.2 +1.0
baz=83
M22A **Cedar Creek Ra** 82.60 334 ⇓P P 00 40 01.0 +0.6
baz=83,SNR=7.1
K26A **Motz Farm, Whi** 82.60 337 ⇑P P 00 40 01.0 +0.8
baz=83
MPMC **Manual Prospec** 82.67 324 ⇑P P 00 40 01.9 +1.0
baz=83,SNR=10
FURC **Furnace Creek,** 82.70 325 ⇓P P 00 40 02.2 +1.6
baz=83,SNR=9.0
N20A **Spence Gulch,** 82.71 333 ⇓P P 00 40 01.5 +0.5
baz=83,SNR=7.1
K25A **Mack Ranch, Ha** 82.74 337 ⇓P P 00 40 02.0 +1.0
baz=83
ISA **Isabella** 82.83 323 *e*P P 00 40 02.8 +1.3
ISA **Isabella** 82.83 323 *e*P P 00 40 02.8 +1.3
ISA **Isabella** 82.83 323 ⇑P P 00 40 03.1 +1.6
baz=83,SNR=24
DAC **Darwin (Calif)** 82.90 324 *e*P P 00 40 01.5 -0.5
DAC pmax pmax
comp=Z,21nm,1.0s
DAC **Darwin (Calif)** 82.90 324 *e*P P 00 40 01.5 -0.5
comp=Z,21nm,1.0s
PKM **Peak Mountain** 82.90 322 ⇑P P 00 40 03.5 +1.5
baz=83,SNR=29
L23A **Garrett** 82.92 335 ⇓P P 00 40 02.5 +0.5
baz=83
BRSD **Miller** 82.94 341 ⇓P P 00 40 02.2 +0.4
baz=83
M21A **Separation Pea** 83.06 334 ⇓P P 00 40 03.0 +0.3
baz=83,SNR=11
L22A **Ellis Ranch, M** 83.10 335 ⇓P P 00 40 03.7 +0.8
baz=84
N19A **John Jarvie Ra** 83.11 332 ⇑P P 00 40 03.5 +0.5
baz=84,SNR=18
K24A **Anderson Ranch** 83.16 336 ⇑P P 00 40 04.1 +1.0
baz=84,SNR=17
M20A **Sweetwater, Wa** 83.26 333 ⇓P P 00 40 04.0 +0.2
baz=84,SNR=5.8
CWC **Cottonwood Cre** 83.26 324 ⇓P P 00 40 04.7 +0.9
baz=84,SNR=8.4
VES **Vestal, Richgr** 83.28 323 ⇑P P 00 40 05.0 +1.3
baz=84,SNR=8.1
MPU **Maple Canyon** 83.33 330 *e*P P 00 40 05.3 +1.2
comp=Z,22nm,0.9s
MPU *ep*P pP 00 40 27.7 +6.1
L21A **Rawlins** 83.37 334 ⇓P P 00 40 04.5 +0.2
baz=84,SNR=27
N18A **Larsen Ranch,** 83.37 332 ⇓P P 00 40 04.6 +0.3
baz=84,SNR=9.2
K23A **Bowen Ranch, D** 83.46 335 ⇓P P 00 40 05.3 +0.7
baz=84
DAU **Daniels Canyon** 83.51 331 *e*P P 00 40 04.0 -1.2
DAU **Daniels Canyon** 83.51 331 *e*P P 00 40 04.0 -1.2
M19A **Rock Springs** 83.63 333 ⇑P P 00 40 06.0 +0.3
baz=84
R11A **Troy Canyon, C** 83.64 327 ⇑P P 00 40 07.3 +1.6
baz=84,SNR=43
J24A **Dixon Ranch, L** 83.65 336 ⇓P P 00 40 06.5 +0.9
baz=84,SNR=12
K22A **Casper** 83.67 335 ⇓P P 00 40 06.4 +0.6
baz=84,SNR=13
PTRM **Twissleman Ran** 83.69 322 *e*P P 00 40 13.4 +7.5
RCTC **Rector, Farmer** 83.72 323 ⇓P P 00 40 06.7 +0.7
baz=84
JLU **Jordanelle** 83.75 331 *e*P P 00 40 06.7 +0.3
JLU *ep*P pP 00 40 25.0 +1.2
L20A **Wamsutter** 83.76 333 ⇓P P 00 40 06.7 +0.3
baz=84,SNR=7.2
N17A **Moffit Pass** 83.80 331 ⇑P P 00 40 07.2 +0.6
baz=84,SNR=20
TIN **Tinemaha** 83.82 324 ⇑P P 00 40 08.1 +1.5
baz=84,SNR=5.5
M18A **Lyman** 83.91 332 ⇓P P 00 40 07.4 +0.3
baz=84
K21A **Alcova** 83.91 334 ⇓P P 00 40 07.5 +0.4
baz=84,SNR=12
DUG **Dugway** 83.97 330 *e*P P 00 40 08.3 +1.0
DUG pmax pmax
comp=Z,25nm,1.0s
DUG **Dugway** 83.97 330 *e*P P 00 40 08.3 +1.0
comp=Z,25nm,1.0s
DUG **Dugway** 83.97 330 ⇑P P 00 40 08.3 +1.0
baz=84,SNR=32
I24A **Kuemmerle Ranc** 84.11 337 ⇓P P 00 40 08.3 +0.4
baz=84,SNR=6.7
RSSD **Black Hills** 84.15 337 *e*P P 00 40 07.6 -0.7
RSSD pmax pmax
comp=Z,15nm,0.9s
RSSD **Black Hills** 84.15 337 *e*P P 00 40 07.5 -0.7
comp=Z,15nm,0.9s
M17A **Scullys Gap (B** 84.18 332 ⇑P P 00 40 08.4 -0.1
baz=84,SNR=7.2
L19A **Farson** 84.22 333 ⇓P P 00 40 09.1 +0.5
baz=85,SNR=26
MTUM **Tungsten Hills** 84.22 324 *e*P P 00 40 10.4 +1.7
TOA0 **Torodi Ar. Sit** 84.24 70 *e*P P 00 40 08.9 -0.2
TOA0 *ep*P pP 00 40 25.5 -1.1
TORD **Torodi Ar. Bea** 84.24 70 P P 00 40 09.2 +0.1
TORD pP pP 00 40 25.8 -0.8
TORD **Torodi Ar. Bea** 84.24 70 P P 00 40 09.2 +0.1
comp=Z,16nm,0.6s,baz=253,slow=3.9,SNR=166
TORD pP pP 00 40 25.8 -0.8
comp=Z,12nm,0.9s,baz=242,slow=4.8,SNR=8.2
L18A **Fontenelle, Gr** 84.33 332 ⇓P P 00 40 09.4 +0.2
baz=85,SNR=12
K20A **Yellowstone Ra** 84.33 334 ⇓P P 00 40 09.1 -0.1
baz=85,SNR=6.5
J22A **Midwest** 84.33 335 ⇓P P 00 40 08.8 -0.3
baz=85,SNR=13
M16A **Huntsville** 84.43 331 ⇓P P 00 40 10.0 +0.3
baz=85,SNR=6.6
EYMN **Ely** 84.53 347 *e*P P 00 40 09.4 -0.4
comp=Z,15nm,1.0s
J21A **Lysite** 84.61 335 ⇑P P 00 40 10.7 +0.2
baz=85,SNR=8.1
HWUT **Hardware Ranch** 84.65 331 *e*P P 00 40 11.2 +0.4
comp=Z,76nm,1.4s
K19A **Absolon Red Bu** 84.66 333 ⇓P P 00 40 10.7 -0.1
baz=85,SNR=24
I22A **9 Mile Ranch,** 84.75 335 ⇑P P 00 40 11.2 0.0
baz=85,SNR=21
L17A **Cokeville** 84.80 332 ⇑P P 00 40 11.5 0.0
baz=85,SNR=11
J20A **Shoshoni** 84.84 334 ⇓P P 00 40 12.6 +0.9
baz=85,SNR=37
BW06 **Boulder Array** 84.87 333 *e*P P 00 40 11.9 -0.1
comp=Z,28nm,1.4s
BW06 **Boulder Array** 84.87 333 ⇑P P 00 40 11.9 -0.1
baz=85,SNR=15
PDAR **Pinedale Array** 84.87 333 P P 00 40 11.8 -0.1
PDAR pP pP 00 40 28.3 -1.2
PDAR PKKPbc PKKPbc 00 58 19.8 -1.7
PDAR **Pinedale Array** 84.87 333 P P 00 40 11.8 -0.1
comp=Z,7.9nm,0.7s,baz=140,slow=7.1,SNR=66
PDAR pP pP 00 40 28.3 -1.2
comp=Z,1.9nm,0.7s,baz=112,slow=7.0,SNR=3.7
PDAR PKKPbc PKKPbc 00 58 19.8 -1.7
comp=Z,0.6nm,0.6s,baz=119,slow=1.5,SNR=6.2
H24A **Dirks Ranch, A** 84.88 337 ⇓P P 00 40 11.6 -0.2
baz=85,SNR=10
NV11 **Mina Array St** 84.89 325 *e*P P 00 40 11.8 -0.3
K18A **Toltan Ranch,** 84.94 333 ⇑P P 00 40 12.9 +0.6
baz=85,SNR=28
L16A **Fish Haven** 84.94 331 ⇑P P 00 40 12.4 +0.1
baz=85,SNR=29
NVAR **Mina Array Bea** 84.96 325 P P 00 40 13.6 +1.1
NVAR pP pP 00 40 31.0 +1.0
NVAR PKKPbc PKKPbc 00 58 22.0 +1.1
NVAR **Mina Array Bea** 84.96 325 P P 00 40 13.6 +1.1
comp=Z,9.6nm,0.7s,baz=152,slow=6.0,SNR=71
NVAR pP pP 00 40 31.0 +1.0
comp=Z,2.9nm,0.8s,baz=158,slow=5.8,SNR=4.0
NVAR PKKPbc PKKPbc 00 58 22.0 +1.1
comp=Z,0.6nm,0.9s,baz=291,slow=0.8,SNR=3.8
I21A **Big Trails, Te** 84.96 335 ⇑P P 00 40 12.1 -0.2
baz=85,SNR=29
H23A **Clabaugh Cattl** 84.99 336 ⇑P P 00 40 11.9 -0.4
baz=85
J19A **Crowheart** 85.11 334 ⇑P P 00 40 13.2 +0.1
baz=86,SNR=20
HVU **Hansel Valley** 85.28 330 *e*P P 00 40 14.4 +0.5
HVU pmax pmax
comp=Z,29nm,0.8s
HVU **Hansel Valley** 85.28 330 *e*P P 00 40 14.4 +0.5
comp=Z,29nm,0.8s
L15A **Malad City** 85.31 331 ⇓P P 00 40 14.1 0.0
baz=86,SNR=22
H22A **Clearmont** 85.33 336 ⇓P P 00 40 13.8 -0.3
baz=86,SNR=6.8
G24A **Alzada** 85.35 337 ⇓P P 00 40 14.2 0.0
baz=86
K17A **Gardner Place,** 85.37 332 ⇓P P 00 40 14.5 +0.1
baz=86,SNR=8.1
I20A **Worland** 85.38 334 ⇓P P 00 40 14.6 +0.3

baz=86,SNR=34
J18A **Kendall Valley** 85.42 333 ⇓P P 00 40 14.6 -0.2
baz=86,SNR=33
ELK **Elko** 85.45 328 *e*P P 00 40 15.6 +0.6
ELK pP **pP** 00 40 31.8 -0.7
ELK **Elko** 85.45 328 P P 00 40 15.5 +0.6
comp=Z,14nm,0.8s,baz=142,slow=4.9,SNR=49
ELK pP **pP** 00 40 31.8 -0.7
comp=Z,3.2nm,0.8s,baz=216,slow=5.2,SNR=3.4
G23A **Biddle** 85.55 337 ⇓P P 00 40 14.8 -0.3
baz=86,SNR=10.0
H21A **Big Horn, Sher** 85.59 335 ⇑P P 00 40 15.0 -0.4
baz=86,SNR=14
CMB **Columbia Colle** 85.64 323 *e*P P 00 40 16.8 +1.1
CMB **Columbia Colle** 85.64 323 *e*P P 00 40 16.8 +1.1
L14A **Malta** 85.69 330 ⇓P P 00 40 16.3 +0.4
baz=86
K16A **Soda Springs** 85.70 332 ⇓P P 00 40 16.6 +0.6
baz=86,SNR=43
I19A **Meeteetse** 85.76 334 ⇓P P 00 40 16.4 0.0
baz=86,SNR=17
I18A **Diamond G Ranc** 85.77 333 ⇑P P 00 40 16.8 +0.3
baz=86,SNR=10
AGMN **Agassiz Nation** 85.77 344 *e*P P 00 40 15.8 -0.1
comp=Z,10nm,0.6s
AGMN *e*pP **pP** 00 40 33.8 +0.3
H20A **Greybull** 85.80 335 ⇑P P 00 40 16.1 -0.3
baz=86,SNR=30
J17A **Brown Place, J** 85.81 333 ⇓P P 00 40 17.0 +0.4
baz=86,SNR=12
F24A **Ekalaka** 85.83 338 ⇓P P 00 40 16.4 0.0
baz=86,SNR=6.5
G22A **Birney** 85.86 336 ⇑P P 00 40 16.5 -0.2
baz=86,SNR=7.1
SNOW **Snow King Moun** 85.92 333 *e*P P 00 40 17.9 +0.7
K15A **Arbon** 85.95 331 ⇑P P 00 40 17.3 +0.1
baz=86,SNR=13
LOHW **Long Hollow** 85.99 333 *e*P P 00 40 17.8 +0.3
TPAW **Teton Pass** 86.01 332 *e*P P 00 40 18.1 +0.4
comp=Z,22nm,0.9s
F23A **Volborg** 86.02 337 ⇑P P 00 40 17.3 -0.1
baz=86,SNR=24
K14A **Jones Ranch, D** 86.09 331 ⇓P P 00 40 18.0 +0.2
baz=86,SNR=12
MOOW **Moose Ponds** 86.16 333 *e*P P 00 40 18.4 0.0
G21A **Lodge Grass** 86.17 336 ⇑P P 00 40 18.3 +0.1
baz=86,SNR=9.6
DCID1 **Drake Creek** 86.19 332 *e*P P 00 40 19.3 +0.9
comp=Z,87nm,1.6s
I17A **Pilgrim Ck.** 86.24 333 ⇑P P 00 40 19.4 +0.7
baz=87,SNR=26
MDND **Maddock** 86.26 342 ⇑P P 00 40 18.7 +0.3
baz=87,SNR=9.6
H19A **Powell** 86.31 334 ⇑P P 00 40 19.1 +0.2
baz=87,SNR=19
F22A **Rosebud** 86.34 336 ⇑P P 00 40 18.8 -0.1
baz=87,SNR=16
IMW **Indian Meadow** 86.36 333 *e*P P 00 40 19.7 +0.4
E24A **Baker** 86.42 338 ⇑P P 00 40 19.8 +0.4
baz=87,SNR=9.8
J15A **Blackfoot** 86.51 331 ⇑P P 00 40 20.6 +0.7
baz=87,SNR=8.6
G20A **Bridger** 86.51 335 ⇑P P 00 40 19.6 -0.3
baz=87,SNR=36
I16A **Newdale** 86.55 332 ⇑P P 00 40 20.5 +0.3
baz=87,SNR=10
H18A **Shoshone NF, C** 86.56 334 ⇓P P 00 40 20.3 0.0
baz=87,SNR=68
F21A **Absaloka Mine,** 86.67 336 ⇓P P 00 40 20.6 0.0
baz=87
E23A **Ismay** 86.68 337 ⇑P P 00 40 20.3 -0.3
baz=87,SNR=7.6
RLMT **Red Lodge** 86.80 334 *e*P P 00 40 21.1 -0.4
comp=Z,13nm,0.6s
RLMT *e*pP **pP** 00 40 38.5 -0.5
RLMT *es*P **sP** 00 40 47.0 +1.2
RLMT **Red Lodge** 86.80 334 ⇑P P 00 40 21.6 +0.2
baz=87,SNR=24
E22A **Miles City** 86.83 337 ⇑P P 00 40 21.0 -0.3
baz=87,SNR=8.9
D24A **Glendive** 86.93 338 ⇓P P 00 40 22.4 +0.7
baz=87,SNR=14
F20A **Billings** 87.00 335 ⇓P P 00 40 21.9 -0.3
baz=87
YMR **Madison River** 87.03 333 *e*P P 00 40 22.7 +0.2
comp=Z,52nm,0.9s
YMR *e*pP **pP** 00 40 39.8 -0.3
I15A **Monteview** 87.03 332 ⇑P P 00 40 23.6 +1.1
baz=87
BEKR **Beckworth** 87.07 325 *e*P P 00 40 23.5 +0.7
comp=Z,17nm,1.2s
G18A **Lazy EL Ranch,** 87.07 334 ⇓P P 00 40 22.6 -0.1
baz=87,SNR=26
H16A **Russell Place,** 87.16 333 ⇓P P 00 40 23.8 +0.6
baz=88
OHCM **Honcut** 87.20 324 *e*P P 00 40 24.4 +1.2
OHCM *e*pP **pP** 00 40 41.7 +0.9
J13A **Cove Ranch, Pi** 87.20 330 ⇓P P 00 40 24.3 +1.0
baz=88,SNR=39
D23A **Lindsay** 87.25 338 ⇑P P 00 40 23.9 +0.6
baz=88,SNR=32
E21A **Keefer Ranch,** 87.28 336 ⇑P P 00 40 23.7 +0.2
baz=88
F19A **Roth Farm, Mol** 87.32 335 ⇓P P 00 40 23.7 -0.1
baz=88,SNR=11
C24A **Savage** 87.33 338 ⇑P P 00 40 24.3 +0.6
baz=88,SNR=15
QLMT **Earthquake Lak** 87.34 333 *e*P P 00 40 25.4 +1.4
I14A **Mackay** 87.36 331 ⇑P P 00 40 25.2 +1.1
baz=88,SNR=24
HLID **Hailey** 87.44 330 *e*P P 00 40 25.5 +1.1
HLID **Hailey** 87.44 330 ⇑P P 00 40 25.6 +1.1
baz=88,SNR=31
G17A **Pierce Place,** 87.50 334 ⇓P P 00 40 25.4 +0.7
baz=88
D22A **Cohagen** 87.53 337 ⇑P P 00 40 24.9 +0.3
baz=88,SNR=9.1
E20A **Meyer Farm, Mu** 87.60 336 ⇑P P 00 40 25.3 +0.2
baz=88,SNR=28
I13A **Wildhorse Cree** 87.61 331 ⇓P P 00 40 26.3 +0.9
baz=88,SNR=45
ULM **Lac du Bonnet** 87.61 345 P P 00 40 24.4 -0.5
ULM pP **pP** 00 40 41.8 -0.8
ULM sP **sP** 00 40 49.2 -0.1
ULM **Lac du Bonnet** 87.61 345 P P 00 40 24.4 -0.5
comp=Z,18nm,0.8s,baz=167,slow=3.4,SNR=22
ULM pP **pP** 00 40 41.8 -0.8
comp=Z,4.3nm,0.7s,baz=193,slow=7.6,SNR=3.0
ULM sP **sP** 00 40 49.2 -0.1
comp=Z,12nm,1.0s,baz=195,slow=5.1,SNR=3.9
H15A **Lima** 87.62 332 ⇑P P 00 40 26.4 +1.0
baz=88,SNR=24
F18A **Big Timber** 87.63 334 ⇓P P 00 40 25.3 0.0
baz=88,SNR=22
D21A **La Casta Ranch** 87.72 337 ⇓P P 00 40 25.7 +0.1
baz=88,SNR=10
E19A **Rath Farm, Rou** 87.79 335 ⇓P P 00 40 26.0 0.0
baz=88,SNR=40
C23A **Lambert** 87.80 338 ⇑P P 00 40 26.0 +0.1
baz=88,SNR=25
G16A **Moss Hill, Enn** 87.81 333 ⇑P P 00 40 26.3 0.0
baz=88,SNR=8.9
MCMT **McKenzie Canyo** 87.87 332 *e*P P 00 40 26.3 -0.4
comp=Z,14nm,1.1s
MCMT *e*pP **pP** 00 40 44.8 +0.5
MCMT *es*P **sP** 00 40 52.2 +1.2
MFID **Camas Ranch** 87.89 329 *e*P P 00 40 26.6 0.0
comp=Z,9.4nm,0.7s
MFID **Camas Ranch** 87.89 329 ⇑P P 00 40 27.1 +0.5
baz=88,SNR=19
H14A **Leadore** 87.90 332 ⇑P P 00 40 27.4 +0.8
baz=88,SNR=14
I12A **Atlanta** 87.92 330 ⇑P P 00 40 27.6 +0.8
baz=88
C22A **Vida** 87.97 338 ⇑P P 00 40 26.6 -0.1
baz=88,SNR=7.7
F17A **Fitzpatrick Pl** 87.97 334 ⇑P P 00 40 27.3 +0.4
baz=88,SNR=9.1
G15A **Dillon** 88.02 332 ⇑P P 00 40 27.7 +0.5
baz=88,SNR=16
DGMT **Dagmar** 88.10 339 *e*P P 00 40 27.9 +0.6
comp=Z,79nm,0.8s
DGMT **Dagmar** 88.10 339 ⇓P P 00 40 27.9 +0.6
baz=88,SNR=20
BOZ **Bozeman (W)** 88.11 333 *e*P P 00 40 27.4 -0.2
BOZ *e**PP **pP** 00 40 45.3 +0.1
BOZ pmax pmax
comp=Z,4.0nm,0.8s
BOZ **Bozeman (W)** 88.11 333 *e*P P 00 40 27.4 -0.2
comp=Z,4.1nm,0.8s
BOZ *e*pP **pP** 00 40 45.3 +0.1
BOZ **Bozeman (W)** 88.11 333 ⇑P P 00 40 27.5 -0.1
baz=88,SNR=11
D20A **Manuel Ranch,** 88.12 336 ⇓P P 00 40 27.4 -0.1
baz=88,SNR=23
H13A **Challis** 88.20 331 ⇑P P 00 40 28.8 +0.7
baz=89,SNR=42
F16A **Kennard Place,** 88.22 333 ⇑P P 00 40 28.4 +0.4
baz=89
DLMT **Dillon** 88.23 332 *e*P P 00 40 29.3 +1.2
comp=Z,23nm,1.3s
DLMT *e*pP **pP** 00 40 47.1 +1.3
E18A **Harlowton** 88.27 335 ⇑P P 00 40 28.6 +0.3
baz=89
LBCM **Butte Creek Ri** 88.30 325 P P 00 40 29.2 +0.6
WVOR **Wild Horse Val** 88.31 327 *e*P P 00 40 28.5 -0.1
WVOR pmax pmax
comp=Z,11nm,1.0s
WVOR **Wild Horse Val** 88.31 327 *e*P P 00 40 28.5 -0.1
comp=Z,11nm,1.0s
B23A **Brockton** 88.33 339 ⇑P P 00 40 28.8 +0.4
baz=89
C21A **Desert Coulee** 88.42 337 ⇑P P 00 40 28.5 -0.4
baz=89,SNR=15
H12A **Diamond D Ranc** 88.43 331 ⇓P P 00 40 29.6 +0.4
baz=89,SNR=10
D19A **Cripps Ranch,** 88.43 336 ⇓P P 00 40 29.2 +0.2
baz=89
A24A **Westby** 88.45 339 ⇑P P 00 40 29.3 +0.3
baz=89,SNR=6.8
G14A **Jackson** 88.46 332 ⇓P P 00 40 30.0 +0.7
baz=89
B22A **Reddig Ranch S** 88.50 338 ⇑P P 00 40 29.4 +0.2
baz=89
E17A **Martinsdale** 88.52 334 ⇓P P 00 40 29.7 +0.2
baz=89,SNR=6.6
LRM **Limekiln Ridge** 88.56 333 *e*P P 00 40 30.5 +0.6
F15A **Butte** 88.59 333 ⇓P P 00 40 30.6 +0.6
baz=89,SNR=23
C20A **Veseth Ranch,** 88.62 336 ⇑P P 00 40 29.4 -0.4
baz=89,SNR=12
G13A **Cobalt** 88.63 331 ⇓P P 00 40 30.9 +0.8
baz=89,SNR=24
MOD **Modoc** 88.64 326 *e*P P 00 40 31.4 +1.1
comp=Z,49nm,0.8s
WDC **Whiskeytown Da** 88.67 324 *e*P P 00 40 30.3 +0.1
WDC *e**PP **pP** 00 40 48.2 +0.4
WDC pmax pmax
comp=Z,21nm,0.7s
WDC **Whiskeytown Da** 88.67 324 *e*P P 00 40 30.3 +0.1
comp=Z,21nm,0.7s
WDC *e*pP **pP** 00 40 48.2 +0.4
A23A **Redstone** 88.74 339 ⇓P P 00 40 30.3 0.0
baz=89
D18A **Linhart Farms,** 88.78 335 ⇑P P 00 40 30.8 +0.2
baz=89
E16A **East Helena** 88.88 334 ⇑P P 00 40 31.4 +0.3
baz=89,SNR=5.5
F14A **Wisdom** 88.90 332 ⇓P P 00 40 32.0 +0.7
baz=89
B21A **Ellsworth Farm** 88.93 337 ⇓P P 00 40 31.3 0.0
baz=89
C19A **Slack Wire Ran** 88.98 336 ⇑P P 00 40 31.3 -0.3
baz=89,SNR=6.1
D17A **Six Diamond Ra** 89.05 335 ⇓P P 00 40 32.1 +0.1
baz=89,SNR=15
A22A **Carney Farms,** 89.08 338 ⇑P P 00 40 32.2 +0.2
baz=90,SNR=17
G12A **Big Creek, Yel** 89.10 331 ⇓P P 00 40 32.6 +0.3
baz=89,SNR=21
LSZ **Lusaka** 89.13 108 LR LR 01 16 05.8
comp=Z,132nm,18.6s,baz=350,slow=33
E15A **Deer Lodge** 89.14 333 ⇑P P 00 40 32.7 +0.3
baz=90,SNR=8.3
F13A **Darby** 89.25 332 ⇓P P 00 40 33.4 +0.4
baz=90,SNR=25
D16A **Dana Ranch, Ca** 89.25 334 ⇑P P 00 40 33.5 +0.5
baz=90,SNR=16
B20A **Solberg Farm,** 89.26 337 ⇑P P 00 40 32.5 -0.3
baz=90,SNR=9.2
A21A **Bergtoll Ranch** 89.39 338 ⇑P P 00 40 33.0 -0.4
baz=90
E14A **Clinton** 89.45 332 ⇓P P 00 40 34.5 +0.6
baz=90,SNR=7.4
EGMT **Eagleton** 89.47 335 ⇓P P 00 40 33.8 -0.1
baz=90
C17A **Wharram Farm,** 89.49 335 ⇑P P 00 40 34.0 +0.1
baz=90
B19A **Brinkman Farms** 89.58 336 ⇓P P 00 40 34.2 -0.1
baz=90,SNR=12
F12A **Elk City** 89.59 331 ⇑P P 00 40 34.9 +0.3
baz=90,SNR=18
A20A **Cobblestone Ra** 89.61 337 ⇓P P 00 40 34.3 -0.1
baz=90,SNR=12
D15A **Lincoln** 89.61 333 ⇓P P 00 40 35.0 +0.4
baz=90
SCHQ **Schefferville** 89.63 3 P P 00 40 33.0 -1.3
SCHQ **Schefferville** 89.63 3 P P 00 40 33.0 -1.3
comp=Z,3.9nm,1.0s,baz=195,slow=13,SNR=4.0
YBH **Yreka Blue Hor** 89.64 324 *e*P P 00 40 34.9 0.0
comp=Z,12nm,1.1s
YBH **Yreka Blue Hor** 89.64 324 P P 00 40 35.2 +0.3
comp=Z,7.9nm,0.8s,baz=134,slow=6.6,SNR=18
BMO **Blue Mountains** 89.68 329 *e*P P 00 40 34.7 -0.3
BMO *e**PP **pP** 00 40 52.7 +0.1
BMO pmax pmax
comp=Z,9.0nm,1.1s
BMO **Blue Mountains** 89.68 329 *e*P P 00 40 34.7 -0.3
comp=Z,8.9nm,1.1s
BMO *e*pP **pP** 00 40 52.7 +0.1
BMO *es*P **sP** 00 40 59.4 0.0
E13A **Victor** 89.74 332 ⇑P P 00 40 35.8 +0.6
baz=90,SNR=9.8
B18A **Beardsley Farm** 89.80 336 ⇑P P 00 40 35.1 -0.3
baz=90,SNR=7.7
A19A **Klindworth Far** 89.92 337 ⇓P P 00 40 35.6 -0.3
baz=90,SNR=13
MSO **Missoula** 89.97 332 ⇓P P 00 40 36.3 0.0
baz=90
C16A **Fuhringer Ranc** 89.98 334 ⇓P P 00 40 36.2 -0.1
baz=90,SNR=5.3
D14A **Greenough** 90.01 333 ⇓P P 00 40 36.5 +0.1
baz=90,SNR=9.3
B17A **L&G Farms, Che** 90.06 335 ⇓P P 00 40 36.3 -0.2
baz=90
SLMT **Seeley Lake** 90.14 333 *e*P P 00 40 37.7 +0.6
C15A **Salmond Ranch,** 90.27 334 ⇓P P 00 40 38.0 +0.3
baz=91,SNR=8.6
A18A **Metzger Ranch,** 90.28 336 ⇓P P 00 40 37.2 -0.4
baz=91,SNR=6.2
D13A **Huon** 90.38 332 ⇓P P 00 40 38.5 +0.4
baz=91,SNR=7.4
HUMO **Hull Mountain** 90.43 325 *e*P P 00 40 39.0 +0.6
comp=Z,20nm,1.6s
B16A **M & M Farms, S** 90.48 335 ⇓P P 00 40 38.4 -0.2
baz=91
SWMT **Swartz Lake** 90.56 333 *e*P P 00 40 39.7 +0.7
A17A **Triple J Farms** 90.59 335 ⇓P P 00 40 38.9 -0.2
baz=91,SNR=7.5
C14A **Swan Lake** 90.68 333 ⇓P P 00 40 39.8 +0.2
baz=91
D12A **Red Ives Fores** 90.69 332 ⇓P P 00 40 39.7 +0.1
baz=91,SNR=23
B15A **Bradely Ranch,** 90.70 334 ⇓P P 00 40 38.9 -0.7
baz=91,SNR=11
VIPM **Ingram Point** 90.83 327 P P 00 40 41.9 +1.5
VIPM **Ingram Point** 90.83 327 P P 00 40 41.9 +1.5
YBMT **Yellow Bay** 90.86 333 *e*P P 00 40 40.5 +0.1
comp=Z,2.7nm,0.7s
JTMT **Jette** 90.86 333 *e*P P 00 40 41.0 +0.6
A16A **West Butte Ran** 90.90 335 ⇓P P 00 40 40.4 -0.1
baz=91
C13A **Hot Springs** 90.91 333 ⇓P P 00 40 40.9 +0.3
baz=91,SNR=6.8
B14A **Marquette Ranc** 91.00 334 ⇑P P 00 40 40.7 -0.3
baz=91
BLMT **Blacktail Moun** 91.11 333 *e*P P 00 40 42.3 +0.6
BSMT **Bassoo Peak** 91.14 333 *e*P P 00 40 42.3 +0.5
C12B **Naegeli Ranch,** 91.28 332 ⇑P P 00 40 42.4 +0.1
baz=92
A15A **Johnson Ranch,** 91.32 334 ⇑P P 00 40 41.8 -0.7
baz=92
B13A **Whitefish** 91.45 333 ⇑P P 00 40 42.9 -0.2
baz=92
BROR **Big Rock Looko** 91.47 326 P P 00 40 43.8 +0.7
A14A **Double T Ranch** 91.57 334 ⇓P P 00 40 43.4 -0.2
baz=92
C11A **Tepee Creek (N** 91.69 332 ⇓P P 00 40 43.9 -0.2
baz=92
VGB **Gordon Butte** 91.69 328 P P 00 40 45.6 +1.4
VGB **Gordon Butte** 91.69 328 P P 00 40 45.6 +1.4
WALA **Waterton Lakes** 91.81 334 *e*P P 00 40 45.1 +0.3
comp=Z,0.3nm,1.0s
WALA *e*pP **pP** 00 41 01.4 -1.0
WALA *es*P **sP** 00 41 09.2 -0.1
HAWA **Hanford** 91.85 329 *e*P P 00 40 46.0 +1.1
comp=Z,13nm,0.8s
HAWA *e*pP **pP** 00 41 04.3 +1.8
A13A **Flathead Natio** 91.89 333 ⇓P P 00 40 45.3 +0.2
baz=92,SNR=5.9
B12A **Libby** 91.95 332 ⇑P P 00 40 45.4 +0.1
baz=92
OD2 **Odessa Site #2** 92.31 330 P P 00 40 47.7 +0.7
NEW **Newport** 92.37 332 *e*P P 00 40 47.1 -0.1
NEW **Newport** 92.37 332 ⇓P P 00 40 46.7 -0.6
baz=93
NEW **Newport** 92.37 332 P P 00 40 46.3 -1.0
comp=Z,1.8nm,0.5s,baz=146,slow=5.9,SNR=4.7
DPW **Davenport** 92.48 331 P P 00 40 48.5 +0.6
DPW **Davenport** 92.48 331 P P 00 40 48.5 +0.6
EBG **Ellensburg** 92.70 329 P P 00 40 50.1 +1.3
TAM **Tamanrasset** 92.96 64 *e*P P 00 40 51.1 +0.4
TAM *e**PP **pP** 00 41 07.5 -0.9
TAM pmax pmax
comp=Z,9.0nm,1.4s
TAM **Tamanrasset** 92.96 64 *e*P P 00 40 51.1 +0.4
comp=Z,8.7nm,1.4s
TAM *e*pP **pP** 00 41 07.5 -0.9
TAM *es*P **sP** 00 41 15.9 +0.7
FFC **Flin Flon** 93.17 343 *e*P P 00 40 50.0 -0.7
FFC pmax pmax
comp=Z,7.0nm,1.4s
FFC **Flin Flon** 93.17 343 *e*P P 00 40 50.0 -0.7
comp=Z,7.0nm,1.4s
ESDC **Sonseca Array** 97.05 46 P P 00 41 07.9 -1.1
ESDC **Sonseca Array** 97.05 46 P P 00 41 07.9 -1.1
comp=Z,0.1nm,0.4s,baz=209,slow=26,SNR=3.7
YKA **Yellowknife Ar** 103.18 341 Pdif **Pdif** 00 41 34.8 -0.8
YKA *e* 00 41 52.5
YKA PP **PP** 00 45 47.7 -4.1
YKA **Yellowknife Ar** 103.18 341 Pdiff **Pdif** 00 41 34.8 -0.8
comp=Z,1.3nm,0.6s,baz=143,slow=4.4,SNR=45
YKA pPdiff **pPdif** 00 41 52.5 -0.8
comp=Z,0.6nm,0.8s,baz=144,slow=4.5,SNR=4.1
YKA PP **PP** 00 45 47.7 -4.1
comp=Z,0.2nm,0.7s,baz=142,slow=7.9,SNR=3.7
GERES **GERESS Array B** 112.64 46 PKiKP **PKiKP** 00 46 12.8 -0.1
GERES PKKPab **PKKPab** 00 57 09.9 +2.1
GERES **GERESS Array B** 112.64 46 PKiKP **PKiKP** 00 46 12.8 -0.1
comp=Z,0.9nm,0.6s,baz=230,slow=1.0,SNR=11
GERES PKKPab **PKKPab** 00 57 09.9 +2.1
comp=Z,0.2nm,0.5s,baz=45,slow=4.0,SNR=3.6
CLL **Collm** 113.38 43 *e*PP PP 00 47 05.0 -1.4
ILAR **Eielson Array** 115.30 333 PP PP 00 47 19.0 -0.7
ILAR **Eielson Array** 115.30 333 PP PP 00 47 19.0 -0.7
comp=Z,0.6nm,1.0s,baz=131,slow=6.1,SNR=5.0
VTS **Vitosha** 115.88 55 ⇑PKiKP **PKPdf** 00 46 19.6 +0.1
VTS **Vitosha** 115.88 55 ⇑*i*P **PKPdf** 00 46 19.6 +0.1
BZS **Buzias** 116.08 51 ⇑PKiKP **PKPdf** 00 46 19.6 0.0
BZS **Buzias** 116.08 51 ⇑*i*P **PKPdf** 00 46 19.6 0.0
PPLA **Turkeypile** 116.55 330 *e*PKPdf **PKPdf** 00 46 20.4 +0.2
NOA **NORSAR Array B** 116.72 33 pPKP pPKPdf 00 46 38.0 -0.6
NOA **NORSAR Array B** 116.72 33 pPKP pPKPdf 00 46 38.0 -0.6
comp=Z,0.5nm,0.6s,baz=252,slow=2.1,SNR=2.4
ASAR **Alice Springs** 116.78 206 PKP **PKPdf** 00 46 20.8 -1.1
ASAR PKKPbc **PKKPbc** 00 56 48.0 +0.4
ASAR **Alice Springs** 116.78 206 PKP **PKPdf** 00 46 20.8 -1.1
comp=Z,1.0nm,0.5s,baz=150,slow=2.0,SNR=4.9
ASAR PKKPbc **PKKPbc** 00 56 48.0 +0.4
comp=Z,1.0nm,0.8s,baz=353,slow=3.0,SNR=4.8
DRGR 117.25 50 ⇓PKiKP **PKPdf** 00 46 21.7 -0.2
DRGR 117.25 50 ⇓*i*P **PKPdf** 00 46 21.7 -0.2
HFS **Hagfors** 117.48 34 PKKPab PKKPab 00 56 48.0 +2.1
HFS **Hagfors** 117.48 34 PKKPab PKKPab 00 56 48.0 +2.1
comp=Z,0.7nm,0.5s,baz=101,slow=7.7,SNR=6.9
TRPA **Tarpa** 117.66 49 ⇑*i*P **PKPdf** 00 46 22.7 +0.2
HUMR **Humele** 117.83 53 ⇓*i*P **PKPdf** 00 46 23.0 0.0
ARR **Arges** 117.93 52 ⇑*i*P **PKPdf** 00 46 23.1 -0.1
BMR **Baia Mare** 118.08 50 ⇓PKiKP **PKPdf** 00 46 23.6 +0.2
BMR **Baia Mare** 118.08 50 ⇓*i*P **PKPdf** 00 46 23.5 +0.2
KWP **Kalwaria Pacla** 118.33 47 ⇑PKiKP **PKPdf** 00 46 24.3 +0.5
KWP **Kalwaria Pacla** 118.33 47 ⇑*i*P **PKPdf** 00 46 24.3 +0.5
KWP **Kalwaria Pacla** 118.33 47 *e*PKP **PKPdf** 00 46 24.4 +0.6
MLR **Muntele Rosu** 118.83 53 ⇑*i*P **PKPdf** 00 46 24.5 -0.5
BURAR **Bucovina Array** 119.14 50 ⇑*i*P **PKPdf** 00 46 25.6 +0.1
PLOR **Plostina** 119.43 53 ⇑PKiKP **PKPdf** 00 46 25.5 -0.5
PLOR **Plostina** 119.43 53 ⇑*i*P **PKPdf** 00 46 25.5 -0.5
VRI **Vrincioaia** 119.48 53 ⇑PKiKP **PKPdf** 00 46 25.3 -0.8
VRI **Vrincioaia** 119.48 53 ⇑*i*P **PKPdf** 00 46 25.3 -0.8
TESR 119.66 52 ⇑*i*P **PKPdf** 00 46 26.1 -0.3
WRA **Warramunga Arr** 120.01 208 PKP **PKPdf** 00 46 27.3 -0.7
WRA pPKP **pPKPdf** 00 46 44.8 -1.6
WRA **Warramunga Arr** 120.01 208 PKP **PKPdf** 00 46 27.3 -0.7
comp=Z,3.3nm,0.6s,baz=170,slow=1.5,SNR=34
WRA pPKP **pPKPdf** 00 46 44.8 -1.6
comp=Z,0.6nm,0.5s,baz=154,slow=1.8,SNR=2.6
SUW **Suwalki** 120.13 43 *e*PKP **PKPdf** 00 46 26.8 -0.2
CFR **Carcaliu** 120.16 54 ⇑PKiKP **PKPdf** 00 46 27.3 -0.1
CFR **Carcaliu** 120.16 54 ⇑*i*P **PKPdf** 00 46 27.3 -0.1
TLCR 120.61 54 ⇑PKiKP **PKPdf** 00 46 28.1 -0.2
TLCR 120.61 54 ⇑*i*P **PKPdf** 00 46 28.1 -0.2
LEOM **Leova** 120.68 52 ⇓PKiKP **PKPdf** 00 46 28.4 +0.1
LEOM **Leova** 120.68 52 ⇓*i*P **PKPdf** 00 46 28.4 +0.1
ANTO **Ankara** 121.47 61 ⇑PKiKP **PKPdf** 00 46 31.1 +0.9
ANTO **Ankara** 121.47 61 ⇑*i*P **PKPdf** 00 46 31.1 +0.9
BR131 **Keskin Array S** 122.03 61 *e*PKPdf **PKPdf** 00 46 31.1 -0.3
BR131 *ep*PKPdf **pPKPdf** 00 46 48.0 -1.7
BRTR **Keskin Array B** 122.03 61 PKP **PKPdf** 00 46 31.3 -0.1
BRTR pPKP **pPKPdf** 00 46 48.8 -0.9
BRTR **Keskin Array B** 122.03 61 PKP **PKPdf** 00 46 31.3 -0.1
comp=Z,4.4nm,0.7s,baz=195,slow=3.0,SNR=37
BRTR pPKP **pPKPdf** 00 46 48.8 -0.9
comp=Z,1.0nm,0.7s,baz=192,slow=3.4,SNR=3.1
KIEV **Kiev** 122.63 48 *e*PKiKP **PKPdf** 00 46 30.3 -1.7
KIEV **Kiev** 122.63 48 *e*PKPdf **PKPdf** 00 46 30.3 -1.7
KIEV *ep*PKPdf **pPKPdf** 00 46 47.4 -2.8
AK01 **Malin Array Si** 122.63 48 *e*PKPdf **PKPdf** 00 46 30.9 -1.0
AKASG **Malin Array Be** 122.64 48 PKiKP **PKPdf** 00 46 31.2 -0.8
AKASG **Malin Array Be** 122.64 48 PKP **PKPdf** 00 46 31.2 -0.8
AKASG pPKP **pPKPdf** 00 46 48.2 -2.1
AKASG **Malin Array Be** 122.64 48 PKP **PKPdf** 00 46 31.2 -0.8
comp=Z,4.2nm,0.6s,baz=263,slow=2.6,SNR=18
AKASG pPKP **pPKPdf** 00 46 48.2 -2.1
comp=Z,1.3nm,0.5s,baz=260,slow=2.8,SNR=4.0
FINES **FINESS Array B** 123.66 35 pPKP pPKPdf 00 46 51.2 -0.7
FINES **FINESS Array B** 123.66 35 pPKP pPKPdf 00 46 51.2 -0.7
comp=Z,1.9nm,0.7s,baz=338,slow=4.1,SNR=2.7
ARCES **ARCESS Array B** 124.82 25 PKP **PKPdf** 00 46 35.8 +0.1
ARCES pPKP **pPKPdf** 00 46 53.6 -0.3
ARCES **ARCESS Array B** 124.82 25 PKP **PKPdf** 00 46 35.8 +0.1
comp=Z,3.3nm,0.9s,baz=264,slow=1.8,SNR=3.6
ARCES pPKP **pPKPdf** 00 46 53.6 -0.3
comp=Z,3.0nm,0.7s,baz=298,slow=3.9,SNR=2.1
MALT **Malatya** 125.04 65 ⇑PKiKP **PKPdf** 00 46 37.9 +0.7
MALT **Malatya** 125.04 65 *e*PKPdf **PKPdf** 00 46 37.3 +0.1
MALT *ep*PKPdf **pPKPdf** 00 46 55.3 -0.1
MALT **Malatya** 125.04 65 ⇑*i*P **PKPdf** 00 46 37.9 +0.7
OBN **Obninsk** 127.95 44 *i* PKiKP **PKPdf** 00 46 42.4 +0.4
OBN pmax pmax
comp=Z,16nm,1.2s
KIV **Kislovodsk** 129.74 59 *i* PKiKP **PKPdf** 00 46 47.0 +1.1
KIV *i* 00 47 01.8
KIV pmax pmax
comp=Z,18nm,1.2s
KBZ **Khabaz** 129.83 59 PKiKP **PKPdf** 00 46 47.2 +1.2
KBZ **Khabaz** 129.83 59 PKP **PKPdf** 00 46 47.2 +1.2
KBZ **Khabaz** 129.83 59 PKP **PKPdf** 00 46 47.2 +1.2
comp=Z,3.0nm,0.8s,baz=245,slow=3.2,SNR=8.7
GNI **Garni** 130.26 64 PKP **PKPdf** 00 46 48.3 +1.1
GNI **Garni** 130.26 64 PKP **PKPdf** 00 46 48.3 +1.1
comp=Z,1.4nm,0.5s,baz=202,slow=5.4,SNR=5.2
ZEI **Tsey** 130.31 61 *i* PKiKP **PKPdf** 00 46 47.6 +0.3
ZEI pmax pmax
comp=Z,6.0nm,1.2s
BILL **Bilibino** 133.94 334 *i* PKiKP **PKPdf** 00 46 49.8 -3.2
BILL *e* 00 49 25.6
BILL pmax pmax

comp=Z,18nm,1.2s
ARU Arti 140.30 42 PKHKP PKPdf 00 46 58.8 -6.3
ABKAR Akbulak array 142.04 53 *e*PKPdf PKPdf 00 47 03.3 -5.2
POO Poona 145.26 109 *eP* **PKPbc 00 47 12.5 -2.4**
PSI Prapat 146.72 163 PKPbc **PKPbc 00 47 19.0 -0.6**
PSI Prapat 146.72 163 PKPbc **PKPbc 00 47 19.0 -0.6**
comp=Z,24nm,0.8s,baz=214,slow=3.6,SNR=15
BRVK Borovoye 147.73 44*c i*PKP2 **PKPbc 00 47 21.7 +0.6**
BRVK pmax pmax
comp=Z,14nm,0.7s
BRVK Borovoye 147.73 44 *e*PKPdf **PKPdf 00 47 17.9 -0.2**
BVAR Borovoye Array 147.80 44 PKIKP **PKPdf 00 47 19.3 +1.0**
BVAR 00 47 22.2
BVAR Borovoye Array 147.80 44 PKP **PKPdf 00 47 19.3 +1.0**
BVAR PKPbc **PKPbc 00 47 22.2 +1.0**
BVAR pPKPbc **pPKPbc 00 47 39.0 -0.4**
BVAR Borovoye Array 147.80 44 PKP **PKPdf 00 47 19.3 +1.0**
comp=Z,15nm,0.6s,baz=270,slow=1.4,SNR=39
BVAR PKPbc **PKPbc 00 47 22.2 +1.0**
comp=Z,15nm,0.6s,baz=296,slow=2.2,SNR=43
BVAR pPKPbc **pPKPbc 00 47 39.0 -0.4**
comp=Z,8.5nm,0.7s,baz=297,slow=1.9,SNR=5.5
HYB Hyderabad 148.15 116 *i* PKP **PKPbc 00 47 22.5 -0.8**
YAK Yakutsk 149.85 340 *e*PKHKP **PKPdf 00 47 24.6 +3.3**
YAK pmax pmax
comp=Z,32nm,1.1s
YAK pmax pmax
comp=N,7.0nm,1.5s
YAK pmax pmax
comp=E,4.0nm,1.5s
YUK Yuzh-Kuril'sk 149.97 299 *e*PKIKP **PKPdf 00 47 17.9 -4.1**
YUK *i* 00 51 02.1
YUK *e* 00 54 23.4
YUK *e*PPP PPP 00 54 28.4
YSS Yuzh-Sakhalins 151.71 305 *e*PKIKP **PKPab 00 47 41.0 +0.9**
YSS *e* 00 47 50.0
AML Almayashu 152.11 65 P **PKPbc 00 47 33.7 +1.0**
SNR=12
EKS2 Erkin-Say 152.14 64 *e*PKIKP **PKPdf 00 47 25.9 +0.3**
EKS2 *e* 00 47 32.9
EKS2 Erkin-Say 152.14 64 *e*PKPdf **PKPdf 00 47 25.9 +0.3**
EKS2 *e*PKPbc **PKiKP 00 47 32.9 +0.3**
EKS2 Erkin-Say 152.14 64 P **PKPbc 00 47 33.3 +1.0**
SNR=13
ASAJ Asahikawa 152.30 299 PKPab **PKPab 00 47 43.9 +1.3**
ASAJ Asahikawa 152.30 299 PKPab **PKPab 00 47 43.9 +1.3**
comp=E,5.6nm,0.4s,baz=192,slow=9.3,SNR=5.0
USP Ospenovka 152.62 62 P **PKPbc 00 47 33.9 +0.6**
SNR=13
AAK Ala-Archa 152.67 64 *e*PKIKP **PKPdf 00 47 27.2 +0.7**
AAK *e* 00 47 33.4
AAK Ala-Archa 152.67 64 *e*PKPdf **PKPdf 00 47 27.2 +0.7**
AAK *e*PKPbc **PKPbc 00 47 33.4 -0.2**
CHMS Chumysh 152.83 63 P **PKPbc 00 47 34.4 +0.6**
SNR=6.7
KBK Karagaybulak 153.00 64 P **PKPbc 00 47 35.2 +0.9**
SNR=7.0
KZA Kyzart 153.27 65 P **PKPbc 00 47 36.3 +1.0**
SNR=7.9
KURBB Kurchatov Arra 153.38 45 PKP **PKPdf 00 47 26.9 0.0**
comp=E,2.1nm,0.8s,baz=299,slow=1.8,SNR=5.3
KURBB PKPbc **PKiKP 00 47 35.0 +0.2**
comp=E,13nm,0.7s,baz=294,slow=2.8,SNR=47
KURBB pPKPbc **pPKPbc 00 47 52.4 -0.5**
comp=E,6.7nm,0.6s,baz=298,slow=2.6,SNR=7.4
KURK Kurchatov 153.39 45*c i*PKIKP **PKPbc 00 47 34.4 -0.2**
KURK pmax pmax
comp=Z,8.0nm,0.6s
KURK Kurchatov 153.39 45 PKP **PKPdf 00 47 26.9 0.0**
KURK PKPbc **PKiKP 00 47 35.0 +0.2**
KURK pPKPbc **pPKPbc 00 47 52.4 -0.5**
TKM2 Tokmak 2 153.45 63 P **PKPbc 00 47 35.7 +0.4**
SNR=6.7
NVS Novosibirsk 153.63 34 *e*PKIKP **PKPbc 00 47 31.5 -3.5**
NVS pmax pmax
comp=Z,27nm,1.5s
NVS pmax pmax
comp=N,5.0nm,1.6s
NVS pmax pmax
comp=E,16nm,1.7s
KSH Kashi 153.90 71 PKPbc **PKPdf 00 47 28.8 +0.5**
KSH PKS **PKSdf 00 51 02.4 -0.2**
KSH PP **PP 00 51 24.5 -0.5**
KSH SKS **SKSdf 00 54 24.0 -5.8**
KSH SKKS **SKKSac 00 58 02.8 -6.4**
KSH SS SS 01 10 49.3 -9.0
KSH LR LR
comp=Z,170nm,4.7s
ULHL Ulahol 153.99 64 P **PKPbc 00 47 37.8 +1.3**
SNR=6.0
ZALV Zalesovo Beam 154.92 34 PKIKP **PKPdf 00 47 28.8 -0.3**
ZALV 00 47 37.7
ZALV 00 47 53.8
ZALV Zalesovo Beam 154.92 34 PKP **PKPdf 00 47 28.8 -0.3**
ZALV PKPbc **PKPbc 00 47 37.7 -0.1**
ZALV PKPab **PKPab 00 47 53.8 +0.4**
ZALV Zalesovo Beam 154.92 34 PKP **PKPdf 00 47 28.8 -0.3**
comp=Z,2.8nm,0.7s,baz=304,slow=2.4,SNR=11
ZALV PKPbc **PKPbc 00 47 37.7 -0.1**
comp=Z,7.9nm,0.7s,baz=310,slow=2.8,SNR=17
ZALV PKPab **PKPab 00 47 53.8 +0.4**
comp=Z,9.0nm,0.6s,baz=303,slow=3.9,SNR=11
MKAR Makanchi Array 157.17 51 PKIKP **PKPdf 00 47 32.5 +0.2**
MKAR Makanchi Array 157.17 51 PKP **PKPdf 00 47 32.5 +0.2**
MKAR PKPab **PKPab 00 48 03.8 +0.4**
MKAR Makanchi Array 157.17 51 PKP **PKPdf 00 47 32.5 +0.2**
comp=Z,1.6nm,0.7s,baz=78,slow=0.4,SNR=7.4
MKAR PKPab **PKPab 00 48 03.8 +0.4**
comp=Z,3.7nm,0.8s,baz=287,slow=4.0,SNR=8.1
PYUN Piuthan 157.31 101 *eP* **PKPab 00 48 04.9 +0.1**
KOLN Koldanda 157.66 102 *eP* **PKPab 00 48 05.8 -0.5**
comp=Z,5.4nm,0.4s
DMN Daman 158.79 104 *eP* **PKPab 00 48 11.6 +0.3**
comp=Z,28nm,0.8s
PKIN Phulchoki 159.01 104 *eP* **PKPab 00 48 12.6 +0.4**
comp=Z,11nm,0.7s
KKN Kakani 159.01 104 *eP* **PKPab 00 48 12.6 +0.4**
comp=Z,8.9nm,0.5s
PKI Pulchoki 159.02 104 *eP* **PKPab 00 48 12.6 +0.2**
comp=Z,13nm,0.6s
RAMN Ramite 159.67 107 *eP* **PKPab 00 48 15.4 +0.3**
comp=Z,20nm,0.6s
USRK Ussuriysk Arra 159.72 304 PKPab **PKPab 00 48 14.9 +0.5**
comp=Z,2.5nm,0.8s,baz=54,slow=9.9,SNR=4.7
ODAN Odare 160.24 109 *eP* **PKPab 00 48 17.8 +0.2**
comp=Z,21nm,0.6s
TAPN Taplejung 160.73 108 *eP* **PKPab 00 48 21.6 +1.8**
comp=Z,7.4nm,0.2s
MDJ Mudanjiang 161.18 307 PKP **PKPdf 00 47 37.8 +0.8**
MDJ AMB AMB
comp=Z,340nm,3.8s
CMAR Chiang Mai Arr 161.45 151 PKP **PKPdf 00 47 38.0 -0.1**
CMAR pPKP **pPKPdf 00 47 55.9 -0.6**
CMAR PKPab **PKPab 00 48 22.6 +0.1**
CMAR Chiang Mai Arr 161.45 151 PKP **PKPdf 00 47 38.0 -0.1**
comp=Z,1.4nm,0.8s,baz=259,slow=2.4,SNR=7.2
CMAR pPKP **pPKPdf 00 47 55.9 -0.6**
comp=Z,1.1nm,0.8s,baz=223,slow=2.3,SNR=2.5
CMAR PKPab **PKPab 00 48 22.7 +0.1**
comp=Z,0.8nm,0.7s,baz=217,slow=4.2,SNR=2.9
WMQ Urumqi 161.81 55 PKP **PKPdf 00 47 37.5 -0.3**
KSRS Korea Array 164.07 284 PKPab **PKPab 00 48 32.9 -0.8**
comp=Z,4.7nm,0.8s,baz=93,slow=3.8,SNR=7.9
KSAR Wonju Array Be 164.10 284 PKPab **PKPab 00 48 32.9 -1.0**
CN2 Changchun 164.22 309 *e*PKP **PKPdf 00 47 44.8 +4.8**
SONM Songino Array 167.15 6 PKPab **PKPab 00 48 46.7 -0.3**
SONM pPKPab **pPKPab 00 49 04.7 -0.1**
SONM Songino Array 167.15 6 PKPab **PKPab 00 48 46.7 -0.3**
comp=Z,0.7nm,0.6s,baz=342,slow=4.4,SNR=6.3
SONM pPKPab **pPKPab 00 49 04.7 -0.1**
comp=Z,2.2nm,1.2s,baz=50,slow=2.3,SNR=3.1
KMI Kunming 168.95 152 PKP **PKPdf 00 47 43.9 -0.6**
KMI PP **PP 00 52 48.5 +4.1**
KMI SKKS 00 59 26.1
KMI AMB AMB
comp=Z,110nm,4.2s
KMI LR LR
comp=N,290nm,16.3s
KMI LR LR
comp=E,250nm,19.5s
KMI LR LR
comp=Z,220nm,17.1s
GYA Guiyang 171.30 170 PKP **PKPdf 00 47 45.5 -0.2**
GYA pPKP **pPKPdf 00 48 04.8 +0.7**
GYA sPKP 00 48 12.5
GYA PKPab **PKPab 00 49 08.6 +2.8**
GYA PKS **PKSdf 00 51 15.0 -3.2**
GYA PP **PP 00 52 58.8 +3.1**
GYA SKKS 00 59 37.6
GYA AMB AMB
comp=Z,130nm,8.9s
GYA LR LR
comp=N,140nm,24.3s
GYA LR LR
comp=E,120nm,25.0s
GYA LR LR
comp=Z,160nm,23.8s
GTA Gaotai 171.90 55 *e*PKP **PKPdf 00 47 46.8 +1.2**
BJI Beijing 172.07 311 PKP **PKPdf 00 47 46.5 +1.1**
HHC Hu-ho-hao-te 173.70 338 *e*PKP **PKPdf 00 47 45.3 -1.0**
HHC PP **PP 00 53 09.8 +2.1**
HHC SS SS 01 14 16.8 -2.8
HHC AMB AMB
comp=Z,290nm,9.1s
CD2 Chengdu 174.31 135 PKP **PKPdf 00 47 46.5 -0.2**
CD2 pPKP **pPKPdf 00 48 05.9 +0.8**
CD2 sPKP 00 48 13.3
CD2 PKPab **PKPab 00 49 20.3 +1.1**
CD2 PKS **PKSdf 00 51 17.3 -1.7**
CD2 PP **PP 00 53 13.4 +2.2**
CD2 SKS **SKSdf 00 54 41.0 -3.5**
CD2 SKKS **SKKSac 00 59 51.0 -1.4**
CD2 SS **SS 01 14 23.4 -3.0**
CD2 AMB AMB
comp=Z,320nm,9.3s
CD2 LR LR
comp=N,630nm,21.1s
CD2 LR LR
comp=E,660nm,26.9s
CD2 LR LR
comp=Z,680nm,24.5s
LZH Lanzhou 176.15 73 *e*PKP **PKPdf 00 47 51.0 +3.8**
LZH pPKP **pPKPdf 00 48 10.0 +4.4**
LZH sPKP 00 48 15.5
LZH LR LR
comp=N,580nm,19.1s
LZH LR LR
comp=E,510nm,19.4s
LZH LR LR
comp=Z,290nm,20.8s

*NEIC **21** 00:37:33.7±0.4, 18.°77N×121.°62E, h35km, mb4.6/8, Error ellipse: s-maj=9.8km s-min=7.2km az=103.0*
NEIC Felt [III PIVS] on Fuga Island and [II PIVS] at Aparri.
*BJI **21** 00:37:34.9, 19.°11N×121.°13E, h15km, mB4.7/17, mb4.5/30, Ms4.2/25, Ms7 3.9/24*
*ISCJB **21** 00:37:35.1±0.3, 19.°02N±0.°02×121.°49E±0.°05, h46km, mb4.2/40, MS3.6/11, Error ellipse: s-maj=6.5km s-min=3.5km az=174.8*
*MAN **21** 00:37:35, 18.°74N×121.°46E, h1km, mb5.3, ML4.2, MS4.5*
MAN INTENSITY III - FUGA ISLAND; INTENSITY II - APARRI CAGAYAN.
*IDC **21** 00:37:36.6±4.1, 18.°79N×121.°60E, h62km±38km, mb3.8/23, mb1 4.0/25, mb1mx3.9/33, mbtmp3.8/25, ML4.0/2, MS3.6/9, Ms1 3.6/9, ms1mx3.4/49, Error ellipse: s-maj=18.1km s-min=15.0km az=65.0*
ISC 21 00:37:37.0±0.5, 19.°01N±0.°03×121.°31E±0.°05, h46km, n119, σ2s 07/132, mb4.2/40, MS3.7/11, 3C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
SGCP	**Mt. Cagua**	**1.03**	**137**	*eP*	Pn	00 37 50.4	-4.6
CVP	**Callao Caves**	**1.38**	**159**	*i* P	**Pn**	**00 37 57.3**	**-2.6**
CVP				*i* S	**Sn**	**00 38 14.4**	**-2.6**
ABRA	**Dolores**	**1.46**	**203**	*eP*	**Pn**	**00 37 57.8**	**-3.1**
CAUP	**Cauayan**	**2.11**	**167**	*eP*	**Pn**	**00 38 10.3**	**+0.5**
PALP	**Palanan**	**2.20**	**151**	*eP*	**Pn**	**00 38 09.7**	**-1.4**
BCPH	**Baguio City Da**	**2.70**	**195**	i/*eP*	**Pn**	**00 38 17.7**	**-0.4**
BCPH				*i* S	**Sn**	**00 38 44.4**	**-5.2**
BOLP	**Bolinao**	**2.93**	**207**	*eP*	**Pn**	**00 38 21.5**	**+0.5**
BALP	**Baler**	**3.26**	**175**	*eP*	**Pn**	**00 38 25.4**	**-0.2**
PCPH	**Palayan**	**3.43**	**183**	i/*eP*	**Pn**	**00 38 28.1**	**+0.1**
SCZP	**Santa Cruz**	**3.48**	**203**	*eP*	**Pn**	**00 38 30.1**	**+1.5**
TWG	**Pinlang**	**3.80**	**357**	*ePn*	**Pn**	**00 38 32.3**	**-0.7**
TPUB	**Ta-pu**	**4.32**	**352**	*ePn*	**Pn**	**00 38 39.0**	**-1.2**
YULB	**Yu-li**	**4.37**	**360**	*ePn*	**Pn**	**00 38 40.1**	**-0.7**
YULB				*eSn*	**Sn**	**00 39 35.1**	**+4.7**
SSLB	**Suanglung**	**4.77**	**356**	*ePn*	**Pn**	**00 38 45.9**	**-0.5**
SSLB				*eSn*	**Sn**	**00 39 37.6**	**-2.8**
NACB	**Ninganchiao**	**5.15**	**3**	*ePn*	**Pn**	**00 38 52.5**	**+1.0**
NACB				*eSn*	**Sn**	**00 39 49.1**	**-0.6**
GQP	**Guinayangan**	**5.19**	**168**	i/*eP*	**Sn**	**00 39 53.7**	**+3.0**
GQP				*eS*	Sn	00 40 07.7	+17
YHNB	**Yeheng**	**5.64**	**1**	*ePn*	**Pn**	**00 38 59.3**	**+0.9**
TATO	**Taipei**	**5.94**	**2**	*ePn*	**Pn**	**00 39 02.4**	**0.0**
QIZ	**Qiongzhong**	**10.85**	**272**	P	**Pn**	**00 40 09.5**	**-0.2**
QIZ				S	**Sn**	**00 42 06.8**	**-2.9**
QIZ				LR	LR		
comp=N,450nm,20.5s							
QIZ				LR	LR		
comp=Z,410nm,14.6s							
WHN	**Wuhan**	**13.11**	**333**	P	**Pn**	**00 40 40.9**	**+0.4**
WHN				*eS*	Sn	00 42 59.1	-5.7
WHN				LR	LR		
comp=Z,700nm,17.6s							
NJ2	**Nanjing**	**13.18**	**351**	*eP*	**Pn**	**00 40 43.1**	**+1.6**
NJ2				S	**Sn**	**00 43 07.0**	**+0.4**
NJ2				pmax	pmax		
comp=Z,20nm,0.5s							
NJ2				LR	LR		
comp=N,520nm,11.8s							
NJ2				LR	LR		
comp=E,520nm,12.9s							
NJ2				LR	LR		
comp=Z,370nm,13.7s							
GYA	**Guiyang**	**15.40**	**301**	*eP*	**Pn**	**00 41 11.0**	**-0.4**
GYA				pmax	pmax		
comp=Z,10.0nm,0.7s							
JNU	**Nakatsue**	**16.46**	**29**	P	**Pn**	**00 41 24.4**	**-0.4**
JNU	**Nakatsue**	**16.46**	**29**	P	**Pn**	**00 41 24.4**	**-0.4**
comp=Z,0.4nm,0.3s,baz=169,slow=7.8,SNR=3.1							
JNU				LR	LR	00 47 47.6	
comp=Z,247nm,19.7s,baz=203,slow=37							
KMI	**Kunming**	**18.25**	**293**	P	**Pn**	**00 41 50.0**	**+2.9**
KMI				S	**Sn**	**00 45 04.6**	**-5.6**
KMI				pmax	pmax		
comp=Z,7.0nm,1.1s							
KMI				LR	LR		
comp=N,570nm,15.3s							
KMI				LR	LR		
comp=E,340nm,12.2s							
KMI				LR	LR		
comp=Z,290nm,13.8s							
KSAR	**Wonju Array Be**	**19.25**	**16**	P	**P**	**00 41 56.7**	**-0.8**
KSRS	**Korea Array**	**19.27**	**16**	P	**P**	**00 41 56.7**	**-1.1**
comp=Z,0.3nm,0.3s,baz=196,slow=12,SNR=4.2							
CD2	**Chengdu**	**19.81**	**310**	P	**Pn**	**00 42 06.5**	**+0.9**
CD2				pP	**pP**	**00 42 13.6**	**-1.1**
CD2				sP	**sP**	**00 42 17.8**	**-2.7**
CD2				PP	**PnPn**	**00 42 24.5**	**+3.9**
CD2				S	**S**	**00 45 39.3**	**-5.3**
CD2				sS	**Sn**	**00 45 50.0**	**+2.5**
CD2				SS	**SnSn**	**00 46 06.1**	**+3.7**
CD2				pmax	pmax		
comp=Z,20nm,0.5s							
CD2				pmax	pmax		
comp=Z,160nm,6.8s							
CD2				LR	LR		
comp=N,460nm,19.6s							
CD2				LR	LR		
comp=E,550nm,16.6s							
CD2				LR	LR		
comp=Z,440nm,11.3s							
CHTO	**Chiang Mai**	**21.16**	**273**	*eP*	**P**	**00 42 19.4**	**+1.0**
CMAR	**Chiang Mai Arr**	**21.19**	**272**	P	**P**	**00 42 20.1**	**+1.4**
CMAR	**Chiang Mai Arr**	**21.19**	**272**	P	**P**	**00 42 20.1**	**+1.4**
comp=Z,10nm,1.1s,baz=79,slow=9.3,SNR=24							
CMAR				LR	LR	00 50 51.2	
comp=Z,39nm,20.9s,baz=80,slow=37							
BJI	**Beijing**	**21.43**	**349**	P	**P**	**00 42 21.1**	**+0.1**
BJI				S	**S**	**00 46 14.3**	**-2.0**
BJI				pmax	pmax		
comp=Z,11nm,0.9s							
BJI				pmax	pmax		
comp=Z,150nm,4.5s							
BJI				LR	LR		
comp=N,220nm,17.3s							
BJI				LR	LR		
comp=E,320nm,20.2s							
MJAR	**Matsushiro Arr**	**22.93**	**37**	P	**P**	**00 42 36.0**	**-1.2**
MJAR	**Matsushiro Arr**	**22.93**	**37**	P	**P**	**00 42 36.0**	**-1.2**
comp=E,4.1nm,0.8s,baz=226,slow=11,SNR=8.9							
MJAR				LR	LR	00 51 57.0	
comp=E,76nm,18.7s,baz=220,slow=38							
LZH	**Lanzhou**	**22.94**	**321**	*eP*	Sn	00 47 07.0	+4.1
LZH				pP	PcP	00 47 11.0	+45
LZH				sP	S	00 47 13.5	+29
LZH				pmax	pmax		
comp=Z,15nm,1.0s							
LZH	**Lanzhou**	**22.94**	**321**	*eP*	**P**	**00 42 39.0**	**+1.5**
LZH				pP	**pP**	**00 42 45.0**	**-3.6**
LZH				sP	**sP**	**00 42 49.8**	**-4.6**
LZH				pmax	pmax		
comp=Z,61nm,1.2s							
LZH				pmax	pmax		
comp=Z,89nm,4.0s							
LZH				LR	LR		
comp=N,190nm,8.0s							
LZH				LR	LR		
comp=E,230nm,4.4s							
LZH				LR	LR		
comp=Z,230nm,4.9s							
GUMO	**Guam**	**23.23**	**100**	LR	LR	00 50 04.8	
comp=Z,242nm,18.7s,baz=56,slow=33							
HHC	**Hu-ho-hao-te**	**23.32**	**341**	*eP*	**P**	**00 42 42.3**	**+1.2**
HHC				pP	**pP**	**00 42 49.3**	**-3.2**
HHC				sP	sP	00 42 52.6	-5.6
HHC				S	**S**	**00 46 49.4**	**-1.0**
HHC				sS	sS	00 47 00.0	-11
HHC				SS	**SnSn**	**00 47 32.3**	**+3.9**
HHC				pmax	pmax		
comp=Z,38nm,0.7s							
HHC				pmax	pmax		
comp=Z,200nm,6.7s							
HHC				LR	LR		
comp=N,440nm,14.7s							
HHC				LR	LR		
comp=E,620nm,9.8s							
HHC				LR	LR		
comp=Z,480nm,13.4s							
IPM	**Ipoh**	**24.50**	**236**	*eP*	P	00 42 57.9	+5.7
comp=Z,24nm,0.9s							
CN2	**Changchun**	**24.97**	**7**	*eP*	**P**	**00 42 59.1**	**+3.0**
CN2				pmax	pmax		
comp=Z,10.0nm,0.6s							
PSI	**Prapat**	**27.18**	**236**	LR	LR	00 53 15.0	
comp=Z,127nm,18.6s,baz=222,slow=34							
GTA	**Gaotai**	**27.54**	**322**	*eP*	**P**	**00 43 21.0**	**+1.4**
GTA				pP	**pP**	**00 43 29.0**	**-2.7**
GTA				sP	sP	00 43 31.8	-5.4
GTA				pmax	pmax		
comp=Z,6.0nm,1.3s							
ULN	**Ulaanbaatar**	**31.04**	**341**	*eP*	**P**	**00 43 52.1**	**+1.5**
comp=Z,14nm,1.7s							
SONM	**Songino Array**	**31.22**	**340**	P	**P**	**00 43 51.7**	**-0.4**
SONM	**Songino Array**	**31.22**	**340**	P	**P**	**00 43 51.7**	**-0.4**
comp=Z,4.5nm,0.8s,baz=158,slow=8.6,SNR=22							
SONM				LR	LR	00 57 39.6	
comp=Z,81nm,18.0s,baz=169,slow=38							
TAPN	**Taplejung**	**31.91**	**291**	*eP*	**P**	**00 44 00.3**	**+1.7**
comp=Z,6.8nm,0.4s							
ODAN	**Odare**	**32.13**	**290**	*eP*	**P**	**00 44 01.7**	**+1.2**
comp=Z,16nm,0.8s							
RAMN	**Ramite**	**32.84**	**290**	*eP*	**P**	**00 44 08.1**	**+1.4**
comp=Z,49nm,1.1s							
GUN	**Gumba**	**33.59**	**292**	*eP*	**P**	**00 44 13.6**	**+0.2**
comp=Z,42nm,0.9s							
PKI	**Pulchoki**	**33.96**	**291**	*eP*	**P**	**00 44 17.4**	**+0.8**
PKIN	**Phulchoki**	**33.98**	**291**	*eP*	**P**	**00 44 17.9**	**+1.3**
KKN	**Kakani**	**34.10**	**292**	*eP*	**P**	**00 44 18.2**	**+0.5**
DMN	**Daman**	**34.23**	**291**	*eP*	**P**	**00 44 19.7**	**+0.8**
comp=Z,7.9nm,0.3s							
DANN	**Dangsing**	**35.50**	**292**	*eP*	**P**	**00 44 29.8**	**-0.1**
comp=Z,16nm,0.9s							
KOLN	**Koldanda**	**35.58**	**291**	*eP*	**P**	**00 44 30.9**	**+0.5**
comp=Z,18nm,0.9s							
PYUN	**Piuthan**	**36.15**	**292**	*eP*	**P**	**00 44 35.2**	**-0.1**
comp=Z,42nm,1.1s							
WMQ	**Urumqi**	**37.47**	**319**	P	**P**	**00 44 49.0**	**+2.8**
WMQ				sP	**sP**	**00 45 00.0**	**-4.0**
WMQ				PP	**PnPn**	**00 46 16.0**	**+2.6**
WMQ				PcP	PcP	00 47 11.0	+7.1
WMQ				S	**S**	**00 50 33.0**	**+1.3**
WMQ				ScP	ScP	00 50 55.0	+7.5
WMQ				SS	**SnSn**	**00 53 07.0**	**-5.2**
WMQ				pmax	pmax		
comp=Z,15nm,1.0s							
WMQ				pmax	pmax		
comp=Z,84nm,4.0s							
WMQ				LR	LR		
comp=N,67nm,14.0s							
WMQ				LR	LR		
comp=E,71nm,14.0s							
WMQ				LR	LR		
comp=Z,66nm,14.0s							
WRA	**Warramunga Arr**	**40.76**	**161**	P	P	00 45 08.9	-4.9
WRA	**Warramunga Arr**	**40.76**	**161**	P	P	00 45 08.9	-4.9
comp=Z,1.8nm,0.7s,baz=342,slow=9.0,SNR=12							
MK31	**Makanchi Array**	**42.25**	**320**	*eP*	**P**	**00 45 26.5**	**+0.8**
MKAR	**Makanchi Array**	**42.25**	**320**	P	**P**	**00 45 27.0**	**+1.2**
MKAR	**Makanchi Array**	**42.25**	**320**	P	**P**	**00 45 27.0**	**+1.2**
comp=Z,3.0nm,0.8s,baz=112,slow=9.8,SNR=40							
MKAR				LR	LR	01 05 56.3	
comp=Z,80nm,18.8s,baz=3.0,slow=40							
KSH	**Kashi**	**43.98**	**308**	i/*eP*	P	00 45 43.5	+3.5
KSH				pP	pP	00 45 52.8	+0.3
KSH				sP	sP	00 45 57.3	-0.6
KSH				PP	**PcP**	**00 47 27.4**	**+2.3**
KSH				PcP	PP	00 47 31.0	+8.0
KSH				ScP	**ScP**	**00 51 18.5**	**+5.2**
KSH				PcS	**PcS**	**00 51 22.5**	**+4.2**
KSH				S	**S**	**00 52 11.1**	**+2.3**
KSH				sS	sS	00 52 28.0	-1.8
KSH				SS	SS	00 55 19.8	-6.9
KSH				ScS	**ScS**	**00 55 38.4**	**+3.2**
KSH				pmax	pmax		
comp=Z,3.0nm,0.5s							
KSH				LR	LR		
comp=N,150nm,5.5s							
KSH				LR	LR		
comp=E,180nm,4.8s							
KSH				LR	LR		
comp=Z,110nm,5.7s							
PETK	**Petropavlovsk-**	**44.16**	**31**	P	**P**	**00 45 40.3**	**-0.7**
PETK	**Petropavlovsk-**	**44.16**	**31**	P	**P**	**00 45 40.3**	**-0.7**
comp=Z,3.6nm,0.8s,baz=241,slow=4.8,SNR=2.5							
ASAR	**Alice Springs**	**44.16**	**163**	P	P	00 45 37.4	-4.0
ASAR	**Alice Springs**	**44.16**	**163**	P	P	00 45 37.4	-4.0
comp=Z,1.6nm,0.8s,baz=342,slow=6.2,SNR=7.3							
ULHL	**Ulahol**	**44.52**	**311**	P	**P**	**00 45 47.0**	**+2.7**
SNR=12							
ZAA0	**Zalesovo Array**	**44.71**	**330**	*eP*	**P**	**00 45 45.1**	**-0.3**
ZALV	**Zalesovo Beam**	**44.71**	**330**	P	**P**	**00 45 45.9**	**+0.5**
ZALV	**Zalesovo Beam**	**44.71**	**330**	P	**P**	**00 45 45.9**	**+0.5**
comp=Z,2.4nm,0.8s,baz=112,slow=6.8,SNR=14							
ZALV				LR	LR	01 07 15.0	
comp=Z,85nm,18.2s,baz=333,slow=40							
TKM2	**Tokmak 2**	**45.17**	**312**	*eP*	**P**	**00 45 52.0**	**+2.4**
comp=Z,13nm,1.4s							
KZA	**Kyzart**	**45.18**	**311**	P	**P**	**00 45 53.0**	**+3.2**
SNR=13							
KBK	**Karagaybulak**	**45.55**	**312**	P	**P**	**00 45 55.0**	**+2.4**
SNR=5.5							
CHMS	**Chumysh**	**45.79**	**312**	P	**P**	**00 45 56.5**	**+2.2**
SNR=5.2							
AAK	**Ala-Archa**	**45.87**	**311**	*eP*	**P**	**00 45 56.8**	**+1.8**
comp=Z,5.8nm,1.3s							
KURK	**Kurchatov**	**46.21**	**323**	*eP*	**P**	**00 45 58.4**	**+1.1**
comp=Z,11nm,1.2s							
KURBB	**Kurchatov Arra**	**46.22**	**323**	P	**P**	**00 45 58.4**	**+1.0**
comp=Z,3.5nm,0.7s,baz=123,slow=7.4,SNR=22							
AML	**Almayashu**	**46.31**	**311**	P	**P**	**00 46 01.2**	**+2.5**
SNR=17							
EKS2	**Erkin-Say**	**46.39**	**311**	*eP*	**P**	**00 46 01.6**	**+2.5**
KKAR	**Karatay Array**	**48.82**	**311**	*eP*	**P**	**00 46 19.5**	**+1.7**
BVAR	**Borovoye Array**	**51.81**	**323**	P	**P**	**00 46 41.2**	**+1.0**
BVAR	**Borovoye Array**	**51.81**	**323**	P	**P**	**00 46 41.2**	**+1.0**
comp=Z,2.3nm,0.8s,baz=108,slow=9.3,SNR=13							
GNI	**Garni**	**67.89**	**306**	P	**P**	**00 48 32.2**	**+1.0**
GNI	**Garni**	**67.89**	**306**	P	**P**	**00 48 32.2**	**+1.0**
comp=Z,1.0nm,0.5s,baz=196,slow=19,SNR=2.2							

KBZ	**Khabaz**	**68.85**	**310**	P		**P**		**00 48 37.2**	**+0.4**
KBZ	**Khabaz**	**68.85**	**310**	P		**P**		**00 48 37.2**	**+0.4**
	comp=Z,3.6nm,1.0s,baz=88,slow=3.7,SNR=5.0								
MALT	**Malatya**	**73.02**	**305**	*e*P		**P**		**00 49 03.1**	**+0.7**
	comp=Z,2.7nm,1.1s								
ILAR	**Eielson Array**	**73.76**	**26**	P		P		00 49 02.5	-3.5
ILAR	**Eielson Array**	**73.76**	**26**	P		P		00 49 02.5	-3.5
	comp=Z,0.7nm,0.8s,baz=275,slow=5.8,SNR=4.0								
RAO	**Raoul Island**	**75.74**	**128**	LR		LR		01 19 15.5	
	comp=Z,49nm,19.1s,baz=308,slow=33								
FINES	**FINESS Array B**	**75.97**	**330**	P		**P**		**00 49 18.4**	**-0.5**
FINES	**FINESS Array B**	**75.97**	**330**	P		**P**		**00 49 18.4**	**-0.5**
	comp=Z,3.1nm,0.8s,baz=108,slow=4.5,SNR=6.5								
EGAK	**Eagle**	**76.15**	**26**	*e*P		**P**		**00 49 17.8**	**-2.1**
	comp=Z,2.3nm,0.8s								
BRTR	**Keskin Array B**	**76.37**	**308**	P		**P**		**00 49 20.8**	**-1.0**
BRTR	**Keskin Array B**	**76.37**	**308**	P		**P**		**00 49 20.8**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=108,slow=7.9,SNR=3.7								
AKASG	**Malin Array Be**	**76.83**	**319**	P		**P**		**00 49 22.8**	**-1.1**
AKASG	**Malin Array Be**	**76.83**	**319**	P		**P**		**00 49 22.8**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=64,slow=7.0,SNR=4.1								
CSS	**Prodhromos**	**77.76**	**303**	*e*P		**P**		**00 49 29.7**	**+0.2**
	comp=Z,9.6nm,1.4s								
INK	**Inuvik**	**77.97**	**22**	P		**P**		**00 49 29.3**	**-0.7**
INK	**Inuvik**	**77.97**	**22**	P		**P**		**00 49 29.3**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=0.6,slow=4.3,SNR=5.4								
MLR	**Muntele Rosu**	**80.34**	**315**	P		**P**		**00 49 43.6**	**+0.1**
MLR	**Muntele Rosu**	**80.34**	**315**	P		**P**		**00 49 43.7**	**+0.1**
	comp=Z,0.6nm,1.0s,baz=179,slow=2.8,SNR=5.8								
HFS	**Hagfors**	**82.13**	**331**	P		**P**		**00 49 51.9**	**-0.7**
HFS	**Hagfors**	**82.13**	**331**	P		**P**		**00 49 51.9**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=94,slow=4.5,SNR=5.5								
NB2	**NORSAR Subarra**	**82.84**	**333**	P		**P**		**00 49 55.4**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=65,slow=5.6								
NOA	**NORSAR Array B**	**82.84**	**333**	P		**P**		**00 49 55.2**	**-1.2**
NOA	**NORSAR Array B**	**82.84**	**333**	P		**P**		**00 49 55.2**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=66,slow=4.9,SNR=4.2								
OKC	**Ostrava-Krasne**	**83.85**	**321**	*e*P		P		00 50 06.0	+4.3
VRAC	**Vranov**	**84.98**	**321**	P		**P**		**00 50 07.8**	**+0.3**
VRAC	**Vranov**	**84.98**	**321**	P		**P**		**00 50 07.8**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=43,slow=6.1,SNR=4.6								
CASY	**Casey**	**85.41**	**184**	*e*P		P		00 50 04.6	-4.3
	comp=Z,30nm,0.6s								
GERES	**GERESS Array B**	**86.91**	**321**	P		**P**		**00 50 14.9**	**-2.2**
GERES	**GERESS Array B**	**86.91**	**321**	P		**P**		**00 50 14.9**	**-2.2**
	comp=Z,0.4nm,0.8s,baz=38,slow=1.7,SNR=3.7								
YKW3	**Yellowknife Ar**	**87.63**	**23**	*e*P		**P**		**00 50 18.0**	**-2.2**
	comp=Z,0.1nm,0.9s								
YKA	**Yellowknife Ar**	**87.68**	**23**	P		P		**00 50 19.8**	**-0.7**
YKA	**Yellowknife Ar**	**87.68**	**23**	P		**P**		**00 50 19.7**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=309,slow=4.5,SNR=33								
VNA2	**Neumayer–Watz**	**120.01**	**197**	*e*P		PKPdf		00 56 31.5	+10
VNA3	**Neumayer Olymp**	**120.47**	**196**	*e*P		PKPdf		00 56 30.8	+8.1

*ISCJB **21** 00:41:51.4±1.2,33.31N±0.04×35.41E±0.06,h8km±6km, Error ellipse: s-maj=9.0km s-min=7.0km az=166.4*
*CSEM **21** 00:41:51.2±0.2,33.33N×35.38E,h10km,ML1.6, Error ellipse: s-maj=3.8km s-min=2.9km az=78.0*
*GRAL **21** 00:41:51.7±0.6,33.29N×35.39E,h4km±5km,MD2.8*
*NSSC **21** 00:41:52.0±0.5,33.30N×35.44E,h7km±2km,MD1.0,ML1.5*

ISC 21 00:41:51.4±1.3,**33.33N**±0.04×**35.39E**±0.05,**h13**km±10km, **n17**,σ0**.43**/30,**Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
MATL	**Matarih**	**0.17**	**342**	*e*P		**Pg**	**00 41 55.5**		**+0.1**
MATL	**Matarih**	**0.17**	**342**	*e*P		**Pg**	**00 41 55.5**		**+0.1**
RCY	**Rachaya**	**0.41**	**65**	*e*P		**Pg**	**00 41 58.9**		**-0.7**
RCY				*e*S		**Sg**	**00 42 05.2**		**+0.1**
BRBR	**Barbar**	**0.47**	**79**	*e*P		**Pg**	**00 42 00.6**		**-0.2**
BRBR				*e*S		**Sg**	**00 42 07.3**		**+0.1**
BRBR					AML	AML	00 42 08.4		
	comp=N,89nm,0.4s								
BRBR					AML	AML	00 42 08.9		
	comp=E,52nm,0.3s								
BRBR	**Barbar**	**0.47**	**79**	*e*P		**Pg**	**00 42 00.6**		**-0.2**
	SNR=99								
BRBR				*e*S		**Sg**	**00 42 07.3**		**+0.1**
	comp=E,52nm,0.3s,SNR=97								
QASN	**Qassioun**	**0.77**	**74**	*e*P		**Pg**	**00 42 06.6**		**+0.3**
QASN				*e*S		**Sg**	**00 42 16.6**		**+0.2**
QASN					AML	AML	00 42 18.6		
	comp=N,127nm,0.7s								
QASN					AML	AML	00 42 19.1		
	comp=E,154nm,0.4s								
QASN	**Qassioun**	**0.77**	**74**	*e*P		**Pg**	**00 42 06.6**		**+0.3**
	SNR=72								
QASN				*e*S		**Sg**	**00 42 16.5**		**+0.2**
	comp=E,154nm,0.4s,SNR=94								
TCHB	**Talchebab**	**0.81**	**143**	*e*P		**Pg**	**00 42 07.2**		**+0.1**
TCHB				*e*S		**Sg**	**00 42 17.4**		**-0.4**
TCHB					AML	AML	00 42 18.8		
	comp=E,37nm,0.6s								
TCHB					AML	AML	00 42 30.9		
	comp=N,31nm,0.5s								
TCHB	**Talchebab**	**0.81**	**143**	*e*P		**Pg**	**00 42 07.2**		**+0.1**
	SNR=72								
TCHB				*e*S		**Sg**	**00 42 17.4**		**-0.4**
	comp=N,31nm,0.5s,SNR=94								
TOTH	**TOTAH**	**0.87**	**87**	*e*P		**Pg**	**00 42 08.3**		**+0.2**
TOTH				*e*S		**Sg**	**00 42 19.5**		**0.0**
TOTH					AML	AML	00 42 25.4		
	comp=E,22nm,0.6s								
TOTH					AML	AML	00 42 27.6		
	comp=N,9.9nm,0.3s								
TOTH	**TOTAH**	**0.87**	**87**	*e*P		**Pg**	**00 42 08.4**		**+0.2**
	SNR=72								
TOTH				*e*S		**Sg**	**00 42 19.5**		**0.0**
	comp=N,9.9nm,0.3s,SNR=93								
HWQ	**Hawqa**	**1.06**	**26**	*e*P		**Pg**	**00 42 11.4**		**-0.4**
HWQ				*e*S		**Sg**	**00 42 25.4**		**-0.2**
HWQ	**Hawqa**	**1.06**	**26**	*e*P		**Pg**	**00 42 11.4**		**-0.4**
HWQ				*e*S		**Sg**	**00 42 25.4**		**-0.2**
SALA	**Sala**	**1.28**	**118**	*i* P		**Pn**	**00 42 15.2**		**+0.1**
SALA				*e*S		**Sb**	**00 42 31.1**		**-0.8**
SALA					AML	AML	00 42 33.3		
	comp=N,13nm,0.5s								
SALA					AML	AML	00 42 33.8		
	comp=E,0.9nm,0.5s								
SALA	**Sala**	**1.28**	**118**	*i* P		**Pn**	**00 42 15.2**		**+0.1**
	SNR=61								
SALA				*e*S		**Sb**	**00 42 31.1**		**-0.8**
	comp=E,0.9nm,0.5s,SNR=62								
ZALF	**Zalf**	**1.68**	**103**	*e*P		**Pn**	**00 42 21.4**		**+1.0**
ZALF	**Zalf**	**1.68**	**103**	*e*P		**Pn**	**00 42 21.4**		**+1.0**
	SNR=47								

*NOU **21** 00:53:07.4±0.6,18.79S×169.61E,h30km,MD4.2,ML3.5, MS3.5*
*ISCJB **21** 00:53:10.1±1.2,19.74S±0.03×169.95E±0.03,h20km±8km, mb5.3/104,MS5.2/196, Error ellipse: s-maj=5.8km s-min=3.3km az=150.7*
*MOS **21** 00:53:11.9±1.2,19.76S×169.95E,h33km,mb5.6/39, MS5.1/36, Error ellipse: s-maj=8.6km s-min=7.7km az=148.9*
*BJI **21** 00:53:12.9,19.38S×170.27E,h39km,mB5.8/40,mb5.2/47, Ms5.3/40,Ms7 5.0/42*
*IDC **21** 00:53:12.7±5.5,19.80S×170.01E,h30km±37km,mb4.9/23, mb1 5.0/26,mb1mx5.0/27,mbtmp4.9/26,ML4.0/2,MS5.1/27, Ms1 5.1/27,ms1mx5.0/32, Error ellipse: s-maj=14.6km s-min=12.2km az=76.0*
*BGS **21** 00:53:13.5±3.5,19.77S×169.94E,h33km,mb5.6(NEIC)*
*NEIC **21** 00:53:13.5±0.6,19.77S×169.94E,h36km±5km,mb5.6/56, MS5.3/144,MW5.8, Error ellipse: s-maj=5.7km s-min=4.2km az=146.0*
*GCMT **21** 00:53:14.8±0.1,19.72S×170.04E,h12km,MW5.6, Moment Tensor Solution. s92,c164; s56,c63; Moment tensor: Scale 10^17^Nm; Mrr-3.21±.03; Mθθ0.98±.03; Mφφ2.23±.03; Mrθ0.51±.08; Mθφ-1.62±.03; Mφr-0.09±.08; Best double couple: M0:3.30000×10^17^ NP1:φs152.00000°, δ42.00000°,λ-80.00000°. NP2:φs319.00000°,δ49.00000°, λ-99.00000°. Principal axes: T 3.3600, Plg3.0000°, Azm55.0000°; N -0.0900, Plg7.0000°, Azm325.0000°; P -3.2700, Plg83.0000°, Azm170.0000°; Data Used: II IU IC G CN. Surface waves: sta=108, comp=228, per= 50.*
*AUST **21** 00:53:15.7±1.2,19.68S×170.10E,h55km Error ellipse: s-maj=1.2km s-min=1.0km az=262.0*
*DJA **21** 00:53:35.7±3.2,20°S±7°×17°0E±°,h231km±43km,M5.2/13,*

mB5.8/9,mb5.1/13,Mw(mB)5.3/9

ISC 21 00:53:13.7±0.3,**19.79S**±0.04×**169.98E**±0.03,**h40**km±2km, **h39**km:**pP-P**,**n916**,σ1**33**/884,**mb5.4**/104,**MS5.3**/196, **66C-57D**,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
BAYA	**Yate Dam**	**3.73**	**230**	*e*P		**Pn**	**00 54 08.4**		**-0.3**
BAYA				*e*S		**Sn**	**00 54 53.5**		**+2.0**
BAYA					AMP		00 55 07.1		
	comp=Z,68nm,4.9s								
DZM	**Mont Dzumac**	**4.01**	**235**	*e*Pn		**Pn**	**00 54 11.3**		**-1.4**
	comp=Z,191nm,0.2s								
DZM				*e*Sn		**Sn**	**00 54 59.0**		**+0.5**
	comp=Z,850nm,0.3s								
DZM				*e*LR		LR	00 55 07.3		
	comp=Z,120μm,25.4s								
DZM	**Mont Dzumac**	**4.01**	**235**	*e*P		**Pn**	**00 54 11.3**		**-1.4**
DZM				*e*S		**Sn**	**00 54 58.2**		**-0.3**
DZM	**Mont Dzumac**	**4.01**	**235**	↑*i*P		**Pn**	**00 54 12.5**		**-0.3**
DZM				*e*Sn		**Sn**	**00 54 57.5**		**-1.0**
DZM	**Mont Dzumac**	**4.01**	**235**	Pn		**Pn**	**00 54 11.4**		**-1.3**
	comp=Z,30nm,0.3s,baz=65,slow=17,SNR=199								
DZM				Sn		**Sn**	**00 54 59.5**		**+0.9**
	comp=Z,380nm,0.3s,baz=333,slow=22,SNR=14								
DZM				LR		LR	00 55 37.9		
	comp=Z,78μm,18.8s,baz=128,slow=36								
NORM	**Noumea**	**4.07**	**233**	*e*P		**Pn**	**00 54 12.6**		**-0.8**
NORM				*e*S		**Sn**	**00 55 00.9**		**+1.0**
NORM					AMP		00 55 14.6		
	comp=Z,2μm,13.2s								
NOUC	**Port Laguerre**	**4.13**	**235**	*e*P		**Pn**	**00 54 13.3**		**-1.1**
NOUC				*e*S		**Sn**	**00 55 02.4**		**+0.9**
NOUC					AMP		00 55 05.5		
	comp=Z,504nm,0.8s								
MSVF	**Nonsavu**	**7.92**	**76**	↑*i*P		**Pn**	**00 55 06.9**		**+0.5**
MSVF				S		**Sn**	**00 56 38.2**		**+3.4**
MSVF	**Nonsavu**	**7.92**	**76**	↑*i*Pn		**Pn**	**00 55 06.9**		**+0.5**
MSVF				S		**Sn**	**00 56 38.2**		**+3.4**
MSVF	**Nonsavu**	**7.92**	**76**	Pn		**Pn**	**00 55 08.0**		**+1.6**
	comp=Z,2μm,1.1s,SNR=33								
OUZ	**Ouvahata**	**15.71**	**169**	*e*Pn		**Pn**	**00 56 52.8**		**+0.7**
	comp=Z,697nm,1.8s								
EIDS	**Eidsvold**	**18.31**	**249**	*e*Pn		**P**	**00 57 23.5**		**-1.0**
	comp=Z,2μm,2.8s								
EIDS				S		**S**	**01 00 51.9**		**0.0**
EIDS	**Eidsvold**	**18.31**	**249**	P		**Pn**	**00 57 28.0**		**+3.4**
	baz=18,SNR=10								
AFI	**Afiamalu**	**18.41**	**74**	P		**P**	**00 57 23.8**		**-1.9**
AFI	**Afiamalu**	**18.41**	**74**	P		**P**	**00 57 23.8**		**-1.9**
	comp=Z,9.8nm,0.3s,baz=261,slow=19,SNR=3.1								
AFI				LR		LR	01 03 02.7		
	comp=Z,13μm,20.0s,baz=264,slow=32								
URZ	**Urewera**	**19.43**	**163**	P		**Pn**	**00 57 38.0**		**0.0**
URZ	**Urewera**	**19.43**	**163**	P		**Pn**	**00 57 38.0**		**0.0**
	comp=Z,4.0nm,0.3s,baz=1.8,slow=7.1,SNR=24								
URZ				LR		LR	01 03 34.6		
	comp=Z,5μm,21.0s,baz=162,slow=32								
ARMA	**Armidale**	**19.67**	**234**	*e*Pn		**P**	**00 57 39.8**		**+0.2**
	comp=Z,2μm,2.4s								
ARMA				S		**S**	**01 01 18.0**		**-1.5**
ARMA	**Armidale**	**19.67**	**234**	P		**Pn**	**00 57 42.8**		**+1.6**
	baz=20,SNR=11								
RMQ	**Roma**	**20.61**	**247**	P		Pn	00 57 52.5		+0.4
	baz=21,SNR=26								
TARA	**Tarawa**	**21.21**	**8**	*e*P		**P**	**00 57 57.0**		**+0.9**
	comp=Z,1μm,1.4s								
TARA				*e*S		**S**	**01 01 50.5**		**+0.6**
TARA					LR	LR			
	comp=Z,7μm,22.0s								
SNZO	**South Karori**	**21.83**	**170**	*e*P		**P**	**00 58 06.0**		**+3.4**
	comp=Z,449nm,1.5s								
SNZO				*e*S		Sn	01 02 14.7		+1.9
SNZO					LR	LR			
	comp=Z,8μm,22.0s								
CTA	**Charters Tower**	**22.30**	**265**	P		**P**	**00 58 08.9**		**+1.0**
CTA	**Charters Tower**	**22.30**	**265**	P		**P**	**00 58 08.9**		**+1.0**
	comp=Z,19nm,0.7s,baz=89,slow=12,SNR=26								
CTA					LR	LR	01 05 57.5		
	comp=Z,5μm,22.0s,baz=82,slow=34								
CTAO	**Charters Tower**	**22.30**	**265**	*e*P		**P**	**00 58 09.2**		**+1.3**
CTAO				*e*S		**S**	**01 02 10.3**		**-0.7**
CTAO					pmax	pmax			
	comp=Z,1μm,2.4s								
CTAO					MLR	MLR			
	comp=Z,6μm,22.0s								
CTAO	**Charters Tower**	**22.30**	**265**	*e*P		**P**	**00 58 09.2**		**+1.3**
	comp=Z,1μm,2.4s								
CTAO				*e*S		**S**	**01 02 10.3**		**-0.7**
CTAO					LR	LR			
	comp=Z,6μm,22.0s								
KHZ	**Kahutara**	**22.77**	**173**	*e*P		**P**	**00 58 12.8**		**+0.3**
	comp=Z,739nm,2.0s								
CNB	**Canberra Magne**	**23.87**	**225**	P		**P**	**00 58 25.5**		**+1.9**
	baz=24,SNR=12								
RPZ	**Rata Peaks**	**23.88**	**178**	*e*P		**P**	**00 58 24.1**		**+0.6**
RPZ	**Rata Peaks**	**23.88**	**178**	P		**P**	**00 58 24.2**		**+0.6**
	comp=Z,19nm,0.7s,baz=304,slow=4.8,SNR=15								
YNG	**Young**	**23.98**	**229**	P		**P**	**00 58 26.7**		**+2.1**
	baz=24,SNR=10								
CAN	**Canberra**	**24.12**	**226**	*e*P		**P**	**00 58 26.9**		**+1.0**
CAN				*e*S		**S**	**01 02 41.1**		**0.0**
CAN					pmax	pmax			
	comp=Z,100nm,1.0s								
CAN					MLR	MLR			
	comp=Z,10μm,20.0s								
CAN	**Canberra**	**24.12**	**226**	*e*P		**P**	**00 58 26.9**		**+1.0**
	comp=Z,100nm,1.0s								
CAN				*e*S		**S**	**01 02 41.1**		**0.0**
CAN					LR	LR			
	comp=Z,10μm,20.0s								
PMG	**Port Moresby**	**24.34**	**292**	↓*e*P		**P**	**00 58 28.1**		**+0.1**
	comp=Z,152nm,0.8s								
PMG				*e*S		**S**	**01 02 43.0**		**-1.8**
PMG	**Port Moresby**	**24.34**	**292**	P		**P**	**00 58 29.3**		**+1.3**
	comp=Z,256nm,0.8s,comp=Z,4μm								
PMG	**Port Moresby**	**24.34**	**292**	P		**P**	**00 58 29.2**		**+1.2**
	comp=Z,91nm,0.8s,baz=96,slow=7.6,SNR=30								
PMG					LR	LR	01 06 47.6		
	comp=Z,5μm,19.0s,baz=29,slow=33								
QLP	**Quilpie**	**24.58**	**249**	P		**P**	**00 58 31.1**		**+0.9**
	baz=25,SNR=31								
CMSA	**Cobar Meteorol**	**24.76**	**237**	P		**P**	**00 58 32.3**		**+0.6**
	baz=25,SNR=71								
MILA	**Mila**	**25.04**	**222**	P		**P**	**00 58 36.1**		**+1.9**
	baz=25,SNR=6.7								
ODZ	**Otahua Downs**	**25.20**	**179**	*e*P		**P**	**00 58 37.1**		**+1.6**
	comp=Z,137nm,1.4s								
WHZ	**Wether Hill Ro**	**26.09**	**183**	*e*P		**P**	**00 58 45.3**		**+1.7**
	comp=Z,834nm,2.4s								
COEN	**Coen**	**26.27**	**279**	*e*P		**P**	**00 58 46.1**		**+0.5**
	comp=Z,1μm,1.2s								
COEN				*e*S		**S**	**01 03 14.7**		**-1.0**
COEN	**Coen**	**26.27**	**279**	P		**P**	**00 58 47.0**		**+1.4**
	baz=26,SNR=9.6								
TOO	**Toolangi**	**27.72**	**225**	P		**P**	**00 58 59.9**		**+1.5**
	baz=28,SNR=4.0								
STKA	**Stephens Creek**	**28.15**	**239**	*e*P		**P**	**00 59 03.4**		**+1.1**
	comp=Z,20nm,1.2s								
STKA				*e*PcP		**PcP**	**01 02 16.6**		**+0.8**
STKA	**Stephens Creek**	**28.15**	**239**	P		**P**	**00 59 03.4**		**+1.1**
	comp=Z,14nm,0.6s,baz=76,slow=10,SNR=42								
STKA				PcP		**PcP**	**01 02 16.5**		**+0.8**
	comp=Z,5.9nm,0.7s,baz=153,slow=6.3,SNR=3.1								
STKA				LR		LR	01 09 58.5		
	comp=Z,11μm,19.5s,baz=52,slow=36								
STKA	**Stephens Creek**	**28.15**	**239**	P		**P**	**00 59 03.4**		**+1.1**
	baz=28,SNR=36								
RAR	**Rarotonga**	**28.35**	**98**	LR		LR	01 07 59.9		
	comp=Z,2μm,18.4s,baz=254,slow=31								
QIS	**Mount Isa**	**28.50**	**263**	P		**P**	**00 59 06.5**		**+0.9**
	baz=29,SNR=5.6								
MOO	**Moorlands**	**29.67**	**215**	P		**P**	**00 59 17.4**		**+1.8**
	baz=30,SNR=10								
ARPS	**Mount Arapiles**	**29.85**	**230**	P		**P**	**00 59 18.8**		**+1.5**
	baz=30,SNR=7.4								
TAU	**Tasmania Unive**	**29.92**	**215**	*e*P		**P**	**00 59 18.3**		**+0.5**
TAU				*e*S		**S**	**01 04 12.5**		**0.0**
TAU					pmax	pmax			
	comp=Z,350nm,2.5s								
TAU					MLR	MLR			
	comp=Z,8μm,20.0s								
TAU	**Tasmania Unive**	**29.92**	**215**	*e*P		**P**	**00 59 18.3**		**+0.5**
	comp=Z,350nm,2.5s								
TAU				*e*S		**S**	**01 04 12.5**		**0.0**
TAU					LR	LR			
	comp=Z,8μm,20.0s								

BBOO	**Buckleboo**	**32.91**	**240**	*e*P		**P**		**00 59 44.8**	**+0.5**
	comp=Z,3μm,1.5s								
BBOO	**Buckleboo**	**32.91**	**240**	P		**P**		**00 59 44.8**	**+0.5**
	baz=33,SNR=31								
JAY	**Jayapura**	**33.35**	**297**	P		**P**		**00 59 49.6**	**+1.2**
	baz=33,SNR=5.2								
WRAB	**Tennant Creek**	**33.47**	**264**	*e*P		**P**		**00 59 48.6**	**-0.8**
WRAB				*e*				01 01 05.3	
WRAB					pmax	pmax			
	comp=Z,27nm,0.9s								
WRAB					MLR	MLR			
	comp=Z,5μm,22.0s								
WRAB	**Tennant Creek**	**33.47**	**264**	*e*P		**P**		**00 59 48.6**	**-0.8**
	comp=Z,27nm,0.9s								
WRAB				*e*PP		**PP**		**01 01 05.3**	**-0.3**
WRAB					LR	LR			
	comp=Z,5μm,22.0s								
WRAB	**Tennant Creek**	**33.47**	**264**	P		**P**		**00 59 48.0**	**-1.4**
	comp=Z,193nm,1.1s,SNR=5.7								
WRA	**Warramunga Arr**	**33.48**	**264**	P		**P**		**00 59 48.1**	**-1.4**
WRA				PcP		**PcP**		**01 02 30.3**	**+0.3**
WRA	**Warramunga Arr**	**33.48**	**264**	P		**P**		**00 59 48.1**	**-1.4**
	comp=Z,8.6nm,0.7s,baz=88,slow=8.5,SNR=51								
WRA				PcP		**PcP**		**01 02 30.3**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=306,slow=1.1,SNR=5.0								
WRA				LR		LR		01 12 45.1	
	comp=Z,4μm,20.8s,baz=90,slow=35								
AS31	**Alice Springs**	**33.67**	**257**	↓*e*P		**P**		**00 59 50.7**	**-0.5**
ASAR	**Alice Springs**	**33.68**	**257**	P		**P**		**00 59 50.5**	**-0.7**
ASAR	**Alice Springs**	**33.68**	**257**	P		**P**		**00 59 50.5**	**-0.7**
	comp=Z,76nm,0.7s,baz=87,slow=9.3,SNR=366								
ASAR				LR		LR		01 13 28.7	
	comp=Z,10μm,18.9s,baz=91,slow=36								
KDU	**Kakadu**	**36.63**	**275**	P		P		01 00 24.8	+8.2
	baz=37,SNR=3.1								
TBI	**Tubuai**	**37.80**	**103**	*e*S		**S**		**01 06 13.7**	**-1.2**
	comp=Z,1μm,28.2s								
TBI				*e*LQ		LQ		01 08 59.5	
	comp=Z,8μm,30.0s								
TBI				*e*LR		LR		01 10 52.4	
	comp=Z,5μm,31.2s,baz=272								
MTN	**Manton Dam**	**37.85**	**274**	P		**P**		**01 00 27.6**	**+0.7**
	baz=38,SNR=4.6								
MTN				S		S		01 05 53.0	-23
	baz=38,SNR=3.3								
PAE	**Paea**	**38.30**	**94**	*e*P		**P**		**01 00 27.8**	**-2.9**
	comp=Z,6.3nm,1.1s								
PPT2	**Papeete2**	**38.32**	**94**	*e*P		**P**		**01 00 28.6**	**-2.4**
	comp=Z,45nm,1.4s								
PPT2				*e*S		**S**		**01 06 21.8**	**-1.1**
	comp=Z,499nm,25.0s								
PPT2				*e*LQ		LQ		01 09 26.4	
	comp=Z,8μm,29.0s								
PPT2				*e*LR		LR		01 11 06.5	
	comp=Z,10μm,28.5s,baz=259								
PPT	**Papeete**	**38.32**	**94**	LR		LR		01 12 26.2	
	comp=Z,2μm,18.5s,baz=252,slow=30								
TIAR	**Tiarei**	**38.54**	**94**	*e*P		**P**		**01 00 30.1**	**-2.7**
	comp=Z,46nm,0.9s								
TVO	**Taravao**	**38.59**	**94**	*e*P		**P**		**01 00 30.2**	**-3.0**
	comp=Z,38nm,1.1s								
XMAS	**Kiritimati**	**38.64**	**60**	*e*P		**P**		**01 00 35.2**	**+1.7**
	comp=Z,103nm,0.9s								
XMAS				*e*S		**S**		**01 06 28.8**	**+1.2**
XMAS					LR	LR			
	comp=Z,4μm,21.0s								
TLE	**Tual**	**38.84**	**286**	P		P		**01 00 36.1**	**+0.8**
	baz=39,SNR=3.5								
WAKE	**Wake Island**	**38.96**	**355**	*e*P		**P**		**01 00 36.3**	**+0.2**
	comp=Z,151nm,1.1s								
WAKE					LR	LR			
	comp=Z,2μm,20.0s								
FORT	**Forrest**	**39.25**	**245**	*e*P		**P**		**01 00 38.2**	**-0.3**
FORT	**Forrest**	**39.25**	**245**	P		**P**		**01 00 39.0**	**+0.4**
	baz=39,SNR=14								
MEH	**Mehetia**	**39.69**	**94**	*e*P		**P**		**01 00 39.3**	**-3.1**
	comp=Z,64nm,0.9s								
PMOR	**Pomariorio Ree**	**40.41**	**90**	*e*P		**P**		**01 00 45.7**	**-2.6**
	comp=Z,67nm,1.0s								
GUMO	**Guam**	**41.36**	**321**	LR		LR		01 16 01.6	
	comp=Z,1μm,21.0s,baz=127,slow=33								
JOHN	**Johnston Islan**	**41.50**	**30**	PFAKE				01 01 10.0	+13
JOHN				LR		LR			
	comp=Z,5.0nm,21.0s								
FITZ	**Fitzroy Crossi**	**41.88**	**265**	*e*P		**P**		**01 01 00.

XMI **Christmas Isla** 62.45 268 P **P** 01 03 34.4 +1.0
baz=62,SNR=3.1
MJAR **Matsushiro Arr** 63.56 332 P **P** 01 03 40.0 -0.2
MJAR **Matsushiro Arr** 63.56 332 P **P** 01 03 40.0 -0.2
comp=Z,30nm,0.9s,baz=168,slow=6.5,SNR=28
MAJO **Matsushiro** 63.56 332 *e*P **P** 01 03 40.4 +0.1
MAJO pmax pmax
comp=Z,45nm,1.0s
MAJO MLR MLR
comp=Z,671nm,20.0s
MAJO **Matsushiro** 63.56 332 *e*P **P** 01 03 40.4 +0.1
comp=Z,45nm,1.0s
MAJO LR LR
comp=Z,671nm,20.0s
MAT **Matsushiro** 63.56 332 P **P** 01 03 40.2 -0.1
MAT S **pS** 01 12 24.6 -0.8
TPUB **Ta-pu** 64.42 309 *e*P **P** 01 03 45.5 -0.7
SSLB **Suanglung** 64.49 310 *e*P **P** 01 03 45.2 -1.4
JNU **Nakatsue** 64.51 324 P **P** 01 03 46.9 +0.2
JNU **Nakatsue** 64.51 324 P **P** 01 03 46.8 +0.2
comp=Z,14nm,0.9s,baz=120,slow=6.0,SNR=3.5
YHNB **Yeheng** 64.73 311 *e*P **P** 01 03 47.7 -0.6
comp=Z,144nm,1.4s
YHNB LR LR
comp=Z,825nm,20.0s
TATO **Taipei** 64.84 311 PFAKE 01 04 00.0 +11
TATO LR LR
comp=Z,820nm,19.0s
ERM **Erimo** 66.30 338 PFAKE 01 04 10.0 +12
ERM LR LR
comp=Z,759nm,20.0s
QZH **Quanzhou** 66.90 310⇓ *i*P **P** 01 04 03.4 +1.3
YUK **Yuzh-Kuril'sk** 67.24 341 *i* P **P** 01 04 02.7 -1.2
YUK *i* 01 06 30.0
YUK *i* PPP PPP 01 08 11.7
YUK *i* S **S** 01 12 56.6 +0.8
YUK *i* SS **SS** 01 17 12.2 -4.2
YUK pmax pmax
comp=N,59nm,1.1s
YUK pmax pmax
comp=E,81nm,1.1s
YUK pmax pmax
comp=Z,220nm,1.1s
YUK pmax pmax
comp=Z,2μm,3.9s
MYKOM **Kota Tinggi** 68.25 280 P **P** 01 04 12.3 +1.4
ASAJ **Asahikawa** 68.35 339 P **P** 01 04 12.7 +1.8
ASAJ **Asahikawa** 68.35 339 P **P** 01 04 12.7 +1.8
comp=Z,87nm,0.9s,baz=237,slow=11,SNR=29
KGM **Kluang** 68.83 280 P **P** 01 04 16.1 +1.5
KSRS **Korea Array** 69.35 325 P **P** 01 04 18.9 +1.7
comp=Z,6.2nm,1.0s,baz=138,slow=5.4,SNR=6.9
KSRS LR LR 01 32 25.6
comp=Z,390nm,19.4s,baz=134,slow=34
KSAR **Wonju Array Be** 69.36 325 P **P** 01 04 18.9 +1.6
KTGM **Kuala Trenggan** 70.26 283 P **P** 01 04 26.2 +2.8
COCO **West Island** 70.27 264 PFAKE 01 04 40.0 +17
COCO LR LR
comp=Z,2μm,20.0s
QSPA **South Pole Qui** 70.27 180 *e*P **P** 01 04 22.7 -0.1
comp=Z,62nm,1.0s
QSPA LR LR
comp=Z,2μm,20.0s
QIZ **Qiongzhong** 70.45 299 P **P** 01 04 25.9 +1.5
QIZ pP **pP** 01 04 35.0 -1.4
QIZ S **S** 01 13 35.3 +0.4
QIZ pmax pmax
comp=Z,19nm,1.5s
QIZ pmax pmax
comp=Z,440nm,7.9s
QIZ LR LR
comp=Z,780nm,28.8s
YSS **Yuzh-Sakhalins** 70.82 341κ *i*P **P** 01 04 28.8 +2.8
YSS *e* 01 04 34.2
YSS *e**SP **sP** 01 04 47.4 +4.9
YSS *e* 01 07 06.0
YSS *e*S S 01 13 44.0 +5.9
YSS *e*PS **PnS** 01 14 06.0 -4.3
YSS pmax pmax
comp=Z,70nm,1.0s
YSS pmax pmax
comp=Z,900nm,4.0s
YSS MLR MLR
comp=Z,400nm,17.0s
FRIM **Kepong** 70.85 281 P **P** 01 04 28.5 +1.5
NJ2 **Nanjing** 71.08 316 *e*P **P** 01 04 28.3 +0.3
NJ2 pP **pP** 01 04 36.8 -3.1
NJ2 sP **sP** 01 04 42.8 -1.7
NJ2 S **S** 01 13 43.5 +1.8
NJ2 pmax pmax
comp=Z,40nm,1.0s
NJ2 pmax pmax
comp=Z,1μm,6.1s
NJ2 LR LR
comp=N,420nm,19.4s
NJ2 LR LR
comp=E,540nm,19.0s
NJ2 LR LR
comp=Z,940nm,20.6s
IPM **Ipoh** 71.87 282 *e*P **P** 01 04 33.5 +0.3
comp=Z,124nm,1.6s
IPM **Ipoh** 71.87 282 P **P** 01 04 34.2 +0.9
FX1 **Attu Island--F** 72.41 2 *e*P **P** 01 04 36.5 +1.0
FX1 **Attu Island--F** 72.41 2 P **P** 01 04 35.6 +0.1
comp=Z,65nm,1.1s,baz=243,slow=3.2,SNR=3.9
FX1 LR LR 01 29 48.4
comp=Z,829nm,21.9s,baz=201,slow=30
KULM **Kulim** 72.53 282 PFAKE 01 04 50.0 +13
KULM LR LR
comp=Z,679nm,22.0s
USRK **Ussuriysk Arra** 72.53 332 P **P** 01 04 37.4 +1.0
comp=Z,24nm,0.9s,baz=130,slow=5.3,SNR=18
USRK LR LR 01 34 16.4
comp=Z,517nm,21.4s,baz=274,slow=34
PET **Petropavlovsk** 73.17 353*d* *i*P **P** 01 04 40.5 +0.6
PET *e*S **S** 01 14 06.6 +1.9
PET *e*PS **PnS** 01 14 40.4 -0.6
PET pmax pmax
comp=Z,35nm,1.4s
PET pmax pmax
comp=Z,100nm,13.0s
PSI **Prapat** 73.20 279 P **P** 01 04 40.5 -0.8
PSI **Prapat** 73.20 279 P **P** 01 04 40.5 -0.8
comp=Z,16nm,0.8s,baz=135,slow=4.2,SNR=13
PSI **Prapat** 73.20 279 P **P** 01 04 41.2 -0.1
baz=73,SNR=6.5
WHN **Wuhan** 73.23 312 P **P** 01 04 41.4 +0.5
WHN *e*S **SKiKP** 01 14 11.1 +1.4
WHN LR LR
comp=Z,1μm,21.8s
RPN **Rapa Nui** 73.24 113 LR LR 01 29 11.4
comp=Z,347nm,19.1s,baz=301,slow=30
PEA0B **Petropavlovsk-** 73.36 352 *e*P **P** 01 04 40.5 -0.7
PEA0B *e*PP **PP** 01 07 22.5 -2.8
PETK **Petropavlovsk-** 73.36 352 P **P** 01 04 41.9 +0.7
PETK **Petropavlovsk-** 73.36 352 P **P** 01 04 41.9 +0.7
PETK **Petropavlovsk-** 73.36 352 P **P** 01 04 41.9 +0.7
comp=Z,35nm,0.9s,baz=147,slow=7.4,SNR=19
MDJ **Mudanjiang** 73.93 331 P **P** 01 04 46.1 +1.4
MDJ pP **PcP** 01 04 58.6 -1.3
MDJ sP **sP** 01 05 03.3 +2.1
MDJ pmax pmax
comp=Z,33nm,1.5s
MDJ pmax pmax
comp=Z,800nm,4.3s
MDJ LR LR
comp=N,670nm,4.9s
MDJ LR LR
comp=E,340nm,7.9s
MDJ LR LR
comp=Z,620nm,7.3s
CN2 **Changchun** 75.28 328 ⇑P **P** 01 04 53.3 +0.8
CN2 *e*sP **sP** 01 05 08.5 -0.6
CN2 *e*S **S** 01 14 29.6 +0.6
CN2 pmax pmax
comp=Z,40nm,0.7s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,800nm,17.0s
CN2 LR LR
comp=E,600nm,17.0s
CN2 LR LR
comp=Z,1μm,19.0s
GYA **Guiyang** 76.70 305⇑ *i*P **P** 01 05 03.3 +2.1
GYA pP **pP** 01 05 14.8 +1.6
GYA sP **sP** 01 05 19.0 +1.2
GYA PP **PP** 01 07 56.5 +2.2
GYA S **S** 01 14 45.3 -0.2
GYA sS **sS** 01 15 05.8 +0.2
GYA SKS **SKSac** 01 15 09.4 -1.0
GYA SS **SS** 01 19 45.0 +2.7
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,1μm,5.2s
GYA LR LR
comp=N,6μm,18.3s
GYA LR LR
comp=E,3μm,19.0s
GYA LR LR
comp=Z,7μm,18.8s
BJI **Beijing** 77.80 321 P **P** 01 05 07.8 +1.0
BJI PP **PP** 01 08 03.1 0.0
BJI S **S** 01 15 00.4 +3.8
BJI SS **SS** 01 19 57.8 -0.3
BJI pmax pmax
comp=Z,34nm,2.4s
BJI pmax pmax
comp=Z,620nm,4.1s
BJI LR LR
comp=N,690nm,24.4s
BJI LR LR
comp=E,670nm,27.1s
BJI LR LR
comp=Z,930nm,31.4s
MAW **Mawson** 78.19 202 P **P** 01 05 09.8 +1.1
MAW **Mawson** 78.19 202 P **P** 01 05 09.8 +1.1
comp=Z,14nm,0.8s,baz=115,slow=6.9,SNR=20
MAW LR LR 01 35 18.0
comp=Z,2μm,20.3s,baz=90,slow=32
MAW **Mawson** 78.19 202 P **P** 01 05 09.9 +1.2
baz=78,SNR=13
XAN **Xi'an** 78.99 312 P **P** 01 05 14.1 +0.4
XAN pP **pP** 01 05 24.3 -1.5
XAN sP **sP** 01 05 28.8 -1.5
XAN PP **PP** 01 08 13.8 +0.5
XAN S **S** 01 15 07.1 -2.7
XAN SKS **SKSac** 01 15 24.4 -2.0
XAN ScS **SKKSac** 01 15 29.3 +1.5
XAN SS **SS** 01 20 14.6 -1.8
XAN pmax pmax
comp=Z,9.0nm,1.1s
XAN pmax pmax
comp=Z,240nm,7.6s
XAN LR LR
comp=N,270nm,22.7s
XAN LR LR
comp=E,79nm,20.4s
XAN LR LR
comp=Z,140nm,18.9s
KMI **Kunming** 79.15 302 P **P** 01 05 16.8 +1.8
KMI PcP **PcP** 01 05 25.1 +1.9
KMI pP **pP** 01 05 27.9 +0.8
KMI sP **sP** 01 05 31.5 -0.1
KMI PP **PP** 01 08 18.4 +3.4
KMI S **S** 01 15 13.3 +1.1
KMI SKS **SKSac** 01 15 23.4 -4.9
KMI sS **SKKSac** 01 15 30.8 +1.1
KMI ScS **ScS** 01 15 33.8 -1.2
KMI SS **SS** 01 20 20.9 +1.5
KMI pmax pmax
comp=Z,32nm,1.7s
KMI pmax pmax
comp=Z,550nm,3.4s
KMI LR LR
comp=N,320nm,22.3s
KMI LR LR
comp=E,380nm,22.3s
KMI LR LR
comp=Z,630nm,22.3s
CMAR **Chiang Mai Arr** 79.36 294 P **P** 01 05 17.7 +1.7
CMAR PKKPbc **PKKPbc** 01 24 06.9 +1.2
CMAR **Chiang Mai Arr** 79.36 294 P **P** 01 05 17.7 +1.7
comp=Z,9.5nm,0.7s,baz=131,slow=4.0,SNR=33
CMAR PKKPbc **PKKPbc** 01 24 06.9 +1.2
comp=Z,0.9nm,0.4s,baz=273,slow=3.6,SNR=5.3
CHTO **Chiang Mai** 79.51 294 *e*P **P** 01 05 16.4 -0.4
CHTO pmax pmax
comp=Z,192nm,2.3s
CHTO MLR MLR
comp=Z,502nm,20.0s
CHTO **Chiang Mai** 79.51 294 *e*P **P** 01 05 16.4 -0.4
comp=Z,192nm,2.3s
CHTO LR LR
comp=Z,502nm,20.0s
HHC **Hu-ho-hao-te** 81.09 319 *e*P **P** 01 05 25.6 +0.7
HHC pP **pP** 01 05 36.5 -0.5
HHC sP **sP** 01 05 40.0 -1.6
HHC S **S** 01 15 32.8 +1.1
HHC SKS **SKSac** 01 15 37.0 -3.9
HHC sS **ScS** 01 15 48.3 -1.5
HHC SS **SS** 01 20 48.8 +1.1
HHC pmax pmax
comp=Z,45nm,1.0s
HHC pmax pmax
comp=Z,1μm,8.5s
HHC LR LR
comp=N,960nm,16.2s
HHC LR LR
comp=E,980nm,18.6s
HHC LR LR
comp=Z,1μm,21.1s
CD2 **Chengdu** 81.12 307 P **P** 01 05 26.8 +1.6
CD2 pP **pP** 01 05 37.8 +0.4
CD2 sP **sP** 01 05 41.8 -0.1
CD2 PP **PP** 01 08 34.5 +3.5
CD2 S **S** 01 15 32.8 +0.5
CD2 SKS **SKSac** 01 15 38.5 -2.9
CD2 sS **ScS** 01 15 51.1 +0.7
CD2 SS **SS** 01 20 51.6 +3.2
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 pmax pmax
comp=Z,1μm,6.5s
CD2 LR LR
comp=N,620nm,18.6s
CD2 LR LR
comp=E,700nm,19.6s
CD2 LR LR
comp=Z,680nm,24.5s
BTO **Baotou** 81.91 318 *e*P **P** 01 05 30.8 +1.6
KDAK **Kodiak Island** 83.31 19 *e*P **P** 01 05 37.1 +1.2
comp=Z,39nm,1.1s
KDAK LR LR
comp=Z,2μm,20.0s
SEY **Seymchan** 83.60 352⇓ *e*P **P** 01 05 37.7 +0.3
LZH **Lanzhou** 83.61 312 P **P** 01 05 40.5 +2.2
LZH pP **pP** 01 05 50.3 -0.2
LZH sP **sP** 01 05 55.0 0.0
LZH S **SKSac** 01 16 00.0 +1.9
LZH sS **sS** 01 16 16.5 -1.7
LZH pmax pmax
comp=Z,26nm,1.0s
LZH pmax pmax
comp=Z,140nm,4.1s
LZH LR LR
comp=N,580nm,15.3s
LZH LR LR
comp=E,510nm,13.2s
LZH LR LR
comp=Z,610nm,16.8s
GAMB **Gambell** 84.51 8 *e*P **P** 01 05 42.1 +0.2
comp=Z,370nm,2.6s
SYO **Syowa Base** 84.61 196⇑ *i*P **P** 01 05 40.8 -1.8
CLNS **Chul'man** 85.16 337 *e*P **P** 01 05 47.2 +1.7
CLNS pmax pmax
comp=N,11nm,1.0s
CLNS pmax pmax
comp=E,4.0nm,1.0s
CLNS pmax pmax
comp=Z,24nm,1.0s
SAO **San Andreas Ge** 85.66 49 *e*P **P** 01 05 49.0 +0.6
SAO pmax pmax
comp=Z,39nm,1.5s
SAO **San Andreas Ge** 85.66 49 *e*P **P** 01 05 49.0 +0.6
comp=Z,39nm,1.5s
PKM **Peak Mountain** 85.96 51 ⇓P **P** 01 05 51.6 +1.5
baz=86
KHMM **Horse Mountain** 86.11 44 *e*P **P** 01 05 50.9 +0.1
CIT **Chita** 86.72 329 *e*P **P** 01 05 53.9 +0.6
TNA **Tin City** 86.73 9 *e*P **P** 01 05 54.4 +1.5
comp=Z,43nm,1.4s
WDC **Whiskeytown Da** 86.75 45 *e*P **P** 01 05 54.9 +1.2
WDC pmax pmax
comp=Z,58nm,1.7s
WDC **Whiskeytown Da** 86.75 45 *e*P **P** 01 05 54.9 +1.2
comp=Z,58nm,1.7s
ARVC **Arvin** 86.78 51 ⇑P **P** 01 05 55.8 +1.8
baz=87
OHCM **Honcut** 86.86 46 *e*P **P** 01 05 54.7 +0.5
VES **Vestal, Richgr** 86.92 50 ⇑P **P** 01 05 56.2 +1.6
baz=87
MWC **Mount Wilson** 86.95 52 *e*P **P** 01 05 56.6 +1.6
MWC **Mount Wilson** 86.95 52 *e*P **P** 01 05 56.6 +1.6
CMB **Columbia Colle** 87.00 48 *e*P **P** 01 05 55.5 +0.5
CMB **Columbia Colle** 87.00 48 *e*P **P** 01 05 55.5 +0.5
YBH **Yreka Blue Hor** 87.21 44 *e*P **P** 01 05 56.6 +0.6
comp=Z,25nm,1.4s
BFSC **Mount Baldy Ra** 87.25 52 ⇓P **P** 01 05 57.2 +0.7
baz=87
ISA **Isabella** 87.28 51 *e*P **P** 01 05 57.7 +1.2
ISA **Isabella** 87.28 51 *e*P **P** 01 05 57.7 +1.2
ISA **Isabella** 87.28 51 ⇑P **P** 01 05 57.7 +1.2
baz=88
EDW2 **Edwards Air Fo** 87.29 52 ⇑P **P** 01 05 57.4 +0.9
baz=88
BAR **Barrett** 87.32 54 *e*P **P** 01 05 58.1 +1.4
comp=Z,4.4nm,1.0s
PMR **Palmer** 87.43 18 *e*P **P** 01 05 55.8 -0.6
PMR pmax pmax
comp=Z,77nm,2.0s
PMR **Palmer** 87.43 18 *e*P **P** 01 05 55.8 -0.6
comp=Z,77nm,2.0s
HUMO **Hull Mountain** 87.48 43 *e*P **P** 01 05 58.2 +0.9
comp=Z,44nm,1.5s
YAK **Yakutsk** 87.60 342 *e*P **P** 01 05 56.7 -0.5
YAK *e*S **SKSac** 01 16 14.8 -6.8
YAK pmax pmax
comp=Z,23nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,1.3s
YAK smax smax
comp=E,209nm,13.4s
YAK smax smax
comp=N,128nm,10.6s
MONP **Monument Peak** 87.60 54 ⇓P **P** 01 05 58.7 +0.5
baz=88
BILL **Bilibino** 87.61 359*d* *i*P **P** 01 05 57.8 +0.6
BILL *i* 01 09 23.7
BILL *e*SS SS 01 22 31.7 +9.1
BILL MLR MLR
comp=Z,100nm,18.0s
BILL **Bilibino** 87.61 359 *e*P **P** 01 05 57.4 +0.2
comp=Z,70nm,0.9s
BILL LR LR
comp=Z,683nm,20.0s
ULN **Ulaanbaatar** 87.72 323 *e*P **P** 01 05 58.4 0.0
comp=Z,15nm,0.8s
ULN LR LR
comp=Z,372nm,21.0s
DVTC **Desert V Tower** 87.75 54 ⇑P **P** 01 05 59.5 +0.7
baz=88
LRMC **Laurel Mountai** 87.78 51 ⇓P **P** 01 05 60.0 +1.0
baz=88
BEKR **Beckworth** 87.88 46 *e*P **P** 01 06 00.7 +1.3
comp=Z,21nm,1.5s
PFO **Pinyon Flat Ob** 87.88 53 *e*P **P** 01 06 00.2 +0.7
comp=Z,472nm,3.2s
PFO LR LR
comp=Z,1μm,19.0s
PFO **Pinyon Flat Ob** 87.88 53 P **P** 01 06 00.8 +1.3
comp=Z,34nm,1.1s,SNR=5.6
MTUM **Tungsten Hills** 87.98 49 *e*P P 01 05 56.6 -3.3
GTA **Gaotai** 88.00 313 ⇓P **P** 01 06 01.3 +1.4
GTA pP **pP** 01 06 11.3 -0.9
GTA sP **sP** 01 06 15.3 -1.4
GTA SKS **SKSac** 01 16 25.5 +0.1
GTA S **S** 01 16 43.4 +2.6
GTA sS **sS** 01 16 58.9 -2.3
GTA SS **SS** 01 22 32.8 +2.9
GTA pmax pmax
comp=Z,19nm,2.1s
GTA pmax pmax
comp=Z,690nm,8.9s
GTA LR LR
comp=N,300nm,22.0s
GTA LR LR
comp=E,320nm,19.7s
GTA LR LR
comp=Z,350nm,22.6s
WCN **Washoe City** 88.03 47 *e*P **P** 01 06 00.3 +0.2
WCN pmax pmax
comp=Z,94nm,2.2s
WCN **Washoe City** 88.03 47 *e*P **P** 01 06 00.3 +0.2
comp=Z,94nm,2.2s
SONM **Songino Array** 88.07 323 P **P** 01 06 00.5 +0.4
SONM **Songino Array** 88.07 323 P **P** 01 06 00.5 +0.4
comp=Z,14nm,0.9s,baz=137,slow=4.2,SNR=62
SONM LR LR 01 42 01.5
comp=Z,284nm,20.3s,baz=90,slow=33
SWSC **Sam W. Stewart** 88.10 54 ⇑P **P** 01 06 01.0 +0.6
baz=88
MPMC **Manual Prospec** 88.18 51 ⇓P **P** 01 06 01.8 +0.8
baz=88
DAC **Darwin (Calif)** 88.20 50 PFAKE 01 06 10.0 +9.0
DAC LR LR
comp=Z,2μm,21.0s
SHL **Shillong** 88.22 298 *e*P P 01 06 04.5 +3.2
GSC **Goldstone** 88.35 52 *e*P **P** 01 06 01.9 +0.3
GSC pmax pmax
comp=Z,45nm,1.9s
GSC **Goldstone** 88.35 52 *e*P **P** 01 06 01.9 +0.3
comp=Z,45nm,1.9s
GSC **Goldstone** 88.35 52 ⇑P **P** 01 06 02.3 +0.7
baz=88
BELC **Belle Mtn. Jos** 88.39 53 ⇓P **P** 01 06 03.0 +1.1
baz=89
HEC **Hector,Ludlow** 88.50 52 ⇓P **P** 01 06 02.3 0.0
baz=89
TRF **Thorofare Moun** 88.58 17 *e*P **P** 01 06 00.2 -1.9
comp=Z,9.7nm,1.0s
NVAR **Mina Array Bea** 88.64 48 P **P** 01 06 03.9 +0.8
NVAR **Mina Array Bea** 88.64 48 P **P** 01 06 03.9 +0.8
comp=Z,3.5nm,0.8s,baz=224,slow=3.8,SNR=9.9
NVAR LR LR 01 36 57.2
comp=Z,2μm,21.9s,baz=95,slow=30
SNAA **Sanae** 88.65 182 *e*P **P** 01 06 01.9 -0.5
SNAA **Sanae** 88.65 182 *e*P **P** 01 06 00.9 -1.5
comp=Z,93nm,1.8s
BC3 **Big Chuckawall** 88.66 54 ⇓P **P** 01 06 03.8 +0.7
baz=89
NV11 **Mina Array Sit** 88.75 48 *e*P **P** 01 06 03.7 +0.2
FURC **Furnace Creek,** 88.81 51 ⇑P **P** 01 06 04.9 +1.3
baz=89
MOD **Modoc** 88.87 44 *e*P **P** 01 06 02.7 -1.3
comp=Z,115nm,1.8s
GLA **Glamis** 88.89 54 *e*P **P** 01 06 05.5 +1.3
GLA **Glamis** 88.89 54 *e*P **P** 01 06 05.5 +1.3
GLA **Glamis** 88.89 54 ⇑P **P** 01 06 05.2 +1.1
baz=89
GMRC **Granite Mounta** 88.98 52 ⇓P **P** 01 06 04.9 +0.2
baz=89
SHOC **Shoshone** 88.99 51 ⇑P **P** 01 06 04.8 +0.3
baz=89
TUQ **Turquoise Moun** 89.06 52 ⇑P **P** 01 06 05.6 +0.6
baz=89
IRM **Iron Mountain** 89.10 53 ⇓P **P** 01 06 06.0 +0.9
baz=89
MCK **McKinley** 89.17 17 *e*P **P** 01 06 04.6 -0.1
MCK pmax pmax
comp=Z,10.0nm,1.1s
MCK **McKinley** 89.17 17 *e*P **P** 01 06 04.6 -0.1
comp=Z,10nm,1.1s
VNA3 **Neumayer Olymp** 89.21 180 *e*P **P** 01 06 04.9 -0.1
TPH **Tonopah** 89.25 49 PFAKE 01 06 20.0 +14
TPH LR LR
comp=Z,2μm,22.0s
NLWA **Neilton Lookou** 89.33 38 PFAKE 01 06 20.0 +14
NLWA LR LR
comp=Z,1μm,20.0s
Y12C **Blythe** 89.41 54 ⇑P **P** 01 06 07.5 +1.0
baz=90
LDFC **Landfair** 89.51 52 *e*P **P** 01 06 08.9 +1.8

VNA2 Neumayer--Watz 89.51 181 *e*P **P** **01 06 06.7 +0.3**
113A Mohawk Valley, 89.59 55 ⇓P **P** **01 06 07.5 +0.2**
baz=90
VNA1 Neumayer--Stat 89.80 181 *e*P **P** **01 06 08.6 +0.9**
WRAK Wrangell Islan 90.00 28 PFAKE 01 06 20.0 +11
WRAK LR LR
comp=Z,2μm,20.0s
214A Organ Pipe Nat 90.00 56 ⇑P **P** **01 06 10.8 +1.4**
baz=90
PGC Sidney 90.20 37 *e*P **P** **01 06 09.8 0.0**
comp=Z,1.9nm,1.3s
WVOR Wild Horse Val 90.21 45 *e*P **P** **01 06 11.0 +0.8**
WVOR pmax pmax
comp=Z,24nm,1.3s
WVOR MLR MLR
comp=Z,1μm,22.0s
WVOR Wild Horse Val 90.21 45 *e*P **P** **01 06 11.0 +0.8**
comp=Z,24nm,1.3s
WVOR LR LR
comp=Z,1μm,22.0s
LON Longmire 90.23 40 *e*P **P** **01 06 10.8 +0.7**
LON *e* 01 09 42.2
LON pmax pmax
comp=Z,9.0nm,1.3s
LON Longmire 90.23 40 *e*P **P** **01 06 10.8 +0.7**
comp=Z,9.4nm,1.3s
LON *e*PP **PP** **01 09 42.2 -2.4**
BMN Battle Mountai 90.28 47 PFAKE 01 06 20.0 +9.4
BMN LR LR
comp=Z,1μm,22.0s
COLA College 90.36 17 *e*P **P** **01 06 08.6 -1.5**
COLA pmax pmax
comp=Z,14nm,0.9s
COLA MLR MLR
comp=Z,721nm,21.0s
COLA College 90.36 17 *e*P **P** **01 06 08.6 -1.5**
comp=Z,14nm,0.9s
COLA LR LR
comp=Z,721nm,21.0s
W13A Hualapai Mount 90.44 53 ⇑P **P** **01 06 12.5 +1.0**
baz=91
R11A Troy Canyon, C 90.53 49 ⇓P **P** **01 06 12.6 +0.7**
baz=91
ILAR Eielson Array 90.54 17 P **P** **01 06 09.8 -1.3**
ILAR PP **PP** **01 09 46.1 -0.5**
ILAR Eielson Array 90.54 17 P **P** **01 06 09.8 -1.3**
comp=Z,6.3nm,0.9s,baz=238,slow=5.1,SNR=38
ILAR PP **PP** **01 09 46.1 -0.5**
comp=Z,1.0nm,1.0s,baz=205,slow=7.7,SNR=4.7
ILAR LR LR 01 41 12.8
comp=Z,1μm,20.2s,baz=236,slow=32
ZAK Zakamensk 91.14 324 *e*P **P** **01 06 14.2 -0.1**
ZAK pmax pmax
comp=Z,10.0nm,1.3s
HAWA Hanford 91.44 41 PFAKE 01 06 30.0 +14
HAWA LR LR
comp=Z,1μm,20.0s
IRK Irkutsk 91.55 326 *e*P **P** **01 06 15.6 -0.5**
IRK pmax pmax
comp=Z,42nm,2.0s
COLD Coldfoot 91.63 14 *e*P **P** **01 06 15.3 -0.7**
comp=Z,8.8nm,1.0s
COLD *e*PP **PP** **01 09 54.7 -0.3**
CCUT Cedar City 91.81 51 *e*P **P** **01 06 18.8 +0.9**
comp=Z,15nm,0.3s
X16A Lo Mia Camp, P 92.02 54 ⇓P **P** **01 06 20.0 +1.1**
baz=92
BMO Blue Mountains 92.15 43 *e*P **P** **01 06 19.3 +0.2**
BMO pmax pmax
comp=Z,38nm,2.2s
BMO MLR MLR
comp=Z,2μm,22.0s
BMO Blue Mountains 92.15 43 *e*P **P** **01 06 19.3 +0.2**
comp=Z,38nm,2.2s
BMO LR LR
comp=Z,2μm,22.0s
U15A North Rim 92.15 52 ⇑P **P** **01 06 21.0 +1.4**
baz=92
DLBC Dease Lake 92.21 27 *e*P **P** **01 06 19.5 +0.5**
EGAK Eagle 92.21 19 *e*P **P** **01 06 18.8 0.0**
comp=Z,15nm,0.3s
EGAK PP **PP** **01 09 58.0 -1.7**
EGAK LR LR
comp=Z,707nm,21.0s
ODAN Odare 92.44 298 *e*P **P** **01 06 20.6 -0.5**
comp=Z,21nm,1.0s
WUAZ Wupatki 92.49 53 *e*P **P** **01 06 21.8 +0.8**
comp=Z,11nm,1.1s
WUAZ LR LR
comp=Z,1μm,22.0s
WUAZ Wupatki 92.49 53 ⇓P **P** **01 06 22.4 +1.4**
baz=93
MFID Camas Ranch 92.50 45 *e*P **P** **01 06 21.9 +1.2**
comp=Z,32nm,2.0s
MFID *e*PP PP 01 10 08.7 +6.0
MFID Camas Ranch 92.50 45 ⇑P **P** **01 06 22.0 +1.2**
baz=93
MVU Marysvale 93.02 50 PFAKE 01 06 40.0 +17
MVU LR LR
comp=Z,2μm,20.0s
MOY Mondy 93.03 324 *e*P **P** **01 06 23.1 0.0**
MOY pmax pmax
comp=Z,43nm,2.6s
MSU Marysvale 93.05 50 *e*P **P** **01 06 23.9 +0.3**
MSU pmax pmax
comp=Z,38nm,2.2s
MSU Marysvale 93.05 50 *e*P **P** **01 06 23.9 +0.3**
comp=Z,38nm,2.2s
RAMN Ramite 93.14 297 *e*P **P** **01 06 24.2 -0.1**
DUG Dugway 93.25 48 PFAKE 01 06 40.0 +16
DUG LR LR
comp=Z,2μm,20.0s
HLID Hailey 93.49 45 PFAKE 01 06 40.0 +15
HLID LR LR
comp=Z,2μm,20.0s
HLID Hailey 93.49 45 ⇓P **P** **01 06 26.0 +0.5**
baz=94
G12A Big Creek, Yel 93.54 43 ⇑P **P** **01 06 26.3 +0.7**
baz=94
H12A Diamond D Ranc 93.61 44 ⇑P **P** **01 06 26.2 +0.2**
baz=94
NEW Newport 93.75 40 PFAKE 01 06 40.0 +14
NEW LR LR
comp=Z,918nm,19.0s
F12A Elk City 93.84 43 ⇑P **P** **01 06 26.2 -0.8**
baz=94
GUN Gumba 94.07 298 *e*P **P** **01 06 28.0 -0.7**
C11A Tepee Creek (N 94.09 40 ⇓P **P** **01 06 28.4 +0.4**
baz=94
Y20A Horse Springs, 94.19 56 ⇑P **P** **01 06 28.9 -0.1**
baz=94
G13A Cobalt 94.23 44 ⇓P **P** **01 06 28.8 0.0**
baz=94
PKI Pulchoki 94.35 298 *e*P **P** **01 06 29.7 -0.3**
PKIN Phulchoki 94.36 298 *e*P **P** **01 06 30.0 +0.1**
SRU San Rafael 94.47 50 *e*P **P** **01 06 30.7 +0.6**
SRU pmax pmax
comp=Z,3.0nm,0.8s
SRU San Rafael 94.47 50 *e*P **P** **01 06 30.7 +0.6**
comp=Z,3.3nm,0.8s
KKN Kakani 94.53 298 *e*P **P** **01 06 31.2 +0.6**
DGAR Diego Garcia 94.54 261 PFAKE 01 06 40.0 +9.3
DGAR LR LR
comp=Z,3μm,21.0s
H14A Leadore 94.61 44 ⇑P **P** **01 06 31.2 +0.6**
baz=95
DMN Daman 94.61 298 *e*P **P** **01 06 31.3 +0.2**
HWUT Hardware Ranch 94.66 47 PFAKE 01 06 40.0 +9.1
HWUT LR LR
comp=Z,1μm,19.0s
L16A Fish Haven 94.91 47 ⇑P **P** **01 06 32.2 +0.2**
baz=95
MSO Missoula 95.11 42 PFAKE 01 06 40.0 +7.3
MSO LR LR
comp=Z,807nm,20.0s
MVCO Mesa Verde 95.27 52 PFAKE 01 06 50.0 +16
MVCO LR LR
comp=Z,1μm,21.0s
AHID Auburn Hatcher 95.42 47 PFAKE 01 06 50.0 +16
AHID LR LR
comp=Z,895nm,21.0s
U21A Nageezi 95.63 53 ⇓P **P** **01 06 36.4 +0.9**
baz=96
F15A Butte 95.65 43 ⇓P **P** **01 06 35.5 +0.2**
baz=96
425A Indio Mountain 95.81 60 ⇓P **P** **01 06 38.0 +1.6**
baz=96
KOLN Koldanda 95.92 297 *e*P **P** **01 06 36.8 -0.2**
DANN Dangsing 95.98 298 *e*P **P** **01 06 37.8 +0.4**
comp=Z,12nm,0.8s
ANMO Albuquerque 96.04 55 PFAKE 01 06 50.0 +13
ANMO LR LR
comp=Z,1μm,20.0s
626A Big Bend Ranch 96.10 61 ⇑P **P** **01 06 39.5 +1.9**
baz=96
BOZ Bozeman (W) 96.14 44 PFAKE
BOZ LR LR
comp=Z,2μm,22.0s
BOZ Bozeman (W) 96.14 44 ⇑P **P** **01 06 37.9 +0.4**
baz=96
TXAR Lajitas Array 96.42 61 P **P** **01 06 40.2 +1.1**
TXAR PKKP **PKKPbc** **01 23 23.7 -0.7**
TXAR Lajitas Array 96.42 61 P **P** **01 06 40.2 +1.1**
comp=Z,1.4nm,0.8s,baz=218,slow=5.7,SNR=17
TXAR PKKP **PKKPbc** **01 23 23.7 -0.7**
comp=Z,0.3nm,0.8s,baz=90,slow=5.0,SNR=4.2
TXAR LR LR 01 43 02.0
comp=Z,2μm,19.1s,baz=80,slow=31
BW06 Boulder Array 96.48 47 PFAKE 01 06 50.0 +11
BW06 LR LR
comp=Z,655nm,21.0s
PDAR Pinedale Array 96.48 47 pP pP 01 06 49.5 -2.0
PDAR Pinedale Array 96.48 47 pP **pP** **01 06 49.5 -2.0**
comp=Z,0.9nm,0.8s,baz=224,slow=2.5,SNR=5.9
PDAR LR LR 01 43 09.6
comp=Z,534nm,20.7s,baz=264,slow=31
PYUN Piuthan 96.54 297 *e*P **P** **01 06 40.4 +0.6**
comp=Z,23nm,1.0s
LKWY Lake 96.55 45 PFAKE 01 06 50.0 +10
LKWY LR LR
comp=Z,2μm,22.0s
INK Inuvik 96.84 18 PKiKP **PKiKP** **01 11 15.6 -0.6**
INK Inuvik 96.84 18 PKiKP **PKiKP** **01 11 15.6 -0.6**
comp=Z,1.5nm,0.8s,baz=217,slow=1.1,SNR=3.5
Z26A Caprock 97.43 57 ⇓P Pdif 01 06 45.0 +1.3
baz=98
RLMT Red Lodge 97.50 45 PFAKE 01 06 50.0 +6.2
RLMT LR LR
comp=Z,2μm,22.0s
M21A Separation Pea 97.61 49 ⇑P Pdif 01 06 45.2 +0.8
baz=98
PLCA Paso Flores 97.67 138 P **P** **01 06 43.9 -0.7**
PLCA Paso Flores 97.67 138 P **P** **01 06 43.9 -0.7**
comp=Z,4.2nm,1.1s,baz=225,slow=4.5,SNR=4.8
PLCA LR LR 01 44 34.2
comp=Z,166nm,19.4s,baz=224,slow=32
WMQ Urumqi 98.08 314 P Pdif 01 06 47.0 +0.7
WMQ pP pP 01 06 58.0 -0.5
WMQ sP sP 01 07 02.0 -1.0
WMQ SKS **SKSac** **01 17 20.0 -0.9**
WMQ S **S** **01 18 08.0 -2.4**
WMQ sS sS 01 18 26.0 -5.1
WMQ pmax pmax
comp=Z,21nm,1.2s
WMQ pmax pmax
comp=Z,68nm,8.0s
WMQ LR LR
comp=N,280nm,20.0s
WMQ LR LR
comp=E,400nm,20.0s
WMQ LR LR
comp=Z,470nm,20.0s
EGMT Eagleton 98.19 42 PFAKE 01 07 00.0 +13
EGMT LR LR
comp=Z,874nm,22.0s
ISCO Idaho Springs 98.27 51 PFAKE 01 07 00.0 +12
ISCO LR LR
comp=Z,1μm,21.0s
PAYG Puerto Ayora 98.94 94 PFAKE 01 07 00.0 +9.3
PAYG LR LR
comp=Z,1μm,19.0s
AMTX Amarillo 99.74 56 PFAKE 01 07 10.0 +16
AMTX LR LR
comp=Z,805nm,19.0s
JCT Junction City 99.96 61 PFAKE 01 07 10.0 +15
JCT LR LR
comp=Z,2μm,20.0s
YKA Yellowknife Ar 100.83 27 P **Pdif** **01 06 59.5 +1.6**
YKA PKKPbc **PKKPbc** **01 23 09.3 -3.8**
YKA Yellowknife Ar 100.83 27 P **Pdif** **01 06 59.5 +1.6**
comp=Z,0.4nm,0.6s,baz=253,slow=4.7,SNR=12
YKA PKKPbc **PKKPbc** **01 23 09.3 -3.8**
comp=Z,0.1nm,0.6s,baz=55,slow=2.9,SNR=3.3
OGNE Ogallala 101.22 51 PFAKE 01 07 10.0 +10
OGNE LR LR
comp=Z,1μm,22.0s
DGMT Dagmar 101.86 43 PFAKE 01 07 10.0 +7.1
DGMT LR LR
comp=Z,896nm,20.0s
WMOK Wichita Mounta 101.99 57 PFAKE 01 07 20.0 +16
WMOK LR LR
comp=Z,896nm,20.0s
MK31 Makanchi Array 102.61 315 P **Pdif** **01 07 07.8 +1.5**
MK31 pmax pmax
comp=Z,1.0nm,0.5s
MK31 Makanchi Array 102.61 315 *e*P **Pdif** **01 07 07.8 +1.5**
MKAR Makanchi Array 102.61 315 P **Pdif** **01 07 06.5 +0.2**
MKAR *i* 01 11 27.9
MKAR Makanchi Array 102.61 315 P **Pdif** **01 07 06.5 +0.2**
MKAR PP **PP** **01 11 19.8 -0.4**
MKAR PKiKP **PKiKP** **01 11 27.9 +0.7**
MKAR PKKPbc **PKKPbc** **01 23 05.0 -2.4**
MKAR Makanchi Array 102.61 315 P **Pdif** **01 07 06.5 +0.2**
comp=Z,1.7nm,0.8s,baz=109,slow=4.6,SNR=19
MKAR PP **PP** **01 11 19.8 -0.4**
comp=Z,1.1nm,1.0s,baz=114,slow=5.7,SNR=5.3
MKAR PKiKP **PKiKP** **01 11 27.9 +0.7**
comp=Z,2.4nm,0.9s,baz=65,slow=2.1,SNR=8.6
MKAR PKKPbc **PKKPbc** **01 23 05.0 -2.4**
comp=Z,1.3nm,0.7s,baz=295,slow=3.1,SNR=6.8
ZALV Zalesovo Beam 102.97 323 P **Pdif** **01 07 06.9 -0.7**
ZALV *i* 01 11 27.0
ZALV Zalesovo Beam 102.97 323 P **Pdif** **01 07 06.9 -0.7**
ZALV PKiKP **PKiKP** **01 11 27.0 -0.5**
ZALV Zalesovo Beam 102.97 323 P **Pdif** **01 07 06.9 -0.7**
comp=Z,0.8nm,0.7s,baz=119,slow=5.2,SNR=5.0
ZALV PKiKP **PKiKP** **01 11 27.0 -0.5**
comp=Z,1.1nm,0.6s,baz=115,slow=2.5,SNR=5.2
RER Riviere de l'E 103.89 241 PFAKE 01 07 20.0 +7.3
RER LR LR
comp=Z,3μm,22.0s
TRQA Tornquist 104.57 140 PFAKE 01 07 30.0 +15
TRQA LR LR
comp=Z,423nm,22.0s
KSU1 Kansas State U 104.77 53 PFAKE 01 07 30.0 +14
KSU1 LR LR
comp=Z,952nm,20.0s
FFC Flin Flon 104.80 37 PFAKE 01 07 30.0 +14
FFC LR LR
comp=Z,1μm,22.0s
ECSD EROS Data Cent 105.81 49 PFAKE 01 11 40.0
ECSD LR LR
comp=Z,2μm,22.0s
KURK Kurchatov 105.90 319 P **Pdif** **01 07 21.8 +1.1**
KURK 01 11 44.5
KURK MLR MLR
comp=Z,618nm,22.0s
KURK Kurchatov 105.90 319 Pdif **Pdif** **01 07 21.8 +1.1**
KURK PKiKP **PKiKP** **01 11 32.1 -0.9**
KURK PP **PP** **01 11 44.5 +0.1**
KURK PKKPbc **PKKPbc** **01 22 56.0 -1.5**
KURK PKKPab **PKKPab** **01 23 12.0 +0.7**
KURK LR LR
comp=Z,618nm,22.0s
KURBB Kurchatov Arra 105.93 319 Pdiff **Pdif** **01 07 21.8 +0.9**
comp=Z,0.2nm,0.3s,baz=114,slow=3.4,SNR=5.6
KURBB PKiKP **PKiKP** **01 11 32.2 -0.9**
comp=Z,1.2nm,0.8s,baz=105,slow=1.8,SNR=11
KURBB PP **PP** **01 11 44.5 -0.2**
comp=Z,1.3nm,0.9s,baz=102,slow=4.4,SNR=6.4
KURBB PKKPbc **PKKPbc** **01 22 56.0 -1.4**
comp=Z,2.1nm,0.8s,baz=276,slow=3.7,SNR=9.7
KURBB PKKPab **PKKPab** **01 23 12.0 +0.9**
comp=Z,1.2nm,0.8s,baz=277,slow=4.9,SNR=5.3
MIAR Mount Ida 106.10 59 PFAKE 01 11 50.0
MIAR LR LR
comp=Z,935nm,21.0s
NIL Nilore 106.11 300 PFAKE 01 11 50.0
NIL LR LR
comp=Z,36nm,21.0s
TKM2 Tokmak 2 106.33 310 PFAKE 01 11 50.0
TKM2 LR LR
comp=Z,309nm,21.0s
TGUH Tegucigalpa,Un 106.43 81 PFAKE 01 11 50.0
TGUH LR LR
comp=Z,1μm,20.0s
NNA Nana 107.05 110 PFAKE 01 11 50.0
NNA LR LR
comp=Z,442nm,19.0s
AAK Ala-Archa 107.06 310 PKKPbc PKKPbc 01 22 53.6 -0.2
AAK LR LR
comp=Z,424nm,21.0s
AAK Ala-Archa 107.06 310 PKKPbc PKKPbc 01 22 53.6 -0.2
comp=Z,1.5nm,0.7s,baz=189,slow=8.4,SNR=5.1
TEIG Tepich 107.20 74 PFAKE 01 11 50.0
TEIG LR LR
comp=Z,2μm,22.0s
AGMN Agassiz Nation 107.22 44 PFAKE 01 11 50.0
AGMN LR LR
comp=Z,2μm,20.0s
JTS JuntasAbangare 107.50 85 PFAKE 01 11 50.0
JTS LR LR
comp=Z,839nm,20.0s
EKS2 Erkin-Say 107.59 310 PFAKE 01 11 50.0
EKS2 LR LR
comp=Z,246nm,20.0s
SCIA State Center 107.89 51 PFAKE 01 11 50.0
SCIA LR LR
comp=Z,2μm,19.0s
VBMS Vicksburg 108.08 62 PFAKE 01 11 50.0
VBMS LR LR
comp=Z,1μm,19.0s
OXF Oxford 109.45 59 PFAKE 01 11 50.0
OXF LR LR
comp=Z,1μm,20.0s
EYMN Ely 110.06 45 PFAKE 01 11 50.0
EYMN LR LR
comp=Z,2μm,22.0s
OTAV Otavalo 110.34 97 PFAKE 01 12 00.0
OTAV LR LR
comp=Z,621nm,20.0s
HDIL Hopedale 110.58 53 PFAKE 01 11 50.0
HDIL LR LR
comp=Z,1μm,20.0s
PLAL Pickwick Lake 110.62 59 PFAKE 01 11 50.0
PLAL LR LR
comp=Z,1μm,21.0s
BRAL Brewton 110.73 63 PFAKE 01 11 50.0
BRAL LR LR
comp=Z,1μm,20.0s
LRAL Lakeview Retre 111.15 61 PFAKE 01 12 00.0
LRAL LR LR
comp=Z,1μm,22.0s
BVAR Borovoye Array 111.28 320 PKiKP **PKiKP** **01 11 42.9 -0.2**
BVAR Borovoye Array 111.28 320 PKiKP **PKiKP** **01 11 42.9 -0.2**
BVAR Borovoye Array 111.28 320 PKiKP **PKiKP** **01 11 42.9 -0.2**
comp=Z,2.7nm,0.7s,baz=114,slow=1.7,SNR=16
BRVK Borovoye 111.34 320 ⇑ *i*PKiKP **PKiKP** **01 11 42.9 -0.3**
BRVK pmax pmax
comp=Z,4.0nm,1.0s
BRVK Borovoye 111.34 320 *e*PKiKP **PKiKP** **01 11 42.4 -0.8**
BRVK LR LR
comp=Z,491nm,21.0s
ABPO Ambohimpanom 111.90 239 PFAKE 01 12 00.0
ABPO LR LR
comp=Z,2μm,20.0s
BCIP Isla Barro Col 111.97 88 PFAKE 01 12 00.0
BCIP LR LR
comp=Z,291nm,20.0s
LPAZ La Paz 112.58 118 PKiKP **PKiKP** **01 11 47.8 +0.4**
LPAZ La Paz 112.58 118 PKiKP **PKiKP** **01 11 47.8 +0.4**
comp=Z,1.3nm,0.7s,baz=209,slow=3.0,SNR=5.8
GLMI Grayling 114.48 49 PFAKE 01 12 00.0 +11
GLMI LR LR
comp=Z,1μm,19.0s
AAM Ann Arbor 114.99 52 PFAKE 01 12 00.0 +10
AAM LR LR
comp=Z,1μm,19.0s
CPUP Villa Florida 115.13 133 PKP **PKPdf** **01 11 50.7 -0.6**
CPUP Villa Florida 115.13 133 PKP **PKPdf** **01 11 50.7 -0.6**
comp=Z,2.1nm,0.9s,baz=271,slow=6.2,SNR=4.8
ACSO Alum Creek Sta 115.33 54 PFAKE 01 12 00.0 +8.8
ACSO LR LR
comp=Z,1μm,20.0s
MTDJ Mount Denham 116.55 79 PFAKE 01 12 10.0 +16
MTDJ LR LR
comp=Z,679nm,20.0s
NHSC New Hope 116.82 62 PFAKE 01 12 10.0 +16
NHSC LR LR
comp=Z,1μm,21.0s
SVE Sverdlovsk 116.91 324 *e*PKiKP **PKPdf** **01 11 52.9 -0.8**
BLA Blacksburg 117.06 58 PFAKE 01 12 10.0 +15
BLA LR LR
comp=Z,1μm,22.0s
ERPA Erie 117.70 52 PFAKE 01 12 10.0 +14
ERPA LR LR
comp=Z,1μm,19.0s
ABKAR Akbulak array 117.75 316 *e*PKPdf **PKPdf** **01 11 54.8 -0.8**
ARU Arti 118.08 324 *i* PKiKP **PKPdf** **01 11 55.6 -0.4**
ARU 01 13 13.0
ARU 01 18 46.9
ARU SP SP 01 22 52.5 +0.6
ARU SS **SS** **01 29 18.2 -5.0**
SIV San Ignacio 118.51 122 PKP **PKPdf** **01 11 57.5 -0.6**
SIV San Ignacio 118.51 122 PKP **PKPdf** **01 11 57.5 -0.6**
comp=Z,1.9nm,0.7s,baz=264,slow=4.5,SNR=8.9
SOKR Solikamsk 118.58 328 *i* PKiKP **PKPdf** **01 11 57.2 +0.4**
SOKR pmax pmax
comp=Z,20nm,1.3s
SOKR MLR MLR
comp=Z,260nm,14.0s
CNNC Cliffs of the 118.93 60 PFAKE 01 12 10.0 +12
CNNC LR LR
comp=Z,2μm,21.0s
GTBY Guantanamo Bay 119.16 78 PFAKE 01 12 10.0 +11
GTBY LR LR
comp=Z,1μm,20.0s
CBN Corbin 119.53 57 PFAKE 01 12 10.0 +11
CBN LR LR
comp=Z,933nm,20.0s
KBS Kingsbay 119.93 355 PFAKE 01 12 10.0 +11
KBS LR LR
comp=Z,435nm,19.0s
SUR Sutherland 120.32 210 PFAKE 01 12 10.0 +8.6
SUR LR LR
comp=Z,1μm,19.0s
SAML Samuel 120.39 114 *e*PKPdf **PKPdf** **01 12 00.5 -1.3**
SAML LR LR
comp=Z,674nm,22.0s
SDV Santo Domingo 120.55 91 PFAKE 01 12 10.0 +7.7
SDV LR LR
comp=Z,1.0nm,20.0s
BINY Binghamton 120.68 52 PFAKE 01 12 10.0 +8.5
BINY LR LR
comp=Z,950nm,20.0s
LONY Lake Ozonia 121.63 49 PFAKE 01 12 20.0 +17
LONY LR LR
comp=Z,1μm,19.0s
NCB Newcomb 121.92 50 PFAKE 01 12 20.0 +16
NCB LR LR
comp=Z,2μm,20.0s
SDDR Presa de Saban 122.49 80 PFAKE 01 12 20.0 +14
SDDR LR LR
comp=Z,1μm,20.0s
DAG Danmarks Havn 122.81 2 *i* P **PKPdf** **01 12 03.3 -1.2**
comp=Z,5.5nm,0.8s
DAG
comp=Z,680nm,24.0s
GRTK Grand Turk 123.12 77 PFAKE 01 12 20.0 +13
GRTK LR LR
comp=Z,1μm,20.0s
SPB Sao Paulo 123.53 138 PFAKE 01 12 20.0 +12
SPB LR LR
comp=Z,395nm,20.0s
LBNH Lisbon 123.55 50 PFAKE 01 12 20.0 +13
LBNH LR LR
comp=Z,2μm,20.0s
LBTB Lobatse 123.58 219 PKP **PKPdf** **01 12 07.5 -0.2**
LBTB Lobatse 123.58 219 PKP **PKPdf** **01 12 07.5 -0.2**
comp=Z,3.4nm,0.8s,baz=170,slow=6.1,SNR=3.0
SUMG Summit 124.77 10 *e*PKiKP **PKPdf** **01 12 09.0 +0.1**
SUMG Summit 124.77 10 *e*PKPdf **PKPdf** **01 12 09.0 +0.1**
SUMG Summit 124.77 10 *i* P **PKPdf** **01 12 08.8 -0.1**
comp=Z,6.6nm,1.0s
SCHQ Schefferville 124.94 36 *e*PKPdf **PKPdf** **01 12 08.4 -0.8**
SCHQ PKP **PKPdf** **01 12 08.6 -0.6**

SCHQ Schefferville 124.94 36 PKP **PKPdf 01 12 08.6 -0.6**
comp=Z,6.4nm,0.9s,baz=302,slow=3.5,SNR=7.1
APA Apatity 124.97 341 *e*PKIKP **PKPdf 01 12 09.0 +0.1**
APA *e* 01 19 08.0
APA MLR MLR
comp=Z,1μm,20.0s
KEV Kevo 125.25 345 PFAKE 01 12 20.0 +11
KEV LR LR
comp=Z,574nm,20.0s
ARCES ARCESS Array B 125.77 345 PKP **PKPdf 01 12 08.9 -1.5**
ARCES ARCESS Array B 125.77 345 PKP **PKPdf 01 12 09.0 -1.5**
comp=Z,7.0nm,0.7s,baz=66,slow=2.3,SNR=11
SFJD Kangerlussuaq 126.19 18 PFAKE 01 12 20.0 +8.8
SFJD LR LR
comp=Z,2μm,21.0s
SFJD Kangerlussuaq 126.19 18 *i* P **PKPdf 01 12 08.8 -2.4**
comp=Z,7.3nm,0.8s
MAK Makhachkala 126.84 309 PKIKP **PKPdf 01 12 11.6 -1.6**
MAK *e* 01 14 12.6
MAK *e*PPP PPP 01 17 01.6
MAK *e* 01 19 22.5
MAK *e*SS SS 01 31 21.1 +5.8
MAK pmax pmax
comp=Z,104nm,1.5s
MAK MLR MLR
comp=Z,381nm,24.0s
SJG San Juan 127.10 82 *e*PKPdf **PKPdf 01 12 13.6 -0.8**
SJG PKP **PKPdf 01 12 14.2 -0.2**
SJG LR LR
comp=Z,542nm,21.0s
SJG San Juan 127.10 82 PKP **PKPdf 01 12 14.2 -0.2**
comp=Z,32nm,0.8s,baz=9,slow=5.0,SNR=11
JOF Joensuu 128.52 337 *e*PKIKP **PKPdf 01 12 15.0 -0.8**
JOF Joensuu 128.52 337 *e*pkp **PKPdf 01 12 15.0 -0.8**
DGRG David-gareji 128.60 308 P **PKPdf 01 12 14.9 -1.8**
DGRG S **SKiKP 01 15 49.0 -1.3**
BDFB Brasilia 128.67 131 PKP **PKPdf 01 12 18.1 +0.4**
BDFB Brasilia 128.67 131 PKP **PKPdf 01 12 18.1 +0.4**
comp=Z,7.6nm,0.7s,baz=216,slow=4.0,SNR=16
LSZ Lusaka 128.75 230 PKP **PKPdf 01 12 17.1 -0.8**
LSZ LR LR
comp=Z,2μm,20.0s
LSZ Lusaka 128.75 230 PKP **PKPdf 01 12 17.1 -0.8**
comp=Z,1.5nm,0.7s,baz=85,slow=11,SNR=4.2
SCO Soresbysund 128.80 5 *i* P **PKPdf 01 12 13.1 -3.0**
comp=Z,4.2nm,0.9s
VRHR Novokhopersk 129.02 320 *e*PKIKP **PKPdf 01 12 17.0 -0.1**
VRHR pmax pmax
comp=Z,20nm,0.8s
VRHR pmax pmax
comp=N,2.0nm,0.4s
VRHR pmax pmax
comp=E,20nm,1.3s
TBLG Delisi 129.04 308 P **PKPdf 01 12 17.8 +0.3**
TBLG S SKPbc 01 15 39.1 +3.4
KMBO Kilima Mbogo 129.21 251 PKP **PKPdf 01 12 20.1 +1.1**
KMBO LR LR
comp=Z,998nm,20.0s
KMBO Kilima Mbogo 129.21 251 PKP **PKPdf 01 12 20.1 +1.1**
comp=Z,2.0nm,0.9s,baz=64,slow=6.1,SNR=5.8
GNI Garni 129.24 306 *e*PKPdf **PKPdf 01 12 18.1 -0.1**
GNI PKP **PKPdf 01 12 19.2 +1.1**
GNI *e*PP **PP 01 14 26.6 -0.6**
GNI LR LR
comp=Z,417nm,22.0s
GNI Garni 129.24 306 PKP **PKPdf 01 12 19.2 +1.1**
comp=Z,5.3nm,0.9s,baz=313,slow=2.9,SNR=6.9
ZEI Tsey 129.49 310 *i* PKIKP **PKPdf 01 12 19.2 +0.6**
ZEI pmax pmax
comp=Z,7.0nm,1.0s
MOS Moscow 129.51 327 *e*PKIKP **PKPdf 01 12 17.0 -0.9**
MOS *e* 01 14 36.4
MOS *e* 01 17 11.9
MOS pmax pmax
comp=Z,27nm,0.8s
BBSR BB Station 129.80 64 PFAKE 01 12 30.0 +11
BBSR LR LR
comp=Z,692nm,21.0s
ONI Oni 129.85 309 P **PKPdf 01 12 19.5 +0.5**
ONI S SKPbc 01 15 39.2 +0.7
GRGR Grenville 129.94 91 PFAKE 01 12 30.0 +10
GRGR LR LR
comp=Z,521nm,20.0s
AKH Akhalkalaki 130.01 308 P **PKPdf 01 12 20.5 +0.9**
AKH S SKPbc 01 15 46.0 +6.8
BHD Baghdad 130.01 297 *ex* **PKPdf 01 12 17.0 -2.5**
BHD *i* x x 01 15 44.5
BHD *ex* x 01 18 50.0
BHD *i* x x 01 19 11.0
KBZ Khabaz 130.04 311 PKIKP **PKPdf 01 12 20.1 +0.9**
KBZ Khabaz 130.04 311 PKP **PKPdf 01 12 20.1 +0.9**
KBZ Khabaz 130.04 311 PKP **PKPdf 01 12 20.1 +0.9**
comp=Z,2.2nm,0.8s,baz=117,slow=5.3,SNR=7.0
KIV Kislovodsk 130.15 311 *c i*PKIKP **PKPdf 01 12 20.3 +0.7**
KIV *e* 01 14 39.8
KIV *e*SS SS 01 32 19.8 +23
KIV pmax pmax
comp=Z,8.0nm,0.8s
HAKT HAKKARI 130.31 303 *i* P **PKPdf 01 12 16.7 -3.7**
OBN Obninsk 130.33 327 *c i*PKIKP **PKPdf 01 12 19.9 +0.5**
OBN *i* 01 14 41.5
OBN pmax pmax
comp=Z,42nm,1.6s
VSR Storozhevoye 130.44 321 *e*PKIKP **PKPdf 01 12 19.5 -0.3**
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=E,8.0nm,1.1s
VORD Divnogorie 130.45 321 *e*PKIKP **PKPdf 01 12 19.5 -0.3**
VORD pmax pmax
comp=Z,10.0nm,1.6s
VORD pmax pmax
comp=N,3.0nm,0.5s
VORD pmax pmax
comp=E,4.0nm,0.6s
TUTA Tutak 130.80 305 *i* P **PKPdf 01 12 23.1 +1.8**
KAF Kangasniemi 130.82 338 *e*PKIKP **PKPdf 01 12 19.3 -0.9**
KAF Kangasniemi 130.82 338 *e*pkp **PKPdf 01 12 19.3 -0.9**
FDF Fort de France 131.06 87 PFAKE 01 12 30.0 +7.9
FDF LR LR
comp=Z,555nm,20.0s
ANWB Willy Bob 131.09 83 PFAKE 01 12 30.0 +8.0
ANWB LR LR
comp=Z,753nm,21.0s
ARTV Artvin 131.21 308 *i* P **PKPdf 01 12 23.1 +1.2**
DAGI Agillar 131.24 308 *i* P **PKPdf 01 12 23.1 +1.2**
FINES FINESS Array B 131.35 338 PKP **PKPdf 01 12 20.6 -0.6**
FINES FINESS Array B 131.35 338 PKP **PKPdf 01 12 20.6 -0.6**
comp=Z,5.6nm,0.8s,baz=57,slow=5.1,SNR=8.5
DDEM Demirkent 131.39 307 *i* P **PKPdf 01 12 19.9 -2.3**
HOMI Horasan 131.41 306 *i* P **PKPdf 01 12 19.9 -2.5**
DBAD Bademkaya 131.41 308 *i* P **PKPdf 01 12 18.8 -3.4**
ERZM Erzurum 131.84 306 *i* P **PKPdf 01 12 24.1 +0.9**
SOC Sochi 132.33 311 *e*PKIKP **PKPdf 01 12 22.3 -1.3**
SOC *i* 01 14 46.4
SOC *e* 01 19 27.7
SOC *e*SS SS 01 32 18.5 -4.3
SOC pmax pmax
comp=Z,6.0nm,0.6s
KOPT Kop Dagi 132.48 307 *e*P **PKPdf 01 12 25.2 +0.8**
TSUM Tsumeb 132.74 217 PFAKE 01 12 40.0 +15
TSUM LR LR
comp=Z,1μm,21.0s
ANN Anapa 133.60 314 *i* PKIKP **PKPdf 01 12 26.2 +0.2**
ANN *e* 01 14 53.2
ANN *e* 01 19 33.4
ANN *e*SP SP 01 25 12.7 +4.1
ANN pmax pmax
comp=Z,116nm,7.4s
ANN MLR MLR
comp=Z,406nm,24.0s
KEMA Kemaliye 134.13 306 *e*P PKPdf 01 12 18.8 -8.5
SUSE Susehri 134.17 307 *i* P **PKPdf 01 12 25.2 -2.3**
MALT Malatya 134.35 305 ⇑PKIKP **PKPdf 01 12 29.8 +2.0**
MALT Malatya 134.35 305 *e*PKPdf **PKPdf 01 12 27.5 -0.3**
MALT LR LR
comp=Z,805nm,20.0s
MALT Malatya 134.35 305⇑ *i* P **PKPdf 01 12 29.8 +2.0**
ERBA Erbaa 135.15 308 *i* P **PKPdf 01 12 27.3 -1.8**
GZT Gaziantep 135.19 303 *e*P **PKPdf 01 12 26.3 -3.2**
MBAR Mbarara 135.21 248 PFAKE 01 12 40.0 +10
MBAR LR LR
comp=Z,528nm,21.0s
TOKA Tokat 135.44 308 *i* P **PKPdf 01 12 27.3 -2.3**
KUZU Kuzuini 135.67 303 *i* P **PKPdf 01 12 26.3 -3.9**
AYKD Aykdinkavak 135.77 304 *i* P **PKPdf 01 12 28.4 -2.0**
HAVZ Havza 135.82 309 *i* P PKPdf 01 12 24.1 -6.2
PINB Pinarbasi 135.85 306 *i* P **PKPdf 01 12 28.4 -2.4**
ANDN Andirin 136.10 304 *i* P **PKPdf 01 12 28.4 -2.7**
NB2 NORSAR Subarra 136.15 345 PKPdf **PKPdf 01 12 30.1 -0.2**
comp=Z,3.0nm,0.8s,baz=39,slow=1.9
NOA NORSAR Array B 136.15 345 PKP **PKPdf 01 12 30.2 -0.1**
NOA NORSAR Array B 136.15 345 PKP **PKPdf 01 12 30.2 -0.1**
comp=Z,3.6nm,0.8s,baz=36,slow=2.1,SNR=19
AKASG Malin Array Be 136.34 324 PKIKP **PKPdf 01 12 30.3 -0.6**
AKASG Malin Array Be 136.34 324 PKP **PKPdf 01 12 30.3 -0.6**
AKASG Malin Array Be 136.34 324 PKP **PKPdf 01 12 30.3 -0.6**
comp=Z,5.5nm,0.7s,baz=50,slow=2.4,SNR=14
AK01 Malin Array Si 136.35 324 *e*PKPdf **PKPdf 01 12 30.2 -0.7**
KIEV Kiev 136.35 324 *e*PKIKP **PKPdf 01 12 29.2 -1.7**
KIEV MLR MLR
comp=Z,364nm,21.0s
KIEV Kiev 136.35 324 *e*PKPdf **PKPdf 01 12 29.2 -1.7**
KIEV LR LR
comp=Z,364nm,21.0s
COBT Iskenderun 136.36 302 *i* P **PKPdf 01 12 30.5 -1.1**
AK02 Malin Array Si 136.37 324 *e*PKPdf **PKPdf 01 12 30.4 -0.6**
YAYL Yayladag 136.56 302 *i* P **PKPdf 01 12 29.5 -2.5**
CTKT Corum 136.61 309 *i* P PKPdf 01 12 26.3 -5.7
AVNT Avonos 137.01 306 *i* P **PKPdf 01 12 32.3 -0.5**
CDAG Cicekdag 137.17 307 *i* P **PKPdf 01 12 30.5 -2.5**
GULE Gulek 137.38 304 *i* P **PKPdf 01 12 31.6 -1.9**
SUW Suwalki 137.45 331 *e*PKIKP **PKPdf 01 12 32.6 -0.3**
SUW Suwalki 137.45 331 *e*PKPdf **PKPdf 01 12 32.6 -0.3**
SUW Suwalki 137.45 331 *e*PKP **PKPdf 01 12 34.1 +1.2**
ELDT Eldivan 137.65 309 *e*P **PKPdf 01 12 30.5 -3.4**
BR131 Keskin Array S 137.69 308 *e*PKPdf **PKPdf 01 12 32.5 -1.5**
BRTR Keskin Array B 137.69 308 PKP **PKPdf 01 12 32.8 -1.2**
BRTR Keskin Array B 137.69 308 PKP **PKPdf 01 12 32.8 -1.2**
comp=Z,3.2nm,0.9s,baz=143,slow=3.5,SNR=10
KONO Kongsberg 137.76 345 PFAKE 01 12 50.0 +17
KONO LR LR
comp=Z,473nm,20.0s
BBAL Bala 138.13 308 *i* P **PKPdf 01 12 33.7 -1.0**
EIL Elat 138.20 293 PKP **PKPdf 01 12 35.2 +0.2**
EIL Elat 138.20 293 PKP **PKPdf 01 12 35.2 +0.2**
comp=Z,4.4nm,0.8s,baz=320,slow=5.0,SNR=6.5
ANTO Ankara 138.28 308 ⇓PKIKP **PKPdf 01 12 38.0 +3.0**
ANTO Ankara 138.28 308 *e*PKPdf **PKPdf 01 12 34.4 -0.6**
ANTO LR LR
comp=Z,607nm,22.0s
ANTO Ankara 138.28 308⇓ *i* P **PKPdf 01 12 38.0 +3.0**
KIS Kishinev 138.36 320 *e*PKIKP **PKPdf 01 12 34.0 -0.8**
KIS *e* 01 12 46.0
KIS *e* 01 15 28.0
KIS Kishinev 138.36 320 *e*PKP **PKPdf 01 12 34.0 -0.8**
KIS Kishinev 138.36 320 *e*PP PP 01 15 28.0 +3.4
KIS *e*SKP 01 16 06.0
KIS *e*L L 01 58 12.0
KIS *e*LR LR 02 02 18.0
comp=Z,400nm,20.0s
LEOM Leova 138.95 319 ⇓PKIKP **PKPdf 01 12 37.3 +1.5**
LEOM Leova 138.95 319⇓ *i* P **PKPdf 01 12 37.3 +1.5**
CSS Prodhromos 138.97 301 *e*PKPdf **PKPdf 01 12 35.9 -0.5**
CSS LR LR
comp=Z,984nm,22.0s
ERMK Ermenek 138.98 303 *i* P **PKPdf 01 12 38.0 +1.5**
TLCR 139.17 317 ⇓PKIKP **PKPdf 01 12 39.4 +3.1**
TLCR 139.17 317⇓ *i* P **PKPdf 01 12 39.4 +3.1**
CFR Carcaliu 139.60 318 ⇑PKIKP **PKPdf 01 12 39.5 +2.4**
CFR Carcaliu 139.60 318⇑ *i* P **PKPdf 01 12 39.5 +2.4**
LVV L'vov 139.62 326 *i* PKIKP **PKPdf 01 12 36.3 -0.7**
LVV *e* 01 12 47.1
LVV *e* 01 15 34.7
TESR 139.91 320⇑ *i* P **PKPdf 01 12 38.9 +1.3**
BOLV Bolvadin 139.98 307 *i* P PKPdf 01 12 30.5 -7.7
VRI Vrincioaia 140.17 319 ⇑PKIKP **PKPdf 01 12 40.9 +2.7**
VRI Vrincioaia 140.17 319⇑ *i* P **PKPdf 01 12 40.9 +2.7**
BUR08 Bucovina Ar. S 140.18 322 *e*PKPdf **PKPdf 01 12 38.8 +0.6**
BURAR Bucovina Array 140.19 322⇓ *i* P **PKPdf 01 12 34.0 -4.2**
KWP Kalwaria Pacla 140.42 327 ⇑PKHKP PKPpre 01 12 32.8
KWP Kalwaria Pacla 140.42 327 *e*PKPdf **PKPdf 01 12 38.6 +0.1**
KWP LR LR
comp=Z,515nm,21.0s
KWP Kalwaria Pacla 140.42 327⇑ *i* P PKPdf 01 12 32.8 -5.7
KWP Kalwaria Pacla 140.42 327 *e*PKP **PKPdf 01 12 38.9 +0.4**
ISP Isparta 140.55 306 PFAKE 01 12 50.0 +11
ISP LR LR
comp=Z,603nm,22.0s
MLR Muntele Rosu 140.83 319⇓ *i* P **PKPdf 01 12 34.8 -4.7**
KOLS Kolonicke sedl 141.07 326 *e*PKIKP **PKPdf 01 12 35.6 -4.1**
KOLS Kolonicke sedl 141.07 326 *e*PKP **PKPdf 01 12 35.6 -4.1**
UZH Uzhgorod 141.24 325 *e*PKHKP PKPpre 01 12 34.9
UZH *e* 01 12 39.3
UZH *e* 01 12 48.5
UZH *e* 01 12 52.5
TRPA Tarpa 141.40 325⇑ *i* P **PKPdf 01 12 36.3 -3.9**
OJC Ojcow 141.51 329 *e*PKIKP **PKPdf 01 12 40.4 0.0**
OJC Ojcow 141.51 329 *e*PKPdf **PKPdf 01 12 40.4 0.0**
OJC *e*PKiKP **PKiKP 01 12 43.6 +0.4**
CRVS Cervenica-Dubn 141.51 326 *e*PKHKP PKPpre 01 12 34.9
CRVS Cervenica-Dubn 141.51 326 *e*PKP PKPpre 01 12 34.9
AKAS Kas 141.67 304 *i* P **PKPdf 01 12 39.7 -1.6**
ARR Arges 141.69 320⇑ *i* P **PKPdf 01 12 37.0 -4.0**
DNZL Cakiroluk 141.71 306 *i* P PKPdf 01 12 34.8 -6.6
HUMR Humele 141.89 318⇓ *i* P **PKPdf 01 12 37.1 -4.2**
DRGR 142.07 323 ⇓PKIKP **PKPdf 01 12 38.1 -3.5**
DRGR 142.07 323⇓ *i* P **PKPdf 01 12 38.1 -3.5**
BALY Balya 142.11 310 *i* P PKPdf 01 12 32.7 -9.2
MME1 Meikle Cairn 142.16 354 *e*P **PKPdf 01 12 43.4 +2.0**
MME1 Meikle Cairn 142.16 354 P **PKPdf 01 12 43.4 +2.0**
LOT Lotru 142.18 320⇑ *i* P **PKPdf 01 12 38.5 -3.4**
AKHS Akhisar 142.26 309 *i* P PKPdf 01 12 33.7 -8.4
TURN Turunc 142.28 305 *i* P **PKPdf 01 12 39.1 -3.1**
OKC Ostrava-Krasne 142.55 330 *e*PKIKP **PKPdf 01 12 39.3 -3.0**
OKC Ostrava-Krasne 142.55 330 *e*PKP **PKPdf 01 12 39.3 -3.0**
OKC AMS AMS 02 11 50.0
comp=Z,500nm,28.2s
AYDN Tasoluk 142.60 307 *i* P PKPdf 01 12 35.9 -7.0
KSP Ksiaz 142.69 332 *e*PKIKP **PKPdf 01 12 38.9 -3.6**
KSP Ksiaz 142.69 332 *e*PKP **PKPdf 01 12 38.9 -3.6**
MORC Moravsky Berou 142.88 330 ⇓PKIKP **PKPdf 01 12 39.8 -3.1**
MORC Moravsky Berou 142.88 330 *e*PKPdf **PKPdf 01 12 39.9 -3.1**
MORC Moravsky Berou 142.88 330⇓ *i* P **PKPdf 01 12 39.8 -3.1**
PSZ Piszkesteto 142.94 326 *e*PKIKP **PKPdf 01 12 39.6 -3.5**
PSZ MLR MLR
comp=Z,517nm,22.0s
PSZ Piszkesteto 142.94 326 *e*PKPdf **PKPdf 01 12 39.6 -3.5**
PSZ LR LR
comp=Z,517nm,22.0s
PSZ Piszkesteto 142.94 326⇓ *e*PKPdf **PKPdf 01 12 40.6 -2.5**
KRLC Kraliky 143.02 331 *e*PKIKP PKPbc 01 12 39.6 -0.4
KRLC Kraliky 143.02 331 *e*PKP PKPbc 01 12 39.6 -0.4
DPC Dobruska-Polom 143.03 332 *e*PKIKP PKPbc 01 12 40.2 +0.1
DPC Dobruska-Polom 143.03 332 *e*PKP PKPbc 01 12 40.2 +0.1
DPC AMS AMS 02 09 10.0
comp=Z,600nm,28.2s
UPC Upice 143.06 332 *e*PKIKP PKPbc 01 12 39.8 -0.3
UPC Upice 143.06 332 *e*PKP PKPbc 01 12 39.8 -0.3
GCAM G?zelcaml? 143.07 307 *i* P PKPab 01 12 39.1 +0.1
VYHS Vyhne 143.12 328 *e*PKIKP PKPbc 01 12 40.2 -0.1
VYHS Vyhne 143.12 328 *e*PKP PKPbc 01 12 40.2 -0.1
VYHS *e*PP PP 01 15 43.1 -10
BOZC Bozcaada 143.20 311 *i* P PKPab 01 12 36.9 -2.5
URLA Izmir 143.34 308 *i* P PKPab 01 12 38.0 -2.1
BZS Buzias 143.36 322⇑ *i* P PKPbc 01 12 41.0 0.0
BZS Buzias 143.36 322⇑ *i* P PKPbc 01 12 41.0 0.0
NIS1 Nisyros Isl. 143.45 305 P PKPab 01 12 40.5 -0.1
PKSN Nyarlorinc 143.59 325⇓ *e*PKPdf **PKPdf 01 12 44.1 -0.1**
VRAC Vranov 143.65 330⇓ *i* P PKPbc 01 12 42.8 +1.0
BRG Berggiesshubel 143.66 334 *e*PKP PKPbc 01 12 42.0 +0.3
comp=Z,21nm,0.8s
BRG *e* 01 12 49.0
comp=Z,21nm,0.8s
BRG *e* 01 12 49.0
comp=Z,24nm,1.1s
BRG Berggiesshubel 143.66 334 *e*PKIKP PKPbc 01 12 42.0 +0.3
BRG *e* 01 12 49.0
BRG pmax pmax
comp=Z,5.0nm,0.8s
BRG pmax pmax
comp=Z,21nm,0.9s
BRG Berggiesshubel 143.66 334 *e*PKPbc PKPab 01 12 41.1 +0.2
PVCC Panska Ves 143.66 333 *e*PKIKP PKPbc 01 12 41.7 0.0
PVCC MLR MLR
comp=Z,500nm,17.5s
PVCC Panska Ves 143.66 333 *e*PKP PKPbc 01 12 41.7 0.0
PVCC AMS AMS 02 14 40.0
comp=Z,500nm,17.5s
BUD Budapest 143.67 326⇓ *e*PKPdf PKPbc 01 12 42.3 +0.5
CLL Collm 143.70 335 *i* PKIKP PKPab 01 12 41.3 +0.3
CLL *i* 01 12 45.8
CLL *e* 01 15 57.0
CLL pmax pmax
comp=Z,17nm,1.3s
CLL MLR MLR
comp=Z,500nm,20.6s
CLL Collm 143.70 335 *e*PKPbc PKPab 01 12 41.3 +0.3
CLL Collm 143.70 335 *i* PKPdf PKPab 01 12 41.3 +0.3
comp=Z,17nm,1.3s
CLL *i* PKPdf(2) 01 12 43.4
comp=Z,30nm,1.5s
CLL *i* PKiKP **PKPdf 01 12 45.8 +1.6**
CLL *i* PKiKP(2) 01 12 48.0
comp=Z,23nm,1.0s
CLL *e* 01 13 13.0
CLL *e* 01 13 49.0
CLL *e* 01 14 25.0
CLL *e*PP **PP 01 15 57.0 +0.4**
CLL *e*SPP 01 16 10.0
CLL *e*(SKKP) 01 24 24.0
CLL *e*PSKS 01 26 14.0
CLL *e*(PPPrev) 01 27 59.0
CLL *e*PPS PPS 01 28 26.0
CLL *e*PSPS 01 36 12.0
CLL *e*SSS SSS 01 40 12.0
CLL *e* 01 46 00.0
CLL Lm MLR 02 19 00.0
comp=Z,500nm,20.6s
CHOS Chios island 143.72 309 P PKPab 01 12 41.9 +0.2
NRDL Niedersach Rie 143.79 339 *e*PKPbc PKPbc 01 12 42.0 +0.1
SMOL Smolenice 143.80 329 *e*PKIKP **PKPdf 01 12 44.4 -0.1**
SMOL Smolenice 143.80 329 *e*PKP **PKPdf 01 12 44.4 -0.1**
KAVA Kavala 143.81 313 P PKPab 01 12 41.4 -0.4
FBE Freiberg 143.86 335 *e*PKPbc PKPbc 01 12 42.6 +0.3
PKS7 Kunszentmiklos 143.87 326⇑ *e*PKPdf **PKPdf 01 12 43.6 -1.1**
PKS6 Bocsa 143.93 325⇑ *e*PKPdf **PKPdf 01 12 44.0 -0.8**
VTS Vitosha 143.96 317 ⇓PKIKP PKPbc 01 12 43.4 +0.3
VTS Vitosha 143.96 317⇓ *i* P PKPbc 01 12 43.4 +0.3
RCBR Riachuelo 144.00 132 *e*PKPdf PKPab 01 12 42.9 -0.4
RCBR PKP PKPbc 01 12 43.4 -0.5
RCBR LR LR
comp=Z,783nm,19.0s
RCBR Riachuelo 144.00 132 PKP PKPbc 01 12 43.4 -0.5
comp=Z,18nm,0.7s,baz=202,slow=5.1,SNR=32
PKSG 144.06 327⇑ *e*PKPdf PKPbc 01 12 43.8 +0.8
PRA Prague 144.06 333 PKP PKPbc 01 12 43.0 +0.1
PRA *ex* x 01 13 08.0
PRU Pruhonice 144.08 333 *e*PKIKP PKPbc 01 12 42.9 -0.1
PRU MLR MLR
comp=Z,500nm,25.0s
PRU Pruhonice 144.08 333 *e*PKP PKPbc 01 12 42.9 -0.1
PRU AMS AMS 02 15 10.0
comp=Z,500nm,25.0s
NVR Nevrokopi 144.10 314 P **PKPab 01 12 43.0 +0.1**
ESK Eskdalemuir 144.15 353 PFAKE 01 13 00.0 +15
ESK LR LR
comp=Z,697nm,20.0s
TREC Trest 144.17 331 *e*PKIKP PKPbc 01 12 43.3 0.0
TREC MLR MLR
comp=Z,700nm,27.9s
TREC Trest 144.17 331 *e*PKP PKPbc 01 12 43.3 0.0
TREC AMS AMS 02 09 50.0
comp=Z,700nm,27.9s
PKS2 Kecel 144.19 325⇑ *e*PKPdf **PKPdf 01 12 45.1 -0.1**
CLZ Clausthal 144.24 338 *e*PKIKP PKPbc 01 12 43.6 +0.1
CLZ Clausthal 144.24 338 *e*PKPbc PKPbc 01 12 43.6 +0.1
NEUB Neuenburg 144.25 336 *e*PKPbc PKPbc 01 12 43.6 +0.1
PKST T"s 144.33 327⇑ *e*PKPdf PKPbc 01 12 44.4 +0.5
SRS Serrai 144.38 314 P **PKPab 01 12 43.9 -0.1**
OUR Ouranopolis 144.46 313 P PKPbc 01 12 44.4 -0.1
APE Apeiranthos 144.56 307 P **PKPab 01 12 43.2 -1.6**
APE Apeiranthos 144.56 307 ⇑PKIKP **PKPab 01 12 44.2 -0.6**
APE Apeiranthos 144.56 307⇑ *i* P **PKPab 01 12 44.2 -0.6**
TANN Tannenbergstha 144.61 335 *e*PKPbc PKPbc 01 12 45.2 +0.4
ZKR Zakros 144.62 303 P PKPbc 01 12 45.2 0.0
PKS9 Tamasi 144.63 326⇑ *e*PKPbc PKPbc 01 12 45.4 +0.5
WERD Werda 144.65 335 *e*PKPbc PKPbc 01 12 45.3 +0.5
SOH Sokhos 144.68 314 P **PKPab 01 12 44.8 -0.3**
PLN Plauen 144.68 335 *e*PKPbc **PKPdf 01 12 45.5 -0.5**
IBBN Ibbenburen 144.70 341 *e*PKPbc PKPbc 01 12 45.2 +0.3
GUNZ Gunzen 144.71 335 *e*PKPbc **PKPdf 01 12 45.7 -0.4**
GAL1 Galloway 144.75 355 *e*P **PKPab 01 12 44.4 -0.4**
GAL1 AMB AMB 01 12 46.8
comp=Z,44nm,1.2s
GAL1 Galloway 144.75 355 P **PKPab 01 12 44.4 -0.4**
GAL1 AMB AMB 01 12 46.8
comp=Z,44nm,1.2s
WERN Wernitzgruen 144.75 335 *e*PKPbc **PKPdf 01 12 45.8 -0.4**
MOX Moxa 144.76 336 *e*PKIKP PKPbc 01 12 45.5 +0.3
MOX Moxa 144.76 336 *e*PKPbc PKPbc 01 12 45.5 +0.3
NKC Novy Kostel 144.76 335 *e*PKIKP PKPbc 01 12 45.4 +0.2
NKC MLR MLR
comp=Z,400nm,24.8s
NKC Novy Kostel 144.76 335 *e*PKP PKPbc 01 12 45.4 +0.2
NKC AMS AMS 02 16 10.0
comp=Z,400nm,24.8s
SOP Sopron 144.79 328⇓ *e*PKPbc **PKPdf 01 12 46.2 -0.1**
PLG Polygyros 144.81 313 P **PKPab 01 12 45.1 -0.5**
KNT Kendrikon 144.83 315 P **PKPab 01 12 45.0 -0.6**
PAIG Paliouri 144.84 312 P **PKPab 01 12 45.1 -0.6**
KESW Keswick, Cumbr 144.86 353 *e*P **PKPab 01 12 44.9 -0.3**
KESW AMB AMB 01 12 45.8
comp=Z,74nm,3.2s
KESW Keswick, Cumbr 144.86 353 P **PKPab 01 12 44.9 -0.3**
KESW AMB AMB 01 12 45.8
comp=Z,74nm,3.2s
HORT Hortiatis 144.95 314 P PKPbc 01 12 45.0 -1.2
CONA Conrad Observa 144.96 329 *i* PKPdf **PKPdf 01 12 46.7 0.0**
SNR=30
CONA Conrad Observa 144.96 329 *i* PKPbc **PKPdf 01 12 46.7 0.0**
SNR=30
CONA Conrad Observa 144.96 329⇑ *i* P **PKPdf 01 12 46.4 -0.3**
VAY Valandovo 144.98 315 P **PKPbc 01 12 45.0 -1.1**
VAY Valandovo 144.98 315 *e*PKP **PKPbc 01 12 45.9 -0.2**
AOS Alonnisos 145.01 311 P **PKPbc 01 12 45.2 -1.1**
THE Thessaloniki 145.03 314 P **PKPbc 01 12 44.9 -1.4**
NPS Neapolis 145.05 304 P **PKPdf 01 12 46.9 -0.3**
MRMA Marmari 145.07 309 P **PKPbc 01 12 45.9 -0.7**
MANZ Manzenberg 145.09 335 *e*PKPbc **PKPdf 01 12 46.8 0.0**
KHC Kasperske Hory 145.14 333 *e*PKIKP **PKPdf 01 12 46.8 -0.1**
KHC *e* 01 12 53.8
KHC MLR MLR
comp=Z,600nm,27.5s
KHC Kasperske Hory 145.14 333 *e*PKPdf **PKPdf 01 12 46.9 0.0**
KHC Kasperske Hory 145.14 333 *e*PKP **PKPdf 01 12 46.8 -0.1**
KHC *ep*PKP **PKiKP 01 12 53.8 +3.0**
KHC *ex* x 01 13 10.0
KHC AMS AMS 02 15 10.0
comp=Z,600nm,27.5s
DIVS Divibare 145.17 321 P **PKPbc 01 12 46.8 0.0**
LAST Lasithi 145.19 304 P **PKPdf 01 12 47.5 0.0**
UBBA Unterbreizbach 145.22 338 *e*PKPbc **PKPdf 01 12 46.7 -0.1**
ROTZ Rotzenmuhle 145.22 335 *e*PKPbc **PKPdf 01 12 47.5 +0.5**
GRG Griva 145.26 315 P **PKPbc 01 12 46.0 -1.1**
WTSB Winterswijk 145.29 342 *e*P **PKPbc 01 12 46.4 -0.3**
comp=Z,324nm,2.1s
GEC2 GERESS Array S 145.30 332 *e*PKIKP **PKPab 01 12 47.2 0.0**
GEC2 GERESS Array S 145.30 332 *e*PKPbc **PKPab 01 12 47.2 0.0**
GERES GERESS Array B 145.30 332 PKPbc **PKPbc 01 12 46.9 -0.1**
GERES GERESS Array B 145.30 332 PKPbc **PKPbc 01 12 46.9 -0.1**
comp=Z,18nm,0.9s,baz=32,slow=3.8,SNR=117
SKIA Skiathos 145.30 311 P **PKPbc 01 12 46.5 -0.8**
MRKA Markates 145.40 310 P **PKPdf 01 12 46.4 -1.2**
SKO Skopje 145.40 317 *e*PKP **PKPbc 01 12 47.5 0.0**
XOR Xorichti 145.41 312 P **PKPdf 01 12 46.2 -1.5**
WET Wettzell 145.43 333 *e*PKIKP **PKPab 01 12 48.0 +0.4**
WET Wettzell 145.43 333 *e*PKPbc **PKPab 01 12 48.0 +0.4**
PTL Penteli 145.46 309 P **PKPdf 01 12 46.5 -1.3**
BEHE Becsehely 145.50 327⇓ *e*PKPbc **PKPab 01 12 48.3 +0.4**
ATHU Athens Univers 145.54 309 P **PKPdf 01 12 47.4 -0.5**
LIT Litokhoron 145.59 313 P **PKPdf 01 12 45.9 -2.0**
ATH Athens Observa 145.59 309 P **PKPdf 01 12 46.4 -1.5**
ARSA Arzberg 145.60 329 *i* PKPab **PKPab 01 12 48.9 +0.6**
SNR=16
ARSA Arzberg 145.60 329 *i* PKPbc **PKPab 01 12 48.9 +0.6**

	SNR=16							
ARSA	**Arzberg**	**145.60 329**	⇑	*i*P	**PKPdf**	**01 12 47.8**	**0.0**
SMIA	**Simia**	**145.60 311**		P	**PKPdf**	**01 12 47.4**	**-0.6**
BUG	**Bochum--Univer**	**145.61 341**		*e*PKPbc	**PKPbc**	**01 12 47.8**	**0.0**
IDI	**Anoyia**	**145.61 304**		P	**PKPdf**	**01 12 47.7**	**-0.5**
IDI	**Anoyia**	**145.61 304**		*e*PKPpre	PKPpre	01 12 39.8	
IDI				*e*PKPdf	**PKPbc**	**01 12 48.3**	**-0.2**
GRF	**Grafenberg Arr**	**145.68 335**		*e*PKP2	**PKPab**	**01 12 48.7**	**+0.2**
GRF	**Grafenberg Ar**	**145.68 335**		*e*PKPbc	**PKPab**	**01 12 48.7**	**+0.2**
LHO	**Holmfirth**	**145.72 351**		*e*P	**PKPdf**	**01 12 47.6**	**-0.1**
LHO	**Holmfirth**	**145.72 351**		P	**PKPdf**	**01 12 47.6**	**-0.1**
SIVA	**Sivas**	**145.75 304**		P	**PKPab**	**01 12 49.4**	**+0.2**
MOA	**Molln**	**145.78 330**		*i* PKPab	**PKPab**	**01 12 48.9**	**0.0**
	SNR=28							
MOA	**Molln**	**145.78 330**		*i* PKPbc	**PKPab**	**01 12 48.9**	**0.0**
	SNR=28							
MOA	**Molln**	**145.78 330**	⇓	*i*P	**PKPdf**	**01 12 47.2**	**-0.8**
KOGS	**Kog**	**145.78 327**		*e*PKPdf	**PKPdf**	**01 12 47.9**	**-0.1**
ATAL	**Atalanti**	**145.81 311**		P	**PKPdf**	**01 12 47.2**	**-1.1**
LKR	**Lokris**	**145.84 311**		P	**PKPdf**	**01 12 47.0**	**-1.4**
BIA	**Bitola**	**145.95 315**		P	**PKPdf**	**01 12 47.5**	**-1.1**
BIA	**Bitola**	**145.95 315**		*e*PKP	**PKPbc**	**01 12 49.2**	**-0.1**
FNA	**Florina**	**146.03 315**		P	**PKPdf**	**01 12 47.8**	**-0.9**
AXAR	**Agios Charalam**	**146.04 311**		P	**PKPdf**	**01 12 49.1**	**+0.4**
BCI	**Bajram Curri**	**146.07 318**		*e*P	**PKPbc**	**01 12 49.1**	**-0.5**
AEU	**East Anglia Un**	**146.08 348**		*e*P	**PKPdf**	**01 12 46.8**	**-1.5**
AEU	**East Anglia Un**	**146.08 348**		P	**PKPdf**	**01 12 46.8**	**-1.5**
VAM	**Vamos**	**146.11 305**		P	**PKPab**	**01 12 50.3**	**-0.3**
LTK	**Loutraki**	**146.12 310**		P	**PKPdf**	**01 12 47.0**	**-1.9**
DID	**Didima**	**146.12 309**		P	**PKPdf**	**01 12 48.6**	**-0.3**
DIDY	**Didyma**	**146.15 308**		P	**PKPdf**	**01 12 48.8**	**-0.3**
WME	**Myndd Eilian**	**146.16 354**		*e*P	**PKPbc**	**01 12 49.1**	**-0.3**
WME	**Myndd Eilian**	**146.16 354**		P	**PKPbc**	**01 12 49.1**	**-0.3**
AGG	**Agios Georgios**	**146.17 312**		P	**PKPdf**	**01 12 47.5**	**-1.5**
PHP	**Peshkopia**	**146.19 317**		P	**PKPbc**	**01 12 49.8**	**-0.2**
PERS	**Pernice**	**146.23 328**		*e*PKPdf	**PKPdf**	**01 12 48.5**	**-0.3**
SOKA	**Soboth**	**146.24 328**	⇓	*i* PKPdf	**PKPdf**	**01 12 48.6**	**-0.3**
	comp=Z,46nm,1.7s							
SOKA	**Soboth**	**146.24 328**	⇓	*i*P	**PKPdf**	**01 12 48.6**	**-0.3**
WPM1	**Penmaenmawr**	**146.25 353**		*e*P	**PKPdf**	**01 12 48.4**	**-0.2**
WPM1	**Penmaenmawr**	**146.25 353**		P	**PKPdf**	**01 12 48.4**	**-0.2**
TNS	**Taunus Mts**	**146.26 339**		*e*PKP2	**PKPbc**	**01 12 50.5**	**-0.2**
TNS	**Taunus Mts**	**146.26 339**		*e*PKPbc	**PKPab**	**01 12 50.5**	**-0.2**
WLF1	**Llynfaes**	**146.28 354**		*e*P	**PKPdf**	**01 12 48.4**	**-0.2**
WLF1				AMB	AMB	01 12 52.5	
	comp=Z,87nm,1.6s							
WLF1	**Llynfaes**	**146.28 354**		P	**PKPdf**	**01 12 48.4**	**-0.2**
WLF1				AMB	AMB	01 12 52.5	
	comp=Z,87nm,1.6s							
DSF	**Desfina**	**146.28 310**		P	**PKPdf**	**01 12 49.5**	**+0.3**
MAKR	**Makrakomi, Fth**	**146.31 312**		P	**PKPdf**	**01 12 48.7**	**-0.5**
YRC	**Rhoscolyn**	**146.33 354**		*e*P	**PKPdf**	**01 12 48.0**	**-0.7**
YRC	**Rhoscolyn**	**146.33 354**		P	**PKPdf**	**01 12 48.0**	**-0.7**
KARN	**Karanos**	**146.33 305**		P	**PKPbc**	**01 12 50.7**	**+0.1**
PUK	**Puka**	**146.35 318**		*e*P	**PKPdf**	**01 12 48.0**	**-1.2**
PUK				*e*P	**PKPbc**	**01 12 49.7**	**-0.8**
SISC	**Sisak**	**146.37 326**		P	**PKPbc**	**01 12 50.7**	**+0.4**
GVD	**Gavdhos**	**146.37 304**		*e*PKPdf	**PKPdf**	**01 12 49.8**	**+0.4**
YLL	**Llanberis**	**146.40 354**		*e*P	**PKPdf**	**01 12 49.3**	**+0.5**
YLL	**Llanberis**	**146.40 354**		P	**PKPdf**	**01 12 49.3**	**+0.5**
NEST	**Nestorio**	**146.42 315**		P	**PKPdf**	**01 12 48.2**	**-1.2**
RJOB	**Jochberg**	**146.53 332**		*e*PKPbc	**PKPbc**	**01 12 50.8**	**0.0**
FOEL	**Foel Wylfa**	**146.54 352**		*e*P	**PKPdf**	**01 12 48.3**	**-0.9**
FOEL				AMB	AMB	01 12 52.6	
	comp=Z,131nm,2.3s							
FOEL	**Foel Wylfa**	**146.54 352**		P	**PKPdf**	**01 12 48.3**	**-0.9**
FOEL				AMB	AMB	01 12 52.6	
	comp=Z,131nm,2.3s							
KALE	**Kalithea**	**146.57 311**		P	**PKPbc**	**01 12 51.0**	**-0.2**
YRE	**Yr Eifl**	**146.58 354**		*e*P	**PKPdf**	**01 12 48.7**	**-0.4**
YRE	**Yr Eifl**	**146.58 354**		P	**PKPdf**	**01 12 48.7**	**-0.4**
GUR	**Goura**	**146.61 310**		P	**PKPdf**	**01 12 48.0**	**-1.8**
HGN	**Heimansgroeve**	**146.61 342**		*e*PKP	**PKPdf**	**01 12 49.3**	**0.0**
	comp=Z,495nm,2.7s							
VLI	**Velíai**	**146.63 307**		P	**PKPdf**	**01 12 49.8**	**0.0**
BEBN	**Eben Emael**	**146.65 342**		PKPbc	**PKPab**	**01 12 52.0**	**-0.1**
TOD	**Tromm**	**146.66 338**		PKP2	**PKPbc**	**01 12 50.9**	**-0.2**
TOD	**Tromm**	**146.66 338**		PKP	**PKPbc**	**01 12 50.9**	**-0.2**
EFP	**Efpalio**	**146.72 311**		P	**PKPbc**	**01 12 51.0**	**-0.6**
MEM	**Membach**	**146.72 341**		PKPbc	**PKPbc**	**01 12 50.5**	**-0.7**
MEM				PKPab	**PKiKP**	**01 12 53.1**	**-0.8**
TIR	**Tirane**	**146.74 317**		*e*P	**PKPbc**	**01 12 51.5**	**0.0**
TIR	**Tirane**	**146.74 317**		*e*PKP2	**PKPdf**	**01 12 50.3**	**+0.5**
TIR				MLR	MLR			
	comp=Z,523nm,21.0s							
TIR	**Tirane**	**146.74 317**		*e*PKPdf	**PKPdf**	**01 12 50.3**	**+0.5**
TIR				LR	LR			
	comp=Z,523nm,21.0s							
KBA	**Koelnbreinsper**	**146.76 330**	⇑	*i*PKIKP	**PKPdf**	**01 12 49.5**	**-0.4**
KBA	**Koelnbreinsper**	**146.76 330**		*i* PKPbc	**PKPbc**	**01 12 50.9**	**-0.8**
	SNR=10							
KBA	**Koelnbreinsper**	**146.76 330**		*i* PKPdf	**PKPbc**	**01 12 50.9**	**-0.8**
	SNR=10							
KBA	**Koelnbreinsper**	**146.76 330**	⇑	*i*P	**PKPdf**	**01 12 49.5**	**-0.4**
VLX	**Vlachokerasia**	**146.80 309**		P	**PKPbc**	**01 12 52.1**	**+0.1**
FUR	**Furstenfeldbru**	**146.86 334**		*e*PKP2	**PKPbc**	**01 12 52.3**	**+0.6**
FUR	**Furstenfeldbru**	**146.86 334**		*e*PKPbc	**PKPbc**	**01 12 52.3**	**+0.6**
HLM1	**Long Mynd**	**146.86 352**		*e*P	**PKPdf**	**01 12 49.6**	**0.0**
HLM1				AMB	AMB	01 12 53.6		
	comp=Z,74nm,2.8s							
HLM1	**Long Mynd**	**146.86 352**		P	**PKPdf**	**01 12 49.6**	**0.0**
HLM1				AMB	AMB	01 12 53.6		
	comp=Z,74nm,2.8s							
ABH	**Alteburg**	**146.86 339**		PKP	**PKPbc**	**01 12 51.6**	**-0.1**
JAN	**Janina**	**146.91 313**		P	**PKPbc**	**01 12 51.4**	**-0.7**
LJU	**Ljubljana**	**146.93 328**		*e*PKPdf	**PKPdf**	**01 12 50.1**	**+0.1**
BOJS	**Bojanci**	**146.94 327**		*e*PKPdf	**PKPdf**	**01 12 50.3**	**+0.3**
UCC	**Uccle**	**147.03 343**		PKPbc	**PKPbc**	**01 12 52.5**	**+0.4**
DYR	**Agios Nikonas**	**147.07 308**		P	**PKPbc**	**01 12 52.5**	**-0.2**
BCLA	**Clavier**	**147.10 342**		PKP	**PKPdf**	**01 12 50.8**	**+0.7**
BCLA				PKPab	**PKiKP**	**01 12 54.4**	**-0.3**
RUP	**Ruppelstein**	**147.18 339**		PKP2	**PKPbc**	**01 12 53.0**	**+0.4**
RUP	**Ruppelstein**	**147.18 339**		PKP	**PKPbc**	**01 12 53.0**	**+0.4**
RLS	**Riolos of Patr**	**147.19 310**		P	**PKPbc**	**01 12 53.6**	**+0.7**
STU	**Stuttgart**	**147.20 336**		*e*PKIKP	**PKPdf**	**01 12 50.7**	**+0.3**
STU	**Stuttgart**	**147.20 336**		*e*PKPbc	**PKPbc**	**01 12 53.1**	**+0.5**
STU	**Stuttgart**	**147.20 336**		*e*PKPdf	**PKPdf**	**01 12 50.7**	**+0.3**
ITM	**Ithomi**	**147.21 309**		P	**PKPdf**	**01 12 50.8**	**0.0**
STON	**Ston**	**147.24 321**		P	**PKPdf**	**01 12 50.9**	**+0.4**
VOY	**Vojsko**	**147.26 329**		*e*PKPdf	**PKPdf**	**01 12 50.3**	**-0.4**
VOY				*e*		01 12 52.7		
VOY				*e*		01 13 04.3		
SNF	**Seneffe**	**147.31 343**		PKPbc	**PKPbc**	**01 12 52.9**	**+0.1**
SKP1	**Kophill**	**147.32 349**		*e*P	**PKPdf**	**01 12 51.5**	**+1.0**
SKP1	**Kophill**	**147.32 349**		P	**PKPdf**	**01 12 51.5**	**+1.0**
IGT	**Igoumenitsa**	**147.32 314**		P	**PKPbc**	**01 12 52.3**	**-1.0**
WATA	**Walderalm**	**147.37 332**	⇓	*i*PKIKP	**PKPdf**	**01 12 50.5**	**-0.4**
WATA	**Walderalm**	**147.37 332**	⇓	*i*PKPdf	**PKPdf**	**01 12 50.5**	**-0.4**
	comp=Z,17nm,0.7s,SNR=10							
WATA	**Walderalm**	**147.37 332**	⇓	*i*P	**PKPdf**	**01 12 50.5**	**-0.4**
MCH1	**Michaelchurch**	**147.38 352**		*e*P	**PKPdf**	**01 12 50.1**	**-0.4**
MCH1				AMB	AMB	01 12 57.0		
	comp=Z,109nm,4.4s							
MCH1	**Michaelchurch**	**147.38 352**		P	**PKPdf**	**01 12 50.1**	**-0.4**
MCH1				AMB	AMB	01 12 57.0		
	comp=Z,109nm,4.4s							
ABTA	**Abfaltersbach**	**147.40 331**		*i* PKPdf	**PKPdf**	**01 12 50.5**	**-0.4**
	comp=Z,45nm,0.9s,SNR=27							
ABTA	**Abfaltersbach**	**147.40 331**		*i* P	**PKPdf**	**01 12 50.5**	**-0.4**
WTTA	**Wattenberg**	**147.40 332**	⇑	*i*PKIKP	**PKPdf**	**01 12 50.9**	**-0.1**
WTTA	**Wattenberg**	**147.40 332**		*i* PKPdf	**PKPdf**	**01 12 51.2**	**+0.2**
	SNR=19							
WTTA	**Wattenberg**	**147.40 332**		*i* PKPdf	**PKPdf**	**01 12 51.2**	**+0.2**
	SNR=19							
WTTA	**Wattenberg**	**147.40 332**	⇑	*i*P	**PKPdf**	**01 12 50.9**	**-0.1**
LKD2	**Lefkada island**	**147.44 312**		P	**PKPbc**	**01 12 53.8**	**+0.2**
ELSH	**Elham, Standar**	**147.49 347**		*e*P	**PKPdf**	**01 12 51.0**	**+0.3**
ELSH	**Elham, Standar**	**147.49 347**		P	**PKPdf**	**01 12 51.0**	**+0.3**
WLF	**Walferdange**	**147.50 340**		PKP	**PKPdf**	**01 12 51.2**	**+0.4**
WLF				PKPbc	**PKPbc**	**01 12 54.4**	**+0.9**
WLF	**Walferdange**	**147.50 340**		*e*PKIKP	**PKPdf**	**01 12 50.9**	**+0.1**
WLF				*e*		01 12 54.1		
WLF				MLR	MLR			
	comp=Z,494nm,20.0s							
WLF	**Walferdange**	**147.50 340**		*e*PKPdf	**PKPdf**	**01 12 50.9**	**+0.1**
WLF				*e*PKPbc	**PKPbc**	**01 12 54.1**	**+0.7**
WLF				LR	LR			
	comp=Z,494nm,20.0s							
LANF	**Langenberg**	**147.54 338**		PKP2	**PKPbc**	**01 12 53.5**	**-0.1**
LANF	**Langenberg**	**147.54 338**		PKP	**PKPbc**	**01 12 53.5**	**-0.1**
LANF	**Langenberg**	**147.54 338**		PKP	**PKPbc**	**01 12 53.5**	**-0.1**
TRI	**Trieste**	**147.55 328**		*e*PKIKP	**PKPdf**	**01 12 51.1**	**+0.1**
TRI	**Trieste**	**147.55 328**		*e*PKPdf	**PKPdf**	**01 12 51.0**	**+0.1**
MOTA	**Moosalm**	**147.57 333**	⇑	*i*PKIKP	**PKPdf**	**01 12 50.9**	**-0.3**
MOTA	**Moosalm**	**147.57 333**		*i* PKPdf	**PKPdf**	**01 12 51.2**	**0.0**
	SNR=18							
MOTA	**Moosalm**	**147.57 333**		*i* PKPdf	**PKPdf**	**01 12 51.2**	**0.0**
	SNR=18							
MOTA	**Moosalm**	**147.57 333**	⇑	*i*P	**PKPdf**	**01 12 50.9**	**-0.3**
DOU	**Dourbes**	**147.59 342**		PKP	**PKPdf**	**01 12 51.3**	**+0.4**
DOU				PKPbc	**PKPbc**	**01 12 53.6**	**0.0**
KEK	**Kerkira**	**147.60 314**		P	**PKPdf**	**01 12 52.0**	**+0.7**
SWN1	**Swindon**	**147.68 350**		*e*P	**PKPdf**	**01 12 51.8**	**+0.7**
SWN1				AMB	AMB	01 12 58.5		
	comp=Z,153nm,1.3s							
SWN1	**Swindon**	**147.68 350**		P	**PKPdf**	**01 12 51.8**	**+0.7**
SWN1				AMB	AMB	01 12 58.5		
	comp=Z,153nm,1.3s							
NVLJ	**Novalja**	**147.77 326**		P	**PKPdf**	**01 12 51.1**	**-0.2**
WOL	**Wolverton**	**147.78 350**		*e*P	**PKPdf**	**01 12 51.8**	**+0.6**
WOL				AMB	AMB	01 12 55.8		
	comp=Z,110nm,1.9s							
WOL	**Wolverton**	**147.78 350**		P	**PKPdf**	**01 12 51.8**	**+0.6**
WOL				AMB	AMB	01 12 55.8		
	comp=Z,110nm,1.9s							
BFO	**Black Forest**	**147.89 337**		*e*PKIKP	**PKPdf**	**01 12 52.6**	**+1.0**
BFO				MLR	MLR			
	comp=Z,393nm,22.0s							
BFO	**Black Forest**	**147.89 337**		*e*PKPbc	**PKPbc**	**01 12 54.8**	**+0.2**
BFO	**Black Forest**	**147.89 337**		*e*PKPdf	**PKPdf**	**01 12 52.6**	**+1.0**
BFO				LR	LR			
	comp=Z,393nm,22.0s							
SPAK	**Spaichingen-Ko**	**147.91 336**		PKP	**PKPbc**	**01 12 54.4**	**-0.3**
FETA	**Feichten**	**147.98 333**		*i* PKPdf	**PKPdf**	**01 12 51.9**	**0.0**
	SNR=13							
FETA	**Feichten**	**147.98 333**		*i* PKPdf	**PKPdf**	**01 12 51.9**	**0.0**
	SNR=13							
FETA	**Feichten**	**147.98 333**		*i* P	**PKPdf**	**01 12 51.9**	**0.0**
DAVA	**Damuels**	**148.13 334**	⇑	*i*PKPdf	**PKPdf**	**01 12 52.1**	**0.0**
	comp=Z,53nm,0.9s,SNR=15							
DAVA	**Damuels**	**148.13 334**	⇑	*i*P	**PKPdf**	**01 12 52.1**	**0.0**
FELD	**Feldberg im Sc**	**148.39 337**		PKP	**PKPbc**	**01 12 55.6**	**-0.4**
ECH	**Echery**	**148.41 338**		*e*PKIKP	**PKPdf**	**01 12 52.2**	**-0.2**
ECH						01 12 55.5		
ECH				MLR	MLR			
	comp=Z,446nm,21.0s							
ECH	**Echery**	**148.41 338**		*e*PKPdf	**PKPdf**	**01 12 52.2**	**-0.2**
ECH				PKP	**PKPbc**	**01 12 55.5**	**-0.4**
ECH				LR	LR			
	comp=Z,446nm,21.0s							
DAVOX	**Davos/Dischmat**	**148.53 333**		PKP	**PKPdf**	**01 12 52.3**	**-0.6**
DAVOX				PKPbc	**PKPbc**	**01 12 56.9**	**+0.3**
DAVOX	**Davos/Dischmat**	**148.53 333**		PKP	**PKPdf**	**01 12 52.3**	**-0.6**
	comp=Z,48nm,0.8s,baz=88,slow=6.9,SNR=14							
DAVOX				PKPbc	**PKPbc**	**01 12 56.8**	**+0.3**
	comp=Z,52nm,0.8s,baz=14,slow=3.5,SNR=65							
HTL	**Hartland**	**148.55 353**		*e*P	**PKPdf**	**01 12 53.9**	**+1.4**
HTL				AMB	AMB	01 12 56.9		
	comp=Z,86nm,2.6s							
HTL	**Hartland**	**148.55 353**		P	**PKPdf**	**01 12 53.9**	**+1.4**
HTL				AMB	AMB	01 12 56.9		
	comp=Z,86nm,2.6s							
MOF	**Molkenrain**	**148.73 337**		PKP2	**PKPbc**	**01 12 56.6**	**-0.2**
MOF	**Molkenrain**	**148.73 337**		PKP	**PKPbc**	**01 12 56.6**	**-0.2**
MOF	**Molkenrain**	**148.73 337**		PKP	**PKPbc**	**01 12 56.6**	**-0.2**
THEF	**They Montfort**	**148.81 339**		PKP2	**PKPbc**	**01 12 57.0**	**+0.1**
THEF	**They Montfort**	**148.81 339**		PKP	**PKPbc**	**01 12 57.0**	**+0.1**
THEF	**They Montfort**	**148.81 339**		PKP	**PKPbc**	**01 12 57.0**	**+0.1**
BBS	**Basel-Blauen**	**148.92 337**		PKP2	**PKPbc**	**01 12 56.8**	**-0.5**
BBS	**Basel-Blauen**	**148.92 337**		PKP	**PKPbc**	**01 12 56.8**	**-0.5**
TUE	**Stuetta**	**149.00 334**		*e*PKPdf	**PKPdf**	**01 12 53.4**	**-0.2**
TUE				*e*PKPbc	**PKPbc**	**01 12 57.6**	**-0.1**
TUE				LR	LR			
	comp=Z,449nm,20.0s							
LOMF	**Lomont**	**149.26 337**		PKP2	**PKPbc**	**01 12 58.0**	**-0.2**
LOMF	**Lomont**	**149.26 337**		PKP	**PKPbc**	**01 12 58.0**	**-0.2**
LOMF	**Lomont**	**149.26 337**		PKP	**PKPbc**	**01 12 58.0**	**-0.2**
TIP	**Timpagrande**	**149.90 316**		*e*PKPdf	**PKPdf**	**01 12 55.7**	**+0.6**
TIP				*e*PKPbc	**PKiKP**	**01 13 00.6**	**-0.4**
TIP				LR	LR			
	comp=Z,695nm,22.0s							
JSA	**Saint Aubin**	**149.99 350**		*e*P	**PKPdf**	**01 12 56.2**	**+1.4**
JSA				AMB	AMB	01 13 02.4		
	comp=Z,59nm,1.0s							
JSA	**Saint Aubin**	**149.99 350**		P	**PKPdf**	**01 12 56.2**	**+1.4**
JSA				AMB	AMB	01 13 02.4		
	comp=Z,59nm,1.0s							
AQU	**L'Aquila**	**150.04 324**		PFAKE		01 13 10.0	+3.9
AQU				LR	LR			
	comp=Z,906nm,22.0s							
CUC	**Castrocucco**	**150.06 318**		*e*PKPdf	**PKPdf**	**01 12 54.1**	**-1.3**
CUC				LR	LR			
	comp=Z,506nm,21.0s							
OG01	**Vacheresse**	**150.18 336**		PKP	**PKPbc**	**01 13 00.7**	**+0.2**
VLC	**Villacollemand**	**150.32 330**		*e*PKPdf	**PKPdf**	**01 12 55.6**	**0.0**
VLC				LR	LR			
	comp=Z,576nm,21.0s							
BST	**Brest**	**151.15 352**		PKP	**PKPbc**	**01 13 02.2**	**-0.4**
GDM	**Grand'Maison**	**151.34 336**		PKP	**PKPbc**	**01 13 03.4**	**+0.1**
GRN	**Grenoble**	**151.45 336**		PKP	**PKPbc**	**01 13 03.8**	**+0.3**
AGO	**Saint Agoulin**	**151.65 341**		PKP	**PKPbc**	**01 13 03.8**	**-0.1**
SURF	**Saint Ours**	**151.66 334**		PKP	**PKPbc**	**01 13 04.5**	**+0.3**
SAOF	**Saorge**	**151.75 333**		PKP	**PKPbc**	**01 13 03.6**	**-0.6**
AUTN	**L'Aution**	**151.79 333**		PKP	**PKPbc**	**01 13 04.9**	**+0.4**
TOUF	**Mont Tournerai**	**151.86 333**		PKP	**PKPbc**	**01 13 04.0**	**-0.6**
SSB	**Saint Sauveur**	**151.86 338**		*e*PKIKP	**PKPdf**	**01 12 57.7**	**-0.2**
SSB				*e*		01 13 04.8		
SSB				MLR	MLR			
	comp=Z,459nm,20.0s							
SSB	**Saint Sauveur**	**151.86 338**		*e*PKPdf	**PKPdf**	**01 12 57.7**	**-0.2**
SSB				*e*PKPdf	**PKiKP**	**01 13 04.8**	**+0.1**
SSB				LR	LR			
	comp=Z,459nm,20.0s							
SSB	**Saint Sauveur**	**151.86 338**		PKP	**PKPbc**	**01 13 04.4**	**0.0**
PYM	**Petit Puy Mans**	**151.96 340**		PKP	**PKPbc**	**01 13 04.5**	**-0.1**
MVIF	**Mont Vial**	**151.99 333**		PKP	**PKPbc**	**01 13 04.5**	**-0.4**
REVF	**Revere**	**152.03 332**		PKP	**PKPbc**	**01 13 04.5**	**-0.3**
CALN	**Calern**	**152.22 333**		PKP	**PKPbc**	**01 13 04.9**	**-0.5**
LBL	**Lubilhac**	**152.34 340**		PKP	**PKPbc**	**01 13 06.3**	**+0.8**
OSPF	**L'Ospedale**	**152.76 327**		PKP	**PKPbc**	**01 13 05.8**	**-0.8**
WDD	**Wield Dalam**	**153.13 312**		PFAKE		01 13 10.0	+2.6
WDD				LR	LR			
	comp=Z,695nm,19.0s							
VSL	**Villasalto**	**154.21 324**		PFAKE		01 13 10.0	+0.3
VSL				LR	LR			
	comp=Z,731nm,20.0s							
KEST	**Kesra**	**156.70 317**		*e*PKPdf	**PKPdf**	**01 13 05.1**	**0.0**
KEST				PKPab	**PKPab**	**01 13 36.3**	**+1.9**
KEST	**Kesra**	**156.70 317**		PKPab	**PKPab**	**01 13 36.3**	**+1.9**
	comp=Z,4.7nm,1.0s,baz=224,slow=5.3,SNR=4.3							
CMLA	**Cha da Macela**	**157.57 34**		PFAKE		01 13 20.0	+14
CMLA				LR	LR			
	comp=Z,945nm,19.0s							
PGAV	**Gavieira, Arco**	**157.84 357**		*e*LQ	LQ	02 00 31.9		
PGAV				*e*LR	LR	02 07 25.7		
	comp=Z,476nm,20.0s							
PBRG	**Braganca**	**157.87 353**		*e*PKPab	**PKPab**	**01 13 39.4**	**+0.3**
POLO	**Lamas de Olo**	**158.40 355**		*e*PKPab	**PKPab**	**01 13 41.8**	**+0.3**
PVRL	**Vila Real**	**158.49 355**		*e*PKPab	**PKPab**	**01 13 42.5**	**+0.7**
MVO	**Moncorvo**	**158.54 354**		*e*PKPdf	**PKPdf**	**01 13 07.6**	**+0.4**
MVO	**Moncorvo**	**158.54 354**		*e*PKPab	**PKPab**	**01 13 42.5**	**+0.4**
MVO				*e*LR	LR	02 08 12.2		
	comp=Z,502nm,18.0s							
PVIS	**Viseu**	**159.06 355**		*e*PKPab	**PKPab**	**01 13 44.9**	**+0.6**
MTE	**Manteigas**	**159.34 355**		*e*PKPab	**PKPab**	**01 13 45.6**	**0.0**
MTE				*e*LQ	LQ	01 59 59.5		
MTE				*e*LR	LR	02 08 11.6		
	comp=Z,498nm,22.0s							
MTE	**Manteigas**	**159.34 355**		PFAKE		01 13 20.0	+12
MTE				LR	LR			
	comp=Z,640nm,20.0s							
ESDC	**Sonseca Array**	**159.50 347**		PKP	**PKPdf**	**01 13 08.1**	**-0.2**
ESDC				PKPab	**PKPab**	**01 13 46.5**	**+0.3**
ESDC	**Sonseca Array**	**159.50 347**		PKP	**PKPdf**	**01 13 08.1**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=14,slow=4.0,SNR=4.7							
ESDC				PKPab	**PKPab**	**01 13 46.5**	**+0.3**
	comp=Z,2.7nm,0.9s,baz=14,slow=3.4,SNR=10							
PAB	**San Pablo**	**159.71 347**		PFAKE		01 13 20.0	+11
PAB				LR	LR			
	comp=Z,787nm,22.0s							
PCBR	**Castelo Branco**	**159.89 354**		*e*PKPdf	**PKPdf**	**01 13 09.1**	**+0.4**
PCBR	**Castelo Branco**	**159.89 354**		*e*PKPab	**PKPab**	**01 13 48.3**	**+0.4**
PTOM	**Tomar**	**160.19 356**		*e*PKPab	**PKPab**	**01 13 49.5**	**+0.4**
PMRV	**Marv??o**	**160.29 354**		*e*PKPdf	**PKPdf**	**01 13 08.3**	**-0.9**
PMRV	**Marv??o**	**160.29 354**		*e*PKPab	**PKPab**	**01 13 49.5**	**-0.2**
PMRV				*e*LQ	LQ	02 00 50.6		
PMRV				*e*LR	LR	02 08 54.4		
	comp=Z,731nm,18.0s							
PESTR	**Estremoz**	**160.87 354**		*e*PKPab	**PKPab**	**01 13 52.3**	**+0.1**
PBEJ	**Beja**	**161.73 355**		*e*PKPab	**PKPab**	**01 13 56.7**	**+0.8**
PCVE	**Castro Verde**	**162.13 355**		*e*PKPab	**PKPab**	**01 13 58.7**	**+1.0**
PVAQ	**Vaqueiros**	**162.33 354**		*e*PKPab	**PKPab**	**01 14 00.1**	**+1.5**
PVAQ				*e*LQ	LQ	02 01 07.9		
PVAQ				*e*LR	LR	02 09 40.1		
	comp=Z,597nm,22.0s							
TAM	**Tamanrasset**	**165.20 284**		*e*PKIKP	**PKPdf**	**01 13 14.7**	**0.0**
TAM				*e*		01 14 12.4		
TAM				MLR	MLR			
	comp=Z,895nm,21.0s							
TAM	**Tamanrasset**	**165.20 284**		*e*PKPdf	**PKPdf**	**01 13 14.7**	**0.0**
TAM				*e*PKPab	**PKPab**	**01 14 12.4**	**+0.3**
TAM				LR	LR			
	comp=Z,895nm,21.0s							
RTC	**Rabat Centre**	**165.57 349**		PFAKE		01 13 30.0	+16
RTC				LR	LR			
	comp=Z,923nm,20.0s							
SACV	**Santiago Islan**	**166.18 108**		PFAKE		01 13 30.0	+15
SACV				LR	LR			
	comp=Z,934nm,19.0s							
TOA0	**Torodi Ar. Sit**	**166.97 241**		*e*PKPdf	**PKPdf**	**01 13 15.1**	**-1.0**
TOA0				*e*PKPab	**PKPab**	**01 14 19.2**	**-0.6**
TORD	**Torodi Ar. Bea**	**166.97 241**		PKP	**PKPdf**	**01 13 15.2**	**-0.8**
TORD				PKPab	**PKPab**	**01 14 19.5**	**-0.3**
TORD	**Torodi Ar. Bea**	**166.97 241**		PKP	**PKPdf**	**01 13 15.2**	**-0.8**
	comp=Z,2.3nm,1.0s,

WRA	**Warramunga Arr**	**25.11**	**163**	P		**P**	**01 15 48.1**	**-0.9**
	16nm,0.6s,baz=343,slow=10,SNR=33							
WRA				S		**S**	**01 20 14.4**	**+2.9**
	0.3nm,0.3s,baz=349,slow=18,SNR=4.8							
MBWA	**Marble Bar**	**26.19**	**195**	*e*P		**P**	**01 15 57.6**	**-1.1**
	18nm,0.8s							
QIS	**Mount Isa**	**27.62**	**154**	P		**P**	**01 16 14.0**	**+2.4**
	baz=28,SNR=5.0							
AS31	**Alice Springs**	**28.56**	**166**	*e*P		**P**	**01 16 18.7**	**-1.3**
ASAR	**Alice Springs**	**28.56**	**166**	P		**P**	**01 16 19.1**	**-0.9**
ASAR				S		**S**	**01 21 10.5**	**+4.6**
ASAR	**Alice Springs**	**28.56**	**166**	P		**P**	**01 16 19.1**	**-0.9**
	2.1nm,0.5s,baz=343,slow=6.2,SNR=4.5							
ASAR				S		**S**	**01 21 10.5**	**+4.6**
	0.4nm,0.6s,baz=347,slow=16,SNR=3.5							
CMAR	**Chiang Mai Arr**	**30.76**	**300**	P		**P**	**01 16 39.8**	**+0.3**
CMAR	**Chiang Mai Arr**	**30.76**	**300**	P		**P**	**01 16 39.8**	**+0.3**
	1.0nm,0.4s,baz=121,slow=7.7,SNR=3.9							
CTA	**Charters Tower**	**30.76**	**142**	P		**P**	**01 16 41.6**	**+2.1**
CTA	**Charters Tower**	**30.76**	**142**	P		**P**	**01 16 41.6**	**+2.1**
	7.3nm,0.8s,baz=318,slow=7.4,SNR=8.8							
MEEK	**Meekatharra**	**31.71**	**194**	P		**P**	**01 16 46.3**	**-1.5**
	baz=32,SNR=8.2							
KSAR	**Wonju Array Be**	**33.07**	**1**	P		**P**	**01 17 01.0**	**+1.5**
KSRS	**Korea Array**	**33.08**	**2**	P		**P**	**01 17 01.0**	**+1.4**
	1.3nm,0.8s,baz=176,slow=9.9,SNR=4.1							
FORT	**Forrest**	**34.83**	**178**	*e*P		**P**	**01 17 13.1**	**-1.8**
	35nm,0.8s							
FORT	**Forrest**	**34.83**	**178**	P		**P**	**01 17 13.9**	**-1.0**
	baz=35,SNR=6.9							
KMBL	**Kambalda**	**35.72**	**187**	P		**P**	**01 17 21.4**	**-1.2**
	baz=36,SNR=8.2							
BLDU	**Ballidu**	**35.99**	**195**	P		**P**	**01 17 23.4**	**-1.5**
	baz=36,SNR=6.9							
KLBR	**Kellerberrin**	**36.67**	**193**	P		**P**	**01 17 30.1**	**-0.6**
	baz=37,SNR=6.0							
BBOO	**Buckleboo**	**37.85**	**167**	P		**P**	**01 17 40.0**	**-0.7**
	baz=38,SNR=18							
NWAO	**Narrogin (SRO)**	**38.07**	**193**	*e*P		**P**	**01 17 40.5**	**-2.1**
	8.9nm,0.8s							
NWAO	**Narrogin (SRO)**	**38.07**	**193**	P		**P**	**01 17 41.8**	**-0.8**
	6.4nm,0.5s,baz=24,slow=5.8,SNR=6.8							
STKA	**Stephens Creek**	**38.54**	**160**	*e*P		**P**	**01 17 45.2**	**-1.3**
	3.7nm,1.0s							
STKA	**Stephens Creek**	**38.54**	**160**	P		**P**	**01 17 46.6**	**0.0**
	14nm,0.9s,baz=335,slow=9.4,SNR=16							
STKA	**Stephens Creek**	**38.54**	**160**	P		**P**	**01 17 46.0**	**-0.6**
	baz=39,SNR=9.6							
USRK	**Ussuriysk Arra**	**40.06**	**6**	P		**P**	**01 18 00.7**	**+1.7**
	2.2nm,0.9s,baz=192,slow=8.6,SNR=3.7							
ARMA	**Armidale**	**41.80**	**147**	P		**P**	**01 18 14.4**	**+0.6**
	baz=42,SNR=4.9							
ARPS	**Mount Arapiles**	**43.11**	**162**	P		**P**	**01 18 24.6**	**+0.4**
	baz=44,SNR=10.0							
TAPN	**Taplejung**	**43.85**	**306**	*e*P		**P**	**01 18 29.5**	**-1.2**
	14nm,0.7s							
ODAN	**Odare**	**43.91**	**305**	*e*P		**P**	**01 18 29.8**	**-1.3**
	12nm,0.6s							
RAMN	**Ramite**	**44.59**	**305**	*e*P		**P**	**01 18 35.7**	**-0.9**
	12nm,0.7s							
TOO	**Toolangi**	**45.05**	**159**	P		P	01 18 35.9	-3.9
	baz=45,SNR=4.8							
GUN	**Gumba**	**45.56**	**306**	*e*P		**P**	**01 18 43.1**	**-1.3**
SONM	**Songino Array**	**46.88**	**341**	P		**P**	**01 18 55.0**	**+0.9**
SONM	**Songino Array**	**46.88**	**341**	P		**P**	**01 18 55.0**	**+0.9**
	0.6nm,0.5s,baz=153,slow=7.5,SNR=3.6							
KOLN	**Koldanda**	**47.37**	**304**	*e*P		**P**	**01 18 57.1**	**-1.3**
	15nm,0.5s							
DANN	**Dangsing**	**47.45**	**305**	*e*P		**P**	**01 18 57.3**	**-1.9**
	24nm,0.6s							
PYUN	**Piuthan**	**47.99**	**304**	*e*P		**P**	**01 19 01.4**	**-1.8**
	23nm,0.6s							
MK31	**Makanchi Array**	**57.23**	**325**	*e*P		**P**	**01 20 10.4**	**-0.7**
MKAR	**Makanchi Array**	**57.23**	**325**	P		**P**	**01 20 10.6**	**-0.5**
MKAR	**Makanchi Array**	**57.23**	**325**	P		**P**	**01 20 10.6**	**-0.5**
	2.6nm,0.5s,baz=125,slow=8.0,SNR=22							
ZALV	**Zalesovo Beam**	**60.21**	**333**	P		**P**	**01 20 30.9**	**-0.7**
ZALV	**Zalesovo Beam**	**60.21**	**333**	P		**P**	**01 20 30.9**	**-0.7**
	1.5nm,0.6s,baz=126,slow=6.5,SNR=6.6							
KURBB	**Kurchatov Arra**	**61.40**	**327**	P		**P**	**01 20 39.2**	**-0.6**
	5.1nm,0.7s,baz=124,slow=6.2,SNR=22							
KURK	**Kurchatov**	**61.40**	**327**	*e*P		**P**	**01 20 39.2**	**-0.6**
	4.8nm,0.5s							
BVAR	**Borovoye Array**	**66.99**	**327**	P		**P**	**01 21 16.3**	**-0.1**
BVAR	**Borovoye Array**	**66.99**	**327**	P		**P**	**01 21 16.3**	**-0.1**
	4.5nm,0.8s,baz=124,slow=7.9,SNR=19							
BRVK	**Borovoye**	**67.06**	**327**	*e*P		**P**	**01 21 15.8**	**-1.0**
	6.3nm,0.8s							
KDAK	**Kodiak Island**	**81.39**	**32**	P		**P**	**01 22 42.0**	**+1.8**
KDAK	**Kodiak Island**	**81.39**	**32**	P		**P**	**01 22 42.0**	**+1.8**
	5.5nm,0.8s,baz=252,slow=9.6,SNR=3.1							
VNDA	**Vanda**	**83.90**	**173**	P		**P**	**01 22 52.4**	**-0.5**
VNDA	**Vanda**	**83.90**	**173**	P		**P**	**01 22 52.4**	**-0.5**
	2.9nm,0.8s,baz=303,slow=5.7,SNR=11							
ILAR	**Eielson Array**	**84.59**	**25**	P		**P**	**01 22 57.5**	**+0.8**
ILAR	**Eielson Array**	**84.59**	**25**	P		**P**	**01 22 57.5**	**+0.8**
	0.7nm,0.8s,baz=260,slow=6.5,SNR=6.5							
ASF	**Jabal al Asfar**	**87.76**	**302**	P		**P**	**01 23 13.8**	**+0.6**
ASF	**Jabal al Asfar**	**87.76**	**302**	P		**P**	**01 23 13.8**	**+0.6**
	1.0nm,0.6s,baz=145,slow=12							
INK	**Inuvik**	**89.64**	**22**	P		**P**	**01 23 20.9**	**-0.2**
INK	**Inuvik**	**89.64**	**22**	P		**P**	**01 23 20.9**	**-0.2**
	0.6nm,0.8s,baz=270,slow=1.0,SNR=2.8							
KMBO	**Kilima Mbogo**	**89.72**	**269**	P		**P**	**01 23 22.8**	**-0.1**
KMBO	**Kilima Mbogo**	**89.72**	**269**	P		**P**	**01 23 22.8**	**-0.1**
	1.0nm,0.7s,baz=226,slow=23,SNR=3.9							
BRTR	**Keskin Array B**	**89.82**	**310**	P		**P**	**01 23 20.7**	**-2.1**
BRTR	**Keskin Array B**	**89.82**	**310**	P		**P**	**01 23 20.7**	**-2.1**
	0.4nm,0.5s,baz=137,slow=5.4,SNR=4.9							
ARCES	**ARCESS Array B**	**90.03**	**340**	P		**P**	**01 23 21.8**	**-1.2**
ARCES	**ARCESS Array B**	**90.03**	**340**	P		**P**	**01 23 21.8**	**-1.2**
	6.4nm,1.0s,baz=64,slow=5.5,SNR=5.8							
FINES	**FINESS Array B**	**91.47**	**332**	P		**P**	**01 23 29.2**	**-0.5**
FINES	**FINESS Array B**	**91.47**	**332**	P		**P**	**01 23 29.2**	**-0.5**
	1.8nm,0.8s,baz=11,slow=3.9,SNR=5.3							
YKA	**Yellowknife Ar**	**98.98**	**24**	P		**P**	**01 24 03.9**	**-0.1**
YKA	**Yellowknife Ar**	**98.98**	**24**	P		**P**	**01 24 03.9**	**-0.1**
	0.2nm,0.8s,baz=296,slow=4.0,SNR=3.2							
GERES	**GERESS Array B**	**101.79**	**322**	P		**Pdif**	**01 24 16.8**	**-0.2**
GERES	**GERESS Array B**	**101.79**	**322**	P		**Pdif**	**01 24 16.8**	**-0.2**
	0.3nm,0.7s,baz=101,slow=5.1,SNR=2.5							
TORD	**Torodi Ar. Bea**	**122.91**	**289**	PKP		**PKPdf**	**01 29 20.5**	**-0.3**
TORD	**Torodi Ar. Bea**	**122.91**	**289**	PKP		**PKPdf**	**01 29 20.5**	**-0.3**
	0.6nm,0.7s,baz=53,slow=2.0,SNR=3.6							
CFAA	**Coronel Fontan**	**149.28**	**154**	PKPbc		**PKPbc**	**01 30 13.2**	**+0.2**
CFAA	**Coronel Fontan**	**149.28**	**154**	PKPbc		**PKPbc**	**01 30 13.2**	**+0.2**
	0.2nm,0.5s,baz=292,slow=1.8,SNR=5.4							
CPUP	**Villa Florida**	**157.66**	**170**	PKPab		**PKPab**	**01 30 52.4**	**-0.3**
CPUP	**Villa Florida**	**157.66**	**170**	PKPab		**PKPab**	**01 30 52.4**	**-0.3**
	0.3nm,0.3s,baz=169,slow=7.3,SNR=3.4							

BJI ***21*** *01:16:41.6, 44.˙50N×148.˙64E, h59km, mB5.0/28, mb5.1/45, Ms4.5/29, Ms7 4.4/30*

SKHL ***21*** *01:16:43.1±0.6, 44.˙38N×148.˙65E, h63km±12km, mb5.2/6, Ms4.2/1*

SKHL Felt (III) at Kurilsk, (II) at Yushno-Kurilsk.

JMA ***21*** *01:16:44.3±0.3, 44.˙06N×148.˙08E, h0km, M5.0*

JMA Felt I J1.

ISCJB ***21*** *01:16:45.7±0.3, 44.˙47N±0.˙03×148.˙12E±0.˙02, h65km±3km, mb4.8/175, Error ellipse: s-maj=4.7km s-min=2.4km az=162.9*

MOS ***21*** *01:16:45.2±0.9, 44.˙52N×148.˙15E, h62km, mb5.2/76, MS4.2/4, Error ellipse: s-maj=7.5km s-min=4.5km az=106.8*

MOS Felt (III) at Kuril'sk.

IDC ***21*** *01:16:46.5±1.7, 44.˙53N×148.˙16E, h60km±14km, mb4.5/41, mb1 4.6/48, mb1mx4.6/49, mbtmp4.5/48, MS4.1/3, Ms1 4.1/3, ms1mx3.6/35, Error ellipse: s-maj=10.8km s-min=9.3km az=137.0*

TEH ***21*** *01:16:47.0, 44.˙63N×148.˙06E, h57km, ML4.8*

NEIC ***21*** *01:16:47.1±0.5, 44.˙52N×148.˙07E, h65km±5km, mb5.0/88, Error ellipse: s-maj=4.8km s-min=3.0km az=159.0*

NEIC Recorded [1 JMA] in eastern Hokkaido.

NIED ***21*** *01:17:00, 44.˙10N×148.˙00E, h50km, Mw4.7 Best double couple: Mo1.31000×10¹⁶ NP1:φs30.00000°, δ76.00000°, λ90.00000°. NP2:φs209.00000°, δ14.00000°, λ89.00000°.*

ISC 21 01:16:46.6±0.4, 44.˙48N±0.˙04×148.˙17E±0.˙04, h63km±2km, h62km:pP-P, n853, σ0.97/945, mb4.9/174, 212C-163D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.79**	**344**	PN		**Pn**	**01 17 00.5**	**-1.5**
KUR				*i* S		**Sn**	**01 17 14.0**	**+0.6**
KUR				pmax	pmax			
	comp=Z,24μm,1.8s							
KUR				pmax	pmax			
	comp=N,15μm,2.0s							
KUR				smax	smax			
	comp=N,170μm,2.0s							
KUR				smax	smax			
	comp=E,100μm,2.0s							
KUR	**Kuril'sk**	**0.79**	**344**	*e*P		**Pn**	**01 17 00.5**	**-1.5**
KUR				AMB	AMB	01 17 02.0		
	comp=E,24μm,1.8s							
KUR				AMB	AMB	01 17 02.0		
	comp=E,15μm,2.0s							
KUR				*i* S		**Sn**	**01 17 14.0**	**+0.6**
KUR				A	A	01 17 16.6		
	comp=E,88μm,2.0s							
KUR				A	A	01 17 16.6		
	comp=E,50μm,2.0s							
KUR				A	A	01 17 17.0		
	comp=E,170μm,2.0s							
KUR				A	A	01 17 17.0		
	comp=E,100μm,2.0s							
YUK	**Yuzh-Kuril'sk**	**1.72**	**256**	*i* PN		**Pn**	**01 17 13.7**	**-0.5**
YUK				*i* S		**Sn**	**01 17 36.3**	**+1.1**
YUK				pmax	pmax			
	comp=N,174nm,0.1s							
YUK				pmax	pmax			
	comp=E,654nm,0.1s							
YUK				pmax	pmax			
	comp=Z,3μm,0.1s							
YUK				smax	smax			
	comp=N,5μm,0.3s							
YUK				smax	smax			
	comp=E,12μm,0.4s							
YUK	**Yuzh-Kuril'sk**	**1.72**	**256**	⇓ *i* P		**Pn**	**01 17 13.8**	**-0.5**
YUK				*i* S		**Sn**	**01 17 36.4**	**+1.2**
YUK				A	A	01 17 41.2		
	comp=E,5μm,0.3s							
YUK				A	A	01 17 41.2		
	comp=E,12μm,0.3s							
NEM2	**Nemuro 2**	**2.08**	**238**	P		**Pn**	**01 17 17.4**	**-1.7**
NEM2				*e*S		**Sn**	**01 17 41.5**	**-2.4**
JRA	**Rausu**	**2.26**	**257**	P		**Pn**	**01 17 22.0**	**+0.4**
JRA				*e*S		**Sn**	**01 17 49.9**	**+1.6**
JNK	**Nakash**	**2.65**	**251**	P		**Pn**	**01 17 26.8**	**-0.1**
JNK				*e*S		**Sn**	**01 17 57.5**	**-0.3**
JAK	**Akkeshi**	**2.92**	**241**	P		**Pn**	**01 17 29.4**	**-1.2**
JAK				*e*S		**Sn**	**01 18 03.0**	**-1.5**
JTKR	**Abashiri--Toko**	**3.11**	**262**	P		**Pn**	**01 17 33.7**	**+0.6**
JAR	**Ashorobuto**	**3.39**	**251**	P		**Pn**	**01 17 37.7**	**+0.6**
JAR				*e*S		**Sn**	**01 18 17.9**	**+1.8**
JKJ2	**Kamakawa 2**	**3.95**	**263**	P		**Pn**	**01 17 46.1**	**+1.4**
JCH	**Churui**	**3.96**	**244**	P		**Pn**	**01 17 44.3**	**-0.5**
JCH				*e*S		**Sn**	**01 18 29.1**	**-0.9**
JSE	**Soyaes**	**4.01**	**279**	P		**Pn**	**01 17 46.7**	**+1.2**
ASAJ	**Asahikawa**	**4.02**	**267**	P		**Pn**	**01 17 46.2**	**+0.6**
ASAJ	**Asahikawa**	**4.02**	**267**	P		**Pn**	**01 17 46.2**	**+0.6**
	comp=E,34nm,0.3s,baz=66,slow=21,SNR=52							
ASAJ				LR	LR	01 19 29.5		
	comp=E,2μm,21.5s,baz=131,slow=41							
JFR	**Furan**	**4.25**	**254**	P		**Pn**	**01 17 50.4**	**+1.7**
ERM	**Erimo**	**4.41**	**238**	*d* PN		**Pn**	**01 17 52.4**	**+1.4**
ERM				pmax	pmax			
	comp=Z,548nm,1.0s							
ERM	**Erimo**	**4.41**	**238**	*e*Pn		**Pn**	**01 17 52.5**	**+1.4**
ERM				*e*S		**Sn**	**01 18 40.3**	**-0.7**
JNBK	**Urakawa-nobuka**	**4.52**	**243**	P		**Pn**	**01 17 51.9**	**-0.6**
YSS	**Yuzh-Sakhalins**	**4.53**	**305**	*i* PN		**Pn**	**01 17 55.0**	**+2.4**
YSS				*e*S		**Sn**	**01 18 46.0**	**+2.1**
YSS				pmax	pmax			
	comp=N,160nm,0.6s							
YSS				pmax	pmax			
	comp=E,180nm,0.6s							
YSS				pmax	pmax			
	comp=Z,250nm,0.6s							
YSS				smax	smax			
	comp=N,340nm,0.9s							
YSS				smax	smax			
	comp=E,360nm,0.9s							
YSS				MLR	MLR			
	comp=Z,2μm,18.0s							
YSS				MLR	MLR			
	comp=E,1μm,17.0s							
YSS	**Yuzh-Sakhalins**	**4.53**	**305**	⇓ *i* P		**Pn**	**01 17 55.0**	**+2.4**
YSS				AMB	AMB	01 17 55.6		
	comp=E,250nm,0.6s							
YSS				AMB	AMB	01 17 55.6		
	comp=E,160nm,0.6s							
YSS				AMB	AMB	01 17 55.6		
	comp=E,180nm,0.6s							
YSS				*e*S		**Sn**	**01 18 46.0**	**+2.1**
YSS				A	A	01 18 50.0		
	comp=E,340nm,0.9s							
YSS				A	A	01 18 50.0		
	comp=E,360nm,0.9s							
YSS				*e*LQ	LQ	01 19 00.0		
YSS				AMS	AMS	01 19 30.0		
	comp=E,2μm,18.0s							
YSS				AMS	AMS	01 19 30.0		
	comp=E,1μm,17.0s							
JWK2	**Keihoku**	**4.54**	**283**	P		**Pn**	**01 17 55.3**	**+2.6**
JHR	**Hokuryu**	**4.70**	**263**	P		**Pn**	**01 17 58.1**	**+3.1**
JYG	**Yagishiri**	**4.83**	**272**	P		**Pn**	**01 17 59.3**	**+2.6**
JEW	**Eniwo**	**5.14**	**254**	P		**Pn**	**01 18 03.8**	**+2.8**
JKB	**Kayabe**	**5.83**	**246**	P		**Pn**	**01 18 10.6**	**+0.3**
JKB				*e*S		**Sn**	**01 19 13.6**	**-2.1**
JOT	**Ohata**	**6.08**	**242**	P		**Pn**	**01 18 13.3**	**-0.5**
JOT				*e*S		**Sn**	**01 19 17.8**	**-4.1**
UGL	**Uglegorsk**	**6.22**	**320**	*e*Pn		**Pn**	**01 18 18.6**	**+2.8**
UGL				pmax	pmax			
	comp=Z,162nm,0.4s							
UGL				MLR	MLR			
	comp=N,1μm,20.0s							
UGL				MLR	MLR			
	comp=E,1μm,20.0s							
UGL	**Uglegorsk**	**6.22**	**320**	*e*P		**Pn**	**01 18 18.6**	**+2.8**
UGL				AMB	AMB	01 18 19.5		
	comp=E,162nm,0.4s							
UGL				A	A	01 19 14.0		
	comp=E,99nm,0.9s							
UGL				A	A	01 19 14.0		
	comp=E,186nm,0.7s							
UGL				AMS	AMS	01 20 24.0		
	comp=E,1μm,20.0s							
UGL				AMS	AMS	01 20 24.0		
	comp=E,1μm,20.0s							
JANG	**Nango**	**6.41**	**233**	P		**Pn**	**01 18 16.4**	**-2.0**
JANG				*e*S		Sn	01 19 20.4	-1.0
MIY	**Miyakonagasawa**	**6.81**	**226**	P		**Pn**	**01 19 21.2**	**-2.6**
JIW	**Iwasaki**	**7.17**	**240**	P		**Pn**	**01 18 27.6**	**-1.2**
TYV	**Tymovskoe**	**7.39**	**332**	*e*P		**Pn**	**01 18 32.0**	**+0.3**
TYV				AMB	AMB	01 18 36.0		
	comp=E,46nm,0.8s							
TYV				AMB	AMB	01 18 36.0		
	comp=E,55nm,0.8s							
TYV				AMB	AMB	01 18 36.0		
	comp=E,88nm,0.8s							
TYV				AMS	AMS	01 21 18.0		
	comp=E,2μm,18.0s							
SKR	**Severo-Kuril's**	**8.21**	**38**	*e*PN		Pn	01 18 38.5	-4.3
SKR				*e*			01 20 19.5	
SKR				pmax	pmax			
	comp=Z,80nm,0.6s							
SKR				MLR	MLR			
	comp=Z,2μm,18.0s							
SKR	**Severo-Kuril's**	**8.21**	**38**	*e*P		Pn	01 18 38.5	-4.3
SKR				AMB	AMB	01 18 41.0		
	comp=Z,80nm,0.6s							
SKR				AMS	AMS	01 21 30.0		
	comp=Z,2μm,18.0s							
NKL	**Nikolayevsk**	**9.98**	**333**	⇓ *i* P		**Pn**	**01 19 06.8**	**-0.3**
NKL				AMB	AMB	01 19 08.2		
	comp=Z,83nm,1.1s							
NKL				AMB	AMB	01 19 08.2		
	comp=Z,55nm,1.1s							
NKL				AMB	AMB	01 19 08.2		
	comp=Z,120nm,1.1s							
NKL				*e*L	L	01 21 54.0		
PETK	**Petropavlovsk-**	**10.67**	**33**	PN		**Pn**	**01 19 16.8**	**+0.2**
PETK				pmax	pmax			
	comp=Z,2.0nm,0.3s							
PETK	**Petropavlovsk-**	**10.67**	**33**	P		**Pn**	**01 19 16.8**	**+0.2**
PETK	**Petropavlovsk-**	**10.67**	**33**	P		**Pn**	**01 19 16.8**	**+0.2**
	comp=Z,1.5nm,0.3s,baz=179,slow=12,SNR=11							
MAJO	**Matsushiro**	**10.96**	**227**	*e*PN		**Pn**	**01 19 18.8**	**-1.8**
MAJO	**Matsushiro**	**10.96**	**227**	*e*Pn		**Pn**	**01 19 18.8**	**-1.8**
MAT	**Matsushiro**	**10.96**	**227**	P		**Pn**	**01 19 18.5**	**-2.1**
MAT				*e*S		**Sn**	**01 21 22.6**	**+1.0**
MJAR	**Matsushiro Arr**	**10.96**	**227**	P		**Pn**	**01 19 19.2**	**-1.5**
MJAR	**Matsushiro Arr**	**10.96**	**227**	P		**Pn**	**01 19 19.2**	**-1.5**
	comp=Z,2.5nm,0.3s,baz=27,slow=13,SNR=25							
USRK	**Ussuriysk Arra**	**11.59**	**274**	P		**Pn**	**01 19 30.0**	**+0.9**
	comp=Z,2.0nm,0.3s,baz=85,slow=12,SNR=38							
USRK				LR	LR	01 23 42.6		
	comp=Z,695nm,20.7s,baz=244,slow=36							
MDJ	**Mudanjiang**	**13.26**	**277**	P		**Pn**	**01 19 51.9**	**+0.1**
MDJ				pmax	pmax			
	comp=Z,34nm,1.1s							
MDJ				pmax	pmax			
	comp=Z,680nm,4.8s							
MDJ				LR	LR			
	comp=N,600nm,4.6s							
MDJ				LR	LR			
	comp=E,150nm,4.2s							
MDJ				LR	LR			
	comp=Z,670nm,5.1s							
CN2	**Changchun**	**16.32**	**276**	*e*P		**Pn**	**01 20 31.9**	**+0.3**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
ZEA	**Zeya**	**16.48**	**312**	*e*P		**Pn**	**01 20 31.4**	**-2.1**
ZEA				AMB	AMB	01 20 32.9		
	comp=Z,41nm,1.0s							
ZEA				AMB	AMB	01 20 32.9		
	comp=Z,30nm,0.7s							
KSRS	**Korea Array**	**16.80**	**252**	P		**Pn**	**01 20 36.2**	**-1.4**
	comp=Z,1.2nm,0.3s,baz=59,slow=12,SNR=14							
KSAR	**Wonju Array Be**	**16.84**	**252**	P		**Pn**	**01 20 36.2**	**-1.9**
JNU	**Nakatsue**	**17.57**	**236**	P		**P**	**01 20 47.6**	**+0.1**
JNU	**Nakatsue**	**17.57**	**236**	P		**P**	**01 20 47.6**	**+0.1**
	comp=Z,2.2nm,0.3s,baz=33,slow=8.5,SNR=16							
SNY	**Shenyang**	**18.12**	**270**	⇑P		**Pn**	**01 20 55.3**	**+1.5**
SNY				pmax	pmax			
	comp=Z,28nm,0.8s							
FX1	**Attu Island--F**	**18.45**	**54**	P		**P**	**01 20 56.9**	**0.0**
FX1				*e*Pn		**Pn**	**01 20 58.9**	**+1.2**
FX1	**Attu Island--F**	**18.45**	**54**	P		**P**	**01 20 56.9**	**0.0**
	comp=Z,2.5nm,0.3s,baz=243,slow=4.5,SNR=10							
SEY	**Seymchan**	**18.65**	**6**	⇑ *e*P		**P**	**01 20 59.0**	**0.0**
CLNS	**Chul'man**	**19.14**	**319**	*e*P		**Pn**	**01 21 08.0**	**+2.1**
CLNS				pmax	pmax			
	comp=Z,15nm,0.8s							
CLNS				pmax	pmax			
	comp=E,7.0nm,0.9s							
CLNS				pmax	pmax			
	comp=N,9.0nm,0.8s							
YAK	**Yakutsk**	**20.64**	**335**	*e*P		**P**	**01 21 20.8**	**+0.2**
YAK				*e**PP		**pP**	**01 21 37.7**	**+3.7**
YAK				*e*S		**S**	**01 25 02.0**	**-5.4**
YAK				*e*			01 25 29.6	
YAK				*e**SS		sS	01 25 35.1	+5.6
YAK				*e*			01 32 40.1	
YAK				pmax	pmax			
	comp=Z,37nm,0.9s							
YAK				pmax	pmax			
	comp=N,8.0nm,0.9s							
YAK				smax	smax			
	comp=N,72nm,2.3s							
YAK				smax	smax			
	comp=E,129nm,2.7s							
BJI	**Beijing**	**24.00**	**271**	P		**P**	**01 21 55.9**	**+0.6**
BJI				pmax	pmax			
	comp=Z,100nm,0.8s							
BJI				pmax	pmax			
	comp=Z,170nm,3.6s							
BILL	**Bilibino**	**25.46**	**16**	*e*P		**P**	**01 22 06.4**	**-1.9**
BILL				*i*			01 22 23.9	
BILL				*i*			01 22 46.7	
BILL				*i*			01 25 38.4	
BILL				pmax	pmax			
	comp=Z,24nm,1.1s							
NJ2	**Nanjing**	**26.00**	**252**	*e*P		**P**	**01 22 13.6**	**+0.1**
NJ2				pP		**pP**	**01 22 26.4**	**-2.3**
NJ2				sP		**sP**	**01 22 32.8**	**-3.3**
NJ2				S		**S**	**01 26 43.0**	**+3.3**
NJ2				sS		**sS**	**01 27 09.0**	**+3.3**
NJ2				pmax	pmax			
	comp=Z,70nm,0.8s							
NJ2				LR	LR			
	comp=N,350nm,13.6s							
NJ2				LR	LR			
	comp=E,560nm,12.6s							
NJ2				LR	LR			
	comp=Z,610nm,18.0s							
HHC	**Hu-ho-hao-te**	**27.02**	**275**	*e*P		**P**	**01 22 22.9**	**+0.1**
HHC				pP		**pP**	**01 22 36.8**	**-1.2**
HHC				sP		**sP**	**01 22 44.1**	**-1.2**
HHC				S		**S**	**01 26 52.8**	**-3.1**
HHC				ScS		**ScS**	**01 33 06.8**	**-1.7**
HHC				pmax	pmax			
	comp=Z,46nm,0.4s							
HHC				pmax	pmax			
	comp=Z,390nm,5.9s							
HHC				LR	LR			
	comp=N,700nm,15.7s							
HHC				LR	LR			
	comp=E,850nm,15.1s							
HHC				LR	LR			
	comp=Z,830nm,17.3s							
BTO	**Baotou**	**28.20**	**276**	*e*P		**P**	**01 22 35.8**	**+2.4**
ULN	**Ulaanbaatar**	**28.43**	**292**	*e*P		**P**	**01 22 35.1**

comp=N,620nm,18.6s
CD2 LR LR
comp=E,700nm,19.6s
CD2 LR LR
comp=Z,680nm,24.5s
GYA Guiyang 37.81 256 P **P** **01 23 58.0 +0.9**
GYA pP **pP** **01 24 12.6 -0.1**
GYA sP **sP** **01 24 19.4 -0.6**
GYA PP **PnPn** **01 25 27.4 +1.2**
GYA S **S** **01 29 43.3 -0.4**
GYA ScP **ScP** **01 29 55.8 +1.3**
GYA ScS **ScS** **01 34 03.0 -0.8**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,5.0s
GYA LR LR
comp=N,340nm,17.3s
GYA LR LR
comp=E,220nm,18.0s
GYA LR LR
comp=Z,360nm,17.8s
SPU Mount Spurr 38.24 43 *e*P **P** **01 24 01.0 +0.8**
TRF Thorofare Moun 39.01 39 *e*P **P** **01 24 06.6 -0.2**
comp=Z,5.0nm,0.8s
COLD Coldfoot 39.14 33 *e*P **P** **01 24 07.4 -0.2**
comp=Z,5.4nm,0.8s
SML Sawmill 39.99 41 *e*P **P** **01 24 15.2 +0.4**
SML pmax pmax
comp=Z,5.0nm,0.8s
SML Sawmill 39.99 41 *e*P **P** **01 24 15.2 +0.4**
comp=Z,4.9nm,0.8s
COLA College 40.05 37 *e*P **P** **01 24 16.1 +0.9**
COLA pmax pmax
comp=Z,18nm,0.8s
COLA College 40.05 37 *e*P **P** **01 24 16.1 +0.9**
comp=Z,18nm,0.8s
ILAR Eielson Array 40.47 37 P **P** **01 24 18.1 -0.6**
ILAR ScP **ScP** **01 30 02.2 -1.7**
ILAR Eielson Array 40.47 37 P **P** **01 24 18.1 -0.6**
comp=Z,5.6nm,0.9s,baz=256,slow=7.1,SNR=28
ILAR ScP **ScP** **01 30 02.2 -1.7**
comp=Z,0.6nm,0.9s,baz=281,slow=4.7,SNR=4.6
ZAA0 Zalesovo Array 41.15 307 *e*P **P** **01 24 24.0 -0.4**
ZALV Zalesovo Beam 41.15 307 P **P** **01 24 24.5 +0.1**
ZALV 01 26 22.8
ZALV pmax pmax
comp=Z,2.0nm,0.5s
ZALV Zalesovo Beam 41.15 307 P **P** **01 24 24.4 +0.1**
ZALV PcP **PcP** **01 26 22.8 +0.3**
ZALV Zalesovo Beam 41.15 307 P **P** **01 24 24.4 +0.1**
comp=Z,2.3nm,0.5s,baz=76,slow=7.6,SNR=12
ZALV PcP **PcP** **01 26 22.8 +0.3**
comp=Z,18nm,0.6s,baz=79,slow=3.0,SNR=34
KMI Kunming 41.39 258 ⇑P **P** **01 24 27.6 +0.6**
KMI pP **pP** **01 24 43.4 +0.6**
KMI sP **sP** **01 24 50.3 +0.3**
KMI PP **PnPn** **01 26 07.3 -1.3**
KMI S **S** **01 30 37.8 +0.3**
KMI sS **sS** **01 31 03.9 -0.3**
KMI SS SS 01 33 35.8 -7.5
KMI pmax pmax
comp=Z,39nm,1.0s
KMI pmax pmax
comp=Z,210nm,3.1s
KMI LR LR
comp=N,400nm,13.9s
KMI LR LR
comp=E,520nm,20.9s
KMI LR LR
comp=Z,630nm,21.2s
NVS Novosibirsk 41.84 308 *e*P **P** **01 24 30.5 +0.5**
NVS *e* 01 26 04.5
NVS pmax pmax
comp=Z,26nm,2.5s
NVS pmax pmax
comp=N,12nm,2.4s
NVS pmax pmax
comp=E,5.0nm,3.0s
BMRM Bremner River 41.87 42 *e*P **P** **01 24 30.8 +0.5**
comp=E,12nm,1.0s
DAV Davao City (W) 42.15 215 LR LR 01 40 46.5
comp=E,270nm,18.6s,baz=128,slow=34
WMQ Urumqi 42.51 291 P **P** **01 24 37.0 +1.2**
WMQ pP **pP** **01 24 53.0 +1.4**
WMQ sP **sP** **01 25 00.0 +1.2**
WMQ PP **PP** **01 26 19.0 +3.9**
WMQ PcS **PcS** **01 30 21.0 +1.6**
WMQ S **S** **01 30 54.0 +0.6**
WMQ sS **sS** **01 31 21.0 +0.8**
WMQ SS **SS** **01 33 58.0 -6.6**
WMQ ScS **ScS** **01 34 31.0 -0.1**
WMQ pmax pmax
comp=Z,21nm,1.0s
WMQ pmax pmax
comp=Z,75nm,5.0s
WMQ LR LR
comp=N,320nm,16.0s
WMQ LR LR
comp=E,120nm,15.0s
WMQ LR LR
comp=Z,170nm,15.0s
EGAK Eagle 42.91 36 *e*P **P** **01 24 38.2 -0.4**
comp=Z,12nm,0.8s
MK31 Makanchi Array 44.90 297 *e*P **P** **01 24 54.8 -0.1**
MK31 *e* 01 26 35.7
MK31 Makanchi Array 44.90 297 *e*P **P** **01 24 54.8 -0.1**
MK31 ePcP **PcP** **01 26 35.7 +0.3**
MKAR Makanchi Array 44.90 297 *e*P **P** **01 24 54.9 0.0**
MKAR 01 26 35.5
MKAR Makanchi Array 44.90 297 *e*P **P** **01 24 54.9 0.0**
MKAR PcP **PcP** **01 26 35.5 +0.2**
MKAR Makanchi Array 44.90 297 P **P** **01 24 54.8 -0.1**
comp=Z,19nm,0.8s,baz=77,slow=8.2,SNR=69
MKAR PcP **PcP** **01 26 35.5 +0.2**
comp=Z,8.5nm,0.7s,baz=59,slow=3.9,SNR=14
KURK Kurchatov 45.73 304*ce*P **P** **01 25 01.2 -0.1**
KURK pmax pmax
comp=Z,12nm,0.8s
KURK Kurchatov 45.73 304 *e*P **P** **01 25 00.9 -0.4**
KURK PcP **PcP** **01 26 38.5 +0.4**
KURBB Kurchatov Arra 45.82 304 P **P** **01 25 02.1 +0.1**
comp=Z,10nm,0.8s,baz=70,slow=8.6,SNR=47
KURBB PcP **PcP** **01 26 38.5 +0.1**
comp=Z,12nm,0.7s,baz=75,slow=3.5,SNR=24
CHTO Chiang Mai 48.19 254 *e*P **P** **01 25 21.8 +0.9**
CHTO pmax pmax
comp=Z,34nm,0.8s
CHTO Chiang Mai 48.19 254 *e*P **P** **01 25 21.8 +0.9**
comp=Z,34nm,0.8s
CMAR Chiang Mai Arr 48.44 254 P **P** **01 25 23.8 +1.0**
CMAR PcP **PcP** **01 26 49.0 +0.7**
CMAR Chiang Mai Arr 48.44 254 P **P** **01 25 23.8 +1.0**
comp=Z,11nm,0.8s,baz=38,slow=7.3,SNR=48
CMAR PcP **PcP** **01 26 49.0 +0.7**
comp=Z,1.1nm,0.4s,baz=122,slow=0.9,SNR=4.3
SHL Shillong 48.81 267 *e*P **P** **01 25 26.1 +0.3**
BVAR Borovoye Array 49.61 309 PcP **PcP** **01 26 51.8 -0.1**
BVAR Borovoye Array 49.61 309 PcP **PcP** **01 26 51.8 -0.1**
comp=Z,5.3nm,0.5s,baz=64,slow=3.4,SNR=10
DLBC Dease Lake 49.64 43 *e*P **P** **01 25 33.1 +1.5**
DLBC Dease Lake 49.64 43 P **P** **01 25 32.3 +0.7**
comp=Z,4.0nm,0.8s,baz=289,slow=12,SNR=10
BRVK Borovoye 49.66 309⇑ *e*P **P** **01 25 32.5 +0.9**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
BRVK Borovoye 49.66 309 *e*P **P** **01 25 32.6 +0.9**
TAPN Taplejung 50.73 272 *e*P **P** **01 25 41.2 +0.7**
comp=Z,60nm,0.6s
ULHL Ulahol 50.76 294 P **P** **01 25 41.6 +1.2**
SNR=5.3
TKM2 Tokmak 2 50.86 295 *e*P **P** **01 25 42.2 +1.0**
TKM2 pmax pmax
comp=Z,10.0nm,0.8s
TKM2 Tokmak 2 50.86 295 *e*P **P** **01 25 42.2 +1.0**
comp=Z,10nm,0.8s
TKM2 Tokmak 2 50.86 295 P **P** **01 25 42.3 +1.2**
SNR=7.1
ODAN Odare 51.25 271 *e*P **P** **01 25 44.7 +0.4**
comp=Z,45nm,0.7s
USP Ospenovka 51.40 296 P **P** **01 25 45.6 +0.6**
SNR=13
KBK Karagaybulak 51.40 295 P **P** **01 25 46.3 +1.1**
SNR=16
KZA Kyzart 51.49 295 P **P** **01 25 47.2 +1.0**
SNR=35
GUN Gumba 51.71 273 *e*P **P** **01 25 48.3 +0.5**
comp=Z,187nm,0.8s
AAK Ala-Archa 51.71 296*c i*P **P** **01 25 47.7 +0.2**
AAK pmax pmax
comp=Z,12nm,0.7s
AAK Ala-Archa 51.71 296 *e*P **P** **01 25 47.9 +0.4**
comp=Z,1.6nm,0.8s
AAK PcP **PcP** **01 27 00.6 +0.4**
AAK Ala-Archa 51.71 296 P **P** **01 25 47.2 -0.3**
comp=Z,52nm,0.6s,SNR=7.5
AAK Ala-Archa 51.71 296 P **P** **01 25 48.2 +0.7**
comp=Z,6.8nm,0.8s,baz=114,slow=5.0,SNR=21
AAK PcP **PcP** **01 27 00.6 +0.4**
comp=Z,3.1nm,0.8s,baz=318,slow=7.5,SNR=4.7
RAMN Ramite 51.76 272 *e*P **P** **01 25 48.5 +0.4**
comp=Z,290nm,0.5s
EKS2 Erkin-Say 52.16 296 *e*P **P** **01 25 51.3 +0.5**
EKS2 pmax pmax
comp=Z,11nm,0.8s
EKS2 Erkin-Say 52.16 296 *e*P **P** **01 25 51.3 +0.5**
comp=Z,11nm,0.8s
EKS2 Erkin-Say 52.16 296 P **P** **01 25 51.3 +0.5**
SNR=14
KKN Kakani 52.20 274 *e*P **P** **01 25 51.9 +0.5**
comp=Z,107nm,0.8s
PKI Pulchoki 52.24 273 *e*P **P** **01 25 52.1 +0.3**
comp=Z,78nm,0.8s
PKIN Phulchoki 52.25 273 *e*P **P** **01 25 52.0 +0.2**
comp=Z,43nm,0.6s
PKIN Phulchoki 52.25 273 *e*P **P** **01 25 52.3 +0.5**
comp=Z,57nm,0.6s
KSH Kashi 52.28 291 *e*P P 01 25 55.4 +3.7
KSH pP pP 01 26 11.1 +3.1
KSH sP sP 01 26 18.3 +3.2
KSH PcP **PcP** **01 27 04.0 +1.7**
KSH PP PP 01 27 56.3 +5.8
KSH ScP **ScP** **01 30 56.1 +2.4**
KSH PcS **PcS** **01 31 02.3 +1.5**
KSH S **S** **01 33 15.1 +2.8**
KSH sS sS 01 33 41.3 +1.6
KSH ScS **ScS** **01 35 36.3 +0.4**
KSH SS **SS** **01 36 51.6 +1.5**
KSH pmax pmax
comp=Z,42nm,1.3s
KSH LR LR
comp=N,66nm,3.5s
KSH LR LR
comp=E,110nm,4.6s
KSH LR LR
comp=Z,210nm,4.5s
DMN Daman 52.44 274 *e*P **P** **01 25 53.8 +0.6**
comp=Z,135nm,0.7s
AML Almayashu 52.47 295 P **P** **01 25 54.2 +0.8**
SNR=18
DANN Dangsing 52.96 275 *e*P **P** **01 25 58.0 +0.9**
comp=Z,266nm,0.8s
SVE Sverdlovsk 53.12 317⇓ *e*P **P** **01 25 57.4 0.0**
SVE pmax pmax
comp=Z,14nm,0.9s
KOLN Koldanda 53.42 275 *e*P **P** **01 26 01.1 +0.8**
comp=Z,85nm,0.7s
PYUN Piuthan 53.66 275 *e*P **P** **01 26 02.8 +0.7**
comp=Z,239nm,0.9s
KK31 Karatay Array 54.02 298 *i*P **P** **01 26 03.7 -0.6**
KK31 pmax pmax
comp=Z,4.0nm,0.5s
KKAR Karatay Array 54.02 298 *e*P **P** **01 26 04.0 -0.3**
KKAR Karatay Array 54.02 298 *e*P **P** **01 26 04.0 -0.3**
RES Resolute Bay 54.06 17 *e*P **P** **01 26 03.6 -0.5**
comp=Z,76nm,0.8s
BOK Bokaro 54.19 269 *e*P **P** **01 26 06.4 +0.6**
BOK AMB AMB 01 26 07.0
comp=Z,21nm,0.6s
ARU Arti 54.32 317*c i*P **P** **01 26 05.8 -0.4**
ARU 01 27 09.0
ARU S **S** **01 33 41.1 +2.0**
ARU SS **SS** **01 37 16.2 -5.0**
ARU pmax pmax
comp=Z,23nm,1.2s
YKW3 Yellowknife Ar 54.75 34 *e*P **P** **01 26 09.2 0.0**
comp=Z,0.2nm,0.9s
YKA Yellowknife Ar 54.79 34 P **P** **01 26 09.8 +0.3**
YKA PcP **PcP** **01 27 11.4 +0.3**
YKA ScP **ScP** **01 31 04.4 +0.3**
YKA Yellowknife Ar 54.79 34 P **P** **01 26 09.8 +0.3**
comp=Z,9.3nm,0.7s,baz=299,slow=6.8,SNR=101
YKA PcP **PcP** **01 27 11.4 +0.3**
comp=Z,1.3nm,0.6s,baz=307,slow=3.8,SNR=4.1
YKA ScP **ScP** **01 31 04.4 +0.3**
comp=Z,0.2nm,0.8s,baz=290,slow=4.2,SNR=3.9
KAPI Kappang 55.49 215 P **P** **01 26 14.5 -0.6**
KAPI Kappang 55.49 215 P **P** **01 26 14.5 -0.6**
comp=Z,3.4nm,0.5s,baz=135,slow=7.1,SNR=4.3
DDI Dehra Dun 55.85 281 *e*P **P** **01 26 18.2 +0.5**
DHRM DHARAMSHALA 55.98 284 *e*P **P** **01 26 18.6 -0.2**
DHRM AMB AMB 01 26 20.4
comp=Z,58nm,2.9s
SMLA Simla 56.01 282 *e*P **P** **01 26 19.0 +0.2**
DGPR DIGLIPUR 56.24 254 *e*P **P** **01 26 21.6 +1.1**
AB31 Akbulak array 57.18 309 P **P** **01 26 26.7 -0.1**
AB31 pmax pmax
comp=Z,4.0nm,0.3s
ABKAR Akbulak array 57.18 309 *e*P **P** **01 26 26.8 0.0**
LVZ Lovozero 57.44 336*ce*P **P** **01 26 26.7 -1.7**
LVZ pmax pmax
comp=Z,120nm,2.5s
AKTO Aktyubinsk 57.62 311 P **P** **01 26 29.2 -0.7**
AKTO 01 27 22.6
AKTO pmax pmax
comp=Z,3.0nm,0.5s
AKTO Aktyubinsk 57.62 311 P **P** **01 26 29.2 -0.7**
AKTO PcP **PcP** **01 27 22.6 +0.1**
AKTO Aktyubinsk 57.62 311 P **P** **01 26 29.2 -0.7**
comp=Z,2.5nm,0.5s,baz=58,slow=5.8,SNR=18
AKTO PcP **PcP** **01 27 22.6 +0.1**
comp=Z,0.9nm,0.5s,baz=60,slow=4.0,SNR=4.7
NLWA Neilton Lookou 58.02 53 *e*P **P** **01 26 34.5 +1.6**
comp=Z,10.0nm,0.9s
KEV Kevo 58.29 340 *e*P **P** **01 26 31.2 -3.1**
KEV pmax pmax
comp=Z,2.0nm,0.3s
KEV Kevo 58.29 340 *ep* **P** **01 26 31.2 -3.1**
comp=Z,1.5nm,0.3s
DAG Danmarks Havn 58.74 356 *i*P **P** **01 26 37.5 +0.2**
comp=Z,3.2nm,0.8s
ARCES ARCESS Array B 58.82 340 P **P** **01 26 37.8 -0.2**
ARCES PcP **PcP** **01 27 27.3 +0.4**
ARCES ARCESS Array B 58.82 340 P **P** **01 26 37.8 -0.2**
comp=Z,3.2nm,0.8s,baz=39,slow=7.8,SNR=24
ARCES PcP **PcP** **01 27 27.3 +0.4**
comp=Z,3.3nm,0.6s,baz=61,slow=4.2,SNR=6.6
VIS Vishakhapatnam 59.91 266 *ex* **PP** **01 28 56.6 -2.3**
CMBY CAMPBELL BAY 60.01 248 *ex* PcP 01 27 24.3 -8.2
CMBY AMB AMB 01 27 33.6
comp=Z,62nm,2.6s
AJM Ajmer 60.55 279 *e*P **P** **01 26 49.9 -0.7**
BHPL Bhopal 60.59 275 *e*P **P** **01 26 50.2 -0.6**
NEW Newport 61.30 49 *e*P **P** **01 26 55.7 +0.3**
comp=Z,8.9nm,0.9s
NEW Newport 61.30 49⇑P **P** **01 26 55.8 +0.4**
baz=61,SNR=7.9
A12A Yaak River Ran 61.70 48⇓P **P** **01 26 58.7 +0.7**
baz=62
JOF Joensuu 61.78 332 *e*P **P** **01 26 57.1 -1.2**
JOF pmax pmax
comp=Z,7.0nm,0.4s
JOF Joensuu 61.78 332 *ep* **P** **01 26 57.1 -1.2**
comp=Z,6.8nm,0.4s
C11A Tepee Creek (N 62.02 49⇓P **P** **01 27 00.8 +0.6**
baz=62
A13A Flathead Natio 62.36 48⇑P **P** **01 27 03.2 +0.7**
baz=62
WALA Waterton Lakes 62.55 47 *e*P **P** **01 27 03.9 +0.1**
comp=Z,0.3nm,0.9s
B13A Whitefish 62.66 48⇓P **P** **01 27 05.6 +1.1**
baz=62,SNR=12
BSMT Bassoo Peak 62.81 49 *e*P **P** **01 27 06.6 +1.0**
A14A Double T Ranch 62.85 47⇓P **P** **01 27 06.3 +0.4**
baz=63,SNR=7.6
BLMT Blacktail Moun 62.94 48 *e*P **P** **01 27 08.0 +1.5**
D12A Red Ives Fores 62.98 50⇓P **P** **01 27 07.3 +0.6**
baz=63
C13A Hot Springs 63.02 49⇑P **P** **01 27 07.6 +0.7**
baz=63,SNR=7.0
JTMT Jette 63.14 49 *e*P **P** **01 27 08.8 +1.1**
SUMG Summit 63.16 2 *e*P **P** **01 27 07.1 -0.7**
SUMG Summit 63.16 2 *e*P **P** **01 27 07.1 -0.7**
SUMG Summit 63.16 2 *i*P **P** **01 27 06.8 -1.0**
comp=Z,9.2nm,0.7s
A15A Johnson Ranch, 63.21 47⇑P **P** **01 27 08.4 +0.2**
baz=63
B14A Marquette Ranc 63.30 48⇑P **P** **01 27 09.6 +0.7**
baz=63
C14A Swan Lake 63.41 48⇓P **P** **01 27 10.3 +0.8**
baz=63
SWMT Swartz Lake 63.44 49 *e*P **P** **01 27 10.6 +0.8**
D13A Huson 63.44 49⇓P **P** **01 27 10.1 +0.4**
baz=63,SNR=11
HYB Hyderabad 63.53 269 *i*P **P** **01 27 10.0 -0.6**
HYB Hyderabad 63.53 269 *e*P **P** **01 27 10.6 -0.1**
HYB AMB AMB 01 27 10.8
comp=Z,32nm,0.9s
B15A Bradely Ranch, 63.71 47⇓P **P** **01 27 11.9 +0.5**
baz=64,SNR=5.0
A16A West Butte Ran 63.82 46⇓P **P** **01 27 13.0 +0.7**
baz=64
F12A Elk City 63.82 51⇑P **P** **01 27 13.0 +0.7**
baz=64
SLMT Seeley Lake 63.87 49 *e*P **P** **01 27 13.3 +0.6**
MSO Missoula 63.88 49 *e*P **P** **01 27 13.1 +0.4**
comp=Z,7.1nm,1.0s
MSO Missoula 63.88 49⇓P **P** **01 27 13.1 +0.4**
baz=64,SNR=9.7
D14A Greenough 63.97 49⇓P **P** **01 27 14.0 +0.7**
baz=64,SNR=14
E13A Victor 63.99 50⇓P **P** **01 27 13.6 +0.2**
baz=64
KAF Kangasniemi 63.99 334 *e*P **P** **01 27 11.5 -1.4**
KAF pmax pmax
comp=Z,4.0nm,0.5s
KAF Kangasniemi 63.99 334 *ep* **P** **01 27 11.5 -1.4**
comp=Z,3.6nm,0.5s
C15A Salmond Ranch, 64.02 48⇓P **P** **01 27 14.5 +1.0**
baz=64,SNR=7.2
B16A M & M Farms, S 64.09 47⇓P **P** **01 27 14.4 +0.4**
baz=64,SNR=5.6
G12A Big Creek, Yel 64.17 51⇑P **P** **01 27 14.6 0.0**
baz=64
CTA Charters Tower 64.27 182 P **P** **01 27 14.6 -0.6**
CTA Charters Tower 64.27 182 P **P** **01 27 14.6 -0.6**
comp=Z,3.6nm,0.6s,baz=22,slow=5.9,SNR=4.5
A17A Triple J Farms 64.28 46⇑P **P** **01 27 15.6 +0.4**
baz=64,SNR=5.5
F13A Darby 64.31 50⇑P **P** **01 27 15.8 +0.3**
baz=64
E14A Clinton 64.38 49⇑P **P** **01 27 16.2 +0.1**
baz=64,SNR=5.6
BEKR Beckworth 64.43 59 *e*P **P** **01 27 16.9 +0.5**
comp=Z,1.7nm,0.8s
IMYA Miami 64.44 297 *e*P **P** **01 27 17.6 +1.0**
C16A Fuhringer Ranc 64.46 47⇓P **P** **01 27 17.0 +0.6**
baz=64,SNR=20
D15A Lincoln 64.52 48⇓P **P** **01 27 17.3 +0.4**
baz=64
FIA1 FINESS Array S 64.56 333 *e*P **P** **01 27 15.9 -0.7**
FINES FINESS Array B 64.56 333 P **P** **01 27 15.1 -1.5**
FINES FINESS Array B 64.56 333 P **P** **01 27 15.1 -1.5**
comp=Z,7.9nm,0.5s,baz=42,slow=7.5,SNR=44
B17A L&G Farms, Che 64.64 46⇑P **P** **01 27 18.0 +0.5**
baz=64
FFC Flin Flon 64.68 37 *e*P **P** **01 27 18.2 +0.6**
FFC pmax pmax
comp=Z,31nm,1.0s
FFC Flin Flon 64.68 37 *e*P **P** **01 27 18.2 +0.6**
comp=Z,31nm,1.0s
ABKT Ailbek 64.73 299 P **P** **01 27 18.9 +0.6**
comp=Z,158nm,0.5s,SNR=11
A18A Metzger Ranch, 64.74 46⇑P **P** **01 27 18.5 +0.3**
baz=64
H12A Diamond D Ranc 64.78 52⇓P **P** **01 27 19.1 +0.4**
baz=65
G13A Cobalt 64.80 51⇓P **P** **01 27 18.7 0.0**
baz=65,SNR=7.2
E15A Deer Lodge 64.84 49⇑P **P** **01 27 19.5 +0.6**
baz=65,SNR=6.8
MFID Camas Ranch 64.94 53⇑P **P** **01 27 20.3 +0.7**
baz=65
D16A Dana Ranch, Ca 65.04 48⇓P **P** **01 27 20.9 +0.7**
baz=65,SNR=7.4
IMOG Moghan 65.07 297 *e*P **P** **01 27 21.9 +1.1**
C17A Wharram Farm, 65.08 47⇓P **P** **01 27 21.0 +0.6**
baz=65
IPAY Payeh 65.08 297 *e*P **P** **01 27 22.1 +1.3**
HRY Holter Researc 65.09 48 *e*P **P** **01 27 21.9 +1.3**
I12A Atlanta 65.10 52⇑P **P** **01 27 21.5 +0.7**
baz=65,SNR=6.6
B18A Beardsley Farm 65.11 46⇑P **P** **01 27 21.3 +0.7**
baz=65,SNR=7.4
H13A Challis 65.11 51⇓P **P** **01 27 21.1 +0.3**
baz=65
SCO Scoresbysund 65.13 356 *i*P **P** **01 27 20.2 0.0**
comp=Z,3.5nm,0.8s
G14A Jackson 65.13 50⇑P **P** **01 27 20.9 -0.1**
baz=65
OBN Obninsk 65.16 324 *e*P **P** **01 27 19.9 -0.7**
OBN *e* 01 27 52.1
OBN pmax pmax
comp=Z,15nm,1.2s
OBN MLR MLR
comp=Z,100nm,17.0s
IKRD Kardeh 65.19 298 *e*P **P** **01 27 18.5 -3.0**
F15A Butte 65.28 49⇑P **P** **01 27 22.5 +0.5**
baz=65,SNR=12
E16A East Helena 65.29 48⇑P **P** **01 27 22.7 +0.9**
baz=65
A19A Klindworth Far 65.29 45⇑P **P** **01 27 22.4 +0.7**
baz=65,SNR=10
LRM Limekiln Ridge 65.32 49 *e*P **P** **01 27 22.8 +0.6**
ISFR Sfrayin 65.34 298 *e*P **P** **01 27 22.7 +0.2**
WRA Warramunga Arr 65.34 194 P **P** **01 27 21.6 -0.6**
WRA Warramunga Arr 65.34 194 P **P** **01 27 21.6 -0.6**
comp=Z,9.3nm,0.9s,baz=14,slow=6.8,SNR=10.0
EGMT Eagleton 65.36 46 *e*P **P** **01 27 23.2 +1.0**
comp=Z,16nm,0.9s
EGMT Eagleton 65.36 46⇓P **P** **01 27 22.8 +0.6**
baz=65
D17A Six Diamond Ra 65.42 47⇓P **P** **01 27 23.1 +0.4**
baz=65,SNR=7.7
B19A Brinkman Farms 65.50 45⇑P **P** **01 27 23.8 +0.8**
baz=65,SNR=9.1
CMB Columbia Colle 65.53 60 *e*P **P** **01 27 24.4 +0.9**
CMB pmax pmax
comp=Z,41nm,2.5s
CMB Columbia Colle 65.53 60 *e*P **P** **01 27 24.4 +0.9**
comp=Z,40nm,2.5s
VRHR Novokhopersk 65.58 318 *e*P **P** **01 27 21.5 -2.0**
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=Z,20nm,0.8s
VRHR pmax pmax
comp=E,9.0nm,0.6s
FITZ Fitzroy Crossi 65.59 204 P **P** **01 27 23.4 -0.4**
FITZ Fitzroy Crossi 65.59 204 P **P** **01 27 23.4 -0.4**
comp=E,8.0nm,1.0s,baz=27,slow=4.5,SNR=2.5
I13A Wildhorse Cree 65.60 52⇓P **P** **01 27 24.6 +0.6**
baz=65
G15A Dillon 65.71 50⇓P **P** **01 27 25.3 +0.6**
baz=66,SNR=7.6
A20A Cobblestone Ra 65.74 45⇑P **P** **01 27 25.3 +0.7**
baz=66,SNR=6.9
E17A Martinsdale 65.77 48⇑P **P** **01 27 25.8 +0.8**
baz=66,SNR=8.7
D18A Linhart Farms, 65.86 47⇓P **P** **01 27 26.3 +0.8**
baz=66
BOZ Bozeman (W) 65.88 49 *e*P **P** **01 27 26.6 +0.9**
BOZ pmax pmax
comp=Z,11nm,1.0s
BOZ Bozeman (W) 65.88 49 *e*P **P** **01 27 26.6 +0.9**
comp=Z,11nm,1.0s
BOZ Bozeman (W) 65.88 49⇑P **P** **01 27 26.5 +0.9**
baz=66,SNR=12
J13A Cove Ranch, Pi 65.89 52⇑P **P** **01 27 26.8 +1.0**
baz=66
C19A Slack Wire Ran 65.91 46⇑P **P** **01 27 26.6 +0.9**
baz=66,SNR=13
I14A Mackay 65.96 52⇑P **P** **01 27 27.1 +0.8**
baz=66,SNR=6.9
B20A Solberg Farm, 65.97 45⇑P **P** **01 27 27.1 +1.0**
baz=66
G16A Moss Hill, Enn 66.05 50⇓P **P** **01 27 27.3 +0.5**
baz=66,SNR=11

BHJ **Bhuj** 66.10 280 *eP* P 01 27 26.7 -0.5
POO **Poona** 66.17 273 *eP* P 01 27 28.0 +0.2
POO AMB AMB 01 27 28.0
comp=Z,42nm,1.3s
E18A **Harlowton** 66.21 48 ⇑P P 01 27 28.6 +0.9
baz=66
F17A **Fitzpatrick Pl** 66.23 48 ⇑P P 01 27 28.9 +0.9
baz=66
J14A **Carey** 66.31 52 ⇑P P 01 27 29.6 +1.2
baz=66
C20A **Veseth Ranch,** 66.46 46 ⇑P P 01 27 30.2 +0.9
baz=66,SNR=12
G17A **Pierce Place,** 66.57 49 ⇓P P 01 27 31.0 +0.9
baz=66
NVAR **Mina Array Bea** 66.57 59 P P 01 27 31.2 +0.8
NVAR **Mina Array Bea** 66.57 59 P P 01 27 31.2 +0.8
comp=Z,3.8nm,0.7s,baz=285,slow=7.1,SNR=31
VSR **Storozhevoye** 66.66 320 *eP* P 01 27 30.0 -0.4
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,9.0nm,0.7s
VSR MLR MLR
comp=Z,1μm,21.0s
VSR MLR MLR
comp=N,960nm,22.0s
VSR MLR MLR
comp=E,1μm,22.0s
A22A **Carney Farms,** 66.67 44 ⇓P P 01 27 31.1 +0.5
baz=66,SNR=17
H16A **Russell Place,** 66.69 50 ⇓P P 01 27 31.6 +0.6
baz=66,SNR=6.0
KAD **Karad** 66.73 272 *ex* P 01 27 37.0 +5.6
F18A **Big Timber** 66.74 48 ⇓P P 01 27 32.0 +0.9
baz=66,SNR=7.1
D20A **Manuel Ranch,** 66.80 46 ⇑P P 01 27 32.3 +0.9
baz=67,SNR=9.7
C21A **Desert Coulee** 66.84 45 ⇓P P 01 27 32.5 +0.8
baz=67
J15A **Blackfoot** 66.87 51 ⇓P P 01 27 33.0 +0.9
baz=67
E19A **Rath Farm, Rou** 66.87 47 ⇓P P 01 27 32.8 +0.9
baz=67,SNR=6.1
K14A **Jones Ranch, D** 67.00 53 ⇑P P 01 27 33.8 +0.9
baz=67
I16A **Newdale** 67.09 51 ⇑P P 01 27 34.7 +1.2
baz=67
F19A **Roth Farm, Mol** 67.18 48 ⇓P P 01 27 34.8 +0.8
baz=67,SNR=6.9
LKWY **Lake** 67.24 49 *eP* P 01 27 37.6 +3.1
LKWY pmax pmax
comp=Z,4.0nm,0.8s
LKWY **Lake** 67.24 49 *eP* P 01 27 37.6 +3.1
comp=Z,4.3nm,0.8s
H17A **Grant Village** 67.25 50 ⇑P P 01 27 36.4 +1.8
baz=67,SNR=8.7
K15A **Arbon** 67.27 52 ⇑P P 01 27 36.0 +1.3
baz=67
IMW **Indian Meadow** 67.38 50 *eP* P 01 27 36.8 +1.4
D21A **La Casta Ranch** 67.40 46 ⇑P P 01 27 36.3 +1.1
baz=67
ITEG **Tejag** 67.45 294 *eP* P 01 27 36.3 +0.3
B23A **Brockton** 67.47 44 ⇓P P 01 27 36.1 +0.5
baz=67,SNR=6.7
I17A **Pilgrim Ck.** 67.56 50 ⇓P P 01 27 38.1 +1.5
baz=67,SNR=5.4
H18A **Shoshone NF, C** 67.56 49 ⇓P P 01 27 37.3 +0.8
baz=67
MOOW **Moose Ponds** 67.58 50 *eP* P 01 27 38.0 +1.4
comp=Z,5.3nm,1.1s
TPAW **Teton Pass** 67.63 51 *eP* P 01 27 38.8 +1.8
comp=Z,6.9nm,0.9s
K16A **Soda Springs** 67.71 51 ⇑P P 01 27 38.7 +1.3
baz=68
LOHW **Long Hollow** 67.75 50 *eP* P 01 27 39.3 +1.6
comp=Z,2.9nm,0.8s
D22A **Cohagen** 67.76 45 ⇓P P 01 27 38.2 +0.7
baz=68
C23A **Lambert** 67.82 44 ⇓P P 01 27 38.3 +0.4
baz=68,SNR=6.1
J17A **Brown Place, J** 67.85 51 ⇓P P 01 27 39.2 +0.9
baz=68
PKM **Peak Mountain** 67.85 62 ⇑P P 01 27 39.6 +1.1
baz=68
DGMT **Dagmar** 67.86 43 *eP* P 01 27 38.7 +0.6
comp=Z,25nm,0.8s
DGMT **Dagmar** 67.86 43 ⇓P P 01 27 38.4 +0.3
baz=68,SNR=6.2
H19A **Powell** 67.93 49 ⇑P P 01 27 39.5 +0.8
baz=68
G20A **Bridger** 67.98 48 ⇓P P 01 27 39.8 +0.7
baz=68
GRAC **Grapevine Rang** 68.05 59 ⇑P P 01 27 40.5 +1.0
baz=68,SNR=8.2
D23A **Lindsay** 68.24 45 ⇑P P 01 27 41.3 +0.8
baz=68
R11A **Troy Canyon, C** 68.27 57 ⇓P P 01 27 41.5 +0.4
baz=68,SNR=6.9
IGLO **Ghaloghah** 68.29 300 *eP* P 01 27 42.4 +1.2
L16A **Fish Haven** 68.33 52 ⇓P P 01 27 41.9 +0.5
baz=68
J18A **Kendall Valley** 68.33 50 ⇓P P 01 27 41.9 +0.5
baz=68
I19A **Meeteetse** 68.35 49 ⇑P P 01 27 42.1 +0.7
baz=68
MPMC **Manual Prospec** 68.57 60 ⇓P P 01 27 43.4 +0.4
baz=68,SNR=7.0
L17A **Cokeville** 68.58 52 ⇑P P 01 27 43.6 +0.7
baz=68
F22A **Rosebud** 68.64 46 ⇑P P 01 27 43.8 +0.7
baz=68
E23A **Ismay** 68.64 45 ⇑P P 01 27 44.0 +0.9
baz=68
K18A **Toltan Ranch,** 68.70 51 ⇑P P 01 27 44.2 +0.6
baz=68
FURC **Furnace Creek,** 68.70 60 ⇑P P 01 27 44.5 +1.1
baz=68
D24A **Glendive** 68.72 44 ⇓P P 01 27 44.1 +0.6
baz=68,SNR=7.2
DUG **Dugway** 68.72 54 *eP* P 01 27 44.5 +0.7
DUG pmax pmax
comp=Z,20nm,1.9s
DUG **Dugway** 68.72 54 *eP* P 01 27 44.5 +0.7
comp=Z,20nm,1.9s
DUG **Dugway** 68.72 54 ⇑P P 01 27 44.5 +0.7
baz=68,SNR=5.6
LRMC **Laurel Mountai** 68.82 61 ⇑P P 01 27 45.0 +0.6
baz=69
J19A **Crowheart** 68.83 50 ⇑P P 01 27 45.4 +1.0
baz=69
BLG **Laguna Peak** 68.83 63 ⇑P P 01 27 45.3 +0.9
baz=69
I20A **Worland** 68.87 49 ⇓P P 01 27 45.4 +0.7
baz=69
BW06 **Boulder Array** 68.88 50 *eP* P 01 27 45.5 +0.7
comp=Z,5.8nm,1.2s
BW06 **Boulder Array** 68.88 50 ⇑P P 01 27 45.2 +0.4
baz=69
PDAR **Pinedale Array** 68.88 50 P P 01 27 45.1 +0.3
PDAR **Pinedale Array** 68.88 50 P P 01 27 45.1 +0.3
comp=Z,2.5nm,0.6s,baz=257,slow=2.3,SNR=21
IANJ **Anjilo** 68.90 299 *eP* P 01 27 45.9 +0.8
G22A **Birney** 69.00 47 ⇑P P 01 27 45.9 +0.6
baz=69
H21A **Big Horn, Sher** 69.00 48 ⇓P P 01 27 45.9 +0.5
baz=69
EDW2 **Edwards Air Fo** 69.02 61 ⇓P P 01 27 46.4 +0.8
baz=69
ASAR **Alice Springs** 69.06 194 P P 01 27 46.8 +1.1
ASAR **Alice Springs** 69.06 194 P P 01 27 46.8 +1.1
comp=Z,3.8nm,0.6s,baz=20,slow=7.4,SNR=5.2
ISHM **Shahmirzad** 69.07 300 *eP* P 01 27 46.8 +0.6
E24A **Baker** 69.11 45 ⇑P P 01 27 46.4 +0.5
baz=69
F23A **Volborg** 69.12 46 ⇓P P 01 27 46.5 +0.5
baz=69
NB2 **NORSAR Subarra** 69.19 339 P P 01 27 45.1 -1.0
comp=Z,19nm,1.1s,baz=29,slow=6.2
NOA **NORSAR Array B** 69.19 339 P P 01 27 44.5 -1.6
NOA **NORSAR Array B** 69.19 339 P P 01 27 44.5 -1.6
comp=Z,4.1nm,0.5s,baz=31,slow=6.2,SNR=53
K19A **Absolon Red Bu** 69.23 50 ⇓P P 01 27 47.1 +0.2
baz=69
J20A **Shoshoni** 69.30 49 ⇓P P 01 27 47.8 +0.5
baz=69
HFS **Hagfors** 69.30 338 P P 01 27 45.2 -1.6
HFS **Hagfors** 69.30 338 P P 01 27 45.2 -1.6
comp=Z,3.6nm,0.4s,baz=52,slow=5.8,SNR=41
N17A **Moffit Pass** 69.37 53 ⇓P P 01 27 48.3 +0.4
baz=69,SNR=7.6
I21A **Big Trails, Te** 69.41 48 ⇑P P 01 27 48.5 +0.5
baz=69,SNR=6.3
SHOC **Shoshone** 69.43 60 ⇓P P 01 27 48.8 +0.8
baz=69
NAO01 **NORSAR Array S** 69.44 339 *eP* P 01 27 46.6 -1.0
comp=Z,3.7nm,0.8s
G23A **Biddle** 69.48 46 ⇓P P 01 27 48.7 +0.5
baz=69
GSC **Goldstone** 69.49 60 *eP* P 01 27 49.2 +0.7
GSC **Goldstone** 69.49 60 *eP* P 01 27 49.2 +0.7
GSC **Goldstone** 69.49 60 ⇓P P 01 27 49.2 +0.7
baz=69
F24A **Ekalaka** 69.52 45 ⇓P P 01 27 48.9 +0.4
baz=69,SNR=5.4
ILAS **Lasjerd** 69.55 300 *eP* P 01 27 50.0 +0.9
K20A **Yellowstone Ra** 69.62 50 ⇓P P 01 27 49.6 +0.3
baz=69
BFSC **Mount Baldy Ra** 69.64 62 ⇓P P 01 27 50.3 +0.8
baz=70
I22A **9 Mile Ranch,** 69.79 48 ⇑P P 01 27 50.9 +0.6
baz=70
KIV **Kislovodsk** 69.82 312 ⇑*iP* P 01 27 51.6 +1.2
KIV pmax pmax
comp=Z,16nm,0.9s
KIV MLR MLR
comp=Z,200nm,16.0s
KBZ **Khabaz** 69.86 312 P P 01 27 51.1 +0.6
KBZ pmax pmax
comp=Z,12nm,0.7s
KBZ **Khabaz** 69.86 312 P P 01 27 51.1 +0.6
KBZ **Khabaz** 69.86 312 P P 01 27 51.1 +0.6
comp=Z,12nm,0.7s,baz=58,slow=5.8,SNR=39
ZEI **Tsey** 69.97 311 *eP* P 01 27 51.5 0.0
ZEI pmax pmax
comp=Z,10.0nm,0.8s
DGRG **David-gareji** 70.05 309 P P 01 27 52.2 +0.4
L20A **Wamsutter** 70.06 50 ⇑P P 01 27 52.4 +0.4
baz=70
J22A **Midwest** 70.12 48 ⇑P P 01 27 52.7 +0.3
baz=70,SNR=7.0
TBLG **Delisi** 70.21 309 *eP* P 01 27 53.3 +0.5
TBLG **Delisi** 70.21 309 P P 01 27 53.3 +0.5
H24A **Dirks Ranch, A** 70.22 46 ⇓P P 01 27 53.0 +0.1
baz=70
K21A **Alcova** 70.23 49 ⇑P P 01 27 53.3 +0.2
baz=70
ONI **Oni** 70.34 311 P P 01 27 55.0 +1.5
IBAF **Bafgh** 70.35 295 *eP* P 01 27 53.9 -0.1
GOR **Gori** 70.39 310 P P 01 27 55.5 +1.7
P17A **Butcher Ranch,** 70.39 54 ⇑P P 01 27 54.8 +0.7
baz=70
ULM **Lac du Bonnet** 70.47 38 *eP* P 01 27 54.2 +0.1
ULM **Lac du Bonnet** 70.47 38 P P 01 27 52.7 -1.5
comp=Z,6.3nm,0.7s,baz=316,slow=7.2,SNR=9.1
M20A **Sweetwater, Wa** 70.49 51 ⇓P P 01 27 55.2 +0.5
baz=70
MDND **Maddock** 70.51 41 ⇑P P 01 27 54.9 +0.4
baz=70,SNR=5.9
GMRC **Granite Mounta** 70.54 60 ⇓P P 01 27 55.8 +0.8
baz=70
IVRN **Varamin** 70.57 300 *eP* P 01 27 55.5 +0.4
IGZV **Ghazvin** 70.58 302 *eP* P 01 27 55.9 +0.5
K22A **Casper** 70.61 49 ⇓P P 01 27 55.7 +0.3
baz=70
L21A **Rawlins** 70.62 50 ⇓P P 01 27 55.8 +0.3
baz=70
KZR **Kazreti** 70.63 309 P P 01 27 55.7 +0.3
ICHK **Chekchek** 70.67 296 *eP* P 01 27 56.1 +0.1
TRD **Trivandrum** 70.69 263 ⇓*ex* pP 01 28 11.5 -1.5
SRU **San Rafael** 70.76 54 *eP* P 01 27 57.2 +0.8
SRU pmax pmax
comp=Z,7.0nm,0.9s
SRU **San Rafael** 70.76 54 *eP* P 01 27 57.2 +0.8
comp=Z,7.3nm,0.9s
SRU **San Rafael** 70.76 54 ⇑P P 01 27 56.8 +0.4
baz=71,SNR=5.3
IMHD **Mahdasht** 70.77 301 *eP* P 01 27 57.1 +0.7
I24A **Kuemmerle Ranc** 70.79 47 ⇓P P 01 27 56.7 +0.3
baz=71
PFO **Pinyon Flat Ob** 70.81 62 ⇑P P 01 27 57.3 +0.7
baz=71
BELC **Belle Mtn. Jos** 70.84 61 ⇑P P 01 27 57.2 +0.3
baz=71
M21A **Separation Pea** 70.86 50 ⇓P P 01 27 57.2 +0.2
baz=71
N20A **Spence Gulch,** 70.89 51 ⇑P P 01 27 57.8 +0.6
baz=71
RSSD **Black Hills** 70.92 47 *eP* P 01 27 56.3 -1.0
RSSD **Black Hills** 70.92 47 *eP* P 01 27 56.3 -1.0
IMEH **Mehriz** 71.10 296 *eP* P 01 27 57.9 -0.7
AKH **Akhalkalaki** 71.12 310 P P 01 27 59.6 +1.2
IRM **Iron Mountain** 71.26 60 ⇑P P 01 28 00.1 +0.8
baz=71
GNI **Garni** 71.28 308 *eP* P 01 28 00.2 +0.8
comp=Z,20nm,1.1s
GNI **Garni** 71.28 308 P P 01 27 59.5 +0.1
comp=Z,4.7nm,0.7s,baz=284,slow=1.6,SNR=8.2
P19A **Cripple Cowboy** 71.30 53 ⇓P P 01 27 60.0 +0.3
baz=71
MONP **Monument Peak** 71.30 62 ⇓P P 01 28 00.5 +0.8
baz=71
N21A **Black Mountain** 71.35 51 ⇑P P 01 27 59.9 -0.1
baz=71
IRAZ **Razeghan** 71.41 301 *eP* P 01 28 00.5 +0.1
BC3 **Big Chuckawall** 71.41 61 ⇓P P 01 28 00.9 +0.7
baz=71
AKASG **Malin Array Be** 71.42 324 P P 01 27 59.1 -0.8
AKASG pmax pmax
comp=Z,9.0nm,0.7s
AKASG **Malin Array Be** 71.42 324 P P 01 27 59.1 -0.8
AKASG **Malin Array Be** 71.42 324 P P 01 27 59.1 -0.8
comp=Z,8.6nm,0.7s,baz=37,slow=6.1,SNR=26
W13A **Hualapai Mount** 71.42 59 ⇑P P 01 28 00.9 +0.4
baz=71
AK01 **Malin Array Si** 71.44 324 *eP* P 01 27 59.1 -0.8
KIEV **Kiev** 71.44 324 *eP* P 01 27 59.5 -0.5
KIEV **Kiev** 71.44 324 *eP* P 01 27 59.5 -0.5
AK02 **Malin Array Si** 71.47 324 *eP* P 01 27 58.8 -1.3
U15A **North Rim** 71.51 57 ⇑P P 01 28 01.9 +0.8
baz=71,SNR=5.6
IZEF **Zefeh** 71.57 298 *eP* P 01 28 01.2 -0.3
SOC **Sochi** 71.64 313 *eP* P 01 28 00.9 -0.4
SOC *e* 01 30 36.1
SOC *eS* S 01 37 14.0 -1.9
SOC pmax pmax
comp=Z,4.0nm,0.2s
SOC MLR MLR
comp=Z,370nm,21.0s
IKLH **Kolahrood** 71.76 299 *eP* P 01 28 03.0 +0.4
PDMCI **Parker Dam,Lak** 71.80 60 ⇑P P 01 28 03.3 +0.8
baz=72
N22A **Wattenberg Ran** 71.92 50 ⇑P P 01 28 03.9 +0.4
baz=72
Y12C **Blythe** 71.92 60 ⇑P P 01 28 04.3 +1.1
baz=72
ANN **Anapa** 71.95 316 *eP* P 01 28 02.7 -0.4
ANN *e**PP pP 01 28 18.8 -1.4
ANN *eS* S 01 37 16.4 -2.9
ANN pmax pmax
comp=Z,118nm,7.1s
S18A **Hurst Farm, Bl** 72.02 55 ⇓P P 01 28 04.3 +0.2
baz=72,SNR=5.3
N23A **Red Feather La** 72.13 50 ⇓P P 01 28 05.1 +0.4
baz=72
Q20A **Ridgley Place,** 72.15 53 ⇑P P 01 28 05.2 +0.5
baz=72
PV04 **Paradox Valley** 72.18 54 *eP* P 01 28 05.7 +0.8
GLA **Glamis** 72.20 61 ⇓P P 01 28 05.7 +0.8
baz=72
P21A **Newcastle** 72.24 52 ⇓P P 01 28 05.6 +0.3
baz=72
O22A **Kremmling** 72.30 51 ⇓P P 01 28 06.1 +0.3
baz=72
M24A **Cheyenne** 72.34 49 ⇑P P 01 28 06.7 +0.8
baz=72
IPIR **Pirpir** 72.62 299 *eP* P 01 28 08.4 +0.6
O23A **Lake Granby, G** 72.62 51 ⇓P P 01 28 08.8 +1.2
baz=72,SNR=5.8
WUAZ **Wupatki** 72.67 57 ⇓P P 01 28 09.0 +1.1
baz=72
Y14A **Wickenburg** 72.74 59 ⇓P P 01 28 09.0 +0.8
baz=73
SMCO **Snowmass** 72.74 52 *eP* P 01 28 09.3 +0.8
comp=Z,25nm,2.1s
N24A **Carr** 72.76 49 ⇓P P 01 28 09.3 +1.0
baz=72
S20A **Disappointment** 72.88 54 ⇑P P 01 28 09.8 +0.6
baz=73
R21A **Cimarron** 72.97 53 ⇑P P 01 28 10.4 +0.7
baz=73
Q22A **Crested Butte,** 73.00 52 ⇓P P 01 28 10.5 +0.6
baz=73
ISCO **Idaho Springs** 73.07 51 ⇑P P 01 28 10.9 +0.6
baz=73
MVCO **Mesa Verde** 73.22 54 *eP* P 01 28 10.7 -0.5
comp=Z,4.5nm,0.8s
MVCO **Mesa Verde** 73.22 54 ⇓P P 01 28 11.9 +0.7
baz=73
P23A **Jefferson** 73.24 51 ⇑P P 01 28 11.9 +0.5
baz=73
S21A **Coal Bank Pass** 73.32 53 ⇑P P 01 28 12.6 +0.8
baz=73
X16A **Lo Mia Camp, P** 73.37 58 ⇑P P 01 28 13.1 +1.0
baz=73
ILIN **Lien** 73.53 303 *eP* P 01 28 13.1 +0.1
IKOM **Komasi** 73.70 302 *eP* P 01 28 13.9 -0.1
S22A **4UR Ranch, Cre** 73.81 53 ⇑P P 01 28 15.1 +0.3
baz=74
Q24A **Divide** 73.91 51 ⇓P P 01 28 15.6 +0.3
baz=74
IDHR **Dehrash** 74.03 303 *eP* P 01 28 15.7 -0.2
P25A **Willow Gulch B** 74.07 50 ⇑P P 01 28 16.5 +0.5
baz=74
R23A **Moffat** 74.07 52 ⇑P P 01 28 16.6 +0.3
baz=74
IGHG **Ghaleghazi** 74.17 303 *eP* P 01 28 16.3 -0.5
214A **Organ Pipe Nat** 74.19 61 ⇑P P 01 28 17.5 +0.8
baz=74
OGNE **Ogallala** 74.21 48 ⇑P P 01 28 17.3 +0.6
baz=74
V20A **Brimhall** 74.21 55 ⇓P P 01 28 17.6 +0.6
baz=74
T22A **Edith** 74.28 53 ⇑P P 01 28 18.2 +0.8
baz=74
R24A **Sanders Place,** 74.45 52 ⇓P P 01 28 19.0 +0.7
baz=74
V21A **Milan** 74.69 55 ⇑P P 01 28 20.3 +0.5
baz=74
KWP **Kalwaria Pacla** 74.91 327 ⇓P P 01 28 20.2 -0.3
KWP **Kalwaria Pacla** 74.91 327 *eP* P 01 28 20.3 -0.3
comp=Z,17nm,1.0s
KWP **Kalwaria Pacla** 74.91 327 ⇓*iP* P 01 28 20.2 -0.3
KWP **Kalwaria Pacla** 74.91 327 *eP* P 01 28 20.6 +0.1
ECSD **EROS Data Cent** 74.93 43 *eP* P 01 28 20.2 -0.6
comp=Z,13nm,0.9s
R25A **Fountain Ranch** 74.97 51 ⇓P P 01 28 21.8 +0.5
baz=75
V22A **San Miguel Ran** 75.04 54 ⇑P P 01 28 22.4 +0.6
baz=75
X20A **Quemado** 75.06 56 ⇓P P 01 28 22.6 +0.7
baz=75
U23A **El Rito** 75.17 54 ⇑P P 01 28 23.3 +0.8
baz=75
PRAR **RASCA** 75.25 323 ⇑*iP* P 01 28 22.2 -0.3
T24A **Torres, Weston** 75.29 52 ⇓P P 01 28 24.0 +0.7
baz=75
R26A **Arlington** 75.32 51 ⇓P P 01 28 23.5 +0.2
baz=75
BUR08 **Bucovina Ar. S** 75.47 324 *eP* P 01 28 23.6 -0.2
BURAR **Bucovina Array** 75.48 324 ⇓*iP* P 01 28 23.4 -0.5
OJC **Ojcow** 75.54 329 *eP* P 01 28 23.8 -0.3
OJC **Ojcow** 75.54 329 *eP* P 01 28 23.8 -0.3
OJC **Ojcow** 75.54 329 *eP* P 01 28 24.1 0.0
X21A **Alamocita Cree** 75.55 56 ⇓P P 01 28 25.5 +0.7
baz=75
Y20A **Horse Springs,** 75.57 57 ⇑P P 01 28 25.8 +0.9
baz=75
V23A **Ortiz Mt. (NFS** 75.58 54 ⇓P P 01 28 25.7 +0.9
baz=75
SPMN **St. Paul** 75.61 40 ⇓P P 01 28 24.7 +0.1
baz=75
T25A **Trinidad** 75.61 52 ⇓P P 01 28 25.7 +0.6
baz=75
R27A **Eads** 75.69 50 ⇑P P 01 28 25.4 +0.1
baz=76
TESR 75.73 323 ⇑*iP* P 01 28 25.2 -0.1
TLCR 75.79 321 ⇓P P 01 28 25.8 +0.2
TLCR 75.79 321 ⇓*iP* P 01 28 25.8 +0.2
S26A **Kim** 75.79 51 ⇓P P 01 28 25.6 -0.3
baz=76
Y21A **Point of Rocks** 75.92 56 ⇓P P 01 28 28.0 +1.1
baz=76
X22A **Bernardo** 75.96 55 ⇓P P 01 28 28.5 +1.5
baz=76
Z20A **Nine Sixteen R** 75.99 57 ⇓P P 01 28 28.0 +0.8
baz=76
NIE **Niedzica** 76.00 328 *eP* P 01 28 27.6 +0.8
NIE **Niedzica** 76.00 328 *eP* P 01 28 27.6 +0.8
T26A **Comanche Natio** 76.04 51 ⇓P P 01 28 27.9 +0.5
baz=76
MALT **Malatya** 76.06 310 ⇑P P 01 28 28.6 +1.2
MALT **Malatya** 76.06 310 *eP* P 01 28 28.1 +0.7
comp=Z,14nm,1.0s
MALT **Malatya** 76.06 310 ⇑*iP* P 01 28 28.6 +1.2
PETR 76.09 322 ⇓*iP* P 01 28 28.6 +1.3
CFR **Carcaliu** 76.10 321 ⇓P P 01 28 27.1 -0.3
CFR **Carcaliu** 76.10 321 ⇓*iP* P 01 28 27.1 -0.3
V24A **Rampart Ranch,** 76.12 53 ⇓P P 01 28 29.3 +1.3
baz=76
U25A **Circle Dot Ran** 76.14 52 ⇓P P 01 28 28.6 +0.6
baz=76
TRPA **Tarpa** 76.17 326 ⇑*iP* P 01 28 28.2 +0.5
VRI **Vrincioaia** 76.20 322 ⇓P P 01 28 27.9 -0.1
VRI **Vrincioaia** 76.20 322 ⇓*iP* P 01 28 27.9 -0.1
STKA **Stephens Creek** 76.23 186 *eP* P 01 28 29.4 +1.4
STKA **Stephens Creek** 76.23 186 P P 01 28 29.2 +1.2
comp=Z,7.5nm,0.7s,baz=338,slow=7.2,SNR=11
PLOR **Plostina** 76.24 322 ⇓P P 01 28 28.4 +0.2
PLOR **Plostina** 76.24 322 ⇓*iP* P 01 28 28.4 +0.2
120A **U Bar Ranch, L** 76.36 58 ⇓P P 01 28 30.5 +1.3
baz=76
W24A **Lazy 6 Ranch,** 76.40 54 ⇑P P 01 28 30.5 +0.9
baz=76
Z21A **St. Cloud Mine** 76.41 57 ⇓P P 01 28 30.6 +1.0
baz=76
GRER 76.47 322 ⇑*iP* P 01 28 23.1 -6.4
UPC **Upice** 76.67 331 *eP* P 01 28 29.5 -1.0
UPC **Upice** 76.67 331 *e*PKP P 01 28 29.5 -1.0
SCHQ **Schefferville** 76.69 20 *eP* P 01 28 30.4 -0.1
comp=Z,10nm,1.1s
SCHQ **Schefferville** 76.69 20 P P 01 28 30.8 +0.2
comp=Z,4.6nm,0.7s,baz=354,slow=7.3,SNR=12
DPC **Dobruska-Polom** 76.69 331 *eP* P 01 28 31.2 +0.5
DPC **Dobruska-Polom** 76.69 331 *eP* P 01 28 31.4 +0.7
comp=Z,41nm,1.9s
DPC **Dobruska-Polom** 76.69 331 *e*PKP P 01 28 31.2 +0.5
MORC **Moravsky Berou** 76.74 330 ⇑P P 01 28 31.2 +0.2
MORC **Moravsky Berou** 76.74 330 ⇑*iP* P 01 28 31.2 +0.2
UMR **Umm Al-Rimmam** 76.74 298 *eP* P 01 28 31.1 -0.1
UMR AMb AMB 01 28 31.8
comp=Z,105nm,0.9s
319A **Douglas** 76.78 59 ⇓P P 01 28 32.4 +0.8
baz=77
MIB **Mutribah** 76.80 299 *eP* P 01 28 31.5 -0.1
MIB AMb AMB 01 28 32.6
comp=Z,96nm,0.9s
MLR **Muntele Rosu** 76.83 322 P P 01 28 31.3 -0.4
MLR **Muntele Rosu** 76.83 322 ⇓*iP* P 01 28 31.7 0.0
MLR **Muntele Rosu** 76.83 322 P P 01 28 31.3 -0.4
comp=Z,0.9nm,0.4s,baz=135,slow=1.4
ISR **Istrita** 76.86 322 ⇓P P 01 28 32.2 +0.4
ISR **Istrita** 76.86 322 ⇓*iP* P 01 28 32.2 +0.4
220A **Playas Peak, P** 76.87 58 ⇓P P 01 28 33.0 +0.9
baz=77
121A **Cookes Peak, D** 76.88 57 ⇑P P 01 28 33.2 +0.9
baz=77
Y23A **Lovelace Mesa,** 76.93 55 ⇓P P 01 28 33.5 +1.0
baz=77
W25A **X Bar L Ranch,** 76.94 53 ⇑P P 01 28 33.1 +0.6
baz=77
CLL **Collm** 77.00 333 ⇑*iP* P 01 28 31.9 -0.5
CLL *i* 01 28 38.4
CLL pmax pmax
comp=Z,17nm,1.0s
CLL **Collm** 77.00 333 ⇑*iP* P 01 28 31.9 -0.5
comp=Z,17nm,1.0s
QRN **Al-Qurain** 77.16 298 *eP* P 01 28 33.7 0.0
QRN AMb AMB 01 28 34.8

comp=Z,133nm,0.9s
DRGR 77.17 325 ⇓P P 01 28 22.6 -11
DRGR 77.17 325 ⇓*i*P P 01 28 22.6 -11
NAY **Al-Naaiem** 77.24 298 *e*P **P** **01 28 33.9 -0.2**
NAY AMP 01 28 34.4
NAY AMb AMB 01 28 35.1
comp=Z,49nm,1.0s
VOIR 77.27 323 ⇓P **P** **01 28 34.7 +0.6**
VOIR 77.27 323 ⇓*i*P **P** **01 28 34.7 +0.6**
RDF **Al-Radifah** 77.27 298 *e*P **P** **01 28 34.4 +0.1**
RDF AMb AMB 01 28 35.3
comp=Z,149nm,0.7s
Y24A **Capitan** 77.30 55 ⇑P **P** **01 28 34.9 +0.3**
baz=77
Z23A **Rita Site, Whi** 77.30 56 ⇓P **P** **01 28 35.0 +0.5**
baz=77
VRAC **Vranov** 77.47 330 P **P** **01 28 35.5 +0.4**
VRAC **Vranov** 77.47 330 ⇑*i*P **P** **01 28 35.1 +0.1**
VRAC **Vranov** 77.47 330 P **P** **01 28 35.5 +0.4**
comp=Z,9.7nm,1.0s,baz=32,slow=5.5,SNR=7.6
ARR **Arges** 77.50 323 ⇑*i*P **P** **01 28 36.3 +0.9**
BR131 **Keskin Array S** 77.57 314 *e*P **P** **01 28 35.9 -0.1**
comp=Z,6.0nm,0.8s
BRTR **Keskin Array B** 77.57 314 P **P** **01 28 36.1 +0.2**
BRTR **Keskin Array B** 77.57 314 P **P** **01 28 36.1 +0.2**
comp=Z,6.1nm,0.7s,baz=86,slow=3.5,SNR=55
PRU **Pruhonice** 77.61 331 *e*P **P** **01 28 35.4 -0.4**
PRU **Pruhonice** 77.61 331 *e*PKP **P** **01 28 35.4 -0.4**
EKA **Eskdalemuir Ar** 77.64 344 P **P** **01 28 35.5 -0.3**
EKA **Eskdalemuir Ar** 77.64 344 P **P** **01 28 35.5 -0.3**
comp=Z,11nm,0.7s,baz=22,slow=5.3,SNR=41
ESK **Eskdalemuir** 77.66 344 *e*P **P** **01 28 36.0 0.0**
ESK pmax pmax
comp=Z,10.0nm,0.7s
ESK **Eskdalemuir** 77.66 344 *e*P **P** **01 28 36.0 0.0**
comp=Z,9.8nm,0.7s
ANTO **Ankara** 77.90 315 ⇓P **P** **01 28 38.5 +0.8**
ANTO **Ankara** 77.90 315 *e*P **P** **01 28 38.4 +0.8**
comp=Z,24nm,0.8s
ANTO **Ankara** 77.90 315 ⇓*i*P **P** **01 28 38.5 +0.8**
BZS **Buzias** 78.57 325 ⇓P **P** **01 28 40.7 -0.5**
BZS **Buzias** 78.57 325 ⇓*i*P **P** **01 28 40.7 -0.5**
Z26A **Caprock** 78.61 54 ⇓P **P** **01 28 42.2 +0.4**
baz=78
Y27A **Causey** 78.65 54 ⇑P **P** **01 28 42.5 +0.5**
baz=78
125A **Gardner Draw,** 78.66 55 ⇓P **P** **01 28 42.6 +0.5**
baz=78
KHC **Kasperske Hory** 78.67 332 *e*P **P** **01 28 41.9 +0.1**
KHC *e* 01 28 51.3
KHC **Kasperske Hory** 78.67 332 *e*PKP **P** **01 28 41.9 +0.1**
KHC *ep*PKP **PcP** **01 28 51.3 +0.8**
AMTX **Amarillo** 78.77 52 *e*P **P** **01 28 43.5 +0.9**
comp=Z,6.9nm,1.0s
AMTX **Amarillo** 78.77 52 ⇓P **P** **01 28 42.9 +0.3**
baz=79
GERES **GERESS Array B** 78.88 331 P **P** **01 28 42.6 -0.3**
GERES **GERESS Array B** 78.88 331 P **P** **01 28 42.6 -0.3**
comp=Z,4.3nm,0.6s,baz=34,slow=5.2,SNR=12
225A **Deer Hill, Car** 78.95 56 ⇓P **P** **01 28 44.1 +0.3**
baz=79
Z27A **Tatum** 79.03 54 ⇓P **P** **01 28 44.4 +0.4**
baz=79
324A **Moseley Ranch,** 79.03 57 ⇑P **P** **01 28 44.4 +0.2**
baz=79
126A **Clayton Basin,** 79.04 55 ⇑P **P** **01 28 44.5 +0.4**
baz=79
226B **Tecolote Peak,** 79.36 55 ⇓P **P** **01 28 46.6 +0.7**
baz=79
325A **Bean Ranch, Si** 79.39 56 ⇓P **P** **01 28 46.6 +0.5**
baz=79
W31A **Holland Ranch,** 79.52 51 ⇑P **P** **01 28 47.3 +0.6**
baz=79
HGN **Heimansgroeve** 79.63 337 *e*P **P** **01 28 46.2 -0.6**
comp=Z,12nm,0.7s
MEM **Membach** 79.75 337 P **P** **01 28 47.3 -0.2**
comp=Z,8.7nm,1.0s
425A **Indio Mountain** 79.80 57 ⇓P **P** **01 28 48.9 +0.6**
baz=80
TOD **Tromm** 79.81 335 *e*P **P** **01 28 47.9 0.0**
TOD **Tromm** 79.81 335 *e*P **P** **01 28 47.9 0.0**
X31A **McDonald Ranch** 79.90 51 ⇑P **P** **01 28 49.1 +0.4**
baz=80
Z29A **Hungry Hill Ra** 79.93 53 ⇓P **P** **01 28 49.6 +0.7**
baz=80
128A **Castleberry Fa** 79.95 54 ⇓P **P** **01 28 49.3 +0.3**
baz=80
326A **Caldwell Ranch** 80.02 56 ⇑P **P** **01 28 49.9 +0.4**
baz=80
BCLA **Clavier** 80.12 337 P **P** **01 28 48.8 -0.7**
comp=Z,9.9nm,1.6s
Z30A **Sanderson Ranc** 80.24 53 ⇓P **P** **01 28 50.7 +0.1**
baz=80
PERS **Pernice** 80.26 329 *i*P **P** **01 28 50.2 -0.3**
GROS **Grobnik** 80.26 329 *i*P **P** **01 28 50.1 -0.4**
VTS **Vitosha** 80.33 322 P **P** **01 28 51.1 +0.1**
VTS **Vitosha** 80.33 322 ⇓P **P** **01 28 51.1 +0.1**
VTS **Vitosha** 80.33 322 ⇓*i*P **P** **01 28 51.1 +0.1**
426A **McDonald Obser** 80.45 56 ⇑P **P** **01 28 51.8 -0.1**
baz=80
WMOK **Wichita Mounta** 80.49 50 *e*P **P** **01 28 50.4 -1.5**
WMOK pmax pmax
comp=Z,2.0nm,0.6s
WMOK **Wichita Mounta** 80.49 50 *e*P **P** **01 28 50.4 -1.5**
comp=Z,1.5nm,0.6s
GIVF **Givet** 80.54 337 *e*P **P** **01 28 51.1 -0.7**
GIVF **Givet** 80.54 337 *e*P **P** **01 28 51.1 -0.7**
GIVF **Givet** 80.54 337 *e*P **P** **01 28 51.1 -0.7**
DOU **Dourbes** 80.61 337 P **P** **01 28 51.9 -0.3**
comp=Z,5.7nm,1.4s
328A **Wristen Ranch,** 80.66 55 ⇓P **P** **01 28 53.2 +0.3**
baz=80
LANF **Langenberg** 80.67 335 *e*P **P** **01 28 52.4 -0.2**
LANF **Langenberg** 80.67 335 *e*P **P** **01 28 52.4 -0.2**
LANF **Langenberg** 80.67 335 *e*P **P** **01 28 52.4 -0.2**
427A **Hayter Ranch,** 80.70 56 ⇑P **P** **01 28 53.7 +0.6**
baz=80
GCIS **Gornji Cirnik** 80.72 329 *e*P **P** **01 28 52.4 -0.5**
BAIF **Baives** 80.75 337 *e*P **P** **01 28 51.8 -1.1**
comp=Z,6.6nm,0.6s
BAIF **Baives** 80.75 337 *e*P **P** **01 28 51.8 -1.1**
BAIF pmax pmax
comp=Z,7.0nm,0.6s
BAIF **Baives** 80.75 337 *e*P **P** **01 28 51.8 -1.1**
comp=Z,6.6nm,0.6s
LEGS **Legarje** 80.76 329 *i*P **P** **01 28 52.5 -0.5**
Z31A **Sharp Cattle R** 80.78 52 ⇓P **P** **01 28 53.8 +0.4**
baz=81
229A **Bryant Ranch,** 80.82 54 ⇓P **P** **01 28 54.5 +0.9**
baz=81
526A **Mary Lane Ranc** 80.86 57 ⇓P **P** **01 28 54.7 +0.7**
baz=81
HDIL **Hopedale** 80.86 41 *e*P **P** **01 28 54.0 +0.3**
comp=Z,32nm,0.8s
LJU **Ljubljana** 80.97 329 *i*P **P** **01 28 53.3 -0.9**
NVR **Nevrokopi** 81.04 321 P **P** **01 28 54.7 0.0**
329A **Wagon Wheel Ra** 81.07 54 ⇑P **P** **01 28 55.8 +0.7**
baz=81
527A **Woodward Ranch** 81.08 56 ⇑P **P** **01 28 55.8 +0.5**
baz=81
SPAK **Spaichingen-Ko** 81.15 334 *e*P **P** **01 28 55.3 +0.1**
626A **Big Bend Ranch** 81.20 57 ⇑P **P** **01 28 56.1 +0.3**
baz=81
428A **Kincaid Ranch,** 81.21 55 ⇑P **P** **01 28 56.4 +0.6**
baz=81
TUL1 **Tulsa** 81.22 48 ⇑P **P** **01 28 55.3 -0.4**
baz=81
CSS **Prodhromos** 81.30 311 P **P** **01 28 56.2 +0.1**
CSS **Prodhromos** 81.30 311 *e*P **P** **01 28 56.3 +0.1**
comp=Z,22nm,0.8s
CDF **Champ du Feu** 81.34 335 *e*P **P** **01 28 55.7 -0.5**
comp=Z,32nm,1.0s
CDF **Champ du Feu** 81.34 335 *e*P **P** **01 28 55.7 -0.5**
CDF pmax pmax
comp=Z,32nm,1.0s
CDF **Champ du Feu** 81.34 335 *e*P **P** **01 28 55.7 -0.5**
comp=Z,32nm,1.0s
ASF **Jabal al Asfar** 81.39 307 P **P** **01 28 57.7 +1.0**
ASF **Jabal al Asfar** 81.39 307 P **P** **01 28 57.7 +1.0**
comp=Z,17nm,0.8s,baz=263,slow=4.0,SNR=28
ECH **Echery** 81.55 335 *e*P **P** **01 28 56.7 -0.5**
ECH **Echery** 81.55 335 *e*P **P** **01 28 56.7 -0.5**
ECH **Echery** 81.55 335 *e*P **P** **01 28 56.7 -0.5**
528A **Cox Ranch, San** 81.56 56 ⇑P **P** **01 28 58.1 +0.4**
baz=81
ABTX **Abilene, Hawle** 81.57 52 ⇑P **P** **01 28 58.2 +0.6**
baz=81
FELD **Feldberg im Sc** 81.59 334 *e*P **P** **01 28 57.1 -0.5**
SKO **Skopje** 81.61 323 *e*P **P** **01 28 56.2 -1.4**
MMAI **Mount Meron Ar** 81.61 308 P **P** **01 28 58.9 +1.0**
MMAI **Mount Meron Ar** 81.61 308 P **P** **01 28 58.9 +1.0**
comp=Z,36nm,0.7s,baz=42,slow=6.9,SNR=96
TXAR **Lajitas Array** 81.64 57 P **P** **01 28 58.5 +0.4**
TXAR **Lajitas Array** 81.64 57 P **P** **01 28 58.5 +0.4**
comp=Z,3.5nm,0.6s,baz=299,slow=4.1,SNR=63
VAY **Valandovo** 81.64 322 *e*P **P** **01 28 56.4 -1.4**
PAGF **Fort de Pagny** 81.67 336 ⇑*i*P **P** **01 28 57.7 -0.2**
comp=Z,12nm,0.7s
PAGF **Fort de Pagny** 81.67 336 ⇑*i*P **P** **01 28 57.7 -0.2**
comp=Z,12nm,0.7s
231A **Bronte** 81.70 53 ⇑P **P** **01 28 58.1 -0.3**
baz=82
627A **Terlingua Ranc** 81.72 57 ⇑P **P** **01 28 58.6 0.0**
baz=82
429A **Davenport Ranc** 81.75 55 ⇓P **P** **01 28 58.8 +0.2**
baz=82
MOF **Molkenrain** 81.88 335 *e*P **P** **01 28 58.6 -0.5**
MOF **Molkenrain** 81.88 335 *e*P **P** **01 28 58.6 -0.5**
MOF **Molkenrain** 81.88 335 *e*P **P** **01 28 58.6 -0.5**
THEF **They Montfort** 81.89 336 *e*P **P** **01 28 58.8 -0.2**
THEF **They Montfort** 81.89 336 *e*P **P** **01 28 58.8 -0.2**
THEF **They Montfort** 81.89 336 *e*P **P** **01 28 58.8 -0.2**
MEZF **Maizieres J'vi** 81.92 336 ⇑*i*P **P** **01 28 58.9 -0.2**
comp=Z,25nm,0.8s
MEZF **Maizieres J'vi** 81.92 336 ⇑*i*P **P** **01 28 58.9 -0.2**
comp=Z,25nm,0.8s
529A **Stev Forest Ra** 81.92 56 ⇑P **P** **01 28 59.6 0.0**
baz=82
DAVOX **Davos/Dischmat** 81.95 332 P **P** **01 28 59.5 -0.1**
DAVOX **Davos/Dischmat** 81.95 332 P **P** **01 28 59.5 -0.1**
comp=Z,7.2nm,0.8s,baz=84,slow=6.0,SNR=3.8
HAU **Haudompre** 81.98 335 *e*P **P** **01 28 58.8 -0.7**
HAU **Haudompre** 81.98 335 *e*P **P** **01 28 58.8 -0.7**
HAU **Haudompre** 81.98 335 *e*P **P** **01 28 58.8 -0.7**
628A **Black Gap, Mar** 81.99 56 ⇓P **P** **01 29 00.1 +0.2**
baz=82
HINF **Hinteralfeld** 82.00 335 *e*P **P** **01 28 58.8 -0.8**
comp=Z,9.4nm,0.7s
HINF **Hinteralfeld** 82.00 335 *e*P **P** **01 28 58.8 -0.8**
HINF pmax pmax
comp=Z,9.0nm,0.7s
HINF **Hinteralfeld** 82.00 335 *e*P **P** **01 28 58.8 -0.8**
comp=Z,9.4nm,0.7s
PLG **Polygyros** 82.01 321 P **P** **01 28 59.3 -0.5**
SFIN **Scholer Farm** 82.01 39 ⇑P **P** **01 28 59.6 -0.1**
baz=82
430A **Baggett Ranch,** 82.01 54 ⇓P **P** **01 28 59.8 -0.3**
baz=82
NWAO **Narrogin (SRO)** 82.03 206 P **P** **01 29 00.1 +0.4**
NWAO **Narrogin (SRO)** 82.03 206 P **P** **01 29 00.1 +0.4**
comp=Z,16nm,0.7s,baz=29,slow=4.4,SNR=7.4
BBS **Basel-Blauen** 82.11 334 *e*P **P** **01 29 00.0 -0.2**
BBS **Basel-Blauen** 82.11 334 *e*P **P** **01 29 00.0 -0.2**
SFTF **Sexfontaines** 82.19 336 ⇑*i*P **P** **01 29 00.1 -0.5**
comp=Z,33nm,0.7s
SFTF **Sexfontaines** 82.19 336 ⇑*i*P **P** **01 29 00.1 -0.5**
comp=Z,33nm,0.7s
PAIG **Palilouri** 82.26 320 P **P** **01 29 00.5 -0.6**
CHOS **Chios island** 82.37 318 P **P** **01 29 01.6 -0.2**
530A **J-C Ranch, Com** 82.42 55 ⇓P **P** **01 29 02.4 +0.2**
baz=82
BIA **Bitola** 82.43 322 *e*P **P** **01 29 00.6 -1.5**
431A **Sonora** 82.46 54 ⇓P **P** **01 29 02.2 -0.1**
baz=82
AOS **Alonnisos** 82.78 320 P **P** **01 29 03.2 -0.6**
531A **Rocksprings** 82.87 54 ⇑P **P** **01 29 04.8 +0.3**
baz=83
XOR **Xorichti** 82.94 320 P **P** **01 29 03.6 -1.0**
NEST **Nestorio** 83.05 322 P **P** **01 29 04.6 -0.7**
JCT **Junction City** 83.07 54 ⇑P **P** **01 29 05.5 0.0**
baz=83
SENIN **Lac Senin/Sane** 83.16 334 *e*P **P** **01 29 05.7 -0.2**
FLN **La Foliniere** 83.17 340 ⇑*i*P **P** **01 29 05.1 -0.5**
comp=Z,20nm,0.6s
FLN **La Foliniere** 83.17 340 ⇑*i*P **P** **01 29 05.1 -0.5**
FLN pmax pmax
comp=Z,20nm,0.6s
FLN **La Foliniere** 83.17 340 ⇑*i*P **P** **01 29 05.1 -0.5**
comp=Z,20nm,0.6s
NIS1 **Nisyros Isl.** 83.23 316 P **P** **01 29 05.5 -0.7**
LDF **La Druitiere** 83.23 339 ⇑*i*P **P** **01 29 05.4 -0.6**
comp=Z,15nm,0.8s
LDF **La Druitiere** 83.23 339 ⇑*i*P **P** **01 29 05.4 -0.6**
LDF pmax pmax
comp=Z,15nm,0.8s
LDF **La Druitiere** 83.23 339 ⇑*i*P **P** **01 29 05.4 -0.6**
comp=Z,15nm,0.8s
532A **Rocksprings** 83.27 54 ⇑P **P** **01 29 06.9 +0.3**
baz=83
WHTX **Lake Whitney** 83.28 51 ⇓P **P** **01 29 06.5 0.0**
baz=83
CABF **La Chapelle** 83.31 335 *e*P **P** **01 29 06.1 -0.4**
comp=Z,15nm,0.9s
CABF **La Chapelle** 83.31 335 *e*P **P** **01 29 06.1 -0.4**
CABF pmax pmax
comp=Z,15nm,0.9s
CABF **La Chapelle** 83.31 335 *e*P **P** **01 29 06.1 -0.4**
comp=Z,15nm,0.9s
SMIA **Simia** 83.32 320 P **P** **01 29 05.9 -0.7**
LOR **Lormes** 83.38 336 ⇑*i*P **P** **01 29 06.2 -0.6**
comp=Z,25nm,0.9s
LOR **Lormes** 83.38 336 ⇑*i*P **P** **01 29 06.2 -0.6**
comp=Z,25nm,0.9s
631A **Perdido Creek** 83.41 55 ⇑P **P** **01 29 07.5 +0.2**
baz=83
MIAR **Mount Ida** 83.43 47 *e*P **P** **01 29 07.9 +0.6**
MIAR pmax pmax
comp=Z,11nm,0.9s
MIAR **Mount Ida** 83.43 47 *e*P **P** **01 29 07.8 +0.6**
comp=Z,11nm,0.9s
ATAL **Atalanti** 83.56 320 P **P** **01 29 06.7 -1.1**
GRR **Gorron** 83.61 340 ⇑*i*P **P** **01 29 07.7 -0.2**
comp=Z,46nm,0.8s
GRR **Gorron** 83.61 340 ⇑*i*P **P** **01 29 07.7 -0.2**
GRR pmax pmax
comp=Z,46nm,0.8s
GRR **Gorron** 83.61 340 ⇑*i*P **P** **01 29 07.7 -0.2**
comp=Z,46nm,0.8s
SSF **Saint Saulge** 83.67 337 ⇑*i*P **P** **01 29 07.7 -0.5**
comp=Z,15nm,0.8s
SSF **Saint Saulge** 83.67 337 ⇑*i*P **P** **01 29 07.7 -0.5**
SSF pmax pmax
comp=Z,15nm,0.8s
SSF **Saint Saulge** 83.67 337 ⇑*i*P **P** **01 29 07.7 -0.5**
comp=Z,15nm,0.8s
APE **Apeiranthos** 83.67 317 ⇓P **P** **01 29 06.3 -2.2**
APE **Apeiranthos** 83.67 317 ⇓*i*P **P** **01 29 06.3 -2.2**
PARMO **Parma** 83.72 43 *e*P **P** **01 29 09.8 +1.1**
HYF **Humbligny** 83.72 337 *e*P **P** **01 29 08.5 0.0**
HYF **Humbligny** 83.72 337 *e*P **P** **01 29 08.5 0.0**
632A **Uvalde** 83.80 54 ⇑P **P** **01 29 09.2 -0.1**
baz=84
SMF **Signal de Mont** 83.95 336 ⇑*i*P **P** **01 29 09.3 -0.4**
comp=Z,74nm,0.9s
SMF **Signal de Mont** 83.95 336 ⇑*i*P **P** **01 29 09.3 -0.4**
SMF pmax pmax
comp=Z,74nm,0.9s
SMF **Signal de Mont** 83.95 336 ⇑*i*P **P** **01 29 09.3 -0.4**
comp=Z,74nm,0.9s
AVF **Avril sur Loir** 83.96 337 ⇑*i*P **P** **01 29 09.4 -0.3**
comp=Z,40nm,0.8s
AVF **Avril sur Loir** 83.96 337 ⇑*i*P **P** **01 29 09.4 -0.3**
AVF pmax pmax
comp=Z,40nm,0.8s
AVF **Avril sur Loir** 83.96 337 ⇑*i*P **P** **01 29 09.4 -0.3**
comp=Z,40nm,0.8s
LPL **La Plagne** 84.09 334 ⇑*i*P **P** **01 29 10.7 0.0**
comp=Z,35nm,0.8s
LPL **La Plagne** 84.09 334 ⇑*i*P **P** **01 29 10.7 0.0**
LPL pmax pmax
comp=Z,35nm,0.8s
LPL **La Plagne** 84.09 334 ⇑*i*P **P** **01 29 10.7 0.0**
comp=Z,35nm,0.8s
LPG **La Tagne** 84.10 334 ⇑*i*P **P** **01 29 10.9 +0.1**
comp=Z,37nm,0.8s
LPG **La Plagne** 84.10 334 ⇑*i*P **P** **01 29 10.9 +0.1**
LPG pmax pmax
comp=Z,37nm,0.8s
LPG **La Plagne** 84.10 334 ⇑*i*P **P** **01 29 10.9 +0.1**
comp=Z,37nm,0.8s
SGMF **Saint Gilles** 84.14 341 ⇑*i*P **P** **01 29 10.6 0.0**
comp=Z,54nm,0.8s
SGMF **Saint Gilles** 84.14 341 ⇑*i*P **P** **01 29 10.6 0.0**
SGMF pmax pmax
comp=Z,55nm,0.8s
SGMF **Saint Gilles** 84.14 341 ⇑*i*P **P** **01 29 10.6 0.0**
comp=Z,54nm,0.8s
ROSF **Rostrenen** 84.23 341 *e*P **P** **01 29 10.6 -0.5**
comp=Z,58nm,0.9s
ROSF **Rostrenen** 84.23 341 *e*P **P** **01 29 10.6 -0.5**
ROSF pmax pmax
comp=Z,58nm,0.9s
ROSF **Rostrenen** 84.23 341 *e*P **P** **01 29 10.6 -0.5**
comp=Z,58nm,0.9s
732A **Laxson Ranch,** 84.27 55 ⇑P **P** **01 29 12.0 +0.4**
baz=84
BGF **Bois d'Agland** 84.31 337 *e*P **P** **01 29 11.2 -0.3**
comp=Z,17nm,0.7s
BGF **Bois d'Agland** 84.31 337 *e*P **P** **01 29 11.2 -0.3**
BGF pmax pmax
comp=Z,17nm,0.7s
BGF **Bois d'Agland** 84.31 337 *e*P **P** **01 29 11.2 -0.3**
comp=Z,17nm,0.7s
EIL **Elat** 84.36 307 P **P** **01 29 12.8 +0.7**
EIL **Elat** 84.36 307 P **P** **01 29 12.8 +0.7**
comp=Z,37nm,0.8s,baz=352,slow=4.6,SNR=52
BST **Brest** 84.44 342 *e*P **P** **01 29 11.8 -0.3**
BST **Brest** 84.44 342 *e*P **P** **01 29 11.8 -0.3**
QUIF **Quistinic** 84.60 341 ⇑*i*P **P** **01 29 12.7 -0.2**
comp=Z,35nm,0.8s
QUIF **Quistinic** 84.60 341 ⇑*i*P **P** **01 29 12.7 -0.2**
QUIF pmax pmax
comp=Z,35nm,0.8s
QUIF **Quistinic** 84.60 341 ⇑*i*P **P** **01 29 12.7 -0.2**
comp=Z,35nm,0.8s
AGO **Saint Agoulin** 84.69 336 *e*P **P** **01 29 13.8 +0.3**
AGO **Saint Agoulin** 84.69 336 *e*P **P** **01 29 13.8 +0.3**
TCF **Toulx Ste Croi** 84.74 337 ⇑*i*P **P** **01 29 13.7 0.0**
comp=Z,17nm,0.8s
TCF **Toulx Ste Croi** 84.74 337 ⇑*i*P **P** **01 29 13.7 0.0**
TCF pmax pmax
comp=Z,17nm,0.8s
TCF **Toulx Ste Croi** 84.74 337 ⇑*i*P **P** **01 29 13.7 0.0**
comp=Z,17nm,0.8s
MBDF **Montbardon** 84.78 333 *e*P **P** **01 29 13.5 -0.6**
comp=Z,19nm,0.6s
MBDF **Montbardon** 84.78 333 *e*P **P** **01 29 13.5 -0.6**
MBDF pmax pmax
comp=Z,19nm,0.6s
MBDF **Montbardon** 84.78 333 *e*P **P** **01 29 13.5 -0.6**
comp=Z,19nm,0.6s
ZKR **Zakros** 84.88 316 P **P** **01 29 14.4 -0.2**
ORIF **Oris-en-Rattie** 84.89 334 ⇑*i*P **P** **01 29 14.7 +0.1**
comp=Z,26nm,0.7s
ORIF **Oris-en-Rattie** 84.89 334 ⇑*i*P **P** **01 29 14.7 +0.1**
ORIF pmax pmax
comp=Z,26nm,0.7s
ORIF **Oris-en-Rattie** 84.89 334 ⇑*i*P **P** **01 29 14.7 +0.1**
comp=Z,26nm,0.7s
SSB **Saint Sauveur** 84.98 335 *e*P **P** **01 29 14.1 -0.8**
SSB pmax pmax
comp=Z,9.0nm,0.9s
SSB **Saint Sauveur** 84.98 335 *e*P **P** **01 29 14.1 -0.8**
comp=Z,9.0nm,0.9s
PYM **Petit Puy Mans** 85.00 336 *e*P **P** **01 29 15.3 +0.2**
PYM **Petit Puy Mans** 85.00 336 *e*P **P** **01 29 15.3 +0.2**
PYM **Petit Puy Mans** 85.00 336 *e*P **P** **01 29 15.3 +0.2**
WVT **Waverly** 85.08 42 *e*P **P** **01 29 15.7 +0.2**
WVT pmax pmax
comp=Z,6.0nm,0.8s
WVT **Waverly** 85.08 42 *e*P **P** **01 29 15.7 +0.2**
comp=Z,6.5nm,0.8s
MFF **Saint Martin d** 85.08 339 ⇑*i*P **P** **01 29 15.6 +0.2**
comp=Z,54nm,0.8s
MFF **Saint Martin d** 85.08 339 ⇑*i*P **P** **01 29 15.6 +0.2**
MFF pmax pmax
comp=Z,54nm,0.8s
MFF **Saint Martin d** 85.08 339 ⇑*i*P **P** **01 29 15.6 +0.2**
comp=Z,54nm,0.8s
VIVF **Saint-Julien-l** 85.32 335 ⇑*i*P **P** **01 29 16.8 +0.1**
comp=Z,14nm,0.7s
VIVF **Saint-Julien-l** 85.32 335 ⇑*i*P **P** **01 29 16.8 +0.1**
VIVF pmax pmax
comp=Z,14nm,0.7s
VIVF **Saint-Julien-l** 85.32 335 ⇑*i*P **P** **01 29 16.8 +0.1**
comp=Z,14nm,0.7s
SBF **Sospel** 85.34 333 ⇑*i*P **P** **01 29 16.0 -0.8**
comp=Z,19nm,0.6s
SBF **Sospel** 85.34 333 ⇑*i*P **P** **01 29 16.0 -0.8**
SBF pmax pmax
comp=Z,19nm,0.6s
SBF **Sospel** 85.34 333 ⇑*i*P **P** **01 29 16.0 -0.8**
comp=Z,19nm,0.6s
IDI **Anoyia** 85.40 317 P **P** **01 29 15.6 -1.7**
IDI **Anoyia** 85.40 317 *e*P **P** **01 29 16.1 -1.2**
comp=Z,28nm,0.5s
SIVA **Sivas** 85.66 317 P **P** **01 29 18.2 -0.2**
RJF **Les Rejaudoux** 85.83 337 *e*P **P** **01 29 19.3 +0.1**
comp=Z,42nm,1.1s
RJF **Les Rejaudoux** 85.83 337 *e*P **P** **01 29 19.3 +0.1**
RJF pmax pmax
comp=Z,42nm,1.1s
RJF **Les Rejaudoux** 85.83 337 *e*P **P** **01 29 19.3 +0.1**
comp=Z,42nm,1.1s
SMRF **Simiane la Rot** 85.84 334 *e*P **P** **01 29 19.8 +0.5**
comp=Z,10nm,0.9s
SMRF **Simiane la Rot** 85.84 334 *e*P **P** **01 29 19.8 +0.5**
comp=Z,10nm,0.9s
FRF **La Foret Royal** 85.87 333 *e*P **P** **01 29 19.2 -0.2**
comp=Z,9.5nm,0.7s
FRF **La Foret Royal** 85.87 333 *e*P **P** **01 29 19.2 -0.2**
FRF pmax pmax
comp=Z,10.0nm,0.7s
FRF **La Foret Royal** 85.87 333 *e*P **P** **01 29 19.2 -0.2**
comp=Z,9.5nm,0.7s
PGF **Pioggiola** 85.98 331 *e*P **P** **01 29 19.3 -0.8**
comp=Z,11nm,0.7s
PGF **Pioggiola** 85.98 331 *e*P **P** **01 29 19.3 -0.8**
PGF pmax pmax
comp=Z,11nm,0.7s
PGF **Pioggiola** 85.98 331 *e*P **P** **01 29 19.3 -0.8**
comp=Z,11nm,0.7s
CAF **Calviac** 86.03 337 ⇑*i*P **P** **01 29 20.7 +0.5**
comp=Z,55nm,1.0s
CAF **Calviac** 86.03 337 ⇑*i*P **P** **01 29 20.7 +0.5**
CAF pmax pmax
comp=Z,55nm,1.0s
CAF **Calviac** 86.03 337 ⇑*i*P **P** **01 29 20.7 +0.5**
comp=Z,55nm,1.0s
LMR **La Mourre** 86.11 333 ⇑*i*P **P** **01 29 20.3 -0.3**
comp=Z,47nm,0.9s
LMR **La Mourre** 86.11 333 ⇑*i*P **P** **01 29 20.3 -0.3**
LMR pmax pmax
comp=Z,47nm,0.9s
LMR **La Mourre** 86.11 333 ⇑*i*P **P** **01 29 20.3 -0.3**
comp=Z,47nm,0.9s
LASF **Ste Croix** 86.28 335 ⇑*i*P **P** **01 29 21.9 +0.5**
comp=Z,36nm,1.0s
LASF **Ste Croix** 86.28 335 ⇑*i*P **P** **01 29 21.9 +0.5**
comp=Z,36nm,1.0s
LFF **La Frestale** 86.38 337 ⇑*i*P **P** **01 29 22.4 +0.6**
comp=Z,47nm,0.8s
LFF **La Frestale** 86.38 337 ⇑*i*P **P** **01 29 22.4 +0.6**
LFF pmax pmax
comp=Z,47nm,0.8s
LFF **La Frestale** 86.38 337 ⇑*i*P **P** **01 29 22.4 +0.6**
comp=Z,47nm,0.8s
SWET **Sewanee** 86.72 42 *e*P **P** **01 29 24.2 +0.5**
CPCT **Cooper Cave** 87.20 41 *e*P **P** **01 29 26.5 +0.5**
MTLF **Montolieu** 87.43 336 *e*P **P** **01 29 27.7 +0.7**
comp=Z,20nm,1.0s
MTLF **Montolieu** 87.43 336 *e*P **P** **01 29 27.7 +0.7**
MTLF pmax pmax
comp=Z,20nm,1.0s
MTLF **Montolieu** 87.43 336 *e*P **P** **01 29 27.7 +0.7**
comp=Z,20nm,1.0s
EPF **Esparros** 88.26 337 *e*P **P** **01 29 31.3 +0.3**
comp=Z,9.3nm,0.8s
EPF **Esparros** 88.26 337 *e*P **P** **01 29 31.3 +0.3**
EPF pmax pmax
comp=Z,9.0nm,0.8s
EPF **Esparros** 88.26 337 *e*P **P** **01 29 31.3 +0.3**
comp=Z,9.3nm,0.8s
SJPF **Ste Jean** 88.61 338 *e*P **P** **01 29 32.6 0.0**
comp=Z,58nm,1.5s
SJPF **Ste Jean** 88.61 338 *e*P **P** **01 29 32.6 0.0**
SJPF pmax pmax
comp=Z,58nm,1.5s

SJPF	Ste Jean	88.61	338	*e*P		P	01 29 32.6	0.0
	comp=Z,58nm,1.5s							
ETSF	Etsaut	88.63	338⇑	*i*P		P	01 29 32.6	-0.2
	comp=Z,13nm,0.8s							
ETSF	Etsaut	88.63	338⇑	*i*P		P	01 29 32.6	-0.2
ETSF					pmax	pmax		
	comp=Z,13nm,0.8s							
ETSF	Etsaut	88.63	338⇑	*i*P		P	01 29 32.6	-0.2
	comp=Z,13nm,0.8s							
KMSC	Kings Mountain	88.91	39	⇓P		P	01 29 34.1	0.0
	baz=89							
KEST	Kesra	91.86	328	P		P	01 29 47.2	-0.7
KEST	Kesra	91.86	328	P		P	01 29 47.2	-0.7
	comp=Z,3.0nm,0.9s,baz=348,slow=2.8,SNR=8.4							
ESDC	Sonseca Array	92.55	339	P		P	01 29 50.1	-0.9
ESDC	Sonseca Array	92.55	339	P		P	01 29 50.1	-0.9
	comp=Z,2.2nm,0.7s,baz=14,slow=4.6,SNR=21							
MDT	Midelt	99.17	337	P		Pdif	01 30 20.4	-1.0
MDT	Midelt	99.17	337	P		Pdif	01 30 20.4	-1.0
	comp=Z,0.9nm,0.6s,baz=16,slow=5.3,SNR=4.1							
TORD	Torodi Ar. Bea	115.06	324	PKP		PKPdf	01 35 20.2	-0.7
TORD				PP		PP	01 36 16.9	-3.1
TORD	Torodi Ar. Bea	115.06	324	PKP		PKPdf	01 35 20.2	-0.7
	comp=Z,1.0nm,0.5s,baz=14,slow=1.5,SNR=13							
TORD				PP		PP	01 36 16.9	-3.1
	comp=Z,0.7nm,0.9s,baz=29,slow=6.8,SNR=3.9							
VNDA	Vanda	122.02	177	PKP		PKPdf	01 35 32.2	-0.1
VNDA	Vanda	122.02	177	PKP		PKPdf	01 35 32.2	-0.1
	comp=Z,1.9nm,0.8s,baz=316,slow=3.6,SNR=7.9							
LIC	Lamto	124.06	327	*e*PKIKP		PKPdf	01 35 36.1	-2.2
	comp=Z,14nm,0.8s							
LIC	Lamto	124.06	327	*e*PKPdf		PKPdf	01 35 36.1	-2.2
BOSA	Boshof	132.43	269	PKP		PKPdf	01 35 53.6	-0.2
BOSA	Boshof	132.43	269	PKP		PKPdf	01 35 53.6	-0.2
	comp=Z,2.0nm,0.6s,baz=49,slow=2.6,SNR=3.9							
LPAZ	La Paz	138.48	59	PKP		PKPdf	01 36 06.1	0.0
LPAZ	La Paz	138.48	59	PKP		PKPdf	01 36 06.1	0.0
	comp=Z,1.3nm,0.7s,baz=332,slow=6.2,SNR=7.1							
SIV	San Ignacio	142.37	50	PKPpre		PKPpre	01 36 07.6	
SIV	San Ignacio	142.37	50	PKhKP		PKPpre	01 36 07.6	
	comp=Z,2.6nm,0.8s,baz=332,slow=2.4,SNR=10							
LCO	Las Campanas	145.59	77	*e*PKPdf		PKPbc	01 36 18.5	+0.2
BDFB	Brasilia	148.15	31	PKPbc		PKPbc	01 36 26.1	+0.4
BDFB	Brasilia	148.15	31	PKPbc		PKPbc	01 36 26.1	+0.4
	comp=Z,10nm,0.9s,baz=297,slow=1.6,SNR=13							
CFAA	Coronel Fontan	148.84	78	PKPbc		PKPbc	01 36 26.9	-0.1
CFAA	Coronel Fontan	148.84	78	PKPbc		PKPbc	01 36 26.9	-0.1
	comp=Z,1.4nm,0.7s,baz=302,slow=3.8,SNR=13							
PLCA	Paso Flores	151.44	96	PKPbc		PKPbc	01 36 33.3	+0.3
PLCA	Paso Flores	151.44	96	PKPbc		PKPbc	01 36 33.3	+0.3
	comp=Z,6.3nm,0.8s,baz=288,slow=2.5,SNR=17							
CPUP	Villa Florida	152.61	57	PKP		PKPdf	01 36 29.1	+0.2
CPUP				PKPbc		PKPbc	01 36 35.9	-0.1
CPUP				PKPab		PKPab	01 36 46.0	-0.6
CPUP	Villa Florida	152.61	57	PKP		PKPdf	01 36 29.1	+0.2
	comp=Z,1.1nm,0.5s,baz=233,slow=5.1,SNR=3.0							
CPUP				PKPbc		PKPbc	01 36 35.9	-0.1
	comp=Z,1.1nm,0.5s,baz=300,slow=5.2,SNR=5.8							
CPUP				PKPab		PKPab	01 36 46.0	-0.6
	comp=Z,3.1nm,0.8s,baz=16,slow=4.0,SNR=6.1							

IDC ***21*** *01:18:25.4±0.7, 4.°13S×129.°68E, h0km, mb4.4/10, mb1 4.5/14, mb1mx4.3/26, mbtmp4.4/14, ML3.9/4, MS3.9/1, Ms1 3.9/1, ms1mx3.3/29, Error ellipse: s-maj=30.8km s-min=14.2km az=60.0*

DJA ***21*** *01:18:28.5±0.6, 4.°S×4.°×13.°0E±°, h10km, M4.3/8, mb4.5/6, mB5.7/1, MLv4.2/8, Mw(mB)5.2/17*

ISCJB ***21*** *01:18:28.2±0.3, 4.°24S±0.°04×129.°69E±0.°04, h33km, mb4.3/12, Error ellipse: s-maj=7.0km s-min=4.4km az=142.9*

NEIC ***21*** *01:18:30.4±0.3, 4.°23S×129.°69E, h35km, mb4.6/8, Error ellipse: s-maj=9.9km s-min=6.0km az=56.0*

AUST ***21*** *01:18:30.9±0.5, 4.°31S×129.°59E, h52km, Error ellipse: s-maj=1.5km s-min=0.8km az=42.0*

ISC 21 01:18:30.1±0.5, 4.°33S±0.°05×129.°63E±0.°06, h35km, n73, σ1s68/70, mb4.3/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
				Op				
BNDI	Bandanaira	0.33	125	P		Pn	01 18 36.2	-2.2
BNDI	Bandanaira	0.33	125	P		Pn	01 18 36.5	-1.9
MSAI	Masohi	1.20	324	P		Pn	01 18 48.6	-1.9
MSAI	Masohi	1.20	324	P		Pn	01 18 47.8	-2.7
AAI	Ambon	1.57	294	P		Pn	01 18 53.9	-1.6
AAI	Ambon	1.57	294	P		Pn	01 18 53.9	-1.6
	baz=1.5,SNR=11							
AAI				S		Sn	01 19 13.1	-1.6
	baz=1.5,SNR=7.3							
FAKI	Fak Fak	2.96	62	P		Pn	01 19 12.7	-2.0
FAKI	Fak Fak	2.96	62	P		Pn	01 19 13.5	-1.2
TLE	Tual	3.35	113	P		Pn	01 19 22.7	+2.6
TLE	Tual	3.35	113	P		Pn	01 19 22.2	+2.2
	baz=3.4,SNR=21							
SWI	Sorong	3.81	25	P		Pn	01 19 23.4	-2.9
SWI	Sorong	3.81	25	P		Pn	01 19 25.5	-0.8
SWI	Sorong	3.81	25	P		Pn	01 19 23.6	-2.7
	baz=3.8,SNR=24							
LBMI	Labuha	4.24	330	P		Pn	01 19 32.6	+0.3
RKPI	Ransiki, Papua	5.33	58	P		Pn	01 19 45.8	-1.5
	578nm,0.9s,8μm							
MTN	Manton Dam	8.59	170	P		Pn	01 20 35.4	+3.4
	baz=8.7,SNR=32							
KDU	Kakadu	8.77	162	P		Pn	01 20 35.4	+0.9
	baz=8.8,SNR=42							
MRSI	Marisa	9.05	302	P		Pn	01 20 41.2	+2.9
	25nm,0.9s							
SPSI	Sidrap Palu	9.85	272	P		Pn	01 20 55.4	+6.1
	12nm,1.2s							
KAPI	Kappang	9.87	266	Pn		Pn	01 20 49.9	+0.2
KAPI	Kappang	9.87	266	P		Pn	01 20 54.4	+4.7
	16nm,1.2s							
KAPI	Kappang	9.87	266	Pn		Pn	01 20 49.9	+0.2
	0.3nm,0.3s,baz=87,slow=18,SNR=1.9							
WSI	Waingapu	10.68	240	S		Sn	01 23 23.3	+24
	baz=11,SNR=3.3							
DAV	Davao City (W)	12.03	340	LR		LR	01 24 37.9	
	comp=Z,582nm,20.5s,baz=147,slow=31							
FITZ	Fitzroy Crossi	14.23	196	*e*Pn		Pn	01 21 51.1	+1.8
FITZ	Fitzroy Crossi	14.23	196	Pn		Pn	01 21 49.6	+0.3
	0.5nm,0.3s,baz=28,slow=12,SNR=15							
FITZ	Fitzroy Crossi	14.23	196	P		Pn	01 21 50.6	+1.3
	baz=14,SNR=14							
KHKI	Kahang-Kahang	14.50	253	P		P	01 22 05.1	+5.9
WRAB	Tennant Creek	16.18	164	*e*Pn		Pn	01 22 14.1	-0.9
	19nm,0.8s							
WRAB				*e*S		Sn	01 25 09.4	-3.9
WRA	Warramunga Arr	16.18	164	Pn		Pn	01 22 12.3	-2.7
WRA				Sn		Sn	01 25 09.4	-4.1
WRA	Warramunga Arr	16.18	164	Pn		Pn	01 22 12.3	-2.7
	0.6nm,0.3s,baz=348,slow=13,SNR=14							
WRA				Sn		Sn	01 25 09.4	-4.1
	0.3nm,0.3s,baz=350,slow=22,SNR=4.3							
COEN	Coen	16.43	127	*e*Pn		Pn	01 22 16.9	-1.2
	320nm,0.9s							
COEN	Coen	16.43	127	P		Pn	01 22 15.5	-2.6
	baz=16,SNR=9.3							
PMG	Port Moresby	18.11	107	*e*Pn		P	01 22 39.1	-0.1
PMG	Port Moresby	18.11	107	P		Pn	01 22 38.4	-0.7
	0.6nm,0.3s,baz=309,slow=9.6,SNR=7.6							
QIS	Mount Isa	18.82	150	P		Pn	01 22 48.8	+1.1
	baz=19,SNR=8.8							
MBWA	Marble Bar	19.30	209	*e*Pn		Pn	01 22 54.4	+1.0
	20nm,1.0s							
AS31	Alice Springs	19.66	168	*e*P		Pn	01 22 58.2	+0.4
ASAR	Alice Springs	19.66	168	P		Pn	01 22 58.1	+0.3
ASAR				S		S	01 26 34.8	-1.4
ASAR	Alice Springs	19.66	168	P		Pn	01 22 58.1	+0.3
	1.6nm,0.3s,baz=349,slow=9.9,SNR=52							
ASAR				S		S	01 26 34.8	-1.4
	baz=354,slow=24,SNR=3.7							
KSM	Kuching	20.15	286	*e*P		Pn	01 23 03.1	-0.5
	30nm,1.0s							
CTA	Charters Tower	22.53	135	P		P	01 23 28.7	+1.6
CTA	Charters Tower	22.53	135	P		P	01 23 28.7	+1.6
	22nm,0.8s,baz=311,slow=12,SNR=29							
CTAO	Charters Tower	22.53	135	*e*P		P	01 23 28.2	+1.1
	44nm,1.2s							
QLP	Quilpie	26.17	149	P		P	01 24 02.5	+1.1
	baz=26,SNR=6.3							
STKA	Stephens Creek	29.61	159	*e*P		P	01 24 34.3	+2.2
	1.4nm,0.9s							
STKA	Stephens Creek	29.61	159	P		P	01 24 34.1	+1.9
	6.6nm,0.8s,baz=324,slow=14,SNR=9.6							
STKA	Stephens Creek	29.61	159	P		P	01 24 27.9	-4.3
	baz=30,SNR=3.8							
GSI	Gunungsitoli	32.52	279	P		P	01 25 11.7	+14
	baz=32,SNR=3.1							
CMAR	Chiang Mai Arr	37.78	308	P		P	01 25 44.2	+0.9
CMAR	Chiang Mai Arr	37.78	308	P		P	01 25 44.2	+0.9
	2.7nm,0.6s,baz=129,slow=7.1,SNR=7.7							
MJAR	Matsushiro Arr	41.44	10	P		P	01 26 12.2	-1.3
MJAR	Matsushiro Arr	41.44	10	P		P	01 26 12.2	-1.3
	1.0nm,0.3s,baz=183,slow=11,SNR=4.4							
SONM	Songino Array	55.81	341	P		P	01 28 04.3	+0.3
SONM	Songino Array	55.81	341	P		P	01 28 04.3	+0.3
	1.8nm,0.8s,baz=159,slow=7.1,SNR=7.6							
MK31	Makanchi Array	65.81	326	*e*P		P	01 29 11.3	-0.6
MKAR	Makanchi Array	65.81	326	P		P	01 29 11.4	-0.5
MKAR	Makanchi Array	65.81	326	P		P	01 29 11.4	-0.5
	2.5nm,0.7s,baz=123,slow=8.8,SNR=9.8							
ZALV	Zalesovo Beam	69.04	334	P		P	01 29 31.6	-0.5
ZALV	Zalesovo Beam	69.04	334	P		P	01 29 31.6	-0.5
	2.5nm,0.8s,baz=145,slow=5.3,SNR=6.0							
KURBB	Kurchatov Arra	70.06	328	P		P	01 29 37.9	-0.6
	4.5nm,0.7s,baz=131,slow=5.5,SNR=26							
KURK	Kurchatov	70.07	328	*e*P		P	01 29 38.1	-0.4
	11nm,0.9s							
BVAR	Borovoye Array	75.63	328	P		P	01 30 11.3	-0.2
BVAR	Borovoye Array	75.63	328	P		P	01 30 11.3	-0.2
	3.3nm,0.8s,baz=123,slow=5.5,SNR=12							
BRVK	Borovoye	75.70	328	*e*P		P	01 30 11.7	-0.2
	9.5nm,1.2s							
AKTO	Aktyubinsk	81.75	322	P		P	01 30 45.0	-0.3
AKTO	Aktyubinsk	81.75	322	P		P	01 30 45.0	-0.3
	1.7nm,0.8s,baz=117,slow=7.0,SNR=4.5							
SNAA	Sanae	98.16	194	*e*PKPab		PKiKP	01 36 36.4	+0.6
VNA3	Neumayer Olymp	100.00	192	*e*PKPab		PKiKP	01 36 40.2	+1.1
CPUP	Villa Florida	148.78	168	PKPbc		PKPbc	01 38 15.8	+1.1
CPUP	Villa Florida	148.78	168	PKPbc		PKPbc	01 38 15.8	+1.1
	1.5nm,0.7s,baz=204,slow=1.9,SNR=4.1							
LPAZ	La Paz	153.01	140	PKPbc		PKPbc	01 38 27.2	+1.5
LPAZ	La Paz	153.01	140	PKPbc		PKPbc	01 38 27.2	+1.5
	1.6nm,0.9s,baz=211,slow=2.1,SNR=3.8							

IDC ***21*** *01:18:32.2±0.7, 19.°87S×170.°08E, h0km, mb4.4/16, mb1 4.6/18, mb1mx4.5/23, mbtmp4.4/18, ML3.9/2, MS4.3/11, Ms1 4.3/11, ms1mx4.0/28, Error ellipse: s-maj=22.0km s-min=16.8km az=155.0*

ISCJB ***21*** *01:18:36.1±1.4, 19.°93S±0.°10×170.°04E±0.°07, h36km±13km, mb4.4/21, MS4.2/9, Error ellipse: s-maj=17.0km s-min=9.0km az=155.8*

NEIC ***21*** *01:18:38.4±1.1, 19.°95S×170.°03E, h44km±10km, mb4.9/5, Error ellipse: s-maj=11.2km s-min=7.8km az=159.0*

ISC 21 01:18:38.1±0.5, 19.°9S±0.°1×170.°00E±0.°08, h39km±3km, n95, σ1s24/92, mb4.4/21, MS4.4/9, 4C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
				Op				
DZM	Mont Dzumac	3.96	236	*e*Pn		Pn	01 19 35.9	-0.6
	102nm,0.3s							
DZM				*e*Sn		Sn	01 20 18.3	-3.4
	102nm,0.3s							
DZM	Mont Dzumac	3.96	236	*e*P		Pn	01 19 35.7	-0.7
DZM				*e*S		Sn	01 20 21.6	-0.2
DZM	Mont Dzumac	3.96	236	Pn		Pn	01 19 36.0	-0.4
DZM				Sn		Sn	01 20 22.9	+1.2
DZM	Mont Dzumac	3.96	236	Pn		Pn	01 19 36.0	-0.4
	10nm,0.3s,baz=59,slow=17,SNR=48							
DZM				Sn		Sn	01 20 22.9	+1.2
	20nm,0.3s,baz=168,slow=22,SNR=12							
DZM				LR		LR	01 21 01.5	
	comp=Z,4μm,18.7s,baz=62,slow=37							
NOUC	Port Laguerre	4.09	237	*e*P		Pn	01 19 38.0	-0.1
NOUC				*e*S		Sn	01 20 26.7	+2.0
MSVF	Nonsavu	7.92	76	*e*Pn		Pn	01 20 31.5	+0.6
	110nm,1.0s							
AFI	Afiamalu	18.42	74	LR		LR	01 28 14.4	
	comp=Z,766nm,20.3s,baz=267,slow=32							
URZ	Urewera	19.31	163	P		P	01 22 58.1	-1.7
URZ	Urewera	19.31	163	P		P	01 22 58.1	-1.7
	0.3nm,0.3s,baz=315,slow=2.9,SNR=2.0							
CTA	Charters Tower	22.31	265	LR		LR	01 31 22.3	
	comp=Z,417nm,20.6s,baz=72,slow=34							
RPZ	Rata Peaks	23.76	178	LR		LR	01 32 15.0	
	comp=Z,189nm,18.1s,baz=344,slow=35							
PMG	Port Moresby	24.40	292	P		P	01 23 52.4	-0.7
PMG	Port Moresby	24.40	292	P		P	01 23 52.4	-0.7
	16nm,0.8s,baz=133,slow=9.0,SNR=2.4							
STKA	Stephens Creek	28.11	239	P		P	01 24 26.8	+0.3
STKA	Stephens Creek	28.11	239	P		P	01 24 26.8	+0.3
	1.3nm,0.5s,baz=83,slow=9.1,SNR=4.4							
STKA				LR		LR	01 34 50.7	
	comp=Z,914nm,18.6s,baz=2.0,slow=35							
WRA	Warramunga Arr	33.49	264	P		P	01 25 14.2	+0.2
WRA	Warramunga Arr	33.49	264	P		P	01 25 14.2	+0.2
	3.4nm,0.9s,baz=96,slow=8.4,SNR=3.8							
ASAR	Alice Springs	33.67	257	P		P	01 25 15.6	-0.1
ASAR	Alice Springs	33.67	257	P		P	01 25 15.6	-0.1
	11nm,0.8s,baz=85,slow=9.6,SNR=12							
ASAR				LR		LR	01 37 58.4	
	comp=Z,698nm,19.3s,baz=360,slow=35							
TBI	Tubuai	37.76	103	*e*LR		LR	01 36 04.0	
	339nm,31.2s							
PPT2	Papeete2	38.29	93	*e*LR		LR	01 36 20.3	
	515nm,27.8s							
PPT	Papeete	38.29	93	LR		LR	01 36 55.8	
	comp=Z,399nm,19.8s,baz=3.0,slow=29							
FITZ	Fitzroy Crossi	41.89	265	P		P	01 26 25.6	+0.6
FITZ	Fitzroy Crossi	41.89	265	P		P	01 26 25.6	+0.6
	4.0nm,0.8s,baz=104,slow=9.6,SNR=3.4							
FITZ				LR		LR	01 42 11.8	
	comp=Z,450nm,18.2s,baz=38,slow=34							
MBWA	Marble Bar	46.93	259	*e*P		P	01 27 05.7	+0.4
	22nm,1.1s							
NWAO	Narrogin (SRO)	48.55	243	LR		LR	01 46 49.4	
	comp=Z,76nm,18.4s,baz=43,slow=35							
KAPI	Kappang	51.03	280	P		P	01 27 36.6	-0.2
KAPI	Kappang	51.03	280	P		P	01 27 36.6	-0.2
	9.2nm,1.0s,baz=112,slow=6.0,SNR=3.1							
VNDA	Vanda	57.80	182	P		P	01 28 25.9	+0.9
VNDA	Vanda	57.80	182	P		P	01 28 25.9	+0.9
	1.2nm,0.8s,baz=35,slow=5.3,SNR=6.2							
VNDA				LR		LR	01 48 00.8	
	comp=Z,206nm,19.0s,baz=1.4,slow=31							
MJAR	Matsushiro Arr	63.67	332	P		P	01 29 05.0	-0.5
MJAR	Matsushiro Arr	63.67	332	P		P	01 29 05.0	-0.5
	3.0nm,0.9s,baz=173,slow=5.5,SNR=4.0							
ASAJ	Asahikawa	68.47	339	P		P	01 29 37.0	+0.8
ASAJ	Asahikawa	68.47	339	P		P	01 29 37.0	+0.8
	3.1nm,0.3s,baz=162,slow=2.4,SNR=4.1							
QSPA	South Pole Qui	70.16	180	*e*P		P	01 29 46.9	+0.3
	3.4nm,0.9s							
USRK	Ussuriysk Arra	72.65	332	P		P	01 30 02.6	+1.0
	3.4nm,0.9s,baz=169,slow=12,SNR=2.9							
PETK	Petropavlovsk-	73.48	352	P		P	01 30 06.2	-0.2
PETK	Petropavlovsk-	73.48	352	P		P	01 30 06.2	-0.2
	4.6nm,0.8s,baz=208,slow=8.1,SNR=3.6							
CMAR	Chiang Mai Arr	79.43	294	P		P	01 30 40.6	-0.2
CMAR	Chiang Mai Arr	79.43	294	P		P	01 30 40.6	-0.2
	2.0nm,0.8s,baz=123,slow=3.4,SNR=7.4							
TNA	Tin City	86.84	9	*e*P		P	01 31 19.1	+1.1
	10nm,1.3s							
ISA	Isabella	87.34	51	*e*P		P	01 31 21.6	+0.3
	5.1nm,1.0s							
BILL	Bilibino	87.73	359	*e*P		P	01 31 22.0	-0.2
	8.9nm,0.8s							
SONM	Songino Array	88.18	323	P		P	01 31 25.6	+0.6
SONM	Songino Array	88.18	323	P		P	01 31 25.6	+0.6
	1.9nm,0.8s,baz=133,slow=6.1,SNR=7.4							
SNAA	Sanae	88.53	182	*e*PKiKP		PKiKP	01 36 27.2	+0.5
NVAR	Mina Array Bea	88.70	48	P		P	01 31 28.3	+0.4
NVAR	Mina Array Bea	88.70	48	P		P	01 31 28.3	+0.4
	0.6nm,0.9s,baz=232,slow=6.7,SNR=3.2							
VNA3	Neumayer Olymp	89.10	180	*e*PKiKP		PKiKP	01 36 31.6	+4.0
VNA2	Neumayer--Watz	89.40	181	*e*PKiKP		PKiKP	01 36 31.5	+3.5
ILAR	Eielson Array	90.65	17	P		P	01 31 34.6	-1.5
ILAR	Eielson Array	90.65	17	P		P	01 31 34.6	-1.5
	1.0nm,0.8s,baz=230,slow=5.6,SNR=9.1							
TXAR	Lajitas Array	96.45	61	P		P	01 32 02.9	-0.9
TXAR	Lajitas Array	96.45	61	P		P	01 32 02.9	-0.9
	0.9nm,0.4s,baz=254,slow=3.4,SNR=0.2							
TXAR				LR		LR	02 11 48.1	
	comp=Z,151nm,18.9s,baz=90,slow=33							
YKA	Yellowknife Ar	100.92	27	P		Pdif	01 32 23.6	+0.8
YKA	Yellowknife Ar	100.92	27	P		Pdif	01 32 23.6	+0.8
	0.1nm,0.7s,baz=255,slow=4.3,SNR=3.7							
AKTO	Aktyubinsk	119.04	317	PKP		PKPdf	01 37 22.4	-0.2
AKTO	Aktyubinsk	119.04	317	PKP		PKPdf	01 37 22.4	-0.2
	1.6nm,0.8s,baz=342,slow=7.4,SNR=6.9							
ARCES	ARCESS Array B	125.89	345	PKP		PKPdf	01 37 35.4	+0.3
ARCES	ARCESS Array B	125.89	345	PKP		PKPdf	01 37 35.4	+0.3
	4.2nm,0.9s,baz=38,slow=1.6,SNR=3.6							
DGRG	David-gareji	128.69	308	P		Pdif	01 34 32.7	+5.8
TBLG	Delisi	129.12	308	P		Pdif	01 34 32.7	+3.9
NOA	NORSAR Array B	136.26	345	PKP		PKPdf	01 37 54.7	-0.4
NOA	NORSAR Array B	136.26	345	PKP		PKPdf	01 37 54.7	-0.4
	0.3nm,0.7s,baz=23,slow=4.9,SNR=3.3							
DPC	Dobruska-Polom	143.15	332	*e*PKPdf		PKPbc	01 38 04.7	-0.2
UPC	Upice	143.17	332	*e*PKPdf		PKPbc	01 38 04.5	-0.4
BRG	Berggiesshubel	143.78	334	*e*P		PKPbc	01 38 06.6	+0.1
	2.9nm,1.1s							
BRG								
	comp=N,419nm,22.1s							
BRG								
	comp=E,343nm,30.8s							
BRG								
	comp=Z,481nm,22.9s							
CLL	Collm	143.81	335	*e*PKiKP		PKiKP	01 38 12.0	-0.4
RCBR	Riachuelo	143.91	132	PKP		PKPab	01 38 07.6	+0.1
RCBR	Riachuelo	143.91	132	PKP		PKPab	01 38 07.6	+0.1
	comp=Z,4.1nm,0.7s,baz=236,slow=4.8,SNR=8.3							
PRU	Pruhonice	144.19	333	*e*PKPdf		PKPab	01 38 07.6	+0.2
PRU				*ep*PKP		pPKPdf	01 38 20.4	-1.7
EKA	Eskdalemuir Ar	144.25	353	PKP		PKPab	01 38 07.6	+0.1
EKA	Eskdalemuir Ar	144.25	353	PKP		PKPab	01 38 07.6	+0.1
	comp=Z,0.5nm,0.6s,baz=20,slow=2.5,SNR=3.6							
SRS	Serrai	144.48	314	P		PKPab	01 38 08.3	-0.6
NKC	Novy Kostel	144.88	335	*e*PKP		PKPab	01 38 10.1	+0.1
KNT	Kendrikon	144.93	314	P		PKPab	01 38 09.7	-0.8
VAY	Valandovo	145.07	315	*e*P		PKPbc	01 38 09.7	-1.2
CONA	Conrad Observa	145.07	329⇑	*i*PKPdf		PKPdf	01 38 11.5	+0.1
	comp=Z,18nm,1.5s							
KHC	Kasperske Hory	145.25	333	*e*PKPdf		PKPbc	01 38 11.2	-0.1
KHC	Kasperske Hory	145.25	333	*e*PKP		PKPbc	01 38 11.0	-0.3
KHC				*ep*PKP		pPKPdf	01 38 21.5	-2.5
DIVS	Divibare	145.27	321	P		PKPbc	01 38 11.6	0.0
LAST	Lasithi	145.27	303	P		PKPbc	01 38 12.0	+0.1
GERES	GERESS Array B	145.41	332	PKPbc		PKPbc	01 38 11.9	0.0
GERES	GERESS Array B	145.41	332	PKPbc		PKPbc	01 38 11.9	0.0
	comp=Z,1.7nm,0.7s,baz=50,slow=4.2,SNR=18							
XOR	Xorichti	145.51	311	P		PKPdf	01 38 11.2	-1.1
IDI	Anoyia	145.69	304	*e*PKPdf		PKPdf	01 38 12.4	-0.4
ARSA	Arzberg	145.71	329⇑	*i*PKPbc		PKPdf	01 38 11.8	-0.6
	comp=Z,15nm,1.8s							
MOA	Molln	145.89	330⇑	*i*PKPab		PKPdf	01 38 12.8	+0.1
	comp=Z,13nm,1.1s							
LKR	Lokris	145.94	310	P		PKPdf	01 38 12.3	-0.7
LTK	Loutraki	146.21	309	P		PKPdf	01 38 12.9	-0.7
GUR	Goura	146.70	310	P		PKPbc	01 38 15.5	-0.7
FETA	Feichten	148.09	333⇓	*i*PKiKP		PKPbc	01 38 19.8	-0.1
	comp=Z,11nm,1.1s							
DAVA	Damuels	148.24	334⇑	*i*PKPdf		PKPdf	01 38 16.1	-0.8
	comp=Z,9.3nm,1.0s							
TORD	Torodi Ar. Bea	166.93	241	PKP		PKPdf	01 38 40.5	-0.1
TORD				PKPab		PKPab	01 39 44.1	-0.1
TORD	Torodi Ar. Bea	166.93	241	PKP		PKPdf	01 38 40.5	-0

VOY	Vojsko	2.29	322	*e*Pn		Pn	01 26 04.2	+1.4
VOY				*e*Sn		Sb	01 26 33.7	-1.0
BEHE	Becsehely	2.31	15⇓	*e*Pn		Pn	01 26 02.9	-0.1
BEHE				*e*Sn		Sg	01 26 44.8	+5.4
BEHE	Becsehely	2.31	15⇓	*e*Pn		Pn	01 26 02.9	-0.1
FSSB	Fossombrone	2.33	257	Pn		Pn	01 26 03.2	-0.2
	comp=Z,171nm,0.3s							
FSSB	Fossombrone	2.33	257	Pn		Pn	01 26 03.2	-0.2
	comp=Z,171nm,0.3s							
BRY	Bratogost	2.33	124⇓	*i*Pn		Pb	01 26 06.8	-0.6
BRY				*e*Sn		Sg	01 26 39.4	-1.0
BRY	Bratogost	2.33	124⇓	*i*Pn		Pb	01 26 06.8	-0.6
BRY				*e*Sn		Sg	01 26 39.4	-1.0
TERO	Teramo	2.34	227	Pn		Pn	01 26 02.9	-0.6
TERO				Sn		Sn	01 26 31.8	-0.3
	comp=Z,94nm,0.8s							
TERO	Teramo	2.34	227	Pn		Pn	01 26 02.9	-0.6
TERO				Sn		Sn	01 26 31.8	-0.3
	comp=Z,94nm,0.8s							
SNTG	Esanatoglia	2.37	246	Pn		Pn	01 26 03.5	-0.4
	comp=Z,51nm,0.5s							
SNTG	Esanatoglia	2.37	246	Pn		Pn	01 26 03.5	-0.4
	comp=Z,51nm,0.5s							
FDMO	Fiordimonte	2.38	240	Pn		Pn	01 26 03.4	-0.7
	comp=Z,65nm,0.3s							
FDMO	Fiordimonte	2.38	240	Pn		Pn	01 26 03.4	-0.7
	comp=Z,65nm,0.3s							
SABO	M.te Sabotino	2.38	317	Pn		Pn	01 26 04.4	+0.3
	comp=Z,313nm,0.6s							
SABO	M.te Sabotino	2.38	317	Pn		Pn	01 26 04.4	+0.3
	comp=Z,313nm,0.6s							
UPM	Unac-Piva	2.41	115⇓	*i*Pn		Pb	01 26 07.6	-1.0
UPM				*e*Sn		Sb	01 26 40.9	+2.6
UPM	Unac-Piva	2.41	115⇓	*i*Pn		Pb	01 26 07.6	-1.0
UPM				*e*Sn		Sb	01 26 40.9	+2.6
OBKA	Obir	2.46	337⇓	*e*Pn		Pn	01 26 05.6	+0.4
	SNR=15							
OBKA				⇓*i*Sn		Sb	01 26 37.7	-2.0
OBKA	Obir	2.46	337	Pn		Pn	01 26 05.6	+0.4
	SNR=15							
OBKA				Sn		Sb	01 26 37.7	-2.0
NRCA	Norcia	2.48	236	Pn		Pn	01 26 05.1	-0.3
NRCA				Sn		Sn	01 26 35.2	-0.4
	comp=Z,99nm,0.2s							
NRCA	Norcia	2.48	236	Pn		Pn	01 26 05.1	-0.3
NRCA				Sn		Sn	01 26 35.2	-0.4
	comp=Z,99nm,0.2s							
SGRT	San Giovanni R	2.49	183	Pn		Pn	01 26 04.8	-0.9
	comp=Z,155nm,0.6s							
SGRT	San Giovanni R	2.49	183	Pn		Pn	01 26 04.8	-0.9
	comp=Z,155nm,0.6s							
CAMP	Campotosto	2.50	228	Pn		Pn	01 26 05.3	-0.5
	comp=Z,83nm,0.5s							
CAMP	Campotosto	2.50	228	Pn		Pn	01 26 05.3	-0.5
	comp=Z,83nm,0.5s							
SOKA	Soboth	2.51	346⇓	*i*Pn		Pn	01 26 06.2	+0.3
SOKA				⇑*i*Sn		Sn	01 26 36.8	+0.4
SOKA	Soboth	2.51	346	Pn		Pn	01 26 06.2	+0.3
SOKA				Sn		Sn	01 26 36.8	+0.4
CESI	CESI - Serrava	2.51	241	Pn		Pn	01 26 05.3	-0.6
	comp=Z,37nm,0.6s							
CESI	CESI - Serrava	2.51	241	Pn		Pn	01 26 05.3	-0.6
	comp=Z,37nm,0.6s							
MSAG	Monte S. Angel	2.53	180	Pn		Pn	01 26 05.0	-1.2
MSAG	Monte S. Angel	2.53	180	Pn		Pn	01 26 05.0	-1.2
PIEI	Pieia	2.54	255	Pn		Pn	01 26 06.0	-0.3
	comp=Z,69nm,0.3s							
PIEI	Pieia	2.54	255	Pn		Pn	01 26 06.0	-0.3
	comp=Z,69nm,0.3s							
BBLS	Lazići	2.55	97	*e*Pn		Pb	01 26 11.1	+0.2
BBLS				*e*Sn		Sb	01 26 44.2	+2.0
BBLS	Lazići	2.55	97	*e*Pn		Pb	01 26 11.1	+0.2
BBLS				*e*Sn		Sb	01 26 44.2	+2.0
HCY	Herceg Novi	2.60	133⇓	*i*Pn		Pb	01 26 11.5	-0.4
HCY				*e*Sn		Sb	01 26 45.9	+2.2
HCY	Herceg Novi	2.60	133⇓	*i*Pn		Pb	01 26 11.5	-0.4
HCY				*e*Sn		Sb	01 26 45.9	+2.2
TEKS	Tekeris	2.61	82	*e*Pn		Pb	01 26 12.2	+0.2
TEKS	Tekeris	2.61	82	*e*Pn		Pb	01 26 12.2	+0.2
MURB	Monte Urbino	2.64	249	Pn		Pn	01 26 07.6	-0.1
	comp=Z,205nm,0.3s							
MURB	Monte Urbino	2.64	249	Pn		Pn	01 26 07.6	-0.1
	comp=Z,205nm,0.3s							
ASSB	Assisi San Ben	2.65	244	Pn		Pn	01 26 07.6	-0.2
	comp=Z,76nm,0.6s							
ASSB	Assisi San Ben	2.65	244	Pn		Pn	01 26 07.6	-0.2
	comp=Z,76nm,0.6s							
LNSS	Leonessa	2.66	233	Pn		Pn	01 26 07.7	-0.3
	comp=Z,289nm,0.4s							
LNSS	Leonessa	2.66	233	Pn		Pn	01 26 07.7	-0.3
	comp=Z,289nm,0.4s							
NKY	Niksic	2.66	122⇓	*i*Pn		Pb	01 26 12.4	-0.5
NKY				*e*Sn		Sb	01 26 47.2	+1.7
NKY	Niksic	2.66	122⇓	*i*Pn		Pb	01 26 12.4	-0.5
NKY				*e*Sn		Sb	01 26 47.2	+1.7
INTR	Introdacqua	2.67	214	Pn		Pn	01 26 06.9	-1.2
INTR	Introdacqua	2.67	214	Pn		Pn	01 26 06.9	-1.2
PARC	Parchiule	2.72	259	Pn		Pn	01 26 08.6	-0.1
	comp=Z,62nm,0.7s							
PARC	Parchiule	2.72	259	Pn		Pn	01 26 08.6	-0.1
	comp=Z,62nm,0.7s							
VINO	Villanova	2.74	318	Pn		Pn	01 26 09.1	+0.1
VINO	Villanova	2.74	318	Pn		Pn	01 26 09.1	+0.1
PTCC	Patocco-Chiusa	2.81	321	Pn		Pn	01 26 10.6	+0.6
	comp=Z,2.0nm,0.4s							
PTCC	Patocco-Chiusa	2.81	321	Pn		Pn	01 26 10.6	+0.6
	comp=Z,2.0nm,0.4s							
GEPF	Gemona	2.82	317	Pn		Pn	01 26 10.1	+0.1
	comp=Z,134nm,0.6s							
BSSO	Busso	2.87	200	Pn		Pn	01 26 10.2	-0.6
BSSO	Busso	2.87	200	Pn		Pn	01 26 10.2	-0.6
MYKA	Terra Mystica	2.87	327⇓	*i*Pn		Pn	01 26 11.6	+0.8
MYKA				⇓*i*Sn		Sn	01 26 47.9	+2.6
MYKA	Terra Mystica	2.87	327	Pn		Pn	01 26 11.6	+0.8
MYKA				Sn		Sn	01 26 47.9	+2.6
PKS9	Tamasi	2.87	35	*e*Pn		Pg	01 26 20.0	-0.4
PKS9				*e*Sn		Sg	01 27 10.2	+13
VVLD	Villa Vallelon	2.91	216	Pn		Pn	01 26 10.3	-1.1
	comp=Z,90nm,0.6s							
VVLD	Villa Vallelon	2.91	216	Pn		Pn	01 26 10.3	-1.1
	comp=Z,90nm,0.6s							
BUM	Brajici-Budva	2.92	131⇓	*i*Pn		Pb	01 26 15.8	-1.5
BUM				*e*Sn		Sb	01 26 54.4	+1.5
BUM	Brajici-Budva	2.92	131⇓	*i*Pn		Pb	01 26 15.8	-1.5
BUM				*e*Sn		Sb	01 26 54.4	+1.5
FGSL	Fruska Gora	2.92	71	*e*Pn		Pb	01 26 15.9	-1.4
FGSL				*e*Sn		Sb	01 26 52.0	-1.0
FRGS	Fruska Gora	2.92	70	*e*Pn		Pb	01 26 15.9	-1.4
FRGS				*e*Sn		Sb	01 26 52.0	-1.0
DIVS	Divibare	2.94	91	*e*Pn		Pb	01 26 17.2	-0.4
DIVS				*e*Sn		Sb	01 26 53.5	0.0
DIVS	Divibare	2.94	91	*e*Pn		Pb	01 26 17.2	-0.4
DIVS				*e*Sn		Sb	01 26 53.5	0.0
SDI	San Donato	2.97	212	Pn		Pn	01 26 11.3	-0.9
	comp=Z,34nm,0.5s							
SDI	San Donato	2.97	212	Pn		Pn	01 26 11.3	-0.9
	comp=Z,34nm,0.5s							
POFI	Posta Fibreno	3.00	213	Pn		Pn	01 26 11.7	-0.9
	comp=Z,45nm,0.7s							
POFI	Posta Fibreno	3.00	213	Pn		Pn	01 26 11.7	-0.9
	comp=Z,45nm,0.7s							
CAFI	Castiglion Fio	3.00	254	Pn		Pn	01 26 12.7	+0.1
CAFI	Castiglion Fio	3.00	254	Pn		Pn	01 26 12.7	+0.1
MNS	Montasola	3.00	233	Pn		Pn	01 26 12.2	-0.4
	comp=Z,61nm,0.3s							
MNS	Montasola	3.00	233	Pn		Pn	01 26 12.2	-0.4
	comp=Z,61nm,0.3s							
ARSA	Arzberg	3.02	355⇑	*i*Pn		Pn	01 26 12.3	-0.5
	SNR=15							
ARSA				⇑*i*Sn		Sn	01 26 49.9	+1.1
ARSA	Arzberg	3.02	355	Pn		Pn	01 26 12.8	0.0
	comp=Z,15nm,0.7s							
ARSA	Arzberg	3.02	355	Pn		Pn	01 26 12.8	0.0
	comp=Z,15nm,0.7s							
ARSA				Sn		Sn	01 26 49.9	+1.1
PDG	Podgorica	3.04	126	*e*Pn		Pb	01 26 17.1	-2.2
PDG				*e*Sn		Sb	01 26 57.7	+1.4
PDG	Podgorica	3.04	126⇑	*i*Pn		Pb	01 26 17.8	-1.5
PDG				*e*Sn		Sb	01 26 57.2	+0.9
TTG	Podgorica	3.04	126⇑	*i*Pn		Pb	01 26 17.8	-1.5
TTG				*e*Sn		Sb	01 26 57.2	+0.9
MGAB	Montegabbione	3.07	246	Pn		Pn	01 26 13.5	0.0
	comp=Z,96nm,0.5s							
MGAB	Montegabbione	3.07	246	Pn		Pn	01 26 13.5	0.0
	comp=Z,96nm,0.5s							
IVAS	Ivanjica	3.14	101	*e*Pn		Pb	01 26 19.4	-1.6
IVAS	Ivanjica	3.14	101	*e*Pn		Pb	01 26 19.4	-1.6
CERT	Cerreto	3.14	224	Pn		Pn	01 26 13.9	-0.7
	comp=Z,113nm,0.4s							
CERT	Cerreto	3.14	224	Pn		Pn	01 26 13.9	-0.7
	comp=Z,113nm,0.4s							
BEY	Berane	3.20	114⇓	*i*Pn		Pb	01 26 20.1	-2.0
BEY				*e*Sn		Sb	01 27 00.8	-0.3
IVA	Berane	3.20	114⇓	*i*Pn		Pb	01 26 20.1	-2.0
IVA				*e*Sn		Sb	01 27 00.8	-0.3
TRUS	Trudelj	3.23	89	*e*Pn		Pb	01 26 20.2	-2.3
TRUS	Trudelj	3.23	89	*e*Pn		Pb	01 26 20.2	-2.3
ULC	Ulcinj	3.34	132⇑	*i*Pn		Pb	01 26 22.4	-2.0
ULC				*e*Sn		Sb	01 27 04.8	-0.2
ULC	Ulcinj	3.34	132⇑	*i*Pn		Pb	01 26 22.4	-2.0
ULC				*e*Sn		Sb	01 27 04.8	-0.2
KBA	Koelnbreinsper	3.35	328⇑	*i*Pn		Pn	01 26 18.0	+0.4
KBA				⇑*i*Sn		Sn	01 26 59.3	+1.9
KBA	Koelnbreinsper	3.35	328	Pn		Pn	01 26 18.0	+0.4
KBA				Sn		Sn	01 26 59.3	+1.9
PKST	T"s	3.36	26⇑	*e*Pn		Pn	01 26 17.3	-0.2
PKST	T"s	3.36	26⇑	*e*Pn		Pn	01 26 17.3	-0.2
PVY	Plav	3.38	118	*e*Pn		Pb	01 26 22.7	-2.5
PVY				*e*Sn		Sb	01 27 05.0	-1.2
ABTA	Abfaltersbach	3.46	317⇓	*i*Pn		Pn	01 26 19.4	+0.4
	SNR=8.9							
ABTA				⇓*i*Sn		Sn	01 27 02.5	+2.7
ABTA	Abfaltersbach	3.46	317	Pn		Pn	01 26 19.4	+0.4
	SNR=8.9							
ABTA				Sn		Sn	01 27 02.5	+2.7
SOP	Sopron	3.47	7⇓	*e*Pn		Pn	01 26 18.9	-0.1
SOP	Sopron	3.47	7⇓	*e*Pn		Pn	01 26 18.9	-0.1
GRUS	Gruza	3.48	94	*e*Pn		Pb	01 26 23.7	-3.1
GRUS				*e*Sn		Sb	01 27 07.2	-1.8
GRUS	Gruza	3.48	94	*e*Pn		Pb	01 26 23.7	-3.1
GRUS				*e*Sn		Sb	01 27 07.2	-1.8
MCRV	Calabrutti - M	3.50	189	Pn		Pn	01 26 18.4	-1.2
MCRV	Calabrutti - M	3.50	189	Pn		Pn	01 26 18.4	-1.2
CTI	Castel Tesino	3.51	302	Pn		Pn	01 26 20.1	+0.4
	comp=Z,117nm,0.2s							
CTI	Castel Tesino	3.51	302	Pn		Pn	01 26 20.1	+0.4
	comp=Z,117nm,0.2s							
PKSG		3.59	28	*e*Pn		Pn	01 26 21.3	+0.6
PKSG		3.59	28	*e*Pn		Pn	01 26 21.3	+0.6
PUK	Puka	3.65	126	*e*PN		Sn	01 27 03.3	-1.3
PUK				*i* SN		Sg	01 27 26.6	+4.0
CONA	Conrad Observa	3.68	359⇓	*i*Pn		Pn	01 26 22.1	+0.1
	SNR=27							
CONA				⇓*i*Sn		Sn	01 27 05.6	+0.3
CONA	Conrad Observa	3.68	359	Pn		Pn	01 26 22.1	+0.1
	SNR=27							
CONA				Sn		Sn	01 27 05.6	+0.3
MOA	Molln	3.78	343⇑	*i*Pn		Pn	01 26 24.1	+0.8
	SNR=18							
MOA				⇓*i*Sn		Sn	01 27 09.2	+1.5
MOA	Molln	3.78	343	Pn		Pn	01 26 24.1	+0.8
	SNR=18							
MOA				Sn		Sn	01 27 09.2	+1.5
SELS	Selova	3.91	103	*e*Pn		Pn	01 26 29.8	+4.7
ABSI	Aberstueckl	4.07	309	Pn		Pn	01 26 27.7	+0.2
	comp=Z,125nm,0.6s							
ABSI	Aberstueckl	4.07	309	Pn		Pn	01 26 27.7	+0.2
	comp=Z,125nm,0.6s							
RJOB	Jochberg	4.11	329	*e*Pn		Pn	01 26 29.6	+1.7
RJOB				*e*Sn		Sn	01 27 18.1	+2.3
PHP	Peshkopia	4.20	126	*e*PN		Sn	01 27 12.1	-5.8
PHP				*i* SN		Sg	01 27 43.3	+3.3
WTTA	Wattenberg	4.25	317⇑	*i*Pn		Pn	01 26 30.5	+0.6
	SNR=13							
WTTA				⇓*i*Sn		Sn	01 27 23.5	+4.1
WTTA	Wattenberg	4.25	317	Pn		Pn	01 26 30.5	+0.6
	SNR=13							
BZS	Buzias	4.28	69⇑	*i*P		Pb	01 26 42.8	+2.4
WATA	Walderalm	4.33	317⇓	*i*Pn		Pn	01 26 31.6	+0.7
WATA				⇑*i*Sn		Sn	01 27 24.3	+3.0
WATA	Walderalm	4.33	317	Pn		Pn	01 26 31.6	+0.7
WATA				Sn		Sn	01 27 24.3	+3.0
SMOL	Smolenice	4.40	13	*e*PN		Pn	01 26 30.8	-0.9
SMOL				*e*PG		Sn	01 27 17.6	-5.2
SMOL	Smolenice	4.40	13	*e*Pn		Pn	01 26 30.8	-0.9
MOTA	Moosalm	4.57	314⇑	*i*Pn		Pn	01 26 35.6	+1.3
	SNR=9.0							
MOTA				⇓*i*Sn		Sn	01 27 30.6	+3.3
MOTA	Moosalm	4.57	314	Pn		Pn	01 26 35.6	+1.3
	SNR=9.0							
MOTA				Sn		Sn	01 27 30.6	+3.3
PSZ	Piszkesteto	4.60	36	*e*Pn		Pn	01 26 36.3	+1.7
PSZ				*e*Sn		Sn	01 27 24.5	-3.4
PSZ	Piszkesteto	4.60	36	*e*Pn		Pn	01 26 36.3	+1.7
VLO	Vlora	4.62	144	*e*PN		Pb	01 26 41.7	-4.4
VLO	Vlora	4.62	144	*e*Pn		Pb	01 26 41.7	-4.4
VYHS	Vyhne	4.71	24	*e*PN		Pn	01 26 35.2	-0.8
VYHS				*e*PG		Sn	01 27 23.2	-7.2
VYHS				*e*SN		Sg	01 28 06.2	+10
VYHS	Vyhne	4.71	24	*e*			01 28 06.4	
VYHS	Vyhne	4.71	24	*e*Pn		Pn	01 26 35.2	-0.8
GEC2	GERESS Array S	4.85	342	*e*Pn		Pn	01 26 38.4	+0.4
GEC2				*e*Sn		Sn	01 27 33.3	-0.7
ZAPS	Zavoj	4.96	99	*e*Pn		Pn	01 26 44.3	+4.7
VRAC	Vranov	5.08	5	*e*Pn		Pn	01 26 42.1	+0.9
VRAC				*e*Sn		Sn	01 27 39.2	-0.6
KHC	Kasperske Hory	5.14	343	*e*PN		Pn	01 26 42.2	+0.2
KHC				*e*PG		Pb	01 26 59.5	+4.4
KHC				*e*SN		Sn	01 27 40.2	-1.0
KHC				*ex*			01 27 53.5	
KHC	Kasperske Hory	5.14	343	Pn		Pn	01 26 42.2	+0.2
KHC				Sn		Sn	01 27 40.2	-1.0
PGF	Pioggiola	5.31	254	*e*Pn		Pn	01 26 44.4	-0.1
PGF				*e*Sn		Sn	01 27 38.4	-7.2
	comp=Z,1.5nm,0.4s							
PGF	Pioggiola	5.31	254	*e*Pn		Pn	01 26 44.4	-0.1
WET	Wettzell	5.32	338	*e*Pn		Pn	01 26 44.8	+0.3
WET				*e*Sn		Sn	01 27 44.8	-0.9
MORC	Moravsky Berou	5.64	11⇓	*i*P		Pn	01 26 48.1	-0.8
MORC	Moravsky Berou	5.64	11	*e*Pn		Pn	01 26 49.2	+0.3
PRU	Pruhonice	5.82	351	*e*PN		Pn	01 26 51.3	0.0
PRU				*e*SN		Sn	01 27 56.4	-1.4
PRU	Pruhonice	5.82	351	Pn		Pn	01 26 51.3	0.0
ROTZ	Rotzenmuhle	6.08	337	*e*Pn		Pn	01 26 54.9	+0.1
ROTZ				*e*Sn		Sn	01 28 02.6	-1.5
SBF	Sospel	6.12	269	*e*Pn		Pn	01 26 55.1	-0.4
SBF				*e*Sn		Sn	01 27 57.1	-8.3
	comp=Z,8.5nm,0.3s							
SBF	Sospel	6.12	269	*e*Pn		Pn	01 26 55.1	-0.4
MANZ	Manzenberg	6.30	337	*e*Pn		Pn	01 26 59.1	+1.2
MANZ				*e*Sn		Sn	01 28 08.8	-0.9
NKC	Novy Kostel	6.44	340	*e*PN		Pn	01 26 59.9	+0.1
NKC	Novy Kostel	6.44	340	Pn		Pn	01 26 59.9	+0.1
MBDF	Montbardon	6.56	277	*e*Pn		Pn	01 27 00.9	-0.7
MBDF				*e*Sn		Sn	01 28 08.0	-8.2
	comp=Z,7.9nm,0.5s							
MBDF	Montbardon	6.56	277	*e*Pn		Pn	01 27 00.9	-0.7
LPG	La Plagne	6.63	284	*e*Pn		Pn	01 27 02.2	-0.5
LPG				*e*Sn		Sn	01 28 10.0	-8.2
	comp=Z,8.4nm,0.5s							
LPG	La Plagne	6.63	284	*e*Pn		Pn	01 27 02.2	-0.5
LPL	La Plagne	6.64	284	*e*Pn		Pn	01 27 02.3	-0.5
LPL				*e*Sn		Sn	01 28 10.3	-8.2
	comp=Z,6.4nm,0.4s							
LPL	La Plagne	6.64	284	*e*Pn		Pn	01 27 02.3	-0.5
FRF	La Foret Royal	6.73	267	*e*Pn		Pn	01 27 02.9	-0.9
FRF				*e*Sn		Sn	01 28 11.6	-8.6
	comp=Z,6.0nm,0.5s							
FRF	La Foret Royal	6.73	267	*e*Pn		Pn	01 27 02.9	-0.9
BRG	Berggiesshubel	6.76	349	*e*(SN)		Sn	01 28 19.4	-1.6
BRG				SG		Sb	01 28 42.9	-0.4
	comp=Z,3.2nm,0.7s							
LMR	La Mourre	6.87	266	*e*Pn		Pn	01 27 04.8	-0.9
LMR				*e*Sn		Sn	01 28 15.1	-8.5
	comp=Z,4.1nm,0.4s							
LMR	La Mourre	6.87	266	*e*Pn		Pn	01 27 04.8	-0.9
ORIF	Oris-en-Rattie	7.20	279	*e*Pn		Pn	01 27 09.4	-0.9
ORIF				*e*Sn		Sn	01 28 23.0	-8.9
	comp=Z,6.7nm,0.5s							
ORIF	Oris-en-Rattie	7.20	279	*e*Pn		Pn	01 27 09.4	-0.9
HINF	Hinteralfeld	7.24	303	*e*Pn		Pn	01 27 11.2	+0.3
HINF				*e*Sn		Sn	01 28 25.7	-7.3
	comp=Z,4.7nm,0.4s							
HINF	Hinteralfeld	7.24	303	*e*Pn		Pn	01 27 11.2	+0.3
CDF	Champ du Feu	7.28	308	*e*Pn		Pn	01 27 11.6	+0.1
CDF	Champ du Feu	7.28	308	*e*Pn		Pn	01 27 11.6	+0.1
CABF	La Chapelle	7.30	292	*e*Pn		Pn	01 27 11.5	-0.3
CABF	La Chapelle	7.30	292	*e*Pn		Pn	01 27 11.5	-0.3
CLL	Collm	7.33	346	*e*Pn		Pn	01 27 12.0	0.0
CLL				*e*			01 29 01.0	
CLL				*e*Sg		Sg	01 29 13.0	-7.4
SMRF	Simiane la Rot	7.45	272	*e*Pn		Pn	01 27 12.6	-1.1
SMRF	Simiane la Rot	7.45	272	*e*Pn		Pn	01 27 12.6	-1.1
HAU	Haudompre	7.63	303	*e*Pn		Pn	01 27 16.0	-0.2
HAU				*e*Sn		Sn	01 28 35.0	-7.5
	comp=Z,6.0nm,0.4s							
HAU	Haudompre	7.63	303	*e*Pn		Pn	01 27 16.0	-0.2
TNS	Taunus Mts	7.84	322	*e*Pn		Pn	01 27 20.2	+1.1
VIVF	Saint-Julien-l	8.05	278	*e*Pn		Pn	01 27 21.2	-0.8
VIVF	Saint-Julien-l	8.05	278	*e*Pn		Pn	01 27 21.2	-0.8
LASF	Ste Croix	8.67	273	*e*Pn		Pn	01 27 29.6	-0.8
LASF	Ste Croix	8.67	273	*e*Pn		Pn	01 27 29.6	-0.8
SMF	Signal de Mont	8.82	290	*e*Pn		Pn	01 27 31.4	-1.1
SMF	Signal de Mont	8.82	290	*e*Pn		Pn	01 27 31.4	-1.1
LOR	Lormes	8.95	294	*e*Pn		Pn	01 27 34.2	-0.1
LOR	Lormes	8.95	294	*e*Pn		Pn	01 27 34.2	-0.1
SSF	Saint Saulge	9.13	292	*e*Pn		Pn	01 27 36.3	-0.4
SSF	Saint Saulge	9.13	292	*e*Pn		Pn	01 27 36.3	-0.4
BGF	Bois d'Agland	9.48	289	*e*Pn		Pn	01 27 40.6	-0.9
BGF	Bois d'Agland	9.48	289	*e*Pn		Pn	01 27 40.6	-0.9

IDC 21 01:28:14.6±4.0, 6°42S×128°25E, h399km±45km, mb2.4/1, mb1 2.8/4, mb1mx2.6/20, mbtmp2.6/4, Error ellipse: s-maj=74.4km s-min=16.2km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
FITZ	Fitzroy Crossi	11.89	192	P	P	01	30 51.5	-1.7
	0.1nm,0.3s,baz=23,slow=13,SNR=4.7							
WRA	Warramunga Arr	14.69	157	P	P	01	31 24.6	+0.7
	0.4nm,0.3s,baz=337,slow=12,SNR=11							
WRA				S	S	01	34 00.1	-0.4
	0.1nm,0.3s,baz=338,slow=17,SNR=4.0							
ASAR	Alice Springs	17.99	163	P	P	01	32 00.2	+1.0
	0.2nm,0.3s,baz=342,slow=11,SNR=5.3							
ASAR				S	S	01	35 05.6	+0.6
	0.1nm,0.3s,baz=343,slow=22,SNR=3.3							
MKAR	Makanchi Array	66.80	327	P	P	01	38 24.8	0.0
	0.1nm,0.3s,baz=130,slow=5.8,SNR=2.6							

*IDC **21** 01:41:14.7±0.5, 4°28S×129°69E, h0km, mb4.2/13, mb1 4.4/17, mb1mx4.3/25, mbtmp4.3/17, ML3.9/4, MS3.7/5, Ms1 3.7/5, ms1mx3.4/29, Error ellipse: s-maj=27.2km s-min=10.0km az=70.0*

*AUST **21** 01:41:15.6±2.8, 4°11S×129°59E, h1km, Error ellipse: s-maj=1.0km s-min=0.8km az=225.0*

*NEIC **21** 01:41:18.8±2.7, 4°25S×129°76E, h27km±20km, mb4.6/12, Error ellipse: s-maj=11.0km s-min=6.1km az=221.0*

*DJA **21** 01:41:18.0±0.4, 4°S±3°×13°0E±°, h9km±4km, M4.6/10, mb4.9/4, mB5.9/1, MLv4.4/10, Mw(mB)5.5/1*

*ISCJB **21** 01:41:18.2±0.5, 4°29S±0°03×129°65E±0°03, h34km±5km, mb4.5/27, MS4.0/6, Error ellipse: s-maj=6.6km s-min=4.0km az=140.4*

ISC 21 01:41:19.3±1.0, 4°24S±0°04×129°65E±0°04, h26km±6km, n110, σ1§45/115, mb4.4/27, MS4.0/6, Banda Sea

| Code | Station Name | Δ° | AZ° | Phase ID | | Time | | Res |
|---|---|---|---

baz=30,SNR=4.5
NWAO Narrogin (SRO) 30.81 201 LR LR 01 59 49.5
comp=Z,330nm,21.4s,baz=185,slow=36
GSI Gunungsitoli 32.52 279 S S 01 52 32.7 -30
baz=32,SNR=4.0
JNU Nakatsue 37.18 2 LR LR 02 02 58.9
comp=Z,173nm,18.6s,baz=230,slow=35
CMAR Chiang Mai Arr 37.74 308 P **P** **01 48 33.8 +0.5**
CMAR Chiang Mai Arr 37.74 308 P **P** **01 48 33.8 +0.5**
2.2nm,0.4s,baz=140,slow=7.3,SNR=16
GYA Guiyang 37.77 325 *eP* **P** **01 48 36.0 +2.5**
GYA pmax pmax
comp=Z,10.0nm,0.8s
CHTO Chiang Mai 37.94 308 *eP* **P** **01 48 36.2 +1.2**
comp=Z,8.2nm,0.9s
KMI Kunming 39.19 320 P **P** **01 48 48.3 +2.7**
KMI pmax pmax
comp=Z,13nm,0.7s
KMI LR LR
comp=N,350nm,15.5s
KMI LR LR
comp=E,260nm,18.6s
KMI LR LR
comp=Z,270nm,19.7s
DZM Mont Dzumac 39.80 120 P **P** **01 48 49.0 -1.6**
DZM Mont Dzumac 39.80 120 P **P** **01 48 49.0 -1.6**
comp=Z,4.8nm,0.7s,baz=325,slow=12,SNR=2.3
MJAR Matsushiro Arr 41.35 10 P **P** **01 49 01.0 -2.1**
MJAR Matsushiro Arr 41.35 10 P **P** **01 49 01.0 -2.1**
comp=Z,1.6nm,0.6s,baz=183,slow=9.2,SNR=5.0
NFK Norfolk Island 43.87 128 S S 01 55 30.3 -23
baz=44,SNR=3.1
BJI Beijing 45.77 346 P P 01 49 42.9 +4.3
BJI S **S** **01 56 23.3 +2.6**
BJI pmax pmax
comp=Z,10.0nm,0.6s
BJI LR LR
comp=N,370nm,21.1s
BJI LR LR
comp=E,330nm,24.8s
BJI LR LR
comp=Z,100nm,18.6s
HHC Hu-ho-hao-te 47.83 341 *eP* **P** **01 49 56.9 +2.0**
HHC pP pP 01 50 06.0 +3.1
HHC sP sP 01 50 10.9 +4.8
HHC S **S** **01 56 51.5 +1.1**
HHC sS sS 01 57 09.6 +6.0
HHC ScS **ScS** **01 59 46.3 -0.5**
HHC SS **SS** **02 00 15.6 -3.7**
HHC pmax pmax
comp=Z,31nm,0.6s
HHC pmax pmax
comp=Z,490nm,4.3s
HHC LR LR
comp=N,490nm,12.2s
HHC LR LR
comp=E,430nm,10.6s
HHC LR LR
comp=Z,380nm,12.2s
CN2 Changchun 47.97 356 *eP* **P** **01 49 58.6 +2.8**
CN2 pmax pmax
comp=Z,20nm,0.7s
USRK Ussuriysk Arra 48.27 2 P **P** **01 49 58.3 +0.3**
comp=Z,1.1nm,0.6s,baz=188,slow=7.7,SNR=3.1
ODAN Odare 51.22 310 *eP* **P** **01 50 20.5 -0.7**
comp=Z,18nm,0.9s
TAPN Taplejung 51.23 310 *eP* **P** **01 50 20.2 -1.1**
comp=Z,12nm,0.5s
GTA Gaotai 51.41 330 *eP* **P** **01 50 24.1 +1.9**
GTA pP pP 01 50 33.5 +3.2
GTA sP sP 01 50 38.0 +4.5
GTA pmax pmax
comp=Z,4.0nm,0.5s
RAMN Ramite 51.88 309 *eP* **P** **01 50 25.9 -0.2**
comp=Z,16nm,0.5s
GUN Gumba 52.91 310 *eP* **P** **01 50 32.2 -1.6**
comp=Z,14nm,0.5s
PKI Pulchoki 53.10 309 *eP* **P** **01 50 34.4 -0.9**
KOLN Koldanda 54.60 308 *eP* **P** **01 50 45.6 -0.5**
DANN Dangsing 54.76 309 *eP* **P** **01 50 45.6 -1.7**
comp=Z,26nm,1.0s
HYB Hyderabad 54.83 295 *i* P **P** **01 50 46.0 -1.7**
PYUN Piuthan 55.23 309 *eP* **P** **01 50 49.7 -1.0**
comp=Z,48nm,1.1s
ULN Ulaanbaatar 55.55 342 *eP* **P** **01 50 52.6 +0.1**
comp=Z,6.1nm,1.1s
SONM Songino Array 55.73 341 P **P** **01 50 54.0 +0.2**
SONM Songino Array 55.73 341 P **P** **01 50 54.0 +0.2**
comp=Z,4.8nm,1.1s,baz=167,slow=6.5,SNR=11
WMQ Urumqi 60.91 326 P **P** **01 51 31.8 +1.8**
WMQ pmax pmax
comp=Z,21nm,1.0s
MK31 Makanchi Array 65.75 326 *eP* **P** **01 52 01.1 -0.8**
MKAR Makanchi Array 65.75 326 *eP* **P** **01 52 01.5 -0.4**
MKAR Makanchi Array 65.75 326 P **P** **01 52 01.2 -0.7**
comp=Z,1.5nm,0.4s,baz=121,slow=8.3,SNR=32
KSH Kashi 65.77 317 P **P** **01 52 03.9 +1.6**
KSH pP pP 01 52 16.9 +6.3
KSH sP sP 01 52 22.0 +8.2
KSH PcP **PcP** **01 52 34.0 +0.6**
KSH PP **PP** **01 54 31.9 +4.5**
KSH ScP 01 56 32.4
KSH PcS 01 56 36.9
KSH S **S** **02 00 46.5 -1.0**
KSH sS sS 02 01 08.9 +7.7
KSH ScS **SKSac** **02 01 53.4 -3.3**
KSH SS **SS** **02 05 03.6 +1.1**
KSH pmax pmax
comp=Z,1.0nm,0.3s
KSH pmax pmax
comp=Z,69nm,3.7s
KSH LR LR
comp=N,65nm,4.3s
KSH LR LR
comp=E,44nm,3.5s
KSH LR LR
comp=Z,230nm,4.8s
TKM2 Tokmak 2 67.66 320 *eP* **P** **01 52 14.6 +0.2**
comp=Z,3.1nm,0.6s
AAK Ala-Archa 68.23 319 *eP* **P** **01 52 18.2 +0.2**
comp=Z,1.7nm,0.9s
ZALV Zalesovo Beam 68.97 333 P **P** **01 52 21.0 -1.1**
ZALV Zalesovo Beam 68.97 333 P **P** **01 52 21.0 -1.1**
comp=Z,2.2nm,0.8s,baz=104,slow=6.3,SNR=12
KURK Kurchatov 70.00 328 *eP* **P** **01 52 27.9 -0.6**
comp=Z,12nm,0.9s
VNDA Vanda 75.21 173 P **P** **01 52 58.4 -0.7**
VNDA Vanda 75.21 173 P **P** **01 52 58.4 -0.7**
comp=Z,1.2nm,0.9s,baz=302,slow=6.8,SNR=5.7
BRVK Borovoye 75.63 328 *eP* **P** **01 53 01.6 -0.3**
comp=Z,8.3nm,1.0s
ABKAR Akbulak array 80.15 321 *eP* **P** **01 53 25.4 -1.7**
AKTO Aktyubinsk 81.69 322 P **P** **01 53 35.2 -0.2**
AKTO Aktyubinsk 81.69 322 P **P** **01 53 35.2 -0.2**
comp=Z,2.2nm,0.8s,baz=108,slow=6.3,SNR=6.1
KBZ Khabaz 90.56 314 P **P** **01 54 20.1 +0.9**
KBZ Khabaz 90.56 314 P **P** **01 54 20.1 +0.9**
comp=Z,0.8nm,0.6s,baz=49,slow=11,SNR=3.4
ILAR Eielson Array 91.01 25 P **P** **01 54 20.6 -0.3**
ILAR Eielson Array 91.01 25 P **P** **01 54 20.7 -0.3**
comp=Z,0.4nm,0.9s,baz=293,slow=4.7,SNR=3.4
TXAR Lajitas Array 123.78 57 PKP **PKPdf** **02 00 15.7 +0.1**
TXAR Lajitas Array 123.78 57 PKP **PKPdf** **02 00 15.7 +0.1**
comp=Z,0.1nm,0.4s,baz=205,slow=3.5,SNR=3.3
TORD Torodi Ar. Bea 127.89 283 PKP **PKPdf** **02 00 22.6 -1.2**
TORD Torodi Ar. Bea 127.89 283 PKP **PKPdf** **02 00 22.6 -1.2**
comp=Z,0.6nm,0.8s,baz=82,slow=1.8,SNR=3.3
CFAA Coronel Fontan 140.49 156 PKP **PKPdf** **02 00 45.0 -2.0**
CFAA Coronel Fontan 140.49 156 PKP **PKPdf** **02 00 45.0 -2.0**
comp=Z,0.3nm,0.7s,baz=217,slow=2.7,SNR=4.2
CPUP Villa Florida 148.87 168 PKPbc **PKPbc** **02 01 04.8 -0.6**
CPUP Villa Florida 148.87 168 PKPbc **PKPbc** **02 01 04.8 -0.6**
comp=Z,2.1nm,0.7s,baz=242,slow=2.9,SNR=6.8
LPAZ La Paz 153.07 140 PKPbc **PKPbc** **02 01 16.4 0.0**
LPAZ La Paz 153.07 140 PKPbc **PKPbc** **02 01 16.4 0.0**
comp=Z,1.6nm,0.9s,baz=64,slow=1.2,SNR=4.6

*IDC **21** 01:56:35.4±1.0,4˚.26S×129˚.41E,h0km, mb4.0/5, mb1 4.0/8, mb1mx3.8/22, mbtmp3.9/8, ML3.6/3, Error ellipse: s-maj=52.9km s-min=18.6km az=70.0*
*DJA **21** 01:56:37.4±0.7,4˚S±7˚×13˚0E±˚, h10km±9km, M3.5/4, MLv3.5/4*
*ISCJB **21** 01:56:38.4±0.5,4˚.28S±0˚.05×129˚.61E±0˚.07, h33km, mb3.9/5, Error ellipse: s-maj=10.3km s-min=6.4km az=152.8*
*AUST **21** 01:56:41.6,4˚.49S×129˚.52E, h35km*
ISC 21 01:56:40.5±0.8,4˚26S±0˚.07×129˚.57E±0˚.07, h35km, n22,
σ1§46/21, mb3.9/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.43**	**128**	P		Pn	01 56 46.2	-4.0
MSAI	**Masohi**	**1.10**	**325**	P		**Pn**	**01 56 57.4**	**-2.1**
AAI	**Ambon**	**1.48**	**292**	P		**Pn**	**01 57 04.4**	**-0.3**
AAI	**Ambon**	**1.48**	**292**	P		**Pn**	**01 57 03.9**	**-0.7**
baz=1.5,SNR=6.7								
FAKI	**Fak Fak**	**2.99**	**64**	P		**Pn**	**01 57 23.3**	**-2.1**
TLE	**Tual**	**3.44**	**114**	P		**Pn**	**01 57 30.0**	**-1.7**
TLE	**Tual**	**3.44**	**114**	P		**Pn**	**01 57 32.4**	**+0.6**
baz=3.4,SNR=4.6								
SWI	**Sorong**	**3.77**	**27**	P		Pn	01 57 31.8	-4.4
SWI	**Sorong**	**3.77**	**27**	P		**Pn**	**01 57 36.6**	**+0.4**
baz=4.0,SNR=6.5								
MTN	**Manton Dam**	**8.67**	**170**	P		**Pn**	**01 58 46.0**	**+2.5**
baz=8.5,SNR=11								
MTN				S		**Sn**	**02 00 19.4**	**-0.8**
baz=8.5,SNR=8.3								
MTN	**Manton Dam**	**8.67**	**170**	P		**Sn**	**02 00 19.2**	**-1.0**
baz=9.0,SNR=5.8								
KDU	**Kakadu**	**8.86**	**161**	P		**Pn**	**01 58 47.5**	**+1.4**
baz=8.7,SNR=17								
PCI	**Palu**	**10.27**	**289**	P		**Pn**	**01 59 07.7**	**+2.1**
baz=10,SNR=3.4								
FITZ	**Fitzroy Crossi**	**14.29**	**195**	Pn		**Pn**	**01 59 58.1**	**-2.3**
0.1nm,0.3s,baz=13,slow=13,SNR=5.6								
FITZ	**Fitzroy Crossi**	**14.29**	**195**	P		**Pn**	**02 00 00.8**	**+0.4**
baz=14,SNR=7.2								
WRA	**Warramunga Arr**	**16.27**	**164**	Pn		**Pn**	**02 00 24.7**	**-1.8**
0.2nm,0.3s,baz=346,slow=13,SNR=7.2								
ASAR	**Alice Springs**	**19.75**	**168**	P		**Pn**	**02 01 08.5**	**-0.7**
0.4nm,0.3s,baz=351,slow=10,SNR=15								
CTA	**Charters Tower**	**22.63**	**135**	P		**P**	**02 01 38.5**	**0.0**
3.8nm,0.8s,baz=315,slow=17,SNR=3.8								
STKA	**Stephens Creek**	**29.71**	**159**	P		**P**	**02 02 44.0**	**+0.7**
0.4nm,0.4s,baz=325,slow=12,SNR=2.1								
PETK	**Petropavlovsk-**	**61.88**	**19**	P		**P**	**02 06 57.4**	**+1.1**
3.7nm,0.6s,baz=217,slow=3.6,SNR=3.2								
MKAR	**Makanchi Array**	**65.71**	**326**	P		**P**	**02 07 21.5**	**-0.2**
0.5nm,0.4s,baz=112,slow=7.4,SNR=17								
ZALV	**Zalesovo Beam**	**68.95**	**334**	P		**P**	**02 07 41.4**	**-0.5**
0.4nm,0.4s,baz=126,slow=7.3,SNR=2.4								

*IDC **21** 01:58:07.1±0.6,4˚.21S×129˚.69E, h0km, mb4.2/11, mb1 4.4/15, mb1mx4.3/23, mbtmp4.3/15, ML4.2/4, MS3.6/6, Ms1 3.6/6, ms1mx3.4/34, Error ellipse: s-maj=29.6km s-min=13.3km az=68.0*
*NEIC **21** 01:58:08.7±4.0,4˚.22S×129˚.73E, h10km±26km, mb4.7/10, Error ellipse: s-maj=10.5km s-min=7.1km az=52.0*
*ISCJB **21** 01:58:10.4±0.3,4˚.28S±0˚.04×129˚.66E±0˚.04, h33km, mb4.5/25, MS3.8/5, Error ellipse: s-maj=6.8km s-min=3.8km az=143.1*
*DJA **21** 01:58:11.4±0.5,4˚S±7˚×13˚0E±˚, h12km±7km, M4.8/8, mb5.6/1, mB5.9/1, MLv4.3/8, Mw(mB)5.5/1*
*AUST **21** 01:58:12.7,3˚.99S×129˚.51E, h60km*
*BJI **21** 01:58:17.4,4˚.01S×129˚.60E, h67km, mB5.0/9, mb5.0/21, Ms4.8/10, Ms7 4.5/10*
ISC 21 01:58:12.0±0.4,4˚30S±0˚.04×129˚.66E±0˚.05, h35km, n92,
σ1§68/100, mb4.6/25, MS3.7/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.33**	**132**	P		**Pn**	**01 58 18.9**	**-1.5**
BNDI				S		**Sn**	**01 58 25.2**	**-0.9**
MSAI	**Masohi**	**1.19**	**323**	P		**Pn**	**01 58 32.8**	**+0.6**
AAI	**Ambon**	**1.58**	**293**	P		**Pn**	**01 58 37.9**	**+0.4**
AAI				S		**Sn**	**01 58 55.8**	**-1.0**
AAI	**Ambon**	**1.58**	**293**	P		**Pn**	**01 58 36.4**	**-1.1**
baz=1.3,SNR=7.7								
AAI				S		**Sn**	**01 58 55.4**	**-1.4**
baz=1.3,SNR=4.6								
FAKI	**Fak Fak**	**2.93**	**62**	P		**Pn**	**01 58 55.6**	**-0.5**
TLE	**Tual**	**3.34**	**114**	P		**Pn**	**01 59 04.5**	**+2.7**
TLE	**Tual**	**3.34**	**114**	P		**Pn**	**01 59 04.5**	**+2.7**
baz=3.6,SNR=13								
SWI	**Sorong**	**3.77**	**25**	P		**Pn**	**01 59 08.2**	**+0.5**
SWI	**Sorong**	**3.77**	**25**	P		**Pn**	**01 59 06.8**	**-1.0**
baz=3.6,SNR=8.9								
LBMI	**Labuha**	**4.23**	**329**	P		**Pn**	**01 59 15.4**	**+1.4**
RKPI	**Ransiki, Papua**	**5.30**	**59**	P		**Pn**	**01 59 29.5**	**+0.8**
KDU	**Kakadu**	**8.79**	**162**	P		**Pn**	**02 00 18.9**	**+2.2**
baz=9.2,SNR=9.1								
KAPI	**Kappang**	**9.90**	**266**	*e*Pn		Pn	02 00 38.4	+6.6
KAPI	**Kappang**	**9.90**	**266**	Pn		**Pn**	**02 00 34.6**	**+2.7**
0.7nm,0.3s,baz=96,slow=19,SNR=2.4								
KAPI				LR		LR	02 04 09.5	
comp=Z,338nm,21.2s,baz=124,slow=36								
PCI	**Palu**	**10.37**	**289**	P		Pn	02 00 24.7	-14
baz=10,SNR=9.1								
PCI				S		Sn	02 02 22.8	-11
baz=10,SNR=9.8								
FITZ	**Fitzroy Crossi**	**14.27**	**196**	Pn		**Pn**	**02 01 30.8**	**-0.8**
FITZ	**Fitzroy Crossi**	**14.27**	**196**	Pn		**Pn**	**02 01 30.8**	**-0.8**
0.6nm,0.3s,baz=112,slow=5.0,SNR=9.4								
FITZ				LR		LR	02 07 10.3	
comp=Z,139nm,21.5s,baz=344,slow=38								
FITZ	**Fitzroy Crossi**	**14.27**	**196**	P		**P**	**02 01 40.1**	**+1.7**
baz=15,SNR=8.6								
WRAB	**Tennant Creek**	**16.20**	**164**	*e*Pn		**Pn**	**02 01 56.2**	**-0.8**
24nm,1.1s								
WRAB				*e*S		**Sn**	**02 04 50.5**	**-5.2**
WRA	**Warramunga Arr**	**16.20**	**164**	Pn		**Pn**	**02 01 55.3**	**-1.8**
WRA				Sn		**Sn**	**02 04 50.7**	**-5.2**
WRA	**Warramunga Arr**	**16.20**	**164**	Pn		**Pn**	**02 01 55.3**	**-1.8**
0.7nm,0.3s,baz=346,slow=13,SNR=10								
WRA				Sn		**Sn**	**02 04 50.7**	**-5.2**
0.2nm,0.3s,baz=340,slow=22,SNR=5.4								
COEN	**Coen**	**16.43**	**127**	*e*Pn		**Pn**	**02 01 58.6**	**-1.4**
244nm,1.0s								
COEN	**Coen**	**16.43**	**127**	P		**P**	**02 02 03.9**	**+1.5**
baz=17,SNR=6.8								
PMG	**Port Moresby**	**18.10**	**107**	*e*Pn		**Pn**	**02 02 20.2**	**-0.6**
97nm,1.2s								
PMG	**Port Moresby**	**18.10**	**107**	P		**Pn**	**02 02 20.7**	**-0.1**
1.3nm,0.3s,baz=302,slow=7.4,SNR=8.5								
PMG				LR		LR	02 10 35.1	
comp=Z,579nm,18.9s,baz=272,slow=41								
QIS	**Mount Isa**	**18.84**	**150**	P		**Pn**	**02 02 30.7**	**+0.9**
baz=19,SNR=8.2								
MBWA	**Marble Bar**	**19.33**	**209**	*e*P		**Pn**	**02 02 36.3**	**+0.6**
28nm,0.9s								
AS31	**Alice Springs**	**19.68**	**168**	*e*P		**P**	**02 02 39.9**	**+1.6**
ASAR	**Alice Springs**	**19.68**	**168**	P		**Pn**	**02 02 40.5**	**+0.5**
ASAR				S		**S**	**02 06 16.9**	**-1.8**
ASAR	**Alice Springs**	**19.68**	**168**	P		**Pn**	**02 02 40.5**	**+0.5**
2.4nm,0.3s,baz=350,slow=10,SNR=22								
ASAR				S		**S**	**02 06 16.9**	**-1.8**
0.1nm,0.3s,baz=344,slow=22,SNR=3.4								
KSM	**Kuching**	**20.17**	**286**	*e*P		**P**	**02 02 44.7**	**+1.1**
30nm,1.1s								
CTA	**Charters Tower**	**22.53**	**136**	P		**P**	**02 03 10.4**	**+1.3**
CTA	**Charters Tower**	**22.53**	**136**	P		**P**	**02 03 10.4**	**+1.3**
14nm,0.6s,baz=317,slow=12,SNR=16								
CTAO	**Charters Tower**	**22.53**	**136**	*e*P		**P**	**02 03 10.2**	**+1.1**
21nm,0.8s								
GUMO	**Guam**	**23.32**	**40**	LR		LR	02 12 13.3	
comp=Z,85nm,18.2s,baz=43,slow=36								
STKA	**Stephens Creek**	**29.64**	**159**	P		**P**	**02 04 15.5**	**+1.3**
STKA	**Stephens Creek**	**29.64**	**159**	P		**P**	**02 04 15.5**	**+1.3**
2.9nm,0.8s,baz=327,slow=15,SNR=4.7								
NWAO	**Narrogin (SRO)**	**30.76**	**201**	LR		LR	02 16 18.8	
comp=Z,143nm,18.5s,baz=173,slow=35								
GSI	**Gunungsitoli**	**32.54**	**279**	S		S	02 09 46.8	-6.6
baz=32,SNR=7.1								
CNB	**Canberra Magne**	**35.84**	**152**	P		P	02 05 13.3	+4.8
baz=36,SNR=5.8								
CMAR	**Chiang Mai Arr**	**37.78**	**308**	P		**P**	**02 05 26.4**	**+1.2**
CMAR	**Chiang Mai Arr**	**37.78**	**308**	P		**P**	**02 05 26.4**	**+1.2**
2.3nm,0.3s,baz=139,slow=7.7,SNR=16								
CMAR				LR		LR	02 22 30.5	
comp=Z,38nm,19.7s,baz=220,slow=39								
GYA	**Guiyang**	**37.82**	**325**	*e*P		**P**	**02 05 27.8**	**+2.3**
GYA				pP		pP	02 05 44.6	+8.9
GYA				sP		sP	02 05 53.3	+13
GYA				S		**S**	**02 11 15.4**	**+0.9**
GYA				ScP		**ScP**	**02 11 23.0**	**-3.8**
GYA				ScS		**ScS**	**02 15 31.8**	**-4.2**
GYA				pmax		pmax		
comp=Z,10.0nm,0.8s								
GYA				pmax		pmax		
comp=Z,90nm,4.8s								
GYA				LR		LR		
comp=N,350nm,17.5s								
GYA				LR		LR		
comp=E,280nm,18.4s								
GYA				LR		LR		
comp=Z,390nm,17.9s								
CHTO Chiang Mai 37.98 308 *eP* **P** **02 05 27.9 +1.1**								
comp=Z,14nm,1.1s								
KMI Kunming 39.23 320 P P 02 05 41.6 +4.1								
KMI pmax pmax								
comp=Z,10.0nm,1.1s								
MJAR Matsushiro Arr 41.41 10 P **P** **02 05 53.7 -1.4**								
MJAR Matsushiro Arr 41.41 10 P **P** **02 05 53.7 -1.4**								
comp=Z,1.8nm,0.6s,baz=190,slow=10,SNR=5.1								
KSAR Wonju Array Be 41.56 358 P **P** **02 05 56.5 +0.1**								
KSRS Korea Array 41.57 358 P **P** **02 05 56.5 +0.1**								
comp=Z,1.2nm,0.7s,baz=181,slow=8.4,SNR=2.9								
CD2 Chengdu 42.87 327 P **P** **02 06 09.3 +2.1**								
CD2 pP pP 02 06 26.0 +8.5								
CD2 sP sP 02 06 33.9 +12								
CD2 PP PP 02 07 52.5 +5.4								
CD2 PcP **PcP** **02 07 58.6 +0.8**								
CD2 PcS **PcS** **02 11 49.8 -0.4**								
CD2 S **S** **02 12 29.9 +0.3**								
CD2 sS sS 02 12 58.8 +12								
CD2 SS **SS** **02 15 37.3 -4.6**								
CD2 pmax pmax								
comp=Z,10.0nm,0.4s								
CD2 pmax pmax								
comp=Z,120nm,5.2s								
BJI Beijing 45.83 346 P **P** **02 06 30.3 -0.3**								
BJI pmax pmax								
comp=Z,13nm,0.7s								
LZH Lanzhou 46.88 331 *eP* **P** **02 06 41.0 +1.8**								
LZH pP pP 02 06 58.5 +8.9								
LZH sP sP 02 07 06.0 +12								
LZH pmax pmax								
comp=Z,18nm,1.0s								
HHC Hu-ho-hao-te 47.89 341 *eP* **P** **02 06 48.6 +1.7**								
HHC pP pP 02 07 04.3 +7.0								
HHC sP sP 02 07 10.8 +9.3								
HHC S **S** **02 13 39.8 -2.2**								
HHC sS sS 02 14 07.9 +8.8								
HHC ScS **ScS** **02 16 33.1 -4.7**								
HHC SS SS 02 17 01.3 -10								
HHC pmax pmax								
comp=Z,42nm,0.5s								
HHC pmax pmax								
comp=Z,330nm,3.7s								
HHC LR LR								
comp=N,460nm,14.8s								
HHC LR LR								
comp=E,550nm,14.7s								
HHC LR LR								
comp=Z,290nm,14.3s								
CN2 Changchun 48.03 356 *eP* P 02 06 53.6 +5.8								
CN2 pmax pmax								
comp=Z,10.0nm,0.7s								
ODAN Odare 51.26 310 *eP* **P** **02 07 12.9 -0.1**								
TAPN Taplejung 51.27 310 *eP* **P** **02 07 12.7 -0.4**								
comp=Z,8.0nm,0.5s								
GTA Gaotai 51.46 330 *eP* **P** **02 07 14.8 +0.6**								
GTA pP pP 02 07 32.1 +7.4								
GTA sP sP 02 07 37.9 +9.1								
GTA pmax pmax								
comp=Z,5.0nm,1.3s								
RAMN Ramite 51.91 309 *eP* **P** **02 07 17.7 -0.2**								
comp=Z,19nm,0.6s								
GUN Gumba 52.95 310 *eP* **P** **02 07 25.2 -0.5**								
comp=Z,18nm,0.8s								
KOLN Koldanda 54.64 309 *eP* **P** **02 07 37.7 -0.2**								
comp=Z,19nm,0.9s								
DANN Dangsing 54.79 309 *eP* **P** **02 07 38.6 -0.5**								
comp=Z,23nm,0.9s								
PYUN Piuthan 55.27 309 *eP* **P** **02 07 42.2 -0.3**								
comp=Z,38nm,1.0s								
SONM Songino Array 55.79 341 P **P** **02 07 45.5 -0.2**								
SONM Songino Array 55.79 341 P **P** **02 07 45.5 -0.2**								
comp=Z,1.8nm,0.5s,baz=157,slow=7.9,SNR=7.8								
WMQ Urumqi 60.97 326 P **P** **02 08 23.8 +1.9**								
WMQ pmax pmax								
comp=Z,25nm,1.0s								
PETK Petropavlovsk- 61.89 19 P **P** **02 08 28.1 +0.3**								
PETK Petropavlovsk- 61.89 19 P **P** **02 08 28.1 +0.3**								
comp=Z,5.2nm,0.9s,baz=214,slow=6.6,SNR=2.6								
MK31 Makanchi Array 65.80 326 *eP* **P** **02 08 53.6 -0.2**								
MKAR Makanchi Array 65.80 326 *eP* **P** **02 08 53.7 -0.1**								
MKAR Makanchi Array 65.80 326 P **P** **02 08 53.6 -0.1**								
comp=Z,3.3nm,0.7s,baz=124,slow=8.0,SNR=22								
KSH Kashi 65.82 317 *eP* P 02 09 02.4 +8.3								
KSH pP PcP 02 09 17.0 -8.0								
KSH sP sP 02 09 24.0 +15								
KSH PcP pP 02 09 30.0 +25								
KSH PP PP 02 11 29.0 +10								
KSH ScP 02 13 27.0								
KSH PcS 02 13 33.3								
KSH sS sS 02 18 10.8 +14								
KSH pmax pmax								
comp=Z,4.0nm,0.7s								
KSH pmax pmax								
comp=Z,75nm,3.4s								
KSH LR LR								
comp=N,67nm,3.2s								
KSH LR LR								
comp=E,110nm,5.1s								
KSH LR LR								
comp=Z,180nm,6.2s								
EKS2 Erkin-Say 68.76 319 *eP* **P** **02 09 13.4 +0.7**								
comp=Z,3.5nm,0.9s								
ZAA0 Zalesovo Array 69.03 333 *eP* **P** **02 09 13.3 -0.6**								
ZALV Zalesovo Beam 69.03 333 P **P** **02 09 13.7 -0.2**								
ZALV Zalesovo Beam 69.03 333 P **P** **02 09 13.7 -0.2**								
comp=Z,3.1nm,0.9s,baz=108,slow=4.8,SNR=13								
KURK Kurchatov 70.05 328 *eP* **P** **02 09 20.3 -0.1**								
comp=Z,16nm,1.0s								
VNDA Vanda 75.15 173 P **P** **02 09 50.6 +0.4**								
VNDA Vanda 75.15 173 P **P** **02 09 50.6 +0.4**								
comp=Z,1.1nm,0.7s,baz=308,slow=5.6,SNR=9.0								
BRVK Borovoye 75.69 328 *eP* **P** **02 09 53.8 +0.1**								
comp=Z,8.9nm,1.0s								
ABKAR Akbulak array 80.20 321 *eP* **P** **02 10 18.9 0.0**								
ILAR Eielson Array 91.07 25 P **P** **02 11 11.9 -0.7**								
ILAR Eielson Array 91.07 25 P **P** **02 11 11.9 -0.7**								
comp=Z,0.2nm,0.6s,baz=256,slow=3.6,SNR=3.0								
PDAR Pinedale Array 115.23 44 PKP **PKPdf** **02 16 50.3 -0.1**								
PDAR Pinedale Array 115.23 44 PKP **PKPdf** **02 16 50.3 -0.1**								
comp=Z,0.1nm,0.5s,baz=328,slow=3.2,SNR=2.3								
TXAR Lajitas Array 123.81 57 PKP **PKPdf** **02 17 07.6 +0.5**								
TXAR Lajitas Array 123.81 57 PKP **PKPdf** **02 17 07.6 +0.5**								
comp=Z,0.3nm,0.9s,baz=119,slow=1.1,SNR=3.3								
TORD Torodi Ar. Bea 127.91 283 PKP **PKPdf** **02 17 15.0 -0.1**								
TORD Torodi Ar. Bea 127.91 283 PKP **PKPdf** **02 17 15.0 -0.1**								
comp=Z,0.7nm,1.0s,baz=100,slow=1.1,SNR=3.5								
CPUP Villa Florida 148.81 168 PKPbc **PKPbc** **02 17 56.9 +0.2**								
CPUP Villa Florida 148.81 168 PKPbc **PKPbc** **02 17 56.9 +0.2**								
comp=Z,4.0nm,0.9s,baz=140,slow=5.5,SNR=6.7								
LPAZ La Paz 153.02 140 PKPbc **PKPbc** **02 18 08.7 +1.0**								
**

0.1nm,0.3s,baz=207,slow=8.4,SNR=5.9
MKAR **Makanchi Array** 13.23 37 Pn P 02 19 04.5 -1.0
0.0nm,0.3s,baz=221,slow=14,SNR=2.8
AB31 **Akbulak array** 14.76 331 ⇑P P 02 19 27.1 +4.7
0.1nm,0.2s,baz=165,slow=10,SNR=7.5
AB31 ⇓S S 02 22 06.4 +1.3
0.2nm,0.2s,baz=113,slow=52,SNR=4.2
ZALV **Zalesovo Beam** 19.79 25 P Pn 02 20 23.8 +2.4
0.4nm,0.3s,baz=219,slow=12,SNR=3.1
TORD **Torodi Ar. Bea** 65.50 268 P P 02 26 30.4 +6.1
0.1nm,0.4s,baz=60,slow=7.0,SNR=4.1

IDC 21 02:22:29.0±5.2, 29°.15S×177°.57W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.6/17, mbtmp3.5/2, Error ellipse: s-maj=235.1km s-min=81.6km az=164.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.57**	**265**	P	P	02 30 34.3	-0.6
	0.4nm,0.7s,baz=106,slow=9.2,SNR=3.7						
WRA	**Warramunga Arr**	**44.44**	**271**	P	P	02 30 42.4	+0.4
	0.3nm,0.4s,baz=111,slow=8.0,SNR=13						
FINES	**FINESS Array B**	**144.10**	**341**	PKP	PKPdf	02 42 05.0	-0.9
	1.1nm,0.5s,baz=29,slow=3.2,SNR=6.1						

*IDC **21** 02:38:37.7±1.5, 20°.80S×178°.57W, h563km±16km, mb3.7/18, mb1 3.9/20, mb1mx3.8/24, mbtmp3.7/20, Error ellipse: s-maj=14.2km s-min=11.1km az=136.0*
*ISCJB **21** 02:38:38.2±0.2, 20°.91S±0°.06×178°.74W±0°.05, h579km, mb4.3/59, Error ellipse: s-maj=7.8km s-min=5.2km az=148.9*
*NEIC **21** 02:38:41.2±1.1, 20°.65S×178°.83W, h593km±9km, mb4.4/42, Error ellipse: s-maj=28.7km s-min=7.3km az=154.0*
ISC 21 02:38:38.8±0.4, 20°.93S±0°.07×178°.66W±0°.08, h579km, n404, σ0.69/416, mb4.4/58, 138C-140D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.44**	**315**	*eP*	P	02 40 06.9	+0.7
MSVF				*eS*	S	02 41 13.1	-4.2
RAO	**Raoul Island**	**8.32**	**175**	P	P	02 40 38.7	-1.7
	122nm,0.3s,baz=261,slow=23,SNR=5.4						
RAO				S	S	02 42 19.1	-1.1
	39nm,0.3s,baz=90,slow=20,SNR=3.1						
AFI	**Afiamalu**	**9.58**	**44**	P	P	02 40 48.8	-4.4
	baz=180,slow=2.0,SNR=3.4						
AFI				S	S	02 42 32.4	-11
	5.3nm,0.3s,baz=229,slow=19,SNR=4.3						
DZM	**Mont Dzumac**	**13.91**	**263**	P	P	02 41 36.6	-0.6
	0.2nm,0.3s,baz=88,slow=18,SNR=2.7						
URZ	**Urewera**	**17.66**	**191**	P	P	02 42 09.9	-2.1
	1.6nm,0.3s,baz=28,slow=3.8,SNR=7.4						
RPZ	**Rata Peaks**	**24.29**	**198**	P	P	02 43 12.9	+1.3
	3.8nm,0.6s,baz=22,slow=11,SNR=3.2						
CTA	**Charters Tower**	**32.83**	**265**	P	P	02 44 26.6	+0.7
	5.1nm,0.4s,baz=92,slow=12,SNR=11						
CTA				PcP	PcP	02 46 53.1	-0.2
	0.7nm,0.3s,baz=191,slow=1.7,SNR=3.8						
CTAO	**Charters Tower**	**32.83**	**265**	*eP*	P	02 44 27.2	+1.3
PMG	**Port Moresby**	**34.84**	**284**	*eP*	P	02 44 44.0	+1.3
	20nm,0.9s						
PMG	**Port Moresby**	**34.84**	**284**	P	P	02 44 43.9	+1.1
	17nm,0.8s,baz=111,slow=2.4,SNR=7.0						
STKA	**Stephens Creek**	**37.05**	**241**	*eP*	P	02 45 01.5	+0.7
STKA	**Stephens Creek**	**37.05**	**245**	P	P	02 45 01.4	+0.7
	3.0nm,0.5s,baz=87,slow=11,SNR=8.0						
STKA				PcP	PcP	02 47 06.2	+0.4
	0.7nm,0.6s,baz=280,slow=0.6,SNR=3.3						
AS31	**Alice Springs**	**43.82**	**257**	*eP*	P	02 45 55.7	+0.9
ASAR	**Alice Springs**	**43.82**	**257**	P	P	02 45 55.4	+0.6
	10nm,0.8s,baz=98,slow=7.2,SNR=66						
ASAR				PcP	PcP	02 47 28.6	+0.3
	2.8nm,0.6s,baz=106,slow=4.7,SNR=8.7						
ASAR				S	S	02 51 42.9	-1.7
	1.4nm,0.8s,baz=94,slow=18,SNR=4.9						
WRAB	**Tennant Creek**	**43.92**	**263**	*eP*	P	02 45 55.6	+0.1
	13nm,1.2s						
WRA	**Warramunga Arr**	**43.93**	**263**	P	P	02 45 55.4	-0.3
	8.7nm,0.8s,baz=97,slow=7.5,SNR=91						
MBWA	**Marble Bar**	**57.16**	**258**	*eP*	P	02 47 32.0	+0.3
	14nm,0.8s						
VNDA	**Vanda**	**57.43**	**185**	P	P	02 47 34.4	+1.8
	0.9nm,0.6s,baz=344,slow=8.4,SNR=12						
NWAO	**Narrogin (SRO)**	**57.62**	**244**	P	P	02 47 35.4	+0.7
	8.0nm,0.8s,baz=73,slow=17,SNR=4.4						
MJAR	**Matsushiro Arr**	**70.19**	**324**	P	P	02 48 53.8	-0.4
	0.9nm,0.5s,baz=167,slow=5.7,SNR=6.7						
PETK	**Petropavlovsk-**	**76.52**	**346**	P	P	02 49 29.8	0.0
	9.4nm,0.7s,baz=148,slow=8.7,SNR=8.6						
KSRS	**Korea Array**	**76.80**	**319**	P	P	02 49 31.7	0.0
	2.5nm,0.8s,baz=150,slow=7.0,SNR=5.6						
BSC	**Santa Cruz Isl**	**78.34**	**47**	⇑P	P	02 49 41.4	+1.2
	baz=78						
SCI	**San Clemente I**	**78.51**	**48**	⇑P	P	02 49 42.1	+1.0
	baz=79						
PKM	**Peak Mountain**	**78.73**	**46**	⇓P	P	02 49 43.5	+1.1
	baz=79						
CHGN	**Chignik**	**78.81**	**11**	*eP*	P	02 49 41.5	-0.5
USRK	**Ussuriysk Arra**	**78.96**	**326**	P	P	02 49 44.3	+1.2
	9.0nm,0.9s,baz=161,slow=3.1,SNR=10.0						
HOPS	**Hopland**	**79.10**	**41**	*eP*	P	02 49 45.0	+1.0
ARVC	**Arvin**	**79.53**	**46**	⇓P	P	02 49 47.4	+1.0
	baz=80						
VES	**Vestal, Richgr**	**79.77**	**45**	⇓P	P	02 49 48.4	+0.8
	baz=80						
MURC	**Murrieta**	**79.80**	**48**	⇓P	P	02 49 48.7	+0.8
	baz=80						
BFSC	**Mount Baldy Ra**	**79.83**	**47**	⇓P	P	02 49 48.9	+0.8
	baz=80						
MONP	**Monument Peak**	**79.95**	**49**	⇑P	P	02 49 49.6	+0.7
	baz=80						
EDW2	**Edwards Air Fo**	**79.96**	**47**	⇑P	P	02 49 49.3	+0.6
	baz=80,SNR=6.6						
DVTC	**Desert V Tower**	**80.06**	**49**	⇓P	P	02 49 50.1	+0.8
	baz=80						
ISA	**Isabella**	**80.08**	**46**	*eP*	P	02 49 50.1	+0.8
	11nm,1.3s						
ISA	**Isabella**	**80.08**	**46**	⇓P	P	02 49 49.9	+0.6
	baz=80,SNR=8.5						
CMB	**Columbia Colle**	**80.19**	**43**	*eP*	P	02 49 50.4	+0.5
	8.4nm,1.1s						
OHCM	**Honcut**	**80.28**	**41**	*eP*	P	02 49 51.0	+0.8
PFO	**Pinyon Flat Ob**	**80.32**	**48**	⇑P	P	02 49 50.9	+0.1
	baz=80						
WDC	**Whiskeytown Da**	**80.40**	**40**	*eP*	P	02 49 51.5	+0.7
	22nm,1.4s						
SWSC	**Sam W. Stewart**	**80.42**	**49**	⇓P	P	02 49 52.0	+0.9
	baz=80						
LRMC	**Laurel Mountai**	**80.50**	**46**	⇓P	P	02 49 52.3	+0.7
	baz=81						
CWC	**Cottonwood Cre**	**80.78**	**45**	⇓P	P	02 49 53.8	+0.7
	baz=81						
BELC	**Belle Mtn. Jos**	**80.85**	**48**	⇓P	P	02 49 54.0	+0.5
	baz=81,SNR=6.2						
MPMC	**Manual Prospec**	**80.96**	**46**	⇑P	P	02 49 54.5	+0.4
	baz=81,SNR=7.6						
MTUM	**Tungsten Hills**	**80.98**	**44**	*eP*	P	02 49 55.0	+0.9
GSC	**Goldstone**	**81.00**	**47**	*eP*	P	02 49 54.7	+0.6
	7.8nm,1.1s						
GSC	**Goldstone**	**81.00**	**47**	⇓P	P	02 49 54.6	+0.4
	baz=81,SNR=7.2						
YBH	**Yreka Blue Hor**	**81.01**	**39**	*eP*	P	02 49 55.1	+1.1
	25nm,1.4s						
BC3	**Big Chuckawall**	**81.05**	**49**	⇑P	P	02 49 55.2	+0.7
	baz=81,SNR=5.4						
HEC	**Hector,Ludlow**	**81.07**	**48**	⇑P	P	02 49 55.2	+0.7
	baz=81						
GLA	**Glamis**	**81.17**	**50**	⇑P	P	02 49 56.6	+1.6
	baz=81						
BEKR	**Beckworth**	**81.30**	**41**	*eP*	P	02 49 56.3	+0.7
	10nm,1.5s						
WCN	**Washoe City**	**81.34**	**42**	*eP*	P	02 49 56.7	+0.8
	8.7nm,1.1s						
HUMO	**Hull Mountain**	**81.41**	**38**	*eP*	P	02 49 57.5	+1.5
	21nm,1.1s						
GMRC	**Granite Mounta**	**81.51**	**48**	⇓P	P	02 49 57.5	+0.7
	baz=82						
IRM	**Iron Mountain**	**81.53**	**49**	⇑P	P	02 49 57.5	+0.7
	baz=82,SNR=8.1						
GRAC	**Grapevine Rang**	**81.56**	**45**	⇑P	P	02 49 57.8	+0.9
	baz=82						
FURC	**Furnace Creek,**	**81.61**	**46**	⇑P	P	02 49 57.7	+0.6
	baz=82						
TUQ	**Turquoise Moun**	**81.68**	**47**	⇓P	P	02 49 58.2	+0.5
	baz=82						
SHOC	**Shoshone**	**81.69**	**47**	⇓P	P	02 49 58.1	+0.5
	baz=82						
Y12C	**Blythe**	**81.76**	**49**	⇓P	P	02 49 58.9	+1.0
	baz=82						
NVAR	**Mina Array Bea**	**81.76**	**44**	P	P	02 49 58.4	+0.3
	4.6nm,0.6s,baz=225,slow=8.3,SNR=46						
113A	**Mohawk Valley,**	**81.78**	**50**	⇑P	P	02 49 59.1	+1.1
	baz=82						
NV11	**Mina Array Sit**	**81.86**	**44**	*eP*	P	02 49 58.9	+0.3
LDFC	**Landfair**	**82.05**	**48**	*eP*	P	02 50 00.7	+1.2
	21nm,0.9s						
214A	**Organ Pipe Nat**	**82.06**	**52**	⇓P	P	02 50 00.5	+0.9
	baz=82,SNR=5.1						
PDMCI	**Parker Dam,Lak**	**82.31**	**49**	⇑P	P	02 50 01.4	+0.7
	baz=82						
MOD	**Modoc**	**82.54**	**40**	*eP*	P	02 50 02.7	+0.8
	15nm,0.8s						
Z14A	**Wintersburg**	**82.68**	**50**	⇑P	P	02 50 03.5	+0.9
	baz=83,SNR=5.8						
W13A	**Hualapai Mount**	**82.91**	**48**	⇑P	P	02 50 04.5	+0.5
	baz=83,SNR=9.2						
Y14A	**Wickenburg**	**82.93**	**50**	⇓P	P	02 50 04.5	+0.5
	baz=83,SNR=6.3						
R11A	**Troy Canyon, C**	**83.49**	**45**	⇑P	P	02 50 06.8	+0.1
	baz=84						
BMN	**Battle Mountai**	**83.58**	**42**	*eP*	P	02 50 07.9	+0.8
	8.2nm,0.9s						
WVOR	**Wild Horse Val**	**83.85**	**40**	*eP*	P	02 50 08.8	+0.4
	2.6nm,0.8s						
NLWA	**Neilton Lookou**	**83.93**	**34**	*eP*	P	02 50 10.1	+1.5
	37nm,1.5s						
X16A	**Lo Mia Camp, P**	**84.29**	**50**	⇓P	P	02 50 11.6	+0.8
	baz=84,SNR=11						
319A	**Douglas**	**84.40**	**54**	⇓P	P	02 50 12.5	+1.2
	baz=84,SNR=11						
CCUT	**Cedar City**	**84.55**	**46**	*eP*	P	02 50 13.1	+1.0
	2.9nm,0.8s						
U15A	**North Rim**	**84.71**	**48**	⇑P	P	02 50 13.9	+1.0
	baz=85						
WUAZ	**Wupatki**	**84.89**	**49**	⇑P	P	02 50 14.3	+0.6
	baz=85						
320A	**Kipp Ranch, An**	**84.95**	**54**	⇓P	P	02 50 15.4	+1.4
	baz=85						
TRW	**Toppenish Ridg**	**85.04**	**36**	P	P	02 50 14.7	+0.7
220A	**Playas Peak, P**	**85.22**	**53**	⇑P	P	02 50 16.0	+0.7
	baz=85,SNR=8.1						
X18A	**Snowflake**	**85.42**	**51**	⇑P	P	02 50 17.1	+0.8
	baz=86						
120A	**U Bar Ranch, L**	**85.44**	**53**	⇑P	P	02 50 17.5	+1.1
	baz=86						
PMR	**Palmer**	**85.58**	**14**	*eP*	P	02 50 15.3	-0.7
	25nm,1.4s						
HAWA	**Hanford**	**85.66**	**37**	*eP*	P	02 50 17.9	+1.0
	14nm,0.9s						
Z20A	**Nine Sixteen R**	**85.73**	**52**	⇑P	P	02 50 18.6	+0.8
	baz=86,SNR=5.4						
MVU	**Marysvale**	**85.82**	**46**	*eP*	P	02 50 19.2	+1.0
	3.6nm,1.0s						
ETW	**Entiat**	**85.95**	**35**	P	P	02 50 18.9	+0.5
BMO	**Blue Mountains**	**86.03**	**39**	*eP*	P	02 50 19.2	+0.4
	4.9nm,0.8s						
121A	**Cookes Peak, D**	**86.06**	**53**	⇑P	P	02 50 20.3	+0.9
	baz=86						
MFID	**Camas Ranch**	**86.11**	**41**	*eP*	P	02 50 19.9	+0.6
	5.9nm,1.0s						
MFID	**Camas Ranch**	**86.11**	**41**	⇑P	P	02 50 19.7	+0.5
	baz=86						
BMRM	**Bremner River**	**86.11**	**16**	*eP*	P	02 50 18.6	-0.1
	15nm,1.1s						
WTV	**Waterville**	**86.21**	**35**	P	P	02 50 19.9	+0.3
Y20A	**Horse Springs,**	**86.27**	**52**	⇑P	P	02 50 21.0	+0.6
	baz=86						
X20A	**Quemado**	**86.48**	**51**	⇓P	P	02 50 22.2	+0.9
	baz=87						
Z21A	**St. Cloud Mine**	**86.51**	**52**	⇑P	P	02 50 22.3	+0.8
	baz=87						
TNA	**Tin City**	**86.60**	**4**	*eP*	P	02 50 21.7	+0.9
	3.0nm,0.8s						
OD2	**Odessa Site #2**	**86.70**	**36**	P	P	02 50 22.4	+0.6
Q16A	**Castle Valley**	**86.73**	**46**	⇓P	P	02 50 23.1	+0.7
	baz=87						
I12A	**Atlanta**	**86.74**	**40**	⇓P	P	02 50 22.7	+0.4
	baz=87,SNR=13						
W20A	**Ramah**	**86.75**	**51**	⇑P	P	02 50 23.3	+0.6
	baz=87						
Y21A	**Point of Rocks**	**86.83**	**52**	⇑P	P	02 50 23.8	+0.7
	baz=87						
X21A	**Alamocita Cree**	**86.95**	**51**	⇑P	P	02 50 24.0	+0.4
	baz=87						
TRF	**Throfare Moun**	**87.00**	**12**	*eP*	P	02 50 21.5	-1.5
	16nm,0.7s						
Z22A	**Elephant Butte**	**87.01**	**53**	⇓P	P	02 50 24.5	+0.7
	baz=87						
HLID	**Hailey**	**87.05**	**41**	*eP*	P	02 50 24.4	+0.6
	7.4nm,0.9s						
HLID	**Hailey**	**87.05**	**41**	⇓P	P	02 50 24.2	+0.4
	baz=87,SNR=9.3						
J13A	**Cove Ranch, Pi**	**87.11**	**41**	⇓P	P	02 50 24.6	+0.6
	baz=87,SNR=8.8						
SRU	**San Rafael**	**87.26**	**46**	*eP*	P	02 50 25.4	+0.5
	6.2nm,0.8s						
SRU	**San Rafael**	**87.26**	**46**	⇓P	P	02 50 25.2	+0.3
	baz=87						
K14A	**Jones Ranch, D**	**87.28**	**42**	⇓P	P	02 50 25.2	+0.4
	baz=87						
P17A	**Butcher Ranch,**	**87.30**	**46**	⇓P	P	02 50 25.8	+0.8
	baz=87						
324A	**Moseley Ranch,**	**87.31**	**55**	⇑P	P	02 50 25.5	+0.3
	baz=87,SNR=12						
H12A	**Diamond D Ranc**	**87.32**	**40**	⇑P	P	02 50 25.2	+0.2
	baz=87,SNR=18						
Y22A	**Socorro**	**87.32**	**52**	⇓P	P	02 50 25.9	+0.6
	baz=87						
G12A	**Big Creek, Yel**	**87.35**	**39**	⇑P	P	02 50 25.5	+0.3
	baz=87						
425A	**Indio Mountain**	**87.41**	**56**	⇑P	P	02 50 26.4	+0.7
	baz=88,SNR=14						
I13A	**Wildhorse Cree**	**87.42**	**41**	⇑P	P	02 50 25.9	+0.4
	baz=88						
J14A	**Carey**	**87.48**	**42**	⇓P	P	02 50 26.5	+0.7
	baz=88						
L15A	**Malad City**	**87.50**	**43**	⇓P	P	02 50 26.5	+0.6
	baz=88						
MCK	**McKinley**	**87.52**	**13**	*eP*	P	02 50 24.7	-0.6
	11nm,0.8s						
626A	**Big Bend Ranch**	**87.53**	**57**	⇓P	P	02 50 26.9	+0.7
	baz=88,SNR=10.0						
224A	**Cornudas Mount**	**87.56**	**54**	⇑P	P	02 50 27.1	+0.7
	baz=88,SNR=8.0						
325A	**Bean Ranch, Si**	**87.67**	**55**	⇓P	P	02 50 27.3	+0.4
	baz=88,SNR=11						
H13A	**Challis**	**87.69**	**40**	⇑P	P	02 50 27.1	+0.5
	baz=88,SNR=8.4						
P18A	**Preston Nutter**	**87.71**	**46**	⇑P	P	02 50 27.4	+0.3
	baz=88						
F12A	**Elk City**	**87.74**	**39**	⇓P	P	02 50 26.9	0.0
	baz=88,SNR=27						
526A	**Mary Lane Ranc**	**87.79**	**57**	⇓P	P	02 50 28.1	+0.6
	baz=88,SNR=9.7						
TXAR	**Lajitas Array**	**87.81**	**58**	P	P	02 50 28.4	+0.9
	4.8nm,0.8s,baz=219,slow=6.1,SNR=56						
TXAR				PKKPbc	PKKPbc	03 08 11.2	+0.2
	0.5nm,1.0s,baz=79,slow=2.7,SNR=3.6						
I14A	**Mackay**	**87.84**	**41**	⇑P	P	02 50 28.1	+0.6
	baz=88,SNR=11						
124A	**Stringfield Ra**	**87.89**	**54**	⇓P	P	02 50 28.6	+0.5
	baz=88						
N17A	**Moffit Pass**	**87.97**	**45**	⇓P	P	02 50 28.4	+0.1
	baz=88						
G13A	**Cobalt**	**87.98**	**40**	⇑P	P	02 50 28.2	+0.2
	baz=88,SNR=8.8						
Y23A	**Lovelace Mesa,**	**87.99**	**53**	⇓P	P	02 50 28.5	+0.1
	baz=88						
Q19A	**Hogan Spring (**	**88.04**	**47**	⇓P	P	02 50 28.6	+0.2
	baz=88						
627A	**Terlingua Ranc**	**88.08**	**58**	⇑P	P	02 50 29.5	+0.7
	baz=88,SNR=8.8						
NEW	**Newport**	**88.08**	**36**	*eP*	P	02 50 28.4	+0.1
	4.8nm,0.9s						
NEW	**Newport**	**88.08**	**36**	⇓P	P	02 50 28.1	-0.2
	baz=88						
426A	**McDonald Obser**	**88.10**	**56**	⇓P	P	02 50 29.5	+0.5
	baz=88,SNR=13						
225A	**Deer Hill, Car**	**88.11**	**55**	⇓P	P	02 50 29.5	+0.5
	baz=88,SNR=6.5						
L16A	**Fish Haven**	**88.12**	**43**	⇑P	P	02 50 28.7	-0.2
	baz=88,SNR=10						
S20A	**Disappointment**	**88.13**	**48**	⇓P	P	02 50 29.2	+0.2
	baz=88						
ANMO	**Albuquerque**	**88.15**	**51**	*eP*	P	02 50 29.6	+0.4
	4.9nm,1.0s						
X23A	**Hourglass Bar**	**88.19**	**52**	⇓P	P	02 50 29.7	+0.4
	baz=88						
J15A	**Blackfoot**	**88.19**	**42**	⇑P	P	02 50 29.8	+0.7
	baz=88,SNR=6.0						
527A	**Woodward Ranch**	**88.20**	**57**	⇑P	P	02 50 29.8	+0.4
	baz=88,SNR=8.7						
H14A	**Leadore**	**88.25**	**40**	⇓P	P	02 50 29.8	+0.4
	baz=88,SNR=6.2						
F13A	**Darby**	**88.30**	**39**	⇓P	P	02 50 29.4	-0.1
	baz=88,SNR=10.0						
C11A	**Tepee Creek (N**	**88.32**	**37**	⇑P	P	02 50 29.8	+0.4
	baz=88						
M17A	**Scullys Gap (B**	**88.34**	**44**	⇑P	P	02 50 30.0	+0.1
	baz=88						
D12A	**Red Ives Fores**	**88.39**	**38**	⇑P	P	02 50 29.8	0.0
	baz=88						
K16A	**Soda Springs**	**88.43**	**43**	⇓P	P	02 50 30.6	+0.3
	baz=88,SNR=7.3						
S21A	**Coal Bank Pass**	**88.45**	**49**	⇓P	P	02 50 30.7	0.0
	baz=89						
Y24A	**Capitan**	**88.45**	**53**	⇑P	P	02 50 30.8	+0.2
	baz=89,SNR=16						
125A	**Gardner Draw,**	**88.48**	**54**	⇑P	P	02 50 31.0	+0.4
	baz=89						
628A	**Black Gap, Mar**	**88.49**	**58**	⇓P	P	02 50 31.2	+0.5
	baz=89,SNR=5.5						
U22A	**Llaves**	**88.52**	**50**	⇑P	P	02 50 31.1	+0.3
	baz=89						
L17A	**Cokeville**	**88.52**	**44**	⇑P	P	02 50 30.7	0.0
	baz=89						
G14A	**Jackson**	**88.53**	**40**	⇓P	P	02 50 30.8	+0.1
	baz=89						
226B	**Tecolote Peak,**	**88.60**	**55**	⇑P	P	02 50 31.6	+0.4
	baz=89,SNR=9.1						
427A	**Hayter Ranch,**	**88.66**	**56**	⇓P	P	02 50 32.0	+0.5
	baz=89,SNR=13						
MCMT	**McKenzie Canyo**	**88.68**	**40**	*eP*	P	02 50 32.1	+0.7
	6.8nm,1.1s						
C12B	**Naegeli Ranch,**	**88.69**	**37**	⇑P	P	02 50 31.7	+0.5
	baz=89						
H15A	**Lima**	**88.69**	**41**	⇓P	P	02 50 32.0	+0.6
	baz=89						
Z25A	**Roswell**	**88.70**	**54**	⇑P	P	02 50 32.4	+0.7
	baz=89						
Q20A	**Ridgley Place,**	**88.71**	**47**	⇑P	P	02 50 32.0	+0.4
	baz=89						
M18A	**Lyman**	**88.71**	**44**	⇓P	P	02 50 31.6	0.0
	baz=89,SNR=7.6						
V23A	**Ortiz Mt. (NFS**	**88.72**	**51**	⇑P	P	02 50 32.3	+0.5
	baz=89						
N18A	**Larsen Ranch,**	**88.75**	**45**	⇓P	P	02 50 31.7	-0.1
	baz=89,SNR=6.0						
COLA	**College**	**88.75**	**13**	*eP*	P	02 50 30.2	-0.7
	19nm,0.9s						
O19A	**Miners Draw (B**	**88.79**	**46**	⇓P	P	02 50 31.7	-0.2
	baz=89,SNR=5.1						
K17A	**Gardner Place,**	**88.82**	**43**	⇓P	P	02 50 32.6	+0.5
	baz=89						
528A	**Cox Ranch, San**	**88.85**	**57**	⇓P	P	02 50 33.0	+0.6
	baz=89						
ILAR	**Eielson Array**	**88.87**	**13**	P	P	02 50 30.4	-1.0
	4.9nm,0.9s,baz=229,slow=5.6,SNR=37						
P20A	**De Beque**	**88.90**	**47**	⇑P	P	02 50 32.8	+0.4
	baz=89						
D13A	**Huson**	**88.93**	**38**	⇑P	P	02 50 32.5	+0.2
	baz=89						
R21A	**Cimarron**	**88.95**	**48**	⇑P	P	02 50 33.5	+0.6
	baz=89						
126A	**Clayton Basin,**	**88.95**	**54**	⇑P	P	02 50 33.0	+0.2
	baz=89						
U23A	**El Rito**	**88.97**	**50**	⇑P	P	02 50 33.8	+0.8
	baz=89						
Y25A	**Mesa, Roswell**	**89.00**	**53**	⇑P	P	02 50 33.1	0.0
	baz=89,SNR=5.1						
I16A	**Newdale**	**89.03**	**42**	⇓P	P	02 50 33.7	+0.8
	baz=89,SNR=6.9						
N19A	**John Jarvie Ra**	**89.04**	**45**	⇓P	P	02 50 33.1	0.0
	baz=89						
W24A	**Lazy 6 Ranch,**	**89.04**	**52**	⇑P	P	02 50 33.2	-0.1
	baz=89						
G15A	**Dillon**	**89.07**	**40**	⇑P	P	02 50 33.6	+0.4
	baz=89,SNR=8.0						
MSO	**Missoula**	**89.09**	**38**	⇓P	P	02 50 33.2	+0.1
	baz=89						
DLMT	**Dillon**	**89.11**	**40**	*eP*	P	02 50 33.8	+0.5
	5.5nm,0.9s						
E14A	**Clinton**	**89.13**	**39**	⇓P	P	02 50 33.3	-0.1
	baz=89						
BSMT	**Bassoo Peak**	**89.15**	**37**	*eP*	P	02 50 33.3	-0.2
S22A	**4UR Ranch, Cre**	**89.16**	**49**	⇑P	P	02 50 34.5	+0.6
	baz=89						
TPAW	**Teton Pass**	**89.17**	**42**	*eP*	P	02 50 34.5	+0.7
	6.0nm,0.9s						
428A	**Kincaid Ranch,**	**89.17**	**57**	⇓P	P	02 50 34.7	+0.9
	baz=89						
J17A	**Brown Place, J**	**89.25**	**43**	⇓P	P	02 50 34.4	+0.3
	baz=89,SNR=8.8						
Z26A	**Caprock**	**89.25**	**54**	⇓P	P	02 50 34.3	0.0
	baz=89,SNR=7.6						
SNOW	**Snow King Moun**	**89.28**	**42**	*eP*	P	02 50 34.6	+0.4
	9.7nm,0.8s						
529A	**Stev Forest Ra**	**89.28**	**57**	⇓P	P	02 50 34.4	+0.1
	baz=89,SNR=5.0						
X25A	**Clemmons Ranch**	**89.29**	**53**	⇑P	P	02 50 34.6	+0.2
	baz=89						
O20A	**White River Ci**	**89.30**	**46**	⇓P	P	02 50 34.9	+0.5
	baz=89						
K18A	**Toltan Ranch,**	**89.32**	**43**	⇑P	P	02 50 34.9	+0.5
	baz=89,SNR=11						
M19A	**Rock Springs**	**89.34**	**45**	⇓P	P	02 50 34.8	+0.2
	baz=89						
328A	**Wristen Ranch,**	**89.35**	**56**	⇓P	P	02 50 34.9	+0.3
	baz=90						
V24A	**Rampart Ranch,**	**89.37**	**51**	⇑P	P	02 50 35.2	+0.3
	baz=90						
F15A	**Butte**	**89.42**	**40**	⇓P	P	02 50 35.1	+0.3
	baz=90				

V25A	Rancho No Teng baz=90	89.90	51	⇓P		P	02 50 37.5	+0.3
A13A	Flathead Natio baz=90	89.95	36	⇑P		P	02 50 37.3	+0.3
M20A	Sweetwater, Wa baz=90	89.98	45	⇓P		P	02 50 38.0	+0.5
530A	J-C Ranch, Com baz=90	89.99	58	⇑P		P	02 50 38.1	+0.5
D15A	Lincoln baz=90	90.03	39	⇓P		P	02 50 37.8	+0.4
329A	Wagon Wheel Ra baz=90	90.03	56	⇓P		P	02 50 38.2	+0.4
LKWY	Lake 4.1nm,1.1s	90.05	42	*e*P		P	02 50 39.7	+1.9
N21A	Black Mountain baz=90,SNR=5.2	90.08	46	⇓P		P	02 50 38.5	+0.5
128A	Castleberry Fa baz=90	90.12	55	⇓P		P	02 50 38.5	+0.3
L20A	Wamsutter baz=90,SNR=8.6	90.12	45	⇑P		P	02 50 38.7	+0.6
T24A	Torres, Weston baz=90	90.12	50	⇑P		P	02 50 38.5	+0.2
Y27A	Causey baz=90	90.13	54	⇑P		P	02 50 38.6	+0.3
EGAK	Eagle 16nm,1.3s	90.17	15	*e*P		P	02 50 37.1	-0.4
K19A	Absolon Red Bu baz=90,SNR=5.8	90.18	44	⇓P		P	02 50 38.0	-0.3
S24A	Houchin Ranch, baz=90	90.26	50	⇑P		P	02 50 39.7	+0.7
J19A	Crowheart baz=90,SNR=5.3	90.26	43	⇓P		P	02 50 38.7	0.0
E16A	East Helena baz=90	90.26	39	⇓P		P	02 50 38.8	+0.3
B14A	Marquette Ranc baz=90	90.28	37	⇑P		P	02 50 38.5	-0.1
631A	Perdido Creek baz=90	90.29	59	⇓P		P	02 50 39.2	+0.2
U25A	Circle Dot Ran baz=90	90.29	51	⇓P		P	02 50 39.4	+0.3
WALA	Waterton Lakes	90.29	37	*e*P		P	02 50 38.4	-0.3
430A	Baggett Ranch, baz=90	90.33	57	⇑P		P	02 50 39.4	+0.3
C15A	Salmond Ranch, baz=90	90.36	38	⇑P		P	02 50 39.2	+0.2
229A	Bryant Ranch, baz=90	90.36	56	⇑P		P	02 50 39.7	+0.4
COLD	Coldfoot 6.6nm,1.0s	90.41	11	*e*P		P	02 50 38.9	+0.4
K20A	Yellowstone Ra baz=90,SNR=5.7	90.43	44	⇓P		P	02 50 39.1	-0.4
MSTX	Muleshoe baz=91	90.46	54	⇑P		P	02 50 40.1	+0.3
O22A	Kremmling baz=91	90.46	47	⇓P		P	02 50 40.2	+0.3
A14A	Double T Ranch baz=91	90.52	37	⇓P		P	02 50 39.7	0.0
F17A	Fitzpatrick Pl baz=91	90.56	40	⇓P		P	02 50 40.7	+0.8
M21A	Separation Pea baz=91	90.58	45	⇓P		P	02 50 40.3	0.0
D16A	Dana Ranch, Ca baz=91	90.59	39	⇑P		P	02 50 40.7	+0.6
T25A	Trinidad baz=91	90.61	50	⇓P		P	02 50 40.8	+0.3
531A	Rocksprings baz=91	90.62	58	⇓P		P	02 50 40.8	+0.3
330A	Mertzon baz=91	90.63	57	⇓P		P	02 50 40.6	0.0
B15A	Bradely Ranch, baz=91	90.66	38	⇑P		P	02 50 40.0	-0.3
I19A	Meeteetse baz=91	90.67	43	⇓P		P	02 50 40.6	0.0
E17A	Martinsdale baz=91	90.71	40	⇓P		P	02 50 40.8	+0.1
L21A	Rawlins baz=91	90.74	45	⇓P		P	02 50 41.0	0.0
U26A	Atchley Ranch, baz=91	90.77	51	⇑P		P	02 50 41.6	+0.3
N22A	Wattenberg Ran baz=91,SNR=5.9	90.82	46	⇓P		P	02 50 41.9	+0.4
S25A	Robets Cordova baz=91	90.82	50	⇑P		P	02 50 41.5	0.0
C16A	Fuhringer Ranc baz=91	90.87	38	⇑P		P	02 50 41.3	0.0
230A	Sterling City baz=91	90.87	56	⇑P		P	02 50 42.6	+1.0
A15A	Johnson Ranch, baz=91	90.91	37	⇑P		P	02 50 41.4	-0.1
J20A	Shoshoni baz=91,SNR=6.3	90.92	43	⇓P		P	02 50 42.0	+0.2
ISCO	Idaho Springs baz=91	90.94	47	⇓P		P	02 50 42.5	+0.4
632A	Uvalde baz=91	90.96	59	⇓P		P	02 50 42.7	+0.7
Z29A	Hungry Hill Ra baz=91	90.98	55	⇓P		P	02 50 42.8	+0.6
H19A	Powell baz=91	90.98	42	⇓P		P	02 50 42.4	+0.5
M22A	Cedar Creek Ra baz=91	91.00	46	⇓P		P	02 50 42.8	+0.6
532A	Rocksprings baz=91	91.11	58	⇓P		P	02 50 43.2	+0.4
X28A	Dimmitt baz=91	91.13	53	⇑P		P	02 50 42.9	+0.1
K21A	Alcova baz=91	91.13	44	⇓P		P	02 50 43.1	+0.3
D17A	Six Diamond Ra baz=91	91.16	39	⇑P		P	02 50 42.9	+0.2
I20A	Worland baz=91	91.18	43	⇓P		P	02 50 43.2	+0.4
B16A	M & M Farms, S baz=91	91.20	38	⇑P		P	02 50 42.7	-0.1
N23A	Red Feather La baz=91	91.20	46	⇑P		P	02 50 43.5	+0.3
Y29A	Porterfield Fa baz=91	91.25	54	⇑P		P	02 50 43.7	+0.3
E18A	Harlowton baz=91	91.33	40	⇑P		P	02 50 44.2	+0.6
J21A	Lysite baz=91	91.33	44	⇓P		P	02 50 43.9	+0.2
C17A	Wharram Farm, baz=91	91.36	39	⇓P		P	02 50 43.6	+0.1
L22A	Ellis Ranch, M baz=92	91.39	45	⇑P		P	02 50 44.5	+0.5
Z30A	Sanderson Ranc baz=92	91.43	55	⇑P		P	02 50 44.3	+0.1
U27A	Thompson Grove baz=92	91.46	51	⇓P		P	02 50 44.2	-0.1
S26A	Kim baz=92	91.50	50	⇓P		P	02 50 44.5	0.0
432A	Menard baz=92	91.50	58	⇑P		P	02 50 44.6	+0.1
231A	Bronte baz=92	91.51	56	⇓P		P	02 50 44.6	0.0
H20A	Greybull baz=92	91.51	43	⇓P		P	02 50 44.4	+0.1
A16A	West Butte Ran baz=92	91.54	37	⇓P		P	02 50 44.2	-0.2
M23A	Laramie baz=92	91.61	46	⇓P		P	02 50 45.3	+0.2
K22A	Casper baz=92	91.61	45	⇓P		P	02 50 45.3	+0.4
I21A	Big Trails, Te baz=92	91.65	43	⇓P		P	02 50 45.2	+0.1
B17A	L&G Farms, Che baz=92	91.66	38	⇓P		P	02 50 45.0	+0.1
332A	Millersview baz=92	91.74	57	⇓P		P	02 50 45.7	+0.1
R26A	Arlington baz=92	91.80	50	⇓P		P	02 50 45.9	0.0
P25A	Willow Gulch B baz=92	91.82	48	⇑P		P	02 50 46.0	+0.1
L23A	Garrett baz=92,SNR=5.3	91.92	45	⇑P		P	02 50 46.5	+0.1
J22A	Midwest baz=92	91.99	44	⇓P		P	02 50 46.8	+0.1
A17A	Triple J Farms baz=92	92.05	38	⇑P		P	02 50 46.8	+0.1
Z31A	Sharp Cattle R baz=92	92.20	55	⇓P		P	02 50 47.8	+0.1
M24A	Cheyenne baz=92	92.22	46	⇓P		P	02 50 48.0	+0.2
R27A	Eads baz=92	92.26	50	⇑P		P	02 50 48.0	0.0
T28A	Walsh baz=92	92.27	51	⇓P		P	02 50 48.1	+0.1
ABTX	Abilene, Hawle baz=92	92.31	56	⇑P		P	02 50 48.5	+0.3
B18A	Beardsley Farm baz=92	92.31	38	⇑P		P	02 50 48.0	+0.1
C19A	Slack Wire Ran baz=92	92.42	39	⇑P		P	02 50 48.8	+0.4
KSCO	Kaye Shedlock' baz=93	92.69	49	⇓P		P	02 50 50.2	+0.3
Z32A	Haskell baz=93	92.70	55	⇓P		P	02 50 50.4	+0.4
C20A	Veseth Ranch, baz=93	93.03	40	⇓P		P	02 50 51.4	+0.2
A19A	Klindworth Far baz=93	93.17	38	⇑P		P	02 50 51.7	-0.1
V31A	Spring Creek L baz=94	93.40	53	⇓P		P	02 50 53.8	+0.6
A20A	Cobblestone Ra baz=94	93.62	39	⇑P		P	02 50 53.8	0.0
F23A	Volborg baz=94	93.71	42	⇑P		P	02 50 54.7	+0.3
H24A	Dirks Ranch, A baz=94	93.83	43	⇑P		P	02 50 55.0	+0.1
K26A	Motz Farm, Whi baz=94	93.85	46	⇓P		P	02 50 55.5	+0.4
C23A	Lambert baz=95	94.76	40	⇓P		P	02 50 59.4	+0.4
YKA	Yellowknife Ar 0.6nm,0.7s,baz=243,slow=4.5,SNR=14	97.16	25	P		Pdif	02 51 08.8	-0.6
ZALV	Zalesovo Beam 1.2nm,0.6s,baz=54,slow=0.5,SNR=4.7	110.43	321	PKiKP		PKiKP	02 56 04.3	-1.3
MKAR	Makanchi Array 0.2nm,0.6s,baz=139,slow=5.5,SNR=3.2	111.04	313	Pdiff		Pdif	02 52 15.1	+3.6
MKAR	1.1nm,0.7s,baz=99,slow=0.8,SNR=6.2			PKiKP		PKiKP	02 56 05.9	-1.1
KURBB	Kurchatov Arra 1.2nm,0.7s,baz=90,slow=0.2,SNR=7.2	113.94	317	PKiKP		PKiKP	02 56 11.2	-1.2
BVAR	Borovoye Array 2.5nm,0.4s,baz=151,slow=0.1,SNR=10	119.00	320	PKP		PKPdf	02 56 21.1	-1.0
AKTO	Aktyubinsk 2.1nm,0.7s,baz=112,slow=1.4,SNR=5.9	126.97	318	PKP		PKPdf	02 56 36.8	-0.6
ARCES	ARCESS Array B 2.9nm,0.6s,baz=106,slow=2.6,SNR=14	129.22	349	PKP		PKPdf	02 56 40.0	-1.1
FINES	FINESS Array B 1.6nm,0.8s,baz=90,slow=1.0,SNR=4.7	136.00	343	PKP		PKPdf	02 56 52.4	-1.7
NB2	NORSAR Subarra comp=Z,1.2nm,0.6s,baz=16,slow=3.2	139.32	353	PKP		PKPdf	02 56 51.4	-8.9
NOA	NORSAR Array B comp=Z,2.1nm,0.8s,baz=14,slow=2.3,SNR=12	139.32	353	PKhKP		PKPpre	02 56 50.9	
NOA				PKP		PKPdf	02 57 00.7	+0.4
SUW	comp=Z,1.1nm,0.8s,baz=18,slow=4.2,SNR=5.3 Suwalki	143.01	339	*e*PKPdf		PKPab	02 57 04.5	-0.2
AKASG	Malin Array Be comp=Z,15nm,0.6s,baz=43,slow=4.2,SNR=75	143.08	330	PKhKP		PKPpre	02 57 03.9	
AK01	Malin Array Si	143.09	330	*e*PKPdf		PKPab	02 57 04.3	-0.8
KIEV	Kiev	143.09	330	*e*PKPdf		PKPab	02 57 04.1	-1.0
AK02	Malin Array Si	143.13	330	*e*PKPdf		PKPab	02 57 04.6	-0.6
MALT	Malatya	143.69	307	*e*PKPdf		PKPdf	02 57 08.6	-0.3
MALT	Malatya	143.69	307	⇓*i*P		PKPab	02 57 08.4	+0.4
MUD	Monsted U'grnd comp=Z,20nm,1.0s	144.04	353	⇓*i*P		PKPbc	02 57 07.6	-0.7
BSD	Bornholm Skovb comp=Z,25nm,0.9s	144.36	347	*i* P		PKPbc	02 57 08.6	-0.7
KIS	Kishinev	145.74	326	*e*UNK		PKPab	02 57 12.0	-3.5
ASF	Jabal al Asfar comp=Z,5.2nm,0.8s,baz=282,slow=2.8,SNR=9.4	146.42	297	PKPbc		PKPbc	02 57 16.5	+0.3
BR131	Keskin Array S	146.66	311	*e*PKPdf		PKPbc	02 57 16.3	-0.3
BRTR	Keskin Array B comp=Z,4.2nm,0.6s,baz=132,slow=4.8,SNR=39	146.66	311	PKPbc		PKPbc	02 57 16.1	-0.6
KWP	Kalwaria Pacla	146.70	334	*e*PKPbc		PKPbc	02 57 16.2	0.0
KWP	Kalwaria Pacla	146.70	334	⇑*i*P		PKPbc	02 57 16.3	0.0
TLCR		146.88	323	⇑*i*P		PKPbc	02 57 16.7	-0.1
BUR08	Bucovina Ar. S	147.11	330	*e*PKPbc		PKPbc	02 57 17.8	+0.2
BURAR	Bucovina Array	147.12	330	⇑*i*P		PKPbc	02 57 17.8	+0.2
TESR		147.19	327	⇑*i*P		PKPbc	02 57 17.1	-0.5
ANTO	Ankara	147.19	312	*e*PKPbc		PKPbc	02 57 18.0	+0.1
ANTO	Ankara	147.19	312	⇑*i*P		PKPbc	02 57 18.1	+0.1
CFR	Carcaliu	147.26	324	⇑*i*P		PKPbc	02 57 17.7	-0.1
OJC	Ojcow	147.32	338	*e*PKPdf		PKPbc	02 57 17.9	+0.1
KOLS	Kolonicke sedl	147.43	334	PDIF		PKPbc	02 57 18.6	+0.4
KOLS				*e*			02 57 23.6	
MMAI	Mount Meron Ar comp=Z,7.1nm,0.5s,baz=64,slow=5.7,SNR=24	147.48	299	PKPbc		PKPbc	02 57 19.1	+0.2
VRI	Vrancioaia	147.58	326	⇓*i*P		PKPbc	02 57 18.5	-0.2
CRVS	Cervenica-Dubn	147.78	335	PDIF		PKPbc	02 57 18.5	-0.6
CRVS				*e*			02 57 23.5	
NIE	Niedzica	147.80	337	*e*PX		PKPbc	02 57 19.8	+0.6
DOPR	Dopca	148.20	327	⇑*i*P		PKPbc	02 57 20.9	+0.6
OKC	Ostrava-Krasne	148.21	339	⇑*i*P		PKPbc	02 57 19.5	-0.6
OKC				*e*PKPAB		PKPab	02 57 25.5	+0.1
MLR	Muntele Rosu	148.24	326	⇓*i*P		PKPbc	02 57 20.1	-0.4
UPC	Upice	148.29	342	⇑*e*PKP		PKPbc	02 57 20.5	+0.2
UPC				*e*PKPAB		PKPab	02 57 26.0	+0.3
CLL	Collm	148.33	346	*e*PKPdf		PKPdf	02 57 15.0	-1.1
CLL				⇓*i*PKPbc		PKPbc	02 57 20.2	-0.2
CLL	comp=Z,23nm,0.9s			⇑*i*PKPab		PKPab	02 57 24.9	-0.9
DPC	comp=Z,12nm,0.8s Dobruska-Polom	148.34	342	*e*PKPdf		PKPbc	02 57 20.7	+0.2
DPC	Dobruska-Polom	148.34	342	⇑*e*PKP		PKPbc	02 57 20.7	+0.2
DPC				*e*PKPAB		PKPab	02 57 26.4	+0.5
MORC	Moravsky Berou	148.46	340	*e*PKPbc		PKPbc	02 57 21.2	+0.3
MORC				*e*PKPab		PKPab	02 57 26.9	+0.4
MORC	Moravsky Berou	148.46	340	⇓*i*P		PKPbc	02 57 21.0	+0.2
EIL	Elat comp=Z,5.4nm,0.7s,baz=152,slow=1.8,SNR=8.7	148.48	293	PKPbc		PKPbc	02 57 21.7	+0.2
BRG	Berggiesshubel comp=Z,6.7nm,1.3s	148.51	345	*e*PKP		PKPdf	02 57 16.3	-0.1
BRG				*i*			02 57 20.9	
CSS	comp=Z,14nm,1.2s Prodhromos	148.62	303	*e*PKPbc		PKPbc	02 57 20.5	-1.1
PVCC	Panska Ves	148.67	344	⇑*e*PKP		PKPbc	02 57 21.6	+0.4
DRGR		148.88	331	⇑*i*P		PKPbc	02 57 21.8	-0.2
ARR	Arges	148.99	327	⇑*i*P		PKPbc	02 57 23.0	+0.7
VYHS	Vyhne	149.11	337	PDIF		PKPbc	02 57 22.4	0.0
VYHS				*e*			02 57 29.4	
PRU	Pruhonice	149.17	343	⇑*e*PKP		PKPbc	02 57 22.2	-0.3
PRU				*e*PKPAB		PKPab	02 57 29.4	+0.1
PSZ	Piszkesteto	149.19	335	*e*PKPbc		PKPbc	02 57 22.8	+0.1
PSZ				*e*PKPab		PKPab	02 57 28.4	-1.1
PSZ	Piszkesteto	149.19	335	⇑*i*P		PKPbc	02 57 22.3	-0.4
NKC	Novy Kostel	149.46	346	⇑*e*PKP		PKPbc	02 57 23.1	-0.1
NKC				*e*PKPAB		PKPab	02 57 31.0	+0.5
TREC	Trest	149.53	342	⇑*e*PKP		PKPbc	02 57 23.3	-0.1
TREC				*e*PKPAB		PKPab	02 57 31.0	+0.2
SMOL	Smolenice	149.59	339	PDIF		PKPbc	02 57 24.6	+1.1
SMOL				*e*			02 57 32.2	
GZR	Gura Zlata	149.89	329	⇓*i*P		PKPbc	02 57 23.9	-0.5
MEM	Membach	150.15	354	PKPbc		PKPbc	02 57 24.8	0.0
KHC	Kasperske Hory	150.21	344	*e*PKPbc		PKPbc	02 57 25.3	+0.3
KHC				*e*PKPab		PKPab	02 57 34.0	+0.3
KHC	Kasperske Hory	150.21	344	⇑*e*PKP		PKPbc	02 57 25.0	0.0
KHC				*e*PKPAB		PKPab	02 57 33.8	+0.1
BZS	Buzias	150.27	331	⇓*i*P		PKPbc	02 57 25.0	-0.2
GEC2	GERESS Array S	150.43	343	*e*PKPdf		PKPbc	02 57 25.6	-0.1
GERES	GERESS Array B comp=Z,5.3nm,0.8s,baz=38,slow=2.4,SNR=40	150.43	343	PKPbc		PKPbc	02 57 25.2	-0.4
GERES				PKPab		PKPab	02 57 34.4	-0.4
CONA	comp=Z,1.4nm,0.8s,baz=20,slow=4.3,SNR=5.6 Conrad Observa comp=Z,16nm,1.3s	150.62	340	⇑*i*PKiKP		PKPbc	02 57 26.3	+0.2
DOU	Dourbes	150.78	356	PKPbc		PKPbc	02 57 25.8	-0.4
WLF	Walferdange	151.07	354	PKPbc		PKPbc	02 57 27.3	+0.4
VTS	Vitosha	151.65	325	⇓*i*P		PKPbc	02 57 28.3	-0.3
BFO	Black Forest	152.09	350	*e*PKPbc		PKPbc	02 57 28.8	-0.5
BFO				*e*PKPab		PKPab	02 57 41.1	-0.5
FETA	Feichten comp=Z,5.1nm,1.0s	152.87	346	⇑*i*PKPbc		PKPbc	02 57 30.8	-0.4
FUORN	Ofenpass-Fuorn	153.35	346	*e*PKPdf		PKPbc	02 57 32.2	-0.2
FUORN				*e*PKPab		PKPab	02 57 41.3	-6.1
TUE	Stuetta	153.69	347	*e*PKPdf		PKPbc	02 57 32.0	-1.1
ESDC	Sonseca Array comp=Z,0.3nm,0.4s,baz=338,slow=3.7,SNR=12	160.77	12	PKPab		PKPab	02 58 18.2	-1.2
TORD	Torodi Ar. Bea comp=Z,1.9nm,0.9s,baz=320,slow=1.2,SNR=9.1	172.26	183	PKP		PKPdf	02 57 41.1	-1.5
TORD				PKPab		PKPab	02 59 10.6	0.0

comp=Z,0.6nm,0.8s,baz=149,slow=3.4,SNR=3.4

*IDC **21** 02:43:11.2±0.7, 4°37S×129°53E, h0km, mb4.0/11, mb1 4.2/15, mb1mx4.1/27, mbtmp4.1/15, ML3.7/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/23, Error ellipse: s-maj=38.4km s-min=15.1km az=59.0*

*ISCJB **21** 02:43:14.3±0.3, 4°35S±0°04×129°65E±0°05, h33km, mb4.0/12, Error ellipse: s-maj=7.5km s-min=4.3km az=142.7*

*DJA **21** 02:43:14.9±0.6, 4°S±7°×13°0E±°, h12km±8km, M4.5/7, mb5.2/2, mB5.6/1, MLv4.2/7, Mw(mB)5.2/1*

*NEIC **21** 02:43:16.5±0.4, 4°33S×129°69E, h35km, mb4.7/3, Error ellipse: s-maj=12.8km s-min=7.0km az=55.0*

*AUST **21** 02:43:16.4±0.0, 4°23S×129°56E, h36km, Error ellipse: s-maj=1.2km s-min=1.0km az=230.0*

ISC 21 02:43:16.4±0.5, 4°31S±0°06×129°67E±0°05, h35km, n59, σ1§34/61, mb4.1/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.32	132	P		Pn		02 43 22.5	-2.1
MSAI	Masohi	1.20	322	P		Pn		02 43 36.4	+0.3
MSAI				S		Sn		02 43 52.5	+0.7
AAI	Ambon	1.59	293	P		Pn		02 43 41.4	-0.7
AAI	Ambon baz=1.5,SNR=8.6	1.59	293	P		Pn		02 43 40.5	-1.5
AAI	baz=1.5,SNR=12			S		Sn		02 43 59.8	-1.6
FAKI	Fak Fak	2.92	62	P		Pn		02 44 00.5	+0.1
TLE	Tual	3.33	114	P		Pn		02 44 08.5	+2.5
TLE	Tual baz=3.5,SNR=15	3.33	114	P		Pn		02 44 09.8	+3.8
SWI	Sorong	3.77	25	P		Pn		02 44 10.9	-1.2
SWI	Sorong baz=3.8,SNR=5.5	3.77	25	P		Pn		02 44 11.2	-0.9
RKPI	Ransiki, Papua 382nm,0.6s,6µm	5.29	58	P		Pn		02 44 32.3	-0.7
TNTI	Ternate	5.54	335	P		Pn		02 44 36.8	+0.4
MTN	Manton Dam baz=8.8,SNR=3.7	8.61	170	P		Pn		02 45 18.7	+0.2
KDU	Kakadu baz=8.9,SNR=9.3	8.78	162	P		Pn		02 45 22.9	+2.1
KAPI	Kappang	9.91	266	Pn		Pn		02 45 38.5	+2.1
KAPI	Kappang 0.9nm,0.3s,baz=228,slow=20,SNR=5.5	9.91	266	Pn		Pn		02 45 38.5	+2.1
KAPI	comp=Z,105nm,21.5s,baz=117,slow=34			LR		LR		02 48 47.9	
FITZ	Fitzroy Crossi 11nm,0.8s	14.27	196	*e*Pn		Pn		02 46 36.4	+0.4
FITZ	Fitzroy Crossi 0.4nm,0.3s,baz=35,slow=9.1,SNR=21	14.27	196	Pn		Pn		02 46 34.0	-2.0
FITZ	Fitzroy Crossi baz=14,SNR=18	14.27	196	P		Pn		02 46 37.5	+1.5
WRA	Warramunga Arr	16.20	164	Pn		Pn		02 46 58.5	-2.9
WRA				Sn		Sn		02 49 56.9	-3.2
WRA	Warramunga Arr 0.2nm,0.3s,baz=346,slow=13,SNR=4.6	16.20	164	Pn		Pn		02 46 58.6	-2.9
WRA	0.1nm,0.3s,baz=339,slow=21,SNR=3.6			Sn		Sn		02 49 56.9	-3.2
COEN	Coen 113nm,1.1s	16.42	127	*e*P		Pn		02 47 04.0	-0.2
COEN	Coen baz=17,SNR=5.5	16.42	127	P		Pn		02 47 04.4	+0.2
PMG	Port Moresby	18.09	107	*e*Pn		P		02 47 26.3	+1.1
PMG	Port Moresby 0.4nm,0.3s,baz=302,slow=7.1,SNR=3.9	18.09	107	P		P		02 47 26.1	+0.9
QIS	Mount Isa baz=19,SNR=5.6	18.83	150	P		Pn		02 47 36.9	+2.8
AS31	Alice Springs	19.68	168	*e*P		P		02 47 43.7	+1.0
ASAR	Alice Springs	19.68	168	P		P		02 47 42.8	+0.2
ASAR				S		Sn		02 51 24.3	-0.1
ASAR	Alice Springs 0.5nm,0.3s,baz=350,slow=9.8,SNR=15	19.68	168	P		P		02 47 42.8	+0.2
ASAR	0.0nm,0.3s,baz=345,slow=17,SNR=4.4			S		Sn		02 51 24.3	-0.1
CTA	Charters Tower	22.52	136	P		P		02 48 14.1	+0.8
CTA	Charters Tower 4.3nm,0.6s,baz=310,slow=11,SNR=5.7	22.52	136	P		P		02 48 14.1	+0.8
CTAO	Charters Tower 9.7nm,0.8s	22.52	136	*e*P		P		02 48 12.8	-0.5
STKA	Stephens Creek	29.63	159	P		P		02 49 17.0	-1.6
STKA	Stephens Creek 0.6nm,0.5s,baz=5.7,slow=10,SNR=2.9	29.63	159	P		P		02 49 17.0	-1.6
CMAR	Chiang Mai Arr	37.79	308	P		P		02 50 30.0	+0.4
CMAR	Chiang Mai Arr 1.2nm,0.5s,baz=140,slow=6.8,SNR=7.1	37.79	308	P		P		02 50 30.0	+0.4
RAMN	Ramite 14nm,0.5s	51.92	309	*e*P		P		02 52 22.2	-0.1
GUN	Gumba 8.5nm,0.6s	52.96	310	*e*P		P		02 52 27.6	-2.5
PKIN	Phulchoki	53.16	309	*e*P		P		02 52 27.5	-4.0
KOLN	Koldanda 10nm,0.6s	54.65	309	*e*P		P		02 52 34.2	-8.1
PYUN	Piuthan 16nm,0.8s	55.28	309	*e*P		P		02 52 37.1	-10
SONM	Songino Array	55.80	341	P		P		02 52 51.0	+0.9
SONM	Songino Array 0.6nm,0.4s,baz=165,slow=6.2,SNR=3.7	55.80	341	P		P		02 52 51.0	+0.9
MK31	Makanchi Array	65.81	326	*e*P		P		02 53 57.9	-0.2
MKAR	Makanchi Array	65.81	326	P		P		02 53 58.0	-0.2
MKAR	Makanchi Array 2.3nm,0.7s,baz=123,slow=7.9,SNR=19	65.81	326	P		P		02 53 58.0	-0.2
AAK	Ala-Archa	68.29	319	P		P		02 54 14.3	+0.1
AAK	Ala-Archa 0.7nm,0.4s,baz=165,slow=12,SNR=2.3	68.29	319	P		P		02 54 14.3	+0.1
ZALV	Zalesovo Beam	69.04	333	P		P		02 54 18.1	-0.3
ZALV	Zalesovo Beam 1.2nm,0.6s,baz=123,slow=5.5,SNR=5.7	69.04	333	P		P		02 54 18.1	-0.3
KURBB	Kurchatov Arra 2.5nm,0.7s,baz=131,slow=4.4,SNR=8.6	70.06	328	P		P		02 54 24.7	-0.1
KURK	Kurchatov 5.7nm,0.8s	70.06	328	*e*P		P		02 54 24.8	0.0
BVAR	Borovoye Array	75.62	328	P		P		02 54 57.6	-0.1
BVAR	Borovoye Array 2.4nm,0.9s,baz=116,slow=6.8,SNR=8.8	75.62	328	P		P		02 54 57.6	-0.1
AKTO	Aktyubinsk	81.75	322	P		P		02 55 31.9	+0.4
AKTO	Aktyubinsk 1.8nm,0.8s,baz=118,slow=5.1,SNR=8.3	81.75	322	P		P		02 55 31.9	+0.4
ILAR	Eielson Array	91.06	25	P		P		02 56 17.9	+0.9
ILAR	Eielson Array 0.2nm,0.6s,baz=258,slow=4.5,SNR=3.7	91.06	25	P		P		02 56 17.9	+0.9
TORD	Torodi Ar. Bea	127.92	283	PKP		PKPdf		03 02 19.1	-0.4
TORD	Torodi Ar. Bea 0.3nm,0.8s,baz=108,slow=1.2,SNR=4.0	127.92	283	PKP		PKPdf		03 02 19.1	-0.4

*ISCJB **21** 02:54:39.5±0.7, 30°21N±0°06×69°88E±0°06, h19km, mb3.5/14, Error ellipse: s-maj=9.9km s-min=4.2km az=38.9*

*IDC **21** 02:54:40.1±1.0, 30°43N×69°80E, h0km, mb3.6/9, mb1 3.7/11, mb1mx3.5/32, mbtmp3.6/11, ML3.7/2, Error ellipse: s-maj=27.0km s-min=20.2km az=84.0*

*NNC **21** 02:54:51.7±3.7, 31°46N×69°98E, h0km, mb3.5, Error ell

DDI	**Dehra Dun**	**7.12**	**88**	*ex*		**Pg**	02 56 58.0	-0.2
DDI				*ex*		Sg	02 58 36.0	+5.5
AGRA	**Agra**	**7.76**	**111**	*eS*		**Sn**	**02 57 58.0**	**-3.2**
AGRA				AML	AML		02 59 04.7	
	comp=N,82nm,0.4s							
AGRA				AML	AML		02 59 07.0	
	comp=E,63nm,0.4s							
PYUN	**Piuthan**	**11.72**	**98**	*eP*		**Pn**	**02 57 27.9**	**-0.4**
	comp=E,13nm,0.4s							
PYUN				*eS*		Sn	02 59 39.5	+0.8
DANN	**Dangsing**	**12.32**	**96**	*eP*		**Pn**	**02 57 37.6**	**+1.0**
	comp=E,20nm,0.4s							
KOLN	**Koldanda**	**12.32**	**98**	*eP*		**Pn**	**02 57 35.0**	**-1.6**
	comp=E,14nm,0.4s							
KK31	**Karatay Array**	**12.78**	**2**	Pn		**Pn**	**02 57 40.1**	**-2.5**
	comp=E,2.8nm,0.6s,baz=178,slow=13,SNR=40							
KK31				⇑Sn		Sn	02 59 56.0	-8.4
	comp=E,2.2nm,0.7s,baz=189,slow=24,SNR=5.2							
AAK	**Ala-Archa**	**12.86**	**16**	Pn		**Pn**	**02 57 41.9**	**-1.9**
	comp=E,1.2nm,0.3s,baz=168,slow=4.6,SNR=9.9							
AAK				Sn		**Sn**	**03 00 01.2**	**-5.3**
	comp=E,0.2nm,0.3s,baz=307,slow=20,SNR=2.6							
TKM2	**Tokmak 2**	**13.41**	**19**	⇑Pn		**Pn**	**02 57 51.4**	**0.0**
	comp=E,3.3nm,1.1s							
DMN	**Daman**	**13.65**	**98**	*eP*		**Pn**	**02 57 52.5**	**-2.3**
KKN	**Kakani**	**13.76**	**97**	*eP*		**Pn**	**02 57 55.4**	**-0.8**
	comp=E,15nm,0.4s							
KKN				*eS*		**Sn**	**03 00 27.1**	**-1.5**
PKIN	**Phulchoki**	**13.91**	**97**	*eP*		**Pn**	**02 57 55.3**	**-3.0**
	comp=E,7.2nm,0.3s							
PKI	**Pulchoki**	**13.93**	**97**	*eP*		**Pn**	**02 57 56.2**	**-2.4**
GUN	**Gumba**	**14.25**	**96**	*eP*		**Pn**	**02 58 02.4**	**-0.6**
	comp=E,33nm,0.5s							
RAMN	**Ramite**	**15.11**	**99**	*eP*		Pn	02 58 08.7	-6.0
	comp=E,9.1nm,0.4s							
ODAN	**Odare**	**15.81**	**98**	*eP*		Pn	02 58 18.1	-5.7
	comp=E,8.6nm,0.3s							
TAPN	**Taplejung**	**15.96**	**96**	*eP*		**Pn**	**02 58 22.6**	**-3.1**
MKAR	**Makanchi Array**	**19.09**	**27**	P		**P**	**02 59 02.8**	**-0.6**
	comp=E,0.1nm,0.3s,baz=202,slow=9.2,SNR=5.5							
AB31	**Akbulak array**	**20.36**	**341**	P		**P**	**02 59 17.1**	**0.0**
	comp=E,0.2nm,0.2s,baz=143,slow=12,SNR=12							
KUR16	**Kurchatov Arra**	**21.32**	**15**	⇑P		**P**	**02 59 25.7**	**-1.7**
	comp=E,0.2nm,0.9s							
KURBB	**Kurchatov Arra**	**21.32**	**15**	P		**P**	**02 59 26.8**	**-0.7**
	comp=E,1.5nm,0.7s,baz=207,slow=9.7,SNR=7.2							
KURK	**Kurchatov**	**21.43**	**15**	⇑P		**P**	**02 59 27.7**	**-0.9**
	comp=E,3.1nm,1.1s							
AKTO	**Aktyubinsk**	**21.97**	**340**	⇓P		**P**	**02 59 37.5**	**+3.0**
	comp=E,0.8nm,1.0s							
AKTO	**Aktyubinsk**	**21.97**	**340**	P		**P**	**02 59 34.0**	**-0.4**
	comp=E,0.7nm,0.5s,baz=174,slow=16,SNR=3.6							
VOSK	**Vostochnaya**	**22.41**	**2**	⇑P		**P**	**02 59 40.1**	**+0.8**
	comp=E,4.4nm,1.4s							
ZRNK	**Zerenda**	**22.63**	**359**	⇓P		**P**	**02 59 42.8**	**+1.3**
	comp=E,3.5nm,0.8s							
BVAR	**Borovoye Array**	**22.70**	**1**	P		**P**	**02 59 41.0**	**-1.3**
	comp=E,2.0nm,0.7s,baz=171,slow=10,SNR=12							
BRVK	**Borovoye**	**22.73**	**1**	⇑P		**P**	**02 59 43.9**	**+1.3**
	comp=E,8.3nm,0.9s							
ZALV	**Zalesovo Beam**	**26.00**	**20**	P		**P**	**03 00 15.0**	**+1.6**
	comp=E,2.4nm,0.5s,baz=208,slow=8.4,SNR=14							
ARCES	**ARCESS Array B**	**46.55**	**340**	P		**P**	**03 03 08.5**	**+0.6**
	comp=E,3.1nm,1.0s,baz=134,slow=7.7,SNR=3.7							
TORD	**Torodi Ar. Bea**	**64.70**	**271**	P		**P**	**03 05 20.2**	**+1.2**
	comp=E,0.2nm,0.4s,baz=54,slow=5.4,SNR=13							
WRA	**Warramunga Arr**	**79.65**	**120**	P		**P**	**03 06 50.0**	**+1.6**
	comp=E,0.2nm,0.7s,baz=321,slow=4.7,SNR=3.0							
ASAR	**Alice Springs**	**81.60**	**124**	P		**P**	**03 07 00.7**	**+1.9**
	comp=E,0.2nm,0.5s,baz=301,slow=4.9,SNR=3.1							
YKA	**Yellowknife Ar**	**87.46**	**2**	P		**P**	**03 07 28.5**	**+0.7**
	comp=E,0.1nm,0.4s,baz=347,slow=5.5,SNR=4.1							

IDC 21 02:55:20.8±5.7, 14°.88N×93°.43W, h48km±39km, mb3.2/1, mb1 3.6/4, mb1mx3.2/24, mbtmp3.3/4, ML3.4/3, Error ellipse: s-maj=54.0km s-min=19.8km az=7.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**2.60**	**328**	P	Pn	02 56 00.1	-0.3
	3.8nm,0.3s,baz=140,slow=11,SNR=35						
CMIG				S	Sn	02 56 31.4	+0.5
	7.3nm,0.3s,baz=139,slow=20,SNR=19						
TEIG	**Tepich**	**7.24**	**42**	P	Pn	02 57 04.9	+0.9
	2.7nm,0.3s,baz=283,slow=2.5,SNR=16						
TEIG				S	Sn	02 58 25.0	+0.2
	4.1nm,0.3s,baz=96,slow=20,SNR=6.4						
TXAR	**Lajitas Array**	**17.21**	**328**	P	Pn	02 59 18.0	0.0
	0.0nm,0.3s,baz=148,slow=14,SNR=2.4						
YKA	**Yellowknife Ar**	**49.86**	**347**	P	P	03 04 09.4	+0.5
	0.3nm,0.5s,baz=151,slow=7.4,SNR=9.8						
CMAR	**Chiang Mai Arr**	**144.70**	**339**	PKP	PKPab	03 14 51.1	-0.7
	1.0nm,0.3s,baz=328,slow=3.2,SNR=4.5						

IDC 21 03:16:52.3±1.7, 4°.12N×126°.35E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.7/24, mbtmp3.8/5, Error ellipse: s-maj=105.2km s-min=23.0km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.09**	**182**	P	P	03 21 49.9	+0.6
	1.6nm,0.7s,baz=3.7,slow=11,SNR=8.1						
WRA	**Warramunga Arr**	**25.17**	**162**	P	P	03 22 19.0	-0.5
	1.7nm,0.4s,baz=339,slow=11,SNR=21						
ASAR	**Alice Springs**	**28.58**	**165**	P	P	03 22 50.0	-0.3
	0.4nm,0.6s,baz=350,slow=7.6,SNR=7.0						
STKA	**Stephens Creek**	**38.62**	**159**	P	P	03 24 17.6	+0.2
	0.9nm,0.4s,baz=341,slow=14,SNR=4.1						
MKAR	**Makanchi Array**	**57.02**	**325**	P	P	03 26 40.1	0.0
	0.3nm,0.4s,baz=117,slow=8.3,SNR=8.0						

KRSC 21 03:43:29.6±1.7, 50°.09N×157°.02E, h10km±10km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.83**	**316**	*iP*	Pb	03 43 46.1	0.0
SKR				*iS*	Sb	03 43 58.3	+1.0
MIPR	**Malaya Ipel'ka**	**2.19**	**356**	P	Pn	03 44 06.5	+0.4
MTVR	**Mutnovka**	**2.50**	**16**	*eP*	Pn	03 44 12.1	+1.5
MTVR				*eS*	Sn	03 44 42.9	+1.6
RUS	**Russkaya**	**2.53**	**21**	*eP*	Pn	03 44 11.5	+0.9
RUS				*eS*	Sn	03 44 42.1	+0.6
GRL	**Gorelyy**	**2.55**	**15**	P	Pn	03 44 12.8	+1.6
UGLR	**Uglovaya**	**3.32**	**19**	*eP*	Pn	03 44 23.9	+2.2
AVH	**Avacha**	**3.35**	**18**	P	Pn	03 44 24.6	+2.4
SDLR	**Sedlovina**	**3.40**	**19**	*eP*	Pn	03 44 24.4	+1.6
SPN	**Mys Shipunski**	**3.55**	**31**	S	Sn	03 45 07.9	+1.3

*DDA **21** 03:50:12.8, 39°.03N×43°.65E, h7km, MD2.8*

ISC 21 03:50:13.0±1.3, 39°.01N±0°.04×43°.64E±0°.06, h9km±13km, n5, σ18°57/10, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLDR	**Caldiran**	**0.26**	**59**	*eP*G	**Pg**	**03 50 17.2**	**-1.0**
CLDR				*eS*G	**Sg**	**03 50 21.9**	**+0.1**
TVAN	**Van**	**0.52**	**200**	*eP*	**Pg**	**03 50 22.7**	**-0.3**
TVAN				*eS*	**Sb**	**03 50 31.9**	**-0.1**
DYDN	**Diyadin**	**0.53**	**5**	*eP*	**Pg**	**03 50 22.9**	**-0.4**
DYDN				*eS*	**Sb**	**03 50 31.3**	**-1.2**
TUTA	**Tutak**	**0.75**	**302**	*iP*	**Pg**	**03 50 26.8**	**-0.6**
TUTA				*iS*	**Sb**	**03 50 38.4**	**-0.2**
GNI	**Garni**	**1.42**	**37**	*e*PG	**Pn**	**03 50 39.0**	**-0.1**
GNI				*e*SG	**Sg**	**03 51 02.1**	**+3.4**

IDC 21 03:50:57.9±4.3, 0°.66S×136°.63E, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.6/19, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=192.2km s-min=29.1km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.30**	**187**	P	P	03 55 24.7	+0.1
	0.1nm,0.3s,baz=5.3,slow=11,SNR=11						
ASAR	**Alice Springs**	**23.03**	**186**	P	P	03 56 04.6	-0.2
	2.2nm,0.7s,baz=12,slow=12,SNR=22						
MKAR	**Makanchi Array**	**66.90**	**323**	P	P	04 01 52.2	+0.1
	0.2nm,0.5s,baz=115,slow=6.9,SNR=3.7						

*ISCJB **21** 03:51:20.2±0.8, 28°.68S±0°.04×70°.0W±0°.1, h99km±11km, mb3.1/1, Error ellipse: s-maj=19.2km s-min=6.6km az=176.1*

*GUC **21** 03:51:20.1±0.7, 28°.65S×70°.17W, h100km, ML3.8*

*IDC **21** 03:51:25.8±7.7, 28°.97S×69°.89W, h135km±63km, mb2.9/1, mb1 2.6/2, mb1mx2.6/16, mbtmp2.6/2, Error ellipse: s-maj=79.5km s-min=57.8km az=136.0*

ISC 21 03:51:21.2±0.9, 28°.69S±0°.05×70°.1W±0°.1, h100km±9km, n10, σ0°85/15, 2C-1D, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VACH	**Vallenar**	**0.55**	**282**	⇑*iP*	Pn	03 51 27.7	-10
VACH				*iS*	Sn	03 51 39.8	-10
VACH				AML	AML	03 51 40.3	
	comp=E,26µm,0.1s						
LCO	**Las Campanas**	**0.58**	**237**	⇓*iP*	**Pn**	**03 51 37.8**	**-0.2**
LCO				*iS*	**Sn**	**03 51 50.4**	**0.0**
LCO				AML	AML	03 51 51.8	
	comp=E,2µm,0.4s						
CPCH	**Copiapo**	**1.34**	**352**	*iS*	**Sn**	**03 52 02.2**	**-1.8**
TLL	**Tololo Astrono**	**1.58**	**201**	⇑*iP*	**Pn**	**03 51 48.9**	**+0.2**
TLL				*iS*	**Sn**	**03 52 10.2**	**+0.7**
TLL				AML	AML	03 52 12.9	
	comp=N,316nm,0.5s						
CDCH	**Caldera**	**1.72**	**340**	*iP*	**Pn**	**03 51 50.7**	**+0.5**
CDCH				*eS*	**Sn**	**03 52 12.6**	**+0.3**
CMCH	**Combarbala**	**2.58**	**197**	*eP*	**Pn**	**03 52 01.1**	**-0.4**
CMCH				*iS*	**Sn**	**03 52 31.8**	**-0.6**
CMCH				AML	AML	03 52 34.5	
	comp=N,680nm,0.6s						
CFAA	**Coronel Fontan**	**3.34**	**151**	P	**Pn**	**03 52 12.4**	**+0.9**
	baz=321,slow=18						
CFAA				S	**Sn**	**03 52 49.0**	**-1.4**
	comp=N,0.5nm,0.3s,baz=220,slow=16,SNR=4.6						
TORD	**Torodi Ar. Bea**	**80.86**	**70**	P	**P**	**04 03 24.4**	**-0.2**
	comp=N,0.2nm,0.6s,baz=251,slow=4.4,SNR=3.7						
TORD				pP	**pP**	**04 03 50.9**	**+0.5**
	comp=N,0.3nm,1.0s,baz=228,slow=4.1,SNR=1.5						
WRA	**Warramunga Arr**	**126.18**	**209**	PKP	**PKPdf**	**04 10 12.3**	**-0.3**
	comp=N,0.1nm,0.4s,baz=152,slow=1.8,SNR=4.6						
MKAR	**Makanchi Array**	**151.90**	**42**	PKPbc	**PKPbc**	**04 11 04.7**	**+0.4**
	comp=N,0.3nm,0.8s,baz=326,slow=3.7,SNR=2.6						

IDC 21 03:51:43.9±1.6, 35°.91S×104°.52W, h0km, mb4.0/5, mb1 4.4/5, mb1mx4.0/16, mbtmp4.0/5, MS3.6/7, Ms1 3.6/7, ms1mx3.4/20, Error ellipse: s-maj=68.5km s-min=28.8km az=44.0, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**9.67**	**334**	LR	LR	03 56 29.9	
	comp=Z,314nm,20.2s,baz=131,slow=30						
PLCA	**Paso Flores**	**26.98**	**111**	P	P	03 57 26.8	-0.6
	1.6nm,1.0s,baz=231,slow=13,SNR=2.6						
PLCA				LR	LR	04 04 40.2	
	comp=Z,43nm,20.6s,baz=189,slow=29						
RKT	**Rikitea**	**29.28**	**287**	*e*LR	LR	04 05 13.5	
	281nm,26.2s						
CFAA	**Coronel Fontan**	**30.36**	**92**	LR	LR	04 08 04.9	
	comp=Z,14nm,19.2s,baz=246,slow=32						
USHA	**Ushuaia**	**31.15**	**139**	LR	LR	04 07 46.0	
	comp=Z,263nm,21.9s,baz=38,slow=31						
TBI	**Tubuai**	**40.69**	**275**	*e*LR	LR	04 10 35.3	
	295nm,27.5s						
CPUP	**Villa Florida**	**41.18**	**90**	LR	LR	04 13 33.7	
	comp=Z,141nm,18.4s,baz=235,slow=32						
PPT2	**Papeete2**	**43.75**	**282**	*e*LR	LR	04 11 52.9	
	326nm,25.0s						
PPT	**Papeete**	**43.76**	**283**	LR	LR	04 14 13.1	
	comp=Z,239nm,19.2s,baz=353,slow=31						
BDFB	**Brasilia**	**53.98**	**83**	LR	LR	04 20 57.7	
	comp=Z,95nm,18.9s,baz=264,slow=32						
TXAR	**Lajitas Array**	**64.90**	**1**	P	P	04 02 25.1	0.0
	1.7nm,0.9s,baz=185,slow=9.0,SNR=19						
NVAR	**Mina Array Bea**	**75.06**	**349**	P	P	04 03 28.2	+0.7
	1.4nm,0.8s,baz=176,slow=7.6,SNR=12						
PDAR	**Pinedale Array**	**78.44**	**356**	P	P	04 03 45.8	-0.7
	2.0nm,0.9s,baz=163,slow=5.6,SNR=14						
YKA	**Yellowknife Ar**	**98.40**	**355**	P	P	04 05 22.0	-0.9
	0.1nm,0.7s,baz=166,slow=3.9,SNR=4.0						
BRTR	**Keskin Array B**	**146.95**	**71**	PKPbc	PKPbc	04 11 29.1	+0.6
	3.2nm,1.1s,baz=245,slow=2.3,SNR=11						
SONM	**Songino Array**	**154.25**	**307**	PKPbc	PKPbc	04 11 45.5	-0.2
	1.1nm,0.8s,baz=90,slow=1.5,SNR=5.9						
SONM				PKPab	PKPab	04 11 58.9	-0.8
	1.3nm,0.7s,baz=92,slow=3.8,SNR=4.0						

*MOS **21** 04:08:36.9±1.1, 24°.38N×141°.71E, h33km, mb4.8/17, Error ellipse: s-maj=15.4km s-min=7.8km az=96.7*

MOS Felt (II) at Yuzhno-Kuril'sk.

*NEIC **21** 04:08:40.7±1.7, 24°.42N×141°.72E, h50km±15km, mb4.6/22, Error ellipse: s-maj=9.6km s-min=8.1km az=110.0*

*IDC **21** 04:08:41.4±0.7, 24°.46N×141°.75E, h60km±6km, mb3.8/19, mb1 4.1/20, mb1mx4.0/26, mbtmp3.8/20, MS3.5/19, Ms1 3.5/19, ms1mx3.4/43, Error ellipse: s-maj=19.0km s-min=12.3km az=79.0*

ISC 21 04:08:41.5±0.7, 24°.42N±0°.08×141°.8E±0°.1, h56km±5km, h56km:pP-P, n267, σ0°94/265, mb4.4/47, MS3.6/16, 77C-74D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**11.16**	**164**	LR	LR	04 14 45.0	
	comp=Z,198nm,21.4s,baz=179,slow=32						
MJAR	**Matsushiro Arr**	**12.46**	**347**	P	**Pn**	**04 11 35.2**	**-0.9**
MJAR	**Matsushiro Arr**	**12.46**	**347**	P	**Pn**	**04 11 35.2**	**-0.9**
	0.4nm,0.3s,baz=167,slow=11,SNR=3.2						
JNU	**Nakatsue**	**12.90**	**315**	LR	LR	04 16 22.8	
	comp=Z,78nm,20.0s,baz=290,slow=36						
KSRS	**Korea Array**	**17.58**	**321**	LR	LR	04 19 05.6	
	comp=Z,50nm,19.4s,baz=68,slow=36						
ASAJ	**Asahikawa**	**19.66**	**2**	LR	LR	04 21 08.9	
	comp=Z,79nm,20.0s,baz=174,slow=38						
USRK	**Ussuriysk Arra**	**21.29**	**340**	P	**P**	**04 13 20.5**	**-2.7**
	4.0nm,0.9s,baz=174,slow=24,SNR=2.5						
YSS	**Yuzh-Sakhalins**	**22.50**	**2**	*e*P	**P**	**04 13 37.1**	**+0.9**
DAV	**Davao City (W)**	**23.21**	**225**	LR	LR	04 21 19.5	
	comp=Z,177nm,21.2s,baz=226,slow=33						
PETK	**Petropavlovsk-**	**31.07**	**19**	LR	LR	04 25 30.6	
	comp=Z,81nm,20.2s,baz=200,slow=32						
KAPI	**Kappang**	**36.28**	**219**	LR	LR	04 28 44.3	
	comp=Z,88nm,21.9s,baz=216,slow=33						
SONM	**Songino Array**	**36.43**	**319**	P	**P**	**04 15 40.8**	**-0.1**
SONM				PcP	**PcP**	**04 18 03.4**	**-0.6**
SONM	**Songino Array**	**36.43**	**319**	P	**P**	**04 15 40.8**	**-0.1**
	0.3nm,0.3s,baz=140,slow=11,SNR=2.8						
SONM				PcP	**PcP**	**04 18 03.4**	**-0.6**
	0.7nm,0.7s,baz=134,slow=4.2,SNR=3.3						
SONM				LR	LR	04 31 18.1	
	comp=Z,61nm,21.6s,baz=255,slow=37						
YAK	**Yakutsk**	**38.48**	**351**	*i*P	**P**	**04 15 59.7**	**+1.9**
SEY	**Seymchan**	**39.15**	**8**	⇑*eP*	**P**	**04 16 04.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**40.19**	**270**	LR	LR	04 32 18.8	
	comp=Z,91nm,19.5s,baz=158,slow=35						
WRAB	**Tennant Creek**	**44.68**	**190**	*e*P	**P**	**04 16 48.5**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.4s						
WRAB	**Tennant Creek**	**44.68**	**190**	*e*P	**P**	**04 16 48.5**	**-0.5**
	comp=Z,10nm,0.4s						
WRA	**Warramunga Arr**	**44.69**	**190**	P	**P**	**04 16 48.6**	**-0.5**
WRA				pP	**pP**	**04 17 04.3**	**+0.6**
WRA				PcP	**PcP**	**04 18 31.1**	**+0.2**
WRA				pPcP		04 18 44.8	
WRA	**Warramunga Arr**	**44.69**	**190**	P	**P**	**04 16 48.6**	**-0.5**
	comp=Z,6.3nm,0.3s,baz=10,slow=8.6,SNR=109						
WRA				pP	**pP**	**04 17 04.3**	**+0.6**
	comp=Z,1.9nm,0.4s,baz=12,slow=8.7,SNR=3.7						
WRA				PcP	**PcP**	**04 18 31.1**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=6.3,slow=3.5,SNR=6.3						
WRA				pPcP		04 18 44.8	
	comp=Z,0.9nm,0.5s,baz=4.6,slow=3.4,SNR=2.7						
BILL	**Bilibino**	**46.13**	**12**	⇓*iP*	**P**	**04 17 00.1**	**+0.2**
BILL				pmax	pmax		
	comp=Z,38nm,1.0s						
TIXI	**Tiksi**	**47.82**	**355**	⇓*eP*	**P**	**04 17 12.9**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TIXI				MLR	MLR		
	comp=Z,77nm,25.0s						
ASAR	**Alice Springs**	**48.41**	**190**	P	**P**	**04 17 17.2**	**-1.0**

ASAR	**Alice Springs**	**48.41**	**190**	P	**P**	**04 17 17.2**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=19,slow=11,SNR=5.0						
TAPN	**Taplejung**	**48.42**	**286**	*e*P	**P**	**04 17 20.6**	**+1.9**
ODAN	**Odare**	**48.78**	**285**	*e*P	**P**	**04 17 23.7**	**+2.3**
	comp=Z,16nm,0.3s						
RAMN	**Ramite**	**49.46**	**285**	*e*P	**P**	**04 17 28.1**	**+1.5**
	comp=Z,6.7nm,0.4s						
GUN	**Gumba**	**49.93**	**287**	*e*P	**P**	**04 17 33.0**	**+2.7**
	comp=Z,17nm,0.4s						
KKN	**Kakani**	**50.47**	**287**	*e*P	**P**	**04 17 36.6**	**+2.3**
DMN	**Daman**	**50.66**	**287**	*e*P	**P**	**04 17 37.6**	**+1.9**
	comp=Z,7.5nm,0.4s						
ZALV	**Zalesovo Beam**	**51.29**	**321**	P	**P**	**04 17 37.7**	**-2.0**
ZALV	**Zalesovo Beam**	**51.29**	**321**	P	**P**	**04 17 37.6**	**-2.0**
ZALV	**Zalesovo Beam**	**51.29**	**321**	P	**P**	**04 17 37.6**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=93,slow=7.5,SNR=3.2						
ZALV				LR	LR	04 39 06.1	
	comp=Z,34nm,20.8s,baz=322,slow=36						
DANN	**Dangsing**	**51.70**	**288**	*e*P	**P**	**04 17 46.4**	**+2.8**
	comp=Z,83nm,0.8s						
MK31	**Makanchi Array**	**51.92**	**311**	*e*P	**P**	**04 17 45.0**	**+0.4**
MK31	**Makanchi Array**	**51.92**	**311**	*e*P	**P**	**04 17 45.0**	**+0.4**
MKAR	**Makanchi Array**	**51.92**	**311**	*e*P	**P**	**04 17 44.9**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**51.92**	**311**	*e*P	**P**	**04 17 45.0**	**+0.3**
MKAR				pP	**pP**	**04 17 58.8**	**-0.8**
MKAR	**Makanchi Array**	**51.92**	**311**	P	**P**	**04 17 44.6**	**0.0**
	comp=Z,0.5nm,0.4s,baz=88,slow=9.1,SNR=16						
MKAR				pP	**pP**	**04 17 58.8**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=82,slow=9.6,SNR=4.2						
MKAR				LR	LR	04 40 50.3	
	comp=Z,28nm,19.6s,baz=351,slow=37						
KOLN	**Koldanda**	**51.94**	**287**	*e*P	**P**	**04 17 47.7**	**+2.4**
	comp=Z,23nm,0.8s						
PYUN	**Piuthan**	**52.41**	**288**	*e*P	**P**	**04 17 51.3**	**+2.5**
	comp=Z,46nm,0.9s						
KURK	**Kurchatov**	**54.62**	**316**	⇑*e*P	**P**	**04 18 03.7**	**-0.6**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURK	**Kurchatov**	**54.62**	**316**	*e*P	**P**	**04 18 04.0**	**-0.2**
	comp=Z,3.7nm,1.0s						
STKA	**Stephens Creek**	**55.98**	**180**	*e*P	**P**	**04 18 14.4**	**+0.2**
STKA	**Stephens Creek**	**55.98**	**180**	P	**P**	**04 18 13.2**	**-1.0**
	comp=Z,2.2nm,0.5s,baz=355,slow=6.9,SNR=10						
AAK	**Ala-Archa**	**57.51**	**306**	*i*P	**P**	**04 18 26.6**	**+1.3**
AAK				pmax	pmax		
	comp=Z,19nm,3.2s						
TRF	**Thorofare Moun**	**58.59**	**29**	*e*P	**P**	**04 18 31.2**	**-1.2**
	comp=Z,83nm,2.8s						
PMR	**Palmer**	**58.89**	**31**	*e*P	**P**	**04 18 33.9**	**-0.5**
PMR				pmax	pmax		
	comp=Z,13nm,1.1s						
PMR	**Palmer**	**58.89**	**31**	*e*P	**P**	**04 18 33.9**	**-0.5**
	comp=Z,13nm,1.1s						
AFI	**Afiamalu**	**59.22**	**125**	LR	LR	04 39 41.7	
	comp=Z,122nm,18.8s,baz=260,slow=31						
MCK	**McKinley**	**59.23**	**29**	*e*P	**P**	**04 18 36.2**	**-0.5**
MCK				pmax	pmax		
	comp=Z,13nm,1.2s						
MCK	**McKinley**	**59.23**	**29**	*e*P	**P**	**04 18 36.2**	**-0.5**
	comp=Z,13nm,1.2s						
COLD	**Coldfoot**	**59.23**	**25**	*e*P	**P**	**04 18 37.2**	**+0.5**
	comp=Z,2.4nm,0.8s						
SML	**Sawmill**	**59.29**	**31**	*e*P	**P**	**04 18 37.5**	**+0.3**
SML				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SML	**Sawmill**	**59.29**	**31**	*e*P	**P**	**04 18 37.5**	**+0.3**
	comp=Z,2.3nm,1.1s						
BVAR	**Borovoye Array**	**59.78**	**319**	P	**P**	**04 18 40.1**	**-0.6**
BVAR	**Borovoye Array**	**59.78**	**319**	P	**P**	**04 18 40.1**	**-0.6**
BVAR	**Borovoye Array**	**59.78**	**319**	P	**P**	**04 18 40.1**	**-0.6**
	comp=Z,1.3nm,0.3s,baz=96,slow=7.9,SNR=11						
COLA	**College**	**59.83**	**28**	*i*P	**P**	**04 18 41.0**	**+0.2**
BRVK	**Borovoye**	**59.84**	**319**	⇑*e*P	**P**	**04 18 41.0**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ILAR	**Eielson Array**	**60.23**	**28**	P	**P**	**04 18 42.3**	**-1.3**
ILAR	**Eielson Array**	**60.23**	**28**	P	**P**	**04 18 42.3**	**-1.3**
	comp=Z,5.7nm,1.0s,baz=261,slow=5.6,SNR=40						
KKAR	**Karatay Array**	**60.37**	**307**	*e*P	**P**	**04 18 46.2**	**+1.2**
KKAR	**Karatay Array**	**60.37**	**307**	*e*P	**P**	**04 18 46.2**	**+1.2**
ARU	**Arti**

MSO	Missoula	81.69	42	⇑P		P	04 20 53.3	-0.8
	baz=82							
E13A	Victor	81.71	43	⇓P		P	04 20 54.4	+0.3
	baz=82							
SLMT	Seeley Lake	81.78	42	*e*P		P	04 20 54.7	+0.2
	comp=Z,7.9nm,1.3s							
D14A	Greenough	81.84	42	⇓P		P	04 20 54.4	-0.5
	baz=82							
B15A	Bradely Ranch,	81.84	40	⇓P		P	04 20 54.8	0.0
	baz=82							
F13A	Darby	81.92	43	⇓P		P	04 20 55.0	-0.3
	baz=82							
MFID	Camas Ranch	82.01	46	*e*P		P	04 20 56.2	+0.4
	comp=Z,6.4nm,1.2s							
MFID	Camas Ranch	82.01	46	⇓P		P	04 20 56.0	+0.2
	baz=82,SNR=5.1							
C15A	Salmond Ranch,	82.06	41	⇓P		P	04 20 55.7	-0.3
	baz=82							
A16A	West Butte Ran	82.11	40	⇑P		P	04 20 56.5	+0.3
	baz=82,SNR=6.7							
H12A	Diamond D Ranc	82.14	45	⇑P		P	04 20 56.4	-0.1
	baz=82							
E14A	Clinton	82.15	42	⇓P		P	04 20 56.0	-0.6
	baz=82							
G13A	Cobalt	82.29	44	⇓P		P	04 20 57.0	-0.3
	baz=82,SNR=7.1							
I12A	Atlanta	82.30	45	⇑P		P	04 20 57.2	-0.2
	baz=82							
B16A	M & M Farms, S	82.30	40	⇓P		P	04 20 56.1	-1.1
	baz=82							
MLAC	Mammoth Lakes	82.42	52	⇑P		P	04 20 59.1	+0.9
	baz=82							
NVAR	Mina Array Bea	82.46	51	P		P	04 20 58.1	-0.3
NVAR	Mina Array Bea	82.46	51	P		P	04 20 58.1	-0.3
	comp=Z,2.2nm,0.9s,baz=271,slow=5.5,SNR=14							
H13A	Challis	82.52	44	⇓P		P	04 20 58.8	+0.3
	baz=82,SNR=5.2							
C16A	Fuhringer Ranc	82.57	41	⇓P		P	04 20 58.5	-0.1
	baz=82,SNR=6.8							
A17A	Triple J Farms	82.63	39	⇓P		P	04 20 59.6	+0.7
	baz=82							
E15A	Deer Lodge	82.67	42	⇑P		P	04 20 58.2	-1.0
	baz=82							
B17A	L&G Farms, Che	82.89	40	⇑P		P	04 21 00.7	+0.5
	baz=83,SNR=13							
I13A	Wildhorse Cree	82.90	45	⇑P		P	04 21 00.2	-0.3
	baz=83							
F15A	Butte	83.03	43	⇓P		P	04 21 00.9	-0.3
	baz=83							
D16A	Dana Ranch, Ca	83.05	41	⇑P		P	04 21 00.9	-0.2
	baz=83							
H14A	Leadore	83.06	44	⇓P		P	04 21 01.3	0.0
	baz=83							
J13A	Cove Ranch, Pi	83.09	45	⇑P		P	04 21 01.7	+0.2
	baz=83							
A18A	Metzger Ranch,	83.14	39	⇓P		P	04 21 01.8	+0.3
	baz=83,SNR=5.5							
E16A	East Helena	83.21	42	⇓P		P	04 21 02.1	+0.1
	baz=83							
C17A	Wharram Farm,	83.23	41	⇓P		P	04 21 01.9	-0.2
	baz=83							
I14A	Mackay	83.32	45	⇑P		P	04 21 03.4	+0.7
	baz=83							
G15A	Dillon	83.35	43	⇑P		P	04 21 03.1	+0.2
	baz=83							
B18A	Beardsley Farm	83.44	40	⇑P		P	04 21 02.8	-0.2
	baz=83,SNR=7.0							
D17A	Six Diamond Ra	83.51	41	⇓P		P	04 21 03.9	+0.3
	baz=83,SNR=8.2							
J14A	Carey	83.56	45	⇑P		P	04 21 04.5	+0.6
	baz=83							
EGMT	Eagleton	83.63	40	*e*P		P	04 21 04.5	+0.4
	comp=Z,6.8nm,1.2s							
EGMT	Eagleton	83.63	40	⇓P		P	04 21 03.7	-0.4
	baz=84							
E17A	Martinsdale	83.74	42	⇑P		P	04 21 05.1	+0.3
	baz=84,SNR=7.2							
G16A	Moss Hill, Enn	83.75	43	⇑P		P	04 21 04.8	-0.1
	baz=84							
A19A	Klindworth Far	83.77	39	⇑P		P	04 21 05.2	+0.5
	baz=84,SNR=6.7							
B19A	Brinkman Farms	83.89	39	⇓P		P	04 21 05.6	+0.2
	baz=84,SNR=9.1							
I15A	Monteview	83.90	44	⇓P		P	04 21 06.7	+1.1
	baz=84							
D18A	Linhart Farms,	84.01	41	⇓P		P	04 21 06.6	+0.5
	baz=84							
MPMC	Manual Prospec	84.06	53	⇑P		P	04 21 06.4	-0.3
	baz=84							
F17A	Fitzpatrick Pl	84.13	42	⇑P		P	04 21 07.2	+0.4
	baz=84							
K14A	Jones Ranch, D	84.14	46	⇓P		P	04 21 07.9	+1.0
	baz=84							
C19A	Slack Wire Ran	84.19	40	⇓P		P	04 21 06.9	0.0
	baz=84							
FFC	Flin Flon	84.20	32	*i* P		P	04 21 06.9	+0.2
FFC	Flin Flon	84.20	32	*e*P		P	04 21 06.5	-0.2
	comp=Z,7.3nm,1.1s							
J15A	Blackfoot	84.22	45	⇓P		P	04 21 08.3	+1.1
	baz=84							
A20A	Cobblestone Ra	84.25	38	⇓P		P	04 21 07.3	+0.1
	baz=84							
E18A	Harlowton	84.26	41	⇓P		P	04 21 07.9	+0.6
	baz=84,SNR=8.9							
H16A	Russell Place,	84.35	43	⇓P		P	04 21 08.5	+0.6
	baz=84,SNR=8.7							
R11A	Troy Canyon, C	84.42	50	⇓P		P	04 21 08.5	+0.1
	baz=84							
FMP	Fort Macarthur	84.48	56	⇑P		P	04 21 10.7	+2.1
	baz=84							
CIS	Catalina Islan	84.53	56	⇑P		P	04 21 11.3	+2.5
	baz=84							
AKASG	Malin Array Be	84.55	324	*ce*P		P	04 21 08.5	0.0
AKASG					pmax	pmax		
	comp=Z,1.0nm,0.5s							
AKASG	Malin Array Be	84.55	324	P		P	04 21 07.2	-1.4
AKASG	Malin Array Be	84.55	324	P		P	04 21 07.2	-1.4
	comp=Z,0.7nm,0.5s,baz=51,slow=4.6,SNR=4.3							
F18A	Big Timber	84.70	42	⇓P		P	04 21 09.3	-0.3
	baz=84							
C20A	Veseth Ranch,	84.81	40	⇑P		P	04 21 10.3	+0.3
	baz=85,SNR=5.1							
L15A	Malad City	84.91	46	⇑P		P	04 21 10.9	+0.1
	baz=85							
H17A	Grant Village	84.92	43	⇑P		P	04 21 13.2	+2.3
	baz=85,SNR=6.8							
IMW	Indian Meadow	84.93	44	*e*P		P	04 21 11.8	+0.8
	comp=Z,5.7nm,1.1s							
LKWY	Lake	84.94	43	*e*P		P	04 21 13.3	+2.3
LKWY					pmax	pmax		
	comp=Z,13nm,1.1s							
LKWY	Lake	84.94	43	*e*P		P	04 21 13.3	+2.3
	comp=Z,13nm,1.1s							
E19A	Rath Farm, Rou	84.98	41	⇓P		P	04 21 11.2	+0.2
	baz=85							
K16A	Soda Springs	85.03	45	⇑P		P	04 21 12.1	+0.7
	baz=85,SNR=5.3							
D20A	Manuel Ranch,	85.05	40	⇓P		P	04 21 11.8	+0.6
	baz=85,SNR=8.8							
I17A	Pilgrim Ck.	85.15	44	⇓P		P	04 21 13.4	+1.4
	baz=85							
F19A	Roth Farm, Mol	85.20	41	⇓P		P	04 21 12.4	+0.3
	baz=85							
C21A	Desert Coulee	85.27	39	⇑P		P	04 21 12.3	-0.1
	baz=85,SNR=6.2							
LOHW	Long Hollow	85.28	44	*e*P		P	04 21 13.4	+0.7
	comp=Z,6.6nm,1.4s							
A22A	Carney Farms,	85.33	38	⇑P		P	04 21 12.6	0.0
	baz=85							
H18A	Shoshone NF, C	85.35	43	⇑P		P	04 21 13.8	+0.8
	baz=85							
RLMT	Red Lodge	85.37	42	*e*P		P	04 21 13.3	+0.3
	comp=Z,37nm,1.8s							
RLMT	Red Lodge	85.37	42	⇑P		P	04 21 13.9	+0.8
	baz=85							
DUG	Dugway	85.48	48	*e*P		P	04 21 13.8	+0.2
DUG					pmax	pmax		
	comp=Z,10.0nm,1.4s							
DUG	Dugway	85.48	48	*e*P		P	04 21 13.8	+0.2
	comp=Z,9.9nm,1.4s							
DUG	Dugway	85.48	48	⇑P		P	04 21 13.9	+0.2
	baz=85							
TUQ	Turquoise Moun	85.48	53	⇓P		P	04 21 13.8	+0.1
	baz=85							
L16A	Fish Haven	85.53	46	⇑P		P	04 21 14.3	+0.4
	baz=85							
D21A	La Casta Ranch	85.73	40	⇓P		P	04 21 15.0	+0.4
	baz=86							
H19A	Powell	85.77	42	⇑P		P	04 21 15.8	+0.8
	baz=86,SNR=5.2							
J18A	Kendall Valley	85.85	44	⇑P		P	04 21 15.8	+0.2
	baz=86							
NB2	NORSAR Subarra	85.95	338	P		P	04 21 13.8	-1.6
	comp=Z,1.1nm,1.1s,baz=49,slow=4.6							
NOA	NORSAR Array B	85.95	338	P		P	04 21 13.7	-1.6
NOA	NORSAR Array B	85.95	338	P		P	04 21 13.7	-1.6
	comp=Z,1.2nm,0.9s,baz=40,slow=4.9,SNR=4.9							
NOA					LR	LR	05 00 33.7	
	comp=Z,24nm,18.1s,baz=80,slow=36							
G20A	Bridger	85.96	42	⇑P		P	04 21 15.8	-0.1
	baz=86							
GMRC	Granite Mounta	85.97	54	⇑P		P	04 21 16.5	+0.3
	baz=86							
C22A	Vida	86.01	39	⇓P		P	04 21 16.2	+0.2
	baz=86							
I19A	Meeteetse	86.08	43	⇓P		P	04 21 17.2	+0.6
	baz=86							
K18A	Toltan Ranch,	86.12	45	⇑P		P	04 21 18.1	+1.2
	baz=86							
B23A	Brockton	86.13	38	⇑P		P	04 21 16.6	0.0
	baz=86							
D22A	Cohagen	86.16	39	⇓P		P	04 21 16.9	+0.2
	baz=86							
BW06	Boulder Array	86.37	44	⇓P		P	04 21 18.2	+0.1
	baz=86							
PDAR	Pinedale Array	86.37	44	P		P	04 21 17.1	-1.0
PDAR	Pinedale Array	86.37	44	P		P	04 21 17.1	-1.0
	comp=Z,1.7nm,1.0s,baz=318,slow=2.0,SNR=7.7							
PDAR					LR	LR	04 54 02.7	
	comp=Z,71nm,19.6s,baz=258,slow=32							
C23A	Lambert	86.38	38	⇑P		P	04 21 18.4	+0.6
	baz=86							
A24A	Westby	86.42	37	⇑P		P	04 21 18.2	+0.2
	baz=86							
J19A	Creheart	86.44	44	⇑P		P	04 21 19.0	+0.7
	baz=86							
N17A	Moffit Pass	86.44	46	⇓P		P	04 21 18.9	+0.3
	baz=86							
H20A	Greybull	86.47	42	⇑P		P	04 21 19.0	+0.6
	baz=86							
DGMT	Dagmar	86.57	38	⇑P		P	04 21 18.5	-0.1
	baz=86							
BC3	Big Chuckawall	86.63	55	⇑P		P	04 21 19.3	-0.1
	baz=86							
I20A	Worland	86.67	43	⇓P		P	04 21 20.1	+0.7
	baz=86							
D23A	Lindsay	86.70	39	⇓P		P	04 21 20.2	+0.8
	baz=86							
K19A	Absolon Red Bu	86.79	44	⇑P		P	04 21 20.2	+0.1
	baz=87							
L19A	Farson	86.83	45	⇓P		P	04 21 20.5	+0.2
	baz=87							
W13A	Hualapai Mount	87.12	53	⇓P		P	04 21 22.3	+0.4
	baz=87							
N18A	Larsen Ranch,	87.19	46	⇓P		P	04 21 22.2	+0.1
	baz=87							
K20A	Yellowstone Ra	87.19	44	⇓P		P	04 21 22.1	+0.1
	baz=87							
I21A	Big Trails, Te	87.25	43	⇑P		P	04 21 22.7	+0.4
	baz=87							
F23A	Volborg	87.38	40	⇑P		P	04 21 22.1	-0.6
	baz=87							
H22A	Clearmont	87.42	42	⇓P		P	04 21 23.4	+0.4
	baz=87							
BRTR	Keskin Array B	87.54	313	P		P	04 21 22.3	-1.5
BRTR					pP	pP	04 21 39.9	0.0
BRTR	Keskin Array B	87.54	313	P		P	04 21 22.3	-1.5
	comp=Z,0.2nm,0.4s,baz=122,slow=5.2,SNR=3.2							
BRTR					pP	pP	04 21 39.9	0.0
	comp=Z,0.4nm,0.6s,baz=338,slow=1.3,SNR=3.2							
U15A	North Rim	87.63	51	⇓P		P	04 21 24.7	+0.3
	baz=88							
I22A	9 Mile Ranch,	87.71	42	⇑P		P	04 21 24.9	+0.5
	baz=88							
J22A	Midwest	87.97	43	⇓P		P	04 21 26.1	+0.4
	baz=88							
113A	Mohawk Valley,	88.29	55	⇑P		P	04 21 27.9	+0.6
	baz=88							
Y14A	Wickenburg	88.31	53	⇑P		P	04 21 27.8	+0.4
	baz=88							
P19A	Cripple Cowboy	88.32	47	⇓P		P	04 21 28.1	+0.6
	baz=88							
M21A	Separation Pea	88.36	45	⇓P		P	04 21 28.1	+0.3
	baz=88							
S18A	Hurst Farm, Bl	88.62	49	⇓P		P	04 21 28.1	-1.0
	baz=88							
Q20A	Ridgley Place,	89.13	47	⇓P		P	04 21 32.1	+0.8
	baz=89							
X16A	Lo Mia Camp, P	89.21	52	⇑P		P	04 21 33.2	+1.4
	baz=89							
N22A	Wattenberg Ran	89.37	45	⇑P		P	04 21 33.4	+0.9
	baz=89							
214A	Organ Pipe Nat	89.39	55	⇓P		P	04 21 33.1	+0.6
	baz=89							
ULM	Lac du Bonnet	89.88	33	LR		LR	05 00 14.5	
	comp=Z,44nm,18.9s,baz=311,slow=34							
U21A	Nageezi	90.87	49	⇓P		P	04 21 39.7	+0.2
	baz=91							
X20A	Quemado	91.25	51	⇓P		P	04 21 42.0	+0.7
	baz=91							
U22A	Llaves	91.45	49	⇑P		P	04 21 42.9	+0.7
	baz=91							
R24A	Sanders Place,	91.63	46	⇓P		P	04 21 43.5	+0.5
	baz=92							
Y20A	Horse Springs,	91.66	52	⇑P		P	04 21 44.0	+0.7
	baz=92							
X21A	Alamocita Cree	91.81	51	⇑P		P	04 21 44.6	+0.6
	baz=92							
S24A	Houchin Ranch,	91.88	47	⇓P		P	04 21 45.1	+0.8
	baz=92							
Z20A	Nine Sixteen R	91.92	52	⇓P		P	04 21 45.6	+1.2
	baz=92							
U23A	El Rito	91.92	49	⇑P		P	04 21 44.6	+0.2
	baz=92							
Y21A	Point of Rocks	92.11	51	⇑P		P	04 21 46.7	+1.3
	baz=92							
R25A	Fountain Ranch	92.22	46	⇑P		P	04 21 46.3	+0.7
	baz=92							
Q26A	Hugo	92.28	45	⇓P		P	04 21 46.4	+0.5
	baz=92							
X22A	Bernardo	92.32	50	⇓P		P	04 21 47.6	+1.3
	baz=92							
ANMO	Albuquerque	92.48	50	*e*P		P	04 21 47.2	+0.2
	comp=Z,3.9nm,1.2s							
Z21A	St. Cloud Mine	92.48	52	⇓P		P	04 21 48.3	+1.3
	baz=92							
R26A	Arlington	92.68	46	⇓P		P	04 21 47.9	+0.2
	baz=92							
121A	Cookes Peak, D	92.80	52	⇑P		P	04 21 49.7	+1.2
	baz=93							
V24A	Rampart Ranch,	92.88	49	⇑P		P	04 21 49.5	+0.7
	baz=93							
Z22A	Elephant Butte	93.01	51	⇑P		P	04 21 50.3	+0.8
	baz=93							
S26A	Kim	93.04	46	⇑P		P	04 21 50.1	+0.6
	baz=93							
W24A	Lazy 6 Ranch,	93.06	49	⇑P		P	04 21 50.6	+0.9
	baz=93							
U25A	Circle Dot Ran	93.10	48	⇑P		P	04 21 50.3	+0.5
	baz=93							
T26A	Comanche Natio	93.21	47	⇑P		P	04 21 50.6	+0.3
	baz=93							
V25A	Rancho No Teng	93.26	48	⇑P		P	04 21 51.3	+0.7
	baz=93							
GERES	GERESS Array B	93.60	329	LR		LR	05 11 45.3	
	comp=Z,46nm,18.4s,baz=69,slow=40							
125A	Gardner Draw,	94.97	51	⇑P		P	04 21 59.0	+0.6
	baz=95							
TXAR	Lajitas Array	97.49	53	P		Pdif	04 22 10.7	+0.8
TXAR	Lajitas Array	97.49	53	P		Pdif	04 22 10.7	+0.8
	comp=Z,0.1nm,0.5s,baz=318,slow=5.2,SNR=2.8							
TORD	Torodi Ar. Bea	126.03	309	PKP		PKPdf	04 27 37.5	-0.7
TORD	Torodi Ar. Bea	126.03	309	PKP		PKPdf	04 27 37.5	-0.7
	comp=Z,0.5nm,0.8s,baz=73,slow=0.7,SNR=8.3							
PLCA	Paso Flores	148.50	129	PKPbc		PKPbc	04 28 21.4	-0.7
PLCA	Paso Flores	148.50	129	PKPbc		PKPbc	04 28 21.4	-0.7
	comp=Z,1.5nm,0.6s,baz=204,slow=7.6,SNR=7.0							
LPAZ	La Paz	150.86	80	*e*PKPbc		PKPbc	04 28 29.2	-0.1
LPAZ	La Paz	150.86	80	PKPbc		PKPbc	04 28 28.8	-0.5
	comp=Z,1.2nm,0.5s,baz=352,slow=4.0,SNR=9.5							

*THE **21** 04:15:35.7, 36°.23N × 22°.36E, h0km ± 1km, ML1.9/3, Error ellipse: s-maj=1.5km s-min=0.6km az=225.0*
*CSEM **21** 04:15:36.0 ± 0.4, 36°.27N × 22°.38E, h2km, MD3.2, Error ellipse: s-maj=8.9km s-min=4.6km az=44.0*
*ATH **21** 04:15:36.8, 36°.31N × 22°.42E, h5km ± 2km, MD3.2/17*

ISC 21 04:15:36.3 ± 1.3, 36°.27N ± 0°.03 × 22°.38E ± 0°.03, h4km ± 10km, n53, σ0°.56/83, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DYR	Agios Nikonas	0.49	356	P		Pg	04 15 45.8	+0.1
DYR				S		Sb	04 15 54.1	-1.0
DYR	Agios Nikonas	0.49	356	*e*PG		Pg	04 15 45.8	+0.1
DYR	Agios Nikonas	0.49	356	*e*PB		Pg	04 15 45.8	+0.1
DYR				*e*SB		Sg	04 15 52.8	+0.7
DYR	Agios Nikonas	0.49	356	P		Pg	04 15 45.8	+0.1
DYR				*e*Sb		Sg	04 15 52.8	+0.7
DYR				S		Sb	04 15 54.1	-1.0
KYTH	Kithira	0.53	89	P		Pg	04 15 46.1	-0.3
KYTH	Kithira	0.53	89	*e*PB		Pg	04 15 46.1	-0.3
KYTH	Kithira	0.53	89	*e*PB		Pg	04 15 46.1	-0.3
KYTH	Kithira	0.53	89	P		Pg	04 15 46.1	-0.3
VLI	Veliai	0.63	45	P		Pg	04 15 48.5	+0.1
VLI				S		Sb	04 15 58.5	-0.6
VLI	Veliai	0.63	45	*e*PB		Pg	04 15 48.5	+0.1
VLI				*e*SB		Sb	04 15 58.5	-0.6
VLI	Veliai	0.63	45	*e*PB		Pg	04 15 48.7	+0.3
VLI				*e*SB		Sg	04 15 56.8	+0.2
VLI	Veliai	0.63	45	*e*Pb		Pg	04 15 48.7	+0.3
VLI				*e*Sb		Sg	04 15 56.8	+0.2
VLI				S		Sb	04 15 58.5	-0.6
PYL	PYLOS	0.81	321	P		Pg	04 15 51.2	-0.6
PYL				S		Sb	04 16 03.7	-0.4
PYL	PYLOS	0.81	321	*e*PG		Pg	04 15 51.2	-0.6
PYL				*e*SB		Sb	04 16 03.4	-0.7
PYL	PYLOS	0.81	321	*e*PG		Pg	04 15 51.5	-0.3
PYL				*e*SB		Sb	04 16 04.5	+0.4
PYL	PYLOS	0.81	321	P		Pg	04 15 51.2	-0.6
PYL	PYLOS	0.81	321	*e*Pg		Pg	04 15 51.5	-0.3
PYL				S		Sb	04 16 03.7	-0.4
PYL				*e*Sb		Sb	04 16 04.5	+0.4
ITM	Ithomi	0.98	338	P		Pg	04 15 54.6	-0.4
ITM				S		Sb	04 16 09.3	+0.3
ITM	Ithomi	0.98	338	*e*PN		Pg	04 15 55.1	+0.1
ITM				*e*SB		Sb	04 16 09.5	+0.5
ITM	Ithomi	0.98	338	*e*PG		Pg	04 15 54.7	-0.3
ITM				*e*SB		Sb	04 16 09.1	+0.1
ITM	Ithomi	0.98	338	*e*Pg		Pg	04 15 54.7	-0.3
ITM				*e*Sb		Sb	04 16 09.1	+0.1
VLX	Vlachokerasia	1.10	360	P		Pg	04 15 56.6	-0.7
VLX				S		Sn	04 16 13.9	-0.3
VLX	Vlachokerasia	1.10	360	*e*PB		Pg	04 15 56.9	-0.4
VLX				*e*SB		Sb	04 16 12.7	+0.1
VLX	Vlachokerasia	1.10	360	P		Pg	04 15 56.6	-0.7
VLX	Vlachokerasia	1.10	360	*e*Pb		Pg	04 15 56.9	-0.4
VLX				*e*Sb		Sb	04 16 12.7	+0.1
AMT	Artemida-Makis	1.37	337	P		Pn	04 16 01.9	-0.3
AMT				S		Sn	04 16 22.0	+1.2
AMT	Artemida-Makis	1.37	337	*e*PG		Pn	04 16 01.8	-0.4
AMT	Artemida-Makis	1.37	337	*e*PG		Pn	04 16 01.8	-0.4
AMT				*e*SB		Sn	04 16 21.2	+0.4
AMT	Artemida-Makis	1.37	337	P		Pn	04 16 01.9	-0.3
AMT				*e*Sb		Sn	04 16 21.2	+0.4
AMT				S		Sn	04 16 22.0	+1.2
DIDY	Didyma	1.38	29	P		Pg	04 16 02.5	-0.1
DIDY				S		Sn	04 16 22.3	+1.3
DIDY	Didyma	1.38	29	P		Pg	04 16 02.5	-0.1
DID	Didima	1.41	29	P		Pb	04 16 03.1	-0.1
DID				S		Sn	04 16 23.6	+1.8
DID	Didima	1.41	29	*e*PB		Pb	04 16 03.0	-0.1
DID	Didima	1.41	29	*e*PG		Pn	04 16 02.4	-0.4
DID	Didima	1.41	29	*e*Pg		Pn	04 16 02.4	-0.4
DID	Didima	1.41	29	P		Pb	04 16 03.1	-0.1
KARN	Karanos	1.52	124	P		Pn	04 16 03.3	-0.9
KARN				S		Sn	04 16 24.6	+0.1
KARN	Karanos	1.52	124	*e*PB		Pg	04 16 06.2	+0.8
KARN	Karanos	1.52	124	P		Pn	04 16 03.3	-0.9
KARN	Karanos	1.52	124	*e*Pb		Pg	04 16 06.2	+0.8
KARN				S		Sn	04 16 24.6	+0.1
GUR	Goura	1.66	359	*e*PG		Pb	04 16 07.2	-0.3
GUR	Goura	1.66	359	*e*Pg		Pb	04 16 07.3	-0.3
VAM	Vamos	1.71	120	*e*PN		Pg	04 16 09.4	+0.3
LTK	Loutraki	1.81	15	*e*PG		Pb	04 16 09.4	-0.6
LTK	Loutraki	1.81	15	*e*Pg		Pb	04 16 09.4	-0.6
RLS	Riolos of Patr	1.93	338	*e*PN		Pg	04 16 12.8	-0.4
RLS				*e*SN		Sg	04 16 39.4	+1.2
LAKA	Lakka	1.99	351	*e*PG		Pb	04 16 12.6	-0.5
LAKA	Lakka	1.99	351	*e*Pg		Pb	04 16 12.6	-0.5
TRIZ	Trizonia	2.10	353	*e*PG		Pb	04 16 15.2	+0.2
TRIZ	Trizonia	2.10	353	*e*Pg		Pb	04 16 15.2	+0.2
KALE	Kalithea	2.12	355	*e*PN		Pb	04 16 15.1	-0.3
KALE	Kalithea	2.12	355	*e*Pn		Pb	04 16 15.1	-0.3
IDI	Anoyia	2.26	115	*e*PN		Pb	04 16 17.8	+0.1

IDC 21 04:20:51.8 ± 2.2, 4°.11S × 129°.75E, h0km, mb3.3/1, mb1 3.6/4, mb1mx3.4/21, mbtmp3.4/4, ML3.2/3, Error ellipse: s-maj=112.7km s-min=26.7km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	Fitzroy Crossi	14.47	196	Pn		Pn	04 24 16.5	-1.6
	0.0nm,0.3s,baz=14,slow=17,SNR=2.2							
WRA	Warramunga Arr	16.36	164	Pn		Pn	04 24 41.5	-1.6
	0.1nm,0.3s,baz=349,slow=13,SNR=2.7							
ASAR	Alice Springs	19.85	169	P		Pn	04 25 25.8	-0.3
	0.3nm,0.3s,baz=348,slow=10.0,SNR=16							
MKAR	Makanchi Array	65.69	326	P		P	04 31 38.2

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.73**	**225**	*e*S	**Sn**	**04 35 29.8**	**-0.1**
PLUM	**Mont Dore**	**3.97**	**226**	*e*S	**Sn**	**04 35 37.3**	**+1.3**
DZM	**Mont Dzumac**	**3.98**	**230**	*e*P	**Pn**	**04 34 49.1**	**-0.5**
DZM				*e*S	**Sn**	**04 35 35.6**	**-0.7**
DZM	**Mont Dzumac**	**3.98**	**230**	Pn	**Pn**	**04 34 49.4**	**-0.1**
	3.8nm,0.3s,baz=61,slow=19,SNR=24						
DZM				Sn	**Sn**	**04 35 34.0**	**-2.3**
	6.8nm,0.3s,baz=68,slow=16,SNR=4.1						
DZM				LR	LR	04 36 13.0	
	comp=Z,317nm,20.1s,baz=18,slow=36						
LASL	**Noumea**	**4.01**	**228**	*e*S	**Sn**	**04 35 37.2**	**+0.2**
NOUC	**Port Laguerre**	**4.10**	**231**	*e*P	**Pn**	**04 34 51.7**	**+0.6**
NOUC				*e*S	**Sn**	**04 35 39.4**	**+0.2**
NOUC				AMP		04 35 43.1	
	comp=Z,30nm,1.7s						
STKA	**Stephens Creek**	**28.09**	**238**	LR	LR	04 50 02.7	
	comp=Z,129nm,19.7s,baz=24,slow=35						
WRA	**Warramunga Arr**	**33.28**	**263**	P	**P**	**04 40 25.6**	**-0.8**
	comp=Z,1.0nm,0.9s,baz=89,slow=8.5,SNR=4.6						
ASAR	**Alice Springs**	**33.51**	**256**	P	**P**	**04 40 28.4**	**0.0**
	comp=Z,2.8nm,0.7s,baz=87,slow=9.2,SNR=36						
FITZ	**Fitzroy Crossi**	**41.68**	**264**	P	**P**	**04 41 38.5**	**+1.0**
	comp=Z,4.2nm,0.9s,baz=78,slow=9.3,SNR=6.5						
GERES	**GERESS Array B**	**144.98**	**332**	PKP	**PKPdf**	**04 53 24.9**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=64,slow=2.3,SNR=4.3						

*ISK **21** 04:42:20.8,39.˝11N×29.˝08E,h5km,MD2.9*
*ISCJB **21** 04:42:21.4±0.4,39.˝11N±0.˝03×29.˝08E±0.˝03,h5km±6km, Error ellipse: s-maj=4.4km s-min=3.8km az=149.3*
*CSEM **21** 04:42:21.7±0.1,39.˝11N×29.˝09E,h8km,MD2.8,Error ellipse: s-maj=1.7km s-min=1.5km az=44.0*
*DDA **21** 04:42:21.8,39.˝10N×29.˝07E,h8km,MD2.8*
ISC 21 04:42:21.8±0.9,39.˝11N±0.˝02×29.˝08E±0.˝02,h13km±8km, n34,σ0ˢ39/51,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.29**	**257**	*i* P	**Pg**	**04 42 28.0**	**+0.1**
DEMI				*i* S	**Sg**	**04 42 32.1**	**+0.2**
DEMI	**Demirci**	**0.29**	**257**	*i* P	**Pg**	**04 42 28.0**	**+0.1**
DEMI				*i* S	**Sg**	**04 42 32.1**	**+0.2**
GDZ	**Gediz**	**0.31**	**94**	*i* P	**Pg**	**04 42 28.3**	**0.0**
GDZ				*i* S	**Sg**	**04 42 32.9**	**+0.3**
GDZ	**Gediz**	**0.31**	**94**	*i* P	**Pg**	**04 42 28.3**	**0.0**
GDZ				*i* S	**Sg**	**04 42 32.9**	**+0.3**
TVSB	**Tavsanli**	**0.45**	**41**	*e*PG	**Pg**	**04 42 30.2**	**-0.5**
TVSB				*e*SG	**Sg**	**04 42 35.8**	**-1.0**
DST	**Dursunbey**	**0.61**	**324**	*e*PG	**Pg**	**04 42 33.1**	**-0.6**
DST				*e*SG	**Sg**	**04 42 41.9**	**+0.1**
DST	**Dursunbey**	**0.61**	**324**	*e*Pg	**Pg**	**04 42 33.1**	**-0.6**
DST				*e*Sg	**Sg**	**04 42 41.9**	**+0.1**
DURS	**Dursunbey**	**0.68**	**316**	*i* P	**Pg**	**04 42 34.5**	**-0.6**
DURS				*i* S	**Sn**	**04 42 48.5**	**+0.7**
DURS	**Dursunbey**	**0.68**	**316**	*i* P	**Pg**	**04 42 34.5**	**-0.6**
DURS				*i* S	**Sg**	**04 42 48.5**	**+0.7**
KULA	**Kula-Manisa**	**0.68**	**209**	*e*PG	**Pg**	**04 42 34.9**	**-0.2**
KULA				*e*SG	**Sg**	**04 42 43.3**	**-0.6**
MANT	**Manisa**	**0.74**	**214**	*i* P	**Pg**	**04 42 36.2**	**0.0**
MANT				*i* S	**Sg**	**04 42 45.8**	**-0.2**
MANT	**Manisa**	**0.74**	**214**	*i* P	**Pg**	**04 42 36.2**	**0.0**
MANT				*i* S	**Sg**	**04 42 45.8**	**-0.2**
ALT	**Altintas**	**0.80**	**94**	*e*PG	**Pg**	**04 42 37.2**	**-0.2**
ALT	**Altintas**	**0.80**	**94**	*e*Pg	**Pg**	**04 42 37.2**	**-0.2**
KHAL	**Karahalli**	**0.81**	**156**	*i* P	**Pb**	**04 42 37.7**	**-0.1**
KHAL				*i* S	**Sb**	**04 42 48.4**	**-0.2**
KHAL	**Karahalli**	**0.81**	**156**	*i* P	**Pb**	**04 42 37.7**	**-0.1**
KHAL				*i* S	**Sb**	**04 42 48.4**	**-0.2**
KHL	**Karahalli**	**0.86**	**156**	*e*PG	**Pg**	**04 42 37.8**	**-0.7**
KHL	**Karahalli**	**0.86**	**156**	*e*Pg	**Pg**	**04 42 37.8**	**-0.7**
AKHS	**Akhisar**	**1.01**	**257**	*i* P	**Pn**	**04 42 41.7**	**-0.1**
AKHS				*i* S	**Sb**	**04 42 55.0**	**+0.5**
AKHS	**Akhisar**	**1.01**	**257**	*i* P	**Pn**	**04 42 41.7**	**-0.1**
AKHS				*i* S	**Sb**	**04 42 55.0**	**+0.5**
SHUT	**Suhut-Afyon**	**1.28**	**115**	*e*PN	**Pg**	**04 42 46.2**	**-0.2**
SHUT	**Suhut-Afyon**	**1.28**	**115**	*e*Pn	**Pg**	**04 42 46.2**	**-0.2**
KCTX	**Karacabey (Bur**	**1.28**	**334**	*e*PN	**Pn**	**04 42 45.3**	**-0.2**
BALY	**Balya**	**1.29**	**300**	*i* P	**Pg**	**04 42 46.5**	**-0.2**
BALY				*i* S	**Sn**	**04 43 03.0**	**+0.1**
BALY	**Balya**	**1.29**	**300**	*i* P	**Pg**	**04 42 46.5**	**-0.2**
BALY				*i* S	**Sn**	**04 43 03.0**	**+0.1**
GEMT	**Gemlik**	**1.33**	**4**	*e*PN	**Pb**	**04 42 46.8**	**+0.2**
GEMT	**Gemlik**	**1.33**	**4**	*e*Pn	**Pb**	**04 42 46.8**	**+0.2**
GONE	**Gonen-Balikesi**	**1.43**	**311**	*e*PN	**Pb**	**04 42 47.9**	**-0.4**
ARMT	**Armutlu**	**1.46**	**353**	*e*PN	**Pn**	**04 42 48.4**	**+0.4**
ARMT	**Armutlu**	**1.46**	**353**	*e*Pn	**Pn**	**04 42 48.4**	**+0.4**
YLV	**Yalova**	**1.47**	**9**	*e*PN	**Pn**	**04 42 48.2**	**0.0**
YLV	**Yalova**	**1.47**	**9**	*e*Pn	**Pn**	**04 42 48.2**	**0.0**
GULT	**Gulveren**	**1.72**	**39**	*e*PN	**Pn**	**04 42 52.2**	**+0.6**
GULT	**Gulveren**	**1.72**	**39**	*e*Pn	**Pn**	**04 42 52.2**	**+0.6**

*IDC **21** 04:45:43.5±1.0,4.˝34S×137.˝33E,h0km,mb3.7/5, mb1 4.0/8,mb1mx3.8/20,mbtmp3.9/8,ML4.0/3,MS3.3/1, Ms1 3.5/1,ms1mx2.7/30,Error ellipse: s-maj=38.7km s-min=20.8km az=78.0*
*AUST **21** 04:47:13.3±9.0,10.˝20S×134.˝02E,h0km±2km,Error ellipse: s-maj=6.2km s-min=1.9km az=43.0*
ISC 21 04:45:49.5±1.1,4.˝64S±0.˝10×137.˝1E±0.˝1,h35km,n14, σ2ˢ07/13,mb3.7/5,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDU	**Kakadu**	**9.20**	**209**	P	Pn	04 48 03.5	+3.7
	baz=2.9,SNR=8.6						
MTN	**Manton Dam**	**10.05**	**215**	P	Pn	04 48 16.1	+4.6
	baz=3.9,SNR=21						
PMG	**Port Moresby**	**11.06**	**116**	Pn	**Pn**	**04 48 23.8**	**-1.5**
	1.7nm,0.3s,baz=311,slow=10.0,SNR=3.5						
WRA	**Warramunga Arr**	**15.44**	**190**	Pn	**Pn**	**04 49 23.6**	**-1.3**
	0.4nm,0.3s,baz=9.0,slow=13,SNR=14						
WRA				Sn	**Sn**	**04 52 11.9**	**-3.1**
	0.6nm,0.3s,baz=11,slow=22,SNR=5.1						
WRA				Lg	Lg	04 54 01.6	
	1.0nm,0.3s,baz=12,slow=32,SNR=5.3						
FITZ	**Fitzroy Crossi**	**17.44**	**219**	P	**P**	**04 49 51.2**	**0.0**
	0.6nm,0.3s,baz=45,slow=12,SNR=15						
FITZ				S	**Sn**	**04 53 01.1**	**-2.4**
	0.4nm,0.3s,baz=171,slow=16,SNR=3.2						
FITZ	**Fitzroy Crossi**	**17.44**	**219**	P	**P**	**04 49 54.5**	**+3.3**
	baz=11,SNR=5.9						
CTA	**Charters Tower**	**17.76**	**151**	P	**P**	**04 49 57.2**	**+2.5**
	0.3nm,0.3s,baz=340,slow=12,SNR=2.5						
ASAR	**Alice Springs**	**19.16**	**189**	P	**Pn**	**04 50 13.2**	**+2.0**
	1.0nm,0.3s,baz=12,slow=10,SNR=42						
ASAR				S	**Sn**	**04 53 45.1**	**0.0**
	0.2nm,0.3s,baz=12,slow=19,SNR=4.1						
ASAR				Lg	Lg	04 56 01.3	
	0.2nm,0.3s,baz=14,slow=31,SNR=3.4						
STKA	**Stephens Creek**	**27.42**	**172**	P	**P**	**04 51 33.1**	**+1.1**
	0.3nm,0.3s,baz=5.7,slow=10,SNR=2.0						
CMAR	**Chiang Mai Arr**	**44.04**	**303**	LR	LR	05 14 04.3	
	comp=Z,30nm,18.6s,baz=210,slow=39						
MKAR	**Makanchi Array**	**70.34**	**323**	P	**P**	**04 56 59.0**	**-0.8**
	0.6nm,0.6s,baz=122,slow=7.3,SNR=6.9						
KURBB	**Kurchatov Arra**	**74.38**	**326**	P	**P**	**04 57 22.9**	**-0.8**
	0.1nm,0.3s,baz=130,slow=5.8,SNR=4.0						
BVAR	**Borovoye Array**	**79.97**	**326**	P	**P**	**04 57 54.6**	**-0.5**
	0.4nm,0.4s,baz=116,slow=3.4,SNR=3.2						
ILAR	**Eielson Array**	**88.25**	**25**	P	P	04 58 33.2	-3.8
	0.2nm,0.5s,baz=252,slow=4.7,SNR=3.5						

*IDC **21** 04:59:07.8±1.3,37.˝45N×106.˝40E,h0km,mb3.2/3, mb1 3.5/4,mb1mx3.2/27,mbtmp3.3/4,ML3.2/1,Error ellipse: s-maj=55.1km s-min=20.9km az=72.0*
*BJI **21** 04:59:11.6,37.˝57N×106.˝19E,h10km,ML3.3/12*
ISC 21 04:59:12.0±0.8,37.˝47N±0.˝05×106.˝37E±0.˝04,h10km,n9, σ2ˢ51/17,Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**2.46**	**236**	Pg	**Pn**	**04 59 52.0**	**-0.3**
LZH				Sg	**Sn**	**05 00 23.0**	**+0.6**
LZH				*s*max	*s*max		
	comp=N,620nm,0.8s						
LZH				*s*max	*s*max		
	comp=E,380nm,0.5s						
XAN	**Xi'an**	**4.00**	**148**	Pn	Pn	05 00 17.8	+4.3
XAN				Pg	**Pg**	**05 00 26.6**	**-2.1**
XAN				Sg	**Sb**	**05 01 14.8**	**+3.6**
XAN				*s*max	*s*max		
	comp=N,53nm,0.7s						
XAN				*s*max	*s*max		
	comp=E,14nm,0.6s						
BTO	**Baotou**	**4.23**	**41**	*e*Pn	**Pn**	**05 00 15.1**	**-1.5**
BTO				*e*Pg	**Pb**	**05 00 27.3**	**+0.8**
BTO				Sn	**Sn**	**05 01 05.4**	**-0.6**
BTO				Sg	**Sb**	**05 01 20.5**	**+2.9**
BTO				*s*max	*s*max		
	comp=N,23nm,0.3s						
BTO				*s*max	*s*max		
	comp=E,22nm,0.3s						
HHC	**Hu-ho-hao-te**	**5.26**	**49**	*e*Pn	**Pb**	**05 00 44.8**	**+0.7**
HHC				Pg	Pg	05 00 45.8	-6.9
HHC				Sg	**Sb**	**05 01 53.3**	**+6.0**
HHC				*s*max	*s*max		
	comp=N,140nm,0.3s						
HHC				*s*max	*s*max		
	comp=E,150nm,0.3s						
GTA	**Gaotai**	**5.50**	**293**	Pn	**Pn**	**05 00 35.5**	**+1.4**
GTA				Pg	**Pb**	**05 00 49.4**	**+1.2**
GTA				Sn	**Sn**	**05 01 35.3**	**-2.1**
GTA				Sg	**Sb**	**05 01 55.8**	**+1.6**
GTA				*s*max	*s*max		
	comp=N,34nm,1.0s						
GTA				*s*max	*s*max		
	comp=E,27nm,1.0s						
SONM	**Songino Array**	**10.36**	**0**	Pn	**Pn**	**05 01 39.5**	**-1.1**
	comp=E,0.2nm,0.3s,baz=184,slow=17,SNR=2.9						
SONM				Sn	**Sn**	**05 03 34.5**	**-2.3**
	comp=E,0.2nm,0.3s,baz=191,slow=22,SNR=6.5						
SONM				Lg	Lg	05 04 35.0	
	comp=E,0.1nm,0.3s,baz=199,slow=26,SNR=2.7						
MKAR	**Makanchi Array**	**20.07**	**305**	P	**P**	**05 03 43.3**	**-2.2**
	comp=E,0.1nm,0.5s,baz=110,slow=14,SNR=2.8						
WRA	**Warramunga Arr**	**62.89**	**150**	P	P	05 09 35.8	-2.6
	comp=E,0.5nm,0.7s,baz=338,slow=7.1,SNR=3.8						
ASAR	**Alice Springs**	**66.11**	**152**	P	P	05 09 56.3	-3.1
	comp=E,0.2nm,0.4s,baz=334,slow=6.8,SNR=5.2						

*ISK **21** 05:05:08.8,39.˝11N×29.˝08E,h5km,MD3.0*
*ISCJB **21** 05:05:09.3±0.4,39.˝12N±0.˝02×29.˝07E±0.˝03,h3km±5km, Error ellipse: s-maj=3.9km s-min=3.4km az=6.8*
*CSEM **21** 05:05:09.6±0.1,39.˝12N×29.˝07E,h5km,MD3.0,Error ellipse: s-maj=2.4km s-min=2.2km az=47.0*
*DDA **21** 05:05:09.3,39.˝11N×29.˝07E,h7km,MD3.0*
ISC 21 05:05:09.8±0.9,39.˝12N±0.˝02×29.˝07E±0.˝02,h12km±9km, n49,σ0ˢ51/70,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.29**	**254**	*i* P	**Pg**	**05 05 15.9**	**+0.1**
DEMI				*i* S	**Sg**	**05 05 20.0**	**+0.2**
DEMI	**Demirci**	**0.29**	**254**	*i* P	**Pg**	**05 05 15.9**	**+0.1**
DEMI				*i* S	**Sg**	**05 05 20.0**	**+0.2**
GDZ	**Gediz**	**0.32**	**96**	*i* P	**Pg**	**05 05 16.1**	**-0.2**
GDZ				*i* S	**Sg**	**05 05 20.9**	**+0.2**
GDZ	**Gediz**	**0.32**	**96**	*i* P	**Pg**	**05 05 16.1**	**-0.2**
GDZ				*i* S	**Sg**	**05 05 20.9**	**+0.2**
TVSB	**Tavsanli**	**0.44**	**43**	*e*PG	**Pg**	**05 05 18.3**	**-0.3**
TVSB				*e*SG	**Sg**	**05 05 24.1**	**-0.4**
TVSB	**Tavsanli**	**0.44**	**43**	*e*Pg	**Pg**	**05 05 18.3**	**-0.3**
TVSB				*e*Sg	**Sg**	**05 05 24.1**	**-0.4**
DST	**Dursunbey**	**0.59**	**324**	*e*PG	**Pg**	**05 05 21.2**	**-0.2**
DST	**Dursunbey**	**0.59**	**324**	*e*Pg	**Pg**	**05 05 21.2**	**-0.2**
DURS	**Dursunbey**	**0.67**	**316**	*i* P	**Pg**	**05 05 22.6**	**-0.1**
DURS				*i* S	**Sg**	**05 05 31.9**	**+0.4**
DURS	**Dursunbey**	**0.67**	**316**	*i* P	**Pg**	**05 05 22.6**	**-0.1**
DURS				*i* S	**Sg**	**05 05 31.9**	**+0.4**
KULA	**Kula-Manisa**	**0.69**	**208**	*e*PG	**Pg**	**05 05 22.9**	**-0.2**
KULA				*e*SG	**Sg**	**05 05 31.6**	**-0.6**
KULA	**Kula-Manisa**	**0.69**	**208**	*e*Pg	**Pg**	**05 05 22.9**	**-0.2**
KULA				*e*Sg	**Sg**	**05 05 31.6**	**-0.6**
ALT	**Altintas**	**0.81**	**95**	*e*PG	**Pb**	**05 05 25.8**	**0.0**
ALT	**Altintas**	**0.81**	**95**	*e*Pg	**Pb**	**05 05 25.8**	**0.0**
KHAL	**Karahalli**	**0.82**	**156**	*i* P	**Pg**	**05 05 25.5**	**-0.2**
KHAL				*i* S	**Sg**	**05 05 35.9**	**-0.5**
KHAL	**Karahalli**	**0.82**	**156**	*i* P	**Pg**	**05 05 25.5**	**-0.2**
KHAL				*i* S	**Sg**	**05 05 35.9**	**-0.5**
KHL	**Karahalli**	**0.87**	**156**	*e*PG	**Pg**	**05 05 26.2**	**-0.4**
KHL				*e*SG	**Sg**	**05 05 38.2**	**+0.2**
KHL	**Karahalli**	**0.87**	**156**	*e*Pg	**Pg**	**05 05 26.2**	**-0.4**
KHL				*e*Sg	**Sg**	**05 05 38.2**	**+0.2**
ORLT	**Orhaneli**	**0.93**	**352**	*e*PG	**Pg**	**05 05 27.4**	**-0.3**
ORLT	**Orhaneli**	**0.93**	**352**	*e*Pg	**Pg**	**05 05 27.4**	**-0.3**
AKHS	**Akhisar**	**1.01**	**256**	*i* P	**Pb**	**05 05 29.5**	**+0.3**
AKHS				*i* S	**Sg**	**05 05 41.8**	**-0.7**
AKHS	**Akhisar**	**1.01**	**256**	*i* P	**Pb**	**05 05 29.5**	**+0.3**
AKHS				*i* S	**Sg**	**05 05 41.8**	**-0.7**
AKS	**Akhisar**	**1.01**	**256**	*e*PG	**Pg**	**05 05 28.2**	**-1.1**
AKS	**Akhisar**	**1.01**	**256**	*e*Pg	**Pg**	**05 05 28.2**	**-1.1**
CAVI	**Cavuskoy**	**1.23**	**29**	*e*PN	**Pn**	**05 05 32.7**	**-0.1**
CAVI	**Cavuskoy**	**1.23**	**29**	*e*Pn	**Pn**	**05 05 32.7**	**-0.1**
MDNY	**Mudanya-Bursa**	**1.25**	**353**	*e*PN	**Pn**	**05 05 33.2**	**+0.2**
MDNY	**Mudanya-Bursa**	**1.25**	**353**	*e*Pn	**Pn**	**05 05 33.2**	**+0.2**
KCTX	**Karacabey (Bur**	**1.27**	**334**	*e*PN	**Pn**	**05 05 33.5**	**+0.2**
KCTX	**Karacabey (Bur**	**1.27**	**334**	*e*Pn	**Pn**	**05 05 33.5**	**+0.2**
BALY	**Balya**	**1.28**	**299**	*i* P	**Pg**	**05 05 34.3**	**-0.1**
BALY				*i* S	**Sb**	**05 05 50.3**	**-0.1**
BALY	**Balya**	**1.28**	**299**	*i* P	**Pg**	**05 05 34.3**	**-0.1**
BALY				*i* S	**Sb**	**05 05 50.3**	**-0.1**
SHUT	**Suhut-Afyon**	**1.29**	**116**	*e*PN	**Pn**	**05 05 33.0**	**-0.6**
SHUT	**Suhut-Afyon**	**1.29**	**116**	*e*Pn	**Pn**	**05 05 33.1**	**-0.6**
GEMT	**Gemlik**	**1.31**	**4**	*e*PN	**Pg**	**05 05 34.9**	**-0.1**
GEMT	**Gemlik**	**1.31**	**4**	*e*Pn	**Pg**	**05 05 34.9**	**-0.1**
GONE	**Gonen-Balikesi**	**1.41**	**311**	*e*PN	**Pn**	**05 05 35.5**	**+0.2**
GONE	**Gonen-Balikesi**	**1.41**	**311**	*e*Pn	**Pn**	**05 05 35.5**	**+0.2**
DNZL	**Cakiroluk**	**1.43**	**181**	*i* P	**Pg**	**05 05 37.5**	**+0.2**
DNZL				*i* S	**Sg**	**05 05 58.6**	**+2.7**
DNZL	**Cakiroluk**	**1.43**	**181**	*i* P	**Pg**	**05 05 37.5**	**+0.2**
SEYT	**Eskypehyr**	**1.43**	**73**	*i* P	**Pg**	**05 05 37.3**	**0.0**
SEYT				*i* S	**Sg**	**05 05 55.7**	**-0.2**
SEYT	**Eskypehyr**	**1.43**	**73**	*i* P	**Pg**	**05 05 37.3**	**0.0**
SEYT				*i* S	**Sg**	**05 05 55.7**	**-0.2**
ARMT	**Armutlu**	**1.45**	**354**	*e*PN	**Pb**	**05 05 37.0**	**+0.4**
ARMT	**Armutlu**	**1.45**	**354**	*e*Pn	**Pb**	**05 05 37.1**	**+0.4**
BNT	**Bandirma**	**1.52**	**324**	*e*PN	**Pb**	**05 05 37.8**	**0.0**
BNT	**Bandirma**	**1.52**	**324**	*e*Pn	**Pb**	**05 05 37.8**	**0.0**
GULT	**Gulveren**	**1.71**	**40**	*e*PN	**Pn**	**05 05 40.3**	**+0.8**
GULT	**Gulveren**	**1.71**	**40**	*e*Pn	**Pn**	**05 05 40.3**	**+0.8**
BUY	**Buyukada**	**1.73**	**1**	*e*Pn	**Pb**	**05 05 41.1**	**-0.3**

IDC 21 05:06:43.0±1.5,4.˝09N×126.˝71E,h0km,mb3.6/6, mb1 3.7/6,mb1mx3.5/25,mbtmp3.6/6,Error ellipse: s-maj=107.0km s-min=18.5km az=69.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.08**	**183**	P	P	05 11 39.9	+0.1
	0.9nm,0.3s,baz=10,slow=12,SNR=10						
WRA	**Warramunga Arr**	**25.04**	**163**	P	P	05 12 08.6	-0.4
	0.7nm,0.4s,baz=342,slow=9.5,SNR=11						
ASAR	**Alice Springs**	**28.47**	**166**	P	P	05 12 40.4	+0.4
	0.2nm,0.4s,baz=347,slow=7.1,SNR=4.0						
STKA	**Stephens Creek**	**38.48**	**159**	P	P	05 14 06.8	-0.1
	0.8nm,0.4s,baz=0.0,slow=5.1,SNR=3.3						
MKAR	**Makanchi Array**	**57.25**	**325**	P	P	05 16 32.6	+0.3
	0.2nm,0.5s,baz=126,slow=8.3,SNR=4.2						
KURBB	**Kurchatov Arra**	**61.42**	**327**	P	P	05 17 00.6	-0.5
	0.2nm,0.3s,baz=122,slow=6.5,SNR=4.2						

*CSEM **21** 05:07:01.0,39.˝11N×29.˝08E,h7km,MD2.6,After DDA*
DDA 21 05:07:01.0,39.˝11N×29.˝08E,h7km,MD2.6,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.29**	**258**	*i* P	Pg	05 07 07.4	+0.7
DEMI				*i* S	Sg	05 07 11.4	+0.7
DEMI	**Demirci**	**0.29**	**258**	*i* P	Pg	05 07 07.4	+0.6
DEMI				*i* S	Sg	05 07 11.4	+0.7
GDZ	**Gediz**	**0.32**	**93**	*i* P	Pg	05 07 07.7	+0.3
GDZ				*i* S	Sg	05 07 12.1	+0.4
GDZ	**Gediz**	**0.32**	**93**	*i* P	Pg	05 07 07.7	+0.3
GDZ				*i* S	Sg	05 07 12.1	+0.4
DURS	**Dursunbey**	**0.68**	**317**	*i* P	Pg	05 07 14.1	-0.2
DURS				*i* S	Sg	05 07 23.9	+0.7
DURS	**Dursunbey**	**0.68**	**317**	*i* P	Pg	05 07 14.1	-0.1
DURS				*i* S	Sg	05 07 23.9	+0.7
MANT	**Manisa**	**0.73**	**214**	*i* P	Pg	05 07 15.3	-0.2
MANT				*i* S	Sg	05 07 24.8	-0.5
MANT	**Manisa**	**0.73**	**214**	*i* P	Pg	05 07 15.3	-0.1
MANT				*i* S	Sg	05 07 24.8	-0.4
KHAL	**Karahalli**	**0.80**	**156**	*i* P	Pb	05 07 17.1	-0.3
KHAL				*i* S	Sg	05 07 27.7	+0.6
KHAL	**Karahalli**	**0.80**	**156**	*i* P	Pb	05 07 17.1	-0.3
KHAL				*i* S	Sg	05 07 27.7	+0.6
BALY	**Balya**	**1.29**	**300**	*i* P	Pg	05 07 29.7	+3.8
BALY				*i* S	Sn	05 07 44.0	+0.8
BALY	**Balya**	**1.29**	**300**	*i* P	Pg	05 07 29.7	+3.8
BALY				*i* S	Sn	05 07 44.0	+0.8

IDC 21 05:13:25.8±18.0,22.˝01S×174.˝81W,h0km,mb4.1/5, mb1 4.3/5,mb1mx3.9/22,mbtmp4.1/5,Error ellipse: s-maj=337.8km s-min=150.2km az=83.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.32**	**266**	P	P	05 20 32.9	+1.2
	3.6nm,0.3s,baz=87,slow=11,SNR=5.2						
STKA	**Stephens Creek**	**39.86**	**246**	P	P	05 21 00.5	-0.9
	0.3nm,0.3s,baz=102,slow=12,SNR=4.0						
ASAR	**Alice Springs**	**47.08**	**258**	P	P	05 21 59.1	-0.7
	1.1nm,0.5s,baz=99,slow=7.0,SNR=14						
WRA	**Warramunga Arr**	**47.35**	**263**	P	P	05 22 01.3	-0.6
	1.5nm,0.3s,baz=96,slow=8.5,SNR=50						
FITZ	**Fitzroy Crossi**	**55.78**	**263**	P	P	05 23 05.6	+0.6
	1.8nm,0.9s,baz=120,slow=8.1,SNR=7.4						

*KRSC **21** 05:17:26.9±1.4,53.˝19N×158.˝37E,h158km±38km,ML3.7*
*ISCJB **21** 05:17:27.4±0.4,53.˝13N±0.˝04×158.˝41E±0.˝09, h157km±3km,mb3.4/6,Error ellipse: s-maj=9.7km s-min=5.3km az=36.8*
*IDC **21** 05:17:27.3±0.9,53.˝40N×157.˝99E,h146km±9km,mb3.0/6, mb1 3.5/7,mb1mx3.1/27,mbtmp3.1/7,Error ellipse: s-maj=59.0km s-min=21.5km az=145.0*
ISC 21 05:17:28.2±0.8,53.˝15N±0.˝06×158.˝41E±0.˝06,h155km±5km, n43,σ0ˢ96/58,mb3.5/6,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PET	**Petropavlovsk**	**0.19**	**130**	*e*P	**Pn**	**05 17 48.9**	**-0.1**
PET				*e*S	**Sn**	**05 18 05.1**	**+0.3**
KOK	**Koryaka**	**0.20**	**44**	*i* P	**Pn**	**05 17 49.1**	**-0.1**
KOK				*e*S	**Sn**	**05 18 05.1**	**-0.1**
AVH	**Avacha**	**0.23**	**59**	*e*P	**Pn**	**05 17 49.3**	**+0.1**
AVH				*e*S	**Sn**	**05 18 05.7**	**+0.4**
KRER	**Koryakskii**	**0.26**	**53**	*e*P	**Pn**	**05 17 49.4**	**0.0**
KRER				*e*S	**Sn**	**05 18 05.8**	**+0.1**
UGLR	**Uglovaya**	**0.26**	**76**	*i* P	**Pn**	**05 17 49.7**	**+0.4**
UGLR				*i* S	**Sn**	**05 18 06.4**	**+1.0**
SMAR	**Somma**	**0.27**	**64**	*i* P	**Pn**	**05 17 49.6**	**+0.1**
SMAR				*e*S	**Sn**	**05 18 06.2**	**+0.5**
SDLR	**Sedlovina**	**0.32**	**65**	*i* P	**Pn**	**05 17 49.3**	**-0.2**
SDLR				*e*S	**Sn**	**05 18 05.6**	**-0.2**
PETK	**Petropavlovsk-**	**0.43**	**265**	P	**Pn**	**05 17 48.2**	**-1.6**
	21nm,0.3s,baz=152,slow=27,SNR=490						
NLC	**Nalytchevo**	**0.57**	**87**	*e*P	**Pn**	**05 17 50.6**	**+0.2**
NLC				*e*S	**Sn**	**05 18 08.0**	**+0.7**
GRL	**Gorelyy**	**0.63**	**199**	*e*P	**Pn**	**05 17 50.8**	**-0.2**
MTVR	**Mutnovka**	**0.68**	**192**	*e*P	**Pn**	**05 17 51.3**	**0.0**
RUS	**Russkaya**	**0.72**	**175**	*e*P	**Pn**	**05 17 50.7**	**-0.6**
RUS				*e*S	**Sn**	**05 18 08.1**	**-0.8**
APC	**Apacha**	**0.79**	**254**

NP1:ϕ=116.00000°,δ=18.00000°,λ=177.00000°. NP2: ϕ=208.00000°,δ=89.00000°,λ=72.00000°. Principal axes: T 2.3200, Plg43.0000°, Azm101.0000°; N 0.1800, Plg18.0000°, Azm209.0000°; P -2.5100, Plg42.0000°, Azm315.0000°; Data Used: II IU CN IC G. Surface waves: sta=113, comp=272, per= 50.

SZGRF ***21*** *05:26:17.0, 51.59N×155.18E, h173km, mb6.1, Northwest of Kuril Islands, Russia*

ISC 21 05:26:11.6±0.2, 50.73N±0.03×155.19E±0.02, h157km±1km, h156km:pP-P, n2184, σ1§37/2666, mb6.0/488, 250C-391D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.59**	**94**	⇓*i* PN		**Pn**	**05 26 31.0**	**-3.1**
SKR				*i* S		**Sn**	**05 26 46.6**	**-4.8**
SKR				pmax	pmax			
	comp=E,459μm,4.0s							
SKR				pmax	pmax			
	comp=Z,789μm,4.0s							
SKR				pmax	pmax			
	comp=N,250μm,2.0s							
SKR				smax	smax			
	comp=N,2356μm,2.0s							
SKR				smax	smax			
	comp=E,1612μm,2.0s							
SKR	**Severo-Kuril's**	**0.59**	**94**	*i* P		**Pn**	**05 26 33.2**	**-0.9**
SKR				*i* S		**Sn**	**05 26 49.5**	**-1.9**
MIPR	**Malaya Ipel'ka**	**1.83**	**32**	*i* P		**Pn**	**05 26 46.5**	**+1.3**
ASAK	**Asacha**	**2.37**	**45**	*i* P		**Pn**	**05 26 52.6**	**+1.1**
APC	**Apacha**	**2.52**	**28**	*i* P		**Pn**	**05 26 54.8**	**+1.7**
APC				*i* S		**Sn**	**05 27 26.8**	**+1.4**
GRL	**Gorelyy**	**2.56**	**43**	*i* P		**Pn**	**05 26 55.1**	**+1.3**
MTVR	**Mutnovka**	**2.56**	**46**	*i* P		**Pn**	**05 26 54.7**	**+0.8**
RUS	**Russkaya**	**2.69**	**49**	PN		**Pn**	**05 26 55.3**	**+0.1**
RUS	**Russkaya**	**2.69**	**49**	*i* P		**Pn**	**05 26 55.3**	**+0.1**
PEA0B	**Petropavlovsk-**	**2.85**	**32**	*e*Pn		**Pn**	**05 26 58.8**	**+1.6**
PEA0B				*e*Sn		**Sn**	**05 27 38.2**	**+5.6**
PETK	**Petropavlovsk-**	**2.85**	**32**	P		**Pn**	**05 26 58.6**	**+1.4**
PETK				S		**Sn**	**05 27 38.4**	**+5.8**
PETK	**Petropavlovsk-**	**2.85**	**32**	P		**Pn**	**05 26 58.6**	**+1.4**
	comp=E,371nm,0.3s,baz=198,slow=13,SNR=2254							
PETK				S		**Sn**	**05 27 38.4**	**+5.8**
	comp=E,312nm,0.3s,baz=160,slow=17,SNR=8.1							
PET	**Petropavlovsk**	**3.15**	**42**	*α i* PN		**Pn**	**05 27 01.7**	**+0.8**
PET				*e*S		**Sn**	**05 27 40.6**	**+1.3**
PET				pmax	pmax			
	comp=Z,7μm,1.0s							
PET				pmax	pmax			
	comp=Z,15μm,2.5s							
PET				smax	smax			
	comp=N,104μm,0.9s							
PET				MLR	MLR			
	comp=Z,84μm,6.0s							
PET				MLR	MLR			
	comp=Z,146μm,8.0s							
PET	**Petropavlovsk**	**3.15**	**42**	*i* P		**Pn**	**05 27 01.9**	**+1.0**
INSR	**Institute**	**3.16**	**41**	*i* P		**Pn**	**05 27 02.4**	**+1.3**
INSR				*i* S		**Sn**	**05 27 40.6**	**+1.1**
KOK	**Koryaka**	**3.34**	**38**	*i* P		**Pn**	**05 27 05.6**	**+2.1**
UGLR	**Uglovaya**	**3.35**	**41**	*i* P		**Pn**	**05 27 05.3**	**+1.6**
AVH	**Avacha**	**3.36**	**39**	*i* P		**Pn**	**05 27 05.7**	**+2.0**
SMAR	**Somma**	**3.38**	**40**	*i* P		**Pn**	**05 27 05.8**	**+1.7**
KRER	**Koryakskii**	**3.39**	**39**	*i* P		**Pn**	**05 27 06.1**	**+1.9**
SDLR	**Sedlovina**	**3.43**	**40**	*i* P		**Pn**	**05 27 05.8**	**+1.2**
NLC	**Nalytchevo**	**3.55**	**45**	PN		**Pn**	**05 27 05.2**	**-0.8**
NLC	**Nalytchevo**	**3.55**	**45**	*i* P		**Pn**	**05 27 05.2**	**-0.8**
SPN	**Mys Shipunski**	**3.82**	**50**	PN		**Pn**	**05 27 08.8**	**-0.8**
SPN	**Mys Shipunski**	**3.82**	**50**	*i* P		**Pn**	**05 27 08.8**	**-0.8**
KII	**Karymskiy**	**4.22**	**37**	*i* P		**Pn**	**05 27 16.0**	**+1.2**
TUMR	**Tumrok**	**5.46**	**31**	*i* P		**Pn**	**05 27 32.9**	**+1.8**
MKZ	**Mys Kozlova**	**5.53**	**44**	PN		**Pn**	**05 27 30.8**	**-1.1**
MKZ				S		Sn	05 28 28.2	-6.6
MKZ	**Mys Kozlova**	**5.53**	**44**	*i* P		**Pn**	**05 27 30.8**	**-1.1**
MKZ				*e*S		Sn	05 28 28.2	-6.6
ESO	**Esso**	**5.62**	**21**	PN		**Pn**	**05 27 36.1**	**+3.0**
ESO				S		**Sn**	**05 28 39.1**	**+2.1**
ESO	**Esso**	**5.62**	**21**	*i* P		**Pn**	**05 27 36.1**	**+3.0**
ESO				*e*S		**Sn**	**05 28 39.1**	**+2.1**
KMNR	**Kamenistaya**	**5.88**	**29**	*i* P		**Pn**	**05 27 38.6**	**+2.0**
KMNR				S		**Sn**	**05 28 44.5**	**+1.2**
KOZ	**Kozyrevsk**	**6.03**	**26**	*i* P		**Pn**	**05 27 40.2**	**+1.6**
KOZ				S		**Sn**	**05 28 47.7**	**+0.9**
KOZR	**Kozyr**	**6.04**	**26**	PN		**Pn**	**05 27 40.2**	**+1.4**
KOZR				S		**Sn**	**05 28 47.7**	**+0.6**
KPT	**Kopyto**	**6.05**	**28**	*i* P		**Pn**	**05 27 40.6**	**+1.7**
KPT				*e*S		**Sn**	**05 28 47.2**	**-0.2**
KIRR	**Kirishev**	**6.08**	**29**	*i* P		**Pn**	**05 27 40.9**	**+1.6**
KIRR				*e*S		**Sn**	**05 28 48.9**	**+0.8**
BZMR	**Bezymyannaya**	**6.11**	**29**	*i* P		**Pn**	**05 27 41.4**	**+1.7**
BZMR				*e*S		**Sn**	**05 28 49.1**	**+0.3**
BZWR	**Bezymyannyi-We**	**6.13**	**29**	*i* P		**Pn**	**05 27 41.7**	**+1.6**
BZWR				*e*S		**Sn**	**05 28 50.2**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**6.17**	**30**	*i* P		**Pn**	**05 27 42.3**	**+1.7**
BZGR				*e*S		**Sn**	**05 28 51.4**	**+1.0**
SRDR	**Sredinnyy**	**6.22**	**24**	*i* P		**Pn**	**05 27 43.4**	**+2.3**
ZLN	**Zelenaya**	**6.27**	**30**	*i* P		**Pn**	**05 27 43.7**	**+1.8**
LGNR	**Loginova**	**6.29**	**29**	*i* P		**Pn**	**05 27 44.1**	**+1.8**
LGNR				*e*S		**Sn**	**05 28 53.2**	**-0.2**
CIRR	**Tsirk**	**6.34**	**29**	*i* P		**Pn**	**05 27 44.6**	**+1.8**
KRSR	**Krestovskiy**	**6.37**	**28**	*i* P		**Pn**	**05 27 44.3**	**+1.2**
KRSR				S		**Sn**	**05 28 53.9**	**-1.0**
KLY	**Klyuchi**	**6.47**	**28**	PN		**Pn**	**05 27 46.8**	**+2.4**
KLY				S		**Sn**	**05 28 58.2**	**+0.9**
KLY	**Klyuchi**	**6.47**	**28**	*i* P		**Pn**	**05 27 46.8**	**+2.4**
KLY				*e*S		**Sn**	**05 28 58.2**	**+0.9**
BDR	**Baidarnaya**	**6.86**	**29**	*i* P		**Pn**	**05 27 51.2**	**+1.6**
BDR				*e*S		**Sn**	**05 29 03.6**	**-3.0**
SRKR	**Sorokina**	**6.92**	**29**	*i* P		**Pn**	**05 27 51.7**	**+1.3**
SMKR	**Semkarok**	**6.95**	**30**	*e*P		**Pn**	**05 27 52.2**	**+1.4**
KBTR	**Krutoberegovo**	**7.13**	**37**	PN		**Pn**	**05 27 52.3**	**-0.9**
KBTR				S		Sn	05 29 05.8	-7.2
KBTR	**Krutoberegovo**	**7.13**	**37**	*e*P		**Pn**	**05 27 52.3**	**-0.9**
KBTR				S		Sn	05 29 05.8	-7.2
KUR	**Kuril'sk**	**7.37**	**225**	⇑*i* PN		**Pn**	**05 27 57.3**	**+0.8**
KUR				*i* S		**Sn**	**05 29 21.8**	**+2.9**
KUR				pmax	pmax			
	comp=Z,1μm,0.7s							
KUR				pmax	pmax			
	comp=N,340nm,0.9s							
KUR				pmax	pmax			
	comp=E,340nm,1.0s							
KUR				pmax	pmax			
	comp=N,10μm,4.0s							
KUR				pmax	pmax			
	comp=E,23μm,4.0s							
KUR				pmax	pmax			
	comp=Z,15μm,4.0s							
KUR				smax	smax			
	comp=N,32μm,3.6s							
KUR				smax	smax			
	comp=E,19μm,4.0s							
KUR				smax	smax			
	comp=N,13μm,1.0s							
KUR				smax	smax			
	comp=E,5μm,1.0s							
BKI	**Bering**	**7.90**	**51**	PN		**Pn**	**05 28 01.1**	**-2.3**
BKI	**Bering**	**7.90**	**51**	*i* P		**Pn**	**05 28 01.1**	**-2.3**
BKI				*e*S		Sn	05 29 19.8	-12
OKH	**Okha**	**8.05**	**295**	⇑*i* PN		Pn	05 28 09.8	+4.4
OKH				pmax	pmax			
	comp=Z,17μm,5.0s							
UGL	**Uglegorsk**	**8.63**	**264**	*e*PN		Pn	05 28 17.7	+4.5
UGL				pmax	pmax			
	comp=Z,896nm,1.0s							
UGL				pmax	pmax			
	comp=N,2μm,3.0s							
UGL				pmax	pmax			
	comp=E,6μm,4.0s							
UGL				MLR	MLR			
	comp=N,31μm,17.0s							
UGL				MLR	MLR			
	comp=E,22μm,17.0s							
PALN	**Palana**	**8.82**	**16**	*i* S		**Sn**	**05 29 54.1**	**+0.7**
YSS	**Yuzh-Sakhalins**	**9.03**	**250**	*α i* PN		Pn	05 28 22.8	+4.4
YSS				*i* S		**Sn**	**05 30 03.0**	**+4.4**
YSS				pmax	pmax			
	comp=N,690nm,1.0s							
YSS				pmax	pmax			
	comp=E,1μm,1.0s							
YSS				pmax	pmax			
	comp=Z,890nm,1.0s							
YSS				pmax	pmax			
	comp=N,2μm,3.0s							
YSS				pmax	pmax			
	comp=E,3μm,3.0s							
YSS				pmax	pmax			
	comp=Z,2μm,3.0s							
YSS				smax	smax			
	comp=N,18μm,10.0s							
YSS				smax	smax			
	comp=E,9μm,7.0s							
YSS				MLR	MLR			
	comp=Z,13μm,14.0s							
YSS				MLR	MLR			
	comp=N,12μm,13.0s							
YSS				MLR	MLR			
	comp=E,13μm,11.0s							
YSS	**Yuzh-Sakhalins**	**9.03**	**250**	*i* P		**Pn**	**05 28 20.9**	**+2.5**
YSS				*i* S		**Sn**	**05 29 55.8**	**-2.8**
YUK	**Yuzh-Kuril'sk**	**9.21**	**227**	*i* PN		**Pn**	**05 28 20.6**	**-0.2**
YUK				*i* S		**Sn**	**05 29 59.6**	**-3.4**
YUK				pmax	pmax			
	comp=N,186nm,0.2s							
YUK				pmax	pmax			
	comp=E,241nm,0.2s							
YUK				pmax	pmax			
	comp=Z,2μm,0.2s							
YUK				MLR	MLR			
	comp=N,7μm,15.0s							
YUK				MLR	MLR			
	comp=Z,12μm,15.0s							
YUK				MLR	MLR			
	comp=E,7μm,15.0s							
ASAJ	**Asahikawa**	**10.79**	**237**	P		**Pn**	**05 28 44.0**	**+2.3**
ASAJ				S		**S**	**05 30 46.3**	**+4.2**
ASAJ	**Asahikawa**	**10.79**	**237**	P		**Pn**	**05 28 44.0**	**+2.3**
	comp=E,72nm,0.3s,baz=64,slow=12,SNR=188							
ASAJ				S		**S**	**05 30 46.3**	**+4.2**
	comp=E,25nm,0.3s,baz=278,slow=18,SNR=3.0							
FX1	**Attu Island--F**	**11.34**	**72**	*e*Pn		**Pn**	**05 28 48.5**	**-0.3**
FX1				S		Sn	05 30 44.4	-10
FX1				*e*Sn		**Sn**	**05 30 48.9**	**-5.2**
FX1	**Attu Island--F**	**11.34**	**72**	P		**Pn**	**05 28 48.2**	**-0.6**
	comp=E,300nm,0.3s,baz=273,slow=9.7,SNR=218							
FX1				S		Sn	05 30 44.4	-10
	comp=E,812nm,0.3s,baz=73,slow=19,SNR=12							
TILK	**Tilichiki**	**11.53**	**28**	*e*P		**Pn**	**05 28 51.8**	**+0.6**
ERM	**Erimo**	**12.03**	**228**	*d i* PN		**Pn**	**05 28 55.1**	**-2.7**
ERM				pmax	pmax			
	comp=Z,545nm,0.7s							
ERM	**Erimo**	**12.03**	**228**	*e*Pn		**Pn**	**05 28 55.3**	**-2.5**
ERM				*e*Sn		Sn	05 31 01.2	-10
ERM	**Erimo**	**12.03**	**228**	Pn		**Pn**	**05 28 55.4**	**-2.5**
	comp=Z,8μm,0.5s,SNR=68							
SEY	**Seymchan**	**12.33**	**354**	*d i* PN		**P**	**05 29 04.6**	**-2.7**
AMKA	**Amchitka**	**15.16**	**78**	*e*P		**Pn**	**05 29 36.5**	**-0.9**
	comp=Z,3μm,1.0s							
AMKA				*e*S		Sn	05 32 16.1	-10
USRK	**Ussuriysk Arra**	**16.95**	**256**	P		**Pn**	**05 29 58.9**	**-0.3**
	comp=Z,6.8nm,0.3s,baz=64,slow=11,SNR=102							
USRK				ScP		**ScP**	**05 37 56.1**	**+0.7**
	baz=200,slow=3.9,SNR=5.6							
VLA	**Vladivostok**	**17.59**	**253**	*i* P		**P**	**05 30 06.2**	**+0.6**
VLA				pmax	pmax			
	comp=Z,439nm,1.8s							
BILL	**Bilibino**	**18.20**	**13**	⇑*i* P		**Pn**	**05 30 13.4**	**-0.5**
BILL				pmax	pmax			
	comp=Z,3μm,1.0s							
BILL	**Bilibino**	**18.20**	**13**	*i* P		**P**	**05 30 11.9**	**-0.2**
MDJ	**Mudanjiang**	**18.24**	**260**	P		**P**	**05 30 13.1**	**+0.4**
MDJ				sP		**sP**	**05 30 55.1**	**-4.3**
MDJ				S		**Sn**	**05 33 40.8**	**+1.3**
MDJ				ScP		**ScP**	**05 37 55.1**	**-3.0**
MDJ				PcS		**PcS**	**05 38 09.6**	**-4.7**
MDJ				ScS		**ScS**	**05 41 36.8**	**-2.1**
MDJ				pmax	pmax			
	comp=Z,540nm,0.9s							
MDJ				pmax	pmax			
	comp=Z,4μm,4.7s							
MDJ				LR	LR			
	comp=N,7μm,12.3s							
MDJ				LR	LR			
	comp=E,9μm,13.2s							
MDJ				LR	LR			
	comp=Z,14μm,11.5s							
MAJO	**Matsushiro**	**18.70**	**227**	*e*P		**P**	**05 30 18.6**	**+0.7**
	comp=Z,457nm,0.8s							
MAT	**Matsushiro**	**18.70**	**227**	P		**P**	**05 30 18.4**	**+0.6**
MAT				S		**S**	**05 33 41.9**	**-0.5**
MJAR	**Matsushiro Arr**	**18.70**	**227**	P		**P**	**05 30 18.2**	**+0.4**
MJAR	**Matsushiro Arr**	**18.70**	**227**	P		**P**	**05 30 18.2**	**+0.4**
	comp=Z,22nm,0.3s,baz=18,slow=9.3,SNR=338							
CLNS	**Chul'man**	**18.81**	**301**	*e*P		**Pn**	**05 30 22.4**	**+1.2**
CLNS				pmax	pmax			
	comp=Z,2μm,1.3s							
CLNS				pmax	pmax			
	comp=E,2μm,1.4s							
CLNS				pmax	pmax			
	comp=N,1μm,1.4s							
CLNS				MLR	MLR			
	comp=Z,7μm,14.0s							
CLNS				MLR	MLR			
	comp=E,6μm,13.0s							
CLNS				MLR	MLR			
	comp=N,4μm,13.0s							
JHJ	**Hachijo jima 2**	**20.92**	**219**	P		**P**	**05 30 42.2**	**+0.5**
	comp=N,410nm,1.0s,baz=105,slow=11,SNR=3.8							
CN2	**Changchun**	**21.24**	**263**	⇓P		**P**	**05 30 42.6**	**-2.4**
CN2				*e*PP		**pP**	**05 31 15.3**	**+2.7**
CN2				*e*S		S	05 34 22.8	-8.8
CN2				pmax	pmax			
	comp=Z,4μm,6.0s							
GAMB	**Gambell**	**21.85**	**41**	*e*P		**P**	**05 30 50.6**	**-0.5**
	comp=Z,85nm,0.7s							
GAMB				*e*S		**S**	**05 34 41.6**	**0.0**
NIKO	**Nikolski**	**22.18**	**70**	*e*P		**P**	**05 30 52.2**	**-2.5**
	comp=Z,576nm,0.9s							
SNY	**Shenyang**	**23.44**	**260**	⇓P		**P**	**05 31 06.5**	**+0.1**
SNY				PP		**PnPn**	**05 31 41.5**	**-2.3**
SNY				S		**S**	**05 35 05.8**	**-2.0**
SNY				pmax	pmax			
	comp=Z,190nm,2.4s							
SNY				pmax	pmax			
	comp=Z,5μm,8.2s							
SNY				LR	LR			
	comp=N,8μm,13.7s							
SNY				LR	LR			
	comp=E,6μm,15.7s							
SNY				LR	LR			
	comp=Z,9μm,13.2s							
KSRS	**Korea Array**	**23.49**	**246**	P		**P**	**05 31 07.7**	**+0.7**
	comp=Z,137nm,0.9s,baz=46,slow=9.2,SNR=149							
KSRS				PcP		**PcP**	**05 34 49.2**	**+1.3**
	comp=Z,8.2nm,0.8s,baz=359,slow=2.7,SNR=4.1							
KSRS				pPcP			05 35 29.6	
	comp=Z,19nm,1.0s,baz=38,slow=0.5,SNR=4.9							
KSRS				ScP		**ScP**	**05 38 13.6**	**+2.6**
	comp=Z,8.0nm,1.0s,baz=19,slow=2.3,SNR=5.1							
KSRS				P3KPbc			06 04 27.9	
	comp=Z,5.4nm,1.2s,baz=229,slow=4.7,SNR=6.2							
KSAR	**Wonju Array Be**	**23.52**	**246**	P		**P**	**05 31 07.7**	**+0.4**
KSAR				PcP		**PcP**	**05 34 49.2**	**+1.2**
KSAR				pPcP			05 35 29.6	
KSAR				ScP		**ScP**	**05 38 13.6**	**+2.5**
KSAR				*e*			06 04 27.9	
AKUT	**Akutan**	**23.84**	**67**	*e*P		**P**	**05 31 08.3**	**-1.6**
	comp=Z,3μm,1.1s							
TNA	**Tin City**	**24.00**	**38**	*e*P		**P**	**05 31 13.1**	**+1.8**
	comp=Z,848nm,1.1s							
TIXI	**Tiksi**	**24.11**	**340**	*d i* P		**P**	**05 31 12.2**	**0.0**
TIXI				pmax	pmax			
	comp=Z,1μm,1.6s							
TIXI				MLR	MLR			
	comp=Z,4μm,13.0s							
INCN	**Inchon**	**24.23**	**248**	*e*P		**P**	**05 31 15.2**	**+1.5**
	comp=Z,1μm,1.9s							
INCN				*e*			05 31 46.1	
JNU	**Nakatsue**	**25.05**	**235**	P		**P**	**05 31 22.2**	**+1.1**
JNU	**Nakatsue**	**25.05**	**235**	P		**P**	**05 31 22.2**	**+1.1**
	comp=Z,514nm,0.7s,baz=32,slow=3.9,SNR=188							
CIT	**Chita**	**25.77**	**289**	*e*P		**P**	**05 31 27.2**	**-0.3**
CIT				*e*			05 32 21.1	
CIT				*e*			05 35 35.7	
DL2	**Dalian**	**26.35**	**256**	P		**P**	**05 31 32.4**	**-0.3**
DL2				S		**S**	**05 35 52.9**	**-1.0**
DL2				pmax	pmax			
	comp=Z,220nm,0.7s							
DL2				pmax	pmax			
	comp=Z,2μm,6.7s							
DL2				LR	LR			
	comp=N,4μm,8.7s							
DL2				LR	LR			
	comp=E,3μm,8.4s							
DL2				LR	LR			
	comp=Z,3μm,11.8s							
SDPT	**Sand Point**	**26.70**	**63**	*e*P		**P**	**05 31 32.6**	**-3.1**
	comp=Z,362nm,1.0s							
CHGN	**Chignik**	**27.71**	**60**	*e*P		**P**	**05 31 42.5**	**-2.2**
SVW2	**Sparrevohn**	**28.78**	**50**	*e*P		**P**	**05 31 55.3**	**+1.1**
	comp=Z,83nm,0.8s							
BJI	**Beijing**	**29.09**	**264**	P		**P**	**05 31 56.8**	**-0.3**
BJI				pP		**pP**	**05 32 27.9**	**-2.2**
BJI				sP		**sP**	**05 32 43.1**	**-5.0**
BJI				S		**S**	**05 36 37.1**	**0.0**
BJI				sS		**sS**	**05 37 30.8**	**-4.3**
BJI				pmax	pmax			
	comp=Z,100nm,2.4s							
BJI				pmax	pmax			
	comp=Z,2μm,4.4s							
BJI				LR	LR			
	comp=N,16μm,19.8s							
BJI				LR	LR			
	comp=E,7μm,26.2s							
BJI				LR	LR			
	comp=Z,5μm,26.8s							
RSO	**Redoubt South**	**30.20**	**51**	*e*P		**P**	**05 32 07.8**	**+0.8**
PPLA	**Purkeypile**	**30.34**	**46**	*e*P		**P**	**05 32 09.1**	**+1.0**
	comp=Z,2μm,2.4s							
OHAK	**Old Harbor**	**30.35**	**57**	*e*P		**P**	**05 32 07.2**	**-0.8**
	comp=Z,926nm,0.9s							
SPU	**Mount Spurr**	**30.49**	**49**	*e*P		**P**	**05 32 10.1**	**+0.8**
MIDW	**Midway**	**30.58**	**127**	*e*P		**P**	**05 32 10.0**	**-0.4**
	comp=Z,201nm,1.0s							
KDAK	**Kodiak Island**	**30.63**	**56**	*e*P		**P**	**05 32 09.6**	**-0.9**
	comp=Z,528nm,0.8s							
KDAK				ScP		**ScP**	**05 38 32.8**	**+0.7**
KDAK	**Kodiak Island**	**30.63**	**56**	P		**P**	**05 32 09.0**	**-1.5**
	comp=Z,4μm,1.0s							
KDAK	**Kodiak Island**	**30.63**	**56**	P		**P**	**05 32 09.1**	**-1.4**
	comp=Z,578nm,0.9s,baz=287,slow=4.4,SNR=160							
KDAK				ScP		**ScP**	**05 38 32.8**	**+0.7**
	comp=Z,107nm,1.2s,baz=149,slow=0.2,SNR=5.2							
TIA	**Tai'an**	**30.82**	**257**	P		**P**	**05 32 12.0**	**-0.4**
TIA				pP		**pP**	**05 32 42.3**	**-3.2**
TIA				sP		sP	05 32 56.6	-6.9
TIA				LR	LR			
	comp=N,1μm,8.0s							
TIA				LR	LR			
	comp=E,3μm,13.0s							
TIA				LR	LR			
	comp=Z,3μm,12.8s							
ULN	**Ulaanbaatar**	**31.09**	**284**	*e*P		**P**	**05 32 15.0**	**+0.2**
	comp=Z,101nm,1.0s							
ULN	**Ulaanbaatar**	**31.09**	**284**	P		**P**	**05 32 15.5**	**+0.7**
	SNR=50							
ULN	**Ulaanbaatar**	**31.09**	**284**	P		**P**	**05 32 15.4**	**+0.6**
	comp=Z,134nm,1.2s,comp=Z,4μmcomp=Z,19μm							
TRF	**Thorofare Moun**	**31.19**	**45**	*e*P		**P**	**05 32 15.5**	**-0.1**
	comp=Z,273nm,1.0s							
IRK	**Irkutsk**	**31.21**	**293**	*e*P		**P**	**05 32 15.9**	**+0.2**
IRK				*e*			05 32 49.9	
IRK				pmax	pmax			
	comp=Z,631nm,1.6s							
COLD	**Coldfoot**	**31.30**	**38**	*e*P		**P**	**05 32 17.0**	**+0.7**
	comp=Z,155nm,0.8s							
SONM	**Songino Array**	**31.50**	**284**	P		**P**	**05 32 18.4**	**0.0**
SONM				PcP		**PcP**	**05 35 07.9**	**+0.5**
SONM				pPcP			05 35 48.6	
SONM				ScP		**ScP**	**05 38 35.4**	**-0.1**
SONM				*e*			06 03 51.4	
SONM				P'P'			06 06 01.4	
SONM	**Songino Array**	**31.50**	**284**	P		**P**	**05 32 18.4**	**0.0**
	comp=Z,12nm,0.5s,baz=58,slow=9.3,SNR=137							
SONM				PcP		**PcP**	**05 35 07.9**	**+0.5**
	comp=Z,19nm,0.5s,baz=101,slow=2.0,SNR=14							
SONM				pPcP			05 35 48.6	
	comp=Z,27nm,1.0s,baz=82,slow=3.1,SNR=4.9							
SONM				ScP		**ScP**	**05 38 35.4**	**-0.1**
	comp=Z,12nm,0.8s,baz=92,slow=3.4,SNR=5.3							
SONM				LR	LR		05 46 19.9	
	comp=Z,1μm,21.2s,baz=65,slow=38							
SONM				P3KPbc			06 03 51.4	
	comp=Z,1.0nm,0.8s,baz=236,slow=4.9,SNR=6.4							
SONM				PKPPKP		**P'P'df**	**06 06 01.4**	**-1.1**
	comp=Z,0.9nm,0.9s,baz=207,slow=3.0,SNR=3.5							
HHC	**Hu-ho-hao-te**	**31.57**	**269**	⇓*i* P		**P**	**05 32 18.5**	**-0.6**
HHC				pP		**pP**	**05 32 51.6**	**-0.6**
HHC				sP		**sP**	**05 33 10.5**	**+0.3**
HHC				S		**S**	**05 37 17.6**	**+1.6**
HHC				sS		**sS**	**05 38 12.3**	**-2.0**
HHC				ScS		**ScS**	**05 42 34.3**	**+0.3**
HHC				pmax	pmax			
	comp=Z,200nm,1.1s							
HHC				pmax	pmax			
	comp=Z,5μm,5.6s							
HHC				LR	LR			
	comp=N,17μm,16.5s							
HHC				LR	LR			
	comp=E,17μm,16.7s							
HHC				LR	LR			
	comp=Z,10μm,14.7s							
TLY	**Talaya**	**31.76**	**292**	P		**P**	**05 32 22.0**	**+1.4**
	comp=Z,2μm,0.9s,SNR=85							
MCK	**McKinley**	**31.78**	**44**	*e*P		**P**	**05 32 20.9**	**+0.3**
	comp=Z,333nm,0.8s							
PMR	**Palmer**	**31.85**	**48**	*e*P		**P**	**05 32 19.9**	**-1.2**
	comp=Z,89nm,0.7s							
SEW	**Seward**	**31.88**	**51**	*e*P		**P**	**05 32 20.9**	**-0.5**
	comp=Z,466nm,0.8s							
SSE	**Sheshan**	**31.92**	**245**	P		**P**	**05 32 22.8**	**+0.7**
SSE				pP		**pP**	**05 32 54.3**	**-1.0**
SSE				sP		**sP**	**05 33 12.1**	**-1.1**
SSE				S		**S**	**05 37 20.3**	**-1.1**
SSE				sS		**sS**	**05 38 19.4**	**-0.4**
SSE				pmax	pmax			
	comp=Z,62nm,1.0s							
SSE				pmax	pmax			
	comp=Z,2μm,5.8s							
SSE				LR	LR			
	comp=N,5μm,24.1s							
SSE				LR	LR			
	comp=E,3μm,24.1s							
SSE				LR	LR	

TIY LR LR
comp=N,4μm,10.3s
TIY LR LR
comp=E,4μm,8.3s
TIY LR LR
comp=Z,5μm,25.6s
PAX Paxson 33.40 46 *e*P **P 05 32 35.0 +0.2**
PAX pmax pmax
comp=Z,93nm,0.8s
PAX Paxson 33.40 46 *e*P **P** **05 32 35.0 +0.2**
comp=Z,93nm,0.8s
DIV Divide 33.52 49 *e*P **P** **05 32 36.2 +0.4**
comp=Z,277nm,0.8s
MID Middleton Isla 33.55 52 *e*P **P** **05 32 36.3 +0.4**
MID pmax pmax
comp=Z,839nm,1.0s
MID Middleton Isla 33.55 52 *e*P **P** **05 32 36.3 +0.4**
comp=Z,839nm,1.0s
BMRM Bremner River 34.11 49 *e*P **P** **05 32 41.5 +0.6**
comp=Z,602nm,1.0s
RAGM Ragged Mountai 34.18 50 *e*P **P** **05 32 42.3 +0.9**
comp=Z,456nm,0.9s
MENT Mentasta 34.20 45 *e*P **P** **05 32 42.1 +0.5**
EGAK Eagle 35.07 42 *e*P **P** **05 32 48.8 -0.2**
comp=Z,247nm,0.7s
WHN Wuhan 36.37 252 P **P** **05 33 00.3 -0.1**
WHN pP **pP** **05 33 35.3 +1.2**
WHN S **S** **05 38 24.8 -5.0**
WHN ScP **ScP** **05 38 51.9 -0.9**
WHN pmax pmax
comp=Z,280nm,0.7s
WHN LR LR
comp=N,8μm,8.9s
WHN LR LR
comp=E,6μm,11.0s
WHN LR LR
comp=Z,11μm,14.0s
KRAR Krasnoyarsk 36.42 303⇑ *e*P **P** **05 33 01.5 +0.9**
KRAR pmax pmax
comp=Z,432nm,1.2s
KRAR MLR MLR
comp=Z,3μm,23.0s
TATO Taipei 36.48 238 *e*P **P** **05 33 02.0 +0.6**
comp=Z,342nm,0.9s
YHNB Yeheng 36.78 238 *e*P **P** **05 33 03.4 -0.7**
comp=Z,99nm,0.8s
PNL Peninsula 36.92 50 *e*P **P** **05 33 05.5 +0.6**
comp=Z,324nm,0.9s
NACB Ninganchiao 37.07 237 *e*P **P** **05 33 04.8 -1.6**
comp=Z,96nm,0.8s
XAN Xi'an 37.34 262 P **P** **05 33 08.3 -0.4**
XAN pP **pP** **05 33 38.5 -4.0**
XAN sP **sP** **05 33 56.0 -4.3**
XAN S **S** **05 38 39.1 -5.6**
XAN ScP **ScP** **05 39 00.1 +3.6**
XAN SS SS 05 41 23.1 -12
XAN ScS **ScS** **05 43 05.8 +0.8**
XAN pmax pmax
comp=Z,480nm,14.8s
XAN LR LR
comp=N,4μm,15.4s
XAN LR LR
comp=E,960nm,17.2s
XAN LR LR
comp=Z,2μm,15.8s
SSLB Suanglung 37.72 237 *e*P **P** **05 33 11.5 -0.4**
comp=Z,128nm,0.8s
YULB Yu-li 37.86 237 *e*P **P** **05 33 13.6 +0.5**
comp=Z,78nm,0.6s
QZH Quanzhou 38.09 241⇓ *i*P **P** **05 33 17.8 +2.8**
QZH pP **pP** **05 33 51.3 +2.4**
QZH S **S** **05 38 57.3 +1.3**
QZH sS sS 05 39 49.9 -5.4
QZH ScS **ScS** **05 43 09.1 -0.3**
QZH pmax pmax
comp=Z,1μm,0.8s
QZH pmax pmax
comp=Z,7μm,4.8s
QZH LR LR
comp=N,4μm,13.6s
QZH LR LR
comp=E,5μm,9.3s
QZH LR LR
comp=Z,4μm,14.0s
TPUB Ta-pu 38.29 237 *e*P **P** **05 33 16.9 +0.2**
comp=Z,392nm,1.0s
TWG Pinlang 38.44 236 *e*P **P** **05 33 17.9 0.0**
comp=Z,2μm,1.1s
SKAG Skagway 38.96 50 *e*P **P** **05 33 23.8 +1.9**
comp=Z,551nm,1.3s
LZH Lanzhou 39.26 268⇓P **P** **05 33 25.8 +1.0**
LZH pP **pP** **05 33 58.1 -0.8**
LZH sP **sP** **05 34 17.1 +0.4**
LZH *e*S **S** **05 39 10.0 -3.6**
LZH sS sS 05 40 07.0 -6.2
LZH SS **SS** **05 42 11.1 -2.1**
LZH pmax pmax
comp=Z,500nm,1.0s
LZH pmax pmax
comp=Z,3μm,4.6s
LZH LR LR
comp=N,6μm,13.9s
LZH LR LR
comp=E,5μm,12.6s
LZH LR LR
comp=Z,9μm,15.7s
GTA Gaotai 39.83 276⇓P **P** **05 33 30.3 +0.8**
GTA pP **pP** **05 34 05.9 +2.3**
GTA PP **PnPn** **05 35 09.8 +0.9**
GTA PcP **PcP** **05 35 31.3 -0.9**
GTA ScP **ScP** **05 39 06.1 +0.1**
GTA PcS **PcS** **05 39 22.3 -0.3**
GTA S **S** **05 39 24.3 +2.3**
GTA sS **sS** **05 40 25.8 +4.1**
GTA ScS **ScS** **05 43 17.6 -1.9**
GTA pmax pmax
comp=Z,160nm,1.6s
GTA pmax pmax
comp=Z,2μm,10.7s
GTA LR LR
comp=N,6μm,16.1s
GTA LR LR
comp=E,9μm,12.8s
GTA LR LR
comp=Z,9μm,11.9s
ZAA0 Zalesovo Array 41.50 303 *e*P **P** **05 33 42.7 0.0**
ZALV Zalesovo Beam 41.50 303 P **P** **05 33 42.8 0.0**
ZALV PcP **PcP** **05 35 37.4 +0.3**
ZALV pPcP 05 36 19.1
ZALV ScP **ScP** **05 39 13.8 +1.6**
ZALV Zalesovo Beam 41.50 303 P **P** **05 33 42.8 0.0**
comp=Z,24nm,0.5s,baz=60,slow=7.5,SNR=50
ZALV PcP **PcP** **05 35 37.4 +0.3**
comp=Z,32nm,0.4s,baz=71,slow=3.4,SNR=12
ZALV pPcP 05 36 19.1
comp=Z,76nm,1.0s,baz=90,slow=3.0,SNR=7.2
ZALV ScP **ScP** **05 39 13.8 +1.6**
comp=Z,4.0nm,0.3s,baz=51,slow=3.5,SNR=5.6
CRAG Craig 41.55 55 *e*P **P** **05 33 45.0 +1.9**
comp=Z,278nm,1.1s
WRAK Wrangell Islan 41.56 53 *e*P **P** **05 33 45.3 +2.2**
comp=Z,396nm,0.9s
DLBC Dease Lake 41.90 49 *e*P **P** **05 33 48.2 +2.2**
GZH Guangzhou 42.52 245 P P 05 33 47.3 -4.1
GZH LR LR
comp=N,4μm,19.8s
GZH LR LR
comp=E,4μm,20.8s
CD2 Chengdu 42.67 262 P **P** **05 33 53.0 +0.4**
CD2 pP **pP** **05 34 26.6 -0.6**
CD2 sP **sP** **05 34 44.0 -0.8**
CD2 PP **PP** **05 35 36.5 +1.8**
CD2 PcP **PcP** **05 35 43.4 +1.9**
CD2 PcS **PcS** **05 39 34.4 +0.4**
CD2 S **S** **05 40 03.3 -0.7**
CD2 sS **sS** **05 41 02.3 -1.9**
CD2 SS SS 05 43 11.4 -8.9
CD2 ScS **ScS** **05 43 35.9 -1.0**
CD2 pmax pmax
comp=Z,260nm,1.0s
CD2 pmax pmax
comp=Z,3μm,8.0s
CD2 LR LR
comp=N,450nm,12.5s
CD2 LR LR
comp=E,480nm,10.9s
CD2 LR LR
comp=Z,3μm,14.7s
GYA Guiyang 43.99 255⇑ *i*P **P** **05 34 03.8 +0.5**
GYA pP **pP** **05 34 38.0 0.0**
GYA sP **sP** **05 34 56.4 +0.8**
GYA PcP **PP** **05 35 47.8 -1.0**
GYA PP **PcP** **05 35 51.3 +5.2**
GYA ScP **ScP** **05 39 24.3 +1.5**
GYA PcS **PcS** **05 39 40.6 +0.9**
GYA S **S** **05 40 23.0 -0.3**
GYA sS **sS** **05 41 23.3 -0.5**
GYA SS ScS 05 43 36.5 -8.9
GYA pmax pmax
comp=Z,50nm,0.9s
GYA pmax pmax
comp=Z,3μm,5.3s
GYA LR LR
comp=N,9μm,18.5s
GYA LR LR
comp=E,7μm,19.4s
GYA LR LR
comp=Z,10μm,18.9s
WMQ Urumqi 44.86 289 P **P** **05 34 11.0 +1.0**
WMQ pP **pP** **05 34 47.0 +2.2**
WMQ PP **PP** **05 35 59.0 +1.3**
WMQ ScP **ScP** **05 39 26.0 -0.1**
WMQ S **S** **05 40 36.0 +0.5**
WMQ sS **sS** **05 41 38.0 +1.8**
WMQ ScS **ScS** **05 43 49.0 -1.4**
WMQ SS **SS** **05 43 54.0 -5.8**
WMQ pmax pmax
comp=Z,310nm,1.2s
WMQ pmax pmax
comp=Z,4μm,5.0s
WMQ LR LR
comp=N,8μm,16.0s
WMQ LR LR
comp=E,5μm,15.0s
WMQ LR LR
comp=Z,5μm,15.0s
ALE Alert 45.64 6 P **P** **05 34 15.0 -0.5**
comp=Z,2μm,0.8s
KURK Kurchatov 46.38 301 *e*P **P** **05 34 22.0 +0.3**
comp=Z,2μm,1.8s
KURK ScP **ScP** **05 39 33.7 +1.5**
KURK P'P' 06 05 51.6
KURK *e* 06 12 05.2
KURK Kurchatov 46.38 301 P **P** **05 34 22.3 +0.6**
SNR=207
KURK Kurchatov 46.38 301 P **P** **05 34 22.3 +0.6**
comp=Z,2μm,1.2s
MK31 Makanchi Array 46.42 295 *e*P **P** **05 34 22.4 +0.3**
MKAR Makanchi Array 46.42 295 *e*P **P** **05 34 22.3 +0.2**
MKAR ScP **ScP** **05 39 32.6 +0.1**
MKAR P'P' 06 05 49.1
MKAR *e* 06 12 05.0
MKAR Makanchi Array 46.42 295 P **P** **05 34 22.3 +0.2**
comp=Z,142nm,0.9s,baz=60,slow=5.8,SNR=439
MKAR ScP **ScP** **05 39 32.6 +0.1**
comp=Z,7.8nm,0.9s,baz=41,slow=4.6,SNR=2.9
MKAR LR LR 05 54 52.7
comp=Z,5μm,19.8s,baz=48,slow=37
MKAR PKPPKP **P'P'df** **06 05 49.1 +2.8**
comp=Z,1.0nm,0.9s,baz=280,slow=0.7,SNR=4.0
MKAR P4KPbc 06 12 05.0
comp=Z,0.4nm,0.4s,baz=47,slow=5.8,SNR=5.6
KURBB Kurchatov Arra 46.48 301 ScP **ScP** **05 39 33.7 +1.1**
comp=Z,14nm,1.0s,baz=55,slow=3.6,SNR=4.6
KURBB LR LR 05 52 55.4
comp=Z,2μm,21.4s,baz=65,slow=35
KURBB PKPPKP P'P'df 06 05 51.6 +5.4
comp=Z,0.1nm,0.3s,baz=263,slow=2.3,SNR=4.1
KURBB P4KPbc 06 12 05.2
comp=Z,0.4nm,0.3s,baz=62,slow=3.9,SNR=10
RES Resolute Bay 46.62 20 *e*P **P** **05 34 23.8 +0.6**
comp=Z,7.6nm,0.4s
KIP Kipapa 46.71 111*c i*P **P** **05 34 25.4 +0.9**
KIP pmax pmax
comp=Z,1μm,1.2s
KIP Kipapa 46.71 111 *e*P **P** **05 34 25.5 +0.9**
comp=Z,1μm,1.2s
HON Honolulu 46.79 111 *e*P **P** **05 34 26.2 +1.0**
HON Honolulu 46.79 111 *e*P **P** **05 34 26.2 +1.0**
YKW3 Yellowknife Ar 46.91 39 *e*P **P** **05 34 26.7 +1.1**
comp=Z,3.5nm,0.9s
YKA Yellowknife Ar 46.94 39 P **P** **05 34 26.8 +1.0**
YKA PcP **PcP** **05 35 57.0 +1.3**
YKA pPcP 05 36 36.0
YKA ScP **ScP** **05 39 34.5 +0.2**
YKA S **S** **05 41 06.1 +1.5**
YKA ScS **ScS** **05 44 03.5 +0.4**
YKA P'P' 06 05 32.1
YKA *e* 06 12 07.5
YKA Yellowknife Ar 46.94 39 P **P** **05 34 26.8 +1.0**
comp=Z,125nm,0.8s,baz=300,slow=7.7,SNR=852
YKA PcP **PcP** **05 35 56.9 +1.3**
comp=Z,9.8nm,0.6s,baz=303,slow=4.1,SNR=5.0
YKA pPcP 05 36 35.9
comp=Z,19nm,0.8s,baz=315,slow=3.4,SNR=6.0
YKA ScP **ScP** **05 39 34.5 +0.2**
comp=Z,9.9nm,1.1s,baz=299,slow=4.1,SNR=2.8
YKA S **S** **05 41 06.1 +1.5**
comp=Z,24nm,1.0s,baz=298,slow=14,SNR=9.7
YKA ScS **ScS** **05 44 03.4 +0.4**
comp=Z,8.5nm,1.2s,baz=313,slow=5.8,SNR=6.3
YKA PKPPKP P'P'df 06 05 32.1 -13
comp=Z,0.4nm,0.6s,baz=161,slow=2.1,SNR=6.6
YKA P4KPbc 06 12 07.5
comp=Z,0.1nm,0.5s,baz=299,slow=4.0,SNR=5.1
RCP Roxas 47.21 226⇓ *e*P **P** **05 34 30.0 +1.5**
KMI Kunming 47.38 258⇓P **P** **05 34 30.5 +0.5**
KMI pP **pP** **05 35 05.4 +0.2**
KMI sP **sP** **05 35 23.3 +0.6**
KMI PcP **PcP** **05 36 00.5 +2.4**
KMI PP **PP** **05 36 23.5 +1.0**
KMI ScP **ScP** **05 39 35.5 -1.6**
KMI PcS **PcS** **05 39 54.6 +0.6**
KMI S **S** **05 41 10.0 -2.1**
KMI sS **sS** **05 42 12.3 -1.0**
KMI ScS **ScS** **05 44 06.8 -0.8**
KMI SS **SS** **05 44 35.5 -6.1**
KMI pmax pmax
comp=Z,140nm,1.9s
KMI pmax pmax
comp=Z,3μm,4.7s
KMI LR LR
comp=N,4μm,16.2s
KMI LR LR
comp=E,3μm,14.2s
KMI LR LR
comp=Z,4μm,33.0s
QIZ Qiongzhong 47.72 245 P **P** **05 34 33.3 +0.9**
QIZ sP **sP** **05 35 20.8 -4.3**
QIZ S **S** **05 41 19.1 +2.6**
QIZ sS **sS** **05 42 17.5 -0.2**
QIZ pmax pmax
comp=Z,350nm,1.2s
QIZ pmax pmax
comp=Z,2μm,9.0s
HKL Haleakala 48.30 110 *e*P **P** **05 34 38.3 +1.0**
HKL Haleakala 48.30 110 *e*P **P** **05 34 38.3 +1.0**
KBS Kingsbay 48.77 351 *e*P **P** **05 34 38.7 -1.0**
KBS AMB AMB 05 34 41.7
comp=Z,223nm,1.5s
KBS *e*pP **pP** **05 35 15.4 +0.3**
KBS *e*S **S** **05 41 28.1 -1.9**
KBS Kingsbay 48.77 351⇓ *e*P **P** **05 34 39.3 -0.4**
KBS pmax pmax
comp=Z,146nm,1.2s
KBS Kingsbay 48.77 351 *e*P **P** **05 34 39.3 -0.4**
comp=Z,92nm,1.0s
POHA Pohakuloa 49.46 110 *e*P **P** **05 34 46.5 +0.5**
comp=Z,2μm,1.1s
BRVK Borovoye 49.49 308*d i*P **P** **05 34 45.6 +0.1**
BRVK pmax pmax
comp=Z,625nm,1.6s
BRVK Borovoye 49.49 308 *e*P **P** **05 34 45.8 +0.3**
comp=Z,2μm,2.0s
BRVK Borovoye 49.49 308 P **P** **05 34 45.8 +0.3**
SNR=194
BRVK Borovoye 49.49 308 P **P** **05 34 45.4 -0.1**
comp=Z,2μm,1.1s
PUH Pauahi 49.94 110 *e*P **P** **05 34 49.5 0.0**
DAV Davao City (W) 50.00 220 P **P** **05 34 50.9 +1.1**
DAV Davao City (W) 50.00 220 P **P** **05 34 51.2 +1.5**
SNR=6.6
DAV Davao City (W) 50.00 220 P **P** **05 34 50.9 +1.1**
comp=Z,218nm,0.4s,baz=69,slow=17,SNR=8.0
PGC Sidney 50.12 59 *e*P **P** **05 34 51.0 +0.7**
comp=Z,17nm,1.1s
NLWA Neilton Lookou 50.62 60 *e*P **P** **05 34 55.6 +1.4**
comp=Z,474nm,1.0s
VDB Vedder Mountai 50.63 58 P **P** **05 34 54.6 +0.4**
HDW Hoodsport 50.92 60 P **P** **05 34 57.6 +1.2**
GNW Green Mountain 51.09 60 P **P** **05 34 58.6 +1.0**
LSA Lhasa 51.49 271 P **P** **05 34 58.4 -3.0**
LSA S **S** **05 42 05.6 -4.1**
LSA LR LR
comp=N,4μm,20.0s
LSA LR LR
comp=E,3μm,23.4s
LSA LR LR
comp=Z,5μm,23.0s
AAA Alma-Ata 51.54 294 *i*P **P** **05 35 02.7 +1.6**
AAA *e*S **S** **05 42 12.5 +3.2**
AAA pmax pmax
comp=Z,4μm,7.9s
AAA smax smax
comp=E,3μm,9.9s
AAA MLR MLR
comp=Z,10μm,11.0s
SOKR Solikamsk 51.88 320*d i*P **P** **05 35 02.8 -0.4**
SOKR *PP **pP** **05 35 39.9 +0.9**
SOKR *SP **sP** **05 35 56.4 0.0**
SOKR 05 37 00.9
SOKR S **S** **05 42 15.7 +2.4**
SOKR *SS **sS** **05 43 14.3 -1.0**
SOKR SS SS 05 45 42.2 -9.1
SOKR SSS SSS 05 47 40.9
SOKR pmax pmax
comp=Z,250nm,1.9s
SOKR MLR MLR
comp=E,2μm,15.0s
SVE Sverdlovsk 51.89 316*c e*P **P** **05 35 03.8 +0.4**
SVE *e* 05 35 42.2
SVE *e* 05 37 00.9
SVE *e*S **S** **05 42 12.7 -0.8**
SVE *e*SS SS 05 45 41.9 -10
SVE pmax pmax
comp=Z,470nm,1.6s
RCS Mount Rainier- 52.10 60 P **P** **05 35 06.7 +1.1**
LON Longmire 52.13 60 *e*P **P** **05 35 06.1 +0.6**
LON pmax pmax
comp=Z,92nm,1.1s
LON Longmire 52.13 60 *e*P **P** **05 35 06.1 +0.6**
comp=Z,92nm,1.1s
NLW Nelson Butte 52.14 58 P **P** **05 35 06.5 +0.9**
WPW White Pass 52.31 60 P **P** **05 35 07.6 +0.8**
TWW Teanaway 52.42 59 P **P** **05 35 08.8 +1.3**
LTY Liberty 52.45 59 P **P** **05 35 08.4 +0.6**
TKM2 Tokmak 2 52.54 294 *e*P **P** **05 35 09.3 +0.6**
TKM2 pmax pmax
comp=Z,175nm,1.0s
TKM2 Tokmak 2 52.54 294 *e*P **P** **05 35 09.3 +0.6**
comp=Z,175nm,1.0s
TKM2 Tokmak 2 52.54 294 P **P** **05 35 09.2 +0.6**
SNR=134
WTV Waterville 52.57 58 P **P** **05 35 08.9 +0.2**
ULHL Ulahol 52.58 293 P **P** **05 35 10.8 +1.8**
SNR=11
COR Corvallis 52.62 63 *e*P **P** **05 35 10.6 +1.7**
COR pmax pmax
comp=Z,341nm,0.9s
COR Corvallis 52.62 63 *e*P **P** **05 35 10.6 +1.7**
comp=Z,341nm,0.9s
DAG Danmarks Havn 52.72 358⇓ *i*P **P** **05 35 08.2 -1.0**
comp=Z,37nm,0.7s
DAG *i* 05 35 47.0
DAG
comp=Z,1μm,13.0s
USP Ospenovka 52.96 295 P **P** **05 35 12.3 +0.7**
SNR=146
CHMS Chumysh 52.98 295 P **P** **05 35 12.1 +0.4**
SNR=66
VLL Laurance Lake 52.99 61 P **P** **05 35 13.0 +1.2**
ARU Arti 53.04 316*d i*P **P** **05 35 11.5 -0.4**
ARU *e*PP **pP** **05 35 48.6 +0.8**
ARU *SP **sP** **05 36 05.7 +0.5**
ARU *e* 05 36 17.9
ARU *e* 05 37 11.8
ARU PPP PPP 05 38 21.4
ARU S **S** **05 42 29.7 +0.5**
ARU *SS **sS** **05 43 34.5 +3.0**
ARU 05 44 40.6
ARU pmax pmax
comp=Z,779nm,1.7s
ARU Arti 53.04 316 P **P** **05 35 11.9 0.0**
comp=Z,2μm,1.3s,SNR=40
KBK Karagaybulak 53.08 295 P **P** **05 35 13.4 +0.8**
SNR=42
KEBM Edson Butte 53.08 65 *e*P **P** **05 35 14.4 +2.0**
comp=Z,396nm,0.9s
IMP Imphal 53.15 265 *e*P **P** **05 35 12.0 -1.2**
IMP *ex* x 05 41 33.0
IMP *ex* x 05 44 34.0
FRU Bishkek 53.16 295⇓ *i*P **P** **05 35 14.0 +1.0**
FRU *i* 05 36 20.0
FRU *e*S **S** **05 42 30.0 -1.3**
FRU MLR MLR
comp=Z,4μm,16.0s
VFP Flag Point 53.20 61 P **P** **05 35 14.5 +1.0**
UBPT Khong Chiam 53.22 247 P **P** **05 35 15.9 +2.2**
comp=Z,604nm,2.0s,comp=Z,10μm
KZA Kyzart 53.26 294 P **P** **05 35 15.5 +1.2**
SNR=133
AAK Ala-Archa 53.35 295*d i*P **P** **05 35 15.1 +0.5**
AAK pmax pmax
comp=Z,1μm,1.7s
AAK MLR MLR
comp=Z,11μm,16.0s
AAK Ala-Archa 53.35 295 *e*P **P** **05 35 15.2 +0.6**
comp=Z,60nm,1.0s
AAK *e* 05 35 53.1
AAK P'P' 06 05 40.3
AAK Ala-Archa 53.35 295 P **P** **05 35 15.5 +0.8**
SNR=214
AAK Ala-Archa 53.35 295 P **P** **05 35 15.2 +0.5**
SNR=169
AAK Ala-Archa 53.35 295 P **P** **05 35 15.0 +0.5**
comp=Z,1μm,0.9s
AAK Ala-Archa 53.35 295 PKPPKP **P'P'df** **06 05 40.3 +3.3**
comp=Z,0.6nm,0.4s,baz=170,slow=7.9,SNR=3.6
KBO Bosley Butte 53.56 66 *e*P **P** **05 35 17.8 +1.8**
comp=Z,907nm,1.3s
WRD Warden 53.56 58 P **P** **05 35 15.7 -0.1**
HAWA Hanford 53.60 59 *e*P **P** **05 35 17.0 +0.8**
comp=Z,390nm,1.1s
UCH Uchtor 53.60 294 P **P** **05 35 18.3 +1.6**
SNR=11
LVZ Lovozero 53.67 336*d i*P **P** **05 35 14.8 -1.6**
LVZ pmax pmax
comp=Z,210nm,1.5s
NEW Newport 53.73 56 *e*P **P** **05 35 17.6 +0.4**
comp=Z,279nm,1.0s
NEW P'P' 06 05 34.4
NEW Newport 53.73 56⇓P **P** **05 35 17.5 +0.4**
baz=54,SNR=244
NEW ⇑S **S** **05 42 39.0 +0.1**
baz=54
NEW ⇑S **S** **05 42 39.0 +0.1**
baz=54
NEW Newport 53.73 56 PKPPKP **P'P'df** **06 05 34.4 -2.0**
comp=Z,1.6nm,0.8s,baz=201,slow=6.5,SNR=5.4
EKS2 Erkin-Say 53.75 295 *e*P **P** **05 35 18.3 +0.8**
EKS2 pmax pmax
comp=Z,224nm,0.9s
EKS2 Erkin-Say 53.75 295 *e*P **P** **05 35 18.3 +0.8**
comp=Z,224nm,0.9s
EKS2 Erkin-Say 53.75 295 P **P** **05 35 18.2 +0.8**
SNR=88
SHL Shillong 53.90 267 *i*P **P** **05 35 19.0 +0.2**
SHL *i*x x 05 42 36.0
HUMO Hull Mountain 54.04 65 *e*P **P** **05 35 21.1 +1.7**
comp=Z,423nm,1.2s
KEV Kevo 54.05 340 *e*P **P** **05 35 17.4 -1.6**
KEV Kevo 54.05 340 *ep* **P** **05 35 17.4 -1.6**
comp=Z,1.7nm,0.3s
A12A Yaak River Ran 54.09 54⇓P **P** **05 35 20.7 +1.0**

baz=54,SNR=60
AML Almayashu 54.13 295 P **P** 05 35 21.6 +1.0
SNR=105
KRMB Red Mountain 54.17 66 *e*P **P** 05 35 22.4 +1.9
comp=Z,2µm,2.8s
APA Apatity 54.23 336 ⇓ *i*P **P** 05 35 19.0 -1.4
APA *i* 05 36 24.0
APA *i* 05 37 22.0
APA *i* PPP PPP 05 38 34.0
APA *i* S **S** 05 42 42.0 -3.0
APA *i* 05 44 50.0
APA *i* SS **SS** 05 46 28.0 -0.1
APA pmax pmax
comp=Z,200nm,1.4s
APA MLR MLR
comp=Z,2µm,20.0s
CMMT Chiang Mai 54.41 256 P **P** 05 35 23.5 +1.2
comp=Z,441nm,0.9s,comp=Z,6µm
CHTO Chiang Mai 54.41 256 *e*P **P** 05 35 23.4 +1.1
CHTO pmax pmax
comp=Z,354nm,1.0s
CHTO Chiang Mai 54.41 256 *e*P **P** 05 35 23.4 +1.1
comp=Z,354nm,1.0s
CHTO Chiang Mai 54.41 256 P **P** 05 35 23.5 +1.2
SNR=99
CHTO Chiang Mai 54.41 256 P **P** 05 35 23.4 +1.1
comp=Z,490nm,1.0s,comp=Z,7µm
B12A Libby 54.41 55 ⇓P **P** 05 35 22.9 +0.8
baz=54,SNR=22
C11A Tepee Creek (N 54.45 56 ⇓P **P** 05 35 23.3 +1.0
baz=54
KSH Kashi 54.46 291 ⇓ *i*P P 05 35 27.3 +4.7
KSH pP pP 05 36 00.0 +1.3
KSH sP sP 05 36 16.3 +0.3
KSH PcP **PcP** 05 36 28.4 +4.3
KSH PP PP 05 37 32.8 +6.7
KSH ScP **ScP** 05 40 12.5 +5.2
KSH PcS **PcS** 05 40 25.6 +1.6
KSH S **S** 05 42 54.8 +5.8
KSH sS sS 05 43 50.6 -1.0
KSH ScS **ScS** 05 44 57.3 +1.4
KSH SS **SS** 05 46 38.8 +5.7
KSH pmax pmax
comp=Z,49nm,0.8s
KSH LR LR
comp=N,2µm,7.7s
KSH LR LR
comp=E,5µm,7.8s
KSH LR LR
comp=Z,5µm,7.9s
ARCES ARCESS Array B 54.55 341 P **P** 05 35 21.2 -1.5
ARCES ScP **ScP** 05 40 08.3 +1.3
ARCES P'P' 06 05 36.0
ARCES ARCESS Array B 54.55 341 P **P** 05 35 21.2 -1.5
comp=Z,9.4nm,0.5s,baz=32,slow=7.9,SNR=60
ARCES ScP **ScP** 05 40 08.3 +1.3
comp=Z,17nm,0.7s,baz=32,slow=4.8,SNR=5.7
ARCES LR LR 06 03 45.9
comp=Z,2µm,18.6s,baz=29,slow=41
ARCES PKPPKP **P'P'df** 06 05 36.0 +1.0
comp=Z,4.2nm,0.8s,baz=349,slow=2.5,SNR=3.7
CM31 Chiang Mai Arr 54.68 255 *e*P **P** 05 35 25.7 +1.4
comp=Z,123nm,0.7s
CMAR Chiang Mai Arr 54.68 255 P **P** 05 35 25.8 +1.5
CMAR PcP **PcP** 05 36 25.6 +0.5
CMAR ScP **ScP** 05 40 09.3 +1.0
CMAR P'P'ab **P'P'ab** 06 06 08.2 -1.6
CMAR Chiang Mai Arr 54.68 255 P **P** 05 35 25.8 +1.5
comp=Z,122nm,0.7s,baz=32,slow=7.0,SNR=303
CMAR PcP **PcP** 05 36 25.6 +0.5
comp=Z,28nm,0.7s,baz=18,slow=3.2,SNR=8.4
CMAR ScP **ScP** 05 40 09.3 +1.0
comp=Z,14nm,0.8s,baz=14,slow=3.8,SNR=6.9
CMAR PKP2ab 06 06 08.2
comp=Z,0.8nm,0.3s,baz=306,slow=4.8,SNR=6.0
KHMM Horse Mountain 54.69 67 *e*P **P** 05 35 26.4 +2.1
comp=Z,714nm,1.0s
A13A Flathead Natio 54.73 54 ⇓P **P** 05 35 25.2 +0.8
baz=54
YBH Yreka Blue Hor 54.73 65 *e*P **P** 05 35 26.4 +1.9
comp=Z,451nm,1.1s
YBH pP **pP** 05 36 00.1 -0.5
YBH *e* 05 36 01.2
YBH Yreka Blue Hor 54.73 65 P **P** 05 35 26.5 +1.9
comp=Z,394nm,1.0s,baz=332,slow=2.6,SNR=306
YBH pP **pP** 05 36 00.1 -0.5
comp=Z,140nm,1.0s,baz=107,slow=1.8,SNR=3.5
MYLDM Lahad Datu 54.77 227 P **P** 05 35 27.7 +2.8
MYLDM Lahad Datu 54.77 227 P **P** 05 35 27.4 +2.5
comp=Z,155nm,1.8s,comp=Z,5µmcomp=Z,14µm
WALA Waterton Lakes 54.91 54 *e*P **P** 05 35 26.3 +0.6
C12B Naegeli Ranch, 54.95 56 ⇓P **P** 05 35 26.9 +1.0
baz=55,SNR=168
SDKM Sandakan 54.98 228 P **P** 05 35 27.5 +1.0
B13A Whitefish 55.05 54 ⇑P **P** 05 35 27.6 +1.0
baz=55,SNR=362
KKM Kota Kinabalu 55.10 230 *e*P **P** 05 35 29.0 +1.6
comp=Z,884nm,2.0s
KKM Kota Kinabalu 55.10 230 P **P** 05 35 29.4 +2.0
KKM Kota Kinabalu 55.10 230 P **P** 05 35 29.1 +1.7
comp=Z,179nm,1.6s,comp=Z,4µm
A14A Double T Ranch 55.21 53 ⇓P **P** 05 35 28.4 +0.5
baz=55,SNR=239
BSMT Bassoo Peak 55.22 55 *e*P **P** 05 35 29.1 +1.1
TAPN Taplejung 55.30 272 *e*P **P** 05 35 29.4 +0.4
comp=Z,516nm,1.5s
KK31 Karatay Array 55.33 298 *i*P **P** 05 35 28.0 -0.7
KK31 pmax pmax
comp=Z,167nm,1.2s
KKAR Karatay Array 55.33 298 *e*P **P** 05 35 28.8 +0.1
KKAR Karatay Array 55.33 298 *e*P **P** 05 35 28.8 +0.1
BLMT Blacktail Moun 55.34 55 *e*P **P** 05 35 30.0 +1.1
D12A Red Ives Fores 55.43 56 ⇑P **P** 05 35 29.8 +0.4
baz=55
C13A Hot Springs 55.44 55 ⇓P **P** 05 35 30.5 +1.1
baz=55,SNR=153
TMCR Tamitsa 55.47 332 *e*P **P** 05 35 28.9 -0.3
TMCR pmax pmax
comp=Z,583nm,1.7s
KIPM Iron Peak 55.52 67 *e*P **P** 05 35 31.9 +1.7
comp=Z,468nm,1.2s
KIPM *e* 05 36 06.3
KCPM Cahto Peak 55.54 68 *e*P **P** 05 35 31.5 +1.1
comp=Z,170nm,1.0s
JTMT Jette 55.55 55 *e*P **P** 05 35 31.4 +1.1
A15A Johnson Ranch, 55.56 53 ⇑P **P** 05 35 30.5 +0.2
baz=55
WDC Whiskeytown Da 55.57 66 *e*P **P** 05 35 31.6 +1.2
WDC pmax pmax
comp=Z,365nm,1.2s
WDC Whiskeytown Da 55.57 66 *e*P **P** 05 35 31.6 +1.2
comp=Z,365nm,1.2s
YBMT Yellow Bay 55.61 55 *e*P **P** 05 35 31.6 +0.9
comp=Z,228nm,1.0s
B14A Marquette Ranc 55.67 54 ⇓P **P** 05 35 31.8 +0.6
baz=56,SNR=68
TRO Tromso 55.78 343 *e*P **P** 05 35 31.3 -0.1
TRO eS **S** 05 43 04.3 -1.1
BMO Blue Mountains 55.78 59 *e*P **P** 05 35 33.0 +1.0
comp=Z,388nm,1.1s
C14A Swan Lake 55.81 55 ⇑P **P** 05 35 33.1 +1.0
baz=56
ODAN Odare 55.84 272 *e*P **P** 05 35 33.0 +0.2
TSM Tawau 55.84 227 P **P** 05 35 33.8 +1.2
SWMT Swartz Lake 55.84 55 *e*P **P** 05 35 33.2 +0.8
D13A Huson 55.87 56 ⇓P **P** 05 35 33.1 +0.6
baz=56,SNR=142
MOD Modoc 56.01 64 *e*P **P** 05 35 35.2 +1.5
comp=Z,971nm,1.0s
MOD *e* 05 36 09.8
GUN Gumba 56.07 274 *e*P **P** 05 35 34.8 +0.3
B15A Bradely Ranch, 56.07 54 ⇑P **P** 05 35 34.3 +0.3
baz=56,SNR=181
A16A West Butte Ran 56.15 52 ⇑P **P** 05 35 34.7 +0.2
baz=56,SNR=219
RAMN Ramite 56.28 272 *e*P **P** 05 35 36.1 +0.2
comp=Z,283nm,0.6s
SLMT Seeley Lake 56.28 55 *e*P **P** 05 35 36.4 +0.8
HOPS Hopland 56.29 68 *e*P **P** 05 35 36.3 +0.8
comp=Z,404nm,1.3s
HOPS *e* 05 36 11.7
F12A Elk City 56.31 57 ⇑P **P** 05 35 36.9 +1.1
baz=56,SNR=277
MSO Missoula 56.31 56 *e*P **P** 05 35 36.5 +0.7
comp=Z,294nm,1.1s
MSO Missoula 56.31 56 ⇓P **P** 05 35 36.5 +0.7
baz=56,SNR=396
D14A Greenough 56.38 55 ⇓P **P** 05 35 37.0 +0.7
baz=56,SNR=488
C15A Salmond Ranch, 56.39 54 ⇓P **P** 05 35 37.4 +1.1
baz=56,SNR=417
E13A Victor 56.43 56 ⇓P **P** 05 35 37.2 +0.6
baz=56,SNR=190
B16A M & M Farms, S 56.44 53 ⇓P **P** 05 35 36.7 +0.1
baz=56,SNR=83
KKN Kakani 56.53 274 *e*P **P** 05 35 38.1 +0.4
comp=Z,386nm,1.0s
PKI Pulchoki 56.60 274 *e*P **P** 05 35 38.8 +0.5
A17A Triple J Farms 56.60 52 ⇑P **P** 05 35 38.0 +0.3
baz=56,SNR=218
PKIN Phulchoki 56.60 274 *e*P **P** 05 35 38.4 +0.2
comp=Z,95nm,0.7s
WVOR Wild Horse Val 56.60 62 *e*P **P** 05 35 39.2 +1.3
WVOR *e* 05 36 14.2
WVOR pmax pmax
comp=Z,554nm,1.0s
WVOR Wild Horse Val 56.60 62 *e*P **P** 05 35 39.2 +1.3
comp=Z,554nm,1.0s
WVOR *e* 05 36 14.2
CHMT Chamberlain Mo 56.62 55 *e*P **P** 05 35 38.5 +0.5
SUMG Summit 56.63 5 *e*P **P** 05 35 37.9 0.0
SUMG *e* 05 36 17.0
SUMG pmax pmax
comp=Z,401nm,0.8s
SUMG Summit 56.63 5 *e*P **P** 05 35 37.9 0.0
comp=Z,401nm,0.8s
SUMG *e* 05 36 17.0
SUMG Summit 56.63 5 ⇓ *i*P **P** 05 35 38.2 +0.3
comp=Z,256nm,0.9s
SUMG *i* pP **pP** 05 36 16.9 +2.7
SUMG *i* S **S** 05 43 15.3 -2.1
SUMG *e* 05 44 25.3
SUMG *i* 05 45 12.4
G12A Big Creek, Yel 56.68 58 ⇑P **P** 05 35 39.3 +0.9
baz=56
DMN Daman 56.77 274 *e*P **P** 05 35 41.0 +1.6
comp=Z,181nm,0.6s
F13A Darby 56.78 57 ⇓P **P** 05 35 39.7 +0.6
baz=57,SNR=161
E14A Clinton 56.82 56 ⇓P **P** 05 35 40.2 +0.9
baz=57,SNR=236
C16A Fuhringer Ranc 56.82 54 ⇓P **P** 05 35 40.2 +0.9
baz=57,SNR=322
FFC Flin Flon 56.84 43 *e*P **P** 05 35 40.2 +1.1
FFC pmax pmax
comp=Z,146nm,0.9s
FFC Flin Flon 56.84 43 *e*P **P** 05 35 40.2 +1.1
comp=Z,146nm,0.9s
FFC Flin Flon 56.84 43 P **P** 05 35 40.3 +1.1
comp=Z,925nm,1.0s
D15A Lincoln 56.91 55 ⇓P **P** 05 35 41.0 +1.0
baz=57
MCCM Marconi Confer 56.96 69 *e*P **P** 05 35 40.7 +0.4
comp=Z,229nm,1.1s
MCCM *e* 05 36 15.4
AB31 Akbulak array 56.96 309 *i*P **P** 05 35 39.8 -0.3
AB31 pmax pmax
comp=Z,103nm,0.5s
ABKAR Akbulak array 56.96 309 *e*P **P** 05 35 40.0 -0.1
comp=Z,92nm,0.5s
ABKAR *e* 05 36 18.9
B17A L&G Farms, Che 56.98 53 ⇓P **P** 05 35 40.9 +0.6
baz=57,SNR=218
OHCM Honcut 57.00 67 *e*P **P** 05 35 41.1 +0.6
A18A Metzger Ranch, 57.05 52 ⇑P **P** 05 35 41.0 +0.2
baz=57,SNR=155
CHBT CHBT 57.06 248 P **P** 05 35 43.4 +2.2
comp=Z,1µm,1.2s,comp=Z,14µmcomp=Z,17µm
DANN Dangsing 57.10 276 *e*P **P** 05 35 42.6 +0.8
comp=Z,204nm,0.7s
E15A Deer Lodge 57.26 55 ⇑P **P** 05 35 43.3 +0.9
baz=57,SNR=78
F14A Wisdom 57.27 56 ⇑P **P** 05 35 43.4 +0.8
baz=57,SNR=127
G13A Cobalt 57.29 57 ⇓P **P** 05 35 43.4 +0.7
baz=57,SNR=271
BEKR Beckworth 57.30 66 *e*P **P** 05 35 43.8 +0.9
comp=Z,195nm,1.0s
BEKR *e* 05 36 18.5
H12A Diamond D Ranc 57.31 58 ⇓P **P** 05 35 43.5 +0.7
baz=57,SNR=112
D16A Dana Ranch, Ca 57.42 54 ⇑P **P** 05 35 44.8 +1.2
baz=57,SNR=285
B18A Beardsley Farm 57.42 52 ⇓P **P** 05 35 44.3 +0.8
baz=57,SNR=313
C17A Wharram Farm, 57.43 53 ⇑P **P** 05 35 44.1 +0.6
baz=57,SNR=359
HRY Holter Researc 57.49 55 *e*P **P** 05 35 45.3 +1.3
MFID Camas Ranch 57.52 60 *e*P **P** 05 35 45.5 +1.2
comp=Z,409nm,1.3s
MFID Camas Ranch 57.52 60 ⇓P **P** 05 35 45.7 +1.3
baz=57,SNR=246
A19A Klindworth Far 57.59 51 ⇓P **P** 05 35 45.2 +0.6
baz=57,SNR=187
G14A Jackson 57.60 57 ⇓P **P** 05 35 45.3 +0.3
baz=57,SNR=57
KOLN Koldanda 57.61 275 *e*P **P** 05 35 45.7 +0.5
comp=Z,104nm,0.7s
SAC San Andreas 57.61 69 *e*P **P** 05 35 45.0 +0.2
SAC *e* 05 36 20.2
SAC pmax pmax
comp=Z,188nm,1.0s
SAC San Andreas 57.61 69 *e*P **P** 05 35 45.0 +0.2
comp=Z,188nm,1.0s
SAC *e* 05 36 20.2
H13A Challis 57.62 58 ⇓P **P** 05 35 45.9 +0.9
baz=57,SNR=306
I12A Atlanta 57.66 59 ⇓P **P** 05 35 46.5 +1.2
baz=58,SNR=317
EGMT Eagleton 57.68 52 *e*P **P** 05 35 45.8 +0.5
comp=Z,268nm,1.1s
EGMT Eagleton 57.68 52 ⇑P **P** 05 35 45.9 +0.6
baz=58,SNR=172
E16A East Helena 57.69 55 ⇓P **P** 05 35 46.7 +1.3
baz=58,SNR=229
F15A Butte 57.72 56 ⇑P **P** 05 35 46.7 +1.0
baz=58,SNR=211
LRM Limekiln Ridge 57.75 56 *e*P **P** 05 35 46.9 +0.9
PYUN Piuthan 57.76 276 *e*P **P** 05 35 46.5 +0.2
comp=Z,1µm,1.5s
D17A Six Diamond Ra 57.79 54 ⇑P **P** 05 35 46.9 +0.8
baz=58,SNR=317
B19A Brinkman Farms 57.80 51 ⇓P **P** 05 35 47.0 +0.9
baz=58,SNR=348
DLMT Dillon 57.98 56 *e*P **P** 05 35 48.4 +0.9
comp=Z,300nm,1.1s
A20A Cobblestone Ra 58.02 51 ⇓P **P** 05 35 48.5 +0.9
baz=58,SNR=284
WCN Washoe City 58.02 66 *e*P **P** 05 35 49.1 +1.2
WCN *e* 05 36 24.2
WCN pmax pmax
comp=Z,413nm,1.2s
WCN Washoe City 58.02 66 *e*P **P** 05 35 49.1 +1.2
comp=Z,413nm,1.2s
WCN *e* 05 36 24.2
H14A Leadore 58.06 57 ⇑P **P** 05 35 48.9 +0.7
baz=58,SNR=127
I13A Wildhorse Cree 58.13 58 ⇑P **P** 05 35 50.1 +1.5
baz=58,SNR=555
E17A Martinsdale 58.16 54 ⇓P **P** 05 35 50.3 +1.5
baz=58,SNR=253
G15A Dillon 58.17 56 ⇓P **P** 05 35 49.7 +0.9
baz=58,SNR=466
HLID Hailey 58.20 59 *e*P **P** 05 35 50.4 +1.3
comp=Z,281nm,1.1s
HLID Hailey 58.20 59 ⇓P **P** 05 35 50.6 +1.5
baz=58,SNR=364
MCMT McKenzie Canyo 58.20 57 *e*P **P** 05 35 49.9 +0.7
comp=Z,90nm,0.9s
D18A Linhart Farms, 58.21 53 ⇓P **P** 05 35 50.2 +1.2
baz=58,SNR=84
F16A Kennard Place, 58.21 55 ⇓P **P** 05 35 50.2 +1.2
baz=58,SNR=61
C19A Slack Wire Ran 58.23 52 ⇓P **P** 05 35 50.2 +1.1
baz=58,SNR=256
B20A Solberg Farm, 58.27 51 ⇓P **P** 05 35 50.1 +0.8
baz=58,SNR=270
BOZ Bozeman (W) 58.30 55 *e*P **P** 05 35 51.0 +1.3
BOZ pmax pmax
comp=Z,290nm,0.9s
BOZ Bozeman (W) 58.30 55 *e*P **P** 05 35 51.0 +1.3
comp=Z,290nm,0.9s
BOZ Bozeman (W) 58.30 55 ⇑P **P** 05 35 51.2 +1.5
baz=58,SNR=560
CAL Calcutta 58.32 267 *e*P **P** 05 35 49.9 0.0
CAL *ex* x 05 41 33.4
JOF Joensuu 58.38 333 *e*P **P** 05 35 48.6 -1.2
JOF pmax pmax
comp=Z,21nm,0.5s
JOF Joensuu 58.38 333 *e*p **P** 05 35 48.6 -1.2
comp=Z,21nm,0.5s
A21A Bergtoil Ranch 58.44 50 ⇑P **P** 05 35 51.7 +1.2
baz=58,SNR=77
J13A Cove Ranch, Pi 58.44 59 ⇑P **P** 05 35 52.3 +1.6
baz=58,SNR=345
H15A Lima 58.45 57 ⇑P **P** 05 35 51.6 +0.8
baz=58,SNR=154
I14A Mackay 58.48 58 ⇓P **P** 05 35 52.3 +1.3
baz=58,SNR=483
G16A Moss Hill, Enn 58.49 56 ⇓P **P** 05 35 52.4 +1.3
baz=58,SNR=412
CMB Columbia Colle 58.50 67 *e*P **P** 05 35 52.1 +1.0
CMB *e* 05 36 27.5
CMB pmax pmax
comp=Z,323nm,1.2s
CMB Columbia Colle 58.50 67 *e*P **P** 05 35 52.1 +1.0
comp=Z,323nm,1.2s
CMB *e* 05 36 27.5
LGTI Lohaghat 58.56 279 *ex* P 05 35 57.3 +5.8
E18A Harlowton 58.57 54 ⇓P **P** 05 35 53.0 +1.4
baz=58,SNR=138
F17A Fitzpatrick Pl 58.63 55 ⇑P **P** 05 35 53.3 +1.3
baz=58,SNR=198
D19A Cripps Ranch, 58.70 53 ⇑P **P** 05 35 53.5 +1.2
baz=58,SNR=82
BMN Battle Mountai 58.72 63 *e*P **P** 05 35 54.3 +1.5
BMN pmax pmax
comp=Z,327nm,0.9s
BMN Battle Mountai 58.72 63 *e*P **P** 05 35 54.2 +1.5
comp=Z,327nm,0.9s
SAO San Andreas Ge 58.73 69 *e*P **P** 05 35 53.4 +0.7
SAO pmax pmax
comp=Z,148nm,1.1s
SAO San Andreas Ge 58.73 69 *e*P **P** 05 35 53.4 +0.7
comp=Z,148nm,1.1s
C20A Veseth Ranch, 58.77 52 ⇑P **P** 05 35 53.9 +1.1
baz=58,SNR=238
B21A Ellsworth Farm 58.77 51 ⇓P **P** 05 35 53.6 +0.8
baz=58
J14A Carey 58.84 58 ⇑P **P** 05 35 55.9 +2.3
baz=59
A22A Carney Farms, 58.92 49 ⇑P **P** 05 35 54.9 +1.1
baz=59,SNR=196
I15A Monteview 58.95 57 ⇑P **P** 05 35 55.4 +1.1
baz=59,SNR=40
QLMT Earthquake Lak 58.95 56 *e*P **P** 05 35 55.7 +1.4
BOK Bokaro 58.97 270 *e*P **P** 05 35 56.0 +1.6
G17A Pierce Place, 58.98 55 ⇓P **P** 05 35 56.2 +1.8
baz=59,SNR=267
SCO Scoresbysund 59.08 359 *i*P **P** 05 35 53.9 -0.6
comp=Z,13nm,1.6s
DHRM DHARAMSHALA 59.08 284 *e*P **P** 05 35 55.4 0.0
BTM Bintulu 59.09 231 P **P** 05 35 56.7 +1.3
F18A Big Timber 59.12 54 ⇓P **P** 05 35 56.9 +1.6
baz=59,SNR=308
D20A Manuel Ranch, 59.12 52 ⇓P **P** 05 35 56.8 +1.5
baz=59,SNR=236
H16A Russell Place, 59.13 56 ⇓P **P** 05 35 57.1 +1.6
baz=59,SNR=427
C21A Desert Coulee 59.14 51 ⇓P **P** 05 35 56.5 +1.2
baz=59,SNR=86
SDNR Sundarnagar 59.18 283 *e*P **P** 05 35 55.5 -0.4
E19A Rath Farm, Rou 59.22 53 ⇑P **P** 05 35 57.4 +1.4
baz=59,SNR=162
GCMT Greycliff 59.22 54 *e*P **P** 05 35 57.7 +1.6
comp=Z,188nm,1.0s
YMR Madison River 59.30 56 *e*P **P** 05 35 58.2 +1.4
comp=Z,327nm,0.9s
THN Thein Dam 59.32 285 *e*P **P** 05 35 54.5 -2.2
THN *ex* x 05 43 23.5
SMLA Simla 59.32 283 *e*P **P** 05 35 56.6 -0.1
DDI Dehra Dun 59.32 281 *ex* P 05 35 51.8 -5.1
B22A Reddig Ranch S 59.36 50 ⇑P **P** 05 35 57.9 +1.1
baz=59,SNR=36
J15A Blackfoot 59.38 58 ⇓P **P** 05 35 59.0 +1.8
baz=59,SNR=169
A23A Redstone 59.45 49 ⇑P **P** 05 35 58.1 +0.7
baz=59,SNR=5.4
NVAR Mina Array Bea 59.45 66 P **P** 05 35 59.1 +1.3
NVAR pP **pP** 05 36 33.5 -1.0
NVAR P'P' 06 05 24.7
NVAR ⇑ *e* 06 05 37.1
NVAR Mina Array Bea 59.45 66 P **P** 05 35 59.1 +1.3
comp=Z,215nm,0.9s,baz=292,slow=6.9,SNR=634
NVAR pP **pP** 05 36 33.5 -1.0
comp=Z,10nm,0.4s,baz=234,slow=27,SNR=2.4
NVAR PKPPKP **P'P'df** 06 05 24.7 -3.2
comp=Z,2.1nm,1.1s,baz=106,slow=5.3,SNR=5.2
NVAR PKP2bc 06 05 37.1
comp=Z,1.0nm,0.9s,baz=162,slow=4.1,SNR=5.1
E20A Meyer Farm, Mu 59.52 53 ⇓P **P** 05 35 59.4 +1.4
baz=59,SNR=198
NV11 Mina Array Sit 59.53 65 *e*P **P** 05 35 59.5 +1.2
NV11 *e* 05 36 34.8
F19A Roth Farm, Mol 59.55 54 ⇑P **P** 05 35 59.7 +1.4
baz=59,SNR=384
K14A Jones Ranch, D 59.55 59 ⇑P **P** 05 36 00.5 +2.2
baz=59,SNR=422
I16A Newdale 59.56 57 ⇑P **P** 05 36 00.5 +2.1
baz=59,SNR=373
BHK Bhakra 59.58 283 *e*P **P** 05 35 59.6 +1.0
BHK *ex* x 05 36 38.8
KONS Konsvik 59.59 343 *e*P P 05 35 54.2 -3.8
G18A Lazy EL Ranch, 59.60 55 ⇑P **P** 05 35 59.7 +1.0
baz=59,SNR=117
ELK Elko 59.63 62 *e*P **P** 05 36 00.5 +1.5
comp=Z,1µm,0.8s
ELK P'P' 06 05 28.6
ELK Elko 59.63 62 LR LR 05 57 53.7
comp=Z,1µm,20.6s,baz=344,slow=32
ELK PKPPKP **P'P'df** 06 05 28.6 +0.8
comp=Z,1.6nm,0.7s,baz=136,slow=6.5,SNR=6.9
MOR8 Moi Rana 59.63 343 *e*P **P** 05 35 56.4 -2.0
MOR8 AMB AMB 05 35 59.2
comp=Z,130nm,1.8s
LKWY Lake 59.67 56 *e*P **P** 05 36 02.0 +2.7
LKWY pmax pmax
comp=Z,288nm,0.9s
LKWY Lake 59.67 56 *e*P **P** 05 36 02.0 +2.7
comp=Z,288nm,0.9s
MLAC Mammoth Lakes 59.68 67 ⇑P **P** 05 36 01.4 +1.9
baz=60,SNR=36
FLOS Flostrand 59.69 343 *e*P **P** 05 35 58.6 0.0
H17A Grant Village 59.69 56 ⇑P **P** 05 36 02.5 +3.0
baz=60,SNR=560
D21A La Casta Ranch 59.71 52 ⇓P **P** 05 36 00.7 +1.4
baz=60,SNR=169
B23A Brockton 59.73 49 ⇑P **P** 05 36 00.6 +1.2
baz=60,SNR=116
C22A Vida 59.79 50 ⇓P **P** 05 36 00.7 +0.9
baz=60,SNR=140
K15A Arbon 59.81 58 ⇓P **P** 05 36 02.5 +2.3
baz=60,SNR=307
IMW Indian Meadow 59.84 57 *e*P **P** 05 36 02.4 +1.9
comp=Z,327nm,1.1s
L14A Malta 59.87 59 ⇓P **P** 05 36 02.4 +1.9
baz=60,SNR=174
RLMT Red Lodge 59.88 55 *e*P **P** 05 36 02.3 +1.6
comp=Z,436nm,1.0s
RLMT *e* 05 36 37.8
RLMT Red Lodge 59.88 55 ⇓P **P** 05 36 02.4 +1.6
baz=60,SNR=402
A24A Westby 59.89 48 ⇓P **P** 05 36 01.4 +1.0
baz=60,SNR=96
DCID1 Drake Creek 59.92 57 *e*P **P** 05 36 02.9 +1.9
comp=Z,342nm,1.0s
H18A Shoshone NF, C 59.98 55 ⇑P **P** 05 36 02.9 +1.5
baz=60,SNR=145
F20A Billings 59.99 53 ⇑P **P** 05 36 02.7 +1.4
baz=60
RRI2 Red Ridge 60.01 57 *e*P **P** 05 36 03.7 +2.0
comp=Z,391nm,0.9s
I17A Pilgrim Ck. 60.02 56 ⇓P **P** 05 36 04.0 +2.4
baz=60,SNR=185
MTUM Tungsten Hills 60.03 67 *e*P **P** 05 36 03.0 +1.2
E21A Keefer Ranch, 60.03 52 ⇓P **P** 05 36 03.2 +1.7
baz=60,SNR=128
MOOW Moose Ponds 60.04 57 *e*P **P** 05 36 03.5 +1.7
comp=Z,203nm,1.0s
HNR Honiara 60.05 175 P **P** 05 36 02.8 +1.0

HNR **Honiara** 60.05 175 P **P** 05 36 02.7 +1.0
comp=Z,48nm,0.5s,baz=234,slow=15,SNR=3.6
D22A **Cohagen** 60.06 51 ⇑P **P** 05 36 03.0 +1.3
baz=60,SNR=166
C23A **Lambert** 60.09 50 ⇓P **P** 05 36 03.2 +1.3
baz=60,SNR=90
DGMT **Dagmar** 60.11 49 *e*P **P** 05 36 03.0 +1.0
comp=Z,322nm,0.9s
DGMT *e* 05 36 38.6
DGMT **Dagmar** 60.11 49 ⇓P **P** 05 36 02.9 +1.0
baz=60,SNR=140
TPAW **Teton Pass** 60.11 57 *e*P **P** 05 36 04.2 +1.9
comp=Z,480nm,1.1s
TPAW *e* 05 36 39.5
SBUM **Sibu** 60.17 232 P **P** 05 36 05.2 +2.5
SBUM **Sibu** 60.17 232 P **P** 05 36 04.8 +2.1
comp=Z,172nm,1.9s,comp=Z,4µm
LOHW **Long Hollow** 60.21 57 *e*P **P** 05 36 04.6 +1.7
comp=Z,406nm,1.1s
PTRM **Twissleman Ran** 60.22 69 *e*P **P** 05 36 04.0 +1.1
K16A **Soda Springs** 60.22 58 ⇑P **P** 05 36 05.1 +2.1
baz=60,SNR=445
SNOW **Snow King Moun** 60.23 57 *e*P **P** 05 36 05.1 +2.0
comp=Z,317nm,1.0s
SNOW *e* 05 36 40.4
REDW **Red Top Meadow** 60.25 57 *e*P **P** 05 36 05.3 +2.1
comp=Z,6.3nm,1.1s
PMG **Port Moresby** 60.29 189 *e*P **P** 05 36 03.6 +0.2
comp=Z,326nm,1.4s
PMG *e* 05 36 39.4
PMG **Port Moresby** 60.29 189 P **P** 05 36 06.0 +2.6
comp=Z,41nm,0.9s,comp=Z,7µm
PMG **Port Moresby** 60.29 189 P **P** 05 36 03.5 +0.1
comp=Z,20nm,0.6s,baz=13,slow=6.8,SNR=7.2
HVU **Hansel Valley** 60.29 59 *e*P **P** 05 36 05.1 +1.6
HVU pmax pmax
comp=Z,193nm,1.0s
HVU **Hansel Valley** 60.29 59 *e*P **P** 05 36 05.1 +1.6
comp=Z,193nm,1.0s
J17A **Brown Place, J** 60.33 57 ⇓P **P** 05 36 05.7 +2.0
baz=60,SNR=431
H19A **Powell** 60.34 55 ⇓P **P** 05 36 05.4 +1.7
baz=60,SNR=197
KKR **Kurukshetra** 60.34 282 *e*P **P** 05 36 02.9 -0.9
RCTC **Rector, Farmer** 60.34 68 ⇑P **P** 05 36 04.4 +0.7
baz=60,SNR=79
L15A **Malad City** 60.35 59 ⇓P **P** 05 36 05.4 +1.5
baz=60,SNR=237
G20A **Bridger** 60.36 54 ⇑P **P** 05 36 04.8 +1.0
baz=60,SNR=258
KAF **Kangasniemi** 60.41 335 *e*P **P** 05 36 01.9 -1.8
KAF pmax pmax
comp=Z,16nm,0.5s
KAF **Kangasniemi** 60.41 335 *e*p **P** 05 36 01.9 -1.8
comp=Z,16nm,0.5s
TIN **Tinemaha** 60.43 67 ⇑P **P** 05 36 06.0 +1.6
baz=60,SNR=95
F21A **Absaloka Mine,** 60.50 53 ⇓P **P** 05 36 06.0 +1.3
baz=60,SNR=22
D23A **Lindsay** 60.52 51 ⇓P **P** 05 36 06.2 +1.4
baz=60,SNR=107
AHID **Auburn Hatcher** 60.53 58 *e*P **P** 05 36 06.6 +1.5
comp=Z,291nm,1.0s
I18A **Diamond G Ranc** 60.57 56 ⇓P **P** 05 36 07.4 +1.9
baz=60,SNR=168
SMMC **Simmler** 60.58 69 ⇓P **P** 05 36 06.7 +1.3
baz=60,SNR=111
K17A **Gardner Place,** 60.63 57 ⇑P **P** 05 36 07.0 +1.2
baz=60,SNR=144
C24A **Savage** 60.65 50 ⇑P **P** 05 36 07.0 +1.4
baz=60,SNR=31
E22A **Miles City** 60.66 52 ⇓P **P** 05 36 07.0 +1.2
baz=60,SNR=120
VES **Vestal, Richgr** 60.76 68 ⇑P **P** 05 36 06.8 +0.4
baz=61,SNR=177
I19A **Meeteetse** 60.77 55 ⇓P **P** 05 36 08.2 +1.5
baz=61,SNR=107
J18A **Kendall Valley** 60.80 57 ⇑P **P** 05 36 08.4 +1.4
baz=61,SNR=92
FRB **Frobisher Bay** 60.84 21 LR LR 06 05 05.9
comp=Z,1µm,18.4s,baz=218,slow=38
FRB PKPPKP **P'P'df** 06 05 21.4 -4.0
comp=Z,1.6nm,0.8s,baz=149,slow=11,SNR=4.3
L16A **Fish Haven** 60.86 58 ⇓P **P** 05 36 09.0 +1.6
baz=61,SNR=200
G21A **Lodge Grass** 60.87 53 ⇓P **P** 05 36 08.1 +0.9
baz=61,SNR=36
E23A **Ismay** 60.94 51 ⇑P **P** 05 36 09.3 +1.7
baz=61
GRAC **Grapevine Rang** 60.97 66 ⇓P **P** 05 36 09.7 +1.7
baz=61,SNR=347
F22A **Rosebud** 60.97 52 ⇓P **P** 05 36 08.9 +1.1
baz=61,SNR=138
PKM **Peak Mountain** 60.97 69 ⇓P **P** 05 36 09.4 +1.2
baz=61,SNR=119
H20A **Greybull** 60.98 54 ⇓P **P** 05 36 08.7 +0.7
baz=61,SNR=70
SFJD **Kangerlussuaq** 60.98 11 *e*P **P** 05 36 07.0 -0.5
comp=Z,542nm,1.3s
SFJD **Kangerlussuaq** 60.98 11 ⇓*i*P **P** 05 36 07.2 -0.3
comp=Z,95nm,0.7s
SFJD *i* S **S** 05 44 07.5 -5.3
SFJD *i* 05 45 40.3
NDI **New Delhi** 60.99 281 *e*P **P** 05 36 06.0 -2.1
NDI *ex* x 05 43 24.5
FIA1 **FINESS Array S** 61.02 335 *e*P **P** 05 36 05.7 -2.2
FIA1 *e* 05 36 46.3
FINES **FINESS Array B** 61.02 335 P **P** 05 36 06.8 -1.1
FINES PcP **PcP** 05 36 48.9 -0.5
FINES P'P' 06 05 17.9
FINES **FINESS Array B** 61.02 335 P **P** 05 36 06.8 -1.1
comp=Z,26nm,0.5s,baz=31,slow=7.9,SNR=140
FINES PcP **PcP** 05 36 48.9 -0.5
comp=Z,19nm,0.5s,baz=49,slow=4.4,SNR=10
FINES PKPPKP P'P'df 06 05 17.9 -7.2
comp=Z,1.7nm,0.6s,baz=174,slow=1.9,SNR=5.4
R11A **Troy Canyon, C** 61.07 64 ⇑P **P** 05 36 09.8 +1.1
baz=61,SNR=359
HWUT **Hardware Ranch** 61.07 59 *e*P **P** 05 36 10.2 +1.5
comp=Z,298nm,0.8s
L17A **Cokeville** 61.11 58 ⇓P **P** 05 36 10.4 +1.4
baz=61,SNR=278
K18A **Toltan Ranch,** 61.18 57 ⇓P **P** 05 36 11.5 +2.0
baz=61,SNR=622
PUL **Pulkovo** 61.18 332⇑ *e*P **P** 05 36 09.8 +0.9
PUL pmax pmax
comp=Z,299nm,1.6s
M16A **Huntsville** 61.24 59 ⇓P **P** 05 36 11.2 +1.3
baz=61
ISA **Isabella** 61.24 68 *e*P **P** 05 36 09.8 0.0
ISA *e* 05 36 44.5
ISA pmax pmax
comp=Z,164nm,1.0s
ISA **Isabella** 61.24 68 *e*P **P** 05 36 09.8 0.0
comp=Z,164nm,1.0s
ISA *e* 05 36 44.5
ISA **Isabella** 61.24 68 ⇑P **P** 05 36 10.0 +0.2
baz=61,SNR=218
J19A **Crowheart** 61.27 56 ⇑P **P** 05 36 11.7 +1.6
baz=61,SNR=127
I20A **Worland** 61.28 55 ⇑P **P** 05 36 11.6 +1.6
baz=61,SNR=189
DAC **Darwin (Calif)** 61.33 67 *e*P **P** 05 36 11.3 +0.7
DAC pmax pmax
comp=Z,247nm,1.2s
DAC **Darwin (Calif)** 61.33 67 *e*P **P** 05 36 11.2 +0.7
comp=Z,247nm,1.2s
G22A **Birney** 61.34 53 ⇑P **P** 05 36 11.4 +1.0
baz=61,SNR=119
SBC **Santa Barbara** 61.34 70 ⇑P **P** 05 36 11.7 +1.3
baz=61,SNR=25
BW06 **Boulder Array** 61.35 57 *e*P **P** 05 36 11.7 +1.1
comp=Z,400nm,1.0s
BW06 *e* 05 36 46.5
BW06 **Boulder Array** 61.35 57 ⇓P **P** 05 36 11.9 +1.2
baz=61,SNR=760
PDAR **Pinedale Array** 61.35 57 P **P** 05 36 11.7 +1.0
PDAR pP **pP** 05 36 46.9 -0.7
PDAR P'P' 06 05 22.2
PDAR **Pinedale Array** 61.35 57 P **P** 05 36 11.7 +1.0
comp=Z,345nm,0.9s,baz=318,slow=2.0,SNR=832
PDAR pP **pP** 05 36 46.9 -0.7
comp=Z,147nm,1.0s,baz=325,slow=2.3,SNR=4.0
PDAR LR LR 06 04 32.6
comp=Z,1µm,18.1s,baz=154,slow=38
PDAR PKPPKP **P'P'df** 06 05 22.2 -2.8
comp=Z,3.0nm,1.1s,baz=146,slow=2.9,SNR=5.6

DUG **Dugway** 61.36 61 *e*P **P** 05 36 12.1 +1.5
DUG pmax pmax
comp=Z,414nm,1.0s
DUG **Dugway** 61.36 61 *e*P **P** 05 36 12.1 +1.5
comp=Z,414nm,1.0s
DUG **Dugway** 61.36 61 ⇓P **P** 05 36 12.2 +1.5
baz=61,SNR=456
H21A **Big Horn, Sher** 61.37 54 ⇓P **P** 05 36 11.8 +1.1
baz=61,SNR=178
E24A **Baker** 61.39 51 ⇑P **P** 05 36 11.9 +1.3
baz=61,SNR=40
ARVC **Arvin** 61.40 69 ⇑P **P** 05 36 11.2 +0.4
baz=61,SNR=50
F23A **Volborg** 61.43 52 ⇑P **P** 05 36 12.2 +1.2
baz=61,SNR=224
MPMC **Manual Prospec** 61.54 67 ⇑P **P** 05 36 13.0 +1.0
baz=61,SNR=447
AGRA **Agra** 61.55 279 *e*P **P** 05 36 11.5 -0.4
CTU **Camp Tracy** 61.60 60 *e*P **P** 05 36 13.7 +1.4
comp=Z,245nm,0.9s
FURC **Furnace Creek,** 61.63 66 ⇑P **P** 05 36 13.7 +1.4
baz=62,SNR=591
M17A **Scullys Gap (B** 61.65 58 ⇑P **P** 05 36 13.8 +1.1
baz=62,SNR=106
L18A **Fontenelle, Gr** 61.68 58 ⇑P **P** 05 36 14.2 +1.3
baz=62,SNR=223
K19A **Absolon Red Bu** 61.69 56 ⇑P **P** 05 36 13.4 +0.6
baz=62,SNR=158
BSC **Santa Cruz Isl** 61.70 70 ⇓P **P** 05 36 13.6 +0.7
baz=62,SNR=32
J20A **Shoshoni** 61.72 55 ⇓P **P** 05 36 14.5 +1.5
baz=62,SNR=134
H22A **Clearmont** 61.74 53 ⇑P **P** 05 36 14.1 +1.0
baz=62,SNR=27
G23A **Biddle** 61.81 52 ⇑P **P** 05 36 14.4 +0.9
baz=62,SNR=118
I21A **Big Trails, Te** 61.81 55 ⇑P **P** 05 36 14.8 +1.1
baz=62,SNR=322
OSI **Osito Adit** 61.81 69 *e*P **P** 05 36 14.5 +0.8
comp=Z,460nm,1.0s
OSI **Osito Adit** 61.81 69 ⇑P **P** 05 36 14.7 +1.1
baz=62,SNR=28
KUDL **Kundal** 61.82 281 *e*P **P** 05 36 12.8 -0.9
KUDL AMb AMB 05 36 15.2
comp=Z,186nm,0.7s
F24A **Ekalaka** 61.83 51 P **P** 05 36 14.7 +1.1
baz=62,SNR=68
JLU **Jordanelle** 61.83 60 *e*P **P** 05 36 15.2 +1.3
comp=Z,265nm,1.1s
LRMC **Laurel Mountai** 61.83 68 ⇑P **P** 05 36 14.7 +0.8
baz=62,SNR=210
L19A **Farson** 61.92 57 ⇑P **P** 05 36 15.4 +1.0
baz=62,SNR=106
N17A **Moffit Pass** 61.93 59 ⇓P **P** 05 36 15.8 +1.2
baz=62,SNR=412
MOS **Moscow** 61.94 325 *d*⇓P **P** 05 36 13.7 -0.4
MOS *e**PP **pP** 05 36 51.8 +0.8
MOS *e* 05 38 31.2
MOS *e*PPP PPP 05 39 59.0
MOS *i* S **S** 05 44 22.7 -2.5
MOS pmax pmax
comp=Z,2µm,2.5s
MOS pmax pmax
comp=N,700nm,2.0s
MOS pmax pmax
comp=Z,606nm,1.5s
MOS pmax pmax
comp=N,249nm,1.5s
BLG **Laguna Peak** 61.96 70 ⇑P **P** 05 36 15.2 +0.6
baz=62,SNR=67
KSM **Kuching** 61.97 233 *e*P **P** 05 36 17.1 +2.3
comp=N,506nm,1.5s
KSM *e* 05 36 54.5
KSM **Kuching** 61.97 233 P **P** 05 36 17.3 +2.4
KSM **Kuching** 61.97 233 P **P** 05 36 17.1 +2.3
comp=N,277nm,1.8s,comp=N,5µm
M18A **Lyman** 62.01 58 ⇑P **P** 05 36 16.2 +1.1
baz=62,SNR=117
J21A **Lysite** 62.06 55 ⇓P **P** 05 36 16.3 +0.9
baz=62,SNR=171
EDW2 **Edwards Air Fo** 62.06 68 ⇑P **P** 05 36 16.4 +1.0
baz=62,SNR=470
DAU **Daniels Canyon** 62.06 60 *e*P **P** 05 36 17.1 +1.5
DAU **Daniels Canyon** 62.06 60 *e*P **P** 05 36 17.1 +1.5
K20A **Yellowstone Ra** 62.07 56 ⇓P **P** 05 36 15.8 +0.4
baz=62,SNR=168
MPU **Maple Canyon** 62.13 60 *e*P **P** 05 36 17.4 +1.5
comp=N,414nm,0.9s
I22A **9 Mile Ranch,** 62.17 54 ⇓P **P** 05 36 17.3 +1.3
baz=62,SNR=120
G24A **Alzada** 62.20 52 ⇓P **P** 05 36 16.9 +0.7
baz=62,SNR=56
H23A **Clabaugh Cattl** 62.25 53 ⇓P **P** 05 36 17.1 +0.6
baz=62,SNR=7.3
KHET **Khetri** 62.30 281 *e*P **P** 05 36 16.3 -0.6
KHET *ex* x 05 36 55.3
DECC **Green Verdugo** 62.30 69 ⇑P **P** 05 36 17.7 +0.8
baz=62,SNR=65
SHOC **Shoshone** 62.36 66 ⇓P **P** 05 36 18.3 +1.0
baz=62,SNR=207
DGPR **DIGLIPUR** 62.42 257 *e*P **P** 05 36 17.5 -0.3
DGPR AMB AMB 05 36 20.6
comp=Z,1µm,1.7s
M19A **Rock Springs** 62.44 57 ⇑P **P** 05 36 18.7 +0.7
baz=62,SNR=45
PASC **Pasadena Art C** 62.44 69 *e*P **P** 05 36 18.3 +0.5
comp=Z,1µm,1.1s
GSC **Goldstone** 62.47 67 *e*P **P** 05 36 18.9 +0.8
GSC pmax pmax
comp=Z,309nm,1.0s
GSC **Goldstone** 62.47 67 *e*P **P** 05 36 18.9 +0.8
comp=Z,309nm,1.0s
GSC **Goldstone** 62.47 67 ⇑P **P** 05 36 19.0 +1.0
baz=62,SNR=296
MWC **Mount Wilson** 62.48 69 *e*P **P** 05 36 18.9 +0.6
MWC *e* 05 36 54.5
MWC pmax pmax
comp=Z,594nm,1.1s
MWC **Mount Wilson** 62.48 69 *e*P **P** 05 36 18.9 +0.6
comp=Z,594nm,1.1s
MWC *e* 05 36 54.5
J22A **Midwest** 62.51 54 ⇑P **P** 05 36 19.2 +0.8
baz=62,SNR=186
L20A **Wamsutter** 62.52 57 ⇑P **P** 05 36 19.5 +0.9
baz=62,SNR=207
N18A **Larsen Ranch,** 62.53 58 ⇓P **P** 05 36 19.3 +0.7
baz=62,SNR=147
H24A **Dirks Ranch, A** 62.55 52 ⇑P **P** 05 36 18.9 +0.5
baz=62,SNR=123
KTGM **Kuala Trenggan** 62.59 242 P **P** 05 36 21.9 +3.0
STKI **Sintang** 62.59 231 P **P** 05 36 20.9 +1.9
ULM **Lac du Bonnet** 62.64 43 *e*P **P** 05 36 19.3 +0.5
comp=Z,501nm,2.3s
ULM pP **pP** 05 36 54.7 -1.2
ULM S **S** 05 44 33.8 -0.4
ULM P'P' 06 05 20.8
ULM **Lac du Bonnet** 62.64 43 P **P** 05 36 18.7 -0.2
comp=Z,61nm,0.9s,baz=313,slow=7.0,SNR=55
ULM pP **pP** 05 36 54.7 -1.2
comp=Z,74nm,1.1s,baz=328,slow=7.3,SNR=4.7
ULM S **S** 05 44 33.8 -0.4
comp=Z,8.4nm,1.0s,baz=233,slow=20,SNR=5.5
ULM LR LR 06 04 12.4
comp=Z,2µm,21.3s,baz=320,slow=36
ULM PKPPKP **P'P'df** 06 05 20.8 -1.9
comp=Z,2.7nm,0.6s,baz=156,slow=5.0,SNR=4.3
I23A **Meade Ranch, G** 62.65 53 ⇓P **P** 05 36 19.7 +0.6
baz=62
RRX **Edison Barstow** 62.65 68 ⇑P **P** 05 36 20.2 +1.0
baz=62,SNR=8.2
K21A **Alcova** 62.66 55 ⇓P **P** 05 36 20.2 +0.8
baz=62,SNR=329
ARUT **Antelope Range** 62.68 63 *e*P **P** 05 36 20.6 +1.1
ARUT pmax pmax
comp=Z,179nm,1.0s
ARUT **Antelope Range** 62.68 63 *e*P **P** 05 36 20.6 +1.1
comp=Z,178nm,1.0s
FMP **Fort Macarthur** 62.70 69 ⇑P **P** 05 36 20.2 +0.7
baz=63,SNR=9.6
BFSC **Mount Baldy Ra** 62.71 69 ⇓P **P** 05 36 20.4 +0.7
baz=63,SNR=162
MDND **Maddock** 62.72 47 ⇑P **P** 05 36 20.8 +1.4
baz=62,SNR=138
XMAS **Kiritimati** 62.77 124 *e*P **P** 05 36 20.3 +0.2
comp=Z,598nm,1.4s
XMAS *e* 05 36 56.2
OBN **Obninsk** 62.81 325 *d*⇓P **P** 05 36 18.7 -1.1

OBN *i* *PP **PcP** 05 36 55.1 -1.7
OBN *i* S **S** 05 44 31.7 -4.3
OBN pmax pmax
comp=Z,551nm,1.4s
OBN **Obninsk** 62.81 325 P **P** 05 36 19.4 -0.4
comp=Z,1µm,1.5s,SNR=16
CIS **Catalina Islan** 62.85 70 ⇓P **P** 05 36 20.9 +0.4
baz=63,SNR=31
N19A **John Jarvie Ra** 62.86 58 ⇑P **P** 05 36 21.6 +0.9
baz=63,SNR=126
MVU **Marysvale** 62.87 62 *e*P **P** 05 36 22.4 +1.5
comp=Z,172nm,1.0s
TMUT **Trail Mountain** 62.87 60 *e*P **P** 05 36 22.4 +1.4
comp=Z,388nm,0.8s
MSU **Marysvale** 62.88 62 *e*P **P** 05 36 22.5 +1.6
MSU *e* 05 36 58.5
MSU **Marysvale** 62.88 62 *e*P **P** 05 36 22.5 +1.6
MSU *e* 05 36 58.5
CCUT **Cedar City** 62.88 63 *e*P **P** 05 36 22.3 +1.3
comp=Z,227nm,1.1s
CCUT *e* 05 36 56.1
TUQ **Turquoise Moun** 62.89 67 ⇓P **P** 05 36 21.9 +0.9
baz=63,SNR=350
M20A **Sweetwater, Wa** 62.97 57 ⇓P **P** 05 36 22.9 +1.4
baz=63,SNR=151
J23A **Dilts Ranch, B** 62.99 54 ⇑P **P** 05 36 22.1 +0.6
baz=63,SNR=17
P17A **Butcher Ranch,** 63.01 60 ⇓P **P** 05 36 23.1 +1.4
baz=63,SNR=155
K22A **Casper** 63.03 55 ⇑P **P** 05 36 22.6 +0.9
baz=63,SNR=88
SCI **San Clemente I** 63.06 70 ⇓P **P** 05 36 22.5 +0.6
baz=63,SNR=18
L21A **Rawlins** 63.07 56 ⇑P **P** 05 36 23.0 +0.9
baz=63,SNR=103
HEC **Hector,Ludlow** 63.08 67 ⇑P **P** 05 36 23.1 +1.0
baz=63,SNR=670
BBRC **Big Bear Solar** 63.13 68 ⇓P **P** 05 36 23.4 +0.8
baz=63,SNR=119
I24A **Kuenmerle Ranc** 63.14 53 ⇑P **P** 05 36 23.0 +0.5
baz=63,SNR=38
Q16A **Castle Valley** 63.16 61 ⇑P **P** 05 36 24.2 +1.5
baz=63,SNR=187
JBP **Jabalpur** 63.17 274 ⇓*i*P **P** 05 36 23.4 +0.7
JBP *ex* x 05 42 55.0
P18A **Preston Nutter** 63.17 60 ⇓P **P** 05 36 24.2 +1.3
baz=63
RSSD **Black Hills** 63.25 52 *e*P **P** 05 36 24.1 +0.8
RSSD *e* 05 36 59.6
RSSD pmax pmax
comp=Z,291nm,1.0s
RSSD **Black Hills** 63.25 52 *e*P **P** 05 36 24.1 +0.8
comp=Z,291nm,1.0s
RSSD *e* 05 36 59.6
O19A **Miners Draw (B** 63.31 58 ⇓P **P** 05 36 24.6 +1.0
baz=63,SNR=200
M21A **Separation Pea** 63.32 56 ⇓P **P** 05 36 24.7 +0.9
baz=63,SNR=182
KAPI **Kappang** 63.33 220 PKPPKP **P'P'df** 06 05 21.7 +3.2
comp=Z,4.0nm,0.6s,baz=24,slow=19,SNR=4.8
SRU **San Rafael** 63.38 60 *e*P **P** 05 36 25.5 +1.4
SRU pmax pmax
comp=Z,780nm,1.0s
SRU **San Rafael** 63.38 60 *e*P **P** 05 36 25.5 +1.4
comp=Z,780nm,1.0s
SRU **San Rafael** 63.38 60 ⇓P **P** 05 36 25.6 +1.4
baz=63,SNR=886
N20A **Spence Gulch,** 63.39 57 ⇓P **P** 05 36 25.9 +1.6
baz=63,SNR=498
K23A **Bowen Ranch, D** 63.42 54 ⇓P **P** 05 36 24.6 +0.3
baz=63,SNR=33
MURC **Murrieta** 63.43 69 ⇑P **P** 05 36 25.1 +0.7
baz=63,SNR=179
J24A **Dixon Ranch, L** 63.50 53 ⇑P **P** 05 36 25.2 +0.4
baz=63,SNR=37
GMRC **Granite Mounta** 63.50 67 ⇑P **P** 05 36 26.1 +1.2
baz=63,SNR=417
L22A **Ellis Ranch, M** 63.51 55 ⇑P **P** 05 36 26.5 +1.5
baz=63,SNR=96
LDFC **Landfair** 63.62 66 *e*P **P** 05 36 26.6 +1.0
comp=Z,647nm,0.9s
PBA **Port Blair** 63.70 256 *e*P P 05 36 27.7 +1.4
PBA *ex* x 05 38 06.2
PBA *ex* x 05 38 14.4
L23A **Garrett** 63.84 55 ⇑P **P** 05 36 27.6 +0.5
baz=64,SNR=120
N21A **Black Mountain** 63.84 57 ⇓P **P** 05 36 28.2 +1.0
baz=64,SNR=91
BELC **Belle Mtn. Jos** 63.85 68 ⇑P **P** 05 36 27.6 +0.3
baz=64,SNR=276
P19A **Cripple Cowboy** 63.85 59 ⇑P **P** 05 36 28.3 +1.0
baz=64,SNR=527
K24A **Anderson Ranch** 63.86 54 ⇓P **P** 05 36 27.0 -0.2
baz=64,SNR=6.6
PFO **Pinyon Flat Ob** 63.86 68 *e*P **P** 05 36 27.6 +0.3
comp=Z,173nm,1.2s
PFO **Pinyon Flat Ob** 63.86 68 P **P** 05 36 27.0 -0.3
comp=Z,82nm,1.2s,SNR=82
PFO **Pinyon Flat Ob** 63.86 68 ⇑P **P** 05 36 27.8 +0.5
baz=64,SNR=114
M22A **Cedar Creek Ra** 63.87 56 ⇑P **P** 05 36 28.3 +0.8
baz=64,SNR=202
O20A **White River Ci** 63.90 58 ⇑P **P** 05 36 28.5 +1.0
baz=64,SNR=244
VRHR **Novokhopersk** 63.96 320 *e*P **P** 05 36 25.3 -2.2
VRHR *e**PP **pP** 05 37 05.6 +0.9
VRHR *e*S S 05 44 38.9 -12
VRHR *e*SP SPn 05 45 30.7 +24
VRHR pmax pmax
comp=Z,160nm,1.1s
VRHR pmax pmax
comp=N,120nm,0.9s
VRHR pmax pmax
comp=E,120nm,0.9s
VRHR smax smax
comp=N,320nm,4.4s
VRHR smax smax
comp=Z,560nm,4.7s
VRHR smax smax
comp=E,190nm,2.6s
VRHR MLR MLR
comp=Z,2µm,13.0s
VRHR MLR MLR
comp=N,830nm,12.0s
VRHR MLR MLR
comp=E,2µm,16.0s
KULM **Kulim** 64.03 244 *e*P **P** 05 36 30.2 +1.8
comp=E,3µm,2.4s
KULM **Kulim** 64.03 244 P **P** 05 36 31.0 +2.5
KULM **Kulim** 64.03 244 P **P** 05 36 30.3 +1.8
AGMN **Agassiz Nation** 64.09 45 *e*P **P** 05 36 28.9 +0.4
comp=E,127nm,1.0s
AGMN *e* 05 37 04.2
NEE2 **Needles Airpor** 64.12 66 ⇓P **P** 05 36 29.6 +0.8
baz=64,SNR=21
AJM **Ajmer** 64.15 281 *e*P **P** 05 36 27.7 -1.5
MOL **Molde** 64.17 344 *e*P **P** 05 36 28.5 -0.1
Q19A **Hogan Spring (** 64.18 60 ⇓P **P** 05 36 30.2 +0.9
baz=64,SNR=956
IRM **Iron Mountain** 64.24 67 ⇓P **P** 05 36 30.8 +1.1
baz=64,SNR=456
O21A **Pagoda** 64.26 57 ⇑P **P** 05 36 31.1 +1.2
baz=64,SNR=179
P20A **De Beque** 64.27 59 ⇑P **P** 05 36 30.7 +0.7
baz=64,SNR=105
U15A **North Rim** 64.28 63 ⇑P **P** 05 36 31.7 +1.5
baz=64,SNR=294
L24A **Wheatland** 64.28 55 ⇓P **P** 05 36 30.6 +0.6
baz=64,SNR=30
M23A **Laramie** 64.29 55 ⇑P **P** 05 36 30.8 +0.7
baz=64,SNR=69
W13A **Hualapai Mount** 64.31 65 ⇑P **P** 05 36 31.4 +1.1
baz=64,SNR=280
N22A **Wattenberg Ran** 64.38 56 ⇑P **P** 05 36 32.3 +1.5
baz=64,SNR=157
BAR **Barrett** 64.39 69 *e*P **P** 05 36 31.2 +0.5
comp=E,274nm,1.2s
BAR *e* 05 37 07.0
MONP **Monument Peak** 64.39 69 ⇓P **P** 05 36 31.5 +0.6
baz=64,SNR=100
BC3 **Big Chuckawall** 64.42 68 ⇓P **P** 05 36 31.6 +0.7
baz=64,SNR=269
K25A **Mack Ranch, Ha** 64.42 53 ⇓P **P** 05 36 31.4 +0.6
baz=64,SNR=7.7
VOR **Voronezh** 64.44 322 P **P** 05 36 29.0 -1.6
VOR pmax pmax
comp=Z,500nm,1.4s

IPM Ipoh 64.48 244 eP P 05 36 32.6 +1.3
comp=Z,2µm,2.3s
IPM Ipoh 64.48 244 P P 05 36 33.2 +1.8
IPM Ipoh 64.48 244 P P 05 36 32.3 +0.9
comp=Z,241nm,1.7s,comp=Z,5µmcomp=Z,16µm
PHWY Pilot Hill 64.55 55 eP P 05 36 32.4 +0.6
comp=Z,76nm,1.2s
PHWY e 05 37 11.0
N23A Red Feather La 64.58 56 ⇓P P 05 36 33.3 +1.2
baz=64,SNR=205
S18A Hurst Farm, Bl 64.68 61 ⇓P P 05 36 33.7 +0.9
baz=64,SNR=652
L25A Engebretsen Ra 64.70 54 ⇑P P 05 36 33.4 +0.8
baz=64,SNR=12
K26A Motz Farm, Whi 64.71 53 ⇓P P 05 36 33.0 +0.3
baz=64,SNR=25
Q20A Ridgley Place, 64.71 59 ⇓P P 05 36 33.5 +0.6
baz=64,SNR=192
PV10 Paradox Valley 64.72 60 eP P 05 36 34.4 +1.4
comp=Z,15µm,1.0s
SWSC Sam W. Stewart 64.72 68 ⇓P P 05 36 33.3 +0.5
baz=65,SNR=68
PDMCI Parker Dam,Lak 64.73 66 ⇑P P 05 36 33.7 +0.9
baz=65,SNR=146
BHPL Bhopal 64.73 276 eP P 05 36 32.2 -0.8
BHPL eP P 05 36 32.7 -0.3
DVTC Desert V Tower 64.74 69 ⇑P P 05 36 33.7 +0.7
baz=65,SNR=63
M24A Cheyenne 64.75 55 ⇑P P 05 36 34.4 +1.3
baz=64,SNR=103
P21A Newcastle 64.76 58 ⇑P P 05 36 34.5 +1.3
baz=65,SNR=390
PV04 Paradox Valley 64.78 60 eP P 05 36 34.5 +1.2
O22A Kremmling 64.79 57 ⇑P P 05 36 34.3 +0.9
baz=65,SNR=124
BORG Borgarnes 64.83 358 eP P 05 36 33.3 +0.4
comp=Z,186nm,1.5s
VSR Storozhevoye 64.86 321 eP P 05 36 32.4 -0.9
VSR e*PP pP 05 37 12.7 +2.1
VSR eS S 05 44 55.2 -6.3
VSR eSP SPn 05 45 45.0 +26
VSR pmax pmax
comp=Z,200nm,1.1s
VSR pmax pmax
comp=N,210nm,1.3s
VSR pmax pmax
comp=E,150nm,1.2s
VSR smax smax
comp=N,310nm,4.5s
VSR smax smax
comp=Z,210nm,2.8s
VSR smax smax
comp=E,290nm,3.1s
VSR MLR MLR
comp=Z,3µm,13.0s
VSR MLR MLR
comp=N,1µm,14.0s
VSR MLR MLR
comp=E,2µm,18.0s
NB2 NORSAR Subarra 64.89 342 P P 05 36 32.1 -1.4
baz=24,slow=6.9
NB2 NORSAR Subarra 64.89 342 P P 05 36 32.1 -1.4
comp=Z,239nm,1.7s,baz=24,slow=6.9
NOA NORSAR Array B 64.89 342 P P 05 36 31.9 -1.6
NOA NORSAR Array B 64.89 342 P P 05 36 31.9 -1.6
comp=Z,14nm,0.6s,baz=25,slow=6.5,SNR=67
NOA LR LR 06 09 36.7
comp=Z,1µm,18.1s,baz=25,slow=40
Y12C Blythe 64.89 67 ⇑P P 05 36 35.0 +1.2
baz=65,SNR=95
VORD Divnogorie 65.00 321 eP P 05 36 33.2 -1.0
VORD e*PP pP 05 37 13.2 +1.7
VORD eS S 05 44 57.1 -6.1
VORD eSP pS 05 45 47.0 +1.3
VORD pmax pmax
comp=N,170nm,1.4s
VORD pmax pmax
comp=Z,210nm,1.4s
VORD pmax pmax
comp=E,130nm,1.3s
VORD smax smax
comp=N,250nm,3.0s
VORD smax smax
comp=Z,200nm,2.4s
VORD smax smax
comp=E,230nm,2.5s
VORD MLR MLR
comp=Z,2µm,13.0s
VORD MLR MLR
comp=N,1µm,12.0s
VORD MLR MLR
comp=E,2µm,14.0s
VIS Vishakhapatnam 65.03 268 eP P 05 36 35.8 +0.9
VIS eP P 05 36 36.0 +1.1
P22A Eagle 65.08 58 ⇑P P 05 36 36.5 +1.3
baz=65,SNR=253
O23A Lake Granby, G 65.09 57 ⇓P P 05 36 37.1 +1.7
baz=65,SNR=288
MYKOM Kota Tinggi 65.11 239 P P 05 36 38.2 +2.8
MYKOM Kota Tinggi 65.11 239 P P 05 36 38.4 +3.0
comp=E,207nm,1.7s,comp=E,4µmcomp=E,11µm
NAO01 NORSAR Array S 65.14 342 eP P 05 36 35.0 0.0
comp=E,77nm,1.0s
PV01 Paradox Valley 65.15 60 eP P 05 36 36.4 +0.7
comp=E,4µm,1.0s
FRIM Kepong 65.15 242 P P 05 36 37.4 +1.7
M25A Palm-Egli Farm 65.18 54 ⇑P P 05 36 37.2 +1.4
baz=65,SNR=61
K27A Flueckinger Fa 65.18 52 ⇓P P 05 36 36.1 +0.4
baz=65,SNR=36
N24A Carr 65.19 55 ⇑P P 05 36 37.3 +1.4
baz=65,SNR=65
Q21A Lamborn Mesa, 65.19 59 ⇑P P 05 36 37.2 +1.2
baz=65,SNR=316
GLA Glamis 65.21 68 eP P 05 36 37.0 +1.0
GLA e 05 37 12.6
GLA pmax pmax
comp=Z,517nm,1.1s
GLA Glamis 65.21 68 eP P 05 36 37.0 +1.0
comp=Z,517nm,1.1s
GLA e 05 37 12.6
GLA Glamis 65.21 68 ⇓P P 05 36 37.1 +1.1
baz=65,SNR=213
R20A Redvale 65.21 60 ⇓P P 05 36 37.3 +1.2
baz=65,SNR=277
KGM Kluang 65.22 240 P P 05 36 38.7 +2.6
NGP Nagpur 65.22 273 eP P 05 36 34.6 -1.6
NGP ex x 05 45 00.9
L26A Underwood Farm 65.24 53 ⇓P P 05 36 36.6 +0.5
baz=65,SNR=8.5
COEN Coen 65.26 193 eP P 05 36 36.8 +0.5
comp=Z,3µm,1.1s
SMCO Snowmass 65.27 58 eP P 05 36 37.6 +1.0
comp=Z,222nm,0.8s
SMCO e 05 37 13.4
WUAZ Wupatki 65.45 64 eP P 05 36 39.0 +1.3
comp=Z,440nm,1.2s
WUAZ Wupatki 65.45 64 ⇓P P 05 36 39.2 +1.5
baz=65,SNR=261
S20A Disappointment 65.48 60 ⇑P P 05 36 38.9 +1.0
baz=65,SNR=337
BRSD Miller 65.52 49 ⇓P P 05 36 37.9 +0.1
baz=65,SNR=23
Q22A Crested Butte, 65.53 58 ⇑P P 05 36 39.6 +1.4
baz=65,SNR=303
R21A Cimarron 65.54 59 ⇑P P 05 36 39.8 +1.6
baz=65,SNR=679
ISCO Idaho Springs 65.55 57 eP P 05 36 39.8 +1.4
ISCO e 05 37 15.3
ISCO pmax pmax
comp=Z,370nm,1.1s
ISCO Idaho Springs 65.55 57 eP P 05 36 39.8 +1.4
comp=Z,370nm,1.1s
ISCO e 05 37 15.3
ISCO Idaho Springs 65.55 57 ⇓P P 05 36 39.9 +1.4
baz=65,SNR=349
L27A T5 Ranch, Ells 65.60 53 ⇑P P 05 36 38.9 +0.5
baz=65,SNR=9.7
O24A Longmont 65.60 56 ⇓P P 05 36 40.2 +1.7
baz=65,SNR=61
N25A Grover 65.61 55 ⇑P P 05 36 40.2 +1.6
baz=65,SNR=57
M26A McRoberts Ranc 65.63 54 ⇑P P 05 36 39.9 +1.2
baz=65,SNR=42
Y14A Wickenburg 65.64 66 ⇑P P 05 36 39.9 +1.2
baz=66,SNR=284
P23A Jefferson 65.73 57 ⇓P P 05 36 41.5 +1.9
baz=66,SNR=55
IZAR Zarasai 65.74 331 eP P 05 36 38.6 -0.3
IZAR AMB AMB 05 36 40.2
comp=Z,60nm,2.0s
ABKT Ailbek 65.75 301 P P 05 36 40.7 +1.3
comp=Z,1µm,1.2s,SNR=59
MVCO Mesa Verde 65.85 60 eP P 05 36 41.3 +1.1
comp=Z,386nm,0.9s
MVCO Mesa Verde 65.85 60 ⇓P P 05 36 41.4 +1.1
baz=66,SNR=394
S21A Coal Bank Pass 65.92 60 ⇓P P 05 36 42.5 +1.7
baz=66,SNR=655
ISAL Salakas 65.92 331 eP P 05 36 39.8 -0.2
ISAL AMB AMB 05 36 41.5
comp=Z,78nm,2.1s
M27A Reverse DX Ran 65.97 53 ⇓P P 05 36 41.8 +1.0
baz=66,SNR=15
113A Mohawk Valley, 66.04 67 ⇓P P 05 36 42.0 +0.7
baz=66,SNR=78
N26A Koester Ranch, 66.05 54 ⇑P P 05 36 42.6 +1.3
baz=66,SNR=70
Q23A Hartsel 66.08 57 ⇑P P 05 36 43.3 +1.5
baz=66,SNR=98
IIGN Ignalina 66.08 331 eP P 05 36 40.9 -0.2
IIGN AMB AMB 05 36 42.5
comp=Z,104nm,1.4s
Z14A Wintersburg 66.09 66 ⇑P P 05 36 42.6 +1.0
baz=66,SNR=38
O25A Wiggins 66.11 56 ⇑P P 05 36 42.9 +1.2
baz=66,SNR=45
P24A Kohler Place, 66.13 56 ⇓P P 05 36 43.5 +1.6
baz=66,SNR=60
X16A Lo Mia Camp, P 66.20 64 ⇓P P 05 36 44.0 +1.5
baz=66,SNR=382
ISHV Shirvan 66.26 301 eP P 05 36 43.9 +1.1
MICGM Minsk 66.27 330⇓eP P 05 36 41.0 -1.3
EYMN Ely 66.27 42 eP P 05 36 43.0 +0.6
comp=Z,242nm,1.0s
EYMN e 05 37 18.3
NACGM Naroch 66.28 330 eP P 05 36 38.0 -4.4
MNK Minsk 66.29 330deP P 05 36 41.0 -1.4
MNK e*PP pP 05 37 20.0 +0.2
MNK e*SP sP 05 37 36.0 -0.8
MNK e 05 39 20.0
MNK ePPP PPP 05 40 48.0
MNK eS S 05 45 12.0 -6.7
MNK e*SS SKSac 05 46 19.0 -4.1
MNK eSS SS 05 49 30.0 -6.8
MNK pmax pmax
comp=Z,730nm,1.2s
MNK pmax pmax
comp=E,590nm,1.6s
MNK pmax pmax
comp=N,960nm,1.4s
MNK pmax pmax
comp=Z,6µm,5.0s
IAKL Akhelmad 66.36 299 eP P 05 36 44.6 +1.0
S22A 4UR Ranch, Cre 66.38 59 ⇓P P 05 36 45.4 +1.7
baz=66,SNR=528
Q24A Divide 66.40 57 ⇑P P 05 36 44.8 +1.0
baz=66,SNR=111
N27A Anderson Farm, 66.42 54 ⇑P P 05 36 44.8 +1.1
baz=66,SNR=112
O26A Horse Wrangler 66.43 55 ⇓P P 05 36 44.7 +0.9
baz=66,SNR=87
U20A Newcomb 66.44 61 ⇑P P 05 36 45.1 +1.1
baz=66,SNR=34
ISFR Sfrayin 66.45 300 eP P 05 36 45.3 +1.2
KONO Kongsberg 66.50 342 eP P 05 36 43.2 -0.4
KONO AMB AMB 05 36 45.9
comp=Z,164nm,1.6s
KONO eS S 05 45 20.0 -1.1
KONO eSKS SKSac 05 46 23.9 -0.6
KONO Kongsberg 66.50 342 eP P 05 36 43.3 -0.4
KONO pmax pmax
comp=Z,118nm,1.3s
KONO Kongsberg 66.50 342 eP P 05 36 43.3 -0.4
comp=Z,118nm,1.3s
P25A Willow Gulch B 66.52 56 ⇓P P 05 36 45.9 +1.5
baz=66,SNR=222
ASK Askoy 66.53 344 eP P 05 36 43.4 -0.5
T21A Navajo Lake 66.54 60 ⇓P P 05 36 46.1 +1.5
baz=66,SNR=142
RUND Rundenannen 66.57 344 eP P 05 36 43.8 -0.3
RUND AMB AMB 05 36 45.7
comp=Z,189nm,1.5s
OGNE Ogallala 66.58 54 eP P 05 36 45.4 +0.8
comp=Z,791nm,0.9s
OGNE e 05 37 21.3
OGNE Ogallala 66.58 54 ⇑P P 05 36 45.7 +1.0
baz=66,SNR=181
R23A Moffat 66.60 58 ⇑P P 05 36 46.6 +1.5
baz=66,SNR=190
BER Bergen 66.60 344 eP P 05 36 42.5 -1.8
BER AMB AMB 05 36 45.4
comp=Z,124nm,1.6s
CMBY CAMPBELL BAY 66.61 251 eP P 05 36 45.4 +0.3
W18A Petrified Fore 66.67 63 ⇓P P 05 36 46.9 +1.5
baz=66,SNR=77
ODD1 Odda 66.82 343 eP P 05 36 45.5 -0.3
AKL Akola 66.84 275 eP P 05 36 47.2 +0.7
AKL i x x 05 45 23.8
S23A Nye Farm, Mont 66.86 58 ⇓P P 05 36 48.5 +1.8
baz=67,SNR=107
T22A Edith 66.87 60 ⇑P P 05 36 48.3 +1.5
baz=67,SNR=395
U21A Nageezi 66.88 60 ⇓P P 05 36 48.1 +1.2
baz=67,SNR=294
V20A Brimhall 66.89 61 ⇑P P 05 36 48.0 +1.1
baz=67,SNR=130
O27A Beecher Island 66.90 54 ⇑P P 05 36 47.6 +0.8
baz=67,SNR=32
Q25A Bedland, Calha 66.92 56 ⇓P P 05 36 47.9 +0.9
baz=67,SNR=140
P26A Davis Ranch, A 66.92 55 ⇑P P 05 36 47.8 +0.9
baz=67,SNR=158
R24A Sanders Place, 66.96 58 ⇓P P 05 36 48.6 +1.3
baz=67,SNR=159
X18A Snowflake 66.97 63 ⇑P P 05 36 48.8 +1.5
baz=67,SNR=366
PSI Prapat 67.04 244 P P 05 36 49.0 +1.1
PSI Prapat 67.04 244 P P 05 36 49.8 +1.9
comp=Z,176nm,2.0s,comp=Z,4µm
PSI Prapat 67.04 244 P P 05 36 49.0 +1.1
comp=Z,76nm,0.7s,baz=5.4,slow=5.2,SNR=33
ECSD EROS Data Cent 67.17 48 eP P 05 36 48.5 +0.2
comp=Z,355nm,1.0s
ECSD e 05 37 24.6
214A Organ Pipe Nat 67.18 67 ⇑P P 05 36 49.6 +1.0
baz=67
Q26A Hugo 67.29 56 ⇓P P 05 36 50.1 +0.8
baz=67,SNR=206
T23A Casias Ranch, 67.33 59 ⇓P P 05 36 50.9 +1.2
baz=67,SNR=111
S24A Houchin Ranch, 67.33 58 ⇓P P 05 36 51.2 +1.4
baz=67,SNR=138
V21A Milan 67.35 61 ⇓P P 05 36 50.9 +1.1
baz=67,SNR=63
W20A Ramah 67.36 62 ⇑P P 05 36 50.9 +1.0
baz=67,SNR=330
U22A Llaves 67.36 60 ⇓P P 05 36 51.2 +1.4
baz=67,SNR=207
R25A Fountain Ranch 67.46 57 ⇓P P 05 36 51.1 +0.8
baz=67,SNR=49
MAK Makhachkala 67.51 311 eP P 05 36 50.2 -0.1
MAK e 05 37 16.3
MAK e*PP pP 05 37 30.7 +2.8
MAK e*SP sP 05 37 42.7 -2.1
MAK e 05 39 16.5
MAK ePPP PPP 05 40 58.5
MAK eS S 05 45 31.2 -2.5
MAK e 05 46 14.4
MAK e 05 46 31.5
MAK pmax pmax
comp=Z,448nm,1.8s
V22A San Miguel Ran 67.67 60 ⇑P P 05 36 52.9 +1.1
baz=68,SNR=207
KSCO Kaye Shedlock' 67.70 55 ⇓P P 05 36 52.4 +0.6
baz=68,SNR=46
IMND Minoodasht 67.71 302 eP P 05 36 53.8 +2.1
S25A Robets Cordova 67.74 58 ⇓P P 05 36 52.7 +0.5
baz=68,SNR=64
U23A El Rito 67.76 60 ⇓P P 05 36 53.8 +1.5
baz=68,SNR=810
X20A Quemado 67.79 62 ⇑P P 05 36 54.3 +1.8
baz=68,SNR=376
R26A Arlington 67.79 56 ⇑P P 05 36 53.1 +0.8
baz=68,SNR=237
SPMN St. Paul 67.80 45 ⇑P P 05 36 52.4 +0.3
baz=68,SNR=25
T24A Torres, Weston 67.84 58 ⇓P P 05 36 54.5 +1.6
baz=68
W21A San Fidel 67.84 61 ⇓P P 05 36 54.0 +1.1
baz=68,SNR=14
T25A Trinidad 68.13 58 ⇓P P 05 36 55.5 +0.9
baz=68,SNR=143
R27A Eads 68.14 56 ⇑P P 05 36 55.0 +0.4
baz=68,SNR=77
SUW Suwalki 68.15 332 eP P 05 36 53.1 -1.1
SUW pmax pmax
comp=Z,557nm,1.5s
SUW Suwalki 68.15 332 eP P 05 36 53.1 -1.1
comp=Z,557nm,1.5s
SUW Suwalki 68.15 332 eP P 05 36 53.0 -1.1
SUW epP pP 05 37 33.5 +1.8
SUW eS S 05 45 38.1 -2.9
SUW eScS SKiKP 05 46 30.2 -2.0
SUW LMZ LR 06 04 33.5
SNART Snartemo 68.18 342 eP P 05 36 52.2 -2.0
SNART AMB AMB 05 36 56.2
comp=Z,115nm,1.6s
BGNE Belgrade 68.18 51 ⇓P P 05 36 54.7 0.0
baz=68,SNR=71
V23A Ortiz Mt. (NFS 68.19 60 ⇑P P 05 36 57.1 +2.0
baz=68,SNR=288
U24A Moreno Valley 68.20 59 ⇑P P 05 36 56.7 +1.5
baz=68,SNR=145
X21A Alamocita Cree 68.26 62 ⇓P P 05 36 57.4 +1.9
baz=68,SNR=676
S26A Kim 68.28 57 ⇓P P 05 36 55.8 +0.4
baz=68,SNR=112
HYB Hyderabad 68.29 271 eP P 05 36 55.0 -0.6
HYB e*PP pP 05 37 30.0 -3.3
HYB eS S 05 45 43.0 -0.8
HYB Hyderabad 68.29 271 eP P 05 36 55.0 -0.6
HYB epP pP 05 37 30.0 -3.3
HYB ePP PP 05 39 28.0 -0.1
HYB eScP 05 41 10.0
HYB e 05 41 44.0
HYB eS S 05 45 43.0 -0.8
HYB ePS PnS 05 46 28.0 -3.2
HYB e 05 47 50.0
HYB ePKPPKP P'P'df 06 05 12.0 -0.7
HYB Hyderabad 68.29 271 eP P 05 36 56.3 +0.7
W22A Albuquerque 68.31 61 ⇓P P 05 36 57.4 +1.7
baz=68,SNR=44
Y20A Horse Springs, 68.32 63 ⇓P P 05 36 57.7 +1.8
baz=68,SNR=330
IDAH Dahanechah 68.54 296 eP P 05 36 57.5 +0.2
S27A Las Animas 68.54 57 ⇓P P 05 36 57.3 +0.2
baz=68,SNR=67
T26A Comanche Natio 68.55 57 ⇓P P 05 36 57.4 +0.2
baz=68,SNR=243
ANMO Albuquerque 68.63 61 eP P 05 36 58.9 +1.2
comp=Z,162nm,0.9s
ANMO e 05 37 34.8
ANMO P'P' 06 05 06.5
ANMO Albuquerque 68.63 61 P P 05 36 59.0 +1.2
comp=Z,171nm,1.0s,baz=316,slow=7.6,SNR=294
ANMO PKPPKP P'P'df 06 05 06.5 -6.4
comp=Z,2.2nm,1.1s,baz=141,slow=5.4,SNR=12
ANMO LR LR 06 06 24.8
comp=Z,1µm,19.6s,baz=325,slow=35
Y21A Point of Rocks 68.64 62 ⇓P P 05 36 59.7 +1.8
baz=68,SNR=103
W23A Werner Place, 68.64 60 ⇑P P 05 36 59.2 +1.4
baz=68,SNR=151
X22A Bernardo 68.65 61 ⇑P P 05 37 00.1 +2.3
baz=68,SNR=223
LAZ Ladron 68.65 62 eP P 05 36 59.3 +1.4
comp=Z,190nm,1.1s
LAZ e 05 37 35.0
U25A Circle Dot Ran 68.68 58 ⇓P P 05 36 59.0 +0.9
baz=68,SNR=275
V24A Rampart Ranch, 68.71 59 ⇓P P 05 36 59.9 +1.6
baz=68,SNR=348
Z20A Nine Sixteen R 68.78 64 ⇑P P 05 37 00.1 +1.5
baz=69,SNR=113
LATR Latur 68.81 273 eP P 05 36 58.0 -0.8
LENM Lemitar 68.92 62 eP P 05 37 00.9 +1.4
LENM e 05 37 36.1
V25A Rancho No Teng 68.98 59 ⇓P P 05 37 00.9 +0.9
baz=69,SNR=152
AKASG Malin Array Be 68.99 327 i P P 05 36 58.2 -1.2
AKASG pmax pmax
comp=Z,12nm,0.4s
AKASG Malin Array Be 68.99 327 P P 05 36 57.7 -1.8
AKASG P'P'ab P'P'ab 06 05 12.1 -0.9
AKASG Malin Array Be 68.99 327 P P 05 36 57.7 -1.8
comp=Z,12nm,0.4s,baz=32,slow=6.0,SNR=129
AKASG PKP2ab 06 05 12.1
comp=Z,0.5nm,0.5s,baz=225,slow=4.2,SNR=5.4
AKASG LR LR 06 08 07.2
comp=Z,2µm,19.1s,baz=40,slow=36
LPM Los Pinos Moun 69.00 61 eP P 05 37 01.3 +1.3
LPM e 05 37 37.0
KIV Kislovodsk 69.00 314d iP P 05 36 59.3 -0.5
KIV i *PP pP 05 37 41.0 +3.5
KIV i S S 05 45 50.3 -1.4
KIV pmax pmax
comp=Z,421nm,1.9s
KIV MLR MLR
comp=Z,1µm,16.0s
KIEV Kiev 69.00 327 eP P 05 36 58.3 -1.2
KIEV e 05 37 38.4
KIEV pmax pmax
comp=Z,247nm,1.2s
KIEV Kiev 69.00 327 eP P 05 36 58.3 -1.2
comp=Z,248nm,1.2s
KIEV e 05 37 38.4
AK01 Malin Array Si 69.00 327 eP P 05 36 58.2 -1.3
Y22D IRIS PASSCAL I 69.01 62 ⇓P P 05 37 01.9 +1.8
baz=69,SNR=11
W24A Lazy 6 Ranch, 69.02 60 ⇑P P 05 37 01.7 +1.5
baz=69,SNR=252
AK02 Malin Array Si 69.04 327 eP P 05 36 58.3 -1.4
U26A Atchley Ranch, 69.04 58 ⇓P P 05 37 00.6 +0.3
baz=69,SNR=75
X23A Hourglass Bar 69.05 61 ⇑P P 05 37 01.7 +1.4
baz=69,SNR=11
ITEG Tejag 69.06 296 eP P 05 37 01.0 +0.6
KBZ Khabaz 69.08 314 P P 05 37 00.6 +0.5
KBZ pmax pmax
comp=Z,73nm,1.0s
KBZ MLR MLR
comp=Z,2µm,20.1s
KBZ Khabaz 69.08 314 P P 05 37 00.6 +0.5
KBZ Khabaz 69.08 314 P P 05 37 00.6 +0.5
comp=Z,73nm,1.0s,baz=49,slow=4.4,SNR=142
KBZ LR LR 06 11 51.0
comp=Z,2µm,20.1s,baz=36,slow=40
Y22A Socorro 69.09 62 ⇑P P 05 37 02.3 +1.7
baz=69,SNR=106
T27A Campo 69.09 57 ⇓P P 05 37 00.8 +0.3
baz=69,SNR=66
SCHQ Schefferville 69.11 24 eP P 05 37 00.4 +0.3
comp=Z,441nm,1.4s
SCHQ e 05 37 37.8
SCHQ S S 05 45 50.3 -2.1
SCHQ ⇑e 06 05 07.7
SCHQ Schefferville 69.11 24 P P 05 37 00.1 0.0
comp=Z,40nm,0.4s,baz=344,slow=6.1,SNR=210
SCHQ S S 05 45 50.3 -2.1
comp=Z,19nm,1.2s,baz=241,slow=18,SNR=13
SCHQ PKP2bc 06 05 07.7
comp=Z,4.0nm,0.8s,baz=212,slow=4.7,SNR=5.8
IGLO Ghaloghah 69.12 302 eP P 05 37 00.9 +0.1
BNM Barren Site 69.12 61 eP P 05 37 02.0 +1.1
comp=Z,193nm,1.3s
BNM e 05 37 37.0
Z21A St. Cloud Mine 69.16 63 ⇑P P 05 37 02.7 +1.7
baz=69,SNR=105
120A U Bar Ranch, L 69.17 64 ⇓P P 05 37 02.7 +1.6
baz=69,SNR=340
SJI Sawahan 69.25 227 P P 05 37 01.9 +0.3
IKOO Kooshah 69.26 296 eP P 05 37 01.9 +0.1
KRKI Karangkates 69.31 226 P P 05 37 02.3 +0.5

ZEI **Tsey** 69.36 313 *i* P P 05 37 01.6 -0.6
ZEI *e* 05 37 24.8
ZEI *e**PP **pP** 05 37 41.2 +1.3
ZEI *e* 05 39 34.2
ZEI *e*PPP PPP 05 41 15.5
ZEI *e*S **S** 05 45 51.1 -5.1
ZEI *e* 05 46 45.2
ZEI pmax pmax
comp=Z,128nm,1.4s
T28A **Walsh** 69.37 56 ⇓P P 05 37 02.3 +0.1
baz=69
BSD **Bornholm Skovb** 69.45 337 ⇓*i*P P 05 37 00.9 -1.2
comp=Z,19nm,1.3s
BSD *i* 05 37 41.5
BSD
comp=Z,2µm,15.0s
V26A **Tequesquite Ra** 69.47 58 ⇑P P 05 37 03.2 +0.4
baz=69,SNR=99
X24A **Lazy VL Ranch,** 69.48 60 ⇑P P 05 37 04.6 +1.6
baz=69,SNR=83
PWJI **Pagerwojo** 69.49 227 P P 05 37 02.8 -0.1
U27A **Thompson Grove** 69.52 57 ⇑P P 05 37 03.5 +0.4
baz=69,SNR=158
COP **Copenhagen** 69.53 339 ⇓*i*P P 05 37 02.3 -0.3
COP *e*S **S** 05 45 56.0 -1.1
COP *i* 05 46 50.2
COP
comp=Z,810nm,18.0s
W25A **X Bar L Ranch,** 69.53 59 ⇑P P 05 37 04.3 +1.1
baz=69,SNR=245
MUD **Monsted U'grnd** 69.54 341 ⇓*i*P P 05 37 02.4 -0.3
comp=Z,13nm,0.7s
MUD
comp=Z,2µm,13.0s
Z22A **Elephant Butte** 69.59 62 ⇑P P 05 37 05.0 +1.3
baz=69,SNR=220
BHJ **Bhuj** 69.60 282 *e*P P
BHJ AMB AMB 05 37 05.9
comp=Z,425nm,1.3s
Y23A **Lovelace Mesa,** 69.60 61 ⇓P P 05 37 05.2 +1.5
baz=69,SNR=302
319A **Douglas** 69.66 65 ⇓P P 05 37 05.3 +1.2
baz=70,SNR=185
121A **Cookes Peak, D** 69.66 63 ⇓P P 05 37 05.7 +1.6
baz=70,SNR=116
DGRG **David-gareji** 69.68 311 P P 05 37 04.3 +0.3
220A **Playas Peak, P** 69.70 64 ⇓P P 05 37 05.5 +1.1
baz=70,SNR=194
ONI **Oni** 69.71 313 P P 05 37 04.4 +0.3
TBLG **Delisi** 69.77 312 *i*P P 05 37 05.0 +0.6
TBLG **Delisi** 69.77 312 P P 05 37 05.0 +0.6
T29A **Hugoton** 69.78 56 ⇓P P 05 37 04.6 0.0
baz=70,SNR=49
IANJ **Anjilo** 69.85 301 *e*P P 05 37 06.4 +1.1
GOR **Gori** 69.87 312 P P 05 37 05.7 +0.6
LLD **Lille Linde** 69.90 339 *i*P P 05 37 06.1 +1.2
ISHM **Shahmirzad** 69.93 302 *e*P P 05 37 07.2 +1.4
X25A **Clemmons Ranch** 69.93 60 ⇑P P 05 37 07.2 +1.5
baz=70,SNR=218
Y24A **Capitan** 69.95 61 ⇓P P 05 37 07.0 +1.1
baz=70,SNR=342
IALA **Alasht** 69.98 303 *e*P P 05 37 04.3 -1.8
122A **Conniff Cattle** 69.98 63 ⇓P P 05 37 07.8 +1.8
baz=70,SNR=172
UGM **Wanagama** 69.99 228 *e*P P 05 37 05.6 -0.4
Z23A **Rita Site, Whi** 70.00 62 ⇑P P 05 37 07.5 +1.4
baz=70,SNR=127
W26A **Owens Ranch, T** 70.00 59 ⇑P P 05 37 07.1 +1.0
baz=70,SNR=14
V27A **Dan Oppiter Fa** 70.01 58 ⇑P P 05 37 06.4 +0.3
baz=70,SNR=105
221A **Mesquite Ranch** 70.05 64 ⇑P P 05 37 08.0 +1.6
baz=70,SNR=162
320A **Kipp Ranch, An** 70.12 65 ⇑P P 05 37 08.2 +1.3
baz=70
SCIA **State Center** 70.18 48 *e*P P 05 37 07.9 +1.1
comp=Z,435nm,0.8s
SCIA *e* 05 37 43.9
T30A **Plains** 70.26 55 ⇑P P 05 37 07.1 -0.4
baz=70,SNR=19
V28A **Channing** 70.34 57 ⇓P P 05 37 08.1 -0.1
baz=70,SNR=47
RGN **Rugen** 70.35 338 *e*P P 05 37 07.1 -0.6
comp=Z,626nm,1.8s
RGN **Rugen** 70.35 338 *e*P P 05 37 09.1 +1.4
comp=Z,205nm,1.3s
Y25A **Mesa, Roswell** 70.36 60 ⇑P P 05 37 09.3 +1.0
baz=70,SNR=365
222A **Williams Famil** 70.37 63 ⇓P P 05 37 09.2 +0.9
baz=70,SNR=5.2
X26A **CR and CF Fran** 70.38 59 ⇓P P 05 37 09.3 +0.9
baz=70,SNR=84
MVH1 **Achvaich** 70.39 348 *e*P P 05 37 05.9 -1.9
MVH1 **Achvaich** 70.39 348 P P 05 37 05.9 -1.9
W27A **Bowe Ranch, En** 70.41 58 ⇑P P 05 37 08.9 +0.4
baz=70,SNR=34
ILAS **Lasjerd** 70.42 302 *e*P P 05 37 10.0 +1.2
Z24A **Sheeppen Canyo** 70.43 61 ⇓P P 05 37 09.8 +1.0
baz=70,SNR=267
POO **Poona** 70.45 276 *e*P P 05 37 09.2 +0.4
POO *e*P P 05 37 10.1 +1.2
POO AMB AMB 05 37 11.1
comp=Z,281nm,1.1s
123A **Bell Site, Whi** 70.45 62 ⇓P P 05 37 10.2 +1.3
baz=70,SNR=19
GKP **Gorka Klasztor** 70.50 335 *e*P P 05 37 08.1 -0.5
GKP *e*pP **pP** 05 37 47.5 +1.1
GKP *e*S **S** 05 46 05.9 -2.7
GKP *e*ScS **SKSac** 05 46 53.6 -1.4
GKP LMZ LR 06 02 18.2
U30A **WK&E Inc. Balk** 70.59 56 ⇓P P 05 37 09.1 -0.5
baz=70,SNR=52
MCD **Coleburn Disti** 70.61 348 *e*P P 05 37 07.6 -1.5
MCD **Coleburn Disti** 70.61 348 P P 05 37 07.6 -1.5
AKH **Akhalkalaki** 70.61 312 P P 05 37 10.3 +0.6
SOC **Sochi** 70.62 316 *d*P P 05 37 09.3 -0.2
SOC *i* 05 37 27.7
SOC *i**PP **pP** 05 37 50.2 +2.8
SOC *e**SP **sP** 05 38 04.6 +0.3
SOC *i* 05 39 46.7
SOC *i* PPP PPP 05 41 32.2
SOC *i* S **S** 05 46 08.8 -1.6
SOC *i* 05 46 54.4
SOC pmax pmax
comp=Z,230nm,1.6s
V29A **Stinnett** 70.62 57 ⇓P P 05 37 09.6 -0.2
baz=70,SNR=11
ANN **Anapa** 70.64 318 *d*P P 05 37 08.6 -1.0
ANN *i* 05 37 29.4
ANN *i**PP **pP** 05 37 49.6 +2.1
ANN *i* 05 39 47.2
ANN *e*PPP PPP 05 41 31.1
ANN *e*S **S** 05 46 07.9 -2.6
ANN *i* 05 46 53.3
ANN pmax pmax
comp=Z,222nm,1.9s
T31A **Randall Ranch,** 70.67 55 ⇓P P 05 37 09.8 -0.2
baz=70,SNR=50
X27A **F and S Farms,** 70.70 59 ⇑P P 05 37 11.3 +1.0
baz=70,SNR=88
KSU1 **Kansas State U** 70.70 52 *e*P P 05 37 08.6 -1.5
comp=Z,174nm,0.9s
KSU1 *e* 05 37 45.6
W28A **Vega** 70.72 58 ⇑P P 05 37 11.1 +0.7
baz=70,SNR=90
BEL **Belsk** 70.76 332 *i*P P 05 37 10.1 -0.1
BEL *e*pP **pP** 05 37 51.0 +3.0
BEL *e*S **S** 05 46 10.6 -1.0
BEL *e*ScS **SKSac** 05 46 57.1 +0.1
BEL LMZ LR 06 06 18.6
223A **Chaparral, Ant** 70.82 63 ⇓P P 05 37 12.3 +1.2
baz=71,SNR=28
Z25A **Roswell** 70.83 61 ⇓P P 05 37 12.4 +1.2
baz=71,SNR=135
Y26A **Elida** 70.84 60 ⇑P P 05 37 12.2 +0.9
baz=71,SNR=39
124A **Stringfield Ra** 70.85 62 ⇓P P 05 37 12.2 +0.8
baz=71,SNR=137
MDO **Dochfour** 70.89 348 *e*P P 05 37 09.6 -1.3
MDO **Dochfour** 70.89 348 P P 05 37 09.6 -1.3
CTA **Charters Tower** 70.94 189 P P 05 37 11.5 -0.1
CTA pP **pP** 05 37 47.7 -1.8
CTA **Charters Tower** 70.94 189 P P 05 37 11.5 -0.1
comp=Z,21nm,0.6s,baz=7.1,slow=7.5,SNR=28
CTA pP **pP** 05 37 47.7 -1.8
comp=Z,66nm,1.0s,baz=6.6,slow=6.9,SNR=8.7
CTAO **Charters Tower** 70.94 189 *e*P P 05 37 11.6 0.0
CTAO *e* 05 37 47.9
CTAO pmax pmax
comp=Z,274nm,1.5s
CTAO **Charters Tower** 70.94 189 *e*P P 05 37 11.6 0.0
comp=Z,274nm,1.5s
CTAO *e* 05 37 47.9
KAC **Achnashellach** 70.95 349 *e*P P 05 37 10.2 -1.0
KAC **Achnashellach** 70.95 349 P P 05 37 10.2 -1.0
GNI **Garni** 70.99 311 *e*P P 05 37 13.6 +1.6
GNI **Garni** 70.99 311 *e*P P 05 37 13.2 +1.2
comp=Z,2µm,1.9s
GNI S S 05 46 15.7 +0.6
GNI **Garni** 70.99 311 P P 05 37 13.4 +1.4
SNR=73
GNI **Garni** 70.99 311 S S 05 46 15.7 +0.6
comp=Z,3.4nm,0.3s,baz=304,slow=22,SNR=3.2
MSVF **Nonsavu** 71.07 157 *e*P P 05 37 14.1 +1.6
MSVF pmax pmax
comp=Z,296nm,1.6s
MSVF **Nonsavu** 71.07 157 *e*P P 05 37 14.1 +1.6
comp=Z,296nm,1.6s
MSVF **Nonsavu** 71.07 157 P P 05 37 14.0 +1.6
comp=Z,542nm,1.1s,SNR=32
W29A **Amraillo** 71.12 58 ⇑P P 05 37 13.2 +0.4
baz=71,SNR=17
U31A **Nine Bar Ranch** 71.13 55 ⇑P P 05 37 13.1 +0.3
baz=71,SNR=11
V30A **Spur Ranch, Mi** 71.15 56 ⇓P P 05 37 12.9 0.0
baz=71,SNR=12
Y27A **Causey** 71.23 59 ⇑P P 05 37 14.4 +0.8
baz=71,SNR=307
Z26A **Caprock** 71.25 60 ⇓P P 05 37 14.6 +1.0
baz=71,SNR=529
224A **Cornudas Mount** 71.28 62 ⇓P P 05 37 15.0 +1.1
baz=71,SNR=170
X28A **Dimmitt** 71.28 58 ⇓P P 05 37 14.3 +0.5
baz=71,SNR=43
AMTX **Amarillo** 71.29 58 *e*P P 05 37 14.4 +0.6
comp=Z,280nm,1.0s
AMTX *e* 05 37 50.4
AMTX **Amarillo** 71.29 58 ⇑P P 05 37 14.5 +0.6
baz=71,SNR=154
125A **Gardner Draw,** 71.33 61 ⇑P P 05 37 15.3 +1.1
baz=71,SNR=215
MSTX **Muleshoe** 71.38 59 ⇓P P 05 37 14.9 +0.5
baz=71,SNR=209
BCA **Borcka** 71.45 313 *e*P P 05 37 14.6 0.0
CPRX **Cap Rock** 71.49 60 *e*P P 05 37 16.6 +1.5
comp=Z,336nm,0.7s
CPRX *e* 05 37 52.3
LVV **L'vov** 71.50 329 *i*P P 05 37 12.3 -2.4
LVV *i* PPP PPP 05 41 42.1
LVV *e* 05 46 17.7
ARTV **Artvin** 71.52 313 *i*P P 05 37 15.5 +0.3
V31A **Spring Creek L** 71.59 56 ⇑P P 05 37 16.2 +0.6
baz=71,SNR=140
X29A **Tulia** 71.61 58 ⇓P P 05 37 16.6 +0.8
baz=71,SNR=165
DAGI **Agilar** 71.61 313 *i*P P 05 37 15.3 -0.3
BSEG **Bad Segeberg** 71.62 339 *e*P P 05 37 15.1 -0.2
BSEG pmax pmax
comp=Z,468nm,1.9s
BSEG **Bad Segeberg** 71.62 339 *e*P P 05 37 15.1 -0.2
comp=Z,468nm,1.9s
Z27A **Tatum** 71.64 60 ⇓P P 05 37 16.7 +0.7
baz=72,SNR=276
GLMI **Grayling** 71.64 40 *e*P P 05 37 16.3 +0.6
comp=Z,276nm,1.0s
GLMI *e* 05 37 52.8
225A **Deer Hill, Car** 71.65 62 ⇓P P 05 37 17.1 +1.0
baz=72,SNR=204
W30A **Crocket Farms** 71.65 57 ⇓P P 05 37 16.8 +0.8
baz=71,SNR=37
126A **Clayton Basin,** 71.69 61 ⇑P P 05 37 16.9 +0.6
baz=72,SNR=114
Y28A **McKinney Farm,** 71.72 59 ⇓P P 05 37 16.8 +0.4
baz=72,SNR=102
324A **Moseley Ranch,** 71.78 63 ⇓P P 05 37 17.3 +0.5
baz=72,SNR=103
DDEM **Demirkent** 71.83 313 *i*P P 05 37 17.5 +0.5
IBAF **Bafgh** 71.83 298 *e*P P 05 37 17.4 +0.2
GDL2 **Guadalupe Moun** 71.84 61 *e*P P 05 37 18.1 +0.9
GDL2 *e* 05 37 54.4
SIM **Simferopol'** 71.90 320 *e*P P 05 37 16.7 -0.5
HLG **Helgoland** 71.93 340 *e*P P 05 37 16.8 -0.3
comp=Z,197nm,1.3s
DYDN **Diyadin** 71.97 311 *i*P P 05 37 19.2 +1.2
W31A **Holland Ranch,** 71.98 56 ⇓P P 05 37 18.5 +0.6
baz=72,SNR=84
ICHK **Chekchek** 71.99 299 *e*P P 05 37 18.6 +0.4
226B **Tecolote Peak,** 72.04 61 ⇑P P 05 37 19.3 +0.9
baz=72,SNR=451
X30A **Coker Ranch, T** 72.05 57 ⇑P P 05 37 18.7 +0.3
baz=72,SNR=91
CLNB **Carlsbad** 72.06 61 *e*P P 05 37 19.0 +0.5
comp=Z,47nm,1.1s
CLNB *e* 05 37 55.4
Y29A **Porterfield Fa** 72.06 58 ⇓P P 05 37 19.3 +0.8
baz=72,SNR=59
KWP **Kalwaria Pacla** 72.09 330 ⇓P P 05 37 18.1 -0.2
KWP **Kalwaria Pacla** 72.09 330 *e*P P 05 37 18.1 -0.2
comp=Z,909nm,1.5s
KWP *e* 05 37 59.4
KWP **Kalwaria Pacla** 72.09 330 ⇓*i*P P 05 37 18.1 -0.2
KWP **Kalwaria Pacla** 72.09 330 *i*P P 05 37 18.2 -0.1
KWP *e*pP **pP** 05 37 59.3 +3.0
KWP *e*S **S** 05 46 25.4 -1.7
KWP *e*ScS **SKSac** 05 47 06.9 -0.4
KWP LMZ LR 06 03 28.5
EAB **Aberfoyle** 72.11 348 *e*P P 05 37 16.5 -1.7
EAB **Aberfoyle** 72.11 348 P P 05 37 16.5 -1.7
Z28A **Tucker Farm, M** 72.11 59 ⇓P P 05 37 19.1 +0.4
baz=72,SNR=82
325A **Bean Ranch, Si** 72.12 62 ⇓P P 05 37 19.7 +0.8
baz=72,SNR=138
RUE **Ruedersdorf** 72.12 336 *e*P P 05 37 17.8 -0.5
comp=Z,442nm,1.7s
RUE *e*pP **pP** 05 37 59.4 +3.1
RUE **Ruedersdorf** 72.12 336 *e*P P 05 37 18.1 -0.2
comp=Z,137nm,1.1s
RUE *e* 05 37 59.4
ESY **Stoneypath** 72.13 347 *e*P P 05 37 17.2 -1.2
ESY **Stoneypath** 72.13 347 P P 05 37 17.2 -1.2
CLDR **Caldiran** 72.18 310 *e*P P 05 37 20.6 +1.4
KIS **Kishinev** 72.25 325 ⇓*i*P P 05 37 17.5 -1.7
KIS *e* 05 37 37.0
KIS *i**PP **pP** 05 37 58.0 +0.8
KIS *e* 05 38 10.0
KIS *i* 05 40 01.0
KIS *i* PPP PPP 05 41 46.0
KIS *e*S **S** 05 46 24.0 -4.9
KIS *e*PS PnS 05 47 06.0 -16
KIS *e**SS ScS 05 47 21.0 +10
KIS pmax pmax
comp=Z,840nm,2.0s
KIS pmax pmax
comp=Z,2µm,10.0s
KIS pmax pmax
comp=Z,2µm,18.0s
KIS **Kishinev** 72.25 325 *i*P P 05 37 17.5 -1.7
comp=Z,800nm,2.0s
KIS *i* pP **pP** 05 37 58.0 +0.8
KIS **Kishinev** 72.25 325 *i* PP PP 05 40 01.0 -0.2
KIS **Kishinev** 72.25 325 *e*S **S** 05 46 24.0 -4.9
KIS **Kishinev** 72.25 325 *e*PS **SKSac** 05 47 06.0 -2.5
KIS *es*S **PnS** 05 47 21.0 -0.5
KIS *e*SSS SSS 05 54 00.0
KIS LRM MLR 06 15 08.0
comp=Z,4µm,14.0s
EAU **Auchinoon** 72.32 348 *e*P P 05 37 17.1 -2.4
EAU **Auchinoon** 72.32 348 P P 05 37 17.1 -2.4
EBL **Broad Law** 72.33 347 *e*P P 05 37 18.1 -1.5
EBL **Broad Law** 72.33 347 P P 05 37 18.1 -1.5
X31A **McDonald Ranch** 72.39 57 ⇓P P 05 37 20.8 +0.5
baz=72,SNR=91
HOMI **Horasan** 72.43 312 *i*P P 05 37 21.4 +0.7
Y30A **Stafford Cattl** 72.47 58 ⇑P P 05 37 21.5 +0.7
baz=72,SNR=56
OJC **Ojcow** 72.48 332 ⇓*i*P P 05 37 20.2 -0.3
OJC *e**PP **pP** 05 38 01.1 +2.5
OJC *e*S **S** 05 46 28.2 -3.3
OJC *e*SKSac **SKSac** 05 47 09.7 -0.5
OJC *e*SS SS 05 51 02.2 -10
OJC L L 06 16 46.5
comp=Z,514nm,1.7s
OJC **Ojcow** 72.48 332 *i*P P 05 37 20.2 -0.3
OJC *e*pP **pP** 05 38 01.1 +2.5
OJC *e*S **S** 05 46 28.2 -3.3
OJC *e*SKSac **SKSac** 05 47 09.7 -0.5
OJC *e*SS SS 05 51 02.2 -10
OJC L L 06 16 46.5
comp=Z,4µm,17.8s
Z29A **Hungry Hill Ra** 72.50 59 ⇑P P 05 37 22.0 +0.9
baz=72,SNR=340
TUTA **Tutak** 72.50 311 *i*P P 05 37 22.2 +1.1
IMEH **Mehriz** 72.52 298 *e*P P 05 37 21.0 -0.4
IAS **Iasi** 72.54 326 P P 05 37 20.4 -0.5
425A **Indio Mountain** 72.55 63 ⇑P P 05 37 22.6 +1.1
baz=72,SNR=297
128A **Castleberry Fa** 72.56 60 ⇓P P 05 37 22.3 +0.9
baz=72,SNR=263
227A **Bennet, Jal** 72.58 61 ⇓P P 05 37 22.2 +0.7
baz=72,SNR=28
IZEF **Zefreh** 72.64 301 *e*P P 05 37 23.2 +1.1
KTUT **Trabzon** 72.67 314 *e*P P 05 37 21.5 -0.3
MACK **Trabzon** 72.70 314 *i*P P 05 37 21.7 -0.4
326A **Caldwell Ranch** 72.72 62 ⇑P P 05 37 23.4 +1.0
baz=72,SNR=236
WRA **Warramunga Arr** 72.72 201 P P 05 37 22.7 +0.4
WRA **Warramunga Arr** 72.72 201 P P 05 37 22.7 +0.4
comp=Z,55nm,0.6s,baz=16,slow=6.3,SNR=34
IKLH **Kolahrood** 72.73 302 *e*P P 05 37 23.7 +1.1
Y31A **Rekieta Farm,** 72.75 57 ⇑P P 05 37 22.8 +0.4
baz=72,SNR=53
ERZM **Erzurum** 72.79 313 *i*P P 05 37 24.1 +1.2
EZM **Erzurum** 72.79 313 *e*P P 05 37 24.3 +1.4
Z30A **Sanderson Ranc** 72.80 58 ⇑P P 05 37 23.3 +0.5
baz=73,SNR=394
ESK **Eskdalemuir** 72.80 347 *e*P P 05 37 21.4 -0.9
ESK AMB AMB 05 37 23.9
comp=Z,120nm,2.3s
ESK **Eskdalemuir** 72.80 347 P P 05 37 21.4 -0.9
ESK AMB AMB 05 37 23.9
comp=Z,120nm,2.3s
ESK **Eskdalemuir** 72.80 347 *e*P P 05 37 21.8 -0.6
ESK pmax pmax
comp=Z,226nm,1.7s
ESK **Eskdalemuir** 72.80 347 *e*P P 05 37 21.8 -0.6
comp=Z,226nm,1.7s
ESK **Eskdalemuir** 72.80 347 P P 05 37 21.7 -0.6
comp=Z,219nm,0.9s,SNR=7.5
KOLS **Kolonicke sedl** 72.84 330 *e*P P 05 37 22.5 -0.2
KOLS pmax pmax
comp=Z,183nm,1.7s
KOLS **Kolonicke sedl** 72.84 330 *e*P P 05 37 22.5 -0.2
KOLS *e*PCP **PcP** 05 37 37.9 -1.1
KOLS *e*pP **pP** 05 38 00.5 -0.3
KOLS *e*S **S** 05 46 31.2 -4.4
VANB **Van** 72.86 310 *e*P P 05 37 24.6 +1.5
PAAR **RASCA** 72.87 326 *i*P P 05 37 22.4 -0.5
228A **UT Block 9, Go** 72.88 60 ⇓P P 05 37 24.1 +0.8
baz=73,SNR=117
129A **Stewart Farms,** 72.89 59 ⇑P P 05 37 23.8 +0.4
baz=73,SNR=101
LEOM **Leova** 72.90 325 ⇑P P 05 37 22.4 -0.7
LEOM **Leova** 72.90 325 ⇑*i*P P 05 37 22.4 -0.7
TVAN **Van** 72.91 310 *i*P P 05 37 25.1 +1.6
ECK **Cauldkaine Hil** 72.92 347 *e*P P 05 37 22.0 -1.0
ECK **Cauldkaine Hil** 72.92 347 P P 05 37 22.0 -1.0
KSP **Ksiaz** 72.94 334 ⇓*e*P P 05 37 22.7 -0.5
KSP *e**PP **pP** 05 38 02.8 +1.5
KSP *e*S **S** 05 46 33.8 -2.8
KSP *e* 05 47 12.8
KSP **Ksiaz** 72.94 334 *e*P P 05 37 22.7 -0.5
KSP *e*pP **pP** 05 38 03.4 +2.1
KSP *e*S **S** 05 46 36.4 -0.2
KSP *e*ScS **SKSac** 05 47 07.3 -6.2
KSP LMZ LR 06 03 47.1
WMOK **Wichita Mounta** 72.94 56 *e*P P 05 37 24.0 +0.4
WMOK *e* 05 38 00.8
WMOK pmax pmax
comp=Z,290nm,0.9s
WMOK **Wichita Mounta** 72.94 56 *e*P P 05 37 24.0 +0.4
comp=Z,290nm,0.9s
WMOK *e* 05 38 00.8
327A **Balmorhea Ranc** 72.95 61 ⇑P P 05 37 24.8 +1.1
baz=73,SNR=13
BAYT **Ayd¯–ntepe-Bay** 72.97 314 *e*P P 05 37 24.6 +0.7
BUR08 **Bucovina Ar. S** 72.99 327 *e*P P 05 37 23.0 -0.7
NRDL **Niedersach Rie** 73.00 339 *e*P P 05 37 22.9 -0.6
comp=Z,188nm,1.7s
NRDL *e*pP **pP** 05 38 04.3 +2.7
BURAR **Bucovina Array** 73.01 327 P P 05 37 23.3 -0.5
BURAR **Bucovina Array** 73.01 327 ⇓*i*P P 05 37 23.3 -0.5
NIE **Niedzica** 73.03 331 ⇑*i*P P 05 37 24.0 +0.1
NIE *e**PP **pP** 05 38 05.2 +3.3
NIE **Niedzica** 73.03 331 *i*P P 05 37 24.0 +0.1
NIE *e*pP **pP** 05 38 05.2 +3.3
HDIL **Hopedale** 73.06 46 *e*P P 05 37 24.6 +0.5
comp=Z,356nm,1.0s
HDIL *e* 05 38 00.5
RAC **Raciborz** 73.08 333 *e*P P 05 37 24.3 +0.3
RAC *e*S **SKiKP** 05 46 39.0 -0.6
UZH **Uzhgorod** 73.10 329 ⇓*i*P P 05 37 22.5 -1.7
UZH *e* 05 37 35.9
UZH *e* 05 38 04.3
UZH *i*S **S** 05 46 33.7 -4.8
KOPT **Kop Dagi** 73.11 313 *i*P P 05 37 25.8 +1.0
CRVS **Cervenica-Dubn** 73.13 330 *e*P P 05 37 23.3 -1.1
CRVS pmax pmax
comp=Z,272nm,1.8s
CRVS **Cervenica-Dubn** 73.13 330 *e*P P 05 37 23.3 -1.1
CRVS *e*PCP **PcP** 05 37 39.7 -0.5
CRVS *e*pP **pP** 05 38 02.2 -0.3
CRVS *e*S S 05 46 31.8 -7.1
Y32A **R-V Farms, Ver** 73.15 57 ⇑P P 05 37 25.3 +0.5
baz=73,SNR=175
DZM **Mont Dzumac** 73.16 169 *e*P P 05 37 26.3 +1.5
comp=Z,269nm,1.4s
DZM *e*pP **pP** 05 38 00.7 -2.3
comp=Z,320nm,1.4s
DZM *e*S **S** 05 46 36.5 -3.2
comp=Z,5µm,28.4s
DZM **Mont Dzumac** 73.16 169 *e*P P 05 37 24.9 +0.1
DZM *e*S **pP** 05 38 03.2 +0.2
DZM **Mont Dzumac** 73.16 169 P P 05 37 25.8 +1.0
DZM **Mont Dzumac** 73.16 169 P P 05 37 25.8 +1.0
comp=Z,38nm,0.8s,baz=40,slow=7.4,SNR=31
NOUC **Port Laguerre** 73.17 169 *e*P P 05 37 25.2 +0.5
NOUC *e*S **pP** 05 38 02.3 -0.6
426A **McDonald Obser** 73.18 62 ⇑P P 05 37 25.9 +0.7
baz=73,SNR=111
ESPY **Espiye-Giresun** 73.20 315 *e*P P 05 37 24.4 -0.5
GUMT **Gumushane** 73.22 314 *e*P P 05 37 25.8 +0.6
GEVA **Gevas** 73.24 310 *i*P P 05 37 25.9 +0.5
Z31A **Sharp Cattle R** 73.30 58 ⇓P P 05 37 26.0 +0.3
baz=73,SNR=154
OKC **Ostrava-Krasne** 73.31 333 ⇓*i*P P 05 37 25.4 0.0
OKC *e**PP **pP** 05 38 05.8 +2.3
OKC *e* 05 40 09.1
OKC *e* 05 41 58.5
OKC *e*S **S** 05 46 41.1 +0.3
OKC *e* 05 47 16.6
OKC MLR MLR
comp=Z,3µm,16.9s
OKC **Ostrava-Krasne** 73.31 333 ⇓*i*P P 05 37 25.4 0.0
OKC *e*pP **pP** 05 38 05.8 +2.3
OKC *e*PP **PP** 05 40 09.1 -1.0
OKC *ex* x 05 41 58.5
OKC *e*S **S** 05 46 41.1 +0.3
OKC *e*SKS **SKKSac** 05 47 16.6 0.0
OKC AMS AMS 06 16 50.0
comp=Z,3µm,16.9s
UPC **Upice** 73.32 334 ⇓*i*P P 05 37 25.3 -0.2
UPC *e* 05 37 41.0
UPC *e**PP **pP** 05 38 07.7 +4.1
UPC **Upice** 73.32 334 ⇓*i*P P 05 37 25.3 -0.2
UPC *e*PCP **PcP** 05 37 41.0 0.0
UPC *e*pP **pP** 05 38 07.7 +4.1
328A **Wristen Ranch,** 73.32 61 ⇑P P 05 37 26.6 +0.8
baz=73,SNR=333
VRTB **Varto-Mus** 73.34 312 *e*P P 05 37 27.2 +1.2
DPC **Dobruska-Polom** 73.37 334 ⇓*i*P P 05 37 25.8 0.0
DPC *e* 05 37 41.5
DPC *e**PP **pP** 05 38 04.7 +0.7
DPC *e* 05 40 09.5
DPC *e*S **S** 05 46 41.0 -0.6

DPC *e* 05 47 17.6
DPC MLR MLR
comp=Z,3µm,13.9s
DPC Dobruska-Polom 73.37 334 *e*P **P 05 37 25.3 -0.6**
comp=Z,614nm,1.8s
DPC Dobruska-Polom 73.37 334⇓ *i*P **P 05 37 25.8 0.0**
DPC *e*PCP **PcP 05 37 41.5 +0.2**
DPC *e*pP **pP 05 38 04.7 +0.7**
DPC *e*PP **PP 05 40 09.5 -1.2**
DPC *e*S **S 05 46 41.0 -0.6**
DPC *e*SKS **SKKSac 05 47 17.6 +0.4**
DPC AMS AMS 06 17 00.0
comp=Z,3µm,13.9s
CLL Collm 73.39 336⇓ *i*P **P 05 37 24.9 -0.9**
CLL *i* 05 37 35.1
CLL *i* *PP **pP 05 38 06.2 +2.2**
CLL *e*S **S 05 46 41.0 -0.7**
CLL pmax pmax
comp=Z,301nm,1.7s
CLL Collm 73.39 336 *e*P **P 05 37 24.8 -1.1**
comp=Z,300nm,1.7s
CLL *e*pP **pP 05 38 06.5 +2.5**
CLL Collm 73.39 336⇓ *i*P **P 05 37 24.9 -0.9**
comp=Z,301nm,1.7s
CLL *i* 05 37 35.1
CLL *i* pP **pP 05 38 06.2 +2.2**
comp=Z,135nm,1.1s
CLL *i* 05 38 49.7
CLL *e*PP **PP 05 40 08.0 -2.7**
CLL *e*pPP 05 40 48.0
CLL *e*sPP 05 41 07.0
CLL *e*PPP PPP 05 42 03.0
CLL *e*PPPP 05 43 00.0
CLL *e* 05 44 08.0
CLL *e*S **S 05 46 41.0 -0.7**
CLL *e*SKSac **SKSac 05 47 15.0 -1.9**
CLL *e*PS **PnS 05 47 37.0 +1.0**
CLL *e*sS **sS 05 47 47.0 -0.6**
CLL *e*sPPS 05 48 25.0
CLL *e*SS **SS 05 51 24.0 -1.8**
CLL *e*sSS 05 52 32.0
CLL *e*SSS SSS 05 54 48.0
CLL *e*sSSS 05 56 09.0
CLL *e* 05 57 33.0
CLL LmH 06 14 00.0
comp=Z,2µm,19.6s
427A Hayter Ranch, 73.39 62⇓ **P 05 37 27.2 +0.9**
baz=73,SNR=128
GRSN GIRESUNGRSN 73.40 315 *i*P **P 05 37 23.0 -3.1**
130A Snyder 73.41 59⇑ **P 05 37 27.0 +0.6**
baz=73,SNR=70
229A Bryant Ranch, 73.43 60⇑ **P 05 37 27.4 +0.9**
baz=73,SNR=84
GAL1 Galloway 73.44 348 *e*P **P 05 37 24.2 -1.9**
GAL1 AMB AMB 05 37 26.3
comp=Z,134nm,2.4s
GAL1 Galloway 73.44 348 P **P 05 37 24.2 -1.9**
GAL1 AMB AMB 05 37 26.3
comp=Z,134nm,2.4s
TESR 73.45 326⇓ *i*P **P 05 37 25.4 -0.9**
TRPA Tarpa 73.46 329⇓ *i*P **P 05 37 25.8 -0.5**
TRPA Tarpa 73.46 329⇓ *e* **P 05 37 26.4 +0.1**
TATV Tatvan 73.47 311 *i*P **P 05 37 27.5 +0.7**
KESW Keswick, Cumbr 73.49 347 *e*P **P 05 37 25.1 -1.3**
KESW AMB AMB 05 37 27.1
comp=Z,222nm,2.2s
KESW Keswick, Cumbr 73.49 347 P **P 05 37 25.1 -1.3**
KESW AMB AMB 05 37 27.1
comp=Z,222nm,2.2s
HAKT HAKKARI 73.52 310 *i*P **P 05 37 27.5 +0.4**
BMR Baia Mare 73.54 328 P **P 05 37 27.0 +0.2**
MORC Moravsky Berou 73.54 333⇓ P **P 05 37 26.5 -0.3**
MORC Moravsky Berou 73.54 333 *e*P **P 05 37 26.1 -0.8**
comp=Z,418nm,1.7s
MORC *e* 05 38 08.8
MORC Moravsky Berou 73.54 333⇓ *i*P **P 05 37 26.5 -0.3**
BRG Berggiesshubel 73.54 336 *i*P **P 05 37 26.2 -0.6**
comp=Z,141nm,1.6s
BRG *i* PP **PP 05 40 11.0 -1.0**
comp=Z,76nm,1.6s
BRG SKS **SKiKP 05 46 38.0 -2.3**
BRG S SKSac 05 47 07.0 -11
BRG SS SS 05 51 49.0 +21
BRG
comp=N,2µm,15.4s
BRG
comp=E,1µm,12.9s
BRG
comp=Z,3µm,14.9s
BRG Berggiesshubel 73.54 336 *i*P **P 05 37 26.2 -0.6**
BRG *i* 05 40 11.0
BRG 05 46 38.0
BRG S S 05 47 07.0 +24
BRG pmax pmax
comp=Z,141nm,1.6s
BRG MLR MLR
comp=N,76µm,15.4s
BRG MLR MLR
comp=E,2µm,12.9s
BRG MLR MLR
comp=Z,1µm,14.9s
BRG Berggiesshubel 73.54 336 *e*P **P 05 37 26.0 -0.8**
comp=Z,141nm,1.6s
BRG *e*pP **pP 05 38 07.6 +2.7**
CLZ Clausthal 73.55 338 *e*P **P 05 37 26.7 -0.1**
CLZ *e**PP **pP 05 38 08.2 +3.2**
CLZ pmax pmax
comp=Z,356nm,1.6s
CLZ Clausthal 73.55 338 *e*P **P 05 37 26.7 -0.1**
comp=Z,356nm,1.6s
CLZ *e*pP **pP 05 38 08.2 +3.2**
TUL1 Tulsa 73.58 53⇑ **P 05 37 27.6 +0.4**
baz=73,SNR=109
IPIR Pirpir 73.59 302 *e*P **P 05 37 29.2 +1.5**
526A Mary Lane Ranc 73.60 63⇑ **P 05 37 28.8 +1.1**
baz=73,SNR=196
FBE Freiberg 73.65 336 *e*P **P 05 37 26.9 -0.5**
comp=Z,347nm,1.8s
FBE *e*pP **pP 05 38 08.5 +3.0**
131A Roby 73.66 58⇓ **P 05 37 28.6 +0.8**
baz=74,SNR=125
Z32A Haskell 73.67 57⇓ **P 05 37 28.1 +0.3**
baz=74,SNR=163
PVCC Panska Ves 73.69 335 *e*P **P 05 37 27.4 -0.2**
PVCC *e**PP **pP 05 38 08.4 +2.6**
PVCC *e*S **S 05 46 44.3 -0.8**
PVCC MLR MLR
comp=Z,2µm,14.7s
PVCC Panska Ves 73.69 335⇓ *e*P **P 05 37 27.4 -0.2**
PVCC *e*pP **pP 05 38 08.4 +2.6**
PVCC *e*S **S 05 46 44.3 -0.8**
PVCC AMS AMS 06 18 20.0
comp=Z,2µm,14.7s
329A Wagon Wheel Ra 73.70 60⇓ **P 05 37 29.0 +0.9**
baz=74,SNR=268
IBBN Ibbenburen 73.71 340 *e*P **P 05 37 27.2 -0.5**
comp=Z,367nm,2.0s
TLCR 73.78 324 P **P 05 37 28.0 -0.2**
NEUB Neuenburg 73.79 337 *e*P **P 05 37 27.5 -0.7**
comp=Z,296nm,1.8s
NEUB *e*pP **pP 05 38 09.1 +2.8**
527A Woodward Ranch 73.81 62⇓ **P 05 37 29.6 +0.7**
baz=74,SNR=159
ERZN Erzincan 73.81 313 *e*P **P 05 37 29.9 +1.2**
CUKT Cukurca 73.81 309 *e*P **P 05 37 29.6 +0.8**
BNGB Bing¶ll 73.84 312 *e*P **P 05 37 30.0 +1.1**
230A Sterling City 73.87 59⇑ **P 05 37 29.6 +0.6**
baz=74,SNR=61
428A Kincaid Ranch, 73.89 61⇑ **P 05 37 30.7 +1.4**
baz=74,SNR=138
PETR 73.91 325⇓ *i*P **P 05 37 29.5 +0.5**
ILIN Lien 73.94 306 *e*P **P 05 37 29.3 -0.4**
626A Big Bend Ranch 73.96 63⇓ **P 05 37 30.4 +0.8**
baz=74,SNR=327
VRI Vrincioaia 73.97 325⇓ **P 05 37 28.9 -0.5**
VRI Vrincioaia 73.97 325⇓ *i*P **P 05 37 28.9 -0.5**
SUSE Susehri 74.00 315 *i*P **P 05 37 29.4 -0.5**
PLOR Plostina 74.01 325⇑ **P 05 37 29.1 -0.6**
PLOR Plostina 74.01 325⇑ *i*P **P 05 37 29.1 -0.6**
CFR Carcaliu 74.04 324⇓ **P 05 37 29.1 -0.7**
CFR Carcaliu 74.04 324⇓ *i*P **P 05 37 29.0 -0.7**
ABTX Abilene, Hawle 74.10 58⇓ **P 05 37 30.9 +0.6**
baz=74,SNR=98
AAM Ann Arbor 74.11 41 *e*P **P 05 37 30.3 +0.1**

AAM *e* 05 38 07.7
AAM pmax pmax
comp=Z,267nm,0.9s
AAM Ann Arbor 74.11 41 *e*P **P 05 37 30.3 +0.1**
comp=Z,267nm,0.9s
AAM *e* 05 38 07.7
DIKM Dikmen 74.13 318 *e*P **P 05 37 30.9 +0.6**
PRA Prague 74.14 335⇓ P **P 05 37 30.0 -0.3**
PRA pP **pP 05 38 11.0 +2.5**
SLM Saint Louis 74.15 48 *e*P **P 05 37 30.7 +0.2**
SLM *e* 05 38 07.4
SLM pmax pmax
comp=Z,230nm,0.9s
SLM Saint Louis 74.15 48 *e*P **P 05 37 30.7 +0.2**
comp=Z,230nm,0.9s
SLM *e* 05 38 07.4
PRU Pruhonice 74.19 335⇓ *i*P **P 05 37 30.2 -0.3**
PRU *e* 05 37 45.3
PRU *e**PP **pP 05 38 09.9 +1.2**
PRU *e* 05 40 18.7
PRU *e*S **S 05 46 49.3 -1.4**
PRU *e* 05 47 21.5
PRU MLR MLR
comp=Z,3µm,16.0s
PRU Pruhonice 74.19 335⇓ *i*P **P 05 37 30.2 -0.3**
PRU *e*PCP **PcP 05 37 45.3 +0.6**
PRU *e*pP **pP 05 38 09.9 +1.2**
PRU *e*PP **PP 05 40 18.7 +1.2**
PRU *e*S **S 05 46 49.3 -1.4**
PRU *e*SKS **SKSac 05 47 21.5 -1.5**
PRU AMS AMS 06 18 30.0
comp=Z,3µm,16.0s
SFIN Scholer Farm 74.19 45⇑ **P 05 37 31.1 +0.4**
baz=74,SNR=18
SIRN S¨¨rnak 74.20 310 *i*P P 05 37 35.9 +4.9
330A Mertzon 74.20 60⇑ **P 05 37 31.5 +0.5**
baz=74,SNR=118
VRAC Vranov 74.23 333⇑ *i*P **P 05 37 30.8 0.0**
WTSB Winterswijk 74.24 340 *e*P **P 05 37 30.0 -0.7**
comp=Z,523nm,2.2s
IKOM Komasi 74.24 305 *e*P **P 05 37 31.2 -0.1**
RSDY Resadiye-TOKAT 74.24 315 *e*P **P 05 37 31.8 +0.8**
KVT Kavak 74.25 317 *e*P **P 05 37 32.1 +1.0**
528A Cox Ranch, San 74.26 62⇓ **P 05 37 32.7 +1.2**
baz=74,SNR=196
ERBA Erbaa 74.27 316 *i*P **P 05 37 32.0 +0.8**
231A Bronte 74.27 59⇑ **P 05 37 31.7 +0.4**
baz=74,SNR=63
VYHS Vyhne 74.30 332 *e*P **P 05 37 31.3 0.0**
VYHS pmax pmax
comp=Z,141nm,1.5s
VYHS Vyhne 74.30 332 *e*P **P 05 37 31.2 0.0**
VYHS *e*PCP **PcP 05 37 45.5 +0.2**
VYHS *e*pP **pP 05 38 08.8 -0.7**
LHO Holmfirth 74.32 346 *e*P **P 05 37 29.9 -1.4**
LHO Holmfirth 74.32 346 P **P 05 37 29.9 -1.4**
TANN Tannenbergstha 74.35 336 *e*P **P 05 37 31.1 -0.4**
comp=Z,209nm,1.8s
TANN *e*pP **pP 05 38 12.8 +3.1**
MOX Moxa 74.35 337 *e*P **P 05 37 30.9 -0.6**
MOX *e**PP **pP 05 38 12.6 +2.9**
MOX pmax pmax
comp=Z,191nm,1.6s
MOX Moxa 74.35 337 *e*P **P 05 37 30.9 -0.6**
comp=Z,191nm,1.6s
MOX *e*pP **pP 05 38 12.6 +2.9**
WERD Werda 74.36 336 *e*P **P 05 37 31.1 -0.4**
comp=Z,263nm,1.7s
WERD *e*pP **pP 05 38 12.8 +3.0**
PLN Plauen 74.36 336 *e*P **P 05 37 31.2 -0.3**
comp=Z,3µm,2.2s
PLN *e*pP **pP 05 38 12.9 +3.2**
DOPR Dopca 74.36 326⇓ *i*P **P 05 37 31.0 -0.7**
TXAR Lajitas Array 74.39 63 P **P 05 37 33.0 +0.9**
TXAR pP **pP 05 38 09.1 -1.4**
TXAR PKKPbc **PKKPbc 05 56 56.9 +0.7**
TXAR P'P' 06 05 00.5
TXAR Lajitas Array 74.39 63 P **P 05 37 33.0 +0.9**
comp=Z,139nm,0.7s,baz=296,slow=5.2,SNR=1219
TXAR pP **pP 05 38 09.1 -1.4**
comp=Z,243nm,0.9s,baz=294,slow=4.0,SNR=11
TXAR PKKPbc **PKKPbc 05 56 56.9 +0.7**
comp=Z,1.3nm,1.1s,baz=76,slow=3.8,SNR=3.9
TXAR PKPPKP **P'P'df 06 05 00.5 -2.2**
comp=Z,0.8nm,1.0s,baz=46,slow=3.6,SNR=4.3
HAVZ Havza 74.40 317 *i*P **P 05 37 32.5 +0.5**
429A Davenport Ranc 74.40 61⇓ **P 05 37 32.7 +0.5**
baz=74,SNR=162
BZK Bozkurt 74.41 319 *e*P **P 05 37 32.0 +0.1**
IDHR Dehrash 74.41 306 *e*P **P 05 37 31.7 -0.7**
GUNZ Gunzen 74.43 336 *e*P **P 05 37 31.5 -0.5**
comp=Z,279nm,1.7s
GUNZ *e*pP **pP 05 38 13.2 +3.0**
BEST Besiri 74.44 311 *i*P **P 05 37 33.0 +0.7**
ILIC ilic-Erzincan 74.45 314 *e*P **P 05 37 33.3 +0.9**
627A Terlingua Ranc 74.46 63⇓ **P 05 37 33.6 +1.0**
baz=74,SNR=282
LPIG La Paz 74.46 71 LR LR 06 03 47.8
comp=Z,71nm,21.7s,baz=321,slow=30
BYBT Boyabat 74.49 318 *e*P **P 05 37 33.6 +1.2**
WERN Wernitzgruen 74.49 336 *e*P **P 05 37 31.9 -0.4**
comp=Z,235nm,1.7s
WERN *e*pP **pP 05 38 13.6 +3.1**
PSZ Piszkesteto 74.49 331⇓ P **P 05 37 32.2 -0.2**
PSZ Piszkesteto 74.49 331⇓ *i*P **P 05 37 32.3 -0.2**
comp=Z,487nm,1.8s
PSZ *e* 05 38 13.8
PSZ Piszkesteto 74.49 331⇓ *i*P **P 05 37 32.2 -0.2**
PSZ Piszkesteto 74.49 331⇓ *e*P **P 05 37 32.5 +0.1**
NKC Novy Kostel 74.52 336⇓ *i*P **P 05 37 32.2 -0.3**
NKC *e**PP **pP 05 38 11.2 +0.5**
NKC *e*S **S 05 46 53.0 -1.4**
NKC *e* 05 47 25.6
NKC MLR MLR
comp=Z,3µm,15.3s
NKC Novy Kostel 74.52 336⇓ *i*P **P 05 37 32.2 -0.3**
NKC *e*pP **pP 05 38 11.2 +0.5**
NKC *e*S **S 05 46 53.0 -1.4**
NKC *e*SKS **SKSac 05 47 25.6 +0.1**
NKC AMS AMS 06 15 50.0
comp=Z,3µm,15.3s
PTK Pertek 74.52 313 *e*P **P 05 37 34.1 +1.2**
TREC Trest 74.56 334⇓ *i*P **P 05 37 32.6 -0.1**
TREC *e**PP **pP 05 38 13.5 +2.5**
TREC *e*S **S 05 46 54.2 -0.7**
TREC MLR MLR
comp=Z,2µm,14.1s
TREC Trest 74.56 334⇓ *i*P **P 05 37 32.6 -0.1**
TREC *e*pP **pP 05 38 13.5 +2.5**
TREC *e*PP PP 05 40 15.3 -5.4
TREC *ex* x 05 40 55.1
TREC *e*S **S 05 46 54.2 -0.7**
TREC AMS AMS 06 16 50.0
comp=Z,2µm,14.1s
DRGR 74.57 328⇑ **P 05 37 32.3 -0.6**
DRGR 74.57 328⇑ *i*P **P 05 37 32.3 -0.6**
MLR Muntele Rosu 74.58 326⇑ *i*P **P 05 37 32.6 -0.4**
UBBA Unterbreizbach 74.58 338 *e*P **P 05 37 32.1 -0.6**
comp=Z,248nm,1.8s
UBBA *e*pP **pP 05 38 13.5 +2.6**
529A Stev Forest Ra 74.60 61⇑ **P 05 37 34.3 +1.0**
baz=74,SNR=412
IGHG Ghaleghazi 74.61 306 *e*P **P 05 37 33.0 -0.5**
BUG Bochum--Univer 74.63 340 *e*P **P 05 37 32.3 -0.7**
comp=Z,328nm,1.9s
KEMA Kemaliye 74.63 314 *i*P **P 05 37 34.0 +0.6**
430A Baggett Ranch, 74.64 60⇓ **P 05 37 34.2 +0.6**
baz=74,SNR=281
232A Coleman 74.67 58⇑ **P 05 37 34.2 +0.6**
baz=74,SNR=218
TOKA Tokat 74.68 316 *i*P **P 05 37 34.1 +0.5**
ISR Istrita 74.68 325⇓ **P 05 37 33.3 -0.2**
ISR Istrita 74.68 325⇓ *i*P **P 05 37 33.3 -0.2**
331A San Angelo 74.69 59⇑ **P 05 37 34.2 +0.4**
baz=74,SNR=201
SMOL Smolenice 74.71 332 *e*P **P 05 37 34.5 +0.9**
SMOL Smolenice 74.71 332 *e*P **P 05 37 34.5 +0.9**
628A Black Gap, Mar 74.72 62⇑ **P 05 37 34.9 +0.9**
baz=75,SNR=160
MANZ Manzenberg 74.83 336 *e*P **P 05 37 33.7 -0.6**
comp=Z,152nm,1.7s
MANZ *e*pP **pP 05 38 15.4 +2.9**
ISRV Sarvestan 74.88 298 *e*P **P 05 37 36.0 +0.7**

WPM1 Penmaenmawr 74.90 347 *e*P **P 05 37 33.5 -1.1**
WPM1 Penmaenmawr 74.90 347 P **P 05 37 33.5 -1.1**
WLF1 Llynfaes 74.94 347 *e*P **P 05 37 33.2 -1.6**
WLF1 AMB AMB 05 37 34.9
comp=Z,124nm,2.2s
WLF1 Llynfaes 74.94 347 P **P 05 37 33.2 -1.6**
WLF1 AMB AMB 05 37 34.9
comp=Z,124nm,2.2s
VOIR 74.94 326⇑ **P P 05 37 35.0 -0.1**
VOIR 74.94 326⇑ *i*P **P 05 37 35.0 -0.1**
DIYA Diyarbakir 74.95 312 *i*P **P 05 37 36.0 +0.7**
SVRC Sivrice-ELAZID 74.97 313 *e*P **P 05 37 36.9 +1.4**
332A Millersview 75.00 59⇓ **P 05 37 36.1 +0.5**
baz=75,SNR=210
ROTZ Rotzenmuhle 75.01 336 *e*P **P 05 37 35.2 -0.1**
comp=Z,215nm,1.6s
ROTZ *e*pP **pP 05 38 16.8 +3.3**
BALT Daday 75.02 319 *i*P **P 05 37 36.1 +0.4**
ELZG Elazig 75.03 313 *i*P **P 05 37 37.0 +1.2**
431A Sonora 75.07 60⇓ **P 05 37 36.5 +0.5**
baz=75,SNR=292
OLIL Olney 75.07 46 *e*P **P 05 37 36.6 +0.8**
comp=Z,153nm,0.9s
OLIL *e* 05 38 12.8
530A J-C Ranch, Com 75.08 61⇓ **P 05 37 37.0 +0.9**
baz=75,SNR=189
ZST Bratislava 75.09 332 *e*P **P 05 37 35.4 -0.3**
ZST Bratislava 75.09 332 *e*P **P 05 37 35.4 -0.3**
ZST *e*pP **pP 05 38 12.6 -1.4**
MARD Mardin 75.13 311 *i*P **P 05 37 37.2 +0.9**
BUD Budapest 75.14 331⇓ *e*P **P 05 37 36.5 +0.4**
ARR Arges 75.15 326⇓ *i*P **P 05 37 36.6 +0.4**
TOS Tosya 75.16 318 *e*P **P 05 37 37.4 +1.0**
SULR 75.16 325⇓ *i*P P 05 37 32.5 -3.7
CTKT Corum 75.17 317 *i*P **P 05 37 37.2 +0.6**
DLF Lyons Farm 75.21 349 *e*P **P 05 37 35.8 -0.5**
KHC Kasperske Hory 75.23 335⇓ *i*P **P 05 37 36.6 0.0**
KHC *e**PP **pP 05 38 17.9 +3.0**
KHC *e* 05 40 28.5
KHC *e*S **S 05 47 00.9 -1.4**
KHC *e* 05 47 32.3
KHC MLR MLR
comp=Z,2µm,13.8s
KHC Kasperske Hory 75.23 335 *e*P **P 05 37 36.7 0.0**
comp=Z,323nm,1.7s
KHC *e* 05 38 17.7
KHC Kasperske Hory 75.23 335⇓ *i*P **P 05 37 36.6 0.0**
KHC *e*pP **pP 05 38 17.9 +3.0**
KHC *ex* x 05 39 00.0
KHC *e*PP **PP 05 40 28.5 +2.1**
KHC *ex* x 05 43 16.1
KHC *e*S **S 05 47 00.9 -1.4**
KHC *e*SKS **SKKSac 05 47 32.3 +1.0**
KHC AMS AMS 06 19 30.0
comp=Z,2µm,13.8s
YRE Yr Eifl 75.24 347 *e*P **P 05 37 34.7 -1.8**
YRE Yr Eifl 75.24 347 P **P 05 37 34.7 -1.8**
MSNY Massena 75.25 34 *e*P **P 05 37 36.5 -0.2**
comp=Z,1µm,1.1s
MSNY *e* 05 38 13.8
ILGA Ilgaz 75.28 318 *i*P **P 05 37 38.0 +0.8**
PSN Preselentsi 75.30 323 *i*P **P 05 37 37.0 0.0**
DEV Deva 75.30 328⇑ **P 05 37 36.7 -0.3**
DEV Deva 75.30 328 P **P 05 37 37.0 0.0**
DEV Deva 75.30 328⇑ *i*P **P 05 37 36.7 -0.3**
GRF Grafenberg Arr 75.33 337 *e*P **P 05 37 37.0 -0.1**
GRF *e**PP **pP 05 38 18.7 +3.3**
GRF pmax pmax
comp=Z,485nm,1.7s
GRF Grafenberg Arr 75.33 337 *e*P **P 05 37 37.0 -0.1**
comp=Z,485nm,1.7s
GRF *e*pP **pP 05 38 18.7 +3.3**
432A Menard 75.37 59⇑ **P 05 37 38.2 +0.5**
baz=75,SNR=52
RFTA Plano 75.37 56 *e*P **P 05 37 38.0 +0.4**
RFTA *e* 05 38 14.8
PKSN Nyarlorinc 75.40 330⇑ *e* **P 05 37 38.3 +0.8**
WET Wettzell 75.40 335 *e*P **P 05 37 37.5 -0.1**
WET *e**PP **pP 05 38 19.2 +3.3**
WET pmax pmax
comp=Z,326nm,1.7s
WET Wettzell 75.40 335 *e*P **P 05 37 37.5 -0.1**
comp=Z,326nm,1.7s
WET *e*pP **pP 05 38 19.2 +3.3**
MYA Malataya 75.42 313 *e*P **P 05 37 39.2 +1.2**
PKSG 75.42 331⇓ *e* **P 05 37 37.9 +0.3**
BLO Bloomington 75.43 45 *e*P **P 05 37 38.3 +0.4**
BLO *e* 05 38 14.8
BLO pmax pmax
comp=Z,109nm,0.9s
BLO Bloomington 75.43 45 *e*P **P 05 37 38.3 +0.4**
comp=Z,109nm,0.9s
BLO *e* 05 38 14.8
MALT Malatya 75.43 313 *e*P **P 05 37 39.3 +1.2**
MALT Malatya 75.43 313⇓ P **P 05 37 38.6 +0.6**
MALT Malatya 75.43 313 *e*P **P 05 37 39.0 +1.0**
comp=Z,252nm,1.5s
MALT Malatya 75.43 313⇓ *i*P **P 05 37 38.6 +0.6**
MALT Malatya 75.43 313 *e*P **P 05 37 38.8 +0.8**
GEC2 GERESS Array S 75.46 335 *e*P **P 05 37 37.4 -0.6**
GEC2 *e**PP **pP 05 38 19.2 +2.9**
GEC2 pmax pmax
comp=Z,160nm,1.6s
GEC2 GERESS Array S 75.46 335 *e*P **P 05 37 37.4 -0.6**
comp=Z,160nm,1.6s
GEC2 *e*pP **pP 05 38 19.2 +2.9**
GERES GERESS Array B 75.46 335 P **P 05 37 37.1 -0.8**
GERES PP **PP 05 40 30.5 +2.1**
GERES GERESS Array B 75.46 335 P **P 05 37 37.1 -0.8**
comp=Z,5.6nm,0.5s,baz=25,slow=3.5,SNR=44
GERES PP **PP 05 40 30.5 +2.1**
comp=Z,7.1nm,1.0s,baz=44,slow=4.1,SNR=3.5
GERES LR LR 06 18 20.5
comp=Z,2µm,18.2s,baz=20,slow=42
HLM1 Long Mynd 75.47 346 *e*P **P 05 37 35.6 -2.3**
HLM1 AMB AMB 05 37 38.6
comp=Z,159nm,2.4s
HLM1 Long Mynd 75.47 346 P **P 05 37 35.6 -2.3**
HLM1 AMB AMB 05 37 38.6
comp=Z,159nm,2.4s
PKS7 Kunszentmiklos 75.49 331⇑ *e*P **P 05 37 39.2 +1.2**
531A Rocksprings 75.50 60⇑ P **P 05 37 38.9 +0.5**
baz=75,SNR=211
TNS Taunus Mts 75.50 339 *e*P **P 05 37 37.7 -0.5**
TNS pmax pmax
comp=Z,187nm,1.7s
TNS Taunus Mts 75.50 339 *e*P **P 05 37 37.7 -0.5**
comp=Z,187nm,1.7s
HGN Heimansgroeve 75.55 340 *e*P **P 05 37 37.6 -0.7**
comp=Z,768nm,2.3s
SAFT Safranbolu 75.55 319 *e*P **P 05 37 39.0 +0.5**
BEBN Eben Emael 75.58 341 P **P 05 37 38.3 -0.1**
comp=Z,55nm,2.3s
CORM Corum 75.61 317 *e*P **P 05 37 40.0 +0.9**
PKST T¨¨s 75.65 331⇓ *e* **P 05 37 38.8 -0.2**
DARE Darende-Malaty 75.66 314 *e*P **P 05 37 40.5 +1.2**
JCT Junction City 75.67 59 *e*P **P 05 37 39.8 +0.4**
JCT *e* 05 38 16.4
JCT pmax pmax
comp=Z,328nm,1.0s
JCT Junction City 75.67 59 *e*P **P 05 37 39.8 +0.4**
comp=Z,328nm,1.0s
JCT *e* 05 38 16.4
JCT Junction City 75.67 59⇑ **P 05 37 39.9 +0.4**
baz=76,SNR=184
AKCD Akcadag 75.68 314 *i*P **P 05 37 40.1 +0.6**
LONY Lake Ozonia 75.68 34 *e*P **P 05 37 38.8 -0.5**
comp=Z,110nm,1.0s
LONY *e* 05 38 16.2
MEM Membach 75.68 340 P **P 05 37 38.3 -0.7**
BANOM Banah 75.69 293 P **P 05 37 39.7 +0.1**
SNR=24
CANT Cankiri 75.69 318 *e*P **P 05 37 40.4 +1.0**
CONA Conrad Observa 75.69 333 *i*P **P 05 37 39.6 +0.3**
comp=Z,1µm,2.6s,SNR=20
CONA Conrad Observa 75.69 333 *i*P **P 05 37 39.6 +0.3**
comp=Z,1µm,2.6s
SOP Sopron 75.71 333⇓ *e*P **P 05 37 39.8 +0.5**
YOZ Yozgat 75.75 316 *e*P **P 05 37 40.2 +0.4**
WHTX Lake Whitney 75.76 57⇑ **P 05 37 40.4 +0.6**
baz=76,SNR=146
ERPA Erie 75.77 39 *e*P **P 05 37 40.1 +0.4**
comp=Z,809nm,1.5s
ERPA *e* 05 38 17.1

GZR **Gura Zlata** 75.77 328 ⇓P P 05 37 39.1 -0.7
GZR **Gura Zlata** 75.77 328 ⇓*i*P P 05 37 39.1 -0.7
MIAR **Mount Ida** 75.77 53 *e*P P 05 37 40.3 +0.4
MIAR *e* 05 38 16.9
MIAR pmax pmax
comp=Z,173nm,1.0s
MIAR **Mount Ida** 75.77 53 *e*P P 05 37 40.3 +0.4
comp=Z,173nm,1.0s
MIAR *e* 05 38 16.9
EIDS **Eidsvold** 75.85 184 *e*P P 05 37 41.1 +1.0
comp=Z,364nm,1.6s
EIDS *e* 05 38 17.8
FRNY **Flat Rock** 75.85 33 *e*P P 05 37 40.0 -0.1
comp=Z,58nm,1.0s
FRNY *e* 05 38 17.3
SSW **Stow on the Wo** 75.85 346 *e*P P 05 37 38.4 -1.6
SSW **Stow on the Wo** 75.85 346 P P 05 37 38.4 -1.6
UCC **Uccle** 75.85 341 P P 05 37 39.8 -0.2
ELDT **Eldivan** 75.86 318 *i* P P 05 37 40.9 +0.4
532A **Rocksprings** 75.88 60 ⇓P P 05 37 41.0 +0.4
baz=76,SNR=239
USIN **University of** 75.89 46 *e*P P 05 37 41.5 +1.0
comp=Z,467nm,0.9s
USIN *e* 05 38 18.1
URFA **Urfa** 75.95 313 *e*P P 05 37 42.4 +1.4
PARMO **Parma** 75.96 49 *e*P P 05 37 42.0 +1.1
PARMO *e* 05 38 18.5
BZS **Buzias** 75.97 328 ⇓P P 05 37 39.9 -0.9
BZS **Buzias** 75.97 328 ⇓*i*P P 05 37 39.9 -0.9
MCH1 **Michaelchurch** 76.00 346 *e*P P 05 37 38.3 -2.5
MCH1 AMB AMB 05 37 47.6
comp=Z,105nm,1.7s
MCH1 **Michaelchurch** 76.00 346 P P 05 37 38.3 -2.5
MCH1 AMB AMB 05 37 47.6
comp=Z,105nm,1.7s
TOD **Tromm** 76.00 338 *e*P P 05 37 40.3 -0.6
TOD **Tromm** 76.00 338 *e*P P 05 37 40.3 -0.6
KDZE **Karadeniz Ereo** 76.01 320 *e*P P 05 37 40.3 -0.8
BCLA **Clavier** 76.01 341 P P 05 37 40.6 -0.3
comp=Z,90nm,2.7s
TRD **Trivandrum** 76.01 266 *e*P P 05 37 41.5 0.0
TRD AMb AMB 05 37 45.6
comp=Z,482nm,1.4s
TRD *ex* x 05 40 46.0
ABH **Alteburg** 76.03 339 *e*P P 05 37 40.1 -1.0
PINB **Pinarbasi** 76.06 315 *i* P P 05 37 42.4 +0.7
631A **Perdido Creek** 76.06 61 ⇓P P 05 37 42.2 +0.5
baz=76,SNR=688
ALLY **Alegheny Colle** 76.10 39 *e*P P 05 37 42.5 +0.8
comp=Z,414nm,1.0s
ALLY *e* 05 38 19.1
ACSO **Alum Creek Sta** 76.11 42 *e*P P 05 37 42.3 +0.6
comp=Z,190nm,1.0s
ACSO *e* 05 38 19.0
SNF **Seneffe** 76.14 341 P P 05 37 41.4 -0.3
comp=Z,104nm,2.8s
BNN **Bunyan** 76.16 315 *e*P P 05 37 42.7 +0.5
CDAG **Cicekdag** 76.18 317 *i* P P 05 37 42.3 +0.1
PKS9 **Tamasi** 76.18 331 ⇓*e*P P 05 37 42.9 +1.0
PVMO **Portageville** 76.19 49 *e*P P 05 37 43.1 +0.9
comp=Z,453nm,1.1s
PVMO *e* 05 38 20.1
UALR **University of** 76.21 52 *e*P P 05 37 43.0 +0.7
comp=Z,64nm,1.1s
MOA **Molln** 76.21 334 ⇓*i*P P 05 37 42.2 0.0
comp=Z,2µm,4.6s,SNR=25
MOA **Molln** 76.21 334 ⇓*i*P P 05 37 42.2 0.0
comp=Z,2µm,4.6s
WCI **Wyandotte Cave** 76.30 45 *e*P P 05 37 43.7 +0.8
WCI *e* 05 38 20.5
WCI pmax pmax
comp=Z,264nm,0.9s
WCI **Wyandotte Cave** 76.30 45 *e*P P 05 37 43.7 +0.8
comp=Z,264nm,0.9s
WCI *e* 05 38 20.5
RUP **Ruppelstein** 76.31 339 *e*P P 05 37 41.7 -1.0
RUP **Ruppelstein** 76.31 339 *e*P P 05 37 41.7 -1.0
CRAR **CRAIOVA** 76.35 326 P P 05 37 43.1 +0.2
ZIMR 76.37 325 P P 05 37 42.5 -0.6
NCB **Newcomb** 76.37 34 *e*P P 05 37 43.0 -0.2
NCB *e* 05 38 20.3
GNAR **Gosnell** 76.40 49 *e*P P 05 37 45.0 +1.6
comp=Z,5µm,1.0s
GNAR *e* 05 38 21.0
ARSA **Arzberg** 76.40 333 *i* P P 05 37 43.7 +0.4
comp=Z,1µm,2.5s,SNR=44
ARSA **Arzberg** 76.40 333 *i* P P 05 37 43.7 +0.4
comp=Z,1µm,2.5s
BR131 **Keskin Array S** 76.41 317 *e*P P 05 37 43.4 -0.2
comp=Z,31nm,0.9s
BRTR **Keskin Array B** 76.41 317 P P 05 37 43.2 -0.4
BRTR PKKPbc **PKKPbc** 05 56 54.2 +2.0
BRTR **Keskin Array B** 76.41 317 P P 05 37 43.2 -0.4
comp=Z,15nm,0.6s,baz=64,slow=2.9,SNR=97
BRTR PKKPbc **PKKPbc** 05 56 54.2 +2.0
comp=Z,0.9nm,0.7s,baz=175,slow=3.6,SNR=6.0
GIVF **Givet** 76.41 341 *e*P P 05 37 41.8 -1.4
GIVF *e*pP **pP** 05 38 22.7 +1.1
GIVF **Givet** 76.41 341 *e*P P 05 37 41.8 -1.4
GIVF *e**PP **pP** 05 38 22.7 +1.1
GIVF **Givet** 76.41 341 *e*P P 05 37 41.8 -1.4
GIVF *e*pP **pP** 05 38 22.7 +1.1
HBAR **Harrisburg** 76.42 50 *e*P P 05 37 44.6 +1.2
HBAR *e* 05 38 21.2
AS31 **Alice Springs** 76.42 200 *e*P P 05 37 44.8 +1.3
ASAR **Alice Springs** 76.42 200 P P 05 37 44.6 +1.2
ASAR P'P' 06 04 56.1
ASAR **Alice Springs** 76.42 200 P P 05 37 44.6 +1.2
comp=Z,56nm,0.6s,baz=13,slow=5.4,SNR=732
ASAR PKPPKP **P'P'df** 06 04 56.1 +0.9
comp=Z,1.4nm,1.1s,baz=180,slow=2.0,SNR=5.5
632A **Uvalde** 76.43 60 ⇑P P 05 37 44.2 +0.5
baz=76,SNR=174
DOU **Dourbes** 76.47 341 P P 05 37 43.1 -0.4
SZH **Strazhica** 76.50 324 *i* P P 05 37 42.8 -1.0
GLAT **Glass** 76.50 49 *e*P P 05 37 45.4 +1.4
GLAT *e* 05 38 21.7
WLF **Walferdange** 76.54 340 P P 05 37 44.1 +0.2
comp=Z,136nm,2.6s
WLF **Walferdange** 76.54 340 *e*P P 05 37 45.5 +1.5
WLF pmax pmax
comp=Z,157nm,1.4s
WLF **Walferdange** 76.54 340 *e*P P 05 37 43.7 -0.3
comp=Z,741nm,2.4s
WLF **Walferdange** 76.54 340 *e*P P 05 37 45.5 +1.5
comp=Z,157nm,1.4s
BHD **Baghdad** 76.56 306 *i* x P 05 37 42.9 -1.4
BHD *i* x x 05 38 19.8
BHD *i* x x 05 38 38.9
BHD *i* x x 05 47 12.5
BHD *i* x x 05 47 38.3
BHD *i* x x 05 48 05.7
BAIF **Baives** 76.58 341 *e*P P 05 37 42.9 -1.2
BAIF **Baives** 76.58 341 *e*P P 05 37 42.9 -1.2
BAIF **Baives** 76.58 341 *e*P P 05 37 42.9 -1.2
GZT **Gaziantep** 76.61 313 *i* P P 05 37 45.3 +0.5
WBK **Wadi Bani Khal** 76.61 289 P P 05 37 46.4 +1.5
SNR=24
HATD **Hatta, Dubai** 76.62 293 P P 05 37 44.9 +0.1
SNR=121
HENT **Hendek** 76.64 320 *i* P P 05 37 44.3 -0.5
UTMT **University of** 76.64 48 *e*P P 05 37 45.7 +1.0
comp=Z,458nm,1.1s
UTMT *e* 05 38 22.7
LOD **Lodumlu** 76.65 318 *e*P P 05 37 45.3 +0.5
ANTO **Ankara** 76.65 318 *e*P P 05 37 45.0 +0.1
ANTO **Ankara** 76.65 318 ⇓P P 05 37 44.8 0.0
ANTO **Ankara** 76.65 318 *e*P P 05 37 45.2 +0.4
comp=Z,298nm,1.6s
ANTO **Ankara** 76.65 318 ⇓*i*P P 05 37 44.8 0.0
ANTO **Ankara** 76.65 318 P P 05 37 45.4 +0.6
SNR=40
ANTO **Ankara** 76.65 318 ⇓*i*P P 05 37 44.8 0.0
AVNT **Avonos** 76.66 316 *i* P P 05 37 44.9 -0.2
STU **Stuttgart** 76.68 338 *e*P P 05 37 44.2 -0.6
comp=Z,273nm,1.9s
STU *e*pP **pP** 05 38 25.9 +2.7
RJOB **Jochberg** 76.72 335 *e*P P 05 37 45.2 +0.1
comp=Z,258nm,1.9s
RJOB *e*pP **pP** 05 38 27.0 +3.5
MDV **Middlebury** 76.72 34 *e*P P 05 37 44.6 -0.4
FUR **Furstenfeldbru** 76.72 336 *e*P P 05 37 44.7 -0.3
FUR *e**PP **pP** 05 38 26.5 +3.0
FUR pmax pmax
comp=Z,358nm,1.6s
FUR **Furstenfeldbru** 76.72 336 *e*P P 05 37 44.7 -0.3
comp=Z,358nm,1.6s
FUR *e*pP **pP** 05 38 26.5 +3.0
BEHE **Becsehely** 76.74 332 ⇓*e*P P 05 37 45.3 +0.2
PVL **Pavlikeni** 76.76 325 *i* P P 05 37 54.9 +10
HALT **Halls** 76.77 49 *e*P P 05 37 46.7 +1.3
HALT *e* 05 38 23.0
ASHO **Ashiyiah** 76.77 293 P P 05 37 45.8 +0.1
SNR=142
NAZ **Nazwa, Dubai** 76.77 293 P P 05 37 45.7 +0.1
SNR=31
BBAL **Bala** 76.78 318 *i* P P 05 37 45.7 0.0
BBAL **Bala** 76.78 318 *i* P P 05 37 45.7 0.0
KMRS **Kahramanmaras** 76.79 314 *e*P P 05 37 46.5 +0.9
LANF **Langenberg** 76.81 339 *e*P P 05 37 44.7 -0.8
LANF **Langenberg** 76.81 339 *e*P P 05 37 44.7 -0.8
LANF **Langenberg** 76.81 339 *e*P P 05 37 44.7 -0.8
MDUB **Mudurnu** 76.81 319 *e*P P 05 37 46.0 +0.2
SMDO **Samad** 76.83 290 P P 05 37 46.9 +0.8
SNR=23
HOQ **Hoqain** 76.87 291 P P 05 37 46.0 -0.2
SNR=60
SILT **Sile** 76.87 321 *e*P P 05 37 46.0 +0.1
AFSR **Af'ar-Bala (A** 76.88 318 *e*P P 05 37 46.6 +0.4
KOGS **Kog** 76.91 332 *i* P P 05 37 45.7 -0.4
KOGS *e* 05 43 41.8
KOGS *e*S **S** 05 47 19.1 -1.6
GAZ **Gaziantep** 76.92 314 *e*P P 05 37 47.5 +1.1
732A **Laxson Ranch,** 76.93 61 ⇓P P 05 37 47.7 +1.3
baz=77,SNR=266
JMB **Yambol** 76.94 324 P P 05 37 46.4 +0.1
LBNH **Lisbon** 76.94 33 *e*P P 05 37 47.0 +0.7
LBNH pmax pmax
comp=Z,109nm,1.0s
LBNH **Lisbon** 76.94 33 *e*P P 05 37 47.0 +0.7
comp=Z,109nm,1.0s
VAL **Valentia** 76.97 351 ⇓*i*P P 05 37 45.4 -0.8
VAL **Valentia** 76.97 351 ⇑*i*S S 05 47 08.4 -13
ANDN **Andirin** 76.98 314 *i* P P 05 37 47.5 +0.7
SPNC **Sapanca-Adapaz** 77.00 320 *e*P P 05 37 47.1 +0.5
HEX **Exmoor** 77.02 347 *e*P P 05 37 45.0 -1.7
HEX **Exmoor** 77.02 347 P P 05 37 45.0 -1.7
SOKA **Soboth** 77.06 333 ⇓*i*P P 05 37 47.1 +0.1
comp=Z,936nm,2.2s
SOKA **Soboth** 77.06 333 ⇓*i*P P 05 37 47.1 +0.1
comp=Z,936nm,2.2s
PERS **Pernice** 77.08 333 *e*P P 05 37 47.0 -0.1
PERS *i*pP **pP** 05 38 28.2 +2.6
PERS *e*S **S** 05 47 20.5 -2.2
PERS *e* 05 53 30.0
ACCN **Adirondack Com** 77.08 34 *e*P P 05 37 47.5 +0.3
comp=Z,189nm,1.0s
ACCN *e* 05 38 24.4
MET **Memphis--Engin** 77.11 50 *e*P P 05 37 51.4 +4.0
comp=Z,421nm,1.1s
MET *e* 05 38 27.7
GULT **Gulveren** 77.13 320 *e*P P 05 37 47.6 +0.1
CTYL **Yal??k??y-??at** 77.14 322 *e*P P 05 37 47.6 +0.2
KBA **Koelnbreinsper** 77.17 334 *i* P P 05 37 48.2 +0.5
KBA pmax pmax
comp=Z,2µm,2.3s
KBA **Koelnbreinsper** 77.17 334 *i* P P 05 37 48.2 +0.5
comp=Z,2µm,2.3s,SNR=94
KBA **Koelnbreinsper** 77.17 334 *i* P P 05 37 48.2 +0.5
comp=Z,2µm,2.3s
ISK **Istanbul-Kandi** 77.18 321 *e*P P 05 37 47.2 -0.4
HTL **Hartland** 77.19 347 *e*P P 05 37 46.8 -0.7
HTL AMB AMB 05 37 48.3
comp=Z,149nm,2.9s
HTL **Hartland** 77.19 347 P P 05 37 46.8 -0.7
HTL AMB AMB 05 37 48.3
comp=Z,149nm,2.9s
BGKT **Bogazkoy** 77.19 321 *e*P P 05 37 47.6 -0.2
ASUD **Al Ashush, Dub** 77.24 293 P P 05 37 48.7 +0.5
SNR=23
CTKS **Kestanelik-??a** 77.25 322 *e*P P 05 37 47.9 -0.1
BINY **Binghamton** 77.26 36 *e*P P 05 37 48.0 -0.1
comp=Z,164nm,1.1s
BINY *e* 05 38 25.4
HNH **Hanover** 77.29 33 *e*P P 05 37 49.3 +1.1
HNH *e* 05 38 26.3
KOZT **Kozan** 77.30 315 *e*P P 05 37 50.0 +1.6
BFO **Black Forest** 77.30 338 *e*P P 05 37 47.6 -0.7
BFO *e*PP **pP** 05 38 29.3 +2.6
BFO pmax pmax
comp=Z,311nm,2.1s
BFO **Black Forest** 77.30 338 *e*P P 05 37 47.6 -0.7
comp=Z,311nm,2.1s
BFO *e*pP **pP** 05 38 29.3 +2.6
BFO **Black Forest** 77.30 338 *e*P P 05 37 47.8 -0.5
BFO **Black Forest** 77.30 338 P P 05 37 47.4 -0.9
comp=Z,170nm,1.6s,SNR=15
WVT **Waverly** 77.30 48 *e*P P 05 37 48.7 +0.2
WVT *e* 05 38 26.0
WVT pmax pmax
comp=Z,96nm,0.9s
WVT **Waverly** 77.30 48 *e*P P 05 37 48.7 +0.2
comp=Z,96nm,0.9s
WVT *e* 05 38 26.0
KUZU **Kuzuini** 77.31 313 *i* P P 05 37 49.0 +0.5
JMDO **Jabal Madar** 77.31 290 P P 05 37 48.9 +0.2
SNR=42
NIG **Nigde** 77.32 316 *e*P P 05 37 49.5 +0.7
BUY **Buyukada** 77.34 321 *i* P P 05 37 48.0 -0.5
OBKA **Obir** 77.35 333 *i* P P 05 37 48.7 0.0
comp=Z,2µm,2.9s,SNR=22
OBKA **Obir** 77.35 333 *i* P P 05 37 48.7 0.0
comp=Z,2µm,2.9s
ELBA **Catalca** 77.36 322 *i* P P 05 37 48.7 0.0
SLVT **Silivri** 77.38 322 *e*P P 05 37 48.9 +0.2
SPAK **Spaichingen-Ko** 77.40 338 *e*P P 05 37 48.1 -0.8
WATA **Walderalm** 77.41 336 ⇓*i*P P 05 37 49.2 +0.1
WATA pmax pmax
comp=Z,676nm,1.9s
WATA **Walderalm** 77.41 336 ⇓*i*P P 05 37 49.2 +0.1
comp=Z,676nm,1.9s,SNR=17
WATA **Walderalm** 77.41 336 ⇓*i*P P 05 37 49.2 +0.1
comp=Z,676nm,1.9s
EDRB **Edirne** 77.41 323 *e*P P 05 37 48.8 -0.1
WVL **Waterville** 77.42 31 *e*P P 05 37 49.2 +0.3
comp=Z,69nm,0.8s
WVL *e* 05 38 27.3
WTTA **Wattenberg** 77.46 336 *i* P P 05 37 49.7 +0.3
WTTA pmax pmax
comp=Z,2µm,2.4s
WTTA **Wattenberg** 77.46 336 *i* P P 05 37 49.7 +0.3
comp=Z,2µm,2.4s,SNR=19
WTTA **Wattenberg** 77.46 336 *i* P P 05 37 49.7 +0.3
comp=Z,2µm,2.4s
CDF **Champ du Feu** 77.47 339 *e*P P 05 37 47.8 -1.5
CDF *e*pP **pP** 05 38 29.0 +1.2
CDF **Champ du Feu** 77.47 339 *e*P P 05 37 47.8 -1.5
CDF *e**PP **pP** 05 38 29.0 +1.2
CDF **Champ du Feu** 77.47 339 *e*P P 05 37 47.8 -1.5
CDF *e*pP **pP** 05 38 29.0 +1.2
YLV **Yalova** 77.48 321 *e*P P 05 37 49.3 -0.2
RETA **Reutte** 77.48 336 *i* P P 05 37 49.4 +0.1
comp=Z,1µm,2.9s,SNR=23
RETA **Reutte** 77.48 336 *i* P P 05 37 49.4 +0.1
comp=Z,1µm,2.9s
MYKA **Terra Mystica** 77.50 334 ⇑*i*P P 05 37 49.0 -0.5
comp=Z,936nm,2.5s
MYKA **Terra Mystica** 77.50 334 ⇑*i*P P 05 37 49.0 -0.5
comp=Z,936nm,2.5s
ARQ **Araqi** 77.52 291 P P 05 37 50.1 +0.2
SNR=45
MOTA **Moosalm** 77.53 336 *i* P P 05 37 49.7 0.0
MOTA pmax pmax
comp=Z,473nm,1.9s
MOTA **Moosalm** 77.53 336 *i* P P 05 37 49.7 0.0
comp=Z,473nm,1.9s,SNR=18
MOTA **Moosalm** 77.53 336 *i* P P 05 37 49.7 0.0
comp=Z,473nm,1.9s
SVRH **Sivrihisar-ESK** 77.54 319 *e*P P 05 37 49.5 -0.3
BSY **Bisya** 77.57 291 P P 05 37 50.6 +0.5
SNR=64
CAVI **Cavuskoy** 77.60 320 *e*P P 05 37 50.3 +0.2
LIBD **Limburg** 77.64 338 *e*P P 05 37 49.3 -0.8
LIBD **Limburg** 77.64 338 *e*P P 05 37 49.3 -0.8
CRLT **Corlu** 77.65 322 *e*P P 05 37 50.6 +0.4
TRY **Troy** 77.65 35 *e*P P 05 37 50.8 +0.6
comp=Z,434nm,1.5s
TRY *e* 05 38 27.7
GEMT **Gemlik** 77.66 321 *e*P P 05 37 50.2 -0.2
ECH **Echery** 77.68 339 *e*P P 05 37 49.9 -0.5
ECH pmax pmax
comp=Z,303nm,1.9s
ECH **Echery** 77.68 339 *e*P P 05 37 49.9 -0.5
comp=Z,303nm,1.9s
ECH **Echery** 77.68 339 *e*P P 05 37 49.5 -0.9
PAGF **Fort de Pagny** 77.68 340 *e*P P 05 37 49.4 -1.0
PAGF *e*pP **pP** 05 38 30.5 +1.6
PAGF **Fort de Pagny** 77.68 340 *e*P P 05 37 49.4 -1.0
PAGF *e*pP **pP** 05 38 30.5 +1.6
ARMT **Armutlu** 77.68 321 *e*P P 05 37 50.3 -0.2
ABTA **Abfaltersbach** 77.70 335 *i* P P 05 37 50.3 -0.3
comp=Z,938nm,2.5s,SNR=29
ABTA **Abfaltersbach** 77.70 335 *i* P P 05 37 50.3 -0.3
comp=Z,938nm,2.5s
FFD **Franklin Falls** 77.72 33 *e*P P 05 37 50.9 +0.3
comp=Z,190nm,1.0s
FFD *e* 05 38 29.3
CEYT **Ceyhan** 77.72 314 *e*P P 05 37 51.8 +1.0
UMR **Umm Al-Rimmam** 77.73 302 *e*P P 05 37 50.4 -0.5
UMR AMb AMB 05 37 53.5
comp=Z,497nm,1.5s
SULT **Sultanhani-AKS** 77.73 317 *e*P P 05 37 51.2 +0.3
MIB **Mutribah** 77.73 302 *e*P P 05 37 50.7 -0.2
MIB AMb AMB 05 37 52.7
comp=Z,310nm,1.2s
ESKT **Eskisehir** 77.76 319 *e*P P 05 37 50.8 -0.3
SEYT **Eskypehyr** 77.76 319 *i* P P 05 37 50.6 -0.4
SISC **Sisak** 77.76 332 *i* P P 05 37 50.8 0.0
PGB **Panagyurishte** 77.76 325 *i* P P 05 37 50.2 -0.8
LJU **Ljubljana** 77.78 333 *e*P P 05 37 50.4 -0.6
LJU *e*pP **pP** 05 38 31.1 +1.7
LJU *e*PP **PP** 05 40 50.0 +2.2
LJU *e*pPP 05 41 28.3
LJU *e* 05 43 44.6
LJU *e*S **S** 05 47 26.7 -3.5
SLLE **Schleitheim** 77.79 338 ⇓*i*P P 05 37 50.4 -0.6
SLE pmax pmax
comp=Z,1µm,3.1s
SLE **Schleitheim** 77.79 338 ⇓*i*P P 05 37 50.4 -0.6
comp=Z,1µm,3.1s
SLE **Schleitheim** 77.79 338 ⇓*i*P P 05 37 50.4 -0.6
comp=Z,1µm,3.1s
FELD **Feldberg im Sc** 77.80 338 *e*P P 05 37 50.2 -1.0
CADS **Cadrg** 77.84 334 *e*P P 05 37 50.2 -1.1
MDNY **Mudanya-Bursa** 77.84 321 *e*P P 05 37 51.3 -0.1
TKR **Tekirdag** 77.84 322 *e*P P 05 37 51.9 +0.5
DIVS **Divibare** 77.85 329 P P 05 37 50.7 -0.8
OXF **Oxford** 77.86 50 *e*P P 05 37 52.2 +0.6
OXF *e* 05 38 29.0
OXF pmax pmax
comp=Z,459nm,1.1s
OXF **Oxford** 77.86 50 *e*P P 05 37 52.2 +0.6
comp=Z,459nm,1.1s
OXF *e* 05 38 29.0
SSPA **Standing Stone** 77.86 38 *e*P P 05 37 51.7 +0.3
comp=Z,156nm,1.0s
SSPA *e* 05 38 28.5
KIZT **Kizilcal** 77.86 318 *e*P P 05 37 51.6 -0.1
MEZF **Maizieres J'vi** 77.88 340 *e*P P 05 37 50.5 -0.9
MEZF **Maizieres J'vi** 77.88 340 *e*P P 05 37 50.5 -0.9
COBT **Iskenderun** 77.89 314 *i* P P 05 37 52.6 +0.7
DAVA **Damuels** 77.89 337 *i* P P 05 37 51.6 -0.1
comp=Z,1µm,3.2s,SNR=26
DAVA **Damuels** 77.89 337 *i* P P 05 37 51.6 -0.1
comp=Z,1µm,3.2s
FETA **Feichten** 77.92 336 *i* P P 05 37 52.1 +0.2
comp=Z,1µm,3.0s,SNR=24
FETA **Feichten** 77.92 336 *i* P P 05 37 52.1 +0.2
comp=Z,1µm,3.0s
GULE **Gulek** 77.93 315 *i* P P 05 37 52.6 +0.5
THEF **They Montfort** 77.94 340 *e*P P 05 37 51.1 -0.7
THEF **They Montfort** 77.94 340 *e*P P 05 37 51.1 -0.7
THEF **They Montfort** 77.94 340 *e*P P 05 37 51.1 -0.7
PLD **Plovdiv** 77.96 325 P P 05 37 51.5 -0.5
PLD **Plovdiv** 77.96 325 *i* P P 05 37 51.0 -1.0
VOY **Vojsko** 77.98 334 *e*P P 05 37 50.8 -1.3
VOY *e* 05 38 08.6
LIENZ **Kamor/St.Gall** 77.98 337 ⇓*i*P P 05 37 52.1 -0.2
comp=Z,1µm,3.1s
LIENZ **Kamor/St.Gall** 77.98 337 ⇓*i*P P 05 37 52.1 -0.2
comp=Z,1µm,3.1s
EMMW **East Machias** 78.00 30 *e*P P 05 37 52.1 0.0
comp=Z,207nm,1.0s
EMMW *e* 05 38 30.5
WILA **Wila** 78.02 337 ⇓*i*P P 05 37 52.1 -0.2
comp=Z,2µm,3.1s
WILA **Wila** 78.02 337 ⇓*i*P P 05 37 52.1 -0.2
comp=Z,2µm,3.1s
MOF **Molkenrain** 78.03 339 *e*P P 05 37 51.3 -1.1
MOF **Molkenrain** 78.03 339 *e*P P 05 37 51.3 -1.1
MOF **Molkenrain** 78.03 339 *e*P P 05 37 51.3 -1.1
KBD **Kabd** 78.03 302 *e*P P 05 37 52.5 -0.1
KBD AMb AMB 05 37 54.6
comp=Z,278nm,1.4s
HAU **Haudompre** 78.06 339 *e*P P 05 37 51.1 -1.4
HAU *e*pP **pP** 05 38 31.9 +0.9
HAU *e*R 05 38 32.5
comp=Z,2µm,17.8s
HAU **Haudompre** 78.06 339 *e*P P 05 37 51.1 -1.4
HAU *e**PP **pP** 05 38 31.9 +0.9
HAU **Haudompre** 78.06 339 *e*P P 05 37 51.1 -1.4
HAU *e*pP **pP** 05 38 31.9 +0.9
BOJS **Bojanci** 78.06 332 *e*P P 05 37 52.0 -0.5
BOJS *e*pP **pP** 05 38 33.2 +2.2
BOJS *e*PP **PP** 05 40 52.1 +2.0
BOJS *e*pPP 05 41 30.3
KDHN **Kadinhani** 78.06 318 *i* P P 05 37 52.2 -0.6
VTS **Vitosha** 78.07 326 P P 05 37 52.2 -0.5
VTS **Vitosha** 78.07 326 ⇑P P 05 37 52.3 -0.5
VTS **Vitosha** 78.07 326 ⇑*i*P P 05 37 52.3 -0.5
VTS **Vitosha** 78.07 326 *i* P P 05 37 52.0 -0.8
KDZ **Kurdzhali** 78.08 324 *i* P P 05 37 52.2 -0.5
KDZ **Kurdzhali** 78.08 324 *i* P P 05 37 52.2 -0.5
SULZ **Cheisacher** 78.10 338 ⇓*i*P P 05 37 52.4 -0.3
comp=Z,2µm,3.0s
SULZ **Cheisacher** 78.10 338 ⇓*i*P P 05 37 52.4 -0.3
comp=Z,2µm,3.0s
MFT **Murefte** 78.12 322 *e*P P 05 37 52.9 -0.1
HINF **Hinteralfeld** 78.13 339 *e*P P 05 37 51.3 -1.6
HINF **Hinteralfeld** 78.13 339 *e*P P 05 37 51.3 -1.6
HINF **Hinteralfeld** 78.13 339 *e*P P 05 37 51.3 -1.6
ZUR **Degenried** 78.14 338 ⇓*i*P P 05 37 52.7 -0.2
ZUR pmax pmax
comp=Z,592nm,2.2s
ZUR **Degenried** 78.14 338 ⇓*i*P P 05 37 52.7 -0.2
comp=Z,592nm,2.2s
ZUR **Degenried** 78.14 338 ⇓*i*P P 05 37 52.7 -0.2
comp=Z,592nm,2.2s
KCTX **Karacabey (Bur** 78.14 321 *e*P P 05 37 53.2 +0.2
MRMT **Marmara Adasi** 78.15 322 *e*P P 05 37 53.0 -0.2
SFTF **Sexfontaines** 78.16 340 *e*P P 05 37 51.8 -1.2
comp=Z,84nm,0.6s
SFTF *e*pP **pP** 05 38 32.8 +1.2
SFTF **Sexfontaines** 78.16 340 *e*P P 05 37 51.8 -1.2
comp=Z,84nm,0.6s
SFTF *e*pP **pP** 05 38 32.8 +1.2
NAY **Al-Naaiem** 78.22 302 *e*P P 05 37 53.3 -0.4
NAY AMb AMB 05 37 56.1
comp=Z,297nm,1.1s
HKT **Hockley** 78.22 57 *e*P P 05 37 53.4 -0.1
HKT *e* 05 38 30.7
HKT pmax pmax
comp=Z,219nm,1.5s
HKT **Hockley** 78.22 57 *e*P P 05 37 53.4 -0.1
comp=Z,219nm,1.5s
HKT *e* 05 38 30.7
LADK **Ladik-KONYA** 78.23 317 *e*P P 05 37 53.6 -0.1
PLONS **Plons/SG** 78.24 337 ⇓*i*P P 05 37 53.5 -0.1
comp=Z,1µm,3.0s
PLONS **Plons/SG** 78.24 337 ⇓*i*P P 05 37 53.5 -0.1
comp=Z,1µm,3.0s
SART **Tekirdag** 78.24 322 *i* P P 05 37 53.4 -0.3
RKY **Sarkoy-Tekirda** 78.24 322 *e*P P 05 37 53.8 +0.1
QRN **Al-Qurain** 78.25 301 *e*P P 05 37 53.8 0.0
QRN AMb AMB 05 37 57.5
comp=Z,650nm,2.0s
KRTS **Karatas** 78.25 314 *e*P P 05 37 54.8 +1.1
HTY **Hatay** 78.27 314 *e*P P 05 37 54.5 +0.7
BBS **Basel-Blauen** 78.30 338 *e*P P 05 37 53.0 -0.9
BBS **Basel-Blauen** 78.30 338 *e*P P 05 37 53.0 -0.9
RDF **Al-Radifah** 78.31 301 *e*P P 05 37 53.9 -0.2

RDF AMb AMB 05 37 56.9
comp=Z,800nm,1.7s
TRI Trieste 78.31 334 *e*P **P 05 37 52.8 -1.0**
TRI pmax pmax
comp=Z,203nm,1.7s
TRI Trieste 78.31 334 *e*P **P 05 37 52.8 -1.0**
comp=Z,203nm,1.7s
RZN Rozhen 78.31 324 *i*P **P 05 37 53.5 -0.7**
YAYL Yayladag 78.36 314 *i*P **P 05 37 54.8 +0.4**
DAVOX Davos/Dischmat 78.36 336⇓*i*P **P 05 37 54.5 +0.1**
comp=Z,1μm,2.9s
DAVOX Davos/Dischmat 78.36 336⇓*i*P **P 05 37 54.5 +0.1**
comp=Z,1μm,2.9s
BALST Balsthal 78.38 338⇓*i*P **P 05 37 54.1 -0.2**
comp=Z,2μm,2.1s
BALST Balsthal 78.38 338⇓*i*P **P 05 37 54.1 -0.2**
comp=Z,2μm,2.1s
MERS Mersin 78.39 315 *e*P **P 05 37 54.5 0.0**
TVSB Tavsanli 78.39 320 *e*P **P 05 37 54.5 0.0**
BOLV Bolvadin 78.39 319 *i*P **P 05 37 53.8 -0.8**
FUORN Ofenpass-Fuorn 78.41 336⇓*i*P **P 05 37 55.0 +0.3**
comp=Z,2μm,2.7s
FUORN Ofenpass-Fuorn 78.41 336 *e*P **P 05 37 55.1 +0.3**
comp=Z,719nm,1.9s
BOURR Bourrignon 78.44 338⇓*i*P **P 05 37 54.7 +0.1**
comp=Z,1μm,2.7s
BOURR Bourrignon 78.44 338⇓*i*P **P 05 37 54.7 +0.1**
comp=Z,1μm,2.7s
KONT Konya--Tatoy 78.44 317 *e*P **P 05 37 54.9 +0.1**
KRBG Karabiga-Canak 78.45 322 *e*P **P 05 37 54.8 +0.1**
ALT Altintas 78.46 319 *e*P **P 05 37 55.0 +0.1**
MUO Muotathal 78.50 337⇓*i*P **P 05 37 55.2 +0.1**
comp=Z,1μm,3.0s
MUO Muotathal 78.50 337⇓*i*P **P 05 37 55.2 +0.1**
comp=Z,1μm,3.0s
ALN Alexandroupoli 78.50 323 P **P 05 37 54.5 -0.5**
ALN Alexandroupoli 78.50 323 *e*P **P 05 37 52.0 -3.0**
LLS Linth-Limmern 78.52 337⇓*i*P **P 05 37 55.2 0.0**
LLS pmax pmax
comp=Z,1μm,2.8s
LLS Linth-Limmern 78.52 337⇓*i*P **P 05 37 55.2 0.0**
comp=Z,1μm,2.8s
LLS Linth-Limmern 78.52 337⇓*i*P **P 05 37 55.2 0.0**
comp=Z,1μm,2.8s
LOMF Lomont 78.57 339 *e*P **P 05 37 54.6 -0.8**
LOMF Lomont 78.57 339 *e*P **P 05 37 54.6 -0.8**
LOMF Lomont 78.57 339 *e*P **P 05 37 54.6 -0.8**
JSA Saint Aubin 78.59 345 *e*P **P 05 37 55.0 -0.2**
JSA AMB AMB 05 37 56.1
comp=Z,219nm,2.0s
JSA Saint Aubin 78.59 345 P **P 05 37 55.0 -0.2**
JSA AMB AMB 05 37 56.1
comp=Z,219nm,2.0s
GONE Gonen-Balikesi 78.59 322 *e*P **P 05 37 55.4 -0.1**
ENEZ Enez 78.60 323 *e*P **P 05 37 55.5 0.0**
HRV Adam Dziewonsk 78.60 33 *e*P **P 05 37 55.2 -0.3**
HRV *e* 05 38 33.5
HRV pmax pmax
comp=Z,57nm,1.0s
HRV Adam Dziewonsk 78.60 33 *e*P **P 05 37 55.2 -0.3**
comp=Z,57nm,1.0s
HRV *e* 05 38 33.5
BNALP Bannalp 78.64 337⇓*i*P **P 05 37 55.8 0.0**
comp=Z,1μm,2.9s
BNALP Bannalp 78.64 337⇓*i*P **P 05 37 55.8 0.0**
comp=Z,1μm,2.9s
DURS Dursunbey 78.66 321 *i*P **P 05 37 55.5 -0.5**
LPK Lapseki 78.68 322 *e*P **P 05 37 56.2 +0.2**
GDZ Gediz 78.69 320 *i*P **P 05 37 55.9 -0.4**
MNCY Minicoy 78.69 269 *e*P **P 05 37 55.8 -0.6**
MNCY AMB AMB 05 37 57.8
comp=Z,742nm,3.0s
SHUT Suhut-Afyon 78.70 319 *e*P **P 05 37 56.6 +0.4**
FLN La Foliniere 78.72 344 *e*P **P 05 37 54.6 -1.4**
comp=Z,706nm,1.8s
FLN *e*pP **pP 05 38 35.5 +0.9**
FLN *e*R
comp=Z,1μm,18.5s
FLN La Foliniere 78.72 344 *e*P **P 05 37 54.6 -1.4**
FLN *e**PP **pP 05 38 35.5 +0.9**
FLN pmax pmax
comp=Z,707nm,1.8s
FLN La Foliniere 78.72 344 *e*P **P 05 37 54.6 -1.4**
comp=Z,706nm,1.8s
FLN *e*pP **pP 05 38 35.5 +0.9**
VDL Val di Lei 78.75 337⇓*i*P **P 05 37 56.6 +0.1**
VDL pmax pmax
comp=Z,1μm,2.6s
VDL Val di Lei 78.75 337⇓*i*P **P 05 37 56.6 +0.1**
comp=Z,1μm,2.6s
VDL Val di Lei 78.75 337⇓*i*P **P 05 37 56.6 +0.1**
comp=Z,1μm,2.6s
KKB Krupnik 78.75 326 *i*P **P 05 37 55.6 -0.8**
GELI Tayfur-Gelibol 78.77 323 *e*P **P 05 37 56.3 -0.1**
TUE Stuetta 78.78 337 *e*P **P 05 37 56.8 0.0**
comp=Z,638nm,2.0s
WES Weston 78.79 33 *e*P **P 05 37 56.5 0.0**
WES *e* 05 38 34.6
WES pmax pmax
comp=Z,247nm,1.2s
WES Weston 78.79 33 *e*P **P 05 37 56.5 0.0**
comp=Z,247nm,1.2s
WES *e* 05 38 34.6
HASLI Hasliberg/Brie 78.81 338⇓*i*P **P 05 37 56.7 -0.1**
comp=Z,1μm,2.4s
HASLI Hasliberg/Brie 78.81 338⇓*i*P **P 05 37 56.7 -0.1**
comp=Z,1μm,2.4s
LDF La Druitiere 78.81 344 *e*P **P 05 37 55.3 -1.3**
comp=Z,453nm,1.7s
LDF La Druitiere 78.81 344 *e*P **P 05 37 55.3 -1.3**
LDF pmax pmax
comp=Z,453nm,1.7s
LDF La Druitiere 78.81 344 *e*P **P 05 37 55.3 -1.3**
comp=Z,453nm,1.7s
BALB Balikesir 78.86 321 *e*P **P 05 37 56.8 -0.2**
BALY Balya 78.88 321 *i*P **P 05 37 56.5 -0.6**
NVR Nevrokopi 78.92 325 P **P 05 37 57.0 -0.3**
NVR Nevrokopi 78.92 325 *e*P **P 05 37 57.1 -0.3**
TZTN Tazewell 78.92 45 *e*P **P 05 37 57.9 +0.4**
comp=Z,94nm,0.9s
TZTN *e* 05 38 35.4
SWET Sewanee 78.94 47 *e*P **P 05 37 58.0 +0.5**
comp=Z,217nm,0.9s
SWET *e* 05 38 34.5
FUSIO Fusio 78.97 337⇓*i*P **P 05 37 57.7 +0.1**
comp=Z,1μm,2.2s
FUSIO Fusio 78.97 337⇓*i*P **P 05 37 57.7 +0.1**
comp=Z,1μm,2.2s
KAVA Kavala 78.99 324 P **P 05 37 57.4 -0.2**
KAVA Kavala 78.99 324 *e*P **P 05 37 57.4 -0.2**
MVL Millersville 79.01 38 *e*P **P 05 37 58.8 +1.0**
comp=Z,102nm,1.1s
WIMIS Wimmis 79.03 338⇓*i*P **P 05 37 57.8 0.0**
comp=Z,1μm,4.3s
WIMIS Wimmis 79.03 338⇓*i*P **P 05 37 57.8 0.0**
comp=Z,1μm,4.3s
NVLJ Novalja 79.03 332 *i*P **P 05 37 56.5 -1.3**
DEMI Demirci 79.04 320 *i*P **P 05 37 57.5 -0.6**
PAL Palisades 79.07 36 *e*P **P 05 37 58.4 +0.4**
PAL *e* 05 38 36.0
PAL pmax pmax
comp=Z,252nm,1.1s
PAL Palisades 79.07 36 *e*P **P 05 37 58.4 +0.4**
comp=Z,252nm,1.1s
PAL *e* 05 38 36.0
TORNY Torny/Romont 79.08 338⇓*i*P **P 05 37 58.2 +0.1**
comp=Z,1μm,2.4s
TORNY Torny/Romont 79.08 338⇓*i*P **P 05 37 58.2 +0.1**
comp=Z,1μm,2.4s
GRR Gorron 79.14 344 *e*P **P 05 37 57.2 -1.1**
comp=Z,446nm,1.3s
GRR *e*pP **pP 05 38 38.3 +1.3**
GRR Gorron 79.14 344 *e*P **P 05 37 57.2 -1.1**
GRR *e**PP **pP 05 38 38.3 +1.3**
GRR pmax pmax
comp=Z,446nm,1.3s
GRR Gorron 79.14 344 *e*P **P 05 37 57.2 -1.1**
comp=Z,446nm,1.3s
GRR *e*pP **pP 05 38 38.3 +1.3**
VBMS Vicksburg 79.16 52 *e*P **P 05 38 00.4 +1.7**
comp=Z,263nm,1.1s
VBMS *e* 05 38 36.9
SRS Serrai 79.22 325 P **P 05 37 58.2 -0.7**
CPNY Central Park 79.23 36 *e*P **P 05 37 59.6 +0.6**
CPNY *e* 05 38 36.7

SKO Skopje 79.24 327 P **P 05 37 59.3 +0.3**
SKO Skopje 79.24 327 *i*P **P 05 37 59.5 +0.5**
ERMK Ermenek 79.29 316 *i*P **P 05 37 59.0 -0.6**
ERMK Ermenek 79.29 316 *i*P **P 05 37 59.0 -0.6**
KHAL Karahalli 79.29 319 *i*P **P 05 37 58.8 -0.7**
LOR Lormes 79.31 341 *e*P **P 05 37 57.9 -1.4**
LOR *e*R
comp=Z,2μm,22.8s
LOR Lormes 79.31 341 *e*P **P 05 37 57.9 -1.4**
EZN Ezine 79.32 322 *e*P **P 05 37 59.1 -0.3**
KHL Karahalli 79.32 319 *e*P **P 05 37 59.6 0.0**
SDMD Soldier's Deli 79.33 38 *e*P **P 05 38 00.1 +0.6**
comp=Z,188nm,1.2s
SDMD *e* 05 38 36.5
ISP Isparta 79.33 318 *e*P **P 05 37 59.2 -0.5**
ISP Isparta 79.33 318 P **P 05 37 58.8 -0.9**
ISP Isparta 79.33 318 *e*P **P 05 37 59.5 -0.2**
ISP Isparta 79.33 318 *e*P **P 05 37 59.5 -0.2**
MUGIO Muggio 79.37 337⇓*i*P **P 05 38 00.0 +0.3**
comp=Z,1μm,2.2s
MUGIO Muggio 79.37 337⇓*i*P **P 05 38 00.0 +0.3**
comp=Z,1μm,2.2s
SENIN Lac Senin/Sane 79.39 338⇓*i*P **P 05 37 59.2 -0.8**
comp=Z,2μm,4.0s
SENIN Lac Senin/Sane 79.39 338⇓*i*P **P 05 37 59.2 -0.8**
comp=Z,2μm,4.0s
CPCT Cooper Cave 79.39 46 *e*P **P 05 38 00.6 +0.7**
CPCT *e* 05 38 37.4
BOZC Bozcaada 79.41 323 *i*P **P 05 37 58.8 -1.1**
VAY Valandovo 79.42 326 P **P 05 37 59.2 -0.7**
VAY Valandovo 79.42 326 *i*P **P 05 37 58.7 -1.2**
CABF La Chapelle 79.44 339 *e*P **P 05 37 59.0 -1.1**
comp=Z,748nm,1.8s
CABF *e*pP **pP 05 38 40.3 +1.5**
CABF La Chapelle 79.44 339 *e*P **P 05 37 59.0 -1.1**
CABF *e**PP **pP 05 38 40.3 +1.5**
CABF pmax pmax
comp=Z,748nm,1.8s
CABF La Chapelle 79.44 339 *e*P **P 05 37 59.0 -1.1**
comp=Z,748nm,1.8s
CABF *e*pP **pP 05 38 40.3 +1.5**
KNT Kendrikon 79.44 325 P **P 05 37 59.6 -0.5**
GIMEL St. Georges / 79.47 339⇓*i*P **P 05 38 00.2 -0.1**
comp=Z,1μm,4.0s
GIMEL St. Georges / 79.47 339⇓*i*P **P 05 38 00.2 -0.1**
comp=Z,1μm,4.0s
AIGLE Aigle 79.49 338⇓*i*P **P 05 38 00.3 -0.1**
comp=Z,825nm,2.2s
AIGLE Aigle 79.49 338⇓*i*P **P 05 38 00.3 -0.1**
comp=Z,825nm,2.2s
KULA Kula-Manisa 79.51 320 *e*P **P 05 38 00.5 -0.1**
MMK Mattmark 79.52 337⇓*i*P **P 05 38 01.0 +0.2**
MMK pmax pmax
comp=Z,1μm,2.2s
MMK Mattmark 79.52 337⇓*i*P **P 05 38 01.0 +0.2**
comp=Z,1μm,2.2s
MMK Mattmark 79.52 337⇓*i*P **P 05 38 01.0 +0.2**
comp=Z,1μm,2.2s
AKHS Akhisar 79.54 321 *i*P **P 05 37 59.8 -0.9**
AKS Akhisar 79.54 321 *e*P **P 05 38 01.1 +0.4**
HYF Humbligny 79.56 341 *e*P **P 05 37 59.8 -0.8**
HYF Humbligny 79.56 341 *e*P **P 05 37 59.8 -0.8**
SGMF Saint Gilles 79.56 345 *e*P **P 05 37 59.6 -1.0**
comp=Z,88nm,0.7s
SGMF *e*pP **pP 05 38 40.6 +1.3**
SGMF Saint Gilles 79.56 345 *e*P **P 05 37 59.6 -1.0**
SGMF *e**PP **pP 05 38 40.6 +1.3**
SGMF pmax pmax
comp=Z,88nm,0.7s
SGMF Saint Gilles 79.56 345 *e*P **P 05 37 59.6 -1.0**
comp=Z,88nm,0.7s
SGMF *e*pP **pP 05 38 40.6 +1.3**
TKL Tuckaleechee C 79.56 45 *e*P **P 05 38 01.5 +0.7**
TKL *e* 05 38 37.8
OG01 Vacheresse 79.56 338 *e*P **P 05 38 00.4 -0.4**
OG01 Vacheresse 79.56 338 *e*P **P 05 38 00.4 -0.4**
SOH Sokhos 79.57 325 P **P 05 37 59.9 -1.0**
MANT Manisa 79.57 320 *i*P **P 05 38 00.4 -0.7**
SSF Saint Saulge 79.58 341 *e*P **P 05 37 59.5 -1.2**
comp=Z,419nm,1.8s
SSF *e*pP **pP 05 38 40.6 +1.2**
SSF Saint Saulge 79.58 341 *e*P **P 05 37 59.5 -1.2**
SSF *e**PP **pP 05 38 40.6 +1.2**
SSF pmax pmax
comp=Z,419nm,1.8s
SSF Saint Saulge 79.58 341 *e*P **P 05 37 59.5 -1.2**
comp=Z,419nm,1.8s
SSF *e*pP **pP 05 38 40.6 +1.2**
ROSF Rostrenen 79.60 346 *e*P **P 05 37 59.8 -1.0**
comp=Z,591nm,1.6s
ROSF Rostrenen 79.60 346 *e*P **P 05 37 59.8 -1.0**
ROSF pmax pmax
comp=Z,591nm,1.6s
ROSF Rostrenen 79.60 346 *e*P **P 05 37 59.8 -1.0**
comp=Z,591nm,1.6s
BCK Bucak 79.61 318 *e*P **P 05 38 00.1 -1.0**
AYVA Ayvalik 79.62 322 *i*P **P 05 38 00.3 -0.8**
DIX Grande Dixence 79.63 338⇓*i*P **P 05 38 01.7 +0.3**
DIX pmax pmax
comp=Z,952nm,2.0s
DIX Grande Dixence 79.63 338⇓*i*P **P 05 38 01.7 +0.3**
comp=Z,952nm,2.0s
DIX Grande Dixence 79.63 338⇓*i*P **P 05 38 01.7 +0.3**
comp=Z,952nm,2.0s
EREN Erenkoy 79.66 315 *e*P **P 05 38 01.5 +0.1**
STON Ston 79.69 330 *i*P **P 05 37 59.7 -1.7**
LIA Limnos Island 79.69 323 P **P 05 38 00.8 -0.6**
LIA Limnos Island 79.69 323 *e*P **P 05 37 59.2 -2.2**
PUK Puka 79.71 328 *i*P **P 05 37 59.5 -2.1**
BLA Blacksburg 79.73 42 *e*P **P 05 38 03.2 +1.4**
BLA *e* 05 38 39.6
BLA pmax pmax
comp=Z,213nm,1.1s
BLA Blacksburg 79.73 42 *e*P **P 05 38 03.2 +1.4**
comp=Z,213nm,1.1s
BLA *e* 05 38 39.6
HMDM Hanimaadhoo 79.73 268 P **P 05 38 04.0 +2.0**
BST Brest 79.75 346 *e*P **P 05 38 01.1 -0.5**
BST Brest 79.75 346 *e*P **P 05 38 01.1 -0.5**
OUR Ouranopolis 79.76 324 P **P 05 38 01.1 -0.7**
OUR Ouranopolis 79.76 324 P **P 05 38 01.1 -0.7**
GRG Griva 79.80 326 P **P 05 38 01.5 -0.6**
PRK Paraskevi 79.84 322 P **P 05 38 01.4 -0.8**
PHP Peshkopia 79.84 327 *i*P **P 05 38 00.7 -1.6**
PHP Peshkopia 79.84 327 P **P 05 38 01.4 -0.9**
HORT Hortiatis 79.86 325 P **P 05 38 01.2 -1.3**
AVF Avril sur Loir 79.87 341 *e*P **P 05 38 01.1 -1.2**
comp=Z,498nm,1.5s
AVF Avril sur Loir 79.87 341 *e*P **P 05 38 01.1 -1.2**
AVF pmax pmax
comp=Z,498nm,1.5s
AVF Avril sur Loir 79.87 341 *e*P **P 05 38 01.1 -1.2**
comp=Z,498nm,1.5s
THE Thessaloniki 79.88 325 P **P 05 38 01.1 -1.3**
SMF Signal de Mont 79.90 340 *e*P **P 05 38 01.3 -1.2**
comp=Z,1μm,1.7s
SMF Signal de Mont 79.90 340 *e*P **P 05 38 01.3 -1.2**
SMF pmax pmax
comp=Z,1μm,1.7s
SMF Signal de Mont 79.90 340 *e*P **P 05 38 01.3 -1.2**
comp=Z,1μm,1.7s
PLG Polygyros 79.93 325 P **P 05 38 01.9 -0.9**
PLG Polygyros 79.93 325 P **P 05 38 01.9 -0.9**
QUIF Quistinic 79.99 345 *e*P **P 05 38 01.7 -1.2**
comp=Z,565nm,1.8s
QUIF *e*pP **pP 05 38 42.8 +1.2**
QUIF Quistinic 79.99 345 *e*P **P 05 38 01.7 -1.2**
QUIF *e**PP **pP 05 38 42.8 +1.2**
QUIF pmax pmax
comp=Z,565nm,1.8s
QUIF Quistinic 79.99 345 *e*P **P 05 38 01.7 -1.2**
comp=Z,565nm,1.8s
QUIF *e*pP **pP 05 38 42.8 +1.2**
DENT Denizli 80.01 319 *e*P **P 05 38 03.8 +0.5**
DNZL Cakiroluk 80.06 319 *i*P **P 05 38 03.4 -0.3**
KORT Korkueli 80.10 318 *i*P **P 05 38 02.8 -1.1**
BIA Bitola 80.12 326 *i*P **P 05 38 02.2 -1.6**
CBN Corbin 80.15 39 *e*P **P 05 38 04.8 +0.9**
CBN *e* 05 38 42.1
LFK Lefkose 80.15 315 *e*P **P 05 38 04.0 -0.1**
PHNC Paralimni 80.16 315 P **P 05 38 03.5 -0.6**
comp=Z,2.3nm,1.3s
IZM Izmir 80.18 321 *e*P **P 05 38 03.5 -0.7**
BGF Bois d'Agland 80.19 341 *e*P **P 05 38 03.0 -1.1**
comp=Z,468nm,1.8s
BGF Bois d'Agland 80.19 341 *e*P **P 05 38 03.0 -1.1**
BGF pmax pmax
comp=Z,468nm,1.8s
BGF Bois d'Agland 80.19 341 *e*P **P 05 38 03.0 -1.1**
comp=Z,468nm,1.8s
LRAL Lakeview Retre 80.22 49 *e*P **P 05 38 04.0 -0.4**
comp=Z,88nm,0.9s
LRAL *e* 05 38 41.5
GOLH Golhisar 80.23 319 *i*P **P 05 38 04.1 -0.4**
PAIG Paliouri 80.23 324 P **P 05 38 03.2 -1.2**
PAIG Paliouri 80.23 324 P **P 05 38 03.2 -1.2**
BLCB Balcova 80.28 321 *e*P **P 05 38 04.0 -0.6**
FNA Florina 80.31 326 P **P 05 38 03.9 -1.0**
LPL La Plagne 80.32 338 *e*P **P 05 38 04.5 -0.5**
comp=Z,68nm,0.6s
LPL La Plagne 80.32 338 *e*P **P 05 38 04.5 -0.5**
LPL pmax pmax
comp=Z,68nm,0.6s
LPL La Plagne 80.32 338 *e*P **P 05 38 04.5 -0.5**
comp=Z,68nm,0.6s
GLHS Glhisar (BURDU 80.32 319 *e*P **P 05 38 04.9 -0.2**
LPG La Plagne 80.33 338 *e*P **P 05 38 04.8 -0.4**
comp=Z,111nm,0.7s
LPG *e*pP **pP 05 38 46.0 +2.1**
LPG La Plagne 80.33 338 *e*P **P 05 38 04.8 -0.4**
LPG *e**PP **pP 05 38 46.0 +2.1**
LPG pmax pmax
comp=Z,111nm,0.7s
LPG La Plagne 80.33 338 *e*P **P 05 38 04.8 -0.4**
comp=Z,111nm,0.7s
LPG *e*pP **pP 05 38 46.0 +2.1**
TIR Tirane 80.34 328 *i*P **P 05 38 03.4 -1.5**
TIR Tirane 80.34 328 P **P 05 38 04.3 -0.6**
TIR Tirane 80.34 328 *e*P **P 05 38 04.9 0.0**
TIR pmax pmax
comp=Z,327nm,1.4s
TIR Tirane 80.34 328 *e*P **P 05 38 04.9 0.0**
comp=Z,327nm,1.4s
MAMC Mammari 80.39 315 P **P 05 38 05.2 -0.1**
URLA Izmir 80.47 321 *i*P **P 05 38 04.8 -0.9**
ELL Elmali 80.50 318 *e*P **P 05 38 05.7 -0.3**
CSS Prodhromos 80.51 315 P **P 05 38 04.5 -1.5**
comp=Z,3.1nm,1.5s
CSS Prodhromos 80.51 315 *e*P **P 05 38 06.0 +0.1**
CSS Prodhromos 80.51 315 P **P 05 38 05.7 -0.3**
CSS Prodhromos 80.51 315 *e*P **P 05 38 05.7 -0.3**
comp=Z,1μm,2.0s
CSS Prodhromos 80.51 315 *e*P **P 05 38 05.5 -0.5**
LIT Litokhoron 80.52 325 P **P 05 38 04.5 -1.4**
COCO West Island 80.56 238 *e*P **P 05 38 08.8 +2.5**
COCO pmax pmax
comp=Z,2μm,1.8s
COCO West Island 80.56 238 *e*P **P 05 38 08.8 +2.5**
comp=Z,2μm,1.8s
COCO West Island 80.56 238 P **P 05 38 08.7 +2.5**
SNR=5.4
COCO West Island 80.56 238 P **P 05 38 08.8 +2.5**
AYDN Tasoluk 80.56 320 *i*P **P 05 38 06.4 +0.2**
LEF Lefka 80.58 315 *e*P **P 05 38 05.8 -0.5**
TCF Toulx Ste Croi 80.58 341 *e*P **P 05 38 05.3 -0.9**
comp=Z,214nm,1.4s
TCF *e*pP **pP 05 38 46.4 +1.5**
TCF Toulx Ste Croi 80.58 341 *e*P **P 05 38 05.3 -0.9**
TCF *e**PP **pP 05 38 46.4 +1.5**
TCF pmax pmax
comp=Z,214nm,1.4s
TCF Toulx Ste Croi 80.58 341 *e*P **P 05 38 05.3 -0.9**
comp=Z,214nm,1.4s
TCF *e*pP **pP 05 38 46.4 +1.5**
KZN Kozani 80.59 326 P **P 05 38 05.2 -1.2**
KZN Kozani 80.59 326 *e*P P 05 37 57.4 -9.0
AGO Saint Agoulin 80.62 341 *e*P **P 05 38 06.7 +0.3**
AGO Saint Agoulin 80.62 341 *e*P **P 05 38 06.7 +0.3**
CHOS Chios island 80.67 322 P **P 05 38 06.1 -0.7**
VLC Villacollemand 80.67 335 *e*P **P 05 38 07.6 +0.9**
ALFC Alevga 80.67 316 P **P 05 38 05.9 -1.0**
comp=Z,1.6nm,0.6s
ALFC Alevga 80.67 316 P **P 05 38 05.9 -1.0**
comp=Z,1.6nm,0.6s
MFF Saint Martin d 80.74 343 *e*P **P 05 38 06.2 -0.7**
comp=Z,242nm,1.3s
MFF Saint Martin d 80.74 343 *e*P **P 05 38 06.2 -0.7**
MFF pmax pmax
comp=Z,242nm,1.3s
MFF Saint Martin d 80.74 343 *e*P **P 05 38 06.2 -0.7**
comp=Z,242nm,1.3s
NEST Nestorio 80.76 326 P **P 05 38 06.4 -0.9**
GDM Grand'Maison 80.76 338 *e*P **P 05 38 07.7 +0.4**
GDM Grand'Maison 80.76 338 *e*P **P 05 38 07.7 +0.4**
GCAM G?zelcaml? 80.79 321 *i*P **P 05 38 06.5 -0.8**
GRN Grenoble 80.81 339 *e*P **P 05 38 07.9 +0.4**
GRN Grenoble 80.81 339 *e*P **P 05 38 07.9 +0.4**
GRN Grenoble 80.81 339 *e*P **P 05 38 07.9 +0.4**
AOS Alonnisos 80.82 324 P **P 05 38 06.4 -1.1**
YER Yerkesik 80.85 320 *e*P **P 05 38 08.2 +0.4**
ARMA Armidale 80.85 183 *e*P **P 05 38 09.4 +1.8**
ARMA *e* 05 38 46.0
AKMC Akamas 80.90 316 P **P 05 38 07.0 -1.1**
AKMC Akamas 80.90 316 P **P 05 38 07.0 -1.1**
XOR Xorichti 80.91 324 P **P 05 38 06.5 -1.5**
XOR Xorichti 80.91 324 P **P 05 38 06.5 -1.5**
MLSB Milas 80.92 320 *e*P **P 05 38 08.1 0.0**
PYM Petit Puy Mans 80.93 341 *e*P **P 05 38 07.6 -0.5**
PYM Petit Puy Mans 80.93 341 *e*P **P 05 38 07.6 -0.5**
PYM Petit Puy Mans 80.93 341 *e*P **P 05 38 07.6 -0.5**
FETY Fethiye 80.94 319 *e*P **P 05 38 07.9 -0.4**
SKIA Skiathos 80.98 324 P **P 05 38 07.0 -1.4**
SKIA Skiathos 80.98 324 P **P 05 38 07.0 -1.4**
COLF Collangettes 81.01 340 *e*P **P 05 38 08.4 -0.1**
COLF Collangettes 81.01 340 *e*P **P 05 38 08.4 -0.1**
PPCY Paphos 81.01 316 P **P 05 38 07.1 -1.5**
PPCY Paphos 81.01 316 P **P 05 38 07.1 -1.5**
SSB Saint Sauveur 81.05 339 *e*P **P 05 38 08.5 -0.2**
SSB *e* 05 38 50.7
SSB pmax pmax
comp=Z,86nm,1.0s
SSB Saint Sauveur 81.05 339 *e*P **P 05 38 08.5 -0.2**
comp=Z,86nm,1.0s
SSB *e* 05 38 50.7
MBDF Montbardon 81.05 338 *e*P **P 05 38 07.8 -1.1**
comp=Z,36nm,0.7s
MBDF Montbardon 81.05 338 *e*P **P 05 38 07.8 -1.1**
MBDF pmax pmax
comp=Z,36nm,0.6s
MBDF Montbardon 81.05 338 *e*P **P 05 38 07.8 -1.1**
comp=Z,36nm,0.6s
AKAS Kas 81.06 318 *i*P **P 05 38 07.4 -1.6**
KMSC Kings Mountain 81.08 44 ⇑P **P 05 38 09.7 +0.8**
baz=81
ORIF Oris-en-Rattie 81.08 338 *e*P **P 05 38 08.5 -0.4**
comp=Z,143nm,0.9s
ORIF *e*R
comp=Z,1μm,22.5s
ORIF Oris-en-Rattie 81.08 338 *e*P **P 05 38 08.5 -0.4**
ORIF pmax pmax
comp=Z,143nm,0.9s
ORIF Oris-en-Rattie 81.08 338 *e*P **P 05 38 08.5 -0.4**
comp=Z,143nm,0.9s
KSL Kastellorizon 81.14 318 *e*P P 05 38 05.6 -3.7
THL Klokotos Trika 81.16 325 P **P 05 38 07.1 -2.2**
THL Klokotos Trika 81.16 325 *e*P P 05 38 04.7 -4.6
VLO Vlora 81.25 327 *i*P **P 05 38 08.4 -1.3**
SURF Saint Ours 81.27 338 *e*P **P 05 38 10.3 +0.2**
SURF Saint Ours 81.27 338 *e*P **P 05 38 10.3 +0.2**
SMIA Simia 81.33 324 P **P 05 38 08.9 -1.3**
SMIA Simia 81.33 324 P **P 05 38 08.9 -1.3**
MRKA Markates 81.34 324 P **P 05 38 08.9 -1.4**
LBL Lubilhac 81.37 340 *e*P **P 05 38 10.7 +0.3**
LBL Lubilhac 81.37 340 *e*P **P 05 38 10.7 +0.3**
LBL Lubilhac 81.37 340 *e*P **P 05 38 10.7 +0.3**
VIVF Saint-Julien-l 81.42 339 *e*P **P 05 38 10.0 -0.6**
VIVF *e*pP **pP 05 38 51.1 +1.6**
VIVF Saint-Julien-l 81.42 339 *e*P **P 05 38 10.0 -0.6**
VIVF *e**PP **pP 05 38 51.1 +1.6**
VIVF Saint-Julien-l 81.42 339 *e*P **P 05 38 10.0 -0.6**
VIVF *e*pP **pP 05 38 51.1 +1.6**
DAT Datca 81.48 320 *e*P **P 05 38 10.0 -1.2**
AQU L'Aquila 81.48 332 *e*P **P 05 38 11.9 +0.9**
AQU L'Aquila 81.48 332⇓*i*P **P 05 38 11.0 0.0**
JAN Janina 81.50 326 P **P 05 38 10.9 -0.2**
JAN Janina 81.50 326 *e*P **P 05 38 09.5 -1.6**
AGG Agios Georgios 81.53 325 P **P 05 38 09.1 -2.2**

AGG Agios Georgios 81.53 325 *e*P **P 05 38 09.2 -2.1**
SAOF Saorge 81.56 337 *e*P **P 05 38 10.5 -0.9**
SAOF Saorge 81.56 337 *e*P **P 05 38 10.5 -0.9**
SAOF Saorge 81.56 337 *e*P **P 05 38 10.5 -0.9**
ATAL Atalanti 81.56 324 P **P 05 38 09.8 -1.6**
ATAL Atalanti 81.56 324 P **P 05 38 09.8 -1.6**
AUTN L'Aution 81.58 337 *e*P **P 05 38 10.9 -0.8**
AUTN L'Aution 81.58 337 *e*P **P 05 38 10.9 -0.8**
AUTN L'Aution 81.58 337 *e*P **P 05 38 10.9 -0.8**
MRMA Marmari 81.60 323 P **P 05 38 10.4 -1.3**
LKR Lokris 81.60 324 P **P 05 38 09.8 -1.9**
LKR Lokris 81.60 324 *e*P **P 05 38 10.8 -0.9**
LKR Lokris 81.60 324 P **P 05 38 09.8 -1.9**
MAKR Makrakomi, Fth 81.61 325 P **P 05 38 10.0 -1.7**
TOUF Mont Tournerai 81.61 337 *e*P **P 05 38 10.9 -0.9**
TOUF Mont Tournerai 81.61 337 *e*P **P 05 38 10.9 -0.9**
TOUF Mont Tournerai 81.61 337 *e*P **P 05 38 10.9 -0.9**
AXAR Agios Charalam 81.63 324 P **P 05 38 10.0 -1.8**
AXAR Agios Charalam 81.63 324 P **P 05 38 10.0 -1.8**
RJF Les Rejaudoux 81.66 342 *e*P **P 05 38 11.1 -0.8**
comp=Z,1µm,1.9s
RJF *e*R
comp=Z,2µm,19.2s
RJF Les Rejaudoux 81.66 342 *e*P **P 05 38 11.1 -0.8**
RJF pmax pmax
comp=Z,1µm,1.9s
RJF Les Rejaudoux 81.66 342 *e*P **P 05 38 11.1 -0.8**
comp=Z,1µm,1.9s
ARG Arkhangelos 81.70 319 P **P 05 38 11.5 -0.7**
ARG Arkhangelos 81.70 319 *e*P **P 05 38 12.3 +0.1**
SBF Sospel 81.70 337 *e*P **P 05 38 11.1 -1.1**
comp=Z,109nm,0.8s
SBF *e*pP **pP 05 38 54.0 +2.9**
SBF Sospel 81.70 337 *e*P **P 05 38 11.1 -1.1**
SBF *e**PP **pP 05 38 54.0 +2.9**
SBF pmax pmax
comp=Z,109nm,0.8s
SBF Sospel 81.70 337 *e*P **P 05 38 11.1 -1.1**
comp=Z,109nm,0.8s
SBF *e*pP **pP 05 38 54.0 +2.9**
MVIF Mont Vial 81.74 337 *e*P **P 05 38 11.7 -0.8**
MVIF Mont Vial 81.74 337 *e*P **P 05 38 11.7 -0.8**
MVIF Mont Vial 81.74 337 *e*P **P 05 38 11.7 -0.8**
NIS1 Nisyros Isl. 81.75 320 P **P 05 38 11.0 -1.5**
IGT Igoumenitsa 81.79 326 P **P 05 38 11.7 -0.9**
PTL Penteli 81.81 323 P **P 05 38 11.2 -1.6**
PTL Penteli 81.81 323 *e*P P 05 38 09.3 -3.5
EVR Evrytania 81.81 325 P **P 05 38 11.2 -1.7**
KEK Kerkira 81.82 327 P **P 05 38 11.8 -1.0**
KEK Kerkira 81.82 327 *e*P **P 05 38 10.2 -2.6**
REVF Revere 81.83 337 *e*P **P 05 38 12.3 -0.6**
REVF Revere 81.83 337 *e*P **P 05 38 12.3 -0.6**
REVF Revere 81.83 337 *e*P **P 05 38 12.3 -0.6**
JSC Jenkinsville 81.84 44 *e*P **P 05 38 13.2 +0.3**
JSC Jenkinsville 81.84 44 *e*P **P 05 38 13.2 +0.3**
BRAL Brewton 81.86 50 *e*P **P 05 38 14.3 +1.2**
comp=Z,345nm,1.0s
BRAL *e* 05 38 51.4
RAR Rarotonga 81.88 138 *e*P **P 05 38 13.2 +0.1**
comp=Z,233nm,1.5s
RAR *e* 05 38 50.0
RAR Rarotonga 81.88 138 LR LR 06 07 36.6
comp=Z,1µm,19.7s,baz=270,slow=30
ATHU Athens Univers 81.91 323 P **P 05 38 11.4 -1.9**
CAF Calviac 81.92 341 *e*P **P 05 38 12.9 -0.3**
comp=Z,657nm,1.6s
CAF *e*pP **pP 05 38 53.9 +1.8**
CAF Calviac 81.92 341 *e*P **P 05 38 12.9 -0.3**
CAF *e**PP **pP 05 38 53.9 +1.8**
CAF pmax pmax
comp=Z,657nm,1.6s
CAF Calviac 81.92 341 *e*P **P 05 38 12.9 -0.3**
comp=Z,657nm,1.6s
CAF *e*pP **pP 05 38 53.9 +1.8**
ATH Athens Observa 81.93 323 P **P 05 38 11.7 -1.7**
CALN Calern 81.94 337 *e*P **P 05 38 12.6 -0.9**
CALN Calern 81.94 337 *e*P **P 05 38 12.6 -0.9**
CALN Calern 81.94 337 *e*P **P 05 38 12.6 -0.9**
SCTE Santa Cesarea 81.95 328 *e*P P 05 38 08.4 -5.0
DSF Desfina 81.99 324 P **P 05 38 11.4 -2.4**
DSF Desfina 81.99 324 P **P 05 38 11.4 -2.4**
APE Apeiranthos 82.01 322 *e*P **P 05 38 11.8 -2.1**
APE Apeiranthos 82.01 322 P **P 05 38 11.5 -2.5**
APE Apeiranthos 82.01 322 ||P **P 05 38 11.4 -2.5**
APE Apeiranthos 82.01 322 ||*i*P **P 05 38 11.4 -2.5**
SMRF Simiane la Rot 82.05 338 *e*P **P 05 38 13.5 -0.4**
SMRF *e*pP **pP 05 38 54.7 +1.9**
SMRF Simiane la Rot 82.05 338 *e*P **P 05 38 13.5 -0.4**
SMRF *e*pP **pP 05 38 54.7 +1.9**
PMOR Pomariorio Ree 82.15 125 *e*P **P 05 38 15.8 +1.2**
comp=Z,607nm,1.3s
PMOR *e*pP **pP 05 38 53.4 -0.1**
comp=Z,276nm,1.2s
KALE Kalithea 82.15 325 P **P 05 38 12.6 -2.0**
LTK Loutraki 82.17 324 P **P 05 38 12.1 -2.5**
LTK Loutraki 82.17 324 *e*P **P 05 38 11.9 -2.7**
LTK Loutraki 82.17 324 P **P 05 38 12.1 -2.5**
LFF La Frestale 82.17 342 *e*P **P 05 38 14.0 -0.5**
comp=Z,1µm,1.7s
LFF La Frestale 82.17 342 *e*P **P 05 38 14.0 -0.5**
LFF pmax pmax
comp=Z,1µm,1.7s
LFF La Frestale 82.17 342 *e*P **P 05 38 14.0 -0.5**
comp=Z,1µm,1.7s
FRF La Foret Royal 82.18 337 *e*P **P 05 38 13.4 -1.2**
FRF La Foret Royal 82.18 337 *e*P **P 05 38 13.4 -1.2**
FRF La Foret Royal 82.18 337 *e*P **P 05 38 13.4 -1.2**
TRIZ Trizonia 82.20 325 P **P 05 38 12.9 -1.8**
EFP Efpalio 82.20 325 P **P 05 38 13.5 -1.3**
EFP Efpalio 82.20 325 *e*P **P 05 38 13.9 -0.9**
LKD2 Lefkada island 82.34 326 P **P 05 38 14.3 -1.2**
LASF Ste Croix 82.34 340 *e*P **P 05 38 15.1 -0.4**
comp=Z,830nm,1.9s
LASF Ste Croix 82.34 340 *e*P **P 05 38 15.1 -0.4**
comp=Z,830nm,1.9s
LAKA Lakka 82.34 325 P **P 05 38 14.2 -1.4**
LMR La Mourre 82.43 338 *e*P **P 05 38 14.8 -1.1**
comp=Z,2µm,1.9s
LMR *e*pP **pP 05 38 56.2 +1.4**
LMR La Mourre 82.43 338 *e*P **P 05 38 14.8 -1.1**
LMR *e**PP **pP 05 38 56.2 +1.4**
LMR pmax pmax
comp=Z,2µm,1.9s
LMR La Mourre 82.43 338 *e*P **P 05 38 14.8 -1.1**
comp=Z,2µm,1.9s
LMR *e*pP **pP 05 38 56.2 +1.4**
CNNC Cliffs of the 82.48 41 *e*P **P 05 38 17.2 +1.0**
comp=Z,118nm,0.8s
CNNC *e* 05 38 55.0
GUR Goura 82.48 324 P **P 05 38 14.3 -2.1**
GUR Goura 82.48 324 *e*P **P 05 38 14.7 -1.7**
GUR Goura 82.48 324 P **P 05 38 14.3 -2.1**
DID Didima 82.52 323 P **P 05 38 13.4 -3.1**
DID Didima 82.52 323 *e*P **P 05 38 14.0 -2.5**
DID Didima 82.52 323 P **P 05 38 13.4 -3.1**
PGF Pioggiola 82.53 335 *e*P **P 05 38 15.1 -1.5**
comp=Z,287nm,1.3s
PGF Pioggiola 82.53 335 *e*P **P 05 38 15.1 -1.5**
PGF pmax pmax
comp=Z,287nm,1.3s
PGF Pioggiola 82.53 335 *e*P **P 05 38 15.1 -1.5**
comp=Z,287nm,1.3s
DIDY Didyma 82.56 323 P **P 05 38 13.6 -3.2**
DIDY Didyma 82.56 323 P **P 05 38 13.6 -3.2**
RLS Riolos of Patr 82.69 325 P **P 05 38 16.5 -0.8**
RLS Riolos of Patr 82.69 325 *e*P P 05 38 12.0 -5.3
CUC Castrocucco 82.90 330 *e*P **P 05 38 17.8 -0.7**
CUC Castrocucco 82.90 330 *e*P **P 05 38 16.6 -1.8**
VLS Valsamata 82.91 326 P **P 05 38 17.2 -1.2**
VLS Valsamata 82.91 326 *e*P **P 05 38 17.3 -1.2**
VLX Vlachokerasia 82.96 324 P **P 05 38 16.7 -2.2**
VLX Vlachokerasia 82.96 324 *e*P P 05 38 14.4 -4.5
MMIG Aquila 83.06 70 P **P 05 38 19.6 +0.1**
AMT Artemida-Makis 83.07 324 P **P 05 38 17.9 -1.4**
STKA Stephens Creek 83.12 192 *e*P **P 05 38 20.1 +0.8**
comp=Z,22nm,1.4s
STKA pP **pP 05 38 57.9 -0.5**
STKA PKKPbc **PKKPbc 05 56 40.0 +0.6**
STKA P'P' 06 04 45.0
STKA Stephens Creek 83.12 192 P **P 05 38 19.9 +0.6**
comp=Z,23nm,0.9s,baz=341,slow=7.0,SNR=32
STKA pP **pP 05 38 57.9 -0.5**
comp=Z,47nm,1.1s,baz=353,slow=7.9,SNR=5.4
STKA PKKPbc **PKKPbc 05 56 40.0 +0.6**
comp=Z,2.5nm,0.8s,baz=117,slow=2.3,SNR=3.4
STKA PKPPKP **P'P'df 06 04 45.0 +2.1**
comp=Z,2.4nm,1.1s,baz=190,slow=5.1,SNR=3.1
STKA LR LR 06 15 08.0
comp=Z,1µm,18.0s,baz=5.1,slow=35
TIGA Tifton 83.16 47 ||P **P 05 38 21.2 +1.4**
baz=83
ITM Ithomi 83.30 324 P **P 05 38 18.8 -1.7**
ITM Ithomi 83.30 324 *e*P **P 05 38 19.3 -1.2**
NHSC New Hope 83.31 44 *e*P **P 05 38 22.0 +1.5**
NHSC *e* 05 38 59.4
OSPF L'Ospedale 83.31 335 *e*P **P 05 38 20.0 -0.6**
OSPF L'Ospedale 83.31 335 *e*P **P 05 38 20.0 -0.6**
VLI Veliai 83.33 323 P **P 05 38 17.7 -2.9**
VLI Veliai 83.33 323 *e*P **P 05 38 19.9 -0.7**
VLI Veliai 83.33 323 P **P 05 38 17.7 -2.9**
TIP Timpagrande 83.33 329 *e*P **P 05 38 20.6 -0.1**
comp=Z,541nm,1.6s
RBK Rabkut 83.38 289 P **P 05 38 20.8 -0.5**
SNR=28
MTLF Montolieu 83.40 341 *e*P **P 05 38 20.4 -0.5**
comp=Z,547nm,1.6s
MTLF Montolieu 83.40 341 *e*P **P 05 38 20.4 -0.5**
MTLF pmax pmax
comp=Z,547nm,1.6s
MTLF Montolieu 83.40 341 *e*P **P 05 38 20.4 -0.5**
comp=Z,547nm,1.6s
ZKR Zakros 83.43 320 P **P 05 38 20.2 -1.0**
ZKR Zakros 83.43 320 *e*P **P 05 38 20.4 -0.8**
PPT Papeete 83.45 128 P **P 05 38 22.6 +1.3**
PPT pP **pP 05 39 00.2 -0.2**
PPT Papeete 83.45 128 P **P 05 38 22.6 +1.3**
comp=Z,196nm,1.1s,baz=323,slow=3.3,SNR=29
PPT pP **pP 05 39 00.2 -0.2**
comp=Z,88nm,1.0s,baz=283,slow=8.5,SNR=2.3
PPT LR LR 06 09 50.7
comp=Z,1µm,18.8s,baz=270,slow=31
PPT2 Papeete2 83.47 128 *e*P **P 05 38 22.8 +1.3**
comp=Z,359nm,1.4s
PPT2 *e*pP **pP 05 39 00.5 0.0**
comp=Z,202nm,1.5s
PPT2 *e*S **S 05 48 27.7 -2.1**
comp=Z,3µm,20.0s
DYR Agios Nikonas 83.52 324 P **P 05 38 20.1 -1.5**
PAE Paea 83.53 128 *e*P **P 05 38 22.7 +1.0**
comp=Z,83nm,1.3s
PAE *e*pP **pP 05 38 58.9 -1.8**
comp=Z,40nm,1.3s
NPS Neapolis 83.55 321 P **P 05 38 19.6 -2.2**
NPS Neapolis 83.55 321 *e*P **P 05 38 20.1 -1.7**
TIAR Tiarei 83.56 128 *e*P **P 05 38 23.0 +1.1**
comp=Z,346nm,1.2s
TIAR *e*pP **pP 05 39 00.7 -0.2**
comp=Z,171nm,1.2s
PYL PYLOS 83.62 324 P **P 05 38 20.1 -2.0**
PYL PYLOS 83.62 324 *e*P **P 05 38 20.6 -1.5**
KYTH Kithira 83.67 323 *e*P **P 05 38 20.8 -1.6**
LAST Lasithi 83.69 321 P **P 05 38 21.0 -1.6**
LAST Lasithi 83.69 321 *e*P **P 05 38 21.6 -1.0**
LRDF Laroque-de-Fa 83.72 340 *e*P **P 05 38 23.2 +0.7**
LRDF Laroque-de-Fa 83.72 340 *e*P **P 05 38 23.2 +0.7**
TVO Taravao 83.79 128 *e*P **P 05 38 24.4 +1.3**
comp=Z,380nm,1.4s
IDI Anoyia 83.82 321 P **P 05 38 20.7 -2.5**
IDI Anoyia 83.82 321 *e*P **P 05 38 20.9 -2.3**
comp=Z,423nm,2.2s
IDI Anoyia 83.82 321 *e*P **P 05 38 20.5 -2.7**
XRY Khrisi 83.85 320 *e*P **P 05 38 22.4 -0.9**
VAM Vamos 83.99 322 P **P 05 38 22.0 -2.0**
VAM Vamos 83.99 322 *e*P **P 05 38 21.5 -2.5**
MLS Moulis 84.00 341 *e*P **P 05 38 24.0 0.0**
MLS Moulis 84.00 341 *e*P **P 05 38 24.0 0.0**
CARF Carcanieres 84.02 340 *e*P **P 05 38 24.2 0.0**
CARF Carcanieres 84.02 340 *e*P **P 05 38 24.2 0.0**
ABTO Aybut 84.04 290 P **P 05 38 24.4 -0.2**
SNR=43
FILF Fillols 84.07 340 *e*P **P 05 38 24.8 +0.4**
FILF Fillols 84.07 340 *e*P **P 05 38 24.8 +0.4**
SJAF Saint Jean de 84.07 340 *e*P **P 05 38 24.5 +0.2**
SJAF Saint Jean de 84.07 340 *e*P **P 05 38 24.5 +0.2**
EPF Esparros 84.08 342 *e*P **P 05 38 23.0 -1.4**
EPF *e*pP **pP 05 39 04.0 +0.5**
EPF Esparros 84.08 342 *e*P **P 05 38 23.0 -1.4**
EPF *e**PP **pP 05 39 04.0 +0.5**
EPF Esparros 84.08 342 *e*P **P 05 38 23.0 -1.4**
EPF *e*pP **pP 05 39 04.0 +0.5**
SIVA Sivas 84.08 321 P **P 05 38 23.5 -1.0**
KARN Karanos 84.10 322 P **P 05 38 23.1 -1.5**
KARN Karanos 84.10 322 *e*P **P 05 38 23.2 -1.4**
LABF Labassere 84.12 342 *e*P **P 05 38 23.8 -0.8**
LABF Labassere 84.12 342 *e*P **P 05 38 23.8 -0.8**
ORDF Ordiarp 84.15 343 *e*P **P 05 38 23.7 -1.0**
ORDF Ordiarp 84.15 343 *e*P **P 05 38 23.7 -1.0**
EIL Elat 84.16 311 *e*P **P 05 38 25.0 0.0**
OSSF Osses 84.17 343 *e*P **P 05 38 23.8 -1.0**
OSSF Osses 84.17 343 *e*P **P 05 38 23.8 -1.0**
REYF Montagne du Re 84.19 342 *e*P **P 05 38 24.8 -0.2**
REYF Montagne du Re 84.19 342 *e*P **P 05 38 24.8 -0.2**
VIEF Viey 84.29 342 *e*P **P 05 38 25.7 +0.2**
VIEF Viey 84.29 342 *e*P **P 05 38 25.7 +0.2**
RESF Ens 84.30 342 *e*P **P 05 38 26.0 +0.4**
RESF Ens 84.30 342 *e*P **P 05 38 26.0 +0.4**
SJPF Ste Jean 84.31 343 *e*P **P 05 38 24.3 -1.2**
comp=Z,165nm,1.5s
SJPF Ste Jean 84.31 343 *e*P **P 05 38 24.3 -1.2**
SJPF pmax pmax
comp=Z,165nm,1.5s
SJPF Ste Jean 84.31 343 *e*P **P 05 38 24.3 -1.2**
comp=Z,165nm,1.5s
LARF Larrau 84.33 343 *e*P **P 05 38 25.7 0.0**
LARF Larrau 84.33 343 *e*P **P 05 38 25.7 0.0**
ETSF Etsaut 84.39 342 *e*P **P 05 38 25.2 -0.8**
comp=Z,93nm,0.9s
ETSF Etsaut 84.39 342 *e*P **P 05 38 25.2 -0.8**
ETSF pmax pmax
comp=Z,93nm,0.9s
ETSF Etsaut 84.39 342 *e*P **P 05 38 25.2 -0.8**
comp=Z,93nm,0.9s
MEH Mehetia 84.47 127 *e*P **P 05 38 27.7 +1.2**
comp=Z,483nm,1.2s
MEH *e*pP **pP 05 39 04.0 -1.6**
comp=Z,225nm,1.3s
GVD Gavdhos 84.53 321 P **P 05 38 25.4 -1.3**
GVD Gavdhos 84.53 321 *e*P **P 05 38 25.1 -1.6**
comp=Z,2µm,1.8s
FORT Forrest 84.62 203 *e*P **P 05 38 27.8 +0.9**
comp=Z,260nm,0.8s
KAAM Kaadhehdhoo 84.67 264 P **P 05 38 29.2 +1.5**
ZIIG Zihuatanejo 84.71 69 P **P 05 38 26.5 -1.4**
BBOO Buckleboo 84.88 196 *e*P **P 05 38 28.6 +0.4**
comp=Z,4µm,1.4s
BBOO *e* 05 39 05.8
BBOO Buckleboo 84.88 196 P pP 05 39 07.4 0.0
baz=29,SNR=5.7
VSL Villasalto 85.28 334 *e*P **P 05 38 30.1 -0.3**
comp=Z,570nm,1.9s
PBRG Braganca 86.50 347 *i*P **P 05 38 35.5 -1.0**
comp=Z,152nm,1.5s
PBRG *e*pP **pP 05 39 14.6 -1.1**
PGAV Gavieira, Arco 86.56 348 *i*P **P 05 38 36.1 -0.7**
comp=Z,187nm,1.4s
PGAV *e*pP **pP 05 39 17.9 +1.8**
PGAV *e*SKsac **SKsac 05 48 48.4 -0.1**
PGAV *e*S **S 05 49 00.3 +0.3**
PCAB Cabril 86.78 347 *i*P **P 05 38 37.1 -0.7**
comp=Z,197nm,1.4s
WDD Wield Dalam 87.07 329 *e*P **P 05 38 38.7 -0.5**
comp=Z,118nm,1.0s
WDD *e* 05 39 20.2
POLO Lamas de Olo 87.08 347 *i*P **P 05 38 38.7 -0.6**
comp=Z,157nm,1.4s
POLO *e*pP **pP 05 39 18.4 -0.2**
OUZ Omahuta 87.11 165 *e*P **P 05 38 42.0 +3.0**
comp=Z,217nm,1.5s
PVRL Vila Real 87.16 347 *i*P **P 05 38 39.0 -0.7**
comp=Z,380nm,1.6s
PVRL *e*pP **pP 05 39 18.8 -0.2**
MVO Moncorvo 87.17 347 *i*P **P 05 38 38.8 -0.9**
MVO *e*pP **pP 05 39 18.9 -0.2**
MVO *e*SKsac **SKsac 05 48 52.2 0.0**
MVO *e*S **S 05 49 05.9 +0.1**
PVIS Viseu 87.74 347 *i*P **P 05 38 41.6 -0.8**
comp=Z,238nm,1.3s
PVIS *e*pP **pP 05 39 22.3 +0.5**
MTE Manteigas 88.00 347 *i*P **P 05 38 43.0 -0.7**
comp=Z,222nm,1.5s
MTE *e*SKsac **SKsac 05 48 57.7 +0.5**
MTE *e*S **S 05 49 13.9 +0.2**
MTE Manteigas 88.00 347 *e*P **P 05 38 42.6 -1.0**
comp=Z,169nm,1.3s
ESDC Sonseca Array 88.14 344 P **P 05 38 43.1 -1.2**
ESDC Sonseca Array 88.14 344 P **P 05 38 43.1 -1.2**
comp=Z,11nm,0.5s,baz=8.4,slow=4.0,SNR=111
ESDC LR LR 06 27 27.2
comp=Z,1µm,18.3s,baz=10.0,slow=42
ESLA Sonseca Array 88.14 344 *e*P **P 05 38 43.2 -1.1**
comp=Z,99nm,1.4s
ESLA *e* 05 39 25.0
PAB San Pablo 88.33 344 *e*P **P 05 38 44.0 -1.3**
PAB pmax pmax
comp=Z,148nm,1.3s
PAB San Pablo 88.33 344 *e*P **P 05 38 44.0 -1.3**
comp=Z,148nm,1.3s
TBI Tubuai 88.40 131 *e*P **P 05 38 47.3 +1.8**
comp=Z,657nm,1.4s
TBI *e*S **S 05 49 14.3 -3.1**
comp=Z,3µm,19.2s
CMAH Djebel Manchou 88.50 335 P P 05 38 42.2 -3.9
CAEH 'Ain El Ouahch 88.51 335 P **P 05 38 44.0 -2.1**
PCBR Castelo Branco 88.54 347 *i*P **P 05 38 45.1 -1.0**
comp=Z,180nm,1.5s
PCBR *e*pP **pP 05 39 25.4 -0.2**
KEST Kesra 88.80 333 *e*P **P 05 38 47.5 0.0**
KEST Kesra 88.80 333 P **P 05 38 46.8 -0.7**
comp=Z,6.1nm,0.5s,baz=16,slow=3.3,SNR=27
KEST LR LR 06 22 08.5
comp=Z,452nm,18.5s,baz=192,slow=38
PTOM Tomar 88.89 347 *e*P **P 05 38 46.8 -1.0**
comp=Z,200nm,1.5s
CKFL Kef-Lekhel 88.91 335 P **P 05 38 45.2 -2.9**
PMRV Marv??o 88.93 347 *i*P **P 05 38 46.9 -1.1**
comp=Z,192nm,1.6s
PMRV *e*pP **pP 05 39 26.7 -0.8**
PMRV *e*SKsac **SKsac 05 49 04.8 +2.1**
PMRV *e*S **S 05 49 22.1 -0.2**
CASM Ain Smara 89.10 335 P **P 05 38 46.0 -2.9**
SET Setif 89.44 336 P **P 05 38 50.0 -0.6**
PESTR Estremoz 89.51 347 *i*P **P 05 38 49.5 -1.2**
comp=Z,172nm,1.6s
PESTR *e*pP **pP 05 39 29.9 -0.3**
PMAFR Mafra 89.66 348 *i*P **P 05 38 50.4 -1.0**
comp=Z,250nm,1.8s
NWAO Narrogin (SRO) 89.78 211 *e*P **P 05 38 52.2 +0.5**
NWAO *e*pP **pP 05 39 30.6 -0.6**
NWAO Narrogin (SRO) 89.78 211 P **P 05 38 51.8 0.0**
comp=Z,16nm,0.7s,baz=7.2,slow=4.9,SNR=11
NWAO *e*pP **pP 05 39 30.6 -0.6**
comp=Z,47nm,1.2s,baz=44,slow=4.4,SNR=5.6
LIS Lisbon 89.88 348 *e*P **P 05 38 52.4 0.0**
LIS *e*PP **PP 05 42 27.9 +1.8**
LIS *e*S **SKsac 05 49 08.3 +0.1**
LIS AMS AMS 06 31 46.3
comp=N,2µm,15.4s
LIS Lisbon 89.88 348 *e*P **P 05 38 52.4 0.0**
LIS *e* **PP 05 42 27.9 +1.8**
LIS *e*S S 05 49 08.2 -23
EVO Evora 89.90 347 ||*i*P **P 05 38 51.3 -1.2**
comp=N,387nm,1.6s
EVO *e*pP **pP 05 39 31.5 -0.5**
EVO *e*R
comp=N,2µm,17.2s
EVO Evora 89.90 347 *i*P **P 05 38 51.5 -1.0**
comp=N,189nm,1.6s
EVO *e*pP **pP 05 39 32.0 0.0**
EVOP Sao Brissos 89.92 347 ||*i*P **P 05 38 51.3 -1.3**
EVOP *e**PP **pP 05 39 31.5 -0.6**
EVOP pmax pmax
comp=Z,387nm,1.6s
EVOP Sao Brissos 89.92 347 ||*i*P **P 05 38 51.3 -1.3**
comp=Z,387nm,1.6s
EVOP *e*pP **pP 05 39 31.5 -0.6**
EMHD Djebel Mahouad 90.05 338 P **P 05 38 53.0 -0.4**
TEIG Tepich 90.07 57 *e*P **P 05 38 55.3 +1.7**
comp=Z,153nm,1.3s
TEIG *e* 05 39 32.2
PBAR Barrancos 90.10 346 *i*P **P 05 38 52.5 -1.0**
comp=Z,251nm,1.5s
PBAR *e*pP **pP 05 39 35.0 +2.0**
EBNR Beni Rached 90.30 339 P **P 05 38 54.0 -0.5**
PBEJ Beja 90.37 347 *e*P **P 05 38 54.0 -0.7**
comp=Z,198nm,1.6s
PBEJ *e*pP **pP 05 39 34.4 +0.1**
PGRA Graciosa 90.58 2 *e*P **P 05 38 56.6 +0.9**
comp=Z,584nm,1.7s
PGRA *e*S S 05 49 19.0 -19
MESJ Messejana 90.61 347 *e*P **P 05 38 55.5 -0.4**
MESJ *e*S **SKsac 05 49 13.1 +0.6**
MESJ AMS AMS 06 28 54.4
comp=Z,956nm,15.1s
MESJ Messejana 90.61 347 *e*P **P 05 38 55.4 -0.4**
MESJ *e*S **SKsac 05 49 13.0 +0.6**
URZ Urewera 90.69 163 P **P 05 38 54.6 -1.2**
URZ Urewera 90.69 163 P **P 05 38 54.6 -1.2**
comp=Z,8.2nm,0.8s,baz=83,slow=6.5,SNR=3.3
URZ LR LR 06 10 29.7
comp=Z,2µm,20.9s,baz=9.4,slow=29
PCVE Castro Verde 90.78 347 *i*P **P 05 38 56.0 -0.6**
comp=Z,273nm,1.5s
PCVE *e*pP **pP 05 39 36.2 0.0**
ROSA Rosais 90.88 3 *e*P **P 05 38 57.6 +0.5**
comp=Z,516nm,1.8s
ROSA *e*S **S 05 49 42.3 +2.0**
PCED Cedros 90.95 3 *e*P **P 05 38 57.3 -0.1**
comp=Z,198nm,2.0s
PVAQ Vaqueiros 90.96 346 *i*P **P 05 38 56.7 -0.8**
comp=Z,188nm,1.5s
PVAQ *e*pP **pP 05 39 36.7 -0.3**
PVAQ *e*SKsac **SKsac 05 49 15.5 +1.1**
PVAQ *e*S **S 05 49 42.3 +1.2**
PTEO Sao Teotonio 90.97 347 *e*P **P 05 38 57.1 -0.4**
comp=Z,242nm,1.6s
ADH Angra Heroismo 90.97 2 *e*P **P 05 38 58.7 +1.2**
comp=Z,250nm,1.6s
PMAN Manadas 90.97 3 *e*P **P 05 38 58.3 +0.8**
comp=Z,562nm,1.5s
CALA Caldeira 91.00 3 *e*P **P 05 38 56.9 -0.8**
HOR Horta 91.06 3 *e*P P 05 39 02.4 +4.5
PICO Pico 91.09 3 *e*P **P 05 38 57.0 -1.1**
PCAN Candelaria 91.13 3 *e*P **P 05 38 58.8 +0.6**
comp=Z,264nm,2.0s
PBDV Barranco-do-Ve 91.15 347 *i*P **P 05 38 58.0 -0.4**
comp=Z,197nm,1.5s
PBDV *e*pP **pP 05 39 36.7 -1.2**
PID Ribeirinha 91.16 3 *e*P **P 05 38 59.9 +1.5**
MORF Marmelete 91.19 347 *i*P **P 05 38 57.8 -0.8**
comp=Z,300nm,1.4s
MORF *e*pP **pP 05 39 36.9 -1.3**
MORF Marmelete 91.19 347 *e*P **P 05 38 59.3 +0.7**
MORF *e* **PP 05 42 37.8 +1.2**
MORF *e*S **SKsac 05 49 16.3 +0.4**
BDHA Al Bayda' 91.26 294 ||*e*P **P 05 38 59.5 +0.1**
PFVI Vila Bisbo 91.39 347 *i*P **P 05 38 58.7 -0.7**
comp=Z,58nm,1.6s
CMLA Cha da Macela 91.88 1 *e*P **P 05 38 59.8 -1.9**
CMLA *e*S **S 05 49 53.8 +4.4**
CMLA Cha da Macela 91.88 1 *e*P **P 05 39 02.0 +0.3**
CMLA pmax pmax
comp=Z,214nm,1.4s
CMLA Cha da Macela 91.88 1 *e*P **P 05 39 02.0 +0.3**
comp=Z,214nm,1.4s
PSMN Pico do Norte, 92.64 0 *e*P **P 05 39 04.7 -0.5**
comp=Z,189nm,1.5s
PSMN *e*S SKsac 05 49 32.9 +9.0
PSMA Santa Maria 92.65 0 *e*P P 05 39 00.8 -4.5
comp=Z,196nm,1.4s
TAU Tasmania Unive 93.51 186 *e*P **P 05 39 10.7 +2.0**
TAU pmax pmax
comp=Z,27nm,1.1s
TAU Tasmania Unive 93.51 186 *e*P **P 05 39 10.7 +2.0**
comp=Z,27nm,1.1s
TGUH Tegucigalpa,Un 95.67 60 *e*P **P 05 39 20.7 +1.3**
comp=Z,124nm,1.3s
TGUH *e* 05 39 57.5
RKT Rikitea 95.72 120 *e*SKsac **SKsac 05 49 41.3 +0.9**
comp=Z,3µm,27.5s
PMPS Porto Santo 96.24 353 *e*P **P 05 39 21.3 -0.5**
comp=Z,317nm,1.5s

PMAR	**Madeira**	**96.62**	**353**	*e*P		**P**	**05 39 23.2**	**-0.5**
	comp=Z,272nm,1.6s								
JTS	**JuntasAbangare**	**100.04**	**60**	S		**SKSac**	**05 49 59.0**	**-4.1**
	comp=Z,2.8nm,0.4s,baz=274,slow=21,SNR=9.6								
TAM	**Tamanrasset**	**102.06**	**332**	*e*P		**Pdif**	**05 39 47.6**	**-0.5**
TAM				pmax	pmax				
	comp=Z,24nm,1.3s								
TAM	**Tamanrasset**	**102.06**	**332**	*e*Pdif		**Pdif**	**05 39 47.6**	**-0.5**
	comp=Z,24nm,1.3s								
KMBO	**Kilima Mbogo**	**108.23**	**292**	PP	PP		05 44 46.7	-0.4	
KMBO	**Kilima Mbogo**	**108.23**	**292**	PP	PP		05 44 46.7	-0.4	
	comp=Z,5.9nm,1.1s,baz=27,slow=10,SNR=6.1								
ROSC	**El Rosal**	**110.26**	**54**	PP	PP		05 45 01.5	-0.2	
ROSC	**El Rosal**	**110.26**	**54**	PP	PP		05 45 01.5	-0.2	
	comp=Z,5.9nm,0.7s,baz=96,slow=21,SNR=3.8								
TOA0	**Torodi Ar. Sit**	**112.31**	**332**	*e*PKPdf		**PKiKP**	**05 44 28.5**	**-0.3**	
TORD	**Torodi Ar. Bea**	**112.31**	**332**	Pdif		**Pdif**	**05 40 32.4**	**-1.2**	
TORD				PKiKP		**PKiKP**	**05 44 28.8**	**0.0**	
TORD				PKKPbc		**PKKPbc**	**05 55 17.5**	**+0.3**	
TORD				PKKPab		**PKKPab**	**05 55 27.6**	**-3.1**	
TORD	**Torodi Ar. Bea**	**112.31**	**332**	Pdiff		**Pdif**	**05 40 32.4**	**-1.2**	
	comp=Z,1.6nm,1.0s,baz=3.1,slow=4.5,SNR=5.6								
TORD				PKiKP		**PKiKP**	**05 44 28.8**	**0.0**	
	comp=Z,2.8nm,0.4s,baz=15,slow=1.7,SNR=75								
TORD				PKKPbc		**PKKPbc**	**05 55 17.5**	**+0.3**	
	comp=Z,1.6nm,0.5s,baz=210,slow=1.8,SNR=13								
TORD				PKKPab		**PKKPab**	**05 55 27.6**	**-3.1**	
	comp=Z,10nm,1.1s,baz=203,slow=3.7,SNR=10.0								
OPO	**Ambohidratompo**	**115.51**	**272**	PKP		**PKPdf**	**05 44 35.2**	**+0.2**	
OPO	**Ambohidratompo**	**115.51**	**272**	PKP		**PKPdf**	**05 44 35.2**	**+0.2**	
	comp=Z,0.9nm,0.6s,baz=109,slow=2.6,SNR=4.0								
LIC	**Lamto**	**120.76**	**337**	*e*PKIKP		**PKPdf**	**05 44 44.7**	**-0.4**	
	comp=Z,36nm,0.7s								
LIC				*e*R					
	comp=Z,1μm,22.2s								
LIC	**Lamto**	**120.76**	**337**	*e*PKPdf		**PKPdf**	**05 44 44.7**	**-0.4**	
LSZ	**Lusaka**	**124.84**	**290**	*e*PKPdf		**PKPdf**	**05 44 53.4**	**+0.5**	
LSZ	**Lusaka**	**124.84**	**290**	P		**PKPdf**	**05 44 54.1**	**+1.2**	
	SNR=7.8								
SAML	**Samuel**	**127.71**	**51**	*e*PKPdf		**PKPdf**	**05 44 58.4**	**+0.1**	
SAML				*e*			05 45 38.3		
VNDA	**Vanda**	**128.04**	**178**	PKP		**PKPdf**	**05 44 57.1**	**+0.1**	
VNDA	**Vanda**	**128.04**	**178**	PKP		**PKPdf**	**05 44 57.1**	**+0.1**	
	comp=Z,5.2nm,0.5s,baz=328,slow=4.1,SNR=60								
SBA	**Scott Base**	**128.51**	**177**	*e*PKPdf		**PKPdf**	**05 44 58.6**	**+0.7**	
LPAZ	**La Paz**	**131.24**	**61**	PKP		**PKPdf**	**05 45 05.9**	**+0.2**	
LPAZ				*e*PKPdf		**PKiKP**	**05 45 06.4**	**-0.2**	
LPAZ				*e*			05 45 46.0		
LPAZ				pPKP		**pPKPdf**	**05 45 46.3**	**-0.8**	
LPAZ				SKPbc		**SKPbc**	**05 48 14.9**	**-0.8**	
LPAZ	**La Paz**	**131.24**	**61**	PKP		**PKPdf**	**05 45 05.9**	**+0.2**	
	comp=Z,5.1nm,0.7s,baz=26,slow=5.2,SNR=19								
LPAZ				pPKP		**pPKPdf**	**05 45 46.3**	**-0.8**	
	comp=Z,20nm,0.9s,baz=348,slow=5.3,SNR=8.5								
LPAZ				SKPbc		**SKPbc**	**05 48 14.9**	**-0.8**	
	comp=Z,61nm,1.3s,baz=8.4,slow=6.3,SNR=10								
LBTB	**Lobatse**	**133.80**	**284**	PKPpre	PKPpre		05 44 53.0		
LBTB				PKP		**PKPdf**	**05 45 10.0**	**+0.4**	
LBTB				*e*PKPdf		**PKiKP**	**05 45 10.2**	**-0.7**	
LBTB				pPKP	pPKPdf		05 45 50.6	-0.4	
LBTB				*e*			05 45 51.6		
LBTB				SKPbc		**SKPbc**	**05 48 23.8**	**+0.1**	
LBTB	**Lobatse**	**133.80**	**284**	PKhKP	PKPpre		05 44 53.0		
	comp=Z,3.1nm,0.5s,baz=236,slow=5.8,SNR=5.8								
LBTB				PKP		**PKPdf**	**05 45 10.0**	**+0.4**	
	comp=Z,22nm,1.0s,baz=55,slow=3.6,SNR=11								
LBTB				pPKP	pPKPdf		05 45 50.6	-0.4	
	comp=Z,24nm,1.0s,baz=75,slow=1.2,SNR=4.5								
LBTB				SKPbc		**SKPbc**	**05 48 23.8**	**+0.1**	
	comp=Z,15nm,0.7s,baz=78,slow=2.5,SNR=8.5								
TSUM	**Tsumeb**	**134.11**	**297**	PKPpre	PKPpre		05 44 57.2		
TSUM				PKP		**PKPdf**	**05 45 10.1**	**-0.3**	
TSUM				SKPbc		**SKPbc**	**05 48 25.2**	**+0.3**	
TSUM	**Tsumeb**	**134.11**	**297**	PKhKP	PKPpre		05 44 57.2		
	comp=Z,4.7nm,0.9s,baz=197,slow=5.5,SNR=2.0								
TSUM				PKP		**PKPdf**	**05 45 10.1**	**-0.3**	
	comp=Z,13nm,0.9s,baz=58,slow=5.2,SNR=5.6								
TSUM				SKPbc		**SKPbc**	**05 48 25.2**	**+0.3**	
	comp=Z,16nm,1.0s,baz=104,slow=4.5,SNR=7.6								
SIV	**San Ignacio**	**134.77**	**53**	SKPbc		**SKPbc**	**05 48 27.3**	**+0.2**	
SIV	**San Ignacio**	**134.77**	**53**	SKPbc		**SKPbc**	**05 48 27.3**	**+0.2**	
	comp=Z,84nm,1.2s,baz=335,slow=4.4,SNR=7.2								
MAW	**Mawson**	**136.30**	**214**	PKPpre	PKPpre		05 45 04.4		
MAW				PKP		**PKPdf**	**05 45 13.2**	**+0.4**	
MAW				SKPbc		**SKPbc**	**05 48 28.1**	**-1.9**	
MAW	**Mawson**	**136.30**	**214**	PKhKP	PKPpre		05 45 04.4		
	comp=Z,2.6nm,0.6s,baz=261,slow=14,SNR=6.1								
MAW				PKP		**PKPdf**	**05 45 13.2**	**+0.4**	
	comp=Z,23nm,0.9s,baz=82,slow=4.7,SNR=15								
MAW				SKPbc		**SKPbc**	**05 48 28.1**	**-1.9**	
	comp=Z,18nm,1.0s,baz=1.7,slow=3.0,SNR=5.3								
BOSA	**Boshof**	**136.59**	**281**	PKPpre	PKPpre		05 45 02.1		
BOSA				*e*PKPdf		**PKPdf**	**05 45 14.6**	**-0.2**	
BOSA				PKP		**PKPdf**	**05 45 14.8**	**0.0**	
BOSA				SKPbc		**SKPbc**	**05 48 32.7**	**+0.2**	
BOSA	**Boshof**	**136.59**	**281**	PKhKP	PKPpre		05 45 02.1		
	comp=Z,3.8nm,0.5s,baz=65,slow=3.6,SNR=13								
BOSA				PKP		**PKPdf**	**05 45 14.8**	**0.0**	
	comp=Z,10.0nm,0.5s,baz=328,slow=2.9,SNR=12								
BOSA				SKPbc		**SKPbc**	**05 48 32.7**	**+0.2**	
	comp=Z,9.5nm,0.8s,baz=76,slow=4.4,SNR=4.1								
BDFB	**Brasilia**	**140.32**	**36**	PKPpre	PKPpre		05 45 14.7		
BDFB				SKPbc		**SKPbc**	**05 48 43.7**	**+0.4**	
BDFB	**Brasilia**	**140.32**	**36**	PKhKP	PKPpre		05 45 14.7		
	comp=Z,2.8nm,0.5s,baz=330,slow=4.5,SNR=13								
BDFB				SKPbc		**SKPbc**	**05 48 43.7**	**+0.4**	
	comp=Z,28nm,1.2s,baz=358,slow=4.3,SNR=5.0								
QSPA	**South Pole Qui**	**140.47**	**180**	PKPpre	PKPpre		05 45 11.8		
QSPA				*e*PKPdf	PKPdf		05 45 14.1	-6.5	
QSPA				SKPbc		**SKPbc**	**05 48 39.9**	**-2.0**	
QSPA	**South Pole Qui**	**140.47**	**180**	PKhKP	PKPpre		05 45 11.8		
	comp=Z,19nm,0.6s,baz=293,slow=0.9,SNR=52								
QSPA				SKPbc		**SKPbc**	**05 48 39.9**	**-2.0**	
	comp=Z,33nm,0.9s,baz=16,slow=2.1,SNR=5.3								
SUR	**Sutherland**	**141.96**	**281**	*e*PKPdf		**PKPdf**	**05 45 21.6**	**-2.9**	
SYO	**Syowa Base**	**145.00**	**215** ⇑	*i*P		PKPbc	05 45 27.3	-0.9	
SYO	**Syowa Base**	**145.00**	**215** ⇓	*i*PKiKP		**PKiKP**	**05 45 34.5**	**+2.2**	
CPUP	**Villa Florida**	**145.24**	**58**	PKPbc		**PKPab**	**05 45 30.5**	**0.0**	
CPUP				pPKPbc	pPKPbc		05 46 09.6	-1.5	
CPUP	**Villa Florida**	**145.24**	**58**	PKPbc		**PKPab**	**05 45 30.5**	**0.0**	
	comp=Z,79nm,0.9s,baz=308,slow=3.1,SNR=97								
CPUP				pPKPbc	pPKPbc		05 46 09.6	-1.5	
	comp=Z,190nm,1.0s,baz=326,slow=2.6,SNR=8.8								
PLCA	**Paso Flores**	**147.03**	**90**	*e*PKPbc		**PKPbc**	**05 45 35.8**	**+0.5**	
PLCA				pPKPbc		**pPKPbc**	**05 46 14.7**	**-1.4**	
PLCA				*e*			05 46 14.9		
PLCA	**Paso Flores**	**147.03**	**90**	PKPbc		**PKPbc**	**05 45 35.8**	**+0.5**	
	comp=Z,133nm,0.8s,baz=298,slow=3.7,SNR=137								
PLCA				pPKPbc		**pPKPbc**	**05 46 14.7**	**-1.4**	
	comp=Z,132nm,1.0s,baz=290,slow=3.2,SNR=6.2								
SPB	**Sao Paulo**	**147.72**	**41**	*e*PKPdf		**PKPdf**	**05 45 35.7**	**+1.2**	
SPB				*e*			05 46 17.2		
CAM4	**Nova Friburgo**	**148.47**	**33** ⇑	*i*P		**PKPdf**	**05 45 31.1**	**-4.9**	
CAM4				*i*			05 45 33.1		
CAM4				*i*			05 45 37.1		
CAM4				*i*			05 45 39.9		
CAM4				*i*			05 45 43.3		
CAM4				*i*			05 45 47.5		
CAM4				*i*			05 45 50.5		
CAM4				*i*			05 45 55.2		
CAM4				*i*			05 46 14.4		
CAM4				*i*			05 46 17.3		
CAM4				*i*			05 46 19.9		
CAM4				*i*			05 46 22.7		
CAM4				*i*			05 46 25.9		
CAM4				*i*			05 46 41.4		
CAM4				*i*			05 46 56.6		
TRQA	**Tornquist**	**150.90**	**79**	*e*PKPdf		**PKPdf**	**05 45 41.6**	**+2.5**	
TRQA				*e*PKPbc		**PKiKP**	**05 45 45.5**	**0.0**	
TRQA				*e*PKPab		**PKPab**	**05 45 52.9**	**-0.1**	
TRQA				*e*			05 46 24.4		
LPA	**La Plata**	**151.32**	**69**	*e*PKP		**PKPbc**	**05 45 46.0**	**0.0**	
SNAA	**Sanae**	**156.76**	**197**	*e*PKPdf		**PKPdf**	**05 45 46.5**	**+0.1**	
SNAA	**Sanae**	**156.76**	**197**	*e*PKPab		**PKPab**	**05 46 17.2**	**+0.3**	
SNAA	**Sanae**	**156.76**	**197**	*ep*PKPdf		pPKPdf	05 46 22.9	-5.1	
SNAA	**Sanae**	**156.76**	**197**	*es*PKPab		sPKPab	05 47 14.0	+0.8	
SNAA	**Sanae**	**156.76**	**197**	*e*PKPdf		**PKPdf**	**05 45 45.4**	**-1.0**	
VNA2	**Neumayer--Watz**	**158.20**	**195**	*e*PKPdf		**PKPdf**	**05 45 48.6**	**+0.4**	
VNA2	**Neumayer--Watz**	**158.20**	**195**	*e*PKPab		**PKPab**	**05 46 23.9**	**+0.8**	
VNA2	**Neumayer--Watz**	**158.20**	**195**	*ep*PKPdf		pPKPdf	05 46 28.2	-1.6	
VNA2	**Neumayer--Watz**	**158.20**	**195**	*es*PKPab		sPKPab	05 47 16.7	-2.6	
VNA3	**Neumayer Olymp**	**158.28**	**193**	*e*PKPdf		**PKPdf**	**05 45 48.4**	**+0.1**	
VNA3	**Neumayer Olymp**	**158.28**	**193**	*e*PKPab		**PKPab**	**05 46 23.7**	**+0.2**	
VNA3	**Neumayer Olymp**	**158.28**	**193**	*ep*PKPdf		pPKPdf	05 46 29.0	-0.9	
VNA3	**Neumayer Olymp**	**158.28**	**193**	*es*PKPab		sPKPab	05 47 17.0	-2.6	
VNA3	**Neumayer Olymp**	**158.28**	**193**	*es*KPdf		**SKPdf**	**05 49 04.4**	**-1.2**	
VNA1	**Neumayer--Stat**	**158.59**	**195**	*e*PKPab		**PKPab**	**05 46 25.7**	**+1.0**	
VNA1	**Neumayer--Stat**	**158.59**	**195**	*ep*PKPdf		pPKPdf	05 46 29.9	-0.3	
VNA1	**Neumayer--Stat**	**158.59**	**195**	*es*PKPab		sPKPab	05 47 19.4	-1.5	

BJI ***21*** *05:33:17.4,4.˚66S×129.˚79E, h31km, mB5.8/29, mb5.3/40, Ms5.6/33, Ms7 5.3/33*

IDC ***21*** *05:33:17.5±0.4,4.˚20S×129.˚62E, h0km, mb5.1/30, mb1 5.2/33, mb1mx5.2/36, mbtmp5.2/33, ML4.7/3, MS5.0/12, Ms1 5.0/12, ms1mx4.7/46, Error ellipse: s-maj=16.5km s-min=9.8km az=56.0*

AUST ***21*** *05:33:18.9±0.2,4.˚31S×129.˚61E, h1km, Error ellipse: s-maj=0.9km s-min=0.5km az=30.0*

ISCJB ***21*** *05:33:20.2±0.7,4.˚22S±0.˚03×129.˚77E±0.˚02, h30km±4km, mb5.3/84, MS5.3/159, Error ellipse: s-maj=4.7km s-min=3.7km az=34.9*

MOS ***21*** *05:33:21.7±1.1,4.˚12S×129.˚65E, h33km, mb5.6/20, MS5.1/20, Error ellipse: s-maj=12.8km s-min=6.7km az=123.9*

DJA ***21*** *05:33:21.3±0.6,4.˚S±2.˚×13.˚0E±.˚, h10km, M5.7/52, mb5.6/52, mB6.0/41, MLv5.7/17, Mw(mB)5.6/41, Mwp5.8/6*

NEIC ***21*** *05:33:22.0±1.8,4.˚23S×129.˚66E, h30km±12km, mb5.4/31, MS5.4/139, MW5.7, Error ellipse: s-maj=7.6km s-min=4.7km az=46.0*

TEH ***21*** *05:33:23.0,4.˚33S×129.˚63E, h35km, ML5.4*

GCMT ***21*** *05:33:24.4±0.2,4.˚20S×129.˚76E, h12km, MW5.6, Moment Tensor Solution. s44,c61; s20,c22; Moment tensor: Scale 10^17^Nm; Mrr1.97±.06; Mθθ-0.38±.05; Mϕϕ-1.59±.06; Mrθ-0.36±.20; Mrϕ2.24±.05; Mθϕ-0.56±.19; Best double couple: M=2.80000×10^17^ NP1:ϕ=295.00000°, δ51.00000°, λ48.00000°. NP2:ϕ=169.00000°, δ55.00000°, λ129.00000°. Principal axes: T 2.3600, Plg59.0000°, Azm139.0000°; N 0.9600, Plg31.0000°, Azm324.0000°; P -3.3200, Plg2.0000°, Azm233.0000°; Data Used: II IU CN G IC. Surface waves: sta= 85, comp=143, per= 50.*

ISC 21 05:33:23.0±0.3, 4.˚28S±0.˚03×129.˚69E±0.˚04, h36km±1km, h36km: pP-P, n737, σ1=26/664, mb5.3/83, MS5.4/159, 74C-98D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.32**	**138**	P		**Pn**	**05 33 29.4**	**-1.8**	
BNDI	**Bandanaira**	**0.32**	**138**	P		Pn	05 33 25.7	-5.5	
	baz=0.4,SNR=624								
BNDI				S		Sn	05 33 29.8	-7.8	
	baz=0.4,SNR=7.4								
MSAI	**Masohi**	**1.20**	**321**	P		**Pn**	**05 33 40.1**	**-3.1**	
AAI	**Ambon**	**1.60**	**292**	P		**Pn**	**05 33 46.5**	**-2.2**	
AAI	**Ambon**	**1.60**	**292**	P		Pn	05 33 46.4	-2.3	
	baz=1.5,SNR=92								
AAI				S		**Sn**	**05 34 05.7**	**-2.4**	
	baz=1.5,SNR=7.2								
NLAI	**Namlea**	**2.78**	**292**	P		**Pn**	**05 34 06.4**	**+1.4**	
FAKI	**Fak Fak**	**2.90**	**62**	P		**Pn**	**05 34 05.4**	**-1.2**	
FAKI	**Fak Fak**	**2.90**	**62**	P		Pn	05 34 03.3	-3.3	
	baz=3.0,SNR=65								
FAKI				S		**Sn**	**05 34 41.4**	**+1.2**	
	baz=3.0,SNR=6.0								
TLE	**Tual**	**3.33**	**114**	P		**Pn**	**05 34 15.4**	**+2.9**	
TLE	**Tual**	**3.33**	**114**	P		**Pn**	**05 34 15.1**	**+2.6**	
	baz=3.4,SNR=167								
TLE				S		Sn	05 34 59.2	+8.5	
	baz=3.4,SNR=10								
SWI	**Sorong**	**3.74**	**25**	P		**Pn**	**05 34 16.0**	**-2.2**	
SWI	**Sorong**	**3.74**	**25**	P		**Pn**	**05 34 16.8**	**-1.4**	
	baz=3.8,SNR=90								
LBMI	**Labuha**	**4.23**	**329**	P		**Pn**	**05 34 23.7**	**-1.2**	
RKPI	**Ransiki, Papua**	**5.26**	**59**	P		**Pn**	**05 34 38.6**	**-0.5**	
	5μm,0.7s,110μm32nm								
TNTI	**Ternate**	**5.53**	**335**	P		**Pn**	**05 34 42.3**	**-0.5**	
	846nm,1.1s,15μm16μm3.8nm								
GAMI	**Galela, Maluku**	**6.37**	**343**	P		**Pn**	**05 34 54.0**	**-0.3**	
	439nm,1.2s,6μm1.5nm								
SRPI	**Serui, Papua**	**6.97**	**70**	P		**Pn**	**05 35 01.4**	**-1.2**	
	818nm,0.6s,46μm42μm11nm								
BAKI	**Biak**	**7.11**	**65**	P		**Pn**	**05 35 03.2**	**-1.3**	
	1μm,1.3s,15μm5.0nm								
BBSI	**Bau Bau**	**7.19**	**260**	P		Pn	05 35 09.3	+3.7	
	735nm,1.1s,12μm38μm2.3nm								
KMSI	**Cibinong**	**7.47**	**310**	P		**Pn**	**05 35 10.1**	**+0.7**	
	1μm,0.6s,21μm11nm								
MNI	**Manado**	**7.47**	**319**	P		**Pn**	**05 35 09.2**	**-0.3**	
	573nm,0.7s,11μm428μm3.2nm								
LUWI	**Luwuk**	**7.62**	**295**	P		**Pn**	**05 35 12.4**	**+0.9**	
	685nm,1.3s,11μm17μm3.3nm								
LUWI	**Luwuk**	**7.62**	**295**	P		**Pn**	**05 35 13.2**	**+1.7**	
	baz=7.6,SNR=10								
SKSI	**Soroako, Sulaw**	**8.52**	**282**	P		Pn	05 35 27.3	+3.4	
	254nm,1.3s,4μm								
MMRI	**Maumere**	**8.57**	**239**	P		Pn	05 35 28.6	+4.0	
	431nm,1.5s,7μm47μm								
MTN	**Manton Dam**	**8.63**	**171**	P		**Pn**	**05 35 26.2**	**+0.9**	
	baz=8.7,SNR=34								
KDU	**Kakadu**	**8.79**	**162**	P		**Pn**	**05 35 26.9**	**-0.7**	
	baz=8.8,SNR=206								
MRSI	**Marisa**	**9.07**	**301**	P		**Pn**	**05 35 31.3**	**-0.1**	
	258nm,0.9s,4μm								
BSSI	**Bau Bau, Buton**	**9.34**	**258**	P		**Pn**	**05 35 38.1**	**+2.9**	
	385nm,1.1s,7μm								
BKSI	**Bulukumba**	**9.59**	**263**	P		**Pn**	**05 35 41.5**	**+3.0**	
	264nm,1.9s,6μm								
SPSI	**Sidrap Palu**	**9.90**	**271**	P		**Pn**	**05 35 45.2**	**+2.4**	
	194nm,1.5s,4μm								
TTSI	**Tana Toraja**	**9.92**	**277**	P		Pn	05 35 46.5	+3.4	
	186nm,1.0s,4μm								
KAPI	**Kappang**	**9.93**	**265**	*e*Pn		**Pn**	**05 35 44.9**	**+1.7**	
KAPI	**Kappang**	**9.93**	**265**	P		**Pn**	**05 35 45.7**	**+2.5**	
	SNR=38								
KAPI	**Kappang**	**9.93**	**265**	Pn		**Pn**	**05 35 45.3**	**+2.1**	
	694nm,0.7s,SNR=11								
KAPI	**Kappang**	**9.93**	**265**	P		**Pn**	**05 35 45.3**	**+2.1**	
	245nm,1.2s,4μm								
KAPI	**Kappang**	**9.93**	**265**	Pn		**Pn**	**05 35 45.4**	**+2.2**	
	5.3nm,0.3s,baz=90,slow=6.0,SNR=23								
KAPI					LR	LR	05 39 31.7		
	comp=Z,11μm,20.1s,baz=95,slow=38								
JAY	**Jayapura**	**11.14**	**81**	P		**Pn**	**05 35 59.7**	**-0.1**	
	79nm,1.2s,10μm								
JAY	**Jayapura**	**11.14**	**81**	P		**Pn**	**05 35 59.3**	**-0.6**	
	baz=11,SNR=4.7								
JAY				S		**Sn**	**05 38 06.1**	**+2.9**	
	baz=11,SNR=3.4								
MMPI	**Merauke**	**11.41**	**112**	S		**Sn**	**05 38 05.6**	**-4.3**	
	baz=12,SNR=6.4								
KBKI	**Kotabaru**	**13.52**	**274**	P		Pn	05 36 24.3	-8.1	
FITZ	**Fitzroy Crossi**	**14.29**	**196**	*e*Pn		**Pn**	**05 36 41.3**	**-1.7**	
FITZ	**Fitzroy Crossi**	**14.29**	**196**	Pn		**Pn**	**05 36 40.5**	**-2.4**	
	2.1nm,0.3s,baz=27,slow=11,SNR=70								
FITZ					LR	LR	05 42 24.8		
	comp=Z,7μm,21.9s,baz=246,slow=38								
FITZ	**Fitzroy Crossi**	**14.29**	**196**	P		**Pn**	**05 36 41.2**	**-1.7**	
	baz=14,SNR=78								
KHKI	**Kahang-Kahang**	**14.56**	**253**	P		**Pn**	**05 36 49.4**	**+2.8**	
	520nm,1.0s,11μm								
SRBI	**Singaraja**	**14.87**	**255**	P		**P**	**05 36 53.6**	**-2.5**	
	495nm,1.3s,11μm								
DNP	**Denpasar**	**15.03**	**252**	P		**P**	**05 37 01.1**	**+3.3**	
IGBI	**Denpasar**	**15.13**	**252**	P		**P**	**05 36 58.3**	**-0.6**	
	315nm,1.5s,245μm								
BYJI	**Banyuwangi**	**15.73**	**255**	P		**P**	**05 37 07.0**	**+1.4**	
KMMI	**Balanget**	**15.88**	**259**	P		**P**	**05 37 08.8**	**+1.5**	
	476nm,1.6s,15μm								
WRAB	**Tennant Creek**	**16.21**	**164**	*e*P		**Pn**	**05 37 05.4**	**-2.7**	
WRAB	**Tennant Creek**	**16.21**	**164**	*e*Pn		**Pn**	**05 37 05.4**	**-2.7**	
	541nm,1.5s								
WRAB					*e*S	**Sn**	**05 40 04.5**	**-2.3**	
WRAB	**Tennant Creek**	**16.21**	**164**	Pn		**Pn**	**05 37 05.0**	**-3.1**	
	706nm,1.4s,SNR=28								
WRA	**Warramunga Arr**	**16.21**	**164**	Pn		**Pn**	**05 37 04.5**	**-3.7**	
WRA					Sn	**Sn**	**05 40 05.5**	**-1.5**	
WRA	**Warramunga Arr**	**16.21**	**164**	Pn		**Pn**	**05 37 04.5**	**-3.7**	
	3.7nm,0.3s,baz=342,slow=13,SNR=48								
WRA					Sn	**Sn**	**05 40 05.5**	**-1.5**	
	4.8nm,0.3s,baz=345,slow=23,SNR=5.1								
COEN	**Coen**	**16.41**	**127**	*e*P		**Pn**	**05 37 08.4**	**-2.3**	
	2μm,0.7s								
COEN	**Coen**	**16.41**	**127**	P		**Pn**	**05 37 08.1**	**-2.6**	
	baz=16,SNR=20								
GMJI	**Gumukmas**	**16.62**	**255**	P		**P**	**05 37 17.0**	**+1.5**	
	226nm,1.3s,7μm								

KKM	**Kota Kinabalu**	**16.92**	**307**	*e*P		**Pn**	**05 37 16.9**	**-0.3**	
	282nm,1.2s								
KKM	**Kota Kinabalu**	**16.92**	**307**	P		**P**	**05 37 20.6**	**+1.8**	
KKM	**Kota Kinabalu**	**16.92**	**307**	P		**P**	**05 37 18.6**	**-0.3**	
	204nm,2.2s,5μm								
KKM	**Kota Kinabalu**	**16.92**	**307**	P		**P**	**05 37 19.4**	**+0.5**	
	baz=17,SNR=4.2								
RCP	**Roxas**	**17.19**	**336** ⇑	*e*P		**P**	**05 37 23.4**	**+1.6**	
PMG	**Port Moresby**	**18.08**	**107**	*e*P		**P**	**05 37 32.2**	**+0.7**	
	1μm,1.3s								
PMG	**Port Moresby**	**18.08**	**107**	P		**P**	**05 37 32.6**	**+1.0**	
	602nm,1.2s,7μm								
PMG	**Port Moresby**	**18.08**	**107**	P		**P**	**05 37 31.6**	**0.0**	
	2.6nm,0.3s,baz=296,slow=8.4,SNR=24								
SBUM	**Sibu**	**18.69**	**291**	P		**Pn**	**05 37 39.9**	**+1.0**	
	177nm,1.6s,5μm								
PCJI	**Pacitan**	**18.80**	**257**	P		**Pn**	**05 37 41.6**	**+1.3**	
	284nm,1.4s,5μm								
SMRI	**Semarang**	**19.34**	**261**	P		Pn	05 37 52.1	+5.3	
	752nm,1.2s,13μm								
MBWA	**Marble Bar**	**19.36**	**209**	*e*P		**Pn**	**05 37 47.1**	**+0.1**	
	308nm,0.9s								
MBWA	**Marble Bar**	**19.36**	**209**	P		**P**	**05 37 47.4**	**+0.4**	
	SNR=53								
UGM	**Wanagama**	**19.39**	**258**	P		Pn	05 37 59.4	+12	
	baz=19,SNR=3.1								
ASAR	**Alice Springs**	**19.70**	**168**	P		**Pn**	**05 37 50.8**	**-0.2**	
ASAR				S		**Sn**	**05 41 32.1**	**+0.7**	
ASAR	**Alice Springs**	**19.70**	**168**	P		**Pn**	**05 37 50.8**	**-0.2**	
	11nm,0.3s,baz=353,slow=9.1,SNR=65								
ASAR				S		**Sn**	**05 41 32.1**	**+0.7**	
	1.4nm,0.3s,baz=347,slow=16,SNR=4.6								
BJII	**Banjamegara**	**20.10**	**260**	P		Pn	05 38 00.6	+4.7	
	450nm,0.9s,9μm								
KSM	**Kuching**	**20.19**	**286**	*e*P		**P**	**05 37 55.0**	**+0.2**	
	747nm,1.5s								
KSM	**Kuching**	**20.19**	**286**	P		Pn	05 37 56.3	-0.5	
KSM	**Kuching**	**20.19**	**286**	P		**P**	**05 37 55.7**	**+1.0**	
	307nm,1.2s,3μm								
KSM	**Kuching**	**20.19**	**286**	P		**P**	**05 37 55.8**	**+1.0**	
	baz=20,SNR=16								
K

comp=E,5μm,18.4s
GYA LR LR
comp=Z,9μm,17.9s
CMMT Chiang Mai 37.99 308 P P 05 40 39.2 +1.4
comp=Z,121nm,1.1s
CHTO Chiang Mai 37.99 308 *eP* **P 05 40 38.0 +0.2**
CHTO MLR MLR
comp=Z,2μm,19.0s
CHTO Chiang Mai 37.99 308 *eP* **P 05 40 38.0 +0.2**
CHTO LR LR
comp=Z,2μm,19.0s
CHTO Chiang Mai 37.99 308 P P **05 40 38.9 +1.1**
SNR=8.7
CHTO Chiang Mai 37.99 308 P P **05 40 38.7 +0.9**
comp=Z,135nm,1.1s
KMI Kunming 39.24 320 ⇓P **P 05 40 49.6 +1.2**
KMI pP **pP 05 41 00.9 +2.0**
KMI sP **sP 05 41 05.1 +2.0**
KMI PP **PnPn 05 42 25.3 +3.6**
KMI ScP **ScP 05 46 44.0 +0.8**
KMI S **S 05 46 49.3 +2.4**
KMI sS **sS 05 47 06.8 +2.7**
KMI SS **SS 05 49 36.8 -4.3**
KMI pmax pmax
comp=Z,78nm,1.5s
KMI pmax pmax
comp=Z,780nm,7.1s
KMI LR LR
comp=N,3μm,11.1s
KMI LR LR
comp=E,2μm,12.3s
KMI LR LR
comp=Z,3μm,10.7s
DZM Mont Dzumac 39.75 120 *eP* **P 05 40 52.9 +0.2**
DZM Mont Dzumac 39.75 120 P **P 05 40 53.0 +0.4**
comp=Z,75nm,1.1s,baz=317,slow=5.1,SNR=11
MJAR Matsushiro Arr 41.39 10 P **P 05 41 03.5 -2.3**
MJAR Matsushiro Arr 41.39 10 P **P 05 41 03.5 -2.3**
comp=Z,33nm,0.7s,baz=186,slow=10.0,SNR=32
MJAR LR LR 05 54 32.4
comp=Z,1μm,20.7s,baz=185,slow=31
MAJO Matsushiro 41.39 10 *eP* **P 05 41 04.4 -1.4**
MAJO MLR MLR
comp=Z,2μm,19.0s
MAJO Matsushiro 41.39 10 *eP* **P 05 41 04.4 -1.4**
MAJO LR LR
comp=Z,2μm,19.0s
MAT Matsushiro 41.39 10 P **P 05 41 03.9 -1.9**
MAT S **S 05 47 22.9 +4.6**
TAU Tasmania Unive 41.53 160 PFAKE 05 41 20.0 +13
TAU LR LR
comp=Z,4μm,19.0s
KSAR Wonju Array Be 41.54 358 P **P 05 41 07.2 +0.1**
KSRS Korea Array 41.55 358 P **P 05 41 07.2 0.0**
comp=Z,13nm,0.7s,baz=175,slow=9.4,SNR=17
KSRS LR LR 05 58 32.7
comp=Z,1μm,19.4s,baz=278,slow=36
CD2 Chengdu 42.87 326 P **P 05 41 19.3 +1.3**
CD2 pP **pP 05 41 29.5 +1.0**
CD2 sP **sP 05 41 33.8 +1.0**
CD2 PP **PP 05 43 01.8 +3.8**
CD2 PcP **PcP 05 43 09.5 +0.8**
CD2 ScP **ScP 05 46 56.5 -0.7**
CD2 PcS **PcS 05 47 00.6 -0.5**
CD2 S **S 05 47 42.0 +1.6**
CD2 sS **sS 05 47 59.1 +1.4**
CD2 SS **SS 05 50 48.3 -4.5**
CD2 ScS **ScS 05 51 14.5 -2.0**
CD2 pmax pmax
comp=Z,70nm,0.9s
CD2 pmax pmax
comp=Z,480nm,5.4s
CD2 LR LR
comp=N,2μm,12.2s
CD2 LR LR
comp=E,2μm,16.6s
CD2 LR LR
comp=Z,1μm,16.2s
WAKE Wake Island 43.26 56 PFAKE 05 41 30.0 +8.7
WAKE LR LR
comp=Z,4μm,19.0s
TARA Tarawa 43.57 84 PFAKE 05 41 40.0 +16
TARA LR LR
comp=Z,6μm,20.0s
BJI Beijing 45.82 346 P **P 05 41 40.0 -1.4**
BJI pmax pmax
comp=Z,55nm,1.2s
LZH Lanzhou 46.88 331 ⇓P **P 05 41 50.3 +0.2**
LZH pP **pP 05 42 02.0 +1.3**
LZH sP **sP 05 42 07.1 +2.2**
LZH pmax pmax
comp=Z,320nm,1.7s
LZH pmax pmax
comp=Z,700nm,5.2s
LZH LR LR
comp=N,3μm,11.7s
LZH LR LR
comp=E,5μm,12.6s
LZH LR LR
comp=Z,6μm,11.4s
ERM Erimo 47.68 14 PFAKE 05 42 10.0 +14
ERM LR LR
comp=Z,3μm,19.0s
HHC Hu-ho-hao-te 47.88 341 *eP* **P 05 41 57.6 -0.1**
HHC pP **pP 05 42 07.3 -1.0**
HHC sP **sP 05 42 11.0 -1.5**
HHC S **S 05 48 53.0 +0.4**
HHC pmax pmax
comp=Z,71nm,0.5s
HHC pmax pmax
comp=Z,2μm,6.0s
HHC LR LR
comp=N,3μm,12.3s
HHC LR LR
comp=E,4μm,15.7s
HHC LR LR
comp=Z,3μm,11.6s
CN2 Changchun 48.02 356 *eP* P 05 42 03.0 +4.5
CN2 *es*P sP 05 42 17.8 +4.4
CN2 *eS* **S 05 48 59.6 +5.4**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,17.0s
CN2 LR LR
comp=E,300nm,17.0s
CN2 LR LR
comp=Z,500nm,18.0s
USRK Ussuriysk Arra 48.31 2 P **P 05 42 00.7 0.0**
comp=Z,16nm,0.8s,baz=190,slow=7.1,SNR=15
MSVF Nonsavu 49.16 110 *eP* **P 05 42 10.3 +2.4**
MSVF MLR MLR
comp=Z,3μm,19.0s
MSVF Nonsavu 49.16 110 *eP* **P 05 42 10.2 +2.4**
MSVF LR LR
comp=Z,3μm,19.0s
FUNA Funafuti 49.35 98 PFAKE 05 42 20.0 +11
FUNA LR LR
comp=Z,5μm,19.0s
ASAJ Asahikawa 49.56 12 P **P 05 42 10.1 -0.3**
ASAJ Asahikawa 49.56 12 P **P 05 42 10.1 -0.3**
comp=Z,6.7nm,0.5s,baz=233,slow=10,SNR=2.7
ASAJ LR LR 05 59 56.5
comp=Z,2μm,19.0s,baz=199,slow=32
ODAN Odare 51.27 310 *eP* **P 05 42 23.4 -0.5**
comp=Z,265nm,1.2s
TAPN Taplejung 51.28 310 *eP* **P 05 42 23.6 -0.5**
comp=Z,49nm,0.4s
GTA Gaotai 51.46 330 P **P 05 42 25.1 +0.1**
GTA pP **pP 05 42 35.6 -0.1**
GTA sP **sP 05 42 39.3 -0.6**
GTA PcP **PcP 05 43 38.4 -0.7**
GTA ScP **ScP 05 47 33.4 +0.2**
GTA S **S 05 49 40.3 -2.5**
GTA pmax pmax
comp=Z,40nm,1.5s
GTA LR LR
comp=N,1μm,12.3s
GTA LR LR
comp=E,2μm,13.3s
GTA LR LR
comp=Z,2μm,13.8s
RAMN Ramite 51.92 309 *eP* **P 05 42 28.4 -0.4**

comp=Z,326nm,0.9s
GUN Gumba 52.96 310 *eP* **P 05 42 36.1 -0.5**
comp=Z,93nm,0.5s
PKI Pulchoki 53.15 309 *eP* **P 05 42 37.3 -0.7**
comp=Z,240nm,1.4s
PKIN Phulchoki 53.17 309 *eP* **P 05 42 37.7 -0.3**
comp=Z,39nm,0.8s
KKN Kakani 53.36 309 *eP* **P 05 42 38.9 -0.5**
comp=Z,164nm,1.1s
DMN Daman 53.41 309 *eP* **P 05 42 39.1 -0.7**
comp=Z,398nm,1.5s
RPZ Rata Peaks 53.58 143 P **P 05 42 41.7 +1.2**
RPZ Rata Peaks 53.58 143 P **P 05 42 41.7 +1.2**
comp=Z,19nm,0.9s,baz=331,slow=9.2,SNR=4.7
SNZO South Karori 54.56 139 PFAKE 05 43 00.0 +12
SNZO LR LR
comp=Z,3μm,19.0s
KOLN Koldanda 54.65 309 *eP* **P 05 42 48.2 -0.6**
comp=Z,280nm,1.0s
URZ Urewera 54.77 135 P **P 05 42 49.5 +0.2**
URZ Urewera 54.77 135 P **P 05 42 49.5 +0.2**
comp=Z,14nm,0.6s,baz=321,slow=8.8,SNR=4.5
DANN Dangsing 54.80 309 *eP* **P 05 42 49.3 -0.7**
comp=Z,383nm,1.1s
HYB Hyderabad 54.87 295 *eP* P 05 42 46.0 -4.4
HYB Hyderabad 54.87 295 *eP* P 05 42 46.0 -4.4
HYB Hyderabad 54.87 295 *i* P P 05 42 46.0 -4.4
PYUN Piuthan 55.28 309 *eP* **P 05 42 52.6 -0.8**
comp=Z,613nm,1.1s
RAO Raoul Island 55.40 123 PFAKE 05 43 10.0 +16
RAO LR LR
comp=Z,3μm,20.0s
ULN Ulaanbaatar 55.60 342 *eP* **P 05 42 55.7 +0.5**
comp=Z,96nm,1.3s
ULN LR LR
comp=Z,1μm,20.0s
ULN Ulaanbaatar 55.60 342 P **P 05 42 55.8 +0.5**
comp=Z,346nm,1.0s
SONM Songino Array 55.78 341 P **P 05 42 56.8 +0.2**
SONM ⇑*e* 06 13 12.0
SONM Songino Array 55.78 341 P **P 05 42 56.8 +0.2**
comp=Z,17nm,0.8s,baz=161,slow=6.6,SNR=26
SONM PKP2bc 06 13 12.0
comp=Z,0.3nm,0.6s,baz=329,slow=1.7,SNR=3.6
DGAR Diego Garcia 56.99 264 PFAKE 05 43 20.0 +14
DGAR LR LR
comp=Z,2μm,20.0s
AFI Afiamalu 58.46 104 PFAKE 05 43 30.0 +14
AFI LR LR
comp=Z,3μm,19.0s
MIDW Midway 60.30 54 PFAKE 05 43 40.0 +12
MIDW LR LR
comp=Z,2μm,19.0s
MOY Mondy 60.87 340 *eP* **P 05 43 32.5 +0.5**
MOY pmax pmax
comp=Z,146nm,1.8s
WMQ Urumqi 60.97 326 P **P 05 43 33.0 +0.3**
WMQ pP **pP 05 43 43.0 -0.6**
WMQ sP **sP 05 43 47.0 -0.8**
WMQ PcP **PcP 05 44 16.0 +0.1**
WMQ PP **PP 05 45 50.0 +2.6**
WMQ ScP **ScP 05 48 13.0 -1.8**
WMQ S S 05 51 48.0 -0.7
WMQ ScS SKSac 05 53 18.0 -3.2
WMQ SS **SS 05 55 49.0 +0.3**
WMQ pmax pmax
comp=Z,65nm,1.0s
WMQ pmax pmax
comp=Z,1μm,6.0s
WMQ LR LR
comp=N,2μm,18.0s
WMQ LR LR
comp=E,2μm,18.0s
WMQ LR LR
comp=Z,2μm,18.0s
PETK Petropavlovsk- 61.86 19 P **P 05 43 38.0 -0.5**
PETK Petropavlovsk- 61.86 19 P **P 05 43 38.0 -0.5**
PETK Petropavlovsk- 61.86 19 P **P 05 43 38.0 -0.5**
comp=Z,9.8nm,0.7s,baz=189,slow=6.7,SNR=6.2
PETK LR LR 06 05 07.5
comp=Z,1μm,21.3s,baz=99,slow=31
CASY Casey 63.32 189 *eP* **P 05 43 47.8 -0.2**
comp=Z,35nm,1.3s
CASY LR LR
comp=Z,3μm,22.0s
MK31 Makanchi Array 65.80 326 *eP* **P 05 44 04.2 -0.4**
MK31 Makanchi Array 65.80 326 *eP* **P 05 44 04.2 -0.4**
MKAR Makanchi Array 65.80 326 P **P 05 44 04.5 -0.1**
MKAR Makanchi Array 65.80 326 P **P 05 44 04.5 -0.1**
MKAR Makanchi Array 65.80 326 P **P 05 44 04.5 -0.1**
comp=Z,17nm,0.6s,baz=122,slow=8.2,SNR=5.1
KSH Kashi 65.82 317 P **P 05 44 05.5 +0.5**
KSH pP **pP 05 44 16.3 +0.3**
KSH sP **sP 05 44 20.3 +0.1**
KSH PcP **PcP 05 44 36.0 +0.1**
KSH PP **PP 05 46 33.5 +3.2**
KSH ScP 05 48 35.0
KSH PcS 05 48 38.9
KSH S **S 05 52 44.5 -5.1**
KSH sS **sS 05 53 08.6 +0.9**
KSH ScS **SKSac 05 53 56.8 -1.6**
KSH SS **SS 05 57 06.4 +1.5**
KSH pmax pmax
comp=Z,25nm,0.8s
KSH pmax pmax
comp=Z,940nm,5.2s
KSH LR LR
comp=N,2μm,8.3s
KSH LR LR
comp=E,1μm,7.5s
KSH LR LR
comp=Z,2μm,8.3s
YAK Yakutsk 66.12 360 *eP* **P 05 44 06.2 -0.1**
YAK *e**PP **pP 05 44 13.9 -3.4**
YAK *e* 05 44 39.0
YAK *eS* **S 05 52 52.0 -0.1**
YAK pmax pmax
comp=Z,40nm,0.8s
YAK pmax pmax
comp=N,11nm,1.2s
YAK pmax pmax
comp=E,9.0nm,1.5s
YAK smax smax
comp=N,415nm,4.5s
YAK smax smax
comp=E,487nm,5.6s
YAK MLR MLR
comp=Z,1μm,18.0s
YAK MLR MLR
comp=N,761nm,19.0s
YAK MLR MLR
comp=E,624nm,21.0s
PAF Port-aux-Franc 67.21 218 PFAKE 05 44 30.0 +16
PAF LR LR
comp=Z,5μm,21.0s
KZA Kyzart 67.53 319 P **P 05 44 16.9 +0.7**
SNR=14
FX1 Attu Island--F 67.69 27 *eP* **P 05 44 16.7 +0.3**
FX1 Attu Island--F 67.69 27 P **P 05 44 16.9 +0.4**
comp=Z,36nm,0.8s,baz=40,slow=6.4,SNR=5.2
TKM2 Tokmak 2 67.71 320 *eP* **P 05 44 17.1 0.0**
TKM2 pmax pmax
comp=Z,32nm,0.8s
TKM2 MLR MLR
comp=Z,1μm,19.0s
TKM2 Tokmak 2 67.71 320 *eP* **P 05 44 17.1 0.0**
comp=Z,32nm,0.8s
TKM2 LR LR
comp=Z,1μm,19.0s
TKM2 Tokmak 2 67.71 320 P **P 05 44 17.1 0.0**
SNR=9.4
AAK Ala-Archa 68.28 319 *eP* **P 05 44 20.8 +0.1**
AAK Ala-Archa 68.28 319 *eP* **P 05 44 20.8 +0.1**
AAK P'P' 06 12 36.8
AAK Ala-Archa 68.28 319 P **P 05 44 21.1 +0.4**
SNR=6.2
AAK Ala-Archa 68.28 319 P **P 05 44 21.0 +0.4**
comp=Z,132nm,1.1s,SNR=5.6
AAK Ala-Archa 68.28 319 P **P 05 44 20.4 -0.2**
comp=Z,13nm,0.9s,baz=106,slow=8.5,SNR=7.3
AAK PKPPKP **P'P'df 06 12 36.8 -1.3**
comp=Z,2.6nm,0.7s,baz=207,slow=2.7,SNR=8.5
AML Almayashu 68.57 319 P **P 05 44 23.2 +0.5**
SNR=16
USP Ospenovka 68.58 320 P **P 05 44 21.9 -0.5**
SNR=9.6

EKS2 Erkin-Say 68.76 319 *eP* **P 05 44 23.9 +0.3**
EKS2 pmax pmax
comp=Z,25nm,0.9s
EKS2 MLR MLR
comp=Z,2μm,20.0s
EKS2 Erkin-Say 68.76 319 *eP* **P 05 44 23.9 +0.3**
comp=Z,25nm,0.9s
EKS2 LR LR
comp=Z,2μm,20.0s
EKS2 Erkin-Say 68.76 319 P **P 05 44 23.8 +0.3**
SNR=7.0
ZAA0 Zalesovo Array 69.03 333 *eP* **P 05 44 24.0 -0.8**
ZALV Zalesovo Beam 69.03 333 P **P 05 44 24.2 -0.6**
ZALV Zalesovo Beam 69.03 333 P **P 05 44 24.2 -0.6**
ZALV P'P'ab **P'P'ab 06 12 37.3 +1.1**
ZALV Zalesovo Beam 69.03 333 P **P 05 44 24.2 -0.6**
comp=Z,33nm,0.9s,baz=108,slow=4.8,SNR=17
ZALV PKP2ab 06 12 37.3
comp=Z,1.0nm,0.6s,baz=255,slow=4.5,SNR=4.2
KURBB Kurchatov Arra 70.05 328 P **P 05 44 30.8 -0.4**
comp=Z,58nm,0.8s,baz=126,slow=5.4,SNR=67
KURBB PKP2bc 06 12 33.9
comp=Z,0.5nm,0.4s,baz=297,slow=3.7,SNR=6.3
KURK Kurchatov 70.05 328 P **P 05 44 30.4 -0.8**
KURK pmax pmax
comp=Z,182nm,1.1s
KURK Kurchatov 70.05 328 *eP* **P 05 44 30.9 -0.3**
KURK ⇑*e* 06 12 33.9
KURK Kurchatov 70.05 328 P **P 05 44 31.6 +0.4**
SNR=11
KURK Kurchatov 70.05 328 P **P 05 44 31.5 +0.3**
comp=Z,890nm,1.0s,SNR=25
NVS Novosibirsk 70.31 334 *i* P P 05 44 24.9 -7.8
NVS *e* 05 47 08.1
NVS pmax pmax
comp=N,35nm,1.6s
NVS pmax pmax
comp=E,143nm,1.6s
NVS pmax pmax
comp=Z,284nm,1.6s
NVS pmax pmax
comp=Z,280nm,3.5s
NVS pmax pmax
comp=N,275nm,4.0s
NVS pmax pmax
comp=E,458nm,4.2s
RAR Rarotonga 70.33 111 PFAKE 05 44 50.0 +16
RAR LR LR
comp=Z,1μm,21.0s
KK31 Karatay Array 71.11 318 *i* P **P 05 44 36.8 -1.1**
KK31 pmax pmax
comp=Z,48nm,1.2s
KKAR Karatay Array 71.11 318 *eP* **P 05 44 37.2 -0.7**
KKAR pmax pmax
comp=Z,35nm,1.1s
KKAR Karatay Array 71.11 318 *eP* **P 05 44 37.2 -0.7**
comp=Z,35nm,1.1s
JMDO Jabal Madar 74.72 294 P **P 05 45 00.3 +0.7**
SNR=5.3
SMDO Samad 74.90 295 P **P 05 45 01.1 +0.2**
SNR=5.7
VNDA Vanda 75.17 173 *eP* P 05 44 56.6 -4.6
comp=Z,55nm,1.6s
IDAH Dahanechah 75.52 305 *eP* **P 05 45 04.8 +0.4**
BVA0 Borovoye Array 75.61 328 *i* P **P 05 45 02.5 -1.7**
BVA0 pmax pmax
comp=Z,27nm,1.3s
BVAR Borovoye Array 75.61 328 P **P 05 45 03.8 -0.3**
BVAR Borovoye Array 75.61 328 P **P 05 45 03.8 -0.3**
BVAR Borovoye Array 75.61 328 P **P 05 45 03.8 -0.3**
comp=Z,42nm,0.8s,baz=125,slow=7.4,SNR=29
HOQ Hogain 75.67 296 P **P 05 45 05.3 +0.2**
SNR=9.3
BRVK Borovoye 75.69 328 *eP* **P 05 45 04.0 -0.6**
BRVK MLR MLR
comp=Z,2μm,20.0s
BRVK Borovoye 75.69 328 *eP* **P 05 45 04.0 -0.6**
BRVK LR LR
comp=Z,2μm,20.0s
BRVK Borovoye 75.69 328 P **P 05 45 05.3 +0.7**
SNR=9.3
BRVK Borovoye 75.69 328 P **P 05 45 04.6 0.0**
comp=Z,580nm,1.1s,SNR=16
SBA Scott Base 76.05 172 PFAKE 05 45 20.0 +14
SBA LR LR
comp=Z,1μm,20.0s
IKOO Kooshah 76.15 305 *eP* **P 05 45 07.9 -0.1**
IMYA Miami 76.28 309 *eP* **P 05 45 08.4 -0.2**
ITEG Tejag 76.47 305 *eP* **P 05 45 09.8 +0.1**
BILL Bilibino 76.56 13 PFAKE 05 45 20.0 +11
BILL LR LR
comp=Z,1μm,22.0s
ISRO Mashad 76.77 309 *eP* **P 05 45 11.0 -0.2**
IMOG Moghan 76.81 308 *eP* **P 05 45 11.0 -0.8**
HATD Hatta, Dubai 76.96 297 P **P 05 45 12.8 +0.3**
SNR=6.8
ASHO Ashiyiah 77.00 296 P **P 05 45 13.2 +0.5**
SNR=5.7
BANOM Banah 77.03 298 P **P 05 45 13.7 +0.9**
SNR=5.6
IPAY Payeh 77.17 309 *eP* **P 05 45 13.3 -0.4**
MAW Mawson 77.35 201 LR LR 06 17 26.8
comp=Z,912nm,19.9s,baz=65,slow=34
RBK Rabkut 77.50 289 P **P 05 45 15.3 -0.3**
SNR=5.5
IKRD Kardeh 77.63 309 *eP* P 05 45 12.0 -4.3
ASUD Al Ashush, Dub 77.64 296 P **P 05 45 16.9 +0.7**
SNR=6.2
ABKT Ailbek 78.23 310 P **P 05 45 19.8 +0.5**
comp=Z,251nm,1.4s,SNR=8.6
ABTO Aybut 78.34 289 P **P 05 45 20.1 -0.2**
SNR=7.5
IBAF Bafgh 78.80 303 *eP* **P 05 45 21.9 -0.8**
IMEH Mehriz 79.56 303 *eP* **P 05 45 25.5 -1.5**
ICHK Chekchek 79.90 304 *eP* **P 05 45 27.9 -0.9**
PPT Papeete 79.90 107 P **P 05 45 28.0 -0.8**
PPT Papeete 79.90 107 P **P 05 45 28.0 -0.8**
comp=Z,8.5nm,0.7s,baz=261,slow=13,SNR=2.2
AB31 Akbulak array 80.20 321 P **P 05 45 29.1 -0.6**
AB31 pmax pmax
comp=Z,18nm,0.5s
ABKAR Akbulak array 80.20 321 *eP* **P 05 45 29.1 -0.6**
comp=Z,19nm,0.6s
ISRV Sarvestan 80.45 301 *eP* **P 05 45 31.9 0.0**
GAMB Gambell 80.54 23 *eP* **P 05 45 30.4 -0.8**
comp=Z,28nm,1.2s
ABPO Ambohimpanom 81.50 252 PFAKE 05 45 50.0 +12
ABPO LR LR
comp=Z,892nm,20.0s
OPO Ambohidratompo 81.55 252 P **P 05 45 36.7 -1.1**
OPO Ambohidratompo 81.55 252 P **P 05 45 36.7 -1.1**
comp=Z,4.1nm,0.7s,baz=79,slow=7.7,SNR=7.8
AKTO Aktyubinsk 81.75 322 P **P 05 45 37.8 -0.2**
AKTO Aktyubinsk 81.75 322 P **P 05 45 37.8 -0.2**
AKTO Aktyubinsk 81.75 322 P **P 05 45 37.8 -0.2**
comp=Z,38nm,1.1s,baz=18,slow=20
TNA Tin City 82.83 22 *eP* **P 05 45 44.5 +1.2**
comp=Z,12nm,1.0s
QRN Al-Qurain 84.84 299 *eP* **P 05 45 53.7 -0.7**
QRN AMb AMB 05 45 56.7
comp=Z,148nm,1.6s
UMR Umm Al-Rimmam 85.12 300 *eP* **P 05 45 55.2 -0.5**
UMR AMb AMB 05 45 58.9
comp=Z,112nm,1.1s
RDF Al-Radifah 85.19 299 *eP* **P 05 45 55.4 -0.8**
RDF AMb AMB 05 45 59.2
comp=Z,113nm,1.0s
MIB Mutribah 85.48 300 *eP* **P 05 45 56.5 -1.1**
MIB AMb AMB 05 45 59.1
comp=Z,149nm,1.2s
NAY Al-Naaiem 85.50 300 *eP* **P 05 45 57.1 -0.5**
NAY AMb AMB 05 46 01.4
comp=Z,66nm,0.7s
QSPA South Pole Qui 85.68 180 *eP* **P 05 45 55.9 -2.1**
comp=Z,85nm,1.2s
QSPA LR LR
comp=Z,2μm,19.0s
QSPA South Pole Qui 85.68 180 P **P 05 45 56.4 -1.6**
comp=Z,59nm,1.1s,baz=358,slow=2.2,SNR=6.7
IKOM Komasi 85.92 305 *eP* **P 05 45 58.5 -1.4**
ISRB Sarab 86.31 308 *eP* **P 05 46 01.8 0.0**
IGHG Ghaleghazi 86.72 305 *eP* **P 05 46 02.5 -1.4**
IDHR Dehrash 86.91 305 *eP* **P 05 46 03.2 -1.6**
KDAK Kodiak Island 87.08 32 *eP* **P 05 46 06.4 +1.6**
comp=Z,45nm,1.0s
KDAK LR LR

comp=Z,1µm,20.0s
KDAK Kodiak Island 87.08 32 P P 05 46 04.7 -0.1
comp=Z,19nm,0.8s,baz=175,slow=5.3,SNR=7.9
MAK Makhachkala 87.18 313 eP P 05 46 06.7 +1.1
MAK S S 05 56 33.1 -10
IAZR Azarshahr 87.61 308 eP P 05 46 08.1 -0.1
IMRD Marand 87.96 309 eP P 05 46 10.2 +0.5
BHD Baghdad 88.40 303 ex P 05 46 16.2 +4.5
BHD ex x 05 57 04.5
GNI Garni 88.87 310 eP P 05 46 15.0 +1.0
GNI LR LR
comp=Z,2µm,20.0s
PMR Palmer 89.54 28 eP P 05 46 15.9 -0.5
PMR pmax pmax
comp=Z,13nm,0.9s
PMR Palmer 89.54 28 eP P 05 46 15.9 -0.5
comp=Z,11nm,0.8s
ZEI Tsey 89.78 313 eP P 05 46 15.5 -2.8
ZEI pmax pmax
comp=Z,26nm,1.4s
SML Sawmill 89.95 28 eP P 05 46 20.1 +1.7
SML pmax pmax
comp=Z,6.0nm,1.0s
SML Sawmill 89.95 28 eP P 05 46 20.1 +1.7
comp=Z,6.4nm,1.0s
MCK McKinley 90.00 26 eP P 05 46 17.2 -1.3
MCK pmax pmax
comp=Z,41nm,1.3s
MCK McKinley 90.00 26 eP P 05 46 17.2 -1.3
comp=Z,41nm,1.3s
COLD Coldfoot 90.09 23 eP P 05 46 21.9 +3.0
comp=Z,11nm,0.8s
COLA College 90.64 25 PFAKE 05 46 30.0 +8.6
COLA LR LR
comp=Z,932nm,21.0s
ILAR Eielson Array 91.04 25 P P 05 46 21.4 -1.9
ILAR PKKP **PKKPdf 06 03 46.6 +0.3**
ILAR Eielson Array 91.04 25 P P 05 46 21.4 -1.9
comp=Z,1.0nm,0.6s,baz=255,slow=4.7,SNR=13
ILAR PKKP **PKKPdf 06 03 46.6 +0.3**
comp=Z,0.8nm,0.8s,baz=98,slow=4.6,SNR=9.6
ILAR LR LR 06 21 40.6
comp=Z,828nm,21.0s,baz=273,slow=32
KMBO Kilima Mbogo 92.34 269 eP P 05 46 30.7 -0.1
comp=Z,8.8nm,0.9s
KMBO Kilima Mbogo 92.34 269 P P 05 46 29.9 -0.9
comp=Z,5.3nm,0.8s,baz=54,slow=7.1,SNR=7.2
KMBO LR LR 06 24 25.2
comp=Z,1µm,22.0s,baz=57,slow=33
EGAK Eagle 93.48 25 eP P 05 46 35.9 +1.3
comp=Z,16nm,1.3s
EGAK LR LR
comp=Z,658nm,20.0s
MALT Malatya 93.61 308 eP P 05 46 36.9 +0.9
MALT MLR MLR
comp=Z,663nm,20.0s
MALT Malatya 93.61 308 eP P 05 46 36.9 +0.9
MALT LR LR
comp=Z,663nm,20.0s
INK Inuvik 96.47 22 PKKP PKKPbc 06 03 32.5 -3.1
comp=Z,0.9nm,0.8s,baz=115,slow=6.3,SNR=4.8
BRTR Keskin Array B 97.37 309 P P 05 46 51.1 -2.0
BRTR Keskin Array B 97.37 309 P P 05 46 51.1 -2.0
comp=Z,1.0nm,0.8s,baz=139,slow=6.8,SNR=3.2
JOF Joensuu 97.61 333 eP P 05 46 50.0 -3.5
JOF pmax pmax
comp=Z,4.0nm,0.7s
JOF Joensuu 97.61 333 ep P 05 46 50.0 -3.5
comp=Z,3.7nm,0.7s
CSS Prodhromos 97.64 305 PFAKE 05 47 10.0 +16
CSS LR LR
comp=Z,1µm,21.0s
WRAK Wrangell Islan 97.96 34 PFAKE 05 47 10.0 +15
WRAK LR LR
comp=Z,1µm,20.0s
ANTO Ankara 98.02 310 PFAKE 05 47 10.0 +14
ANTO LR LR
comp=Z,544nm,21.0s
SNAA Sanae 98.22 194 epPKPab P 05 46 55.7 -0.5
KEV Kevo 98.38 340 PFAKE 05 47 10.0 +13
KEV LR LR
comp=Z,687nm,20.0s
ARCES ARCESS Array B 98.94 340 P P 05 46 58.2 -1.1
ARCES ARCESS Array B 98.94 340 P P 05 46 58.2 -1.1
comp=Z,9.2nm,0.8s,baz=85,slow=6.8,SNR=12
KBS Kingsbay 99.35 350 PFAKE 05 47 10.0 +9.0
KBS LR LR
comp=Z,631nm,21.0s
VNA2 Neumayer--Watz 99.79 193 epPKPab Pdif 05 47 00.8 -2.3
ISP Isparta 99.85 307 PFAKE 05 47 20.0 +16
ISP LR LR
comp=Z,1µm,19.0s
AKASG Malin Array Be 99.93 321 P Pdif 05 47 02.3 -1.8
AKASG Malin Array Be 99.93 321 P Pdif 05 47 02.3 -1.8
AKASG Malin Array Be 99.93 321 P Pdif 05 47 02.3 -1.8
comp=Z,0.2nm,0.3s,baz=76,slow=4.7,SNR=2.9
LSZ Lusaka 99.93 254 PFAKE 05 47 20.0 +15
LSZ LR LR
comp=Z,888nm,20.0s
KIEV Kiev 99.94 321 PFAKE 05 47 20.0 +16
KIEV LR LR
comp=Z,967nm,19.0s
KAF Kangasniemi 100.02 332 eP Pdif 05 46 59.4 -4.9
KAF pmax pmax
comp=Z,3.0nm,0.7s
KAF Kangasniemi 100.02 332 ep Pdif 05 46 59.4 -4.9
comp=Z,3.2nm,0.7s
VNA3 Neumayer Olymp 100.06 192 epPKPab Pdif 05 46 59.9 -4.4
FINES FINESS Array B 100.24 332 P Pdif 05 47 02.9 -2.4
FINES FINESS Array B 100.24 332 P Pdif 05 47 02.9 -2.4
comp=Z,3.8nm,0.8s,baz=86,slow=7.5,SNR=5.0
BUR08 Bucovina Ar. S 102.90 318 ePdif Pdif 05 47 17.2 -0.4
SUR Sutherland 103.50 235 PFAKE 05 47 30.0 +9.2
SUR LR LR
comp=Z,1µm,20.0s
KWP Kalwaria Pacla 104.22 320 PFAKE 05 47 30.0 +6.7
KWP LR LR
comp=Z,912nm,19.0s
NLWA Neilton Lookou 104.26 42 PFAKE 05 47 30.0 +6.5
NLWA LR LR
comp=Z,966nm,19.0s
UZH Uzhgorod 104.67 319 eP Pdif 05 47 25.7 +0.4
YKA Yellowknife Ar 105.46 26 Pdif Pdif 05 47 26.2 -2.3
YKA PKiKP **PKiKP 05 51 41.5 -0.4**
YKA PKKPbc **PKKPbc 06 03 06.2 -3.2**
YKA Yellowknife Ar 105.46 26 Pdiff Pdif 05 47 26.2 -2.3
comp=Z,0.5nm,0.8s,baz=291,slow=4.4,SNR=3.3
YKA PKiKP **PKiKP 05 51 41.5 -0.4**
comp=Z,1.3nm,0.8s,baz=298,slow=1.9,SNR=12
YKA PKKPbc **PKKPbc 06 03 06.2 -3.2**
comp=Z,0.4nm,0.6s,baz=111,slow=3.1,SNR=8.3
PSZ Piszkesteto 106.38 319 PFAKE 05 52 00.0
PSZ LR LR
comp=Z,630nm,20.0s
VYHS Vyhne 106.95 319 eP Pdif 05 47 38.0 +2.6
VYHS Vyhne 106.95 319 PDIF Pdif 05 47 38.0 +2.6
NB2 NORSAR Subarra 107.23 333 P Pdif 05 47 34.7 -1.7
comp=Z,3.5nm,0.9s,baz=67,slow=4.8
NOA NORSAR Array B 107.23 333 Pdif Pdif 05 47 34.8 -1.7
NOA PKKPbc **PKKPbc 06 03 02.6 -1.5**
NOA NORSAR Array B 107.23 333 Pdiff Pdif 05 47 34.8 -1.7
comp=Z,1.5nm,0.7s,baz=69,slow=4.6,SNR=6.4
NOA PKKPbc **PKKPbc 06 03 02.6 -1.5**
comp=Z,0.9nm,0.7s,baz=64,slow=2.7,SNR=4.1
HAWA Hanford 107.36 43 PFAKE 05 52 00.0
HAWA LR LR
comp=Z,830nm,20.0s
TIR Tirane 107.66 312 PFAKE 05 52 00.0
TIR LR LR
comp=Z,2µm,19.0s
NEW Newport 108.52 40 PFAKE 05 52 00.0
NEW LR LR
comp=Z,1µm,21.0s
KONO Kongsberg 108.53 332 PFAKE 05 52 00.0
KONO LR LR
comp=Z,676nm,20.0s
WVOR Wild Horse Val 108.82 47 PFAKE 05 52 00.0
WVOR LR LR
comp=Z,779nm,19.0s
TSUM Tsumeb 109.29 248 PFAKE 05 52 00.0
TSUM LR LR
comp=Z,1µm,21.0s
CLL Collm 109.81 323 ePKPdf PKiKP 05 51 51.0 +0.7
CLL epPP 05 52 31.0
NVAR Mina Array Bea 109.84 51 Pdif Pdif 05 47 48.2 -0.6
NVAR PKiKP **PKiKP 05 51 51.8 +0.6**
NVAR PKKPbc **PKKPbc 06 02 53.9 -1.4**
NVAR Mina Array Bea 109.84 51 Pdiff Pdif 05 47 48.2 -0.6
comp=Z,0.5nm,0.9s,baz=263,slow=6.3,SNR=2.8
NVAR PKiKP **PKiKP 05 51 51.8 +0.6**
comp=Z,0.9nm,0.8s,baz=247,slow=2.4,SNR=6.5
NVAR PKKPbc **PKKPbc 06 02 53.9 -1.4**
comp=Z,0.4nm,0.7s,baz=128,slow=4.1,SNR=3.6
BSMT Bassoo Peak 110.14 40 ePKPdf PKiKP 05 51 51.5 +0.1
GERES GERESS Array B 110.14 321 PKiKP PKiKP 05 51 50.2 -1.0
GERES GERESS Array B 110.14 321 PKiKP PKiKP 05 51 50.2 -1.0
comp=Z,0.8nm,0.8s,baz=90,slow=0.5,SNR=5.7
BMN Battle Mountai 110.27 48 PFAKE 05 52 00.0
BMN LR LR
comp=Z,942nm,22.0s
TIP Timpagrande 110.40 310 PFAKE 05 52 00.0
TIP LR LR
comp=Z,1µm,20.0s
TPH Tonopah 110.75 51 PFAKE 05 52 00.0
TPH LR LR
comp=Z,710nm,20.0s
DAC Darwin (Calif) 110.79 53 PFAKE 05 52 00.0
DAC LR LR
comp=Z,1µm,20.0s
CUC Castrococco 110.95 311 PFAKE 05 52 00.0
CUC LR LR
comp=Z,3µm,19.0s
MSO Missoula 110.98 41 PFAKE 05 52 00.0
MSO LR LR
comp=Z,576nm,21.0s
D14A Greenough 111.19 41 ⇓P PKiKP 05 51 52.9 -0.4
H13A Challis 111.41 44 ⇑P PKiKP 05 51 54.2 +0.4
baz=111
B15A Bradely Ranch, 111.42 39 ⇑P PKiKP 05 51 53.4 -0.2
baz=111
C15A Salmond Ranch, 111.56 40 ⇑P PKiKP 05 51 53.6 -0.4
baz=112
HLID Hailey 111.57 45 PFAKE 05 52 10.0
HLID LR LR
comp=Z,1µm,22.0s
I13A Wildhorse Cree 111.68 44 ⇓P PKiKP 05 51 54.0 -0.5
baz=112
C16A Fuhringer Ranc 112.10 40 ⇓P PKiKP 05 51 54.9 0.0
baz=112
AQU L'Aquila 112.16 314 PFAKE 05 52 10.0
AQU LR LR
comp=Z,2µm,20.0s
PFO Pinyon Flat Ob 112.18 56 PFAKE 05 52 10.0
PFO LR LR
comp=Z,1µm,21.0s
A17A Triple J Farms 112.38 38 ⇑P PKiKP 05 51 55.5 +0.1
baz=112
B17A L&G Farms, Che 112.54 39 ⇓P PKiKP 05 51 55.6 -0.1
baz=112
GMRC Granite Mounta 112.61 54 ⇓P PKiKP 05 51 56.4 +0.1
baz=113
C17A Wharram Farm, 112.79 40 ⇑P PKiKP 05 51 56.2 0.0
baz=113
WDD Wield Dalam 112.81 307 PFAKE 05 52 10.0
WDD LR LR
comp=Z,915nm,20.0s
BOZ Bozeman (W) 112.87 42 PFAKE 05 52 10.0
BOZ LR LR
comp=Z,804nm,20.0s
D17A Six Diamond Ra 113.00 40 ⇑P PKiKP 05 51 56.4 -0.3
baz=113
B18A Beardsley Farm 113.14 39 ⇓P PKiKP 05 51 57.0 +0.2
baz=113
DAVOX Davos/Dischmat 113.24 320 PKiKP PKiKP 05 51 54.6 -2.6
DAVOX Davos/Dischmat 113.24 320 PKiKP PKiKP 05 51 54.6 -2.6
comp=Z,1.8nm,0.4s,baz=150,slow=8.1,SNR=2.9
EGMT Eagleton 113.29 39 PFAKE 05 52 10.0
EGMT LR LR
comp=Z,918nm,22.0s
A19A Klindworth Far 113.58 38 ⇑P PKiKP 05 51 57.9 +0.2
baz=114
DUG Dugway 113.61 48 PFAKE 05 52 10.0
DUG LR LR
comp=Z,810nm,20.0s
B19A Brinkman Farms 113.64 38 ⇓P PKiKP 05 51 57.7 0.0
baz=114
BFO Black Forest 113.67 322 PFAKE 05 52 10.0
BFO LR LR
comp=Z,685nm,21.0s
TUE Stuetta 113.69 319 PFAKE 05 52 10.0
TUE LR LR
comp=Z,997nm,20.0s
VLC Villacollemand 113.75 317 PFAKE 05 52 10.0
VLC LR LR
comp=Z,623nm,20.0s
C19A Slack Wire Ran 113.83 39 ⇓P PKiKP 05 51 58.3 +0.1
baz=114
LKWY Lake 114.04 43 PFAKE 05 52 10.0 +11
LKWY LR LR
comp=Z,1µm,19.0s
F18A Big Timber 114.05 41 ⇑P PKPdf 05 51 58.9 +0.1
baz=114
AHID Auburn Hatcher 114.12 45 PFAKE 05 52 10.0 +11
AHID LR LR
comp=Z,880nm,21.0s
HWUT Hardware Ranch 114.13 46 PFAKE 05 52 10.0 +11
HWUT LR LR
comp=Z,1µm,20.0s
SNOW Snow King Moun 114.15 44 ePKPdf PKPdf 05 52 00.1 +0.9
LOHW Long Hollow 114.20 44 ePKPdf PKPdf 05 51 60.0 +0.7
B20A Solberg Farm, 114.21 38 ⇓P PKPdf 05 51 59.1 +0.3
baz=114
ECH Echery 114.44 322 PFAKE 05 52 10.0 +11
ECH LR LR
comp=Z,672nm,21.0s
E19A Rath Farm, Rou 114.46 40 ⇑P PKPdf 05 51 59.6 +0.1
baz=114
WLF Walferdange 114.48 323 PFAKE 05 52 10.0 +11
WLF LR LR
comp=Z,771nm,19.0s
MVU Marysvale 114.49 50 PFAKE 05 52 10.0 +10
MVU LR LR
comp=Z,894nm,20.0s
C20A Veseth Ranch, 114.50 39 ⇑P PKPdf 05 51 59.4 -0.1
baz=114
MSU Marysvale 114.52 49 ePKIKP PKPdf 05 52 01.5 +1.5
MSU Marysvale 114.52 49 ePKPdf PKPdf 05 52 01.5 +1.5
RLMT Red Lodge 114.61 42 PFAKE 05 52 10.0 +10
RLMT LR LR
comp=Z,837nm,22.0s
J18A Kendall Valley 114.73 44 ⇓P PKPdf 05 52 00.9 +0.6
baz=115
HINF Hinteralfeld 114.78 321 ePKIKP PKPdf 05 51 58.9 -1.1
comp=Z,5.8nm,0.6s
HINF Hinteralfeld 114.78 321 ePKIKP PKPdf 05 51 58.9 -1.1
HINF Hinteralfeld 114.78 321 ePKPdf PKPdf 05 51 58.9 -1.1
FFC Flin Flon 114.79 30 PFAKE 05 52 10.0 +10
FFC LR LR
comp=Z,1µm,22.0s
U15A North Rim 114.94 52 ⇑P PKPdf 05 52 01.2 +0.2
baz=115
C21A Desert Coulee 115.02 38 ⇓P PKPdf 05 52 00.7 +0.2
baz=115
HAU Haudompre 115.02 322 ePKIKP PKPdf 05 51 59.6 -0.8
HAU Haudompre 115.02 322 ePKIKP PKPdf 05 51 59.6 -0.8
HAU Haudompre 115.02 322 ePKPdf PKPdf 05 51 59.6 -0.8
RPN Rapa Nui 115.08 122 PFAKE 05 52 10.0 +8.9
RPN LR LR
comp=Z,1µm,20.0s
F20A Billings 115.11 41 ⇓P PKPdf 05 52 01.3 +0.6
baz=115
BW06 Boulder Array 115.20 44 PFAKE 05 52 10.0 +8.8
BW06 LR LR
comp=Z,1µm,19.0s
BW06 Boulder Array 115.20 44 ⇓P PKPdf 05 52 01.3 +0.1
baz=115
PDAR Pinedale Array 115.20 44 PKP PKPdf 05 52 01.7 +0.5
PDAR PKKPbc **PKKPbc 06 02 35.6 -1.9**
PDAR Pinedale Array 115.20 44 PKP PKPdf 05 52 01.7 +0.5
comp=Z,1.4nm,0.8s,baz=76,slow=0.2,SNR=8.4
PDAR PKKPbc **PKKPbc 06 02 35.6 -1.9**
comp=Z,1.0nm,0.9s,baz=120,slow=4.6,SNR=7.0
G20A Bridger 115.28 41 ⇑P PKPdf 05 52 01.4 +0.2
baz=115
D21A La Casta Ranch 115.38 39 ⇑P PKPdf 05 52 01.1 -0.1
baz=115
BAIF Baives 115.45 324 ePKIKP PKPdf 05 52 01.0 -0.1
BAIF Baives 115.45 324 ePKIKP PKPdf 05 52 01.0 -0.1
BAIF Baives 115.45 324 ePKPdf PKPdf 05 52 01.0 -0.1
SRU San Rafael 115.60 48 ⇓P PKPdf 05 52 02.0 0.0
baz=116
P18A Preston Nutter 115.66 48 ⇑P PKPdf 05 52 02.2 -0.1
baz=116
K19A Absolon Red Bu 115.67 44 ⇑P PKPdf 05 52 02.0 0.0
baz=116
H20A Greybull 115.68 42 ⇑P PKPdf 05 52 01.7 -0.3
baz=116
LPG La Plagne 115.72 319 ePKIKP PKPdf 05 52 01.5 -0.7
comp=Z,14nm,0.9s
LPG La Plagne 115.72 319 ePKIKP PKPdf 05 52 01.5 -0.7
LPG La Plagne 115.72 319 ePKPdf PKPdf 05 52 01.5 -0.7
LPL La Plagne 115.73 319 ePKIKP PKPdf 05 52 01.5 -0.6
LPL La Plagne 115.73 319 ePKIKP PKPdf 05 52 01.5 -0.6
LPL La Plagne 115.73 319 ePKPdf PKPdf 05 52 01.5 -0.6
CABF La Chapelle 115.73 320 ePKIKP PKPdf 05 52 01.4 -0.5
comp=Z,17nm,0.9s
CABF La Chapelle 115.73 320 ePKIKP PKPdf 05 52 01.4 -0.5
CABF La Chapelle 115.73 320 ePKPdf PKPdf 05 52 01.4 -0.5
I20A Worland 115.78 43 ⇑P PKPdf 05 52 02.3 +0.2
baz=116
C22A Vida 115.80 38 ⇑P PKPdf 05 52 02.4 +0.5
baz=116
SBF Sospel 115.86 317 ePKIKP PKPdf 05 52 01.3 -0.9
SBF Sospel 115.86 317 ePKIKP PKPdf 05 52 01.3 -0.9
SBF Sospel 115.86 317 ePKPdf PKPdf 05 52 01.3 -0.9
D22A Cohagen 115.86 39 ⇓P PKPdf 05 52 02.4 +0.4
baz=116
VSL Villasalto 115.87 312 PFAKE 05 52 10.0 +7.7
VSL LR LR
comp=Z,1µm,21.0s
WUAZ Wupatki 115.89 53 ePKPdf PKPdf 05 52 03.4 +0.8
WUAZ LR LR
comp=Z,997nm,20.0s
WUAZ Wupatki 115.89 53 ⇑P PKPdf 05 52 02.8 +0.2
baz=116
MBDF Montbardon 116.00 318 ePKIKP PKPdf 05 52 02.1 -0.5
comp=Z,11nm,0.8s
MBDF Montbardon 116.00 318 ePKIKP PKPdf 05 52 02.1 -0.5
MBDF Montbardon 116.00 318 ePKPdf PKPdf 05 52 02.1 -0.5
J20A Shoshoni 116.02 43 ⇑P PKPdf 05 52 02.8 +0.1
baz=116
C23A Lambert 116.21 38 ⇓P PKPdf 05 52 03.0 +0.2
baz=116
E22A Miles City 116.29 40 ⇓P PKPdf 05 52 03.2 +0.3
baz=116
L20A Wamsutter 116.30 45 ⇓P PKPdf 05 52 03.6 +0.3
baz=116
I21A Big Trails, Te 116.40 43 ⇑P PKPdf 05 52 03.3 0.0
baz=116
D23A Lindsay 116.46 39 ⇑P PKPdf 05 52 03.3 +0.1
baz=116
FRF La Foret Royal 116.50 317 ePKIKP PKPdf 05 52 02.6 -0.8
FRF La Foret Royal 116.50 317 ePKIKP PKPdf 05 52 02.6 -0.8
FRF La Foret Royal 116.50 317 ePKPdf PKPdf 05 52 02.6 -0.8
ORIF Oris-en-Rattie 116.51 319 ePKIKP PKPdf 05 52 02.7 -0.8
comp=Z,5.6nm,0.6s
ORIF Oris-en-Rattie 116.51 319 ePKIKP PKPdf 05 52 02.7 -0.8
ORIF Oris-en-Rattie 116.51 319 ePKPdf PKPdf 05 52 02.7 -0.8
DGMT Dagmar 116.52 37 PFAKE 05 52 10.0 +6.7
DGMT LR LR
comp=Z,770nm,21.0s
M20A Sweetwater, Wa 116.58 45 ⇑P PKPdf 05 52 03.8 -0.1
baz=116
ESK Eskdalemuir 116.67 332 PFAKE 05 52 10.0 +6.7
ESK LR LR
comp=Z,671nm,20.0s
E23A Ismay 116.67 39 ⇓P PKPdf 05 52 03.8 +0.1
baz=117
N20A Spence Gulch, 116.74 46 ⇑P PKPdf 05 52 04.3 +0.1
baz=117
C24A Savage 116.79 38 ⇓P PKPdf 05 52 04.1 +0.3
baz=117
K21A Alcova 116.84 44 ⇓P PKPdf 05 52 03.6 -0.7
baz=117
LOR Lormes 116.86 322 ePKIKP PKPdf 05 52 03.3 -0.7
comp=Z,6.7nm,0.8s
LOR Lormes 116.86 322 ePKPdf PKPdf 05 52 03.3 -0.7
F23A Volborg 116.92 40 ⇓P PKPdf 05 52 04.0 -0.2
baz=117
O20A White River Ci 116.97 47 ⇑P PKPdf 05 52 04.6 0.0
baz=117
L21A Rawlins 116.99 45 ⇓P PKPdf 05 52 04.6 0.0
baz=117
P20A De Beque 117.06 48 ⇓P PKPdf 05 52 04.9 +0.1
baz=117
J22A Midwest 117.09 43 ⇑P PKPdf 05 52 04.7 -0.1
baz=117
SSF Saint Saulge 117.17 322 ePKIKP PKPdf 05 52 04.0 -0.5
comp=Z,8.0nm,0.7s
SSF Saint Saulge 117.17 322 ePKIKP PKPdf 05 52 04.0 -0.5
SSF Saint Saulge 117.17 322 ePKPdf PKPdf 05 52 04.0 -0.5
SSB Saint Sauveur 117.25 320 PFAKE 05 52 20.0 +15
SSB LR LR
comp=Z,609nm,20.0s
W18A Petrified Fore 117.28 53 ⇓P PKPdf 05 52 05.8 +0.4
baz=117
N21A Black Mountain 117.29 46 ⇓P PKPdf 05 52 05.5 +0.2
baz=117
VIVF Saint-Julien-l 117.33 319 ePKIKP PKPdf 05 52 04.3 -0.7
VIVF Saint-Julien-l 117.33 319 ePKIKP PKPdf 05 52 04.3 -0.7
VIVF Saint-Julien-l 117.33 319 ePKPdf PKPdf 05 52 04.3 -0.7
K22A Casper 117.34 44 ⇓P PKPdf 05 52 05.3 +0.1
baz=117
PV01 Paradox Valley 117.35 49 ePKPdf PKPdf 05 52 05.8 +0.3
AVF Avril sur Loir 117.38 321 ePKIKP PKPdf 05 52 04.0 -0.9
AVF Avril sur Loir 117.38 321 ePKIKP PKPdf 05 52 04.0 -0.9
AVF Avril sur Loir 117.38 321 ePKPdf PKPdf 05 52 04.0 -0.9
SFJD Kangerlussuaq 117.40 0 PFAKE 05 52 20.0 +16
SFJD LR LR
comp=Z,555nm,20.0s
F24A Ekalaka 117.48 40 ⇓P PKPdf 05 52 05.5 +0.2
baz=117
S20A Disappointment 117.59 49 ⇓P PKPdf 05 52 06.1 +0.1
baz=118
MVCO Mesa Verde 117.67 50 ePKPdf PKPdf 05 52 07.1 +1.0
MVCO LR LR
comp=Z,779nm,19.0s
MVCO Mesa Verde 117.67 50 ⇓P PKPdf 05 52 06.8 +0.7
baz=118
BGF Bois d'Agland 117.79 321 ePKIKP PKPdf 05 52 05.5 -0.3
comp=Z,15nm,0.7s
BGF Bois d'Agland 117.79 321 ePKIKP PKPdf 05 52 05.5 -0.3
BGF Bois d'Agland 117.79 321 ePKPdf PKPdf 05 52 05.5 -0.3
H24A Dirks Ranch, A 117.86 41 ⇑P PKPdf 05 52 06.0 0.0
baz=118
S21A Coal Bank Pass 118.08 49 ⇓P PKPdf 05 52 08.2 +1.2
baz=118
LASF Ste Croix 118.17 318 ePKIKP PKPdf 05 52 05.3 -1.3
LASF Ste Croix 118.17 318 ePKPdf PKPdf 05 52 05.3 -1.3
SMCO Snowmass 118.21 47 ePKPdf PKPdf 05 52 08.4 +1.0
W20A Ramah 118.26 52 ⇓P PKPdf 05 52 07.9 +0.6
baz=118
Q22A Crested Butte, 118.36 48 ⇑P PKPdf 05 52 07.8 +0.3
baz=118
RSSD Black Hills 118.45 41 ePKIKP PKPdf 05 52 07.1 -0.3
RSSD Black Hills 118.45 41 ePKPdf PKPdf 05 52 07.1 -0.3
T21A Navajo Lake 118.47 50 ⇓P PKPdf 05 52 08.2 +0.6
baz=118
U21A Nageezi 118.55 51 ⇓P PKPdf 05 52 08.7 +0.9
baz=118
319A Douglas 118.57 57 ⇓P PKPdf 05 52 08.6 +0.7
baz=118
R22A Saguache, Gunn 118.68 48 ⇓P PKPdf 05 52 09.0 +0.8
baz=119
Z20A Nine Sixteen R 118.71 54 ⇑P PKPdf 05 52 08.7 +0.5
baz=119
FLN La Foliniere 118.77 325 ePKIKP PKPdf 05 52 06.8 -0.7
FLN La Foliniere 118.77 325 ePKIKP PKPdf 05 52 06.8 -0.7
FLN La Foliniere 118.77 325 ePKPdf PKPdf 05 52 06.8 -0.7
S22A 4UR Ranch, Cre 118.78 49 ⇑P PKPdf 05 52 09.3 +0.9
baz=119
120A U Bar Ranch, L 118.82 55 ⇓P PKPdf 05 52 09.1 +0.7
baz=119
CAF Calviac 118.99 320 ePKIKP PKPdf 05 52 07.3 -0.9
CAF Calviac 118.99 320 ePKIKP PKPdf 05 52 07.3 -0.9
CAF Calviac 118.99 320 ePKPdf PKPdf 05 52 07.3 -0.9
ISCO Idaho Springs 118.99 46 PFAKE 05 52 20.0 +11
ISCO LR LR
comp=Z,1µm,19.0s
X21A Alamocita Cree 119.01 53 ⇓P PKPdf 05 52 09.2 +0.5
baz=119
220A Playas Peak, P 119.07 56 ⇓P PKPdf 05 52 09.6 +0.8
baz=119
Q23A Hartsel 119.14 47 ⇑P PKPdf 05 52 09.2 +0.2
baz=119
U22A Llaves 119.18 50 ⇓P PKPdf 05 52 09.7 +0.7

baz=119
320A Kipp Ranch, An 119.20 56 ⇓P PKPdf 05 52 10.0 +0.8
baz=119
V22A San Miguel Ran 119.28 51 ⇓P PKPdf 05 52 09.7 +0.5
baz=119
R23A Moffat 119.38 48 ⇓P PKPdf 05 52 09.9 +0.4
baz=119
121A Cookes Peak, D 119.52 55 ⇑P PKPdf 05 52 09.8 0.0
baz=120
MTLF Montolieu 119.56 318 *e*PKIKP PKPdf 05 52 08.5 -0.8
MTLF Montolieu 119.56 318 *e*PKIKP PKPdf 05 52 08.5 -0.8
MTLF Montolieu 119.56 318 *e*PKPdf PKPdf 05 52 08.5 -0.8
T23A Casias Ranch, 119.60 50 ⇓P PKPdf 05 52 11.2 +1.3
baz=120
MFF Saint Martin d 119.61 322 *e*PKIKP PKPdf 05 52 08.7 -0.5
comp=Z,15nm,0.9s
MFF Saint Martin d 119.61 322 *e*PKIKP PKPdf 05 52 08.7 -0.5
MFF Saint Martin d 119.61 322 *e*PKPdf PKPdf 05 52 08.7 -0.5
U23A El Rito 119.70 50 ⇓P PKPdf 05 52 10.8 +0.7
baz=120
Y22A Socorro 119.80 53 ⇑P PKPdf 05 52 11.3 +1.1
baz=120
V23A Ortiz Mt. (NFS 119.89 51 ⇑P PKPdf 05 52 11.0 +0.6
baz=120
ANMO Albuquerque 119.92 52 *e*PKPdf PKPdf 05 52 11.1 +0.7
ANMO LR LR
comp=Z,1μm,21.0s
Z22A Elephant Butte 119.99 54 ⇓P PKPdf 05 52 11.5 +0.9
baz=120
BNM Barren Site 120.01 53 *e*PKPdf PKPdf 05 52 11.8 +1.1
S24A Houchin Ranch, 120.02 49 ⇑P PKPdf 05 52 11.3 +0.6
baz=120
M26A McRoberts Ranc 120.12 44 ⇓P PKPdf 05 52 10.8 +0.3
baz=120
P25A Willow Gulch B 120.14 46 ⇓P PKPdf 05 52 11.1 +0.4
baz=120
SGMF Saint Gilles 120.21 325 *e*PKIKP PKPdf 05 52 09.6 -0.7
comp=Z,7.4nm,0.7s
SGMF Saint Gilles 120.21 325 *e*PKIKP PKPdf 05 52 09.6 -0.7
SGMF Saint Gilles 120.21 325 *e*PKPdf PKPdf 05 52 09.6 -0.7
ULM Lac du Bonnet 120.34 32 PKP PKPdf 05 52 10.0 -0.6
ULM Lac du Bonnet 120.34 32 PKP PKPdf 05 52 10.0 -0.6
comp=Z,1.9nm,0.4s,baz=321,slow=6.2,SNR=3.5
O26A Horse Wrangler 120.47 45 ⇓P PKPdf 05 52 11.4 +0.1
baz=120
Y23A Lovelace Mesa, 120.53 53 ⇓P PKPdf 05 52 11.9 +0.2
baz=120
ROSF Rostrenen 120.58 325 *e*PKIKP PKPdf 05 52 10.3 -0.7
ROSF Rostrenen 120.58 325 *e*PKIKP PKPdf 05 52 10.3 -0.7
ROSF Rostrenen 120.58 325 *e*PKPdf PKPdf 05 52 10.3 -0.7
S25A Robets Cordova 120.60 48 ⇑P PKPdf 05 52 12.1 +0.4
baz=120
V24A Rampart Ranch, 120.60 51 ⇑P PKPdf 05 52 12.1 +0.3
baz=120
W24A Lazy 6 Ranch, 120.66 51 ⇓P PKPdf 05 52 11.5 -0.4
baz=121
P26A Davis Ranch, A 120.71 46 ⇓P PKPdf 05 52 11.7 -0.1
baz=121
QUIF Quistinic 120.74 325 *e*PKIKP PKPdf 05 52 10.5 -0.8
QUIF Quistinic 120.74 325 *e*PKIKP PKPdf 05 52 10.5 -0.8
QUIF Quistinic 120.74 325 *e*PKPdf PKPdf 05 52 10.5 -0.8
T25A Trinidad 120.79 49 ⇓P PKPdf 05 52 12.2 +0.1
baz=121
N27A Anderson Farm, 120.80 44 ⇓P PKPdf 05 52 11.7 -0.1
baz=121
EPF Esparros 120.93 319 *e*PKIKP PKPdf 05 52 11.2 -0.8
EPF Esparros 120.93 319 *e*PKIKP PKPdf 05 52 11.2 -0.8
EPF Esparros 120.93 319 *e*PKPdf PKPdf 05 52 11.2 -0.8
Y24A Capitan 121.02 53 ⇓P PKPdf 05 52 13.6 +1.0
baz=121
U25A Circle Dot Ran 121.04 50 ⇓P PKPdf 05 52 13.0 +0.4
baz=121
V25A Rancho No Teng 121.07 50 ⇓P PKPdf 05 52 12.7 0.0
baz=121
OGNE Ogallala 121.09 44 PFAKE 05 52 20.0 +7.6
OGNE LR LR
comp=Z,810nm,20.0s
R26A Arlington 121.10 47 ⇑P PKPdf 05 52 13.0 +0.5
baz=121
Z24A Sheeppen Canyo 121.25 53 ⇓P PKPdf 05 52 13.3 +0.2
baz=121
S26A Kim 121.33 48 ⇓P PKPdf 05 52 13.0 0.0
baz=121
124A Stringfield Ra 121.36 54 ⇑P PKPdf 05 52 13.4 +0.1
baz=121
W25A X Bar L Ranch, 121.39 51 ⇓P PKPdf 05 52 13.4 +0.2
baz=121
T26A Comanche Natio 121.39 49 ⇓P PKPdf 05 52 13.6 +0.4
baz=121
AGMN Agassiz Nation 121.44 34 PFAKE 05 52 20.0 +7.3
AGMN LR LR
comp=Z,1μm,21.0s
224A Cornudas Mount 121.48 55 ⇓P PKPdf 05 52 14.2 +0.7
baz=121
U26A Atchley Ranch, 121.55 49 ⇑P PKPdf 05 52 14.3 +0.7
baz=122
R27A Eads 121.58 47 ⇓P PKPdf 05 52 13.5 0.0
baz=122
ETSF Etsaut 121.58 319 *e*PKIKP PKPdf 05 52 12.4 -0.9
comp=Z,17nm,1.0s
ETSF Etsaut 121.58 319 *e*PKIKP PKPdf 05 52 12.4 -0.9
ETSF Etsaut 121.58 319 *e*PKPdf PKPdf 05 52 12.4 -0.9
Y25A Mesa, Roswell 121.61 53 ⇓P PKPdf 05 52 13.3 -0.4
baz=122
324A Moseley Ranch, 121.69 56 ⇓P PKPdf 05 52 13.8 -0.1
baz=122
S27A Las Animas 121.73 48 ⇑P PKPdf 05 52 13.9 +0.1
baz=122
SJPF Ste Jean 121.92 319 *e*PKIKP PKPdf 05 52 12.7 -1.1
SJPF Ste Jean 121.92 319 *e*PKIKP PKPdf 05 52 12.7 -1.1
SJPF Ste Jean 121.92 319 *e*PKPdf PKPdf 05 52 12.7 -1.1
125A Gardner Draw, 122.02 54 ⇓P PKPdf 05 52 14.8 +0.3
baz=122
325A Bean Ranch, Si 122.13 55 ⇓P PKPdf 05 52 14.4 -0.4
baz=122
U27A Thompson Grove 122.23 49 ⇓P PKPdf 05 52 15.0 +0.2
baz=122
425A Indio Mountain 122.28 56 ⇓P PKPdf 05 52 15.2 +0.1
baz=122
V27A Dan Oppiter Fa 122.46 50 ⇓P PKPdf 05 52 15.7 +0.4
baz=122
T28A Walsh 122.52 48 ⇓P PKPdf 05 52 15.5 +0.2
baz=122
126A Clayton Basin, 122.54 54 ⇑P PKPdf 05 52 15.6 +0.2
baz=122
226B Tecolote Peak, 122.59 54 ⇓P PKPdf 05 52 15.6 +0.1
baz=122
Y27A Causey 122.83 52 ⇑P PKPdf 05 52 16.3 +0.3
baz=123
326A Caldwell Ranch 122.96 55 ⇑P PKPdf 05 52 16.4 +0.1
baz=123
Z27A Tatum 122.97 53 ⇑P PKPdf 05 52 16.4 +0.1
baz=123
TAM Tamanrasset 123.05 294 PFAKE 05 52 30.0 +13
TAM LR LR
comp=Z,977nm,19.0s
426A McDonald Obser 123.10 56 ⇑P PKPdf 05 52 17.2 +0.4
baz=123
T29A Hugoton 123.11 48 ⇑P PKPdf 05 52 16.9 +0.5
baz=123
MSTX Muleshoe 123.11 52 ⇑P PKPdf 05 52 16.8 +0.2
baz=123
526A Mary Lane Ranc 123.22 57 ⇑P PKPdf 05 52 17.1 +0.2
baz=123
626A Big Bend Ranch 123.32 57 ⇓P PKPdf 05 52 17.3 +0.3
baz=123
X28A Dimmitt 123.38 51 ⇑P PKPdf 05 52 16.9 -0.1
baz=123
ECSD EROS Data Cent 123.40 39 *e*PKPdf PKPdf 05 52 16.0 -0.7
ECSD LR LR
comp=Z,960nm,21.0s
BGNE Belgrade 123.53 42 ⇓P PKPdf 05 52 17.0 0.0
baz=123
Y28A McKinney Farm, 123.54 52 ⇓P PKPdf 05 52 17.7 +0.3
baz=124
427A Hayter Ranch, 123.57 56 ⇑P PKPdf 05 52 17.7 +0.3
baz=124
W29A Amarillo 123.59 50 ⇓P PKPdf 05 52 18.0 +0.6
baz=124
527A Woodward Ranch 123.60 56 ⇓P PKPdf 05 52 17.7 +0.1
baz=124
AMTX Amarillo 123.65 50 *e*PKPdf PKPdf 05 52 18.6 +1.1
AMTX LR LR
comp=Z,1μm,20.0s
AMTX Amarillo 123.65 50 ⇓P PKPdf 05 52 18.0 +0.5
baz=124
T30A Plains 123.72 48 ⇑P PKPdf 05 52 18.3 +0.7
baz=124
TXAR Lajitas Array 123.77 57 PKP PKPdf 05 52 18.1 +0.2
TXAR PKKPbc PKKPbc 06 02 06.6 +1.3
TXAR Lajitas Array 123.77 57 PKP PKPdf 05 52 18.1 +0.2
comp=Z,1.7nm,0.8s,baz=202,slow=1.8,SNR=13
TXAR PKKPbc PKKPbc 06 02 06.6 +1.3
comp=Z,0.2nm,0.7s,baz=126,slow=6.4,SNR=3.5
X29A Tulia 123.79 51 ⇓P PKPdf 05 52 18.3 +0.6
baz=124
U30A WK&E Inc. Balk 123.82 48 ⇓P PKPdf 05 52 18.2 +0.4
baz=124
EFI East Falkland 123.87 174 PFAKE 05 52 30.0 +13
EFI LR LR
comp=Z,2μm,19.0s
328A Wristen Ranch, 123.90 55 ⇓P PKPdf 05 52 18.4 +0.4
baz=124
627A Terlingua Ranc 123.97 57 ⇓P PKPdf 05 52 18.8 +0.5
baz=124
EYMN Ely 124.02 32 PFAKE 05 52 30.0 +12
EYMN LR LR
comp=Z,1μm,20.0s
V30A Spur Ranch, Mi 124.08 49 ⇑P PKPdf 05 52 18.7 +0.4
baz=124
Z29A Hungry Hill Ra 124.19 52 ⇓P PKPdf 05 52 19.0 +0.4
baz=124
129A Stewart Farms, 124.27 53 ⇑P PKPdf 05 52 19.0 +0.2
baz=124
528A Cox Ranch, San 124.28 56 ⇓P PKPdf 05 52 19.2 +0.4
baz=124
T31A Randall Ranch, 124.32 47 ⇑P PKPdf 05 52 19.1 +0.5
baz=124
628A Black Gap, Mar 124.38 57 ⇓P PKPdf 05 52 19.0 0.0
baz=124
X30A Coker Ranch, T 124.42 51 ⇑P PKPdf 05 52 18.9 -0.1
baz=124
329A Wagon Wheel Ra 124.54 54 ⇑P PKPdf 05 52 20.0 +0.7
baz=124
Y30A Stafford Cattl 124.61 51 ⇓P PKPdf 05 52 19.7 +0.3
baz=124
Z30A Sanderson Ranc 124.63 52 ⇑P PKPdf 05 52 19.6 +0.3
baz=125
V31A Spring Creek L 124.72 49 ⇓P PKPdf 05 52 19.9 +0.4
baz=125
529A Stev Forest Ra 124.76 56 ⇑P PKPdf 05 52 20.0 +0.3
baz=125
W31A Holland Ranch, 124.86 50 ⇑P PKPdf 05 52 20.2 +0.4
baz=125
429A Davenport Ranc 124.88 55 ⇑P PKPdf 05 52 20.0 0.0
baz=125
130A Snyder 125.00 53 ⇑P PKPdf 05 52 20.2 +0.1
baz=125
X31A McDonald Ranch 125.05 50 ⇑P PKPdf 05 52 20.3 +0.2
baz=125
230A Sterling City 125.11 54 ⇑P PKPdf 05 52 20.8 +0.5
baz=125
330A Mertzon 125.22 54 ⇑P PKPdf 05 52 20.5 -0.1
baz=125
ESDC Sonseca Array 125.34 317 PKP PKPdf 05 52 20.9 +0.3
ESDC Sonseca Array 125.34 317 PKP PKPdf 05 52 20.9 +0.3
comp=Z,0.2nm,0.3s,baz=15,slow=5.3,SNR=6.3
ESLA Sonseca Array 125.34 317 *e*PKPdf PKPdf 05 52 20.7 +0.1
430A Baggett Ranch, 125.36 55 ⇓P PKPdf 05 52 21.0 +0.1
baz=125
530A J-C Ranch, Com 125.48 56 ⇓P PKPdf 05 52 21.4 +0.3
baz=125
KSU1 Kansas State U 125.64 44 PFAKE 05 52 30.0 +8.9
KSU1 LR LR
comp=Z,1μm,22.0s
PAB San Pablo 125.66 317 PFAKE 05 52 30.0 +8.8
PAB LR LR
comp=Z,494nm,19.0s
231A Bronte 125.73 53 ⇓P PKPdf 05 52 21.9 +0.4
baz=126
331A San Angelo 125.86 54 ⇓P PKPdf 05 52 22.1 +0.4
baz=126
431A Sonora 125.91 55 ⇑P PKPdf 05 52 22.2 +0.3
baz=126
Z32A Haskell 125.92 51 ⇑P PKPdf 05 52 22.3 +0.5
baz=126
WMOK Wichita Mounta 125.92 50 PFAKE 05 52 30.0 +8.2
WMOK LR LR
comp=Z,1μm,20.0s
PBRG Braganca 126.12 320 *e*PKPdf PKPdf 05 52 23.3 +1.3
531A Rocksprings 126.12 56 ⇓P PKPdf 05 52 22.8 +0.5
baz=126
631A Pecos Creek 126.33 56 ⇑P PKPdf 05 52 22.8 +0.1
baz=126
SCIA State Center 126.49 39 PFAKE 05 52 30.0 +7.4
SCIA LR LR
comp=Z,841nm,22.0s
432A Menard 126.51 54 ⇑P PKPdf 05 52 23.5 +0.4
baz=126
JCT Junction City 126.63 55 *e*PKIKP PKPdf 05 52 23.8 +0.5
JCT MLR MLR
comp=Z,829nm,21.0s
JCT Junction City 126.63 55 *e*PKPdf PKPdf 05 52 23.8 +0.5
JCT LR LR
comp=Z,829nm,21.0s
JCT Junction City 126.63 55 ⇓P PKPdf 05 52 23.7 +0.4
baz=127
532A Rocksprings 126.66 55 ⇓P PKPdf 05 52 23.4 +0.1
baz=127
PGAV Gavieira, Arco 126.99 321 *e*PKPdf PKPdf 05 52 23.0 -0.7
POLO Lamas de Olo 127.01 320 *e*PKPdf PKPdf 05 52 24.5 +0.7
PVRL Vila Real 127.02 320 *e*PKPdf PKPdf 05 52 24.7 +1.0
732A Laxson Ranch, 127.05 57 ⇓P PKPdf 05 52 24.2 +0.1
baz=127
MTE Manteigas 127.37 319 *e*PKPdf PKPdf 05 52 25.7 +1.3
MTE Manteigas 127.37 319 PFAKE 05 52 40.0 +16
MTE LR LR
comp=Z,763nm,21.0s
TUL1 Tulsa 127.66 47 ⇓P PKPdf 05 52 25.2 +0.2
baz=128
PMRV Marv??o 127.77 318 *e*PKPdf PKPdf 05 52 25.4 +0.2
SCHQ Schefferville 127.85 12 PKP PKPdf 05 52 24.6 -0.2
SCHQ Schefferville 127.85 12 PKP PKPdf 05 52 24.6 -0.2
comp=Z,6.6nm,1.1s,baz=329,slow=5.9,SNR=3.3
TORD Torodi Ar. Bea 127.93 283 PKP PKPdf 05 52 25.6 -0.5
TORD Torodi Ar. Bea 127.93 283 PKP PKPdf 05 52 25.6 -0.5
comp=Z,6.4nm,0.7s,baz=63,slow=1.9,SNR=15
WHTX Lake Whitney 127.99 52 ⇑P PKPdf 05 52 25.9 +0.1
baz=128
GLMI Grayling 129.67 31 PFAKE 05 52 40.0 +11
GLMI LR LR
comp=Z,985nm,21.0s
HDIL Hopedale 129.69 39 PFAKE 05 52 40.0 +11
HDIL LR LR
comp=Z,1μm,22.0s
MIAR Mount Ida 129.89 48 PFAKE 05 52 40.0 +11
MIAR LR LR
comp=Z,1μm,22.0s
RTC Rabat Centre 130.00 312 PFAKE 05 52 40.0 +11
RTC LR LR
comp=Z,570nm,19.0s
PLCA Paso Flores 131.52 159 PKP PKPdf 05 52 33.5 +1.1
PLCA Paso Flores 131.52 159 PKP PKPdf 05 52 33.5 +1.1
comp=Z,5.2nm,0.8s,baz=166,slow=2.4,SNR=7.0
SHEL Horse Pasture 131.54 244 PFAKE 05 52 40.0 +7.0
SHEL LR LR
comp=Z,2μm,20.0s
AAM Ann Arbor 131.90 33 PFAKE 05 52 40.0 +7.1
AAM LR LR
comp=Z,1μm,21.0s
OXF Oxford 132.92 45 PFAKE 05 52 50.0 +15
OXF LR LR
comp=Z,1μm,22.0s
VBMS Vicksburg 133.23 49 PFAKE 05 52 50.0 +14
VBMS LR LR
comp=Z,1μm,21.0s
PLAL Pickwick Lake 133.61 44 PFAKE 05 52 50.0 +14
PLAL LR LR
comp=Z,1μm,19.0s
ACSO Alum Creek Sta 133.66 35 PFAKE 05 52 50.0 +14
ACSO LR LR
comp=Z,1μm,21.0s
ERPA Erie 133.97 31 PFAKE 05 52 50.0 +13
ERPA LR LR
comp=Z,1μm,22.0s
LONY Lake Ozonia 134.52 24 PFAKE 05 52 50.0 +12
LONY LR LR
comp=Z,792nm,21.0s
LIC Lamto 134.87 274 *e*PKIKP PKPdf 05 52 37.6 -1.7
comp=Z,13nm,0.7s
LIC Lamto 134.87 274 *e*PKPdf PKPdf 05 52 37.6 -1.7
NCB Newcomb 135.20 25 PFAKE 05 52 50.0 +11
NCB LR LR
comp=Z,868nm,21.0s
LRAL Lakeview Retre 135.40 46 PFAKE 05 52 50.0 +10
LRAL LR LR
comp=Z,1μm,20.0s
BINY Binghamton 135.85 28 PFAKE 05 52 50.0 +10
BINY LR LR
comp=Z,708nm,21.0s
LBNH Lisbon 135.89 22 PFAKE 05 52 50.0 +10
LBNH LR LR
comp=Z,751nm,20.0s
TKL Tuckaleechee C 136.10 40 *e*PKPdf PKPdf 05 52 41.8 +0.8
BRAL Brewton 136.40 48 PFAKE 05 52 50.0 +8.4
BRAL LR LR
comp=Z,1μm,20.0s
TRQA Tornquist 136.50 167 PFAKE 05 52 50.0 +8.3
TRQA LR LR
comp=Z,1μm,21.0s
BLA Blacksburg 137.17 36 PFAKE 05 52 50.0 +7.0
BLA LR LR
comp=Z,940nm,21.0s
CBN Corbin 138.19 33 PFAKE 05 53 00.0 +15
CBN LR LR
comp=Z,1μm,20.0s
PAYG Puerto Ayora 139.76 96 PFAKE 05 53 00.0 +12
PAYG LR LR
comp=Z,866nm,20.0s
TEIG Tepich 139.81 64 PFAKE 05 53 00.0 +12
TEIG LR LR
comp=Z,619nm,20.0s
CNNC Cliffs of the 140.01 36 PFAKE 05 53 00.0 +12
CNNC LR LR
comp=Z,1μm,20.0s
NHSC New Hope 140.01 41 PFAKE 05 53 00.0 +12
NHSC LR LR
comp=Z,906nm,21.0s
LCO Las Campanas 141.53 151 PFAKE 05 53 00.0 +8.5
LCO LR LR
comp=Z,823nm,21.0s
TGUH Tegucigalpa,Un 142.30 73 PFAKE 05 53 00.0 +7.2
TGUH LR LR
comp=Z,561nm,21.0s
JTS JuntasAbangare 145.15 78 PKPbc PKPdf 05 52 58.0 +0.2
JTS *e*PKPdf PKPab 05 52 58.4 +0.9
JTS LR LR
comp=Z,561nm,20.0s
JTS JuntasAbangare 145.15 78 PKPbc PKPdf 05 52 58.0 +0.2
comp=Z,24nm,0.7s,baz=269,slow=4.8,SNR=13
CPUP Villa Florida 148.82 168 PKPbc PKPbc 05 53 07.5 -0.1
CPUP Villa Florida 148.82 168 PKPbc PKPbc 05 53 07.5 -0.1
comp=Z,28nm,0.9s,baz=142,slow=0.5,SNR=19
NNA Nana 149.06 122 *e*PKPdf PKPdf 05 53 05.6 +1.1
NNA PKPbc PKPbc 05 53 09.0 +0.4
NNA LR LR
comp=Z,677nm,20.0s
NNA Nana 149.06 122 PKPbc PKPbc 05 53 09.0 +0.4
comp=Z,23nm,0.7s,baz=248,slow=8.5,SNR=8.7
ATAH Atahualpa 149.77 112 PKPbc PKPbc 05 53 12.4 +1.6
ATAH Atahualpa 149.77 112 PKPbc PKPbc 05 53 12.4 +1.6
comp=Z,13nm,0.7s,baz=113,slow=1.0,SNR=13
MTDJ Mount Denham 149.99 60 PFAKE 05 53 20.0 +3.5
MTDJ LR LR
comp=Z,476nm,19.0s
BCIP Isla Barro Col 150.29 79 PFAKE 05 53 20.0 +2.2
BCIP LR LR
comp=Z,692nm,21.0s
GTBY Guantanamo Bay 151.27 55 PFAKE 05 53 20.0 -1.6
GTBY LR LR
comp=Z,650nm,20.0s
OTAV Otavalo 151.61 97 *e*PKPdf PKPdf 05 53 08.9 -0.1
OTAV LR LR
comp=Z,422nm,21.0s
SACV Santiago Islan 151.65 294 PFAKE 05 53 20.0 -3.4
SACV LR LR
comp=Z,483nm,19.0s
SPB Sao Paulo 152.15 186 PFAKE 05 53 20.0 +4.4
SPB LR LR
comp=Z,1μm,22.0s
LPAZ La Paz 153.01 140 PKP PKPdf 05 53 12.0 +0.8
LPAZ *e*PKPdf PKPbc 05 53 12.2 -6.3
LPAZ *e*PKPbc PKiKP 05 53 18.9 +0.3
LPAZ PKPbc PKPab 05 53 19.1 -11
LPAZ La Paz 153.01 140 PKP PKPdf 05 53 12.0 +0.8
comp=Z,3.1nm,0.8s,baz=11,slow=1.2,SNR=5.4
LPAZ PKPbc PKiKP 05 53 19.1 +0.4
comp=Z,8.6nm,0.6s,baz=162,slow=2.1,SNR=28
GRTK Grand Turk 153.51 48 PFAKE 05 53 20.0 +1.4
GRTK LR LR
comp=Z,825nm,20.0s
SDDR Presa de Saban 154.84 53 PFAKE 05 53 20.0 -1.6
SDDR LR LR
comp=Z,659nm,21.0s
SIV San Ignacio 157.22 152 PKP PKPdf 05 53 17.0 +0.8
SIV PKPab PKPab 05 53 47.0 +0.2
SIV San Ignacio 157.22 152 PKP PKPdf 05 53 17.0 +0.8
comp=Z,2.5nm,0.9s,baz=245,slow=1.6,SNR=3.5
SIV PKPab PKPab 05 53 47.0 +0.2
comp=Z,5.9nm,0.9s,baz=223,slow=4.3,SNR=5.8
SJG San Juan 159.29 47 PFAKE 05 53 30.0 +11
SJG LR LR
comp=Z,536nm,22.0s
SAML Samuel 161.63 136 *e*PKPdf PKPdf 05 53 21.7 +0.4
SAML LR LR
comp=Z,665nm,21.0s
RCBR Riachuelo 162.45 235 PFAKE 05 53 30.0 +7.8
RCBR LR LR
comp=Z,925nm,20.0s
ANWB Willy Bob 162.59 39 PFAKE 05 53 30.0 +7.9
ANWB LR LR
comp=Z,686nm,22.0s
FDF Fort de France 165.11 45 PFAKE 05 53 40.0 +15
FDF LR LR
comp=Z,699nm,21.0s
GRGR Grenville 166.34 55 PFAKE 05 53 40.0 +14
GRGR LR LR
comp=Z,588nm,20.0s
BBGH Gun Hill 167.32 45 PFAKE 05 53 40.0 +14
BBGH LR LR
comp=Z,2μm,20.0s

CSEM ***21*** *05:36:56.3±0.4, 39°.20N×29°.12E, h2km, MD2.5, Error ellipse: s-maj=10.1km s-min=7.6km az=15.0*

DDA 21 05:36:58.5, 39°.05N×29°.03E, h7km, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEMI	**Demirci**	**0.24**	**267**	*i* P	Pg	05 37 03.6	+0.1
DEMI				*i* S	Sg	05 37 07.9	+1.0
DEMI	**Demirci**	**0.24**	**267**	*i* P	Pg	05 37 03.6	+0.1
DEMI				*i* S	Sg	05 37 07.9	+1.0
MANT	**Manisa**	**0.67**	**213**	*i* P	Pg	05 37 11.7	-0.1
MANT				*i* S	Sg	05 37 21.4	+0.6
MANT	**Manisa**	**0.67**	**213**	*i* P	Pg	05 37 11.7	-0.1
MANT				*i* S	Sg	05 37 21.4	+0.6
KHAL	**Karahalli**	**0.77**	**152**	*i* P	Pg	05 37 13.5	-0.1
KHAL				*i* S	Sg	05 37 24.0	+0.3
KHAL	**Karahalli**	**0.77**	**152**	*i* P	Pg	05 37 13.5	-0.1
KHAL				*i* S	Sg	05 37 24.0	+0.3

IDC 21 05:45:19.1±1.9, 4°.04S×129°.95E, h0km, mb3.7/3, mb1 3.9/6, mb1mx3.7/22, mbtmp3.7/6, ML3.4/2, Error ellipse: s-maj=85.2km s-min=24.0km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**14.60**	**196**	Pn	Pn	05 48 45.4	-1.7
	0.1nm,0.3s,baz=25,slow=14,SNR=3.8						
WRA	**Warramunga Arr**	**16.37**	**165**	Pn	Pn	05 49 11.0	+0.5
	0.2nm,0.3s,baz=349,slow=13,SNR=4.3						
WRA				Sn	Sn	05 52 07.2	-5.8
	0.1nm,0.3s,baz=354,slow=23,SNR=3.6						
ASAR	**Alice Springs**	**19.88**	**169**	P	P	05 49 52.6	+0.4
	0.2nm,0.3s,baz=349,slow=11,SNR=7.0						
CMAR	**Chiang Mai Arr**	**37.86**	**307**	P	P	05 52 38.3	+0.2
	0.5nm,0.3s,baz=132,slow=7.4,SNR=4.0						
MKAR	**Makanchi Array**	**65.75**	**326**	P	P	05 56 05.6	-0.4
	0.6nm,0.6s,baz=120,slow=7.1,SNR=4.4						
KURBB	**Kurchatov Arra**	**69.98**	**328**	P	P	05 56 32.6	+0.1
	0.5nm,0.6s,baz=131,slow=5.3,SNR=4.8						

IDC 21 05:58:53.5±6.6, 3°.32N×127°.80E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/23, mbtmp3.5/3, Error ellipse:

s-maj=141.9km s-min=103.7km az=77.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.00**	**165**	P	P	06 04 09.9	-0.2
	1.4nm,0.7s,baz=345,slow=10,SNR=11						
ASAR	**Alice Springs**	**27.48**	**168**	P	P	06 04 41.5	-0.1
	0.2nm,0.4s,baz=342,slow=8.3,SNR=3.5						
STKA	**Stephens Creek**	**37.38**	**160**	P	P	06 06 08.3	+0.2
	0.8nm,0.6s,baz=5.7,slow=10,SNR=2.9						

*IDC **21** 06:00:05.9±0.5, 31.35S×177.71W, h0km, mb4.5/11, mb1 4.6/14, mb1mx4.5/23, mbtmp4.6/14, ML4.3/2, MS4.5/1, Ms1 4.5/1, ms1mx3.7/38, Error ellipse: s-maj=18.3km s-min=16.5km az=112.0*
*AUST **21** 06:00:06.1±1.2, 31.54S×176.60W, h50km, Error ellipse: s-maj=2.1km s-min=1.4km az=292.0*
*ISCJB **21** 06:00:08.6±0.5, 31.44S±0.05×177.73W±0.09, h26km, mb4.6/16, MS4.5/1, Error ellipse: s-maj=11.6km s-min=6.9km az=17.2*
*NEIC **21** 06:00:12.6±1.2, 31.33S×177.72W, h46km±10km, mb5.1/7, Error ellipse: s-maj=12.2km s-min=8.2km az=132.0*

ISC 21 06:00:09.9±0.5, 31.31S±0.06×177.62W±0.09, h26km, n95, σ1§08/91, mb4.6/16, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.07**	**353**	*e*Pn	**Pn**	**06 00 44.2**	**+1.3**
RAO				Sn	**Sb**	**06 01 10.7**	**-1.3**
RAO	**Raoul Island**	**2.07**	**353**	Pn	**Pn**	**06 00 44.0**	**+1.1**
	152nm,0.3s,baz=113,slow=15,SNR=6.3						
RAO				Sn	**Sb**	**06 01 10.7**	**-1.3**
	196nm,0.3s,baz=265,slow=22,SNR=4.1						
URZ	**Urewera**	**8.18**	**211**	*e*Pn	Pn	06 02 00.2	-6.6
URZ				*e*Sn	Sn	06 03 28.8	-10
URZ	**Urewera**	**8.18**	**211**	Pn	Pn	06 01 59.1	-7.7
	1.0nm,0.3s,baz=99,slow=3.5,SNR=4.9						
URZ				Sn	Sn	06 03 26.8	-12
	14nm,0.3s,baz=168,slow=18,SNR=17						
OUZ	**Omahuta**	**8.33**	**240**	*e*Pn	**Pn**	**06 02 10.5**	**+1.6**
MSVF	**Nonsavu**	**14.08**	**343**	*e*Pn	Pn	06 03 31.2	+3.4
	26nm,1.3s						
RPZ	**Rata Peaks**	**15.28**	**213**	Pn	Pn	06 03 36.0	-7.8
RPZ				Sn	Sn	06 06 08.4	-24
RPZ	**Rata Peaks**	**15.28**	**213**	Pn	Pn	06 03 36.0	-7.8
	0.7nm,0.3s,baz=170,slow=20,SNR=2.3						
RPZ				Sn	Sn	06 06 08.4	-24
	1.2nm,0.3s,baz=18,slow=23,SNR=7.9						
DZM	**Mont Dzumac**	**16.94**	**299**	Pn	**P**	**06 04 09.0**	**+2.0**
DZM	**Mont Dzumac**	**16.94**	**299**	Pn	**P**	**06 04 09.0**	**+2.0**
	0.2nm,0.3s,baz=107,slow=16,SNR=8.1						
AFI	**Afiamalu**	**18.13**	**19**	P	**P**	**06 04 20.3**	**+0.1**
AFI	**Afiamalu**	**18.13**	**19**	P	**P**	**06 04 20.3**	**+0.1**
	1.0nm,0.3s,baz=90,slow=7.7,SNR=3.5						
RAR	**Rarotonga**	**18.88**	**62**	P	**P**	**06 04 27.9**	**-0.5**
RAR	**Rarotonga**	**18.88**	**62**	P	**P**	**06 04 27.8**	**-0.5**
	0.5nm,0.3s,baz=272,slow=2.3,SNR=2.4						
RMQ	**Roma**	**29.76**	**271**	P	**P**	**06 06 16.3**	**+1.9**
	baz=31,SNR=4.4						
TOO	**Toolangi**	**30.92**	**248**	P	**P**	**06 06 24.2**	**-0.3**
	baz=32,SNR=3.6						
CMSA	**Cobar Meteorol**	**31.22**	**260**	P	**P**	**06 06 27.5**	**+0.3**
	baz=32,SNR=11						
QLP	**Quilpie**	**33.60**	**268**	P	**P**	**06 06 48.3**	**+0.2**
	baz=34,SNR=5.7						
ARPS	**Mount Arapiles**	**33.85**	**250**	P	**P**	**06 06 49.6**	**-0.6**
	baz=34,SNR=13						
CTA	**Charters Tower**	**34.27**	**280**	P	**P**	**06 06 54.5**	**+0.5**
CTA	**Charters Tower**	**34.27**	**280**	P	**P**	**06 06 54.5**	**+0.5**
	19nm,0.8s,baz=106,slow=11,SNR=18						
CTAO	**Charters Tower**	**34.27**	**280**	*e*P	**P**	**06 06 54.8**	**+0.7**
	36nm,1.1s						
STKA	**Stephens Creek**	**34.60**	**258**	*e*P	**P**	**06 06 56.5**	**-0.3**
	1.4nm,0.8s						
STKA	**Stephens Creek**	**34.60**	**258**	P	**P**	**06 06 56.1**	**-0.7**
	7.3nm,0.8s,baz=102,slow=8.9,SNR=17						
STKA	**Stephens Creek**	**34.60**	**258**	P	**P**	**06 06 56.4**	**-0.3**
	baz=35,SNR=13						
BBOO	**Buckleboo**	**39.05**	**255**	*e*P	**P**	**06 07 32.4**	**-2.2**
	204nm,0.9s						
BBOO	**Buckleboo**	**39.05**	**255**	P	**P**	**06 07 32.4**	**-2.2**
	baz=40,SNR=11						
QIS	**Mount Isa**	**39.71**	**275**	P	**P**	**06 07 41.7**	**+1.3**
	baz=41,SNR=4.9						
AS31	**Alice Springs**	**43.39**	**268**	*e*P	**P**	**06 08 09.3**	**-1.2**
ASAR	**Alice Springs**	**43.39**	**268**	P	**P**	**06 08 08.9**	**-1.6**
ASAR				ScP	**ScP**	**06 13 51.0**	**+2.5**
ASAR	**Alice Springs**	**43.39**	**268**	P	**P**	**06 08 08.9**	**-1.6**
	4.3nm,0.7s,baz=112,slow=8.2,SNR=33						
ASAR				ScP	**ScP**	**06 13 51.0**	**+2.5**
	0.6nm,0.8s,baz=96,slow=4.3,SNR=4.1						
WRAB	**Tennant Creek**	**44.46**	**273**	*e*P	**P**	**06 08 18.2**	**-0.9**
	27nm,1.0s						
WRAB	**Tennant Creek**	**44.46**	**273**	P	**P**	**06 08 18.5**	**-0.6**
	154nm,1.0s,SNR=13						
WRA	**Warramunga Arr**	**44.46**	**273**	P	**P**	**06 08 17.5**	**-1.6**
WRA	**Warramunga Arr**	**44.46**	**273**	P	**P**	**06 08 17.5**	**-1.6**
	23nm,0.8s,baz=113,slow=7.8,SNR=67						
WRA				LR	LR	06 26 04.5	
	comp=Z,565nm,20.9s,baz=345,slow=35						
VNDA	**Vanda**	**47.23**	**186**	P	**P**	**06 08 40.5**	**+0.4**
VNDA	**Vanda**	**47.23**	**186**	P	**P**	**06 08 40.5**	**+0.4**
	0.3nm,0.7s,baz=22,slow=5.4,SNR=2.0						
FITZ	**Fitzroy Crossi**	**52.69**	**270**	*e*P	**P**	**06 09 21.1**	**-1.2**
	12nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.69**	**270**	P	**P**	**06 09 20.9**	**-1.5**
	6.5nm,0.9s,baz=138,slow=9.0,SNR=9.2						
TLE	**Tual**	**52.98**	**288**	P	P	06 09 20.6	-4.0
	baz=54,SNR=4.5						
CASY	**Casey**	**54.49**	**208**	*e*P	**P**	**06 09 33.5**	**-1.4**
	14nm,0.7s						
MEEK	**Meekatharra**	**55.30**	**258**	P	**P**	**06 09 38.9**	**-2.6**
	baz=56,SNR=5.1						
QSPA	**South Pole Qui**	**58.80**	**180**	*e*P	**P**	**06 10 06.4**	**+0.7**
	28nm,1.0s						
QSPA	**South Pole Qui**	**58.80**	**180**	P	**P**	**06 10 05.3**	**-0.5**
	4.6nm,0.9s,baz=359,slow=1.8,SNR=16						
MAW	**Mawson**	**71.57**	**201**	P	**P**	**06 11 29.4**	**+1.0**
MAW	**Mawson**	**71.57**	**201**	P	**P**	**06 11 29.4**	**+1.0**
	3.3nm,0.8s,baz=103,slow=8.7,SNR=3.6						
PLCA	**Paso Flores**	**81.65**	**133**	P	**P**	**06 12 26.4**	**+0.4**
PLCA	**Paso Flores**	**81.65**	**133**	P	**P**	**06 12 26.4**	**+0.4**
	1.6nm,0.9s,baz=208,slow=15,SNR=3.2						
ISA	**Isabella**	**86.71**	**44**	*e*P	P	06 12 54.8	+3.2
	5.1nm,1.2s						
PETK	**Petropavlovsk-**	**86.77**	**345**	P	**P**	**06 12 52.0**	**+0.7**
PETK	**Petropavlovsk-**	**86.77**	**345**	P	**P**	**06 12 52.0**	**+0.7**
	5.1nm,0.7s,baz=151,slow=9.5,SNR=4.4						
USRK	**Ussuriysk Arra**	**88.09**	**326**	P	**P**	**06 12 58.8**	**+1.0**
	1.8nm,0.7s,baz=142,slow=43,SNR=3.4						
NVAR	**Mina Array Bea**	**88.68**	**43**	P	**P**	**06 13 02.2**	**+1.1**
NVAR	**Mina Array Bea**	**88.68**	**43**	P	**P**	**06 13 02.2**	**+1.1**
	0.7nm,0.8s,baz=217,slow=11,SNR=8.5						
MKAR	**Makanchi Array**	**118.61**	**310**	PKP	**PKPdf**	**06 18 54.0**	**-1.1**
MKAR	**Makanchi Array**	**118.61**	**310**	PKP	**PKPdf**	**06 18 54.0**	**-1.1**
	0.7nm,1.0s,baz=152,slow=1.3,SNR=4.6						
KURK	**Kurchatov**	**121.91**	**313**	PKP	**PKPdf**	**06 19 00.6**	**-0.8**
KURBB	**Kurchatov Arra**	**121.95**	**313**	PKP	**PKPdf**	**06 19 00.6**	**-0.9**
	0.9nm,0.7s,baz=108,slow=2.1,SNR=12						
BVAR	**Borovoye Array**	**127.28**	**315**	PKP	**PKPdf**	**06 19 11.7**	**+0.1**
BVAR	**Borovoye Array**	**127.28**	**315**	PKP	**PKPdf**	**06 19 11.7**	**+0.1**
	0.5nm,0.4s,baz=103,slow=2.0,SNR=4.2						
KMBO	**Kilima Mbogo**	**133.79**	**232**	PKP	**PKPdf**	**06 19 25.2**	**-0.3**
KMBO	**Kilima Mbogo**	**133.79**	**232**	PKP	**PKPdf**	**06 19 25.2**	**-0.3**
	0.8nm,0.5s,baz=85,slow=12,SNR=3.2						
AKTO	**Aktyubinsk**	**134.95**	**312**	PKP	**PKPdf**	**06 19 26.4**	**+0.3**
AKTO	**Aktyubinsk**	**134.95**	**312**	PKP	**PKPdf**	**06 19 26.4**	**+0.3**
	0.4nm,0.4s,baz=346,slow=4.2						
JOF	**Joensuu**	**143.38**	**338**	*e*pkp	PKPab	06 19 37.1	-0.1
	1.9nm,0.8s						
GNI	**Garni**	**144.78**	**296**	PKP	PKPbc	06 19 43.8	+0.2
GNI	**Garni**	**144.78**	**296**	PKP	PKPbc	06 19 43.8	+0.2
	3.3nm,0.3s,baz=167,slow=4.7,SNR=5.1						
KAF	**Kangasniemi**	**145.51**	**340**	*e*pkp	**PKPdf**	**06 19 44.1**	**-0.8**
	4.7nm,0.6s						
KBZ	**Khabaz**	**145.88**	**303**	PKPbc	**PKPab**	**06 19 47.5**	**+0.3**
KBZ	**Khabaz**	**145.88**	**303**	PKPbc	**PKPab**	**06 19 47.5**	**+0.3**
	11nm,1.0s,baz=141,slow=1.7,SNR=13						
FIA1	**FINESS Array S**	**146.11**	**340**	*e*PKPbc	**PKPbc**	**06 19 47.1**	**+0.3**
FINES	**FINESS Array B**	**146.11**	**340**	PKPbc	**PKPbc**	**06 19 46.8**	**-0.1**
FINES	**FINESS Array B**	**146.11**	**340**	PKPbc	**PKPbc**	**06 19 46.8**	**-0.1**
	15nm,0.8s,baz=58,slow=4.7,SNR=25						
NB2	**NORSAR Subarra**	**149.70**	**351**	PKP	**PKPbc**	**06 19 56.9**	**+0.3**
	comp=Z,11nm,1.2s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**149.70**	**351**	PKPbc	**PKPbc**	**06 19 56.0**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=15,slow=4.2,SNR=4.6						
MALT	**Malatya**	**149.73**	**293**	*e*PKPbc	**PKPbc**	**06 19 58.5**	**+1.0**
ASF	**Jabal al Asfar**	**150.71**	**281**	PKPbc	**PKPbc**	**06 20 00.8**	**+0.8**
ASF	**Jabal al Asfar**	**150.71**	**281**	PKPbc	**PKPbc**	**06 20 00.8**	**+0.8**
	comp=Z,8.2nm,0.9s,baz=15,slow=1.8,SNR=12						
MMAI	**Mount Meron Ar**	**152.05**	**282**	PKPbc	**PKPbc**	**06 20 04.0**	**+0.9**
MMAI	**Mount Meron Ar**	**152.05**	**282**	PKPbc	**PKPbc**	**06 20 04.0**	**+0.9**
	comp=Z,4.4nm,0.4s,baz=70,slow=5.5,SNR=13						
AKASG	**Malin Array Be**	**152.22**	**322**	PKPbc	**PKPbc**	**06 20 01.4**	**-1.4**
AKASG				PKPab	**PKPab**	**06 20 11.1**	**-1.5**
AKASG	**Malin Array Be**	**152.22**	**322**	PKPbc	**PKPbc**	**06 20 01.4**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=52,slow=2.6,SNR=8.8						
AKASG				PKPab	**PKPab**	**06 20 11.1**	**-1.5**
	comp=Z,3.1nm,0.7s,baz=50,slow=3.0,SNR=8.2						
AK01	**Malin Array Si**	**152.23**	**322**	*e*PKPbc	**PKPbc**	**06 20 02.6**	**-0.2**
KIEV	**Kiev**	**152.23**	**322**	*e*PKPbc	**PKPbc**	**06 20 03.0**	**+0.2**
AK02	**Malin Array Si**	**152.25**	**322**	*e*PKPbc	**PKPbc**	**06 20 02.8**	**0.0**
BR131	**Keskin Array S**	**153.31**	**297**	*e*PKPbc	**PKPbc**	**06 20 05.2**	**-0.6**
BRTR	**Keskin Array B**	**153.31**	**297**	PKPbc	**PKPbc**	**06 20 04.8**	**-1.0**
BRTR	**Keskin Array B**	**153.31**	**297**	PKPbc	**PKPbc**	**06 20 04.8**	**-1.0**
	comp=Z,1.7nm,0.8s,baz=108,slow=4.0,SNR=11						
CLL	**Collm**	**158.53**	**342**	*e*PKPab	**PKPab**	**06 20 40.0**	**+0.5**
	comp=Z,5.0nm,1.0s						
BRG	**Berggiesshubel**	**158.65**	**340**	*e*P	**PKPab**	**06 20 39.6**	**-0.5**
	comp=Z,5.2nm,1.3s						
GERES	**GERESS Array B**	**160.50**	**337**	PKPab	**PKPab**	**06 20 48.0**	**-0.4**
GERES	**GERESS Array B**	**160.50**	**337**	PKPab	**PKPab**	**06 20 48.0**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=90,slow=5.3,SNR=4.8						
TORD	**Torodi Ar. Bea**	**161.91**	**178**	PKPab	**PKPab**	**06 20 54.3**	**-0.8**
TORD	**Torodi Ar. Bea**	**161.91**	**178**	PKPab	**PKPab**	**06 20 54.3**	**-0.8**
	comp=Z,1.5nm,0.9s,baz=186,slow=3.1,SNR=7.4						

IDC 21 06:05:44.9±2.1, 4.20S×129.38E, h0km, mb3.3/1, mb1 3.6/4, mb1mx3.4/21, mbtmp3.4/4, ML3.2/2, Error ellipse: s-maj=108.8km s-min=26.8km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.29**	**195**	Pn	Pn	06 09 08.1	-0.7
	0.1nm,0.3s,baz=17,slow=13,SNR=3.5						
WRA	**Warramunga Arr**	**16.38**	**163**	Pn	Pn	06 09 36.3	-0.1
	baz=347,slow=14,SNR=1.5						
ASAR	**Alice Springs**	**19.84**	**168**	P	P	06 10 17.8	+0.2
	0.2nm,0.3s,baz=350,slow=10,SNR=4.7						
MKAR	**Makanchi Array**	**65.56**	**326**	P	P	06 16 30.5	0.0
	0.1nm,0.4s,baz=122,slow=5.2,SNR=3.4						

IDC 21 06:12:55.4±1.2, 4.34S×129.22E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.7/22, mbtmp3.8/8, ML3.6/2, Error ellipse: s-maj=101.0km s-min=18.7km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.12**	**194**	Pn	Pn	06 16 16.6	-0.2
	0.1nm,0.3s,baz=28,slow=11,SNR=5.5						
FITZ				Sn	Sn	06 18 53.2	-1.1
	0.0nm,0.3s,baz=225,slow=19,SNR=1.8						
WRA	**Warramunga Arr**	**16.29**	**163**	Pn	Pn	06 16 39.7	-6.0
	0.1nm,0.3s,baz=350,slow=13,SNR=9.3						
WRA				Sn	Sn	06 19 33.6	-14
	0.1nm,0.3s,baz=345,slow=23,SNR=3.6						
ASAR	**Alice Springs**	**19.74**	**167**	P	P	06 17 26.6	-0.4
	0.3nm,0.3s,baz=347,slow=9.2,SNR=22						
ASAR				S	S	06 21 02.9	-7.6
	0.1nm,0.3s,baz=346,slow=26,SNR=4.2						
STKA	**Stephens Creek**	**29.75**	**158**	P	P	06 19 03.4	-0.3
	0.9nm,0.6s,baz=331,slow=16,SNR=1.9						
SONM	**Songino Array**	**55.69**	**342**	P	P	06 22 33.9	+0.3
	0.5nm,0.7s,baz=133,slow=6.1,SNR=2.6						
MKAR	**Makanchi Array**	**65.59**	**327**	P	P	06 23 40.1	-1.1
	0.5nm,0.7s,baz=127,slow=6.9,SNR=3.1						
ZALV	**Zalesovo Beam**	**68.87**	**334**	P	P	06 24 01.3	-0.5
	0.4nm,0.3s,baz=90,slow=4.3,SNR=1.4						
KURBB	**Kurchatov Arra**	**69.85**	**328**	P	P	06 24 08.2	+0.2
	0.8nm,0.7s,baz=126,slow=5.0,SNR=9.4						
BVAR	**Borovoye Array**	**75.42**	**328**	P	P	06 24 41.4	+0.4
	0.3nm,0.4s,baz=159,slow=4.5,SNR=2.4						
TORD	**Torodi Ar. Bea**	**127.49**	**283**	PKP	PKPdf	06 32 04.5	+1.0
	0.4nm,0.9s,baz=147,slow=2.5,SNR=2.1						

SKHL 21 06:15:03.0±1.1, 51.19N×136.91E, h29km±4km, mb4.5/8, 1C-1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRNR	**Gornyy**	**0.52**	**216**	⇓*i*Pg	Pb	06 15 13.3	-0.5
GRNR				AMB	AMB	06 15 14.4	
	2μm,0.3s						
GRNR				AMB	AMB	06 15 14.4	
	1μm,0.3s						
GRNR				*e*Sg	Sb	06 15 19.7	-1.4
GRNR				A	A	06 15 20.1	
	4μm,0.8s						
NKL	**Nikolayevsk**	**3.04**	**48**	*e*Pn	Pn	06 15 49.1	0.0
NKL				⇑*i*Pg	Pb	06 15 57.1	+0.8
NKL				AMB	AMB	06 15 59.5	
	300nm,1.0s						
NKL				AMB	AMB	06 15 59.5	
	150nm,0.5s						
NKL				*e*Sn	Sn	06 16 25.0	+0.6
NKL				*e*Sg	Sb	06 16 37.0	+4.0
NKL				A	A	06 16 43.0	
	490nm,0.5s						
EKMR	**Ekimchan**	**3.08**	**309**	*e*Pn	Pn	06 15 50.0	+0.3
EKMR				*e*Pg	Pb	06 15 58.0	+0.8
EKMR				AMB	AMB	06 16 03.5	
	91nm,0.5s						
EKMR				AMB	AMB	06 16 03.5	
	75nm,0.5s						
EKMR				AMB	AMB	06 16 03.5	
	140nm,0.5s						
EKMR				sPg	Sn	06 16 10.0	-16
EKMR				*e*Sg	Sb	06 16 38.5	+4.2
EKMR				A	A	06 16 48.9	
	290nm,0.6s						
EKMR				A	A	06 16 48.9	
	310nm,0.6s						
EKMR				A	A	06 16 48.9	
	130nm,0.6s						
TYV	**Tymovskoe**	**3.64**	**93**	*e*Pg	Pb	06 16 10.8	+4.2
TYV				AMB	AMB	06 16 15.0	
	19nm,0.6s						
TYV				AMB	AMB	06 16 15.0	
	32nm,0.6s						
TYV				sPg	Sn	06 16 24.9	-14
TYV				*e*Sg	Sb	06 16 56.1	+5.8
TYV				A	A	06 17 12.0	
	304nm,0.8s						
TYV				A	A	06 17 12.0	
	198nm,0.8s						
UGL	**Uglegorsk**	**3.93**	**121**	*e*Pg	Pb	06 16 16.5	+4.9
UGL				AMB	AMB	06 16 18.0	
	110nm,0.3s						
UGL				pPg	Pn	06 16 25.7	+24
UGL				sPg	Sn	06 16 33.0	-13
UGL				*e*Sg	Sb	06 17 07.4	+8.8
UGL				A	A	06 17 09.0	
	699nm,0.8s						
UGL				A	A	06 17 09.0	
	723nm,0.8s						
OKH	**Okha**	**4.38**	**55**	*e*Sg	Sb	06 17 23.0	+11
OKH				A	A	06 17 31.0	
	400nm,0.8s						
YSS	**Yuzh-Sakhalins**	**5.72**	**136**	*e*Sg	Sb	06 17 58.8	+8.8
BMKR	**Bomnak**	**6.02**	**309**	*e*Pn	Pn	06 16 30.2	+0.2
BMKR				*e*Pg	Pb	06 16 52.4	+5.4
BMKR				AMB	AMB	06 16 56.4	
	14nm,0.5s						
BMKR				*e*Sg	Sb	06 18 10.0	+11
BMKR				A	A	06 18 23.9	
	68nm,0.5s						
TEY	**Ternei**	**6.16**	**182**	*e*Sg	Sb	06 18 14.0	+11
TEY				*e*Sg	Sn	06 18 17.0	+36
TEY				A	A	06 18 30.0	
	86nm,1.0s						
ZEA	**Zeya**	**6.43**	**297**	*e*Pg	Pb	06 17 00.5	+6.4
ZEA				AMB	AMB	06 17 04.9	
	29nm,0.6s						
ZEA				sPg	Sn	06 17 10.8	-37
ZEA				*e*Sg	Sb	06 18 23.3	+13
ZEA				A	A	06 18 31.9	
	140nm,0.8s						
KROS	**Kirovskiy**	**6.84**	**302**	*e*Pn	Pn	06 16 41.4	+0.1
KROS				sPn	sPn	06 16 53.0	+1.2
KROS				*e*Pg	Pb	06 17 07.0	+5.9
KROS				AMB	AMB	06 17 12.4	
	9.0nm,0.5s						
KROS				AMB	AMB	06 17 12.4	
	10.0nm,0.5s						
KROS				*e*Sn	Sn	06 17 59.6	+1.4
KROS				*e*Sg	Sb	06 18 37.5	+15
KROS				A	A	06 18 44.0	
	14nm,0.6s						
KROS				A	A	06 18 44.0	
	35nm,0.6s						
KROS				A	A	06 18 44.0	
	41nm,0.6s						

*IDC **21** 06:16:44.5±2.7, 24.15N×65.79E, h0km, mb3.8/9, mb1 4.0/10, mb1mx3.7/29, mbtmp3.8/10, ML3.7/1, Error ellipse: s-maj=66.9km s-min=26.0km az=146.0*
*ISCJB **21** 06:16:48.9±2.1, 24.4N±0.3×65.7E±0.2, h33km, mb3.8/9, Error ellipse: s-maj=52.6km s-min=11.3km az=144.1*
*OMAN **21** 06:17:15.9±99.0, 18.23N×62.05E, h37km, Error ellipse: s-maj=129.6km s-min=16.7km az=244.0*

ISC 21 06:16:51.1±2.3, 24.4N±0.3×65.6E±0.2, h35km, n13, σ1§14/13, mb3.7/9, 3D, Off coast of Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBK	**Wadi Bani Khal**	**6.34**	**255**	⇓P	**Pn**	**06 18 22.2**	**-0.1**
	SNR=12						
WBK				⇓S	**Sn**	**06 19 31.2**	**-2.2**
JMDO	**Jabal Madar**	**7.18**	**256**	⇓P	**Pn**	**06 18 36.1**	**+2.5**
	SNR=7.9						
HATD	**Hatta, Dubai**	**8.64**	**275**	P	Pn	06 19 17.6	+24
	SNR=7.5						
AAK	**Ala-Archa**	**19.66**	**20**	P	**P**	**06 21 16.8**	**-0.3**
	0.2nm,0.3s,baz=238,slow=11,SNR=16						
MKAR	**Makanchi Array**	**26.07**	**27**	P	**P**	**06 22 21.0**	**-0.3**
	1.1nm,0.8s,baz=214,slow=10,SNR=9.5						
KURBB	**Kurchatov Arra**	**28.07**	**18**	P	**P**	**06 22 38.7**	**-0.5**
	0.9nm,0.8s,baz=211,slow=8.9,SNR=7.0						
ZALV	**Zalesovo Beam**	**32.87**	**21**	P	**P**	**06 23 21.5**	**-0.1**
	0.7nm,0.3s,baz=241,slow=9.7,SNR=3.7						
AKASG	**Malin Array Be**	**38.43**	**323**	P	**P**	**06 24 10.2**	**+0.9**
	0.8nm,0.5s,baz=118,slow=7.4,SNR=4.6						
FINES	**FINESS Array B**	**45.77**	**335**	P	**P**	**06 25 08.9**	**0.0**
	2.5nm,1.0s,baz=120,slow=8.5,SNR=3.4						
ARCES	**ARCESS Array B**	**51.01**	**343**	P	**P**	**06 25 49.2**	**0.0**
	5.4nm,1.0s,baz=142,slow=7.8,SNR=4.3						
TORD	**Torodi Ar. Bea**	**61.10**	**272**	P	**P**	**06 27 02.2**	**0.0**
	0.5nm,1.0s,baz=96,slow=7.9,SNR=2.4						
ILAR	**Eielson Array**	**87.66**	**13**	P	**P**	**06 29 35.0**	**-0.7**
	0.2nm,0.6s,baz=307,slow=4.5,SNR=3.7						
YKA	**Yellowknife Ar**	**93.45**	**0**	P	**P**	**06 30 02.6**	**-0.1**
	0.2nm,0.6s,baz=348,slow=4.8,SNR=7.1						

IDC 21 06:33:20.7±3.5, 19.32S×70.13W, h115km±28km, mb3.4/2, mb1 3.2/5, mb1mx3.1/19, mbtmp3.0/5, MS3.1/2, Ms1 3.2/2, ms1mx3.0/15, Error ellipse: s-maj=49.4km s-min=30.7km az=96.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.57**	**33**	P	Pn	06 34 15.7	+0.8
	0.5nm,0.3s,baz=209,slow=7.1,SNR=20						
LPAZ				LR	LR	06 35 08.2	
	comp=Z,215nm,19.4s,baz=326,slow=30						
SIV	**San Ignacio**	**9.25**	**70**	P	Pn	06 35 29.8	-1.4
	0.4nm,0.3s,baz=263,slow=9.2,SNR=8.1						
SIV				LR	LR	06 38 39.6	
	comp=Z,172nm,20.8s,slow=34						
CFAA	**Coronel Fontan**	**12.35**	**172**	P	Pn	06 36 12.7	+0.1
	baz=359,slow=13						
CFAA				S	Sn	06 38 10.2	-18
	0.0nm,0.3s,baz=259,slow=21,SNR=7.9						
TORD	**Torodi Ar. Bea**	**77.73**	**71**	P	P	06 45 05.9	+0.4
	0.7nm,0.8s,baz=242,slow=5.2,SNR=4.0						
YKA	**Yellowknife Ar**	**88.76**	**341**	P	P	06 46 00.3	-0.6
	0.3nm,0.6s,baz=135,slow=4.8,SNR=8.2						
MKAR	**Makanchi Array**	**144.50**	**33**	PKP	PKPdf	06 52 43.6	+0.1
	0.3nm,0.5s,baz=318,slow=4.5,SNR=6.3						

*JMA **21** 06:35:45.0±0.2, 37.21N×142.36E, h8km±2km, M3.5*
*IDC **21** 06:35:46.2±12.0, 37.49N×142.30E, h0km, mb3.6/3, mb1 3.5/4, mb1mx3.3/26, mbtmp3.5/4, ML3.0/1, Error ellipse: s-maj=222.1km s-min=43.9km az=138.0*

**ISC 21 06:35:45.4±3.2

2.8nm,0.7s,baz=88,slow=12,SNR=9.0
WRAB Tennant Creek 50.60 257 *e*P **P 06 45 42.8 -0.4**
1.7nm,0.6s
WRA Warramunga Arr 50.61 257 P **P 06 45 42.0 -1.3**
WRA Warramunga Arr 50.61 257 P **P 06 45 42.0 -1.3**
1.0nm,0.4s,baz=93,slow=6.7,SNR=39
AS31 Alice Springs 50.80 252 *e*P **P 06 45 43.6 -1.2**
ASAR Alice Springs 50.80 252 P **P 06 45 43.3 -1.4**
ASAR Alice Springs 50.80 252 P **P 06 45 43.3 -1.4**
4.1nm,0.7s,baz=88,slow=8.5,SNR=65
ISA Isabella 72.47 44 *e*P **P 06 48 13.1 +2.4**
6.1nm,1.5s
NVAR Mina Array Bea 74.19 41 P **P 06 48 22.5 +1.5**
NVAR Mina Array Bea 74.19 41 P **P 06 48 22.5 +1.5**
0.9nm,0.6s,baz=226,slow=9.4,SNR=8.9
LON Longmire 77.30 33 *e*P **P 06 48 40.2 +1.9**
2.0nm,0.5s
PMR Palmer 79.58 11 *e*P **P 06 48 51.6 +1.2**
1.7nm,0.6s
TXAR Lajitas Array 80.20 56 P **P 06 48 56.7 +2.0**
TXAR Lajitas Array 80.20 56 P **P 06 48 56.7 +2.0**
0.3nm,0.6s,baz=220,slow=7.7,SNR=5.4
PV01 Paradox Valley 80.50 46 *e*P **P 06 48 58.2 +1.8**
165nm,0.9s
ANMO Albuquerque 80.51 50 P **P 06 48 57.9 +1.5**
ANMO Albuquerque 80.51 50 P **P 06 48 57.9 +1.5**
0.7nm,0.7s,baz=241,slow=5.6,SNR=3.9
MCK McKinley 81.59 10 *e*P **P 06 49 02.4 +1.0**
10nm,1.0s
PDAR Pinedale Array 82.13 41 P **P 06 49 06.4 +1.5**
PDAR Pinedale Array 82.13 41 P **P 06 49 06.4 +1.5**
0.9nm,0.8s,baz=216,slow=2.6,SNR=8.8
COLA College 82.83 10 *e*P **P 06 49 08.7 +1.0**
4.7nm,1.1s
ILAR Eielson Array 82.91 11 P **P 06 49 08.9 +0.7**
ILAR Eielson Array 82.91 11 P **P 06 49 08.9 +0.7**
1.0nm,0.7s,baz=227,slow=6.2,SNR=30
YKA Yellowknife Ar 90.33 23 P **P 06 49 45.1 +0.6**
YKA Yellowknife Ar 90.33 23 P **P 06 49 45.1 +0.6**
0.5nm,0.8s,baz=233,slow=4.5,SNR=12
BRTR Keskin Array B 147.26 321 PKPbc **PKPbc 06 56 28.5 +0.8**
BRTR Keskin Array B 147.26 321 PKPbc **PKPbc 06 56 28.5 +0.8**
0.8nm,0.8s,baz=122,slow=1.9,SNR=4.0
TORD Torodi Ar. Bea 173.62 116 PKPab **PKPab 06 58 23.3 -0.4**
TORD Torodi Ar. Bea 173.62 116 PKPab **PKPab 06 58 23.3 -0.4**
0.7nm,0.9s,baz=242,slow=2.1,SNR=3.2

IDC 21 06:42:08.2±3.0, 23°61'S×70°06'E, h0km, mb3.7/8, mb1 3.7/8, mb1mx3.6/26, mbtmp3.7/8, MS4.0/1, Ms1 4.0/1, ms1mx3.4/38, Error ellipse: s-maj=103.4km s-min=25.4km az=43.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**51.27**	**77**	LR	LR	07 10 03.0	
	comp=Z,142nm,19.1s,baz=68,slow=33						
ASAR	**Alice Springs**	**58.02**	**104**	P	P	06 52 03.1	-0.2
	0.3nm,0.6s,baz=256,slow=5.9,SNR=7.3						
WRA	**Warramunga Arr**	**59.37**	**100**	P	P	06 52 12.6	-0.1
	0.5nm,0.7s,baz=256,slow=6.4,SNR=4.0						
MKAR	**Makanchi Array**	**70.94**	**9**	P	P	06 53 26.6	-0.6
	0.8nm,0.8s,baz=184,slow=5.7,SNR=6.7						
BRTR	**Keskin Array B**	**71.59**	**331**	P	P	06 53 31.5	0.0
	0.6nm,0.8s,baz=73,slow=4.8,SNR=2.9						
KURBB	**Kurchatov Arra**	**74.28**	**6**	P	P	06 53 47.6	+0.7
	0.2nm,0.3s,baz=200,slow=6.4,SNR=4.6						
AKTO	**Aktyubinsk**	**74.48**	**352**	P	P	06 53 48.1	-0.1
	0.8nm,0.8s,baz=207,slow=9.0,SNR=3.3						
SONM	**Songino Array**	**79.25**	**24**	P	P	06 54 10.0	+0.2
	0.3nm,0.4s,baz=176,slow=5.8,SNR=2.8						
ZALV	**Zalesovo Beam**	**78.28**	**9**	P	P	06 54 09.2	-0.4
	0.4nm,0.4s,baz=199,slow=4.0,SNR=3.6						
NVAR	**Mina Array Bea**	**163.59**	**24**	PKPab	PKPab	07 03 05.4	+0.4
	0.3nm,0.7s,baz=290,slow=3.7,SNR=2.7						

IDC 21 06:50:46.7±2.7, 16°36'S×72°76'W, h79km±22km, mb3.3/4, mb1 3.5/8, mb1mx3.4/22, mbtmp3.3/8, Error ellipse: s-maj=46.7km s-min=20.5km az=29.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.44**	**90**	P	Pn	06 51 53.5	+1.1
	1.2nm,0.3s,baz=277,slow=10,SNR=38						
NNA	**Nana**	**5.88**	**317**	P	Pn	06 52 11.3	-0.2
	5.4nm,0.3s,baz=126,slow=10,SNR=9.4						
NNA				S	Sn	06 53 16.7	-1.0
	5.3nm,0.3s,baz=225,slow=17,SNR=2.8						
SIV	**San Ignacio**	**11.23**	**90**	P	Pn	06 53 23.2	-1.2
	0.1nm,0.3s,baz=294,slow=12,SNR=2.7						
CFAA	**Coronel Fontan**	**15.72**	**166**	P	Pn	06 54 23.4	-0.3
	0.0nm,0.3s,baz=345,slow=8.6,SNR=4.8						
TXAR	**Lajitas Array**	**54.36**	**326**	P	P	07 00 04.9	-0.7
	0.1nm,0.5s,baz=146,slow=9.8,SNR=3.8						
NVAR	**Mina Array Bea**	**69.22**	**323**	P	P	07 01 46.2	+0.7
	0.1nm,0.5s,baz=161,slow=8.4,SNR=3.8						
TORD	**Torodi Ar. Bea**	**79.20**	**73**	P	P	07 02 43.5	-0.3
	1.3nm,0.6s,baz=250,slow=5.9,SNR=14						
YKA	**Yellowknife Ar**	**85.18**	**342**	P	P	07 03 13.6	-0.3
	0.6nm,0.7s,baz=133,slow=5.1,SNR=16						
WRA	**Warramunga Arr**	**135.16**	**217**	PKP	PKPdf	07 09 57.2	-0.9
	0.4nm,0.8s,baz=129,slow=2.7,SNR=2.8						
SONM	**Songino Array**	**148.61**	**1**	PKPbc	PKPbc	07 10 25.3	+0.4
	0.8nm,0.8s,baz=288,slow=0.5,SNR=3.2						

IDC 21 06:54:17.9±0.7, 4°59'N×127°89'E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.9/23, mbtmp3.9/10, Error ellipse: s-maj=44.8km s-min=14.3km az=81.0
NEIC 21 06:54:22.9±0.5, 4°60'N×127°91'E, h35km, mb4.2/5, Error ellipse: s-maj=30.5km s-min=9.3km az=74.0
ISCJB 21 06:54:24.3±0.5, 4°57'N±0°08'×127°78'E±0°2, h66km, mb4.0/15, Error ellipse: s-maj=30.8km s-min=9.7km az=165.8
ISC 21 06:54:26.0±0.7, 4°55'N±0°10×127°92'E±0°2, h66km, n26, σ0°94/26, mb4.1/15, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.62**	**185**	P	**P**	**06 59 20.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**22.62**	**185**	P	**P**	**06 59 20.9**	**-0.6**
	0.8nm,0.4s,baz=11,slow=8.1,SNR=9.1						
WRAB	**Tennant Creek**	**25.16**	**165**	*e*P	**P**	**06 59 46.0**	**+0.7**
	2.6nm,0.6s						
WRA	**Warramunga Arr**	**25.16**	**166**	P	**P**	**06 59 45.0**	**-0.4**
WRA	**Warramunga Arr**	**25.16**	**166**	P	**P**	**06 59 45.0**	**-0.4**
	1.9nm,0.5s,baz=345,slow=10,SNR=17						
ASAR	**Alice Springs**	**28.66**	**168**	P	**P**	**07 00 17.1**	**+0.4**
ASAR	**Alice Springs**	**28.66**	**168**	P	**P**	**07 00 17.1**	**+0.4**
	0.5nm,0.5s,baz=358,slow=8.1,SNR=12						
STKA	**Stephens Creek**	**38.52**	**161**	*e*P	**P**	**07 01 42.6**	**+0.6**
	0.8nm,1.0s						
STKA	**Stephens Creek**	**38.52**	**161**	P	**P**	**07 01 42.7**	**+0.6**
	0.8nm,0.4s,baz=330,slow=10,SNR=5.6						
USRK	**Ussuriysk Arra**	**39.65**	**5**	P	**P**	**07 01 51.9**	**+0.5**
	2.2nm,0.7s,baz=207,slow=6.4,SNR=3.8						
SONM	**Songino Array**	**46.89**	**340**	P	**P**	**07 02 49.8**	**0.0**
SONM	**Songino Array**	**46.89**	**340**	P	**P**	**07 02 49.8**	**0.0**
	0.6nm,0.7s,baz=152,slow=7.4,SNR=4.5						
PETK	**Petropavlovsk-**	**54.26**	**22**	P	**P**	**07 03 46.3**	**+1.2**
PETK	**Petropavlovsk-**	**54.26**	**22**	P	**P**	**07 03 46.3**	**+1.2**
	3.1nm,0.7s,baz=183,slow=10,SNR=3.4						
MK31	**Makanchi Array**	**57.53**	**324**	*e*P	**P**	**07 04 09.6**	**+0.9**
MKAR	**Makanchi Array**	**57.53**	**324**	P	**P**	**07 04 09.7**	**+1.0**
MKAR	**Makanchi Array**	**57.53**	**324**	P	**P**	**07 04 09.7**	**+1.0**
	1.4nm,0.4s,baz=113,slow=7.9,SNR=38						
ZALV	**Zalesovo Beam**	**60.37**	**332**	P	**P**	**07 04 27.6**	**-0.6**
ZALV	**Zalesovo Beam**	**60.37**	**332**	P	**P**	**07 04 27.6**	**-0.6**
	0.7nm,0.4s,baz=124,slow=8.2,SNR=6.5						
KURK	**Kurchatov**	**61.66**	**327**	*e*P	**P**	**07 04 37.9**	**+0.9**
	3.6nm,0.6s						
KKAR	**Karatay Array**	**63.40**	**316**	*e*P	**P**	**07 04 49.2**	**+0.4**
	1.2nm,0.6s						
ABKAR	**Akbulak array**	**72.23**	**320**	*e*P	**P**	**07 05 44.5**	**+0.4**
	0.7nm,0.2s						
ILAR	**Eielson Array**	**83.89**	**25**	P	**P**	**07 06 47.1**	**-1.2**
ILAR	**Eielson Array**	**83.89**	**25**	P	**P**	**07 06 47.1**	**-1.2**
	0.4nm,0.7s,baz=245,slow=5.0,SNR=8.2						
ARCES	**ARCESS Array B**	**90.06**	**340**	P	**P**	**07 07 16.4**	**-1.9**
ARCES	**ARCESS Array B**	**90.06**	**340**	P	**P**	**07 07 16.4**	**-1.9**
	5.2nm,1.0s,baz=65,slow=5.1,SNR=4.5						

ISK 21 07:12:40.9, 37°33'N×30°89'E, h8km, MD2.9
CSEM 21 07:12:42.2±0.3, 37°36'N×30°85'E, h10km, MD2.9, Error ellipse: s-maj=7.7km s-min=5.4km az=169.0
DDA 21 07:12:43.5, 37°44'N×31°03'E, h7km, MD2.9
ISC 21 07:12:42.6±1.1, 37°40'N±0°04×30°89'E±0°03, h7km±10km, n25, σ1°26/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCK	**Bucak**	**0.24**	**285**	*e*PG	**Pg**	**07 12 46.8**	**-0.6**
BCK				*e*SG	**Sg**	**07 12 51.0**	**+0.3**
BCK	**Bucak**	**0.24**	**285**	*e*Pg	**Pg**	**07 12 46.8**	**-0.6**
BCK				*e*Sg	**Sg**	**07 12 51.0**	**+0.3**
ISP	**Isparta**	**0.51**	**326**	*e*PG	**Pg**	**07 12 52.5**	**0.0**
ISP				*e*SG	**Sg**	**07 13 01.3**	**+2.1**
ISP	**Isparta**	**0.51**	**326**	*e*Pg	**Pg**	**07 12 52.5**	**0.0**
ISP				*e*Sg	**Sg**	**07 13 01.3**	**+2.1**
GOLH	**Golhisar**	**1.07**	**262**	*e*P	**Pb**	**07 13 02.0**	**-1.5**
GOLH				*i* S	**Sn**	**07 13 23.2**	**+3.9**
GOLH	**Golhisar**	**1.07**	**262**	*e*P	**Pb**	**07 13 02.0**	**-1.5**
GLHS	**Gihisar (BURDU**	**1.13**	**258**	*e*PN	**Pb**	**07 13 03.1**	**-1.5**
GLHS	**Gihisar (BURDU**	**1.13**	**258**	*e*Pn	**Pb**	**07 13 03.1**	**-1.5**
KONT	**Konya--Tatoy**	**1.29**	**65**	*e*Pn	**Pn**	**07 13 06.2**	**-1.0**
KONT	**Konya--Tatoy**	**1.29**	**65**	*e*Pn	**Pn**	**07 13 06.2**	**-1.0**
BOLV	**Bolvadin**	**1.32**	**2**	*i* P	**Pg**	**07 13 09.1**	**+1.2**
BOLV				*i* S	**Sb**	**07 13 24.7**	**-0.3**
BOLV	**Bolvadin**	**1.32**	**2**	*i* P	**Pg**	**07 13 09.1**	**+1.2**
BOLV				*i* S	**Sb**	**07 13 24.7**	**-0.3**
LADK	**Ladik-KONYA**	**1.42**	**55**	*e*PN	**Pn**	**07 13 08.1**	**-0.9**
LADK	**Ladik-KONYA**	**1.42**	**55**	*e*Pn	**Pn**	**07 13 08.1**	**-0.9**
KHAL	**Karahalli**	**1.47**	**312**	*i* P	**Pn**	**07 13 09.3**	**-0.4**
KHAL	**Karahalli**	**1.47**	**312**	*i* P	**Pn**	**07 13 09.3**	**-0.4**
KDHN	**Kadinhani**	**1.48**	**41**	*i* P	**Pn**	**07 13 09.3**	**-0.5**
KDHN				*i* S	**Sn**	**07 13 29.3**	**-0.3**
KDHN	**Kadinhani**	**1.48**	**41**	*i* P	**Pn**	**07 13 09.3**	**-0.5**
KDHN				*i* S	**Sn**	**07 13 29.3**	**-0.3**
AKAS	**Kas**	**1.55**	**222**	*i* P	**Pg**	**07 13 14.1**	**+1.8**
AKAS				*i* S	Sg	07 13 41.0	+8.6
FETY	**Fethiye**	**1.63**	**243**	*e*PN	**Pn**	**07 13 10.7**	**-1.1**
FETY	**Fethiye**	**1.63**	**243**	*e*Pn	**Pn**	**07 13 10.7**	**-1.1**
KIZT	**Kizilcal**	**1.67**	**28**	*e*PN	**Pn**	**07 13 12.0**	**-0.5**
KIZT	**Kizilcal**	**1.67**	**28**	*e*Pn	**Pn**	**07 13 12.0**	**-0.5**
ERMK	**Ermenek**	**1.79**	**114**	*i* P	**Pb**	**07 13 15.0**	**-0.8**
ERMK				*i* S	**Sg**	**07 13 41.0**	**+0.9**
ERMK	**Ermenek**	**1.79**	**114**	*i* P	**Pb**	**07 13 15.0**	**-0.8**

MEX 21 07:22:04.8±1.1, 16°42'N×98°16'W, h5km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.04**	**135**	*e*P	Pg	07 22 04.2	-1.8
PNIG				*i* S	Sg	07 22 06.9	+0.1
UTMO	**Huajuapan**	**1.44**	**13**	*i* P	Pn	07 22 27.9	-4.0
UTMO				*i* S	Sb	07 22 46.1	-5.2
VHO	**Vista Hermosa**	**1.51**	**64**	*i* P	Pn	07 22 28.5	-4.3
VHO				*i* S	Sn	07 22 48.4	-4.7
HUIG	**Huatulco**	**2.07**	**108**	*i* P	Pn	07 22 37.5	-2.7
HUIG				*i* S	Sn	07 23 02.7	-3.8
CAIG	**El Cayaco**	**2.12**	**287**	*i* P	Pn	07 22 38.0	-2.9
CAIG				*i* S	Sn	07 23 03.6	-4.0
YAIG	**Yautepec**	**2.58**	**340**	*e*P	Pn	07 22 44.3	-3.2
YAIG				*i* S	Sn	07 23 14.9	-4.5
CMIG	**Matias Romero**	**3.20**	**77**	*i* P	Pn	07 22 53.3	-2.6
CMIG				*i* S	Sn	07 23 31.3	-3.2

ISCJB 21 07:24:47.2±0.6, 53°0S±0°2×118°0W±0°2, h10km, mb4.0/12, MS4.0/1, Error ellipse: s-maj=30.3km s-min=13.4km az=156.5
IDC 21 07:24:47.2±0.6, 52°99S×118°10W, h0km, mb4.1/10, mb1 4.3/10, mb1mx4.1/18, mbtmp4.1/10, MS3.9/1, Ms1 3.9/1, ms1mx3.3/22, Error ellipse: s-maj=35.8km s-min=16.1km az=161.0
NEIC 21 07:24:48.8±0.4, 52°98S×118°08W, h10km, mb4.4/5, Error ellipse: s-maj=23.8km s-min=11.0km az=161.0
ISC 21 07:24:48.8±0.6, 53°0S±0°2×118°1W±0°1, h10km, n36, σ0°93/37, mb4.1/12, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**34.09**	**88**	P	**P**	**07 31 34.9**	**+1.5**
PLCA	**Paso Flores**	**34.09**	**88**	P	**P**	**07 31 34.9**	**+1.5**
	2.5nm,1.1s,baz=211,slow=5.9,SNR=2.8						
QSPA	**South Pole Qui**	**37.23**	**180**	*e*P	**P**	**07 32 00.5**	**+0.3**
	8.8nm,1.3s						
QSPA	**South Pole Qui**	**37.23**	**180**	P	**P**	**07 32 00.6**	**+0.5**
	2.7nm,1.1s,baz=122,slow=4.3,SNR=3.8						
CFAA	**Coronel Fontan**	**41.55**	**79**	P	**P**	**07 32 35.0**	**-1.4**
CFAA	**Coronel Fontan**	**41.55**	**79**	P	**P**	**07 32 35.0**	**-1.4**
	0.3nm,1.0s,baz=270,slow=5.1,SNR=3.3						
CPUP	**Villa Florida**	**51.91**	**84**	P	**P**	**07 33 56.6**	**-1.0**
CPUP	**Villa Florida**	**51.91**	**84**	P	**P**	**07 33 56.6**	**-1.0**
	0.5nm,0.5s,baz=233,slow=10,SNR=3.8						
CPUP				LR	LR	07 55 12.3	
	comp=Z,116nm,18.0s,baz=12,slow=35						
LPAZ	**La Paz**	**53.41**	**66**	*e*P	**P**	**07 34 10.7**	**+1.2**
	3.0nm,1.3s						
LPAZ	**La Paz**	**53.41**	**66**	P	**P**	**07 34 10.8**	**+1.2**
	1.5nm,0.9s,baz=81,slow=2.3,SNR=4.5						
SIV	**San Ignacio**	**57.65**	**73**	P	**P**	**07 34 39.6**	**+0.4**
SIV	**San Ignacio**	**57.65**	**73**	P	**P**	**07 34 39.6**	**+0.4**
	2.2nm,0.8s,baz=236,slow=11,SNR=8.7						
STKA	**Stephens Creek**	**70.98**	**242**	*e*P	**P**	**07 36 07.3**	**+0.8**
	0.6nm,0.9s						
STKA	**Stephens Creek**	**70.98**	**242**	P	**P**	**07 36 06.3**	**-0.1**
	2.1nm,0.8s,baz=155,slow=8.1,SNR=3.1						
ASAR	**Alice Springs**	**81.61**	**242**	P	**P**	**07 37 06.1**	**-0.9**
ASAR	**Alice Springs**	**81.61**	**242**	P	**P**	**07 37 06.1**	**-0.9**
	2.0nm,0.9s,baz=146,slow=4.6,SNR=11						
TXAR	**Lajitas Array**	**82.90**	**13**	P	**P**	**07 37 13.4**	**0.0**
TXAR	**Lajitas Array**	**82.90**	**13**	P	**P**	**07 37 13.4**	**0.0**
	0.5nm,1.0s,baz=213,slow=9.0,SNR=4.5						
WRA	**Warramunga Arr**	**84.39**	**244**	P	**P**	**07 37 20.5**	**-1.0**
WRA	**Warramunga Arr**	**84.39**	**244**	P	**P**	**07 37 20.5**	**-1.0**
	4.3nm,1.0s,baz=141,slow=4.7,SNR=12						
WRAB	**Tennant Creek**	**84.39**	**244**	*e*P	**P**	**07 37 21.1**	**-0.4**
	6.8nm,1.1s						
FITZ	**Fitzroy Crossi**	**90.52**	**238**	*e*P	**P**	**07 37 50.9**	**-0.2**
	3.3nm,0.9s						
FITZ	**Fitzroy Crossi**	**90.52**	**238**	P	**P**	**07 37 51.2**	**+0.1**
	2.8nm,0.8s,baz=170,slow=8.2,SNR=3.6						
GERES	**GERESS Array B**	**149.75**	**78**	PKPbc	**PKPbc**	**07 44 38.0**	**0.0**
GERES	**GERESS Array B**	**149.75**	**78**	PKPbc	**PKPbc**	**07 44 38.0**	**0.0**
	0.2nm,0.3s,baz=232,slow=3.2,SNR=4.2						
CLL	**Collm**	**150.37**	**73**	*i* PKPbc	**PKPbc**	**07 44 39.7**	**+0.4**
	comp=Z,6.0nm,1.0s						
CLL				*i* pPKPbc	**PKPab**	**07 44 44.7**	**-1.1**
CLL				*i* (PKPab)	PKiKP	07 44 48.8	+8.7
	comp=Z,6.0nm,1.0s						
SONM	**Songino Array**	**151.57**	**278**	PKPbc	**PKPbc**	**07 44 44.3**	**+1.9**
SONM	**Songino Array**	**151.57**	**278**	PKPbc	**PKPbc**	**07 44 44.3**	**+1.9**
	comp=Z,1.6nm,0.8s,baz=150,slow=3.4,SNR=5.4						
NOA	**NORSAR Array B**	**151.88**	**53**	PKPbc	**PKPbc**	**07 44 43.0**	**+0.4**
NOA	**NORSAR Array B**	**151.88**	**53**	PKPbc	**PKPbc**	**07 44 43.0**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=272,slow=2.2,SNR=3.7						
BRTR	**Keskin Array B**	**156.58**	**113**	PKPab	**PKPab**	**07 45 11.9**	**-0.7**
BRTR	**Keskin Array B**	**156.58**	**113**	PKPab	**PKPab**	**07 45 11.9**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=188,slow=5.0,SNR=7.0						
MKAR	**Makanchi Array**	**165.53**	**253**	PKPab	**PKPab**	**07 45 50.9**	**-0.5**
MKAR	**Makanchi Array**	**165.53**	**253**	PKPab	**PKPab**	**07 45 50.9**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=110,slow=6.6,SNR=13						
ZALV	**Zalesovo Beam**	**166.35**	**283**	PKPab	**PKPab**	**07 45 54.0**	**-0.7**
ZALV	**Zalesovo Beam**	**166.35**	**283**	PKPab	**PKPab**	**07 45 54.0**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=116,slow=3.4,SNR=3.2						

IDC 21 07:41:01.2±4.1, 2°52'S×103°65'E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/23, mbtmp3.6/4, Error ellipse: s-maj=241.7km s-min=25.3km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.61**	**122**	P	P	07 47 52.2	-0.1
	0.2nm,0.4s,baz=304,slow=11,SNR=8.8						
ASAR	**Alice Springs**	**36.03**	**128**	P	P	07 48 04.2	-0.3
	0.8nm,0.4s,baz=300,slow=7.5,SNR=28						
STKA	**Stephens Creek**	**46.12**	**133**	P	P	07 49 27.6	+0.2
	0.6nm,0.4s,baz=304,slow=7.3,SNR=4.5						
MKAR	**Makanchi Array**	**52.59**	**342**	P	P	07 50 16.6	-0.1
	0.1nm,0.4s,baz=150,slow=9.2,SNR=4.1						

IDC 21 07:48:34.2±2.1, 4°43N×127°13E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/23, mbtmp3.6/4, Error ellipse: s-maj=170.1km s-min=24.3km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.23**	**164**	P	P	07 54 00.1	-1.9
	0.9nm,0.6s,baz=344,slow=10,SNR=7.7						
ASAR	**Alice Springs**	**28.70**	**167**	P	P	07 54 34.6	+1.4
	0.1nm,0.5s,baz=354,slow=7.5,SNR=2.8						
STKA	**Stephens Creek**	**38.64**	**160**	P	P	07 56 00.0	+0.5
	1.2nm,0.8s,baz=352,slow=13,SNR=3.0						
MKAR	**Makanchi Array**	**57.22**	**325**	P	P	07 58 23.2	-0.1
	0.5nm,0.6s,baz=125,slow=8.2,SNR=4.5						

ATH 21 08:06:46.6, 36°05N×21°53E, h25km±1km, MD4.4/16, ML4.5
NEIC 21 08:06:46.7, 36°05N×21°53E, h25km, mb4.3/10, ML4.5(ATH), After ATH.
CSEM 21 08:06:47.0±0.2, 36°06N×21°42E, h20km, mb4.4/12, Ms3.7, Error ellipse: s-maj=5.1km s-min=3.3km az=43.0
THE 21 08:06:48.5, 36°14N×21°54E, h16km±3km, ML4.5/6, Error ellipse: s-maj=3.4km s-min=0.9km az=224.0
IDC 21 08:06:49.5±3.5, 36°19N×21°73E, h33km±27km, mb3.8/20, mb1 3.9/26, mb1mx3.9/38, mbtmp3.8/26, ML3.9/6, MS3.6/6, Ms1 3.6/6, ms1mx3.1/46, Error ellipse: s-maj=15.3km s-min=13.4km az=167.0
HLW 21 08:06:49.2, 36°18N×22°15E, h33km±40km, Md4.4, Ml4.0
BEO 21 08:06:50.2±0.8, 36°42N×21°32E, h0km, ML4.4/8
PDG 21 08:06:50.1±0.4, 36°42N×21°42E, h18km±4km, ML4.4/8, Error ellipse: s-maj=4.6km s-min=1.8km az=90.0
VIE 21 08:06:59.7±0.6, 37°05N×21°01E, h15km±14km, mb3.5/2, Ms3.7/2, Error ellipse: s-maj=15.7km s-min=4.4km az=148.0
ISC 21 08:06:47.6±1.0, 36°16N±0°04×21°43E±0°03, h23km±7km, n465, σ1°41/466, mb4.2/29, MS3.7/5, 34C-20D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.78**	**19**	P	**Pn**		**+0.2**
PYL				S	**Sn**		**+0.7**
DYR	**Agios Nikonas**	**0.94**	**50**	P	**Pn**		**-0.2**
DYR				S	**Sn**		**+0.5**
DYR	**Agios Nikonas**	**0.94**	**50**	*e*PN	**Pn**		**-0.2**
DYR				*e*SN	**Sn**		**+0.5**
DYR	**Agios Nikonas**	**0.94**	**50**	P	**Pn**		**0.0**
DYR				S	**Sn**		**+0.5**
ITM	**Ithomi**	**1.09**	**21**	P	**Pb**		**+0.5**
ITM				S	**Sn**		**+1.4**
ITM	**Ithomi**	**1.09**	**21**	*e*PN	**Pb**		**+1.0**
ITM				*e*SN	**Sn**		**+3.8**
ITM	**Ithomi**	**1.09**	**21**	P	**Pb**		**+0.5**
ITM	**Ithomi**	**1.09**	**21**	*e*Pn	**Pb**		**+1.0**
ITM				S	**Sn**		**+1.4**
ITM				*e*Sn	**Sn**		**+3.8**
KYTH	**Kithira**	**1.30**	**84**	P	**Pb**		**+1.1**
KYTH	**Kithira**	**1.30**	**84**	*e*PN	**Pn**		**+0.2**
KYTH	**Kithira**	**1.30**	**84**	*e*Pn	**Pn**		**+0.2**
KYTH	**Kithira**	**1.30**	**84**	P	**Pb**		**+1.1**
VLI	**Veliai**	**1.33**	**65**	P	**Pb**		**-0.3**
VLI				S	**Sb**		**+0.5**
VLI	**Veliai**	**1.33**	**65**	*e*PN	**Pb**		**-0.2**
VLI				*e*SN	**Sb**		**+1.2**
VLI	**Veliai**	**1.33**	**65**	*e*Pn	**Pb**		**-0.2**
VLI				S	**Sb**		**+0.1**
VLI				*e*Sn	**Sb**		**+1.2**
AMT	**Artemida-Makis**	**1.39**	**9**	P	**Pb**		**+0.4**
VLX	**Vlachokerasia**	**1.43**	**32**	P	**Pb**		**-0.2**
VLX				S	**Sb**		**+0.2**
VLX	**Vlachokerasia**	**1.43**	**32**	*e*PN	**Pb**		**-0.2**
VLX				*e*SN	**Sb**		**+1.9**
VLX	**Vlachokerasia**	**1.43**	**32**	P	**Pb**		**-0.2**
VLX				S	**Sb**		**+0.2**
VLX				*e*Sn	**Sb**		**+1.9**
RLS	**Riolos of Patr**	**1.90**	**1**	P	**Pb**		**+1.8**
RLS				S	**Sb**		**+0.3**
RLS	**Riolos of Patr**	**1.90**	**1**	*e*PB	**Pb**		**-0.5**
RLS				*e*SN	**Sb**		**+2.0**
RLS	**Riolos of Patr**	**1.90**	**1**	P	**Pn**		**+1.8**
RLS	**Riolos of Patr**	**1.90**	**1**	*e*Pb	**Pb**		**-0.5**
RLS				S	**Sb**		**+0.3**
RLS				*e*Sn	**Sb**		**+2.0**
DIDY	**Didyma**	**1.94**	**47**	P	**Pn**		**+0.1**
DIDY				S	**Sn**		**+0.6**
DIDY	**Didyma**	**1.94**	**47**	P	**Pn**		**+0.1**
DIDY				S	**Sn**		**+0.6**
KLV	**Kalavryta, Ach**

ATAL	Atalanti	2.83	26	P		Pn	08 07 31.8	+0.4	NKY	Niksic	6.91	345	⇓*i*Pn		Pn	08 08 28.6	+1.1	
MAKR	Makrakomi, Fth	2.90	11	P		Pb	08 07 36.0	-2.7	HMAT	Matruh	6.92	135	P		Pn	08 08 24.1	-3.4	
MAKR	Makrakomi, Fth	2.90	11	P		Pb	08 07 36.0	-2.7		baz=139								
AGG	Agios Georgios	2.94	14	P		Pn	08 07 35.0	+2.0	HMAT				AMP			08 09 00.0		
AGG				S		Sn	08 08 09.9	+2.2		comp=E,80µm,0.3s,logA/T=5.4,baz=139								
AGG	Agios Georgios	2.94	14	*e*PN		Pn	08 07 35.2	+2.2	SELS	Selova	7.05	358	⇑*i*Pn		Pn	08 08 29.1	-0.4	
AGG	Agios Georgios	2.94	14	P		Pn	08 07 35.0	+2.0	SELS				*e*Sn		Sn	08 09 44.6	-4.3	
AGG				S		Sn	08 08 09.9	+2.2	BRY	Bratogost	7.09	343	⇑*i*Pn		Pn	08 08 30.6	+0.5	
IDI	Anoyia	2.94	106	P		Pn	08 07 33.0	0.0	BRY				*e*Sn		Sn	08 09 46.6	-3.5	
IDI	Anoyia	2.94	106	*e*Pn		Pn	08 07 33.3	+0.3	BRY	Bratogost	7.09	343	⇑*i*Pn		Pn	08 08 30.6	+0.5	
IDI	Anoyia	2.94	106	*e*PN		Pn	08 07 33.0	0.0	ZAPS	Zavoj	7.17	7	⇑*i*Pn		Pn	08 08 33.3	+2.3	
IDI	Anoyia	2.94	106	P		Pn	08 07 33.0	0.0	STON	Ston	7.30	338	*e*Pn		Pn	08 08 32.4	-0.4	
IDI	Anoyia	2.94	106	*e*Pn		Pn	08 07 33.3	+0.3	STON				Sn		Sn	08 09 49.4	-5.4	
SIVA	Sivas	2.98	112	P		Pn	08 07 34.1	+0.7	STON	Ston	7.30	338	*e*PN		Pn	08 08 32.3	-0.4	
SIVA	Sivas	2.98	112	*e*PN		Pn	08 07 33.7	+0.3	UPM	Unac-Piva	7.30	345	⇑*i*Pn		Pn	08 08 34.6	+1.7	
SIVA	Sivas	2.98	112	*e*Pn		Pn	08 07 33.7	+0.3	UPM				*e*Sn		Sn	08 09 52.5	-2.7	
SIVA	Sivas	2.98	112	P		Pn	08 07 34.1	+0.7	PLE	Pljevlja	7.33	348	⇓*i*Pn		Pn	08 08 34.6	+1.3	
SMIA	Simia	3.06	27	P		Pn	08 07 35.1	+0.5	PLE				*e*Sn		Sn	08 09 51.8	-4.1	
SMIA	Simia	3.06	27	P		Pn	08 07 35.1	+0.5	SWA2		7.68	153	P		Pn	08 08 36.4	-1.7	
MRKA	Markates	3.07	33	P		Pn	08 07 35.2	+0.5		baz=157								
MRKA	Markates	3.07	33	P		Pn	08 07 35.2	+0.5	SWA2				S		Sn	08 09 58.1	-6.4	
THR6	Thira Island,	3.21	85	P		Pn	08 07 36.6	0.0		baz=157								
THR3	Thira Island,	3.22	84	P		Pn	08 07 36.3	-0.4	SWA2				AMP			08 10 00.0		
THR2	Thira island,	3.25	84	P		Pn	08 07 37.0	-0.1		comp=E,220µm,0.4s,logA/T=5.7,baz=157								
THR1	Thera Island	3.26	85	P		Pn	08 07 36.8	-0.6	SWA2		7.68	153	P		Pn	08 08 36.4	-1.7	
SKIA	Skiathos	3.41	28	P		Pn	08 07 39.6	+0.3	GRUS	Gruza	7.74	356	⇓*i*Pn		Pn	08 08 38.7	-0.1	
SKIA	Skiathos	3.41	28	P		Pn	08 07 39.6	+0.3	GRUS				*e*Sn		Sn	08 10 01.1	-4.6	
APE	Apeiranthos	3.42	73	P		Pn	08 07 39.6	+0.1	GRUS	Gruza	7.74	356	⇓*i*Pn		Pn	08 08 38.7	-0.1	
APE	Apeiranthos	3.42	73	*e*PN		Pn	08 07 40.0	+0.5	BBLS	Lazići	7.85	349	*e*Pn		Pn	08 08 40.1	-0.3	
APE	Apeiranthos	3.42	73	P		Pn	08 07 39.6	+0.1	BBLS				*e*Sn		Sn	08 10 04.1	-4.5	
APE	Apeiranthos	3.42	73	*e*Pn		Pn	08 07 40.0	+0.5	BBLS	Lazići	7.85	349	*e*Pn		Pn	08 08 40.1	-0.3	
THL	Klokotos Trika	3.43	8	P		Pn	08 07 42.0	+2.4	DIVS	Divibare	8.01	353	P		Pn	08 08 42.2	-0.3	
THL	Klokotos Trika	3.43	8	P		Pn	08 07 42.0	+2.4	DIVS	Divibare	8.01	353	⇓*i*Pn		Pn	08 08 42.1	-0.4	
LAST	Lasithi	3.44	106	P		Pn	08 07 39.8	-0.1	DIVS				*e*Sn		Sn	08 10 08.2	-4.2	
LAST	Lasithi	3.44	106	*e*PN		Pn	08 07 40.2	+0.3	DIVS	Divibare	8.01	353	P		Pn	08 08 42.2	-0.3	
LAST	Lasithi	3.44	106	P		Pn	08 07 39.8	-0.1	HBRG	Burj al 'Arab	8.97	126	P		Pn	08 08 51.5	-4.2	
LAST	Lasithi	3.44	106	*e*Pn		Pn	08 07 40.2	+0.3		baz=128								
NEO	Neokhori	3.45	24	*e*PN		Pn	08 07 42.4	+2.5	FGSL	Fruska Gora	9.07	353	⇑*i*Pn		Pn	08 08 56.2	-0.9	
NEO	Neokhori	3.45	24	*e*Pn		Pn	08 07 42.4	+2.5	FRGS	Fruska Gora	9.07	353	⇑*i*Pn		Pn	08 08 56.2	-0.9	
IGT	Igoumenitsa	3.48	346	P		Pn	08 07 42.1	+1.8	BLY	Banja Luka	9.17	341	*e*Pn		Pn	08 08 59.9	+1.5	
IGT	Igoumenitsa	3.48	346	P		Pn	08 07 42.1	+1.8	BLY				*e*Sn		Sn	08 10 36.5	-4.3	
XOR	Xorichti	3.49	23	P		Pn	08 07 41.0	+0.5	BLY	Banja Luka	9.17	341	*e*PN		Pn	08 08 59.9	+1.5	
XOR	Xorichti	3.49	23	P		Pn	08 07 41.0	+0.5	GZR	Gura Zlata	9.28	6	⇑*i*P		Pn	08 09 00.9	+0.9	
NPS	Neapolis	3.52	104	*e*PN		Pn	08 07 40.0	-0.9	GZR	Gura Zlata	9.28	6	⇑*i*P		Pn	08 09 00.9	+0.9	
NPS	Neapolis	3.52	104	*e*Pn		Pn	08 07 40.0	-0.9	BZS	Buzias	9.45	1	⇑*i*Pn		Pn	08 09 02.2	0.0	
JAN	Janina	3.52	353	P		Pn	08 07 43.2	+2.3	BZS	Buzias	9.45	1	⇑*i*Pn		Pn	08 09 02.2	0.0	
JAN	Janina	3.52	353	P		Pn	08 07 43.2	+2.3	ARR	Arges	9.51	14	⇑*i*Pn		Pn	08 09 04.2	+1.0	
AOS	Alonnisos	3.58	32	P		Pn	08 07 41.1	-0.6	ARR	Arges	9.51	14	⇑*i*Pn		Pn	08 09 04.2	+1.0	
AOS	Alonnisos	3.58	32	*e*PN		Pn	08 07 43.2	+1.5	CSS	Prodhromos	9.77	94	*e*Sn		Sn	08 10 44.2	-11	
AOS	Alonnisos	3.58	32	P		Pn	08 07 41.1	-0.6		comp=E,7.7nm,0.4s								
AOS	Alonnisos	3.58	32	*e*Pn		Pn	08 07 43.2	+1.5	CSS	Prodhromos	9.77	94	*e*Sn		Sn	08 10 44.2	-11	
XRY	Khrisi	3.71	109	*e*PN		Pn	08 07 43.4	0.0		comp=E,7.7nm,0.4s								
XRY	Khrisi	3.71	109	*e*Pn		Pn	08 07 43.4	0.0	NVLJ	Novalja	9.77	331	*e*Pn		Pn	08 09 07.5	+0.9	
KEK	Kerkira	3.77	340	P		Pn	08 07 46.3	+1.9	NVLJ				Sn		Sn	08 10 50.5	-5.1	
KEK	Kerkira	3.77	340	P		Pn	08 07 46.3	+1.9	NVLJ	Novalja	9.77	331	*e*Pn		Pn	08 09 07.5	+0.9	
LIT	Litokhoron	4.02	12	P		Pn	08 07 49.7	+1.9	MLR	Muntele Rosu	9.93	19	Pn		Pn	08 09 11.1	+2.2	
LIT	Litokhoron	4.02	12	*e*PN		Pn	08 07 50.5	+2.7	MLR	Muntele Rosu	9.93	19	⇓*i*P		Pn	08 09 10.8	+1.9	
LIT	Litokhoron	4.02	12	P		Pn	08 07 49.7	+1.9	MLR	Muntele Rosu	9.93	19	Pn		Pn	08 09 11.1	+2.2	
LIT	Litokhoron	4.02	12	*e*Pn		Pn	08 07 50.5	+2.7		comp=E,0.1nm,0.3s,baz=148,slow=8.2,SNR=6.2								
ZKR	Zakros	4.03	104	P		Pn	08 07 48.5	+0.6	MLR	Muntele Rosu	9.93	19	⇓*i*P		Pn	08 09 10.8	+1.9	
ZKR	Zakros	4.03	104	*e*PN		Pn	08 07 47.7	-0.2	MLR	Muntele Rosu	9.93	19	Pn		Pn	08 09 11.1	+2.2	
KZN	Kozani	4.15	4	P		Pn	08 07 51.9	+2.3	HNAT	Natroun	10.09	128	P		Pn	08 09 07.1	-4.0	
KZN	Kozani	4.15	4	*e*PN		Pn	08 07 52.5	+2.9		baz=130								
KZN	Kozani	4.15	4	P		Pn	08 07 51.9	+2.3	HMYD	Mayadein	10.10	126	P		Pn	08 09 06.8	-4.5	
KZN	Kozani	4.15	4	*e*Pn		Pn	08 07 52.5	+2.9		baz=128								
PAIG	Paliouri	4.16	25	P		Pn	08 07 50.6	+1.0	BR131	Keskin Array S	10.28	66	*e*Pn		Pn	08 09 15.9	+2.2	
PAIG	Paliouri	4.16	25	P		Pn	08 07 50.6	+1.0		comp=E,3.1nm,0.6s								
NEST	Nestorio	4.26	356	P		Pn	08 07 54.5	+3.4	BR131	Keskin Array S	10.28	66	*e*Pn		Pn	08 09 15.9	+2.2	
NEST	Nestorio	4.26	356	P		Pn	08 07 54.5	+3.4		comp=E,3.1nm,0.6s								
CHOS	Chios island	4.30	58	P		Pn	08 07 51.0	-0.7	BRTR	Keskin Array B	10.28	66	Pn		Pn	08 09 16.1	+2.4	
CHOS	Chios island	4.30	58	*e*PN		Pn	08 07 53.0	+1.3	BRTR	Keskin Array B	10.28	66	Pn		Pn	08 09 16.1	+2.4	
CHOS	Chios island	4.30	58	P		Pn	08 07 51.0	-0.7		comp=E,0.1nm,0.3s,baz=245,slow=12,SNR=6.8								
CHOS	Chios island	4.30	58	*e*Pn		Pn	08 07 53.0	+1.3	BRTR	Keskin Array B	10.28	66	Pn		Pn	08 09 16.1	+2.4	
FNA	Florina	4.62	359	P		Pn	08 07 57.8	+1.8	CFR	Carcaliu	10.34	27	⇓*i*P		Pn	08 09 14.4	-0.1	
FNA	Florina	4.62	359	P		Pn	08 07 57.8	+1.8	CFR	Carcaliu	10.34	27	⇓*i*P		Pn	08 09 14.4	-0.1	
HORT	Hortiatis	4.62	16	P		Pn	08 07 57.0	+0.9	BOJS	Bojanci	10.44	335	*e*Pn		Pn	08 09 15.9	+0.1	
HORT	Hortiatis	4.62	16	P		Pn	08 07 57.0	+0.9	BOJS				*e*Sn		Sn	08 11 05.5	-6.5	
THE	Thessaloniki	4.62	15	P		Pn	08 07 57.4	+1.4	BOJS	Bojanci	10.44	335	*e*Pn		Pn	08 09 15.9	+0.1	
THE	Thessaloniki	4.62	15	P		Pn	08 07 57.4	+1.4	PLOR	Plostina	10.45	21	⇑*i*P		Pn	08 09 15.9	-0.1	
NIS1	Nisyros Isl.	4.66	83	P		Pn	08 07 58.6	+2.1	PLOR	Plostina	10.45	21	⇑*i*P		Pn	08 09 15.9	-0.1	
NIS1	Nisyros Isl.	4.66	83	*e*PN		Pn	08 07 57.9	+1.4	VRI	Vrincioaia	10.49	21	⇓*i*P		Pn	08 09 17.6	+1.1	
NIS1	Nisyros Isl.	4.66	83	*e*Pn		Pn	08 07 57.9	+1.4	VRI	Vrincioaia	10.49	21	⇓*i*P		Pn	08 09 17.6	+1.1	
NIS1	Nisyros Isl.	4.66	83	P		Pn	08 07 58.6	+2.1	KOT	Kottamia	10.71	123	P		Pn	08 09 15.7	-3.9	
KARP	Karpathos	4.69	96	*e*PN		Pn	08 07 56.9	-0.1		baz=124								
KARP	Karpathos	4.69	96	*e*Pn		Pn	08 07 56.9	-0.1	KOT				AMP			08 11 00.0		
TIP	Timpagrande	4.78	311	*e*PN		Pn	08 08 00.2	+2.0		comp=E,40µm,0.7s,logA/T=4.8,baz=124								
TIP	Timpagrande	4.78	311	*e*Pn		Pn	08 08 00.2	+2.0	HSAF	As Saff	10.72	125	P		Pn	08 09 16.1	-3.6	
GRG	Griva	4.85	9	P		Pn	08 08 00.6	+1.4		baz=127								
GRG	Griva	4.85	9	P		Pn	08 08 00.6	+1.4	HFRF	Wahat Farafira	10.72	145	P		Pn	08 09 18.0	-1.7	
BIA	Bitola	4.85	359	P		Pn	08 08 01.1	+1.9		baz=148								
BIA	Bitola	4.85	359	*e*Pn		Pn	08 08 01.2	+2.0	HFRF	Wahat Farafira	10.72	145	P		Pn	08 09 18.0	-1.7	
BIA	Bitola	4.85	359	P		Pn	08 08 01.1	+1.9	GLL	Jalalah	10.85	124	P		Pn	08 09 18.1	-3.3	
CEL	Celeste	4.89	297	*e*Pn		Pn	08 08 02.1	+2.3		baz=126								
	80nm,0.5s								HHAG	Hagoal	10.88	122	P		Pn	08 09 17.4	-4.4	
CEL	Celeste	4.89	297	*e*Pn		Pn	08 08 02.1	+2.3		baz=123								
	80nm,0.5s								AMAG	Maghara	11.27	116	P		Pn	08 09 23.4	-3.9	
SOH	Sokhos	4.89	17	P		Pn	08 08 01.6	+1.8		baz=117								
SOH	Sokhos	4.89	17	*e*PN		Pn	08 08 02.9	+3.1	SOKA	Soboth	11.55	337	⇓*i*Pn		Pn	08 09 31.3	+0.2	
SOH	Sokhos	4.89	17	P		Pn	08 08 01.6	+1.8	SOKA				*i*Sn		Sn	08 11 31.2	-8.1	
SOH	Sokhos	4.89	17	*e*Pn		Pn	08 08 02.9	+3.1	SOKA	Soboth	11.55	337	⇓*i*Pn		Pn	08 09 31.3	+0.2	
KNT	Kendrikon	5.12	12	P		Pn	08 08 04.3	+1.4	SOKA				*i*Sn		Sn	08 11 31.2	-8.1	
KNT	Kendrikon	5.12	12	P		Pn	08 08 04.3	+1.4	SOKA	Soboth	11.55	337	Pn		Pn	08 09 31.3	+0.2	
VAY	Valandovo	5.23	9	P		Pn	08 08 05.4	+1.0	OBKA	Obir	11.56	336	⇑*i*Pn		Pn	08 09 30.9	-0.3	
VAY	Valandovo	5.23	9	*e*Pn		Pn	08 08 05.5	+1.2	OBKA				⇓*i*Sn		Sn	08 11 34.4	-5.1	
VAY	Valandovo	5.23	9	*e*Pn		Pn	08 08 01.0	-3.4	OBKA	Obir	11.56	336	⇑*i*Pn		Pn	08 09 30.9	-0.3	
VAY	Valandovo	5.23	9	P		Pn	08 08 05.4	+1.0	OBKA				*i* Sn		Sn	08 11 30.6	-8.9	
SRS	Serrai	5.23	18	P		Pn	08 08 05.3	+0.9	OBKA	Obir	11.56	336	Pn		Pn	08 09 30.9	-0.3	
SRS	Serrai	5.23	18	P		Pn	08 08 05.3	+0.9	BUR08	Bucovina Array	11.79	13	⇑*i*P		Pn	08 09 35.8	+1.5	
TIR	Tirane	5.32	347	P		Pn	08 08 07.9	+2.3	BUR08	Bucovina Array	11.79	13	⇑*i*P		Pn	08 09 35.8	+1.5	
TIR	Tirane	5.32	347	*e*Pn		Pn	08 08 08.0	+2.3	PSZ	Piszkesteto	11.81	355	*e*Pn		Pn	08 09 34.9	+0.3	
	85nm,0.3s									comp=E,16nm,0.8s								
TIR	Tirane	5.32	347	*e*Pn		Pn	08 08 07.7	+2.1	PSZ	Piszkesteto	11.81	355	⇑*i*P		Pn	08 09 34.8	+0.2	
TIR				*e*Sn		Sn	08 09 04.4	-1.8	PSZ	Piszkesteto	11.81	355	*e*Pn		Pn	08 09 34.9	+0.3	
TIR	Tirane	5.32	347	*e*Pn		Pn	08 08 07.7	+2.1		comp=E,16nm,0.8s								
TIR				*e*Sn		Sn	08 09 04.4	-1.8	BUR08	Bucovina Ar. S	11.81	13	*e*Pn		Pn	08 09 35.4	+0.7	
KAVA	Kavala	5.40	26	P		Pn	08 08 07.7	+1.0	BUR08	Bucovina Ar. S	11.81	13	*e*Pn		Pn	08 09 35.4	+0.7	
KAVA	Kavala	5.40	26	P		Pn	08 08 07.7	+1.0	MMAI	Mount Meron Ar	11.93	101	Pn		Pn	08 09 32.0	-4.3	
ARG	Arkhangelos	5.41	87	P		Pn	08 08 07.3	+0.4	MMAI				Sn		Sn	08 11 34.9	-14	
ARG	Arkhangelos	5.41	87	P		Pn	08 08 07.3	+0.4	MMAI	Mount Meron Ar	11.93	101	Pn		Pn	08 09 32.0	-4.3	
NVR	Nevrokopi	5.52	19	P		Pn	08 08 10.3	+1.9		comp=E,1.7nm,0.3s,baz=313,slow=11,SNR=3.8								
NVR	Nevrokopi	5.52	19	P		Pn	08 08 10.3	+1.9	MMAI				Sn		Sn	08 11 34.9	-14	
PHP	Peshkopia	5.57	352	P		Pn	08 08 10.7	+1.6		comp=E,6.8nm,0.3s,baz=290,slow=26,SNR=6.4								
PHP	Peshkopia	5.57	352	P		Pn	08 08 10.7	+1.6	MMAI	Mount Meron Ar	11.93	101	Pn		Pn	08 09 32.0	-4.3	
CUC	Castrocucco	5.85	313	*e*Pn		Pn	08 08 16.4	+3.4	MMAI				Sn		Sn	08 11 34.9	-14	
	56nm,0.6s								HNKL	Nakhl	12.22	117	P		Pn	08 09 36.3	-4.0	
CUC	Castrocucco	5.85	313	*e*Pn		Pn	08 08 16.4	+3.4		baz=118								
	56nm,0.6s								HNKL				AMP			08 12 33.9		
ALN	Alexandroupoli	5.95	36	P		Pn	08 08 14.9	+0.6		comp=N,30µm,1.2s,logA/T=4.4,baz=118								
ALN	Alexandroupoli	5.95	36	P		Pn	08 08 14.9	+0.6	GRB	Gharib	12.41	126	P		Pn	08 09 39.6	-3.3	
ULC	Ulcinj	6.04	344	⇑*i*Pn		Pn	08 08 15.9	+0.4		baz=128								
ULC				*e*Sn		Sn	08 09 22.0	-2.0	VYHS	Vyhne	12.47	352	*e*PN		Pn	08 09 42.8	-0.8	
ULC	Ulcinj	6.04	344	⇑*i*Pn		Pn	08 08 15.9	+0.4	VYHS	Vyhne	12.47	352	*e*SN		Sn	08 11 55.4	-6.4	
BUM	Brajici-Budva	6.44	343	⇑*i*Pn		Pn	08 08 21.6	+0.5	HDK1	Dakhla	12.60	145	P		Pn	08 09 43.1	-2.4	
BUM				*e*Sn		Sn	08 09 31.0	-2.9		baz=147								
BUM	Brajici-Budva	6.44	343	⇑*i*Pn		Pn	08 08 21.6	+0.5	HDK1	Dakhla	12.60	145	P		Pn	08 09 43.1	-2.4	
PDG	Podgorica	6.49	346	*e*Pn		Pn	08 08 22.1	+0.5	CRVS	Cervenica-Dubn	12.73	0	*e*PN		Pn	08 09 49.3	+2.1	
PDG				*e*Sn		Sn	08 09 31.9	-2.9	KOLS	Kolonicke sedl	12.78	3	*e*		P	08 09 55.8	-2.9	
PDG	Podgorica	6.49	346	⇑*i*Pn		Pn	08 08 22.4	+0.8	KOLS				*e*			08 12 05.6		
TTG	Podgorica	6.49	346	⇑*i*Pn		Pn	08 08 22.4	+0.8	EIL	Elat	13.06	116	Pn		Pn	08 09 48.1	-3.7	
TTG				*e*Sn		Sn	08 09 32.3	-2.5	EIL				Sn		Sn	08 12 02.2	-14	
PVY	Plav	6.53	350	⇓*i*Pn		Pn	08 08 24.1	+1.8	EIL	Elat	13.06	116	Pn		Pn	08 09 48.1	-3.7	
PVY				*e*Sn		Sn	08 09 33.6	-2.5		comp=N,0.8nm,0.3s,baz=309,slow=13,SNR=5.7								
PVY	Plav	6.53	350	⇓*i*Pn		Pn	08 08 24.1	+1.8	EIL				Sn		Sn	08 12 02.2	-14	
VTS	Vitosha	6.57	12	P		Pn	08 08 24.7	+1.8		comp=N,2.0nm,0.3s,baz=101,slow=16,SNR=4.9								
VTS	Vitosha	6.57	12	⇑*i*P		Pn	08 08 24.4	+1.5	EIL	Elat	13.06	116	Pn		Pn	08 09 48.1	-3.7	
VTS	Vitosha	6.57	12	*e*Pn		Pn	08 08 24.4	+1.5	EIL				Sn		Sn	08 12 02.2	-14	
VTS				*e*Sn		Sn	08 09 35.6	+1.5	DAVOX	Davos/Dischmat	13.68	324	Pn		Pn	08 10 04.5	+4.2	
VTS	Vitosha	6.57	12	*e*Pn		Pn	08 08 24.4	+1.5	DAVOX				Sn		Sn	08 12 26.7	-4.9	
VTS	Vitosha	6.57	12	P		Pn	08 08 24.7	+1.8	DAVOX	Davos/Dischmat	13.68	324	Pn		Pn	08 10 04.5	+4.2	
BARS	Barje	6.66	2	⇓*i*Pn		Pn	08 08 24.8	+0.9		comp=N,0.4nm,0.3s,baz=162,slow=19,SNR=2.6								
BARS				*e*Sn		Sn	08 09 35.2	-3.9	DAVOX				Sn		Sn	08 12 26.7	-4.9	
BARS	Barje	6.66	2	⇓*i*Pn		Pn	08 08 24.8	+0.9		comp=N,0.5nm,0.3s,baz=343,slow=19,SNR=4.1								
HCY	Herceg Novi	6.68	341	⇑*i*Pn		Pn	08 08 24.2	-0.1	DAVOX	Davos/Dischmat	13.68	324	Pn		Pn	08 10 04.5	+4.2	
HCY				*e*Sn		Sn	08 09 36.5	-3.1	DAVOX				Sn		Sn	08 12 26.7	-4.9	
HCY	Herceg Novi	6.68	341	⇑*i*Pn		Pn	08 08 24.2	-0.1	MALT	Malatya	13.71	76	*e*Pn		Pn	08 10 01.6	+0.9	
BEY	Berane	6.81	350	⇑*i*Pn		Pn	08 08 27.9	+1.8		comp=N,7.3nm,0.8s								
IVA	Berane	6.81	350	⇑*i*Pn		Pn	08 08 27.9	+1.8	MALT	Malatya	13.71	76	⇓*i*P		Pn	08 10 01.6	+0.9	
IVA				*e*Sn		Sn	08 09 39.5	-3.4	MALT	Malatya	13.71	76	*e*Pn		Pn	08 10 01.6	+0.9	
NKY	Niksic	6.91	345	⇓*i*Pn		Pn	08 08 28.6	+1.1		comp=N,7.3nm,0.8s								
NKY				*e*Sn		Sn	08 09 42.8	-2.6	TUE	Stuetta	13.72	322	*e*Pn		Pn	08 10 03.9	+3.1	
										comp=N,6.2nm,0.8s								
									TUE	Stuetta	13.72	322	*e*Pn		Pn	08 10 03.9	+3.1	
										comp=N,6.2nm,0.8s								

GERES	GERESS Array B	13.89	338	Pn		Pn	08 10 05.1	+2.1
GERES	GERESS Array B	13.89	338	Pn		Pn	08 10 05.1	+2.1
	comp=N,0.3nm,0.3s,baz=172,slow=11,SNR=5.9							
GERES	GERESS Array B	13.89	338	Pn		Pn	08 10 05.1	+2.1
MORC	Moravsky Berou	13.90	349	⇑*i*P		P	08 10 09.4	-1.8
MORC	Moravsky Berou	13.90	349	⇑*i*P		P	08 10 09.4	-1.8
AK02	Malin Array Si	15.54	19	*e*P		P	08 10 27.8	-1.4
AK02	Malin Array Si	15.54	19	*e*P		P	08 10 27.8	-1.4
AK01	Malin Array Si	15.57	19	*e*P		Pn	08 10 26.2	+0.7
AK01	Malin Array Si	15.57	19	*e*P		Pn	08 10 26.2	+0.7
AKASG	Malin Array Be	15.58	19	Pn		Pn	08 10 23.0	-2.7
AKASG	Malin Array Be	15.58	19	Pn		Pn	08 10 23.0	-2.7
	comp=N,0.5nm,0.3s,baz=206,slow=12,SNR=3.7							
AKASG	Malin Array Be	15.58	19	Pn		Pn	08 10 23.0	-2.7
CDF	Champ du Feu	16.08	324	*e*P		Pn	08 10 31.1	-1.1
	comp=N,16nm,0.8s							
CDF	Champ du Feu	16.08	324	*e*P		Pn	08 10 31.1	-1.1
	comp=N,16nm,0.8s							
CDF	Champ du Feu	16.08	324	*e*P		Pn	08 10 31.1	-1.1
	comp=N,16nm,0.8s							
HAU	Haudompre	16.26	321	*e*P		Pn	08 10 32.5	-1.9
	comp=N,15nm,0.7s							
HAU	Haudompre	16.26	321	*e*P		Pn	08 10 32.5	-1.9
	comp=N,15nm,0.7s							
CLL	Collm	16.30	341	*e*(P)		P	08 10 40.0	+2.3
CLL				*e*pP		pP	08 10 43.0	-1.0
CLL				*e*PP		PnPn	08 10 47.0	+3.1
CLL				*e*(sPP)			08 10 57.0	
CLL				*e*sPPP			08 11 00.0	
CLL				*e*			08 11 06.0	
CLL				Lm		MLR	08 16 00.0	
	comp=Z,100nm,20.3s							
TCF	Toulx Ste Croi	17.61	311	*e*P		Pn	08 10 47.5	-3.9
	comp=Z,2.5nm,0.6s							
TCF	Toulx Ste Croi	17.61	311	*e*P		Pn	08 10 47.5	-3.9
	comp=Z,2.5nm,0.6s							
TCF	Toulx Ste Croi	17.61	311	*e*P		Pn	08 10 47.5	-3.9
	comp=Z,2.5nm,0.6s							
SUW	Suwalki	17.89	3	*e*P		P	08 10 55.9	+0.6
	comp=Z,32nm,0.4s							
SUW	Suwalki	17.89	3	*e*P		P	08 10 55.9	+0.6
	comp=Z,

AAK	**Ala-Archa**	**40.95**	**64**	*e*P		**P**	**08 14 29.2**	**+0.6**
	comp=Z,4.6nm,0.9s								
AAK	**Ala-Archa**	**40.95**	**64**	P		**P**	**08 14 27.5**	**-1.1**
	comp=Z,1.9nm,0.4s,baz=353,slow=2.8,SNR=4.0								
AAK	**Ala-Archa**	**40.95**	**64**	*e*P		**P**	**08 14 29.2**	**+0.6**
	comp=Z,4.6nm,0.9s								
MK31	**Makanchi Array**	**45.77**	**57**	*e*P		**P**	**08 15 05.7**	**-1.5**
MK31	**Makanchi Array**	**45.77**	**57**	*e*P		**P**	**08 15 05.7**	**-1.5**
MKAR	**Makanchi Array**	**45.77**	**57**	P		**P**	**08 15 05.8**	**-1.4**
MKAR	**Makanchi Array**	**45.77**	**57**	P		**P**	**08 15 05.8**	**-1.4**
	comp=Z,1.3nm,0.3s,baz=270,slow=7.8,SNR=32								
MKAR	**Makanchi Array**	**45.77**	**57**	P		**P**	**08 15 05.8**	**-1.4**
ZAA0	**Zalesovo Array**	**46.52**	**47**	*e*P		P	08 15 10.4	-2.6
ZAA0	**Zalesovo Array**	**46.52**	**47**	*e*P		P	08 15 10.4	-2.6
ZALV	**Zalesovo Beam**	**46.52**	**47**	P		**P**	**08 15 11.2**	**-1.7**
ZALV	**Zalesovo Beam**	**46.52**	**47**	P		**P**	**08 15 11.2**	**-1.7**
	comp=Z,1.4nm,0.3s,baz=273,slow=7.4,SNR=10								
ZALV	**Zalesovo Beam**	**46.52**	**47**	P		**P**	**08 15 11.2**	**-1.7**
PYUN	**Piuthan**	**51.99**	**80**	*e*P		**P**	**08 15 54.3**	**-1.2**
	comp=Z,24nm,0.6s								
DANN	**Dangsing**	**52.50**	**80**	*e*P		**P**	**08 15 58.5**	**-0.8**
	comp=Z,28nm,0.5s								
KOLN	**Koldanda**	**52.62**	**80**	*e*P		**P**	**08 15 59.0**	**-1.1**
DMN	**Daman**	**53.89**	**80**	*e*P		**P**	**08 16 08.2**	**-1.4**
KKN	**Kakani**	**53.95**	**80**	*e*P		**P**	**08 16 08.0**	**-1.9**
	comp=Z,12nm,0.5s								
PKIN	**Phulchoki**	**54.14**	**80**	*e*P		**P**	**08 16 09.8**	**-1.6**
	comp=Z,9.5nm,0.2s								
GUN	**Gumba**	**54.38**	**79**	*e*P		**P**	**08 16 11.5**	**-1.7**
SCHQ	**Schefferville**	**60.44**	**318**	P		**P**	**08 16 55.2**	**+0.1**
SCHQ	**Schefferville**	**60.44**	**318**	P		**P**	**08 16 55.2**	**+0.1**
	comp=Z,3.3nm,0.9s,baz=27,slow=8.3,SNR=9.9								
SCHQ	**Schefferville**	**60.44**	**318**	P		**P**	**08 16 55.2**	**+0.1**
SONM	**Songino Array**	**61.19**	**50**	P		**P**	**08 16 59.7**	**-0.8**
SONM	**Songino Array**	**61.19**	**50**	P		**P**	**08 16 59.7**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=258,slow=7.2,SNR=3.3								
SONM	**Songino Array**	**61.19**	**50**	P		**P**	**08 16 59.7**	**-0.8**
BOSA	**Boshof**	**64.53**	**176**	P		**P**	**08 17 24.0**	**+1.2**
BOSA	**Boshof**	**64.53**	**176**	P		**P**	**08 17 24.0**	**+1.2**
	comp=Z,2.8nm,0.7s,baz=32,slow=13,SNR=5.5								
BOSA	**Boshof**	**64.53**	**176**	P		**P**	**08 17 24.0**	**+1.2**
YKA	**Yellowknife Ar**	**75.53**	**341**	P		**P**	**08 18 30.9**	**+1.1**
YKA	**Yellowknife Ar**	**75.53**	**341**	P		**P**	**08 18 30.9**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=36,slow=5.9,SNR=15								
YKA	**Yellowknife Ar**	**75.53**	**341**	P		**P**	**08 18 30.9**	**+1.1**
USRK	**Ussuriysk Arra**	**78.25**	**43**	P		**P**	**08 18 44.7**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=122,slow=14,SNR=2.0								
ILAR	**Eielson Array**	**78.98**	**355**	P		**P**	**08 18 50.2**	**+1.1**
ILAR	**Eielson Array**	**78.98**	**355**	P		**P**	**08 18 50.2**	**+1.1**
	comp=Z,0.2nm,0.7s,baz=347,slow=4.5,SNR=4.1								
ILAR	**Eielson Array**	**78.98**	**355**	P		**P**	**08 18 50.2**	**+1.1**
KSAR	**Wonju Array Be**	**80.03**	**51**	P		**P**	**08 18 54.0**	**-1.3**
KSAR	**Wonju Array Be**	**80.03**	**51**	P		**P**	**08 18 54.0**	**-1.3**
KSRS	**Korea Array**	**80.04**	**51**	P		**P**	**08 18 54.0**	**-1.4**
	comp=Z,1.6nm,0.6s,baz=320,slow=5.6,SNR=5.2								
BDFB	**Brasilia**	**83.32**	**245**	LR		LR	08 55 57.8		
	comp=Z,115nm,19.8s,baz=295,slow=35								
WRA	**Warramunga Arr**	**119.70**	**94**	PKP		**PKPdf**	**08 25 35.4**	**-0.7**
WRA	**Warramunga Arr**	**119.70**	**94**	PKP		**PKPdf**	**08 25 35.4**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=297,slow=1.7,SNR=2.8								
WRA	**Warramunga Arr**	**119.70**	**94**	PKIKP		**PKPdf**	**08 25 35.4**	**-0.7**
ASAR	**Alice Springs**	**121.20**	**98**	PKP		**PKPdf**	**08 25 38.6**	**-0.3**
ASAR	**Alice Springs**	**121.20**	**98**	PKP		**PKPdf**	**08 25 38.6**	**-0.3**
	comp=Z,0.4nm,1.0s,baz=342,slow=2.3,SNR=5.7								
ASAR	**Alice Springs**	**121.20**	**98**	PKIKP		**PKPdf**	**08 25 38.7**	**-0.3**

*CSEM **21** 08:08:36.0, 42.52°N × 13.30°E, h11 km, MD2.1/13, After ROM*
ROM 21 08:08:36.0 ± 0.1, **42.52°N × 13.30°E, h11** km ± 1 km, **Md2.1**/13, **4C-2D, Error ellipse: s-maj=1.5km s-min=1.2km az=75.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.09**	**76**	*i*Pg	Pg	08 08 39.1	+0.4
CAMP				Sg	Sg	08 08 41.0	+0.3
CAMP	**Campotosto**	**0.09**	**76**	*i*Pg	Pg	08 08 39.1	+0.4
CAMP				Sg	Sg	08 08 41.0	+0.3
AQU	**L'Aquila**	**0.18**	**154**	Pg	Pg	08 08 40.4	+0.4
AQU				Sg	Sg	08 08 43.9	+1.2
AQU	**L'Aquila**	**0.18**	**154**	Pg	Pg	08 08 40.4	+0.4
AQU				Sg	Sg	08 08 43.9	+1.2
LNSS	**Leonessa**	**0.21**	**295**	Pg	Pg	08 08 41.0	+0.4
LNSS				Sg	Sg	08 08 44.9	+1.1
LNSS	**Leonessa**	**0.21**	**295**	Pg	Pg	08 08 41.0	+0.4
LNSS				Sg	Sg	08 08 44.9	+1.1
TERO	**Teramo**	**0.25**	**64**	*i*Pg	Pg	08 08 41.4	+0.1
TERO				Sg	Sg	08 08 45.3	+0.5
TERO	**Teramo**	**0.25**	**64**	*i*Pg	Pg	08 08 41.4	+0.1
TERO				Sg	Sg	08 08 45.3	+0.5
FIAM	**Fiamignano**	**0.28**	**209**	*i*Pg	Pg	08 08 42.1	+0.2
FIAM				Sg	Sg	08 08 46.7	+0.9
FIAM	**Fiamignano**	**0.28**	**209**	*i*Pg	Pg	08 08 42.1	+0.2
FIAM				Sg	Sg	08 08 46.7	+0.9
FAGN	**Fagnano**	**0.33**	**139**	Pn	Pb	08 08 44.0	0.0
FAGN	**Fagnano**	**0.33**	**139**	Pn	Pb	08 08 44.0	0.0
NRCA	**Norcia**	**0.35**	**337**	Pg	Pg	08 08 43.2	+0.1
NRCA				Sg	Sg	08 08 48.7	+0.9
NRCA	**Norcia**	**0.35**	**337**	Pg	Pg	08 08 43.2	+0.1
NRCA				Sg	Sg	08 08 48.7	+0.9
VCEL	**Villa Celiera**	**0.42**	**106**	Pg	Pb	08 08 45.1	-0.5
VCEL	**Villa Celiera**	**0.42**	**106**	Pg	Pb	08 08 45.1	-0.5
MNS	**Montasola**	**0.47**	**254**	Pn	Pg	08 08 45.3	-0.1
MNS				Sn	Sb	08 08 52.7	-0.8
MNS	**Montasola**	**0.47**	**254**	Pn	Pg	08 08 45.3	-0.1
MNS				Sn	Sb	08 08 52.7	-0.8
OFFI	**Offida**	**0.51**	**34**	Pg	Pb	08 08 46.8	-0.2
OFFI	**Offida**	**0.51**	**34**	Pg	Pb	08 08 46.8	-0.2
FDMO	**Fiordimonte**	**0.54**	**343**	Pn	Pg	08 08 46.5	-0.2
FDMO				Sn	Sb	08 08 55.3	-0.2
FDMO	**Fiordimonte**	**0.54**	**343**	Pn	Pg	08 08 46.5	-0.2
FDMO				Sn	Sb	08 08 55.3	-0.2
CESI	**CESI - Serrava**	**0.57**	**330**	Pg	Pg	08 08 47.1	-0.1
CESI				Sg	Sb	08 08 56.0	-0.3
CESI	**CESI - Serrava**	**0.57**	**330**	Pg	Pg	08 08 47.1	-0.1
CESI				Sg	Sb	08 08 56.0	-0.3
GUMA	**Gualdo di Mace**	**0.72**	**40**	Pg	Pg	08 08 47.1	-2.9
GUMA	**Gualdo di Mace**	**0.72**	**40**	Pg	Pg	08 08 47.1	-2.9

*CSEM **21** 08:17:21.0, 42.26°N × 13.53°E, h9 km, MD2.7/24, After ROM*
*ROM **21** 08:17:21.0 ± 0.1, 42.26°N × 13.53°E, h9 km, Md2.7/24, Ml2.7/23, Error ellipse: s-maj=1.1km s-min=0.8km az=79.0*
ISC 21 08:17:21.1 ± 0.9, **42.26N** ± 0.02 × **13.53E** ± 0.02, **h12** km ± 5km, **n52**, σ **0.45**/80, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.04**	**84**	Pg	**Pg**	**08 17 23.3**	**-0.1**
FAGN				Sg	**Sg**	**08 17 24.3**	**-0.8**
FAGN	**Fagnano**	**0.04**	**84**	Pg	**Pg**	**08 17 23.3**	**-0.1**
FAGN				Sg	**Sg**	**08 17 24.3**	**-0.8**
AQU	**L'Aquila**	**0.13**	**314**	Pg	**Pg**	**08 17 24.7**	**+0.2**
AQU				Sg	**Sg**	**08 17 27.7**	**+0.8**
	6μm,0.9s						
AQU	**L'Aquila**	**0.13**	**314**	Pg	**Pg**	**08 17 24.7**	**+0.2**
AQU				Sg	**Sg**	**08 17 27.7**	**+0.8**
	6μm,0.9s						
PTQR	**Pietraquaria**	**0.26**	**202**	Pg	**Pg**	**08 17 26.9**	**+0.4**
PTQR				Sg	**Sg**	**08 17 31.1**	**+0.9**
PTQR	**Pietraquaria**	**0.26**	**202**	Pg	**Pg**	**08 17 26.9**	**+0.4**
PTQR				Sg	**Sg**	**08 17 31.1**	**+0.9**
VCEL	**Villa Celiera**	**0.27**	**60**	Pg	**Pg**	**08 17 27.3**	**+0.6**
VCEL				Sg	**Sb**	**08 17 32.1**	**-0.4**
	2μm,0.5s						
VCEL	**Villa Celiera**	**0.27**	**60**	Pg	**Pg**	**08 17 27.3**	**+0.6**
VCEL				Sg	**Sb**	**08 17 32.1**	**-0.4**
	2μm,0.5s						
CAMP	**Campotosto**	**0.29**	**342**	Pg	**Pg**	**08 17 27.5**	**+0.4**
CAMP				Sg	**Sb**	**08 17 32.4**	**-0.8**
	842nm,0.7s						
CAMP	**Campotosto**	**0.29**	**342**	Pg	**Pg**	**08 17 27.5**	**+0.4**
CAMP				Sg	**Sb**	**08 17 32.4**	**-0.8**
	842nm,0.7s						
FIAM	**Fiamignano**	**0.31**	**271**	Pg	**Pg**	**08 17 27.6**	**+0.2**
	1μm,0.7s						
FIAM	**Fiamignano**	**0.31**	**271**	Pg	**Pg**	**08 17 27.6**	**+0.2**
	1μm,0.7s						
TERO	**Teramo**	**0.36**	**9**	Pg	**Pg**	**08 17 28.6**	**+0.1**
TERO				Sg	**Sg**	**08 17 34.1**	**+0.7**
	706nm,0.3s						
TERO	**Teramo**	**0.36**	**9**	Pg	**Pg**	**08 17 28.6**	**+0.1**
TERO				Sg	**Sg**	**08 17 34.1**	**+0.7**
	706nm,0.3s						
INTR	**Introdacqua**	**0.38**	**132**	Pg	**Pg**	**08 17 29.1**	**+0.5**
INTR				Sg	**Sb**	**08 17 34.9**	**-0.7**
	990nm,0.4s						
INTR	**Introdacqua**	**0.38**	**132**	Pg	**Pg**	**08 17 29.1**	**+0.5**
INTR				Sg	**Sb**	**08 17 34.9**	**-0.7**
	990nm,0.4s						
VVLD	**Villa Vallelon**	**0.40**	**170**	Pg	**Pg**	**08 17 29.2**	**+0.2**
VVLD				Sg	**Sb**	**08 17 35.5**	**-0.7**
	725nm,0.3s						
VVLD	**Villa Vallelon**	**0.40**	**170**	Pg	**Pg**	**08 17 29.2**	**+0.2**
VVLD				Sg	**Sb**	**08 17 35.5**	**-0.7**
	725nm,0.3s						
GUAR	**Guarcino**	**0.49**	**199**	Pg	**Pg**	**08 17 30.8**	**0.0**
GUAR				Sg	**Sb**	**08 17 39.0**	**0.0**
	418nm,0.3s						
GUAR	**Guarcino**	**0.49**	**199**	Pg	**Pg**	**08 17 30.8**	**0.0**
GUAR				Sg	**Sb**	**08 17 39.0**	**0.0**
	418nm,0.3s						
LNSS	**Leonessa**	**0.50**	**313**	Pg	**Pb**	**08 17 31.5**	**-0.4**
	719nm,0.7s						
LNSS	**Leonessa**	**0.50**	**313**	Pg	**Pb**	**08 17 31.5**	**-0.4**
	719nm,0.7s						
CERT	**Cerreto**	**0.51**	**233**	Pg	**Pg**	**08 17 31.1**	**-0.1**
CERT				Sg	**Sg**	**08 17 38.7**	**+0.7**
	614nm,0.4s						
CERT	**Cerreto**	**0.51**	**233**	Pg	**Pg**	**08 17 31.1**	**-0.1**
CERT				Sg	**Sg**	**08 17 38.7**	**+0.7**
	614nm,0.4s						
LPEL	**Lama dei Pelig**	**0.53**	**114**	Pg	**Pg**	**08 17 31.6**	**+0.1**
LPEL				Sg	**Sb**	**08 17 39.8**	**-0.3**
	831nm,0.6s						
LPEL	**Lama dei Pelig**	**0.53**	**114**	Pg	**Pg**	**08 17 31.6**	**+0.1**
LPEL				Sg	**Sb**	**08 17 39.8**	**-0.3**
	831nm,0.6s						
POFI	**Posta Fibreno**	**0.56**	**166**	Pg	**Pg**	**08 17 32.0**	**-0.1**
POFI				Sg	**Sb**	**08 17 41.0**	**+0.1**
	197nm,0.6s						
POFI	**Posta Fibreno**	**0.56**	**166**	Pg	**Pg**	**08 17 32.0**	**-0.1**
POFI				Sg	**Sb**	**08 17 41.0**	**+0.1**
	197nm,0.6s						
SDI	**San Donato**	**0.59**	**159**	Pg	**Pg**	**08 17 32.5**	**-0.1**
SDI				Sg	**Sb**	**08 17 42.1**	**+0.3**
	254nm,0.2s						
SDI	**San Donato**	**0.59**	**159**	Pg	**Pg**	**08 17 32.5**	**-0.1**
SDI				Sg	**Sb**	**08 17 42.1**	**+0.3**
	254nm,0.2s						
MTCE	**Montecelio**	**0.63**	**248**	Pg	**Pg**	**08 17 33.1**	**-0.3**
	195nm,0.7s						
MTCE	**Montecelio**	**0.63**	**248**	Pg	**Pg**	**08 17 33.1**	**-0.3**
	195nm,0.7s						
MNS	**Montasola**	**0.64**	**281**	Pg	**Pg**	**08 17 33.2**	**-0.4**
	217nm,0.4s						
MNS	**Montasola**	**0.64**	**281**	Pg	**Pg**	**08 17 33.2**	**-0.4**
	217nm,0.4s						
NRCA	**Norcia**	**0.65**	**332**	Pg	**Pg**	**08 17 33.6**	**-0.2**
	198nm,0.1s						
NRCA	**Norcia**	**0.65**	**332**	Pg	**Pg**	**08 17 33.6**	**-0.2**
	198nm,0.1s						
OFFI	**Offida**	**0.68**	**10**	Pg	**Pg**	**08 17 34.5**	**+0.1**
	907nm,0.6s						
OFFI	**Offida**	**0.68**	**10**	Pg	**Pg**	**08 17 34.5**	**+0.1**
	907nm,0.6s						
RNI2	**Rionero Sannit**	**0.73**	**140**	Pg	**Pg**	**08 17 35.5**	**+0.3**
	364nm,0.6s						
RNI2	**Rionero Sannit**	**0.73**	**140**	Pg	**Pg**	**08 17 35.5**	**+0.3**
	364nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.73**	**196**	Pg	**Pg**	**08 17 34.8**	**-0.5**
	197nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.73**	**196**	Pg	**Pg**	**08 17 34.8**	**-0.5**
	197nm,0.6s						
CERA	**Filignano**	**0.76**	**151**	Pg	**Pg**	**08 17 35.3**	**-0.5**
CERA				Sg	**Sb**	**08 17 47.0**	**+0.4**
	342nm,0.5s						
CERA	**Filignano**	**0.76**	**151**	Pg	**Pg**	**08 17 35.3**	**-0.5**
CERA				Sg	**Sb**	**08 17 47.0**	**+0.4**
	342nm,0.5s						
MIDA	**Miranda**	**0.82**	**139**	Pg	**Pg**	**08 17 36.6**	**-0.4**
	249nm,0.4s						
MIDA	**Miranda**	**0.82**	**139**	Pg	**Pg**	**08 17 36.6**	**-0.4**
	249nm,0.4s						
FDMO	**Fiordimonte**	**0.84**	**337**	Pg	**Pg**	**08 17 37.3**	**-0.1**
	87nm,0.3s						
FDMO	**Fiordimonte**	**0.84**	**337**	Pg	**Pg**	**08 17 37.3**	**-0.1**
	87nm,0.3s						
CESI	**CESI - Serrava**	**0.87**	**328**	Pg	**Pg**	**08 17 38.1**	**+0.1**
	50nm,0.5s						
CESI	**CESI - Serrava**	**0.87**	**328**	Pg	**Pg**	**08 17 38.1**	**+0.1**
	50nm,0.5s						
ASSB	**Assisi San Ben**	**1.01**	**321**	Pg	**Pb**	**08 17 40.7**	**+0.1**
	119nm,0.6s						
ASSB	**Assisi San Ben**	**1.01**	**321**	Pg	**Pb**	**08 17 40.7**	**+0.1**
	119nm,0.6s						

*BEO **21** 08:33:04.8 ± 0.9, 39.11°N × 20.65°E, h0 km, ML3.3/7*
*ISCJB **21** 08:33:05.4 ± 0.5, 39.30°N ± 0.01 × 20.92°E ± 0.02, h1 km ± 3 km, Error ellipse: s-maj=3.2km s-min=2.3km az=156.3*
*CSEM **21** 08:33:05.9 ± 0.1, 39.29°N × 20.95°E, h2 km, MD3.0, Error ellipse: s-maj=3.3km s-min=2.5km az=72.0*
*THE **21** 08:33:05.8, 39.29°N × 20.92°E, h0 km ± 1 km, ML3.1/11, Error ellipse: s-maj=1.2km s-min=0.4km az=238.0*
*ATH **21** 08:33:05.8, 39.35°N × 20.93°E, h28 km ± 3 km, MD3.0/6*
ISC 21 08:33:05.0 ± 1.1, **39.30N** ± 0.01 × **20.92E** ± 0.02, **h4** km ± 9km, **n95**, σ **1.19**/147, **2C-2D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.36**	**352**	P	**Pg**	**08 33 12.4**	**+0.3**
JAN				S	**Sb**	**08 33 18.8**	**-1.4**
JAN	**Janina**	**0.36**	**352**	*e*PB	**Pg**	**08 33 12.6**	**+0.5**
JAN				*e*SB	**Sb**	**08 33 19.0**	**-1.2**
JAN	**Janina**	**0.36**	**352**	*e*Pb	**Pg**	**08 33 12.6**	**+0.5**
JAN				S	**Sg**	**08 33 17.1**	**+0.3**
JAN				*e*Sb	**Sb**	**08 33 19.0**	**-1.2**
IGT	**Igoumenitsa**	**0.51**	**298**	P	**Pg**	**08 33 15.3**	**+0.4**
IGT				S	**Sb**	**08 33 23.4**	**-1.0**
IGT	**Igoumenitsa**	**0.51**	**298**	P	**Pg**	**08 33 15.5**	**+0.6**
IGT				S	**Sb**	**08 33 23.4**	**-1.0**
LKD2	**Lefkada island**	**0.55**	**202**	P	**Pb**	**08 33 17.0**	**-0.2**
LKD2	**Lefkada island**	**0.55**	**202**	*e*PN	**Pb**	**08 33 17.3**	**+0.1**
LKD2				*e*SN	**Sn**	**08 33 27.5**	**-1.7**
LKD2	**Lefkada island**	**0.55**	**202**	P	**Pb**	**08 33 17.3**	**+0.1**
LKD2	**Lefkada island**	**0.55**	**202**	*e*Pn	**Pb**	**08 33 17.3**	**+0.1**
LKD2				S	**Sb**	**08 33 25.8**	**+0.4**
EVR	**Evrytania**	**0.79**	**119**	P	**Pg**	**08 33 20.2**	**0.0**
EVR				S	**Sb**	**08 33 32.8**	**+0.4**
EVR	**Evrytania**	**0.79**	**119**	*e*PB	**Pb**	**08 33 20.7**	**-0.7**
EVR				*e*SN	**Sn**	**08 33 33.9**	**-1.4**
EVR	**Evrytania**	**0.79**	**119**	P	**Pg**	**08 33 20.2**	**0.0**
EVR	**Evrytania**	**0.79**	**119**	*e*Pb	**Pb**	**08 33 20.7**	**-0.7**
EVR				S	**Sb**	**08 33 32.6**	**+0.2**
THL	**Klokotos Trika**	**0.89**	**72**	P	**Pg**	**08 33 22.3**	**+0.2**
THL				S	**Sb**	**08 33 35.4**	**+0.2**
THL	**Klokotos Trika**	**0.89**	**72**	*e*PN	**Pn**	**08 33 23.2**	**-1.1**
THL				*e*SN	**Sb**	**08 33 35.3**	**+0.1**
THL	**Klokotos Trika**	**0.89**	**72**	P	**Pg**	**08 33 22.3**	**+0.2**
THL	**Klokotos Trika**	**0.89**	**72**	*e*Pn	**Pn**	**08 33 23.2**	**-1.1**
THL				S	**Sb**	**08 33 35.1**	**-0.1**
KEK	**Kerkira**	**0.96**	**296**	P	**Pb**	**08 33 24.2**	**-0.1**
KEK				S	**Sn**	**08 33 38.5**	**-1.0**
KEK	**Kerkira**	**0.96**	**296**	*e*PN	**Pn**	**08 33 24.6**	**-0.7**
KEK	**Kerkira**	**0.96**	**296**	P	**Pn**	**08 33 24.6**	**-0.7**
KEK				S	**Sn**	**08 33 38.5**	**-1.0**
MAKR	**Makrakomi, Fth**	**0.98**	**106**	P	**Pg**	**08 33 23.7**	**-0.2**
MAKR				S	**Sn**	**08 33 39.2**	**-0.8**
MAKR	**Makrakomi, Fth**	**0.98**	**106**	P	**Pg**	**08 33 23.7**	**-0.2**
MAKR				S	**Sn**	**08 33 39.2**	**-0.8**
NEST	**Nestorio**	**1.12**	**5**	P	**Pb**	**08 33 26.4**	**-0.6**
NEST				S	**Sn**	**08 33 42.9**	**-0.6**
NEST	**Nestorio**	**1.12**	**5**	P	**Pb**	**08 33 26.4**	**-0.6**
NEST				S	**Sn**	**08 33 42.9**	**-0.6**
AGG	**Agios Georgios**	**1.13**	**104**	P	**Pb**	**08 33 25.9**	**-1.2**
AGG	**Agios Georgios**	**1.13**	**104**	P	**Pb**	**08 33 26.0**	**-1.2**
AGG				S	**Sn**	**08 33 44.3**	**+0.7**
VLS	**Valsamata**	**1.15**	**193**	P	**Pb**	**08 33 26.8**	**-0.6**
VLS				S	**Sn**	**08 33 44.2**	**+0.2**
VLS	**Valsamata**	**1.15**	**193**	*e*PB	**Pn**	**08 33 27.3**	**-0.6**
VLS				*e*SN	**Sn**	**08 33 45.8**	**+1.8**
VLS	**Valsamata**	**1.15**	**193**	P	**Pg**	**08 33 27.0**	**0.0**
VLS	**Valsamata**	**1.15**	**193**	*e*Pb	**Pn**	**08 33 27.3**	**-0.6**
VLS				S	**Sn**	**08 33 44.2**	**+0.2**
VLS				*e*Sn	**Sn**	**08 33 45.8**	**+1.8**
EFP	**Efpalio**	**1.16**	**138**	P	**Pb**	**08 33 27.0**	**-0.6**
EFP				S	**Sn**	**08 33 44.3**	**0.0**
EFP	**Efpalio**	**1.16**	**138**	P	**Pg**	**08 33 27.8**	**+0.5**
EFP				S	**Sn**	**08 33 44.3**	**0.0**
KFL	**Anninata**	**1.19**	**185**	P	**Pg**	**08 33 27.8**	**0.0**
KFL				S	**Sn**	**08 33 45.4**	**+0.3**
KFL	**Anninata**	**1.19**	**185**	P	**Pg**	**08 33 27.8**	**0.0**
KFL				S	**Sn**	**08 33 45.4**	**+0.3**
KZN	**Kozani**	**1.20**	**33**	P	**Pg**	**08 33 28.4**	**+0.3**
KZN				S	**Sn**	**08 33 46.3**	**+0.8**
KZN	**Kozani**	**1.20**	**33**	P	**Pg**	**08 33 28.4**	**+0.3**
KZN				S	**Sn**	**08 33 46.3**	**+0.8**
TRIZ	**Trizonia**	**1.29**	**136**	P	**Pg**	**08 33 30.2**	**+0.4**
TRIZ	**Trizonia**	**1.29**	**136**	P	**Pg**	**08 33 30.2**	**+0.4**
RLS	**Riolos of Patr**	**1.31**	**161**	P	**Pg**	**08 33 30.8**	**+0.7**
RLS	**Riolos of Patr**	**1.31**	**161**	P	**Pg**	**08 33 30.8**	**+0.7**
KALE	**Kalithea**	**1.31**	**133**	P	**Pb**	**08 33 30.0**	**-0.3**
KALE	**Kalithea**	**1.31**	**133**	P	**Pb**	**08 33 30.0**	**-0.3**
LIT	**Litokhoron**	**1.45**	**56**	P	**Pb**	**08 33 31.9**	**-0.8**
LIT				S	**Sg**	**08 33 53.1**	**+1.4**
LIT	**Litokhoron**	**1.45**	**56**	P	**Pb**	**08 33 31.9**	**-0.8**
LIT				S	**Sg**	**08 33 53.1**	**+1.4**
AXAR	**Agios Charalam**	**1.45**	**111**	P	**Pg**	**08 33 33.5**	**+0.6**
AXAR	**Agios Charalam**	**1.45**	**111**	P	**Pg**	**08 33 33.5**	**+0.6**
FNA	**Florina**	**1.53**	**13**	P	**Pn**	**08 33 32.9**	**-0.2**
FNA				S	**Sg**	**08 33 55.3**	**+1.2**
FNA	**Florina**	**1.53**	**13**	P	**Pn**	**08 33 32.9**	**-0.2**
FNA				S	**Sg**	**08 33 55.3**	**+1.2**
DSF	**Desfina**	**1.54**	**125**	P	**Pb**	**08 33 33.9**	**-0.2**
DSF				S	**Sg**	**08 33 55.1**	**+0.8**
DSF	**Desfina**	**1.54**	**125**	P	**Pb**	**08 33 33.9**	**-0.2**
DSF				S	**Sg**	**08 33 55.1**	**+0.8**
ATAL	**Atalanti**	**1.75**	**110**	P	**Pb**	**08 33 37.3**	**-0.3**
ATAL	**Atalanti**	**1.75**	**110**	P	**Pb**	**08 33 37.3**	**-0.3**
LKR	**Lokris**	**1.75**	**111**	P	**Pb**	**08 33 37.3**	**-0.3**
LKR	**Lokris**	**1.75**	**111**	P	**Pb**	**08 33 37.3**	**-0.3**
BIA	**Bitola**	**1.75**	**10**	P	**Pb**	**08 33 37.0**	**-0.7**
BIA				S	**Sg**	**08 34 01.3**	**+0.1**
BIA	**Bitola**	**1.75**	**10**	*e*Pn	**Pg**	**08 33 38.2**	**-0.3**
BIA	**Bitola**	**1.75**	**10**	P	**Pb**	**08 33 37.0**	**-0.7**
BIA	**Bitola**	**1.75**	**10**	*e*Pn	**Pg**	**08 33 38.2**	**-0.3**
BIA				S	**Sg**	**08 34 01.3**	**+0.1**
XOR	**Xorichti**	**1.76**	**87**	P	**Pn**	**08 33 36.3**	**-0.1**
XOR				S	**Sg**	**08 34 01.4**	**-0.3**
XOR	**Xorichti**	**1.76**	**87**	P	**Pn**	**08 33 36.3**	**-0.1**
XOR				S	**Sg**	**08 34 01.4**	**-0.3**
SKIA	**Skiathos**	**1.98**	**93**	P	**Pn**	**08 33 39.4**	**+0.1**
SKIA	**Skiathos**	**1.98**	**93**	P	**Pn**	**08 33 39.4**	**+0.1**
GRG	**Griva**	**2.01**	**34**	P	**Pb**	**08 33 40.9**	**-1.3**
GRG	**Griva**	**2.01**	**34**	P	**Pb**	**08 33 40.9**	**-1.3**
MRKA	**Markates**	**2.16**	**105**	P	**Pb**	**08 33 42.9**	**-1.8**
MRKA				S	**Sb**	**08 34 10.8**	**-1.1**
MRKA	**Markates**	**2.16**	**105**	P	**Pb**	**08 33 42.9**	**-1.8**
MRKA				S	**Sb**	**08 34 10.8**	**

AMKA Amchitka 4.62 262 P **Pn** **08 38 37.0 +1.0**
AMKA S **Sn** **08 39 30.3 +2.0**
AKRB Akutan Reef Bi 4.80 64 P **Pn** **08 38 40.2 +1.7**
ZRO Akutan Zero 4.84 64 P **Pn** **08 38 40.3 +1.3**
AKGG Akutan Green G 4.87 63 P **Pn** **08 38 41.0 +1.6**
AKLV Akutan Long Va 4.87 63 P **Pn** **08 38 41.4 +1.9**
AHB Akutan Harbor 4.94 64 P **Pn** **08 38 42.1 +1.8**
AKUT Akutan 4.97 64 P **Pn** **08 38 42.3 +1.6**
LSSE Little Sitkin 4.97 270 P **Pn** **08 38 42.9 +2.0**
LSNW Little Sitkin 5.00 270 P **Pn** **08 38 43.5 +2.2**
LSSA Little Sitkin 5.01 270 P **Pn** **08 38 43.1 +1.8**
WESE West Dahl East 5.73 63 P **Pn** **08 38 52.8 +1.5**
BRPK Brown Peak 6.26 63 P **Pn** **08 38 59.3 +0.9**
FALS False Pass 6.50 62 P **Pn** **08 39 03.3 +1.6**
DRIA Deer Island 7.17 63 P **Pn** **08 39 11.7 +0.8**
DT1 Dutton Round H 7.21 62 P **Pn** **08 39 12.4 +1.1**
DTNA Dutton South F 7.23 62 P **Pn** **08 39 13.1 +1.4**
PS4A Pavlof South-4 7.51 61 P **Pn** **08 39 16.9 +1.4**
SMY Shemya 7.67 279 P **Pn** **08 39 18.5 +0.9**
SMY Shemya 7.67 279 P **Pn** **08 39 18.4 +0.9**
FX1 Attu Island--F 8.23 280 P **Pn** **08 39 25.7 +0.4**
FX1 S **Sn** **08 40 54.1 -2.5**
FX1 Attu Island--F 8.23 280 P **Pn** **08 39 25.7 +0.4**
16nm,0.3s,baz=299,slow=2.1,SNR=107
FX1 S **Sn** **08 40 54.1 -2.5**
2.4nm,0.3s,baz=255,slow=20,SNR=1.8
SDPT Sand Point 8.26 63 P **Pn** **08 39 26.0 +0.3**
CHGN Chignik 9.66 59 *e*Pn **Pn** **08 39 44.4 -0.4**
GAMB Gambell 11.63 4⇓*e*Pn **Pn** **08 40 14.2 +2.6**
558nm,1.5s
OHAK Old Harbor 12.63 59 *e*Pn **Pn** **08 40 22.6 -2.7**
KDAK Kodiak Island 13.15 57 *e*Pn **Pn** **08 40 32.0 -0.3**
40nm,0.4s
KDAK S **Sn** **08 42 51.2 -5.3**
KDAK Kodiak Island 13.15 57 Pn **Pn** **08 40 29.8 -2.5**
532nm,0.4s,SNR=16
KDAK Kodiak Island 13.15 57 P **Pn** **08 40 29.8 -2.5**
3.7nm,0.3s,baz=256,slow=7.7,SNR=35
KDAK S **Sn** **08 42 51.2 -5.3**
0.6nm,0.3s,baz=198,slow=20,SNR=2.8
KDAK LR LR 08 46 08.3
comp=Z,2μm,19.6s,baz=247,slow=40
SVW2 Sparrevohn 13.19 41 *e*Pn Pn 08 40 36.2 +3.4
TNA Tin City 13.67 10 *e*Pn **P** **08 40 43.4 -2.3**
226nm,1.3s
RSO Redoubt South 14.06 46 *e*Pn **P** **08 40 48.0 -2.3**
SPU Mount Spurr 14.69 44 *e*Pn **P** **08 40 57.1 -0.1**
SEW Seward 15.42 50 *e*P **Pn** **08 41 00.2 -1.8**
102nm,1.0s
SEW eS **Sn** **08 43 47.8 -3.8**
PPLA Purkeypile 15.53 38 *e*P **P** **08 41 07.2 +0.7**
106nm,1.0s
PMR Palmer 16.14 45 *e*P **Pn** **08 41 11.9 +0.9**
PMR pmax pmax
comp=Z,30nm,0.9s
PMR Palmer 16.14 45 *e*P **Pn** **08 41 11.9 +0.9**
comp=Z,30nm,0.9s
TRF Thorofare Moun 16.55 38 *e*P **P** **08 41 18.3 +0.4**
comp=Z,138nm,1.1s
SML Sawmill 16.57 45 *e*P **Pn** **08 41 17.2 +0.7**
SML pmax pmax
comp=Z,12nm,0.9s
SML Sawmill 16.57 45 *e*P **Pn** **08 41 17.2 +0.7**
comp=Z,12nm,0.9s
MID Middleton Isla 16.73 54 *e*P **Pn** **08 41 19.0 +0.6**
MID pmax pmax
comp=Z,118nm,0.8s
MID Middleton Isla 16.73 54 *e*P **Pn** **08 41 19.0 +0.6**
comp=Z,118nm,0.8s
PET Petropavlovsk 16.96 284 *e*P **P** **08 41 24.1 +1.9**
PET eS **Sn** **08 44 30.7 +1.8**
PET pmax pmax
comp=Z,600nm,14.4s
PET MLR MLR
comp=Z,600nm,19.0s
PET MLR MLR
comp=Z,500nm,20.0s
MCK McKinley 17.21 38 *e*P **P** **08 41 25.3 +0.2**
MCK pmax pmax
comp=Z,67nm,0.8s
MCK McKinley 17.21 38 *e*P **P** **08 41 25.3 +0.2**
comp=Z,67nm,0.8s
DIV Divide 17.48 49 *e*P **P** **08 41 27.9 0.0**
comp=Z,40nm,0.7s
PEA0B Petropavlovsk- 17.52 284 *e*P **P** **08 41 33.0 +4.6**
PETK Petropavlovsk- 17.52 284 P **P** **08 41 29.2 +0.8**
PETK Petropavlovsk- 17.52 284 P **P** **08 41 29.2 +0.8**
PETK PcP **PcP** **08 46 05.5 +1.0**
PETK pPcP 08 46 21.6
PETK Petropavlovsk- 17.52 284 P **P** **08 41 29.2 +0.8**
comp=Z,2.2nm,0.3s,baz=93,slow=13,SNR=30
PETK PcP **PcP** **08 46 05.5 +1.0**
comp=Z,0.8nm,0.3s,baz=144,slow=2.8,SNR=7.3
PETK pPcP 08 46 21.6
comp=Z,0.4nm,0.3s,baz=101,slow=7.7,SNR=5.4
PETK LR LR 08 47 19.8
comp=Z,358nm,21.6s,baz=83,slow=34
RAGM Ragged Mountai 17.78 51 *e*Pn **P** **08 41 31.4 +0.1**
comp=Z,64nm,0.9s
BMRM Bremner River 17.97 50 *e*P **P** **08 41 32.2 -1.2**
comp=Z,54nm,0.8s
COLA College 18.21 36 *e*P **P** **08 41 35.6 -0.3**
COLA pmax pmax
comp=Z,46nm,0.8s
COLA College 18.21 36 *e*P **P** **08 41 35.6 -0.3**
comp=Z,46nm,0.8s
PAX Paxson 18.26 43 *e*P **P** **08 41 36.1 -0.6**
PAX pmax pmax
comp=Z,46nm,0.8s
PAX Paxson 18.26 43 *e*P **P** **08 41 36.1 -0.6**
comp=Z,46nm,0.8s
ILAR Eielson Array 18.52 37 P **P** **08 41 38.0 -1.3**
ILAR PcP **PcP** **08 46 06.2 +0.2**
ILAR ScP **ScP** **08 49 35.1 -0.1**
ILAR *e* 09 16 17.1
ILAR Eielson Array 18.52 37 P **P** **08 41 38.0 -1.3**
comp=Z,9.1nm,0.3s,baz=243,slow=10.0,SNR=396
ILAR PcP **PcP** **08 46 06.2 +0.2**
comp=Z,0.9nm,0.3s,baz=273,slow=3.3,SNR=19
ILAR ScP **ScP** **08 49 35.1 -0.1**
comp=Z,0.2nm,0.3s,baz=266,slow=3.4,SNR=8.6
ILAR LR LR 08 49 39.7
comp=Z,1μm,18.4s,baz=26,slow=40
ILAR P3KPbc 09 16 17.1
comp=Z,0.0nm,0.3s,baz=40,slow=3.8,SNR=20
BILL Bilibino 18.66 336⇑*iP* **Pn** **08 41 44.6 +2.7**
BILL pmax pmax
comp=Z,784nm,1.1s
BILL MLR MLR
comp=Z,200nm,16.0s
COLD Coldfoot 18.86 28 *e*P **Pn** **08 41 45.8 +1.5**
comp=Z,92nm,0.9s
MENT Mentasta 18.99 44 *e*P **P** **08 41 45.1 +0.6**
SKR Severo-Kuril's 19.01 278 P **Pn** **08 41 48.7 +2.6**
SKR pmax pmax
comp=Z,180nm,1.0s
SKR MLR MLR
comp=Z,2μm,20.0s
PNL Peninsula 20.25 55 *e*P **P** **08 41 58.5 +0.2**
comp=Z,100nm,0.7s
EGAK Eagle 20.72 40 *e*P **P** **08 42 03.9 +0.7**
comp=Z,383nm,0.7s
SEY Seymchan 20.98 314 *e*P Pn 08 42 08.8 -0.5
SKAG Skagway 22.30 56 *e*P **P** **08 42 19.3 -0.9**
comp=Z,57nm,0.8s
CRAG Craig 23.74 66 *e*P **P** **08 42 35.6 +1.2**
comp=Z,110nm,1.1s
WRAK Wrangell Islan 24.04 64 *e*P **P** **08 42 39.5 +2.5**
comp=Z,139nm,0.8s
INK Inuvik 24.85 35 P **P** **08 42 44.5 +0.1**
INK pP **pP** **08 42 59.1 -1.4**
INK PcP **PcP** **08 46 19.2 +0.8**
INK pPcP 08 46 35.2
INK ScP **ScP** **08 49 51.8 +0.8**
INK *e* 09 15 48.6
INK Inuvik 24.85 35 P **P** **08 42 44.5 +0.1**
comp=Z,120nm,0.8s,baz=247,slow=8.5,SNR=657
INK pP **pP** **08 42 59.1 -1.4**
comp=Z,61nm,0.8s,baz=205,slow=14,SNR=10
INK PcP **PcP** **08 46 19.2 +0.8**
comp=Z,21nm,0.6s,baz=293,slow=2.6,SNR=13
INK pPcP 08 46 35.2
comp=Z,16nm,0.9s,baz=258,slow=0.6,SNR=3.9
INK ScP **ScP** **08 49 51.8 +0.8**
comp=Z,3.9nm,0.9s,baz=283,slow=2.8,SNR=3.6

INK LR LR 08 53 29.5
comp=Z,823nm,21.3s,baz=91,slow=39
INK P3KPbc 09 15 48.6
comp=Z,1.9nm,1.0s,baz=86,slow=3.0,SNR=7.6
DLBC Dease Lake 25.07 58 *e*P **P** **08 42 48.3 +1.7**
DLBC *e* 08 43 01.8
DLBC pP **pP** **08 43 01.9 -0.8**
DLBC PcP **PcP** **08 46 20.7 +1.6**
DLBC Dease Lake 25.07 58 P **P** **08 42 48.4 +1.7**
comp=Z,32nm,0.5s,baz=273,slow=7.9,SNR=188
DLBC pP **pP** **08 43 01.9 -0.8**
comp=Z,78nm,0.7s,baz=292,slow=10.0,SNR=24
DLBC PcP **PcP** **08 46 20.7 +1.6**
comp=Z,8.6nm,0.6s,baz=211,slow=1.8,SNR=5.1
BBB Bella Bella 27.40 72 pP pP 08 43 23.6 -0.2
BBB Bella Bella 27.40 72 pP **pP** **08 43 23.6 -0.2**
comp=Z,66nm,1.0s,baz=275,slow=11,SNR=5.2
BBB LR LR 08 51 40.8
comp=Z,283nm,20.7s,baz=317,slow=31
YUK Yuzh-Kuril'sk 28.09 269*di P* **P** **08 43 13.0 -0.7**
YUK *i* 08 44 04.6
YUK S **S** **08 47 49.1 -4.5**
YUK *e*SS **SnSn** **08 49 21.9 +6.9**
YUK pmax pmax
comp=Z,43nm,3.3s
YUK MLR MLR
comp=N,249nm,20.0s
YUK MLR MLR
comp=E,273nm,20.0s
YUK MLR MLR
comp=Z,304nm,20.0s
ASAJ Asahikawa 30.06 272 PcP **PcP** **08 46 32.5 +1.1**
ASAJ Asahikawa 30.06 272 PcP **PcP** **08 46 32.5 +1.1**
comp=Z,8.0nm,0.7s,baz=153,slow=2.3,SNR=3.7
ASAJ LR LR 08 54 48.2
comp=Z,333nm,19.6s,baz=241,slow=35
ERM Erimo 30.85 268 *e*P **P** **08 43 40.1 +1.9**
ERM pmax pmax
comp=Z,174nm,1.2s
ERM Erimo 30.85 268 *e*P **P** **08 43 40.2 +2.0**
comp=Z,389nm,1.6s
ERM Erimo 30.85 268 P **P** **08 43 40.1 +1.9**
comp=Z,790nm,0.7s,SNR=11
YAK Yakutsk 31.41 311 *e*P P 08 43 48.5 +5.6
YAK *e* 08 44 54.8
YAK *e* 08 46 33.0
YAK *e*S **S** **08 48 47.1 +1.9**
YAK *e*SS **SS** **08 51 02.7 +1.0**
YAK *e* 08 54 07.2
YAK pmax pmax
comp=Z,11nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=N,2.0nm,1.0s
YAK pmax pmax
comp=Z,19nm,0.9s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=E,13nm,0.9s
YAK smax smax
comp=E,45nm,2.9s
YAK smax smax
comp=N,101nm,3.5s
YAK MLR MLR
comp=Z,815nm,20.0s
YAK MLR MLR
comp=E,552nm,17.0s
YAK MLR MLR
comp=N,353nm,17.0s
PGC Sidney 31.50 76 *e*P **P** **08 43 44.8 +1.0**
comp=N,0.7nm,0.6s
NLWA Neilton Lookou 31.81 79 *e*P **P** **08 43 48.7 +2.1**
comp=N,74nm,1.2s
NLWA *e* 08 44 01.9
VDB Vedder Mountai 32.14 75 P **P** **08 43 50.7 +1.3**
YKW3 Yellowknife Ar 32.18 48 *e*P **P** **08 43 49.2 -0.4**
comp=N,0.4nm,0.7s
YKA Yellowknife Ar 32.19 48 P **P** **08 43 49.5 -0.3**
YKA PcP **PcP** **08 46 37.8 +1.0**
YKA pPcP 08 46 53.1
YKA ScP **ScP** **08 50 14.9 +0.9**
YKA PKiKP **PKiKP** **08 54 03.0 -1.0**
YKA *e* 09 15 31.1
YKA Yellowknife Ar 32.19 48 P **P** **08 43 49.5 -0.3**
comp=N,11nm,0.5s,baz=277,slow=9.5,SNR=227
YKA PcP **PcP** **08 46 37.7 +1.0**
comp=N,14nm,0.9s,baz=286,slow=2.4,SNR=18
YKA pPcP 08 46 53.1
comp=N,8.1nm,0.9s,baz=281,slow=2.6,SNR=6.6
YKA ScP **ScP** **08 50 14.9 +0.9**
comp=N,1.5nm,0.5s,baz=284,slow=3.5,SNR=9.5
YKA PKiKP **PKiKP** **08 54 03.0 -1.0**
comp=N,0.7nm,0.7s,baz=291,slow=1.1,SNR=9.3
YKA P3KPbc 09 15 31.1
comp=N,0.6nm,0.7s,baz=93,slow=5.3,SNR=9.0
JCW Jim Creek 32.61 76 P **P** **08 43 55.3 +1.6**
HTW Haystack Looko 32.88 77 P **P** **08 43 57.6 +1.6**
D05A Enumclaw 33.03 78 P **P** **08 43 59.6 +2.3**
TDL Tradedollar La 33.30 79 P **P** **08 44 01.5 +1.7**
LON Longmire 33.35 78 *e*P **P** **08 44 01.5 +1.4**
LON pmax pmax
comp=Z,32nm,0.7s
LON Longmire 33.35 78 *e*P **P** **08 44 01.5 +1.4**
comp=Z,32nm,0.7s
COR Corvallis 33.53 83 *e*P **P** **08 44 04.1 +2.5**
COR *e* 08 44 16.9
COR pmax pmax
comp=Z,64nm,0.9s
COR Corvallis 33.53 83 *e*P **P** **08 44 04.1 +2.5**
comp=Z,64nm,0.9s
COR *e* 08 44 16.9
WPW White Pass 33.53 78 P **P** **08 44 03.2 +1.4**
NLW Nelson Butte 33.61 75 P **P** **08 44 04.0 +1.6**
VFP Flag Point 34.27 80 P **P** **08 44 09.7 +1.5**
HAWA Hanford 34.90 78 *e*P **P** **08 44 15.0 +1.5**
comp=Z,121nm,0.8s
HAWA *e* 08 44 28.4
KHMM Horse Mountain 35.32 89 *e*P **P** **08 44 19.8 +2.5**
comp=Z,35nm,0.9s
KHMM *e* 08 44 32.3
NEW Newport 35.43 73 *e*P **P** **08 44 19.0 +0.9**
comp=Z,105nm,0.8s
NEW *e* 08 44 32.9
NEW Newport 35.43 73 ⇑P **P** **08 44 19.0 +0.9**
baz=35,SNR=82
YBH Yreka Blue Hor 35.45 87 *e*P **P** **08 44 20.3 +1.9**
comp=Z,15nm,0.9s
A12A Yaak River Ran 35.98 72 ⇑P **P** **08 44 24.1 +1.3**
baz=36,SNR=9.5
C11A Tepee Creek (N 36.14 74 ⇓P **P** **08 44 24.8 +0.6**
baz=36
WDC Whiskeytown Da 36.22 88 *e*P **P** **08 44 26.3 +1.4**
WDC *e* 08 44 40.0
WDC pmax pmax
comp=Z,47nm,1.4s
WDC Whiskeytown Da 36.22 88 *e*P **P** **08 44 26.3 +1.4**
comp=Z,47nm,1.4s
WDC *e* 08 44 40.0
B12A Libby 36.23 72 ⇓P **P** **08 44 26.1 +1.1**
baz=36,SNR=8.4
USRK Ussuriysk Arra 36.49 280 P **P** **08 44 27.5 +0.4**
comp=Z,4.1nm,0.5s,baz=59,slow=9.5,SNR=15
USRK PcP **PcP** **08 46 50.6 +1.2**
comp=Z,30nm,0.7s,baz=56,slow=2.8,SNR=42
USRK pPcP 08 47 06.1
comp=Z,12nm,0.7s,baz=52,slow=2.6,SNR=7.0
USRK ScP **ScP** **08 50 31.2 +1.5**
comp=Z,1.2nm,0.8s,baz=48,slow=3.2,SNR=4.1
USRK LR LR 08 58 09.7
comp=Z,391nm,21.1s,baz=221,slow=34
C12B Naegeli Ranch, 36.66 73 ⇓P **P** **08 44 29.6 +0.9**
baz=36,SNR=58
A13A Flathead Natio 36.70 71 ⇑P **P** **08 44 29.6 +0.6**
baz=37
MOD Modoc 36.83 85 *e*P **P** **08 44 31.7 +1.5**
comp=Z,122nm,1.4s
MOD *e* 08 44 45.7
HOPS Hopland 36.85 91 *e*P **P** **08 44 31.8 +1.6**
comp=Z,34nm,1.2s
WALA Waterton Lakes 36.93 71 *e*P **P** **08 44 31.7 +0.7**
comp=Z,1.9nm,1.2s
WALA *e* 08 44 45.4
B13A Whitefish 36.94 72 ⇑P **P** **08 44 31.8 +0.9**
baz=37,SNR=7.4

BSMT Bassoo Peak 37.00 73 *e*P **P** **08 44 32.5 +0.9**
BSMT *e* 08 44 46.3
BMO Blue Mountains 37.03 79 *e*P **P** **08 44 32.8 +1.0**
comp=Z,68nm,1.2s
BMO *e* 08 44 46.3
D12A Red Ives Fores 37.06 74 ⇑P **P** **08 44 32.4 +0.3**
baz=37,SNR=33
BLMT Blacktail Moun 37.17 72 *e*P **P** **08 44 34.1 +1.0**
BLMT *e* 08 44 47.8
C13A Hot Springs 37.21 73 ⇑P **P** **08 44 34.2 +0.9**
baz=37,SNR=74
MJAR Matsushiro Arr 37.23 265 P **P** **08 44 34.6 +1.1**
MJAR PcP **PcP** **08 46 52.6 +0.8**
MJAR pPcP 08 47 08.5
MJAR Matsushiro Arr 37.23 265 P **P** **08 44 34.6 +1.1**
comp=Z,39nm,0.7s,baz=47,slow=6.8,SNR=105
MJAR PcP **PcP** **08 46 52.6 +0.8**
comp=Z,15nm,0.8s,baz=88,slow=0.6,SNR=13
MJAR pPcP 08 47 08.5
comp=Z,10nm,0.8s,baz=72,slow=0.7,SNR=6.1
MAJO Matsushiro 37.23 265 *e*P **P** **08 44 34.6 +1.1**
MAJO pmax pmax
comp=Z,159nm,1.0s
MAJO Matsushiro 37.23 265 *e*P **P** **08 44 34.6 +1.1**
comp=Z,159nm,1.0s
MAT Matsushiro 37.23 265 P **P** **08 44 34.5 +1.0**
MAT S **S** **08 50 17.0 +1.6**
A14A Double T Ranch 37.26 70 ⇓P **P** **08 44 34.6 +0.9**
baz=37,SNR=49
JTMT Jette 37.35 73 *e*P **P** **08 44 35.3 +0.8**
JTMT *e* 08 44 49.4
YBMT Yellow Bay 37.45 72 *e*P **P** **08 44 36.0 +0.6**
comp=Z,64nm,1.1s
YBMT *e* 08 44 50.1
WVOR Wild Horse Val 37.55 83 *e*P **P** **08 44 37.4 +1.2**
WVOR pmax pmax
comp=Z,51nm,0.9s
WVOR Wild Horse Val 37.55 83 *e*P **P** **08 44 37.4 +1.2**
comp=Z,50nm,0.9s
RES Resolute Bay 37.57 25 *e*P **P** **08 44 35.2 -0.7**
comp=Z,0.2nm,0.3s
D13A Huson 37.57 74 ⇑P **P** **08 44 36.7 +0.3**
baz=37,SNR=22
OHCM Honcut 37.62 89 *e*P **P** **08 44 37.6 +0.9**
SWMT Swartz Lake 37.63 73 *e*P **P** **08 44 37.4 +0.5**
SWMT *e* 08 44 51.1
B14A Marquette Ranc 37.64 71 ⇓P **P** **08 44 37.7 +0.7**
baz=38,SNR=9.8
C14A Swan Lake 37.65 72 ⇑P **P** **08 44 37.7 +0.7**
baz=38
A15A Johnson Ranch, 37.65 70 ⇓P **P** **08 44 37.2 +0.1**
baz=38,SNR=35
MDJ Mudanjiang 37.73 282 P **P** **08 44 36.9 -0.7**
MDJ pP **pP** **08 44 56.6 +2.4**
MDJ sP **sP** **08 45 05.3 +3.1**
MDJ PP **PP** **08 46 03.5 -1.1**
MDJ S **S** **08 50 21.1 -1.7**
MDJ ScP **ScP** **08 50 32.5 -1.9**
MDJ PcS **PcS** **08 50 38.9 -2.9**
MDJ sS **sS** **08 50 53.8 +2.6**
MDJ pmax pmax
comp=Z,16nm,1.9s
MDJ pmax pmax
comp=Z,600nm,4.7s
MDJ LR LR
comp=N,600nm,3.8s
MDJ LR LR
comp=E,120nm,4.2s
MDJ LR LR
comp=Z,700nm,5.1s
F12A Elk City 37.78 76 ⇑P **P** **08 44 39.0 +0.7**
baz=38,SNR=133
BEKR Beckworth 37.99 87 *e*P **P** **08 44 40.9 +0.8**
comp=Z,26nm,1.5s
BEKR *e* 08 44 54.4
MSO Missoula 38.01 74 *e*P **P** **08 44 40.6 +0.5**
comp=Z,74nm,1.1s
MSO *e* 08 44 54.4
MSO Missoula 38.01 74 ⇓P **P** **08 44 40.5 +0.5**
baz=38,SNR=67
E13A Victor 38.06 74 ⇑P **P** **08 44 41.0 +0.5**
baz=38,SNR=50
SLMT Seeley Lake 38.06 73 *e*P **P** **08 44 41.0 +0.4**
SLMT *e* 08 44 54.8
G12A Big Creek, Yel 38.07 77 ⇓P **P** **08 44 41.0 +0.3**
baz=38,SNR=26
G12A ⇑S **S** **08 50 28.8 +0.4**
baz=38
G12A ⇑S **S** **08 50 28.8 +0.4**
baz=38
B15A Bradely Ranch, 38.08 71 ⇓P **P** **08 44 41.0 +0.3**
baz=38,SNR=50
D14A Greenough 38.14 73 ⇑P **P** **08 44 41.5 +0.3**
baz=38,SNR=117
C15A Salmond Ranch, 38.32 72 ⇑P **P** **08 44 43.5 +0.8**
baz=38,SNR=114
F13A Darby 38.32 75 ⇓P **P** **08 44 43.5 +0.8**
baz=38,SNR=114
A16A West Butte Ran 38.32 70 ⇑P **P** **08 44 42.6 -0.1**
baz=38
CHMT Chamberlain Mo 38.37 73 *e*P **P** **08 44 43.5 +0.3**
CHMT *e* 08 44 57.6
E14A Clinton 38.49 74 ⇑P **P** **08 44 44.9 +0.7**
baz=38,SNR=71
B16A M & M Farms, S 38.52 70 ⇑P **P** **08 44 44.5 +0.1**
baz=38,SNR=7.2
JHJ Hachijo jima 2 38.56 259 LR LR 08 58 12.8
comp=Z,143nm,21.2s,baz=11,slow=32
H12A Diamond D Ranc 38.66 77 ⇓P **P** **08 44 46.2 +0.5**
baz=38,SNR=56
WCN Washoe City 38.70 88 *e*P **P** **08 44 47.2 +1.1**
WCN pmax pmax
comp=Z,66nm,1.5s
WCN Washoe City 38.70 88 *e*P **P** **08 44 47.2 +1.1**
comp=Z,66nm,1.5s
MFID Camas Ranch 38.70 80 *e*P **P** **08 44 46.0 0.0**
comp=Z,30nm,0.8s
MFID *e* 08 44 59.7
MFID Camas Ranch 38.70 80 ⇓P **P** **08 44 46.7 +0.7**
baz=39,SNR=36
D15A Lincoln 38.74 73 ⇑P **P** **08 44 46.8 +0.5**
baz=39,SNR=91
G13A Cobalt 38.74 76 ⇓P **P** **08 44 46.9 +0.6**
baz=39,SNR=91
C16A Fuhringer Ranc 38.80 71 ⇓P **P** **08 44 47.3 +0.5**
baz=39,SNR=72
A17A Triple J Farms 38.84 69 ⇑P **P** **08 44 47.3 +0.3**
baz=39,SNR=71
F14A Wisdom 38.88 75 ⇑P **P** **08 44 48.4 +0.9**
baz=39,SNR=32
I12A Atlanta 38.91 79 ⇓P **P** **08 44 48.6 +0.8**
baz=39,SNR=63
E15A Deer Lodge 38.99 74 ⇑P **P** **08 44 48.8 +0.5**
baz=39,SNR=67
H13A Challis 39.02 77 ⇓P **P** **08 44 49.1 +0.5**
baz=39,SNR=47
CMB Columbia Colle 39.09 90 *e*P **P** **08 44 50.5 +1.3**
CMB *e* 08 45 03.9
CMB pmax pmax
comp=Z,48nm,1.7s
CMB Columbia Colle 39.09 90 *e*P **P** **08 44 50.5 +1.3**
comp=Z,48nm,1.7s
CMB *e* 08 45 03.9
B17A L&G Farms, Che 39.11 70 ⇓P **P** **08 44 49.6 +0.3**
baz=39,SNR=41
G14A Jackson 39.12 76 ⇓P **P** **08 44 50.1 +0.5**
baz=39,SNR=43
SAO San Andreas Ge 39.25 92 *e*P **P** **08 44 51.3 +0.9**
SAO *e* 08 45 04.8
SAO pmax pmax
comp=Z,26nm,0.9s
SAO San Andreas Ge 39.25 92 *e*P **P** **08 44 51.3 +0.9**
comp=Z,26nm,0.9s
SAO *e* 08 45 04.8
D16A Dana Ranch, Ca 39.31 72 ⇓P **P** **08 44 51.5 +0.5**
baz=39,SNR=28
HRY Holter Researc 39.31 73 *e*P **P** **08 44 51.6 +0.6**
HRY *e* 08 45 06.1
A18A Metzger Ranch, 39.34 69 ⇑P **P** **08 44 51.1 -0.1**
baz=39,SNR=18
F15A Butte 39.38 74 ⇓P **P** **08 44 52.0 +0.3**
baz=39,SNR=24
LRM Limekiln Ridge 39.42 74 *e*P **P** **08 44 52.4 +0.4**
I13A Wildhorse Cree 39.46 78 ⇑P **P** **08 44 53.1 +0.8**
baz=39,SNR=90
C17A Wharram Farm, 39.46 71 ⇓P **P** **08 44 52.4 +0.2**

baz=39,SNR=37
HLID Hailey 39.47 78 *e*P **P 08 44 53.5 +1.0**
comp=Z,70nm,1.2s
HLID *e* 08 45 06.9
HLID Hailey 39.47 78 ⇓P **P 08 44 53.4 +1.0**
baz=39,SNR=66
E16A East Helena 39.50 73 ⇑P **P 08 44 53.1 +0.6**
baz=39,SNR=52
H14A Leadore 39.52 76 ⇓P **P 08 44 53.5 +0.7**
baz=39,SNR=128
BMN Battle Mountai 39.58 84 *e*P **P 08 44 54.8 +1.5**
BMN pmax pmax
comp=Z,16nm,0.9s
BMN Battle Mountai 39.58 84 *e*P **P 08 44 54.8 +1.5**
comp=Z,16nm,0.9s
DLMT Dillon 39.58 75 *e*P **P 08 44 53.6 +0.4**
comp=Z,35nm,0.9s
B18A Beardsley Farm 39.65 69 ⇓P **P 08 44 54.2 +0.5**
baz=40,SNR=42
J13A Cove Ranch, Pi 39.71 79 ⇓P **P 08 44 55.5 +1.1**
baz=40,SNR=168
MCMT McKenzie Canyo 39.72 76 *e*P **P 08 44 55.0 +0.5**
comp=Z,55nm,0.6s
MCMT *e* 08 45 08.8
G15A Dillon 39.75 75 ⇓P **P 08 44 54.9 +0.2**
baz=40,SNR=92
D17A Six Diamond Ra 39.75 72 ⇓P **P 08 44 54.9 +0.2**
baz=40,SNR=15
EGMT Eagleton 39.85 70 *e*P **P 08 44 55.6 +0.3**
comp=Z,93nm,0.8s
EGMT *e* 08 45 10.8
EGMT Eagleton 39.85 70 ⇓P **P 08 44 55.8 +0.4**
baz=40,SNR=58
I14A Mackay 39.85 77 ⇑P **P 08 44 56.7 +1.1**
baz=40,SNR=166
F16A Kennard Place, 39.92 74 ⇓P **P 08 44 56.4 +0.3**
baz=40,SNR=14
H15A Lima 39.95 76 ⇓P **P 08 44 57.0 +0.6**
baz=40,SNR=90
A19A Klindworth Far 39.97 68 ⇑P **P 08 44 56.7 +0.3**
baz=40,SNR=34
BOZ Bozeman (W) 40.00 74 *e*P **P 08 44 57.6 +0.8**
BOZ *e* 08 45 11.3
BOZ pmax pmax
comp=Z,72nm,0.8s
BOZ Bozeman (W) 40.00 74 *e*P **P 08 44 57.6 +0.8**
comp=Z,72nm,0.8s
BOZ *e* 08 45 11.3
BOZ Bozeman (W) 40.00 74 ⇑P **P 08 44 57.4 +0.7**
baz=40,SNR=51
E17A Martinsdale 40.02 73 ⇓P **P 08 44 57.8 +0.9**
baz=40,SNR=56
B19A Brinkman Farms 40.09 69 ⇓P **P 08 44 57.8 +0.4**
baz=40,SNR=55
G16A Moss Hill, Enn 40.12 75 ⇓P **P 08 44 58.3 +0.5**
baz=40,SNR=133
NVAR Mina Array Bea 40.13 88 P **P 08 44 59.1 +1.1**
NVAR pP **pP 08 45 13.2 -1.7**
NVAR PcP **PcP 08 47 02.3 +1.1**
NVAR pPcP 08 47 17.2
NVAR ScP **ScP 08 50 45.3 +1.3**
NVAR Mina Array Bea 40.13 88 P **P 08 44 59.1 +1.1**
baz=40,SNR=68
NVAR pP **pP 08 45 13.2 -1.7**
comp=Z,9.7nm,0.7s,baz=293,slow=7.9,SNR=13
NVAR PcP **PcP 08 47 02.3 +1.1**
comp=Z,7.1nm,0.6s,baz=302,slow=3.0,SNR=20
NVAR pPcP 08 47 17.2
comp=Z,7.8nm,0.8s,baz=293,slow=2.7,SNR=5.5
NVAR ScP **ScP 08 50 45.3 +1.3**
comp=Z,2.0nm,0.9s,baz=282,slow=4.8,SNR=4.7
NVAR LR LR 08 58 36.9
comp=Z,135nm,20.4s,baz=63,slow=32
J14A Carey 40.15 78 ⇓P **P 08 44 59.3 +1.3**
baz=40,SNR=78
D18A Linhart Farms, 40.25 71 ⇓P **P 08 44 59.8 +1.1**
baz=40,SNR=43
MLAC Mammoth Lakes 40.30 89 ⇑P **P 08 45 01.2 +1.7**
baz=40,SNR=7.3
I15A Monteview 40.39 77 ⇓P **P 08 45 01.0 +1.1**
baz=40,SNR=22
C19A Slack Wire Ran 40.40 70 ⇓P **P 08 45 00.9 +0.9**
baz=40,SNR=133
F17A Fitzpatrick Pl 40.43 73 ⇑P **P 08 45 01.2 +0.9**
baz=40,SNR=45
A20A Cobblestone Ra 40.46 68 ⇓P **P 08 45 00.8 +0.4**
baz=40,SNR=45
E18A Harlowton 40.51 72 ⇓P **P 08 45 02.1 +1.1**
baz=40,SNR=30
QLMT Earthquake Lak 40.56 75 *e*P **P 08 45 02.1 +0.6**
QLMT *e* 08 45 16.3
ELK Elko 40.60 83 *e*P **P 08 45 02.6 +0.7**
comp=Z,316nm,0.9s
ELK *e* 08 45 16.5
B20A Solberg Farm, 40.63 68 ⇑P **P 08 45 02.1 +0.3**
baz=40
MTUM Tungsten Hills 40.65 89 *e*P **P 08 45 03.8 +1.6**
CN2 Changchun 40.66 283 *e*P **P 08 45 04.0 +1.9**
CN2 *es*P sP 08 45 33.0 +6.2
CN2 *e*S **S 08 51 07.1 +0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
G17A Pierce Place, 40.70 74 ⇑P **P 08 45 03.6 +1.0**
baz=41,SNR=34
PTRM Twissleman Ran 40.73 92 *e*P **P 08 45 04.2 +1.4**
H16A Russell Place, 40.74 75 ⇓P **P 08 45 03.5 +0.6**
baz=41,SNR=111
J15A Blackfoot 40.76 77 ⇑P **P 08 45 04.6 +1.5**
baz=41,SNR=47
K14A Jones Ranch, D 40.80 79 ⇑P **P 08 45 04.2 +0.8**
baz=41,SNR=25
D19A Cripps Ranch, 40.80 70 ⇑P **P 08 45 04.1 +0.9**
baz=41,SNR=62
FFC Flin Flon 40.89 57 *ce*P **P 08 45 03.6 -0.2**
FFC Flin Flon 40.89 57 *e*P **P 08 45 03.7 -0.1**
comp=Z,25nm,0.6s
FFC Flin Flon 40.89 57 P **P 08 45 03.9 +0.1**
comp=Z,287nm,0.5s,SNR=28
RCTC Rector, Farmer 40.90 91 ⇓P **P 08 45 05.1 +1.0**
baz=41
YMR Madison River 40.92 75 *e*P **P 08 45 05.2 +0.7**
comp=Z,162nm,1.0s
YMR *e* 08 45 19.3
A21A Bergtoll Ranch 40.97 67 ⇓P **P 08 45 05.0 +0.4**
baz=41
F18A Big Timber 40.98 73 ⇑P **P 08 45 05.7 +0.9**
baz=41,SNR=34
C20A Veseth Ranch, 41.02 69 ⇑P **P 08 45 05.9 +0.9**
baz=41,SNR=46
TIN Tinemaha 41.04 89 ⇑P **P 08 45 07.0 +1.6**
baz=41
I16A Newdale 41.06 76 ⇑P **P 08 45 06.6 +1.1**
baz=41,SNR=51
L14A Malta 41.06 80 ⇓P **P 08 45 06.8 +1.3**
baz=41,SNR=11
GCMT Greycliff 41.08 73 *e*P **P 08 45 06.3 +0.7**
comp=Z,56nm,1.1s
GCMT *e* 08 45 20.1
SMMC Simmler 41.08 93 ⇓P **P 08 45 06.9 +1.2**
baz=41,SNR=5.2
K15A Arbon 41.11 78 ⇓P **P 08 45 07.5 +1.5**
baz=41,SNR=31
ALE Alert 41.19 11 P **P 08 45 07.6 +1.6**
comp=Z,185nm,0.5s,SNR=8.1
B21A Ellsworth Farm 41.21 68 ⇓P **P 08 45 06.6 +0.1**
baz=41,SNR=22
E19A Rath Farm, Rou 41.23 71 ⇓P **P 08 45 07.5 +0.7**
baz=41,SNR=36
D20A Manuel Ranch, 41.27 70 ⇓P **P 08 45 07.9 +0.8**
baz=41,SNR=33
VES Vestal, Richgr 41.30 91 ⇓P **P 08 45 07.9 +0.5**
baz=41,SNR=13
H17A Grant Village 41.31 75 ⇓P **P 08 45 09.8 +2.1**
baz=41,SNR=86
LKWY Lake 41.32 75 *e*P **P 08 45 09.7 +2.0**
LKWY *e* 08 45 24.0
LKWY pmax pmax
comp=Z,89nm,0.7s
LKWY Lake 41.32 75 *e*P **P 08 45 09.7 +2.0**
comp=Z,89nm,0.7s
LKWY *e* 08 45 23.9
IMW Indian Meadow 41.37 76 *e*P **P 08 45 09.3 +1.1**
comp=Z,84nm,1.0s
IMW *e* 08 45 23.3
DCID1 Drake Creek 41.40 76 *e*P **P 08 45 10.1 +1.8**
comp=Z,73nm,0.9s
DCID1 *e* 08 45 24.4
G18A Lazy EL Ranch, 41.40 73 ⇑P **P 08 45 08.2 -0.1**
baz=41,SNR=24
RRI2 Red Ridge 41.45 77 *e*P **P 08 45 10.2 +1.3**
comp=Z,109nm,0.9s
RRI2 *e* 08 45 24.4
F19A Roth Farm, Mol 41.47 72 ⇑P **P 08 45 09.4 +0.6**
baz=41,SNR=24
PKM Peak Mountain 41.47 93 ⇓P **P 08 45 10.5 +1.5**
baz=41,SNR=22
C21A Desert Coulee 41.48 69 ⇓P **P 08 45 09.4 +0.7**
baz=41,SNR=26
HVU Hansel Valley 41.49 80 *e*P **P 08 45 10.2 +1.1**
HVU *e* 08 45 24.1
HVU pmax pmax
comp=Z,54nm,0.7s
HVU Hansel Valley 41.49 80 *e*P **P 08 45 10.2 +1.1**
comp=Z,54nm,0.7s
HVU *e* 08 45 24.1
CWC Cottonwood Cre 41.53 90 ⇑P **P 08 45 10.5 +1.0**
baz=41
A22A Carney Farms, 41.54 67 ⇑P **P 08 45 09.6 +0.3**
baz=41,SNR=34
MOOW Moose Ponds 41.57 76 *e*P **P 08 45 10.7 +0.9**
comp=Z,28nm,1.0s
MOOW *e* 08 45 23.8
I17A Pilgrim Ck. 41.57 76 ⇓P **P 08 45 11.2 +1.3**
baz=41,SNR=22
E20A Meyer Farm, Mu 41.59 71 ⇑P **P 08 45 10.4 +0.7**
baz=41,SNR=26
K16A Soda Springs 41.59 78 ⇓P **P 08 45 11.6 +1.6**
baz=42,SNR=100
L15A Malad City 41.59 79 ⇓P **P 08 45 10.7 +0.8**
baz=42,SNR=28
TPAW Teton Pass 41.59 76 *e*P **P 08 45 11.3 +1.3**
comp=Z,115nm,1.6s
TPAW *e* 08 45 25.2
GRAC Grapevine Rang 41.60 89 ⇓P **P 08 45 11.4 +1.4**
baz=42,SNR=9.3
RLMT Red Lodge 41.68 73 *e*P **P 08 45 11.6 +1.0**
comp=Z,172nm,0.9s
RLMT *e* 08 45 25.7
RLMT Red Lodge 41.68 73 ⇑P **P 08 45 11.6 +1.0**
baz=42,SNR=113
H18A Shoshone NF, C 41.69 74 ⇑P **P 08 45 11.4 +0.6**
baz=42,SNR=40
REDW Red Top Meadow 41.73 76 *e*P **P 08 45 13.2 +2.2**
comp=Z,1.7nm,1.4s
REDW *e* 08 45 25.5
SNOW Snow King Moun 41.73 76 *e*P **P 08 45 12.4 +1.3**
comp=Z,61nm,1.2s
SNOW *e* 08 45 26.5
LOHW Long Hollow 41.73 76 *e*P **P 08 45 12.1 +0.9**
comp=Z,28nm,0.9s
LOHW *e* 08 45 26.0
ISA Isabella 41.79 91 *e*P **P 08 45 12.0 +0.5**
ISA pmax pmax
comp=Z,17nm,0.9s
ISA Isabella 41.79 91 *e*P **P 08 45 12.0 +0.5**
comp=Z,17nm,0.9s
ISA Isabella 41.79 91 ⇑P **P 08 45 12.0 +0.5**
baz=42,SNR=24
J17A Brown Place, J 41.81 76 ⇑P **P 08 45 12.9 +1.2**
baz=42,SNR=34
R11A Troy Canyon, C 41.85 86 ⇓P **P 08 45 12.8 +0.7**
baz=42,SNR=41
B22A Reddig Ranch S 41.86 67 ⇓P **P 08 45 12.4 +0.5**
baz=42,SNR=13
AHID Auburn Hatcher 41.92 77 *e*P **P 08 45 13.5 +0.9**
comp=Z,64nm,1.0s
AHID *e* 08 45 27.3
DAC Darwin (Calif) 41.93 90 *e*P **P 08 45 13.6 +0.8**
DAC *e* 08 45 27.0
DAC pmax pmax
comp=Z,5.0nm,0.5s
DAC Darwin (Calif) 41.93 90 *e*P **P 08 45 13.6 +0.8**
comp=Z,5.2nm,0.5s
DAC *e* 08 45 27.0
D21A La Casta Ranch 41.94 70 ⇓P **P 08 45 13.2 +0.6**
baz=42,SNR=21
F20A Billings 41.96 72 ⇑P **P 08 45 13.4 +0.6**
baz=42,SNR=12
K17A Gardner Place, 42.04 77 ⇑P **P 08 45 14.3 +0.7**
baz=42,SNR=28
H19A Powell 42.09 74 ⇓P **P 08 45 15.2 +1.2**
baz=42,SNR=95
MPMC Manual Prospec 42.14 90 ⇑P **P 08 45 15.5 +1.0**
baz=42,SNR=24
A23A Redstone 42.15 66 ⇑P **P 08 45 14.5 +0.3**
baz=42
I18A Diamond G Ranc 42.15 75 ⇓P **P 08 45 15.6 +1.1**
baz=42,SNR=38
L16A Fish Haven 42.16 78 ⇓P **P 08 45 15.8 +1.2**
baz=42,SNR=149
E21A Keefer Ranch, 42.18 70 ⇑P **P 08 45 15.4 +0.9**
baz=42,SNR=16
BSC Santa Cruz Isl 42.18 94 ⇓P **P 08 45 15.6 +0.9**
baz=42
C22A Vida 42.22 68 ⇓P **P 08 45 15.0 +0.3**
baz=42,SNR=26
G20A Bridger 42.24 73 ⇓P **P 08 45 15.6 +0.5**
baz=42,SNR=79
FURC Furnace Creek, 42.26 89 ⇑P **P 08 45 16.2 +1.1**
baz=42,SNR=38
J18A Kendall Valley 42.31 76 ⇑P **P 08 45 16.6 +0.7**
baz=42,SNR=52
HWUT Hardware Ranch 42.32 79 *e*P **P 08 45 16.8 +0.9**
comp=Z,27nm,0.8s
HWUT *e* 08 45 30.1
OSI Osito Adit 42.33 92 *e*P **P 08 45 16.7 +0.8**
comp=Z,26nm,0.9s
OSI Osito Adit 42.33 92 ⇓P **P 08 45 16.9 +1.1**
baz=42,SNR=6.2
B23A Brockton 42.34 67 ⇓P **P 08 45 16.2 +0.5**
baz=42,SNR=34
D22A Cohagen 42.37 69 ⇓P **P 08 45 16.9 +0.9**
baz=42,SNR=69
LRMC Laurel Mountai 42.39 91 ⇑P **P 08 45 17.0 +0.5**
baz=42,SNR=12
DUG Dugway 42.41 82 *e*P **P 08 45 17.6 +1.0**
DUG *e* 08 45 31.9
DUG pmax pmax
comp=Z,107nm,1.1s
DUG Dugway 42.41 82 *e*P **P 08 45 17.6 +1.0**
comp=Z,107nm,1.1s
DUG *e* 08 45 31.9
DUG Dugway 42.41 82 ⇑P **P 08 45 17.6 +1.0**
baz=42,SNR=109
L17A Cokeville 42.45 78 ⇑P **P 08 45 17.8 +0.8**
baz=42,SNR=43
I19A Meeteetse 42.45 74 ⇑P **P 08 45 17.7 +0.8**
baz=42,SNR=32
M16A Huntsville 42.45 79 ⇓P **P 08 45 17.8 +0.8**
baz=42,SNR=77
BLG Laguna Peak 42.46 93 ⇓P **P 08 45 17.6 +0.7**
baz=42,SNR=6.3
F21A Absaloka Mine, 42.55 71 ⇓P **P 08 45 18.0 +0.5**
baz=42,SNR=9.4
C23A Lambert 42.58 68 ⇓P **P 08 45 18.6 +0.8**
baz=42,SNR=41
EDW2 Edwards Air Fo 42.60 92 ⇑P **P 08 45 18.7 +0.6**
baz=42,SNR=14
K18A Toltan Ranch, 42.63 77 ⇑P **P 08 45 19.8 +1.3**
baz=42,SNR=123
A24A Wasatby 42.66 66 ⇑P **P 08 45 18.8 +0.4**
baz=42,SNR=44
CTU Camp Tracy 42.75 80 *e*P **P 08 45 20.6 +1.2**
comp=Z,60nm,1.1s
CTU *e* 08 45 33.3
H20A Greybull 42.78 73 ⇑P **P 08 45 19.8 +0.3**
baz=43,SNR=31
DGMT Dagmar 42.79 66 *e*P **P 08 45 19.8 +0.4**
comp=Z,180nm,1.5s
DGMT *e* 08 45 33.8
DGMT Dagmar 42.79 66 ⇑P **P 08 45 19.6 +0.2**
baz=43,SNR=14
DECC Green Verdugo 42.81 92 ⇓P **P 08 45 20.5 +0.7**
baz=43
G21A Lodge Grass 42.83 72 ⇑P **P 08 45 20.1 +0.2**
baz=43,SNR=16
BW06 Boulder Array 42.84 76 *e*P **P 08 45 20.8 +0.6**
comp=Z,113nm,0.8s
BW06 *e* 08 45 34.9
BW06 Boulder Array 42.84 76 ⇑P **P 08 45 20.9 +0.8**
baz=43,SNR=186
PDAR Pinedale Array 42.84 76 P **P 08 45 20.8 +0.6**
PDAR pP **pP 08 45 35.0 -2.1**
PDAR PcP **PcP 08 47 10.0 0.0**
PDAR Pinedale Array 42.84 76 P **P 08 45 20.8 +0.6**
comp=Z,104nm,0.7s,baz=304,slow=4.3,SNR=884
PDAR pP **pP 08 45 35.0 -2.1**
comp=Z,124nm,0.9s,baz=309,slow=4.7,SNR=24
PDAR PcP **PcP 08 47 10.0 0.0**
comp=Z,3.6nm,0.6s,baz=108,slow=0.3,SNR=4.5
PDAR LR LR 09 00 06.2
comp=Z,196nm,21.0s,baz=313,slow=32
J19A Crowheart 42.86 75 ⇑P **P 08 45 21.1 +0.9**
baz=43,SNR=57
E22A Miles City 42.89 70 ⇑P **P 08 45 21.0 +0.8**
baz=43,SNR=24
SNY Shenyang 42.93 282 ⇑P **P 08 45 23.4 +2.9**
SNY pmax pmax
comp=Z,11nm,0.5s
M17A Scullys Gap (B 42.94 79 ⇑P **P 08 45 21.4 +0.4**
baz=43,SNR=21
PASC Pasadena Art C 42.95 92 *e*P **P 08 45 21.6 +0.8**
comp=Z,137nm,1.3s
PASC *e* 08 45 35.4
KSRS Korea Array 42.96 274 P **P 08 45 22.4 +1.5**
comp=Z,8.6nm,0.5s,baz=56,slow=7.6,SNR=34
KSRS PcP **PcP 08 47 11.4 +1.2**
comp=Z,25nm,0.7s,baz=69,slow=3.7,SNR=27
KSRS pPcP 08 47 26.9
comp=Z,11nm,0.8s,baz=54,slow=3.6,SNR=6.8
KSRS LR LR 09 02 12.1
comp=Z,155nm,19.5s,baz=52,slow=34
SHOC Shoshone 42.98 89 ⇓P **P 08 45 22.1 +0.9**
baz=43,SNR=6.8
JLU Jordanelle 42.99 80 *e*P **P 08 45 22.3 +0.9**
comp=Z,63nm,1.1s
JLU *e* 08 45 36.3
KSAR Wonju Array Be 42.99 274 P **P 08 45 22.4 +1.2**
KSAR PcP **PcP 08 47 11.4 +1.1**
KSAR pPcP 08 47 26.9
MWC Mount Wilson 43.00 92 *e*P **P 08 45 22.3 +0.9**
MWC pmax pmax
comp=Z,39nm,1.0s
MWC Mount Wilson 43.00 92 *e*P **P 08 45 22.3 +0.9**
comp=Z,39nm,1.0s
I20A Worland 43.01 74 ⇓P **P 08 45 22.1 +0.7**
baz=43,SNR=49
GSC Goldstone 43.05 90 *e*P **P 08 45 22.7 +0.9**
GSC *e* 08 45 36.3
GSC pmax pmax
comp=Z,55nm,1.0s
GSC Goldstone 43.05 90 *e*P **P 08 45 22.7 +0.9**
comp=Z,56nm,1.0s
GSC *e* 08 45 36.2
GSC Goldstone 43.05 90 ⇑P **P 08 45 22.7 +0.9**
baz=43,SNR=71
L18A Fontenelle, Gr 43.05 78 ⇓P **P 08 45 22.5 +0.6**
baz=43,SNR=57
F22A Rosebud 43.07 71 ⇓P **P 08 45 22.3 +0.5**
baz=43,SNR=21
N17A Moffit Pass 43.16 79 ⇑P **P 08 45 23.2 +0.5**
baz=43,SNR=23
C24A Savage 43.16 68 ⇓P **P 08 45 23.4 +1.0**
baz=43,SNR=32
RRX Edison Barstow 43.21 91 ⇓P **P 08 45 23.9 +1.0**
baz=43
DAU Daniels Canyon 43.22 80 *e*P **P 08 45 24.6 +1.2**
DAU *e* 08 45 38.2
DAU Daniels Canyon 43.22 80 *e*P **P 08 45 24.6 +1.2**
DAU *e* 08 45 38.2
E23A Ismay 43.23 69 ⇓P **P 08 45 23.9 +1.0**
baz=43,SNR=25
BFSC Mount Baldy Ra 43.23 92 ⇓P **P 08 45 24.3 +1.0**
baz=43,SNR=37
K19A Absolon Red Bu 43.24 76 ⇑P **P 08 45 23.5 +0.3**
baz=43,SNR=186
MPU Maple Canyon 43.24 81 *e*P **P 08 45 24.4 +1.0**
comp=Z,40nm,0.8s
MPU *e* 08 45 37.4
H21A Big Horn, Sher 43.26 73 ⇓P **P 08 45 23.7 +0.3**
baz=43,SNR=22
M18A Lyman 43.33 78 ⇓P **P 08 45 24.5 +0.4**
baz=43,SNR=34
CIS Catalina Islan 43.34 93 ⇑P **P 08 45 25.4 +1.4**
baz=43
L19A Farson 43.36 77 ⇑P **P 08 45 24.7 +0.4**
baz=43,SNR=74
G22A Birney 43.37 71 ⇓P **P 08 45 24.4 +0.2**
baz=43,SNR=27
J20A Shoshoni 43.38 75 ⇑P **P 08 45 25.4 +1.1**
baz=43,SNR=74
TUQ Turquoise Moun 43.51 89 ⇓P **P 08 45 26.2 +0.7**
baz=43,SNR=11
ARUT Antelope Range 43.52 85 *e*P **P 08 45 26.2 +0.6**
ARUT pmax pmax
comp=Z,33nm,1.2s
ARUT Antelope Range 43.52 85 *e*P **P 08 45 26.2 +0.6**
comp=Z,33nm,1.2s
I21A Big Trails, Te 43.58 74 ⇑P **P 08 45 26.1 0.0**
baz=43,SNR=60
F23A Volborg 43.60 70 ⇓P **P 08 45 26.3 +0.3**
baz=43,SNR=70
K20A Yellowstone Ra 43.63 76 ⇑P **P 08 45 26.5 +0.1**
baz=44,SNR=95
HEC Hector,Ludlow 43.66 90 ⇑P **P 08 45 27.3 +0.7**
baz=44,SNR=11
BBRC Big Bear Solar 43.67 91 ⇑P **P 08 45 27.8 +0.9**
baz=44,SNR=16
H22A Clearmont 43.69 72 ⇑P **P 08 45 27.0 +0.2**
baz=44,SNR=5.9
CCUT Cedar City 43.72 85 *e*P **P 08 45 28.3 +1.1**
comp=Z,79nm,1.6s
E24A Baker 43.76 69 ⇓P **P 08 45 28.2 +0.9**
baz=44,SNR=22
J21A Lysite 43.76 74 ⇑P **P 08 45 27.9 +0.3**
baz=44,SNR=46
MVU Marysvale 43.82 83 *e*P **P 08 45 29.1 +1.1**
comp=Z,24nm,0.8s
MVU *e* 08 45 43.4
M19A Rock Springs 43.83 78 ⇑P **P 08 45 28.1 0.0**
baz=44,SNR=17
MSU Marysvale 43.83 83 *e*P **P 08 45 29.4 +1.2**
MSU *e* 08 45 43.1
MSU Marysvale 43.83 83 *e*P **P 08 45 29.4 +1.2**
MSU *e* 08 45 43.1
N18A Larsen Ranch, 43.84 79 ⇓P **P 08 45 28.2 +0.1**
baz=44,SNR=44
G23A Biddle 43.90 71 ⇓P **P 08 45 28.6 +0.1**
baz=44,SNR=30
TMUT Trail Mountain 43.94 81 *e*P **P 08 45 30.4 +1.3**
comp=Z,93nm,0.9s
TMUT *e* 08 45 44.4
MURC Murrieta 43.94 92 ⇑P **P 08 45 29.4 +0.5**
baz=44,SNR=9.1
JNU Nakatsue 44.00 267 P **P 08 45 30.5 +1.2**
JNU Nakatsue 44.00 267 P **P 08 45 30.5 +1.2**
comp=Z,94nm,0.9s,baz=13,slow=5.6,SNR=6.7
JNU LR LR 09 02 14.0
comp=Z,318nm,20.9s,baz=258,slow=34
I22A 9 Mile Ranch, 44.02 73 ⇑P **P 08 45 29.8 +0.4**
baz=44,SNR=35
L20A Wamsutter 44.02 76 ⇓P **P 08 45 29.6 0.0**
baz=44,SNR=30
F24A Ekalaka 44.09 70 ⇑P **P 08 45 30.3 +0.4**
baz=44,SNR=19
GMRC Granite Mounta 44.10 90 ⇓P **P 08 45 30.9 +0.6**
baz=44,SNR=30
P17A Butcher Ranch, 44.11 81 ⇓P **P 08 45 31.2 +0.9**
baz=44,SNR=23
N19A John Jarvie Ra 44.19 78 ⇓P **P 08 45 31.1 +0.2**
baz=44,SNR=44
Q16A Castle Valley 44.19 82 ⇓P **P 08 45 32.2 +1.1**
baz=44,SNR=43
LDFC Landfair 44.24 89 *e*P **P 08 45 32.2 +0.8**
comp=Z,49nm,0.8s
H23A Clabaugh Cattl 44.26 72 ⇑P **P 08 45 31.0 -0.4**
baz=44
J22A Midwest 44.30 74 ⇑P **P 08 45 32.1 +0.4**
baz=44,SNR=90
K21A Alcova 44.30 75 ⇑P **P 08 45 31.9 +0.1**
baz=44,SNR=67
P18A Preston Nutter 44.32 80 ⇑P **P 08 45 33.2 +1.0**
baz=44
G24A Alzada 44.40 70 ⇑P **P 08 45 32.5 0.0**
baz=44,SNR=23
PFO Pinyon Flat Ob 44.40 92 *e*P **P 08 45 33.1 +0.5**
comp=Z,18nm,1.3s
PFO *e* 08 45 46.2
PFO Pinyon Flat Ob 44.40 92 P **P 08 45 33.5 +0.9**

comp=Z,70nm,0.8s,SNR=8.9
PFO Pinyon Flat Ob 44.40 92 ⇑P P 08 45 32.9 +0.3
baz=44,SNR=18
BELC Belle Mtn. Jos 44.41 91 ⇑P P 08 45 33.1 +0.3
baz=44,SNR=23
M20A Sweetwater, Wa 44.42 77 ⇓P P 08 45 33.6 +0.7
baz=44,SNR=67
SRU San Rafael 44.47 81 eP P 08 45 34.1 +0.9
SRU pmax pmax
comp=Z,66nm,0.8s
SRU San Rafael 44.47 81 eP P 08 45 34.1 +0.9
comp=Z,66nm,0.8s
SRU San Rafael 44.47 81 ⇓P P 08 45 34.0 +0.9
baz=44,SNR=79
109C Camp Elliot, M 44.48 93 ⇓P P 08 45 34.0 +0.9
baz=44,SNR=7.5
O19A Miners Draw (B 44.58 79 ⇓P P 08 45 34.8 +0.7
baz=44,SNR=138
L21A Rawlins 44.63 76 ⇑P P 08 45 34.7 +0.2
baz=44,SNR=148
H24A Dirks Ranch, A 44.65 71 ⇑P P 08 45 34.0 -0.5
baz=44,SNR=16
K22A Casper 44.72 75 ⇓P P 08 45 35.2 0.0
baz=45,SNR=40
N20A Spence Gulch, 44.77 78 ⇑P P 08 45 36.4 +0.8
baz=45,SNR=59
IRM Iron Mountain 44.83 90 ⇑P P 08 45 36.6 +0.6
baz=45,SNR=21
M21A Separation Pea 44.84 76 ⇓P P 08 45 36.3 +0.1
baz=45,SNR=52
J23A Dilts Ranch, B 44.85 73 ⇑P P 08 45 36.7 +0.6
baz=45,SNR=9.2
BAR Barrett 44.89 93 eP P 08 45 37.1 +0.7
comp=Z,20nm,0.8s
MONP Monument Peak 44.91 92 ⇑P P 08 45 37.4 +0.6
baz=45,SNR=19
BC3 Big Chuckawall 44.98 91 ⇑P P 08 45 37.4 +0.1
baz=45,SNR=16
W13A Hualapai Mount 44.98 88 ⇑P P 08 45 38.1 +0.7
baz=45,SNR=49
P19A Cripple Cowboy 45.08 80 ⇓P P 08 45 38.8 +0.7
baz=45,SNR=121
U15A North Rim 45.09 85 ⇑P P 08 45 39.5 +1.2
baz=45,SNR=59
I24A Kuemmerle Ranc 45.12 72 ⇓P P 08 45 37.8 -0.5
baz=45,SNR=6.8
L22A Ellis Ranch, M 45.14 75 ⇑P P 08 45 39.1 +0.6
baz=45,SNR=34
K23A Bowen Ranch, D 45.19 74 ⇑P P 08 45 38.8 0.0
baz=45,SNR=15
O20A White River Ci 45.22 79 ⇓P P 08 45 39.8 +0.6
baz=45,SNR=87
SWSC Sam W. Stewart 45.25 92 ⇑P P 08 45 39.9 +0.6
baz=45,SNR=7.7
DVTC Desert V Tower 45.26 92 ⇓P P 08 45 40.1 +0.7
baz=45,SNR=19
N21A Black Mountain 45.27 77 ⇓P P 08 45 39.7 +0.1
baz=45,SNR=87
RSSD Black Hills 45.32 71 eP P 08 45 39.8 -0.1
RSSD pmax pmax
comp=Z,51nm,1.3s
RSSD Black Hills 45.32 71 eP P 08 45 39.8 -0.1
comp=Z,51nm,1.3s
Q19A Hogan Spring (45.33 81 ⇑P P 08 45 40.1 +0.2
baz=45,SNR=54
PDMCI Parker Dam,Lak 45.36 89 ⇑P P 08 45 40.6 +0.6
baz=45,SNR=14
J24A Dixon Ranch, L 45.42 73 ⇑P P 08 45 40.7 +0.1
baz=45,SNR=14
M22A Cedar Creek Ra 45.43 76 ⇑P P 08 45 41.0 +0.2
baz=45,SNR=48
Y12C Blythe 45.49 90 ⇑P P 08 45 41.8 +0.6
baz=45,SNR=14
P20A De Beque 45.52 79 ⇓P P 08 45 41.7 +0.2
baz=45,SNR=14
L23A Garrett 45.53 75 ⇑P P 08 45 41.7 +0.1
baz=45,SNR=106
O21A Pagoda 45.63 78 ⇑P P 08 45 42.8 +0.3
baz=46
S18A Hurst Farm, Bl 45.69 82 ⇓P P 08 45 43.2 +0.3
baz=46,SNR=73
K24A Anderson Ranch 45.69 73 ⇓P P 08 45 42.5 -0.3
baz=46,SNR=13
MDND Maddock 45.70 65 ⇑P P 08 45 43.0 +0.4
baz=46,SNR=58
GLA Glamis 45.77 91 eP P 08 45 44.1 +0.6
GLA pmax pmax
comp=Z,31nm,0.9s
GLA Glamis 45.77 91 eP P 08 45 44.0 +0.6
comp=Z,31nm,0.9s
GLA Glamis 45.77 91 ⇓P P 08 45 44.0 +0.6
baz=46,SNR=14
PV10 Paradox Valley 45.83 81 eP P 08 45 45.1 +1.0
comp=Z,2µm,0.9s
PV10 e 08 45 58.4
N22A Wattenberg Ran 45.88 77 ⇓P P 08 45 45.1 +0.6
baz=46,SNR=93
PV04 Paradox Valley 45.90 81 eP P 08 45 45.0 +0.5
PV04 e 08 45 59.2
M23A Laramie 45.91 75 ⇑P P 08 45 44.8 +0.2
baz=46,SNR=19
Q20A Ridgley Place, 45.92 80 ⇓P P 08 45 44.6 0.0
baz=46,SNR=40
L24A Wheatland 46.03 74 ⇓P P 08 45 45.8 +0.3
baz=46,SNR=13
P21A Newcastle 46.07 79 ⇑P P 08 45 46.5 +0.5
baz=46,SNR=56
N23A Red Feather La 46.13 76 ⇑P P 08 45 47.0 +0.6
baz=46,SNR=46
PHWY Pilot Hill 46.17 75 eP P 08 45 46.6 -0.1
comp=Z,25nm,0.8s
O22A Kremmling 46.22 77 ⇑P P 08 45 47.6 +0.4
baz=46,SNR=47
WUAZ Wupatki 46.25 86 eP P 08 45 48.3 +1.0
comp=Z,46nm,1.0s
WUAZ e 08 46 03.7
WUAZ Wupatki 46.25 86 ⇑P P 08 45 48.3 +1.0
baz=46,SNR=37
PV01 Paradox Valley 46.27 81 eP P 08 45 47.8 +0.3
comp=Z,6µm,0.8s
PV01 e 08 46 01.1
Y14A Wickenburg 46.30 89 ⇓P P 08 45 48.1 +0.6
baz=46,SNR=24
K25A Mack Ranch, Ha 46.31 73 ⇓P P 08 45 47.9 +0.2
baz=46,SNR=8.9
R20A Redvale 46.35 81 ⇓P P 08 45 48.5 +0.4
baz=46,SNR=33
ULM Lac du Bonnet 46.38 60 P P 08 45 47.7 -0.2
ULM pP pP 08 46 01.4 -3.6
ULM Lac du Bonnet 46.38 60 P P 08 45 47.7 -0.2
comp=Z,59nm,0.5s,baz=305,slow=8.0,SNR=84
ULM pP pP 08 46 01.4 -3.6
comp=Z,18nm,0.7s,baz=275,slow=9.6,SNR=5.3
ULM LR LR 09 05 14.0
comp=Z,211nm,18.5s,baz=312,slow=36
Q21A Lamborn Mesa, 46.43 80 ⇑P P 08 45 49.2 +0.5
baz=46,SNR=26
M24A Cheyenne 46.44 75 ⇑P P 08 45 49.3 +0.6
baz=46,SNR=15
P22A Eagle 46.44 78 ⇑P P 08 45 49.2 +0.4
baz=46,SNR=29
L25A Engebretsen Ra 46.53 74 ⇓P P 08 45 50.0 +0.6
baz=46,SNR=12
O23A Lake Granby, G 46.57 77 ⇓P P 08 45 51.0 +1.2
baz=46,SNR=110
SMCO Snowmass 46.58 79 eP P 08 45 50.3 +0.2
comp=Z,21nm,0.7s
S20A Disappointment 46.59 81 ⇑P P 08 45 50.4 +0.3
baz=46,SNR=89
113A Mohawk Valley, 46.62 90 ⇑P P 08 45 50.3 +0.3
baz=46,SNR=19
K26A Motz Farm, Whi 46.66 72 ⇑P P 08 45 50.1 -0.2
baz=46,SNR=5.4
Z14A Wintersburg 46.72 89 ⇓P P 08 45 51.4 +0.5
baz=47
R21A Cimarron 46.74 80 ⇓P P 08 45 51.8 +0.6
baz=47,SNR=42
N24A Carr 46.80 76 ⇓P P 08 45 52.5 +0.9
baz=47,SNR=17
Q22A Crested Butte, 46.81 79 ⇑P P 08 45 52.5 +0.6
baz=47,SNR=72
MVCO Mesa Verde 46.91 82 eP P 08 45 52.8 +0.3
comp=Z,36nm,1.1s
MVCO Mesa Verde 46.91 82 ⇑P P 08 45 53.0 +0.5
baz=47,SNR=24
M25A Palm-Egli Farm 46.92 74 ⇑P P 08 45 53.5 +1.0
baz=47,SNR=39
X16A Lo Mia Camp, P 46.94 87 ⇑P P 08 45 53.9 +1.2
baz=47,SNR=22
ISCO Idaho Springs 47.01 77 eP P 08 45 54.1 +0.8
ISCO pmax pmax
comp=Z,55nm,1.4s
ISCO Idaho Springs 47.01 77 eP P 08 45 54.1 +0.8
comp=Z,55nm,1.4s
ISCO Idaho Springs 47.01 77 ⇓P P 08 45 53.8 +0.5
baz=47,SNR=34
S21A Coal Bank Pass 47.05 81 ⇑P P 08 45 54.4 +0.7
baz=47,SNR=57
L26A Underwood Farm 47.13 73 ⇓P P 08 45 54.1 +0.1
baz=47
O24A Longmont 47.13 76 ⇓P P 08 45 55.2 +1.1
baz=47,SNR=11
P23A Jefferson 47.14 78 ⇓P P 08 45 55.7 +1.3
baz=47,SNR=33
K27A Flueckinger Fa 47.21 72 ⇑P P 08 45 54.4 -0.2
baz=47,SNR=13
N25A Grover 47.28 75 ⇑P P 08 45 56.1 +0.8
baz=47
U20A Newcomb 47.44 83 ⇓P P 08 45 57.3 +0.8
baz=47
Q23A Hartsel 47.44 78 ⇑P P 08 45 57.8 +1.1
baz=47,SNR=51
M26A McRoberts Ranc 47.44 74 ⇓P P 08 45 57.1 +0.7
baz=47,SNR=5.7
AGMN Agassiz Nation 47.50 62 eP P 08 45 56.3 -0.4
comp=Z,124nm,1.0s
AGMN e 08 46 09.3
W18A Petrified Fore 47.52 85 ⇓P P 08 45 58.2 +1.0
baz=47,SNR=14
L27A T5 Ranch, Ells 47.55 73 ⇓P P 08 45 57.2 -0.1
baz=47
S22A 4UR Ranch, Cre 47.58 80 ⇑P P 08 45 58.9 +1.2
baz=47,SNR=57
P24A Kohler Place, 47.61 77 ⇑P P 08 45 59.2 +1.4
baz=48,SNR=14
T21A Navajo Lake 47.63 81 ⇓P P 08 45 59.3 +1.2
baz=48,SNR=22
O25A Wiggins 47.70 76 ⇓P P 08 45 59.6 +1.1
baz=48,SNR=34
214A Organ Pipe Nat 47.76 90 ⇑P P 08 45 59.6 +0.6
baz=48,SNR=21
X18A Snowflake 47.78 86 ⇓P P 08 46 00.3 +1.0
baz=48,SNR=15
N26A Koester Ranch, 47.79 75 ⇑P P 08 46 00.1 +0.9
baz=48,SNR=27
Q24A Divide 47.81 78 ⇑P P 08 46 00.3 +0.7
baz=48,SNR=17
V20A Brimhall 47.85 83 ⇓P P 08 46 00.3 +0.6
baz=48,SNR=14
M27A Reverse DX Ran 47.85 73 ⇑P P 08 45 59.9 +0.3
baz=48
R23A Moffat 47.90 79 ⇓P P 08 46 01.2 +0.9
baz=48,SNR=28
U21A Nageezi 47.93 82 ⇓P P 08 46 01.3 +0.9
baz=48,SNR=81
T22A Edith 48.00 81 ⇓P P 08 46 02.2 +1.1
baz=48,SNR=42
P25A Willow Gulch B 48.05 77 ⇑P P 08 46 02.5 +1.2
baz=48,SNR=76
BRSD Miller 48.06 68 ⇓P P 08 46 00.9 -0.2
baz=48,SNR=11
O26A Horse Wrangler 48.10 75 ⇑P P 08 46 02.4 +0.8
baz=48
S23A Nye Farm, Mont 48.10 80 ⇑P P 08 46 02.9 +1.2
baz=48,SNR=15
N27A Anderson Farm, 48.21 74 ⇑P P 08 46 03.0 +0.6
baz=48,SNR=21
W20A Ramah 48.27 84 ⇑P P 08 46 03.6 +0.5
baz=48,SNR=27
R24A Sanders Place, 48.30 78 ⇑P P 08 46 04.2 +1.0
baz=48,SNR=44
V21A Milan 48.35 83 ⇓P P 08 46 04.2 +0.5
baz=48,SNR=6.1
Q25A Bedland, Calha 48.38 77 ⇑P P 08 46 04.5 +0.6
baz=48,SNR=39
OGNE Ogallala 48.42 74 eP P 08 46 04.1 +0.2
comp=Z,266nm,1.4s
OGNE e 08 46 18.4
OGNE Ogallala 48.42 74 ⇓P P 08 46 04.5 +0.6
baz=48,SNR=12
U22A Llaves 48.45 82 ⇑P P 08 46 05.2 +0.8
baz=48,SNR=35
BJI Beijing 48.45 285 P P 08 46 05.5 +1.4
BJI S S 08 52 57.0 -2.7
BJI sS sS 08 53 27.4 -1.6
BJI pmax pmax
comp=Z,6.0nm,0.7s
BJI LR LR
comp=N,340nm,24.4s
BJI LR LR
comp=E,240nm,26.6s
BJI LR LR
comp=Z,270nm,34.3s
P26A Davis Ranch, A 48.51 76 ⇓P P 08 46 05.9 +1.1
baz=48,SNR=107
T23A Casias Ranch, 48.52 80 ⇓P P 08 46 06.0 +1.0
baz=48,SNR=29
S24A Houchin Ranch, 48.62 79 ⇓P P 08 46 06.9 +1.1
baz=48,SNR=50
O27A Beecher Island 48.63 75 ⇑P P 08 46 06.1 +0.5
baz=48,SNR=23
X20A Quemado 48.66 85 ⇓P P 08 46 07.3 +1.3
baz=49,SNR=35
V22A San Miguel Ran 48.72 82 ⇑P P 08 46 07.0 +0.4
baz=49,SNR=33
W21A San Fidel 48.80 83 ⇓P P 08 46 07.8 +0.7
baz=49,SNR=16
Q26A Hugo 48.81 77 ⇑P P 08 46 07.9 +0.8
baz=49,SNR=22
R25A Fountain Ranch 48.85 78 ⇑P P 08 46 08.2 +0.8
baz=49,SNR=27
ULN Ulaanbaatar 48.86 298 eP P 08 46 07.2 -0.1
ULN Ulaanbaatar 48.86 298 P P 08 46 08.4 +1.0
comp=Z,15nm,1.9s
U23A El Rito 48.88 81 ⇑P P 08 46 08.7 +1.0
baz=49,SNR=104
S25A Robets Cordova 49.08 79 ⇑P P 08 46 10.0 +0.8
baz=49,SNR=85
KBS Kingsbay 49.08 359 ceP P 08 46 12.2 +3.8
KBS pmax pmax
comp=Z,51nm,2.5s
KBS Kingsbay 49.08 359 eP P 08 46 11.8 +3.4
comp=Z,26nm,0.8s
KBS e 08 46 25.3
T24A Torres, Weston 49.09 80 ⇑P P 08 46 10.7 +1.3
baz=49
Y20A Horse Springs, 49.16 85 ⇑P P 08 46 11.2 +1.3
baz=49,SNR=27
X21A Alamosita Cree 49.16 84 ⇑P P 08 46 11.2 +1.3
baz=49,SNR=79
SONM Songino Array 49.24 299 P P 08 46 10.2 0.0
SONM PcP PcP 08 47 32.3 +0.1
SONM ScP ScP 08 51 21.3 +0.2
SONM Songino Array 49.24 299 P P 08 46 10.2 0.0
comp=Z,4.0nm,0.6s,baz=58,slow=7.5,SNR=13
SONM PcP PcP 08 47 32.3 +0.1
comp=Z,6.6nm,0.7s,baz=70,slow=2.0,SNR=7.0
SONM ScP ScP 08 51 21.3 +0.2
comp=Z,1.3nm,0.7s,baz=33,slow=3.9,SNR=4.4
SONM LR LR 09 07 18.4
comp=Z,736nm,20.4s,baz=59,slow=36
R26A Arlington 49.26 77 ⇑P P 08 46 11.2 +0.7
baz=49,SNR=42
V23A Ortiz Mt. (NFS 49.27 82 ⇓P P 08 46 12.1 +1.4
baz=49,SNR=42
KSCO Kaye Shedlock' 49.29 76 ⇑P P 08 46 11.7 +0.9
baz=49,SNR=53
W22A Albuquerque 49.30 83 ⇓P P 08 46 12.1 +1.2
baz=49,SNR=9.8
ZAK Zakamensk 49.36 303 ⇑iP P 08 46 11.1 0.0
ZAK e 08 47 32.2
ZAK pmax pmax
comp=Z,7.0nm,1.3s
U24A Moreno Valley 49.39 80 ⇓P P 08 46 12.9 +1.2
baz=49,SNR=20
T25A Trinidad 49.43 79 ⇓P P 08 46 13.0 +1.1
baz=49,SNR=127
Y21A Point of Rocks 49.52 84 ⇑P P 08 46 13.9 +1.2
baz=49,SNR=11
Z20A Nine Sixteen R 49.57 86 ⇑P P 08 46 14.0 +1.1
baz=50,SNR=20
LAZ Ladron 49.59 84 eP P 08 46 14.0 +0.9
comp=Z,33nm,1.3s
LAZ e 08 46 28.7
X22A Bernardo 49.59 84 ⇑P P 08 46 15.0 +1.9
baz=50,SNR=20
ANMO Albuquerque 49.64 83 eP P 08 46 14.0 +0.5
comp=Z,36nm,1.3s
ANMO e 08 46 27.3
R27A Eads 49.66 77 ⇑P P 08 46 14.3 +0.8
baz=50,SNR=40
W23A Werner Place, 49.68 82 ⇑P P 08 46 14.5 +0.7
baz=50,SNR=30
S26A Kim 49.69 78 ⇑P P 08 46 14.2 +0.4
baz=50,SNR=104
MOY Mondy 49.76 306 eP P 08 46 15.3 +1.2
ECSD EROS Data Cent 49.82 67 eP P 08 46 13.7 -0.9
comp=Z,29nm,1.0s
V24A Rampart Ranch, 49.84 81 ⇓P P 08 46 16.2 +1.2
baz=50,SNR=73
LENM Lemitar 49.85 84 eP P 08 46 16.4 +1.4
T26A Comanche Natio 49.90 78 ⇑P P 08 46 15.7 +0.3
baz=50,SNR=63
U25A Circle Dot Ran 49.92 80 ⇓P P 08 46 16.5 +0.9
baz=50,SNR=102
Y22D IRIS PASSCAL I 49.94 84 ⇑P P 08 46 17.0 +1.3
baz=50
LPM Los Pinos Moun 49.96 83 eP P 08 46 17.0 +1.1
LPM e 08 46 31.1
S27A Las Animas 49.99 78 ⇑P P 08 46 16.6 +0.5
baz=50,SNR=7.7
Z21A St. Cloud Mine 50.00 85 ⇓P P 08 46 17.5 +1.2
baz=50,SNR=10
Y22A Socorro 50.01 84 ⇓P P 08 46 17.4 +1.2
baz=50,SNR=44
X23A Hourglass Bar 50.05 83 ⇑P P 08 46 17.5 +0.9
baz=50,SNR=27
EYMN Ely 50.06 60 eP P 08 46 15.8 -0.5
comp=Z,109nm,1.1s
BNM Barren Site 50.07 84 eP P 08 46 17.9 +1.1
comp=Z,64nm,1.4s
BNM e 08 46 31.1
W24A Lazy 6 Ranch, 50.10 82 ⇑P P 08 46 18.0 +1.0
baz=50,SNR=46
V25A Rancho N Teng 50.16 81 ⇓P P 08 46 18.5 +1.0
baz=50,SNR=65
DAG Danmarks Havn 50.28 7 iP P 08 46 17.2 -0.3
comp=Z,12nm,0.9s
DAG i 08 46 32.7
U26A Atchley Ranch, 50.33 79 ⇑P P 08 46 19.6 +0.9
baz=50,SNR=95
319A Douglas 50.34 88 ⇓P P 08 46 19.4 +0.7
baz=50,SNR=9.8
BGNE Belgrade 50.40 71 ⇑P P 08 46 19.0 0.0
baz=50,SNR=22
220A Playas Peak, P 50.44 87 ⇓P P 08 46 20.2 +0.8
baz=50,SNR=44
121A Cookes Peak, D 50.46 86 ⇓P P 08 46 20.6 +0.9
baz=50,SNR=20
Z22A Elephant Butte 50.47 85 ⇓P P 08 46 20.8 +1.0
baz=50,SNR=13
T27A Campo 50.50 78 ⇑P P 08 46 20.3 +0.3
baz=50,SNR=26
X24A Lazy VL Ranch, 50.52 82 ⇑P P 08 46 21.2 +1.0
baz=50,SNR=5.9
Y23A Lovelace Mesa, 50.57 83 ⇑P P 08 46 21.5 +1.0
baz=50,SNR=56
HHC Hu-ho-hao-te 50.65 289 eP P 08 46 20.3 -0.7
HHC pP pP 08 46 39.3 +1.0
HHC sP sP 08 46 47.8 +1.7
HHC S S 08 53 28.0 -2.7
HHC sS sS 08 54 00.8 +0.6
HHC ScS ScS 08 56 00.8 -4.4
HHC SS SS 08 57 00.8 -4.4
HHC pmax pmax
comp=Z,28nm,0.6s
HHC pmax pmax
comp=Z,290nm,9.0s
HHC LR LR
comp=N,540nm,16.5s
HHC LR LR
comp=E,560nm,16.0s
HHC LR LR
comp=Z,540nm,16.7s
W25A X Bar L Ranch, 50.67 81 ⇑P P 08 46 22.2 +0.9
baz=50,SNR=85
V26A Tequesquite Ra 50.70 80 ⇓P P 08 46 22.2 +0.8
baz=51,SNR=130
221A Mesquite Ranch 50.82 86 ⇓P P 08 46 23.3 +0.9
baz=51,SNR=9.5
122A Conniff Cattle 50.83 85 ⇑P P 08 46 23.7 +1.3
baz=51,SNR=6.2
320A Kipp Ranch, An 50.83 88 ⇓P P 08 46 23.3 +0.9
baz=51,SNR=29
T28A Walsh 50.83 78 ⇑P P 08 46 22.9 +0.5
baz=51
U27A Thompson Grove 50.86 79 ⇓P P 08 46 23.2 +0.6
baz=51,SNR=64
Z23A Rita Site, Whi 50.91 84 ⇑P P 08 46 23.9 +0.9
baz=51,SNR=11
GUMO Guam 50.92 237 eP P 08 46 21.2 -1.9
comp=Z,96nm,0.5s
Y24A Capitan 50.95 83 ⇑P P 08 46 24.4 +1.0
baz=51,SNR=95
X25A Clemmons Ranch 51.01 82 ⇓P P 08 46 24.8 +1.0
baz=51,SNR=17
SPMN St. Paul 51.03 64 ⇓P P 08 46 23.4 -0.3
baz=51,SNR=13
W26A Owens Ranch, T 51.18 81 ⇑P P 08 46 25.8 +0.7
baz=51,SNR=29
T29A Hugoton 51.30 77 ⇑P P 08 46 26.5 +0.6
baz=51,SNR=18
V27A Dan Oppiter Fa 51.30 79 ⇑P P 08 46 26.3 +0.4
baz=51,SNR=17
123A Bell Site, Whi 51.32 85 ⇓P P 08 46 27.0 +0.9
baz=51
Z24A Sheeppen Canyo 51.40 83 ⇑P P 08 46 27.8 +1.0
baz=51,SNR=47
Y25A Mesa, Roswell 51.40 82 ⇑P P 08 46 27.5 +0.7
baz=51,SNR=73
X26A CR and CF Fran 51.52 81 ⇓P P 08 46 28.0 +0.5
baz=51,SNR=44
W27A Bowe Ranch, En 51.62 80 ⇑P P 08 46 28.5 +0.1
baz=52,SNR=27
SUMG Summit 51.63 16 eP P 08 46 27.6 -0.6
SUMG pmax pmax
comp=Z,40nm,1.3s
SUMG Summit 51.63 16 eP P 08 46 27.6 -0.6
comp=Z,40nm,1.3s
SUMG Summit 51.63 16 iP P 08 46 28.6 +0.4
comp=Z,17nm,1.0s
SUMG e 08 46 44.6
223A Chaparral, Ant 51.65 85 ⇑P P 08 46 29.5 +0.9
baz=52
V28A Channing 51.67 79 ⇓P P 08 46 28.7 +0.1
baz=52,SNR=12
124A Stringfield Ra 51.77 84 ⇑P P 08 46 30.3 +0.7
baz=52,SNR=37
T30A Plains 51.83 77 ⇑P P 08 46 30.1 +0.4
baz=52,SNR=21
Z25A Roswell 51.83 83 ⇑P P 08 46 30.5 +0.6
baz=52,SNR=28
X27A F and S Farms, 51.88 81 ⇑P P 08 46 30.6 +0.3
baz=52,SNR=19
Y26A Elida 51.93 82 ⇓P P 08 46 31.2 +0.5
baz=52,SNR=8.7
V29A Stinnett 52.01 78 ⇓P P 08 46 31.3 +0.1
baz=52,SNR=7.1
W28A Vega 52.01 79 ⇑P P 08 46 31.5 +0.3
baz=52,SNR=12
U30A WK&E Inc. Balk 52.10 77 ⇑P P 08 46 32.1 +0.3
baz=52,SNR=56
NJ2 Nanjing 52.12 275 eP P 08 46 33.0 +1.1
NJ2 S S 08 53 49.5 -1.3
NJ2 sS sS 08 54 27.5 +7.2
NJ2 pmax pmax
comp=Z,20nm,0.8s
NJ2 pmax pmax
comp=Z,320nm,4.3s
NJ2 LR LR
comp=N,180nm,14.7s
NJ2 LR LR
comp=E,160nm,15.8s
NJ2 LR LR
comp=Z,100nm,11.5s
224A Cornudas Mount 52.16 85 ⇑P P 08 46 33.3 +0.9
baz=52,SNR=31
Z26A Caprock 52.28 82 ⇑P P 08 46 33.8 +0.5
baz=52,SNR=42
125A Gardner Draw, 52.29 84 ⇓P P 08 46 34.0 +0.7
baz=52,SNR=43
T31A Randall Ranch, 52.30 76 ⇓P P 08 46 33.4 +0.1
baz=52,SNR=31

Y27A Causey 52.36 81 ⇑P P 08 46 34.4 +0.6
baz=52,SNR=131
W29A Amraillo 52.44 79 ⇓P P 08 46 34.4 0.0
baz=52,SNR=9.8
MNTX Cornudas Mount 52.51 85 *eP* P 08 46 35.1 +0.3
comp=Z,33nm,1.2s
MNTX *e* 08 46 49.2
MNTX Cornudas Mount 52.51 85 ⇑P P 08 46 35.6 +0.8
baz=52,SNR=43
X28A Dimmitt 52.52 80 ⇑P P 08 46 35.2 +0.3
baz=52,SNR=29
MSTX Muleshoe 52.54 81 ⇓P P 08 46 35.4 +0.2
baz=52,SNR=70
225A Deer Hill, Car 52.56 84 ⇓P P 08 46 36.3 +0.8
baz=52,SNR=51
AMTX Amarillo 52.58 79 *eP* P 08 46 35.9 +0.5
comp=Z,57nm,0.8s
AMTX *e* 08 46 50.4
AMTX Amarillo 52.58 79 ⇑P P 08 46 36.0 +0.6
baz=52,SNR=36
V30A Spur Ranch, Mi 52.59 78 ⇑P P 08 46 35.4 0.0
baz=52,SNR=20
324A Moseley Ranch, 52.62 85 ⇑P P 08 46 36.3 +0.4
baz=52,SNR=17
U31A Nine Bar Ranch 52.69 77 ⇑P P 08 46 36.3 +0.2
baz=52,SNR=12
126A Clayton Basin, 52.69 83 ⇑P P 08 46 36.5 +0.3
baz=53,SNR=21
Z27A Tatum 52.72 82 ⇓P P 08 46 36.6 +0.1
baz=53,SNR=50
GDL2 Guadalupe Moun 52.78 84 *eP* P 08 46 37.6 +0.7
GDL2 *e* 08 46 51.4
KSU1 Kansas State U 52.79 72 *eP* P 08 46 36.2 -0.6
comp=Z,78nm,0.9s
KSU1 *e* 08 46 50.2
X29A Tulia 52.87 80 ⇑P P 08 46 37.6 +0.1
baz=53,SNR=9.3
Y28A McKinney Farm, 52.90 81 ⇑P P 08 46 37.9 +0.1
baz=53,SNR=71
SCIA State Center 52.91 67 *eP* P 08 46 37.9 +0.2
comp=Z,225nm,1.6s
SCIA *e* 08 46 51.7
325A Bean Ranch, Si 52.99 85 ⇓P P 08 46 39.2 +0.6
baz=53,SNR=70
226B Tecolote Peak, 52.99 84 ⇓P P 08 46 39.1 +0.7
baz=53,SNR=64
CLNB Carlsbad 53.03 83 *eP* P 08 46 39.1 +0.3
comp=Z,2.3nm,0.5s
W30A Crocket Farms 53.05 78 ⇑P P 08 46 39.3 +0.5
baz=53,SNR=16
V31A Spring Creek L 53.09 77 ⇑P P 08 46 39.5 +0.4
baz=53,SNR=40
Z28A Tucker Farm, M 53.24 81 ⇑P P 08 46 40.2 -0.1
baz=53,SNR=37
Y29A Porterfield Fa 53.28 80 ⇓P P 08 46 41.0 +0.4
baz=53,SNR=44
X30A Coker Ranch, T 53.37 79 ⇓P P 08 46 41.5 +0.3
baz=53,SNR=35
425A Indio Mountain 53.38 85 ⇓P P 08 46 42.3 +0.9
baz=53,SNR=51
W31A Holland Ranch, 53.42 78 ⇑P P 08 46 41.9 +0.3
baz=53,SNR=33
SFJD Kangerlussuaq 53.56 24 *i* P P 08 46 42.1 +0.1
comp=Z,7.3nm,0.7s
227A Bennet, Jal 53.57 83 ⇓P P 08 46 43.1 +0.4
baz=54,SNR=9.9
326A Caldwell Ranch 53.63 84 ⇑P P 08 46 43.8 +0.6
baz=54,SNR=16
128A Castleberry Fa 53.64 82 ⇓P P 08 46 43.5 +0.2
baz=54,SNR=61
Z29A Hungry Hill Ra 53.67 81 ⇓P P 08 46 43.9 +0.4
baz=54,SNR=58
Y30A Stafford Cattl 53.74 80 ⇑P P 08 46 44.4 +0.5
baz=54,SNR=60
X31A McDonald Ranch 53.78 78 ⇑P P 08 46 44.6 +0.4
baz=54,SNR=35
327A Balmorhea Ranc 53.89 84 ⇓P P 08 46 45.4 +0.4
baz=54
228A UT Block 9, Go 53.92 83 ⇓P P 08 46 45.3 0.0
baz=54,SNR=14
Z30A Sanderson Ranc 54.01 80 ⇑P P 08 46 46.0 +0.1
baz=54,SNR=48
129A Stewart Farms, 54.01 82 ⇓P P 08 46 45.8 -0.1
baz=54,SNR=38
426A McDonald Obser 54.05 85 ⇓P P 08 46 46.6 +0.2
baz=54,SNR=24
Y31A Rekieta Farm, 54.07 79 ⇑P P 08 46 46.3 +0.1
baz=54,SNR=11
328A Wristen Ranch, 54.30 83 ⇑P P 08 46 48.1 0.0
baz=54,SNR=52
427A Hayter Ranch, 54.31 84 ⇓P P 08 46 48.4 +0.2
baz=54,SNR=30
WMOK Wichita Mounta 54.43 77 *eP* P 08 46 49.2 +0.3
WMOK *e* 08 47 03.7
WMOK pmax pmax
comp=Z,69nm,0.8s
WMOK Wichita Mounta 54.43 77 *eP* P 08 46 49.2 +0.3
comp=Z,69nm,0.8s
WMOK *e* 08 47 03.7
526A Mary Lane Ranc 54.44 85 ⇓P P 08 46 49.6 +0.4
baz=54
229A Bryant Ranch, 54.50 82 ⇓P P 08 46 49.5 +0.1
baz=54,SNR=11
Y32A R-V Farms, Ver 54.53 79 ⇓P P 08 46 50.0 +0.3
baz=54
Z31A Sharp Cattle R 54.58 80 ⇑P P 08 46 50.1 +0.1
baz=54,SNR=41
130A Snyder 54.58 81 ⇑P P 08 46 50.1 0.0
baz=54,SNR=18
527A Woodward Ranch 54.68 85 ⇓P P 08 46 51.0 +0.1
baz=55,SNR=41
329A Wagon Wheel Ra 54.73 83 ⇑P P 08 46 51.4 +0.2
baz=55,SNR=28
626A Big Bend Ranch 54.77 86 ⇓P P 08 46 51.8 +0.3
baz=55,SNR=55
428A Kincaid Ranch, 54.84 84 ⇑P P 08 46 52.6 +0.6
baz=55,SNR=52
131A Roby 54.88 80 ⇓P P 08 46 52.5 +0.3
baz=55,SNR=22
230A Sterling City 54.98 82 ⇓P P 08 46 53.1 +0.2
baz=55,SNR=49
Z32A Haskell 54.99 79 ⇑P P 08 46 53.1 +0.2
baz=55,SNR=124
528A Cox Ranch, San 55.17 84 ⇑P P 08 46 54.6 +0.2
baz=55,SNR=45
TXAR Lajitas Array 55.22 86 P P 08 46 55.0 +0.3
TXAR pP **pP** 08 47 09.5 -2.7
TXAR PcP **PcP** 08 47 55.5 +0.6
TXAR pPcP 08 48 11.5
TXAR ScP **ScP** 08 51 48.4 +1.0
TXAR P'P' 09 16 54.0
TXAR Lajitas Array 55.22 86 P P 08 46 55.0 +0.3
comp=Z,18nm,0.7s,baz=298,slow=5.0,SNR=289
TXAR pP **pP** 08 47 09.5 -2.7
comp=Z,11nm,0.7s,baz=308,slow=4.4,SNR=8.1
TXAR PcP **PcP** 08 47 55.5 +0.6
comp=Z,10nm,0.8s,baz=263,slow=1.3,SNR=5.3
TXAR pPcP 08 48 11.5
comp=Z,12nm,0.9s,baz=306,slow=4.3,SNR=3.5
TXAR ScP **ScP** 08 51 48.4 +1.0
comp=Z,2.7nm,0.9s,baz=289,slow=3.8,SNR=7.0
TXAR LR LR 09 07 49.3
comp=Z,148nm,21.6s,baz=130,slow=33
TXAR PKPPKP P'P'df 09 16 54.0 -8.1
comp=Z,0.2nm,0.7s,baz=152,slow=4.7,SNR=3.7
330A Mertzon 55.28 82 ⇑P P 08 46 55.0 -0.1
baz=55,SNR=33
627A Terlingua Ranc 55.30 85 ⇓P P 08 46 55.7 +0.3
baz=55
ABTX Abilene, Hawle 55.37 80 ⇓P P 08 46 56.1 +0.5
baz=55,SNR=42
429A Davenport Ranc 55.39 83 ⇓P P 08 46 55.6 -0.3
baz=55,SNR=42
TUL1 Tulsa 55.41 74 ⇑P P 08 46 55.7 -0.2
baz=55,SNR=27
231A Bronte 55.44 81 ⇑P P 08 46 55.9 -0.3
baz=55,SNR=17
529A Stev Forest Ra 55.54 84 ⇑P P 08 46 57.1 +0.1
baz=55,SNR=26
628A Black Gap, Mar 55.59 85 ⇑P P 08 46 57.5 +0.2
baz=56,SNR=64
430A Baggett Ranch, 55.68 83 ⇓P P 08 46 58.0 0.0
baz=56,SNR=90
GLMI Grayling 55.72 59 *eP* P 08 46 57.8 -0.2
comp=Z,143nm,0.8s
331A San Angelo 55.81 82 ⇓P P 08 46 58.7 -0.1
baz=56,SNR=49
YHNB Yeheng 55.83 267 *eP* P 08 46 58.6 -0.5
comp=Z,22nm,0.6s
ZALV Zalesovo Beam 55.84 316 P P 08 46 58.9 +0.2
ZALV 08 47 56.4
ZALV Zalesovo Beam 55.84 316 P P 08 46 58.9 +0.2
ZALV PcP **PcP** 08 47 56.4 -0.4
ZALV Zalesovo Beam 55.84 316 P P 08 46 58.9 +0.2
comp=Z,1.1nm,0.4s,baz=45,slow=5.5,SNR=5.5
ZALV PcP **PcP** 08 47 56.4 -0.4
comp=Z,2.4nm,0.6s,baz=37,slow=5.7,SNR=4.7
ZALV LR LR 09 11 25.1
comp=Z,301nm,21.1s,baz=199,slow=36
232A Coleman 55.88 81 ⇓P P 08 46 59.3 0.0
baz=56,SNR=66
SCO Scoresbysund 55.88 11 *i* P P 08 46 58.7 0.0
comp=Z,5.9nm,0.8s
SCO *i* 08 47 14.3
NVS Novosibirsk 55.90 317 *eP* P 08 46 58.4 -0.7
NVS *i* 08 47 56.8
HDIL Hopedale 56.02 66 *eP* P 08 46 59.6 -0.6
comp=Z,161nm,1.4s
HDIL *e* 08 47 13.6
530A J-C Ranch, Com 56.07 83 ⇑P P 08 47 01.0 +0.2
baz=56,SNR=116
431A Sonora 56.14 82 ⇑P P 08 47 01.0 -0.2
baz=56,SNR=92
332A Millersview 56.17 81 ⇓P P 08 47 01.3 -0.1
baz=56,SNR=64
432A Menard 56.50 82 ⇑P P 08 47 03.5 -0.2
baz=56,SNR=44
531A Rocksprings 56.54 83 ⇑P P 08 47 03.8 -0.3
baz=56,SNR=38
SSLB Suanglung 56.74 267 *eP* P 08 47 06.0 +0.5
comp=Z,148nm,0.6s
JCT Junction City 56.77 82 *eP* P 08 47 05.4 -0.3
JCT *e* 08 47 20.1
JCT pmax pmax
comp=Z,69nm,1.0s
JCT Junction City 56.77 82 *eP* P 08 47 05.4 -0.3
comp=Z,69nm,1.0s
JCT *e* 08 47 20.1
JCT Junction City 56.77 82 ⇓P P 08 47 05.3 -0.3
baz=57,SNR=23
SLM Saint Louis 56.79 68 *eP* P 08 47 05.3 -0.4
SLM pmax pmax
comp=Z,141nm,1.6s
SLM Saint Louis 56.79 68 *eP* P 08 47 05.3 -0.4
comp=Z,141nm,1.6s
YULB Yu-li 56.82 266 *eP* P 08 47 05.1 -1.0
comp=Z,110nm,1.3s
RFTA Plano 56.88 78 *eP* P 08 47 06.9 +0.6
RFTA *e* 08 47 21.1
532A Rocksprings 56.96 82 ⇓P P 08 47 06.4 -0.6
baz=57,SNR=30
631A Perdido Creek 57.05 83 ⇓P P 08 47 07.1 -0.6
baz=57,SNR=37
WHTX Lake Whitney 57.13 79 ⇓P P 08 47 08.7 +0.5
baz=57,SNR=53
SCHQ Schefferville 57.21 41 *eP* P 08 47 07.4 -1.0
comp=Z,12nm,0.7s
SCHQ Schefferville 57.21 41 P P 08 47 07.6 -0.8
comp=Z,9.7nm,0.6s,baz=324,slow=8.4,SNR=42
SCHQ LR LR 09 14 05.3
comp=Z,314nm,19.2s,baz=7.0,slow=38
TPUB Ta-pu 57.30 266 *eP* P 08 47 11.8 +2.3
comp=Z,58nm,0.7s
QZH Quanzhou 57.34 269 ⇑*i*P P 08 47 11.6 +1.9
QZH pmax pmax
comp=Z,130nm,0.7s
SFIN Scholer Farm 57.37 65 ⇓P P 08 47 09.6 -0.1
baz=57,SNR=16
632A Uvalde 57.47 83 ⇑P P 08 47 10.3 -0.3
baz=57,SNR=22
MIAR Mount Ida 57.67 74 *eP* P 08 47 11.9 0.0
MIAR *e* 08 47 26.3
MIAR pmax pmax
comp=Z,117nm,0.8s
MIAR Mount Ida 57.67 74 *eP* P 08 47 11.9 0.0
comp=Z,117nm,0.8s
MIAR *e* 08 47 26.3
ARCES ARCESS Array B 57.78 352 P P 08 47 12.0 -0.2
ARCES PcP **PcP** 08 48 04.5 +0.4
ARCES PKiKP **PKiKP** 08 54 29.3 +0.9
ARCES ARCESS Array B 57.78 352 P P 08 47 12.0 -0.2
comp=Z,9.7nm,0.6s,baz=9.5,slow=6.5,SNR=40
ARCES PcP **PcP** 08 48 04.5 +0.4
comp=Z,18nm,0.7s,baz=19,slow=4.4,SNR=9.3
ARCES PKiKP **PKiKP** 08 54 29.3 +0.9
comp=Z,6.6nm,1.0s,baz=27,slow=6.0,SNR=4.1
ARCES LR LR 09 11 59.4
comp=Z,329nm,21.1s,baz=41,slow=36
732A Laxson Ranch, 57.91 83 ⇑P P 08 47 13.9 +0.2
baz=58,SNR=40
OLIL Olney 57.94 67 *eP* P 08 47 13.3 -0.5
comp=Z,110nm,1.1s
AAM Ann Arbor 57.94 61 *eP* P 08 47 14.0 +0.3
AAM pmax pmax
comp=Z,42nm,0.6s
AAM Ann Arbor 57.94 61 *eP* P 08 47 13.9 +0.3
comp=Z,42nm,0.6s
UALR University of 58.23 73 *eP* P 08 47 15.5 -0.4
comp=Z,76nm,1.3s
UALR *e* 08 47 28.6
GTA Gaotai 58.33 295 *eP* P 08 47 16.4 -0.2
GTA pP **pP** 08 47 36.8 +2.4
GTA sP **sP** 08 47 46.1 +4.1
GTA PcP **PcP** 08 48 07.3 +0.3
GTA PP **PP** 08 49 27.8 +1.8
GTA S **S** 08 55 08.3 -5.6
GTA sS **sS** 08 55 39.8 -4.1
GTA SS **SS** 08 59 00.6 -5.5
GTA pmax pmax
comp=Z,10.0nm,0.6s
GTA pmax pmax
comp=Z,88nm,7.1s
GTA LR LR
comp=N,330nm,17.6s
GTA LR LR
comp=E,440nm,17.6s
GTA LR LR
comp=Z,470nm,16.6s
LZH Lanzhou 58.33 289 *eP* P 08 47 17.6 +0.8
LZH pP **pP** 08 47 38.0 +3.5
LZH sP sP 08 47 47.5 +5.4
LZH pmax pmax
comp=Z,26nm,1.0s
LZH pmax pmax
comp=Z,140nm,5.7s
LVZ Lovozero 58.39 348 *eP* P 08 47 19.4 +2.9
LVZ pmax pmax
comp=Z,72nm,1.7s
PARMO Parma 58.43 70 *eP* P 08 47 16.7 -0.5
PARMO *e* 08 47 30.8
BLO Bloomington 58.52 66 *eP* P 08 47 16.8 -1.1
BLO pmax pmax
comp=Z,39nm,0.7s
BLO Bloomington 58.52 66 *eP* P 08 47 16.8 -1.1
comp=Z,39nm,0.7s
USIN University of 58.72 67 *eP* P 08 47 18.9 -0.3
comp=Z,120nm,0.8s
USIN *e* 08 47 33.4
GNAR Gosnell 58.76 70 *eP* P 08 47 19.0 -0.5
comp=Z,853nm,1.2s
APA Apatity 58.86 348 ⇓*i*P P 08 47 20.6 +0.9
APA MLR MLR
comp=Z,800nm,14.0s
UTMT University of 59.16 69 *eP* P 08 47 22.2 -0.1
comp=Z,247nm,1.3s
UTMT *e* 08 47 37.1
HALT Halls 59.19 70 *eP* P 08 47 22.6 +0.1
HALT *e* 08 47 36.5
WCI Wyandotte Cave 59.31 66 *eP* P 08 47 22.3 -1.1
WCI pmax pmax
comp=Z,42nm,1.0s
WCI Wyandotte Cave 59.31 66 *eP* P 08 47 22.3 -1.1
comp=Z,42nm,1.0s
HKT Hockley 59.55 79 *eP* P 08 47 25.1 +0.1
HKT *e* 08 47 39.8
HKT pmax pmax
comp=Z,150nm,1.5s
HKT Hockley 59.55 79 *eP* P 08 47 25.1 +0.1
comp=Z,150nm,1.5s
HKT *e* 08 47 39.8
ACSO Alum Creek Sta 59.74 62 *eP* P 08 47 25.9 -0.3
comp=Z,176nm,1.8s
WVT Waverly 59.91 69 *eP* P 08 47 26.9 -0.5
WVT pmax pmax
comp=Z,16nm,0.8s
WVT Waverly 59.91 69 *eP* P 08 47 26.9 -0.5
comp=Z,16nm,0.8s
ERPA Erie 60.02 59 *eP* P 08 47 28.4 +0.2
comp=Z,96nm,1.0s
OXF Oxford 60.14 71 *eP* P 08 47 28.6 -0.4
OXF *e* 08 47 43.6
OXF pmax pmax
comp=Z,425nm,1.1s
OXF Oxford 60.14 71 *eP* P 08 47 28.6 -0.4
comp=Z,425nm,1.1s
OXF *e* 08 47 43.6
ALLY Alegheny Colle 60.27 60 *eP* P 08 47 30.2 +0.3
comp=Z,176nm,0.8s
MSNY Massena 60.60 54 *eP* P 08 47 31.2 -0.8
comp=Z,719nm,0.9s
KURK Kurchatov 60.81 316 P P 08 47 34.1 +0.7
KURK 08 48 16.6
KURK pmax pmax
comp=Z,9.0nm,0.6s
KURK MLR MLR
comp=Z,258nm,18.3s
KURK Kurchatov 60.81 316 *eP* P 08 47 33.2 -0.1
comp=Z,13nm,0.7s
KURK PcP **PcP** 08 48 16.6 +0.1
KURK P'P' 09 16 53.2
KURK Kurchatov 60.81 316 P P 08 47 33.2 -0.1
comp=Z,127nm,0.5s,SNR=7.2
KURBB Kurchatov Arra 60.92 316 P P 08 47 34.0 0.0
comp=Z,8.7nm,0.6s,baz=39,slow=7.0,SNR=22
KURBB PcP **PcP** 08 48 16.6 -0.3
comp=Z,7.5nm,0.9s,baz=42,slow=5.6,SNR=5.6
KURBB LR LR 09 16 05.4
comp=Z,258nm,18.3s,baz=55,slow=38
KURBB PKPPKP **P'P'df** 09 16 53.2 -1.9
comp=Z,0.7nm,0.7s,baz=232,slow=2.8,SNR=3.6
LONY Lake Ozonia 61.01 54 *eP* P 08 47 34.0 -0.9
comp=Z,25nm,0.6s
VBMS Vicksburg 61.12 74 *eP* P 08 47 36.1 +0.4
comp=Z,162nm,0.9s
VBMS *e* 08 47 50.4
FRNY Flat Rock 61.35 53 *eP* P 08 47 36.4 -0.7
comp=Z,14nm,0.9s
SOKR Solikamsk 61.45 334 *eP* P 08 47 37.6 +0.1
SOKR pmax pmax
comp=Z,10.0nm,0.7s
SWET Sewanee 61.64 68 *eP* P 08 47 38.8 -0.5
comp=Z,81nm,1.5s
WMQ Urumqi 61.65 306 P P 08 47 39.0 -0.2
WMQ pP **pP** 08 47 59.0 +1.9
WMQ sP **sP** 08 48 07.0 +2.3
WMQ PcP **PcP** 08 48 21.0 +0.9
WMQ PP **PP** 08 49 57.0 +1.9
WMQ ScP **ScP** 08 52 14.0 -1.5
WMQ S **S** 08 55 54.0 -2.2
WMQ sS **sS** 08 56 28.0 +1.5
WMQ ScS **SKKSac** 08 57 20.0 -4.4
WMQ SS **SS** 08 59 57.0 -0.8
WMQ pmax pmax
comp=Z,20nm,1.0s
WMQ pmax pmax
comp=Z,130nm,6.0s
WMQ LR LR
comp=N,370nm,18.0s
WMQ LR LR
comp=E,260nm,18.0s
WMQ LR LR
comp=Z,420nm,18.0s
NCB Newcomb 61.66 54 *eP* P 08 47 39.2 0.0
comp=Z,15nm,0.5s
TZTN Tazewell 62.04 66 *eP* P 08 47 42.0 0.0
comp=Z,44nm,0.9s
BINY Binghamton 62.05 57 *eP* P 08 47 42.4 +0.5
comp=Z,164nm,0.9s
CD2 Chengdu 62.05 285 P P 08 47 42.8 +0.7
CD2 pP **pP** 08 48 03.6 +3.6
CD2 sP sP 08 48 13.0 +5.4
CD2 PcP **PcP** 08 48 22.8 +0.9
CD2 PP **PP** 08 50 02.0 +3.0
CD2 PcS **PcS** 08 52 24.5 -0.8
CD2 S **S** 08 55 58.3 -3.3
CD2 sS **sS** 08 56 34.1 +2.2
CD2 ScS **SKKSac** 08 57 23.1 -4.7
CD2 SS **SS** 09 00 03.0 -1.6
CD2 pmax pmax
comp=Z,30nm,0.4s
CD2 pmax pmax
comp=Z,260nm,5.6s
CD2 LR LR
comp=N,280nm,12.7s
CD2 LR LR
comp=E,590nm,17.2s
CD2 LR LR
comp=Z,380nm,19.6s
MKAR Makanchi Array 62.08 311 P P 08 47 41.2 -0.9
MKAR pmax pmax
comp=Z,3.0nm,0.5s
MKAR MLR MLR
comp=Z,250nm,21.1s
MKAR Makanchi Array 62.08 311 *eP* P 08 47 41.8 -0.3
MKAR P'P' 09 16 34.5
MKAR Makanchi Array 62.08 311 P P 08 47 41.1 -0.9
comp=Z,2.9nm,0.5s,baz=56,slow=7.4,SNR=15
MKAR LR LR 09 15 01.7
comp=Z,250nm,21.1s,baz=24,slow=36
MKAR PKPPKP P'P'df 09 16 34.5 -19
comp=Z,0.5nm,1.0s,baz=151,slow=3.3,SNR=3.3
MDV Middlebury 62.16 53 *eP* P 08 47 41.6 -0.9
SSPA Standing Stone 62.19 59 *eP* P 08 47 42.5 -0.3
comp=Z,67nm,0.8s
CPCT Cooper Cave 62.28 67 *eP* P 08 47 42.9 -0.6
BVAR Borovoye Array 62.35 322 P P 08 47 44.1 +0.4
BVAR Borovoye Array 62.35 322 P P 08 47 44.1 +0.4
BVAR P'P' 09 16 51.1
BVAR Borovoye Array 62.35 322 P P 08 47 44.1 +0.4
comp=Z,7.8nm,0.4s,baz=60,slow=6.3,SNR=26
BVAR LR LR 09 16 18.3
comp=Z,377nm,20.0s,baz=59,slow=37
BVAR PKPPKP **P'P'df** 09 16 51.1 -1.8
comp=Z,0.9nm,0.7s,baz=186,slow=2.9,SNR=3.5
ACCN Adirondack Com 62.36 54 *eP* P 08 47 43.5 -0.4
comp=Z,54nm,0.9s
BRVK Borovoye 62.37 322 *eP* P 08 47 44.6 +0.8
BRVK pmax pmax
comp=Z,21nm,1.2s
BRVK Borovoye 62.37 322 *eP* P 08 47 44.1 +0.3
comp=Z,22nm,1.2s
BRVK Borovoye 62.37 322 P P 08 47 44.4 +0.6
comp=Z,89nm,1.2s,SNR=6.0
TKL Tuckaleechee C 62.55 67 *eP* P 08 47 45.0 -0.3
LRAL Lakeview Retre 62.59 71 *eP* P 08 47 44.6 -1.0
comp=Z,33nm,0.9s
BLA Blacksburg 63.30 63 *eP* P 08 47 50.4 +0.1
BLA pmax pmax
comp=Z,134nm,1.1s
BLA Blacksburg 63.30 63 *eP* P 08 47 50.4 +0.1
comp=Z,134nm,1.1s
MVL Millersville 63.46 58 *eP* P 08 47 51.4 +0.1
comp=Z,68nm,0.8s
GYA Guiyang 63.54 280 ⇑*i*P P 08 47 51.5 -0.6
GYA pP **pP** 08 48 15.0 +4.9
GYA sP sP 08 48 23.8 +6.1
GYA PcP **PcP** 08 48 30.5 +2.3
GYA PP **PP** 08 50 15.6 +3.3
GYA ScP 08 52 22.3
GYA S **S** 08 56 17.8 -2.7
GYA sS **sS** 08 56 55.6 +4.7
GYA SKS **SKKSac** 08 57 34.4 -5.0
GYA SS **SS** 09 00 27.9 -0.3
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=N,3μm,19.5s
GYA LR LR
comp=E,1μm,20.4s
GYA LR LR
comp=Z,2μm,19.9s
ARU Arti 63.59 331 *d i*P P 08 47 52.7 +0.9
ARU 08 48 29.3
ARU 08 50 10.9
ARU S **S** 08 56 17.2 -2.8
ARU pmax pmax
comp=Z,19nm,1.7s

SDMD Soldier's Deli 63.63 59 *e*P **P 08 47 52.4 0.0**
comp=Z,96nm,0.8s
PAL Palisades 63.98 56 *e*P **P 08 47 54.6 -0.1**
PAL pmax pmax
comp=Z,115nm,0.8s
PAL Palisades 63.98 56 *e*P **P 08 47 54.6 -0.1**
comp=Z,115nm,0.8s
BRAL Brewton 64.02 72 *e*P **P 08 47 55.2 +0.1**
comp=Z,128nm,0.8s
CPNY Central Park 64.12 56 *e*P **P 08 47 56.3 +0.7**
comp=Z,117nm,0.7s
CBN Corbin 64.23 60 *e*P **P 08 47 57.0 +0.7**
comp=Z,67nm,0.8s
KMSC Kings Mountain 64.30 65 ⇑P **P 08 47 56.8 0.0**
baz=64
JSC Jenkinsville 64.97 66 *e*P **P 08 48 01.1 -0.1**
JSC Jenkinsville 64.97 66 *e*P **P 08 48 01.1 -0.1**
FIA1 FINESS Array S 65.63 350 *e*P **P 08 48 05.6 +0.6**
FIA1 *e* 08 48 21.4
FINES FINESS Array B 65.63 350 P **P 08 48 04.9 -0.1**
FINES pP **pP 08 48 21.3 -1.8**
FINES P'P' 09 16 43.9
FINES FINESS Array B 65.63 350 P **P 08 48 04.9 -0.1**
comp=Z,6.9nm,0.6s,baz=7.6,slow=5.8,SNR=23
FINES pP **pP 08 48 21.3 -1.8**
comp=Z,7.5nm,0.8s,baz=12,slow=9.8,SNR=7.4
FINES PKPPKP **P'P'df 09 16 43.9 -3.8**
comp=Z,5.9nm,0.9s,baz=46,slow=5.5,SNR=8.1
FINES LR LR 09 20 35.7
comp=Z,216nm,18.9s,baz=121,slow=40
CNNC Cliffs of the 66.13 63 *e*P **P 08 48 09.8 +1.2**
comp=Z,55nm,1.1s
NHSC New Hope 66.44 66 *e*P **P 08 48 11.5 +0.8**
comp=Z,192nm,1.0s
KMI Kunming 66.90 282 P **P 08 48 14.6 +0.6**
KMI pP **pP 08 48 34.4 +2.3**
KMI PcP **PcP 08 48 43.5 +1.3**
KMI sP sP 08 48 45.9 +6.2
KMI PP **PP 08 50 45.0 +3.2**
KMI ScP 08 52 38.0
KMI PcS 08 52 46.8
KMI S **S 08 56 58.6 -3.2**
KMI sS **sS 08 57 35.8 +3.3**
KMI SKS **SKSac 08 58 00.3 -4.8**
KMI SS **SS 09 01 19.5 -1.2**
KMI pmax pmax
comp=Z,26nm,1.0s
KMI pmax pmax
comp=Z,57nm,3.1s
KMI LR LR
comp=N,250nm,18.7s
KMI LR LR
comp=E,250nm,21.7s
KMI LR LR
comp=Z,310nm,23.2s
NB2 NORSAR Subarra 67.03 358 P **P 08 48 13.8 -0.3**
comp=Z,0.7nm,0.5s,baz=7.9,slow=6.5
NOA NORSAR Array B 67.03 358 P **P 08 48 13.6 -0.5**
NOA pP **pP 08 48 30.4 -1.8**
NOA P'P' 09 16 41.1
NOA NORSAR Array B 67.03 358 P **P 08 48 13.6 -0.5**
comp=Z,4.3nm,0.5s,baz=3.9,slow=6.5,SNR=27
NOA pP **pP 08 48 30.4 -1.8**
comp=Z,6.0nm,0.8s,baz=2.2,slow=6.3,SNR=8.6
NOA LR LR 09 15 05.3
comp=Z,114nm,21.7s,baz=0.0,slow=34
NOA PKPPKP **P'P'df 09 16 41.1 -4.3**
comp=Z,4.2nm,1.1s,baz=177,slow=2.9,SNR=3.5
QIZ Qiongzhong 67.13 272 P **P 08 48 14.9 -0.3**
QIZ pP **pP 08 48 36.3 +3.0**
QIZ S **S 08 57 02.8 -1.4**
QIZ pmax pmax
comp=Z,57nm,1.2s
QIZ pmax pmax
comp=Z,160nm,4.7s
QIZ LR LR
comp=Z,200nm,23.3s
HFS Hagfors 67.86 356 LR LR 09 16 33.7
comp=Z,113nm,19.4s,baz=351,slow=35
FRU Bishkek 68.63 313 *e*P **P 08 48 25.0 +0.6**
AAK Ala-Archa 68.84 313 P **P 08 48 26.5 +0.6**
AAK pmax pmax
comp=Z,9.0nm,0.7s
AAK MLR MLR
comp=Z,302nm,21.4s
AAK Ala-Archa 68.84 313 *e*P **P 08 48 26.3 +0.4**
comp=Z,2.5nm,0.8s
AAK Ala-Archa 68.84 313 P **P 08 48 26.0 +0.1**
comp=Z,91nm,0.7s,SNR=12
AAK Ala-Archa 68.84 313 P **P 08 48 26.5 +0.6**
comp=Z,8.5nm,0.7s,baz=88,slow=3.3,SNR=26
AAK LR LR 09 19 60.0
comp=Z,302nm,21.4s,baz=166,slow=37
AKTO Aktyubinsk 68.86 328 P **P 08 48 26.1 +0.4**
AKTO 08 48 49.4
AKTO Aktyubinsk 68.86 328 P **P 08 48 26.1 +0.4**
AKTO PcP **PcP 08 48 49.4 -0.3**
AKTO Aktyubinsk 68.86 328 P **P 08 48 26.1 +0.4**
comp=Z,8.9nm,0.5s,baz=48,slow=6.7,SNR=43
AKTO PcP **PcP 08 48 49.4 -0.3**
comp=Z,7.1nm,0.7s,baz=40,slow=11,SNR=3.8
EKS2 Erkin-Say 69.14 313 *e*P **P 08 48 28.4 +0.7**
EKS2 Erkin-Say 69.14 313 *e*P **P 08 48 28.4 +0.7**
ABKAR Akbulak array 69.22 326 *e*P **P 08 48 28.2 +0.4**
MSVF Nonsavu 70.05 189 *e*P **P 08 48 34.6 +1.3**
MSVF pmax pmax
comp=Z,204nm,2.4s
MSVF Nonsavu 70.05 189 *e*P **P 08 48 34.6 +1.3**
comp=Z,204nm,2.4s
PMG Port Moresby 70.08 222 *e*P **P 08 48 32.9 -0.6**
comp=Z,81nm,1.2s
PMG Port Moresby 70.08 222 P **P 08 48 31.5 -2.0**
comp=Z,54nm,1.1s
PMG Port Moresby 70.08 222 P **P 08 48 33.8 +0.3**
comp=Z,42nm,0.9s,baz=32,slow=5.6,SNR=9.5
OBN Obninsk 70.19 342 *e*P **P 08 48 33.5 -0.2**
OBN *i* 08 48 50.6
OBN pmax pmax
comp=Z,29nm,1.6s
OBN MLR MLR
comp=Z,300nm,19.0s
KKAR Karatay Array 70.22 316 *e*P **P 08 48 34.1 -0.1**
KKAR Karatay Array 70.22 316 *e*P **P 08 48 34.1 -0.1**
LSA Lhasa 70.27 293 P **P 08 48 36.0 +0.8**
LSA pmax pmax
comp=Z,20nm,0.9s
PMOR Pomariorio Ree 70.49 154 *e*P **P 08 48 36.7 +0.8**
comp=Z,75nm,1.0s
KSH Kashi 70.62 310 P P 08 48 40.4 +3.6
KSH pP **PcP 08 49 00.5 +3.0**
KSH sP sP 08 49 10.1 +7.5
KSH PP PP 08 51 20.9 +7.5
KSH S **S 08 57 46.8 +1.5**
KSH sS SKSac 08 58 24.9 -7.8
KSH SKS **SKKSac 08 58 31.3 -1.5**
KSH ScS **ScS 08 58 34.3 +0.2**
KSH pmax pmax
comp=Z,61nm,1.1s
KSH LR LR
comp=N,360nm,8.5s
KSH LR LR
comp=E,260nm,6.3s
KSH LR LR
comp=Z,290nm,5.2s
TEIG Tepich 71.32 81 *e*P **P 08 48 41.6 +0.5**
comp=Z,343nm,2.5s
TEIG *e* 08 48 56.3
PPT Papeete 72.51 156 LR LR 09 12 40.5
comp=Z,256nm,20.3s,baz=349,slow=29
PPT2 Papeete2 72.53 156 *e*LR LR 09 10 43.4
comp=Z,366nm,23.8s,baz=344
TIAR Tiarei 72.56 156 *e*P **P 08 48 49.1 +0.7**
comp=Z,81nm,1.0s
MYLDM Lahad Datu 72.60 256 P **P 08 48 50.5 +1.7**
MYLDM Lahad Datu 72.60 256 P **P 08 48 50.5 +1.7**
comp=Z,63nm,1.3s
UBPT Khong Chiam 72.67 273 P **P 08 48 49.7 +0.4**
comp=Z,125nm,1.2s
TVO Taravao 72.80 156 *e*P **P 08 48 50.7 +0.8**
comp=Z,33nm,0.8s
VRHR Novokhopersk 72.90 338 *e*P **P 08 48 48.8 -1.3**
VRHR pmax pmax
comp=Z,20nm,0.7s
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,1.0s
SHL Shillong 72.99 290 *e*P **P 08 48 51.0 -0.3**
KKM Kota Kinabalu 73.28 258 *e*P **P 08 48 53.8 +0.8**
comp=E,18nm,0.9s
VSR Storozhevoye 73.34 339 *e*P **P 08 48 52.5 -0.2**
VSR pmax pmax
comp=Z,30nm,1.4s
VSR pmax pmax
comp=N,20nm,0.9s
VSR pmax pmax
comp=E,20nm,1.0s
VORD Divnogorie 73.55 339 *e*P **P 08 48 54.2 +0.3**
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.9s
CMMT Chiang Mai 73.95 280 P **P 08 48 57.6 +0.8**
comp=E,18nm,1.3s
CHTO Chiang Mai 73.96 280 *e*P **P 08 48 57.1 +0.2**
CHTO pmax pmax
comp=Z,17nm,1.1s
CHTO Chiang Mai 73.96 280 *e*P **P 08 48 57.0 +0.2**
comp=Z,16nm,1.1s
CHTO Chiang Mai 73.96 280 P **P 08 48 56.9 +0.1**
comp=Z,20nm,1.4s
TAPN Taplejung 74.01 294 *e*P **P 08 48 57.8 +0.4**
comp=Z,30nm,0.6s
CMAR Chiang Mai Arr 74.23 280 P **P 08 48 59.2 +0.8**
CMAR pP **PcP 08 49 14.8 +1.8**
CMAR Chiang Mai Arr 74.23 280 P **P 08 48 59.2 +0.8**
comp=Z,17nm,0.7s,baz=27,slow=6.8,SNR=66
CMAR pP **PcP 08 49 14.8 +1.8**
comp=Z,11nm,0.9s,baz=26,slow=6.4,SNR=4.4
CMAR LR LR 09 22 42.7
comp=Z,90nm,18.5s,baz=254,slow=37
ODAN Odare 74.57 294 *e*P **P 08 49 00.8 +0.2**
comp=Z,22nm,0.8s
GUN Gumba 74.60 296 *e*P **P 08 49 01.3 +0.4**
comp=Z,38nm,0.4s
RAMN Ramite 74.94 294 *e*P **P 08 49 02.8 +0.1**
comp=Z,40nm,0.5s
KKN Kakani 75.02 296 *e*P **P 08 49 03.4 +0.2**
PKI Pulchoki 75.12 296 *e*P **P 08 49 04.0 +0.1**
PKIN Phulchoki 75.12 296 *e*P **P 08 49 04.2 +0.4**
comp=Z,9.1nm,0.6s
DMN Daman 75.26 296 *e*P **P 08 49 04.8 +0.2**
comp=Z,35nm,0.9s
BBSR BB Station 75.33 56 *e*P **P 08 49 05.1 +0.5**
comp=Z,20nm,0.7s
DANN Dangsing 75.42 297 *e*P **P 08 49 05.8 +0.3**
comp=Z,52nm,0.7s
AKASG Malin Array Be 75.69 345 P **P 08 49 05.6 -0.7**
AKASG *PP **PcP 08 49 21.4 +2.6**
AKASG Malin Array Be 75.69 345 P **P 08 49 05.6 -0.7**
AKASG pP **PcP 08 49 21.4 +2.6**
AKASG PKiKP **PKiKP 08 54 52.4 -0.7**
AKASG Malin Array Be 75.69 345 P **P 08 49 05.6 -0.7**
comp=Z,4.3nm,0.5s,baz=16,slow=6.0,SNR=12
AKASG pP **PcP 08 49 21.4 +2.6**
comp=Z,5.5nm,0.6s,baz=15,slow=5.5,SNR=6.3
AKASG PKiKP **PKiKP 08 54 52.4 -0.7**
comp=Z,0.7nm,0.4s,baz=19,slow=2.1,SNR=4.2
AKASG LR LR 09 25 46.4
comp=Z,272nm,21.4s,baz=10.0,slow=38
KIEV Kiev 75.70 345 *e*P **P 08 49 05.4 -1.0**
KIEV pmax pmax
comp=Z,6.0nm,0.6s
KIEV Kiev 75.70 345 *e*P **P 08 49 05.4 -1.0**
comp=Z,5.6nm,0.6s
AK01 Malin Array Si 75.70 345 *e*P **P 08 49 05.7 -0.7**
AK02 Malin Array Si 75.73 345 *e*P **P 08 49 05.8 -0.7**
COEN Coen 75.83 224 *e*P **P 08 49 07.8 +0.3**
comp=Z,153nm,1.1s
KOLN Koldanda 75.96 297 *e*P **P 08 49 08.6 +0.1**
comp=Z,26nm,0.8s
PYUN Piuthan 76.04 298 *e*P **P 08 49 08.9 -0.1**
comp=Z,114nm,0.9s
DZM Mont Dzumac 76.04 199 *e*S **S 08 58 42.0 -4.5**
comp=Z,419nm,31.1s
DZM *e*LR LR 09 12 17.8
comp=Z,475nm,31.6s
CLZ Clausthal 76.27 358 *e*P **P 08 49 10.2 +0.5**
CLZ pmax pmax
comp=Z,33nm,1.6s
CLZ Clausthal 76.27 358 *e*P **P 08 49 10.2 +0.5**
comp=Z,33nm,1.6s
CHBT CHBT 76.55 273 P **P 08 49 12.8 +1.1**
comp=Z,65nm,1.6s,comp=Z,6μm
TGUH Tegucigalpa,Un 76.66 84 *e*P **P 08 49 13.9 +1.6**
comp=Z,232nm,1.6s
CLL Collm 76.71 356 *e*P **P 08 49 12.0 -0.1**
CLL *e* 08 49 23.0
CLL *i* 08 49 28.9
CLL pmax pmax
comp=Z,10.0nm,1.0s
CLL Collm 76.71 356 *e*P **P 08 49 11.8 -0.3**
comp=Z,10.0nm,0.9s
CLL Collm 76.71 356 *e*P **P 08 49 12.0 -0.1**
comp=Z,10.0nm,1.0s
CLL *e*PcP **PcP 08 49 23.0 -0.2**
CLL *i* pP **pP 08 49 28.9 -1.6**
CLL *e*PPP PPP 08 53 48.0
CLL *e*SP S 08 59 32.0 +39
CLL *es*PPS 09 00 09.0
CLL *e*SS **SS 09 03 42.0 -6.6**
CLL *es*SSS 09 09 48.0
KSP Ksiaz 76.99 354 *e*P **P 08 49 13.5 -0.2**
FBE Freiberg 77.08 356 *e*P **P 08 49 14.3 +0.1**
comp=Z,20nm,0.9s
BRG Berggiesshubel 77.10 355 *e*P **P 08 49 14.7 +0.4**
comp=Z,17nm,1.3s
BRG Berggiesshubel 77.10 355 *e*P **P 08 49 14.7 +0.4**
BRG Berggiesshubel 77.10 355 *e*P **P 08 49 14.3 0.0**
comp=Z,17nm,1.3s
MOX Moxa 77.43 357 *e*P **P 08 49 16.5 +0.3**
MOX pmax pmax
comp=Z,21nm,1.4s
MOX Moxa 77.43 357 *e*P **P 08 49 16.5 +0.3**
comp=Z,21nm,1.4s
DPC Dobruska-Polom 77.48 354 *e*P **P 08 49 16.9 +0.4**
DPC *e*'PP **pP 08 49 33.8 -1.2**
DPC Dobruska-Polom 77.48 354 *e*P **P 08 49 17.0 +0.5**
comp=Z,20nm,1.0s
DPC Dobruska-Polom 77.48 354 *e*P **P 08 49 16.9 +0.4**
DPC *ep*P **pP 08 49 33.8 -1.2**
PLN Plauen 77.57 356 *e*P **P 08 49 17.2 +0.3**
comp=Z,35nm,1.1s
WERD Werda 77.60 356 *e*P **P 08 49 17.0 -0.1**
comp=Z,8.0nm,1.1s
KWP Kalwaria Pacla 77.61 349 ⇓*i*P **P 08 49 17.8 +0.6**
KWP Kalwaria Pacla 77.61 349 *e*P **P 08 49 17.8 +0.6**
TANN Tannenbergstha 77.63 356 *e*P **P 08 49 17.4 +0.1**
comp=Z,15nm,1.5s
GUNZ Gunzen 77.68 356 *e*P **P 08 49 17.4 -0.2**
comp=Z,26nm,1.6s
WERN Wernitzgruen 77.76 356 *e*P **P 08 49 18.5 +0.5**
comp=Z,16nm,1.1s
NKC Novy Kostel 77.81 356 *e*P **P 08 49 18.9 +0.6**
NKC Novy Kostel 77.81 356 *e*P **P 08 49 18.9 +0.6**
TNS Taunus Mts 77.93 359 *e*P **P 08 49 19.4 +0.4**
TNS pmax pmax
comp=Z,12nm,1.1s
TNS Taunus Mts 77.93 359 *e*P **P 08 49 19.4 +0.4**
comp=Z,12nm,1.1s
PRU Pruhonice 77.95 355 *e*P **P 08 49 19.5 +0.4**
PRU Pruhonice 77.95 355 *e*P **P 08 49 19.5 +0.4**
MORC Moravsky Berou 77.96 353 *e*P **P 08 49 19.2 0.0**
MORC pmax pmax
comp=Z,4.0nm,0.8s
MORC Moravsky Berou 77.96 353 *e*P **P 08 49 19.2 0.0**
comp=Z,4.2nm,0.8s
MORC Moravsky Berou 77.96 353 ⇓*i*P **P 08 49 19.1 -0.1**
GIVF Givet 78.05 1 *e*P **P 08 49 19.6 0.0**
GIVF Givet 78.05 1 *e*P **P 08 49 19.6 0.0**
GIVF Givet 78.05 1 *e*P **P 08 49 19.6 0.0**
MANZ Manzenberg 78.07 356 *e*P **P 08 49 19.8 0.0**
comp=Z,6.0nm,0.9s
BAIF Baives 78.08 2 *e*P **P 08 49 20.0 +0.2**
BAIF Baives 78.08 2 *e*P **P 08 49 20.0 +0.2**
BAIF Baives 78.08 2 *e*P **P 08 49 20.0 +0.2**
TBI Tubuai 78.10 158 *e*LR LR 09 13 07.9
comp=Z,456nm,25.0s,baz=343
ROTZ Rotzenmuhle 78.28 356 *e*P **P 08 49 21.4 +0.5**
comp=Z,9.0nm,1.0s
KOLS Kolonicke sedl 78.35 350 *e*P **P 08 49 21.2 -0.1**
KOLS pmax pmax
comp=Z,9.0nm,1.5s
KOLS Kolonicke sedl 78.35 350 *e*P **P 08 49 21.2 -0.1**
GRF Grafenberg Arr 78.39 357 *e*P **P 08 49 22.2 +0.6**
GRF pmax pmax
comp=Z,48nm,1.5s
GRF Grafenberg Arr 78.39 357 *e*P **P 08 49 22.2 +0.6**
comp=Z,48nm,1.5s
GRF *e*L L 09 22 00.1
comp=Z,106nm,21.9s
VRAC Vranov 78.50 353 ⇓*i*P **P 08 49 22.6 +0.5**
SBUM Sibu 78.53 259 P **P 08 49 20.3 -2.5**
SBUM Sibu 78.53 259 P **P 08 49 23.7 +0.9**
comp=Z,17nm,1.6s
KHC Kasperske Hory 78.86 355 *e*P **P 08 49 24.9 +0.8**
KHC pmax pmax
comp=Z,40nm,1.8s
KHC Kasperske Hory 78.86 355 *e*P **P 08 49 24.9 +0.8**
comp=Z,40nm,1.8s
KHC Kasperske Hory 78.86 355 *e*P **P 08 49 24.9 +0.8**
KHC *ep*P **pP 08 49 41.0 -1.7**
WET Wettzell 78.88 356 *e*P **P 08 49 24.6 +0.4**
WET pmax pmax
comp=Z,10.0nm,1.3s
WET Wettzell 78.88 356 *e*P **P 08 49 24.6 +0.4**
comp=Z,10.0nm,1.3s
TRPA Tarpa 79.11 349 ⇑*i*P **P 08 49 25.7 +0.2**
VYHS Vyhne 79.13 352 *e*P **P 08 49 25.5 -0.1**
VYHS pmax pmax
comp=Z,5.0nm,1.3s
VYHS Vyhne 79.13 352 *e*P **P 08 49 25.5 -0.1**
GEC2 GERESS Array S 79.14 355 *e*P **P 08 49 25.7 0.0**
GEC2 pmax pmax
comp=Z,8.0nm,1.0s
GEC2 GERESS Array S 79.14 355 *e*P **P 08 49 25.7 0.0**
comp=Z,8.0nm,1.0s
GERES GERESS Array B 79.14 355 P **P 08 49 25.6 -0.2**
GERES GERESS Array B 79.14 355 P **P 08 49 25.6 -0.2**
comp=Z,4.1nm,0.7s,baz=32,slow=5.2,SNR=20
FLN La Foliniere 79.22 5 *e*P **P 08 49 25.5 -0.5**
FLN *e*R
comp=Z,137nm,19.2s
FLN La Foliniere 79.22 5 *e*P **P 08 49 25.5 -0.5**
FLN La Foliniere 79.22 5 *e*P **P 08 49 25.5 -0.5**
BUR08 Bucovina Ar. S 79.26 347 *e*P **P 08 49 26.8 +0.3**
KIV Kislovodsk 79.28 334 *e*P **P 08 49 27.1 +0.5**
KIV *i* 08 49 35.6
KIV pmax pmax
comp=Z,13nm,1.0s
KIV MLR MLR
comp=N,100nm,19.0s
BURAR Bucovina Array 79.28 347 ⇑*i*P **P 08 49 26.3 -0.3**
MTDJ Mount Denham 79.31 74 *e*P **P 08 49 28.3 +1.2**
comp=N,144nm,1.4s
LDF La Druitiere 79.41 5 *e*P **P 08 49 26.5 -0.6**
LDF La Druitiere 79.41 5 *e*P **P 08 49 26.5 -0.6**
LDF La Druitiere 79.41 5 *e*P **P 08 49 26.5 -0.6**
KBZ Khbaz 79.43 334 LR LR 09 28 40.9
comp=N,288nm,21.9s,baz=15,slow=39
GRR Gorron 79.57 5 *e*P **P 08 49 27.6 -0.4**
GRR Gorron 79.57 5 *e*P **P 08 49 27.6 -0.4**
GRR Gorron 79.57 5 *e*P **P 08 49 27.6 -0.4**
PAGF Fort de Pagny 79.61 1 *e*P **P 08 49 28.6 +0.4**
comp=N,12nm,1.0s
PAGF Fort de Pagny 79.61 1 *e*P **P 08 49 28.6 +0.4**
comp=N,12nm,1.0s
CDF Champ du Feu 79.75 360 *e*P **P 08 49 29.0 -0.1**
comp=N,10.0nm,0.7s
CDF Champ du Feu 79.75 360 *e*P **P 08 49 29.0 -0.1**
CDF pmax pmax
comp=Z,10.0nm,0.7s
CDF Champ du Feu 79.75 360 *e*P **P 08 49 29.0 -0.1**
comp=Z,10.0nm,0.7s
ANN Anapa 79.78 338 *e*P **pP 08 49 44.1 -3.6**
ANN pmax pmax
comp=Z,109nm,5.8s
BFO Black Forest 79.82 359 *e*P **P 08 49 29.4 0.0**
BFO pmax pmax
comp=Z,35nm,2.0s
BFO Black Forest 79.82 359 *e*P **P 08 49 29.4 0.0**
comp=Z,35nm,2.0s
CONA Conrad Observa 79.92 354 ⇑*i*P **P 08 49 30.6 +0.5**
comp=Z,15nm,1.4s
CONA Conrad Observa 79.92 354 ⇑*i*P **P 08 49 30.6 +0.5**
comp=Z,15nm,1.4s
ECH Echery 79.95 360 *e*P **P 08 49 29.5 -0.6**
ECH *e* 08 49 45.5
ECH pmax pmax
comp=Z,14nm,1.1s
ECH Echery 79.95 360 *e*P **P 08 49 29.5 -0.6**
comp=Z,14nm,1.1s
ECH *e* 08 49 45.5
SFTF Sexfontaines 79.95 1 *e*P **P 08 49 30.1 +0.1**
comp=Z,25nm,0.8s
SFTF Sexfontaines 79.95 1 *e*P **P 08 49 30.1 +0.1**
comp=Z,25nm,0.8s
ZEI Tsey 80.05 333 *e*P **P 08 49 29.3 -1.6**
ZEI pmax pmax
comp=Z,16nm,1.3s
KAPI Kappang 80.07 248 P **P 08 49 30.5 -0.6**
KAPI Kappang 80.07 248 P **P 08 49 30.5 -0.6**
comp=Z,15nm,0.7s,baz=46,slow=0.4,SNR=9.3
CTA Charters Tower 80.13 218 P **P 08 49 31.6 +0.4**
CTA pP **pP 08 49 46.6 -3.2**
CTA Charters Tower 80.13 218 P **P 08 49 31.6 +0.4**
comp=Z,31nm,1.0s,baz=19,slow=6.7,SNR=24
CTA pP **pP 08 49 46.6 -3.2**
comp=Z,19nm,0.8s,baz=354,slow=6.0,SNR=8.2
CTA LR LR 09 24 43.4
comp=Z,90nm,18.8s,baz=157,slow=35
CTAO Charters Tower 80.13 218 *e*P **P 08 49 31.4 +0.2**
CTAO *e* 08 49 46.9
CTAO pmax pmax
comp=Z,71nm,1.3s
CTAO Charters Tower 80.13 218 *e*P **P 08 49 31.4 +0.2**
comp=Z,71nm,1.3s
CTAO *e* 08 49 46.9
HAU Haudompre 80.16 0 *e*P **P 08 49 31.1 -0.1**
HAU *e*R
comp=Z,165nm,22.8s
HAU Haudompre 80.16 0 *e*P **P 08 49 31.1 -0.1**
HAU Haudompre 80.16 0 *e*P **P 08 49 31.1 -0.1**
HINF Hinteralfeld 80.35 360 *e*P **P 08 49 31.9 -0.3**
HINF Hinteralfeld 80.35 360 *e*P **P 08 49 31.9 -0.3**
HINF Hinteralfeld 80.35 360 *e*P **P 08 49 31.9 -0.3**
SIM Simferopol' 80.36 341 P **P 08 49 33.5 +1.2**
KSM Kuching 80.46 260 *e*P **P 08 49 34.1 +0.9**
comp=Z,99nm,1.5s
KSM Kuching 80.46 260 P **P 08 49 35.1 +1.8**
KSM Kuching 80.46 260 P **P 08 49 34.2 +0.9**
comp=Z,48nm,1.3s,comp=Z,637nm
ARSA Arzberg 80.62 354 ⇑*i*P **P 08 49 34.3 +0.6**
comp=Z,6.4nm,0.7s
ARSA Arzberg 80.62 354 ⇑*i*P **P 08 49 34.3 +0.6**
comp=Z,6.4nm,0.7s
VRI Vrincioaia 80.78 346 ⇓*i*P **P 08 49 34.8 +0.2**
PLOR Plostina 80.81 346 ⇓*i*P **P 08 49 36.1 +1.4**
WTTA Wattenberg 80.81 357 ⇑*i*P **P 08 49 35.3 +0.4**
WTTA pmax pmax
comp=Z,23nm,1.6s
WTTA Wattenberg 80.81 357 ⇑*i*P **P 08 49 35.2 +0.4**
comp=Z,23nm,1.6s
WTTA Wattenberg 80.81 357 ⇑*i*P **P 08 49 35.2 +0.4**
comp=Z,23nm,1.6s
LOR Lormes 80.87 2 *e*P **P 08 49 34.8 -0.2**
comp=Z,15nm,0.8s
LOR *e*R
comp=Z,148nm,21.5s
LOR Lormes 80.87 2 *e*P **P 08 49 34.8 -0.2**
comp=Z,15nm,0.8s
KBA Koelnbreinsper 80.92 355 ⇓*i*P **P 08 49 36.1 +0.6**
KBA pmax pmax
comp=Z,21nm,0.7s
KBA Koelnbreinsper 80.92 355 ⇓*i*P **P 08 49 36.1 +0.6**
comp=Z,21nm,0.7s
KBA Koelnbreinsper 80.92 355 ⇓*i*P **P 08 49 36.1 +0.6**
comp=Z,21nm,0.7s
SSF Saint Saulge 81.07 2 *e*P **P 08 49 35.9 -0.1**
comp=Z,19nm,0.8s
SSF Saint Saulge 81.07 2 *e*P **P 08 49 35.9 -0.1**
SSF pmax pmax
comp=Z,19nm,0.8s
SSF Saint Saulge 81.07 2 *e*P **P 08 49 35.9 -0.1**

	comp=Z,19nm,0.8s								
FETA	**Feichten**	**81.08**	**357**	⇑	*i*P		**P**	**08 49 36.9**	**+0.6**
	comp=Z,12nm,1.2s								
FETA	**Feichten**	**81.08**	**357**	⇑	*i*P		**P**	**08 49 36.9**	**+0.6**
	comp=Z,12nm,1.2s								
TLCR		**81.11**	**344**	⇑	*i*P		**P**	**08 49 36.5**	**+0.2**
RAO	**Raoul Island**	**81.21**	**184**		LR	LR	09 19 24.5		
	comp=Z,260nm,18.8s,baz=316,slow=31								
SOKA	**Soboth**	**81.22**	**354**	⇑	*i*P		**P**	**08 49 36.7**	**-0.3**
	comp=Z,22nm,1.4s								
SOKA	**Soboth**	**81.22**	**354**	⇑	*i*P		**P**	**08 49 36.7**	**-0.3**
	comp=Z,22nm,1.4s								
CFR	**Carcaliu**	**81.23**	**345**	⇓	*i*P		**P**	**08 49 37.2**	**+0.3**
MLR	**Muntele Rosu**	**81.26**	**346**	⇑	*i*P		**P**	**08 49 38.9**	**+1.6**
ABTA	**Abfaltersbach**	**81.29**	**356**	⇑	*i*P		**P**	**08 49 37.6**	**+0.2**
	comp=Z,11nm,1.0s								
ABTA	**Abfaltersbach**	**81.29**	**356**	⇑	*i*P		**P**	**08 49 37.6**	**+0.2**
	comp=Z,11nm,1.0s								
AVF	**Avril sur Loir**	**81.33**	**2**		*e*P		**P**	**08 49 37.2**	**-0.2**
	comp=Z,27nm,1.0s								
AVF	**Avril sur Loir**	**81.33**	**2**		*e*P		**P**	**08 49 37.2**	**-0.2**
AVF						pmax	pmax		
	comp=Z,27nm,1.0s								
AVF	**Avril sur Loir**	**81.33**	**2**		*e*P		**P**	**08 49 37.2**	**-0.2**
	comp=Z,27nm,1.0s								
DAVOX	**Davos/Dischmat**	**81.34**	**358**		LR	LR	09 26 16.5		
	comp=Z,107nm,18.6s,baz=79,slow=36								
MFF	**Saint Martin d**	**81.39**	**5**		*e*P		**P**	**08 49 37.6**	**-0.2**
	comp=Z,44nm,1.1s								
MFF	**Saint Martin d**	**81.39**	**5**		*e*P		**P**	**08 49 37.6**	**-0.2**
MFF						pmax	pmax		
	comp=Z,44nm,1.1s								
MFF	**Saint Martin d**	**81.39**	**5**		*e*P		**P**	**08 49 37.6**	**-0.2**
	comp=Z,44nm,1.1s								
GROS	**Grobnik**	**81.41**	**354**		*e*P		**P**	**08 49 37.7**	**-0.2**
VOIR		**81.44**	**347**	⇓	*i*P		**P**	**08 49 41.2**	**+3.0**
SMF	**Signal de Mont**	**81.49**	**2**		*e*P		**P**	**08 49 38.1**	**-0.2**
	comp=Z,40nm,1.0s								
SMF	**Signal de Mont**	**81.49**	**2**		*e*P		**P**	**08 49 38.1**	**-0.2**
SMF						pmax	pmax		
	comp=Z,40nm,1.0s								
SMF	**Signal de Mont**	**81.49**	**2**		*e*P		**P**	**08 49 38.1**	**-0.2**
	comp=Z,40nm,1.0s								
FUORN	**Ofenpass-Fuorn**	**81.49**	**357**		*e*P		**P**	**08 49 39.4**	**+0.7**
CABF	**La Chapelle**	**81.55**	**0**		*e*P		**P**	**08 49 39.0**	**+0.3**
	comp=Z,50nm,1.1s								
CABF	**La Chapelle**	**81.55**	**0**		*e*P		**P**	**08 49 39.0**	**+0.3**
CABF						pmax	pmax		
	comp=Z,50nm,1.1s								
CABF	**La Chapelle**	**81.55**	**0**		*e*P		**P**	**08 49 39.0**	**+0.3**
	comp=Z,50nm,1.1s								
BGF	**Bois d'Agland**	**81.55**	**3**		*e*P		**P**	**08 49 38.5**	**-0.1**
BGF	**Bois d'Agland**	**81.55**	**3**		*e*P		**P**	**08 49 38.5**	**-0.1**
BGF	**Bois d'Agland**	**81.55**	**3**		*e*P		**P**	**08 49 38.5**	**-0.1**
ARR	**Arges**	**81.57**	**347**	⇓	*i*P		**P**	**08 49 39.7**	**+0.9**
TUE	**Stuetta**	**81.66**	**358**		*e*P		**P**	**08 49 39.6**	**+0.1**
	comp=Z,9.6nm,0.7s								
BZS	**Buzias**	**81.70**	**349**	⇑	*i*P		**P**	**08 49 39.3**	**-0.1**
GZR	**Gura Zlata**	**81.78**	**349**	⇑	*i*P		**P**	**08 49 39.7**	**-0.2**
TCF	**Toulx Ste Croi**	**81.80**	**3**		*e*P		**P**	**08 49 39.6**	**-0.4**
	comp=Z,9.5nm,0.8s								
TCF	**Toulx Ste Croi**	**81.80**	**3**		*e*P		**P**	**08 49 39.6**	**-0.4**
TCF						pmax	pmax		
	comp=Z,10.0nm,0.8s								
TCF	**Toulx Ste Croi**	**81.80**	**3**		*e*P		**P**	**08 49 39.6**	**-0.4**
	comp=Z,9.5nm,0.8s								
CRES	**Cresnjev**	**82.04**	**354**		*e*P		**P**	**08 49 42.0**	**+0.7**
RKT	**Rikitea**	**82.18**	**145**		*e*P		**P**	**08 49 42.4**	**+0.4**
	comp=Z,39nm,1.2s								
RKT					*e*	LR	LR	09 15 08.3	
	comp=Z,512nm,30.2s								
GNI	**Garni**	**82.22**	**331**		LR	LR	09 29 57.0		
	comp=Z,165nm,21.8s,baz=199,slow=38								
SDDR	**Presa de Saban**	**82.36**	**69**		*e*P		**P**	**08 49 44.2**	**+0.9**
	comp=Z,74nm,1.5s								
BOJS	**Bojanci**	**82.38**	**354**		*i* P		**P**	**08 49 44.0**	**+1.0**
LPG	**La Plagne**	**82.67**	**360**		*e*P		**P**	**08 49 44.2**	**-0.6**
LPG	**La Plagne**	**82.67**	**360**		*e*P		**P**	**08 49 44.2**	**-0.6**
LPG	**La Plagne**	**82.67**	**360**		*e*P		**P**	**08 49 44.2**	**-0.6**
RJF	**Les Rejaudoux**	**82.76**	**4**		*e*P		**P**	**08 49 44.6**	**-0.4**
	comp=Z,49nm,1.4s								
RJF					*e*	R			
	comp=Z,145nm,20.2s								
RJF	**Les Rejaudoux**	**82.76**	**4**		*e*P		**P**	**08 49 44.6**	**-0.4**
RJF						pmax	pmax		
	comp=Z,49nm,1.4s								
RJF	**Les Rejaudoux**	**82.76**	**4**		*e*P		**P**	**08 49 44.6**	**-0.4**
	comp=Z,49nm,1.4s								
LFF	**La Frestale**	**83.09**	**4**		*e*P		**P**	**08 49 46.7**	**0.0**
	comp=Z,66nm,1.0s								
LFF	**La Frestale**	**83.09**	**4**		*e*P		**P**	**08 49 46.7**	**0.0**
LFF						pmax	pmax		
	comp=Z,66nm,1.0s								
LFF	**La Frestale**	**83.09**	**4**		*e*P		**P**	**08 49 46.7**	**0.0**
	comp=Z,66nm,1.0s								
CAF	**Calviac**	**83.16**	**3**		*e*P		**P**	**08 49 47.1**	**0.0**
	comp=Z,40nm,1.2s								
CAF	**Calviac**	**83.16**	**3**		*e*P		**P**	**08 49 47.1**	**0.0**
CAF						pmax	pmax		
	comp=Z,40nm,1.2s								
CAF	**Calviac**	**83.16**	**3**		*e*P		**P**	**08 49 47.1**	**0.0**
	comp=Z,40nm,1.2s								
EIDS	**Eidsvold**	**83.28**	**212**		*e*P		**P**	**08 49 48.2**	**+0.6**
	comp=Z,29nm,1.1s								
VIVF	**Saint-Julien-l**	**83.29**	**1**		*e*P		**P**	**08 49 47.9**	**+0.1**
VIVF	**Saint-Julien-l**	**83.29**	**1**		*e*P		**P**	**08 49 47.9**	**+0.1**
VIVF	**Saint-Julien-l**	**83.29**	**1**		*e*P		**P**	**08 49 47.9**	**+0.1**
KULM	**Kulim**	**83.38**	**270**		*e*P		**P**	**08 49 49.4**	**+0.8**
	comp=Z,35nm,0.6s								
KULM	**Kulim**	**83.38**	**270**		P		**P**	**08 49 49.8**	**+1.3**
KULM	**Kulim**	**83.38**	**270**		P		**P**	**08 49 50.7**	**+2.1**
KULM	**Kulim**	**83.38**	**270**		P		**P**	**08 49 49.6**	**+1.0**
	comp=Z,136nm,1.4s,comp=Z,1µm								
MBDF	**Montbardon**	**83.44**	**360**		*e*P		**P**	**08 49 48.5**	**-0.2**
	comp=Z,13nm,0.7s								
MBDF	**Montbardon**	**83.44**	**360**		*e*P		**P**	**08 49 48.5**	**-0.2**
MBDF						pmax	pmax		
	comp=Z,13nm,0.7s								
MBDF	**Montbardon**	**83.44**	**360**		*e*P		**P**	**08 49 48.5**	**-0.2**
	comp=Z,13nm,0.7s								
IPM	**Ipoh**	**83.78**	**269**		*e*P		**P**	**08 49 50.9**	**+0.3**
	comp=Z,76nm,0.8s								
IPM					*e*			08 50 06.7	
IPM	**Ipoh**	**83.78**	**269**		P		**P**	**08 49 51.3**	**+0.6**
IPM	**Ipoh**	**83.78**	**269**		P		**P**	**08 49 51.5**	**+0.8**
IPM	**Ipoh**	**83.78**	**269**		P		**P**	**08 49 51.2**	**+0.6**
	comp=Z,128nm,0.9s,comp=Z,1µm								
MYKOM	**Kota Tinggi**	**84.15**	**265**		P		**P**	**08 49 54.2**	**+1.7**
MYKOM	**Kota Tinggi**	**84.15**	**265**		P		**P**	**08 49 53.8**	**+1.3**
	comp=Z,35nm,1.0s								
SMRF	**Simiane la Rot**	**84.18**	**1**		*e*P		**P**	**08 49 53.4**	**+1.1**
	comp=Z,73nm,1.1s								
SMRF	**Simiane la Rot**	**84.18**	**1**		*e*P		**P**	**08 49 53.4**	**+1.1**
	comp=Z,73nm,1.1s								
SBF	**Sospel**	**84.30**	**359**		*e*P		**P**	**08 49 52.7**	**-0.3**
	comp=Z,57nm,0.8s								
SBF	**Sospel**	**84.30**	**359**		*e*P		**P**	**08 49 52.7**	**-0.3**
SBF						pmax	pmax		
	comp=Z,57nm,0.8s								
SBF	**Sospel**	**84.30**	**359**		*e*P		**P**	**08 49 52.7**	**-0.3**
	comp=Z,57nm,0.8s								
KGM	**Kluang**	**84.30**	**266**		P		**P**	**08 49 55.2**	**+1.9**
FRIM	**Kepong**	**84.39**	**268**		P		**P**	**08 49 55.3**	**+1.6**
VTS	**Vitosha**	**84.48**	**348**	⇑	*i*P		**P**	**08 49 53.6**	**-0.4**
FRF	**La Foret Royal**	**84.60**	**360**		*e*P		**P**	**08 49 54.2**	**-0.2**
	comp=Z,122nm,1.4s								
FRF	**La Foret Royal**	**84.60**	**360**		*e*P		**P**	**08 49 54.2**	**-0.2**
FRF						pmax	pmax		
	comp=Z,122nm,1.4s								
FRF	**La Foret Royal**	**84.60**	**360**		*e*P		**P**	**08 49 54.2**	**-0.2**
	comp=Z,122nm,1.4s								
SJPF	**Ste Jean**	**84.81**	**6**		*e*P		**P**	**08 49 55.5**	**0.0**
SJPF	**Ste Jean**	**84.81**	**6**		*e*P		**P**	**08 49 55.5**	**0.0**
SJPF	**Ste Jean**	**84.81**	**6**		*e*P		**P**	**08 49 55.5**	**0.0**
LMR	**La Mourre**	**84.83**	**0**		*e*P		**P**	**08 49 55.9**	**+0.4**
	comp=Z,42nm,1.1s								
LMR	**La Mourre**	**84.83**	**0**		*e*P		**P**	**08 49 55.9**	**+0.4**
LMR						pmax	pmax		
	comp=Z,42nm,1.1s								
LMR	**La Mourre**	**84.83**	**0**		*e*P		**P**	**08 49 55.9**	**+0.4**
	comp=Z,42nm,1.1s								
EPF	**Esparros**	**84.98**	**5**		*e*P		**P**	**08 49 55.7**	**-0.7**
	comp=Z,17nm,0.9s								
EPF	**Esparros**	**84.98**	**5**		*e*P		**P**	**08 49 55.7**	**-0.7**
EPF						pmax	pmax		
	comp=Z,17nm,0.9s								
EPF	**Esparros**	**84.98**	**5**		*e*P		**P**	**08 49 55.7**	**-0.7**
	comp=Z,17nm,0.9s								
WRAB	**Tennant Creek**	**85.00**	**228**		*e*P		**P**	**08 49 55.9**	**-0.6**
WRAB					*e*			08 50 11.6	
WRAB						pmax	pmax		
	comp=Z,51nm,1.1s								
WRAB	**Tennant Creek**	**85.00**	**228**		*e*P		**P**	**08 49 55.9**	**-0.6**
	comp=Z,51nm,1.1s								
WRAB					*e*			08 50 11.6	
WRAB	**Tennant Creek**	**85.00**	**228**		P		**P**	**08 49 56.0**	**-0.6**
	comp=Z,204nm,1.0s,SNR=10								
WRA	**Warramunga Arr**	**85.02**	**228**		P		**P**	**08 49 56.2**	**-0.5**
WRA						pP	**pP**	**08 50 11.7**	**-3.7**
WRA	**Warramunga Arr**	**85.02**	**228**		P		**P**	**08 49 56.2**	**-0.5**
	comp=Z,17nm,0.8s,baz=33,slow=5.8,SNR=103								
WRA						pP	**pP**	**08 50 11.7**	**-3.7**
	comp=Z,13nm,0.6s,baz=32,slow=5.7,SNR=14								
WRA						LR	LR	09 25 13.4	
	comp=Z,134nm,18.0s,baz=50,slow=34								
ETSF	**Etsaut**	**85.06**	**5**		*e*P		**P**	**08 49 56.2**	**-0.6**
	comp=Z,20nm,0.9s								
ETSF	**Etsaut**	**85.06**	**5**		*e*P		**P**	**08 49 56.2**	**-0.6**
ETSF						pmax	pmax		
	comp=Z,20nm,0.9s								
ETSF	**Etsaut**	**85.06**	**5**		*e*P		**P**	**08 49 56.2**	**-0.6**
	comp=Z,20nm,0.9s								
SKO	**Skopje**	**85.31**	**349**		*e*P		**P**	**08 49 58.0**	**0.0**
LRS	**Lares**	**85.44**	**66**		*e*P		**P**	**08 49 59.7**	**+0.7**
LRS					*e*			08 50 14.6	
AOPR	**Arecibo Observ**	**85.45**	**66**		*e*P		**P**	**08 49 59.7**	**+0.7**
BRTR	**Keskin Array B**	**85.46**	**339**		P		**P**	**08 49 58.8**	**-0.2**
BRTR						pP	**pP**	**08 50 14.6**	**-3.2**
BRTR						PKKP	**PKKPdf**	**09 07 53.1**	**+2.1**
BRTR						P'P'		09 16 00.2	
BRTR	**Keskin Array B**	**85.46**	**339**		P		**P**	**08 49 58.8**	**-0.2**
	comp=Z,6.0nm,0.9s,baz=38,slow=2.2,SNR=24								
BRTR						pP	**pP**	**08 50 14.6**	**-3.2**
	comp=Z,2.6nm,0.9s,baz=61,slow=1.9,SNR=4.7								
BRTR						PKKP	**PKKPdf**	**09 07 53.1**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=324,slow=8.2,SNR=3.7								
BRTR						PKPPKP	P'P'df	09 16 00.2	-12
	comp=Z,1.0nm,1.0s,baz=200,slow=3.3,SNR=4.3								
BRTR						LR	LR	09 31 56.5	
	comp=Z,99nm,20.7s,baz=169,slow=38								
PGF	**Pioggiola**	**85.59**	**358**		*e*P		**P**	**08 49 59.3**	**-0.2**
	comp=Z,88nm,1.0s								
PGF	**Pioggiola**	**85.59**	**358**		*e*P		**P**	**08 49 59.3**	**-0.2**
PGF						pmax	pmax		
	comp=Z,88nm,1.0s								
PGF	**Pioggiola**	**85.59**	**358**		*e*P		**P**	**08 49 59.3**	**-0.2**
	comp=Z,88nm,1.0s								
NVR	**Nevrokopi**	**85.62**	**347**		P		**P**	**08 50 00.0**	**+0.4**
PBRG	**Braganca**	**85.64**	**10**		*e*P		**P**	**08 50 00.3**	**+0.6**
	comp=Z,18nm,2.0s								
MALT	**Malatya**	**85.68**	**335**		*e*P		**P**	**08 50 00.9**	**+0.9**
MALT						pmax	pmax		
	comp=Z,8.0nm,0.9s								
MALT	**Malatya**	**85.68**	**335**		*e*P		**P**	**08 50 00.9**	**+0.9**
	comp=Z,8.1nm,0.9s								
MALT	**Malatya**	**85.68**	**335**	⇓	*i*P		**P**	**08 50 00.7**	**+0.7**
CELP	**Cerrillos**	**85.76**	**66**		*e*P		**P**	**08 50 01.4**	**+0.8**
OBIP	**Obispado Ponce**	**85.77**	**66**		*e*P		**P**	**08 50 01.4**	**+0.8**
	comp=Z,44nm,0.7s								
VAY	**Valandovo**	**85.82**	**348**		*e*P		**P**	**08 50 00.1**	**-0.4**
KNT	**Kendrikon**	**85.93**	**348**		P		**P**	**08 50 01.7**	**+0.6**
POLO	**Lamas de Olo**	**85.95**	**11**		*e*P		**P**	**08 50 01.7**	**+0.4**
	comp=Z,16nm,1.8s								
PVRL	**Vila Real**	**86.06**	**11**		*e*P		**P**	**08 50 02.4**	**+0.6**
	comp=Z,25nm,1.6s								
GRG	**Griva**	**86.20**	**348**		P		**P**	**08 50 02.7**	**+0.3**
MVO	**Moncorvo**	**86.25**	**10**		*e*P		**P**	**08 50 03.1**	**+0.4**
	comp=Z,20nm,1.4s								
PSI	**Prapat**	**86.39**	**270**		P		**P**	**08 50 04.6**	**+0.8**
PSI						pP	**pP**	**08 50 19.8**	**-2.8**
PSI	**Prapat**	**86.39**	**270**		P		**P**	**08 50 04.3**	**+0.5**
	comp=Z,274nm,1.2s,comp=Z,3µm								
PSI	**Prapat**	**86.39**	**270**		P		**P**	**08 50 04.6**	**+0.8**
	comp=Z,128nm,0.6s,baz=13,slow=3.9,SNR=61								
PSI						pP	**pP**	**08 50 19.8**	**-2.8**
	comp=Z,37nm,0.6s,baz=28,slow=6.8,SNR=6.5								
FNA	**Florina**	**86.49**	**349**		P		**P**	**08 50 03.5**	**-0.4**
PVIS	**Viseu**	**86.59**	**11**		*e*P		**P**	**08 50 04.8**	**+0.4**
HYB	**Hyderabad**	**87.00**	**295**		*e*P		**P**	**08 50 06.0**	**-0.7**
HYB	**Hyderabad**	**87.00**	**295**		*e*P		**P**	**08 50 06.0**	**-0.7**
HYB	**Hyderabad**	**87.00**	**295**		*i* P		**P**	**08 50 06.0**	**-0.7**
PTOM	**Tomar**	**87.61**	**12**		*e*P		**P**	**08 50 09.4**	**+0.1**
	comp=Z,42nm,1.5s								
XOR	**Xorichti**	**87.66**	**347**		P		**P**	**08 50 08.6**	**-0.9**
FITZ	**Fitzroy Crossi**	**87.68**	**236**		*e*P		**P**	**08 50 09.6**	**-0.1**
	comp=Z,41nm,1.0s								
FITZ					*e*			08 50 25.3	
FITZ	**Fitzroy Crossi**	**87.68**	**236**		P		**P**	**08 50 10.0**	**+0.3**
	comp=Z,29nm,0.9s,baz=35,slow=3.9,SNR=46								
FITZ						pP	**pP**	**08 50 25.5**	**-3.0**
	comp=Z,22nm,0.8s,baz=15,slow=4.3,SNR=12								
FITZ						LR	LR	09 27 33.0	
	comp=Z,115nm,18.6s,baz=22,slow=34								
ARMA	**Armidale**	**87.81**	**210**		*e*P		**P**	**08 50 11.6**	**+1.4**
	comp=Z,18nm,0.8s								
PMRV	**Marv??o**	**87.92**	**11**		*e*P		**P**	**08 50 11.1**	**+0.3**
ESDC	**Sonseca Array**	**88.02**	**8**		P		**P**	**08 50 11.4**	**+0.1**
ESDC	**Sonseca Array**	**88.02**	**8**		P		**P**	**08 50 11.4**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=349,slow=4.1,SNR=16								
AS31	**Alice Springs**	**88.45**	**227**		*e*P		**P**	**08 50 13.4**	**+0.2**
AS31					*e*			08 50 29.4	
ASAR	**Alice Springs**	**88.45**	**227**		P		**P**	**08 50 13.7**	**+0.4**
ASAR						pP	**pP**	**08 50 28.9**	**-3.2**
ASAR						PKKPbc	**PKKPbc**	**09 07 56.0**	**+2.0**
ASAR						P'P'		09 15 55.2	
ASAR	**Alice Springs**	**88.45**	**227**		P		**P**	**08 50 13.7**	**+0.4**
	comp=Z,53nm,1.0s,baz=30,slow=5.0,SNR=304								
ASAR						pP	**pP**	**08 50 28.9**	**-3.2**
	comp=Z,37nm,0.9s,baz=26,slow=4.7,SNR=17								
ASAR						PKKPbc	**PKKPbc**	**09 07 56.0**	**+2.0**
	comp=Z,0.6nm,0.6s,baz=194,slow=1.9,SNR=4.9								
ASAR						PKPPKP	P'P'df	09 15 55.2	-6.1
	comp=Z,0.5nm,0.8s,baz=177,slow=2.4,SNR=5.3								
ASAR						LR	LR	09 26 35.5	
	comp=Z,135nm,21.4s,baz=26,slow=33								
POO	**Poona**	**88.68**	**299**	⇓	*i*P		**P**	**08 50 12.0**	**-2.7**
	comp=Z,50nm,1.0s								
CSS	**Prodhromos**	**90.10**	**338**		*e*P		**P**	**08 50 21.2**	**+0.1**
	comp=Z,8.9nm,0.9s								
URZ	**Urewera**	**90.48**	**187**		LR	LR		09 23 07.7	
	comp=Z,206nm,21.7s,baz=28,slow=30								
SDV	**Santo Domingo**	**90.76**	**75**		*e*P		**P**	**08 50 25.8**	**+1.2**
	comp=Z,0.2nm,0.8s								
MMAI	**Mount Meron Ar**	**91.47**	**336**		LR	LR		09 41 27.9	
	comp=Z,108nm,18.5s,baz=250,slow=42								
STKA	**Stephens Creek**	**92.54**	**217**		*e*P		**P**	**08 50 32.0**	**-0.1**
	comp=Z,5.2nm,0.9s								
STKA					*e*			08 50 47.8	
STKA	**Stephens Creek**	**92.54**	**217**		P		**P**	**08 50 32.7**	**+0.6**
	comp=Z,24nm,0.9s,baz=355,slow=5.9,SNR=52								
STKA						pP	**pP**	**08 50 48.5**	**-2.4**
	comp=Z,27nm,0.9s,baz=31,slow=8.7,SNR=14								
STKA						LR	LR	09 24 55.0	
	comp=Z,209nm,21.3s,baz=26,slow=31								
OTAV	**Otavalo**	**92.85**	**86**		*e*P		**P**	**08 50 35.1**	**+0.5**
	comp=Z,18nm,1.0s								
OTAV					*e*			08 50 50.3	
MBWA	**Marble Bar**	**93.29**	**239**		*e*P		**P**	**08 50 35.0**	**-0.8**
	comp=Z,34nm,1.2s								
MBWA					*e*			08 50 50.6	
LPAZ	**La Paz**	**112.03**	**88**		PKiKP		**PKiKP**	**08 55 57.3**	**+0.3**
LPAZ					PKKPbc		**PKKPbc**	**09 06 49.4**	**+2.7**
LPAZ	**La Paz**	**112.03**	**88**		PKiKP		**PKiKP**	**08 55 57.3**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=69,slow=3.5,SNR=4.7								
LPAZ					PKKPbc		**PKKPbc**	**09 06 49.4**	**+2.7**
	comp=Z,0.9nm,0.6s,baz=6.7,slow=1.9,SNR=6.8								
TOA0	**Torodi Ar. Sit**	**114.77**	**5**		*e*PKPdf		PKPdf	08 56 00.8	-0.8
TORD	**Torodi Ar. Bea**	**114.77**	**5**		PKP		PKPdf	08 56 01.2	-0.3
TORD					SKP			08 59 30.1	
TORD					PKKPbc		**PKKPbc**	**09 06 35.7**	**-1.1**
TORD	**Torodi Ar. Bea**	**114.77**	**5**		PKP		PKPdf	08 56 01.2	-0.3
	comp=Z,3.7nm,0.6s,baz=346,slow=2.3,SNR=46								
TORD					SKP			08 59 30.1	
	comp=Z,0.4nm,0.7s,baz=346,slow=1.9,SNR=4.7								
TORD					PKKPbc		**PKKPbc**	**09 06 35.7**	**-1.1**
	comp=Z,1.6nm,0.8s,baz=178,slow=3.0,SNR=8.0								
LIC	**Lamto**	**120.94**	**14**	⇑	*i*PKiKP		**PKPdf**	**08 56 13.0**	**-0.5**
	comp=Z,21nm,0.6s								
LIC					*e*	R			
	comp=Z,161nm,21.0s								
LIC	**Lamto**	**120.94**	**14**	⇑	*i*PKPdf		**PKPdf**	**08 56 13.0**	**-0.5**
KMBO	**Kilima Mbogo**	**123.00**	**323**		PKP		**PKPdf**	**08 56 18.3**	**+0.6**
KMBO					*e*PKPdf		**PKiKP**	**08 56 18.9**	**+0.9**
KMBO	**Kilima Mbogo**	**123.00**	**323**		PKP		**PKPdf**	**08 56 18.3**	**+0.6**
	comp=Z,12nm,0.9s,baz=13,slow=3.2,SNR=28								
BDFB	**Brasilia**	**123.67**	**71**		PKP		**PKPdf**	**08 56 19.0**	**+0.3**
BDFB	**Brasilia**	**123.67**	**71**		PKP		**PKPdf**	**08 56 19.0**	**+0.3**
	comp=Z,9.7nm,0.7s,baz=219,slow=3.4,SNR=16								
CPUP	**Villa Florida**	**126.18**	**87**		PKP		**PKPdf**	**08 56 22.9**	**-0.1**
CPUP					pPKP		**pPKPdf**	**08 56 39.1**	**-3.5**
CPUP	**Villa Florida**	**126.18**	**87**		PKP		**PKPdf**	**08 56 22.9**	**-0.1**
	comp=Z,5.7nm,0.6s,baz=325,slow=2.0,SNR=22								
CPUP					pPKP		**pPKPdf**	**08 56 39.1**	**-3.5**
	comp=Z,4.4nm,0.7s,baz=2.7,slow=1.7,SNR=5.8								
PLCA	**Paso Flores**	**128.04**	**110**		PKP		**PKPdf**	**08 56 26.6**	**+0.3**
PLCA					pPKP		**pPKPdf**	**08 56 42.3**	**-3.6**
PLCA	**Paso Flores**	**128.04**	**110**		PKP		**PKPdf**	**08 56 26.6**	**+0.3**
	comp=Z,18nm,1.0s,baz=300,slow=7.8,SNR=3.8								
PLCA					pPKP		**pPKPdf**	**08 56 42.3**	**-3.6**
	comp=Z,12nm,0.9s,baz=292,slow=7.3,SNR=2.7								
VNDA	**Vanda**	**130.38**	**187**		PKP		**PKPdf**	**08 56 29.9**	**+0.3**
VNDA					pPKP		**pPKPdf**	**08 56 46.2**	**-3.0**
VNDA					SKPbc		**SKPbc**	**08 59 47.5**	**+0.8**
VNDA	**Vanda**	**130.38**	**187**		PKP		**PKPdf**	**08 56 29.9**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=320,slow=6.1,SNR=8.7								
VNDA					pPKP		**pPKPdf**	**08 56 46.2**	**-3.0**
	comp=Z,1.3nm,0.8s,baz=306,slow=3.3,SNR=4.1								
VNDA					SKPbc		**SKPbc**	**08 59 47.5**	**+0.8**
	comp=Z,5.2nm,0.9s,baz=343,slow=4.1,SNR=15								
TRQA	**Tornquist**	**131.39**	**102**		*e*PKPdf		**PKPdf**	**08 56 32.9**	**+0.2**
TRQA					*e*			08 56 48.5	
CAM4	**Nova Friburgo**	**132.10**	**71**	⇓	*i*P		**PKPdf**	**08 56 34.3**	**-0.5**
CAM4					*i*			08 56 38.9	
CAM4					*i*			08 56 46.1	
CAM4					*i*			08 56 50.8	
CAM4					*i*			08 56 55.2	
CAM4					*i*			08 57 01.3	
CAM4					*i*			08 57 08.4	
CAM4					*i*			08 57 17.0	
ABPO	**Ambohimpanom**	**134.21**	**301**		*e*PKIKP		**PKPdf**	**08 56 38.7**	**-0.1**
ABPO	**Ambohimpanom**	**134.21**	**301**		*e*PKPdf		**PKPdf**	**08 56 38.6**	**-0.1**
LSZ	**Lusaka**	**139.34**	**327**		*e*PKPdf		**PKPdf**	**08 56 48.5**	**+0.3**

4.1nm,0.7s,baz=27,slow=12,SNR=2.6

STKA	**Stephens Creek**	**36.34**	**159**	P	**P**	**09 05 07.9**	**-0.1**
STKA	**Stephens Creek**	**36.34**	**159**	P	**P**	**09 05 07.9**	**-0.1**
	1.7nm,0.4s,baz=340,slow=7.0,SNR=8.4						
STKA	**Stephens Creek**	**36.34**	**159**	P	**P**	**09 05 07.8**	**-0.1**
	baz=37,SNR=7.9						
GUN	**Gumba**	**47.24**	**307**	*e*P	**P**	**09 06 36.5**	**-0.8**
	16nm,0.7s						
PKIN	**Phulchoki**	**47.48**	**306**	*e*P	**P**	**09 06 39.4**	**+0.3**
ULN	**Ulaanbaatar**	**48.91**	**342**	*e*P	**P**	**09 06 50.5**	**+0.9**
	8.0nm,0.8s						
ULN	**Ulaanbaatar**	**48.91**	**342**	P	**P**	**09 06 51.1**	**+1.5**
KOLN	**Koldanda**	**49.01**	**306**	*e*P	**P**	**09 06 51.9**	**+1.1**
	4.4nm,0.5s						
SONM	**Songino Array**	**49.09**	**341**	P	**P**	**09 06 52.0**	**+1.0**
SONM				PcP	**PcP**	**09 08 12.8**	**-0.4**
SONM	**Songino Array**	**49.09**	**341**	P	**P**	**09 06 52.0**	**+1.0**
	3.1nm,0.8s,baz=154,slow=8.4,SNR=14						
SONM				PcP	**PcP**	**09 08 12.8**	**-0.4**
	1.2nm,0.8s,baz=142,slow=5.6,SNR=3.5						
DANN	**Dangsing**	**49.12**	**306**	*e*P	**P**	**09 06 51.9**	**+0.2**
	13nm,0.7s						
NFK	**Norfolk Island**	**49.64**	**132**	S	S	09 13 40.1	-16
	baz=50,SNR=3.1						
PYUN	**Piuthan**	**49.64**	**306**	*e*P	**P**	**09 06 57.1**	**+1.5**
	42nm,1.1s						
MKAR	**Makanchi Array**	**59.30**	**326**	P	**P**	**09 08 06.2**	**+1.2**
MKAR	**Makanchi Array**	**59.30**	**326**	P	**P**	**09 08 06.2**	**+1.2**
	8.6nm,0.6s,baz=120,slow=8.5,SNR=136						
ZALV	**Zalesovo Beam**	**62.37**	**333**	P	**P**	**09 08 25.4**	**-0.1**
ZALV	**Zalesovo Beam**	**62.37**	**333**	P	**P**	**09 08 25.4**	**-0.1**
	1.8nm,0.8s,baz=116,slow=6.8,SNR=5.8						
KURBB	**Kurchatov Arra**	**63.49**	**328**	P	**P**	**09 08 33.8**	**+0.7**
	12nm,0.7s,baz=127,slow=6.0,SNR=94						
KURK	**Kurchatov**	**63.49**	**328**	*e*P	**P**	**09 08 33.9**	**+0.7**
	18nm,0.8s						
KKAR	**Karatay Array**	**64.89**	**317**	*e*P	**P**	**09 08 43.4**	**+0.9**
	4.5nm,0.8s						
BVAR	**Borovoye Array**	**69.07**	**327**	P	**P**	**09 09 09.1**	**+0.4**
BVAR	**Borovoye Array**	**69.07**	**327**	P	**P**	**09 09 09.1**	**+0.4**
	6.0nm,0.9s,baz=126,slow=7.5,SNR=17						
BRVK	**Borovoye**	**69.14**	**327**	*e*P	**P**	**09 09 09.2**	**+0.1**
	6.3nm,0.8s						
ABKAR	**Akbulak array**	**73.85**	**321**	*e*P	**P**	**09 09 38.1**	**+0.6**
	1.2nm,0.5s						
AKTO	**Aktyubinsk**	**75.37**	**322**	P	**P**	**09 09 46.9**	**+0.6**
AKTO	**Aktyubinsk**	**75.37**	**322**	P	**P**	**09 09 46.9**	**+0.6**
	3.9nm,0.8s,baz=102,slow=7.1,SNR=14						
VNDA	**Vanda**	**81.69**	**173**	P	**P**	**09 10 20.2**	**-0.2**
VNDA	**Vanda**	**81.69**	**173**	P	**P**	**09 10 20.2**	**-0.2**
	0.9nm,0.7s,baz=297,slow=5.6,SNR=5.6						
VNDA				LR	LR	09 48 52.6	
	comp=Z,67nm,18.8s,baz=329,slow=37						
KDAK	**Kodiak Island**	**82.96**	**32**	P	**P**	**09 10 28.6**	**+1.2**
KDAK	**Kodiak Island**	**82.96**	**32**	P	**P**	**09 10 28.6**	**+1.2**
	11nm,0.7s,baz=298,slow=2.7,SNR=8.9						
ILAR	**Eielson Array**	**86.33**	**25**	P	**P**	**09 10 43.5**	**-0.8**
ILAR	**Eielson Array**	**86.33**	**25**	P	**P**	**09 10 43.5**	**-0.8**
	0.5nm,0.8s,baz=239,slow=5.2,SNR=6.0						
INK	**Inuvik**	**91.48**	**22**	P	**P**	**09 11 07.8**	**-0.6**
INK	**Inuvik**	**91.48**	**22**	P	**P**	**09 11 07.8**	**-0.6**
	1.4nm,1.0s,baz=278,slow=3.0,SNR=5.4						
DLBC	**Dease Lake**	**94.84**	**31**	P	**P**	**09 11 25.4**	**+1.1**
DLBC	**Dease Lake**	**94.84**	**31**	P	**P**	**09 11 25.4**	**+1.1**
	1.1nm,0.7s,baz=330,slow=8.1,SNR=3.3						
RES	**Resolute Bay**	**99.34**	**10**	P	**Pdif**	**09 11 44.6**	**+0.5**
RES	**Resolute Bay**	**99.34**	**10**	P	**Pdif**	**09 11 44.6**	**+0.5**
	0.7nm,0.6s,baz=265,slow=6.4,SNR=5.5						
YKA	**Yellowknife Ar**	**100.75**	**25**	P	**Pdif**	**09 11 49.9**	**-0.8**
YKA	**Yellowknife Ar**	**100.75**	**25**	P	**Pdif**	**09 11 49.8**	**-0.8**
	0.1nm,0.6s,baz=298,slow=4.4,SNR=5.8						
SCHQ	**Schefferville**	**122.11**	**10**	PKP	**PKPdf**	**09 16 56.8**	**+0.2**
SCHQ	**Schefferville**	**122.11**	**10**	PKP	**PKPdf**	**09 16 56.8**	**+0.2**
	0.8nm,0.4s,baz=314,slow=7.1,SNR=6.1						
TORD	**Torodi Ar. Bea**	**124.04**	**287**	PKP	**PKPdf**	**09 17 01.2**	**-0.2**
TORD	**Torodi Ar. Bea**	**124.04**	**287**	PKP	**PKPdf**	**09 17 01.2**	**-0.2**
	1.0nm,0.7s,baz=33,slow=1.6,SNR=6.7						

IDC 21 09:29:12.9±5.6, 3°46S×131°92E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.3/19, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=382.7km s-min=29.0km az=74.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.56**	**172**	Pn	Pn	09 33 05.6	-1.1
	0.1nm,0.3s,baz=352,slow=13,SNR=4.0						
ASAR	**Alice Springs**	**20.18**	**175**	P	P	09 33 49.8	+0.5
	0.5nm,0.5s,baz=351,slow=9.7,SNR=9.9						
MKAR	**Makanchi Array**	**66.38**	**325**	P	P	09 40 03.8	0.0
	0.2nm,0.5s,baz=118,slow=9.1,SNR=2.5						

IDC 21 09:29:35.2±3.1, 14°45N×124°11E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/24, mbtmp3.4/3, Error ellipse: s-maj=236.1km s-min=28.6km az=63.0, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**35.63**	**163**	P	P	09 36 33.0	-2.0
	1.3nm,0.7s,baz=343,slow=11,SNR=7.4						
ASAR	**Alice Springs**	**39.07**	**166**	P	P	09 37 06.0	+1.8
	0.2nm,0.6s,baz=349,slow=9.0,SNR=3.2						
MKAR	**Makanchi Array**	**47.45**	**322**	P	P	09 38 11.6	-0.2
	0.2nm,0.5s,baz=130,slow=7.7,SNR=3.6						

*NSSC **21** 09:32:01.2±1.4, 35°.83N×36°.74E, h0km±7km, ML1.6*
*CSEM **21** 09:32:07.5±0.4, 35°.46N×36°.64E, h2km, MD2.9, Error ellipse: s-maj=19.0km s-min=6.2km az=81.0*
*DDA **21** 09:32:08.6, 35°.46N×36°.64E, h3km, MD2.9*

ISC 21 09:32:06.8±1.7, 35°45N±0°.05×36°66E±0°.09, h3km±15km, n14, σ0s74/24, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YAYL	**Yayladag**	**0.74**	**323**	*i* P	**Pb**	**09 32 21.7**	**-0.6**
YAYL				*i* S	**Sg**	**09 32 30.7**	**+0.2**
YAYL	**Yayladag**	**0.74**	**323**	*i* P	**Pb**	**09 32 21.7**	**-0.6**
YAYL				*i* S	**Sg**	**09 32 30.7**	**+0.2**
COBT	**Iskenderun**	**1.12**	**343**	*i* P	**Pb**	**09 32 29.2**	**+0.3**
COBT				*i* S	**Sg**	**09 32 42.4**	**-0.4**
COBT	**Iskenderun**	**1.12**	**343**	*i* P	**Pb**	**09 32 29.2**	**+0.3**
COBT				*i* S	**Sg**	**09 32 42.4**	**-0.4**
DRWC	**Darouich**	**1.17**	**0**	*e*P	Pg	09 32 16.3	-13
DRWC				*e*S	Sg	09 32 28.5	-16
DRWC				AML	AML	09 32 34.1	
	comp=N,55nm,0.3s						
DRWC				AML	AML	09 32 35.1	
	comp=E,30nm,0.3s						
KUZU	**Kuzuini**	**1.36**	**14**	*i* P	**Pg**	**09 32 33.1**	**+0.1**
KUZU				*i* S	**Sn**	**09 32 51.4**	**0.0**
KUZU	**Kuzuini**	**1.36**	**14**	*i* P	**Pg**	**09 32 33.1**	**+0.1**
KUZU				*i* S	**Sn**	**09 32 51.4**	**0.0**
KSRV	**Kasrt alli**	**1.95**	**77**	*e*P	Pn	09 32 34.9	-5.9
KSRV				*e*S	Sn	09 33 00.4	-5.5
KSRV				AML	AML	09 33 06.6	
	comp=Z,9.3nm,0.3s						
BRBR	**Barbar**	**2.11**	**196**	*e*P	**Pn**	**09 32 42.6**	**-0.6**
BRBR				*e*S	**Sb**	**09 33 13.8**	**+1.2**
BRBR				AML	AML	09 33 15.7	
	comp=E,7.7nm,0.5s						
BRBR				AML	AML	09 33 25.2	
	comp=N,9.2nm,6.3s						
BRBR	**Barbar**	**2.11**	**196**	*e*P	**Pn**	**09 32 42.6**	**-0.6**
	SNR=45						
BRBR				*e*S	**Sb**	**09 33 13.8**	**+1.2**
	comp=N,7.7nm,0.5s,SNR=40						
ZALF	**Zalf**	**2.58**	**167**	*e*P	**Pn**	**09 32 49.8**	**+0.3**
ZALF				*e*S	**Sb**	**09 33 24.8**	**-1.0**
ZALF				AML	AML	09 33 31.3	
	comp=N,7.0nm,0.6s						
ZALF				AML	AML	09 33 34.7	
	comp=E,5.7nm,0.4s						
ZALF	**Zalf**	**2.58**	**167**	*e*P	**Pn**	**09 32 49.8**	**+0.3**
	SNR=45						
ZALF				*e*S	**Sb**	**09 33 24.8**	**-1.0**
	comp=E,5.7nm,0.4s,SNR=40						
SALA	**Sala**	**2.73**	**179**	*e*P	**Pn**	**09 32 52.8**	**+1.1**
SALA				*e*S	**Sb**	**09 33 29.6**	**-0.7**
SALA				AML	AML	09 33 40.0	
	comp=E,0.9nm,0.5s						
SALA				AML	AML	09 33 47.5	
	comp=N,5.5nm,0.4s						

SALA	**Sala**	**2.73**	**179**	*e*P	**Pn**	**09 32 52.8**	**+1.1**
	SNR=45							
SALA				*e*S	**Sb**	**09 33 29.6**	**-0.7**
	comp=N,5.5nm,0.4s,SNR=40							

IDC 21 09:37:05.3±1.7, 24°37S×67°02W, h162km±16km, mb3.4/3, mb1 3.5/6, mb1mx3.4/17, mbtmp3.3/6, Error ellipse: s-maj=24.1km s-min=16.1km az=96.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CFAA	**Coronel Fontan**	**7.29**	**188**	P	Pn	09 38 51.1	+1.8
	0.1nm,0.3s,baz=22,slow=14,SNR=10						
CFAA				S	Sn	09 40 09.1	-2.1
	0.2nm,0.3s,baz=316,slow=20,SNR=11						
LPAZ	**La Paz**	**8.10**	**352**	P	Pn	09 39 00.8	-0.2
	1.6nm,0.3s,baz=159,slow=8.3,SNR=50						
CPUP	**Villa Florida**	**8.98**	**105**	P	Pn	09 39 12.8	+1.2
	0.2nm,0.3s,baz=266,slow=19,SNR=4.5						
SIV	**San Ignacio**	**10.03**	**35**	P	Pn	09 39 25.0	-0.7
	0.3nm,0.3s,baz=237,slow=13,SNR=5.6						
TXAR	**Lajitas Array**	**63.97**	**325**	P	P	09 47 21.3	-0.1
	0.2nm,0.8s,baz=138,slow=5.9,SNR=3.2						
TORD	**Torodi Ar. Bea**	**76.71**	**69**	P	P	09 48 38.5	-0.6
	1.0nm,0.5s,baz=251,slow=5.1,SNR=19						
YKA	**Yellowknife Ar**	**94.46**	**340**	P	P	09 50 06.1	-0.3
	0.3nm,0.5s,baz=129,slow=4.4,SNR=8.9						
ASAR	**Alice Springs**	**128.12**	**205**	PKP	PKPdf	09 55 52.7	-0.2
	0.3nm,0.6s,baz=121,slow=1.8,SNR=5.2						
WRA	**Warramunga Arr**	**131.30**	**207**	PKP	PKPdf	09 55 59.1	+0.1
	0.3nm,0.8s,baz=154,slow=1.7,SNR=8.3						
ZALV	**Zalesovo Beam**	**143.72**	**28**	PKP	PKPbc	09 56 19.1	+0.5
	0.9nm,0.4s,baz=21,slow=5.1,SNR=5.4						
MKAR	**Makanchi Array**	**146.81**	**40**	PKPbc	PKPbc	09 56 28.5	+0.2
	1.5nm,0.6s,baz=301,slow=3.3,SNR=21						

*IDC **21** 09:37:10.3±3.4, 4°.51S×139°.07E, h0km, mb3.7/1, mb1 4.0/4, mb1mx3.7/17, mbtmp3.8/4, ML3.6/3, MS2.7/1, Ms1 2.7/1, ms1mx2.5/29, Error ellipse: s-maj=105.1km s-min=30.2km az=92.0*
*ISCJB **21** 09:37:12.0±0.8, 4°.65S±0°.07×139°.2E±0°.1, h27km, mb3.6/1, Error ellipse: s-maj=15.6km s-min=10.0km az=17.2*
*AUST **21** 09:37:12.5±7.5, 4°.57S×139°.28E, h11km, Error ellipse: s-maj=1.6km s-min=1.0km az=305.0*

ISC 21 09:37:13.3±1.1, 4°.69S±0°.10×139°.3E±0°.2, h27km, n13, σ1s86/11, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.57**	**33**	P	**Pn**	**09 37 53.3**	**+0.2**
	baz=2.5,SNR=11						
COEN	**Coen**	**9.96**	**158**	P	Pn	09 39 38.7	+3.9
	baz=10,SNR=10						
KDU	**Kakadu**	**10.43**	**220**	P	**Pn**	**09 39 43.5**	**+2.3**
	baz=10,SNR=16						
MTN	**Manton Dam**	**11.44**	**224**	P	**Pn**	**09 39 56.5**	**+1.5**
	baz=12,SNR=19						
QIS	**Mount Isa**	**15.78**	**179**	P	**Pn**	**09 40 54.1**	**+0.3**
	baz=16,SNR=8.1						
WRA	**Warramunga Arr**	**15.92**	**197**	Pn	**Pn**	**09 40 55.2**	**-0.4**
	0.2nm,0.3s,baz=17,slow=13,SNR=18						
WRA				Sn	**Sn**	**09 43 48.2**	**-3.1**
	0.2nm,0.3s,baz=18,slow=25,SNR=2.8						
CTA	**Charters Tower**	**16.73**	**157**	Lg	Lg	09 46 09.6	
	0.1nm,0.3s,baz=228,slow=20,SNR=4.0						
FITZ	**Fitzroy Crossi**	**18.88**	**224**	P	**Pn**	**09 41 32.2**	**-0.3**
	0.1nm,0.3s,baz=75,slow=12,SNR=4.0						
FITZ				S	Sx	09 44 53.0	
	0.1nm,0.3s,baz=309,slow=6.5,SNR=2.3						
FITZ	**Fitzroy Crossi**	**18.88**	**224**	P	**Pn**	**09 41 34.7**	**+2.3**
	baz=19,SNR=4.3						
GUMO	**Guam**	**18.98**	**17**	LR	LR	09 47 15.0	
	comp=Z,23nm,19.7s,baz=270,slow=32						
ASAR	**Alice Springs**	**19.58**	**195**	P	**Pn**	**09 41 42.0**	**+1.2**
	0.6nm,0.3s,baz=24,slow=9.1,SNR=95						
PCI	**Palu**	**19.81**	**280**	P	**Pn**	**09 41 41.8**	**-1.9**
	baz=20,SNR=4.6						
MKAR	**Makanchi Array**	**71.72**	**323**	P	**P**	**09 48 32.6**	**-0.4**
	0.6nm,0.8s,baz=120,slow=7.2,SNR=5.7						

*BJI **21** 09:57:45.9, 37°.28N×141°.69E, h37km, mB5.2/43, mb5.3/62, Ms5.0/69, Ms7 4.7/66*
*MOS **21** 09:57:48.7±0.7, 37°.54N×141°.43E, h33km, mb5.5/125, MS4.7/24, Error ellipse: s-maj=6.4km s-min=3.9km az=104.1*
*IDC **21** 09:57:49.8±0.5, 37°.35N×141°.56E, h41km±3km, mb4.8/25, mb1 4.9/31, mb1mx4.9/34, mbtmp4.8/31, ML4.6/5, MS4.6/49, Ms1 4.6/49, ms1mx4.6/54, Error ellipse: s-maj=11.2km s-min=10.1km az=117.0*
*JMA **21** 09:57:49.2±0.1, 37°.34N×141°.59E, h45km±2km, M5.2 Broadband fault plane solution: P waves. NP1: φ±23.00000°, δ56.00000°, λ91.00000°. NP2:φ±201.00000°, δ34.00000°, λ88.00000°. Principal axes: T Plg79.0000°, Azm297.0000°; N Plg1.0000°, Azm202.0000°; P Plg11.0000°, Azm112.0000°;*
JMA Felt III J1.
*ISCJB **21** 09:57:50.1±0.3, 37°.37N±0°.02×141°.46E±0°.02, h51km±2km, mb5.2/299, MS4.8/84 Error ellipse: s-maj=3.5km s-min=2.2km az=159.9*
*NEIC **21** 09:57:50.5±0.1, 37°.37N×141°.40E, mb5.2/180, MW5.3(NIED), Error ellipse: s-maj=3.6km s-min=2.2km az=153.0*
NEIC Felt [III] at Sendai and [II] at Tokyo. Also felt at Ami, Daigo, Fuchu, Iwaki, Matsudo and Narita. Recorded [3 JMA] in Fukushima, Miyagi and Tochigi; [2 JMA] in Ibaraki, Iwate and Yamagata; [1 JMA] in Akita, Aomori, Chiba, Gumma, Kanagawa, Niigata, Saitama and Tokyo.
*GCMT **21** 09:57:53.5±0.2, 37°.32N×141°.73E, h48km, MW5.3, Moment Tensor Solution. s71,c120; s92,c165; Moment tensor: Scale 10^17Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: M◻1.20000×10^17 NP1:φs203.00000°, δ25.00000°, λ88.00000°. NP2:φs25.00000°, δ65.00000°, λ91.00000°. Principal axes: T 1.1900, Plg70.0000°, Azm297.0000°; N 0.0700, Plg1.0000°, Azm205.0000°; P -1.2500, Plg20.0000°, Azm115.0000°; Data Used: II IU IC G CN.*
*SZGRF **21** 09:57:53.3, 38°.40N×142°.29E, h44km, mb5.4, MS5.0, Near east coast of eastern Honshu, Japan*
*DJA **21** 09:57:54.3±4.7, 37°N±8°×14°2E±1°7, h78km±40km, M5.0/13, mB5.5/8, mb5.2/13, Mw(mB)4.9/8*
*NIED **21** 09:58:00, 37°.40N×141°.60E, h44km, Mw5.3 Best double couple: M◻1.01000×10^17 NP1:φ±24.00000°, δ73.00000°, λ95.00000°. NP2:φs187.00000°, δ18.00000°, λ73.00000°.*

ISC 21 09:57:50.2±0.2, 37°36N±0°.03×141°51E±0°.03, h43km±1km, h42km:pP-P, n1244, σ0s97/1479, mb5.2/298, MS4.8/85, 308C-247D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.50**	**271**	ǁP	**Pn**	**09 58 01.0**	**-0.1**
JFK				S	**Sn**	**09 58 09.0**	**+0.1**
ONAJ	**Iwakimizuishiy**	**0.62**	**246**	ǁP	**Pn**	**09 58 02.3**	**-0.4**
ONAJ				S	**Sn**	**09 58 11.6**	**0.0**
JMM	**Marumori**	**0.76**	**312**	ǁP	**Pn**	**09 58 04.4**	**-0.1**
JMM				S	**Sn**	**09 58 15.1**	**+0.3**
JFT	**Otama**	**0.94**	**280**	ǁP	**Pn**	**09 58 07.9**	**+0.9**
JFT				S	**Sn**	**09 58 21.0**	**+1.7**
JHO	**Hitachi**	**1.06**	**225**	ǁP	**Pn**	**09 58 07.6**	**-0.9**
JHO				*e*S	**Sn**	**09 58 21.5**	**-0.6**
JIO	**Ouri**	**1.10**	**354**	ǁP	**Pn**	**09 58 08.6**	**-0.5**
JIO				S	**Sn**	**09 58 22.0**	**-1.1**
JOU	**Okura**	**1.21**	**327**	ǁP	**Pn**	**09 58 10.9**	**+0.3**
JOU				*e*S	**Sn**	**09 58 27.0**	**+1.2**
JYS	**Shirataka**	**1.43**	**307**	ǁP	**Pn**	**09 58 14.5**	**+0.9**
JFY	**Yanaizu**	**1.44**	**272**	ǁP	**Pn**	**09 58 14.5**	**+0.8**
JFY				*e*S	**Sn**	**09 58 32.9**	**+1.5**
JMK	**Ichinoseki**	**1.61**	**352**	ǁP	**Pn**	**09 58 16.0**	**0.0**
JMK				*e*S	**Sn**	**09 58 36.3**	**+0.8**
OFUJ	**Ofunato**	**1.72**	**4**	ǁP	**Pn**	**09 58 17.0**	**-0.6**
JYK	**Kaneyama**	**1.80**	**330**	ǁP	**Pn**	**09 58 19.3**	**+0.6**
JYA	**Atsumi**	**1.88**	**312**	ǁP	**Pn**	**09 58 20.8**	**+1.0**
JAG	**Ashikaga**	**1.89**	**241**	ǁP	**Pn**	**09 58 20.1**	**+0.1**
JKT	**Katashina**	**1.90**	**253**	ǁP	**Pn**	**09 58 21.3**	**+1.1**
JHK	**Hiroka**	**1.99**	**268**	ǁP	**Pn**	**09 58 22.3**	**+1.0**

JOM	**Ohasama**	**2.12**	**355**	ǁP	**Pn**	**09 58 23.2**	**+0.1**
JRG	**Rokugo**	**2.15**	**342**	ǁP	**Pn**	**09 58 24.5**	**+1.0**
JTB	**Tobi-shima**	**2.39**	**321**	ǁP	**Pn**	**09 58 27.5**	**+0.7**
JGK	**Kuni**	**2.43**	**252**	ǁP	**Pn**	**09 58 29.0**	**+1.6**
JRY	**Ryogami san**	**2.49**	**238**	ǁP	**Pn**	**09 58 28.3**	**+0.1**
JSD	**Sado**	**2.66**	**286**	ǁP	**Pn**	**09 58 31.0**	**+0.5**
MJAR	**Matsushiro Arr**	**2.77**	**254**	P	**Pn**	**09 58 33.4**	**+1.4**
MJAR	**Matsushiro Arr**	**2.77**	**254**	P	**Pn**	**09 58 33.4**	**+1.4**
	117nm,0.3s,baz=82,slow=14,SNR=304						
MJAR				LR	LR	09 59 56.1	
	comp=Z,23μm,19.6s,baz=65,slow=46						
MAJO	**Matsushiro**	**2.77**	**254**	*e*P	**Pn**	**09 58 33.9**	**+1.9**
MAJO	**Matsushiro**	**2.77**	**254**	*e*Pn	**Pn**	**09 58 33.9**	**+1.9**
MAT	**Matsushiro**	**2.77**	**254**	P	**Pn**	**09 58 33.7**	**+1.7**
MAT				*e*S	**Sn**	**09 59 08.7**	**+4.5**
MAT	**Matsushiro**	**2.77**	**254**	P	**Pn**	**09 58 33.7**	**+1.7**
JNG	**Nsakai**	**2.89**	**252**	ǁP	**Pn**	**09 58 35.4**	**+1.6**
JAH	**Hinai**	**2.91**	**347**	ǁP	**Pn**	**09 58 35.3**	**+1.4**
JNT	**Takato**	**3.09**	**242**	ǁP	**Pn**	**09 58 38.3**	**+1.8**
JTM	**Tenmabayashi**	**3.44**	**354**	P	**Pn**	**09 58 42.2**	**+1.0**
JNY	**Yasuok**	**3.56**	**237**	ǁP	**Pn**	**09 58 44.9**	**+2.0**
JHJ	**Hachijo jima 2**	**4.46**	**199**	P	**Pn**	**09 58 55.4**	**+0.2**
	460nm,0.3s,baz=136,slow=1.7,SNR=62						
JHJ				S	**Sn**	**09 59 43.3**	**-2.5**
	532nm,0.3s,baz=99,slow=23,SNR=7.7						
ERM	**Erimo**	**4.82**	**15**	*d i*P	**Pn**	**09 58 59.9**	**-0.2**
ERM				pmax	pmax		
	comp=Z,189nm,1.0s						
ERM	**Erimo**	**4.82**	**15**	*e*Pn	**Pn**	**09 59 01.0**	**+0.9**
ERM				*e*Sn	**Sn**	**09 59 58.4**	**+3.7**
ASAJ	**Asahikawa**	**6.80**	**7**	P	**Pn**	**09 59 27.1**	**-0.3**
ASAJ				S	**Sn**	**10 00 44.5**	**+1.1**
ASAJ	**Asahikawa**	**6.80**	**7**	P	**Pn**	**09 59 27.1**	**-0.3**
	comp=Z,111nm,0.3s,baz=213,slow=11,SNR=47						
ASAJ				S	**Sn**	**10 00 44.5**	**+1.1**
	comp=Z,19nm,0.3s,baz=180,slow=20,SNR=2.7						
YUK	**Yuzh-Kuril's**	**7.44**	**25**	*c i*P	**Pn**	**09 59 34.9**	**-1.2**
YUK				*i* S	**Sn**	**10 00 56.9**	**-2.2**
YUK				pmax	pmax		
	comp=N,63nm,0.2s						
YUK				pmax	pmax		
	comp=Z,204nm,0.2s						
YUK				pmax	pmax		
	comp=E,38nm,0.1s						
KUR	**Kuril's**	**9.20**	**29**	P	**Pn**	**10 00 00.5**	**+0.3**
YSS	**Yuzh-Sakhalins**	**9.63**	**5**	*e*P	**Pn**	**10 00 06.0**	**-0.1**
YSS				*e*S	**Sn**	**10 01 50.0**	**-2.9**
YSS				pmax	pmax		
	comp=N,120nm,1.0s						
YSS				pmax	pmax		
	comp=E,50nm,1.0s						
YSS				pmax	pmax		
	comp=Z,120nm,1.0s						
YSS				MLR	MLR		
	comp=Z,2μm,17.0s						
YSS				MLR	MLR		
	comp=N,2μm,15.0s						
YSS				MLR	MLR		
	comp=E,2μm,17.0s						
JNU	**Nakatsue**	**9.66**	**247**	P	**Pn**	**10 00 08.5**	**+1.9**
JNU	**Nakatsue**	**9.66**	**247**	P	**Pn**	**10 00 08.5**	**+1.9**
	comp=E,3.9nm,0.3s,baz=76,slow=8.3,SNR=28						
USRK	**Ussuriysk Arra**	**9.93**	**316**	P	**Pn**	**10 00 11.9**	**+1.8**
	comp=E,1.8nm,0.3s,baz=131,slow=14,SNR=22						
USRK				LR	LR	10 03 50.1	
	comp=E,7μm,19.4s,baz=118,slow=36						
KSRS	**Korea Array**	**10.81**	**275**	P	Pn	10 00 27.7	+5.5
	comp=E,2.8nm,0.3s,baz=89,slow=13,SNR=76						
KSRS				LR	LR	10 04 18.6	
	comp=E,6μm,19.3s,baz=86,slow=36						
KSAR	**Wonju Array Be**	**10.84**	**275**	P	Pn	10 00 27.7	+5.0
MDJ	**Mudanjiang**	**11.55**	**313**	P	Pn	10 00 37.4	+5.0
MDJ				pmax	pmax		
	comp=Z,71nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,770nm,4.5s						
MDJ				LR	LR		
	comp=N,2μm,13.9s						
MDJ				LR	LR		
	comp=E,3μm,15.4s						
MDJ				LR	LR		
	comp=Z,5μm,20.1s						
INCN	**Inchon**	**11.83**	**275**	*e*Pn	**Pn**	**10 00 36.0**	**-0.2**
CN2	**Changchun**	**13.79**	**303**	*e*P	**Pn**	**10 01 04.5**	**+1.6**
CN2				*es*P		10 01 19.5	
CN2				*e*S	**Sn**	**10 03 35.4**	**+0.9**
CN2				pmax	pmax		
	comp=Z,30nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,2μm,15.0s						
CN2				LR	LR		
	comp=E,3μm,15.0s						
CN2				LR	LR		
	comp=Z,3μm,16.0s						
SNY	**Shenyang**	**14.52**	**293**	ǁP	**Pn**	**10 01 14.8**	**+2.0**
SNY				pmax	pmax		
	comp=Z,48nm,1.3s						
SNY				pmax	pmax		
	comp=Z,850nm,12.0s						
SNY				LR	LR		
	comp=N,3μm,14.3s

TIA LR LR
comp=Z,3μm,18.4s
PET Petropavlovsk 19.70 32 *e*P **Pn** **10 02 15.8 -1.5**
PET *e*S **S** **10 05 49.1 -6.2**
PET pmax pmax
comp=Z,200nm,7.0s
PET MLR MLR
comp=Z,2μm,19.0s
PET MLR MLR
comp=Z,2μm,22.0s
BJI Beijing 19.93 286 P **P** **10 02 17.0 -1.3**
BJI S Sn 10 06 02.0 -1.4
BJI pmax pmax
comp=Z,30nm,1.3s
BJI pmax pmax
comp=Z,260nm,4.3s
BJI LR LR
comp=N,1μm,15.0s
BJI LR LR
comp=E,1μm,20.4s
BJI LR LR
comp=Z,1μm,31.8s
YHNB Yeheng 21.34 239 *e*P **P** **10 02 33.1 -0.6**
comp=Z,40nm,0.7s
NACB Ninganchiao 21.52 238 *e*P **P** **10 02 33.7 -1.8**
comp=Z,23nm,0.5s
SSLB Suanglung 22.21 238 *e*P **P** **10 02 40.4 -2.6**
comp=Z,52nm,1.0s
YULB Yu-li 22.25 237 *e*P **P** **10 02 39.6 -3.8**
comp=Z,25nm,0.8s
CLNS Chul'man 22.42 336 *e*P **P** **10 02 43.1 -1.9**
CLNS *e*PPP PPP 10 03 15.2
CLNS *e* 10 06 39.8
CLNS *e*S **S** **10 06 47.0 -1.3**
CLNS *e*SS **SnSn** **10 07 18.0 -0.8**
CLNS pmax pmax
comp=Z,46nm,1.1s
CLNS pmax pmax
comp=N,37nm,1.0s
CLNS pmax pmax
comp=E,21nm,1.1s
CLNS smax smax
comp=E,261nm,10.8s
CLNS smax smax
comp=N,470nm,12.0s
CLNS MLR MLR
comp=N,1μm,16.0s
CLNS MLR MLR
comp=Z,2μm,18.0s
CLNS MLR MLR
comp=E,936nm,16.0s
TPUB Ta-pu 22.76 238 *e*P **P** **10 02 47.0 -1.9**
comp=E,78nm,0.9s
TWG Pinlang 22.79 236 *e*P **P** **10 02 49.8 +0.6**
comp=E,576nm,1.3s
QZH Quanzhou 23.12 244⇑ *i*P **P** **10 02 51.0 -1.5**
QZH *e*S **S** **10 06 54.1 -6.6**
QZH pmax pmax
comp=Z,140nm,0.8s
QZH LR LR
comp=N,2μm,10.4s
QZH LR LR
comp=E,1μm,11.0s
QZH LR LR
comp=Z,3μm,22.4s
HHC Hu-ho-hao-te 23.44 288 *e*P **P** **10 02 54.8 -0.9**
HHC pP **pP** **10 03 04.4 -2.2**
HHC sP **sP** **10 03 09.4 -2.5**
HHC S **S** **10 07 03.3 -2.7**
HHC sS sS 10 07 15.0 -10
HHC pmax pmax
comp=Z,84nm,1.0s
HHC pmax pmax
comp=Z,460nm,5.3s
HHC LR LR
comp=N,3μm,14.6s
HHC LR LR
comp=E,2μm,17.7s
HHC LR LR
comp=Z,2μm,17.5s
WHN Wuhan 23.48 261 P **P** **10 02 54.5 -1.5**
WHN S **S** **10 07 02.3 -4.2**
WHN LR LR
comp=N,5μm,16.6s
WHN LR LR
comp=E,3μm,14.9s
WHN LR LR
comp=Z,6μm,20.1s
CIT Chita 24.50 316 *e*P **P** **10 03 05.3 +0.1**
CIT *e* 10 03 12.0
CIT *e* 10 03 42.0
YAK Yakutsk 25.77 347 *e*P **P** **10 03 15.6 -1.0**
YAK *e**PP **pP** **10 03 23.4 -4.6**
YAK *e*PPP PPP 10 03 58.3
YAK *e* 10 06 44.4
YAK *e*S **S** **10 07 40.5 -2.0**
YAK *e**SS **sS** **10 07 57.8 -3.9**
YAK *e*SSS SSS 10 08 47.9
YAK *e* 10 14 11.6
YAK pmax pmax
comp=Z,307nm,1.0s
YAK pmax pmax
comp=N,126nm,1.3s
YAK pmax pmax
comp=E,66nm,1.5s
YAK smax smax
comp=E,113nm,1.5s
YAK smax smax
comp=N,104nm,1.5s
YAK MLR MLR
comp=Z,2μm,17.0s
YAK MLR MLR
comp=N,1μm,15.0s
YAK MLR MLR
comp=E,513nm,15.0s
SEY Seymchan 26.46 11*ce*P **P** **10 03 23.8 +1.0**
XAN Xi'an 26.60 273 P **P** **10 03 23.8 -0.7**
XAN pP **pP** **10 03 35.3 -0.6**
XAN sP **sP** **10 03 41.0 0.0**
XAN PP **PnPn** **10 04 05.4 -0.9**
XAN S **S** **10 07 50.3 -6.0**
XAN pmax pmax
comp=Z,29nm,0.9s
XAN pmax pmax
comp=Z,82nm,11.0s
XAN LR LR
comp=N,1μm,16.2s
XAN LR LR
comp=E,140nm,17.6s
XAN LR LR
comp=Z,370nm,18.2s
FX1 Attu Island--F 26.92 45 P **P** **10 03 29.0 +2.0**
FX1 Attu Island--F 26.92 45 P **P** **10 03 29.0 +2.0**
comp=Z,31nm,0.9s,baz=246,slow=18,SNR=5.5
FX1 LR LR 10 12 32.1
comp=Z,496nm,18.9s,baz=261,slow=33
ULN Ulaanbaatar 27.23 304 *e*P **P** **10 03 30.4 +0.2**
comp=Z,71nm,1.1s
ULN Ulaanbaatar 27.23 304 P **P** **10 03 31.5 +1.3**
SNR=23
ULN Ulaanbaatar 27.23 304 P **P** **10 03 30.6 +0.4**
comp=Z,58nm,1.0s,comp=Z,650nm
SONM Songino Array 27.67 303 P **P** **10 03 34.4 +0.3**
SONM PcP **PcP** **10 06 50.1 -0.1**
SONM ScP **ScP** **10 10 26.9 -0.5**
SONM Songino Array 27.67 303 P **P** **10 03 34.4 +0.3**
comp=Z,43nm,0.8s,baz=104,slow=8.4,SNR=103
SONM PcP **PcP** **10 06 50.1 -0.1**
comp=Z,4.4nm,1.0s,baz=106,slow=3.1,SNR=3.6
SONM ScP **ScP** **10 10 26.9 -0.5**
comp=Z,2.0nm,1.1s,baz=128,slow=6.4,SNR=3.9
SONM LR LR 10 14 50.6
comp=Z,2μm,18.8s,baz=81,slow=37
IRK Irkutsk 29.94 312 *e*P **P** **10 03 53.6 -0.4**
IRK pmax pmax
comp=Z,34nm,1.4s
LZH Lanzhou 30.09 279⇓ P **P** **10 03 56.0 +0.3**
LZH pP pP 10 04 01.0 -6.2
LZH S **S** **10 08 47.0 -4.4**
LZH sS **sS** **10 09 06.3 -4.4**
LZH SS **SnSn** **10 10 28.1 +1.6**
LZH pmax pmax
comp=Z,57nm,1.2s
LZH pmax pmax
comp=Z,210nm,4.0s
LZH LR LR
comp=N,1μm,14.4s
LZH LR LR
comp=E,2μm,14.2s
LZH LR LR
comp=Z,3μm,18.2s
ZAK Zakamensk 30.13 308 *e*P **P** **10 03 55.8 0.0**
ZAK pmax pmax
comp=Z,30nm,1.0s
TLY Talaya 30.18 311 P **P** **10 03 56.3 +0.2**
comp=Z,225nm,0.9s,SNR=13
GYA Guiyang 31.35 260⇑ *i*P **P** **10 04 07.8 +1.0**
GYA pP **pP** **10 04 20.4 +2.0**
GYA PcP **PcP** **10 07 02.1 +2.1**
GYA S **S** **10 09 10.6 -0.7**
GYA SS **SnSn** **10 10 58.8 +1.4**
GYA pmax pmax
comp=Z,40nm,0.9s
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,550nm,16.5s
GYA LR LR
comp=E,480nm,17.4s
GYA LR LR
comp=Z,590nm,16.9s
CD2 Chengdu 31.75 270 P **P** **10 04 10.3 +0.1**
CD2 pP **pP** **10 04 21.1 -0.7**
CD2 sP **sP** **10 04 25.9 -1.0**
CD2 PP **PnPn** **10 05 15.6 +0.2**
CD2 PcP **PcP** **10 07 01.9 +1.0**
CD2 S **S** **10 09 15.4 -1.9**
CD2 sS **sS** **10 09 33.8 -2.8**
CD2 PcS **PcS** **10 10 45.3 -0.3**
CD2 SS **SnSn** **10 11 06.3 -0.6**
CD2 pmax pmax
comp=Z,60nm,0.7s
CD2 pmax pmax
comp=Z,240nm,4.0s
CD2 LR LR
comp=N,1μm,14.2s
CD2 LR LR
comp=E,2μm,15.6s
CD2 LR LR
comp=Z,2μm,18.1s
MOY Mondy 31.79 310 *e*P **P** **10 04 10.6 +0.2**
MOY pmax pmax
comp=Z,29nm,1.1s
GTA Gaotai 32.54 287 *e*P **P** **10 04 17.4 +0.2**
GTA pP **pP** **10 04 29.3 +0.5**
GTA sP **sP** **10 04 33.3 -0.6**
GTA PcP **PcP** **10 07 04.3 +1.3**
GTA S **S** **10 09 29.1 -0.5**
GTA sS **sS** **10 09 46.8 -2.2**
GTA ScP **ScP** **10 10 44.6 +1.2**
GTA SS **SnSn** **10 11 27.4 +1.4**
GTA ScS **ScS** **10 14 43.4 +0.4**
GTA pmax pmax
comp=Z,30nm,1.2s
GTA pmax pmax
comp=Z,150nm,4.7s
GTA LR LR
comp=N,1μm,18.1s
GTA LR LR
comp=E,1μm,21.8s
GTA LR LR
comp=Z,2μm,22.8s
QIZ Qiongzhong 33.13 245 P **P** **10 04 23.3 +0.9**
QIZ S **S** **10 09 41.5 +2.6**
QIZ pmax pmax
comp=Z,49nm,1.2s
QIZ LR LR
comp=N,930nm,17.6s
QIZ LR LR
comp=E,410nm,17.9s
QIZ LR LR
comp=Z,790nm,20.2s
BILL Bilibino 33.69 16⇓ *i*P **P** **10 04 26.2 -0.5**
BILL *e* 10 04 38.0
BILL *e* 10 07 04.8
BILL pmax pmax
comp=Z,196nm,1.2s
BILL MLR MLR
comp=Z,200nm,17.0s
BILL Bilibino 33.69 16 *e*P **P** **10 04 26.5 -0.3**
comp=Z,37nm,1.1s
TIXI Tiksi 34.98 353*ce*P P 10 04 41.4 +3.6
TIXI pmax pmax
comp=Z,141nm,1.7s
KMI Kunming 35.09 261 P **P** **10 04 39.6 +0.1**
KMI pP **pP** **10 04 51.3 +0.1**
KMI sP **sP** **10 04 55.5 -0.8**
KMI PP **PP** **10 06 00.1 +0.5**
KMI PcP **PcP** **10 07 13.3 +2.7**
KMI S **S** **10 10 08.9 -0.5**
KMI sS **sS** **10 10 28.5 -0.4**
KMI ScP **ScP** **10 10 54.3 +1.6**
KMI PcS **PcS** **10 10 58.8 +1.0**
KMI SS **SnSn** **10 12 25.3 -2.9**
KMI ScS **ScS** **10 14 56.8 -0.2**
KMI pmax pmax
comp=Z,150nm,1.0s
KMI pmax pmax
comp=Z,230nm,3.1s
KMI LR LR
comp=N,890nm,16.1s
KMI LR LR
comp=E,2μm,16.6s
KMI LR LR
comp=Z,2μm,15.8s
MYLDM Lahad Datu 38.31 219 P P 10 05 09.1 +2.4
comp=Z,71nm,1.1s,comp=Z,1μm
UBPT Khong Chiam 38.73 245 P **P** **10 05 11.2 +0.9**
TNA Tin City 40.53 30 *e*P P 10 05 26.6 +1.9
comp=Z,40nm,1.1s
TNA *e*pP pP 10 05 39.4 +2.9
WMQ Urumqi 40.76 297 P **P** **10 05 28.0 +1.0**
WMQ pP **pP** **10 05 40.0 +1.2**
WMQ sP **sP** **10 05 46.0 +2.1**
WMQ PP **PnPn** **10 07 06.0 +0.3**
WMQ PcP **PcP** **10 07 30.0 +2.4**
WMQ ScP **ScP** **10 11 14.0 +0.3**
WMQ S **S** **10 11 35.0 +0.3**
WMQ sS **sS** **10 11 55.0 +0.7**
WMQ SS **SS** **10 14 33.0 -3.3**
WMQ ScS **ScS** **10 15 28.0 -0.5**
WMQ pmax pmax
comp=Z,98nm,1.0s
WMQ pmax pmax
comp=Z,550nm,5.0s
WMQ LR LR
comp=N,1μm,15.0s
WMQ LR LR
comp=E,1μm,15.0s
WMQ LR LR
comp=Z,1μm,15.0s
CMMT Chiang Mai 41.44 255 P **P** **10 05 34.0 +1.2**
comp=Z,16nm,1.1s,comp=Z,443nm
CHTO Chiang Mai 41.45 255 *e*P **P** **10 05 33.5 +0.7**
CHTO pmax pmax
comp=Z,22nm,1.2s
CHTO Chiang Mai 41.45 255 *e*P **P** **10 05 33.5 +0.7**
comp=Z,22nm,1.2s
CHTO Chiang Mai 41.45 255 P **P** **10 05 33.9 +1.0**
SNR=6.2
CHTO Chiang Mai 41.45 255 P **P** **10 05 33.6 +0.7**
comp=Z,18nm,1.2s,comp=Z,428nm
CMAR Chiang Mai Arr 41.65 255 P **P** **10 05 34.6 +0.1**
CMAR PcP **PcP** **10 07 31.0 +0.2**
CMAR ScP **ScP** **10 11 18.4 +0.9**
CMAR Chiang Mai Arr 41.65 255 P **P** **10 05 34.6 +0.1**
comp=Z,16nm,0.9s,baz=50,slow=5.7,SNR=38
CMAR PcP **PcP** **10 07 31.0 +0.2**
comp=Z,8.3nm,1.0s,baz=14,slow=3.2,SNR=8.1
CMAR ScP **ScP** **10 11 18.4 +0.9**
comp=Z,2.3nm,1.0s,baz=41,slow=2.7,SNR=7.1
CMAR LR LR 10 24 51.0
comp=Z,862nm,18.0s,baz=61,slow=39
ZALV Zalesovo Beam 41.75 312 P **P** **10 05 35.0 +0.1**
ZALV pmax pmax
comp=Z,29nm,0.4s
ZALV MLR MLR
comp=Z,2μm,18.5s
ZALV Zalesovo Beam 41.75 312 P **P** **10 05 35.0 +0.1**
ZALV Zalesovo Beam 41.75 312 P **P** **10 05 35.0 +0.1**
comp=Z,29nm,0.4s,baz=91,slow=6.2,SNR=125
ZALV LR LR 10 23 49.7
comp=Z,2μm,18.5s,baz=163,slow=37
IMP Imphal 42.23 267 *ex* P 10 05 35.0 -4.2
LSA Lhasa 42.26 275 P **P** **10 05 40.9 +1.0**
LSA S **S** **10 11 58.0 +0.1**
LSA LR LR
comp=E,750nm,29.6s
LSA LR LR
comp=Z,1μm,27.8s
NVS Novosibirsk 42.67 313⇑ *i*P **P** **10 05 42.2 -0.2**
NVS pmax pmax
comp=N,11nm,1.0s
NVS pmax pmax
comp=E,52nm,1.0s
NVS pmax pmax
comp=Z,68nm,1.0s
CHBT CHBT 42.68 245 P **P** **10 05 45.1 +2.2**
SHL Shillong 43.48 269 *i* x **P** **10 05 49.0 -0.6**
SHL *ex* x 10 12 18.0
SBUM Sibu 43.95 225 P **P** **10 05 54.1 +1.0**
comp=Z,25nm,0.9s,comp=Z,614nm
MK31 Makanchi Array 44.01 302 *e*P **P** **10 05 53.3 -0.1**
MK31 pmax pmax
comp=Z,70nm,0.9s
MKAR Makanchi Array 44.01 302 P **P** **10 05 53.4 0.0**
MKAR pmax pmax
comp=Z,33nm,0.7s
MKAR MLR MLR
comp=Z,783nm,18.3s
MKAR Makanchi Array 44.01 302 *e*P **P** **10 05 53.5 +0.2**
MKAR Makanchi Array 44.01 302 P **P** **10 05 53.4 0.0**
comp=Z,33nm,0.7s,baz=83,slow=9.4,SNR=166
MKAR LR LR 10 25 30.9
comp=Z,783nm,18.3s,baz=81,slow=38
SVW2 Sparrevohn 45.22 38 *e*P P 10 06 04.4 +1.7
comp=Z,22nm,1.0s
KURK Kurchatov 45.79 308*c i*P **P** **10 06 07.1 -0.3**
KURK pmax pmax
comp=Z,158nm,1.0s
KURK Kurchatov 45.79 308 *e*P **P** **10 06 07.2 -0.1**
comp=Z,256nm,1.1s
KURK *e*pP **pP** **10 06 20.4 +1.1**
KURK Kurchatov 45.79 308 P **P** **10 06 07.5 +0.1**
SNR=100
KSM Kuching 45.83 226 *e*P **P** **10 06 09.2 +1.2**
comp=Z,44nm,1.0s
KSM *e*pP **pP** **10 06 21.8 +1.8**
KSM Kuching 45.83 226 P **P** **10 06 09.6 +1.5**
comp=Z,44nm,1.1s
KURBB Kurchatov Arra 45.86 308 P **P** **10 06 07.8 -0.1**
comp=Z,79nm,0.6s,baz=82,slow=7.7,SNR=171
TAPN Taplejung 45.99 274 *e*P **P** **10 06 10.0 +0.3**
comp=Z,52nm,0.4s
OHAK Old Harbor 46.47 43 *e*P **P** **10 06 12.6 0.0**
comp=Z,32nm,1.0s
OHAK *e*pP **pP** **10 06 23.3 -1.2**
ODAN Odare 46.47 273 *e*P **P** **10 06 13.8 +0.5**
comp=Z,265nm,1.0s
RSO Redoubt South 46.60 38 *e*P **P** **10 06 14.8 +1.0**
RSO *e*pP **pP** **10 06 27.2 +1.3**
KAPI Kappang 46.78 210 *e*P **P** **10 06 15.4 -0.1**
comp=Z,66nm,1.1s
KAPI *e*pP **pP** **10 06 30.3 +2.8**
KAPI Kappang 46.78 210 LR LR 10 26 46.0
comp=Z,243nm,19.1s,baz=216,slow=37
KDAK Kodiak Island 46.81 42 *e*P **P** **10 06 15.4 +0.1**
comp=Z,35nm,0.8s
KDAK Kodiak Island 46.81 42 LR LR 10 25 51.5
comp=Z,843nm,20.9s,baz=252,slow=36
PPLA Purkeypile 46.86 35 *e*P P 10 06 17.6 +1.7
comp=Z,23nm,1.0s
PPLA *e*pP pP 10 06 29.9 +2.1
SPU Mount Spurr 46.93 37 *e*P **P** **10 06 17.0 +0.8**
RAMN Ramite 47.06 274 *e*P **P** **10 06 18.3 +0.4**
comp=Z,533nm,1.0s
GUN Gumba 47.20 275 *e*P **P** **10 06 19.6 +0.4**
comp=Z,348nm,0.7s
PKI Pulchoki 47.72 275 *e*P **P** **10 06 23.1 -0.1**
comp=Z,67nm,0.5s
TRF Thorofare Moun 47.72 34 *e*P **P** **10 06 22.9 +0.3**
comp=Z,17nm,0.8s
TRF *e*pP **pP** **10 06 36.0 +1.5**
KKN Kakani 47.73 276 *e*P **P** **10 06 23.5 +0.4**
comp=Z,211nm,1.1s
PKIN Phulchoki 47.73 275 *e*P **P** **10 06 24.4 +1.2**
comp=Z,40nm,0.6s
COLD Coldfoot 47.83 29 *e*P **P** **10 06 24.3 +1.2**
comp=Z,11nm,1.0s
COLD *e*pP **pP** **10 06 36.7 +1.6**
DMN Daman 47.95 275 *e*P **P** **10 06 25.5 +0.6**
comp=Z,95nm,0.7s
SEW Seward 48.26 39 *e*P **P** **10 06 26.7 +0.2**
comp=Z,42nm,1.1s
PMR Palmer 48.32 37 *e*P **P** **10 06 27.1 +0.2**
PMR *e**PP **pP** **10 06 39.8 +0.8**
PMR pmax pmax
comp=Z,32nm,0.9s
PMR Palmer 48.32 37 *e*P **P** **10 06 27.1 +0.2**
comp=Z,32nm,0.9s
PMR *e*pP **pP** **10 06 39.8 +0.8**
MCK McKinley 48.32 34 *e*P **P** **10 06 27.6 +0.6**
MCK *e**PP **pP** **10 06 39.9 +0.9**
MCK pmax pmax
comp=Z,21nm,0.8s
MCK McKinley 48.32 34 *e*P **P** **10 06 27.6 +0.6**
comp=Z,22nm,0.8s
MCK *e*pP **pP** **10 06 39.9 +0.9**
DANN Dangsing 48.68 277 *e*P **P** **10 06 31.1 +0.5**
comp=Z,434nm,0.7s
SML Sawmill 48.69 36 *e*P **P** **10 06 30.8 +1.0**
SML *e**PP **pP** **10 06 43.0 +1.1**
SML pmax pmax
comp=Z,12nm,0.9s
SML Sawmill 48.69 36 *e*P **P** **10 06 30.8 +1.0**
comp=Z,12nm,0.9s
SML *e*pP **pP** **10 06 43.0 +1.1**
COLA College 48.76 32 *e*P **P** **10 06 31.5 +1.2**
COLA *e**PP **pP** **10 06 43.0 +0.7**
COLA pmax pmax
comp=Z,22nm,0.9s
COLA College 48.76 32 *e*P **P** **10 06 31.5 +1.2**
comp=Z,22nm,0.9s
COLA *e*pP **pP** **10 06 43.0 +0.7**
KULM Kulim 49.05 240 *e*P **P** **10 06 33.6 +0.5**
comp=Z,42nm,1.2s
KOLN Koldanda 49.07 276 *e*P **P** **10 06 33.8 +0.4**
comp=Z,155nm,1.0s
ILAR Eielson Array 49.18 33 P **P** **10 06 33.4 -0.1**
ILAR pP **pP** **10 06 44.4 -1.2**
ILAR Eielson Array 49.18 33 P **P** **10 06 33.4 -0.1**
comp=Z,17nm,0.9s,baz=269,slow=5.8,SNR=140
ILAR pP **pP** **10 06 44.4 -1.2**
comp=Z,21nm,0.8s,baz=267,slow=4.6,SNR=18
ILAR LR LR 10 28 20.8
comp=Z,326nm,21.8s,baz=84,slow=37
IPM Ipoh 49.38 239 *e*P **P** **10 06 34.8 -0.8**
comp=Z,33nm,1.0s
IPM *e*pP **pP** **10 06 47.7 0.0**
IPM Ipoh 49.38 239 P **P** **10 06 34.8 -0.8**
comp=Z,39nm,1.2s
PYUN Piuthan 49.40 277 *e*P **P** **10 06 36.5 +0.5**
comp=Z,812nm,1.0s
TKM2 Tokmak 2 49.54 298 *e*P **P** **10 06 37.6 +0.7**
TKM2 *e**PP **pP** **10 06 50.8 +1.9**
TKM2 pmax pmax
comp=Z,96nm,1.0s
TKM2 Tokmak 2 49.54 298 *i* P **P** **10 06 37.7 +0.8**
TKM2 Tokmak 2 49.54 298 *e*P **P** **10 06 37.6 +0.7**
comp=Z,96nm,1.0s
TKM2 *e*pP **pP** **10 06 50.8 +1.9**
TKM2 Tokmak 2 49.54 298 P **P** **10 06 37.7 +0.8**
SNR=51
HNR Honiara 49.65 156 LR LR 10 26 41.8
comp=Z,876nm,20.0s,baz=161,slow=35
DIV Divide 49.97 37 *e*P **P** **10 06 40.8 +1.1**
comp=Z,38nm,0.9s
DIV *e*pP **pP** **10 06 53.4 +1.7**
KZA Kyzart 50.04 297 P **P** **10 06 42.0 +1.1**
SNR=26
KBK Karagaybulak 50.08 298 P **P** **10 06 41.6 +0.7**
SNR=28
CHMS Chumysh 50.11 299 P **P** **10 06 41.3 +0.3**
SNR=12
USP Ospenovka 50.21 299 P **P** **10 06 42.6 +0.9**
SNR=11
FRU Bishkek 50.26 298 *e*P **P** **10 06 42.0 -0.1**

FRU *i* 10 06 55.0
FRU pmax pmax
comp=Z,60nm,1.2s
FRU MLR MLR
comp=Z,2µm,19.0s
KSH Kashi 50.34 294 P P 10 06 47.3 +4.4
KSH pP pP 10 06 59.4 +4.4
KSH sP sP 10 07 03.8 +3.8
KSH PcP **PcP** **10 08 04.3 +3.2**
KSH PP PP 10 08 45.1 +6.7
KSH ScP **ScP** **10 11 54.5 +1.0**
KSH PcS **PcS** **10 12 00.8 +2.4**
KSH S **S** **10 13 55.9 +3.0**
KSH sS sS 10 14 20.5 +7.5
KSH ScS **ScS** **10 16 30.0 -0.5**
KSH SS **SS** **10 17 31.5 +4.9**
KSH pmax pmax
comp=Z,20nm,1.0s
KSH LR LR
comp=N,480nm,7.7s
KSH LR LR
comp=E,740nm,11.1s
KSH LR LR
comp=Z,330nm,9.4s
AAK Ala-Archa 50.40 298 *ce* P **P** **10 06 43.7 +0.3**
AAK pmax pmax
comp=Z,60nm,1.0s
AAK Ala-Archa 50.40 298 *e* P **P** **10 06 43.5 +0.1**
comp=Z,11nm,1.4s
AAK Ala-Archa 50.40 298 P P **10 06 43.9 +0.5**
SNR=16
AAK Ala-Archa 50.40 298 P P **10 06 43.5 +0.1**
comp=Z,15nm,0.6s,baz=102,slow=5.0,SNR=42
BVA0 Borovoye Array 50.41 312 *i* P **P** **10 06 42.7 -0.3**
BVA0 pmax pmax
comp=Z,11nm,1.0s
BVAR Borovoye Array 50.41 312 P P **10 06 43.0 0.0**
BVAR *PP **pP** **10 06 54.5 -0.6**
BVAR pmax pmax
comp=Z,19nm,0.5s
BVAR pmax pmax
comp=Z,43nm,0.9s
BVAR Borovoye Array 50.41 312 P P **10 06 43.0 0.0**
BVAR pP **pP** **10 06 54.5 -0.6**
BVAR Borovoye Array 50.41 312 P P **10 06 43.0 0.0**
comp=Z,19nm,0.5s,baz=79,slow=7.7,SNR=81
BVAR pP **pP** **10 06 54.5 -0.6**
comp=Z,43nm,0.9s,baz=89,slow=8.1,SNR=11
BRVK Borovoye 50.47 312 *ce* P **P** **10 06 43.5 +0.1**
BRVK pmax pmax
comp=Z,68nm,1.0s
BRVK Borovoye 50.47 312 *e* P **P** **10 06 43.6 +0.1**
comp=Z,62nm,1.0s
BRVK epP **pP** **10 06 56.6 +1.1**
BRVK Borovoye 50.47 312 P P **10 06 43.9 +0.5**
SNR=28
DOT Dot Lake 50.49 34 *e* P **P** **10 06 44.2 +0.6**
comp=Z,10nm,0.7s
BMRM Bremner River 50.56 37 *e* P **P** **10 06 45.2 +1.2**
comp=Z,34nm,0.8s
RAGM Ragged Mountai 50.60 38 *e* P **P** **10 06 45.3 +0.9**
comp=Z,48nm,0.9s
RAGM epP **pP** **10 06 56.6 +0.1**
MENT Mentasta 50.73 35 *e* P **P** **10 06 46.4 +1.1**
MENT epP **pP** **10 06 58.7 +1.3**
EKS2 Erkin-Say 50.90 298 *e* P **P** **10 06 47.5 +0.5**
EKS2 pmax pmax
comp=Z,24nm,0.9s
EKS2 Erkin-Say 50.90 298 *e* P **P** **10 06 47.5 +0.5**
comp=Z,24nm,0.9s
EKS2 Erkin-Say 50.90 298 P P **10 06 48.9 +1.9**
SNR=8.3
COEN Coen 51.07 178 *e* P **P** **10 06 49.0 +0.7**
comp=Z,142nm,0.8s
COEN epP **pP** **10 07 00.2 -0.2**
AML Almayashu 51.12 298 P P **10 06 49.9 +0.9**
SNR=118
EGAK Eagle 51.62 32 *e* P **P** **10 06 52.4 +0.5**
comp=Z,12nm,1.0s
PSI Prapat 52.02 239 P P **10 06 56.2 +0.5**
comp=Z,27nm,1.1s
KK31 Karatay Array 53.03 300 *i* P **P** **10 07 02.1 -0.6**
KK31 pmax pmax
comp=Z,77nm,1.0s
UGM Wanagama 53.55 219 *e* P **P** **10 07 06.2 -0.6**
comp=Z,186nm,1.1s
NDI New Delhi 53.69 281 *ex* **P** **10 07 05.0 -2.7**
INK Inuvik 54.06 27 LR LR 10 32 19.4
comp=Z,258nm,20.8s,baz=40,slow=38
JBP Jabalpur 54.13 273‖ *e* P **P** **10 07 12.4 +1.4**
JBP *ex* x 10 07 20.3
SVE Sverdlovsk 54.95 318 *de* P **P** **10 07 17.0 +0.5**
SVE *eS* **S** **10 14 59.3 +4.2**
SVE pmax pmax
comp=Z,154nm,0.9s
SVE MLR MLR
comp=Z,2µm,18.0s
SKAG Skagway 55.39 38 *e* P **P** **10 07 21.0 +1.4**
comp=Z,14nm,1.0s
SOKR Solikamsk 56.12 322 *c i* P **P** **10 07 24.9 +0.1**
SOKR pmax pmax
comp=Z,100nm,1.3s
SOKR MLR MLR
comp=Z,810nm,21.0s
ARU Arti 56.17 318 *c i* P **P** **10 07 25.1 -0.1**
ARU *PP **pP** **10 07 42.1 +4.6**
ARU 10 08 20.7
ARU 10 09 27.9
ARU PPP PPP 10 10 41.7
ARU S **S** **10 15 10.8 -0.4**
ARU SS SS 10 18 49.2 -8.3
ARU pmax pmax
comp=Z,139nm,1.0s
ARU MLR MLR
comp=Z,2µm,18.0s
ARU Arti 56.17 318 P P **10 07 25.2 0.0**
comp=Z,816nm,0.9s,SNR=12
FITZ Fitzroy Crossi 57.16 198 *e* P **P** **10 07 33.2 +0.6**
comp=Z,7.7nm,0.6s
FITZ Fitzroy Crossi 57.16 198 LR LR 10 30 15.2
comp=Z,139nm,22.0s,baz=19,slow=34
CTA Charters Tower 57.31 175 LR LR 10 28 12.0
comp=Z,145nm,19.3s,baz=351,slow=32
WRAB Tennant Creek 57.38 188 *e* P **P** **10 07 33.3 -0.9**
WRAB pmax pmax
comp=Z,24nm,0.9s
WRAB Tennant Creek 57.38 188 *e* P **P** **10 07 33.3 -0.9**
comp=Z,24nm,0.9s
WRA Warramunga Arr 57.39 188 P P **10 07 33.3 -1.0**
WRA Warramunga Arr 57.39 188 P P **10 07 33.3 -1.0**
comp=Z,8.9nm,0.6s,baz=6.0,slow=6.9,SNR=162
WRA LR LR 10 29 43.1
comp=Z,334nm,21.5s,baz=30,slow=33
AB31 Akbulak array 57.79 310 *i* P **P** **10 07 36.1 -0.7**
AB31 pmax pmax
comp=Z,20nm,0.6s
ABKAR Akbulak array 57.79 310 *e* P **P** **10 07 36.6 -0.3**
comp=Z,12nm,0.5s
HYB Hyderabad 58.29 268 *e* P **P** **10 07 40.0 -0.8**
HYB Hyderabad 58.29 268 *e* P **P** **10 07 40.0 -0.8**
HYB Hyderabad 58.29 268 *i* P **P** **10 07 40.0 -0.8**
HYB epP **pP** **10 07 54.0 +0.9**
DLBC Dease Lake 58.32 38 *e* P P 10 07 42.7 +2.1
DLBC epP pP 10 07 53.6 +0.8
DLBC Dease Lake 58.32 38 LR LR 10 35 38.6
comp=Z,188nm,18.7s,baz=60,slow=39
AKTO Aktyubinsk 58.51 312 P P **10 07 41.9 0.0**
AKTO pmax pmax
comp=Z,47nm,1.0s
AKTO Aktyubinsk 58.51 312 P P **10 07 41.9 0.0**
AKTO Aktyubinsk 58.51 312 P P **10 07 41.9 0.0**
comp=Z,47nm,1.0s,baz=82,slow=6.8,SNR=38
ALE Alert 59.78 4 P P **10 07 50.0 -0.2**
comp=Z,264nm,1.0s,SNR=28
KBS Kingsbay 60.35 350 *e* P **P** **10 07 54.2 +0.1**
KBS *eS* **S** **10 16 08.4 +3.2**
KBS Kingsbay 60.35 350 *c i* P **P** **10 07 54.6 +0.5**
KBS pmax pmax
comp=Z,41nm,1.0s
KBS Kingsbay 60.35 350 *e* P **P** **10 07 54.6 +0.5**
comp=Z,47nm,1.0s
KBS epP **pP** **10 08 07.8 +1.3**
ASAR Alice Springs 61.12 188 P P **10 07 59.4 -0.7**
ASAR Alice Springs 61.12 188 P P **10 07 59.4 -0.7**
comp=Z,5.4nm,0.7s,baz=359,slow=4.9,SNR=57

ASAR LR LR 10 35 57.2
comp=Z,168nm,18.5s,baz=350,slow=37
MBWA Marble Bar 61.72 203 *e* P **P** **10 08 04.1 0.0**
comp=Z,28nm,1.0s
MBWA epP **pP** **10 08 15.5 -0.9**
RES Resolute Bay 62.27 14 *e* P **P** **10 08 06.7 -0.4**
comp=Z,4.9nm,1.4s
RES epP **pP** **10 08 19.5 0.0**
APA Apatity 62.42 336 *i* P **P** **10 08 08.8 +0.5**
APA MLR MLR
comp=Z,2µm,17.0s
TMCR Tamitsa 62.50 331 *e* P **P** **10 08 08.6 -0.2**
TMCR pmax pmax
comp=Z,74nm,1.3s
KEV Kevo 63.16 339 *e* P **P** **10 08 12.2 -0.9**
KEV pmax pmax
comp=Z,13nm,0.8s
KEV Kevo 63.16 339 *ep* **P** **10 08 12.2 -0.9**
comp=Z,12nm,0.8s
YKW3 Yellowknife Ar 63.45 30 *e* P **P** **10 08 15.4 +0.2**
comp=Z,0.3nm,1.1s
YKA Yellowknife Ar 63.49 30 P **P** **10 08 15.0 -0.4**
YKA Yellowknife Ar 63.49 30 P **P** **10 08 15.0 -0.4**
comp=Z,12nm,1.0s,baz=295,slow=6.6,SNR=89
DZM Mont Dzumac 63.61 154 *e* P P 10 08 21.3 +4.5
comp=Z,80nm,1.2s
DZM *eS* S 10 16 53.4 +5.7
comp=Z,820nm,34.3s
DZM *e* LR LR 10 27 16.3
comp=Z,1µm,21.3s
DZM Mont Dzumac 63.61 154 *e* P **P** **10 08 18.1 +1.3**
comp=Z,45nm,1.2s
DZM Mont Dzumac 63.61 154 LR LR 10 33 34.5
comp=Z,1µm,20.8s,baz=340,slow=34
ARCES ARCESS Array B 63.72 339 P **P** **10 08 16.8 -0.1**
ARCES ARCESS Array B 63.72 339 P **P** **10 08 16.8 -0.1**
comp=Z,30nm,1.0s,baz=58,slow=7.7,SNR=23
ARCES LR LR 10 38 31.2
comp=Z,770nm,21.1s,baz=41,slow=38
ABKT Ailbek 63.74 299 P **P** **10 08 17.1 -0.5**
comp=Z,179nm,1.4s,SNR=8.0
KTK1 Kautokeino 64.68 339 *e* P **P** **10 08 23.9 +0.8**
KTK1 *eS* **S** **10 16 59.4 -0.4**
MSVF Nonsavu 64.71 141 *e* P **P** **10 08 25.4 +1.4**
MSVF *e*PP **pP** **10 08 38.2 +1.7**
MSVF pmax pmax
comp=Z,160nm,2.6s
MSVF Nonsavu 64.71 141 *e* P **P** **10 08 25.4 +1.4**
comp=Z,160nm,2.6s
MSVF epP **pP** **10 08 38.2 +1.7**
DAG Danmarks Havn 65.46 355 *i* P **P** **10 08 27.9 -0.2**
comp=Z,28nm,1.0s
DAG *i* 10 08 40.9
JOF Joensuu 65.71 332 *e* P **P** **10 08 28.6 -1.3**
JOF pmax pmax
comp=Z,6.0nm,0.5s
JOF Joensuu 65.71 332 *ep* **P** **10 08 28.6 -1.3**
comp=Z,5.9nm,0.5s
NLWA Neilton Lookou 66.44 48 *e* P P 10 08 36.5 +1.6
comp=Z,23nm,1.1s
NLWA epP pP 10 08 47.6 +0.2
MOS Moscow 67.03 323 *e* P **P** **10 08 37.3 -1.2**
MOS *e* 10 08 49.6
MOS pmax pmax
comp=Z,70nm,1.0s
AFI Afiamalu 67.28 130 LR LR 10 32 42.5
comp=Z,369nm,20.4s,baz=353,slow=31
VRHR Novokhopersk 67.50 318 *e* P **P** **10 08 40.3 -1.2**
VRHR *e*PP **pP** **10 08 52.4 -1.6**
VRHR pmax pmax
comp=Z,20nm,0.5s
VRHR pmax pmax
comp=N,30nm,1.2s
VRHR pmax pmax
comp=E,10.0nm,0.4s
OBN Obninsk 67.88 323 *c i* P **P** **10 08 43.2 -0.6**
OBN pmax pmax
comp=Z,50nm,1.0s
OBN MLR MLR
comp=Z,500nm,15.0s
LON Longmire 67.98 47 *e* P **P** **10 08 46.2 +1.5**
LON pmax pmax
comp=Z,6.0nm,1.1s
LON Longmire 67.98 47 *e* P **P** **10 08 46.2 +1.5**
comp=Z,6.2nm,1.1s
KAF Kangasniemi 68.05 333 *e* P **P** **10 08 43.5 -1.3**
KAF pmax pmax
comp=Z,10.0nm,0.5s
KAF Kangasniemi 68.05 333 *ep* **P** **10 08 43.5 -1.3**
comp=Z,9.8nm,0.5s
MAK Makhachkala 68.32 308 *e* P **P** **10 08 44.8 -2.0**
MAK *e* 10 09 10.1
MAK *e* 10 11 19.3
MAK *e*PPP PPP 10 12 55.1
MAK *eS* S 10 17 37.7 -6.9
MAK pmax pmax
comp=Z,27nm,0.3s
MAK MLR MLR
comp=Z,707nm,19.0s
TWW Teanaway 68.33 47 P P 10 08 48.7 +1.8
ETW Entiat 68.39 46 P P **10 08 48.2 +0.8**
FINES FINESS Array B 68.56 332 P P **10 08 47.6 -0.4**
FINES FINESS Array B 68.56 332 P P **10 08 47.6 -0.4**
comp=Z,20nm,0.8s,baz=41,slow=7.6,SNR=37
FINES LR LR 10 41 08.9
comp=Z,876nm,18.2s,baz=256,slow=38
EBG Ellensburg 68.62 47 P P **10 08 50.1 +1.4**
DBC Dubki 68.71 308 *i* P P **10 08 48.5 -0.9**
DBC *i* S **pP** **10 09 01.0 -0.9**
VSR Storozhevoye 68.74 319 *e* P P **10 08 48.6 -0.7**
VSR *e*PP **pP** **10 09 01.2 -0.6**
VSR pmax pmax
comp=Z,40nm,0.9s
VSR pmax pmax
comp=N,30nm,0.8s
VSR pmax pmax
comp=E,30nm,0.8s
H04A Detroit Lake 68.84 49 P P **10 08 50.7 +0.6**
STKA Stephens Creek 68.88 180 P P **10 08 50.0 -0.2**
STKA Stephens Creek 68.88 180 P P **10 08 50.0 -0.2**
comp=E,4.5nm,0.8s,baz=346,slow=7.0,SNR=12
STKA LR LR 10 38 09.9
comp=E,358nm,18.9s,baz=15,slow=35
VFP Flag Point 68.94 49 P P **10 08 51.6 +0.7**
FORT Forrest 68.94 192 *e* P P **10 08 50.9 +0.3**
comp=E,59nm,0.7s
MOR8 Moi Rana 69.08 340 *e* P P **10 08 49.6 -1.6**
MOR8 AMB AMB 10 08 51.7
comp=Z,60nm,0.9s
HAWA Hanford 69.50 47 *e* P P **10 08 55.1 +1.0**
comp=Z,16nm,1.3s
HAWA epP **pP** **10 09 08.2 +1.5**
NEW Newport 69.84 44 *e* P P **10 08 56.7 +0.4**
comp=Z,13nm,1.0s
NEW epP **pP** **10 09 07.4 -1.4**
NEW Newport 69.84 44 ‖P P **10 08 56.6 +0.3**
baz=70,SNR=7.2
NEW Newport 69.84 44 LR LR 10 36 10.8
comp=Z,200nm,19.7s,baz=298,slow=33
KHMM Horse Mountain 69.89 54 *e* P P **10 08 58.1 +1.3**
comp=Z,29nm,1.2s
KHMM epP **pP** **10 09 09.6 +0.2**
BBOO Buckleboo 69.99 185 *e* P P **10 08 57.4 +0.3**
comp=Z,489nm,1.1s
BBOO epP **pP** **10 09 07.6 -2.1**
YBH Yreka Blue Hor 70.09 52 *e* P P 10 08 59.5 +1.6
comp=Z,15nm,1.1s
YBH epP pP 10 09 10.5 0.0
YBH Yreka Blue Hor 70.09 52 LR LR 10 36 21.2
comp=Z,119nm,19.8s,baz=306,slow=33
A12A Yaak River Ran 70.28 43 ⇑P P **10 08 58.6 -0.4**
baz=70
SUMG Summit 70.36 360 *e* P P **10 09 00.3 +0.9**
SUMG *e*PP **pP** **10 09 12.6 +0.6**
SUMG pmax pmax
comp=Z,59nm,1.2s
SUMG Summit 70.36 360 *e* P P **10 09 00.3 +0.9**
comp=Z,59nm,1.2s
SUMG epP **pP** **10 09 12.6 +0.6**
SUMG Summit 70.36 360 *i* P P **10 09 00.0 +0.6**
comp=Z,28nm,1.0s
SUMG *i* 10 09 12.2
DGRG David-gareji 70.46 308 P P **10 09 01.9 +1.8**
C11A Tepee Creek (N 70.56 44 ‖P P **10 09 00.9 +0.2**
baz=70
B12A Libby 70.58 43 ⇑P P **10 09 01.3 +0.5**
baz=70
ZEI Tsey 70.66 309 *e* P P **10 09 01.2 -0.4**
ZEI *e* 10 09 13.2
ZEI pmax pmax
comp=Z,14nm,1.0s
TBLG Delisi 70.71 308 P P **10 09 01.1 -0.5**
TBLG Delisi 70.71 308 P P **10 09 01.1 -0.5**
KBZ Khabaz 70.75 311 LR LR 10 44 56.3
comp=Z,878nm,18.6s,baz=243,slow=40
KIV Kislovodsk 70.75 311 *c i* P P **10 09 02.3 +0.4**
KIV pmax pmax
comp=Z,96nm,1.0s
KIV MLR MLR
comp=Z,500nm,17.0s
WDC Whiskeytown Da 70.82 53 *e* P P **10 09 03.4 +1.1**
WDC pmax pmax
comp=Z,12nm,1.0s
WDC Whiskeytown Da 70.82 53 *e* P P **10 09 03.4 +1.1**
comp=Z,12nm,1.0s
WBK Wadi Bani Khal 70.94 284 P P **10 09 04.5 +1.1**
SNR=8.3
A13A Flathead Natio 70.95 43 ‖P P **10 09 03.4 +0.3**
baz=71
ONI Oni 71.04 309 P P **10 09 04.2 +0.6**
C12B Naegeli Ranch, 71.07 44 ⇑P P **10 09 04.0 +0.3**
baz=71
WALA Waterton Lakes 71.15 42 *e* P P **10 09 05.1 +0.8**
comp=Z,0.5nm,0.9s
WALA epP **pP** **10 09 18.1 +1.3**
BANOM Banah 71.18 289 P P **10 09 05.3 +0.6**
SNR=8.1
B13A Whitefish 71.24 43 ⇑P P **10 09 05.2 +0.4**
baz=71,SNR=29
BSMT Bassoo Peak 71.37 44 *e* P P **10 09 06.9 +1.1**
BSMT epP **pP** **10 09 19.4 +1.0**
SMDO Samad 71.40 285 P P **10 09 07.7 +1.4**
SNR=8.2
A14A Double T Ranch 71.46 42 ‖P P **10 09 06.3 +0.1**
baz=71,SNR=16
MOD Modoc 71.50 51 *e* P P **10 09 07.5 +0.9**
comp=Z,20nm,0.9s
MOD epP **pP** **10 09 20.1 +0.9**
BLMT Blacktail Moun 71.51 43 *e* P P **10 09 07.6 +1.0**
BLMT epP **pP** **10 09 20.3 +1.1**
D12A Red Ives Fores 71.52 45 ⇑P P **10 09 06.4 -0.2**
baz=71
GNI Garni 71.57 307 LR LR 10 43 15.1
comp=Z,581nm,19.8s,baz=56,slow=38
C13A Hot Springs 71.59 44 ‖P P **10 09 07.3 +0.3**
baz=71,SNR=9.9
BMO Blue Mountains 71.65 47 *e* P P **10 09 08.2 +0.8**
BMO *e**PP **pP** **10 09 21.3 +1.3**
BMO pmax pmax
comp=Z,18nm,0.8s
BMO Blue Mountains 71.65 47 *e* P P **10 09 08.2 +0.8**
comp=Z,18nm,0.8s
BMO epP **pP** **10 09 21.3 +1.3**
HOQ Hoqain 71.68 286 P P **10 09 08.5 +0.7**
SNR=10
JTMT Jette 71.71 44 *e* P P **10 09 08.7 +1.0**
JTMT epP **pP** **10 09 21.5 +1.2**
JMDO Jabal Madar 71.74 284 P P **10 09 08.2 +0.1**
SNR=9.0
YBMT Yellow Bay 71.79 43 *e* P P **10 09 09.3 +1.1**
comp=Z,8.7nm,1.0s
YBMT epP **pP** **10 09 20.5 -0.3**
SCO Scoresbysund 71.80 354 *i* P P **10 09 08.1 +0.5**
comp=Z,15nm,0.9s
SCO *i* 10 09 21.6
A15A Johnson Ranch, 71.82 42 ⇑P P **10 09 08.5 +0.2**
baz=72,SNR=14
B14A Marquette Ranc 71.90 43 ‖P P **10 09 09.2 +0.4**
baz=72,SNR=20
HATD Hatta, Dubai 71.90 288 P P **10 09 09.5 +0.4**
SNR=17
C14A Swan Lake 71.99 43 ‖P P **10 09 09.5 +0.2**
baz=72,SNR=9.3
D13A Huson 71.99 44 ‖P P **10 09 09.4 +0.1**
baz=72,SNR=13
SWMT Swartz Lake 72.00 44 *e* P P **10 09 10.2 +0.7**
ASHO Ashiyiah 72.03 288 P P **10 09 10.8 +0.8**
SNR=13
IZAR Zarasai 72.17 328 *e* P P **10 09 11.0 +0.9**
IZAR AMB AMB 10 09 25.8
comp=Z,13nm,0.7s
OHCM Honcut 72.18 54 *e* P P **10 09 11.1 +0.6**
BSY Bisya 72.23 285 P P **10 09 11.7 +0.6**
SNR=12
WVOR Wild Horse Val 72.23 50 *e* P P **10 09 11.9 +1.0**
WVOR *e**PP **pP** **10 09 24.4 +0.9**
WVOR pmax pmax
comp=Z,14nm,1.0s
WVOR Wild Horse Val 72.23 50 *e* P P **10 09 11.9 +1.0**
comp=Z,14nm,1.0s
WVOR epP **pP** **10 09 24.4 +0.9**
MICGM Minsk 72.27 326 *e* P P **10 09 11.0 +0.2**
MNK Minsk 72.29 326 *e* P P **10 09 11.0 +0.1**
B15A Bradely Ranch, 72.31 42 ‖P P **10 09 11.3 0.0**
baz=72,SNR=34
F12A Elk City 72.32 46 ⇑P P **10 09 11.5 0.0**
baz=72,SNR=28
ISAL Salakas 72.34 327 *e* P P **10 09 12.0 +0.9**
ISAL AMB AMB 10 09 26.8
comp=Z,35nm,1.0s
ARQ Araqi 72.42 286 P P **10 09 13.2 +0.9**
SNR=16
MSO Missoula 72.43 44 *e* P P **10 09 12.4 +0.4**
comp=Z,7.6nm,1.1s
MSO epP **pP** **10 09 25.5 +0.8**
MSO Missoula 72.43 44 ‖P P **10 09 12.0 -0.1**
baz=72,SNR=11
SLMT Seeley Lake 72.44 44 *e* P P **10 09 12.7 +0.6**
A16A West Butte Ran 72.44 41 ⇑P P **10 09 12.1 0.0**
baz=72
IIGN Ignalina 72.44 327 *e* P P **10 09 12.6 +0.8**
IIGN AMB AMB 10 09 28.3
comp=Z,26nm,0.9s
NACGM Naroch 72.50 327 *e* P P **10 09 10.0 -2.1**
E13A Victor 72.52 45 ‖P P **10 09 12.5 -0.1**
baz=72,SNR=6.0
D14A Greenough 72.52 44 ⇑P P **10 09 12.6 0.0**
baz=72,SNR=14
BEKR Beckworth 72.60 53 *e* P P **10 09 13.6 +0.3**
comp=Z,8.4nm,0.8s
BEKR epP **pP** **10 09 26.6 +0.7**
C15A Salmond Ranch, 72.60 43 ⇑P P **10 09 13.5 +0.4**
baz=72,SNR=18
G12A Big Creek, Yel 72.64 46 ‖P P **10 09 13.4 0.0**
baz=72,SNR=8.8
B16A M & M Farms, S 72.70 42 ⇑P P **10 09 13.7 +0.1**
baz=72,SNR=15
SOC Sochi 72.74 312 *c i* P P **10 09 13.6 -0.1**
SOC *e**PP **pP** **10 09 26.0 -0.4**
SOC *eS* **S** **10 18 31.7 -4.4**
SOC *e**SS **sS** **10 19 00.0 +2.9**
SOC pmax pmax
comp=Z,27nm,0.8s
SOC MLR MLR
comp=Z,863nm,20.0s
CHMT Chamberlain Mo 72.76 44 *e* P P **10 09 14.5 +0.3**
CHMT epP **pP** **10 09 27.5 +0.7**
F13A Darby 72.83 45 ‖P P **10 09 14.2 -0.2**
baz=73,SNR=9.9
DAGI Agillar 72.83 309 *i* P P **10 09 14.0 -0.5**
A17A Triple J Farms 72.92 41 ⇑P P **10 09 14.8 -0.1**
baz=73,SNR=27
E14A Clinton 72.93 44 ‖P P **10 09 14.7 -0.4**
baz=73
DBAD Bademkaya 73.00 309 *i* P P **10 09 15.7 +0.2**
C16A Fuhringer Ranc 73.05 42 ⇑P P **10 09 15.9 +0.2**
baz=73,SNR=16
D15A Lincoln 73.09 43 ‖P P **10 09 16.0 0.0**
baz=73
H12A Diamond D Ranc 73.25 47 ‖P P **10 09 16.7 -0.4**
baz=73,SNR=15
B17A L&G Farms, Che 73.26 42 ⇑P P **10 09 16.3 -0.5**
baz=73,SNR=17
G13A Cobalt 73.29 46 ‖P P **10 09 16.9 -0.4**
baz=73,SNR=11
WCN Washoe City 73.31 53 *e* P P **10 09 17.9 +0.5**
WCN *e**PP **PcP** **10 09 31.4 -2.3**
WCN pmax pmax
comp=Z,12nm,1.1s
WCN Washoe City 73.31 53 *e* P P **10 09 17.9 +0.5**
comp=Z,12nm,1.1s
WCN epP **PcP** **10 09 31.4 -2.3**

MFID Camas Ranch 73.35 48 *e*P P 10 09 18.6 +1.0
comp=Z,18nm,0.9s
MFID epP pP 10 09 30.0 -0.2
MFID Camas Ranch 73.35 48 ⇑P P 10 09 17.9 +0.3
baz=73,SNR=12
F14A Wisdom 73.35 45 ⇑P P 10 09 17.6 0.0
baz=73,SNR=8.4
ANN Anapa 73.36 314 *e*P P 10 09 16.6 -0.8
ANN *e**PP pP 10 09 29.3 -0.7
ANN pmax pmax
comp=Z,42nm,1.1s
ANN MLR MLR
comp=Z,501nm,19.0s
A18A Metzger Ranch, 73.38 41 ⇓P P 10 09 17.6 +0.1
baz=73,SNR=33
FFC Flin Flon 73.39 33 *ce*P P 10 09 17.7 +0.3
FFC Flin Flon 73.39 33 *e*P P 10 09 16.8 -0.7
comp=Z,30nm,1.0s
FFC epP PcP 10 09 31.2 -2.3
E15A Deer Lodge 73.39 44 ⇓P P 10 09 17.8 0.0
baz=73,SNR=23
I12A Atlanta 73.54 47 ⇑P P 10 09 19.2 +0.5
baz=73,SNR=35
H13A Challis 73.59 46 ⇑P P 10 09 19.4 +0.4
baz=73,SNR=37
CMB Columbia Colle 73.62 55 *e*P P 10 09 20.1 +1.0
CMB pmax pmax
comp=Z,16nm,1.0s
CMB Columbia Colle 73.62 55 *e*P P 10 09 20.1 +1.0
comp=Z,16nm,1.0s
D16A Dana Ranch, Ca 73.63 43 ⇓P P 10 09 19.4 +0.3
baz=73,SNR=9.6
G14A Jackson 73.64 45 ⇓P P 10 09 19.4 0.0
baz=74
HRY Holter Researc 73.67 43 *e*P P 10 09 20.0 +0.6
HRY epP PcP 10 09 33.4 -1.6
C17A Wharram Farm, 73.68 42 ⇑P P 10 09 19.3 -0.1
baz=74,SNR=12
B18A Beardsley Farm 73.74 41 ⇑P P 10 09 19.9 +0.2
baz=74,SNR=15
HFS Hagfors 73.82 336 LR LR 10 44 29.2
comp=Z,1µm,19.7s,baz=38,slow=38
F15A Butte 73.83 44 ⇓P P 10 09 21.0 +0.5
baz=74,SNR=49
E16A East Helena 73.86 43 ⇓P P 10 09 20.9 +0.4
baz=74,SNR=22
LRM Limekiln Ridge 73.86 44 *e*P P 10 09 21.1 +0.4
LRM epP PcP 10 09 34.8 -1.2
NB2 NORSAR Subarra 73.92 337 P P 10 09 20.0 -0.4
baz=39,slow=6.2
NB2 NORSAR Subarra 73.92 337 P P 10 09 20.0 -0.4
comp=Z,27nm,0.7s,baz=39,slow=6.2
NOA NORSAR Array B 73.92 337 P P 10 09 20.2 -0.2
NOA NORSAR Array B 73.92 337 P P 10 09 20.2 -0.2
comp=Z,30nm,1.0s,baz=39,slow=5.8,SNR=43
NOA LR LR 10 44 11.6
comp=Z,908nm,21.9s,baz=35,slow=38
A19A Klindworth Far 73.94 40 ⇓P P 10 09 21.3 +0.4
baz=74,SNR=38
EGMT Eagleton 73.98 41 *e*P P 10 09 21.5 +0.4
comp=Z,25nm,0.9s
EGMT epP PcP 10 09 34.8 -1.4
EGMT Eagleton 73.98 41 ⇓P P 10 09 21.2 +0.1
baz=74,SNR=20
D17A Six Diamond Ra 74.02 43 ⇓P P 10 09 21.5 +0.1
baz=74,SNR=12
NC602 NORSAR Array S 74.05 337 *e*P P 10 09 21.4 +0.2
NC602 *e*S S 10 18 50.8 +0.5
DLMT Dillon 74.06 45 *e*P P 10 09 22.6 +0.9
comp=Z,24nm,0.8s
I13A Wildhorse Cree 74.06 47 ⇑P P 10 09 22.0 +0.2
baz=74,SNR=14
H14A Leadore 74.07 46 ⇑P P 10 09 21.7 -0.2
baz=74
AKASG Malin Array Be 74.09 322 P P 10 09 21.1 -0.4
AKASG pmax pmax
comp=Z,8.0nm,0.4s
AKASG MLR MLR
comp=Z,872nm,19.1s
AKASG Malin Array Be 74.09 322 P P 10 09 21.1 -0.4
AKASG Malin Array Be 74.09 322 P P 10 09 21.1 -0.4
comp=Z,8.3nm,0.4s,baz=46,slow=5.8,SNR=53
AKASG LR LR 10 44 52.0
comp=Z,872nm,19.1s,baz=40,slow=38
HLID Hailey 74.09 47 *e*P P 10 09 22.6 +0.6
comp=Z,13nm,1.0s
HLID epP PcP 10 09 35.5 -1.5
HLID Hailey 74.09 47 ⇓P P 10 09 22.4 +0.4
baz=74,SNR=14
KIEV Kiev 74.10 322 *e*P P 10 09 21.1 -0.5
KIEV *e**PP pP 10 09 34.5 +0.2
KIEV pmax pmax
comp=Z,56nm,1.0s
KIEV Kiev 74.10 322 *e*P P 10 09 21.1 -0.5
comp=Z,56nm,1.0s
KIEV epP pP 10 09 34.5 +0.2
B19A Brinkman Farms 74.13 41 ⇑P P 10 09 22.2 +0.2
baz=74,SNR=32
G15A Dillon 74.24 45 ⇓P P 10 09 22.9 +0.1
baz=74,SNR=26
BMN Battle Mountai 74.25 51 *e*P P 10 09 24.3 +1.4
BMN pmax pmax
comp=Z,20nm,1.0s
BMN Battle Mountai 74.25 51 *e*P P 10 09 24.3 +1.4
comp=Z,20nm,1.0s
J13A Cove Ranch, Pi 74.33 47 ⇓P P 10 09 24.0 +0.6
baz=74,SNR=13
F16A Kennard Place, 74.34 44 ⇓P P 10 09 23.6 +0.3
baz=74,SNR=24
E17A Martinsdale 74.35 43 ⇑P P 10 09 23.9 +0.4
baz=74,SNR=23
A20A Cobblestone Ra 74.39 40 ⇓P P 10 09 23.8 +0.3
baz=74,SNR=14
BOZ Bozeman (W) 74.42 44 *e*P P 10 09 24.5 +0.7
BOZ pmax pmax
comp=Z,18nm,0.8s
BOZ Bozeman (W) 74.42 44 *e*P P 10 09 24.5 +0.7
comp=Z,18nm,0.8s
BOZ Bozeman (W) 74.42 44 ⇑P P 10 09 24.1 +0.2
baz=74,SNR=32
I14A Mackay 74.44 46 ⇑P P 10 09 24.7 +0.7
baz=74,SNR=33
D18A Linhart Farms, 74.47 42 ⇓P P 10 09 24.5 +0.5
baz=74,SNR=20
H15A Lima 74.48 45 ⇓P P 10 09 24.6 +0.3
baz=74,SNR=6.1
C19A Slack Wire Ran 74.53 41 ⇑P P 10 09 24.9 +0.6
baz=74,SNR=55
G16A Moss Hill, Enn 74.58 45 ⇓P P 10 09 25.0 +0.2
baz=74,SNR=16
SUW Suwalki 74.65 327 *e*P P 10 09 24.4 -0.4
SUW *e* 10 09 37.4
NVAR Mina Array Bea 74.73 53 P P 10 09 26.6 +0.7
NVAR pP pP 10 09 37.6 -0.9
NVAR Mina Array Bea 74.73 53 P P 10 09 26.6 +0.7
comp=Z,11nm,0.9s,baz=286,slow=6.1,SNR=55
NVAR pP pP 10 09 37.6 -0.9
comp=Z,18nm,0.9s,baz=283,slow=5.4,SNR=19
NVAR LR LR 10 40 29.3
comp=Z,195nm,18.7s,baz=288,slow=34
J14A Carey 74.76 47 ⇓P P 10 09 26.6 +0.8
baz=75,SNR=15
F17A Fitzpatrick Pl 74.80 44 ⇑P P 10 09 26.4 +0.4
baz=75,SNR=30
A21A Bergtoll Ranch 74.83 39 ⇓P P 10 09 26.2 +0.2
baz=75,SNR=5.4
I15A Monteview 74.95 46 ⇓P P 10 09 26.9 0.0
baz=75
D19A Cripps Ranch, 74.98 42 ⇓P P 10 09 27.2 +0.3
baz=75,SNR=28
QLMT Earthquake Lak 75.04 45 *e*P P 10 09 28.6 +1.1
C20A Veseth Ranch, 75.09 41 ⇑P P 10 09 27.6 +0.1
baz=75,SNR=26
PTRM Twissleman Ran 75.10 57 *e*P P 10 09 29.1 +1.3
G17A Pierce Place, 75.12 44 ⇑P P 10 09 28.7 +0.9
baz=75,SNR=19
B21A Ellsworth Farm 75.14 40 ⇓P P 10 09 27.9 +0.1
baz=75,SNR=17
SIM Simferopol' 75.15 315 *e*P P 10 09 28.0 +0.2
GRSN GIRESUNGRSN 75.17 310 *i*P P 10 09 27.8 -0.3
MTUM Tungsten Hills 75.19 54 *e*P P 10 09 29.5 +1.0
MTUM epP PcP 10 09 40.6 -1.2
H16A Russell Place, 75.22 45 ⇑P P 10 09 28.9 +0.4
baz=75,SNR=16
ELK Elko 75.28 50 *e*P P 10 09 30.2 +1.2
comp=Z,149nm,0.9s
F18A Big Timber 75.32 43 ⇑P P 10 09 29.2 +0.3
baz=75,SNR=27
A22A Carney Farms, 75.34 39 ⇑P P 10 09 29.0 +0.1
baz=75,SNR=44
J15A Blackfoot 75.34 46 ⇑P P 10 09 29.6 +0.4
baz=75,SNR=14
RCTC Rector, Farmer 75.36 55 ⇑P P 10 09 29.9 +0.8
baz=75
YMR Madison River 75.40 45 *e*P P 10 09 30.8 +1.2
comp=Z,20nm,0.9s
D20A Manuel Ranch, 75.42 41 ⇑P P 10 09 29.9 +0.4
baz=75,SNR=29
GCMT Greycliff 75.42 43 *e*P P 10 09 30.8 +1.2
comp=Z,19nm,1.1s
K14A Jones Ranch, D 75.43 47 ⇑P P 10 09 30.4 +0.7
baz=75,SNR=10
SMMC Simmler 75.44 57 ⇑P P 10 09 30.4 +0.7
baz=75
E19A Rath Farm, Rou 75.47 42 ⇓P P 10 09 30.3 +0.6
baz=75,SNR=36
C21A Desert Coulee 75.49 40 ⇑P P 10 09 30.1 +0.3
baz=75,SNR=15
KONO Kongsberg 75.51 337 AMS AMS 10 45 52.9
comp=Z,804nm,18.4s
KONO Kongsberg 75.51 337 *e*P P
KONO pmax pmax
comp=Z,12nm,1.0s
KONO Kongsberg 75.51 337 *e*P P 10 09 30.4 +0.8
comp=Z,12nm,1.0s
SFJD Kangerlussuaq 75.56 5 *i*P P 10 09 29.5 -0.2
comp=Z,13nm,1.0s
TIN Tinemaha 75.58 54 ⇑P P 10 09 31.6 +0.9
baz=75
I16A Newdale 75.59 46 ⇑P P 10 09 31.9 +1.2
baz=75,SNR=47
MIB Mutribah 75.61 296 *e*P P 10 09 29.7 -1.0
MIB AMb AMB 10 09 44.4
comp=Z,112nm,1.1s
BHD Baghdad 75.69 301 *ex* P 10 09 29.9 -1.2
L14A Malta 75.70 48 ⇓P P 10 09 31.9 +0.7
baz=76,SNR=7.8
KBD Kabd 75.72 296 *e*P P 10 09 30.7 -0.7
KBD AMb AMB 10 09 45.2
comp=Z,93nm,1.4s
K15A Arbon 75.72 47 ⇓P P 10 09 31.9 +0.5
baz=76,SNR=9.1
VES Vestal, Richgr 75.73 56 ⇓P P 10 09 31.5 +0.1
baz=76
B22A Reddig Ranch S 75.75 40 ⇓P P 10 09 31.1 -0.2
baz=76,SNR=7.9
F19A Roth Farm, Mol 75.77 43 ⇑P P 10 09 31.9 +0.4
baz=76,SNR=16
G18A Lazy EL Ranch, 75.77 44 ⇓P P 10 09 31.8 +0.2
baz=76
LKWY Lake 75.78 45 *e*P P 10 09 34.5 +2.7
LKWY Lake 75.78 45 *e*P P 10 09 34.5 +2.7
H17A Grant Village 75.79 45 ⇓P P 10 09 34.1 +2.2
baz=76,SNR=38
E20A Meyer Farm, Mu 75.79 42 ⇑P P 10 09 32.2 +0.6
baz=76,SNR=23
PKM Peak Mountain 75.80 57 ⇑P P 10 09 32.4 +0.4
baz=76,SNR=7.6
QRN Al-Qurain 75.80 295 *e*P P 10 09 31.1 -0.8
QRN AMb AMB 10 09 45.7
comp=Z,148nm,1.3s
IMW Indian Meadow 75.89 45 *e*P P 10 09 33.9 +1.4
comp=Z,27nm,0.8s
DCID1 Drake Creek 75.94 46 *e*P P 10 09 34.3 +1.7
comp=Z,43nm,0.9s
RDF Al-Radifah 75.96 296 *e*P P 10 09 32.4 -0.4
RDF AMb AMB 10 09 47.4
comp=Z,172nm,1.2s
NAY Al-Naaiem 76.00 296 *e*P P 10 09 31.6 -1.4
NAY AMb AMB 10 09 46.6
comp=Z,65nm,1.3s
RRI2 Red Ridge 76.02 46 *e*P P
comp=Z,25nm,0.9s 10 09 34.9 +1.7
KEMA Kemaliye 76.02 309 *i*P P 10 09 33.1 +0.1
D21A La Casta Ranch 76.03 41 ⇓P P 10 09 33.4 +0.4
baz=76,SNR=8.5
RLMT Red Lodge 76.06 44 *e*P P 10 09 34.4 +1.1
comp=Z,36nm,1.4s
RLMT Red Lodge 76.06 44 ⇓P P 10 09 34.2 +0.9
baz=76,SNR=12
I17A Pilgrim Ck. 76.08 45 ⇓P P 10 09 35.1 +1.6
baz=76,SNR=26
MOOW Moose Ponds 76.09 45 *e*P P 10 09 34.7 +1.1
comp=Z,17nm,1.0s
H18A Shoshone NF, C 76.12 44 ⇓P P 10 09 34.1 +0.4
baz=76,SNR=11
HVU Hansel Valley 76.14 48 *e*P P 10 09 35.1 +1.3
HVU pmax pmax
comp=Z,21nm,1.0s
HVU Hansel Valley 76.14 48 *e*P P 10 09 35.1 +1.3
comp=Z,21nm,1.0s
TPAW Teton Pass 76.14 46 *e*P P 10 09 35.0 +1.1
comp=Z,21nm,0.9s
B23A Brockton 76.14 39 ⇓P P 10 09 33.6 +0.1
baz=76,SNR=48
C22A Vida 76.16 40 ⇓P P 10 09 33.5 -0.2
baz=76,SNR=9.5
GRAC Grapevine Rang 76.17 54 ⇑P P 10 09 34.6 +0.7
baz=76,SNR=16
BER Bergen 76.18 339 AMS AMS 10 46 10.9
comp=Z,837nm,15.7s
K16A Soda Springs 76.18 46 ⇓P P 10 09 34.4 +0.3
baz=76,SNR=26
L15A Malad City 76.23 47 ⇑P P 10 09 34.8 +0.5
baz=76,SNR=7.8
ERBA Erbaa 76.23 311 *i*P P 10 09 34.3 +0.2
F20A Billings 76.23 42 ⇓P P 10 09 34.2 0.0
baz=76
ISA Isabella 76.24 56 *e*P P 10 09 34.3 0.0
ISA Isabella 76.24 56 *e*P P 10 09 34.3 0.0
ISA Isabella 76.24 56 ⇓P P 10 09 34.7 +0.4
baz=76,SNR=5.5
LOHW Long Hollow 76.26 45 *e*P P 10 09 35.9 +1.4
comp=Z,8.7nm,0.9s
SNOW Snow King Moun 76.27 46 *e*P P 10 09 35.4 +0.8
comp=Z,14nm,0.8s
E21A Keefer Ranch, 76.33 41 ⇓P P 10 09 34.8 +0.2
baz=76,SNR=8.6
A24A Westby 76.33 38 ⇑P P 10 09 34.6 +0.1
baz=76,SNR=9.3
J17A Brown Place, J 76.35 46 ⇑P P 10 09 35.7 +0.7
baz=76,SNR=13
RAO Raoul Island 76.40 144 LR LR 10 37 09.6
comp=Z,371nm,19.4s,baz=263,slow=31
D22A Cohagen 76.40 41 ⇓P P 10 09 35.3 +0.3
baz=76,SNR=19
DAC Darwin (Calif) 76.45 55 *e*P P 10 09 36.8 +1.1
DAC pmax pmax
comp=Z,15nm,0.9s
DAC Darwin (Calif) 76.45 55 *e*P P 10 09 36.8 +1.1
comp=Z,14nm,0.9s
C23A Lambert 76.48 40 ⇓P P 10 09 35.8 +0.3
baz=76,SNR=20
H19A Powell 76.50 44 ⇓P P 10 09 36.6 +0.9
baz=76,SNR=14
R11A Troy Canyon, C 76.50 52 ⇓P P 10 09 36.1 +0.2
baz=76,SNR=25
AHID Auburn Hatcher 76.50 46 *e*P P 10 09 37.4 +1.6
comp=Z,9.9nm,0.8s
DGMT Dagmar 76.54 39 *e*P P 10 09 36.2 +0.5
comp=Z,62nm,1.4s
DGMT Dagmar 76.54 39 ⇓P P 10 09 35.8 +0.1
baz=76,SNR=12
G20A Bridger 76.57 43 ⇓P P 10 09 36.1 0.0
baz=76,SNR=7.8
K17A Gardner Place, 76.62 46 ⇓P P 10 09 36.3 -0.2
baz=76
MALT Malatya 76.63 308 ⇓P P 10 09 37.7 +1.1
MALT Malatya 76.63 308 *e*P P 10 09 37.3 +0.7
comp=Z,49nm,1.1s
MALT Malatya 76.63 308 ⇓*i*P P 10 09 37.7 +1.1
I18A Diamond G Ranc 76.65 45 ⇓P P 10 09 37.0 +0.2
baz=76
MPMC Manual Prospec 76.65 55 ⇓P P 10 09 37.2 +0.3
baz=76,SNR=14
KIS Kishinev 76.69 320 *e*L L 10 36 24.0
KIS LRM MLR 10 46 04.0
comp=Z,2µm,18.0s
F21A Absaloka Mine, 76.77 42 ⇑P P 10 09 37.6 +0.4
baz=77
L16A Fish Haven 76.78 47 ⇓P P 10 09 37.6 +0.2
baz=77,SNR=9.7
FURC Furnace Creek, 76.81 54 ⇓P P 10 09 37.7 +0.3
baz=77,SNR=20
J18A Kendall Valley 76.84 45 ⇓P P 10 09 37.3 -0.5
baz=77,SNR=20
LRMC Laurel Mountai 76.87 55 ⇓P P 10 09 38.2 +0.2
baz=77,SNR=7.8
I19A Meeteetse 76.89 44 ⇑P P 10 09 37.9 -0.2
baz=77,SNR=5.6
HWUT Hardware Ranch 76.95 47 *e*P P 10 09 39.2 +0.8
comp=Z,27nm,1.2s
AKCD Akcadag 76.96 308 *i*P P 10 09 38.8 +0.4
E22A Miles City 76.99 41 ⇓P P 10 09 38.7 +0.3
baz=77,SNR=10
EDW2 Edwards Air Fo 77.02 56 ⇑P P 10 09 39.4 +0.6
baz=77,SNR=12
C24A Savage 77.05 39 ⇑P P 10 09 38.7 +0.1
baz=77,SNR=7.0
L17A Cokeville 77.05 47 ⇓P P 10 09 39.2 +0.2
baz=77,SNR=7.8
DUG Dugway 77.09 49 *e*P P 10 09 39.2 +0.1
DUG pmax pmax
comp=Z,18nm,0.8s
DUG Dugway 77.09 49 *e*P P 10 09 39.2 +0.1
comp=Z,18nm,0.8s
DUG Dugway 77.09 49 ⇑P P 10 09 39.6 +0.4
baz=77,SNR=40
M16A Huntsville 77.10 48 ⇓P P 10 09 39.3 +0.1
baz=77
G21A Lodge Grass 77.11 42 ⇑P P 10 09 38.9 -0.2
baz=77
H20A Greybull 77.16 43 ⇓P P 10 09 39.3 -0.1
baz=77,SNR=6.5
K18A Toltan Ranch, 77.19 46 ⇓P P 10 09 40.1 +0.3
baz=77,SNR=12
IAS Iasi 77.21 320 P P 10 09 40.1 +0.6
BEL Belsk 77.21 327 *e*P P 10 09 40.1 +0.7
BEL *e* 10 09 53.1
F22A Rosebud 77.26 42 ⇑P P 10 09 40.2 +0.3
baz=77,SNR=10
E23A Ismay 77.28 41 ⇓P P 10 09 40.2 +0.2
baz=77,SNR=32
BORG Borgarnes 77.33 353 LR LR 10 44 56.1
comp=Z,202nm,19.7s,baz=359,slow=36
LEOM Leova 77.34 319 ⇑P P 10 09 40.8 +0.6
LEOM Leova 77.34 319 ⇑*i*P P 10 09 40.8 +0.6
J19A Crowheart 77.35 45 ⇑P P 10 09 41.1 +0.5
baz=77,SNR=20
MWC Mount Wilson 77.37 57 *e*P P 10 09 41.5 +0.7
MWC *e**PP pP 10 09 52.1 -1.5
MWC pmax pmax
comp=Z,18nm,1.1s
MWC Mount Wilson 77.37 57 *e*P P 10 09 41.5 +0.7
comp=Z,18nm,1.1s
MWC epP pP 10 09 52.1 -1.5
BW06 Boulder Array 77.39 46 *e*P P 10 09 40.9 -0.1
comp=Z,8.8nm,0.8s
BW06 Boulder Array 77.39 46 ⇓P P 10 09 40.8 -0.1
baz=77,SNR=11
PDAR Pinedale Array 77.39 46 P P 10 09 40.9 0.0
PDAR Pinedale Array 77.39 46 P P 10 09 40.9 0.0
comp=Z,6.0nm,0.9s,baz=279,slow=2.7,SNR=37
I20A Worland 77.43 44 ⇓P P 10 09 41.5 +0.5
baz=77,SNR=9.9
CTKT Corum 77.44 312 *i*P P 10 09 41.2 +0.1
SHOC Shoshone 77.53 54 ⇓P P 10 09 42.0 +0.4
baz=77
GSC Goldstone 77.55 55 *e*P P 10 09 42.4 +0.7
GSC *e**PP pP 10 09 54.7 +0.2
GSC pmax pmax
comp=Z,16nm,0.9s
GSC Goldstone 77.55 55 *e*P P 10 09 42.4 +0.7
comp=Z,16nm,0.9s
GSC epP pP 10 09 54.7 +0.2
GSC Goldstone 77.55 55 ⇑P P 10 09 42.2 +0.5
baz=77,SNR=7.5
M17A Scullys Gap (B 77.56 47 ⇑P P 10 09 41.9 +0.1
baz=77
H21A Big Horn, Sher 77.59 43 ⇑P P 10 09 42.3 +0.5
baz=77,SNR=10
G22A Birney 77.60 42 ⇑P P 10 09 41.9 0.0
baz=77,SNR=7.9
CIS Catalina Islan 77.62 57 ⇑P P 10 09 42.5 +0.4
baz=78
BFSC Mount Baldy Ra 77.62 56 ⇑P P 10 09 42.7 +0.4
baz=78,SNR=5.7
L18A Fontenelle, Gr 77.64 46 ⇓P P 10 09 42.6 +0.3
baz=78,SNR=13
JLU Jordanelle 77.65 48 *e*P P 10 09 43.6 +1.2
comp=Z,17nm,1.1s
JLU epP pP 10 09 56.3 +1.2
BALT Daday 77.70 313 *i*P P 10 09 42.9 +0.4
F23A Volborg 77.74 41 ⇑P P 10 09 42.8 +0.2
baz=78,SNR=22
K19A Absolon Red Bu 77.75 45 ⇑P P 10 09 42.7 -0.2
baz=78,SNR=9.4
E24A Baker 77.75 40 ⇓P P 10 09 43.3 +0.7
baz=78,SNR=5.1
N17A Moffit Pass 77.80 48 ⇓P P 10 09 43.3 0.0
baz=78,SNR=12
ILGA Ilgaz 77.81 313 *i*P P 10 09 44.2 +1.0
J20A Shoshoni 77.84 44 ⇓P P 10 09 43.5 +0.2
baz=78,SNR=14
DAU Daniels Canyon 77.88 48 *e*P P 10 09 45.1 +1.3
DAU Daniels Canyon 77.88 48 *e*P P 10 09 45.1 +1.3
TLCR 77.89 318 ⇑P P 10 09 44.0 +0.7
TLCR 77.89 318 ⇑*i*P P 10 09 44.0 +0.7
MPU Maple Canyon 77.91 49 *e*P P 10 09 44.4 +0.6
comp=Z,22nm,0.8s
MPU epP pP 10 09 57.5 +1.0
KWP Kalwaria Pacla 77.91 324 ⇑P P 10 09 44.1 +0.7
KWP Kalwaria Pacla 77.91 324 *e*P P 10 09 43.9 +0.5
comp=Z,111nm,1.0s
KWP epP pP 10 09 57.2 +1.1
KWP Kalwaria Pacla 77.91 324 ⇑*i*P P 10 09 44.1 +0.7
KWP Kalwaria Pacla 77.91 324 *e*P P 10 09 44.1 +0.7
KWP *e* 10 09 56.0
L19A Farson 77.92 46 ⇑P P 10 09 44.3 +0.4
baz=78,SNR=9.0
M18A Lyman 77.94 47 ⇓P P 10 09 44.4 +0.4
baz=78
I21A Big Trails, Te 77.98 44 ⇑P P 10 09 44.8 +0.7
baz=78,SNR=18
H22A Clearmont 77.98 43 ⇑P P 10 09 44.3 +0.3
baz=78,SNR=6.9
TUQ Turquoise Moun 78.04 55 ⇑P P 10 09 45.1 +0.5
baz=78,SNR=11
G23A Biddle 78.09 42 ⇓P P 10 09 44.8 +0.2
baz=78,SNR=11
BBRC Big Bear Solar 78.10 56 ⇑P P 10 09 44.8 -0.2
baz=78
BURAR Bucovina Array 78.10 322 ⇑*i*P P 10 09 44.9 +0.3
TESR 78.13 320 ⇓*i*P P 10 09 45.1 +0.4
K20A Yellowstone Ra 78.14 45 ⇓P P 10 09 45.0 0.0
baz=78,SNR=6.8
HEC Hector Ludlow 78.14 55 ⇑P P 10 09 45.5 +0.5
baz=78,SNR=7.8
F24A Ekalaka 78.16 41 ⇓P P 10 09 45.2 +0.3
baz=78,SNR=12
ARUT Antelope Range 78.19 51 *e*P P 10 09 46.4 +1.1
ARUT pmax pmax
comp=Z,23nm,1.1s
ARUT Antelope Range 78.19 51 *e*P P 10 09 46.4 +1.1
comp=Z,23nm,1.1s
J21A Lysite 78.20 44 ⇑P P 10 09 45.5 +0.2
baz=78,SNR=12
CFR Carcaliu 78.25 318 ⇓P P 10 09 45.6 +0.3
CFR Carcaliu 78.25 318 ⇓*i*P P 10 09 45.6 +0.3
CDAG Cicekdag 78.32 311 *i*P P 10 09 45.6 -0.4
PETR 78.36 319 ⇑*i*P P 10 09 47.4 +1.5
I22A 9 Mile Ranch, 78.37 43 ⇑P P 10 09 46.2 0.0
baz=78,SNR=9.8
CCUT Cedar City 78.38 52 *e*P P 10 09 47.8 +1.2
comp=Z,21nm,1.1s
ANDN Andirin 78.38 308 *i*P P 10 09 47.2 +0.8
N18A Larsen Ranch, 78.46 47 ⇑P P 10 09 46.9 +0.1
baz=78,SNR=10
MVU Marysvale 78.50 50 *e*P P 10 09 47.9 +0.7
comp=Z,20nm,1.1s
MSU Marysvale 78.52 50 *e*P P 10 09 48.9 +1.6
MSU Marysvale 78.52 50 *e*P P 10 09 48.9 +1.6
VRI Vrincioaia 78.53 320 ⇑P P 10 09 48.4 +1.5
VRI Vrincioaia 78.53 320 ⇑*i*P P 10 09 48.4 +1.5
AVNT Avonos 78.55 310 *i*P P 10 09 48.1 +0.7
L20A Wamsutter 78.56 46 ⇓P P 10 09 47.3 -0.1
baz=78,SNR=5.2
PLOR Plostina 78.58 320 ⇑P P 10 09 48.2 +1.0
PLOR Plostina 78.58 320 ⇑*i*P P 10 09 48.2 +1.0
KOLS Kolonicke sedl 78.60 324 *e*P P 10 09 48.0 +0.8

KOLS pmax pmax
comp=Z,21nm,1.0s
KOLS Kolonicke sedl 78.60 324 *e*P **P 10 09 48.0 +0.8**
KOLS *e*PP **PP 10 12 46.2 +1.4**
GMRC Granite Mounta 78.61 55 ⇓P **P 10 09 48.2 +0.5**
baz=78
TMUT Trail Mountain 78.61 49 *e*P P 10 09 49.5 +1.7
comp=Z,12nm,0.9s
J22A Midwest 78.69 44 ⇑P **P 10 09 48.2 +0.2**
baz=78,SNR=38
BRTR Keskin Array B 78.69 312 P **P 10 09 48.0 -0.1**
BRTR pP **pP 10 10 00.4 -0.4**
BRTR PP **PP 10 12 49.0 +3.0**
BRTR Keskin Array B 78.69 312 P **P 10 09 48.0 -0.1**
comp=Z,14nm,1.0s,baz=97,slow=3.9,SNR=53
BRTR pP **pP 10 10 00.4 -0.4**
comp=Z,29nm,1.1s,baz=90,slow=4.9,SNR=12
BRTR PP **PP 10 12 49.0 +3.0**
comp=Z,3.5nm,1.0s,baz=74,slow=5.5,SNR=4.2
BRTR LR LR 10 49 07.4
comp=Z,236nm,19.0s,baz=209,slow=39
GRER 78.73 319 ⇑*i*P P 10 09 50.1 +2.1
K21A Alcova 78.77 45 ⇓P **P 10 09 48.7 +0.2**
baz=79,SNR=14
P17A Butcher Ranch, 78.78 49 ⇓P **P 10 09 49.4 +0.8**
baz=79,SNR=8.0
LDFC Landfair 78.79 54 *e*P **P 10 09 49.4 +0.8**
comp=Z,22nm,0.7s
LDFC *e*pP **pP 10 10 01.4 0.0**
N19A John Jarvie Ra 78.80 47 ⇓P **P 10 09 48.7 0.0**
baz=79,SNR=5.5
PFO Pinyon Flat Ob 78.80 56 *e*P **P 10 09 49.3 +0.5**
comp=Z,8.9nm,0.9s
PFO Pinyon Flat Ob 78.80 56 ⇓P **P 10 09 48.4 -0.3**
baz=79
UZH Uzhgorod 78.81 324 *e*P **P 10 09 49.1 +0.8**
UZH *e* 10 09 55.1
UZH *e* 10 10 00.9
UZH *e* 10 10 07.1
UZH *e* 10 12 47.0
UZH *e*S **S 10 19 42.0 -0.8**
UZH MLR MLR
comp=N,500nm,17.0s
UZH MLR MLR
comp=E,800nm,17.0s
UZH MLR MLR
comp=Z,400nm,17.0s
OJC Ojcow 78.81 326 ⇑*i*P **P 10 09 48.6 +0.3**
OJC *e* 10 09 59.8
OJC Ojcow 78.81 326 *e*P **P 10 09 48.7 +0.4**
comp=Z,61nm,1.0s
OJC Ojcow 78.81 326 *e*P **P 10 09 48.6 +0.3**
OJC *e*PcP **pP 10 09 59.8 -1.3**
H24A Dirks Ranch, A 78.84 42 ⇓P **P 10 09 48.8 0.0**
baz=79,SNR=11
BELC Belle Mtn. Jos 78.86 56 ⇓P **P 10 09 49.3 +0.2**
baz=79
Q16A Castle Valley 78.87 49 ⇑P **P 10 09 49.6 +0.5**
baz=79
P18A Preston Nutter 78.98 48 ⇓P **P 10 09 50.7 +0.8**
baz=79
M20A Sweetwater, Wa 78.99 46 ⇑P **P 10 09 50.0 +0.3**
baz=79,SNR=5.4
CRVS Cervenica-Dubn 79.00 324 *e*P **P 10 09 49.2 -0.2**
CRVS pmax pmax
comp=Z,20nm,1.4s
CRVS Cervenica-Dubn 79.00 324 *e*P **P 10 09 49.2 -0.2**
PGOR Pogoanele 79.04 319 ⇑*i*P P 10 09 53.0 +3.4
TRPA Tarpa 79.04 323 ⇓*i*P **P 10 09 50.8 +1.2**
TRPA Tarpa 79.04 323 ⇓*e*P **P 10 09 51.0 +1.4**
ANTO Ankara 79.10 312 ⇑P **P 10 09 50.4 +0.2**
ANTO Ankara 79.10 312 *e*P **P 10 09 51.1 +0.9**
ANTO Ankara 79.10 312 ⇑*i*P **P 10 09 50.4 +0.2**
ANTO Ankara 79.10 312 P **P 10 09 51.5 +1.3**
SNR=11
ISR Istrita 79.13 319 ⇑P **P 10 09 51.0 +0.8**
ISR Istrita 79.13 319 ⇑*i*P **P 10 09 51.0 +0.8**
L21A Rawlins 79.14 45 ⇑P **P 10 09 50.6 0.0**
baz=79,SNR=8.4
SRU San Rafael 79.14 49 *e*P **P 10 09 51.3 +0.7**
SRU pmax pmax
comp=Z,24nm,0.8s
SRU San Rafael 79.14 49 *e*P **P 10 09 51.3 +0.7**
comp=Z,24nm,0.8s
SRU San Rafael 79.14 49 ⇑P **P 10 09 50.7 +0.1**
baz=79,SNR=29
DOPR Dopca 79.14 320 ⇑*i*P P 10 09 53.2 +2.9
K22A Casper 79.17 44 ⇑P **P 10 09 50.7 +0.1**
baz=79,SNR=5.3
MLR Muntele Rosu 79.19 320 ⇓*i*P **P 10 09 50.7 +0.1**
MLR Muntele Rosu 79.19 320 LR LR 10 48 08.0
comp=Z,302nm,18.7s,baz=48,slow=38
ULM Lac du Bonnet 79.19 33 P **P 10 09 50.3 -0.1**
ULM Lac du Bonnet 79.19 33 P **P 10 09 50.3 -0.1**
comp=Z,13nm,0.9s,baz=306,slow=6.5,SNR=11
ULM LR LR 10 46 00.5
comp=Z,194nm,21.8s,baz=309,slow=36
J23A Dilts Ranch, B 79.20 43 ⇓P **P 10 09 50.8 0.0**
baz=79
MDND Maddock 79.20 37 ⇑P **P 10 09 50.9 +0.3**
baz=79,SNR=10
O19A Miners Draw (B 79.21 47 ⇑P **P 10 09 51.1 +0.1**
baz=79,SNR=5.1
MONP Monument Peak 79.26 57 ⇓P **P 10 09 51.5 +0.1**
baz=79
IRM Iron Mountain 79.33 55 ⇑P **P 10 09 51.9 +0.4**
baz=79,SNR=6.9
N20A Spence Gulch, 79.37 46 ⇑P **P 10 09 52.5 +0.6**
baz=79,SNR=13
M21A Separation Pea 79.38 45 ⇑P **P 10 09 52.0 +0.1**
baz=79,SNR=5.7
I24A Kuemmerle Ranc 79.40 42 ⇑P **P 10 09 51.8 0.0**
baz=79
SECR 79.43 319 ⇑*i*P P 10 09 54.0 +2.2
BC3 Big Chuckawall 79.44 56 ⇓P **P 10 09 52.3 +0.1**
baz=79
RSSD Black Hills 79.54 42 *e*P **P 10 09 52.5 -0.2**
RSSD pmax pmax
comp=Z,16nm,1.1s
RSSD Black Hills 79.54 42 *e*P **P 10 09 52.5 -0.2**
comp=Z,16nm,1.1s
GULE Gulek 79.54 309 *i*P **P 10 09 53.4 +0.6**
W13A Hualapai Mount 79.57 54 ⇑P **P 10 09 53.3 +0.3**
baz=79,SNR=6.8
K23A Bowen Ranch, D 79.59 44 ⇑P **P 10 09 52.8 -0.2**
baz=79
DVTC Desert V Tower 79.61 57 ⇓P **P 10 09 53.8 +0.6**
baz=80,SNR=6.2
L22A Ellis Ranch, M 79.62 45 ⇑P **P 10 09 53.1 -0.1**
baz=79
SWSC Sam W. Stewart 79.64 57 ⇓P **P 10 09 53.7 +0.5**
baz=80
VOIR 79.68 320 ⇑P **P 10 09 54.2 +0.9**
VOIR 79.68 320 ⇑*i*P **P 10 09 54.2 +0.9**
P19A Cripple Cowboy 79.72 48 ⇓P **P 10 09 54.0 +0.2**
baz=80,SNR=20
U15A North Rim 79.75 52 ⇓P **P 10 09 54.7 +0.7**
baz=80,SNR=13
BSEG Bad Segeberg 79.80 333 *e*P **P 10 09 53.8 +0.2**
BSEG *e**PP **pP 10 10 06.6 +0.2**
BSEG pmax pmax
comp=Z,86nm,1.0s
BSEG Bad Segeberg 79.80 333 *e*P **P 10 09 53.8 +0.2**
comp=Z,86nm,1.0s
BSEG *e*pP **pP 10 10 06.6 +0.2**
OKC Ostrava-Krasne 79.82 327 *e*P **P 10 09 54.8 +1.0**
OKC *e* 10 10 07.2
OKC MLR MLR
comp=Z,800nm,15.9s
OKC Ostrava-Krasne 79.82 327 *e*P **P 10 09 54.8 +1.0**
OKC *e*pP **pP 10 10 07.2 +0.6**
OKC AMS AMS 10 48 00.0
comp=Z,800nm,15.9s
O20A White River Ci 79.83 47 ⇑P **P 10 09 54.3 -0.1**
baz=80,SNR=6.1
N21A Black Mountain 79.84 46 ⇑P **P 10 09 54.6 +0.1**
baz=80,SNR=7.4
KSP Ksiaz 79.86 328 ⇑*e*P **P 10 09 54.5 +0.5**
KSP *e**PP **pP 10 10 07.2 +0.4**
KSP MLR MLR
comp=Z,2μm,18.8s
KSP Ksiaz 79.86 328 *e*P **P 10 09 54.6 +0.5**
KSP *e* 10 10 07.2
PDMCI Parker Dam,Lak 79.90 55 ⇑P **P 10 09 55.1 +0.6**
baz=80,SNR=6.5
DRGR 79.90 322 ⇑P **P 10 09 55.2 +0.8**
DRGR 79.90 322 ⇑*i*P **P 10 09 55.2 +0.8**
ARR Arges 79.94 320 ⇓*i*P **P 10 09 56.0 +1.3**
M22A Cedar Creek Ra 79.95 45 ⇓P **P 10 09 55.0 0.0**
baz=80,SNR=8.3
L23A Garrett 79.98 44 ⇑P **P 10 09 55.0 -0.1**
baz=80,SNR=11
Y12C Blythe 79.99 55 ⇑P **P 10 09 55.2 +0.2**
baz=80
Q19A Hogan Spring (80.00 48 ⇓P **P 10 09 55.2 +0.1**
baz=80,SNR=19
MORC Moravsky Berou 80.13 327 ⇑P **P 10 09 56.8 +1.2**
MORC Moravsky Berou 80.13 327 *e*P **P 10 09 56.5 +0.9**
comp=Z,38nm,1.0s
MORC Moravsky Berou 80.13 327 ⇑*i*P **P 10 09 56.8 +1.2**
P20A De Beque 80.16 48 ⇑P **P 10 09 56.0 -0.1**
baz=80
GLA Glamis 80.22 56 *e*P **P 10 09 57.3 +0.9**
GLA *e**PP **pP 10 10 08.2 -0.9**
GLA pmax pmax
comp=Z,26nm,1.1s
GLA Glamis 80.22 56 *e*P **P 10 09 57.3 +0.9**
comp=Z,26nm,1.1s
GLA *e*pP **pP 10 10 08.2 -0.9**
GLA Glamis 80.22 56 ⇓P **P 10 09 56.3 -0.1**
baz=80
DPC Dobruska-Polom 80.22 328 *e*P **P 10 09 57.2 +1.1**
DPC *e* 10 10 05.2
DPC *e* 10 10 09.2
DPC MLR MLR
comp=Z,700nm,18.8s
DPC Dobruska-Polom 80.22 328 *e*P **P 10 09 56.8 +0.7**
comp=Z,51nm,1.2s
DPC Dobruska-Polom 80.22 328 *e*P **P 10 09 57.2 +1.1**
DPC *e*PCP **pP 10 10 05.2 -3.6**
DPC *e*pP **pwP 10 10 09.2 +0.4**
DPC AMS AMS 10 48 40.0
comp=Z,700nm,18.8s
UPC Upice 80.23 328 *e*P **P 10 09 56.9 +0.8**
UPC *e* 10 10 08.2
UPC Upice 80.23 328 *e*P **P 10 09 56.9 +0.8**
UPC *e*PCP **PcP 10 10 04.6 +1.4**
UPC *e*pP **pP 10 10 08.2 -0.6**
LOT Lotru 80.32 321 ⇑*i*P **P 10 09 57.6 +0.8**
HUMR Humele 80.34 320 ⇓*i*P **P 10 09 58.0 +1.2**
S18A Hurst Farm, Bl 80.37 50 ⇓P **P 10 09 57.0 -0.3**
baz=80,SNR=15
M23A Laramie 80.39 45 ⇓P **P 10 09 57.3 -0.1**
baz=80,SNR=7.3
N22A Wattenberg Ran 80.42 46 ⇓P **P 10 09 58.0 +0.3**
baz=80,SNR=6.9
PSZ Piszkesteto 80.44 324 *e*P **P 10 09 58.4 +1.1**
PSZ *e**PP **pP 10 10 11.5 +1.4**
PSZ pmax pmax
comp=Z,49nm,1.0s
PSZ Piszkesteto 80.44 324 *e*P **P 10 09 58.4 +1.1**
comp=Z,49nm,1.0s
PSZ *e*pP **pP 10 10 11.4 +1.4**
PSZ Piszkesteto 80.44 324 ⇑*i*P **P 10 09 58.1 +0.8**
PSZ Piszkesteto 80.44 324 ⇓*e*P **P 10 09 58.6 +1.3**
DEV Deva 80.45 322 P **P 10 09 58.5 +1.2**
DEV Deva 80.45 322 ⇓*i*P P 10 09 59.5 +2.2
SEYT Eskypehyr 80.47 313 *i*P **P 10 09 57.8 +0.1**
VYHS Vyhne 80.50 325 *e*P **P 10 09 57.9 +0.3**
VYHS pmax pmax
comp=Z,15nm,1.1s
VYHS Vyhne 80.50 325 *e*P **P 10 09 57.9 +0.3**
VYHS *e*pP **pP 10 10 09.3 -1.0**
VYHS *e*PP **PP 10 13 03.3 +2.8**
Q20A Ridgley Place, 80.57 48 ⇑P **P 10 09 58.7 +0.4**
baz=80,SNR=12
PV04 Paradox Valley 80.57 49 *e*P **P 10 09 59.5 +1.1**
AGMN Agassiz Nation 80.63 35 *e*P **P 10 09 57.9 -0.3**
comp=Z,20nm,1.0s
AGMN *e*pP **pP 10 10 10.9 -0.1**
K25A Mack Ranch, Ha 80.65 43 ⇓P **P 10 09 58.7 +0.1**
baz=80
N23A Red Feather La 80.65 45 ⇑P **P 10 09 59.3 +0.4**
baz=80,SNR=12
PHWY Pilot Hill 80.66 45 *e*P **P 10 09 59.5 +0.7**
comp=Z,10nm,1.0s
P21A Newcastle 80.69 47 ⇑P **P 10 09 59.3 +0.3**
baz=80,SNR=7.4
O22A Kremmling 80.80 46 ⇓P **P 10 09 59.7 0.0**
baz=81,SNR=9.4
BRG Berggiesshubel 80.81 329 *e*P **P 10 09 59.5 +0.4**
comp=Z,24nm,1.0s
BRG *e* 10 10 11.6
comp=Z,24nm,1.1s
BRG
comp=N,630nm,13.1s
BRG
comp=E,437nm,17.9s
BRG
comp=Z,916nm,14.9s
BRG Berggiesshubel 80.81 329 *e*P **P 10 09 59.5 +0.4**
BRG *e* 10 10 11.6
BRG pmax pmax
comp=Z,6.0nm,0.9s
BRG MLR MLR
comp=N,24μm,13.1s
BRG MLR MLR
comp=E,630nm,17.9s
BRG MLR MLR
comp=Z,437nm,14.9s
BRG Berggiesshubel 80.81 329 *e*P **P 10 09 59.2 +0.1**
comp=Z,27nm,1.0s
BRG *e*pP **pP 10 10 11.8 -0.1**
PVCC Panska Ves 80.82 329 *e*P **P 10 10 00.2 +1.0**
PVCC Panska Ves 80.82 329 *e*P **P 10 10 00.2 +1.0**
CLL Collm 80.85 330 ⇑*i*P **P 10 09 59.1 -0.2**
CLL *i**PP **pP 10 10 11.7 -0.4**
CLL pmax pmax
comp=Z,55nm,1.0s
CLL MLR MLR
comp=Z,700nm,18.3s
CLL Collm 80.85 330 *e*P **P 10 09 59.2 -0.1**
comp=Z,54nm,1.0s
CLL *e*pP **pP 10 10 11.9 -0.2**
CLL Collm 80.85 330 ⇑*i*P **P 10 09 59.1 -0.2**
comp=Z,55nm,1.0s
CLL *i*pP **pP 10 10 11.7 -0.4**
CLL *es*PcP 10 10 25.0
CLL *e*PP **PP 10 13 01.0 -2.3**
CLL *es*S **sS 10 20 30.0 +4.4**
CLL *e*PPS PPS 10 21 12.0
CLL *e*SS SS 10 25 48.0 +31
CLL *e*SSSS 10 31 42.0
CLL Lm MLR 10 48 00.0
comp=Z,700nm,18.3s
Y14A Wickenburg 80.86 54 ⇓P **P 10 09 59.9 +0.1**
baz=81,SNR=12
GZR Gura Zlata 80.86 321 ⇑P **P 10 09 59.5 -0.1**
GZR Gura Zlata 80.86 321 ⇑*i*P **P 10 09 59.5 -0.1**
VRAC Vranov 80.89 327 ⇑*i*P **P 10 10 01.0 +1.4**
VRAC Vranov 80.89 327 LR LR 10 49 28.0
comp=Z,920nm,18.5s,baz=40,slow=38
M24A Cheyenne 80.90 44 ⇑P **P 10 10 00.4 +0.4**
baz=81,SNR=8.1
WUAZ Wupatki 80.90 52 *e*P **P 10 10 01.2 +1.1**
comp=Z,27nm,1.0s
WUAZ *e*pP **pP 10 10 14.6 +1.7**
WUAZ Wupatki 80.90 52 ⇑P **P 10 10 00.9 +0.8**
baz=81,SNR=13
PV01 Paradox Valley 80.94 49 *e*P **P 10 10 01.3 +0.9**
comp=Z,2μm,1.2s
K26A Motz Farm, Whi 80.96 42 ⇑P **P 10 10 00.4 +0.1**
baz=81,SNR=8.6
FBE Freiberg 81.01 330 *e*P **P 10 10 00.6 +0.4**
comp=Z,54nm,1.0s
FBE *e*pP **pP 10 10 13.1 +0.1**
R20A Redvale 81.02 49 ⇓P **P 10 10 01.1 +0.3**
baz=81,SNR=19
NRDL Niedersach Rie 81.03 332 *e*P **P 10 10 00.4 +0.3**
comp=Z,19nm,1.0s
P22A Eagle 81.05 47 ⇑P **P 10 10 01.4 +0.5**
baz=81,SNR=19
Q21A Lamborn Mesa, 81.07 48 ⇓P **P 10 10 01.6 +0.6**
baz=81,SNR=25
113A Mohawk Valley, 81.09 56 ⇑P **P 10 10 01.7 +0.7**
baz=81,SNR=7.9
SMOL Smolenice 81.12 326 *e*P **P 10 10 02.3 +1.5**
SMOL *e* 10 10 14.9
SMOL Smolenice 81.12 326 *e*P **P 10 10 02.3 +1.5**
SMOL *e*pP **pP 10 10 14.9 +1.3**
O23A Lake Granby, G 81.12 46 ⇑P **P 10 10 02.4 +1.0**
baz=81,SNR=8.6
BUD Budapest 81.16 325 ⇓*e*P **P 10 10 02.4 +1.4**
PRU Pruhonice 81.24 329 *e*P **P 10 10 02.2 +0.7**
PRU *e* 10 10 13.6
PRU MLR MLR
comp=Z,800nm,16.9s
PRU Pruhonice 81.24 329 *e*P **P 10 10 02.2 +0.7**
PRU *e*PCP **PcP 10 10 08.0 +0.4**
PRU *e*pP **pP 10 10 13.6 -0.7**
PRU AMS AMS 10 48 50.0
comp=Z,800nm,16.9s
Z14A Wintersburg 81.26 55 ⇓P **P 10 10 02.5 +0.7**
baz=81
S20A Disappointment 81.26 49 ⇓P **P 10 10 02.7 +0.5**
baz=81,SNR=9.1
BZS Buzias 81.27 322 ⇓P **P 10 10 01.5 -0.2**
BZS Buzias 81.27 322 ⇓*i*P **P 10 10 01.5 -0.2**
N24A Carr 81.30 45 ⇑P **P 10 10 02.8 +0.7**
baz=81
TREC Trest 81.37 328 *e*P P 10 09 56.1 -6.1
TREC *e* 10 10 02.5
TREC MLR MLR
comp=Z,800nm,15.9s
TREC Trest 81.37 328 *e*P **P 10 10 02.5 +0.3**
TREC AMS AMS 10 49 10.0
comp=Z,800nm,15.9s
R21A Cimarron 81.39 48 ⇓P **P 10 10 03.6 +0.8**
baz=81,SNR=12
NEUB Neuenburg 81.41 331 *e*P **P 10 10 02.9 +0.6**
comp=Z,78nm,1.2s
NEUB *e*pP **pP 10 10 15.2 +0.1**
Q22A Crested Butte, 81.44 47 ⇓P **P 10 10 03.8 +0.7**
baz=81,SNR=18
CLZ Clausthal 81.45 332 *e*P **P 10 10 02.7 +0.1**
CLZ pmax pmax
comp=Z,63nm,1.1s
CLZ Clausthal 81.45 332 *e*P **P 10 10 02.7 +0.1**
comp=Z,63nm,1.1s
K27A Flueckinger Fa 81.46 42 ⇓P **P 10 10 03.6 +0.7**
baz=81,SNR=10
ZST Bratislava 81.50 326 *e*P **P 10 10 03.6 +0.8**
ZST *e* 10 10 15.1
ZST Bratislava 81.50 326 *e*P **P 10 10 03.6 +0.8**
ZST *e*pP **pP 10 10 15.1 -0.5**
X16A Lo Mia Camp, P 81.56 53 ⇓P **P 10 10 04.5 +0.8**
baz=81,SNR=15
ISCO Idaho Springs 81.57 46 *e*P **P 10 10 04.8 +1.0**
ISCO *e**PP **pP 10 10 17.7 +1.1**
ISCO pmax pmax
comp=Z,43nm,1.9s
ISCO Idaho Springs 81.57 46 *e*P **P 10 10 04.8 +1.0**
comp=Z,43nm,1.9s
ISCO *e*pP **pP 10 10 17.7 +1.1**
ISCO Idaho Springs 81.57 46 ⇓P **P 10 10 03.8 0.0**
baz=81
MVCO Mesa Verde 81.58 49 *e*P **P 10 10 04.6 +0.8**
comp=Z,20nm,1.2s
MVCO Mesa Verde 81.58 49 ⇑P **P 10 10 04.4 +0.5**
baz=81,SNR=8.2
O24A Longmont 81.66 45 ⇓P **P 10 10 04.9 +0.8**
baz=82,SNR=8.8
S21A Coal Bank Pass 81.72 49 ⇑P **P 10 10 05.2 +0.6**
baz=82,SNR=6.4
P23A Jefferson 81.73 46 ⇑P **P 10 10 04.7 0.0**
baz=82
TANN Tannenbergstha 81.76 330 *e*P **P 10 10 04.2 -0.1**
comp=Z,13nm,1.1s
TANN *e*pP **pP 10 10 16.9 -0.2**
WERD Werda 81.80 330 *e*P **P 10 10 04.6 +0.2**
comp=Z,19nm,1.2s
WERD *e*pP **pP 10 10 17.3 +0.1**
PLN Plauen 81.83 330 *e*P **P 10 10 04.8 +0.2**
comp=Z,95nm,1.3s
PLN *e*pP **pP 10 10 17.4 0.0**
GUNZ Gunzen 81.86 330 *e*P **P 10 10 05.0 +0.3**
comp=Z,26nm,1.1s
GUNZ *e*pP **pP 10 10 17.6 +0.1**
WERN Wernitzgruen 81.90 330 *e*P **P 10 10 05.1 +0.1**
comp=Z,26nm,1.1s
WERN *e*pP **pP 10 10 17.7 -0.1**
NKC Novy Kostel 81.91 330 *e*P **P 10 10 05.7 +0.7**
NKC *e* 10 10 12.5
NKC *e* 10 10 18.2
NKC MLR MLR
comp=Z,700nm,15.5s
NKC Novy Kostel 81.91 330 *e*P **P 10 10 05.7 +0.7**
NKC *e*PCP **PcP 10 10 12.5 +1.9**
NKC *e*pP **pP 10 10 18.2 +0.4**
NKC AMS AMS 10 50 00.0
comp=Z,700nm,15.5s
MOX Moxa 81.92 330 *e*P **P 10 10 05.0 0.0**
MOX *e**PP **pP 10 10 17.8 0.0**
MOX pmax pmax
comp=Z,26nm,1.3s
MOX Moxa 81.92 330 *e*P **P 10 10 05.0 0.0**
comp=Z,26nm,1.3s
MOX *e*pP **pP 10 10 17.8 0.0**
CSS Prodhromos 81.92 308 *e*P **P 10 10 05.7 +0.4**
comp=Z,23nm,0.8s
BRSD Miller 81.94 39 ⇑P **P 10 10 05.2 -0.1**
baz=82
KHAL Karahalli 82.03 313 *i*P **P 10 10 05.6 -0.3**
IBBN Ibbenburen 82.03 333 *e*P **P 10 10 05.6 +0.1**
comp=Z,70nm,1.0s
Q23A Hartsel 82.04 47 ⇑P **P 10 10 06.8 +0.5**
baz=82
URZ Urewera 82.10 152 LR LR 10 41 35.6
comp=Z,540nm,20.8s,baz=154,slow=32
SOP Sopron 82.12 326 ⇑*e*P **P 10 10 07.0 +0.9**
P24A Kohler Place, 82.17 46 ⇓P **P 10 10 07.6 +0.8**
baz=82
BALY Balya 82.19 315 *i*P P 10 10 03.3 -3.4
O25A Wiggins 82.21 45 ⇑P **P 10 10 07.4 +0.5**
baz=82
214A Organ Pipe Nat 82.23 56 ⇓P **P 10 10 07.7 +0.7**
baz=82
S22A 4UR Ranch, Cre 82.23 48 ⇓P **P 10 10 08.5 +1.2**
baz=82,SNR=15
MANZ Manzenberg 82.24 330 *e*P **P 10 10 07.0 +0.2**
comp=Z,29nm,1.1s
CONA Conrad Observa 82.25 327 ⇑*i*P **P 10 10 07.5 +0.6**
comp=Z,37nm,1.1s,SNR=19
CONA Conrad Observa 82.25 327 ⇑*i*P **P 10 10 07.5 +0.6**
comp=Z,37nm,1.1s
KHC Kasperske Hory 82.31 328 *e*P **P 10 10 07.4 +0.3**
KHC *e* 10 10 13.1
KHC *e* 10 10 20.6
KHC MLR MLR
comp=Z,600nm,15.7s
KHC Kasperske Hory 82.31 328 *e*P **P 10 10 07.4 +0.3**
KHC Kasperske Hory 82.31 328 *e*P **P 10 10 07.4 +0.3**
KHC *e*PCP **PcP 10 10 13.1 +0.8**
KHC *e*pP **pP 10 10 20.6 +0.7**
KHC AMS AMS 10 49 40.0
comp=Z,600nm,15.7s
T21A Navajo Lake 82.31 49 ⇑P **P 10 10 08.3 +0.7**
baz=82
ROTZ Rotzenmuhle 82.37 330 *e*P **P 10 10 07.8 +0.4**
comp=Z,33nm,1.2s
ROTZ *e*pP **pP 10 10 20.5 +0.3**
Q24A Divide 82.40 46 ⇑P **P 10 10 08.4 +0.3**
baz=82
UBBA Unterbreizbach 82.41 331 *e*P **P 10 10 07.4 0.0**
comp=Z,21nm,1.4s
X18A Snowflake 82.43 52 ⇑P **P 10 10 08.6 +0.4**
baz=82
GEC2 GERESS Array S 82.47 328 *e*P **P 10 10 08.0 -0.1**
GEC2 *e**PP **pP 10 10 20.7 -0.2**
GEC2 pmax pmax
comp=Z,22nm,1.0s
GEC2 GERESS Array S 82.47 328 *e*P **P 10 10 08.0 -0.1**
comp=Z,22nm,1.0s
GEC2 *e*pP **pP 10 10 20.7 -0.2**
GERES GERESS Array B 82.47 328 P **P 10 10 07.8 -0.3**
GERES pP **pP 10 10 20.3 -0.6**
GERES GERESS Array B 82.47 328 P **P 10 10 07.8 -0.3**
comp=Z,15nm,0.9s,baz=49,slow=4.3,SNR=49
GERES pP **pP 10 10 20.3 -0.6**
comp=Z,8.7nm,0.9s,baz=44,slow=5.4,SNR=7.3
GERES LR LR 10 51 08.5
comp=Z,528nm,18.0s,baz=186,slow=39
R23A Moffat 82.53 47 ⇓P **P 10 10 09.5 +0.7**
baz=82,SNR=17
V20A Brimhall 82.53 50 ⇑P **P 10 10 09.2 +0.5**
baz=82,SNR=8.0
WET Wettzell 82.58 329 *e*P **P 10 10 09.1 +0.5**

WET e*PP pP 10 10 21.7 +0.3
WET pmax pmax
comp=Z,31nm,1.2s
WET Wettzell 82.58 329 eP P 10 10 09.1 +0.5
comp=Z,31nm,1.2s
WET epP pP 10 10 21.7 +0.3
P25A Willow Gulch B 82.59 45 ⇑P P 10 10 09.4 +0.4
baz=82,SNR=6.9
U21A Nageezi 82.61 49 ⇓P P 10 10 09.9 +0.7
baz=82,SNR=9.6
N27A Anderson Farm, 82.61 43 ⇓P P 10 10 09.1 +0.1
baz=82
VTS Vitosha 82.62 319 P P 10 10 09.4 +0.4
VTS Vitosha 82.62 319 ⇑P P 10 10 09.6 +0.6
VTS Vitosha 82.62 319 ⇑iP P 10 10 09.6 +0.6
T22A Edith 82.67 49 ⇓P P 10 10 10.1 +0.5
baz=82,SNR=12
S23A Nye Farm, Mont 82.75 48 ⇓P P 10 10 10.7 +0.7
baz=83,SNR=6.9
OGNE Ogallala 82.79 43 eP P 10 10 10.0 +0.2
comp=Z,26nm,1.4s
OGNE epP pP 10 10 23.4 +0.7
OGNE Ogallala 82.79 43 ⇑P P 10 10 09.9 0.0
baz=83
GRF Grafenberg Arr 82.83 330 eP P 10 10 10.3 +0.5
GRF e*PP pP 10 10 22.0 -0.6
GRF pmax pmax
comp=Z,50nm,1.0s
GRF MLR MLR
comp=Z,600nm,18.7s
GRF Grafenberg Arr 82.83 330 eP P 10 10 10.3 +0.5
comp=Z,50nm,1.0s
GRF epP pP 10 10 22.0 -0.6
GRF eL L 10 51 28.8
comp=Z,570nm,18.7s
ESK Eskdalemuir 82.88 341 eP P 10 10 10.4 +0.5
ESK Eskdalemuir 82.88 341 eP P 10 10 10.4 +0.5
ARSA Arzberg 82.91 326 ⇑iP P 10 10 10.8 +0.5
comp=Z,18nm,1.0s,SNR=6.9
ARSA Arzberg 82.91 326 ⇑iP P 10 10 10.8 +0.5
comp=Z,18nm,1.0s
BUG Bochum--Univer 82.92 333 eP P 10 10 10.0 -0.2
comp=Z,25nm,0.8s
R24A Sanders Place, 82.92 47 ⇓P P 10 10 11.0 +0.3
baz=83,SNR=7.7
BEHE Becsehely 82.94 325 ⇓eP P 10 10 23.5 +13
W20A Ramah 82.95 51 ⇑P P 10 10 11.3 +0.3
baz=83,SNR=7.8
Q25A Bedland, Calha 82.95 46 ⇓P P 10 10 11.3 +0.4
baz=83,SNR=13
MOA Molln 83.00 327 ⇑iP P 10 10 10.7 -0.1
comp=Z,24nm,1.2s,SNR=10
MOA Molln 83.00 327 ⇑iP P 10 10 10.7 -0.1
comp=Z,24nm,1.2s
P26A Davis Ranch, A 83.02 45 ⇑P P 10 10 11.0 -0.2
baz=83
V21A Milan 83.03 50 ⇑P P 10 10 11.6 +0.2
baz=83
O27A Beecher Island 83.07 44 ⇑P P 10 10 11.1 -0.3
baz=83
U22A Llaves 83.12 49 ⇑P P 10 10 12.4 +0.5
baz=83,SNR=7.1
DIVS Divibare 83.17 322 P P 10 10 11.6 -0.2
T23A Casias Ranch, 83.17 48 ⇓P P 10 10 13.1 +1.0
baz=83,SNR=10
S24A Houchin Ranch, 83.25 47 ⇑P P 10 10 13.4 +0.8
baz=83,SNR=5.7
X20A Quemado 83.33 51 ⇑P P 10 10 13.9 +0.9
baz=83,SNR=15
Q26A Hugo 83.36 45 ⇑P P 10 10 12.9 0.0
baz=83
AKAS Kas 83.38 311 iP P 10 10 08.6 -4.4
V22A San Miguel Ran 83.40 49 ⇑P P 10 10 14.0 +0.7
baz=83,SNR=10
R25A Fountain Ranch 83.45 46 ⇑P P 10 10 13.5 +0.1
baz=83,SNR=8.8
TNS Taunus Mts 83.47 332 eP P 10 10 13.3 +0.1
TNS pmax pmax
comp=Z,16nm,0.9s
TNS Taunus Mts 83.47 332 eP P 10 10 13.3 +0.1
comp=Z,16nm,0.9s
W21A San Fidel 83.48 50 ⇓P P 10 10 14.0 +0.3
baz=83
U23A El Rito 83.56 49 ⇑P P 10 10 15.1 +1.0
baz=83,SNR=33
PERS Pernice 83.56 326 iP P 10 10 13.7 0.0
PERS epP pP 10 10 26.2 -0.3
SOKA Soboth 83.57 326 ⇑iP P 10 10 13.7 -0.1
comp=Z,57nm,1.1s
SOKA Soboth 83.57 326 ⇑iP P 10 10 13.7 -0.1
comp=Z,57nm,1.1s
ECSD EROS Data Cent 83.61 38 eP P 10 10 14.0 0.0
comp=Z,15nm,0.9s
ECSD epP pP 10 10 26.9 +0.1
S25A Robets Cordova 83.69 47 ⇑P P 10 10 14.7 -0.1
baz=84
RJOB Jochberg 83.72 328 eP P 10 10 14.9 +0.4
comp=Z,38nm,0.9s
T24A Torres, Weston 83.73 48 ⇑P P 10 10 16.1 +1.1
baz=84,SNR=21
KNT Kendrikon 83.79 318 P P 10 10 14.8 -0.1
KSCO Kaye Shedlock' 83.80 45 ⇓P P 10 10 14.9 -0.3
baz=84
Y20A Horse Springs, 83.82 52 ⇑P P 10 10 16.6 +1.1
baz=84,SNR=16
R26A Arlington 83.83 46 ⇑P P 10 10 15.6 +0.2
baz=84,SNR=9.7
X21A Alamocita Cree 83.84 51 ⇓P P 10 10 16.5 +0.9
baz=84,SNR=13
TOD Tromm 83.84 331 eP P 10 10 15.2 +0.2
TOD Tromm 83.84 331 eP P 10 10 15.2 +0.2
VAY Valandovo 83.85 318 P P 10 10 14.5 -0.7
VAY Valandovo 83.85 318 eP P 10 10 14.0 -1.2
V23A Ortiz Mt. (NFS 83.95 49 ⇑P P 10 10 17.4 +1.3
baz=84,SNR=9.1
SKO Skopje 83.98 320 eP P 10 10 14.8 -1.1
W22A Albuquerque 83.99 50 ⇓P P 10 10 17.4 +1.1
baz=84
KBA Koelnbreinsper 84.00 327 ⇓iP P 10 10 16.0 0.0
KBA pmax pmax
comp=Z,19nm,0.9s
KBA Koelnbreinsper 84.00 327 ⇓iP P 10 10 16.0 0.0
comp=Z,19nm,0.9s,SNR=7.2
KBA Koelnbreinsper 84.00 327 ⇓iP P 10 10 16.0 0.0
comp=Z,19nm,0.9s
FUR Furstenfeldbru 84.01 329 eP P 10 10 16.3 +0.4
FUR pmax pmax
comp=Z,68nm,1.0s
FUR Furstenfeldbru 84.01 329 eP P 10 10 16.3 +0.4
comp=Z,68nm,1.0s
BEBN Eben Emael 84.02 334 P P 10 10 16.7 +0.9
comp=Z,9.8nm,1.0s
U24A Moreno Valley 84.05 48 ⇑P P 10 10 17.7 +1.1
baz=84,SNR=11
MEM Membach 84.05 333 P P 10 10 16.7 +0.7
comp=Z,16nm,1.1s
MEM AP pP 10 10 28.3 -0.6
PDKS Podkum 84.05 326 eP P 10 10 15.8 -0.4
PLG Polygyros 84.06 317 P P 10 10 15.8 -0.5
T25A Trinidad 84.06 47 ⇑P P 10 10 17.2 +0.5
baz=84,SNR=14
Y21A Point of Rocks 84.19 51 ⇑P P 10 10 18.7 +1.3
baz=84,SNR=13
R27A Eads 84.21 45 ⇓P P 10 10 17.0 -0.2
baz=84
Z20A Nine Sixteen R 84.21 52 ⇑P P 10 10 18.3 +0.9
baz=84,SNR=23
MYKA Terra Mystica 84.22 327 ⇑iP P 10 10 16.3 -0.7
comp=Z,21nm,1.1s
MYKA Terra Mystica 84.22 327 ⇑iP P 10 10 16.3 -0.7
comp=Z,21nm,1.1s
PAIG Paliouri 84.25 317 P P 10 10 16.9 -0.3
LAZ Ladron 84.27 51 epP pP 10 10 32.4 +1.9
X22A Bernardo 84.28 51 ⇓P P 10 10 18.5 +0.8
baz=84
ARG Arkhangelos 84.28 312 P P 10 10 17.5 0.0
S26A Kim 84.28 46 ⇓P P 10 10 17.3 -0.4
baz=84
SPMN St. Paul 84.32 35 ⇓P P 10 10 17.6 0.0
baz=84
ANMO Albuquerque 84.32 50 eP P 10 10 17.8 -0.2
comp=Z,22nm,1.1s
ANMO epP pP 10 10 32.7 +1.9
ANMO Albuquerque 84.32 50 LR LR 10 43 56.0
comp=Z,164nm,21.2s,baz=204,slow=33
STU Stuttgart 84.36 331 eP P 10 10 18.7 +1.0

STU pmax pmax
comp=Z,49nm,0.9s
STU Stuttgart 84.36 331 eP P 10 10 18.3 +0.6
comp=Z,70nm,1.1s
STU epP pP 10 10 30.4 -0.1
STU Stuttgart 84.36 331 eP P 10 10 18.7 +1.0
comp=Z,49nm,0.9s
W23A Werner Place, 84.36 50 ⇓P P 10 10 19.0 +0.8
baz=84,SNR=10
BOJS Bojanci 84.36 325 eP P 10 10 17.5 -0.3
RUP Ruppelstein 84.42 332 eP P 10 10 17.8 -0.2
RUP Ruppelstein 84.42 332 eP P 10 10 17.8 -0.2
BCLA Clavier 84.46 334 P P 10 10 18.4 +0.3
comp=Z,14nm,1.1s
V24A Rampart Ranch, 84.51 49 ⇓P P 10 10 19.9 +0.9
baz=84,SNR=22
T26A Comanche Natio 84.52 47 ⇑P P 10 10 19.2 +0.3
baz=84,SNR=21
BGNE Belgrade 84.53 41 ⇑P P 10 10 18.6 -0.1
baz=84
CEY Cerknica 84.56 326 eP P 10 10 18.0 -0.8
CEY epP pP 10 10 30.8 -0.8
S27A Las Animas 84.56 46 ⇓P P 10 10 19.3 +0.2
baz=84
U25A Circle Dot Ran 84.57 48 ⇓P P 10 10 19.8 +0.5
baz=84,SNR=13
WTTA Wattenberg 84.58 328 ⇓iP P 10 10 18.5 -0.5
WTTA pmax pmax
comp=Z,16nm,1.0s
WTTA Wattenberg 84.58 328 ⇓iP P 10 10 18.5 -0.5
comp=Z,16nm,1.0s
WTTA Wattenberg 84.58 328 ⇓iP P 10 10 18.5 -0.5
comp=Z,16nm,1.0s
ABTA Abfaltersbach 84.61 328 ⇑iP P 10 10 18.0 -1.1
comp=Z,21nm,1.1s
ABTA Abfaltersbach 84.61 328 ⇑iP P 10 10 18.0 -1.1
comp=Z,21nm,1.1s
LPM Los Pinos Moun 84.64 50 eP P 10 10 20.5 +0.9
comp=Z,2.3nm,0.8s
LPM epP pP 10 10 33.5 +1.1
Z21A St. Cloud Mine 84.66 52 ⇑P P 10 10 20.6 +0.8
baz=84,SNR=13
AOS Alonnisos 84.67 316 P P 10 10 18.9 -0.5
Y22A Socorro 84.68 51 ⇑P P 10 10 20.4 +0.6
baz=84,SNR=5.4
PPT Papeete 84.71 117 LR LR 10 43 40.1
comp=Z,542nm,18.3s,baz=339,slow=32
PPT2 Papeete2 84.73 117 eS S 10 20 46.4 +1.7
comp=Z,133nm,25.2s
PPT2 eSS SS 10 26 24.5 +6.8
comp=Z,142nm,25.2s
PPT2 eLR LR 10 36 42.5
comp=Z,2µm,29.8s,baz=312
LANF Langenberg 84.73 331 eP P 10 10 19.5 0.0
LANF Langenberg 84.73 331 eP P 10 10 19.5 0.0
LANF Langenberg 84.73 331 eP P 10 10 19.5 0.0
X23A Hourglass Bar 84.73 50 ⇑P P 10 10 20.3 +0.2
baz=85
MOTA Moosalm 84.73 329 ⇑iP P 10 10 19.5 -0.3
MOTA pmax pmax
comp=Z,26nm,1.0s
MOTA Moosalm 84.73 329 ⇑iP P 10 10 19.5 -0.3
comp=Z,26nm,1.0s
MOTA Moosalm 84.73 329 ⇑iP P 10 10 19.5 -0.3
comp=Z,26nm,1.0s
SNF Seneffe 84.75 334 P P 10 10 19.8 +0.2
comp=Z,22nm,1.1s
SNF AP pP 10 10 32.6 +0.2
BNM Barren Site 84.75 51 eP P 10 10 21.1 +0.9
comp=Z,15nm,1.3s
BNM epP pP 10 10 34.6 +1.5
RETA Reutte 84.76 329 ⇑iP P 10 10 19.7 -0.1
comp=Z,46nm,0.9s,SNR=22
RETA Reutte 84.76 329 ⇑iP P 10 10 19.7 -0.1
comp=Z,46nm,0.9s
LIT Litokhoron 84.77 318 P P 10 10 19.2 -0.7
W24A Lazy 6 Ranch, 84.78 49 ⇑P P 10 10 21.2 +0.9
baz=85,SNR=16
WLF Walferdange 84.78 333 P P 10 10 20.4 +0.7
comp=Z,19nm,1.7s
WLF Walferdange 84.78 333 eP P 10 10 20.0 +0.2
comp=Z,47nm,1.5s
V25A Rancho No Teng 84.83 48 ⇓P P 10 10 21.4 +0.9
baz=85,SNR=22
GIVF Givet 84.90 334 eP P 10 10 20.0 -0.3
comp=Z,38nm,1.2s
GIVF epP pP 10 10 32.7 -0.5
GIVF Givet 84.90 334 eP P 10 10 20.0 -0.3
GIVF e*PP pP 10 10 32.7 -0.5
GIVF pmax pmax
comp=Z,38nm,1.2s
GIVF Givet 84.90 334 eP P 10 10 20.0 -0.3
comp=Z,38nm,1.2s
GIVF epP pP 10 10 32.7 -0.5
319A Douglas 84.91 54 ⇓P P 10 10 21.6 +0.8
baz=85,SNR=9.0
XOR Xorichti 84.91 317 P P 10 10 19.5 -1.1
U26A Atchley Ranch, 84.96 47 ⇑P P 10 10 21.9 +0.7
baz=85,SNR=14
DOU Dourbes 84.98 334 P P 10 10 20.3 -0.4
comp=Z,13nm,1.4s
SCHQ Schefferville 85.00 16 eP P 10 10 21.0 +0.2
comp=Z,25nm,1.1s
SCHQ Schefferville 85.00 16 P P 10 10 20.6 -0.1
comp=Z,21nm,1.1s,baz=358,slow=6.1,SNR=15
SCHQ LR LR 10 50 10.5
comp=Z,287nm,20.9s,baz=359,slow=37
RPZ Rata Peaks 85.04 159 LR LR 10 41 00.8
comp=Z,554nm,20.5s,baz=264,slow=30
220A Playas Peak, P 85.04 53 ⇓P P 10 10 22.1 +0.5
baz=85,SNR=6.7
BFO Black Forest 85.06 331 eP P 10 10 20.9 -0.3
BFO e*PP pP 10 10 33.9 -0.2
BFO pmax pmax
comp=Z,70nm,1.1s
BFO Black Forest 85.06 331 eP P 10 10 20.9 -0.3
comp=Z,70nm,1.1s
BFO epP pP 10 10 33.9 -0.2
BFO Black Forest 85.06 331 eP P 10 10 20.6 -0.6
BFO epP pP 10 10 34.9 +0.8
SPAK Spaichingen-Ko 85.06 330 eP P 10 10 21.3 0.0
T27A Campo 85.10 46 ⇑P P 10 10 21.8 0.0
baz=85
121A Cookes Peak, D 85.10 52 ⇑P P 10 10 22.8 +0.9
baz=85,SNR=11
Z22A Elephant Butte 85.14 51 ⇓P P 10 10 22.7 +0.7
baz=85,SNR=12
FETA Feichten 85.15 329 ⇑iP P 10 10 21.5 -0.3
comp=Z,24nm,1.0s,SNR=16
FETA Feichten 85.15 329 ⇑iP P 10 10 21.5 -0.3
comp=Z,24nm,1.0s
BAIF Baives 85.15 334 eP P 10 10 21.3 -0.3
comp=Z,45nm,1.1s
BAIF Baives 85.15 334 eP P 10 10 21.3 -0.3
BAIF pmax pmax
comp=Z,45nm,1.1s
BAIF Baives 85.15 334 eP P 10 10 21.3 -0.3
comp=Z,45nm,1.1s
MRKA Markates 85.16 316 P P 10 10 20.9 -1.0
X24A Lazy VL Ranch, 85.20 50 ⇓P P 10 10 23.2 +0.8
baz=85,SNR=8.4
APE Apeiranthos 85.21 314 ⇑P P 10 10 22.2 0.0
APE Apeiranthos 85.21 314 ⇑iP P 10 10 22.2 0.0
SMIA Simia 85.25 316 P P 10 10 21.3 -1.0
Y23A Lovelace Mesa, 85.25 50 ⇑P P 10 10 23.2 +0.6
baz=85,SNR=14
DAVA Damuels 85.28 329 ⇑iP P 10 10 22.4 -0.1
comp=Z,59nm,1.0s,SNR=17
DAVA Damuels 85.28 329 ⇑iP P 10 10 22.4 -0.1
comp=Z,59nm,1.0s
NEST Nestorio 85.31 319 P P 10 10 22.1 -0.6
W25A X Bar L Ranch, 85.34 49 ⇑P P 10 10 24.0 +1.0
baz=85,SNR=24
V26A Tequesquite Ra 85.35 48 ⇓P P 10 10 23.7 +0.6
baz=85,SNR=18
CDF Champ du Feu 85.40 331 ⇑iP P 10 10 22.8 -0.2
comp=Z,87nm,1.0s
CDF epP pP 10 10 35.3 -0.6
CDF Champ du Feu 85.40 331 ⇑iP P 10 10 22.8 -0.2
CDF e*PP pP 10 10 35.3 -0.6
CDF pmax pmax
comp=Z,87nm,1.0s
CDF Champ du Feu 85.40 331 ⇑iP P 10 10 22.8 -0.2
comp=Z,87nm,1.0s
CDF epP pP 10 10 35.3 -0.6
T28A Walsh 85.41 46 ⇑P P 10 10 23.0 -0.2
baz=85
320A Kipp Ranch, An 85.42 54 ⇓P P 10 10 23.9 +0.5
baz=85,SNR=7.3
221A Mesquite Ranch 85.45 53 ⇑P P 10 10 23.8 +0.2
baz=85
U27A Thompson Grove 85.48 47 ⇑P P 10 10 24.2 +0.5
baz=85,SNR=11
ATAL Atalanti 85.48 316 P P 10 10 22.5 -1.0
122A Conniff Cattle 85.48 52 ⇑P P 10 10 24.0 +0.2
baz=85
LKR Lokris 85.52 316 P P 10 10 22.1 -1.6
FELD Feldberg im Sc 85.55 331 eP P 10 10 23.4 -0.4
Z23A Rita Site, Whi 85.59 51 ⇑P P 10 10 24.8 +0.6
baz=85,SNR=7.3
ECH Echery 85.60 331 eP P 10 10 24.0 +0.1
ECH e*PP pP 10 10 37.9 +1.1
ECH pmax pmax
comp=Z,35nm,1.0s
ECH Echery 85.60 331 eP P 10 10 24.0 +0.1
comp=Z,35nm,1.0s
ECH epP pP 10 10 37.9 +1.1
ECH Echery 85.60 331 eP P 10 10 23.4 -0.5
Y24A Capitan 85.63 50 ⇑P P 10 10 24.5 0.0
baz=86
FUORN Ofenpass-Fuorn 85.66 329 eP P 10 10 25.0 +0.5
comp=Z,49nm,0.9s
DAVOX Davos/Dischmat 85.69 329 LR LR 10 52 21.8
comp=Z,964nm,18.8s,baz=84,slow=38
X25A Clemmons Ranch 85.69 49 ⇓P P 10 10 25.3 +0.5
baz=86,SNR=5.6
W26A Owens Ranch, T 85.84 48 ⇑P P 10 10 25.9 +0.4
baz=86
T29A Hugoton 85.85 45 ⇑P P 10 10 25.8 +0.4
baz=86
PAGF Fort de Pagny 85.86 332 ⇑iP P 10 10 25.3 +0.1
comp=Z,33nm,1.1s
PAGF epP pP 10 10 37.9 -0.2
PAGF Fort de Pagny 85.86 332 ⇑iP P 10 10 25.3 +0.1
comp=Z,33nm,1.0s
PAGF epP pP 10 10 37.9 -0.2
MOF Molkenrain 85.91 331 eP P 10 10 25.0 -0.6
MOF Molkenrain 85.91 331 eP P 10 10 25.0 -0.6
MOF Molkenrain 85.91 331 eP P 10 10 25.0 -0.6
V27A Dan Oppiter Fa 85.93 47 ⇓P P 10 10 26.3 +0.4
baz=86,SNR=6.4
123A Bell Site, Whi 85.99 52 ⇓P P 10 10 26.8 +0.6
baz=86
THEF They Montfort 86.04 332 eP P 10 10 25.6 -0.5
THEF They Montfort 86.04 332 eP P 10 10 25.6 -0.5
THEF They Montfort 86.04 332 eP P 10 10 25.6 -0.5
HINF Hinteralfeld 86.05 331 ⇑iP P 10 10 25.5 -0.7
comp=Z,24nm,1.0s
HINF Hinteralfeld 86.05 331 ⇑iP P 10 10 25.5 -0.7
HINF pmax pmax
comp=Z,24nm,1.0s
HINF Hinteralfeld 86.05 331 ⇑iP P 10 10 25.5 -0.7
comp=Z,24nm,1.0s
Z24A Sheeppen Canyo 86.08 51 ⇑P P 10 10 27.1 +0.3
baz=86,SNR=5.7
BBS Basel-Blauen 86.08 331 eP P 10 10 25.8 -0.6
BBS Basel-Blauen 86.08 331 eP P 10 10 25.8 -0.6
HAU Haudompre 86.08 332 eP P 10 10 25.8 -0.5
comp=Z,41nm,0.9s
HAU eR
comp=Z,758nm,23.0s
HAU Haudompre 86.08 332 eP P 10 10 25.8 -0.5
HAU pmax pmax
comp=Z,41nm,0.9s
HAU Haudompre 86.08 332 eP P 10 10 25.8 -0.5
comp=Z,41nm,0.9s
Y25A Mesa, Roswell 86.08 50 ⇑P P 10 10 26.6 -0.1
baz=86,SNR=5.5
MEZF Maizieres J'vi 86.15 333 ⇑iP P 10 10 26.7 +0.1
comp=Z,78nm,1.1s
MEZF epP pP 10 10 39.3 -0.2
MEZF Maizieres J'vi 86.15 333 ⇑iP P 10 10 26.7 +0.1
comp=Z,78nm,1.1s
MEZF epP pP 10 10 39.3 -0.2
TUE Stuetta 86.15 329 eP P 10 10 26.9 0.0
comp=Z,22nm,1.1s
ZKR Zakros 86.16 312 P P 10 10 26.8 -0.1
W27A Bowe Ranch, En 86.28 48 ⇑P P 10 10 28.1 +0.4
baz=86,SNR=32
V28A Channing 86.30 47 ⇑P P 10 10 27.6 -0.1
baz=86
T30A Plains 86.35 45 ⇑P P 10 10 27.8 -0.1
baz=86
SFTF Sexfontaines 86.41 333 ⇑iP P 10 10 27.7 -0.2
comp=Z,150nm,1.1s
SFTF epP pP 10 10 40.3 -0.5
SFTF Sexfontaines 86.41 333 ⇑iP P 10 10 27.7 -0.2
comp=Z,150nm,1.1s
SFTF epP pP 10 10 40.3 -0.5
LOMF Lomont 86.44 331 eP P 10 10 27.8 -0.4
LOMF Lomont 86.44 331 eP P 10 10 27.8 -0.4
LOMF Lomont 86.44 331 eP P 10 10 27.8 -0.4
124A Stringfield Ra 86.45 51 ⇓P P 10 10 28.8 +0.2
baz=86,SNR=11
Z25A Roswell 86.51 50 ⇑P P 10 10 29.1 +0.3
baz=86,SNR=10
X27A F and S Farms, 86.55 48 ⇑P P 10 10 29.4 +0.4
baz=86,SNR=11
LAST Lasithi 86.56 312 P P 10 10 28.5 -0.5
Y26A Elida 86.61 49 ⇓P P 10 10 29.5 +0.1
baz=86
SCIA State Center 86.64 38 eP P 10 10 29.9 +0.7
comp=Z,48nm,1.1s
SCIA epP pP 10 10 43.3 +1.3
W28A Vega 86.65 47 ⇑P P 10 10 29.5 0.0
baz=86
U30A WK&E Inc. Balk 86.65 46 ⇑P P 10 10 29.3 -0.1
baz=86,SNR=5.9
T31A Randall Ranch, 86.80 45 ⇓P P 10 10 30.3 +0.2
baz=87,SNR=5.7
IDI Anoyia 86.82 313 eP P 10 10 30.2 0.0
comp=Z,37nm,1.0s
224A Cornudas Mount 86.83 52 ⇓P P 10 10 30.5 0.0
baz=87,SNR=8.8
Z26A Caprock 86.96 50 ⇑P P 10 10 31.1 +0.1
baz=87,SNR=12
125A Gardner Draw, 86.97 51 ⇓P P 10 10 31.4 +0.3
baz=87,SNR=10.0
KSU1 Kansas State U 87.02 41 eP P 10 10 30.5 -0.6
comp=Z,29nm,0.9s
KSU1 epP pP 10 10 43.1 -0.8
Y27A Causey 87.03 49 ⇓P P 10 10 31.2 -0.2
baz=87
SENIN Lac Senin/Sane 87.07 330 eP P 10 10 31.8 +0.4
comp=Z,24nm,1.4s
MNTX Cornudas Mount 87.17 52 eP P 10 10 32.2 +0.3
comp=Z,7.2nm,1.2s
MNTX epP pP 10 10 45.8 +0.9
MNTX Cornudas Mount 87.17 52 ⇓P P 10 10 32.0 +0.1
baz=87
X28A Dimmitt 87.17 48 ⇓P P 10 10 32.3 +0.3
baz=87,SNR=6.6
MSTX Muleshoe 87.21 49 ⇓P P 10 10 32.3 0.0
baz=87
AMTX Amarillo 87.22 47 eP P 10 10 32.9 +0.7
comp=Z,37nm,1.1s
AMTX epP pP 10 10 46.0 +0.9
AMTX Amarillo 87.22 47 ⇓P P 10 10 32.5 +0.3
baz=87,SNR=11
225A Deer Hill, Car 87.24 51 ⇑P P 10 10 32.5 0.0
baz=87
324A Moseley Ranch, 87.28 52 ⇓P P 10 10 32.7 0.0
baz=87
CABF La Chapelle 87.34 331 eP P 10 10 32.0 -0.6
CABF La Chapelle 87.34 331 eP P 10 10 32.0 -0.6
CABF La Chapelle 87.34 331 eP P 10 10 32.0 -0.6
126A Clayton Basin, 87.37 50 ⇑P P 10 10 32.8 -0.2
baz=87
Z27A Tatum 87.40 49 ⇓P P 10 10 33.2 0.0
baz=87,SNR=9.6
GDL2 Guadalupe Moun 87.46 51 eP P 10 10 34.4 +1.0
GDL2 epP pP 10 10 47.6 +1.2
X29A Tulia 87.51 48 ⇓P P 10 10 34.3 +0.7
baz=87,SNR=12
Y28A McKinney Farm, 87.56 48 ⇓P P 10 10 33.7 -0.2
baz=87
LOR Lormes 87.62 333 ⇑iP P 10 10 33.5 -0.3
comp=Z,96nm,1.1s
LOR epP pP 10 10 46.2 -0.6
LOR eR
comp=Z,532nm,20.0s
LOR Lormes 87.62 333 ⇑iP P 10 10 33.5 -0.3

	comp=Z,96nm,1.1s									
LOR					*e*pP		**pP**	10 10 46.2	-0.6	
325A	**Bean Ranch, Si**	**87.65**	**52**	⇓P			**P**	10 10 34.2	-0.2	
	baz=88									
V31A	**Spring Creek L**	**87.65**	**46**	⇑P			**P**	10 10 34.8	+0.6	
	baz=87,SNR=7.3									
226B	**Tecolote Peak,**	**87.67**	**51**	⇓P			**P**	10 10 34.6	+0.2	
	baz=88									
FLN	**La Foliniere**	**87.84**	**336**	⇑*i*P			**P**	10 10 34.4	-0.4	
	comp=Z,70nm,1.1s									
FLN					*e*R					
	comp=Z,875nm,19.5s									
FLN	**La Foliniere**	**87.84**	**336**	⇑*i*P			**P**	10 10 34.4	-0.4	
FLN					pmax	pmax				
	comp=Z,70nm,1.1s									
FLN	**La Foliniere**	**87.84**	**336**	⇑*i*P			**P**	10 10 34.4	-0.4	
	comp=Z,70nm,1.1s									
LDF	**La Druitiere**	**87.87**	**336**	*e*P			**P**	10 10 34.7	-0.2	
	comp=Z,34nm,1.0s									
LDF	**La Druitiere**	**87.87**	**336**	*e*P			**P**	10 10 34.7	-0.2	
LDF					pmax	pmax				
	comp=Z,34nm,1.0s									
LDF	**La Druitiere**	**87.87**	**336**	*e*P			**P**	10 10 34.7	-0.2	
	comp=Z,34nm,1.0s									
Z28A	**Tucker Farm, M**	**87.91**	**49**	⇑P			**P**	10 10 35.3	-0.3	
	baz=88									
SSF	**Saint Saulge**	**87.93**	**333**	⇑*i*P			**P**	10 10 35.0	-0.3	
	comp=Z,47nm,1.0s									
SSF	**Saint Saulge**	**87.93**	**333**	⇑*i*P			**P**	10 10 35.0	-0.3	
SSF					pmax	pmax				
	comp=Z,47nm,1.0s									
SSF	**Saint Saulge**	**87.93**	**333**	⇑*i*P			**P**	10 10 35.0	-0.3	
	comp=Z,47nm,1.0s									
Y29A	**Porterfield Fa**	**87.94**	**48**	⇓P			**P**	10 10 36.0	+0.3	
	baz=88									
LPL	**La Plagne**	**87.99**	**330**	*e*P			**P**	10 10 35.8	-0.1	
	comp=Z,25nm,1.0s									
LPL	**La Plagne**	**87.99**	**330**	*e*P			**P**	10 10 35.8	-0.1	
LPL					pmax	pmax				
	comp=Z,25nm,1.0s									
LPL	**La Plagne**	**87.99**	**330**	*e*P			**P**	10 10 35.8	-0.1	
	comp=Z,25nm,1.0s									
LPG	**La Plagne**	**88.00**	**330**	*e*P			**P**	10 10 35.6	-0.4	
	comp=Z,26nm,0.9s									
LPG	**La Plagne**	**88.00**	**330**	*e*P			**P**	10 10 35.6	-0.4	
LPG					pmax	pmax				
	comp=Z,26nm,0.9s									
LPG	**La Plagne**	**88.00**	**330**	*e*P			**P**	10 10 35.6	-0.4	
	comp=Z,26nm,0.9s									
X30A	**Coker Ranch, T**	**88.00**	**47**	⇓P			**P**	10 10 36.0	+0.1	
	baz=88									
W31A	**Holland Ranch,**	**88.01**	**46**	⇑P			**P**	10 10 36.4	+0.5	
	baz=88,SNR=7.0									
425A	**Indio Mountain**	**88.04**	**52**	⇑P			**P**	10 10 36.2	-0.1	
	baz=88									
SMF	**Signal de Mont**	**88.16**	**332**	*e*P			**P**	10 10 36.2	-0.2	
	comp=Z,62nm,1.2s									
SMF	**Signal de Mont**	**88.16**	**332**	*e*P			**P**	10 10 36.2	-0.2	
SMF					pmax	pmax				
	comp=Z,62nm,1.2s									
SMF	**Signal de Mont**	**88.16**	**332**	*e*P			**P**	10 10 36.2	-0.2	
	comp=Z,62nm,1.2s									
GLMI	**Grayling**	**88.19**	**31**	*e*P			**P**	10 10 37.6	+1.0	
	comp=Z,124nm,1.0s									
GLMI					*e*pP		**pP**	10 10 50.9	+1.4	
AVF	**Avril sur Loir**	**88.21**	**333**	*e*P			**P**	10 10 36.5	-0.1	
	comp=Z,70nm,1.1s									
AVF					*e*pP		**pP**	10 10 49.2	-0.3	
AVF	**Avril sur Loir**	**88.21**	**333**	*e*P			**P**	10 10 36.5	-0.1	
AVF					*e**PP		**pP**	10 10 49.2	-0.3	
AVF					pmax	pmax				
	comp=Z,70nm,1.1s									
AVF	**Avril sur Loir**	**88.21**	**333**	*e*P			**P**	10 10 36.5	-0.1	
	comp=Z,70nm,1.1s									
AVF					*e*pP		**pP**	10 10 49.2	-0.3	
GRR	**Gorron**	**88.29**	**336**	⇑*i*P			**P**	10 10 36.9	0.0	
	comp=Z,86nm,1.0s									
GRR					*e*pP		**pP**	10 10 49.6	-0.3	
GRR	**Gorron**	**88.29**	**336**	⇑*i*P			**P**	10 10 36.9	0.0	
GRR					*e**PP		**pP**	10 10 49.6	-0.3	
GRR					pmax	pmax				
	comp=Z,86nm,1.0s									
GRR	**Gorron**	**88.29**	**336**	⇑*i*P			**P**	10 10 36.9	0.0	
	comp=Z,86nm,1.0s									
GRR					*e*pP		**pP**	10 10 49.6	-0.3	
326A	**Caldwell Ranch**	**88.31**	**51**	⇓P			**P**	10 10 37.4	0.0	
	baz=88,SNR=5.8									
128A	**Castleberry Fa**	**88.32**	**49**	⇓P			**P**	10 10 37.5	-0.1	
	baz=88									
Z29A	**Hungry Hill Ra**	**88.34**	**48**	⇑P			**P**	10 10 37.7	+0.1	
	baz=88,SNR=8.8									
X31A	**McDonald Ranch**	**88.39**	**46**	⇑P			**P**	10 10 37.7	0.0	
	baz=88,SNR=8.5									
Y30A	**Stafford Cattl**	**88.39**	**48**	⇑P			**P**	10 10 38.0	+0.2	
	baz=88									
TIP	**Timpagrande**	**88.44**	**320**	*e*P			**P**	10 10 38.2	+0.3	
	comp=Z,46nm,1.1s									
BGF	**Bois d'Agland**	**88.60**	**333**	*e*P			**P**	10 10 38.3	-0.1	
BGF					*e*pP		**pP**	10 10 51.1	-0.3	
BGF	**Bois d'Agland**	**88.60**	**333**	*e*P			**P**	10 10 38.3	-0.1	
BGF					*e**PP		**pP**	10 10 51.1	-0.3	
BGF	**Bois d'Agland**	**88.60**	**333**	*e*P			**P**	10 10 38.3	-0.1	
BGF					*e*pP		**pP**	10 10 51.1	-0.3	
228A	**UT Block 9, Go**	**88.60**	**50**	⇓P			**P**	10 10 38.8	0.0	
	baz=88									
MBDF	**Montbardon**	**88.62**	**330**	*e*P			**P**	10 10 38.6	-0.2	
	comp=Z,14nm,0.9s									
MBDF	**Montbardon**	**88.62**	**330**	*e*P			**P**	10 10 38.6	-0.2	
MBDF					pmax	pmax				
	comp=Z,14nm,0.9s									
MBDF	**Montbardon**	**88.62**	**330**	*e*P			**P**	10 10 38.6	-0.2	
	comp=Z,14nm,0.9s									
TBI	**Tubuai**	**88.63**	**121**	*e*S			**S**	10 21 17.6	-4.6	
	comp=Z,180nm,29.2s									
TBI					*e*LR		LR	10 38 37.6		
	comp=Z,1μm,23.8s,baz=314									
Z30A	**Sanderson Ranc**	**88.67**	**48**	⇓P			**P**	10 10 39.1	0.0	
	baz=88,SNR=5.8									
Y31A	**Rekieta Farm,**	**88.70**	**47**	⇓P			**P**	10 10 39.5	+0.3	
	baz=88									
426A	**McDonald Obser**	**88.72**	**52**	⇑P			**P**	10 10 39.3	-0.3	
	baz=89									
ORIF	**Oris-en-Rattie**	**88.82**	**330**	*e*P			**P**	10 10 39.8	+0.1	
ORIF					*e*R					
	comp=Z,666nm,19.0s									
ORIF	**Oris-en-Rattie**	**88.82**	**330**	*e*P			**P**	10 10 39.8	+0.1	
ORIF	**Oris-en-Rattie**	**88.82**	**330**	*e*P			**P**	10 10 39.8	+0.1	
SGMF	**Saint Gilles**	**88.95**	**337**	*e*P			**P**	10 10 40.0	0.0	
SGMF	**Saint Gilles**	**88.95**	**337**	*e*P			**P**	10 10 40.0	0.0	
SGMF	**Saint Gilles**	**88.95**	**337**	*e*P			**P**	10 10 40.0	0.0	
LPIG	**La Paz**	**88.96**	**60**	LR			LR	10 51 23.5		
	comp=Z,23nm,18.0s,baz=5.6,slow=36									
328A	**Wristen Ranch,**	**88.98**	**50**	⇑P			**P**	10 10 40.7	+0.1	
	baz=89									
427A	**Hayter Ranch,**	**88.98**	**51**	⇑P			**P**	10 10 40.8	+0.1	
	baz=89									
WMOK	**Wichita Mounta**	**89.00**	**46**	*e*P			**P**	10 10 41.0	+0.4	
WMOK					*e**PP		**pP**	10 10 54.3	+0.8	
WMOK					pmax	pmax				
	comp=Z,17nm,1.1s									
WMOK	**Wichita Mounta**	**89.00**	**46**	*e*P			**P**	10 10 41.0	+0.4	
	comp=Z,17nm,1.1s									
WMOK					*e*pP		**pP**	10 10 54.3	+0.8	
TCF	**Toulx Ste Croi**	**89.06**	**333**	*e*P			**P**	10 10 40.6	0.0	
	comp=Z,27nm,1.2s									
TCF	**Toulx Ste Croi**	**89.06**	**333**	*e*P			**P**	10 10 40.6	0.0	
TCF					pmax	pmax				
	comp=Z,27nm,1.2s									
TCF	**Toulx Ste Croi**	**89.06**	**333**	*e*P			**P**	10 10 40.6	0.0	
	comp=Z,27nm,1.2s									
526A	**Mary Lane Ranc**	**89.10**	**52**	⇑P			**P**	10 10 41.3	0.0	
	baz=89									
ROSF	**Rostrenen**	**89.10**	**337**	*e*P			**P**	10 10 40.6	-0.1	
	comp=Z,44nm,1.0s									
ROSF					*e*pP		**pP**	10 10 53.7	0.0	
ROSF	**Rostrenen**	**89.10**	**337**	*e*P			**P**	10 10 40.6	-0.1	
ROSF					*e**PP		**pP**	10 10 53.7	0.0	
ROSF					pmax	pmax				
	comp=Z,44nm,1.0s									
ROSF	**Rostrenen**	**89.10**	**337**	*e*P			**P**	10 10 40.6	-0.1	
	comp=Z,44nm,1.0s									
ROSF					*e*pP		**pP**	10 10 53.7	0.0	
Y32A	**R-V Farms, Ver**	**89.14**	**47**	⇑P			**P**	10 10 41.3	0.0	
	baz=89									
229A	**Bryant Ranch,**	**89.18**	**49**	⇓P			**P**	10 10 41.5	0.0	
	baz=89									
Z31A	**Sharp Cattle R**	**89.22**	**47**	⇓P			**P**	10 10 41.9	+0.2	
	baz=89,SNR=5.8									
527A	**Woodward Ranch**	**89.34**	**52**	⇓P			**P**	10 10 42.2	-0.2	
	baz=89									
VIVF	**Saint-Julien-l**	**89.35**	**331**	*e*P			**P**	10 10 42.8	+0.8	
	comp=Z,19nm,0.9s									
VIVF	**Saint-Julien-l**	**89.35**	**331**	*e*P			**P**	10 10 42.8	+0.8	
VIVF					pmax	pmax				
	comp=Z,19nm,0.9s									
VIVF	**Saint-Julien-l**	**89.35**	**331**	*e*P			**P**	10 10 42.8	+0.8	
	comp=Z,19nm,0.9s									
329A	**Wagon Wheel Ra**	**89.42**	**50**	⇑P			**P**	10 10 42.6	0.0	
	baz=89									
626A	**Big Bend Ranch**	**89.42**	**53**	⇑P			**P**	10 10 42.7	0.0	
	baz=89									
QUIF	**Quistinic**	**89.44**	**337**	*e*P			**P**	10 10 42.1	-0.2	
	comp=Z,20nm,0.8s									
QUIF	**Quistinic**	**89.44**	**337**	*e*P			**P**	10 10 42.1	-0.2	
QUIF					pmax	pmax				
	comp=Z,20nm,0.8s									
QUIF	**Quistinic**	**89.44**	**337**	*e*P			**P**	10 10 42.1	-0.2	
	comp=Z,20nm,0.8s									
PGF	**Pioggiola**	**89.47**	**327**	*e*P			**P**	10 10 42.6	-0.1	
	comp=Z,78nm,1.3s									
PGF	**Pioggiola**	**89.47**	**327**	*e*P			**P**	10 10 42.6	-0.1	
PGF					pmax	pmax				
	comp=Z,78nm,1.3s									
PGF	**Pioggiola**	**89.47**	**327**	*e*P			**P**	10 10 42.6	-0.1	
	comp=Z,78nm,1.3s									
428A	**Kincaid Ranch,**	**89.51**	**51**	⇑P			**P**	10 10 43.1	0.0	
	baz=89									
131A	**Roby**	**89.54**	**48**	⇓P			**P**	10 10 43.4	+0.2	
	baz=89									
CEL	**Celeste**	**89.58**	**320**	*e*P			**P**	10 10 42.8	-0.5	
MFF	**Saint Martin d**	**89.61**	**335**	⇑*i*P			**P**	10 10 43.4	+0.2	
	comp=Z,45nm,1.1s									
MFF	**Saint Martin d**	**89.61**	**335**	⇑*i*P			**P**	10 10 43.4	+0.2	
MFF					pmax	pmax				
	comp=Z,45nm,1.1s									
MFF	**Saint Martin d**	**89.61**	**335**	⇑*i*P			**P**	10 10 43.4	+0.2	
	comp=Z,45nm,1.1s									
Z32A	**Haskell**	**89.62**	**47**	⇑P			**P**	10 10 43.9	+0.4	
	baz=89,SNR=18									
FRF	**La Foret Royal**	**89.64**	**329**	*e*P			**P**	10 10 42.5	-0.9	
FRF	**La Foret Royal**	**89.64**	**329**	*e*P			**P**	10 10 42.5	-0.9	
FRF	**La Foret Royal**	**89.64**	**329**	*e*P			**P**	10 10 42.5	-0.9	
230A	**Sterling City**	**89.66**	**49**	⇓P			**P**	10 10 43.9	+0.1	
	baz=90									
SMRF	**Simiane la Rot**	**89.73**	**330**	*e*P			**P**	10 10 43.2	-0.6	
SMRF	**Simiane la Rot**	**89.73**	**330**	*e*P			**P**	10 10 43.2	-0.6	
TUL1	**Tulsa**	**89.81**	**43**	⇑P			**P**	10 10 44.3	0.0	
	baz=90									
528A	**Cox Ranch, San**	**89.84**	**51**	⇑P			**P**	10 10 44.8	+0.1	
	baz=90									
TXAR	**Lajitas Array**	**89.86**	**52**	P			**P**	10 10 44.8	0.0	
TXAR					pP		**pP**	10 10 58.1	+0.3	
TXAR	**Lajitas Array**	**89.86**	**52**	P			**P**	10 10 44.8	0.0	
	comp=Z,5.1nm,0.9s,baz=294,slow=3.3,SNR=45									
TXAR					pP		**pP**	10 10 58.1	+0.3	
	comp=Z,7.2nm,0.7s,baz=306,slow=2.8,SNR=18									
TXAR					LR		LR	10 44 44.7		
	comp=Z,234nm,21.9s,baz=185,slow=31									
LMR	**La Mourre**	**89.88**	**329**	*e*P			**P**	10 10 43.6	-0.9	
	comp=Z,70nm,1.4s									
LMR	**La Mourre**	**89.88**	**329**	*e*P			**P**	10 10 43.6	-0.9	
LMR					pmax	pmax				
	comp=Z,70nm,1.4s									
LMR	**La Mourre**	**89.88**	**329**	*e*P			**P**	10 10 43.6	-0.9	
	comp=Z,70nm,1.4s									
627A	**Tengua Ranc**	**89.96**	**52**	⇑P			**P**	10 10 45.5	+0.2	
	baz=90									
330A	**Mertzon**	**89.96**	**49**	⇓P			**P**	10 10 45.0	-0.2	
	baz=90									
ABTX	**Abilene, Hawle**	**90.01**	**48**	⇓P			**P**	10 10 45.5	+0.1	
	baz=90,SNR=5.9									
429A	**Davenport Ranc**	**90.07**	**50**	⇓P			**P**	10 10 45.6	-0.2	
	baz=90									
231A	**Bronte**	**90.10**	**49**	⇓P			**P**	10 10 45.4	-0.4	
	baz=90									
RJF	**Les Rejaudoux**	**90.15**	**333**	⇑*i*P			**P**	10 10 45.8	+0.1	
	comp=Z,27nm,1.1s									
RJF					*e*pP		**pP**	10 10 58.6	-0.1	
RJF					*e*R					
	comp=Z,540nm,20.2s									
RJF	**Les Rejaudoux**	**90.15**	**333**	⇑*i*P			**P**	10 10 45.8	+0.1	
RJF					*e**PP		**pP**	10 10 58.6	-0.1	
RJF					pmax	pmax				
	comp=Z,27nm,1.1s									
RJF	**Les Rejaudoux**	**90.15**	**333**	⇑*i*P			**P**	10 10 45.8	+0.1	
	comp=Z,27nm,1.1s									
RJF					*e*pP		**pP**	10 10 58.6	-0.1	
529A	**Stev Forest Ra**	**90.22**	**51**	⇑P			**P**	10 10 46.4	0.0	
	baz=90									
628A	**Black Gap, Mar**	**90.25**	**52**	⇑P			**P**	10 10 46.3	-0.2	
	baz=90									
CAF	**Calviac**	**90.27**	**332**	⇑*i*P			**P**	10 10 46.7	+0.3	
	comp=Z,32nm,1.1s									
CAF	**Calviac**	**90.27**	**332**	⇑*i*P			**P**	10 10 46.7	+0.3	
CAF					pmax	pmax				
	comp=Z,32nm,1.1s									
CAF	**Calviac**	**90.27**	**332**	⇑*i*P			**P**	10 10 46.7	+0.3	
	comp=Z,32nm,1.1s									
LASF	**Ste Croix**	**90.32**	**331**	*e*P			**P**	10 10 46.7	+0.1	
LASF	**Ste Croix**	**90.32**	**331**	*e*P			**P**	10 10 46.7	+0.1	
430A	**Baggett Ranch,**	**90.36**	**50**	⇑P			**P**	10 10 46.4	-0.7	
	baz=90									
331A	**San Angelo**	**90.48**	**49**	⇓P			**P**	10 10 47.1	-0.5	
	baz=90									
232A	**Coleman**	**90.54**	**48**	⇓P			**P**	10 10 47.7	-0.2	
	baz=90									
SFIN	**Scholer Farm**	**90.72**	**35**	⇓P			**P**	10 10 47.7	-0.8	
	baz=90									
LFF	**La Frestale**	**90.74**	**333**	*e*P			**P**	10 10 48.8	+0.3	
	comp=Z,51nm,1.0s									
LFF	**La Frestale**	**90.74**	**333**	*e*P			**P**	10 10 48.8	+0.3	
LFF					pmax	pmax				
	comp=Z,51nm,1.0s									
LFF	**La Frestale**	**90.74**	**333**	*e*P			**P**	10 10 48.8	+0.3	
	comp=Z,51nm,1.0s									
530A	**J-D Ranch, Com**	**90.75**	**50**	⇑P			**P**	10 10 48.5	-0.4	
	baz=91									
431A	**Sonora**	**90.82**	**50**	⇓P			**P**	10 10 48.8	-0.4	
	baz=91									
332A	**Millersview**	**90.84**	**49**	⇑P			**P**	10 10 49.1	-0.1	
	baz=91									
432A	**Menard**	**91.17**	**49**	⇑P			**P**	10 10 50.5	-0.3	
	baz=91									
531A	**Rocksprings**	**91.22**	**50**	⇓P			**P**	10 10 51.0	0.0	
	baz=91									
JCT	**Junction City**	**91.45**	**49**	*e*P			**P**	10 10 52.2	+0.1	
JCT					*e**PP		**pP**	10 11 05.2	+0.1	
JCT					pmax	pmax				
	comp=Z,12nm,0.9s									
JCT	**Junction City**	**91.45**	**49**	*e*P			**P**	10 10 52.2	+0.1	
	comp=Z,12nm,0.9s									
JCT					*e*pP		**pP**	10 11 05.2	+0.1	
JCT	**Junction City**	**91.45**	**49**	⇑P			**P**	10 10 51.8	-0.3	
	baz=91									
MTLF	**Montolieu**	**91.57**	**332**	*e*P			**P**	10 10 52.5	+0.1	
	comp=Z,30nm,1.1s									
MTLF	**Montolieu**	**91.57**	**332**	*e*P			**P**	10 10 52.5	+0.1	
MTLF					pmax	pmax				
	comp=Z,30nm,1.1s									
MTLF	**Montolieu**	**91.57**	**332**	*e*P			**P**	10 10 52.5	+0.1	
	comp=Z,30nm,1.1s									
532A	**Rocksprings**	**91.64**	**50**	⇓P			**P**	10 10 52.7	-0.3	
	baz=92									
631A	**Perdido Creek**	**91.73**	**50**	⇑P			**P**	10 10 53.9	+0.5	
	baz=92									
WHTX	**Lake Whitney**	**91.75**	**47**	⇑P			**P**	10 10 53.6	+0.2	
	baz=92									
MIAR	**Mount Ida**	**92.03**	**43**	*e*P			**P**	10 10 55.1	+0.4	
MIAR					*e**PP		**pP**	10 11 08.1	+0.5	
MIAR					pmax	pmax				
	comp=Z,29nm,1.0s									
MIAR	**Mount Ida**	**92.03**	**43**	*e*P			**P**	10 10 55.1	+0.4	
	comp=Z,29nm,1.0s									
MIAR					*e*pP		**pP**	10 11 08.1	+0.5	
632A	**Uvalde**	**92.15**	**50**	⇑P			**P**	10 10 55.5	+0.1	
	baz=92									
EPF	**Esparros**	**92.54**	**333**	*e*P			**P**	10 10 56.4	-0.5	
	comp=Z,14nm,1.0s									
EPF					*e*pP		**pP**	10 11 09.2	-0.7	
EPF	**Esparros**	**92.54**	**333**	*e*P			**P**	10 10 56.4	-0.5	
EPF					*e**PP		**pP**	10 11 09.2	-0.7	
EPF					pmax	pmax				
	comp=Z,14nm,1.0s									
EPF	**Esparros**	**92.54**	**333**	*e*P			**P**	10 10 56.4	-0.5	
	comp=Z,14nm,1.0s									
EPF					*e*pP		**pP**	10 11 09.2	-0.7	
732A	**Laxson Ranch,**	**92.59**	**51**	⇑P			**P**	10 10 57.8	+0.4	
	baz=92									
ETSF	**Etsaut**	**92.98**	**333**	*e*P			**P**	10 10 59.4	+0.4	
	comp=Z,22nm,1.1s									
ETSF	**Etsaut**	**92.98**	**333**	*e*P			**P**	10 10 59.4	+0.4	
ETSF					pmax	pmax				
	comp=Z,23nm,1.1s									
ETSF	**Etsaut**	**92.98**	**333**	*e*P			**P**	10 10 59.4	+0.4	
	comp=Z,22nm,1.1s									
SJPF	**Ste Jean**	**93.03**	**334**	*e*P			**P**	10 10 59.1	0.0	
SJPF	**Ste Jean**	**93.03**	**334**	*e*P			**P**	10 10 59.1	0.0	
SJPF	**Ste Jean**	**93.03**	**334**	*e*P			**P**	10 10 59.1	0.0	
HKT	**Hockley**	**94.19**	**47**	*e*P			**P**	10 11 04.7	+0.1	
HKT					*e**PP		**pP**	10 11 18.6	+1.0	
HKT					pmax	pmax				
	comp=Z,62nm,2.8s									
HKT	**Hockley**	**94.19**	**47**	*e*P			**P**	10 11 04.7	+0.1	
	comp=Z,62nm,2.8s									
HKT					*e*pP		**pP**	10 11 18.6	+1.0	
KEST	**Kesra**	**94.81**	**323**	LR			LR	10 59 03.8		
	comp=Z,240nm,21.0s,baz=21,slow=39									
TKL	**Tuckaleechee C**	**96.08**	**36**	LR			LR	10 56 44.8		
	comp=Z,182nm,18.8s,baz=155,slow=37									
ESDC	**Sonseca Array**	**97.03**	**334**	P			Pdif	10 11 16.6	-1.0	
ESDC	**Sonseca Array**	**97.03**	**334**	P			Pdif	10 11 16.6	-1.0	
	comp=Z,1.6nm,0.7s,baz=22,slow=3.4,SNR=8.5									
ESDC					LR		LR	10 59 29.4		
	comp=Z,742nm,20.6s,baz=115,slow=38									
KMSC	**Kings Mountain**	**97.62**	**34**	⇓P			Pdif	10 11 20.2	0.0	
	baz=97									
RKT	**Rikitea**	**98.81**	**112**	*e*LR			LR	10 43 33.4		
	comp=Z,1μm,26.8s,baz=309									
VNDA	**Vanda**	**115.29**	**175**	PKP			**PKPdf**	10 16 24.5	-1.2	
VNDA	**Vanda**	**115.29**	**175**	PKP			**PKPdf**	10 16 24.5	-1.2	
	comp=Z,0.9nm,1.0s,baz=11,slow=4.6,SNR=3.9									
TORD	**Torodi Ar. Bea**	**117.15**	**315**	PKP			**PKPdf**	10 16 30.4	-0.8	
TORD					PP		**PP**	10 17 38.1	-2.6	
TORD	**Torodi Ar. Bea**	**117.15**	**315**	PKP			**PKPdf**	10 16 30.4	-0.8	
	comp=Z,3.0nm,1.0s,baz=2.1,slow=1.8,SNR=9.7									
TORD					PP		**PP**	10 17 38.1	-2.6	
	comp=Z,8.6nm,1.1s,baz=44,slow=6.1,SNR=11									
LIC	**Lamto**	**126.57**	**317**	*e*PKIKP			**PKPdf**	10 16 48.3	-0.9	
	comp=Z,17nm,0.9s									
LIC					*e*R					
	comp=Z,527nm,23.0s									
LIC	**Lamto**	**126.57**	**317**	*e*PKPdf			**PKPdf**	10 16 48.3	-0.9	
BOSA	**Boshof**	**126.71**	**260**	PKP			**PKPdf**	10 16 49.1	0.0	
BOSA	**Boshof**	**126.71**	**260**	PKP			**PKPdf**	10 16 49.1	0.0	
	comp=Z,8.4nm,1.0s,baz=158,slow=4.1,SNR=4.9									
QSPA	**South Pole Qui**	**127.10**	**180**	*e*PKPdf			**PKPdf**	10 16 49.1	+0.5	
VNA2	**Neumayer--Watz**	**142.65**	**196**	*e*PKPdf			**PKPdf**	10 17 14.5	-2.9	
VNA2	**Neumayer--Watz**	**142.65**	**196**	*e*PKiKP			**PKPdf**	10 17 17.4	0.0	
VNA2	**Neumayer--Watz**	**142.65**	**196**	*e*pPKPdf			pPKPdf	10 17 28.5	-2.3	
VNA2	**Neumayer--Watz**	**142.65**	**196**	*e*pPKiKP			pPKPdf	10 17 31.6	+0.8	
VNA3	**Neumayer Olymp**	**142.90**	**195**	*e*PKPdf			**PKPdf**	10 17 14.3	-3.6	
SAML	**Samuel**	**143.96**	**45**	*e*PKPdf			PKPbc	10 17 18.9	-0.4	
LPAZ	**La Paz**	**146.46**	**59**	pPKPbc			pPKPbc	10 17 41.2	+0.1	

0.4nm,0.3s,baz=192,slow=8.3,SNR=3.6
TORD Torodi Ar. Bea 78.56 71 P P 10 26 44.4 -0.5
0.4nm,0.5s,baz=249,slow=4.8,SNR=5.4
YKA Yellowknife Ar 89.59 341 P P 10 27 39.2 -0.8
0.2nm,0.6s,baz=134,slow=5.0,SNR=5.4
MKAR Makanchi Array 145.66 34 PKPbc PKPab 10 34 22.2 +0.2
0.5nm,0.5s,baz=317,slow=4.3,SNR=6.7

IDC 21 10:21:19.2±48.0, 15°66S×175°10W, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.5/19, mbtmp3.8/3, Error ellipse: s-maj=913.5km s-min=182.4km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.49**	**240**	P		P	10 29 16.1	-0.2
	0.7nm,0.4s,baz=88,slow=12,SNR=4.4							
WRA	**Warramunga Arr**	**48.19**	**257**	P		P	10 30 01.6	-0.3
	0.2nm,0.5s,baz=91,slow=7.4,SNR=4.8							
ASAR	**Alice Springs**	**48.47**	**252**	P		P	10 30 04.0	0.0
	2.1nm,0.5s,baz=89,slow=8.2,SNR=31							

NEIC 21 10:25:42.5, 32.83N×87.10W, h13km, MN3.8, MW3.3(USGS), After CERI., Alabama

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LRAL	**Lakeview Retre**	**0.22**	**23**	*e*Pg		Pg	10 25 47.0	-0.4
LRAL				*e*Sg		Sg	10 25 48.7	-1.9
BRAL	**Brewton**	**1.81**	**179**	*e*Pn		Pn	10 26 13.9	+0.4
BRAL				*e*Sn		Sb	10 26 38.4	+0.2
OXF	**Oxford**	**2.55**	**312**	*e*Pn		Pn	10 26 24.6	+1.0
OXF				*e*Sg		Sb	10 27 00.3	+0.8
SWET	**Sewanee**	**2.57**	**22**	*e*Pn		Pn	10 26 25.1	+1.1
SWET				*e*Sg		Sb	10 27 00.9	+0.7
VBMS	**Vicksburg**	**2.95**	**259**	*e*Pn		Pn	10 26 29.1	0.0
VBMS				*e*Pg		Pb	10 26 37.0	+2.0
VBMS				*e*Sn		Sn	10 27 05.8	+1.4
GOGA	**Godfrey**	**3.10**	**78**	Pn		Pn	10 26 30.3	-0.9
GOGA				*e*Sg		Sg	10 27 23.5	+1.2
MET	**Memphis--Engin**	**3.28**	**315**	*e*Pn		Pn	10 26 34.9	+1.2
MET				*e*Sn		Sn	10 27 11.2	-1.4
WVT	**Waverly**	**3.35**	**350**	*e*Pn		Pn	10 26 34.9	+0.3
WVT				*e*Sn		Sn	10 27 12.8	-1.4
CPCT	**Cooper Cave**	**3.38**	**39**	*e*Pn		Pn	10 26 36.5	+1.5
CPCT				*e*Sn		Sn	10 27 16.1	+1.1
HALT	**Halls**	**3.59**	**330**	*e*Pn		Pn	10 26 36.5	-1.3
HALT				*e*Sg		Sg	10 27 36.0	-1.8
UTMT	**University of**	**3.79**	**338**	Pn		Pn	10 26 39.7	-1.0
UTMT				*e*Pg		Pb	10 26 49.6	+0.2
UTMT				*e*Sg		Sb	10 27 38.0	+2.7
GLAT	**Glass**	**3.88**	**333**	*e*Pn		Pn	10 26 42.9	+1.1
GLAT				*e*Sn		Sn	10 27 27.8	+0.6
GNAR	**Gosnell**	**3.95**	**323**	*e*Pn		Pn	10 26 43.9	+1.0
GNAR				*e*Sg		Sg	10 27 45.8	-3.6
HBAR	**Harrisburg**	**4.01**	**314**	*e*Pn		Pn	10 26 44.8	+1.1
HBAR				*e*Sg		Sg	10 27 48.7	-2.6
PARMO	**Parma**	**4.40**	**331**	*e*Pn		Pn	10 26 49.5	+0.4
PARMO				*e*Sg		Sb	10 27 58.1	+5.4
TZTN	**Tazewell**	**4.72**	**37**	*e*Pn		Pn	10 26 54.3	+0.8
TZTN				*e*Sn		Sn	10 27 48.8	+0.6
UALR	**University of**	**4.78**	**295**	*e*Pn		Pn	10 26 55.9	+1.7
UALR				*e*Sn		Sn	10 27 51.3	+1.8
UALR				*e*Sg		Sg	10 28 10.2	-5.8
JSC	**Jenkinsville**	**5.09**	**72**	*e*Pn		Pn	10 27 00.2	+1.7
USIN	**University of**	**5.14**	**355**	Pn		Pn	10 26 59.5	+0.2
USIN				*e*Sn		Sn	10 27 57.6	-0.9
USIN				*e*Sg		Sb	10 28 19.5	+5.4
WCI	**Wyandotte Cave**	**5.43**	**7**	*e*Pn		Pn	10 27 04.6	+1.4
	33nm,0.4s							
WCI				*e*Sn		Sn	10 28 03.5	-2.1
WCI				*e*Sg		Sb	10 28 29.4	+7.0
MIAR	**Mount Ida**	**5.66**	**289**	*e*Pn		Pn	10 27 08.3	+1.9
MIAR				*e*Sn		Sn	10 28 11.2	-0.1
OLIL	**Olney**	**5.95**	**352**	Pn		Pn	10 27 09.6	-0.7
OLIL				*e*Sg		Sg	10 28 48.4	-5.0
BLO	**Bloomington**	**6.35**	**4**	*e*Pg		Pg	10 27 44.1	+0.1
BLO				*e*Sg		Sg	10 28 57.9	-8.3
CNNC	**Cliffs of the**	**8.01**	**70**	*e*Pn		Pn	10 27 42.3	+3.7
ACSO	**Alum Creek Sta**	**8.10**	**23**	Pn		Pn	10 27 39.3	-0.5
ACSO				*e*Sn		Sn	10 29 10.3	-0.9

IDC 21 10:35:14.1±1.4, 11°39N×85°23W, h0km, mb3.5/5, mb1 4.0/6, mb1mx3.7/22, mbtmp3.6/6, ML3.3/1, MS3.8/2, Ms1 3.8/2, ms1mx2.9/30, Error ellipse: s-maj=71.2km s-min=10.2km az=71.0, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JTS	**JuntasAbangare**	**1.12**	**166**	Pg		Pb	10 35 36.3	-0.1
	22nm,0.3s,baz=313,slow=21,SNR=62							
JTS				Lg		Lg	10 35 50.4	
	39nm,0.3s,baz=299,slow=19,SNR=13							
CMIG	**Matias Romero**	**10.94**	**302**	Pn		Pn	10 37 49.9	-2.2
	0.2nm,0.3s,baz=139,slow=11,SNR=3.4							
TXAR	**Lajitas Array**	**24.79**	**319**	P		P	10 40 38.0	0.0
	1.1nm,0.5s,baz=138,slow=10.0,SNR=18							
PDAR	**Pinedale Array**	**37.75**	**330**	P		P	10 42 31.9	-0.3
	0.3nm,0.6s,baz=119,slow=14,SNR=3.9							
NVAR	**Mina Array Bea**	**39.93**	**318**	P		P	10 42 51.8	+1.3
	1.6nm,0.7s,baz=134,slow=7.4,SNR=16							
NVAR						LR	11 00 22.8	
	comp=Z,98nm,19.1s,baz=20,slow=38							
YBH	**Yreka Blue Hor**	**44.56**	**320**	LR		LR	11 03 38.1	
	comp=Z,127nm,18.1s,baz=313,slow=38							
YKA	**Yellowknife Ar**	**55.22**	**344**	P		P	10 44 48.6	+0.1
	0.1nm,0.4s,baz=144,slow=7.2,SNR=6.4							
ILAR	**Eielson Array**	**67.87**	**336**	P		P	10 46 12.8	-1.3
	0.4nm,0.9s,baz=127,slow=5.7,SNR=4.6							

IDC 21 10:37:42.6±2.2, 4°06S×130°09E, h0km, mb3.3/2, mb1 3.4/4, mb1mx3.3/20, mbtmp3.2/4, ML2.9/1, MS3.2/2, Ms1 3.2/2, ms1mx2.9/16, Error ellipse: s-maj=167.0km s-min=26.5km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**10.35**	**264**	LR		LR	10 43 45.8	
	comp=Z,62nm,21.5s,baz=352,slow=35							
WRA	**Warramunga Arr**	**16.32**	**166**	Pn		Pn	10 41 31.4	-2.0
	0.1nm,0.3s,baz=349,slow=13,SNR=4.0							
ASAR	**Alice Springs**	**19.84**	**170**	P		Pn	10 42 16.1	-0.7
	0.1nm,0.3s,baz=348,slow=10,SNR=18							
HNR	**Honiara**	**30.11**	**102**	LR		LR	10 55 02.7	
	comp=Z,89nm,18.2s,baz=127,slow=34							
MKAR	**Makanchi Array**	**65.84**	**326**	P		P	10 48 29.2	-0.9
	0.1nm,0.4s,baz=112,slow=6.4,SNR=2.5							
KURBB	**Kurchatov Arra**	**70.08**	**328**	P		P	10 48 57.6	+1.1
	0.4nm,0.8s,baz=133,slow=5.7,SNR=4.7							

IDC 21 10:39:40.5±0.9, 14°52N×93°78W, h0km, mb4.2/10, mb1 4.4/13, mb1mx4.2/23, mbtmp4.2/13, ML4.0/3, MS3.6/2, Ms1 3.7/2, ms1mx2.9/35, Error ellipse: s-maj=35.9km s-min=15.4km az=51.0
ISCJB 21 10:39:41.3±0.6, 14°44N±0°05×94°19W±0°03, h30km, mb4.1/13, MS3.7/1, Error ellipse: s-maj=7.6km s-min=4.3km az=19.5
MEX 21 10:39:42.3±0.7, 14°32N×94°18W, h19km±17km, MD4.3
ISC 21 10:39:43.6±0.7, 14°44N±0°07×94°14W±0°04, h30km, n28, σ1§77/39, mb4.3/13, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
THIG		**1.88**	**75**	*e*P		**Pn**	**10 40 11.0**	**-2.7**
THIG				*i* S		**Sn**	**10 40 33.8**	**-2.6**
HUIG	**Huatulco**	**2.31**	**305**	*e*P		**Pn**	**10 40 18.3**	**-1.4**
HUIG				*i* S		**Sn**	**10 40 44.4**	**-2.8**
TGIG		**2.53**	**23**	*e*P		**Pn**	**10 40 21.4**	**-1.3**
TGIG				*i* S		**Sn**	**10 40 52.8**	**+0.2**
CCIG	**Comitan**	**2.67**	**46**	*e*P		**Pn**	**10 40 24.1**	**-0.7**
CCIG				*i* S		**Sn**	**10 40 55.6**	**-0.5**
CMIG	**Matias Romero**	**2.73**	**345**	*e*P		**Pn**	**10 40 24.7**	**-0.8**
CMIG				*i* S		**Sn**	**10 40 56.4**	**-1.2**
CMIG	**Matias Romero**	**2.73**	**345**	Pn		**Pn**	**10 40 24.6**	**-0.8**
	28nm,0.3s,baz=159,slow=11,SNR=282							
CMIG					Sn	**Sn**	**10 40 54.9**	**-2.6**
	93nm,0.3s,baz=82,slow=17,SNR=14							
VHO	**Vista Hermosa**	**3.62**	**317**	*i* P		**Pn**	**10 40 35.6**	**-2.3**
VHO				*i* S		**Sn**	**10 41 18.3**	**-1.4**
PNIG	**Pinotepa**	**4.31**	**297**	*e*P		**Pn**	**10 40 45.1**	**-2.1**
PNIG				*i* S		**Sn**	**10 41 34.5**	**-1.9**
UTMO	**Huajuapan**	**4.87**	**314**	*i* P		**Pn**	**10 40 52.9**	**-2.2**
UTMO				*i* S		**Sn**	**10 41 48.7**	**-2.0**
TPIG	**Tehuac#an**	**5.02**	**322**	*i* P		**Pn**	**10 40 55.1**	**-2.0**
TPIG				*i* S		**Sn**	**10 41 54.3**	**0.0**
TEIG	**Tepich**	**8.03**	**43**	Pn		**Pn**	**10 41 35.4**	**-2.9**
	14nm,0.3s,baz=249,slow=4.0,SNR=74							
TEIG					LR	LR	10 44 56.9	
	comp=Z,594nm,20.9s,baz=159,slow=41							
TXAR	**Lajitas Array**	**17.24**	**331**	P		**P**	**10 43 44.5**	**+0.8**
	0.0nm,0.3s,baz=147,slow=11,SNR=8.5							
ROSC	**El Rosal**	**21.71**	**114**	P		**P**	**10 44 31.3**	**-1.6**
	3.6nm,0.3s,baz=103,slow=19,SNR=2.0							
ANMO	**Albuquerque**	**23.24**	**334**	P		**P**	**10 44 50.4**	**+1.6**
	0.8nm,0.7s,baz=157,slow=16,SNR=3.9							
PDAR	**Pinedale Array**	**31.20**	**338**	P		**P**	**10 46 02.6**	**+2.1**
	0.6nm,0.9s,baz=132,slow=6.2,SNR=3.6							
NVAR	**Mina Array Bea**	**32.05**	**323**	P		P	10 46 12.0	+4.0
	3.2nm,0.9s,baz=143,slow=8.6,SNR=19							
NVAR					PcP	**PcP**	**10 49 00.3**	**+3.0**
	0.5nm,0.8s,baz=153,slow=7.0,SNR=4.5							
ULM	**Lac du Bonnet**	**35.74**	**358**	P		**P**	**10 46 37.0**	**-2.7**
	2.1nm,0.6s,baz=182,slow=6.4,SNR=3.6							
YKA	**Yellowknife Ar**	**50.14**	**348**	P		**P**	**10 48 36.7**	**+0.7**
	3.8nm,0.7s,baz=154,slow=7.2,SNR=65							
YKA					PcP	**PcP**	**10 49 55.4**	**+0.4**
	0.2nm,0.7s,baz=151,slow=4.3,SNR=3.7							
CFAA	**Coronel Fontan**	**52.09**	**152**	P		**P**	**10 48 52.5**	**+1.4**
	0.1nm,0.4s,baz=349,slow=8.6,SNR=4.2							
BDFB	**Brasilia**	**54.52**	**121**	P		**P**	**10 49 08.0**	**-1.3**
	4.3nm,0.8s,baz=173,slow=2.2,SNR=5.5							
ILAR	**Eielson Array**	**61.63**	**337**	P		**P**	**10 49 59.5**	**+1.2**
	3.0nm,1.0s,baz=145,slow=4.3,SNR=27							
NB2	**NORSAR Subarra**	**84.75**	**28**	P		**P**	**10 52 15.8**	**+1.0**
	comp=Z,2.2nm,0.8s,baz=291,slow=5.1							
NOA	**NORSAR Array B**	**84.75**	**28**	P		**P**	**10 52 16.2**	**+1.3**
	comp=Z,3.4nm,0.8s,baz=292,slow=5.0,SNR=12							
NOA					LR	LR	11 28 58.5	
	comp=Z,27nm,18.2s,baz=80,slow=35							
ARCES	**ARCESS Array B**	**86.37**	**18**	P		**P**	**10 52 24.1**	**+1.4**
	comp=Z,7.9nm,1.0s,baz=293,slow=4.8,SNR=5.3							
GERES	**GERESS Array B**	**90.58**	**39**	P		**P**	**10 52 43.5**	**+0.2**
	comp=Z,0.4nm,0.2s,baz=294,slow=1.3,SNR=4.4							
TORD	**Torodi Ar. Bea**	**92.29**	**76**	P		**P**	**10 52 50.6**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=311,slow=5.0,SNR=2.4							
WRA	**Warramunga Arr**	**133.48**	**256**	PKP		**PKPdf**	**10 58 59.2**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=91,slow=2.3,SNR=5.9							
CMAR	**Chiang Mai Arr**	**144.86**	**338**	PKP		**PKPdf**	**10 59 18.6**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=349,slow=4.0,SNR=9.5							

DJA 21 10:45:55.4±0.6, 1°S±7°×10°5E±°, h10km, M5.3/6, mb5.6/3, mB6.0/3, MLv5.1/6, Mw(mB)5.6/3
IDC 21 10:46:41.0±7.1, 3°78S×104°56E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/23, mbtmp3.3/3, Error ellipse: s-maj=403.2km s-min=28.4km az=51.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.33**	**202**	P		Pg	10 47 02.3	-4.3
KASI	**Kota Agung**	**1.73**	**182**	P		Pn	10 47 11.5	-0.9
KSI	**Kapahiang**	**1.96**	**274**	P		Pn	10 47 05.8	-10
WRA	**Warramunga Arr**	**33.18**	**121**	P		P	10 53 19.4	-0.3
	0.3nm,0.7s,baz=300,slow=11,SNR=5.3							
ASAR	**Alice Springs**	**34.55**	**128**	P		P	10 53 31.9	+0.2
	0.1nm,0.4s,baz=295,slow=7.7,SNR=4.4							
MKAR	**Makanchi Array**	**54.06**	**341**	P		P	10 56 07.3	-0.1
	0.3nm,0.5s,baz=141,slow=7.7,SNR=6.3							

NSSC 21 10:49:51.4±1.2, 36°40N×40°86E, h0km±5km, ML2.1
CSEM 21 10:49:52.2±0.4, 36°38N×40°83E, h2km, ML2.1, Error ellipse: s-maj=9.8km s-min=6.1km az=95.0
DDA 21 10:49:53.3, 36°51N×40°64E, h7km, MD2.9
ISC 21 10:49:52.5±1.2, 36°40N±0°03×40°82E±0°03, h2km±12km, n12, σ0§80/24, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SFNV	**Sufian**	**0.57**	**272**	*e*P		**Pg**	**10 50 03.2**	**-0.3**
SFNV				*e*S		**Sg**	**10 50 12.2**	**+1.2**
SFNV					AML	AML	10 50 27.4	
	comp=Z,112nm,0.5s							
SFNV	**Sufian**	**0.57**	**272**	*e*P		**Pg**	**10 50 03.2**	**-0.3**
	SNR=91							
SFNV				*e*S		**Sg**	**10 50 12.2**	**+1.2**
	comp=Z,112nm,0.5s,SNR=59							
MZRK	**Al-Mazaregh**	**0.58**	**194**	*e*P		**Pg**	**10 50 02.5**	**-1.1**
MZRK				*e*S		**Sg**	**10 50 12.0**	**+0.7**
MZRK					AML	AML	10 50 27.3	
	comp=Z,142nm,0.4s							
MZRK	**Al-Mazaregh**	**0.58**	**194**	*e*P		**Pg**	**10 50 02.5**	**-1.1**
	SNR=75							
MZRK				*e*S		**Sg**	**10 50 12.0**	**+0.7**
	comp=Z,142nm,0.4s,SNR=59							
KBSD	**Kabsdagh**	**0.65**	**340**	*e*P		**Pg**	**10 50 04.5**	**-0.4**
KBSD				*e*S		**Sg**	**10 50 13.3**	**+0.2**
KBSD					AML	AML	10 50 23.5	
	comp=Z,84nm,0.5s							
KBSD	**Kabsdagh**	**0.65**	**340**	*e*P		**Pg**	**10 50 04.5**	**-0.4**
	SNR=75							
KBSD				*e*S		**Sg**	**10 50 13.4**	**+0.2**
	comp=Z,84nm,0.5s,SNR=59							
MARD	**Mardin**	**0.92**	**358**	*i* P		**Pg**	**10 50 09.1**	**-1.0**
MARD				*i* S		**Sb**	**10 50 23.5**	**-0.4**
BEST	**Besiri**	**1.53**	**13**	*i* P		**Pn**	**10 50 19.9**	**-1.1**
BEST				*i* S		**Sg**	**10 50 41.9**	**+0.1**
SIRN	**S¯¯rnak**	**1.68**	**49**	*i* P		**Pg**	**10 50 25.8**	**+1.1**
SIRN				*i* S		**Sg**	**10 50 46.7**	**+0.2**
SIRN	**S¯¯rnak**	**1.68**	**49**	*i* P		**Pg**	**10 50 25.8**	**+1.1**
SIRN				*i* S		**Sg**	**10 50 46.7**	**+0.2**
JHLN	**Al Jahlan**	**2.06**	**250**	*e*P		**Pn**	**10 50 28.3**	**+0.1**
JHLN				*e*S		**Sn**	**10 50 55.0**	**+0.5**
JHLN					AML	AML	10 51 00.4	
	comp=Z,27nm,0.4s							
JHLN	**Al Jahlan**	**2.06**	**250**	*e*P		**Pn**	**10 50 28.3**	**+0.1**
	SNR=45							
JHLN				*e*S		**Sn**	**10 50 55.0**	**+0.5**
	comp=Z,27nm,0.4s,SNR=40							

ISCJB 21 10:56:19.5±1.0, 43°82N±0°05×128°0W±0°1, h10km, mb3.3/4, MS3.1/3, Error ellipse: s-maj=12.0km s-min=6.0km az=156.2
IDC 21 10:56:19.9±2.0, 43°89N×127°92W, h0km, mb3.2/5, mb1 3.6/9, mb1mx3.5/32, mbtmp3.3/9, ML3.6/4, MS3.3/5, Ms1 3.3/5, ms1mx2.9/18, Error ellipse: s-maj=34.0km s-min=14.7km az=52.0
NEIC 21 10:56:21.4±1.2, 43°86N×128°00W, h10km, mb3.7/2, Error ellipse: s-maj=15.8km s-min=8.7km az=68.0
ISC 21 10:56:21.9±1.3, 43°81N±0°06×127°97W±0°09, h10km, n46, σ1§59/49, mb3.5/4, MS3.2/3, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**2.81**	**108**	*e*Pn		Pn	10 57 03.8	-3.1
KEBM				*e*Sn		**Sn**	**10 57 36.6**	**-4.3**
RNO	**Roman Nose**	**3.06**	**87**	P		**Pn**	**10 57 08.5**	**-1.8**
MPOR	**Mary's Peak**	**3.26**	**76**	P		**Pn**	**10 57 11.5**	**-1.6**
COR	**Corvallis**	**3.44**	**75**	*e*Pn		**Pn**	**10 57 14.8**	**-0.7**
COR				*e*Sn		**Sb**	**10 58 03.5**	**-1.3**
DBO	**Dodson Butte**	**3.51**	**100**	P		**Pn**	**10 57 14.9**	**-1.6**
KMOR	**Kings Mountain**	**3.68**	**59**	P		**Pn**	**10 57 17.7**	**-1.2**
F03A	**Seaside**	**3.79**	**54**	P		**Pn**	**10 57 19.3**	**-1.0**
HUMO	**Hull Mountain**	**3.85**	**106**	*e*Pn		**Pn**	**10 57 19.1**	**-2.1**
NLO	**Nicolai Mounta**	**3.94**	**53**	P		**Pn**	**10 57 21.5**	**-0.9**
BROR	**Big Rock Looko**	**4.00**	**81**	P		**Pn**	**10 57 22.9**	**-0.4**
SSOR	**Sweet Springs**	**4.09**	**73**	P		**Pn**	**10 57 24.5**	**-0.1**
IRO	**Indian Ridge**	**4.13**	**85**	P		**Pn**	**10 57 24.2**	**-1.0**
G04A	**Mulino**	**4.17**	**68**	P		**Pn**	**10 57 25.3**	**-0.2**
PRLK	**Prince Lake**	**4.35**	**83**	P		**Pn**	**10 57 27.8**	**-0.3**
YBH	**Yreka Blue Hor**	**4.39**	**116**	*e*Pn		**Pn**	**10 57 28.2**	**-0.5**
YBH					Sn	**Sn**	**10 58 21.2**	**+1.3**
YBH	**Yreka Blue Hor**	**4.39**	**116**	Pn		**Pn**	**10 57 27.8**	**-0.8**
	0.6nm,0.3s,baz=304,slow=12,SNR=23							
YBH					Sn	**Sn**	**10 58 21.2**	**+1.3**
	0.9nm,0.3s,baz=168,slow=12,SNR=6.1							
F04A	**Amboy**	**4.48**	**60**	P		**Pn**	**10 57 29.8**	**-0.1**
NLWA	**Neilton Lookou**	**4.60**	**37**	*e*Pn		**Pn**	**10 57 30.5**	**-1.0**
NLWA				*e*Sn		**Sn**	**10 58 28.1**	**+3.2**
WDC	**Whiskeytown Da**	**5.16**	**127**	*e*Pn		**Pn**	**10 57 40.8**	**+1.7**
	9.0nm,1.1s							
WDC				*e*Sn		**Sn**	**10 58 40.6**	**+1.9**
LON	**Longmire**	**5.25**	**54**	*e*Pn		**Pn**	**10 57 40.2**	**-0.2**
WVOR	**Wild Horse Val**	**6.96**	**98**	*e*Pn		**Pn**	**10 58 02.7**	**-1.4**
	1.4nm,0.6s							
WCN	**Washoe City**	**7.63**	**123**	*e*Pn		**Pn**	**10 58 15.2**	**+2.0**
	5.3nm,1.0s							
CMB	**Columbia Colle**	**8.13**	**133**	*e*Pn		**Pn**	**10 58 21.4**	**+1.4**
	5.4nm,1.0s							
NEW	**Newport**	**8.76**	**56**	*e*Pn		**Pn**	**10 58 28.3**	**-0.2**
NEW	**Newport**	**8.76**	**56**	Pn		**Pn**	**10 58 28.4**	**-0.2**
	0.9nm,0.3s,baz=244,slow=13,SNR=11							
NEW					LR	LR	11 01 52.1	
	comp=Z,267nm,19.2s,baz=286,slow=38							
NVAR	**Mina Array Bea**	**9.05**	**123**	Pn		**Pn**	**10 58 34.8**	**+2.0**
NVAR	**Mina Array Bea**	**9.05**	**123**	Pn		**Pn**	**10 58 34.8**	**+2.0**
	0.1nm,0.3s,baz=301,slow=13,SNR=13							
BSMT	**Bassoo Peak**	**10.05**	**62**	*e*Pn		**Pn**	**10 58 49.1**	**+2.7**
MSO	**Missoula**	**10.33**	**68**	*e*Pn		**Pn**	**10 58 52.0**	**+1.8**
JTMT	**Jette**	**10.34**	**63**	*e*Pn		**Pn**	**10 58 52.7**	**+2.4**
SLMT	**Seeley Lake**	**10.72**	**66**	*e*Pn		Pn	10 59 00.3	+4.7
	3.3nm,0.9s							
PDAR	**Pinedale Array**	**13.46**	**88**	Pn		**Pn**	**10 59 34.5**	**+1.5**
PDAR	**Pinedale Array**	**13.46**	**88**	Pn		**Pn**	**10 59 34.5**	**+1.5**
	0.0nm,0.3s,baz=275,slow=14,SNR=3.0							
DLBC	**Dease Lake**	**14.71**	**356**	LR		LR	11 05 35.6	
	comp=Z,64nm,18.1s,baz=123,slow=38							
DGMT	**Dagmar**	**17.10**	**66**	*e*Pn		**P**	**11 00 25.3**	**+2.7**
	3.8nm,0.5s							
FFC	**Flin Flon**	**20.05**	**48**	*e*P		**P**	**11 00 54.2**	**-0.8**
	2.4nm,0.7s							
YKA	**Yellowknife Ar**	**20.28**	**18**	P		**P**	**11 00 56.8**	**-0.6**
YKA	**Yellowknife Ar**	**20.28**	**18**	P		**P**	**11 00 56.8**	**-0.6**
	0.8nm,0.7s,baz=206,slow=11,SNR=9.1							
ULM	**Lac du Bonnet**	**22.68**	**62**	P		**P**	**11 01 23.7**	**+0.4**
ULM	**Lac du Bonnet**	**22.68**	**62**	P		**P**	**11 01 23.7**	**+0.4**
	1.8nm,0.5s,baz=282,slow=10,SNR=3.9							
ULM					LR	LR	11 09 14.9	
	comp=Z,83nm,18.6s,baz=10,slow=34							
ILAR	**Eielson Array**	**23.54**	**340**	P		**P**	**11 01 30.1**	**-1.9**
ILAR	**Eielson Array**	**23.54**	**340**	P		**P**	**11 01 30.1**	**-1.9**
	0.2nm,0.7s,baz=157,slow=8.0,SNR=4.5							
ILAR					LR	LR	11 09 04.4	
	comp=Z,82nm,19.2s,baz=123,slow=33							
TXAR	**Lajitas Array**	**24.16**	**119**	P		**P**	**11 01 38.2**	**-0.2**
TXAR	**Lajitas Array**	**24.16**	**119**	P		**P**	**11 01 38.2**	**-0.2**
	0.7nm,0.6s,baz=288,slow=6.9,SNR=11							
INK	**Inuvik**	**24.73**	**355**	P		**P**	**11 01 41.9**	**-1.2**
INK	**Inuvik**	**24.73**	**355**	P		**P**	**11 01 41.9**	**-1.2**
	1.2nm,1.1s,baz=196,slow=5.6,SNR=2.5							
INK					LR	LR	11 10 06.2	
	comp=Z,47nm,18.4s,baz=298,slow=34							

DDA 21 11:16:05.4, 36°88N×37°53E, h7km, MD2.5, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GZT	**Gaziantep**	**0.48**	**3**	*i* P		Pb	11 16 16.4	0.0

ISCJB 21 11:34:31.4±0.5, 6°89N±0°07×72°98W±0°06, h166km, mb3.5/6, Error ellipse: s-maj=11.5km s-min=6.1km az=143.8
IDC 21 11:34:33.0±2.3, 6°75N×73°04W, h171km±18km, mb3.3/6, mb1 3.7/8, mb1mx3.4/23, mbtmp3.4/8, Error ellipse: s-maj=38.2km s-min=19.8km az=86.0
FUNV 21 11:34:37.5, 7°05N×72°76W, h148km, MW3.8
ISC 21 11:34:32.2±0.8, 6°92N±0°08×72°90W±0°08, h166km, n24, σ1§60/29, mb3.5/6, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.11**	**32**	⇓*i* P		**Pn**	**11 35 01.1**	**+1.4**
CAPV				*e*S		**Sn**	**11 35 18.0**	**-2.9**
SOCV	**Socops**	**2.44**	**56**	*e*P		**Pn**	**11 35 15.2**	**+1.7**
SOCV				*e*S		**Sn**	**11 35 42.5**	**-3.0**
VIGV	**El Vigia**	**2.44**	**38**	*e*P		**Pn**	**11 35 15.3**	**+1.7**
VIGV				*e*S		**Sn**	**11 35 42.1**	**-3.5**
ROSC	**El Rosal**	**

MAT *e*S **Sn 11 46 09.9 +2.2**
MJAR Matsushiro Arr 5.78 54 P **Pn 11 45 04.0 +1.3**
6.9nm,0.3s,baz=242,slow=14,SNR=89
USRK Ussuriysk Arra 10.93 358 LR LR 11 50 10.5
comp=Z,99nm,19.7s,baz=171,slow=36
ASAJ Asahikawa 13.43 33 LR LR 11 50 48.6
comp=Z,34nm,21.3s,baz=355,slow=32
SONM Songino Array 24.39 314 P **P 11 48 54.0 0.0**
1.6nm,0.7s,baz=119,slow=10,SNR=5.1
ZALV Zalesovo Beam 39.25 316 LR LR 12 08 44.3
comp=Z,25nm,19.1s,baz=214,slow=38
FITZ Fitzroy Crossi 51.48 188 P **P 11 52 40.5 -0.4**
1.0nm,0.6s,baz=35,slow=8.6,SNR=6.3
WRA Warramunga Arr 52.94 178 P **P 11 52 51.5 -0.3**
2.2nm,0.7s,baz=353,slow=8.3,SNR=20
ILAR Eielson Array 56.55 30 P **P 11 53 18.1 +0.6**
0.5nm,1.0s,baz=270,slow=6.3,SNR=3.1
ILAR pP **pP 11 53 29.1 -0.2**
0.4nm,0.6s,baz=287,slow=7.2,SNR=7.7
ASAR Alice Springs 56.63 178 P **P 11 53 18.6 +0.1**
1.5nm,0.6s,baz=11,slow=13,SNR=40
FINES FINESS Array B 68.56 330 P **P 11 54 35.9 -1.6**
2.0nm,0.9s,baz=56,slow=4.8,SNR=3.6
YKA Yellowknife Ar 70.64 27 P **P 11 54 50.8 +0.5**
0.1nm,0.6s,baz=305,slow=6.5,SNR=3.6
YKA pP **pP 11 55 02.5 0.0**
0.4nm,0.8s,baz=300,slow=6.3,SNR=6.9
NVAR Mina Array Bea 83.08 48 pP pP 11 56 14.6 +1.0
0.4nm,0.7s,baz=306,slow=3.5,SNR=4.5

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*IDC **21** 12:03:00.6±2.1,23˚.10S×170˚.62E, h0km, mb4.0/6, mb1 4.2/7, mb1mx4.0/19, mbtmp4.0/7, ML3.6/1, MS3.3/1, Ms1 3.3/1, ms1mx2.8/33, Error ellipse: s-maj=76.9km s-min=24.0km az=158.0*
*ISCJB **21** 12:03:03.2±1.1,23.2S±0˚.2×170˚.55E±0˚.08, h28km, mb3.9/6, MS3.1/1, Error ellipse: s-maj=35.9km s-min=9.8km az=6.1*

ISC 21 12:03:05.1±1.4,23˚.1S±0˚.3×170˚.58E±0˚.09, h28km, n10, σ0s71/12, mb3.9/6, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.95**	**284**	*e*P		**Pn**		**12 04 03.7**	**-0.3**
DZM				*e*S		**Sn**		**12 04 50.3**	**+0.9**
DZM	**Mont Dzumac**	**3.95**	**284**	Pn		**Pn**		**12 04 03.9**	**-0.1**
3.9nm,0.3s,baz=150,slow=18,SNR=134									
DZM					Sn	**Sn**		**12 04 48.7**	**-0.7**
0.8nm,0.3s,baz=131,slow=19,SNR=1.9									
NOUC	**Port Laguerre**	**4.07**	**283**	*e*P		**Pn**		**12 04 05.4**	**-0.1**
NOUC				*e*S		**Sn**		**12 04 52.3**	**+0.1**
RPZ	**Rata Peaks**	**20.60**	**179**	LR		LR		12 13 54.0	
comp=Z,79nm,18.1s,baz=342,slow=32									
ASAR	**Alice Springs**	**33.61**	**262**	P		**P**		**12 09 43.2**	**-0.2**
1.1nm,0.8s,baz=93,slow=9.4,SNR=16									
WRA	**Warramunga Arr**	**33.80**	**268**	P		**P**		**12 09 43.9**	**-1.2**
0.3nm,0.5s,baz=100,slow=8.4,SNR=6.6									
FITZ	**Fitzroy Crossi**	**42.23**	**268**	P		**P**		**12 10 56.4**	**+0.3**
1.3nm,0.7s,baz=117,slow=4.5,SNR=3.3									
PETK	**Petropavlovsk-**	**76.68**	**352**	P		**P**		**12 14 54.0**	**+0.8**
6.5nm,0.8s,baz=155,slow=7.4,SNR=5.7									
NVAR	**Mina Array Bea**	**90.41**	**48**	P		**P**		**12 16 04.5**	**+0.2**
0.6nm,0.8s,baz=224,slow=7.8,SNR=5.8									
ILAR	**Eielson Array**	**93.51**	**17**	P		**P**		**12 16 16.8**	**-0.9**
0.7nm,0.8s,baz=242,slow=7.0,SNR=8.4									

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*CSEM **21** 12:07:22.5, 57˚.12N×12˚.43E, h0km, ML1.3, Mining explosion. After UPP*

UPP 21 12:07:22.5, 57˚.12N×12˚.43E, h0km, ML1.3, Mining explosion., Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FABU	**Falkenberg**	**0.20**	**127**	P		Pg		12 07 26.4	+0.2
FABU				S		Sg		12 07 29.0	+0.2
BORU	**Boraas**	**0.55**	**19**	P		Pg		12 07 32.8	-0.2
GNOU	**Gnosjoe**	**0.74**	**76**	P		Pg		12 07 36.6	-0.1
TJOU	**Tjoern**	**1.01**	**335**	P		Pg		12 07 42.0	+0.1
FKPU	**Falk**	**1.25**	**33**	P		Pg		12 07 45.4	-1.1

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*NEIC **21** 12:19:22.3, 18˚.75N×67˚.25W, h11km, MD2.7(RSPR), After RSPR.*

RSPR 21 12:19:24.9, 18˚.71N×67˚.19W, h15km±3km, 3C-7D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.25**	**163**	‖*e*P		Pg		12 19 28.2	-2.1
AGPR	**Aguadilla, PR**	**0.25**	**163**	*e*S		Sg		12 19 34.1	+0.2
AGPR	**Aguadilla, PR**	**0.25**	**163**	‖*e*P		Pg		12 19 28.2	-2.1
AGPR				*e*S		Sg		12 19 33.8	-0.1
LRS	**Lares**	**0.52**	**142**	↑*e*P		Pg		12 19 32.7	-2.6
LRS				*e*S		Sg		12 19 41.6	-0.8
LRS	**Lares**	**0.52**	**142**	*e*S		Sg		12 19 41.6	-0.8
LRS	**Lares**	**0.52**	**142**	↑*e*P		Pg		12 19 32.7	-2.6
LRS				*e*S		Sg		12 19 41.6	-0.8
AOPR	**Arecibo Observ**	**0.54**	**131**	‖*e*P		Pg		12 19 34.3	-1.4
AOPR	**Arecibo Observ**	**0.54**	**131**	*e*S		Sg		12 19 43.4	+0.4
AOPR	**Arecibo Observ**	**0.54**	**131**	‖*e*P		Pg		12 19 34.3	-1.4
CRPR	**Cabo Rojo, PR**	**0.70**	**174**	‖*e*P		Pg		12 19 35.7	-2.8
CRPR	**Cabo Rojo, PR**	**0.70**	**174**	‖*e*P		Pg		12 19 36.2	-2.3
CRPR	**Cabo Rojo, PR**	**0.70**	**174**	*e*S		Sg		12 19 46.9	-0.9
CRPR	**Cabo Rojo, PR**	**0.70**	**174**	‖*e*P		Pg		12 19 35.7	-2.8
CBYP	**Canovanas**	**1.33**	**109**	‖*e*P		Pn		12 19 46.5	-2.7
CBYP	**Canovanas**	**1.33**	**109**	*e*S		Sn		12 20 02.3	-4.4

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*IDC **21** 12:22:32.8±0.3, 64˚.54N×168˚.34E, h0km, mb4.8/31, mb1 4.9/34, mb1mx4.9/38, mbtmp4.8/34, ML4.7/3, MS4.1/34, Ms1 4.2/34, ms1mx4.0/60, Error ellipse: s-maj=11.5km s-min=8.7km az=169.0*
*ISCJB **21** 12:22:33.6±0.1, 64˚.53N±0˚.02×168˚.51E±0˚.03, h12km, mb5.0/217, MS4.4/58, Error ellipse: s-maj=3.6km s-min=1.7km az=177.8*
*BJI **21** 12:22:33.0, 64˚.60N×168˚.40E, h10km, mB5.1/32, mb4.9/50, Ms5.3/50, MS7 4.9/46*
*MOS **21** 12:22:34.1±1.2, 64˚.43N×168˚.53E, h17km, mb5.2/98, MS4.2/33, Error ellipse: s-maj=8.3km s-min=4.7km az=91.6*
*NEIC **21** 12:22:35.1±0.2, 64˚.51N×168˚.48E, h10km, mb5.1/145, Error ellipse: s-maj=5.3km s-min=2.9km az=189.0*
*NERS **21** 12:22:36.8, 64˚.77N×167˚.67E, h17km*
*GCMT **21** 12:22:36.9±0.2, 64˚.73N×168˚.29E, h18km±1km, MW5.0, Moment Tensor Solution. s31,c43; s79,c123; Moment tensor: Scale 10^{16}Nm; M_{rr}1.06±.17; $M_{\theta\theta}$-0.96±.14; $M_{\phi\phi}$-0.11±.11; $M_{r\theta}$0.74±.33; $M_{r\phi}$3.23±.09; $M_{\theta\phi}$-1.65±.33; Best double couple: $M_0$3.70000×10^{16} NP1:ϕ_s266.00000°, δ60.00000°, λ6.00000°. NP2:ϕ_s173.00000°, δ85.00000°, λ149.00000°. Principal axes: T 3.0700, Plg25.0000°, Azm125.0000°; N 1.2300, Plg59.0000°, Azm345.0000°; P -4.3000, Plg17.0000°, Azm223.0000°; Data Used: ll IU IC CN G.*
*DJA **21** 12:22:56.6±8.3, 65˚.N±14˚×16˚.7E±2˚.5, h179km±70km, M4.8/8, mB5.4/2, mb4.8/8, Mw(mB)4.8/2*

ISC 21 12:22:35.4±0.3, 64˚.59N±0˚.04×168˚.62E±0˚.03, h12km±1km, h12km:pP-P, n979, σ1s30/1063, mb5.0/217, MS4.4/58, 231C-220D, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BILL	**Bilibino**	**3.59**	**346**	‖*i*P		**Pn**		**12 23 29.7**	**-1.0**
BILL				*e*S		**Sn**		**12 24 12.3**	**-0.6**
BILL					pmax	pmax			
comp=Z,1μm,0.5s									
BILL					smax	smax			
comp=N,10μm,0.6s									
BILL	**Bilibino**	**3.59**	**346**	‖*i*P		**Pn**		**12 23 29.7**	**-1.0**
BILL				*e*Pb		Pb		12 23 33.4	-5.3
BILL				*e*Pg		Pg		12 23 37.1	-7.0
BILL					Pgmax			12 23 42.9	
comp=N,1μm,0.5s									
BILL				*e*S		**Sn**		**12 24 12.3**	**-0.6**
BILL				*e*Sg		**Sb**		**12 24 22.9**	**+0.8**
BILL					Sgmax			12 24 29.5	
comp=N,10μm,0.6s									
BILL	**Bilibino**	**3.59**	**346**	*e*Pn		**Pn**		**12 23 29.6**	**-1.2**
EVEN	**Evensk**	**5.02**	**242**	*e*P		**Pn**		**12 23 49.5**	**-0.9**
EVEN					Pmax			12 23 50.3	
comp=N,140nm,0.4s									
EVEN				*e*Pg		**Pb**		**12 24 05.7**	**+2.6**
EVEN					Pgmax			12 24 07.3	
comp=N,480nm,0.4s									
EVEN				*e*S		**Sn**		**12 24 47.6**	**-0.6**
EVEN				*e*Sg		**Sb**		**12 25 07.2**	**+4.0**
EVEN					Sgmax			12 25 15.2	
comp=N,7μm,0.4s									
OMS	**Omsukchan**	**6.10**	**256**	*e*P		**Pn**		**12 24 03.9**	**-1.4**
OMS				S		**Sn**		**12 25 15.9**	**+1.0**
OMS					pmax	pmax			
comp=Z,20nm,0.7s									
OMS					smax	smax			
comp=E,3μm,0.7s									
OMS					smax	smax			
comp=N,6μm,1.1s									
OMS	**Omsukchan**	**6.10**	**256**	*e*P		**Pn**		**12 24 03.9**	**-1.4**
OMS					Pmax			12 24 05.1	
comp=N,20nm,0.7s									
OMS				*e*Pg		**Pb**		**12 24 22.1**	**+0.6**
OMS					Pgmax			12 24 24.9	
comp=N,340nm,0.7s									
OMS				*e*S		**Sn**		**12 25 15.9**	**+1.0**
OMS				*e*Sg		**Sb**		**12 25 38.2**	**+3.8**
OMS					Sgmax			12 25 51.4	
comp=N,3μm,0.7s									
OMS					Sgmax			12 25 51.4	
comp=N,6μm,1.1s									
SEY	**Seymchan**	**7.38**	**264**	*d i*P		**Pn**		**12 24 21.0**	**-1.8**
SEY	**Seymchan**	**7.38**	**264**	*e*P		**Pn**		**12 24 21.1**	**-1.8**
SEY					Pmax			12 24 22.0	
comp=N,30nm,0.4s									
SEY				*e*Sg		Sb		12 26 17.6	+6.5
SEY					Sgmax			12 26 32.1	
comp=N,2μm,0.5s									
SEY					Sgmax			12 26 32.1	
comp=N,910nm,0.5s									
TLAR	**Talaya**	**8.18**	**252**	*e*P		**Pn**		**12 24 33.1**	**-0.7**
TLAR				S		**Sn**		**12 26 03.1**	**-2.9**
TLAR					pmax	pmax			
comp=Z,70nm,0.3s									
TLAR					smax	smax			
comp=E,2μm,0.7s									
TLAR	**Talaya**	**8.18**	**252**	*e*P		**Pn**		**12 24 33.1**	**-0.7**
TLAR					Pmax			12 24 35.0	
comp=E,70nm,0.3s									
TLAR				*e*S		**Sn**		**12 26 03.1**	**-2.9**
TLAR				*e*Sg		Sg		12 26 47.1	-11
TLAR					Sgmax			12 27 12.3	
comp=E,2μm,0.7s									
SNGR	**Sinegor'e**	**8.57**	**261**	*e*P		**Pn**		**12 24 37.5**	**-1.6**
SNGR					Pmax			12 24 38.3	
comp=E,60nm,0.5s									
SNGR				*e*Pg		Pg		12 25 04.5	-15
SNGR					Pgmax			12 25 10.0	
comp=E,140nm,0.7s									
SNGR				*e*S		Sn		12 26 07.7	-7.8
SNGR				*e*				12 26 28.8	
SNGR				*e*				12 26 42.2	
SNGR				*e*Sg		Sg		12 26 56.9	-13
SNGR					Sgmax			12 27 06.1	
comp=E,3μm,0.9s									
SNGR					Sgmax			12 27 06.1	
comp=E,980nm,0.9s									
GAMB	**Gambell**	**8.62**	**87**	*e*Pn		**Pn**		**12 24 39.3**	**-0.4**
comp=E,4.3nm,0.7s									
SUUS	**Susuman**	**9.25**	**268**	*e*P		**Pn**		**12 24 47.4**	**-1.0**
SUUS					pmax	pmax			
comp=Z,80nm,0.7s									
SUUS	**Susuman**	**9.25**	**268**	*e*P		**Pn**		**12 24 47.4**	**-1.0**
SUUS					Pmax			12 24 51.1	
comp=Z,80nm,0.7s									
SUUS				*e*S		Sn		12 26 16.4	-16
SUUS					Sgmax			12 27 34.9	
comp=Z,2μm,0.8s									
MGD	**Magadan 1**	**9.47**	**249**	*e*P		**Pn**		**12 24 49.9**	**-1.5**
MGD					Pmax			12 24 51.3	
comp=Z,60nm,0.6s									
MGD				*e*				12 24 58.3	
MGD				*e*S		Sn		12 26 27.2	-10
MGD				*e*				12 27 11.8	
MGD				*e*				12 27 19.7	
MGD				*e*Sg				12 27 25.9	
MGD					Sgmax			12 27 43.9	
comp=Z,4μm,0.8s									
MGD					Sgmax			12 27 43.9	
comp=Z,4μm,1.0s									
OCHR	**Omchak**	**9.82**	**262**	↑*i*		Pn		12 25 13.1	+17
OCHR					Pmax			12 25 14.5	
comp=Z,60nm,0.7s									
OCHR				*e*S		Sn		12 27 03.5	+17
OCHR				*e*				12 27 12.6	
OCHR					Sgmax			12 28 06.4	
comp=Z,4μm,0.7s									
OCHR					Sgmax			12 28 06.4	
comp=Z,1μm,0.6s									
TNA	**Tin City**	**9.93**	**74**	*e*Pn		**Pn**		**12 24 58.1**	**+0.4**
comp=Z,300nm,1.3s									
TNA				*e*Sn		**Sn**		**12 26 52.6**	**+3.8**
FX1	**Attu Island--F**	**11.98**	**167**	*e*Pn		**Pn**		**12 25 24.4**	**-1.3**
FX1				S		Sn		12 27 31.4	-7.7
FX1	**Attu Island--F**	**11.98**	**167**	Pn		**Pn**		**12 25 24.2**	**-1.5**
comp=Z,11nm,0.3s,baz=333,slow=7.4,SNR=44									
FX1					Sn	Sn		12 27 31.4	-7.7
comp=Z,1.3nm,0.3s,baz=138,slow=14,SNR=2.0									
FX1					LR	LR		12 29 47.2	
comp=Z,1μm,18.7s,baz=0.1,slow=36									
PET	**Petropavlovsk**	**12.68**	**208**	*e*P		Pn		12 25 30.5	-4.7
PET					MLR	MLR			
comp=Z,800nm,14.0s									
PEA0B	**Petropavlovsk-**	**12.80**	**211**	*e*Pn		**Pn**		**12 25 37.4**	**+0.5**
PETK	**Petropavlovsk-**	**12.80**	**211**	P		**Pn**		**12 25 39.2**	**+2.2**
PETK					MLR	MLR			
comp=Z,461nm,18.0s									
PETK	**Petropavlovsk-**	**12.80**	**211**	Pn		**Pn**		**12 25 39.2**	**+2.2**
PETK	**Petropavlovsk-**	**12.80**	**211**	Pn		**Pn**		**12 25 39.2**	**+2.2**
comp=Z,0.2nm,0.3s,baz=60,slow=8.9,SNR=9.3									
PETK					LR	LR		12 30 50.0	
comp=Z,461nm,18.0s,baz=30,slow=39									
AMKA	**Amchitka**	**14.38**	**152**	*e*Pn		**Pn**		**12 25 58.5**	**0.0**
comp=Z,275nm,0.9s									
SKR	**Severo-Kuril's**	**15.42**	**211**	P		**P**		**12 26 14.7**	**-2.3**
SKR					pmax	pmax			
comp=Z,220nm,1.0s									
SKR					MLR	MLR			
comp=Z,2μm,16.0s									
UNV	**Unalaska Valle**	**16.54**	**119**	*e*Pn		**Pn**		**12 26 27.7**	**+0.9**
comp=Z,82nm,0.9s									
SVW2	**Sparrevohn**	**16.56**	**86**	*e*P		**P**		**12 26 30.1**	**+0.4**
comp=Z,38nm,1.0s									
COLD	**Coldfoot**	**16.79**	**63**	*e*Pn		**Pn**		**12 26 30.9**	**+1.0**
comp=Z,85nm,0.8s									
COLD				*e*Sn		**S**		**12 29 42.5**	**-4.3**
OKH	**Okha**	**17.07**	**242**	*e*P		**Pn**		**12 26 32.4**	**-1.2**
OKH				*e*S		**Sn**		**12 29 45.2**	**+2.2**
OKH					smax	smax			
comp=Z,2μm,10.0s									
PPLA	**Purkeypile**	**17.23**	**78**	*e*Pn		**P**		**12 26 37.3**	**+0.1**
comp=Z,386nm,1.6s									
YAK	**Yakutsk**	**17.48**	**280**	*c i*P		**Pn**		**12 26 38.6**	**0.0**
YAK					pmax	pmax			
comp=Z,66nm,1.4s									
YAK					pmax	pmax			
comp=N,10.0nm,1.4s									
YAK					pmax	pmax			
comp=E,35nm,1.4s									
YAK					pmax	pmax			
comp=N,10.0nm,0.8s									
YAK					pmax	pmax			
comp=Z,105nm,1.3s									
YAK					pmax	pmax			
comp=E,110nm,1.6s									
YAK					MLR	MLR			
comp=Z,3μm,11.0s									
YAK					MLR	MLR			
comp=E,2μm,10.0s									
YAK					MLR	MLR			
comp=N,459nm,10.0s									
TRF	**Thorofare Moun**	**17.82**	**75**	*e*P		**P**		**12 26 44.0**	**+0.3**
comp=N,133nm,1.0s									
SDPT	**Sand Point**	**17.84**	**107**	*e*Pn		**P**		**12 26 44.7**	**+1.0**
comp=N,134nm,1.0s									
SPU	**Mount Spurr**	**18.03**	**83**	*e*Pn		**P**		**12 26 46.7**	**+0.8**
CHGN	**Chignik**	**18.06**	**102**	*e*P		**P**		**12 26 47.0**	**+0.8**
RSO	**Redoubt South**	**18.08**	**85**	*e*P		**P**		**12 26 47.4**	**+0.8**
MCK	**McKinley**	**18.27**	**73**	*e*P		**P**		**12 26 49.7**	**+1.1**
MCK					pmax	pmax			
comp=Z,304nm,1.1s									
MCK	**McKinley**	**18.27**	**73**	*e*P		**P**		**12 26 49.7**	**+1.1**
comp=Z,304nm,1.1s									
COLA	**College**	**18.32**	**69**	*e*P		**P**		**12 26 49.5**	**+0.6**
COLA					pmax	pmax			
comp=Z,54nm,1.0s									
COLA	**College**	**18.32**	**69**	*e*P		**P**		**12 26 49.5**	**+0.6**
comp=Z,54nm,1.0s									
ILAR	**Eielson Array**	**18.74**	**69**	P		**Pn**		**12 26 54.5**	**+0.4**
ILAR	**Eielson Array**	**18.74**	**69**	P		**Pn**		**12 26 54.5**	**+0.4**
comp=Z,1.4nm,0.3s,baz=286,slow=8.7,SNR=18									
ILAR					LR	LR		12 34 35.9	
comp=Z,610nm,19.0s,baz=299,slow=38									
PMR	**Palmer**	**19.09**	**80**	*e*P		**P**		**12 26 56.9**	**-0.5**
PMR					pmax	pmax			
comp=Z,30nm,1.0s									
PMR	**Palmer**	**19.09**	**80**	*e*P		**P**		**12 26 56.9**	**-0.5**
comp=Z,30nm,1.0s									
SML	**Sawmill**	**19.33**	**78**	*e*P		**P**		**12 27 00.0**	**-0.1**
SML					pmax	pmax			
comp=Z,13nm,0.8s									
SML	**Sawmill**	**19.33**	**78**	*e*P		**P**		**12 27 00.0**	**-0.1**
comp=Z,13nm,0.8s									
KDAK	**Kodiak Island**	**19.63**	**92**	*e*P		**P**		**12 27 03.9**	**+0.6**
comp=Z,65nm,1.0s									
KDAK	**Kodiak Island**	**19.63**	**92**	P		**P**		**12 27 04.0**	**+0.6**
comp=Z,2.1nm,0.3s,baz=273,slow=5.4,SNR=14									
KDAK					LR	LR		12 35 10.8	
comp=Z,1μm,19.6s,baz=315,slow=38									
OHAK	**Old Harbor**	**19.66**	**94**	*e*P		**P**		**12 27 04.0**	**+0.2**
comp=Z,72nm,1.0s									
SEW	**Seward**	**19.68**	**84**	*e*P		**P**		**12 27 04.2**	**+0.3**
comp=Z,79nm,1.0s									
PAX	**Paxson**	**20.01**	**74**	*e*P		**P**		**12 27 07.3**	**-0.3**
PAX					pmax	pmax			
comp=Z,181nm,1.4s									
PAX	**Paxson**	**20.01**	**74**	*e*P		**P**		**12 27 07.3**	**-0.3**
comp=Z,181nm,1.4s									
DOT	**Dot Lake**	**20.31**	**71**	*e*P		**P**		**12 27 09.9**	**-0.9**
comp=Z,148nm,0.9s									
DIV	**Divide**	**20.73**	**78**	*e*P		**P**		**12 27 15.7**	**+0.2**
comp=Z,116nm,0.9s									
MENT	**Mentasta**	**20.75**	**73**	*e*P		**P**		**12 27 15.2**	**-0.4**
EGAK	**Eagle**	**21.03**	**67**	*e*P		**P**		**12 27 17.4**	**-1.1**
comp=Z,279nm,1.7s									
BMRM	**Bremner River**	**21.31**	**78**	*e*P		**P**		**12 27 21.8**	**+0.2**
comp=Z,63nm,0.9s									
RAGM	**Ragged Mountai**	**21.57**	**79**	*e*P		**P**		**12 27 25.5**	**+1.1**
comp=Z,124nm,1.0s									
CLNS	**Chul'man**	**22.33**	**270**	*e*P		**P**		**12 27 32.7**	**+0.1**
CLNS					pmax	pmax			
comp=N,12nm,1.2s									
CLNS					pmax	pmax			
comp=Z,20nm,1.1s									
CLNS					pmax	pmax			
comp=E,19nm,1.1s									
CLNS					MLR	MLR			
comp=N,5μm,12.0s									
CLNS					MLR	MLR			
comp=E,2μm,12.0s									
CLNS					MLR	MLR			
comp=Z,650nm,16.0s									
YSS	**Yuzh-Sakhalins**	**22.61**	**231**	‖*e*P		**P**		**12 27 36.0**	**+0.4**
YSS				*i* *SP		**sP**		**12 27 39.2**	**-1.5**
YSS				*e*S		**S**		**12 31 38.0**	**-4.7**
YSS				*e*				12 31 47.0	
YSS					pmax	pmax			
comp=Z,40nm,1.1s									
YSS					MLR	MLR			
comp=Z,600nm,16.0s									
INK	**Inuvik**	**22.66**	**55**	P		**P**		**12 27 36.2**	**+0.3**
INK	**Inuvik**	**22.66**	**55**	P		**P**		**12 27 36.2**	**+0.3**
comp=Z,27nm,0.9s,baz=294,slow=11,SNR=101									
INK					LR	LR		12 38 12.2	
comp=Z,798nm,18.6s,baz=93,slow=41									
PNL	**Peninsula**	**24.19**	**77**	*e*P		**P**		**12 27 51.5**	**+0.2**
comp=Z,73nm,0.9s									
YUK	**Yuzh-Kuril'sk**	**24.24**	**223**	P		**P**		**12 27 49.3**	**-2.5**
YUK				*i*				12 28 17.8	
YUK				*e*S		**S**		**12 32 07.1**	**-2.6**
YUK				*i* SS		**SnSn**		**12 32 48.3**	**-3.5**
YUK					MLR	MLR			
comp=N,148nm,12.0s									
YUK					MLR	MLR			
comp=E,143nm,12.0s									
YUK					MLR	MLR			
comp=Z,387nm,12.0s									
ASAJ	**Asahikawa**	**25.17**	**228**	P		**P**		**12 28 01.3**	**+1.1**
ASAJ	**Asahikawa**	**25.17**	**228**	P		**P**		**12 28 01.3**	**+1.1**
comp=Z,25nm,0.8s,baz=326,slow=11,SNR=8.0									
ASAJ					LR	LR		12 37 48.2	
comp=Z,190nm,18.0s,baz=252,slow=37									
SKAG	**Skagway**	**26.02**	**75**	*e*P		**P**		**12 28 09.0**	**+1.2**
comp=Z,69nm,1.3s									
DLBC	**Dease Lake**	**28.83**	**73**	*e*P		**P**		**12 28 34.4**	**+1.3**
DLBC					PcP	**PcP**		**12 31 41.9**	**-0.3**
DLBC	**Dease Lake**	**28.83**	**73**	P		**P**		**12 28 34.7**	**+1.6**
comp=Z,10nm,0.7s,baz=298,slow=9.2,SNR=28									
DLBC					PcP	**PcP**		**12 31 41.9**	**-0.3**
comp=Z,3.3nm,0.9s,baz=308,slow=6.2,SNR=4.5									
DLBC					LR	LR		12 41 39.2	
comp=Z,897nm,19.3s,baz=299,slow=40									
USRK	**Ussuriysk Arra**	**28.86**	**243**	P		**P**		**12 28 30.9**	**-2.4**
comp=Z,6.1nm,0.6s,baz=33,slow=8.3,SNR=11									
USRK					PcP	**PcP**		**12 31 42.0**	**-0.3**
comp=Z,9.0nm,0.8s,baz=357,slow=0.8,SNR=6.3									
USRK					LR	LR		12 39 48.8	
comp=Z,313nm,20.0s,baz=23,slow=36									
MDJ	**Mudanjiang**	**29.45**	**246**	P		**P**		**12 28 38.1**	**-0.5**
MDJ					pP	**pP**		**12 28 42.3**	**-0.1**
MDJ					sP	**sP**		**12 28 43.3**	**-0.6**
MDJ					S	**S**		**12 33 33.8**	**+1.7**
MDJ					sS	**sS**		**12 33 38.9**	**+0.5**
MDJ					ScP	**ScP**		**12 35 26.5**	**+1.6**
MDJ					PcS	**PcS**		**12 35 27.9**	**+1.2**
MDJ					ScS	**ScS**		**12 39 20.6**	**+1.2**
MDJ					pmax	pmax			
comp=Z,25nm,1.4s									
MDJ					pmax	pmax			
comp=Z,430nm,4.3s									
MDJ					LR	LR

SNY	**Shenyang**	**34.19**	**250**	⇑P		**P**		**12 29 18.9**	**-1.3**
SNY				S		**S**		**12 34 51.3**	**+5.3**
SNY				pmax		pmax			
	comp=Z,21nm,1.1s								
SNY				pmax		pmax			
	comp=Z,200nm,3.7s								
SNY				LR		LR			
	comp=N,2µm,15.8s								
SNY				LR		LR			
	comp=E,2µm,15.6s								
SNY				LR		LR			
	comp=Z,1µm,12.2s								
IRK	**Irkutsk**	**34.28**	**280**	*e*P		**P**		**12 29 20.3**	**-0.6**
IRK				pmax		pmax			
	comp=Z,76nm,1.0s								
TLY	**Talaya**	**34.95**	**280**	P		**P**		**12 29 28.4**	**+1.6**
	comp=Z,113nm,0.7s,SNR=5.0								
ZAK	**Zakamensk**	**36.07**	**279**	*e*P		**P**		**12 29 34.9**	**-1.6**
ZAK				pmax		pmax			
	comp=Z,15nm,1.1s								
MOY	**Mondy**	**36.09**	**282**	*e*P		**P**		**12 29 38.2**	**+1.6**
MOY				pmax		pmax			
	comp=Z,36nm,2.2s								
KSRS	**Korea Array**	**36.23**	**241**	P		**P**		**12 29 36.0**	**-1.8**
	comp=Z,4.0nm,0.7s,baz=23,slow=8.5,SNR=9.8								
KSRS				PcP		**PcP**		**12 32 01.8**	**-1.0**
	comp=Z,5.0nm,0.8s,baz=18,slow=3.3,SNR=8.6								
KSRS				LR		LR		12 44 12.5	
	comp=Z,246nm,18.1s,baz=228,slow=36								
KSAR	**Wonju Array Be**	**36.26**	**241**	P		**P**		**12 29 36.0**	**-2.0**
KSAR				PcP		**PcP**		**12 32 01.8**	**-1.1**
KRAR	**Krasnoyarsk**	**36.28**	**293**	*e*P		**P**		**12 29 39.3**	**+1.2**
KRAR				pmax		pmax			
	comp=Z,22nm,1.0s								
ULN	**Ulaanbaatar**	**36.36**	**273**	*e*P		**P**		**12 29 36.9**	**-2.1**
	comp=Z,11nm,0.9s								
ULN	**Ulaanbaatar**	**36.36**	**273**	P		**P**		**12 29 37.9**	**-1.2**
	comp=Z,14nm,1.0s								
SONM	**Songino Array**	**36.67**	**273**	P		**P**		**12 29 41.2**	**-0.4**
SONM				PcP		**PcP**		**12 32 02.8**	**-1.3**
SONM	**Songino Array**	**36.67**	**273**	P		**P**		**12 29 41.2**	**-0.4**
	comp=Z,15nm,0.9s,baz=43,slow=8.5,SNR=25								
SONM				PcP		**PcP**		**12 32 02.8**	**-1.3**
	comp=Z,1.7nm,0.7s,baz=55,slow=3.7,SNR=4.0								
SONM				LR		LR		12 45 13.1	
	comp=Z,1µm,18.4s,baz=220,slow=37								
PGC	**Sidney**	**38.49**	**81**	*e*P		**P**		**12 29 58.3**	**+1.5**
	comp=Z,1.0nm,0.6s								
BJI	**Beijing**	**38.74**	**257**	P		**P**		**12 29 59.1**	**+0.1**
BJI				S		**S**		**12 35 56.1**	**+0.5**
BJI				pmax		pmax			
	comp=Z,11nm,0.8s								
BJI				LR		LR			
	comp=N,1µm,13.9s								
BJI				LR		LR			
	comp=E,2µm,12.5s								
VDB	**Vedder Mountai**	**38.77**	**79**	P		**P**		**12 29 60.0**	**+0.7**
DAG	**Danmarks Havn**	**38.80**	**3**	*i* P		**P**		**12 29 58.6**	**-0.5**
	comp=E,4.1nm,1.0s								
MBW	**Mount Baker**	**39.05**	**80**	P		**P**		**12 30 02.7**	**+0.9**
NLWA	**Neilton Lookou**	**39.28**	**83**	*e*P		**P**		**12 30 05.5**	**+1.9**
JCW	**Jim Creek**	**39.49**	**80**	P		**P**		**12 30 06.5**	**+1.2**
HHC	**Hu-ho-hao-te**	**40.02**	**262**	*e*P		**P**		**12 30 08.4**	**-1.5**
HHC				pP		**pP**		**12 30 12.8**	**-1.0**
HHC				sP		**sP**		**12 30 15.4**	**+0.1**
HHC				S		**S**		**12 36 14.1**	**-1.0**
HHC				sS		**sS**		**12 36 20.0**	**-1.5**
HHC				SS		SS		12 38 59.5	-12
HHC				ScS		**ScS**		**12 40 13.6**	**-2.7**
HHC				pmax		pmax			
	comp=Z,72nm,0.6s								
HHC				pmax		pmax			
	comp=Z,230nm,6.3s								
HHC				LR		LR			
	comp=N,2µm,15.3s								
HHC				LR		LR			
	comp=E,3µm,15.2s								
HHC				LR		LR			
	comp=Z,2µm,15.8s								
ETW	**Entiat**	**40.62**	**79**	P		**P**		**12 30 15.5**	**+0.7**
LON	**Longmire**	**40.66**	**81**	*e*P		**P**		**12 30 16.6**	**+1.5**
LON				pmax		pmax			
	comp=Z,11nm,0.9s								
LON	**Longmire**	**40.66**	**81**	*e*P		**P**		**12 30 16.6**	**+1.5**
	comp=Z,11nm,0.9s								
WPW	**White Pass**	**40.81**	**81**	P		**P**		**12 30 17.9**	**+1.5**
TBM	**Table Mountain**	**40.85**	**80**	P		**P**		**12 30 17.5**	**+0.9**
NVS	**Novosibirsk**	**40.89**	**298**	*e*P		**P**		**12 30 16.0**	**-0.7**
NVS				pmax		pmax			
	comp=Z,65nm,1.9s								
NVS				pmax		pmax			
	comp=N,13nm,1.2s								
NVS				pmax		pmax			
	comp=E,22nm,1.7s								
ZAA0	**Zalesovo Array**	**40.95**	**296**	*e*P		**P**		**12 30 17.6**	**+0.3**
ZALV	**Zalesovo Beam**	**40.95**	**296**	P		**P**		**12 30 16.5**	**-0.8**
ZALV								12 32 15.5	
ZALV				pmax		pmax			
	comp=Z,8.0nm,0.8s								
ZALV				MLR		MLR			
	comp=Z,233nm,20.6s								
ZALV	**Zalesovo Beam**	**40.95**	**296**	P		**P**		**12 30 16.4**	**-0.8**
ZALV				PcP		**PcP**		**12 32 15.5**	**-1.8**
ZALV	**Zalesovo Beam**	**40.95**	**296**	P		**P**		**12 30 16.4**	**-0.8**
	comp=Z,8.1nm,0.8s,baz=55,slow=6.0,SNR=33								
ZALV				PcP		**PcP**		**12 32 15.5**	**-1.8**
	comp=Z,4.7nm,0.7s,baz=356,slow=2.0,SNR=4.6								
ZALV				LR		LR		12 47 36.4	
	comp=Z,233nm,20.6s,baz=176,slow=37								
MXC	**Moxie City**	**41.45**	**80**	P		**P**		**12 30 23.0**	**+1.5**
NEW	**Newport**	**41.46**	**76**	*e*P		**P**		**12 30 22.3**	**+0.7**
	comp=Z,84nm,2.0s								
NEW	**Newport**	**41.46**	**76**	⇓P		**P**		**12 30 22.1**	**+0.4**
	baz=41,SNR=11								
NEW	**Newport**	**41.46**	**76**	P		**P**		**12 30 22.2**	**+0.7**
NEW				LR		LR		12 48 49.3	
	comp=Z,514nm,18.4s,baz=321,slow=38								
A12A	**Yaak River Ran**	**41.55**	**74**	⇑P		**P**		**12 30 23.3**	**+0.9**
	baz=41,SNR=7.7								
VLL	**Laurance Lake**	**41.73**	**83**	P		**P**		**12 30 25.4**	**+1.5**
COR	**Corvallis**	**41.74**	**85**	*e*P		**P**		**12 30 26.0**	**+2.2**
COR				pmax		pmax			
	comp=Z,52nm,0.8s								
COR	**Corvallis**	**41.74**	**85**	*e*P		**P**		**12 30 26.0**	**+2.2**
	comp=Z,52nm,0.8s								
SUMG	**Summit**	**41.88**	**12**	*e*P		**P**		**12 30 25.3**	**+0.1**
SUMG				pmax		pmax			
	comp=Z,288nm,2.7s								
SUMG	**Summit**	**41.88**	**12**	*e*P		**P**		**12 30 25.3**	**+0.1**
	comp=Z,288nm,2.7s								
SUMG	**Summit**	**41.88**	**12**	*i* P		**P**		**12 30 25.2**	**+0.1**
	comp=Z,9.9nm,0.9s								
HAWA	**Hanford**	**41.91**	**80**	*e*P		**P**		**12 30 26.3**	**+1.0**
	comp=Z,43nm,1.5s								
B12A	**Libby**	**41.94**	**75**	⇑P		**P**		**12 30 26.7**	**+1.1**
	baz=42,SNR=6.4								
C11A	**Tepee Creek (N**	**42.16**	**76**	⇓P		**P**		**12 30 28.0**	**+0.7**
	baz=42								
WALA	**Waterton Lakes**	**42.18**	**73**	*e*P		**P**		**12 30 28.3**	**+0.7**
	comp=Z,1.6nm,0.8s								
A14A	**Double T Ranch**	**42.45**	**73**	⇓P		**P**		**12 30 30.4**	**+0.6**
	baz=42,SNR=46								
B13A	**Whitefish**	**42.48**	**74**	⇓P		**P**		**12 30 30.9**	**+0.9**
	baz=42,SNR=107								
FFC	**Flin Flon**	**42.48**	**59**	*e*P		**P**		**12 30 29.1**	**-0.7**
FFC				pmax		pmax			
	comp=Z,16nm,1.3s								
FFC	**Flin Flon**	**42.48**	**59**	*e*P		**P**		**12 30 29.1**	**-0.7**
	comp=Z,16nm,1.3s								
C12B	**Naegeli Ranch,**	**42.59**	**75**	⇑P		**P**		**12 30 31.5**	**+0.7**
	baz=42,SNR=12								
KEBM	**Edson Butte**	**42.67**	**87**	*e*P		**P**		**12 30 30.4**	**-1.1**
	comp=Z,28nm,0.9s								
A15A	**Johnson Ranch,**	**42.73**	**72**	⇓P		**P**		**12 30 32.2**	**+0.2**
	baz=43,SNR=48								
BSMT	**Bassoo Peak**	**42.76**	**75**	*e*P		**P**		**12 30 33.1**	**+0.7**
BLMT	**Blacktail Moun**	**42.81**	**74**	*e*P		**P**		**12 30 33.5**	**+0.7**
C13A	**Hot Springs**	**42.98**	**75**	⇑P		**P**		**12 30 34.8**	**+0.7**
	baz=43,SNR=25								
B14A	**Marquette Ranc**	**42.99**	**73**	⇓P		**P**		**12 30 34.6**	**+0.4**
	baz=43,SNR=30								
JTMT	**Jette**	**43.05**	**75**	*e*P		**P**		**12 30 35.5**	**+0.8**
YBMT	**Yellow Bay**	**43.07**	**74**	*e*P		**P**		**12 30 35.5**	**+0.6**
	comp=Z,23nm,0.9s								
D12A	**Red Ives Fores**	**43.16**	**76**	⇓P		**P**		**12 30 36.0**	**+0.5**
	baz=43								
A16A	**West Butte Ran**	**43.22**	**71**	⇓P		**P**		**12 30 35.7**	**-0.3**
	baz=43								
KEV	**Kevo**	**43.28**	**342**	*e*P		**P**		**12 30 35.7**	**-0.3**
KEV				pmax		pmax			
	comp=Z,8.0nm,0.8s								
KEV	**Kevo**	**43.28**	**342**	*e*p		**P**		**12 30 35.7**	**-0.3**
	comp=Z,8.2nm,0.8s								
B15A	**Bradely Ranch,**	**43.32**	**73**	⇑P		**P**		**12 30 36.8**	**0.0**
	baz=43,SNR=73								
SWMT	**Swartz Lake**	**43.36**	**74**	*e*P		**P**		**12 30 37.6**	**+0.5**
HUMO	**Hull Mountain**	**43.48**	**86**	*e*P		**P**		**12 30 39.9**	**+1.8**
	comp=Z,12nm,0.8s								
D13A	**Huson**	**43.49**	**75**	⇓P		**P**		**12 30 38.5**	**+0.3**
	baz=43,SNR=11								
A17A	**Triple J Farms**	**43.58**	**71**	⇓P		**P**		**12 30 38.7**	**-0.2**
	baz=44,SNR=19								
B16A	**M & M Farms, S**	**43.59**	**72**	⇓P		**P**		**12 30 38.9**	**-0.1**
	baz=44,SNR=6.0								
ARCES	**ARCESS Array B**	**43.68**	**342**	P		**P**		**12 30 38.1**	**-1.3**
ARCES	**ARCESS Array B**	**43.68**	**342**	P		**P**		**12 30 38.1**	**-1.3**
	comp=Z,7.1nm,0.6s,baz=26,slow=8.6,SNR=10								
ARCES				LR		LR		12 50 34.0	
	comp=Z,305nm,18.2s,baz=22,slow=38								
C15A	**Salmond Ranch,**	**43.73**	**73**	⇑P		**P**		**12 30 40.6**	**+0.5**
	baz=44,SNR=76								
SLMT	**Seeley Lake**	**43.78**	**74**	*e*P		**P**		**12 30 40.9**	**+0.3**
D14A	**Greenough**	**43.90**	**74**	⇑P		**P**		**12 30 42.0**	**+0.5**
	baz=44,SNR=32								
MSO	**Missula**	**43.92**	**75**	*e*P		**P**		**12 30 42.2**	**+0.5**
	comp=Z,19nm,1.0s								
MSO	**Missoula**	**43.92**	**75**	⇑P		**P**		**12 30 42.2**	**+0.5**
	baz=44,SNR=17								
A18A	**Metzger Ranch,**	**43.95**	**70**	⇓P		**P**		**12 30 41.5**	**-0.3**
	baz=44,SNR=14								
B17A	**L&G Farms, Che**	**44.06**	**71**	⇑P		**P**		**12 30 42.9**	**+0.1**
	baz=44,SNR=69								
C16A	**Fuhringer Ranc**	**44.06**	**72**	⇑P		**P**		**12 30 42.8**	**+0.1**
	baz=44,SNR=56								
BMO	**Blue Mountains**	**44.09**	**79**	*e*P		**P**		**12 30 43.8**	**+0.8**
	comp=Z,108nm,1.6s								
E13A	**Victor**	**44.13**	**76**	⇑P		**P**		**12 30 43.8**	**+0.5**
	baz=44,SNR=28								
CHMT	**Chamberlain Mo**	**44.14**	**74**	*e*P		**P**		**12 30 43.8**	**+0.2**
F12A	**Elk City**	**44.23**	**77**	⇓P		**P**		**12 30 45.1**	**+0.9**
	baz=44,SNR=52								
YBH	**Yreka Blue Hor**	**44.30**	**87**	*e*P		**P**		**12 30 46.1**	**+1.4**
	comp=Z,16nm,0.8s								
YBH	**Yreka Blue Hor**	**44.30**	**87**	P		**P**		**12 30 46.1**	**+1.4**
	baz=290,slow=6.2								
YBH				LR		LR		12 48 45.0	
	comp=Z,203nm,18.3s,baz=322,slow=35								
APA	**Apatity**	**44.31**	**337**	⇑*e*P		**P**		**12 30 47.0**	**+2.6**
D15A	**Lincoln**	**44.34**	**74**	⇑P		**P**		**12 30 45.5**	**+0.3**
	baz=44,SNR=32								
A19A	**Klindworth Far**	**44.39**	**69**	⇑P		**P**		**12 30 45.5**	**+0.2**
	baz=44,SNR=48								
B18A	**Beardsley Farm**	**44.39**	**70**	⇑P		**P**		**12 30 45.5**	**+0.1**
	baz=44,SNR=41								
E14A	**Clinton**	**44.44**	**75**	⇓P		**P**		**12 30 46.4**	**+0.6**
	baz=44,SNR=35								
SSE	**Sheshan**	**44.44**	**244**	P		**P**		**12 30 44.3**	**-1.5**
SSE				S		**S**		**12 37 22.8**	**+2.7**
SSE				pmax		pmax			
	comp=Z,49nm,0.7s								
SSE				pmax		pmax			
	comp=Z,120nm,3.6s								
SSE				LR		LR			
	comp=N,310nm,27.7s								
SSE				LR		LR			
	comp=E,340nm,27.7s								
SSE				LR		LR			
	comp=Z,270nm,17.7s								
NJ2	**Nanjing**	**44.51**	**248**	*e*P		**P**		**12 30 47.4**	**+1.0**
NJ2				pP		**pP**		**12 30 50.6**	**+0.3**
NJ2				S		**S**		**12 37 23.0**	**+1.8**
NJ2				sS		**sS**		**12 37 27.5**	**-0.1**
NJ2				pmax		pmax			
	comp=Z,40nm,1.0s								
NJ2				pmax		pmax			
	comp=Z,340nm,3.9s								
NJ2				LR		LR			
	comp=N,720nm,12.4s								
NJ2				LR		LR			
	comp=E,1µm,16.3s								
NJ2				LR		LR			
	comp=Z,530nm,18.7s								
KHMM	**Horse Mountain**	**44.56**	**88**	*e*P		**P**		**12 30 48.8**	**+1.9**
	comp=Z,135nm,1.8s								
F13A	**Darby**	**44.59**	**76**	⇓P		**P**		**12 30 47.4**	**+0.3**
	baz=44,SNR=25								
C17A	**Wharram Farm,**	**44.60**	**72**	⇓P		**P**		**12 30 46.9**	**-0.1**
	baz=44,SNR=53								
B19A	**Brinkman Farms**	**44.68**	**70**	⇓P		**P**		**12 30 47.9**	**+0.2**
	baz=45,SNR=30								
EGMT	**Eagleton**	**44.70**	**71**	*e*P		**P**		**12 30 48.0**	**+0.1**
	comp=Z,53nm,0.6s								
EGMT	**Eagleton**	**44.70**	**71**	⇓P		**P**		**12 30 47.8**	**0.0**
	baz=45,SNR=50								
G12A	**Big Creek, Yel**	**44.70**	**78**	⇑P		**P**		**12 30 48.5**	**+0.5**
	baz=45,SNR=23								
D16A	**Dana Ranch, Ca**	**44.75**	**73**	⇑P		**P**		**12 30 48.7**	**+0.3**
	baz=45,SNR=38								
A20A	**Cobblestone Ra**	**44.76**	**69**	⇓P		**P**		**12 30 48.6**	**+0.4**
	baz=45,SNR=48								
E15A	**Deer Lodge**	**44.78**	**74**	⇓P		**P**		**12 30 49.4**	**+0.8**
	baz=45,SNR=39								
HRY	**Holter Researc**	**44.89**	**74**	*e*P		**P**		**12 30 50.3**	**+0.9**
F14A	**Wisdom**	**44.97**	**75**	⇑P		**P**		**12 30 50.8**	**+0.6**
	baz=45,SNR=7.8								
SCO	**Scoresbysund**	**44.99**	**5**	*i* P		**P**		**12 30 49.7**	**-0.1**
	comp=Z,5.3nm,0.9s								
D17A	**Six Diamond Ra**	**45.01**	**72**	⇑P		**P**		**12 30 50.1**	**-0.3**
	baz=45,SNR=13								
A21A	**Bergtoll Ranch**	**45.07**	**68**	⇓P		**P**		**12 30 51.3**	**+0.6**
	baz=45								
B20A	**Solberg Farm,**	**45.07**	**69**	⇑P		**P**		**12 30 50.8**	**0.0**
	baz=45,SNR=6.3								
E16A	**East Helena**	**45.10**	**74**	⇓P		**P**		**12 30 52.0**	**+0.9**
	baz=45,SNR=142								
G13A	**Cobalt**	**45.19**	**77**	⇑P		**P**		**12 30 52.0**	**+0.2**
	baz=45,SNR=16								
MOD	**Modoc**	**45.20**	**84**	*e*P		**P**		**12 30 52.9**	**+0.9**
	comp=Z,268nm,2.5s								
C19A	**Slack Wire Ran**	**45.22**	**70**	⇑P		**P**		**12 30 52.3**	**+0.4**
	baz=45,SNR=32								
F15A	**Butte**	**45.31**	**75**	⇑P		**P**		**12 30 53.7**	**+0.7**
	baz=45,SNR=18								
WDC	**Whiskeytown Da**	**45.32**	**87**	*e*P		**P**		**12 30 53.6**	**+0.9**
WDC				pmax		pmax			
	comp=Z,10.0nm,0.7s								
WDC	**Whiskeytown Da**	**45.32**	**87**	*e*P		**P**		**12 30 53.6**	**+0.9**
	comp=Z,9.7nm,0.7s								
D18A	**Linhart Farms,**	**45.34**	**72**	⇓P		**P**		**12 30 53.5**	**+0.5**
	baz=45,SNR=11								
LRM	**Limekiln Ridge**	**45.35**	**75**	*e*P		**P**		**12 30 54.0**	**+0.7**
H12A	**Diamond D Ranc**	**45.37**	**78**	⇓P		**P**		**12 30 53.8**	**+0.5**
	baz=45,SNR=32								
G14A	**Jackson**	**45.39**	**76**	⇑P		**P**		**12 30 53.8**	**+0.2**
	baz=45,SNR=12								
A22A	**Carney Farms,**	**45.47**	**67**	⇑P		**P**		**12 30 53.9**	**-0.1**
	baz=45,SNR=7.8								
WVOR	**Wild Horse Val**	**45.48**	**83**	*e*P		**P**		**12 30 55.1**	**+0.9**
WVOR				pmax		pmax			
	comp=Z,19nm,0.9s								
WVOR	**Wild Horse Val**	**45.48**	**83**	*e*P		**P**		**12 30 55.1**	**+0.9**
	comp=Z,19nm,0.9s								
E17A	**Martinsdale**	**45.49**	**73**	⇑P		**P**		**12 30 55.1**	**+0.8**
	baz=45,SNR=56								
KIPM	**Iron Peak**	**45.55**	**89**	*e*P		**P**		**12 30 56.3**	**+1.5**
	comp=Z,17nm,0.8s								
H13A	**Challis**	**45.61**	**77**	⇓P		**P**		**12 30 55.3**	**+0.2**
	baz=46,SNR=25								
KCPM	**Cahto Peak**	**45.61**	**89**	*e*P		**P**		**12 30 56.2**	**+1.1**
	comp=Z,8.9nm,0.9s								
C20A	**Veseth Ranch,**	**45.66**	**70**	⇑P		**P**		**12 30 55.7**	**+0.3**
	baz=46,SNR=46								
DLMT	**Dillon**	**45.66**	**75**	*e*P		**P**		**12 30 56.8**	**+1.2**
	comp=Z,40nm,1.3s								
SFJD	**Kangerlussuaq**	**45.71**	**20**	*i* P		**P**		**12 30 55.4**	**-0.1**
	comp=Z,10nm,0.7s								
F16A	**Kennard Place,**	**45.72**	**74**	⇓P		**P**		**12 30 56.9**	**+0.9**
	baz=46,SNR=12								
D19A	**Cripps Ranch,**	**45.74**	**71**	⇑P		**P**		**12 30 56.7**	**+0.5**
	baz=46,SNR=43								
BOZ	**Bozeman (W)**	**45.83**	**74**	*e*P		**P**		**12 30 58.1**	**+1.2**
BOZ				pmax		pmax			
	comp=Z,43nm,0.8s								
BOZ	**Bozeman (W)**	**45.83**	**74**	*e*P		**P**		**12 30 58.1**	**+1.2**
	comp=Z,43nm,0.8s								
BOZ	**Bozeman (W)**	**45.83**	**74**	⇓P		**P**		**12 30 58.1**	**+1.2**
	baz=46,SNR=59								
I12A	**Atlanta**	**45.86**	**79**	⇑P		**P**		**12 30 57.5**	**+0.3**
	baz=46,SNR=21								
G15A	**Dillon**	**45.86**	**75**	⇑P		**P**		**12 30 58.1**	**+0.9**
	baz=46,SNR=49								
KURK	**Kurchatov**	**45.86**	**298**	*c i*P		**P**		**12 30 55.6**	**-1.3**
KURK				pmax		pmax			
	comp=Z,61nm,1.0s								
KURK	**Kurchatov**	**45.86**	**298**	*e*P		**P**		**12 30 55.0**	**-1.9**
	comp=Z,48nm,0.9s								
KURK				PP		**PP**		**12 32 41.9**	**-2.1**
MFID	**Camas Ranch**	**45.87**	**79**	*e*P		**P**		**12 30 57.8**	**+0.6**
	comp=Z,45nm,1.6s								
MFID	**Camas Ranch**	**45.87**	**79**	⇑P		**P**		**12 30 57.7**	**+0.5**
	baz=46,SNR=12								
C21A	**Desert Coulee**	**45.93**	**69**	⇑P		**P**		**12 30 57.8**	**+0.2**
	baz=46,SNR=18								
H14A	**Leadore**	**45.94**	**76**	⇓P		**P**		**12 30 58.1**	**+0.2**
	baz=46,SNR=20								
KURBB	**Kurchatov Arra**	**45.97**	**298**	P		**P**		**12 30 56.0**	**-1.7**
	comp=Z,4.0nm,0.6s,baz=40,slow=8.1,SNR=6.7								
KURBB				PP		**PP**		**12 32 41.9**	**-3.2**
	comp=Z,8.8nm,0.9s,baz=38,slow=8.9,SNR=3.7								
SOKR	**Solikamsk**	**45.98**	**319**	⇓*i*P		**P**		**12 30 58.8**	**+1.1**
SOKR				pmax		pmax			
	comp=Z,10.0nm,0.9s								
SOKR				MLR		MLR			
	comp=Z,280nm,13.0s								
MCMT	**McKenzie Canyo**	**45.98**	**76**	*e*P		**P**		**12 30 59.0**	**+0.7**
	comp=Z,6.5nm,0.7s								
F17A	**Fitzpatrick Pl**	**46.02**	**73**	⇑P		**P**		**12 30 59.6**	**+1.2**
	baz=46,SNR=91								
G16A	**Moss Hill, Enn**	**46.09**	**75**	⇓P		**P**		**12 30 59.9**	**+0.9**
	baz=46,SNR=77								
D20A	**Manuel Ranch,**	**46.10**	**70**	⇓P		**P**		**12 30 59.8**	**+0.9**
	baz=46,SNR=76								
I13A	**Wildhorse Cree**	**46.19**	**78**	⇑P		**P**		**12 31 00.3**	**+0.4**
	baz=46,SNR=47								
H15A	**Lima**	**46.24**	**76**	⇓P		**P**		**12 31 00.9**	**+0.7**
	baz=46,SNR=14								
B23A	**Brockton**	**46.26**	**67**	⇓P		**P**		**12 31 00.0**	**-0.1**
	baz=46,SNR=5.2								
GTA	**Gaotai**	**46.27**	**272**	*e*P		**P**		**12 30 59.3**	**-1.1**
GTA				pP		**pP**		**12 31 04.0**	**-0.3**
GTA				sP		**sP**		**12 31 06.3**	**+0.4**
GTA				S		**S**		**12 37 44.1**	**-2.6**
GTA				sS		**sS**		**12 37 51.3**	**-1.8**
GTA				SS		**ScS**		**12 41 00.8**	**+5.6**
GTA				pmax		pmax			
	comp=Z,13nm,1.5s								
GTA				pmax		pmax			
	comp=Z,180nm,4.3s								
GTA				LR		LR			
	comp=N,2µm,15.7s								
GTA				LR		LR			
	comp=E,3µm,14.3s								
GTA				LR		LR			
	comp=Z,2µm,9.5s								
A24A	**Westby**	**46.28**	**66**	⇑P		**P**		**12 31 00.0**	**-0.3**
	baz=46,SNR=7.8								
E19A	**Rath Farm, Rou**	**46.34**	**71**	⇓P		**P**		**12 31 01.5**	**+0.6**
	baz=46,SNR=39								
F18A	**Big Timber**	**46.41**	**73**	⇓P		**P**		**12 31 02.2**	**+0.7**
	baz=46,SNR=46								
I14A	**Mackay**	**46.46**	**77**	⇑P		**P**		**12 31 02.1**	**+0.1**
	baz=46,SNR=9.4								
G17A	**Pierce Place,**	**46.46**	**74**	⇑P		**P**		**12 31 03.0**	**+1.1**
	baz=46,SNR=11								
C22A	**Vida**	**46.48**	**68**	⇓P		**P**		**12 31 02.0**	**+0.1**
	baz=46,SNR=15								
GCMT	**Greycliff**	**46.52**	**73**	*e*P		**P**		**12 31 03.6**	**+1.2**
	comp=Z,8.0nm,0.7s								
TMCR	**Tamitsa**	**46.53**	**333**	*e*P		P		12 31 05.2	+3.2
TMCR				pmax		pmax			
	comp=Z,18nm,0.9s								
DGMT	**Dagmar**	**46.57**	**66**	⇓P		**P**		**12 31 02.4**	**-0.2**
	baz=46,SNR=5.4								
QLMT	**Earthquake Lak**	**46.57**	**75**	*e*P		**P**		**12 31 04.0**	**+1.1**
E20A	**Meyer Farm, Mu**	**46.58**	**71**	⇓P		**P**		**12 31 03.4**	**+0.7**
	baz=46,SNR=19								
D21A	**La Casta Ranch**	**46.59**	**69**	⇑P		**P**		**12 31 03.2**	**+0.5**
	baz=46,SNR=11								
J13A	**Cove Ranch, Pi**	**46.59**	**78**	⇑P		**P**		**12 31 03.7**	**+0.8**
	baz=46,SNR=48								
C23A	**Lambert**	**46.72**	**68**	⇓P	

	baz=47								
IMW	Indian Meadow	47.54	75	*e*P		P	12 31 11.9	+1.4	
	comp=Z,39nm,0.9s								
F21A	Absaloka Mine,	47.54	71	⇑P		P	12 31 10.5	+0.3	
	baz=47								
WCN	Washoe City	47.57	86	*e*P		P	12 31 11.2	+0.5	
WCN				pmax	pmax				
	comp=Z,16nm,1.0s								
WCN	Washoe City	47.57	86	*e*P		P	12 31 11.2	+0.5	
	comp=Z,16nm,1.0s								
G20A	Bridger	47.59	72	⇑P		P	12 31 11.2	+0.6	
	baz=48,SNR=43								
MK31	Makanchi Array	47.59	292	*e*P		P	12 31 09.2	-1.3	
MK31				pmax	pmax				
	comp=Z,21nm,1.2s								
MK31	Makanchi Array	47.59	292	*e*P		P	12 31 08.7	-1.8	
MKAR	Makanchi Array	47.59	292	P		P	12 31 07.9	-2.6	
MKAR							12 32 56.5		
MKAR				pmax	pmax				
	comp=Z,6.0nm,0.8s								
MKAR				pmax	pmax				
	comp=Z,6.0nm,0.9s								
MKAR				MLR	MLR				
	comp=Z,275nm,18.3s								
MKAR	Makanchi Array	47.59	292	*e*P		P	12 31 08.5	-2.0	
MKAR				PP	PP		12 32 56.5	-5.2	
MKAR	Makanchi Array	47.59	292	P		P	12 31 07.9	-2.6	
	comp=Z,5.8nm,0.8s,baz=61,slow=9.9,SNR=35								
MKAR				PP	PP		12 32 56.5	-5.2	
	comp=Z,6.3nm,0.9s,baz=51,slow=9.6,SNR=4.2								
MKAR				LR	LR		12 50 57.8		
	comp=Z,275nm,18.2s,baz=221,slow=36								
WHN	Wuhan	47.66	251	P		P	12 31 06.9	-4.3	
WHN				LR	LR				
	comp=N,2µm,15.3s								
WHN				LR	LR				
	comp=E,2µm,11.0s								
WHN				LR	LR				
	comp=Z,1µm,15.7s								
I17A	Pilgrim Ck.	47.67	75	⇓P		P	12 31 13.4	+1.9	
	baz=48,SNR=24								
K14A	Jones Ranch, D	47.70	78	⇑P		P	12 31 13.0	+1.4	
	baz=48,SNR=14								
H19A	Powell	47.72	73	⇑P		P	12 31 13.1	+1.4	
	baz=48,SNR=126								
E23A	Ismay	47.73	69	⇓P		P	12 31 12.2	+0.6	
	baz=48								
MOOW	Moose Ponds	47.74	75	*e*P		P	12 31 13.1	+1.1	
	comp=Z,28nm,1.1s								
WMQ	Urumqi	47.80	285	P		P	12 31 12.0	-0.2	
WMQ				sP		sP	12 31 19.0	+1.3	
WMQ				PcP		PcP	12 32 42.0	+1.1	
WMQ				PP		PP	12 33 04.0	+0.3	
WMQ				ScP		ScP	12 36 33.0	-1.6	
WMQ				S		S	12 38 07.0	-1.3	
WMQ				sS		sS	12 38 13.0	-1.8	
WMQ				ScS		ScS	12 41 02.0	-3.0	
WMQ				SS		SS	12 41 30.0	-6.2	
WMQ				pmax	pmax				
	comp=Z,18nm,1.0s								
WMQ				pmax	pmax				
	comp=Z,120nm,5.0s								
WMQ				LR	LR				
	comp=N,2µm,16.0s								
WMQ				LR	LR				
	comp=E,760nm,15.0s								
WMQ				LR	LR				
	comp=Z,900nm,15.0s								
RRI2	Red Ridge	47.83	76	*e*P		P	12 31 14.1	+1.4	
	comp=Z,44nm,0.8s								
K15A	Arbon	47.86	77	⇓P		P	12 31 13.8	+0.9	
	baz=48,SNR=10								
TPAW	Teton Pass	47.87	75	*e*P		P	12 31 14.6	+1.6	
	comp=Z,30nm,0.8s								
F22A	Rosebud	47.93	70	⇓P		P	12 31 13.3	+0.1	
	baz=48,SNR=11								
SNOW	Snow King Moun	47.97	75	*e*P		P	12 31 15.5	+1.7	
	comp=Z,32nm,0.9s								
G21A	Lodge Grass	47.99	71	⇓P		P	12 31 14.2	+0.4	
	baz=48,SNR=16								
REDW	Red Top Meadow	48.01	75	*e*P		P	12 31 15.7	+1.6	
	comp=Z,0.6nm,1.2s								
J17A	Brown Place, J	48.07	75	⇓P		P	12 31 15.9	+1.4	
	baz=48,SNR=21								
E24A	Baker	48.07	68	⇑P		P	12 31 14.8	+0.5	
	baz=48,SNR=7.8								
ARU	Arti	48.09	315	*d*/*i*P		P	12 31 15.3	+1.1	
ARU							12 33 05.8		
ARU				S		S	12 38 16.6	+4.6	
ARU				SS		SS	12 41 40.4	+0.1	
ARU				pmax	pmax				
	comp=Z,17nm,0.8s								
ARU				MLR	MLR				
	comp=Z,615nm,18.0s								
K16A	Soda Springs	48.14	76	⇓P		P	12 31 16.0	+1.0	
	baz=48,SNR=7.6								
I18A	Diamond G Ranc	48.16	74	⇑P		P	12 31 16.6	+1.3	
	baz=48,SNR=22								
I19A	Meeteetse	48.23	73	⇓P		P	12 31 16.6	+0.9	
	baz=48,SNR=30								
H20A	Greybull	48.27	72	⇑P		P	12 31 16.2	+0.3	
	baz=48,SNR=22								
ULM	Lac du Bonnet	48.31	59	*e*P		P	12 31 15.7	-0.3	
	comp=Z,19nm,1.0s								
ULM				PcP		PcP	12 32 41.0	-1.5	
ULM	Lac du Bonnet	48.31	59	P		P	12 31 15.7	-0.3	
	comp=Z,14nm,0.7s,baz=318,slow=8.0,SNR=21								
ULM				PcP		PcP	12 32 41.0	-1.5	
	comp=Z,9.8nm,0.8s,baz=297,slow=3.6,SNR=4.0								
ULM				LR		LR	12 53 57.2		
	comp=Z,250nm,18.8s,baz=329,slow=39								
ELK	Elko	48.31	81	*e*P		P	12 31 17.6	+1.1	
	comp=Z,90nm,0.8s								
F23A	Volborg	48.32	69	⇓P		P	12 31 16.3	+0.1	
	baz=48,SNR=15								
CMB	Columbia Colle	48.36	87	*e*P		P	12 31 17.0	+0.4	
CMB				pmax	pmax				
	comp=Z,28nm,1.8s								
CMB	Columbia Colle	48.36	87	*e*P		P	12 31 17.0	+0.4	
	comp=Z,28nm,1.8s								
G22A	Birney	48.37	70	⇓P		P	12 31 17.0	+0.3	
	baz=48,SNR=14								
AHID	Auburn Hatcher	48.40	76	*e*P		P	12 31 17.3	+0.2	
	comp=Z,25nm,1.0s								
J18A	Kendall Valley	48.48	75	⇓P		P	12 31 18.7	+0.9	
	baz=48,SNR=48								
L15A	Malad City	48.48	78	⇓P		P	12 31 18.8	+1.1	
	baz=48,SNR=28								
K17A	Gardner Place,	48.48	76	⇓P		P	12 31 18.2	+0.5	
	baz=48								
HVU	Hansel Valley	48.50	78	*e*P		P	12 31 19.0	+1.2	
HVU				pmax	pmax				
	comp=Z,48nm,1.0s								
HVU	Hansel Valley	48.50	78	*e*P		P	12 31 19.0	+1.2	
	comp=Z,48nm,1.0s								
H21A	Big Horn, Sher	48.55	71	⇓P		P	12 31 19.0	+0.9	
	baz=48,SNR=61								
F24A	Ekalaka	48.60	69	⇓P		P	12 31 18.6	+0.1	
	baz=48,SNR=6.7								
I20A	Worland	48.66	73	⇓P		P	12 31 19.4	+0.5	
	baz=48,SNR=21								
G23A	Biddle	48.75	70	⇑P		P	12 31 19.6	0.0	
	baz=49,SNR=9.2								
J19A	Crowheart	48.84	74	⇑P		P	12 31 21.3	+0.9	
	baz=49,SNR=19								
H22A	Clearmont	48.86	71	⇓P		P	12 31 21.0	+0.5	
	baz=49,SNR=9.4								
MDND	Maddock	48.87	63	⇑P		P	12 31 20.6	+0.2	
	baz=49								
L16A	Fish Haven	48.88	77	⇓P		P	12 31 21.7	+0.9	
	baz=49,SNR=29								
NVAR	Mina Array Bea	48.93	85	P		P	12 31 22.0	+0.8	
NVAR				PcP		PcP	12 32 45.5	+0.2	
NVAR	Mina Array Bea	48.93	85	P		P	12 31 22.0	+0.8	
	comp=Z,9.5nm,0.8s,baz=306,slow=7.1,SNR=68								
NVAR				PcP		PcP	12 32 45.5	+0.2	
	comp=Z,2.7nm,0.7s,baz=305,slow=2.4,SNR=3.8								
JOF	Joensuu	48.93	336	*e*P		P	12 31 18.4	-2.2	
JOF				pmax	pmax				
	comp=Z,4.0nm,0.7s								
JOF	Joensuu	48.93	336	*e*p		P	12 31 18.4	-2.2	
	comp=Z,3.7nm,0.7s								
K18A	Toltan Ranch,	48.95	75	⇑P		P	12 31 22.6	+1.3	
	baz=49,SNR=48								
SAO	San Andreas Ge	48.97	89	*e*P		P	12 31 22.0	+0.7	
SAO				pmax	pmax				
	comp=Z,10.0nm,0.8s								
SAO	San Andreas Ge	48.97	89	*e*P		P	12 31 22.0	+0.7	
	comp=Z,10nm,0.8s								
BW06	Boulder Array	49.04	75	*e*P		P	12 31 22.7	+0.7	
	comp=Z,42nm,0.8s								
BW06	Boulder Array	49.04	75	⇓P		P	12 31 22.5	+0.4	
	baz=49,SNR=92								
G24A	Alzada	49.04	69	⇓P		P	12 31 21.5	-0.3	
	baz=49,SNR=7.0								
PDAR	Pinedale Array	49.04	75	P		P	12 31 22.6	+0.6	
PDAR	Pinedale Array	49.04	75	P		P	12 31 22.6	+0.6	
	comp=Z,38nm,0.7s,baz=343,slow=3.0,SNR=307								
PDAR				LR		LR	12 53 16.7		
	comp=Z,458nm,18.8s,baz=336,slow=38								
L17A	Cokeville	49.04	76	⇑P		P	12 31 22.7	+0.7	
	baz=49,SNR=19								
I21A	Big Trails, Te	49.12	72	⇑P		P	12 31 22.8	+0.3	
	baz=49,SNR=31								
HWUT	Hardware Ranch	49.16	77	*e*P		P	12 31 23.9	+1.1	
	comp=Z,78nm,1.5s								
J20A	Shoshoni	49.17	73	⇓P		P	12 31 24.0	+1.1	
	baz=49,SNR=56								
H23A	Clabaugh Cattl	49.27	70	⇓P		P	12 31 23.8	+0.2	
	baz=49								
K19A	Absolon Red Bu	49.29	74	⇑P		P	12 31 23.8	-0.1	
	baz=49,SNR=23								
M16A	Huntsville	49.37	78	⇓P		P	12 31 25.4	+0.8	
	baz=49,SNR=12								
I22A	9 Mile Ranch,	49.38	72	⇓P		P	12 31 25.2	+0.7	
	baz=49,SNR=65								
J21A	Lysite	49.44	73	⇑P		P	12 31 25.7	+0.7	
	baz=49,SNR=41								
H24A	Dirks Ranch, A	49.46	69	⇓P		P	12 31 25.0	-0.1	
	baz=49,SNR=46								
L18A	Fontenelle, Gr	49.54	76	⇑P		P	12 31 26.2	+0.4	
	baz=49,SNR=13								
K20A	Yellowstone Ra	49.63	74	⇑P		P	12 31 26.4	-0.1	
	baz=50,SNR=38								
M17A	Scullys Gap (B	49.65	77	⇑P		P	12 31 27.3	+0.6	
	baz=50,SNR=8.5								
L19A	Farson	49.67	75	⇑P		P	12 31 27.0	+0.2	
	baz=50,SNR=23								
MTUM	Tungsten Hills	49.72	86	*e*P		P	12 31 28.8	+1.6	
I23A	Meade Ranch, G	49.74	71	⇓P		P	12 31 27.5	+0.2	
	baz=50								
J22A	Midwest	49.78	72	⇓P		P	12 31 27.6	0.0	
	baz=50,SNR=22								
DUG	Dugway	49.80	79	*e*P		P	12 31 28.5	+0.8	
DUG				pmax	pmax				
	comp=Z,27nm,1.1s								
DUG	Dugway	49.80	79	*e*P		P	12 31 28.5	+0.8	
	comp=Z,27nm,1.1s								
DUG	Dugway	49.80	79	⇑P		P	12 31 28.6	+0.8	
	baz=50,SNR=18								
AGMN	Agassiz Nation	49.92	60	*e*P		P	12 31 27.8	-0.6	
	comp=Z,12nm,0.8s								
M18A	Lyman	49.94	76	⇓P		P	12 31 29.1	+0.3	
	baz=50								
N17A	Moffit Pass	50.02	77	⇓P		P	12 31 29.9	+0.4	
	baz=50,SNR=14								
JLU	Jordanelle	50.04	78	*e*P		P	12 31 30.6	+0.9	
	comp=Z,16nm,1.2s								
K21A	Alcova	50.11	73	⇓P		P	12 31 30.6	+0.4	
	baz=50,SNR=43								
TIN	Tinemaha	50.11	86	⇓P		P	12 31 31.2	+1.1	
	baz=50								
R11A	Troy Canyon, C	50.16	83	⇓P		P	12 31 30.8	+0.2	
	baz=50,SNR=7.7								
I24A	Kuemmerle Ranc	50.17	70	⇓P		P	12 31 30.4	0.0	
	baz=50,SNR=10								
J23A	Dilts Ranch, B	50.17	71	⇑P		P	12 31 30.4	-0.1	
	baz=50								
L20A	Wamsutter	50.17	74	⇑P		P	12 31 30.8	+0.2	
	baz=50,SNR=27								
RSSD	Black Hills	50.19	69	*e*P		P	12 31 30.8	+0.1	
RSSD				pmax	pmax				
	comp=Z,14nm,0.7s								
RSSD	Black Hills	50.19	69	*e*P		P	12 31 30.8	+0.1	
	comp=Z,14nm,0.7s								
M19A	Rock Springs	50.25	75	⇓P		P	12 31 31.2	0.0	
	baz=50								
DAU	Daniels Canyon	50.28	78	*e*P		P	12 31 32.8	+1.2	
DAU	Daniels Canyon	50.28	78	*e*P		P	12 31 32.8	+1.2	
RCTC	Rector, Farmer	50.30	88	⇑P		P	12 31 32.0	+0.6	
	baz=50								
K22A	Casper	50.39	73	⇑P		P	12 31 32.1	-0.1	
	baz=50								
PTRM	Twissleman Ran	50.44	89	*e*P		P	12 31 33.8	+1.3	
MPU	Maple Canyon	50.45	79	*e*P		P	12 31 33.6	+0.8	
	comp=Z,12nm,0.8s								
N18A	Larsen Ranch,	50.48	76	⇓P		P	12 31 33.2	+0.3	
	baz=50,SNR=41								
GRAC	Grapevine Rang	50.53	86	⇑P		P	12 31 34.4	+1.3	
	baz=50,SNR=6.0								
KAF	Kangasniemi	50.53	338	*e*P		P	12 31 32.6	-0.2	
KAF				pmax	pmax				
	comp=Z,3.0nm,0.5s								
KAF	Kangasniemi	50.53	338	*e*p		P	12 31 32.6	-0.2	
	comp=Z,3.4nm,0.5s								
J24A	Dixon Ranch, L	50.59	71	⇓P		P	12 31 33.7	0.0	
	baz=50,SNR=20								
L21A	Rawlins	50.61	74	⇓P		P	12 31 34.3	+0.3	
	baz=50,SNR=19								
M20A	Sweetwater, Wa	50.67	75	⇓P		P	12 31 35.0	+0.6	
	baz=51,SNR=14								
K23A	Bowen Ranch, D	50.67	72	⇓P		P	12 31 34.1	-0.2	
	baz=51								
CWC	Cottonwood Cre	50.69	87	⇑P		P	12 31 35.5	+0.9	
	baz=51								
N19A	John Jarvie Ra	50.75	76	⇑P		P	12 31 35.1	+0.1	
	baz=51,SNR=13								
VES	Vestal, Richgr	50.77	88	⇑P		P	12 31 35.2	+0.3	
	baz=51,SNR=9.7								
SMMC	Simnler	50.82	89	⇓P		P	12 31 36.4	+1.0	
	baz=51								
M21A	Separation Pea	50.91	74	⇓P		P	12 31 36.2	-0.1	
	baz=51,SNR=19								
L22A	Ellis Ranch, M	50.94	73	⇓P		P	12 31 37.5	+1.1	
	baz=51,SNR=61								
K24A	Anderson Ranch	51.03	71	⇑P		P	12 31 37.0	0.0	
	baz=51								
L23A	Garrett	51.18	72	⇑P		P	12 31 38.6	+0.4	
	baz=51,SNR=23								
ISA	Isabella	51.18	87	*e*P		P	12 31 38.2	+0.1	
ISA				pmax	pmax				
	comp=Z,7.0nm,0.8s								
ISA	Isabella	51.18	87	*e*P		P	12 31 38.2	+0.1	
	comp=Z,7.4nm,0.8s								
ISA	Isabella	51.18	87	⇑P		P	12 31 38.2	+0.1	
	baz=51,SNR=11								
N20A	Spence Gulch,	51.18	75	⇓P		P	12 31 39.4	+1.1	
	baz=51,SNR=97								
FURC	Furnace Creek,	51.19	85	⇓P		P	12 31 39.0	+0.9	
	baz=51,SNR=13								
FINES	FINESS Array B	51.20	338	P		P	12 31 37.5	-0.3	
FINES	FINESS Array B	51.20	338	P		P	12 31 37.5	-0.3	
	comp=Z,4.7nm,0.7s,baz=16,slow=7.9,SNR=12								
FINES				LR		LR	12 57 51.3		
	comp=Z,240nm,18.7s,baz=357,slow=41								
TMUT	Trail Mountain	51.23	79	*e*P		P	12 31 39.6	+0.8	
	comp=Z,17nm,1.0s								
PKM	Peak Mountain	51.25	89	⇑P		P	12 31 40.0	+1.2	
	baz=51,SNR=18								
MPMC	Manual Prospec	51.27	86	⇑P		P	12 31 39.8	+0.9	
	baz=51,SNR=29								
O19A	Miners Draw (B	51.27	76	⇓P		P	12 31 39.4	+0.5	
	baz=51,SNR=6.4								
P17A	Butcher Ranch,	51.28	78	⇓P		P	12 31 39.7	+0.7	
	baz=51,SNR=11								
P18A	Preston Nutter	51.36	78	⇑P		P	12 31 40.6	+0.9	
	baz=51								
M22A	Cedar Creek Ra	51.40	73	⇑P		P	12 31 40.0	0.0	
	baz=51,SNR=12								
MVU	Marysvale	51.47	80	*e*P		P	12 31 41.8	+1.3	
	comp=Z,21nm,0.9s								
MSU	Marysvale	51.48	80	*e*P		P	12 31 42.0	+1.5	
MSU	Marysvale	51.48	80	*e*P		P	12 31 42.0	+1.5	
K25A	Mack Ranch, Ha	51.51	70	⇑P		P	12 31 40.8	+0.2	
	baz=51,SNR=6.7								
ARUT	Antelope Range	51.55	82	*e*P		P	12 31 42.3	+1.3	
ARUT				pmax	pmax				
	comp=Z,19nm,0.9s								
ARUT	Antelope Range	51.55	82	*e*P		P	12 31 42.3	+1.3	
	comp=Z,19nm,0.9s								
L24A	Wheatland	51.55	72	⇑P		P	12 31 40.9	0.0	
	baz=51								
N21A	Black Mountain	51.55	75	⇓P		P	12 31 41.6	+0.5	
	baz=51,SNR=37								
Q16A	Castle Valley	51.56	79	⇓P		P	12 31 42.1	+1.0	
	baz=52,SNR=11								
LRMC	Laurel Mountai	51.67	87	⇑P		P	12 31 42.5	+0.5	
	baz=52,SNR=24								
SRU	San Rafael	51.67	78	*e*P		P	12 31 43.0	+1.0	
SRU				pmax	pmax				
	comp=Z,37nm,0.8s								
SRU	San Rafael	51.67	78	*e*P		P	12 31 43.0	+1.0	
	comp=Z,36nm,0.8s								
SRU	San Rafael	51.67	78	⇓P		P	12 31 42.8	+0.8	
	baz=52,SNR=64								
M23A	Laramie	51.71	73	⇑P		P	12 31 42.4	+0.2	
	baz=52,SNR=14								
K26A	Motz Farm, Whi	51.72	70	⇑P		P	12 31 42.2	+0.1	
	baz=52,SNR=8.1								
O20A	White River Ci	51.78	76	⇓P		P	12 31 43.2	+0.5	
	baz=52,SNR=20								
CCUT	Cedar City	51.78	82	*e*P		P	12 31 43.7	+0.9	
	comp=Z,13nm,0.9s								
CD2	Chengdu	51.78	262	P		P	12 31 44.0	+1.3	
CD2				pP		pP	12 31 48.5	+1.9	
CD2				sP		sP	12 31 51.0	+2.9	
CD2				PcP		PcP	12 32 57.8	+2.1	
CD2				PP		PP	12 33 42.3	+2.2	
CD2				PcS		PcS	12 36 54.3	+0.5	
CD2				S		S	12 39 03.8	-0.4	
CD2				sS		sS	12 39 10.9	+0.2	
CD2				ScS		ScS	12 41 31.3	-1.1	
CD2				SS		SS	12 42 37.9	-2.4	
CD2				pmax	pmax				
	comp=Z,20nm,0.5s								
CD2				pmax	pmax				
	comp=Z,90nm,4.5s								
CD2				LR	LR				
	comp=N,2µm,17.2s								
CD2				LR	LR				
	comp=E,2µm,17.2s								
CD2				LR	LR				
	comp=Z,730nm,10.4s								
EYMN	Ely	51.83	57	*e*P		P	12 31 43.9	+1.2	
	comp=Z,26nm,1.2s								
P19A	Cripple Cowboy	51.89	77	⇑P		P	12 31 44.2	+0.6	
	baz=52,SNR=16								
SHOC	Shoshone	51.92	85	⇓P		P	12 31 44.6	+1.0	
	baz=52,SNR=13								
PHWY	Pilot Hill	51.95	73	*e*P		P	12 31 44.2	+0.1	
	comp=Z,11nm,0.6s								
N22A	Wattenberg Ran	51.96	74	⇓P		P	12 31 44.8	+0.6	
	baz=52,SNR=22								
OSI	Osito Adit	51.96	88	⇑P		P	12 31 44.9	+0.9	
	baz=52								
O21A	Pagoda	52.03	75	⇓P		P	12 31 45.1	+0.4	
	baz=52								
EDW2	Edwards Air Fo	52.05	88	⇑P		P	12 31 45.1	+0.5	
	baz=52,SNR=12								
M24A	Cheyenne	52.08	72	⇑P		P	12 31 45.7	+0.8	
	baz=52,SNR=23								
K27A	Flueckinger Fa	52.09	69	⇓P		P	12 31 44.9	-0.1	
	baz=52								
N23A	Red Feather La	52.09	73	⇓P		P	12 31 45.5	+0.4	
	baz=52,SNR=15								
BSC	Santa Cruz Isl	52.10	90	⇑P		P	12 31 45.6	+0.6	
	baz=52								
GSC	Goldstone	52.20	86	*e*P		P	12 31 46.7	+0.9	
GSC				pmax	pmax				
	comp=Z,25nm,0.9s								
GSC	Goldstone	52.20	86	*e*P		P	12 31 46.7	+0.9	
	comp=Z,25nm,0.9s								
GSC	Goldstone	52.20	86	⇓P		P	12 31 46.7	+0.9	
	baz=52,SNR=26								
BLG	Laguna Peak	52.24	89	⇑P		P	12 31 46.5	+0.5	
	baz=52								
P20A	De Beque	52.25	76	⇓P		P	12 31 46.4	+0.2	
	baz=52,SNR=8.8								
L26A	Underwood Farm	52.31	70	⇓P		P	12 31 46.6	+0.1	
	baz=52								
Q19A	Hogan Spring (	52.34	77	⇑P		P	12 31 46.9	+0.1	
	baz=52,SNR=52								
M25A	Palm-Egli Farm	52.42	71	⇑P		P	12 31 48.1	+0.7	
	baz=52,SNR=5.7								
DECC	Green Verdugo	52.44	88	⇓P		P	12 31 48.2	+0.7	
	baz=52								
O22A	Kremmling	52.46	74	⇑P		P	12 31 48.6	+0.7	
	baz=52,SNR=14								
TUQ	Turquoise Moun	52.47	85	⇓P		P	12 31 48.8	+0.9	
	baz=52								
RRX	Edison Barstow	52.48	87	⇑P		P	12 31 49.0	+1.2	
	baz=52								
PASC	Pasadena Art C	52.57	88	*e*P		P	12 31 49.2	+0.7	
	comp=Z,55nm,0.8s								
MWC	Mount Wilson	52.58	88	*e*P		P	12 31 49.7	+0.9	
MWC				pmax	pmax				
	comp=Z,66nm,1.4s								
MWC	Mount Wilson	52.58	88	*e*P		P	12 31 49.7	+0.9	
	comp=Z,66nm,1.4s								
L27A	T5 Ranch, Ells	52.58	70	⇑P		P	12 31 48.9	+0.4	
	baz=52								
N24A	Carr	52.59	72	⇑P		P	12 31 49.6	+0.9	
	baz=52								
P21A	Newcastle	52.62	75	⇑P		P	12 31 49.8	+0.8	
	baz=52,SNR=17								
O23A	Lake Granby, G	52.68	74	⇓P		P	12 31 50.6	+1.1	
	baz=53,SNR=26								
BFSC	Mount Baldy Ra	52.74	88	⇓P		P	12 31 50.8	+1.0	
	baz=53,SNR=21								
Q20A	Ridgley Place,	52.74	77	⇓P		P	12 31 49.9	0.0	
	baz=53,SNR=20								
M26A	McRoberts Ranc	52.77	71	⇑P		P	12 31 50.4	+0.4	
	baz=53								
HEC	Hector,Ludlow	52.81	86	⇑P		P	12 31 51.2	+0.9	
	baz=53								
P22A	Eagle	52.85	75	⇑P		P	12 31 51.2	+0.5	
	baz=53,SNR=12								
FMP	Fort Macarthur	52.91	89	⇑P		P	12 31 51.6	+0.7	
	baz=53								
PV04	Paradox Valley	52.96	77	*e*P		P	12 31 52.3	+0.8	
M27A	Reverse DX Ran	53.02	70	⇓P		P	12 31 52.2	+0.4

baz=53,SNR=9.9
SCHQ Schefferville 53.54 36 *e*P **P 12 31 54.5 -0.8**
SCHQ Schefferville 53.54 36 P **P 12 31 54.3 -1.0**
comp=Z,7.2nm,0.6s,baz=18,slow=8.2,SNR=20
NB2 NORSAR Subarra 53.54 347 P **P 12 31 53.9 -1.3**
comp=Z,14nm,0.8s,baz=12,slow=7.4
NOA NORSAR Array B 53.54 347 P **P 12 31 54.0 -1.3**
NOA NORSAR Array B 53.54 347 P **P 12 31 54.0 -1.3**
comp=Z,13nm,0.9s,baz=11,slow=7.4,SNR=14
NOA LR LR 12 57 12.3
comp=Z,82nm,19.1s,baz=0.0,slow=39
R21A Cimarron 53.55 76 ⇑P **P 12 31 56.7 +0.8**
baz=53,SNR=36
N27A Anderson Farm, 53.57 71 ⇓P **P 12 31 56.3 +0.4**
baz=53,SNR=8.7
USP Ospenovka 53.59 295 *i* P **P 12 31 58.3 +2.4**
USP Ospenovka 53.59 295 P **P 12 31 58.3 +2.4**
SNR=6.4
NEE2 Needles Airpor 53.60 85 ⇑P **P 12 31 56.8 +0.8**
baz=54
W13A Hualapai Mount 53.63 84 ⇓P **P 12 31 57.5 +1.0**
baz=54
SPMN St. Paul 53.64 60 ⇑P **P 12 31 55.8 -0.4**
baz=54,SNR=5.7
OGNE Ogallala 53.65 70 *e*P **P 12 31 56.9 +0.4**
comp=Z,22nm,0.8s
OGNE Ogallala 53.65 70 ⇓P **P 12 31 56.7 +0.3**
baz=54,SNR=7.3
BELC Belle Mtn. Jos 53.66 86 ⇑P **P 12 31 57.2 +0.6**
baz=54,SNR=19
S20A Disappointment 53.67 77 ⇓P **P 12 31 57.4 +0.6**
baz=54,SNR=19
P24A Kohler Place, 53.68 73 ⇓P **P 12 31 58.1 +1.3**
baz=54
CHMS Chumysh 53.72 295 *i* P **P 12 31 59.1 +2.3**
CHMS Chumysh 53.72 295 P **P 12 31 59.1 +2.3**
SNR=7.7
O26A Horse Wrangler 53.73 72 ⇑P **P 12 31 57.7 +0.6**
baz=54,SNR=7.9
NAO01 NORSAR Array S 53.76 347 *e*P **P 12 31 58.0 +1.2**
comp=Z,5.7nm,0.8s
ABKAR Akbulak array 53.77 310 *e*P **P 12 31 56.4 -0.7**
comp=Z,7.0nm,0.7s
PFO Pinyon Flat Ob 53.80 87 *e*P **P 12 31 58.1 +0.5**
comp=Z,27nm,1.6s
PFO Pinyon Flat Ob 53.80 87 ⇓P **P 12 31 57.8 +0.2**
baz=54,SNR=11
Q23A Hartsel 53.81 75 ⇓P **P 12 31 58.8 +0.9**
baz=54,SNR=13
IRM Iron Mountain 53.89 86 ⇓P **P 12 31 59.4 +1.2**
baz=54,SNR=32
FRU Bishkek 53.91 295 *e*P **P 12 32 00.0 +1.7**
FRU pmax pmax
comp=Z,210nm,2.4s
KBK Karagaybulak 53.93 294 P **P 12 32 01.0 +2.5**
SNR=9.9
P25A Willow Gulch B 53.99 73 ⇓P **P 12 31 60.0 +0.9**
baz=54,SNR=6.9
S21A Coal Bank Pass 54.05 77 ⇑P **P 12 32 00.7 +1.1**
baz=54,SNR=25
Q24A Divide 54.05 74 ⇓P **P 12 32 00.3 +0.7**
baz=54,SNR=9.2
O27A Beecher Island 54.11 71 ⇓P **P 12 32 00.3 +0.5**
baz=54
AAK Ala-Archa 54.13 295 *e*P **P 12 31 59.3 -0.7**
AAK pmax pmax
comp=Z,61nm,0.8s
AAK Ala-Archa 54.13 295 *e*P **P 12 31 59.4 -0.6**
comp=Z,5.7nm,0.9s
AAK Ala-Archa 54.13 295 P **P 12 31 59.5 -0.5**
comp=Z,22nm,0.9s,baz=44,slow=3.3,SNR=33
109C Camp Elliot, M 54.13 88 ⇑P **P 12 32 00.5 +0.5**
baz=54
MVCO Mesa Verde 54.13 78 *e*P **P 12 32 00.4 +0.2**
comp=Z,11nm,1.0s
MVCO Mesa Verde 54.13 78 ⇓P **P 12 32 00.5 +0.4**
baz=54,SNR=6.4
HFS Hagfors 54.16 345 LR LR 12 54 22.9
comp=Z,171nm,21.5s,baz=13,slow=35
BC3 Big Chuckawall 54.19 86 ⇑P **P 12 32 01.1 +0.6**
baz=54,SNR=13
PDMCI Parker Dam,Lak 54.20 85 ⇓P **P 12 32 01.2 +0.8**
baz=54,SNR=9.6
P26A Davis Ranch, A 54.29 72 ⇓P **P 12 32 01.7 +0.5**
baz=54,SNR=14
KZA Kyzart 54.30 294 *i* P **P 12 32 04.1 +2.5**
KZA Kyzart 54.30 294 P **P 12 32 04.1 +2.5**
SNR=14
WUAZ Wupatki 54.35 81 *e*P **P 12 32 03.0 +1.3**
comp=Z,18nm,0.9s
WUAZ Wupatki 54.35 81 ⇑P **P 12 32 02.8 +1.1**
baz=54,SNR=19
S22A 4UR Ranch, Cre 54.38 76 ⇓P **P 12 32 03.2 +1.2**
baz=54
EKS2 Erkin-Say 54.39 295 *e*P **P 12 32 01.5 -0.3**
EKS2 pmax pmax
comp=Z,27nm,1.1s
EKS2 Erkin-Say 54.39 295 *e*P **P 12 32 01.5 -0.3**
comp=Z,27nm,1.1s
EKS2 Erkin-Say 54.39 295 P **P 12 32 04.5 +2.7**
SNR=16
R23A Moffat 54.42 75 ⇑P **P 12 32 03.7 +1.4**
baz=54,SNR=26
MONP Monument Peak 54.43 87 ⇓P **P 12 32 03.1 +0.8**
baz=54,SNR=20
GYA Guiyang 54.43 257 ⇑*i*P **P 12 32 04.8 +2.5**
GYA PP **PP 12 34 07.4 +3.2**
GYA S **S 12 39 41.0 +0.5**
GYA SS **SS 12 43 21.3 -1.2**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,5.2s
GYA LR LR
comp=N,520nm,18.5s
GYA LR LR
comp=E,450nm,19.4s
GYA LR LR
comp=Z,570nm,18.9s
Q25A Bedland, Calha 54.46 73 ⇑P **P 12 32 03.2 +0.6**
baz=54,SNR=12
BAR Barrett 54.50 88 *e*P **P 12 32 03.5 +0.9**
comp=Z,14nm,0.8s
Y12C Blythe 54.51 85 ⇓P **P 12 32 03.7 +1.1**
baz=54,SNR=8.7
SWSC Sam W. Stewart 54.65 87 ⇑P **P 12 32 04.4 +0.8**
baz=55,SNR=8.2
R24A Sanders Place, 54.69 74 ⇓P **P 12 32 05.0 +0.8**
baz=55,SNR=15
T21A Navajo Lake 54.73 77 ⇓P **P 12 32 05.7 +1.2**
baz=55
Q26A Hugo 54.76 73 ⇓P **P 12 32 05.4 +0.8**
baz=55,SNR=14
S23A Nye Farm, Mont 54.76 75 ⇓P **P 12 32 06.4 +1.6**
baz=55,SNR=9.1
DVTC Desert V Tower 54.76 87 ⇑P **P 12 32 05.5 +0.9**
baz=55,SNR=12
BGNE Belgrade 54.82 67 ⇓P **P 12 32 04.6 -0.2**
baz=55,SNR=6.4
U20A Newcomb 54.83 78 ⇓P **P 12 32 05.9 +0.8**
baz=55,SNR=7.2
T22A Edith 54.97 77 ⇓P **P 12 32 07.4 +1.1**
baz=55,SNR=20
GLA Glamis 54.97 86 *e*P **P 12 32 07.4 +1.3**
GLA pmax pmax
comp=Z,31nm,0.8s
GLA Glamis 54.97 86 *e*P **P 12 32 07.4 +1.3**
comp=Z,31nm,0.8s
GLA Glamis 54.97 86 ⇓P **P 12 32 07.2 +1.1**
baz=55,SNR=8.1
Y14A Wickenburg 55.00 84 ⇓P **P 12 32 07.4 +1.1**
baz=55,SNR=19
KSCO Kaye Shedlock' 55.05 72 ⇓P **P 12 32 07.4 +0.7**
baz=55,SNR=12
KONO Kongsberg 55.07 347 *i* P **P 12 32 08.9 +2.6**
OBN Obninsk 55.08 329 *e*P **P 12 32 06.3 -0.2**
OBN *i* 12 33 11.8
OBN *e* 12 34 09.1
OBN pmax pmax
comp=Z,7.0nm,1.0s
OBN MLR MLR
comp=Z,300nm,17.0s
R25A Fountain Ranch 55.10 74 ⇑P **P 12 32 08.0 +0.9**
baz=55,SNR=8.2
S24A Houchin Ranch, 55.15 75 ⇑P **P 12 32 08.8 +1.2**
baz=55,SNR=16
U21A Nageezi 55.15 78 ⇑P **P 12 32 08.3 +0.8**
baz=55,SNR=14

X16A Lo Mia Camp, P 55.26 82 ⇓P **P 12 32 09.8 +1.5**
baz=55,SNR=38
KK31 Karatay Array 55.27 298 *i* P **P 12 32 08.1 0.0**
KK31 pmax pmax
comp=Z,7.0nm,0.6s
KKAR Karatay Array 55.27 298 *e*P **P 12 32 06.9 -1.2**
KKAR Karatay Array 55.27 298 *e*P **P 12 32 06.9 -1.2**
R26A Arlington 55.31 73 ⇑P **P 12 32 09.1 +0.6**
baz=55,SNR=23
T23A Casias Ranch, 55.31 76 ⇑P **P 12 32 09.8 +1.0**
baz=55
V20A Brimhall 55.35 79 ⇑P **P 12 32 09.6 +0.7**
baz=55
W18A Petrified Fore 55.39 80 ⇑P **P 12 32 10.1 +0.9**
baz=55,SNR=6.7
S25A Robets Cordova 55.45 74 ⇓P **P 12 32 10.1 +0.5**
baz=55,SNR=20
Z14A Wintersburg 55.52 84 ⇓P **P 12 32 11.1 +1.2**
baz=55,SNR=16
U22A Llaves 55.53 77 ⇓P **P 12 32 11.3 +0.9**
baz=55,SNR=7.2
R27A Eads 55.59 72 ⇑P **P 12 32 11.0 +0.4**
baz=56,SNR=15
113A Mohawk Valley, 55.67 85 ⇑P **P 12 32 12.1 +1.1**
baz=56,SNR=26
V21A Milan 55.69 78 ⇑P **P 12 32 12.1 +0.7**
baz=56
T24A Torres, Weston 55.69 75 ⇑P **P 12 32 12.9 +1.4**
baz=56,SNR=54
X18A Snowflake 55.80 81 ⇓P **P 12 32 13.6 +1.4**
baz=56,SNR=26
U23A El Rito 55.85 76 ⇓P **P 12 32 13.7 +1.1**
baz=56,SNR=19
S26A Kim 55.88 73 ⇑P **P 12 32 13.1 +0.4**
baz=56,SNR=26
V22A San Miguel Ran 55.91 77 ⇑P **P 12 32 13.8 +0.8**
baz=56,SNR=8.5
T25A Trinidad 55.91 75 ⇑P **P 12 32 13.7 +0.7**
baz=56,SNR=13
W20A Ramah 55.91 79 ⇑P **P 12 32 13.6 +0.6**
baz=56,SNR=8.9
S27A Las Animas 56.07 73 ⇓P **P 12 32 14.4 +0.3**
baz=56
U24A Moreno Valley 56.17 76 ⇓P **P 12 32 16.4 +1.5**
baz=56
KSH Kashi 56.20 292 *e*P P 12 32 19.9 +5.0
KSH pP pP 12 32 24.6 +5.7
KSH sP sP 12 32 26.9 +6.5
KSH PcP **PcP 12 33 16.9 +4.4**
KSH PP PP 12 34 26.9 +7.2
KSH ScP **ScP 12 37 13.9 +2.9**
KSH PcS **PcS 12 37 16.0 +2.9**
KSH S **S 12 40 09.0 +5.2**
KSH sS sS 12 40 16.4 +6.0
KSH ScS **ScS 12 42 04.9 +1.3**
KSH SS **SS 12 43 56.0 +6.4**
KSH pmax pmax
comp=Z,3.0nm,0.7s
KSH LR LR
comp=N,300nm,7.1s
KSH LR LR
comp=E,240nm,4.3s
KSH LR LR
comp=Z,150nm,4.2s
T26A Comanche Natio 56.21 74 ⇓P **P 12 32 15.2 0.0**
baz=56,SNR=18
V23A Ortiz Mt. (NFS 56.35 77 ⇓P **P 12 32 17.7 +1.6**
baz=56,SNR=13
X20A Quemado 56.41 80 ⇑P **P 12 32 17.5 +1.0**
baz=56,SNR=21
U25A Circle Dot Ran 56.54 75 ⇑P **P 12 32 18.1 +0.7**
baz=56,SNR=14
W22A Albuquerque 56.64 78 ⇓P **P 12 32 19.4 +1.2**
baz=56
T27A Campo 56.67 73 ⇓P **P 12 32 18.8 +0.4**
baz=57,SNR=7.6
V24A Rampart Ranch, 56.75 76 ⇑P **P 12 32 20.5 +1.4**
baz=57,SNR=25
214A Organ Pipe Nat 56.78 85 ⇑P **P 12 32 20.2 +1.2**
baz=57,SNR=16
X21A Alamocita Cree 56.79 79 ⇑P **P 12 32 20.6 +1.3**
baz=57,SNR=25
U26A Atchley Ranch, 56.82 74 ⇓P **P 12 32 20.0 +0.6**
baz=57,SNR=19
W23A Werner Place, 56.87 77 ⇑P **P 12 32 20.7 +0.9**
baz=57,SNR=8.9
T28A Walsh 56.87 73 ⇓P **P 12 32 20.0 +0.3**
baz=57
ANMO Albuquerque 56.92 78 *e*P **P 12 32 21.1 +0.9**
comp=Z,43nm,1.9s
V25A Rancho No Teng 56.93 75 ⇓P **P 12 32 20.9 +0.7**
baz=57,SNR=36
Y20A Horse Springs, 57.00 80 ⇑P **P 12 32 22.2 +1.3**
baz=57,SNR=17
X22A Bernardo 57.07 78 ⇓P **P 12 32 22.6 +1.4**
baz=57,SNR=7.1
LAZ Lazon 57.10 78 *e*P **P 12 32 22.8 +1.3**
comp=Z,2.8nm,0.7s
W24A Lazy 6 Ranch, 57.14 77 ⇓P **P 12 32 22.6 +0.9**
baz=57,SNR=16
U27A Thompson Grove 57.18 74 ⇑P **P 12 32 22.2 +0.3**
baz=57,SNR=25
T29A Hugoton 57.18 72 ⇓P **P 12 32 21.9 0.0**
baz=57,SNR=9.2
Y21A Point of Rocks 57.21 79 ⇑P **P 12 32 23.6 +1.2**
baz=57
KMI Kunming 57.27 260 P **P 12 32 25.1 +2.3**
KMI pP **pP 12 32 28.3 +1.6**
KMI S **S 12 40 18.6 +0.2**
KMI SS **SS 12 44 08.3 +1.1**
KMI pmax pmax
comp=Z,7.0nm,1.0s
KMI pmax pmax
comp=Z,71nm,3.5s
KMI LR LR
comp=N,630nm,12.1s
KMI LR LR
comp=E,980nm,9.5s
KMI LR LR
comp=Z,640nm,12.6s
V26A Tequesquite Ra 57.31 75 ⇑P **P 12 32 23.1 +0.2**
baz=57,SNR=23
X23A Hourglass Bar 57.35 78 ⇓P **P 12 32 24.0 +0.8**
baz=57,SNR=12
LENM Lemitar 57.37 78 *e*P **P 12 32 25.0 +1.7**
LPM Los Pinos Moun 57.39 78 *e*P **P 12 32 24.7 +1.2**
KSU1 Kansas State U 57.40 67 *e*P **P 12 32 22.0 -1.3**
comp=Z,38nm,0.8s
W25A X Bar L Ranch, 57.53 76 ⇓P **P 12 32 24.8 +0.4**
baz=57,SNR=17
BNM Barren Site 57.53 78 *e*P **P 12 32 25.8 +1.2**
comp=Z,24nm,1.5s
VRHR Novokhopersk 57.55 323 *e*P **P 12 32 23.2 -1.0**
VRHR pmax pmax
comp=Z,10.0nm,0.3s
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,30nm,0.5s
Y22A Socorro 57.57 79 ⇓P **P 12 32 25.9 +1.1**
baz=58,SNR=14
T30A Plains 57.58 71 ⇓P **P 12 32 24.6 -0.1**
baz=58
Z20A Nine Sixteen R 57.59 80 ⇑P **P 12 32 26.2 +1.3**
baz=58,SNR=15
X24A Lazy VL Ranch, 57.68 77 ⇓P **P 12 32 26.7 +1.2**
baz=58,SNR=22
V27A Dan Oppiter Fa 57.74 74 ⇓P **P 12 32 25.9 0.0**
baz=58,SNR=12
Z21A St. Cloud Mine 57.81 80 ⇑P **P 12 32 27.8 +1.3**
baz=58,SNR=13
T31A Randall Ranch, 57.89 71 ⇑P **P 12 32 27.3 +0.6**
baz=58
W26A Owens Ranch, T 57.93 75 ⇑P **P 12 32 27.6 +0.4**
baz=58,SNR=8.2
Y23A Lovelace Mesa, 57.96 78 ⇑P **P 12 32 28.5 +1.0**
baz=58,SNR=7.5
U30A WK&E Inc. Balk 57.98 72 ⇓P **P 12 32 27.2 -0.3**
baz=58,SNR=5.6
V28A Channing 58.00 74 ⇑P **P 12 32 28.5 +0.8**
baz=58
X25A Clemmons Ranch 58.04 76 ⇑P **P 12 32 28.7 +0.7**
baz=58,SNR=14
VSR Storozhevoye 58.06 325 *e*P **P 12 32 28.5 +0.8**
VSR pmax pmax
comp=Z,20nm,0.6s
VSR pmax pmax
comp=N,30nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.5s
Z22A Elephant Butte 58.16 79 ⇓P **P 12 32 30.1 +1.2**
baz=58,SNR=16
Y24A Capitan 58.23 77 ⇑P **P 12 32 30.5 +1.1**
baz=58,SNR=28
W27A Bowe Ranch, En 58.24 75 ⇑P **P 12 32 29.3 -0.1**
baz=58,SNR=6.7
LSA Lhasa 58.25 273 P **P 12 32 31.3 +1.3**
LSA pmax pmax
comp=Z,20nm,1.2s
VORD Divnogorie 58.26 325 *e*P **P 12 32 30.0 +0.9**
VORD pmax pmax
comp=Z,8.0nm,0.8s
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,7.0nm,0.6s
X26A CR and CF Fran 58.37 76 ⇑P **P 12 32 30.5 +0.2**
baz=58,SNR=8.1
W28A Vega 58.43 74 ⇓P **P 12 32 30.6 -0.1**
baz=58,SNR=6.0
121A Cookes Peak, D 58.43 80 ⇑P **P 12 32 32.2 +1.4**
baz=58,SNR=18
U31A Nine Bar Ranch 58.44 71 ⇑P **P 12 32 30.4 -0.3**
baz=58
Z23A Rita Site, Whi 58.46 78 ⇑P **P 12 32 32.1 +1.1**
baz=58,SNR=9.7
Y25A Mesa, Roswell 58.54 77 ⇓P **P 12 32 32.0 +0.4**
baz=58,SNR=20
X27A F and S Farms, 58.59 75 ⇑P **P 12 32 32.0 +0.2**
baz=58
122A Conniff Cattle 58.62 79 ⇓P **P 12 32 33.4 +1.3**
baz=58,SNR=5.9
220A Playas Peak, P 58.66 81 ⇑P **P 12 32 33.5 +1.1**
baz=59,SNR=12
Z24A Sheeppen Canyo 58.77 78 ⇓P **P 12 32 34.2 +1.0**
baz=59,SNR=18
319A Douglas 58.80 82 ⇑P **P 12 32 34.4 +1.1**
baz=59,SNR=21
221A Mesquite Ranch 58.89 80 ⇑P **P 12 32 35.2 +1.3**
baz=59,SNR=8.6
Y26A Elida 58.91 76 ⇓P **P 12 32 34.3 +0.2**
baz=59
V31A Spring Creek L 58.96 72 ⇑P **P 12 32 34.3 0.0**
baz=59,SNR=8.1
AMTX Amarillo 58.97 74 *e*P **P 12 32 34.4 0.0**
comp=E,30nm,0.8s
AMTX Amarillo 58.97 74 ⇑P **P 12 32 34.3 -0.2**
baz=59,SNR=15
X28A Dimmitt 59.07 74 ⇑P **P 12 32 34.7 -0.5**
baz=59
Z25A Roswell 59.09 77 ⇑P **P 12 32 35.8 +0.5**
baz=59,SNR=8.7
320A Kipp Ranch, An 59.15 81 ⇓P **P 12 32 36.9 +1.1**
baz=59,SNR=7.3
Y27A Causey 59.22 75 ⇓P **P 12 32 36.3 0.0**
baz=59
124A Stringfield Ra 59.28 78 ⇑P **P 12 32 37.5 +0.7**
baz=59,SNR=13
MSTX Muleshoe 59.31 75 ⇓P **P 12 32 36.6 -0.2**
baz=59,SNR=15
X29A Tulia 59.34 74 ⇓P **P 12 32 36.8 -0.2**
baz=59,SNR=14
Z26A Caprock 59.40 76 ⇓P **P 12 32 37.8 +0.3**
baz=59,SNR=22
W31A Holland Ranch, 59.43 72 ⇑P **P 12 32 37.2 -0.3**
baz=59,SNR=5.7
Y28A McKinney Farm, 59.58 75 ⇓P **P 12 32 38.3 -0.3**
baz=60,SNR=6.0
125A Gardner Draw, 59.65 77 ⇓P **P 12 32 39.8 +0.6**
baz=60,SNR=28
X30A Coker Ranch, T 59.68 73 ⇑P **P 12 32 39.1 -0.3**
baz=60
Z27A Tatum 59.69 76 ⇓P **P 12 32 39.4 -0.1**
baz=60,SNR=15
QIZ Qiongzhong 59.74 249 P **P 12 32 40.5 +0.7**
QIZ S **S 12 40 52.3 +2.0**
QIZ pmax pmax
comp=Z,16nm,1.3s
QIZ pmax pmax
comp=Z,82nm,4.2s
QIZ LR LR
comp=N,590nm,17.6s
QIZ LR LR
comp=E,470nm,17.6s
QIZ LR LR
comp=Z,380nm,16.0s
224A Cornudas Mount 59.79 78 ⇓P **P 12 32 40.9 +0.7**
baz=60,SNR=19
Y29A Porterfield Fa 59.86 74 ⇑P **P 12 32 40.4 -0.2**
baz=60
X31A McDonald Ranch 59.89 72 ⇑P **P 12 32 40.7 -0.1**
baz=60,SNR=7.3
126A Clayton Basin, 59.93 77 ⇑P **P 12 32 41.2 +0.1**
baz=60,SNR=8.7
SFIN Scholer Farm 59.94 59 ⇑P **P 12 32 40.0 -0.9**
baz=60
225A Deer Hill, Car 60.05 78 ⇑P **P 12 32 42.7 +0.7**
baz=60,SNR=15
Z28A Tucker Farm, M 60.06 75 ⇑P **P 12 32 41.3 -0.6**
baz=60
MSNY Massena 60.06 47 *e*P **P 12 32 40.6 -1.0**
comp=Z,178nm,0.9s
Y30A Stafford Cattl 60.16 74 ⇑P **P 12 32 42.2 -0.5**
baz=60,SNR=6.0
GDL2 Guadalupe Moun 60.17 77 *e*P **P 12 32 43.6 +0.8**
MNTX Cornudas Mount 60.17 79 *e*P **P 12 32 43.4 +0.7**
comp=Z,16nm,1.1s
MNTX Cornudas Mount 60.17 79 ⇑P **P 12 32 43.5 +0.8**
baz=60,SNR=26
ESK Eskdalemuir 60.25 355 *e*P **P 12 32 41.5 -1.4**
ESK pmax pmax
comp=Z,31nm,1.3s
ESK Eskdalemuir 60.25 355 *e*P **P 12 32 41.5 -1.4**
comp=Z,31nm,1.3s
WMOK Wichita Mounta 60.29 71 *e*P **P 12 32 43.2 -0.2**
WMOK pmax pmax
comp=Z,22nm,0.9s
WMOK Wichita Mounta 60.29 71 *e*P **P 12 32 43.2 -0.2**
comp=Z,22nm,0.9s
CLNB Carlsbad 60.32 77 *e*P **P 12 32 44.4 +0.6**
comp=Z,2.3nm,0.5s
324A Moseley Ranch, 60.35 79 ⇑P **P 12 32 44.4 +0.3**
baz=60,SNR=11
Y31A Rekieta Farm, 60.35 73 ⇓P **P 12 32 43.5 -0.4**
baz=60
226B Tecolote Peak, 60.36 77 ⇑P **P 12 32 44.2 +0.2**
baz=60,SNR=20
Z29A Hungry Hill Ra 60.36 75 ⇓P **P 12 32 44.0 0.0**
baz=60,SNR=18
TUL1 Tulsa 60.48 68 ⇓P **P 12 32 44.0 -0.7**
baz=60
Z30A Sanderson Ranc 60.58 74 ⇓P **P 12 32 45.0 -0.5**
baz=60,SNR=23
128A Castleberry Fa 60.59 76 ⇓P **P 12 32 45.8 +0.1**
baz=60,SNR=30
325A Bean Ranch, Si 60.63 78 ⇑P **P 12 32 46.3 +0.3**
baz=60,SNR=8.5
Y32A R-V Farms, Ver 60.66 72 ⇓P **P 12 32 45.5 -0.4**
baz=60
AKASG Malin Array Be 60.79 332 P **P 12 32 44.8 -1.8**
AKASG pmax pmax
comp=Z,8.0nm,0.7s
AKASG MLR MLR
comp=Z,276nm,18.4s
AKASG Malin Array Be 60.79 332 P **P 12 32 44.8 -1.8**
AKASG Malin Array Be 60.79 332 P **P 12 32 44.8 -1.8**
comp=Z,7.6nm,0.7s,baz=20,slow=7.2,SNR=14
AKASG LR LR 13 02 54.5
comp=Z,276nm,18.4s,baz=25,slow=40
KIEV Kiev 60.80 332 *e*P **P 12 32 47.6 +1.0**
KIEV pmax pmax
comp=Z,8.0nm,0.9s
KIEV Kiev 60.80 332 *e*P **P 12 32 47.6 +1.0**
comp=Z,8.3nm,0.9s
AK01 Malin Array Si 60.80 332 *e*P **P 12 32 48.2 +1.6**
AK02 Malin Array Si 60.84 332 *e*P **P 12 32 48.1 +1.2**
129A Stewart Farms, 60.84 75 ⇑P **P 12 32 46.7 -0.6**
baz=61
Z31A Sharp Cattle R 60.96 73 ⇓P **P 12 32 47.4 -0.7**
baz=61,SNR=12
228A UT Block 9, Go 60.98 76 ⇑P **P 12 32 47.9 -0.4**
baz=61
OLIL Olney 61.01 60 *e*P **P 12 32 47.5 -0.8**
comp=Z,50nm,1.1s
326A Caldwell Ranch 61.10 78 ⇑P **P 12 32 49.4 +0.3**

baz=61,SNR=9.2
425A Indio Mountain 61.13 79 ⇑P P P 12 32 50.2 +0.8
baz=61,SNR=8.5
Z32A Haskell 61.24 73 ⇑P P P 12 32 49.4 -0.6
baz=61,SNR=17
130A Snyder 61.25 74 ⇑P P P 12 32 49.8 -0.2
baz=61,SNR=6.2
131A Roby 61.42 74 ⇓P P P 12 32 51.0 -0.2
baz=61,SNR=11
328A Wristen Ranch, 61.53 77 ⇑P P P 12 32 51.8 -0.2
baz=61,SNR=7.0
426A McDonald Obser 61.64 78 ⇓P P P 12 32 53.0 +0.1
baz=62,SNR=13
427A Hayter Ranch, 61.74 77 ⇑P P P 12 32 53.8 +0.4
baz=62,SNR=16
ABTX Abilene, Hawle 61.77 73 ⇓P P P 12 32 53.2 -0.3
baz=62,SNR=20
TAPN Taplejung 61.77 275 *e*P P P 12 32 51.9 -2.1
comp=Z,36nm,0.7s
329A Wagon Wheel Ra 61.79 76 ⇑P P P 12 32 53.5 -0.2
baz=62,SNR=6.4
230A Sterling City 61.80 75 ⇓P P P 12 32 53.1 -0.6
baz=62
USIN University of 61.85 61 *e*P P P 12 32 53.2 -0.8
comp=Z,54nm,0.7s
GUN Gumba 62.07 276 *e*P P P 12 32 54.4 -1.6
comp=Z,170nm,1.0s
231A Bronte 62.09 74 ⇓P P P 12 32 55.2 -0.5
baz=62
WCI Wyandotte Cave 62.13 59 *e*P P P 12 32 54.7 -1.1
WCI *e*R
comp=Z,18nm,0.8s
WCI Wyandotte Cave 62.13 59 *e*P P P 12 32 54.7 -1.1
comp=Z,18nm,0.8s
526A Mary Lane Ranc 62.14 78 ⇑P P P 12 32 56.7 +0.5
baz=62,SNR=19
428A Kincaid Ranch, 62.15 77 ⇑P P P 12 32 56.8 +0.6
baz=62,SNR=14
330A Mertzon 62.19 75 ⇑P P P 12 32 56.0 -0.4
baz=62,SNR=9.7
PARMO Parma 62.20 63 *e*P P P 12 32 55.5 -0.8
527A Woodward Ranch 62.27 78 ⇓P P P 12 32 57.2 +0.1
baz=62,SNR=14
ODAN Odare 62.34 275 *e*P P P 12 32 57.1 -0.6
comp=Z,67nm,1.1s
232A Coleman 62.41 74 ⇓P P P 12 32 57.4 -0.5
baz=62,SNR=21
KKN Kakani 62.44 277 *e*P P P 12 32 57.2 -1.1
comp=Z,53nm,0.6s
MIAR Mount Ida 62.56 67 *e*P P P 12 32 57.7 -1.0
MIAR *e*R
comp=Z,11nm,1.0s
MIAR Mount Ida 62.56 67 *e*P P P 12 32 57.7 -1.0
comp=Z,11nm,1.0s
626A Big Bend Ranch 62.56 79 ⇑P P P 12 32 59.4 +0.4
baz=62,SNR=17
PKI Pulchoki 62.57 277 *e*P P P 12 32 58.5 -0.8
comp=Z,50nm,1.0s
PKIN Phulchoki 62.57 277 *e*P P P 12 32 58.0 -1.2
comp=Z,24nm,1.0s
429A Davenport Ranc 62.57 76 ⇓P P P 12 32 58.6 -0.4
baz=62,SNR=8.5
DANN Dangsing 62.60 279 *e*P P P 12 32 58.0 -1.4
comp=Z,185nm,0.9s
RAMN Ramite 62.60 275 *e*P P P 12 32 59.0 -0.4
comp=Z,81nm,0.7s
528A Cox Ranch, San 62.60 77 ⇑P P P 12 32 59.8 +0.5
baz=62,SNR=18
DMN Daman 62.67 277 *e*P P P 12 32 59.2 -0.7
comp=Z,56nm,1.0s
430A Baggett Ranch, 62.71 76 ⇑P P P 12 32 59.4 -0.5
baz=63
332A Millersview 62.81 74 ⇓P P P 12 33 00.2 -0.3
baz=63,SNR=32
529A Stev Forest Ra 62.87 77 ⇑P P P 12 33 01.0 0.0
baz=63,SNR=24
CLL Collm 62.89 343 *e*P P P 12 33 02.0 +1.3
CLL *e* 12 33 40.0
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 62.89 343 *e*P P P 12 33 02.0 +1.3
comp=Z,8.0nm,0.9s
CLL *e*PcP PcP 12 33 40.0 +1.2
comp=Z,7.0nm,1.0s
TXAR Lajitas Array 62.95 78 P P P 12 33 02.0 +0.4
TXAR Lajitas Array 62.95 78 P P P 12 33 02.0 +0.4
comp=Z,2.4nm,0.5s,baz=281,slow=7.0,SNR=56
627A Terlingua Ranc 62.97 78 ⇓P P P 12 33 02.1 +0.4
baz=63,SNR=53
OJC Ojcow 62.98 338 *e*P P P 12 33 01.6 +0.3
OJC pmax pmax
comp=Z,23nm,1.0s
OJC Ojcow 62.98 338 *e*P P P 12 33 01.6 +0.3
comp=Z,23nm,1.0s
OJC Ojcow 62.98 338 *e*P P P 12 33 03.3 +2.0
KWP Kalwaria Pacla 63.06 336 *e*P P P 12 33 02.0 +0.1
KWP pmax pmax
comp=Z,28nm,0.9s
KWP Kalwaria Pacla 63.06 336 *e*P P P 12 33 02.0 +0.1
comp=Z,28nm,0.9s
KWP Kalwaria Pacla 63.06 336 ⇑*i*P P P 12 33 04.1 +2.2
KWP Kalwaria Pacla 63.06 336 *e*P P P 12 33 03.8 +1.9
431A Sonora 63.06 75 ⇓P P P 12 33 02.0 -0.2
baz=63,SNR=25
PYUN Piuthan 63.14 279 *e*P P P 12 33 01.1 -1.9
comp=Z,134nm,0.9s
628A Black Gap, Mar 63.15 78 ⇑P P P 12 33 03.1 +0.3
baz=63,SNR=27
KOLN Koldanda 63.17 278 *e*P P P 12 33 01.7 -1.5
comp=Z,45nm,0.8s
530A J-C Ranch, Com 63.22 76 ⇑P P P 12 33 03.1 -0.2
baz=63,SNR=12
WHTX Lake Whitney 63.22 72 ⇓P P P 12 33 02.7 -0.5
baz=63,SNR=5.2
432A Menard 63.23 74 ⇑P P P 12 33 02.8 -0.6
baz=63,SNR=6.2
KBL Kabul 63.26 294 *e*P P P 12 33 04.4 +0.7
KBL pmax pmax
comp=Z,23nm,0.9s
KBL Kabul 63.26 294 *e*P P P 12 33 04.4 +0.7
comp=Z,23nm,0.9s
UPC Upice 63.27 341 *e*P P P 12 33 05.2 +1.9
UPC Upice 63.27 341 *e*P P P 12 33 05.2 +1.9
MAK Makhachkala 63.32 315 *e*P P P 12 32 58.7 -5.0
DPC Dobruska-Polom 63.38 341 *e*P P P 12 33 03.7 -0.4
DPC *e* 12 33 06.0
DPC *e* 12 33 11.6
DPC MLR MLR
comp=Z,200nm,14.4s
DPC Dobruska-Polom 63.38 341 *e*P P P 12 33 06.1 +2.0
comp=Z,13nm,0.9s
DPC Dobruska-Polom 63.38 341 *e*P P P 12 33 03.7 -0.4
DPC *ep*P P 12 33 06.0 +2.0
DPC *es*P sP 12 33 11.6 +2.0
DPC AMS AMS 13 07 20.0
comp=Z,200nm,14.4s
WVT Waverly 63.40 62 *e*P P P 12 33 03.3 -1.0
WVT pmax pmax
comp=Z,24nm,0.7s
WVT Waverly 63.40 62 *e*P P P 12 33 03.3 -1.0
comp=Z,24nm,0.7s
531A Rocksprings 63.54 75 ⇓P P P 12 33 04.8 -0.6
baz=63,SNR=7.0
JCT Junction City 63.57 75 *e*P P P 12 33 05.5 -0.1
JCT Junction City 63.57 75 *e*P P P 12 33 05.5 -0.1
JCT Junction City 63.57 75 ⇓P P P 12 33 05.3 -0.3
baz=64,SNR=13
OKC Ostrava-Krasne 63.61 339 AMS AMS AMS 13 05 40.0
comp=Z,200nm,13.0s
MORC Moravsky Berou 63.76 340 *e*P P P 12 33 06.5 -0.1
MORC pmax pmax
comp=Z,8.0nm,1.1s
MORC Moravsky Berou 63.76 340 *e*P P P 12 33 06.5 -0.1
comp=Z,8.5nm,1.1s
KOLS Kolonicke sedl 63.81 336 *e*P P P 12 33 08.8 +2.0
KOLS pmax pmax
comp=Z,8.0nm,0.9s
KOLS Kolonicke sedl 63.81 336 *e*P P P 12 33 08.8 +2.0
KIV Kislovodsk 63.82 319 *d*/P P P 12 33 09.3 +2.2
KIV *i* 12 33 43.9
KIV pmax pmax
comp=Z,20nm,1.0s
KIV MLR MLR
comp=Z,200nm,19.0s
532A Rocksprings 63.84 75 ⇑P P P 12 33 06.6 -0.7
baz=64,SNR=8.1
KBZ Khabaz 63.97 319 P P P 12 33 09.2 +1.3
KBZ pmax pmax
comp=Z,25nm,1.0s
KBZ MLR MLR
comp=Z,251nm,22.0s
KBZ Khabaz 63.97 319 P P P 12 33 09.2 +1.3
KBZ Khabaz 63.97 319 P P P 12 33 09.2 +1.3
comp=Z,25nm,1.0s,baz=274,slow=4.3,SNR=26
KBZ LR LR 13 03 10.4
comp=Z,251nm,22.0s,baz=210,slow=38
CRVS Cervenica-Dubn 63.98 337 *e*P P P 12 33 09.0 +1.0
CRVS pmax pmax
comp=Z,5.0nm,0.9s
CRVS Cervenica-Dubn 63.98 337 *e*P P P 12 33 09.0 +1.0
PRU Pruhonice 63.98 342 *e*P P P 12 33 09.9 +1.9
PRU MLR MLR
comp=Z,200nm,23.4s
PRU Pruhonice 63.98 342 *e*P P P 12 33 09.9 +1.9
PRU AMS AMS 13 03 50.0
comp=Z,200nm,23.4s
UZH Uzhgorod 64.09 336 *e*P P P 12 33 09.0 +0.3
631A Perdido Creek 64.18 76 ⇓P P P 12 33 08.8 -0.8
baz=64,SNR=31
OXF Oxford 64.22 64 *e*P P P 12 33 09.0 -0.7
OXF pmax pmax
comp=Z,29nm,0.8s
OXF Oxford 64.22 64 *e*P P P 12 33 09.0 -0.7
comp=Z,29nm,0.8s
VRAC Vranov 64.36 340 ⇓*i*P P P 12 33 11.0 +0.5
VRAC Vranov 64.36 340 LR LR 13 02 19.6
comp=Z,48nm,21.1s,baz=14,slow=37
632A Uvalde 64.43 75 ⇑P P P 12 33 10.3 -0.9
baz=64,SNR=6.4
CMMT Chiang Mai 64.46 260 P P P 12 33 10.1 -1.4
comp=Z,13nm,1.1s,comp=Z,364nm
CHTO Chiang Mai 64.46 260 *e*P P P 12 33 12.0 +0.5
CHTO pmax pmax
comp=Z,9.0nm,0.8s
CHTO Chiang Mai 64.46 260 *e*P P P 12 33 12.0 +0.5
comp=Z,8.6nm,0.8s
CHTO Chiang Mai 64.46 260 P P P 12 33 09.2 -2.3
comp=Z,15nm,1.1s
BUR08 Bucovina Ar. S 64.51 333 *e*P P P 12 33 12.0 +0.4
TREC Trest 64.53 341 *e*P P P 12 33 13.2 +1.6
TREC MLR MLR
comp=Z,300nm,15.7s
TREC Trest 64.53 341 *e*P P P 12 33 13.2 +1.6
TREC AMS AMS 13 06 00.0
comp=Z,300nm,15.7s
BURAR Bucovina Array 64.53 333 ⇑*i*P P P 12 33 13.5 +1.8
TRPA Tarpa 64.53 336 ⇑*e*P P P 12 33 13.9 +2.3
ZEI Tsey 64.56 318 *e*P P P 12 33 11.9 -0.3
ZEI pmax pmax
comp=Z,26nm,1.0s
TZTN Tazewell 64.63 58 *e*P P P 12 33 11.8 -0.6
comp=Z,38nm,1.0s
CMAR Chiang Mai Arr 64.78 260 P P P 12 33 13.8 +0.3
CMAR Chiang Mai Arr 64.78 260 P P P 12 33 13.8 +0.3
comp=Z,7.0nm,1.0s,baz=7.3,slow=5.7,SNR=21
CMAR LR LR 13 01 54.6
comp=Z,194nm,18.2s,baz=210,slow=36
VYHS Vyhne 64.81 338 *e*P P P 12 33 14.8 +1.4
VYHS pmax pmax
comp=Z,5.0nm,1.0s
VYHS Vyhne 64.81 338 *e*P P P 12 33 14.8 +1.4
SWET Sewanee 64.92 61 *e*P P P 12 33 13.1 -1.3
comp=Z,30nm,0.7s
GIVF Givet 64.95 349 *e*P P P 12 33 16.4 +2.1
GIVF Givet 64.95 349 *e*P P P 12 33 16.4 +2.1
GIVF Givet 64.95 349 *e*P P P 12 33 16.4 +2.1
KHC Kasperske Hory 64.95 342 *e*P P P 12 33 16.3 +1.9
KHC *e* 12 33 19.0
KHC MLR MLR
comp=Z,200nm,14.8s
KHC Kasperske Hory 64.95 342 *e*P P P 12 33 16.7 +2.3
comp=Z,8.8nm,1.2s
KHC Kasperske Hory 64.95 342 *e*P P P 12 33 16.3 +1.9
KHC *ep*P pP 12 33 19.0 +0.6
KHC AMS AMS 13 07 00.0
comp=Z,200nm,14.8s
SOC Sochi 64.98 321 *e*P P P 12 33 15.8 +1.2
SOC MLR MLR
comp=Z,258nm,13.0s
732A Laxson Ranch, 65.03 76 ⇓P P P 12 33 14.9 -0.2
baz=65,SNR=18
BAIF Baives 65.04 349 *e*P P P 12 33 17.1 +2.2
BAIF Baives 65.04 349 *e*P P P 12 33 17.1 +2.2
BAIF Baives 65.04 349 *e*P P P 12 33 17.1 +2.2
NDI New Delhi 65.07 284 *e*P P P 12 33 06.0 -9.4
PSZ Piszkesteto 65.19 337 *e*P P P 12 33 18.9 +2.9
PSZ pmax pmax
comp=Z,18nm,1.2s
PSZ Piszkesteto 65.19 337 *e*P P P 12 33 18.9 +2.9
comp=Z,18nm,1.2s
PSZ Piszkesteto 65.19 337 ⇑*i*P P P 12 33 12.8 -3.2
PSZ Piszkesteto 65.19 337 ⇑*e*P P P 12 33 18.3 +2.3
GERES GERESS Array B 65.22 342 P P P 12 33 15.3 -0.9
GERES GERESS Array B 65.22 342 P P P 12 33 15.3 -0.9
comp=Z,3.3nm,0.9s,baz=30,slow=3.5,SNR=12
GERES LR LR 13 02 32.2
comp=Z,109nm,19.2s,baz=10,slow=37
CPCT Cooper Cave 65.24 59 *e*P P P 12 33 15.3 -1.1
TESR 65.31 332 ⇑*i*P P P 12 33 18.1 +1.4
TKL Tuckaleechee C 65.34 59 *e*P P P 12 33 16.1 -1.0
ZST Bratislava 65.37 339 *e*P P P 12 33 18.3 +1.3
ZST Bratislava 65.37 339 *e*P P P 12 33 18.3 +1.3
HKT Hockley 65.67 71 *e*P P P 12 33 19.1 0.0
HKT pmax pmax
comp=Z,18nm,1.4s
HKT Hockley 65.67 71 *e*P P P 12 33 19.1 0.0
comp=Z,18nm,1.4s
DRGR 65.79 335 ⇑*i*P P P 12 33 21.6 +1.7
VRI Vrincioaia 65.91 332 ⇓*i*P P P 12 33 21.6 +1.0
PLOR Plostina 65.94 332 ⇑*i*P P P 12 33 23.0 +2.2
TLCR 66.12 330 ⇑*i*P P P 12 33 22.9 +1.0
CFR Carcaliu 66.27 331 ⇓*i*P P P 12 33 21.2 -1.7
CDF Champ du Feu 66.39 347 *e*P P P 12 33 25.6 +1.9
CDF Champ du Feu 66.39 347 *e*P P P 12 33 25.6 +1.9
CDF Champ du Feu 66.39 347 *e*P P P 12 33 25.6 +1.9
PAGF Fort de Pagny 66.40 348 *e*P P P 12 33 26.3 +2.6
PAGF Fort de Pagny 66.40 348 *e*P P P 12 33 26.3 +2.6
MLR Muntele Rosu 66.42 332 ⇓*i*P P P 12 33 23.9 -0.1
LRAL Lakeview Retre 66.46 63 *e*P P P 12 33 22.3 -2.0
comp=Z,21nm,0.8s
VOIR 66.65 333 ⇑*i*P P P 12 33 26.6 +1.2
FLN La Foliniere 66.66 352 *e*P P P 12 33 27.1 +1.8
FLN *e*R
comp=Z,159nm,19.8s
FLN La Foliniere 66.66 352 *e*P P P 12 33 27.1 +1.8
FLN La Foliniere 66.66 352 *e*P P P 12 33 27.1 +1.8
KMSC Kings Mountain 66.69 57 ⇑P P P 12 33 24.1 -1.6
baz=66,SNR=8.3
GNI Garni 66.73 316 *e*P P 12 33 29.4 +3.3
LDF La Druitiere 66.81 352 *e*P P P 12 33 27.8 +1.5
LDF La Druitiere 66.81 352 *e*P P P 12 33 27.8 +1.5
LDF La Druitiere 66.81 352 *e*P P P 12 33 27.8 +1.5
KBA Koelnbreinsper 67.00 342 ⇑*i*P P P 12 33 30.5 +2.8
KBA pmax pmax
comp=Z,16nm,1.2s
KBA Koelnbreinsper 67.00 342 ⇑*i*sP P P 12 33 30.5 +2.8
comp=Z,16nm,1.2s
KBA Koelnbreinsper 67.00 342 ⇑*i*P P P 12 33 30.4 +2.8
comp=Z,16nm,1.2s
GRR Gorron 67.06 352 *e*P P P 12 33 29.7 +1.9
GRR Gorron 67.06 352 *e*P P P 12 33 29.7 +1.9
GRR Gorron 67.06 352 *e*P P P 12 33 29.7 +1.9
BZS Buzias 67.13 335 ⇓*i*P P P 12 33 29.6 +1.3
GZR Gura Zlata 67.13 335 ⇑*i*P P P 12 33 28.5 0.0
ROSF Rostrenen 67.23 354 *e*P P P 12 33 30.3 +1.3
comp=Z,42nm,1.3s
ROSF Rostrenen 67.23 354 *e*P P P 12 33 30.3 +1.3
ROSF pmax pmax
comp=Z,42nm,1.3s
ROSF Rostrenen 67.23 354 *e*P P P 12 33 30.3 +1.3
comp=Z,42nm,1.3s
SGMF Saint Gilles 67.28 354 *e*P P P 12 33 31.5 +2.2
SGMF Saint Gilles 67.28 354 *e*P P P 12 33 31.5 +2.2
SGMF Saint Gilles 67.28 354 *e*P P P 12 33 31.5 +2.2
OBKA Obir 67.39 341 ⇑*i*P P P 12 33 29.7 -0.4
comp=Z,23nm,1.0s
OBKA Obir 67.39 341 ⇑*i*P P P 12 33 29.7 -0.4
comp=Z,23nm,1.0s
ABTA Abfaltersbach 67.43 342 ⇑*i*pP P P 12 33 31.7 +1.4
comp=Z,6.2nm,0.8s
ABTA Abfaltersbach 67.43 342 ⇑*i*P P P 12 33 31.7 +1.4
comp=Z,6.2nm,0.8s
JSC Jenkinsville 67.48 57 *e*P P P 12 33 29.3 -1.5
JSC Jenkinsville 67.48 57 *e*P P P 12 33 29.3 -1.5
LOR Lormes 67.84 349 *e*P P P 12 33 34.8 +1.9
comp=Z,21nm,0.9s
LOR *e*R
comp=Z,95nm,19.0s
LOR Lormes 67.84 349 *e*P P P 12 33 34.8 +1.9
comp=Z,21nm,0.9s
SSF Saint Saulge 68.08 349 *e*P P P 12 33 36.3 +2.0
comp=Z,12nm,0.9s
SSF Saint Saulge 68.08 349 *e*P P P 12 33 36.3 +2.0
SSF pmax pmax
comp=Z,12nm,0.9s
SSF Saint Saulge 68.08 349 *e*P P P 12 33 36.3 +2.0
comp=Z,12nm,0.9s
CABF La Chapelle 68.29 347 *e*P P P 12 33 37.0 +1.2
comp=Z,23nm,1.1s
CABF La Chapelle 68.29 347 *e*P P P 12 33 37.0 +1.2
CABF pmax pmax
comp=Z,23nm,1.1s
CABF La Chapelle 68.29 347 *e*P P P 12 33 37.0 +1.2
comp=Z,23nm,1.1s
AVF Avril sur Loir 68.36 349 *e*P P P 12 33 36.1 0.0
comp=Z,14nm,0.8s
AVF Avril sur Loir 68.36 349 *e*P P P 12 33 36.1 0.0
AVF pmax pmax
comp=Z,15nm,0.8s
AVF Avril sur Loir 68.36 349 *e*P P P 12 33 36.1 0.0
comp=Z,14nm,0.8s
SMF Signal de Mont 68.46 349 *e*P P P 12 33 38.4 +1.6
comp=Z,13nm,0.8s
SMF Signal de Mont 68.46 349 *e*P P P 12 33 38.4 +1.6
SMF pmax pmax
comp=Z,13nm,0.8s
SMF Signal de Mont 68.46 349 *e*P P P 12 33 38.4 +1.6
comp=Z,13nm,0.8s
BGF Bois d'Agland 68.63 350 *e*P P P 12 33 38.0 +0.2
BGF Bois d'Agland 68.63 350 *e*P P P 12 33 38.0 +0.2
BGF Bois d'Agland 68.63 350 *e*P P P 12 33 38.0 +0.2
MFF Saint Martin d 68.80 352 *e*P P P 12 33 41.0 +2.2
MFF Saint Martin d 68.80 352 *e*P P P 12 33 41.0 +2.2
MFF Saint Martin d 68.80 352 *e*P P P 12 33 41.0 +2.2
NHSC New Hope 68.93 57 *e*P P P 12 33 38.9 -1.0
TCF Toulx Ste Croi 68.95 350 *e*P P P 12 33 41.8 +2.0
TCF Toulx Ste Croi 68.95 350 *e*P P P 12 33 41.8 +2.0
TCF Toulx Ste Croi 68.95 350 *e*P P P 12 33 41.8 +2.0
VTS Vitosha 69.75 333 ⇓*i*P P P 12 33 43.7 -1.3
VIVF Saint-Julien-l 70.17 348 *e*P P P 12 33 49.5 +2.1
VIVF Saint-Julien-l 70.17 348 *e*P P P 12 33 49.5 +2.1
VIVF Saint-Julien-l 70.17 348 *e*P P P 12 33 49.5 +2.1
BRTR Keskin Array B 70.18 325 P P P 12 33 46.7 -0.9
BRTR Keskin Array B 70.18 325 P P P 12 33 46.7 -0.9
comp=Z,12nm,1.0s,baz=35,slow=4.5,SNR=29
BRTR LR LR 13 11 50.0
comp=Z,63nm,19.1s,baz=192,slow=42
MALT Malatya 70.25 320 *e*P P P 12 33 48.6 +0.6
MALT pmax pmax
comp=Z,13nm,1.1s
MALT Malatya 70.25 320 *e*P P P 12 33 48.6 +0.6
comp=Z,13nm,1.1s
MALT Malatya 70.25 320 ⇑*i*P P P 12 33 49.0 +1.0
CAF Calviac 70.31 350 *e*P P P 12 33 50.6 +2.3
comp=Z,13nm,0.9s
CAF Calviac 70.31 350 *e*P P P 12 33 50.6 +2.3
CAF pmax pmax
comp=Z,13nm,0.9s
CAF Calviac 70.31 350 *e*P P P 12 33 50.6 +2.3
comp=Z,13nm,0.9s
SBF Sospel 70.88 346 *e*P P P 12 33 52.4 +0.7
SBF Sospel 70.88 346 *e*P P P 12 33 52.4 +0.7
SBF Sospel 70.88 346 *e*P P P 12 33 52.4 +0.7
LASF Ste Croix 71.01 348 *e*P P P 12 33 54.2 +1.7
LASF Ste Croix 71.01 348 *e*P P P 12 33 54.2 +1.7
LMR La Mourre 71.50 346 *e*P P P 12 33 57.1 +1.7
LMR La Mourre 71.50 346 *e*P P P 12 33 57.1 +1.7
LMR La Mourre 71.50 346 *e*P P P 12 33 57.1 +1.7
MTLF Montolieu 71.88 350 *e*P P P 12 34 00.1 +2.4
comp=Z,23nm,1.1s
MTLF Montolieu 71.88 350 *e*P P P 12 34 00.1 +2.4
MTLF pmax pmax
comp=Z,23nm,1.1s
MTLF Montolieu 71.88 350 *e*P P P 12 34 00.1 +2.4
comp=Z,23nm,1.1s
EPF Esparros 72.32 351 *e*P P P 12 34 03.1 +2.7
comp=Z,16nm,0.9s
EPF Esparros 72.32 351 *e*P P P 12 34 03.1 +2.7
EPF pmax pmax
comp=Z,16nm,0.9s
EPF Esparros 72.32 351 *e*P P P 12 34 03.1 +2.7
comp=Z,16nm,0.9s
ETSF Etsaut 72.51 352 *e*P P P 12 34 04.1 +2.5
ETSF Etsaut 72.51 352 *e*P P P 12 34 04.1 +2.5
ETSF Etsaut 72.51 352 *e*P P P 12 34 04.1 +2.5
SBUM Sibu 73.93 240 P P P 12 34 12.3 +2.1
comp=Z,26nm,1.2s
HYB Hyderabad 74.46 278 *e*P P P 12 34 13.0 -0.3
HYB Hyderabad 74.46 278 *e*P P P 12 34 13.0 -0.3
HYB Hyderabad 74.46 278 *i*P P P 12 34 13.0 -0.3
CSS Prodhromos 74.76 323 *e*P P P 12 34 16.8 +1.9
comp=Z,23nm,1.1s
MIB Mutribah 75.44 310 *e*P P P 12 34 17.4 -1.4
MIB AMb AMB 12 34 21.2
comp=Z,88nm,0.8s
KSM Kuching 75.55 241 *e*P P P 12 34 19.7 +0.1
comp=Z,29nm,1.4s
ESDC Sonseca Array 75.91 354 P P P 12 34 20.4 -1.1
ESDC Sonseca Array 75.91 354 P P P 12 34 20.4 -1.1
comp=Z,5.8nm,1.0s,baz=2.6,slow=6.3,SNR=16
PAB San Pablo 76.05 354 *e*P P P 12 34 23.7 +1.4
PAB pmax pmax
comp=Z,6.0nm,0.9s
PAB San Pablo 76.05 354 *e*P P P 12 34 23.7 +1.4
comp=Z,6.0nm,0.9s
EVO Evora 77.18 357 *e*P P P 12 34 29.5 +0.9
comp=Z,21nm,1.2s
EVO *e*R
comp=Z,164nm,20.5s
EVOP Sao Brissos 77.18 357 *e*P P P 12 34 29.5 +0.9
EVOP pmax pmax
comp=Z,21nm,1.2s
EVOP Sao Brissos 77.18 357 *e*P P P 12 34 29.5 +0.9
comp=Z,21nm,1.2s
KEST Kesra 78.68 343 LR LR 13 17 34.1
comp=Z,58nm,18.9s,baz=202,slow=42
EIL Elat 79.33 320 LR LR 13 16 23.4
comp=Z,131nm,18.1s,baz=270,slow=41
CTAO Charters Tower 86.16 201 *e*P P P 12 35 14.2 -1.8
CTAO pmax pmax
comp=Z,26nm,0.8s
CTAO Charters Tower 86.16 201 *e*P P P 12 35 14.2 -1.8
comp=Z,26nm,0.8s
DZM Mont Dzumac 86.40 182 P P P 12 35 16.9 -0.3
DZM Mont Dzumac 86.40 182 P P P 12 35 16.9 -0.3
comp=Z,16nm,1.1s,baz=46,slow=11,SNR=6.2
LRS Lares 87.19 52 *e*P P P 12 35 20.8 -0.5
PPT2 Papeete2 87.95 140 *e*LR LR 13 03 23.5
comp=Z,72nm,23.2s
WRAB Tennant Creek 88.30 212 *e*P P P 12 35 24.5 -1.8
WRAB pmax pmax
comp=Z,9.0nm,0.9s
WRAB Tennant Creek 88.30 212 *e*P P P 12 35 24.5 -1.8
comp=Z,8.8nm,0.9s
WRA Warramunga Arr 88.31 212 P P P 12 35 24.4 -2.0
WRA Warramunga Arr 88.31 212 P P P 12 35 24.4 -2.0
comp=Z,4.1nm,0.7s,baz=17,slow=5.6,SNR=21
FITZ Fitzroy Crossi 88.76 220 *e*P P P 12 35 26.8 -1.7
comp=Z,4.3nm,0.7s
FITZ Fitzroy Crossi 88.76 220 P P P 12 35 27.2 -1.3
comp=Z,3.4nm,0.6s,baz=360,slow=4.1,SNR=9.2
AS31 Alice Springs 92.00 211 *e*P P P 12 35 41.8 -1.7
ASAR Alice Springs 92.00 211 P P P 12 35 41.4 -2.2
ASAR PKKP PKKPbc 12 52 58.5 +0.2
ASAR Alice Springs 92.00 211 P P P 12 35 41.4 -2.2
comp=Z,3.2nm,0.6s,baz=12,slow=5.2,SNR=12
ASAR PKKP PKKPbc 12 52 58.5 +0.2
comp=Z,0.3nm,0.6s,baz=187,slow=2.2,SNR=6.8
TBI Tubuai 93.47 142 *e*LR LR 13 05 56.7
comp=Z,129nm,23.0s
ATD Arta Tunnel 93.90 307 LR LR 13 21 15.8
comp=Z,80nm,18.9s,baz=11,slow=38
ROSC El Rosal 96.87 63 LR LR 13 23 48.7
comp=Z,57nm,18.2s,baz=282,slow=38
TORD Torodi Ar. Bea 101.85 347 P Pdif 12 36 28.4 -0.1
TORD Torodi Ar. Bea 101.85 347 P Pdif 12 36 28.4 -0.1

	comp=Z,0.8nm,1.0s,baz=6.9,slow=4.6,SNR=3.4							
PLCA	**Paso Flores**	**138.98**	**84**	PKPpre	PKPpre	12 41 52.0		
PLCA				PKP	**PKPdf**	**12 41 58.6**	**-2.2**	
PLCA	**Paso Flores**	**138.98**	**84**	PKhKP	PKPpre	12 41 52.0		
	comp=Z,1.0nm,0.7s,baz=224,slow=8.7,SNR=3.0							
PLCA				PKP	**PKPdf**	**12 41 58.6**	**-2.2**	
	comp=Z,3.6nm,0.8s,baz=267,slow=3.5,SNR=9.6							
VNDA	**Vanda**	**141.94**	**182**	PKPpre	PKPpre	12 41 58.8		
VNDA	**Vanda**	**141.94**	**182**	PKhKP	PKPpre	12 41 58.8		
	comp=Z,0.7nm,0.7s,baz=342,slow=4.8,SNR=9.1							
MAW	**Mawson**	**151.42**	**230**	PKPbc	**PKPbc**	**12 42 26.2**	**-0.9**	
MAW	**Mawson**	**151.42**	**230**	PKPbc	**PKPbc**	**12 42 26.2**	**-0.9**	
	comp=Z,24nm,0.8s,baz=354,slow=1.7,SNR=22							
EFI	**East Falkland**	**152.90**	**84**	*e*PKIKP	**PKPbc**	**12 42 29.1**	**-1.8**	
EFI	**East Falkland**	**152.90**	**84**	*e*PKPbc	**PKPbc**	**12 42 29.1**	**-1.8**	
QSPA	**South Pole Qui**	**154.38**	**180**	PKPbc	**PKPbc**	**12 42 32.1**	**-1.6**	
QSPA	**South Pole Qui**	**154.38**	**180**	PKPbc	**PKPbc**	**12 42 32.1**	**-1.6**	
	comp=Z,6.5nm,0.6s,baz=278,slow=0.6,SNR=47							

CSEM ***21*** *12:26:23.0±0.2, 38°.65N×48°.74E, h2km, ML3.7, Error ellipse: s-maj=7.2km s-min=3.8km az=12.0*
THR ***21*** *12:26:23.3±0.6, 38°.65N×48°.71E, h14km±9km, ML3.5*
AZER ***21*** *12:26:23.7, 38°.85N×48°.72E, h16km*
ISCJB ***21*** *12:26:24.2±0.4, 38°.75N±0°.02×48°.83E±0°.04, h25km±4km, Error ellipse: s-maj=5.0km s-min=3.6km az=151.3*
TEH ***21*** *12:26:24.1, 38°.76N×48°.71E, h12km, ML3.7*

ISC 21 12:26:25.1±0.9, 38°.73N±0°.03×48°.73E±0°.04, h26km±7km, n56, σ0s91/71, 13C-8D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LKRN	**Lenkeran, Azer**	**0.04**	**114**	⇓P		**Pb**	**12 26 29.3**	**-0.2**
	SNR=602							
LKRN				⇑S		**Sb**	**12 26 32.9**	**+0.4**
GLBA	**Clilabad**	**0.58**	**333**	⇓P		**Pb**	**12 26 34.9**	**-1.7**
	SNR=91							
GLBA				⇓S		**Sb**	**12 26 43.4**	**-1.1**
GRMI	**Germi**	**0.66**	**277**	*e*Pg		**Pb**	**12 26 36.3**	**-1.7**
GRMI				AML		AML	12 26 46.1	
	comp=E,4μm,0.6s							
GRMI	**Germi**	**0.66**	**277**	*e*Pg		**Pb**	**12 26 36.3**	**-1.7**
ISRB	**Sarab**	**1.23**	**223**	⇑*e*Pg		**Pn**	**12 26 46.6**	**-0.2**
ISRB				*e*			12 26 50.5	
	comp=Z,12μm,0.1s							
ISRB				*e*Sg		**Sb**	**12 27 03.6**	**+0.3**
ISRB	**Sarab**	**1.23**	**223**	⇑*e*Pg		**Pn**	**12 26 46.6**	**-0.2**
ISRB				*e*Sg		**Sb**	**12 27 03.6**	**+0.3**
ALIB	**Äli-Bayra**	**1.25**	**10**	⇑P		**Pb**	**12 26 47.8**	**-0.2**
	SNR=6.0							
IHRS	**Heris**	**1.39**	**253**	⇓*e*Pg		**Pn**	**12 26 48.7**	**-0.2**
IHRS				*e*Sg		**Sn**	**12 27 07.2**	**+0.7**
IHRS				*e*			12 27 11.5	
	comp=Z,54μm,0.1s							
IHRS	**Heris**	**1.39**	**253**	⇓*e*Pg		**Pn**	**12 26 48.7**	**-0.2**
IHRS				*e*Sg		**Sn**	**12 27 07.2**	**+0.7**
BRDA	**Brd**	**1.95**	**322**	⇓P		**Pn**	**12 26 56.8**	**+0.4**
	SNR=10							
ZNJK	**Zanjan**	**2.05**	**181**	*e*Pg		**Pn**	**12 26 59.1**	**+0.9**
ZNJK				*e*Sg		**Sb**	**12 27 25.9**	**-1.1**
ZNJK				AML		AML	12 27 31.0	
	comp=E,227nm,0.5s							
ZNJK	**Zanjan**	**2.05**	**181**	*e*Pg		**Pn**	**12 26 59.1**	**+0.9**
ZNJK				*e*Sg		**Sb**	**12 27 25.9**	**-1.1**
PQL	**Pirkuli**	**2.06**	**357**	⇑P		**Pn**	**12 26 58.2**	**0.0**
	SNR=6.1							
PQL				⇑S		**Sn**	**12 27 23.4**	**+0.3**
ITBZ	**Tabriz**	**2.08**	**257**	*e*Pn		**Pn**	**12 26 58.8**	**+0.3**
ITBZ				*e*			12 27 05.7	
	comp=Z,5μm,0.1s							
ITBZ				*e*Sg		**Sb**	**12 27 28.1**	**+0.3**
ITBZ	**Tabriz**	**2.08**	**257**	*e*Pn		**Pn**	**12 26 58.8**	**+0.3**
IML	**Ismayilli**	**2.11**	**349**	⇑P		**Pn**	**12 26 58.5**	**-0.2**
	SNR=4.0							
IML				⇑S		**Sn**	**12 27 25.0**	**+0.9**
SIZA	**Siyzn**	**2.35**	**3**	⇓P		**Pn**	**12 27 01.8**	**-0.3**
	SNR=5.9							
SIZA				⇑S		**Sn**	**12 27 31.8**	**+1.7**
IMRD	**Marand**	**2.37**	**271**	*e*Pn		**Pn**	**12 27 02.6**	**+0.2**
IMRD				*e*Sg		**Sb**	**12 27 37.5**	**+1.6**
IMRD				*e*			12 27 42.3	
	comp=Z,11μm,0.2s							
IMRD	**Marand**	**2.37**	**271**	*e*Pn		**Pn**	**12 27 02.6**	**+0.2**
IMRD				*e*Sg		**Sb**	**12 27 37.5**	**+1.6**
IAZR	**Azarshahr**	**2.41**	**245**	*e*			12 27 23.4	
	comp=Z,6μm,0.2s							
IAZR				*e*Pn		**Pn**	**12 27 03.8**	**+0.8**
NAX	**Nakhchivan**	**2.56**	**281**	⇑P		**Pn**	**12 27 07.3**	**+2.4**
	SNR=22							
IGZV	**Ghazvin**	**2.62**	**153**	*e*			12 27 43.2	
	comp=Z,2μm,0.1s							
IGZV				*e*Pn		**Pn**	**12 27 06.1**	**+0.2**
QUBA	**Quba, Azerbaij**	**2.63**	**356**	⇓P		**Pn**	**12 27 06.3**	**+0.4**
GANJ	**Ganja**	**2.67**	**317**	⇑P		**Pn**	**12 27 05.4**	**-1.0**
	SNR=5.9							
SEKA	**Sheki**	**2.74**	**335**	⇑P		**Pn**	**12 27 06.7**	**-0.8**
	SNR=12							
SEKA				⇑S		**Sn**	**12 27 39.5**	**-0.4**
MAKU	**Maku**	**3.21**	**283**	*e*Pn		**Pn**	**12 27 15.6**	**+1.6**
MAKU				AML		AML	12 28 10.3	
	comp=N,98nm,0.4s							
MAKU	**Maku**	**3.21**	**283**	*e*Pn		**Pn**	**12 27 15.6**	**+1.6**
CHTH	**Charan**	**3.40**	**145**	*e*Pn		**Pn**	**12 27 17.5**	**+0.8**
CHTH	**Charan**	**3.40**	**145**	*e*Pn		**Pn**	**12 27 17.5**	**+0.8**
IMHD	**Mahdasht**	**3.41**	**152**	*e*Pn		**Pn**	**12 27 17.3**	**+0.7**
IMHD				*e*			12 28 02.4	
	comp=Z,587nm,0.1s							
IMHD	**Mahdasht**	**3.41**	**152**	*e*Pn		**Pn**	**12 27 17.3**	**+0.7**
IRAZ	**Razeghan**	**3.45**	**163**	*e*Pn		**Pn**	**12 27 17.5**	**+0.1**
IRAZ				*e*			12 28 22.4	
	comp=Z,647nm,0.2s							
IRAZ	**Razeghan**	**3.45**	**163**	*e*Pn		**Pn**	**12 27 17.5**	**+0.1**
IPRN	**Peran**	**3.79**	**130**	*e*Pn		**Pn**	**12 27 22.3**	**+0.3**
IPRN				*e*			12 28 09.1	
	comp=Z,3μm,0.1s							
IDMV	**Damavand**	**4.10**	**139**	*e*Pn		**Pn**	**12 27 26.0**	**-0.4**
IDMV				*e*			12 28 20.1	
	comp=Z,281nm,0.1s							
IDMV	**Damavand**	**4.10**	**139**	*e*Pn		**Pn**	**12 27 26.0**	**-0.4**
IALA	**Alasht**	**4.19**	**128**	*e*Pn		**Pn**	**12 27 26.7**	**-0.8**
IALA				*e*			12 28 20.2	
	comp=Z,1μm,0.1s							
IALA	**Alasht**	**4.19**	**128**	*e*Pn		**Pn**	**12 27 26.7**	**-0.8**
TBLG	**Delisi**	**4.28**	**316**	P		**Pn**	**12 27 30.9**	**+2.4**
TBLG	**Delisi**	**4.28**	**316**	P		**Pn**	**12 27 30.9**	**+2.4**
IVRN	**Varamin**	**4.43**	**146**	*e*Pn		**Pn**	**12 27 31.2**	**+0.5**
IVRN	**Varamin**	**4.43**	**146**	*e*Pn		**Pn**	**12 27 31.2**	**+0.5**
ISHM	**Shahmirzad**	**4.66**	**127**	*e*Pn		**Pn**	**12 27 34.5**	**+0.4**
ISHM				*e*			12 28 33.4	
	comp=Z,1μm,0.1s							
ISHM	**Shahmirzad**	**4.66**	**127**	*e*Pn		**Pn**	**12 27 34.5**	**+0.4**
IKIA	**Kiasar**	**4.68**	**121**	*e*Pn		**Pn**	**12 27 34.6**	**+0.4**
IKIA				*e*			12 28 31.4	
	comp=Z,680nm,0.1s							
IKIA	**Kiasar**	**4.68**	**121**	*e*Pn		**Pn**	**12 27 34.6**	**+0.4**
IANJ	**Anjilo**	**5.27**	**127**	*e*Pn		**Pn**	**12 27 42.6**	**+0.3**
IANJ				*e*			12 28 51.8	
	comp=Z,174nm,0.1s							
IANJ	**Anjilo**	**5.27**	**127**	*e*Pn		**Pn**	**12 27 42.6**	**+0.3**
ISHV	**Shirvan**	**7.17**	**97**	*e*Pn		**Pn**	**12 28 08.5**	**0.0**
ISHV	**Shirvan**	**7.17**	**97**	*e*Pn		**Pn**	**12 28 08.5**	**0.0**
ISFR	**Sfrayin**	**7.52**	**100**	*e*Pn		**Pn**	**12 28 13.2**	**-0.1**
ISFR				*e*			12 29 41.9	
	comp=Z,369nm,0.3s							
ISFR	**Sfrayin**	**7.52**	**100**	*e*Pn		**Pn**	**12 28 13.2**	**-0.1**
IPAY	**Payeh**	**8.46**	**102**	*e*Pn		**Pn**	**12 28 26.0**	**-0.2**
IPAY				*e*			12 28 27.8	
	comp=Z,139nm,0.1s							
IPAY	**Payeh**	**8.46**	**102**	*e*Pn		**Pn**	**12 28 26.0**	**-0.2**
IMYA	**Miami**	**9.34**	**101**	*e*Pn		**Pn**	**12 28 37.6**	**-0.6**
IMYA				*e*			12 28 42.4	
	comp=Z,49nm,0.1s							
IMYA	**Miami**	**9.34**	**101**	*e*Pn		**Pn**	**12 28 37.6**	**-0.6**

IDC ***21*** *12:26:33.8±1.4, 17°.90S×178°.48W, h540km±18km, mb3.2/8, mb1 3.4/10, mb1mx3.2/22, mbtmp3.2/10, Error ellipse: s-maj=27.0km s-min=11.5km az=146.0*
ISCJB ***21*** *12:26:34.9±0.5, 17°.8S±0°.1×178°.45W±0°.09, h579km, mb3.7/8, Error ellipse: s-maj=20.4km s-min=7.6km az=155.8*

AUST ***21*** *12:26:36.2±0.0, 17°.66S×178°.44W, h575km, Error ellipse: s-maj=3.2km s-min=1.6km az=350.0*

ISC 21 12:26:36.0±0.6, 17°.8S±0°.1×178°.41W±0°.10, h579km, n30, σ1s31/31, mb3.7/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AFI	**Afiamalu**	**7.48**	**59**	P		**P**	**12 28 28.2**	**-1.6**
	4.6nm,0.3s,baz=128,slow=2.6,SNR=9.1							
AFI				S		**S**	**12 29 59.2**	**-3.7**
	1.1nm,0.3s,baz=49,slow=20,SNR=2.2							
NIUE	**Niue**	**8.15**	**100**	P		**P**	**12 28 36.8**	**+0.8**
	baz=8.2,SNR=5.1							
DZM	**Mont Dzumac**	**14.85**	**251**	P		**P**	**12 29 41.5**	**-1.9**
	0.9nm,0.3s,baz=93,slow=18,SNR=11							
URZ	**Urewera**	**20.72**	**190**	P		**P**	**12 30 34.8**	**-2.2**
	3.2nm,0.4s,baz=153,slow=14,SNR=5.8							
RMQ	**Roma**	**31.53**	**248**	P		**P**	**12 32 12.6**	**+0.6**
	baz=32,SNR=5.1							
CMSA	**Cobar Meteorol**	**35.18**	**240**	P		**P**	**12 32 42.7**	**+0.2**
	baz=35,SNR=16							
QLP	**Quilpie**	**35.55**	**249**	P		**P**	**12 32 45.6**	**-0.2**
	baz=36,SNR=9.5							
COEN	**Coen**	**37.10**	**270**	P		**P**	**12 32 58.7**	**+0.2**
	baz=37,SNR=8.7							
TOO	**Toolangi**	**37.21**	**231**	P		**P**	**12 33 00.3**	**+1.1**
	baz=37,SNR=5.0							
STKA	**Stephens Creek**	**38.66**	**241**	P		**P**	**12 33 11.8**	**+0.7**
	6.2nm,0.4s,baz=94,slow=9.7,SNR=34							
STKA	**Stephens Creek**	**38.66**	**241**	P		**P**	**12 33 11.8**	**+0.7**
	baz=39,SNR=28							
BBOO	**Buckleboo**	**43.44**	**241**	P		**P**	**12 33 49.1**	**+0.3**
	baz=44,SNR=14							
WRA	**Warramunga Arr**	**44.64**	**259**	P		**P**	**12 33 57.1**	**-1.1**
	2.9nm,0.5s,baz=91,slow=7.1,SNR=148							
ASAR	**Alice Springs**	**44.81**	**254**	P		**P**	**12 33 59.3**	**-0.2**
	31nm,0.6s,baz=89,slow=7.8,SNR=1072							
ASAR				PcP		**PcP**	**12 35 29.6**	**+0.8**
	0.8nm,0.4s,baz=103,slow=4.0,SNR=5.8							
KDU	**Kakadu**	**47.55**	**269**	P		**P**	**12 34 19.9**	**-0.4**
	baz=48,SNR=6.0							
MTN	**Manton Dam**	**48.80**	**268**	P		**P**	**12 34 29.0**	**-0.6**
	baz=49,SNR=5.6							
FITZ	**Fitzroy Crossi**	**53.04**	**260**	P		**P**	**12 35 00.4**	**+0.2**
	1.1nm,0.3s,baz=115,slow=4.6,SNR=23							
FITZ	**Fitzroy Crossi**	**53.04**	**260**	P		**P**	**12 35 00.4**	**+0.2**
	baz=53,SNR=13							
MEEK	**Meekatharra**	**58.45**	**249**	P		**P**	**12 35 37.1**	**-0.5**
	baz=58,SNR=5.1							
WSI	**Waingapu**	**59.87**	**269**	P		P	12 35 56.6	+9.4
	baz=60,SNR=4.2							
MJAR	**Matsushiro Arr**	**67.85**	**323**	P		**P**	**12 36 37.5**	**+0.1**
	1.1nm,0.5s,baz=152,slow=6.4,SNR=4.6							
UGM	**Wanagama**	**69.64**	**268**	P		**P**	**12 36 48.9**	**+0.2**
	baz=70,SNR=3.8							
NVAR	**Mina Array Bea**	**79.38**	**44**	P		**P**	**12 37 45.6**	**+2.6**
	0.2nm,0.6s,baz=215,slow=7.7,SNR=3.0							
ILAR	**Eielson Array**	**85.82**	**13**	P		**P**	**12 38 14.9**	**+0.5**
	0.2nm,0.4s,baz=224,slow=5.2,SNR=7.8							
PDAR	**Pinedale Array**	**87.30**	**43**	P		**P**	**12 38 24.4**	**+2.1**
	0.2nm,0.5s,baz=242,slow=1.9,SNR=2.7							
ARCES	**ARCESS Array B**	**126.25**	**350**	PKP		**PKPdf**	**12 44 34.2**	**+1.5**
	5.9nm,0.9s,baz=12,slow=4.6,SNR=2.9							
BRTR	**Keskin Array B**	**144.73**	**315**	PKP		**PKPab**	**12 45 09.4**	**+0.3**
	1.2nm,0.5s,baz=108,slow=2.6,SNR=8.4							
MMAI	**Mount Meron Ar**	**146.10**	**303**	PKPbc		**PKPab**	**12 45 13.8**	**-0.9**
	1.0nm,0.3s,baz=72,slow=2.7,SNR=3.8							
GERES	**GERESS Array B**	**147.54**	**345**	PKPbc		**PKPbc**	**12 45 17.1**	**+1.3**
	1.2nm,0.5s,baz=11,slow=2.7,SNR=6.6							
TORD	**Torodi Ar. Bea**	**175.34**	**181**	PKP		**PKPdf**	**12 45 41.5**	**+0.6**
	0.5nm,1.0s,baz=174,slow=3.9,SNR=2.8							

IDC ***21*** *12:45:43.3±0.9, 38°.77N×21°.12E, h0km, mb3.8/10, mb1 3.9/14, mb1mx3.8/30, mbtmp3.8/14, ML4.0/4, Error ellipse: s-maj=17.5km s-min=17.0km az=91.0*
CSEM ***21*** *12:45:45.9±0.1, 38°.79N×21°.12E, h2km, MD3.3, Error ellipse: s-maj=2.8km s-min=1.9km az=60.0*
ATH ***21*** *12:45:45.6, 38°.84N×21°.11E, h1km±1km, MD3.3/33, ML4.0*
PDG ***21*** *12:45:46.0±0.6, 38°.82N×21°.11E, h8km±1km, ML3.7/9, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
THE ***21*** *12:45:46.2, 38°.81N×21°.11E, h0km±1km, ML3.8/4, Error ellipse: s-maj=1.9km s-min=0.6km az=202.0*

ISC 21 12:45:45.8±0.9, 38°.80N±0°.01×21°.12E±0°.01, h12km±6km, n226, σ1s28/283, mb3.9/11, 19C-9D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LKD2	**Lefkada island**	**0.36**	**268**	P		**Pg**	**12 45 53.2**	**+0.3**
LKD2				S		**Sb**	**12 45 59.1**	**-0.6**
LKD2	**Lefkada island**	**0.36**	**268**	*e*PB		**Pg**	**12 45 53.2**	**+0.3**
LKD2				*e*SB		**Sg**	**12 45 57.4**	**-0.4**
LKD2	**Lefkada island**	**0.36**	**268**	*e*Pb		**Pg**	**12 45 53.3**	**+0.3**
LKD2				*e*Sb		**Sg**	**12 45 57.4**	**-0.4**
LKD2				S		**Sb**	**12 45 59.1**	**-0.6**
EVR	**Evrytania**	**0.55**	**78**	P		**Pg**	**12 45 55.9**	**-0.7**
EVR				S		**Sb**	**12 45 59.5**	**+0.2**
EVR	**Evrytania**	**0.55**	**78**	*e*PB		**Pg**	**12 45 57.0**	**+0.4**
EVR	**Evrytania**	**0.55**	**78**	P		**Pg**	**12 45 55.9**	**-0.7**
EVR	**Evrytania**	**0.55**	**78**	*e*Pb		**Pg**	**12 45 57.0**	**+0.4**
EVR				S		**Sg**	**12 46 04.8**	**+0.8**
EFP	**Efpalio**	**0.72**	**121**	P		**Pg**	**12 45 59.2**	**-0.6**
EFP				S		**Sb**	**12 46 10.6**	**+0.5**
EFP	**Efpalio**	**0.72**	**121**	*e*PG		**Pg**	**12 45 59.6**	**-0.2**
EFP	**Efpalio**	**0.72**	**121**	P		**Pg**	**12 45 59.2**	**-0.6**
EFP	**Efpalio**	**0.72**	**121**	*e*Pg		**Pg**	**12 45 59.6**	**-0.2**
EFP				S		**Sb**	**12 46 10.6**	**+0.5**
KFL	**Anninata**	**0.74**	**201**	P		**Pg**	**12 45 59.9**	**-0.1**
KFL	**Anninata**	**0.74**	**201**	P		**Pg**	**12 46 00.0**	**-0.1**
KFL				S		**Sb**	**12 46 12.2**	**+1.7**
UPR	**University Cam**	**0.74**	**134**	P		**Pb**	**12 46 00.5**	**+0.1**
UPR	**University Cam**	**0.74**	**134**	*e*PB		**Pb**	**12 46 00.6**	**+0.1**
UPR	**University Cam**	**0.74**	**134**	P		**Pg**	**12 46 00.3**	**+0.3**
UPR	**University Cam**	**0.74**	**134**	*e*Pb		**Pb**	**12 46 00.6**	**+0.1**
UPR				S		**Sb**	**12 46 11.6**	**+1.1**
VLS	**Valsamata**	**0.75**	**214**	P		**Pg**	**12 45 59.6**	**-0.6**
VLS				S		**Sb**	**12 46 11.9**	**+1.1**
VLS	**Valsamata**	**0.75**	**214**	*e*PG		**Pg**	**12 46 00.0**	**-0.2**
VLS				*e*SB		**Sb**	**12 46 12.3**	**+1.5**
VLS	**Valsamata**	**0.75**	**214**	P		**Pg**	**12 45 59.6**	**-0.6**
VLS	**Valsamata**	**0.75**	**214**	*e*Pg		**Pg**	**12 46 00.0**	**-0.2**
VLS				S		**Sb**	**12 46 11.9**	**+1.1**
VLS				*e*Sb		**Sb**	**12 46 12.3**	**+1.5**
PSA1	**Psathopyrgos**	**0.77**	**128**	*e*PB		**Pb**	**12 46 00.9**	**-0.1**
RLS	**Riolos of Patr**	**0.79**	**159**	P		**Pg**	**12 46 00.9**	**-0.2**
RLS	**Riolos of Patr**	**0.79**	**159**	*e*PG		**Pb**	**12 46 01.3**	**-0.1**
RLS				*e*SB		**Sb**	**12 46 13.2**	**+1.1**
RLS	**Riolos of Patr**	**0.79**	**159**	P		**Pg**	**12 46 00.9**	**-0.2**
RLS	**Riolos of Patr**	**0.79**	**159**	*e*Pg		**Pb**	**12 46 01.3**	**-0.1**
RLS				S		**Sb**	**12 46 13.7**	**+1.6**
MAKR	**Makrakomi, Fth**	**0.82**	**75**	P		**Pg**	**12 46 01.3**	**-0.3**
MAKR	**Makrakomi, Fth**	**0.82**	**75**	P		**Pg**	**12 46 01.3**	**-0.3**
MAKR				S		**Sb**	**12 46 13.0**	**0.0**
TRIZ	**Trizonia**	**0.87**	**120**	P		**Pg**	**12 46 01.8**	**-0.7**
TRIZ	**Trizonia**	**0.87**	**120**	*e*PB		**Pb**	**12 46 02.7**	**0.0**
TRIZ				*e*SB		**Sn**	**12 46 16.0**	**-0.3**
TRIZ	**Trizonia**	**0.87**	**120**	P		**Pg**	**12 46 01.8**	**-0.7**
TRIZ	**Trizonia**	**0.87**	**120**	*e*Pb		**Pb**	**12 46 02.7**	**0.0**
TRIZ				S		**Sn**	**12 46 16.0**	**-0.3**
LAKA	**Lakka**	**0.88**	**129**	P		**Pg**	**12 46 02.2**	**-0.5**
LAKA	**Lakka**	**0.88**	**129**	*e*PG		**Pg**	**12 46 02.5**	**-0.2**
LAKA				*e*SB		**Sn**	**12 46 16.4**	**-0.2**
LAKA	**Lakka**	**0.88**	**129**	P		**Pg**	**12 46 02.2**	**-0.5**
LAKA	**Lakka**	**0.88**	**129**	*e*Pg		**Pg**	**12 46 02.5**	**-0.2**
LAKA				S		**Sb**	**12 46 16.0**	**+1.4**
JAN	**Janina**	**0.88**	**347**	P		**Pg**	**12 46 02.2**	**-0.6**
JAN				S		**Sb**	**12 46 15.7**	**+1.0**
JAN	**Janina**	**0.88**	**347**	*e*PB		**Pg**	**12 46 02.0**	**-0.8**
JAN	**Janina**	**0.88**	**347**	P		**Pg**	**12 46 02.2**	**-0.6**
JAN				S		**Sb**	**12 46 15.7**	**+1.0**
KALE	**Kalithea**	**0.90**	**117**	P		**Pg**	**12 46 02.2**	**-1.0**
KALE	**Kalithea**	**0.90**	**117**	*e*PB		**Pg**	**12 46 02.4**	**-0.8**
KALE				*e*SB		**Sg**	**12 46 15.3**	**+0.4**
KALE	**Kalithea**	**0.90**	**117**	*e*Pb		**Pg**	**12 46 02.4**	**-0.8**
KALE				*e*Sb		**Sg**	**12 46 15.3**	**+0.4**
KALE				S		**Sn**	**12 46 18.1**	**+0.9**
IGT	**Igoumenitsa**	**0.95**	**320**	P		**Pg**	**12 46 03.7**	**-0.4**
IGT	**Igoumenitsa**	**0.95**	**320**	P		**Pg**	**12 46 03.7**	**-0.4**
IGT				S		**Sb**	**12 46 17.8**	**+1.0**
AGG	**Agios Georgios**	**0.97**	**76**	P		**Pg**	**12 46 04.0**	**-0.5**
AGG	**Agios Georgios**	**0.97**	**76**	*e*PN		**Pg**	**12 46 04.4**	**-0.1**
AGG	**Agios Georgios**	**0.97**	**76**	P		**Pg**	**12 46 04.0**	**-0.5**
AGG	**Agios Georgios**	**0.97**	**76**	*e*Pn		**Pg**	**12 46 04.4**	**-0.1**
AGG				S		**Sb**	**12 46 17.8**	**+0.4**
MEV	**Metsovon**	**0.99**	**5**	P		**Pg**	**12 46 04.4**	**-0.5**
MEV	**Metsovon**	**0.99**	**5**	P		**Pg**	**12 46 04.4**	**-0.5**
THL	**Klokotos Trika**	**1.03**	**42**	P		**Pg**	**12 46 04.9**	**-0.8**
THL	**Klokotos Trika**	**1.03**	**42**	*e*PN		**Pg**	**12 46 05.1**	**-0.6**
THL	**Klokotos Trika**	**1.03**	**42**	P		**Pg**	**12 46 04.9**	**-0.8**
THL				S		**Sb**	**12 46 19.6**	**+0.5**
KLV	**Kalavryta, Ach**	**1.11**	**133**	*e*PG		**Pg**	**12 46 06.3**	**-0.8**
KLV	**Kalavryta, Ach**	**1.11**	**133**	*e*Pn		**Pg**	**12 46 06.3**	**-0.8**
DSF	**Desfina**	**1.17**	**109**	P		**Pb**	**12 46 06.9**	**-1.1**
DSF	**Desfina**	**1.17**	**109**	P		**Pb**	**12 46 06.9**	**-1.1**
DSF				S		**Sn**	**12 46 24.3**	**+0.4**
AXAR	**Agios Charalam**	**1.21**	**91**	P		**Pb**	**12 46 08.4**	**-0.1**
AXAR	**Agios Charalam**	**1.21**	**91**	P		**Pb**	**12 46 08.5**	**-0.1**
AXAR				S		**Sb**	**12 46 24.2**	**+0.1**
GUR	**Goura**	**1.29**	**131**	P		**Pn**	**12 46 09.4**	**-0.3**
GUR				S		**Sn**	**12 46 31.0**	**+4.0**
GUR	**Goura**	**1.29**	**131**	*e*PG		**Pn**	**12 46 10.1**	**+0.4**
GUR	**Goura**	**1.29**	**131**	P		**Pn**	**12 46 09.4**	**-0.3**
GUR	**Goura**	**1.29**	**131**	*e*Pg		**Pn**	**12 46 10.1**	**+0.4**
GUR				S		**Sn**	**12 46 30.1**	**+3.1**
AMT	**Artemida-Makis**	**1.35**	**160**	P		**Pb**	**12 46 11.1**	**+0.1**
AMT	**Artemida-Makis**	**1.35**	**160**	*e*PG		**Pb**	**12 46 11.4**	**+0.4**
AMT	**Artemida-Makis**	**1.35**	**160**	P		**Pb**	**12 46 11.1**	**+0.1**
AMT	**Artemida-Makis**	**1.35**	**160**	*e*Pg		**Pb**	**12 46 11.4**	**+0.4**
KEK	**Kerkira**	**1.37**	**312**	P		**Pn**	**12 46 10.9**	**+0.2**
KEK	**Kerkira**	**1.37**	**312**	*e*PB		**Pn**	**12 46 11.0**	**+0.2**
KEK	**Kerkira**	**1.37**	**312**	P		**Pn**	**12 46 10.9**	**+0.2**
LKR	**Lokris**	**1.48**	**95**	P		**Pb**	**12 46 13.2**	**0.0**
LKR	**Lokris**	**1.48**	**95**	*e*PG		**Pn**	**12 46 12.8**	**+0.6**
LKR	**Lokris**	**1.48**	**95**	*e*Pg		**Pn**	**12 46 12.8**	**+0.6**
LKR	**Lokris**	**1.48**	**95**	P		**Pb**	**12 46 13.2**	**0.0**
ATAL	**Atalanti**	**1.49**	**94**	P		**Pb**	**12 46 13.3**	**-0.1**
ATAL	**Atalanti**	**1.49**	**94**	P		**Pb**	**12 46 13.3**	**-0.1**
KZN	**Kozani**	**1.59**	**18**	P		**Pb**	**12 46 15.3**	**+0.2**
KZN				S		**Sg**	**12 46 37.4**	**+0.5**
KZN	**Kozani**	**1.59**	**18**	*e*PG		**Pn**	**12 46 14.1**	**+0.3**
KZN	**Kozani**	**1.59**	**18**	*e*Pg		**Pn**	**12 46 14.1**	**+0.3**
KZN	**Kozani**	**1.59**	**18**	P		**Pb**	**12 46 15.3**	**+0.2**
KZN				S		**Sg**	**12 46 37.4**	**+0.5**
NEST	**Nestorio**	**1.61**	**358**	P		**Pb**	**12 46 15.3**	**-0.2**
NEST	**Nestorio**	**1.61**	**358**	P		**Pb**	**

RZN	Rozhen	3.99	43	*i* P	Pn	12 46 48.7	+1.8	
RZN	Rozhen	3.99	43	*i* P	Pn	12 46 48.7	+1.8	
VTS	Vitosha	4.11	22	⇑*i* P	Pb	12 46 53.6	-4.5	
VTS	Vitosha	4.11	22	*e*P	Pn	12 46 52.8	+4.3	
VTS	Vitosha	4.11	22	*e*P	Pn	12 46 52.8	+4.3	
HCY	Herceg Novi	4.15	332	⇑*i* Pn	Pn	12 46 48.4	-0.6	
HCY				*e*Sn	Sn	12 47 39.3	+1.9	
HCY	Herceg Novi	4.15	332	⇑*i* Pn	Pn	12 46 48.4	-0.6	
HCY				*e*Sn	Sn	12 47 39.3	+1.9	
BEY	Berane	4.17	348	⇓*i* Pn	Pn	12 46 50.5	+1.2	
BEY				*e*Sn	Sn	12 47 40.6	+2.6	
IVA	Berane	4.17	348	⇓*i* Pn	Pn	12 46 50.5	+1.2	
IVA				*e*Sn	Sn	12 47 40.6	+2.6	
NKY	Niksic	4.32	339	⇓*i* Pn	Pn	12 46 52.8	+1.4	
NKY				*e*Sn	Sn	12 47 44.1	+2.4	
NKY	Niksic	4.32	339	⇓*i* Pn	Pn	12 46 52.8	+1.4	
NKY				*e*Sn	Sn	12 47 44.1	+2.4	
BRY	Bratogost	4.54	335	⇓*i* Pn	Pn	12 46 55.5	+1.1	
BRY	Bratogost	4.54	335	⇓*i* Pn	Pn	12 46 55.5	+1.1	
UPM	Unac-Piva	4.71	340	⇑*i* Pn	Pn	12 46 58.2	+1.5	
UPM				*e*Sn	Sn	12 47 53.1	+1.8	
UPM	Unac-Piva	4.71	340	⇑*i* Pn	Pn	12 46 58.2	+1.5	
UPM				*e*Sn	Sn	12 47 53.1	+1.8	
PLE	Pljevlja	4.71	344	⇑*i* Pn	Pn	12 46 58.8	+2.1	
PLE				*e*Sn	Sn	12 47 52.9	+1.6	
PLE	Pljevlja	4.71	344	⇑*i* Pn	Pn	12 46 58.8	+2.1	
PLE				*e*Sn	Sn	12 47 52.9	+1.6	
GZR	Gura Zlata	6.70	10	⇓*i* P	Pb	12 47 35.8	-6.4	
NVLJ	Novalja	7.42	323	*e*Pn	Pn	12 47 32.3	-1.4	
NVLJ				Sn	Sn	12 48 52.3	-5.4	
MLR	Muntele Rosu	7.59	27	⇓*i* P	Pn	12 47 38.9	+2.7	
MLR	Muntele Rosu	7.59	27	⇓*i* Pn	Pn	12 47 39.0	+2.8	
	0.2nm,0.3s,baz=294,slow=14,SNR=8.0							
MLR	Muntele Rosu	7.59	27	⇓*i* P	Pn	12 47 38.9	+2.7	
PLOR	Plostina	8.15	28	⇑*i* P	Pn	12 47 48.4	+4.5	
VRI	Vrincioaia	8.19	29	⇑*i* P	Pn	12 47 48.2	+3.8	
VRI	Vrincioaia	8.19	29	⇑*i* P	Pn	12 47 48.2	+3.8	
BRTR	Keskin Array B	9.76	81	Pn	Pn	12 48 09.8	+3.7	
	0.3nm,0.3s,baz=257,slow=12,SNR=11							
VYHS	Vyhne	9.83	351	*e*PN	Pn	12 48 08.0	+1.2	
VYHS				*e*SN	Sn	12 49 49.7	-7.4	
KEST	Kesra	9.87	256	Pn	Pn	12 48 10.9	+3.4	
	0.1nm,0.3s,baz=214,slow=3.6,SNR=4.1							
KIS	Kishinev	9.95	32	*e*L	L	13 01 40.0		
GERES	GERESS Array B	11.37	334	Pn	Pn	12 48 26.9	-1.1	
	0.2nm,0.3s,baz=150,slow=14,SNR=6.7							
GERES				Sn	Sn	12 50 28.2	-6.8	
	0.2nm,0.3s,baz=161,slow=19,SNR=2.9							
MMAI	Mount Meron Ar	12.94	112	Pn	Pn	12 48 50.1	+0.6	
	1.7nm,0.3s,baz=320,slow=13,SNR=2.9							
KBZ	Khabaz	17.09	66	P	P	12 49 47.4	+1.4	
	0.1nm,0.3s,baz=272,slow=14,SNR=5.2							
ESDC	Sonseca Array	19.43	281	P	P	12 50 12.2	+0.1	
	0.4nm,0.3s,baz=75,slow=12,SNR=5.8							
HFS	Hagfors	21.86	350	P	P	12 50 39.1	+1.1	
	2.7nm,0.6s,baz=146,slow=11,SNR=6.6							
FINES	FINESS Array B	22.88	6	P	P	12 50 48.5	-0.4	
	3.0nm,0.9s,baz=174,slow=8.8,SNR=5.2							
NB2	NORSAR Subarra	23.11	348	P	P	12 50 50.3	-1.0	
	comp=Z,2.8nm,0.8s,baz=156,slow=9.3							
NB2	NORSAR Subarra	23.11	348	P	P	12 50 50.3	-1.0	
	comp=Z,2.8nm,0.8s,SNR=7.4							
NOA	NORSAR Array B	23.11	348	P	P	12 50 50.4	-0.9	
	comp=Z,2.5nm,0.8s,baz=155,slow=9.4,SNR=6.7							
EKA	Eskdalemuir Ar	23.20	323	P	P	12 50 51.3	-0.9	
	comp=Z,4.5nm,1.0s,baz=122,slow=11,SNR=4.9							
TORD	Torodi Ar. Bea	30.81	219	P	P	12 52 01.8	+0.3	
	comp=Z,1.1nm,0.7s,baz=30,slow=9.2,SNR=11							
ARCES	ARCESS Array B	30.89	3	P	P	12 52 02.2	+0.5	
	comp=Z,3.6nm,0.8s,baz=180,slow=4.9,SNR=5.0							
MKAR	Makanchi Array	44.58	59	P	P	12 53 56.4	-1.2	
	comp=Z,1.3nm,0.5s,baz=270,slow=7.4,SNR=27							
MKAR				PcP	PcP	12 55 39.0	-1.3	
	comp=Z,0.4nm,0.7s,baz=289,slow=3.0,SNR=2.5							
ZALV	Zalesovo Beam	44.93	49	P	P	12 53 59.1	-1.1	
	comp=Z,11nm,0.4s,baz=276,slow=8.6,SNR=53							
SCHQ	Schefferville	58.32	317	P	P	12 55 40.2	-0.1	
	comp=Z,2.5nm,0.9s,baz=84,slow=10,SNR=3.1							
SONM	Songino Array	59.70	51	P	P	12 55 48.5	-1.6	
	comp=Z,0.2nm,0.3s,baz=260,slow=8.5,SNR=3.6							
ILAR	Eielson Array	76.33	355	P	P	12 57 34.1	0.0	
	comp=Z,0.2nm,0.7s,baz=338,slow=4.1,SNR=4.9							
WRA	Warramunga Arr	120.10	92	PKP	PKPdf	13 04 35.4	-1.3	
	comp=Z,0.2nm,0.5s,baz=314,slow=1.5,SNR=4.6							
ASAR	Alice Springs	121.78	96	PKP	PKPdf	13 04 38.9	-1.1	
	comp=Z,0.3nm,0.6s,baz=309,slow=1.2,SNR=6.7							

IDC 21 12:48:42.2±2.0, 3.32N×125.18E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/22, mbtmp3.3/3, Error ellipse: s-maj=192.2km s-min=25.8km az=64.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.81	159	P	P	12 54 06.6	+0.3
	0.3nm,0.4s,baz=337,slow=11,SNR=10						
ASAR	Alice Springs	28.14	163	P	P	12 54 35.9	-0.4
	0.1nm,0.5s,baz=350,slow=7.2,SNR=4.4						
MKAR	Makanchi Array	57.02	326	P	P	12 58 29.8	-0.1
	0.3nm,0.6s,baz=110,slow=8.4,SNR=3.0						

IDC 21 12:53:47.7±1.6, 3.72N×126.74E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/24, mbtmp3.7/5, Error ellipse: s-maj=149.5km s-min=20.0km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.67	163	P	P	12 59 09.6	-0.9
	1.6nm,0.7s,baz=342,slow=10,SNR=9.8						
ASAR	Alice Springs	28.10	166	P	P	12 59 43.0	+1.5
	0.3nm,0.6s,baz=348,slow=8.6,SNR=7.3						
STKA	Stephens Creek	38.12	159	P	P	13 01 08.0	-0.6
	1.1nm,0.5s,baz=335,slow=6.3,SNR=8.2						
MKAR	Makanchi Array	57.57	325	P	P	13 03 38.5	-0.9
	0.2nm,0.4s,baz=125,slow=7.3,SNR=4.9						
KURBB	Kurchatov Arra	61.75	327	P	P	13 04 08.7	+0.7
	0.4nm,0.5s,baz=129,slow=6.3,SNR=5.8						

IDC 21 12:56:58.5±1.1, 7.26N×126.86E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/26, mbtmp3.6/5, Error ellipse: s-maj=60.4km s-min=22.1km az=76.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	25.23	183	P	P	13 02 24.6	-1.6
	1.2nm,0.8s,baz=16,slow=8.7,SNR=5.8						
ASAR	Alice Springs	31.50	168	P	P	13 03 24.1	+1.8
	0.7nm,1.0s,baz=343,slow=7.2,SNR=4.1						
MKAR	Makanchi Array	54.77	324	P	P	13 06 30.6	+0.5
	0.7nm,0.5s,baz=122,slow=7.6,SNR=10						
KURBB	Kurchatov Arra	58.88	326	P	P	13 06 58.9	-0.2
	0.8nm,0.7s,baz=126,slow=6.3,SNR=11						
ILAR	Eielson Array	81.88	26	P	P	13 09 19.1	-0.5
	0.1nm,0.5s,baz=270,slow=4.6,SNR=2.6						

IDC 21 13:00:59.8±1.8, 7.87S×118.82E, h0km, mb3.8/3, mb1 3.9/6, mb1mx3.6/24, mbtmp3.7/6, ML3.5/3, Error ellipse: s-maj=52.7km s-min=19.8km az=71.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	Kappang	2.98	18	Pn	Pn	13 01 47.6	-0.8
	4.5nm,0.3s,baz=193,slow=6.1,SNR=40						
KAPI				Sn	Sb	13 02 27.9	-3.0
	19nm,0.3s,baz=90,slow=21,SNR=8.5						
FITZ	Fitzroy Crossi	12.14	148	Pn	Pn	13 03 53.9	-0.3
	0.1nm,0.3s,baz=324,slow=14,SNR=3.7						
FITZ				Sn	Sn	13 06 04.3	-6.2
	0.2nm,0.3s,baz=175,slow=20,SNR=5.7						
WRA	Warramunga Arr	19.24	130	P	P	13 05 25.4	-0.5
	0.3nm,0.3s,baz=305,slow=12,SNR=17						
ASAR	Alice Springs	21.35	139	P	P	13 05 48.6	-0.2
	3.2nm,0.3s,baz=314,slow=8.9,SNR=42						
STKA	Stephens Creek	31.94	141	P	P	13 07 28.0	+0.6
	1.0nm,0.4s,baz=310,slow=9.8,SNR=6.5						
MKAR	Makanchi Array	63.38	333	P	P	13 11 30.9	-0.1
	0.1nm,0.3s,baz=138,slow=7.4,SNR=3.6						

MEX 21 13:02:03.4±0.7, 16.77N×99.05W, h30km±26km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACX	Acapulco	0.78	277	*e*P	Pn	13 02 16.2	-2.2
ACX				*e*S	Sb	13 02 27.4	-1.4
PNIG	Pinotepa	0.96	113	*e*P	Pn	13 02 17.9	-3.1
PNIG				*e*S	Sn	13 02 31.3	-2.4
CAIG	El Cayaco	1.20	283	*e*P	Pn	13 02 21.6	-2.6
CAIG				*e*S	Sn	13 02 37.3	-2.2
MEIG	Mezcala	1.27	335	*e*P	Pn	13 02 22.9	-2.4
MEIG				*e*S	Sn	13 02 38.2	-3.3
UTMO	Huajuapan	1.59	48	*e*P	Pn	13 02 27.9	-2.0
UTMO				*i* S	Sn	13 02 47.0	-2.6
YAIG	Yautepec	2.08	360	*i* P	Pn	13 02 34.8	-1.7
YAIG				*i* S	Sn	13 02 59.3	-2.3

IDC 21 13:05:15.9±1.7, 3.89N×126.69E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.5/24, mbtmp3.4/5, Error ellipse: s-maj=107.0km s-min=23.2km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	21.88	183	P	P	13 10 11.1	+0.5
	0.4nm,0.4s,baz=17,slow=12,SNR=3.8						
WRA	Warramunga Arr	24.85	163	P	P	13 10 39.0	-1.3
	1.5nm,0.7s,baz=340,slow=11,SNR=11						
ASAR	Alice Springs	28.28	166	P	P	13 11 12.7	+1.4
	0.1nm,0.3s,baz=347,slow=12,SNR=5.2						
STKA	Stephens Creek	38.29	159	P	P	13 12 37.8	-0.5
	0.7nm,0.3s,baz=316,slow=11,SNR=4.3						
MKAR	Makanchi Array	57.40	325	P	P	13 15 06.3	0.0
	0.1nm,0.5s,baz=134,slow=8.2,SNR=2.9						

*IDC **21** 13:06:55.5±0.8, 32.12S×178.58W, h0km, mb4.2/7, mb1 4.4/8, mb1mx4.2/21, mbtmp4.2/8, ML4.3/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/22, Error ellipse: s-maj=28.3km s-min=23.3km az=160.0*
*ISCJB **21** 13:07:00.2±0.8, 32.37S±0.05×178.8W±0.1, h33km, mb4.3/9, Error ellipse: s-maj=17.7km s-min=6.7km az=13.5*
*NEIC **21** 13:07:04.5±1.3, 32.21S×178.66W, h65km±11km, mb4.9/2, Error ellipse: s-maj=17.2km s-min=11.9km az=122.0*

ISC 21 13:07:00.9±0.6, 32.29S±0.07×178.7W±0.1, h33km, n60, σ1s51/55, mb4.3/9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	3.10	12	P	Pn	13 07 50.0	+2.4
RAO				Sn	Sn	13 08 22.5	-0.9
RAO	Raoul Island	3.10	12	LR	LR	13 08 14.1	
	comp=Z,407nm,20.3s,baz=194,slow=27						
RAO				Sn	Sn	13 08 22.5	-0.9
	336nm,0.3s,baz=33,slow=20,SNR=4.9						
MXZ	Matakaoa Point	5.82	205	*e*Pn	Pn	13 08 26.2	+1.3
CNGZ	Carnagh Statio	6.69	202	*e*Pn	Pn	13 08 36.8	-0.1
MWZ	Matawai	6.79	206	*e*Pn	Pn	13 08 37.4	-0.8
MWZ				*e*Sn	Sn	13 09 53.4	-1.0
WCZ	Waipu Caves	6.85	236	*e*Pn	Pn	13 08 44.6	+5.5
URZ	Urewera	6.88	209	*e*P	Pn	13 08 41.3	+1.7
	18nm,0.5s						
URZ				Sn	Sn	13 09 58.2	+1.5
URZ	Urewera	6.88	209	Pn	Pn	13 08 38.7	-0.8
	5.3nm,0.3s,baz=80,slow=2.0,SNR=33						
URZ				Sn	Sn	13 09 58.2	+1.5
	5.4nm,0.3s,baz=124,slow=22,SNR=8.0						
OUZ	Omahuta	7.08	244	*e*P	Pn	13 08 47.7	+5.6
OUZ	Omahuta	7.08	244	*e*PN	Pn	13 08 47.8	+5.6
BKZ	Black Stump Fm	7.91	209	*e*PN	Pn	13 08 52.2	-1.4
MCHZ	McNeill Hill	8.07	207	*e*PN	Pn	13 08 56.2	+0.4
PXZ	Pawanui	8.53	204	*e*PN	Pn	13 08 59.9	-2.2
BFZ	Birch Farm	9.32	205	*e*SN	Sn	13 10 51.2	-5.4
MRZ	Mangatainoka R	9.55	207	*e*PN	Pn	13 09 13.1	-3.0
MRZ				*e*SN	Sn	13 10 55.2	-7.1
NNZ	Nelson	10.96	213	*e*SN	Sn	13 11 29.1	-7.5
THZ	Tophouse	11.60	213	*e*PN	Pn	13 09 38.9	-5.3
THZ				*e*SN	Sn	13 11 44.9	-7.8
MQZ	McQueen's Vall	13.29	208	*e*SN	Sn	13 12 19.8	-14
STKA	Stephens Creek	33.55	260	P	P	13 13 38.6	+0.9
STKA	Stephens Creek	33.55	260	P	P	13 13 38.6	+0.9
	0.9nm,0.5s,baz=71,slow=11,SNR=3.7						
CTA	Charters Tower	33.60	282	P	P	13 13 39.1	+0.8
CTA	Charters Tower	33.60	282	P	P	13 13 39.1	+0.8
	4.1nm,0.5s,baz=114,slow=12,SNR=6.9						
CTAO	Charters Tower	33.60	282	*e*P	P	13 13 40.1	+1.8
AS31	Alice Springs	42.48	269	*e*P	P	13 14 52.5	-0.7
ASAR	Alice Springs	42.48	269	P	P	13 14 53.0	-0.3
ASAR	Alice Springs	42.48	269	P	P	13 14 53.0	-0.3
	4.5nm,0.7s,baz=109,slow=7.9,SNR=67						
WRAB	Tennant Creek	43.64	275	*e*P	P	13 15 02.0	-0.6
	12nm,0.6s						
WRA	Warramunga Arr	43.64	274	P	P	13 15 02.2	-0.4
WRA	Warramunga Arr	43.64	274	P	P	13 15 02.2	-0.4
	9.9nm,0.5s,baz=113,slow=8.0,SNR=267						
VNDA	Vanda	46.16	186	*e*P	P	13 15 24.7	+2.9
VNDA	Vanda	46.16	186	P	P	13 15 24.6	+2.7
	0.4nm,0.5s,baz=33,slow=7.6,SNR=5.3						
FITZ	Fitzroy Crossi	51.82	272	P	P	13 16 05.3	-0.7
FITZ	Fitzroy Crossi	51.82	272	P	P	13 16 05.3	-0.7
	2.9nm,1.0s,baz=177,slow=3.1,SNR=9.1						
QSPA	South Pole Qui	57.82	180	*e*P	P	13 16 51.0	+2.0
	5.8nm,0.6s						
SNAA	Sanae	76.28	179	*e*P	P	13 18 51.0	+5.0
VNA3	Neumayer Olymp	76.46	176	*e*P	P	13 18 52.5	+5.6
VNA2	Neumayer--Watz	76.89	177	*e*P	P	13 18 54.9	+5.6
NVAR	Mina Array Bea	90.00	43	P	P	13 19 57.1	-0.1
NVAR	Mina Array Bea	90.00	43	P	P	13 19 57.1	-0.1
	0.8nm,0.7s,baz=221,slow=8.0,SNR=7.6						
MKAR	Makanchi Array	118.55	309	PKP	PKPdf	13 25 45.4	+0.4
MKAR	Makanchi Array	118.55	309	PKP	PKPdf	13 25 45.4	+0.4
	0.2nm,0.6s,baz=96,slow=1.1,SNR=2.9						
KURK	Kurchatov	121.94	313	PKP	PKPdf	13 25 49.2	-2.1
KURBB	Kurchatov Arra	121.97	313	PKP	PKPdf	13 25 49.2	-2.2
	0.3nm,0.4s,baz=110,slow=1.8,SNR=5.1						
BVAR	Borovoye Array	127.35	315	PKP	PKPdf	13 26 00.7	-1.0
BVAR	Borovoye Array	127.35	315	PKP	PKPdf	13 26 00.7	-1.0
	0.5nm,0.5s,baz=48,slow=2.2,SNR=3.6						
ARCES	ARCESS Array B	140.31	347	PKP	PKPdf	13 26 26.8	+1.3
ARCES	ARCESS Array B	140.31	347	PKP	PKPdf	13 26 26.8	+1.3
	1.0nm,0.5s,baz=29,slow=2.8,SNR=5.8						
JOF	Joensuu	143.95	337	*ep*	PKPab	13 26 27.2	-2.2
	0.9nm,0.5s						
KBZ	Khabaz	145.66	302	PKPbc	PKPdf	13 26 36.1	+0.5
KBZ	Khabaz	145.66	302	PKPbc	PKPdf	13 26 36.1	+0.5
	1.3nm,0.6s,baz=130,slow=2.9,SNR=4.2						
KAF	Kangasniemi	146.12	339	*ep*	PKPdf	13 26 34.1	-1.8
	2.7nm,0.5s						
FIA1	FINESS Array S	146.71	339	*e*PKPdf	PKPdf	13 26 36.2	-0.6
FIA1				*e*PKPbc	PKPbc	13 26 37.1	-1.5
FINES	FINESS Array B	146.71	339	PKPbc	PKPdf	13 26 37.0	+0.2
FINES	FINESS Array B	146.71	339	PKPbc	PKPdf	13 26 37.0	+0.2
	6.2nm,0.7s,baz=45,slow=4.9,SNR=25						
NB2	NORSAR Subarra	150.52	350	PKP	PKPbc	13 26 47.3	-1.3
	comp=Z,3.8nm,0.7s,baz=18,slow=2.6						
NOA	NORSAR Array B	150.52	350	PKPbc	PKPbc	13 26 47.5	-1.0
NOA	NORSAR Array B	150.52	350	PKPbc	PKPbc	13 26 47.5	-1.0
	comp=Z,2.5nm,0.5s,baz=16,slow=4.2,SNR=15						
NAO01	NORSAR Array S	150.76	350	*e*PKPab	PKPab	13 26 54.9	-1.3
TORD	Torodi Ar. Bea	160.94	181	PKPab	PKPab	13 27 39.3	-1.5
TORD	Torodi Ar. Bea	160.94	181	PKPab	PKPab	13 27 39.3	-1.5
	comp=Z,0.4nm,0.7s,baz=168,slow=3.2,SNR=6.6						

*ISCJB **21** 13:13:02.9±0.3, 26.79N±0.03×60.76E±0.03, h10km, mb4.0/27, Error ellipse: s-maj=4.6km s-min=3.8km az=165.6*
*TEH **21** 13:13:05.8, 26.46N×60.89E, h34km, ML3.9*
*CSEM **21** 13:13:08.8±0.5, 26.77N×60.60E, h30km, ML4.1/3, Error ellipse: s-maj=13.7km s-min=5.8km az=108.0*
*IDC **21** 13:13:08.8±0.9, 26.73N×60.72E, h53km±6km, mb3.8/24, mb1 3.9/25, mb1mx3.8/34, mbtmp3.8/25, Error ellipse: s-maj=17.2km s-min=10.6km az=14.0*
*THR **21** 13:13:12.5±0.3, 27.26N×60.20E, h15km, ML3.9*
*OMAN **21** 13:13:12.8, 26.32N×60.47E, h75km*

ISC 21 13:13:04.0±0.5, 26.79N±0.06×60.72E±0.05, h10km, n120, σ1s78/115, mb4.0/27, 3C-1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZHSF	Zahedan	2.81	1	*e*Pn	Pb	13 13 53.4	-1.1
ZHSF	Zahedan	2.81	1	*e*Pn	Pb	13 13 53.3	-1.1
BANOM	Banah	4.06	259	⇑P	Pn	13 14 07.3	+1.0
	SNR=96						
BANOM	Banah	4.06	259	P	Pn	13 14 07.3	+1.0
	SNR=96						
BANOM	Banah	4.06	259	Pn	Pn	13 14 08.0	+1.7
	SNR=96						
BNDS	Bandar-Abbas	4.10	280	*e*Pn	Pn	13 14 09.8	+2.8
BNDS				AML	AML	13 14 58.6	
	comp=N,242nm,0.8s						
BNDS	Bandar-Abbas	4.10	280	*e*Pn	Pn	13 14 09.8	+2.8
SMDO	Samad	4.44	214	P	Pn	13 14 12.0	+0.5
	SNR=13						
SMDO	Samad	4.44	214	P	Pn	13 14 12.0	+0.5
	SNR=13						
WBK	Wadi Bani Khal	4.46	201	P	Pn	13 14 11.1	-0.6
	SNR=87						
WBK	Wadi Bani Khal	4.46	201	P	Pn	13 14 11.1	-0.6
	SNR=87						
HATD	Hatta, Dubai	4.58	246	Pn	Pn	13 14 14.0	+0.7
ASHO	Ashiyiah	4.70	245	P	Pn	13 14 15.7	+0.7
	SNR=15						
ASHO	Ashiyiah	4.70	245	Pn	Pn	13 14 15.8	+0.7
	SNR=30						
KRBR	Kerman	4.72	313	*e*Pn	Pn	13 14 16.6	+1.0
KRBR				*e*Sg	Sb	13 15 18.7	-5.4
KRBR				AML	AML	13 15 21.5	
	comp=E,150nm,0.3s						
KRBR				AML	AML	13 15 21.7	
	comp=N,162nm,0.8s						
KRBR	Kerman	4.72	313	*e*Pn	Pn	13 14 16.6	+1.0
NAZ	Nazwa, Dubai	4.90	250	Pn	Pn	13 14 18.7	+0.9
JMDO	Jabal Madar	5.01	209	P	Pn	13 14 20.8	+1.6
	SNR=35						
JMDO				P	Pn	13 14 20.9	+1.6
	SNR=17						
JMDO	Jabal Madar	5.01	209	P	Pn	13 14 20.8	+1.6
	SNR=35						
FAQ	Al Faqa, Dubai	5.05	247	Pn	Pn	13 14 21.6	+1.7
ARQ	Araqi	5.13	229	P	Pn	13 14 24.4	+3.4
	SNR=11						
ARQ	Araqi	5.13	229	P	Pn	13 14 24.4	+3.4
	SNR=11						
BSYO	Bisya	5.13	219	P	Pn	13 14 24.1	+3.1
	SNR=14						
BSY	Bisya	5.15	219	P	Pn	13 14 24.1	+2.9
	SNR=14						
ASUD	Al Ashush, Dub	5.32	247	⇓P	Pn	13 14 27.0	+3.5
	SNR=7.8						
ASUD	Al Ashush, Dub	5.32	247	Pn	Pn	13 14 25.1	+1.5
ASUD	Al Ashush, Dub	5.32	247	P	Pn	13 14 27.0	+3.4
	SNR=7.8						
IKOO	Kooshah	5.81	345	*e*Pn	Pn	13 14 33.0	+2.5
IKOO				*e*		13 14 43.9	
	comp=Z,815nm,0.1s						
IKOO	Kooshah	5.81	345	*e*Pn	Pn	13 14 33.0	+2.5
IDAH	Dahanechah	5.97	353	*e*Pn	Pn	13 14 35.8	+3.0
IDAH				*e*		13 14 39.7	
	comp=Z,325nm,0.2s						
IDAH	Dahanechah	5.97	353	*e*Pn	Pn	13 14 35.8	+3.0
ITEG	Tejag	6.32	345	*e*Pn	Pn	13 14 40.6	+3.1
ITEG				*e*		13 14 44.8	
	comp=Z,515nm,0.2s						
ITEG	Tejag	6.32	345	*e*Pn	Pn	13 14 40.6	+3.1
IBAF	Bafgh	6.57	318	*e*Pn	Pn	13 14 43.9	+3.0
IBAF				*e*		13 15 00.7	
	comp=Z,334nm,0.2s						
IBAF	Bafgh	6.57	318	*e*Pn	Pn	13 14 43.9	+3.0
GHIR	Ghir-Karzin	7.03	284	*e*Pn	Pn	13 14 49.4	+2.3
GHIR	Ghir-Karzin	7.03	284	*e*Pn	Pn	13 14 49.4	+2.3
IMEH	Mehriz	7.04	312	*e*Pn	Pn	13 14 49.7	+2.3
IMEH				*e*		13 15 06.2	
	comp=Z,182nm,0.3s						
IMEH	Mehriz	7.04	312	*e*Pn	Pn	13 14 49.7	+2.3
ISRV	Sarvestan	7.20	293	*e*Pn	Pn	13 14 51.5	+1.8
ISRV				*e*		13 14 53.4	
	comp=Z,5μm,0.1s						
ISRV				*e*Sn	Sn	13 16 09.9	-1.8
ISRV	Sarvestan	7.20	293	*e*Pn	Pn	13 14 51.5	+1.8
ISRV				*e*Sn	Sn	13 16 09.9	-1.8
ICHK	Chekchek	7.73	316	*e*Pn	Pn	13 14 59.6	+2.7
ICHK				*e*		13 15 02.0	
	comp=Z,350nm,0.3s						
ICHK	Chekchek	7.73	316	*e*Pn	Pn	13 14 59.6	+2.7
SHI

	comp=Z,38nm,1.0s								
MMAI	**Mount Meron Ar**	**22.78**	**292**	P		**P**	**13 18 08.1**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=108,slow=9.3,SNR=3.0								
EIL	**Elat**	**22.87**	**283**	P		**P**	**13 18 08.1**	**+0.3**
	comp=Z,2.2nm,0.6s,baz=345,slow=17,SNR=3.7								
RAMN	**Ramite**	**23.07**	**84**	*eP*		**P**	**13 18 10.7**	**+0.5**
	comp=Z,12nm,0.6s								
AKTO	**Aktyubinsk**	**23.70**	**356**	P		**P**	**13 18 15.0**	**-0.9**
	comp=Z,4.6nm,0.5s,baz=172,slow=12,SNR=27								
ODAN	**Odare**	**23.79**	**84**	*eP*		**P**	**13 18 17.5**	**+0.3**
TAPN	**Taplejung**	**24.02**	**82**	*eP*		**P**	**13 18 19.7**	**+0.1**
	comp=Z,7.8nm,0.6s								
BRTR	**Keskin Array B**	**25.95**	**307**	P		**P**	**13 18 36.5**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=128,slow=9.9,SNR=24								
BRTR				pP		pP	13 18 51.6	+12	
	comp=Z,1.2nm,0.7s,baz=142,slow=11,SNR=3.6								
MKAR	**Makanchi Array**	**26.25**	**35**	P		**P**	**13 18 39.4**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=215,slow=9.6,SNR=2.9								
BVAR	**Borovoye Array**	**27.18**	**13**	P		**P**	**13 18 48.6**	**+1.0**
	comp=Z,1.0nm,0.4s,baz=195,slow=11,SNR=10								
KURBB	**Kurchatov Array**	**27.41**	**25**	P		**P**	**13 18 50.3**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=214,slow=8.4,SNR=3.3								
KURBB				pP		pP	13 19 02.7	+10	
	comp=Z,1.1nm,0.7s,baz=220,slow=9.0,SNR=4.8								
ZALV	**Zalesovo Beam**	**32.44**	**27**	P		**P**	**13 19 34.7**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=236,slow=6.7,SNR=3.3								
ZALV				pP		pP	13 19 47.4	+10	
	comp=Z,1.3nm,0.5s,baz=228,slow=9.1,SNR=5.1								
MLR	**Muntele Rosu**	**33.37**	**313**	⇑*iP*		**P**	**13 19 44.6**	**+2.0**
AKASG	**Malin Array Be**	**33.83**	**323**	P		**P**	**13 19 45.5**	**-0.9**
	comp=Z,7.4nm,0.5s,baz=124,slow=8.0,SNR=23								
BURAR	**Bucovina Array**	**34.67**	**316**	⇑*iP*		**P**	**13 19 52.8**	**-1.0**
CMAR	**Chiang Mai Arr**	**36.13**	**95**	P		**P**	**13 20 06.2**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=285,slow=8.2,SNR=3.4								
CMAR				PcP		**PcP**	**13 22 31.5**	**-1.0**	
	comp=Z,0.4nm,0.5s,baz=298,slow=4.2,SNR=4.1								
JOF	**Joensuu**	**40.98**	**340**	*ep*		**P**	**13 20 45.0**	**-1.7**
	comp=Z,2.0nm,0.5s								
SONM	**Songino Array**	**41.23**	**47**	P		**P**	**13 20 49.3**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=254,slow=9.1,SNR=6.0								
SONM				pP		pP	13 21 03.0	+11	
	comp=Z,0.7nm,0.7s,baz=257,slow=9.5,SNR=4.2								
FINES	**FINESS Array B**	**41.71**	**336**	P		**P**	**13 20 52.4**	**-0.4**
	comp=Z,3.9nm,0.4s,baz=132,slow=8.7,SNR=32								
KAF	**Kangasniemi**	**42.06**	**337**	*ep*		**P**	**13 20 54.4**	**-1.3**
	comp=Z,1.9nm,0.6s								
GERES	**GERESS Array B**	**42.34**	**314**	P		**P**	**13 20 57.4**	**-0.9**
	comp=Z,2.1nm,0.7s,baz=99,slow=8.2,SNR=14								
PSI	**Prapat**	**43.67**	**117**	P		**P**	**13 21 08.2**	**-1.2**
	comp=Z,5.3nm,0.7s,baz=282,slow=12,SNR=5.7								
KEV	**Kevo**	**47.23**	**345**	*ep*		**P**	**13 21 35.6**	**-1.1**
	comp=Z,0.8nm,0.3s								
ARCES	**ARCESS Array B**	**47.43**	**344**	P		**P**	**13 21 37.5**	**-0.8**
	comp=Z,1.6nm,0.4s,baz=143,slow=7.7,SNR=24								
ARCES				pP		pP	13 21 51.6	+10	
	comp=Z,5.2nm,1.0s,baz=139,slow=9.6,SNR=1.7								
NB2	**NORSAR Subarra**	**47.61**	**330**	P		**P**	**13 21 38.5**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=109,slow=8.6								
NOA	**NORSAR Array B**	**47.61**	**330**	P		**P**	**13 21 38.5**	**-1.5**
	comp=Z,1.8nm,0.8s,baz=113,slow=7.9,SNR=6.5								
ESDC	**Sonseca Array**	**54.55**	**301**	P		**P**	**13 22 31.9**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=58,slow=8.7,SNR=5.0								
TORD	**Torodi Ar. Bea**	**56.67**	**268**	P		**P**	**13 22 46.6**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=54,slow=8.0,SNR=7.6								
KSRS	**Korea Array**	**56.83**	**61**	P		**P**	**13 22 48.0**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=273,slow=6.9,SNR=7.0								
WRA	**Warramunga Arr**	**85.11**	**115**	P		**P**	**13 25 39.0**	**-1.6**
	comp=Z,1.6nm,0.6s,baz=313,slow=4.2,SNR=32								
ILAR	**Eielson Array**	**86.24**	**11**	pP		pP	13 25 58.9	+10	
	comp=Z,0.4nm,0.7s,baz=333,slow=4.2,SNR=3.9								
ASAR	**Alice Springs**	**86.66**	**118**	P		**P**	**13 25 47.0**	**-1.4**
	comp=Z,1.0nm,0.5s,baz=303,slow=5.0,SNR=58								
YKA	**Yellowknife Ar**	**90.95**	**358**	P		**P**	**13 26 07.6**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=6.7,slow=4.2,SNR=2.6								
YKA				pP		pP	13 26 22.0	+11	
	comp=Z,0.1nm,0.5s,baz=1.3,slow=4.2,SNR=3.5								

*NSSC **21** 13:18:24.4±2.8,31°.56N×35°.44E,h0km±24km,MD2.0, ML2.6*
*CSEM **21** 13:18:29.3±0.1,31°.48N×35°.52E,h20km,ML3.5,Error ellipse: s-maj=5.7km s-min=2.6km az=108.0*
*HLW **21** 13:18:31.5,31°.42N×35°.43E,h29km±16km,Md3.3,Ml3.1*
ISC 21 13:18:28.5±1.8,**31°.50N**±0°.03×**35°.54E**±0°.05,**h20**km±7km, **n45**,σ1§**21**/54,**Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZFRI	**Zfri**	**0.99**	**198**	Pg		**Pg**	**13 18 47.2**	**-0.6**
ZFRI				Sg		**Sb**	**13 19 00.5**	**+0.9**
KZIT	**Kziot**	**1.14**	**239**	Pg		**Pb**	**13 18 49.8**	**+0.2**
KZIT				Sg		**Sn**	**13 19 05.8**	**+1.3**
TCHB	**Talchebab**	**1.22**	**17**	*eP*		Pn	13 18 47.1	-3.4
TCHB				*eS*		**Sb**	**13 19 03.9**	**-2.6**
TCHB				AML		AML	13 19 05.1	
	comp=E,876nm,0.3s							
TCHB				AML		AML	13 19 09.7	
	comp=N,612nm,0.4s							
TCHB				AML		AML	13 19 10.5	
	comp=Z,260nm,0.5s							
TCHB	**Talchebab**	**1.22**	**17**	*eP*		Pn	13 18 47.1	-3.4
	SNR=57							
TCHB				*eS*		**Sb**	**13 19 03.8**	**-2.6**
	comp=Z,260nm,0.5s,SNR=49							
PRNI	**Paran**	**1.23**	**202**	Pg		**Pn**	**13 18 51.5**	**+0.9**
PRNI				Sg		**Sn**	**13 19 08.3**	**+1.6**
BLGI	**Bet Lehem HaGe**	**1.27**	**347**	Pg		**Pn**	**13 18 52.0**	**+0.9**
BLGI				Sg		**Sb**	**13 19 09.9**	**+2.3**
MMA0	**Mount Meron ar**	**1.52**	**356**	Pn		**Pn**	**13 18 55.9**	**+1.3**
MMA0				Sn		**Sn**	**13 19 16.8**	**+2.9**
SALA	**Sala**	**1.58**	**40**	*eP*		Pn	13 18 51.6	-3.9
SALA				*eS*		**Sn**	**13 19 14.5**	**-1.0**
SALA				AML		AML	13 19 22.4	
	comp=E,16nm,0.4s							
SALA				AML		AML	13 19 25.2	
	comp=N,98nm,0.3s							
SALA	**Sala**	**1.58**	**40**	*eP*		Pn	13 18 51.6	-3.9
	SNR=57							
SALA				*eS*		**Sn**	**13 19 14.5**	**-1.0**
	comp=N,98nm,0.3s,SNR=49							
HNTI	**Hanita**	**1.61**	**349**	Pn		**Pn**	**13 18 57.7**	**+1.9**
MBRI	**Mt Berech**	**1.78**	**198**	Pn		**Pn**	**13 18 58.8**	**+0.6**
MBRI				Sn		**Sn**	**13 19 21.7**	**+1.3**
EIL	**Elat**	**1.89**	**196**	Pn		**Pn**	**13 19 00.8**	**+1.1**
BRBR	**Barbar**	**1.94**	**10**	*eP*		Pn	13 18 58.9	-1.6
BRBR				*eS*		**Sn**	**13 19 22.8**	**-1.7**
BRBR				AML		AML	13 19 33.8	
	comp=N,90nm,0.3s							
BRBR				AML		AML	13 19 34.5	
	comp=E,88nm,0.4s							
BRBR	**Barbar**	**1.94**	**10**	*eP*		Pn	13 18 58.9	-1.6
	SNR=45							
BRBR				*eS*		**Sn**	**13 19 22.8**	**-1.7**
	comp=E,88nm,0.4s,SNR=40							
TOTH	**TOTAH**	**2.00**	**22**	*eP*		Pn	13 18 58.7	-2.6
TOTH				*eS*		**Sn**	**13 19 24.9**	**-0.9**
TOTH				AML		AML	13 19 36.7	
	comp=E,80nm,0.5s							
TOTH				AML		AML	13 19 37.0	
	comp=N,70nm,0.6s							
TOTH	**TOTAH**	**2.00**	**22**	*eP*		Pn	13 18 58.7	-2.6
	SNR=45							
TOTH				*eS*		**Sn**	**13 19 24.9**	**-0.9**
	comp=N,70nm,0.6s,SNR=40							
RCY	**Rachaya**	**2.01**	**7**	*eP*		**Pn**	**13 19 03.1**	**+1.7**
HNKL	**Nakhl**	**2.06**	**221**	P		**Pn**	**13 19 02.5**	**+0.5**
	baz=221							
HNKL				AMP			13 19 00.0	
	comp=E,150μm,0.2s,logA/T=5.8,baz=221							
HNKL	**Nakhl**	**2.06**	**221**	P		**Pn**	**13 19 02.5**	**+0.5**
HNKL				S		**Sn**	**13 19 25.3**	**-1.9**
ZALF	**Zalf**	**2.08**	**46**	*eP*		**Pn**	**13 19 03.1**	**+0.8**
ZALF				*eS*		**Sn**	**13 19 28.5**	**+0.8**
ZALF				AML		AML	13 19 44.4	
	comp=E,55nm,0.5s							
ZALF				AML		AML	13 19 50.7	
	comp=N,72nm,0.5s							
ZALF	**Zalf**	**2.08**	**46**	*eP*		**Pn**	**13 19 03.1**	**+0.8**
	SNR=45							
ZALF				*eS*		**Sn**	**13 19 28.5**	**+0.8**
	comp=N,72nm,0.5s,SNR=40							
HBST	**Basata**	**2.38**	**197**	P		**Pn**	**13 19 06.9**	**+0.5**
	baz=196							
HBST				AMP			13 19 00.0	
	comp=E,230μm,0.4s,logA/T=5.8,baz=196							
HBST	**Basata**	**2.38**	**197**	P		**Pn**	**13 19 06.9**	**+0.5**

HWQ	**Hawqa**	**2.79**	**7**	*eP*		Pn	13 19 15.7	+3.5
HWQ	**Hawqa**	**2.79**	**7**	*eP*		Pn	13 19 15.7	+3.5
SUZ		**2.86**	**235**	P		**Pn**	**13 19 13.5**	**+0.5**
	baz=236							
SUZ		**2.86**	**235**	P		**Pn**	**13 19 13.5**	**+0.5**
HDHB	**Dhahab**	**2.88**	**196**	P		**Pn**	**13 19 13.7**	**+0.4**
	baz=195							
HDHB	**Dhahab**	**2.88**	**196**	P		**Pn**	**13 19 13.7**	**+0.4**
ZNM		**3.12**	**228**	P		**Pn**	**13 19 17.4**	**+0.8**
	baz=228							
ZNM		**3.12**	**228**	P		**Pn**	**13 19 17.4**	**+0.8**
HKAT	**Jabal Katrina**	**3.25**	**205**	P		**Pn**	**13 19 18.7**	**+0.1**
	baz=204							
HKAT	**Jabal Katrina**	**3.25**	**205**	P		**Pn**	**13 19 18.7**	**+0.1**
HHAG	**Hagoal**	**3.34**	**243**	P		**Pn**	**13 19 20.0**	**+0.4**
	baz=244							
HHAG				AMP			13 20 00.0	
	comp=N,80μm,0.4s,logA/T=5.3,baz=244							
HHAG	**Hagoal**	**3.34**	**243**	P		**Pn**	**13 19 20.0**	**+0.4**
ZAF		**3.40**	**230**	P		**Pn**	**13 19 20.9**	**+0.5**
	baz=231							
ZAF		**3.40**	**230**	P		**Pn**	**13 19 20.9**	**+0.5**
KOT	**Kottamia**	**3.56**	**245**	P		**Pn**	**13 19 22.5**	**-0.1**
	baz=246							
KOT				AMP			13 20 00.0	
	comp=N,30μm,0.2s,logA/T=5.1,baz=246							
KOT				S		**Sn**	**13 20 02.1**	**-2.0**
	baz=246							
KOT	**Kottamia**	**3.56**	**245**	P		**Pn**	**13 19 22.5**	**-0.1**
KOT				S		**Sn**	**13 20 02.1**	**-2.0**
GLL	**Jalalah**	**3.82**	**241**	P		**Pn**	**13 19 26.2**	**0.0**
	baz=242							
GLL	**Jalalah**	**3.82**	**241**	P		**Pn**	**13 19 26.2**	**0.0**
HSAF	**As Saff**	**3.91**	**242**	P		**Pn**	**13 19 27.9**	**+0.4**
	baz=243							
HSAF	**As Saff**	**3.91**	**242**	P		**Pn**	**13 19 27.9**	**+0.4**
GRB	**Gharib**	**4.01**	**217**	P		**Pn**	**13 19 28.7**	**-0.1**
	baz=217							
GRB	**Gharib**	**4.01**	**217**	P		**Pn**	**13 19 28.7**	**-0.1**

*IDC **21** 14:00:29.1±1.1,39°.35N×73°.67E,h0km,mb3.4/3, mb1 3.5/8,mb1mx3.3/31,mbtmp3.4/8,ML3.1/5,Error ellipse: s-maj=21.8km s-min=14.6km az=102.0*
*NNC **21** 14:00:34.0±2.2,39°.69N×73°.45E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=19.3km s-min=10.0km az=10.0*
ISC 21 14:00:33.8±1.2,**39°.54N**±0°.09×**73°.36E**±0°.09,**h29**km,**n13**, σ1§**82**/13,**mb3.5**/3,**8C-2D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AAK	**Ala-Archa**	**3.20**	**15**	Pn		Pb	14 01 25.3	-4.7
	3.7nm,0.3s,baz=159,slow=8.1,SNR=19							
AAK				Sn		**Sb**	**14 02 07.4**	**-1.2**
	3.9nm,0.3s,baz=334,slow=15,SNR=5.8							
TKM2	**Tokmak 2**	**3.77**	**26**	⇑Pn		**Pn**	**14 01 31.9**	**+1.8**
	4.4nm,0.8s							
TKM2				⇑Pg		**Pb**	**14 01 39.7**	**0.0**
	5.1nm,0.6s							
TKM2				⇑Lg		Lg	14 02 27.9	
	48nm,1.3s							
KK31	**Karatay Array**	**4.15**	**330**	⇑Pn		Pb	14 01 40.3	-5.9
	1.0nm,0.3s,baz=148,slow=16,SNR=20							
KK31				⇓Pg		Pn	14 01 48.8	+14
	4.0nm,0.5s,baz=151,slow=18,SNR=12							
KK31				⇑Sn		**Sb**	**14 02 32.2**	**-3.7**
	17nm,0.7s,baz=139,slow=24,SNR=2.9							
KK31				⇑Lg		Lg	14 02 45.5	
	18nm,0.6s,baz=83,slow=28,SNR=6.8							
MK31	**Makanchi Array**	**9.74**	**39**	⇓Lg		Lg	14 05 35.4	
	2.0nm,0.9s							
MKAR	**Makanchi Array**	**9.74**	**39**	Pn		**Pn**	**14 02 53.2**	**+1.3**
	0.0nm,0.3s,baz=224,slow=8.0,SNR=3.5							
MKAR				Lg		Lg	14 05 36.4	
	0.0nm,0.3s,baz=234,slow=27,SNR=3.8							
KURBB	**Kurchatov Arra**	**11.66**	**16**	Lg		Lg	14 06 36.9	
	0.0nm,0.3s,baz=203,slow=32,SNR=8.5							
AB31	**Akbulak array**	**13.63**	**320**	⇑Pn		**Pn**	**14 03 45.6**	**+0.6**
	0.4nm,0.6s,baz=126,slow=14,SNR=7.8							
AB31				⇑Sn		**Sn**	**14 06 16.8**	**+1.5**
	0.4nm,0.5s,baz=126,slow=26,SNR=5.1							
BVAR	**Borovoye Array**	**13.64**	**352**	Pn		**Pn**	**14 03 45.7**	**+0.5**
	0.1nm,0.3s,baz=163,slow=15,SNR=5.3							
AKTO	**Aktyubinsk**	**15.34**	**320**	Pn		**Pn**	**14 04 08.3**	**+0.2**
	0.1nm,0.3s,baz=144,slow=14,SNR=2.4							
ZALV	**Zalesovo Beam**	**16.37**	**25**	Pn		**Pn**	**14 04 20.7**	**-0.6**
	0.3nm,0.3s,baz=224,slow=6.0,SNR=3.2							
TORD	**Torodi Ar. Bea**	**67.65**	**269**	P		**P**	**14 11 29.8**	**+1.5**
	0.2nm,0.6s,baz=54,slow=5.1,SNR=4.1							
WRA	**Warramunga Arr**	**82.07**	**124**	P		**P**	**14 12 49.6**	**-1.9**
	0.3nm,0.5s,baz=326,slow=5.2,SNR=7.0							
ASAR	**Alice Springs**	**84.52**	**127**	P		**P**	**14 13 02.1**	**-2.0**
	0.2nm,0.7s,baz=310,slow=5.0,SNR=6.0							

*CSEM **21** 14:03:58.9±0.2,48°.54N×15°.11E,h1km,ML2.7/8,Error ellipse: s-maj=4.8km s-min=3.5km az=92.0,Mining explosion.*
*VIE **21** 14:03:59.1±0.1,48°.51N×15°.07E,h0km±1km,mb1.8/5, ML2.2/5,Error ellipse: s-maj=0.8km s-min=0.7km az=162.0 11 km SE of Gross Gerungs Mining explosion.*
*PRU **21** 14:04:00.3,48°.54N×15°.09E,h0km*
ISC 21 14:03:59.5±0.8,**48°.53N**±0°.02×**15°.07E**±0°.03,**h0**km,**n18**, σ0§**25**/33,**6C,Austria**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CONA	**Conrad Observa**	**0.80**	**138**	⇑*i*Pg		**Pg**	**14 04 14.7**	**0.0**
	20nm,0.1s							
CONA				⇑*i*Sg		**Sg**	**14 04 25.0**	**0.0**
	8.9nm,0.2s							
CONA	**Conrad Observa**	**0.80**	**138**	Pg		**Pg**	**14 04 14.7**	**0.0**
	20nm,0.1s							
CONA				Sg		**Sg**	**14 04 25.0**	**0.0**
	8.9nm,0.2s							
MOA	**Molln**	**0.86**	**219**	⇑*i*Pg		**Pg**	**14 04 15.8**	**-0.1**
	2.6nm,0.1s							
MOA				⇑*i*Sg		**Sg**	**14 04 27.2**	**+0.1**
	5.8nm,0.2s							
MOA	**Molln**	**0.86**	**219**	Pg		**Pg**	**14 04 15.8**	**-0.1**
	2.6nm,0.1s							
MOA				Sg		**Sg**	**14 04 27.2**	**+0.1**
	5.8nm,0.2s							
KHC	**Kasperske Hory**	**1.16**	**302**	*e*PG		**Pg**	**14 04 21.5**	**-0.1**
KHC				*e*SG		**Sb**	**14 04 37.8**	**-0.1**
	comp=Z,15nm,0.2s							
KHC	**Kasperske Hory**	**1.16**	**302**	Pg		**Pg**	**14 04 21.5**	**-0.1**
KHC				Sg		**Sb**	**14 04 37.8**	**-0.1**
	15nm,0.2s							
VRAC	**Vranov**	**1.27**	**51**	*e*Pg		**Pg**	**14 04 23.5**	**-0.3**
VRAC				*e*Sg		**Sb**	**14 04 41.1**	**-0.1**
ARSA	**Arzberg**	**1.31**	**166**	⇑*i*Pg		**Pg**	**14 04 24.1**	**-0.4**
	4.4nm,0.1s							
ARSA				⇑*i*Sg		**Sb**	**14 04 41.9**	**-0.3**
	7.3nm,0.3s							
ARSA	**Arzberg**	**1.31**	**166**	Pg		**Pg**	**14 04 24.1**	**-0.4**
	4.4nm,0.1s							
ARSA				Sg		**Sb**	**14 04 41.9**	**-0.3**
	7.3nm,0.3s							
PRU	**Pruhonice**	**1.51**	**347**	*e*PG		**Pb**	**14 04 27.8**	**-0.4**
PRU				*e*SG		**Sn**	**14 04 48.2**	**+0.2**
	comp=Z,8.6nm,0.2s							
PRU	**Pruhonice**	**1.51**	**347**	Pg		**Pb**	**14 04 27.8**	**-0.4**
PRU				Sg		**Sn**	**14 04 48.2**	**+0.2**
	8.6nm,0.2s							
DPC	**Dobruska-Polom**	**2.00**	**24**	*e*PG		**Pb**	**14 04 36.6**	**-0.1**
DPC				*e*SG		**Sg**	**14 05 03.8**	**+0.1**
	comp=Z,2.8nm,0.2s							
DPC	**Dobruska-Polom**	**2.00**	**24**	Pg		**Pb**	**14 04 36.6**	**-0.1**
DPC				Sg		**Sg**	**14 05 03.8**	**+0.1**
	2.8nm,0.2s							
MORC	**Moravsky Berou**	**2.05**	**51**	*e*Pg		**Pn**	**14 04 35.8**	**+0.6**
UPC	**Upice**	**2.08**	**17**	*e*PG		**Pb**	**14 04 38.1**	**+0.1**
UPC				*e*SG		**Sg**	**14 05 05.7**	**-0.4**
	comp=Z,3.8nm,0.2s							
UPC	**Upice**	**2.08**	**17**	Pg		**Pb**	**14 04 38.1**	**+0.1**
UPC				Sg		**Sg**	**14 05 05.7**	**-0.4**
	3.8nm,0.2s							
NKC	**Novy Kostel**	**2.42**	**316**	*e*SG		**Sg**	**14 05 17.1**	**0.0**
	comp=Z,5.7nm,0.3s							
NKC	**Novy Kostel**	**2.42**	**316**	Sg		**Sg**	**14 05 17.1**	**0.0**
	5.7nm,0.3s							

IDC 21 14:10:31.5±1.6,**4°.05N×126°.52E,h0km,mb3.5/5, mb1 3.7/5,mb1mx3.4/24,mbtmp3.5/5,Error ellipse: s-maj=94.9km s-min=22.3km az=67.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.03**	**182**	P		P	14 15 28.3	+0.6
	0.9nm,0.9s,baz=13,slow=14,SNR=3.0							
WRA	**Warramunga Arr**	**25.05**	**162**	P		P	14 15 56.8	-0.9
	0.9nm,0.5s,baz=342,slow=11,SNR=18							
ASAR	**Alice Springs**	**28.47**	**166**	P		P	14 16 27.3	-1.2
	0.2nm,0.7s,baz=342,slow=7.7,SNR=5.7							
STKA	**Stephens Creek**	**38.50**	**159**	P		P	14 17 56.9	+1.3
	1.4nm,0.8s,baz=359,slow=9.5,SNR=2.8							
MKAR	**Makanchi Array**	**57.17**	**325**	P		P	14 20 20.3	0.0
	0.5nm,0.5s,baz=121,slow=8.0,SNR=10							

*IDC **21** 14:15:39.8±0.9,6°.43S×130°.56E,h0km,mb4.2/8, mb1 4.4/11,mb1mx4.2/20,mbtmp4.3/11,ML4.5/3,Error ellipse: s-maj=45.9km s-min=15.3km az=74.0*
*ISCJB **21** 14:15:48.6±0.3,6°.51S±0°.04×130°.54E±0°.06,h90km, mb4.0/8,Error ellipse: s-maj=9.3km s-min=4.9km az=166.9*
*AUST **21** 14:15:49.5,6°.48S×130°.54E,h100km*
ISC 21 14:15:50.0±0.5,**6°.47S**±0°.05×**130°.70E**±0°.08,**h90**km,**n39**, σ1§**59**/37,**mb4.0/8,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BNDI	**Bandanaira**	**2.09**	**338**	P		**Pn**	**14 16 24.5**	**+1.1**
	baz=2.1,SNR=13							
TLE	**Tual**	**2.19**	**68**	P		Pn	14 16 29.8	+5.0
	baz=2.3,SNR=23							
FAKI	**Fak Fak**	**3.85**	**24**	P		**Pn**	**14 16 48.0**	**+0.9**
	baz=3.9,SNR=20							
FAKI				S		**Sn**	**14 17 30.5**	**-0.8**
	baz=3.9,SNR=15							
SWI	**Sorong**	**5.59**	**6**	P		**Pn**	**14 17 11.9**	**+1.2**
	baz=5.7,SNR=13							
SWI				S		**Sn**	**14 18 09.7**	**-4.1**
	baz=5.7,SNR=11							
MTN	**Manton Dam**	**6.35**	**176**	P		**Pn**	**14 17 20.7**	**-0.4**
	baz=6.4,SNR=151							
MTN				S		**Sn**	**14 18 31.2**	**-1.0**
	baz=6.4,SNR=9.5							
KDU	**Kakadu**	**6.42**	**164**	P		**Pn**	**14 17 22.0**	**-0.1**
	baz=6.5,SNR=155							
KAPI	**Kappang**	**10.98**	**277**	Pn		**Pn**	**14 18 22.1**	**-2.2**
	0.3nm,0.3s,baz=30,slow=20,SNR=1.7							
PCI	**Palu**	**12.16**	**297**	S		Sn	14 20 33.6	-20
	baz=12,SNR=9.7							
FITZ	**Fitzroy Crossi**	**12.57**	**203**	Pn		Pn	14 18 40.2	-5.4
	5.5nm,0.3s,baz=36,slow=11,SNR=70							
FITZ				Sn		Sn	14 20 51.7	-12
	2.9nm,0.3s,baz=174,slow=20,SNR=7.0							
FITZ	**Fitzroy Crossi**	**12.57**	**203**	P		Pn	14 18 40.2	-5.4
	baz=13,SNR=126							
WRA	**Warramunga Arr**	**13.86**	**166**	Pn		Pn	14 18 58.9	-3.7
	1.5nm,0.3s,baz=347,slow=13,SNR=56							
WRA				Sn		Sn	14 21 24.6	-10
	3.7nm,0.3s,baz=348,slow=21,SNR=12							
COEN	**Coen**	**14.36**	**122**	P		**Pn**	**14 19 09.9**	**+0.9**
	baz=14,SNR=30							
COEN				S		**Sn**	**14 21 41.8**	**-5.4**
	baz=14,SNR=4.8							
QIS	**Mount Isa**	**16.46**	**149**	P		**P**	**14 19 36.0**	**-0.8**
	baz=17,SNR=10.0							
QIS				S		Sn	14 22 25.8	-12
	baz=17,SNR=5.3							
PMG	**Port Moresby**	**16.57**	**101**	Pn		**P**	**14 19 40.3**	**+2.3**
	1.2nm,0.3s,baz=279,slow=7.0,SNR=9.4							
ASAR	**Alice Springs**	**17.38**	**170**	P		**Pn**	**14 19 45.8**	**-1.1**
	1.4nm,0.3s,baz=339,slow=9.0,SNR=150							
ASAR				S		Sn	14 22 51.1	-9.1
	1.1nm,0.3s,baz=357,slow=28,SNR=12							
MEEK	**Meekatharra**	**23.13**	**208**	P		**P**	**14 20 47.9**	**-0.7**
	baz=23,SNR=6.7							
FORT	**Forrest**	**24.31**	**186**	P		**P**	**14 21 00.3**	**+1.1**
	baz=24,SNR=12							
MORW	**Morawa**	**26

*IDC **21** 14:23:38.0±3.8, 36°.38N×70°.50E, h184km±33km, mb3.3/8, mb1 3.4/12, mb1mx3.2/31, mbtmp3.3/12, Error ellipse: s-maj=27.7km s-min=20.0km az=6.0*
*ISCJB **21** 14:23:39.4±0.4, 36°.53N±0°.03×70°.41E±0°.07, h204km, mb3.3/6, Error ellipse: s-maj=7.7km s-min=3.9km az=165.2*
*NNC **21** 14:23:43.5±5.5, 36°.85N×70°.38E, h187km±46km, mb2.9, mpv4.4, Error ellipse: s-maj=46.8km s-min=27.6km az=27.0*

ISC 21 14:23:40.3±0.6, 36°.53N±0°.05×70°.52E±0°.08, h204km, n42, σ1°56/48, mb3.4/6, 10C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.93	157	⇓P	Pn	Pn	14 24 30.0	+0.4
CEP				S	S	S	14 25 07.0	-0.4
THW	Thamme Wali	3.86	165	⇓P	Pn	Pn	14 24 40.6	0.0
THW				S	S	S	14 25 25.0	-2.4
SARP	Sargodha	4.93	158	P	Pn	Pn	14 24 53.4	-0.6
AML	Almayashu SNR=184	6.11	23	P	Pn	Pn	14 25 09.7	+0.3
UCH	Uchtor SNR=7.9	6.47	27	P	Pn	Pn	14 25 15.0	+0.9
KK31	Karatay Array 3.6nm,0.2s,baz=197,slow=14,SNR=106	6.56	360	⇑P	Pn	Pn	14 25 14.5	-0.3
KK31	18nm,0.7s,baz=190,slow=17,SNR=3.9			⇑S	S	S	14 26 25.1	-4.6
EKS2	Erkin-Say SNR=32	6.62	21	P	Pn	Pn	14 25 16.3	+0.7
KZA	Kyzart SNR=12	6.64	32	P	Pn	Pn	14 25 16.1	-0.1
AAK	Ala-Archa 6.4nm,0.3s,baz=183,slow=6.4,SNR=74	6.82	26	P	Pn	Pn	14 25 19.0	+0.7
AAK	2.5nm,0.3s,baz=360,slow=19,SNR=4.1			S	S	S	14 26 33.9	-2.0
KBK	Karagaybulak SNR=15	7.01	28	P	Pn	Pn	14 25 21.2	+0.5
CHMS	Chumysh SNR=5.6	7.23	25	P	Pn	Pn	14 25 24.4	+0.9
SDNR	Sundarnagar	7.34	131	*e*P	Pn	Pn	14 25 27.5	+2.5
SDNR				*e*S	S	S	14 26 43.5	-4.6
USP	Ospenovka SNR=7.9	7.39	23	P	Pn	Pn	14 25 26.3	+0.8
TKM2	Tokmak 2 24nm,0.5s	7.48	30	⇑P	Pn	Pn	14 25 27.6	+0.6
TKM2	9.1nm,0.7s			⇓S	S	S	14 26 50.7	-1.0
TKM2	Tokmak 2 SNR=40	7.48	30	P	Pn	Pn	14 25 27.5	+0.6
MK31	Makanchi Array 0.7nm,0.4s,baz=113,slow=8.8,SNR=41	13.49	37	⇑P	Pn	Pn	14 26 41.0	-2.7
KOLN	Koldanda	14.10	125	*e*P	Pn	Pn	14 26 50.3	-1.2
AB31	Akbulak array 1.9nm,0.5s,baz=147,slow=13,SNR=63	14.87	332	⇓P	Pn	Pn	14 26 59.4	-1.1
AB31	0.9nm,0.6s,baz=275,slow=32,SNR=4.7			⇑S	S	S	14 29 39.1	-6.2
KUR17	Kurchatov Arra 0.2nm,1.4s	15.21	20	⇓P	Pn	Pn	14 27 03.8	-0.9
DMN	Daman 5.9nm,0.3s	15.22	122	*e*P	P	P	14 27 07.0	+1.4
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=207,slow=10,SNR=12	15.22	20	P	Pn	Pn	14 27 04.5	-0.2
KKN	Kakani	15.22	121	*e*P	P	P	14 27 08.3	+2.6
PKIN	Phulchoki 8.8nm,0.3s	15.44	121	*e*P	P	P	14 27 09.0	+0.9
PKI	Pulchoki 11nm,0.6s	15.45	121	*e*P	P	P	14 27 10.1	+1.8
VOSK	Vostochnaya 2.7nm,0.9s	16.19	1	⇑P	P	P	14 27 15.5	-0.4
ZRNK	Zerenda 2.6nm,0.8s	16.45	357	⇑P	Pn	Pn	14 27 20.4	+0.8
BVA0	Borovoye Array 0.6nm,1.1s,baz=162,slow=10.0,SNR=9.1	16.49	360	P	Pn	Pn	14 27 23.4	+3.3
BVAR	Borovoye Array 0.6nm,0.3s,baz=187,slow=12,SNR=9.8	16.49	360	P	Pn	Pn	14 27 20.0	-0.1
BRVK	Borovoye 4.8nm,0.8s	16.53	359	⇑P	Pn	Pn	14 27 22.1	+1.6
AKTO	Aktyubinsk 0.9nm,0.9s	16.56	331	⇑P	Pn	Pn	14 27 20.8	-0.2
AKTO	0.4nm,0.9s			⇑S	S	S	14 30 22.9	+0.2
AKTO	Aktyubinsk 0.6nm,0.3s,baz=146,slow=11,SNR=18	16.56	331	P	P	P	14 27 20.2	+0.3
RAMN	Ramite	16.66	120	*e*P	Pn	Pn	14 27 22.2	-0.5
TAPN	Taplejung	17.20	117	*e*P	Pn	Pn	14 27 31.4	+2.3
ZALV	Zalesovo Beam 1.2nm,0.3s,baz=220,slow=11,SNR=14	20.05	25	P	P	P	14 27 59.1	+1.5
GNI	Garni 5.2nm,0.4s,baz=176,slow=20,SNR=3.3	20.52	288	P	P	P	14 28 03.1	+0.1
FINES	FINESS Array B 1.1nm,0.6s,baz=114,slow=8.0,SNR=6.6	37.24	326	P	P	P	14 30 33.1	+1.2
ARCES	ARCESS Array B 3.9nm,0.9s,baz=111,slow=6.6,SNR=5.1	40.97	338	P	P	P	14 31 03.8	+1.2
NB2	NORSAR Subarra comp=Z,0.5nm,0.5s,baz=95,slow=7.9	44.12	323	P	P	P	14 31 28.6	+0.4
NOA	NORSAR Array B comp=Z,0.8nm,0.7s,baz=96,slow=8.0,SNR=4.6	44.12	323	P	P	P	14 31 27.7	-0.5
TORD	Torodi Ar. Bea comp=Z,0.4nm,0.5s,baz=52,slow=6.3,SNR=7.9	65.33	268	P	P	P	14 33 59.5	-1.4
YKA	Yellowknife Ar comp=Z,0.1nm,0.3s,baz=358,slow=5.8,SNR=5.1	81.23	2	P	P	P	14 35 32.9	-0.1
ASAR	Alice Springs comp=Z,0.4nm,0.6s,baz=311,slow=4.6,SNR=9.4	84.59	125	P	P	P	14 35 50.6	-0.3

*IDC **21** 14:28:52.6±2.2, 53°.00N×166°.51W, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.4/30, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=57.2km s-min=26.2km az=171.0*
*ISCJB **21** 14:28:54.6±1.2, 53°.04N±0°.07×166°.74W±0°.08, h27km±8km, mb3.4/4, Error ellipse: s-maj=13.1km s-min=5.8km az=154.0*
*NEIC **21** 14:28:55.4, 53°.07N×166°.81W, h25km, ML3.4(AEIC), After AEIC.*

ISC 21 14:28:55.1±2.2, 53°.09N±0°.10×166°.77W±0°.06, h15km±13km, n29, σ0°98/34, mb3.3/4, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MGOD	Makushin Gods	0.71	355	P	Pg	Pg	14 29 09.1	+0.1
MREP	Makushin Rep't	0.72	1	P	Pb	Pg	14 29 09.9	+0.5
MSOM	Makushin Julie	0.74	352	P	Pg	Pg	14 29 09.7	+0.2
OKFG	Magazine Ridge	0.76	296	P	Pg	Pg	14 29 09.5	-0.4
OKFG				S	Sg	Sg	14 29 20.2	+0.4
UNV	Unalaska Valle	0.78	12	P	Pg	Pg	14 29 09.5	-0.7
UNV				S	Sg	Sg	14 29 20.0	-0.5
MSW	Makushin Switc	0.83	360	P	Pb	Pb	14 29 10.9	-0.3
MCIR	Makushin Cirqu	0.87	355	P	Pg	Pg	14 29 12.1	+0.1
OKSO	Okmok South	0.88	288	P	Pb	Pb	14 29 10.9	-1.1
MTBL	Makushin Table	0.89	4	P	Pb	Pb	14 29 12.1	-0.1
OKCE	Okmok Cone E	0.90	293	P	Pb	Pb	14 29 11.9	-0.5
OKCE				S	Sg	Sg	14 29 25.3	+0.8
OKSP	Okmok Steeple	0.93	281	P	Pb	Pb	14 29 12.2	-0.7
ZRO	Akutan Zero	1.11	25	P	Pb	Pb	14 29 15.0	-1.1
AKRB	Akutan Reef Bi	1.12	22	P	Pn	Pn	14 29 15.5	-0.8
AKRB				S	Sb	Sb	14 29 30.7	0.0
AHB	Akutan Harbor	1.18	29	P	Pn	Pn	14 29 15.8	-1.2
AKLV	Akutan Long Va	1.18	24	P	Pn	Pn	14 29 15.8	-1.3
AKGG	Akutan Green G	1.21	22	P	Pn	Pn	14 29 16.6	-0.8
AKUT	Akutan	1.21	29	P	Pn	Pn	14 29 15.6	-1.8
AKUT				S	Sb	Sb	14 29 31.6	-1.4
NIKO	Nikolski	1.26	266	*e*Pn	Pn	Pn	14 29 16.4	-1.7
WESE	West Dahl East	1.90	42	P	Pn	Pn	14 29 27.0	0.0
DRIA	Deer Island	3.26	53	P	Pn	Pn	14 29 46.9	+1.3
DT1	Dutton Round H	3.33	51	P	Pn	Pn	14 29 47.3	+0.8
DTNA	Dutton South F	3.37	50	P	Pn	Pn	14 29 47.4	+0.3
SDPT	Sand Point	4.33	56	P	Pn	Pn	14 30 01.4	+1.1
KDAK	Kodiak Island 0.3nm,0.3s,baz=216,slow=8.7,SNR=4.9	9.33	54	Pn	Pn	Pn	14 31 08.3	-0.5
KDAK	0.1nm,0.3s,baz=310,slow=17,SNR=2.4			Sn	Sn	Sn	14 32 46.6	-6.7
TNA	Tin City 1.3nm,0.4s	12.53	358	*e*P	Pn	Pn	14 31 54.6	+2.2
PETK	Petropavlovsk- 5.0nm,1.0s,baz=89,slow=13,SNR=17	21.20	284	P	P	P	14 33 41.0	+1.2
INK	Inuvik 1.3nm,0.7s,baz=238,slow=7.1,SNR=8.0	21.88	33	P	P	P	14 33 47.0	+0.1
YKA	Yellowknife Ar 0.2nm,0.5s,baz=273,slow=7.8,SNR=4.2	28.57	50	P	P	P	14 34 49.9	-0.1
TXAR	Lajitas Array 0.1nm,0.3s,baz=297,slow=5.0,SNR=3.4	51.17	92	P	P	P	14 37 56.3	-1.3

IDC 21 14:29:48.0±8.9, 4°.47N×72°.19W, h0km, mb3.6/1,

2009 APR

mb1 4.0/1, mb1mx3.4/22, mbtmp3.6/1, Error ellipse: s-maj=594.7km s-min=46.3km az=89.0, Colombia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
YKA	Yellowknife Ar	65.78	340	P	P	P	14 40 34.8	+0.1
ASAR	Alice Springs 0.6nm,0.7s,baz=127,slow=7.4,SNR=15	148.42	230	PKPbc	PKPbc		14 49 37.7	+0.2
ASAR	0.5nm,0.6s,baz=120,slow=3.8,SNR=5.7	148.42	230	PKPbc	PKPbc		14 49 37.7	+0.2
WRA	Warramunga Arr 1.2nm,0.7s,baz=107,slow=3.0,SNR=15	149.94	237	PKPbc	PKPbc		14 49 40.2	-1.2

IDC 21 14:30:16.8±2.0, 3°.53N×126°.61E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/23, mbtmp3.4/4, 1C, Error ellipse: s-maj=186.2km s-min=24.4km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	4.36	327	*i* P	Pn	Pn	14 31 26.4	+2.1
WRA	Warramunga Arr 2.1nm,0.9s,baz=342,slow=10,SNR=10	24.53	162	P	P	P	14 35 38.4	+0.1
ASAR	Alice Springs 0.3nm,1.0s,baz=355,slow=9.4,SNR=3.5	27.95	166	P	P		14 36 08.5	-0.7
STKA	Stephens Creek 0.3nm,0.3s,baz=354,slow=9.2,SNR=2.5	37.99	159	P	P		14 37 37.1	+0.5
MKAR	Makanchi Array 0.3nm,0.5s,baz=123,slow=7.5,SNR=6.5	57.65	325	P	P		14 40 08.8	-0.2

*CSEM **21** 14:47:59.7±0.4, 51°.46N×16°.12E, h2km, ML3.0/8, Error ellipse: s-maj=6.6km s-min=5.4km az=52.0*
*WAR **21** 14:47:59.8, 51°.51N×16°.11E*
*PRU **21** 14:48:00.2, 51°.46N×16°.14E, h0km*

ISC 21 14:47:59.9±1.8, 51°.46N±0°.08×16°.12E±0°.05, h0km, n23, σ0°69/44, Poland

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.63	170	*e*Pg	Pb	Pb	14 48 13.1	-0.6
KSP				*e*Sg	Sg	Sg	14 48 21.3	+1.2
KSP	Ksiaz	0.63	170	*e*Pg	Pg	Pg	14 48 12.5	+0.6
KSP				*e*Sg	Sg	Sg	14 48 21.3	+1.2
UPC	Upice	0.96	184	*e*PG	Pb	Pb	14 48 19.0	-0.3
UPC	comp=Z,17nm,0.3s			*e*SG	Sg	Sg	14 48 30.8	+0.2
UPC	Upice	0.96	184	Pg	Pb	Pb	14 48 19.0	-0.3
UPC	17nm,0.3s			Sg	Sg	Sg	14 48 30.8	+0.2
DPC	Dobruska-Polom	1.12	173	*e*PG	Pg	Pg	14 48 21.2	-0.1
DPC	comp=Z,25nm,0.6s			*e*SG	Sg	Sg	14 48 36.0	+0.2
DPC	Dobruska-Polom	1.12	173	Pg	Pg	Pg	14 48 21.2	-0.1
DPC	25nm,0.6s			Sg	Sg	Sg	14 48 36.0	+0.2
PVCC	Panska Ves	1.36	227	*e*PG	Pn	Pn	14 48 26.0	0.0
PVCC	comp=Z,69nm,0.2s			*e*SG	Sb	Sb	14 48 44.4	+0.4
PVCC	Panska Ves	1.36	227	Pg	Pn	Pn	14 48 26.0	0.0
PVCC	69nm,0.2s			Sg	Sb	Sb	14 48 44.4	+0.4
BRG	Berggiesshubel	1.49	248	PG	Pn	Pn	14 48 27.8	-0.1
BRG	21nm,0.4s			SG	Sg	Sg	14 48 47.8	0.0
PRU	Pruhonice	1.79	215	*e*PG	Pb	Pb	14 48 33.6	+0.2
PRU	comp=Z,11nm,0.4s			*e*SG	Sg	Sg	14 48 57.1	-0.1
PRU	Pruhonice	1.79	215	Pg	Pb	Pb	14 48 33.6	+0.2
PRU	11nm,0.4s			Sg	Sg	Sg	14 48 57.1	-0.1
MORC	Moravsky Berou	1.92	151	*e*Pn	Pn	Pn	14 48 33.6	-0.1
MORC				*e*Sg	Sb	Sb	14 49 00.0	-0.1
CLL	Collm	1.96	267	*e*Pg	Pb	Pb	14 48 36.0	-0.4
CLL				*i*			14 48 40.0	
CLL	comp=Z,9.0nm,0.5s			*e*Sg	Sb	Sb	14 49 02.0	+0.7
OKC	Ostrava-Krasne comp=Z,8.8nm,0.4s	2.08	141	*e*SG	Sb	Sb	14 49 05.4	+0.7
OKC	Ostrava-Krasne comp=Z,8.8nm,0.4s	2.08	141	Sg	Sb	Sb	14 49 05.4	+0.7
VRAC	Vranov	2.18	172	*e*Pn	Pn	Pn	14 48 35.7	-1.6
VRAC				*e*Sg	Sg	Sg	14 49 09.5	-0.3
TREC	Trest comp=Z,9.8nm,0.3s	2.21	191	*e*SG	Sg	Sg	14 49 10.6	-0.1
TREC	Trest comp=Z,9.8nm,0.3s	2.21	191	Sg	Sg	Sg	14 49 10.6	-0.1
NKC	Novy Kostel	2.63	244	*e*PN	Pn	Pn	14 48 43.9	+0.3
NKC				*e*PG	Pg	Pg	14 48 49.7	-0.6
NKC	comp=Z,12nm,0.3s			*e*SG	Sg	Sg	14 49 25.2	+0.8
NKC	Novy Kostel	2.63	244	Pn	Pn	Pn	14 48 43.9	+0.3
KHC	Kasperske Hory	2.85	216	*e*PN	Pn	Pn	14 48 47.8	+1.3
KHC				*e*PG	Pb	Pb	14 48 52.3	+0.8
KHC				*e*SN	Sn	Sn	14 49 20.6	-1.0
KHC	comp=Z,4.3nm,0.3s			*e*SG	Sg	Sg	14 49 29.9	-1.4
KHC	Kasperske Hory	2.85	216	Pn	Pn	Pn	14 48 47.8	+1.3
KHC	Kasperske Hory	2.85	216	Pg	Pb	Pb	14 48 52.3	+0.8
KHC				Sn	Sn	Sn	14 49 20.6	-1.0
KHC	comp=Z,4.3nm,0.3s			Sg	Sg	Sg	14 49 29.9	-1.4

IDC 21 14:53:14.6±1.1, 4°.05N×126°.66E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.8/25, mbtmp3.8/9, MS3.0/2, Ms1 3.0/2, ms1mx2.6/36, 1D, Error ellipse: s-maj=105.5km s-min=14.6km az=71.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W) comp=Z,270nm,19.0s,baz=193,slow=47	3.19	340	LR	LR	LR	14 55 44.4	
CTBH	Cotabato--PC H	3.96	323	⇓*i* P	Pb	Pb	14 54 21.3	-4.0
KAPI	Kappang comp=Z,71nm,19.1s,baz=116,slow=42	11.35	218	LR	LR	LR	15 01 10.9	
FITZ	Fitzroy Crossi 1.2nm,0.4s,baz=356,slow=5.7,SNR=11	22.04	183	P	P		14 58 11.5	+0.5
WRA	Warramunga Arr 3.7nm,0.7s,baz=342,slow=11,SNR=30	25.01	163	P	P		14 58 39.8	-0.7
ASAR	Alice Springs 0.3nm,0.6s,baz=349,slow=7.6,SNR=8.0	28.44	166	P	P		14 59 11.7	+0.3
STKA	Stephens Creek 2.5nm,0.7s,baz=337,slow=9.8,SNR=7.9	38.45	159	P	P		15 00 38.4	0.0
SONM	Songino Array 0.8nm,0.8s,baz=148,slow=8.5,SNR=3.3	46.97	341	P	P		15 01 48.5	+1.0
MKAR	Makanchi Array 0.8nm,0.5s,baz=118,slow=8.2,SNR=23	57.25	325	P	P		15 03 04.3	+0.3
ZALV	Zalesovo Beam 0.4nm,0.4s,baz=128,slow=6.2,SNR=2.8	60.27	333	P	P		15 03 24.3	-0.5
BVAR	Borovoye Array 1.0nm,0.7s,baz=116,slow=6.8,SNR=5.8	67.01	327	P	P		15 04 08.3	-1.1
VNDA	Vanda 0.9nm,0.9s,baz=337,slow=5.2,SNR=3.8	83.75	173	P	P		15 05 45.2	+0.1

IDC 21 15:08:21.1±5.3, 3°.81S×131°.56E, h0km, mb3.2/1, mb1 3.2/3, mb1mx3.2/19, mbtmp3.1/3, ML2.9/2, Error ellipse: s-maj=379.4km s-min=29.3km az=73.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.0nm,0.3s,baz=352,slow=13,SNR=3.6	16.27	171	Pn	Pn	Pn	15 12 12.2	+1.0
ASAR	Alice Springs 0.1nm,0.3s,baz=347,slow=11,SNR=3.2	19.88	174	P	P		15 12 53.7	-0.5
MKAR	Makanchi Array 0.1nm,0.5s,baz=119,slow=7.2,SNR=2.3	66.46	325	P	P		15 19 12.5	0.0

*ISCJB **21** 15:23:46.6±0.8, 56°.05S±0°.1×27°.5W±0°.4, h112km, mb4.2/7, Error ellipse: s-maj=33.6km s-min=12.0km az=153.2*
*IDC **21** 15:23:47.5±0.7, 55°.93S×27°.62W, h104km±6km, mb3.9/7, mb1 4.0/8, mb1mx3.9/17, mbtmp3.9/8, Error ellipse: s-maj=26.0km s-min=13.5km az=69.0*

ISC 21 15:23:47.8±0.7, 55°.9S±0°.1×27°.7W±0°.2, h112km, n16, σ0°86/20, mb4.2/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	17.20	160	*e*P	P		15 27 40.3	-0.3
VNA2	Neumayer--Watz	17.41	158	*e*P	P		15 27 42.8	-0.1
SNAA	Sanae	18.97	156	*e*P	P		15 27 59.8	-0.2
SNAA	Sanae 1.0nm,0.3s,baz=301,slow=11,SNR=92	18.97	156	P	P		15 27 59.9	-0.1
QSPA	South Pole Qui 3.8nm,0.5s,baz=187,slow=2.7,SNR=37	34.33	180	P	P		15 30 24.0	+0.7
QSPA	1.1nm,0.7s,baz=156,slow=12,SNR=1.4			pP	pP		15 30 47.9	-0.3
CPUP	Villa Florida 0.8nm,0.4s,baz=174,slow=4.0,SNR=4.3	36.53	312	P	P		15 30 42.8	+0.5
MAW	Mawson 1.9nm,0.6s,baz=215,slow=10,SNR=5.8	40.41	144	P	P		15 31 14.6	+0.3
VNDA	Vanda 3.2nm,0.6s,baz=189,slow=5.7,SNR=29	46.69	183	P	P		15 32 04.3	-0.2
LPAZ	La Paz 2.3nm,0.4s,baz=133,slow=4.9,SNR=9.6	50.09	306	P	P		15 32 33.1	+1.2
LPAZ	1.9nm,0.8s,baz=219,slow=4.8,SNR=3.4			pP	pP		15 32 56.1	-2.2
TORD	Torodi Ar. Bea 2.9nm,0.6s,baz=199,slow=6.1,SNR=10	73.07	30	P	P		15 35 06.1	+0.5
TORD	0.6nm,0.5s,baz=196,slow=6.7,SNR=3.1			pP	pP		15 35 33.0	-0.6
ASAR	Alice Springs 0.6nm,0.8s,baz=183,slow=4.0,SNR=12	99.19	163	P	Pdif		15 37 16.2	-0.5
YKA	Yellowknife Ar 0.6nm,0.6s,baz=127,slow=2.3,SNR=14	135.90	318	PKP	PKPdf		15 42 53.8	0.0
INK	Inuvik 2.9nm,0.6s,baz=81,slow=4.1,SNR=16	145.53	321	PKPbc	PKPbc		15 43 11.3	0.0
ILAR	Eielson Array 4.8nm,0.7s,baz=134,slow=1.9,SNR=60	149.83	312	PKPbc	PKPbc		15 43 23.1	0.0
ILAR	1.3nm,1.0s,baz=84,slow=1.4,SNR=2.6			pPKPbc	pPKPbc		15 43 51.2	-2.1
KDAK	Kodiak Island 5.8nm,0.4s,baz=107,slow=3.1,SNR=15	150.52	297	PKPbc	PKPbc		15 43 25.5	+0.6
SONM	Songino Array 2.7nm,0.6s,baz=227,slow=3.5,SNR=15	150.98	87	PKPbc	PKPbc		15 43 26.6	0.0

*IDC **21** 15:32:53.9±2.6, 36°.38N×141°.81E, h0km, mb3.6/3, mb1 3.5/5, mb1mx3.3/27, mbtmp3.6/5, ML3.3/2, MS2.8/3, Ms1 2.8/3, ms1mx2.5/44, Error ellipse: s-maj=60.1km s-min=26.7km az=66.0*
*JMA **21** 15:32:54.7±0.3, 36°.29N×141°.96E, h74km, M2.8*

ISC 21 15:32:50.8±2.2, 36°.26N±0°.04×142°.2E±0°.1, h2km±12km, n20, σ1°36/22, mb3.7/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.19	242	P	Pb	Pb	15 33 14.5	+0.4
CHOJ				*e*S	Sn	Sn	15 33 30.3	-1.0
JHO	Hitachi	1.33	286	P	Pg	Pg	15 33 15.4	-0.8
ONAJ	Iwakimizuishiy	1.38	308	P	Pg	Pg	15 33 16.7	-0.5
JFK	Kawauchi	1.51	317	P	Pb	Pg	15 33 19.9	+0.4
BSO1	Boso 1	1.87	211	P	Pg	Pg	15 33 26.9	+0.3
BSO1				*e*S	Sn	Sn	15 33 47.6	+0.3
JFT	Otama	1.93	311	P	Pn	Pn	15 33 24.8	+0.2
JMM	Marumori	1.94	326	P	Pn	Pn	15 33 23.9	-0.8
BSO3	Boso 3	1.98	223	P	Pn	Pn	15 33 25.4	+0.3
JAG	Ashikaga	2.19	275	P	Pn	Pn	15 33 27.9	-0.3
JFY	Yanaizu	2.28	301	P	Pn	Pn	15 33 29.4	0.0
JRY	Ryogami san	2.65	266	P	Pn	Pn	15 33 34.2	-0.3
JOD2	Odawara 2	2.69	249	P	Pn	Pn	15 33 35.5	+0.4
MJAR	Matsushiro Arr 2.0nm,0.3s,baz=91,slow=15,SNR=20	3.20	276	Pn	Pn	Pn	15 33 42.5	+0.4
MJAR	1.1nm,0.3s,baz=88,slow=12,SNR=5.1			Sn	Sn	Sn	15 34 22.1	+1.3
MAT	Matsushiro	3.20	276	P	Pn	Pn	15 33 42.8	+0.7
MAT				*e*S	Sn	Sn	15 34 21.2	+0.3
JHJ	Hachijo jima 2 15nm,0.3s,baz=78,slow=20,SNR=3.7	3.70	213	Pn	Pn	Pn	15 33 49.9	+0.9
JHJ	15nm,0.3s,baz=83,slow=23,SNR=6.6			Sn	Sn	Sn	15 34 28.1	-5.0
JHJ	comp=Z,265nm,20.7s,baz=107,slow=35			LR	LR		15 35 01.8	
ASAJ	Asahikawa comp=Z,47nm,19.2s,baz=166,slow=44	7.85	2	LR	LR		15 38 33.4	
USRK	Ussuriysk Array comp=Z,39nm,21.4s,baz=286,slow=30	11.09	319	LR	LR		15 38 22.8	
SONM	Songino Array 1.0nm,0.8s,baz=113,slow=11,SNR=4.7	28.71	305	P	P		15 38 49.0	-0.4
MKAR	Makanchi Array 0.8nm,0.6s,baz=87,slow=11,SNR=3.9	45.04	303	P	P		15 41 09.1	+1.3
ASAR	Alice Springs 0.2nm,0.8s,baz=12,slow=13,SNR=3.1	60.11	189	P	P		15 43 03.9	+4.2

*MOS **21** 15:34:23.5±0.5, 47°.53N×158°.66E, h36km, mb4.4/1, Error ellipse: s-maj=57.1km s-min=9.0km az=90.3*

KRSC 21 15:34:47.1±0.9, 49°.34N×158°.61E, h42km±41km, ML4.3, 1C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.10	311	*i* PN	Pn	Pn	15 35 17.9	-1.8
SKR	comp=N,80nm,0.5s			pmax	pmax			
SKR	comp=E,100nm,0.5s			pmax	pmax			
SKR	comp=Z,150nm,0.5s			pmax	pmax			
SKR	Severo-Kuril's	2.10	311	*i* P	Pn	Pn	15 35 19.7	0.0
SKR				*e*S	Sn	Sn	15 35 43.8	-0.7
PAU	Pauzhetka	2.42	332	PN	Pn	Pn	15 35 26.1	+2.0
PAU	Pauzhetka	2.42	332	*e*P	Pn	Pn	15 35 26.1	+2.0
PAU				*e*S	Sn	Sn	15 35 54.6	+2.1
RUS	Russkaya	3.10	359	PN	Pn	Pn	15 35 36.0	+2.6
RUS	Russkaya	3.10	359	*e*P	Pn	Pn	15 35 36.0	+2.6
RUS				*e*S	Sn	Sn	15 36 11.1	+1.9
MTVR	Mutnovka	3.16	355	*e*P	Pn	Pn	15 35 37.3	+2.8
MTVR				*e*S	Sn	Sn	15 36 13.0	+2.0
MIPR	Malaya Ipel'ka	3.17	339	*e*P	Pn	Pn	15 35 37.1	+2.7
MIPR				S	Sn	Sn	15 36 12.8	+1.9
GRL	Gorelyy	3.23	354	*e*P	Pn	Pn	15 35 38.9	+3.4
GRL				*e*S	Sn	Sn	15 36 16.1	+3.3
PET	Petropavlovsk	3.69	0	*i* PN	Pn	Pn	15 35 44.6	+3.1
PET	comp=Z,71nm,0.4s			pmax	pmax			
PET	Petropavlovsk	3.69	0	*e*P	Pn	Pn	15 35 45.0	+3.5
PET				*e*S	Sn	Sn	15 36 26.7	+3.0
APC	Apacha	3.71	346	*e*P	Pn	Pn	15 35 45.2	+3.5
UGLR	Uglovaya	3.88	2	*e*P	Pn	Pn	15 35 47.6	+3.3
AVH	Avacha	3.93	1	*e*P	Pn	Pn	15 35 48.7	+3.7
AVH				*e*S	Sn	Sn	15 36 32.8	+2.9
SMAR	Somma

0.2nm,0.4s,baz=70,slow=3.4,SNR=3.9

ROM ***21*** *15:44:36.3±0.1, 42°.32N×13°.37E, h10km, MI3.7/13, Error ellipse: s-maj=1.1km s-min=1.0km az=80.0*
CSEM ***21*** *15:44:36.7±0.1, 42°.33N×13°.36E, h2km, ML4.0/8, Error ellipse: s-maj=2.5km s-min=2.2km az=22.0*
LDG ***21*** *15:44:36.4±0.1, 42°.32N×13°.34E, h2km, MI3.3/5, Error ellipse: s-maj=3.7km s-min=2.5km az=36.0*
IDC ***21*** *15:44:36.9±1.2, 42°.44N×13°.27E, h0km, mb3.5/3, mb1 3.7/7, mb1mx3.5/29, mbtmp3.5/7, ML3.5/4, MS3.1/1, Ms1 3.1/1, ms1mx2.1/35, Error ellipse: s-maj=20.3km s-min=14.1km az=92.0*
ISCJB ***21*** *15:44:36.2±0.2, 42°.34N±0°.02×13°.36E±0°.02, h13km±1km, mb3.5/2, MS3.1/1, Error ellipse: s-maj=2.9km s-min=2.4km az=16.1*
BEO ***21*** *15:44:37.9±1.0, 42°.60N×13°.26E, h0km, ML3.8/6*
PRU ***21*** *15:44:38.2, 42°.38N×13°.47E, h0km*
ISC 21 15:44:37.4±0.7, 42°.35N±0°.02×13°.37E±0°.02, h12km±4km, n154, σ1°40/187, 3C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.02**	**77**	Pg	**Pg**	**15 44 38.8**	**-0.8**
AQU				Sg	**Sg**	**15 44 40.2**	**-0.9**
	65μm,0.4s						
AQU	**L'Aquila**	**0.02**	**77**	Pg	**Pg**	**15 44 38.8**	**-0.8**
AQU				Sg	**Sg**	**15 44 40.2**	**-0.9**
	65μm,0.4s						
FAGN	**Fagnano**	**0.18**	**118**	Pg	**Pg**	**15 44 40.7**	**-0.7**
FAGN				Sg	**Sg**	**15 44 43.9**	**-0.3**
	54μm,0.5s						
FAGN	**Fagnano**	**0.18**	**118**	Pg	**Pg**	**15 44 40.7**	**-0.7**
FAGN				Sg	**Sg**	**15 44 43.9**	**-0.3**
	54μm,0.5s						
CAMP	**Campotosto**	**0.19**	**9**	*e*P	**Pg**	**15 44 41.1**	**-0.5**
CAMP	**Campotosto**	**0.19**	**9**	Pg	**Pg**	**15 44 41.2**	**-0.4**
CAMP				Sg	**Sg**	**15 44 44.5**	**-0.1**
	11μm,0.5s						
CAMP	**Campotosto**	**0.19**	**9**	*e*P	**Pg**	**15 44 41.1**	**-0.5**
CAMP				Sg	**Sg**	**15 44 44.5**	**-0.1**
	11μm,0.5s						
FIAM	**Fiamignano**	**0.20**	**247**	Pg	**Pg**	**15 44 41.3**	**-0.5**
FIAM				Sg	**Sg**	**15 44 44.6**	**-0.3**
	20μm,0.5s						
FIAM	**Fiamignano**	**0.20**	**247**	Pg	**Pg**	**15 44 41.3**	**-0.5**
FIAM				Sg	**Sg**	**15 44 44.6**	**-0.3**
	20μm,0.5s						
TERO	**Teramo**	**0.32**	**32**	Pg	**Pg**	**15 44 43.1**	**-0.8**
TERO				Sg	**Sb**	**15 44 49.2**	**-1.2**
	17μm,0.9s						
TERO	**Teramo**	**0.32**	**32**	Pg	**Pg**	**15 44 43.1**	**-0.8**
TERO				Sg	**Sb**	**15 44 49.2**	**-1.2**
	17μm,0.9s						
PTQR	**Pietraquaria**	**0.33**	**176**	Pg	**Pg**	**15 44 43.0**	**-1.0**
PTQR	**Pietraquaria**	**0.33**	**176**	Pg	**Pg**	**15 44 43.0**	**-1.0**
VCEL	**Villa Celiera**	**0.35**	**82**	Pg	**Pg**	**15 44 43.5**	**-1.0**
	9μm,0.6s						
VCEL	**Villa Celiera**	**0.35**	**82**	Pg	**Pg**	**15 44 43.5**	**-1.0**
	9μm,0.6s						
LNSS	**Leonessa**	**0.35**	**316**	Pg	**Pg**	**15 44 44.1**	**-0.4**
LNSS				Sg	**Sb**	**15 44 51.0**	**-0.3**
	6μm,0.6s						
LNSS	**Leonessa**	**0.35**	**316**	Pg	**Pg**	**15 44 44.1**	**-0.4**
CERT	**Cerreto**	**0.49**	**216**	Pg	**Pg**	**15 44 45.9**	**-1.1**
CERT				Sg	**Sg**	**15 44 52.7**	**-0.9**
	9μm,0.4s						
CERT	**Cerreto**	**0.49**	**216**	Pg	**Pg**	**15 44 45.9**	**-1.1**
CERT				Sg	**Sg**	**15 44 52.7**	**-0.9**
	9μm,0.4s						
MNS	**Montasola**	**0.51**	**274**	Pg	**Pg**	**15 44 46.3**	**-1.1**
	2μm,0.4s						
MNS	**Montasola**	**0.51**	**274**	Pg	**Pg**	**15 44 46.3**	**-1.1**
	2μm,0.4s						
VVLD	**Villa Vallelon**	**0.51**	**159**	Pg	**Pg**	**15 44 46.2**	**-1.2**
	5μm,0.6s						
VVLD	**Villa Vallelon**	**0.51**	**159**	Pg	**Pg**	**15 44 46.2**	**-1.2**
	5μm,0.6s						
INTR	**Introdacqua**	**0.52**	**130**	Pg	**Pg**	**15 44 46.4**	**-1.1**
INTR				Sg	**Sg**	**15 44 54.5**	**0.0**
	3μm,0.7s						
INTR	**Introdacqua**	**0.52**	**130**	Pg	**Pg**	**15 44 46.4**	**-1.1**
INTR				Sg	**Sg**	**15 44 54.5**	**0.0**
	3μm,0.7s						
NRCA	**Norcia**	**0.52**	**339**	Pg	**Pg**	**15 44 47.0**	**-0.6**
NRCA				Sg	**Sb**	**15 44 55.5**	**-0.6**
	2μm,0.5s						
NRCA	**Norcia**	**0.52**	**339**	Pg	**Pg**	**15 44 47.0**	**-0.6**
NRCA				Sg	**Sb**	**15 44 55.5**	**-0.6**
	2μm,0.5s						
GUAR	**Guarcino**	**0.56**	**185**	Pg	**Pg**	**15 44 46.7**	**-1.5**
GUAR	**Guarcino**	**0.56**	**185**	Pg	**Pg**	**15 44 46.7**	**-1.5**
MTCE	**Montecelio**	**0.57**	**235**	Pg	**Pg**	**15 44 47.3**	**-1.2**
	2μm,0.6s						
MTCE	**Montecelio**	**0.57**	**235**	Pg	**Pg**	**15 44 47.3**	**-1.2**
	2μm,0.6s						
TRTR	**Tortoreto Alta**	**0.61**	**41**	Pg	**Pb**	**15 44 49.5**	**-0.5**
TRTR	**Tortoreto Alta**	**0.61**	**41**	Pg	**Pb**	**15 44 49.5**	**-0.5**
OFFI	**Offida**	**0.63**	**22**	Pg	**Pg**	**15 44 49.5**	**-0.1**
OFFI	**Offida**	**0.63**	**22**	Pg	**Pg**	**15 44 49.5**	**-0.1**
CESX	**Cesi**	**0.64**	**294**	Pg	**Pg**	**15 44 49.2**	**-0.6**
	2μm,0.5s						
CESX	**Cesi**	**0.64**	**294**	Pg	**Pg**	**15 44 49.2**	**-0.6**
	2μm,0.5s						
POFI	**Posta Fibreno**	**0.68**	**158**	Pg	**Pg**	**15 44 49.1**	**-1.5**
POFI	**Posta Fibreno**	**0.68**	**158**	Pg	**Pg**	**15 44 49.1**	**-1.5**
FDMO	**Fiordimonte**	**0.72**	**343**	Pg	**Pg**	**15 44 50.1**	**-1.2**
FDMO	**Fiordimonte**	**0.72**	**343**	Pg	**Pg**	**15 44 50.1**	**-1.2**
RMP	**Rome, Mte Porz**	**0.73**	**223**	Pg	**Pg**	**15 44 50.0**	**-1.5**
RMP	**Rome, Mte Porz**	**0.73**	**223**	Pg	**Pg**	**15 44 50.0**	**-1.5**
CAFR	**Castel Frentan**	**0.73**	**99**	Pg	**Pg**	**15 44 50.6**	**-1.0**
CAFR	**Castel Frentan**	**0.73**	**99**	Pg	**Pg**	**15 44 50.6**	**-1.0**
CESI	**CESI - Serrava**	**0.74**	**332**	Pg	**Pg**	**15 44 50.5**	**-1.2**
CESI	**CESI - Serrava**	**0.74**	**332**	Pg	**Pg**	**15 44 50.5**	**-1.2**
GIUL	**Giuliano Di Ro**	**0.80**	**186**	Pg	**Pg**	**15 44 51.6**	**-1.1**
GIUL	**Giuliano Di Ro**	**0.80**	**186**	Pg	**Pg**	**15 44 51.6**	**-1.1**
GUMA	**Gualdo di Mace**	**0.83**	**30**	Pg	**Pg**	**15 44 50.5**	**-2.8**
GUMA	**Gualdo di Mace**	**0.83**	**30**	Pg	**Pg**	**15 44 50.5**	**-2.8**
ASSB	**Assisi San Ben**	**0.87**	**323**	Pg	**Pg**	**15 44 53.1**	**-1.1**
ASSB	**Assisi San Ben**	**0.87**	**323**	Pg	**Pg**	**15 44 53.1**	**-1.1**
RNI2	**Rionero Sannit**	**0.87**	**138**	Pg	**Pg**	**15 44 52.1**	**-2.0**
RNI2	**Rionero Sannit**	**0.87**	**138**	Pg	**Pg**	**15 44 52.1**	**-2.0**
CERA	**Filignano**	**0.89**	**147**	Pg	**Pg**	**15 44 52.5**	**-2.1**
CERA	**Filignano**	**0.89**	**147**	Pg	**Pg**	**15 44 52.5**	**-2.1**
CING	**Cingoli**	**1.03**	**353**	Pg	**Pg**	**15 44 56.0**	**-1.3**
CING	**Cingoli**	**1.03**	**353**	Pg	**Pg**	**15 44 56.0**	**-1.3**
TOLF	**Tolfa**	**1.06**	**255**	Pg	**Pg**	**15 44 56.9**	**-0.8**
TOLF	**Tolfa**	**1.06**	**255**	Pg	**Pg**	**15 44 56.9**	**-0.8**
MURB	**Monte Urbino**	**1.11**	**326**	Pg	**Pg**	**15 44 57.6**	**-1.1**
MURB	**Monte Urbino**	**1.11**	**326**	Pg	**Pg**	**15 44 57.6**	**-1.1**
SACS	**San Casciano d**	**1.19**	**295**	Pg	**Pg**	**15 44 59.5**	**-0.7**
ARVD	**Arcevia**	**1.19**	**345**	Pg	**Pg**	**15 44 58.7**	**-1.6**
ARVD	**Arcevia**	**1.19**	**345**	Pg	**Pg**	**15 44 58.7**	**-1.6**
AOI	**Ancona**	**1.21**	**8**	Pg	**Pg**	**15 44 59.6**	**-1.1**
AOI	**Ancona**	**1.21**	**8**	Pg	**Pg**	**15 44 59.6**	**-1.1**
NVLJ	**Novalja**	**2.47**	**26**	*e*Pn	**Pn**	**15 45 17.5**	**+0.1**
NVLJ				Sn	**Sn**	**15 45 47.7**	**+0.2**
NVLJ	**Novalja**	**2.47**	**26**	*e*Pn	**Pn**	**15 45 17.5**	**+0.1**
NVLJ				Sn	**Sn**	**15 45 47.6**	**+0.2**
CDT	**Castel del Mon**	**2.52**	**119**	*e*Pn	**Pn**	**15 45 19.0**	**+0.9**
STON	**Ston**	**3.24**	**79**	*e*Pn	**Pn**	**15 45 28.6**	**+0.6**
STON				Sn	**Sn**	**15 46 06.7**	**+0.3**
STON	**Ston**	**3.24**	**79**	*e*Pn	**Pn**	**15 45 28.6**	**+0.6**
STON				Sn	**Sn**	**15 46 06.7**	**+0.3**
PGF	**Pioggiola**	**3.24**	**275**	*e*Pn	**Pn**	**15 45 28.5**	**+0.4**
PGF				*e*Sn	**Sn**	**15 46 08.6**	**+1.9**
	14nm,0.5s						
PGF	**Pioggiola**	**3.24**	**275**	*e*Pn	**Pn**	**15 45 28.5**	**+0.4**
PGF				*e*Sn	**Sn**	**15 46 08.6**	**+1.9**
	6.8nm,0.5s						
VOY	**Vojsko**	**3.70**	**6**	*e*Pn	**Pn**	**15 45 36.3**	**+1.8**
VOY				*e*		15 45 51.7	
VOY	**Vojsko**	**3.70**	**6**	Pn	**Pn**	**15 45 36.3**	**+1.8**
PCP	**Piancastagn**	**4.14**	**304**	P	**Pn**	**15 45 38.2**	**-2.3**
MYKA	**Terra Mystica**	**4.29**	**2**	⇑*i*Pn	**Pn**	**15 45 42.8**	**+0.3**
MYKA	**Terra Mystica**	**4.29**	**2**	Pn	**Pn**	**15 45 42.8**	**+0.3**
PDG	**Podgorica**	**4.36**	**87**	*e*Sn	**Sn**	**15 46 37.0**	**+2.9**
PDG	**Podgorica**	**4.36**	**87**	*e*Sn	**Sn**	**15 46 37.0**	**+2.9**
ABTA	**Abfaltersbach**	**4.44**	**352**	⇓*i*Pn	**Pn**	**15 45 45.4**	**+0.8**
	SNR=13						
ABTA	**Abfaltersbach**	**4.44**	**352**	Pn	**Pn**	**15 45 45.4**	**+0.8**
	SNR=13						
SOKA	**Soboth**	**4.49**	**15**	⇓*i*Pn	**Pn**	**15 45 46.6**	**+1.3**
SOKA	**Soboth**	**4.49**	**15**	Pn	**Pn**	**15 45 46.6**	**+1.3**
SBF	**Sospel**	**4.60**	**291**	*e*Pn	**Pn**	**15 45 46.8**	**0.0**
SBF	**Sospel**	**4.60**	**291**	*e*Pn	**Pn**	**15 45 46.8**	**0.0**
BBLS	**Lazići**	**4.67**	**69**	*e*Pn	**Pn**	**15 45 49.7**	**+1.9**
BBLS	**Lazići**	**4.67**	**69**	*e*Pn	**Pn**	**15 45 49.7**	**+1.9**
KBA	**Koelnbreinsper**	**4.73**	**360**	⇑*i*Pn	**Pn**	**15 45 50.3**	**+1.7**
	SNR=7.4						
KBA	**Koelnbreinsper**	**4.73**	**360**	Pn	**Pn**	**15 45 50.3**	**+1.7**
	SNR=7.4						
WTTA	**Wattenberg**	**5.07**	**347**	⇑*i*Pn	**Pn**	**15 45 55.4**	**+2.1**
	SNR=5.9						
WTTA	**Wattenberg**	**5.07**	**347**	Pn	**Pn**	**15 45 55.4**	**+2.1**
	SNR=5.9						
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**15 45 53.2**	**-0.1**
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**15 45 53.2**	**-0.1**
DAVOX	**Davos/Dischmat**	**5.08**	**332**	Pn	**Pn**	**15 45 54.9**	**+1.4**
	2.1nm,0.3s,baz=154,slow=18,SNR=15						
DAVOX				Sn	**Sn**	**15 46 52.6**	**+0.3**
	0.5nm,0.3s,baz=144,slow=23,SNR=4.1						
IVAS	**Ivanjica**	**5.13**	**74**	*e*Pn	**Pn**	**15 45 55.4**	**+1.4**
IVAS				*e*Sn	**Sn**	**15 46 53.0**	**-0.1**
IVAS	**Ivanjica**	**5.13**	**74**	*e*Pn	**Pn**	**15 45 55.4**	**+1.4**
IVAS				*e*Sn	**Sn**	**15 46 53.0**	**-0.1**
LMR	**La Mourre**	**5.14**	**283**	*e*Pn	**Pn**	**15 45 53.7**	**-0.4**
LMR	**La Mourre**	**5.14**	**283**	*e*Pn	**Pn**	**15 45 53.7**	**-0.4**
DIVS	**Divibare**	**5.14**	**68**	*e*Pn	**Pn**	**15 45 55.6**	**+1.3**
DIVS	**Divibare**	**5.14**	**68**	*e*Pn	**Pn**	**15 45 55.6**	**+1.3**
MBDF	**Montbardon**	**5.35**	**299**	*e*P	**Pn**	**15 45 59.1**	**+1.9**
MBDF	**Montbardon**	**5.35**	**299**	*e*P	**Pn**	**15 45 59.1**	**+1.9**
TRUS	**Trudelj**	**5.47**	**68**	*e*Pn	**Pn**	**15 45 59.6**	**+1.0**
TRUS	**Trudelj**	**5.47**	**68**	*e*Pn	**Pn**	**15 45 59.6**	**+1.0**
GRUS	**Gruza**	**5.59**	**72**	*e*Pn	**Pn**	**15 46 01.5**	**+1.2**
GRUS				*e*Sn	**Sn**	**15 47 05.3**	**+0.8**
GRUS	**Gruza**	**5.59**	**72**	*e*Pn	**Pn**	**15 46 01.5**	**+1.2**
GRUS				*e*Sn	**Sn**	**15 47 05.3**	**+0.8**
LPG	**La Plagne**	**5.72**	**306**	*e*P	**Pn**	**15 46 04.9**	**+2.5**
LPG				*e*Sn	**Sn**	**15 47 04.1**	**-4.1**
	5.1nm,0.5s						
LPG	**La Plagne**	**5.72**	**306**	*e*P	**Pn**	**15 46 04.9**	**+2.5**
LPL	**La Plagne**	**5.74**	**306**	*e*P	**Pn**	**15 46 05.0**	**+2.4**
LPL				*e*Sn	**Sn**	**15 47 03.2**	**-5.4**
	6.7nm,0.6s						
LPL	**La Plagne**	**5.74**	**306**	*e*P	**Pn**	**15 46 05.0**	**+2.4**
SELS	**Selova**	**5.77**	**79**	*e*Pn	**Pn**	**15 46 04.1**	**+1.3**
SELS	**Selova**	**5.77**	**79**	*e*Pn	**Pn**	**15 46 04.1**	**+1.3**
SMRF	**Simiane la Rot**	**5.93**	**289**	*e*P	**Pn**	**15 46 06.3**	**+1.3**
SMRF	**Simiane la Rot**	**5.93**	**289**	*e*P	**Pn**	**15 46 06.3**	**+1.3**
ORIF	**Oris-en-Rattie**	**6.01**	**298**	*e*P	Pn	15 46 09.6	+3.4
BARS	**Barje**	**6.25**	**83**	*e*Pn	**Pn**	**15 46 10.3**	**+0.9**
BARS				*e*Sn	**Sn**	**15 47 21.5**	**+0.7**
BARS	**Barje**	**6.25**	**83**	*e*Pn	**Pn**	**15 46 10.3**	**+0.9**
BARS				*e*Sn	**Sn**	**15 47 21.5**	**+0.7**
GERES	**GERESS Array B**	**6.50**	**2**	Pn	**Pn**	**15 46 12.7**	**-0.2**
	0.6nm,0.3s,baz=177,slow=14,SNR=9.6						
GERES				Sn	**Sn**	**15 47 25.7**	**-1.3**
	1.1nm,0.3s,baz=177,slow=20,SNR=4.9						
CABF	**La Chapelle**	**6.73**	**312**	*e*Pn	**Pn**	**15 46 16.5**	**+0.5**
CABF	**La Chapelle**	**6.73**	**312**	*e*Pn	**Pn**	**15 46 16.5**	**+0.5**
KHC	**Kasperske Hory**	**6.79**	**1**	*e*PN	**Pn**	**15 46 17.8**	**+1.1**
KHC				*ex*	x	15 46 28.5	
KHC				*e*SN	**Sn**	**15 47 31.8**	**-2.1**
KHC				*ex*	x	15 47 57.5	
KHC	**Kasperske Hory**	**6.79**	**1**	Pn	**Pn**	**15 46 17.8**	**+1.1**
VIVF	**Saint-Julien-l**	**6.79**	**295**	*e*Pn	**Pn**	**15 46 18.3**	**+1.4**
VIVF	**Saint-Julien-l**	**6.79**	**295**	*e*Pn	**Pn**	**15 46 18.3**	**+1.4**
ZAPS	**Zavoj**	**6.88**	**79**	*e*Pn	**Pn**	**15 46 20.2**	**+2.2**
ZAPS				*e*Sn	**Sn**	**15 47 36.6**	**+0.4**
ZAPS	**Zavoj**	**6.88**	**79**	*e*Pn	**Pn**	**15 46 20.2**	**+2.2**
ZAPS				*e*Sn	**Sn**	**15 47 36.6**	**+0.4**
HINF	**Hinteralfeld**	**7.15**	**322**	*e*Pn	**Pn**	**15 46 20.9**	**-0.9**
HINF				*e*Sn	Sn	15 47 37.4	-5.6
	8.5nm,0.6s						
HINF	**Hinteralfeld**	**7.15**	**322**	*e*Pn	**Pn**	**15 46 20.9**	**-0.9**
LASF	**Ste Croix**	**7.16**	**287**	*e*Pn	**Pn**	**15 46 21.8**	**-0.1**
LASF	**Ste Croix**	**7.16**	**287**	*e*Pn	**Pn**	**15 46 21.8**	**-0.1**
VYHS	**Vyhne**	**7.25**	**30**	*e*PN	**Pn**	**15 46 20.3**	**-2.8**
VYHS				*e*		15 46 44.0	
VYHS	**Vyhne**	**7.25**	**30**	*e*SN	Sn	15 47 38.1	-7.2
VTS	**Vitosha**	**7.28**	**85**	*e*Pn	**Pn**	**15 46 26.1**	**+2.5**
VTS				*e*Sn	**Sn**	**15 47 46.9**	**+0.6**
VTS	**Vitosha**	**7.28**	**85**	*e*Pn	**Pn**	**15 46 26.1**	**+2.5**
VTS				*e*Sn	**Sn**	**15 47 46.9**	**+0.6**
KEST	**Kesra**	**7.31**	**207**	Pn	Pn	15 46 27.6	+3.5
	1.2nm,0.3s,baz=322,slow=4.6,SNR=26						
CDF	**Champ du Feu**	**7.43**	**327**	*e*Pn	**Pn**	**15 46 24.6**	**-1.0**
CDF	**Champ du Feu**	**7.43**	**327**	*e*Pn	**Pn**	**15 46 24.6**	**-1.0**
HAU	**Haudompre**	**7.52**	**321**	*e*Pn	**Pn**	**15 46 26.4**	**-0.5**
HAU				*e*Sn	Sn	15 47 45.0	-7.0
	21nm,0.5s						
HAU	**Haudompre**	**7.52**	**321**	*e*Pn	**Pn**	**15 46 26.4**	**-0.5**
CAF	**Calviac**	**8.60**	**291**	*e*P	**Pn**	**15 46 42.8**	**+1.2**
CAF	**Calviac**	**8.60**	**291**	*e*P	**Pn**	**15 46 42.8**	**+1.2**
CLL	**Collm**	**8.97**	**359**	*e*Sn	**Sn**	**15 48 23.0**	**-4.5**
CLL				*e*Sg	Sg	15 49 40.0	+15
RJF	**Les Rejaudoux**	**9.06**	**293**	*e*P	**Pn**	**15 46 48.1**	**+0.1**
RJF	**Les Rejaudoux**	**9.06**	**293**	*e*P	**Pn**	**15 46 48.1**	**+0.1**
LFF	**La Frestale**	**9.52**	**290**	*e*P	**Pn**	**15 46 56.0**	**+1.8**
LFF	**La Frestale**	**9.52**	**290**	*e*P	**Pn**	**15 46 56.0**	**+1.8**
MLR	**Muntele Rosu**	**9.60**	**67**	Pn	**Pn**	**15 46 58.5**	**+3.0**
	0.1nm,0.3s,baz=127,slow=17,SNR=8.1						
FINES	**FINESS Array B**	**20.60**	**17**	P	Pn	15 49 18.2	-0.1
	1.7nm,0.6s,baz=190,slow=7.3,SNR=8.9						
TORD	**Torodi Ar. Bea**	**30.81**	**203**	P	**P**	**15 50 53.9**	**+0.8**
	0.4nm,0.8s,baz=19,slow=9.0,SNR=4.8						
ZALV	**Zalesovo Beam**	**47.10**	**50**	LR	LR	16 12 30.0	
	comp=Z,19nm,19.4s,baz=238,slow=36						
MKAR	**Makanchi Array**	**47.87**	**60**	P	**P**	**15 53 15.1**	**+0.1**
	0.4nm,0.6s,baz=277,slow=7.3,SNR=7.4						

IDC 21 16:01:35.7±3.5, 16°.03S×174°.00W, h127km±25km, mb3.8/3, mb1 4.0/4, mb1mx3.5/18, mbtmp3.9/4, Error ellipse: s-maj=153.2km s-min=19.5km az=147.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.01**	**46**	P	Pn	16 02 22.5	0.0
	60nm,0.3s,baz=36,slow=2.0,SNR=104						
AFI				S	Sn	16 02 54.8	-3.8
	51nm,0.3s,baz=128,slow=20,SNR=9.8						
STKA	**Stephens Creek**	**43.22**	**240**	P	P	16 09 24.3	-0.2
	2.3nm,0.9s,baz=100,slow=11,SNR=4.0						
WRA	**Warramunga Arr**	**49.14**	**257**	P	P	16 10 10.5	-0.4
	0.7nm,0.6s,baz=93,slow=7.1,SNR=6.6						
ASAR	**Alice Springs**	**49.37**	**252**	P	P	16 10 12.8	+0.1
	11nm,0.7s,baz=87,slow=7.9,SNR=187						
NVAR	**Mina Array Bea**	**75.18**	**42**	P	P	16 13 05.1	+0.5
	0.7nm,0.9s,baz=224,slow=8.3,SNR=3.8						
PDAR	**Pinedale Array**	**83.12**	**42**	P	P	16 13 47.1	-0.6
	0.1nm,0.4s,baz=252,slow=3.0,SNR=3.6						
BRTR	**Keskin Array B**	**146.27**	**320**	PKPbc	PKPdf	16 21 01.1	+0.6
	0.7nm,0.8s,baz=25,slow=3.3,SNR=5.2						

ISK ***21*** *16:02:36.4, 39°.10N×29°.04E, h6km, MD3.2*
CSEM ***21*** *16:02:37.1±0.1, 39°.11N×29°.04E, h5km, MD3.1, Error ellipse: s-maj=1.4km s-min=1.4km az=141.0*
DDA ***21*** *16:02:37.1, 39°.11N×29°.04E, h7km, MD3.1*
ISC 21 16:02:37.3±1.0, 39°.11N±0°.02×29°.04E±0°.02, h6km±9km, n62, σ0°39/85, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEMI	**Demirci**	**0.26**	**255**	*i* P	**Pg**	**16 02 42.5**	**+0.1**
DEMI				*i* S	**Sg**	**16 02 46.1**	**+0.2**
DEMI	**Demirci**	**0.26**	**255**	*i* P	**Pg**	**16 02 42.5**	**+0.1**
DEMI				*i* S	**Sg**	**16 02 46.1**	**+0.2**
GDZ	**Gediz**	**0.34**	**93**	*i* P	**Pg**	**16 02 44.2**	**+0.1**
GDZ				*i* S	**Sg**	**16 02 49.0**	**+0.4**
GDZ	**Gediz**	**0.34**	**93**	*i* P	**Pg**	**16 02 44.2**	**+0.1**
GDZ				*i* S	**Sg**	**16 02 49.0**	**+0.4**
TVSB	**Tavsanli**	**0.47**	**44**	*e*PG	**Pg**	**16 02 46.4**	**-0.1**
TVSB				*e*SG	**Sg**	**16 02 52.5**	**0.0**
TVSB	**Tavsanli**	**0.47**	**44**	*e*Pg	**Pg**	**16 02 46.4**	**-0.1**
TVSB				*e*Sg	**Sg**	**16 02 52.6**	**0.0**
DST	**Dursunbey**	**0.59**	**327**	*e*PG	**Pg**	**16 02 48.5**	**-0.2**
DST				*e*SG	**Sg**	**16 02 56.3**	**-0.1**
DST	**Dursunbey**	**0.59**	**327**	*e*Pg	**Pg**	**16 02 48.5**	**-0.2**
DST				*e*Sg	**Sg**	**16 02 56.3**	**-0.1**
DURS	**Dursunbey**	**0.66**	**318**	*i* P	**Pg**	**16 02 49.9**	**-0.1**
DURS	**Dursunbey**	**0.66**	**318**	*i*Pn	**Pg**	**16 02 49.9**	**-0.1**
KULA	**Kula-Manisa**	**0.67**	**207**	*e*PG	**Pg**	**16 02 49.8**	**-0.3**
KULA				*e*SG	**Sg**	**16 02 58.4**	**-0.3**
KULA	**Kula-Manisa**	**0.67**	**207**	*e*Pg	**Pg**	**16 02 49.8**	**-0.3**
KULA				*e*Sg	**Sg**	**16 02 58.4**	**-0.3**
MANT	**Manisa**	**0.72**	**211**	*i* P	**Pg**	**16 02 50.8**	**-0.4**
MANT				*i* S	**Sg**	**16 03 00.2**	**-0.5**
MANT	**Manisa**	**0.72**	**211**	*i* P	**Pg**	**16 02 50.8**	**-0.4**
MANT				*i* S	**Sg**	**16 03 00.2**	**-0.5**
KHAL	**Karahalli**	**0.82**	**154**	*i* P	**Pg**	**16 02 53.1**	**+0.1**
KHAL				*i* S	**Sg**	**16 03 03.2**	**-0.4**
KHAL	**Karahalli**	**0.82**	**154**	*i* P	**Pg**	**16 02 53.1**	**+0.1**
KHAL				*i* S	**Sg**	**16 03 03.2**	**-0.4**
ALT	**Altintas**	**0.83**	**93**	*e*PG	**Pg**	**16 02 52.8**	**-0.5**
ALT	**Altintas**	**0.83**	**93**	*e*Pg	**Pg**	**16 02 52.8**	**-0.5**
KHL	**Karahalli**	**0.87**	**154**	*e*PG	**Pg**	**16 02 54.0**	**0.0**
KHL				*e*SG	**Sg**	**16 03 05.4**	**0.0**
KHL	**Karahalli**	**0.87**	**154**	*e*Pg	**Pg**	**16 02 54.0**	**0.0**
KHL				*e*Sg	**Sg**	**16 03 05.4**	**0.0**
ORLT	**Orhaneli**	**0.94**	**353**	*e*PG	**Pg**	**16 02 55.0**	**-0.3**
ORLT	**Orhaneli**	**0.94**	**353**	*e*Pg	**Pg**	**16 02 55.1**	**-0.3**
AKHS	**Akhisar**	**0.98**	**257**	*i* P	**Pg**	**16 02 56.3**	**+0.2**
AKHS				*i* S	**Sg**	**16 03 09.2**	**+0.3**
AKHS	**Akhisar**	**0.98**	**257**	*i* P	**Pg**	**16 02 56.3**	**+0.2**
AKHS				*i* S	**Sg**	**16 03 09.2**	**+0.3**
AKS	**Akhisar**	**0.98**	**257**	*e*PG	**Pg**	**16 02 56.2**	**0.0**
AKS	**Akhisar**	**0.98**	**257**	*e*Pg	**Pg**	**16 02 56.2**	**0.0**
BALB	**Balikesir**	**1.04**	**301**	*e*PG	**Pg**	**16 02 57.5**	**+0.2**
BALB	**Balikesir**	**1.04**	**301**	*e*Pg	**Pg**	**16 02 57.5**	**+0.2**
CAVI	**Cavuskoy**	**1.25**	**29**	*e*PN	**Pg**	**16 03 01.3**	**-0.1**
CAVI	**Cavuskoy**	**1.25**	**29**	*e*Pn	**Pg**	**16 03 01.3**	**-0.1**
MDNY	**Mudanya-Bursa**	**1.26**	**355**	*e*PN	**Pg**	**16 03 00.9**	**-0.6**
MDNY	**Mudanya-Bursa**	**1.26**	**355**	*e*Pn	**Pg**	**16 03 00.9**	**-0.6**
BALY	**Balya**	**1.27**	**300**	*i* P	Pn	**16 03 01.8**	**+0.2**
BALY				*i* S	Sn	**16 03 19.2**	**+0.3**
BALY	**Balya**	**1.27**	**300**	*i* P	Pn	**16 03 01.8**	**+0.2**
BALY				*i* S	Sn	**16 03 19.2**	**+0.3**
KCTX	**Karacabey (Bur**	**

CESI	**CESI - Serrava**	**0.54**	**328**	Pg		**Pg**	**16 21 07.9**	**+0.2**
CESI				Sg		**Sb**	**16 21 16.5**	**+0.4**
	160nm,0.1s							
CERT	**Cerreto**	**0.64**	**201**	Pg		**Pg**	**16 21 08.7**	**-0.8**
CERT	**Cerreto**	**0.64**	**201**	Pg		**Pg**	**16 21 08.7**	**-0.8**
MTCE	**Montecelio**	**0.67**	**218**	Pg		**Pg**	**16 21 09.0**	**-1.0**
MTCE	**Montecelio**	**0.67**	**218**	Pg		**Pg**	**16 21 09.0**	**-1.0**
ASSB	**Assisi San Ben**	**0.68**	**317**	Pg		**Pg**	**16 21 10.2**	**-0.2**
ASSB	**Assisi San Ben**	**0.68**	**317**	Pg		**Pg**	**16 21 10.2**	**-0.2**
GUMA	**Gualdo di Mace**	**0.70**	**42**	Pg		**Pg**	**16 21 07.7**	**-3.0**
GUMA				Sg		**Sg**	**16 21 16.4**	**-3.5**
	3µm,0.3s							
INTR	**Introdacqua**	**0.70**	**140**	Pg		**Pg**	**16 21 09.5**	**-1.2**
INTR	**Introdacqua**	**0.70**	**140**	Pg		**Pg**	**16 21 09.5**	**-1.2**
VVLD	**Villa Vallelon**	**0.72**	**160**	Pg		**Pg**	**16 21 10.8**	**-0.2**
VVLD	**Villa Vallelon**	**0.72**	**160**	Pg		**Pg**	**16 21 10.8**	**-0.2**
GUAR	**Guarcino**	**0.75**	**179**	Pg		**Pg**	**16 21 11.5**	**-0.1**
GUAR	**Guarcino**	**0.75**	**179**	Pg		**Pg**	**16 21 11.5**	**-0.1**
SNTG	**Esanatoglia**	**0.76**	**340**	Pg		**Pg**	**16 21 11.4**	**-0.3**
SNTG	**Esanatoglia**	**0.76**	**340**	Pg		**Pg**	**16 21 11.4**	**-0.3**
CING	**Cingoli**	**0.83**	**355**	Pg		**Pg**	**16 21 12.7**	**-0.5**
CING	**Cingoli**	**0.83**	**355**	Pg		**Pg**	**16 21 12.7**	**-0.5**
POFI	**Posta Fibreno**	**0.88**	**159**	Pg		**Pg**	**16 21 13.3**	**-0.8**
POFI	**Posta Fibreno**	**0.88**	**159**	Pg		**Pg**	**16 21 13.3**	**-0.8**
MURB	**Monte Urbino**	**0.91**	**322**	Pg		**Pg**	**16 21 14.4**	**-0.3**
MURB	**Monte Urbino**	**0.91**	**322**	Pg		**Pg**	**16 21 14.4**	**-0.3**
MGAB	**Montegabbione**	**0.95**	**293**	Pg		**Pg**	**16 21 15.0**	**-0.3**
MGAB	**Montegabbione**	**0.95**	**293**	Pg		**Pg**	**16 21 15.0**	**-0.3**
ARVD	**Arcevia**	**0.99**	**345**	Pg		**Pg**	**16 21 15.8**	**-0.3**
ARVD	**Arcevia**	**0.99**	**345**	Pg		**Pg**	**16 21 15.8**	**-0.3**
GIUL	**Giuliano Di Ro**	**0.99**	**182**	Pg		**Pg**	**16 21 15.6**	**-0.5**
GIUL	**Giuliano Di Ro**	**0.99**	**182**	Pg		**Pg**	**16 21 15.6**	**-0.5**
AOI	**Ancona**	**1.03**	**13**	Pg		**Pg**	**16 21 16.7**	**-0.2**
AOI	**Ancona**	**1.03**	**13**	Pg		**Pg**	**16 21 16.7**	**-0.2**
SACS	**San Casciano d**	**1.07**	**287**	Pg		**Pg**	**16 21 17.4**	**-0.2**
TOLF	**Tolfa**	**1.07**	**244**	Pg		**Pb**	**16 21 16.9**	**-0.5**
TOLF	**Tolfa**	**1.07**	**244**	Pg		**Pb**	**16 21 16.9**	**-0.5**
PIEI	**Pieia**	**1.14**	**331**	Pg		**Pb**	**16 21 18.4**	**-0.1**
PIEI	**Pieia**	**1.14**	**331**	Pg		**Pb**	**16 21 18.4**	**-0.1**
CAFI	**Castiglion Fio**	**1.25**	**309**	Pg		**Pg**	**16 21 20.7**	**-0.4**
CAFI	**Castiglion Fio**	**1.25**	**309**	Pg		**Pg**	**16 21 20.7**	**-0.4**
PARC	**Parchiule**	**1.35**	**325**	Pg		**Pg**	**16 21 22.7**	**-0.2**
PARC	**Parchiule**	**1.35**	**325**	Pg		**Pg**	**16 21 22.7**	**-0.2**
NVLJ	**Novalja**	**2.32**	**29**	*e*Pn		**Pn**	**16 21 35.5**	**+0.7**
NVLJ				Sn		**Sn**	**16 22 04.5**	**+1.3**
NVLJ	**Novalja**	**2.32**	**29**	*e*Pn		**Pn**	**16 21 35.5**	**+0.7**
NVLJ				Sn		**Sn**	**16 22 04.4**	**+1.3**
ABTA	**Abfaltersbach**	**4.24**	**353**	⇑*i*Pn		**Pn**	**16 22 01.3**	**0.0**
ABTA	**Abfaltersbach**	**4.24**	**353**	Pn		**Pn**	**16 22 01.3**	**0.0**
PDG	**Podgorica**	**4.41**	**89**	*e*Pn		**Pn**	**16 22 05.9**	**+2.4**
PDG				*e*Sn		**Sn**	**16 22 54.0**	**-0.7**
PDG	**Podgorica**	**4.41**	**89**	*e*Pn		**Pn**	**16 22 05.9**	**+2.4**
PDG				*e*Sn		**Sn**	**16 22 54.0**	**-0.7**
IVAS	**Ivanjica**	**5.13**	**76**	*e*Pn		**Pn**	**16 22 15.4**	**+1.9**
IVAS	**Ivanjica**	**5.13**	**76**	*e*Pn		**Pn**	**16 22 15.4**	**+1.9**
BARS	**Barje**	**6.29**	**85**	*e*Pn		**Pn**	**16 22 31.0**	**+1.7**
BARS	**Barje**	**6.29**	**85**	*e*Pn		**Pn**	**16 22 31.0**	**+1.7**
KHC	**Kasperske Hory**	**6.59**	**2**	*e*PN		**Pn**	**16 22 34.1**	**+0.6**
KHC				*ex*		x	16 22 43.0	
KHC				*ex*		x	16 23 31.5	
KHC				*e*SN		**Sn**	**16 23 46.8**	**-1.6**
KHC	**Kasperske Hory**	**6.59**	**2**	Pn		**Pn**	**16 22 34.1**	**+0.6**
KHC				Sn		**Sn**	**16 23 46.8**	**-1.6**

*ISCJB **21** 16:23:16.8±1.4,25°.22N±0°.06×125°.16E±0°.05,h7^{km}±10^{km}, mb3.6/6, Error ellipse: s-maj=12.5km s-min=4.3km az=145.1*
*JMA **21** 16:23:18.7±0.1,24°.78N×125°.42E,h46^{km}±1^{km},M3.3*
JMA Felt I J1.
*IDC **21** 16:23:18.7±1.0,25°.55N×124°.97E,h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.4/24, mbtmp3.6/5, Error ellipse: s-maj=49.7km s-min=20.7km az=70.0*

ISC 21 16:23:18.1±1.7,25°.12N±0°.06×125°.19E±0°.04,h13^{km}±12^{km}, n20,σ0°84/25,mb3.5/6,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JMJ	**Miyako jima 2**	**0.32**	**163**	P		**Pb**	**16 23 26.1**	**+0.5**
JMJ				S		**Sb**	**16 23 31.5**	**+0.8**
JOGS	**Gusukube**	**0.41**	**151**	P		**Pg**	**16 23 25.7**	**-0.5**
JOGS				S		**Sg**	**16 23 31.0**	**-0.6**
JTJ	**Tarama**	**0.65**	**223**	P		**Pg**	**16 23 31.7**	**+0.9**
JTJ				*e*S		**Sb**	**16 23 41.1**	**+0.8**
JIJ	**Ishigaki jima**	**1.22**	**232**	P		**Pn**	**16 23 39.9**	**-0.9**
JIJ				*e*S		**Sb**	**16 23 56.0**	**-0.6**
JKRS	**Kuro-shima**	**1.39**	**231**	P		**Pn**	**16 23 43.7**	**-0.1**
JKRS				*e*S		**Sn**	**16 24 02.0**	**+0.6**
IRIF	**Iriomote-Funau**	**1.54**	**240**	P		**Pn**	**16 23 44.8**	**-0.5**
IRIF				S		**Sb**	**16 24 07.0**	**+1.0**
HATJ	**Hateruma jima**	**1.65**	**230**	P		**Pn**	**16 23 47.3**	**+0.5**
JKE	**Kume jima 2**	**1.87**	**50**	P		**Pn**	**16 23 50.4**	**+0.5**
YOJ	**Yonaguni jima**	**2.09**	**252**	P		**Pn**	**16 23 53.3**	**+0.5**
YOJ				*e*S		**Sn**	**16 24 18.5**	**-0.2**
JAGN	**Aguni-jima**	**2.36**	**51**	P		**Pn**	**16 23 57.5**	**+1.0**
JAGN				*e*S		**Sn**	**16 24 26.2**	**+0.9**
JJT2	**Tamagusuku 2**	**2.52**	**66**	P		**Pn**	**16 23 58.8**	**0.0**
JOW	**Kunigami**	**3.26**	**58**	P		**Pn**	**16 24 09.2**	**+0.3**
JTK	**Tokunoshima**	**4.29**	**51**	P		**Pn**	**16 24 22.1**	**-1.0**
JMZ	**Minamidaito 2**	**5.49**	**81**	P		Pn	16 24 33.4	-6.3
JMZ				*e*S		Sn	16 25 30.8	-12
MKAR	**Makanchi Array**	**40.27**	**314**	P		**P**	**16 30 54.5**	**-0.3**
	0.5nm,0.5s,baz=101,slow=9.7,SNR=6.0							
ZALV	**Zalesovo Beam**	**41.52**	**325**	P		**P**	**16 31 03.6**	**-1.4**
	0.4nm,0.4s,baz=96,slow=7.6,SNR=3.1							
WRA	**Warramunga Arr**	**45.67**	**168**	P		P	16 31 44.5	+5.8
	1.5nm,0.9s,baz=350,slow=8.7,SNR=6.3							
ASAR	**Alice Springs**	**49.23**	**169**	P		P	16 32 12.8	+6.4
	0.4nm,0.7s,baz=354,slow=14,SNR=3.9							
ILAR	**Eielson Array**	**66.70**	**28**	P		**P**	**16 34 09.7**	**+1.2**
	0.2nm,0.6s,baz=296,slow=10,SNR=6.0							
FINES	**FINESS Array B**	**72.47**	**330**	P		**P**	**16 34 42.7**	**-1.4**
	1.0nm,0.8s,baz=35,slow=5.1,SNR=3.5							

JMA 21 16:25:48.5±0.4,43°.98N×148°.08E,h0^{km},M3.7,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NEM2	**Nemuro 2**	**1.80**	**251**	P		Pn	16 26 20.7	-0.1
NEM2				*e*S		Sn	16 26 44.4	0.0
JRA	**Rausu**	**2.14**	**270**	P		Pn	16 26 26.0	+0.6
JRA				*e*S		Sb	16 26 54.0	-1.1
JNK	**Nakash**	**2.47**	**262**	P		Pn	16 26 30.7	+0.8
JNK				*e*S		Sn	16 27 01.9	+1.1
JAK	**Akkeshi**	**2.65**	**249**	P		Pn	16 26 33.4	+0.9
JAK				*e*S		Sb	16 27 07.6	-2.3
JAR	**Ashorobuto**	**3.20**	**259**	P		Pn	16 26 41.8	+1.7
JAR				*e*S		Sn	16 27 21.7	+2.8
JNBK	**Urakawa-nobuka**	**4.25**	**248**	P		Pn	16 26 56.6	+2.1
JKB	**Kayabe**	**5.58**	**250**	P		Pn	16 27 14.6	+1.9
JKB				*e*S		Sn	16 28 18.9	+1.4

*MOS **21** 16:32:12.6±1.0,5°.95S×147°.02E,h33^{km},mb5.0/13, Error ellipse: s-maj=12.4km s-min=7.6km az=94.9*
*ISCJB **21** 16:32:14.7±1.0,6°.03S±0°.04×147°.15E±0°.04,h55^{km}±9^{km}, mb4.8/68, MS4.1/19, Error ellipse: s-maj=7.2km s-min=6.0km az=172.4*
*NEIC **21** 16:32:14.7±0.2,5°.97S×147°.09E,mb4.8/26, Error ellipse: s-maj=7.7km s-min=4.9km az=93.0*
NEIC Felt at Bulolo and Lae.
*IDC **21** 16:32:15.3±0.5,6°.04S×147°.06E,h44^{km}±5^{km},mb4.6/24, mb1 4.6/28,mb1mx4.6/29,mbtmp4.6/28,ML4.4/5,MS4.1/22, Ms1 4.1/22,ms1mx4.0/28, Error ellipse: s-maj=11.1km s-min=6.9km az=97.0*
*BJI **21** 16:32:15.1,6°.29S×147°.31E,h77^{km},mB5.2/22,mb4.8/38, Ms5.0/10,Ms7 4.7/11*
*GCMT **21** 16:32:19.3±0.3,6°.09S×147°.21E,h44^{km},MW5.0,Moment Tensor Solution. s43,c55; s48,c68; Moment tensor: Scale 10^{16}Nm; M_{rr}3.54±.16; $M_{\theta\theta}$-3.52±.10; $M_{\phi\phi}$-0.02±.12; $M_{r\theta}$0.17±.09; $M_{\theta\phi}$1.28±.08; $M_{\phi r}$-0.64±.11; Best double couple: $M_0$3.80000×10^{16} NP1:ϕ_s278.00000°,δ43.00000°, λ76.00000°. NP2:ϕ_s118.00000°,δ49.00000°,λ103.00000°. Principal axes: T 3.6500, Plg80.0000°, Azm93.0000°; N 0.3100, Plg10.0000°, Azm289.0000°; P -3.9600,*

*Plg3.0000°, Azm198.0000°; Data Used: ll IU IC G CN. DJA **21** 16:32:21.9±1.4,6°.5S±9°×14°.7E±1°.1,h51^{km}±10^{km},M5.2/15, mB5.5/8,mb5.2/15,MLv5.5/1,Mw(mB)5.0/8*

ISC 21 16:32:17.9±0.3,6°.12S±0°.04×147°.20E±0°.05,h69^{km}±2^{km}, h68^{km}:pP-P,n187,σ1s71/228,mb4.8/66,5C-3D,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**3.27**	**181**	*e*P		**Pn**	**16 33 06.4**	**-0.3**
PMG				S		**Sn**	**16 33 46.0**	**+1.6**
PMG	**Port Moresby**	**3.27**	**181**	P		**Pn**	**16 33 06.7**	**0.0**
PMG	**Port Moresby**	**3.27**	**181**	P		**Pn**	**16 33 06.4**	**-0.3**
	49nm,0.3s,baz=7.7,slow=5.3,SNR=107							
PMG				S		**Sn**	**16 33 46.0**	**+1.6**
	206nm,0.3s,baz=65,slow=16,SNR=3.9							
PMG				LR		LR	16 34 05.4	
	comp=Z,3µm,19.9s,baz=27,slow=33							
COEN	**Coen**	**8.74**	**207**	*e*P		**Pn**	**16 34 21.2**	**-0.4**
	620nm,0.6s							
HNR	**Honiara**	**13.05**	**105**	*e*P		**Pn**	**16 35 21.8**	**+1.3**
HNR	**Honiara**	**13.05**	**105**	P		**Pn**	**16 35 21.3**	**+0.8**
	1.6nm,0.3s,baz=247,slow=7.4,SNR=5.6							
HNR				LR		LR	16 39 52.9	
	comp=Z,398nm,21.9s,baz=105,slow=35							
CTA	**Charters Tower**	**13.91**	**184**	P		**Pn**	**16 35 32.7**	**+0.7**
CTA	**Charters Tower**	**13.91**	**184**	P		**Pn**	**16 35 32.7**	**+0.7**
	1.7nm,0.3s,baz=13,slow=14,SNR=12							
CTA				LR		LR	16 40 37.4	
	comp=Z,1µm,20.2s,baz=14,slow=36							
CTAO	**Charters Tower**	**13.91**	**184**	*e*P		**Pn**	**16 35 33.3**	**+1.3**
CTAO				pmax		pmax		
	comp=Z,32nm,0.9s							
CTAO	**Charters Tower**	**13.91**	**184**	*e*P		**Pn**	**16 35 33.3**	**+1.3**
	comp=Z,32nm,0.9s							
FAKI	**Fak Fak**	**15.24**	**281**	P		**P**	**16 35 54.6**	**+1.9**
SWI	**Sorong**	**16.74**	**288**	P		**Pn**	**16 36 06.2**	**-1.9**
	comp=Z,224nm,0.8s,comp=Z,2µm							
MSAI	**Masohi**	**18.42**	**278**	P		**Pn**	**16 36 29.4**	**+0.8**
	comp=Z,33nm,1.1s,comp=Z,299nm							
WRAB	**Tennant Creek**	**18.56**	**221**	*e*P		**P**	**16 36 28.5**	**-0.9**
WRAB				pmax		pmax		
	comp=Z,67nm,0.8s							
WRAB	**Tennant Creek**	**18.56**	**221**	*e*P		**P**	**16 36 28.5**	**-0.9**
	comp=Z,67nm,0.8s							
WRA	**Warramunga Arr**	**18.57**	**221**	P		**P**	**16 36 29.0**	**-0.6**
WRA				S		**S**	**16 39 54.2**	**-3.3**
WRA				PcP		**PcP**	**16 40 57.9**	**+1.3**
WRA				pPcP			16 41 10.0	
WRA	**Warramunga Arr**	**18.57**	**221**	P		**P**	**16 36 29.0**	**-0.6**
	comp=Z,2.1nm,0.3s,baz=45,slow=12,SNR=60							
WRA				S		**S**	**16 39 54.2**	**-3.3**
	comp=Z,0.3nm,0.3s,baz=43,slow=21,SNR=5.4							
WRA				PcP		**PcP**	**16 40 57.9**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=27,slow=1.9,SNR=10							
WRA				pPcP			16 41 10.0	
	comp=Z,0.4nm,0.3s,baz=19,slow=1.6,SNR=5.8							
WRA				LR		LR	16 44 09.3	
	comp=Z,655nm,21.5s,baz=50,slow=38							
EIDS	**Eidsvold**	**19.50**	**169**	*e*P		**P**	**16 36 40.0**	**+0.4**
	comp=Z,18nm,0.6s							
GUMO	**Guam**	**19.72**	**353**	P		**P**	**16 36 41.6**	**-0.4**
GUMO	**Guam**	**19.72**	**353**	P		**P**	**16 36 41.6**	**-0.4**
	comp=Z,3.1nm,0.3s,baz=184,slow=18,SNR=6.3							
GUMO				LR		LR	16 44 02.0	
	comp=Z,307nm,18.3s,baz=149,slow=36							
LBMI	**Labuha**	**20.40**	**285**	P		Pn	16 36 53.0	+0.9
	comp=Z,134nm,1.3s,comp=Z,2µm							
AS31	**Alice Springs**	**21.63**	**215**	*e*P		**P**	**16 37 02.3**	**-0.4**
ASAR	**Alice Springs**	**21.63**	**215**	P		**P**	**16 37 02.6**	**-0.1**
ASAR				S		**S**	**16 41 01.0**	**+2.3**
ASAR	**Alice Springs**	**21.63**	**215**	P		**P**	**16 37 02.6**	**-0.1**
	comp=Z,19nm,0.5s,baz=49,slow=8.7,SNR=128							
ASAR				S		**S**	**16 41 01.0**	**+2.3**
	comp=Z,13nm,0.8s,baz=37,slow=22,SNR=7.7							
ASAR				LR		LR	16 46 21.6	
	comp=Z,832nm,18.1s,baz=38,slow=39							
MNI	**Manado**	**23.56**	**288**	P		**P**	**16 37 22.1**	**-0.4**
	comp=Z,200nm,0.7s,comp=Z,2µm							
FITZ	**Fitzroy Crossi**	**24.18**	**239**	*e*P		**P**	**16 37 27.3**	**-0.7**
	comp=Z,95nm,0.8s							
FITZ	**Fitzroy Crossi**	**24.18**	**239**	P		**P**	**16 37 27.4**	**-0.7**
	comp=Z,78nm,0.8s,baz=64,slow=10,SNR=124							
FITZ				LR		LR	16 48 51.6	
	comp=Z,609nm,18.4s,baz=68,slow=41							
DZM	**Mont Dzumac**	**24.44**	**132**	*e*P		**P**	**16 37 30.4**	**-0.1**
	comp=Z,59nm,0.9s							
DZM				*e*S		**S**	**16 41 46.2**	**+0.3**
	comp=Z,360nm,28.1s							
DZM				*e*LR		LR	16 43 38.9	
	comp=Z,2µm,24.7s							
DZM	**Mont Dzumac**	**24.44**	**132**	P		**P**	**16 37 30.4**	**-0.1**
DZM	**Mont Dzumac**	**24.44**	**132**	P		**P**	**16 37 30.4**	**-0.1**
	comp=Z,19nm,0.8s,baz=254,slow=22,SNR=15							
ARMA	**Armidale**	**24.53**	**171**	*e*P		**P**	**16 37 31.9**	**+0.7**
	comp=Z,76nm,1.0s							
MMRI	**Maumere**	**24.88**	**263**	P		**P**	**16 37 34.2**	**-0.3**
	comp=Z,95nm,1.0s,comp=Z,1µm							
LUWI	**Luwuk**	**24.89**	**281**	P		**P**	**16 37 36.9**	**+2.3**
	comp=Z,482nm,1.0s,comp=Z,4µm							
DAV	**Davao City (W)**	**25.24**	**301**	LR		LR	16 46 57.2	
	comp=Z,76nm,20.6s,baz=214,slow=35							
STKA	**Stephens Creek**	**26.16**	**191**	*e*P		**P**	**16 37 45.6**	**-0.3**
	comp=Z,3.5nm,0.7s							
STKA	**Stephens Creek**	**26.16**	**191**	P		**P**	**16 37 46.2**	**+0.3**
	comp=Z,16nm,0.6s,baz=347,slow=7.9,SNR=23							
STKA				LR		LR	16 48 37.8	
	comp=Z,1µm,19.7s,baz=20,slow=38							
WSI	**Waingapu**	**26.87**	**261**	P		**P**	**16 37 52.4**	**-0.1**
KAPI	**Kappang**	**27.34**	**271**	*e*P		**P**	**16 37 55.8**	**-0.9**
KAPI	**Kappang**	**27.34**	**271**	P		**P**	**16 37 55.2**	**-1.5**
	comp=Z,8.2nm,0.7s,baz=228,slow=17,SNR=7.7							
BBOO	**Buckleboo**	**28.51**	**200**	*e*P		**P**	**16 38 06.3**	**-0.7**
	comp=Z,314nm,0.8s							
FORT	**Forrest**	**30.41**	**214**	P		**P**	**16 38 24.4**	**+0.6**
	comp=Z,23nm,0.7s							
MBWA	**Marble Bar**	**30.51**	**238**	*e*P		**P**	**16 38 24.7**	**-0.1**
	comp=Z,14nm,0.7s							
NWAO	**Narrogin (SRO)**	**38.58**	**222**	LR		LR	16 56 55.6	
	comp=Z,1µm,18.6s,baz=45,slow=38							
AFI	**Afiamalu**	**41.08**	**104**	P		**P**	**16 39 56.7**	**+1.3**
AFI	**Afiamalu**	**41.08**	**104**	P		**P**	**16 39 56.7**	**+1.3**
	comp=Z,33nm,0.9s,baz=340,slow=12,SNR=2.3							
JNU	**Nakatsue**	**41.99**	**339**	P		**P**	**16 40 01.1**	**-1.4**
JNU	**Nakatsue**	**41.99**	**339**	P		**P**	**16 40 01.1**	**-1.4**
	comp=Z,21nm,0.8s,baz=145,slow=6.9,SNR=7.0							
RPZ	**Rata Peaks**	**42.92**	**154**	*e*P		**P**	**16 40 11.0**	**+1.1**
RPZ	**Rata Peaks**	**42.92**	**154**	P		**P**	**16 40 10.4**	**+0.5**
	comp=Z,9.2nm,0.5s,baz=302,slow=4.0,SNR=15							
MJAR	**Matsushiro Arr**	**43.27**	**349**	P		**P**	**16 40 11.5**	**-1.2**
MJAR	**Matsushiro Arr**	**43.27**	**349**	P		**P**	**16 40 11.5**	**-1.2**
	comp=Z,17nm,1.0s,baz=179,slow=8.3,SNR=24							
MJAR				LR		LR	16 56 29.7	
	comp=Z,124nm,21.5s,baz=185,slow=34							
MAJO	**Matsushiro**	**43.27**	**349**	*e*P		**P**	**16 40 12.2**	**-0.5**
MAJO				pmax		pmax		
	comp=Z,48nm,1.1s							
MAJO	**Matsushiro**	**43.27**	**349**	*e*P		**P**	**16 40 12.2**	**-0.5**
	comp=Z,48nm,1.1s							
MAT	**Matsushiro**	**43.27**	**349**	P		**P**	**16 40 11.8**	**-0.9**
MAT				*e*S		S	16 46 27.0	-8.1
QIZ	**Qiongzhong**	**44.49**	**305**	P		**P**	**16 40 22.5**	**-0.3**
QIZ				sP		**sP**	**16 40 46.6**	**-1.3**
QIZ				S		**S**	**16 46 54.3**	**+1.0**
QIZ				pmax		pmax		
	comp=Z,11nm,1.9s							
KSRS	**Korea Array**	**46.94**	**339**	P		**P**	**16 40 41.5**	**-0.2**
	comp=Z,7.8nm,0.8s,baz=158,slow=9.1,SNR=21							
KSRS				LR		LR	16 57 01.5	
	comp=Z,196nm,20.1s,baz=157,slow=32							
KSAR	**Wonju Array Be**	**46.94**	**339**	P		**P**	**16 40 41.5**	**-0.3**
IPM	**Ipoh**	**47.29**	**282**	*e*P		**P**	**16 40 44.9**	**-0.1**
	comp=Z,26nm,1.0s							
WHN	**Wuhan**	**48.15**	**321**	P		**P**	**16 40 54.3**	**+2.9**
ASAJ	**Asahikawa**	**50.18**	**356**	P		**P**	**16 41 06.9**	**+0.3**
ASAJ	**Asahikawa**	**50.18**	**356**	P		**P**	**16 41 06.9**	**+0.3**
	comp=Z,20nm,1.0s,baz=118,slow=24,SNR=6.5							
GYA	**Guiyang**	**50.91**	**311**	P		**P**	**16 41 14.3**	**+1.7**
GYA				pP		**pP**	**16 41 32.4**	**+2.3**
GYA				sP		**sP**	**16 41 39.9**	**+2.0**
GYA				PP		**PP**	**16 43 11.8**	**+2.1**
GYA				ScP		**ScP**	**16 46 17.6**	**-1.1**
GYA				S		S	16 48 31.3	+6.9
GYA				pmax		pmax		
	comp=Z,10.0nm,0.9s							
GYA				pmax		pmax		
	comp=Z,90nm,5.1s							
USRK	**Ussuriysk Arra**	**51.93**	**346**	P		**P**	**16 41 19.4**	**-0.2**
	comp=Z,6.7nm,0.8s,baz=181,slow=8.5,SNR=8.2							
USRK				LR		LR	17 01 35.0	
	comp=Z,57nm,18.8s,baz=213,slow=34							
KMI	**Kunming**	**53.23**	**308**	P		**P**	**16 41 30.8**	**+0.8**
KMI				S		**S**	**16 48 56.6**	**+0.2**
KMI				pmax		pmax		
	comp=Z,9.0nm,1.2s							
RAR	**Rarotonga**	**53.41**	**112**	P		**P**	**16 41 32.4**	**+1.3**
RAR	**Rarotonga**	**53.41**	**112**	P		**P**	**16 41 32.4**	**+1.3**
	comp=Z,8.8nm,0.7s,baz=270,slow=10,SNR=4.1							
CN2	**Changchun**	**53.44**	**340**	*e*P		**P**	**16 41 33.8**	**+2.9**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
CM31	**Chiang Mai Arr**	**53.48**	**298**	P		**P**	**16 41 30.7**	**-0.9**
	comp=Z,3.2nm,0.6s							
CMAR	**Chiang Mai Arr**	**53.48**	**298**	P		**P**	**16 41 31.2**	**-0.4**
CMAR				pP		pP	16 41 42.8	-6.6
CMAR				⇑*e*			17 12 04.8	
CMAR	**Chiang Mai Arr**	**53.48**	**298**	P		**P**	**16 41 31.2**	**-0.4**
	comp=Z,2.8nm,0.9s,baz=122,slow=6.0,SNR=14							
CMAR				pP		pP	16 41 42.8	-6.6
	comp=Z,2.6nm,0.6s,baz=122,slow=5.5,SNR=7.9							
CMAR				LR		LR	17 07 34.0	
	comp=Z,94nm,18.7s,baz=296,slow=40							
CMAR				PKP2bc			17 12 04.8	
	comp=Z,0.4nm,0.3s,baz=281,slow=3.6,SNR=4.1							
XAN	**Xi'an**	**53.90**	**320**	P		**P**	**16 41 33.1**	**-1.4**
XAN				pmax		pmax		
	comp=Z,3.0nm,1.2s							
XAN				pmax		pmax		
	comp=Z,20nm,4.4s							
BJI	**Beijing**	**54.10**	**331**	P		**P**	**16 41 34.3**	**-1.5**
BJI				pmax		pmax		
	comp=Z,19nm,0.9s							
BJI				pmax		pmax		
	comp=Z,220nm,4.5s							
CD2	**Chengdu**	**55.50**	**314**	P		**P**	**16 41 47.0**	**+0.8**
CD2				pP		**pP**	**16 42 04.6**	**+0.7**
CD2				sP		**sP**	**16 42 12.6**	**+0.9**
CD2				PcP		**PcP**	**16 42 46.0**	**+0.5**
CD2				PP		**PP**	**16 43 53.3**	**+2.4**
CD2				PcS		PcS	16 46 37.3	-8.5
CD2				S		**S**	**16 49 25.4**	**-1.1**
CD2				sS		**sS**	**16 49 55.8**	**-0.8**
CD2				SS		**SS**	**16 53 11.0**	**-1.5**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
CD2				pmax		pmax		
	comp=Z,120nm,5.4s							
HHC	**Hu-ho-hao-te**	**57.04**	**328**	*e*P		**P**	**16 41 57.8**	**+0.8**
HHC				pP		**pP**	**16 42 13.9**	**-0.9**
HHC				sP		**sP**	**16 42 21.4**	**-1.1**
HHC				S		**S**	**16 49 46.3**	**-0.4**
HHC				ScS		**ScS**	**16 51 39.8**	**-0.5**
HHC				pmax		pmax		
	comp=Z,33nm,0.7s							
HHC				pmax		pmax		
	comp=Z,250nm,6.9s							
HHC				LR		LR		
	comp=N,310nm,16.6s							
HHC				LR		LR		
	comp=E,430nm,16.2s							
HHC				LR		LR		
	comp=Z,380nm,16.1s							
LZH	**

ZAA0	**Zalesovo Array**	**79.22**	**328**	*eP*		**P**	**16 44 12.8**	**-2.7**
ZALV	**Zalesovo Beam**	**79.22**	**328**	P		**P**	**16 44 13.6**	**-1.9**
ZALV	**Zalesovo Beam**	**79.22**	**328**	P		**P**	**16 44 13.6**	**-1.9**
ZALV				⇑*e*			17 11 13.4	
ZALV	**Zalesovo Beam**	**79.22**	**328**	P		**P**	**16 44 13.6**	**-1.9**
	comp=Z,4.0nm,0.5s,baz=108,slow=5.2,SNR=20							
ZALV				PKP2bc			17 11 13.4	
	baz=311,slow=3.4,SNR=4.7							
ZALV				LR		LR	17 18 27.7	
	comp=Z,93nm,20.8s,baz=165,slow=35							
KSH	**Kashi**	**79.61**	**312**	*eP*		**P**	**16 44 19.8**	**+1.7**
KSH				*e*PcP		**PcP**	**16 44 27.0**	**+1.2**
KSH				pP		**pP**	**16 44 40.4**	**+3.6**
KSH				sP		**sP**	**16 44 48.3**	**+4.0**
KSH				*e*PP		**PP**	**16 47 23.0**	**+3.3**
KSH				S		**S**	**16 54 14.8**	**-0.2**
KSH				SKS		**SKSac**	**16 54 24.8**	**-4.3**
KSH				ScS		**SKKSac**	**16 54 33.6**	**+2.8**
KSH				sS		**sS**	**16 54 50.6**	**+3.8**
KSH				SS		**SS**	**16 59 28.9**	**+4.2**
KSH				pmax		pmax		
	comp=Z,2.0nm,0.2s							
KSH				LR		LR		
	comp=Z,360nm,5.2s							
KURK	**Kurchatov**	**81.42**	**323**	*d* iP		**P**	**16 44 26.2**	**-1.2**
KURK				pmax		pmax		
	comp=Z,7.0nm,1.7s							
KURK	**Kurchatov**	**81.42**	**323**	*eP*		**P**	**16 44 25.8**	**-1.6**
	comp=Z,4.3nm,1.0s							
AAK	**Ala-Archa**	**81.57**	**315**	*eP*		**P**	**16 44 27.8**	**-0.8**
AAK				pmax		pmax		
	comp=Z,8.0nm,0.7s							
AAK	**Ala-Archa**	**81.57**	**315**	*eP*		**P**	**16 44 27.1**	**-1.4**
	comp=Z,3.1nm,0.6s							
EKS2	**Erkin-Say**	**82.08**	**314**	*eP*		**P**	**16 44 30.2**	**-1.0**
EKS2				pmax		pmax		
	comp=Z,4.0nm,0.7s							
EKS2	**Erkin-Say**	**82.08**	**314**	*eP*		**P**	**16 44 30.2**	**-1.0**
	comp=Z,3.7nm,0.7s							
MAW	**Mawson**	**82.21**	**203**	P		**P**	**16 44 29.9**	**-1.4**
MAW	**Mawson**	**82.21**	**203**	P		**P**	**16 44 29.9**	**-1.4**
	comp=Z,5.1nm,0.6s,baz=107,slow=7.4,SNR=17							
MAW				LR		LR	17 17 28.6	
	comp=Z,137nm,20.8s,baz=284,slow=33							
TRF	**Thorofare Moun**	**83.59**	**24**	P		**P**	**16 44 37.1**	**-1.6**
	comp=Z,4.8nm,0.8s							
SML	**Sawmill**	**83.67**	**26**	*eP*		**P**	**16 44 38.5**	**-0.4**
SML				pmax		pmax		
	comp=Z,5.0nm,1.1s							
SML	**Sawmill**	**83.67**	**26**	*eP*		**P**	**16 44 38.5**	**-0.4**
	comp=Z,4.9nm,1.1s							
KKAR	**Karatay Array**	**84.52**	**314**	*eP*		**P**	**16 44 42.2**	**-1.4**
KKAR				pmax		pmax		
	comp=Z,16nm,1.4s							
KKAR	**Karatay Array**	**84.52**	**314**	*eP*		**P**	**16 44 42.2**	**-1.4**
	comp=Z,16nm,1.4s							
BMRM	**Bremner River**	**84.97**	**27**	*eP*		**P**	**16 44 45.1**	**-0.4**
	comp=Z,9.6nm,1.0s							
COLA	**College**	**85.18**	**23**	*eP*		**P**	**16 44 44.3**	**-2.1**
COLA				pmax		pmax		
	comp=Z,8.0nm,0.8s							
COLA	**College**	**85.18**	**23**	*eP*		**P**	**16 44 44.3**	**-2.1**
	comp=Z,8.1nm,0.8s							
COLD	**Coldfoot**	**85.38**	**20**	P		**P**	**16 44 46.2**	**-1.1**
	comp=Z,4.6nm,0.9s							
ILAR	**Eielson Array**	**85.51**	**23**	P		**P**	**16 44 46.0**	**-2.1**
ILAR	**Eielson Array**	**85.51**	**23**	P		**P**	**16 44 46.0**	**-2.1**
	comp=Z,8.0nm,0.6s,baz=253,slow=5.0,SNR=71							
ILAR				LR		LR	17 18 09.7	
	comp=Z,97nm,20.1s,baz=253,slow=32							
DOT	**Dot Lake**	**86.21**	**25**	*eP*		**P**	**16 44 50.8**	**-0.8**
	comp=Z,8.8nm,0.9s							
BRVK	**Borovoye**	**87.05**	**324**	*eP*		**P**	**16 44 54.0**	**-1.9**
BRVK				pmax		pmax		
	comp=Z,3.0nm,0.8s							
BRVK	**Borovoye**	**87.05**	**324**	*eP*		**P**	**16 44 53.8**	**-2.1**
	comp=Z,4.3nm,1.0s							
EGAK	**Eagle**	**87.79**	**24**	*eP*		**P**	**16 44 58.5**	**-0.7**
	comp=Z,10nm,1.1s							
INK	**Inuvik**	**91.69**	**21**	P		**P**	**16 45 15.9**	**-1.4**
INK	**Inuvik**	**91.69**	**21**	P		**P**	**16 45 15.9**	**-1.4**
	comp=Z,1.7nm,0.9s,baz=262,slow=8.9,SNR=6.5							
ABKAR	**Akbulak array**	**92.80**	**319**	P		P	16 45 19.4	-3.5
	comp=Z,1.9nm,0.7s							
NVAR	**Mina Array Bea**	**97.28**	**52**	P		Pdif	16 45 44.6	+0.6
NVAR	**Mina Array Bea**	**97.28**	**52**	P		Pdif	16 45 44.6	+0.6
	comp=Z,0.4nm,0.7s,baz=254,slow=6.4,SNR=4.3							
NEW	**Newport**	**98.31**	**42**	LR		LR	17 24 13.3	
	comp=Z,71nm,19.1s,baz=87,slow=32							
YKA	**Yellowknife Ar**	**99.18**	**28**	P		**Pdif**	**16 45 51.0**	**-0.6**
YKA				pP		pP	16 46 03.9	-6.8
YKA				PKKPbc		**PKKPbc**	**17 02 15.6**	**-3.4**
YKA				PKKP		PKKPdf	17 02 28.9	+6.5
YKA	**Yellowknife Ar**	**99.18**	**28**	P		**Pdif**	**16 45 50.9**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=274,slow=4.7,SNR=21							
YKA				pP		pP	16 46 03.9	-6.8
	comp=Z,0.8nm,0.9s,baz=271,slow=4.8,SNR=5.0							
YKA				PKKPbc		**PKKPbc**	**17 02 15.6**	**-3.4**
	comp=Z,0.6nm,0.7s,baz=87,slow=2.8,SNR=13							
YKA				PKKP		PKKPdf	17 02 28.9	+6.5
	comp=Z,0.4nm,0.7s,baz=91,slow=2.5,SNR=5.1							
PDAR	**Pinedale Array**	**103.85**	**48**	Pdif		**Pdif**	**16 46 11.9**	**-1.3**
PDAR	**Pinedale Array**	**103.85**	**48**	Pdiff		**Pdif**	**16 46 11.9**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=282,slow=2.7,SNR=4.0							
TXAR	**Lajitas Array**	**109.64**	**61**	PKKPbc	PKKPbc		17 01 46.5	+0.1
TXAR				PKKP		**PKKPab**	**17 01 59.1**	**+1.6**
TXAR	**Lajitas Array**	**109.64**	**61**	PKKPbc	PKKPbc		17 01 46.5	+0.1
	comp=Z,0.2nm,0.5s,baz=111,slow=5.6,SNR=4.5							
TXAR				PKKP		**PKKPab**	**17 01 59.1**	**+1.6**
	comp=Z,1.1nm,0.8s,baz=115,slow=3.4,SNR=10							
BOSA	**Boshof**	**114.34**	**235**	PKP		PKPdf	16 50 50.5	-0.3
BOSA	**Boshof**	**114.34**	**235**	PKP		PKPdf	16 50 50.5	-0.3
	comp=Z,4.3nm,0.8s,baz=73,slow=1.1,SNR=6.4							
VYHS	**Vyhne**	**119.31**	**323**	*e*PKIKP		**PKPdf**	**16 51 03.7**	**+4.2**
VYHS	**Vyhne**	**119.31**	**323**	*e*PKP		**PKPdf**	**16 51 03.7**	**+4.2**
BRG	**Berggiesshubel**	**120.91**	**327**	*eP*		**PKPdf**	**16 51 04.1**	**+1.6**
	comp=Z,5.2nm,1.0s							
BRG	**Berggiesshubel**	**120.91**	**327**	*e*PKIKP		**PKPdf**	**16 51 04.1**	**+1.6**
BRG				pmax		pmax		
	comp=Z,21nm,1.0s							
PLCA	**Paso Flores**	**121.91**	**147**	PKP		**PKPdf**	**16 51 05.7**	**+0.8**
PLCA				pPKP		**pPKPdf**	**16 51 17.9**	**-6.7**
PLCA	**Paso Flores**	**121.91**	**147**	PKP		**PKPdf**	**16 51 05.7**	**+0.8**
	comp=Z,3.1nm,0.7s,baz=206,slow=1.3,SNR=12							
PLCA				pPKP		**pPKPdf**	**16 51 17.9**	**-6.7**
	comp=Z,3.9nm,0.7s,baz=250,slow=2.5,SNR=7.0							
KHC	**Kasperske Hory**	**122.04**	**326**	*e*PKIKP		**PKPdf**	**16 51 06.2**	**+1.4**
KHC	**Kasperske Hory**	**122.04**	**326**	*e*PKPdf		**PKPdf**	**16 51 06.2**	**+1.4**
GERES	**GERESS Array B**	**122.12**	**326**	PKP		**PKPdf**	**16 51 03.3**	**-1.7**
GERES				PKKPbc		**PKKPab**	**17 01 01.5**	**-0.8**
GERES	**GERESS Array B**	**122.12**	**326**	PKP		**PKPdf**	**16 51 03.3**	**-1.7**
	comp=Z,1.3nm,0.6s,baz=81,slow=1.8,SNR=11							
GERES				PKKPbc		**PKKPab**	**17 01 01.5**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=195,slow=3.0,SNR=3.7							
TSUM	**Tsumeb**	**124.37**	**242**	*e*PKPdf		**PKPdf**	**16 51 10.7**	**+0.5**
CFAA	**Coronel Fontan**	**129.50**	**140**	PKP		**PKPdf**	**16 51 20.2**	**+0.6**
CFAA				pPKP		**pPKPdf**	**16 51 32.3**	**-7.1**
CFAA	**Coronel Fontan**	**129.50**	**140**	PKP		**PKPdf**	**16 51 20.2**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=269,slow=3.4,SNR=12							
CFAA				pPKP		**pPKPdf**	**16 51 32.3**	**-7.1**
	comp=Z,0.7nm,0.8s,baz=292,slow=3.7,SNR=5.9							
ATAH	**Atahualpa**	**132.64**	**105**	PKP		**PKPdf**	**16 51 26.6**	**+0.1**
ATAH	**Atahualpa**	**132.64**	**105**	PKP		**PKPdf**	**16 51 26.6**	**+0.1**
	comp=Z,7.9nm,0.7s,baz=170,slow=3.6,SNR=5.9							
LPAZ	**La Paz**	**138.55**	**123**	*e*PKPpre	PKPpre		16 51 28.3	
LPAZ				PKPpre	PKPpre		16 51 29.6	
LPAZ				*e*PKPdf		**PKPdf**	**16 51 38.0**	**+0.3**
LPAZ	**La Paz**	**138.55**	**123**	PKhKP	PKPpre		16 51 29.6	
	comp=Z,4.2nm,0.8s,baz=228,slow=2.3,SNR=19							
LPAZ				PKP		**PKPdf**	**16 51 38.0**	**+0.3**
	comp=Z,11nm,0.9s,baz=232,slow=3.3,SNR=18							
CPUP	**Villa Florida**	**139.92**	**145**	PKPpre	PKPpre		16 51 28.8	
CPUP				PKP		**PKPdf**	**16 51 39.0**	**-0.1**
CPUP	**Villa Florida**	**139.92**	**145**	PKhKP	PKPpre		16 51 28.8	
	comp=Z,0.5nm,0.4s,baz=238,slow=5.8,SNR=3.6							
CPUP				PKP		**PKPdf**	**16 51 39.0**	**-0.1**
	comp=Z,4.0nm,0.7s,baz=250,slow=1.7,SNR=7.1							
SIV	**San Ignacio**	**144.42**	**128**	PKP		PKPbc	16 51 46.2	+0.2
SIV	**San Ignacio**	**144.42**	**128**	PKP		PKPbc	16 51 46.2	+0.2
	comp=Z,15nm,0.6s,baz=250,slow=4.1,SNR=63							
TOA0	**Torodi Ar. Sit**	**145.31**	**284**	*e*PKPdf		**PKPbc**	**16 51 47.9**	**-1.0**
TORD	**Torodi Ar. Bea**	**145.31**	**284**	PKPbc		**PKPbc**	**16 51 48.2**	**-0.7**
TORD				pPKPbc		pPKPbc	16 52 02.0	-6.5
TORD	**Torodi Ar. Bea**	**145.31**	**284**	PKPbc		**PKPbc**	**16 51 48.2**	**-0.7**
	comp=Z,10.0nm,0.6s,baz=77,slow=3.4,SNR=74							
TORD				pPKPbc		pPKPbc	16 52 02.0	-6.5
	comp=Z,16nm,0.7s,baz=86,slow=3.3,SNR=12							
SAML	**Samuel**	**146.22**	**116**	*e*PKPdf		**PKPdf**	**16 51 50.9**	**+0.3**
SPB	**Sao Paulo**	**147.19**	**155**	*e*PKPbc		**PKPbc**	**16 51 54.6**	**+0.4**
DBIC	**Dimbokro**	**152.23**	**273**	PKP		**PKPdf**	**16 51 57.9**	**-2.2**
DBIC	**Dimbokro**	**152.23**	**273**	PKP		**PKPdf**	**16 51 57.9**	**-2.2**
	comp=Z,12nm,0.7s,baz=91,slow=3.7,SNR=6.8							
BDFB	**Brasilia**	**153.65**	**145**	PKP		**PKPdf**	**16 52 02.9**	**+0.6**
BDFB				PKPbc		**PKPbc**	**16 52 09.9**	**-0.3**
BDFB				PKPab		**PKPab**	**16 52 23.1**	**+0.4**
BDFB	**Brasilia**	**153.65**	**145**	PKP		**PKPdf**	**16 52 02.9**	**+0.6**
	comp=Z,13nm,0.9s,baz=173,slow=2.0,SNR=15							
BDFB				PKPbc		**PKPbc**	**16 52 09.9**	**-0.3**
	comp=Z,21nm,0.8s,baz=165,slow=2.6,SNR=17							
BDFB				PKPab		**PKPab**	**16 52 23.1**	**+0.4**
	comp=Z,13nm,0.5s,baz=245,slow=1.2,SNR=13							

DJA 21 16:40:38.9±0.8, 2°S±10°×12°3E±1°1, h101km±8km, M4.0/4, MLv4.0/4, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.66**	**10**	P		Pn	16 40 54.4	-1.7
LUWI				S		Sn	16 41 12.8	+3.8
MRSI	**Marisa**	**2.28**	**342**	P		Pn	16 41 14.8	-0.4
KMSI	**Cibinong**	**2.62**	**30**	P		Pn	16 41 17.8	-1.8
SPSI	**Sidrap Palu**	**3.66**	**232**	P		Pn	16 41 33.9	+0.4
MNI	**Manado**	**3.81**	**35**	P		Pn	16 41 37.1	+1.5

IDC 21 16:47:47.0±2.4, 28°.17N×54°.05E, h0km, mb3.4/6, mb1 3.5/6, mb1mx3.3/26, mbtmp3.4/6, Error ellipse: s-maj=61.6km s-min=26.1km az=157.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**20.43**	**310**	P		P	16 52 26.7	+0.6
	0.2nm,0.6s,baz=114,slow=11,SNR=2.3							
MKAR	**Makanchi Array**	**28.88**	**42**	P		P	16 53 47.8	+0.3
	0.2nm,0.5s,baz=230,slow=9.2,SNR=3.4							
ZALV	**Zalesovo Beam**	**34.19**	**33**	P		P	16 54 33.5	-0.4
	0.5nm,0.5s,baz=231,slow=10,SNR=3.6							
FINES	**FINESS Array B**	**38.14**	**339**	P		P	16 55 07.0	-0.6
	1.4nm,0.9s,baz=126,slow=5.9,SNR=4.3							
TORD	**Torodi Ar. Bea**	**50.85**	**264**	P		P	16 56 49.6	-0.2
	0.3nm,0.5s,baz=65,slow=7.4,SNR=5.4							
YKA	**Yellowknife Ar**	**89.20**	**355**	P		P	17 00 44.5	+0.2
	0.1nm,0.4s,baz=14,slow=6.4,SNR=2.8							

ISCJB ***21*** *17:13:21.6±0.5, 40°.83N±0°.03×30°.79E±0°.04, h9km±5km, Error ellipse: s-maj=6.4km s-min=4.7km az=136.2*
CSEM ***21*** *17:13:21.7±0.1, 40°.82N×30°.83E, h10km, MD2.8, Error ellipse: s-maj=3.5km s-min=2.9km az=143.0*
ISK ***21*** *17:13:21.2, 40°.80N×30°.83E, h10km, MD2.8*
DDA ***21*** *17:13:22.4, 40°.80N×30°.78E, h7km, MD2.8*

ISC 21 17:13:21.9±0.9, 40°.82N±0°.03×30°.83E±0°.03, h16km±5km, n30, σ0°61/42, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HENT	**Hendek**	**0.05**	**89**	*i* P		**Pg**	**17 13 24.9**	**0.0**
HENT				*i* S		**Sg**	**17 13 26.9**	**-0.1**
HENT	**Hendek**	**0.05**	**89**	*i* P		**Pg**	**17 13 24.9**	**0.0**
HENT				*i* S		**Sg**	**17 13 26.9**	**-0.1**
MDUB	**Mudurnu**	**0.45**	**142**	*e*PG		**Pg**	**17 13 30.5**	**-0.4**
MDUB				*e*SG		**Sg**	**17 13 36.5**	**-0.4**
MDUB	**Mudurnu**	**0.45**	**142**	*e*Pg		**Pg**	**17 13 30.5**	**-0.4**
MDUB				*e*Sg		**Sg**	**17 13 36.6**	**-0.4**
GULT	**Gulveren**	**0.46**	**212**	*e*PG		**Pg**	**17 13 30.6**	**-0.5**
GULT				*e*SG		**Sg**	**17 13 36.9**	**-0.5**
GULT	**Gulveren**	**0.46**	**212**	*e*Pg		**Pg**	**17 13 30.6**	**-0.5**
GULT				*e*Sg		**Sg**	**17 13 36.9**	**-0.5**
GPA	**Golpazari**	**0.67**	**217**	*e*PG		**Pg**	**17 13 33.4**	**-1.5**
GPA	**Golpazari**	**0.67**	**217**	*e*Pg		**Pg**	**17 13 33.4**	**-1.5**
KDZE	**Karadeniz Ereo**	**0.67**	**43**	*e*PG		**Pg**	**17 13 34.3**	**-0.8**
KDZE				*e*SG		**Sb**	**17 13 44.6**	**+0.4**
KDZE	**Karadeniz Ereo**	**0.67**	**43**	*e*Pg		**Pg**	**17 13 34.3**	**-0.8**
KDZE				*e*Sg		**Sb**	**17 13 44.7**	**+0.4**
SILT	**Sile**	**0.96**	**291**	*e*PG		**Pn**	**17 13 40.8**	**+0.2**
SILT	**Sile**	**0.96**	**291**	*e*Pg		**Pn**	**17 13 40.8**	**+0.2**
CAVI	**Cavuskoy**	**0.98**	**231**	*e*PG		**Pg**	**17 13 40.1**	**-0.7**
CAVI				*e*SG		**Sb**	**17 13 53.6**	**+0.5**
CAVI	**Cavuskoy**	**0.98**	**231**	*e*Pg		**Pg**	**17 13 40.1**	**-0.7**
CAVI				*e*Sg		**Sb**	**17 13 53.6**	**+0.5**
YLV	**Yalova**	**1.14**	**258**	*e*PN		**Pg**	**17 13 43.8**	**-0.1**
YLV	**Yalova**	**1.14**	**258**	*e*Pn		**Pg**	**17 13 43.8**	**-0.1**
ESKT	**Eskisehir**	**1.30**	**179**	*e*PN		**Pn**	**17 13 45.8**	**+0.4**
ESKT	**Eskisehir**	**1.30**	**179**	*e*Pn		**Pn**	**17 13 45.8**	**+0.4**
SEYT	**Eskypehyr**	**1.30**	**179**	*i* P		**Pg**	**17 13 46.6**	**-0.4**
SEYT				*i* S		**Sg**	**17 14 04.7**	**+0.8**
SEYT	**Eskypehyr**	**1.30**	**179**	*i* P		**Pg**	**17 13 46.6**	**-0.4**
SEYT				*i* S		**Sg**	**17 14 04.7**	**+0.8**
ISK	**Istanbul-Kandi**	**1.37**	**281**	*e*PN		**Pn**	**17 13 46.5**	**+0.3**
ISK	**Istanbul-Kandi**	**1.37**	**281**	*e*Pn		**Pn**	**17 13 46.5**	**+0.3**
SAFT	**Safranbolu**	**1.46**	**73**	*e*PN		**Pb**	**17 13 48.4**	**-0.3**
SAFT	**Safranbolu**	**1.46**	**73**	*e*Pn		**Pb**	**17 13 48.4**	**-0.3**
ARMT	**Armutlu**	**1.52**	**261**	*e*PN		**Pn**	**17 13 48.8**	**+0.4**
ARMT	**Armutlu**	**1.52**	**261**	*e*Pn		**Pn**	**17 13 48.8**	**+0.4**
TVSB	**Tavsanli**	**1.73**	**218**	*e*PN		**Pn**	**17 13 52.0**	**+0.7**
TVSB	**Tavsanli**	**1.73**	**218**	*e*Pn		**Pn**	**17 13 52.0**	**+0.7**
CTKS	**Kestanelik-??a**	**1.81**	**284**	*e*PN		**Pn**	**17 13 53.1**	**+0.8**
CTKS	**Kestanelik-??a**	**1.81**	**284**	*e*Pn		**Pn**	**17 13 53.1**	**+0.8**

DDA ***21*** *17:17:35.5, 39°.12N×42°.11E, h4km, MD3.3*
CSEM ***21*** *17:17:36.3±0.2, 39°.09N×41°.98E, h2km, MD3.6, Error ellipse: s-maj=5.2km s-min=4.5km az=17.0*
ISK ***21*** *17:17:36.1, 39°.07N×41°.96E, h6km, MD3.6*

ISC 21 17:17:37.4±1.0, 39°.06N±0°.02×41°.97E±0°.02, h8km±9km, n63, σ1°39/72, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VRTB	**Varto-Mus**	**0.41**	**285**	*e*PG		**Pg**	**17 17 44.3**	**-1.2**
VRTB	**Varto-Mus**	**0.41**	**285**	*e*Pg		**Pg**	**17 17 44.3**	**-1.2**
BTMT	**Batman**	**0.94**	**204**	*e*PN		**Pn**	**17 17 57.3**	**+0.3**
BTMT	**Batman**	**0.94**	**204**	*e*Pn		**Pn**	**17 17 57.3**	**+0.3**
ERZM	**Erzurum**	**0.97**	**332**	*i* P		**Pg**	**17 17 53.9**	**-2.2**
ERZM	**Erzurum**	**0.97**	**332**	*i* P		**Pg**	**17 17 53.9**	**-2.2**
EZM	**Erzurum**	**0.97**	**331**	*e*PG		**Pg**	**17 17 54.9**	**-1.2**
HOMI	**Horasan**	**0.99**	**357**	*i* P		Pg	17 17 52.5	-4.0
HOMI				*i* S		**Sn**	**17 18 15.7**	**+3.5**
BNGB	**Bing¨¶l**	**1.00**	**267**	*e*PG		**Pg**	**17 17 55.1**	**-1.7**
BNGB				*e*SG		**Sg**	**17 18 10.5**	**+0.7**
GEVA	**Gevas**	**1.13**	**131**	*i* P		**Pg**	**17 17 57.3**	**-1.9**
GEVA				*i* S		**Sn**	**17 18 16.9**	**+1.3**
GEVA	**Gevas**	**1.13**	**131**	*i* P		**Pg**	**17 17 57.3**	**-1.9**
GEVA				*i* S		**Sn**	**17 18 16.9**	**+1.3**
VANB	**Van**	**1.20**	**112**	*e*PN		**Pb**	**17 17 59.8**	**-0.7**
VANB	**Van**	**1.20**	**112**	*e*Pn		**Pb**	**17 17 59.8**	**-0.7**
TVAN	**Van**	**1.24**	**115**	*i* P		Pg	17 17 57.4	-3.9
TVAN	**Van**	**1.24**	**115**	*i* P		Pg	17 17 57.4	-3.9
BEST	**Besiri**	**1.28**	**205**	*i* P		**Pn**	**17 18 00.8**	**-1.0**
BEST				*i* S		**Sn**	**17 18 22.5**	**+3.3**
KOPT	**Kop Dagi**	**1.49**	**311**	*i* P		**Pn**	**17 18 04.0**	**-0.8**
KOPT				*i* S		**Sg**	**17 18 27.3**	**+2.0**
KOPT	**Kop Dagi**	**1.49**	**311**	*i* P		**Pn**	**17 18 04.0**	**-0.8**
KOPT				*i* S		**Sg**	**17 18 27.3**	**+2.0**
CLDR	**Caldiran**	**1.52**	**86**	*e*PN		**Pb**	**17 18 04.7**	**-1.3**
CLDR	**Caldiran**	**1.52**	**86**	*e*Pn		**Pb**	**17 18 04.7**	**-1.3**
SIRN	**S¨¹rnak**	**1.60**	**167**	*i* P		Pg	17 18 11.4	+3.4
SIRN				*i* S		Sg	17 18 34.9	+6.2
KARS	**Kars**	**1.79**	**28**	*e*PN		**Pn**	**17 18 08.4**	**-0.4**
KARS	**Kars**	**1.79**	**28**	*e*Pn		**Pn**	**17 18 08.4**	**-0.4**
ERZN	**Erzincan**	**1.82**	**288**	*e*PN		**Pn**	**17 18 08.7**	**-0.5**
DIYA	**Diyarbakir**	**1.84**	**233**	*i* P		**Pn**	**17 18 09.1**	**-0.3**
DIYA				*i* S		**Sg**	**17 18 37.2**	**+0.7**
DIYA	**Diyarbakir**	**1.84**	**233**	*i* P		**Pn**	**17 18 09.1**	**-0.3**
DIYA				*i* S		**Sg**	**17 18 37.2**	**+0.7**
DDEM	**Demirkent**	**1.84**	**355**	*i* P		**Pn**	**17 18 09.6**	**+0.1**
DDEM				*i* S		Sg	17 18 47.7	+11
DDEM	**Demirkent**	**1.84**	**355**	*i* P		**Pn**	**17 18 09.6**	**+0.1**
BAYT	**Ayd¨¹ntepe-Bay**	**1.94**	**314**	*e*PN		**Pn**	**17 18 11.0**	**+0.1**
BAYT	**Ayd¨¹ntepe-Bay**	**1.94**	**314**	*e*Pn		**Pn**	**17 18 11.0**	**+0.1**
DBAD	**Bademkaya**	**1.97**	**354**	*i* P		**Pb**	**17 18 12.1**	**-1.6**
DBAD	**Bademkaya**	**1.97**	**354**	*i* P		**Pb**	**17 18 12.1**	**-1.6**
MARD	**Mardin**	**1.97**	**209**	*i* P		**Pn**	**17 18 11.0**	**-0.4**
MARD				*i* S		**Sn**	**17 18 35.3**	**-1.0**
PTK	**Pertek**	**2.01**	**266**	*e*PN		**Pn**	**17 18 11.4**	**-0.5**
PTK	**Pertek**	**2.01**	**266**	*e*Pn		**Pn**	**17 18 11.4**	**-0.5**
DAGI	**Agillar**	**2.02**	**359**	*i* P		**Pn**	**17 18 12.4**	**+0.4**
DAGI				*i* S		Sg	17 18 49.6	+7.3
HAKT	**HAKKARI**	**2.03**	**137**	*i* P		**Pb**	**17 18 13.9**	**-0.8**
HAKT				*i* S		**Sg**	**17 18 45.9**	**+3.3**
HAKT	**HAKKARI**	**2.03**	**137**	*i* P		**Pb**	**17 18 13.9**	**-0.8**
EZC	**Erzincan**	**2.14**	**290**	*e*PN		**Pn**	**17 18 13.2**	**-0.4**
EZC	**Erzincan**	**2.14**	**290**	*e*Pn		**Pn**	**17 18 13.2**	**-0.4**
SVRC	**Sivrice-ELAZID**	**2.19**	**253**	*e*PN		**Pn**	**17 18 14.0**	**-0.3**
SVRC	**Sivrice-ELAZID**	**2.19**	**253**	*e*Pn		**Pn**	**17 18 14.0**	**-0.3**
KELT	**Kelkit**	**2.36**	**298**	*i* P		**Pb**	**17 18 19.9**	**-0.5**
KELT				*i* S		**Sg**	**17 18 56.0**	**+2.7**
KELT	**Kelkit**	**2.36**	**298**	*i* P		**Pb**	**17 18 19.9**	**-0.5**
GUMT	**Gumushane**	**2.38**	**307**	*e*PN		**Pn**	**17 18 16.4**	**-0.4**
GUMT	**Gumushane**	**2.38**	**307**	*e*Pn		**Pn**	**17 18 16.4**	**-0.4**
BCA	**Borcka**	**2.40**	**354**	*e*PN		**Pn**	**17 18 16.6**	**-0.5**
BCA	**Borcka**	**2.40**	**354**	*e*Pn		**Pn**	**17 18 16.6**	**-0.5**
GNI	**Garni**	**2.41**	**62**	*e*PN		**Pn**	**17 18 17.1**	**-0.2**
GNI	**Garni**	**2.41**	**62**	*e*Pn		**Pn**	**17 18 17.1**	**-0.2**
AKH	**Akhalkalaki**	**2.63**	**26**	P		Pn	**17 18 18.1**	**-2.2**
AKH				S		**Sg**	**17 19 06.0**	**+4.2**
AKH	**Akhalkalaki**	**2.63**	**26**	P		**Pn**	**17 18 18.1**	**-2.2**
ILIC	**ilic-Erzincan**	**2.67**	**280**	*e*PN		**Pn**	**17 18 20.7**	**-0.1**
ILIC	**ilic-Erzincan**	**2.67**	**280**	*e*Pn		**Pn**	**17 18 20.7**	**-0.1**
MALT	**Malatya**	**2.87**	**256**	*e*PN		**Pn**	**17 18 23.6**	**+0.1**
MALT	**Malatya**	**2.87**	**256**	*e*Pn		**Pn**	**17 18 23.7**	**+0.1**
URFA	**Urfa**	**2.95**	**238**	*e*PN		**Pn**	**17 18 25.1**	**+0.4**
URFA	**Urfa**	**2.95**	**238**	*e*Pn		**Pn**	**17 18 25.1**	**+0.4**
GOR	**Gori**	**3.35**	**28**	P		**Pn**	**17 18

LKR	Lokris	2.89	26	P	Pn	17 24 56.7	+1.3		
LKR	Lokris	2.89	26	*e*PN	Pn	17 24 56.5	+1.1		
LKR	Lokris	2.89	26	*e*Pn	Pn	17 24 56.5	+1.1		
IDI	Anoyia	2.98	104	P	Pn	17 24 57.6	+1.0		
IDI	Anoyia	2.98	104	*e*PN	Pn	17 24 57.7	+1.1		
IDI	Anoyia	2.98	104	*e*Pn	Pn	17 24 57.7	+1.1		
AGG	Agios Georgios	3.05	14	P	Pn	17 24 59.5	+1.9		
AGG	Agios Georgios	3.05	14	*e*PN	Pn	17 24 59.7	+2.1		
AGG	Agios Georgios	3.05	14	P	Pn	17 24 59.5	+1.9		
THL	Klokotos Trika	3.53	8	P	Pn	17 25 06.4	+2.2		
THL	Klokotos Trika	3.53	8	*e*PN	Pn	17 25 06.6	+2.4		
THL	Klokotos Trika	3.53	8	P	Pn	17 25 06.4	+2.2		
NPS	Neapolis	3.55	102	*e*PN	Pn	17 25 06.7	+2.2		
NPS	Neapolis	3.55	102	*e*Pn	Pn	17 25 06.7	+2.2		
IGT	Igoumenitsa	3.56	347	P	Pn	17 25 06.4	+1.9		
IGT	Igoumenitsa	3.56	347	P	Pn	17 25 06.4	+1.9		
NEO	Neokhori	3.56	24	*e*PN	Pn	17 25 05.7	+1.1		
NEO	Neokhori	3.56	24	*e*Pn	Pn	17 25 05.7	+1.1		
AOS	Alonnisos	3.69	32	P	Pn	17 25 06.4	+0.1		
AOS	Alonnisos	3.69	32	P	Pn	17 25 06.4	+0.1		
KEK	Kerkira	3.84	342	P	Pn	17 25 11.5	+3.0		
KEK	Kerkira	3.84	342	P	Pn	17 25 11.5	+3.0		
LIT	Litokhoron	4.12	12	P	Pn	17 25 14.6	+2.2		
LIT	Litokhoron	4.12	12	P	Pn	17 25 14.6	+2.2		
BIA	Bitola	4.95	360	*e*Pn	Pn	17 25 25.2	+1.5		
BIA				*e*Sg	Sn	17 26 17.1	-2.9		
BIA	Bitola	4.95	360	*e*Pn	Pn	17 25 25.1	+1.5		
VAY	Valandovo	5.33	10	*e*Pn	Pn	17 25 29.9	+1.0		
VAY				*e*Sg	Sn	17 26 22.4	-7.0		
VAY	Valandovo	5.33	10	*e*Pn	Pn	17 25 30.4	+1.5		
ULC	Ulcinj	6.11	345	*e*Pn	Pn	17 25 40.5	+0.8		
ULC				*e*Sn	Sn	17 26 46.5	-2.3		
ULC	Ulcinj	6.11	345	*e*Pn	Pn	17 25 40.5	+0.8		
PDG	Podgorica	6.56	346	*e*Pn	Pn	17 25 46.7	+0.9		
PDG				*e*Sn	Sn	17 26 55.7	-4.0		
PDG	Podgorica	6.56	346	⇑*i*Pn	Pn	17 25 47.2	+1.4		
TTG	Podgorica	6.56	346	⇑*i*Pn	Pn	17 25 47.2	+1.4		
TTG				*e*Sn	Sn	17 26 57.3	-2.4		
PVY	Plav	6.61	351	⇓*i*Pn	Pn	17 25 48.4	+1.8		
PVY				*e*Sn	Sn	17 26 58.8	-2.3		
PVY	Plav	6.61	351	⇓*i*Pn	Pn	17 25 48.4	+1.8		
VTS	Vitosha	6.67	12	*e*Pn	Pn	17 25 49.7	+2.2		
VTS	Vitosha	6.67	12	*e*Pn	Pn	17 25 49.7	+2.2		
HCY	Herceg Novi	6.75	342	⇓*i*Pn	Pn	17 25 49.8	+1.4		
HCY				*e*Sn	Sn	17 27 02.0	-2.4		
HCY	Herceg Novi	6.75	342	⇓*i*Pn	Pn	17 25 49.8	+1.4		
BARS	Barje	6.75	3	*e*Pn	Pn	17 25 50.0	+1.6		
BARS	Barje	6.75	3	*e*Pn	Pn	17 25 50.0	+1.6		
BEY	Berane	6.89	351	⇓*i*Pn	Pn	17 25 52.0	+1.6		
IVA	Berane	6.89	351	⇓*i*Pn	Pn	17 25 52.0	+1.6		
IVA				*e*Sn	Sn	17 27 05.6	-2.4		
NKY	Niksic	6.98	346	*e*Pn	Pn	17 25 54.1	+2.4		
NKY				*e*Sn	Sn	17 27 06.9	-3.4		
NKY	Niksic	6.98	346	*e*Pn	Pn	17 25 54.1	+2.4		
SELS	Selova	7.15	359	*e*Pn	Pn	17 25 54.1	+0.2		
BRY	Bratogost	7.17	343	*e*Pn	Pn	17 25 56.1	+1.9		
BRY				*e*Sn	Sn	17 27 11.8	-3.0		
BRY	Bratogost	7.17	343	*e*Pn	Pn	17 25 56.1	+1.9		
ZAPS	Zavoj	7.26	7	*e*Pn	Pn	17 25 57.6	+2.1		
STON	Ston	7.36	339	*e*Pn	Pn	17 25 56.2	-0.5		
STON					Sn	17 27 12.2	-7.2		
UPM	Unac-Piva	7.37	346	*e*Pn	Pn	17 25 57.9	+0.8		
UPM				*e*Sn	Sn	17 27 15.9	-4.1		
UPM	Unac-Piva	7.37	346	*e*Pn	Pn	17 25 57.9	+0.8		
IVAS	Ivanjica	7.56	353	*e*Pn	Pn	17 26 00.6	+1.1		
IVAS	Ivanjica	7.56	353	*e*Pn	Pn	17 26 00.6	+1.1		
GRUS	Gruza	7.83	357	*e*Pn	Pn	17 26 04.1	+0.9		
GRUS				*e*Sn	Sn	17 27 25.1	-5.2		
GRUS	Gruza	7.83	357	*e*Pn	Pn	17 26 04.1	+0.9		
DIVS	Divibare	8.09	353	*e*Pn	Pn	17 26 07.1	+0.2		
DIVS				*e*Sn	Sn	17 27 31.7	-5.8		
DIVS	Divibare	8.09	353	*e*Pn	Pn	17 26 07.1	+0.2		
NVLJ	Novalja	9.82	332	*e*Pn	Pn	17 26 31.1	+0.5		
NVLJ					Sn	17 28 13.3	-6.6		
NVLJ	Novalja	9.82	332	*e*Pn	Pn	17 26 31.0	+0.5		
MLR	Muntele Rosu	10.03	19	Pn	Pn	17 26 45.7	+12		
	0.0nm,0.3s,baz=138,slow=14,SNR=2.4								
BRTR	Keskin Array B	10.37	66	Pn	Pn	17 26 47.8	+10		
	0.1nm,0.3s,baz=263,slow=10.0,SNR=3.2								
MMAI	Mount Meron Ar	11.97	101	Pn	Pn	17 26 57.9	-2.2		
	0.5nm,0.3s,baz=289,slow=14,SNR=3.5								
GERES	GERESS Array B	13.95	339	Pn	Pn	17 27 28.9	+1.8		
	0.1nm,0.3s,baz=170,slow=15,SNR=2.4								
AKASG	Malin Array Be	15.69	19	Pn	P	17 27 59.0	+5.0		
	0.6nm,0.3s,baz=211,slow=12,SNR=3.7								
HFS	Hagfors	24.59	351	P	P	17 29 27.7	-1.0		
	1.3nm,0.6s,baz=163,slow=11,SNR=5.2								
FINES	FINESS Array B	25.57	5	P	P	17 29 37.4	-0.2		
	0.4nm,0.3s,baz=163,slow=11,SNR=6.2								
NB2	NORSAR Subarra	25.82	349	P	P	17 29 42.0	+2.1		
	comp=Z,4.2nm,1.4s,baz=159,slow=9.3								
NB2	NORSAR Subarra	25.82	349	P	P	17 29 42.0	+2.1		
	comp=Z,4.2nm,1.4s,baz=159,slow=9.1,SNR=4.4								
NOA	NORSAR Array B	25.82	349	P	P	17 29 39.2	-0.6		
	comp=Z,0.7nm,0.9s,baz=170,slow=15,SNR=2.5								
BVAR	Borovoye Array	38.00	48	P	P	17 31 29.9	+3.3		
	comp=Z,0.2nm,0.4s,baz=267,slow=8.7,SNR=2.5								
MKAR	Makanchi Array	45.87	57	P	P	17 32 30.9	-0.1		
	comp=Z,0.2nm,0.4s,baz=272,slow=7.4,SNR=7.6								
ZALV	Zalesovo Beam	46.62	47	P	P	17 32 36.0	-0.8		
	comp=Z,0.3nm,0.3s,baz=284,slow=7.5,SNR=3.6								

*BJI **21** 17:32:22.2,9.60S×71.20W,h616km,mB5.2/13*
*ISCJB **21** 17:32:23.3±0.4,9.57S×0.04×71.27W×0.03,h627km±5km, mb4.7/198,Error ellipse: s-maj=6.7km s-min=3.6km az=28.9*
*NEIC **21** 17:32:23.6±0.2,9.61S×71.22W,mb4.8/134,Error ellipse: s-maj=5.4km s-min=3.7km az=56.0*
*IDC **21** 17:32:24.1±0.4,9.70S×71.28W,h628km±5km,mb4.0/23, mb1 4.2/28,mb1mx4.2/31,mbtmp4.1/28,Error ellipse: s-maj=10.1km s-min=6.5km az=55.0*

ISC 21 17:32:24.1±0.4,9.73S±0.04×71.25W±0.05,h631km±4km, h632km:pP-P,n706,σ1900/792,mb4.7/194,169C-181D, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**5.93**	**247**	⇓*i*P		**P**	**17 34 05.9**	**-0.5**
	488nm,0.6s							
NNA				P		P	17 34 06.1	-0.3
NNA				S		**S**	**17 35 28.4**	**-1.6**
NNA				*e*S		S	17 35 28.9	-1.1
NNA				*e*PcP		**PcP**	**17 39 47.0**	**+2.0**
NNA	**Nana**	**5.93**	**247**	P		**P**	**17 34 06.1**	**-0.3**
	85nm,0.3s,baz=57,slow=7.2,SNR=215							
NNA				S		**S**	**17 35 28.4**	**-1.6**
	baz=157,slow=23,SNR=7.4							
LPAZ	**La Paz**	**7.20**	**155**	⇓*i*P		**P**	**17 34 18.2**	**+0.3**
	103nm,0.4s							
LPAZ				P		P	17 34 18.4	+0.4
LPAZ				*e*S		**S**	**17 35 48.8**	**-2.1**
LPAZ				S		S	17 35 50.0	-1.2
LPAZ	**La Paz**	**7.20**	**155**	P		**P**	**17 34 18.4**	**+0.5**
	36nm,0.3s,baz=338,slow=6.9,SNR=739							
LPAZ				S		**S**	**17 35 50.0**	**-1.0**
	7.6nm,0.3s,baz=164,slow=17,SNR=10.0							
ATAH	**Atahualpa**	**7.52**	**289**	P		**P**	**17 34 21.6**	**+0.9**
ATAH				S		**S**	**17 35 55.5**	**-0.4**
ATAH	**Atahualpa**	**7.52**	**289**	P		**P**	**17 34 21.6**	**+0.9**
	37nm,0.3s,baz=111,slow=5.2,SNR=234							
ATAH				S		**S**	**17 35 55.5**	**-0.4**
	9.6nm,0.3s,baz=126,slow=23,SNR=3.8							
SAML	**Samuel**	**8.00**	**85**	⇑*i*P		**P**	**17 34 25.7**	**+1.1**
	90nm,0.4s							
SAML				*e*S		**S**	**17 36 03.3**	**+0.1**
SAML				*e*ScP		**ScP**	**17 42 14.4**	**-5.4**
SIV	**San Ignacio**	**11.72**	**123**	P		**P**	**17 35 01.2**	**+1.0**
SIV	**San Ignacio**	**11.72**	**123**	P		**P**	**17 35 01.2**	**+1.0**
	66nm,0.3s,baz=304,slow=9.9,SNR=945							
OTAV	**Otavalo**	**12.22**	**324**	*e*P		**P**	**17 35 07.1**	**+1.6**
	116nm,0.5s							
OTAV				*e*S		**S**	**17 37 13.7**	**-3.9**
OTAV				*e*ScP		**ScP**	**17 42 26.5**	**+0.6**
ROSC	**El Rosal**	**14.81**	**348**	P		**P**	**17 35 31.0**	**+1.2**
ROSC				S		**S**	**17 38 04.3**	**+3.2**
ROSC	**El Rosal**	**14.81**	**348**	P		**P**	**17 35 31.0**	**+1.2**
	20nm,0.3s,baz=92,slow=4.4,SNR=27							
ROSC				S		**S**	**17 38 04.3**	**+3.2**
	0.2nm,0.3s,baz=188,slow=22,SNR=8.3							
SDV	**Santo Domingo**	**18.50**	**2**	*e*P		**P**	**17 36 03.2**	**0.0**
	1.3nm,1.0s							
SDV				*e*S		**S**	**17 39 04.0**	**+3.4**
LCO	**Las Campanas**	**19.19**	**179**	*e*P		**P**	**17 36 10.3**	**+0.9**
	21nm,0.8s							
BCIP	**Isla Barro Col**	**20.62**	**335**	P		**P**	**17 36 22.9**	**+0.8**
	20nm,0.7s							
PAYG	**Puerto Ayora**	**20.96**	**294**	*e*P		**P**	**17 36 26.0**	**+0.8**
	78nm,0.9s							
CPUP	**Villa Florida**	**21.13**	**143**	P		**P**	**17 36 26.6**	**+0.1**
CPUP	**Villa Florida**	**21.13**	**143**	P		**P**	**17 36 26.6**	**+0.1**
	17nm,0.5s,baz=308,slow=9.3,SNR=66							
CFAA	**Coronel Fontan**	**21.95**	**173**	P		**P**	**17 36 33.9**	**+0.1**
CFAA				S		**S**	**17 39 56.1**	**+1.7**
CFAA				ScP		**ScP**	**17 42 45.0**	**-0.3**
CFAA	**Coronel Fontan**	**21.95**	**173**	P		**P**	**17 36 33.9**	**+0.1**
	0.5nm,0.5s,baz=360,slow=7.7,SNR=7.7							
CFAA				S		**S**	**17 39 56.1**	**+1.7**
	0.4nm,0.6s,baz=144,slow=16,SNR=3.0							
CFAA				ScP		**ScP**	**17 42 45.0**	**-0.3**
	0.6nm,0.8s,baz=312,slow=4.6,SNR=3.9							
BDFB	**Brasilia**	**23.41**	**107**	P		**P**	**17 36 48.8**	**+1.7**
BDFB	**Brasilia**	**23.41**	**107**	P		**P**	**17 36 48.8**	**+1.7**
	31nm,0.5s,baz=274,slow=10.0,SNR=48							
GRGR	**Grenville**	**23.72**	**24**	⇓*e*P		**P**	**17 36 49.9**	**+0.3**
	280nm,0.6s							
JTS	**JuntasAbangare**	**24.11**	**325**	P		**P**	**17 36 55.0**	**+1.9**
JTS	**JuntasAbangare**	**24.11**	**325**	P		**P**	**17 36 55.0**	**+1.9**
	15nm,0.7s,baz=127,slow=5.5,SNR=8.8							
BBGH	**Gun Hill**	**25.52**	**27**	P		**P**	**17 37 07.1**	**+1.6**
	354nm,0.9s							
FDF	**Fort de France**	**26.29**	**23**	*e*P		**P**	**17 37 10.2**	**-2.0**
	74nm,0.6s							
CRPR	**Cabo Rojo, PR**	**27.86**	**8**	⇓*i*P		**P**	**17 37 26.2**	**+0.4**
	90nm,0.5s							
OBIP	**Obispado Ponce**	**27.97**	**9**	*e*P		**P**	**17 37 26.5**	**-0.3**
	103nm,0.5s							
CELP	**Cerrillos**	**28.01**	**10**	*e*P		**P**	**17 37 26.8**	**-0.3**
CDVI	**St. Croix**	**28.05**	**13**	*e*P		**P**	**17 37 26.0**	**-1.4**
	266nm,0.6s							
SJG	**San Juan**	**28.12**	**10**	⇓*i*P		**P**	**17 37 27.2**	**-0.8**
	74nm,0.6s							
SJG				P		P	17 37 27.5	-0.5
SJG	**San Juan**	**28.12**	**10**	P		**P**	**17 37 27.5**	**-0.5**
	107nm,0.7s,baz=154,slow=5.9,SNR=23							
LRS	**Lares**	**28.18**	**9**	*e*P		**P**	**17 37 28.0**	**-0.7**
LRS				*e*PcP		**PcP**	**17 40 20.6**	**-0.3**
MTP	**Monte Pirata**	**28.21**	**12**	⇓*i*P		**P**	**17 37 27.9**	**-1.0**
	45nm,0.4s							
AGPR	**Aguadilla, PR**	**28.31**	**8**	*e*P		**P**	**17 37 29.7**	**-0.1**
	125nm,0.7s							
CBYP	**Canovanas**	**28.33**	**11**	⇓*i*P		**P**	**17 37 29.1**	**-0.9**
	198nm,0.8s							
MTDJ	**Mount Denham**	**28.46**	**347**	*e*P		**P**	**17 37 30.9**	**-0.3**
	50nm,0.7s							
SDDR	**Presa de Saban**	**28.53**	**360**	*e*P		**P**	**17 37 31.1**	**-0.6**
	32nm,0.5s							
STVI	**Saint Thomas**	**28.58**	**13**	*e*P		**P**	**17 37 30.5**	**-1.5**
	81nm,0.6s							
ANWB	**Willy Bob**	**28.78**	**19**	*e*P		**P**	**17 37 31.5**	**-2.3**
	1µm,0.6s							
TRQA	**Tornquist**	**29.42**	**165**	*e*P		**P**	**17 37 39.2**	**+0.1**
	2.6nm,0.6s							
GTBY	**Guantanamo Bay**	**29.71**	**353**	*e*P		**P**	**17 37 41.4**	**-0.4**
	31nm,0.8s							
PLCA	**Paso Flores**	**30.89**	**179**	*e*P		**P**	**17 37 52.3**	**+0.6**
	2.5nm,0.7s							
PLCA				P		P	17 37 52.6	+1.0
PLCA				ScP		**ScP**	**17 43 12.8**	**+0.8**
PLCA	**Paso Flores**	**30.89**	**179**	P		**P**	**17 37 52.6**	**+1.0**
	1.3nm,0.4s,baz=350,slow=9.0,SNR=13							
PLCA				ScP		**ScP**	**17 43 12.8**	**+0.8**
	3.6nm,0.8s,baz=10,slow=3.3,SNR=6.7							
GRTK	**Grand Turk**	**31.04**	**0**	*e*P		**P**	**17 37 52.0**	**-1.1**
	132nm,0.8s							
TEIG	**Tepich**	**34.16**	**331**	*e*P		**P**	**17 38 18.9**	**-0.4**
	9.2nm,0.5s							
TEIG				P		P	17 38 19.5	+0.3
TEIG	**Tepich**	**34.16**	**331**	P		**P**	**17 38 19.5**	**+0.3**
	5.9nm,0.4s,baz=335,slow=0.9,SNR=9.5							
CMIG	**Matias Romero**	**35.44**	**319**	P		**P**	**17 38 30.7**	**+0.8**
CMIG	**Matias Romero**	**35.44**	**319**	P		**P**	**17 38 30.7**	**+0.8**
	26nm,0.4s,baz=112,slow=6.3,SNR=60							
EFI	**East Falkland**	**43.20**	**168**	*e*P		**P**	**17 39 32.0**	**+0.7**
	68nm,1.1s							
NHSC	**New Hope**	**43.44**	**349**	⇓*i*P		**P**	**17 39 33.8**	**+0.5**
	349nm,0.9s							
JSC	**Jenkinsville**	**44.78**	**348**	*e*P		**P**	**17 39 43.6**	**-0.1**
LRAL	**Lakeview Retre**	**45.09**	**341**	*e*P		**P**	**17 39 45.1**	**-1.0**
	42nm,0.8s							
LRAL				*e*PcP		**PcP**	**17 41 11.5**	**-1.3**
VBMS	**Vicksburg**	**45.59**	**337**	P		**P**	**17 39 48.5**	**-1.4**
	44nm,0.6s							
KMSC	**Kings Mountain**	**45.63**	**348**	⇓P		**P**	**17 39 50.4**	**+0.2**
	baz=46							
CPCT	**Cooper Cave**	**46.65**	**345**	*e*P		**P**	**17 39 56.6**	**-1.2**
TKL	**Tuckaleechee C**	**46.66**	**346**	⇓*e*P		**P**	**17 39 56.8**	**-1.1**
TKL				P		P	17 39 57.4	-0.5
TKL	**Tuckaleechee C**	**46.66**	**346**	P		**P**	**17 39 57.4**	**-0.6**
	31nm,0.8s,baz=158,slow=9.4,SNR=33							
SWET	**Sewanee**	**46.80**	**343**	⇓*i*P		**P**	**17 39 58.0**	**-1.1**
	52nm,0.6s							
732A	**Lawson Ranch,**	**47.23**	**325**	⇓P		**P**	**17 40 02.7**	**+0.4**
	baz=47							
OXF	**Oxford**	**47.24**	**339**	*e*P		**P**	**17 40 00.1**	**-2.1**
VWCC	**Virginia Weste**	**47.44**	**351**	*e*P		**P**	**17 40 03.8**	**+0.1**
TZTN	**Tazewell**	**47.45**	**347**	⇓*i*P		**P**	**17 40 02.9**	**-1.0**
	18nm,0.6s							
TZTN				*e*PcP		**PcP**	**17 41 20.6**	**-0.5**
BLA	**Blacksburg**	**47.48**	**350**	*e*P		**P**	**17 40 03.9**	**-0.1**
	47nm,0.7s							
BLA				*e*PcP		**PcP**	**17 41 21.1**	**-0.2**
632A	**Uvalde**	**47.72**	**326**	⇓P		**P**	**17 40 07.0**	**+1.0**
	baz=48							
631A	**Perdido Creek**	**48.09**	**325**	⇑P		**P**	**17 40 08.7**	**0.0**
	baz=48,SNR=6.4							
WVT	**Waverly**	**48.21**	**342**	*e*P		**P**	**17 40 07.2**	**-2.2**
	20nm,0.4s							
532A	**Rocksprings**	**48.27**	**326**	⇑P		**P**	**17 40 10.5**	**+0.5**
	baz=48							
WHTX	**Lake Whitney**	**48.46**	**330**	⇓P		**P**	**17 40 12.0**	**+0.7**
	baz=49							
UALR	**University of**	**48.56**	**337**	*e*P		**P**	**17 40 10.8**	**-1.2**
	57nm,1.0s							
531A	**Rocksprings**	**48.65**	**326**	⇓P		**P**	**17 40 13.4**	**+0.6**
	baz=49							
432A	**Menard**	**48.78**	**327**	⇑P		**P**	**17 40 14.6**	**+0.8**
	baz=49							
MIAR	**Mount Ida**	**48.85**	**335**	⇓*i*P		**P**	**17 40 13.2**	**-0.9**
	14nm,0.6s							
MIAR				*e*PcP		**PcP**	**17 41 25.9**	**-0.4**
MIAR				*e*PP		**PP**	**17 42 16.7**	**-0.1**
431A	**Sonora**	**49.08**	**326**	⇑P		**P**	**17 40 16.6**	**+0.6**
	baz=49							
332A	**Millersview**	**49.15**	**327**	⇓P		**P**	**17 40 16.7**	**+0.2**
	baz=49,SNR=5.6							
331A	**San Angelo**	**49.46**	**327**	⇓P		**P**	**17 40 19.3**	**+0.6**
	baz=50							
628A	**Black Gap, Mar**	**49.49**	**323**	⇑P		**P**	**17 40 19.5**	**+0.6**
	baz=50							
232A	**Coleman**	**49.50**	**328**	⇑P		**P**	**17 40 19.1**	**+0.1**
	baz=50,SNR=8.7							
430A	**Baggett Ranch,**	**49.51**	**326**	⇑P		**P**	**17 40 19.7**	**+0.6**
	baz=50							
529A	**Stev Forest Ra**	**49.57**	**324**	⇓P		**P**	**17 40 19.8**	**+0.3**
	baz=50,SNR=6.5							
WCI	**Wyandotte Cave**	**49.73**	**344**	⇓*i*P		**P**	**17 40 19.1**	**-1.5**
	73nm,0.6s							
429A	**Davenport Ranc**	**49.75**	**325**	⇑P		**P**	**17 40 21.3**	**+0.4**
	baz=50,SNR=5.9							
627A	**Terlingua Ranc**	**49.76**	**323**	⇑P		**P**	**17 40 21.5**	**+0.5**
	baz=50							
TXAR	**Lajitas Array**	**49.84**	**322**	P		**P**	**17 40 21.6**	**0.0**
TXAR				PcP		**PcP**	**17 41 29.9**	**-0.4**
TXAR				pP		**pP**	**17 42 15.1**	**-0.1**
TXAR	**Lajitas Array**	**49.84**	**322**	P		**P**	**17 40 21.6**	**0.0**
	0.6nm,0.3s,baz=163,slow=9.2,SNR=14							
TXAR				PcP		**PcP**	**17 41 29.9**	**-0.4**
	1.4nm,0.5s,baz=137,slow=5.9,SNR=6.5							
TXAR				pP		**pP**	**17 42 15.1**	**-0.1**
	1.1nm,0.7s,baz=116,slow=8.6,SNR=2.7							
USIN	**University of**	**49.86**	**343**	⇓*e*P		**P**	**17 40 20.0**	**-1.5**
	229nm,0.7s							
231A	**Bronte**	**49.89**	**327**	⇑P		**P**	**17 40 22.0**	**+0.2**
	baz=50							
528A	**Cox Ranch, San**	**49.92**	**324**	⇑P		**P**	**17 40 23.1**	**+0.9**
	baz=50							
330A	**Mertzon**	**49.95**	**326**	⇑P		**P**	**17 40 22.8**	**+0.5**
	baz=50							
ABTX	**Abilene, Hawle**	**50.07**	**328**	⇓P		**P**	**17 40 23.2**	**0.0**
	baz=50,SNR=5.1							
230A	**Sterling City**	**50.28**	**327**	⇓P		**P**	**17 40 25.1**	**+0.4**
	baz=50							
428A	**Kincaid Ranch,**	**50.28**	**324**	⇓P		**P**	**17 40 25.8**	**+1.1**
	baz=50							
626A	**Big Bend Ranch**	**50.28**	**322**	⇓P		**P**	**17 40 25.3**	**+0.4**
	baz=50,SNR=8.7							
527A	**Woodward Ranch**	**50.40**	**323**	⇓P		**P**	**17 40 25.8**	**+0.1**
	baz=50							
329A	**Wagon Wheel Ra**	**50.45**	**326**	⇑P		**P**	**17 40 26.5**	**+0.5**
	baz=51							
SSPA	**Standing Stone**	**50.48**	**353**	*e*P		**P**	**17 40 25.6**	**-0.3**
	15nm,0.8s							
SSPA				*e*PcP		**PcP**	**17 41 31.7**	**-0.5**
131A	**Roby**	**50.50**	**328**	⇑P		**P**	**17 40 26.9**	**+0.6**
	baz=51							
Z32A	**Haskell**	**50.53**	**329**	⇓P		**P**	**17 40 26.8**	**+0.3**
	baz=51							
526A	**Mary Lane Ranc**	**50.62**	**323**	⇓P		**P**	**17 40 27.8**	**+0.4**
	baz=51							
BLO	**Bloomington**	**50.68**	**345**	⇓*i*P		**P**	**17 40 26.0**	**-1.3**
	100nm,0.7s							
BLO				*e*PcP		**PcP**	**17 41 32.8**	**-0.3**
OLIL	**Olney**	**50.70**	**343**	*e*P		**P**	**17 40 25.4**	**-2.2**
	20nm,0.3s							
130A	**Snyder**	**50.75**	**327**	⇓P		**P**	**17 40 28.5**	**+0.5**
	baz=51							
328A	**Wristen Ranch,**	**50.84**	**325**	⇓P		**P**	**17 40 29.3**	**+0.5**
	baz=51							
ACSO	**Alum Creek Sta**	**50.88**	**348**	*e*P		**P**	**17 40 27.9**	**-0.9**
	105nm,1.1s							
Z31A	**Sharp Cattle R**	**50.88**	**329**	⇓P		**P**	**17 40 29.3**	**+0.3**
	baz=51,SNR=8.7							
TUL1	**Tulsa**	**50.95**	**334**	⇑P		**P**	**17 40 28.8**	**-0.6**
	baz=51,SNR=5.9							
426A	**McDonald Obser**	**51.02**	**323**	⇓P		**P**	**17 40 30.8**	**+0.5**
	baz=51,SNR=6.1							
129A	**Stewart Farms,**	**51.26**	**327**	⇑P		**P**	**17 40 32.1**	**+0.3**
	baz=51							
SLM	**Saint Louis**	**51.27**	**341**	*e*P		**P**	**17 40 30.6**	**-1.0**
	70nm,0.7s							
WMOK	**Wichita Mounta**	**51.34**	**331**	*e*P		**P**	**17 40 31.7**	**-0.5**
	7.0nm,0.5s							
WMOK				*e*PcP		**PcP**	**17 41 35.4**	**-0.2**
Z30A	**Sanderson Ranc**	**51.37**	**328**	⇓P		**P**	**17 40 32.8**	**+0.3**
	baz=52,SNR=21							
Y31A	**Rekieta Farm,**	**51.45**	**329**	⇑P		**P**	**17 40 33.5**	**+0.4**
	baz=52,SNR=6.8							
326A	**Caldwell Ranch**	**51.47**	**324**	⇓P		**P**	**17 40 33.6**	**+0.3**
	baz=52							
227A	**Bennet, Jal**	**51.58**	**325**	⇑P		**P**	**17 40 34.9**	**+0.7**
	baz=52							
128A	**Castleberry Fa**	**51.59**	**326**	⇓P		**P**	**17 40 34.3**	**+0.1**
	baz=52							
Z29A	**Hungry Hill Ra**	**51.65**	**327**	⇓P		**P**	**17 40 34.5**	**-0.1**
	baz=52							
425A	**Indio Mountain**	**51.68**	**322**	⇑P		**P**	**17 40 34.8**	**-0.1**
	baz=52,SNR=6.5							
Y30A	**Stafford Cattl**	**51.71**	**328**	⇓P		**P**	**17 40 35.0**	**0.0**
	baz=52

baz=55,SNR=5.6
V25A Rancho No Teng 55.17 327 ⇑P P 17 40 59.5 0.0
baz=55,SNR=8.0
PMSA Palmer Station 55.20 176 eP P 17 41 01.0 +2.2
12nm,0.4s
V24A Rampart Ranch, 55.44 326 ⇑P P 17 41 01.5 +0.2
baz=56
U25A Circle Dot Ran 55.48 328 ⇑P P 17 41 01.8 +0.2
baz=56,SNR=7.4
Z20A Nine Sixteen R 55.49 322 ⇓P P 17 41 02.3 +0.6
baz=56
T26A Comanche Natio 55.65 329 ⇓P P 17 41 02.9 +0.2
baz=56
Y20A Horse Springs, 55.91 323 ⇑P P 17 41 05.3 +0.7
baz=56
S26A Kim 55.93 329 ⇑P P 17 41 05.0 +0.4
baz=56,SNR=6.9
T25A Trinidad 56.04 328 ⇑P P 17 41 06.0 +0.5
baz=56,SNR=6.4
R27A Eads 56.11 330 ⇓P P 17 41 06.3 +0.6
baz=56
T24A Torres, Weston 56.33 328 ⇓P P 17 41 08.2 +0.8
baz=56
R26A Arlington 56.44 330 ⇑P P 17 41 08.3 +0.3
baz=57,SNR=7.1
S25A Robets Cordova 56.45 329 ⇑P P 17 41 08.4 +0.2
baz=57,SNR=11
V22A San Miguel Ran 56.48 325 ⇓P P 17 41 09.5 +1.0
baz=57,SNR=5.3
R25A Fountain Ranch 56.74 329 ⇑P P 17 41 10.5 +0.4
baz=57
U22A Llaves 56.79 326 ⇑P P 17 41 11.1 +0.5
baz=57
T23A Casias Ranch, 56.82 327 ⇓P P 17 41 11.4 +0.5
baz=57
S24A Houchin Ranch, 56.84 328 ⇑P P 17 41 11.7 +0.8
baz=57
Q26A Hugo 56.96 330 ⇑P P 17 41 12.2 +0.6
baz=57,SNR=5.4
R24A Sanders Place, 57.23 329 ⇑P P 17 41 14.2 +0.7
baz=57,SNR=9.1
U21A Nageezi 57.27 325 ⇑P P 17 41 14.5 +0.7
baz=57
T22A Edith 57.28 326 ⇑P P 17 41 15.2 +1.3
baz=57
Q25A Bedland, Calha 57.31 330 ⇑P P 17 41 14.6 +0.6
baz=57,SNR=10.0
P26A Davis Ranch, A 57.37 331 ⇓P P 17 41 15.2 +0.8
baz=58
214A Organ Pipe Nat 57.41 318 ⇑P P 17 41 15.2 +0.6
baz=58,SNR=5.3
O27A Beecher Island 57.46 332 ⇓P P 17 41 15.7 +0.9
baz=58,SNR=7.5
R23A Moffat 57.57 328 ⇑P P 17 41 16.7 +0.8
baz=58,SNR=7.1
U20A Newcomb 57.72 325 ⇓P P 17 41 17.4 +0.6
baz=58
P25A Willow Gulch B 57.73 330 ⇓P P 17 41 17.6 +0.7
baz=58,SNR=7.9
S22A 4UR Ranch, Cre 57.77 327 ⇓P P 17 41 17.8 +0.6
baz=58,SNR=7.3
Q24A Divide 57.80 329 ⇓P P 17 41 18.2 +0.7
baz=58
COWI Conover 57.84 345 eP P 17 41 16.0 -1.2
10.0nm,0.6s
COWI ePcP PcP 17 42 00.1 -0.7
OGNE Ogallala 57.86 333 ⇓P P 17 41 17.7 +0.2
baz=58,SNR=5.7
O26A Horse Wrangler 57.89 331 ⇓P P 17 41 18.8 +1.0
baz=58
ECSD EROS Data Cent 57.99 339 eP P 17 41 16.8 -1.5
10nm,0.4s
P24A Kohler Place, 58.10 330 ⇑P P 17 41 20.2 +0.8
baz=58
Q23A Hartsel 58.11 329 ⇑P P 17 41 20.0 +0.4
baz=58
X16A Lo Mia Camp, P 58.12 321 ⇑P P 17 41 20.5 +1.0
baz=58
O25A Wiggins 58.18 331 ⇑P P 17 41 20.1 +0.3
baz=58
S21A Coal Bank Pass 58.23 326 ⇑P P 17 41 20.8 +0.4
baz=58
MVCO Mesa Verde 58.30 325 eP P 17 41 21.2 +0.4
4.9nm,0.9s
MVCO Mesa Verde 58.30 325 ⇓P P 17 41 21.3 +0.5
baz=58
N26A Koester Ranch, 58.31 332 ⇓P P 17 41 21.7 +1.1
baz=58
Z14A Wintersburg 58.38 319 ⇑P P 17 41 22.3 +1.2
baz=58
P23A Jefferson 58.46 329 ⇑P P 17 41 23.0 +1.0
baz=59
M27A Reverse DX Ran 58.48 333 ⇑P P 17 41 22.6 +0.8
baz=59
113A Mohawk Valley, 58.55 318 ⇑P P 17 41 23.0 +0.8
baz=59
R21A Cimarron 58.61 327 ⇑P P 17 41 23.4 +0.6
baz=59
Q22A Crested Butte, 58.64 328 ⇓P P 17 41 24.0 +0.9
baz=59
S20A Disappointment 58.67 326 ⇑P P 17 41 24.1 +0.8
baz=59,SNR=6.4
ISCO Idaho Springs 58.67 329 eP P 17 41 23.4 +0.1
9.3nm,1.2s
ISCO ePcP PcP 17 42 04.8 +0.2
ISCO Idaho Springs 58.67 329 ⇑P P 17 41 23.4 +0.1
baz=59,SNR=6.5
M26A McRoberts Ranc 58.78 332 ⇓P P 17 41 23.9 +0.2
baz=59,SNR=5.2
WUAZ Wupatki 58.81 322 ⇓P P 17 41 24.8 +0.7
baz=59
L27A T5 Ranch, Ells 58.90 333 ⇓P P 17 41 25.7 +1.2
baz=59
SMCO Snowmass 58.90 328 eP P 17 41 24.8 -0.1
5.1nm,0.6s
SMCO ePcP PcP 17 42 06.0 +0.3
R20A Redvale 58.93 326 ⇑P P 17 41 25.9 +1.0
baz=59
N24A Carr 59.10 331 ⇓P P 17 41 26.8 +0.9
baz=59
P22A Eagle 59.10 328 ⇓P P 17 41 26.7 +0.7
baz=59
O23A Lake Granby, G 59.14 330 ⇓P P 17 41 26.8 +0.5
baz=59,SNR=5.2
M25A Palm-Egli Farm 59.18 332 ⇑P P 17 41 27.4 +1.0
baz=59
L26A Underwood Farm 59.20 333 ⇑P P 17 41 27.1 +0.6
baz=59
K27A Flueckinger Fa 59.36 334 ⇓P P 17 41 28.4 +0.9
baz=60
P21A Newcastle 59.41 328 ⇑P P 17 41 29.2 +1.2
baz=60
BBTS Babate 59.41 67 P P 17 41 29.8 +1.5
BBTS Babate 59.41 67 P P 17 41 29.8 +1.5
38nm,0.6s,baz=253,slow=2.0,SNR=7.3
O22A Kremmling 59.42 329 ⇓P P 17 41 28.6 +0.3
baz=60
GLA Glamis 59.42 318 ⇓P P 17 41 28.6 +0.6
baz=60
BRSD Miller 59.47 337 ⇑P P 17 41 28.1 0.0
baz=60
S18A Hurst Farm, Bl 59.48 325 ⇓P P 17 41 29.2 +0.5
baz=60
M24A Cheyenne 59.56 331 ⇑P P 17 41 30.1 +1.0
baz=60
N23A Red Feather La 59.67 330 ⇑P P 17 41 30.4 +0.5
baz=60
K26A Motz Farm, Whi 59.78 333 ⇓P P 17 41 31.1 +0.8
baz=60
N22A Wattenberg Ran 59.85 330 ⇓P P 17 41 32.2 +1.1
baz=60
O21A Pagoda 59.93 328 ⇑P P 17 41 32.9 +1.4
baz=60
Q19A Hogan Spring (59.97 326 ⇓P P 17 41 32.6 +1.0
baz=60,SNR=10
U15A North Rim 59.97 322 ⇓P P 17 41 32.7 +0.8
baz=60
M23A Laramie 59.99 331 ⇓P P 17 41 32.4 +0.5
baz=60,SNR=6.9
K25A Mack Ranch, Ha 60.02 333 ⇓P P 17 41 32.6 +0.7
baz=60
EYMN Ely 60.16 344 eP P 17 41 31.5 -1.1
35nm,0.4s
BC3 Big Chuckawall 60.20 318 ⇓P P 17 41 33.8 +0.5
baz=60
O20A White River Ci 60.27 328 ⇓P P 17 41 34.7 +0.9
baz=60
P19A Cripple Cowboy 60.30 327 ⇓P P 17 41 34.3 +0.3
baz=60,SNR=12
IRM Iron Mountain 60.31 319 ⇓P P 17 41 34.8 +0.9
baz=60,SNR=5.3
M22A Cedar Creek Ra 60.37 330 ⇑P P 17 41 34.8 +0.3
baz=60
L23A Garrett 60.48 331 ⇑P P 17 41 35.4 +0.3
baz=61,SNR=8.6
L22A Ellis Ranch, M 60.77 331 ⇓P P 17 41 37.7 +0.8
baz=61
SRU San Rafael 60.77 326 ⇑P P 17 41 37.6 +0.6
baz=61,SNR=11
BELC Belle Mtn. Jos 60.77 318 ⇑P P 17 41 38.2 +1.1
baz=61
N20A Spence Gulch, 60.79 328 ⇑P P 17 41 37.9 +0.7
baz=61,SNR=8.6
O19A Miners Draw (B 60.85 327 ⇓P P 17 41 38.2 +0.7
baz=61,SNR=12
M21A Separation Pea 60.91 330 ⇓P P 17 41 38.6 +0.7
baz=61
K23A Bowen Ranch, D 60.94 332 ⇓P P 17 41 39.0 +1.0
baz=61
J24A Dixon Ranch, L 60.94 333 ⇑P P 17 41 39.1 +1.2
baz=61
P18A Preston Nutter 60.98 326 ⇓P P 17 41 39.5 +1.0
baz=61
Q16A Castle Valley 61.00 325 ⇑P P 17 41 39.5 +1.0
baz=61
GMRC Granite Mounta 61.03 319 ⇓P P 17 41 39.7 +1.0
baz=61
P17A Butcher Ranch, 61.14 326 ⇓P P 17 41 40.2 +0.8
baz=61
L21A Rawlins 61.18 330 ⇓P P 17 41 39.8 +0.2
baz=61,SNR=5.5
M20A Sweetwater, Wa 61.23 329 ⇑P P 17 41 40.7 +0.7
baz=61
RSSD Black Hills 61.28 334 eP P 17 41 40.8 +0.5
10nm,0.4s
N19A John Jarvie Ra 61.31 328 ⇓P P 17 41 40.9 +0.4
baz=61,SNR=6.3
MVU Marysvale 61.31 324 eP P 17 41 41.0 +0.4
4.0nm,0.8s
MVU ePcP PcP 17 42 15.6 +0.3
I24A Kuemmerle Ranc 61.34 333 ⇓P P 17 41 41.5 +0.9
baz=62
TUQ Turquoise Moun 61.60 319 ⇑P P 17 41 42.9 +0.5
baz=62
K21A Alcova 61.62 330 ⇓P P 17 41 42.8 +0.3
baz=62,SNR=8.9
N18A Larsen Ranch, 61.63 328 ⇑P P 17 41 43.4 +0.8
baz=62
L20A Wamsutter 61.69 329 ⇑P P 17 41 43.7 +0.7
baz=62
AGMN Agassiz Nation 61.73 342 ⇓iP P 17 41 42.0 -0.8
68nm,0.6s
J22A Midwest 61.84 332 ⇑P P 17 41 43.7 -0.2
baz=62,SNR=5.8
H24A Dirks Ranch, A 62.01 334 ⇓P P 17 41 44.8 0.0
baz=62,SNR=8.0
CIS Catalina Islan 62.04 316 ⇓P P 17 41 46.4 +1.2
baz=62
DAU Daniels Canyon 62.08 326 eP P 17 41 46.3 +0.7
6.5nm,0.8s
GSC Goldstone 62.09 319 ⇑P P 17 41 46.3 +0.8
baz=62
M18A Lyman 62.16 328 ⇓P P 17 41 46.3 +0.3
baz=62
K20A Yellowstone Ra 62.17 330 ⇑P P 17 41 46.0 0.0
baz=62,SNR=11
I22A 9 Mile Ranch, 62.21 332 ⇑P P 17 41 46.3 +0.1
baz=62,SNR=15
N17A Moffit Pass 62.22 327 ⇑P P 17 41 47.8 +1.3
baz=62,SNR=11
H23A Clabaugh Cattl 62.23 333 ⇑P P 17 41 47.0 +0.7
baz=62
J21A Lysite 62.25 331 ⇓P P 17 41 47.1 +0.5
baz=62,SNR=7.3
L19A Farson 62.28 329 ⇑P P 17 41 47.2 +0.4
baz=62,SNR=6.7
G24A Alzada 62.41 334 ⇑P P 17 41 48.2 +0.9
baz=62
L18A Fontenelle, Gr 62.50 328 ⇑P P 17 41 48.9 +0.7
baz=63
M17A Scullys Gap (B 62.51 327 ⇓P P 17 41 48.3 +0.1
baz=63
I21A Big Trails, Te 62.53 331 ⇓P P 17 41 48.5 +0.2
baz=63,SNR=14
K19A Absolon Red Bu 62.55 330 ⇑P P 17 41 48.1 -0.4
baz=63,SNR=5.7
J20A Shoshoni 62.56 330 ⇓P P 17 41 48.8 +0.4
baz=63
MDND Maddock 62.59 339 ⇑P P 17 41 48.8 +0.4
baz=63,SNR=18
EDW2 Edwards Air Fo 62.62 318 ⇓P P 17 41 49.0 +0.1
baz=63
G23A Biddle 62.73 333 ⇑P P 17 41 49.6 +0.2
baz=63,SNR=20
LRMC Laurel Mountai 62.77 318 ⇑P P 17 41 50.6 +0.6
baz=63
DUG Dugway 62.80 325 eP P 17 41 50.6 +0.6
5.9nm,0.8s
DUG Dugway 62.80 325 ⇓P P 17 41 51.1 +1.1
baz=63,SNR=8.0
F24A Ekalaka 62.83 335 ⇑P P 17 41 50.2 +0.2
baz=63,SNR=16
BW06 Boulder Array 62.86 329 ⇑P P 17 41 50.5 0.0
baz=63,SNR=9.3
PDAR Pinedale Array 62.86 329 P P 17 41 50.5 0.0
PDAR PcP PcP 17 42 20.9 -0.6
PDAR Pinedale Array 62.86 329 P P 17 41 50.5 0.0
3.6nm,0.5s,baz=121,slow=9.1,SNR=44
PDAR PcP PcP 17 42 20.9 -0.6
2.1nm,0.5s,baz=126,slow=7.1,SNR=6.7
J19A Crowheart 62.97 330 ⇓P P 17 41 51.4 +0.3
baz=63,SNR=8.1
MPMC Manual Prospec 62.99 319 ⇓P P 17 41 52.0 +0.6
baz=63
K18A Toltan Ranch, 63.02 329 ⇓P P 17 41 52.3 +0.8
baz=63
I20A Worland 63.03 331 ⇓P P 17 41 51.7 +0.3
baz=63,SNR=12
H21A Big Horn, Sher 63.03 332 ⇓P P 17 41 51.7 +0.3
baz=63
L17A Cokeville 63.06 328 ⇓P P 17 41 51.5 -0.2
baz=63,SNR=6.4
HWUT Hardware Ranch 63.08 327 eP P 17 41 51.0 -0.9
4.4nm,0.6s
HWUT ePcP PcP 17 42 20.3 -2.2
F23A Volborg 63.14 334 ⇑P P 17 41 52.3 +0.2
baz=63,SNR=14
G22A Birney 63.15 333 ⇑P P 17 41 52.1 0.0
baz=63,SNR=9.4
R11A Troy Canyon, C 63.21 322 ⇑P P 17 41 53.8 +1.1
baz=63
BSC Santa Cruz Isl 63.22 316 ⇓P P 17 41 53.4 +0.7
baz=63
L16A Fish Haven 63.30 327 ⇑P P 17 41 53.3 0.0
baz=63,SNR=6.6
E24A Baker 63.34 335 ⇓P P 17 41 54.0 +0.7
baz=64,SNR=16
H20A Greybull 63.37 331 ⇑P P 17 41 53.5 0.0
baz=64,SNR=5.2
ISA Isabella 63.40 318 eP P 17 41 54.8 +0.9
2.5nm,0.5s
ISA Isabella 63.40 318 ⇑P P 17 41 55.1 +1.2
baz=64
J18A Kendall Valley 63.42 329 ⇑P P 17 41 54.1 +0.1
baz=64,SNR=20
ULM Lac du Bonnet 63.47 343 P P 17 41 52.9 -1.0
ULM Lac du Bonnet 63.47 343 P P 17 41 52.9 -1.0
45nm,0.3s,baz=154,slow=6.0,SNR=66
I19A Meeteetse 63.51 330 ⇑P P 17 41 55.5 +0.9
baz=64
G21A Lodge Grass 63.56 332 ⇓P P 17 41 55.1 +0.3
baz=64
I18A Diamond G Ranc 63.67 330 ⇓P P 17 41 56.1 +0.5
baz=64,SNR=10
E23A Ismay 63.71 334 ⇓P P 17 41 56.4 +0.8
baz=64
L15A Malad City 63.80 327 ⇑P P 17 41 56.5 +0.1
baz=64
PKM Peak Mountain 63.85 317 ⇑P P 17 41 58.0 +1.1
baz=64,SNR=5.7
J17A Brown Place, J 63.88 329 ⇑P P 17 41 57.5 +0.6
baz=64
E22A Miles City 63.94 334 ⇓P P 17 41 56.8 -0.2
baz=64,SNR=7.2
K16A Soda Springs 63.95 328 ⇓P P 17 41 58.3 +1.0
baz=64,SNR=6.9
G20A Bridger 64.02 332 ⇑P P 17 41 57.5 -0.2
baz=64,SNR=12
C24A Savage 64.17 336 ⇑P P 17 41 59.4 +1.0
baz=64
MOOW Moose Ponds 64.17 329 eP P 17 41 58.8 0.0
3.3nm,0.8s
MOOW ePcP PcP 17 42 26.2 -0.8
RRI2 Red Ridge 64.18 329 eP P 17 41 59.1 +0.2
24nm,0.9s
I17A Pilgrim Ck. 64.21 329 ⇑P P 17 41 59.8 +0.8
baz=64,SNR=6.9
L14A Malta 64.28 326 ⇑P P 17 41 59.4 -0.1
baz=64,SNR=5.5
H18A Shoshone NF, C 64.31 331 ⇓P P 17 41 59.6 0.0
baz=64,SNR=11
K15A Arbon 64.35 327 ⇓P P 17 42 00.5 +0.6
baz=64
IMW Indian Meadow 64.38 329 eP P 17 42 00.7 +0.5
4.4nm,0.5s
IMW ePcP PcP 17 42 27.7 -0.2
SCHQ Schefferville 64.42 3 eP P 17 41 59.0 -0.8
33nm,0.9s
SCHQ PcP PcP 17 42 26.4 -1.0
SCHQ ePcP PcP 17 42 26.5 -0.9
SCHQ Schefferville 64.42 3 P P 17 41 59.3 -0.5
17nm,0.6s,baz=198,slow=5.1,SNR=44
SCHQ PcP PcP 17 42 26.4 -1.0
6.5nm,0.4s,baz=155,slow=5.8,SNR=5.6
RLMT Red Lodge 64.45 331 eP P 17 42 00.7 +0.3
4.1nm,0.5s
RLMT Red Lodge 64.45 331 ⇓P P 17 42 00.9 +0.4
baz=65,SNR=8.7
E21A Keefer Ranch, 64.51 333 ⇓P P 17 42 01.2 +0.5
baz=65,SNR=6.2
H17A Grant Village 64.55 330 ⇓P P 17 42 02.3 +1.1
baz=65
LKWY Lake 64.59 330 P P 17 42 00.1 -1.4
6.9nm,0.8s
D22A Cohagen 64.60 334 ⇓P P 17 42 02.1 +0.9
baz=65,SNR=15
I16A Newdale 64.64 329 ⇓P P 17 42 02.4 +0.8
baz=65
C23A Lambert 64.69 335 ⇓P P 17 42 02.4 +0.6
baz=65,SNR=11
G18A Lazy EL Ranch, 64.73 331 ⇑P P 17 42 03.0 +0.8
baz=65,SNR=24
J15A Blackfoot 64.79 328 ⇓P P 17 42 03.6 +1.0
baz=65
DGMT Dagmar 64.83 336 ⇓iP P 17 42 03.0 +0.5
20nm,0.4s
DGMT Dagmar 64.83 336 ⇓P P 17 42 03.3 +0.8
baz=65,SNR=12
F19A Roth Farm, Mol 64.84 332 ⇑P P 17 42 03.4 +0.6
baz=65,SNR=7.3
D21A La Casta Ranch 64.88 334 ⇓P P 17 42 04.0 +1.0
baz=65,SNR=17
NVAR Mina Array Bea 64.93 321 P P 17 42 04.5 +0.8
NVAR PcP PcP 17 42 30.5 +0.3
NVAR pP pP 17 44 07.6 +0.5
NVAR Mina Array Bea 64.93 321 P P 17 42 04.5 +0.8
0.5nm,0.5s,baz=141,slow=6.0,SNR=5.0
NVAR PcP PcP 17 42 30.5 +0.3
2.3nm,0.7s,baz=123,slow=4.8,SNR=11
NVAR pP pP 17 44 07.6 +0.5
0.4nm,0.5s,baz=134,slow=6.4,SNR=2.6
C22A Vida 64.94 335 ⇓P P 17 42 03.9 +0.6
baz=65,SNR=9.8
YMR Madison River 64.94 330 eP P 17 42 04.3 +0.7
20nm,0.7s
E20A Meyer Farm, Mu 64.95 333 ⇑P P 17 42 04.3 +0.9
baz=65,SNR=14
H16A Russell Place, 65.11 330 ⇑P P 17 42 06.0 +1.3
baz=65,SNR=18
A24A Westby 65.12 337 ⇓P P 17 42 05.7 +1.3
baz=65
B23A Brockton 65.14 336 ⇓P P 17 42 05.5 +1.0
baz=65,SNR=20
E19A Rath Farm, Rou 65.22 332 ⇑P P 17 42 05.8 +0.7
baz=65,SNR=26
F18A Big Timber 65.24 331 ⇓P P 17 42 06.0 +0.8
baz=65,SNR=16
J14A Carey 65.31 327 ⇓P P 17 42 07.2 +1.3
baz=65,SNR=13
D20A Manuel Ranch, 65.40 333 ⇑P P 17 42 06.9 +0.7
baz=66
B22A Reddig Ranch S 65.42 335 ⇓P P 17 42 07.2 +0.9
baz=66
C21A Desert Coulee 65.51 334 ⇑P P 17 42 07.4 +0.5
baz=66,SNR=46
F17A Fitzpatrick Pl 65.69 331 ⇓P P 17 42 08.7 +0.6
baz=66
I14A Mackay 65.69 328 ⇓P P 17 42 09.3 +1.1
baz=66,SNR=10.0
J13A Cove Ranch, Pi 65.71 327 ⇑P P 17 42 09.1 +0.7
baz=66,SNR=5.2
H15A Lima 65.75 329 ⇑P P 17 42 09.6 +1.0
baz=66
G16A Moss Hill, Enn 65.76 330 ⇑P P 17 42 09.5 +0.9
baz=66
D19A Cripps Ranch, 65.79 333 ⇓P P 17 42 09.2 +0.5
baz=66,SNR=11
C20A Veseth Ranch, 65.82 334 ⇑P P 17 42 09.0 +0.3
baz=66,SNR=14
A22A Carney Farms, 65.93 336 ⇓P P 17 42 10.2 +0.8
baz=66,SNR=23
B21A Ellsworth Farm 65.95 335 ⇓P P 17 42 09.9 +0.4
baz=66,SNR=7.6
HLID Hailey 65.95 327 eP P 17 42 10.5 +0.6
2.8nm,0.6s
HLID Hailey 65.95 327 ⇓P P 17 42 10.8 +0.9
baz=66,SNR=6.4
BOZ Bozeman (W) 65.97 330 ⇑P P 17 42 10.3 +0.4
baz=66,SNR=6.8
MCMT McKenzie Canyo 66.00 329 eP P 17 42 11.2 +0.9
3.2nm,0.7s
I13A Wildhorse Cree 66.03 327 ⇑P P 17 42 11.5 +1.1
baz=66,SNR=9.6
G15A Dillon 66.06 329 ⇑P P 17 42 11.4 +0.9
baz=66
F16A Kennard Place, 66.07 330 ⇓P P 17 42 11.5 +1.0
baz=66
H14A Leadore 66.12 328 ⇓P P 17 42 11.7 +0.8
baz=66,SNR=8.1
E17A Martinsdale 66.19 331 ⇑P P 17 42 12.1 +0.8
baz=66,SNR=7.9
D18A Linhart Farms, 66.23 332 ⇓P P 17 42 12.0 +0.6
baz=66
DLMT Dillon 66.25 329 eP P 17 42 12.2 +0.6
3.0nm,0.7s
C19A Slack Wire Ran 66.30 333 ⇓P P 17 42 12.5 +0.7
baz=66,SNR=34
B20A Solberg Farm, 66.38 334 ⇑P P 17 42 12.5 +0.3
baz=66,SNR=13
F15A Butte 66.53 330 ⇑P P 17 42 14.2 +0.8
baz=67
H13A Challis 66.55 328 ⇑P P 17 42 14.6 +1.2
baz=67,SNR=5.4
G14A Jackson 66.60 329 ⇑P P 17 42 14.6 +0.7
baz=67
D17A Six Diamond Ra 66.61 332 ⇑P P 17 42 14.5 +0.7
baz=67,SNR=14
MFID Camas Ranch 66.62 326 eP P 17 42 14.9 +1.0
22nm,0.9s
MFID epP pP 17 44 17.5 -0.8
MFID Camas Ranch 66.62 326 ⇑P P 17 42 15.2 +1.3
baz=67,SNR=16
E16A East Helena 66.63 331 ⇓P P 17 42 14.4 +0.5
baz=67
A20A Cobblestone Ra 66.68 335 ⇓P P 17 42 14.3 +0.3
baz=67,SNR=11
B19A Brinkman Farms 66.79 334 ⇓P P 17 42 15.5 +0.8
baz=67,SNR=26
EGMT Eagleton 66.83 333 eP P 17 42 14.9 -0.1
22nm,0.6s
EGMT epP pP 17 44 10.3 -9.2
EGMT Eagleton 66.83 333 ⇓P P 17 42 15.5 +0.5
baz=67,SNR=16
HRY Holter Researc 66.83 331 eP P 17 42 15.7 +0.6
6.0nm,0.5s
H12A Diamond D Ranc 66.85 328 ⇓P P 17 42 16.5 +1.1
baz=67,SNR=8.0
G13A Cobalt 66.90 328 ⇑P P 17 42 16.8 +1.2
baz=67,SNR=9.2
D16A Dana Ranch, Ca 66.93 331 ⇑P P 17 42 16.9 +1.2
baz=67,SNR=15
F14A Wisdom 66.95 329 ⇓P P 17 42 16.7 +0.8
baz=67
C17A Wharram Farm, 67.00 332 ⇑P P 17 42 16.9 +0.9

baz=67,SNR=11
E15A **Deer Lodge** 67.02 330 ⇑P P 17 42 16.9 +0.6
baz=67
A19A **Klindworth Far** 67.06 334 ⇑P P 17 42 16.8 +0.4
baz=67,SNR=25
B18A **Beardsley Farm** 67.11 333 ⇓P P 17 42 17.5 +0.8
baz=67,SNR=5.4
PMPS **Porto Santo** 67.38 48 eP P 17 42 20.1 +1.6
D15A **Lincoln** 67.40 331 ⇑P P 17 42 20.0 +1.4
baz=68,SNR=14
F13A **Darby** 67.42 329 ⇑P P 17 42 19.5 +0.8
baz=68,SNR=8.0
E14A **Clinton** 67.43 330 ⇓P P 17 42 20.0 +1.2
baz=68,SNR=11
B17A **L&G Farms, Che** 67.50 333 ⇑P P 17 42 19.1 +0.1
baz=68,SNR=6.4
C16A **Fuhringer Ranc** 67.58 332 ⇓P P 17 42 20.5 +0.9
baz=68,SNR=11
E13A **Victor** 67.80 329 ⇑P P 17 42 22.2 +1.2
baz=68,SNR=11
LIC **Lamto** 67.85 79 eP P 17 42 21.8 0.0
24nm,0.7s,baz=252
LIC **Lamto** 67.85 79 eP P 17 42 21.8 0.0
24nm,0.7s
F12A **Elk City** 67.88 328 ⇓P P 17 42 22.1 +0.6
baz=68,SNR=6.9
D14A **Greenough** 67.91 330 ⇑P P 17 42 22.3 +0.7
baz=68,SNR=6.2
A17A **Triple J Farms** 67.93 333 ⇑P P 17 42 22.0 +0.3
baz=68,SNR=15
MSO **Missoula** 67.94 330 eP P 17 42 22.8 +1.0
2.1nm,0.7s
MSO **Missoula** 67.94 330 ⇑P P 17 42 23.1 +1.2
baz=68,SNR=7.6
C15A **Salmond Ranch,** 67.96 331 ⇓P P 17 42 23.0 +1.0
baz=68,SNR=17
B16A **M & M Farms, S** 68.00 332 ⇑P P 17 42 22.4 +0.3
baz=68,SNR=12
SLMT **Seeley Lake** 68.01 330 eP P 17 42 22.5 +0.2
7.3nm,0.8s
MOD **Modoc** 68.24 323 eP P 17 42 24.7 +0.9
17nm,0.6s
B15A **Bradely Ranch,** 68.32 332 ⇑P P 17 42 24.2 +0.1
baz=68,SNR=12
A16A **West Butte Ran** 68.34 333 ⇓P P 17 42 24.8 +0.6
baz=68,SNR=7.5
D13A **Huson** 68.38 330 ⇓P P 17 42 25.0 +0.6
baz=68,SNR=6.2
SWMT **Swartz Lake** 68.44 330 eP P 17 42 25.7 +0.9
7.7nm,0.9s
B14A **Marquette Ranc** 68.69 331 ⇑P P 17 42 27.1 +0.7
baz=69,SNR=8.4
JTMT **Jette** 68.75 330 eP P 17 42 27.2 +0.6
9.9nm,1.1s
C13A **Hot Springs** 68.84 330 ⇓P P 17 42 28.3 +1.1
baz=69,SNR=11
A15A **Johnson Ranch,** 68.88 332 ⇓P P 17 42 27.6 +0.2
baz=69,SNR=8.6
A14A **Double T Ranch** 69.19 332 ⇓P P 17 42 29.3 0.0
baz=69,SNR=8.4
FFC **Flin Flon** 69.21 342 eP P 17 42 28.5 -0.7
13nm,0.7s
B13A **Whitefish** 69.27 331 ⇓P P 17 42 30.5 +0.8
baz=69,SNR=9.5
C12B **Naegeli Ranch,** 69.31 330 ⇑P P 17 42 30.8 +0.9
baz=69
YBH **Yreka Blue Hor** 69.61 321 P P 17 42 31.5 -0.4
YBH **Yreka Blue Hor** 69.61 321 P P 17 42 31.5 -0.4
1.7nm,0.5s,baz=123,slow=3.7,SNR=7.9
B12A **Libby** 69.88 330 ⇑P P 17 42 34.4 +1.1
baz=70,SNR=7.5
A12A **Yaak River Ran** 70.23 331 ⇓P P 17 42 36.5 +1.1
baz=70
NEW **Newport** 70.50 329 P P 17 42 36.2 -0.8
NEW **Newport** 70.50 329 P P 17 42 36.2 -0.8
3.0nm,0.8s,baz=126,slow=4.6,SNR=2.8
WPW **White Pass** 71.84 326 P P 17 42 46.1 +1.3
FL2 **Flat Top 2** 71.98 325 P P 17 42 46.9 +1.2
BMW **Boistfort Moun** 72.64 325 P P 17 42 50.6 +1.2
JCW **Jim Creek** 72.95 327 P P 17 42 51.1 0.0
HDW **Hoodsport** 73.23 326 P P 17 42 53.7 +0.9
VDB **Vedder Mountai** 73.54 328 P P 17 42 54.7 +0.3
OSR **Olympics--Salm** 73.65 326 P P 17 42 56.7 +1.6
OBC **Olympics--Boni** 74.02 326 P P 17 42 58.8 +1.6
SNAA **Sanae** 74.10 162 eP P 17 42 58.0 +0.7
1.3nm,0.6s
PFVI **Vila Bisbo** 74.70 47 eP P 17 43 03.2 +2.0
MORF **Marmelete** 74.91 47 eP P 17 43 04.5 +2.1
75nm,1.2s
PTEO **Sao Teotonio** 74.95 47 eP P 17 43 04.8 +2.3
PMAFR **Mafra** 75.16 45 eP P 17 43 05.5 +1.8
PBDV **Barranco-do-Ve** 75.40 47 eP P 17 43 07.2 +2.1
52nm,1.2s
PCVE **Castro Verde** 75.48 47 eP P 17 43 07.5 +2.0
64nm,0.8s
PVAQ **Vaqueiros** 75.62 47 eP P 17 43 08.1 +1.8
PBEJ **Beja** 75.77 47 eP P 17 43 09.0 +1.9
22nm,1.1s
EVOP **Sao Brissos** 75.80 46 eP P 17 43 07.6 +0.4
59nm,0.9s
EVO **Evora** 75.88 46 eP P 17 43 07.6 0.0
59nm,0.9s
EVO **Evora** 75.88 46 eP P 17 43 09.2 +1.6
21nm,1.0s
TOA0 **Torodi Ar. Sit** 75.90 74 eP P 17 43 08.5 +0.3
TOA0 epP pP 17 45 16.4 -0.9
TORD **Torodi Ar. Bea** 75.90 74 P P 17 43 08.6 +0.4
TORD pP pP 17 45 16.8 -0.6
TORD S S 17 51 59.7 -2.0
TORD **Torodi Ar. Bea** 75.90 74 P P 17 43 08.6 +0.4
29nm,0.6s,baz=262,slow=5.1,SNR=224
TORD pP pP 17 45 16.8 -0.6
5.3nm,0.8s,baz=268,slow=5.8,SNR=9.0
TORD S S 17 51 59.7 -2.0
2.6nm,1.0s,baz=259,slow=13,SNR=8.9
PMTG **Montargil** 75.95 46 eP P 17 43 09.5 +1.5
35nm,0.9s
PTOM **Tomar** 76.06 45 eP P 17 43 10.0 +1.4
44nm,0.7s
MDT **Midelt** 76.20 53 P P 17 43 11.6 +2.0
MDT **Midelt** 76.20 53 P P 17 43 11.6 +2.0
13nm,0.7s,baz=257,slow=4.8,SNR=31
PESTR **Estremoz** 76.32 46 eP P 17 43 11.6 +1.5
27nm,1.5s
PBAR **Barrancos** 76.43 47 eP P 17 43 12.5 +1.8
PTO **Porto** 76.58 44 eP P 17 43 12.8 +1.4
57nm,0.9s
PMRV **Marv??o** 76.69 46 eP P 17 43 12.9 +0.8
PCBR **Castelo Branco** 76.80 45 eP P 17 43 13.8 +1.1
22nm,0.9s
PVIS **Viseu** 76.88 44 eP P 17 43 14.6 +1.4
44nm,0.6s
MTE **Manteigas** 76.99 45 eP P 17 43 14.9 +1.1
32nm,1.1s
MTE **Manteigas** 76.99 45 eP P 17 43 14.8 +1.0
12nm,0.6s
PGAV **Gavieira, Arco** 77.17 43 eP P 17 43 15.9 +1.2
37nm,1.1s
PCAB **Cabril** 77.22 43 eP P 17 43 16.0 +1.1
54nm,1.3s
POLO **Lamas de Olo** 77.23 44 eP P 17 43 16.1 +1.0
12nm,1.4s
PVRL **Vila Real** 77.24 44 eP P 17 43 16.3 +1.2
28nm,0.8s
MVO **Moncorvo** 77.67 44 eP P 17 43 18.7 +1.3
50nm,0.7s
PBRG **Braganca** 78.13 44 eP P 17 43 21.1 +1.3
22nm,1.7s
PAB **San Pablo** 78.90 46 eP P 17 43 25.1 +1.1
13nm,0.8s
ESDC **Sonseca Array** 79.22 46 P P 17 43 27.2 +1.5
ESDC **Sonseca Array** 79.22 46 P P 17 43 27.2 +1.5
4.8nm,0.5s,baz=256,slow=5.7,SNR=34
ESLA **Sonseca Array** 79.22 46 eP P 17 43 26.9 +1.2
7.8nm,1.3s
YKA **Yellowknife Ar** 79.39 341 P P 17 43 25.8 -0.1
YKA S S 17 52 39.6 +3.5
YKA **Yellowknife Ar** 79.39 341 P P 17 43 25.7 -0.1
20nm,0.7s,baz=136,slow=5.6,SNR=483
YKA S S 17 52 39.6 +3.5
0.8nm,0.9s,baz=126,slow=10,SNR=9.1
YKW3 **Yellowknife Ar** 79.44 341 eP P 17 43 25.6 -0.6
0.6nm,0.8s
TAM **Tamanrasset** 81.75 65 eP P 17 43 40.7 +1.5
19nm,0.8s
SJPF **Ste Jean** 82.40 44 eP P 17 43 42.7 +0.9
20nm,0.6s
SJPF **Ste Jean** 82.40 44 eP P 17 43 42.7 +0.9
20nm,0.6s
ETSF **Etsaut** 82.78 44 eP P 17 43 44.6 +0.8
14nm,0.9s
ETSF **Etsaut** 82.78 44 eP P 17 43 44.6 +0.8
14nm,0.9s
QUIF **Quistinic** 82.92 39 eP P 17 43 44.5 +0.2
18nm,0.5s
QUIF **Quistinic** 82.92 39 eP P 17 43 44.5 +0.2
18nm,0.5s
ROSF **Rostrenen** 83.02 39 eP P 17 43 45.0 +0.3
41nm,0.8s
ROSF **Rostrenen** 83.02 39 eP P 17 43 45.0 +0.3
41nm,0.8s
SGMF **Saint Gilles** 83.43 39 eP P 17 43 46.7 -0.1
12nm,0.5s
SGMF **Saint Gilles** 83.43 39 eP P 17 43 46.7 -0.1
12nm,0.5s
EPF **Esparros** 83.45 44 eP P 17 43 47.5 +0.4
11nm,0.7s
EPF **Esparros** 83.45 44 eP P 17 43 47.5 +0.4
11nm,0.7s
MFF **Saint Martin d** 84.35 41 eP P 17 43 51.3 0.0
18nm,0.5s
MFF **Saint Martin d** 84.35 41 eP P 17 43 51.3 0.0
18nm,0.5s
LFF **La Frestale** 84.36 43 eP P 17 43 51.4 0.0
37nm,0.8s
LFF **La Frestale** 84.36 43 eP P 17 43 51.4 0.0
37nm,0.8s
GRR **Gorron** 84.53 39 eP P 17 43 52.0 -0.2
53nm,0.7s
GRR **Gorron** 84.53 39 eP P 17 43 52.0 -0.2
53nm,0.7s
MTLF **Montolieu** 84.85 45 eP P 17 43 53.6 -0.3
23nm,0.9s
MTLF **Montolieu** 84.85 45 eP P 17 43 53.6 -0.3
23nm,0.9s
SUMG **Summit** 84.86 9 eP P 17 43 54.0 +0.2
40nm,0.6s
SUMG **Summit** 84.86 9 *i* P P 17 43 54.1 +0.3
45nm,0.8s
FLN **La Foliniere** 84.90 39 eP P 17 43 53.9 -0.1
77nm,0.8s
FLN **La Foliniere** 84.90 39 eP P 17 43 53.9 -0.1
77nm,0.8s
RJF **Les Rejaudoux** 85.00 43 eP P 17 43 54.2 -0.4
23nm,0.9s
RJF **Les Rejaudoux** 85.00 43 eP P 17 43 54.2 -0.4
23nm,0.9s
LDF **La Druitiere** 85.06 39 eP P 17 43 54.6 -0.1
58nm,0.8s
LDF **La Druitiere** 85.06 39 eP P 17 43 54.6 -0.1
58nm,0.8s
CAF **Calviac** 85.25 43 eP P 17 43 55.6 -0.2
17nm,0.6s
CAF **Calviac** 85.25 43 eP P 17 43 55.6 -0.2
17nm,0.6s
TCF **Toulx Ste Croi** 85.78 42 eP P 17 43 57.8 -0.5
17nm,0.8s
TCF **Toulx Ste Croi** 85.78 42 eP P 17 43 57.8 -0.5
17nm,0.8s
ESK **Eskdalemuir** 85.82 32 eP P 17 43 57.3 -0.8
8.0nm,0.8s
EKA **Eskdalemuir Ar** 85.85 32 P P 17 43 58.0 -0.4
EKA **Eskdalemuir Ar** 85.85 32 P P 17 43 58.0 -0.4
1.6nm,0.4s,baz=238,slow=5.3,SNR=20
LASF **Ste Croix** 86.20 44 eP P 17 44 00.5 +0.2
24nm,0.9s
LASF **Ste Croix** 86.20 44 eP P 17 44 00.5 +0.2
24nm,0.9s
BGF **Bois d'Agland** 86.28 42 eP P 17 44 00.3 -0.3
35nm,0.7s
BGF **Bois d'Agland** 86.28 42 eP P 17 44 00.3 -0.3
35nm,0.7s
SCO **Scoresbysund** 86.68 15 *i* P P 17 44 02.6 +0.7
18nm,0.8s
AVF **Avril sur Loir** 86.68 42 eP P 17 44 01.8 -0.7
16nm,0.8s
AVF **Avril sur Loir** 86.68 42 eP P 17 44 01.8 -0.7
16nm,0.8s
SSF **Saint Saulge** 86.87 41 eP P 17 44 02.6 -0.7
7.6nm,0.7s
SSF **Saint Saulge** 86.87 41 eP P 17 44 02.6 -0.7
7.6nm,0.7s
SMF **Signal de Mont** 86.96 42 eP P 17 44 03.4 -0.4
22nm,0.8s
SMF **Signal de Mont** 86.96 42 eP P 17 44 03.4 -0.4
22nm,0.8s
VIVF **Saint-Julien-l** 86.99 44 eP P 17 44 04.3 +0.3
19nm,0.9s
VIVF **Saint-Julien-l** 86.99 44 eP P 17 44 04.3 +0.3
19nm,0.9s
LOR **Lormes** 87.16 41 eP P 17 44 04.0 -0.7
13nm,0.8s
LOR **Lormes** 87.16 41 eP P 17 44 04.0 -0.7
13nm,0.8s
SMRF **Simiane la Rot** 87.36 45 eP P 17 44 06.2 +0.4
8.2nm,0.7s
SMRF **Simiane la Rot** 87.36 45 eP P 17 44 06.2 +0.4
8.2nm,0.7s
ORIF **Oris-en-Rattie** 87.83 44 eP P 17 44 08.6 +0.6
43nm,0.7s
ORIF **Oris-en-Rattie** 87.83 44 eP P 17 44 08.6 +0.6
43nm,0.7s
LMR **La Mourre** 87.84 46 eP P 17 44 08.0 0.0
31nm,1.0s
LMR **La Mourre** 87.84 46 eP P 17 44 08.0 0.0
31nm,1.0s
VNDA **Vanda** 87.99 190 pP pP 17 46 23.8 +1.2
VNDA **Vanda** 87.99 190 pP pP 17 46 23.8 +1.2
1.0nm,0.8s,baz=172,slow=4.2,SNR=3.5
FRF **La Foret Royal** 88.00 45 eP P 17 44 08.6 -0.1
35nm,1.0s
FRF **La Foret Royal** 88.00 45 eP P 17 44 08.6 -0.1
35nm,1.0s
KEST **Kesra** 88.08 53 P P 17 44 09.8 +0.4
KEST **Kesra** 88.08 53 P P 17 44 09.8 +0.4
3.6nm,0.5s,baz=221,slow=5.3,SNR=12
SFTF **Sexfontaines** 88.19 41 eP P 17 44 09.1 -0.4
48nm,0.9s
SFTF **Sexfontaines** 88.19 41 eP P 17 44 09.1 -0.4
48nm,0.9s
BAIF **Baives** 88.21 39 eP P 17 44 09.3 -0.2
18nm,0.8s
BAIF **Baives** 88.21 39 eP P 17 44 09.3 -0.2
18nm,0.8s
MEZF **Maizieres J'vi** 88.29 40 eP P 17 44 09.6 -0.3
MEZF **Maizieres J'vi** 88.29 40 eP P 17 44 09.6 -0.3
MBDF **Montbardon** 88.39 44 eP P 17 44 10.9 +0.2
9.5nm,0.7s
MBDF **Montbardon** 88.39 44 eP P 17 44 10.9 +0.2
9.5nm,0.7s
CABF **La Chapelle** 88.43 42 eP P 17 44 10.6 -0.2
18nm,0.8s
CABF **La Chapelle** 88.43 42 eP P 17 44 10.6 -0.2
18nm,0.8s
LPL **La Plagne** 88.57 43 eP P 17 44 12.2 +0.6
19nm,0.6s
LPL **La Plagne** 88.57 43 eP P 17 44 12.2 +0.6
18nm,0.6s
LPG **La Plagne** 88.58 43 eP P 17 44 12.4 +0.6
19nm,0.7s
LPG **La Plagne** 88.58 43 eP P 17 44 12.4 +0.6
19nm,0.7s
GIVF **Givet** 88.61 39 eP P 17 44 11.4 0.0
74nm,0.8s
GIVF **Givet** 88.61 39 eP P 17 44 11.4 0.0
74nm,0.8s
SBF **Sospel** 88.63 45 eP P 17 44 11.6 -0.1
23nm,0.8s
SBF **Sospel** 88.63 45 eP P 17 44 11.6 -0.1
23nm,0.8s
PAGF **Fort de Pagny** 88.73 40 eP P 17 44 11.9 -0.1
6.1nm,0.9s
PAGF **Fort de Pagny** 88.73 40 eP P 17 44 11.9 -0.1
6.1nm,0.9s
HAU **Haudompre** 88.98 41 eP P 17 44 12.6 -0.6
HAU **Haudompre** 88.98 41 eP P 17 44 12.6 -0.6
BCLA **Clavier** 88.99 38 P P 17 44 13.5 +0.3
comp=Z,7.2nm,1.5s
HINF **Hinteralfeld** 89.26 41 eP P 17 44 13.8 -0.7
comp=Z,7.8nm,0.8s
HINF **Hinteralfeld** 89.26 41 eP P 17 44 13.8 -0.7
comp=Z,7.8nm,0.8s
WLF **Walferdange** 89.31 39 eP P 17 44 15.0 +0.4
comp=Z,19nm,0.9s
ECH **Echery** 89.56 41 eP P 17 44 15.7 -0.2
comp=Z,18nm,1.4s
CDF **Champ du Feu** 89.69 41 eP P 17 44 16.1 -0.5
comp=Z,10nm,0.8s
CDF **Champ du Feu** 89.69 41 eP P 17 44 16.1 -0.5
comp=Z,10nm,0.8s
BFO **Black Forest** 90.35 41 eP P 17 44 19.0 -0.5
comp=Z,4.0nm,0.9s
EGAK **Eagle** 90.37 336 eP P 17 44 18.9 -0.3
comp=Z,5.8nm,0.9s
TNS **Taunus Mts** 90.88 39 eP P 17 44 22.4 +0.4
comp=Z,16nm,1.3s
DAG **Danmarks Havn** 91.46 11 *i* P P 17 44 23.6 -0.4
comp=Z,6.6nm,0.8s
FETA **Feichten** 91.62 43⇑*i*PcP PcP 17 44 26.1 0.0
comp=Z,6.0nm,1.0s
FETA **Feichten** 91.62 43⇑*i*P PcP 17 44 26.1 0.0
comp=Z,6.0nm,1.0s
MOTA **Moosalm** 91.94 42⇓*i*PcP PcP 17 44 27.4 -0.1
comp=Z,4.5nm,0.7s
MOTA **Moosalm** 91.94 42⇓*i*P PcP 17 44 27.4 -0.1
comp=Z,4.5nm,0.7s
WTTA **Wattenberg** 92.28 43⇑*i*P P 17 44 28.8 +0.1
comp=Z,13nm,1.1s
WTTA **Wattenberg** 92.28 43⇑*i*P P 17 44 28.8 +0.1
comp=Z,13nm,1.1s
CLZ **Clausthal** 92.44 38 eP P 17 44 29.7 +0.6
comp=Z,5.0nm,1.0s
GRF **Grafenberg Arr** 92.51 40 eP P 17 44 29.8 +0.4
comp=Z,10.0nm,1.2s
ILAR **Eielson Array** 92.68 335 P P 17 44 29.1 -0.7
ILAR PP PP 17 48 22.4 -1.1
ILAR **Eielson Array** 92.68 335 P P 17 44 29.1 -0.7
comp=Z,0.8nm,0.4s,baz=137,slow=3.6,SNR=18
ILAR PP PP 17 48 22.4 -1.1
comp=Z,1.9nm,0.8s,baz=101,slow=6.2,SNR=9.1
ABTA **Abfaltersbach** 92.77 43⇑*i*P P 17 44 30.5 -0.3
comp=Z,11nm,0.9s
ABTA **Abfaltersbach** 92.77 43⇑*i*P P 17 44 30.5 -0.3
comp=Z,11nm,0.9s
MOX **Moxa** 92.95 39 eP P 17 44 31.9 +0.5
comp=Z,3.0nm,0.8s
COLA **College** 93.11 335 eP P 17 44 30.9 -0.9
comp=Z,3.8nm,0.8s
MANZ **Manzenberg** 93.13 40 eP P 17 44 33.0 +0.7
comp=Z,8.0nm,1.2s
RJOB **Jochberg** 93.14 42 eP P 17 44 32.7 +0.3
comp=Z,6.0nm,0.7s
ROTZ **Rotzenmuhle** 93.15 40 eP P 17 44 33.2 +0.9
comp=Z,10.0nm,1.0s
PLN **Plauen** 93.26 39 eP P 17 44 33.4 +0.6
comp=Z,34nm,1.3s
WERD **Werda** 93.35 40 eP P 17 44 33.7 +0.5
comp=Z,11nm,1.5s
WERN **Wernitzgruen** 93.36 40 eP P 17 44 34.1 +0.8
comp=Z,5.0nm,1.0s
KBA **Koelnbreinsper** 93.39 43⇑*i*P P 17 44 33.6 -0.1
comp=Z,6.4nm,0.8s
KBA **Koelnbreinsper** 93.39 43⇑*i*P P 17 44 33.6 -0.1
comp=Z,6.4nm,0.8s
NKC **Novy Kostel** 93.39 40 eP P 17 44 34.6 +1.1
TANN **Tannenbergstha** 93.44 40 eP P 17 44 34.5 +0.8
comp=Z,11nm,1.6s
WET **Wettzell** 93.46 41 eP P 17 44 34.2 +0.4
comp=Z,8.0nm,1.0s
TRF **Thorofare Moun** 93.77 334 eP P 17 44 33.9 -1.1
comp=Z,3.8nm,0.6s
KHC **Kasperske Hory** 93.91 41 eP P 17 44 36.2 +0.4
comp=Z,5.3nm,1.1s
KHC **Kasperske Hory** 93.91 41 eP P 17 44 36.4 +0.5
CLL **Collm** 93.94 39 eP P 17 44 36.4 +0.5
comp=Z,9.0nm,1.5s
GEC2 **GERESS Array S** 93.94 41 eP P 17 44 36.2 +0.1
comp=Z,6.0nm,0.8s
GERES **GERESS Array B** 93.94 41 P P 17 44 36.2 +0.1
GERES **GERESS Array B** 93.94 41 P P 17 44 36.2 +0.1
comp=Z,5.1nm,0.7s,baz=250,slow=3.6,SNR=35
MOA **Molln** 94.14 42⇓*i*PcP PcP 17 44 37.3 +0.2
comp=Z,13nm,1.3s
MOA **Molln** 94.14 42⇓*i*P PcP 17 44 37.3 +0.2
comp=Z,13nm,1.3s
BRG **Berggiesshubel** 94.45 39 eP P 17 44 38.9 +0.7
comp=Z,8.0nm,1.2s
PRU **Pruhonice** 94.68 40 eP P 17 44 40.1 +0.8
NB2 **NORSAR Subarra** 94.80 29 P P 17 44 40.2 +0.6
baz=256,slow=4.1
NB2 **NORSAR Subarra** 94.80 29 P P 17 44 40.2 +0.6
comp=Z,5.2nm,0.9s,baz=256,slow=4.1
NOA **NORSAR Array B** 94.80 29 P P 17 44 40.5 +0.9
NOA **NORSAR Array B** 94.80 29 P P 17 44 40.5 +0.9
comp=Z,4.4nm,0.9s,baz=256,slow=4.3,SNR=10
TREC **Trest** 95.17 41 eP P 17 44 42.4 +0.8
CONA **Conrad Observa** 95.21 42⇑*i*PcP PcP 17 44 42.5 +0.6
comp=Z,10nm,1.7s
CONA **Conrad Observa** 95.21 42⇑*i*P PcP 17 44 42.5 +0.6
comp=Z,10nm,1.7s
UPC **Upice** 95.69 40 eP P 17 44 44.9 +1.1
HFS **Hagfors** 95.85 30 P P 17 44 44.6 +0.3
HFS **Hagfors** 95.85 30 P P 17 44 44.6 +0.3
comp=Z,0.9nm,0.4s,baz=134,slow=4.3,SNR=7.8
DPC **Dobruska-Polom** 95.86 40 eP P 17 44 45.8 +1.1
VYHS **Vyhne** 97.26 42 PDIF P 17 44 51.7 +0.8
CRVS **Cervenica-Dubn** 99.03 42 PDIF Pdif 17 45 03.0 +4.2
ARCES **ARCESS Array B** 101.42 21 P Pdif 17 45 08.6 -0.3
ARCES **ARCESS Array B** 101.42 21 P Pdif 17 45 08.6 -0.3
comp=Z,3.6nm,0.7s,baz=266,slow=3.5,SNR=13
BRTR **Keskin Array B** 107.59 51 PKiKP PKiKP 17 49 41.7 +0.5
BRTR PP PP 17 50 11.9 -3.0
BRTR **Keskin Array B** 107.59 51 PKiKP PKiKP 17 49 41.7 +0.5
comp=Z,0.5nm,0.6s,baz=222,slow=1.7,SNR=4.2
BRTR PP PP 17 50 11.9 -3.0
comp=Z,0.4nm,0.6s,baz=205,slow=2.6,SNR=3.6
KBZ **Khabaz** 114.08 46 PKP PKiKP 17 49 53.9 +0.8
KBZ **Khabaz** 114.08 46 PKP PKiKP 17 49 53.9 +0.8
comp=Z,4.5nm,0.8s,baz=232,slow=2.6,SNR=12
PETK **Petropavlovsk-** 121.61 328 PKP PKPdf 17 50 08.4 +1.0
PETK **Petropavlovsk-** 121.61 328 PKP PKPdf 17 50 08.4 +1.0
comp=Z,2.5nm,0.8s,baz=160,slow=2.7,SNR=7.3
ABKAR **Akbulak array** 123.52 36 ePKPdf PKPdf 17 50 11.8 +0.6
ABKAR eSKP 17 52 48.5
STKA **Stephens Creek** 128.05 216 PKP PKPdf 17 50 20.4 0.0
STKA **Stephens Creek** 128.05 216 PKP PKPdf 17 50 20.4 0.0
comp=Z,1.2nm,0.5s,baz=39,slow=1.1,SNR=10
ZAA0 **Zalesovo Array** 131.91 19 ePKPpre PKPpre 17 50 18.6
ZAA0 ePKPdf PKPdf 17 50 27.2 +0.2
ZAA0 epPKPdf pPKPdf 17 52 46.2 -5.6
ZAA0 eSKP 17 52 55.1
ZALV **Zalesovo Beam** 131.91 19 PKPpre PKPpre 17 50 13.4
ZALV PKP PKPdf 17 50 27.4 +0.4
ZALV pPKP pPKPdf 17 52 49.5 -2.3
ZALV SKPbc SKPbc 17 52 54.4 -1.0
ZALV **Zalesovo Beam** 131.91 19 PKiKP PKPpre 17 50 13.4
comp=Z,0.6nm,0.4s,baz=296,slow=3.7,SNR=4.4
ZALV PKP PKPdf 17 50 27.4 +0.4
comp=Z,12nm,0.7s,baz=275,slow=2.7,SNR=39
ZALV pPKP pPKPdf 17 52 49.5 -2.3
comp=Z,2.1nm,0.8s,baz=327,slow=2.5,SNR=4.7
ZALV SKPbc SKPbc 17 52 54.4 -1.0
comp=Z,7.7nm,0.8s,baz=330,slow=4.5,SNR=18
KURK **Kurchatov** 132.19 26 PKP PKPdf 17 50 27.9 +0.3
KURK SKPbc SKPbc 17 52 56.7 +0.2
KURBB **Kurchatov Arra** 132.22 26 PKP PKPdf 17 50 27.9 +0.3
comp=Z,3.6nm,0.5s,baz=312,slow=2.5,SNR=18
KURBB SKPbc SKPbc 17 52 56.7 +0.1
comp=Z,2.5nm,0.5s,baz=317,slow=3.6,SNR=21
KKAR **Karatay Array** 132.95 38 ePKPdf PKPdf 17 50 28.8 -0.6
KKAR eSKP 17 52 58.4
EKS2 **Erkin-Say** 135.17 37 ePKPdf PKPdf 17 50 32.0 -1.7
EKS2 eSKP 17 53 06.8
AAK **Ala-Archa** 135.61 36 ePKPdf PKPdf 17 50 34.7 +0.1
AAK PKP PKPdf 17 50 36.0 +1.4
AAK SKPbc SKPbc 17 53 07.9 0.0
AAK eSKP 17 53 08.8
AAK **Ala-Archa** 135.61 36 PKP PKPdf 17 50 36.0 +1.4
comp=Z,3.8nm,0.7s,baz=150,slow=2.3,SNR=10
AAK SKPbc SKPbc 17 53 07.9 0.0
comp=Z,5.8nm,1.0s,baz=236,slow=2.6,SNR=9.8
TKM2 **Tokmak 2** 136.07 35 ePKPdf PKPdf 17 50 36.0 +0.6
TKM2 eSKP 17 53 10.2
MKAR **Makanchi Array** 136.75 27 PKPpre PKPpre 17 50 25.2
MKAR PKP PKPdf 17 50 35.7 -0.6
MKAR SKPbc SKPbc 17 53 10.7 -0.3
MKAR **Makanchi Array** 136.75 27 PKhKP PKPpre 17 50 25.2
comp=Z,0.8nm,0.6s,baz=337,slow=3.4,SNR=10
MKAR PKP PKPdf 17 50 35.7 -0.6
comp=Z,4.3nm,0.7s,baz=321,slow=1.7,SNR=26
MKAR SKPbc SKPbc 17 53 10.7 -0.3

comp=Z,2.1nm,0.7s,baz=324,slow=3.8,SNR=11
KSH Kashi 138.38 39 *e*PKP PKPdf 17 50 34.0 -5.7
KSH PP **PP** **17 53 34.9 -3.2**
KSH PKS PKSdf 17 54 07.4 -8.4
KSH SKS **SKSdf** **17 56 47.1 -4.6**
KSH SKKS **SKKSac** **17 59 24.5 -4.9**
KSH AMB AMB
comp=Z,170nm,4.1s
ASAR Alice Springs 138.69 216 PKPpre PKPpre 17 50 36.0
ASAR PKP **PKPdf** **17 50 40.5 -0.1**
ASAR pPKP pPKPdf 17 53 04.4 -1.1
ASAR SKPbc **SKPbc** **17 53 16.1 -1.1**
ASAR Alice Springs 138.69 216 PKhKP PKPpre 17 50 36.0
comp=Z,1.8nm,0.8s,baz=129,slow=2.6,SNR=4.0
ASAR PKP **PKPdf** **17 50 40.5 -0.1**
comp=Z,1.4nm,0.6s,baz=125,slow=2.0,SNR=26
ASAR pPKP pPKPdf 17 53 04.4 -1.1
comp=Z,1.3nm,0.7s,baz=134,slow=1.5,SNR=7.3
ASAR SKPbc **SKPbc** **17 53 16.1 -1.1**
comp=Z,6.4nm,0.6s,baz=128,slow=3.6,SNR=36
USRK Ussuriysk Arra 140.18 334 PKhKP PKPpre 17 50 36.8
comp=Z,1.7nm,0.6s,baz=142,slow=35,SNR=7.1
USRK SKPbc **SKPbc** **17 53 19.9 -0.6**
comp=Z,2.4nm,0.6s,baz=7.4,slow=1.9,SNR=8.4
WRA Warramunga Arr 141.22 220 PKP **PKPdf** **17 50 45.0 -0.2**
WRA Warramunga Arr 141.22 220 PKP **PKPdf** **17 50 45.0 -0.2**
comp=Z,136nm,0.4s,baz=133,slow=2.2,SNR=2.9
WMQ Urumqi 141.42 25 PKP **PKPdf** **17 50 45.3 +0.4**
ULN Ulaanbaatar 141.96 2 *e*PKPdf **PKPdf** **17 50 42.5 -3.3**
ULN *e*PP PP 17 53 53.5 -5.2
SONM Songino Array 141.97 3 PKP **PKPdf** **17 50 43.2 -2.6**
SONM SKPbc **SKPbc** **17 53 25.3 +0.3**
SONM Songino Array 141.97 3 PKP **PKPdf** **17 50 43.2 -2.6**
comp=Z,6.2nm,0.7s,baz=323,slow=2.8,SNR=31
SONM SKPbc **SKPbc** **17 53 25.3 +0.3**
comp=Z,1.3nm,0.5s,baz=327,slow=1.9,SNR=5.4
MJAR Matsushiro Arr 142.25 320 PKPpre PKPpre 17 50 43.7
MJAR Matsushiro Arr 142.25 320 PKhKP PKPpre 17 50 43.7
comp=Z,4.0nm,0.6s,baz=63,slow=2.0,SNR=15
CN2 Changchun 143.08 340 *e*PKP PKPab 17 50 42.4 -3.4
KSRS Korea Array 147.42 331 PKP **PKPdf** **17 50 56.1 +0.9**
comp=Z,27nm,0.7s,baz=35,slow=1.8,SNR=63
KSRS PKPbc **PKPbc** **17 50 59.3 +0.5**
comp=Z,27nm,0.7s,baz=23,slow=2.5,SNR=72
KSAR Wonju Array Be 147.45 331 PKP **PKPdf** **17 50 56.1 +0.8**
KSAR PKPbc **PKPbc** **17 50 59.3 +0.4**
HHC Hu-ho-hao-te 148.90 356 *e*PKPbc **PKPdf** **17 50 57.3 -0.5**
HHC PP **PP** **17 54 41.8 +2.8**
HHC SKS **SKSdf** **17 57 03.3 -4.1**
HHC SS **SS** **18 12 59.8 -0.1**
HHC AMB AMB
comp=Z,180nm,5.0s
GTA Gaotai 149.38 14 PKPbc **PKPdf** **17 50 59.5 +0.9**
GTA PKPab **PKPab** **17 51 11.3 0.0**
GTA SKS **SKSdf** **17 57 05.6 -2.6**
GTA AMB AMB
comp=Z,95nm,4.7s
PYUN Piuthan 149.66 49 *e*P **PKPdf** **17 50 59.8 +0.3**
HYB Hyderabad 149.70 72 *i* PKP **PKPdf** **17 50 59.0 -0.6**
HYB *e* 17 51 12.5
DANN Dangsing 150.10 48 *e*P **PKPdf** **17 51 01.0 +0.7**
comp=Z,246nm,0.7s
KOLN Koldanda 150.29 49 *e*P **PKPdf** **17 51 00.5 0.0**
comp=Z,73nm,0.8s
DMN Daman 151.50 48 *e*P **PKPdf** **17 51 02.5 +0.1**
comp=Z,68nm,0.6s
KKN Kakani 151.52 48 *e*P **PKPdf** **17 51 02.6 +0.3**
comp=Z,84nm,0.6s
PKIN Phulchoki 151.73 48 *e*P **PKPdf** **17 51 04.1 +1.4**
PKI Pulchoki 151.74 48 *e*P **PKPdf** **17 51 03.6 +0.8**
comp=Z,56nm,0.8s
GUN Gumba 151.89 47 *e*P **PKPdf** **17 51 04.3 +1.2**
comp=Z,101nm,0.7s
RAMN Ramite 152.96 48 *e*P **PKPdf** **17 51 05.3 +0.8**
comp=Z,79nm,0.7s
LZH Lanzhou 153.38 9 *e*PKPbc **PKPdf** **17 51 05.0 +0.3**
LZH pPKP **pPKPdf** **17 53 25.5 -4.8**
LZH sPKP 17 54 21.0
TAPN Taplejung 153.52 46 *e*P **PKPdf** **17 51 06.0 +0.6**
comp=Z,19nm,0.5s
ODAN Odare 153.59 47 *e*P **PKPdf** **17 51 06.0 +0.6**
comp=Z,28nm,0.7s
CD2 Chengdu 158.42 12 PKP **PKPdf** **17 51 10.1 -1.2**
GYA Guiyang 163.24 6 *e*PKP **PKPdf** **17 51 14.5 -2.1**
GYA PKPab **PKPab** **17 52 11.0 -0.3**
GYA pPKP **pPKPdf** **17 53 38.5 -4.2**
GYA sPKP 17 54 35.6
GYA PKS **PKSdf** **17 54 46.4 -3.4**
GYA PP **PP** **17 55 59.0 +2.0**
GYA AMB AMB
comp=Z,90nm,7.9s
KMI Kunming 163.66 20 PKP **PKPdf** **17 51 15.5 -1.6**
CMAR Chiang Mai Arr 167.13 47 PKP **PKPdf** **17 51 20.4 +0.6**
CMAR PKPab **PKPab** **17 52 28.9 +0.1**
CMAR Chiang Mai Arr 167.13 47 PKP **PKPdf** **17 51 20.4 +0.6**
comp=Z,2.2nm,0.8s,baz=283,slow=1.8,SNR=12
CMAR PKPab **PKPab** **17 52 28.9 +0.1**
comp=Z,3.7nm,0.8s,baz=303,slow=5.4,SNR=18

*ISCJB **21** 17:40:46.6±0.6,31˚.41N±0˚.04×104˚.37E±0˚.08, h14km, mb3.7/5, Error ellipse: s-maj=10.1km s-min=5.3km az=21.1*
*IDC **21** 17:40:47.4±1.1,31˚.59N×104˚.15E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.6/30, mbtmp3.7/8, ML3.4/2, Error ellipse: s-maj=35.6km s-min=20.3km az=57.0*
*BJI **21** 17:40:48.8,31˚.63N×104˚.07E, h10km, mb3.9/1, ML3.9/19, Ms3.9/3, Ms7 3.7/3*
ISC 21 17:40:48.6±0.7, 31˚.52N±0˚.05×104˚.18E±0˚.07, h14km, n15, σ2°28/17, mb3.7/5, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.71**	**211**	⇑*i*Pg	**Pg**	**17 41 01.4**	**-1.0**
CD2				Sg	**Sb**	**17 41 11.8**	**-0.5**
CD2				smax	smax		
	comp=N,8μm,0.7s						
CD2				smax	smax		
	comp=E,5μm,0.8s						
LZH	**Lanzhou**	**4.56**	**357**	Pg	**Pb**	**17 42 08.9**	**+0.3**
LZH				Sg	**Sg**	**17 43 12.4**	**-2.8**
LZH				smax	smax		
	comp=N,310nm,1.0s						
LZH				smax	smax		
	comp=E,130nm,0.8s						
LZH				LR	LR		
	comp=N,420nm,4.5s						
LZH				LR	LR		
	comp=E,1μm,7.8s						
LZH				LR	LR		
	comp=Z,800nm,6.5s						
XAN	**Xi'an**	**4.72**	**57**	Pn	**Pn**	**17 41 58.3**	**-1.1**
XAN				Sg	**Sb**	**17 43 11.6**	**+3.8**
XAN				smax	smax		
	comp=N,200nm,0.8s						
XAN				smax	smax		
	comp=E,100nm,0.8s						
GYA	**Guiyang**	**5.49**	**156**	Pn	**Pn**	**17 42 12.5**	**+2.4**
GYA				smax	smax		
	comp=N,90nm,0.9s						
GYA				smax	smax		
	comp=E,110nm,1.0s						
KMI	**Kunming**	**6.50**	**192**	Pn	Pn	17 42 18.9	-5.1
KMI				Sn	**Sn**	**17 43 36.0**	**-2.1**
KMI				smax	smax		
	comp=N,31nm,1.9s						
KMI				smax	smax		
	comp=E,28nm,2.2s						
KMI				LR	LR		
	comp=N,470nm,7.2s						
KMI				LR	LR		
	comp=E,540nm,12.8s						
GTA	**Gaotai**	**8.64**	**337**	*e*P	Pn	17 42 57.0	+3.7
GTA				S	Sn	17 44 37.9	+7.3
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA				LR	LR		
	comp=N,150nm,12.4s						
GTA				LR	LR		
	comp=E,150nm,8.5s						
GTA				LR	LR		
	comp=Z,220nm,12.3s						
WHN	**Wuhan**	**8.78**	**94**	*e*P	Pn	17 43 03.8	+8.7
WHN				S	**Sn**	**17 44 28.4**	**-5.5**
CMAR	**Chiang Mai Arr**	**13.84**	**201**	Pn	**Pn**	**17 44 04.6**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=12,slow=9.2,SNR=3.0						
SONM	**Songino Array**	**16.38**	**5**	Pn	**Pn**	**17 44 39.7**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=194,slow=12,SNR=4.4						
KSRS	**Korea Array**	**20.42**	**67**	P	**P**	**17 45 24.9**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=251,slow=9.9,SNR=7.5						
MKAR	**Makanchi Array**	**22.71**	**318**	P	**P**	**17 45 50.3**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=120,slow=13,SNR=12						
ZALV	**Zalesovo Beam**	**26.38**	**334**	P	**P**	**17 46 23.8**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=132,slow=8.8,SNR=7.0						
KURBB	**Kurchatov Arra**	**26.95**	**323**	P	**P**	**17 46 29.1**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=128,slow=8.8,SNR=5.5						
FINES	**FINESS Array B**	**57.26**	**326**	P	**P**	**17 50 36.5**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=120,slow=6.8,SNR=3.3						
ASAR	**Alice Springs**	**61.81**	**149**	P	**P**	**17 51 09.0**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=337,slow=6.6,SNR=9.0						

*ISCJB **21** 17:45:10.5±1.0, 38˚.41N±0˚.03×26˚.34E±0˚.06, h11km±5km, Error ellipse: s-maj=8.0km s-min=5.5km az=11.0*
*CSEM **21** 17:45:10.6±0.2, 38˚.41N×26˚.34E, h12km, MD2.8, Error ellipse: s-maj=3.7km s-min=2.7km az=86.0*
*ISK **21** 17:45:10.5, 38˚.39N×26˚.39E, h16km, MD2.9*
*DDA **21** 17:45:11.2, 38˚.44N×26˚.42E, h17km, MD2.8*
ISC 21 17:45:10.4±1.6, 38˚.40N±0˚.03×26˚.35E±0˚.03, h14km±14km, n26, σ0°40/42, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.19**	**102**	*i* P	**Pb**	**17 45 15.6**	**-0.1**
URLA				*i* S	**Sb**	**17 45 18.9**	**-0.4**
URLA	**Izmir**	**0.19**	**102**	*i* P	**Pb**	**17 45 15.6**	**-0.1**
URLA				*i* S	**Sb**	**17 45 18.9**	**-0.4**
BLCB	**Balcova**	**0.54**	**91**	*e*PG	**Pb**	**17 45 21.3**	**-0.3**
BLCB				*e*SG	**Sb**	**17 45 28.9**	**-0.3**
BLCB	**Balcova**	**0.54**	**91**	*e*Pg	**Pb**	**17 45 21.3**	**-0.3**
BLCB				*e*Sg	**Sb**	**17 45 29.0**	**-0.3**
IZM	**Izmir**	**0.71**	**90**	*e*PG	**Pb**	**17 45 25.0**	**+0.4**
IZM				*e*SG	**Sb**	**17 45 34.2**	**-0.1**
IZM	**Izmir**	**0.71**	**90**	*e*Pg	**Pb**	**17 45 25.0**	**+0.4**
IZM				*e*Sg	**Sb**	**17 45 34.2**	**-0.1**
AYVA	**Ayvalik**	**0.94**	**16**	*i* P	**Pb**	**17 45 28.0**	**-0.5**
AYVA				*i* S	**Sg**	**17 45 41.3**	**+0.3**
AYVA	**Ayvalik**	**0.94**	**16**	*i* P	**Pb**	**17 45 28.0**	**-0.5**
AYVA				*i* S	**Sg**	**17 45 41.3**	**+0.3**
GCAM	**G?zelcaml?**	**0.98**	**135**	*i* P	**Pn**	**17 45 30.2**	**+0.4**
GCAM				*i* S	**Sn**	**17 45 43.6**	**+0.2**
GCAM	**G?zelcaml?**	**0.98**	**135**	*i* P	**Pn**	**17 45 30.2**	**+0.4**
GCAM				*i* S	**Sn**	**17 45 43.6**	**+0.2**
AKS	**Akhisar**	**1.24**	**67**	*e*PN	**Pb**	**17 45 33.6**	**0.0**
AKS				*e*SN	**Sg**	**17 45 50.4**	**0.0**
AKS	**Akhisar**	**1.24**	**67**	*e*Pn	**Pb**	**17 45 33.6**	**0.0**
AKS				*e*Sn	**Sg**	**17 45 50.4**	**0.0**
EZN	**Ezine**	**1.42**	**359**	*e*PN	**Pb**	**17 45 36.4**	**-0.3**
EZN	**Ezine**	**1.42**	**359**	*e*Pn	**Pb**	**17 45 36.4**	**-0.3**
APE	**Apeiranthos**	**1.48**	**206**	*e*PN	**Pb**	**17 45 37.5**	**-0.2**
APE				*e*SN	**Sb**	**17 45 56.4**	**0.0**
APE	**Apeiranthos**	**1.48**	**206**	*e*Pn	**Pb**	**17 45 37.5**	**-0.2**
APE				*e*Sn	**Sb**	**17 45 56.4**	**0.0**
BODT	**Bodrum**	**1.54**	**150**	*e*PN	**Pn**	**17 45 37.0**	**-0.4**
BODT	**Bodrum**	**1.54**	**150**	*e*Pn	**Pn**	**17 45 37.0**	**-0.4**
BALY	**Balya**	**1.66**	**36**	*i* P	**Pb**	**17 45 40.2**	**-0.6**
BALY				*i* S	**Sb**	**17 46 01.1**	**-0.5**
BALY	**Balya**	**1.66**	**36**	*i* P	**Pb**	**17 45 40.2**	**-0.6**
BALY				*i* S	**Sb**	**17 46 01.1**	**-0.5**
BALB	**Balikesir**	**1.72**	**43**	*e*PN	**Pn**	**17 45 40.1**	**+0.3**
BALB	**Balikesir**	**1.72**	**43**	*e*Pn	**Pn**	**17 45 40.1**	**+0.3**
GONE	**Gonen-Balikesi**	**1.94**	**32**	*e*PN	**Pn**	**17 45 43.5**	**+0.5**
GONE	**Gonen-Balikesi**	**1.94**	**32**	*e*Pn	**Pn**	**17 45 43.5**	**+0.5**
GELI	**Tayfur-Gelibol**	**2.00**	**3**	*e*PN	**Pn**	**17 45 44.5**	**+0.8**
GELI	**Tayfur-Gelibol**	**2.00**	**3**	*e*Pn	**Pn**	**17 45 44.5**	**+0.8**

*ISCJB **21** 18:07:42.7±0.9, 36˚.55N±0˚.07×26˚.89E±0˚.06, h124km±11km, Error ellipse: s-maj=12.5km s-min=4.8km az=151.1*
*CSEM **21** 18:07:43.3±0.4, 36˚.57N×26˚.89E, h118km±5km, MD3.0, Error ellipse: s-maj=7.4km s-min=3.4km az=153.0*
*DDA **21** 18:07:43.6, 35˚.87N×27˚.25E, h9km, MD3.0*
*ISK **21** 18:07:45.6, 36˚.11N×27˚.27E, h82km, ML2.5*
*THE **21** 18:07:46.0, 36˚.65N×26˚.69E, h14km±5km, Error ellipse: s-maj=5.9km s-min=1.5km az=347.0*
ISC 21 18:07:43.1±1.5, 36˚.58N±0˚.05×26˚.90E±0˚.04, h119km±13km, n30, σ1°71/50, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAT	**Datca**	**0.57**	**75**	*e*PG	**Pn**	**18 08 01.8**	**+0.3**
DAT	**Datca**	**0.57**	**75**	*e*Pg	**Pn**	**18 08 01.8**	**+0.3**
ARG	**Arkhangelos**	**1.06**	**110**	P	**Pn**	**18 08 06.8**	**+1.2**
ARG				S	**Sn**	**18 08 23.9**	**+1.3**
ARG	**Arkhangelos**	**1.06**	**110**	P	**Pn**	**18 08 06.8**	**+1.2**
ARG				S	**Sn**	**18 08 23.9**	**+1.3**
YER	**Yerkesik**	**1.24**	**63**	*e*PN	**Pn**	**18 08 08.7**	**+1.1**
YER				*e*SN	**Sn**	**18 08 27.3**	**+1.1**
YER	**Yerkesik**	**1.24**	**63**	*e*Pn	**Pn**	**18 08 08.7**	**+1.1**
YER				*e*Sn	**Sn**	**18 08 27.3**	**+1.1**
TURN	**Turunc**	**1.40**	**78**	*i* P	Pn	18 08 06.7	-2.6
TURN				*i* S	**Sn**	**18 08 23.7**	**-5.5**
TURN	**Turunc**	**1.40**	**78**	*i* P	Pn	18 08 06.7	-2.6
TURN				*i* S	**Sn**	**18 08 23.7**	**-5.5**
ZKR	**Zakros**	**1.56**	**201**	P	**Pn**	**18 08 12.6**	**+1.4**
ZKR				S	**Sn**	**18 08 33.3**	**+0.7**
ZKR	**Zakros**	**1.56**	**201**	P	**Pn**	**18 08 12.6**	**+1.4**
ZKR				S	**Sn**	**18 08 33.3**	**+0.7**
NPS	**Neapolis**	**1.68**	**219**	P	**Pn**	**18 08 13.0**	**+0.4**
NPS				S	**Sn**	**18 08 34.4**	**-0.7**
NPS	**Neapolis**	**1.68**	**219**	P	**Pn**	**18 08 13.0**	**+0.4**
NPS				S	**Sn**	**18 08 34.4**	**-0.7**
FETY	**Fethiye**	**1.76**	**88**	*e*PN	**Pn**	**18 08 13.4**	**-0.2**
FETY				*e*SN	**Sn**	**18 08 32.3**	**-4.5**
FETY	**Fethiye**	**1.76**	**88**	*e*Pn	**Pn**	**18 08 13.4**	**-0.2**
FETY				*e*Sn	**Sn**	**18 08 32.3**	**-4.5**
CHOS	**Chios island**	**1.92**	**340**	P	**Pn**	**18 08 16.0**	**+0.4**
CHOS	**Chios island**	**1.92**	**340**	P	**Pn**	**18 08 16.0**	**+0.4**
DNZL	**Cakiroluk**	**2.04**	**57**	*i* P	**Pn**	**18 08 17.8**	**+0.6**
DNZL				*i* S	**Sn**	**18 08 44.5**	**+1.2**
DNZL	**Cakiroluk**	**2.04**	**57**	*i* P	**Pn**	**18 08 17.8**	**+0.6**
DNZL				*i* S	**Sn**	**18 08 44.5**	**+1.2**
IDI	**Anoyia**	**2.08**	**232**	P	**Pn**	**18 08 17.6**	**+0.1**
IDI				S	**Sn**	**18 08 41.9**	**-2.0**
IDI	**Anoyia**	**2.08**	**232**	P	**Pn**	**18 08 17.6**	**+0.1**
IDI				S	**Sn**	**18 08 41.9**	**-2.0**
AKAS	**Kas**	**2.21**	**98**	*i* P	**Pn**	**18 08 19.9**	**+0.6**
AKAS				*i* S	**Sn**	**18 08 46.7**	**-0.3**
AKAS	**Kas**	**2.21**	**98**	*i* P	**Pn**	**18 08 19.9**	**+0.6**
AKAS				*i* S	**Sn**	**18 08 46.7**	**-0.3**
GOLH	**Golhisar**	**2.23**	**72**	*i* P	**Pn**	**18 08 20.3**	**+0.8**
GOLH				*i* S	**Sn**	**18 08 48.1**	**+0.7**
GOLH	**Golhisar**	**2.23**	**72**	*i* P	**Pn**	**18 08 20.3**	**+0.8**
GOLH				*i* S	**Sn**	**18 08 48.1**	**+0.7**
ELL	**Elmali**	**2.43**	**85**	*e*PN	**Pn**	**18 08 21.9**	**-0.1**
ELL	**Elmali**	**2.43**	**85**	*e*Pn	**Pn**	**18 08 21.9**	**-0.1**
KORT	**Korkueli**	**2.80**	**80**	*i* P	**Pn**	**18 08 27.6**	**+0.7**
KORT				*i* S	**Sn**	**18 09 00.9**	**+0.3**
KORT	**Korkueli**	**2.80**	**80**	*i* P	**Pn**	**18 08 27.6**	**+0.7**
KORT				*i* S	**Sn**	**18 09 00.9**	**+0.3**
KYTH	**Kithira**	**3.13**	**266**	P	**Pn**	**18 08 31.7**	**+0.7**
KYTH	**Kithira**	**3.13**	**266**	P	**Pn**	**18 08 31.7**	**+0.7**

*IDC **21** 18:08:07.4±1.7, 43˚.51N×105˚.31W, h0km, mb3.8/2, mb1 3.5/7, mb1mx3.4/30, mbtmp3.4/7, ML2.8/4, MS3.1/4, Ms1 3.1/4, ms1mx2.5/53, Error ellipse: s-maj=46.1km s-min=8.5km az=149.0*
*ISCJB **21** 18:08:08.5±0.2, 43˚.73N±0˚.01×105˚.29W±0˚.02, h0km, mb3.8/2, Error ellipse: s-maj=2.3km s-min=1.8km az=159.9*
*NEIC **21** 18:08:09.1±0.4, 43˚.74N×105˚.25W, h0km, ML3.3, Error ellipse: s-maj=6.1km s-min=4.8km az=148.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
ISC 21 18:08:08.9±0.6, 43.72N±0˚.02×105˚.28W±0˚.02, h0km, n141, σ0°89/158, 48C-51D, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I23A	**Meade Ranch, G**	**0.27**	**331**	⇑P	**Pg**	**18 08 15.1**	**+1.0**
	baz=0.3,SNR=149						
I23A				⇑S	**Sg**	**18 08 17.7**	**+0.1**
	baz=0.3						
J23A	**Dilts Ranch, B**	**0.38**	**211**	P	**Pg**	**18 08 16.6**	**+0.6**
	baz=0.4,SNR=497						
J23A				⇓S	**Sg**	**18 08 21.4**	**+0.5**
	baz=0.4						
I24A	**Kuemmerle Ranc**	**0.49**	**74**	⇑P	**Pg**	**18 08 19.4**	**+1.0**
	baz=0.5,SNR=129						
J24A	**Dixon Ranch, L**	**0.60**	**131**	P	**Pg**	**18 08 21.0**	**+0.6**
	baz=0.6,SNR=118						
J24A				⇓S	**Sb**	**18 08 30.2**	**-1.2**
	baz=0.6						
H23A	**Clabaugh Cattl**	**0.84**	**354**	⇑P	**Pg**	**18 08 25.0**	**-0.1**
	baz=0.8,SNR=24						
I22A	**9 Mile Ranch,**	**0.89**	**281**	P	**Pg**	**18 08 25.7**	**-0.2**
	baz=0.9,SNR=651						
I22A				⇑S	**Sg**	**18 08 37.4**	**0.0**
	baz=0.9						
J22A	**Midwest**	**0.92**	**251**	P	**Pg**	**18 08 25.9**	**-0.6**
	baz=1.0,SNR=176						
RSSD	**Black Hills**	**0.99**	**66**	*e*Pg	**Pg**	**18 08 27.4**	**-0.4**
K23A	**Bowen Ranch, D**	**1.00**	**195**	⇓P	**Pg**	**18 08 27.9**	**-0.1**
	baz=1.0,SNR=14						
K24A	**Anderson Ranch**	**1.06**	**161**	⇓P	**Pg**	**18 08 29.2**	**0.0**
	baz=1.1						
H24A	**Dirks Ranch, A**	**1.15**	**27**	⇓P	**Pg**	**18 08 30.5**	**-0.5**
	baz=1.1						
H22A	**Clearmont**	**1.16**	**319**	⇓P	**Pg**	**18 08 30.9**	**-0.3**
	baz=1.2,SNR=35						
H22A				⇓S	**Sg**	**18 08 46.6**	**+0.3**
	baz=1.2						
K22A	**Casper**	**1.40**	**221**	⇑P	**Pn**	**18 08 34.7**	**-1.3**
	baz=1.4,SNR=22						
K22A				⇑S	**Sb**	**18 08 55.0**	**+0.4**
	baz=1.4						
I21A	**Big Trails, Te**	**1.46**	**274**	⇑P	**Pn**	**18 08 34.8**	**-1.9**
	baz=1.5						
I21A				⇑S	**Sg**	**18 08 55.9**	**+0.2**
	baz=1.5						
G23A	**Biddle**	**1.48**	**357**	⇓P	**Pn**	**18 08 36.3**	**-0.6**
	baz=1.5,SNR=85						
G23A				⇓S	**Sn**	**18 08 57.8**	**+0.8**
	baz=1.5						
K25A	**Mack Ranch, Ha**	**1.52**	**137**	P	**Pb**	**18 08 38.1**	**+0.1**
	baz=1.5,SNR=190						
H21A	**Big Horn, Sher**	**1.56**	**306**	⇑P	**Pn**	**18 08 37.6**	**-0.4**
	baz=1.6,SNR=46						
H21A				⇑S	**Sn**	**18 08 59.0**	**+0.1**
	baz=1.6						
J21A	**Lysite**	**1.62**	**257**	P	**Pn**	**18 08 37.9**	**-1.0**
	baz=1.6,SNR=154						
J21A				⇑S	**Sn**	**18 09 00.5**	**0.0**
	baz=1.6						
L23A	**Garrett**	**1.64**	**191**	⇓P	**Pn**	**18 08 38.7**	**-0.4**
	baz=1.7,SNR=306						
L23A				⇑Sb	**Sg**	**18 09 02.7**	**+1.2**
	baz=1.7						
G22A	**Birney**	**1.66**	**335**	⇓P	**Pn**	**18 08 39.5**	**+0.1**
	baz=1.7,SNR=39						
L24A	**Wheatland**	**1.70**	**171**	⇓P	**Pn**	**18 08 40.1**	**+0.1**
	baz=1.7,SNR=20						
L24A				⇓S	**Sg**	**18 09 03.8**	**+0.3**
	baz=1.7						
G24A	**Alzada**	**1.72**	**21**	⇑P	**Pn**	**18 08 40.7**	**+0.5**
	baz=1.7,SNR=15						
G24A				⇓Sb	**Sg**	**18 09 05.4**	**+1.3**
	baz=1.7						
K21A	**Alcova**	**1.81**	**234**	P	**Pn**	**18 08 41.6**	**+0.2**
	baz=1.8,SNR=452						
K21A				⇑Sb	**Sb**	**18 09 06.6**	**+0.4**
	baz=1.8						
L25A	**Engebretsen Ra**	**1.84**	**148**	⇓P	**Pb**	**18 08 43.2**	**-0.3**
	baz=1.8,SNR=151						
L25A				⇑Sb	**Sg**	**18 09 09.5**	**+1.4**
	baz=1.8						
K26A	**Motz Farm, Whi**	**1.85**	**123**	⇑P	**Pb**	**18 08 43.0**	**-0.6**
	baz=1.8,SNR=15						
K26A				⇓S	**Sb**	**18 09 07.3**	**0.0**
	baz=1.8						
L22A	**Ellis Ranch, M**	**1.89**	**207**	⇓P	**Pn**	**18 08 43.0**	**+0.3**
	baz=1.9,SNR=101						
L22A				⇓S	**Sn**	**18 09 08.1**	**+0.8**
	baz=1.9						
F23A	**Volborg**	**2.00**	**358**	P	**Pn**	**18 08 44.5**	**+0.4**
	baz=2.0,SNR=84						
F23A				⇑S	**Sn**	**18 09 10.9**	**+1.1**
	baz=2.0						
G21A	**Lodge Grass**	**2.04**	**318**	⇑P	**Pn**	**18 08 44.8**	**+0.2**
	baz=2.0,SNR=50						
G21A				⇓Sb	**Sb**	**18 09 13.6**	**+0.8**
	baz=2.0						
J20A	**Shoshoni**	**2.07**	**261**	⇑Pb	**Pb**	**18 08 46.8**	**-0.6**
	baz=2.1						
J20A				⇑Sb	**Sb**	**18 09 14.9**	**+1.1**
	baz=2.1						
I20A	**Worland**	**2.07**	**277**	⇓P	**Pn**	**18 08 45.3**	**+0.3**
	baz=2.1,SNR=356						
I20A				⇑S	**Sn**	**18 09 11.8**	**+0.2**
	baz=2.1						
H20A	**Greybull**	**2.10**	**292**	⇓P	**Pn**	**18 08 45.5**	**0.0**
	baz=2.1,SNR=11						
H20A				⇑S	**Sn**	**18 09 12.3**	**0.0**
	baz=2.1						
F22A	**Rosebud**	**2.17**	**342**	⇓P	**Pn**	**18 08 46.6**	**+0.2**
	baz=2.2,SNR=14						
F24A	**Ekalaka**	**2.20**	**15**	⇑Sb	**Sg**	**18 09 19.4**	**-0.3**
	baz=2.2						
M23A	**Laramie**	**2.28**	**188**	⇓P	**Pn**	**18 08 48.7**	**+0.7**
	baz=2.3,SNR=51						
M24A	**Cheyenne**	**2.28**	**171**	⇑P	**Pn**	**18 08 48.9**	**+0.9**
	baz=2.3,SNR=199						
L21A	**Rawlins**	**2.33**	**222**	⇑P	**Pn**	**18 08 49.2**	**+0.5**
	baz=2.4,SNR=98						
PHWY	**Pilot Hill**	**2.42**	**183**	*e*Pn	**Pn**	**18 08 50.2**	**+0.1**
K27A	**Flueckinger Fa**	**2.45**	**114**	⇓P	**Pn**	**18 08 50.7**	**+0.5**
	baz=2.4						
M25A	**Palm-Egli Farm**	**2.46**	**158**	⇓P	**Pn**	**18 08 52.0**	**+1.6**
	baz=2.5,SNR=29						
F21A	**Absaloka Mine,**	**2.48**	**329**	⇑P	**Pn**	**18 08 50.3**	**-0.3**
	baz=2.5						
K20A	**Yellowstone Ra**	**2.48**	**246**	⇓P	**Pn**	**18 08 51.2**	**+0.6**
	baz=2.5,SNR=169						
M22A	**Cedar Creek Ra**	**2.51**	**203**	⇓P	**Pn**	**18 08 52.7**	**+1.5**
	baz=2.5,SNR=201						
G20A

G18A	**Lazy EL Ranch,** baz=3.5,SNR=13	**3.45**	**299**	⇓P	**Pn**	**18 09 04.2**	**+0.2**
G18A	baz=3.5			⇑S	**Sn**	**18 09 46.5**	**+0.8**
D22A	**Cohagen** baz=3.5,SNR=11	**3.48**	**350**	⇑P	**Pn**	**18 09 04.6**	**+0.2**
N27A	**Anderson Farm,** baz=3.6,SNR=18	**3.56**	**144**	⇓P	**Pn**	**18 09 06.4**	**+0.9**
N20A	**Spence Gulch,** baz=3.7,SNR=9.0	**3.64**	**218**	⇓P	**Pn**	**18 09 07.5**	**+0.8**
OGNE	**Ogallala**	**3.68**	**138**	*e*Pn	**Pn**	**18 09 07.7**	**+0.6**
E19A	**Rath Farm, Rou** baz=3.7,SNR=11	**3.69**	**319**	⇑P	**Pn**	**18 09 06.9**	**-0.4**
GCMT	**Greycliff**	**3.74**	**305**	*e*Pn	**Pn**	**18 09 08.4**	**+0.4**
LKWY	**Lake**	**3.78**	**285**	*e*Pn	**Pn**	**18 09 08.5**	**-0.1**
LOHW	**Long Hollow**	**3.86**	**270**	*e*Pn	**Pn**	**18 09 10.3**	**+0.6**
D20A	**Manuel Ranch,** baz=3.9,SNR=6.6	**3.92**	**330**	⇓P	**Pn**	**18 09 10.0**	**-0.4**
ISCO	**Idaho Springs**	**3.93**	**184**	*e*Pn	**Pn**	**18 09 11.4**	**+0.7**
ISCO	**Idaho Springs** baz=4.0,SNR=19	**3.93**	**184**	⇑P	**Pn**	**18 09 11.7**	**+1.0**
MOOW	**Moose Ponds**	**3.96**	**272**	*e*Pn	**Pn**	**18 09 13.7**	**+2.6**
SNOW	**Snow King Moun**	**3.98**	**268**	*e*Pn	**Pn**	**18 09 14.2**	**+2.8**
C22A	**Vida** baz=4.0,SNR=18	**4.04**	**354**	⇑P	**Pn**	**18 09 13.1**	**+1.0**
REDW	**Red Top Meadow**	**4.06**	**267**	Pn	Pn	18 09 16.5	+4.0
C23A	**Lambert** baz=4.1,SNR=36	**4.08**	**1**	⇓P	**Pn**	**18 09 13.5**	**+0.9**
IMW	**Indian Meadow**	**4.10**	**274**	*e*Pn	**Pn**	**18 09 13.8**	**+0.8**
TPAW	**Teton Pass**	**4.12**	**269**	*e*Pn	**Pn**	**18 09 15.4**	**+2.0**
YMR	**Madison River**	**4.19**	**285**	*e*Pn	**Pn**	**18 09 16.5**	**+2.2**
DCID1	**Drake Creek**	**4.28**	**270**	Pn	Pn	18 09 11.2	-4.3
AHID	**Auburn Hatcher**	**4.36**	**259**	*e*Pg	**Pb**	**18 09 27.2**	**+0.7**
F17A	**Fitzpatrick Pl** baz=4.4,SNR=13	**4.40**	**302**	⇓P	**Pn**	**18 09 17.7**	**+0.5**
RRI2	**Red Ridge**	**4.41**	**267**	*e*Pn	**Pn**	**18 09 18.5**	**+1.2**
P26A	**Davis Ranch, A** baz=4.4,SNR=14	**4.41**	**160**	⇓P	**Pn**	**18 09 18.1**	**+1.0**
SMCO	**Snowmass**	**4.72**	**196**	*e*Pg	**Pb**	**18 09 32.3**	**-0.4**
E17A	**Martinsdale** baz=4.8,SNR=9.8	**4.80**	**307**	⇓P	**Pn**	**18 09 23.2**	**+0.6**
DGMT	**Dagmar**	**4.81**	**9**	*e*Pn	**Pn**	**18 09 23.5**	**+1.0**
L16A	**Fish Haven** baz=4.9,SNR=18	**4.83**	**251**	⇓P	**Pn**	**18 09 23.7**	**+0.7**
BOZ	**Bozeman (W)**	**4.92**	**295**	*e*Pn	**Pn**	**18 09 22.4**	**-1.8**
N17A	**Moffit Pass** baz=5.0,SNR=6.6	**4.96**	**238**	⇓P	**Pn**	**18 09 25.1**	**+0.1**
HWUT	**Hardware Ranch** 14nm,0.5s	**5.09**	**248**	*e*Pn	**Pn**	**18 09 26.6**	**0.0**
D17A	**Six Diamond Ra** baz=5.1,SNR=29	**5.12**	**314**	⇑P	**Pn**	**18 09 26.9**	**0.0**
E16A	**East Helena** baz=5.3,SNR=8.0	**5.32**	**304**	⇓P	**Pn**	**18 09 29.7**	**-0.1**
DLMT	**Dillon** 15nm,1.0s	**5.48**	**290**	Pn	Pn	18 09 36.5	+4.6
LRM	**Limekiln Ridge** 21nm,0.4s	**5.52**	**295**	Pn	Pn	18 09 39.4	+6.8
P18A	**Preston Nutter** baz=5.6,SNR=25	**5.53**	**224**	⇑P	**Pn**	**18 09 33.3**	**+0.6**
DAU	**Daniels Canyon** 14nm,0.5s	**5.54**	**235**	*e*Pn	**Pn**	**18 09 34.9**	**+1.9**
JLU	**Jordanelle** 8.2nm,0.7s	**5.54**	**238**	*e*Pn	**Pn**	**18 09 32.8**	**-0.1**
R26A	**Arlington** baz=5.6,SNR=12	**5.59**	**165**	⇑P	**Pn**	**18 09 33.8**	**+0.3**
R25A	**Fountain Ranch** baz=5.6,SNR=15	**5.62**	**172**	⇑P	**Pn**	**18 09 34.1**	**+0.2**
E15A	**Deer Lodge** baz=5.9,SNR=8.3	**5.87**	**300**	⇓P	**Pn**	**18 09 36.9**	**-0.3**
PV04	**Paradox Valley**	**5.99**	**208**	*e*Pn	**Pn**	**18 09 40.3**	**+1.4**
MPU	**Maple Canyon** 26nm,1.1s	**6.01**	**234**	*e*Pn	**Pn**	**18 09 40.1**	**+0.8**
SRU	**San Rafael**	**6.06**	**222**	*e*Pn	**Pn**	**18 09 40.0**	**+0.1**
SRU	**San Rafael** baz=6.1,SNR=27	**6.06**	**222**	⇑P	**Pn**	**18 09 39.8**	**-0.1**
S25A	**Robets Cordova** baz=6.1,SNR=6.9	**6.09**	**174**	⇓P	**Pn**	**18 09 40.4**	**0.0**
PV01	**Paradox Valley** 250nm,0.4s	**6.11**	**205**	*e*Pn	**Pn**	**18 09 41.3**	**+0.6**
S26A	**Kim** baz=6.3,SNR=13	**6.25**	**167**	⇓P	**Pn**	**18 09 42.5**	**0.0**
TMUT	**Trail Mountain** 6.7nm,0.4s	**6.27**	**227**	*e*Pn	**Pn**	**18 09 42.9**	**-0.1**
ECSD	**EROS Data Cent** 7.4nm,0.4s	**6.28**	**87**	*e*Pn	**Pn**	**18 09 42.7**	**-0.1**
Q16A	**Castle Valley** baz=6.6,SNR=14	**6.53**	**225**	⇓P	**Pn**	**18 09 46.6**	**+0.1**
DUG	**Dugway** 4.4nm,0.4s	**6.63**	**240**	*e*Pn	**Pn**	**18 09 47.8**	**+0.1**
DUG	**Dugway** baz=6.6,SNR=14	**6.63**	**240**	⇑P	**Pn**	**18 09 47.6**	**-0.1**
HLID	**Hailey** 3.4nm,0.8s	**6.63**	**272**	*e*Pn	**Pn**	**18 09 45.0**	**-2.7**
D14A	**Greenough** baz=6.7,SNR=8.0	**6.69**	**303**	⇓P	**Pn**	**18 09 48.0**	**-0.5**
SLMT	**Seeley Lake** 3.1nm,0.5s	**6.76**	**304**	*e*Pn	**Pn**	**18 09 48.8**	**-0.7**
T27A	**Campo** baz=7.0,SNR=12	**6.94**	**163**	⇑P	**Pn**	**18 09 51.8**	**-0.1**
MSU	**Marysvale** 8.5nm,0.9s	**7.36**	**227**	Pn	**Pn**	**18 09 58.4**	**+0.6**
MVU	**Marysvale** 3.5nm,0.5s	**7.38**	**227**	*e*Pn	**Pn**	**18 09 58.3**	**+0.1**
BSMT	**Bassoo Peak** 2.4nm,0.6s	**7.82**	**305**	*e*Pn	**Pn**	**18 10 06.2**	**+2.1**
ELK	**Elko**	**7.96**	**251**	Pn	**Pn**	**18 10 06.4**	**+0.3**
ELK	**Elko** 0.2nm,0.3s,baz=67,slow=13,SNR=3.8	**7.96**	**251**	Pn	**Pn**	**18 10 06.4**	**+0.3**
AGMN	**Agassiz Nation** 7.1nm,0.5s	**7.99**	**52**	*e*Pn	**Pn**	**18 10 06.8**	**+0.5**
ULM	**Lac du Bonnet**	**9.16**	**41**	Pn	**Pn**	**18 10 20.8**	**-1.5**
ULM				Pg	Pb	18 10 55.6	
ULM				Lg	Lg	18 12 59.8	
ULM	**Lac du Bonnet** 0.6nm,0.3s,baz=225,slow=13,SNR=3.2	**9.16**	**41**	Pn	**Pn**	**18 10 20.8**	**-1.5**
ULM	1.3nm,0.3s,baz=219,slow=14,SNR=5.6			Pg	Pb	18 10 55.6	
ULM	0.5nm,0.3s,baz=318,slow=19,SNR=4.8			Lg	Lg	18 12 59.8	
ULM	comp=Z,94nm,19.6s,baz=280,slow=38			LR	LR	18 13 58.7	
NEW	**Newport**	**9.41**	**303**	Lg	Lg	18 13 02.7	
NEW	**Newport** 0.1nm,0.3s,baz=54,slow=22,SNR=3.4	**9.41**	**303**	Lg	Lg	18 13 02.7	
NEW	comp=Z,137nm,18.1s,baz=112,slow=40			LR	LR	18 14 25.6	
WUAZ	**Wupatki** 5.2nm,0.4s	**9.44**	**212**	*e*Pn	**Pn**	**18 10 26.5**	**+0.1**
NVAR	**Mina Array Bea**	**11.16**	**246**	Pn	**Pn**	**18 10 49.2**	**-0.7**
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=59,slow=14,SNR=2.5	**11.16**	**246**	Pn	**Pn**	**18 10 49.2**	**-0.7**
TKL	**Tuckaleechee C** comp=Z,80nm,21.1s,baz=214,slow=38	**18.38**	**109**	LR	LR	18 19 39.7	
SADO	**Sadowa** comp=Z,55nm,19.1s,baz=103,slow=38	**18.74**	**78**	LR	LR	18 19 52.9	
YKA	**Yellowknife Ar**	**19.58**	**347**	P	**P**	**18 12 37.8**	**-0.4**
YKA	**Yellowknife Ar** 0.1nm,0.3s,baz=166,slow=13,SNR=4.5	**19.58**	**347**	P	**P**	**18 12 37.8**	**-0.4**
ZALV	**Zalesovo Beam**	**82.32**	**354**	P	**P**	**18 20 30.4**	**-1.7**
ZALV	**Zalesovo Beam** 0.3nm,0.5s,baz=18,slow=5.2,SNR=2.6	**82.32**	**354**	P	**P**	**18 20 30.4**	**-1.7**
MKAR	**Makanchi Array**	**89.62**	**355**	P	**P**	**18 21 07.9**	**-0.5**
MKAR	**Makanchi Array** 0.5nm,0.8s,baz=8.9,slow=3.9,SNR=4.6	**89.62**	**355**	P	**P**	**18 21 07.9**	**-0.5**

IDC 21 18:21:13.2±1.9,**0°26N**×**97°74E,h0**km**,mb3.9**/4,**mb1 3.9**/6,**mb1mx3.6**/25,**mbtmp3.8**/6,**ML3.6**/2,**MS3.4**/2,**Ms1 3.4**/2,**ms1mx2.8**/35,**Error ellipse: s-maj=62.8km s-min=19.6km az=63.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat** 2.6nm,0.3s,baz=174,slow=7.9,SNR=7.0	**2.79**	**25**	Pn	Pn	18 21 59.0	-0.3
PSI	comp=Z,264nm,19.6s,baz=183,slow=34			LR	LR	18 22 46.0	
CMAR	**Chiang Mai Arr** 0.2nm,0.3s,baz=194,slow=11,SNR=14	**18.12**	**4**	P	Pn	18 25 25.1	-1.6
WRA	**Warramunga Arr** 520nm,0.8s,baz=304,slow=8.9,SNR=2.9	**41.09**	**121**	P	P	18 28 59.2	0.0
ASAR	**Alice Springs** 0.7nm,0.6s,baz=297,slow=8.0,SNR=12	**42.41**	**127**	P	P	18 29 09.7	-0.3
SONM	**Songino Array** 0.9nm,0.8s,baz=191,slow=8.5,SNR=5.0	**47.98**	**8**	P	P	18 29 53.3	-0.7
MKAR	**Makanchi Array** 1.1nm,0.6s,baz=158,slow=7.6,SNR=17	**48.28**	**346**	P	P	18 29 56.5	+0.3
ZALV	**Zalesovo Beam** 2.3nm,0.5s,baz=182,slow=7.1,SNR=14	**54.57**	**351**	P	P	18 30 43.2	+0.1
HFS	**Hagfors** comp=Z,42nm,19.7s,baz=161,slow=38	**86.80**	**330**	LR	LR	19 16 29.2	

*MOS **21** 18:36:49.7±0.7,53°.36N×160°.95E,h47km,mb4.2/7,Error ellipse: s-maj=14.6km s-min=7.8km az=66.1*
*ISCJB **21** 18:36:50.4±0.5,53°.35N±0°.02×160°.92E±0°.06,h52km±6km, mb4.0/15,Error ellipse: s-maj=6.4km s-min=2.4km az=33.3*
*KRSC **21** 18:36:50.0±0.7,53°.38N×160°.84E,h40km±39km,ML4.5*
*IDC **21** 18:36:51.3±1.5,53°.41N×160°.89E,h43km±16km,mb3.7/9, mb1 4.0/10,mb1mx3.6/27,mbtmp3.8/10,ML4.3/1,Error ellipse: s-maj=21.8km s-min=9.3km az=164.0*
*NEIC **21** 18:36:51.5±0.8,53°.47N×160°.79E,h48km±9km,mb4.2/4, Error ellipse: s-maj=12.9km s-min=6.3km az=151.0*

ISC 21 18:36:50.9±1.1,**53°35N**±0°.03×**160°90E**±0°.04,**h41**km±12km, **n90**,σ1§**19**/137,**mb3.9**/15,**1C,Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.58**	**245**	PN	**Pn**	**18 37 02.6**	**-0.2**
SPN	**Mys Shipunski**	**0.58**	**245**	P	**Pn**	**18 37 02.6**	**-0.2**
NLC	**Nalytchevo**	**0.95**	**260**	PN	**Pn**	**18 37 07.4**	**-0.3**
NLC				S	**Sn**	**18 37 19.3**	**-0.8**
NLC	**Nalytchevo**	**0.95**	**260**	P	**Pn**	**18 37 07.4**	**-0.3**
NLC				S	**Sn**	**18 37 19.3**	**-0.8**
KII	**Karymskiy**	**1.10**	**309**	P	**Pn**	**18 37 08.8**	**-1.1**
SDLR	**Sedlovina**	**1.21**	**267**	P	**Pn**	**18 37 11.2**	**-0.2**
SDLR				S	**Sn**	**18 37 26.1**	**-0.6**
UGLR	**Uglovaya**	**1.25**	**264**	P	**Pn**	**18 37 12.3**	**+0.3**
UGLR				S	**Sn**	**18 37 28.3**	**+0.6**
SMAR	**Somma**	**1.26**	**267**	P	**Pn**	**18 37 11.9**	**-0.3**
SMAR				S	**Sn**	**18 37 27.4**	**-0.7**
KRER	**Koryakskii**	**1.29**	**269**	P	**Pn**	**18 37 12.7**	**+0.1**
KRER				S	**Sn**	**18 37 29.1**	**+0.3**
AVH	**Avacha**	**1.30**	**267**	P	**Pn**	**18 37 12.8**	**+0.2**
AVH				S	**Sn**	**18 37 29.3**	**+0.5**
MKZ	**Mys Kozlova**	**1.30**	**22**	PN	**Pn**	**18 37 11.8**	**-0.8**
MKZ				S	**Sn**	**18 37 27.1**	**-1.6**
MKZ	**Mys Kozlova**	**1.30**	**22**	P	**Pn**	**18 37 11.8**	**-0.8**
MKZ				S	**Sn**	**18 37 27.1**	**-1.6**
KOK	**Koryaka**	**1.36**	**268**	P	**Pn**	**18 37 13.4**	**0.0**
KOK				S	**Sn**	**18 37 30.1**	**-0.2**
PET	**Petropavlovsk**	**1.39**	**257**	⇑*i*PN	**Pn**	**18 37 13.6**	**-0.2**
PET				*e*S	**Sn**	**18 37 30.5**	**-0.4**
PET	comp=Z,372nm,0.4s			pmax	pmax		
PET	comp=E,2μm,0.6s			smax	smax		
PET	**Petropavlovsk**	**1.39**	**257**	P	**Pn**	**18 37 13.7**	**-0.1**
PET				S	**Sn**	**18 37 30.7**	**-0.2**
RUS	**Russkaya**	**1.71**	**238**	PN	**Pn**	**18 37 18.2**	**0.0**
RUS				S	**Sn**	**18 37 38.4**	**-0.4**
RUS	**Russkaya**	**1.71**	**238**	P	**Pn**	**18 37 18.2**	**0.0**
RUS				S	**Sn**	**18 37 38.4**	**-0.4**
MTVR	**Mutnovka**	**1.86**	**243**	P	**Pn**	**18 37 20.8**	**+0.4**
MTVR				S	**Sn**	**18 37 43.4**	**+0.7**
GRL	**Gorelyy**	**1.89**	**246**	P	**Pn**	**18 37 21.6**	**+0.9**
GRL				S	**Sn**	**18 37 44.9**	**+1.5**
PEA0B	**Petropavlovsk-**	**1.94**	**264**	*e*Pn	**Pn**	**18 37 21.8**	**+0.4**
PEA0B				*e*Sn	**Sn**	**18 37 44.2**	**-0.2**
PETK	**Petropavlovsk-**	**1.94**	**264**	PN	**Pn**	**18 37 21.9**	**+0.6**
PETK				S	**Sn**	**18 37 45.5**	**+1.0**
PETK	comp=Z,52nm,0.3s			pmax	pmax		
PETK	comp=N,91nm,0.3s			smax	smax		
PETK	**Petropavlovsk-**	**1.94**	**264**	P	**Pn**	**18 37 21.9**	**+0.6**
PETK				S	**Sn**	**18 37 45.5**	**+1.0**
PETK	**Petropavlovsk-** comp=N,52nm,0.3s,baz=93,slow=21,SNR=323	**1.94**	**264**	P	**Pn**	**18 37 21.9**	**+0.6**
PETK	comp=N,91nm,0.3s,baz=82,slow=40,SNR=24			S	**Sn**	**18 37 45.5**	**+1.0**
TUMR	**Tumrok**	**1.98**	**347**	P	**Pn**	**18 37 22.5**	**+0.4**
TUMR				S	**Sn**	**18 37 46.7**	**+1.0**
ASAK	**Asacha**	**2.06**	**243**	P	**Pn**	**18 37 24.2**	**+1.1**
ASAK				S	**Sn**	**18 37 49.4**	**+1.9**
APC	**Apacha**	**2.29**	**261**	P	**Pn**	**18 37 27.4**	**+1.2**
APC				S	**Sn**	**18 37 54.8**	**+1.7**
KMNR	**Kamenistaya**	**2.44**	**351**	P	**Pn**	**18 37 29.4**	**+1.1**
KMNR				S	**Sn**	**18 37 58.5**	**+1.6**
BZGR	**Bezymyannyi-Gr**	**2.60**	**357**	P	**Pn**	**18 37 31.9**	**+1.5**
BZGR				S	**Sn**	**18 38 02.4**	**+1.6**
BZMR	**Bezymyannaya**	**2.60**	**355**	P	**Pn**	**18 37 32.0**	**+1.5**
BZMR				S	**Sn**	**18 38 03.0**	**+2.1**
KIRR	**Kirishev**	**2.63**	**353**	P	**Pn**	**18 37 32.3**	**+1.4**
KIRR				S	**Sn**	**18 38 03.2**	**+1.6**
BZWR	**Bezymyannyi-We**	**2.63**	**355**	P	**Pn**	**18 37 32.4**	**+1.5**
KPT	**Kopyto**	**2.65**	**352**	P	**Pn**	**18 37 32.4**	**+1.2**
KPT				S	**Sn**	**18 38 02.9**	**+0.8**
ZLN	**Zelenaya**	**2.67**	**359**	P	**Pn**	**18 37 33.0**	**+1.5**
ZLN				S	**Sn**	**18 38 03.9**	**+1.3**
MIPR	**Malaya Ipel'ka**	**2.73**	**248**	P	**Pn**	**18 37 34.1**	**+1.9**
LGNR	**Loginova**	**2.74**	**358**	P	**Pn**	**18 37 34.0**	**+1.4**
LGNR				S	**Sn**	**18 38 06.1**	**+1.5**
CIRR	**Tsirk**	**2.77**	**358**	P	**Pn**	**18 37 34.6**	**+1.7**
CIRR				S	**Sn**	**18 38 07.1**	**+2.0**
KOZ	**Kozyrevsk**	**2.78**	**348**	P	**Pn**	**18 37 33.4**	**+0.6**
KOZ				S	**Sn**	**18 38 05.1**	**0.0**
KOZR	**Kozyr**	**2.78**	**348**	PN	**Pn**	**18 37 33.4**	**+0.5**
KOZR				S	**Sn**	**18 38 05.1**	**-0.1**
ESO	**Esso**	**2.88**	**335**	PN	**Pn**	**18 37 34.3**	**+0.1**
ESO				S	**Sn**	**18 38 07.0**	**-0.6**
ESO	**Esso**	**2.88**	**335**	P	**Pn**	**18 37 34.3**	**+0.1**
ESO				S	**Sn**	**18 38 07.0**	**-0.6**
KRSR	**Krestovskiy**	**2.88**	**356**	P	**Pn**	**18 37 35.3**	**+1.0**
KRSR				S	**Sn**	**18 38 08.6**	**+0.9**
KLY	**Klyuchi**	**2.97**	**357**	PN	**Pn**	**18 37 36.4**	**+0.9**
KLY				S	**Sn**	**18 38 10.4**	**+0.6**
KLY	**Klyuchi**	**2.97**	**357**	P	**Pn**	**18 37 36.4**	**+0.9**
KLY				S	**Sn**	**18 38 10.4**	**+0.6**
SRDR	**Sredinnyy**	**3.05**	**348**	P	**Pn**	**18 37 36.7**	**+0.1**
KBTR	**Krutoberegovo**	**3.07**	**20**	S	**Sn**	**18 38 14.2**	**+1.9**
PAU	**Pauzhetka**	**3.13**	**235**	PN	**Pn**	**18 37 39.8**	**+2.1**
PAU				S	**Sn**	**18 38 16.1**	**+2.2**
PAU	**Pauzhetka**	**3.13**	**235**	P	**Pn**	**18 37 39.8**	**+2.1**
PAU				S	**Sn**	**18 38 16.1**	**+2.2**
BDR	**Baidarnaya**	**3.23**	**3**	P	**Pn**	**18 37 40.7**	**+1.6**
BDR				S	**Sn**	**18 38 17.7**	**+1.4**
SMKR	**Semkarok**	**3.25**	**6**	P	**Pn**	**18 37 40.7**	**+1.3**
SMKR				S	**Sn**	**18 38 17.9**	**+1.0**
SRKR	**Sorokina**	**3.31**	**3**	P	**Pn**	**18 37 41.7**	**+1.5**
SRKR				S	**Sn**	**18 38 18.9**	**+0.5**
BKI	**Bering**	**3.50**	**56**	PN	**Pn**	**18 37 43.2**	**+0.4**
BKI	**Bering**	**3.50**	**56**	P	**Pn**	**18 37 43.2**	**+0.4**
SKR	**Severo-Kuril's**	**3.98**	**230**	*e*PN	**Pn**	**18 37 49.5**	**+0.1**
SKR	**Severo-Kuril's**	**3.98**	**230**	P	**Pn**	**18 37 51.2**	**+1.8**
SKR				S	**Sn**	**18 38 36.2**	**+1.5**
FX1	**Attu Island--F**	**7.40**	**89**	*e*Pn	**Pn**	**18 38 36.7**	**+0.5**
FX1				S	**Sn**	**18 39 55.8**	**-3.0**
FX1				*e*Sn	**Sn**	**18 39 55.8**	**-3.0**
FX1	**Attu Island--F** comp=N,16nm,0.3s,baz=266,slow=1.9,SNR=87	**7.40**	**89**	P	**Pn**	**18 38 37.2**	**+0.9**
FX1	comp=N,26nm,0.3s,baz=65,slow=11,SNR=15			S	**Sn**	**18 39 55.8**	**-3.0**
BILL	**Bilibino**	**14.96**	**8**	*e*P	**P**	**18 40 23.8**	**-0.3**
BILL	comp=Z,13nm,1.0s			pmax	pmax		
BILL	**Bilibino** comp=Z,5.5nm,0.9s	**14.96**	**8**	Pn	**Pn**	**18 40 18.2**	**-1.0**
MJA0	**Matsu Arr-Jizo**	**23.07**	**232**	*e*P	**P**	**18 41 56.2**	**+3.5**
MJA0	comp=Z,2.0nm,0.6s			pmax	pmax		
MJAR	**Matsushiro Arr**	**23.09**	**232**	P	**P**	**18 41 53.2**	**+0.3**
MJAR	**Matsushiro Arr** comp=Z,1.7nm,0.6s,baz=15,slow=10,SNR=6.4	**23.09**	**232**	P	**P**	**18 41 53.2**	**+0.3**
MAJO	**Matsushiro**	**23.09**	**232**	P	**P**	**18 41 52.7**	**-0.2**
MAJO	comp=Z,28nm,1.4s			pmax	pmax		
MAJO	**Matsushiro** comp=Z,28nm,1.4s	**23.09**	**232**	P	**P**	**18 41 52.7**	**-0.2**
MCK	**McKinley**	**27.42**	**48**	P	**P**	**18 42 31.8**	**-0.5**
MCK	comp=Z,4.0nm,1.1s			pmax	pmax		
MCK	**McKinley** comp=Z,4.2nm,1.1s	**27.42**	**48**	P	**P**	**18 42 31.8**	**-0.5**
SML	**Sawmill**	**27.82**	**52**	P	**P**	**18 42 34.3**	**-1.6**
SML	comp=Z,1.0nm,1.0s			pmax	pmax		
SML	**Sawmill** comp=Z,1.3nm,1.0s	**27.82**	**52**	P	**P**	**18 42 34.2**	**-1.6**
ILAR	**Eielson Array**	**28.29**	**46**	P	**P**	**18 42 39.7**	**-0.3**
ILAR	**Eielson Array** comp=Z,1.2nm,0.7s,baz=263,slow=8.2,SNR=17	**28.29**	**46**	P	**P**	**18 42 39.7**	**-0.3**
BMRM	**Bremner River**	**29.71**	**53**	P	**P**	**18 42 52.1**	**-0.7**
INK	**Inuvik**	**33.37**	**38**	P	**P**	**18 43 24.4**	**-0.2**
INK	**Inuvik** comp=Z,0.9nm,0.5s,baz=271,slow=1.2,SNR=9.2	**33.37**	**38**	P	**P**	**18 43 24.4**	**-0.2**
YKA	**Yellowknife Ar**	**42.64**	**43**	P	**P**	**18 44 43.0**	**+0.2**
YKA	**Yellowknife Ar** comp=Z,0.9nm,0.5s,baz=299,slow=7.9,SNR=15	**42.64**	**43**	P	**P**	**18 44 43.0**	**+0.2**
MKAR	**Makanchi Array**	**48.48**	**296**	*e*P	**P**	**18 45 30.0**	**+0.8**
MKAR	**Makanchi Array**	**48.48**	**296**	P	**P**	**18 45 27.3**	**-1.9**
MKAR	**Makanchi Array** comp=Z,0.2nm,0.4s,baz=52,slow=6.6,SNR=6.4	**48.48**	**296**	P	**P**	**18 45 27.3**	**-1.9**
BSMT	**Bassoo Peak** comp=Z,2.9nm,0.7s	**50.83**	**60**	*e*P	**P**	**18 45 47.8**	**+0.6**
NVAR	**Mina Array Bea**	**55.20**	**71**	P	**P**	**18 46 20.4**	**+0.7**
NVAR	**Mina Array Bea** comp=Z,0.4nm,0.5s,baz=303,slow=7.2,SNR=5.0	**55.20**	**71**	P	**P**	**18 46 20.4**	**+0.7**
PDAR	**Pinedale Array**	**56.97**	**61**	P	**P**	**18 46 33.5**	**+1.3**
PDAR	**Pinedale Array** comp=Z,1.0nm,0.6s,baz=316,slow=3.5,SNR=8.4	**56.97**	**61**	P	**P**	**18 46 33.5**	**+1.3**
FINES	**FINESS Array B**	**60.07**	**337**	P	**P**	**18 46 51.3**	**-1.9**
FINES	**FINESS Array B** comp=Z,2.3nm,0.9s,baz=28,slow=8.6,SNR=6.8	**60.07**	**337**	P	**P**	**18 46 51.3**	**-1.9**
TXAR	**Lajitas Array**	**70.09**	**68**	P	**P**	**18 47 59.8**	**+0.9**
TXAR	**Lajitas Array** comp=Z,1.6nm,0.5s,baz=302,slow=4.6,SNR=18	**70.09**	**68**	P	**P**	**18 47 59.8**	**+0.9**
WRA	**Warramunga Arr**	**76.52**	**206**	P	**P**	**18 48 36.0**	**-0.5**
WRA	**Warramunga Arr** comp=Z,81nm,0.4s,baz=21,slow=6.1,SNR=1.9	**76.52**	**206**	P	**P**	**18 48 36.0**	**-0.5**
ASAR	**Alice Springs**	**80.19**	**205**	P	**P**	**18 48 57.2**	**+0.5**
ASAR	**Alice Springs** comp=Z,0.7nm,0.6s,baz=18,slow=5.5,SNR=16	**80.19**	**205**	P	**P**	**18 48 57.2**	**+0.5**

SKHL 21 18:46:52.7±0.1,**55°91N**×**126°94E,h23**km±1km,**mb3.7**/3, **Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KROS	**Kirovskiy**	**1.48**	**179**	*e*Pn	Pn	18 47 17.7	-0.2
KROS				*i* Pg	Pb	18 47 19.5	0.0
KROS	5.0nm,0.3s			AMB	AMB	18 47 20.0	
KROS	22nm,0.3s			AMB	AMB	18 47 20.0	
KROS				pPg		18 47 28.0	
KROS				*e*Sn	Sn	18 47 36.6	0.0
KROS				*i* Sg	Sb	18 47 39.1	+1.2
KROS	95nm,0.4s			A	A	18 47 40.9	
KROS	37nm,0.4s			A	A	18 47 40.9	
KROS	33nm,0.4s			A	A	18 47 40.9	
KROS				*e*rx	rx	18 47 46.2	
BMKR	**Bomnak**	**1.62**	**137**	*e*Pn	Pn	18 47 19.9	+0.1
BMKR				*e*Pg	Pb	18 47 21.9	0.0
BMKR	33nm,0.4s			AMB	AMB	18 47 22.3	
BMKR				pPg		18 47 30.4	
BMKR				*e*Sn	Sn	18 47 39.8	-0.2
BMKR				*e*Sg	Sb	18 47 43.5	+1.6
BMKR	122nm,0.2s			A	A	18 47 44.0	
BMKR				*e*rx	rx	18 47 50.0	
ZEA	**Zeya**	**2.18**	**175**	*e*Sg	Sb	18 48 00.5	+2.4
ZEA	58nm,0.5s			A	A	18 48 05.5	
ZEA	59nm,0.5s			A	A	18 48 05.5	
ZEA	24nm,0.5s			A	A	18 48 05.5	
TUP	**Tupik**	**4.27**	**253**	*e*rx	rx	18 48 06.3	
TUP				*e*rx	rx	18 48 13.2	
TUP				*e*Sg	Sb	18 49 07.0	+8.7
TUP	14nm,0.8s			A	A	18 49 12.2	
EKMR	**Ekimchan**	**4.51**	**127**	*e*Pg	Pb	18 48 14.0	+2.8
EKMR	2.0nm,0.2s			AMB	AMB	18 48 17.9	
EKMR				*e*Sg	Sb	18 49 13.8	+8.6
EKMR	8.0nm,0.4s			A	A	18 49 19.2	
EKMR	5.0nm,0.4s			A	A	18 49 19.2	

*BJI **21** 18:47:32.9,11°.74N×126°.41E,h40km,mB5.0/34,mb4.8/47, Ms4.5/37,Ms7 4.3/37*
*IDC **21** 18:47:32.0±0.5,12°.29N×126°.34E,h0km,mb4.7/23, mb1 4.8/24,mb1mx4.8/27,mbtmp4.7/24,ML4.5/1,MS3.9/16, Ms1 3.9/16,ms1mx3.7/40,Error ellipse: s-maj=19.1km s-min=11.6km az=85.0*
*ISCJB **21** 18:47:35.8±1.0,12°.38N±0°.02×126°.32E±0°.03,h33km±6km, mb4.9/97,MS4.1/26,Error ellipse: s-maj=4.8km s-min=4.0km az=168.9*
*MOS **21** 18

BCPH	**Baguio City Da**	**6.88**	**307**	⇑*i*	P	Pn	18 49 06.5	-10	
BCPH				*i*	S	**Pn**	**18 49 14.6**	**-2.0**	
SCZP	**Santa Cruz**	**7.11**	**300**	*e*	**P**	**Pn**	**18 49 17.5**	**-2.1**	
BOLP	**Bolinao**	**7.41**	**304**	*e*	**P**	**Pn**	**18 49 21.9**	**-1.9**	
ABRA	**Dolores**	**7.58**	**315**	*e*	**P**	**Pn**	**18 49 24.1**	**-2.0**	
BATP	**Bataraza**	**9.09**	**248**	*e*	P	Pn	18 49 51.0	+4.2	
SDKM	**Sandakan**	**11.20**	**234**	P		Pn	18 50 20.5	+4.7	
TNTI	**Ternate**	**11.52**	**175**	P		**Pn**	**18 50 17.9**	**-2.2**	
	119nm,1.5s,1µm								
TSM	**Tawau**	**11.56**	**227**	P		Pn	18 50 24.3	+3.7	
KKM	**Kota Kinabalu**	**11.77**	**239**	Pn		Pn	18 50 27.3	+3.6	
KKM	**Kota Kinabalu**	**11.77**	**239**	P		Pn	18 50 28.2	+4.6	
LBMI	**Labuha**	**12.93**	**175**	P		Pn	18 50 43.7	+4.3	
	94nm,1.4s,1µm								
LUWI	**Luwuk**	**13.74**	**195**	P		**Pn**	**18 50 52.3**	**+1.8**	
	116nm,1.3s,2µm								
SWI	**Sorong**	**13.98**	**159**	P		**Pn**	**18 50 55.5**	**+1.7**	
	51nm,1.4s,935nm								
MSAI	**Masohi**	**15.78**	**170**	P		**Pn**	**18 51 17.6**	**+0.1**	
	53nm,1.3s,628nm								
BTM	**Bintulu**	**15.94**	**236**	P		**P**	**18 51 22.2**	**-0.5**	
FAKI	**Fak Fak**	**16.25**	**158**	P		**Pn**	**18 51 22.0**	**-1.5**	
	58nm,1.3s,831nm								
TTSI	**Tana Toraja**	**16.58**	**203**	P		**P**	**18 51 30.0**	**+0.2**	
	128nm,1.3s,2µm								
SBUM	**Sibu**	**17.07**	**236**	P		**P**	**18 51 35.9**	**+0.6**	
SBUM	**Sibu**	**17.07**	**236**	P		**P**	**18 51 35.8**	**+0.6**	
	146nm,1.5s,2µm								
QIZ	**Qiongzhong**	**17.21**	**295**	P		**Pn**	**18 51 35.9**	**+0.3**	
QIZ				pP		**pP**	**18 51 45.0**	**-1.8**	
QIZ				S		**Sn**	**18 54 46.9**	**+0.7**	
QIZ				pmax	pmax				
	comp=Z,10.0nm,1.6s								
QIZ				pmax	pmax				
	comp=Z,110nm,4.1s								
QIZ				LR	LR				
	comp=N,460nm,19.4s								
QIZ				LR	LR				
	comp=E,180nm,30.3s								
QIZ				LR	LR				
	comp=Z,680nm,16.5s								
SPSI	**Sidrap Palu**	**17.45**	**202**	P		**P**	**18 51 38.9**	**-0.4**	
	comp=Z,74nm,1.0s,comp=Z,985nm								
GUMO	**Guam**	**18.11**	**84**	LR		LR	18 57 36.1		
	comp=Z,138nm,20.0s,baz=264,slow=33								
KAPI	**Kappang**	**18.42**	**201**	*e*P		**P**	**18 51 49.7**	**-0.5**	
	comp=Z,88nm,1.1s								
KAPI	**Kappang**	**18.42**	**201**	P		**Pn**	**18 51 50.5**	**0.0**	
	SNR=23								
KAPI	**Kappang**	**18.42**	**201**	P		**P**	**18 51 49.6**	**-0.5**	
	comp=Z,84nm,1.3s,comp=Z,1µm								
KAPI	**Kappang**	**18.42**	**201**	P		**Pn**	**18 51 50.2**	**-0.3**	
	comp=Z,115nm,0.3s,baz=30,slow=6.1,SNR=37								
KBKI	**Kotabaru**	**18.52**	**214**	P		**Pn**	**18 51 55.5**	**+3.9**	
	comp=Z,56nm,0.9s,comp=Z,941nm								
BKSI	**Bulukumba**	**18.58**	**200**	P		**Pn**	**18 51 52.6**	**+0.2**	
	comp=Z,45nm,1.1s,comp=Z,639nm								
STKI	**Sintang**	**19.12**	**232**	P		**Pn**	**18 51 59.5**	**+0.6**	
	comp=Z,51nm,1.4s,comp=Z,1µm								
KSM	**Kuching**	**19.20**	**237**	*e*P		**P**	**18 51 58.7**	**+0.1**	
	comp=Z,91nm,1.2s								
KSM	**Kuching**	**19.20**	**237**	P		**Pn**	**18 51 59.5**	**-0.4**	
KSM	**Kuching**	**19.20**	**237**	P		**Pn**	**18 51 59.4**	**-0.4**	
	comp=Z,89nm,1.4s								
BBKI	**Banjar Baru**	**19.40**	**217**	P		**Pn**	**18 52 02.0**	**-0.3**	
	comp=Z,81nm,1.3s,comp=Z,2µm								
UBPT	**Khong Chiam**	**20.47**	**281**	P		**P**	**18 52 12.3**	**-0.2**	
	comp=Z,77nm,0.9s,comp=Z,868nm								
NJ2	**Nanjing**	**20.81**	**342**	*e*P		Pn	18 52 22.0	+3.3	
NJ2				pP		pP	18 52 30.3	+4.1	
NJ2				sP		sP	18 52 34.8	+3.4	
NJ2				S		Sn	18 56 16.0	+3.3	
NJ2				pmax	pmax				
	comp=Z,30nm,1.3s								
NJ2				pmax	pmax				
	comp=Z,220nm,4.6s								
NJ2				LR	LR				
	comp=N,230nm,15.2s								
NJ2				LR	LR				
	comp=E,460nm,11.4s								
NJ2				LR	LR				
	comp=Z,270nm,19.4s								
PBKI	**Pangkalan Bun**	**20.86**	**225**	P		Pn	18 52 18.3	-1.1	
	comp=Z,228nm,1.4s,comp=Z,2µm								
JNU	**Nakatsue**	**21.12**	**11**	P		**P**	**18 52 20.1**	**+0.7**	
JNU	**Nakatsue**	**21.12**	**11**	P		**P**	**18 52 20.1**	**+0.7**	
	comp=Z,15nm,0.9s,baz=225,slow=6.4,SNR=4.8								
JNU				LR		LR	18 59 53.9		
	comp=Z,260nm,18.2s,baz=40,slow=35								
MMRI	**Maumere**	**21.21**	**191**	P		**P**	**18 52 21.0**	**+0.5**	
	comp=Z,129nm,1.0s,comp=Z,1µm								
WHN	**Wuhan**	**21.25**	**330**	⇓P		P	18 52 25.8	+5.0	
WHN				S		**S**	**18 56 19.5**	**+4.6**	
WHN				LR	LR				
	comp=N,1µm,15.3s								
WHN				LR	LR				
	comp=E,1µm,16.4s								
WHN				LR	LR				
	comp=Z,980nm,11.0s								
BWJI	**Bawean**	**22.60**	**218**	P		**P**	**18 52 37.2**	**+1.8**	
	comp=Z,94nm,1.4s								
KMMI	**Kalianget**	**22.84**	**213**	P		**P**	**18 52 39.0**	**+1.1**	
KHKI	**Kahang-Kahang**	**23.15**	**208**	P		P	18 52 51.0	+10	
GYA	**Guiyang**	**23.23**	**310**	P		**P**	**18 52 41.3**	**-0.6**	
GYA				pP		**pP**	**18 52 52.8**	**+0.4**	
GYA				PP		**PnPn**	**18 53 13.5**	**+4.8**	
GYA				PcP		**PcP**	**18 56 31.0**	**+2.0**	
GYA				S		**S**	**18 56 47.6**	**-3.7**	
GYA				sS		**sS**	**18 57 05.4**	**-4.4**	
GYA				SS		**SnSn**	**18 57 34.5**	**+6.8**	
GYA				pmax	pmax				
	comp=Z,20nm,0.8s								
GYA				pmax	pmax				
	comp=Z,110nm,4.5s								
GYA				LR	LR				
	comp=N,720nm,15.5s								
GYA				LR	LR				
	comp=E,550nm,16.4s								
GYA				LR	LR				
	comp=Z,670nm,15.9s								
KTGM	**Kuala Trenggan**	**23.94**	**255**	P		**P**	**18 52 48.9**	**+0.2**	
MYKOM	**Kota Tinggi**	**24.61**	**247**	P		**P**	**18 52 54.7**	**-0.2**	
KGM	**Kluang**	**24.99**	**248**	P		**P**	**18 52 59.4**	**+1.1**	
KSAR	**Wonju Array Be**	**25.05**	**3**	P		**P**	**18 52 59.2**	**+0.7**	
KSRS	**Korea Array**	**25.07**	**3**	P		**P**	**18 52 59.2**	**+0.5**	
	comp=Z,25nm,0.7s,baz=183,slow=9.1,SNR=63								
KSRS				LR		LR	19 01 53.7		
	comp=Z,353nm,19.0s,baz=173,slow=34								
KMI	**Kunming**	**25.66**	**303**	⇑P		**P**	**18 53 05.4**	**+0.9**	
KMI				pP		**pP**	**18 53 15.9**	**+0.3**	
KMI				sP		**sP**	**18 53 19.8**	**-0.8**	
KMI				PP		**PnPn**	**18 53 46.9**	**+4.9**	
KMI				S		**S**	**18 57 27.8**	**-2.7**	
KMI				sS		**sS**	**18 57 47.5**	**-1.7**	
KMI				SS		**SnSn**	**18 58 34.3**	**+7.0**	
KMI				pmax	pmax				
	comp=Z,12nm,1.1s								
KMI				pmax	pmax				
	comp=Z,120nm,5.8s								
KMI				LR	LR				
	comp=N,350nm,13.2s								
KMI				LR	LR				
	comp=E,460nm,11.7s								
KMI				LR	LR				
	comp=Z,450nm,13.2s								
FRIM	**Kepong**	**26.06**	**252**	P		**P**	**18 53 08.9**	**+0.9**	
IPM	**Ipoh**	**26.20**	**255**	P		**P**	**18 53 09.1**	**-0.1**	
KULM	**Kulim**	**26.30**	**257**	*e*P		**P**	**18 53 08.4**	**-1.8**	
	comp=Z,6.6nm,0.8s								
KULM	**Kulim**	**26.30**	**257**	P		**P**	**18 53 10.9**	**+0.7**	
MJAR	**Matsushiro Arr**	**26.38**	**22**	P		**P**	**18 53 10.2**	**-0.4**	
MJAR	**Matsushiro Arr**	**26.38**	**22**	P		**P**	**18 53 10.2**	**-0.4**	
	comp=Z,1.7nm,0.6s,baz=196,slow=9.9,SNR=5.8								
MJAR				LR		LR	19 03 09.6		
	comp=Z,493nm,18.1s,baz=200,slow=36								
CM31	**Chiang Mai Arr**	**27.08**	**286**	*e*P		**P**	**18 53 16.9**	**-0.3**	
	comp=Z,8.8nm,0.6s								
CMAR	**Chiang Mai Arr**	**27.08**	**286**	P		**P**	**18 53 17.1**	**0.0**	
CMAR				PcP		**PcP**	**18 56 38.5**	**+0.9**	
CMAR	**Chiang Mai Arr**	**27.08**	**286**	P		**P**	**18 53 17.1**	**0.0**	
	comp=Z,7.8nm,0.7s,baz=102,slow=7.6,SNR=58								
CMAR				PcP		**PcP**	**18 56 38.5**	**+0.9**	
	comp=Z,1.6nm,0.8s,baz=100,slow=0.9,SNR=6.6								
CMAR				LR		LR	19 04 08.7		
	comp=Z,220nm,18.6s,baz=247,slow=37								
CHTO	**Chiang Mai**	**27.14**	**287**	*e*P		**P**	**18 53 16.4**	**-1.3**	
CHTO				*e*			18 56 38.2		
CHTO					pmax	pmax			
	comp=Z,15nm,1.0s								
CHTO	**Chiang Mai**	**27.14**	**287**	*e*P		**P**	**18 53 16.4**	**-1.3**	
	comp=Z,15nm,1.0s								
CHTO				*e*PcP		**PcP**	**18 56 38.2**	**+0.4**	
CD2	**Chengdu**	**27.87**	**315**	P		**P**	**18 53 25.5**	**+1.3**	
CD2				pP		**pP**	**18 53 36.1**	**+0.7**	
CD2				sP		**sP**	**18 53 40.9**	**+0.6**	
CD2				PP		**PnPn**	**18 54 15.6**	**+3.6**	
CD2				PcP		**PcP**	**18 56 40.6**	**+1.2**	
CD2				S		**S**	**18 58 04.8**	**-0.2**	
CD2				sS		**sS**	**18 58 22.8**	**-0.9**	
CD2				SS		**SnSn**	**18 59 27.5**	**+6.5**	
CD2				pmax	pmax				
	comp=Z,20nm,0.8s								
CD2				pmax	pmax				
	comp=Z,180nm,4.1s								
CD2				LR	LR				
	comp=N,530nm,13.9s								
CD2				LR	LR				
	comp=E,630nm,11.9s								
CD2				LR	LR				
	comp=Z,420nm,14.2s								
PSI	**Prapat**	**28.74**	**253**	P		**P**	**18 53 31.1**	**-1.1**	
PSI				PcP		**PcP**	**18 56 43.4**	**+1.5**	
PSI	**Prapat**	**28.74**	**253**	P		**P**	**18 53 31.1**	**-1.1**	
	comp=Z,5.5nm,0.7s,baz=57,slow=4.8,SNR=5.4								
PSI				PcP		**PcP**	**18 56 43.4**	**+1.5**	
	comp=Z,4.3nm,0.4s,baz=191,slow=9.2,SNR=5.3								
PSI				LR		LR	19 05 10.1		
	comp=Z,846nm,20.5s,baz=246,slow=37								
BJI	**Beijing**	**29.03**	**344**	P		**P**	**18 53 36.3**	**+2.1**	
BJI				S		S	18 58 30.0	+7.2	
BJI				pmax	pmax				
	comp=Z,15nm,1.2s								
BJI				pmax	pmax				
	comp=Z,160nm,4.1s								
BJI				LR	LR				
	comp=N,310nm,14.1s								
BJI				LR	LR				
	comp=E,380nm,23.2s								
BJI				LR	LR				
	comp=Z,130nm,20.0s								
SNY	**Shenyang**	**29.49**	**356**	⇑P		P	18 53 41.8	+3.5	
SNY				pmax	pmax				
	comp=Z,31nm,1.3s								
PMG	**Port Moresby**	**29.91**	**135**	P		P	18 53 46.0	+3.7	
	comp=Z,9.3nm,0.9s								
FITZ	**Fitzroy Crossi**	**30.24**	**181**	*e*P		**P**	**18 53 44.8**	**-0.4**	
	comp=Z,38nm,1.1s								
LZH	**Lanzhou**	**31.16**	**323**	*e*P		**P**	**18 53 56.0**	**+2.6**	
LZH				pP		**pP**	**18 54 07.1**	**+2.5**	
LZH				sP		**sP**	**18 54 11.5**	**+2.0**	
LZH				*e*S		**S**	**18 59 02.0**	**+5.3**	
LZH				sS		**sS**	**18 59 14.3**	**-1.1**	
LZH				SS		**SnSn**	**19 00 48.8**	**+7.7**	
LZH				pmax	pmax				
	comp=Z,20nm,1.2s								
LZH				pmax	pmax				
	comp=Z,65nm,4.0s								
LZH				LR	LR				
	comp=N,490nm,13.2s								
LZH				LR	LR				
	comp=E,340nm,12.8s								
LZH				LR	LR				
	comp=Z,420nm,15.3s								
HHC	**Hu-ho-hao-te**	**31.24**	**338**	*e*P		**P**	**18 53 54.5**	**+0.6**	
HHC				pP		**pP**	**18 54 04.0**	**-1.2**	
HHC				sP		**sP**	**18 54 08.5**	**-1.6**	
HHC				S		**S**	**18 58 55.3**	**-2.4**	
HHC				pmax	pmax				
	comp=Z,31nm,0.6s								
HHC				pmax	pmax				
	comp=Z,260nm,5.9s								
HHC				LR	LR				
	comp=N,550nm,12.9s								
HHC				LR	LR				
	comp=E,680nm,12.9s								
HHC				LR	LR				
	comp=Z,640nm,12.0s								
CN2	**Changchun**	**31.38**	**359**	*e*P		P	18 53 58.8	+3.8	
USRK	**Ussuriysk Arra**	**32.14**	**8**	P		**P**	**18 54 01.2**	**-0.4**	
	comp=Z,5.2nm,0.7s,baz=186,slow=7.5,SNR=11								
USRK				LR		LR	19 06 16.7		
	comp=Z,207nm,18.8s,baz=304,slow=35								
WRAB	**Tennant Creek**	**33.01**	**166**	*e*P		**P**	**18 54 07.8**	**-1.8**	
WRAB				pmax	pmax				
	comp=Z,27nm,1.3s								
WRAB	**Tennant Creek**	**33.01**	**166**	*e*P		**P**	**18 54 07.8**	**-1.8**	
	comp=Z,27nm,1.3s								
WRA	**Warramunga Arr**	**33.02**	**166**	P		**P**	**18 54 07.7**	**-1.9**	
WRA	**Warramunga Arr**	**33.02**	**166**	P		**P**	**18 54 07.7**	**-1.9**	
	comp=Z,47nm,0.3s,baz=346,slow=9.4,SNR=2.5								
MBWA	**Marble Bar**	**33.90**	**191**	*e*P		**P**	**18 54 15.5**	**-1.7**	
	comp=Z,12nm,1.0s								
SHL	**Shillong**	**35.02**	**297**	*ex*		**P**	**18 54 27.0**	**-0.3**	
GTA	**Gaotai**	**35.75**	**324**	*e*P		**P**	**18 54 34.1**	**+0.8**	
GTA				pP		**pP**	**18 54 44.8**	**+0.1**	
GTA				sP		**sP**	**18 54 50.3**	**+0.7**	
GTA				PP		**PP**	**18 55 57.3**	**+2.3**	
GTA				S		**S**	**19 00 07.3**	**-0.5**	
GTA				pmax	pmax				
	comp=Z,3.0nm,1.1s								
GTA				pmax	pmax				
	comp=Z,150nm,5.2s								
GTA				LR	LR				
	comp=N,330nm,16.1s								
GTA				LR	LR				
	comp=E,310nm,15.7s								
GTA				LR	LR				
	comp=Z,310nm,18.1s								
YUK	**Yuzh-Kuril'sk**	**35.79**	**24**	P		**P**	**18 54 31.7**	**-1.6**	
YUK				S		**S**	**19 00 08.0**	**+0.2**	
YUK				MLR	MLR				
	comp=E,222nm,19.0s								
YUK				MLR	MLR				
	comp=Z,329nm,19.0s								
YUK				MLR	MLR				
	comp=N,306nm,20.0s								
AS31	**Alice Springs**	**36.53**	**168**	*e*P		**P**	**18 54 38.8**	**-1.1**	
ASAR	**Alice Springs**	**36.53**	**168**	P		**P**	**18 54 38.9**	**-1.0**	
ASAR				PcP		**PcP**	**18 57 03.0**	**-0.1**	
ASAR	**Alice Springs**	**36.53**	**168**	P		**P**	**18 54 38.9**	**-1.0**	
	comp=N,8.4nm,0.6s,baz=352,slow=9.5,SNR=159								
ASAR				PcP		**PcP**	**18 57 03.0**	**-0.1**	
	comp=N,2.3nm,0.5s,baz=343,slow=2.4,SNR=7.8								
LSA	**Lhasa**	**36.92**	**303**	P		**P**	**18 54 44.0**	**+0.2**	
LSA				pmax	pmax				
	comp=Z,10.0nm,1.6s								
CTAO	**Charters Tower**	**37.71**	**148**	*e*P		**P**	**18 54 50.0**	**0.0**	
CTAO	**Charters Tower**	**37.71**	**148**	*e*P		**P**	**18 54 50.0**	**0.0**	
ULN	**Ulaanbaatar**	**38.93**	**339**	*e*P		**P**	**18 54 59.7**	**-0.4**	
	comp=Z,8.3nm,0.7s								
ULN				*e*PcP		**PcP**	**18 57 11.3**	**+1.1**	
ULN	**Ulaanbaatar**	**38.93**	**339**	P		**P**	**18 55 01.7**	**+1.6**	
	SNR=5.0								
TAPN	**Taplejung**	**39.10**	**298**	*e*P		**P**	**18 55 02.2**	**+0.2**	
	comp=Z,71nm,1.1s								
SONM	**Songino Array**	**39.13**	**339**	P		**P**	**18 55 01.5**	**-0.3**	
SONM	**Songino Array**	**39.13**	**339**	P		**P**	**18 55 01.5**	**-0.3**	
	comp=Z,6.3nm,0.7s,baz=155,slow=8.5,SNR=21								
SONM				LR		LR	19 11 59.3		
	comp=Z,166nm,18.7s,baz=259,slow=38								
ODAN	**Odare**	**39.26**	**297**	*e*P		**P**	**18 55 03.3**	**0.0**	
	comp=Z,80nm,0.9s								
RAMN	**Ramite**	**39.96**	**297**	*e*P		**P**	**18 55 09.3**	**+0.1**	
	comp=Z,88nm,0.8s								
GUN	**Gumba**	**40.81**	**299**	*e*P		**P**	**18 55 16.5**	**+0.2**	
	comp=Z,93nm,1.0s								
PKI	**Pulchoki**	**41.14**	**298**	*e*P		**P**	**18 55 18.5**	**-0.4**	
	comp=Z,49nm,1.0s								
PKIN	**Phulchoki**	**41.15**	**298**	*e*P		**P**	**18 55 19.0**	**0.0**	
	comp=Z,20nm,0.7s								
KKN	**Kakani**	**41.30**	**298**	*e*P		**P**	**18 55 19.9**	**-0.2**	
	comp=Z,38nm,1.0s								
DMN	**Daman**	**41.41**	**298**	*e*P		**P**	**18 55 20.9**	**-0.2**	
	comp=Z,88nm,1.1s								
DANN	**Dangsing**	**42.73**	**299**	*e*P		**P**	**18 55 31.7**	**-0.2**	
	comp=Z,68nm,0.8s								
KOLN	**Koldanda**	**42.75**	**298**	*e*P		**P**	**18 55 32.0**	**+0.1**	
	comp=Z,58nm,0.8s								
FORT	**Forrest**	**42.88**	**178**	*e*P		**P**	**18 55 32.8**	**+0.1**	
	comp=Z,100nm,0.8s								
PYUN	**Piuthan**	**43.34**	**298**	*e*P		**P**	**18 55 36.4**	**-0.4**	
	comp=Z,114nm,0.9s								
MOY	**Mondy**	**44.27**	**338**	*e*P		**P**	**18 55 42.2**	**-1.6**	
WMQ	**Urumqi**	**45.66**	**321**	P		**P**	**18 55 56.0**	**+1.1**	
WMQ				pP		**pP**	**18 56 09.0**	**+2.5**	
WMQ				sP		**sP**	**18 56 13.0**	**+1.6**	
WMQ				PcP		**PcP**	**18 57 34.0**	**+1.5**	
WMQ				PP		**PP**	**18 57 43.0**	**+0.7**	
WMQ				ScP		**ScP**	**19 01 21.0**	**-1.4**	
WMQ				S		**S**	**19 02 35.0**	**-0.1**	
WMQ				sS		**sS**	**19 02 56.0**	**+1.6**	
WMQ				ScS		**ScS**	**19 05 45.0**	**-2.9**	
WMQ				SS		SS	19 05 52.0	-7.7	
WMQ				pmax	pmax				
	comp=Z,16nm,1.0s								
WMQ				pmax	pmax				
	comp=Z,120nm,5.0s								
WMQ				LR	LR				
	comp=N,310nm,16.0s								
WMQ				LR	LR				
	comp=E,340nm,16.0s								
WMQ				LR	LR				
	comp=Z,250nm,16.0s								
NWAO	**Narrogin (SRO)**	**45.83**	**191**	*e*P		**P**	**18 55 55.5**	**-0.6**	
BBOO	**Buckleboo**	**45.83**	**169**	*e*P		**P**	**18 55 55.6**	**-0.6**	
	comp=Z,426nm,0.6s								
STKA	**Stephens Creek**	**46.32**	**162**	*e*P		**P**	**18 55 59.8**	**-0.2**	
	comp=Z,5.9nm,0.9s								
STKA				*e*			18 56 18.2		
STKA				*e*PcP		**PcP**	**18 57 34.3**	**-0.5**	
STKA	**Stephens Creek**	**46.32**	**162**	P		**P**	**18 55 60.0**	**-0.1**	
	comp=Z,19nm,0.7s,baz=339,slow=7.1,SNR=54								
STKA				LR		LR	19 14 04.8		
	comp=Z,145nm,21.6s,baz=211,slow=34								
HYB	**Hyderabad**	**46.36**	**282**	*e*P		**P**	**18 56 00.5**	**-0.2**	
HYB	**Hyderabad**	**46.36**	**282**	*e*P		**P**	**18 56 00.5**	**-0.2**	
HYB	**Hyderabad**	**46.36**	**282**	*i*P		**P**	**18 56 00.5**	**-0.2**	
PETK	**Petropavlovsk-**	**47.76**	**25**	P		**P**	**18 56 11.7**	**+0.6**	
PETK	**Petropavlovsk-**	**47.76**	**25**	P		**P**	**18 56 11.7**	**+0.6**	
PETK	**Petropavlovsk-**	**47.76**	**25**	P		**P**	**18 56 11.7**	**+0.6**	
	comp=Z,8.8nm,0.5s,baz=204,slow=4.2,SNR=18								
PETK				LR		LR	19 15 14.9		
	comp=Z,128nm,18.5s,baz=216,slow=35								
PET	**Petropavlovsk**	**48.10**	**26**	*e*P		**P**	**18 56 14.5**	**+0.9**	
PET				*e*S		**S**	**19 03 09.5**	**+0.2**	
PET				pmax	pmax				
	comp=Z,26nm,1.3s								
PET				MLR	MLR				
	comp=Z,200nm,19.0s								
SDNR	**Sundarnagar**	**49.16**	**301**	*ex*		**P**	**18 56 23.0**	**+0.7**	
YAK	**Yakutsk**	**49.69**	**2**	*e*P		**P**	**18 56 23.8**	**-1.9**	
YAK				pmax	pmax				
	comp=Z,20nm,1.0s								
YAK				pmax	pmax				
	comp=N,9.0nm,1.3s								
YAK				pmax	pmax				
	comp=E,2.0nm,1.4s								
YAK				MLR	MLR				
	comp=Z,251nm,23.0s								
YAK				MLR	MLR				
	comp=E,54nm,19.0s								
YAK				MLR	MLR				
	comp=N,159nm,19.0s								
MK31	**Makanchi Array**	**50.45**	**322**	*i*P		**P**	**18 56 32.2**	**+0.4**	
MK31				pmax	pmax				
	comp=Z,20nm,0.8s								
MK31	**Makanchi Array**	**50.45**	**322**	*e*P		**P**	**18 56 32.3**	**+0.4**	
MK31				*e*			18 56 42.9		
MKAR	**Makanchi Array**	**50.45**	**322**	P		**P**	**18 56 32.5**	**+0.7**	
MKAR	**Makanchi Array**	**50.45**	**322**	P		**P**	**18 56 32.5**	**+0.7**	
MKAR	**Makanchi Array**	**50.45**	**322**	P		**P**	**18 56 32.5**	**+0.7**	
	comp=Z,13nm,0.7s,baz=111,slow=8.9,SNR=37								
MKAR				LR		LR	19 18 37.0		
	comp=Z,81nm,18.3s,baz=344,slow=37								
KSH	**Kashi**	**51.93**	**311**	*e*P		**P**	**18 56 45.1**	**+2.0**	
KSH				pP		**pP**	**18 56 55.3**	**+0.4**	
KSH				sP		**sP**	**18 56 58.8**	**-0.9**	
KSH				PcP		**PcP**	**18 57 55.4**	**0.0**	
KSH				PP		**PP**	**18 58 43.8**	**+2.5**	
KSH				ScP		**ScP**	**19 01 50.1**	**+0.9**	
KSH				PcS		**PcS**	**19 01 53.6**	**0.0**	
KSH				S		**S**	**19 04 03.0**	**-0.5**	
KSH				sS		**sS**	**19 04 22.0**	**-1.0**	
KSH				ScS		**ScS**	**19 06 29.0**	**-1.2**	
KSH				SS		**SS**	**19 07 40.8**	**+0.1**	
KSH				pmax	pmax				
	comp=Z,14nm,1.0s								
KSH				LR	LR				
	comp=E,110nm,4.1s								
KSH				LR	LR				
	comp=Z,260nm,5.3s								
DZM	**Mont Dzumac**	**52.12**	**131**	*e*S		**S**	**19 04 06.5**	**+0.2**	
	comp=Z,82nm,25.4s								
DZM				*e*LQ		LQ	19 09 38.9		
	comp=Z,442nm,29.2s								
DZM				*e*LR		LR	19 11 49.1		
	comp=Z,243nm,28.6s								
ZAA0	**Zalesovo Array**	**52.87**	**331**	*e*P		**P**	**18 56 49.1**	**-0.6**	
ZALV	**Zalesovo Beam**	**52.87**	**331**	P		**P**	**18 56 49.5**	**-0.2**	
ZALV	**Zalesovo Beam**	**52.87**	**331**	P		**P**	**18 56 49.5**	**-0.2**	
ZALV	**Zalesovo Beam**	**52.87**	**331**	P		**P**	**18 56 49.5**	**-0.2**	
	comp=Z,5.5nm,0.7s,baz=124,slow=6.6,SNR=22								
KZA	**Kyzart**	**53.23**	**314**	*i*P		**P**	**18 56 54.7**	**+1.6**	
KZA	**Kyzart**	**53.23**	**314**	P		**P**	**18 56 54.7**	**+1.6**	
	SNR=12								
TKM2	**Tokmak 2**	**53.26**	**315**	*e*P		**P**	**18 56 53.4**	**+0.4**	
TKM

	comp=Z,3.0nm,0.5s							
KKAR	**Karatay Array**	**56.87**	**314**	*e*P		**P**	**18 57 18.9**	**0.0**
	comp=Z,2.7nm,0.5s							
TAU	**Tasmania Unive**	**58.23**	**162**	P		**P**	**18 57 26.8**	**-1.4**
TAU				pmax	pmax			
	comp=Z,8.0nm,0.8s							
TAU	**Tasmania Unive**	**58.23**	**162**	P		**P**	**18 57 26.8**	**-1.4**
	comp=Z,7.8nm,0.8s							
MSVF	**Nonsavu**	**59.15**	**119**	*e*P		**P**	**18 57 36.9**	**+1.7**
MSVF				pmax	pmax			
	comp=Z,28nm,1.0s							
MSVF	**Nonsavu**	**59.15**	**119**	*e*P		**P**	**18 57 36.9**	**+1.7**
	comp=Z,28nm,1.0s							
BVA0	**Borovoye Array**	**60.03**	**325**	*i* P		**P**	**18 57 40.2**	**-0.5**
BVA0				pmax	pmax			
	comp=Z,1.0nm,0.6s							
BVAR	**Borovoye Array**	**60.03**	**325**	LR		LR	19 23 35.6	
	comp=Z,77nm,19.6s,baz=168,slow=36							
BRVK	**Borovoye**	**60.10**	**325**	*e*P		**P**	**18 57 41.1**	**0.0**
BRVK				pmax	pmax			
	comp=Z,11nm,0.8s							
BRVK	**Borovoye**	**60.10**	**325**	*e*P		**P**	**18 57 41.1**	**0.0**
	comp=Z,11nm,0.8s							
BRVK	**Borovoye**	**60.10**	**325**	P		**P**	**18 57 41.5**	**+0.4**
	SNR=7.7							
BILL	**Bilibino**	**61.42**	**16**	*e*P		**P**	**18 57 49.8**	**-0.1**
BILL				*i*			18 57 58.1	
BILL				*i*			18 58 33.2	
BILL				*i*			19 00 07.0	
BILL				pmax	pmax			
	comp=Z,6.0nm,0.8s							
IMYA	**Miami**	**63.69**	**304**	*e*P		**P**	**18 58 06.0**	**+0.1**
IDAH	**Dahanechah**	**63.70**	**300**	*e*P		**P**	**18 58 06.1**	**0.0**
ISRO	**Mashad**	**64.20**	**304**	*e*P		**P**	**18 58 08.1**	**-1.0**
IMOG	**Moghan**	**64.30**	**304**	*e*P		**P**	**18 58 09.8**	**-0.2**
IKOO	**Kooshah**	**64.42**	**300**	*e*P		**P**	**18 58 10.1**	**-0.7**
IPAY	**Payeh**	**64.59**	**305**	*e*P		**P**	**18 58 10.9**	**-0.9**
ITEG	**Tejag**	**64.65**	**301**	*e*P		**P**	**18 58 12.4**	**+0.2**
IKRD	**Kardeh**	**65.00**	**305**	*e*P		P	18 58 10.2	-4.3
AB31	**Akbulak array**	**65.38**	**319**	*i* P		**P**	**18 58 15.9**	**-0.5**
AB31				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ABKAR	**Akbulak array**	**65.38**	**319**	*e*P		**P**	**18 58 15.7**	**-0.7**
	comp=Z,2.8nm,0.6s							
ISFR	**Sfrayin**	**65.42**	**305**	*e*P		**P**	**18 58 16.7**	**-0.6**
SVE	**Sverdlovsk**	**66.53**	**327**	*e*P		**P**	**18 58 23.6**	**0.0**
SVE				pmax	pmax			
	comp=Z,12nm,0.8s							
ARU	**Arti**	**67.56**	**326**	*d i*P		**P**	**18 58 29.2**	**-1.0**
ARU				*PP		**pP**	**18 58 39.8**	**-2.5**
ARU							19 00 56.2	
ARU				S		**S**	**19 07 23.6**	**-0.2**
ARU				pmax	pmax			
	comp=Z,21nm,1.7s							
IGLO	**Ghaloghah**	**68.75**	**304**	*e*P		**P**	**18 58 38.0**	**-0.4**
ISRV	**Sarvestan**	**69.53**	**297**	*e*P		**P**	**18 58 42.8**	**-0.6**
IFIR	**Firoozkooh**	**69.63**	**304**	*e*P		**P**	**18 58 43.5**	**-0.4**
IVRN	**Varamin**	**70.48**	**303**	*e*P		P	18 58 45.2	-3.7
IGZV	**Ghazvin**	**71.67**	**304**	*e*P		**P**	**18 58 56.8**	**+0.6**
ISRB	**Sarab**	**73.64**	**306**	*e*P		**P**	**18 59 07.2**	**-0.7**
QRN	**Al-Qurain**	**74.11**	**297**	*e*P		**P**	**18 59 10.3**	**-0.3**
QRN				AMb	AMB	AMB	18 59 13.7	
	comp=Z,77nm,1.1s							
IHRS	**Heris**	**74.11**	**307**	*e*P		**P**	**18 59 10.4**	**-0.3**
MIB	**Mutribah**	**74.51**	**298**	*e*P		**P**	**18 59 12.2**	**-0.6**
MIB				AMb	AMB	AMB	18 59 23.9	
	comp=Z,61nm,0.7s							
NAY	**Al-Naaiem**	**74.65**	**297**	*e*P		**P**	**18 59 12.9**	**-0.8**
NAY				AMb	AMB	AMB	18 59 17.5	
	comp=Z,18nm,1.0s							
IDHR	**Dehrash**	**74.88**	**303**	*e*P		**P**	**18 59 13.2**	**-2.0**
IMRD	**Marand**	**75.13**	**307**	*e*P		**P**	**18 59 16.6**	**+0.1**
GNI	**Garni**	**75.77**	**309**	*e*P		**P**	**18 59 20.8**	**+0.6**
	comp=Z,17nm,0.9s							
GNI	**Garni**	**75.77**	**309**	P		**P**	**18 59 22.0**	**+1.9**
	SNR=8.8							
TRF	**Thorofare Moun**	**76.11**	**27**	*e*P		**P**	**18 59 22.0**	**+0.3**
	comp=Z,37nm,1.8s							
COLD	**Coldfoot**	**76.20**	**23**	*e*P		**P**	**18 59 22.3**	**+0.5**
	comp=Z,17nm,1.2s							
ZEI	**Tsey**	**76.22**	**311**	*e*P		**P**	**18 59 22.7**	**0.0**
ZEI				pmax	pmax			
	comp=Z,30nm,1.0s							
PMR	**Palmer**	**76.66**	**29**	*e*P		**P**	**18 59 23.8**	**-0.7**
PMR	**Palmer**	**76.66**	**29**	*e*P		**P**	**18 59 23.8**	**-0.7**
BHD	**Baghdad**	**76.68**	**302**	*ex*		x	18 59 18.5	
MCK	**McKinley**	**76.71**	**27**	*e*P		**P**	**18 59 24.6**	**-0.2**
MCK				pmax	pmax			
	comp=Z,29nm,1.3s							
MCK	**McKinley**	**76.71**	**27**	*e*P		**P**	**18 59 24.6**	**-0.2**
	comp=Z,30nm,1.3s							
KBZ	**Khabaz**	**76.87**	**312**	P		**P**	**18 59 26.6**	**+0.6**
KBZ	**Khabaz**	**76.87**	**312**	P		**P**	**18 59 26.6**	**+0.6**
KBZ	**Khabaz**	**76.87**	**312**	P		**P**	**18 59 26.6**	**+0.6**
	comp=Z,11nm,0.9s,baz=145,slow=2.5,SNR=14							
KIV	**Kislovodsk**	**77.01**	**313**	*e*P		**P**	**18 59 27.5**	**+0.5**
KIV				*i*			18 59 37.6	
KIV				*e*			19 02 20.8	
KIV				*e*S		**S**	**19 09 12.3**	**-0.4**
KIV				pmax	pmax			
	comp=Z,48nm,1.0s							
SML	**Sawmill**	**77.03**	**29**	*e*P		**P**	**18 59 26.3**	**-0.4**
SML	**Sawmill**	**77.03**	**29**	*e*P		**P**	**18 59 26.3**	**-0.4**
COLA	**College**	**77.16**	**26**	P		**P**	**18 59 28.1**	**+0.9**
COLA	**College**	**77.16**	**26**	P		**P**	**18 59 28.1**	**+0.9**
VRHR	**Novokhopersk**	**77.21**	**320**	*e*P		**P**	**18 59 27.4**	**-0.4**
VRHR				pmax	pmax			
	comp=Z,20nm,0.8s							
VRHR				pmax	pmax			
	comp=N,10.0nm,1.4s							
VRHR				pmax	pmax			
	comp=E,10.0nm,0.6s							
ILAR	**Eielson Array**	**77.58**	**26**	P		**P**	**18 59 29.1**	**-0.5**
ILAR	**Eielson Array**	**77.58**	**26**	P		**P**	**18 59 29.1**	**-0.5**
	comp=E,1.3nm,0.6s,baz=236,slow=5.5,SNR=17							
TMCR	**Tamitsa**	**78.27**	**333**	*e*P		P	18 59 43.2	+10
TMCR				pmax	pmax			
	comp=Z,17nm,0.4s							
VORD	**Divnogorie**	**78.68**	**320**	*e*P		**P**	**18 59 35.4**	**-0.6**
VORD				pmax	pmax			
	comp=N,8.0nm,0.8s							
VORD				pmax	pmax			
	comp=Z,10.0nm,0.8s							
VORD				pmax	pmax			
	comp=E,10.0nm,0.9s							
VSR	**Storozhevoye**	**78.74**	**320**	*e*P		**P**	**18 59 35.7**	**-0.6**
VSR				pmax	pmax			
	comp=N,6.0nm,0.7s							
VSR				pmax	pmax			
	comp=Z,10.0nm,0.7s							
VSR				pmax	pmax			
	comp=E,10.0nm,0.8s							
SOC	**Sochi**	**79.19**	**312**	*e*P		P	18 59 35.2	-3.7
SOC				pmax	pmax			
	comp=Z,15nm,0.9s							
SOC				pmax	pmax			
	comp=Z,24nm,0.6s							
MOS	**Moscow**	**79.20**	**325**	*e*P		**P**	**18 59 38.1**	**-0.6**
MOS				*e*			18 59 55.8	
CASY	**Casey**	**79.25**	**186**	*e*P		**P**	**18 59 38.9**	**+0.3**
	comp=Z,21nm,0.9s							
OBN	**Obninsk**	**79.87**	**324**	⇓*i*P		**P**	**18 59 42.7**	**+0.3**
OBN				*i*			18 59 52.6	
OBN				pmax	pmax			
	comp=Z,59nm,1.6s							
EGAK	**Eagle**	**80.02**	**26**	*e*P		**P**	**18 59 43.4**	**+0.4**
	comp=Z,18nm,1.4s							
MALT	**Malatya**	**80.85**	**307**	*e*P		**P**	**18 59 49.2**	**+1.0**
MALT				pmax	pmax			
	comp=Z,13nm,1.0s							
MALT	**Malatya**	**80.85**	**307**	*e*P		**P**	**18 59 49.2**	**+1.0**
	comp=Z,13nm,1.0s							
MALT	**Malatya**	**80.85**	**307**	⇓*i*P		**P**	**18 59 50.6**	**+2.4**
JOF	**Joensuu**	**81.41**	**333**	*e*P		**P**	**18 59 49.9**	**-0.6**
JOF				pmax	pmax			
	comp=Z,7.0nm,0.6s							
JOF	**Joensuu**	**81.41**	**333**	*e*p		**P**	**18 59 49.9**	**-0.6**
	comp=Z,6.8nm,0.6s							
ARCES	**ARCESS Array B**	**82.30**	**340**	P		**P**	**18 59 54.8**	**-0.3**
ARCES	**ARCESS Array B**	**82.30**	**340**	P		**P**	**18 59 54.8**	**-0.3**
	comp=Z,21nm,0.8s,baz=80,slow=5.8,SNR=16							
ARE0	**ARCESS Array S**	**82.30**	**340**	*e*P		**P**	**18 59 55.9**	**+0.8**
INK	**Inuvik**	**82.37**	**22**	P		**P**	**18 59 55.5**	**+0.1**
INK	**Inuvik**	**82.37**	**22**	P		**P**	**18 59 55.5**	**+0.1**
	comp=Z,8.0nm,0.9s,baz=275,slow=5.4,SNR=12							
MIR	**Mirnyy**	**82.39**	**193**	⇑*i*P		**P**	**18 59 56.5**	**+1.1**
MIR				pmax	pmax			
	comp=Z,56nm,1.5s							
SIM	**Simferopol'**	**82.96**	**314**	*e*P		**P**	**18 59 59.2**	**+0.2**
KAF	**Kangasniemi**	**83.85**	**332**	*e*P		**P**	**19 00 02.1**	**-1.1**
KAF				pmax	pmax			
	comp=Z,9.0nm,0.7s							
KAF	**Kangasniemi**	**83.85**	**332**	*e*p		**P**	**19 00 02.1**	**-1.1**
	comp=Z,8.6nm,0.7s							
FIA1	**FINESS Array S**	**84.12**	**332**	*e*P		**P**	**19 00 03.6**	**-1.0**
FIA1				*e*			19 00 14.7	
FINES	**FINESS Array B**	**84.12**	**332**	P		**P**	**19 00 03.9**	**-0.7**
FINES	**FINESS Array B**	**84.12**	**332**	P		**P**	**19 00 03.9**	**-0.7**
	comp=Z,17nm,0.9s,baz=70,slow=6.3,SNR=24							
BR131	**Keskin Array S**	**84.28**	**309**	*e*P		**P**	**19 00 05.0**	**-1.1**
	comp=Z,1.9nm,0.6s							
BRTR	**Keskin Array B**	**84.28**	**309**	P		**P**	**19 00 06.5**	**+0.4**
BRTR	**Keskin Array B**	**84.28**	**309**	P		**P**	**19 00 06.5**	**+0.4**
	comp=Z,2.6nm,0.8s,baz=116,slow=5.6,SNR=18							
ANTO	**Ankara**	**84.89**	**310**	P		**P**	**19 00 09.5**	**+0.4**
	SNR=5.6							
MICGM	**Minsk**	**84.92**	**325**	*e*		**P**	**19 00 08.0**	**-0.8**
MNK	**Minsk**	**84.95**	**325**	*e*P		**P**	**19 00 08.0**	**-0.9**
AKASG	**Malin Array Be**	**85.02**	**321**	P		**P**	**19 00 08.9**	**-0.5**
AKASG	**Malin Array Be**	**85.02**	**321**	P		**P**	**19 00 08.9**	**-0.5**
AKASG	**Malin Array Be**	**85.02**	**321**	P		**P**	**19 00 08.9**	**-0.5**
	comp=Z,9.1nm,0.6s,baz=64,slow=4.7,SNR=25							
AK01	**Malin Array Si**	**85.03**	**321**	*e*P		**P**	**19 00 08.7**	**-0.8**
KIEV	**Kiev**	**85.03**	**321**	*e*P		**P**	**19 00 08.5**	**-0.9**
KIEV				pmax	pmax			
	comp=Z,31nm,1.2s							
KIEV	**Kiev**	**85.03**	**321**	*e*P		**P**	**19 00 08.5**	**-0.9**
	comp=Z,31nm,1.2s							
AK02	**Malin Array Si**	**85.04**	**321**	*e*P		**P**	**19 00 09.2**	**-0.2**
CSS	**Prodhromos**	**85.47**	**305**	*e*P		**P**	**19 00 12.1**	**+0.1**
	comp=Z,17nm,0.6s							
TLCR		**86.59**	**315**	⇑P		**P**	**19 00 18.7**	**+1.5**
TLCR		**86.59**	**315**	⇑*i*P		**P**	**19 00 18.7**	**+1.5**
CFR	**Carcaliu**	**87.05**	**315**	⇑P		**P**	**19 00 20.6**	**+1.1**
CFR	**Carcaliu**	**87.05**	**315**	⇑*i*P		**P**	**19 00 20.6**	**+1.1**
SUW	**Suwalki**	**87.71**	**325**	*e*P		**P**	**19 00 22.7**	**+0.2**
SUW				pmax	pmax			
	comp=Z,25nm,1.0s							
SUW	**Suwalki**	**87.71**	**325**	*e*P		**P**	**19 00 22.7**	**+0.2**
	comp=Z,25nm,1.0s							
TESR		**87.72**	**317**	⇑*i*P		**P**	**19 00 23.0**	**+0.3**
VRI	**Vrincioaia**	**87.83**	**316**	⇑P		**P**	**19 00 23.2**	**-0.1**
VRI	**Vrincioaia**	**87.83**	**316**	⇑*i*P		**P**	**19 00 23.2**	**-0.1**
PPT	**Papeete**	**88.15**	**108**	LR		LR	19 34 29.8	
	comp=Z,114nm,18.9s,baz=172,slow=32							
PPT2	**Papeete2**	**88.15**	**108**	*e*S		**S**	**19 11 05.3**	**-1.9**
	comp=Z,103nm,25.8s							
PPT2				*e*LR		LR	19 28 34.7	
	comp=Z,341nm,29.0s							
BURAR	**Bucovina Array**	**88.36**	**318**	⇑*i*P		P	19 00 29.2	+3.3
BUR08	**Bucovina Ar. S**	**88.36**	**318**	*e*P		**P**	**19 00 25.7**	**-0.2**
MLR	**Muntele Rosu**	**88.46**	**316**	⇑*i*P		**P**	**19 00 29.6**	**+3.1**
KMBO	**Kilima Mbogo**	**89.34**	**269**	*e*P		**P**	**19 00 31.5**	**+0.2**
	comp=Z,9.6nm,1.3s							
RES	**Resolute Bay**	**89.48**	**10**	*e*P		**P**	**19 00 30.3**	**-0.1**
	comp=Z,6.7nm,0.6s							
RES				*e*			19 00 41.3	
TBI	**Tubuai**	**89.59**	**114**	*e*LR		LR	19 29 01.3	
	comp=Z,181nm,32.5s							
KOLS	**Kolonicke sedl**	**89.83**	**320**	*e*P		**P**	**19 00 34.0**	**+1.3**
KOLS				pmax	pmax			
	comp=Z,22nm,2.3s							
KOLS	**Kolonicke sedl**	**89.83**	**320**	*e*P		**P**	**19 00 34.0**	**+1.3**
UZH	**Uzhgorod**	**89.92**	**320**	*e*P		**P**	**19 00 32.5**	**-0.5**
UZH				*e*			19 00 41.2	
UZH				*e*S		**S**	**19 11 19.2**	**-3.4**
CRVS	**Cervenica-Dubn**	**90.35**	**320**	*e*P		**P**	**19 00 34.9**	**-0.2**
CRVS				pmax	pmax			
	comp=Z,19nm,1.7s							
CRVS	**Cervenica-Dubn**	**90.35**	**320**	*e*P		**P**	**19 00 34.9**	**-0.2**
NB2	**NORSAR Subarra**	**90.95**	**334**	P		**P**	**19 00 36.6**	**-1.0**
	comp=Z,4.6nm,0.8s,baz=66,slow=4.8							
NOA	**NORSAR Array B**	**90.95**	**334**	P		**P**	**19 00 37.0**	**-0.7**
NOA	**NORSAR Array B**	**90.95**	**334**	P		**P**	**19 00 37.0**	**-0.7**
	comp=Z,2.7nm,0.7s,baz=62,slow=4.7,SNR=12							
NOA				LR		LR	19 46 55.9	
	comp=Z,62nm,18.2s,baz=115,slow=39							
YKA	**Yellowknife Ar**	**91.87**	**24**	P		**P**	**19 00 41.8**	**0.0**
YKA	**Yellowknife Ar**	**91.87**	**24**	P		**P**	**19 00 41.7**	**0.0**
	comp=Z,1.1nm,0.8s,baz=299,slow=4.6,SNR=12							
VNDA	**Vanda**	**91.95**	**173**	P		**P**	**19 00 40.9**	**-0.8**
VNDA	**Vanda**	**91.95**	**173**	P		**P**	**19 00 40.9**	**-0.8**
	comp=Z,3.4nm,0.9s,baz=324,slow=6.9,SNR=12							
VYHS	**Vyhne**	**92.12**	**321**	*e*P		P	19 00 46.7	+3.4
VYHS				pmax	pmax			
	comp=Z,20nm,2.3s							
VYHS	**Vyhne**	**92.12**	**321**	*e*P		P	19 00 46.7	+3.4
CLL	**Collm**	**94.46**	**325**	*e*P		**P**	**19 00 53.0**	**-1.0**
CLL				pmax	pmax			
	comp=Z,19nm,2.1s							
CLL	**Collm**	**94.46**	**325**	*e*P		**P**	**19 00 53.0**	**-1.0**
	comp=Z,19nm,2.1s							
GERES	**GERESS Array B**	**95.12**	**322**	P		**P**	**19 00 58.2**	**+1.0**
GERES	**GERESS Array B**	**95.12**	**322**	P		**P**	**19 00 58.2**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=116,slow=4.5,SNR=2.5							
TXAR	**Lajitas Array**	**116.44**	**48**	PKP		**PKPdf**	**19 06 19.1**	**+0.9**
TXAR	**Lajitas Array**	**116.44**	**48**	PKP		**PKPdf**	**19 06 19.1**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=244,slow=2.0,SNR=6.4							
TORD	**Torodi Ar. Bea**	**119.55**	**293**	PKP		**PKPdf**	**19 06 24.4**	**0.0**
TORD				PP		**PP**	**19 07 44.9**	**-1.8**
TORD	**Torodi Ar. Bea**	**119.55**	**293**	PKP		**PKPdf**	**19 06 24.4**	**0.0**
	comp=Z,1.0nm,0.8s,baz=87,slow=1.5,SNR=6.0							
TORD				PP		**PP**	**19 07 44.9**	**-1.8**
	comp=Z,1.1nm,0.8s,baz=79,slow=7.7,SNR=4.5							
PLCA	**Paso Flores**	**148.05**	**155**	PKPbc		**PKPbc**	**19 07 20.6**	**+1.0**
PLCA	**Paso Flores**	**148.05**	**155**	PKPbc		**PKPbc**	**19 07 20.6**	**+1.0**
	comp=Z,6.1nm,0.9s,baz=225,slow=5.1,SNR=9.3							

*CSEM **21** 18:58:23.8, 42°.26N×13°.45E, h8km, MD1.9/2, After ROM*
ROM 21 18:58:23.8±0.1, 42°.26N×13°.45E, h8km±1km, Md1.9/2, Ml1.6/1, Error ellipse: s-maj=1.0km s-min=0.9km az=35.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.10**	**85**	Pg	Pg	18 58 26.6	+0.3
FAGN				Sg	Sg	18 58 28.5	+0.4
FAGN	**Fagnano**	**0.10**	**85**	Pg	Pg	18 58 26.6	+0.3
FAGN				Sg	Sg	18 58 28.5	+0.4
AQU	**L'Aquila**	**0.10**	**340**	Pg	Pg	18 58 27.0	+0.6
AQU				Sg	Sg	18 58 28.8	+0.6
AQU	**L'Aquila**	**0.10**	**340**	Pg	Pg	18 58 27.0	+0.6
AQU				Sg	Sg	18 58 28.8	+0.6
PTQR	**Pietraquaria**	**0.24**	**189**	Pg	Pg	18 58 29.7	+1.0
PTQR				Sg	Sg	18 58 33.4	+1.3
PTQR	**Pietraquaria**	**0.24**	**189**	Pg	Pg	18 58 29.7	+1.0
PTQR				Sg	Sg	18 58 33.4	+1.3
FIAM	**Fiamignano**	**0.25**	**272**	Pg	Pg	18 58 29.6	+0.7
FIAM				Sg	Sg	18 58 33.7	+1.3
FIAM	**Fiamignano**	**0.25**	**272**	Pg	Pg	18 58 29.6	+0.7
FIAM				Sg	Sg	18 58 33.7	+1.3
VCEL	**Villa Celiera**	**0.32**	**65**	Pg	Pb	18 58 31.5	-0.4
VCEL	**Villa Celiera**	**0.32**	**65**	Pg	Pb	18 58 31.5	-0.4
NRCA	**Norcia**	**0.63**	**337**	Pg	Pg	18 58 35.9	-0.2
NRCA				Sg	Sb	18 58 45.4	-0.8
	38nm,0.9s						
NRCA	**Norcia**	**0.63**	**337**	Pg	Pg	18 58 35.9	-0.2
NRCA				Sg	Sb	18 58 45.4	-0.8
	38nm,0.9s						

*ISCJB **21** 19:01:50.4±0.4, 39°.10N±0°.03×29°.04E±0°.03, h4km±6km, Error ellipse: s-maj=5.5km s-min=3.7km az=149.2*
*CSEM **21** 19:01:50.5±0.1, 39°.11N×29°.05E, h5km, MD2.8, Error ellipse: s-maj=1.9km s-min=1.6km az=139.0*
*ISK **21** 19:01:50.1, 39°.10N×29°.06E, h8km, MD2.9*
*DDA **21** 19:01:50.4, 39°.08N×29°.04E, h7km, MD2.8*
ISC 21 19:01:50.6±0.9, 39°.10N±0°.02×29°.04E±0°.02, h11km±9km, n40, σ0°.24/54, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.26**	**258**	*i* P	**Pg**	**19 01 56.0**	**+0.1**
DEMI				*i* S	**Sg**	**19 01 59.6**	**+0.1**
DEMI	**Demirci**	**0.26**	**258**	*i* P	**Pg**	**19 01 56.0**	**+0.1**
DEMI				*i* S	**Sg**	**19 01 59.6**	**+0.1**
GDZ	**Gediz**	**0.34**	**91**	*i* P	**Pg**	**19 01 57.6**	**0.0**
GDZ				*i* S	**Sg**	**19 02 02.4**	**+0.2**
TVSB	**Tavsanli**	**0.48**	**43**	*e*PG	**Pg**	**19 01 59.9**	**-0.2**
TVSB				*e*SG	**Sg**	**19 02 06.2**	**-0.3**
TVSB	**Tavsanli**	**0.48**	**43**	*e*Pg	**Pg**	**19 01 59.9**	**-0.2**
TVSB				*e*Sg	**Sg**	**19 02 06.2**	**-0.3**
KULA	**Kula-Manisa**	**0.65**	**207**	*e*PG	**Pg**	**19 02 03.2**	**-0.1**
KULA				*e*SG	**Sg**	**19 02 11.8**	**-0.1**
KULA	**Kula-Manisa**	**0.65**	**207**	*e*Pg	**Pg**	**19 02 03.2**	**-0.1**
KULA				*e*Sg	**Sg**	**19 02 11.8**	**-0.1**
DURS	**Dursunbey**	**0.67**	**319**	*i* P	**Pg**	**19 02 03.3**	**-0.3**
DURS	**Dursunbey**	**0.67**	**319**	*i* P	**Pg**	**19 02 03.3**	**-0.3**
MANT	**Manisa**	**0.71**	**212**	*i* P	**Pg**	**19 02 04.4**	**-0.1**
MANT				*i* S	**Sg**	**19 02 13.8**	**-0.1**
MANT	**Manisa**	**0.71**	**212**	*i* P	**Pg**	**19 02 04.4**	**-0.1**
MANT				*i* S	**Sg**	**19 02 13.8**	**-0.1**
KHAL	**Karahalli**	**0.81**	**154**	*i* P	**Pn**	**19 02 08.3**	**+0.2**
KHAL				*i* S	**Sg**	**19 02 16.9**	**+0.1**
KHAL	**Karahalli**	**0.81**	**154**	*i* P	**Pn**	**19 02 08.3**	**+0.2**
KHAL				*i* S	**Sg**	**19 02 16.9**	**+0.1**
ALT	**Altintas**	**0.83**	**93**	*e*PG	**Pg**	**19 02 06.3**	**-0.5**
ALT	**Altintas**	**0.83**	**93**	*e*Pg	**Pg**	**19 02 06.3**	**-0.5**
KHL	**Karahalli**	**0.86**	**154**	*e*PG	**Pb**	**19 02 07.5**	**-0.2**
KHL	**Karahalli**	**0.86**	**154**	*e*Pg	**Pb**	**19 02 07.5**	**-0.2**
AKHS	**Akhisar**	**0.98**	**257**	*i* P	**Pn**	**19 02 10.1**	**-0.3**
AKHS				*i* S	**Sb**	**19 02 23.1**	**+0.5**
AKHS	**Akhisar**	**0.98**	**257**	*i* P	**Pn**	**19 02 10.1**	**-0.3**
AKHS				*i* S	**Sb**	**19 02 23.1**	**+0.5**
AKS	**Akhisar**	**0.98**	**257**	*e*PG	**Pn**	**19 02 10.1**	**-0.3**
AKS	**Akhisar**	**0.98**	**257**	*e*Pg	**Pn**	**19 02 10.1**	**-0.3**
BALB	**Balikesir**	**1.05**	**301**	*e*PG	**Pb**	**19 02 10.9**	**+0.1**
BALB	**Balikesir**	**1.05**	**301**	*e*Pg	**Pb**	**19 02 10.9**	**+0.1**
CAVI	**Cavuskoy**	**1.27**	**29**	*e*PN	**Pg**	**19 02 14.9**	**-0.1**
CAVI	**Cavuskoy**	**1.27**	**29**	*e*Pn	**Pg**	**19 02 14.9**	**-0.1**
KCTX	**Karacabey (Bur**	**1.28**	**336**	*e*PN	**Pg**	**19 02 15.1**	**-0.1**
KCTX	**Karacabey (Bur**	**1.28**	**336**	*e*Pn	**Pg**	**19 02 15.1**	**-0.1**
GEMT	**Gemlik**	**1.34**	**5**	*e*PN	**Pb**	**19 02 15.8**	**0.0**
GEMT	**Gemlik**	**1.34**	**5**	*e*Pn	**Pb**	**19 02 15.8**	**0.0**
GONE	**Gonen-Balikesi**	**1.41**	**313**	*e*PN	**Pn**	**19 02 16.1**	**-0.2**
GONE	**Gonen-Balikesi**	**1.41**	**313**	*e*Pn	**Pn**	**19 02 16.1**	**-0.2**
ARMT	**Armutlu**	**1.47**	**355**	*e*PN	**Pn**	**19 02 17.1**	**-0.1**
ARMT	**Armutlu**	**1.47**	**355**	*e*Pn	**Pn**	**19 02 17.1**	**-0.1**
YLV	**Yalova**	**1.49**	**10**	*e*PN	**Pb**	**19 02 18.3**	**-0.1**
YLV	**Yalova**	**1.49**	**10**	*e*Pn	**Pb**	**19 02 18.3**	**-0.1**
GPA	**Golpazari**	**1.54**	**39**	*e*PN	**Pn**	**19 02 18.1**	**-0.1**
GPA	**Golpazari**	**1.54**	**39**	*e*Pn	**Pn**	**19 02 18.1**	**-0.1**
GULT	**Gulveren**	**1.75**	**40**	*e*PN	**Pn**	**19 02 21.7**	**+0.6**
GULT	**Gulveren**	**1.75**	**40**	*e*Pn	**Pn**	**19 02 21.7**	**+0.6**

*IDC **21** 19:04:51.7±4.5, 37°.35N×72°.27E, h171km±34km, mb3.4/6, mb1 3.5/11, mb1mx3.2/31, mbtmp3.5/11, Error ellipse: s-maj=42.8km s-min=30.3km az=147.0*
*ISCJB **21** 19:04:52.8±0.5, 37°.61N±0°.04×71°.83E±0°.08, h130km, mb3.6/6, Error ellipse: s-maj=9.3km s-min=5.2km az=179.0*
*NNC **21** 19:05:05.4±4.6, 38°.43N×72°.60E, h214km±33km, mb2.6, mpv3.4, Error ellipse: s-maj=43.8km s-min=20.8km az=11.0*
ISC 21 19:04:52.9±0.8, 37°.63N±0°.05×71°.9E±0°.1, h130km, n34, σ1°99/36, mb3.8/6, 8C-8D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.79**	**179**	⇓P	**Pn**	**19 05 52.5**	**+2.4**
CEP				S	**Sn**	**19 06 35.0**	**+0.6**

STKA					LR	LR	19 46 43.4		
	comp=Z,135nm,18.1s,baz=22,slow=33								
MAW	**Mawson**		**38.02 218**		LR	LR	19 52 08.5		
	comp=Z,220nm,19.0s,baz=122,slow=36								
ASAR	**Alice Springs**		**41.10 324**		P	P	19 37 25.4	-0.6	
	0.8nm,0.9s,baz=172,slow=8.4,SNR=5.7								
WRA	**Warramunga Arr**		**44.52 326**		P	P	19 37 53.8	-0.1	
	42nm,0.4s,baz=160,slow=7.2,SNR=1.7								
FITZ	**Fitzroy Crossi**		**48.89 316**		P	P	19 38 28.1	+0.1	
	2.8nm,0.9s,baz=170,slow=11,SNR=4.0								
PPT	**Papeete**		**56.64 64**		LR	LR	19 59 10.5		
	comp=Z,68nm,18.7s,baz=17,slow=31								

*CSEM **21** 19:37:02.2±0.2,43.56N×7.61E,h15km,ML2.8/19,Error ellipse: s-maj=4.1km s-min=3.3km az=142.0*
*LDG **21** 19:37:02.7±0.1,43.56N×7.67E,h12km,Md2.7/3,Ml2.7/19,Error ellipse: s-maj=1.8km s-min=1.5km az=47.0*
*GEN **21** 19:37:03.2,43.56N×7.60E,h9km,ML2.5*
*ROM **21** 19:37:03.8±0.6,43.61N×7.62E,h10km,Ml2.6/2,Error ellipse: s-maj=6.0km s-min=3.5km az=14.0*
*STR **21** 19:37:05.4±0.5,43.66N×7.61E,h5km,Ml2.8,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 21 19:37:02.5±1.1,43.53N±0.03×7.66E±0.03,h21km±2km, n78,σ1°43/138,Near south coast of France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
REVF	**Revere**	**0.29**	**315**	Pg	**Pb**	**19 37 10.0**	**+0.8**
REVF				Sg	**Sb**	**19 37 13.1**	**-0.8**
REVF	**Revere**	**0.29**	**315**	Pg	**Pb**	**19 37 10.0**	**+0.8**
REVF				Sg	**Sb**	**19 37 13.1**	**-0.8**
SBF	**Sospel**	**0.37**	**334**	*e*Pg	**Pb**	**19 37 10.1**	**-0.2**
SBF				*e*Sg	**Sb**	**19 37 14.5**	**-1.1**
	2μm,0.4s						
SBF	**Sospel**	**0.37**	**334**	*e*Pg	**Pb**	**19 37 10.1**	**-0.2**
SBF				*e*Sg	**Sb**	**19 37 14.5**	**-1.1**
	1μm,0.4s						
SAOF	**Saorge**	**0.46**	**351**	Pg	**Pb**	**19 37 12.1**	**+0.2**
SAOF				Sg	**Sb**	**19 37 16.9**	**-1.4**
SAOF	**Saorge**	**0.46**	**351**	Pg	**Pb**	**19 37 12.1**	**+0.2**
SAOF				Sg	**Sb**	**19 37 16.9**	**-1.4**
AUTN	**L'Aution**	**0.49**	**341**	Pg	**Pb**	**19 37 13.3**	**+0.7**
AUTN				Sg	**Sb**	**19 37 18.6**	**-0.9**
AUTN	**L'Aution**	**0.49**	**341**	Pg	**Pb**	**19 37 13.3**	**+0.7**
AUTN				Sg	**Sb**	**19 37 18.6**	**-0.9**
MVIF	**Mont Vial**	**0.52**	**315**	Pg	**Pb**	**19 37 13.3**	**+0.3**
MVIF				Sg	**Sb**	**19 37 19.6**	**-0.5**
MVIF	**Mont Vial**	**0.52**	**315**	Pg	**Pb**	**19 37 13.3**	**+0.3**
MVIF				Sg	**Sb**	**19 37 19.6**	**-0.5**
TOUF	**Mont Tournerai**	**0.56**	**329**	Pg	**Pb**	**19 37 13.8**	**-0.1**
TOUF				Sg	**Sb**	**19 37 19.6**	**-2.1**
TOUF	**Mont Tournerai**	**0.56**	**329**	Pg	**Pb**	**19 37 13.8**	**-0.1**
TOUF				Sg	**Sb**	**19 37 19.6**	**-2.1**
CALN	**Calern**	**0.60**	**292**	Pg	**Pn**	**19 37 15.2**	**-0.7**
CALN				Sg	**Sb**	**19 37 22.4**	**-0.2**
CALN	**Calern**	**0.60**	**292**	Pg	**Pn**	**19 37 15.2**	**-0.7**
CALN				Sg	**Sb**	**19 37 22.4**	**-0.2**
RORO	**Rocca Rossa**	**0.65**	**27**	P	**Pb**	**19 37 15.6**	**+0.3**
RORO				S	**Sb**	**19 37 23.0**	**-0.2**
ENR	**Entracque**	**0.72**	**346**	P	**Pb**	**19 37 16.0**	**-0.4**
ENR				S	**Sb**	**19 37 24.7**	**-1.1**
FRF	**La Foret Royal**	**0.73**	**273**	*e*Pg	**Pn**	**19 37 17.0**	**-0.6**
FRF				*e*Sg	**Sb**	**19 37 26.5**	**+0.3**
	145nm,0.2s						
FRF	**La Foret Royal**	**0.73**	**273**	*e*Pg	**Pn**	**19 37 17.0**	**-0.6**
FRF				*e*Sg	**Sb**	**19 37 26.5**	**+0.3**
	72nm,0.2s						
STV	**Sant Anna di V**	**0.75**	**342**	Pg	**Pb**	**19 37 17.1**	**+0.1**
STV				Sg	**Sb**	**19 37 26.2**	**-0.6**
STV	**Sant Anna di V**	**0.75**	**342**	P	**Pb**	**19 37 16.8**	**-0.2**
STV	**Sant Anna di V**	**0.75**	**342**	Pg	**Pb**	**19 37 17.1**	**+0.1**
STV				S	**Sb**	**19 37 25.7**	**-1.1**
STV				Sg	**Sb**	**19 37 26.2**	**-0.6**
LMR	**La Mourre**	**0.86**	**257**	*e*Pg	**Pb**	**19 37 18.9**	**+0.2**
LMR				*e*Sg	**Sb**	**19 37 29.8**	**+0.1**
	46nm,0.2s						
LMR	**La Mourre**	**0.86**	**257**	*e*Pg	**Pb**	**19 37 18.9**	**+0.2**
LMR				*e*Sg	**Sb**	**19 37 29.8**	**+0.1**
	23nm,0.2s						
QLNO	**Quiliano**	**0.94**	**32**	Pg	**Pn**	**19 37 20.7**	**+0.2**
QLNO				Sg	**Sn**	**19 37 32.8**	**-0.4**
	87nm,0.6s						
QLNO	**Quiliano**	**0.94**	**32**	Pg	**Pn**	**19 37 20.7**	**+0.2**
QLNO				Sg	**Sn**	**19 37 32.8**	**-0.4**
	87nm,0.6s						
DOI	**San Damiano**	**1.02**	**343**	Pg	**Pn**	**19 37 21.8**	**+0.2**
DOI				Sg	**Sn**	**19 37 34.5**	**-0.8**
	274nm,0.2s						
DOI	**San Damiano**	**1.02**	**343**	Pg	**Pn**	**19 37 21.8**	**+0.2**
DOI				Sg	**Sn**	**19 37 34.5**	**-0.8**
	274nm,0.2s						
PZZ	**Stroppo**	**1.05**	**338**	P	**Pn**	**19 37 22.0**	**-0.1**
PZZ				S	**Sb**	**19 37 34.3**	**-1.1**
PCP	**Piancastagn**	**1.20**	**32**	P	**Pb**	**19 37 24.4**	**-0.1**
PCP				S	**Sn**	**19 37 39.7**	**0.0**
MBDF	**Montbardon**	**1.35**	**332**	*e*Pg	**Pb**	**19 37 27.8**	**+0.5**
MBDF				*e*Sg	**Sb**	**19 37 44.6**	**+0.4**
	50nm,0.2s						
MBDF	**Montbardon**	**1.35**	**332**	*e*Pg	**Pb**	**19 37 27.8**	**+0.5**
MBDF				*e*Sg	**Sb**	**19 37 44.6**	**+0.4**
	25nm,0.2s						
OG22	**Abries**	**1.39**	**339**	Pn	**Pb**	**19 37 27.7**	**-0.2**
OG22	**Abries**	**1.39**	**339**	Pg	**Pb**	**19 37 28.5**	**+0.6**
OG22				Sg	**Sb**	**19 37 46.3**	**+1.1**
OG22	**Abries**	**1.39**	**339**	Pn	**Pb**	**19 37 27.7**	**-0.2**
OG22	**Abries**	**1.39**	**339**	Pg	**Pb**	**19 37 28.5**	**+0.6**
OG22				Sg	**Sb**	**19 37 46.3**	**+1.1**
PGF	**Pioggiola**	**1.39**	**134**	*e*Pn	**Pn**	**19 37 26.7**	**-0.1**
PGF				*e*Sn	**Sn**	**19 37 43.6**	**-0.9**
	12nm,0.2s						
PGF	**Pioggiola**	**1.39**	**134**	*e*Pn	**Pn**	**19 37 26.7**	**-0.1**
PGF				*e*Sn	**Sn**	**19 37 43.6**	**-0.9**
	5.8nm,0.2s						
MONC	**Moncucco Torin**	**1.56**	**7**	Pg	**Pb**	**19 37 30.7**	**+0.1**
MONC	**Moncucco Torin**	**1.56**	**7**	Pg	**Pb**	**19 37 30.7**	**+0.1**
SMRF	**Simiane la Rot**	**1.57**	**287**	*e*Pn	**Pn**	**19 37 29.4**	**+0.2**
SMRF	**Simiane la Rot**	**1.57**	**287**	*e*Pg	**Pb**	**19 37 31.7**	**+0.8**
SMRF				*e*Sg	**Sb**	**19 37 52.7**	**+2.4**
	52nm,0.3s						
SMRF	**Simiane la Rot**	**1.57**	**287**	*e*Pn	**Pn**	**19 37 29.4**	**+0.2**
SMRF	**Simiane la Rot**	**1.57**	**287**	*e*Pg	**Pb**	**19 37 31.7**	**+0.8**
SMRF				*e*Sg	**Sb**	**19 37 52.7**	**+2.4**
	26nm,0.3s						
RSP	**Reno Superiore**	**1.64**	**350**	P	**Pn**	**19 37 30.1**	**-0.1**
RSP				S	**Sn**	**19 37 49.0**	**-1.7**
ORIF	**Oris-en-Rattie**	**1.88**	**318**	*e*Pg	**Pb**	**19 37 37.2**	**+0.9**
ORIF				*e*Sg	**Sb**	**19 38 01.6**	**+2.2**
	36nm,0.4s						
ORIF	**Oris-en-Rattie**	**1.88**	**318**	*e*Pg	**Pb**	**19 37 37.2**	**+0.9**
ORIF				*e*Sg	**Sb**	**19 38 01.6**	**+2.2**
	18nm,0.4s						
LSD	**Lago del Serru**	**1.96**	**349**	Pg	**Pn**	**19 37 35.6**	**+0.8**
LSD	**Lago del Serru**	**1.96**	**349**	Pg	**Pn**	**19 37 35.6**	**+0.8**
LSD	**Lago del Serru**	**1.96**	**349**	P	**Pn**	**19 37 35.8**	**+1.0**
LSD				S	**Sn**	**19 37 58.8**	**-0.1**
TRAV	**Traversella**	**1.98**	**2**	P	**Pn**	**19 37 34.7**	**+0.2**
TRAV				S	**Sn**	**19 37 56.6**	**-2.5**
LPG	**La Plagne**	**2.07**	**342**	*e*P	**Pb**	**19 37 38.6**	**-0.9**
LPG	**La Plagne**	**2.07**	**342**	*e*Pg	**Pb**	**19 37 40.8**	**+1.3**
LPG				*e*Sn	**Sn**	**19 37 59.5**	**-2.0**
LPG				*e*Sg	**Sb**	**19 38 07.1**	**+2.2**
	15nm,0.5s						
LPG	**La Plagne**	**2.07**	**342**	*e*P	**Pb**	**19 37 38.6**	**-0.9**
LPG	**La Plagne**	**2.07**	**342**	*e*Pg	**Pb**	**19 37 40.8**	**+1.3**
LPG				*e*Sn	**Sn**	**19 37 59.5**	**-2.0**
LPG				*e*Sg	**Sb**	**19 38 07.1**	**+2.2**
	7.4nm,0.5s						
LPL	**La Plagne**	**2.09**	**342**	*e*P	**Pb**	**19 37 38.1**	**-1.8**
LPL	**La Plagne**	**2.09**	**342**	*e*Pg	**Pb**	**19 37 41.4**	**+1.5**
LPL				*e*Sn	**Sn**	**19 38 00.1**	**-1.9**
LPL				*e*Sg	**Sb**	**19 38 07.7**	**+2.2**
	17nm,0.4s						
LPL	**La Plagne**	**2.09**	**342**	*e*P	**Pb**	**19 37 38.1**	**-1.8**
LPL	**La Plagne**	**2.09**	**342**	*e*Pg	**Pb**	**19 37 41.4**	**+1.5**
LPL				*e*Sn	**Sn**	**19 38 00.1**	**-1.9**
LPL				*e*Sg	**Sb**	**19 38 07.7**	**+2.2**
	8.4nm,0.4s						
RSL	**Roselend**	**2.28**	**342**	Pg	**Pb**	**19 37 45.5**	**+2.5**
RSL				Sg	**Sb**	**19 38 14.6**	**+3.8**
RSL	**Roselend**	**2.28**	**342**	Pg	**Pb**	**19 37 45.5**	**+2.5**
RSL				Sg	**Sb**	**19 38 14.6**	**+3.8**
VIVF	**Saint-Julien-l**	**2.52**	**303**	*e*Pn	**Pn**	**19 37 41.1**	**-1.1**
VIVF				*e*Sn	**Sn**	**19 38 10.6**	**-1.7**
VIVF				*e*Sg	**Sb**	**19 38 21.9**	**+4.3**
	12nm,0.3s						
VIVF	**Saint-Julien-l**	**2.52**	**303**	*e*Pn	**Pn**	**19 37 41.1**	**-1.1**
VIVF				*e*Sn	**Sn**	**19 38 10.6**	**-1.7**
VIVF				*e*Sg	**Sb**	**19 38 21.9**	**+4.3**
	5.8nm,0.3s						
LASF	**Ste Croix**	**2.80**	**283**	*e*Pn	**Pn**	**19 37 45.7**	**-0.4**
LASF				*e*Sn	**Sn**	**19 38 17.8**	**-1.4**
	4.7nm,0.3s						
LASF	**Ste Croix**	**2.80**	**283**	*e*Pn	**Pn**	**19 37 45.7**	**-0.4**
LASF				*e*Sn	**Sn**	**19 38 17.8**	**-1.4**
	2.3nm,0.3s						
CABF	**La Chapelle**	**3.27**	**341**	*e*Pn	**Pn**	**19 37 51.7**	**-0.9**
CABF				*e*Sg	**Sb**	**19 38 44.5**	**+5.2**
	3.4nm,0.4s						
CABF	**La Chapelle**	**3.27**	**341**	*e*Pn	**Pn**	**19 37 51.7**	**-0.9**
CABF				*e*Sg	**Sb**	**19 38 44.5**	**+5.2**
	1.9nm,0.5s						
MTLF	**Montolieu**	**3.96**	**269**	*e*Pn	**Pn**	**19 38 01.7**	**-0.3**
MTLF				*e*Sg	Sb	19 39 07.4	+8.3
	1.1nm,0.2s						
MTLF	**Montolieu**	**3.96**	**269**	*e*Pn	**Pn**	**19 38 01.7**	**-0.3**
MTLF				*e*Sg	Sb	19 39 07.4	+8.3
	1.8nm,0.4s						
SMF	**Signal de Mont**	**4.12**	**320**	*e*Pn	**Pn**	**19 38 03.3**	**-0.9**
SMF				*e*Sg	Sb	19 39 11.3	+7.7
	2.3nm,0.3s						
SMF	**Signal de Mont**	**4.12**	**320**	*e*Pn	**Pn**	**19 38 03.3**	**-0.9**
SMF				*e*Sg	Sb	19 39 11.3	+7.7
	1.1nm,0.3s						
CAF	**Calviac**	**4.25**	**291**	*e*Pn	**Pn**	**19 38 05.5**	**-0.5**
CAF				*e*Sg	Sb	19 39 15.9	+8.4
	1.8nm,0.3s						
CAF	**Calviac**	**4.25**	**291**	*e*Pn	**Pn**	**19 38 05.5**	**-0.5**
CAF				*e*Sg	Sb	19 39 15.9	+8.4
	1.2nm,0.4s						
AVF	**Avril sur Loir**	**4.46**	**318**	*e*Pn	**Pn**	**19 38 08.1**	**-0.7**
AVF				*e*Sg	Sb	19 39 21.8	+8.5
	1.8nm,0.4s						
AVF	**Avril sur Loir**	**4.46**	**318**	*e*Pn	**Pn**	**19 38 08.1**	**-0.7**
AVF				*e*Sg	Sb	19 39 21.8	+8.5
	0.9nm,0.4s						
BGF	**Bois d'Agland**	**4.56**	**313**	*e*Pn	**Pn**	**19 38 09.3**	**-0.9**
BGF				*e*Sg	Sb	19 39 25.1	+8.9
	3.5nm,0.3s						
BGF	**Bois d'Agland**	**4.56**	**313**	*e*Pn	**Pn**	**19 38 09.3**	**-0.9**
BGF				*e*Sg	Sb	19 39 25.1	+8.9
	2.8nm,0.4s						
LFF	**La Frestale**	**5.16**	**288**	*e*Pn	**Pn**	**19 38 17.9**	**-0.6**
LFF				*e*Sg	Sb	19 39 44.5	+11
	1.7nm,0.2s						
LFF	**La Frestale**	**5.16**	**288**	*e*Pn	**Pn**	**19 38 17.9**	**-0.6**
LFF				*e*Sg	Sb	19 39 44.5	+11
	3.8nm,0.5s						

IDC 21 19:37:24.8±2.6,3.86S×130.09E,h0km,mb2.9/1, mb1 3.3/1,mb1mx3.1/18,mbtmp3.1/1,ML5.2/1,Error ellipse: s-maj=175.0km s-min=30.4km az=70.0,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.52**	**166**	Pn	Pn	19 41 18.1	0.0
	9.0nm,0.3s,baz=349,slow=13,SNR=2.0						
ASAR	**Alice Springs**	**20.03**	**170**	P	P	19 41 59.5	0.0
	0.2nm,0.3s,baz=352,slow=11,SNR=6.9						
MKAR	**Makanchi Array**	**65.67**	**326**	P	P	19 48 11.2	0.0
	0.1nm,0.4s,baz=108,slow=7.8,SNR=4.2						

MEX 21 19:40:11.3±1.0,17.32N×94.86W,h45km±10km,MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.23**	**187**	*e*P	Pn	19 40 18.0	-1.4
CMIG				*i* S	Sn	19 40 23.4	-1.7
VHO	**Vista Hermosa**	**1.81**	**262**	*e*P	Pn	19 40 39.3	-1.0
VHO				*i* S	Sn	19 40 59.5	-2.8
VHO				*e*S	Sn	19 41 00.0	-2.3
HUIG	**Huatulco**	**1.96**	**218**	*e*P	Pn	19 40 40.1	-1.9
HUIG				*i* S	Sn	19 41 04.1	-1.3
TPIG	**Tehuac#an**	**2.62**	**295**	*e*P	Pn	19 40 49.5	-1.9
TPIG				*e*S	Sn	19 41 20.8	-1.5
UTMO	**Huajuapan**	**2.86**	**281**	*e*P	Pn	19 40 54.2	-0.5
UTMO				*e*S	Sn	19 41 26.7	-1.3
PNIG	**Pinotepa**	**3.27**	**254**	*e*P	Pn	19 40 57.3	-2.7
PNIG				*i* S	Sn	19 41 35.7	-2.1

*BJI **21** 19:41:08.0,13.65N×55.59E,h10km,mB5.1/13,mb4.6/22,Ms5.0/11,Ms7 4.8/12*
*ISCJB **21** 19:41:15.7±0.4,14.37N±0.05×56.26E±0.04,h10km,mb4.5/81,MS4.7/3,Error ellipse: s-maj=7.8km s-min=5.6km az=178.2*
*NEIC **21** 19:41:16.8±0.4,14.26N×56.27E,h10km,mb4.9/41,Error ellipse: s-maj=9.3km s-min=7.5km az=155.0*
*IDC **21** 19:41:16.2±0.6,14.40N×56.35E,h0km,mb4.1/29,mb1 4.2/29,mb1mx4.1/40,mbtmp4.1/29,Error ellipse: s-maj=14.6km s-min=13.4km az=117.0*
*TEH **21** 19:41:17.0,14.21N×56.25E,h10km,ML4.7*
*CSEM **21** 19:41:20.7±0.2,14.36N×56.32E,h33km,mb4.7/41,Ms4.0,Error ellipse: s-maj=9.6km s-min=7.6km az=149.0*

ISC 21 19:41:17.8±0.5,14.45N±0.07×56.32E±0.06,h10km, h10km:pP-P,n335,σ1°30/341,mb4.6/80,MS4.7/3,17C-8D, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QRN	**Al-Qurain**	**16.22**	**333**	*e*P	**Pn**	**19 45 03.3**	**-2.5**
QRN				AMb	AMB	19 45 21.7	
	comp=Z,148nm,1.3s						
RDF	**Al-Radifah**	**16.54**	**332**	*e*P	**Pn**	**19 45 07.5**	**-2.5**
IMEH	**Mehriz**	**16.93**	**355**	P	**Pn**	**19 45 12.4**	**-2.7**
IMEH	**Mehriz**	**16.93**	**355**	*e*P	**Pn**	**19 45 12.5**	**-2.7**
NAY	**Al-Naaiem**	**16.96**	**332**	*e*P	**Pn**	**19 45 12.1**	**-3.2**
NAY				AMb	AMB	19 45 27.4	
	comp=Z,23nm,1.2s						
IBAF	**Bafgh**	**17.08**	**358**	P	**Pn**	**19 45 14.1**	**-2.8**
IBAF	**Bafgh**	**17.08**	**358**	*e*P	**Pn**	**19 45 14.2**	**-2.7**
MIB	**Mutribah**	**17.39**	**333**	*e*P	**Pn**	**19 45 17.6**	**-2.9**
MIB				AMb	AMB	19 45 34.6	
	comp=Z,64nm,1.1s						
IVRN	**Varamin**	**20.87**	**349**	P	**P**	**19 45 59.8**	**-0.4**
IVRN	**Varamin**	**20.87**	**349**	*e*P	**P**	**19 45 59.7**	**-0.4**
IVRN	**Varamin**	**20.87**	**349**	P	**P**	**19 45 59.8**	**-0.4**
IANJ	**Anjilo**	**21.04**	**355**	P	**P**	**19 46 01.8**	**-0.4**
IANJ	**Anjilo**	**21.04**	**355**	*e*P	**P**	**19 46 01.8**	**-0.4**
IKOM	**Komasi**	**21.20**	**339**	*e*P	**P**	**19 46 03.6**	**-0.2**
IKOM	**Komasi**	**21.20**	**339**	*e*P	**P**	**19 46 03.6**	**-0.2**
IDMV	**Damavand**	**21.39**	**350**	P	**P**	**19 46 06.4**	**+0.4**
IDMV	**Damavand**	**21.39**	**350**	*e*P	**P**	**19 46 06.4**	**+0.4**
IDMV	**Damavand**	**21.39**	**350**	*e*P	**P**	**19 46 06.4**	**+0.4**
ISHM	**Shahmirzad**	**21.44**	**353**	*e*P	**P**	**19 46 07.1**	**+0.6**
ISHM	**Shahmirzad**	**21.44**	**353**	*e*P	**P**	**19 46 07.1**	**+0.6**
IR3	**Iran Long-Peri**	**21.47**	**348**	*e*P	**P**	**19 46 08.2**	**+1.6**
IR3	**Iran Long-Peri**	**21.47**	**348**	*e*P	**P**	**19 46 08.2**	**+1.6**
HYB	**Hyderabad**	**21.58**	**79**	*i* P	P	19 46 19.0	+11
IRAZ	**Razeghan**	**21.64**	**346**	*e*P	**P**	**19 46 09.1**	**+0.5**
IRAZ	**Razeghan**	**21.64**	**346**	*e*P	**P**	**19 46 09.1**	**+0.5**
BHD	**Baghdad**	**21.65**	**332**	*ex*	**P**	**19 46 08.9**	**+0.4**
BHD				*ex*	x	19 50 08.0	
BHD	**Baghdad**	**21.65**	**332**	*e*P	**P**	**19 46 08.9**	**+0.4**
BHD				*e*S	**S**	**19 50 08.0**	**-0.3**
IGHG	**Ghaleghazi**	**21.67**	**338**	*e*P	**P**	**19 46 11.8**	**+2.9**
IGHG	**Ghaleghazi**	**21.67**	**338**	*e*P	**P**	**19 46 11.8**	**+2.9**
IMOG	**Moghan**	**21.74**	**7**	*e*P	**P**	**19 46 09.3**	**-0.4**
IMOG	**Moghan**	**21.74**	**7**	*e*P	**P**	**19 46 09.3**	**-0.4**
ISRO	**Mashad**	**21.95**	**7**	*e*P	**P**	**19 46 12.2**	**+0.4**
ISRO	**Mashad**	**21.95**	**7**	*e*P	**P**	**19 46 12.2**	**+0.4**
IPAY	**Payeh**	**22.04**	**6**	*e*P	**P**	**19 46 12.8**	**-0.1**
IPAY	**Payeh**	**22.04**	**6**	*e*P	**P**	**19 46 12.8**	**-0.1**
IMYA	**Miami**	**22.06**	**8**	*e*P	**P**	**19 46 12.9**	**-0.2**
IMYA	**Miami**	**22.06**	**8**	*e*P	**P**	**19 46 12.9**	**-0.2**
IDHR	**Dehrash**	**22.07**	**338**	P	**P**	**19 46 12.1**	**-1.1**
IDHR	**Dehrash**	**22.07**	**338**	*e*P	**P**	**19 46 12.5**	**-0.7**
IDHR	**Dehrash**	**22.07**	**338**	*e*P	**P**	**19 46 12.5**	**-0.7**
IKRD	**Kardeh**	**22.32**	**5**	*e*P	**P**	**19 46 17.0**	**+1.1**
IKRD	**Kardeh**	**22.32**	**5**	*e*P	**P**	**19 46 17.0**	**+1.1**
IGZV	**Ghazvin**	**22.52**	**347**	P	**P**	**19 46 21.7**	**+3.7**
IGZV	**Ghazvin**	**22.52**	**347**	*e*P	**P**	**19 46 21.7**	**+3.7**
ISFR	**Sfrayin**	**22.56**	**3**	*e*P	**P**	**19 46 19.0**	**+0.5**
ISFR	**Sfrayin**	**22.56**	**3**	*e*P	**P**	**19 46 19.0**	**+0.5**
KBL	**Kabul**	**23.07**	**28**	*e*P	**P**	**19 46 26.3**	**+2.5**
	comp=Z,27nm,1.4s						
KBL	**Kabul**	**23.07**	**28**	*e*P	**P**	**19 46 26.3**	**+2.5**
	comp=Z,27nm,1.4s						
KMBO	**Kilima Mbogo**	**24.41**	**232**	*e*P	**P**	**19 46 34.1**	**-2.9**
	comp=Z,11nm,1.3s						
KMBO	**Kilima Mbogo**	**24.41**	**232**	P	**P**	**19 46 38.2**	**+1.1**
	comp=Z,1.4nm,0.8s,baz=54,slow=15,SNR=4.3						
KMBO	**Kilima Mbogo**	**24.41**	**232**	*e*P	**P**	**19 46 34.2**	**-2.9**
	comp=Z,11nm,1.3s						
EIL	**Elat**	**24.87**	**311**	P	**P**	**19 46 42.4**	**+1.7**
EIL	**Elat**	**24.87**	**311**	P	**P**	**19 46 42.4**	**+1.7**
	comp=Z,6.3nm,0.8s,baz=81,slow=3.2,SNR=11						
EIL	**Elat**	**24.87**	**311**	P	**P**	**19 46 42.4**	**+1.7**
ASF	**Jabal al Asfar**	**25.02**	**318**	P	**P**	**19 46 44.3**	**+2.2**
ASF	**Jabal al Asfar**	**25.02**	**318**	P	**P**	**19 46 44.3**	**+2.2**
	comp=Z,5.7nm,1.0s,baz=2.4,slow=3.0,SNR=13						
MMAI	**Mount Meron Ar**	**26.52**	**318**	P	**P**	**19 46 57.9**	**+2.1**
MMAI	**Mount Meron Ar**	**26.52**	**318**	P	**P**	**19 46 57.9**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=299,slow=46,SNR=3.5						
MMAI	**Mount Meron Ar**	**26.52**	**318**	P	**P**	**19 46 57.9**	**+2.1**
GNI	**Garni**	**27.54**	**341**	P	**P**	**19 47 07.0**	**+2.0**
GNI	**Garni**	**27.54**	**341**	P	**P**	**19 47 07.0**	**+2.0**
	comp=Z,11nm,0.9s,baz=85,slow=0.9,SNR=6.6						
GNI	**Garni**	**27.54**	**341**	P	**P**	**19 47 07.0**	**+2.0**
MALT	**Malatya**	**28.56**	**330**	*e*P	**P**	**19 47 15.4**	**+1.4**
	comp=Z,25nm,1.4s						
MALT	**Malatya**	**28.56**	**330**	*e*P	**P**	**19 47 15.4**	**+1.4**
	comp=Z,25nm,1.4s						
KSH	**Kashi**	**30.36**	**31**	*e*P	P	19 47 27.0	-3.0
KSH				pP	pP	19 47 32.4	-0.7
KSH				sP	sP	19 47 35.4	+1.1
KSH				PP	**PnPn**	**19 48 25.4**	**-2.8**
KSH				PcP	**PcP**	**19 50 28.9**	**-1.1**
KSH				S	S	19 52 23.9	-6.6
KSH				ScS	**ScS**	**19 58 02.6**	**-6.1**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSH				LR	LR		
	comp=N,220nm,3.6s						
KSH				LR	LR		
	comp=E,160nm,3.8s						
KSH				LR	LR		
	comp=Z,290nm,3.9s						
KKAR	**Karatay Array**	**31.05**	**20**	*e*P	**P**	**19 47 37.2**	**+1.3**
	comp=Z,1.6nm,1.0s						
KKAR	**Karatay Array**	**31.05**	**20**	*e*P	**P**	**19 47 37.2**	**+1.3**
	comp=Z,1.6nm,1.0s						
KBZ	**Khabaz**	**31.36**	**341**	P	**P**	**19 47 40.6**	**+2.1**
KBZ	**Khabaz**	**31.36**	**341**	P	**P**	**19 47 40.6**	**+2.1**
	comp=Z,4.5nm,1.0s,baz=213,slow=10,SNR=7.3						
KBZ	**Khabaz**	**31.36**	**341**	P	**P**	**19 47 40.7**	**+2.1**
EKS2	**Erkin-Say**	**31.88**	**25**	*e*P	P	19 47 46.9	+3.4
	comp=Z,10nm,1.3s						
BRTR	**Keskin Array B**	**32.09**	**326**	P	**P**	**19 47 47.2**	**+1.9**
BRTR	**Keskin Array B**	**32.09**	**326**	P	**P**	**19 47 47.2**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=134,slow=5.3,SNR=4.4						
BRTR	**Keskin Array B**	**32.09**	**326**	P	**P**	**19 47 47.2**	**+1.9**
AAK	**Ala-Archa**	**32.16**	**26**	*e*P	**P**	**19 47 48.5**	**+2.6**
	comp=Z,27nm,1.4s						
AAK	**Ala-Archa**	**32.16**	**26**	*e*P	**P**	**19 47 48.5**	**+2.6**
	comp=Z,27nm,1.4s						
TKM2	**Tokmak 2**	**32.86**	**27**	*e*P	**P**	**19 47 52.9**	**+0.8**
	comp=Z,7.5nm,1.3s						
TKM2	**Tokmak 2**	**32.86**	**27**	*e*P	**P**	**19 47 52.9**	**+0.8**
	comp=Z,7.5nm,1.3s						
ABKAR	**Akbulak array**	**34.84**	**4**	*e*P	**P**	**19 48 08.9**	**0.0**
	comp=

KMI					LR	LR			
	comp=N,420nm,26.4s								
KMI					LR	LR			
	comp=E,450nm,29.7s								
KMI					LR	LR			
	comp=Z,690nm,33.0s								
ZAA0	**Zalesovo Array**	**45.31**	**23**	*e*P	**P**		**19 49 36.0 +0.3**		
ZAA0	**Zalesovo Array**	**45.31**	**23**	*e*P	**P**		**19 49 36.0 +0.3**		
ZALV	**Zalesovo Beam**	**45.31**	**23**	P	**P**		**19 49 36.2 +0.5**		
ZALV	**Zalesovo Beam**	**45.31**	**23**	P	**P**		**19 49 36.2 +0.5**		
	comp=Z,2.4nm,0.8s,baz=230,slow=8.8,SNR=12								
ZALV	**Zalesovo Beam**	**45.31**	**23**	P	**P**		**19 49 36.2 +0.5**		
GTA	**Gaotai**	**45.47**	**48**	*e*P	**P**		**19 49 37.5 0.0**		
GTA				pP	**pP**		**19 49 41.6 +1.0**		
GTA				sP	**sP**		**19 49 44.1 +2.3**		
GTA				pmax	pmax				
	comp=Z,2.0nm,1.4s								
VYHS	**Vyhne**	**45.85**	**326**	*e*P	P		19 49 44.3 +4.1		
VYHS				*e*			19 49 51.2		
CD2	**Chengdu**	**46.37**	**61**	P	**P**		**19 49 45.5 +0.9**		
CD2				pP	**pP**		**19 49 50.0 +2.3**		
CD2				sP	**sP**		**19 49 52.5 +3.5**		
CD2				PcP	**PcP**		**19 51 20.3 +0.7**		
CD2				PP	**PP**		**19 51 34.8 +1.3**		
CD2				PcS	**PcS**		**19 55 13.6 -0.8**		
CD2				S	**S**		**19 56 33.3 +1.0**		
CD2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
CD2				pmax	pmax				
	comp=Z,90nm,5.4s								
CD2				LR	LR				
	comp=N,790nm,19.6s								
CD2				LR	LR				
	comp=E,1μm,21.5s								
CD2				LR	LR				
	comp=Z,1μm,20.6s								
ZST	**Bratislava**	**46.65**	**324**	*e*P	P		19 49 51.2 +4.8		
IIGN	**Ignalina**	**46.98**	**337**	*e*P	**P**		**19 49 49.3 +0.4**		
IIGN				AMB	AMB		19 49 57.4		
	comp=Z,10nm,1.4s								
IIGN	**Ignalina**	**46.98**	**337**	*e*P	**P**		**19 49 49.3 +0.4**		
	comp=Z,10nm,1.4s,SNR=25								
OKC	**Ostrava-Krasne**	**46.99**	**327**	*e*P	P		19 49 55.5 +6.4		
OKC				*ex*	x		19 50 00.9		
ARSA	**Arzberg**	**47.07**	**323**	⇑*i*SP	sP		19 49 56.6 +2.4		
	comp=Z,10nm,1.2s								
ARSA	**Arzberg**	**47.07**	**323**	⇑*i*P	sP		19 49 56.6 +2.4		
	comp=Z,10nm,1.2s								
ISAL	**Salakas**	**47.18**	**337**	*e*P	**P**		**19 49 50.9 +0.5**		
ISAL				AMB	AMB		19 50 04.1		
	comp=Z,10nm,1.4s								
ISAL	**Salakas**	**47.18**	**337**	*e*P	**P**		**19 49 50.9 +0.5**		
	comp=Z,10nm,1.4s,SNR=25								
SUW	**Suwalki**	**47.24**	**334**	*e*P	**P**		**19 49 50.6 -0.3**		
	comp=Z,35nm,1.0s								
SUW	**Suwalki**	**47.24**	**334**	*e*P	**P**		**19 49 51.6 +0.7**		
SUW	**Suwalki**	**47.24**	**334**	*e*P	**P**		**19 49 50.6 -0.3**		
	comp=Z,35nm,1.0s								
IZAR	**Zarasai**	**47.27**	**337**	*e*P	**P**		**19 49 51.6 +0.5**		
IZAR				AMB	AMB		19 49 59.7		
	comp=Z,9.4nm,0.6s								
IZAR	**Zarasai**	**47.27**	**337**	*e*P	**P**		**19 49 51.6 +0.5**		
	comp=Z,9.4nm,0.6s,SNR=25								
MORC	**Moravsky Berou**	**47.28**	**326**	*e*P	**P**		**19 49 51.2 -0.2**		
	comp=Z,11nm,1.2s								
MORC	**Moravsky Berou**	**47.28**	**326**	*e*P	**P**		**19 49 51.2 -0.2**		
	comp=Z,11nm,1.2s								
VRAC	**Vranov**	**47.54**	**325**	P	**P**		**19 49 52.9 -0.5**		
VRAC	**Vranov**	**47.54**	**325**	P	**P**		**19 49 52.9 -0.5**		
	comp=Z,1.2nm,0.4s,baz=135,slow=4.3,SNR=2.7								
VRAC	**Vranov**	**47.54**	**325**	P	**P**		**19 49 52.9 -0.5**		
TREC	**Trest**	**48.14**	**325**	*e*P	P		19 50 03.9 +5.8		
TREC				*ex*	x		19 50 09.8		
DPC	**Dobruska-Polom**	**48.26**	**327**	*e*P	P		19 50 05.4 +6.5		
DPC				*ex*	x		19 50 10.8		
GYA	**Guiyang**	**48.38**	**67**	*e*P	**P**		**19 50 01.0 +0.6**		
GYA				pmax	pmax				
	comp=Z,10.0nm,1.0s								
UPC	**Upice**	**48.51**	**327**	*e*P	**P**		**19 50 00.9 +0.1**		
UPC				*ep*P	**pP**		**19 50 07.7 +3.7**		
UPC				*ex*	x		19 50 12.6		
UPC	**Upice**	**48.51**	**327**	P	**P**		**19 50 00.9 +0.1**		
TAM	**Tamanrasset**	**48.66**	**288**	*e*P	**P**		**19 50 03.1 +0.5**		
	comp=Z,9.7nm,1.4s								
TAM	**Tamanrasset**	**48.66**	**288**	*e*P	**P**		**19 50 03.1 +0.5**		
	comp=Z,9.7nm,1.4s								
GERES	**GERESS Array B**	**48.92**	**324**	P	**P**		**19 50 03.4 -0.8**		
GERES	**GERESS Array B**	**48.92**	**324**	P	**P**		**19 50 03.4 -0.8**		
	comp=Z,0.2nm,0.4s,baz=126,slow=9.9,SNR=4.3								
GERES	**GERESS Array B**	**48.92**	**324**	P	**P**		**19 50 03.4 -0.8**		
PRU	**Pruhonice**	**49.03**	**325**	*e*P	P		19 50 09.0 +4.2		
PRU				*ex*	x		19 50 15.4		
KHC	**Kasperske Hory**	**49.13**	**324**	*e*P	**P**		**19 50 05.6 -0.1**		
KHC				*ep*P	**pP**		**19 50 10.6 +1.7**		
KHC				*ex*	x		19 50 15.9		
KHC	**Kasperske Hory**	**49.13**	**324**	P	**P**		**19 50 05.6 -0.1**		
PGF	**Pioggiola**	**49.28**	**314**	*e*P	**P**		**19 50 07.1 0.0**		
	comp=Z,55nm,1.3s								
PGF	**Pioggiola**	**49.28**	**314**	*e*P	**P**		**19 50 07.1 0.0**		
	comp=Z,55nm,1.3s								
PGF	**Pioggiola**	**49.28**	**314**	*e*P	**P**		**19 50 07.1 0.0**		
	comp=Z,28nm,1.3s								
LBTB	**Lobatse**	**49.36**	**218**	P	**P**		**19 50 07.2 -0.6**		
LBTB	**Lobatse**	**49.36**	**218**	P	**P**		**19 50 07.2 -0.6**		
	comp=Z,7.0nm,1.0s,baz=276,slow=11,SNR=5.5								
LBTB	**Lobatse**	**49.36**	**218**	P	**P**		**19 50 07.2 -0.6**		
MOTA	**Moosalm**	**49.77**	**321**	⇑*i*P	**P**		**19 50 09.8 -0.9**		
	comp=Z,6.5nm,0.8s								
MOTA	**Moosalm**	**49.77**	**321**	⇑*i*P	**P**		**19 50 09.8 -0.9**		
	comp=Z,6.5nm,0.8s								
MOTA	**Moosalm**	**49.77**	**321**	⇑*i*P	**P**		**19 50 09.8 -0.9**		
	comp=Z,6.5nm,0.8s								
BRG	**Berggiesshubel**	**49.82**	**326**	*e*P	P		19 50 17.0 +6.1		
	comp=Z,4.6nm,1.0s								
DAVOX	**Davos/Dischmat**	**50.29**	**320**	P	**P**		**19 50 13.3 -1.4**		
DAVOX	**Davos/Dischmat**	**50.29**	**320**	P	**P**		**19 50 13.3 -1.4**		
	comp=Z,3.2nm,0.9s,baz=151,slow=19,SNR=2.7								
DAVOX	**Davos/Dischmat**	**50.29**	**320**	P	**P**		**19 50 13.3 -1.4**		
NKC	**Novy Kostel**	**50.32**	**325**	*e*P	**P**		**19 50 14.9 +0.2**		
NKC				*ep*P	**pP**		**19 50 20.6 +2.7**		
NKC				*ex*	x		19 50 26.0		
NKC	**Novy Kostel**	**50.32**	**325**	P	**P**		**19 50 14.9 +0.2**		
CLL	**Collm**	**50.55**	**326**	*e*(sP)	**sP**		**19 50 23.0 +2.2**		
	comp=Z,9.0nm,1.3s								
CLL				*e*			19 50 27.0		
	comp=Z,41nm,2.1s								
CLL				*e*			19 51 00.0		
SBF	**Sospel**	**50.80**	**315**	*e*P	**P**		**19 50 18.7 +0.2**		
	comp=Z,63nm,1.4s								
SBF	**Sospel**	**50.80**	**315**	*e*P	**P**		**19 50 18.7 +0.2**		
	comp=Z,63nm,1.4s								
SBF	**Sospel**	**50.80**	**315**	*e*P	**P**		**19 50 18.7 +0.2**		
	comp=Z,32nm,1.4s								
FRF	**La Foret Royal**	**51.24**	**315**	*e*P	**P**		**19 50 22.3 +0.5**		
FRF	**La Foret Royal**	**51.24**	**315**	*e*P	**P**		**19 50 22.3 +0.5**		
FRF	**La Foret Royal**	**51.24**	**315**	*e*P	**P**		**19 50 22.3 +0.5**		
LMR	**La Mourre**	**51.27**	**314**	*e*P	**P**		**19 50 22.3 +0.4**		
	comp=Z,34nm,1.2s								
LMR	**La Mourre**	**51.27**	**314**	*e*P	**P**		**19 50 22.3 +0.4**		
	comp=Z,34nm,1.2s								
LMR	**La Mourre**	**51.27**	**314**	*e*P	**P**		**19 50 22.3 +0.4**		
	comp=Z,17nm,1.2s								
QIZ	**Qiongzhong**	**51.30**	**77**	P	**P**		**19 50 20.6 -2.0**		
QIZ				S	**S**		**19 57 39.8 -2.1**		
MBDF	**Montbardon**	**51.54**	**316**	*e*P	**P**		**19 50 24.0 -0.2**		
MBDF	**Montbardon**	**51.54**	**316**	*e*P	**P**		**19 50 24.0 -0.2**		
MBDF	**Montbardon**	**51.54**	**316**	*e*P	**P**		**19 50 24.0 -0.2**		
FINES	**FINESS Array B**	**51.71**	**342**	P	**P**		**19 50 23.4 -1.6**		
FINES	**FINESS Array B**	**51.71**	**342**	P	**P**		**19 50 23.4 -1.6**		
	comp=Z,5.4nm,1.0s,baz=98,slow=2.8,SNR=5.9								
FINES	**FINESS Array B**	**51.71**	**342**	P	**P**		**19 50 23.4 -1.6**		
LPG	**La Plagne**	**51.82**	**317**	*e*P	**P**		**19 50 26.0 -0.4**		
	comp=Z,16nm,0.9s								
LPG	**La Plagne**	**51.82**	**317**	*e*P	**P**		**19 50 26.0 -0.4**		
	comp=Z,16nm,0.9s								
LPG	**La Plagne**	**51.82**	**317**	*e*P	**P**		**19 50 26.0 -0.4**		
	comp=Z,8.0nm,0.9s								
LPL	**La Plagne**	**51.84**	**317**	*e*P	**P**		**19 50 26.1 -0.4**		
	comp=Z,27nm,1.1s								
LPL	**La Plagne**	**51.84**	**317**	*e*P	**P**		**19 50 26.1 -0.4**		
	comp=Z,27nm,1.1s								
LPL	**La Plagne**	**51.84**	**317**	*e*P	**P**		**19 50 26.1 -0.4**		
	comp=Z,14nm,1.1s								
ORIF	**Oris-en-Rattie**	**52.21**	**316**	*e*P	**P**		**19 50 28.4 -0.7**		
ORIF	**Oris-en-Rattie**	**52.21**	**316**	*e*P	**P**		**19 50 28.4 -0.7**		
ORIF	**Oris-en-Rattie**	**52.21**	**316**	*e*P	**P**		**19 50 28.4 -0.7**		
BOSA	**Boshof**	**52.30**	**215**	*e*P	P		19 50 25.5 -4.5		
	comp=Z,36nm,1.5s								
BOSA	**Boshof**	**52.30**	**215**	P	**P**		**19 50 28.9 -1.0**		
	comp=Z,6.9nm,1.1s,baz=101,slow=5.2,SNR=3.1								
CDF	**Champ du Feu**	**52.56**	**321**	*e*P	**P**		**19 50 31.0 -0.6**		
	comp=Z,47nm,1.5s								
CDF	**Champ du Feu**	**52.56**	**321**	*e*P	**P**		**19 50 31.0 -0.6**		
	comp=Z,47nm,1.5s								
CDF	**Champ du Feu**	**52.56**	**321**	*e*P	**P**		**19 50 31.0 -0.6**		
	comp=Z,24nm,1.5s								
HINF	**Hinteralfeld**	**52.59**	**320**	*e*P	**P**		**19 50 31.0 -0.8**		
HINF	**Hinteralfeld**	**52.59**	**320**	*e*P	**P**		**19 50 31.0 -0.8**		
HINF	**Hinteralfeld**	**52.59**	**320**	*e*P	**P**		**19 50 31.0 -0.8**		
CABF	**La Chapelle**	**52.64**	**318**	*e*P	**P**		**19 50 32.5 +0.2**		
	comp=Z,21nm,1.0s								
CABF	**La Chapelle**	**52.64**	**318**	*e*P	**P**		**19 50 32.5 +0.2**		
	comp=Z,21nm,1.0s								
CABF	**La Chapelle**	**52.64**	**318**	*e*P	**P**		**19 50 32.5 +0.2**		
	comp=Z,10nm,1.0s								
TOA0	**Torodi Ar. Sit**	**52.96**	**276**	P	**P**		**19 50 32.0 -3.0**		
TOA0	**Torodi Ar. Sit**	**52.96**	**276**	P	**P**		**19 50 32.0 -3.0**		
TORD	**Torodi Ar. Bea**	**52.96**	**276**	P	**P**		**19 50 34.4 -0.6**		
TORD	**Torodi Ar. Bea**	**52.96**	**276**	P	**P**		**19 50 34.4 -0.6**		
	comp=Z,2.3nm,1.0s,baz=100,slow=3.2,SNR=12								
TORD	**Torodi Ar. Bea**	**52.96**	**276**	P	**P**		**19 50 34.4 -0.6**		
LASF	**Ste Croix**	**53.33**	**315**	*e*P	**P**		**19 50 38.4 +1.1**		
	comp=Z,46nm,1.3s								
LASF	**Ste Croix**	**53.33**	**315**	*e*P	**P**		**19 50 38.4 +1.1**		
	comp=Z,46nm,1.3s								
LASF	**Ste Croix**	**53.33**	**315**	*e*P	**P**		**19 50 38.4 +1.1**		
	comp=Z,23nm,1.3s								
PAGF	**Fort de Pagny**	**53.57**	**320**	*e*P	**P**		**19 50 38.7 -0.2**		
PAGF	**Fort de Pagny**	**53.57**	**320**	*e*P	**P**		**19 50 38.7 -0.2**		
PAGF	**Fort de Pagny**	**53.57**	**320**	*e*P	**P**		**19 50 38.7 -0.2**		
SFTF	**Sexfontaines**	**53.87**	**320**	*e*P	**P**		**19 50 41.0 -0.2**		
	comp=Z,44nm,1.4s								
SFTF	**Sexfontaines**	**53.87**	**320**	*e*P	**P**		**19 50 41.0 -0.2**		
	comp=Z,44nm,1.4s								
SFTF	**Sexfontaines**	**53.87**	**320**	*e*P	**P**		**19 50 41.0 -0.2**		
	comp=Z,22nm,1.4s								
MEZF	**Maizieres J'vi**	**53.97**	**320**	*e*P	**P**		**19 50 41.9 +0.1**		
	comp=Z,55nm,1.4s								
MEZF	**Maizieres J'vi**	**53.97**	**320**	*e*P	**P**		**19 50 41.9 +0.1**		
	comp=Z,28nm,1.4s								
MEZF	**Maizieres J'vi**	**53.97**	**320**	*e*P	**P**		**19 50 41.9 +0.1**		
	comp=Z,28nm,1.4s								
SMF	**Signal de Mont**	**54.11**	**318**	*e*P	**P**		**19 50 42.6 -0.4**		
	comp=Z,16nm,1.1s								
SMF	**Signal de Mont**	**54.11**	**318**	*e*P	**P**		**19 50 42.6 -0.4**		
	comp=Z,16nm,1.1s								
SMF	**Signal de Mont**	**54.11**	**318**	*e*P	**P**		**19 50 42.6 -0.4**		
	comp=Z,7.8nm,1.1s								
MTLF	**Montolieu**	**54.27**	**313**	*e*P	**P**		**19 50 44.1 -0.1**		
MTLF	**Montolieu**	**54.27**	**313**	*e*P	**P**		**19 50 44.1 -0.1**		
MTLF	**Montolieu**	**54.27**	**313**	*e*P	**P**		**19 50 44.1 -0.1**		
LOR	**Lormes**	**54.30**	**318**	*e*P	**P**		**19 50 44.1 -0.2**		
	comp=Z,17nm,1.0s								
LOR	**Lormes**	**54.30**	**318**	*e*P	**P**		**19 50 44.1 -0.2**		
	comp=Z,17nm,1.0s								
LOR	**Lormes**	**54.30**	**318**	*e*P	**P**		**19 50 44.1 -0.2**		
	comp=Z,8.6nm,1.0s								
SSF	**Saint Saulge**	**54.46**	**318**	*e*P	**P**		**19 50 45.1 -0.4**		
	comp=Z,7.4nm,0.9s								
SSF	**Saint Saulge**	**54.46**	**318**	*e*P	**P**		**19 50 45.1 -0.4**		
	comp=Z,7.4nm,0.9s								
SSF	**Saint Saulge**	**54.46**	**318**	*e*P	**P**		**19 50 45.1 -0.4**		
	comp=Z,3.7nm,0.9s								
AVF	**Avril sur Loir**	**54.48**	**318**	*e*P	**P**		**19 50 45.0 -0.6**		
	comp=Z,18nm,1.2s								
AVF	**Avril sur Loir**	**54.48**	**318**	*e*P	**P**		**19 50 45.0 -0.6**		
	comp=Z,18nm,1.2s								
AVF	**Avril sur Loir**	**54.48**	**318**	*e*P	**P**		**19 50 45.0 -0.6**		
	comp=Z,9.1nm,1.2s								
HHC	**Hu-ho-hao-te**	**54.51**	**50**	*e*P	P		19 50 43.1 -3.0		
HHC				sP	sP		19 50 50.5 0.0		
HHC				PcS	**PcS**		**19 55 48.9 -0.2**		
HHC				ScS	ScS		20 00 27.4 -8.5		
HHC				pmax	pmax				
	comp=Z,21nm,0.7s								
HHC				pmax	pmax				
	comp=Z,240nm,6.3s								
HHC				LR	LR				
	comp=N,600nm,19.4s								
HHC				LR	LR				
	comp=E,450nm,16.9s								
HHC				LR	LR				
	comp=Z,500nm,17.8s								
GIVF	**Givet**	**54.69**	**322**	*e*P	**P**		**19 50 47.1 0.0**		
GIVF	**Givet**	**54.69**	**322**	*e*P	**P**		**19 50 47.1 0.0**		
GIVF	**Givet**	**54.69**	**322**	*e*P	**P**		**19 50 47.1 0.0**		
BGF	**Bois d'Agland**	**54.74**	**317**	*e*P	**P**		**19 50 47.5 0.0**		
	comp=Z,26nm,1.1s								
BGF	**Bois d'Agland**	**54.74**	**317**	*e*P	**P**		**19 50 47.5 0.0**		
	comp=Z,26nm,1.1s								
BGF	**Bois d'Agland**	**54.74**	**317**	*e*P	**P**		**19 50 47.5 0.0**		
	comp=Z,13nm,1.1s								
BAIF	**Baives**	**55.04**	**322**	*e*P	**P**		**19 50 49.7 +0.1**		
	comp=Z,21nm,1.0s								
BAIF	**Baives**	**55.04**	**322**	*e*P	**P**		**19 50 49.7 +0.1**		
	comp=Z,21nm,1.0s								
BAIF	**Baives**	**55.04**	**322**	*e*P	**P**		**19 50 49.7 +0.1**		
	comp=Z,11nm,1.0s								
TCF	**Toulx Ste Croi**	**55.08**	**317**	*e*P	**P**		**19 50 49.7 -0.3**		
	comp=Z,27nm,1.4s								
TCF	**Toulx Ste Croi**	**55.08**	**317**	*e*P	**P**		**19 50 49.7 -0.3**		
	comp=Z,27nm,1.4s								
TCF	**Toulx Ste Croi**	**55.08**	**317**	*e*P	**P**		**19 50 49.7 -0.3**		
	comp=Z,14nm,1.4s								
HFS	**Hagfors**	**55.15**	**336**	P	**P**		**19 50 48.8 -1.4**		
HFS	**Hagfors**	**55.15**	**336**	P	**P**		**19 50 48.8 -1.4**		
	comp=Z,2.5nm,1.0s,baz=199,slow=12,SNR=3.2								
HFS	**Hagfors**	**55.15**	**336**	P	**P**		**19 50 48.8 -1.4**		
EPF	**Esparros**	**55.53**	**313**	*e*P	**P**		**19 50 52.9 -0.5**		
EPF	**Esparros**	**55.53**	**313**	*e*P	**P**		**19 50 52.9 -0.5**		
EPF	**Esparros**	**55.53**	**313**	*e*P	**P**		**19 50 52.9 -0.5**		
LFF	**La Frestale**	**55.70**	**315**	*e*P	**P**		**19 50 54.5 0.0**		
	comp=Z,22nm,1.0s								
LFF	**La Frestale**	**55.70**	**315**	*e*P	**P**		**19 50 54.5 0.0**		
	comp=Z,22nm,1.0s								
LFF	**La Frestale**	**55.70**	**315**	*e*P	**P**		**19 50 54.5 0.0**		
	comp=Z,11nm,1.0s								
ETSF	**Etsaut**	**56.14**	**312**	*e*P	**P**		**19 50 58.3 +0.5**		
ETSF	**Etsaut**	**56.14**	**312**	*e*P	**P**		**19 50 58.3 +0.5**		
ETSF	**Etsaut**	**56.14**	**312**	*e*P	**P**		**19 50 58.3 +0.5**		
NOA	**NORSAR Array B**	**56.68**	**336**	P	**P**		**19 51 00.1 -1.1**		
NOA	**NORSAR Array B**	**56.68**	**336**	P	**P**		**19 51 00.1 -1.1**		
	comp=Z,0.7nm,0.8s,baz=359,slow=19,SNR=2.7								
NOA	**NORSAR Array B**	**56.68**	**336**	P	**P**		**19 51 00.1 -1.1**		
MFF	**Saint Martin d**	**56.73**	**317**	*e*P	**P**		**19 51 01.1 -0.7**		
	comp=Z,22nm,1.3s								
MFF	**Saint Martin d**	**56.73**	**317**	*e*P	**P**		**19 51 01.1 -0.7**		
	comp=Z,22nm,1.3s								
MFF	**Saint Martin d**	**56.73**	**317**	*e*P	**P**		**19 51 01.1 -0.7**		
	comp=Z,11nm,1.3s								
LDF	**La Druitiere**	**57.25**	**319**	*e*P	**P**		**19 51 04.8 -0.7**		
	comp=Z,14nm,0.9s								
LDF	**La Druitiere**	**57.25**	**319**	*e*P	**P**		**19 51 04.8 -0.7**		
	comp=Z,14nm,0.9s								
LDF	**La Druitiere**	**57.25**	**319**	*e*P	**P**		**19 51 04.8 -0.7**		
	comp=Z,6.9nm,0.9s								
FLN	**La Foliniere**	**57.53**	**319**	*e*P	**P**		**19 51 06.7 -0.7**		
	comp=Z,1.1nm,0.8s								
FLN	**La Foliniere**	**57.53**	**319**	*e*P	**P**		**19 51 06.7 -0.7**		
	comp=Z,9.1nm,0.8s								
FLN	**La Foliniere**	**57.53**	**319**	*e*P	**P**		**19 51 06.7 -0.7**		
	comp=Z,4.6nm,0.8s								
GRR	**Gorron**	**57.67**	**318**	*e*P	**P**		**19 51 07.7 -0.7**		
GRR	**Gorron**	**57.67**	**318**	*e*P	**P**		**19 51 07.7 -0.7**		
GRR	**Gorron**	**57.67**	**318**	*e*P	**P**		**19 51 07.7 -0.7**		
BJI	**Beijing**	**57.83**	**52**	P	**P**		**19 51 09.4 -0.3**		
BJI				S	**S**		**19 59 13.0 +3.7**		
BJI				pmax	pmax				
	comp=Z,15nm,0.4s								
BJI				LR	LR				
	comp=N,2μm,20.3s								
BJI				LR	LR				
	comp=E,1μm,22.3s								
BJI				LR	LR				
	comp=Z,1μm,24.2s								
ESDC	**Sonseca Array**	**58.11**	**308**	P	**P**		**19 51 11.4 -0.4**		
ESDC	**Sonseca Array**	**58.11**	**308**	P	**P**		**19 51 11.4 -0.4**		
	comp=Z,2.0nm,0.8s,baz=85,slow=5.3,SNR=47								
ESDC	**Sonseca Array**	**58.11**	**308**	P	**P**		**19 51 11.4 -0.4**		
ESLA	**Sonseca Array**	**58.11**	**308**	*e*P	**P**		**19 51 09.5 -2.3**		
	comp=Z,4.7nm,1.4s								
ESLA	**Sonseca Array**	**58.11**	**308**	*e*P	**P**		**19 51 09.5 -2.3**		
	comp=Z,4.7nm,1.4s								
SGMF	**Saint Gilles**	**58.73**	**318**	*e*P	**P**		**19 51 15.0 -0.8**		
SGMF	**Saint Gilles**	**58.73**	**318**	*e*P	**P**		**19 51 15.0 -0.8**		
SGMF	**Saint Gilles**	**58.73**	**318**	*e*P	**P**		**19 51 15.0 -0.8**		
ROSF	**Rostrenen**	**59.22**	**318**	*e*P	**P**		**19 51 18.1 -1.1**		
	comp=Z,44nm,1.4s								
ROSF	**Rostrenen**	**59.22**	**318**	*e*P	**P**		**19 51 18.1 -1.1**		
	comp=Z,44nm,1.4s								
ROSF	**Rostrenen**	**59.22**	**318**	*e*P	**P**		**19 51 18.1 -1.1**		
	comp=Z,22nm,1.4s								
LIC	**Lamto**	**60.76**	**269**	*e*P	**P**		**19 51 31.2 +0.8**		
	comp=Z,6.7nm,0.7s								
LIC	**Lamto**	**60.76**	**269**	*e*P	**P**		**19 51 31.2 +0.8**		
	comp=Z,6.7nm,0.7s								
LIC	**Lamto**	**60.76**	**269**	*e*P	**P**		**19 51 31.2 +0.8**		
	comp=Z,3.3nm,0.7s								
EKA	**Eskdalemuir Ar**	**61.02**	**326**	P	**P**		**19 51 30.9 -0.5**		
EKA	**Eskdalemuir Ar**	**61.02**	**326**	P	**P**		**19 51 30.9 -0.5**		
	comp=Z,4.3nm,1.1s,baz=45,slow=12,SNR=3.6								
EKA	**Eskdalemuir Ar**	**61.02**	**326**	P	**P**		**19 51 30.9 -0.5**		
CN2	**Changchun**	**65.10**	**48**	*e*P	**P**		**19 52 00.3 +1.5**		
KSAR	**Wonju Array Be**	**66.80**	**55**	P	**P**		**19 52 09.2 -0.6**		
KSAR	**Wonju Array Be**	**66.80**	**55**	P	**P**		**19 52 09.2 -0.6**		
KSRS	**Korea Array**	**66.83**	**55**	P	**P**		**19 52 09.2 -0.8**		
	comp=Z,1.1nm,0.8s,baz=288,slow=7.6,SNR=3.8								
WRAB	**Tennant Creek**	**83.97**	**112**	*e*P	**P**		**19 53 46.8 -2.1**		
	comp=Z,4.3nm,0.9s								
WRAB	**Tennant Creek**	**83.97**	**112**	*e*P	**P**		**19 53 46.8 -2.1**		
	comp=Z,4.2nm,0.9s								
ASAR	**Alice Springs**	**84.72**	**116**	P	**P**		**19 53 51.7 -0.9**		
ASAR	**Alice Springs**	**84.72**	**116**	P	**P**		**19 53 51.7 -0.9**		
	comp=Z,2.9nm,0.9s,baz=287,slow=4.8,SNR=20								
ASAR	**Alice Springs**	**84.72**	**116**	P	**P**		**19 53 51.7 -0.9**		
NVAR	**Mina Array Bea**	**127.16**	**355**	PKP	**PKPdf**		**20 00 24.5 +1.3**		
NVAR	**Mina Array Bea**	**127.16**	**355**	PKP	**PKPdf**		**20 00 24.5 +1.3**		
	comp=Z,1.6nm,0.9s,baz=81,slow=0.3,SNR=10								
NVAR	**Mina Array Bea**	**127.16**	**355**	PKIKP	**PKPdf**		**20 00 24.5 +1.3**		
TXAR	**Lajitas Array**	**132.38**	**336**	PKP	**PKPdf**		**20 00 34.9 +1.7**		
TXAR	**Lajitas Array**	**132.38**	**336**	PKP	**PKPdf**		**20 00 34.9 +1.7**		
	comp=Z,0.1nm,0.2s,baz=133,slow=3.8,SNR=2.3								

BJI ***21*** *19:44:55.6,* $13^{\circ}.81N_{\times}55^{\circ}.66E$*, h10km, mB5.4/39, mb5.0/47, Ms5.1/45, Ms7 5.0/43*

IDC ***21*** *19:45:02.7±0.4, 14°.44N×56°.37E, h0km, mb4.6/41, mb1 4.7/42, mb1mx4.7/44, mbtmp4.6/42, ML3.9/1, MS4.7/22, Ms1 4.7/22, ms1mx4.6/28, Error ellipse: s-maj=10.4km s-min=10.2km az=94.0*

GCMT ***21*** *

MIB AMb AMB 19 49 10.3
comp=Z,223nm,1.1s
MNCY Minicoy 17.50 109 *eP* **P 19 49 08.8 0.0**
FURI Furi 18.14 254 P **P 19 49 17.9 +0.5**
FURI S **S 19 52 48.7 +3.9**
QUE Quetta 18.44 30⇑ *iP* **P 19 49 19.0 -1.4**
QUE *eS* **Sn 19 52 41.0 -5.3**
QUE Quetta 18.44 30⇑ *iP* **P 19 49 19.0 -1.4**
QUE *eS* **Sn 19 52 41.0 -5.3**
QUE Quetta 18.44 30 *iP* **P 19 49 19.0 -1.4**
MSEY Mahe Island 19.05 183 P **P 19 49 23.6 -3.4**
comp=Z,400nm,1.9s
AKL Akola 20.66 70⇓ *iP* **P 19 49 46.0 +1.4**
AKL AMP 19 50 01.3
comp=Z,258nm,1.7s
AKL *iS* **S 19 53 36.1 +1.3**
IVRN Varamin 20.84 349 P **P 19 49 46.7 +0.2**
IVRN Varamin 20.84 349 *eP* **P 19 49 44.8 -1.7**
IVRN *eP* Pn 19 49 46.7 -2.3
IVRN Varamin 20.84 349 *eP* **P 19 49 44.8 -1.7**
IANJ Anjilo 21.01 355 P **P 19 49 48.6 +0.2**
IANJ Anjilo 21.01 355 *eP* **P 19 49 48.7 +0.3**
IANJ Anjilo 21.01 355 P **P 19 49 48.6 +0.2**
ILAS Lasjerd 21.03 352 *eP* **P 19 49 48.5 -0.2**
ILAS Lasjerd 21.03 352 *eP* **P 19 49 48.5 -0.2**
TRD Trivandrum 21.07 104 *eP* **P 19 49 46.9 -2.1**
TRD *ex* x 19 53 47.1
IKOM Komasi 21.17 339 *eP* **P 19 49 49.2 -0.9**
IKOM Komasi 21.17 339 *eP* **P 19 49 49.2 -0.9**
IR5 Iran Long-Peri 21.28 347 *eP* **P 19 49 50.7 -0.6**
IR5 Iran Long-Peri 21.28 347 *eP* **P 19 49 50.7 -0.6**
IFIR Firoozkooh 21.31 352 *eP* **P 19 49 51.0 -0.7**
IFIR Firoozkooh 21.31 352 *eP* **P 19 49 51.0 -0.7**
IDMV Damavand 21.36 350 P **P 19 49 51.2 -1.0**
IDMV Damavand 21.36 350 *eP* **P 19 49 51.3 -1.0**
IDMV Damavand 21.36 350 P **P 19 49 51.2 -1.0**
ISHM Shahmirzad 21.41 353 *eP* **P 19 49 52.2 -0.6**
ISHM Shahmirzad 21.41 353 *eP* **P 19 49 52.2 -0.6**
IR3 Iran Long-Peri 21.44 348 *eP* **P 19 49 50.5 -2.4**
IR3 Iran Long-Peri 21.44 348 *eP* **P 19 49 50.5 -2.4**
HYB Hyderabad 21.57 79 *iP* **P 19 49 54.0 -0.4**
HYB *eS* **S 19 53 54.0 +1.2**
HYB Hyderabad 21.57 79 *eP* **P 19 49 55.8 +1.4**
HYB *eS* **S 19 53 54.1 +1.2**
HYB *eS* Sn 19 54 02.5 +0.9
IRAZ Razeghan 21.61 346 *eP* **P 19 49 53.8 -1.1**
IRAZ Razeghan 21.61 346 *eP* **P 19 49 53.8 -1.1**
BHD Baghdad 21.63 332 *ix* **P 19 49 52.9 -1.9**
BHD *ix* x 19 53 50.0
BHD Baghdad 21.63 332 *iP* **P 19 49 52.9 -1.9**
BHD *iS* **S 19 53 50.0 -3.6**
IGHG Ghaleghazi 21.64 338 *eP* **P 19 49 55.9 +0.7**
IGHG Ghaleghazi 21.64 338 *eP* **P 19 49 55.9 +0.7**
IMOG Moghan 21.70 7 *eP* **P 19 49 55.2 -0.8**
IMOG Moghan 21.70 7 *eP* **P 19 49 55.2 -0.8**
IVIS Veis 21.72 338 *eP* **P 19 49 55.1 -0.8**
IVIS Veis 21.72 338 *eP* **P 19 49 55.1 -0.8**
IMHD Mahdasht 21.72 347 *eP* **P 19 49 56.3 +0.4**
IMHD Mahdasht 21.72 347 *eP* **P 19 49 56.3 +0.4**
BHPL Bhopal 21.76 63 *eP* **P 19 49 58.1 +1.7**
BHPL AMB AMB 19 50 09.6
comp=Z,211nm,1.4s
BHPL *ex* x 19 54 01.1
ISRO Mashad 21.92 7 *eP* **P 19 49 57.4 -0.7**
ISRO Mashad 21.92 7 *eP* **P 19 49 57.4 -0.7**
IPAY Payeh 22.01 6 *eP* **P 19 49 58.9 -0.3**
IPAY Payeh 22.01 6 *eP* **P 19 49 58.9 -0.3**
ILIN Lien 22.03 339 *eP* **P 19 49 58.1 -1.3**
ILIN Lien 22.03 339 *eP* **P 19 49 58.1 -1.3**
IMYA Miami 22.03 8 *eP* **P 19 49 59.3 0.0**
IMYA Miami 22.03 8 *eP* **P 19 49 59.3 0.0**
IDHR Dehrash 22.04 338 P **P 19 49 57.0 -2.5**
IDHR Dehrash 22.04 338 *eP* **P 19 49 57.0 -2.5**
IDHR Dehrash 22.04 338 *eP* **P 19 49 57.0 -2.5**
IKRD Kardeh 22.29 5 P **P 19 50 01.9 -0.3**
IKRD Kardeh 22.29 5 *eP* **P 19 50 02.0 -0.3**
IKRD Kardeh 22.29 5 P **P 19 50 01.9 -0.3**
IGZV Ghazvin 22.49 347 *eP* **P 19 50 04.4 +1.1**
IGZV Ghazvin 22.49 347 *eP* **P 19 50 05.4 +1.1**
ISFR Sfrayin 22.53 3 P **P 19 50 04.5 -0.2**
ISFR Sfrayin 22.53 3 *eP* **P 19 50 04.6 -0.2**
NGP Nagpur 22.61 70 *eP* **P 19 50 05.0 -0.5**
NGP *ex* x 19 54 17.6
KBL Kabul 23.04 28 *eP* **P 19 50 11.4 +1.3**
KBL pmax pmax
comp=Z,107nm,1.4s
KBL Kabul 23.04 28 *eP* **P 19 50 11.4 +1.3**
comp=Z,107nm,1.4s
KBL Kabul 23.04 28 *eP* **P 19 50 11.4 +1.3**
comp=Z,107nm,1.4s
MDRS Chennai 23.27 91 *eP* **P 19 50 12.8 +0.3**
MDRS *ex* x 19 54 37.1
ABKT Ailbek 23.41 4 P **P 19 50 13.8 +0.2**
comp=Z,383nm,0.8s,SNR=22
NDI New Delhi 23.97 50 *eP* **P 19 50 19.0 -0.1**
JBP Jabalpur 23.97 65⇑ *eP* **P 19 50 19.9 +0.7**
JBP *ix* x 19 50 34.0
comp=Z,102nm,1.8s
JBP *eS* **S 19 54 38.4 +3.3**
KMBO Kilima Mbogo 24.43 232 *eP* **P 19 50 24.1 +0.4**
KMBO Kilima Mbogo 24.43 232 *eP* **P 19 50 23.3 -0.5**
comp=Z,312nm,2.1s
KMBO Kilima Mbogo 24.43 232 P **P 19 50 25.1 +1.4**
comp=Z,6.7nm,0.8s,baz=48,slow=11,SNR=19
KMBO LR LR 20 00 26.2
comp=Z,7μm,18.7s,baz=64,slow=38
KMBO Kilima Mbogo 24.43 232 *eP* **P 19 50 23.3 -0.5**
comp=Z,312nm,2.1s
EIL Elat 24.85 311 P **P 19 50 28.1 +1.0**
EIL Elat 24.85 311 P **P 19 50 28.1 +1.0**
comp=Z,23nm,1.0s,baz=117,slow=3.2,SNR=17
EIL LR LR 20 00 31.2
comp=Z,3μm,18.9s,baz=120,slow=37
EIL Elat 24.85 311 P **P 19 50 28.1 +1.0**
ASF Jabal al Asfar 24.99 318 P **P 19 50 29.9 +1.4**
ASF Jabal al Asfar 24.99 318 P **P 19 50 29.9 +1.4**
comp=Z,18nm,1.0s,baz=16,slow=3.7,SNR=22
ASF LR LR 20 01 01.8
comp=Z,1μm,19.6s,baz=170,slow=38
SMLA Simla 25.30 46 *eP* **P 19 50 31.5 +0.4**
SMLA *ex* x 19 56 52.2
SDNR Sundarnagar 25.38 45 *ex* P 19 50 26.0 -5.9
DHRM DHARAMSHALA 25.40 42 *eP* **P 19 50 33.4 +1.1**
DHRM AMB AMB 19 50 48.2
comp=Z,91nm,1.7s
DHRM *ex* x 19 55 07.5
DHRM AMB AMB 20 01 45.7
comp=E,516nm,9.1s
DDI Dehra Dun 25.46 48 *eP* **P 19 50 33.3 +0.6**
DDI AMB AMB 19 50 48.2
comp=Z,253nm,1.1s
DDI *ex* x 19 57 38.5
VIS Vishakhapatnam 26.13 79 *ex* **pP 19 50 45.1 +0.5**
VIS *ex* x 19 57 03.6
MMAI Mount Meron Ar 26.50 318 P **P 19 50 43.5 +1.4**
MMAI Mount Meron Ar 26.50 318 P **P 19 50 43.5 +1.4**
comp=Z,20nm,1.0s,baz=118,slow=8.7,SNR=18
MMAI LR LR 20 01 37.3
comp=Z,1μm,18.0s,baz=110,slow=38
MMAI Mount Meron Ar 26.50 318 P **P 19 50 43.5 +1.4**
VANB Van 26.60 337 *eP* **P 19 50 45.4 +2.4**
CLDR Caldiran 26.89 338 *eP* **P 19 50 44.9 -0.8**
GNI Garni 27.51 341 *eP* **P 19 50 51.9 +0.7**
comp=Z,439nm,1.6s
GNI Garni 27.51 341 P **P 19 50 52.5 +1.3**
comp=Z,14nm,0.8s,baz=177,slow=3.6,SNR=8.9
GNI LR LR 20 03 27.9
comp=Z,2μm,21.3s,baz=144,slow=40
GNI Garni 27.51 341 *eP* **P 19 50 51.9 +0.7**
comp=Z,439nm,1.6s
URFA Urfa 27.66 329 *eP* **P 19 50 56.1 +3.6**
VRTB Varto-Mus 27.85 335 *eP* **P 19 50 58.0 +3.7**
BNGB Bing¨ll 28.04 333 *eP* **P** 19 50 59.7 +3.7
SVRC Sivrice-ELAZID 28.16 331 *eP* **P 19 50 59.8 +2.7**
PYUN Piuthan 28.22 57 *eP* **P 19 50 58.6 +0.8**
comp=Z,194nm,1.5s
GAZ Gaziantep 28.29 327 *eP* P 19 51 01.4 +3.3
DGRG David-gareji 28.51 343 P **P 19 51 01.7 +1.7**
DGRG S **S 19 55 51.0 +4.2**
MALT Malatya 28.54 330 *eP* P 19 51 03.9 +3.5
MALT Malatya 28.54 330 *eP* **P 19 51 03.1 +2.8**
MALT pmax pmax
comp=Z,128nm,1.5s
MALT Malatya 28.54 330 *eP* **P 19 51 03.1 +2.8**
comp=Z,128nm,1.5s
PTK Pertek 28.54 332 *eP* P 19 51 12.9 +12
KOLN Koldanda 28.59 58 *eP* **P 19 51 02.2 +1.1**
comp=Z,54nm,1.2s
KMRS Kahramanmaras 28.70 327 *eP* **P 19 51 02.9 +1.1**
KZR Kazreti 28.73 341 P **P 19 51 04.0 +2.0**
KZR Kazreti 28.73 341 P **P 19 51 04.0 +2.0**
KRTS Karatas 28.88 323 *eP* P 19 51 09.2 +5.9
DANN Dangsing 28.94 57 *eP* **P 19 51 05.2 +0.9**
comp=Z,238nm,1.7s
TBLG Delisi 28.95 342 *eP* **P 19 51 03.9 0.0**
TBLG *eS* **S 19 55 57.8 +4.0**
TBLG Delisi 28.95 342 P **P 19 51 04.0 0.0**
TBLG S **S 19 55 57.8 +4.0**
TBLG Delisi 28.95 342 *eP* **P 19 51 03.9 0.0**
CEYT Ceyhan 28.97 324 *eP* P 19 51 08.1 +4.0
AKH Akhalkalaki 29.05 340 P **P 19 51 06.7 +1.7**
AKH S **S 19 55 57.9 +2.1**
AKH Akhalkalaki 29.05 340 P **P 19 51 06.7 +1.7**
CSS Prodhromos 29.06 319 *eP* **P 19 51 04.9 -0.1**
comp=Z,22nm,1.4s
CSS Prodhromos 29.06 319 *eP* **P 19 51 04.9 -0.1**
comp=Z,22nm,1.4s
DARE Darende-Malaty 29.20 329 *eP* **P 19 51 08.4 +2.1**
KOZT Kozan 29.27 325 *eP* P 19 51 10.2 +3.5
ILIC ilic-Erzincan 29.37 331 *eP* P 19 51 11.0 +3.3
BOK Bokaro 29.37 67 *eP* **P 19 51 09.5 +1.7**
GOR Gori 29.38 341 P **P 19 51 10.2 +2.6**
MAK Makhachkala 29.38 347 *eP* **P 19 51 09.7 +2.1**
MAK *e* 19 52 09.1
MAK *ePPP* PPP 19 52 17.9
MAK *eS* **S 19 56 04.9 +4.5**
MAK *eSSS* SSS 19 57 49.9
MAK pmax pmax
comp=Z,203nm,1.6s
MAK MLR MLR
comp=Z,3μm,20.0s
MAK Makhachkala 29.38 347 *eP* **P 19 51 09.7 +2.1**
comp=Z,203nm,1.6s
MBAR Mbarara 29.43 242 LR LR 20 03 19.6
comp=Z,1μm,19.8s,baz=57,slow=37
BAYT Ayd¨ntepe-Bay 29.44 334 *eP* P 19 51 11.8 +3.4
MERS Mersin 29.58 323 *eP* **P 19 51 10.3 +0.7**
SARI SarD1z-Kayseri 29.63 327 *eP* **P 19 51 12.1 +2.0**
GUMT Gumushane 29.77 334 *eP* P 19 51 16.9 +5.5
DMN Daman 29.78 59 *eP* **P 19 51 12.3 +0.6**
comp=Z,104nm,1.5s
KKN Kakani 29.99 59 *eP* **P 19 51 14.4 +0.9**
comp=Z,71nm,1.2s
PKIN Phulchoki 30.01 60 *eP* **P 19 51 14.7 +0.9**
PKI Pulchoki 30.02 60 *eP* **P 19 51 15.0 +1.1**
comp=Z,116nm,1.6s
ONI Oni 30.13 341 P **P 19 51 15.7 +1.3**
ZEI Tsey 30.15 342 *eP* **P 19 51 16.3 +1.5**
ZEI pmax pmax
comp=Z,81nm,1.9s
ZEI Tsey 30.15 342 *eP* **P 19 51 16.3 +1.5**
comp=Z,81nm,1.9s
BNN Bunyan 30.26 327 *eP* **P 19 51 17.9 +2.3**
KSH Kashi 30.33 31 P P 19 51 13.0 -3.3
KSH pP pP 19 51 18.0 -4.1
KSH sP sP 19 51 20.3 -4.2
KSH PP **PnPn 19 52 11.0 -3.6**
KSH S S 19 56 07.6 -8.1
KSH ScP **ScP 19 57 56.0 -1.9**
KSH ScS **ScS 20 01 49.3 -4.6**
KSH pmax pmax
comp=Z,11nm,0.8s
KSH pmax pmax
comp=Z,470nm,4.5s
KSH LR LR
comp=N,3μm,15.7s
KSH LR LR
comp=E,2μm,12.5s
KSH LR LR
comp=Z,3μm,13.1s
ESPY Espiye-Giresun 30.48 333 *eP* **P 19 51 20.1 +2.7**
GUN Gumba 30.53 59 *eP* **P 19 51 19.5 +1.1**
comp=Z,173nm,1.3s
RSDY Resadiye-TOKAT 30.70 331 *eP* **P 19 51 20.4 +1.0**
RAMN Ramite 30.83 61 *eP* **P 19 51 22.0 +1.0**
comp=Z,86nm,1.2s
KKAR Karatay Array 31.02 20 *eP* **P 19 51 22.2 0.0**
KKAR pmax pmax
comp=Z,27nm,1.3s
KKAR Karatay Array 31.02 20 *eP* **P 19 51 22.2 0.0**
comp=Z,27nm,1.3s
KKAR Karatay Array 31.02 20 *eP* **P 19 51 22.2 0.0**
comp=Z,27nm,1.3s
SULT Sultanhani-AKS 31.07 324 *eP* **P 19 51 24.9 +2.1**
KBZ Khabaz 31.33 341 P **P 19 51 26.5 +1.6**
KBZ Khabaz 31.33 341 P **P 19 51 26.5 +1.6**
KBZ Khabaz 31.33 341 P **P 19 51 26.5 +1.6**
comp=Z,9.3nm,1.0s,baz=172,slow=4.5,SNR=10
KBZ LR LR 20 06 02.9
comp=Z,2μm,21.8s,baz=148,slow=40
KBZ Khabaz 31.33 341 P **P 19 51 26.5 +1.6**
AML Almayashu 31.38 25 P **P 19 51 27.8 +2.0**
SNR=7.4
AML Almayashu 31.38 25 P **P 19 51 27.8 +2.0**
SNR=8.4
ODAN Odare 31.47 62 *eP* **P 19 51 27.7 +1.0**
comp=Z,165nm,1.8s
KIV Kislovodsk 31.60 341⇑ *iP* **P 19 51 28.7 +1.3**
KIV *i* 19 51 38.7
KIV *i* 19 52 39.1
KIV *i* 19 54 20.0
KIV *iS* **S 19 56 34.5 -1.0**
KIV pmax pmax
comp=Z,31nm,1.3s
KIV MLR MLR
comp=Z,2μm,16.0s
KIV Kislovodsk 31.60 341 *iP* **P 19 51 28.7 +1.3**
comp=Z,31nm,1.3s
KIV Kislovodsk 31.60 341 *i* PcP **PcP 19 54 20.0 +0.5**
KIV *iS* **S 19 56 34.5 -1.0**
comp=Z,2μm,16.0s
LADK Ladik-KONYA 31.74 323 *eP* **P 19 51 31.0 +2.3**
KVT Kavak 31.84 330 *eP* **P 19 51 30.1 +0.6**
EKS2 Erkin-Say 31.85 25 *eP* **P 19 51 31.6 +1.9**
EKS2 pmax pmax
comp=Z,109nm,1.5s
EKS2 Erkin-Say 31.85 25 *eP* **P 19 51 31.6 +1.9**
comp=Z,109nm,1.5s
EKS2 Erkin-Say 31.85 25 P **P 19 51 32.2 +2.5**
SNR=18
EKS2 Erkin-Say 31.85 25 *eP* **P 19 51 31.6 +1.9**
comp=Z,109nm,1.5s
CORM Corum 31.87 328 *eP* **P 19 51 32.3 +2.5**
TAPN Taplejung 31.89 61 *eP* **P 19 51 31.5 +1.1**
comp=Z,354nm,1.7s
KZA Kyzart 32.00 27 P **P 19 51 33.9 +2.6**
SNR=8.5
BRTR Keskin Array B 32.07 326 P **P 19 51 32.8 +1.1**
BRTR PcP **PcP 19 54 20.9 0.0**
BRTR Keskin Array B 32.07 326 P **P 19 51 32.8 +1.1**
comp=Z,3.1nm,1.0s,baz=134,slow=11,SNR=11
BRTR PcP **PcP 19 54 20.9 0.0**
comp=Z,2.1nm,0.9s,baz=113,slow=3.2,SNR=3.9
BRTR LR LR 20 05 49.4
comp=Z,1μm,20.6s,baz=327,slow=39
BRTR Keskin Array B 32.07 326 *eP* **P 19 51 32.7 +1.1**
comp=Z,3.0nm,1.0s
BRTR Keskin Array B 32.07 326 PcP **PcP 19 54 21.0 0.0**
BR131 Keskin Array S 32.07 326 *eP* **P 19 51 32.1 +0.6**
comp=Z,15nm,1.3s
BR131 Keskin Array S 32.07 326 *eP* **P 19 51 32.2 +0.6**
comp=Z,15nm,1.3s
AAK Ala-Archa 32.13 26 *iP* **P 19 51 34.7 +2.6**
AAK pmax pmax
comp=Z,61nm,1.3s
AAK Ala-Archa 32.13 26 P **P 19 51 33.9 +1.8**
AAK PcP **PcP 19 54 20.9 -0.2**
AAK Ala-Archa 32.13 26 P **P 19 51 34.5 +2.4**
SNR=20
AAK Ala-Archa 32.13 26 P **P 19 51 34.0 +1.8**
comp=Z,144nm,1.1s,SNR=20
AAK Ala-Archa 32.13 26 P **P 19 51 33.9 +1.8**
comp=Z,15nm,1.0s,baz=196,slow=11
AAK PcP **PcP 19 54 20.9 -0.2**
comp=Z,3.0nm,0.8s,baz=74,slow=1.7,SNR=4.4
AAK Ala-Archa 32.13 26 P **P 19 51 33.9 +1.8**
AAK Ala-Archa 32.13 26 PcP **PcP 19 54 20.9 -0.2**
AFSR Af˙ar-Bala (A 32.18 325 *eP* **P 19 51 35.0 +2.4**
SOC Sochi 32.30 337*c iP* **P 19 51 33.0 -0.4**
SOC *e* 19 52 33.9
SOC *eS* S 19 56 37.8 -8.4
SOC *eSS* **SnSn 19 58 40.9 +2.4**
SOC pmax pmax
comp=Z,39nm,1.0s
SOC MLR MLR
comp=Z,1μm,12.0s
SOC Sochi 32.30 337 *i* P **P 19 51 33.0 -0.4**
comp=Z,39nm,1.0s
KBK Karagaybulak 32.34 26 P **P 19 51 36.6 +2.6**
SNR=17
FRU Bishkek 32.34 26 *eP* **P 19 51 36.0 +2.1**
FRU pmax pmax
comp=Z,180nm,2.0s
FRU Bishkek 32.34 26 *eP* **P 19 51 36.0 +2.1**
comp=Z,180nm,2.0s
ELL Elmali 32.35 318 *eP* **P 19 51 34.2 +0.1**
KIZT Kizilcal 32.48 323 *eP* **P 19 51 37.4 +2.2**
CHMS Chumysh 32.53 26 P **P 19 51 37.7 +2.1**
SNR=8.0
ISP Isparta 32.61 320 *eP* **P 19 51 38.0 +1.6**
ANTO Ankara 32.63 325 *eP* **P 19 51 37.9 +1.4**
ANTO Ankara 32.63 325 *eP* **P 19 51 37.7 +1.2**
ANTO pmax pmax
comp=Z,47nm,1.4s
ANTO Ankara 32.63 325 *eP* **P 19 51 37.7 +1.2**
comp=Z,47nm,1.4s
ANTO Ankara 32.63 325 *eP* **P 19 51 37.7 +1.2**
comp=Z,47nm,1.4s
DIKM Dikmen 32.66 330 *eP* **P 19 51 39.0 +2.4**
LOD Lodumlu 32.66 325 *eP* **P 19 51 39.0 +2.2**
CANT Cankiri 32.71 327 *eP* **P 19 51 39.2 +2.1**
BYBT Boyabat 32.76 329 *eP* **P 19 51 38.2 +0.7**
FETY Fethiye 32.82 317 *eP* P 19 51 41.4 +3.2
TKM2 Tokmak 2 32.83 27 *eP* **P 19 51 39.8 +1.4**
TKM2 pmax pmax
comp=Z,15nm,0.6s
TKM2 Tokmak 2 32.83 27 *eP* **P 19 51 39.8 +1.4**
comp=Z,15nm,0.6s
TKM2 Tokmak 2 32.83 27 P **P 19 51 40.3 +1.9**
SNR=12
TKM2 Tokmak 2 32.83 27 *eP* **P 19 51 39.8 +1.4**
comp=Z,15nm,0.6s
SHUT Suhut-Afyon 33.05 321 *eP* **P 19 51 42.2 +1.9**
SVRH Sivrihisar-ESK 33.06 323 *eP* **P 19 51 41.6 +1.3**
BZK Bozkurt 33.50 329 *eP* **P 19 51 45.7 +1.7**
YER Yerkesik 33.63 317 *eP* **P 19 51 46.6 +1.4**
DAT Datca 33.88 316 *eP* **P 19 51 48.0 +0.6**
MDUB Mudurnu 33.93 325 *eP* **P 19 51 49.4 +1.5**
OPO Ambohidratompo 34.06 196 P **P 19 51 50.3 +1.1**
OPO Ambohidratompo 34.06 196 P **P 19 51 50.3 +1.1**
comp=Z,6.2nm,1.1s,baz=346,slow=2.2,SNR=5.3
OPO LR LR 20 02 54.1
comp=Z,4μm,19.8s,baz=356,slow=32
OPO Ambohidratompo 34.06 196 P **P 19 51 50.3 +1.1**
AGT Agartala 34.21 69 *ex* **PP 19 53 09.0 +1.1**
ANN Anapa 34.21 336 *eP* **P 19 51 50.1 0.0**
ANN *e* 19 53 01.2
ANN *eS* S 19 57 07.5 -8.3
ANN *eSS* **SnSn 19 59 30.9 +6.1**
ANN pmax pmax
comp=Z,107nm,1.6s
ANN MLR MLR
comp=Z,1μm,18.0s
ANN Anapa 34.21 336 *eP* **P 19 51 50.1 0.0**
comp=Z,107nm,1.6s
TVSB Tavsanli 34.28 322 *eP* **P 19 51 53.1 +2.2**
GULT Gulveren 34.29 324 *eP* **P 19 51 52.8 +1.9**
CAVI Cavuskoy 34.53 323 *eP* **P 19 51 56.0 +3.1**
ABKAR Akbulak array 34.80 4 *eP* **P 19 51 54.8 -0.3**
comp=Z,18nm,0.9s
ABKAR Akbulak array 34.80 4 *eP* **P 19 51 54.8 -0.3**
comp=Z,18nm,0.9s
GEMT Gemlik 35.06 323 *eP* **P 19 51 57.2 -0.3**
SHL Shillong 35.08 66 *eP* **P 19 51 57.5 -0.6**
SHL *ex* x 19 57 35.0
SHL AMB AMB 20 04 55.7
comp=Z,5μm,16.9s
BALB Balikesir 35.36 321 *eP* **P 19 52 02.4 +2.4**
LSA Lhasa 35.48 59 P **P 19 52 01.5 -0.3**
LSA pmax pmax
comp=Z,60nm,0.8s
SIM Simferopol' 35.73 333 *eP* **P 19 52 04.7 +1.5**
SIM Simferopol' 35.73 333 *eP* **P 19 52 04.7 +1.5**
AKTK Aktyubinsk 35.88 2 P **P 19 52 05.4 +1.0**
AKTO Aktyubinsk 35.88 2 P **P 19 52 05.4 +1.0**
AKTO Aktyubinsk 35.88 2 P **P 19 52 05.4 +1.0**
AKTO Aktyubinsk 35.88 2 P **P 19 52 05.4 +1.0**
comp=Z,8.4nm,0.8s,baz=183,slow=10,SNR=11
AKTO LR LR 20 09 33.4
comp=Z,2μm,20.8s,baz=11,slow=41
AKTO Aktyubinsk 35.88 2 P **P 19 52 05.4 +1.0**
PRK Paraskevi 36.14 319 P **P 19 52 07.7 +1.0**
PRK Paraskevi 36.14 319 P **P 19 52 07.7 +1.0**
GELI Tayfur-Gelibol 36.68 320 *eP* **P 19 52 13.3 +2.0**
IMP Imphal 36.77 68 *eP* **P 19 52 15.0 +2.6**
DIDY Didyma 37.25 314 P **P 19 52 16.0 -0.4**
DIDY Didyma 37.25 314 P **P 19 52 16.0 -0.4**
EDRB Edirne 37.39 323 *eP* **P 19 52 19.2 +1.8**
PSN Preselentsi 37.75 326 *iP* **P 19 52 21.2 +0.8**
PSN Preselentsi 37.75 326 *iP* **P 19 52 21.2 +0.8**
JMB Yambol 37.86 323 *iP* P 19 52 24.7 +3.3
KDZ Kurdzhali 38.06 321 *iP* **P 19 52 25.0 +1.9**
KDZ Kurdzhali 38.06 321 *iP* **P 19 52 25.0 +1.9**
GUR Goura 38.07 314 P **P 19 52 23.5 +0.1**
GUR Goura 38.07 314 P **P 19 52 23.5 +0.1**
PAIG Paliouri 38.18 318 P **P 19 52 25.2 +1.1**
PAIG Paliouri 38.18 318 P **P 19 52 25.2 +1.1**
VRHR Novokhopersk 38.40 345 *eP* **P 19 52 26.2 +0.4**
VRHR *e*PP pP 19 52 37.2 +5.5
VRHR *eS* S 19 58 12.7 -7.0
VRHR pmax pmax
comp=N,40nm,0.7s
VRHR pmax pmax
comp=Z,30nm,0.7s
VRHR pmax pmax
comp=E,30nm,1.0s
VRHR smax smax
comp=E,400nm,3.1s
VRHR smax smax
comp=Z,270nm,5.6s
VRHR smax smax
comp=N,100nm,1.9s
VRHR MLR MLR
comp=Z,2μm,22.0s
VRHR MLR MLR
comp=N,330nm,16.0s
VRHR MLR MLR
comp=E,2μm,18.0s
VRHR Novokhopersk 38.40 345 *eP* **P 19 52 26.2 +0.4**
KALE Kalithea 38.43 315 P **P 19 52 26.8 +0.5**
KALE Kalithea 38.43 315 P **P 19 52 26.8 +0.5**
TLCR 38.44 328⇓ P **P 19 52 27.3 +1.1**
TLCR 38.44 328⇓ *iP* **P 19 52 27.3 +1.1**
TLCR 38.44 328 P **P 19 52 27.3 +1.1**
RZN Rozhen 38.51 321 *iP* **P 19 52 28.5 +1.4**
RZN Rozhen 38.51 321 *iP* **P 19 52 28.5 +1.4**
PLD Plovdiv 38.76 321 P **P 19 52 29.9 +1.0**
PLD Plovdiv 38.76 321 *iP* **P 19 52 30.1 +1.2**
PLD Plovdiv 38.76 321 P **P 19 52 29.9 +1.0**
CFR Carcaliu 38.78 328⇑ P **P 19 52 30.0 +0.9**
CFR Carcaliu 38.78 328⇑ *iP* **P 19 52 30.0 +0.9**
CFR Carcaliu 38.78 328 P **P 19 52 30.0 +0.9**
MK31 Makanchi Array 38.84 29 *eP* **P 19 52 30.1 +0.5**
MK31 *e* 19 54 40.3
MK31 Makanchi Array 38.84 29 *eP* **P 19 52 30.1 +0.5**
MK31 *eP*cP **PcP 19 54 40.3 -0.2**
MK31 Makanchi Array 38.84 29 *eP* **P 19 52 30.1 +0.5**
MKAR Makanchi Array 38.84 29*c eP* **P 19 52 30.7 +1.1**
MKAR pmax pmax
comp=Z,4.0nm,0.8s
MKAR Makanchi Array 38.84 29 P **P 19 52 30.8 +1.1**
MKAR PcP **PcP 19 54 41.1 +0.5**
MKAR Makanchi Array 38.84 29 P **P 19 52 30.8 +1.1**
comp=Z,3.9nm,0.8s,baz=218,slow=7.2,SNR=23
MKAR PcP **PcP 19 54 41.1 +0.5**
comp=Z,3.0nm,0.8s,baz=243,slow=1.3,SNR=6.7
MKAR Makanchi Array 38.84 29 *eP* **P 19 52 30.7 +1.1**
comp=Z,4.0nm,0.8s
NVR Nevrokopi 38.84 320 P **P 19 52 29.6 -0.1**
NVR Nevrokopi 38.84 320 P **P 19 52 29.6 -0.1**

SRS Serrai 38.88 319 P **P** **19 52 31.1 +1.1**
SRS Serrai 38.88 319 P **P** **19 52 31.1 +1.1**
VORD Divnogorie 38.91 343 *e*P **P** **19 52 29.5 -0.5**
VORD *e**PP **pP** **19 52 40.4 +4.5**
VORD *e*S S 19 58 17.2 -10
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD pmax pmax
comp=N,30nm,0.8s
VORD pmax pmax
comp=E,20nm,0.7s
VORD smax smax
comp=E,300nm,5.8s
VORD smax smax
comp=Z,480nm,6.3s
VORD smax smax
comp=N,260nm,3.6s
VORD MLR MLR
comp=Z,940nm,16.0s
VORD MLR MLR
comp=N,800nm,18.0s
VORD MLR MLR
comp=E,750nm,17.0s
VORD Divnogorie 38.91 343 *e*P **P** **19 52 29.5 -0.5**
comp=E,30nm,0.8s
PVL Pavlikeni 39.05 323 *i* P **P** **19 52 32.5 +1.2**
PVL Pavlikeni 39.05 323 *i* P **P** **19 52 32.5 +1.2**
MMB Musomiste 39.06 320 *i* P **P** **19 52 32.5 +1.0**
MMB Musomiste 39.06 320 *i* P **P** **19 52 32.5 +1.0**
VSR Storozhevoye 39.17 343 *e*P **P** **19 52 32.0 -0.2**
VSR *e*PP **pP** **19 52 42.5 +4.4**
VSR *e*S S 19 58 23.0 -8.2
VSR pmax pmax
comp=Z,50nm,1.2s
VSR pmax pmax
comp=N,60nm,1.1s
VSR pmax pmax
comp=E,30nm,1.1s
VSR smax smax
comp=E,210nm,3.8s
VSR smax smax
comp=Z,90nm,3.0s
VSR smax smax
comp=N,120nm,2.1s
VSR MLR MLR
comp=Z,970nm,17.0s
VSR MLR MLR
comp=N,700nm,20.0s
VSR MLR MLR
comp=E,2µm,18.0s
VSR Storozhevoye 39.17 343 *e*P **P** **19 52 32.0 -0.2**
comp=E,50nm,1.2s
PGOR Pogoanele 39.21 327⇑ *i*P **P** **19 52 34.3 +1.7**
PGOR Pogoanele 39.21 327⇑ *i*P **P** **19 52 34.3 +1.7**
PGB Panagyurishte 39.34 322 *i* P **P** **19 52 34.8 +0.9**
PGB Panagyurishte 39.34 322 *i* P **P** **19 52 34.8 +0.9**
KNT Kendrikon 39.35 319 P **P** **19 52 34.3 +0.4**
KNT Kendrikon 39.35 319 P **P** **19 52 34.3 +0.4**
BSI Banda Aceh 39.35 99 P **P** **19 52 35.8 +1.5**
comp=E,69nm,1.5s,comp=E,978nm
GRER 39.52 327⇑ *i*P **P** **19 52 38.2 +2.9**
ISR Istrita 39.58 327 ⇓ *i*P **P** **19 52 37.4 +1.5**
ISR Istrita 39.58 327 ⇓ *i*P **P** **19 52 37.4 +1.5**
ISR Istrita 39.58 327 P **P** **19 52 37.4 +1.5**
KKB Krupnik 39.62 320 *i* P **P** **19 52 36.8 +0.7**
KKB Krupnik 39.62 320 *i* P **P** **19 52 36.8 +0.7**
PETR 39.62 328⇑ *i*P **P** **19 52 37.5 +1.4**
PETR 39.62 328⇑ *i*P **P** **19 52 37.5 +1.4**
WMQ Urumqi 39.64 36 P **P** **19 52 38.0 +1.6**
WMQ sP **sP** **19 52 45.0 +0.4**
WMQ PP **PnPn** **19 54 13.0 +2.4**
WMQ PcP **PcP** **19 54 45.0 +1.8**
WMQ ScP **ScP** **19 58 32.0 +0.8**
WMQ S **S** **19 58 41.0 +2.3**
WMQ ScS **ScS** **20 02 43.0 -0.6**
WMQ pmax pmax
comp=Z,46nm,1.0s
WMQ pmax pmax
comp=Z,440nm,5.0s
WMQ LR LR
comp=N,1µm,16.0s
WMQ LR LR
comp=E,1µm,16.0s
WMQ LR LR
comp=Z,1µm,16.0s
VAY Valandovo 39.64 319 *e*P **P** **19 52 36.8 +0.5**
VAY Valandovo 39.64 319 *e*P **P** **19 52 37.3 +1.0**
KIS Kishinev 39.72 330 *e*P **P** **19 52 36.0 -0.9**
KIS *i* 19 52 42.5
KIS *e* 19 54 11.0
KIS *e*PPP PPP 19 54 46.0
KIS *e*S S 19 58 30.0 -10
KIS *e*SSS SSS 20 01 33.0
KIS MLR MLR
comp=Z,1µm,16.0s
KIS MLR MLR
comp=N,1µm,18.0s
KIS MLR MLR
comp=E,1µm,16.0s
KIS MLR MLR
comp=Z,1µm,16.0s
KIS Kishinev 39.72 330 *e*P **P** **19 52 36.0 -0.9**
KIS *e*pP pP 19 53 08.0 +25
KIS Kishinev 39.72 330 *e*PP PP 19 54 11.0 +2.8
KIS Kishinev 39.72 330 *e*PPP PPP 19 54 46.0
KIS *e*S S 19 58 30.0 -10
KIS Kishinev 39.72 330 *e*PS 19 59 05.0
KIS *e*SS SS 20 01 06.0 -29
KIS *e*SSS SSS 20 01 33.0
KIS *e*L L 20 05 30.0
KIS LRM MLR 20 13 22.0
comp=Z,1µm,16.0s
KIS Kishinev 39.72 330 *e*P **P** **19 52 36.0 -0.9**
VTS Vitosha 39.95 321 P **P** **19 52 40.0 +1.0**
VTS Vitosha 39.95 321⇑ P **P** **19 52 40.4 +1.4**
VTS Vitosha 39.95 321⇑ *i*P **P** **19 52 40.4 +1.4**
VTS Vitosha 39.95 321 *i*P **P** **19 52 40.0 +1.0**
VTS Vitosha 39.95 321 P **P** **19 52 40.4 +1.4**
VRI Vrincioaia 39.98 328 ⇓ P **P** **19 52 41.1 +2.0**
VRI Vrincioaia 39.98 328 ⇓ *i*P **P** **19 52 41.1 +2.0**
VRI Vrincioaia 39.98 328 P **P** **19 52 41.1 +2.0**
PLOR Plostina 40.01 327 ⇓ P **P** **19 52 41.2 +1.8**
PLOR Plostina 40.01 327 ⇓ *i*P **P** **19 52 41.2 +1.8**
PLOR Plostina 40.01 327 P **P** **19 52 41.2 +1.8**
BVAR Borovoye Array 40.04 13 P **P** **19 52 40.4 +0.9**
BVAR 19 54 44.7
BVAR Borovoye Array 40.04 13 P **P** **19 52 40.4 +0.9**
BVAR PcP **PcP** **19 54 44.7 +0.5**
BVAR Borovoye Array 40.04 13 P **P** **19 52 40.4 +0.9**
comp=Z,1.8nm,0.8s,baz=203,slow=6.4,SNR=7.3
BVAR PcP **PcP** **19 54 44.7 +0.5**
comp=Z,9.6nm,0.9s,baz=206,slow=3.4,SNR=13
BVAR LR LR 20 11 37.1
comp=Z,1µm,19.5s,baz=240,slow=40
BVAR Borovoye Array 40.04 13 P **P** **19 52 40.4 +0.9**
BVAR Borovoye Array 40.04 13 PcP **PcP** **19 54 44.7 +0.5**
BRVK Borovoye 40.05 13*c i*P **P** **19 52 40.0 +0.5**
BRVK pmax pmax
comp=Z,51nm,3.4s
BRVK Borovoye 40.05 13 *e*P **P** **19 52 39.5 0.0**
comp=Z,82nm,1.8s
BRVK Borovoye 40.05 13 P **P** **19 52 40.5 +1.0**
comp=Z,46nm,1.8s,SNR=10.0
BRVK Borovoye 40.05 13 *e*P **P** **19 52 39.5 0.0**
comp=Z,82nm,1.8s
HUMR Humele 40.06 325 ⇓ *i*P **P** **19 52 41.6 +1.8**
HUMR Humele 40.06 325 ⇓ *i*P **P** **19 52 41.6 +1.8**
FNA Florina 40.13 318 P **P** **19 52 40.4 -0.1**
FNA Florina 40.13 318 P **P** **19 52 40.4 -0.1**
MLR Muntele Rosu 40.14 327 P **P** **19 52 41.3 +0.7**
MLR Muntele Rosu 40.14 327⇑ *i*P **P** **19 52 42.6 +2.0**
MLR Muntele Rosu 40.14 327 P **P** **19 52 41.3 +0.7**
comp=Z,4.9nm,0.8s,baz=162,slow=11
MLR Muntele Rosu 40.14 327 P **P** **19 52 41.3 +0.7**
KURBB Kurchatov Arra 40.29 22 P **P** **19 52 42.6 +1.0**
comp=Z,12nm,1.1s,baz=220,slow=8.3,SNR=38
KURBB PcP **PcP** **19 54 44.8 -0.2**
comp=Z,3.9nm,0.8s,baz=231,slow=3.3,SNR=11
KURBB LR LR 20 10 30.9
comp=Z,1µm,21.5s,baz=220,slow=38
KURK Kurchatov 40.40 22*c i*P **P** **19 52 43.2 +0.8**
KURK pmax pmax
comp=Z,20nm,1.6s
KURK Kurchatov 40.40 22 *e*P **P** **19 52 41.7 -0.7**
comp=Z,98nm,1.6s
KURK PcP **PcP** **19 54 44.8 -0.5**
KURK Kurchatov 40.40 22 P **P** **19 52 43.5 +1.1**
comp=Z,89nm,1.3s,SNR=7.0
KURK Kurchatov 40.40 22 *e*P **P** **19 52 41.7 -0.7**
comp=Z,98nm,1.6s
TESR 40.45 328⇑ *i*P **P** **19 52 43.9 +0.9**
TESR 40.45 328⇑ *i*P **P** **19 52 43.9 +0.9**
VOIR 40.59 326⇑ *i*P **P** **19 52 45.2 +0.9**
VOIR 40.59 326⇑ *i*P **P** **19 52 45.2 +0.9**
VOIR 40.59 326 P **P** **19 52 45.2 +0.9**
LSZ Lusaka 40.60 224 *e*P **P** **19 52 45.3 +0.6**
LSZ Lusaka 40.60 224 P **P** **19 52 44.8 +0.2**
LSZ Lusaka 40.60 224 P **P** **19 52 46.4 +1.7**
SNR=9.0
LSZ Lusaka 40.60 224 P **P** **19 52 44.8 +0.2**
comp=Z,13nm,1.0s,baz=49,slow=11,SNR=12
LSZ LR LR 20 11 37.3
comp=Z,1µm,19.6s,baz=130,slow=39
LSZ Lusaka 40.60 224 P **P** **19 52 46.4 +1.7**
SNR=9.0
SKO Skopje 40.70 319 *e*P **P** **19 52 46.1 +0.9**
SKO Skopje 40.70 319 *e*P **P** **19 52 46.6 +1.4**
DOPR Dopca 40.75 327 ⇓ *i*P **P** **19 52 46.7 +1.2**
DOPR Dopca 40.75 327 ⇓ *i*P **P** **19 52 46.7 +1.2**
BARS Barje 40.92 320 *e*P **P** **19 52 47.5 +0.5**
CHTO Chiang Mai 40.99 78 *e*P **P** **19 52 48.3 +0.5**
CHTO pmax pmax
comp=Z,152nm,2.3s
CHTO Chiang Mai 40.99 78 *e*P **P** **19 52 48.3 +0.5**
comp=Z,152nm,2.3s
CHTO Chiang Mai 40.99 78 P **P** **19 52 48.8 +1.0**
SNR=5.7
CHTO Chiang Mai 40.99 78 P **P** **19 52 48.5 +0.7**
comp=Z,24nm,2.4s,comp=Z,874nm
CHTO Chiang Mai 40.99 78 P **P** **19 52 48.8 +1.0**
SNR=5.7
CM31 Chiang Mai Arr 40.99 78 *e*P **P** **19 52 48.9 +1.0**
comp=Z,31nn,1.3s
CM31 Chiang Mai Arr 40.99 78 *e*P **P** **19 52 48.8 +1.0**
comp=Z,31nn,1.3s
CMAR Chiang Mai Arr 40.99 78 P **P** **19 52 48.9 +1.0**
CMAR PcP **PcP** **19 54 48.2 +0.3**
comp=Z,19nn,1.1s,baz=275,slow=8.7,SNR=37
CMAR PcP **PcP** **19 54 48.2 +0.3**
comp=Z,2.2nn,0.8s,baz=269,slow=4.8,SNR=7.5
CMAR LR LR 20 09 00.8
comp=Z,360nn,21.9s,baz=80,slow=35
CMAR Chiang Mai Arr 40.99 78 P **P** **19 52 48.9 +1.0**
CMMT Chiang Mai 40.99 78 P **P** **19 52 48.8 +0.9**
comp=Z,21nn,2.4s,comp=Z,836nn
LOT Lotru 41.30 325 ⇓ *i*P **P** **19 52 51.0 +0.8**
LOT Lotru 41.30 325 ⇓ *i*P **P** **19 52 51.0 +0.8**
MDB Medias 41.40 326⇑ P **P** **19 52 50.8 0.0**
MDB Medias 41.40 326⇑ *i*P **P** **19 52 50.8 0.0**
MDB Medias 41.40 326 P **P** **19 52 50.8 0.0**
SELS Selova 41.57 321 *e*P **P** **19 52 51.8 -0.5**
GZR Gura Zlata 41.83 324 ⇓ P **P** **19 52 55.5 +1.1**
GZR Gura Zlata 41.83 324 ⇓ *i*P **P** **19 52 55.5 +1.1**
GZR Gura Zlata 41.83 324 P **P** **19 52 55.5 +1.1**
ARU Arti 41.90 2 P **P** **19 52 56.7 +2.0**
ARU 19 54 35.4
ARU *e* 19 54 50.6
ARU PPP PPP 19 55 05.2
ARU S S 19 59 05.9 -6.0
ARU SS SS 20 02 11.2 -7.4
ARU Arti 41.90 2 P **P** **19 52 56.7 +2.0**
ARU Arti 41.90 2 *e*PcP **PcP** **19 54 50.6 +0.5**
BURAR Bucovina Array 41.92 328⇑ *i*P **P** **19 52 56.6 +1.4**
BURAR Bucovina Array 41.92 328⇑ *i*P **P** **19 52 56.6 +1.4**
BUR08 Bucovina Ar. S 41.95 328 *e*P **P** **19 52 56.2 +0.8**
BUR08 Bucovina Ar. S 41.95 328 *e*P **P** **19 52 56.2 +0.8**
GRUS Gruza 42.18 321 *e*P **P** **19 52 57.3 +0.1**
AK02 Malin Array Si 42.23 334 *e*P **P** **19 52 56.4 -1.1**
AK02 Malin Array Si 42.23 334 *e*P **P** **19 52 56.4 -1.1**
AK01 Malin Array Si 42.26 334 *e*P **P** **19 52 57.3 -0.4**
AK01 Malin Array Si 42.26 334 *e*P **P** **19 52 57.3 -0.4**
AKASG Malin Array Be 42.26 334*ce*P **P** **19 52 57.7 0.0**
AKASG pmax pmax
comp=Z,8.0nm,0.8s
AKASG Malin Array Be 42.26 334 P **P** **19 52 57.8 0.0**
AKASG PP **PP** **19 54 36.6 +0.9**
AKASG Malin Array Be 42.26 334 P **P** **19 52 57.8 0.0**
comp=Z,7.7nm,0.8s,baz=135,slow=7.9,SNR=15
AKASG PP **PP** **19 54 36.6 +0.9**
comp=Z,5.2nm,0.9s,baz=138,slow=11,SNR=7.0
AKASG LR LR 20 13 47.9
comp=Z,1µm,20.5s,baz=120,slow=41
AKASG Malin Array Be 42.26 334 *e*P **P** **19 52 57.7 0.0**
comp=Z,8.0nm,0.8s
AKASG Malin Array Be 42.26 334 PP PP 19 54 36.6 +0.9
KIEV Kiev 42.26 334 *e*P **P** **19 52 57.5 -0.2**
KIEV pmax pmax
comp=Z,60nm,1.1s
KIEV Kiev 42.26 334 *e*P **P** **19 52 57.5 -0.2**
comp=Z,60nm,1.1s
KIEV Kiev 42.26 334 *e*P **P** **19 52 57.5 -0.2**
comp=Z,60nm,1.1s
SVE Sverdlovsk 42.39 4 *e*P **P** **19 52 59.1 +0.4**
SVE *e* 19 54 48.1
SVE *e*S **S** **19 59 15.7 -3.4**
SVE pmax pmax
comp=Z,40nm,1.7s
SVE MLR MLR
comp=Z,1µm,20.0s
SVE Sverdlovsk 42.39 4 *e*P **P** **19 52 59.1 +0.4**
comp=Z,40nm,1.7s
TIP Timpagrande 42.55 313 *e*P **P** **19 53 01.2 +0.8**
comp=Z,54nn,1.2s
TIP Timpagrande 42.55 313 *e*P **P** **19 53 01.2 +0.8**
comp=Z,54nn,1.2s
BZS Buzias 42.62 324⇑ P **P** **19 53 01.3 +0.5**
BZS Buzias 42.62 324⇑ *i*P **P** **19 53 01.3 +0.5**
BZS Buzias 42.62 324 P **P** **19 53 01.3 +0.5**
DRGR 42.71 326 ⇓ P **P** **19 53 03.6 +2.0**
DRGR 42.71 326 ⇓ *i*P **P** **19 53 03.6 +2.0**
DRGR 42.71 326 P **P** **19 53 03.6 +2.0**
CEL Celeste 42.80 311 *e*P **P** **19 53 03.5 +1.0**
comp=Z,30nn,0.9s
CEL Celeste 42.80 311 *e*P **P** **19 53 03.5 +1.0**
comp=Z,30nn,0.9s
BMR Baia Mare 42.84 327⇑ P **P** **19 53 02.3 -0.3**
BMR Baia Mare 42.84 327⇑ *i*P **P** **19 53 02.3 -0.3**
BMR Baia Mare 42.84 327 P **P** **19 53 02.3 -0.3**
BBLS Lazići 42.97 320 *e*P **P** **19 53 04.0 +0.2**
OBN Obninsk 43.35 344⇑ *i*P **P** **19 53 06.7 +0.2**
OBN *i* 19 53 17.5
OBN *e* 19 54 52.3
OBN *i*S **S** **19 59 28.0 -5.2**
OBN pmax pmax
comp=Z,23nn,1.0s
OBN MLR MLR
comp=Z,800nm,17.0s
OBN Obninsk 43.35 344 *i* P **P** **19 53 06.7 +0.2**
comp=Z,23nn,1.0s
PSI Prapat 43.59 101 P **P** **19 53 09.7 +0.5**
PSI Prapat 43.59 101 P **P** **19 53 10.6 +1.4**
comp=Z,19nn,1.2s
PSI Prapat 43.59 101 P **P** **19 53 09.7 +0.5**
comp=Z,7.8nn,0.8s,baz=252,slow=7.8,SNR=6.5
MOS Moscow 43.63 345 *e*P **P** **19 53 10.1 +1.4**
MOS *e* 19 54 55.4
MOS pmax pmax
comp=Z,107nn,1.5s
MOS MLR MLR
comp=Z,1µm,18.0s
MOS Moscow 43.63 345 *e*P **P** **19 53 10.1 +1.4**
comp=Z,1µm,18.0s
MOS Moscow 43.63 345 *e*PcP **PcP** **19 54 55.4 -0.5**
TRPA Tarpa 43.63 327 ⇓ *i*P **P** **19 53 09.7 +0.8**
TRPA Tarpa 43.63 327⇓ *e*P **P** **19 53 10.1 +1.2**
TRPA Tarpa 43.63 327 ⇓ *i*P **P** **19 53 09.7 +0.8**
UZH Uzhgorod 44.07 328 *e*P **P** **19 53 12.2 -0.2**
UZH *e* 19 53 23.1
UZH *i*S **S** **19 59 42.0 -2.0**
UZH *e*SS **SS** **20 03 03.0 +1.5**
UZH Uzhgorod 44.07 328 *e*P **P** **19 53 12.2 -0.2**
UZH *i*S **S** **19 59 42.0 -2.0**
KOLS Kolonicke sedl 44.27 328 *e*P **P** **19 53 15.5 +1.4**
KOLS *e* 19 53 26.8
KOLS pmax pmax
comp=Z,85nn,1.4s
KOLS Kolonicke sedl 44.27 328 *e*P **P** **19 53 15.5 +1.4**
KOLS *e*pP **pP** **19 53 21.6 +1.6**
KOLS *e* 19 53 26.8
KOLS Kolonicke sedl 44.27 328 *e*P **P** **19 53 15.5 +1.4**
comp=Z,85nm,1.4s
PKSN Nyarlorinc 44.35 324⇓ *e*P **P** **19 53 16.1 +1.4**
PKSN Nyarlorinc 44.35 324⇓ *e*P **P** **19 53 16.1 +1.4**
KWP Kalwaria Pacla 44.50 329⇑ P **P** **19 53 16.6 +0.7**
KWP Kalwaria Pacla 44.50 329 *e*P **P** **19 53 15.8 -0.1**
comp=Z,46nm,1.1s
KWP Kalwaria Pacla 44.50 329⇑ *i*P **P** **19 53 16.6 +0.7**
KWP Kalwaria Pacla 44.50 329 *e*P **P** **19 53 16.6 +0.7**
KWP *e* 19 53 22.6
KWP Kalwaria Pacla 44.50 329 *e*P **P** **19 53 15.8 -0.1**
comp=Z,46nm,1.1s
CRVS Cervenica-Dubn 44.67 328 *e*P **P** **19 53 17.6 +0.3**
CRVS *e* 19 53 28.6
CRVS pmax pmax
comp=Z,73nm,1.7s
CRVS Cervenica-Dubn 44.67 328 *e*P **P** **19 53 17.6 +0.3**
CRVS *e*pP **pP** **19 53 23.4 +0.2**
CRVS *e* 19 53 28.6
CRVS Cervenica-Dubn 44.67 328 *e*P **P** **19 53 17.6 +0.3**
comp=Z,73nm,1.7s
KMI Kunming 44.74 69 P **P** **19 53 19.1 +0.6**
KMI pP **pP** **19 53 22.4 -2.0**
KMI sP **sP** **19 53 23.6 -3.2**
KMI PP **PP** **19 55 05.4 +2.4**
KMI S **S** **19 59 56.3 +1.4**
KMI pmax pmax
comp=Z,12nm,1.2s
KMI pmax pmax
comp=Z,220nm,3.9s
KMI LR LR
comp=N,570nm,15.8s
KMI LR LR
comp=E,860nm,23.7s
KMI LR LR
comp=Z,1µm,19.7s
PKS7 Kunszentmiklos 44.83 324⇑ *e*P **P** **19 53 19.6 +1.1**
PKS7 Kunszentmiklos 44.83 324⇑ *e*P **P** **19 53 19.6 +1.1**
PSZ Piszkesteto 44.92 326 *e*P **P** **19 53 18.0 -1.3**
PSZ pmax pmax
comp=Z,77nm,1.7s
PSZ Piszkesteto 44.92 326 *e*P **P** **19 53 18.0 -1.3**
comp=Z,77nm,1.7s
PSZ Piszkesteto 44.92 326⇑ *e*P **P** **19 53 19.8 +0.5**
PSZ Piszkesteto 44.92 326 *e*P **P** **19 53 18.0 -1.3**
comp=Z,77nm,1.7s
SOKR Solikamsk 45.01 0 *e*P P 19 53 23.9 +4.2
SOKR S **S** **20 00 00.6 +3.3**
SOKR pmax pmax
comp=Z,20nm,1.1s
SOKR MLR MLR
comp=Z,2µm,25.0s
PKS9 Tamasi 45.09 323⇑ *e*P **P** **19 53 21.6 +1.0**
PKS9 Tamasi 45.09 323⇑ *e*P **P** **19 53 21.6 +1.0**
BUD Budapest 45.15 325⇑ *e*P **P** **19 53 22.2 +1.1**
BUD Budapest 45.15 325⇑ *e*P **P** **19 53 22.2 +1.1**
ZAA0 Zalesovo Array 45.28 23 *e*P **P** **19 53 21.8 -0.2**
ZAA0 Zalesovo Array 45.28 23 *e*P **P** **19 53 21.8 -0.2**
ZALV Zalesovo Beam 45.28 23 P **P** **19 53 22.2 +0.2**
ZALV Zalesovo Beam 45.28 23 P **P** **19 53 22.1 +0.2**
ZALV Zalesovo Beam 45.28 23 P **P** **19 53 22.1 +0.2**
comp=Z,12nm,0.8s,baz=228,slow=7.9,SNR=42
ZALV Zalesovo Beam 45.28 23 P **P** **19 53 22.1 +0.2**
NVS Novosibirsk 45.38 22⇑ *i*P **P** **19 53 23.2 +0.4**
NVS *i* PPP PPP 19 55 51.0
NVS pmax pmax
comp=N,85nm,1.7s
NVS pmax pmax
comp=E,27nm,1.7s
NVS pmax pmax
comp=Z,173nm,1.7s
NVS Novosibirsk 45.38 22 *i* P **P** **19 53 23.2 +0.4**
GTA Gaotai 45.45 48 *e*P **P** **19 53 24.8 +1.0**
GTA pP **pP** **19 53 28.8 -0.9**
GTA sP **sP** **19 53 31.1 -1.0**
GTA PP **PP** **19 55 13.6 +3.4**
GTA S **S** **20 00 08.3 +3.7**
GTA SS **SS** **20 03 25.4 -2.7**
GTA pmax pmax
comp=Z,4.0nm,1.7s
GTA pmax pmax
comp=Z,250nm,6.6s
GTA LR LR
comp=N,600nm,16.2s
GTA LR LR
comp=E,2µm,21.4s
GTA LR LR
comp=Z,2µm,22.8s
PKSG 45.46 324⇑ *e*P **P** **19 53 24.3 +0.8**
PKSG 45.46 324⇑ *e*P **P** **19 53 24.3 +0.8**
NIE Niedzica 45.58 327 *e*P **P** **19 53 24.0 -0.6**
NIE Niedzica 45.58 327 *e*P **P** **19 53 24.0 -0.6**
NIE Niedzica 45.58 327 *e*P **P** **19 53 24.0 -0.6**
PKST T‴s 45.59 324⇑ *e*P **P** **19 53 25.1 +0.5**
PKST T‴s 45.59 324⇑ *e*P **P** **19 53 25.1 +0.5**
MICGM Minsk 45.68 337 *e*P **P** **19 53 23.0 -2.2**
MNK Minsk 45.70 337 *e*P **P** **19 53 23.0 -2.3**
MNK *e* 19 55 16.0
MNK Minsk 45.70 337 *e*P **P** **19 53 23.0 -2.3**
VYHS Vyhne 45.83 326 *e*P **P** **19 53 26.8 +0.3**
VYHS *e* 19 53 37.8
VYHS pmax pmax
comp=Z,32nm,1.5s
VYHS Vyhne 45.83 326 *e*P **P** **19 53 26.8 +0.3**
VYHS *e*pP **pP** **19 53 32.8 +0.4**
VYHS *e* 19 53 37.8
VYHS Vyhne 45.83 326 *e*P **P** **19 53 26.8 +0.3**
comp=Z,32nm,1.5s
BEHE Becsehely 45.91 322⇑ *e*P **P** **19 53 28.5 +1.4**
BEHE Becsehely 45.91 322⇑ *e*P **P** **19 53 28.5 +1.4**
AQU L'Aquila 46.17 316 P **P** **19 53 28.2 -1.1**
comp=Z,45nn,1.1s
AQU L'Aquila 46.17 316 P **P** **19 53 28.2 -1.1**
comp=Z,45nn,1.1s
KOGS Kog 46.21 322 *e*P **P** **19 53 30.0 +0.5**
KOGS *i* 19 53 41.6
KOGS *e*S **S** **20 00 17.5 +2.5**
KOGS Kog 46.21 322 P **P** **19 53 30.0 +0.5**
OJC Ojcow 46.33 328 *e*P **P** **19 53 30.5 +0.1**
OJC *e**PP **pP** **19 53 36.2 -0.2**
OJC *e*S **S** **20 00 19.1 +2.4**
OJC MLR MLR
comp=Z,500nm,19.2s
OJC Ojcow 46.33 328 *e*P **P** **19 53 30.5 +0.1**
OJC *e*pP **pP** **19 53 36.2 -0.2**
OJC *e*S **S** **20 00 19.1 +2.4**
OJC L L 20 16 13.3
comp=Z,500nm,19.2s
OJC Ojcow 46.33 328 *e*P **P** **19 53 30.5 +0.1**
OJC *e*pP **pP** **19 53 36.2 -0.2**
BOJS Bojanci 46.35 320 *e*P **P** **19 53 31.0 +0.3**
BOJS *e*S **S** **20 00 20.0 +2.9**
BOJS *e*SS SS 20 03 58.5 +16
BOJS Bojanci 46.35 320 *e*P **P** **19 53 31.0 +0.3**
CD2 Chengdu 46.35 61 P **P** **19 53 31.6 +0.6**
CD2 pP **pP** **19 53 36.1 -0.8**
CD2 sP **sP** **19 53 38.6 -0.7**
CD2 PcP **PcP** **19 55 06.8 +0.8**
CD2 PP **PP** **19 55 20.6 +0.7**
CD2 PcS **PcS** **19 59 00.1 -0.6**
CD2 S **S** **20 00 18.6 +0.9**
CD2 ScS **ScS** **20 03 24.4 -1.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.6s
CD2 LR LR
comp=N,790nm,19.6s
CD2 LR LR
comp=E,1µm,21.5s
CD2 LR LR
comp=Z,1µm,20.6s
NACGM Naroch 46.40 337 *e*P **P** **19 53 29.0 -1.8**
NACGM Naroch 46.40 337 *e*P **P** **19 53 29.0 -1.8**
NACGM Naroch 46.40 337 *e*SS SS 20 03 43.0 -0.3
ZST Bratislava 46.63 324 *e*P P 19 53 37.9 +5.2
ZST *e* 19 53 43.1
ZST Bratislava 46.63 324 *e*P P 19 53 37.8 +5.1
ZST *e* 19 53 43.0
SOP Sopron 46.66 324⇑ *e*P **P** **19 53 33.7 +0.7**
SOP Sopron 46.66 324⇑ *e*P **P** **19 53 33.7 +0.7**

BEL Belsk 46.84 330 *e*P **P** **19 53 34.7 +0.4**
BEL *e* 19 53 40.8
BEL *e* 19 53 46.7
BEL Belsk 46.84 330 *e*P **P** **19 53 34.8 +0.4**
IIGN Ignalina 46.95 337 *e*P **P** **19 53 36.1 +0.9**
IIGN AMB AMB 19 53 42.7
comp=Z,38nm,1.1s
IIGN Ignalina 46.95 337 *e*P **P** **19 53 36.1 +0.9**
comp=Z,38nm,1.1s,SNR=24
OKC Ostrava-Krasne 46.97 327 *e*P **P** **19 53 35.3 -0.1**
OKC *e* 19 53 46.1
OKC *e*S **S** **20 00 28.0 +2.2**
OKC MLR MLR
comp=Z,700nm,18.6s
OKC Ostrava-Krasne 46.97 327⇑ *e*P **P** **19 53 35.3 -0.1**
OKC *e*pP **pP** **19 53 41.6 +0.2**
OKC *e*x x 19 53 46.1
OKC *e*S **S** **20 00 28.0 +2.2**
OKC AMS AMS 20 16 40.0
comp=Z,700nm,18.6s
OKC Ostrava-Krasne 46.97 327 *e*P **P** **19 53 35.3 -0.1**
KEST Kesra 46.99 306 *e*P **P** **19 53 36.7 +0.8**
KEST Kesra 46.99 306 P **P** **19 53 36.6 +0.8**
comp=Z,5.8nm,1.0s,baz=226,slow=2.1,SNR=8.1
KEST LR LR 20 15 12.8
comp=Z,218nm,19.4s,baz=319,slow=38
KEST Kesra 46.99 306 *e*P **P** **19 53 36.7 +0.8**
ARSA Arzberg 47.05 323⇓ *i*P **P** **19 53 36.4 +0.3**
comp=Z,53nm,1.6s,SNR=7.7
ARSA Arzberg 47.05 323⇓ *i*P **P** **19 53 36.4 +0.3**
comp=Z,53nm,1.6s
ARSA Arzberg 47.05 323⇓ *i*P **P** **19 53 36.4 +0.3**
comp=Z,53nm,1.6s
SOKA Soboth 47.05 322⇓ *i*P **P** **19 53 36.4 +0.2**
comp=Z,41nm,1.4s
SOKA Soboth 47.05 322⇓ *i*P **P** **19 53 36.4 +0.2**
comp=Z,41nm,1.4s
SOKA Soboth 47.05 322⇓ *i*P **P** **19 53 36.4 +0.2**
comp=Z,41nm,1.4s
LJU Ljubljana 47.06 321 *i* P **P** **19 53 36.8 +0.7**
LJU *i* 19 53 48.2
LJU *e*S **S** **20 00 28.8 +1.6**
LJU *e*SS SS 20 04 07.9 +14
LJU Ljubljana 47.06 321 P **P** **19 53 36.8 +0.7**
ISAL Salakas 47.16 337 *e*P **P** **19 53 37.5 +0.8**
ISAL AMB AMB 19 53 44.1
comp=Z,27nm,1.2s
ISAL Salakas 47.16 337 *e*P **P** **19 53 37.5 +0.8**
comp=Z,27nm,1.2s,SNR=24
CONA Conrad Observa 47.19 323⇓ *i*P **P** **19 53 37.3 0.0**
comp=Z,90nm,1.3s,SNR=14
CONA Conrad Observa 47.19 323⇓ *i*P **P** **19 53 37.3 0.0**
comp=Z,90nm,1.3s
CONA Conrad Observa 47.19 323⇓ *i*P **P** **19 53 37.3 0.0**
comp=Z,90nm,1.3s
SUW Suwalki 47.21 334 *e*P **P** **19 53 36.9 -0.3**
SUW pmax pmax
comp=Z,139nm,1.0s
SUW Suwalki 47.21 334 *e*P **P** **19 53 36.9 -0.3**
comp=Z,139nm,1.0s
SUW Suwalki 47.21 334 *e*P **P** **19 53 37.6 +0.4**
SUW *e* 19 53 43.3
SUW *e* 19 53 49.1
SUW Suwalki 47.21 334 *e*P **P** **19 53 36.9 -0.3**
comp=Z,139nm,1.0s
IZAR Zarasai 47.24 337 *e*P **P** **19 53 38.1 +0.7**
IZAR AMB AMB 19 53 50.0
comp=Z,32nm,1.6s
IZAR Zarasai 47.24 337 *e*P **P** **19 53 38.1 +0.7**
comp=Z,32nm,1.6s,SNR=24
MORC Moravsky Berou 47.26 326 *e*P **P** **19 53 37.7 0.0**
MORC pmax pmax
comp=Z,36nm,1.1s
MORC Moravsky Berou 47.26 326 *e*P **P** **19 53 37.6 0.0**
comp=Z,36nm,1.1s
MORC Moravsky Berou 47.26 326 *e*P **P** **19 53 37.7 0.0**
UBPT Khong Chiam 47.42 82 P **P** **19 53 38.7 -0.7**
comp=Z,20nm,1.8s
VOY Vojsko 47.44 320 *e*P **P** **19 53 38.7 -0.6**
VOY *e* 19 53 44.3
VOY Vojsko 47.44 320 P **P** **19 53 38.7 -0.6**
LZH Lanzhou 47.50 54 *e*P **P** **19 53 40.0 0.0**
LZH pP **pP** **19 53 43.5 -2.4**
LZH sP **sP** **19 53 45.0 -3.3**
LZH PP **PP** **19 55 30.0 -1.4**
LZH S **S** **20 00 32.1 -2.0**
LZH pmax pmax
comp=Z,15nm,1.0s
LZH pmax pmax
comp=Z,55nm,4.0s
LZH LR LR
comp=N,1μm,13.6s
LZH LR LR
comp=E,370nm,11.5s
LZH LR LR
comp=Z,2μm,16.4s
VRAC Vranov 47.51 325 P **P** **19 53 39.8 +0.1**
VRAC Vranov 47.51 325⇑ *i*P **P** **19 53 39.9 +0.2**
VRAC Vranov 47.51 325 P **P** **19 53 39.8 +0.1**
comp=Z,6.0nm,0.8s,baz=126,slow=7.9,SNR=8.3
VRAC Vranov 47.51 325 P **P** **19 53 39.8 +0.1**
MYKA Terra Mystica 47.87 321⇓ *i*P **P** **19 53 42.3 -0.3**
comp=Z,76nm,1.6s
MYKA Terra Mystica 47.87 321⇓ *i*P **P** **19 53 42.3 -0.3**
comp=Z,76nm,1.6s
MYKA Terra Mystica 47.87 321⇓ *i*P **P** **19 53 42.3 -0.3**
comp=Z,76nm,1.6s
VSL Villasalto 48.00 310 *e*P **P** **19 53 44.2 +0.6**
VSL Villasalto 48.00 310 *e*P **P** **19 53 44.2 +0.6**
MOA Molln 48.08 323⇓ *i*P **P** **19 53 44.1 0.0**
comp=Z,52nm,1.1s,SNR=12
MOA Molln 48.08 323⇓ *i*P **P** **19 53 44.1 0.0**
comp=Z,52nm,1.1s
MOA Molln 48.08 323⇓ *i*P **P** **19 53 44.1 0.0**
comp=Z,52nm,1.1s
TREC Trest 48.12 325⇑ *i*P **P** **19 53 44.4 0.0**
TREC *e* 19 53 55.5
TREC *e*S **S** **20 00 44.5 +2.3**
TREC MLR MLR
comp=Z,700nm,20.9s
TREC Trest 48.12 325⇑ *i*P **P** **19 53 44.4 0.0**
TREC *e*pP **pP** **19 53 50.6 +0.3**
TREC *e*x x 19 53 55.5
TREC *e*S **S** **20 00 44.5 +2.3**
TREC AMS AMS 20 20 00.0
comp=Z,700nm,20.9s
TREC Trest 48.12 325 *i* P **P** **19 53 44.4 0.0**
DPC Dobruska-Polom 48.23 326⇑ *i*P **P** **19 53 45.4 +0.2**
DPC *e* 19 53 56.5
DPC *e*S **S** **20 00 45.2 +1.4**
DPC MLR MLR
comp=Z,700nm,17.6s
DPC Dobruska-Polom 48.23 326⇑ *i*P **P** **19 53 45.4 +0.2**
DPC *e*pP **pP** **19 53 51.5 +0.3**
DPC *e*x x 19 53 56.5
DPC *e*S **S** **20 00 45.2 +1.4**
DPC AMS AMS 20 18 30.0
comp=Z,700nm,17.6s
DPC Dobruska-Polom 48.23 326 *i* P **P** **19 53 45.4 +0.2**
DPC S **S** **20 00 45.2 +1.4**
KBA Koelnbreinsper 48.26 321⇓ *i*P **P** **19 53 45.2 -0.5**
KBA pmax pmax
comp=Z,34nm,1.4s
KBA Koelnbreinsper 48.26 321⇓ *i*P **P** **19 53 45.2 -0.5**
comp=Z,34nm,1.4s,SNR=6.5
KBA Koelnbreinsper 48.26 321⇓ *i*P **P** **19 53 45.2 -0.5**
comp=Z,34nm,1.4s
KBA Koelnbreinsper 48.26 321 *i* P **P** **19 53 45.2 -0.5**
comp=Z,34nm,1.4s
GYA Guiyang 48.37 67⇑ *i*P **P** **19 53 46.6 -0.2**
GYA PP **PP** **19 55 39.6 +0.2**
GYA ScP **ScP** **19 59 07.3 +0.1**
GYA S **S** **20 00 47.5 +0.9**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=N,770nm,17.5s
GYA LR LR
comp=E,530nm,18.4s
GYA LR LR
comp=Z,660nm,17.9s
SLR Silverton 48.41 215 *e*P **P** **19 53 48.1 +1.1**
SLR AMB AMB 19 53 48.8
comp=Z,81nm,1.8s
UPC Upice 48.48 327⇑ *i*P **P** **19 53 47.3 +0.2**
UPC *e* 19 53 58.8
UPC Upice 48.48 327⇑ *i*P **P** **19 53 47.3 +0.2**
UPC *e*pP **pP** **19 53 53.4 +0.3**
UPC *e*x x 19 53 58.8
UPC Upice 48.48 327 *i* P **P** **19 53 47.3 +0.2**
KSP Ksiaz 48.52 327 *e*P **P** **19 53 47.3 -0.1**
KSP *e* 19 53 58.3
KSP *e* 19 55 40.5
KSP *e*S **S** **20 00 48.5 +0.7**
KSP MLR MLR
comp=Z,1μm,26.9s
KSP Ksiaz 48.52 327 *e*P **P** **19 53 47.6 +0.2**
KSP *e* 19 53 53.5
KSP *e* 19 53 58.9
KSP Ksiaz 48.52 327 *e*P **P** **19 53 47.3 -0.1**
KSP *e*pP **pP** **19 53 53.1 -0.3**
ABSA Djebel Ababsia 48.59 306 P P 19 53 43.1 -5.2
MYKOM Kota Tinggi 48.59 101 P **P** **19 53 48.8 +0.3**
comp=Z,54nm,1.8s,comp=Z,932nm
ABTA Abfaltersbach 48.62 321⇓ *i*P **P** **19 53 48.0 -0.3**
comp=Z,43nm,1.3s,SNR=5.8
ABTA Abfaltersbach 48.62 321⇓ *i*P **P** **19 53 48.0 -0.3**
comp=Z,43nm,1.3s
ABTA Abfaltersbach 48.62 321⇓ *i*P **P** **19 53 48.0 -0.3**
comp=Z,43nm,1.3s
TAM Tamanrasset 48.65 288 *e*P **P** **19 53 49.9 +0.9**
TAM pmax pmax
comp=Z,22nm,1.3s
TAM Tamanrasset 48.65 288 *e*P **P** **19 53 49.9 +0.9**
comp=Z,22nm,1.3s
TAM Tamanrasset 48.65 288 *e*P **P** **19 53 49.9 +0.9**
comp=Z,22nm,1.3s
CMAH Djebel Manchou 48.72 306 P P 19 53 42.5 -6.7
GEC2 GERESS Array S 48.90 324 *e*P **P** **19 53 49.3 -1.2**
GEC2 *e**SP **sP** **19 54 01.4 +2.6**
GEC2 pmax pmax
comp=Z,48nm,2.6s
GEC2 GERESS Array S 48.90 324 *e*P **P** **19 53 49.3 -1.2**
comp=Z,48nm,2.6s
GEC2 *es*P **sP** **19 54 01.4 +2.6**
GEC2 GERESS Array S 48.90 324 *e*P **P** **19 53 49.3 -1.2**
comp=Z,48nm,2.6s
GERES GERESS Array B 48.90 324 P **P** **19 53 49.4 -1.1**
GERES PcP **PcP** **19 55 14.5 -0.2**
GERES GERESS Array B 48.90 324 P **P** **19 53 49.4 -1.1**
comp=Z,1.4nm,0.7s,baz=120,slow=7.9,SNR=11
GERES PcP **PcP** **19 55 14.5 -0.2**
comp=Z,1.6nm,0.8s,baz=140,slow=5.2,SNR=4.3
GERES LR LR 20 16 25.4
comp=Z,411nm,21.6s,baz=111,slow=38
GERES GERESS Array B 48.90 324 P **P** **19 53 49.4 -1.1**
GERES GERESS Array B 48.90 324 PcP **PcP** **19 55 14.5 -0.2**
RJOB Jochberg 48.90 322 *e*P **P** **19 53 49.5 -1.0**
comp=Z,11nm,1.1s
RJOB *es*P **sP** **19 54 01.0 +2.2**
ERPM east rand prop 48.91 214 *e*P **P** **19 53 51.7 +0.7**
ERPM AMB AMB 19 53 52.7
comp=Z,64nm,1.4s
PRU Pruhonice 49.00 325⇑ *i*P **P** **19 53 51.0 -0.1**
PRU *e* 19 54 02.0
PRU *e*S **S** **20 00 50.4 -4.2**
PRU MLR MLR
comp=Z,600nm,14.4s
PRU Pruhonice 49.00 325⇑ *i*P **P** **19 53 51.0 -0.1**
PRU *e*pP **pP** **19 53 57.4 +0.3**
PRU *e*x x 19 54 02.0
PRU *e*S **S** **20 00 50.4 -4.2**
PRU AMS AMS 20 20 30.0
comp=Z,600nm,14.4s
PRU Pruhonice 49.00 325 *i* P **P** **19 53 51.0 -0.1**
KHC Kasperske Hory 49.11 324⇑ *i*P **P** **19 53 51.0 -1.0**
KHC *e* 19 54 02.3
KHC *e*S S 20 00 48.7 -7.5
KHC MLR MLR
comp=Z,500nm,15.4s
KHC Kasperske Hory 49.11 324 *e*P **P** **19 53 50.6 -1.4**
comp=Z,45nm,1.4s
KHC Kasperske Hory 49.11 324⇑ *i*P **P** **19 53 51.0 -1.0**
KHC *e*pP **pP** **19 53 57.4 -0.6**
KHC *e*x x 19 54 02.3
KHC *e*S S 20 00 48.7 -7.5
KHC AMS AMS 20 21 00.0
comp=Z,500nm,15.4s
KHC Kasperske Hory 49.11 324 *e*P **P** **19 53 50.6 -1.4**
comp=Z,45nm,1.4s
PGF Pioggiola 49.26 314 *e*P **P** **19 53 52.3 -1.1**
comp=Z,72nm,1.2s
PGF Pioggiola 49.26 314 *e*P **P** **19 53 52.3 -1.1**
PGF pmax pmax
comp=Z,72nm,1.2s
PGF Pioggiola 49.26 314 *e*P **P** **19 53 52.3 -1.1**
comp=Z,72nm,1.2s
PGF Pioggiola 49.26 314 *e*P **P** **19 53 52.3 -1.1**
comp=Z,36nm,1.2s
KLOF Kloof 49.27 215 *e*P **P** **19 53 55.0 +1.4**
KLOF AMB AMB 19 53 56.0
comp=Z,47nm,2.8s
PVCC Panska Ves 49.27 326⇑ *i*P **P** **19 53 53.1 -0.1**
PVCC *e* 19 54 04.2
PVCC MLR MLR
comp=Z,500nm,22.1s
PVCC Panska Ves 49.27 326⇑ *i*P **P** **19 53 53.1 -0.1**
PVCC *e*pP **pP** **19 53 58.7 -0.5**
PVCC *e*x x 19 54 04.2
PVCC AMS AMS 20 17 30.0
comp=Z,500nm,22.1s
PVCC Panska Ves 49.27 326 *i* P **P** **19 53 53.1 -0.1**
KSR Koster 49.27 216 *e*P **P** **19 53 55.1 +1.4**
KSR AMB AMB 19 54 35.0
comp=Z,26nm,1.9s
CASM Ain Smara 49.36 306 P **P** **19 53 53.6 -0.6**
CASM Ain Smara 49.36 306 P **P** **19 53 53.6 -0.6**
WTTA Wattenberg 49.38 321⇓ *i*P **P** **19 53 53.2 -1.1**
WTTA pmax pmax
comp=Z,44nm,1.1s
WTTA Wattenberg 49.38 321⇓ *i*P **P** **19 53 53.2 -1.1**
comp=Z,44nm,1.1s,SNR=9.0
WTTA Wattenberg 49.38 321⇓ *i*P **P** **19 53 53.2 -1.1**
comp=Z,44nm,1.1s
WTTA Wattenberg 49.38 321 *i* P **P** **19 53 53.2 -1.1**
comp=Z,44nm,1.1s
LBTB Lobatse 49.39 218⇑ *i*P **P** **19 53 55.8 +1.4**
LBTB AMB AMB 19 53 56.6
comp=Z,73nm,1.5s
LBTB Lobatse 49.39 218 P **P** **19 53 54.2 -0.3**
LBTB Lobatse 49.39 218 P **P** **19 53 54.2 -0.3**
comp=Z,37nm,1.1s,baz=49,slow=7.7,SNR=19
LBTB Lobatse 49.39 218 P **P** **19 53 54.2 -0.3**
GKP Gorka Klasztor 49.44 330 *e*P **P** **19 53 54.9 +0.5**
GKP *e* 19 54 00.8
GKP *e* 19 54 06.0
GKP Gorka Klasztor 49.44 330 *e*P **P** **19 53 54.9 +0.5**
WATA Walderalm 49.45 321⇑ *i*P **P** **19 53 54.0 -0.8**
WATA pmax pmax
comp=Z,22nm,0.8s
WATA Walderalm 49.45 321⇑ *i*P **P** **19 53 54.0 -0.8**
comp=Z,22nm,0.8s,SNR=6.5
WATA Walderalm 49.45 321⇑ *i*P **P** **19 53 54.0 -0.8**
comp=Z,22nm,0.8s
WATA Walderalm 49.45 321 *i* P **P** **19 53 54.0 -0.8**
comp=Z,22nm,0.8s
WET Wettzell 49.52 324 *e*P **P** **19 53 53.3 -1.8**
WET *e**SP **sP** **19 54 05.0 +1.5**
WET pmax pmax
comp=Z,9.0nm,1.4s
WET Wettzell 49.52 324 *e*P **P** **19 53 53.3 -1.8**
comp=Z,9.0nm,1.4s
WET *es*P **sP** **19 54 05.0 +1.5**
WET Wettzell 49.52 324 *e*P **P** **19 53 53.3 -1.8**
comp=Z,9.0nm,1.4s
MOTA Moosalm 49.75 321⇓ *i*P **P** **19 53 55.8 -1.3**
MOTA pmax pmax
comp=Z,46nm,1.0s
MOTA Moosalm 49.75 321⇓ *i*P **P** **19 53 55.8 -1.3**
comp=Z,46nm,1.0s,SNR=8.5
MOTA Moosalm 49.75 321⇓ *i*P **P** **19 53 55.8 -1.3**
comp=Z,46nm,1.0s
MOTA Moosalm 49.75 321 *i* P **P** **19 53 55.8 -1.3**
comp=Z,46nm,1.0s
BRG Berggiesshubel 49.79 326 *e*P **P** **19 53 56.5 -0.6**
comp=Z,8.7nm,1.1s
BRG *e* 19 54 02.9
comp=Z,16nm,1.1s
BRG S **S** **20 01 03.0 -2.6**
BRG SS SS 20 04 47.0 +8.8
BRG
comp=N,428nm,17.0s
BRG
comp=E,401nm,17.5s
BRG
comp=Z,557nm,18.3s
BRG Berggiesshubel 49.79 326 *e*P **P** **19 53 56.5 -0.6**
BRG *e* 19 54 02.9
BRG S **S** **20 01 03.0 -2.6**
BRG pmax pmax
comp=Z,5.0nm,1.0s
BRG pmax pmax
comp=Z,9.0nm,1.1s
BRG MLR MLR
comp=N,16μm,17.0s
BRG MLR MLR
comp=E,428nm,17.5s
BRG MLR MLR
comp=Z,401nm,18.3s
BRG Berggiesshubel 49.79 326 *e*P **P** **19 53 56.6 -0.5**
comp=Z,9.0nm,1.0s
BRG *e*pP **pP** **19 54 03.1 0.0**
BRG *es*P **sP** **19 54 08.1 +2.6**
BRG Berggiesshubel 49.79 326 *e*P **P** **19 53 56.5 -0.6**
comp=Z,5.0nm,1.0s
FETA Feichten 49.84 320⇓ *i*P **P** **19 53 56.7 -1.1**
comp=Z,40nm,1.2s,SNR=6.3
FETA Feichten 49.84 320⇓ *i*P **P** **19 53 56.7 -1.1**
comp=Z,40nm,1.2s
FETA Feichten 49.84 320⇓ *i*P **P** **19 53 56.7 -1.1**
comp=Z,40nm,1.2s
PRYS Parys 49.86 214 *e*P **P** **19 53 58.8 +0.7**
PRYS AMB AMB 19 54 00.0
comp=Z,60nm,1.9s
FUR Furstenfeldbru 50.00 322 *e*P **P** **19 53 57.8 -1.0**
FUR *e**SP **sP** **19 54 09.5 +2.3**
FUR pmax pmax
comp=Z,54nm,0.8s
FUR Furstenfeldbru 50.00 322 *e*P **P** **19 53 57.8 -1.0**
comp=Z,54nm,0.8s
FUR *e*pP **pP** **19 54 04.6 -0.2**
FUR *es*P **sP** **19 54 09.5 +2.3**
FUR Furstenfeldbru 50.00 322 *e*P **P** **19 53 57.8 -1.0**
comp=Z,54nm,0.8s
RETA Reutte 50.02 321⇓ *i*P **P** **19 53 57.8 -1.2**
comp=Z,22nm,1.0s
RETA Reutte 50.02 321⇓ *i*P **P** **19 53 57.8 -1.2**
comp=Z,22nm,1.0s
RETA Reutte 50.02 321⇓ *i*P **P** **19 53 57.8 -1.2**
comp=Z,22nm,1.0s
FBE Freiberg 50.13 326 *e*P **P** **19 53 59.6 -0.1**
comp=Z,24nm,1.4s
FBE *e*pP **pP** **19 54 06.2 +0.5**
FBE *es*P **sP** **19 54 11.2 +3.1**
ROTZ Rotzenmuhle 50.20 324 *e*P **P** **19 53 59.5 -0.8**
comp=Z,23nm,1.6s
ROTZ *e*pP **pP** **19 54 06.1 -0.2**
ROTZ *es*P **sP** **19 54 11.2 +2.6**
SET Setif 50.21 305 P **P** **19 54 02.0 +1.3**
SET Setif 50.21 305 P **P** **19 54 02.0 +1.3**
DAVOX Davos/Dischmat 50.27 320 P **P** **19 54 00.9 -0.2**
DAVOX Davos/Dischmat 50.27 320 P **P** **19 54 00.9 -0.2**
comp=Z,11nm,0.9s,baz=119,slow=7.3,SNR=9.6
DAVOX Davos/Dischmat 50.27 320 P **P** **19 54 00.9 -0.2**
NKC Novy Kostel 50.29 325⇑ *i*P **P** **19 54 01.1 +0.1**
NKC *e* 19 54 12.3
NKC MLR MLR
comp=Z,600nm,16.0s
NKC Novy Kostel 50.29 325⇑ *i*P **P** **19 54 01.1 +0.1**
NKC *e*pP **pP** **19 54 07.1 +0.1**
NKC *e*x x 19 54 12.3
NKC *e*x x 20 00 59.5
NKC AMS AMS 20 21 20.0
comp=Z,600nm,16.0s
NKC Novy Kostel 50.29 325 *i* P **P** **19 54 01.1 +0.1**
WERN Wernitzgruen 50.36 325 *e*P **P** **19 54 01.4 -0.1**
comp=Z,40nm,1.5s
WERN *es*P **sP** **19 54 12.8 +3.0**
MANZ Manzenberg 50.36 324 *e*P **P** **19 54 00.8 -0.7**
comp=Z,17nm,1.4s
MANZ *e*pP **pP** **19 54 07.2 -0.4**
MANZ *es*P **sP** **19 54 12.4 +2.5**
TANN Tannenbergstha 50.37 325 *e*P **P** **19 54 01.1 -0.5**
comp=Z,139nm,2.9s
TANN *es*P **sP** **19 54 12.8 +2.8**
GUNZ Gunzen 50.42 325 *e*P **P** **19 54 01.8 -0.2**
comp=Z,33nm,1.4s
GUNZ *es*P **sP** **19 54 13.3 +3.0**
DAVA Damuels 50.48 320⇓ *i*P **P** **19 54 01.3 -1.3**
comp=Z,48nm,1.4s,SNR=6.8
DAVA Damuels 50.48 320⇓ *i*P **P** **19 54 01.3 -1.3**
comp=Z,48nm,1.4s
DAVA Damuels 50.48 320⇓ *i*P **P** **19 54 01.3 -1.3**
comp=Z,48nm,1.4s
WERD Werda 50.48 325 *e*P **P** **19 54 01.7 -0.7**
comp=Z,20nm,1.4s
WERD *es*P **sP** **19 54 13.5 +2.8**
TUE Stuetta 50.48 319 *e*P P 19 53 59.6 -3.1
comp=Z,34nm,1.5s
CLL Collm 50.52 326 *i* P **P** **19 54 02.7 0.0**
CLL *i* *SP **sP** **19 54 13.5 +2.5**
CLL pmax pmax
comp=Z,41nm,1.8s
CLL MLR MLR
comp=Z,400nm,20.6s
CLL Collm 50.52 326 *e*P **P** **19 54 02.3 -0.4**
comp=Z,41nm,1.7s
CLL *es*P **sP** **19 54 13.9 +2.9**
CLL Collm 50.52 326 *i* P **P** **19 54 02.7 0.0**
comp=Z,41nm,1.8s
CLL *e*(sP) **sP** **19 54 09.0 -2.0**
CLL *i* 19 54 13.5
comp=Z,110nm,1.7s
CLL *e*PP **PP** **19 56 03.0 +4.5**
CLL *e*S **S** **20 01 12.0 -3.8**
comp=N,100nm,16.5s
CLL *e*S **S** **20 01 12.0 -3.8**
comp=E,400nm,25.5s
CLL *e*SS SS 20 05 06.0 +16
CLL *e*SSS SSS 20 06 18.0
CLL LmV 20 20 00.0
comp=Z,400nm,20.6s
CLL Collm 50.52 326 *i* P **P** **19 54 02.7 0.0**
comp=Z,41nm,1.8s
PLN Plauen 50.58 325 *e*P **P** **19 54 02.5 -0.6**
comp=Z,532nm,2.5s
PLN *es*P **sP** **19 54 14.4 +2.9**
RUE Ruedersdorf 50.72 328 *e*P **P** **19 54 04.0 -0.1**
comp=Z,27nm,1.1s
RUE *e*pP **pP** **19 54 10.6 +0.5**
RUE *es*P **sP** **19 54 15.6 +3.1**
GRA1 Grafenberg Arr 50.73 324 *e*P **P** **19 54 03.2 -1.1**
comp=Z,500nm,18.1s
GRF Grafenberg Arr 50.73 324 *e*P **P** **19 54 03.2 -1.1**
GRF *e**SP **sP** **19 54 14.7 +2.1**
GRF pmax pmax
comp=Z,16nm,0.9s
GRF MLR MLR
comp=Z,500nm,18.1s
GRF Grafenberg Arr 50.73 324 *e*P **P** **19 54 03.2 -1.1**
comp=Z,16nm,0.9s
GRF *e*pP **pP** **19 54 09.7 -0.6**
GRF *es*P **sP** **19 54 14.7 +2.1**
GRF *e*L L 20 22 16.7
comp=Z,505nm,18.1s
SAOF Saorge 50.74 315 *e*P **P** **19 54 05.1 +0.6**
SAOF Saorge 50.74 315 *e*P **P** **19 54 05.1 +0.6**
SAOF Saorge 50.74 315 *e*P **P** **19 54 05.1 +0.6**
SAOF Saorge 50.74 315 *e*P **P** **19 54 05.1 +0.6**
TSUM Tsumeb 50.75 230 *e*P **P** **19 54 06.8 +1.8**
SBF Sospel 50.78 315 *e*P **P** **19 54 03.8 -1.1**
comp=Z,28nm,0.8s
SBF Sospel 50.78 315 *e*P **P** **19 54 03.8 -1.1**
SBF pmax pmax
comp=Z,28nm,0.8s
SBF Sospel 50.78 315 *e*P **P** **19 54 03.8 -1.1**
comp=Z,28nm,0.8s
SBF Sospel 50.78 315 *e*P **P** **19 54 03.8 -1.1**
comp=Z,14nm,0.8s
SEK Senekal 50.82 213⇑ *i*P **P** **19 54 06.2 +0.8**
SEK AMB AMB 19 54 07.4
comp=Z,71nm,1.4s
MOX Moxa 50.96 325 *e*P **P** **19 54 05.7 -0.3**

MOX e*SP **sP** 19 54 17.3 +3.0
MOX pmax pmax
comp=Z,12nm,0.9s
MOX Moxa 50.96 325 *e*P **P** 19 54 05.7 -0.3
comp=Z,12nm,0.9s
MOX *e*pP **pP** 19 54 12.2 +0.2
MOX *e*sP **sP** 19 54 17.3 +3.0
MOX Moxa 50.96 325 *e*P **P** 19 54 05.7 -0.3
comp=Z,12nm,0.9s
TOUF Mont Tournerai 50.96 315 *e*P **P** 19 54 07.0 +0.6
TOUF Mont Tournerai 50.96 315 *e*P **P** 19 54 07.0 +0.6
TOUF Mont Tournerai 50.96 315 *e*P **P** 19 54 07.0 +0.6
TOUF Mont Tournerai 50.96 315 *e*P **P** 19 54 07.0 +0.6
NEUB Neuenburg 51.14 325 *e*P **P** 19 54 07.2 -0.1
comp=Z,41nm,0.9s
NEUB *e*pP **pP** 19 54 13.7 +0.4
NEUB *e*sP **sP** 19 54 18.8 +3.1
SWZ Schweizer 51.19 216 *e*P **P** 19 54 08.8 +0.7
SWZ AMB AMB 19 54 16.1
comp=Z,89nm,1.9s
FRF La Foret Royal 51.22 315 *e*P **P** 19 54 07.9 -0.2
comp=Z,217nm,1.7s
FRF La Foret Royal 51.22 315 *e*P **P** 19 54 07.9 -0.2
FRF pmax pmax
comp=Z,217nm,1.7s
FRF La Foret Royal 51.22 315 *e*P **P** 19 54 07.9 -0.2
comp=Z,217nm,1.7s
FRF La Foret Royal 51.22 315 *e*P **P** 19 54 07.9 -0.2
comp=Z,109nm,1.7s
LMR La Mourre 51.25 314 *e*P **P** 19 54 08.0 -0.3
comp=Z,173nm,1.4s
LMR La Mourre 51.25 314 *e*P **P** 19 54 08.0 -0.3
LMR pmax pmax
comp=Z,173nm,1.4s
LMR La Mourre 51.25 314 *e*P **P** 19 54 08.0 -0.3
comp=Z,173nm,1.4s
LMR La Mourre 51.25 314 *e*P **P** 19 54 08.0 -0.3
comp=Z,86nm,1.4s
QIZ Qiongzhong 51.29 77 P **P** 19 54 08.0 -1.0
QIZ S **S** 20 01 28.3 +0.9
QIZ pmax pmax
comp=Z,23nm,2.0s
QIZ LR LR
comp=N,300nm,27.0s
QIZ LR LR
comp=Z,400nm,38.1s
MOY Mondy 51.43 34 *e*P **P** 19 54 11.4 +1.7
MOY pmax pmax
comp=Z,59nm,2.0s
MOY Mondy 51.43 34 *e*P **P** 19 54 11.4 +1.7
comp=Z,59nm,2.0s
SPAK Spaichingen-Ko 51.48 321 *e*P **P** 19 54 09.6 -0.5
SPAK Spaichingen-Ko 51.48 321 *e*P **P** 19 54 09.6 -0.5
JOF Joensuu 51.49 346 *e*P **P** 19 54 09.1 -0.6
JOF pmax pmax
comp=Z,6.0nm,0.8s
JOF Joensuu 51.49 346 *e*p **P** 19 54 09.1 -0.6
comp=Z,6.4nm,0.8s
JOF Joensuu 51.49 346 *e*P **P** 19 54 09.1 -0.6
comp=Z,6.4nm,0.8s
MBDF Montbardon 51.52 316 *e*P **P** 19 54 09.6 -0.9
comp=Z,23nm,0.9s
MBDF Montbardon 51.52 316 *e*P **P** 19 54 09.6 -0.9
MBDF pmax pmax
comp=Z,23nm,0.9s
MBDF Montbardon 51.52 316 *e*P **P** 19 54 09.6 -0.9
comp=Z,23nm,0.9s
MBDF Montbardon 51.52 316 *e*P **P** 19 54 09.6 -0.9
comp=Z,12nm,0.9s
FIA1 FINESS Array S 51.68 342 *e*P **P** 19 54 09.7 -1.5
FIA1 FINESS Array S 51.68 342 *e*P **P** 19 54 09.7 -1.5
FINES FINESS Array B 51.68 342 P **P** 19 54 11.1 -0.1
FINES FINESS Array B 51.68 342 P **P** 19 54 11.1 -0.1
comp=Z,11nm,0.8s,baz=137,slow=9.0,SNR=20
FINES FINESS Array B 51.68 342 P **P** 19 54 11.1 -0.1
LPG La Plagne 51.80 317 *e*P **P** 19 54 11.8 -0.9
comp=Z,71nm,1.0s
LPG La Plagne 51.80 317 *e*P **P** 19 54 11.8 -0.9
LPG pmax pmax
comp=Z,71nm,1.0s
LPG La Plagne 51.80 317 *e*P **P** 19 54 11.8 -0.9
comp=Z,71nm,1.0s
LPG La Plagne 51.80 317 *e*P **P** 19 54 11.8 -0.9
comp=Z,36nm,1.0s
LPL La Plagne 51.82 317 *e*P **P** 19 54 11.8 -1.0
comp=Z,78nm,1.1s
LPL La Plagne 51.82 317 *e*P **P** 19 54 11.8 -1.0
LPL pmax pmax
comp=Z,79nm,1.1s
LPL La Plagne 51.82 317 *e*P **P** 19 54 11.8 -1.0
comp=Z,78nm,1.1s
LPL La Plagne 51.82 317 *e*P **P** 19 54 11.8 -1.0
comp=Z,39nm,1.1s
BFO Black Forest 51.86 321 *e*P **P** 19 54 11.4 -1.4
BFO *e*SP **sP** 19 54 23.4 +2.3
BFO pmax pmax
comp=Z,16nm,1.1s
BFO Black Forest 51.86 321 *e*P **P** 19 54 11.4 -1.4
comp=Z,16nm,1.1s
BFO *e*sP **sP** 19 54 23.4 +2.3
BFO Black Forest 51.86 321 *e*P **P** 19 54 11.5 -1.3
comp=Z,58nm,1.4s
BFO Black Forest 51.86 321 P **P** 19 54 12.1 -0.7
comp=Z,85nm,1.0s,SNR=6.0
BFO Black Forest 51.86 321 *e*P **P** 19 54 11.4 -1.4
comp=Z,16nm,1.1s
FELD Feldberg im Sc 51.88 320 *e*P **P** 19 54 12.6 -0.5
FELD Feldberg im Sc 51.88 320 *e*P **P** 19 54 12.6 -0.5
RSL Roselend 51.95 317 *e*P **P** 19 54 13.9 +0.2
RSL Roselend 51.95 317 *e*P **P** 19 54 13.9 +0.2
BBS Basel-Blauen 52.02 320 *e*P **P** 19 54 13.5 -0.6
BBS Basel-Blauen 52.02 320 *e*P **P** 19 54 13.5 -0.6
BBS Basel-Blauen 52.02 320 *e*P **P** 19 54 13.5 -0.6
SMRF Simiane la Rot 52.09 315 *e*P **P** 19 54 14.7 +0.1
comp=Z,129nm,1.6s
SMRF Simiane la Rot 52.09 315 *e*P **P** 19 54 14.7 +0.1
comp=Z,129nm,1.6s
SMRF Simiane la Rot 52.09 315 *e*P **P** 19 54 14.7 +0.1
comp=Z,65nm,1.6s
ZAK Zakamensk 52.11 36 *e*P **P** 19 54 14.6 -0.1
ZAK pmax pmax
comp=Z,10.0nm,1.9s
ZAK Zakamensk 52.11 36 *e*P **P** 19 54 14.6 -0.1
comp=Z,10.0nm,1.9s
OG01 Vacheresse 52.13 318 *e*P **P** 19 54 14.4 -0.6
OG01 Vacheresse 52.13 318 *e*P **P** 19 54 14.4 -0.6
KAF Kangasniemi 52.15 343 *e*P **P** 19 54 14.0 -0.6
KAF pmax pmax
comp=Z,6.0nm,1.0s
KAF Kangasniemi 52.15 343 *e*p **P** 19 54 14.0 -0.6
comp=Z,5.9nm,1.0s
KAF Kangasniemi 52.15 343 *e*P **P** 19 54 14.0 -0.6
comp=Z,5.9nm,1.0s
EMHD Djebel Mahouad 52.15 305 P **P** 19 54 16.5 +1.2
EMHD Djebel Mahouad 52.15 305 P **P** 19 54 16.5 +1.2
ORIF Oris-en-Rattie 52.18 316 *e*P **P** 19 54 13.9 -1.5
comp=Z,42nm,1.4s
ORIF *e*R
comp=Z,499nm,20.8s
ORIF Oris-en-Rattie 52.18 316 *e*P **P** 19 54 13.9 -1.5
ORIF pmax pmax
comp=Z,42nm,1.4s
ORIF Oris-en-Rattie 52.18 316 *e*P **P** 19 54 13.9 -1.5
comp=Z,42nm,1.4s
ORIF Oris-en-Rattie 52.18 316 *e*P **P** 19 54 13.9 -1.5
comp=Z,21nm,1.4s
CLZ Clausthal 52.22 326 *e*P **P** 19 54 15.3 -0.1
CLZ *e*SP **sP** 19 54 26.9 +3.1
CLZ pmax pmax
comp=Z,136nm,2.4s
CLZ Clausthal 52.22 326 *e*P **P** 19 54 15.3 -0.1
comp=Z,136nm,2.4s
CLZ *e*pP **pP** 19 54 21.8 +0.4
CLZ *e*sP **sP** 19 54 26.9 +3.1
CLZ Clausthal 52.22 326 *e*P **P** 19 54 15.3 -0.1
comp=Z,136nm,2.4s
BOSA Boshof 52.33 215 *e*P **P** 19 54 17.1 +0.5
BOSA AMB AMB 19 54 18.7
comp=Z,44nm,3.5s
BOSA Boshof 52.33 215 *e*P **P** 19 54 17.4 +0.8
comp=Z,42nm,1.0s
BOSA Boshof 52.33 215 P **P** 19 54 17.8 +1.1
comp=Z,26nm,0.9s,baz=43,slow=7.3,SNR=24
BOSA Boshof 52.33 215 *e*P **P** 19 54 17.4 +0.8
comp=Z,42nm,1.0s
MOF Molkenrain 52.41 320 *e*P **P** 19 54 16.3 -0.7

MOF Molkenrain 52.41 320 *e*P **P** 19 54 16.3 -0.7
MOF Molkenrain 52.41 320 *e*P **P** 19 54 16.3 -0.7
MOF Molkenrain 52.41 320 *e*P **P** 19 54 16.3 -0.7
LOMF Lomont 52.41 319 *e*P **P** 19 54 17.0 0.0
LOMF Lomont 52.41 319 *e*P **P** 19 54 17.0 0.0
LOMF Lomont 52.41 319 *e*P **P** 19 54 17.0 0.0
LOMF Lomont 52.41 319 *e*P **P** 19 54 17.0 0.0
LANF Langenberg 52.44 321 *e*P **P** 19 54 15.7 -1.4
LANF Langenberg 52.44 321 *e*P **P** 19 54 15.7 -1.4
LANF Langenberg 52.44 321 *e*P **P** 19 54 15.7 -1.4
LANF Langenberg 52.44 321 *e*P **P** 19 54 15.7 -1.4
ECH Echery 52.53 320 *e*P **P** 19 54 16.5 -1.3
ECH pmax pmax
comp=Z,79nm,1.8s
ECH Echery 52.53 320 *e*P **P** 19 54 16.5 -1.3
comp=Z,79nm,1.8s
ECH Echery 52.53 320 *e*P **P** 19 54 17.2 -0.6
ECH Echery 52.53 320 *e*P **P** 19 54 16.5 -1.3
comp=Z,79nm,1.8s
CDF Champ du Feu 52.53 321 *e*P **P** 19 54 16.8 -1.1
comp=Z,222nm,1.6s
CDF Champ du Feu 52.53 321 *e*P **P** 19 54 16.8 -1.1
CDF pmax pmax
comp=Z,223nm,1.6s
CDF Champ du Feu 52.53 321 *e*P **P** 19 54 16.8 -1.1
comp=Z,222nm,1.6s
CDF Champ du Feu 52.53 321 *e*P **P** 19 54 16.8 -1.1
comp=Z,111nm,1.6s
HINF Hinteralfeld 52.57 320 *e*P **P** 19 54 16.8 -1.3
comp=Z,127nm,1.9s
HINF Hinteralfeld 52.57 320 *e*P **P** 19 54 16.8 -1.3
HINF pmax pmax
comp=Z,127nm,1.9s
HINF Hinteralfeld 52.57 320 *e*P **P** 19 54 16.8 -1.3
comp=Z,127nm,1.9s
HINF Hinteralfeld 52.57 320 *e*P **P** 19 54 16.8 -1.3
comp=Z,64nm,1.9s
TNS Taunus Mts 52.57 323 *e*P **P** 19 54 17.0 -1.1
TNS *e*SP **sP** 19 54 28.8 +2.3
TNS pmax pmax
comp=Z,30nm,1.6s
TNS Taunus Mts 52.57 323 *e*P **P** 19 54 17.0 -1.1
comp=Z,30nm,1.6s
TNS *e*pP **pP** 19 54 23.6 -0.5
TNS *e*sP **sP** 19 54 28.8 +2.3
TNS Taunus Mts 52.57 323 *e*P **P** 19 54 17.0 -1.1
comp=Z,30nm,1.6s
CABF La Chapelle 52.62 318 *e*P **P** 19 54 18.1 -0.5
comp=Z,361nm,1.7s
CABF La Chapelle 52.62 318 *e*P **P** 19 54 18.1 -0.5
CABF pmax pmax
comp=Z,361nm,1.7s
CABF La Chapelle 52.62 318 *e*P **P** 19 54 18.1 -0.5
comp=Z,361nm,1.7s
CABF La Chapelle 52.62 318 *e*P **P** 19 54 18.1 -0.5
comp=Z,180nm,1.7s
NRDL Niedersach Rie 52.67 326 *e*P **P** 19 54 18.9 +0.3
comp=Z,42nm,1.3s
NRDL *e*pP **pP** 19 54 25.6 +1.0
NRDL *e*sP **sP** 19 54 30.4 +3.4
TLY Talaya 52.89 35 *e*P **P** 19 54 21.1 +0.7
TLY *e* 19 54 32.2
TLY *e*S S 20 01 39.3 -9.2
TLY *e* 20 04 03.5
TLY pmax pmax
comp=Z,8.0nm,1.5s
TLY MLR MLR
comp=Z,820nm,17.0s
TLY Talaya 52.89 35 *e*P **P** 19 54 21.1 +0.7
comp=Z,8.0nm,1.5s
SONM Songino Array 52.95 40 P **P** 19 54 21.3 +0.2
SONM Songino Array 52.95 40 P **P** 19 54 21.3 +0.2
comp=Z,1.8nm,0.7s,baz=249,slow=8.8,SNR=7.7
SONM Songino Array 52.95 40 P **P** 19 54 21.3 +0.2
HAU Haudompre 52.95 320 *e*P **P** 19 54 19.6 -1.3
comp=Z,21nm,1.1s
HAU *e*R
comp=Z,267nm,18.0s
HAU Haudompre 52.95 320 *e*P **P** 19 54 19.6 -1.3
HAU pmax pmax
comp=Z,21nm,1.1s
HAU Haudompre 52.95 320 *e*P **P** 19 54 19.6 -1.3
comp=Z,21nm,1.1s
HAU Haudompre 52.95 320 *e*P **P** 19 54 19.6 -1.3
comp=Z,10nm,1.1s
TOA0 Torodi Ar. Sit 52.96 276 *e*P **P** 19 54 20.9 -0.6
TOA0 *e*PcP **PcP** 19 55 30.2 -0.1
TOA0 Torodi Ar. Sit 52.96 276 *e*P **P** 19 54 20.9 -0.6
TORD Torodi Ar. Bea 52.96 276 P **P** 19 54 21.3 -0.2
TORD PcP **PcP** 19 55 30.4 +0.1
TORD Torodi Ar. Bea 52.96 276 P **P** 19 54 21.3 -0.2
comp=Z,12nm,1.1s,baz=92,slow=7.3,SNR=41
TORD PcP **PcP** 19 55 30.4 +0.1
comp=Z,4.6nm,1.0s,baz=82,slow=4.7,SNR=4.8
TORD LR LR 20 16 16.3
comp=Z,819nm,20.6s,baz=115,slow=35
TORD Torodi Ar. Bea 52.96 276 P **P** 19 54 21.3 -0.2
VIVF Saint-Julien-l 52.98 316 *e*P **P** 19 54 20.4 -0.8
comp=Z,72nm,1.4s
VIVF Saint-Julien-l 52.98 316 *e*P **P** 19 54 20.4 -0.8
VIVF pmax pmax
comp=Z,72nm,1.4s
VIVF Saint-Julien-l 52.98 316 *e*P **P** 19 54 20.4 -0.8
comp=Z,72nm,1.4s
VIVF Saint-Julien-l 52.98 316 *e*P **P** 19 54 20.4 -0.8
comp=Z,36nm,1.4s
RUP Ruppelstein 53.17 322 *e*P **P** 19 54 21.7 -0.9
RUP Ruppelstein 53.17 322 *e*P **P** 19 54 21.7 -0.9
RUP Ruppelstein 53.17 322 *e*P **P** 19 54 21.7 -0.9
SSB Saint Sauveur 53.20 316 *e*P **P** 19 54 21.3 -1.5
SSB pmax pmax
comp=Z,28nm,0.9s
SSB Saint Sauveur 53.20 316 *e*P **P** 19 54 21.3 -1.5
comp=Z,28nm,0.9s
SSB Saint Sauveur 53.20 316 *e*P **P** 19 54 22.7 -0.1
SSB Saint Sauveur 53.20 316 *e*P **P** 19 54 22.7 -0.1
SSB Saint Sauveur 53.20 316 *e*P **P** 19 54 21.3 -1.5
comp=Z,28nm,0.9s
BTO Baotou 53.29 50 *e*P **P** 19 54 22.5 -1.2
LASF Ste Croix 53.30 315 *e*P **P** 19 54 23.0 -0.6
comp=Z,172nm,1.7s
LASF Ste Croix 53.30 315 *e*P **P** 19 54 23.0 -0.6
comp=Z,172nm,1.7s
LASF Ste Croix 53.30 315 *e*P **P** 19 54 23.0 -0.6
comp=Z,86nm,1.7s
ULN Ulaanbaatar 53.37 41 *e*P **P** 19 54 24.8 +0.6
comp=Z,27nm,1.6s
ULN Ulaanbaatar 53.37 41 P **P** 19 54 25.0 +0.8
comp=Z,9.4nm,2.0s
ULN Ulaanbaatar 53.37 41 *e*P **P** 19 54 24.8 +0.6
comp=Z,27nm,1.6s
IRK Irkutsk 53.49 35 *e*P **P** 19 54 23.7 -1.1
IRK pmax pmax
comp=Z,88nm,2.1s
IRK Irkutsk 53.49 35 *e*P **P** 19 54 23.7 -1.1
comp=Z,88nm,2.1s
PAGF Fort de Pagny 53.54 320 *e*P **P** 19 54 24.3 -0.9
comp=Z,14nm,1.1s
PAGF Fort de Pagny 53.54 320 *e*P **P** 19 54 24.3 -0.9
comp=Z,14nm,1.1s
PAGF Fort de Pagny 53.54 320 *e*P **P** 19 54 24.3 -0.9
comp=Z,6.8nm,1.1s
WLF Walferdange 53.70 322 P **P** 19 54 25.8 -0.5
WLF XP **sP** 19 54 32.5 -2.3
WLF E 19 54 36.7
WLF Walferdange 53.70 322 *e*P **P** 19 54 25.1 -1.3
WLF pmax pmax
comp=Z,70nm,1.4s
WLF Walferdange 53.70 322 *e*P **P** 19 54 25.9 -0.5
comp=Z,16nm,0.9s
WLF *e*pP **sP** 19 54 32.4 -2.3
WLF *e*sP sP 19 54 37.3 +2.6
WLF Walferdange 53.70 322 *e*P **P** 19 54 25.1 -1.3
comp=Z,70nm,1.4s
WLF Walferdange 53.70 322 *e*P **P** 19 54 25.1 -1.3
comp=Z,70nm,1.4s
BUG Bochum--Univer 53.77 324 *e*P **P** 19 54 26.6 -0.2
comp=Z,11nm,0.9s
BUG *e*pP **pP** 19 54 33.0 +0.2
BUG *e*sP **sP** 19 54 37.9 +2.8
SFTF Sexfontaines 53.84 320 *e*P **P** 19 54 26.7 -0.8
comp=Z,234nm,1.5s
SFTF Sexfontaines 53.84 320 *e*P **P** 19 54 26.7 -0.8
comp=Z,234nm,1.5s
SFTF Sexfontaines 53.84 320 *e*P **P** 19 54 26.7 -0.8

comp=Z,117nm,1.5s
IBBN Ibbenburen 53.86 325 *e*P **P** 19 54 27.4 -0.1
comp=Z,14nm,0.8s
IBBN *e*sP **sP** 19 54 39.1 +3.2
MEZF Maizieres J'vi 53.94 320 *e*P **P** 19 54 27.6 -0.5
comp=Z,366nm,1.7s
MEZF Maizieres J'vi 53.94 320 *e*P **P** 19 54 27.6 -0.5
comp=Z,366nm,1.7s
MEZF Maizieres J'vi 53.94 320 *e*P **P** 19 54 27.6 -0.5
comp=Z,183nm,1.7s
PLDF La Plantade 54.02 317 *e*P **P** 19 54 28.6 -0.3
PLDF La Plantade 54.02 317 *e*P **P** 19 54 28.6 -0.3
PLDF La Plantade 54.02 317 *e*P **P** 19 54 28.6 -0.3
PLDF La Plantade 54.02 317 *e*P **P** 19 54 28.6 -0.3
LBL Lubilhac 54.05 316 *e*P **P** 19 54 28.7 -0.4
LBL Lubilhac 54.05 316 *e*P **P** 19 54 28.7 -0.4
LBL Lubilhac 54.05 316 *e*P **P** 19 54 28.7 -0.4
LBL Lubilhac 54.05 316 *e*P **P** 19 54 28.7 -0.4
SMF Signal de Mont 54.09 318 *e*P **P** 19 54 28.2 -1.1
SMF Signal de Mont 54.09 318 *e*P **P** 19 54 28.2 -1.1
SMF Signal de Mont 54.09 318 *e*P **P** 19 54 28.2 -1.1
SMF Signal de Mont 54.09 318 *e*P **P** 19 54 28.2 -1.1
MEM Membach 54.15 323 P **P** 19 54 29.9 +0.2
MEM Membach 54.15 323 P **P** 19 54 29.8 +0.2
MTLF Montolieu 54.25 313 *e*P **P** 19 54 29.8 -0.7
MTLF Montolieu 54.25 313 *e*P **P** 19 54 29.8 -0.7
MTLF Montolieu 54.25 313 *e*P **P** 19 54 29.8 -0.7
MTLF Montolieu 54.25 313 *e*P **P** 19 54 29.8 -0.7
LOR Lormes 54.28 318 *e*P **P** 19 54 29.9 -0.8
comp=Z,180nm,1.4s
LOR *e*R
comp=Z,379nm,23.0s
LOR Lormes 54.28 318 *e*P **P** 19 54 29.9 -0.8
comp=Z,180nm,1.4s
LOR Lormes 54.28 318 *e*P **P** 19 54 29.9 -0.8
comp=Z,90nm,1.4s
PYM Petit Puy Mans 54.37 316 *e*P **P** 19 54 30.3 -1.1
PYM Petit Puy Mans 54.37 316 *e*P **P** 19 54 30.3 -1.1
PYM Petit Puy Mans 54.37 316 *e*P **P** 19 54 30.3 -1.1
PYM Petit Puy Mans 54.37 316 *e*P **P** 19 54 30.3 -1.1
AGO Saint Agoulin 54.38 317 *e*P **P** 19 54 30.1 -1.3
AGO Saint Agoulin 54.38 317 *e*P **P** 19 54 30.1 -1.3
AGO Saint Agoulin 54.38 317 *e*P **P** 19 54 30.1 -1.3
BEBN Eben Emael 54.42 323 P **P** 19 54 31.6 +0.1
BEBN E 19 54 42.6
BEBN Eben Emael 54.42 323 P **P** 19 54 31.6 +0.1
SSF Saint Saulge 54.44 318 *e*P **P** 19 54 30.9 -0.9
comp=Z,41nm,1.0s
SSF Saint Saulge 54.44 318 *e*P **P** 19 54 30.9 -0.9
SSF pmax pmax
comp=Z,41nm,1.0s
SSF Saint Saulge 54.44 318 *e*P **P** 19 54 30.9 -0.9
comp=Z,41nm,1.0s
SSF Saint Saulge 54.44 318 *e*P **P** 19 54 30.9 -0.9
comp=Z,20nm,1.0s
AVF Avril sur Loir 54.45 318 *e*P **P** 19 54 30.7 -1.2
comp=Z,26nm,0.9s
AVF Avril sur Loir 54.45 318 *e*P **P** 19 54 30.7 -1.2
AVF pmax pmax
comp=Z,26nm,0.9s
AVF Avril sur Loir 54.45 318 *e*P **P** 19 54 30.7 -1.2
comp=Z,26nm,0.9s
AVF Avril sur Loir 54.45 318 *e*P **P** 19 54 30.7 -1.2
comp=Z,13nm,0.9s
HHC Hu-ho-hao-te 54.49 50 *e*P **P** 19 54 33.0 +0.6
HHC pP **pP** 19 54 37.3 -1.2
HHC sP **sP** 19 54 40.0 -0.8
HHC PcS **PcS** 19 59 34.0 -1.4
HHC S **S** 20 02 10.1 -0.6
HHC ScS **ScS** 20 04 18.3 -2.8
HHC pmax pmax
comp=Z,35nm,0.8s
HHC pmax pmax
comp=Z,820nm,6.2s
HHC LR LR
comp=N,2μm,17.3s
HHC LR LR
comp=E,4μm,19.8s
HHC LR LR
comp=Z,5μm,21.4s
BCLA Clavier 54.49 322 P **P** 19 54 32.4 +0.3
comp=Z,18nm,2.6s
BCLA Clavier 54.49 322 P **P** 19 54 32.4 +0.3
comp=Z,18nm,2.6s
GIVF Givet 54.66 322 *e*P **P** 19 54 32.8 -0.6
comp=Z,180nm,1.6s
GIVF Givet 54.66 322 *e*P **P** 19 54 32.8 -0.6
GIVF pmax pmax
comp=Z,180nm,1.6s
GIVF Givet 54.66 322 *e*P **P** 19 54 32.8 -0.6
comp=Z,180nm,1.6s
GIVF Givet 54.66 322 *e*P **P** 19 54 32.8 -0.6
comp=Z,90nm,1.6s
BGF Bois d'Agland 54.72 317 *e*P **P** 19 54 33.3 -0.5
comp=Z,54nm,0.8s
BGF Bois d'Agland 54.72 317 *e*P **P** 19 54 33.3 -0.5
BGF pmax pmax
comp=Z,54nm,0.8s
BGF Bois d'Agland 54.72 317 *e*P **P** 19 54 33.3 -0.5
comp=Z,54nm,0.8s
BGF Bois d'Agland 54.72 317 *e*P **P** 19 54 33.3 -0.5
comp=Z,27nm,0.8s
VERF Verneugheol 54.72 316 *e*P **P** 19 54 34.2 +0.3
VERF Verneugheol 54.72 316 *e*P **P** 19 54 34.2 +0.3
CAF Calviac 54.77 315 *e*P **P** 19 54 33.3 -1.0
CAF Calviac 54.77 315 *e*P **P** 19 54 33.3 -1.0
CAF Calviac 54.77 315 *e*P **P** 19 54 33.3 -1.0
CAF Calviac 54.77 315 *e*P **P** 19 54 33.3 -1.0
DOU Dourbes 54.80 322 P **P** 19 54 34.4 +0.1
DOU XP **sP** 19 54 40.5 -2.2
comp=Z,14nm,1.3s
DOU E 19 54 45.5
DOU Dourbes 54.80 322 P **P** 19 54 34.4 +0.1
BAIF Baives 55.02 322 *e*P **P** 19 54 35.4 -0.5
comp=Z,164nm,1.4s
BAIF Baives 55.02 322 *e*P **P** 19 54 35.4 -0.5
BAIF pmax pmax
comp=Z,164nm,1.4s
BAIF Baives 55.02 322 *e*P **P** 19 54 35.4 -0.5
comp=Z,164nm,1.4s
BAIF Baives 55.02 322 *e*P **P** 19 54 35.4 -0.5
comp=Z,82nm,1.4s
TCF Toulx Ste Croi 55.06 317 *e*P **P** 19 54 35.6 -0.7
comp=Z,25nm,0.9s
TCF Toulx Ste Croi 55.06 317 *e*P **P** 19 54 35.6 -0.7
TCF pmax pmax
comp=Z,25nm,0.9s
TCF Toulx Ste Croi 55.06 317 *e*P **P** 19 54 35.6 -0.7
comp=Z,25nm,0.9s
TCF Toulx Ste Croi 55.06 317 *e*P **P** 19 54 35.6 -0.7
comp=Z,12nm,0.9s
HFS Hagfors 55.12 336 P **P** 19 54 36.2 -0.3
HFS Hagfors 55.12 336 P **P** 19 54 36.2 -0.3
comp=Z,7.3nm,0.9s,baz=149,slow=3.5,SNR=7.9
HFS Hagfors 55.12 336 P **P** 19 54 36.2 -0.3
SNF Seneffe 55.13 322 P **P** 19 54 36.3 -0.5
SNF XP **sP** 19 54 43.2 -2.0
SNF Seneffe 55.13 322 P **P** 19 54 36.2 -0.5
RJF Les Rejaudoux 55.25 315 *e*P **P** 19 54 37.0 -0.7
comp=Z,52nm,1.4s
RJF *e*R
comp=Z,466nm,23.0s
RJF Les Rejaudoux 55.25 315 *e*P **P** 19 54 37.0 -0.7
RJF pmax pmax
comp=Z,52nm,1.4s
RJF Les Rejaudoux 55.25 315 *e*P **P** 19 54 37.0 -0.7
comp=Z,52nm,1.4s
RJF Les Rejaudoux 55.25 315 *e*P **P** 19 54 37.0 -0.7
comp=Z,26nm,1.4s
EPF Esparros 55.51 312 *e*P **P** 19 54 38.5 -1.2
EPF Esparros 55.51 312 *e*P **P** 19 54 38.5 -1.2
EPF Esparros 55.51 312 *e*P **P** 19 54 38.5 -1.2
EPF Esparros 55.51 312 *e*P **P** 19 54 38.5 -1.2
LFF La Frestale 55.68 315 *e*P **P** 19 54 40.2 -0.6
comp=Z,37nm,0.9s
LFF La Frestale 55.68 315 *e*P **P** 19 54 40.2 -0.6
LFF pmax pmax
comp=Z,37nm,0.9s
LFF La Frestale 55.68 315 *e*P **P** 19 54 40.2 -0.6
comp=Z,37nm,0.9s
LFF La Frestale 55.68 315 *e*P **P** 19 54 40.2 -0.6
comp=Z,18nm,0.9s
ETSF Etsaut 56.12 312 *e*P **P** 19 54 43.6 -0.5
comp=Z,25nm,1.0s
ETSF Etsaut 56.12 312 *e*P **P** 19 54 43.6 -0.5

ETSF pmax pmax
comp=Z,25nm,1.0s
ETSF Etsaut 56.12 312 *e*P **P** 19 54 43.6 -0.5
comp=Z,25nm,1.0s
ETSF Etsaut 56.12 312 *e*P **P** 19 54 43.6 -0.5
comp=Z,13nm,1.0s
SBUM Sibu 56.41 97 P **P** 19 54 46.5 0.0
comp=Z,22nm,1.6s
KONO Kongsberg 56.55 334 *e*P **P** 19 54 49.2 +2.5
KONO pmax pmax
comp=Z,66nm,1.6s
KONO Kongsberg 56.55 334 *e*P **P** 19 54 49.2 +2.5
comp=Z,66nm,1.6s
KONO Kongsberg 56.55 334 *e*P **P** 19 54 49.2 +2.5
comp=Z,66nm,1.6s
SJPF Ste Jean 56.65 312 *e*P **P** 19 54 47.0 -0.8
comp=Z,35nm,0.9s
SJPF Ste Jean 56.65 312 *e*P **P** 19 54 47.0 -0.8
SJPF pmax pmax
comp=Z,35nm,0.9s
SJPF Ste Jean 56.65 312 *e*P **P** 19 54 47.0 -0.8
comp=Z,35nm,0.9s
SJPF Ste Jean 56.65 312 *e*P **P** 19 54 47.0 -0.8
comp=Z,17nm,0.9s
NB2 NORSAR Subarra 56.65 336 P **P** 19 54 46.1 -1.4
baz=124,slow=7.4
NB2 NORSAR Subarra 56.65 336 P **P** 19 54 46.1 -1.4
comp=Z,54nm,1.7s,baz=124,slow=7.4
NB2 NORSAR Subarra 56.65 336 P **P** 19 54 46.1 -1.4
comp=Z,54nm,1.7s,baz=124,slow=7.1,SNR=4.1
NOA NORSAR Array B 56.65 336 P **P** 19 54 46.5 -1.0
NOA NORSAR Array B 56.65 336 P **P** 19 54 46.5 -1.0
comp=Z,4.0nm,1.0s,baz=120,slow=7.6,SNR=6.0
NOA NORSAR Array B 56.65 336 P **P** 19 54 46.5 -1.0
NAO01 NORSAR Array S 56.67 335 *e*P **P** 19 54 46.7 -0.9
comp=Z,12nm,0.9s
NAO01 NORSAR Array S 56.67 335 *e*P **P** 19 54 46.7 -0.9
comp=Z,12nm,0.9s
MFF Saint Martin d 56.71 317 *e*P **P** 19 54 47.0 -1.1
comp=Z,67nm,1.5s
MFF Saint Martin d 56.71 317 *e*P **P** 19 54 47.0 -1.1
MFF pmax pmax
comp=Z,67nm,1.5s
MFF Saint Martin d 56.71 317 *e*P **P** 19 54 47.0 -1.1
comp=Z,67nm,1.5s
MFF Saint Martin d 56.71 317 *e*P **P** 19 54 47.0 -1.1
comp=Z,34nm,1.5s
LDF La Druitiere 57.23 319 *e*P **P** 19 54 50.6 -1.2
comp=Z,71nm,1.0s
LDF La Druitiere 57.23 319 *e*P **P** 19 54 50.6 -1.2
LDF pmax pmax
comp=Z,71nm,1.0s
LDF La Druitiere 57.23 319 *e*P **P** 19 54 50.6 -1.2
comp=Z,71nm,1.0s
LDF La Druitiere 57.23 319 *e*P **P** 19 54 50.6 -1.2
comp=Z,36nm,1.0s
FLN La Foliniere 57.51 319 *e*P **P** 19 54 52.5 -1.2
comp=Z,133nm,1.6s
FLN *e*R
comp=Z,519nm,22.2s
FLN La Foliniere 57.51 319 *e*P **P** 19 54 52.5 -1.2
FLN pmax pmax
comp=Z,133nm,1.6s
FLN La Foliniere 57.51 319 *e*P **P** 19 54 52.5 -1.2
comp=Z,133nm,1.6s
FLN La Foliniere 57.51 319 *e*P **P** 19 54 52.5 -1.2
comp=Z,67nm,1.6s
GRR Gorron 57.65 318 *e*P **P** 19 54 53.3 -1.4
comp=Z,19nm,0.9s
GRR Gorron 57.65 318 *e*P **P** 19 54 53.3 -1.4
GRR pmax pmax
comp=Z,19nm,0.9s
GRR Gorron 57.65 318 *e*P **P** 19 54 53.3 -1.4
comp=Z,19nm,0.9s
GRR Gorron 57.65 318 *e*P **P** 19 54 53.3 -1.4
comp=Z,9.4nm,0.9s
SUR Sutherland 57.68 216 *e*P **P** 19 54 57.0 +1.7
BJI Beijing 57.81 52 P **P** 19 54 56.1 +0.1
BJI S **S** 20 02 54.3 -0.2
BJI SS **SS** 20 06 50.9 +5.7
BJI pmax pmax
comp=Z,15nm,0.8s
BJI pmax pmax
comp=Z,160nm,3.4s
BJI LR LR
comp=N,2μm,20.3s
BJI LR LR
comp=E,1μm,20.3s
BJI LR LR
comp=Z,1μm,24.1s
ESDC Sonseca Array 58.09 308 P **P** 19 54 57.4 -0.8
ESDC Sonseca Array 58.09 308 P **P** 19 54 57.4 -0.8
comp=Z,8.3nm,0.7s,baz=84,slow=6.3,SNR=48
ESDC LR LR 20 22 21.1
comp=Z,124nm,19.4s,baz=105,slow=38
ESDC Sonseca Array 58.09 308 P **P** 19 54 57.3 -0.8
ESLA Sonseca Array 58.09 308 *e*P **P** 19 54 57.7 -0.4
comp=Z,2.4nm,0.8s
ESLA Sonseca Array 58.09 308 *e*P **P** 19 54 57.7 -0.4
comp=Z,2.4nm,0.8s
ARCES ARCESS Array B 58.32 348 P **P** 19 54 58.8 -0.3
ARCES ARCESS Array B 58.32 348 P **P** 19 54 58.8 -0.3
comp=Z,4.5nm,0.8s,baz=137,slow=9.1,SNR=8.1
ARCES ARCESS Array B 58.32 348 P **P** 19 54 58.8 -0.3
PAB San Pablo 58.37 308 *e*P **P** 19 54 59.5 -0.6
PAB pmax pmax
comp=Z,71nm,1.8s
PAB San Pablo 58.37 308 *e*P **P** 19 54 59.5 -0.6
comp=Z,71nm,1.8s
PAB San Pablo 58.37 308 *e*P **P** 19 54 59.5 -0.6
comp=Z,71nm,1.8s
SGMF Saint Gilles 58.71 318 *e*P **P** 19 55 00.6 -1.5
comp=Z,49nm,1.0s
SGMF Saint Gilles 58.71 318 *e*P **P** 19 55 00.6 -1.5
SGMF pmax pmax
comp=Z,49nm,1.0s
SGMF Saint Gilles 58.71 318 *e*P **P** 19 55 00.6 -1.5
comp=Z,49nm,1.0s
SGMF Saint Gilles 58.71 318 *e*P **P** 19 55 00.6 -1.5
comp=Z,25nm,1.0s
CIT Chita 58.71 37 *e*P **P** 19 55 02.7 +0.5
CIT Chita 58.71 37 *e*P **P** 19 55 02.7 +0.5
QUIF Quistinic 59.02 317 *e*P **P** 19 55 02.5 -1.8
comp=Z,65nm,1.5s
QUIF Quistinic 59.02 317 *e*P **P** 19 55 02.5 -1.8
QUIF pmax pmax
comp=Z,65nm,1.5s
QUIF Quistinic 59.02 317 *e*P **P** 19 55 02.5 -1.8
comp=Z,65nm,1.5s
QUIF Quistinic 59.02 317 *e*P **P** 19 55 02.5 -1.8
comp=Z,32nm,1.5s
ROSF Rostrenen 59.19 318 *e*P **P** 19 55 03.7 -1.8
comp=Z,110nm,1.7s
ROSF Rostrenen 59.19 318 *e*P **P** 19 55 03.7 -1.8
ROSF pmax pmax
comp=Z,110nm,1.7s
ROSF Rostrenen 59.19 318 *e*P **P** 19 55 03.7 -1.8
comp=Z,110nm,1.7s
ROSF Rostrenen 59.19 318 *e*P **P** 19 55 03.7 -1.8
comp=Z,55nm,1.7s
NJ2 Nanjing 59.29 61 *e*P **P** 19 55 06.6 +0.1
NJ2 pP **pP** 19 55 08.8 -3.8
NJ2 S **S** 20 03 16.0 +1.9
NJ2 pmax pmax
comp=Z,20nm,0.9s
NJ2 pmax pmax
comp=Z,200nm,11.1s
NJ2 LR LR
comp=N,380nm,15.6s
NJ2 LR LR
comp=E,920nm,23.5s
NJ2 LR LR
comp=Z,810nm,19.7s
PBAR Barrancos 60.32 306 *e*P **P** 19 55 13.2 -0.2
comp=Z,206nm,1.9s
PBAR Barrancos 60.32 306 *e*P **P** 19 55 13.2 -0.2
comp=Z,206nm,1.9s
PBRG Braganca 60.46 310 *e*P **P** 19 55 13.8 -0.6
PBRG Braganca 60.46 310 *e*P **P** 19 55 13.8 -0.6
MVO Moncorvo 60.60 309 *e*P **P** 19 55 14.7 -0.7
comp=Z,34nm,1.8s
MVO *e*S S 20 03 37.5 +6.7
MVO *e*LQ LQ 20 10 32.5
MVO A A 20 31 30.2
comp=Z,242nm,18.0s
MVO Moncorvo 60.60 309 *e*P **P** 19 55 14.7 -0.7
comp=Z,34nm,1.8s

PMRV Marv??o 60.70 307 *e*P **P** 19 55 15.1 -1.0
comp=Z,38nm,1.9s
PMRV *e*LR LR 20 15 20.0
comp=Z,229nm,16.0s
PMRV Marv??o 60.70 307 *e*P **P** 19 55 15.1 -1.0
comp=Z,38nm,1.9s
LIC Lamto 60.76 269 *e*P **P** 19 55 17.1 +0.2
comp=Z,26nm,1.1s,baz=90
LIC *e*R
comp=Z,358nm,19.2s
LIC Lamto 60.76 269 *e*P **P** 19 55 17.1 +0.2
comp=Z,26nm,1.0s
LIC Lamto 60.76 269 *e*P **P** 19 55 17.1 +0.2
comp=Z,13nm,1.1s,baz=90
PVAQ Vaqueiros 60.80 305 *e*S S 20 03 40.7 +7.4
PVAQ *e*LQ LQ 20 10 28.7
PVAQ *e*LR LR 20 15 24.2
comp=Z,211nm,18.0s
PBEJ Beja 60.96 306 *e*P **P** 19 55 17.4 -0.4
comp=Z,30nm,1.5s
PBEJ Beja 60.96 306 *e*P **P** 19 55 17.4 -0.4
comp=Z,30nm,1.5s
EKA Eskdalemuir Ar 60.99 326 P **P** 19 55 16.7 -1.0
EKA Eskdalemuir Ar 60.99 326 P **P** 19 55 16.7 -1.0
comp=Z,3.1nm,0.8s,baz=112,slow=6.7,SNR=8.7
EKA Eskdalemuir Ar 60.99 326 P **P** 19 55 16.7 -1.0
PCVE Castro Verde 61.06 305 *e*P **P** 19 55 17.4 -1.2
comp=Z,38nm,1.8s
PCVE Castro Verde 61.06 305 *e*P **P** 19 55 17.4 -1.2
comp=Z,38nm,1.8s
EVO Evora 61.11 306 *e*P **P** 19 55 19.3 +0.5
comp=Z,87nm,1.6s
EVO *e*R
comp=Z,292nm,18.0s
EVO Evora 61.11 306 *e*P **P** 19 55 17.9 -0.9
comp=Z,40nm,1.8s
EVO Evora 61.11 306 *e*P **P** 19 55 17.9 -0.9
comp=Z,40nm,1.8s
EVOP Sao Brissos 61.19 306 *e*P **P** 19 55 19.3 -0.1
EVOP pmax pmax
comp=Z,87nm,1.6s
EVOP Sao Brissos 61.19 306 *e*P **P** 19 55 19.3 -0.1
comp=Z,87nm,1.6s
EVOP Sao Brissos 61.19 306 *e*P **P** 19 55 19.3 -0.1
comp=Z,43nm,1.6s
POLO Lamas de Olo 61.19 309 *e*P **P** 19 55 18.3 -1.2
comp=Z,21nm,2.1s
POLO Lamas de Olo 61.19 309 *e*P **P** 19 55 18.3 -1.2
comp=Z,21nm,2.1s
SSE Sheshan 61.27 62 P **P** 19 55 20.4 +0.4
SSE pmax pmax
comp=Z,30nm,0.8s
SSE pmax pmax
comp=Z,88nm,3.1s
SSE LR LR
comp=N,300nm,29.3s
SSE LR LR
comp=E,340nm,29.6s
SSE LR LR
comp=Z,430nm,27.7s
PFVI Vila Bisbo 61.66 305 *e*P **P** 19 55 22.8 +0.2
comp=Z,26nm,1.9s
PFVI Vila Bisbo 61.66 305 *e*P **P** 19 55 22.8 +0.2
comp=Z,26nm,1.9s
CN2 Changchun 65.08 48 *e*P **P** 19 55 45.8 +0.7
CN2 *e*sP **sP** 19 55 52.0 -1.6
CN2 *e*S **S** 20 04 26.8 0.0
CN2 pmax pmax
comp=Z,20nm,0.7s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,600nm,17.0s
CN2 LR LR
comp=E,800nm,17.0s
CN2 LR LR
comp=Z,900nm,19.0s
KAPI Kappang 65.79 102 *e*P **P** 19 55 48.1 -2.1
comp=Z,87nm,1.5s
KAPI Kappang 65.79 102 P **P** 19 55 48.0 -2.2
comp=Z,168nm,1.2s,SNR=8.8
KAPI Kappang 65.79 102 P **P** 19 55 48.4 -1.8
comp=Z,42nm,1.5s,comp=Z,785nm
KSAR Wonju Array Be 66.78 55 P **P** 19 55 55.7 -0.5
KSAR Wonju Array Be 66.78 55 P **P** 19 55 55.7 -0.5
KSRS Korea Array 66.81 55 P **P** 19 55 55.7 -0.6
comp=Z,6.3nm,0.8s,baz=269,slow=6.8,SNR=19
JNU Nakatsue 69.41 60 P **P** 19 56 12.4 -0.5
JNU Nakatsue 69.41 60 P **P** 19 56 12.4 -0.5
comp=Z,27nm,1.1s,baz=45,slow=1.4,SNR=3.0
JNU Nakatsue 69.41 60 P **P** 19 56 12.4 -0.5
YAK Yakutsk 69.52 29 *e*P **P** 19 56 12.0 -0.9
YAK *e**PP **pP** 19 56 22.5 +3.5
YAK *e* 19 56 30.2
YAK *e*PPP PPP 20 00 29.8
YAK *e*S **S** **20 05 18.8 -0.7**
YAK *e* 20 06 15.1
YAK *e*SS **SS** **20 09 48.2 +1.4**
YAK *e*SSS SSS 20 12 58.9
YAK pmax pmax
comp=E,29nm,1.4s
YAK pmax pmax
comp=Z,59nm,1.4s
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=Z,186nm,3.8s
YAK pmax pmax
comp=N,108nm,4.2s
YAK pmax pmax
comp=E,119nm,3.8s
YAK smax smax
comp=N,174nm,4.6s
YAK smax smax
comp=E,167nm,3.7s
YAK MLR MLR
comp=Z,637nm,21.0s
YAK MLR MLR
comp=E,350nm,17.0s
YAK MLR MLR
comp=N,309nm,19.0s
YAK Yakutsk 69.52 29 *e*P **P** 19 56 12.0 -0.9
comp=N,2.0nm,0.9s
USRK Ussuriysk Arra 69.82 48 P **P** 19 56 14.5 -0.5
comp=N,4.4nm,0.8s,baz=303,slow=3.3,SNR=8.6
BBTS Babate 70.19 281 LR LR 20 28 30.0
comp=N,600nm,19.0s,baz=272,slow=37
TIXI Tiksi 70.87 19 *e*P **P** 19 56 20.3 -0.7
TIXI pmax pmax
comp=Z,46nm,2.5s
TIXI Tiksi 70.87 19 *e*P **P** 19 56 20.3 -0.7
comp=Z,46nm,2.5s
SCO Scoresbysund 72.53 340 *i* P P 19 56 34.6 +3.6
comp=Z,4.5nm,0.9s
DAG Danmarks Havn 72.56 347 *i* P **P** 19 56 30.8 -0.3
comp=Z,7.2nm,0.8s
MJAR Matsushiro Arr 75.08 56 P **P** 19 56 46.4 -0.3
MJAR Matsushiro Arr 75.08 56 P **P** 19 56 46.4 -0.3
comp=Z,1.7nm,0.9s,baz=271,slow=5.1,SNR=3.6
MJAR Matsushiro Arr 75.08 56 P **P** 19 56 46.4 -0.3
FITZ Fitzroy Crossi 75.60 113 *e*P **P** 19 56 49.0 -0.8
comp=Z,7.6nm,0.9s
FITZ Fitzroy Crossi 75.60 113 LR LR 20 22 47.3
comp=Z,228nm,20.6s,baz=308,slow=30
FITZ Fitzroy Crossi 75.60 113 *e*P **P** 19 56 49.0 -0.8
comp=Z,7.6nm,0.9s
SUMG Summit 77.72 342 *e*P **P** 19 57 02.0 +0.6
SUMG pmax pmax
comp=Z,373nm,2.6s
SUMG Summit 77.72 342 *e*P **P** 19 57 02.0 +0.6
comp=Z,373nm,2.6s
SUMG Summit 77.72 342 *i* P **P** 19 57 02.3 +0.9
comp=Z,7.3nm,1.0s
SUMG Summit 77.72 342 *e*P **P** 19 57 02.0 +0.6
comp=Z,373nm,2.6s
YUK Yuzh-Kuril'sk 79.76 47 *e*P P 19 57 18.6 +5.9
YUK S S 20 07 25.3 +11
YUK MLR MLR
comp=N,155nm,21.0s
YUK MLR MLR
comp=Z,294nm,21.0s
SEY Seymchan 79.97 28 *e*P **P** 19 57 14.9 +1.5
SEY Seymchan 79.97 28 *e*P **P** 19 57 14.9 +1.5
MAW Mawson 82.00 177 P **P** 19 57 23.2 -0.7
MAW Mawson 82.00 177 P **P** 19 57 23.2 -0.7
comp=Z,7.6nm,1.0s,baz=337,slow=4.4,SNR=6.0
MAW LR LR 20 28 33.2
comp=Z,766nm,19.6s,baz=324,slow=32
MAW Mawson 82.00 177 P **P** 19 57 23.2 -0.7
BILL Bilibino 83.92 21 *e*P **P** 19 57 34.2 +0.1
BILL *i* 19 57 41.1
BILL *e* 20 00 46.6
BILL *e*S **S** **20 07 52.9 -3.8**
BILL pmax pmax
comp=Z,8.0nm,1.2s
WRA Warramunga Arr 83.97 112 P **P** 19 57 34.3 -1.0
WRA Warramunga Arr 83.97 112 P **P** 19 57 34.3 -1.0
comp=Z,48nm,0.4s,baz=299,slow=4.2,SNR=1.8
WRAB Tennant Creek 83.98 112 *e*P **P** 19 57 34.6 -0.7
WRAB pmax pmax
comp=Z,15nm,0.9s
WRAB Tennant Creek 83.98 112 *e*P **P** 19 57 34.6 -0.7
comp=Z,15nm,0.9s
WRAB Tennant Creek 83.98 112 P **P** 19 57 34.2 -1.1
comp=Z,141nm,0.8s,SNR=13
SYO Syowa Base 84.12 186 ⇓*i*P **P** 19 57 34.6 -0.3
AS31 Alice Springs 84.73 116 *e*P **P** 19 57 37.9 -1.3
ASAR Alice Springs 84.73 116 P **P** 19 57 38.0 -1.2
ASAR Alice Springs 84.73 116 P **P** 19 57 38.0 -1.2
comp=Z,14nm,0.9s,baz=292,slow=5.0,SNR=86
RES Resolute Bay 89.20 353 *e*P **P** 19 58 00.2 +0.4
comp=Z,21nm,1.8s
STKA Stephens Creek 93.59 122 *e*P **P** 19 58 19.5 -1.5
STKA Stephens Creek 93.59 122 P **P** 19 58 19.5 -1.5
comp=Z,3.3nm,1.0s,baz=333,slow=3.6,SNR=3.7
CTAO Charters Tower 94.80 109 *e*P **P** 19 58 25.8 -1.0
CTAO pmax pmax
comp=Z,12nm,1.0s
CTAO Charters Tower 94.80 109 *e*P **P** 19 58 25.8 -1.0
comp=Z,12nm,1.0s
ILAR Eielson Array 99.03 10 P **Pdif** 19 58 44.6 -0.5
ILAR PP **PP** 20 02 48.5 +2.1
ILAR Eielson Array 99.03 10 P **Pdif** 19 58 44.6 -0.5
comp=Z,0.4nm,1.0s,baz=309,slow=1.7,SNR=3.3
ILAR PP **PP** 20 02 48.5 +2.1
comp=Z,0.8nm,0.9s,baz=326,slow=5.4,SNR=6.0
YKA Yellowknife Ar 102.94 356 P **Pdif** 19 59 02.4 -0.2
YKA PP **PKiKP** 20 03 20.2 -2.3
YKA Yellowknife Ar 102.94 356 P **Pdif** 19 59 02.3 -0.2
comp=Z,0.2nm,0.7s,baz=62,slow=8.0,SNR=4.4
YKA PP **PKiKP** 20 03 20.2 -2.3
comp=Z,0.3nm,0.8s,baz=10.0,slow=7.3,SNR=3.8
B13A Whitefish 116.89 353 ⇓P **PKPdf** 20 03 49.1 -0.3
baz=117
NEW Newport 117.27 355 ⇑P **PKPdf** 20 03 50.3 +0.3
baz=117
C14A Swan Lake 117.40 352 ⇓P **PKPdf** 20 03 50.4 0.0
baz=117
C13A Hot Springs 117.59 353 ⇑P **PKPdf** 20 03 50.9 +0.1
baz=117
E20A Meyer Farm, Mu 117.70 348 ⇓P **PKPdf** 20 03 51.2 +0.2
baz=118
F23A Volborg 117.84 346 ⇓P **PKPdf** 20 03 51.0 -0.3
baz=118
E19A Rath Farm, Rou 117.88 348 ⇓P **PKPdf** 20 03 51.1 -0.2
baz=118
D15A Lincoln 117.95 351 ⇑P **PKPdf** 20 03 51.5 0.0
baz=118
D13A Huson 118.15 353 ⇓P **PKPdf** 20 03 51.6 -0.3
baz=118
MSO Missoula 118.35 352 ⇑P **PKPdf** 20 03 51.9 -0.3
baz=118
G22A Birney 118.53 346 ⇓P **PKPdf** 20 03 52.8 +0.2
baz=118
F15A Butte 119.12 351 ⇓P **PKPdf** 20 03 53.2 -0.7
baz=119
BOZ Bozeman (W) 119.17 350 ⇑P **PKPdf** 20 03 53.4 -0.5
baz=119
F13A Darby 119.42 353 ⇑P **PKPdf** 20 03 54.1 -0.3
baz=119
H18A Shoshone NF, C 119.76 349 ⇑P **PKPdf** 20 03 55.7 +0.5
baz=120
I22A 9 Mile Ranch, 119.82 346 ⇓P **PKPdf** 20 03 54.8 -0.4
baz=120
H16A Russell Place, 120.02 350 ⇓P **PKPdf** 20 03 56.1 +0.4
baz=120
I21A Big Trails, Te 120.09 346 ⇓P **PKPdf** 20 03 55.1 -0.7
baz=120
G13A Cobalt 120.09 352 ⇑P **PKPdf** 20 03 55.3 -0.4
baz=120
I20A Worland 120.14 347 ⇓P **PKPdf** 20 03 55.5 -0.4
baz=120
H14A Leadore 120.44 351 ⇓P **PKPdf** 20 03 56.7 +0.2
baz=120
J21A Lysite 120.56 346 ⇑P **PKPdf** 20 03 56.4 -0.3
baz=120
J19A Crowheart 120.99 348 ⇓P **PKPdf** 20 03 57.7 +0.1
baz=121
K21A Alcova 121.19 346 ⇓P **PKPdf** 20 03 57.5 -0.5
baz=121
J18A Kendall Valley 121.24 348 ⇑P **PKPdf** 20 03 57.8 -0.4
baz=121
L23A Garrett 121.30 344 ⇓P **PKPdf** 20 03 57.8 -0.4
baz=121
K19A Absolon Red Bu 121.37 347 ⇓P **PKPdf** 20 03 58.0 -0.3
baz=121
K20A Yellowstone Ra 121.42 347 ⇑P **PKPdf** 20 03 58.1 -0.3
baz=121
I12A Atlanta 121.48 353 ⇓P **PKPdf** 20 03 58.9 +0.4
baz=121
BW06 Boulder Array 121.58 348 ⇓P **PKPdf** 20 03 58.5 -0.2
baz=121
PDAR Pinedale Array 121.58 348 PKP **PKPdf** 20 03 58.4 -0.4
PDAR Pinedale Array 121.58 348 PKP **PKPdf** 20 03 58.4 -0.4
comp=Z,4.8nm,0.7s,baz=71,slow=2.6,SNR=28
HLID Hailey 121.62 352 ⇓P **PKPdf** 20 03 58.8 +0.1
baz=121
M24A Cheyenne 121.67 343 ⇑P **PKPdf** 20 03 59.0 +0.1
baz=121
J14A Carey 121.73 351 ⇑P **PKPdf** 20 03 59.3 +0.4
baz=122
J13A Cove Ranch, Pi 121.75 352 ⇑P **PKPdf** 20 03 59.7 +0.8
baz=122
L21A Rawlins 121.86 346 ⇓P **PKPdf** 20 03 59.1 -0.2
baz=122
MFID Camas Ranch 121.94 353 *e*PKPdf **PKPdf** 20 03 59.2 0.0
MFID Camas Ranch 121.94 353 ⇑P **PKPdf** 20 03 59.7 +0.4
baz=122
M21A Separation Pea 122.19 346 ⇑P **PKPdf** 20 03 59.2 -0.8
baz=122
K14A Jones Ranch, D 122.44 351 ⇑P **PKPdf** 20 04 00.4 +0.1
baz=122
M20A Sweetwater, Wa 122.50 346 ⇓P **PKPdf** 20 04 00.4 -0.2
baz=122
N23A Red Feather La 122.50 344 ⇑P **PKPdf** 20 04 00.2 -0.5
baz=122
L16A Fish Haven 122.66 349 ⇓P **PKPdf** 20 04 00.2 -0.6
baz=122
P26A Davis Ranch, A 122.99 341 ⇑P **PKPdf** 20 04 01.7 +0.2
baz=123
N21A Black Mountain 123.03 345 ⇓P **PKPdf** 20 04 01.3 -0.3
baz=123
M17A Scullys Gap (B 123.04 348 ⇓P **PKPdf** 20 04 01.3 -0.3
baz=123
HWUT Hardware Ranch 123.08 349 *e*PKPdf **PKPdf** 20 04 01.6 0.0
O23A Lake Granby, G 123.14 344 ⇑P **PKPdf** 20 04 01.5 -0.4
baz=123
N20A Spence Gulch, 123.14 346 ⇑P **PKPdf** 20 04 01.2 -0.6
baz=123
KSCO Kaye Shedlock' 123.27 340 ⇓P **PKPdf** 20 04 01.9 0.0
baz=123
N18A Larsen Ranch, 123.32 347 ⇓P **PKPdf** 20 04 01.6 -0.5
baz=123
O22A Kremmling 123.35 344 ⇑P **PKPdf** 20 04 01.5 -0.8
baz=123
N17A Moffit Pass 123.59 348 ⇑P **PKPdf** 20 04 02.5 -0.3
baz=123
O20A White River Ci 123.80 346 ⇑P **PKPdf** 20 04 02.5 -0.6
baz=124
O19A Miners Draw (B 123.85 347 ⇓P **PKPdf** 20 04 02.6 -0.5
baz=124
Q25A Bedland, Calha 123.86 342 ⇑P **PKPdf** 20 04 02.9 -0.4
baz=124
P23A Jefferson 123.90 343 ⇓P **PKPdf** 20 04 03.4 0.0
baz=124
R27A Eads 123.98 340 ⇓P **PKPdf** 20 04 03.4 0.0
baz=124
Q24A Divide 124.08 343 ⇑P **PKPdf** 20 04 03.3 -0.4
baz=124
R26A Arlington 124.17 341 ⇑P **PKPdf** 20 04 03.5 -0.2
baz=124
DAU Daniels Canyon 124.18 349 *e*PKIKP **PKPdf** 20 04 04.2 +0.3
DAU Daniels Canyon 124.18 349 *e*PKIKP **PKPdf** 20 04 04.2 +0.3
DAU Daniels Canyon 124.18 349 *e*PKPdf **PKPdf** 20 04 04.2 +0.3

P21A	Newcastle baz=124	124.18	345	⇑P	PKPdf	20 04 03.9	0.0	
P19A	Cripple Cowboy baz=124	124.45	346	⇑P	PKPdf	20 04 04.0	-0.4	
R25A	Fountain Ranch baz=124	124.58	341	⇑P	PKPdf	20 04 04.0	-0.5	
DUG	Dugway baz=124	124.67	350	⇓P	PKPdf	20 04 04.5	-0.1	
P18A	Preston Nutter baz=124	124.73	347	⇑P	PKPdf	20 04 04.6	-0.4	
R24A	Sanders Place, baz=124	124.75	342	⇓P	PKPdf	20 04 04.8	-0.2	
S26A	Kim baz=125	124.80	340	⇑P	PKPdf	20 04 04.7	-0.3	
U30A	WK&E Inc. Balk baz=125	124.80	337	⇑P	PKPdf	20 04 04.7	-0.2	
R23A	Moffat baz=125	125.00	343	⇑P	PKPdf	20 04 04.9	-0.7	
T27A	Campo baz=125	125.06	340	⇑P	PKPdf	20 04 05.3	-0.2	
S25A	Robets Cordova baz=125	125.07	341	⇓P	PKPdf	20 04 04.7	-0.8	
Q19A	Hogan Spring (baz=125	125.16	346	⇓P	PKPdf	20 04 05.2	-0.4	
V31A	Spring Creek L baz=125	125.16	336	⇑P	PKPdf	20 04 05.6	0.0	
T26A	Comanche Natio baz=125	125.25	340	⇓P	PKPdf	20 04 05.5	-0.4	
SRU	San Rafael baz=125	125.29	347	⇓P	PKPdf	20 04 05.3	-0.7	
S24A	Houchin Ranch, baz=125	125.33	342	⇑P	PKPdf	20 04 05.8	-0.4	
T25A	Trinidad baz=125	125.54	341	⇓P	PKPdf	20 04 06.3	-0.2	
PV04	Paradox Valley	125.61	346	ePKPdf	PKPdf	20 04 05.9	-0.6	
WMOK	Wichita Mounta	125.64	335	ePKIKP	PKPdf	20 04 05.6	-0.9	
WMOK	Wichita Mounta	125.64	335	ePKIKP	PKPdf	20 04 05.6	-0.9	
WMOK	Wichita Mounta	125.64	335	ePKPdf	PKPdf	20 04 05.5	-0.9	
S22A	4UR Ranch, Cre baz=126	125.69	344	⇓P	PKPdf	20 04 06.0	-0.8	
T24A	Torres, Weston baz=126	125.80	342	⇑P	PKPdf	20 04 07.1	0.0	
BEKR	Beckworth	125.84	357	ePKPdf	PKPdf	20 04 06.3	-0.6	
U26A	Atchley Ranch, baz=126	126.01	340	⇓P	PKPdf	20 04 07.0	-0.4	
S20A	Disappointment baz=126	126.01	345	⇓P	PKPdf	20 04 07.3	-0.1	
S21A	Coal Bank Pass baz=126	126.03	344	⇑P	PKPdf	20 04 07.5	0.0	
U25A	Circle Dot Ran baz=126	126.22	341	⇓P	PKPdf	20 04 07.7	-0.1	
T22A	Edith baz=126	126.40	343	⇑P	PKPdf	20 04 08.5	+0.4	
S18A	Hurst Farm, Bl baz=126	126.54	346	⇑P	PKPdf	20 04 08.3	-0.2	
Y32A	R-V Farms, Ver baz=126	126.54	335	⇑P	PKPdf	20 04 08.0	-0.3	
LPAZ	La Paz	126.55	260	PKP	PKPdf	20 04 09.0	-0.4	
LPAZ	La Paz comp=Z,1.2nm,0.8s,baz=292,slow=4.3,SNR=4.7	126.55	260	PKP	PKPdf	20 04 09.0	-0.4	
V26A	Tequesquite Ra baz=126	126.57	340	⇑P	PKPdf	20 04 07.8	-0.6	
AMTX	Amarillo	126.65	337	ePKPdf	PKPdf	20 04 08.1	-0.4	
AMTX	Amarillo baz=126	126.65	337	⇑P	PKPdf	20 04 08.5	0.0	
V25A	Rancho No Teng baz=127	126.80	341	⇑P	PKPdf	20 04 08.7	-0.2	
R11A	Troy Canyon, C baz=127	126.90	352	⇑P	PKPdf	20 04 09.1	0.0	
W27A	Bowe Ranch, En baz=127	126.98	339	⇓P	PKPdf	20 04 09.0	-0.2	
NV11	Mina Array Sit	127.11	355	ePKPdf	PKPdf	20 04 10.4	+1.0	
V24A	Rampart Ranch, baz=127	127.11	341	⇑P	PKPdf	20 04 09.8	+0.2	
NVAR	Mina Array Bea	127.13	355	PKP	PKPdf	20 04 10.8	+1.3	
NVAR	Mina Array Bea comp=Z,8.4nm,0.8s,baz=19,slow=0.6,SNR=56	127.13	355	PKP	PKPdf	20 04 10.8	+1.3	
U21A	Nageezi baz=127	127.15	344	⇓P	PKPdf	20 04 10.2	+0.6	
Z32A	Haskell baz=127	127.16	334	⇑P	PKPdf	20 04 09.7	+0.2	
W26A	Owens Ranch, T baz=127	127.20	339	⇓P	PKPdf	20 04 09.5	-0.1	
W25A	X Bar L Ranch, baz=127	127.32	340	⇑P	PKPdf	20 04 09.8	-0.1	
Z31A	Sharp Cattle R baz=127	127.43	335	⇑P	PKPdf	20 04 09.6	-0.4	
W24A	Lazy 6 Ranch, baz=127	127.63	341	⇓P	PKPdf	20 04 10.0	-0.5	
Z30A	Sanderson Ranc baz=128	127.85	336	⇓P	PKPdf	20 04 10.5	-0.3	
V20A	Brimhall baz=128	127.96	344	⇓P	PKPdf	20 04 10.7	-0.4	
Y27A	Causey baz=128	128.08	338	⇓P	PKPdf	20 04 11.3	0.0	
U15A	North Rim baz=128	128.24	348	⇓P	PKPdf	20 04 12.0	+0.2	
Y26A	Elida baz=128	128.28	339	⇓P	PKPdf	20 04 11.7	0.0	
232A	Coleman baz=128	128.46	334	⇓P	PKPdf	20 04 11.9	-0.1	
Y25A	Mesa, Roswell baz=128	128.58	340	⇓P	PKPdf	20 04 12.3	0.0	
W20A	Ramah baz=128	128.61	344	⇓P	PKPdf	20 04 12.4	-0.1	
Z27A	Tatum baz=128	128.61	338	⇓P	PKPdf	20 04 11.9	-0.4	
Y24A	Capitan baz=129	128.82	340	⇑P	PKPdf	20 04 13.1	+0.2	
LAZ	Ladron	128.91	342	ePKPdf	PKPdf	20 04 12.7	-0.3	
Z26A	Caprock baz=129	128.93	339	⇓P	PKPdf	20 04 12.7	-0.2	
WUAZ	Wupatki	128.93	347	ePKPdf	PKPdf	20 04 12.5	-0.4	
332A	Millersview baz=129	128.93	334	⇑P	PKPdf	20 04 12.5	-0.4	
128A	Castleberry Fa baz=129	128.96	337	⇑P	PKPdf	20 04 12.6	-0.4	
Y23A	Lovelace Mesa, baz=129	129.01	341	⇓P	PKPdf	20 04 13.2	0.0	
X21A	Alamocita Cree baz=129	129.05	343	⇓P	PKPdf	20 04 13.7	+0.3	
Y22A	Socorro baz=129	129.29	342	⇓P	PKPdf	20 04 14.2	+0.5	
331A	San Angelo baz=129	129.29	334	⇑P	PKPdf	20 04 13.5	-0.1	
Z24A	Sheeppen Canyo baz=129	129.34	340	⇑P	PKPdf	20 04 14.6	+0.8	
432A	Menard baz=129	129.39	333	⇓P	PKPdf	20 04 14.0	+0.2	
MPMC	Manual Prospec baz=129	129.39	354	⇓P	PKPdf	20 04 14.6	+0.7	
Y21A	Point of Rocks baz=129	129.43	343	⇑P	PKPdf	20 04 13.9	-0.1	
330A	Mertzon baz=129	129.52	335	⇑P	PKPdf	20 04 14.0	-0.1	
X18A	Snowflake baz=129	129.54	345	⇑P	PKPdf	20 04 15.1	+0.9	
Z23A	Rita Site, Whi baz=130	129.69	341	⇑P	PKPdf	20 04 15.8	+1.4	
Y20A	Horse Springs, baz=130	129.72	343	⇓P	PKPdf	20 04 15.9	+1.2	
W13A	Hualapai Mount baz=130	129.82	350	⇑P	PKPdf	20 04 15.9	+1.2	
431A	Sonora baz=130	129.91	334	⇑P	PKPdf	20 04 14.7	-0.1	
Z22A	Elephant Butte baz=130	129.92	342	⇑P	PKPdf	20 04 15.6	+0.7	
124A	Stringfield Ra baz=130	129.95	340	⇓P	PKPdf	20 04 15.1	0.0	
GSC	Goldstone baz=130	130.06	353	⇓P	PKPdf	20 04 16.0	+1.0	
226B	Tecolote Peak, baz=130	130.07	338	⇑P	PKPdf	20 04 15.1	0.0	
328A	Wristen Ranch, baz=130	130.19	336	⇓P	PKPdf	20 04 15.0	-0.3	
225A	Deer Hill, Car baz=130	130.28	339	⇑P	PKPdf	20 04 15.7	+0.1	
531A	Rocksprings baz=130	130.33	333	⇑P	PKPdf	20 04 15.6	0.0	
429A	Davenport Ranc baz=130	130.50	335	⇑P	PKPdf	20 04 15.9	0.0	
Z20A	Nine Sixteen R baz=130	130.53	343	⇑P	PKPdf	20 04 17.2	+1.2	
632A	Uvalde baz=130	130.56	332	⇓P	PKPdf	20 04 16.3	+0.2	
530A	J-C Ranch, Com baz=130	130.68	334	⇑P	PKPdf	20 04 16.5	+0.2	
428A	Kincaid Ranch, baz=130	130.72	336	⇓P	PKPdf	20 04 16.8	+0.4	
Y14A	Wickenburg baz=131	130.79	348	⇓P	PKPdf	20 04 17.2	+0.8	
121A	Cookes Peak, D baz=131	130.84	342	⇓P	PKPdf	20 04 17.5	+0.8	
IRM	Iron Mountain baz=131	130.95	351	⇓P	PKPdf	20 04 17.9	+1.2	
325A	Bean Ranch, Si baz=131	131.00	339	⇑P	PKPdf	20 04 16.6	-0.4	
529A	Stev Forest Ra baz=131	131.07	335	⇓P	PKPdf	20 04 17.1	0.0	
324A	Moseley Ranch, baz=131	131.11	339	⇓P	PKPdf	20 04 17.0	-0.2	
BELC	Belle Mtn. Jos baz=131	131.24	352	⇓P	PKPdf	20 04 18.3	+1.0	
528A	Cox Ranch, San baz=131	131.26	336	⇑P	PKPdf	20 04 17.2	-0.3	
426A	McDonald Obser baz=131	131.29	337	⇓P	PKPdf	20 04 17.7	0.0	
BC3	Big Chuckawall baz=131	131.50	351	⇑P	PKPdf	20 04 19.2	+1.4	
425A	Indio Mountain baz=131	131.53	338	⇑P	PKPdf	20 04 18.1	+0.1	
527A	Woodward Ranch baz=131	131.60	337	⇑P	PKPdf	20 04 18.2	+0.1	
220A	Playas Peak, P baz=131	131.65	343	⇑P	PKPdf	20 04 18.5	+0.4	
526A	Mary Lane Ranc baz=132	131.86	337	⇑P	PKPdf	20 04 19.2	+0.6	
628A	Black Gap, Mar baz=132	131.90	335	⇑P	PKPdf	20 04 18.9	+0.3	
GLA	Glamis	131.98	350	ePKIKP	PKPdf	20 04 17.9	-0.8	
GLA	Glamis	131.98	350	ePKIKP	PKPdf	20 04 17.9	-0.8	
GLA	Glamis	131.98	350	ePKPdf	PKPdf	20 04 17.9	-0.8	
627A	Terlingua Ranc baz=132	132.13	336	⇑P	PKPdf	20 04 19.0	-0.1	
626A	Big Bend Ranch baz=132	132.33	337	⇑P	PKPdf	20 04 19.3	-0.2	
TXAR	Lajitas Array	132.35	336	PKP	PKPdf	20 04 19.8	+0.3	
TXAR	Lajitas Array comp=Z,1.4nm,0.7s,baz=125,slow=1.1,SNR=12	132.35	336	PKP	PKPdf	20 04 19.8	+0.3	

*ISCJB **21** 19:47:23.2±0.4, 14°.41N±0°.06×56°.16E±0°.05, h10km, mb4.7/67, MS4.7/1, Error ellipse: s-maj=9.2km s-min=7.3km az=0.9*

*GCMT **21** 19:47:24.3±0.4, 14°.47N×56°.26E, h13km±1km, MW5.1, Moment Tensor Solution. s23,c26; s54,c81; Moment tensor: Scale 10^{16}Nm; M_{rr}=4.50±.38; $M_{\theta\theta}$3.47±.27; $M_{\phi\phi}$1.03±.24; $M_{r\theta}$2.20±.66; $M_{\theta\phi}$-1.48±.15; $M_{\phi r}$-0.99±.60; Best double couple: $M_0$5.00000×10^{16} NP1:ϕ_s116.00000°, δ30.0000°, λ-89.00000°. NP2:ϕ_s295.00000°, δ60.00000°, λ-90.00000°. Principal axes: T 4.7900, Plg15.0000°, Azm25.0000°; N 0.3300, Plg0.0000°, Azm295.0000°; P -5.1300, Plg75.0000°, Azm203.0000°; Data Used: IC II IU G CN.*

*IDC **21** 19:47:24.7±0.5, 14°.43N×56°.38E, h0km, mb4.3/26, mb1 4.4/26,mb1mx4.3/36,mbtmp4.3/26,MS4.6/1, Ms1 4.6/1,ms1mx3.9/28 Error ellipse: s-maj=14.5km s-min=13.1km az=125.0*

*NEIC **21** 19:47:25.2±0.3, 14°.39N×56°.19E, h10km, mb5.2/42, Error ellipse: s-maj=8.1km s-min=7.1km az=179.0*

*CSEM **21** 19:47:28.8±0.2, 14°.43N×56°.19E, h33km, mb4.9/42, Mw5.1*

ISC 21 19:47:25.4±0.5, 14°.33N±0°.09×56°.32E±0°.08, h10km, n239, s1s39/236, mb4.8/67, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
KBL	Kabul 27nm,1.3s	23.17	28	eP	P		19 52 30.9	-1.6
KBL	Kabul 27nm,1.3s	23.17	28	eP	P		19 52 30.9	-1.6
KMBO	Kilima Mbogo 18nm,1.1s	24.34	232	eP	P		19 52 43.9	-0.1
KMBO	Kilima Mbogo 6.1nm,1.0s,baz=180,slow=2.0,SNR=2.8	24.34	232	P	P		19 52 47.0	+3.0
KMBO	Kilima Mbogo 18nm,1.1s	24.34	232	eP	P		19 52 43.9	-0.1
MMAI	Mount Meron Ar	26.61	318	P	P		19 53 05.3	+1.1
MMAI	Mount Meron Ar 3.0nm,0.8s,baz=166,slow=8.6,SNR=2.5	26.61	318	P	P		19 53 05.3	+1.1
MMAI	Mount Meron Ar	26.61	318	P	P		19 53 05.3	+1.1
GNI	Garni 45nm,1.2s	27.65	341	eP	P		19 53 14.9	+1.3
GNI	Garni 45nm,1.2s	27.65	341	eP	P		19 53 14.9	+1.3
MALT	Malatya 32nm,1.4s	28.66	330	eP	P		19 53 20.3	-2.3
MALT	Malatya 32nm,1.4s	28.66	330	eP	P		19 53 20.3	-2.3
CSS	Prodhromos 5.6nm,1.0s	29.17	319	eP	P		19 53 26.7	-0.3
CSS	Prodhromos 5.6nm,1.0s	29.17	319	eP	P		19 53 26.7	-0.3
EKS2	Erkin-Say 9.5nm,1.0s	31.99	25	eP	P		19 53 51.0	-1.0
EKS2	Erkin-Say 9.5nm,1.0s	31.99	25	eP	P		19 53 51.0	-1.0
AAK	Ala-Archa 41nm,1.5s	32.26	26	eP	P		19 53 55.9	+1.5
AAK				PcP	PcP		19 56 43.2	+0.4
AAK	Ala-Archa 5.8nm,0.9s,baz=174,slow=7.4,SNR=5.6	32.26	26	P	P		19 53 56.3	+1.9
AAK				PcP	PcP		19 56 43.2	+0.4
AAK	Ala-Archa 41nm,1.5s	32.26	26	eP	P		19 53 55.9	+1.5
AAK	Ala-Archa	32.26	26	PcP	PcP		19 56 43.2	+0.4
TKM2	Tokmak 2 21nm,1.7s	32.97	26	P	P		19 53 51.1	-10
AKTO	Aktyubinsk	36.03	2	P	P		19 54 27.6	+0.8
AKTO	Aktyubinsk 6.3nm,0.7s,baz=208,slow=3.2,SNR=7.0	36.03	2	P	P		19 54 27.6	+0.8
AKTO	Aktyubinsk	36.03	2	P	P		19 54 27.6	+0.8
MK31	Makanchi Array	38.97	29	eP	P		19 54 50.8	-1.0
MK31	Makanchi Array	38.97	29	eP	P		19 54 50.8	-1.0
MKAR	Makanchi Array	38.97	29	P	P		19 54 52.9	+1.0
MKAR				PcP	PcP		19 57 03.0	+0.7
MKAR	Makanchi Array 2.5nm,1.0s,baz=212,slow=9.5,SNR=5.5	38.97	29	P	P		19 54 52.9	+1.0
MKAR	1.2nm,0.9s,baz=233,slow=3.2,SNR=5.2			PcP	PcP		19 57 03.0	+0.7
MKAR	Makanchi Array	38.97	29	P	P		19 54 52.9	+1.0
MKAR	Makanchi Array	38.97	29	PcP	PcP		19 57 03.0	+0.7
BVAR	Borovoye Array	40.19	13	PcP	PcP		19 57 06.7	+0.8
BVAR	Borovoye Array 2.5nm,0.8s,baz=176,slow=4.5,SNR=5.2	40.19	13	PcP	PcP		19 57 06.7	+0.8
BVAR	Borovoye Array	40.19	13	PcP	PcP		19 57 06.7	+0.8
MLR	Muntele Rosu	40.27	327	P	P		19 55 04.7	+2.0
MLR	Muntele Rosu 1.9nm,1.0s,baz=324,slow=17,SNR=4.7	40.27	327	P	P		19 55 04.7	+2.0
KURBB	Kurchatov Arra 2.8nm,0.8s,baz=222,slow=7.8,SNR=6.8	40.43	22	P	P		19 55 05.0	+1.2
KURBB	1.7nm,1.0s,baz=227,slow=3.4,SNR=4.4			PcP	PcP		19 57 07.5	+0.8
LSZ	Lusaka 26nm,1.3s	40.49	224	eP	P		19 55 03.5	-1.4
LSZ	Lusaka 9.2nm,1.1s,baz=41,slow=13,SNR=3.7	40.49	224	P	P		19 55 08.2	+3.3
LSZ	Lusaka 26nm,1.3s	40.49	224	eP	P		19 55 03.5	-1.4
KURK	Kurchatov	40.54	22	P	P		19 55 05.0	+0.3
KURK				PcP	PcP		19 57 07.5	+0.4
KURK	Kurchatov	40.54	22	P	P		19 55 05.0	+0.3
CHTO	Chiang Mai 15nm,1.4s	41.02	78	P	P		19 55 09.4	+0.2
CHTO	Chiang Mai 15nm,1.4s	41.02	78	P	P		19 55 09.4	+0.2
CMAR	Chiang Mai Arr	41.03	78	P	P		19 55 10.9	+1.6
CMAR				PcP	PcP		19 57 08.9	-0.4
CMAR	Chiang Mai Arr 4.8nm,1.0s,baz=277,slow=8.9,SNR=5.5	41.03	78	P	P		19 55 10.9	+1.6
CMAR				PcP	PcP		19 57 08.9	-0.4
CMAR	Chiang Mai Arr 0.9nm,0.9s,baz=266,slow=4.3,SNR=5.0	41.03	78	P	P		19 55 10.9	+1.6
CMAR	Chiang Mai Arr	41.03	78	PcP	PcP		19 57 08.9	-0.4
AKASG	Malin Array Be	42.39	335	P	P		19 55 19.2	-0.7
AKASG	Malin Array Be 3.8nm,0.9s,baz=136,slow=7.1,SNR=3.7	42.39	335	P	P		19 55 19.2	-0.7
AKASG	Malin Array Be	42.39	335	P	P		19 55 19.2	-0.7
ZAA0	Zalesovo Array	45.42	23	P	P		19 55 43.8	-0.4
ZAA0	Zalesovo Array	45.42	23	P	P		19 55 43.8	-0.4
ZALV	Zalesovo Beam	45.42	23	P	P		19 55 44.5	+0.3
ZALV	Zalesovo Beam 4.8nm,0.8s,baz=230,slow=6.9,SNR=4.8	45.42	23	P	P		19 55 44.5	+0.3
ZALV	Zalesovo Beam	45.42	23	P	P		19 55 44.5	+0.3
KEST	Kesra	47.07	306	P	P		19 55 58.7	+1.0
KEST	Kesra 2.7nm,0.9s,baz=8.1,slow=7.1,SNR=2.6	47.07	306	P	P		19 55 58.7	+1.0
KEST	Kesra	47.07	306	P	P		19 55 58.7	+1.0
MORC	Moravsky Berou 13nm,1.2s	47.38	327	P	P		19 55 56.0	-3.8
MORC	Moravsky Berou 13nm,1.2s	47.38	327	P	P		19 55 56.0	-3.8
GERES	GERESS Array B	49.02	324	P	P		19 56 11.9	-0.6
GERES	GERESS Array B 0.7nm,0.6s,baz=113,slow=12,SNR=3.8	49.02	324	P	P		19 56 11.9	-0.6
GERES	GERESS Array B	49.02	324	P	P		19 56 11.9	-0.6
LBTB	Lobatse	49.27	218	P	P		19 56 16.6	+1.8
LBTB	Lobatse 16nm,1.0s,baz=43,slow=4.5,SNR=6.7	49.27	218	P	P		19 56 16.6	+1.8
LBTB	Lobatse	49.27	218	P	P		19 56 16.5	+1.8
PGF	Pioggiola 124nm,1.6s	49.36	314	eP	P		19 56 13.6	-1.7
PGF	Pioggiola 124nm,1.6s	49.36	314	eP	P		19 56 13.6	-1.7
PGF	Pioggiola 62nm,1.6s	49.36	314	eP	P		19 56 13.6	-1.7
SBF	Sospel 37nm,0.9s	50.89	315	eP	P		19 56 24.5	-2.3
SBF	Sospel 37nm,0.9s	50.89	315	eP	P		19 56 24.5	-2.3
SBF	Sospel 19nm,0.9s	50.89	315	eP	P		19 56 24.5	-2.3
FRF	La Foret Royal 164nm,1.6s	51.33	315	eP	P		19 56 29.1	-0.9
FRF	La Foret Royal 164nm,1.6s	51.33	315	eP	P		19 56 29.1	-0.9
FRF	La Foret Royal 82nm,1.6s	51.33	315	eP	P		19 56 29.1	-0.9
LMR	La Mourre 111nm,1.6s	51.35	314	eP	P		19 56 28.5	-1.7
LMR	La Mourre 111nm,1.6s	51.35	314	eP	P		19 56 28.5	-1.7
LMR	La Mourre 56nm,1.6s	51.35	314	eP	P		19 56 28.5	-1.7
MBDF	Montbardon 12nm,0.8s	51.63	316	eP	P		19 56 30.3	-2.2
MBDF	Montbardon 12nm,0.8s	51.63	316	eP	P		19 56 30.3	-2.2
MBDF	Montbardon 5.8nm,0.8s	51.63	316	eP	P		19 56 30.3	-2.2
JOF	Joensuu 2.0nm,0.6s	51.63	346	ep	P		19 56 29.8	-2.1
JOF	Joensuu 2.0nm,0.6s	51.63	346	eP	P		19 56 29.8	-2.1
FINES	FINESS Array B	51.83	342	P	P		19 56 33.8	+0.4
FINES	FINESS Array B 3.0nm,0.7s,baz=136,slow=9.8,SNR=6.3	51.83	342	P	P		19 56 33.8	+0.4
FINES	FINESS Array B	51.83	342	P	P		19 56 33.8	+0.4
LPG	La Plagne 18nm,0.8s	51.91	317	eP	P		19 56 33.0	-1.7
LPG	La Plagne 18nm,0.8s	51.91	317	eP	P		19 56 33.0	-1.7
LPG	La Plagne 9.1nm,0.8s	51.91	317	eP	P		19 56 33.0	-1.7
LPL	La Plagne 26nm,0.9s	51.92	317	eP	P		19 56 33.1	-1.6
LPL	La Plagne 26nm,0.9s	51.92	317	eP	P		19 56 33.1	-1.6
LPL	La Plagne 13nm,0.9s	51.92	317	eP	P		19 56 33.1	-1.6
BOSA	Boshof 20nm,1.0s	52.21	215	eP	P		19 56 36.8	-0.1
BOSA	Boshof 5.1nm,0.6s,baz=52,slow=7.9,SNR=6.1	52.21	215	P	P		19 56 39.1	+2.2
BOSA	Boshof 20nm,1.0s	52.21	215	eP	P		19 56 36.8	-0.1
ORIF	Oris-en-Rattie 89nm,1.8s	52.29	316	eP	P		19 56 35.4	-1.9
ORIF	Oris-en-Rattie 89nm,1.8s	52.29	316	eP	P		19 56 35.4	-1.9
ORIF	Oris-en-Rattie 44nm,1.8s	52.29	316	eP	P		19 56 35.4	-1.9
CDF	Champ du Feu 15nm,0.8s	52.65	321	eP	P		19 56 38.1	-1.8
CDF	Champ du Feu 15nm,0.8s	52.65	321	eP	P		19 56 38.1	-1.8
CDF	Champ du Feu 7.3nm,0.8s	52.65	321	eP	P		19 56 38.1	-1.8
HINF	Hinteralfeld	52.68	320	eP	P		19 56 38.0	-2.1
HINF	Hinteralfeld	52.68	320	eP	P		19 56 38.0	-2.1
HINF	Hinteralfeld	52.68	320	eP	P		19 56 38.0	-2.1
CABF	La Chapelle 154nm,1.8s	52.73	318	eP	P		19 56 39.5	-1.0
CABF	La Chapelle 154nm,1.8s	52.73	318	eP	P		19 56 39.5	-1.0
CABF	La Chapelle 77nm,1.8s	52.73	318	eP	P		19 56 39.5	-1.0
TOA0	Torodi Ar. Sit	52.97	276	P	P		19 56 40.6	-2.1
TOA0	Torodi Ar. Sit	52.97	276	P	P		19 56 40.6	-2.1
TORD	Torodi Ar. Bea	52.97	276	P	P		19 56 43.2	+0.5
TORD	Torodi Ar. Bea 1.0nm,0.9s,baz=97,slow=6.0,SNR=4.4	52.97	276	P	P		19 56 43.2	+0.5
TORD	Torodi Ar. Bea	52.97	276	P	P		19 56 43.2	+0.5
SONM	Songino Array	53.06	40	P	P		19 56 43.9	+0.8
SONM	Songino Array 0.8nm,0.5s,baz=248,slow=7.6,SNR=3.5	53.06	40	P	P		19 56 43.9	+0.8
SONM	Songino Array	53.06	40	P	P		19 56 43.9	+0.8
LASF	Ste Croix	53.41	315	eP	P		19 56 44.3	-1.2
LASF	Ste Croix	53.41	315	eP	P		19 56 44.3	-1.2
LASF	Ste Croix	53.41	315	eP	P		19 56 44.3	-1.2
PAGF	Fort de Pagny	53.66	320	eP	P		19 56 45.7	-1.5
PAGF	Fort de Pagny	53.66	320	eP	P		19 56 45.7	-1.5
PAGF	Fort de Pagny	53.66	320	eP	P		19 56 45.7	-1.5
SFTF	Sexfontaines 42nm,1.2s	53.96	320	eP	P		19 56 48.0	-1.4
SFTF	Sexfontaines 42nm,1.2s	53.96	320	eP	P		19 56 48.0	-1.4
SFTF	Sexfontaines 21nm,1.2s	53.96	320	eP	P		19 56 48.0	-1.4
MEZF	Maizieres J'vi 46nm,1.1s	54.05	320	eP	P		19 56 48.9	-1.2
MEZF	Maizieres J'vi 46nm,1.1s	54.05	320	eP	P		19 56 48.9	-1.2
MEZF	Maizieres J'vi 23nm,1.1s	54.05	320	eP	P		19 56 48.9	-1.2
SMF	Signal de Mont 35nm,1.5s	54.20	318	eP	P		19 56 49.6	-1.6
SMF	Signal de Mont 35nm,1.5s	54.20	318	eP	P		19 56 49.6	-1.6
SMF	Signal de Mont 18nm,1.5s	54.20	318	eP	P		19 56 49.6	-1.6
MTLF	Montolieu	54.35	313	eP	P		19 56 50.9	-1.5
MTLF	Montolieu	54.35	313	eP	P		19 56 50.9	-1.5
MTLF	Montolieu	54.35	313	eP	P		19 56 50.9	-1.5
LOR	Lormes 30nm,1.1s	54.39	318	eP	P		19 56 51.1	-1.5
LOR	Lormes 30nm,1.1s	54.39	318	eP	P		19 56 51.1	-1.5
LOR	Lormes 15nm,1.1s	54.39	318	eP	P		19 56 51.1	-1.5
SSF	Saint Saulge 12nm,1.0s	54.55	318	eP	P		19 56 52.2	-1.6
SSF	Saint Saulge 12nm,1.0s	54.55	318	eP	P		19 56 52.2	-1.6
SSF	Saint Saulge 6.1nm,1.0s	54.55	318	eP	P		19 56 52.2	-1.6
AVF	Avril sur Loir 26nm,1.3s	54.56	318	eP	P		19 56 52.1	-1.8
AVF	Avril sur Loir 26nm,1.3s	54.56	318	eP	P		19 56 52.1	-1.8
AVF	Avril sur Loir 13nm,1.3s	54.56	318	eP	P		19 56 52.1	-1.8
GIVF	Givet	54.78	322	eP	P		19 56 54.1	-1.3
GIVF	Givet	54.78	322	eP	P		19 56 54.1	-1.3
GIVF	Givet	54.78	322	eP	P		19 56 54.1	-1.3
BGF	Bois d'Agland 69nm,1.4s	54.82	317	eP	P		19 56 54.6	-1.2
BGF	Bois d'Agland 69nm,1.4s	54.82	317	eP	P		19 56 54.6	-1.2
BGF	Bois d'Agland 34nm,1.4s	54.82	317	eP	P		19

BAIF	Baives	55.13	322	*e*P	P	19 56 56.8	-1.1
	28nm,1.4s						
TCF	Toulx Ste Croi	55.16	317	*e*P	P	19 56 56.9	-1.4
TCF	Toulx Ste Croi	55.16	317	*e*P	P	19 56 56.9	-1.4
TCF	Toulx Ste Croi	55.16	317	*e*P	P	19 56 56.9	-1.4
HFS	Hagfors	55.26	336	P	P	19 56 58.9	+0.2
HFS	Hagfors	55.26	336	P	P	19 56 58.9	+0.2
	3.9nm,0.9s,baz=139,slow=9.5,SNR=4.5						
HFS	Hagfors	55.26	336	P	P	19 56 58.9	+0.2
RJF	Les Rejaudoux	55.35	315	*e*P	P	19 56 58.1	-1.5
RJF	Les Rejaudoux	55.35	315	*e*P	P	19 56 58.1	-1.5
RJF	Les Rejaudoux	55.35	315	*e*P	P	19 56 58.1	-1.5
LFF	La Frestale	55.79	315	*e*P	P	19 57 01.1	-1.6
LFF	La Frestale	55.79	315	*e*P	P	19 57 01.1	-1.6
LFF	La Frestale	55.79	315	*e*P	P	19 57 01.1	-1.6
ETSF	Etsaut	56.22	312	*e*P	P	19 57 04.8	-1.2
	19nm,1.0s						
ETSF	Etsaut	56.22	312	*e*P	P	19 57 04.8	-1.2
	19nm,1.0s						
ETSF	Etsaut	56.22	312	*e*P	P	19 57 04.8	-1.2
	9.7nm,1.0s						
SJPF	Ste Jean	56.74	312	*e*P	P	19 57 07.7	-1.9
	43nm,1.3s						
SJPF	Ste Jean	56.74	312	*e*P	P	19 57 07.7	-1.9
	43nm,1.3s						
SJPF	Ste Jean	56.74	312	*e*P	P	19 57 07.7	-1.9
	21nm,1.3s						
NOA	NORSAR Array B	56.78	336	P	P	19 57 08.7	-0.9
NOA	NORSAR Array B	56.78	336	P	P	19 57 08.7	-0.9
	0.9nm,0.8s,baz=12,slow=13,SNR=3.3						
NOA	NORSAR Array B	56.78	336	P	P	19 57 08.7	-0.9
MFF	Saint Martin d	56.81	317	*e*P	P	19 57 08.3	-1.7
	19nm,1.1s						
MFF	Saint Martin d	56.81	317	*e*P	P	19 57 08.3	-1.7
	19nm,1.1s						
MFF	Saint Martin d	56.81	317	*e*P	P	19 57 08.3	-1.7
	9.3nm,1.1s						
LDF	La Druitiere	57.34	319	*e*P	P	19 57 11.9	-1.8
	50nm,1.5s						
LDF	La Druitiere	57.34	319	*e*P	P	19 57 11.9	-1.8
	50nm,1.5s						
LDF	La Druitiere	57.34	319	*e*P	P	19 57 11.9	-1.8
	25nm,1.5s						
SUR	Sutherland	57.55	216	P	P	19 57 14.0	-1.6
	36nm,1.1s						
SUR	Sutherland	57.55	216	P	P	19 57 14.0	-1.6
	36nm,1.1s						
FLN	La Foliniere	57.62	319	*e*P	P	19 57 13.7	-2.0
	50nm,1.4s						
FLN	La Foliniere	57.62	319	*e*P	P	19 57 13.7	-2.0
	50nm,1.4s						
FLN	La Foliniere	57.62	319	*e*P	P	19 57 13.7	-2.0
	25nm,1.4s						
GRR	Gorron	57.76	319	*e*P	P	19 57 14.2	-2.4
GRR	Gorron	57.76	319	*e*P	P	19 57 14.2	-2.4
GRR	Gorron	57.76	319	*e*P	P	19 57 14.2	-2.4
ESDC	Sonseca Array	58.18	308	P	P	19 57 19.4	-0.5
ESDC	Sonseca Array	58.18	308	P	P	19 57 19.4	-0.5
	2.0nm,0.6s,baz=87,slow=6.4,SNR=8.3						
ESDC	Sonseca Array	58.18	308	P	P	19 57 19.4	-0.5
ESLA	Sonseca Array	58.18	308	*e*P	P	19 57 18.8	-1.1
	1.5nm,0.8s						
ESLA	Sonseca Array	58.18	308	*e*P	P	19 57 18.8	-1.1
	1.5nm,0.8s						
ARCES	ARCESS Array B	58.46	348	P	P	19 57 20.5	-0.8
ARCES	ARCESS Array B	58.46	348	P	P	19 57 20.5	-0.8
	4.8nm,0.8s,baz=134,slow=5.2,SNR=5.3						
ARCES	ARCESS Array B	58.46	348	P	P	19 57 20.5	-0.8
SGMF	Saint Gilles	58.82	318	*e*P	P	19 57 21.9	-2.2
	50nm,1.3s						
SGMF	Saint Gilles	58.82	318	*e*P	P	19 57 21.9	-2.2
	50nm,1.3s						
SGMF	Saint Gilles	58.82	318	*e*P	P	19 57 21.9	-2.2
	25nm,1.3s						
QUIF	Quistinic	59.13	318	*e*P	P	19 57 23.6	-2.7
	57nm,1.6s						
QUIF	Quistinic	59.13	318	*e*P	P	19 57 23.6	-2.7
	57nm,1.6s						
QUIF	Quistinic	59.13	318	*e*P	P	19 57 23.6	-2.7
	28nm,1.6s						
LIC	Lamto	60.76	269	*e*P	P	19 57 38.5	+0.5
	10nm,0.9s						
LIC	Lamto	60.76	269	*e*P	P	19 57 38.5	+0.5
	10nm,0.9s						
EKA	Eskdalemuir Ar	61.11	326	P	P	19 57 39.4	-0.3
EKA	Eskdalemuir Ar	61.11	326	P	P	19 57 39.4	-0.3
	3.3nm,1.2s,baz=58,slow=29,SNR=2.8						
EKA	Eskdalemuir Ar	61.11	326	P	P	19 57 39.4	-0.3
EVO	Evora	61.19	306	*e*P	P	19 57 40.2	-0.4
	12nm,1.0s						
EVOP	Sao Brissos	61.28	306	*e*P	P	19 57 40.2	-1.0
	12nm,1.0s						
EVOP	Sao Brissos	61.28	306	*e*P	P	19 57 40.2	-1.0
	5.8nm,1.0s						
KSAR	Wonju Array Be	66.86	55	P	P	19 58 16.8	-1.1
KSAR	Wonju Array Be	66.86	55	P	P	19 58 16.8	-1.1
KSRS	Korea Array	66.89	55	P	P	19 58 16.8	-1.3
	2.7nm,0.8s,baz=269,slow=7.1,SNR=5.1						
FITZ	Fitzroy Crossi	75.54	113	P	P	19 59 10.6	-0.1
FITZ	Fitzroy Crossi	75.54	113	P	P	19 59 10.6	-0.1
	2.4nm,0.8s,baz=210,slow=4.6,SNR=4.0						
FITZ	Fitzroy Crossi	75.54	113	P	P	19 59 10.6	-0.1
WRAB	Tennant Creek	83.93	112	*e*P	P	19 59 56.1	-0.2
	6.4nm,1.0s						
WRAB	Tennant Creek	83.93	112	P	P	19 59 56.9	+0.6
	46nm,1.0s,SNR=5.1						
WRAB	Tennant Creek	83.93	112	*e*P	P	19 59 56.1	-0.2
	6.4nm,1.0s						
ASAR	Alice Springs	84.67	116	P	P	19 59 59.1	-0.9
ASAR	Alice Springs	84.67	116	P	P	19 59 59.1	-0.9
	4.6nm,0.9s,baz=290,slow=4.8,SNR=13						
ASAR	Alice Springs	84.67	116	P	P	19 59 59.1	-0.9
PMG	Port Moresby	93.09	99	P	P	20 00 39.6	-0.7
	23nm,1.1s						
PMG	Port Moresby	93.09	99	P	P	20 00 39.6	-0.7
	23nm,1.1s						
RCBR	Riachuelo	93.57	265	LR	LR	20 41 46.7	
	comp=Z,254nm,19.7s,baz=69,slow=35						
DZM	Mont Dzumac	113.65	108	*e*LR	LR	20 40 09.7	
	317nm,23.2s						
PDAR	Pinedale Array	121.72	348	PKP	PKPdf	20 06 20.4	+0.1
PDAR	Pinedale Array	121.72	348	PKP	PKPdf	20 06 20.4	+0.1
	1.2nm,0.8s,baz=101,slow=2.4,SNR=5.5						
PDAR	Pinedale Array	121.72	348	PKIKP	PKPdf	20 06 20.4	+0.1
NVAR	Mina Array Bea	127.28	355	PKP	PKPdf	20 06 32.7	+1.7
NVAR	Mina Array Bea	127.28	355	PKP	PKPdf	20 06 32.7	+1.7
	2.5nm,0.8s,baz=344,slow=1.0,SNR=8.4						
NVAR	Mina Array Bea	127.28	355	PKIKP	PKPdf	20 06 32.7	+1.7
TXAR	Lajitas Array	132.48	336	PKP	PKPdf	20 06 41.4	+0.3
TXAR	Lajitas Array	132.48	336	PKP	PKPdf	20 06 41.3	+0.3
	0.4nm,0.8s,baz=107,slow=0.9,SNR=4.0						
TXAR	Lajitas Array	132.48	336	PKIKP	PKPdf	20 06 41.3	+0.3
TBI	Tubuai	154.04	114	*e*LR	LR	20 58 55.9	
	252nm,30.2s						
PPT2	Papeete2	154.90	101	*e*LR	LR	20 59 14.1	
	245nm,25.2s						
RKT	Rikitea	166.19	131	*e*LR	LR	21 04 33.0	
	1μm,37.2s						

*ISCJB **21** 19:47:27.5±0.5,38˚.12N±0˚.02×23˚.29E±0˚.03,h11km±4km, Error ellipse: s-maj=4.3km s-min=3.2km az=27.4*
*CSEM **21** 19:47:27.8±0.1,38˚.11N×23˚.27E,h8km, ML2.3/2, Error ellipse: s-maj=3.1km s-min=2.4km az=34.0*
*THE **21** 19:47:27.7,38˚.10N×23˚.28E,h9km±3km, ML2.3/2, Error ellipse: s-maj=3.7km s-min=0.4km az=202.0*
*ATH **21** 19:47:28.1,38˚.10N×23˚.28E,h16km±1km, MD2.9/16, ML1.9*

ISC 21 19:47:27.5±0.9,**38˚.10N**±0˚.02×**23˚.29E**±0˚.02,**h13**km±7km, **n58**,σ0˚.48/83,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTK	Loutraki	0.26	254	P	Pg	19 47 32.6	-0.5
LTK				S	Sg	19 47 36.8	0.0
LTK	Loutraki	0.26	254	*e*PB	Pg	19 47 32.9	-0.2
LTK				*e*SB	Sb	19 47 38.2	-0.3
LTK	Loutraki	0.26	254	P	Pg	19 47 32.6	-0.5
LTK	Loutraki	0.26	254	*e*Pb	Pg	19 47 32.9	-0.2
LTK				S	Sg	19 47 36.8	0.0
LTK				*e*Sb	Sb	19 47 38.2	-0.3
ATH	Athens Observa	0.36	110	P	Pg	19 47 34.9	+0.1
ATH				S	Sg	19 47 40.2	+0.5
ATH	Athens Observa	0.36	110	*e*PB	Pb	19 47 35.4	-0.4
ATH				*e*SB	Sb	19 47 41.0	-0.3
ATH	Athens Observa	0.36	110	*e*Pb	Pb	19 47 35.4	-0.4
ATH				S	Sg	19 47 40.2	+0.5
ATH				*e*Sb	Sb	19 47 41.0	-0.3
NAIG	Nisos Aigina	0.37	154	*e*PB	Pb	19 47 35.3	-0.6
NAIG	Nisos Aigina	0.37	154	*e*Pb	Pb	19 47 35.3	-0.6
ATHU	Athens Univers	0.41	108	P	Pb	19 47 35.9	-0.8
ATHU	Athens Univers	0.41	108	P	Pb	19 47 35.9	-0.8
PTL	Penteli	0.46	96	P	Pg	19 47 36.7	+0.1
PTL	Penteli	0.46	96	*e*PB	Pb	19 47 37.2	-0.2
PTL				*e*SB	Sb	19 47 43.7	-0.5
PTL	Penteli	0.46	96	P	Pg	19 47 36.7	+0.1
PTL	Penteli	0.46	96	*e*Pb	Pb	19 47 37.3	-0.2
PTL				*e*Sb	Sb	19 47 43.7	-0.5
DID	Didima	0.59	184	P	Pg	19 47 38.8	-0.3
DID	Didima	0.59	184	*e*PN	Pg	19 47 39.0	-0.1
DID	Didima	0.59	184	P	Pg	19 47 38.8	-0.3
DID	Didima	0.59	184	*e*Pn	Pg	19 47 39.0	-0.1
LKR	Lokris	0.60	338	P	Pg	19 47 38.8	-0.4
LKR				S	Sb	19 47 48.0	-0.2
LKR	Lokris	0.60	338	*e*PN	Pb	19 47 39.2	-0.6
LKR				*e*SN	Sb	19 47 48.4	+0.2
LKR	Lokris	0.60	338	P	Pg	19 47 38.8	-0.4
LKR				S	Sb	19 47 48.0	-0.2
LKR				*e*Sn	Sb	19 47 48.4	+0.2
ATAL	Atalanti	0.63	341	P	Pg	19 47 39.2	-0.7
ATAL				S	Sb	19 47 49.2	+0.1
ATAL	Atalanti	0.63	341	P	Pg	19 47 39.2	-0.7
ATAL				S	Sb	19 47 49.2	+0.1
MRKA	Markates	0.65	21	P	Pg	19 47 39.9	-0.4
MRKA	Markates	0.65	21	P	Pg	19 47 39.9	-0.4
DSF	Desfina	0.68	298	P	Pg	19 47 40.3	-0.4
DSF				S	Sb	19 47 50.6	+0.2
DSF	Desfina	0.68	298	P	Pg	19 47 40.3	-0.4
DSF				S	Sb	19 47 50.6	+0.2
GUR	Goura	0.76	258	P	Pb	19 47 42.2	-0.5
GUR	Goura	0.76	258	*e*PN	Pb	19 47 42.8	+0.1
GUR	Goura	0.76	258	P	Pb	19 47 42.2	-0.5
SMIA	Simia	0.79	356	P	Pg	19 47 42.4	-0.3
SMIA	Simia	0.79	356	P	Pg	19 47 42.4	-0.3
AXAR	Agios Charalam	0.83	324	P	Pg	19 47 43.2	-0.4
AXAR	Agios Charalam	0.83	324	P	Pg	19 47 43.2	-0.4
KLV	Kalavryta, Ach	0.90	267	*e*PN	Pn	19 47 46.9	+1.1
KLV	Kalavryta, Ach	0.90	267	*e*Pn	Pn	19 47 46.9	+1.1
KALE	Kalithea	0.95	288	*e*PN	Pn	19 47 46.5	-0.1
KALE				*e*SN	Sb	19 47 59.1	+0.8
KALE	Kalithea	0.95	288	*e*Pn	Pn	19 47 46.5	-0.1
KALE				*e*Sn	Sb	19 47 59.1	+0.8
TRIZ	Trizonia	0.99	286	*e*PN	Pn	19 47 47.4	+0.3
TRIZ				*e*SN	Sn	19 48 00.4	-0.5
TRIZ	Trizonia	0.99	286	*e*Pn	Pn	19 47 47.4	+0.3
TRIZ				*e*Sn	Sn	19 48 00.4	-0.5
VLX	Vlachokerasia	1.02	225	*e*PN	Pn	19 47 47.7	+0.1
LAKA	Lakka	1.04	278	*e*PN	Pn	19 47 48.2	+0.4
LAKA				*e*SN	Sn	19 48 02.0	-0.2
LAKA	Lakka	1.04	278	*e*Pn	Pn	19 47 48.2	+0.4
LAKA				*e*Sn	Sn	19 48 02.0	-0.2
EFP	Efpalio	1.14	287	*e*PN	Pn	19 47 49.9	+0.9
EFP	Efpalio	1.14	287	*e*Pn	Pn	19 47 49.9	+0.9
AGG	Agios Georgios	1.19	321	*e*PN	Pg	19 47 50.5	+0.1
AGG	Agios Georgios	1.19	321	*e*Pn	Pg	19 47 50.5	+0.1
NEO	Neokhori	1.21	358	*e*PN	Pg	19 47 50.8	0.0
NEO	Neokhori	1.21	358	*e*Pn	Pg	19 47 50.8	0.0
VLI	Veliai	1.40	192	*e*PN	Pg	19 47 54.6	+0.1
VLI				*e*SN	Sg	19 48 13.8	+1.1
DYR	Agios Nikonas	1.53	210	*e*PN	Pg	19 47 57.3	+0.4
DYR	Agios Nikonas	1.53	210	*e*Pn	Pg	19 47 57.3	+0.4
PYL	PYLOS	1.72	226	*e*PN	Pg	19 47 59.3	-1.1
PYL	PYLOS	1.72	226	*e*Pn	Pg	19 47 59.3	-1.1
THL	Klokotos Trika	1.77	326	*e*PN	Pb	19 48 00.0	+0.2
THL	Klokotos Trika	1.77	326	*e*Pn	Pb	19 48 00.0	+0.2

*IDC **21** 19:59:29.7±1.0,0˚.71S×133˚.33E,h0km, mb4.0/6, mb1 4.2/8,mb1mx3.9/23,mbtmp4.1/8,ML4.6/3, Error ellipse: s-maj=43.4km s-min=16.8km az=80.0*
*ISCJB **21** 19:59:31.7±0.7,0˚.76S±0˚.05×133˚.50E±0˚.07,h29km, mb4.0/6, Error ellipse: s-maj=9.8km s-min=6.9km az=171.0*
*AUST **21** 19:59:32.3,0˚.98S×133˚.50E,h10km*

ISC 21 19:59:34.6±0.9,**0˚.90S**±0˚.07×**133˚.46E**±0˚.09,**h29**km,**n21**, σ2°.23/26,**mb4.0/6**,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	Sorong	2.20	271	P	Pn	20 00 06.0	-3.2
	baz=2.2,SNR=163						
FAKI	Fak Fak	2.34	211	P	Pn	20 00 12.1	+0.9
	baz=2.3,SNR=200						
FAKI				S	Sb	20 00 42.0	-2.7
	baz=2.3,SNR=6.8						
TLE	Tual	4.76	189	P	Pn	20 00 48.4	+3.9
	baz=4.7,SNR=19						
TLE				S	Sn	20 01 42.6	+4.0
	baz=4.7,SNR=5.9						
BNDI	Bandanaira	5.06	225	P	Pn	20 00 49.6	+1.0
	baz=5.0,SNR=7.1						
KDU	Kakadu	11.75	185	P	Pn	20 02 20.7	+0.3
	baz=12,SNR=32						
KDU				S	Sn	20 04 27.1	-3.5
	baz=12,SNR=6.5						
MTN	Manton Dam	12.09	191	P	Pn	20 02 24.9	-0.1
	baz=12,SNR=45						
MTN				S	Sn	20 04 35.4	-3.5
	baz=12,SNR=6.3						
PCI	Palu	13.62	270	P	P	20 02 56.0	+1.4
	baz=14,SNR=7.4						
PCI				S	Sn	20 05 19.4	+2.8
	baz=14,SNR=10						
KAPI	Kappang	14.29	253	Pn	Pn	20 02 53.3	-1.8
	0.5nm,0.3s,baz=90,slow=7.4,SNR=15						
WSI	Waingapu	15.73	236	S	S	20 06 21.6	-0.5
	baz=16,SNR=3.3						
FITZ	Fitzroy Crossi	18.74	204	P	P	20 03 49.9	-1.4
	0.6nm,0.3s,baz=19,slow=11,SNR=19						
FITZ				S	Sn	20 07 06.8	-14
	0.4nm,0.3s,baz=176,slow=11,SNR=7.0						
FITZ	Fitzroy Crossi	18.74	204	P	P	20 03 50.8	-0.5
	baz=19,SNR=25						
FITZ				S	Sn	20 07 07.7	-13
	baz=19,SNR=6.0						
WRA	Warramunga Arr	18.94	177	P	Pn	20 03 55.5	+1.2
	6.7nm,0.3s,baz=356,slow=12,SNR=1.6						
WRA				S	Sn	20 07 21.1	-4.6
	15nm,0.3s,baz=354,slow=22,SNR=2.9						
ASAR	Alice Springs	22.63	179	P	P	20 04 34.8	+1.3
	3.8nm,0.4s,baz=358,slow=11,SNR=85						
ASAR				S	S	20 08 42.2	+2.5
	1.1nm,0.8s,baz=360,slow=26,SNR=5.1						
STKA	Stephens Creek	31.75	167	P	P	20 05 57.5	+1.2
	3.0nm,0.4s,baz=340,slow=7.7,SNR=20						
STKA	Stephens Creek	31.75	167	P	P	20 05 57.3	+1.0
	baz=32,SNR=17						
KMBL	Kambalda	32.22	199	P	P	20 06 01.6	+1.1
	baz=32,SNR=4.5						
ARPS	Mount Arapiles	36.52	169	P	P	20 06 39.9	+2.3
	baz=37,SNR=5.7						
MKAR	Makanchi Array	65.21	324	P	P	20 10 11.8	-1.6
	0.7nm,0.6s,baz=112,slow=7.9,SNR=11						
ZALV	Zalesovo Beam	67.80	331	P	P	20 10 27.6	-2.2
	0.5nm,0.5s,baz=123,slow=5.3,SNR=2.3						
KURBB	Kurchatov Arra	69.28	326	P	P	20 10 37.4	-1.6
	0.8nm,0.7s,baz=123,slow=5.9,SNR=8.0						
ILAR	Eielson Array	86.40	25	P	P	20 12 12.9	-1.1
	0.6nm,0.9s,baz=248,slow=5.2,SNR=5.8						

*BJI **21** 20:08:37.2,13˚.99N×55˚.69E,h10km, mB5.0/8, mb4.5/26, Ms4.7/12,Ms7 4.4/13*
*ISCJB **21** 20:08:41.6±0.3,14˚.41N±0˚.04×56˚.28E±0˚.03,h10km, mb4.6/103,MS4.2/19, Error ellipse: s-maj=5.4km s-min=4.1km az=0.2*
*IDC **21** 20:08:42.1±0.5,14˚.35N×56˚.38E,h0km,mb4.2/28, mb1 4.3/28,mb1mx4.2/36,mbtmp4.2/28,MS4.2/12, Ms1 4.2/12,ms1mx3.8/46, Error ellipse: s-maj=13.1km s-min=12.1km az=135.0*
*GCMT **21** 20:08:43.5±0.3,14˚.35N×56˚.30E,h12km,MW5.0, Moment Tensor Solution. s23,c29; s71,c103; Moment tensor: Scale 10¹⁶Nm; Mrr=2.50±.10; Mθθ2.04±.09; Mϕϕ0.46±.12; Mrθ0.02±.33; Mθϕ-1.20±.08; Mϕr-3.01±.42; Best double couple: Mo3.80000×10¹⁶ NP1:φ=99.00000°, δ33.00000°, λ-141.00000°. NP2:φ=335.00000°, δ70.00000°, λ-63.00000°. Principal axes: T 3.2500, Plg20.0000°, Azm45.0000°; N 1.1900, Plg25.0000°, Azm145.0000°; P -4.4300, Plg57.0000°, Azm280.0000°; Data Used: II IC IU G CN.*
*CSEM **21** 20:08:43.7±0.1,14˚.39N×56˚.31E,h10km,mb4.7/32,Ms3.9, Mw5.0 Error ellipse: s-maj=5.9km s-min=5.5km az=23.0*
*NEIC **21** 20:08:43.4±0.3,14˚.46N×56˚.29E,h10km,mb5.0/45,Error ellipse: s-maj=6.8km s-min=5.8km az=172.0*
*MOS **21** 20:08:44.9±1.0,14˚.38N×56˚.19E,h33km,mb5.0/42,Error ellipse: s-maj=7.9km s-min=4.6km az=114.5*
*TEH **21** 20:08:45.0,14˚.48N×56˚.23E,h10km, ML4.6*
*DJA **21** 20:09:05.8±4.0,14˚N±.8˚×.5˚6E±.1˚0,h208km±45km,M4.3/9, mb4.3/9*

ISC 21 20:08:43.8±0.3,**14˚.47N**±0˚.05×**56˚.31E**±0˚.05,**h10**km, **h10**km:**pP-P**,**n483**,σ1°.**21**/489,**mb4.7**/103,**MS4.2**/19, **27C-14D**,**Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RBK	Rabkut	3.63	326	Pn	Pn	20 09 41.3	+1.2
	SNR=8.1						
RBK	Rabkut	3.63	326	Pn	Pn	20 09 41.3	+1.2
	SNR=8.1						
RBK	Rabkut	3.63	326	P	Sn	20 10 21.8	-1.3
	SNR=6.0						
ABTO	Aybut	4.08	315	P	Pn	20 09 46.3	0.0
	SNR=15						
BSY	Bisya	8.27	6	P	Pn	20 10 43.1	-0.8
	SNR=7.6						
WBK	Wadi Bani Khal	8.48	17	Pn	Pn	20 10 48.1	+1.4
	SNR=8.4						
WBK	Wadi Bani Khal	8.48	17	Pn	Pn	20 10 48.1	+1.4
	SNR=8.4						
SMDO	Samad	8.70	11	Pn	Pn	20 10 50.4	+0.5
	SNR=9.3						
SMDO	Samad	8.70	11	P	Pn	20 10 50.6	+0.8
	SNR=9.8						
ARQ	Araqi	8.82	1	Pn	Pn	20 10 52.7	+1.3
	SNR=9.8						
ARQ	Araqi	8.82	1	Pn	Pn	20 10 52.7	+1.3
	SNR=9.8						
ARQ	Araqi	8.82	1	P	Pn	20 10 52.3	+0.9
	SNR=11						
HOQ	Hoqain	9.11	6	P	Pn	20 10 54.8	-0.6
	SNR=8.5						
ATD	Arta Tunnel	13.44	259	Pn	P	20 11 58.9	-5.4
ATD	Arta Tunnel	13.44	259	Pn	P	20 11 58.9	-5.4
	0.3nm,0.3s,baz=156,slow=20,SNR=2.5						
ATD				LR	LR	20 15 49.5	
	comp=Z,1μm,18.5s,baz=308,slow=32						
QRN	Al-Qurain	16.19	333	*e*P	Pn	20 12 29.3	-2.2
QRN				AMb	AMB	20 12 36.0	
	comp=Z,133nm,1.0s						
RDF	Al-Radifah	16.51	332	*e*P	Pn	20 12 33.0	-2.6
RDF				AMb	AMB	20 12 40.1	
	comp=Z,182nm,1.2s						
KBD	Kabd	16.66	333	*e*P	Pn	20 12 34.8	-2.7
KBD				AMb	AMB	20 12 41.2	
	comp=Z,80nm,1.1s						
IMEH	Mehriz	16.91	355	P	Pn	20 12 36.8	-4.1
IMEH	Mehriz	16.91	355	*e*P	Pn	20 12 36.9	-4.0
IBAF	Bafgh	17.05	358	P	Pn	20 12 39.5	-3.1
IBAF	Bafgh	17.05	358	*e*P	Pn	20 12 39.5	-3.1
MIB	Mutribah	17.36	333	*e*P	Pn	20 12 43.7	-2.6
MIB				AMb	AMB	20 12 53.0	
	comp=Z,45nm,0.8s						
QUE	Quetta	18.46	30	*e*P	Pn	20 13 00.0	0.0
QUE				*e*S	Sn	20 16 24.0	-2.5
QUE	Quetta	18.46	30	*e*P	Pn	20 13 00.0	0.0
QUE				*e*S	Sn	20 16 24.0	-2.5
QUE	Quetta	18.46	30	*e*P	Pn	20 13 00.0	0.0
IVRN	Varamin	20.85	349	P	Pn	20 13 26.9	-1.5
IVRN	Varamin	20.85	349	*e*P	Pn	20 13 26.9	-1.5
IVRN	Varamin	20.85	349	*e*P	Pn	20 13 26.9	-1.5
IANJ	Anjilo	21.02	355	P	P	20 13 28.0	+0.1
IANJ	Anjilo	21.02	355	*e*P	P	20 13 28.0	+0.1
IANJ	Anjilo	21.02	355	*e*P	P	20 13 28.0	+0.1
ILAS	Lasjerd	21.04	352	*e*P	P	20 13 29.5	+1.4
ILAS	Lasjerd	21.04	352	*e*P	P	20 13 29.5	+1.4
IKOM	Komasi	21.17	339	*e*P	P	20 13 30.6	+1.1
IKOM	Komasi	21.17	339	*e*P	P	20 13 30.6	+1.1
IR5	Iran Long-Peri	21.29	347	*e*P	P	20 13 30.7	0.0
IR5	Iran Long-Peri	21.29	347	*e*P	P	20 13 30.7	0.0
IDMV	Damavand	21.36	350	P	P	20 13 32.3	+0.6
IDMV	Damavand	21.36	350	*e*P	P	20 13 32.4	+0.7
IDMV	Damavand	21.36	350	*e*P	P	20 13 32.4	+0.7
ISHM	Shahmirzad	21.42	353	*e*P	P	20 13 33.8	+1.6
ISHM	Shahmirzad	21.42	353	*e*P	P	20 13 33.8	+1.6
IR3	Iran Long-Peri	21.45	348	*e*P	P	20 13 33.5	+1.1
IR3	Iran Long-Peri	21.45	348	*e*P	P	20 13 33.5	+1.1
HYB	Hyderabad	21.59	79	*e*P	P	20 13 35.5	+1.6
HYB	Hyderabad	21.59	79	*e*P	P	20 13 35.5	+1.6
HYB	Hyderabad	21.59	79	*i* P	P	20 13 35.5	+1.6
HYB	Hyderabad	21.59	79	*e*P	P	20 13 35.5	+1.6
IRAZ	Razeghan	21.62	346	*e*P	P	20 13 34.0	-0.3
IRAZ	Razeghan	21.62	346	*e*P	P	20 13 34.0	-0.3
BHD	Baghdad	21.63	332

MALT	Malatya	28.54	330	*e*P		P	20 14 41.5	+1.7		
	comp=Z,52nm,1.4s									
MALT	Malatya	28.54	330	*e*P		P	20 14 41.5	+1.7		
	comp=Z,52nm,1.4s									
KOLN	Koldanda	28.61	58	*e*P		P	20 14 41.9	+1.2		
	comp=Z,12nm,1.0s									
DANN	Dangsing	28.96	57	*e*P		P	20 14 50.0	+6.1		
	comp=Z,34nm,1.2s									
CSS	Prodhromos	29.06	319	P		P	20 14 41.9	-2.5		
	comp=Z,5.7nm,1.1s									
CSS	Prodhromos	29.06	319	P		P	20 14 41.9	-2.5		
	comp=Z,5.7nm,1.1s									
DMN	Daman	29.80	59	*e*P		P	20 14 50.4	-0.9		
	comp=Z,45nm,1.4s									
KKN	Kakani	30.00	59	*e*P		P	20 14 53.5	+0.4		
	comp=Z,27nm,1.1s									
PKIN	Phulchoki	30.03	60	*e*P		P	20 14 52.3	-1.1		
ZEI	Tsey	30.16	342	*e*P		P	20 14 55.8	+1.5		
ZEI				pmax		pmax				
	comp=Z,23nm,1.8s									
ZEI	Tsey	30.16	342	*e*P		P	20 14 55.8	+1.5		
	comp=Z,23nm,1.8s									
KSH	Kashi	30.34	31	*e*P		P	20 14 52.4	-3.5		
KSH				pP		pP	20 14 57.0	-1.9		
KSH				sP		sP	20 14 59.9	-0.3		
KSH				PP		PnPn	20 15 50.1	-3.9		
KSH				PcP		PcP	20 17 54.4	-1.6		
KSH				S		S	20 19 46.9	-9.4		
KSH				ScP		ScP	20 21 35.3	-3.3		
KSH				PcS		PcS	20 21 37.9	-1.7		
KSH				ScS		ScS	20 25 29.3	-5.3		
KSH				pmax		pmax				
	comp=Z,4.0nm,0.9s									
KSH				pmax		pmax				
	comp=Z,140nm,3.0s									
KSH				LR		LR				
	comp=N,150nm,4.1s									
KSH				LR		LR				
	comp=E,150nm,3.6s									
KSH				LR		LR				
	comp=Z,490nm,10.8s									
GUN	Gumba	30.54	59	*e*P		P	20 14 59.1	+1.1		
	comp=Z,50nm,1.1s									
KKAR	Karatay Array	31.03	20	*e*P		P	20 15 02.7	+0.9		
KKAR				pmax		pmax				
	comp=Z,2.0nm,0.8s									
KKAR	Karatay Array	31.03	20	*e*P		P	20 15 02.7	+0.9		
	comp=Z,2.2nm,0.8s									
KKAR	Karatay Array	31.03	20	*e*P		P	20 15 02.7	+0.9		
	comp=Z,2.2nm,0.8s									
KBZ	Khabaz	31.34	341	P		P	20 15 06.1	+1.7		
KBZ	Khabaz	31.34	341	P		P	20 15 06.1	+1.7		
KBZ	Khabaz	31.34	341	P		P	20 15 06.1	+1.7		
	comp=Z,3.5nm,0.8s,baz=174,slow=8.9,SNR=9.8									
KBZ	Khabaz	31.34	341	P		P	20 15 06.1	+1.7		
ODAN	Odare	31.49	62	*e*P		P	20 15 02.1	-4.2		
KIV	Kislovodsk	31.61	341	*e*P		P	20 15 08.8	+1.9		
KIV				*i*			20 16 17.6			
KIV				*i*			20 17 58.9			
KIV				pmax		pmax				
	comp=Z,6.0nm,1.2s									
KIV				MLR		MLR				
	comp=Z,400nm,18.0s									
KIV	Kislovodsk	31.61	341	*e*P		P	20 15 08.8	+1.9		
	comp=Z,6.0nm,1.2s									
EKS2	Erkin-Say	31.87	25	*e*P		P	20 15 09.6	+0.3		
EKS2				pmax		pmax				
	comp=Z,5.0nm,0.7s									
EKS2	Erkin-Say	31.87	25	*e*P		P	20 15 09.6	+0.3		
	comp=Z,4.7nm,0.7s									
EKS2	Erkin-Say	31.87	25	*e*P		P	20 15 09.6	+0.3		
	comp=Z,4.7nm,0.7s									
TAPN	Taplejung	31.91	61	*e*P		P	20 15 09.1	-0.9		
	comp=Z,49nm,1.1s									
BR131	Keskin Array S	32.07	326	*e*P		P	20 15 10.6	-0.5		
	comp=Z,3.7nm,1.0s									
BR131	Keskin Array S	32.07	326	*e*P		P	20 15 10.6	-0.5		
	comp=Z,3.7nm,1.0s									
BRTR	Keskin Array B	32.07	326	P		P	20 15 12.4	+1.3		
BRTR				PcP		PcP	20 18 00.2	-0.4		
BRTR	Keskin Array B	32.07	326	P		P	20 15 12.4	+1.3		
	comp=Z,0.7nm,0.7s,baz=155,slow=12,SNR=7.1									
BRTR				PcP		PcP	20 18 00.2	-0.4		
	comp=Z,0.6nm,0.9s,baz=154,slow=7.2,SNR=3.6									
BRTR	Keskin Array B	32.07	326	P		P	20 15 12.4	+1.3		
AAK	Ala-Archa	32.14	26	*e*P		P	20 15 14.9	+3.2		
AAK				pmax		pmax				
	comp=Z,48nm,1.7s									
AAK	Ala-Archa	32.14	26	P		P	20 15 13.2	+1.5		
AAK	Ala-Archa	32.14	26	P		P	20 15 14.4	+2.7		
	SNR=14									
AAK	Ala-Archa	32.14	26	P		P	20 15 14.1	+2.4		
	comp=Z,55nm,0.8s,SNR=8.0									
AAK	Ala-Archa	32.14	26	P		P	20 15 13.2	+1.5		
	comp=Z,6.8nm,0.8s,baz=207,slow=7.7,SNR=26									
AAK	Ala-Archa	32.14	26	P		P	20 15 13.2	+1.5		
FRU	Bishkek	32.36	26	*e*P		P	20 15 16.0	+2.6		
FRU				pmax		pmax				
	comp=Z,60nm,2.1s									
FRU	Bishkek	32.36	26	*e*P		P	20 15 16.0	+2.6		
	comp=Z,60nm,2.1s									
TKM2	Tokmak 2	32.85	27	*e*P		P	20 15 18.4	+0.5		
TKM2				pmax		pmax				
	comp=Z,6.0nm,1.1s									
TKM2	Tokmak 2	32.85	27	*e*P		P	20 15 18.4	+0.5		
	comp=Z,5.5nm,1.1s									
TKM2	Tokmak 2	32.85	27	*e*P		P	20 15 18.4	+0.5		
	comp=Z,5.5nm,1.1s									
OPO	Ambohidratompo	34.04	196	P		P	20 15 28.1	-0.4		
OPO	Ambohidratompo	34.04	196	P		P	20 15 28.1	-0.4		
	comp=Z,2.0nm,0.9s,baz=52,slow=17,SNR=2.6									
OPO	Ambohidratompo	34.04	196	P		P	20 15 28.1	-0.4		
ABKAR	Akbulak array	34.81	4	*e*P		P	20 15 30.9	-3.8		
	comp=Z,5.8nm,1.0s									
AKTO	Aktyubinsk	35.89	2	PcP		PcP	20 18 10.4	-0.6		
AKTO	Aktyubinsk	35.89	2	PcP		PcP	20 18 10.4	-0.6		
	comp=Z,1.9nm,0.7s,baz=145,slow=2.9,SNR=5.5									
AKTO				LR		LR	20 32 30.6			
	comp=Z,352nm,19.9s,baz=180,slow=40									
AKTO	Aktyubinsk	35.89	2	PcP		PcP	20 18 10.4	-0.6		
VRHR	Novokhopersk	38.41	345	*e*P		P	20 16 05.8	+0.5		
VRHR				pmax		pmax				
	comp=Z,20nm,1.1s									
VRHR				pmax		pmax				
	comp=N,20nm,0.8s									
VRHR				pmax		pmax				
	comp=E,20nm,0.7s									
VRHR	Novokhopersk	38.41	345	*e*P		P	20 16 05.8	+0.5		
	comp=E,20nm,0.8s									
MK31	Makanchi Array	38.85	29	*e*P		P	20 16 09.8	+0.6		
MK31	Makanchi Array	38.85	29	*e*P		P	20 16 09.8	+0.6		
MK31	Makanchi Array	38.85	29	*e*P		P	20 16 09.8	+0.6		
MKAR	Makanchi Array	38.85	29	*ce*P		P	20 16 10.1	+0.9		
MKAR				pmax		pmax				
	comp=Z,2.0nm,0.8s									
MKAR	Makanchi Array	38.85	29	P		P	20 16 10.2	+0.9		
MKAR	Makanchi Array	38.85	29	P		P	20 16 10.2	+0.9		
	comp=Z,1.5nm,0.8s,baz=214,slow=11,SNR=12									
MKAR	Makanchi Array	38.85	29	*e*P		P	20 16 10.1	+0.9		
	comp=Z,2.0nm,0.8s									
VORD	Divnogorie	38.91	343	*e*P		P	20 16 10.2	+0.7		
VORD				pmax		pmax				
	comp=Z,8.0nm,0.6s									
VORD				pmax		pmax				
	comp=N,20nm,0.7s									
VORD				pmax		pmax				
	comp=E,10.0nm,0.5s									
VORD	Divnogorie	38.91	343	*e*P		P	20 16 10.2	+0.7		
	comp=E,20nm,0.7s									
VSR	Storozhevoye	39.17	343	*e*P		P	20 16 12.1	+0.4		
VSR				pmax		pmax				
	comp=Z,10.0nm,1.0s									
VSR				pmax		pmax				
	comp=N,10.0nm,0.9s									
VSR				pmax		pmax				
	comp=E,5.0nm,0.8s									
VSR	Storozhevoye	39.17	343	*e*P		P	20 16 12.1	+0.4		
	comp=E,10.0nm,0.9s									
VAY	Valandovo	39.64	319	*e*P		P	20 16 16.1	+0.4		
VAY	Valandovo	39.64	319	*e*P		P	20 16 16.6	+0.8		
WMQ	Urumqi	39.65	36	P		P	20 16 17.0	+1.0		
WMQ				pmax		pmax				
	comp=Z,16nm,1.0s									
KIS	Kishinev	39.72	330	*e*P		P	20 16 16.0	-0.3		
KIS				*e*			20 16 26.0			
KIS	Kishinev	39.72	330	*e*UNK		P	20 16 16.0	-0.3		
KIS	Kishinev	39.72	330	*e*P		P	20 16 16.0	-0.3		
VTS	Vitosha	39.94	321⇑	*i*P		P	20 16 19.9	+1.4		
VTS	Vitosha	39.94	321	*e*P		P	20 16 19.4	+0.9		
VRI	Vrincioaia	39.98	328⇓	*i*P		P	20 16 20.1	+1.5		
VRI	Vrincioaia	39.98	328⇓	*i*P		P	20 16 20.1	+1.5		
PLOR	Plostina	40.01	327⇑	*i*P		P	20 16 21.0	+2.1		
PLOR	Plostina	40.01	327⇑	*i*P		P	20 16 21.0	+2.1		
BVAR	Borovoye Array	40.05	13	P		P	20 16 20.1	+1.1		
BVAR							20 18 24.0			
BVAR	Borovoye Array	40.05	13	P		P	20 16 20.1	+1.1		
BVAR				PcP		PcP	20 18 24.0	+0.1		
BVAR	Borovoye Array	40.05	13	P		P	20 16 20.1	+1.1		
	comp=Z,1.0nm,0.7s,baz=194,slow=10,SNR=6.0									
BVAR				PcP		PcP	20 18 24.0	+0.1		
	comp=Z,1.8nm,0.7s,baz=191,slow=3.2,SNR=9.3									
BVAR	Borovoye Array	40.05	13	P		P	20 16 20.1	+1.1		
BVAR	Borovoye Array	40.05	13	PcP		PcP	20 18 24.0	+0.1		
MLR	Muntele Rosu	40.14	327⇑	*i*P		P	20 16 22.6	+2.5		
MLR	Muntele Rosu	40.14	327⇑	*i*P		P	20 16 22.6	+2.5		
KURBB	Kurchatov Arra	40.30	22	P		P	20 16 22.1	+0.9		
	comp=Z,3.9nm,0.8s,baz=220,slow=8.3,SNR=25									
KURBB				PcP		PcP	20 18 24.4	-0.3		
	comp=Z,0.9nm,0.8s,baz=229,slow=3.8,SNR=5.7									
KURK	Kurchatov	40.41	22	*e*P		P	20 16 23.4	+1.4		
KURK				pmax		pmax				
	comp=Z,9.0nm,1.2s									
KURK	Kurchatov	40.41	22	P		P	20 16 22.1	0.0		
KURK				PcP		PcP	20 18 24.4	-0.6		
KURK	Kurchatov	40.41	22	P		P	20 16 22.0	0.0		
TESR		40.45	328⇓	*i*P		P	20 16 23.5	+1.0		
TESR		40.45	328⇓	*i*P		P	20 16 23.5	+1.0		
LSZ	Lusaka	40.58	224	P		P	20 16 24.1	+0.1		
LSZ	Lusaka	40.58	224	P		P	20 16 24.1	+0.1		
	comp=Z,4.9nm,0.9s,baz=30,slow=12,SNR=7.5									
LSZ				LR		LR	20 33 16.2			
	comp=Z,434nm,20.1s,baz=122,slow=36									
LSZ	Lusaka	40.58	224	P		P	20 16 24.1	+0.1		
SKO	Skopje	40.70	319	*e*P		P	20 16 25.7	+1.1		
SKO	Skopje	40.70	319	*e*P		P	20 16 26.2	+1.6		
CHTO	Chiang Mai	41.01	78	P		P	20 16 27.1	-0.4		
CHTO	Chiang Mai	41.01	78	P		P	20 16 27.1	-0.4		
CHTO	Chiang Mai	41.01	78	P		P	20 16 27.1	-0.4		
CM31	Chiang Mai Arr	41.01	78	*e*P		P	20 16 27.6	+0.1		
	comp=Z,4.1nm,0.9s									
CM31	Chiang Mai Arr	41.01	78	*e*P		P	20 16 27.6	+0.1		
	comp=Z,4.1nm,0.9s									
CMAR	Chiang Mai Arr	41.01	78	P		P	20 16 27.4	0.0		
CMAR				PcP		PcP	20 18 26.9	-0.6		
CMAR	Chiang Mai Arr	41.01	78	P		P	20 16 27.4	0.0		
	comp=Z,2.4nm,0.8s,baz=277,slow=9.1,SNR=17									
CMAR				PcP		PcP	20 18 27.0	-0.6		
	comp=Z,0.5nm,0.6s,baz=264,slow=5.6,SNR=4.2									
CMAR				LR		LR	20 31 35.4			
	comp=Z,152nm,20.3s,baz=89,slow=34									
CMAR	Chiang Mai Arr	41.01	78	P		P	20 16 27.5	0.0		
CMAR	Chiang Mai Arr	41.01	78	PcP		PcP	20 18 27.0	-0.6		
LOT	Lotru	41.30	325⇓	*i*P		P	20 16 30.0	+0.4		
LOT	Lotru	41.30	325⇓	*i*P		P	20 16 30.0	+0.4		
BURAR	Bucovina Array	41.92	328⇑	*i*P		P	20 16 35.1	+0.5		
BURAR	Bucovina Array	41.92	328⇑	*i*P		P	20 16 35.1	+0.5		
BUR08	Bucovina Ar. S	41.95	328	*e*P		P	20 16 35.3	+0.4		
BUR08	Bucovina Ar. S	41.95	328	*e*P		P	20 16 35.3	+0.4		
GRUS	Gruza	42.18	321	*e*P		P	20 16 37.1	+0.4		
AK02	Malin Array Si	42.23	334	*e*P		P	20 16 37.7	+0.7		
AK02	Malin Array Si	42.23	334	*e*P		P	20 16 37.7	+0.7		
AK01	Malin Array Si	42.26	334	*e*P		P	20 16 36.0	-1.2		
AK01	Malin Array Si	42.26	334	*e*P		P	20 16 36.0	-1.2		
AKASG	Malin Array Be	42.26	334	P		P	20 16 36.9	-0.4		
AKASG							20 18 20.4			
AKASG	Malin Array Be	42.26	334	P		P	20 16 36.9	-0.4		
AKASG				PP		PP	20 18 20.4	+5.3		
AKASG	Malin Array Be	42.26	334	P		P	20 16 36.9	-0.4		
	comp=Z,1.4nm,0.7s,baz=133,slow=7.5,SNR=10									
AKASG				PP		PP	20 18 20.4	+5.3		
	comp=Z,0.7nm,0.4s,baz=146,slow=10,SNR=5.0									
AKASG	Malin Array Be	42.26	334	P		P	20 16 36.8	-0.4		
AKASG	Malin Array Be	42.26	334	PP		PP	20 18 20.4	+5.3		
KIEV	Kiev	42.26	334	*e*P		P	20 16 36.5	-0.7		
KIEV				pmax		pmax				
	comp=Z,31nm,1.4s									
KIEV	Kiev	42.26	334	*e*P		P	20 16 36.5	-0.7		
	comp=Z,31nm,1.4s									
KIEV	Kiev	42.26	334	*e*P		P	20 16 36.5	-0.7		
	comp=Z,31nm,1.4s									
TIP	Timpagrande	42.54	313	P		P	20 16 39.6	-0.2		
TIP	Timpagrande	42.54	313	P		P	20 16 39.6	-0.2		
BZS	Buzias	42.62	324⇑	*i*P		P	20 16 41.1	+0.9		
BZS	Buzias	42.62	324⇑	*i*P		P	20 16 41.1	+0.9		
OBN	Obninsk	43.36	344	*e*P		P	20 16 47.7	+1.1		
OBN				*i*			20 16 57.7			
OBN				*e*			20 18 34.4			
OBN				pmax		pmax				
	comp=Z,37nm,2.5s									
OBN				MLR		MLR				
	comp=Z,200nm,15.0s									
PSI	Prapat	43.61	101	LR		LR	20 31 52.0			
	comp=Z,335nm,19.2s,baz=252,slow=32									
TRPA	Tarpa	43.63	327⇓	*e*		P	20 16 49.0	+0.6		
MOS	Moscow	43.63	345	*e*P		P	20 16 48.2	-0.1		
MOS				*e*			20 16 59.3			
MOS				*e*			20 17 33.0			
UZH	Uzhgorod	44.07	328	*e*P		P	20 16 51.9	0.0		
UZH				*e*			20 17 03.5			
KOLS	Kolonicke sedl	44.27	328	*e*P		P	20 16 55.0	+1.4		
KOLS				*e*			20 17 06.1			
KOLS				pmax		pmax				
	comp=Z,18nm,1.5s									
KOLS	Kolonicke sedl	44.27	328	*e*P		P	20 16 55.0	+1.4		
KOLS				*ep*P		pP	20 17 01.4	+4.7		
KOLS				*e*			20 17 06.1			
CRVS	Cervenica-Dubn	44.67	328	*e*P		P	20 16 57.3	+0.5		
CRVS				*e*			20 17 08.1			
CRVS				pmax		pmax				
	comp=Z,15nm,1.8s									
CRVS	Cervenica-Dubn	44.67	328	*e*P		P	20 16 57.2	+0.5		
CRVS				*ep*P		pP	20 17 03.8	+3.9		
CRVS				*e*			20 17 08.1			
KMI	Kunming	44.76	69	P		P	20 17 00.3	+2.2		
KMI				S		S	20 23 33.3	-2.2		
KMI				pmax		pmax				
	comp=Z,8.0nm,1.4s									
KMI				LR		LR				
	comp=Z,220nm,22.0s									
PSZ	Piszkesteto	44.92	326	*e*P		P	20 16 59.5	+0.7		
PSZ	Piszkesteto	44.92	326	*e*P		P	20 16 59.5	+0.7		
ZAA0	Zalesovo Array	45.29	23	*e*P		P	20 17 00.7	-0.9		
ZAA0	Zalesovo Array	45.29	23	*e*P		P	20 17 00.7	-0.9		
ZALV	Zalesovo Beam	45.29	23	P		P	20 17 01.5	-0.1		
ZALV	Zalesovo Beam	45.29	23	P		P	20 17 01.5	-0.1		
ZALV	Zalesovo Beam	45.29	23	P		P	20 17 01.5	-0.1		
	comp=Z,5.9nm,0.7s,baz=227,slow=7.7,SNR=28									
ZALV	Zalesovo Beam	45.29	23	P		P	20 17 01.5	-0.1		
NVS	Novosibirsk	45.40	22	*e*P		P	20 17 02.7	+0.3		
NVS				pmax		pmax				
	comp=N,27nm,1.9s									
NVS				pmax		pmax				
	comp=Z,49nm,1.9s									
NVS				pmax		pmax				
	comp=E,6.0nm,1.0s									
GTA	Gaotai	45.47	48	*e*P		P	20 17 02.8	-0.6		
GTA				pP		pP	20 17 07.3	+0.8		
GTA				sP		sP	20 17 09.6	+1.8		
GTA				PP		PP	20 18 49.8	0.0		
GTA				S		S	20 23 44.3	-0.9		
GTA				pmax		pmax				
	comp=Z,3.0nm,1.0s									
GTA				pmax		pmax				
	comp=Z,130nm,5.2s									
GTA				LR		LR				
	comp=N,210nm,19.0s									
GTA				LR		LR				
	comp=E,420nm,19.0s									
GTA				LR		LR				
	comp=Z,480nm,19.9s									
VYHS	Vyhne	45.83	326	*e*P		P	20 17 06.2	+0.2		
VYHS				*e*			20 17 17.3			
VYHS				pmax		pmax				
	comp=Z,10.0nm,1.8s									
VYHS	Vyhne	45.83	326	*e*P		P	20 17 06.2	+0.2		
VYHS				*ep*P		pP	20 17 13.0	+3.9		
VYHS				*e*			20 17 17.3			
BEHE	Becsehely	45.91	322⇑	*e*P		P	20 17 08.1	+1.5		
BEHE	Becsehely	45.91	322⇑	*e*P		P	20 17 08.1	+1.5		
CD2	Chengdu	46.37	61	P		P	20 17 11.4	+0.8		
CD2				pP		pP	20 17 15.9	+2.2		
CD2				sP		sP	20 17 18.4	+3.4		
CD2				PcP		PcP	20 18 46.8	+1.2		
CD2				PP		PP	20 19 00.4	+0.9		
CD2				PcS		PcS	20 22 40.0	-0.4		
CD2				S		S	20 23 58.3	0.0		
CD2				pmax		pmax				
	comp=Z,10.0nm,0.5s									
CD2				pmax		pmax				
	comp=Z,80nm,5.0s									
ZST	Bratislava	46.62	324	*e*P		P	20 17 12.8	+0.6		
ZST				*e*			20 17 22.4			
ZST	Bratislava	46.62	324	*e*P		P	20 17 12.8	+0.6		
ZST				*e*			20 17 22.4			
SOP	Sopron	46.66	324⇓	*e*P		P	20 17 12.3	-0.2		
SOP	Sopron	46.66	324⇓	*e*P		P	20 17 12.3	-0.2		
IIGN	Ignalina	46.95	337	*e*P		P	20 17 14.2	-0.5		
IIGN				AMB		AMB	20 17 27.3			
	comp=Z,12nm,1.3s									
OKC	Ostrava-Krasne	46.97	327	*e*P		P	20 17 15.8	+0.9		
OKC				*e*			20 17 26.6			
OKC	Ostrava-Krasne	46.97	327⇑	*e*P		P	20 17 15.8	+0.9		
OKC				*ex*		x	20 17 21.8			
OKC				*ex*		x	20 17 26.6			
OKC	Ostrava-Krasne	46.97	327	P		P	20 17 15.8	+0.9		
SOKA	Soboth	47.05	322⇓	*i*P		P	20 17 16.0	+0.3		
	comp=Z,12nm,1.3s									
SOKA	Soboth	47.05	322⇓	*i*P		P	20 17 15.9	+0.3		
	comp=Z,12nm,1.3s									
SOKA	Soboth	47.05	322	P		P	20 17 16.0	+0.3		
	comp=Z,12nm,1.3s									
ISAL	Salakas	47.16	337	*e*P		P	20 17 15.7	-0.5		
ISAL				AMB		AMB	20 17 17.6			
	comp=Z,10nm,2.4s									
CONA	Conrad Observa	47.19	324⇑	*i*P		P	20 17 17.1	+0.4		
	comp=Z,26nm,1.4s									
CONA	Conrad Observa	47.19	324⇑	*i*P		P	20 17 17.1	+0.4		
	comp=Z,26nm,1.4s									
CONA	Conrad Observa	47.19	324	P		P	20 17 17.1	+0.4		
	comp=Z,26nm,1.4s									
SUW	Suwalki	47.22	334	*e*P		P	20 17 17.0	+0.3		
SUW	Suwalki	47.22	334	*e*P		P	20 17 17.0	+0.3		
IZAR	Zarasai	47.25	337	*e*P		P	20 17 16.5	-0.4		
IZAR				AMB		AMB	20 17 29.2			
	comp=Z,9.6nm,1.6s									
IZAR	Zarasai	47.25	337	*e*P		P	20 17 16.5	-0.4		
	comp=Z,9.6nm,1.6s,SNR=24									
MORC	Moravsky Berou	47.26	326	*e*P		P	20 17 16.1	-1.1		
MORC				pmax		pmax				
	comp=Z,22nm,1.6s									
MORC	Moravsky Berou	47.26	326	*e*P		P	20 17 16.1	-1.1		
	comp=Z,22nm,1.6s									
MORC	Moravsky Berou	47.26	326	*e*P		P	20 17 16.1	-1.1		
	comp=Z,22nm,1.6s									
VRAC	Vranov	47.51	325	*e*P		P	20 17 19.3	+0.2		
LZH	Lanzhou	47.52	54	*e*P		P	20 17 15.0	-4.6		
LZH				pP		pP	20 17 20.0	-2.8		
LZH				sP		sP	20 17 21.5	-2.5		
LZH				pmax		pmax				
	comp=Z,18nm,1.1s									
LZH				LR		LR				
	comp=N,200nm,11.8s									
LZH				LR		LR				
	comp=E,310nm,15.6s									
LZH				LR		LR				
	comp=Z,330nm,13.8s									
TREC	Trest	48.12	325	*e*P		P	20 17 24.5	+0.7		
TREC				*e*			20 17 35.1			
TREC	Trest	48.12	325⇑	*e*P		P	20 17 24.5	+0.7		
TREC				*ex*		x	20 17 35.1			
TREC				*ex*		x	20 17 44.1			
TREC	Trest	48.12	325	P		P	20 17 24.5	+0.7		
DPC	Dobruska-Polom	48.23	326	*e*P		P	20 17 24.8	+0.1		
DPC				*e*			20 17 36.5			
DPC	Dobruska-Polom	48.23	326	*e*P		P	20 17 24.8	+0.1		
DPC				*ex*		x	20 17 36.5			
DPC	Dobruska-Polom	48.23	326	P		P	20 17 24.8	+0.1		
GYA	Guiyang	48.39	67	*e*P		P	20 17 27.6	+1.2		
GYA				pmax		pmax				
	comp=Z,10.0nm,1.0s									
UPC	Upice	48.48	327	*e*P		P	20 17 26.8	+0.2		
UPC				*e*			20 17 38.3			
UPC	Upice	48.48	327⇑	*e*P		P	20 17 26.8	+0.2		
UPC				*ex*		x	20 17 38.3			
UPC	Upice	48.48	327	P		P	20 17 26.8	+0.2		
TAM	Taman

FRF	La Foret Royal	51.22 315	eP	P	20 17 47.3	-0.3		
FRF	La Foret Royal	51.22 315	eP	P	20 17 47.3	-0.3		
FRF	La Foret Royal	51.22 315	eP	P	20 17 47.3	-0.3		
LMR	La Mourre	51.24 314	eP	P	20 17 47.6	-0.1		
	comp=Z,71nm,1.4s							
LMR	La Mourre	51.24 314	eP	P	20 17 47.6	-0.1		
LMR			pmax	pmax				
	comp=Z,71nm,1.4s							
LMR	La Mourre	51.24 314	eP	P	20 17 47.6	-0.1		
	comp=Z,71nm,1.4s							
LMR	La Mourre	51.24 314	eP	P	20 17 47.6	-0.1		
	comp=Z,36nm,1.4s							
MOY	Mondy	51.45 34	eP	P	20 17 51.0	+1.7		
MOY	Mondy	51.45 34	eP	P	20 17 51.0	+1.7		
JOF	Joensuu	51.49 346	eP	P	20 17 49.3	+0.1		
JOF			pmax	pmax				
	comp=Z,3.0nm,0.7s							
JOF	Joensuu	51.49 346	ep	P	20 17 49.3	+0.1		
	comp=Z,2.7nm,0.7s							
JOF	Joensuu	51.49 346	eP	P	20 17 49.3	+0.1		
	comp=Z,3.0nm,0.7s							
MBDF	Montbardon	51.52 316	eP	P	20 17 49.3	-0.7		
	comp=Z,14nm,1.0s							
MBDF	Montbardon	51.52 316	eP	P	20 17 49.3	-0.7		
MBDF			pmax	pmax				
	comp=Z,14nm,1.0s							
MBDF	Montbardon	51.52 316	eP	P	20 17 49.3	-0.7		
	comp=Z,14nm,1.0s							
MBDF	Montbardon	51.52 316	eP	P	20 17 49.3	-0.7		
	comp=Z,6.8nm,1.0s							
FINES	FINESS Array B	51.69 342	P	P	20 17 50.5	-0.2		
FINES	FINESS Array B	51.69 342	P	P	20 17 50.5	-0.2		
	comp=Z,1.1nm,0.6s,baz=128,slow=7.8,SNR=7.4							
FINES	FINESS Array B	51.69 342	P	P	20 17 50.5	-0.2		
LPG	La Plagne	51.79 317	eP	P	20 17 51.3	-0.9		
	comp=Z,23nm,0.9s							
LPG	La Plagne	51.79 317	eP	P	20 17 51.3	-0.9		
LPG			pmax	pmax				
	comp=Z,23nm,0.9s							
LPG	La Plagne	51.79 317	eP	P	20 17 51.3	-0.9		
	comp=Z,23nm,0.9s							
LPG	La Plagne	51.79 317	eP	P	20 17 51.3	-0.9		
	comp=Z,11nm,0.9s							
LPL	La Plagne	51.81 317	eP	P	20 17 51.4	-0.9		
LPL	La Plagne	51.81 317	eP	P	20 17 51.4	-0.9		
LPL	La Plagne	51.81 317	eP	P	20 17 51.4	-0.9		
LPL	La Plagne	51.81 317	eP	P	20 17 51.4	-0.9		
SMRF	Simiane la Rot	52.09 315	eP	P	20 17 54.1	0.0		
	comp=Z,89nm,1.5s							
SMRF	Simiane la Rot	52.09 315	eP	P	20 17 54.1	0.0		
	comp=Z,89nm,1.5s							
ZAK	Zakamensk	52.12 36	eP	P	20 17 50.1	-4.3		
ORIF	Oris-en-Rattie	52.18 316	eP	P	20 17 53.2	-1.6		
	comp=Z,33nm,1.5s							
ORIF	Oris-en-Rattie	52.18 316	eP	P	20 17 53.2	-1.6		
ORIF			pmax	pmax				
	comp=Z,33nm,1.5s							
ORIF	Oris-en-Rattie	52.18 316	eP	P	20 17 53.2	-1.6		
	comp=Z,33nm,1.5s							
BOSA	Boshof	52.32 215	P	P	20 17 55.8	-0.3		
BOSA	Boshof	52.32 215	P	P	20 17 55.8	-0.3		
	comp=Z,7.3nm,0.9s,baz=32,slow=7.7,SNR=9.6							
BOSA	Boshof	52.32 215	P	P	20 17 55.8	-0.3		
CDF	Champ du Feu	52.53 321	eP	P	20 17 56.3	-1.1		
	comp=Z,54nm,1.6s							
CDF	Champ du Feu	52.53 321	eP	P	20 17 56.3	-1.1		
CDF			pmax	pmax				
	comp=Z,54nm,1.6s							
CDF	Champ du Feu	52.53 321	eP	P	20 17 56.3	-1.1		
	comp=Z,54nm,1.6s							
HINF	Hinteralfeld	52.57 320	eP	P	20 17 56.3	-1.3		
HINF	Hinteralfeld	52.57 320	eP	P	20 17 56.3	-1.3		
HINF	Hinteralfeld	52.57 320	eP	P	20 17 56.3	-1.3		
CABF	La Chapelle	52.62 318	eP	P	20 17 57.8	-0.2		
	comp=Z,28nm,1.0s							
CABF	La Chapelle	52.62 318	eP	P	20 17 57.8	-0.2		
CABF			pmax	pmax				
	comp=Z,28nm,1.0s							
CABF	La Chapelle	52.62 318	eP	P	20 17 57.8	-0.2		
	comp=Z,28nm,1.0s							
TLY	Talaya	52.91 35	eP	P	20 18 04.5	+4.4		
TLY			eS	S	20 25 18.6	-11		
TLY			pmax	pmax				
	comp=Z,6.0nm,1.9s							
TLY			MLR	MLR				
	comp=Z,187nm,18.0s							
TOA0	Torodi Ar. Sit	52.95 276	eP	P	20 18 00.5	-0.4		
TOA0	Torodi Ar. Sit	52.95 276	eP	P	20 18 00.5	-0.4		
TORD	Torodi Ar. Bea	52.95 276	P	P	20 18 00.8	-0.1		
TORD	Torodi Ar. Bea	52.95 276	P	P	20 18 00.8	-0.1		
	comp=Z,2.8nm,0.9s,baz=91,slow=6.8,SNR=18							
TORD			LR	LR	20 39 53.8			
	comp=Z,161nm,19.0s,baz=100,slow=35							
TORD	Torodi Ar. Bea	52.95 276	P	P	20 18 00.8	-0.1		
SONM	Songino Array	52.97 40	P	P	20 18 01.1	+0.4		
SONM	Songino Array	52.97 40	P	P	20 18 01.1	+0.4		
	comp=Z,1.4nm,0.7s,baz=244,slow=7.9,SNR=6.5							
SONM	Songino Array	52.97 40	P	P	20 18 01.1	+0.4		
VIVF	Saint-Julien-l	52.97 316	eP	P	20 18 00.2	-0.5		
VIVF	Saint-Julien-l	52.97 316	eP	P	20 18 00.2	-0.5		
VIVF	Saint-Julien-l	52.97 316	eP	P	20 18 00.2	-0.5		
LASF	Ste Croix	53.30 315	eP	P	20 18 02.6	-0.5		
	comp=Z,144nm,1.8s							
LASF	Ste Croix	53.30 315	eP	P	20 18 02.6	-0.5		
	comp=Z,144nm,1.8s							
ULN	Ulaanbaatar	53.39 41	eP	P	20 18 02.7	-1.2		
ULN	Ulaanbaatar	53.39 41	eP	P	20 18 02.7	-1.2		
PAGF	Fort de Pagny	53.54 320	eP	P	20 18 03.9	-0.8		
PAGF	Fort de Pagny	53.54 320	eP	P	20 18 03.9	-0.8		
SFTF	Sexfontaines	53.84 320	eP	P	20 18 06.2	-0.8		
	comp=Z,43nm,1.2s							
SFTF	Sexfontaines	53.84 320	eP	P	20 18 06.2	-0.8		
	comp=Z,43nm,1.2s							
MEZF	Maizieres J'vi	53.94 320	eP	P	20 18 07.2	-0.4		
	comp=Z,34nm,1.1s							
MEZF	Maizieres J'vi	53.94 320	eP	P	20 18 07.2	-0.4		
	comp=Z,34nm,1.1s							
SMF	Signal de Mont	54.09 318	eP	P	20 18 07.8	-1.0		
SMF	Signal de Mont	54.09 318	eP	P	20 18 07.8	-1.0		
SMF	Signal de Mont	54.09 318	eP	P	20 18 07.8	-1.0		
MTLF	Montolieu	54.24 313	eP	P	20 18 09.1	-0.9		
MTLF	Montolieu	54.24 313	eP	P	20 18 09.1	-0.9		
MTLF	Montolieu	54.24 313	eP	P	20 18 09.1	-0.9		
LOR	Lormes	54.27 318	eP	P	20 18 09.4	-0.7		
LOR			eR					
	comp=Z,144nm,21.2s							
LOR	Lormes	54.27 318	eP	P	20 18 09.4	-0.7		
SSF	Saint Saulge	54.44 318	eP	P	20 18 10.5	-0.8		
	comp=Z,13nm,0.9s							
SSF	Saint Saulge	54.44 318	eP	P	20 18 10.5	-0.8		
SSF			pmax	pmax				
	comp=Z,13nm,0.9s							
SSF	Saint Saulge	54.44 318	eP	P	20 18 10.5	-0.8		
	comp=Z,13nm,0.9s							
AVF	Avril sur Loir	54.45 318	eP	P	20 18 10.3	-1.1		
	comp=Z,9.9nm,0.8s							
AVF	Avril sur Loir	54.45 318	eP	P	20 18 10.3	-1.1		
AVF			pmax	pmax				
	comp=Z,10.0nm,0.8s							
AVF	Avril sur Loir	54.45 318	eP	P	20 18 10.3	-1.1		
	comp=Z,9.9nm,0.8s							
HHC	Hu-ho-hao-te	54.51 50	eP	P	20 18 12.0	-0.1		
HHC			pP	pP	20 18 19.8	+4.5		
HHC			PP	PP	20 20 15.4	+1.1		
HHC			pmax	pmax				
	comp=Z,19nm,0.7s							
HHC			LR	LR				
	comp=N,480nm,19.6s							
HHC			LR	LR				
	comp=E,730nm,21.6s							
HHC			LR	LR				
	comp=Z,820nm,19.4s							
BGF	Bois d'Agland	54.71 317	eP	P	20 18 12.8	-0.5		
	comp=Z,17nm,0.8s							
BGF	Bois d'Agland	54.71 317	eP	P	20 18 12.8	-0.5		
BGF			pmax	pmax				
	comp=Z,17nm,0.8s							
BGF	Bois d'Agland	54.71 317	eP	P	20 18 12.8	-0.5		
	comp=Z,17nm,0.8s							
CAF	Calviac	54.77 315	eP	P	20 18 12.8	-1.0		
CAF	Calviac	54.77 315	eP	P	20 18 12.8	-1.0		
CAF	Calviac	54.77 315	eP	P	20 18 12.8	-1.0		
BAIF	Baives	55.01 322	eP	P	20 18 14.9	-0.5		
	comp=Z,16nm,1.1s							
BAIF	Baives	55.01 322	eP	P	20 18 14.9	-0.5		
BAIF			pmax	pmax				
	comp=Z,16nm,1.1s							
BAIF	Baives	55.01 322	eP	P	20 18 14.9	-0.5		
	comp=Z,16nm,1.1s							
TCF	Toulx Ste Croi	55.05 317	eP	P	20 18 14.9	-0.9		
	comp=Z,10nm,1.0s							
TCF	Toulx Ste Croi	55.05 317	eP	P	20 18 14.9	-0.9		
TCF			pmax	pmax				
	comp=Z,10.0nm,1.0s							
TCF	Toulx Ste Croi	55.05 317	eP	P	20 18 14.9	-0.9		
	comp=Z,10nm,1.0s							
RJF	Les Rejaudoux	55.24 315	eP	P	20 18 16.5	-0.7		
RJF			eR					
	comp=Z,176nm,18.5s							
RJF	Les Rejaudoux	55.24 315	eP	P	20 18 16.5	-0.7		
RJF	Les Rejaudoux	55.24 315	eP	P	20 18 16.5	-0.7		
LFF	La Frestale	55.68 315	eP	P	20 18 19.8	-0.5		
LFF	La Frestale	55.68 315	eP	P	20 18 19.8	-0.5		
LFF	La Frestale	55.68 315	eP	P	20 18 19.8	-0.5		
ETSF	Etsaut	56.12 312	eP	P	20 18 23.1	-0.5		
	comp=Z,27nm,1.2s							
ETSF	Etsaut	56.12 312	eP	P	20 18 23.1	-0.5		
ETSF			pmax	pmax				
	comp=Z,27nm,1.2s							
ETSF	Etsaut	56.12 312	eP	P	20 18 23.1	-0.5		
	comp=Z,27nm,1.2s							
SJPF	Ste Jean	56.64 312	eP	P	20 18 27.4	+0.1		
	comp=Z,97nm,1.8s							
SJPF	Ste Jean	56.64 312	eP	P	20 18 27.4	+0.1		
SJPF			pmax	pmax				
	comp=Z,97nm,1.8s							
SJPF	Ste Jean	56.64 312	eP	P	20 18 27.4	+0.1		
	comp=Z,97nm,1.8s							
NAO01	NORSAR Array S	56.67 335	eP	P	20 18 23.9	-3.2		
NAO01	NORSAR Array S	56.67 335	eP	P	20 18 23.9	-3.2		
MFF	Saint Martin d	56.70 317	eP	P	20 18 26.5	-1.1		
MFF	Saint Martin d	56.70 317	eP	P	20 18 26.5	-1.1		
MFF	Saint Martin d	56.70 317	eP	P	20 18 26.5	-1.1		
LDF	La Druitiere	57.23 319	eP	P	20 18 30.1	-1.2		
	comp=Z,25nm,1.1s							
LDF	La Druitiere	57.23 319	eP	P	20 18 30.1	-1.2		
LDF			pmax	pmax				
	comp=Z,25nm,1.1s							
LDF	La Druitiere	57.23 319	eP	P	20 18 30.1	-1.2		
	comp=Z,25nm,1.1s							
FLN	La Foliniere	57.50 319	eP	P	20 18 32.2	-1.0		
	comp=Z,50nm,1.4s							
FLN			eR					
	comp=Z,168nm,22.2s							
FLN	La Foliniere	57.50 319	eP	P	20 18 32.2	-1.0		
FLN			pmax	pmax				
	comp=Z,50nm,1.4s							
FLN	La Foliniere	57.50 319	eP	P	20 18 32.2	-1.0		
	comp=Z,50nm,1.4s							
GRR	Gorron	57.64 318	eP	P	20 18 33.5	-0.7		
	comp=Z,32nm,1.2s							
GRR	Gorron	57.64 318	eP	P	20 18 33.5	-0.7		
GRR			pmax	pmax				
	comp=Z,32nm,1.2s							
GRR	Gorron	57.64 318	eP	P	20 18 33.5	-0.7		
	comp=Z,32nm,1.2s							
BJI	Beijing	57.83 52	P	P	20 18 35.5	-0.1		
BJI			pmax	pmax				
	comp=Z,8.0nm,1.7s							
ESDC	Sonseca Array	58.09 308	P	P	20 18 37.2	-0.4		
ESDC	Sonseca Array	58.09 308	P	P	20 18 37.2	-0.4		
	comp=Z,3.7nm,0.8s,baz=86,slow=6.7,SNR=20							
ESDC	Sonseca Array	58.09 308	P	P	20 18 37.2	-0.4		
ESLA	Sonseca Array	58.09 308	eP	P	20 18 36.1	-1.5		
	comp=Z,5.3nm,1.3s							
ESLA	Sonseca Array	58.09 308	eP	P	20 18 36.1	-1.5		
	comp=Z,5.3nm,1.3s							
ARCES	ARCESS Array B	58.32 348	P	P	20 18 37.6	-1.1		
ARCES	ARCESS Array B	58.32 348	P	P	20 18 37.6	-1.1		
	comp=Z,3.9nm,0.9s,baz=52,slow=9.8,SNR=7.0							
ARCES	ARCESS Array B	58.32 348	P	P	20 18 37.6	-1.1		
SGMF	Saint Gilles	58.70 318	eP	P	20 18 40.2	-1.4		
SGMF	Saint Gilles	58.70 318	eP	P	20 18 40.2	-1.4		
SGMF	Saint Gilles	58.70 318	eP	P	20 18 40.2	-1.4		
LIC	Lamto	60.75 269	eP	P	20 18 57.1	+0.8		
	comp=Z,14nm,1.0s							
LIC	Lamto	60.75 269	eP	P	20 18 57.1	+0.8		
	comp=Z,14nm,1.0s							
EVO	Evora	61.10 306	eP	P	20 18 58.8	+0.5		
	comp=Z,15nm,1.1s							
EVOP	Sao Brissos	61.19 306	eP	P	20 18 58.8	-0.1		
EVOP			pmax	pmax				
	comp=Z,15nm,1.1s							
EVOP	Sao Brissos	61.19 306	eP	P	20 18 58.8	-0.1		
	comp=Z,15nm,1.1s							
CN2	Changchun	65.10 48	eP	P	20 19 24.3	-0.5		
CN2			pmax	pmax				
	comp=Z,10.0nm,0.8s							
KAPI	Kappang	65.80 102	P	P	20 19 27.0	-2.8		
KSAR	Wonju Array Be	66.80 55	P	P	20 19 34.8	-1.0		
KSAR	Wonju Array Be	66.80 55	P	P	20 19 34.8	-1.0		
KSRS	Korea Array	66.83 55	P	P	20 19 34.8	-1.2		
	comp=Z,2.7nm,0.7s,baz=264,slow=6.7,SNR=7.3							
YAK	Yakutsk	69.53 29	eP	P	20 19 50.9	-1.6		
YAK			pmax	pmax				
	comp=Z,9.0nm,1.1s							
YAK			pmax	pmax				
	comp=E,5.0nm,1.3s							
USRK	Ussuriysk Arra	69.83 48	P	P	20 19 54.1	-0.6		
	comp=E,2.0nm,0.9s,baz=252,slow=16,SNR=3.7							
USRK			LR	LR	20 52 51.5			
	comp=E,152nm,20.4s,baz=96,slow=38							
TIXI	Tiksi	70.88 19	eP	P	20 20 00.4	-0.2		
TIXI			pmax	pmax				
	comp=Z,8.0nm,1.7s							
MJAR	Matsushiro Arr	75.10 56	P	P	20 20 28.5	+2.1		
MJAR	Matsushiro Arr	75.10 56	P	P	20 20 28.5	+2.1		
	comp=Z,0.7nm,0.5s,baz=268,slow=14,SNR=3.0							
FITZ	Fitzroy Crossi	75.61 113	P	P	20 20 28.8	-0.7		
FITZ	Fitzroy Crossi	75.61 113	P	P	20 20 28.8	-0.7		
	comp=Z,1.9nm,0.8s,baz=264,slow=4.0,SNR=4.4							
FITZ	Fitzroy Crossi	75.61 113	P	P	20 20 28.8	-0.7		
BILL	Bilibino	83.93 21	eP	P	20 21 13.9	+0.1		
BILL			i		20 21 19.1			
BILL			pmax	pmax				
	comp=Z,17nm,1.2s							
BILL	Bilibino	83.93 21	eP	P	20 21 13.9	+0.1		
	comp=Z,4.5nm,1.0s							
BILL	Bilibino	83.93 21	eP	P	20 21 13.9	+0.1		
	comp=Z,4.5nm,1.0s							
WRAB	Tennant Creek	83.99 112	eP	P	20 21 13.0	-2.0		
WRAB			pmax	pmax				
	comp=Z,5.0nm,0.8s							
WRAB	Tennant Creek	83.99 112	eP	P	20 21 13.0	-2.0		
	comp=Z,5.0nm,0.8s							
WRAB	Tennant Creek	83.99 112	eP	P	20 21 13.0	-2.0		
	comp=Z,5.0nm,0.8s							
ASAR	Alice Springs	84.74 116	P	P	20 21 17.2	-1.5		
ASAR	Alice Springs	84.74 116	P	P	20 21 17.2	-1.5		
	comp=Z,2.9nm,0.9s,baz=290,slow=5.1,SNR=21							
ASAR	Alice Springs	84.74 116	P	P	20 21 17.2	-1.5		
AS31	Alice Springs	84.74 116	eP	P	20 21 16.1	-2.6		
AS31	Alice Springs	84.74 116	eP	P	20 21 16.1	-2.6		
STKA	Stephens Creek	93.60 122	P	P	20 21 59.6	-1.1		
STKA	Stephens Creek	93.60 122	P	P	20 21 59.6	-1.1		
PDAR	Pinedale Array	121.58 348	PKP	PKPdf	20 27 37.8	-0.6		
PDAR	Pinedale Array	121.58 348	PKP	PKPdf	20 27 37.8	-0.6		
	comp=Z,1.4nm,0.7s,baz=60,slow=3.2,SNR=9.7							
PDAR	Pinedale Array	121.58 348	PKIKP	PKPdf	20 27 37.8	-0.6		
NVAR	Mina Array Bea	127.14 355	PKP	PKPdf	20 27 50.1	+1.0		
NVAR	Mina Array Bea	127.14 355	PKP	PKPdf	20 27 50.1	+1.0		
	comp=Z,1.6nm,0.7s,baz=316,slow=0.4,SNR=16							
NVAR	Mina Array Bea	127.14 355	PKIKP	PKPdf	20 27 50.1	+1.0		
TXAR	Lajitas Array	132.35 336	PKP	PKPdf	20 27 59.2	+0.1		
TXAR	Lajitas Array	132.35 336	PKP	PKPdf	20 27 59.2	+0.1		
	comp=Z,0.5nm,0.8s,baz=90,slow=1.3,SNR=4.7							
TXAR	Lajitas Array	132.35 336	PKIKP	PKPdf	20 27 59.2	+0.1		

ROM 21 20:14:01.5±0.1, 42°.54N×13°.35E, h10km±1km, Md1.4/4, Ml1.3/2, Error ellipse: s-maj=3.5km s-min=0.8km az=144.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	Campotosto	0.04	89	Pg	Pg	20 14 03.8	+0.2
CAMP				Sg	Sg	20 14 05.2	0.0
	78nm,0.4s						
LNSS	Leonessa	0.24	287	Pg	Pg	20 14 07.0	+0.4
LNSS				Sg	Sg	20 14 11.2	+1.2
	271nm,2.0s						
NRCA	Norcia	0.34	330	Pg	Pg	20 14 08.9	+0.4
NRCA				Sg	Sb	20 14 14.5	-1.0
	44nm,1.0s						

*CSEM **21** 20:17:05.2, 42°.27N×13°.48E, h9km, After ROM*
ROM 21 20:17:05.2±0.1, 42°.27N×13°.48E, h9km±1km, Ml1.8/4, Error ellipse: s-maj=1.5km s-min=1.2km az=47.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAGN	Fagnano	0.08	94	Pg	Pg	20 17 07.7	+0.2
FAGN				Sg	Sg	20 17 09.1	0.0
FAGN	Fagnano	0.08	94	Pg	Pg	20 17 07.7	+0.2
FAGN				Sg	Sg	20 17 09.1	0.0
AQU	L'Aquila	0.10	325	eP	Pg	20 17 07.9	+0.1
	606nm,0.8s						
AQU	L'Aquila	0.10	325	Pg	Pg	20 17 08.0	+0.2
AQU				Sg	Sg	20 17 11.0	+1.4
AQU	L'Aquila	0.10	325	Pg	Pg	20 17 08.0	+0.2
AQU				Sg	Sg	20 17 11.0	+1.4
PTQR	Pietraquaria	0.26	193	Pg	Pg	20 17 11.1	+0.6
PTQR				Sg	Sb	20 17 15.8	-1.0
PTQR	Pietraquaria	0.26	193	Pg	Pg	20 17 11.1	+0.6
PTQR				Sg	Sb	20 17 15.8	-1.0
CAMP	Campotosto	0.27	349	Pg	Pg	20 17 11.5	+0.7
CAMP				Sg	Sb	20 17 16.0	-1.3
	163nm,1.0s						
CAMP	Campotosto	0.27	349	Pg	Pg	20 17 11.5	+0.7
CAMP				Sg	Sb	20 17 16.0	-1.3
	163nm,1.0s						
FIAM	Fiamignano	0.27	269	Pg	Pg	20 17 11.3	+0.6
FIAM				Sg	Sb	20 17 16.4	-0.8
	253nm,0.9s						
FIAM	Fiamignano	0.27	269	Pg	Pg	20 17 11.3	+0.6
FIAM				Sg	Sb	20 17 16.4	-0.8
	253nm,0.9s						
VCEL	Villa Celiera	0.29	65	Pg	Pb	20 17 12.6	-0.3
	140nm,0.5s						
VCEL	Villa Celiera	0.29	65	Pg	Pb	20 17 12.6	-0.3
	140nm,0.5s						
INTR	Introdacqua	0.41	129	Pg	Pg	20 17 13.8	+0.4
INTR				Sg	Sb	20 17 21.0	-0.2
	93nm,0.6s						
INTR	Introdacqua	0.41	129	Pg	Pg	20 17 13.8	+0.4
INTR				Sg	Sb	20 17 21.0	-0.2
	93nm,0.6s						
VVLD	Villa Vallelon	0.41	165	Pg	Pg	20 17 13.8	+0.3
VVLD	Villa Vallelon	0.41	165	Pg	Pg	20 17 13.8	+0.3
LNSS	Leonessa	0.46	316	Pg	Pg	20 17 14.7	+0.3
LNSS	Leonessa	0.46	316	Pg	Pg	20 17 14.7	+0.3
SDI	San Donato	0.61	156	Pg	Pg	20 17 17.4	+0.2
	9.0nm,0.2s						
SDI	San Donato	0.61	156	Pg	Pg	20 17 17.4	+0.2
	9.0nm,0.2s						
NRCA	Norcia	0.62	334	Pg	Pg	20 17 17.2	-0.2
	3.0nm,0.2s						
NRCA	Norcia	0.62	334	Pg	Pg	20 17 17.2	-0.2
	3.0nm,0.2s						

*GCMT **21** 20:18:30.7±0.3, 14°.46N×56°.22E, h14km±1km, MW5.0, Moment Tensor Solution. s23,c24; s57,c92; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.77±.23; $M_{\theta\theta}$2.60±.15; $M_{\phi\phi}$0.17±.13; $M_{r\theta}$1.57±.30; $M_{\theta\phi}$-0.66±.08; $M_{\phi r}$-1.76±.36; Best double couple: $M_0$3.60000×10^{16} NP1:ϕ_{s}88.00000°, δ29.00000°, λ-122.00000°. NP2:ϕ_{s}304.00000°, δ65.00000°, λ-73.00000°. Principal axes: T 3.4400, Plg19.0000°, Azm22.0000°; N 0.3700, Plg15.0000°, Azm117.0000°; P -3.8100, Plg65.0000°, Azm244.0000°; Data Used: IC II IU CN G.*
*IDC **21** 20:18:31.8±0.5, 14°.38N×56°.36E, h0km, mb4.1/33, mb1 4.2/33, mb1mx4.2/41, mbtmp4.1/33, MS4.1/19, Ms1 4.1/19, ms1mx4.0/36 Error ellipse: s-maj=13.7km s-min=12.0km az=139.0*
*NEIC **21** 20:18:32.9±0.4, 14°.38N×56°.23E, h10km, mb5.0/49, Error ellipse: s-maj=9.6km s-min=7.9km az=164.0*
*BJI **21** 20:18:33.2, 14°.50N×56°.46E, h8km, mB5.2/11, mb4.7/24, Ms4.7/15, Ms7 4.4/15*
*TEH **21** 20:18:33.0, 12°.28N×56°.41E, h10km, ML4.8*
*ISCJB **21** 20:18:34.1±1.8, 14°.39N±0°.05×56°.21E±0°.04, h31km±12km, mb4.6/112, MS4.2/25, Error ellipse: s-maj=8.5km s-min=5.9km az=168.4*
*MOS **21** 20:18:34.9±1.4, 14°.40N×56°.15E, h33km, mb5.2/46, Error ellipse: s-maj=8.3km s-min=4.4km az=114.2*
*CSEM **21** 20:18:36.1±0.2, 14°.41N×56°.26E, h30km, mb4.8/52, Ms3.8, Mw5.0, Error ellipse: s-maj=8.2km s-min=7.2km az=139.0*
*DJA **21** 20:19:04.2±3.8, 15°.N±8°.×5°.6E±1°.0, h281km±47km, M4.3/7, mB5.2/2, mb4.3/7, Mw(mB)4.5/2*
ISC 21 20:18:34.6±0.5, 14°.40N±0°.06×56°.30E±0°.05, h19km±1km, h19km:pP-P, n500, σ1s42/523, mb4.7/112, MS4.2/25, 28C-5D, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RBK	Rabkut	3.69	327	Pn	Pn	20 19 29.4	-1.2
	SNR=7.1						
RBK	Rabkut	3.69	327	P	Pn	20 19 29.4	-1.2
	SNR=7.1						
ABTO	Aybut	4.12	316	Pn	Pn	20 19 35.0	-1.6
	SNR=15						
ABTO	Aybut	4.12	316	Pn	Pn	20 19 35.0	-1.6
	SNR=15						
MUKL	Al Mukalla	7.03	272	eP	Pn	20 20 17.1	+0.5
WBK	Wadi Bani Khal	8.55	17	Pn	Pn	20 20 37.6	+0.1
	SNR=13						
WBK	Wadi Bani Khal	8.55	17	P	Pn	20 20 37.6	+0.1
	SNR=13						
SMDO	Samad	8.77	11	Pn	Pn	20 20 41.6	+1.0
	SNR=7.2						
SMDO	Samad	8.77	11	P	Pn	20 20 41.6	+1.0
	SNR=7.2						
ARQ	Araqi	8.89	1	Pn	Pn	20 20 42.2	+0.1
	SNR=8.8						
ARQ	Araqi	8.89	1	P	Pn	20 20 42.

IMHD Mahdasht 21.79 348 *eP* **P** **20 23 26.8 +1.2**
ISRO Mashad 22.00 7 *eP* **P** **20 23 23.7 -4.1**
IPAY Payeh 22.09 6 *eP* **P** **20 23 28.2 -0.7**
IPAY Payeh 22.09 6 *eP* **P** **20 23 28.2 -0.7**
ILIN Lien 22.10 339 *eP* **P** **20 23 31.0 +2.0**
ILIN Lien 22.10 339 *eP* **P** **20 23 31.0 +2.0**
IDHR Dehrash 22.11 338 *eP* **P** **20 23 28.6 -0.4**
IDHR Dehrash 22.11 338 *eP* **P** **20 23 28.6 -0.4**
IMYA Miami 22.12 8 P **P** **20 23 27.6 -1.5**
IMYA Miami 22.12 8 *eP* **P** **20 23 27.7 -1.4**
IMYA Miami 22.12 8 *eP* **P** **20 23 27.7 -1.4**
IKRD Kardeh 22.37 5 *eP* **P** **20 23 31.4 -0.6**
IKRD Kardeh 22.37 5 *eP* **P** **20 23 31.4 -0.6**
IGZV Ghazvin 22.56 347 *eP* **P** **20 23 34.6 +0.6**
IGZV Ghazvin 22.56 347 *eP* **P** **20 23 34.6 +0.6**
ISFR Sfrayin 22.61 4 P **P** **20 23 34.0 -0.5**
ISFR Sfrayin 22.61 4 *eP* **P** **20 23 34.1 -0.5**
KBL Kabul 23.13 28 *eP* **P** **20 23 41.1 +1.2**
KBL pmax pmax
comp=Z,30nm,1.3s
KBL Kabul 23.13 28 *eP* **P** **20 23 41.1 +1.2**
comp=Z,30nm,1.3s
KBL Kabul 23.13 28 *eP* **P** **20 23 41.1 +1.2**
comp=Z,30nm,1.3s
ABKT Ailbek 23.50 4 P **P** **20 23 43.4 +0.1**
comp=Z,123nm,0.7s,SNR=7.2
KMBO Kilima Mbogo 24.36 232 P **P** **20 23 52.8 +0.9**
KMBO Kilima Mbogo 24.36 232 P **P** **20 23 52.8 +0.9**
comp=Z,2.3nm,0.8s,baz=40,slow=13,SNR=9.4
KMBO LR LR 20 33 55.5
comp=Z,1μm,18.0s,baz=91,slow=38
KMBO Kilima Mbogo 24.36 232 P **P** **20 23 52.8 +0.9**
EIL Elat 24.88 311 P **P** **20 23 58.2 +2.0**
EIL Elat 24.88 311 P **P** **20 23 58.2 +2.0**
comp=Z,4.6nm,0.7s,baz=112,slow=1.7,SNR=5.9
EIL LR LR 20 34 10.2
comp=Z,499nm,21.5s,baz=128,slow=38
EIL Elat 24.88 311 P **P** **20 23 58.2 +2.0**
ASF Jabal al Asfar 25.04 318 P **P** **20 23 59.5 +1.8**
ASF Jabal al Asfar 25.04 318 P **P** **20 23 59.5 +1.8**
comp=Z,5.4nm,1.1s,baz=18,slow=2.9,SNR=8.8
ASF LR LR 20 34 38.8
comp=Z,333nm,20.6s,baz=167,slow=38
MMAI Mount Meron Ar 26.54 318 P **P** **20 24 13.7 +2.3**
MMAI Mount Meron Ar 26.54 318 P **P** **20 24 13.7 +2.3**
comp=Z,4.8nm,0.9s,baz=127,slow=13,SNR=6.8
MMAI LR LR 20 35 05.1
comp=Z,284nm,18.7s,baz=120,slow=37
MMAI Mount Meron Ar 26.54 318 P **P** **20 24 13.7 +2.3**
GNI Garni 27.58 341 P **P** **20 24 22.5 +1.8**
GNI Garni 27.58 341 P **P** **20 24 22.5 +1.8**
comp=Z,9.8nm,0.8s,baz=3.9,slow=5.3,SNR=14
GNI LR LR 20 37 18.6
comp=Z,805nm,19.4s,baz=315,slow=41
GNI Garni 27.58 341 P **P** **20 24 22.5 +1.8**
MALT Malatya 28.59 330 *eP* **P** **20 24 32.6 +2.9**
MALT pmax pmax
comp=Z,62nm,1.8s
MALT Malatya 28.59 330 *eP* **P** **20 24 32.6 +2.9**
comp=Z,62nm,1.8s
MALT Malatya 28.59 330 *eP* **P** **20 24 32.6 +2.9**
comp=Z,62nm,1.8s
MBAR Mbarara 29.36 242 LR LR 20 36 47.9
comp=Z,337nm,18.9s,baz=64,slow=37
ZEI Tsey 30.22 342 *eP* **P** **20 24 45.3 +1.0**
ZEI pmax pmax
comp=Z,14nm,0.9s
ZEI Tsey 30.22 342 *eP* **P** **20 24 45.3 +1.0**
comp=Z,14nm,0.9s
KSH Kashi 30.42 31 *eP* P 20 24 41.9 -4.0
KSH pP pP 20 24 46.3 -5.5
KSH sP sP 20 24 49.4 -4.8
KSH PP **PnPn** **20 25 40.3 -4.3**
KSH PcP **PcP** **20 27 43.8 -1.6**
KSH S S 20 29 39.3 -6.6
KSH sS sS 20 29 45.8 -10
KSH SS **SnSn** **20 31 16.4 -5.4**
KSH ScP **ScP** **20 31 25.0 -2.0**
KSH PcS **PcS** **20 31 27.3 -1.8**
KSH ScS **ScS** **20 35 19.1 -4.0**
KSH pmax pmax
comp=Z,4.0nm,0.5s
KSH pmax pmax
comp=Z,83nm,3.2s
KSH LR LR
comp=N,610nm,9.2s
KSH LR LR
comp=E,480nm,9.2s
KSH LR LR
comp=Z,540nm,6.4s
KKAR Karatay Array 31.11 20 *eP* **P** **20 24 52.4 +0.6**
KKAR pmax pmax
comp=Z,30nm,1.8s
KKAR Karatay Array 31.11 20 *eP* **P** **20 24 52.4 +0.6**
comp=Z,30nm,1.8s
KKAR Karatay Array 31.11 20 *eP* **P** **20 24 52.4 +0.6**
comp=Z,30nm,1.8s
KBZ Khabaz 31.40 341 P **P** **20 24 55.5 +1.2**
KBZ Khabaz 31.40 341 P **P** **20 24 55.5 +1.2**
KBZ Khabaz 31.40 341 P **P** **20 24 55.5 +1.2**
comp=Z,5.9nm,0.8s,baz=168,slow=8.9,SNR=12
KBZ LR LR 20 39 30.8
comp=Z,373nm,21.3s,baz=152,slow=40
KBZ Khabaz 31.40 341 P **P** **20 24 55.5 +1.2**
KIV Kislovodsk 31.67 341 *eP* P 20 25 01.2 +4.3
KIV *e* 20 26 07.4
KIV pmax pmax
comp=Z,39nm,1.6s
KIV MLR MLR
comp=Z,500nm,17.0s
EKS2 Erkin-Say 31.94 25 *eP* P 20 25 03.0 +3.7
EKS2 pmax pmax
comp=Z,7.0nm,0.8s
EKS2 Erkin-Say 31.94 25 *eP* P 20 25 03.0 +3.7
comp=Z,7.1nm,0.8s
BRTR Keskin Array B 32.12 326 P **P** **20 25 03.1 +2.2**
BRTR Keskin Array B 32.12 326 P **P** **20 25 03.1 +2.2**
comp=Z,0.9nm,0.9s,baz=172,slow=4.1,SNR=2.5
BRTR LR LR 20 39 50.0
comp=Z,413nm,19.2s,baz=335,slow=40
BRTR Keskin Array B 32.12 326 P **P** **20 25 03.1 +2.2**
AAK Ala-Archa 32.22 26 *eP* **P** **20 25 04.7 +2.9**
AAK pmax pmax
comp=Z,16nm,0.8s
AAK Ala-Archa 32.22 26 P **P** **20 25 03.6 +1.9**
AAK PcP **PcP** **20 27 50.8 +0.6**
AAK Ala-Archa 32.22 26 P **P** **20 25 04.4 +2.6**
SNR=12
AAK Ala-Archa 32.22 26 P **P** **20 25 04.2 +2.4**
comp=Z,60nm,1.6s,SNR=7.2
AAK Ala-Archa 32.22 26 P **P** **20 25 03.6 +1.9**
comp=Z,5.2nm,0.9s,baz=198,slow=6.2,SNR=16
AAK PcP **PcP** **20 27 50.8 +0.6**
comp=Z,1.6nm,0.7s,baz=155,slow=6.2,SNR=4.3
AAK Ala-Archa 32.22 26 P **P** **20 25 03.6 +1.9**
SOC Sochi 32.37 337 *eP* **P** **20 25 03.9 +1.0**
SOC *e* 20 26 15.2
SOC *eS* **S** **20 30 16.6 +0.6**
SOC *eSS* **SnSn** **20 32 10.1 +1.1**
SOC pmax pmax
comp=Z,14nm,0.9s
SOC MLR MLR
comp=Z,400nm,14.0s
SOC Sochi 32.37 337 *eP* **P** **20 25 03.9 +1.0**
comp=Z,14nm,0.9s
FRU Bishkek 32.43 26 *eP* P 20 25 11.0 +7.5
FRU pmax pmax
comp=Z,80nm,2.1s
TKM2 Tokmak 2 32.92 27 *eP* **P** **20 25 07.9 -0.1**
TKM2 pmax pmax
comp=Z,7.0nm,1.2s
TKM2 Tokmak 2 32.92 27 *eP* **P** **20 25 07.9 -0.1**
comp=Z,6.9nm,1.2s
TKM2 Tokmak 2 32.92 27 *eP* **P** **20 25 07.9 -0.1**
comp=Z,6.9nm,1.2s
ABKAR Akbulak array 34.89 4 *eP* **P** **20 25 25.4 +0.7**
comp=Z,1.9nm,0.6s
ABKAR Akbulak array 34.89 4 *eP* **P** **20 25 25.4 +0.7**
comp=Z,1.9nm,0.6s
SIM Simferopol' 35.79 333 *eP* P 20 25 35.7 +3.1
SIM Simferopol' 35.79 333 *eP* P 20 25 35.7 +3.1
AKTK Aktyubinsk 35.97 2 P **P** **20 25 33.8 -0.2**
AKTO Aktyubinsk 35.97 2 P **P** **20 25 33.8 -0.2**
AKTO Aktyubinsk 35.97 2 P **P** **20 25 33.8 -0.2**
AKTO Aktyubinsk 35.97 2 P **P** **20 25 33.8 -0.2**
comp=Z,1.9nm,0.7s,baz=177,slow=11,SNR=5.1
AKTO Aktyubinsk 35.97 2 P **P** **20 25 33.8 -0.2**
VRHR Novokhopersk 38.48 345 *eP* **P** **20 25 56.9 +1.7**
VRHR pmax pmax
comp=Z,30nm,0.8s
VRHR pmax pmax
comp=N,20nm,0.9s
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR Novokhopersk 38.48 345 *eP* **P** **20 25 56.9 +1.7**
comp=E,20nm,0.9s
MK31 Makanchi Array 38.93 29 *eP* **P** **20 25 59.9 +0.7**
MK31 Makanchi Array 38.93 29 *eP* **P** **20 25 59.9 +0.7**
MK31 Makanchi Array 38.93 29 *eP* **P** **20 25 59.9 +0.7**
MKAR Makanchi Array 38.93 29 P **P** **20 25 59.2 0.0**
MKAR 20 28 09.3
MKAR Makanchi Array 38.93 29 P **P** **20 25 59.2 0.0**
MKAR PcP **PcP** **20 28 09.3 -0.4**
MKAR Makanchi Array 38.93 29 P **P** **20 25 59.2 0.0**
comp=E,1.2nm,0.8s,baz=217,slow=7.2,SNR=12
MKAR PcP **PcP** **20 28 09.3 -0.4**
comp=E,0.7nm,0.8s,baz=198,slow=1.5,SNR=4.7
MKAR LR LR 20 43 52.7
comp=E,407nm,20.4s,baz=205,slow=39
MKAR Makanchi Array 38.93 29 P **P** **20 25 59.2 0.0**
VSR Storozhevoye 39.24 343 *eP* **P** **20 26 01.6 -0.1**
VSR pmax pmax
comp=Z,10.0nm,0.9s
VSR pmax pmax
comp=N,30nm,1.0s
VSR pmax pmax
comp=E,8.0nm,0.9s
VSR Storozhevoye 39.24 343 *eP* **P** **20 26 01.6 -0.1**
comp=E,30nm,1.0s
VAY Valandovo 39.69 319 *eP* **P** **20 26 06.1 +0.6**
WMQ Urumqi 39.72 36 P **P** **20 26 08.3 +2.4**
WMQ pmax pmax
comp=Z,16nm,1.0s
KIS Kishinev 39.77 330 *eP* **P** **20 26 04.0 -2.2**
KIS *e* 20 26 16.0
KIS *e* 20 26 21.0
KIS Kishinev 39.77 330 *eUNK* **P** **20 26 04.0 -2.2**
VTS Vitosha 39.99 321 *i|P* P 20 26 12.0 +3.7
VRI Vrincioaia 40.03 328 *i↑P* **P** **20 26 09.8 +1.4**
PLOR Plostina 40.06 328 *i|P* **P** **20 26 11.1 +2.4**
BVAR Borovoye Array 40.13 13 P **P** **20 26 09.6 +0.5**
BVAR 20 28 13.1
BVAR Borovoye Array 40.13 13 P **P** **20 26 09.6 +0.5**
BVAR PcP **PcP** **20 28 13.1 -0.2**
BVAR Borovoye Array 40.13 13 P **P** **20 26 09.6 +0.5**
comp=Z,0.7nm,0.6s,baz=186,slow=7.3,SNR=5.4
BVAR PcP **PcP** **20 28 13.1 -0.2**
comp=Z,2.4nm,0.7s,baz=211,slow=3.5,SNR=8.8
BVAR Borovoye Array 40.13 13 P **P** **20 26 09.6 +0.5**
BRVK Borovoye 40.13 13 *eP* **P** **20 26 11.2 +2.1**
BRVK pmax pmax
comp=Z,9.0nm,2.5s
BRVK Borovoye 40.13 13 P **P** **20 26 11.3 +2.2**
comp=Z,15nm,1.6s
BRVK Borovoye 40.13 13 *eP* **P** **20 26 11.2 +2.1**
comp=Z,9.0nm,2.5s
MLR Muntele Rosu 40.20 327 P **P** **20 26 11.4 +1.5**
MLR Muntele Rosu 40.20 327 *i|P* **P** **20 26 12.6 +2.7**
MLR Muntele Rosu 40.20 327 P **P** **20 26 11.4 +1.5**
comp=Z,1.2nm,0.8s,baz=157,slow=14,SNR=11
MLR Muntele Rosu 40.20 327 P **P** **20 26 11.4 +1.5**
KURBB Kurchatov Arra 40.38 22 P **P** **20 26 11.9 +0.8**
comp=Z,2.2nm,0.9s,baz=220,slow=8.5,SNR=17
KURBB PcP **PcP** **20 28 13.7 -0.5**
comp=Z,0.9nm,0.8s,baz=222,slow=3.6,SNR=5.0
KURBB LR LR 20 43 58.8
comp=Z,264nm,19.8s,baz=225,slow=38
KURK Kurchatov 40.49 22 *eP* **P** **20 26 14.4 +2.4**
KURK pmax pmax
comp=Z,11nm,1.2s
KURK Kurchatov 40.49 22 *eP* **P** **20 26 11.2 -0.8**
comp=Z,5.2nm,0.8s
KURK PcP **PcP** **20 28 13.7 -0.8**
KURK Kurchatov 40.49 22 *eP* **P** **20 26 11.2 -0.8**
comp=Z,5.2nm,0.8s
TESR 40.51 328 *i↑P* **P** **20 26 13.0 +0.7**
LSZ Lusaka 40.52 224 P **P** **20 26 14.3 +1.4**
LSZ Lusaka 40.52 224 P **P** **20 26 14.3 +1.4**
comp=Z,1.3nm,0.6s,baz=15,slow=14,SNR=3.5
LSZ Lusaka 40.52 224 P **P** **20 26 14.3 +1.4**
SKO Skopje 40.75 319 *eP* **P** **20 26 11.6 -2.8**
CM31 Chiang Mai Arr 41.04 78 *eP* **P** **20 26 16.9 -0.2**
comp=Z,14nm,1.1s
CM31 Chiang Mai Arr 41.04 78 *eP* **P** **20 26 16.9 -0.2**
comp=Z,14nm,1.1s
CMAR Chiang Mai Arr 41.04 78 P **P** **20 26 18.4 +1.3**
CMAR Chiang Mai Arr 41.04 78 P **P** **20 26 18.4 +1.3**
comp=Z,3.1nm,0.8s,baz=278,slow=9.2,SNR=23
CMAR LR LR 20 44 07.1
comp=Z,109nm,19.0s,baz=280,slow=38
CMAR Chiang Mai Arr 41.04 78 P **P** **20 26 18.4 +1.3**
LOT Lotru 41.36 325 *i↑P* **P** **20 26 19.8 +0.3**
LOT Lotru 41.36 325 *i↑P* **P** **20 26 19.8 +0.3**
BURAR Bucovina Array 41.97 329 *i↑P* **P** **20 26 25.1 +0.6**
BURAR Bucovina Array 41.97 329 *i↑P* **P** **20 26 25.1 +0.6**
BUR08 Bucovina Ar. S 42.00 329 *eP* **P** **20 26 24.6 -0.1**
BUR08 Bucovina Ar. S 42.00 329 *eP* **P** **20 26 24.6 -0.1**
GRUS Gruza 42.23 321 *eP* **P** **20 26 24.9 -1.6**
AK02 Malin Array Si 42.30 334 *eP* **P** **20 26 24.6 -2.3**
AK02 Malin Array Si 42.30 334 *eP* **P** **20 26 24.6 -2.3**
AK01 Malin Array Si 42.32 335 *eP* **P** **20 26 26.6 -0.5**
AK01 Malin Array Si 42.32 335 *eP* **P** **20 26 26.6 -0.5**
AKASG Malin Array Be 42.32 335 *ceP* **P** **20 26 27.6 +0.5**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 42.32 335 P **P** **20 26 27.6 +0.5**
AKASG PP **PP** **20 28 09.0 +3.8**
AKASG Malin Array Be 42.32 335 P **P** **20 26 27.6 +0.5**
comp=Z,2.9nm,0.8s,baz=139,slow=7.4,SNR=7.7
AKASG PP **PP** **20 28 09.0 +3.8**
comp=Z,1.2nm,0.7s,baz=136,slow=12,SNR=5.2
AKASG Malin Array Be 42.32 335 P **P** **20 26 27.6 +0.5**
AKASG Malin Array Be 42.32 335 PP PP 20 28 09.0 +3.7
KIEV Kiev 42.32 335 *eP* **P** **20 26 27.7 +0.6**
KIEV pmax pmax
comp=Z,15nm,1.1s
KIEV Kiev 42.32 335 *eP* **P** **20 26 27.6 +0.6**
comp=Z,15nm,1.1s
KIEV Kiev 42.32 335 *eP* **P** **20 26 27.6 +0.5**
comp=Z,15nm,1.1s
TIP Timpagrande 42.58 313 *eP* **P** **20 26 31.6 +2.1**
comp=Z,38nm,1.1s
TIP Timpagrande 42.58 313 *eP* **P** **20 26 31.6 +2.1**
comp=Z,38nm,1.1s
BZS Buzias 42.67 324 *i↑P* **P** **20 26 30.5 +0.5**
BZS Buzias 42.67 324 *i↑P* **P** **20 26 30.5 +0.5**
DIVS Divibare 42.78 321 *eP* **P** **20 26 30.1 -1.0**
BMR Baia Mare 42.90 327 *i|P* **P** **20 26 31.9 +0.1**
BMR Baia Mare 42.90 327 *i|P* **P** **20 26 31.9 +0.1**
OBN Obninsk 43.42 344 *eP* **P** **20 26 38.5 +2.6**
OBN pmax pmax
comp=Z,48nm,1.6s
OBN MLR MLR
comp=Z,300nm,19.0s
MOS Moscow 43.70 345 *eP* P 20 26 42.6 +4.4
MOS *e* 20 28 23.5
UZH Uzhgorod 44.13 328 *eP* **P** **20 26 41.1 -0.6**
UZH *e* 20 26 48.1
KOLS Kolonicke sedl 44.33 328 *eP* **P** **20 26 44.3 +0.9**
KOLS *e* 20 26 56.0
KOLS pmax pmax
comp=Z,27nm,1.5s
KOLS Kolonicke sedl 44.33 328 *eP* **P** **20 26 44.2 +0.9**
KOLS *epP* **pP** **20 26 50.1 +0.7**
KOLS *e* 20 26 56.0
KWP Kalwaria Pacla 44.55 329 *eP* **P** **20 26 46.4 +1.2**
KWP pmax pmax
comp=Z,24nm,1.3s
KWP Kalwaria Pacla 44.55 329 *eP* **P** **20 26 46.4 +1.2**
comp=Z,24nm,1.3s
KWP Kalwaria Pacla 44.55 329 *i↑P* **P** **20 26 45.9 +0.7**
KWP Kalwaria Pacla 44.55 329 *eP* P 20 26 51.9 +6.7
KWP Kalwaria Pacla 44.55 329 *i↑P* **P** **20 26 45.9 +0.7**
CRVS Cervenica-Dubn 44.73 328 *eP* **P** **20 26 47.1 +0.5**
CRVS pmax pmax
comp=Z,15nm,1.5s
CRVS Cervenica-Dubn 44.73 328 *eP* **P** **20 26 47.1 +0.5**
KMI Kunming 44.80 69 P **P** **20 26 49.4 +1.6**
KMI pmax pmax
comp=Z,6.0nm,1.2s
ZAA0 Zalesovo Array 45.37 23 *eP* **P** **20 26 51.1 -0.5**
ZAA0 Zalesovo Array 45.37 23 *eP* **P** **20 26 51.1 -0.5**
ZALV Zalesovo Beam 45.37 23 P **P** **20 26 51.4 -0.1**
ZALV Zalesovo Beam 45.37 23 P **P** **20 26 51.4 -0.1**
ZALV Zalesovo Beam 45.37 23 P **P** **20 26 51.4 -0.1**
comp=Z,5.3nm,0.8s,baz=227,slow=8.0,SNR=22
ZALV LR LR 20 48 15.4
comp=Z,348nm,18.7s,baz=218,slow=39
ZALV Zalesovo Beam 45.37 23 P **P** **20 26 51.4 -0.1**
NVS Novosibirsk 45.47 22 *eP* **P** **20 26 49.5 -2.9**
NVS pmax pmax
comp=Z,57nm,2.0s
NVS pmax pmax
comp=N,23nm,1.8s
NVS pmax pmax
comp=E,4.0nm,1.2s
GTA Gaotai 45.53 48 *eP* **P** **20 26 55.5 +2.3**
GTA pP **pP** **20 26 59.6 +0.3**
GTA sP **sP** **20 27 01.8 +0.1**
GTA PP **PP** **20 28 44.4 +4.5**
GTA S **S** **20 33 39.9 +5.4**
GTA sS **sS** **20 33 46.6 +2.2**
GTA pmax pmax
comp=Z,3.0nm,0.7s
GTA LR LR
comp=N,170nm,17.6s
GTA LR LR
comp=E,420nm,21.9s
GTA LR LR
comp=Z,500nm,20.9s
VYHS Vyhne 45.88 326 *eP* **P** **20 26 55.7 0.0**
VYHS *e* 20 27 06.9
VYHS pmax pmax
comp=Z,6.0nm,1.4s
VYHS Vyhne 45.88 326 *eP* **P** **20 26 55.7 0.0**
VYHS *epP* **pP** **20 27 01.4 -0.4**
VYHS *e* 20 27 06.9
OJC Ojcow 46.39 328 *eP* P 20 27 04.1 +4.4
OJC Ojcow 46.39 328 *eP* P 20 27 04.1 +4.4
CD2 Chengdu 46.42 61 P **P** **20 27 01.3 +1.0**
CD2 pP **pP** **20 27 05.8 -0.6**
CD2 sP **sP** **20 27 08.3 -0.5**
CD2 PcP **PcP** **20 28 36.8 +1.8**
CD2 PP **PP** **20 28 50.3 +0.8**
CD2 PcS **PcS** **20 32 30.0 +0.2**
CD2 S **S** **20 33 48.0 +0.6**
CD2 sS **sS** **20 33 55.1 -2.3**
CD2 SS SS 20 37 05.9 -7.4
CD2 pmax pmax
comp=Z,10.0nm,0.4s
CD2 pmax pmax
comp=Z,80nm,5.4s
CD2 LR LR
comp=N,270nm,15.2s
CD2 LR LR
comp=E,520nm,20.6s
CD2 LR LR
comp=Z,280nm,18.6s
ZST Bratislava 46.68 324 *eP* **P** **20 27 01.5 -0.5**
ZST Bratislava 46.68 324 *eP* **P** **20 27 01.5 -0.5**
KEST Kesra 47.01 306 LR LR 20 48 11.2
comp=Z,63nm,19.0s,baz=341,slow=38
IIGN Ignalina 47.02 337 *eP* **P** **20 27 05.1 +0.6**
IIGN AMB AMB 20 27 13.1
comp=Z,16nm,1.8s
IIGN Ignalina 47.02 337 *eP* **P** **20 27 05.1 +0.6**
comp=Z,16nm,1.8s,SNR=24
OKC Ostrava-Krasne 47.02 327 *eP* **P** **20 27 05.4 +0.7**
OKC *e* 20 27 16.1
OKC Ostrava-Krasne 47.02 327 *i↑eP* **P** **20 27 05.4 +0.7**
OKC *epP* **pP** **20 27 11.0 +0.3**
OKC *ex* x 20 27 16.1
OKC Ostrava-Krasne 47.02 327 P **P** **20 27 05.4 +0.7**
ARSA Arzberg 47.09 323 *i↑P* **P** **20 27 05.9 +0.6**
comp=Z,5.6nm,0.8s
ARSA Arzberg 47.09 323 *i↑P* **P** **20 27 05.9 +0.6**
comp=Z,5.6nm,0.8s
ARSA Arzberg 47.09 323 P **P** **20 27 05.9 +0.6**
comp=Z,5.6nm,0.8s
ISAL Salakas 47.22 337 *eP* **P** **20 27 06.7 +0.6**
ISAL Salakas 47.22 337 *eP* **P** **20 27 06.7 +0.6**
SNR=24
CONA Conrad Observa 47.24 324 *i↑P* **P** **20 27 05.7 -0.8**
comp=Z,16nm,1.0s
CONA Conrad Observa 47.24 324 *i↑P* **P** **20 27 05.7 -0.8**
comp=Z,16nm,1.0s
CONA Conrad Observa 47.24 324 P **P** **20 27 05.7 -0.8**
comp=Z,16nm,1.0s
SUW Suwalki 47.28 334 *eP* **P** **20 27 06.6 +0.1**
IZAR Zarasai 47.31 337 *eP* **P** **20 27 07.4 +0.6**
IZAR AMB AMB 20 27 15.1
comp=Z,11nm,1.4s
IZAR Zarasai 47.31 337 *eP* **P** **20 27 07.4 +0.6**
comp=Z,11nm,1.4s,SNR=24
MORC Moravsky Berou 47.31 326 *eP* P 20 27 03.0 -4.0
MORC pmax pmax
comp=Z,8.0nm,1.0s
MORC Moravsky Berou 47.31 326 *eP* P 20 27 03.0 -4.0
comp=Z,7.8nm,1.0s
MORC Moravsky Berou 47.31 326 *eP* **P** **20 27 06.5 -0.5**
VRAC Vranov 47.56 325 P **P** **20 27 08.8 -0.1**
VRAC Vranov 47.56 325 P **P** **20 27 08.8 -0.1**
comp=Z,1.6nm,0.7s,baz=67,slow=8.1,SNR=4.4
VRAC Vranov 47.56 325 P **P** **20 27 08.8 -0.1**
LZH Lanzhou 47.57 54 *eP* P 20 27 15.0 +5.6
LZH pP pP 20 27 20.1 +4.7
LZH sP sP 20 27 22.5 +4.7
LZH pmax pmax
comp=Z,21nm,1.3s
LZH LR LR
comp=N,170nm,12.3s
LZH LR LR
comp=E,150nm,11.9s
LZH LR LR
comp=Z,200nm,15.1s
VSL Villasalto 48.04 311 P **P** **20 27 11.2 -1.5**
VSL Villasalto 48.04 311 P **P** **20 27 11.2 -1.5**
TREC Trest 48.17 325 *eP* **P** **20 27 14.3 +0.7**
TREC *e* 20 27 19.8
TREC Trest 48.17 325 *i↑eP* **P** **20 27 14.3 +0.7**
TREC *epP* **pP** **20 27 19.8 +0.1**
TREC Trest 48.17 325 P **P** **20 27 14.3 +0.7**
DPC Dobruska-Polom 48.28 327 *i↑P* **P** **20 27 14.5 0.0**
DPC *e* 20 27 26.1
DPC Dobruska-Polom 48.28 327 *i↑P* **P** **20 27 14.5 0.0**
DPC *epP* **pP** **20 27 20.8 +0.2**
DPC *ex* x 20 27 26.1
DPC Dobruska-Polom 48.28 327 P **P** **20 27 14.5 0.0**
KBA Koelnbreinsper 48.31 321 *i↑P* **P** **20 27 17.0 +2.1**
KBA pmax pmax
comp=Z,10.0nm,1.0s
KBA Koelnbreinsper 48.31 321 *i↑pP* **P** **20 27 17.0 +2.1**
comp=Z,9.9nm,1.0s
KBA Koelnbreinsper 48.31 321 *i↑P* **P** **20 27 17.0 +2.1**
comp=Z,9.9nm,1.0s
KBA Koelnbreinsper 48.31 321 P **P** **20 27 17.0 +2.1**
comp=Z,9.9nm,1.0s
GYA Guiyang 48.43 67 *eP* **P** **20 27 16.0 -0.1**
GYA pmax pmax
comp=Z,10.0nm,1.0s
UPC Upice 48.53 327 *eP* **P** **20 27 17.1 +0.7**
UPC *e* 20 27 23.0
UPC Upice 48.53 327 *i↑eP* **P** **20 27 17.1 +0.7**
UPC *epP* **pP** **20 27 23.0 +0.5**
UPC Upice 48.53 327 P **P** **20 27 17.1 +0.7**
KSP Ksiaz 48.57 327 *eP* **P** **20 27 16.8 +0.1**
TAM Tamanrasset 48.65 288 *eP* **P** **20 27 18.6 +0.7**
TAM pmax pmax
comp=Z,14nm,1.4s
TAM Tamanrasset 48.65 288 *eP* **P** **20 27 18.6 +0.7**
comp=Z,14nm,1.4s
TAM Tamanrasset 48.65 288 *eP* **P** **20 27 18.5 +0.7**
comp=Z,14nm,1.4s
GERES GERESS Array B 48.95 324 P **P** **20 27 18.6 -1.1**
GERES GERESS Array B 48.95 324 P **P** **20 27 18.6 -1.1**
comp=Z,0.7nm,0.6s,baz=125,slow=8.3,SNR=5.4
GERES LR LR 20 50 16.2
comp=Z,117nm,21.0s,baz=278,slow=39
GERES GERESS Array B 48.95 324 P **P** **20 27 18.6 -1.1**
PRU Pruhonice 49.06 325 *eP* **P** **20 27 20.9 +0.5**
PRU *e* 20 27 26.4
PRU Pruhonice 49.06 325 *i↑eP* **P** **20 27 20.9 +0.5**
PRU *epP* **pP** **20 27 26.4 -0.1**

PRU	**Pruhonice**	**49.06**	**325**	P		**P**	**20 27 20.9**	**+0.5**
KHC	**Kasperske Hory**	**49.16**	**324**	*e*P		**P**	**20 27 20.0**	**-1.3**
KHC				*e*			20 27 26.9	
KHC				*e*			20 27 36.2	
KHC	**Kasperske Hory**	**49.16**	**324**⇑	*e*P		**P**	**20 27 20.0**	**-1.3**
KHC				*ep*P		**pP**	**20 27 26.9**	**-0.5**
KHC				*ex*		x	20 27 36.2	
KHC	**Kasperske Hory**	**49.16**	**324**	P		**P**	**20 27 20.0**	**-1.3**
LBTB	**Lobatse**	**49.30**	**218**	P		**P**	**20 27 23.1**	**+0.4**
LBTB	**Lobatse**	**49.30**	**218**	P		**P**	**20 27 23.1**	**+0.4**
	comp=Z,3.3nm,0.7s,baz=48,slow=11,SNR=6.5							
LBTB	**Lobatse**	**49.30**	**218**	P		**P**	**20 27 23.1**	**+0.4**
PVCC	**Panska Ves**	**49.32**	**326**	*e*P		**P**	**20 27 20.9**	**-1.5**
PVCC				*e*			20 27 28.5	
PVCC	**Panska Ves**	**49.32**	**326**⇑	*e*P		**P**	**20 27 20.9**	**-1.5**
PVCC				*ep*P		**pP**	**20 27 28.5**	**0.0**
PVCC	**Panska Ves**	**49.32**	**326**	P		**P**	**20 27 20.9**	**-1.5**
BRG	**Berggiesshubel**	**49.84**	**326**	*e*P		P	20 27 32.2	+5.8
	comp=Z,16nm,1.8s							
BRG	**Berggiesshubel**	**49.84**	**326**	*e*P		P	20 27 32.2	+5.8
BRG				pmax		pmax		
	comp=Z,1.0nm,1.7s							
DAVOX	**Davos/Dischmat**	**50.31**	**320**	P		**P**	**20 27 30.1**	**-0.1**
DAVOX	**Davos/Dischmat**	**50.31**	**320**	P		**P**	**20 27 30.1**	**-0.1**
	comp=Z,7.7nm,0.6s,baz=158,slow=19							
DAVOX	**Davos/Dischmat**	**50.31**	**320**	P		**P**	**20 27 30.1**	**-0.1**
NKC	**Novy Kostel**	**50.34**	**325**	*e*P		**P**	**20 27 30.1**	**-0.1**
NKC				*e*			20 27 36.9	
NKC	**Novy Kostel**	**50.34**	**325**⇑	*e*P		**P**	**20 27 30.1**	**-0.1**
NKC				*ex*		x	20 27 36.9	
NKC	**Novy Kostel**	**50.34**	**325**	P		**P**	**20 27 30.1**	**-0.1**
CLL	**Collm**	**50.58**	**326**	*e*P		**P**	**20 27 32.0**	**+0.1**
CLL				*i*			20 27 43.2	
CLL	**Collm**	**50.58**	**326**	*e*P		**P**	**20 27 32.0**	**+0.1**
CLL				*i*			20 27 37.8	
	comp=Z,29nm,1.8s							
CLL				*e*PP		PP	20 29 39.0	+11
FRF	**La Foret Royal**	**51.26**	**315**	*e*P		**P**	**20 27 36.2**	**-1.0**
	comp=Z,156nm,1.8s							
FRF	**La Foret Royal**	**51.26**	**315**	*e*P		**P**	**20 27 36.2**	**-1.0**
FRF				pmax		pmax		
	comp=Z,156nm,1.8s							
FRF	**La Foret Royal**	**51.26**	**315**	*e*P		**P**	**20 27 36.2**	**-1.0**
	comp=Z,156nm,1.8s							
FRF	**La Foret Royal**	**51.26**	**315**	*e*P		**P**	**20 27 36.2**	**-1.0**
	comp=Z,78nm,1.8s							
LMR	**La Mourre**	**51.28**	**314**	*e*P		**P**	**20 27 36.6**	**-0.8**
	comp=Z,99nm,1.3s							
LMR	**La Mourre**	**51.28**	**314**	*e*P		**P**	**20 27 36.6**	**-0.8**
LMR				pmax		pmax		
	comp=Z,99nm,1.3s							
LMR	**La Mourre**	**51.28**	**314**	*e*P		**P**	**20 27 36.6**	**-0.8**
	comp=Z,99nm,1.3s							
LMR	**La Mourre**	**51.28**	**314**	*e*P		**P**	**20 27 36.6**	**-0.8**
	comp=Z,49nm,1.3s							
QIZ	**Qiongzhong**	**51.34**	**77**	P		P	20 27 30.3	-7.9
MOY	**Mondy**	**51.52**	**34**	*e*P		**P**	**20 27 42.2**	**+3.0**
JOF	**Joensuu**	**51.56**	**346**	*e*P		**P**	**20 27 37.8**	**-1.3**
JOF				pmax		pmax		
	comp=Z,2.0nm,0.6s							
JOF	**Joensuu**	**51.56**	**346**	*ep*		**P**	**20 27 37.8**	**-1.3**
	comp=Z,2.2nm,0.6s							
MBDF	**Montbardon**	**51.56**	**316**	*e*P		**P**	**20 27 38.3**	**-1.4**
	comp=Z,28nm,1.1s							
MBDF	**Montbardon**	**51.56**	**316**	*e*P		**P**	**20 27 38.3**	**-1.4**
MBDF				pmax		pmax		
	comp=Z,28nm,1.1s							
MBDF	**Montbardon**	**51.56**	**316**	*e*P		**P**	**20 27 38.3**	**-1.4**
	comp=Z,28nm,1.1s							
MBDF	**Montbardon**	**51.56**	**316**	*e*P		**P**	**20 27 38.3**	**-1.4**
	comp=Z,14nm,1.1s							
FINES	**FINESS Array B**	**51.76**	**342**	P		**P**	**20 27 41.4**	**+0.8**
FINES	**FINESS Array B**	**51.76**	**342**	P		**P**	**20 27 41.4**	**+0.8**
	comp=Z,2.9nm,0.8s,baz=139,slow=9.6,SNR=14							
FINES				LR		LR	20 52 10.4	
	comp=Z,202nm,20.1s,baz=151,slow=39							
FINES	**FINESS Array B**	**51.76**	**342**	P		**P**	**20 27 41.4**	**+0.8**
LPG	**La Plagne**	**51.84**	**317**	*e*P		**P**	**20 27 40.6**	**-1.3**
	comp=Z,34nm,1.0s							
LPG	**La Plagne**	**51.84**	**317**	*e*P		**P**	**20 27 40.6**	**-1.3**
LPG				pmax		pmax		
	comp=Z,34nm,1.0s							
LPG	**La Plagne**	**51.84**	**317**	*e*P		**P**	**20 27 40.6**	**-1.3**
	comp=Z,34nm,1.0s							
LPG	**La Plagne**	**51.84**	**317**	*e*P		**P**	**20 27 40.6**	**-1.3**
	comp=Z,17nm,1.0s							
LPL	**La Plagne**	**51.86**	**317**	*e*P		**P**	**20 27 40.6**	**-1.3**
	comp=Z,20nm,0.7s							
LPL	**La Plagne**	**51.86**	**317**	*e*P		**P**	**20 27 40.6**	**-1.3**
LPL				pmax		pmax		
	comp=Z,20nm,0.7s							
LPL	**La Plagne**	**51.86**	**317**	*e*P		**P**	**20 27 40.6**	**-1.3**
	comp=Z,20nm,0.7s							
LPL	**La Plagne**	**51.86**	**317**	*e*P		**P**	**20 27 40.6**	**-1.3**
	comp=Z,9.8nm,0.7s							
SMRF	**Simiane la Rot**	**52.13**	**315**	*e*P		**P**	**20 27 43.5**	**-0.3**
	comp=Z,71nm,1.4s							
SMRF	**Simiane la Rot**	**52.13**	**315**	*e*P		**P**	**20 27 43.5**	**-0.3**
	comp=Z,71nm,1.4s							
SMRF	**Simiane la Rot**	**52.13**	**315**	*e*P		**P**	**20 27 43.5**	**-0.3**
	comp=Z,36nm,1.4s							
KAF	**Kangasniemi**	**52.22**	**343**	*e*P		**P**	**20 27 44.2**	**+0.2**
KAF				pmax		pmax		
	comp=Z,2.0nm,0.7s							
KAF	**Kangasniemi**	**52.22**	**343**	*ep*		**P**	**20 27 44.2**	**+0.2**
	comp=Z,2.0nm,0.7s							
ORIF	**Oris-en-Rattie**	**52.22**	**316**	*e*P		**P**	**20 27 42.1**	**-2.4**
	comp=Z,16nm,1.1s							
ORIF				*e*R				
	comp=Z,190nm,22.8s							
ORIF	**Oris-en-Rattie**	**52.22**	**316**	*e*P		**P**	**20 27 42.1**	**-2.4**
ORIF				pmax		pmax		
	comp=Z,16nm,1.1s							
ORIF	**Oris-en-Rattie**	**52.22**	**316**	*e*P		**P**	**20 27 42.1**	**-2.4**
	comp=Z,16nm,1.1s							
ORIF	**Oris-en-Rattie**	**52.22**	**316**	*e*P		**P**	**20 27 42.1**	**-2.4**
	comp=Z,7.9nm,1.1s							
BOSA	**Boshof**	**52.25**	**215**	P		**P**	**20 27 45.6**	**+0.7**
BOSA	**Boshof**	**52.25**	**215**	P		**P**	**20 27 45.6**	**+0.7**
	comp=Z,3.5nm,0.9s,baz=3.4,slow=2.9,SNR=4.9							
BOSA				LR		LR	20 50 27.0	
	comp=Z,271nm,18.0s,baz=7.7,slow=37							
BOSA	**Boshof**	**52.25**	**215**	P		**P**	**20 27 45.6**	**+0.7**
CDF	**Champ du Feu**	**52.58**	**321**	*e*P		**P**	**20 27 45.5**	**-1.6**
	comp=Z,10nm,0.8s							
CDF	**Champ du Feu**	**52.58**	**321**	*e*P		**P**	**20 27 45.5**	**-1.6**
CDF				pmax		pmax		
	comp=Z,10.0nm,0.8s							
CDF	**Champ du Feu**	**52.58**	**321**	*e*P		**P**	**20 27 45.5**	**-1.6**
	comp=Z,10nm,0.8s							
CDF	**Champ du Feu**	**52.58**	**321**	*e*P		**P**	**20 27 45.5**	**-1.6**
	comp=Z,5.2nm,0.8s							
HINF	**Hinteralfeld**	**52.61**	**320**	*e*P		**P**	**20 27 45.5**	**-1.8**
HINF	**Hinteralfeld**	**52.61**	**320**	*e*P		**P**	**20 27 45.5**	**-1.8**
HINF	**Hinteralfeld**	**52.61**	**320**	*e*P		**P**	**20 27 45.5**	**-1.8**
HINF	**Hinteralfeld**	**52.61**	**320**	*e*P		**P**	**20 27 45.5**	**-1.8**
CABF	**La Chapelle**	**52.66**	**318**	*e*P		**P**	**20 27 46.9**	**-0.8**
	comp=Z,31nm,0.9s							
CABF	**La Chapelle**	**52.66**	**318**	*e*P		**P**	**20 27 46.9**	**-0.8**
CABF				pmax		pmax		
	comp=Z,31nm,0.9s							
CABF	**La Chapelle**	**52.66**	**318**	*e*P		**P**	**20 27 46.9**	**-0.8**
	comp=Z,31nm,0.9s							
CABF	**La Chapelle**	**52.66**	**318**	*e*P		**P**	**20 27 46.9**	**-0.8**
	comp=Z,16nm,0.9s							
TOA0	**Torodi Ar. Sit**	**52.94**	**276**	P		**P**	**20 27 49.5**	**-0.7**
TOA0	**Torodi Ar. Sit**	**52.94**	**276**	P		**P**	**20 27 49.5**	**-0.7**
TORD	**Torodi Ar. Bea**	**52.94**	**276**	P		**P**	**20 27 50.4**	**+0.2**
TORD				PcP		**PcP**	**20 28 59.3**	**+0.3**
TORD	**Torodi Ar. Bea**	**52.94**	**276**	P		**P**	**20 27 50.4**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=94,slow=7.0,SNR=9.5							
TORD				PcP		**PcP**	**20 28 59.3**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=77,slow=3.2,SNR=2.8							
TORD				LR		LR	20 48 37.4	
	comp=Z,186nm,19.0s,baz=35,slow=34							
TORD	**Torodi Ar. Bea**	**52.94**	**276**	P		**P**	**20 27 50.3**	**+0.2**
VIVF	**Saint-Julien-l**	**53.02**	**316**	*e*P		**P**	**20 27 49.1**	**-1.2**
	comp=Z,29nm,1.1s							
VIVF	**Saint-Julien-l**	**53.02**	**316**	*e*P		**P**	**20 27 49.1**	**-1.2**
VIVF				pmax		pmax		
	comp=Z,29nm,1.1s							
VIVF	**Saint-Julien-l**	**53.02**	**316**	*e*P		**P**	**20 27 49.1**	**-1.2**
	comp=Z,29nm,1.1s							
VIVF	**Saint-Julien-l**	**53.02**	**316**	*e*P		**P**	**20 27 49.1**	**-1.2**
	comp=Z,14nm,1.1s							
SONM	**Songino Array**	**53.03**	**40**	P		**P**	**20 27 50.5**	**0.0**
SONM	**Songino Array**	**53.03**	**40**	P		**P**	**20 27 50.5**	**0.0**
	comp=Z,1.2nm,0.8s,baz=242,slow=7.3,SNR=6.8							
SONM	**Songino Array**	**53.03**	**40**	P		**P**	**20 27 50.5**	**0.0**
LASF	**Ste Croix**	**53.34**	**315**	*e*P		**P**	**20 27 51.7**	**-1.0**
	comp=Z,111nm,1.7s							
LASF	**Ste Croix**	**53.34**	**315**	*e*P		**P**	**20 27 51.7**	**-1.0**
	comp=Z,111nm,1.7s							
LASF	**Ste Croix**	**53.34**	**315**	*e*P		**P**	**20 27 51.7**	**-1.0**
	comp=Z,55nm,1.7s							
PAGF	**Fort de Pagny**	**53.59**	**320**	*e*P		**P**	**20 27 53.2**	**-1.2**
PAGF	**Fort de Pagny**	**53.59**	**320**	*e*P		**P**	**20 27 53.2**	**-1.2**
PAGF	**Fort de Pagny**	**53.59**	**320**	*e*P		**P**	**20 27 53.2**	**-1.2**
SFTF	**Sexfontaines**	**53.89**	**320**	*e*P		**P**	**20 27 55.5**	**-1.1**
	comp=Z,26nm,1.0s							
SFTF	**Sexfontaines**	**53.89**	**320**	*e*P		**P**	**20 27 55.5**	**-1.1**
	comp=Z,26nm,1.0s							
SFTF	**Sexfontaines**	**53.89**	**320**	*e*P		**P**	**20 27 55.5**	**-1.1**
	comp=Z,13nm,1.0s							
MEZF	**Maizieres J'vi**	**53.99**	**320**	*e*P		**P**	**20 27 56.4**	**-0.9**
	comp=Z,31nm,0.9s							
MEZF	**Maizieres J'vi**	**53.99**	**320**	*e*P		**P**	**20 27 56.4**	**-0.9**
	comp=Z,31nm,0.9s							
MEZF	**Maizieres J'vi**	**53.99**	**320**	*e*P		**P**	**20 27 56.4**	**-0.9**
	comp=Z,16nm,0.9s							
SMF	**Signal de Mont**	**54.13**	**318**	*e*P		**P**	**20 27 57.0**	**-1.4**
	comp=Z,22nm,1.2s							
SMF	**Signal de Mont**	**54.13**	**318**	*e*P		**P**	**20 27 57.0**	**-1.4**
SMF				pmax		pmax		
	comp=Z,22nm,1.2s							
SMF	**Signal de Mont**	**54.13**	**318**	*e*P		**P**	**20 27 57.0**	**-1.4**
	comp=Z,22nm,1.2s							
SMF	**Signal de Mont**	**54.13**	**318**	*e*P		**P**	**20 27 57.0**	**-1.4**
	comp=Z,11nm,1.2s							
MTLF	**Montolieu**	**54.29**	**313**	*e*P		**P**	**20 27 58.5**	**-1.1**
MTLF	**Montolieu**	**54.29**	**313**	*e*P		**P**	**20 27 58.5**	**-1.1**
MTLF	**Montolieu**	**54.29**	**313**	*e*P		**P**	**20 27 58.5**	**-1.1**
MTLF	**Montolieu**	**54.29**	**313**	*e*P		**P**	**20 27 58.5**	**-1.1**
LOR	**Lormes**	**54.32**	**318**	*e*P		**P**	**20 27 58.6**	**-1.2**
	comp=Z,35nm,1.1s							
LOR				*e*R				
	comp=Z,104nm,17.2s							
LOR	**Lormes**	**54.32**	**318**	*e*P		**P**	**20 27 58.6**	**-1.2**
	comp=Z,35nm,1.1s							
LOR	**Lormes**	**54.32**	**318**	*e*P		**P**	**20 27 58.6**	**-1.2**
	comp=Z,18nm,1.1s							
SSF	**Saint Saulge**	**54.48**	**318**	*e*P		**P**	**20 27 59.7**	**-1.3**
	comp=Z,8.1nm,0.7s							
SSF	**Saint Saulge**	**54.48**	**318**	*e*P		**P**	**20 27 59.7**	**-1.3**
SSF				pmax		pmax		
	comp=Z,8.0nm,0.7s							
SSF	**Saint Saulge**	**54.48**	**318**	*e*P		**P**	**20 27 59.7**	**-1.3**
	comp=Z,8.1nm,0.7s							
SSF	**Saint Saulge**	**54.48**	**318**	*e*P		**P**	**20 27 59.7**	**-1.3**
	comp=Z,4.1nm,0.7s							
AVF	**Avril sur Loir**	**54.50**	**318**	*e*P		**P**	**20 27 59.5**	**-1.6**
AVF	**Avril sur Loir**	**54.50**	**318**	*e*P		**P**	**20 27 59.5**	**-1.6**
AVF	**Avril sur Loir**	**54.50**	**318**	*e*P		**P**	**20 27 59.5**	**-1.6**
AVF	**Avril sur Loir**	**54.50**	**318**	*e*P		**P**	**20 27 59.5**	**-1.6**
HHC	**Hu-ho-hao-te**	**54.56**	**50**	*e*P		**P**	**20 28 01.6**	**-0.2**
HHC				sP		**sP**	**20 28 08.8**	**-1.5**
HHC				S		**S**	**20 35 37.3**	**-3.2**
HHC				ScS		**ScS**	**20 37 45.1**	**-5.4**
HHC				pmax		pmax		
	comp=Z,24nm,0.7s							
HHC				pmax		pmax		
	comp=Z,420nm,6.3s							
HHC				LR		LR		
	comp=N,460nm,16.0s							
HHC				LR		LR		
	comp=E,940nm,19.2s							
HHC				LR		LR		
	comp=Z,940nm,19.4s							
BGF	**Bois d'Agland**	**54.76**	**317**	*e*P		**P**	**20 28 02.0**	**-1.0**
	comp=Z,22nm,0.8s							
BGF	**Bois d'Agland**	**54.76**	**317**	*e*P		**P**	**20 28 02.0**	**-1.0**
BGF				pmax		pmax		
	comp=Z,22nm,0.8s							
BGF	**Bois d'Agland**	**54.76**	**317**	*e*P		**P**	**20 28 02.0**	**-1.0**
	comp=Z,22nm,0.8s							
BGF	**Bois d'Agland**	**54.76**	**317**	*e*P		**P**	**20 28 02.0**	**-1.0**
	comp=Z,11nm,0.8s							
CAF	**Calviac**	**54.81**	**315**	*e*P		**P**	**20 28 02.0**	**-1.4**
CAF	**Calviac**	**54.81**	**315**	*e*P		**P**	**20 28 02.0**	**-1.4**
CAF	**Calviac**	**54.81**	**315**	*e*P		**P**	**20 28 02.0**	**-1.4**
CAF	**Calviac**	**54.81**	**315**	*e*P		**P**	**20 28 02.0**	**-1.4**
BAIF	**Baives**	**55.06**	**322**	*e*P		**P**	**20 28 04.1**	**-1.0**
	comp=Z,28nm,1.0s							
BAIF	**Baives**	**55.06**	**322**	*e*P		**P**	**20 28 04.1**	**-1.0**
BAIF				pmax		pmax		
	comp=Z,28nm,1.0s							
BAIF	**Baives**	**55.06**	**322**	*e*P		**P**	**20 28 04.1**	**-1.0**
	comp=Z,28nm,1.0s							
BAIF	**Baives**	**55.06**	**322**	*e*P		**P**	**20 28 04.1**	**-1.0**
	comp=Z,14nm,1.0s							
TCF	**Toulx Ste Croi**	**55.10**	**317**	*e*P		**P**	**20 28 04.2**	**-1.3**
	comp=Z,10nm,1.0s							
TCF	**Toulx Ste Croi**	**55.10**	**317**	*e*P		**P**	**20 28 04.2**	**-1.3**
TCF				pmax		pmax		
	comp=Z,10.0nm,1.0s							
TCF	**Toulx Ste Croi**	**55.10**	**317**	*e*P		**P**	**20 28 04.2**	**-1.3**
	comp=Z,10nm,1.0s							
TCF	**Toulx Ste Croi**	**55.10**	**317**	*e*P		**P**	**20 28 04.2**	**-1.3**
	comp=Z,5.2nm,1.0s							
HFS	**Hagfors**	**55.19**	**336**	P		**P**	**20 28 05.3**	**-0.5**
HFS	**Hagfors**	**55.19**	**336**	P		**P**	**20 28 05.3**	**-0.5**
	comp=Z,3.3nm,0.8s,baz=131,slow=6.8,SNR=5.6							
HFS	**Hagfors**	**55.19**	**336**	P		**P**	**20 28 05.3**	**-0.5**
EPF	**Esparros**	**55.54**	**313**	*e*P		**P**	**20 28 07.2**	**-1.6**
	comp=Z,26nm,1.3s							
EPF	**Esparros**	**55.54**	**313**	*e*P		**P**	**20 28 07.2**	**-1.6**
EPF				pmax		pmax		
	comp=Z,26nm,1.3s							
EPF	**Esparros**	**55.54**	**313**	*e*P		**P**	**20 28 07.2**	**-1.6**
	comp=Z,26nm,1.3s							
EPF	**Esparros**	**55.54**	**313**	*e*P		**P**	**20 28 07.2**	**-1.6**
	comp=Z,13nm,1.3s							
LFF	**La Frestale**	**55.72**	**315**	*e*P		**P**	**20 28 09.0**	**-0.9**
	comp=Z,40nm,1.2s							
LFF	**La Frestale**	**55.72**	**315**	*e*P		**P**	**20 28 09.0**	**-0.9**
LFF				pmax		pmax		
	comp=Z,40nm,1.2s							
LFF	**La Frestale**	**55.72**	**315**	*e*P		**P**	**20 28 09.0**	**-0.9**
	comp=Z,40nm,1.2s							
LFF	**La Frestale**	**55.72**	**315**	*e*P		**P**	**20 28 09.0**	**-0.9**
	comp=Z,20nm,1.2s							
ETSF	**Etsaut**	**56.16**	**312**	*e*P		**P**	**20 28 12.4**	**-0.8**
	comp=Z,66nm,1.6s							
ETSF	**Etsaut**	**56.16**	**312**	*e*P		**P**	**20 28 12.4**	**-0.8**
ETSF				pmax		pmax		
	comp=Z,66nm,1.6s							
ETSF	**Etsaut**	**56.16**	**312**	*e*P		**P**	**20 28 12.4**	**-0.8**
	comp=Z,66nm,1.6s							
ETSF	**Etsaut**	**56.16**	**312**	*e*P		**P**	**20 28 12.4**	**-0.8**
	comp=Z,33nm,1.6s							
SJPF	**Ste Jean**	**56.68**	**312**	*e*P		**P**	**20 28 16.0**	**-0.9**
SJPF	**Ste Jean**	**56.68**	**312**	*e*P		**P**	**20 28 16.0**	**-0.9**
SJPF	**Ste Jean**	**56.68**	**312**	*e*P		**P**	**20 28 16.0**	**-0.9**
SJPF	**Ste Jean**	**56.68**	**312**	*e*P		**P**	**20 28 16.0**	**-0.9**
NB2	**NORSAR Subarra**	**56.71**	**336**	P		**P**	**20 28 15.4**	**-1.4**
	comp=Z,13nm,1.4s,baz=124,slow=7.4							
NB2	**NORSAR Subarra**	**56.71**	**336**	P		**P**	**20 28 15.4**	**-1.4**
	comp=Z,13nm,1.4s,SNR=5.5							
NOA	**NORSAR Array B**	**56.71**	**336**	P		**P**	**20 28 16.2**	**-0.6**
NOA	**NORSAR Array B**	**56.71**	**336**	P		**P**	**20 28 16.2**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=226,slow=20,SNR=3.3							
NOA	**NORSAR Array B**	**56.71**	**336**	P		**P**	**20 28 16.2**	**-0.6**
MFF	**Saint Martin d**	**56.75**	**317**	*e*P		**P**	**20 28 15.6**	**-1.7**
	comp=Z,13nm,1.1s							
MFF	**Saint Martin d**	**56.75**	**317**	*e*P		**P**	**20 28 15.6**	**-1.7**
MFF				pmax		pmax		
	comp=Z,13nm,1.1s							
MFF	**Saint Martin d**	**56.75**	**317**	*e*P		**P**	**20 28 15.6**	**-1.7**
	comp=Z,13nm,1.1s							
MFF	**Saint Martin d**	**56.75**	**317**	*e*P		**P**	**20 28 15.6**	**-1.7**
	comp=Z,6.4nm,1.1s							
LDF	**La Druitiere**	**57.27**	**319**	*e*P		**P**	**20 28 19.3**	**-1.6**
	comp=Z,19nm,0.9s							
LDF	**La Druitiere**	**57.27**	**319**	*e*P		**P**	**20 28 19.3**	**-1.6**
LDF				pmax		pmax		
	comp=Z,19nm,0.9s							
LDF	**La Druitiere**	**57.27**	**319**	*e*P		**P**	**20 28 19.3**	**-1.6**
	comp=Z,19nm,0.9s							
LDF	**La Druitiere**	**57.27**	**319**	*e*P		**P**	**20 28 19.3**	**-1.6**
	comp=Z,9.4nm,0.9s							
FLN	**La Foliniere**	**57.55**	**319**	*e*P		**P**	**20 28 21.3**	**-1.6**
	comp=Z,18nm,0.8s							
FLN				*e*R				
	comp=Z,180nm,22.0s							
FLN	**La Foliniere**	**57.55**	**319**	*e*P		**P**	**20 28 21.3**	**-1.6**
FLN				pmax		pmax		
	comp=Z,18nm,0.8s							
FLN	**La Foliniere**	**57.55**	**319**	*e*P		**P**	**20 28 21.3**	**-1.6**
	comp=Z,18nm,0.8s							
FLN	**La Foliniere**	**57.55**	**319**	*e*P		**P**	**20 28 21.3**	**-1.6**
	comp=Z,8.9nm,0.8s							
GRR	**Gorron**	**57.69**	**319**	*e*P		**P**	**20 28 22.2**	**-1.7**
	comp=Z,47nm,1.5s							
GRR	**Gorron**	**57.69**	**319**	*e*P		**P**	**20 28 22.2**	**-1.7**
GRR				pmax		pmax		
	comp=Z,47nm,1.5s							
GRR	**Gorron**	**57.69**	**319**	*e*P		**P**	**20 28 22.2**	**-1.7**
	comp=Z,47nm,1.5s							
GRR	**Gorron**	**57.69**	**319**	*e*P		**P**	**20 28 22.2**	**-1.7**
	comp=Z,24nm,1.5s							
MDT	**Midelt**	**57.99**	**300**	P		**P**	**20 28 25.9**	**-0.6**
MDT	**Midelt**	**57.99**	**300**	P		**P**	**20 28 25.9**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=93,slow=8.0,SNR=4.0							
MDT	**Midelt**	**57.99**	**300**	P		**P**	**20 28 25.9**	**-0.6**
ESDC	**Sonseca Array**	**58.12**	**308**	P		**P**	**20 28 26.5**	**-0.7**
ESDC	**Sonseca Array**	**58.12**	**308**	P		**P**	**20 28 26.5**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=86,slow=6.7,SNR=17							
ESDC	**Sonseca Array**	**58.12**	**308**	P		**P**	**20 28 26.5**	**-0.7**
ESLA	**Sonseca Array**	**58.12**	**308**	*e*P		**P**	**20 28 24.4**	**-2.8**
	comp=Z,7.2nm,1.2s							
ARCES	**ARCESS Array B**	**58.40**	**348**	P		**P**	**20 28 27.1**	**-1.4**
ARCES	**ARCESS Array B**	**58.40**	**348**	P		**P**	**20 28 27.1**	**-1.4**
	comp=Z,4.4nm,1.0s,baz=142,slow=8.6,SNR=4.6							
ARCES	**ARCESS Array B**	**58.40**	**348**	P		**P**	**20 28 27.1**	**-1.4**
SGMF	**Saint Gilles**	**58.75**	**318**	*e*P		**P**	**20 28 29.5**	**-1.8**
	comp=Z,23nm,1.0s							
SGMF	**Saint Gilles**	**58.75**	**318**	*e*P		**P**	**20 28 29.5**	**-1.8**
SGMF				pmax		pmax		
	comp=Z,23nm,1.0s							
SGMF	**Saint Gilles**	**58.75**	**318**	*e*P		**P**	**20 28 29.5**	**-1.8**
	comp=Z,23nm,1.0s							
SGMF	**Saint Gilles**	**58.75**	**318**	*e*P		**P**	**20 28 29.5**	**-1.8**
	comp=Z,12nm,1.0s							
QUIF	**Quistinic**	**59.07**	**318**	*e*P		**P**	**20 28 31.1**	**-2.4**
QUIF	**Quistinic**	**59.07**	**318**	*e*P		**P**	**20 28 31.1**	**-2.4**
QUIF	**Quistinic**	**59.07**	**318**	*e*P		**P**	**20 28 31.1**	**-2.4**
QUIF	**Quistinic**	**59.07**	**318**	*e*P		**P**	**20 28 31.1**	**-2.4**
ROSF	**Rostrenen**	**59.23**	**318**	*e*P		**P**	**20 28 32.4**	**-2.3**
ROSF	**Rostrenen**	**59.23**	**318**	*e*P		**P**	**20 28 32.4**	**-2.3**
ROSF	**Rostrenen**	**59.23**	**318**	*e*P		**P**	**20 28 32.4**	**-2.3**
ROSF	**Rostrenen**	**59.23**	**318**	*e*P		**P**	**20 28 32.4**	**-2.3**
LIC	**Lamto**	**60.73**	**269**	*e*P		**P**	**20 28 46.0**	**+0.5**
	comp=Z,31nm,1.3s							
LIC				*e*R				
	comp=Z,168nm,20.0s							
LIC	**Lamto**	**60.73**	**269**	*e*P		**P**	**20 28 46.0**	**+0.5**
	comp=Z,31nm,1.3s							
LIC	**Lamto**	**60.73**	**269**	*e*P		**P**	**20 28 46.0**	**+0.5**
	comp=Z,15nm,1.3s							
EVO	**Evora**	**61.13**	**306**	*e*P		**P**	**20 28 47.7**	**-0.2**
	comp=Z,13nm,1.0s							
EVO				*e*R				
	comp=Z,89nm,20.2s							
EVOP	**Sao Brissos**	**61.22**	**306**	*e*P		**P**	**20 28 47.7**	**-0.7**
EVOP				pmax

s-maj=0.8km s-min=0.7km az=36.0
DJA 21 21:10:05.4±1.0, 11°S±4°×16°E±°, h83km±11km, M5.3/44, mB5.7/24, mb5.3/44, Mw(mB)5.3/24
ISC 21 21:10:03.8±0.3, **10°93S**±0°03×**166°01E**±0°03, **h73**km±1km, **h73**km:**pP-P**, **n908**, σ1‡**30**/1046, **mb5.2**/150, **184C-147D**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.15**	**284**	⇓*i*Pn	**Pn**	**21 11 30.3**	**-1.8**
HNR				*e*Sn	**Sn**	**21 12 37.8**	**-3.3**
HNR	**Honiara**	**6.15**	**284**	P	**Pn**	**21 11 30.6**	**-1.5**
	294nm,0.3s,baz=159,slow=2.5,SNR=94						
DZM	**Mont Dzumac**	**11.08**	**178**	*e*Pn	**Pn**	**21 12 40.2**	**+0.7**
	49nm,0.2s						
DZM				*e*Sn	Sn	21 14 34.4	-7.4
	43nm,0.3s						
DZM				*e*LR	LR	21 15 09.6	
	18μm,24.5s						
DZM	**Mont Dzumac**	**11.08**	**178**	*e*Pn	**Pn**	**21 12 39.8**	**+0.3**
	126nm,0.6s						
DZM				*e*Sn	**Sn**	**21 14 42.4**	**+0.6**
DZM	**Mont Dzumac**	**11.08**	**178**	P	**Pn**	**21 12 40.2**	**+0.7**
	12nm,0.3s,baz=22,slow=17,SNR=99						
NOUC	**Port Laguerre**	**11.11**	**179**	*e*P	**Pn**	**21 12 40.6**	**+0.9**
NOUC				*e*S	**Sn**	**21 14 39.5**	**-2.8**
FUNA	**Funafuti**	**13.22**	**81**	*e*Pn	**Pn**	**21 13 08.7**	**+0.2**
MSVF	**Nonsavu**	**13.48**	**121**	*e*P	**P**	**21 13 16.4**	**-2.3**
MSVF	**Nonsavu**	**13.48**	**121**	*e*Pn	**P**	**21 13 16.4**	**-2.3**
MSVF				*e*Sn	**S**	**21 15 57.6**	**-1.8**
MSVF	**Nonsavu**	**13.48**	**121**	P	P	21 13 22.0	+3.3
	2μm,0.9s,SNR=30						
TARA	**Tarawa**	**14.01**	**30**	*e*Pn	**Pn**	**21 13 17.5**	**-1.5**
TARA				*e*Sn	**Sn**	**21 15 51.0**	**-2.1**
PMG	**Port Moresby**	**18.61**	**273**	*e*Pn	**P**	**21 14 15.3**	**-0.2**
	68nm,1.1s						
PMG				*e*S	**S**	**21 17 43.3**	**-0.4**
PMG	**Port Moresby**	**18.61**	**273**	P	**P**	**21 14 15.7**	**+0.1**
	68nm,1.1s,2μm						
PMG	**Port Moresby**	**18.61**	**273**	P	**Pn**	**21 14 16.7**	**0.0**
	0.4nm,0.3s,baz=37,slow=6.1,SNR=6.0						
EIDS	**Eidsvold**	**20.15**	**223**	*e*P	**P**	**21 14 32.1**	**-0.1**
	102nm,1.0s						
EIDS				*e*S	**S**	**21 18 14.8**	**+0.1**
EIDS	**Eidsvold**	**20.15**	**223**	P	Pn	21 14 33.9	-0.8
	baz=20,SNR=19						
CTA	**Charters Tower**	**21.08**	**242**	P	**P**	**21 14 43.5**	**+1.2**
CTA	**Charters Tower**	**21.08**	**242**	P	**P**	**21 14 43.5**	**+1.2**
	26nm,0.7s,baz=73,slow=11,SNR=27						
CTA				LR	LR	21 21 41.9	
	comp=Z,6μm,19.7s,baz=90,slow=33						
CTAO	**Charters Tower**	**21.08**	**242**	⇓*e*P	**P**	**21 14 42.0**	**-0.3**
CTAO				*e*S	**S**	**21 18 32.6**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,136nm,1.0s						
CTAO				MLR	MLR		
	comp=Z,7μm,22.0s						
CTAO	**Charters Tower**	**21.08**	**242**	⇓*e*P	**P**	**21 14 42.0**	**-0.3**
	comp=Z,136nm,1.0s						
CTAO				*e*S	**S**	**21 18 32.6**	**-0.5**
CTAO				LR	LR		
	comp=Z,7μm,22.0s						
AFI	**Afiamalu**	**21.89**	**100**	⇑*e*P	**P**	**21 14 51.6**	**+0.5**
	comp=Z,208nm,1.2s						
AFI	**Afiamalu**	**21.89**	**100**	P	**P**	**21 14 51.0**	**-0.1**
	comp=Z,75nm,0.9s,baz=295,slow=4.5,SNR=8.0						
AFI				LR	LR	21 21 47.4	
	comp=Z,5μm,18.7s,baz=268,slow=32						
RMQ	**Roma**	**22.45**	**224**	P	**P**	**21 14 57.8**	**+0.7**
	baz=22,SNR=29						
COEN	**Coen**	**22.50**	**260**	*e*P	**P**	**21 14 57.8**	**+0.2**
	comp=Z,692nm,1.1s						
COEN				*e*S	**S**	**21 18 57.2**	**-2.4**
COEN	**Coen**	**22.50**	**260**	P	P	21 15 08.0	+10
	baz=22,SNR=9.9						
ARMA	**Armidale**	**23.55**	**212**	⇑*e*P	**P**	**21 15 08.3**	**+0.4**
	comp=Z,730nm,1.9s						
ARMA				*e*S	**S**	**21 19 17.1**	**+0.5**
ARMA	**Armidale**	**23.55**	**212**	P	**P**	**21 15 09.0**	**+1.1**
	baz=24,SNR=15						
RAO	**Raoul Island**	**23.61**	**143**	LR	LR	21 22 33.2	
	comp=Z,3μm,18.7s,baz=324,slow=32						
OUZ	**Omahuta**	**25.14**	**165**	*e*P	**P**	**21 15 23.6**	**+1.5**
	comp=Z,90nm,0.8s						
OUZ	**Omahuta**	**25.14**	**165**	*e*PN	**P**	**21 15 24.2**	**+2.1**
QLP	**Quilpie**	**25.77**	**230**	P	**P**	**21 15 28.4**	**+0.5**
	baz=26,SNR=19						
MGCD	**Mangrove Creek**	**26.05**	**209**	P	**P**	**21 15 34.9**	**+4.5**
	baz=26,SNR=5.6						
QIS	**Mount Isa**	**27.11**	**246**	P	**P**	**21 15 40.3**	**+0.1**
	baz=27,SNR=11						
CMSA	**Cobar Meteorol**	**27.81**	**219**	P	**P**	**21 15 46.5**	**+0.2**
	baz=28,SNR=6.3						
YNG	**Young**	**28.28**	**212**	P	**P**	**21 15 51.5**	**+1.1**
	baz=28,SNR=7.5						
CNB	**Canberra Magne**	**28.60**	**209**	P	**P**	**21 15 54.3**	**+1.0**
	baz=29,SNR=11						
CAN	**Canberra**	**28.78**	**210**	PFAKE		21 16 10.0	+15
CAN				LR	LR		
	comp=Z,3μm,19.0s						
URZ	**Urewera**	**28.97**	**162**	⇑*e*P	**P**	**21 15 56.4**	**0.0**
	comp=Z,102nm,1.3s						
URZ				*e*PcP	**PcP**	**21 19 03.6**	**0.0**
URZ				*e*S	**S**	**21 20 41.3**	**-0.8**
URZ	**Urewera**	**28.97**	**162**	P	**P**	**21 15 56.7**	**+0.3**
	comp=Z,35nm,0.5s,baz=16,slow=1.9,SNR=30						
URZ				LR	LR	21 25 58.5	
	comp=Z,3μm,21.5s,baz=324,slow=33						
NGZ	**Ngauruhoe**	**29.40**	**165**	*e*PN	**P**	**21 16 01.8**	**+1.4**
FWVZ	**Far West T-bar**	**29.46**	**165**	PN	**P**	**21 16 02.5**	**+1.5**
BKZ	**Black Stump Fm**	**29.63**	**163**	*e*PN	**P**	**21 16 02.8**	**+0.5**
NMHZ	**Naumai**	**29.66**	**163**	PN	**P**	**21 16 03.1**	**+0.5**
MILA	**Mila**	**30.12**	**208**	P	**P**	**21 16 07.8**	**+1.1**
	baz=30,SNR=5.6						
PNHZ	**Pukenui**	**30.25**	**164**	PN	**P**	**21 16 07.3**	**-0.5**
QRZ	**Quartz Range**	**30.33**	**170**	PN	**P**	**21 16 10.2**	**+1.8**
STKA	**Stephens Creek**	**30.70**	**224**	*e*P	**P**	**21 16 12.2**	**+0.3**
	comp=Z,6.4nm,0.9s						
STKA				*e*PcP	**PcP**	**21 19 08.6**	**+0.3**
STKA				PcP	PcP	21 19 08.8	+0.5
STKA	**Stephens Creek**	**30.70**	**224**	P	**P**	**21 16 12.2**	**+0.3**
	comp=Z,11nm,0.8s,baz=50,slow=8.9,SNR=22						
STKA				PcP	**PcP**	**21 19 08.8**	**+0.5**
	comp=Z,8.5nm,0.7s,baz=163,slow=2.1,SNR=3.6						
STKA				LR	LR	21 27 47.1	
	comp=Z,6μm,19.4s,baz=39,slow=35						
STKA	**Stephens Creek**	**30.70**	**224**	P	**P**	**21 16 12.4**	**+0.6**
	baz=31,SNR=16						
MRZ	**Mangatainoka R**	**30.79**	**166**	PN	**P**	**21 16 11.8**	**-0.8**
BFZ	**Birch Farm**	**30.98**	**165**	*e*PN	**P**	**21 16 13.2**	**-0.9**
HOWZ	**Holdsworth Sta**	**31.00**	**166**	PN	**P**	**21 16 13.6**	**-0.8**
SNZO	**South Karori**	**31.21**	**167**	*e*P	**P**	**21 16 16.0**	**-0.2**
	comp=Z,117nm,0.6s						
SNZO				LR	LR		
	comp=Z,3μm,20.0s						
MTW	**Mount Morrison**	**31.25**	**166**	PN	**P**	**21 16 15.8**	**-0.7**
TMWZ	**Te Maipa**	**31.29**	**166**	PN	**P**	**21 16 16.2**	**-0.7**
THZ	**Tophouse**	**31.30**	**170**	PN	**P**	**21 16 17.3**	**+0.2**
WRAB	**Tennant Creek**	**31.75**	**250**	*e*P	**P**	**21 16 20.4**	**-0.8**
WRAB				*e*		21 19 12.2	
WRAB				pmax	pmax		
	comp=Z,56nm,1.0s						
WRAB				MLR	MLR		
	comp=Z,5μm,19.0s						
WRAB	**Tennant Creek**	**31.75**	**250**	*e*P	**P**	**21 16 20.4**	**-0.8**
	comp=Z,56nm,1.0s						
WRAB				*e*PcP	**PcP**	**21 19 12.2**	**+0.9**
WRAB				LR	LR		
	comp=Z,5μm,19.0s						
WRAB	**Tennant Creek**	**31.75**	**250**	P	**P**	**21 16 20.9**	**-0.4**
	comp=Z,270nm,0.9s,SNR=21						
WRA	**Warramunga Arr**	**31.76**	**250**	P	**P**	**21 16 20.6**	**-0.8**
WRA				PcP	**PcP**	**21 19 12.6**	**+1.2**
WRA	**Warramunga Arr**	**31.76**	**250**	P	**P**	**21 16 20.6**	**-0.8**
	comp=Z,49nm,0.4s,baz=80,slow=9.1,SNR=3.0						
WRA				PcP	**PcP**	**21 19 12.6**	**+1.2**
	comp=Z,35nm,0.3s,baz=74,slow=3.1,SNR=2.1						
WRA				LR	LR	21 27 52.9	
	comp=Z,3μm,21.9s,baz=70,slow=34						
KHZ	**Kahutara**	**32.05**	**169**	*e*P	**P**	**21 16 23.2**	**-0.3**
	comp=Z,455nm,1.2s						
GUMO	**Guam**	**32.15**	**319**	PFAKE		21 16 40.0	+15
GUMO				LR	LR		
	comp=Z,2μm,21.0s						
LTZ	**Lake Taylor**	**32.20**	**171**	PN	**P**	**21 16 25.3**	**+0.4**
TOO	**Toolangi**	**32.30**	**211**	P	**P**	**21 16 26.9**	**+1.0**
	baz=32,SNR=14						
FOZ	**Fox Glacier**	**32.67**	**175**	*e*PN	**P**	**21 16 30.1**	**+1.2**
OXZ	**Oxford**	**32.69**	**172**	*e*PN	**P**	**21 16 29.3**	**+0.2**
KDU	**Kakadu**	**32.86**	**264**	P	**P**	**21 16 29.9**	**-1.0**
	baz=33,SNR=7.3						
RPZ	**Rata Peaks**	**32.95**	**173**	P	**P**	**21 16 31.8**	**+0.4**
RPZ	**Rata Peaks**	**32.95**	**173**	P	**P**	**21 16 31.8**	**+0.4**
	comp=Z,340nm,0.7s,baz=339,slow=3.0,SNR=179						
ASAR	**Alice Springs**	**33.07**	**243**	P	**P**	**21 16 31.7**	**-1.1**
ASAR				PcP	**PcP**	**21 19 15.3**	**+0.4**
ASAR				S	**S**	**21 21 45.1**	**-1.7**
ASAR				ScP	**ScP**	**21 22 55.9**	**+2.9**
ASAR				PKiKP	**PKiKP**	**21 26 40.6**	**-0.6**
ASAR	**Alice Springs**	**33.07**	**243**	P	**P**	**21 16 31.7**	**-1.1**
	comp=Z,16nm,0.6s,baz=65,slow=10.0,SNR=95						
ASAR				PcP	**PcP**	**21 19 15.3**	**+0.4**
	comp=Z,8.5nm,0.7s,baz=63,slow=2.3,SNR=13						
ASAR				S	**S**	**21 21 45.1**	**-1.7**
	comp=Z,0.6nm,0.7s,baz=64,slow=21,SNR=2.4						
ASAR				ScP	**ScP**	**21 22 55.9**	**+2.9**
	comp=Z,2.0nm,0.9s,baz=58,slow=4.5,SNR=4.1						
ASAR				PKiKP	**PKiKP**	**21 26 40.6**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=91,slow=1.2,SNR=6.2						
ASAR				LR	LR	21 28 56.7	
	comp=Z,4μm,20.2s,baz=69,slow=34						
JCZ	**Jackson Bay**	**33.11**	**176**	*e*PN	**P**	**21 16 34.2**	**+1.3**
LBZ	**Lake Benmore**	**33.53**	**175**	*e*PN	**P**	**21 16 36.5**	**0.0**
ARPS	**Mount Arapiles**	**33.72**	**216**	P	**P**	**21 16 39.4**	**+1.1**
	baz=34,SNR=6.8						
MTN	**Manton Dam**	**34.16**	**263**	P	**P**	**21 16 45.1**	**+2.8**
	baz=34,SNR=3.4						
ODZ	**Otahua Downs**	**34.22**	**174**	*e*P	**P**	**21 16 43.0**	**+0.6**
	comp=Z,29nm,1.0s						
EAZ	**Earnscleugh**	**34.30**	**176**	*e*PN	**P**	**21 16 44.2**	**+1.1**
BBOO	**Buckleboo**	**35.09**	**227**	*e*P	**P**	**21 16 50.3**	**+0.1**
	comp=Z,1μm,0.9s						
BBOO	**Buckleboo**	**35.09**	**227**	P	**P**	**21 16 50.2**	**+0.1**
	baz=35,SNR=29						
MOO	**Moorlands**	**35.43**	**204**	P	**P**	**21 16 54.0**	**+1.1**
	baz=36,SNR=9.4						
TAU	**Tasmania Unive**	**35.77**	**204**	*e*P	**P**	**21 16 56.7**	**+0.9**
TAU				pmax	pmax		
	comp=Z,49nm,0.9s						
TAU				MLR	MLR		
	comp=Z,2μm,19.0s						
TAU	**Tasmania Unive**	**35.77**	**204**	*e*P	**P**	**21 16 56.7**	**+0.9**
	comp=Z,49nm,0.9s						
TAU				LR	LR		
	comp=Z,2μm,19.0s						
PALU	**Palau**	**36.26**	**299**	P	P	21 17 13.2	+13
	baz=36,SNR=7.8						
LBMI	**Labuha**	**39.60**	**282**	P	**P**	**21 17 28.0**	**-0.5**
	comp=Z,86nm,0.9s,comp=Z,2μm						
FITZ	**Fitzroy Crossi**	**39.66**	**255**	*e*P	**P**	**21 17 28.5**	**-0.4**
	comp=Z,0.4nm,0.7s						
FITZ				*e*PcP	**PcP**	**21 19 35.6**	**+1.0**
FITZ	**Fitzroy Crossi**	**39.66**	**255**	P	**P**	**21 17 28.6**	**-0.4**
	baz=40,SNR=41						
FORT	**Forrest**	**40.32**	**235**	*e*P	**P**	**21 17 34.1**	**-0.1**
	comp=Z,93nm,0.9s						
MIDW	**Midway**	**42.11**	**22**	PFAKE		21 18 00.0	+11
MIDW				LR	LR		
	comp=Z,3μm,21.0s						
MMRI	**Maumere**	**43.17**	**269**	P	**P**	**21 17 57.7**	**-0.1**
	comp=Z,110nm,0.9s,comp=Z,2μm						
BBSI	**Bau Bau**	**43.30**	**274**	P	**P**	**21 17 59.0**	**+0.2**
	comp=Z,63nm,1.1s,comp=Z,1μm						
PPT	**Papeete**	**43.47**	**104**	LR	LR	21 32 06.0	
	comp=Z,2μm,19.0s,baz=182,slow=30						
PPT2	**Papete2**	**43.47**	**104**	*e*S	**S**	**21 24 27.9**	**+4.0**
	comp=Z,1μm,27.2s						
PPT2				*e*LQ	LQ	21 28 05.9	
	comp=Z,4μm,32.0s						
PPT2				*e*LR	LR	21 29 57.1	
	comp=Z,5μm,24.8s,baz=272						
DAV	**Davao City (W)**	**44.03**	**292**	PFAKE		21 18 20.0	+15
DAV				LR	LR		
	comp=Z,1μm,20.0s						
LUWI	**Luwuk**	**44.05**	**280**	P	**P**	**21 18 03.3**	**-1.5**
	comp=Z,97nm,1.1s,comp=Z,1μm						
LUWI	**Luwuk**	**44.05**	**280**	P	**P**	**21 18 05.2**	**+0.4**
	baz=44,SNR=3.0						
TBI	**Tubuai**	**44.13**	**112**	*e*S	**S**	**21 24 37.7**	**+4.5**
	comp=Z,1μm,27.2s						
TBI				*e*LQ	LQ	21 28 24.7	
	comp=Z,4μm,30.8s						
TBI				*e*LR	LR	21 30 15.1	
	comp=Z,8μm,27.8s,baz=283						
BSSI	**Bau Bau, Buton**	**45.23**	**272**	P	**P**	**21 18 13.6**	**-0.6**
	comp=Z,84nm,1.1s,comp=Z,1μm						
MRSI	**Marisa**	**45.25**	**282**	P	**P**	**21 18 13.4**	**-1.0**
	comp=Z,29nm,1.1s						
MBWA	**Marble Bar**	**45.48**	**251**	*e*P	**P**	**21 18 15.8**	**-0.3**
	comp=Z,42nm,0.9s						
MBWA				*e*PcP	**PcP**	**21 19 53.9**	**-0.2**
MBWA				LR	LR		
	comp=Z,2μm,19.0s						
KMBL	**Kambalda**	**45.52**	**237**	P	**P**	**21 18 16.2**	**-0.1**
	baz=46,SNR=6.8						
BKSI	**Bulukumba**	**45.73**	**273**	P	**P**	**21 18 17.7**	**-0.5**
	comp=Z,20nm,1.0s						
KAPI	**Kappang**	**46.14**	**274**	*e*P	**P**	**21 18 19.9**	**-1.5**
	comp=Z,50nm,1.0s						
KAPI				*e*PcP	**PcP**	**21 19 54.0**	**-2.5**
KAPI	**Kappang**	**46.14**	**274**	P	**P**	**21 18 19.4**	**-2.1**
	comp=Z,64nm,1.5s,comp=Z,949nm						
TTSI	**Tana Toraja**	**46.46**	**276**	P	**P**	**21 18 24.4**	**+0.5**
	comp=Z,18nm,1.4s,comp=Z,536nm						
MEEK	**Meekatharra**	**47.23**	**244**	P	**P**	**21 18 30.5**	**+0.7**
	baz=47,SNR=93						
KLBR	**Kellerberrin**	**48.98**	**238**	P	**P**	**21 18 42.5**	**-0.8**
	baz=49,SNR=7.8						
BLDU	**Ballidu**	**49.64**	**239**	P	**P**	**21 18 49.1**	**+0.8**
	baz=50,SNR=6.1						
KHKI	**Kahang-Kahang**	**49.71**	**268**	P	**P**	**21 18 47.6**	**-1.4**
	comp=Z,40nm,1.1s,comp=Z,1μm						
NWAO	**Narrogin (SRO)**	**49.74**	**236**	*e*P	**P**	**21 18 49.0**	**0.0**
	comp=Z,26nm,1.0s						
NWAO				LR	LR		
	comp=Z,6μm,19.0s						
MORW	**Morawa**	**49.90**	**241**	P	**P**	**21 18 50.7**	**+0.4**
	baz=50,SNR=6.7						
MYLDM	**Lahad Datu**	**49.92**	**286**	P	P	21 19 01.9	+11
KBKI	**Kotabaru**	**49.98**	**275**	P	**P**	**21 18 50.9**	**-0.1**
	comp=Z,22nm,1.1s,comp=Z,495nm						
KKM	**Kota Kinabalu**	**52.35**	**286**	PFAKE		21 19 20.0	+11
KKM				LR	LR		
	comp=Z,445nm,20.0s						
MJAR	**Matsushiro Arr**	**53.99**	**332**	P	**P**	**21 19 19.8**	**-0.7**
MJAR				PcP	**PcP**	**21 20 26.0**	**+1.1**
MJAR	**Matsushiro Arr**	**53.99**	**332**	P	**P**	**21 19 19.8**	**-0.7**
	comp=Z,20nm,0.7s,baz=168,slow=9.1,SNR=50						
MJAR				PcP	**PcP**	**21 20 26.0**	**+1.1**
	comp=Z,4.5nm,0.6s,baz=168,slow=5.3,SNR=6.5						
MAJO	**Matsushiro**	**53.99**	**332**	*e*P	**P**	**21 19 19.0**	**-1.5**
MAJO				*e*		21 20 24.4	
MAJO				pmax	pmax		
	comp=Z,76nm,1.2s						
MAJO				MLR	MLR		
	comp=Z,797nm,20.0s						
MAJO	**Matsushiro**	**53.99**	**332**	*e*P	**P**	**21 19 19.0**	**-1.5**
	comp=Z,76nm,1.2s						
MAJO				*e*PcP	**PcP**	**21 20 24.4**	**-0.5**
MAJO				LR	LR		
	comp=Z,797nm,20.0s						
MAT	**Matsushiro**	**53.99**	**332**	P	**P**	**21 19 19.4**	**-1.1**
MAT				S	**S**	**21 26 51.8**	**+0.8**
UGM	**Wanagama**	**54.76**	**268**	P	**P**	**21 19 26.9**	**+0.4**
	baz=55,SNR=4.3						
YHNB	**Yeheng**	**56.11**	**310**	*e*P	**P**	**21 19 34.2**	**-1.8**
	comp=Z,100nm,1.3s						
YHNB				*e*PcP	**PcP**	**21 20 32.7**	**-0.7**
YHNB				LR	LR		
	comp=Z,1μm,20.0s						
TATO	**Taipei**	**56.19**	**310**	PFAKE		21 19 50.0	+13
TATO				LR	LR		
	comp=Z,2μm,21.0s						
KSM	**Kuching**	**56.74**	**279**	PFAKE		21 19 50.0	+9.3
KSM				LR	LR		
	comp=Z,579nm,21.0s						
KSM	**Kuching**	**56.74**	**279**	P	**P**	**21 19 41.2**	**+0.6**
	baz=57,SNR=4.3						
RKT	**Rikitea**	**57.38**	**110**	*e*LQ	LQ	21 33 59.5	
	comp=Z,2μm,33.0s						
RKT				*e*LR	LR	21 36 23.5	
	comp=Z,5μm,28.0s,baz=274						
CISI	**Cisompet, Garu**	**57.47**	**268**	P	**P**	**21 19 45.1**	**-0.8**
	baz=57,SNR=6.6						
YUK	**Yuzh-Kuril'sk**	**57.69**	**343**	*e*P	P	21 19 53.8	+7.1
YUK				*i*		21 21 53.6	
YUK				*i* PPP	PPP	21 23 16.1	
YUK				*e*S	S	21 27 46.2	+6.4
YUK				*e*SS	**SS**	**21 31 32.8**	**+1.2**
LEM	**Lembang**	**57.77**	**269**	P	**P**	**21 19 48.8**	**+0.7**
	baz=58,SNR=6.0						
KSRS	**Korea Array**	**59.93**	**325**	P	**P**	**21 20 02.8**	**+0.4**
	comp=Z,8.7nm,0.7s,baz=136,slow=7.2,SNR=26						
KSRS				LR	LR	21 45 31.3	
	comp=Z,486nm,19.5s,baz=140,slow=36						
KSAR	**Wonju Array Be**	**59.94**	**325**	P	**P**	**21 20 02.8**	**+0.3**
SSE	**Sheshan**	**59.95**	**316**	P	**P**	**21 20 02.1**	**-0.6**
SSE				S	**S**	**21 28 09.9**	**+0.3**
SSE				sS	**sS**	**21 28 39.8**	**-1.8**
SSE				pmax	pmax		
	comp=Z,51nm,0.7s						
SSE				pmax	pmax		
	comp=Z,130nm,5.2s						
SSE				LR	LR		
	comp=N,510nm,28.4s						
SSE				LR	LR		
	comp=E,580nm,28.4s						
SSE				LR	LR		
	comp=Z,740nm,30.6s						
YSS	**Yuzh-Sakhalins**	**61.26**	**342**	⇓*i*P	**P**	**21 20 13.1**	**+1.9**
YSS				*e*		21 20 25.4	
YSS				*e*		21 35 13.0	
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
NJ2	**Nanjing**	**62.12**	**315**	*e*P	**P**	**21 20 17.5**	**+0.1**
NJ2				S	**S**	**21 28 43.0**	**+5.8**
NJ2				sS	**sS**	**21 29 10.0**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,50nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,310nm,8.3s						
NJ2				LR	LR		
	comp=N,740nm,22.4s						
NJ2				LR	LR		
	comp=E,780nm,26.7s						
NJ2				LR	LR		
	comp=Z,1μm,29.0s						
QIZ	**Qiongzhong**	**62.86**	**298**	P	**P**	**21 20 21.5**	**-1.0**
QIZ				pP	**pP**	**21 20 42.5**	**+1.0**
QIZ				S	**S**	**21 28 45.3**	**-1.6**
QIZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
QIZ				LR	LR		
	comp=N,500nm,22.0s						
QIZ				LR	LR		
	comp=E,330nm,29.6s						
QIZ				LR	LR		
	comp=Z,2μm,23.5s						
USRK	**Ussuriysk Arra**	**62.96**	**333**	P	**P**	**21 20 23.6**	**+1.0**
	comp=Z,26nm,0.7s,baz=126,slow=6.5,SNR=68						
USRK				PcP	**PcP**	**21 21 01.6**	**+1.5**
	comp=Z,12nm,0.8s,baz=132,slow=4.0,SNR=5.6						
USRK				LR	LR	21 44 46.6	
	comp=Z,587nm,21.6s,baz=299,slow=33						
MYKOM	**Kota Tinggi**	**63.09**	**278**	P	**P**	**21 20 25.0**	**+0.8**
	comp=Z,33nm,1.2s						
KGM	**Kluang**	**63.66**	**278**	P	**P**	**21 20 29.1**	**+1.1**
FX1	**Attu Island--F**	**63.86**	**5**	*e*P	**P**	**21 20 28.4**	**0.0**
PET	**Petropavlovsk**	**64.01**	**355**	*d*iP	P	21 20 34.7	+5.3
PET				*e**SP	sP	21 21 11.2	+15
PET				*e*S	**S**	**21 29 02.3**	**+2.3**
PET				*e*SS	**SS**	**21 33 17.3**	**+7.0**
PET				pmax	pmax		
	comp=Z,100nm,14.2s						
PEA0B	**Petropavlovsk-**	**64.18**	**354**	*e*P	**P**	**21 20 30.3**	**-0.3**
PETK	**Petropavlovsk-**	**64.18**	**354**	P	**P**	**21 20 31.3**	**+0.7**
PETK						21 21 06.0	
PETK	**Petropavlovsk-**	**64.18**	**354**	P	**P**	**21 20 31.3**	**+0.7**
PETK				PcP	**PcP**	**21 21 06.0**	**+1.0**
PETK	**Petropavlovsk-**	**64.18**	**354**	P	**P**	**21 20 31.3**	**+0.7**
	comp=Z,15nm,0.8s,baz=153,slow=10.0,SNR=14						
PETK				PcP	**PcP**	**21 21 06.0**	**+1.0**
	comp=Z,12nm,0.8s,baz=134,slow=11,SNR=5.9						
PETK				LR	LR	21 43 20.8	
	comp=Z,660nm,21.5s,baz=173,slow=31						
MDJ	**Mudanjiang**	**64.37**	**332**	P	**P**	**21 20 32.4**	**+0.4**
MDJ				pP	**pP**	**21 20 50.1**	**-0.9**
MDJ				sP	**sP**	**21 20 58.9**	**-0.2**
MDJ				PP	**PP**	**21 22 53.9**	**-0.7**
MDJ				S	**S**	**21 29 06.4**	**+1.6**
MDJ				sS	**sS**	**21 29 38.5**	**+1.4**
MDJ				pmax	pmax		
	comp=Z,38nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,340nm,3.5s						
MDJ				LR	LR		
	comp=N,190nm,4.6s						
MDJ				LR	LR		
	comp=E,980nm,5.0s						
MDJ				LR	LR		
	comp=Z,1μm,4.6s						
WHN	**Wuhan**	**64.51**	**311**	⇓P	**P**	**21 20 33.0**	**-0.2**
WHN				S	**S**	**21 29 12.1**	**+5.1**
WHN				LR	LR		
	comp=N,2μm,17.0s						
WHN				LR	LR		
	comp=E,1μm,17.9s						
WHN				LR	LR		
	comp=Z,4μm,31.2s						
KTGM	**Kuala Trenggan**	**64.63**	**281**	P	**P**	**21 20 35.2**	**+0.9**
UBPT	**Khong Chiam**	**65.37**	**292**	P	**P**	**21 20 39.4**	**+0.4**
	comp=Z,21nm,2.8s						
CN2	**Changchun**	**65.78**	**329**	⇑P	**P**	**21 20 41.6**	**+0.5**
CN2	

BJI pmax pmax
comp=Z,350nm,4.0s
BJI LR LR
comp=N,560nm,24.2s
BJI LR LR
comp=E,750nm,21.0s
BJI LR LR
comp=Z,1μm,31.7s
GYA Guiyang 68.57 304 P **P** **21 21 00.5 +1.2**
GYA pP **pP** **21 21 19.3 +0.7**
GYA PP **PP** **21 23 34.3 +2.6**
GYA ScP 21 25 20.4
GYA S **S** **21 29 55.8 -0.8**
GYA sS **sS** **21 30 28.4 -0.8**
GYA SKS **SKSac** **21 30 49.5 -3.0**
GYA SS **SS** **21 34 22.3 0.0**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,150nm,5.2s
GYA LR LR
comp=N,3μm,20.5s
GYA LR LR
comp=E,2μm,21.4s
GYA LR LR
comp=Z,4μm,20.9s
GSI Gunungsitoli 69.11 276 P **P** **21 21 02.8 -0.1**
baz=69,SNR=16
XAN Xi'an 70.24 312 P **P** **21 21 09.3 -0.1**
XAN pP **pP** **21 21 28.1 -0.6**
XAN sP **sP** **21 21 36.1 -0.6**
XAN PP **PP** **21 23 45.0 -0.9**
XAN S **S** **21 30 17.3 +1.5**
XAN SKS **SKSac** **21 31 02.8 -1.9**
XAN SS **SS** **21 34 45.8 -1.8**
XAN pmax pmax
comp=Z,14nm,0.9s
XAN LR LR
comp=N,390nm,22.9s
XAN LR LR
comp=E,310nm,23.2s
XAN LR LR
comp=Z,410nm,22.9s
KMI Kunming 71.28 301 P **P** **21 21 16.8 +0.6**
KMI pP **PcP** **21 21 36.3 +0.7**
KMI sP **sP** **21 21 43.9 +0.4**
KMI PP **PP** **21 23 57.5 +2.2**
KMI S **S** **21 30 27.9 -0.7**
KMI sS **sS** **21 31 00.5 -1.0**
KMI SKS **SKSac** **21 31 08.8 -4.5**
KMI SS **SS** **21 35 05.6 +1.2**
KMI pmax pmax
comp=E,44nm,0.9s
KMI pmax pmax
comp=Z,410nm,3.7s
KMI LR LR
comp=N,470nm,21.7s
KMI LR LR
comp=E,690nm,19.6s
KMI LR LR
comp=Z,850nm,22.3s
HHC Hu-ho-hao-te 71.92 320 *e*P **P** **21 21 19.6 +0.1**
HHC pP **pP** **21 21 39.6 +0.8**
HHC sP **sP** **21 21 48.0 +1.2**
HHC S **S** **21 30 33.6 -1.5**
HHC sS **sS** **21 31 06.9 -1.1**
HHC SKS **SKSac** **21 31 12.0 -5.2**
HHC SS **SS** **21 35 15.6 +2.3**
HHC pmax pmax
comp=Z,69nm,1.3s
HHC pmax pmax
comp=Z,730nm,6.5s
HHC LR LR
comp=N,1μm,17.1s
HHC LR LR
comp=E,2μm,17.9s
HHC LR LR
comp=Z,2μm,17.9s
CM31 Chiang Mai Arr 72.31 293 *e*P **P** **21 21 21.5 -0.6**
comp=Z,20nm,0.8s
CMAR Chiang Mai Arr 72.31 293 P **P** **21 21 22.9 +0.7**
CMAR Chiang Mai Arr 72.31 293 P **P** **21 21 22.9 +0.7**
comp=Z,18nm,0.8s,baz=121,slow=4.5,SNR=90
CMAR LR LR 21 54 47.3
comp=Z,317nm,18.8s,baz=14,slow=37
CMMT Chiang Mai 72.41 294 P **P** **21 21 23.9 +1.1**
comp=Z,25nm,1.7s,comp=Z,519nm
CHTO Chiang Mai 72.42 294 *e*P **P** **21 21 22.0 -0.8**
CHTO pmax pmax
comp=Z,37nm,1.3s
CHTO MLR MLR
comp=Z,547nm,22.0s
CHTO Chiang Mai 72.42 294 *e*P **P** **21 21 22.0 -0.8**
comp=Z,37nm,1.3s
CHTO LR LR
comp=Z,547nm,22.0s
CHTO Chiang Mai 72.42 294 P **P** **21 21 22.9 +0.1**
comp=Z,26nm,1.7s,comp=Z,564nm
CD2 Chengdu 72.74 307 P **P** **21 21 25.5 +1.0**
CD2 pP **pP** **21 21 44.6 +0.7**
CD2 sP **sP** **21 21 52.8 +0.9**
CD2 PP **PP** **21 24 10.3 +2.9**
CD2 S **S** **21 30 44.3 -0.5**
CD2 sS **sS** **21 31 17.3 -0.4**
CD2 SKS **SKSac** **21 31 19.6 -4.1**
CD2 ScS **SKKSac** **21 31 23.0 -0.9**
CD2 SS **SS** **21 35 27.6 +1.5**
CD2 pmax pmax
comp=Z,70nm,0.5s
CD2 pmax pmax
comp=Z,340nm,6.8s
CD2 LR LR
comp=N,630nm,20.6s
CD2 LR LR
comp=E,610nm,20.6s
CD2 LR LR
comp=Z,870nm,25.5s
MIR Mirnyy 73.28 204⇑ *i*P **P** **21 21 28.5 +1.5**
MIR *i* 21 21 37.0
MIR *i* 21 21 42.0
MIR pmax pmax
comp=Z,270nm,1.5s
SEY Seymchan 74.39 354*c i*P **P** **21 21 33.4 0.0**
LZH Lanzhou 74.87 312⇑ P **P** **21 21 38.1 +1.0**
LZH S **S** **21 31 12.0 +3.2**
LZH sS **SKSac** **21 31 39.0 -0.8**
LZH *e*SS **SS** **21 36 01.3 +2.6**
LZH pmax pmax
comp=Z,52nm,1.1s
LZH pmax pmax
comp=Z,390nm,4.9s
LZH LR LR
comp=N,520nm,17.0s
LZH LR LR
comp=E,720nm,18.0s
LZH LR LR
comp=Z,2μm,19.0s
CLNS Chul'man 75.57 338 *e*P **P** **21 21 41.4 +1.0**
CLNS *e* 21 21 54.7
CLNS *e* 21 24 27.8
CLNS *e*PPP PPP 21 26 13.2
CLNS *e*S **S** **21 31 10.4 -5.0**
CLNS pmax pmax
comp=Z,32nm,1.0s
CLNS pmax pmax
comp=N,18nm,1.3s
CLNS pmax pmax
comp=E,7.0nm,1.1s
CLNS pmax pmax
comp=Z,4.0nm,1.0s
CLNS pmax pmax
comp=N,3.0nm,1.3s
CLNS pmax pmax
comp=E,6.0nm,1.1s
CLNS smax smax
comp=N,140nm,11.7s
CLNS smax smax
comp=E,269nm,16.8s
CLNS MLR MLR
comp=N,190nm,18.0s
CLNS MLR MLR
comp=Z,195nm,19.0s
CLNS MLR MLR
comp=E,428nm,18.0s
OHAK Old Harbor 75.71 21 *e*P **P** **21 21 40.9 -0.2**
comp=E,22nm,0.8s
KDAK Kodiak Island 76.38 21 PFAKE 21 22 00.0 +15
KDAK LR LR
comp=Z,778nm,20.0s
GAMB Gambell 76.42 10 *e*P **P** **21 21 44.6 -0.4**
comp=Z,59nm,0.9s
CIT Chita 77.19 330 *e*P **P** **21 21 49.6 -0.1**
CIT *e* 21 22 02.7
YAK Yakutsk 78.06 343*c i*P **P** **21 21 54.0 -0.2**
YAK *e*'PP **PcP** **21 22 03.0 -0.6**
YAK *e* 21 22 06.0
YAK *e* 21 24 51.3
YAK *e*S **S** **21 31 39.9 -2.3**
YAK *e* 21 32 08.7
YAK pmax pmax
comp=Z,64nm,0.8s
YAK pmax pmax
comp=N,22nm,1.2s
YAK pmax pmax
comp=E,12nm,1.0s
YAK pmax pmax
comp=Z,246nm,4.2s
YAK pmax pmax
comp=E,179nm,5.1s
YAK pmax pmax
comp=N,233nm,4.8s
YAK smax smax
comp=N,87nm,9.9s
YAK smax smax
comp=E,57nm,10.8s
YAK MLR MLR
comp=Z,977nm,21.0s
YAK MLR MLR
comp=E,541nm,24.0s
YAK MLR MLR
comp=N,714nm,22.0s
ULN Ulaanbaatar 78.36 324 *e*P **P** **21 21 56.7 +0.2**
comp=N,29nm,0.8s
ULN LR LR
comp=Z,567nm,21.0s
ULN Ulaanbaatar 78.36 324 P **P** **21 21 56.9 +0.4**
comp=Z,49nm,0.8s,comp=Z,671nm
IMP Imphal 78.69 298 *ex* P 21 21 55.0 -3.7
TNA Tin City 78.72 11 *e*P **P** **21 21 57.6 -0.1**
comp=Z,41nm,1.4s
SONM Songino Array 78.73 324 P **P** **21 21 58.7 +0.2**
SONM Songino Array 78.73 324 P **P** **21 21 58.7 +0.2**
comp=Z,10nm,0.8s,baz=135,slow=4.9,SNR=54
SONM LR LR 21 57 01.4
comp=Z,308nm,20.3s,baz=130,slow=36
BILL Bilibino 78.77 0*c i*P **P** **21 21 58.3 +0.2**
BILL *i* 21 22 03.7
BILL *i* 21 22 13.0
BILL *i* 21 25 00.6
BILL pmax pmax
comp=Z,92nm,1.2s
BILL Bilibino 78.77 0 *e*P **P** **21 21 57.4 -0.6**
comp=Z,77nm,0.9s
BILL LR LR
comp=E,651nm,20.0s
QSPA South Pole Qui 79.07 180 PFAKE 21 22 10.0 +10
QSPA LR LR
comp=Z,1μm,20.0s
GTA Gaotai 79.17 314 *e*P **P** **21 22 02.1 +1.0**
GTA pP **pP** **21 22 21.4 +0.7**
GTA sP **sP** **21 22 30.3 +1.7**
GTA PP **PP** **21 25 05.9 +4.3**
GTA S **S** **21 31 58.8 +3.5**
GTA pmax pmax
comp=Z,37nm,1.1s
GTA pmax pmax
comp=Z,380nm,8.1s
GTA LR LR
comp=N,430nm,21.4s
GTA LR LR
comp=E,760nm,22.8s
GTA LR LR
comp=Z,870nm,22.8s
SEW Seward 79.19 21 *e*P **P** **21 21 59.3 -1.2**
comp=Z,25nm,0.8s
SEW *e*pP **pP** **21 22 18.6 -1.5**
RC01 Rabbit Creek A 79.80 20 *e*P **P** **21 22 03.0 -0.8**
comp=Z,20nm,0.7s
PPLA Purkeypile 80.34 18 *e*P **P** **21 22 06.7 -0.2**
comp=Z,19nm,1.1s
PPLA *e*PP **PP** **21 25 09.8 -1.0**
PMR Palmer 80.36 20 *e*P **P** **21 22 05.7 -1.1**
PMR pmax pmax
comp=Z,20nm,0.8s
PMR Palmer 80.36 20 *e*P **P** **21 22 05.7 -1.1**
comp=Z,20nm,0.8s
SHL Shillong 80.69 298 *e*P **P** **21 22 10.0 +0.4**
SML Sawmill 80.79 20 *e*P **P** **21 22 08.5 -0.7**
SML pmax pmax
comp=Z,22nm,1.5s
SML Sawmill 80.79 20 *e*P **P** **21 22 08.5 -0.7**
comp=Z,22nm,1.5s
DIV Divide 81.21 21 *e*P **P** **21 22 10.6 -0.8**
comp=Z,44nm,0.8s
TRF Thorofare Moun 81.33 18 *e*P **P** **21 22 10.8 -1.4**
comp=Z,19nm,0.7s
BMRM Bremner River 81.53 22 *e*P **P** **21 22 12.4 -0.7**
comp=Z,24nm,0.8s
ZAK Zakamensk 81.76 325 *e*P **P** **21 22 13.1 -1.6**
ZAK pmax pmax
comp=Z,15nm,1.6s
MCK McKinley 81.96 19 *e*P **P** **21 22 14.3 -1.0**
MCK pmax pmax
comp=Z,67nm,1.3s
MCK McKinley 81.96 19 *e*P **P** **21 22 14.3 -1.0**
comp=Z,67nm,1.3s
IRK Irkutsk 82.11 327 *e*P **P** **21 22 15.2 -1.1**
IRK pmax pmax
comp=Z,37nm,0.8s
TLY Talaya 82.17 326 *e*P **P** **21 22 15.6 -1.1**
TLY *e*S **S** **21 32 21.4 -4.6**
TLY *e*SS **SS** **21 37 50.6 +3.1**
TLY pmax pmax
comp=Z,30nm,0.8s
TLY MLR MLR
comp=Z,370nm,20.0s
TLY Talaya 82.17 326 P **P** **21 22 16.3 -0.4**
comp=Z,190nm,0.8s,SNR=7.4
MCCM Marconi Confer 82.26 49 *e*P **P** **21 22 17.3 -0.1**
comp=Z,28nm,0.8s
KIPM Iron Peak 82.40 47 *e*P **P** **21 22 17.8 -0.5**
comp=Z,113nm,1.5s
HOPS Hopland 82.41 48 *e*P **P** **21 22 18.9 +0.7**
comp=Z,67nm,1.3s
LSA Lhasa 82.51 302 P **P** **21 22 19.6 +0.1**
PAX Paxson 82.56 20 *e*P **P** **21 22 17.1 -1.5**
PAX pmax pmax
comp=Z,14nm,0.9s
PAX Paxson 82.56 20 *e*P **P** **21 22 17.1 -1.5**
comp=Z,14nm,0.9s
KHMM Horse Mountain 82.61 46 *e*P **P** **21 22 18.4 -1.0**
comp=Z,82nm,1.4s
SAO San Andreas Ge 82.86 51 *e*P **P** **21 22 19.8 -0.8**
SAO *e* 21 25 31.0
SAO pmax pmax
comp=Z,36nm,1.3s
SAO San Andreas Ge 82.86 51 *e*P **P** **21 22 19.8 -0.8**
comp=Z,36nm,1.3s
SAO *e*PP **PP** **21 25 31.0 -1.0**
COLA College 83.10 18 *e*P **P** **21 22 20.5 -0.6**
COLA pmax pmax
comp=Z,35nm,0.8s
COLA MLR MLR
comp=Z,1μm,20.0s
COLA College 83.10 18 *e*P **P** **21 22 20.5 -0.6**
comp=Z,35nm,0.8s
COLA LR LR
comp=Z,1μm,20.0s
ILAR Eielson Array 83.33 18 P **P** **21 22 21.8 -0.6**
ILAR PKiKP **PKiKP** **21 27 39.3 -0.4**
ILAR PKKPbc **PKKPbc** **21 40 42.0 -3.3**
ILAR P'P' 21 48 46.4
ILAR Eielson Array 83.33 18 P **P** **21 22 21.8 -0.6**
comp=Z,22nm,0.6s,baz=230,slow=4.6,SNR=324
ILAR PKiKP **PKiKP** **21 27 39.3 -0.4**
comp=Z,0.4nm,0.7s,baz=270,slow=2.8,SNR=4.3
ILAR PKKPbc **PKKPbc** **21 40 42.0 -3.3**
comp=Z,0.9nm,0.5s,baz=357,slow=2.2,SNR=12
ILAR PKPPKP **P'P'df** **21 48 46.4 +0.7**
comp=Z,0.5nm,1.0s,baz=328,slow=3.9,SNR=4.6
ILAR LR LR 21 54 31.1
comp=Z,387nm,21.4s,baz=238,slow=32
WDC Whiskeytown Da 83.35 47 *e*P **P** **21 22 22.8 -0.2**
WDC pmax pmax
comp=Z,41nm,1.4s
WDC Whiskeytown Da 83.35 47 *e*P **P** **21 22 22.8 -0.2**
comp=Z,42nm,1.4s
BSC Santa Cruz Isl 83.39 54⇓ P **P** **21 22 24.2 +0.8**
baz=83
SBC Santa Barbara 83.46 53⇑ P **P** **21 22 24.8 +1.1**
baz=84
DOT Dot Lake 83.48 20 *e*P **P** **21 22 23.2 0.0**
comp=Z,102nm,1.3s
DOT *e*PP **PP** **21 25 31.9 -4.6**
SMMC Simmler 83.51 52⇑ P **P** **21 22 25.4 +1.4**
baz=84
PKM Peak Mountain 83.52 53⇑ P **P** **21 22 25.5 +1.2**
baz=84
YBH Yreka Blue Hor 83.63 46 *e*P **P** **21 22 24.1 -0.5**
comp=Z,27nm,1.0s
YBH *e*PP **PP** **21 25 37.6 -0.6**
MOY Mondy 83.63 325 *e*P **P** **21 22 24.0 -0.4**
MOY pmax pmax
comp=Z,62nm,3.7s
HUMO Hull Mountain 83.77 45 *e*P **P** **21 22 25.8 +0.6**
comp=Z,31nm,1.1s
BLG Laguna Peak 83.88 54⇓ P **P** **21 22 26.0 +0.1**
baz=84
SCI San Clemente I 83.95 55⇑ P **P** **21 22 27.3 +1.0**
baz=84
CMB Columbia Colle 84.07 50 *e*P **P** **21 22 26.2 -0.6**
CMB pmax pmax
comp=Z,17nm,0.9s
CMB Columbia Colle 84.07 50 *e*P **P** **21 22 26.2 -0.6**
comp=Z,17nm,0.9s
COLD Coldfoot 84.12 16 *e*P **P** **21 22 24.9 -1.4**
comp=Z,35nm,1.3s
CIS Catalina Islan 84.19 55⇑ P **P** **21 22 28.1 +0.5**
baz=84
OSI Osito Adit 84.30 53⇑ P **P** **21 22 28.8 +0.7**
baz=84
SKAG Skagway 84.33 26 *e*P **P** **21 22 27.4 -0.1**
comp=Z,14nm,0.8s
ARVC Arvin 84.36 53⇓ P **P** **21 22 29.2 +0.9**
baz=84
FMP Fort Macarthur 84.37 54⇑ P **P** **21 22 29.0 +0.7**
baz=84
VES Vestal, Richgr 84.38 52⇑ P **P** **21 22 28.6 +0.2**
baz=84
RCTC Rector, Farmer 84.40 52⇑ P **P** **21 22 28.7 +0.2**
baz=84
DECC Green Verdugo 84.50 54⇑ P **P** **21 22 29.2 +0.1**
baz=84
PASC Pasadena Art C 84.59 54 P **P** **21 22 28.3 -1.2**
BEKR Beckworth 84.68 48 *e*P **P** **21 22 30.1 0.0**
comp=Z,16nm,1.0s
BEKR *e*PP **PP** **21 25 46.3 -0.7**
MWC Mount Wilson 84.71 54 *e*P **P** **21 22 29.6 -0.7**
MWC pmax pmax
comp=Z,71nm,1.5s
MWC Mount Wilson 84.71 54 *e*P **P** **21 22 29.6 -0.7**
comp=Z,71nm,1.5s
TAPN Taplejung 84.78 299 *e*P **P** **21 22 31.0 0.0**
comp=Z,22nm,0.8s
ISA Isabella 84.80 52 *e*P **P** **21 22 30.7 +0.1**
ISA 21 25 46.8
ISA pmax pmax
comp=Z,64nm,1.5s
ISA Isabella 84.80 52 *e*P **P** **21 22 30.7 +0.1**
comp=Z,64nm,1.5s
ISA PP **PP** **21 25 46.8 -1.1**
ISA Isabella 84.80 52⇓ P **P** **21 22 31.6 +0.9**
baz=85
NLWA Neilton Lookou 84.92 40 *e*P **P** **21 22 30.1 -0.8**
comp=Z,12nm,0.9s
MAW Mawson 84.92 202 P **P** **21 22 31.7 +1.2**
MAW Mawson 84.92 202 P **P** **21 22 31.7 +1.2**
comp=Z,73nm,0.8s,baz=106,slow=5.8,SNR=87
MAW LR LR 21 53 48.7
comp=Z,633nm,19.4s,baz=102,slow=31
MAW Mawson 84.92 202 P **P** **21 22 31.7 +1.2**
baz=85,SNR=65
ODAN Odare 84.93 298 *e*P **P** **21 22 31.8 +0.2**
comp=Z,147nm,1.1s
WCN Washoe City 84.94 49 *e*P **P** **21 22 30.9 -0.5**
WCN *e* 21 25 48.5
WCN pmax pmax
comp=Z,39nm,1.5s
WCN Washoe City 84.94 49 *e*P **P** **21 22 30.9 -0.5**
comp=Z,39nm,1.5s
WCN *e*PP **PP** **21 25 48.5 -0.6**
EDW2 Edwards Air Fo 84.95 53⇑ P **P** **21 22 32.0 +0.7**
baz=85
BFSC Mount Baldy Ra 85.03 54⇓ P **P** **21 22 32.7 +0.8**
baz=85
109C Camp Elliot, M 85.09 55⇑ P **P** **21 22 32.7 +0.7**
baz=85
MLAC Mammoth Lakes 85.11 50⇓ P **P** **21 22 33.0 +0.7**
baz=85
EGAK Eagle 85.19 20 *e*P **P** **21 22 32.0 +0.3**
comp=Z,75nm,0.9s
MURC Murrieta 85.21 55⇓ P **P** **21 22 33.1 +0.4**
baz=85
CWC Cottonwood Cre 85.34 52⇓ P **P** **21 22 34.1 +0.7**
baz=85
LRMC Laurel Mountai 85.36 53⇑ P **P** **21 22 34.4 +0.9**
baz=85
BAR Barrett 85.38 56 *e*P **P** **21 22 33.0 -0.5**
comp=Z,9.4nm,0.9s
MOD Modoc 85.38 46 *e*P **P** **21 22 33.1 -0.4**
comp=Z,18nm,0.7s
TIN Tinemaha 85.40 51⇑ P **P** **21 22 34.3 +0.7**
baz=85
BBRC Big Bear Solar 85.62 54⇑ P **P** **21 22 35.4 +0.4**
baz=86
RAMN Ramite 85.63 298 *e*P **P** **21 22 35.1 -0.1**
MONP Monument Peak 85.64 55⇓ P **P** **21 22 36.0 +0.9**
baz=86,SNR=15
PGC Sidney 85.65 39 *e*P **P** **21 22 34.0 -0.4**
comp=Z,1.7nm,0.8s
DAC Darwin (Calif) 85.66 52 *e*P **P** **21 22 35.0 -0.1**
DAC 21 25 54.6
DAC pmax pmax
comp=Z,19nm,1.0s
DAC Darwin (Calif) 85.66 52 *e*P **P** **21 22 35.0 -0.1**
comp=Z,19nm,1.0s
DAC PP **PP** **21 25 54.6 -0.5**
MPMC Manual Prospec 85.68 52⇓ P **P** **21 22 35.7 +0.5**
baz=86
RRX Edison Barstow 85.73 53⇓ P **P** **21 22 35.7 +0.5**
baz=86
NVAR Mina Array Bea 85.75 50 P **P** **21 22 36.2 +0.7**
NVAR PKKPbc **PKKPbc** **21 40 38.3 -0.2**
NVAR Mina Array Bea 85.75 50 P **P** **21 22 36.2 +0.7**
comp=Z,15nm,0.9s,baz=235,slow=7.6,SNR=35
NVAR PKKPbc **PKKPbc** **21 40 38.3 -0.2**
comp=Z,0.6nm,0.8s,baz=44,slow=1.8,SNR=3.6
NVAR LR LR 21 54 02.5
comp=Z,2μm,20.2s,baz=88,slow=31
PFO Pinyon Flat Ob 85.81 55 *e*P **P** **21 22 35.8 0.0**
comp=Z,11nm,0.8s
PFO Pinyon Flat Ob 85.81 55 P **P** **21 22 36.8 +1.0**
comp=Z,78nm,0.9s,SNR=5.8
PFO Pinyon Flat Ob 85.81 55⇑ P **P** **21 22 36.5 +0.8**
baz=86,SNR=7.9
DVTC Desert V Tower 85.84 56⇑ P **P** **21 22 36.9 +1.1**
baz=86
NV11 Mina Array Sit 85.87 50 *e*P **P** **21 22 35.6 -0.3**
LON Longmire 86.00 41 *e*P **P** **21 22 35.5 -0.8**
LON pmax pmax
comp=Z,9.0nm,1.0s
LON Longmire 86.00 41 *e*P **P** **21 22 35.5 -0.8**
comp=Z,8.9nm,1.0s
GSC Goldstone 86.00 53 *e*P **P** **21 22 35.7 -0.9**
GSC pmax pmax
comp=Z,5.0nm,0.6s
GSC Goldstone 86.00 53 *e*P **P** **21 22 35.7 -0.9**
comp=Z,4.5nm,0.6s
GSC Goldstone 86.00 53⇑ P **P** **21 22 37.4 +0.8**
baz=86
GRAC Grapevine Rang 86.04 51⇑ P **P** **21 22 37.6 +0.9**
baz=86
SWSC Sam W. Stewart 86.16 56⇑ P **P** **21 22 38.3 +1.0**
baz=86,SNR=5.9
DLBC Dease Lake 86.19 28 *e*P **P** **21 22 35.1 -1.8**
HEC Hector,Ludlow 86.25 54⇑ P **P** **21 22 38.4 +0.6**
baz=86,SNR=10
BELC Belle Mtn. Jos 86.28 55⇓ P **P** **21 22 38.9 +0.8**

baz=86,SNR=32
FURC Furnace Creek, 86.29 52 ⇓P P 21 22 38.6 +0.8
baz=86
GUN Gumba 86.49 299 eP P 21 22 39.6 +0.1
comp=Z,227nm,1.7s
SHOC Shoshone 86.58 53 ⇑P P 21 22 39.8 +0.5
baz=87
BC3 Big Chuckawall 86.63 55 ⇑P P 21 22 40.7 +0.9
baz=87,SNR=17
WVOR Wild Horse Val 86.72 46 eP P 21 22 39.6 -0.5
WVOR pmax pmax
comp=Z,50nm,1.4s
WVOR Wild Horse Val 86.72 46 eP P 21 22 39.6 -0.5
comp=Z,50nm,1.4s
TUQ Turquoise Moun 86.73 53 ⇑P P 21 22 40.6 +0.3
baz=87,SNR=6.3
GMRC Granite Mounta 86.76 54 ⇑P P 21 22 41.1 +0.7
baz=87,SNR=27
PKI Pulchoki 86.81 299 eP P 21 22 40.6 -0.5
comp=Z,131nm,1.5s
PKIN Phulchoki 86.82 299 eP P 21 22 40.6 -0.4
KKN Kakani 86.97 299 eP P 21 22 41.5 -0.2
comp=Z,138nm,1.6s
GLA Glamis 86.98 56 eP P 21 22 41.3 -0.1
GLA pmax pmax
comp=Z,25nm,0.7s
GLA Glamis 86.98 56 eP P 21 22 41.3 -0.1
comp=Z,24nm,0.7s
GLA Glamis 86.98 56 ⇑P P 21 22 42.6 +1.2
baz=87,SNR=14
IRM Iron Mountain 87.00 55 ⇓P P 21 22 42.5 +1.0
baz=87,SNR=25
DMN Daman 87.08 299 eP P 21 22 42.1 -0.2
comp=Z,85nm,1.2s
HAWA Hanford 87.36 42 eP P 21 22 42.7 -0.1
comp=Z,15nm,0.7s
Y12C Blythe 87.40 55 ⇓P P 21 22 44.3 +0.9
baz=87,SNR=6.9
NEE2 Needles Airpor 87.59 54 ⇑P P 21 22 45.3 +1.1
baz=88
113A Mohawk Valley, 87.77 56 ⇓P P 21 22 46.1 +1.0
baz=88,SNR=11
R11A Troy Canyon, C 87.78 50 ⇓P P 21 22 45.7 +0.4
baz=88,SNR=25
PDMCI Parker Dam,Lak 87.85 55 ⇓P P 21 22 46.5 +1.1
baz=88,SNR=14
W13A Hualapai Mount 88.25 54 ⇑P P 21 22 48.4 +0.8
baz=88,SNR=24
BMO Blue Mountains 88.37 44 eP P 21 22 47.1 -0.8
BMO pmax pmax
comp=Z,13nm,1.0s
BMO Blue Mountains 88.37 44 eP P 21 22 47.1 -0.8
comp=Z,13nm,1.0s
DANN Dangsing 88.41 299 eP P 21 22 47.9 -0.8
comp=Z,68nm,1.1s
KOLN Koldanda 88.42 299 eP P 21 22 47.2 -1.4
comp=Z,18nm,0.8s
Z14A Wintersburg 88.58 56 ⇑P P 21 22 49.8 +0.9
baz=89,SNR=11
Y14A Wickenburg 88.67 55 ⇑P P 21 22 50.1 +0.7
baz=89,SNR=10
ELK Elko 88.68 48 eP P 21 22 49.2 -0.4
MFID Camas Ranch 88.98 46 eP P 21 22 49.6 -1.2
comp=Z,16nm,1.0s
MFID Camas Ranch 88.98 46 ⇑P P 21 22 51.4 +0.6
baz=89
PYUN Piuthan 89.02 299 eP P 21 22 50.4 -1.0
comp=Z,52nm,0.9s
WMQ Urumqi 89.20 315 P P 21 22 51.8 +0.1
WMQ pP **pP** 21 23 13.0 +1.3
WMQ sP **sP** 21 23 22.0 +2.4
WMQ PP **PP** 21 26 25.0 +1.8
WMQ SKS **SKSac** 21 33 13.0 -2.4
WMQ S **S** 21 33 32.0 -3.3
WMQ sS **sS** 21 34 08.0 -1.3
WMQ SS **SS** 21 39 30.0 -1.1
WMQ pmax pmax
comp=Z,29nm,1.0s
WMQ pmax pmax
comp=Z,250nm,8.0s
WMQ LR LR
comp=N,350nm,20.0s
WMQ LR LR
comp=E,550nm,22.0s
WMQ LR LR
comp=Z,620nm,22.0s
CCUT Cedar City 89.27 52 eP P 21 22 52.2 -0.2
comp=Z,50nm,1.3s
NEW Newport 89.49 41 eP P 21 22 52.0 -1.0
comp=Z,5.9nm,0.8s
NEW Newport 89.49 41 ⇑P P 21 22 53.3 +0.3
baz=90,SNR=5.9
G12A Big Creek, Yel 89.80 44 ⇓P P 21 22 55.1 +0.4
baz=90,SNR=48
U15A North Rim 89.83 53 ⇑P P 21 22 56.2 +1.0
baz=90,SNR=47
H12A Diamond D Ranc 89.97 45 ⇓P P 21 22 55.8 +0.4
baz=90,SNR=11
F12A Elk City 90.02 43 ⇓P P 21 22 55.8 +0.2
baz=90,SNR=36
HLID Hailey 90.02 46 eP P 21 22 54.4 -1.3
comp=Z,11nm,0.9s
HLID Hailey 90.02 46 ⇑P P 21 22 56.7 +1.0
baz=90,SNR=16
X16A Lo Mia Camp, P 90.04 55 ⇑P P 21 22 57.4 +1.4
baz=90
J13A Cove Ranch, Pi 90.14 46 ⇑P P 21 22 57.5 +1.3
baz=90,SNR=7.7
I13A Wildhorse Cree 90.31 45 ⇑P P 21 22 57.9 +0.8
baz=90,SNR=34
DUG Dugway 90.33 49 eP P 21 22 55.9 -1.3
DUG pmax pmax
comp=Z,12nm,0.8s
DUG Dugway 90.33 49 eP P 21 22 55.9 -1.3
comp=Z,12nm,0.8s
DUG Dugway 90.33 49 ⇑P P 21 22 58.0 +0.8
baz=90,SNR=12
WUAZ Wupatki 90.35 54 eP P 21 22 57.4 0.0
comp=Z,25nm,0.9s
WUAZ Wupatki 90.35 54 ⇓P P 21 22 58.5 +1.0
baz=90,SNR=14
MVU Marysvale 90.38 51 eP P 21 22 57.9 +0.3
comp=Z,26nm,0.9s
H13A Challis 90.39 45 ⇑P P 21 22 58.0 +0.7
baz=90,SNR=18
C12B Naegeli Ranch, 90.40 41 ⇑P P 21 22 58.1 +0.9
baz=90
L14A Malta 90.47 47 ⇓P P 21 22 58.8 +1.0
baz=90,SNR=14
B12A Libby 90.53 41 ⇓P P 21 22 58.8 +1.0
baz=90
G13A Cobalt 90.54 44 ⇓P P 21 22 58.6 +0.5
baz=90,SNR=25
J14A Carey 90.59 46 ⇓P P 21 22 59.7 +1.3
baz=91
A12A Yaak River Ran 90.62 40 ⇑P P 21 22 59.1 +0.9
baz=91
K14A Jones Ranch, D 90.64 47 ⇓P P 21 22 59.3 +0.8
baz=91,SNR=9.0
F13A Darby 90.65 44 ⇑P P 21 22 58.7 +0.2
baz=91,SNR=42
I14A Mackay 90.78 45 ⇑P P 21 23 00.2 +0.9
baz=91,SNR=8.2
BSMT Bassoo Peak 90.88 41 eP P 21 22 59.2 -0.4
comp=Z,16nm,0.7s
D13A Huson 90.90 42 ⇓P P 21 22 59.7 +0.1
baz=91
E13A Victor 90.91 43 ⇓P P 21 22 59.6 -0.1
baz=91,SNR=6.5
C13A Hot Springs 90.98 42 ⇓P P 21 23 00.3 +0.3
baz=91,SNR=8.0
H14A Leadore 91.01 45 ⇑P P 21 23 01.4 +1.1
baz=91,SNR=8.4
L15A Malad City 91.08 48 ⇓P P 21 23 01.5 +0.8
baz=91,SNR=12
G14A Jackson 91.10 44 ⇑P P 21 23 01.6 +0.8
baz=91,SNR=11
K15A Arbon 91.13 47 ⇑P P 21 23 02.0 +1.1
baz=91
319A Douglas 91.16 58 ⇑P P 21 23 01.7 +0.5
baz=91
MPU Maple Canyon 91.17 50 eP P 21 23 00.7 -0.5
comp=Z,24nm,1.2s
MSO Missoula 91.17 43 ⇑P P 21 23 01.2 +0.2
baz=91
B13A Whitefish 91.23 41 ⇓P P 21 23 01.4 +0.3
baz=91,SNR=7.8
Q16A Castle Valley 91.27 51 ⇑P P 21 23 02.6 +0.9
baz=91,SNR=7.2
X18A Snowflake 91.27 55 ⇓P P 21 23 02.8 +1.1
baz=91
F14A Wisdom 91.31 44 ⇑P P 21 23 02.5 +0.9
baz=91
SWMT Swartz Lake 91.31 42 eP P 21 23 01.1 -0.4
comp=Z,7.8nm,1.1s
E14A Clinton 91.37 43 ⇑P P 21 23 02.0 0.0
baz=91,SNR=13
J15A Blackfoot 91.37 46 ⇑P P 21 23 03.1 +1.1
baz=91,SNR=7.1
I15A Monteview 91.48 46 ⇑P P 21 23 03.7 +1.2
baz=92
H15A Lima 91.51 45 ⇓P P 21 23 03.5 +0.8
baz=92,SNR=26
D14A Greenough 91.53 42 ⇑P P 21 23 02.5 0.0
baz=92,SNR=5.7
C14A Swan Lake 91.54 42 ⇓P P 21 23 02.9 +0.3
baz=92
DAU Daniels Canyon 91.54 49 eP P 21 23 04.0 +1.0
DAU pmax pmax
comp=Z,37nm,1.5s
DAU Daniels Canyon 91.54 49 eP P 21 23 04.0 +1.0
comp=Z,38nm,1.5s
W18A Petrified Fore 91.57 55 ⇓P P 21 23 03.7 +0.6
baz=92
P17A Butcher Ranch, 91.72 50 ⇑P P 21 23 04.1 +0.3
baz=92
DLMT Dillon 91.72 44 eP P 21 23 03.9 +0.3
comp=Z,37nm,1.2s
G15A Dillon 91.75 44 ⇓P P 21 23 04.6 +0.8
baz=92,SNR=17
WALA Waterton Lakes 91.76 40 eP P 21 23 02.8 -0.8
comp=Z,0.6nm,1.1s
L16A Fish Haven 91.77 48 ⇓P P 21 23 04.4 +0.5
baz=92
320A Kipp Ranch, An 91.78 59 ⇓P P 21 23 05.6 +1.4
baz=92,SNR=11
SRU San Rafael 91.80 51 ⇑P P 21 23 04.4 +0.3
baz=92
K16A Soda Springs 91.84 47 ⇓P P 21 23 05.1 +0.9
baz=92,SNR=8.5
220A Playas Peak, P 91.90 58 ⇑P P 21 23 05.7 +1.1
baz=92,SNR=6.2
S18A Hurst Farm, Bl 91.91 52 ⇓P P 21 23 05.2 +0.4
baz=92
F15A Butte 91.91 44 ⇑P P 21 23 04.5 +0.1
baz=92,SNR=17
120A U Bar Ranch, L 91.94 57 ⇑P P 21 23 05.7 +0.8
baz=92,SNR=10.0
E15A Deer Lodge 91.94 43 ⇑P P 21 23 05.1 +0.5
baz=92,SNR=17
N17A Moffit Pass 91.97 49 ⇑P P 21 23 05.2 +0.2
baz=92
B14A Marquette Ranc 91.99 41 ⇑P P 21 23 04.9 +0.2
baz=92,SNR=11
A14A Double T Ranch 92.05 41 ⇓P P 21 23 05.6 +0.6
baz=92
Z20A Nine Sixteen R 92.08 57 ⇓P P 21 23 06.0 +0.4
baz=92,SNR=11
P18A Preston Nutter 92.13 50 ⇓P P 21 23 06.5 +0.8
baz=92,SNR=8.6
I16A Newdale 92.15 46 ⇓P P 21 23 06.8 +1.2
baz=92
D15A Lincoln 92.17 43 ⇑P P 21 23 05.9 +0.3
baz=92,SNR=7.9
L17A Cokeville 92.20 48 ⇑P P 21 23 06.4 +0.5
baz=92
M17A Scullys Gap (B 92.21 48 ⇓P P 21 23 06.2 +0.2
baz=92
G16A Moss Hill, Enn 92.23 44 ⇑P P 21 23 06.3 +0.3
baz=92,SNR=11
C15A Salmond Ranch, 92.29 42 ⇓P P 21 23 06.2 +0.1
baz=92,SNR=15
K17A Gardner Place, 92.30 47 ⇓P P 21 23 07.2 +0.9
baz=92
Y20A Horse Springs, 92.42 56 ⇓P P 21 23 08.1 +1.0
baz=92,SNR=8.7
B15A Bradely Ranch, 92.44 41 ⇑P P 21 23 06.5 -0.2
baz=92,SNR=12
X20A Quemado 92.45 55 ⇑P P 21 23 08.5 +1.3
baz=92
BOZ Bozeman (W) 92.45 44 eP P 21 23 06.0 -0.9
BOZ pmax pmax
comp=Z,20nm,1.3s
BOZ Bozeman (W) 92.45 44 eP P 21 23 06.0 -0.9
comp=Z,20nm,1.3s
BOZ Bozeman (W) 92.45 44 ⇑P P 21 23 07.3 +0.4
baz=92,SNR=14
F16A Kennard Place, 92.48 44 ⇓P P 21 23 07.9 +0.9
baz=92,SNR=9.1
A15A Johnson Ranch, 92.49 41 ⇑P P 21 23 06.8 -0.1
baz=92,SNR=6.8
221A Mesquite Ranch 92.54 58 ⇑P P 21 23 07.3 -0.3
baz=92,SNR=7.1
IMW Indian Meadow 92.54 46 eP P 21 23 07.2 -0.4
comp=Z,6.5nm,0.8s
W20A Ramah 92.56 55 ⇓P P 21 23 07.9 +0.1
baz=92
J17A Brown Place, J 92.59 46 ⇓P P 21 23 08.2 +0.5
baz=93
E16A East Helena 92.62 43 ⇑P P 21 23 08.3 +0.7
baz=93,SNR=15
121A Cookes Peak, D 92.64 58 ⇑P P 21 23 09.4 +1.3
baz=93,SNR=19
M18A Lyman 92.64 48 ⇑P P 21 23 08.4 +0.4
baz=93
MOOW Moose Ponds 92.65 46 eP P 21 23 07.5 -0.5
comp=Z,11nm,1.4s
MOOW e 21 23 26.1
LOHW Long Hollow 92.72 46 eP P 21 23 07.1 -1.2
comp=Z,3.0nm,0.7s
V20A Brimhall 92.72 54 ⇓P P 21 23 09.0 +0.6
baz=93
Q19A Hogan Spring (92.73 51 ⇑P P 21 23 08.7 +0.4
baz=93
L18A Fontenelle, Gr 92.77 48 ⇓P P 21 23 09.2 +0.7
baz=93
U20A Newcomb 92.79 54 ⇑P P 21 23 09.5 +0.7
baz=93,SNR=5.6
I17A Pilgrim Ck. 92.80 46 ⇓P P 21 23 09.8 +1.1
baz=93
D16A Dana Ranch, Ca 92.81 43 ⇓P P 21 23 09.1 +0.5
baz=93,SNR=6.3
N18A Larsen Ranch, 92.84 49 ⇑P P 21 23 09.4 +0.6
baz=93
C16A Fuhringer Ranc 92.86 42 ⇑P P 21 23 09.2 +0.5
baz=93,SNR=16
Z21A St. Cloud Mine 92.88 57 ⇑P P 21 23 10.0 +0.7
baz=93,SNR=5.5
H17A Grant Village 92.90 45 ⇓P P 21 23 10.1 +0.9
baz=93
K18A Toltan Ranch, 92.91 47 ⇓P P 21 23 10.2 +0.9
baz=93
MVCO Mesa Verde 92.97 53 ⇓P P 21 23 10.6 +0.9
baz=93
G17A Pierce Place, 92.99 45 ⇓P P 21 23 10.5 +1.1
baz=93
X21A Alamocita Cree 93.00 56 ⇓P P 21 23 10.8 +1.0
baz=93
Y21A Point of Rocks 93.01 56 ⇓P P 21 23 11.1 +1.2
baz=93,SNR=7.5
B16A M & M Farms, S 93.02 41 ⇑P P 21 23 09.5 +0.1
baz=93
J18A Kendall Valley 93.05 47 ⇑P P 21 23 11.1 +1.3
baz=93
P19A Cripple Cowboy 93.08 50 ⇓P P 21 23 10.8 +0.7
baz=93
PV01 Paradox Valley 93.10 52 eP P 21 23 09.0 -1.2
comp=Z,571nm,0.9s
O19A Miners Draw (B 93.11 50 ⇓P P 21 23 10.9 +0.8
baz=93
F17A Fitzpatrick Pl 93.17 44 ⇑P P 21 23 11.3 +1.1
baz=93,SNR=9.7
N19A John Jarvie Ra 93.19 49 ⇓P P 21 23 10.8 +0.3
baz=93
S20A Disappointment 93.20 52 ⇓P P 21 23 11.1 +0.4
baz=93
W21A San Fidel 93.24 55 ⇑P P 21 23 11.2 +0.3
baz=93
R20A Redvale 93.26 52 ⇑P P 21 23 11.5 +0.6
baz=93
BW06 Boulder Array 93.29 47 ⇓P P 21 23 11.0 0.0
baz=93,SNR=6.1
PDAR Pinedale Array 93.29 47 P P 21 23 11.0 0.0
PDAR PKKPbc **PKKPbc** 21 40 19.2 -0.7
PDAR Pinedale Array 93.29 47 P P 21 23 11.0 0.0
comp=Z,3.1nm,0.8s,baz=250,slow=2.4,SNR=20
PDAR PKKPbc **PKKPbc** 21 40 19.2 -0.7
comp=Z,0.7nm,0.7s,baz=108,slow=3.3,SNR=4.7
PDAR LR LR 21 58 00.7
comp=Z,450nm,21.8s,baz=252,slow=31
I18A Diamond G Ranc 93.29 46 ⇑P P 21 23 11.2 +0.2
baz=93
L19A Farson 93.30 48 ⇑P P 21 23 11.1 +0.1
baz=93
M19A Rock Springs 93.33 49 ⇓P P 21 23 11.7 +0.5
baz=93
D17A Six Diamond Ra 93.42 43 ⇑P P 21 23 11.7 +0.4
baz=93,SNR=9.4
Z22A Elephant Butte 93.45 57 ⇑P P 21 23 12.5 +0.7
baz=93,SNR=9.7
C17A Wharram Farm, 93.47 42 ⇑P P 21 23 11.7 +0.2
baz=93,SNR=23
Q20A Ridgley Place, 93.47 51 ⇓P P 21 23 12.2 +0.4
baz=94
U21A Nageezi 93.48 54 ⇓P P 21 23 12.8 +0.8
baz=94,SNR=24
P20A De Beque 93.50 51 ⇓P P 21 23 12.2 +0.3
baz=94
Y22A Socorro 93.58 56 ⇓P P 21 23 13.2 +0.8
baz=94
B17A L&G Farms, Che 93.58 42 ⇑P P 21 23 12.2 +0.3
baz=94,SNR=7.2
H18A Shoshone NF, C 93.60 45 ⇓P P 21 23 13.4 +1.1
baz=94
S21A Coal Bank Pass 93.61 53 ⇓P P 21 23 13.2 +0.6
baz=94,SNR=10
MKAR Makanchi Array 93.62 317 P P 21 23 11.9 -0.2
MKAR Makanchi Array 93.62 317 P P 21 23 11.9 -0.2
MKAR PKiKP **PKiKP** 21 27 57.0 -0.4
MKAR PKKP **PKKPdf** 21 40 16.7 -1.1
MKAR Makanchi Array 93.62 317 P P 21 23 11.9 -0.2
comp=Z,21nm,0.7s,baz=95,slow=5.6,SNR=135
MKAR PKiKP **PKiKP** 21 27 57.0 -0.4
comp=Z,0.8nm,0.6s,baz=252,slow=0.7,SNR=5.8
MKAR PKKP **PKKPdf** 21 40 16.7 -1.1
comp=Z,2.7nm,0.7s,baz=256,slow=4.2,SNR=19
MKAR LR LR 22 08 22.5
comp=Z,300nm,20.1s,baz=118,slow=37
ZAA0 Zalesovo Array 93.62 324 eP P 21 23 10.5 -1.4
ZALV Zalesovo Beam 93.62 324 P P 21 23 11.0 -0.9
ZALV Zalesovo Beam 93.62 324 P P 21 23 11.0 -0.9
ZALV PKKPbc **PKKPdf** 21 40 15.1 -2.8
ZALV Zalesovo Beam 93.62 324 P P 21 23 11.0 -0.9
comp=Z,9.6nm,0.8s,baz=110,slow=3.7,SNR=45
ZALV PKKPbc **PKKPdf** 21 40 15.1 -2.8
comp=Z,0.5nm,0.4s,baz=304,slow=3.4,SNR=3.7
ZALV LR LR 22 08 27.6
comp=Z,338nm,18.5s,baz=44,slow=37
X22A Bernardo 93.64 56 ⇓P P 21 23 13.8 +1.0
baz=94
223A Chaparral, Ant 93.67 58 ⇑P P 21 23 13.5 +0.7
baz=94
DDI Dehra Dun 93.69 300 ex P 21 23 11.8 -1.1
T21A Navajo Lake 93.69 53 ⇑P P 21 23 13.5 +0.5
baz=94
O20A White River Ci 93.74 50 ⇑P P 21 23 13.4 +0.4
baz=94
J19A Crowheart 93.75 47 ⇓P P 21 23 13.2 +0.2
baz=94
A17A Triple J Farms 93.79 41 ⇓P P 21 23 13.2 +0.3
baz=94,SNR=9.5
G18A Lazy EL Ranch, 93.80 45 ⇑P P 21 23 13.5 +0.3
baz=94
K19A Absolon Red Bu 93.81 47 ⇑P P 21 23 13.0 -0.3
baz=94,SNR=5.3
F18A Big Timber 93.81 44 ⇓P P 21 23 13.8 +0.6
baz=94
N20A Spence Gulch, 93.86 49 ⇓P P 21 23 14.3 +0.7
baz=94
R21A Cimarron 93.93 52 ⇓P P 21 23 14.4 +0.4
baz=94,SNR=7.0
V22A San Miguel Ran 93.98 54 ⇓P P 21 23 15.1 +0.7
baz=94
Q21A Lamborn Mesa, 94.00 51 ⇑P P 21 23 15.0 +0.7
baz=94
D18A Linhart Farms, 94.02 43 ⇓P P 21 23 14.4 +0.4
baz=94
M20A Sweetwater, Wa 94.04 49 ⇑P P 21 23 15.2 +0.7
baz=94
U22A Llaves 94.11 54 ⇑P P 21 23 15.8 +0.9
baz=94,SNR=6.4
K20A Yellowstone Ra 94.14 48 ⇑P P 21 23 14.9 +0.1
baz=94
ANMO Albuquerque 94.17 55 eP P 21 23 14.7 -0.5
comp=Z,3.0nm,0.8s
ANMO LR LR
comp=Z,695nm,22.0s
T22A Edith 94.19 53 ⇓P P 21 23 15.0 -0.3
baz=94
EGMT Eagleton 94.21 42 ⇑P P 21 23 15.5 +0.6
baz=94,SNR=6.9
B18A Beardsley Farm 94.27 42 ⇑P P 21 23 15.6 +0.5
baz=94
Y23A Lovelace Mesa, 94.32 56 ⇑P P 21 23 15.8 0.0
baz=94
F19A Roth Farm, Mol 94.33 44 ⇓P P 21 23 15.8 +0.2
baz=94
A18A Metzger Ranch, 94.33 41 ⇑P P 21 23 15.8 +0.4
baz=94
324A Moseley Ranch, 94.36 59 ⇓P P 21 23 16.3 +0.2
baz=94
S22A 4UR Ranch, Cre 94.38 53 ⇑P P 21 23 16.8 +0.7
baz=94,SNR=6.7
N21A Black Mountain 94.40 50 ⇓P P 21 23 16.2 +0.1
baz=94
224A Cornudas Mount 94.44 58 ⇓P P 21 23 16.5 +0.1
baz=94
W23A Werner Place, 94.46 55 ⇓P P 21 23 17.0 +0.5
baz=94
J20A Shoshoni 94.46 47 ⇓P P 21 23 17.0 +0.7
baz=94
Q22A Crested Butte, 94.52 51 ⇑P P 21 23 17.5 +0.7
baz=94
SMCO Snowmass 94.52 51 eP P 21 23 16.3 -0.6
comp=Z,11nm,1.4s
V23A Ortiz Mt. (NFS 94.53 55 ⇓P P 21 23 17.2 +0.4
baz=94
I20A Worland 94.54 46 ⇑P P 21 23 17.7 +1.2
baz=94
E19A Rath Farm, Rou 94.56 44 ⇓P P 21 23 17.5 +1.0
baz=94,SNR=5.4
124A Stringfield Ra 94.60 58 ⇓P P 21 23 17.5 +0.3
baz=95
C19A Slack Wire Ran 94.62 42 ⇑P P 21 23 17.6 +0.8
baz=95
D19A Cripps Ranch, 94.63 43 ⇓P P 21 23 18.0 +1.2
baz=95
425A Indio Mountain 94.67 60 ⇓P P 21 23 17.5 +0.1
baz=95
M21A Separation Pea 94.67 49 ⇑P P 21 23 17.8 +0.4
baz=95
G20A Bridger 94.72 45 ⇓P P 21 23 17.1 -0.2
baz=95
NVS Novosibirsk 94.72 325 ⇑iP P 21 23 15.4 -1.5
NVS pmax pmax
comp=N,8.0nm,1.5s
NVS pmax pmax
comp=E,14nm,1.5s
NVS pmax pmax
comp=Z,32nm,1.5s
L21A Rawlins 94.73 48 ⇑P P 21 23 17.9 +0.4
baz=95
H20A Greybull 94.73 46 ⇑P P 21 23 18.3 +0.9
baz=95
YKA Yellowknife Ar 94.76 27 P P 21 23 15.7 -1.2
YKA PKiKP **PKiKP** 21 27 59.2 +0.4
YKA PKKPbc PKKPdf 21 40 06.1 -10
YKA Yellowknife Ar 94.76 27 P P 21 23 15.7 -1.2
comp=Z,5.5nm,0.6s,baz=257,slow=4.7,SNR=87
YKA PKiKP **PKiKP** 21 27 59.2 +0.4
comp=Z,0.6nm,0.6s,baz=259,slow=1.2,SNR=12
YKA PKKPbc PKKPdf 21 40 06.1 -10
comp=Z,0.2nm,0.6s,baz=84,slow=2.7,SNR=4.2
P22A Eagle 94.76 51 ⇑P P 21 23 18.2 +0.4
baz=95
YKW3 Yellowknife Ar 94.77 27 eP P 21 23 10.6 -6.3
comp=Z,0.1nm,0.6s
325A Bean Ranch, Si 94.78 59 ⇑P P 21 23 18.2 +0.2
baz=95
Y24A Capitan 94.83 57 ⇑P P 21 23 18.8 +0.6
baz=95
B19A Brinkman Farms 94.83 42 ⇑P P 21 23 18.1 +0.5
baz=95,SNR=8.6
T23A Casias Ranch, 94.88 53 ⇑P P 21 23 18.7 +0.3

baz=95
J21A Lysite 94.92 47 ⇓P P P 21 23 19.2 +0.8
baz=95
K21A Alcova 94.93 48 ⇓P P P 21 23 19.1 +0.6
baz=95
E20A Meyer Farm, Mu 95.01 44 ⇑P P P 21 23 19.5 +0.9
baz=95
O22A Kremmling 95.02 50 ⇓P P P 21 23 18.5 -0.6
baz=95,SNR=7.4
225A Deer Hill, Car 95.03 58 ⇓P P P 21 23 19.7 +0.5
baz=95
A19A Klindworth Far 95.05 41 ⇓P P P 21 23 19.4 +0.7
baz=95
W24A Lazy 6 Ranch, 95.07 55 ⇑P P P 21 23 19.6 +0.3
baz=95
I21A Big Trails, Te 95.11 47 ⇑P P P 21 23 19.4 +0.2
baz=95
626A Big Bend Ranch 95.19 61 ⇓P P P 21 23 19.5 -0.3
baz=95
125A Gardner Draw, 95.25 58 ⇑P P P 21 23 20.2 +0.1
baz=95
V24A Rampart Ranch, 95.26 55 ⇓P P P 21 23 20.7 +0.5
baz=95
C20A Veseth Ranch, 95.31 43 ⇓P P P 21 23 20.4 +0.6
baz=95,SNR=8.5
P23A Jefferson 95.42 51 ⇑P P P 21 23 21.6 +0.6
baz=95
Y25A Mesa, Roswell 95.43 57 ⇓P P P 21 23 20.4 -0.5
baz=95
426A McDonald Obser 95.46 60 ⇑P P P 21 23 20.7 -0.4
baz=95
TXAR Lajitas Array 95.55 61 P P P 21 23 22.1 +0.6
TXAR PP PP 21 27 13.7 +0.1
TXAR PKKPbc PKKPbc 21 40 12.5 -0.6
TXAR Lajitas Array 95.55 61 P P 21 23 22.1 +0.6
comp=Z,1.7nm,0.6s,baz=233,slow=5.3,SNR=23
TXAR PP PP 21 27 13.7 +0.1
comp=Z,1.8nm,1.0s,baz=246,slow=6.2,SNR=6.3
TXAR PKKPbc PKKPbc 21 40 12.5 -0.6
comp=Z,0.6nm,0.6s,baz=108,slow=4.0,SNR=6.8
TXAR LR LR 21 59 15.3
comp=Z,1μm,20.0s,baz=70,slow=31
226B Tecolote Peak, 95.57 59 ⇓P P P 21 23 21.8 +0.3
baz=96
A20A Cobblestone Ra 95.57 41 ⇓P P P 21 23 21.6 +0.6
baz=96,SNR=13
N23A Red Feather La 95.60 50 ⇑P P P 21 23 21.6 0.0
baz=96
J22A Midwest 95.62 47 ⇓P P P 21 23 21.9 +0.3
baz=96
S24A Houchin Ranch, 95.62 53 ⇑P P P 21 23 22.1 +0.2
baz=96
T24A Torres, Weston 95.66 53 ⇓P P P 21 23 22.4 +0.4
baz=96
ISCO Idaho Springs 95.67 51 ⇑P P P 21 23 21.9 -0.1
baz=96
I22A 9 Mile Ranch, 95.70 47 ⇓P P P 21 23 22.7 +0.8
baz=96
527A Woodward Ranch 95.73 61 ⇓P P P 21 23 22.1 -0.2
baz=96
126A Clayton Basin, 95.78 58 ⇑P P P 21 23 22.3 -0.1
baz=96
R24A Sanders Place, 95.80 52 ⇑P P P 21 23 23.0 +0.5
baz=96
V25A Rancho No Teng 95.81 55 ⇓P P P 21 23 22.9 +0.3
baz=96
627A Terlingua Ranc 95.81 61 ⇓P P P 21 23 22.7 0.0
baz=96
W25A X Bar L Ranch, 95.83 55 ⇑P P P 21 23 22.7 0.0
baz=96
Z26A Caprock 95.92 57 ⇓P P P 21 23 23.3 +0.2
baz=96
L23A Garrett 95.98 48 ⇓P P P 21 23 23.5 +0.2
baz=96
U25A Circle Dot Ran 96.06 54 ⇑P P P 21 23 23.8 +0.1
baz=96
B21A Ellsworth Farm 96.09 42 ⇑P P P 21 23 23.8 +0.4
baz=96
Y26A Elida 96.15 57 ⇓P P P 21 23 24.1 0.0
baz=96
S25A Robets Cordova 96.24 53 ⇓P P P 21 23 24.9 +0.4
baz=96,SNR=6.3
A21A Bergtoll Ranch 96.24 41 ⇓P P P 21 23 24.6 +0.5
baz=96
X26A CR and CF Fran 96.26 56 ⇓P P P 21 23 24.3 -0.3
baz=96
J23A Dilts Ranch, B 96.29 47 ⇑P P P 21 23 25.1 +0.5
baz=96
528A Cox Ranch, San 96.44 61 ⇑P P P 21 23 25.7 +0.2
baz=96
V26A Tequesquite Ra 96.47 55 ⇑P P P 21 23 26.0 +0.5
baz=96
L24A Wheatland 96.53 49 ⇓P P P 21 23 25.7 0.0
baz=96
328A Wristen Ranch, 96.60 59 ⇑P P P 21 23 26.3 +0.1
baz=97
428A Kincaid Ranch, 96.61 60 ⇑P P P 21 23 25.9 -0.3
baz=97
KURK Kurchatov 96.72 320 eP P P 21 23 25.0 -1.1
KURK pmax pmax
comp=Z,9.0nm,1.3s
KURK Kurchatov 96.72 320 eP P P 21 23 24.2 -1.9
comp=Z,8.3nm,1.1s
P25A Willow Gulch B 96.72 51 ⇑P P P 21 23 26.8 +0.1
baz=97
F23A Volborg 96.75 45 ⇑P P P 21 23 27.0 +0.5
baz=97
KURBB Kurchatov Arra 96.76 320 LR LR 22 09 06.1
comp=Z,376nm,19.5s,baz=65,slow=37
T26A Comanche Natio 96.83 54 ⇓P P P 21 23 28.0 +0.8
baz=97
X27A F and S Farms, 96.85 56 ⇓P P P 21 23 28.0 +0.7
baz=97
KSH Kashi 96.89 309 eP P 21 23 28.0 +0.7
KSH pP pP 21 23 49.1 +1.7
KSH sP sP 21 23 57.1 +1.9
KSH PP PP 21 27 28.0 +4.4
KSH SKS SKSac 21 33 57.1 -1.1
KSH S S 21 34 42.0 -1.9
KSH sS sS 21 35 17.6 -0.8
KSH SS SS 21 41 24.5 +3.1
KSH pmax pmax
comp=Z,1.0nm,0.1s
KSH pmax pmax
comp=Z,120nm,3.1s
KSH LR LR
comp=N,860nm,11.5s
KSH LR LR
comp=E,350nm,5.8s
KSH LR LR
comp=Z,200nm,4.0s
S26A Kim 96.99 53 ⇑P P 21 23 28.0 +0.1
baz=97
MSTX Muleshoe 97.02 57 ⇓P Pdif 21 23 28.4 +0.2
baz=97
R26A Arlington 97.10 52 ⇑P Pdif 21 23 28.9 +0.4
baz=97
Q26A Hugo 97.14 52 ⇑P P 21 23 28.4 -0.1
baz=97
SNAA Sanae 97.24 184 eP P 21 23 28.3 0.0
429A Davenport Ranc 97.27 60 ⇓P P 21 23 29.0 -0.2
baz=97
T27A Campo 97.50 54 ⇑P P 21 23 30.2 0.0
baz=98
TKM2 Tokmak 2 97.65 312 PFAKE 21 23 40.0 +9.1
TKM2 LR LR
comp=Z,487nm,21.0s
VNA3 Neumayer Olymp 97.96 181 eP Pdif 21 23 32.7 +1.2
AMTX Amarillo 98.04 56 eP P 21 23 31.1 -1.5
comp=Z,5.9nm,0.8s
AMTX Amarillo 98.04 56 ⇓P Pdif 21 23 33.6 +0.9
baz=98
VNA2 Neumayer--Watz 98.21 182 eP Pdif 21 23 33.6 +1.0
AAK Ala-Archa 98.41 312 eP P 21 23 34.0 -0.2
AAK pmax pmax
comp=Z,7.0nm,1.0s
AAK Ala-Archa 98.41 312 eP P 21 23 32.7 -1.5
comp=Z,2.7nm,0.8s
AAK Ala-Archa 98.41 312 LR LR 22 09 24.3
comp=Z,580nm,21.5s,baz=89,slow=36
532A Rocksprings 98.90 61 ⇑P P 21 23 36.1 -0.4
baz=99
EKS2 Erkin-Say 98.94 312 PFAKE 21 23 50.0 +13
EKS2 LR LR
comp=Z,577nm,22.0s
332A Millersview 99.20 60 ⇓P Pdif 21 23 37.6 -0.2
baz=99

FFC Flin Flon 99.99 36 *i* P Pdif 21 23 41.3 +0.6
FFC Flin Flon 99.99 36 *e*Pdif Pdif 21 23 40.0 -0.7
comp=Z,3.6nm,0.9s
KKAR Karatay Array 101.37 312 *e*P Pdif 21 23 45.8 -1.4
KKAR pmax pmax
comp=Z,2.0nm,0.8s
KKAR Karatay Array 101.37 312 *e*Pdif Pdif 21 23 45.8 -1.4
comp=Z,2.1nm,0.8s
BRVK Borovoye 102.09 322 PFAKE 21 24 00.0 +10
BRVK LR LR
comp=Z,859nm,22.0s
TRQA Tornquist 113.78 140 PFAKE 21 28 50.0
TRQA LR LR
comp=Z,711nm,21.0s
APA Apatity 115.41 342 ⇑*i*PKIKP PKPdf 21 28 36.4 -0.3
APA MLR MLR
comp=Z,2μm,20.0s
KEV Kevo 115.76 345 *e*PKIKP PKPdf 21 28 36.6 -0.7
KEV Kevo 115.76 345 *e*pkp PKPdf 21 28 36.6 -0.7
ARCES ARCESS Array B 116.29 346 PKP PKPdf 21 28 38.1 -0.3
ARCES PKKPbc PKKPbc 21 39 05.5 -4.9
ARCES ARCESS Array B 116.29 346 PKP PKPdf 21 28 38.1 -0.3
comp=Z,17nm,0.6s,baz=110,slow=1.5,SNR=85
ARCES PKKPbc PKKPbc 21 39 05.5 -4.9
comp=Z,1.8nm,0.6s,baz=241,slow=1.2,SNR=15
ARE0 ARCESS Array S 116.29 346 *e*P PKPdf 21 28 38.3 -0.1
SUMG Summit 116.68 8 *i* P PKPdf 21 28 40.9 +1.3
TRO Tromso 117.72 348 *e*P PKPdf 21 28 40.4 -0.6
JOF Joensuu 118.93 338 *e*PKIKP PKPdf 21 28 41.8 -1.8
JOF Joensuu 118.93 338 *e*pkp PKPdf 21 28 41.8 -1.8
QRN Al-Qurain 119.75 297 *e*P PKPdf 21 28 46.2 0.0
QRN AMb AMB 21 28 48.0
comp=Z,52nm,0.9s
SCHQ Schefferville 119.80 32 PKP PKPdf 21 28 44.3 -1.2
SCHQ PKKPbc PKKPab 21 38 56.0 -0.9
SCHQ Schefferville 119.80 32 PKP PKPdf 21 28 44.3 -1.2
comp=Z,4.3nm,0.6s,baz=292,slow=0.6,SNR=13
SCHQ PKKPbc PKKPab 21 38 56.0 -0.9
comp=Z,3.6nm,0.8s,baz=172,slow=3.7,SNR=7.3
UMR Umm Al-Rimmam 119.87 298 *e*P PKPdf 21 28 46.5 0.0
UMR AMb AMB 21 28 48.2
comp=Z,35nm,0.8s
STEI Steigen 119.89 348 *e*P PKPdf 21 28 45.2 -0.1
LPAZ La Paz 120.00 116 *e*PKPdf PKPdf 21 28 46.9 -0.9
LPAZ PKP PKPdf 21 28 47.8 0.0
LPAZ La Paz 120.00 116 PKP PKPdf 21 28 47.8 0.0
comp=Z,4.1nm,0.6s,baz=284,slow=1.5,SNR=19
DGRG David-gareji 120.03 312 P PKPdf 21 28 48.9 +2.4
RDF Al-Radifah 120.06 297 *e*P PKPdf 21 28 46.8 0.0
RDF AMb AMB 21 28 48.9
comp=Z,37nm,0.7s
MIB Mutribah 120.18 298 *e*P PKPdf 21 28 46.5 -0.5
MIB AMb AMB 21 28 49.1
comp=Z,37nm,0.8s
SCO Scoresbysund 120.29 3 *i* P PKPdf 21 28 46.1 +0.1
NAY Al-Naaiem 120.31 297 *e*P PKPdf 21 28 46.7 -0.6
NAY AMb AMB 21 28 49.2
comp=Z,15nm,0.9s
TBLG Delisi 120.43 312 *e*PKIKP PKPdf 21 28 48.5 +1.3
TBLG Delisi 120.43 312 P PKPdf 21 28 48.5 +1.3
GNI Garni 120.78 310 *e*PKPdf PKPdf 21 28 46.5 -1.6
GNI LR LR
comp=Z,291nm,20.0s
ZEI Tsey 120.79 313 *i* PKIKP PKPdf 21 28 47.4 -0.7
ZEI pmax pmax
comp=Z,3.0nm,0.7s
GOR Gori 120.83 313 P PKPdf 21 28 51.8 +3.8
OBN Obninsk 120.84 329 ⇑*i*PKIKP PKPdf 21 28 48.4 +0.9
OBN *e* 21 30 17.0
OBN *e*PS PS 21 40 01.5 -7.7
OBN pmax pmax
comp=Z,31nm,1.6s
ONI Oni 121.15 313 P PKPdf 21 28 50.0 +1.4
KAF Kangasniemi 121.23 339 *e*PKIKP PKPdf 21 28 46.3 -1.7
KAF Kangasniemi 121.23 339 *e*pkp PKPdf 21 28 46.3 -1.7
KIV Kislovodsk 121.33 315 *i* PKIKP PKPdf 21 28 48.1 -0.8
KIV *e* 21 30 28.0
KIV *e*PS PS 21 40 11.9 -2.5
KIV pmax pmax
comp=Z,5.0nm,1.0s
AKH Akhalkalaki 121.42 312 P PKPdf 21 28 50.9 +1.6
FLOS Flostrand 121.63 347 *e*P PKPdf 21 28 48.8 +0.1
STOK Stokkvaagen 121.71 348 *e*P PKPdf 21 28 48.3 -0.5
FIA1 FINESS Array S 121.76 339 *e*PKPdf PKPdf 21 28 48.6 -0.4
FINES FINESS Array B 121.76 339 PKP PKPdf 21 28 48.9 -0.2
FINES PKKPbc PKKPbc 21 38 49.3 -0.9
FINES FINESS Array B 121.76 339 PKP PKPdf 21 28 48.9 -0.2
comp=Z,4.6nm,0.5s,baz=22,slow=3.8,SNR=38
FINES PKKPbc PKKPbc 21 38 49.3 -0.9
comp=Z,0.8nm,0.7s,baz=48,slow=2.8,SNR=5.0
BHD Baghdad 122.30 302 *e*x PP 21 30 36.0 +8.5
BHD *e*x x 21 32 15.5
BHD *e*x x 21 34 52.0
BHD *e*x x 21 37 32.0
BHD *e*x x 21 37 42.0
NSS Namsos 123.49 347 *e*P PKPdf 21 28 49.7 -2.6
CPUP Villa Florida 123.91 132 PKP PKPdf 21 28 54.4 +0.1
CPUP Villa Florida 123.91 132 PKP PKPdf 21 28 54.4 +0.1
comp=Z,8.3nm,0.6s,baz=317,slow=1.3,SNR=27
SDDR Presa de Saban 124.27 74 *e*PKPdf PKPdf 21 28 54.9 -0.3
BOSA Boshof 125.37 223 *e*PKPdf PKPdf 21 28 56.9 -0.3
BOSA PKP PKPdf 21 28 58.2 +0.9
BOSA Boshof 125.37 223 PKP PKPdf 21 28 58.2 +0.9
comp=Z,9.5nm,0.6s,baz=127,slow=2.4,SNR=25
NACGM Naroch 125.69 332 *e* PKPdf 21 28 55.0 -1.8
MALT Malatya 125.98 310 ⇓PKIKP PKPdf 21 28 59.1 +1.0
MALT Malatya 125.98 310 *e*PKPdf PKPdf 21 28 57.3 -0.8
MALT LR LR
comp=Z,336nm,22.0s
MALT Malatya 125.98 310 ⇓*i*P PKPdf 21 28 59.1 +1.0
NB2 NORSAR Subarra 126.66 345 PKPdf PKPdf 21 28 58.6 0.0
baz=27,slow=1.8
NB2 NORSAR Subarra 126.66 345 PKPdf PKPdf 21 28 58.6 0.0
comp=Z,7.5nm,0.8s,baz=27,slow=1.8
NOA NORSAR Array B 126.66 345 PKP PKPdf 21 28 58.4 -0.2
NOA NORSAR Array B 126.66 345 PKP PKPdf 21 28 58.4 -0.2
comp=Z,7.7nm,0.6s,baz=35,slow=2.0,SNR=44
AKASG Malin Array Be 126.91 327 PKIKP PKPdf 21 28 59.4 +0.1
AKASG Malin Array Be 126.91 327 PKP PKPdf 21 28 59.4 +0.1
AKASG Malin Array Be 126.91 327 PKP PKPdf 21 28 59.4 +0.1
comp=Z,3.7nm,0.6s,baz=57,slow=1.2,SNR=19
KMBO Kilima Mbogo 127.66 260 PKP PKPdf 21 29 03.0 +0.9
KMBO Kilima Mbogo 127.66 260 PKP PKPdf 21 29 03.0 +0.9
comp=Z,3.8nm,1.0s,baz=52,slow=3.8,SNR=8.3
SUW Suwalki 127.88 333 *e*PKPdf PKPdf 21 29 01.6 +0.6
BR131 Keskin Array S 129.08 313 *e*PKPdf PKPdf 21 29 03.5 -0.4
BRTR Keskin Array B 129.08 313 PKP PKPdf 21 29 04.0 0.0
BRTR Keskin Array B 129.08 313 PKP PKPdf 21 29 04.0 0.0
comp=Z,2.9nm,0.6s,baz=146,slow=5.3,SNR=22
ANTO Ankara 129.63 313 ⇑PKIKP PKPdf 21 29 05.1 +0.2
ANTO Ankara 129.63 313 *e*PKPdf PKPdf 21 29 03.8 -1.1
ANTO Ankara 129.63 313 ⇑*i*P PKPdf 21 29 05.1 +0.2
LEOM Leova 129.69 323 ⇓PKIKP PKPdf 21 29 05.7 +1.0
LEOM Leova 129.69 323 ⇓*i*P PKPdf 21 29 05.7 +1.0
TLCR 130.00 321 ⇑PKIKP PKPdf 21 29 06.8 +1.5
TLCR 130.00 321 ⇑*i*P PKPdf 21 29 06.8 +1.5
BSD Bornholm Skovb 130.41 339 *i* P PKPdf 21 29 04.9 -0.9
BSD
comp=Z,450nm,16.0s
BEL Belsk 130.41 332 *e*PKPdf PKPdf 21 29 07.4 +1.5
CFR Carcaliu 130.42 321 ⇓PKIKP PKPdf 21 29 07.0 +0.9
CFR Carcaliu 130.42 321 ⇓*i*P PKPdf 21 29 07.0 +0.9
TESR 130.61 324 ⇓*i*P PKPdf 21 29 07.4 +0.9
LSZ Lusaka 130.77 239 *e*PKPdf PKPdf 21 29 07.7 -0.1
BUR08 Bucovina Ar. S 130.81 326 *e*PKPdf PKPdf 21 29 06.2 -0.7
BURAR Bucovina Array 130.81 326 ⇑*i*P PKPdf 21 29 08.9 +1.9
CSS Prodhromos 130.87 307 *e*PKPdf PKPdf 21 29 06.6 -0.8
CSS *e*SKP 21 32 24.8
CSS LR LR
comp=Z,352nm,21.0s
VRI Vrincioaia 130.91 323 ⇓PKIKP PKPdf 21 29 07.5 +0.4
VRI Vrincioaia 130.91 323 ⇓*i*P PKPdf 21 29 07.5 +0.4
GKP Gorka Klasztor 130.93 336 *e*PKPdf PKPdf 21 29 07.6 +0.8
KWP Kalwaria Pacla 130.93 329 ⇑PKIKP PKPdf 21 29 07.6 +0.6
KWP Kalwaria Pacla 130.93 329 *e*PKPdf PKPdf 21 29 07.6 +0.6
KWP Kalwaria Pacla 130.93 329 ⇑*i*P PKPdf 21 29 07.6 +0.6
KWP Kalwaria Pacla 130.93 329 *e*PKPdf PKPdf 21 29 07.7 +0.7
MUD Monsted U'grnd 131.15 343 *i* P PKPdf 21 29 07.4 +0.3
MLR Muntele Rosu 131.58 323 ⇑*i*P PKPdf 21 29 07.9 -0.6
KOLS Kolonicke sedl 131.59 329 *e*PKIKP PKPdf 21 29 10.0 +1.7
KOLS Kolonicke sedl 131.59 329 *e*PKP PKPdf 21 29 10.0 +1.7
DOPR Dopca 131.64 324 ⇓*i*P PKPdf 21 29 08.9 +0.4
UZH Uzhgorod 131.77 328 *e*PKIKP PKPdf 21 29 04.3 -4.3

UZH *i* 21 29 08.7
UZH *e* 21 29 18.5
UZH MLR MLR
comp=N,100nm,24.0s
UZH MLR MLR
comp=E,300nm,24.0s
UZH MLR MLR
comp=Z,200nm,24.0s
TRPA Tarpa 131.96 328 ⇑*i*P PKPdf 21 29 10.0 +1.1
OJC Ojcow 131.97 331 *e*PKIKP PKPdf 21 29 09.3 +0.4
OJC Ojcow 131.97 331 *e*PKP PKPdf 21 29 09.3 +0.4
CRVS Cervenica-Dubn 132.03 329 *e*PKIKP PKPdf 21 29 09.6 +0.5
CRVS Cervenica-Dubn 132.03 329 *e*PKP PKPdf 21 29 09.6 +0.5
HUMR Humele 132.67 322 ⇑*i*P PKPdf 21 29 10.7 +0.3
DRGR 132.68 326 ⇑PKIKP PKPdf 21 29 11.3 +0.8
DRGR 132.68 326 ⇑*i*P PKPdf 21 29 11.3 +0.8
OKC Ostrava-Krasne 133.00 332 *e*PKIKP PKPdf 21 29 11.8 +0.9
OKC MLR MLR
comp=Z,700nm,23.7s
OKC Ostrava-Krasne 133.00 332 *e*PKPdf PKPdf 21 29 11.8 +0.9
OKC AMS AMS 22 24 40.0
comp=Z,700nm,23.7s
KSP Ksiaz 133.11 334 *e*PKIKP PKPdf 21 29 12.4 +1.3
KSP MLR MLR
comp=Z,2μm,22.3s
KSP Ksiaz 133.11 334 *e*PKPdf PKPdf 21 29 11.9 +0.8
MORC Moravsky Berou 133.32 332 ⇑PKIKP PKPdf 21 29 12.3 +0.7
MORC Moravsky Berou 133.32 332 ⇑*i*P PKPdf 21 29 12.3 +0.7
DPC Dobruska-Polom 133.46 334 *e*PKIKP PKPdf 21 29 13.1 +1.3
DPC MLR MLR
comp=Z,900nm,19.8s
DPC Dobruska-Polom 133.46 334 *e*PKPdf PKPdf 21 29 13.1 +1.3
DPC AMS AMS 22 26 40.0
comp=Z,900nm,19.8s
PSZ Piszkesteto 133.46 329 ⇑PKIKP PKPdf 21 29 07.9 -4.0
PSZ Piszkesteto 133.46 329 ⇑*i*P PKPdf 21 29 07.8 -4.1
GZR Gura Zlata 133.48 324 ⇑PKIKP PKPdf 21 29 13.5 +1.5
GZR Gura Zlata 133.48 324 ⇑*i*P PKPdf 21 29 13.5 +1.5
UPC Upice 133.48 334 *e*PKIKP PKPdf 21 29 12.9 +1.1
UPC Upice 133.48 334 *e*PKPdf PKPdf 21 29 12.9 +1.1
VYHS Vyhne 133.60 330 *e*PKIKP PKPdf 21 29 13.5 +1.4
VYHS Vyhne 133.60 330 *e*PKP PKPdf 21 29 13.5 +1.4
BZS Buzias 134.00 325 ⇑PKIKP PKPdf 21 29 13.3 +0.4
BZS Buzias 134.00 325 ⇑*i*P PKPdf 21 29 13.3 +0.4
BRG Berggiesshubel 134.07 336 *e*PKP PKPdf 21 29 14.6 +1.7
comp=Z,12nm,1.0s
BRG PP PP 21 31 24.8 -19
BRG
comp=N,480nm,17.5s
BRG
comp=E,318nm,22.1s
BRG
comp=Z,786nm,20.1s
BRG Berggiesshubel 134.07 336 *e*PKIKP PKPdf 21 29 14.6 +1.7
BRG pmax pmax
comp=Z,16nm,1.0s
BRG MLR MLR
comp=N,12μm,17.5s
BRG MLR MLR
comp=E,480nm,22.1s
BRG MLR MLR
comp=Z,318nm,20.1s
BRG Berggiesshubel 134.07 336 *e*PKIKP PKiKP 21 29 15.6 +1.4
PVCC Panska Ves 134.08 335 *e*PKIKP PKPdf 21 29 14.7 +1.8
PVCC MLR MLR
comp=Z,700nm,23.0s
PVCC Panska Ves 134.08 335 *e*PKPdf PKPdf 21 29 14.7 +1.8
PVCC AMS AMS 22 25 40.0
comp=Z,700nm,23.0s
VRAC Vranov 134.09 332 ⇑*i*P PKPdf 21 29 15.4 +2.4
CLL Collm 134.11 337 *e*PKIKP PKPdf 21 29 13.0 +0.1
CLL *e* 21 29 29.0
CLL *e* 21 31 47.0
CLL pmax pmax
comp=Z,5.0nm,0.8s
CLL MLR MLR
comp=Z,500nm,20.8s
CLL Collm 134.11 337 *e*PKPdf PKPdf 21 29 13.1 +0.1
CLL *e*PKiKP PKiKP 21 29 15.5 +1.3
CLL Collm 134.11 337 *e*PKPdf PKPdf 21 29 13.0 +0.1
comp=Z,5.0nm,0.8s
CLL *i* PKiKP PKiKP 21 29 15.2 +1.0
comp=Z,13nm,0.9s
CLL *e*(sPKPdf) 21 29 29.0
CLL *e*PP PP 21 31 47.0 +3.3
CLL *e*PKSbc PKSbc 21 32 43.0 -0.4
CLL *e* 21 41 17.0
CLL *e*PSKS 21 41 56.0
CLL *e*sPS 21 42 25.0
CLL *e*SPP SPP 21 43 40.0
CLL *e*PPPrev 21 45 02.0
CLL *e*SS SS 21 49 42.0 +16
CLL *e*PSPS 21 50 48.0
CLL *e*SSS SSS 21 55 00.0
CLL LmV 22 29 00.0
comp=Z,500nm,20.8s
NRDL Niedersach Rie 134.21 340 *e*PKPdf PKPdf 21 29 13.1 +0.1
NRDL *e*PKiKP PKiKP 21 29 15.8 +1.5
FBE Freiberg 134.27 336 *e*PKiKP PKiKP 21 29 16.3 +1.7
PRU Pruhonice 134.50 334 *e*PKIKP PKPdf 21 29 14.7 +1.0
PRU MLR MLR
comp=Z,800nm,21.6s
PRU Pruhonice 134.50 334 *e*PKPdf PKPdf 21 29 14.7 +1.0
PRU AMS AMS 22 33 00.0
comp=Z,800nm,21.6s
TREC Trest 134.60 333 *e*PKIKP PKPdf 21 29 14.8 +0.8
TREC MLR MLR
comp=Z,900nm,21.7s
TREC Trest 134.60 333 *e*PKPdf PKPdf 21 29 14.8 +0.8
TREC AMS AMS 22 28 20.0
comp=Z,900nm,21.7s
ZST Bratislava 134.65 331 *e*PKIKP PKPdf 21 29 14.7 +0.7
ZST Bratislava 134.65 331 *e*PKP PKPdf 21 29 14.7 +0.7
CLZ Clausthal 134.65 339 *e*PKIKP PKPdf 21 29 14.0 0.0
CLZ Clausthal 134.65 339 *e*PKPdf PKPdf 21 29 14.0 0.0
CLZ *e*PKiKP PKiKP 21 29 17.1 +1.7
NEUB Neuenburg 134.66 337 *e*PKPdf PKPdf 21 29 14.3 +0.4
NEUB *e*PKiKP PKiKP 21 29 16.8 +1.4
VTS Vitosha 134.81 321 ⇑PKIKP PKPdf 21 29 13.8 -0.9
VTS Vitosha 134.81 321 ⇑*i*P PKPdf 21 29 13.8 -0.9
TANN Tannenbergstha 135.02 336 *e*PKPdf PKPdf 21 29 14.6 -0.1
TANN *e*PKiKP PKiKP 21 29 17.6 +1.4
WERD Werda 135.06 336 *e*PKPdf PKPdf 21 29 14.6 -0.2
WERD *e*PKiKP PKiKP 21 29 17.5 +1.2
PLN Plauen 135.08 337 *e*PKiKP PKiKP 21 29 17.5 +1.2
GUNZ Gunzen 135.11 336 *e*PKPdf PKPdf 21 29 15.3 +0.4
GUNZ *e*PKiKP PKiKP 21 29 17.6 +1.2
IBBN Ibbenburen 135.14 341 *e*PKiKP PKiKP 21 29 17.6 +1.3
WERN Wernitzgruen 135.15 336 *e*PKiKP PKiKP 21 29 18.0 +1.5
MOX Moxa 135.17 337 *e*PKPdf PKPdf 21 29 15.2 +0.3
MOX Moxa 135.17 337 *e*PKPdf PKPdf 21 29 15.2 +0.3
MOX *e*PKiKP PKiKP 21 29 17.5 +1.0
NKC Novy Kostel 135.17 336 *e*PKiKP PKPdf 21 29 17.3 +2.3
NKC MLR MLR
comp=Z,600nm,19.9s
NKC Novy Kostel 135.17 336 *e*PKPdf PKPdf 21 29 17.3 +2.3
NKC AMS AMS 22 32 50.0
comp=Z,600nm,19.9s
CONA Conrad Observa 135.42 332 ⇑*i*PKiKP PKPdf 21 29 15.8 +0.2
comp=Z,9.7nm,0.7s
CONA Conrad Observa 135.42 332 ⇑*i*P PKPdf 21 29 15.8 +0.2
MANZ Manzenberg 135.50 336 *e*PKPdf PKPdf 21 29 16.1 +0.5
MANZ *e*PKiKP PKiKP 21 29 18.5 +1.3
KHC Kasperske Hory 135.56 334 *e*PKiKP PKPdf 21 29 16.1 +0.3
KHC *e* 21 29 30.9
KHC MLR MLR
comp=Z,900nm,21.1s
KHC Kasperske Hory 135.56 334 *e*PKPdf PKPdf 21 29 15.8 +0.1
KHC Kasperske Hory 135.56 334 *e*PKPdf PKPdf 21 29 16.1 +0.3
KHC *e*pPKP pPKPdf 21 29 30.9 -5.7
KHC AMS AMS 22 33 30.0
comp=Z,900nm,21.1s
ROTZ Rotzenmuhle 135.63 336 *e*PKiKP PKiKP 21 29 18.8 +1.4
GEC2 GERESS Array S 135.72 334 *e*PKiKP PKPdf 21 29 16.4 +0.2
GEC2 GERESS Array S 135.72 334 *e*PKPdf PKPdf 21 29 16.4 +0.2
GEC2 *e*PKiKP PKiKP 21 29 19.0 +1.2
GERES GERESS Array B 135.72 334 PKPpre PKPpre 21 29 03.9
GERES PKP PKiKP 21 29 17.4 -0.3
GERES GERESS Array B 135.72 334 PKhKP PKPpre 21 29 03.9
comp=Z,1.1nm,0.7s,baz=48,slow=2.0,SNR=11
GERES PKP PKiKP 21 29 17.4 -0.3
comp=Z,4.8nm,0.6s,baz=43,slow=1.8,SNR=24
WET Wettzell 135.84 335 *i* PKIKP PKPdf 21 29 19.2 +2.9

WET	**Wettzell**	**135.84 335**	*e*PKiKP	**PKPdf**	**21 29 19.2**	**+2.9**
BUG	**Bochum--Univer**	**136.04 341**	*e*PKiKP	**PKiKP**	**21 29 19.3**	**+1.2**
GRF	**Grafenberg Arr**	**136.08 336**	*e*PKiKP	**PKdf**	**21 29 16.9**	**+0.2**
GRF	**Grafenberg Arr**	**136.08 336**	*e*PKPdf	**PKPdf**	**21 29 16.9**	**+0.2**
GROS	**Grobnik**	**136.64 330**	*e*PKPdf	**PKPdf**	**21 29 19.1**	**+1.1**
TNS	**Taunus Mts**	**136.68 339**	*i* PKiKP	**PKPdf**	**21 29 21.0**	**+3.2**
TNS	**Taunus Mts**	**136.68 339**	*e*PKiKP	**PKPdf**	**21 29 21.0**	**+3.2**
MEM	**Membach**	**137.16 341**	PKP	**PKPdf**	**21 29 19.6**	**+0.9**
BDFB	**Brasilia**	**137.20 127**	PKPpre	PKPpre	21 29 10.2	
BDFB			PKP	**PKPdf**	**21 29 20.6**	**+0.7**
BDFB	**Brasilia**	**137.20 127**	PKhKP	PKPpre	21 29 10.2	
	comp=Z,2.1nm,0.6s,baz=135,slow=13,SNR=2.9					
BDFB			PKP	**PKPdf**	**21 29 20.6**	**+0.7**
	comp=Z,8.1nm,0.6s,baz=297,slow=2.5,SNR=5.3					
FUR	**Furstenfeldbru**	**137.27 335**	*i* PKiKP	**PKPdf**	**21 29 21.9**	**+2.9**
FUR	**Furstenfeldbru**	**137.27 335**	*e*PKiKP	**PKPdf**	**21 29 21.9**	**+2.9**
LJU	**Ljubljana**	**137.41 331**	*e*PKPdf	**PKPdf**	**21 29 20.1**	**+0.9**
BCLA	**Clavier**	**137.54 342**	PKP	**PKPdf**	**21 29 21.7**	**+2.3**
STU	**Stuttgart**	**137.61 337**	*e*PKiKP	**PKPdf**	**21 29 19.4**	**-0.1**
STU	**Stuttgart**	**137.61 337**	*e*PKPdf	**PKPdf**	**21 29 20.0**	**+0.5**
STU			*e*PKiKP	**PKiKP**	**21 29 22.8**	**+1.3**
STU	**Stuttgart**	**137.61 337**	*e*PKPdf	**PKPdf**	**21 29 19.4**	**-0.1**
CEY	**Cerknica**	**137.68 330**	*e*PKPdf	**PKPdf**	**21 29 20.4**	**+0.6**
SNF	**Seneffe**	**137.77 343**	PKP	**PKPdf**	**21 29 21.7**	**+1.9**
WTTA	**Wattenberg**	**137.82 334**	⇓*i*PKPdf	PKPdf	21 29 14.9	-5.4
	comp=Z,2.2nm,0.5s					
WTTA			⇑*i*PKiKP	**PKPdf**	**21 29 20.9**	**+0.7**
	comp=Z,20nm,0.9s					
WTTA	**Wattenberg**	**137.82 334**	⇑*i*P		**21 29 20.9**	**+0.7**
WLF	**Walferdange**	**137.93 340**	PKP	**PKPdf**	**21 29 21.7**	**+1.6**
WLF	**Walferdange**	**137.93 340**	PKiKP	**PKPdf**	**21 29 19.6**	**-0.5**
WLF	**Walferdange**	**137.93 340**	PKPdf	**PKPdf**	**21 29 19.6**	**-0.5**
LANF	**Langenberg**	**137.95 339**	PKiKP	**PKPdf**	**21 29 15.2**	**-5.0**
LANF	**Langenberg**	**137.95 339**	PKP	**PKPdf**	**21 29 15.2**	**-5.0**
LANF	**Langenberg**	**137.95 339**	PKP	**PKPdf**	**21 29 15.2**	**-5.0**
MOTA	**Moosalm**	**137.99 334**	⇓*i*PKiKP	**PKPdf**	**21 29 20.4**	**-0.1**
MOTA	**Moosalm**	**137.99 334**	⇑*i*PKPdf	PKPdf	21 29 13.2	-7.3
	comp=Z,3.7nm,0.6s					
MOTA			⇓*i*PKPdf	**PKPdf**	**21 29 20.4**	**-0.1**
	comp=Z,8.5nm,0.6s					
MOTA	**Moosalm**	**137.99 334**	⇓*i*P	**PKPdf**	**21 29 20.4**	**-0.1**
DOU	**Dourbes**	**138.04 342**	PKP	**PKPdf**	**21 29 22.6**	**+2.3**
FETA	**Feichten**	**138.40 334**	⇑*i*PKPdf	PKPdf	21 29 15.3	-5.9
	comp=Z,2.7nm,0.7s					
FETA			⇓*i*PKPdf	**PKPdf**	**21 29 21.2**	**0.0**
	comp=Z,17nm,1.1s					
FETA	**Feichten**	**138.40 334**	⇓*i*P	**PKPdf**	**21 29 21.2**	**0.0**
DAVA	**Damuels**	**138.54 335**	⇑*i*PKPdf	PKPdf	21 29 14.8	-6.7
	comp=Z,4.7nm,0.7s					
DAVA			⇑*i*PKiKP	**PKPdf**	**21 29 23.0**	**+1.5**
	comp=Z,11nm,0.6s					
DAVA	**Damuels**	**138.54 335**	⇑*i*P	**PKPdf**	**21 29 23.0**	**+1.5**
MOF	**Molkenrain**	**139.14 338**	PKP	PKPdf	21 29 12.8	-10
TUE	**Stuetta**	**139.41 335**	*e*PKPpre	PKPpre	21 29 16.2	
TUE			PKPdf	**PKPdf**	**21 29 23.6**	**+0.4**
LOMF	**Lomont**	**139.67 338**	PKP	PKPdf	21 29 16.3	-7.2
AGO	**Saint Agoulin**	**142.08 341**	PKP	**PKPdf**	**21 29 26.0**	**-1.8**
AGO	**Saint Agoulin**	**142.08 341**	PKP	**PKPdf**	**21 29 26.0**	**-1.8**
SAOF	**Saorge**	**142.16 334**	PKP	**PKPdf**	**21 29 23.7**	**-4.3**
SAOF	**Saorge**	**142.16 334**	PKP	**PKPdf**	**21 29 23.7**	**-4.3**
AUTN	**L'Aution**	**142.21 335**	PKP	PKPdf	21 29 22.9	-5.4
TOUF	**Mont Tournerai**	**142.27 335**	PKP	PKPdf	21 29 22.4	-6.0
PYM	**Petit Puy Mans**	**142.39 340**	PKiKP	**PKPdf**	**21 29 26.2**	**-2.2**
PYM	**Petit Puy Mans**	**142.39 340**	PKP	**PKPdf**	**21 29 26.2**	**-2.2**
PYM	**Petit Puy Mans**	**142.39 340**	PKP	**PKPdf**	**21 29 26.2**	**-2.2**
CALN	**Calern**	**142.64 335**	PKiKP	**PKPdf**	**21 29 25.2**	**-3.8**
CALN	**Calern**	**142.64 335**	PKP	**PKPdf**	**21 29 25.2**	**-3.8**
CALN	**Calern**	**142.64 335**	PKP	**PKPdf**	**21 29 25.2**	**-3.8**
LBL	**Lubilhac**	**142.76 340**	PKiKP	**PKPdf**	**21 29 26.4**	**-2.7**
LBL	**Lubilhac**	**142.76 340**	PKP	**PKPdf**	**21 29 26.4**	**-2.7**
LBL	**Lubilhac**	**142.76 340**	PKP	**PKPdf**	**21 29 26.4**	**-2.7**
VSL	**Villasalto**	**144.78 328**	*e*PKPdf	**PKPab**	**21 29 31.6**	**-0.1**
LRDF	**Laroque-de-Fa**	**145.02 339**	PKP	**PKPdf**	**21 29 33.3**	**+0.3**
LRDF	**Laroque-de-Fa**	**145.02 339**	PKP	**PKPdf**	**21 29 33.3**	**+0.3**
SJAF	**Saint Jean de**	**145.28 338**	PKP	**PKPab**	**21 29 33.5**	**0.0**
SJAF	**Saint Jean de**	**145.28 338**	PKP	**PKPab**	**21 29 33.5**	**0.0**
FILF	**Fillols**	**145.34 338**	PKP	**PKPab**	**21 29 33.8**	**+0.1**
FILF	**Fillols**	**145.34 338**	PKP	**PKPab**	**21 29 33.8**	**+0.1**
CARF	**Carcanieres**	**145.36 339**	PKP	**PKPab**	**21 29 34.0**	**+0.1**
CARF	**Carcanieres**	**145.36 339**	PKP	**PKPab**	**21 29 34.0**	**+0.1**
MLS	**Moulis**	**145.50 340**	PKP	**PKPab**	**21 29 34.4**	**+0.2**
MLS	**Moulis**	**145.50 340**	PKP	**PKPab**	**21 29 34.4**	**+0.2**
LABF	**Labassere**	**145.74 342**	PKP	**PKPbc**	**21 29 34.6**	**-0.2**
LABF	**Labassere**	**145.74 342**	PKP	**PKPbc**	**21 29 34.6**	**-0.2**
REYF	**Montagne du Re**	**145.87 342**	PKP	**PKPbc**	**21 29 35.3**	**+0.1**
REYF	**Montagne du Re**	**145.87 342**	PKP	**PKPbc**	**21 29 35.3**	**+0.1**
RESF	**Ens**	**145.88 341**	PKP	**PKPab**	**21 29 36.6**	**+0.8**
RESF	**Ens**	**145.88 341**	PKP	**PKPab**	**21 29 36.6**	**+0.8**
VIEF	**Viey**	**145.91 341**	PKP	**PKPab**	**21 29 36.3**	**+0.4**
VIEF	**Viey**	**145.91 341**	PKP	**PKPab**	**21 29 36.3**	**+0.4**
LARF	**Larrau**	**146.07 343**	PKP	**PKPab**	**21 29 36.8**	**+0.4**
LARF	**Larrau**	**146.07 343**	PKP	**PKPab**	**21 29 36.8**	**+0.4**
KEST	**Kesra**	**147.48 323**	*e*PKPdf	**PKPdf**	**21 29 37.7**	**+0.2**
KEST			PKPbc	**PKPbc**	**21 29 40.8**	**+0.7**
KEST	**Kesra**	**147.48 323**	PKPbc	**PKPbc**	**21 29 40.8**	**+0.7**
	comp=Z,28nm,0.8s,baz=226,slow=1.0,SNR=69					
CMAH	**Djebel Manchou**	**147.94 326**	P	**PKPdf**	**21 29 37.8**	**-0.4**
CAEH	**'Ain El Ouahch**	**148.13 327**	P	**PKPbc**	**21 29 40.6**	**-1.1**
ABSA	**Djebel Ababsia**	**148.16 326**	P	**PKPdf**	**21 29 38.0**	**-0.6**
CKFL	**Kef-Lekhel**	**148.48 327**	P	**PKPbc**	**21 29 41.0**	**+1.8**
PBRG	**Braganca**	**148.60 350**	*e*PKPbc	**PKPbc**	**21 29 43.1**	**+0.3**
PGAV	**Gavieira, Arco**	**148.68 352**	*e*PKPbc	**PKPbc**	**21 29 43.3**	**+0.2**
PGAV			eLR	LR	22 23 02.9	
	comp=Z,569nm,18.0s					
CASM	**Ain Smara**	**148.71 327**	P	**PKPbc**	**21 29 42.6**	**-0.7**
PCAB	**Cabril**	**148.90 351**	*e*PKPbc	**PKPbc**	**21 29 43.9**	**+0.3**
POLO	**Lamas de Olo**	**149.19 351**	*e*PKPbc	**PKPbc**	**21 29 45.0**	**+0.6**
MVO	**Moncorvo**	**149.27 350**	*e*PKPdf	**PKPdf**	**21 29 41.5**	**+1.3**
MVO	**Moncorvo**	**149.27 350**	*e*PKPbc	**PKPbc**	**21 29 45.1**	**+0.5**
MVO			eLR	LR	22 21 17.5	
	comp=Z,669nm,20.0s					
PVRL	**Vila Real**	**149.28 351**	*e*PKPbc	**PKPbc**	**21 29 45.0**	**+0.4**
SET	**Setif**	**149.33 328**	P	**PKPbc**	**21 29 45.0**	**+0.1**
PGRA	**Graciosa**	**149.37 22**	*e*PKP	**PKPbc**	**21 29 46.2**	**+1.5**
PTO	**Porto**	**149.54 352**	*e*PKPbc	**PKPbc**	**21 29 45.9**	**+0.8**
ROSA	**Rosais**	**149.54 22**	*e*PKP	**PKPbc**	**21 29 46.1**	**+0.9**
PICO	**Pico**	**149.66 23**	*e*PKP	**PKPbc**	**21 29 46.0**	**+0.4**
PCAN	**Candelaria**	**149.67 23**	*e*PKP	**PKPbc**	**21 29 47.5**	**+1.9**
PMAN	**Manadas**	**149.68 22**	*e*PKP	**PKPbc**	**21 29 46.6**	**+1.1**
PVIS	**Viseu**	**149.85 351**	*e*PKPbc	**PKPbc**	**21 29 46.5**	**+0.5**
ADH	**Angra Heroismo**	**149.97 21**	*e*PKP	**PKPab**	**21 29 49.3**	**-2.7**
ESDC	**Sonseca Array**	**150.02 344**	PKP	**PKPdf**	**21 29 42.9**	**+1.4**
ESDC			PKPbc	**PKPbc**	**21 29 46.8**	**+0.3**
ESDC	**Sonseca Array**	**150.02 344**	PKP	**PKPdf**	**21 29 42.9**	**+1.4**
	comp=Z,8.1nm,0.6s,baz=334,slow=2.3,SNR=12					
ESDC			PKPbc	**PKPbc**	**21 29 46.8**	**+0.3**
	comp=Z,14nm,0.7s,baz=3.3,slow=1.5,SNR=16					
ESLA	**Sonseca Array**	**150.02 344**	*e*PKPdf	**PKPdf**	**21 29 41.5**	**0.0**
ESLA			*e*PKPbc	**PKiKP**	**21 29 47.1**	**-0.3**
MTE	**Manteigas**	**150.10 350**	*e*PKPdf	**PKPdf**	**21 29 41.7**	**+0.1**
MTE	**Manteigas**	**150.10 350**	*e*PKPbc	**PKPbc**	**21 29 47.0**	**+0.4**
MTE			eLR	LR	22 24 57.9	
	comp=Z,706nm,22.0s					
EMHD	**Djebel Mahouad**	**150.54 331**	P	**PKPbc**	**21 29 48.5**	**+0.6**
PCBR	**Castelo Branco**	**150.64 350**	*e*PKPdf	**PKPdf**	**21 29 43.5**	**+1.2**
PCBR	**Castelo Branco**	**150.64 350**	*e*PKPbc	**PKPbc**	**21 29 48.1**	**+0.3**
PTOM	**Tomar**	**151.00 351**	*e*PKPbc	**PKPbc**	**21 29 49.1**	**+0.4**
PMRV	**Marv??o**	**151.02 349**	*e*PKPbc	**PKPbc**	**21 29 49.2**	**+0.4**
PMRV			eLR	LR	22 25 40.0	
	comp=Z,537nm,20.0s					
EBNR	**Beni Rached**	**151.11 333**	P	**PKPbc**	**21 29 49.7**	**+0.6**
PSET	**Sete Cidades**	**151.23 20**	*e*PKP	**PKPbc**	**21 29 49.7**	**+0.4**
ECHA	**Ech Chlef**	**151.30 333**	P	**PKPbc**	**21 29 50.2**	**+0.7**
CMLA	**Cha da Macela**	**151.35 19**	*e*PKP	**PKPbc**	**21 29 50.6**	**+1.0**
PMTG	**Montargil**	**151.51 351**	*e*PKPbc	**PKPbc**	**21 29 50.0**	**+0.1**
EANR	**'Ain N'Sour**	**151.59 334**	P	**PKPbc**	**21 29 51.5**	**+1.3**
PESTR	**Estremoz**	**151.60 349**	*e*PKPbc	**PKPbc**	**21 29 50.4**	**+0.3**
PESTR	**Estremoz**	**151.60 349**	*e*PKPab	**PKPab**	**21 29 57.9**	**-0.9**
PMAFR	**Mafra**	**151.78 352**	*e*PKPab	**PKPab**	**21 30 00.6**	**+1.1**
LIS	**Lisbon**	**152.00 352**	*e*P	**PKPdf**	**21 29 43.0**	**-1.5**
LIS			AMS	AMS	22 32 28.6	
	comp=N,886nm,26.2s					
LIS	**Lisbon**	**152.00 352**	*e*PKiKP	**PKPdf**	**21 29 42.9**	**-1.5**
EVO	**Evora**	**152.00 350**	*e*PKPbc	**PKPbc**	**21 29 51.3**	**+0.3**
EVO	**Evora**	**152.00 350**	*e*PKPab	**PKPab**	**21 30 01.8**	**+1.4**
PBAR	**Barrancos**	**152.17 348**	*e*PKPdf	**PKPdf**	**21 29 45.7**	**+1.0**
PBAR	**Barrancos**	**152.17 348**	*e*PKPbc	**PKPbc**	**21 29 52.0**	**+0.6**
PBAR	**Barrancos**	**152.17 348**	*e*PKPab	**PKPab**	**21 30 02.5**	**+1.4**
PSMA	**Santa Maria**	**152.18 19**	*e*PKP	**PKPbc**	**21 29 52.5**	**+1.0**
PSMN	**Pico do Norte,**	**152.19 19**	*e*PKP	**PKPdf**	**21 29 47.5**	**+2.7**
PBEJ	**Beja**	**152.47 349**	*e*PKPbc	**PKPbc**	**21 29 52.7**	**+0.6**
PBEJ	**Beja**	**152.47 349**	*e*PKPab	**PKPab**	**21 30 04.0**	**+1.6**
PCVE	**Castro Verde**	**152.88 350**	*e*PKPdf	**PKPdf**	**21 29 47.5**	**+1.7**
PCVE	**Castro Verde**	**152.88 350**	*e*PKPbc	**PKPbc**	**21 29 53.8**	**+0.8**
PCVE	**Castro Verde**	**152.88 350**	*e*PKPab	**PKPab**	**21 30 05.8**	**+1.6**
PVAQ	**Vaqueiros**	**153.05 349**	*e*PKPbc	**PKPbc**	**21 29 54.7**	**+1.3**
PVAQ	**Vaqueiros**	**153.05 349**	*e*PKPab	**PKPab**	**21 30 06.3**	**+1.5**
PVAQ			eLR	LR	22 23 28.8	
	comp=N,599nm,22.0s					
PTEO	**Sao Teotonio**	**153.08 351**	*e*PKPbc	**PKPbc**	**21 29 54.5**	**+1.1**
PBDV	**Barranco-do-Ve**	**153.24 349**	*e*PKPdf	**PKPdf**	**21 29 47.4**	**+1.0**
PBDV	**Barranco-do-Ve**	**153.24 349**	*e*PKPbc	**PKPbc**	**21 29 55.3**	**+1.4**
PBDV	**Barranco-do-Ve**	**153.24 349**	*e*PKPab	**PKPab**	**21 30 07.5**	**+1.8**
MORF	**Marmelete**	**153.31 350**	*e*PKPdf	**PKPdf**	**21 29 47.8**	**+1.3**
MORF	**Marmelete**	**153.31 350**	*e*PKIKP	**PKPdf**	**21 29 44.3**	**-2.2**
TOA0	**Torodi Ar. Sit**	**164.50 280**	*e*PKPdf	**PKPdf**	**21 29 59.6**	**-0.6**
TORD	**Torodi Ar. Bea**	**164.50 280**	PKP	**PKPdf**	**21 30 00.2**	**0.0**
TORD			PKPdf	**PKPdf**	**21 30 00.2**	**0.0**
TORD	**Torodi Ar. Bea**	**164.50 280**	PKP	**PKPdf**	**21 30 00.2**	**0.0**
	comp=N,6.0nm,0.6s,baz=17,slow=1.1,SNR=70					
TORD			PKPab	**PKPab**	**21 30 55.0**	**-0.4**
	comp=N,4.5nm,0.8s,baz=87,slow=3.8,SNR=4.7					

BJI 21 21:20:28.5, 27.82N×103.69E, h15km, ML3.6/7, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GYA	**Guiyang**	**2.98**	**116**	*e*Pn	Pn	21 21 08.0	-7.3
GYA				Pg	Pg	21 21 26.8	+1.2
GYA				Sg	Sg	21 22 03.8	-0.4
GYA				smax	smax		
	comp=N,100nm,0.8s						
GYA				smax	smax		
	comp=E,90nm,0.6s						
CD2	**Chengdu**	**3.08**	**1**	Pn	Pb	21 21 20.1	-3.0
CD2				Pg	Pg	21 21 31.5	+3.9
CD2				Sn	Sb	21 21 59.4	-1.1
CD2				Sg	Sg	21 22 12.5	+5.0
CD2				smax	smax		
	comp=N,430nm,0.7s						
CD2				smax	smax		
	comp=E,530nm,0.7s						

*ISCJB **21** 21:55:57.0±0.8, 5°.2N±0°.1×94°.4E±0°.1, h46km, mb4.1/11, Error ellipse: s-maj=23.7km s-min=6.8km az=43.9*
*IDC **21** 21:55:59.2±4.7, 5°.31N×94°.49E, h51km±41km, mb3.7/10, mb1 3.8/12, mb1mx3.6/28, mbtmp3.7/12, ML4.0/2, Error ellipse: s-maj=50.4km s-min=15.1km az=56.0*

ISC 21 21:55:58.7±0.9, 5°.3N±0°.1×94°.4E±0°.1, h46km, n24, σ0§55/26, mb3.8/11, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**5.16**	**118**	P	**Pn**	**21 57 14.4**	**+0.7**
	1.5nm,0.3s,baz=298,slow=10,SNR=7.0						
PSI				S	**Sn**	**21 58 11.4**	**-0.7**
	1.4nm,0.3s,baz=332,slow=18,SNR=2.6						
CMAR	**Chiang Mai Arr**	**13.82**	**18**	P	**Pn**	**21 59 12.7**	**+0.5**
	0.5nm,0.3s,baz=209,slow=15,SNR=7.8						
ODAN	**Odare**	**22.46**	**343**	*e*P	**P**	**22 00 55.5**	**+1.1**
RAMN	**Ramite**	**22.78**	**342**	*e*P	**P**	**22 00 58.0**	**+0.2**
TAPN	**Taplejung**	**22.84**	**345**	*e*P	**P**	**22 00 58.0**	**-0.4**
	4.9nm,0.4s						
PKI	**Pulchoki**	**23.75**	**340**	*e*P	**P**	**22 01 07.0**	**-0.3**
PKIN	**Phulchoki**	**23.76**	**340**	*e*P	**P**	**22 01 07.2**	**-0.1**
	2.8nm,0.4s						
DMN	**Daman**	**23.89**	**339**	*e*P	**P**	**22 01 08.7**	**+0.2**
GUN	**Gumba**	**23.90**	**341**	*e*P	**P**	**22 01 09.1**	**+0.3**
KKN	**Kakani**	**23.99**	**340**	*e*P	**P**	**22 01 09.1**	**-0.3**
KOLN	**Koldanda**	**24.60**	**337**	*e*P	**P**	**22 01 15.3**	**+0.3**
	11nm,0.6s						
DANN	**Dangsing**	**25.05**	**337**	*e*P	**P**	**22 01 19.0**	**-0.2**
	12nm,0.6s						
PYUN	**Piuthan**	**25.13**	**336**	*e*P	**P**	**22 01 20.2**	**+0.4**
	7.2nm,0.2s						
AAK	**Ala-Archa**	**41.16**	**338**	P	**P**	**22 03 38.7**	**-0.2**
	0.9nm,0.7s,baz=54,slow=8.3,SNR=3.9						
MKAR	**Makanchi Array**	**42.65**	**348**	P	**P**	**22 03 50.8**	**0.0**
	2.1nm,0.3s,baz=165,slow=9.1,SNR=36						
SONM	**Songino Array**	**43.62**	**12**	P	**P**	**22 03 57.6**	**-1.1**
	0.7nm,0.6s,baz=190,slow=8.4,SNR=6.5						
WRA	**Warramunga Arr**	**46.61**	**124**	P	**P**	**22 04 22.0**	**-0.7**
	17nm,0.3s,baz=302,slow=9.7,SNR=3.7						
KURBB	**Kurchatov Arra**	**47.09**	**346**	P	**P**	**22 04 26.6**	**+0.6**
	3.3nm,0.6s,baz=172,slow=7.0,SNR=36						
ASAR	**Alice Springs**	**48.11**	**128**	P	**P**	**22 04 34.2**	**-0.1**
	0.8nm,0.8s,baz=300,slow=7.8,SNR=8.6						
ASAR				pP	**pP**	**22 04 48.0**	**+0.8**
	0.3nm,0.6s,baz=314,slow=8.1,SNR=4.4						
ZALV	**Zalesovo Beam**	**49.13**	**353**	P	**P**	**22 04 41.7**	**0.0**
	1.5nm,0.2s,baz=170,slow=7.9,SNR=11						
BRTR	**Keskin Array B**	**64.30**	**312**	P	**P**	**22 06 29.8**	**-0.1**
	0.5nm,0.8s,baz=138,slow=11,SNR=3.4						
FINES	**FINESS Array B**	**75.09**	**332**	P	**P**	**22 07 35.0**	**-0.6**
	0.7nm,0.6s,baz=132,slow=11,SNR=3.8						
ARCES	**ARCESS Array B**	**77.76**	**340**	P	**P**	**22 07 50.4**	**-0.3**
	8.1nm,1.0s,baz=92,slow=10,SNR=4.4						
GERES	**GERESS Array B**	**79.90**	**319**	P	**P**	**22 08 03.5**	**+0.5**
	0.5nm,0.6s,baz=97,slow=5.5,SNR=4.9						

*IDC **21** 22:02:40.2±0.9, 1°.00N×126°.68E, h0km, mb4.0/7, mb1 4.1/9, mb1mx3.9/23, mbtmp4.0/9, ML3.9/2, Error ellipse: s-maj=50.7km s-min=14.3km az=71.0*
*AUST **21** 22:02:41.8±0.0, 2°.09N×126°.60E, h112km, Error ellipse: s-maj=2.1km s-min=1.2km az=327.0*
*ISCJB **21** 22:02:44.1±0.5, 0°.97N±0°.06×126°.38E±0°.06, h39km, mb4.2/11, Error ellipse: s-maj=9.2km s-min=7.2km az=37.8*
*NEIC **21** 22:02:45.2±0.4, 0°.98N×126°.66E, h35km, mb4.1/5, Error ellipse: s-maj=16.7km s-min=7.0km az=72.0*
*DJA **21** 22:02:48.3±0.9, 1°.N±7°×12°.7E±°, h51km±16km, M4.1/5, MLv4.1/5*

ISC 21 22:02:46.2±0.7, 1°.06N±0°.08×126°.48E±0°.08, h39km, n38, σ1§37/35, mb4.1/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.93**	**108**	P	**Pn**	**22 03 03.2**	**+0.5**
TNTI				S	**Sn**	**22 03 14.8**	**0.0**
GAMI	**Galela, Maluku**	**1.52**	**59**	P	**Pn**	**22 03 10.0**	**-0.8**
MNI	**Manado**	**1.69**	**283**	P	Pn	22 03 17.8	+4.6
LBMI	**Labuha**	**1.97**	**149**	P	**Pn**	**22 03 17.8**	**+0.8**
LUWI	**Luwuk**	**4.26**	**241**	P	Pn	22 03 54.2	+5.7
LUWI	**Luwuk**	**4.26**	**241**	P	Pn	22 03 54.4	+5.9
	baz=4.9,SNR=8.9						
PCI	**Palu**	**6.93**	**254**	S	Sn	22 05 56.6	+14
	baz=7.4,SNR=14						
FAKI	**Fak Fak**	**6.99**	**124**	P	**Pn**	**22 04 28.9**	**+2.9**
	baz=7.5,SNR=5.9						
KAPI	**Kappang**	**9.03**	**228**	Pn	**Pn**	**22 04 54.6**	**+0.5**
KAPI	**Kappang**	**9.03**	**228**	Pn	**Pn**	**22 04 54.6**	**+0.5**
	2.4nm,0.3s,baz=55,slow=6.9,SNR=7.4						
MTN	**Manton Dam**	**14.56**	**162**	P	**P**	**22 06 16.1**	**+0.5**
	baz=16,SNR=3.3						
FITZ	**Fitzroy Crossi**	**19.06**	**182**	*e*P	**P**	**22 07 03.1**	**-2.2**
	7.4nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.06**	**182**	P	**P**	**22 07 02.8**	**-2.4**
	0.2nm,0.3s,baz=21,slow=12,SNR=5.8						
FITZ	**Fitzroy Crossi**	**19.06**	**182**	P	**P**	**22 07 04.5**	**-0.7**
	baz=20,SNR=5.1						
WRAB	**Tennant Creek**	**22.24**	**160**	*e*P	**P**	**22 07 37.4**	**-2.4**
	11nm,0.6s						
WRA	**Warramunga Arr**	**22.25**	**160**	P	**P**	**22 07 37.3**	**-2.5**
WRA	**Warramunga Arr**	**22.25**	**160**	P	**P**	**22 07 37.3**	**-2.5**
	36nm,0.3s,baz=339,slow=11,SNR=2.0						
QIS	**Mount Isa**	**25.03**	**150**	P	**P**	**22 08 06.9**	**0.0**
	baz=26,SNR=4.9						
AS31	**Alice Springs**	**25.61**	**164**	*e*P	**P**	**22 08 10.6**	**-1.4**
ASAR	**Alice Springs**	**25.61**	**164**	P	**P**	**22 08 10.8**	**-1.3**
ASAR	**Alice Springs**	**25.61**	**164**	P	**P**	**22 08 10.8**	**-1.3**
	2.3nm,0.4s,baz=347,slow=12,SNR=32						
MEEK	**Meekatharra**	**28.56**	**195**	P	**P**	**22 08 37.5**	**-1.0**
	baz=30,SNR=3.1						
BBOO	**Buckleboo**	**34.88**	**166**	P	**P**	**22 09 32.8**	**-1.1**
	baz=36,SNR=6.5						
STKA	**Stephens Creek**	**35.75**	**158**	*e*P	**P**	**22 09 40.0**	**-1.4**
	0.5nm,0.3s						
STKA	**Stephens Creek**	**35.75**	**158**	P	**P**	**22 09 40.2**	**-1.2**
	2.0nm,0.4s,baz=329,slow=7.9,SNR=16						
STKA	**Stephens Creek**	**35.75**	**158**	P	**P**	**22 09 40.2**	**-1.2**
	baz=37,SNR=12						
SONM	**Songino Array**	**49.75**	**342**	P	**P**	**22 11 36.1**	**+1.3**
	0.3nm,0.6s,baz=160,slow=7.9,SNR=2.9						
MK31	**Makanchi Array**	**59.61**	**326**	*e*P	**P**	**22 12 46.0**	**-0.2**
MKAR	**Makanchi Array**	**59.61**	**326**	P	**P**	**22 12 47.0**	**+0.8**
MKAR	**Makanchi Array**	**59.61**	**326**	P	**P**	**22 12 47.0**	**+0.8**
	0.7nm,0.3s,baz=120,slow=8.0,SNR=30						
ZALV	**Zalesovo Beam**	**62.85**	**334**	P	**P**	**22 13 08.4**	**+0.4**
ZALV	**Zalesovo Beam**	**62.85**	**334**	P	**P**	**22 13 08.4**	**+0.4**
	0.4nm,0.3s,baz=130,slow=4.6,SNR=4.9						
KURBB	**Kurchatov Arra**	**63.85**	**328**	P	**P**	**22 13 15.1**	**+0.5**
	0.9nm,0.5s,baz=130,slow=6.2,SNR=16						
KURK	**Kurchatov**	**63.86**	**328**	*e*P	**P**	**22 13 14.1**	**-0.6**
	2.7nm,0.6s						
ABKAR	**Akbulak array**	**74.06**	**321**	*e*P	**P**	**22 14 18.9**	**+0.8**
	1.6nm,0.8s						
VNDA	**Vanda**	**80.82**	**173**	P	**P**	**22 14 54.8**	**-0.6**
VNDA	**Vanda**	**80.82**	**173**	P	**P**	**22 14 54.8**	**-0.6**
	0.7nm,0.4s,baz=308,slow=7.0,SNR=10						

*MEX **21** 22:09:21.5±0.5, 14°.15N×94°.22W, h16km±13km, MD4.2*
*IDC **21** 22:09:23.7±1.0, 15°.01N×93°.32W, h0km, mb4.1/11, mb1 4.3/13, mb1mx4.1/23, mbtmp4.1/13, ML3.8/1, MS3.7/1, Ms1 3.7/1, ms1mx2.9/29, Error ellipse: s-maj=40.3km s-min=17.7km az=52.0*

ISC 21 22:09:25.7±0.8, 14°.65N±0°.07×93°.95W±0°.05, h30km, n23, σ1§86/27, mb4.3/12, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.65**	**81**	*e*P	**Pn**	**22 09 51.9**	**-0.7**
THIG				*e*S	**Sb**	**22 10 15.6**	**-0.3**
TGIG		**2.26**	**21**	*e*P

	4µm,0.2s								
INTR	**Introdacqua**	**0.08**	**269**	Pg	**Pg**	**22 26 33.8**	**+0.1**		
INTR				Sg	**Sg**	**22 26 35.2**	**-0.4**		
	4µm,0.2s								
LPEL	**Lama dei Pelig**	**0.13**	**75**	Pg	**Pg**	**22 26 33.8**	**-0.6**		
LPEL				Sg	**Sg**	**22 26 36.1**	**-0.6**		
	13µm,0.2s								
LPEL	**Lama dei Pelig**	**0.13**	**75**	Pg	**Pg**	**22 26 33.8**	**-0.6**		
LPEL				Sg	**Sg**	**22 26 36.1**	**-0.6**		
	13µm,0.2s								
VVLD	**Villa Vallelon**	**0.32**	**244**	Pg	**Pg**	**22 26 37.7**	**0.0**		
VVLD				Sg	**Sb**	**22 26 43.2**	**-1.2**		
VVLD	**Villa Vallelon**	**0.32**	**244**	Pg	**Pg**	**22 26 37.7**	**0.0**		
VVLD				Sg	**Sb**	**22 26 43.2**	**-1.2**		
RNI2	**Rionero Sannit**	**0.33**	**161**	Pg	**Pg**	**22 26 38.1**	**+0.3**		
RNI2				Sg	**Sg**	**22 26 43.1**	**+0.9**		
	3µm,0.6s								
RNI2	**Rionero Sannit**	**0.33**	**161**	Pg	**Pg**	**22 26 38.1**	**+0.3**		
RNI2				Sg	**Sg**	**22 26 43.1**	**+0.9**		
	3µm,0.6s								
CAFR	**Castel Frentan**	**0.33**	**49**	Pg	**Pg**	**22 26 38.1**	**+0.3**		
CAFR				Sg	**Sb**	**22 26 44.4**	**0.0**		
	4µm,0.4s								
CAFR	**Castel Frentan**	**0.33**	**49**	Pg	**Pg**	**22 26 38.1**	**+0.3**		
CAFR				Sg	**Sb**	**22 26 44.4**	**0.0**		
	4µm,0.4s								
SDI	**San Donato**	**0.34**	**207**	Pg	**Pg**	**22 26 37.5**	**-0.5**		
SDI	**San Donato**	**0.34**	**207**	Pg	**Pg**	**22 26 37.5**	**-0.5**		
POFI	**Posta Fibreno**	**0.37**	**217**	Pg	**Pg**	**22 26 38.3**	**-0.3**		
POFI				Sg	**Sg**	**22 26 43.9**	**+0.4**		
	1µm,0.6s								
POFI	**Posta Fibreno**	**0.37**	**217**	Pg	**Pg**	**22 26 38.3**	**-0.3**		
POFI				Sg	**Sg**	**22 26 43.9**	**+0.4**		
	1µm,0.6s								
VCEL	**Villa Celiera**	**0.40**	**341**	Pg	**Pb**	**22 26 39.7**	**-0.8**		
VCEL				Sg	**Sb**	**22 26 47.1**	**+0.4**		
	6µm,0.3s								
VCEL	**Villa Celiera**	**0.40**	**341**	Pg	**Pb**	**22 26 39.7**	**-0.8**		
VCEL				Sg	**Sb**	**22 26 47.1**	**+0.4**		
	6µm,0.3s								
FAGN	**Fagnano**	**0.41**	**309**	Pg	**Pg**	**22 26 39.5**	**+0.2**		
FAGN				Sg	**Sb**	**22 26 46.3**	**-0.5**		
	6µm,0.4s								
FAGN	**Fagnano**	**0.41**	**309**	Pg	**Pg**	**22 26 39.5**	**+0.2**		
FAGN				Sg	**Sb**	**22 26 46.3**	**-0.5**		
	6µm,0.4s								
MIDA	**Miranda**	**0.41**	**154**	Pg	**Pg**	**22 26 39.0**	**-0.3**		
MIDA				Sg	**Sg**	**22 26 45.6**	**+0.8**		
	2µm,0.5s								
MIDA	**Miranda**	**0.41**	**154**	Pg	**Pg**	**22 26 39.0**	**-0.3**		
MIDA				Sg	**Sg**	**22 26 45.6**	**+0.8**		
	2µm,0.5s								
CERA	**Filignano**	**0.41**	**179**	Pg	**Pg**	**22 26 38.9**	**-0.5**		
CERA				Sg	**Sg**	**22 26 45.7**	**+0.8**		
	2µm,0.6s								
CERA	**Filignano**	**0.41**	**179**	Pg	**Pg**	**22 26 38.9**	**-0.5**		
CERA				Sg	**Sg**	**22 26 45.7**	**+0.8**		
	2µm,0.6s								
PTQR	**Pietraquaria**	**0.46**	**271**	Pg	**Pg**	**22 26 40.3**	**+0.1**		
	219nm,0.6s								
PTQR	**Pietraquaria**	**0.46**	**271**	Pg	**Pg**	**22 26 40.3**	**+0.1**		
	219nm,0.6s								
TRIV	**Trivento**	**0.47**	**121**	Pg	**Pg**	**22 26 40.1**	**-0.3**		
TRIV				Sg	**Sb**	**22 26 48.2**	**-0.3**		
	982nm,0.7s								
TRIV	**Trivento**	**0.47**	**121**	Pg	**Pg**	**22 26 40.1**	**-0.3**		
TRIV				Sg	**Sb**	**22 26 48.2**	**-0.3**		
	982nm,0.7s								
FRES	**Fresagrandinar**	**0.49**	**94**	Pg	**Pg**	**22 26 40.4**	**-0.4**		
FRES				Sg	**Sg**	**22 26 48.5**	**+1.2**		
	2µm,0.8s								
FRES	**Fresagrandinar**	**0.49**	**94**	Pg	**Pg**	**22 26 40.4**	**-0.4**		
FRES				Sg	**Sg**	**22 26 48.5**	**+1.2**		
	2µm,0.8s								
GUAR	**Guarcino**	**0.57**	**248**	Pg	**Pg**	**22 26 41.7**	**-0.5**		
	673nm,0.3s								
GUAR	**Guarcino**	**0.57**	**248**	Pg	**Pg**	**22 26 41.7**	**-0.5**		
	673nm,0.3s								
AQU	**L'Aquila**	**0.57**	**307**	Pg	**Pg**	**22 26 42.1**	**-0.2**		
AQU				Sg	**Sb**	**22 26 51.7**	**+0.3**		
	2µm,0.4s								
AQU	**L'Aquila**	**0.57**	**307**	Pg	**Pg**	**22 26 42.1**	**-0.2**		
AQU				Sg	**Sb**	**22 26 51.7**	**+0.3**		
	2µm,0.4s								
VAGA	**Valle Agricola**	**0.62**	**164**	Pg	**Pg**	**22 26 42.4**	**-0.8**		
	863nm,0.4s								
VAGA	**Valle Agricola**	**0.62**	**164**	Pg	**Pg**	**22 26 42.4**	**-0.8**		
	863nm,0.4s								
BSSO	**Busso**	**0.64**	**137**	Pg	**Pg**	**22 26 43.0**	**-0.6**		
	439nm,0.3s								
BSSO	**Busso**	**0.64**	**137**	Pg	**Pg**	**22 26 43.0**	**-0.6**		
	439nm,0.3s								
TERO	**Teramo**	**0.68**	**334**	Pg	**Pg**	**22 26 44.1**	**-0.3**		
	576nm,0.3s								
TERO	**Teramo**	**0.68**	**334**	Pg	**Pg**	**22 26 44.1**	**-0.3**		
	576nm,0.3s								
SGG	**Gregorio Mates**	**0.68**	**156**	Pg	**Pg**	**22 26 43.5**	**-0.9**		
	921nm,0.9s								
SGG	**Gregorio Mates**	**0.68**	**156**	Pg	**Pg**	**22 26 43.5**	**-0.9**		
	921nm,0.9s								
CAMP	**Campotosto**	**0.69**	**320**	Pg	**Pg**	**22 26 44.0**	**-0.6**		
	403nm,0.5s								
CAMP	**Campotosto**	**0.69**	**320**	Pg	**Pg**	**22 26 44.0**	**-0.6**		
	403nm,0.5s								
FIAM	**Fiamignano**	**0.71**	**291**	Pg	**Pg**	**22 26 44.2**	**-0.8**		
	695nm,0.7s								
FIAM	**Fiamignano**	**0.71**	**291**	Pg	**Pg**	**22 26 44.2**	**-0.8**		
	695nm,0.7s								
GIUL	**Giuliano Di Ro**	**0.73**	**232**	Pg	**Pg**	**22 26 44.4**	**-0.8**		
	497nm,0.6s								
GIUL	**Giuliano Di Ro**	**0.73**	**232**	Pg	**Pg**	**22 26 44.4**	**-0.8**		
	497nm,0.6s								
PTRJ	**Pietraroja**	**0.75**	**149**	Pg	**Pg**	**22 26 44.9**	**-0.9**		
	3µm,0.6s								
PTRJ	**Pietraroja**	**0.75**	**149**	Pg	**Pg**	**22 26 44.9**	**-0.9**		
	3µm,0.6s								
CERT	**Cerreto**	**0.77**	**266**	Pg	**Pg**	**22 26 45.2**	**-0.9**		
	1µm,0.4s								
CERT	**Cerreto**	**0.77**	**266**	Pg	**Pg**	**22 26 45.2**	**-0.9**		
	1µm,0.4s								
SACR	**S. Croce Del S**	**0.80**	**140**	Pg	**Pg**	**22 26 45.6**	**-1.1**		
	263nm,0.6s								
SACR	**S. Croce Del S**	**0.80**	**140**	Pg	**Pg**	**22 26 45.6**	**-1.1**		
	263nm,0.6s								
MSC	**Monte Massico**	**0.82**	**182**	Pg	**Pg**	**22 26 46.3**	**-0.7**		
MSC	**Monte Massico**	**0.82**	**182**	Pg	**Pg**	**22 26 46.3**	**-0.7**		
MODR	**Mondragone**	**0.87**	**187**	Pg	**Pg**	**22 26 47.1**	**-0.9**		
	120nm,0.4s								
MODR	**Mondragone**	**0.87**	**187**	Pg	**Pg**	**22 26 47.1**	**-0.9**		
	120nm,0.4s								
MELA	**Melanico ??? S**	**0.89**	**110**	Pg	**Pg**	**22 26 46.3**	**-2.0**		
	336nm,0.4s								
MELA	**Melanico ??? S**	**0.89**	**110**	Pg	**Pg**	**22 26 46.3**	**-2.0**		
	336nm,0.4s								
LNSS	**Leonessa**	**0.93**	**310**	Pg	**Pg**	**22 26 48.1**	**-1.1**		
	693nm,0.4s								
LNSS	**Leonessa**	**0.93**	**310**	Pg	**Pg**	**22 26 48.1**	**-1.1**		
	693nm,0.4s								
MTCE	**Montecelio**	**0.95**	**271**	Pg	**Pg**	**22 26 48.4**	**-1.0**		
	338nm,0.8s								
MTCE	**Montecelio**	**0.95**	**271**	Pg	**Pg**	**22 26 48.4**	**-1.0**		
	338nm,0.8s								
OFFI	**Offida**	**0.95**	**345**	Pg	**Pb**	**22 26 50.1**	**+0.3**		
OFFI	**Offida**	**0.95**	**345**	Pg	**Pb**	**22 26 50.1**	**+0.3**		
RMP	**Rome, Mte Porz**	**1.00**	**259**	Pg	**Pg**	**22 26 49.0**	**-1.4**		
	474nm,0.6s								
RMP	**Rome, Mte Porz**	**1.00**	**259**	Pg	**Pg**	**22 26 49.0**	**-1.4**		
	474nm,0.6s								
GUMA	**Gualdo di Mace**	**1.05**	**357**	Pg	**Pn**	**22 26 52.8**	**+0.8**		
	2µm,0.4s								
GUMA	**Gualdo di Mace**	**1.05**	**357**	Pg	**Pn**	**22 26 52.8**	**+0.8**		
	2µm,0.4s								
NRCA	**Norcia**	**1.06**	**321**	Pg	**Pg**	**22 26 50.1**	**-1.4**		
	107nm,0.5s								
NRCA	**Norcia**	**1.06**	**321**	Pg	**Pg**	**22 26 50.1**	**-1.4**		
	107nm,0.5s								
MNS	**Montasola**	**1.06**	**291**	Pg	**Pg**	**22 26 50.1**	**-1.4**		
	391nm,0.6s								
MNS	**Montasola**	**1.06**	**291**	Pg	**Pg**	**22 26 50.1**	**-1.4**		
	391nm,0.6s								
FDMO	**Fiordimonte**	**1.23**	**327**	Pg	**Pg**	**22 26 53.1**	**-1.8**		
	236nm,0.4s								
FDMO	**Fiordimonte**	**1.23**	**327**	Pg	**Pg**	**22 26 53.1**	**-1.8**		
	236nm,0.4s								
MS1	**Monte Sant'Ang**	**1.47**	**101**	*e*Sn	**Sg**	**22 27 20.0**	**+1.4**		
CDT	**Castel del Mon**	**1.94**	**118**	*e*Sn	**Sg**	**22 27 33.6**	**+0.2**		
BAI	**Bari**	**2.33**	**112**	*e*Pn	**Pb**	**22 27 12.7**	**-0.6**		
NVLJ	**Novalja**	**2.63**	**14**	*e*Pn	**Pn**	**22 27 13.7**	**+0.2**		
NVLJ				Sn	**Sn**	**22 27 47.3**	**+1.9**		
STON	**Ston**	**2.86**	**71**	*e*Pn	**Pn**	**22 27 16.9**	**+0.2**		
STON				Sn	**Sn**	**22 27 49.5**	**-1.6**		
STON	**Ston**	**2.86**	**71**	*e*Pn	**Pn**	**22 27 16.9**	**+0.2**		
STON				Sn	**Sn**	**22 27 49.5**	**-1.6**		
PGF	**Pioggiola**	**3.76**	**280**	*e*Pn	**Pn**	**22 27 30.0**	**+0.8**		
PGF				*e*Sn	**Sn**	**22 28 10.1**	**-3.4**		
	31nm,0.9s								
PGF	**Pioggiola**	**3.76**	**280**	*e*Pn	**Pn**	**22 27 30.0**	**+0.8**		
PGF				*e*Sn	**Sn**	**22 28 10.1**	**-3.4**		
	15nm,0.9s								
PDG	**Podgorica**	**3.92**	**82**	*e*Pn	**Pn**	**22 27 32.4**	**+1.1**		
PDG				*e*Sn	**Sn**	**22 28 19.1**	**+1.9**		
PDG	**Podgorica**	**3.92**	**82**	*e*Pn	**Pn**	**22 27 32.4**	**+1.1**		
PDG				*e*Sn	**Sn**	**22 28 19.1**	**+1.9**		
VOY	**Vojsko**	**4.02**	**359**	*e*Pn	Pn	22 27 37.0	+4.2		
VOY				*e*Sn	**Sn**	**22 28 21.2**	**+1.3**		
VOY	**Vojsko**	**4.02**	**359**	Pn	Pn	22 27 37.0	+4.2		
VOY				*e*Sn	**Sn**	**22 28 21.2**	**+1.3**		
DIVS	**Divibare**	**4.85**	**63**	*e*Pn	**Pn**	**22 27 45.1**	**+0.9**		
DIVS				*e*Sn	**Sn**	**22 28 41.4**	**+1.0**		
DIVS	**Divibare**	**4.85**	**63**	*e*Pn	**Pn**	**22 27 45.1**	**+0.9**		
DIVS				*e*Sn	**Sn**	**22 28 41.4**	**+1.0**		
ABTA	**Abfaltersbach**	**4.86**	**348**	⇓*i*Pn	**Pn**	**22 27 44.8**	**+0.5**		
ABTA	**Abfaltersbach**	**4.86**	**348**	Pn	**Pn**	**22 27 44.8**	**+0.5**		
SBF	**Sospel**	**5.17**	**293**	*e*Pn	**Pn**	**22 27 48.5**	**-0.1**		
SBF	**Sospel**	**5.17**	**293**	*e*Pn	**Pn**	**22 27 48.5**	**-0.1**		
GRUS	**Gruza**	**5.26**	**67**	*e*Pn	**Pn**	**22 27 51.2**	**+1.4**		
GRUS				*e*Sn	**Sn**	**22 28 49.8**	**-0.7**		
GRUS	**Gruza**	**5.26**	**67**	*e*Pn	**Pn**	**22 27 51.2**	**+1.4**		
GRUS				*e*Sn	**Sn**	**22 28 49.8**	**-0.7**		
SELS	**Selova**	**5.38**	**75**	*e*Pn	**Pn**	**22 27 52.4**	**+1.0**		
SELS	**Selova**	**5.38**	**75**	*e*Pn	**Pn**	**22 27 52.4**	**+1.0**		
FRF	**La Foret Royal**	**5.64**	**288**	*e*Pn	**Pn**	**22 27 54.7**	**-0.2**		
FRF	**La Foret Royal**	**5.64**	**288**	*e*Pn	**Pn**	**22 27 54.7**	**-0.2**		
LMR	**La Mourre**	**5.69**	**286**	*e*Pn	**Pn**	**22 27 55.2**	**-0.4**		
LMR	**La Mourre**	**5.69**	**286**	*e*Pn	**Pn**	**22 27 55.2**	**-0.4**		
BARS	**Barje**	**5.83**	**79**	*e*Pn	**Pn**	**22 27 58.4**	**+0.8**		
BARS				*e*Sn	**Sn**	**22 29 05.4**	**+0.9**		
BARS	**Barje**	**5.83**	**79**	*e*Pn	**Pn**	**22 27 58.4**	**+0.8**		
BARS				*e*Sn	**Sn**	**22 29 05.4**	**+0.9**		
MBDF	**Montbardon**	**5.93**	**300**	*e*P	**Pn**	**22 28 00.5**	**+1.3**		
MBDF	**Montbardon**	**5.93**	**300**	*e*P	**Pn**	**22 28 00.5**	**+1.3**		
LPG	**La Plagne**	**6.31**	**306**	*e*P	**Pn**	**22 28 06.4**	**+2.0**		
LPG				*e*Sn	Sn	22 29 05.4	-11		
	3.0nm,0.5s								
LPG	**La Plagne**	**6.31**	**306**	*e*P	**Pn**	**22 28 06.4**	**+2.0**		
LPL	**La Plagne**	**6.33**	**306**	*e*P	**Pn**	**22 28 06.6**	**+2.0**		
LPL				*e*Sn	Sn	22 29 04.8	-12		
	2.0nm,0.6s								
LPL	**La Plagne**	**6.33**	**306**	*e*P	**Pn**	**22 28 06.6**	**+2.0**		
ZAPS	**Zavoj**	**6.48**	**76**	*e*Pn	**Pn**	**22 28 08.3**	**+1.7**		
SMRF	**Simiane la Rot**	**6.49**	**290**	*e*P	**Pn**	**22 28 07.9**	**+1.2**		
SMRF	**Simiane la Rot**	**6.49**	**290**	*e*P	**Pn**	**22 28 07.9**	**+1.2**		
VTS	**Vitosha**	**6.84**	**82**	*e*Sn	**Sn**	**22 29 28.3**	**-1.3**		
VTS	**Vitosha**	**6.84**	**82**	*e*Sn	**Sn**	**22 29 28.3**	**-1.3**		
KHC	**Kasperske Hory**	**7.13**	**358**	*e*PN	**Pn**	**22 28 16.3**	**+0.9**		
KHC				*e*SN	**Sn**	**22 29 34.4**	**-2.0**		
KHC	**Kasperske Hory**	**7.13**	**358**	Pn	**Pn**	**22 28 16.3**	**+0.9**		
HINF	**Hinteralfeld**	**7.71**	**321**	*e*Pn	**Pn**	**22 28 22.5**	**-0.9**		
HINF				*e*Sn	Sn	22 29 39.0	-12		
	2.4nm,0.4s								
HINF	**Hinteralfeld**	**7.71**	**321**	*e*Pn	**Pn**	**22 28 22.5**	**-0.9**		
CDF	**Champ du Feu**	**7.97**	**326**	*e*Pn	**Pn**	**22 28 26.1**	**-0.9**		
CDF				*e*Sn	Sn	22 29 45.8	-12		
	3.0nm,0.5s								
CDF	**Champ du Feu**	**7.97**	**326**	*e*Pn	**Pn**	**22 28 26.1**	**-0.9**		
HAU	**Haudompre**	**8.08**	**320**	*e*Pn	**Pn**	**22 28 27.8**	**-0.7**		
HAU				*e*Sn	Sn	22 29 46.6	-13		
	4.1nm,0.4s								
HAU	**Haudompre**	**8.08**	**320**	*e*Pn	**Pn**	**22 28 27.8**	**-0.7**		

*ISCJB **21** 22:30:21.3±0.7, 40°39N±0°04×23°83E±0°07, h21km±6km, Error ellipse: s-maj=9.0km s-min=6.6km az=154.0*
*CSEM **21** 22:30:21.3±0.1,40°41N×23°87E, h15km, ML1.9/2, Error ellipse: s-maj=3.1km s-min=1.6km az=77.0*
*ATH **21** 22:30:21.5, 40°38N×23°70E, h37km, MD2.7/3*
*THE **21** 22:30:22.1,40°43N×23°84E, h10km±2km, ML1.9/2, Error ellipse: s-maj=2.2km s-min=0.4km az=134.0*

ISC 21 22:30:21.6±0.9, 40°41N±0°03×23°84E±0°04, h17km±7km, n16, σ0°27/28, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.13**	**125**	P	**Pb**	**22 30 25.5**	**-0.1**
OUR				S	**Sg**	**22 30 27.9**	**0.0**
OUR	**Ouranopolis**	**0.13**	**125**	P	**Pb**	**22 30 25.5**	**-0.1**
OUR				S	**Sg**	**22 30 27.9**	**0.0**
PLG	**Polygyros**	**0.31**	**264**	P	**Pg**	**22 30 28.2**	**+0.1**
PLG				S	**Sg**	**22 30 33.0**	**+0.4**
PLG	**Polygyros**	**0.31**	**264**	*e*PB	**Pg**	**22 30 28.2**	**+0.1**
PLG	**Polygyros**	**0.31**	**264**	P	**Pg**	**22 30 28.2**	**+0.1**
PLG				S	**Sg**	**22 30 33.0**	**+0.4**
PAIG	**Paliouri**	**0.50**	**195**	P	**Pg**	**22 30 31.6**	**+0.1**
PAIG	**Paliouri**	**0.50**	**195**	P	**Pg**	**22 30 31.6**	**+0.1**
SOH	**Sokhos**	**0.56**	**318**	P	**Pg**	**22 30 32.5**	**-0.2**
SOH				S	**Sg**	**22 30 40.2**	**+0.1**
SOH	**Sokhos**	**0.56**	**318**	*e*PN	**Pg**	**22 30 32.7**	**0.0**
SOH				*e*SN	**Sb**	**22 30 40.9**	**+0.2**
SOH	**Sokhos**	**0.56**	**318**	*e*Pn	**Pg**	**22 30 32.7**	**0.0**
SOH				S	**Sg**	**22 30 40.2**	**+0.1**
SOH				*e*Sn	**Sb**	**22 30 40.9**	**+0.2**
SRS	**Serrai**	**0.73**	**345**	P	**Pb**	**22 30 35.5**	**-0.4**
SRS				S	**Sb**	**22 30 45.6**	**-0.1**
SRS	**Serrai**	**0.73**	**345**	P	**Pb**	**22 30 35.5**	**-0.4**
SRS				S	**Sb**	**22 30 45.6**	**-0.1**
NVR	**Nevrokopi**	**0.94**	**1**	*e*PN	**Pg**	**22 30 40.1**	**+0.2**
NVR				*e*SN	**Sn**	**22 30 53.7**	**+0.5**
NVR	**Nevrokopi**	**0.94**	**1**	*e*Pn	**Pg**	**22 30 40.1**	**+0.2**
NVR				*e*Sn	**Sn**	**22 30 53.7**	**+0.5**
AOS	**Alonnisos**	**1.24**	**179**	*e*PN	**Pn**	**22 30 43.8**	**-0.3**
AOS	**Alonnisos**	**1.24**	**179**	*e*Pn	**Pn**	**22 30 43.8**	**-0.3**

*MOS **21** 22:33:51.2±1.5, 48°68N×155°98E, h34km, mb4.0/5, Error ellipse: s-maj=23.8km s-min=7.8km az=75.5*
*ISCJB **21** 22:33:53.4±1.1, 48°85N±0°07×155°9E±0°1, h49km±11km, mb3.7/10, Error ellipse: s-maj=17.2km s-min=8.5km az=36.5*
*KRSC **21** 22:33:53.1±1.2, 48°91N×156°67E, h5km±5km, ML4.4*
*IDC **21** 22:33:55.5±0.7, 48°87N×155°60E, h50km±6km, mb3.5/10, mb1 3.8/12, mb1mx3.6/27, mbtmp3.6/12, MS2.8/2, Ms1 2.8/2, ms1mx2.5/27, Error ellipse: s-maj=26.0km s-min=13.5km az=144.0*

ISC 21 22:33:55.3±0.8, 48°87N±0°08×155°85E±0°09, h51km±6km, n38, σ1°47/54, mb3.8/10, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.82**	**5**	*e*PN	**Pn**	**22 34 22.0**	**-2.2**
SKR				*e*S	**Sn**	**22 34 45.5**	**-0.5**
SKR				pmax	pmax		
	comp=Z,150nm,0.5s						
SKR				smax	smax		
	comp=N,750nm,0.4s						
SKR				smax	smax		
	comp=E,330nm,0.4s						
SKR	**Severo-Kuril's**	**1.82**	**5**	*e*P	**Pn**	**22 34 24.1**	**-0.1**
SKR				*e*S	**Sn**	**22 34 46.8**	**+0.8**
PAU	**Pauzhetka**	**2.67**	**13**	PN	**Pn**	**22 34 36.8**	**+1.0**
PAU				S	**Sn**	**22 35 08.1**	**+1.2**
PAU	**Pauzhetka**	**2.67**	**13**	*e*P	**Pn**	**22 34 36.8**	**+1.0**
PAU				*e*S	**Sn**	**22 35 08.1**	**+1.2**
MIPR	**Malaya Ipel'ka**	**3.46**	**9**	*e*P	**Pn**	**22 34 47.5**	**+0.9**
MTVR	**Mutnovka**	**3.91**	**21**	*e*P	**Pn**	**22 34 53.3**	**+0.4**
MTVR				*e*S	**Sn**	**22 35 38.0**	**+0.5**
RUS	**Russkaya**	**3.95**	**24**	PN	**Pn**	**22 34 52.7**	**-0.6**
RUS	**Russkaya**	**3.95**	**24**	*e*P	**Pn**	**22 34 52.7**	**-0.6**
RUS				*e*S	**Sn**	**22 35 37.1**	**-1.1**
APC	**Apacha**	**4.14**	**11**	P	**Pn**	**22 34 56.3**	**+0.4**
PETK	**Petropavlovsk-**	**4.40**	**15**	PN	**Pn**	**22 35 01.2**	**+1.7**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,121nm,19.4s						
PETK	**Petropavlovsk-**	**4.40**	**15**	P	**Pn**	**22 35 01.2**	**+1.7**
	comp=Z,2.9nm,0.3s,baz=171,slow=14,SNR=44						
PETK				LR	LR	22 36 58.4	
	comp=Z,120nm,19.4s,baz=74,slow=41						
PET	**Petropavlovsk**	**4.52**	**22**	*e*PN	**Pn**	**22 35 00.8**	**-0.3**
PET				pmax	pmax		
	comp=Z,24nm,0.6s						
PET	**Petropavlovsk**	**4.52**	**22**	P	**Pn**	**22 35 01.1**	**0.0**
PET				*e*S	**Sn**	**22 35 51.6**	**-0.7**
UGLR	**Uglovaya**	**4.73**	**22**	*e*P	**Pn**	**22 35 05.0**	**+0.9**
UGLR				S	**Sn**	**22 35 57.9**	**+0.2**
KOK	**Koryaka**	**4.76**	**21**	*e*P	**Pn**	**22 35 06.4**	**+1.9**
SMAR	**Somma**	**4.77**	**22**	P	**Pn**	**22 35 05.5**	**+0.7**
KRER	**Koryakskii**	**4.80**	**21**	*e*P	**Pn**	**22 35 06.3**	**+1.1**
SDLR	**Sedlovina**	**4.81**	**22**	*e*P	**Pn**	**22 35 05.4**	**+0.2**
SDLR				S	**Sn**	**22 35 58.6**	**-1.0**
SPN	**Mys Shipunski**	**4.99**	**30**	PN	**Pn**	**22 35 06.4**	**-1.1**
SPN	**Mys Shipunski**	**4.99**	**30**	*e*P	**Pn**	**22 35 06.4**	**-1.1**
SPN				*e*S	**Sn**	**22 36 00.5**	**-3.3**
KII	**Karymskiy**	**5.64**	**22**	P	**Pn**	**22 35 15.7**	**-0.8**
MKZ	**Mys Kozlova**	**6.76**	**30**	PN	**Pn**	**22 35 30.4**	**-1.4**
MKZ	**Mys Kozlova**	**6.76**	**30**	*e*P	**Pn**	**22 35 30.4**	**-1.4**
MKZ				S	**Sn**	**22 36 41.7**	**-5.7**
TUMR	**Tumrok**	**6.94**	**21**	P	**Pn**	**22 35 35.8**	**+1.4**
ASAJ	**Asahikawa**	**10.30**	**247**	P	**Pn**	**22 36 19.9**	**-0.3**
	comp=Z,2.2nm,0.3s,baz=107,slow=14,SNR=15						
FX1	**Attu Island--F**	**11.65**	**63**	P	**Pn**	**22 36 37.0**	**-1.6**
	comp=Z,1.1nm,0.3s,baz=277,slow=23,SNR=9.4						
FX1				S	Sn	22 38 37.3	-10
	comp=Z,2.7nm,0.3s,baz=1.4,slow=23,SNR=9.7						
FX1				LR	LR	22 40 28.8	
	comp=Z,34nm,19.1s,baz=157,slow=33						
SEY	**Seymchan**	**14.22**	**354**	*e*P	**P**	**22 37 17.6**	**-2.0**
ILAR	**Eielson Array**	**33.74**	**40**	P	**P**	**22 40 32.5**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=247,slow=8.0,SNR=6.9						
ILAR				pP	**pP**	**22 40 45.5**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=264,slow=6.4,SNR=4.2						
MKAR	**Makanchi Array**	**47.61**	**297**	*e*P	**P**	**22 42 25.9**	**0.0**
MKAR	**Makanchi Array**	**47.61**	**297**	P	**P**	**22 42 23.9**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=58,slow=7.6,SNR=4.3						
YKA	**Yellowknife Ar**	**48.12**	**39**	P	**P**	**22 42 31.2**	**+1.6**
	comp=Z,1.2nm,0.7s,baz=297,slow=7.4,SNR=18						
YKA				pP	**pP**	**22 42 43.8**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=297,slow=7.4,SNR=7.1						
CMAR	**Chiang Mai Arr**	**54.65**	**257**	P	**P**	**22 43 19.0**	**0.0**
	comp=Z,0.7nm,0.5s,baz=36,slow=7.8,SNR=3.5						
CMAR				pP	**pP**	**22 43 31.2**	**-1.7**
	comp=Z,0.7nm,0.3s,baz=40,slow=7.1,SNR=2.1						
NVAR	**Mina Array Bea**	**59.84**	**65**	P	**P**	**22 43 57.5**	**+1.8**
	comp=Z,0.7nm,0.7s,baz=303,slow=8.1,SNR=4.9						
NVAR				pP	**pP**	**22 44 11.8**	**+2.0**
	comp=Z,0.6nm,0.6s,baz=296,slow=7.6,SNR=4.0						
PDAR	**Pinedale Array**	**62.02**	**56**	P	**P**	**22 44 11.8**	**+1.4**
	comp=Z,0.7nm,0.9s,baz=262,slow=1.0,SNR=4.8						
FINES	**FINESS Array B**	**62.89**	**335**	P	**P**	**22 44 15.1**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=49,slow=8.8,SNR=4.7						
WRA	**Warramunga Arr**	**71.14

AYVA	**Ayvalik**	**0.84**	**290**	*i* P	**Pg**	**23**	**44**	**03.3**	**-0.5**
AYVA				*i* S	**Sb**	**23**	**44**	**15.4**	**+0.1**
AYVA	**Ayvalik**	**0.84**	**290**	*i* P	**Pg**	**23**	**44**	**03.3**	**-0.5**
AYVA				*i* S	**Sb**	**23**	**44**	**15.4**	**+0.1**
DST	**Dursunbey**	**0.91**	**50**	*e*PG	**Pb**	**23**	**44**	**04.7**	**-0.4**
DST				*e*SG	**Sb**	**23**	**44**	**17.9**	**+0.7**
DST	**Dursunbey**	**0.91**	**50**	*e*Pg	**Pb**	**23**	**44**	**04.7**	**-0.4**
DST				*e*Sg	**Sb**	**23**	**44**	**17.9**	**+0.7**
ORLT	**Orhaneli**	**1.37**	**42**	*e*PN	**Pn**	**23**	**44**	**12.6**	**+0.2**
ORLT	**Orhaneli**	**1.37**	**42**	*e*Pn	**Pn**	**23**	**44**	**12.6**	**+0.2**
TVSB	**Tavsanli**	**1.42**	**72**	*e*PN	**Pb**	**23**	**44**	**13.7**	**-0.2**
TVSB	**Tavsanli**	**1.42**	**72**	*e*Pn	**Pb**	**23**	**44**	**13.7**	**-0.2**

*CSEM **21** 23:54:35.8±0.2, 37.°18N×36.°36E, h2km, MD2.9, Error ellipse: s-maj=4.7km s-min=3.8km az=103.0*
*ISK **21** 23:54:35.8, 37.°15N×36.°33E, h8km, ML1.7*
*DDA **21** 23:54:35.5, 37.°20N×36.°43E, h6km, MD2.9*
ISC 21 23:54:35.2±1.2, 37.°19N±0.°02×36.°31E±0.°03, h3km±10km, n27, σ0°41/46, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.39**	**4**	*i* P			**Pg**	**23 54 42.2**	**-0.5**
ANDN				*i* S			**Sg**	**23 54 47.8**	**-0.1**
ANDN	**Andirin**	**0.39**	**4**	*i* P			**Pg**	**23 54 42.2**	**-0.5**
ANDN				*i* S			**Sg**	**23 54 47.8**	**-0.1**
KOZT	**Kozan**	**0.48**	**307**	*e*PG			**Pb**	**23 54 46.4**	**0.0**
KOZT				*e*SG			**Sb**	**23 54 54.2**	**+0.3**
KOZT	**Kozan**	**0.48**	**307**	*e*Pg			**Pb**	**23 54 46.4**	**0.0**
KOZT				*e*Sg			**Sb**	**23 54 54.2**	**+0.3**
COBT	**Iskenderun**	**0.67**	**184**	*i* P			**Pg**	**23 54 48.4**	**+0.4**
COBT				*i* S			**Sb**	**23 54 59.3**	**0.0**
COBT	**Iskenderun**	**0.67**	**184**	*i* P			**Pg**	**23 54 48.4**	**+0.4**
COBT				*i* S			**Sb**	**23 54 59.3**	**0.0**
GAZ	**Gaziantep**	**0.72**	**91**	*e*PG			**Pg**	**23 54 49.2**	**+0.3**
GAZ				*e*SG			**Sb**	**23 55 00.4**	**-0.2**
GAZ	**Gaziantep**	**0.72**	**91**	*e*Pg			**Pg**	**23 54 49.2**	**+0.3**
GAZ				*e*Sg			**Sb**	**23 55 00.4**	**-0.2**
KUZU	**Kuzuini**	**0.74**	**124**	*i* P			**Pg**	**23 54 49.2**	**-0.1**
KUZU				*i* S			**Sg**	**23 54 58.9**	**0.0**
KUZU	**Kuzuini**	**0.74**	**124**	*i* P			**Pg**	**23 54 49.2**	**-0.1**
KUZU				*i* S			**Sg**	**23 54 58.9**	**0.0**
KRTS	**Karatas**	**0.97**	**231**	*e*PG			**Pb**	**23 54 54.3**	**-0.3**
KRTS	**Karatas**	**0.97**	**231**	*e*Pg			**Pb**	**23 54 54.3**	**-0.3**
GZT	**Gaziantep**	**1.01**	**80**	*i* P			**Pg**	**23 54 54.2**	**-0.4**
GZT				*i* S			**Sg**	**23 55 07.8**	**+0.1**
HTY	**Hatay**	**1.07**	**188**	*e*PG			**Pg**	**23 54 55.2**	**-0.5**
HTY				*e*SG			**Sn**	**23 55 11.9**	**-0.6**
HTY	**Hatay**	**1.07**	**188**	*e*Pg			**Pg**	**23 54 55.2**	**-0.5**
HTY				*e*Sg			**Sn**	**23 55 11.9**	**-0.6**
YAYL	**Yayladag**	**1.16**	**188**	*i* P			**Pb**	**23 54 58.3**	**+0.3**
YAYL				*i* S			**Sn**	**23 55 14.5**	**-0.3**
YAYL	**Yayladag**	**1.16**	**188**	*i* P			**Pb**	**23 54 58.3**	**+0.3**
YAYL				*i* S			**Sn**	**23 55 14.5**	**-0.3**
ATAB	**Bozova**	**1.60**	**79**	*i* P			**Pn**	**23 55 03.7**	**-0.7**
ATAB				*i* S			**Sn**	**23 55 25.4**	**-0.3**
ATAB	**Bozova**	**1.60**	**79**	*i* P			**Pn**	**23 55 03.7**	**-0.7**
ATAB				*i* S			**Sn**	**23 55 25.4**	**-0.3**
AKCD	**Akcadag**	**1.69**	**49**	*i* P			**Pn**	**23 55 06.3**	**+0.6**
AKCD				*i* S			**Sb**	**23 55 28.7**	**0.0**
AKCD	**Akcadag**	**1.69**	**49**	*i* P			**Pn**	**23 55 06.3**	**+0.6**
AKCD				*i* S			**Sb**	**23 55 28.7**	**0.0**
BNN	**Bunyan**	**1.70**	**348**	*e*PN			**Pg**	**23 55 08.0**	**+0.2**
BNN	**Bunyan**	**1.70**	**348**	*e*Pn			**Pg**	**23 55 08.0**	**+0.2**
URFA	**Urfa**	**2.02**	**82**	*e*PN			**Pn**	**23 55 10.7**	**+0.6**
URFA	**Urfa**	**2.02**	**82**	*e*Pn			**Pn**	**23 55 10.7**	**+0.6**
MALT	**Malatya**	**2.02**	**56**	*e*PN			**Pn**	**23 55 10.9**	**+0.7**
MALT	**Malatya**	**2.02**	**56**	*e*Pn			**Pn**	**23 55 10.9**	**+0.7**

MEX 21 23:59:35.8±0.7, 15.°89N×96.°61W, h10km, MD3.5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.50**	**104**	*e*P			Pg	23 59 44.6	-1.0
HUIG				*i* S			Sg	23 59 52.5	+0.2
VHO	**Vista Hermosa**	**1.18**	**354**	*e*P			Pb	23 59 54.0	-4.5
VHO				*e*S			Sb	00 00 09.9	-4.2
PNIG	**Pinotepa**	**1.54**	**289**	*e*P			Pn	23 59 59.3	-4.1
PNIG				*i* S			Sn	00 00 19.1	-4.4
CMIG	**Matias Romero**	**2.04**	**54**	*i* P			Pn	00 00 06.7	-3.6
CMIG				*i* S			Sn	00 00 31.1	-4.8

*TAP **22** 00:27:04.7, 24.°71N×122.°53E, h109km, ML3.5, C*
*ISCJB **22** 00:27:05.0±0.8, 24.°65N±0.°04×122.°58E±0.°03, h100km±6km, Error ellipse: s-maj=6.9km s-min=3.9km az=178.2*
*JMA **22** 00:27:05.0±0.4, 24.°85N×122.°65E, h101km, M2.1*
ISC 22 00:27:05.5±1.9, 24.°65N±0.°06×122.°58E±0.°03, h99km±13km, n32, σ0°72/59, 3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.44**	**115**	P			**Pn**	**00 27 20.9**	**+0.2**
YOJ				S			**Sn**	**00 27 33.2**	**+1.1**
TWB1	**Santiao Chiao**	**0.64**	**304**	P			**Pn**	**00 27 22.1**	**-0.2**
	baz=294								
TWB1				*e*S			**Sn**	**00 27 35.1**	**+0.2**
	baz=294								
TWC	**Suao**	**0.66**	**267**	*i* P			**Pn**	**00 27 22.1**	**-0.3**
	baz=257								
TWC				S			**Sn**	**00 27 34.6**	**-0.5**
	baz=257								
ENA	**Nanau**	**0.79**	**254**	*i*P			**Pn**	**00 27 23.8**	**+0.1**
	baz=249								
ENA				*e*S			**Sn**	**00 27 37.9**	**+0.6**
	baz=249								
TWE	**Neicheng**	**0.83**	**275**	*i*P			**Pn**	**00 27 24.0**	**0.0**
	baz=269								
TWE				*e*S			**Sn**	**00 27 37.4**	**-0.5**
	baz=269								
NWF	**Wu-fen Shan**	**0.84**	**301**	P			**Pn**	**00 27 24.1**	**-0.1**
	baz=293								
NWF				S			**Sn**	**00 27 38.0**	**-0.2**
	baz=293								
ENTT	**Nioudou**	**0.92**	**270**	P			**Pn**	**00 27 25.2**	**+0.2**
	baz=269								
ENTT				*e*S			**Sn**	**00 27 40.7**	**+1.1**
	baz=269								
TWD	**Chiawan**	**1.06**	**238**	P			**Pn**	**00 27 26.1**	**-0.4**
	baz=230								
TWD				*e*S			**Sn**	**00 27 42.1**	**-0.1**
	baz=230								
IRIF	**Iriomote-Funau**	**1.10**	**106**	P			**Pn**	**00 27 26.8**	**-0.1**
IRIF				S			**Sn**	**00 27 41.7**	**-1.3**
NSK	**Sanguang**	**1.11**	**272**	P			**Pn**	**00 27 27.1**	**0.0**
	baz=274								
NSK				*e*S			**Sn**	**00 27 43.3**	**-0.1**
	baz=274								
HWA	**Hwalien**	**1.11**	**233**	*e*P			**Pn**	**00 27 26.4**	**-0.6**
	baz=224								
HWA				*e*S			**Sn**	**00 27 44.8**	**+1.5**
	baz=224								
NNS	**Nan Shan**	**1.11**	**260**	P			**Pn**	**00 27 27.2**	**0.0**
	baz=251								
NNS				*e*S			**Sn**	**00 27 43.6**	**0.0**
	baz=251								
TWS1	**Kuangyinshan**	**1.14**	**294**	P			**Pn**	**00 27 26.9**	**-0.6**
	baz=286								
TWS1				*e*S			**Sn**	**00 27 43.3**	**-0.7**
	baz=286								
HATJ	**Hateruma jima**	**1.27**	**117**	*e*S			**Sn**	**00 27 47.5**	**+1.0**
WHF	**Hehuan Shan**	**1.29**	**248**	*i*P			**Pn**	**00 27 29.5**	**-0.1**
	baz=244								
WHF				*e*S			**Sn**	**00 27 47.3**	**-0.6**
	baz=244								
ESL	**Shilin**	**1.33**	**232**	P			**Pn**	**00 27 29.6**	**0.0**
	baz=237								
ESL				S			**Sn**	**00 27 47.2**	**-0.7**
	baz=237								
TWT	**Tachien**	**1.33**	**253**	P			**Pn**	**00 27 30.4**	**+0.6**
	baz=247								
JKRS	**Kuro-shima**	**1.37**	**107**	*e*S			**Sn**	**00 27 49.5**	**+0.8**
NSTT	**Nanjuang**	**1.43**	**270**	*e*P			**Pn**	**00 27 30.6**	**-0.3**
	baz=267								
NSTT				*e*S			**Sn**	**00 27 49.7**	**-0.4**
	baz=267								
JIJ	**Ishigaki jima**	**1.46**	**101**	P			**Pn**	**00 27 31.0**	**-0.1**
JIJ				S			**Sn**	**00 27 50.1**	**-0.5**
EHY	**Hungye**	**1.61**	**226**	*e*P			**Pn**	**00 27 32.3**	**-0.8**
	baz=218								
EHY				*e*S			**Sn**	**00 27 53.2**	**-0.9**
	baz=218								
NSY	**Sanyi**	**1.67**	**262**	*e*P			**Pn**	**00 27 33.8**	**0.0**
	baz=260								
TWQ1	**Liyutan**	**1.67**	**260**	*e*P			**Pn**	**00 27 33.1**	**-0.7**
	baz=258								
TWQ1				*e*S			**Sn**	**00 27 55.3**	**0.0**
	baz=258								
SMLT	**Sun Moon Lake**	**1.71**	**244**	P			**Pn**	**00 27 34.8**	**+0.4**
	baz=236								
SMLT				*e*S			**Sn**	**00 27 57.2**	**+0.9**
	baz=236								
TYC	**Yuchr**	**1.73**	**245**	P			**Pn**	**00 27 35.2**	**+0.6**
	baz=246								
TYC				*e*S			**Sn**	**00 27 57.2**	**+0.4**
	baz=246								
TWF1	**Yuli**	**1.74**	**222**	P			**Pn**	**00 27 34.1**	**-0.7**
	baz=227								
TWF1				*e*S			**Sn**	**00 27 55.9**	**-1.1**
	baz=227								
CHKT	**Chengkung**	**1.90**	**216**	*e*P			**Pn**	**00 27 35.9**	**-0.8**
	baz=209								
CHKT				*e*S			**Sn**	**00 27 59.1**	**-1.4**
	baz=209								
ALS	**Alishan**	**1.97**	**235**	*e*P			**Pn**	**00 27 38.6**	**+0.6**
	baz=228								
ALS				*e*S			**Sn**	**00 28 03.1**	**+0.4**
	baz=228								
CHN5	**Tsauling**	**2.02**	**239**	*e*P			**Pn**	**00 27 39.2**	**+0.8**
	baz=247								
CHN5				*e*S			**Sn**	**00 28 04.2**	**+0.7**
	baz=247								
ELDTW	**Lidau**	**2.03**	**225**	*e*P			**Pn**	**00 27 38.0**	**-0.6**
	baz=222								
ELDTW				*e*S			**Sn**	**00 28 03.2**	**-0.7**
	baz=222								
CHN4	**Tsaushan**	**2.22**	**235**	*e*P			**Pn**	**00 27 41.3**	**+0.3**
	baz=233								
CHN4				*e*S			**Sn**	**00 28 08.9**	**+0.7**
	baz=233								
CHN1	**Nanshi**	**2.37**	**233**	*e*P			**Pn**	**00 27 45.2**	**+2.3**
	baz=231								

IDC 22 00:48:53.0±0.6, 13.°74N×144.°78E, h111km±5km, mb3.2/7, mb1 3.4/7, mb1mx3.3/26, mbtmp3.2/7, Error ellipse: s-maj=31.8km s-min=16.3km az=98.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.17**	**150**	P			Pn	00 49 09.5	+1.0
	726nm,0.3s,baz=257,slow=1.0,SNR=151								
GUMO				S			Sn	00 49 21.4	+1.3
	267nm,0.3s,baz=148,slow=22,SNR=36								
WRA	**Warramunga Arr**	**35.01**	**197**	P			P	00 55 34.3	-0.7
	0.5nm,0.5s,baz=18,slow=9.3,SNR=7.8								
FITZ	**Fitzroy Crossi**	**36.84**	**211**	P			P	00 55 50.3	-0.3
	2.4nm,1.0s,baz=33,slow=12,SNR=5.2								
ASAR	**Alice Springs**	**38.66**	**196**	P			P	00 56 06.0	0.0
	0.5nm,0.5s,baz=20,slow=13,SNR=8.8								
SONM	**Songino Array**	**46.56**	**325**	P			P	00 57 10.0	+0.3
	0.2nm,0.6s,baz=126,slow=7.3,SNR=2.4								
MKAR	**Makanchi Array**	**61.33**	**316**	P			P	00 58 56.8	-0.2
	0.6nm,0.5s,baz=93,slow=8.3,SNR=13								
ILAR	**Eielson Array**	**68.47**	**25**	P			P	00 59 41.3	-1.6
	0.2nm,0.4s,baz=249,slow=5.8,SNR=4.4								
YKA	**Yellowknife Ar**	**82.77**	**27**	P			P	01 01 04.7	+0.3
	0.1nm,0.4s,baz=287,slow=5.2,SNR=6.5								
LPAZ	**La Paz**	**148.13**	**99**	PKPbc			PKPbc	01 08 28.3	+0.7
	0.9nm,0.7s,baz=297,slow=4.5,SNR=5.5								

*IDC **22** 00:55:08.8±0.6, 9.°70N×84.°31W, h0km, mb4.1/21, mb1 4.2/23, mb1mx4.2/30, mbtmp4.1/23, ML3.4/2, MS3.8/11, Ms1 3.8/11, ms1mx3.5/32, Error ellipse: s-maj=23.1km s-min=11.0km az=46.0*
*CASC **22** 00:55:09.1±12.0, 9.°29N×84.°86W, h0km±30km, MD4.2, mb4.5(NEIC)*
*NEIC **22** 00:55:14.8±0.7, 9.°65N×84.°37W, h39km±7km, mb4.5/10, Error ellipse: s-maj=13.6km s-min=6.4km az=49.0*
NEIC Felt at Jaco, Parrita and San Ramon.
ISC 22 00:55:10.6±1.3, 9.°55N±0.°05×84.°37W±0.°04, h13km±7km, n169, σ1°12/179, mb4.3/32, MS3.7/10, 40C-34D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
QCR	**Quepos**	**0.24**	**122**	*i*P			Pg	00 55 19.5	+3.8
QCR				*e*S			Sg	00 55 38.5	+19
LAJ	**Bijagual**	**0.40**	**39**	*i*P			**Pg**	**00 55 18.0**	**-0.6**
LAJ				*e*S			Sb	00 55 34.5	+8.7
CGA2	**Cerro Gallo 2**	**0.47**	**349**	*i*P			**Pn**	**00 55 23.6**	**+0.3**
CGA2	**Cerro Gallo 2**	**0.47**	**349**	*i*P			**Pn**	**00 55 23.6**	**+0.3**
SJS	**Escuela Geolog**	**0.50**	**39**	*i*P			**Pn**	**00 55 25.4**	**+1.8**
SJS	**Escuela Geolog**	**0.50**	**39**	*e*P			**Pn**	**00 55 25.4**	**+1.8**
BUS	**Buena Vista**	**0.61**	**90**	*e*P			**Pn**	**00 55 26.7**	**+1.4**
BUS	**Buena Vista**	**0.61**	**90**	*i*P			**Pn**	**00 55 26.6**	**+1.2**
JCR	**Jicaral**	**0.79**	**292**	*i*P			Pg	00 55 18.1	-7.8
JTS	**JuntasAbangare**	**0.93**	**322**	*e*P			**Pn**	**00 55 28.9**	**-0.5**
JTS				S			**Sn**	**00 55 45.3**	**+2.6**
JTS	**JuntasAbangare**	**0.93**	**322**	Pn			**Pn**	**00 55 28.9**	**-0.5**
	355nm,0.3s,baz=132,slow=13,SNR=2208								
JTS				Sn			**Sb**	**00 55 41.4**	**+0.4**
	578nm,0.3s,baz=127,slow=20,SNR=20								
AMAS	**Alto Masis**	**1.22**	**330**	*i* P			**Pb**	**00 55 33.5**	**-0.1**
PTEN	**Parque Tenorio**	**1.30**	**332**	*i* P			**Pg**	**00 55 36.1**	**+0.4**
CUI	**Cuipilapa**	**1.35**	**325**	*i* P			**Pg**	**00 55 36.2**	**-0.3**
CUI				*i* S			**Sg**	**00 55 54.9**	**+0.8**
COLC	**Colonia**	**1.38**	**324**	*i* P			**Pg**	**00 55 36.5**	**-0.6**
GUAB	**Guayabo de Bag**	**1.42**	**324**	*i* P			**Pb**	**00 55 37.2**	**+0.1**
LIM1	**Limonal**	**1.43**	**323**	*i* P			**Pb**	**00 55 37.3**	**+0.1**
MESS	**Mesas**	**1.43**	**326**	*i* P			**Pg**	**00 55 37.6**	**-0.6**
MESS				*i* S			**Sg**	**00 55 57.2**	**+0.4**
ACR	**Cerro Adams**	**1.49**	**127**	*e*P			**Pb**	**00 55 37.5**	**-0.7**
ACR	**Cerro Adams**	**1.49**	**127**	*e*P			**Pb**	**00 55 37.5**	**-0.7**
GPS2	**Hotel Rinc˜‡n**	**1.53**	**321**	*i* P			**Pb**	**00 55 38.6**	**-0.3**
GPS3	**Bodega del ICE**	**1.54**	**321**	*i* P			**Pb**	**00 55 38.7**	**-0.4**
GPS1	**Guardaparques**	**1.55**	**322**	*i* P			**Pb**	**00 55 39.0**	**-0.3**
NY14	**Universidad de**	**1.58**	**314**	*i* P			**Pn**	**00 55 38.5**	**+0.2**
LAPC	**Finca la Perla**	**1.60**	**319**	*i* P			**Pn**	**00 55 39.0**	**+0.4**
GB1A	**Borinquen Arri**	**1.61**	**321**	*i* P			**Pb**	**00 55 40.1**	**-0.2**
GBS3	**Finca Las Im˜¡**	**1.62**	**319**	*i* P			**Pb**	**00 55 40.1**	**-0.4**
GBS2	**Las Lilas**	**1.66**	**320**	*i* P			**Pb**	**00 55 40.3**	**-0.8**
TBS2		**1.85**	**114**	*e*P			**Pb**	**00 55 44.9**	**+0.4**
TBS2				*e*S			**Sg**	**00 56 11.1**	**+0.7**
BRU	**Baru**	**1.94**	**112**	*e*P			**Pg**	**00 55 47.0**	**-0.8**
BRU				*e*S			Sg	00 56 20.5	+7.5
BCIP	**Isla Barro Col**	**4.49**	**95**	*e*Pn			Pn	00 56 22.0	+3.6
BCIP				*e*Sn			**Sn**	**00 57 11.2**	**+0.6**
BCIP	**Isla Barro Col**	**4.49**	**95**	*e*P			Pn	00 56 21.9	+3.4
BCIP				*e*S			**Sb**	**00 57 21.4**	**-2.1**
TGUH	**Tegucigalpa,Un**	**5.30**	**328**	*e*Pn			**Pn**	**00 56 30.2**	**+0.7**
OTAV	**Otavalo**	**10.97**	**147**	*e*Pn			Pn	00 57 53.0	+5.2
TEIG	**Tepich**	**11.26**	**341**	Pn			**Pn**	**00 57 51.6**	**+0.2**
TEIG	**Tepich**	**11.26**	**341**	LR			LR	01 03 18.1	
	comp=Z,295nm,18.1s,baz=85,slow=44								
CMIG	**Matias Romero**	**12.68**	**307**	Pn			**Pn**	**00 58 11.5**	**+0.8**
CMIG	**Matias Romero**	**12.68**	**307**	Pn			**Pn**	**00 58 11.5**	**+0.8**
	0.3nm,0.3s,baz=132,slow=12,SNR=4.9								
ATAH	**Atahualpa**	**17.61**	**160**	P			**P**	**00 59 19.5**	**+2.1**
ATAH	**Atahualpa**	**17.61**	**160**	P			**P**	**00 59 19.5**	**+2.1**
	0.1nm,0.3s,baz=331,slow=12,SNR=2.3								
ATAH				LR			LR	01 05 26.8	
	comp=Z,554nm,21.2s,baz=345,slow=35								
LRAL	**Lakeview Retre**	**23.50**	**354**	*e*P			**P**	**01 00 22.0**	**+1.7**
	27nm,0.8s								
GOGA	**Godfrey**	**23.76**	**2**	*e*P			**P**	**01 00 24.2**	**+1.4**
	14nm,0.9s								
732A	**Laxson Ranch,**	**24.05**	**325**	⇓P			**P**	**01 00 23.1**	**-2.6**
	baz=24,SNR=8.0								
632A	**Uvalde**	**24.54**	**326**	⇑P			**P**	**01 00 29.0**	**-1.2**
	baz=24								
JSC	**Jenkinsville**	**24.78**	**6**	*e*P			**P**	**01 00 32.5**	**+0.2**
631A	**Perdido Creek**	**24.91**	**325**	⇓P			**P**	**01 00 33.1**	**-0.5**
	baz=25,SNR=18								
532A	**Rocksprings**	**25.09**	**327**	⇓P			**P**	**01 00 35.0**	**-0.2**
	baz=25								
JCT	**Junction City**	**25.31**	**328**	*e*P			**P**	**01 00 39.2**	**+2.0**
	9.1nm,0.8s								
JCT	**Junction City**	**25.31**	**328**	⇓P			**P**	**01 00 37.2**	**0.0**
	baz=25								
WHTX	**Lake Whitney**	**25.41**	**333**	⇑P			**P**	**01 00 38.2**	**+0.2**
	baz=25								
531A	**Rocksprings**	**25.47**	**326**	⇑P			**P**	**01 00 39.1**	**+0.4**
	baz=26								
SWET	**Sewanee**	**25.59**	**357**	*e*P			**P**	**01 00 40.2**	**+0.6**
	16nm,0.9s								
432A	**Menard**	**25.62**	**328**	⇑P			**P**	**01 00 39.7**	**-0.3**
	baz=26								
CPCT	**Cooper Cave**	**25.78**	**360**	*e*P			**P**	**01 00 42.0**	**+0.7**
431A	**Sonora**	**25.90**	**327**	⇑P			**P**	**01 00 42.3**	**-0.3**
	baz=26								
530A	**J-C Ranch, Com**	**25.90**	**325**	⇑P			**P**	**01 00 41.4**	**-1.2**
	baz=26,SNR=7.4								
TKL	**Tuckaleechee C**	**25.99**	**1**	P			**P**	**01 00 46.0**	**+2.7**
TKL	**Tuckaleechee C**	**25.99**	**1**	P			**P**	**01 00 46.0**	**+2.7**
	5.0nm,0.8s,baz=155,slow=9.9,SNR=4.2								
TKL				LR			LR	01 10 47.6	
	comp=Z,146nm,21.3s,baz=236,slow=36								
332A	**Millersview**	**26.00**	**329**	⇑P			**P**	**01 00 42.7**	**-0.7**
	baz=26,SNR=5.8								
MIAR	**Mount Ida**	**26.27**	**343**	*e*P			**P**	**01 00 47.0**	**+1.2**
	7.6nm,0.6s								
331A	**San Angelo**	**26.29**	**328**	⇓P			**P**	**01 00 45.7**	**-0.4**
	baz=26,SNR=5.9								
430A	**Baggett Ranch,**	**26.33**	**326**	⇑P			**P**	**01 00 46.1**	**-0.3**
	baz=26								
628A	**Black Gap, Mar**	**26.34**	**321**	⇑P			**P**	**01 00 46.1**	**-0.4**
	baz=26,SNR=9.1								
232A	**Coleman**	**26.36**	**330**	⇓P			**P**	**01 00 45.9**	**-0.7**
	baz=26								
429A	**Davenport Ranc**	**26.58**	**325**	⇑P			**P**	**01 00 47.5**	**-1.1**
	baz=27,SNR=11								
627A	**Terlingua Ranc**	**26.63**	**321**	⇓P			**P**	**01 00 48.2**	**-1.0**
	baz=27								
TXAR	**Lajitas Array**	**26.72**	**320**	P			**P**	**01 00 49.3**	**-0.7**
TXAR				PcP			**PcP**	**01 04 14.9**	**+1.4**
TXAR	**Lajitas Array**	**26.72**	**320**	P			**P**	**01 00 49.3**	**-0.7**
	1.7nm,0.7s,baz=146,slow=9.8,SNR=18								
TXAR				PcP			**PcP**	**01 04 14.9**	**+1.4**
	0.7nm,0.8s,baz=134,slow=5.4,SNR=4.8								
528A	**Cox Ranch, San**	**26.76**	**323**	⇓P			**P**	**01 00 49.2**	**-1.2**
	baz=27,SNR=6.6								
428A	**Kincaid Ranch,**	**27.11**	**324**	⇓P			**P**	**01 00 53.1**	**-0.4**
	baz=27								
626A	**Big Bend Ranch**	**27.17**	**320**	⇑P			**P**	**01 00 53.6**	**-0.5**
	baz=27								
527A	**Woodward Ranch**	**27.25**	**321**	⇑P			**P**	**01 00 54.0**	**-0.8**
	baz=27,SNR=5.1								
526A	**Mary Lane Ranc**	**27.49**	**321**	⇑P			**P**	**01 00 56.3**	**-0.7**
	baz=28								
328A	**Wristen Ranch,**	**27.66**	**324**	⇑P			**P**	**01 00 57.8**	**-0.7**
	baz=28								
426A	**McDonald Obser**	**27.87**	**322**	⇓P			**P**	**01 00 59.7**	**-0.8**
	baz=28								
326A	**Caldwell Ranch**	**28.30**	**323**	⇑P			**P**	**01 01 04.0**	**-0.2**
	baz=28								
WMOK	**Wichita Mounta**	**28.33**	**334**	*e*P			**P**	**01 01 04.3**	**+0.1**
	2.6nm,0.7s								
425A	**Indio Mountain**	**28.55**	**321**	⇑P			**P**	**01 01 05.6**	**-0.8**
	baz=28,SNR=5.8								
WCI	**Wyandotte Cave**	**28.61**	**357**	*e*P			**P**	**01 01 06.2**	**-0.6**
	8.9nm,0.9s								
LPIG	**La Paz**	**28.66**	**304**	P			**P**	**01 01 07.1**	**-0.2**
LPIG	**La Paz**	**28.66**	**304**	P			**P**	**01 01 07.1**	**-0.2**
	0.9nm,0.3s,baz=113,slow=7.7,SNR=1.8								
LPIG				LR			LR	01 13 13.0	
	comp=Z,11nm,18.4s,baz=166,slow=38								
325A	**Bean Ranch, Si**	**28.94**	**322**	⇓P			**P**	**01 01 09.7**	**-0.3**
	baz=29								
226B	**Tecolote Peak,**	**28.96**	**324**	⇓P			**P**	**01 01 09.8**	**-0.2**
	baz=29								
324A	**Moseley Ranch,**	**29.30**	**321**	⇑P			**P**	**01 01 11.8**	**-1.3**
	baz=29,SNR=9.7								
225A	**Deer Hill, Car**	**29.37**	**323**	⇑P			**P**	**01 01 13.4**	**-0.4**
	baz=29							

ULM	**Lac du Bonnet**	**41.68 349**	P	**P**	**01 02 56.6**	**-2.3**
ULM	**Lac du Bonnet**	**41.68 349**	P	**P**	**01 02 56.6**	**-2.3**
	3.2nm,0.5s,baz=164,slow=7.4,SNR=4.5					
ULM			LR	LR	01 20 40.4	
	comp=Z,46nm,18.2s,baz=41,slow=37					
NV11	**Mina Array Sit**	**41.76 319**	*e*P	**P**	**01 03 01.3**	**+1.3**
NVAR	**Mina Array Bea**	**41.86 319**	P	**P**	**01 03 01.8**	**+0.9**
NVAR			PcP	**PcP**	**01 04 57.7**	**+1.0**
NVAR	**Mina Array Bea**	**41.86 319**	P	**P**	**01 03 01.8**	**+0.9**
	2.5nm,0.8s,baz=134,slow=7.0,SNR=17					
NVAR			PcP	**PcP**	**01 04 57.7**	**+1.0**
	1.1nm,0.7s,baz=120,slow=3.6,SNR=5.3					
BDFB	**Brasilia**	**43.86 124**	LR	LR	01 23 29.4	
	comp=Z,129nm,19.2s,baz=333,slow=39					
WVOR	**Wild Horse Val**	**44.41 323**	P	**P**	**01 03 21.4**	**+0.1**
SCHQ	**Schefferville**	**47.27 14**	P	**P**	**01 03 42.0**	**-1.5**
SCHQ	**Schefferville**	**47.27 14**	P	**P**	**01 03 42.0**	**-1.5**
	2.8nm,0.9s,baz=218,slow=9.6,SNR=5.1					
SCHQ			LR	LR	01 24 23.0	
	comp=Z,187nm,18.3s,baz=80,slow=37					
PLCA	**Paso Flores**	**51.64 167**	P	**P**	**01 04 17.1**	**0.0**
PLCA	**Paso Flores**	**51.64 167**	P	**P**	**01 04 17.1**	**0.0**
	1.8nm,0.9s,baz=329,slow=10,SNR=4.3					
BBB	**Bella Bella**	**55.34 329**	P	**P**	**01 04 44.6**	**+0.5**
BBB	**Bella Bella**	**55.34 329**	P	**P**	**01 04 44.6**	**+0.5**
	13nm,1.0s,baz=127,slow=5.1,SNR=1.8					
YKA	**Yellowknife Ar**	**57.20 344**	P	**P**	**01 04 55.2**	**-2.0**
YKA			PcP	**PcP**	**01 05 52.1**	**+0.5**
YKA	**Yellowknife Ar**	**57.20 344**	P	**P**	**01 04 55.2**	**-2.0**
	0.5nm,0.7s,baz=142,slow=6.9,SNR=18					
YKA			PcP	**PcP**	**01 05 52.1**	**+0.5**
	0.4nm,0.7s,baz=143,slow=4.1,SNR=5.2					
DLBC	**Dease Lake**	**59.81 334**	P	**P**	**01 05 14.5**	**-1.1**
DLBC	**Dease Lake**	**59.81 334**	P	**P**	**01 05 14.5**	**-1.1**
	3.0nm,1.1s,baz=135,slow=4.3,SNR=0.9					
BBTS	**Babate**	**66.33 78**	LR	LR	01 31 15.7	
	comp=Z,46nm,20.5s,baz=250,slow=33					
ILAR	**Eielson Array**	**69.88 336**	P	**P**	**01 06 19.6**	**-1.4**
ILAR	**Eielson Array**	**69.88 336**	P	**P**	**01 06 19.6**	**-1.4**
	0.9nm,0.8s,baz=104,slow=4.6,SNR=9.5					
ILAR			LR	LR	01 42 40.5	
	comp=Z,44nm,20.8s,baz=108,slow=41					
MDT	**Midelt**	**76.31 59**	P	**P**	**01 07 01.2**	**+1.3**
MDT	**Midelt**	**76.31 59**	P	**P**	**01 07 01.2**	**+1.3**
	2.3nm,1.0s,baz=285,slow=5.7,SNR=5.5					
ESDC	**Sonseca Array**	**76.61 51**	P	**P**	**01 07 02.6**	**+1.2**
ESDC	**Sonseca Array**	**76.61 51**	P	**P**	**01 07 02.6**	**+1.2**
	2.3nm,0.8s,baz=279,slow=5.6,SNR=18					
TORD	**Torodi Ar. Bea**	**84.08 78**	P	**P**	**01 07 40.6**	**-1.3**
TORD	**Torodi Ar. Bea**	**84.08 78**	P	**P**	**01 07 40.6**	**-1.3**
	0.7nm,0.8s,baz=278,slow=4.2,SNR=5.2					
NB2	**NORSAR Subarra**	**84.42 29**	P	**P**	**01 07 42.3**	**-0.5**
	comp=Z,4.4nm,0.8s,baz=278,slow=5.1					
NOA	**NORSAR Array B**	**84.42 29**	P	**P**	**01 07 43.0**	**+0.2**
NOA	**NORSAR Array B**	**84.42 29**	P	**P**	**01 07 43.0**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=278,slow=5.0,SNR=9.3					
NOA			LR	LR	01 41 27.3	
	comp=Z,34nm,18.4s,baz=270,slow=33					
ARCES	**ARCESS Array B**	**87.92 19**	LR	LR	01 48 10.8	
	comp=Z,69nm,18.1s,baz=28,slow=36					
GERES	**GERESS Array B**	**88.15 41**	P	**P**	**01 08 01.1**	**-0.4**
GERES	**GERESS Array B**	**88.15 41**	P	**P**	**01 08 01.1**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=282,slow=6.7,SNR=7.1					
FINES	**FINESS Array B**	**91.20 27**	P	**P**	**01 08 14.2**	**-1.2**
FINES	**FINESS Array B**	**91.20 27**	P	**P**	**01 08 14.2**	**-1.2**
	comp=Z,2.4nm,1.0s,baz=287,slow=5.4,SNR=3.9					
FINES			LR	LR	01 48 40.8	
	comp=Z,56nm,18.1s,baz=114,slow=35					
SONM	**Songino Array**	**122.07 351**	PKP	**PKPdf**	**01 14 03.8**	**-1.7**
SONM	**Songino Array**	**122.07 351**	PKP	**PKPdf**	**01 14 03.8**	**-1.7**
	comp=Z,0.2nm,0.6s,baz=323,slow=2.2,SNR=2.2					
HHC	**Hu-ho-hao-te**	**127.74 345**	*e*PKP	**PKPdf**	**01 14 15.0**	**-1.5**
HHC			PP	**PP**	**01 16 19.8**	**+3.2**
HHC			SS	SS	01 33 25.0	-2.7
HHC			AMB	AMB		
	comp=Z,170nm,9.1s					

IDC ***22*** *01:03:07.4±3.9,36°.25N×71°.20E,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.3/26,mbtmp3.4/4,Error ellipse: s-maj=102.5km s-min=38.3km az=139.0*

ISCJB ***22*** *01:03:17.0±1.3,36°.67N±0°.08×70°.8E±0°.1,h64km,mb3.3/3, Error ellipse: s-maj=13.1km s-min=11.6km az=19.5*

NNC ***22*** *01:03:26.9±2.1,37°.44N×70°.65E,h0km,mb3.4,mpv3.2, Error ellipse: s-maj=16.6km s-min=16.0km az=76.0*

ISC 22 01:03:19.1±1.5,36.7N±0.1×70.7E±0.1,h64km,n8, σ1ᵖ79/11,mb3.4/3,3C-4D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.42 359**		Pn	Pn	01 04 55.3	+4.2
	1.2nm,0.3s,baz=178,slow=12,SNR=6						
KK31				⇓Sn	**Sn**	**01 06 04.4**	**+1.5**
	1.9nm,0.3s,baz=188,slow=24,SNR=7.6						
TKM2	**Tokmak 2**	**7.30**	**30**	⇓Pn	**Pn**	**01 05 04.9**	**+1.7**
	0.9nm,0.7s						
TKM2				⇑Sn	**Sn**	**01 06 24.0**	**-0.9**
	2.5nm,0.9s						
AB31	**Akbulak array**	**14.80 332**		⇓Pn	**P**	**01 06 48.2**	**-0.8**
	0.3nm,0.5s,baz=1.9,slow=27,SNR=9.0						
AB31				⇓Sn	**Sn**	**01 09 25.9**	**-1.4**
	1.2nm,0.8s,baz=156,slow=24,SNR=6.6						
AKTO	**Aktyubinsk**	**16.50 330**		⇑Pn	**P**	**01 07 10.9**	**+3.1**
	0.3nm,0.9s						
AKTO				⇑Sn	**Sn**	**01 10 07.1**	**-1.3**
	0.6nm,1.4s						
ZALV	**Zalesovo Beam**	**19.87 25**		P	**P**	**01 07 43.0**	**-1.9**
	0.9nm,0.3s,baz=218,slow=10,SNR=4.3						
NOA	**NORSAR Array B**	**44.08 323**		P	**P**	**01 11 21.6**	**+1.1**
	0.5nm,0.7s,baz=96,slow=7.6,SNR=3.1						
TORD	**Torodi Ar. Bea**	**65.45 268**		P	**P**	**01 13 55.5**	**-0.1**
	0.2nm,0.4s,baz=53,slow=5.3,SNR=4.8						
YKA	**Yellowknife Ar**	**81.09**	**2**	P	**P**	**01 15 25.7**	**-1.2**
	0.1nm,0.4s,baz=354,slow=5.8,SNR=4.0						

NOU ***22*** *01:07:46.3±0.5,23°.76S×171°.14E,h10km,MD3.1,ML2.9*

IDC ***22*** *01:07:50.5±8.6,22°.36S×171°.11E,h75km±76km,mb3.7/10, mb1 3.9/10,mb1mx3.8/19,mbtmp3.7/10,MS3.5/5, Ms1 3.5/5,ms1mx3.2/27,Error ellipse: s-maj=29.5km s-min=24.1km az=35.0*

ISCJB ***22*** *01:07:51.5±0.7,22°.5S±0°.1×170°.93E±0°.06,h98km, mb3.8/10,Error ellipse: s-maj=18.3km s-min=7.8km az=4.0*

ISC 22 01:07:52.8±0.8,22°.4S±0°.2×170°.96E±0°.08,h98km,n21, σ1ᵖ21/18,mb3.7/9,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAYA	**Yate Dam**	**3.78 273**		*e*P	**Pn**	**01 08 47.8**	**-1.2**
BAYA				*e*S	**Sn**	**01 09 32.8**	**+0.3**
BAYA				AMP		01 09 45.9	
	comp=Z,25nm,4.2s						
NORM	**Noumea**	**4.14 271**		*e*P	**Pn**	**01 08 52.1**	**-1.9**
NORM				*e*S	**Sn**	**01 09 40.5**	**-0.9**
NOUC	**Port Laguerre**	**4.32 273**		*e*P	**Pn**	**01 08 55.9**	**-0.4**
NOUC				AMP		01 10 00.6	
	comp=Z,76nm,0.8s						
HNR	**Honiara**	**16.66 319**		LR	LR	01 16 57.2	
	comp=Z,131nm,19.2s,baz=132,slow=33						
URZ	**Urewera**	**16.68 163**		LR	LR	01 16 19.0	
	comp=Z,206nm,20.2s,baz=352,slow=30						
RPZ	**Rata Peaks**	**21.27 180**		P	**P**	**01 12 30.0**	**-1.2**
	comp=Z,5.5nm,0.7s,baz=0.0,slow=7.1,SNR=4.0						
CTA	**Charters Tower**	**23.13 271**		LR	LR	01 21 11.8	
	comp=Z,115nm,18.1s,baz=55,slow=34						
PMG	**Port Moresby**	**26.22 296**		P	**P**	**01 13 19.8**	**+1.0**
	comp=Z,6.6nm,0.6s,baz=135,slow=8.6,SNR=2.4						
STKA	**Stephens Creek**	**27.71 244**		P	**P**	**01 13 34.5**	**+2.5**
	comp=Z,0.7nm,0.5s,baz=66,slow=10.0,SNR=1.8						
STKA				LR	LR	01 22 39.4	
	comp=Z,70nm,18.6s,baz=27,slow=32						
ASAR	**Alice Springs**	**34.06 261**		P	**P**	**01 14 29.0**	**+1.0**
	comp=Z,2.6nm,0.7s,baz=83,slow=8.9,SNR=21						
WRA	**Warramunga Arr**	**34.18 267**		P	**P**	**01 14 29.5**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=98,slow=8.6,SNR=9.9						
WRA				LR	LR	01 26 12.9	
	comp=Z,103nm,20.7s,baz=110,slow=32						
TBI	**Tubuai**	**36.41 99**		*e*LR	LR	01 24 33.8	
	comp=Z,76nm,30.8s						
PPT2	**Papeete2**	**37.32 90**		*e*LR	LR	01 24 58.8	
	comp=Z,95nm,29.8s						
VNDA	**Vanda**	**55.36 182**		P	**P**	**01 17 15.8**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=3.7,slow=7.3,SNR=3.1						
NVAR	**Mina Array Bea**	**89.69 48**		P	**P**	**01 20 39.9**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=225,slow=8.2,SNR=16						
ILAR	**Eielson Array**	**92.76 17**		P	**P**	**01 20 51.7**	**-1.8**
	comp=Z,0.3nm,1.0s,baz=235,slow=2.9,SNR=2.9						
TXAR	**Lajitas Array**	**96.86 61**		P	**P**	**01 21 14.7**	**+1.4**
	comp=Z,0.1nm,0.4s,baz=243,slow=8.0,SNR=2.1						
PDAR	**Pinedale Array**	**97.58 47**		P	Pdif	01 21 17.2	+0.7
	comp=Z,0.2nm,0.6s,baz=247,slow=1.9,SNR=2.6						
EKA	**Eskdalemuir Ar**	**146.81 354**		PKPbc	**PKPdf**	**01 27 21.5**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=13,slow=2.9,SNR=7.6						
GERES	**GERESS Array B**	**148.01 331**		PKPbc	**PKPbc**	**01 27 27.4**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=37,slow=3.3,SNR=10.0						
TORD	**Torodi Ar. Bea**	**166.26 230**		PKP	**PKPdf**	**01 27 46.9**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=48,slow=0.7,SNR=6.0						
TORD				PKPab	**PKPab**	**01 28 49.3**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=125,slow=4.2,SNR=3.1						

NIED ***22*** *01:22:00,27°.00N×129°.90E,h5km,Mw3.9 Best double couple: M0 7.48000×10¹⁴ NP1:φ=242.00000°,δ60.00000°, λ-72.00000°. NP2:φ=30.00000°,δ35.00000°, λ-117.00000°.*

IDC ***22*** *01:22:34.7±0.6,27°.05N×129°.92E,h0km,mb3.7/14, mb1 4.0/17,mb1mx3.9/30,mbtmp3.9/17,ML3.9/3,MS4.0/3, Ms1 4.0/3,ms1mx2.9/52,Error ellipse: s-maj=22.5km s-min=13.7km az=73.0*

ISCJB ***22*** *01:22:36.0±1.3,27°.04N±0°.03×129°.96E±0°.04, h25km±10km,mb3.7/15,MS4.1/3,Error ellipse: s-maj=6.0km s-min=5.5km az=168.9*

JMA ***22*** *01:22:36.9±0.1,27°.01N×129°.95E,h52km,M3.6*

ISC 22 01:22:35.5±1.8,27.04N±0.04×129.93E±0.04,h8km±11km, n31,σ1ᵖ25/36,mb3.9/15,MS4.2/3,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**1.15 311**		P	**Pg**	**01 22 57.4**	**-0.2**
JTK				*e*S	**Sg**	**01 23 12.4**	**-0.2**
JZK	**Kikaishima**	**1.27 2**		P	**Pn**	**01 22 59.5**	**-0.2**
JAMN	**Amaminishikomi**	**1.38 331**		P	**Pn**	**01 23 00.5**	**-0.6**
JAMN				*e*S	**Sb**	**01 23 17.2**	**-2.2**
JAM	**Amami Oshima**	**1.40 348**		P	**Pn**	**01 23 01.0**	**-0.4**
JAM				*e*S	**Sb**	**01 23 18.3**	**-1.7**
JOW	**Kunigami**	**1.49 263**		P	**Pn**	**01 23 02.2**	**-0.5**
JOW				*e*S	**Sn**	**01 23 20.8**	**-1.7**
JMZ	**Minamidaito 2**	**1.67 136**		P	**Pn**	**01 23 04.0**	**-1.2**
JMZ				*e*S	**Sn**	**01 23 23.5**	**-3.4**
JIH	**Iheya**	**1.75 270**		P	**Pn**	**01 23 06.1**	**-0.2**
JIH				*e*S	**Sn**	**01 23 27.8**	**-1.0**
JAGN	**Aguni-jima**	**2.44 260**		P	**Pn**	**01 23 15.3**	**-0.5**
JNN	**Nakanoshima**	**2.80 359**		*e*S	**Sn**	**01 23 52.6**	**-2.0**
JKE	**Kume jima 2**	**2.90 257**		P	**Pn**	**01 23 21.1**	**-1.0**
JKE				*e*S	**Sn**	**01 23 55.0**	**-2.2**
JNU	**Nakatsue**	**6.12 7**		Pn	**Pn**	**01 24 07.4**	**+1.0**
	2.8nm,0.3s,baz=188,slow=7.1,SNR=8.6						
JNU				Sn	**Sn**	**01 25 14.6**	**-2.1**
	0.9nm,0.3s,baz=144,slow=17,SNR=1.7						
JHJ	**Hachijo jima 2**	**10.46 52**		Pn	**Pn**	**01 25 06.7**	**+0.8**
	13nm,0.3s,baz=230,slow=15,SNR=4.4						
KSRS	**Korea Array**	**10.53 351**		Pn	**Pn**	**01 25 07.8**	**+1.0**
	0.5nm,0.3s,baz=167,slow=14,SNR=3.1						
SONM	**Songino Array**	**27.74 325**		P	**P**	**01 28 24.8**	**+0.1**
	0.5nm,0.6s,baz=146,slow=6.9,SNR=3.8						
CMAR	**Chiang Mai Arr**	**29.77 260**		P	**P**	**01 28 43.6**	**+0.7**
	0.8nm,0.3s,baz=62,slow=9.6,SNR=2.8						
MKAR	**Makanchi Array**	**42.15 311**		P	**P**	**01 30 27.2**	**-1.3**
	0.7nm,0.9s,baz=99,slow=8.9,SNR=3.6						
KURBB	**Kurchatov Arra**	**45.33 316**		P	**P**	**01 30 53.1**	**-0.9**
	0.3nm,0.5s,baz=102,slow=8.6,SNR=6.3						
WRA	**Warramunga Arr**	**46.89 174**		P	**P**	**01 31 06.7**	**+0.1**
	1.7nm,0.8s,baz=349,slow=8.3,SNR=9.8						
CTA	**Charters Tower**	**49.44 160**		P	**P**	**01 31 27.0**	**+0.7**
	3.5nm,0.7s,baz=315,slow=8.6,SNR=3.2						
ASAR	**Alice Springs**	**50.55 175**		P	**P**	**01 31 35.2**	**+0.5**
	0.8nm,0.5s,baz=6.1,slow=14,SNR=13						
BVAR	**Borovoye Array**	**50.70 318**		P	**P**	**01 31 35.9**	**+0.3**
	0.3nm,0.4s,baz=104,slow=6.1,SNR=2.6						
STKA	**Stephens Creek**	**59.63 169**		P	**P**	**01 32 40.4**	**+0.2**
	1.1nm,0.7s,baz=21,slow=8.6,SNR=2.3						
ILAR	**Eielson Array**	**63.01 29**		P	**P**	**01 33 02.7**	**-0.1**
	0.2nm,0.6s,baz=267,slow=3.6,SNR=3.5						
KBZ	**Khabaz**	**69.83 310**		P	**P**	**01 33 47.7**	**+1.0**
	1.6nm,0.9s,baz=108,slow=6.4,SNR=3.9						
FINES	**FINESS Array B**	**72.91 331**		P	**P**	**01 34 04.9**	**-0.1**
	1.4nm,0.8s,baz=87,slow=7.1,SNR=4.3						
YKA	**Yellowknife Ar**	**77.15 25**		P	**P**	**01 34 30.0**	**+0.5**
	0.2nm,0.7s,baz=298,slow=4.8,SNR=4.9						
BRTR	**Keskin Array B**	**77.74 308**		P	**P**	**01 34 33.9**	**+0.4**
	0.8nm,0.9s,baz=63,slow=6.6,SNR=5.3						
ASF	**Jabal al Asfar**	**78.49 300**		P	**P**	**01 34 39.3**	**+1.6**
	0.7nm,0.5s,baz=51,slow=6.5,SNR=1.9						
MMAI	**Mount Meron Ar**	**79.28 302**		LR	LR	02 11 06.9	
	comp=Z,29nm,19.0s,baz=90,slow=37						
RPZ	**Rata Peaks**	**79.87 151**		LR	LR	02 03 31.7	
	comp=Z,126nm,21.2s,baz=335,slow=31						
PPT	**Papeete**	**89.72 110**		LR	LR	02 11 41.9	
	comp=Z,146nm,21.1s,baz=60,slow=33						

NEIC ***22*** *01:36:55.4,18°.21N×68°.55W,h147km,MD3.7(RSPR), After RSPR.*

RSPR 22 01:36:55.4,18°.21N×68°.55W,h147km±1km,MD3.7/3,9D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMN1	**Samana, DR**	**1.19 325**		⇓*e*P	Pn	01 37 21.6	-0.1
SMN1				*e*S	Sn	01 37 41.6	-0.2
CRPR	**Cabo Rojo, PR**	**1.38 98**		↑*i*P	Pn	01 37 23.3	-0.1
CRPR	**Cabo Rojo, PR**	**1.38 98**		*i* Pu	Pn	01 37 23.4	-0.1
CRPR				*e*S	Sn	01 37 45.0	+0.1
AOPR	**Arecibo Observ**	**1.71 85**		⇓*e*P	Pn	01 37 26.7	-0.3
AOPR	**Arecibo Observ**	**1.71 85**		⇓*e*P	Pn	01 37 26.7	-0.3
AOPR				*e*S	Sn	01 37 51.7	+0.4
CELP	**Cerrillos**	**1.88 94**		⇓*e*P	Pn	01 37 28.7	-0.2
CELP	**Cerrillos**	**1.88 94**		⇓*e*P	Pn	01 37 28.7	-0.2
HUMP	**Col San Antoni**	**2.56 91**		⇓*e*P	Pn	01 37 36.4	-0.7
HUMP	**Col San Antoni**	**2.56 91**		⇓*e*P	Pn	01 37 36.4	-0.7
HUMP				*e*S	Sn	01 38 09.0	-0.3
MTP	**Monte Pirata**	**2.85 92**		⇓*e*P	Pn	01 37 40.9	+0.2
MTP	**Monte Pirata**	**2.85 92**		⇓*e*P	Pn	01 37 40.9	+0.2

TRN 22 01:42:03.3,12°.95N×59°.49W,h44km,MD3.5,2D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBSP	**Saint Philip**	**0.16 13**		⇓*i*P	Pn	01 42 12.2	+1.5
BBSP				*e*S	Sn	01 42 17.5	+1.6
MCLT	**Moule a Chique**	**1.60 298**		*e*P	Pn	01 42 30.4	+1.3
MCLT				*e*S	Sn	01 42 49.6	+1.1
BHS	**Barnard House**	**1.63 282**		*e*P	Pn	01 42 31.4	+2.0
BHS				*e*S	Sn	01 42 51.1	+1.8
SVV	**Soufriere Volc**	**1.72 282**		*e*S	Sn	01 42 53.7	+2.2
FCV	**Fort Charlotte**	**1.72 277**		*e*P	Pn	01 42 32.8	+2.1
FCV				*e*S	Sn	01 42 53.2	+1.7
SLB	**Belfond**	**1.74 300**		⇓*e*P	Pn	01 42 32.2	+1.1
SLB				*e*S	Sn	01 42 53.5	+1.3
SVB	**Belmont**	**1.74 281**		*e*P	Pn	01 42 32.3	+1.2
SVB				*e*S	Sn	01 42 53.9	+1.8
SLW	**Petit Monier**	**1.76 307**		*e*P	Pn	01 42 33.4	+2.0
SLW				*e*S	Sn	01 42 54.2	+1.6
TOSP	**Speyside**	**1.93 212**		*e*P	Pn	01 42 34.2	+0.5
MVM	**Montagne Vaucl**	**2.10 320**		*e*P	Pn	01 42 37.2	+1.2
GRW	**Mount Saint Ca**	**2.26 250**		*e*S	Sn	01 43 06.8	+1.8
FDF	**Fort de France**	**2.39 318**		*e*P	Pn	01 42 41.6	+1.5
FDF				*e*S	Sn	01 43 09.2	+1.0
DLPL	**La Plaine**	**2.92 325**		*e*P	Pn	01 42 48.9	+1.7
DLPL				*e*S	Sn	01 43 22.3	+1.2
DOG	**Dongo Capester**	**3.69 326**		*e*P	Pn	01 42 59.5	+1.6
PHG	**Guadaloupe-2**	**3.69 326**		*e*P	Pn	01 42 59.7	+1.7
HMG	**Houelmont**	**3.69 325**		*e*P	Pn	01 43 00.0	+2.1
SCG	**Saint Claude**	**3.72 326**		*e*P	Pn	01 43 00.1	+1.8
BCG	**Bois Riant Cap**	**3.73 327**		*e*P	Pn	01 42 60.0	+1.5
BCG				*e*S	Sn	01 43 40.9	-0.4
LZG	**Guadaloupe-1**	**3.87 325**		*e*P	Pn	01 43 02.3	+2.1
SEG	**Port Louis**	**3.94 331**		*e*P	Pn	01 43 02.8	+1.5
SKI	**Saint Kitts**	**5.37 325**		*e*P	Pn	01 43 23.6	+2.7

WEL 22 01:44:16.2±0.4,39°.42S×178°.85E,h33km,ML4.2/41, 10C-6D,Error ellipse: s-maj=3.7km s-min=2.1km az=90.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MHGZ	**Mahia Peninsul**	**0.78 289**		⇑P	Pn	01 44 30.1	-0.9
MHGZ				*e*S	Sn	01 44 41.1	-0.3
PRGZ	**Paritu Road**	**0.90 303**		P	Pn	01 44 31.8	-0.9
PRGZ				S	Sn	01 44 42.7	-1.8
CNGZ	**Carnagh Statio**	**1.06 331**		P	Pn	01 44 34.4	-0.4
CKHZ	**Cape Kidnapper**	**1.39 259**		P	Pn	01 44 38.4	-1.0
PUZ	**Puketiti**	**1.42 341**		⇓P	Pn	01 44 38.5	-1.3
PUZ				*e*S	Sn	01 44 53.1	-4.2
RAHZ	**Arahi**	**1.46 289**		P	Pn	01 44 40.2	-0.2
MWZ	**Matawai**	**1.49 316**		⇑P	Pn	01 44 40.2	-0.6
KAHZ	**Kahuranaki**	**1.57 255**		P	Pn	01 44 40.9	-1.0
NMHZ	**Naumai**	**1.62 281**		P	Pn	01 44 42.4	-0.2
PXZ	**Pawanui**	**1.65 248**		⇑P	Pn	01 44 41.3	-1.6
MCHZ	**McNeill Hill**	**1.67 268**		P	Pn	01 44 42.7	-0.5
URZ	**Urewera**	**1.78 310**		P	Pn	01 44 44.6	-0.1
URZ				S	Sn	01 45 06.3	0.0
BKZ	**Black Stump Fm**	**1.85 277**		P	Pn	01 44 45.2	-0.5
MXZ	**Matakaoa Point**	**1.90 347**		P	Pn	01 44 45.5	-0.8
MXZ				S	Sn	01 45 08.2	-0.9
PRHZ	**Porangahau**	**1.91 243**		P	Pn	01 44 44.4	-2.1
WPHZ	**Waipukurau**	**1.97 250**		P	Pn	01 44 46.0	-1.3
EDRZ	**Edgecumbe**	**2.11 308**		P	Pn	01 44 49.3	0.0
PNHZ	**Pukenui**	**2.11 255**		P	Pn	01 44 47.9	-1.3
RRRZ	**Republican Roa**	**2.12 300**		P	Pn	01 44 49.7	+0.3
ALRZ	**Allen Road**	**2.13 293**		*e*P	Pn	01 44 49.8	+0.2
BHHZ	**Black Hill Sta**	**2.16 267**		P	Pn	01 44 49.1	-0.9
TARZ	**Mount Tarawera**	**2.18 302**		P	Pn	01 44 50.6	+0.2
HATZ	**Hinemaiaia**	**2.21 283**		P	Pn	01 44 51.1	+0.4
MARZ	**Manawahe**	**2.22 309**		*e*P	Pn	01 44 51.1	+0.2
DVHZ	**Dannevirke**	**2.25 246**		P	Pn	01 44 49.3	-1.9
TSZ	**Takapari Road**	**2.32 253**		P	Pn	01 44 50.6	-1.6
BFZ	**Birch Farm**	**2.37 237**		P	Pn	01 44 49.8	-2.9
BFZ				*e*S	Sn	01 45 18.4	-2.3
RITZ	**Rihia Road**	**2.37 280**		⇓P	Pn	01 44 53.6	+0.7
OPRZ	**Ohinepanea**	**2.39 310**		P	Pn	01 44 52.5	-0.5
MOVZ	**Moawhango**	**2.40 269**		*e*P	Pn	01 44 53.5	+0.2
RATZ	**Rangitukua**	**2.46 282**		⇑P	Pn	01 44 54.3	+0.3
TUVZ	**Tukino**	**2.48 272**		P	Pn	01 44 55.2	+0.6
OTVZ	**Oturere**	**2.49 275**		P	Pn	01 44 55.1	+0.5
KATZ	**Kakaramea**	**2.49 279**		⇓P	Pn	01 44 55.3	+0.6
KRVZ	**Karewarewa**	**2.51 276**		P	Pn	01 44 55.2	+0.3
WNVZ	**Wahianoa**	**2.52 271**		P	Pn	01 44 55.6	+0.5
WATZ	**Wairara**	**2.53 285**		P	Pn	01 44 54.4	-0.7
NGZ	**Ngauruhoe**	**2.53 274**		⇑P	Pn	01 44 55.7	+0.4
WTVZ	**West Tongariro**	**2.55 276**		⇓P	Pn	01 44 56.0	+0.6
FWVZ	**Far West T-bar**	**2.56 273**		P	Pn	01 44 55.9	+0.1
POWZ	**Post Office Ro**	**2.56 247**		P	Pn	01 44 54.2	-1.3
WPVZ	**Whakapapa**	**2.57 274**		P	Pn	01 44 55.8	0.0
MTVZ	**Mangateitei**	**2.62 270**		⇑P	Pn	01 44 56.6	+0.2
TIWZ	**Tintock**	**2.65 238**		⇑P	Pn	01 44 53.9	-2.9
TWVZ	**Taurewa**	**2.67 276**		P	Pn	01 44 57.1	0.0
MRZ	**Mangatainoka R**	**2.80 243**		⇑P	Pn	01 44 56.2	-2.6
TMWZ	**Te Maipa**	**2.83 232**		P	Pn	01 44 55.3	-3.9

PMG S S 01 56 23.6 +2.2
2.9nm,0.3s,baz=54,slow=21,SNR=1.3
AFI Afiamalu 20.34 93 *e*P Pn 01 52 50.8 -1.7
233nm,0.9s
AFI Afiamalu 20.34 93 P P **01 52 49.7 +2.1**
168nm,0.8s,baz=254,slow=15,SNR=14
CTA Charters Tower 21.08 250 P P **01 52 55.6 +0.4**
CTA S S **01 56 37.1 -1.4**
CTA PcP PcP **01 56 55.2 +1.5**
CTA Charters Tower 21.08 250 P P **01 52 55.6 +0.4**
85nm,0.6s,baz=78,slow=12,SNR=89
CTA S S **01 56 37.1 -1.4**
18nm,1.0s,baz=177,slow=21,SNR=3.4
CTA PcP PcP **01 56 55.2 +1.5**
12nm,0.6s,baz=103,slow=2.4,SNR=3.5
CTAO Charters Tower 21.08 250 *e*P P **01 52 55.5 +0.2**
CTAO pmax pmax
comp=Z,91nm,0.6s
CTAO Charters Tower 21.08 250 *e*P P **01 52 55.5 +0.2**
comp=Z,91nm,0.6s
RMQ Roma 21.50 231 P P **01 53 01.2 +1.6**
baz=22,SNR=457
RMQ S S **01 56 49.1 +3.7**
baz=22,SNR=6.7
ARMA Armidale 22.01 218 *e*P P **01 53 06.3 +1.4**
ARMA Armidale 22.01 218 P P **01 53 06.3 +1.4**
baz=22,SNR=73
PATS Pohnpei 22.27 336 P P **01 53 07.8 +0.5**
baz=22,SNR=14
NIUE Niue 22.50 107 P P **01 53 10.9 +1.5**
baz=23,SNR=12
COEN Coen 23.40 267 *e*P P **01 53 18.9 +1.2**
comp=Z,601nm,1.2s
COEN Coen 23.40 267 P P **01 53 18.8 +1.2**
baz=23,SNR=41
COEN S S 01 56 59.5 -17
baz=23,SNR=5.6
MGCD Mangrove Creek 24.36 214 P P **01 53 28.1 +2.0**
baz=24,SNR=30
QLP Quilpie 25.08 236 P P **01 53 33.4 +0.7**
baz=25,SNR=62
URZ Urewera 25.96 162 P P **01 53 41.0 +0.6**
URZ PcP PcP **01 57 03.2 -0.6**
URZ S S **01 57 56.8 +0.5**
URZ Urewera 25.96 162 P P **01 53 41.0 +0.6**
comp=Z,10nm,0.5s,baz=354,slow=5.4,SNR=7.7
URZ PcP PcP **01 57 03.2 -0.6**
comp=Z,13nm,0.8s,baz=343,slow=2.7,SNR=3.9
URZ S S **01 57 56.8 +0.5**
comp=Z,10.0nm,0.8s,baz=20,slow=22,SNR=3.0
CMSA Cobar Meteorol 26.58 225 P P **01 53 46.9 +0.7**
baz=27,SNR=80
YNG Young 26.69 217 P P **01 53 48.7 +1.6**
baz=27,SNR=27
CNB Canberra Magne 26.89 214 P P **01 53 50.5 +1.5**
baz=27,SNR=28
CAN Canberra 27.09 214 *e*P P **01 53 52.0 +1.2**
CAN pmax pmax
comp=Z,48nm,1.0s
CAN Canberra 27.09 214 *e*P P **01 53 52.0 +1.2**
comp=Z,48nm,1.0s
QIS Mount Isa 27.28 252 P P **01 53 52.8 +0.3**
baz=27,SNR=17
MILA Mila 28.32 212 P P **01 54 03.1 +1.5**
baz=28,SNR=11
JAY Jayapura 28.52 291 P P **01 54 03.4 -0.2**
baz=28,SNR=7.1
STKA Stephens Creek 29.66 228 *e*P P **01 54 14.4 +1.0**
comp=Z,15nm,0.6s
STKA *e*PcP PcP **01 57 12.8 -0.2**
STKA PcP PcP 01 57 13.2 +0.3
STKA S S **01 58 55.5 +0.8**
STKA ScP ScP **02 00 38.4 +1.7**
STKA PKiKP PKiKP **02 04 44.6 -1.1**
STKA Stephens Creek 29.66 228 P P **01 54 14.7 +1.2**
comp=Z,80nm,0.5s,baz=49,slow=8.3,SNR=275
STKA PcP PcP **01 57 13.2 +0.3**
comp=Z,33nm,0.7s,baz=60,slow=4.4,SNR=6.7
STKA S S **01 58 55.5 +0.8**
comp=Z,4.1nm,0.7s,baz=152,slow=19,SNR=2.2
STKA ScP ScP **02 00 38.4 +1.7**
comp=Z,20nm,0.7s,baz=50,slow=3.3,SNR=18
STKA PKiKP PKiKP **02 04 44.6 -1.1**
comp=Z,2.5nm,0.6s,baz=26,slow=1.7,SNR=8.4
STKA LR LR 02 05 37.6
comp=Z,257nm,20.0s,baz=303,slow=35
STKA Stephens Creek 29.66 228 P P **01 54 14.5 +1.0**
baz=30,SNR=152
RPZ Rata Peaks 30.07 175 *e*P P **01 54 17.6 +0.6**
comp=Z,30nm,0.6s
RPZ Rata Peaks 30.07 175 P P **01 54 17.7 +0.8**
comp=Z,30nm,0.6s,baz=264,slow=1.7,SNR=36
TOO Toolangi 30.67 215 P P **01 54 23.9 +1.5**
baz=31,SNR=26
WRAB Tennant Creek 32.08 254 *e*P P **01 54 33.8 -1.0**
WRAB pmax pmax
comp=Z,66nm,1.4s
WRAB Tennant Creek 32.08 254 *e*P P **01 54 33.8 -1.0**
comp=Z,66nm,1.4s
WRAB Tennant Creek 32.08 254 P P **01 54 34.0 -0.9**
comp=Z,170nm,0.6s,SNR=17
WRA Warramunga Arr 32.09 254 P P **01 54 34.0 -1.0**
WRA pP pP **01 55 13.5 -1.4**
WRA PcP PcP **01 57 19.8 +0.1**
WRA S S **01 59 28.4 -4.6**
WRA ScP ScP **02 00 46.5 +1.6**
WRA PKiKP PKiKP **02 04 46.3 -1.3**
WRA *e* 02 26 02.4
WRA Warramunga Arr 32.09 254 P P **01 54 34.0 -1.0**
comp=Z,17nm,0.5s,baz=85,slow=9.6,SNR=197
WRA pP pP **01 55 13.5 -1.4**
comp=Z,7.3nm,0.7s,baz=85,slow=9.2,SNR=2.1
WRA PcP PcP **01 57 19.8 +0.1**
comp=Z,43nm,1.0s,baz=80,slow=2.9,SNR=18
WRA S S **01 59 28.4 -4.6**
comp=Z,21nm,1.2s,baz=86,slow=14,SNR=12
WRA ScP ScP **02 00 46.5 +1.6**
comp=Z,24nm,0.9s,baz=82,slow=3.6,SNR=20
WRA PKiKP PKiKP **02 04 46.3 -1.3**
comp=Z,4.9nm,0.7s,baz=16,slow=0.8,SNR=7.5
WRA LR LR 02 06 57.4
comp=Z,540nm,18.3s,baz=85,slow=35
WRA P3KPbc 02 26 02.4
comp=Z,1.0nm,0.9s,baz=266,slow=3.4,SNR=5.4
RAR Rarotonga 32.26 108 *e*P P **01 54 38.3 +1.9**
comp=Z,48nm,1.3s
RAR Rarotonga 32.26 108 P P **01 54 37.6 +1.3**
comp=Z,12nm,0.5s,baz=259,slow=5.2,SNR=6.6
ARPS Mount Arapiles 32.31 220 P P **01 54 38.0 +1.4**
baz=32,SNR=50
AS31 Alice Springs 33.05 248 *e*P P **01 54 42.5 -0.8**
AS31 *e*PcP PcP **01 57 21.8 -0.6**
ASAR Alice Springs 33.05 248 P P **01 54 42.6 -0.7**
ASAR pP pP **01 55 21.5 -1.9**
ASAR PcP PcP **01 57 22.1 -0.2**
ASAR S S **01 59 43.7 -4.1**
ASAR ScP ScP **02 00 49.8 +1.5**
ASAR PKiKP PKiKP **02 04 47.0 -1.2**
ASAR Alice Springs 33.05 248 P P **01 54 42.6 -0.7**
comp=Z,38nm,0.6s,baz=74,slow=9.4,SNR=374
ASAR pP pP **01 55 21.5 -1.9**
comp=Z,8.8nm,0.6s,baz=74,slow=9.3,SNR=1.4
ASAR PcP PcP **01 57 22.1 -0.2**
comp=Z,21nm,0.7s,baz=70,slow=3.0,SNR=15
ASAR S S **01 59 43.7 -4.1**
comp=Z,29nm,1.0s,baz=79,slow=16,SNR=27
ASAR ScP ScP **02 00 49.8 +1.5**
comp=Z,37nm,0.9s,baz=84,slow=3.3,SNR=32
ASAR PKiKP PKiKP **02 04 47.0 -1.2**
comp=Z,2.1nm,0.6s,baz=79,slow=1.8,SNR=15
ASAR LR LR 02 06 59.2
comp=Z,447nm,19.0s,baz=60,slow=34
MOO Moorlands 33.48 207 P P **01 54 48.3 +1.5**
baz=34,SNR=10
TAU Tasmania Unive 33.80 207 *e*P P **01 54 50.5 +1.1**
TAU pmax pmax
comp=Z,84nm,1.3s
TAU Tasmania Unive 33.80 207 *e*P P **01 54 50.5 +1.1**
comp=Z,84nm,1.3s
KDU Kakadu 33.88 268 P P **01 54 50.5 0.0**
baz=34,SNR=41
BBOO Buckleboo 34.21 231 *e*P P **01 54 53.6 +0.5**
comp=Z,1μm,0.8s
BBOO *e*PcP PcP **01 57 24.7 -0.7**
BBOO Buckleboo 34.21 231 P P **01 54 53.8 +0.6**
baz=34,SNR=65
GUMO Guam 35.05 320 *e*P P **01 54 59.6 -0.9**
comp=Z,84nm,0.6s
GUMO Guam 35.05 320 P P **01 54 59.5 -0.9**
comp=Z,86nm,0.5s,baz=157,slow=17,SNR=13
MTN Manton Dam 35.17 267 P P **01 55 01.7 +0.1**
baz=35,SNR=22
MTN S S **02 00 19.8 -0.6**
baz=35,SNR=7.9
FAKI Fak Fak 36.22 284 P P **01 55 10.8 +0.3**
baz=36,SNR=7.4
SWI Sorong 37.86 287 P P **01 55 24.3 -0.1**
baz=38,SNR=6.5
PALU Palau 38.71 301 P P **01 55 32.0 +0.6**
baz=39,SNR=8.8
FORT Forrest 39.82 238 *e*P P **01 55 40.1 -0.4**
comp=Z,96nm,0.6s
FORT Forrest 39.82 238 P P **01 55 40.5 0.0**
baz=40,SNR=21
FITZ Fitzroy Crossi 40.22 258 P P **01 55 43.7 -0.2**
FITZ PcP PcP **01 57 44.8 +0.8**
FITZ ScP ScP **02 01 16.8 +1.9**
FITZ S S **02 01 34.1 -2.4**
FITZ Fitzroy Crossi 40.22 258 P P **01 55 43.7 -0.2**
comp=Z,9.4nm,0.5s,baz=86,slow=9.0,SNR=53
FITZ PcP PcP **01 57 44.8 +0.8**
comp=Z,25nm,0.7s,baz=77,slow=2.1,SNR=5.4
FITZ ScP ScP **02 01 16.8 +1.9**
comp=Z,17nm,1.0s,baz=74,slow=5.7,SNR=8.1
FITZ S S **02 01 34.1 -2.4**
comp=Z,4.4nm,1.1s,baz=290,slow=22,SNR=1.4
FITZ Fitzroy Crossi 40.22 258 S S 02 01 17.0 -19
baz=40,SNR=9.3
PAE Paea 41.66 101 *e*P P **01 55 56.5 +0.9**
comp=Z,19nm,1.3s
PPT2 Papeete2 41.66 101 *e*P P **01 55 56.8 +1.1**
comp=Z,42nm,0.9s
PPT Papeete 41.66 101 P P **01 55 56.2 +0.5**
PPT Papeete 41.66 101 P P **01 55 56.2 +0.5**
comp=Z,36nm,0.4s,baz=237,slow=20,SNR=5.6
TIAR Tiarei 41.88 101 *e*P P **01 55 58.5 +1.0**
comp=Z,38nm,0.8s
TVO Taravao 41.97 101 *e*P P **01 55 59.4 +1.2**
comp=Z,75nm,0.8s
MEH Mehetia 43.10 102 *e*P P **01 56 08.3 +1.1**
comp=Z,107nm,1.0s
PMOR Pomariorio Ree 43.39 97 *e*P P **01 56 10.3 +0.7**
comp=Z,241nm,1.3s
KMBL Kambalda 45.10 239 P P **01 56 22.7 -0.4**
baz=45,SNR=18
MBWA Marble Bar 45.82 254 *e*P P **01 56 28.8 0.0**
comp=Z,88nm,1.0s
MBWA *e*PcP PcP **01 58 02.4 -0.5**
MEEK Meekatharra 47.19 246 P P **01 56 39.4 0.0**
baz=47,SNR=36
MEEK S S **02 03 15.4 -2.0**
baz=47,SNR=5.8
KAPI Kappang 47.60 276 *e*P P **01 56 42.1 -0.6**
comp=Z,95nm,0.9s
KAPI *e*PcP PcP **01 58 08.7 -0.6**
KAPI Kappang 47.60 276 P P **01 56 42.5 -0.2**
comp=Z,526nm,0.9s,SNR=7.5
KAPI Kappang 47.60 276 P P **01 56 42.2 -0.4**
comp=Z,28nm,0.3s,baz=94,slow=7.4,SNR=50
KLBR Kellerberrin 48.61 240 P P **01 56 49.5 -0.7**
baz=49,SNR=19
KLBR S S **02 03 34.0 -3.2**
baz=49,SNR=6.3
KIP Kipapa 48.79 45 *e*P P **01 56 52.3 +0.7**
KIP pmax pmax
comp=Z,70nm,0.9s
MORW Morawa 49.72 243 P P **01 56 58.3 -0.3**
baz=50,SNR=14
GIRL Giralia 50.95 252 P P **01 57 09.3 +1.4**
baz=51,SNR=5.8
MYLDM Lahad Datu 51.92 288 P P **01 57 17.4 +2.2**
TSM Tawau 52.18 287 P P **01 57 18.4 +1.2**
SDKM Sandakan 53.30 288 P P **01 57 26.2 +0.8**
KKM Kota Kinabalu 54.35 288 *e*P P **01 57 32.8 -0.3**
comp=Z,511nm,1.4s
KKM Kota Kinabalu 54.35 288 P P **01 57 33.7 +0.7**
KKM Kota Kinabalu 54.35 288 P P **01 57 33.3 +0.2**
baz=54,SNR=13
UGM Wanagama 55.94 270 P P **01 57 44.5 +0.1**
baz=56,SNR=13
BTM Bintulu 56.31 283 P P **01 57 47.9 +0.9**
SBUM Sibu 56.90 282 P P **01 57 51.8 +0.7**
MJAR Matsushiro Arr 57.02 332 P P **01 57 51.0 -0.5**
MJAR PcP PcP **01 58 45.1 +0.8**
MJAR Matsushiro Arr 57.02 332 P P **01 57 51.0 -0.5**
comp=Z,54nm,0.8s,baz=156,slow=6.3,SNR=90
MJAR PcP PcP **01 58 45.1 +0.8**
comp=Z,8.9nm,0.8s,baz=143,slow=2.1,SNR=3.0
MAJO Matsushiro 57.02 332 *e*P P **01 57 51.0 -0.5**
MAJO pmax pmax
comp=Z,147nm,1.0s
MAJO Matsushiro 57.02 332 *e*P P **01 57 51.0 -0.5**
comp=Z,147nm,1.0s
MAT Matsushiro 57.02 332 P P **01 57 51.2 -0.3**
TWG Pinlang 58.01 308 *e*P P **01 57 57.3 -1.4**
comp=Z,88nm,0.5s
JNU Natsue 58.11 324 LR LR 02 22 47.8
comp=Z,63nm,18.6s,baz=209,slow=36
YULB Yu-li 58.16 309 *e*P P **01 57 58.8 -1.0**
comp=Z,32nm,0.6s
NACB Ninganchiao 58.39 310 *e*P P **01 58 00.5 -0.8**
comp=Z,159nm,1.1s
NACB *e*PcP PcP **01 58 49.9 -0.1**
KSM Kuching 58.43 280 *e*P P **01 58 01.1 -0.6**
comp=Z,137nm,1.5s
KSM Kuching 58.43 280 P P **01 58 02.3 +0.5**
KSM Kuching 58.43 280 P P **01 58 01.9 +0.1**
baz=58,SNR=7.0
TPUB Ta-pu 58.62 308 *e*P P **01 58 01.9 -1.0**
comp=Z,296nm,1.3s
CISI Cisompet, Garu 58.64 269 P P **01 58 02.5 -0.8**
baz=59,SNR=13
SSLB Suanglung 58.65 309 *e*P P **01 58 02.0 -1.2**
comp=Z,121nm,0.8s
YHNB Yeheng 58.84 310 *e*P P **01 58 04.1 -0.4**
comp=Z,437nm,1.1s
TATO Taipei 58.93 311 *e*P P **01 58 04.7 -0.3**
comp=Z,105nm,1.0s
LEM Lembang 58.98 270 P P **01 58 06.6 +0.8**
baz=59,SNR=5.5
QZH Quanzhou 61.08 309⇓ *i*P P **01 58 22.3 +2.7**
KSRS Korea Array 62.91 325 P P **01 58 32.0 +0.5**
comp=Z,27nm,0.8s,baz=138,slow=7.0,SNR=62
KSRS PcP PcP **01 59 08.6 +0.7**
comp=Z,7.2nm,0.8s,baz=141,slow=4.9,SNR=5.9
KSRS PP PP **02 00 54.9 +2.3**
comp=Z,3.2nm,1.0s,baz=137,slow=8.6,SNR=4.3
KSAR Wonju Array Be 62.92 325 P P **01 58 32.0 +0.4**
KSAR PcP PcP **01 59 08.6 +0.6**
KSAR PP PP **02 00 54.9 +2.1**
VNDA Vanda 63.87 181 *e*P P **01 58 38.0 +0.8**
comp=Z,18nm,0.8s
VNDA PcP PcP **01 59 12.3 +1.1**
VNDA pP pP **01 59 22.4 0.0**
VNDA Vanda 63.87 181 P P **01 58 37.8 +0.6**
comp=Z,11nm,0.6s,baz=359,slow=7.3,SNR=81
VNDA PcP PcP **01 59 12.3 +1.1**
comp=Z,7.2nm,0.8s,baz=256,slow=4.2,SNR=4.3
VNDA pP pP **01 59 22.4 0.0**
comp=Z,9.4nm,1.0s,baz=11,slow=5.4,SNR=1.5
SBA Scott Base 64.14 180 *e*P P **01 58 40.7 +1.6**
SBA pmax pmax
comp=Z,63nm,1.1s
SBA Scott Base 64.14 180 *e*P P **01 58 40.7 +1.6**
comp=Z,63nm,1.1s
SBA *e*pP pP **01 59 27.0 +2.8**
YSS Yuzh-Sakhalins 64.28 342⇑ *i*P P **01 58 42.8 +2.5**
YSS pmax pmax
comp=Z,250nm,1.0s
CASY Casey 64.46 202 *e*P P **01 58 41.2 -0.1**
comp=Z,35nm,0.8s
CASY *e*pP pP **01 59 27.9 +1.4**
MYKOM Kota Tinggi 64.71 279 P P **01 58 44.9 +1.1**
NJ2 Nanjing 64.96 315 *e*P P **01 58 45.6 +0.6**
NJ2 pP pP **01 59 30.3 0.0**
NJ2 pmax pmax
comp=Z,160nm,1.0s
VLA Vladivostok 65.19 332 *i*P P **01 58 47.8 +1.6**
VLA pmax pmax
comp=Z,80nm,1.2s
QIZ Qiongzhong 65.26 299 P P **01 58 47.6 +0.4**
QIZ sP sP **01 59 53.5 0.0**
QIZ S S **02 07 14.8 -0.6**
QIZ pmax pmax
comp=Z,58nm,1.0s
QIZ pmax pmax
comp=Z,130nm,5.4s
KGM Kluang 65.28 279 P P **01 58 48.3 +0.8**
USRK Ussuriysk Arra 65.99 333 P P **01 58 52.5 +1.1**
comp=Z,57nm,0.9s,baz=137,slow=5.1,SNR=78
USRK PcP PcP **01 59 20.5 +0.1**
comp=Z,9.2nm,0.7s,baz=159,slow=4.9,SNR=2.0
KTGM Kuala Trenggan 66.40 282 P P **01 58 56.0 +1.3**
FX1 Attu Island--F 66.52 4 *e*P P **01 58 54.9 +0.4**
PET Petropavlovsk 66.88 354 *e*P P **01 58 56.8 0.0**
PET pmax pmax
comp=Z,109nm,0.8s
BKNI Bangkinang 67.03 276 P P **01 58 59.2 +0.6**
baz=67,SNR=4.3
PEA0B Petropavlovsk- 67.06 354 *e*P P **01 58 58.9 +0.9**
PETK Petropavlovsk- 67.06 354 P P **01 58 58.9 +0.9**
PETK 01 59 25.0
PETK Petropavlovsk- 67.06 354 P P **01 58 58.9 +0.9**
PETK PcP PcP **01 59 25.0 +0.3**
PETK Petropavlovsk- 67.06 354 P P **01 58 58.9 +0.9**
comp=Z,90nm,0.8s,baz=162,slow=6.6,SNR=84
PETK PcP PcP **01 59 25.0 +0.3**
comp=Z,9.1nm,0.9s,baz=147,slow=5.5,SNR=1.1
FRIM Kepong 67.24 279 P P **01 59 00.6 +0.6**
WHN Wuhan 67.28 312⇑ *i*P P **01 58 57.3 -2.5**
WHN pmax pmax
comp=Z,140nm,0.7s
WHN pmax pmax
comp=Z,630nm,3.9s
MDJ Mudanjiang 67.40 332 P P **01 59 01.3 +1.0**
MDJ pP pP **01 59 46.4 +0.5**
MDJ sP sP **02 00 06.5 -0.2**
MDJ PP PP **02 01 32.3 +0.6**
MDJ S S **02 07 41.8 +1.6**
MDJ sS sS **02 08 59.5 -0.1**
MDJ SS SS **02 12 05.8 +1.2**
MDJ pmax pmax
comp=Z,120nm,1.2s
MDJ pmax pmax
comp=Z,430nm,5.1s
IPM Ipoh 68.16 281 *e*P P **01 59 05.7 -0.1**
comp=Z,130nm,0.9s
IPM Ipoh 68.16 281 P P **01 59 06.6 +0.9**
SNY Shenyang 68.37 326⇑P P **01 59 06.8 +0.4**
SNY pmax pmax
comp=Z,39nm,0.6s
KULM Kulim 68.75 281 *e*P P **01 59 09.1 -0.3**
comp=Z,121nm,1.4s
KULM *e*PcP PcP **01 59 29.8 -2.9**
KULM Kulim 68.75 281 P P **01 59 09.8 +0.4**
CN2 Changchun 68.79 329⇑P P **01 59 09.6 +0.6**
CN2 PcP PcP **01 59 32.6 +0.4**
CN2 *e*S S **02 07 51.0 -5.7**
CN2 ScS **SKiKP 02 08 44.4 +3.6**
CN2 SS SS **02 12 25.4 -0.7**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
PSI Prapat 69.72 278 P P **01 59 14.6 -0.9**
PSI Prapat 69.72 278 P P **01 59 14.6 -0.9**
comp=Z,67nm,0.8s,baz=80,slow=6.1,SNR=42
PSI Prapat 69.72 278 P P **01 59 14.7 -0.9**
baz=70,SNR=29
KLR Kul'dur 70.09 336 *e*P P **01 59 15.2 -1.6**
KLR pmax pmax
comp=E,80nm,1.6s
KLR pmax pmax
comp=Z,180nm,1.6s
GSI Gunungsitoli 70.62 276 P P **01 59 21.1 +0.2**
baz=71,SNR=6.7
GYA Guiyang 71.15 304⇑ *i*P P **01 59 25.3 +1.4**
GYA PcP PcP **01 59 44.8 +2.0**
GYA pP pP **02 00 11.4 +1.5**
GYA sP sP **02 00 32.5 +1.8**
GYA PP PP **02 02 07.4 +2.9**
GYA S S **02 08 24.3 -0.8**
GYA SKS SKSac **02 09 04.4 -4.1**
GYA pmax pmax
comp=Z,90nm,0.9s
GYA pmax pmax
comp=Z,120nm,5.0s
MIR Mirnyy 71.25 204⇑ *i*P P **01 59 24.5 +0.9**
MIR *i* 01 59 43.0
MIR pmax pmax
comp=Z,63nm,1.0s
BJI Beijing 71.49 321 P P **01 59 26.0 +0.6**
BJI S S **02 08 32.4 +4.2**
BJI pmax pmax
comp=Z,140nm,0.9s
BJI LR LR
comp=Z,81nm,26.9s
XAN Xi'an 73.02 312 P P **01 59 35.3 +0.6**
XAN pmax pmax
comp=Z,41nm,0.9s
XAN pmax pmax
comp=Z,48nm,4.4s
KMI Kunming 73.78 302⇑P P **01 59 41.0 +1.4**
KMI pP pP **02 00 27.3 +1.3**
KMI sP sP **02 00 48.1 +1.6**
KMI PP PP **02 02 29.5 +2.4**
KMI S S **02 08 54.0 -1.3**
KMI pmax pmax
comp=Z,150nm,1.2s
CM31 Chiang Mai Arr 74.55 294 *e*P P **01 59 44.9 +1.1**
CMAR Chiang Mai Arr 74.55 294 P P **01 59 45.0 +1.1**
CMAR pP pP **02 00 31.0 +0.7**
CMAR Chiang Mai Arr 74.55 294 P P **01 59 45.0 +1.1**
comp=Z,62nm,0.8s,baz=122,slow=4.3,SNR=177
CMAR pP pP **02 00 31.0 +0.7**
comp=Z,11nm,1.0s,baz=124,slow=5.9,SNR=2.5
CHTO Chiang Mai 74.67 294 *e*P P **01 59 45.4 +0.8**
CHTO pmax pmax
comp=Z,120nm,1.1s
CHTO Chiang Mai 74.67 294 *e*P P **01 59 45.4 +0.8**
comp=Z,120nm,1.1s
CHTO Chiang Mai 74.67 294 P P **01 59 45.8 +1.2**
SNR=19
HHC Hu-ho-hao-te 74.82 320⇑P P **01 59 46.1 +1.0**
HHC PcP PcP **02 00 00.1 +1.9**
HHC pP pP 02 00 37.3 +5.7
HHC PP PP **02 02 37.3 +1.8**
HHC S S **02 09 00.8 -5.2**
HHC SKS SKSac 02 09 27.3 -8.2
HHC SS SS **02 13 55.8 -2.9**
HHC pmax pmax
comp=Z,370nm,8.4s
HHC LR LR
comp=N,340nm,16.7s
HHC LR LR
comp=E,310nm,17.8s
HHC LR LR
comp=Z,230nm,17.8s
CD2 Chengdu 75.40 307⇑P P **01 59 49.1 +0.5**
CD2 PcP PcP **02 00 01.6 +0.8**
CD2 pP pP **02 00 36.3 +1.2**
CD2 sP sP **02 00 57.0 +1.2**
CD2 PP PP **02 02 42.6 +2.1**
CD2 S S **02 09 11.3 -1.4**
CD2 SKS SKSac **02 09 34.8 -5.3**
CD2 ScS SKKSac **02 09 40.3 -0.2**
CD2 sS sS **02 10 33.4 -0.4**
CD2 SS SS **02 14 08.8 +1.1**
CD2 pmax pmax
comp=Z,80nm,1.0s
CD2 pmax pmax
comp=Z,240nm,4.0s
QSPA South Pole Qui 76.30 180 PKKPbc PKKPbc 02 19 03.8 -4.5
QSPA South Pole Qui 76.30 180 PKKPbc PKKPbc 02 19 03.7 -4.5
comp=Z,1.0nm,0.5s,baz=238,slow=2.0,SNR=11
SEY Seymchan 77.28 353*c i*P P **01 59 58.9 +0.5**
LZH Lanzhou 77.65 312⇑P P **02 00 02.5 +1.3**
LZH pP pP **02 00 43.3 -4.7**
LZH sP sP **02 01 06.1 -2.5**
LZH pmax pmax
comp=Z,340nm,1.4s
LZH pmax pmax
comp=Z,520nm,4.0s
OHAK Old Harbor 77.85 21 *e*P P **02 00 01.4 -0.2**
comp=Z,35nm,1.0s
OHAK *e*pP pP **02 00 48.3 -0.1**
RPN Rapa Nui 78.08 115 LR LR 02 27 22.0

comp=Z,96nm,20.5s,baz=311,slow=30
CLNS Chul'man 78.60 338*c i*P P 02 00 06.9 +1.1
CLNS *e* 02 00 12.2
CLNS *e* 02 03 04.5
CLNS *e*PPP PPP 02 04 53.3
CLNS *e*S S 02 09 57.7 +12
CLNS *e* 02 10 37.0
CLNS *e**SS sS 02 10 53.9 -14
CLNS pmax pmax
comp=Z,129nm,1.1s
CLNS pmax pmax
comp=N,49nm,1.0s
CLNS pmax pmax
comp=E,20nm,1.1s
CLNS pmax pmax
comp=Z,19nm,1.3s
CLNS pmax pmax
comp=E,5.0nm,0.8s
CLNS pmax pmax
comp=N,12nm,1.2s
CLNS smax smax
comp=E,346nm,16.9s
CLNS smax smax
comp=N,31nm,11.4s
CIT Chita 80.21 330 *e*P P 02 00 15.5 +0.9
CIT pmax pmax
comp=Z,309nm,1.4s
YAK Yakutsk 81.07 343*c i*P P 02 00 19.3 +0.4
YAK *e* 02 03 26.2
YAK *e*PPP PPP 02 05 17.3
YAK *e*S **S** **02 10 11.6 0.0**
YAK *e**SS **sS** **02 11 29.8 -4.1**
YAK *e*SS **SS** **02 15 35.4 +4.1**
YAK pmax pmax
comp=Z,349nm,1.1s
YAK pmax pmax
comp=N,97nm,1.1s
YAK pmax pmax
comp=E,57nm,1.2s
YAK pmax pmax
comp=Z,175nm,4.3s
YAK pmax pmax
comp=N,79nm,3.8s
YAK pmax pmax
comp=E,38nm,2.0s
YAK smax smax
comp=N,78nm,2.7s
YAK smax smax
comp=E,98nm,3.5s
IMP Imphal 81.08 298 *e*P P 02 00 16.0 -3.9
TNA Tin City 81.21 10 *e*P P **02 00 20.6 +1.1**
comp=E,118nm,1.8s
ULN Ulaanbaatar 81.33 324 *e*P P **02 00 21.2 +0.4**
comp=E,98nm,0.9s
ULN Ulaanbaatar 81.33 324 P P **02 00 21.8 +1.0**
SNR=38
SEW Seward 81.34 20 *e*P P **02 00 20.0 -0.3**
comp=E,36nm,1.2s
BILL Bilibino 81.54 360⇑ *i*P P **02 00 21.5 +0.2**
BILL *e* 02 03 28.2
BILL *i*S **S** **02 10 16.4 +0.1**
BILL Bilibino 81.54 360 *e*P P **02 00 21.5 +0.2**
comp=E,139nm,1.0s
SONM Songino Array 81.69 323 P P **02 00 23.0 +0.4**
SONM PKKPbc **PKKPbc** **02 18 53.9 -2.0**
SONM Songino Array 81.69 323 P P **02 00 23.0 +0.4**
comp=E,13nm,0.4s,baz=130,slow=4.5,SNR=165
SONM PKKPbc **PKKPbc** **02 18 53.9 -2.0**
comp=E,0.8nm,0.8s,baz=298,slow=1.7,SNR=5.1
GTA Gaotai 81.98 314⇑ *i*P P **02 00 25.5 +1.1**
GTA pP **pP** **02 01 12.1 +0.4**
GTA sP **sP** **02 01 31.8 -0.3**
GTA PP **PP** **02 03 36.6 +1.5**
GTA S **S** **02 10 22.3 0.0**
GTA sS **sS** **02 11 43.1 -1.6**
GTA SS **SS** **02 15 48.8 +2.7**
GTA pmax pmax
comp=Z,83nm,1.2s
GTA pmax pmax
comp=Z,480nm,3.8s
GTA LR LR
comp=N,180nm,19.0s
GTA LR LR
comp=E,230nm,23.8s
GTA LR LR
comp=Z,120nm,15.7s
RC01 Rabbit Creek A 81.98 20 *e*P P **02 00 23.1 -0.6**
comp=Z,39nm,1.1s
PMR Palmer 82.55 19 *e*P P **02 00 26.2 -0.4**
PMR *e**PP **pP** **02 01 13.5 -0.5**
PMR pmax pmax
comp=Z,243nm,2.0s
PMR Palmer 82.55 19 *e*P P **02 00 26.2 -0.4**
comp=Z,243nm,2.0s
PMR *e*pP **pP** **02 01 13.5 -0.5**
PPLA Purkeypile 82.60 17 *e*P P **02 00 26.3 -0.8**
comp=Z,22nm,1.4s
MAW Mawson 82.82 202 P P **02 00 28.9 +0.9**
MAW Mawson 82.82 202 P P **02 00 28.9 +0.9**
comp=Z,36nm,0.6s,baz=110,slow=6.5,SNR=98
MAW Mawson 82.82 202 P P **02 00 28.9 +0.9**
baz=83,SNR=53
SML Sawmill 82.97 20 *e*P P **02 00 29.0 +0.1**
SML pmax pmax
comp=Z,31nm,1.6s
SML Sawmill 82.97 20 *e*P P **02 00 29.0 +0.1**
comp=Z,31nm,1.6s
SHL Shillong 83.09 298 *e*P P **02 00 31.0 +0.5**
KCPM Cahto Peak 83.27 47 *e*P P **02 00 32.0 +1.0**
comp=Z,15nm,1.1s
KCPM *e*pP **pP** **02 01 19.8 +1.3**
KIPM Iron Peak 83.39 46 *e*P P **02 00 32.1 +0.4**
comp=Z,43nm,1.1s
KIPM *e*pP **pP** **02 01 20.5 +1.4**
TRF Thorofare Moun 83.58 18 *e*P P **02 00 30.5 -1.6**
comp=Z,43nm,1.1s
TRF *e*pP **pP** **02 01 17.9 -1.7**
BMRM Bremner River 83.64 21 *e*P P **02 00 32.4 0.0**
comp=Z,22nm,1.2s
BMRM *e*pP **pP** **02 01 19.5 -0.3**
KHMM Horse Mountain 83.65 45 *e*P P **02 00 33.5 +0.6**
comp=Z,8.6nm,0.7s
KHMM *e*pP **pP** **02 01 21.7 +1.2**
MCK McKinley 84.19 18 *e*P P **02 00 34.3 -0.7**
MCK pmax pmax
comp=Z,138nm,1.5s
MCK McKinley 84.19 18 *e*P P **02 00 34.3 -0.7**
comp=Z,138nm,1.5s
MCK *e*pP **pP** **02 01 21.9 -0.7**
PKM Peak Mountain 84.22 52⇑P P **02 00 36.3 +0.2**
baz=84
WDC Whiskeytown Da 84.36 46 *e*P P **02 00 36.7 +0.4**
WDC pmax pmax
comp=Z,20nm,1.3s
WDC Whiskeytown Da 84.36 46 *e*P P **02 00 36.7 +0.4**
comp=Z,20nm,1.3s
WDC *e*pP **pP** **02 01 25.1 +1.1**
YBH Yreka Blue Hor 84.70 45 *e*P P **02 00 38.6 +0.4**
comp=Z,17nm,1.1s
YBH *e*pP **pP** **02 01 27.2 +1.5**
ZAK Zakamensk 84.73 325⇓ *i*P P **02 00 37.7 -0.4**
ZAK *e* 02 04 01.7
ZAK pmax pmax
comp=Z,79nm,1.3s
HUMO Hull Mountain 84.88 44 *e*P P **02 00 39.4 +0.4**
comp=Z,16nm,0.9s
HUMO *e*pP **pP** **02 01 27.8 +1.2**
CMB Columbia Colle 84.94 49 *e*P P **02 00 39.2 -0.2**
CMB pmax pmax
comp=Z,13nm,0.9s
CMB Columbia Colle 84.94 49 *e*P P **02 00 39.2 -0.2**
comp=Z,13nm,0.9s
CMB *e*pP **pP** **02 01 27.9 +0.9**
LSA Lhasa 85.03 302 P P **02 00 41.3 +0.7**
LSA pmax pmax
comp=Z,60nm,0.7s
ARVC Arvin 85.07 52⇑P P **02 00 40.4 +0.4**
baz=85
VES Vestal, Richgr 85.12 51⇑P P **02 00 40.4 +0.2**
baz=85
TLY Talaya 85.16 326*c i*P P **02 00 40.0 -0.1**
TLY pmax pmax
comp=Z,68nm,0.9s
TLY Talaya 85.16 326 P P **02 00 40.7 +0.6**
comp=Z,496nm,0.7s,SNR=18
MPOR Mary's Peak 85.26 42 P P **02 00 42.2 +1.3**
MENT Mentasta 85.29 20 *e*P P **02 00 40.5 -0.1**
MWC Mount Wilson 85.35 53 *e*P P **02 00 42.0 +0.3**
MWC *e* 02 03 57.8
MWC pmax pmax
comp=Z,18nm,1.0s
MWC Mount Wilson 85.35 53 *e*P P **02 00 42.0 +0.3**
comp=Z,18nm,1.0s
MWC *e*PP PP 02 03 57.8 -5.0
COLA College 85.36 18 *e*P P **02 00 40.4 -0.3**
COLA *e**PP **pP** **02 01 27.2 -1.2**
COLA pmax pmax
comp=Z,22nm,0.8s
COLA College 85.36 18 *e*P P **02 00 40.4 -0.3**
comp=Z,22nm,0.8s
COLA *e*pP **pP** **02 01 27.2 -1.2**
ISA Isabella 85.53 52 *e*P P **02 00 42.3 -0.1**
ISA pmax pmax
comp=Z,22nm,1.4s
ISA Isabella 85.53 52 *e*P P **02 00 42.3 -0.1**
comp=Z,22nm,1.4s
ISA *e*pP **pP** **02 01 31.1 +1.1**
ISA Isabella 85.53 52⇓P P **02 00 42.6 +0.2**
baz=86
ILAR Eielson Array 85.57 18 P P **02 00 41.4 -0.4**
ILAR pP **pP** **02 01 28.6 -0.9**
ILAR PKiKP **PKiKP** **02 05 49.7 -0.8**
ILAR PKKP **PKKPdf** **02 18 43.4 +3.5**
ILAR Eielson Array 85.57 18 P P **02 00 41.4 -0.4**
comp=Z,15nm,0.7s,baz=236,slow=5.6,SNR=167
ILAR pP **pP** **02 01 28.6 -0.9**
comp=Z,12nm,0.8s,baz=232,slow=6.3,SNR=5.6
ILAR PKiKP **PKiKP** **02 05 49.7 -0.8**
comp=Z,0.3nm,0.4s,baz=294,slow=3.4,SNR=4.3
ILAR PKKP **PKKPdf** **02 18 43.4 +3.5**
comp=Z,0.4nm,0.6s,baz=354,slow=3.2,SNR=6.2
ILAR LR LR 02 37 43.8
comp=Z,54nm,18.1s,baz=236,slow=34
EDW2 Edwards Air Fo 85.63 53⇑P P **02 00 43.3 +0.4**
baz=86
BEKR Beckworth 85.63 47 *e*P P **02 00 43.3 +0.4**
comp=Z,5.2nm,1.0s
BEKR *e*pP **pP** **02 01 30.9 +0.3**
109C Camp Elliot, M 85.66 55⇓P P **02 00 43.5 +0.5**
baz=86
DOT Dot Lake 85.67 20 *e*P P **02 00 42.0 -0.4**
comp=Z,9.4nm,0.7s
BFSC Mount Baldy Ra 85.67 53⇑P P **02 00 43.2 0.0**
baz=86
MURC Murrieta 85.82 54⇓P P **02 00 44.1 +0.3**
baz=86
WCN Washoe City 85.86 48 *e*P P **02 00 44.2 +0.1**
WCN pmax pmax
comp=Z,8.0nm,1.1s
WCN Washoe City 85.86 48 *e*P P **02 00 44.2 +0.1**
comp=Z,7.7nm,1.1s
BAR Barrett 85.93 55 *e*P P **02 00 44.6 +0.2**
comp=Z,5.3nm,0.7s
LRMC Laurel Mountai 86.06 52⇑P P **02 00 45.5 +0.4**
baz=86
CWC Cottonwood Cre 86.09 51⇓P P **02 00 45.7 +0.4**
baz=86
MONP Monument Peak 86.20 55⇓P P **02 00 46.4 +0.5**
baz=86,SNR=12
OOW Octopus West 86.20 39 P P **02 00 47.2 +1.8**
PFO Pinyon Flat Ob 86.41 54 *e*P P **02 00 47.2 +0.4**
comp=Z,2.8nm,0.6s
PFO Pinyon Flat Ob 86.41 54⇓P P **02 00 47.0 +0.2**
baz=86,SNR=5.4
MPMC Manual Prospec 86.41 52⇓P P **02 00 47.1 +0.2**
baz=86
COLD Coldfoot 86.46 15 *e*P P **02 00 46.8 +0.7**
comp=Z,240nm,2.3s
COLD *e*pP **pP** **02 01 34.5 +0.6**
NVAR Mina Array Bea 86.61 49 P P **02 00 48.5 +0.7**
NVAR pP **pP** **02 01 36.7 +1.1**
NVAR PKKPbc **PKKPbc** **02 18 43.6 -0.2**
NVAR Mina Array Bea 86.61 49 P P **02 00 48.5 +0.7**
comp=Z,6.1nm,0.8s,baz=234,slow=5.5,SNR=41
NVAR pP **pP** **02 01 36.7 +1.1**
comp=Z,6.5nm,1.0s,baz=227,slow=7.3,SNR=4.7
NVAR PKKPbc **PKKPbc** **02 18 43.6 -0.2**
comp=Z,0.6nm,0.6s,baz=92,slow=2.9,SNR=5.7
MOY Mondy 86.61 325 *e*P P **02 00 48.1 +0.7**
LVP Lakeview Peak 86.63 41 P P **02 00 48.5 +0.9**
GSC Goldstone 86.68 53 *e*P P **02 00 48.0 -0.1**
GSC pmax pmax
comp=Z,3.0nm,0.3s
GSC Goldstone 86.68 53 *e*P P **02 00 48.0 -0.1**
comp=Z,3.5nm,0.3s
SWSC Sam W. Stewart 86.72 55⇓P P **02 00 48.7 +0.5**
baz=87,SNR=12
NV11 Mina Array Sit 86.72 49 *e*P P **02 00 48.3 0.0**
NV11 *e*pP **pP** **02 01 37.0 +0.9**
GRAC Grapevine Rang 86.82 51⇑P P **02 00 49.0 +0.3**
baz=87
TDL Tradedollar La 86.87 41 P P **02 00 49.9 +1.1**
BELC Belle Mtn. Jos 86.89 54⇑P P **02 00 49.5 +0.4**
baz=87,SNR=20
HEC Hector,Ludlow 86.90 53⇓P P **02 00 49.2 +0.1**
baz=87,SNR=11
FURC Furnace Creek, 87.03 52⇑P P **02 00 50.0 +0.4**
baz=87
TAPN Taplejung 87.20 299 *e*P P **02 00 51.0 0.0**
comp=Z,100nm,0.9s
BC3 Big Chuckawall 87.21 55⇑P P **02 00 51.3 +0.6**
baz=87,SNR=12
LON Longmire 87.28 41 *e*P P **02 00 49.8 -0.8**
LON pmax pmax
comp=Z,3.0nm,0.8s
LON Longmire 87.28 41 *e*P P **02 00 49.8 -0.8**
comp=Z,3.1nm,0.8s
ODAN Odare 87.33 298 *e*P P **02 00 51.5 -0.1**
comp=Z,202nm,0.7s
EGAK Eagle 87.37 20 *e*P P **02 00 50.0 -0.6**
comp=Z,20nm,0.9s
GMRC Granite Mounta 87.41 53⇓P P **02 00 51.8 +0.1**
baz=88,SNR=12
TUQ Turquoise Moun 87.41 53⇓P P **02 00 51.7 +0.1**
baz=88,SNR=16
GLA Glamis 87.52 55 *e*P P **02 00 53.2 +1.1**
GLA pmax pmax
comp=Z,25nm,0.9s
GLA Glamis 87.52 55 *e*P P **02 00 53.2 +1.1**
comp=Z,25nm,0.9s
GLA Glamis 87.52 55⇓P P **02 00 53.0 +0.9**
baz=88,SNR=8.6
IRM Iron Mountain 87.61 54⇓P P **02 00 53.0 +0.5**
baz=88,SNR=22
WVOR Wild Horse Val 87.77 45 *e*P P **02 00 53.2 0.0**
WVOR *e**PP **pP** **02 01 41.1 0.0**
WVOR pmax pmax
comp=Z,34nm,1.7s
WVOR Wild Horse Val 87.77 45 *e*P P **02 00 53.2 0.0**
comp=Z,34nm,1.7s
WVOR *e*pP **pP** **02 01 41.1 0.0**
LDFC Landfair 87.93 53 *e*P P **02 00 54.4 +0.4**
comp=Z,104nm,1.4s
Y12C Blythe 87.98 55⇑P P **02 00 54.8 +0.6**
baz=88,SNR=9.4
RAMN Ramite 88.03 298 *e*P P **02 00 54.8 -0.1**
comp=Z,101nm,0.7s
NEE2 Needles Airpor 88.22 54⇓P P **02 00 55.9 +0.6**
baz=88
113A Mohawk Valley, 88.29 56⇓P P **02 00 56.2 +0.5**
baz=88
PDMCI Parker Dam,Lak 88.45 54⇑P P **02 00 57.0 +0.7**
baz=89,SNR=15
R11A Troy Canyon, C 88.60 50⇓P P **02 00 57.4 +0.2**
baz=89,SNR=15
214A Organ Pipe Nat 88.82 57⇑P P **02 00 59.1 +0.9**
baz=89
W13A Hualapai Mount 88.89 54⇓P P **02 00 59.2 +0.5**
baz=89,SNR=19
GUN Gumba 88.91 299 *e*P P **02 00 59.0 -0.2**
comp=Z,110nm,0.8s
PKI Pulchoki 89.22 298 *e*P P **02 01 00.2 -0.4**
comp=Z,212nm,1.1s
PKIN Phulchoki 89.23 298 *e*P P **02 01 00.1 -0.5**
comp=Z,98nm,0.8s
Y14A Wickenburg 89.24 55⇓P P **02 01 00.4 +0.2**
baz=89,SNR=9.9
KKN Kakani 89.39 299 *e*P P **02 01 01.1 -0.1**
comp=Z,105nm,0.9s
DMN Daman 89.49 298 *e*P P **02 01 01.6 -0.1**
comp=Z,324nm,1.1s
BMO Blue Mountains 89.52 44 *e*P P **02 01 01.0 -0.3**
BMO pmax pmax
comp=Z,12nm,0.9s
BMO Blue Mountains 89.52 44 *e*P P **02 01 01.0 -0.3**
comp=Z,12nm,0.9s
BMO *e*pP **pP** **02 01 49.5 +0.2**
ELK Elko 89.61 48 *e*P P **02 01 01.9 0.0**
ELK *e*pP **pP** **02 01 50.8 +0.7**
SYO Syowa Base 89.67 197⇓ *e*P P **02 01 00.2 -1.2**
CCUT Cedar City 90.02 51 *e*P P **02 01 04.8 +0.8**
comp=Z,9.1nm,1.0s
ARUT Antelope Range 90.04 51 *e*P P **02 01 04.5 +0.5**
ARUT pmax pmax
comp=Z,11nm,1.0s
ARUT Antelope Range 90.04 51 *e*P P **02 01 04.5 +0.5**
comp=Z,11nm,1.0s
MFID Camas Ranch 90.05 45 *e*P P **02 01 03.7 -0.1**
comp=Z,14nm,0.9s
MFID *e*pP **pP** **02 01 52.7 +0.8**
MFID Camas Ranch 90.05 45⇓P P **02 01 04.1 +0.3**
baz=90,SNR=15
U15A North Rim 90.52 53⇑P P **02 01 07.1 +0.8**
baz=91,SNR=26
X16A Lo Mia Camp, P 90.62 55⇓P P **02 01 07.8 +1.0**
baz=91
I12A Atlanta 90.65 45⇓P P **02 01 06.9 +0.3**
baz=91,SNR=12
NEW Newport 90.79 40 *e*P P **02 01 06.2 -0.8**
comp=Z,4.4nm,0.7s
NEW Newport 90.79 40⇓P P **02 01 07.0 0.0**
baz=91,SNR=7.6
KOLN Koldanda 90.82 298 *e*P P **02 01 06.7 -1.2**
comp=Z,20nm,0.6s
DANN Dangsing 90.83 299 *e*P P **02 01 07.0 -1.0**
comp=Z,36nm,0.5s
WUAZ Wupatki 90.98 54 *e*P P **02 01 09.0 +0.6**
comp=Z,13nm,1.0s
WUAZ Wupatki 90.98 54⇑P P **02 01 09.0 +0.6**
baz=91
HLID Hailey 91.07 45 *e*P P **02 01 08.5 -0.2**
comp=Z,9.1nm,1.2s
HLID *e*pP **pP** **02 01 57.4 +0.7**
HLID Hailey 91.07 45⇓P P **02 01 09.0 +0.4**
baz=91,SNR=10.0
H12A Diamond D Ranc 91.07 44⇓P P **02 01 08.6 0.0**
baz=91,SNR=17
MVU Marysvale 91.17 51 *e*P P **02 01 09.9 +0.6**
F12A Elk City 91.18 43⇓P P **02 01 08.9 -0.2**
baz=91,SNR=24
J13A Cove Ranch, Pi 91.19 46⇓P P **02 01 09.6 +0.5**
baz=91,SNR=9.6
MSU Marysvale 91.20 51 *e*P P **02 01 10.2 +0.8**
MSU pmax pmax
comp=Z,11nm,1.0s
MSU Marysvale 91.20 51 *e*P P **02 01 10.2 +0.8**
comp=Z,12nm,1.0s
C11A Tepee Creek (N 91.20 41⇑P P **02 01 09.3 +0.3**
baz=91,SNR=13
DUG Dugway 91.21 49 *e*P P **02 01 09.6 +0.3**
DUG pmax pmax
comp=Z,5.0nm,0.6s
DUG Dugway 91.21 49 *e*P P **02 01 09.6 +0.3**
comp=Z,5.2nm,0.6s
DUG Dugway 91.21 49⇑P P **02 01 09.4 +0.1**
baz=91
I13A Wildhorse Cree 91.38 45⇓P P **02 01 10.4 +0.3**
baz=92,SNR=13
PYUN Piuthan 91.43 298 *e*P P **02 01 09.4 -1.3**
comp=Z,90nm,1.1s
L14A Malta 91.44 47⇓P P **02 01 10.8 +0.5**
baz=92
H13A Challis 91.49 44⇓P P **02 01 11.0 +0.5**
baz=92,SNR=12
319A Douglas 91.56 58⇓P P **02 01 11.9 +0.8**
baz=92
J14A Carey 91.62 46⇓P P **02 01 11.5 +0.4**
baz=92
K14A Jones Ranch, D 91.63 47⇑P P **02 01 11.6 +0.4**
baz=92,SNR=5.6
G13A Cobalt 91.66 44⇑P P **02 01 11.2 -0.1**
baz=92,SNR=11
HVU Hansel Valley 91.69 47 *e*P P **02 01 11.2 -0.3**
HVU pmax pmax
comp=Z,2.0nm,0.6s
HVU Hansel Valley 91.69 47 *e*P P **02 01 11.2 -0.3**
comp=Z,2.4nm,0.6s
HVU *e*pP **pP** **02 02 01.2 +1.5**
F13A Darby 91.81 43⇑P P **02 01 11.8 -0.1**
baz=92,SNR=17
X18A Snowflake 91.84 55⇓P P **02 01 12.9 +0.5**
baz=92
I14A Mackay 91.85 45⇑P P **02 01 12.9 +0.6**
baz=92,SNR=6.5
WMQ Urumqi 92.03 315 P P **02 01 13.0 +0.1**
WMQ pP **pP** **02 02 00.0 -1.0**
WMQ sP **sP** **02 02 20.0 -1.3**
WMQ PP **PP** **02 04 58.0 +2.4**
WMQ SKS **SKSac** **02 11 26.0 -1.5**
WMQ S **S** **02 11 55.0 -3.1**
WMQ SS **SS** **02 18 13.0 +0.7**
WMQ pmax pmax
comp=Z,58nm,1.2s
WMQ pmax pmax
comp=Z,250nm,8.0s
WMQ LR LR
comp=N,100nm,20.0s
WMQ LR LR
comp=E,73nm,20.0s
WMQ LR LR
comp=Z,57nm,20.0s
L15A Malad City 92.04 47⇑P P **02 01 13.3 +0.2**
baz=92
E13A Victor 92.10 43⇓P P **02 01 13.7 +0.4**
baz=92
H14A Leadore 92.11 45⇓P P **02 01 13.8 +0.4**
baz=92,SNR=7.9
D13A Huson 92.12 42⇑P P **02 01 13.8 +0.5**
baz=92
BSMT Bassoo Peak 92.14 41 *e*P P **02 01 13.4 -0.1**
comp=Z,3.2nm,0.9s
W18A Petrified Fore 92.16 55⇑P P **02 01 14.7 +0.8**
baz=92
320A Kipp Ranch, An 92.17 58⇑P P **02 01 14.9 +0.9**
baz=92
C13A Hot Springs 92.23 41⇑P P **02 01 14.3 +0.5**
baz=92
G14A Jackson 92.23 44⇓P P **02 01 14.0 0.0**
baz=92,SNR=6.0
220A Playas Peak, P 92.31 58⇓P P **02 01 15.2 +0.5**
baz=92
JLU Jordanelle 92.32 49 *e*P P **02 01 15.3 +0.8**
comp=Z,6.9nm,1.2s
MSO Missoula 92.38 42⇓P P **02 01 14.8 +0.3**
baz=92
120A U Bar Ranch, L 92.39 57⇓P P **02 01 15.6 +0.7**
baz=92
J15A Blackfoot 92.40 46⇓P P **02 01 15.7 +0.9**
baz=92
B13A Whitefish 92.51 41⇓P P **02 01 15.6 +0.6**
baz=93
MCMT McKenzie Canyo 92.52 45 *e*P P **02 01 16.1 +0.8**
comp=Z,1.0nm,0.6s
E14A Clinton 92.55 43⇓P P **02 01 15.9 +0.5**
baz=93
Z20A Nine Sixteen R 92.56 57⇓P P **02 01 16.3 +0.6**
baz=93
H15A Lima 92.60 45⇓P P **02 01 16.5 +0.7**
baz=93
SRU San Rafael 92.61 50⇓P P **02 01 16.1 +0.2**
baz=93
S18A Hurst Farm, Bl 92.63 52⇓P P **02 01 16.2 +0.1**
baz=93
L16A Fish Haven 92.72 48⇓P P **02 01 16.3 0.0**
baz=93
D14A Greenough 92.74 42⇓P P **02 01 16.2 0.0**
baz=93
HYB Hyderabad 92.83 287 *i*P P **02 01 15.5 -1.6**
DLMT Dillon 92.85 44 *e*P P **02 01 17.1 +0.3**
comp=Z,5.0nm,0.7s
DLMT *e*pP pP 02 02 10.8 +5.9
G15A Dillon 92.86 44⇑P P **02 01 17.1 +0.2**
baz=93,SNR=6.6
Y20A Horse Springs, 92.94 56⇓P P **02 01 18.2 +0.6**
baz=93
P18A Preston Nutter 92.95 50⇑P P **02 01 17.7 +0.2**
baz=93
221A Mesquite Ranch 92.96 58⇑P P **02 01 18.0 +0.5**
baz=93
X20A Quemado 93.00 55⇑P P **02 01 18.6 +0.8**

baz=93
F15A **Butte** 93.05 44 ⇓P P 02 01 18.1 +0.3
baz=93
121A **Cookes Peak, D** 93.08 57 ⇓P P 02 01 18.7 +0.5
baz=93
E15A **Deer Lodge** 93.12 43 ⇓P P 02 01 18.5 +0.5
baz=93
W20A **Ramah** 93.14 55 ⇓P P 02 01 19.2 +0.8
baz=93
L17A **Cokeville** 93.15 48 ⇓P P 02 01 18.7 +0.4
baz=93
B14A **Marquette Ranc** 93.26 41 ⇓P P 02 01 18.9 +0.3
baz=93
G16A **Moss Hill, Enn** 93.34 44 ⇓P P 02 01 19.5 +0.4
baz=94
Z21A **St. Cloud Mine** 93.36 57 ⇑P P 02 01 20.0 +0.5
baz=94
D15A **Lincoln** 93.37 42 ⇓P P 02 01 19.5 +0.4
baz=94
Q19A **Hogan Spring (** 93.51 51 ⇑P P 02 01 19.9 0.0
baz=94
C15A **Salmond Ranch,** 93.52 42 ⇓P P 02 01 19.7 -0.1
baz=94
Y21A **Point of Rocks** 93.53 56 ⇑P P 02 01 20.8 +0.6
baz=94
222A **Williams Famil** 93.54 58 ⇓P P 02 01 20.4 +0.2
baz=94
X21A **Alamocita Cree** 93.54 56 ⇓P P 02 01 20.8 +0.5
baz=94
M18A **Lyman** 93.55 48 ⇑P P 02 01 20.7 +0.5
baz=94
BOZ **Bozeman (W)** 93.58 44 ⇓P P 02 01 20.4 +0.3
baz=94
H16A **Russell Place,** 93.58 45 ⇓P P 02 01 20.6 +0.3
baz=94
J17A **Brown Place, J** 93.60 46 ⇑P P 02 01 20.2 -0.1
baz=94
F16A **Kennard Place,** 93.62 44 ⇓P P 02 01 21.4 +1.1
baz=94
PV04 **Paradox Valley** 93.64 52 *e*P P 02 01 20.9 +0.2
MVCO **Mesa Verde** 93.66 53 ⇓P P 02 01 21.5 +0.7
baz=94
B15A **Bradely Ranch,** 93.70 41 ⇑P P 02 01 20.8 +0.3
baz=94
N18A **Larsen Ranch,** 93.72 49 ⇓P P 02 01 21.0 0.0
baz=94
A15A **Johnson Ranch,** 93.78 41 ⇓P P 02 01 21.7 +0.8
baz=94
E16A **East Helena** 93.79 43 ⇑P P 02 01 21.7 +0.6
baz=94
PV01 **Paradox Valley** 93.83 52 *e*P P 02 01 21.6 0.0
comp=Z,504nm,1.0s
K18A **Toltan Ranch,** 93.88 47 ⇓P P 02 01 21.8 +0.1
baz=94
P19A **Cripple Cowboy** 93.89 50 ⇑P P 02 01 22.0 +0.1
baz=94
S20A **Disappointment** 93.92 52 ⇓P P 02 01 22.0 0.0
baz=94
Z22A **Elephant Butte** 93.92 57 ⇑P P 02 01 22.2 +0.2
baz=94
O19A **Miners Draw (B** 93.95 50 ⇑P P 02 01 22.4 +0.4
baz=94
R20A **Redvale** 93.99 52 ⇑P P 02 01 22.7 +0.5
baz=94
D16A **Dana Ranch, Ca** 94.01 43 ⇓P P 02 01 22.6 +0.6
baz=94
J18A **Kendall Valley** 94.05 47 ⇑P P 02 01 22.8 +0.4
baz=94
MAIT **Maitri** 94.05 188 *e*P P 02 01 11.4 -10
C16A **Fuhringer Ranc** 94.09 42 ⇓P P 02 01 22.4 0.0
baz=94
U21A **Nageezi** 94.12 54 ⇓P P 02 01 23.7 +0.8
baz=94
L19A **Farson** 94.24 48 ⇓P P 02 01 24.0 +0.7
baz=94
Q20A **Ridgley Place,** 94.24 51 ⇓P P 02 01 24.1 +0.8
baz=94
BW06 **Boulder Array** 94.26 47 ⇑P P 02 01 24.1 +0.6
baz=94
PDAR **Pinedale Array** 94.26 47 P P 02 01 23.4 0.0
PDAR PP PP 02 05 12.1 -1.1
PDAR PKKP PKKPdf 02 18 22.6 -1.4
PDAR **Pinedale Array** 94.26 47 P P 02 01 23.4 0.0
comp=Z,1.2nm,0.7s,baz=237,slow=3.6,SNR=8.6
PDAR PP PP 02 05 12.1 -1.1
comp=Z,1.2nm,1.1s,baz=268,slow=5.8,SNR=4.3
PDAR PKKP PKKPdf 02 18 22.6 -1.4
comp=Z,1.4nm,0.7s,baz=93,slow=5.3,SNR=12
B16A **M & M Farms, S** 94.28 41 ⇑P P 02 01 24.1 +1.0
baz=94
F17A **Fitzpatrick Pl** 94.30 44 ⇑P P 02 01 24.4 +0.9
baz=94
P20A **De Beque** 94.30 51 ⇓P P 02 01 24.5 +0.9
baz=94
E17A **Martinsdale** 94.31 43 ⇓P P 02 01 23.7 +0.1
baz=94
S21A **Coal Bank Pass** 94.32 52 ⇑P P 02 01 23.9 0.0
baz=94
A16A **West Butte Ran** 94.50 41 ⇑P P 02 01 25.2 +1.0
baz=95
Z23A **Rita Site, Whi** 94.52 57 ⇑P P 02 01 24.6 -0.1
baz=95
SNAA **Sanae** 94.55 183 *e*P P 02 01 23.3 -0.7
SNAA **Sanae** 94.55 183 *ep*P pP 02 02 14.9 +2.7
SNAA **Sanae** 94.55 183 *e*P P 02 01 23.0 -1.0
comp=Z,31nm,1.0s
O20A **White River Ci** 94.57 50 ⇑P P 02 01 24.7 -0.2
baz=95
D17A **Six Diamond Ra** 94.61 43 ⇑P P 02 01 25.1 +0.3
baz=95
R21A **Cimarron** 94.67 52 ⇓P P 02 01 26.1 +0.7
baz=95
C17A **Wharram Farm,** 94.68 42 ⇑P P 02 01 25.8 +0.8
baz=95
N20A **Spence Gulch,** 94.72 49 ⇑P P 02 01 26.0 +0.4
baz=95
324A **Moseley Ranch,** 94.72 59 ⇓P P 02 01 26.2 +0.5
baz=95
ANMO **Albuquerque** 94.73 55 *e*P P 02 01 25.6 0.0
comp=Z,5.5nm,1.2s
ANMO *ep*PP PP 02 05 14.3 -2.8
J19A **Crowheart** 94.74 47 ⇑P P 02 01 26.0 +0.4
baz=95
Q21A **Lamborn Mesa,** 94.76 51 ⇑P P 02 01 26.5 +0.7
baz=95
K19A **Absolon Red Bu** 94.78 47 ⇓P P 02 01 25.8 0.0
baz=95
Y23A **Lovelace Mesa,** 94.82 56 ⇓P P 02 01 26.1 0.0
baz=95
224A **Cornudas Mount** 94.83 58 ⇑P P 02 01 26.6 +0.4
baz=95
X23A **Hourglass Bar** 94.86 56 ⇓P P 02 01 26.4 +0.1
baz=95
F18A **Big Timber** 94.94 44 ⇓P P 02 01 27.4 +1.1
baz=95
L20A **Wamsutter** 94.95 48 ⇑P P 02 01 27.4 +0.8
baz=95
425A **Indio Mountain** 94.99 60 ⇓P P 02 01 26.9 0.0
baz=95
P21A **Newcastle** 95.02 51 ⇓P P 02 01 27.6 +0.7
baz=95
124A **Stringfield Ra** 95.03 58 ⇑P P 02 01 27.8 +0.7
baz=95
A17A **Triple J Farms** 95.06 41 ⇑P P 02 01 27.8 +1.1
baz=95
S22A **4UR Ranch, Cre** 95.08 53 ⇓P P 02 01 27.9 +0.5
baz=95
325A **Bean Ranch, Si** 95.13 59 ⇑P P 02 01 28.1 +0.5
baz=95
VNA3 **Neumayer Olymp** 95.22 181 *e*P P 02 01 26.8 -0.2
VNA3 **Neumayer Olymp** 95.22 181 *ep*P pP 02 02 14.6 -0.6
U23A **El Rito** 95.25 54 ⇑P P 02 01 29.0 +0.8
baz=95
Q22A **Crested Butte,** 95.27 51 ⇑P P 02 01 28.6 +0.4
baz=95
SMCO **Snowmass** 95.30 51 *e*P P 02 01 28.5 0.0
comp=Z,5.2nm,1.1s
SMCO *ep*P pP 02 02 16.4 -0.3
Y24A **Capitan** 95.32 57 ⇓P P 02 01 28.6 +0.2
baz=95
EGMT **Eagleton** 95.44 42 ⇑P P 02 01 29.2 +0.7
baz=96
626A **Big Bend Ranch** 95.44 61 ⇑P P 02 01 29.3 +0.4
baz=96
F19A **Roth Farm, Mol** 95.45 44 ⇑P P 02 01 29.4 +0.8
baz=96
J20A **Shoshoni** 95.45 47 ⇑P P 02 01 29.8 +1.1
baz=96

VNA2 **Neumayer--Watz** 95.48 182 *e*P P 02 01 28.1 -0.1
VNA2 **Neumayer--Watz** 95.48 182 *ep*P pP 02 02 16.1 -0.3
B18A **Beardsley Farm** 95.52 42 ⇓P P 02 01 29.8 +1.0
baz=96
P22A **Eagle** 95.55 51 ⇓P P 02 01 30.0 +0.6
baz=96
I20A **Worland** 95.56 46 ⇑P P 02 01 29.9 +0.7
baz=96
M21A **Separation Pea** 95.56 49 ⇓P P 02 01 29.8 +0.4
baz=96
526A **Mary Lane Ranc** 95.59 61 ⇓P P 02 01 30.0 +0.3
baz=96
W24A **Lazy 6 Ranch,** 95.62 55 ⇑P P 02 01 30.6 +0.8
baz=96
Z25A **Roswell** 95.76 57 ⇑P P 02 01 30.7 +0.4
baz=96
426A **McDonald Obser** 95.77 60 ⇓P P 02 01 30.7 +0.1
baz=96
VNA1 **Neumayer--Stat** 95.78 181 *e*P P 02 01 29.6 +0.1
TXAR **Lajitas Array** 95.79 61 P P 02 01 30.8 +0.3
TXAR pP pP 02 02 20.4 +1.6
TXAR PP PP 02 05 25.8 +0.6
TXAR PKKP PKKPbc 02 18 20.0 +0.1
TXAR **Lajitas Array** 95.79 61 P P 02 01 30.8 +0.3
comp=Z,1.4nm,0.8s,baz=235,slow=4.3,SNR=21
TXAR pP pP 02 02 20.4 +1.6
comp=Z,1.2nm,1.0s,baz=236,slow=4.2,SNR=2.9
TXAR PP PP 02 05 25.8 +0.6
comp=Z,3.4nm,1.0s,baz=237,slow=8.8,SNR=18
TXAR PKKP PKKPbc 02 18 20.0 +0.1
comp=Z,1.3nm,0.8s,baz=97,slow=4.0,SNR=12
TXAR LR LR 02 34 21.5
comp=Z,56nm,20.9s,baz=270,slow=29
D19A **Cripps Ranch,** 95.81 43 ⇓P P 02 01 31.4 +1.2
baz=96
O22A **Kremmling** 95.84 50 ⇓P P 02 01 31.0 +0.2
baz=96
J21A **Lysite** 95.90 47 ⇓P P 02 01 31.2 +0.4
baz=96
Y25A **Mesa, Roswell** 95.92 57 ⇓P P 02 01 31.4 +0.4
baz=96
R23A **Moffat** 95.95 52 ⇓P P 02 01 32.1 +0.8
baz=96
226B **Tecolote Peak,** 95.96 59 ⇓P P 02 01 31.7 +0.4
baz=96
527A **Woodward Ranch** 96.01 61 ⇓P P 02 01 31.6 0.0
baz=96
N22A **Wattenberg Ran** 96.05 50 ⇑P P 02 01 32.0 +0.3
baz=96
627A **Terlingua Ranc** 96.05 61 ⇑P P 02 01 31.7 -0.1
baz=96
B19A **Brinkman Farms** 96.07 42 ⇑P P 02 01 32.8 +1.5
baz=96
Q23A **Hartsel** 96.10 52 ⇑P P 02 01 32.9 +0.9
baz=96
I21A **Big Trails, Te** 96.12 47 ⇑P P 02 01 32.2 +0.4
baz=96
L22A **Ellis Ranch, M** 96.33 48 ⇓P P 02 01 33.0 +0.2
baz=96
Z26A **Caprock** 96.36 57 ⇓P P 02 01 33.0 0.0
baz=96
W25A **X Bar L Ranch,** 96.38 55 ⇓P P 02 01 33.3 +0.1
baz=96
V25A **Rancho No Teng** 96.39 55 ⇓P P 02 01 33.3 0.0
baz=96
N23A **Bird Feather La** 96.45 50 ⇑P P 02 01 33.7 +0.2
baz=96
ISCO **Idaho Springs** 96.46 51 ⇓P P 02 01 34.1 +0.5
baz=97
MK31 **Makanchi Array** 96.48 316 *e*P P 02 01 32.7 -0.5
MK31 **Makanchi Array** 96.48 316 *e*P P 02 01 32.7 -0.5
MKAR **Makanchi Array** 96.48 316 P P 02 01 33.1 -0.1
MKAR **Makanchi Array** 96.48 316 P P 02 01 33.1 -0.1
MKAR PP PP 02 05 25.3 -4.8
MKAR PKiKP PKiKP 02 06 09.3 -0.3
MKAR PKKPbc PKKPbc 02 18 16.4 -2.4
MKAR **Makanchi Array** 96.48 316 P P 02 01 33.1 -0.1
comp=Z,30nm,0.6s,baz=95,slow=6.2,SNR=144
MKAR PP PP 02 05 25.3 -4.8
comp=Z,3.6nm,1.0s,baz=96,slow=9.9,SNR=4.5
MKAR PKiKP PKiKP 02 06 09.3 -0.3
comp=Z,1.7nm,0.6s,baz=214,slow=1.1,SNR=11
MKAR PKKPbc PKKPbc 02 18 16.4 -2.4
comp=Z,1.3nm,0.7s,baz=264,slow=3.6,SNR=9.6
628A **Black Gap, Mar** 96.49 61 ⇓P P 02 01 34.3 +0.6
baz=97
C20A **Veseth Ranch,** 96.51 43 ⇓P P 02 01 34.3 +1.0
baz=97
ZAA0 **Zalesovo Array** 96.58 324 *e*P P 02 01 32.0 -1.4
ZALV **Zalesovo Beam** 96.58 324 P P 02 01 32.4 -1.0
ZALV **Zalesovo Beam** 96.58 324 P P 02 01 32.4 -1.0
ZALV pP pP 02 02 21.5 -0.2
ZALV **Zalesovo Beam** 96.58 324 P P 02 01 32.4 -1.0
comp=Z,19nm,0.6s,baz=113,slow=4.7,SNR=98
ZALV pP pP 02 02 21.5 -0.2
comp=Z,3.5nm,0.8s,baz=103,slow=4.6,SNR=2.2
ZALV LR LR 02 42 27.8
comp=Z,49nm,19.2s,baz=254,slow=34
J22A **Midwest** 96.60 47 ⇓P P 02 01 34.1 +0.1
baz=97
Y26A **Elida** 96.63 57 ⇑P P 02 01 34.5 +0.2
baz=97
YKA **Yellowknife Ar** 96.65 27 P P 02 01 32.1 -1.3
YKA pP pP 02 02 20.1 -1.6
YKA PP PP 02 05 24.5 -6.3
YKA PKiKP PKiKP 02 06 08.9 -0.5
YKA PKKPbc PKKPbc 02 18 15.8 -3.0
YKA **Yellowknife Ar** 96.65 27 P P 02 01 32.1 -1.3
comp=Z,2.0nm,0.5s,baz=255,slow=4.6,SNR=62
YKA pP pP 02 02 20.1 -1.6
comp=Z,2.8nm,0.9s,baz=256,slow=4.7,SNR=3.4
YKA PP PP 02 05 24.5 -6.3
comp=Z,0.6nm,0.9s,baz=255,slow=7.6,SNR=4.0
YKA PKiKP PKiKP 02 06 08.9 -0.5
comp=Z,0.3nm,0.4s,baz=252,slow=1.3,SNR=20
YKA PKKPbc PKKPbc 02 18 15.8 -3.0
comp=Z,0.5nm,0.6s,baz=71,slow=2.8,SNR=11
YKW3 **Yellowknife Ar** 96.67 27 *e*P P 02 01 32.2 -1.3
S25A **Robets Cordova** 96.91 53 ⇑P P 02 01 35.5 -0.1
baz=97
R25A **Fountain Ranch** 97.13 53 ⇓P Pdif 02 01 37.0 +0.4
baz=97
Y27A **Causey** 97.16 57 ⇑P P 02 01 36.5 -0.2
baz=97
MSTX **Muleshoe** 97.49 57 ⇓P Pdif 02 01 38.5 +0.3
baz=98
429A **Davenport Ranc** 97.56 60 ⇓P P 02 01 38.3 -0.2
baz=98
S26A **Kim** 97.65 53 ⇑Pdiff P 02 01 38.8 0.0
baz=98
T27A **Campo** 98.13 54 ⇑Pdiff P 02 01 41.2 +0.2
baz=98
430A **Baggett Ranch,** 98.15 60 ⇑Pdiff Pdif 02 01 41.6 +0.5
baz=98
R27A **Eads** 98.30 53 ⇑Pdiff P 02 01 41.5 -0.2
baz=98
631A **Perdido Creek** 98.45 62 ⇑Pdiff P 02 01 42.1 -0.3
baz=98
AMTX **Amarillo** 98.55 56 *e*P P 02 01 42.4 -0.4
comp=Z,2.8nm,0.6s
AMTX **Amarillo** 98.55 56 ⇑Pdiff Pdif 02 01 43.2 +0.3
baz=99
531A **Rocksprings** 98.61 61 ⇑Pdiff P 02 01 43.1 -0.1
baz=99
KSH **Kashi** 99.58 308 *e*P Pdif 02 01 50.0 +2.6
KSH *ep*P pP 02 02 36.6 +0.9
KSH *es*P sP 02 02 57.1 +1.2
KSH PP PP 02 05 59.5 +5.5
KSH SKS SKSac 02 12 10.0 +2.5
KSH S S 02 13 03.6 +0.1
KSH sS sS 02 14 27.8 -0.8
KSH SS SS 02 20 02.8 +3.5
KSH pmax pmax
comp=Z,49nm,2.7s
KSH LR LR
comp=Z,190nm,5.1s
KURK **Kurchatov** 99.64 320 *c i*P Pdif 02 01 45.9 -1.2
KURK pmax pmax
comp=Z,8.0nm,1.1s
KURK **Kurchatov** 99.64 320 *e*P Pdif 02 01 45.7 -1.5
comp=Z,12nm,1.3s
KURK PKiKP PKiKP 02 06 14.2 -0.8
KURK PKKPbc PKKPbc 02 18 08.3 -1.7
KURBB **Kurchatov Arra** 99.68 320 P Pdif 02 01 46.2 -1.1
comp=Z,2.8nm,0.7s,baz=94,slow=4.8,SNR=22
KURBB PKiKP PKiKP 02 06 14.2 -0.9
comp=Z,1.3nm,0.6s,baz=116,slow=1.6,SNR=9.2
KURBB PKKPbc PKKPbc 02 18 08.3 -1.6
comp=Z,2.2nm,0.8s,baz=286,slow=3.3,SNR=18
TKM2 **Tokmak 2** 100.42 312 *e*P Pdif 02 01 50.3 -0.8
TKM2 pmax pmax
comp=Z,3.0nm,0.7s
TKM2 **Tokmak 2** 100.42 312 *e*P Pdif 02 01 50.3 -0.8
comp=Z,2.9nm,0.7s
AAK **Ala-Archa** 101.17 311 *e*P Pdif 02 01 53.6 -0.8
AAK pmax pmax
comp=Z,5.0nm,0.8s
AAK **Ala-Archa** 101.17 311 *e*Pdif Pdif 02 01 53.8 -0.6
comp=Z,2.1nm,0.8s
AAK PKKPbc PKKPbc 02 18 04.9 -0.6
AAK **Ala-Archa** 101.17 311 P Pdif 02 01 53.7 -0.8
comp=Z,1.8nm,0.7s,baz=90,slow=1.0,SNR=3.8
AAK PKKPbc PKKPbc 02 18 04.9 -0.6
comp=Z,3.2nm,0.6s,baz=195,slow=2.5,SNR=13
EKS2 **Erkin-Say** 101.70 311 *e*P Pdif 02 01 56.2 -0.6
EKS2 **Erkin-Say** 101.70 311 *e*Pdif Pdif 02 01 56.2 -0.6
KKAR **Karatay Array** 104.14 311 *e*P Pdif 02 02 06.2 -1.2
KKAR pmax pmax
comp=Z,1.0nm,0.6s
KKAR **Karatay Array** 104.14 311 *e*Pdif Pdif 02 02 06.2 -1.2
comp=Z,1.1nm,0.6s
BVAR **Borovoye Array** 104.96 322 P Pdif 02 02 10.2 -0.6
BVAR **Borovoye Array** 104.96 322 Pdif Pdif 02 02 10.2 -0.6
BVAR PKiKP PKiKP 02 06 24.7 0.0
BVAR **Borovoye Array** 104.96 322 Pdiff Pdif 02 02 10.2 -0.6
comp=Z,3.5nm,0.9s,baz=104,slow=4.7,SNR=17
BVAR PKiKP PKiKP 02 06 24.7 0.0
comp=Z,1.9nm,0.7s,baz=102,slow=3.4,SNR=4.7
BRVK **Borovoye** 105.03 322 *e*P Pdif 02 02 09.3 -1.8
BRVK pmax pmax
comp=Z,5.0nm,1.0s
BRVK **Borovoye** 105.03 322 *e*Pdif Pdif 02 02 09.2 -1.8
comp=Z,4.5nm,1.0s
RES **Resolute Bay** 105.21 16 *e*PKP PKiKP 02 06 23.7 -0.8
SVE **Sverdlovsk** 110.48 326 *e*PKIKP PKiKP 02 06 34.9 +0.1
SVE pmax pmax
comp=Z,17nm,1.3s
ABKAR **Akbulak array** 111.57 318 *e*PKP PKiKP 02 06 36.5 -0.6
ARU **Arti** 111.66 326 *i* PKIKP PKiKP 02 06 36.9 -0.2
ARU 02 07 19.9
ARU 02 12 59.3
SOKR **Solikamsk** 112.08 329 *e*PKIKP PKiKP 02 06 37.2 -0.5
SOKR pmax pmax
comp=Z,10.0nm,0.9s
AKTO **Aktyubinsk** 112.72 319 PKIKP PKiKP 02 06 39.2 -0.1
AKTO **Aktyubinsk** 112.72 319 PKiKP PKiKP 02 06 39.2 -0.1
AKTO PKKPbc PKKPbc 02 17 28.6 -1.2
AKTO **Aktyubinsk** 112.72 319 PKIKP PKiKP 02 06 39.2 -0.1
comp=Z,7.6nm,0.6s,baz=88,slow=3.9,SNR=37
AKTO PKKPbc PKKPbc 02 17 28.6 -1.2
comp=Z,0.6nm,0.5s,baz=214,slow=4.4,SNR=4.6
DAG **Danmarks Havn** 116.87 2⇑ *i* PKIKP PKPdf 02 06 45.4 -1.1
DAG pmax pmax
comp=Z,6.0nm,0.8s
DAG **Danmarks Havn** 116.87 2⇑ *i* P PKPdf 02 06 45.4 -1.1
comp=Z,8.6nm,0.8s
LPAZ **La Paz** 117.66 117 PKP PKPdf 02 06 49.6 -0.9
LPAZ *e*PKPdf PKiKP 02 06 50.3 -0.3
LPAZ SKP 02 10 08.8
LPAZ PKKPbc PKKPbc 02 17 11.8 -0.8
LPAZ **La Paz** 117.66 117 PKP PKPdf 02 06 49.6 -0.9
comp=Z,1.7nm,0.4s,baz=230,slow=1.6,SNR=9.4
LPAZ SKP 02 10 08.8
comp=Z,1.0nm,0.8s,baz=214,slow=4.7,SNR=3.5
LPAZ PKKPbc PKKPbc 02 17 11.8 -0.8
comp=Z,4.1nm,0.8s,baz=38,slow=4.9,SNR=12
APA **Apatity** 118.43 342⇑ *i* PKIKP PKPdf 02 06 48.6 -1.1
APA *i* 02 07 30.6
APA *i* 02 07 48.6
APA MLR MLR
comp=Z,600nm,15.0s
KEV **Kevo** 118.75 345 *e*PKIKP PKPdf 02 06 49.0 -1.3
KEV **Kevo** 118.75 345 *ep*kp PKPdf 02 06 49.0 -1.3
SUMG **Summit** 119.24 9 *e*PKIKP PKPdf 02 06 51.5 -0.2
SUMG **Summit** 119.24 9 *e*PKPdf PKPdf 02 06 51.5 -0.2
SUMG **Summit** 119.24 9 *i* P PKPdf 02 06 51.8 +0.1
comp=Z,9.7nm,1.0s
ARCES **ARCESS Array B** 119.28 346 PKP PKPdf 02 06 51.2 -0.2
ARCES PKKPbc PKKPab 02 17 04.2 -2.4
ARCES **ARCESS Array B** 119.28 346 PKP PKPdf 02 06 51.2 -0.2
comp=Z,28nm,0.6s,baz=27,slow=1.0,SNR=124
ARCES PKKPbc PKKPab 02 17 04.2 -2.4
comp=Z,9.2nm,0.7s,baz=228,slow=2.7,SNR=52
KTK1 **Kautokeino** 120.21 346 *e*P PKPdf 02 06 52.6 -0.5
TRO **Tromso** 120.69 348 *e*P PKPdf 02 06 53.4 -0.6
TRO AMB AMB 02 06 54.5
comp=Z,58nm,0.9s
CPUP **Villa Florida** 121.13 133 PKP PKPdf 02 06 55.6 -0.6
CPUP PKKPab PKKPbc 02 16 57.8 -1.7
CPUP **Villa Florida** 121.13 133 PKP PKPdf 02 06 55.6 -0.6
comp=Z,2.9nm,0.6s,baz=230,slow=0.5,SNR=11
CPUP PKKPab PKKPbc 02 16 57.8 -1.7
comp=Z,0.9nm,0.6s,baz=36,slow=7.6,SNR=3.5
SFJD **Kangerlussuaq** 121.20 16 *i* P PKPdf 02 06 54.3 -0.8
comp=Z,9.0nm,0.9s
SCHQ **Schefferville** 121.45 33 PKP PKPdf 02 06 55.2 -0.8
SCHQ PKKPab PKKPab 02 16 58.0 +0.5
SCHQ **Schefferville** 121.45 33 PKP PKPdf 02 06 55.2 -0.8
comp=Z,3.2nm,0.6s,baz=264,slow=1.0,SNR=10
SCHQ PKKPab PKKPab 02 16 58.0 +0.5
comp=Z,5.2nm,0.8s,baz=80,slow=4.1,SNR=10
JOF **Joensuu** 121.96 338 *e*PKIKP PKPdf 02 06 55.9 -0.7
JOF **Joensuu** 121.96 338 *ep*kp PKPdf 02 06 55.9 -0.7
QRN **Al-Qurain** 122.08 295 *e*P PKPdf 02 06 58.2 +0.2
QRN AMb AMB 02 06 58.8
comp=Z,176nm,0.7s
KBD **Kabd** 122.27 296 *e*P PKPdf 02 06 58.3 +0.1
KBD AMb AMB 02 06 58.8
comp=Z,34nm,0.5s
RDF **Al-Radifah** 122.40 296 *e*P PKPdf 02 06 58.5 -0.1
RDF AMb AMB 02 06 59.4
comp=Z,131nm,0.6s
MIB **Mutribah** 122.55 297 *e*P PKPdf 02 06 58.7 -0.1
MIB AMb AMB 02 06 59.9
comp=Z,90nm,1.0s
NAY **Al-Naaiem** 122.66 296 *e*P PKPdf 02 06 58.6 -0.5
NAY AMb AMB 02 06 59.9
comp=Z,36nm,1.2s
VRHR **Novokhopersk** 122.69 322 *e*PKIKP PKPdf 02 06 57.9 -0.5
VRHR pmax pmax
comp=Z,80nm,0.6s
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,8.0nm,0.5s
DGRG **David-gareji** 122.78 311 P PKPdf 02 07 00.4 +1.4
STEI **Steigen** 122.86 348 *e*P PKPdf 02 06 58.1 -0.1
STEI AMB AMB 02 07 02.9
comp=Z,40nm,1.6s
SCO **Scoresbysund** 122.98 4 *i* PKIKP PKPdf 02 06 59.0 +0.6
SCO pmax pmax
comp=Z,16nm,1.0s
SCO **Scoresbysund** 122.98 4 *i* P PKPdf 02 06 59.0 +0.6
comp=Z,16nm,1.0s
MOS **Moscow** 123.03 329 *e*PKIKP PKPdf 02 06 57.2 -1.7
MOS pmax pmax
comp=Z,63nm,0.8s
TBLG **Delisi** 123.20 311 *e*PKIKP PKPdf 02 07 00.5 +0.8
TBLG **Delisi** 123.20 311 P PKPdf 02 07 00.5 +0.8
GNI **Garni** 123.50 309 *e*P PKPdf 02 07 00.5 -0.1
GNI **Garni** 123.50 309 *e*PKPdf PKPdf 02 07 01.1 +0.6
GNI PKP PKPdf 02 07 01.4 +0.9
GNI **Garni** 123.50 309 PKPdf PKPdf 02 07 01.7 +1.1
SNR=9.1
GNI **Garni** 123.50 309 PKP PKPdf 02 07 01.4 +0.9
comp=Z,23nm,0.8s,baz=83,slow=1.7,SNR=23
KZR **Kazreti** 123.50 311 P PKPdf 02 07 01.3 +0.9
ZEI **Tsey** 123.58 312 *i* PKIKP PKPdf 02 07 01.1 +0.4
ZEI pmax pmax
comp=Z,18nm,1.0s
GOR **Gori** 123.60 311 P PKPdf 02 07 01.8 +1.3
SIV **San Ignacio** 123.83 120 PKP PKPdf 02 07 01.4 -0.3
SIV PKKPab PKKPbc 02 16 48.7 -0.3
SIV **San Ignacio** 123.83 120 PKP PKPdf 02 07 01.4 -0.3
comp=Z,4.3nm,0.5s,baz=254,slow=3.3,SNR=25
SIV PKKPab PKKPbc 02 16 48.7 -0.3
comp=Z,2.4nm,0.8s,baz=101,slow=4.8,SNR=7.5
OBN **Obninsk** 123.85 328⇑ *i* PKIKP PKPdf 02 07 00.3 -0.2
OBN *i* 02 08 48.5
OBN pmax pmax
comp=Z,94nm,1.4s

ONI Oni 123.94 312 P **PKPdf** 02 07 02.2 +1.0
SUR Sutherland 124.04 214 *e*PKPdf **PKPdf** 02 07 02.1 +0.2
KBZ Khabaz 124.06 314 PKIKP **PKPdf** 02 07 01.5 +0.2
KBZ Khabaz 124.06 314 PKP **PKPdf** 02 07 01.5 +0.2
KBZ Khabaz 124.06 314 PKP **PKPdf** 02 07 01.5 +0.2
comp=Z,9.8nm,0.8s,baz=120,slow=3.2,SNR=25
VSR Storozhevoye 124.08 323 *e*PKIKP **PKPdf** 02 07 00.9 -0.2
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=Z,50nm,0.6s
VSR pmax pmax
comp=E,20nm,1.0s
VORD Divnogorie 124.11 323 *e*PKIKP **PKPdf** 02 07 00.7 -0.4
VORD pmax pmax
comp=Z,40nm,0.9s
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,20nm,1.0s
BOSA Boshof 124.14 221 *e*PKPdf **PKPdf** 02 07 02.1 -0.1
BOSA PKP **PKPdf** 02 07 02.5 +0.3
BOSA Boshof 124.14 221 PKP **PKPdf** 02 07 02.5 +0.3
comp=E,22nm,1.0s,baz=135,slow=1.4,SNR=26
KIV Kislovodsk 124.16 314⇑ *i*PKIKP **PKPdf** 02 07 01.8 +0.2
KIV *i* 02 08 49.2
KIV pmax pmax
comp=Z,43nm,1.4s
AKH Akhalkalaki 124.18 311 P **PKPdf** 02 07 02.8 +1.0
KAF Kangasniemi 124.26 339 *e*PKIKP **PKPdf** 02 06 58.9 -2.2
KAF Kangasniemi 124.26 339 *e*pkp **PKPdf** 02 06 58.9 -2.2
CLDR Caldiran 124.31 308 *e*P **PKPdf** 02 07 03.0 +0.8
STOK Stokkvaagen 124.68 348 *e*P **PKPdf** 02 07 01.5 -0.2
STOK AMB AMB 02 07 05.8
comp=Z,106nm,1.9s
FIA1 FINESS Array S 124.79 338 *e*PKPdf **PKPdf** 02 07 01.7 -0.4
FINES FINESS Array B 124.79 338 PKP **PKPdf** 02 07 02.1 0.0
FINES FINESS Array B 124.79 338 PKP **PKPdf** 02 07 02.1 0.0
comp=Z,26nm,0.8s,baz=40,slow=2.4,SNR=50
VANB Van 124.82 308 *e*P **PKPdf** 02 07 04.6 +1.5
SAML Samuel 125.09 111 *e*PKPdf **PKPdf** 02 07 03.4 -0.7
ATD Arta Tunnel 125.83 274 PKP **PKPdf** 02 07 06.8 +1.2
ATD Arta Tunnel 125.83 274 PKP **PKPdf** 02 07 06.8 +1.2
comp=Z,7.6nm,0.4s,baz=100,slow=3.7
EZM Erzurum 126.09 310 *e*P **PKPdf** 02 07 07.4 +1.7
VRTB Varto-Mus 126.18 309 *e*P **PKPdf** 02 07 07.5 +1.8
SOC Sochi 126.33 314 *e*P **Pdif** 02 03 44.2 -1.8
SOC *i* 02 07 04.6
SOC *e* 02 09 03.8
SOC *e*SS SS 02 25 49.5 -1.9
SOC pmax pmax
comp=Z,10.0nm,0.8s
SOC pmax pmax
comp=Z,38nm,0.9s
SOC Sochi 126.33 314 *i* PKIKP **PKPdf** 02 07 05.6 0.0
LBTB Lobatse 126.35 224 *e*PKPdf **PKPdf** 02 07 06.2 -0.2
NSS Namsos 126.46 347 *e*P **PKPdf** 02 07 02.2 -3.0
BAYT Ayd¨–ntepe-Bay 126.88 310 *e*P **PKPdf** 02 07 08.4 +1.3
GUMT Gumushane 127.36 311 *e*P **PKPdf** 02 07 09.4 +1.5
ANN Anapa 127.50 316 *i* PKIKP **PKPdf** 02 07 04.8 -3.0
ANN pmax pmax
comp=Z,78nm,1.1s
ESPY Espiye-Giresun 127.78 311 *e*P **PKPdf** 02 07 04.6 -3.9
KMBO Kilima Mbogo 128.34 257 PKP **PKPdf** 02 07 11.1 +0.4
KMBO *e*PKPdf **PKiKP** 02 07 11.2 -0.2
KMBO *ep*PKPdf **pPKPdf** 02 08 01.0 -0.1
KMBO Kilima Mbogo 128.34 257 PKPdf **PKPdf** 02 07 12.3 +1.6
SNR=7.0
KMBO Kilima Mbogo 128.34 257 PKP **PKPdf** 02 07 11.1 +0.4
comp=Z,14nm,0.9s,baz=109,slow=2.6,SNR=28
IZAR Zarasai 128.43 333 *e*P **PKPdf** 02 07 08.9 -0.4
IZAR AMB AMB 02 07 11.5
comp=Z,16nm,1.2s
SJG San Juan 128.58 78 *e*PKPdf **PKPdf** 02 07 09.8 -0.9
ISAL Salakas 128.59 333 *e*P **PKPdf** 02 07 09.6 0.0
ISAL AMB AMB 02 07 11.8
comp=Z,14nm,1.2s
MALT Malatya 128.68 308 *e*P **PKPdf** 02 07 11.2 +0.8
MALT Malatya 128.68 308 ⇑PKIKP **PKPdf** 02 07 11.0 +0.5
MALT Malatya 128.68 308 *e*PKPdf **PKPdf** 02 07 10.4 0.0
MALT *e*PP PP 02 09 13.5 -5.5
MALT Malatya 128.68 308⇑ *i*P **PKPdf** 02 07 11.0 +0.5
IIGN Ignalina 128.69 333 *e*P **PKPdf** 02 07 09.9 +0.1
IIGN AMB AMB 02 07 12.0
comp=Z,26nm,0.7s
NACGM Naroch 128.72 332 *e* **PKPdf** 02 07 08.0 -1.8
CBYP Canovanas 128.86 78 *e*PKPdf **PKPdf** 02 07 12.7 +1.4
MOL Molde 129.13 348 *e*P **PKPdf** 02 07 11.1 +0.8
MOL AMB AMB 02 07 13.4
comp=Z,40nm,1.7s
SIM Simferopol' 129.64 318 *i* PKIKP **PKPdf** 02 07 12.3 +0.4
SIM pmax pmax
comp=Z,13nm,0.3s
NB2 NORSAR Subarra129.65 345 PKPdf **PKPdf** 02 07 11.4 -0.1
baz=31,slow=1.9
NB2 NORSAR Subarra129.65 345 PKPdf **PKPdf** 02 07 11.4 -0.1
comp=Z,8.1nm,0.7s,baz=31,slow=1.9
NOA NORSAR Array B 129.65 345 PKP **PKPdf** 02 07 11.9 +0.4
NOA PP **PP** 02 09 24.9 +1.0
NOA NORSAR Array B 129.65 345 PKP **PKPdf** 02 07 11.9 +0.4
comp=Z,12nm,0.7s,baz=33,slow=2.0,SNR=50
NOA PP **PP** 02 09 24.9 +1.0
comp=Z,3.1nm,0.9s,baz=33,slow=6.3,SNR=3.8
HFS Hagfors 129.76 343 PKP **PKPdf** 02 07 10.8 -0.9
HFS Hagfors 129.76 343 PKP **PKPdf** 02 07 10.8 -0.9
comp=Z,15nm,0.9s,baz=31,slow=3.4,SNR=22
SARI SarD1z-Kayseri 129.90 309 *e*P **PKPdf** 02 07 14.0 +1.2
AKASG Malin Array Be 129.90 326 PKIKP **PKPdf** 02 07 12.1 -0.1
AKASG Malin Array Be 129.90 326 PKP **PKPdf** 02 07 12.1 -0.1
AKASG Malin Array Be 129.90 326 PKP **PKPdf** 02 07 12.1 -0.1
comp=Z,8.0nm,0.6s,baz=59,slow=1.9,SNR=40
NAO01 NORSAR Array S 129.90 345 *e*PKPdf **PKPdf** 02 07 11.7 -0.2
AK01 Malin Array Si 129.91 326 *e*PKPdf **PKPdf** 02 07 12.2 0.0
KIEV Kiev 129.91 326 *e*PKIKP **PKPdf** 02 07 11.5 -0.7
KIEV Kiev 129.91 326 *e*PKPdf **PKPdf** 02 07 11.5 -0.7
AK02 Malin Array Si 129.94 326 *e*PKPdf **PKPdf** 02 07 12.1 -0.2
LSZ Lusaka 130.32 236 *e*PKPdf **PKPdf** 02 07 14.4 +0.2
LSZ *e*SKP 02 10 20.2
LSZ Lusaka 130.32 236 PKPdf **PKPdf** 02 07 15.6 +1.4
SNR=6.2
SUW Suwalki 130.91 333 *e*PKIKP **PKPdf** 02 07 14.4 +0.4
SUW Suwalki 130.91 333 *e*PKPdf **PKPdf** 02 07 14.3 +0.4
SUW *e*SKP 02 10 22.6
SUW Suwalki 130.91 333 *e*PKPdf **PKPdf** 02 07 14.2 +0.2
SUW *e*PKPbc **PKiKP** 02 07 15.0 +0.1
ASF Jabal al Asfar 131.21 301 PKP **PKPdf** 02 07 16.0 +0.6
ASF SKPbc **SKPab** 02 10 23.9 +1.2
ASF Jabal al Asfar 131.21 301 PKP **PKPdf** 02 07 16.0 +0.6
comp=Z,11nm,0.8s,baz=135,slow=2.9,SNR=21
ASF SKPbc **SKPab** 02 10 23.9 +1.2
comp=Z,2.2nm,0.7s,baz=135,slow=1.4,SNR=4.0
ODD1 Odda 131.72 347 *e*P **PKPdf** 02 07 16.1 +0.6
ODD1 AMB AMB 02 07 18.7
comp=Z,50nm,1.8s
BR131 Keskin Array S 131.85 311 *e*PKPdf **PKPdf** 02 07 16.1 -0.4
BR131 *e*SKP 02 10 26.1
BRTR Keskin Array B 131.85 311 PKPpre PKPpre 02 07 03.5
BRTR PKP **PKPdf** 02 07 16.1 -0.4
BRTR PP **PP** 02 09 37.2 -2.2
BRTR SKPab **SKPab** 02 10 26.7 +1.5
BRTR Keskin Array B 131.85 311 PKhKP PKPpre 02 07 03.5
comp=Z,1.0nm,0.6s,baz=116,slow=2.9,SNR=7.3
BRTR PKP **PKPdf** 02 07 16.1 -0.4
comp=Z,5.3nm,0.6s,baz=122,slow=2.0,SNR=31
BRTR PP **PP** 02 09 37.2 -2.2
comp=Z,4.6nm,1.2s,baz=76,slow=5.2,SNR=5.8
BRTR SKPab **SKPab** 02 10 26.7 +1.5
comp=Z,3.6nm,0.6s,baz=58,slow=3.3,SNR=14
KAMT Kaman 131.91 311 *e*P **PKPdf** 02 07 16.6 0.0
SAFT Safranbolu 132.01 314 *e*P **PKPdf** 02 07 17.2 +0.6
MERS Mersin 132.05 308 *e*P **PKPdf** 02 07 16.7 -0.2
BLS5 Blasjo 132.20 347 *e*P **PKPdf** 02 07 16.9 +0.6
MMAI Mount Meron Ar 132.28 302 PKP **PKPdf** 02 07 18.6 +1.2
MMAI SKPab **SKPab** 02 10 28.4 +1.2
MMAI Mount Meron Ar 132.28 302 PKP **PKPdf** 02 07 18.6 +1.2
comp=Z,13nm,0.7s,baz=63,slow=3.5,SNR=29
MMAI SKPab **SKPab** 02 10 28.4 +1.2
comp=Z,4.5nm,0.8s,baz=64,slow=3.7,SNR=7.4
ANTO Ankara 132.42 312 *e*P **PKPdf** 02 07 17.7 +0.3
ANTO Ankara 132.42 312 ⇑PKIKP **PKPdf** 02 07 17.5 0.0
ANTO Ankara 132.42 312 *e*PKPdf **PKPdf** 02 07 17.4 0.0
ANTO Ankara 132.42 312⇑ *i*P **PKPdf** 02 07 17.5 0.0
ANTO Ankara 132.42 312 PKPdf **PKPdf** 02 07 18.1 +0.7
SNR=9.7
LOD Lodumlu 132.43 312 *e*P **PKPdf** 02 07 17.9 +0.4
LEOM Leova 132.64 322 ⇑PKIKP **PKPdf** 02 07 17.6 +0.1
LEOM Leova 132.64 322⇑ *i*P **PKPdf** 02 07 17.6 +0.1
HOMB Homborsund 132.75 345 *e*P **PKPdf** 02 07 18.6 +1.3
TLCR 132.92 320 ⇑PKIKP **PKPdf** 02 07 18.7 +0.6
TLCR 132.92 320⇑ *i*P **PKPdf** 02 07 18.7 +0.6
LVV L'vov 133.15 328 *e*PKIKP **PKPdf** 02 07 18.8 +0.4
EIL Elat 133.28 298 PKP **PKPdf** 02 07 19.6 +0.3
EIL SKPab **SKPab** 02 10 31.6 +0.1
EIL Elat 133.28 298 PKP **PKPdf** 02 07 19.6 +0.3
comp=Z,18nm,0.8s,baz=44,slow=2.6,SNR=20
EIL SKPab **SKPab** 02 10 31.6 +0.1
comp=Z,5.2nm,0.9s,baz=41,slow=3.9,SNR=3.6
LADK Ladik-KONYA 133.29 310 *e*P **PKPdf** 02 07 19.9 +0.7
CFR Carcaliu 133.35 320 ⇓PKIKP **PKPdf** 02 07 19.3 +0.4
CFR Carcaliu 133.35 320⇓ *i*P **PKPdf** 02 07 19.3 +0.4
KIZT Kizilcal 133.42 311 *e*P **PKPdf** 02 07 19.3 -0.1
BSD Bornholm Skovb 133.43 338⇓ *i*PKIKP **PKPdf** 02 07 20.1 +1.4
BSD pmax pmax
comp=Z,26nm,0.8s
BSD Bornholm Skovb 133.43 338⇓ *i*P **PKPdf** 02 07 20.1 +1.4
comp=Z,26nm,0.7s
BEL Belsk 133.44 332 *e*PKPdf **PKPdf** 02 07 19.6 +0.8
BEL *e*PKPbc **PKiKP** 02 07 20.9 +0.8
CSS Prodhromos 133.50 305 *e*P **PKPdf** 02 07 20.9 +1.3
CSS Prodhromos 133.50 305 P **PKPdf** 02 07 19.7 +0.1
CSS Prodhromos 133.50 305 *e*PKPdf **PKPdf** 02 07 19.6 +0.1
TESR 133.57 323⇓ *i*P **PKPdf** 02 07 19.6 +0.3
BUR08 Bucovina Ar. S 133.79 325 *e*PKPdf **PKPdf** 02 07 20.5 +0.7
BURAR Bucovina Array 133.79 325⇑ *i*P **PKPdf** 02 07 20.2 +0.4
COP Copenhagen 133.82 341 *e*PKIKP **PKPdf** 02 07 21.2 +1.8
COP pmax pmax
comp=Z,27nm,0.8s
COP Copenhagen 133.82 341 *i* P **PKPdf** 02 07 21.2 +1.8
comp=Z,27nm,0.8s
VRI Vrincioaia 133.86 322 ⇓PKIKP **PKPdf** 02 07 20.3 +0.4
VRI Vrincioaia 133.86 322⇓ *i*P **PKPdf** 02 07 20.3 +0.4
PLOR Plostina 133.91 322 ⇑PKIKP **PKPdf** 02 07 19.2 -0.8
PLOR Plostina 133.91 322⇑ *i*P **PKPdf** 02 07 19.2 -0.8
KWP Kalwaria Pacla 133.94 328 ⇑PKIKP **PKPdf** 02 07 20.5 +0.6
KWP Kalwaria Pacla 133.94 328 *e*PKPdf **PKPdf** 02 07 20.6 +0.6
KWP Kalwaria Pacla 133.94 328⇑ *i*P **PKPdf** 02 07 20.5 +0.6
KWP Kalwaria Pacla 133.94 328 *e*PKPdf **PKPdf** 02 07 20.3 +0.4
KWP *e*PKPbc **PKiKP** 02 07 21.7 +0.4
GKP Gorka Klasztor 133.96 335 *e*PKPdf **PKPdf** 02 07 20.4 +0.6
GKP *e*PKPbc **PKiKP** 02 07 21.6 +0.5
MUD Monsted U'grnd 134.16 343⇓ *i*PKIKP **PKPdf** 02 07 21.6 +1.6
MUD pmax pmax
comp=Z,9.0nm,0.8s
MUD Monsted U'grnd 134.16 343⇓ *i*P **PKPdf** 02 07 21.6 +1.6
comp=Z,8.7nm,0.8s
LLD Lille Linde 134.18 340 *i* PKIKP **PKPdf** 02 07 22.0 +1.9
LLD pmax pmax
comp=Z,40nm,0.7s
LLD Lille Linde 134.18 340 *i* P **PKPdf** 02 07 22.0 +1.9
comp=Z,40nm,0.7s
SHUT Suhut-Afyon 134.51 311 *e*P **PKPdf** 02 07 21.8 +0.3
BDFB Brasilia 134.52 129 PKP **PKPdf** 02 07 21.3 -0.8
BDFB Brasilia 134.52 129 PKP **PKPdf** 02 07 21.3 -0.8
comp=Z,5.7nm,0.7s,baz=214,slow=2.7,SNR=8.3
MLR Muntele Rosu 134.53 322 PKP **PKPdf** 02 07 21.1 -0.2
MLR Muntele Rosu 134.53 322⇓ *i*P **PKPdf** 02 07 20.1 -1.2
MLR Muntele Rosu 134.53 322 PKP **PKPdf** 02 07 21.1 -0.2
comp=Z,2.3nm,0.8s,baz=13,slow=3.8
KOLS Kolonicke sedl 134.60 328 *e*PKIKP **PKPdf** 02 07 21.9 +0.7
KOLS Kolonicke sedl 134.60 328 *e*PKP **PKPdf** 02 07 21.9 +0.7
KOLS *e* 02 10 36.2
DOPR Dopca 134.60 323⇓ *i*P **PKPdf** 02 07 21.8 +0.5
GEMT Gemlik 134.77 314 *e*P **PKPdf** 02 07 21.4 -0.3
UZH Uzhgorod 134.78 328 *e*PKHKP PKPpre 02 07 13.1
UZH *i* 02 07 21.7
UZH *e* 02 08 09.1
ISP Isparta 134.79 310 ⇑PKIKP **PKPdf** 02 07 20.7 -1.3
ISP Isparta 134.79 310⇑ *i*P **PKPdf** 02 07 20.6 -1.4
TRPA Tarpa 134.95 327⇓ *i*P **PKPdf** 02 07 22.3 +0.5
TRPA Tarpa 134.95 327⇓ *e* **PKPdf** 02 07 22.5 +0.7
TVSB Tavsanli 134.97 313 *e*P **PKPdf** 02 07 22.0 -0.3
OJC Ojcow 134.99 331 *e*PKIKP **PKPdf** 02 07 22.2 +0.4
OJC *e* 02 09 57.4
OJC Ojcow 134.99 331 *e*PKP **PKPdf** 02 07 22.2 +0.4
OJC *e*PP **PP** 02 09 57.4 -1.0
CRVS Cervenica-Dubn 135.03 328 *e*PKIKP **PKPdf** 02 07 21.9 -0.1
CRVS *e* 02 09 59.8
CRVS Cervenica-Dubn 135.03 328 *e*PKP **PKPdf** 02 07 21.9 -0.1
CRVS *e*PP **PP** 02 09 59.8 +1.0
CRVS *e* 02 10 34.7
VOIR 135.09 322 ⇑PKIKP **PKPdf** 02 07 23.4 +1.1
VOIR 135.09 322⇑ *i*P **PKPdf** 02 07 23.4 +1.1
NIE Niedzica 135.28 330 *e*PKIKP **PKPdf** 02 07 23.6 +1.1
NIE Niedzica 135.28 330 *e*PKP **PKPdf** 02 07 23.6 +1.1
HUMR Humele 135.61 321⇑ *i*P **PKPdf** 02 07 23.4 +0.2
DRGR 135.66 325 ⇓PKIKP **PKPdf** 02 07 24.4 +1.1
DRGR 135.66 325⇓ *i*P **PKPdf** 02 07 24.4 +1.1
TSUM Tsumeb 135.71 223 *e*PKPdf **PKPdf** 02 07 24.1 -0.3
LOT Lotru 135.84 323⇑ *i*P **PKPdf** 02 07 22.9 -0.8
RUE Ruedersdorf 135.92 337 *e*PKPdf **PKPdf** 02 07 24.2 +0.8
BSEG Bad Segeberg 135.96 341 *e*PKIKP **PKPdf** 02 07 24.2 +0.7
BSEG Bad Segeberg 135.96 341 *e*PKPdf **PKPdf** 02 07 24.2 +0.7
OKC Ostrava-Krasne 136.03 331 *e*PKIKP **PKPdf** 02 07 24.6 +0.8
OKC *e* 02 10 06.4
OKC Ostrava-Krasne 136.03 331 *e*PKPdf **PKPdf** 02 07 24.6 +0.8
OKC *e*PP **PP** 02 10 06.4 +1.5
DEV Deva 136.09 324 PKIKP **PKPdf** 02 07 24.5 +0.5
KSP Ksiaz 136.14 334 *e*PKIKP **PKPdf** 02 07 26.4 +2.4
KSP Ksiaz 136.14 334 *e*PKP **PKPdf** 02 07 26.4 +2.4
MORC Moravsky Berou 136.35 332 ⇓PKIKP **PKPdf** 02 07 24.9 +0.4
MORC Moravsky Berou 136.35 332 *e*PKPpre PKPpre 02 07 17.3
MORC *e*PKPdf **PKPdf** 02 07 24.1 -0.4
MORC *e*PP PP 02 10 01.2 -5.8
MORC Moravsky Berou 136.35 332⇓ *i*P **PKPdf** 02 07 24.9 +0.4
GZR Gura Zlata 136.44 324 ⇓PKIKP **PKPdf** 02 07 25.0 +0.2
GZR Gura Zlata 136.44 324⇓ *i*P **PKPdf** 02 07 25.0 +0.2
PSZ Piszkesteto 136.47 328 ⇓PKIKP **PKPdf** 02 07 25.8 +1.0
PSZ Piszkesteto 136.47 328 *e*PKPdf **PKPdf** 02 07 25.3 +0.5
PSZ Piszkesteto 136.47 328⇓ *i*P **PKPdf** 02 07 25.8 +1.0
PSZ Piszkesteto 136.47 328⇓ *e* **PKPdf** 02 07 25.6 +0.8
DPC Dobruska-Polom 136.49 333 *e*PKHKP PKPpre 02 07 14.2
DPC *e* 02 07 25.4
DPC *e* 02 10 10.2
DPC Dobruska-Polom 136.49 333 *e*PKPpre PKPpre 02 07 14.2
DPC *e*PKPdf **PKPdf** 02 07 25.4 +0.7
DPC *ep*PKP pPKPdf 02 08 18.1 +2.9
DPC *e*PP **PP** 02 10 10.2 +2.4
UPC Upice 136.51 334 *e*PKIKP **PKPdf** 02 07 25.3 +0.6
UPC Upice 136.51 334 *e*PKPdf **PKPdf** 02 07 25.3 +0.6
VYHS Vyhne 136.62 330 *e*PKIKP **PKPdf** 02 07 24.9 -0.1
VYHS *e* 02 10 11.3
VYHS Vyhne 136.62 330 *e*PKP **PKPdf** 02 07 24.9 -0.1
VYHS *e*PP **PP** 02 10 11.3 +2.6
VYHS *e* 02 10 41.6
IZM Izmir 136.96 312 *e*P **PKPdf** 02 07 24.5 -1.4
BZS Buzias 136.97 325⇑PKIKP **PKPdf** 02 07 25.4 -0.3
BZS Buzias 136.97 325⇑ *i*P **PKPdf** 02 07 25.4 -0.3
BRG Berggiesshubel 137.10 335 *e*PKP PKPdf 02 07 17.3 -8.4
comp=Z,3.6nm,0.6s
BRG *i* 02 07 25.9
comp=Z,26nm,0.8s
BRG *ep*PKP pPKPdf 02 08 11.5 -4.7
comp=Z,5.7nm,1.0s
BRG *e*PP PP 02 10 03.1 -8.4
comp=Z,24nm,1.9s
BRG *e* 02 10 36.7
comp=Z,3.5nm,1.0s
BRG Berggiesshubel 137.10 335 *e*PKHKP PKPdf 02 07 17.3 -8.4
BRG *i* 02 07 25.9
BRG *e* 02 08 11.5
BRG pmax pmax
comp=Z,1.0nm,0.6s
BRG pmax pmax
comp=Z,4.0nm,0.8s
BRG pmax pmax
comp=Z,26nm,0.9s
BRG pmax pmax
comp=Z,6.0nm,1.9s
BRG pmax pmax
comp=Z,24nm,0.9s
BRG Berggiesshubel 137.10 335 *e*PKPdf **PKPdf** 02 07 26.0 +0.3
PVCC Panska Ves 137.11 335 *e*PKIKP **PKPdf** 02 07 26.6 +0.8
PVCC Panska Ves 137.11 335 *e*PKPdf **PKPdf** 02 07 26.6 +0.8
VRAC Vranov 137.12 332 PKP **PKPdf** 02 07 26.3 +0.5
VRAC SKPbc **SKPbc** 02 10 39.9 -0.8
VRAC Vranov 137.12 332⇑ *i*P **PKPdf** 02 07 26.0 +0.1
VRAC Vranov 137.12 332 PKP **PKPdf** 02 07 26.3 +0.5
comp=Z,7.6nm,0.8s,baz=32,slow=2.3,SNR=11
VRAC SKPbc **SKPbc** 02 10 39.9 -0.8
comp=Z,2.3nm,0.8s,baz=54,slow=6.0,SNR=3.2
CLL Collm 137.14 336⇑ *i*PKIKP **PKPdf** 02 07 25.8 0.0
CLL pmax pmax
comp=Z,12nm,0.8s
CLL Collm 137.14 336 *e*PKPdf **PKPdf** 02 07 26.0 +0.2
CLL Collm 137.14 336 *e*PKPpre PKPpre 02 07 15.0
CLL ⇑ *i*PKPdf **PKPdf** 02 07 25.8 0.0
comp=Z,12nm,0.8s
CLL ⇓ *i*PKiKP **PKiKP** 02 07 28.1 +0.4
comp=Z,33nm,0.8s
CLL *e*PP **PP** 02 10 10.0 -1.6
CLL *e*SKPdf **SKPdf** 02 10 42.0 -0.4
comp=Z,10.0nm,1.3s
CLL *i* PKSbc **PKSbc** 02 10 59.9 -0.4
CLL *e*(sPP) 02 11 13.0
CLL *e* 02 17 48.0
CLL *e* 02 19 36.0
CLL *e*PS PS 02 21 00.0 +19
CLL *e*PPS PPS 02 22 28.0
CLL *e* 02 23 36.0
PKSN Nyarlorinc 137.14 327⇓ *e* **PKPdf** 02 07 27.3 +1.4
BUD Budapest 137.20 328⇓ *e* **PKPdf** 02 07 24.3 -1.7
NRDL Niedersach Rie 137.23 340 *e*PKPdf **PKPdf** 02 07 26.4 +0.6
SMOL Smolenice 137.29 331 *e*PKIKP **PKPdf** 02 07 26.8 +0.6
SMOL Smolenice 137.29 331 *e*PKP **PKPdf** 02 07 26.8 +0.6
FBE Freiberg 137.30 336 *e*PKPdf **PKPdf** 02 07 26.8 +0.7
PKS7 Kunszentmiklos 137.41 328⇓ *e* **PKPdf** 02 07 27.1 +0.7
PKS6 Bocsa 137.49 327⇓ *e* **PKPdf** 02 07 27.8 +1.2
PRU Pruhonice 137.53 334 *e*PKHKP PKPpre 02 07 19.3
PRU *e* 02 07 27.1
PRU *e* 02 10 14.5
PRU Pruhonice 137.53 334 *e*PKPpre PKPpre 02 07 19.3
PRU *e*PKPdf **PKPdf** 02 07 27.1 +0.6
PRU *ep*PKP pPKPdf 02 08 18.8 +1.8
PRU *e*PP **PP** 02 10 14.5 +0.4
PKSG 137.58 329⇓ *e*PKPdf **PKPdf** 02 07 27.4 +0.7
TREC Trest 137.63 333 *e*PKIKP **PKPdf** 02 07 27.3 +0.5
TREC Trest 137.63 333 *e*PKPdf **PKPdf** 02 07 27.3 +0.5
ZST Bratislava 137.66 330 *e*PKIKP **PKPdf** 02 07 26.8 -0.1
ZST Bratislava 137.66 330 *e*PKP **PKPdf** 02 07 26.8 -0.1
CLZ Clausthal 137.68 339 *e*PKIKP **PKPdf** 02 07 27.2 +0.4
CLZ Clausthal 137.68 339 *e*PKPdf **PKPdf** 02 07 27.2 +0.4
NEUB Neuenburg 137.69 337 *e*PKPdf **PKPdf** 02 07 27.2 +0.4
PKS2 Kecel 137.74 327⇑ *e* **PKPdf** 02 07 27.8 +0.8
ESK Eskdalemuir 137.84 352 *e*PKIKP **PKPdf** 02 07 26.2 -0.7
ESK Eskdalemuir 137.84 352 *e*PKPdf **PKPdf** 02 07 26.2 -0.7
PKST T¨'s 137.85 329⇓ *e*PKKPdf **PKPdf** 02 07 27.7 +0.4
TANN Tannenbergstha 138.05 336 *e*PKPdf **PKPdf** 02 07 28.0 +0.4
WERD Werda 138.09 336 *e*PKPdf **PKPdf** 02 07 27.8 +0.2
PLN Plauen 138.12 336 *e*PKPdf **PKPdf** 02 07 27.9 +0.3
GUNZ Gunzen 138.14 336 *e*PKPdf **PKPdf** 02 07 28.2 +0.5
IBBN Ibbenbren 138.16 341 *e*PKPdf **PKPdf** 02 07 28.4 +0.8
PKS9 Tamasi 138.17 328⇓ **PKPdf** 02 07 28.4 +0.6
WERN Wernitzgruen 138.19 336 *e*PKPdf **PKPdf** 02 07 28.2 +0.4
MOX Moxa 138.20 337 *e*PKIKP **PKPdf** 02 07 28.1 +0.3
MOX Moxa 138.20 337 *e*PKPdf **PKPdf** 02 07 28.1 +0.3
NKC Novy Kostel 138.20 336 *e*PKHKP PKPpre 02 07 19.5
NKC *e* 02 07 27.7
NKC *e* 02 10 21.5
NKC Novy Kostel 138.20 336 *e*PKPpre PKPpre 02 07 19.5
NKC *e*PKPdf **PKPdf** 02 07 27.7 -0.1
NKC *e*PP **PP** 02 10 21.5 +3.2
SOP Sopron 138.28 330⇓ *e* **PKPdf** 02 07 28.7 +0.7
CONA Conrad Observa 138.44 331⇑ *i*PKPdf **PKPdf** 02 07 28.5 +0.1
comp=Z,48nm,1.3s,SNR=15
CONA Conrad Observa 138.44 331⇑ *i*P **PKPdf** 02 07 28.5 +0.1
MANZ Manzenberg 138.53 336 *e*PKPdf **PKPdf** 02 07 28.5 0.0
KHC Kasperske Hory 138.59 334 *e*PKHKP PKPpre 02 07 20.6
KHC *e* 02 07 28.4
KHC Kasperske Hory 138.59 334 *e*PKPpre PKPpre 02 07 20.6
KHC *e*PKPdf **PKPdf** 02 07 28.4 -0.2
KHC *e*PP **PP** 02 10 16.4 -4.4
KHC *e*SKP 02 10 47.7
KHC Kasperske Hory 138.59 334 *e*PKPpre PKPpre 02 07 21.0
KHC *e*PKPdf **PKPdf** 02 07 29.4 +0.8
KHC *ep*PKP pPKPdf 02 08 20.4 +1.3
KHC *e*PP **PP** 02 10 20.5 -0.3
KHC *e*SKP 02 10 47.0
ROTZ Rotzenmuhle 138.66 336 *e*PKPdf **PKPdf** 02 07 28.6 -0.1
GEC2 GERESS Array S 138.75 334 *e*PKIKP **PKPdf** 02 07 28.9 -0.1
GEC2 GERESS Array S 138.75 334 *e*PKPdf **PKPdf** 02 07 28.9 -0.1
GERES GERESS Array B 138.75 334 PKPpre PKPpre 02 07 19.4
GERES PKP **PKPdf** 02 07 29.9 +0.9
GERES PP **PP** 02 10 22.7 +0.8
GERES SKPbc **SKPbc** 02 10 45.5 0.0
GERES GERESS Array B 138.75 334 PKhKP PKPpre 02 07 19.4
comp=Z,2.2nm,0.6s,baz=35,slow=3.9,SNR=15
GERES PKP **PKPdf** 02 07 29.9 +0.9
comp=Z,11nm,0.7s,baz=45,slow=1.5,SNR=29
GERES PP **PP** 02 10 22.7 +0.8
comp=Z,2.2nm,1.0s,baz=17,slow=1.4,SNR=4.2
GERES SKPbc **SKPbc** 02 10 45.5 0.0
comp=Z,3.1nm,0.9s,baz=36,slow=3.9,SNR=6.6
WTSB Winterswijk 138.75 342 *e*PKP PKPdf 02 07 21.7 -7.0
comp=Z,62nm,1.4s
DIVS Divibare 138.81 324 P **PKPdf** 02 07 20.7 -8.5
WET Wettzell 138.87 334 *e*PKIKP **PKPdf** 02 07 29.4 +0.3
WET Wettzell 138.87 334 *e*PKPdf **PKPdf** 02 07 29.4 +0.3
BEHE Becsehely 139.02 329⇓ *e* **PKPdf** 02 07 30.4 +1.0
BUG Bochum--Univer 139.06 341 *e*PKPdf **PKPdf** 02 07 29.4 +0.1
MOA Molln 139.24 332⇑ *i*PKPdf PKPdf 02 07 21.9 -8.0
comp=Z,2.8nm,0.6s
MOA Molln 139.24 332⇑ *i*P PKPdf 02 07 21.9 -8.0
LIT Litokhoron 139.48 317 P PKPdf 02 07 20.0 -10
TNS Taunus Mts 139.70 339 *e*PKIKP **PKPdf** 02 07 31.0 +0.4
TNS Taunus Mts 139.70 339 *e*PKPdf **PKPdf** 02 07 31.0 +0.4
PERS Pernice 139.72 330 *i* P PKPdf 02 07 23.3 -7.5
IDI Anoyia 139.93 309 *e*PKPpre PKPpre 02 07 23.5
IDI *e*PKPdf **PKiKP** 02 07 33.4 -0.6
HGN Heimansgroeve 140.06 342 *e*PKP PKPdf 02 07 25.4 -5.8
comp=Z,66nm,0.9s
TOD Tromm 140.09 338 PKHKP PKPdf 02 07 24.4 -6.9
TOD Tromm 140.09 338 PKP PKPdf 02 07 24.4 -6.9
MEM Membach 140.18 341 PKhKP PKPpre 02 07 24.2
MEM PKP **PKPdf** 02 07 32.0 +0.7
FUR Furstenfeldbru 140.30 335 *e*PKIKP **PKPdf** 02 07 31.7 0.0
FUR Furstenfeldbru 140.30 335 *e*PKPdf **PKPdf** 02 07 31.7 0.0
ABH Alteburg 140.30 339 PKP PKPdf 02 07 24.6 -7.1
LJU Ljubljana 140.43 330 *i* P PKPdf 02 07 26.7 -5.3
BOJS Bojanci 140.45 329 *i* P PKPdf 02 07 25.3 -6.7
TIR Tirane 140.50 320 *e*PKHKP PKPpre 02 07 24.6
TIR *e* 02 07 32.3
TIR Tirane 140.50 320 *e*PKPpre PKPpre 02 07 24.6
TIR *e*PKPdf **PKPdf** 02 07 32.3 0.0
BCLA Clavier 140.56 342 PKhKP PKPpre 02 07 25.7
BCLA PKP **PKPdf** 02 07 32.5 +0.4
RUP Ruppelstein 140.62 340 PKHKP PKPdf 02 07 24.3 -8.0
RUP Ruppelstein 140.62 340 PKP PKPdf 02 07 24.3 -8.0
STU Stuttgart 140.64 337 *e*PKHKP PKPpre 02 07 25.3
STU *e* 02 07 32.5
STU Stuttgart 140.64 337 *e*PKPpre PKPpre 02 07 25.3
STU *e*PKPdf **PKPdf** 02 07 32.5 +0.2
VOY Vojsko 140.75 330 *e*P PKPdf 02 07 26.2 -6.5
VOY *e* 02 07 35.1
JAVS Javornik 140.76 330 *i* P PKPdf 02 07 26.8 -6.0
**SNF Seneffe 140

MOTA	Moosalm	141.02 334	⇑	*i*P	PKPdf	02 07 26.3	-6.9
DOU	Dourbes	141.06 342		PKhKP	PKPpre	02 07 26.9	
DOU				PKP	**PKPdf**	**02 07 33.8**	**+0.8**
BFO	Black Forest	141.33 337		*e*PKHKP	PKPpre	02 07 26.5	
BFO				*e*		02 07 33.3	
BFO				*e*		02 10 36.7	
BFO	Black Forest	141.33 337		*e*PKPpre	PKPpre	02 07 26.5	
BFO				*e*PKPdf	**PKPdf**	**02 07 33.3**	**-0.3**
BFO				*e*SKP		02 10 36.7	
SPAK	Spaichingen-Ko	141.34 337		PKP	PKPdf	02 07 28.4	-5.3
FETA	Feichten	141.43 334	⇑	*i*PKPdf	PKPdf	02 07 28.3	-5.7
	comp=Z,22nm,0.8s,SNR=10.0						
FETA	Feichten	141.43 334	⇑	*i*P	PKPdf	02 07 28.3	-5.7
DAVA	Damuels	141.47 335	⇑	*i*PKPdf	PKPdf	02 07 28.3	-5.9
	comp=Z,13nm,0.5s,SNR=6.3						
DAVA	Damuels	141.57 335	⇑	*i*P	PKPdf	02 07 28.3	-5.9
VLS	Valsamata	141.73 316		P	**PKPdf**	**02 07 29.5**	**-5.1**
FELD	Feldberg im Sc	141.83 337		PKP	PKPdf	02 07 28.5	-6.1
ECH	Echery	141.85 338		*e*PKHKP	PKPpre	02 07 28.3	
ECH				*e*		02 07 33.6	
ECH				*e*		02 10 41.6	
ECH	Echery	141.85 338		*e*PKPpre	PKPpre	02 07 28.3	
ECH				*e*PKPdf	**PKPdf**	**02 07 33.6**	**-1.0**
ECH				*e*SKP		02 10 41.6	
ECH	Echery	141.85 338		PKP	**PKPdf**	**02 07 29.4**	**-5.1**
DAVOX	Davos/Dischmat	141.98 335		PKPpre	PKPpre	02 07 30.3	
DAVOX	Davos/Dischmat	141.98 335		PKhKP	PKPpre	02 07 30.3	
	comp=Z,14nm,0.5s,baz=24,slow=0.3,SNR=43						
MOF	Molkenrain	142.17 338		PKHKP	PKPdf	02 07 29.9	-5.3
MOF	Molkenrain	142.17 338		PKP	PKPdf	02 07 29.9	-5.3
MOF	Molkenrain	142.17 338		PKP	PKPdf	02 07 29.9	-5.3
THEF	They Montfort	142.25 339		PKHKP	**PKPdf**	**02 07 30.7**	**-4.5**
THEF	They Montfort	142.25 339		PKP	**PKPdf**	**02 07 30.7**	**-4.5**
THEF	They Montfort	142.25 339		PKP	**PKPdf**	**02 07 30.7**	**-4.5**
BBS	Basel-Blauen	142.35 337		PKIKP	**PKPdf**	**02 07 31.7**	**-3.8**
BBS	Basel-Blauen	142.35 337		PKP	**PKPdf**	**02 07 31.7**	**-3.8**
TUE	Stuetta	142.44 335		*e*PKPdf	**PKPdf**	**02 07 32.1**	**-3.8**
TUE				*e*SKP		02 10 56.9	
LOMF	Lomont	142.70 338		PKHKP	**PKPdf**	**02 07 31.4**	**-4.7**
LOMF	Lomont	142.70 338		PKP	**PKPdf**	**02 07 31.4**	**-4.7**
LOMF	Lomont	142.70 338		PKP	**PKPdf**	**02 07 31.4**	**-4.7**
AQU	L'Aquila	143.60 327		*e*PKPdf	PKPbc	02 07 36.3	+0.5
AQU	L'Aquila	143.60 327	⇑	*i*P	PKPbc	02 07 35.7	-0.1
OG01	Vacheresse	143.62 337		PKP	**PKPdf**	**02 07 38.8**	**+1.0**
OG01	Vacheresse	143.62 337		PKP	**PKPdf**	**02 07 38.8**	**+1.0**
TIP	Timpagrande	143.69 320		*e*PKPdf	PKPbc	02 07 36.4	+0.3
CUC	Castrocucco	143.78 322		*e*PKPdf	PKPab	02 07 35.2	-0.4
VLC	Villacollemand	143.80 331		*e*PKPdf	PKPab	02 07 35.5	0.0
RSL	Roselend	144.17 337		PKIKP	**PKPdf**	**02 07 38.4**	**-0.5**
RSL	Roselend	144.17 337		PKP	**PKPdf**	**02 07 38.4**	**-0.5**
RSL	Roselend	144.17 337		PKP	**PKPdf**	**02 07 38.4**	**-0.5**
OG35	Corcelles	144.27 338		PKP	PKPbc	02 07 37.8	+0.1
OG22	Abries	144.77 335		PKP	PKPbc	02 07 39.6	+0.2
OG22	Abries	144.77 335		PKP	PKPbc	02 07 39.6	+0.2
BST	Brest	144.78 350		PKP	**PKPdf**	**02 07 39.5**	**-0.1**
BST	Brest	144.78 350		PKP	**PKPdf**	**02 07 39.5**	**-0.1**
CEL	Celeste	144.78 319		*e*PKPdf	**PKPab**	**02 07 38.9**	**-0.5**
GDM	Grand'Maison	144.78 337		PKP	**PKPdf**	**02 07 40.2**	**+0.3**
GDM	Grand'Maison	144.78 337		PKP	**PKPdf**	**02 07 40.2**	**+0.3**
GRN	Grenoble	144.88 337		PKIKP	**PKPdf**	**02 07 40.8**	**+0.8**
GRN	Grenoble	144.88 337		PKP	**PKPdf**	**02 07 40.8**	**+0.8**
GRN	Grenoble	144.88 337		PKP	**PKPdf**	**02 07 40.8**	**+0.8**
AGO	Saint Agoulin	145.10 341		PKP	**PKPab**	**02 07 41.0**	**+0.6**
AGO	Saint Agoulin	145.10 341		PKP	**PKPab**	**02 07 41.0**	**+0.6**
SURF	Saint Ours	145.10 335		PKP	**PKPab**	**02 07 41.2**	**+0.6**
SURF	Saint Ours	145.10 335		PKP	**PKPab**	**02 07 41.2**	**+0.6**
SAOF	Saorge	145.19 334		PKIKP	**PKPbc**	**02 07 40.7**	**+0.2**
SAOF	Saorge	145.19 334		PKP	**PKPbc**	**02 07 40.7**	**+0.2**
SAOF	Saorge	145.19 334		PKP	**PKPbc**	**02 07 40.7**	**+0.2**
AUTN	L'Aution	145.24 334		PKIKP	**PKPab**	**02 07 41.5**	**+0.3**
AUTN	L'Aution	145.24 334		PKP	**PKPab**	**02 07 41.5**	**+0.3**
AUTN	L'Aution	145.24 334		PKP	**PKPab**	**02 07 41.5**	**+0.3**
SSB	Saint Sauveur	145.30 338		*e*PKIKP	**PKPab**	**02 07 41.4**	**+0.2**
SSB	Saint Sauveur	145.30 338		*e*PKPbc	**PKPab**	**02 07 41.4**	**+0.2**
SSB	Saint Sauveur	145.30 338		PKP	**PKPab**	**02 07 41.6**	**+0.4**
TOUF	Mont Tournerai	145.30 334		PKIKP	**PKPab**	**02 07 41.4**	**0.0**
TOUF	Mont Tournerai	145.30 334		PKP	**PKPab**	**02 07 41.4**	**0.0**
TOUF	Mont Tournerai	145.30 334		PKP	**PKPab**	**02 07 41.4**	**0.0**
COLF	Collangettes	145.38 340		PKP	**PKPab**	**02 07 42.0**	**+0.5**
COLF	Collangettes	145.38 340		PKP	**PKPab**	**02 07 42.0**	**+0.5**
PYM	Petit Puy Mans	145.41 340		PKP2	**PKPab**	**02 07 42.1**	**+0.5**
PYM	Petit Puy Mans	145.41 340		PKP	**PKPab**	**02 07 42.1**	**+0.5**
PYM	Petit Puy Mans	145.41 340		PKP	**PKPab**	**02 07 42.1**	**+0.5**
MVIF	Mont Vial	145.44 334		PKP2	**PKPbc**	**02 07 41.5**	**+0.1**
MVIF	Mont Vial	145.44 334		PKP	**PKPbc**	**02 07 41.5**	**+0.1**
MVIF	Mont Vial	145.44 334		PKP	**PKPbc**	**02 07 41.5**	**+0.1**
REVF	Revere	145.47 334		PKP2	**PKPab**	**02 07 42.5**	**+0.6**
REVF	Revere	145.47 334		PKP	**PKPab**	**02 07 42.5**	**+0.6**
REVF	Revere	145.47 334		PKP	**PKPab**	**02 07 42.5**	**+0.6**
VERF	Verneugheol	145.58 341		PKP	**PKPab**	**02 07 42.4**	**+0.2**
VERF	Verneugheol	145.58 341		PKP	**PKPab**	**02 07 42.4**	**+0.2**
OCF	Saint Nazaire	145.61 337		PKP	**PKPab**	**02 07 42.9**	**+0.5**
OG26	St.-Nazaire-De	145.61 337		PKP	**PKPab**	**02 07 42.9**	**+0.5**
CALN	Calern	145.67 334		PKP2	**PKPdf**	**02 07 41.7**	**+0.2**
CALN	Calern	145.67 334		PKP	**PKPdf**	**02 07 41.7**	**+0.2**
CALN	Calern	145.67 334		PKP	**PKPdf**	**02 07 41.7**	**+0.2**
LBL	Lubilhac	145.79 340		PKP2	**PKPab**	**02 07 42.9**	**-0.1**
LBL	Lubilhac	145.79 340		PKP	**PKPab**	**02 07 42.9**	**-0.1**
LBL	Lubilhac	145.79 340		PKP	**PKPab**	**02 07 42.9**	**-0.1**
FRNF	Fournols	145.88 341		PKP	**PKPab**	**02 07 43.5**	**+0.2**
FRNF	Fournols	145.88 341		PKP	**PKPab**	**02 07 43.5**	**+0.2**
OSPF	L'Ospedale	146.26 330		PKP	**PKPbc**	**02 07 44.2**	**+0.3**
OSPF	L'Ospedale	146.26 330		PKP	**PKPbc**	**02 07 44.2**	**+0.3**
VSL	Villasalto	147.78 327		*e*PKPdf	**PKPdf**	**02 07 44.5**	**-0.5**
VSL				*e*PKPbc	**PKPbc**	**02 07 48.2**	**+0.1**
LRDF	Laroque-de-Fa	148.04 339		PKP	**PKPbc**	**02 07 49.2**	**+0.5**
LRDF	Laroque-de-Fa	148.04 339		PKP	**PKPbc**	**02 07 49.2**	**+0.5**
SJAF	Saint Jean de	148.31 338		PKP	**PKPbc**	**02 07 49.4**	**0.0**
SJAF	Saint Jean de	148.31 338		PKP	**PKPbc**	**02 07 49.4**	**0.0**
FILF	Fillols	148.37 338		PKP	**PKPbc**	**02 07 50.0**	**+0.4**
FILF	Fillols	148.37 338		PKP	**PKPbc**	**02 07 50.0**	**+0.4**
CARF	Carcanieres	148.39 339		PKP	**PKPbc**	**02 07 49.7**	**0.0**
CARF	Carcanieres	148.39 339		PKP	**PKPbc**	**02 07 49.7**	**0.0**
MLS	Moulis	148.52 340		PKP	**PKPbc**	**02 07 50.2**	**+0.3**
MLS	Moulis	148.52 340		PKP	**PKPbc**	**02 07 50.2**	**+0.3**
SALF	Salau	148.66 340		PKP	**PKPbc**	**02 07 48.9**	**-1.5**
SALF	Salau	148.66 340		PKP	**PKPbc**	**02 07 48.9**	**-1.5**
LABF	Labassere	148.76 342		PKP	**PKPbc**	**02 07 50.5**	**-0.1**
LABF	Labassere	148.76 342		PKP	**PKPbc**	**02 07 50.5**	**-0.1**
REYF	Montagne du Re	148.88 342		PKP	**PKPbc**	**02 07 51.4**	**+0.5**
REYF	Montagne du Re	148.88 342		PKP	**PKPbc**	**02 07 51.4**	**+0.5**
RESF	Ens	148.90 341		PKP	**PKPbc**	**02 07 52.3**	**+1.3**
RESF	Ens	148.90 341		PKP	**PKPbc**	**02 07 52.3**	**+1.3**
VIEF	Viey	148.92 342		PKP	**PKPbc**	**02 07 52.2**	**+1.2**
VIEF	Viey	148.92 342		PKP	**PKPbc**	**02 07 52.2**	**+1.2**
OSSF	Osses	148.95 344		PKP	**PKPbc**	**02 07 51.0**	**0.0**
OSSF	Osses	148.95 344		PKP	**PKPbc**	**02 07 51.0**	**0.0**
LARF	Larrau	149.08 343		PKP	**PKPbc**	**02 07 52.4**	**+1.0**
LARF	Larrau	149.08 343		PKP	**PKPbc**	**02 07 52.4**	**+1.0**
RCBR	Riachuelo	149.89 129		*e*PKPbc	**PKPbc**	**02 07 53.8**	**-0.4**
RCBR	Riachuelo	149.89 129		PKPbc	**PKPbc**	**02 07 54.0**	**-0.2**
	comp=Z,21nm,0.6s,baz=225,slow=5.7,SNR=28						
KEST	Kesra	150.43 322		*e*PKPdf	**PKPdf**	**02 07 49.7**	**+0.2**
KEST				PKP	**PKPdf**	**02 07 50.2**	**+0.8**
KEST				*e*PKPbc	**PKiKP**	**02 07 55.5**	**-0.1**
KEST				PKPbc	**PKiKP**	**02 07 55.9**	**+0.3**
KEST	Kesra	150.43 322		PKP	**PKPdf**	**02 07 50.2**	**+0.8**
	comp=Z,16nm,1.2s,baz=90,slow=4.0,SNR=4.5						
KEST				PKPbc	**PKiKP**	**02 07 55.9**	**+0.3**
	comp=Z,54nm,0.6s,baz=242,slow=0.8,SNR=121						
CMAH	Djebel Manchou	150.92 325		P	**PKPbc**	**02 07 54.3**	**-1.7**
CAEH	'Ain El Ouahch	151.12 326		P	**PKPbc**	**02 07 55.6**	**-0.8**
ABSA	Djebel Ababsia	151.14 325		P	**PKPbc**	**02 07 55.2**	**-1.4**
PGRA	Graciosa	151.41 25		*e*PKP	**PKPab**	**02 08 02.7**	**-3.1**
PCED	Cedros	151.44 27		*e*PKP	**PKPab**	**02 08 03.2**	**-2.8**
CKFL	Kef-Lekhel	151.47 326		P	**PKPbc**	**02 07 56.0**	**-1.4**
CALA	Caldeira	151.48 27		*e*PKP	**PKPbc**	**02 07 57.5**	**+0.3**
PBRG	Braganca	151.54 351		*e*PKPbc	**PKPbc**	**02 07 57.5**	**+0.3**
PBRG	Braganca	151.54 351		*e*PKPab	**PKPab**	**02 08 07.0**	**+0.7**
ROSA	Rosais	151.56 26		*e*PKP	**PKPbc**	**02 07 58.4**	**+1.1**
PGAV	Gavieira, Arco	151.59 353		*e*PKPbc	**PKPbc**	**02 07 57.9**	**+0.5**
PCAN	Candelaria	151.67 27		*e*PKP	**PKPbc**	**02 07 54.6**	**-3.0**
PMAN	Manadas	151.70 26		*e*PKP	**PKPbc**	**02 07 58.0**	**+0.4**
CASM	Ain Smara	151.70 326		P	**PKPbc**	**02 07 56.6**	**-1.2**
PCAB	Cabril	151.81 353		*e*PKPbc	**PKPbc**	**02 07 58.2**	**+0.3**
ADH	Angra Heroismo	152.03 25		*e*PKP	**PKPbc**	**02 08 02.5**	**+4.1**
POLO	Lamas de Olo	152.11 352		*e*PKPbc	**PKPbc**	**02 07 59.2**	**+0.6**
POLO	Lamas de Olo	152.11 352		*e*PKPab	**PKPab**	**02 08 09.9**	**+1.1**
PVRL	Vila Real	152.20 352		*e*PKPbc	**PKPbc**	**02 07 59.2**	**+0.4**
PVRL	Vila Real	152.20 352		*e*PKPab	**PKPab**	**02 08 10.2**	**+1.1**
MVO	Moncorvo	152.21 351		*e*PKPdf	**PKPdf**	**02 07 52.6**	**+0.6**
MVO	Moncorvo	152.21 351		*e*PKPbc	**PKPbc**	**02 07 59.4**	**+0.6**
SET	Setif	152.33 327		P	**PKPbc**	**02 08 00.0**	**+0.7**
PTO	Porto	152.44 353		*e*PKPbc	**PKPbc**	**02 07 59.9**	**+0.7**
PTO	Porto	152.44 353		*e*PKPab	**PKPab**	**02 08 11.2**	**+1.2**
PVIS	Viseu	152.77 352		*e*PKPdf	**PKPdf**	**02 07 53.6**	**+0.8**
PVIS	Viseu	152.77 352		*e*PKPbc	**PKPbc**	**02 08 00.4**	**+0.3**
PVIS	Viseu	152.77 352		*e*PKPab	**PKPab**	**02 08 12.5**	**+1.0**
ESDC	Sonseca Array	153.02 345		PKP	**PKPdf**	**02 07 53.8**	**+0.6**
ESDC				PKPbc	**PKiKP**	**02 08 01.1**	**+0.3**
ESDC				PKPab	**PKPab**	**02 08 13.1**	**+0.3**
ESDC				PP	**PP**	**02 11 42.8**	**-2.9**
ESDC	Sonseca Array	153.02 345		PKP	**PKPdf**	**02 07 53.8**	**+0.6**
	comp=Z,3.4nm,1.0s,baz=18,slow=2.4,SNR=12						
ESDC				PKPbc	**PKiKP**	**02 08 01.1**	**+0.3**
	comp=Z,12nm,0.8s,baz=7.4,slow=3.0,SNR=48						
ESDC				PKPab	**PKPab**	**02 08 13.1**	**+0.4**
	comp=Z,9.8nm,0.6s,baz=9.9,slow=3.9,SNR=17						
ESDC				PP	**PP**	**02 11 42.8**	**-2.9**
	comp=Z,2.7nm,0.8s,baz=18,slow=6.5,SNR=6.6						
ESLA	Sonseca Array	153.02 345		*e*PKPdf	**PKPdf**	**02 07 53.4**	**+0.2**
ESLA				*e*PKPbc	**PKiKP**	**02 08 00.9**	**+0.1**
ESLA				*e*PKPab	**PKPab**	**02 08 12.7**	**+0.1**
MTE	Manteigas	153.03 351		*e*PKPdf	**PKPdf**	**02 07 53.2**	**0.0**
MTE	Manteigas	153.03 351		*e*PKPdf	**PKPdf**	**02 07 53.5**	**+0.3**
MTE				*e*PKPbc	**PKiKP**	**02 08 01.0**	**+0.2**
MTE				*e*PKPab	**PKPab**	**02 08 13.0**	**+0.4**
PAB	San Pablo	153.23 346		*e*PKIKP	**PKPdf**	**02 07 53.5**	**0.0**
PAB				*e*		02 08 13.3	
PAB	San Pablo	153.23 346		*e*PKPdf	**PKPdf**	**02 07 53.5**	**0.0**
PAB				*e*PKPbc	**PKiKP**	**02 08 01.4**	**+0.2**
PAB				*e*PKPab	**PKPab**	**02 08 13.3**	**-0.2**
PSET	Sete Cidades	153.35 23		*e*PKP	**PKPbc**	**02 08 02.7**	**+1.3**
PDA	Ponta Delgada	153.44 23		*e*PKP	**PKPbc**	**02 08 03.0**	**+1.5**
CMLA	Cha da Macela	153.48 23		*e*PKP	**PKPdf**	**02 07 55.9**	**+2.1**
EMHD	Djebel Mahouad	153.56 331		P	**PKPdf**	**02 07 58.0**	**+3.9**
PCBR	Castelo Branco	153.57 351		*e*PKPdf	**PKPdf**	**02 07 54.2**	**+0.3**
PCBR	Castelo Branco	153.57 351		*e*PKPbc	**PKPbc**	**02 08 01.9**	**+0.2**
PCBR	Castelo Branco	153.57 351		*e*PKPab	**PKPab**	**02 08 15.7**	**+0.8**
PTOM	Tomar	153.92 352		*e*PKPdf	**PKPdf**	**02 07 54.7**	**+0.3**
PTOM	Tomar	153.92 352		*e*PKPbc	**PKPbc**	**02 08 02.9**	**+0.4**
PTOM	Tomar	153.92 352		*e*PKPab	**PKPab**	**02 08 17.2**	**+0.8**
PMRV	Marv??o	153.96 351		*e*PKPbc	**PKPbc**	**02 08 03.0**	**+0.4**
PMRV	Marv??o	153.96 351		*e*PKPab	**PKPab**	**02 08 17.6**	**+1.0**
EBNR	Beni Rached	154.14 333		P	**PKPbc**	**02 08 04.0**	**+0.9**
PSMA	Santa Maria	154.30 23		*e*PKP	**PKPbc**	**02 08 02.5**	**-0.9**
PSMN	Pico do Norte,	154.32 23		*e*PKP	**PKPdf**	**02 07 56.4**	**+1.4**
PMTG	Montargil	154.44 352		*e*PKPbc	**PKPbc**	**02 08 03.7**	**+0.1**
PMTG	Montargil	154.44 352		*e*PKPab	**PKPab**	**02 08 19.5**	**+0.9**
PESTR	Estremoz	154.54 351		*e*PKPdf	**PKPdf**	**02 07 54.9**	**-0.4**
PESTR	Estremoz	154.54 351		*e*PKPbc	**PKPbc**	**02 08 04.0**	**+0.1**
PESTR	Estremoz	154.54 351		*e*PKPab	**PKPab**	**02 08 19.9**	**+0.9**
PMAFR	Mafra	154.68 354		*e*PKPbc	**PKPbc**	**02 08 04.6**	**+0.5**
PMAFR	Mafra	154.68 354		*e*PKPab	**PKPab**	**02 08 20.1**	**+0.5**
EVO	Evora	154.93 351		*e*PKPdf	**PKPdf**	**02 07 55.5**	**-0.3**
EVO	Evora	154.93 351		*e*PKPbc	**PKPbc**	**02 08 04.8**	**+0.1**
EVO	Evora	154.93 351		*e*PKPab	**PKPab**	**02 08 21.9**	**+1.2**
PBAR	Barrancos	155.12 349		*e*PKPdf	**PKPdf**	**02 07 55.5**	**-0.6**
PBAR	Barrancos	155.12 349		*e*PKPab	**PKPab**	**02 08 22.1**	**+0.6**
PBEJ	Beja	155.41 351		*e*PKPdf	**PKPdf**	**02 07 55.9**	**+0.4**
PBEJ				P	PKPab	02 08 06.1	-17
PBEJ	Beja	155.41 351		*e*PKPab	**PKPab**	**02 08 24.1**	**+1.4**
PCVE	Castro Verde	155.82 351		*e*PKPdf	**PKPdf**	**02 07 57.7**	**+0.7**
PCVE				*i* P	PKPab	02 08 07.2	-17
PCVE	Castro Verde	155.82 351		*e*PKPab	**PKPab**	**02 08 25.4**	**+0.9**
PVAQ	Vaqueiros	155.99 350		*e*PKPab	**PKPab**	**02 08 25.4**	**+0.1**
PTEO	Sao Teotonio	156.00 352		*e*PKPab	**PKPab**	**02 08 26.6**	**+1.3**
PBDV	Barranco-do-Ve	156.18 350		*i* P	PKPdf	02 08 10.4	+13
PBDV	Barranco-do-Ve	156.18 350		*e*PKPab	**PKPab**	**02 08 27.7**	**+1.6**
MORF	Marmelete	156.23 352		*e*PKPab	**PKPab**	**02 08 27.8**	**+1.4**
PFVI	Vila Bisbo	156.42 352		*e*PKPab	**PKPab**	**02 08 28.3**	**+1.2**
TAM	Tamanrasset	160.48 300		*e*PKIKP	**PKPdf**	**02 08 03.6**	**+0.3**
TAM				*e*		02 08 45.8	
TAM	Tamanrasset	160.48 300		*e*PKPdf	**PKPdf**	**02 08 03.6**	**+0.3**
TAM				*e*PKPab	**PKPab**	**02 08 45.8**	**+0.3**
TOA0	Torodi Ar. Sit	165.96 269		*e*PKPdf	**PKPdf**	**02 08 07.7**	**-0.8**
TOA0				*e*PKPab	**PKPab**	**02 09 09.0**	**-0.7**
TORD	Torodi Ar. Bea	165.96 269		PKP	**PKPdf**	**02 08 08.2**	**-0.3**
TORD				PKPab	**PKPab**	**02 09 09.9**	**+0.2**
TORD	Torodi Ar. Bea	165.96 269		PKP	**PKPdf**	**02 08 08.2**	**-0.3**
	comp=Z,25nm,1.0s,baz=72,slow=0.5,SNR=77						
TORD				PKPab	**PKPab**	**02 09 09.9**	**+0.2**
	comp=Z,13nm,0.7s,baz=88,slow=4.7,SNR=21						

*ISCJB **22** 02:06:50.7±1.4, 40.°50N±0.°04×23.°26E±0.°04, h5km±12km, Error ellipse: s-maj=7.0km s-min=5.5km az=169.4*
*CSEM **22** 02:06:51.7±0.3, 40.°54N×23.°23E, h10km, MD3.1, Error ellipse: s-maj=6.7km s-min=5.3km az=135.0*
*ATH **22** 02:06:51.4, 40.°50N×23.°26E, h24km, MD3.1/14*
ISC 22 02:06:51.6±0.9, 40.°53N±0.°03×23.°26E±0.°03, h14km±7km, n63, σ0°73/69, 2C, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLG	Polygyros	0.21	137	*e*PB	**Pg**	**02 06 56.1**	**-0.2**
PLG				*e*SB	**Sg**	**02 07 00.0**	**+0.5**
PLG	Polygyros	0.21	137	*e*Pb	**Pg**	**02 06 56.1**	**-0.2**
PLG				*e*Sb	**Sg**	**02 07 00.0**	**+0.5**
SOH	Sokhos	0.30	14	*e*PB	**Pb**	**02 06 58.8**	**-0.1**
SOH	Sokhos	0.30	14	*e*Pb	**Pb**	**02 06 58.8**	**-0.1**
LIT	Litokhoron	0.72	234	*e*PN	**Pg**	**02 07 06.0**	**+0.3**
LIT				*e*SN	**Sb**	**02 07 15.7**	**-0.1**
LIT	Litokhoron	0.72	234	*e*Pn	**Pg**	**02 07 06.0**	**+0.3**
LIT				*e*Sn	**Sb**	**02 07 15.7**	**-0.1**
NVR	Nevrokopi	0.94	29	P	Pn	02 07 16.6	+6.1
NVR	Nevrokopi	0.94	29	*e*PN	**Pn**	**02 07 10.2**	**-0.3**
NVR	Nevrokopi	0.94	29	*e*Pn	**Pn**	**02 07 10.2**	**-0.3**
KZN	Kozani	1.16	259	*e*PN	**Pg**	**02 07 13.6**	**-0.2**
KZN	Kozani	1.16	259	*e*Pn	**Pg**	**02 07 13.6**	**-0.2**
NEO	Neokhori	1.22	181	*e*PN	**Pn**	**02 07 13.9**	**-0.4**
NEO				*e*SN	**Sg**	**02 07 30.9**	**0.0**
NEO	Neokhori	1.22	181	*e*Pn	**Pn**	**02 07 13.9**	**-0.4**
NEO				*e*Sn	**Sg**	**02 07 30.9**	**0.0**
THL	Klokotos Trika	1.35	225	P	Pg	02 07 21.1	+3.5
THL	Klokotos Trika	1.35	225	*e*PN	**Pb**	**02 07 16.1**	**-0.6**
THL				*e*SN	**Sg**	**02 07 34.6**	**-0.6**
THL	Klokotos Trika	1.35	225	*e*Pn	**Pb**	**02 07 16.1**	**-0.6**
THL				*e*Sn	**Sg**	**02 07 34.6**	**-0.6**
FNA	Florina	1.45	281	P	Pg	02 07 28.1	+8.6
LIA	Limnos Island	1.60	112	*e*PN	**Pb**	**02 07 20.3**	**-0.7**
LIA				*e*SN	**Sb**	**02 07 41.0**	**-0.1**
LIA	Limnos Island	1.60	112	*e*Pn	**Pb**	**02 07 20.3**	**-0.7**
LIA				*e*Sn	**Sb**	**02 07 41.0**	**-0.1**
AGG	Agios Georgios	1.67	206	P	**Pg**	**02 07 24.0**	**+0.5**
AGG	Agios Georgios	1.67	206	*e*PN	**Pb**	**02 07 21.6**	**-0.4**
AGG	Agios Georgios	1.67	206	*e*Pn	**Pb**	**02 07 21.6**	**-0.4**
AGG	Agios Georgios	1.67	206	P	**Pg**	**02 07 24.0**	**+0.5**
NEST	Nestorio	1.69	267	P	**Pg**	**02 07 24.9**	**+0.9**
MAKR	Makrakomi, Fth	1.74	210	P	**Pb**	**02 07 23.4**	**0.0**
MAKR	Makrakomi, Fth	1.74	210	P	**Pb**	**02 07 23.4**	**0.0**
ATAL	Atalanti	1.84	186	P	**Pg**	**02 07 26.1**	**-0.8**
ATAL	Atalanti	1.84	186	P	**Pg**	**02 07 26.1**	**-0.8**
LKR	Lokris	1.89	186	*e*PN	**Pn**	**02 07 23.8**	**+0.4**
LKR				*e*SN	**Sb**	**02 07 48.0**	**-1.2**
LKR	Lokris	1.89	186	*e*Pn	**Pn**	**02 07 23.8**	**+0.4**
LKR				*e*Sn	**Sb**	**02 07 48.0**	**-1.2**
EVR	Evrytania	1.96	215	*e*PN	**Pn**	**02 07 24.9**	**+0.4**
EVR				*e*SN	**Sn**	**02 07 49.3**	**+0.4**
EVR	Evrytania	1.96	215	*e*Pn	**Pn**	**02 07 24.9**	**+0.4**
EVR				*e*Sn	**Sn**	**02 07 49.3**	**+0.4**
JAN	Janina	2.04	246	P	**Pn**	**02 07 26.1**	**+0.5**
JAN	Janina	2.04	246	*e*PN	**Pn**	**02 07 26.1**	**+0.5**
JAN	Janina	2.04	246	P	**Pn**	**02 07 26.1**	**+0.5**
VTS	Vitosha	2.06	359	P	**Pn**	**02 07 26.9**	**+0.9**
VTS	Vitosha	2.06	359	⇑PKIKP	**Pb**	**02 07 27.7**	**-1.2**
VTS	Vitosha	2.06	359	⇑ *i*P	**Pb**	**02 07 27.7**	**-1.2**
KALE	Kalithea	2.30	202	*e*PN	**Pn**	**02 07 29.6**	**+0.4**
KALE	Kalithea	2.30	202	*e*Pn	**Pn**	**02 07 29.6**	**+0.4**
EFP	Efpalio	2.34	207	*e*PN	**Pn**	**02 07 30.1**	**+0.4**
EFP	Efpalio	2.34	207	*e*Pn	**Pn**	**02 07 30.1**	**+0.4**
PHP	Peshkopia	2.42	299	P	Pn	02 07 22.5	-8.3
PHP	Peshkopia	2.42	299	P	Pn	02 07 22.5	-8.3
IGT	Igoumenitsa	2.46	247	P	Pn	02 07 27.0	-4.2
IGT	Igoumenitsa	2.46	247	P	Pn	02 07 27.0	-4.2
LTK	Loutraki	2.51	185	*e*PB	**Pn**	**02 07 33.5**	**+1.5**
LTK	Loutraki	2.51	185	*e*Pb	**Pn**	**02 07 33.5**	**+1.5**
PTL	Penteli	2.52	169	*e*PN	**Pn**	**02 07 32.5**	**+0.3**
PTL	Penteli	2.52	169	*e*Pn	**Pn**	**02 07 32.5**	**+0.3**
KLV	Kalavryta, Ach	2.62	199	*e*PN	**Pn**	**02 07 34.6**	**+1.0**
KLV	Kalavryta, Ach	2.62	199	*e*Pn	**Pn**	**02 07 34.6**	**+1.0**
PRK	Paraskevi	2.65	118	*e*PB	**Pn**	**02 07 35.8**	**+1.9**
PRK	Paraskevi	2.65	118	*e*Pb	**Pn**	**02 07 35.8**	**+1.9**
LKD2	Lefkada island	2.65	230	*e*PN	**Pn**	**02 07 34.5**	**+0.5**
LKD2	Lefkada island	2.65	230	*e*Pn	**Pn**	**02 07 34.5**	**+0.5**
GUR	Goura	2.68	196	P	Pn	02 07 25.6	-8.9
GUR	Goura	2.68	196	*e*PN	**Pn**	**02 07 35.0**	**+0.5**
GUR	Goura	2.68	196	*e*Pn	**Pn**	**02 07 35.0**	**+0.5**
KEK	Kerkira	2.77	254	*e*PN	**Pn**

PDAR **Pinedale Array** 93.42 47 P P 03 47 45.6 +1.4
0.2nm,0.5s,baz=253,slow=9.3,SNR=2.3
TXAR **Lajitas Array** 94.97 61 P P 03 47 52.5 +1.1
TXAR **Lajitas Array** 94.97 61 P P 03 47 52.5 +1.1
0.2nm,0.7s,baz=233,slow=4.4,SNR=3.7
YKA **Yellowknife Ar** 95.88 27 P P 03 47 53.5 -1.2
YKA **Yellowknife Ar** 95.88 27 P P 03 47 53.4 -1.2
0.4nm,0.7s,baz=253,slow=4.7,SNR=10
ZALV **Zalesovo Beam** 96.53 324 P P 03 48 02.3 +4.4
ZALV **Zalesovo Beam** 96.53 324 P P 03 48 02.3 +4.4
0.5nm,0.3s,baz=101,slow=5.1,SNR=3.9
MK31 **Makanchi Array** 96.53 316 *e*P P 03 47 57.6 -0.5
MKAR **Makanchi Array** 96.53 316 P P 03 47 58.0 -0.1
MKAR **Makanchi Array** 96.53 316 P P 03 47 58.0 -0.1
1.1nm,0.6s,baz=88,slow=5.9,SNR=9.9
TORD **Torodi Ar. Bea** 166.60 271 PKPab PKPab 03 55 37.0 -0.3
TORD **Torodi Ar. Bea** 166.60 271 PKPab PKPab 03 55 36.9 -0.3
0.7nm,1.0s,baz=89,slow=5.1,SNR=2.6

IDC 22 03:37:59.1±1.9,3.26S×151.10E,h0km,mb3.3/3, mb1 3.6/3,mb1mx3.3/18,mbtmp3.3/3,Error ellipse: s-maj=124.9km s-min=27.1km az=123.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.29**	**223**	P		P	03 43 09.0	+0.2
	0.5nm,0.4s,baz=50,slow=10,SNR=20							
ASAR	**Alice Springs**	**26.23**	**218**	P		P	03 43 36.3	+0.3
	0.1nm,0.3s,baz=47,slow=8.5,SNR=3.1							
ILAR	**Eielson Array**	**81.39**	**23**	P		P	03 50 16.9	-0.6
	0.2nm,0.6s,baz=260,slow=5.4,SNR=4.3							
TORD	**Torodi Ar. Bea**	**148.21**	**290**	PKPbc		PKPbc	03 57 47.6	-0.6
	0.4nm,0.4s,baz=80,slow=2.4,SNR=18							

*ISCJB **22** 03:50:45.9±1.0,18.96N±0.03×146.23E±0.03,h89km±8km, mb4.6/114,Error ellipse: s-maj=5.5km s-min=4.8km az=14.9*
*MOS **22** 03:50:46.7±0.8,18.96N×146.32E,h100km,mb4.8/45, Error ellipse: s-maj=10.2km s-min=5.9km az=100.1*
*BJI **22** 03:50:47.0,18.97N×146.38E,h103km,mB5.1/19, mb4.9/32*
*NEIC **22** 03:50:48.9±1.0,18.94N×146.32E,h107km±9km,mb4.6/56, Error ellipse: s-maj=5.3km s-min=3.9km az=99.0*
*IDC **22** 03:50:49.0±1.2,18.98N×146.37E,h105km±10km, mb4.4/27,mb1 4.5/31,mb1mx4.5/35,mbtmp4.4/31, MS3.7/19,Ms1 3.7/19,ms1mx3.6/38,Error ellipse: s-maj=13.4km s-min=6.5km az=91.0*
ISC 22 03:50:49.0±0.4,18.97N±0.04×146.35E±0.06,h106km±2km, h106km:pP-P,n518,σ0s90/574,mb4.7/113,155C-133D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.54**	**195**	*e*Pn		**Pn**	**03 52 08.6**	**-0.4**
GUMO				*e*Sn		**Sn**	**03 53 06.9**	**-4.5**
GUMO	**Guam**	**5.54**	**195**	P		**Pn**	**03 52 09.2**	**+0.2**
	229nm,0.3s,baz=26,slow=1.8,SNR=28							
GUMO				S		**Sn**	**03 53 13.4**	**+2.0**
	2.0nm,0.3s,baz=18,slow=20,SNR=2.5							
GUMO				LR		LR	03 54 08.4	
	comp=Z,555nm,21.6s,baz=300,slow=36							
JHJ	**Hachijo jima 2**	**15.27**	**339**	P		**Pn**	**03 54 18.6**	**-0.3**
	11nm,0.3s,baz=115,slow=14,SNR=4.1							
MJAR	**Matsushiro Arr**	**18.92**	**339**	P		**P**	**03 55 00.8**	**-0.6**
MJAR				S		**S**	**03 58 29.1**	**-1.6**
MJAR	**Matsushiro Arr**	**18.92**	**339**	P		**P**	**03 55 00.8**	**-0.6**
	3.6nm,0.3s,baz=168,slow=11,SNR=54							
MJAR				S		**S**	**03 58 29.1**	**-1.6**
	0.4nm,0.3s,baz=163,slow=14,SNR=5.1							
MAJO	**Matsushiro**	**18.92**	**339**	*e*P		**P**	**03 55 01.3**	**-0.1**
MAJO				pmax	pmax			
	comp=Z,59nm,0.9s							
MAJO	**Matsushiro**	**18.92**	**339**	*e*P		**P**	**03 55 01.3**	**-0.1**
	comp=Z,59nm,0.9s							
MAT	**Matsushiro**	**18.92**	**339**	P		**P**	**03 55 00.7**	**-0.7**
MAT				S		**S**	**03 58 30.4**	**-0.4**
JNU	**Nakatsue**	**19.76**	**319**	P		**P**	**03 55 10.6**	**0.0**
JNU	**Nakatsue**	**19.76**	**319**	P		**P**	**03 55 10.6**	**0.0**
	comp=Z,0.8nm,0.3s,baz=101,slow=4.6,SNR=5.0							
DAV	**Davao City (W)**	**23.41**	**242**	LR		LR	04 02 56.2	
	comp=Z,105nm,21.6s,baz=352,slow=31							
KSRS	**Korea Array**	**24.47**	**323**	P		**P**	**03 55 58.2**	**+0.1**
	comp=Z,12nm,0.7s,baz=146,slow=9.8,SNR=28							
KSAR	**Wonju Array Be**	**24.49**	**323**	P		**P**	**03 55 58.2**	**0.0**
ASAJ	**Asahikawa**	**25.27**	**354**	P		**P**	**03 56 06.5**	**+1.2**
ASAJ	**Asahikawa**	**25.27**	**354**	P		**P**	**03 56 06.5**	**+1.2**
	comp=Z,11nm,0.5s,baz=209,slow=14,SNR=11							
USRK	**Ussuriysk Arra**	**27.88**	**338**	P		**P**	**03 56 29.8**	**+1.1**
	comp=Z,7.7nm,0.6s,baz=169,slow=8.7,SNR=21							
NJ2	**Nanjing**	**27.93**	**303**	*e*P		**P**	**03 56 30.1**	**+0.7**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
PMG	**Port Moresby**	**28.21**	**178**	*e*P		**P**	**03 56 30.6**	**-1.2**
	comp=Z,18nm,0.8s							
PMG	**Port Moresby**	**28.21**	**178**	P		**P**	**03 56 31.1**	**-0.7**
	comp=Z,11nm,0.5s,baz=9.4,slow=3.0,SNR=4.2							
MDJ	**Mudanjiang**	**29.15**	**335**	P		**P**	**03 56 41.1**	**+1.1**
MDJ				pmax	pmax			
	comp=Z,12nm,1.2s							
MDJ				pmax	pmax			
	comp=Z,170nm,4.0s							
CN2	**Changchun**	**30.35**	**329**	*e*P		**P**	**03 56 50.9**	**+0.3**
CN2				*ep*P		**pP**	**03 57 15.5**	**+1.3**
CN2				*e*S		**S**	**04 01 42.3**	**-0.8**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
CN2				pmax	pmax			
	comp=Z,200nm,3.0s							
HNR	**Honiara**	**31.24**	**153**	LR		LR	04 07 37.7	
	comp=Z,175nm,20.1s,baz=314,slow=32							
KLR	**Kul'dur**	**32.40**	**342**	*e*P		**P**	**03 57 06.0**	**-2.5**
COEN	**Coen**	**32.87**	**186**	*e*P		**P**	**03 57 12.3**	**-0.7**
	comp=Z,133nm,1.0s							
QIZ	**Qiongzhong**	**34.48**	**276**	P		**P**	**03 57 26.9**	**-0.1**
KAPI	**Kappang**	**35.42**	**230**	*e*P		P	03 57 31.7	-3.3
KAPI				*ep*P		pP	03 57 58.0	-1.0
KAPI	**Kappang**	**35.42**	**230**	P		**P**	**03 57 35.1**	**+0.1**
	comp=Z,6.0nm,0.6s,baz=79,slow=10,SNR=7.6							
KAPI				LR		LR	04 11 36.6	
	comp=Z,39nm,19.5s,baz=180,slow=35							
HHC	**Hu-ho-hao-te**	**36.86**	**314**	⇑P		**P**	**03 57 45.3**	**-1.9**
HHC				pP		**pP**	**03 58 09.6**	**-1.6**
HHC				sP		**sP**	**03 58 20.3**	**-3.1**
HHC				PP		**PP**	**03 59 12.8**	**-0.4**
HHC				PcP		**PcP**	**04 00 06.3**	**-0.6**
HHC				S		**S**	**04 03 21.3**	**-2.8**
HHC				ScP		**ScP**	**04 03 42.6**	**-1.5**
HHC				sS		**sS**	**04 04 01.8**	**-3.9**
HHC				SS		SnSn	04 05 53.4	-14
HHC				ScS		**ScS**	**04 07 50.0**	**-1.5**
HHC				pmax	pmax			
	comp=Z,50nm,0.8s							
HHC				pmax	pmax			
	comp=Z,220nm,7.1s							
HHC				LR		LR		
	comp=N,360nm,15.5s							
HHC				LR		LR		
	comp=E,620nm,14.3s							
HHC				LR		LR		
	comp=Z,230nm,16.7s							
GYA	**Guiyang**	**37.25**	**289**	*e*P		**P**	**03 57 51.8**	**+1.1**
GYA				pP		**pP**	**03 58 15.6**	**+0.8**
GYA				sP		**sP**	**03 58 28.0**	**+1.0**
GYA				PcP		**PcP**	**04 00 09.4**	**+1.1**
GYA				S		**S**	**04 03 29.6**	**-0.7**
GYA				ScP		**ScP**	**04 03 46.8**	**+0.9**
GYA				PcS		**PcS**	**04 03 57.8**	**+0.7**
GYA				ScS		**ScS**	**04 07 52.0**	**-2.2**
GYA				pmax	pmax			
	comp=Z,10.0nm,0.8s							
CTA	**Charters Tower**	**38.81**	**180**	P		**P**	**03 58 02.8**	**-0.9**
CTA	**Charters Tower**	**38.81**	**180**	P		**P**	**03 58 02.8**	**-0.9**
	comp=Z,4.3nm,0.7s,baz=354,slow=7.9,SNR=4.6							
CTA				LR		LR	04 11 55.4	
	comp=Z,117nm,18.6s,baz=52,slow=33							
CTAO	**Charters Tower**	**38.81**	**180**	*e*P		**P**	**03 58 03.1**	**-0.6**
CTAO				pmax	pmax			
	comp=Z,12nm,1.0s							
CTAO	**Charters Tower**	**38.81**	**180**	*e*P		**P**	**03 58 03.1**	**-0.6**
	comp=Z,12nm,1.0s							
FX1	**Attu Island--F**	**39.75**	**25**	*e*P		**P**	**03 58 11.4**	**+0.3**
CD2	**Chengdu**	**40.19**	**296**	P		**P**	**03 58 14.9**	**-0.2**
CD2				pP		**pP**	**03 58 39.1**	**-0.4**
CD2				sP		**sP**	**03 58 51.5**	**-0.1**
CD2				PP		**PnPn**	**03 59 52.6**	**-1.6**
CD2				ScP		**ScP**	**04 03 56.3**	**-0.7**
CD2				PcS		**PcS**	**04 04 07.4**	**-0.7**
CD2				S		**S**	**04 04 13.3**	**-1.0**
CD2				sS		**sS**	**04 04 55.3**	**-1.0**
CD2				SS		SS	04 07 09.3	-7.0
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
CD2				pmax	pmax			
	comp=Z,120nm,5.2s							
WRAB	**Tennant Creek**	**40.41**	**198**	*e*P		**P**	**03 58 16.2**	**-0.7**
WRAB				pmax	pmax			
	comp=Z,7.0nm,0.6s							
WRAB	**Tennant Creek**	**40.41**	**198**	*e*P		**P**	**03 58 16.2**	**-0.7**
	comp=Z,7.1nm,0.6s							
WRA	**Warramunga Arr**	**40.42**	**198**	P		**P**	**03 58 16.2**	**-0.8**
WRA				PcP		**PcP**	**04 00 18.6**	**+0.5**
WRA				ScP		**ScP**	**04 03 58.5**	**+0.6**
WRA				S		**S**	**04 04 18.0**	**+0.3**
WRA	**Warramunga Arr**	**40.42**	**198**	P		**P**	**03 58 16.2**	**-0.8**
	comp=Z,3.5nm,0.3s,baz=14,slow=8.2,SNR=95							
WRA				PcP		**PcP**	**04 00 18.6**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=15,slow=3.7,SNR=3.7							
WRA				ScP		**ScP**	**04 03 58.5**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=12,slow=4.2,SNR=6.5							
WRA				S		**S**	**04 04 18.0**	**+0.3**
	comp=Z,1.0nm,1.0s,baz=18,slow=14,SNR=3.8							
LZH	**Lanzhou**	**41.01**	**303**	*e*P		**P**	**03 58 23.0**	**+1.0**
LZH				pP		**pP**	**03 58 46.5**	**+0.1**
LZH				sP		**sP**	**03 58 58.9**	**+0.4**
LZH				pmax	pmax			
	comp=Z,13nm,1.0s							
FITZ	**Fitzroy Crossi**	**42.09**	**210**	*e*P		**P**	**03 58 30.7**	**+0.1**
	comp=Z,16nm,1.1s							
FITZ	**Fitzroy Crossi**	**42.09**	**210**	P		**P**	**03 58 31.1**	**+0.5**
	comp=Z,2.8nm,0.3s,baz=32,slow=11,SNR=48							
ULN	**Ulaanbaatar**	**42.95**	**321**	*e*P		**P**	**03 58 37.8**	**+0.2**
	comp=Z,15nm,0.7s							
SONM	**Songino Array**	**43.32**	**321**	P		**P**	**03 58 41.2**	**+0.7**
SONM				PcP		**PcP**	**04 00 28.6**	**+1.1**
SONM				ScP		**ScP**	**04 04 09.5**	**+0.2**
SONM	**Songino Array**	**43.32**	**321**	P		**P**	**03 58 41.2**	**+0.7**
	comp=Z,15nm,0.8s,baz=136,slow=8.0,SNR=88							
SONM				PcP		**PcP**	**04 00 28.6**	**+1.1**
	comp=Z,1.4nm,0.5s,baz=127,slow=3.0,SNR=3.0							
SONM				ScP		**ScP**	**04 04 09.5**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=109,slow=4.0,SNR=3.3							
AS31	**Alice Springs**	**44.08**	**197**	*e*P		**P**	**03 58 46.6**	**-0.1**
ASAR	**Alice Springs**	**44.08**	**197**	P		**P**	**03 58 46.7**	**0.0**
ASAR				PcP		**PcP**	**04 00 29.2**	**-1.0**
ASAR				ScP		**ScP**	**04 04 13.7**	**+1.2**
ASAR				S		**S**	**04 05 11.8**	**+0.3**
ASAR	**Alice Springs**	**44.08**	**197**	P		**P**	**03 58 46.7**	**0.0**
	comp=Z,1.6nm,0.4s,baz=14,slow=7.0,SNR=27							
ASAR				PcP		**PcP**	**04 00 29.2**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=22,slow=5.3,SNR=2.4							
ASAR				ScP		**ScP**	**04 04 13.7**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=18,slow=6.7,SNR=4.2							
ASAR				S		**S**	**04 05 11.8**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=16,slow=21,SNR=8.6							
SEY	**Seymchan**	**44.12**	**4**	*c iP*		**P**	**03 58 47.6**	**+1.1**
YAK	**Yakutsk**	**44.57**	**349**	*e*P		**P**	**03 58 49.4**	**-0.7**
YAK				pmax	pmax			
	comp=Z,22nm,0.8s							
YAK				pmax	pmax			
	comp=N,10.0nm,1.3s							
CMAR	**Chiang Mai Arr**	**44.80**	**277**	P		**P**	**03 58 54.1**	**+1.5**
CMAR	**Chiang Mai Arr**	**44.80**	**277**	P		**P**	**03 58 54.1**	**+1.5**
	comp=N,2.3nm,0.6s,baz=68,slow=6.9,SNR=8.0							
CMAR				LR		LR	04 19 09.1	
	comp=N,85nm,18.4s,baz=167,slow=38							
GTA	**Gaotai**	**44.88**	**307**	*e*P		**P**	**03 58 54.3**	**+1.2**
GTA				pP		**pP**	**03 59 19.5**	**+1.7**
GTA				sP		**sP**	**03 59 30.8**	**+1.0**
GTA				PcP		**PcP**	**04 00 34.8**	**+1.8**
GTA				ScP		**ScP**	**04 04 17.4**	**+1.6**
GTA				S		**S**	**04 05 21.8**	**-1.3**
GTA				sS		**sS**	**04 06 08.4**	**+2.7**
GTA				ScS		**ScS**	**04 08 37.8**	**-2.1**
GTA				pmax	pmax			
	comp=Z,6.0nm,0.8s							
GTA				LR	LR			
	comp=N,150nm,20.9s							
GTA				LR	LR			
	comp=E,250nm,21.4s							
GTA				LR	LR			
	comp=Z,81nm,18.1s							
DZM	**Mont Dzumac**	**45.27**	**153**	P		**P**	**03 58 56.6**	**+0.3**
DZM	**Mont Dzumac**	**45.27**	**153**	P		**P**	**03 58 56.6**	**+0.3**
	comp=Z,28nm,0.9s,baz=24,slow=9.8,SNR=12							
ZAK	**Zakamensk**	**46.31**	**323**	⇓*iP*		**P**	**03 59 04.3**	**+0.2**
ZAK				*e*			04 00 51.8	
ZAK				pmax	pmax			
	comp=Z,8.0nm,1.1s							
KULM	**Kulim**	**46.55**	**259**	*e*P		**P**	**03 59 06.0**	**-0.4**
	comp=Z,9.9nm,1.0s							
TLY	**Talaya**	**46.70**	**325**	*e*P		**P**	**03 59 06.7**	**-0.4**
TLY				pmax	pmax			
	comp=Z,12nm,1.3s							
MBWA	**Marble Bar**	**47.64**	**214**	*e*P		**P**	**03 59 14.4**	**-0.3**
	comp=Z,7.2nm,0.8s							
MOY	**Mondy**	**48.17**	**324**	*e*P		**P**	**03 59 19.2**	**+0.6**
PSI	**Prapat**	**49.07**	**257**	LR		LR	04 22 03.9	
	comp=Z,209nm,18.0s,baz=285,slow=38							
BILL	**Bilibino**	**50.65**	**10**	*iP*		**P**	**03 59 37.8**	**+0.8**
BILL				*i*			04 00 01.3	
BILL				*i*			04 00 53.2	
BILL				pmax	pmax			
	comp=Z,8.0nm,1.0s							
BILL	**Bilibino**	**50.65**	**10**	*e*P		**P**	**03 59 37.3**	**+0.2**
	comp=Z,3.2nm,0.5s							
STKA	**Stephens Creek**	**50.76**	**185**	*e*P		**P**	**03 59 37.7**	**-0.6**
	comp=Z,11nm,2.1s							
STKA	**Stephens Creek**	**50.76**	**185**	P		**P**	**03 59 37.7**	**-0.6**
	comp=Z,3.1nm,0.6s,baz=356,slow=7.3,SNR=6.3							
STKA				LR		LR	04 23 13.4	
	comp=Z,75nm,18.9s,baz=26,slow=38							
FORT	**Forrest**	**52.50**	**200**	*e*P		**P**	**03 59 52.2**	**+1.0**
AFI	**Afiamalu**	**52.62**	**125**	LR		LR	04 17 53.0	
	comp=Z,19nm,19.0s,baz=354,slow=31							
WMQ	**Urumqi**	**54.60**	**311**	P		**pP**	**04 00 31.1**	**-1.1**
WMQ				pmax	pmax			
	comp=Z,14nm,1.0s							
WMQ	**Urumqi**	**54.60**	**311**	P		**P**	**04 00 08.0**	**+1.4**
WMQ				pP		**pP**	**04 00 32.0**	**-0.2**
WMQ				sP		**sP**	**04 00 43.0**	**-1.0**
WMQ				PP		**PP**	**04 02 13.0**	**+3.0**
WMQ				S		**S**	**04 07 38.0**	**-0.3**
WMQ				sS		**sS**	**04 08 20.0**	**-2.2**
WMQ				ScS		**ScS**	**04 09 44.0**	**-1.7**
WMQ				SS		**SS**	**04 11 22.0**	**-0.3**
WMQ				pmax	pmax			
	comp=Z,22nm,1.0s							
WMQ				pmax	pmax			
	comp=Z,140nm,5.0s							
WMQ				LR	LR			
	comp=N,97nm,16.0s							
WMQ				LR	LR			
	comp=E,75nm,16.0s							
WMQ				LR	LR			
	comp=Z,66nm,16.0s							
COCO	**West Island**	**57.80**	**242**	*e*P		**P**	**04 00 29.5**	**-0.1**
COCO				*e**PP		**pP**	**04 00 57.9**	**+2.5**
COCO	**West Island**	**57.80**	**242**	*e*P		**P**	**04 00 29.4**	**-0.1**
COCO				*ep*P		**pP**	**04 00 57.9**	**+2.5**
ZAA0	**Zalesovo Array**	**58.18**	**322**	*e*P		**P**	**04 00 31.4**	**-0.3**
ZAA0				*ep*P		**pP**	**04 01 01.9**	**+4.3**
ZALV	**Zalesovo Beam**	**58.18**	**322**	P		**P**	**04 00 31.6**	**-0.1**
ZALV	**Zalesovo Beam**	**58.18**	**322**	P		**P**	**04 00 31.6**	**-0.1**
ZALV	**Zalesovo Beam**	**58.18**	**322**	P		**P**	**04 00 31.6**	**-0.1**
	comp=Z,26nm,0.6s,baz=106,slow=7.8,SNR=65							
ZALV				LR		LR	04 24 18.3	
	comp=Z,56nm,20.8s,baz=173,slow=34							
NWAO	**Narrogin (SRO)**	**58.63**	**209**	LR		LR	04 25 35.5	
	comp=Z,122nm,18.0s,baz=185,slow=36							
MK31	**Makanchi Array**	**58.72**	**314**	*e*P		**P**	**04 00 36.0**	**+0.3**
MK31				pmax	pmax			
	comp=Z,3.0nm,0.5s							
MK31	**Makanchi Array**	**58.72**	**314**	*e*P		**P**	**04 00 35.9**	**+0.2**
MKAR	**Makanchi Array**	**58.72**	**314**	*ce*P		**P**	**04 00 36.2**	**+0.5**
MKAR				pmax	pmax			
	comp=Z,5.0nm,0.4s							
MKAR	**Makanchi Array**	**58.72**	**314**	*e*P		**P**	**04 00 36.4**	**+0.7**
MKAR	**Makanchi Array**	**58.72**	**314**	P		**P**	**04 00 36.3**	**+0.5**
	comp=Z,5.0nm,0.5s,baz=88,slow=7.4,SNR=57							
MKAR				LR		LR	04 25 16.9	
	comp=Z,42nm,21.6s,baz=347,slow=35							
KDAK	**Kodiak Island**	**58.80**	**33**	P		**P**	**04 00 36.2**	**+0.3**
KDAK	**Kodiak Island**	**58.80**	**33**	P		**P**	**04 00 36.2**	**+0.3**
	comp=Z,6.2nm,0.6s,baz=267,slow=8.5,SNR=8.2							
NVS	**Novosibirsk**	**59.26**	**323**	⇓*iP*		**P**	**04 00 39.3**	**+0.1**
NVS				pmax	pmax			
	comp=Z,10.0nm,0.6s							
NVS				pmax	pmax			
	comp=N,1.0nm,0.3s							
NVS				pmax	pmax			
	comp=E,7.0nm,0.6s							
PPLA	**Purkeypile**	**60.38**	**28**	*e*P		**P**	**04 00 47.6**	**+0.7**
	comp=E,11nm,1.1s							
SEW	**Seward**	**60.92**	**31**	*e*P		**P**	**04 00 50.4**	**0.0**
	comp=E,9.4nm,0.8s							
TRF	**Thorofare Moun**	**61.36**	**27**	*e*P		**P**	**04 00 52.6**	**-1.0**
	comp=E,15nm,0.9s							
PMR	**Palmer**	**61.41**	**29**	*e*P		**P**	**04 00 53.0**	**-0.7**
PMR				pmax	pmax			
	comp=Z,4.0nm,0.5s							
PMR	**Palmer**	**61.41**	**29**	*e*P		**P**	**04 00 53.0**	**-0.7**
	comp=Z,4.2nm,0.5s							
KURK	**Kurchatov**	**61.48**	**318**	*c iP*		**P**	**04 00 54.5**	**+0.1**
KURK				pmax	pmax			
	comp=Z,22nm,1.7s							
KURK	**Kurchatov**	**61.48**	**318**	*e*P		**P**	**04 00 54.6**	**+0.1**
	comp=Z,16nm,1.1s							
SML	**Sawmill**	**61.83**	**29**	*e*P		**P**	**04 00 56.7**	**+0.1**
SML				pmax	pmax			
	comp=Z,4.0nm,0.7s							
SML	**Sawmill**	**61.83**	**29**	*e*P		**P**	**04 00 56.7**	**+0.1**
	comp=Z,3.6nm,0.7s							
MCK	**McKinley**	**62.02**	**27**	*e*P		**P**	**04 00 57.5**	**-0.3**
MCK				pmax	pmax			
	comp=Z,55nm,2.2s							
MCK	**McKinley**	**62.02**	**27**	*e*P		**P**	**04 00 57.5**	**-0.3**
	comp=Z,55nm,2.2s							
COLD	**Coldfoot**	**62.47**	**23**	*e*P		**P**	**04 01 01.8**	**+1.1**
	comp=Z,3.9nm,0.7s							
COLA	**College**	**62.75**	**26**	*e*P		**P**	**04 01 02.0**	**-0.6**
COLA				pmax	pmax			
	comp=Z,4.0nm,0.8s							
COLA	**College**	**62.75**	**26**	*e*P		**P**	**04 01 02.0**	**-0.6**
	comp=Z,3.8nm,0.8s							
ILAR	**Eielson Array**	**63.13**	**26**	P		**P**	**04 01 04.0**	**-1.1**
ILAR	**Eielson Array**	**63.13**	**26**	P		**P**	**04 01 04.0**	**-1.1**
	comp=Z,5.1nm,0.8s,baz=257,slow=5.1,SNR=42							
ILAR				LR		LR	04 24 48.1	
	comp=Z,61nm,20.4s,baz=273,slow=32							
KSH	**Kashi**	**63.22**	**305**	*e*P		P	04 01 10.3	+3.9
KSH				pP		pP	04 01 34.5	+1.9
KSH				sP		sP	04 01 46.3	+2.1
KSH				PP		PP	04 03 33.0	+6.5
KSH				ScP			04 05 37.3	
KSH				PcS			04 05 48.3	
KSH				S		**S**	**04 09 34.3**	**+4.4**
KSH				sS		sS	04 10 16.4	+1.5
KSH				ScS		**ScS**	**04 10 50.8**	**+1.1**
KSH				SS		**SS**	**04 13 44.6**	**+6.8**
KSH				pmax	pmax			
	comp=Z,3.0nm,0.3s							
KSH				pmax	pmax			
	comp=Z,72nm,3.2s							
KSH				LR	LR			
	comp=Z,230nm,5.2s							
TKM2	**Tokmak 2**	**63.36**	**309**	*e*P		**P**	**04 01 08.2**	**+0.8**
TKM2				pmax	pmax			
	comp=Z,4.0nm,0.9s							
TKM2	**Tokmak 2**	**63.36**	**309**	*e*P		**P**	**04 01 08.2**	**+0.8**
	comp=Z,4.0nm,0.9s							
PAX	**Paxson**	**63.38**	**28**	*e*P		**P**	**04 01 07.0**	**+0.1**
PAX				pmax	pmax			
	comp=Z,7.0nm,0.7s							
PAX	**Paxson**	**63.38**	**28**	*e*P		**P**	**04 01 07.0**	**+0.1**
	comp=Z,6.8nm,0.7s							
BMRM	**Bremner River**	**63.44**	**31**	*e*P		**P**	**04 01 07.1**	**-0.2**
BMRM				*e*PcP		**PcP**	**04 01 42.1**	**-1.1**
DOT	**Dot Lake**	**64.12**	**28**	*e*P		**P**	**04 01 11.2**	**-0.6**
	comp=Z,8.1nm,0.7s							
AAK	**Ala-Archa**	**64.18**	**309**	*e*P		**P**	**04 01 13.1**	**+0.4**
AAK				pmax	pmax			
	comp=Z,3.0nm,1.0s							
AAK	**Ala-Archa**	**64.18**	**309**	*e*P		**P**	**04 01 12.1**	**-0.6**
	comp=Z,1.2nm,0.4s							
EGAK	**Eagle**	**65.55**	**27**	*e*P		**P**	**04 01 20.5**	**-0.4**
	comp=Z,2.0nm,0.5s							
VOSK	**Vostochnaya**	**66.31**	**320**	P		**P**	**04 01 25.7**	**-0.3**
VOSK				pmax	pmax			
	comp=Z,8.0nm,0.6s							
BVA0	**Borovoye Array**	**66.66**	**320**	*i* P		**P**	**04 01 28.2**	**-0.1**
BVA0				pmax	pmax			
	comp=Z,6.0nm,0.5s							
BRVK	**Borovoye**	**66.73**	**320**	*d iP*		**P**	**04 01 28.9**	**+0.2**
BRVK				pmax	pmax			
	comp=Z,23nm,0.7s							
BRVK	**Borovoye**	**66.73**	**320**	*e*P		**P**	**04 01 28.2**	**-0.4**
	comp=Z,24nm,0.6s							
KK31	**Karatay Array**	**67.07**	**310**	*e*P		**P**	**04 01 30.8**	**-0.3**
KK31				pmax	pmax			
	comp=Z,3.0nm,0.4s							
KKAR	**Karatay Array**	**67.07**	**310**	*e*P		**P**	**04 01 31.5**	**+0.4**
KKAR				pmax	pmax			
	comp=Z,5.0nm,0.5s							

CMB	Columbia Colle	81.04	53	eP		P	04 02 52.7	+0.2
	comp=Z,12nm,1.1s							
WCN	Washoe City	81.14	52	eP		P	04 02 53.5	+0.3
WCN				pmax		pmax		
	comp=Z,4.0nm,0.9s							
WCN	Washoe City	81.14	52	eP		P	04 02 53.5	+0.3
	comp=Z,3.6nm,0.9s							
B12A	Libby	81.21	42	⇑P		P	04 02 53.8	+0.7
	baz=81							
BMO	Blue Mountains	81.21	46	eP		P	04 02 53.1	-0.3
BMO				pmax		pmax		
	comp=Z,8.0nm,1.3s							
BMO	Blue Mountains	81.21	46	eP		P	04 02 53.1	-0.3
	comp=Z,7.7nm,1.3s							
A13A	Flathead Natio	81.79	41	⇑P		P	04 02 56.7	+0.3
	baz=82							
D12A	Red Ives Fores	81.81	43	⇓P		P	04 02 56.5	+0.1
	baz=82							
KEV	Kevo	81.87	342	eP		P	04 02 55.5	-0.6
KEV				pmax		pmax		
	comp=Z,8.0nm,0.6s							
KEV	Kevo	81.87	342	ep		P	04 02 55.5	-0.6
	comp=Z,8.2nm,0.6s							
BSMT	Bassoo Peak	81.92	42	eP		P	04 02 57.7	+0.6
B13A	Whitefish	81.94	42	⇓P		P	04 02 57.7	+0.6
	baz=82,SNR=8.4							
WALA	Waterton Lakes	82.06	41	eP		P	04 02 58.5	+0.7
	comp=Z,0.4nm,1.2s							
C13A	Hot Springs	82.11	42	⇑P		P	04 02 58.2	+0.3
	baz=82,SNR=7.4							
JTMT	Jette	82.27	42	eP		P	04 02 59.3	+0.4
F12A	Elk City	82.30	44	⇑P		P	04 02 58.9	-0.2
	baz=82,SNR=5.0							
MLAC	Mammoth Lakes	82.33	53	⇓P		P	04 03 00.2	+0.6
	baz=82							
D13A	Huson	82.38	43	⇑P		P	04 02 59.7	+0.3
	baz=82							
A14A	Double T Ranch	82.40	41	⇓P		P	04 03 00.2	+0.7
	baz=82,SNR=6.5							
PKM	Peak Mountain	82.41	56	⇓P		P	04 03 00.5	+0.5
	baz=82,SNR=7.4							
ARCES	ARCESS Array B	82.43	342	P		P	04 02 59.3	+0.2
ARCES	ARCESS Array B	82.43	342	P		P	04 02 59.3	+0.2
	comp=Z,10.0nm,0.6s,baz=72,slow=7.4,SNR=63							
ARCES				LR		LR	04 42 33.1	
	comp=Z,60nm,20.5s,baz=246,slow=38							
ARE0	ARCESS Array S	82.43	342	eP		P	04 02 59.0	-0.1
G12A	Big Creek, Yel	82.46	45	⇑P		P	04 02 59.7	-0.3
	baz=82							
NVAR	Mina Array Bea	82.49	52	P		P	04 03 00.8	+0.5
NVAR	Mina Array Bea	82.49	52	P		P	04 03 00.8	+0.5
	comp=Z,11nm,0.8s,baz=265,slow=6.2,SNR=77							
NV11	Mina Array Sit	82.60	52	eP		P	04 03 01.1	+0.3
C14A	Swan Lake	82.60	42	⇓P		P	04 03 00.6	+0.1
	baz=82							
MFID	Camas Ranch	82.68	47	eP		P	04 03 01.3	+0.2
	comp=Z,9.6nm,1.0s							
MFID	Camas Ranch	82.68	47	⇑P		P	04 03 01.3	+0.2
	baz=83,SNR=9.0							
VES	Vestal, Richgr	82.69	55	⇑P		P	04 03 00.9	-0.3
	baz=83							
E13A	Victor	82.77	43	⇑P		P	04 03 01.2	-0.3
	baz=83							
MSO	Missoula	82.80	43	⇑P		P	04 03 01.5	-0.1
	baz=83							
A15A	Johnson Ranch,	82.82	41	⇓P		P	04 03 02.2	+0.5
	baz=83,SNR=8.9							
F13A	Darby	82.90	44	⇓P		P	04 03 01.9	-0.3
	baz=83,SNR=7.3							
SLMT	Seeley Lake	82.95	43	eP		P	04 03 01.7	-0.8
	comp=Z,2.6nm,0.8s							
H12A	Diamond D Ranc	82.97	45	⇓P		P	04 03 02.4	-0.2
	baz=83							
D14A	Greenough	82.99	43	⇓P		P	04 03 02.4	-0.2
	baz=83							
I12A	Atlanta	83.03	46	⇑P		P	04 03 03.1	+0.1
	baz=83							
ARVC	Arvin	83.11	55	⇓P		P	04 03 03.6	+0.3
	baz=83							
B15A	Bradely Ranch,	83.16	41	⇓P		P	04 03 03.6	+0.1
	baz=83,SNR=9.4							
G13A	Cobalt	83.20	45	⇑P		P	04 03 03.7	-0.1
	baz=83,SNR=12							
ISA	Isabella	83.22	55	⇑P		P	04 03 03.3	-0.7
	baz=83							
C15A	Salmond Ranch,	83.32	42	⇓P		P	04 03 04.5	+0.1
	baz=83,SNR=5.2							
H13A	Challis	83.37	45	⇑P		P	04 03 04.8	+0.1
	baz=83							
A16A	West Butte Ran	83.53	40	⇑P		P	04 03 05.4	0.0
	baz=83,SNR=5.4							
HLID	Hailey	83.60	46	eP		P	04 03 06.5	+0.6
HLID	Hailey	83.60	46	⇓P		P	04 03 06.1	+0.2
	baz=84,SNR=6.1							
D15A	Lincoln	83.64	42	⇓P		P	04 03 06.5	+0.5
	baz=84							
B16A	M & M Farms, S	83.66	41	⇑P		P	04 03 06.1	+0.1
	baz=84,SNR=7.1							
G14A	Jackson	83.66	44	⇑P		P	04 03 06.5	+0.2
	baz=84							
I13A	Wildhorse Cree	83.68	46	⇓P		P	04 03 06.8	+0.4
	baz=84,SNR=5.3							
E15A	Deer Lodge	83.78	43	⇓P		P	04 03 06.9	+0.1
	baz=84,SNR=10							
J13A	Cove Ranch, Pi	83.82	46	⇑P		P	04 03 07.3	+0.3
	baz=84,SNR=6.7							
EDW2	Edwards Air Fo	83.84	55	⇑P		P	04 03 08.1	+1.0
	baz=84							
MPMC	Manual Prospec	83.85	54	⇑P		P	04 03 07.6	+0.2
	baz=84,SNR=8.5							
C16A	Fuhringer Ranc	83.86	42	⇓P		P	04 03 06.9	-0.1
	baz=84,SNR=7.8							
LRMC	Laurel Mountai	83.89	55	⇓P		P	04 03 07.7	+0.2
	baz=84							
H14A	Leadore	83.94	45	⇓P		P	04 03 08.0	+0.4
	baz=84							
ELK	Elko	83.98	49	eP		P	04 03 08.1	+0.1
JOF	Joensuu	84.03	335	eP		P	04 03 06.6	-0.8
JOF				pmax		pmax		
	comp=Z,23nm,0.5s							
JOF	Joensuu	84.03	335	ep		P	04 03 06.6	-0.8
	comp=Z,23nm,0.5s							
A17A	Triple J Farms	84.08	40	⇑P		P	04 03 08.3	+0.2
	baz=84							
F15A	Butte	84.09	44	⇑P		P	04 03 08.4	+0.1
	baz=84,SNR=8.3							
I14A	Mackay	84.13	46	⇑P		P	04 03 09.2	+0.6
	baz=84,SNR=5.3							
HRY	Holter Researc	84.20	43	eP		P	04 03 07.1	-1.7
	comp=Z,100nm,1.7s							
FURC	Furnace Creek,	84.20	54	⇓P		P	04 03 09.3	+0.5
	baz=84							
MCMT	McKenzie Canyo	84.21	45	eP		P	04 03 09.2	+0.1
	comp=Z,0.6nm,0.7s							
D16A	Dana Ranch, Ca	84.26	42	⇑P		P	04 03 09.5	+0.3
	baz=84,SNR=5.4							
B17A	L&G Farms, Che	84.27	41	⇑P		P	04 03 09.3	+0.3
	baz=84,SNR=12							
J14A	Carey	84.30	46	⇑P		P	04 03 10.2	+0.8
	baz=84,SNR=7.3							
G15A	Dillon	84.33	44	⇓P		P	04 03 09.4	-0.2
	baz=84							
E16A	East Helena	84.36	43	⇑P		P	04 03 09.9	+0.2
	baz=84,SNR=8.6							
H15A	Lima	84.42	45	⇑P		P	04 03 10.2	+0.1
	baz=84							
R11A	Troy Canyon, C	84.53	51	⇑P		P	04 03 11.0	+0.2
	baz=84,SNR=10							
C17A	Wharram Farm,	84.53	41	⇑P		P	04 03 10.5	0.0
	baz=84,SNR=5.1							
A18A	Metzger Ranch,	84.61	40	⇓P		P	04 03 11.0	+0.2
	baz=84,SNR=11							
GSC	Goldstone	84.63	55	⇓P		P	04 03 11.3	+0.1
	baz=84							
F16A	Kennard Place,	84.67	43	⇑P		P	04 03 11.5	+0.3
	baz=85,SNR=7.6							
BOZ	Bozeman (W)	84.72	44	eP		P	04 03 11.7	+0.2
BOZ				pmax		pmax		
	comp=Z,1.0nm,0.6s							
BOZ	Bozeman (W)	84.72	44	eP		P	04 03 11.7	+0.2
	comp=Z,1.0nm,0.6s							
BOZ	Bozeman (W)	84.72	44	⇑P		P	04 03 11.4	-0.1
	baz=85							
G16A	Moss Hill, Enn	84.76	44	⇑P		P	04 03 12.0	+0.2
	baz=85,SNR=12							
D17A	Six Diamond Ra	84.76	42	⇓P		P	04 03 11.9	+0.2
	baz=85,SNR=14							
K14A	Jones Ranch, D	84.81	47	⇓P		P	04 03 12.7	+0.7
	baz=85,SNR=5.9							
SHOC	Shoshone	84.83	54	⇓P		P	04 03 12.2	+0.1
	baz=85							
B18A	Beardsley Farm	84.86	41	⇑P		P	04 03 12.1	+0.1
	baz=85,SNR=6.2							
MURC	Murrieta	84.88	56	⇓P		P	04 03 12.5	+0.1
	baz=85							
E17A	Martinsdale	84.92	43	⇓P		P	04 03 12.6	+0.1
	baz=85							
J15A	Blackfoot	85.01	46	⇓P		P	04 03 14.1	+1.1
	baz=85,SNR=7.7							
EGMT	Eagleton	85.01	41	⇑P		P	04 03 13.0	+0.2
	baz=85,SNR=6.1							
HEC	Hector,Ludlow	85.15	55	⇑P		P	04 03 14.0	+0.2
	baz=85							
QLMT	Earthquake Lak	85.15	44	eP		P	04 03 14.7	+0.9
	comp=Z,1.1nm,0.6s							
109C	Camp Elliot, M	85.19	57	⇓P		P	04 03 14.1	+0.2
	baz=85							
K15A	Arbon	85.20	47	⇑P		P	04 03 14.9	+0.9
	baz=85,SNR=6.5							
F17A	Fitzpatrick Pl	85.25	43	⇑P		P	04 03 14.5	+0.3
	baz=85							
TUQ	Turquoise Moun	85.26	54	⇑P		P	04 03 14.8	+0.5
	baz=85							
A19A	Klinkworth Far	85.28	40	⇑P		P	04 03 14.5	+0.3
	baz=85,SNR=8.8							
D18A	Linhart Farms,	85.30	42	⇑P		P	04 03 14.5	+0.2
	baz=85							
H16A	Russell Place,	85.32	44	⇓P		P	04 03 15.2	+0.6
	baz=85							
B19A	Brinkman Farms	85.34	40	⇑P		P	04 03 14.8	+0.4
	baz=85,SNR=6.0							
OBN	Obninsk	85.39	327	⇑eP		P	04 03 15.3	+0.9
OBN				pmax		pmax		
	comp=Z,6.0nm,0.5s							
G17A	Pierce Place,	85.42	44	⇑P		P	04 03 15.7	+0.7
	baz=85							
PFO	Pinyon Flat Ob	85.46	56	⇓P		P	04 03 15.5	+0.1
	baz=85							
I16A	Newdale	85.47	45	⇑P		P	04 03 16.2	+0.8
	baz=85							
E18A	Harlowton	85.48	42	⇓P		P	04 03 15.9	+0.6
	baz=85,SNR=18							
YMR	Madison River	85.52	44	eP		P	04 03 16.8	+1.2
	comp=Z,19nm,0.8s							
L15A	Malad City	85.55	47	⇓P		P	04 03 16.0	+0.3
	baz=85,SNR=6.2							
C19A	Slack Wire Ran	85.56	41	⇑P		P	04 03 16.0	+0.5
	baz=85,SNR=5.7							
GMRC	Granite Mounta	85.69	55	⇓P		P	04 03 16.7	+0.1
	baz=86							
BELC	Belle Mtn. Jos	85.69	56	⇑P		P	04 03 16.5	-0.1
	baz=86							
MONP	Monument Peak	85.73	57	⇑P		P	04 03 16.6	-0.3
	baz=86							
K16A	Soda Springs	85.79	46	⇓P		P	04 03 17.9	+0.9
	baz=86,SNR=9.0							
A20A	Cobblestone Ra	85.79	40	⇑P		P	04 03 17.2	+0.5
	baz=86							
IMW	Indian Meadow	85.83	45	eP		P	04 03 17.9	+0.6
	comp=Z,6.2nm,0.8s							
F18A	Big Timber	85.86	43	⇑P		P	04 03 17.6	+0.5
	baz=86,SNR=11							
H17A	Grant Village	85.88	44	⇑P		P	04 03 19.7	+2.3
	baz=86,SNR=10.0							
D19A	Cripps Ranch,	85.89	41	⇑P		P	04 03 17.6	+0.4
	baz=86,SNR=16							
DUG	Dugway	85.90	49	eP		P	04 03 17.6	+0.1
DUG				pmax		pmax		
	comp=Z,3.0nm,0.7s							
DUG	Dugway	85.90	49	eP		P	04 03 17.6	+0.1
	comp=Z,3.4nm,0.7s							
DUG	Dugway	85.90	49	⇑P		P	04 03 17.7	+0.1
	baz=86,SNR=10							
B20A	Solberg Farm,	85.91	40	⇑P		P	04 03 17.7	+0.4
	baz=86							
LKWY	Lake	85.93	44	eP		P	04 03 20.0	+2.3
LKWY				pmax		pmax		
	comp=Z,4.0nm,0.6s							
LKWY	Lake	85.93	44	eP		P	04 03 20.0	+2.3
	comp=Z,4.0nm,0.6s							
MOOW	Moose Ponds	86.02	45	eP		P	04 03 18.4	+0.4
	comp=Z,2.2nm,0.8s							
DVTC	Desert V Tower	86.06	57	⇑P		P	04 03 19.0	+0.7
	baz=86							
I17A	Pilgrim Ck.	86.06	45	⇑P		P	04 03 19.4	+1.1
	baz=86							
SNOW	Snow King Moun	86.12	45	eP		P	04 03 19.2	+0.5
	comp=Z,1.8nm,0.5s							
J17A	Brown Place, J	86.19	45	⇓P		P	04 03 19.0	+0.1
	baz=86							
G18A	Lazy EL Ranch,	86.19	43	⇓P		P	04 03 19.6	+0.7
	baz=86							
L16A	Fish Haven	86.20	47	⇑P		P	04 03 19.4	+0.4
	baz=86,SNR=11							
C20A	Veseth Ranch,	86.22	41	⇑P		P	04 03 19.3	+0.5
	baz=86,SNR=17							
BC3	Big Chuckawall	86.23	56	⇑P		P	04 03 19.4	+0.2
	baz=86							
E19A	Rath Farm, Rou	86.23	42	⇑P		P	04 03 19.2	+0.3
	baz=86,SNR=9.1							
HWUT	Hardware Ranch	86.26	47	eP		P	04 03 19.3	0.0
	comp=Z,6.5nm,0.8s							
K17A	Gardner Place,	86.28	46	⇓P		P	04 03 19.5	+0.2
	baz=86							
IRM	Iron Mountain	86.30	55	⇑P		P	04 03 19.6	+0.2
	baz=86							
ARUT	Antelope Range	86.32	51	eP		P	04 03 19.3	-0.3
ARUT				pmax		pmax		
	comp=Z,5.0nm,0.7s							
ARUT	Antelope Range	86.32	51	eP		P	04 03 19.3	-0.3
	comp=Z,5.4nm,0.7s							
A21A	Bergtoll Ranch	86.35	39	⇑P		P	04 03 19.8	+0.4
	baz=86							
H18A	Shoshone NF, C	86.38	44	⇑P		P	04 03 20.1	+0.2
	baz=86							
F19A	Roth Farm, Mol	86.38	43	⇓P		P	04 03 20.0	+0.3
	baz=86,SNR=5.1							
D20A	Manuel Ranch,	86.39	41	⇑P		P	04 03 20.1	+0.5
	baz=86,SNR=12							
KBZ	Khabaz	86.39	315	P		P	04 03 18.9	-0.7
KBZ	Khabaz	86.39	315	P		P	04 03 18.9	-0.7
KBZ	Khabaz	86.39	315	P		P	04 03 18.9	-0.7
	comp=Z,1.5nm,0.8s,baz=308,slow=3.9,SNR=2.9							
KBZ				LR		LR	04 44 56.8	
	comp=Z,32nm,18.3s,baz=210,slow=38							
KAF	Kangasniemi	86.42	336	eP		P	04 03 17.6	-1.8
KAF				pmax		pmax		
	comp=Z,5.0nm,0.5s							
KAF	Kangasniemi	86.42	336	ep		P	04 03 17.6	-1.8
	comp=Z,4.7nm,0.5s							
RLMT	Red Lodge	86.46	43	eP		P	04 03 21.1	+0.8
	comp=Z,8.4nm,0.6s							
RLMT	Red Lodge	86.46	43	⇑P		P	04 03 21.3	+1.1
	baz=86,SNR=14							
FFC	Flin Flon	86.53	33	ceP		P	04 03 20.5	+0.4
FFC	Flin Flon	86.53	33	eP		P	04 03 20.1	0.0
	comp=Z,5.9nm,0.6s							
E20A	Meyer Farm, Mu	86.63	42	⇑P		P	04 03 21.0	+0.2
	baz=86							
I18A	Diamond G Ranc	86.66	45	⇓P		P	04 03 21.8	+0.5
	baz=86							
J18A	Kendall Valley	86.71	45	⇓P		P	04 03 21.9	+0.4
	baz=87,SNR=21							
JLU	Jordanelle	86.72	48	eP		P	04 03 21.7	0.0
	comp=Z,4.7nm,0.7s							
C21A	Desert Coulee	86.73	40	⇑P		P	04 03 21.8	+0.5
	baz=87							
H19A	Powell	86.82	44	⇑P		P	04 03 22.7	+0.8
	baz=87,SNR=6.8							
FIA1	FINESS Array S	86.90	335	eP		P	04 03 20.4	-1.3
FINES	FINESS Array B	86.90	335	P		P	04 03 20.9	-0.8
FINES	FINESS Array B	86.90	335	P		P	04 03 20.9	-0.8
	comp=Z,15nm,0.4s,baz=69,slow=4.8,SNR=212							
F20A	Billings	86.91	42	⇑P		P	04 03 22.4	+0.1
	baz=87							
K18A	Toltan Ranch,	86.92	46	⇓P		P	04 03 23.1	+0.5
	baz=87,SNR=10							
DAU	Daniels Canyon	86.93	48	eP		P	04 03 22.9	+0.2
DAU				pmax		pmax		
	comp=Z,4.0nm,0.7s							
DAU	Daniels Canyon	86.93	48	eP		P	04 03 22.9	+0.2
	comp=Z,4.4nm,0.7s							
GLA	Glamis	86.93	56	⇑P		P	04 03 22.8	+0.2
	baz=87							
M17A	Scullys Gap (B	86.94	47	⇑P		P	04 03 22.6	-0.1
	baz=87							
W13A	Hualapai Mount	86.94	54	⇑P		P	04 03 22.9	+0.1
	baz=87							
A22A	Carney Farms,	86.95	39	⇓P		P	04 03 22.3	0.0
	baz=87							
MVU	Marysvale	86.96	50	eP		P	04 03 23.0	+0.2
	comp=Z,1.5nm,0.7s							
N17A	Moffit Pass	87.03	48	⇓P		P	04 03 23.2	+0.1
	baz=87							
PDMCI	Parker Dam,Lak	87.03	55	⇓P		P	04 03 23.5	+0.6
	baz=87							
I19A	Meeteetse	87.07	44	⇓P		P	04 03 23.9	+0.7
	baz=87							
G20A	Bridger	87.10	43	⇑P		P	04 03 23.5	+0.3
	baz=87,SNR=7.1							
D21A	La Casta Ranch	87.11	41	⇑P		P	04 03 23.6	+0.5
	baz=87							
BW06	Boulder Array	87.19	46	⇓P		P	04 03 23.3	-0.6
	baz=87,SNR=5.0							
PDAR	Pinedale Array	87.20	46	P		P	04 03 23.8	-0.1
PDAR	Pinedale Array	87.20	46	P		P	04 03 23.8	-0.1
	comp=Z,1.9nm,0.6s,baz=222,slow=0.9,SNR=22							
L18A	Fontenelle, Gr	87.20	47	⇑P		P	04 03 24.2	+0.3
	baz=87,SNR=6.1							
E21A	Keefer Ranch,	87.28	41	⇓P		P	04 03 24.4	+0.5
	baz=87							
J19A	Crowheart	87.34	45	⇑P		P	04 03 25.0	+0.6
	baz=87,SNR=15							
M18A	Lyman	87.37	47	⇓P		P	04 03 25.1	+0.4
	baz=87							
C22A	Vida	87.50	40	⇓P		P	04 03 25.5	+0.5
	baz=87							
Q16A	Castle Valley	87.56	50	⇑P		P	04 03 26.1	+0.4
	baz=88							
D22A	Cohagen	87.58	41	⇑P		P	04 03 25.7	+0.4
	baz=88							
L19A	Farson	87.59	46	⇑P		P	04 03 26.0	+0.3
	baz=88,SNR=6.3							
K19A	Absolon Red Bu	87.65	45	⇑P		P	04 03 25.6	-0.4
	baz=88,SNR=13							
P17A	Butcher Ranch,	87.65	49	⇑P		P	04 03 26.1	+0.1
	baz=88							
U15A	North Rim	87.67	52	⇓P		P	04 03 26.9	+0.6
	baz=88,SNR=6.4							
I20A	Worland	87.68	44	⇓P		P	04 03 26.2	+0.3
	baz=88							
B23A	Brockton	87.73	39	⇑P		P	04 03 26.1	+0.1
	baz=88							
G21A	Lodge Grass	87.75	43	⇓P		P	04 03 26.7	+0.4
	baz=88							
N18A	Larsen Ranch,	87.82	47	⇓P		P	04 03 26.5	-0.3
	baz=88,SNR=7.4							
113A	Mohawk Valley,	87.87	56	⇓P		P	04 03 27.3	+0.4
	baz=88							
C23A	Lambert	87.90	40	⇓P		P	04 03 27.5	+0.6
	baz=88							
SRU	San Rafael	87.95	49	eP		P	04 03 27.3	-0.2
SRU				pmax		pmax		
	comp=Z,4.0nm,0.6s							
SRU	San Rafael	87.95	49	eP		P	04 03 27.3	-0.2
	comp=Z,4.5nm,0.6s							
SRU	San Rafael	87.95	49	⇑P		P	04 03 27.5	0.0
	baz=88,SNR=10.0							
J20A	Shoshoni	87.95	45	⇓P		P	04 03 27.5	+0.2
	baz=88							
E22A	Miles City	88.03	41	⇓P		P	04 03 27.6	+0.1
	baz=88							
Y14A	Wickenburg	88.04	55	⇓P		P	04 03 28.3	+0.5
	baz=88,SNR=8.2							
K20A	Yellowstone Ra	88.06	45	⇑P		P	04 03 27.8	-0.1
	baz=88,SNR=11							
H21A	Big Horn, Sher	88.11	43	⇓P		P	04 03 28.2	+0.2
	baz=88							
D23A	Lindsay	88.17	40	⇓P		P	04 03 28.5	+0.3
	baz=88							
N19A	John Jarvie Ra	88.20	47	⇑P		P	04 03 28.6	0.0
	baz=88							
I21A	Big Trails, Te	88.28	44	⇑P		P	04 03 29.0	+0.1
	baz=88							
Z14A	Wintersburg	88.30	55	⇓P		P	04 03 29.1	+0.2
	baz=88							
L20A	Wamsutter	88.33	46	⇑P		P	04 03 29.4	+0.2
	baz=88							
J21A	Lysite	88.38	44	⇓P		P	04 03 29.5	0.0
	baz=88							
O19A	Miners Draw (B	88.47	48	⇑P		P	04 03 30.3	+0.4
	baz=88							
H22A	Clearmont	88.56	43	⇓P		P	04 03 30.7	+0.5
	baz=88							
SUMG	Summit	88.63	1	eP		P	04 03 31.7	+1.5
SUMG	Summit	88.63	1	/ P		P	04 03 31.7	+1.5
M20A	Sweetwater, Wa	88.64	46	⇑P		P	04 03 31.1	+0.4
	baz=88							
F23A	Volborg	88.68	42	⇓P		P	04 03 31.1	+0.4
	baz=89							
WUAZ	Wupatki	88.70	53	eP		P	04 03 31.5	+0.4
	comp=Z,11nm,1.0s							
WUAZ	Wupatki	88.70	53	⇓P		P	04 03 31.7	+0.6
	baz=89,SNR=8.7							
I22A	9 Mile Ranch,	88.78	44	⇓P		P	04 03 32.0	+0.8
	baz=89							
K21A	Alcova	88.80	45	⇓P		P	04 03 31.7	+0.2
	baz=89							
P19A	Cripple Cowboy	88.84	48	⇑P		P	04 03 32.0	+0.3
	baz=89,SNR=18							
N20A	Spence Gulch,	88.86	47	⇑P		P	04 03 31.9	+0.2
	baz=89							
S18A	Hurst Farm, Bl	88.88	50	⇓P		P	04 03 32.2	+0.2
	baz=89							
Q19A	Hogan Spring (	88.91	49	⇓P		P	04 03 32.5	+0.6
	baz=89							
214A	Organ Pipe Nat	88.92	57	⇑P		P	04 03 32.6	+0.6
	baz=89,SNR=7.2							
J22A	Midwest	88.99	44	⇑P		P	04 03 32.4	+0.2
	baz=89							
L21A	Rawlins	89.00	46	⇑P		P	04 03 32.5	+0.1
	baz=89,SNR=7.0							
X16A	Lo Mia Camp, P	89.06	54	⇑P		P	04 03 33.2	+0.4
	baz=89							
M21A	Separation Pea	89.16	46	⇓P		P	04 03 33.4	+0.2
	baz=89,SNR=6.4							
O20A	White River Ci	89.16	48	⇓P		P	04 03 33.5	+0.3
	baz=89							
K22A	Casper	89.28	45	⇑P		P	04 03 34.

IIGN				AMB	AMB	04 03 38.6	
	comp=Z,7.4nm,1.0s						
R21A	**Cimarron**	90.38	49	⇓P	P	04 03 39.7	+0.7
	baz=90,SNR=12						
P22A	**Eagle**	90.42	48	⇓P	P	04 03 39.8	+0.6
	baz=90,SNR=6.2						
N23A	**Red Feather La**	90.43	46	⇑P	P	04 03 40.1	+1.0
	baz=90,SNR=8.2						
SMCO	**Snowmass**	90.45	48	*e*P	P	04 03 39.8	+0.4
	comp=Z,6.2nm,1.2s						
L24A	**Wheatland**	90.61	45	⇑P	P	04 03 40.4	+0.5
	baz=90						
Q22A	**Crested Butte,**	90.62	48	⇓P	P	04 03 40.5	+0.3
	baz=90						
O23A	**Lake Granby, G**	90.74	47	⇑P	P	04 03 41.1	+0.4
	baz=91						
V20A	**Brimhall**	90.76	52	⇑P	P	04 03 41.1	+0.3
	baz=91						
M24A	**Cheyenne**	90.94	45	⇑P	P	04 03 42.1	+0.7
	baz=91						
W20A	**Ramah**	91.01	52	⇓P	P	04 03 42.2	+0.3
	baz=91						
K25A	**Mack Ranch, Ha**	91.06	44	⇑P	P	04 03 42.3	+0.4
	baz=91						
U21A	**Nageezi**	91.10	51	⇓P	P	04 03 42.6	+0.3
	baz=91						
ISCO	**Idaho Springs**	91.13	47	⇑P	P	04 03 43.0	+0.5
	baz=91						
S22A	**4UR Ranch, Cre**	91.15	49	⇑P	P	04 03 43.3	+0.7
	baz=91,SNR=5.6						
P23A	**Jefferson**	91.16	48	⇑P	P	04 03 43.3	+0.7
	baz=91						
N24A	**Carr**	91.18	46	⇑P	P	04 03 43.1	+0.6
	baz=91						
X20A	**Quemado**	91.25	53	⇑P	P	04 03 44.5	+1.5
	baz=91,SNR=7.2						
Q23A	**Hartsel**	91.36	48	⇑P	P	04 03 44.0	+0.4
	baz=91						
T22A	**Edith**	91.41	50	⇑P	P	04 03 43.9	+0.2
	baz=91						
K26A	**Motz Farm, Whi**	91.47	44	⇓P	P	04 03 43.7	0.0
	baz=91						
Y20A	**Horse Springs,**	91.60	53	⇓P	P	04 03 45.5	+0.8
	baz=92						
W21A	**San Fidel**	91.65	52	⇓P	P	04 03 45.8	+0.9
	baz=92						
R23A	**Moffat**	91.68	49	⇑P	P	04 03 46.0	+0.9
	baz=92						
MALT	**Malatya**	91.70	312	*e*P	P	04 03 45.0	+0.1
MALT				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MALT	**Malatya**	91.70	312	*e*P	P	04 03 45.0	+0.1
	comp=Z,1.3nm,0.7s						
U22A	**Llaves**	91.71	51	⇑P	P	04 03 45.9	+0.7
	baz=92						
N25A	**Grover**	91.73	46	⇓P	P	04 03 45.9	+0.9
	baz=92						
Z20A	**Nine Sixteen R**	91.76	54	⇑P	P	04 03 46.6	+1.3
	baz=92,SNR=8.2						
X21A	**Alamocita Cree**	91.83	53	⇓P	P	04 03 46.4	+0.7
	baz=92						
319A	**Douglas**	91.92	56	⇓P	P	04 03 46.7	+0.6
	baz=92						
ULM	**Lac du Bonnet**	92.03	35	P	P	04 03 45.7	-0.3
ULM	**Lac du Bonnet**	92.03	35	P	P	04 03 45.7	-0.3
	comp=Z,4.0nm,0.7s,baz=288,slow=5.5,SNR=5.9						
K27A	**Flueckinger Fa**	92.08	43	⇑P	P	04 03 46.5	0.0
	baz=92						
Y21A	**Point of Rocks**	92.09	53	⇓P	P	04 03 47.9	+1.0
	baz=92						
R24A	**Sanders Place,**	92.17	48	⇓P	P	04 03 47.7	+0.5
	baz=92						
U23A	**El Rito**	92.22	50	⇓P	P	04 03 48.4	+0.9
	baz=92						
P25A	**Willow Gulch B**	92.26	47	⇓P	P	04 03 48.5	+0.9
	baz=92						
220A	**Playas Peak, P**	92.30	55	⇓P	P	04 03 48.8	+1.0
	baz=92						
S24A	**Houchin Ranch,**	92.36	49	⇑P	P	04 03 48.8	+0.6
	baz=92						
HFS	**Hagfors**	92.36	338	LR	LR	04 47 00.9	
	comp=Z,56nm,18.2s,baz=67,slow=36						
Z21A	**St. Cloud Mine**	92.38	54	⇓P	P	04 03 49.5	+1.2
	baz=92,SNR=7.6						
Q25A	**Bedland, Calha**	92.47	47	⇓P	P	04 03 49.2	+0.6
	baz=92						
NB2	**NORSAR Subarra**	92.53	340	P	P	04 03 46.8	-1.4
	baz=50,slow=4.6						
NB2	**NORSAR Subarra**	92.53	340	P	P	04 03 46.8	-1.4
	comp=Z,1.5nm,0.6s,baz=50,slow=4.6						
NOA	**NORSAR Array B**	92.53	340	P	P	04 03 47.2	-1.0
NOA	**NORSAR Array B**	92.53	340	P	P	04 03 47.2	-1.0
	comp=Z,1.9nm,0.7s,baz=46,slow=4.5,SNR=9.1						
NOA				LR	LR	04 46 06.6	
	comp=Z,38nm,20.9s,baz=265,slow=36						
SUW	**Suwalki**	92.57	330	*e*P	P	04 03 47.7	-0.7
Y22A	**Socorro**	92.66	53	⇓P	P	04 03 50.3	+0.8
	baz=93						
T24A	**Torres, Weston**	92.72	49	⇓P	P	04 03 50.4	+0.5
	baz=93						
W23A	**Werner Place,**	92.75	51	⇓P	P	04 03 50.5	+0.6
	baz=93						
N27A	**Anderson Farm,**	92.78	45	⇓P	P	04 03 50.6	+0.7
	baz=93						
R25A	**Fountain Ranch**	92.79	48	⇓P	P	04 03 50.5	+0.5
	baz=93						
P26A	**Davis Ranch, A**	92.80	47	⇓P	P	04 03 50.6	+0.6
	baz=93						
U24A	**Moreno Valley**	92.85	50	⇓P	P	04 03 51.2	+0.7
	baz=93						
S25A	**Robets Cordova**	92.90	49	⇓P	P	04 03 51.0	+0.4
	baz=93						
Z22A	**Elephant Butte**	92.94	53	⇑P	P	04 03 51.5	+0.6
	baz=93						
Q26A	**Hugo**	92.97	47	⇑P	P	04 03 51.6	+0.8
	baz=93						
T25A	**Trinidad**	93.15	49	⇓P	P	04 03 51.9	+0.2
	baz=93						
V24A	**Rampart Ranch,**	93.15	51	⇑P	P	04 03 52.7	+0.8
	baz=93						
W24A	**Lazy 6 Ranch,**	93.27	51	⇑P	P	04 03 52.9	+0.6
	baz=93						
R26A	**Arlington**	93.31	48	⇑P	P	04 03 53.0	+0.7
	baz=93						
Y23A	**Lovelace Mesa,**	93.34	53	⇓P	P	04 03 52.9	+0.2
	baz=93						
U25A	**Circle Dot Ran**	93.48	50	⇓P	P	04 03 53.6	+0.3
	baz=93						
Z23A	**Rita Site, Whi**	93.50	53	⇑P	P	04 03 53.9	+0.6
	baz=93						
KSCO	**Kaye Shedlock'**	93.55	47	⇓P	P	04 03 54.5	+1.1
	baz=93						
V25A	**Rancho No Teng**	93.58	50	⇑P	P	04 03 54.4	+0.7
	baz=94						
S26A	**Kim**	93.60	48	⇑P	P	04 03 53.7	-0.1
	baz=94						
T26A	**Comanche Natio**	93.72	49	⇓P	P	04 03 54.5	+0.2
	baz=94						
U26A	**Atchley Ranch,**	93.96	50	⇑P	P	04 03 56.1	+0.6
	baz=94						
W25A	**X Bar L Ranch,**	93.97	51	⇓P	P	04 03 55.9	+0.4
	baz=94						
Z24A	**Sheeppen Canyo**	94.12	53	⇓P	P	04 03 56.8	+0.5
	baz=94						
124A	**Stringfield Ra**	94.33	53	⇓P	P	04 03 58.0	+0.7
	baz=94						
BRTR	**Keskin Array B**	94.37	314	P	P	04 03 56.1	-1.1
BRTR	**Keskin Array B**	94.37	314	P	P	04 03 56.1	-1.1
	comp=Z,1.1nm,0.8s,baz=73,slow=3.3,SNR=5.0						
BRTR				LR	LR	04 47 33.2	
	comp=Z,22nm,20.5s,baz=248,slow=36						
Y25A	**Mesa, Roswell**	94.37	52	⇑P	P	04 03 57.8	+0.5
	baz=94						
T27A	**Campo**	94.39	49	⇑P	P	04 03 57.8	+0.4
	baz=94						
224A	**Cornudas Mount**	94.54	54	⇑P	P	04 03 58.8	+0.6
	baz=94						
U27A	**Thompson Grove**	94.61	49	⇓P	P	04 03 58.8	+0.4
	baz=94						
Z25A	**Roswell**	94.63	53	⇑P	P	04 03 59.1	+0.5
	baz=94						
X26A	**CR and CF Fran**	94.74	51	⇓P	P	04 03 59.1	+0.1
	baz=95						
T28A	**Walsh**	94.79	48	⇓P	P	04 03 59.4	+0.2
	baz=95						
324A	**Moseley Ranch,**	94.84	55	⇓P	P	04 03 59.7	+0.1
	baz=95						
125A	**Gardner Draw,**	94.95	53	⇓P	P	04 04 00.1	+0.1
	baz=95						
Y26A	**Elida**	95.01	52	⇑P	P	04 04 00.7	+0.4
	baz=95						
W27A	**Bowe Ranch, En**	95.06	50	⇑P	P	04 04 01.0	+0.5
	baz=95						
Z26A	**Caprock**	95.19	52	⇑P	P	04 04 01.3	+0.2
	baz=95						
325A	**Bean Ranch, Si**	95.27	54	⇓P	P	04 04 02.0	+0.4
	baz=95						
BUR08	**Bucovina Ar. S**	95.34	324	*e*P	P	04 04 00.2	-1.3
V28A	**Channing**	95.35	50	⇑P	P	04 04 02.2	+0.4
	baz=95						
425A	**Indio Mountain**	95.51	55	⇑P	P	04 04 03.0	+0.4
	baz=95						
Y27A	**Causey**	95.52	52	⇓P	P	04 04 02.9	+0.3
	baz=95						
Z27A	**Tatum**	95.74	52	⇑P	P	04 04 03.2	-0.4
	baz=96						
AMTX	**Amarillo**	96.15	50	⇑P	P	04 04 05.2	-0.1
	baz=96						
X29A	**Tulia**	96.34	50	⇓P	P	04 04 06.4	+0.2
	baz=96						
CRVS	**Cervenica-Dubn**	96.57	327	*e*P	P	04 04 10.8	+3.9
CRVS	**Cervenica-Dubn**	96.57	327	*e*P	P	04 04 10.8	+3.9
Y29A	**Porterfield Fa**	96.63	51	⇓P	P	04 04 07.8	+0.2
	baz=96						
TXAR	**Lajitas Array**	97.17	56	P	Pdif	04 04 10.6	+0.3
TXAR	**Lajitas Array**	97.17	56	P	Pdif	04 04 10.5	+0.3
	comp=Z,0.3nm,0.7s,baz=297,slow=5.5,SNR=4.1						
Z30A	**Sanderson Ranc**	97.30	51	⇑P	P	04 04 10.5	-0.1
	baz=97						
627A	**Terlingua Ranc**	97.34	56	⇑P	Pdif	04 04 11.5	+0.5
	baz=97						
528A	**Cox Ranch, San**	97.49	55	⇑P	Pdif	04 04 12.2	+0.5
	baz=97						
X31A	**McDonald Ranch**	97.50	50	⇑P	Pdif	04 04 11.7	+0.2
	baz=97						
329A	**Wagon Wheel Ra**	97.50	53	⇑P	P	04 04 11.6	+0.1
	baz=97						
Y31A	**Rekieta Farm,**	97.62	50	⇑P	Pdif	04 04 12.1	+0.1
	baz=98						
VYHS	**Vyhne**	98.17	328	*e*P	P	04 04 13.6	-0.5
VYHS	**Vyhne**	98.17	328	PDIF	P	04 04 13.6	-0.5
GERES	**GERESS Array B**	100.43	330	P	Pdif	04 04 24.9	+0.7
GERES	**GERESS Array B**	100.43	330	P	Pdif	04 04 24.9	+0.7
	comp=Z,0.1nm,0.3s,baz=50,slow=3.1,SNR=3.1						
SCHQ	**Schefferville**	101.23	19	P	Pdif	04 04 28.0	+0.4
SCHQ	**Schefferville**	101.23	19	P	Pdif	04 04 28.0	+0.4
	comp=Z,1.2nm,0.7s,baz=278,slow=14,SNR=2.9						
LBTB	**Lobatse**	125.09	252	*e*PKPdf	PKPdf	04 09 37.1	-0.6
TOA0	**Torodi Ar. Sit**	132.76	310	*e*PKPdf	PKPdf	04 09 53.0	+0.5
TORD	**Torodi Ar. Bea**	132.76	310	PKP	PKPdf	04 09 52.2	-0.3
TORD				SKPbc	SKPbc	04 13 10.1	-0.3
TORD	**Torodi Ar. Bea**	132.76	310	PKP	PKPdf	04 09 52.2	-0.3
	comp=Z,0.5nm,0.4s,baz=20,slow=2.2,SNR=34						
TORD				SKPbc	SKPbc	04 13 10.0	-0.3
	comp=Z,1.9nm,0.8s,baz=42,slow=3.1,SNR=7.9						
PLCA	**Paso Flores**	141.73	133	PKP	PKPdf	04 10 05.6	-2.7
PLCA				*e*PKPdf	PKiKP	04 10 08.5	-2.8
PLCA	**Paso Flores**	141.73	133	PKP	PKPdf	04 10 05.6	-2.7
	comp=Z,2.9nm,0.9s,baz=202,slow=4.9,SNR=3.6						
LCO	**Las Campanas**	144.83	114	*e*PKPdf	PKPbc	04 10 14.0	+0.3
LPAZ	**La Paz**	147.06	91	*e*PKPbc	PKPbc	04 10 22.0	+0.8
LPAZ	**La Paz**	147.06	91	PKPbc	PKPbc	04 10 21.9	+0.8
	comp=Z,8.2nm,0.8s,baz=328,slow=3.3,SNR=20						
TRQA	**Tornquist**	148.86	134	*e*PKPbc	PKPbc	04 10 24.7	+0.1
SAML	**Samuel**	149.71	75	*e*PKPbc	PKPbc	04 10 27.2	-0.1
SAML				*e*PKPab	PKPab	04 10 32.1	-0.7
BDFB	**Brasilia**	165.89	79	PKP	PKPdf	04 10 43.4	+1.0
BDFB	**Brasilia**	165.89	79	PKP	PKPdf	04 10 43.4	+1.0
	comp=Z,0.6nm,0.5s,baz=288,slow=3.2,SNR=3.1						

IDC 22 04:09:06.8±2.2,4°.11S×129°.93E,h0km,mb3.5/1, mb1 3.7/4,mb1mx3.5/21,mbtmpg3.5/4,ML3.0/2,Error ellipse: s-maj=114.7km s-min=24.8km az=74.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	14.52	196	Pn	Pn	04 12 33.5	-0.3
	0.1nm,0.3s,baz=22,slow=14,SNR=4.7						
WRA	**Warramunga Arr**	16.31	165	Pn	Pn	04 12 55.3	-2.1
	0.0nm,0.3s,baz=351,slow=13,SNR=3.9						
WRA				Sn	Sn	04 16 01.1	+1.8
	0.1nm,0.3s,baz=342,slow=24,SNR=4.7						
ASAR	**Alice Springs**	19.82	169	P	Pn	04 13 40.1	-0.6
	0.3nm,0.3s,baz=349,slow=10.0,SNR=11						
MKAR	**Makanchi Array**	65.79	326	P	P	04 19 53.9	0.0
	0.4nm,0.7s,baz=133,slow=8.1,SNR=3.1						

*MDD **22** 04:12:16.1±1.2,36°.18N×8°.24W,h41km±35km,mb3.7/16, Error ellipse: s-maj=12.2km s-min=6.9km az=35.0, PRXIMO*

*LDG **22** 04:12:16.6±0.6,36°.58N×7°.98W,h10km,Ml2.7/2,Error ellipse: s-maj=11.0km s-min=6.3km az=22.0*

*CSEM **22** 04:12:17.5±0.3,36°.36N×8°.10W,h30km,ML1.9,Error ellipse: s-maj=5.5km s-min=3.3km az=28.0*

*INMG **22** 04:12:17.4±0.8,36°.22N×8°.26W,h31km,ML1.9,Error ellipse: s-maj=3.4km s-min=2.2km az=37.0*

ISC 22 04:12:13.6±1.7,36°.46N±0°.05×8°.04W±0°.03,h2km±10km, n89,σ2s12/167,1C-3D,West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PBDV	**Barranco-do-Ve**	0.79	6	*e*P	Pn	04 12 34.6	+2.9
PBDV				*e*S	Sn	04 12 47.7	+3.7
PBDV				A	A	04 12 53.8	
	6.7nm,0.4s						
PBDV	**Barranco-do-Ve**	0.79	6	P	Pn	04 12 34.6	+2.9
PBDV				S	Sn	04 12 47.7	+3.7
	6.7nm,0.4s						
PBDV	**Barranco-do-Ve**	0.79	6	*e*P	Pn	04 12 34.6	+2.9
PBDV				S	Sn	04 12 47.7	+3.7
	6.7nm,0.4s						
PFVI	**Vila Bisbo**	0.92	317	*i*P	Pb	04 12 33.8	+1.6
PFVI				*e*S	Sn	04 12 46.7	-0.6
PFVI				A	A	04 12 53.6	
	11nm,0.1s						
PFVI	**Vila Bisbo**	0.92	317	⇓P	Pb	04 12 33.8	+1.6
	4.1nm,0.1s,SNR=18						
PFVI				S	Sn	04 12 46.6	-0.7
	11nm,0.1s,SNR=7.1						
PFVI	**Vila Bisbo**	0.92	317	P	Pb	04 12 33.8	+1.6
	4.1nm,0.1s,SNR=18						
PFVI				*e*S	Sn	04 12 46.7	-0.6
	11nm,0.1s						
MORF	**Marmelete**	0.97	330	*e*P	Pn	04 12 35.5	+1.2
MORF				*e*S	Sn	04 12 49.8	+1.1
MORF				A	A	04 12 54.2	
	18nm,0.1s						
MORF	**Marmelete**	0.97	330	P	Pn	04 12 35.4	+1.2
MORF				S	Sn	04 12 49.6	+0.9
MORF	**Marmelete**	0.97	330	*e*P	Pn	04 12 35.5	+1.2
MORF				*e*S	Sn	04 12 49.8	+1.1
	18nm,0.1s						
PVAQ	**Vaqueiros**	0.98	15	*e*P	Pn	04 12 37.2	+2.9
PVAQ				*e*S	Sn	04 12 52.1	+3.4
PVAQ				A	A	04 12 52.8	
	14nm,0.1s						
PVAQ	**Vaqueiros**	0.98	15	P	Pn	04 12 37.2	+2.9
PVAQ				S	Sn	04 12 52.1	+3.4
	14nm,0.1s						
PVAQ	**Vaqueiros**	0.98	15	*e*P	Pn	04 12 37.2	+2.9
PVAQ				S	Sn	04 12 52.1	+3.4
	14nm,0.1s						
EGRO	**El Granado**	1.16	23	⇓P	Pn	04 12 40.1	+3.3
	2.0nm,0.0s,SNR=18						
EGRO				S	Sn	04 12 57.0	+3.8
	8.3nm,0.1s,SNR=16						
EGRO	**El Granado**	1.16	23	P	Pn	04 12 40.1	+3.3
	2.0nm,0.0s,SNR=18						
EGRO				S	Sn	04 12 57.0	+3.8
	8.3nm,0.1s,SNR=16						
PCVE	**Castro Verde**	1.17	0	*e*P	Pn	04 12 39.8	+2.9
PCVE				*e*S	Sn	04 12 56.4	+3.0
PCVE				A	A	04 12 58.3	
	8.7nm,0.3s						
PCVE	**Castro Verde**	1.17	0	⇓P	Pn	04 12 39.8	+2.9
PCVE				S	Sn	04 12 56.4	+3.0
	8.7nm,0.3s						
PCVE	**Castro Verde**	1.17	0	P	Pn	04 12 39.8	+2.9
PCVE				S	Sn	04 12 56.4	+3.0
	8.7nm,0.3s						
PTEO	**Sao Teotonio**	1.21	333	*e*P	Pn	04 12 39.1	+1.6
PTEO				*e*S	Sn	04 12 55.8	+1.3
PTEO				A	A	04 13 01.4	
	6.9nm,0.5s						
PTEO	**Sao Teotonio**	1.21	333	P	Pn	04 12 39.1	+1.6
PTEO				S	Sn	04 12 55.8	+1.3
	3.5nm,0.5s						
PTEO	**Sao Teotonio**	1.21	333	*e*P	Pn	04 12 39.1	+1.6
PTEO				S	Sn	04 12 55.8	+1.3
	3.5nm,0.5s						
PBEJ	**Beja**	1.57	5	*e*Sn	Sg	04 13 06.0	+2.0
PBEJ	**Beja**	1.57	5	S	Sg	04 13 06.0	+2.0
PBEJ	**Beja**	1.57	5	S	Sg	04 13 06.0	+2.0
EMIN	**Mina Concepcio**	1.70	40	P	Pg	04 12 47.0	+0.8
	0.2nm,0.1s,SNR=7.9						
EMIN				S	Sg	04 13 09.3	+1.0
	1.4nm,0.1s,SNR=10.0						
EMIN	**Mina Concepcio**	1.70	40	P	Pg	04 12 47.0	+0.8
	0.2nm,0.1s,SNR=7.9						
EMIN				S	Sg	04 13 09.3	+1.0
	1.4nm,0.1s,SNR=10.0						
ESPR	**Espera**	1.80	76	P	Pb	04 12 47.9	+0.6
	0.9nm,0.1s,SNR=7.3						
ESPR				S	Sg	04 13 10.8	-0.7
	4.3nm,0.2s,SNR=5.6						
ESPR	**Espera**	1.80	76	P	Pb	04 12 47.9	+0.6
	0.9nm,0.1s,SNR=7.3						
ESPR				S	Sg	04 13 10.8	-0.7
	4.3nm,0.2s,SNR=5.6						
PBAR	**Barrancos**	1.89	25	*e*Pn	Pg	04 12 50.0	+0.2
PBAR				*e*Sn	Sg	04 13 14.4	+0.2
PBAR				A	A	04 13 15.3	
	11nm,0.5s						
PBAR	**Barrancos**	1.89	25	P	Pg	04 12 50.0	+0.2
PBAR				S	Sg	04 13 14.4	+0.2
	11nm,0.5s						
PBAR	**Barrancos**	1.89	25	P	Pg	04 12 50.0	+0.2
PBAR				S	Sg	04 13 14.4	+0.2
	11nm,0.5s						
EVOP	**Sao Brissos**	2.06	358	*e*Pg	Pb	04 12 51.3	-0.4
EVOP				*e*Sg	Sb	04 13 16.8	-1.0
	3.2nm,0.2s						
EVO	**Evora**	2.07	1	*e*Pg	Pb	04 12 51.3	-0.5
EVO				*e*Sg	Sb	04 13 16.8	-1.1
	6.3nm,0.2s						
EVO	**Evora**	2.07	1	*e*Pn	Pb	04 12 51.8	0.0
EVO				*e*Sn	Sg	04 13 17.9	-2.1
EVO				A	A	04 13 19.1	
	7.2nm,0.1s						
EVO	**Evora**	2.07	1	P	Pn	04 12 51.8	0.0
EVO				S	Sg	04 13 17.9	-2.1
	7.2nm,0.1s						
EVO	**Evora**	2.07	1	P	Pb	04 12 51.8	0.0
EVO				S	Sg	04 13 17.9	-2.1
	7.2nm,0.1s						
PESTR	**Estremoz**	2.43	8	*e*Pn	Pb	04 12 57.0	-1.0
PESTR				*e*Sn	Sb	04 13 27.1	-1.2
PESTR	**Estremoz**	2.43	8	P	Pb	04 12 57.0	-1.0
PESTR				S	Sb	04 13 27.1	-1.2
PESTR	**Estremoz**	2.43	8	P	Pb	04 12 57.0	-1.0
PESTR				S	Sb	04 13 27.1	-1.2
EBAD	**Badajoz**	2.43	19	⇑P	Pb	04 12 57.1	-0.9
	0.4nm,0.1s,SNR=18						
EBAD				S	Sb	04 13 26.9	-1.5
	1.5nm,0.0s,SNR=5.9						
EBAD	**Badajoz**	2.43	19	P	Pb	04 12 57.1	-0.9
	0.4nm,0.1s,SNR=18						
EBAD				S	Sb	04 13 26.9	-1.5
	1.5nm,0.0s,SNR=5.9						
PMTG	**Montargil**	2.61	357	*e*Pn	Pb	04 12 59.1	-1.9
PMTG				*e*Sn	Sb	04 13 30.0	-3.5
PMTG				A	A	04 13 32.2	
	8.8nm,0.2s						
PMTG	**Montargil**	2.61	357	*e*Pn	Pb	04 12 59.1	-1.9
PMTG				*e*Sn	Sb	04 13 30.0	-3.5
	8.8nm,0.2s						
PMAFR	**Mafra**	2.68	339	*e*Pn	Pn	04 13 00.0	+2.3
PMAFR				*e*Sn	Sn	04 13 31.5	+0.8
PMAFR	**Mafra**	2.68	339	P	Pn	04 12 59.7	+2.0
	3.6nm,0.1s,SNR=12						
PMAFR				S	Sb	04 13 32.3	-3.2
	8.6nm,0.2s,SNR=5.7						
PMAFR	**Mafra**	2.68	339	P	Pn	04 12 59.7	+2.0
	3.6nm,0.1s,SNR=12						
PMAFR	**Mafra**	2.68	339	*e*Pn	Pn	04 13 00.0	+2.3
PMAFR				*e*Sn	Sn	04 13 31.5	+0.8
PMAFR				S	Sb	04 13 32.3	-3.2
	8.6nm,0.2s,SNR=5.7						
PMRV	**Marv??o**	3.01	10	*e*Pn	Pb	04 13 04.9	-2.9
PMRV				*e*Sn	Sb	04 13 41.7	-3.3
PMRV				A	A	04 13 44.7	
	4.1nm,0.5s						
PMRV	**Marv??o**	3.01	10	P	Pb	04 13 04.9	-2.9
PMRV				S	Sb	04 13 41.7	-3.3
	4.1nm,0.5s						
PMRV	**Marv??o**	3.01	10	P	Pb	04 13 04.9	-2.9
PMRV				S	Sb	04 13 41.7	-3.3
	4.1nm,0.5s						
PTOM	**Tomar**	3.17	355	*e*Pn	Pn	04 13 06.8	+2.4
PTOM				*e*Sn	Sn	04 13 43.0	+0.3
PTOM				A	A	04 13 45.6	
	5.8nm,0.2s						
PTOM	**Tomar**	3.17	355	P	Pn	04 13 06.8	+2.4
PTOM				S	Sn	04 13 43.0	+0.3
	2.9nm,0.2s						
PTOM	**Tomar**	3.17	355	P	Pn	04 13 06.8	+2.4
PTOM				S	Sn	04 13 43.0	+0.3
	2.9nm,0.2s						
ELUQ	**Luque**	3.21	69	P	Pn	04 13 05.6	+0.5
	0.1nm,0.1s,SNR=7.9						
ELUQ				S	Sn	04 13 45.0	+1.0
	0.6nm,0.1s,SNR=7.9						
ELUQ	**Luque**	3.21	69	P	Pn	04 13 05.6	+0.5
	0.1nm,0.1s,SNR=7.9						
ELUQ				S	Sn	04 13 45.0	+1.0
	0.6nm,0.1s,SNR=7.9						
EADA	**Adamuz**	3.25	57	P	Pn	04 13 07.9	+2.4
	0.1nm,0.0s,SNR=7.9						
EADA				S	Sn	04 13 46.0	+1.3

MVO	**Moncorvo**	**4.76**	**9**	P	**Pn**	**04 13 28.7**	**+2.3**
	0.2nm,0.0s,SNR=7.9						
MVO				S	**Sn**	**04 14 22.2**	**0.0**
	0.8nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**4.76**	**9**	P	**Pn**	**04 13 28.7**	**+2.3**
	0.2nm,0.0s,SNR=7.9						
MVO	**Moncorvo**	**4.76**	**9**	*e*Pn	**Pn**	**04 13 29.2**	**+2.8**
MVO				S	**Sn**	**04 14 22.2**	**0.0**
	0.8nm,0.1s,SNR=7.9						
MVO				*e*Sn	Sb	04 14 23.0	-13
POLO	**Lamas de Olo**	**4.91**	**2**	*e*Pn	**Pn**	**04 13 30.8**	**+2.4**
POLO				*e*Sn	**Sn**	**04 14 27.4**	**+1.6**
POLO	**Lamas de Olo**	**4.91**	**2**	*e*Pn	**Pn**	**04 13 30.8**	**+2.4**
POLO				*e*Sn	**Sn**	**04 14 27.4**	**+1.6**
GUD	**Guadarrama**	**5.17**	**35**	S	**Sn**	**04 14 32.9**	**+0.6**
	0.1nm,0.1s,SNR=7.9						
GUD	**Guadarrama**	**5.17**	**35**	S	**Sn**	**04 14 32.9**	**+0.6**
	0.1nm,0.1s,SNR=7.9						
PCAB	**Cabril**	**5.24**	**0**	*e*Pn	**Pn**	**04 13 35.5**	**+2.6**
PCAB				*e*Sn	**Sn**	**04 14 34.3**	**+0.4**
PCAB	**Cabril**	**5.24**	**0**	P	**Pn**	**04 13 35.5**	**+2.6**
PCAB				S	**Sn**	**04 14 34.3**	**+0.4**
PCAB	**Cabril**	**5.24**	**0**	P	**Pn**	**04 13 35.5**	**+2.6**
PCAB				S	**Sn**	**04 14 34.3**	**+0.4**
ELOB	**Lobios**	**5.40**	**360**	P	**Pn**	**04 13 37.5**	**+2.4**
	0.3nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**04 14 38.1**	**+0.2**
	0.7nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.40**	**360**	P	**Pn**	**04 13 37.5**	**+2.4**
	0.3nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**04 14 38.1**	**+0.2**
	0.7nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**5.56**	**10**	P	**Pn**	**04 13 39.8**	**+2.4**
	0.2nm,0.1s,SNR=7.9						
ECAL				S	**Sn**	**04 14 42.7**	**+0.7**
	0.3nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**5.56**	**10**	P	**Pn**	**04 13 39.8**	**+2.4**
	0.2nm,0.1s,SNR=7.9						
ECAL				S	**Sn**	**04 14 42.7**	**+0.7**
	0.3nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**5.60**	**65**	P	**Pn**	**04 13 38.9**	**+1.0**
	0.4nm,0.1s,SNR=7.9						
ETOB				S	**Sn**	**04 14 42.2**	**-0.6**
	0.4nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**5.60**	**65**	P	**Pn**	**04 13 38.9**	**+1.0**
	0.4nm,0.1s,SNR=7.9						
ETOB				S	**Sn**	**04 14 42.2**	**-0.6**
	0.4nm,0.1s,SNR=7.9						
ETOR	**Torete**	**6.39**	**45**	P	**Pn**	**04 13 51.4**	**+2.6**
	0.2nm,0.1s,SNR=7.9						
ETOR				S	**Sn**	**04 15 02.3**	**-0.1**
	2.6nm,0.1s,SNR=7.9						
SJPF	**Ste Jean**	**8.46**	**36**	*e*Pn	**Pn**	**04 14 15.3**	**-1.8**
SJPF				*e*Sn	Sn	04 15 43.9	-9.3
	0.6nm,0.3s						
ETSF	**Etsaut**	**8.63**	**40**	*e*Pn	**Pn**	**04 14 17.4**	**-2.1**
EPF	**Esparros**	**9.20**	**42**	*e*Pn	**Pn**	**04 14 25.1**	**-2.2**

IDC 22 04:17:13.3±7.3, 18°.39S×173°.97W, *h*0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/20, mbtmp3.6/3, Error ellipse: s-maj=317.3km s-min=37.5km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warrumunga Arr**	**48.69**	**259**	P	P	04 25 59.8	-0.1
	0.3nm,0.3s,baz=96,slow=7.2,SNR=19						
ASAR	**Alice Springs**	**48.73**	**254**	P	P	04 25 59.9	-0.2
	0.9nm,0.7s,baz=95,slow=7.7,SNR=9.2						
ILAR	**Eielson Array**	**85.47**	**11**	P	P	04 29 52.5	0.0
	0.2nm,0.7s,baz=214,slow=5.4,SNR=6.3						

MAN 22 04:25:07.9±2.6, 2N×126°.39E±1.4, *h*24km, mb4.6, ML3.5, MS3.4, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.00**	**230**	*e*P	Pn	04 25 25.3	-0.3
BUTP				*e*S	Sb	04 25 34.8	-3.7
MSLP	**Maasin**	**1.59**	**289**	*e*P	Pn	04 25 34.6	+0.8
PLP	**Palo**	**2.07**	**318⇑**	*e*P	Pn	04 25 40.7	+0.4
PLP				*e*S	Sn	04 26 06.9	+1.6
BUKP	**Musuan**	**2.17**	**217**	*e*P	Pn	04 25 43.0	+1.2
TBP	**Tagbilaran**	**2.50**	**272**	*e*P	Pn	04 25 47.0	+0.8
TBP				*e*S	Sn	04 26 17.5	+1.6
PAGZ	**Pagadian**	**3.46**	**240**	*e*P	Pn	04 26 00.9	+1.5
RCP	**Roxas**	**4.07**	**299⇓**	*e*P	Pn	04 26 10.1	+2.3

*DJA **22** 04:31:11.9±0.5, 4°.5S×126°.39E±1°, h14km±6km, M3.8/5, MLv3.8/5*
*IDC **22** 04:31:11.8±1.3, 4°.34S×129°.03E, h0km, mb3.8/3, mb1 3.8/5, mb1mx3.7/22, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=103.2km s-min=21.4km az=72.0*
*ISCJB **22** 04:31:12.5±0.6, 4°.35S±0°.06×129°.74E±0°.05, h33km, mb3.7/3, Error ellipse: s-maj=8.9km s-min=6.4km az=26.4*
ISC 22 04:31:14.1±0.8, 4°.37S±0°.07×129°.73E±0°.05, h35km, n12, σ1§97/15, mb3.6/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.23**	**132**	P	**Pn**	**04 31 19.6**	**-1.6**
BNDI				S	**Sn**	**04 31 25.6**	**-0.5**
MSAI	**Masohi**	**1.29**	**322**	P	**Pn**	**04 31 32.6**	**-3.1**
NLAI	**Namlea**	**2.86**	**293**	P	**Pn**	**04 31 57.0**	**-0.2**
NLAI				S	**Sn**	**04 32 32.3**	**+1.9**
FAKI	**Fak Fak**	**2.90**	**60**	P	**Pn**	**04 31 57.8**	**+0.1**
FAKI				S	**Sn**	**04 32 30.0**	**-1.4**
TLE	**Tual**	**3.25**	**113**	P	**Pn**	**04 32 04.2**	**+1.6**
FITZ	**Fitzroy Crossi**	**14.22**	**196**	Pn	**Pn**	**04 34 32.5**	**-0.6**
	0.1nm,0.3s,baz=18,slow=12,SNR=6.5						
WRA	**Warramunga Arr**	**16.12**	**164**	Pn	**Pn**	**04 34 55.6**	**-2.5**
	0.2nm,0.3s,baz=347,slow=14,SNR=8.6						
WRA				Sn	**Sn**	**04 37 52.6**	**-3.3**
	0.1nm,0.3s,baz=348,slow=21,SNR=4.1						
ASAR	**Alice Springs**	**19.60**	**169**	P	**Pn**	**04 35 42.3**	**+1.2**
	0.3nm,0.3s,baz=352,slow=11,SNR=22						
STKA	**Stephens Creek**	**29.54**	**159**	P	P	04 37 21.4	+5.8
	1.1nm,0.5s,baz=334,slow=13,SNR=2.9						
SONM	**Songino Array**	**55.88**	**341**	P	**P**	**04 40 49.3**	**+0.9**
	0.3nm,0.6s,baz=152,slow=6.5,SNR=4.3						
MKAR	**Makanchi Array**	**65.90**	**326**	P	**P**	**04 41 56.6**	**+0.1**
	0.3nm,0.5s,baz=121,slow=7.7,SNR=4.0						
TORD	**Torodi Ar. Bea**	**128.00**	**283**	PKP	**PKPdf**	**04 50 19.9**	**+2.5**
	0.3nm,0.8s,baz=48,slow=2.6,SNR=2.2						

*CSEM **22** 04:34:04.7±0.1, 38°.20N×40°.17E, h10km, MD2.9, Error ellipse: s-maj=3.9km s-min=3.0km az=40.0*
*DDA **22** 04:34:05.6, 38°.15N×40°.15E, h7km, MD2.8*
*ISCJB **22** 04:34:06.2±0.6, 38°.13N±0°.03×40°.10E±0°.04, h12km±5km, Error ellipse: s-maj=5.9km s-min=5.0km az=158.2*
*ISK **22** 04:34:06.0, 38°.11N×40°.07E, h9km, MD2.9*
ISC 22 04:34:05.6±0.9, 38°.15N±0°.03×40°.12E±0°.03, h13km±8km, n17, σ0§82/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIYA	**Diyarbakir**	**0.23**	**179**	*i* P	**Pg**	**04 34 10.3**	**-0.2**
DIYA				*i* S	**Sg**	**04 34 14.9**	**+1.0**
DIYA	**Diyarbakir**	**0.23**	**179**	*i* P	**Pg**	**04 34 10.3**	**-0.2**
DIYA				*i* S	**Sg**	**04 34 14.9**	**+1.0**
DIY	**Diyarbakir**	**0.27**	**161**	*e*PG	**Pg**	**04 34 11.4**	**+0.1**
DIY				*e*SG	**Sg**	**04 34 15.5**	**+0.4**
DIY	**Diyarbakir**	**0.27**	**161**	*e*Pg	**Pg**	**04 34 11.4**	**+0.1**
DIY				*e*Sg	**Sg**	**04 34 15.5**	**+0.4**
BEST	**Besiri**	**0.95**	**106**	*i* P	**Pg**	**04 34 24.1**	**+0.2**
BEST				*i* S	**Sb**	**04 34 36.8**	**+0.4**
BNGB	**Bing¯¶ł**	**0.95**	**28**	*e*PG	**Pn**	**04 34 25.1**	**+0.3**
BNGB				*e*SG	**Sn**	**04 34 40.3**	**+2.0**
ELZG	**Elazig**	**0.95**	**292**	*i* P	**Pg**	**04 34 23.4**	**-0.7**
ELZG				*i* S	**Sg**	**04 34 37.3**	**+0.7**
ELZG	**Elazig**	**0.95**	**292**	*i* P	**Pg**	**04 34 23.4**	**-0.7**
ELZG				*i* S	**Sg**	**04 34 37.3**	**+0.7**
MARD	**Mardin**	**0.99**	**148**	*i* P	**Pg**	**04 34 24.5**	**-0.2**
MARD				*i* S	**Sg**	**04 34 37.3**	**-0.2**
BTMT	**Batman**	**1.08**	**87**	*e*PG	**Pb**	**04 34 24.7**	**-1.6**
BTMT	**Batman**	**1.08**	**87**	*e*Pg	**Pb**	**04 34 24.7**	**-1.6**
URFA	**Urfa**	**1.25**	**236**	*e*PN	**Pn**	**04 34 29.0**	**+0.1**
URFA				*e*SN	**Sn**	**04 34 46.4**	**+0.8**
URFA	**Urfa**	**1.25**	**236**	*e*Pn	**Pn**	**04 34 29.0**	**+0.1**
URFA				*e*Sn	**Sn**	**04 34 46.4**	**+0.8**
MALT	**Malatya**	**1.34**	**277**	*e*PN	**Pn**	**04 34 30.5**	**+0.3**
MALT	**Malatya**	**1.34**	**277**	*e*Pn	**Pn**	**04 34 30.5**	**+0.3**
ERZN	**Erzincan**	**1.47**	**348**	*e*PN	**Pg**	**04 34 34.3**	**+0.5**
EZC	**Erzincan**	**1.71**	**340**	*e*Pn	**Pn**	**04 34 34.3**	**-1.0**

IDC 22 05:01:43.2±1.6, 4°.09N×126°.99E, *h*0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/24, mbtmp3.6/5, Error ellipse: s-maj=100.7km s-min=22.3km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.10**	**183**	P	P	05 06 39.9	-0.3
	1.8nm,1.0s,baz=5.7,slow=10,SNR=5.8						
WRA	**Warramunga Arr**	**24.95**	**163**	P	P	05 07 07.3	-1.3
	1.1nm,0.6s,baz=344,slow=11,SNR=9.2						
ASAR	**Alice Springs**	**28.40**	**167**	P	P	05 07 41.1	+1.5
	0.2nm,0.5s,baz=343,slow=9.1,SNR=3.4						
STKA	**Stephens Creek**	**38.38**	**160**	P	P	05 09 06.2	-0.1
	2.7nm,0.6s,baz=316,slow=14,SNR=4.7						
MKAR	**Makanchi Array**	**57.41**	**325**	P	P	05 11 33.8	+0.2
	0.2nm,0.4s,baz=122,slow=8.2,SNR=6.1						
TORD	**Torodi Ar. Bea**	**123.05**	**288**	PKP	PKPdf	05 20 42.2	-0.6
	0.2nm,0.8s,baz=53,slow=2.1,SNR=2.3						

*IDC **22** 05:10:10.4±0.9, 4°.16S×129°.98E, h0km, mb3.9/4, mb1 4.2/7, mb1mx3.9/20, mbtmp4.0/7, ML4.1/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/26, Error ellipse: s-maj=47.4km s-min=12.3km az=76.0*
*AUST **22** 05:10:11.4±0.7, 4°.08S×129°.54E, h0km, Error ellipse: s-maj=1.2km s-min=0.8km az=25.0*
*DJA **22** 05:10:14.0±0.5, 4°.5S±3°×13°.0E±1°, h5km±4km, M4.5/10, mb5.2/3, mB6.0/1, MLv4.2/10, Mw(mB)5.6/1*
*NEIC **22** 05:10:15.4±0.6, 4°.17S×129°.99E, h35km, mb4.5/3, Error ellipse: s-maj=16.3km s-min=9.2km az=63.0*
ISC 22 05:10:11.0±1.9, 4°.18S±0°.04×129°.76E±0°.03, h5km±12km, n46, σ1§82/53, mb4.0/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.38**	**157**	P	**Pn**	**05 10 22.9**	**-0.2**
BNDI				S	**Sb**	**05 10 30.5**	**+4.2**
BNDI	**Bandanaira**	**0.38**	**157**	P	**Pn**	**05 10 22.9**	**-0.2**
	baz=0.6,SNR=122						
MSAI	**Masohi**	**1.17**	**315**	P	**Pb**	**05 10 33.9**	**+0.3**
MSAI				S	**Sb**	**05 10 49.6**	**+0.6**
AAI	**Ambon**	**1.63**	**287**	P	**Pn**	**05 10 40.2**	**-0.1**
AAI				S	**Sg**	**05 11 03.6**	**+0.1**
AAI	**Ambon**	**1.63**	**287**	P	**Pn**	**05 10 40.2**	**-0.1**
	baz=1.4,SNR=13						
AAI				S	**Sn**	**05 10 59.6**	**-2.1**
	baz=1.4,SNR=8.2						
FAKI	**Fak Fak**	**2.78**	**63**	P	**Pb**	**05 10 59.0**	**-2.2**
FAKI				S	**Sb**	**05 11 34.8**	**-0.9**
FAKI	**Fak Fak**	**2.78**	**63**	P	**Pb**	**05 10 59.0**	**-2.2**
	baz=2.9,SNR=37						
NLAI	**Namlea**	**2.81**	**289**	P	**Pn**	**05 10 58.5**	**+2.0**
TLE	**Tual**	**3.31**	**116**	P	**Pb**	**05 11 07.4**	**-2.8**
TLE				S	**Sb**	**05 11 50.4**	**-0.4**
TLE	**Tual**	**3.31**	**116**	P	**Pb**	**05 11 08.8**	**-1.4**
	baz=3.5,SNR=5.2						
TLE				S	**Sb**	**05 11 50.9**	**+0.1**
	baz=3.5,SNR=4.5						
RKPI	**Ransiki, Papua**	**5.15**	**59**	P	**Pn**	**05 11 31.5**	**+2.7**
	250nm,0.5s,15μm1.8nm						
RKPI				S	**Sn**	**05 12 31.4**	**+2.8**
	250nm,0.5s,15μm1.8nm						
TNTI	**Ternate**	**5.46**	**334**	P	**Pn**	**05 11 34.6**	**+1.5**
	70nm,0.7s,0.3nm						
SRPI	**Serui, Papua**	**6.87**	**71**	P	**Pn**	**05 11 55.1**	**+2.7**
LUWI	**Luwuk**	**7.64**	**294**	S	**Sb**	**05 13 52.6**	**-2.8**
	baz=7.4,SNR=3.5						
MTN	**Manton Dam**	**8.72**	**171**	P	Pn	05 12 21.7	+3.8
	baz=8.9,SNR=16						
KDU	**Kakadu**	**8.87**	**163**	P	**Pn**	**05 12 21.8**	**+1.9**
	baz=9.1,SNR=17						
KAPI	**Kappang**	**10.01**	**265**	*e*Pn	Pn	05 12 39.4	+3.9
FITZ	**Fitzroy Crossi**	**14.42**	**196**	*e*Pn	**Pn**	**05 13 37.2**	**+1.4**
FITZ	**Fitzroy Crossi**	**14.42**	**196**	Pn	**Pn**	**05 13 35.9**	**+0.1**
	0.3nm,0.3s,baz=13,slow=6.5,SNR=13						
FITZ				LR	LR	05 19 02.3	
	comp=Z,81nm,21.5s,baz=8.9,slow=37						
FITZ	**Fitzroy Crossi**	**14.42**	**196**	P	**Pn**	**05 13 37.3**	**+1.4**
	baz=14,SNR=18						
WRAB	**Tennant Creek**	**16.29**	**164**	*e*Pn	**Pn**	**05 14 00.5**	**-0.2**
	13nm,1.1s						
WRA	**Warramunga Arr**	**16.30**	**164**	Pn	**Pn**	**05 13 59.5**	**-1.3**
WRA				Sn	**Sn**	**05 16 57.4**	**-4.6**
WRA	**Warramunga Arr**	**16.30**	**164**	Pn	**Pn**	**05 13 59.5**	**-1.3**
	0.6nm,0.3s,baz=349,slow=13,SNR=22						
WRA				Sn	**Sn**	**05 16 57.4**	**-4.6**
	0.3nm,0.3s,baz=354,slow=22,SNR=4.2						
COEN	**Coen**	**16.42**	**127**	*e*Pn	**Pn**	**05 14 00.8**	**-1.6**
COEN	**Coen**	**16.42**	**127**	P	**Pn**	**05 14 03.3**	**+1.0**
	baz=17,SNR=9.1						
QIS	**Mount Isa**	**18.90**	**150**	P	**Pn**	**05 14 34.3**	**+1.2**
	baz=19,SNR=5.9						
AS31	**Alice Springs**	**19.79**	**169**	*e*P	**Pn**	**05 14 44.8**	**+1.0**
ASAR	**Alice Springs**	**19.79**	**169**	P	**Pn**	**05 14 44.0**	**+0.3**
ASAR				S	**S**	**05 18 25.7**	**-0.1**
ASAR	**Alice Springs**	**19.79**	**169**	P	**Pn**	**05 14 44.0**	**+0.3**
	1.7nm,0.3s,baz=352,slow=10,SNR=93						
ASAR				S	**S**	**05 18 25.7**	**-0.1**
	0.1nm,0.3s,baz=350,slow=19,SNR=5.8						
CTAO	**Charters Tower**	**22.55**	**136**	*e*P	**P**	**05 15 09.7**	**-2.5**
	50nm,1.0s						
PATS	**Pohnpei**	**30.53**	**69**	S	S	05 21 52.8	+25
	baz=31,SNR=3.0						
CMAR	**Chiang Mai Arr**	**37.78**	**307**	P	**P**	**05 17 30.7**	**+2.2**
CMAR	**Chiang Mai Arr**	**37.78**	**307**	P	**P**	**05 17 30.7**	**+2.2**
	1.0nm,0.4s,baz=129,slow=7.3,SNR=3.8						
MJAR	**Matsushiro Arr**	**41.27**	**10**	P	**P**	**05 17 56.6**	**-0.7**
MJAR	**Matsushiro Arr**	**41.27**	**10**	P	**P**	**05 17 56.6**	**-0.7**
	1.4nm,0.7s,baz=182,slow=9.5,SNR=3.2						
SONM	**Songino Array**	**55.70**	**341**	P	**P**	**05 19 47.9**	**-0.6**
SONM	**Songino Array**	**55.70**	**341**	P	**P**	**05 19 47.9**	**-0.6**
	1.0nm,1.0s,baz=150,slow=5.8,SNR=5.8						
NIUE	**Niue**	**60.62**	**109**	P	P	05 20 28.2	+4.8
	baz=61,SNR=3.8						
MKAR	**Makanchi Array**	**65.75**	**326**	P	**P**	**05 20 57.7**	**+0.8**
MKAR	**Makanchi Array**	**65.75**	**326**	P	**P**	**05 20 57.7**	**+0.8**
	0.7nm,0.5s,baz=116,slow=8.7,SNR=10						
KURK	**Kurchatov**	**70.00**	**328**	*e*P	**P**	**05 21 24.1**	**+0.6**
	5.9nm,1.0s						
AKH	**Akhalkalaki**	**89.93**	**311**	P	P	05 23 17.4	+5.7
TORD	**Torodi Ar. Bea**	**127.97**	**283**	PKP	**PKPdf**	**05 29 19.2**	**+0.1**
TORD	**Torodi Ar. Bea**	**127.97**	**283**	PKP	**PKPdf**	**05 29 19.2**	**+0.1**
	0.3nm,0.9s,baz=100,slow=1.6,SNR=2.6						
LPAZ	**La Paz**	**153.05**	**139**	PKPbc	**PKPbc**	**05 30 12.7**	**+1.2**
LPAZ	**La Paz**	**153.05**	**139**	PKPbc	**PKPbc**	**05 30 12.7**	**+1.2**
	0.3nm,0.4s,baz=333,slow=2.3,SNR=3.8						

*IDC **22** 05:11:07.7±1.3, 24°.56N×122°.52E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, Error ellipse: s-maj=64.9km s-min=25.5km az=66.0*
*ISCJB **22** 05:11:15.2±0.3, 24°.53N±0°.02×122°.19E±0°.02, h56km±4km, mb3.4/4, Error ellipse: s-maj=4.1km s-min=2.8km az=165.7*
*JMA **22** 05:11:15.8±0.2, 24°.55N×122°.21E, h58km, M3.3*
*TAP **22** 05:11:15.5, 24°.51N×122°.14E, h51km, ML3.9, C*
ISC 22 05:11:15.2±0.9, 24°.50N±0°.03×122°.19E±0°.02, h48km±7km, n58, σ1§21/99, mb3.5/4, 12C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.33**	**290⇑**	*i* P	**Pn**	**05 11 24.7**	**+0.3**
	baz=290						
TWC				S	**Sn**	**05 11 31.0**	**+0.1**
	baz=290						
ENA	**Nanau**	**0.41**	**260⇓**	*i* P	**Pn**	**05 11 25.7**	**+0.4**
	baz=256						
ENA				S	**Sn**	**05 11 33.5**	**+1.0**
	baz=256						
ILA	**Ilan**	**0.48**	**304⇑**	*i* P	**Pn**	**05 11 26.7**	**+0.6**
	baz=309						
ILA				*e*S	**Sn**	**05 11 34.4**	**+0.6**
	baz=309						
TWE	**Neicheng**	**0.52**	**295⇑**	*i* P	**Pn**	**05 11 27.1**	**+0.5**
	baz=299						
TWE				*e*S	**Sn**	**05 11 35.4**	**+0.7**
	baz=299						
TWB1	**Santiao Chiao**	**0.54**	**341⇑**	*i* P	**Pn**	**05 11 27.0**	**+0.2**
	baz=345						
TWB1				*i* S	**Sn**	**05 11 34.8**	**-0.4**
	baz=345						
ENTT	**Nioudou**	**0.58**	**284⇑**	*i* P	**Pn**	**05 11 28.2**	**+0.8**
	baz=289						
ENTT				S	**Sn**	**05 11 37.3**	**+1.2**
	baz=289						
NWF	**Wu-fen Shan**	**0.68**	**327⇑**	*i* P	**Pn**	**05 11 28.9**	**+0.3**
	baz=329						
NWF				S	**Sn**	**05 11 38.3**	**-0.1**
	baz=329						
TWD	**Chiawan**	**0.68**	**232**	*e*P	**Pn**	**05 11 28.7**	**+0.1**
	baz=219						
TWD				*e*S	**Sn**	**05 11 38.8**	**+0.5**
	baz=219						
HWA	**Hwalien**	**0.74**	**226**	*e*P	**Pn**	**05 11 29.5**	**+0.1**
	baz=221						
NNS	**Nan Shan**	**0.74**	**266⇑**	*i* P	**Pn**	**05 11 30.0**	**+0.5**
	baz=264						
NNS				*e*S	**Sn**	**05 11 40.6**	**+0.7**
	baz=264						
YOJ	**Yonaguni jima**	**0.75**	**93**	P	**Pn**	**05 11 30.4**	**+0.9**
YOJ				*e*S	**Sn**	**05 11 41.0**	**+1.0**
NSK	**Sanguang**	**0.77**	**283⇑**	*i* P	**Pn**	**05 11 30.7**	**+0.8**
	baz=283						
NSK				*i* S	**Sn**	**05 11 41.3**	**+0.7**
	baz=283						
TAP1	**Taipei**	**0.81**	**312**	P	**Pn**	**05 11 30.5**	**+0.2**
	baz=324						
TAP1				S	**Sn**	**05 11 41.0**	**-0.2**
	baz=324						
TAP	**Taipei**	**0.82**	**311**	*e*P	**Pn**	**05 11 30.4**	**-0.1**
	baz=324						
TAP				*e*S	**Sn**	**05 11 41.5**	**-0.1**
	baz=324						
WHF	**Hehuan Shan**	**0.91**	**247**	P	**Pn**	**05 11 32.2**	**+0.1**
	baz=245						
WHF				*e*S	**Sn**	**05 11 44.3**	**-0.1**
	baz=245						
TWS1	**Kuangyinshan**	**0.92**	**311⇑**	*i* P	**Pn**	**05 11 32.2**	**+0.4**
	baz=322						
TWS1				S	**Sn**	**05 11 44.2**	**+0.2**
	baz=322						
TWY	**Chenhua**	**0.94**	**326**	⇑P	**Pn**	**05 11 32.3**	**+0.2**
	baz=327						
TWY				*e*S	**Sn**	**05 11 44.7**	**+0.2**
	baz=327						
TWT	**Tachien**	**0.95**	**255**	⇑P	**Pn**	**05 11 33.4**	**+1.0**
	baz=246						
TWT				S	**Sn**	**05 11 45.7**	**+0.7**
	baz=246						
ESL	**Shilin**	**0.97**	**225**	*e*P	**Pn**	**05 11 32.2**	**-0.2**
	baz=232						
NCU	**National Centr**	**1.02**	**298**	P	**Pn**	**05 11 33.9**	**+0.8**
	baz=298						
NCU				*e*S	**Sn**	**05 11 47.9**	**+1.4**
	baz=298						
NSTT	**Nanjuang**	**1.09**	**277**	P	**Pn**	**05 11 35.0**	**+1.0**
	baz=286						
NSTT				*e*S	**Sn**	**05 11 49.2**	**+1.2**
	baz=286						
PCYT	**Pengchaiyu**	**1.13**	**355**	P	**Pn**	**05 11 35.0**	**+0.3**
	baz=350						
HSN	**Hsinchu**	**1.15**	**286**	*e*P	**Pn**	**05 11 35.5**	**+0.7**
	baz=287						
HSN				*e*S	**Sn**	**05 11 50.4**	**+0.9**
	baz=287						
EHY	**Hungye**	**1.26**	**219**	*e*P	**Pn**	**05 11 35.7**	**-0.8**
	baz=225						
TWQ1	**Liyutan**	**1.30**	**264**	*e*P	**Pn**	**05 11 38.1**	**+1.2**
	baz=262						
TWQ1				*e*S	**Sn**	**05 11 54.7**	**+1.6**
	baz=262						
NSY	**Sanyi**	**1.30**	**267**	*e*P	**Pn**	**05 11 38.5**	**+1.5**
	baz=266						
NSY				*e*S	**Sn**	**05 11 55.6**	**+2.3**
	baz=266						
SMLT	**Sun Moon Lake**	**1.32**	**243**	*e*P	**Pn**	**05 11 38.4**	**+1.0**
	baz=231						
SMLT				*e*S	**Sn**	**05 11 55.6**	**+1.7**
	baz=231						
TYC	**Yuchr**	**1.35**	**244**	⇑P	**Pn**	**05 11 38.7**	**+1.1**
	baz=234						
TYC				S	**Sn**	**05 11 55.8**	**+1.5**
	baz=234						
TWF1	**Yuli**	**1.40**	**216**	*e*P	**Pn**	**05 11 37.8**	**-0.6**
	baz=222						
IRIF	**Iriomote-Funau**	**1.42**	**96**	P	**Pn**	**05 11 39.2**	**+0.7**
IRIF				*e*S	**Sn**	**05 11 57.5**	**+1.5**
TCU	**Taichung**	**1.42**	**256**	*e*P	**Pn**	**05 11 39.8**	**+1.2**
	baz=253						
WNT	**Mingjian**	**1.50**	**246**	*e*P	**Pn**	**05 11 40.5**	**+0.8**
	baz=244						
WNT				*e*S	**Sn**	**05 12 00.7**	**+2.5**
	baz=244						
HATJ	**Hateruma jima**	**1.54**	**106**	P	**Pn**	**05 11 41.5**	**+1.3**
CHKT	**Chengkung**	**1.58**	**209**	*e*P	**Pn**	**05 11 40.0**	**-0.8**
	baz=195						
CHKT				*e*S	**Sn**	**05 11 57.2**	**-2.9**
	baz=195						
ALS	**Alishan**	**1.60**	**232**	*e*P	**Pn**	**05 11 42.6**	**+1.3**
	baz=223						
ALS				*e*S	**Sn**	**05 12 02.3**	**+1.3**
	baz=223						
CHN5	**Tsauling**	**1.64**	**237**	*e*P	**Pn**	**

0.2nm,0.5s,baz=308,slow=5.3,SNR=6.2

NIED ***22*** *05:29:00,27˚00N×129˚90E,h5km,Mw3.9 Best double couple: M₀8.72000×10¹⁴ NP1:ϕ=228.00000°,δ51.00000°, λ-82.00000°. NP2:ϕ=36.00000°,δ39.00000°, λ-100.00000°.*

IDC ***22*** *05:29:44.9±0.8,26˚99N×129˚91E,h0km,mb3.8/8, mb1 4.0/9,mb1mx3.8/25,mbtmp3.8/9,ML3.6/1,Error ellipse: s-maj=42.9km s-min=17.3km az=73.0*

ISCJB ***22*** *05:29:46.2±1.4,27˚03N±0˚04×129˚95E±0˚05, h25km±11km,mb3.7/9,Error ellipse: s-maj=6.8km s-min=5.9km az=179.7*

JMA ***22*** *05:29:47.0±0.1,27˚00N×129˚94E,h49km,M3.7*

ISC 22 05:29:45.2±1.8,27˚02N±0˚04×129˚93E±0˚04,h7km±11km, n22,σ1°21/28,mb3.9/9,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
JTK	**Tokunoshima**	**1.16**	**311**	P		**Pg**		**05 30 07.3**	**-0.1**
JTK					eS	**Sg**		**05 30 22.4**	**-0.1**
JZK	**Kikaishima**	**1.29**	**1**	P		**Pg**		**05 30 10.2**	**+0.3**
JAMN	**Amaminishikomi**	**1.39**	**331**	P		**Pn**		**05 30 10.6**	**-0.4**
JAMN					eS	**Sb**		**05 30 27.6**	**-1.9**
JAM	**Amami Oshima**	**1.42**	**348**	P		**Pn**		**05 30 10.8**	**-0.5**
JAM					S	**Sb**		**05 30 28.4**	**-1.8**
JOW	**Kunigami**	**1.49**	**263**	P		**Pn**		**05 30 12.3**	**-0.1**
JOW					eS	**Sn**		**05 30 30.8**	**-1.4**
JMZ	**Minamidaito 2**	**1.66**	**136**	P		**Pn**		**05 30 13.8**	**-0.9**
JMZ					eS	**Sn**		**05 30 34.2**	**-2.1**
JIH	**Iheya**	**1.75**	**271**	P		**Pn**		**05 30 16.2**	**+0.2**
JJT2	**Tamagusuku 2**	**2.15**	**246**	eS		**Sn**		**05 30 47.3**	**-0.9**
JAGN	**Aguni-jima**	**2.44**	**261**	P		**Pn**		**05 30 25.7**	**+0.2**
JNN	**Nakanoshima**	**2.81**	**359**	P		**Pn**		**05 30 30.8**	**+0.2**
JKE	**Kume jima 2**	**2.90**	**257**	P		**Pn**		**05 30 31.5**	**-0.2**
JTN	**Tanegashima 3**	**3.74**	**14**	P		**Pn**		**05 30 43.4**	**+0.1**
JTN					eS	**Sn**		**05 31 25.8**	**-1.7**
JNU	**Nakatsue**	**6.14**	**7**	Pn		**Pn**		**05 31 17.5**	**+1.2**
	1.5nm,0.3s,baz=217,slow=6.6,SNR=5.0								
SONM	**Songino Array**	**27.76**	**325**	P		**P**		**05 35 35.9**	**+1.4**
	0.4nm,0.6s,baz=132,slow=8.8,SNR=4.6								
MKAR	**Makanchi Array**	**42.16**	**311**	P		**P**		**05 37 37.6**	**-0.7**
	0.4nm,0.8s,baz=91,slow=10,SNR=3.6								
WRA	**Warramunga Arr**	**46.88**	**174**	P		**P**		**05 38 16.2**	**+0.1**
	1.3nm,0.7s,baz=354,slow=8.4,SNR=9.0								
CTA	**Charters Tower**	**49.43**	**160**	P		**P**		**05 38 36.8**	**+0.8**
	2.9nm,0.6s,baz=323,slow=5.1,SNR=3.4								
ASAR	**Alice Springs**	**50.53**	**175**	P		**P**		**05 38 44.9**	**+0.6**
	0.8nm,0.6s,baz=11,slow=10,SNR=11								
KBZ	**Khabaz**	**69.84**	**310**	P		**P**		**05 40 58.0**	**+1.5**
	2.2nm,0.9s,baz=52,slow=19,SNR=4.2								
YKA	**Yellowknife Ar**	**77.16**	**25**	P		**P**		**05 41 40.0**	**+0.8**
	0.1nm,0.6s,baz=297,slow=5.0,SNR=3.8								
BRTR	**Keskin Array B**	**77.75**	**308**	P		**P**		**05 41 40.7**	**-2.5**
	0.4nm,0.7s,baz=61,slow=3.6,SNR=2.7								
GERES	**GERESS Array B**	**85.48**	**324**	P		**P**		**05 42 25.5**	**+1.7**
	0.4nm,0.2s,baz=45,slow=4.4,SNR=3.6								

IDC 22 05:30:42.0±1.9,3˚99N×127˚13E,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.4/24,mbtmp3.4/4,Error ellipse: s-maj=103.7km s-min=23.8km az=70.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
FITZ	**Fitzroy Crossi**	**22.00**	**184**	P		**P**		**05 35 38.6**	**+0.6**
	1.0nm,1.0s,baz=13,slow=9.6,SNR=3.4								
WRA	**Warramunga Ar**	**24.82**	**164**	P		P		05 36 07.1	+1.0
	2.9nm,0.8s,baz=343,slow=11,SNR=20								
ASAR	**Alice Springs**	**28.27**	**167**	P		P		05 36 35.7	-1.6
	0.2nm,0.5s,baz=337,slow=8.3,SNR=2.8								
MKAR	**Makanchi Array**	**57.57**	**325**	P		P		05 40 33.6	0.0
	0.1nm,0.4s,baz=116,slow=8.2,SNR=3.6								

IDC 22 05:47:45.5±1.8,12˚80S×167˚83E,h0km,mb3.6/4, mb1 3.9/5,mb1mx3.7/20,mbtmp3.7/5,ML3.7/1,Error ellipse: s-maj=58.9km s-min=28.8km az=127.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
DZM	**Mont Dzumac**	**9.31**	**188**	Pn		Pn		05 50 00.4	-0.9
	0.7nm,0.3s,baz=356,slow=15,SNR=7.1								
STKA	**Stephens Creek**	**30.67**	**227**	P		P		05 54 03.2	+1.2
	1.2nm,0.6s,baz=4.8,slow=12,SNR=3.1								
WRA	**Warramunga Arr**	**32.86**	**253**	P		P		05 54 20.8	-0.7
	0.2nm,0.6s,baz=85,slow=8.4,SNR=3.6								
ASAR	**Alice Springs**	**33.90**	**247**	P		P		05 54 30.4	-0.2
	0.5nm,0.5s,baz=75,slow=9.1,SNR=12								
ILAR	**Eielson Array**	**84.53**	**18**	P		P		06 00 20.2	0.0
	0.4nm,0.9s,baz=231,slow=5.7,SNR=2.5								

BJI ***22*** *05:53:23.3,52˚50N×169˚40W,h10km,mB5.3/3,mb4.6/7, Ms5.2/2,Ms7 4.8/2*

IDC ***22*** *05:53:23.9±0.7,52˚22N×169˚35W,h0km,mb4.2/19, mb1 4.4/22,mb1mx4.3/29,mbtmp4.2/22,ML4.1/3,MS3.3/6, Ms1 3.3/6,ms1mx3.0/40,Error ellipse: s-maj=22.6km s-min=11.9km az=177.0*

MOS ***22*** *05:53:27.9±0.9,52˚32N×169˚40W,h33km,mb4.7/25, Error ellipse: s-maj=12.2km s-min=7.4km az=91.0*

ISCJB ***22*** *05:53:29.1±0.5,52˚31N±0˚04×169˚37W±0˚03,h43km±4km, mb4.4/64,MS3.2/6,Error ellipse: s-maj=6.8km s-min=3.3km az=179.0*

NEIC ***22*** *05:53:30.6,52˚54N×169˚51W,h19km,mb4.5/36,After AEIC.*

ISC 22 05:53:30.8±0.7,52˚33N±0˚08×169˚38W±0˚05,h44km±6km, h43km:pP-P,n384,σ0˚78/399,mb4.4/64,MS3.2/6,93C-95D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
NIKO	**Nikolski**	**0.72**	**26**	P		**Pn**		**05 53 42.2**	**-2.4**
NIKO				S		**Sn**		**05 53 51.0**	**-3.5**
OKSP	**Okmok Steeple**	**1.14**	**35**	P		**Pn**		**05 53 49.5**	**-0.8**
OKSO	**Okmok South**	**1.27**	**35**	P		**Pn**		**05 53 51.1**	**-1.0**
OKSO				S		**Sn**		**05 54 05.7**	**-2.2**
OKCE	**Okmok Cone E**	**1.32**	**33**	P		**Pn**		**05 53 52.5**	**-0.3**
OKCE				S		**Sn**		**05 54 08.8**	**-0.4**
OKFG	**Magazine Ridge**	**1.40**	**39**	P		**Pn**		**05 53 52.5**	**-1.4**
MREP	**Makushin Rep't**	**2.17**	**46**	P		**Pn**		**05 54 04.6**	**+0.1**
MCIR	**Makushin Cirqu**	**2.21**	**42**	P		**Pn**		**05 54 05.0**	**+0.1**
UNV	**Unalaska Valle**	**2.31**	**48**	P		**Pn**		**05 54 06.2**	**0.0**
UNV				S		**Sn**		**05 54 35.4**	**+2.1**
MTBL	**Makushin Table**	**2.31**	**44**	P		**Pn**		**05 54 06.8**	**+0.4**
AKRB	**Akutan Reef Bi**	**2.69**	**46**	P		**Pn**		**05 54 12.3**	**+0.8**
AKGG	**Akutan Green G**	**2.77**	**46**	P		**Pn**		**05 54 13.4**	**+0.9**
KOSE	**Korovin Southe**	**2.87**	**272**	P		**Pn**		**05 54 15.1**	**+1.2**
KOFP	**Korovin Flat P**	**2.90**	**271**	P		**Pn**		**05 54 15.6**	**+1.1**
ATKA	**Atka Island**	**2.96**	**269**	P		**Pn**		**05 54 14.7**	**-0.5**
KOWE	**Korovin West**	**2.99**	**273**	P		**Pn**		**05 54 15.9**	**+0.2**
SDPT	**Sand Point**	**6.08**	**57**	P		**Pn**		**05 54 58.5**	**+0.6**
CESW	**Semis' Southwe**	**6.83**	**271**	P		**Pn**		**05 55 09.7**	**+1.4**
AMKA	**Amchitka**	**7.08**	**267**	P		**Pn**		**05 55 11.9**	**+0.2**
LSPA	**Little Sitkin**	**7.43**	**272**	P		**Pn**		**05 55 18.7**	**+2.2**
FX1	**Attu Island--F**	**10.63**	**280**	*e*Pn		**Pn**		**05 56 00.7**	**+0.3**
FX1	**Attu Island--F**	**10.63**	**280**	Pn		**Pn**		**05 55 59.8**	**-0.6**
	2.8nm,0.3s,baz=246,slow=18,SNR=5.9								
KDAK	**Kodiak Island**	**11.06**	**54**	Pn		**Pn**		**05 56 03.1**	**-3.0**
KDAK	**Kodiak Island**	**11.06**	**54**	Pn		**Pn**		**05 56 03.1**	**-3.0**
	0.6nm,0.3s,baz=279,slow=20,SNR=9.7								
SEW	**Seward**	**13.50**	**47**	*e*Pn		**Pn**		**05 56 37.6**	**-1.9**
PPLA	**Purkeypile**	**13.98**	**34**	*e*Pn		**Pn**		**05 56 46.0**	**-0.1**
SML	**Sawmill**	**14.80**	**42**	P		**Pn**		**05 56 56.1**	**-0.8**
SML	**Sawmill**	**14.80**	**42**	Pn		**Pn**		**05 56 56.1**	**-0.8**
BMRM	**Bremner River**	**16.05**	**48**	*e*Pn		**Pn**		**05 57 10.7**	**-2.4**
	17nm,1.1s								
ILAR	**Eielson Array**	**16.99**	**34**	P		**Pn**		**05 57 22.6**	**-2.3**
ILAR					PcP	**PcP**		**06 02 08.6**	**+0.1**
ILAR	**Eielson Array**	**16.99**	**34**	P		**Pn**		**05 57 22.6**	**-2.3**
	0.1nm,0.3s,baz=216,slow=9.5,SNR=12								
ILAR					PcP	**PcP**		**06 02 08.6**	**+0.1**
	0.0nm,0.3s,baz=261,slow=2.8,SNR=4.9								
COLD	**Coldfoot**	**17.65**	**25**	*e*Pn		**P**		**05 57 33.1**	**-0.5**
EGAK	**Eagle**	**19.07**	**38**	*e*P		**P**		**05 57 48.6**	**-0.6**
	3.7nm,0.8s								
BILL	**Bilibino**	**19.63**	**333**	*i* P		**Pn**		**05 58 00.1**	**+3.2**
BILL					pmax	pmax			
	comp=Z,64nm,1.3s								
PEA0B	**Petropavlovsk-**	**19.87**	**285**	*e*P		**P**		**05 57 58.0**	**+0.1**
PETK	**Petropavlovsk-**	**19.87**	**285**	P		**P**		**05 57 57.7**	**-0.2**
PETK	**Petropavlovsk-**	**19.87**	**285**	P		**P**		**05 57 57.7**	**-0.2**
PETK	**Petropavlovsk-**	**19.87**	**285**	P		**P**		**05 57 57.7**	**-0.2**
	comp=Z,3.6nm,0.3s,baz=93,slow=13,SNR=22								
SKAG	**Skagway**	**20.20**	**56**	*e*P		Pn		05 58 02.4	-1.2
	comp=Z,13nm,0.8s								
SEY	**Seymchan**	**22.69**	**313**	*i* P		**P**		**05 58 27.8**	**-0.4**
DLBC	**Dease Lake**	**22.91**	**59**	P		**P**		**05 58 33.1**	**+2.5**
DLBC	**Dease Lake**	**22.91**	**59**	P		**P**		**05 58 33.1**	**+2.5**
	comp=Z,3.1nm,1.0s,baz=280,slow=9.3,SNR=4.5								
DLBC					LR	LR		06 07 29.8	
	comp=Z,64nm,19.6s,baz=327,slow=37								
YKW3	**Yellowknife Ar**	**30.26**	**49**	*e*P		**P**		**05 59 36.4**	**-0.6**
YKA	**Yellowknife Ar**	**30.27**	**49**	P		**P**		**05 59 37.6**	**+0.4**
YKA					PcP	**PcP**		**06 02 36.8**	**+0.3**
YKA					S	**S**		**06 04 33.1**	**-0.5**
YKA	**Yellowknife Ar**	**30.27**	**49**	P		**P**		**05 59 37.6**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=276,slow=9.0,SNR=35								
YKA					PcP	**PcP**		**06 02 36.8**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=277,slow=2.0,SNR=5.3								
YKA					S	**S**		**06 04 33.1**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=275,slow=22,SNR=5.9								
NEW	**Newport**	**33.02**	**76**	*e*P		**P**		**06 00 02.1**	**+0.5**
	comp=Z,5.0nm,1.0s								
NEW					*e*pP	**pP**		**06 00 15.0**	**+1.6**
NEW	**Newport**	**33.02**	**76**	⇑P		**P**		**06 00 01.9**	**+0.3**
	baz=33								
C12B	**Naegeli Ranch,**	**34.26**	**76**	⇑P		**P**		**06 00 12.8**	**+0.4**
	baz=34								
BSMT	**Bassoo Peak**	**34.60**	**75**	*e*P		**P**		**06 00 15.6**	**+0.1**
D12A	**Red Ives Fores**	**34.65**	**77**	⇑P		**P**		**06 00 15.8**	**0.0**
	baz=34								
C13A	**Hot Springs**	**34.81**	**75**	⇑P		**P**		**06 00 17.3**	**+0.1**
	baz=35								
A14A	**Double T Ranch**	**34.89**	**73**	⇑P		**P**		**06 00 17.9**	**0.0**
	baz=35,SNR=5.8								
C14A	**Swan Lake**	**35.26**	**75**	⇑P		**P**		**06 00 20.5**	**-0.5**
	baz=35								
A15A	**Johnson Ranch,**	**35.29**	**72**	⇑P		**P**		**06 00 20.9**	**-0.4**
	baz=35								
F12A	**Elk City**	**35.36**	**79**	⇑P		**P**		**06 00 21.9**	**0.0**
	baz=35								
MSO	**Missoula**	**35.60**	**76**	*e*P		**P**		**06 00 24.0**	**0.0**
	comp=Z,6.6nm,1.4s								
MSO	**Missoula**	**35.60**	**76**	⇓P		**P**		**06 00 24.4**	**+0.4**
	baz=36								
E13A	**Victor**	**35.65**	**77**	⇓P		**P**		**06 00 24.4**	**0.0**
	baz=36								
B15A	**Bradely Ranch,**	**35.70**	**73**	⇓P		**P**		**06 00 24.5**	**-0.3**
	baz=36								
D14A	**Greenough**	**35.74**	**76**	⇑P		**P**		**06 00 24.8**	**-0.3**
	baz=36,SNR=5.5								
F13A	**Darby**	**35.90**	**78**	⇓P		**P**		**06 00 27.2**	**+0.6**
	baz=36								
C15A	**Salmond Ranch,**	**35.93**	**74**	⇓P		**P**		**06 00 27.1**	**+0.2**
	baz=36,SNR=7.0								
A16A	**West Butte Ran**	**35.97**	**72**	⇑P		**P**		**06 00 26.8**	**-0.3**
	baz=36								
E14A	**Clinton**	**36.08**	**77**	⇓P		**P**		**06 00 28.2**	**+0.1**
	baz=36								
H12A	**Diamond D Ranc**	**36.23**	**80**	⇓P		**P**		**06 00 29.6**	**+0.2**
	baz=36								
G13A	**Cobalt**	**36.32**	**79**	⇓P		**P**		**06 00 30.3**	**+0.1**
	baz=36								
D15A	**Lincoln**	**36.34**	**75**	⇓P		**P**		**06 00 29.9**	**-0.4**
	baz=36								
C16A	**Fuhringer Ranc**	**36.43**	**74**	⇓P		**P**		**06 00 31.0**	**0.0**
	baz=36								
I12A	**Atlanta**	**36.47**	**81**	⇑P		**P**		**06 00 31.6**	**0.0**
	baz=36								
A17A	**Triple J Farms**	**36.49**	**71**	⇑P		**P**		**06 00 30.8**	**-0.7**
	baz=36								
E15A	**Deer Lodge**	**36.58**	**76**	⇓P		**P**		**06 00 31.8**	**-0.6**
	baz=36								
H13A	**Challis**	**36.59**	**80**	⇑P		**P**		**06 00 32.4**	**-0.1**
	baz=36								
G14A	**Jackson**	**36.70**	**78**	⇓P		**P**		**06 00 33.3**	**-0.2**
	baz=37								
B17A	**L&G Farms, Che**	**36.74**	**72**	⇓P		**P**		**06 00 33.2**	**-0.5**
	baz=37								
D16A	**Dana Ranch, Ca**	**36.92**	**75**	⇓P		**P**		**06 00 34.7**	**-0.6**
	baz=37								
F15A	**Butte**	**36.97**	**77**	⇑P		**P**		**06 00 35.5**	**-0.3**
	baz=37								
A18A	**Metzger Ranch,**	**37.00**	**71**	⇓P		**P**		**06 00 34.9**	**-0.8**
	baz=37								
I13A	**Wildhorse Cree**	**37.02**	**81**	⇓P		**P**		**06 00 36.5**	**+0.3**
	baz=37								
HLID	**Hailey**	**37.03**	**81**	*e*P		**P**		**06 00 36.1**	**-0.2**
	comp=Z,2.4nm,0.9s								
HLID					*e*pP	**pP**		**06 00 48.5**	**+0.3**
HLID	**Hailey**	**37.03**	**81**	⇓P		**P**		**06 00 36.6**	**+0.3**
	baz=37								
C17A	**Wharram Farm,**	**37.09**	**73**	⇓P		**P**		**06 00 36.1**	**-0.5**
	baz=37								
H14A	**Leadore**	**37.09**	**79**	⇓P		**P**		**06 00 37.1**	**+0.3**
	baz=37								
E16A	**East Helena**	**37.10**	**75**	⇓P		**P**		**06 00 36.8**	**0.0**
	baz=37								
J13A	**Cove Ranch, Pi**	**37.27**	**81**	⇓P		**P**		**06 00 38.8**	**+0.6**
	baz=37								
B18A	**Beardsley Farm**	**37.29**	**72**	⇑P		**P**		**06 00 38.4**	**+0.1**
	baz=37,SNR=5.1								
G15A	**Dillon**	**37.33**	**78**	⇓P		**P**		**06 00 38.8**	**0.0**
	baz=37								
D17A	**Six Diamond Ra**	**37.37**	**74**	⇓P		**P**		**06 00 38.9**	**-0.2**
	baz=37								
I14A	**Mackay**	**37.41**	**80**	⇑P		**P**		**06 00 39.9**	**+0.4**
	baz=37								
EGMT	**Eagleton**	**37.48**	**72**	*e*P		**P**		**06 00 39.7**	**-0.3**
	comp=Z,11nm,0.9s								
EGMT	**Eagleton**	**37.48**	**72**	⇓P		**P**		**06 00 39.8**	**-0.2**
	baz=37,SNR=9.6								
H15A	**Lima**	**37.53**	**79**	⇑P		**P**		**06 00 40.9**	**+0.3**
	baz=37								
BOZ	**Bozeman (W)**	**37.59**	**77**	*e*P		**P**		**06 00 41.2**	**+0.2**
BOZ					pmax	pmax			
	comp=Z,6.0nm,1.4s								
BOZ	**Bozeman (W)**	**37.59**	**77**	*e*P		**P**		**06 00 41.2**	**+0.2**
	comp=Z,6.0nm,1.4s								
BOZ	**Bozeman (W)**	**37.59**	**77**	⇑P		**P**		**06 00 41.0**	**+0.1**
	baz=38								
E17A	**Martinsdale**	**37.62**	**75**	⇑P		**P**		**06 00 41.4**	**+0.1**
	baz=38								
A19A	**Klindworth Far**	**37.63**	**70**	⇑P		**P**		**06 00 40.7**	**-0.4**
	baz=38								
NVAR	**Mina Array Bea**	**37.67**	**91**	P		**P**		**06 00 41.3**	**-0.5**
NVAR	**Mina Array Bea**	**37.67**	**91**	P		**P**		**06 00 41.3**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=308,slow=9.0,SNR=3.3								
G16A	**Moss Hill, Enn**	**37.70**	**77**	⇓P		**P**		**06 00 42.1**	**+0.1**
	baz=38								
B19A	**Brinkman Farms**	**37.74**	**71**	⇓P		**P**		**06 00 41.8**	**-0.3**
	baz=38								
D18A	**Linart Farms,**	**37.87**	**73**	⇑P		**P**		**06 00 43.2**	**-0.1**
	baz=38								
F17A	**Fitzpatrick Pl**	**38.03**	**76**	⇓P		**P**		**06 00 45.2**	**+0.5**
	baz=38								
C19A	**Slack Wire Ran**	**38.04**	**72**	⇑P		**P**		**06 00 44.9**	**+0.2**
	baz=38,SNR=7.5								
A20A	**Cobblestone Ra**	**38.12**	**70**	⇓P		**P**		**06 00 45.2**	**-0.1**
	baz=38								
B20A	**Solberg Farm,**	**38.29**	**71**	⇑P		**P**		**06 00 46.9**	**+0.2**
	baz=38								
G17A	**Pierce Place,**	**38.29**	**76**	⇓P		**P**		**06 00 47.4**	**+0.6**
	baz=38								
H16A	**Russell Place,**	**38.32**	**78**	⇑P		**P**		**06 00 47.5**	**+0.3**
	baz=38								
D19A	**Cripps Ranch,**	**38.43**	**73**	⇑P		**P**		**06 00 48.6**	**+0.7**
	baz=38								
F18A	**Big Timber**	**38.59**	**75**	⇑P		**P**		**06 00 49.9**	**+0.6**
	baz=38								
C20A	**Veseth Ranch,**	**38.66**	**72**	⇓P		**P**		**06 00 50.3**	**+0.4**
	baz=38,SNR=10								
K15A	**Arbon**	**38.67**	**81**	⇓P		**P**		**06 00 50.8**	**+0.8**
	baz=39								
E19A	**Rath Farm, Rou**	**38.85**	**74**	⇓P		**P**		**06 00 51.9**	**+0.5**
	baz=39								
H17A	**Grant Village**	**38.89**	**78**	⇑P		**P**		**06 00 52.8**	**+0.8**
	baz=39								
J16A	**Bone**	**38.89**	**80**	⇓P		**P**		**06 00 52.5**	**+0.6**
	baz=39								
USRK	**Ussuriysk Arra**	**38.89**	**282**	LR		LR		06 14 24.3	
	comp=Z,38nm,20.8s,baz=20,slow=32								
D20A	**Manuel Ranch,**	**38.90**	**73**	⇓P		**P**		**06 00 52.1**	**+0.3**
	baz=39								
IMW	**Indian Meadow**	**38.95**	**79**	*e*P		**P**		**06 00 52.9**	**+0.3**
	comp=Z,31nm,2.5s								
C21A	**Desert Coulee**	**39.13**	**71**	⇓P		**P**		**06 00 53.8**	**0.0**
	baz=39								
K16A	**Soda Springs**	**39.15**	**80**	⇑P		**P**		**06 00 55.4**	**+1.2**
	baz=39								
E20A	**Meyer Farm, Mu**	**39.21**	**73**	⇑P		**P**		**06 00 54.8**	**+0.3**
	baz=39								
A22A	**Carney Farms,**	**39.22**	**69**	⇓P		**P**		**06 00 54.6**	**0.0**
	baz=39								
RLMT	**Red Lodge**	**39.27**	**76**	*e*P		**P**		**06 00 55.5**	**+0.3**
	comp=Z,5.3nm,1.0s								
RLMT					*e*pP	**pP**		**06 01 08.9**	**+1.7**
RLMT	**Red Lodge**	**39.27**	**76**	⇓P		**P**		**06 00 55.7**	**+0.5**
	baz=39								
J17A	**Brown Place, J**	**39.38**	**79**	⇑P		**P**		**06 00 56.8**	**+0.7**
	baz=39								
R11A	**Troy Canyon, C**	**39.39**	**89**	⇑P		**P**		**06 00 57.8**	**+1.6**
	baz=39								
SBC	**Santa Barbara**	**39.40**	**97**	⇓P		**P**		**06 00 58.6**	**+2.6**
	baz=39								
B22A	**Reddig Ranch S**	**39.52**	**70**	⇑P		**P**		**06 00 57.2**	**+0.1**
	baz=39								
F20A	**Billings**	**39.57**	**74**	⇑P		**P**		**06 00 58.0**	**+0.5**
	baz=39								
D21A	**La Casta Ranch**	**39.58**	**72**	⇓P		**P**		**06 00 57.9**	**+0.3**
	baz=39								
H19A	**Powell**	**39.69**	**76**	⇑P		**P**		**06 00 58.7**	**+0.2**
	baz=40								
L16A	**Fish Haven**	**39.72**	**81**	⇓P		**P**		**06 00 59.7**	**+0.8**
	baz=40								
G20A	**Bridger**	**39.85**	**75**	⇑P		**P**		**06 00 59.9**	**+0.1**
	baz=40								
C22A	**Vida**	**39.87**	**70**	⇓P		**P**		**06 00 59.9**	**0.0**
	baz=40								
J18A	**Kendall Valley**	**39.88**	**79**	⇓P		**P**		**06 01 00.7**	**+0.4**
	baz=40								
DUG	**Dugway**	**39.95**	**85**	*e*P		**P**		**06 01 01.3**	**+0.5**
DUG					pmax	pmax			
	comp=Z,5.0nm,1.3s								
DUG	**Dugway**	**39.95**	**85**	*e*P		**P**		**06 01 01.3**	**+0.5**
	comp=Z,5.2nm,1.3s								
L17A	**Cokeville**	**40.01**	**81**	⇓P		**P**		**06 01 01.3**	**0.0**
	baz=40								
D22A	**Cohagen**	**40.01**	**71**	⇓P		**P**		**06 01 01.3**	**+0.2**
	baz=40,SNR=5.6								
B23A	**Brockton**	**40.02**	**69**	⇑P		**P**		**06 01 00.8**	**-0.3**
	baz=40,SNR=5.9								
K18A	**Toltan Ranch,**	**40.20**	**80**	⇓P		**P**		**06 01 03.5**	**+0.6**
	baz=40								
C23A	**Lambert**	**40.25**	**70**	⇑P		**P**		**06 01 03.0**	**-0.1**
	baz=40,SNR=9.3								
A24A	**Westby**	**40.35**	**68**	⇑P		**P**		**06 01 03.8**	**0.0**
	baz=40								
BW06	**Boulder Array**	**40.42**	**79**	*e*P		**P**		**06 01 04.7**	**-0.1**
	comp=Z,3.1nm,0.8s								
BW06	**Boulder Array**	**40.42**	**79**	⇑P		**P**		**06 01 04.7**	**-0.1**
	baz=40								
PDAR	**Pinedale Array**	**40.42**	**79**	P		**P**		**06 01 03.9**	**-0.9**
PDAR	**Pinedale Array**	**40.42**	**79**	P		**P**		**06 01 03.9**	**-0.9**
	comp=Z,3.3nm,0.9s,baz=305,slow=4.1,SNR=21								
J19A	**Crowheart**	**40.44**	**78**	⇑P		**P**		**06 01 05.0**	**+0.2**
	baz=40								
DGMT	**Dagmar**	**40.47**	**69**	⇑P		**P**		**06 01 05.0**	**+0.2**
	baz=40								
M17A	**Scullys Gap (B**	**40.50**	**81**	⇓P		**P**		**06 01 05.5**	**+0.1**
	baz=40								
E22A	**Miles City**	**40.52**	**72**	⇓P		**P**		**06 01 05.6**	**+0.2**
	baz=40								
JLU	**Jordanelle**	**40.54**	**83**	*e*P		**P**		**06 01 05.5**	**-0.3**
	comp=Z,3.6nm,1.0s								
JLU					*e*pP	**pP**		**06 01 16.8**	**-1.0**
D23A	**Lindsay**	**40.56**	**71**	⇑P		**P**		**06 01 05.9**	**+0.2**
	baz=40								
I20A	**Worland**	**40.60**	**77**	⇓P		**P**		**06 01 06.3**	**+

	baz=46								
S24A	Houchin Ranch,	46.18	82	⇑	P		P	06 01 50.5	-0.8
	baz=46								
X20A	Quemado	46.20	88	⇑	P		P	06 01 51.5	+0.1
	baz=46								
V22A	San Miguel Ran	46.26	85	⇑	P		P	06 01 51.5	-0.5
	baz=46								
U23A	El Rito	46.43	84	⇓	P		P	06 01 53.5	+0.3
	baz=46								
S25A	Robets Cordova	46.64	81	⇑	P		P	06 01 55.3	+0.5
	baz=46								
T24A	Torres, Weston	46.64	83	⇑	P		P	06 01 55.4	+0.5
	baz=46								
X21A	Alamocita Cree	46.70	87	⇑	P		P	06 01 56.1	+0.8
	baz=47								
R26A	Arlington	46.82	80	⇑	P		P	06 01 55.8	-0.3
	baz=47								
T25A	Trinidad	46.99	82	⇓	P		P	06 01 57.7	+0.1
	baz=47								
Y21A	Point of Rocks	47.06	88	⇑	P		P	06 01 58.6	+0.4
	baz=47								
Z20A	Nine Sixteen R	47.10	89	⇑	P		P	06 01 58.1	-0.3
	baz=47								
ANMO	Albuquerque	47.18	86		*e*P		P	06 01 58.8	-0.2
	comp=Z,2.9nm,1.2s								
ANMO					*ep*P		pP	06 02 11.3	0.0
R27A	Eads	47.23	80	⇓	P		P	06 01 58.9	-0.3
	baz=47								
S26A	Kim	47.24	81	⇑	P		P	06 01 59.2	-0.3
	baz=47								
V24A	Rampart Ranch,	47.39	84	⇑	P		P	06 02 00.4	-0.3
	baz=47								
T26A	Comanche Natio	47.46	81	⇓	P		P	06 02 00.7	-0.5
	baz=47								
U25A	Circle Dot Ran	47.47	83	⇓	P		P	06 02 00.9	-0.4
	baz=47								
ECSD	EROS Data Cent	47.49	70		*e*P		P	06 02 00.3	-0.8
	comp=Z,58nm,2.7s								
Z21A	St. Cloud Mine	47.54	88	⇑	P		P	06 02 02.6	+0.8
	baz=48								
Y22A	Socorro	47.54	87	⇓	P		P	06 02 02.7	+0.8
	baz=48								
319A	Douglas	47.88	91	⇓	P		P	06 02 04.8	+0.3
	baz=48								
U26A	Atchley Ranch,	47.88	82	⇑	P		P	06 02 03.9	-0.6
	baz=48								
220A	Playas Peak, P	47.97	90	⇑	P		P	06 02 05.4	+0.2
	baz=48								
BGNE	Belgrade	48.02	73	⇑	P		P	06 02 04.4	-1.0
	baz=48								
W25A	X Bar L Ranch,	48.22	84	⇓	P		P	06 02 06.9	-0.2
	baz=48								
V26A	Tequesquite Ra	48.25	83	⇑	P		P	06 02 07.3	+0.1
	baz=48								
320A	Kipp Ranch, An	48.36	91	⇑	P		P	06 02 08.2	0.0
	baz=48								
Y24A	Capitan	48.49	86	⇑	P		P	06 02 09.1	-0.1
	baz=48								
Z24A	Sheeppen Canyo	48.94	87	⇑	P		P	06 02 12.3	-0.4
	baz=49								
Y25A	Mesa, Roswell	48.95	85	⇓	P		P	06 02 12.5	-0.2
	baz=49								
224A	Cornudas Mount	49.70	88	⇓	P		P	06 02 18.4	-0.1
	baz=50								
Z26A	Caprock	49.82	86	⇓	P		P	06 02 18.7	-0.6
	baz=50								
DAG	Danmarks Havn	49.83	8		*i* P		P	06 02 18.6	0.0
DAG					pmax		pmax		
	comp=Z,3.0nm,0.8s								
DAG	Danmarks Havn	49.83	8		*i* P		P	06 02 18.6	0.0
	comp=Z,4.2nm,0.8s								
Y27A	Causey	49.91	84	⇓	P		P	06 02 19.8	-0.1
	baz=50								
225A	Deer Hill, Car	50.10	87	⇑	P		P	06 02 22.0	+0.5
	baz=50								
TLY	Talaya	50.36	306		*e*P		P	06 02 22.7	-0.3
TLY					pmax		pmax		
	comp=Z,6.0nm,0.7s								
325A	Bean Ranch, Si	50.52	88	⇓	P		P	06 02 24.5	-0.2
	baz=50								
226B	Tecolote Peak,	50.53	87	⇓	P		P	06 02 24.2	-0.4
	baz=50								
SUMG	Summit	50.82	17		*i* P		P	06 02 27.5	+0.8
SUMG					pmax		pmax		
	comp=Z,5.0nm,0.8s								
SUMG	Summit	50.82	17		*e*P		P	06 02 27.2	+0.6
	comp=Z,153nm,2.9s								
SUMG	Summit	50.82	17		*i* P		P	06 02 27.5	+0.8
	comp=Z,5.4nm,0.8s								
425A	Indio Mountain	50.92	89	⇑	P		P	06 02 27.1	-0.6
	baz=51								
ULN	Ulaanbaatar	50.95	301		*e*P		P	06 02 27.9	+0.2
	comp=Z,3.5nm,0.9s								
326A	Caldwell Ranch	51.17	87	⇑	P		P	06 02 29.2	-0.3
	baz=51								
SONM	Songino Array	51.31	301		P		P	06 02 30.4	0.0
SONM					PcP		PcP	06 03 45.0	+0.3
SONM	Songino Array	51.31	301		P		P	06 02 30.4	0.0
	comp=Z,1.0nm,0.4s,baz=54,slow=7.3,SNR=12								
SONM					PcP		PcP	06 03 45.0	+0.3
	comp=Z,0.8nm,0.6s,baz=43,slow=2.4,SNR=4.2								
ZAK	Zakamensk	51.34	305		*e*P		P	06 02 29.7	-0.8
ZAK					*e*			06 03 44.4	
ZAK					pmax		pmax		
	comp=Z,3.0nm,1.4s								
Z30A	Sanderson Ranc	51.55	83	⇑	P		P	06 02 31.6	-0.7
	baz=52								
426A	McDonald Obser	51.59	88	⇑	P		P	06 02 32.1	-0.7
	baz=52								
MOY	Mondy	51.67	307		*e*P		P	06 02 33.6	+0.6
526A	Mary Lane Ranc	51.98	89	⇓	P		P	06 02 34.8	-0.8
	baz=52								
Z31A	Sharp Cattle R	52.13	83	⇓	P		P	06 02 35.8	-0.8
	baz=52								
626A	Big Bend Ranch	52.31	89	⇓	P		P	06 02 37.8	-0.2
	baz=52								
LPIG	La Paz	52.49	99		LR		LR	06 24 08.2	
	comp=Z,4.4nm,18.3s,baz=141,slow=35								
Z32A	Haskell	52.55	82	⇓	P		P	06 02 38.4	-1.2
	baz=52								
TXAR	Lajitas Array	52.75	89		P		P	06 02 40.6	-0.7
TXAR	Lajitas Array	52.75	89		P		P	06 02 40.6	-0.7
	comp=Z,1.0nm,0.7s,baz=301,slow=5.6,SNR=13								
627A	Terlingua Ranc	52.84	89	⇓	P		P	06 02 41.3	-0.6
	baz=53								
HHC	Hu-ho-hao-te	52.93	291		*e*P		P	06 02 43.3	+0.8
HHC					S		S	06 10 09.0	+0.6
HHC					pmax		pmax		
	comp=Z,44nm,0.7s								
HHC					pmax		pmax		
	comp=Z,330nm,7.0s								
429A	Davenport Ranc	52.93	86	⇑	P		P	06 02 41.6	-0.9
	baz=53								
628A	Black Gap, Mar	53.12	88	⇑	P		P	06 02 42.8	-1.1
	baz=53								
430A	Baggett Ranch,	53.22	86	⇑	P		P	06 02 43.1	-1.6
	baz=53								
331A	San Angelo	53.35	85	⇓	P		P	06 02 44.3	-1.3
	baz=53								
232A	Coleman	53.42	84	⇑	P		P	06 02 44.8	-1.3
	baz=53								
530A	J-C Ranch, Com	53.60	86	⇓	P		P	06 02 46.3	-1.1
	baz=54								
431A	Sonora	53.68	85	⇓	P		P	06 02 46.6	-1.4
	baz=54								
332A	Millersview	53.72	84	⇑	P		P	06 02 46.8	-1.5
	baz=54								
432A	Menard	54.04	85	⇓	P		P	06 02 49.4	-1.2
	baz=54								
531A	Rocksprings	54.08	86	⇓	P		P	06 02 49.9	-1.1
	baz=54								
532A	Rocksprings	54.50	85	⇑	P		P	06 02 52.7	-1.2
	baz=54								
WHTX	Lake Whitney	54.68	82	⇓	P		P	06 02 54.4	-0.9
	baz=55								
SCHQ	Schefferville	55.47	43		*e*P		P	06 03 00.9	+0.3
SCHQ	Schefferville	55.47	43		P		P	06 03 00.3	-0.3
	comp=Z,5.0nm,0.8s,baz=310,slow=8.5,SNR=7.3								
ZALV	Zalesovo Beam	57.45	318		P		P	06 03 14.7	0.0
ZALV	Zalesovo Beam	57.45	318		P		P	06 03 14.7	0.0
ZALV	Zalesovo Beam	57.45	318		P		P	06 03 14.7	0.0
	comp=Z,1.5nm,0.8s,baz=46,slow=9.4,SNR=4.5								
ZALV					LR		LR	06 29 46.3	
	comp=Z,58nm,18.1s,baz=95,slow=38								
ARCES	ARCESS Array B	57.96	354		P		P	06 03 17.4	-0.7
ARCES	ARCESS Array B	57.96	354		P		P	06 03 17.4	-0.7
	comp=Z,2.3nm,0.8s,baz=12,slow=7.7,SNR=9.2								
WHN	Wuhan	58.34	280	⇓	P		P	06 03 20.8	-0.4
GTA	Gaotai	60.49	297		*e*P		P	06 03 36.3	+0.1
GTA					pP		pP	06 03 41.3	-7.4
GTA					pmax		pmax		
	comp=Z,5.0nm,0.6s								
KURK	Kurchatov	62.40	318	⇓	*i* P		P	06 03 48.8	+0.1
KURK					pmax		pmax		
	comp=Z,9.0nm,1.7s								
KURK	Kurchatov	62.40	318		*e*P		P	06 03 48.7	0.0
	comp=Z,5.1nm,1.0s								
BRVK	Borovoye	63.74	324		*e*P		P	06 03 57.9	+0.4
BRVK					pmax		pmax		
	comp=Z,7.0nm,1.7s								
MKAR	Makanchi Array	63.83	313		*ce*P		P	06 03 57.7	-0.5
MKAR					pmax		pmax		
	comp=Z,2.0nm,0.8s								
MKAR	Makanchi Array	63.83	313		P		P	06 03 57.8	-0.5
MKAR	Makanchi Array	63.83	313		P		P	06 03 57.8	-0.5
	comp=Z,1.7nm,0.8s,baz=46,slow=6.9,SNR=12								
ARU	Arti	64.65	333		*d* iP		P	06 04 03.6	+0.2
ARU								06 06 22.6	
ARU					S		S	06 12 41.5	+1.7
ARU					SS		SS	06 16 50.5	+0.5
ARU					pmax		pmax		
	comp=Z,12nm,1.7s								
FINES	FINESS Array B	65.91	352		P		P	06 04 11.2	-0.2
FINES	FINESS Array B	65.91	352		P		P	06 04 11.2	-0.2
	comp=Z,5.2nm,0.8s,baz=18,slow=8.0,SNR=9.7								
NB2	NORSAR Subarra	66.98	360		P		P	06 04 18.5	+0.1
	comp=Z,2.2nm,0.6s,baz=360,slow=6.5								
NOA	NORSAR Array B	66.98	360		P		P	06 04 18.6	+0.1
NOA	NORSAR Array B	66.98	360		P		P	06 04 18.6	+0.1
	comp=Z,3.4nm,0.8s,baz=360,slow=6.3,SNR=14								
TKM2	Tokmak 2	69.82	315		*e*P		P	06 04 37.1	+0.5
TKM2					pmax		pmax		
	comp=Z,3.0nm,0.8s								
TKM2	Tokmak 2	69.82	315		*e*P		P	06 04 37.1	+0.5
	comp=Z,3.4nm,0.8s								
ABKAR	Akbulak array	70.47	328		*e*P		P	06 04 40.7	+0.4
	comp=Z,3.2nm,0.8s								
AAK	Ala-Archa	70.53	315		*c i*P		P	06 04 41.2	+0.3
AAK					pmax		pmax		
	comp=Z,11nm,0.7s								
AAK	Ala-Archa	70.53	315		*e*P		P	06 04 41.6	+0.7
	comp=Z,1.3nm,0.8s								
EKS2	Erkin-Say	70.81	316		*e*P		P	06 04 43.6	+1.0
EKS2					pmax		pmax		
	comp=Z,7.0nm,0.9s								
EKS2	Erkin-Say	70.81	316		*e*P		P	06 04 43.6	+1.0
	comp=Z,7.2nm,0.9s								
KKAR	Karatay Array	71.81	318		*e*P		P	06 04 48.7	+0.1
KKAR					pmax		pmax		
	comp=Z,1.0nm,0.6s								
KKAR	Karatay Array	71.81	318		*e*P		P	06 04 48.7	+0.1
	comp=Z,1.4nm,0.6s								
AKASG	Malin Array Be	76.14	348		*ce*P		P	06 05 13.1	-0.5
AKASG					pmax		pmax		
	comp=Z,3.0nm,0.5s								
AKASG	Malin Array Be	76.14	348		P		P	06 05 13.2	-0.4
AKASG	Malin Array Be	76.14	348		P		P	06 05 13.2	-0.4
	comp=Z,2.7nm,0.5s,baz=15,slow=6.0,SNR=6.8								
CMAR	Chiang Mai Arr	76.62	283		P		P	06 05 16.9	+0.1
CMAR	Chiang Mai Arr	76.62	283		P		P	06 05 16.9	+0.1
	comp=Z,3.8nm,0.7s,baz=26,slow=6.4,SNR=16								
DPC	Dobruska-Polom	77.58	356		*e*P		P	06 05 21.8	0.0
DPC					pmax		pmax		
	comp=Z,7.0nm,0.9s								
DPC	Dobruska-Polom	77.58	356		*e*P		P	06 05 21.8	0.0
	comp=Z,7.0nm,0.9s								
GIVF	Givet	77.83	4		*e*P		P	06 05 22.2	-0.9
GIVF	Givet	77.83	4		*e*P		P	06 05 22.2	-0.9
GIVF	Givet	77.83	4		*e*P		P	06 05 22.2	-0.9
BAIF	Baives	77.84	4		*e*P		P	06 05 23.4	+0.2
BAIF	Baives	77.84	4		*e*P		P	06 05 23.4	+0.2
BAIF	Baives	77.84	4		*e*P		P	06 05 23.4	+0.2
KOLS	Kolonicke sedl	78.63	352		*e*P		P	06 05 33.6	+6.0
KOLS	Kolonicke sedl	78.63	352		*e*		P	06 05 33.6	+6.0
GERES	GERESS Array B	79.17	358		P		P	06 05 31.1	+0.4
GERES	GERESS Array B	79.17	358		P		P	06 05 31.1	+0.4
	comp=Z,1.0nm,0.6s,baz=15,slow=5.5,SNR=6.9								
GRR	Gorron	79.18	8		*e*P		P	06 05 30.4	-0.2
	comp=Z,9.4nm,0.8s								
GRR	Gorron	79.18	8		*e*P		P	06 05 30.4	-0.2
GRR					pmax		pmax		
	comp=Z,9.0nm,0.8s								
GRR	Gorron	79.18	8		*e*P		P	06 05 30.4	-0.2
	comp=Z,9.4nm,0.8s								
VYHS	Vyhne	79.31	354		*e*P		P	06 05 32.7	+1.4
VYHS					pmax		pmax		
	comp=Z,3.0nm,1.0s								
VYHS	Vyhne	79.31	354		*e*P		P	06 05 32.7	+1.4
PAGF	Fort de Pagny	79.41	3		*e*P		P	06 05 31.5	-0.3
PAGF	Fort de Pagny	79.41	3		*e*P		P	06 05 31.5	-0.3
SFTF	Sexfontaines	79.73	4		*e*P		P	06 05 33.8	+0.2
SFTF	Sexfontaines	79.73	4		*e*P		P	06 05 33.8	+0.2
KIV	Kislovodsk	80.18	337	⇓	*e*P		P	06 05 36.7	+0.4
KIV					pmax		pmax		
	comp=Z,9.0nm,1.0s								
KBZ	Khabaz	80.35	337		P		P	06 05 37.6	+0.6
KBZ	Khabaz	80.35	337		P		P	06 05 37.5	+0.6
KBZ	Khabaz	80.35	337		P		P	06 05 37.5	+0.6
	comp=Z,3.9nm,0.8s,baz=3.8,slow=2.3,SNR=7.1								
LOR	Lormes	80.61	5		*e*P		P	06 05 38.5	+0.1
LOR	Lormes	80.61	5		*e*P		P	06 05 38.5	+0.1
SSF	Saint Saulge	80.80	5		*e*P		P	06 05 39.6	+0.2
	comp=Z,10nm,1.0s								
SSF	Saint Saulge	80.80	5		*e*P		P	06 05 39.6	+0.2
SSF					pmax		pmax		
	comp=Z,10.0nm,1.0s								
SSF	Saint Saulge	80.80	5		*e*P		P	06 05 39.6	+0.2
	comp=Z,10nm,1.0s								
MFF	Saint Martin d	81.02	7		*e*P		P	06 05 40.8	+0.3
	comp=Z,16nm,1.1s								
MFF	Saint Martin d	81.02	7		*e*P		P	06 05 40.8	+0.3
MFF					pmax		pmax		
	comp=Z,16nm,1.1s								
MFF	Saint Martin d	81.02	7		*e*P		P	06 05 40.8	+0.3
	comp=Z,16nm,1.1s								
AVF	Avril sur Loir	81.06	5		*e*P		P	06 05 40.9	+0.1
	comp=Z,11nm,0.9s								
AVF	Avril sur Loir	81.06	5		*e*P		P	06 05 40.9	+0.1
AVF					pmax		pmax		
	comp=Z,11nm,0.9s								
AVF	Avril sur Loir	81.06	5		*e*P		P	06 05 40.9	+0.1
	comp=Z,11nm,0.9s								
SMF	Signal de Mont	81.23	5		*e*P		P	06 05 41.8	+0.1
	comp=Z,12nm,0.9s								
SMF	Signal de Mont	81.23	5		*e*P		P	06 05 41.8	+0.1
SMF					pmax		pmax		
	comp=Z,12nm,0.9s								
SMF	Signal de Mont	81.23	5		*e*P		P	06 05 41.8	+0.1
	comp=Z,12nm,0.9s								
BGF	Bois d'Agland	81.27	5		*e*P		P	06 05 42.1	+0.2
BGF	Bois d'Agland	81.27	5		*e*P		P	06 05 42.1	+0.2
BGF	Bois d'Agland	81.27	5		*e*P		P	06 05 42.1	+0.2
CABF	La Chapelle	81.36	3		*e*P		P	06 05 43.1	+0.6
	comp=Z,15nm,0.8s								
CABF	La Chapelle	81.36	3		*e*P		P	06 05 43.1	+0.6
CABF					pmax		pmax		
	comp=Z,15nm,0.8s								
CABF	La Chapelle	81.36	3		*e*P		P	06 05 43.1	+0.6
	comp=Z,15nm,0.8s								
TCF	Toulx Ste Croi	81.50	6		*e*P		P	06 05 43.3	+0.2
TCF	Toulx Ste Croi	81.50	6		*e*P		P	06 05 43.3	+0.2
TCF	Toulx Ste Croi	81.50	6		*e*P		P	06 05 43.3	+0.2
LFF	La Frestale	82.74	7		*e*P		P	06 05 50.4	+0.8
LFF	La Frestale	82.74	7		*e*P		P	06 05 50.4	+0.8
LFF	La Frestale	82.74	7		*e*P		P	06 05 50.4	+0.8
CAF	Calviac	82.84	6		*e*P		P	06 05 50.6	+0.4
	comp=Z,16nm,1.1s								
CAF	Calviac	82.84	6		*e*P		P	06 05 50.6	+0.4
CAF					pmax		pmax		
	comp=Z,16nm,1.1s								
CAF	Calviac	82.84	6		*e*P		P	06 05 50.6	+0.4
	comp=Z,16nm,1.1s								
LASF	Ste Croix	83.80	5		*e*P		P	06 05 55.2	+0.1
LASF	Ste Croix	83.80	5		*e*P		P	06 05 55.2	+0.1
SJPF	Ste Jean	84.39	9		*e*P		P	06 05 59.1	+1.0
SJPF	Ste Jean	84.39	9		*e*P		P	06 05 59.1	+1.0
SJPF	Ste Jean	84.39	9		*e*P		P	06 05 59.1	+1.0
MTLF	Montolieu	84.43	6		*e*P		P	06 05 59.0	+0.7
MTLF	Montolieu	84.43	6		*e*P		P	06 05 59.0	+0.7
MTLF	Montolieu	84.43	6		*e*P		P	06 05 59.0	+0.7
EPF	Esparros	84.60	8		*e*P		P	06 05 59.0	-0.3
EPF	Esparros	84.60	8		*e*P		P	06 05 59.0	-0.3
EPF	Esparros	84.60	8		*e*P		P	06 05 59.0	-0.3
ETSF	Etsaut	84.66	8		*e*P		P	06 06 00.3	+0.7
	comp=Z,22nm,0.9s								
ETSF	Etsaut	84.66	8		*e*P		P	06 06 00.3	+0.7
ETSF					pmax		pmax		
	comp=Z,23nm,0.9s								
ETSF	Etsaut	84.66	8		*e*P		P	06 06 00.3	+0.7
	comp=Z,22nm,0.9s								
BRTR	Keskin Array B	86.16	342		P		P	06 06 07.0	-0.2
BRTR	Keskin Array B	86.16	342		P		P	06 06 07.0	-0.2
	comp=Z,0.8nm,0.7s,baz=95,slow=2.9,SNR=4.0								
WRA	Warramunga Arr	86.97	232		P		P	06 06 09.0	-2.1
WRA	Warramunga Arr	86.97	232		P		P	06 06 09.0	-2.1
	comp=Z,0.7nm,0.8s,baz=41,slow=5.7,SNR=6.8								
ESDC	Sonseca Array	87.50	11		P		P	06 06 13.9	+0.3
ESDC	Sonseca Array	87.50	11		P		P	06 06 13.9	+0.3
	comp=Z,0.2nm,0.3s,baz=354,slow=4.7,SNR=5.0								
ASAR	Alice Springs	90.36	230		P		P	06 06 26.2	-0.9
ASAR	Alice Springs	90.36	230		P		P	06 06 26.2	-0.9
	comp=Z,1.4nm,1.0s,baz=35,slow=3.1,SNR=7.1								
TORD	Torodi Ar. Bea	114.34	10		PKP		PKPdf	06 12 04.4	-1.3
TORD	Torodi Ar. Bea	114.34	10		PKP		PKPdf	06 12 04.4	-1.3
	comp=Z,0.2nm,0.6s,baz=344,slow=0.6,SNR=2.2								
PMSA	Palmer Station	141.53	138		PKP		PKPdf	06 12 52.8	-2.6
PMSA	Palmer Station	141.53	138		PKP		PKPdf	06 12 52.8	-2.6
	comp=Z,6.9nm,0.3s,baz=356,slow=0.9,SNR=11								

*ISCJB **22** 05:56:17.6±0.4, 20°.38S±0°.04×69°.02W±0°.07, h97km±5km, mb4.0/7, Error ellipse: s-maj=10.9km s-min=5.8km az=173.6*

*GUC **22** 05:56:18.7±0.6, 20°.42S×69°.30W, h99km±5km, ML4.7*

*NEIC **22** 05:56:18.7, 20°.42S×69°.30W, h99km, MG4.7(GUC), After GUC.*

*IDC **22** 05:56:19.7±0.7, 20°.41S×68°.88W, h101km±5km, mb4.0/7, mb1 4.1/10, mb1mx3.9/18, mbtmp4.0/10, MS3.2/1, Ms1 3.1/1, ms1mx2.5/24, Error ellipse: s-maj=18.3km s-min=12.1km az=86.0*

ISC 22 05:56:19.0±0.5, 20.38S±0°.04×69°.10W±0°.06, h97km±4km, h98km:pP-P, n51, σ1°27/70, mb4.2/7, 6C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HMBC	Humberston	0.75	278	⇑ *i* P		Pn	05 56 35.4	-1.3
HMBC				*i* S		Sn	05 56 48.0	-2.0
HMBC	Humberston	0.75	278	⇑ *i* P		Pn	05 56 35.4	-1.3
HMBC				*i* S		Sn	05 56 48.0	-2.0
HMBC				AML		AML	05 56 49.7	
	comp=E,23μm,0.4s							
PB01	Plate Boundary	0.75	209	⇑ *i* P		Pn	05 56 36.0	-0.8
PB01				*i* S		Sn	05 56 48.8	-1.3
PB09	Plate Boundary	1.42	185	⇓ *i* P		Pn	05 56 44.2	-0.1
PB09				*i* S		Sn	05 57 03.7	+0.3
PB09				AML		AML	05 57 05.9	
	comp=E,73μm,0.8s							
PB04	Plate Boundary	1.91	191	⇑ *i* P		Pn	05 56 53.1	+2.7
PB04				AML		AML	05 57 29.6	
	comp=N,3μm,0.6s							
ARCH	Arica	2.19	329	⇑ *i* P		Pn	05 56 53.4	-0.6
ARCH				*i* S		Sn	05 57 20.7	0.0
ARCH	Arica	2.19	329	⇑ *i* P		Pn	05 56 53.4	-0.6
ARCH				*i* S		Sn	05 57 20.7	0.0
ARCH				AML		AML	05 57 38.4	
	comp=N,5μm,0.5s							
MECH	Mejillones	2.99	205	*i* P		Pn	05 57 04.1	-0.4
MECH	Mejillones	2.99	205	*i* P		Pn	05 57 04.1	-0.4
MECH				AML		AML	05 57 55.3	
	comp=N,2μm,0.5s							
LPAZ	La Paz	4.17	13	P		Pn	05 57 23.5	+2.4
LPAZ				S		Sn	05 58 10.1	+0.9
LPAZ	La Paz	4.17	13	P		Pn	05 57 23.5	+2.4
	comp=N,6.2nm,0.3s,baz=188,slow=7.4,SNR=191							
LPAZ				S		Sn	05 58 10.1	+0.9
	comp=N,5.0nm,0.3s,baz=183,slow=14,SNR=4.5							
LCO	Las Campanas	8.72	189	Pn		Pn	05 58 23.4	+0.8
	comp=N,32nm,0.8s							
SIV	San Ignacio	8.79	62	P		Pn	05 58 22.1	-1.2
SIV	San Ignacio	8.79	62	P		Pn	05 58 22.1	-1.2
	comp=N,6.6nm,0.3s,baz=261,slow=12,SNR=118							
NNA	Nana	11.17	317	Pn		Pn	05 58 56.2	+0.3
CFAA	Coronel Fontan	11.21	176	P		Pn	05 58 50.9	-5.3
CFAA				S		Sn	06 00 48.3	-11
CFAA	Coronel Fontan	11.21	176	P		Pn	05 58 50.9	-5.3
	comp=N,0.1nm,0.3s,baz=357,slow=13,SNR=17							
CFAA				S		Sn	06 00 48.3	-11
	comp=N,0.2nm,0.3s,baz=222,slow=17,SNR=6.6							
CPUP	Villa Florida	12.32	121	P		Pn	05 59 09.7	-1.4
CPUP	Villa Florida	12.32	121	P		Pn	05 59 09.7	-1.4
	comp=N,1.3nm,0.3s,baz=288,sl

IDC 22 06:18:57.0±6.7, 43°01'S×38°05'E, h0km, mb4.4/1, mb1 4.1/2, mb1mx3.6/20, mbtmp4.1/2, ML3.9/1, MS3.4/1, Ms1 3.3/1, ms1mx2.9/26, Error ellipse: s-maj=346.7km s-min=62.4km az=70.0, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**17.69**	**320**	Pn	Pn	06 23 05.1	+0.2
	0.3nm,0.3s,baz=181,slow=14,SNR=4.6						
BOSA				Sn	Sn	06 26 11.2	-12
	0.1nm,0.3s,baz=320,slow=20,SNR=1.8						
BOSA				LR	LR	06 28 41.9	
	comp=Z,108nm,18.6s,baz=169,slow=33						
TORD	**Torodi Ar. Bea**	**65.05**	**320**	P	P	06 29 39.1	-0.1
	2.6nm,0.6s,baz=160,slow=6.8,SNR=20						
TXAR	**Lajitas Array**	**146.51**	**259**	PKPbc	PKPdf	06 38 39.5	+0.7
	0.4nm,0.7s,baz=143,slow=6.1,SNR=6.5						

IDC 22 06:35:42.5±2.8, 22°97S×174°76W, h0km, mb4.1/4, mb1 4.4/4, mb1mx3.9/20, mbtmp4.1/4, Error ellipse: s-maj=227.8km s-min=31.3km az=163.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.31**	**267**	P	P	06 42 48.2	0.0
	3.7nm,0.4s,baz=107,slow=9.0,SNR=9.7						
ASAR	**Alice Springs**	**46.94**	**259**	P	P	06 44 15.8	+0.4
	1.0nm,0.7s,baz=99,slow=6.9,SNR=13						
WRA	**Warramunga Arr**	**47.28**	**264**	P	P	06 44 17.5	-0.6
	2.5nm,0.5s,baz=103,slow=8.8,SNR=48						
TXAR	**Lajitas Array**	**85.89**	**56**	P	P	06 48 24.7	-0.1
	0.4nm,0.9s,baz=210,slow=7.2,SNR=5.0						

CASC 22 06:36:38.9±3.5, 13°35N×90°95W, h23km±10km, MD3.5, ML3.2, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**1.09**	**18**	*e*P	Pn	06 36 57.5	-1.6
PCG				*e*S	Sn	06 37 16.7	+2.9
FUG	**Fuego 3**	**1.10**	**6**	*e*P	Pn	06 36 58.0	-1.2
JAT	**Jato**	**1.17**	**326**	*e*P	Pn	06 36 58.5	-1.4
JAT				*e*S	Sb	06 37 17.9	+2.6
NBG	**Las Nubes**	**1.37**	**25**	*e*P	Pn	06 37 02.8	-0.2
NBG				*e*S	Sb	06 37 21.7	+0.2
SBLS	**San Blas**	**1.38**	**69**	*e*P	Pn	06 37 02.2	-0.9
RTR	**El Retiro**	**1.38**	**67**	*e*P	Pn	06 37 02.2	-0.8
RTR				*e*S	Sb	06 37 21.5	-0.3
SNJE	**San Jose**	**1.41**	**68**	*e*P	Pn	06 37 03.5	+0.1
RBDL	**Robledal**	**1.45**	**58**	*e*P	Pn	06 37 03.3	-0.6
RBDL				*e*S	Sn	06 37 21.6	-0.8
BOQS	**Boqueron**	**1.67**	**76**	*e*P	Pn	06 37 07.1	0.0
BOQS				*e*S	Sn	06 37 29.1	+1.1
SNET	**Serv Nac Est T**	**1.71**	**78**	AML	AML	06 37 09.4	
	comp=Z,250nm,0.2s						
LFU	**La Fuente**	**1.83**	**77**	*e*P	Pn	06 37 09.2	+0.1
LFU				*e*S	Sb	06 37 33.5	-1.0
LFRS	**El Faro**	**1.86**	**81**	*e*P	Pn	06 37 09.7	+0.2
LFRS				*e*S	Sb	06 37 34.7	-0.6
MTO2	**Montecristo 2**	**1.87**	**56**	*e*P	Pn	06 37 09.6	-0.2
MTO2				*e*S	Sn	06 37 32.2	-0.6
LBRS	**Las Brisas**	**1.90**	**78**	*e*P	Pn	06 37 10.1	+0.1
LBRS				*e*S	Sn	06 37 34.4	+1.1
SNVI	**San Vicente**	**2.07**	**82**	*e*P	Pn	06 37 12.9	+0.4
SNVI				*e*S	Sb	06 37 40.0	-1.6
MRL	**Marmol**	**2.10**	**35**	*e*P	Pn	06 37 14.2	+1.3
MRL				*e*S	Sn	06 37 36.9	-1.6
CAHU	**Cacacuatique**	**2.70**	**81**	*e*P	Pn	06 37 21.1	-0.1

TAP 22 06:39:07.9, 24°86N×122°49E, h129km, ML3.5, C
ISCJB 22 06:39:08.1±0.7, 24°79N±0°05×122°51E±0°03, h126km±5km, Error ellipse: s-maj=8.1km s-min=4.0km az=171.8
JMA 22 06:39:08.5±0.3, 24°88N×122°53E, h123km, M2.3
ISC 22 06:39:08.5±1.9, 24°80N±0°07×122°50E±0°03, h126km±12km, n35, σ0s57/61, 3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.51**	**294**	*i* P	**Pn**	**06 39 27.1**	**0.0**
	baz=288						
TWB1				S	**Sn**	**06 39 41.2**	**-0.1**
	baz=288						
YOJ	**Yonaguni jima**	**0.57**	**126**	P	**Pn**	**06 39 27.5**	**0.0**
YOJ				S	**Sn**	**06 39 42.3**	**+0.4**
TWC	**Suao**	**0.62**	**253**	⇓P	**Pn**	**06 39 27.7**	**-0.2**
	baz=242						
TWC				*e*S	**Sn**	**06 39 42.4**	**-0.1**
	baz=242						
NWF	**Wu-fen Shan**	**0.71**	**293**	P	**Pn**	**06 39 28.6**	**0.0**
	baz=278						
NWF				*e*S	**Sn**	**06 39 43.9**	**+0.1**
	baz=278						
TWE	**Neicheng**	**0.76**	**264**	*i* P	**Pn**	**06 39 29.1**	**+0.2**
	baz=259						
TWE				*e*S	**Sn**	**06 39 44.0**	**-0.4**
	baz=259						
ENA	**Nanau**	**0.79**	**242**	⇓*i*P	**Pn**	**06 39 29.4**	**+0.3**
	baz=235						
ENA				*e*S	**Sn**	**06 39 45.2**	**+0.5**
	baz=235						
ENTT	**Nioudou**	**0.87**	**260**	*e*P	**Pn**	**06 39 30.2**	**+0.3**
	baz=258						
ENTT				*e*S	**Sn**	**06 39 46.3**	**+0.3**
	baz=258						
TWY	**Chenhua**	**0.95**	**300**	*e*P	**Pn**	**06 39 30.0**	**-0.5**
	baz=291						
NSK	**Sanguang**	**1.05**	**264**	⇓P	**Pn**	**06 39 31.6**	**0.0**
	baz=265						
NSK				*e*S	**Sn**	**06 39 49.0**	**0.0**
	baz=265						
NNS	**Nan Shan**	**1.09**	**251**	P	**Pn**	**06 39 32.4**	**+0.4**
	baz=242						
NNS				*e*S	**Sn**	**06 39 50.0**	**+0.1**
	baz=242						
TWD	**Chiawan**	**1.09**	**229**	*i* P	**Pn**	**06 39 31.7**	**-0.2**
	baz=223						
TWD				S	**Sn**	**06 39 49.6**	**-0.1**
	baz=223						
HWA	**Hwalien**	**1.16**	**225**	*e*P	**Pn**	**06 39 32.7**	**+0.2**
	baz=215						
HWA				*e*S	**Sn**	**06 39 50.6**	**-0.3**
	baz=215						
NCU	**National Centr**	**1.21**	**278**	*e*P	**Pn**	**06 39 32.8**	**-0.2**
	baz=275						
IRIF	**Iriomote-Funau**	**1.21**	**112**	P	**Pn**	**06 39 32.9**	**-0.2**
WHF	**Hehuan Shan**	**1.30**	**240**	P	**Pn**	**06 39 34.5**	**0.0**
	baz=232						
WHF				*e*S	**Sn**	**06 39 54.2**	**-0.2**
	baz=232						
NSTT	**Nanjuang**	**1.38**	**263**	*e*P	**Pn**	**06 39 34.6**	**-0.3**
	baz=260						
NSTT				*e*S	**Sn**	**06 39 54.5**	**-0.5**
	baz=260						
ESL	**Shilin**	**1.38**	**225**	*e*P	**Pn**	**06 39 34.8**	**-0.2**
	baz=229						
ESL				*e*S	**Sn**	**06 39 55.5**	**+0.3**
	baz=229						
HATJ	**Hateruma jima**	**1.40**	**122**	*e*S	**Sn**	**06 39 55.7**	**+0.3**
JKRS	**Kuro-shima**	**1.48**	**112**	P	**Pn**	**06 39 36.6**	**+0.5**
JKRS				*e*S	**Sn**	**06 39 57.6**	**+0.5**
JIJ	**Ishigaki jima**	**1.56**	**106**	P	**Pn**	**06 39 37.3**	**+0.4**
JIJ				S	**Sn**	**06 39 57.6**	**-1.0**
NSY	**Sanyi**	**1.63**	**257**	*e*P	**Pn**	**06 39 36.8**	**-1.1**
	baz=254						
TWQ1	**Liyutan**	**1.64**	**254**	*e*P	**Pn**	**06 39 37.8**	**0.0**
	baz=252						
TWQ1				*e*S	**Sn**	**06 39 59.9**	**-0.5**
	baz=252						
EHY	**Hungye**	**1.68**	**220**	*e*P	**Pn**	**06 39 37.5**	**-0.8**
	baz=225						
SMLT	**Sun Moon Lake**	**1.72**	**238**	*e*P	**Pn**	**06 39 39.8**	**+0.8**
	baz=233						
SMLT				*e*S	**Sn**	**06 40 03.3**	**+1.0**
	baz=233						
TYC	**Yuchr**	**1.75**	**240**	P	**Pn**	**06 39 39.9**	**+0.8**
	baz=243						
TYC				*e*S	**Sn**	**06 40 03.8**	**+1.2**
	baz=243						
TWF1	**Yuli**	**1.81**	**218**	*e*P	**Pn**	**06 39 39.3**	**-0.7**
	baz=223						
TWF1				*e*S	**Sn**	**06 40 02.7**	**-1.3**
	baz=223						
WNT	**Mingjian**	**1.89**	**241**	*e*P	**Pn**	**06 39 40.7**	**-0.3**
	baz=239						
CHKT	**Chengkung**	**1.98**	**212**	P	**Pn**	**06 39 41.4**	**-0.7**
	baz=204						
CHKT				*e*S	**Sn**	**06 40 06.3**	**-1.5**
	baz=204						
JTJ	**Tarama**	**2.01**	**94**	P	**Pn**	**06 39 42.5**	**+0.2**
JTJ				*e*S	**Sn**	**06 40 07.8**	**-0.4**
ALS	**Alishan**	**2.01**	**231**	*e*P	**Pn**	**06 39 43.2**	**+0.5**
	baz=223						
ALS				*e*S	**Sn**	**06 40 10.1**	**+1.3**
	baz=223						
CHN5	**Tsauling**	**2.05**	**235**	*e*P	**Pn**	**06 39 43.3**	**+0.4**
	baz=233						
CHN5				*e*S	**Sn**	**06 40 10.4**	**+1.1**
	baz=233						
ELDTW	**Lidau**	**2.10**	**221**	*e*P	**Pn**	**06 39 43.2**	**-0.4**
	baz=214						
CHN4	**Tsaushan**	**2.26**	**231**	*e*P	**Pn**	**06 39 45.5**	**0.0**
	baz=238						
CHN4				*e*S	**Sn**	**06 40 14.1**	**+0.2**
	baz=238						
WTP	**Ta-pu**	**2.32**	**229**	P	**Pn**	**06 39 46.3**	**+0.1**
	baz=237						
CHN1	**Nanshi**	**2.42**	**229**	*e*P	**Pn**	**06 39 47.5**	**0.0**
	baz=227						
CHN1				*e*S	**Sn**	**06 40 18.1**	**+0.6**
	baz=227						

NIED 22 06:53:00, 27°10N×130°00E, h8km, Mw3.5 Best double couple: M₀2.03000×10¹⁴ NP1:φ₁198.00000°, δ55.00000°, λ-86.00000°. NP2:φ₂12.00000°, δ35.00000°, λ-95.00000°.
JMA 22 06:53:47.8±0.1, 27°13N×130°04E, h44km, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.17**	**304**	P	**Pn**	06 54 08.3	+0.6
JTK				S	Sn	06 54 23.0	+0.5
JZK	**Kikaishima**	**1.18**	**357**	S	Sn	06 54 22.8	0.0
JAM	**Amami Oshima**	**1.33**	**343**	P	Pn	06 54 10.9	+0.9
JAM				S	Sn	06 54 27.1	+0.6
JAMN	**Amaminishikomi**	**1.35**	**326**	P	Pn	06 54 10.6	+0.4
JAMN				S	Sn	06 54 26.5	-0.4
JOW	**Kunigami**	**1.60**	**260**	P	Pn	06 54 14.6	+0.9
JOW				S	Sn	06 54 33.3	+0.1
JMZ	**Minamidaito 2**	**1.68**	**141**	P	Pn	06 54 15.3	+0.6
JMZ				S	Sn	06 54 35.6	+0.5
JIH	**Iheya**	**1.85**	**268**	P	Pn	06 54 18.2	+1.2
JIH				S	Sn	06 54 40.6	+1.4
JAGN	**Aguni-jima**	**2.56**	**258**	P	Pn	06 54 27.6	+0.9
JAGN				S	Sn	06 54 57.1	+0.5
JNN	**Nakanoshima**	**2.71**	**357**	P	Pn	06 54 30.1	+1.3
JKE	**Kume jima 2**	**3.02**	**255**	P	Pn	06 54 33.6	+0.5
JKE				S	Sn	06 55 08.2	+0.2

IDC 22 07:37:19.2±1.2, 1°80N×127°47E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.8/22, mbtmp3.9/6, ML3.9/1, Error ellipse: s-maj=91.7km s-min=17.5km az=71.0
ISCJB 22 07:37:29.9±0.9, 1°46N±0°08×128°1E±0°1, h150km, mb3.8/5, Error ellipse: s-maj=15.7km s-min=10.7km az=175.9
DJA 22 07:37:31.7±0.7, 1°N±5°×12°8E±°, h129km±5km, M4.6/9, mb4.5/2, mB5.6/2, MLv4.7/9, Mw(mB)5.1/2
ISC 22 07:37:31.6±1.2, 1°41N±0°08×128°1E±0°1, h150km, n16, σ1s79/14, mb4.0/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.56**	**321**	P	**Pn**	**07 37 52.6**	**-0.7**
GAMI	**Galela, Maluku**	**0.56**	**321**	S	**Sn**	**07 38 07.2**	**-2.6**
TNTI	**Ternate**	**1.00**	**231**	P	**Pn**	**07 37 55.4**	**-1.0**
TNTI				S	**Sn**	**07 38 15.1**	**-0.1**
LBMI	**Labuha**	**2.13**	**197**	P	**Pn**	**07 38 06.2**	**-2.1**
MNI	**Manado**	**3.30**	**271**	P	**Pn**	**07 38 21.0**	**-1.8**
SGSI	**Sangihe**	**3.46**	**311**	P	**Pn**	**07 38 27.8**	**+3.0**
KMSI	**Cibinong**	**4.24**	**259**	P	**Pn**	**07 38 32.8**	**-2.2**
NLAI	**Namlea**	**4.73**	**193**	P	**Pn**	**07 38 41.7**	**+0.2**
LUWI	**Luwuk**	**5.89**	**246**	P	**Pn**	**07 38 57.4**	**+0.5**
	36nm,0.7s,6μm0.6nm						
BNDI	**Bandanaira**	**6.15**	**163**	P	**Pn**	**07 38 59.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**19.54**	**187**	P	**Pn**	**07 41 52.8**	**+2.2**
	0.3nm,0.3s,baz=24,slow=11,SNR=9.2						
WRA	**Warramunga Arr**	**22.07**	**164**	P	P	07 42 22.4	+7.7
	4.0nm,0.5s,baz=342,slow=11,SNR=53						
ASAR	**Alice Springs**	**25.54**	**168**	P	P	07 42 54.0	+7.3
	1.0nm,0.5s,baz=348,slow=7.6,SNR=26						
STKA	**Stephens Creek**	**35.47**	**160**	P	P	07 44 22.8	+8.9
	1.9nm,0.6s,baz=325,slow=10.0,SNR=7.1						
SONM	**Songino Array**	**49.94**	**341**	P	**P**	**07 46 10.9**	**+0.6**
	0.2nm,0.3s,baz=152,slow=6.5,SNR=3.6						
MKAR	**Makanchi Array**	**60.26**	**325**	P	**P**	**07 47 24.2**	**0.0**
	1.0nm,0.5s,baz=121,slow=7.8,SNR=12						

ISCJB 22 07:49:50.2±0.7, 59°6S±0°1×26°1W±0°3, h10km, mb4.0/10, Error ellipse: s-maj=24.4km s-min=8.7km az=144.7
IDC 22 07:49:50.4±0.7, 59°58S×26°16W, h0km, mb4.1/10, mb1 4.2/11, mb1mx4.1/19, mbtmp4.1/11, ML4.2/1, Error ellipse: s-maj=25.5km s-min=17.0km az=59.0
ISC 22 07:49:51.8±0.7, 59°6S±0°1×26°1W±0°2, h10km, n22, σ0s81/19, mb4.1/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.32**	**154**	*e*Pn	**Pn**	**07 53 01.1**	**+0.4**
VNA3	**Neumayer Olymp**	**13.48**	**157**	*e*Pn	**Pn**	**07 53 02.5**	**-0.3**
VNA3	**Neumayer Olymp**	**13.48**	**157**	*e*Sn	Sn	07 55 20.6	-12
VNA2	**Neumayer--Watz**	**13.72**	**154**	*e*Pn	**Pn**	**07 53 05.7**	**-0.4**
VNA2	**Neumayer--Watz**	**13.72**	**154**	*e*Sn	Sn	07 55 21.8	-17
SNAA	**Sanae**	**15.30**	**152**	*e*Pn	**Pn**	**07 53 27.2**	**-0.4**
SNAA	**Sanae**	**15.30**	**152**	*e*Sn	Sn	07 56 02.1	-15
SNAA	**Sanae**	**15.30**	**152**	Pn	**Pn**	**07 53 27.0**	**-0.6**
	0.9nm,0.3s,baz=321,slow=14,SNR=55						
SNAA				Sn	Sn	07 56 04.2	-13
	0.2nm,0.3s,baz=310,slow=18,SNR=4.2						
USHA	**Ushuaia**	**23.10**	**263**	P	**P**	**07 54 57.2**	**-0.2**
	17nm,1.1s,baz=120,slow=11,SNR=4.0						
QSPA	**South Pole Qui**	**30.65**	**180**	P	**P**	**07 56 06.9**	**+0.8**
	1.5nm,0.5s,baz=342,slow=9.4,SNR=25						
PLCA	**Paso Flores**	**33.31**	**284**	P	**P**	**07 56 29.7**	**+0.1**
	1.3nm,0.6s,baz=162,slow=8.2,SNR=5.6						
CFAA	**Coronel Fontan**	**39.56**	**296**	P	**P**	**07 57 22.4**	**-0.5**
	0.2nm,0.4s,baz=156,slow=9.2,SNR=8.7						
CPUP	**Villa Florida**	**39.62**	**313**	P	**P**	**07 57 24.1**	**+0.8**
	0.5nm,0.3s,baz=92,slow=20,SNR=3.5						
VNDA	**Vanda**	**43.05**	**183**	P	**P**	**07 57 52.1**	**+1.1**
	1.6nm,0.6s,baz=188,slow=7.1,SNR=14						
BDFB	**Brasilia**	**46.73**	**330**	P	**P**	**07 58 21.2**	**+0.2**
	1.0nm,0.3s,baz=132,slow=12,SNR=3.5						
LPAZ	**La Paz**	**52.92**	**306**	P	**P**	**07 59 08.6**	**-0.1**
	1.0nm,0.4s,baz=59,slow=3.2,SNR=15						
TORD	**Torodi Ar. Bea**	**75.89**	**28**	P	**P**	**08 01 39.3**	**+1.0**
	1.6nm,0.5s,baz=199,slow=6.2,SNR=23						
ASAR	**Alice Springs**	**95.44**	**162**	P	**P**	**08 03 15.4**	**-1.1**
	0.6nm,0.6s,baz=181,slow=3.8,SNR=15						
ARCES	**ARCESS Array B**	**134.01**	**23**	PKP	**PKPdf**	**08 09 07.7**	**+0.2**
	2.0nm,0.8s,baz=212,slow=3.9,SNR=5.2						
YKA	**Yellowknife Ar**	**139.13**	**315**	PKP	**PKPdf**	**08 09 15.8**	**-1.4**
	0.1nm,0.4s,baz=135,slow=2.2,SNR=7.9						
SONM	**Songino Array**	**150.21**	**92**	PKPbc	**PKPbc**	**08 09 41.7**	**-0.3**
	2.9nm,0.8s,baz=224,slow=2.9,SNR=13						
ILAR	**Eielson Array**	**152.79**	**306**	PKPbc	**PKPbc**	**08 09 45.8**	**-1.5**
	0.3nm,0.4s,baz=142,slow=1.6,SNR=10						

ISCJB 22 07:57:19.7±0.7, 38°37N±0°04×22°43E±0°04, h31km±4km, Error ellipse: s-maj=6.8km s-min=4.5km az=151.0
CSEM 22 07:57:19.7±0.3, 38°38N×22°41E, h25km±2km, ML2.4/5, Error ellipse: s-maj=6.7km s-min=3.9km az=143.0
ATH 22 07:57:19.6, 38°41N×22°44E, h26km±1km, MD2.7/6
THE 22 07:57:20.5, 38°40N×22°42E, h17km±1km, ML2.4/5, Error ellipse: s-maj=1.9km s-min=0.5km az=159.0
ISC 22 07:57:19.5±1.0, 38°38N±0°03×22°42E±0°03, h24km±7km, n29, σ0s52/53, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KALE	**Kalithea**	**0.22**	**273**	P	**Pb**	**07 57 25.2**	**-0.2**
KALE				S	**Sb**	**07 57 29.4**	**0.0**
KALE	**Kalithea**	**0.22**	**273**	P	**Pb**	**07 57 25.2**	**-0.2**
KALE				S	**Sb**	**07 57 29.4**	**0.0**
TRIZ	**Trizonia**	**0.27**	**267**	P	**Pb**	**07 57 26.2**	**+0.2**
TRIZ				S	**Sb**	**07 57 30.9**	**+0.4**
TRIZ	**Trizonia**	**0.27**	**267**	P	**Pb**	**07 57 26.2**	**+0.2**
TRIZ				S	**Sb**	**07 57 30.9**	**+0.4**
LAKA	**Lakka**	**0.37**	**248**	P	**Pb**	**07 57 28.4**	**+0.8**
LAKA				S	**Sn**	**07 57 34.9**	**-1.0**
LAKA	**Lakka**	**0.37**	**248**	*e*PB	**Pb**	**07 57 27.7**	**+0.1**
LAKA	**Lakka**	**0.37**	**248**	*e*Pb	**Pb**	**07 57 27.7**	**+0.1**
LAKA	**Lakka**	**0.37**	**248**	P	**Pb**	**07 57 28.4**	**+0.8**
LAKA				S	**Sn**	**07 57 34.9**	**-1.0**
KLV	**Kalavryta, Ach**	**0.40**	**212**	*e*PB	**Pb**	**07 57 28.9**	**+0.9**
KLV				*e*SB	**Sn**	**07 57 35.8**	**-0.7**
KLV	**Kalavryta, Ach**	**0.40**	**212**	*e*Pb	**Pb**	**07 57 28.9**	**+0.9**
KLV				*e*Sb	**Sn**	**07 57 35.8**	**-0.7**
AXAR	**Agios Charalam**	**0.43**	**26**	P	**Pb**	**07 57 28.5**	**0.0**
AXAR				S	**Sb**	**07 57 35.4**	**+0.7**
AXAR	**Agios Charalam**	**0.43**	**26**	P	**Pb**	**07 57 28.5**	**0.0**
AXAR				S	**Sb**	**07 57 35.4**	**+0.7**
LKR	**Lokris**	**0.53**	**59**	P	**Pb**	**07 57 30.2**	**0.0**
LKR				S	**Sn**	**07 57 38.7**	**-1.0**
LKR	**Lokris**	**0.53**	**59**	*e*PN	**Pb**	**07 57 30.2**	**0.0**
LKR				*e*SN	**Sb**	**07 57 37.9**	**+0.5**
LKR	**Lokris**	**0.53**	**59**	P	**Pb**	**07 57 30.2**	**0.0**
LKR				*e*Sn	**Sb**	**07 57 37.9**	**+0.5**
LKR				S	**Sn**	**07 57 38.7**	**-1.0**
ATAL	**Atalanti**	**0.57**	**56**	P	**Pb**	**07 57 31.3**	**+0.5**
ATAL				S	**Sn**	**07 57 40.1**	**-0.5**
ATAL	**Atalanti**	**0.57**	**56**	P	**Pb**	**07 57 31.3**	**+0.5**
ATAL				S	**Sn**	**07 57 40.1**	**-0.5**
AGG	**Agios Georgios**	**0.65**	**354**	P	**Pb**	**07 57 32.0**	**-0.1**
AGG				S	**Sb**	**07 57 41.6**	**+0.8**
AGG	**Agios Georgios**	**0.65**	**354**	*e*PN	**Pb**	**07 57 32.1**	**-0.1**
AGG	**Agios Georgios**	**0.65**	**354**	*e*Pn	**Pb**	**07 57 32.1**	**-0.1**
AGG				S	**Sb**	**07 57 41.6**	**+0.8**
MAKR	**Makrakomi, Fth**	**0.67**	**340**	P	**Pn**	**07 57 33.2**	**-0.3**
MAKR				S	**Sn**	**07 57 43.1**	**-0.2**
MAKR	**Makrakomi, Fth**	**0.67**	**340**	P	**Pn**	**07 57 33.2**	**-0.3**
MAKR				S	**Sn**	**07 57 43.1**	**-0.2**
EVR	**Evrytania**	**0.72**	**318**	P	**Pn**	**07 57 34.0**	**-0.2**
EVR				S	**Sn**	**07 57 44.7**	**+0.2**
EVR	**Evrytania**	**0.72**	**318**	*e*PN	**Pb**	**07 57 33.5**	**+0.1**
EVR				*e*SN	**Sn**	**07 57 44.3**	**-0.2**
EVR	**Evrytania**	**0.72**	**318**	*e*Pn	**Pb**	**07 57 33.5**	**+0.1**
EVR	**Evrytania**	**0.72**	**318**	P	**Pn**	**07 57 34.0**	**-0.2**
EVR				*e*Sn	**Sn**	**07 57 44.3**	**-0.2**
EVR				S	**Sn**	**07 57 44.7**	**+0.2**
THL	**Klokotos Trika**	**1.22**	**345**	*e*PN	**Pb**	**07 57 42.5**	**+0.6**
THL	**Klokotos Trika**	**1.22**	**345**	*e*Pn	**Pb**	**07 57 42.5**	**+0.6**

NSSC 22 08:24:28.4±0.7, 33°77N×36°97E, h0km±6km, MD1.9, ML2.0
CSEM 22 08:24:30.0±0.2, 33°74N×36°88E, h30km, ML2.0, Error ellipse: s-maj=6.3km s-min=3.7km az=43.0
GRAL 22 08:24:31.6±0.3, 33°77N×36°82E, h0km±217km, MD3.1
ISC 22 08:24:28.2±1.6, 33°82N±0°06×36°97E±0°05, h8km±18km, n12, σ0s53/22, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOTH	**TOTAH**	**0.65**	**224**	*e*P	**Pg**	**08 24 40.6**	**-0.1**
TOTH				*e*S	**Sg**	**08 24 49.1**	**+0.1**
TOTH				AML	AML	08 24 57.7	
	comp=N,74nm,0.5s						
TOTH				AML	AML	08 25 01.0	
	comp=E,106nm,0.4s						
TOTH	**TOTAH**	**0.65**	**224**	*e*P	**Pg**	**08 24 40.6**	**-0.1**
	SNR=91						
TOTH				*e*S	**Sg**	**08 24 49.2**	**+0.1**
	comp=E,106nm,0.4s,SNR=59						
QASN	**Qassioun**	**0.65**	**243**	*i* P	**Pg**	**08 24 41.2**	**+0.5**
QASN				*e*S	**Sg**	**08 24 49.7**	**+0.5**
QASN				AML	AML	08 25 01.6	
	comp=N,221nm,0.5s						
QASN				AML	AML	08 25 02.0	
	comp=E,132nm,0.4s						
QASN	**Qassioun**	**0.65**	**243**	*i* P	**Pg**	**08 24 41.2**	**+0.5**
	SNR=91						
QASN				*e*S	**Sg**	**08 24 49.7**	**+0.5**
	comp=E,132nm,0.4s,SNR=59						
BRBR	**Barbar**	**0.94**	**244**	*e*P	**Pg**	**08 24 46.2**	**-0.2**
BRBR				*e*S	**Sb**	**08 25 00.0**	**+0.3**
BRBR				AML	AML	08 25 12.1	
	comp=N,30nm,0.5s						
BRBR				AML	AML	08 25 13.3	
	comp=E,38nm,0.9s						
ZALF	**Zalf**	**0.95**	**161**	*i* P	**Pg**	**08 24 46.5**	**0.0**
ZALF				*e*S	**Sg**	**08 24 58.6**	**-0.2**
ZALF				AML	AML	08 25 08.4	
	comp=N,68nm,0.4s						
ZALF				AML	AML	08 25 28.4	
	comp=E,41nm,0.6s						
ZALF	**Zalf**	**0.95**	**161**	*i* P	**Pg**	**08 24 46.5**	**0.0**
	SNR=67						
ZALF				*e*S	**Sg**	**08 24 58.6**	**-0.2**
	comp=E,41nm,0.6s,SNR=59						
HWQ	**Hawqa**	**0.96**	**298**	*e*P	**Pb**	**08 24 47.4**	**+0.1**
HWQ				*e*S	**Sg**	**08 24 59.2**	**-0.1**
HWQ	**Hawqa**	**0.96**	**298**	*e*P	**Pb**	**08 24 47.4**	**+0.1**
HWQ				*e*S	**Sg**	**08 24 59.2**	**-0.1**
RCY	**Rachaya**	**1.00**	**251**	*e*P	**Pg**	**08 24 47.1**	**-0.4**
RCY				*e*S	**Sg**	**08 24 58.5**	**-1.9**
BHL	**Bhannes**	**1.10**	**275**	*e*P	**Pg**	**08 24 49.2**	**-0.1**
BHL	**Bhannes**	**1.10**	**275**	*e*P	**Pg**	**08 24 49.2**	**-0.1**

*IDC 22 08:32:13.0±1.8, 53°66N×87°84E, h0km, mb1 3.6/3, mb1mx3.2/30, mbtmp3.6/3, ML3.5/3, Error ellipse: s

RCY				*e*S	**Sb**	**08 34 21.4**	**+0.1**
RCY	**Rachaya**	**0.30**	**122**	*e*P	**Pb**	**08 34 17.5**	**+1.3**
RCY				*e*S	**Sb**	**08 34 21.4**	**+0.1**
BRBR	**Barbar**	**0.43**	**125**	*e*P	**Pg**	**08 34 15.0**	**-2.1**
BRBR				*e*S	**Sg**	**08 34 22.5**	**-0.3**
BRBR				*e*S	**Sb**	**08 34 22.7**	**-2.4**
BRBR				AML	AML	08 34 24.4	
	comp=E,96nm,0.4s						
BRBR				AML	AML	08 34 26.3	
	comp=N,55nm,0.6s						
HWQ	**Hawqa**	**0.71**	**29**	*e*P	**Pg**	**08 34 21.4**	**-0.9**
HWQ	**Hawqa**	**0.71**	**29**	*e*P	**Pg**	**08 34 21.4**	**-0.9**
TOTH	**TOTAH**	**0.81**	**111**	*e*P	**Pg**	**08 34 25.1**	**+0.9**
TOTH				*e*S	**Sg**	**08 34 35.1**	**+0.3**
TOTH				AML	AML	08 34 48.3	
	comp=E,27nm,0.6s						
TOTH				AML	AML	08 34 52.5	
	comp=N,23nm,0.6s						
TOTH	**TOTAH**	**0.81**	**111**	*e*P	**Pg**	**08 34 25.1**	**+0.9**
	SNR=75						
TOTH				*e*S	**Sg**	**08 34 35.1**	**+0.3**
	comp=N,23nm,0.6s,SNR=59						
SALA	**Sala**	**1.38**	**133**	*e*P	**Pb**	**08 34 35.4**	**+0.7**
SALA				*e*S	**Sn**	**08 34 52.7**	**+0.1**
SALA				AML	AML	08 35 00.5	
	comp=E,2.4nm,0.5s						
SALA				AML	AML	08 35 01.7	
	comp=N,15nm,0.7s						
SALA	**Sala**	**1.38**	**133**	*e*P	**Pb**	**08 34 35.4**	**+0.7**
	SNR=57						
SALA				*e*S	**Sn**	**08 34 52.7**	**+0.1**
	comp=N,15nm,0.7s,SNR=49						
ROOS	**tl_alroos**	**1.55**	**70**	*e*P	**Pb**	**08 34 37.8**	**+0.3**
ROOS				*e*S	**Sb**	**08 34 57.2**	**0.0**
ZALF	**Zalf**	**1.68**	**115**	*e*P	**Pb**	**08 34 39.6**	**-0.1**
ZALF				*e*S	**Sb**	**08 35 00.6**	**-0.3**
ZALF				AML	AML	08 35 06.8	
	comp=E,12nm,0.7s						
ZALF				AML	AML	08 35 08.2	
	comp=N,16nm,0.7s						
ZALF	**Zalf**	**1.68**	**115**	*e*P	**Pb**	**08 34 39.6**	**-0.1**
	SNR=57						
ZALF				*e*S	**Sb**	**08 35 00.6**	**-0.3**
	comp=N,16nm,0.7s,SNR=49						

ISCJB ***22*** *08:35:55.9±0.7, 38°.21N±0°.03×26°.84E±0°.04, h2km±8km, Error ellipse: s-maj=5.8km s-min=5.4km az=28.7*
CSEM ***22*** *08:35:55.9±0.2, 38°.23N×26°.81E, h8km, MD2.6, Error ellipse: s-maj=3.6km s-min=2.6km az=118.0*
ISK ***22*** *08:35:55.5, 38°.33N×26°.80E, h18km, MD2.6*
DDA ***22*** *08:35:56.0, 38°.20N×26°.82E, h7km, MD2.9*

IDC 22 08:35:56.4±1.0, 38°.22N±0°.03×26°.83E±0°.03, h9km±10km, n18, σ0°52/32, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BLCB	**Balcova**	**0.23**	**45**	*e*PG		**Pg**	**08 36 00.7**	**-0.4**
BLCB				*e*SG		**Sg**	**08 36 04.5**	**+0.3**
BLCB	**Balcova**	**0.23**	**45**	*e*Pg		**Pg**	**08 36 00.7**	**-0.4**
BLCB				*e*Sg		**Sg**	**08 36 04.5**	**+0.3**
URLA	**Izmir**	**0.23**	**307**	*i* P		**Pg**	**08 36 00.8**	**-0.3**
URLA				*i* S		**Sg**	**08 36 04.7**	**+0.4**
URLA	**Izmir**	**0.23**	**307**	*i* P		**Pg**	**08 36 00.8**	**-0.3**
URLA				*i* S		**Sg**	**08 36 04.7**	**+0.4**
IZM	**Izmir**	**0.38**	**62**	*e*PG		**Pg**	**08 36 03.7**	**-0.2**
IZM				*e*SG		**Sg**	**08 36 09.6**	**+0.7**
IZM	**Izmir**	**0.38**	**62**	*e*Pg		**Pg**	**08 36 03.7**	**-0.2**
IZM				*e*Sg		**Sg**	**08 36 09.6**	**+0.7**
GCAM	**G?zelcaml?**	**0.61**	**149**	*i* P		**Pg**	**08 36 08.0**	**-0.2**
GCAM				*i* S		**Sg**	**08 36 16.2**	**0.0**
GCAM	**G?zelcaml?**	**0.61**	**149**	*i* P		**Pg**	**08 36 08.0**	**-0.2**
GCAM				*i* S		**Sg**	**08 36 16.2**	**0.0**
AYDN	**Tasoluk**	**1.00**	**124**	*i* P		**Pg**	**08 36 15.4**	**-0.2**
AYDN				*i* S		**Sg**	**08 36 28.6**	**0.0**
AYDN	**Tasoluk**	**1.00**	**124**	*i* P		**Pg**	**08 36 15.4**	**-0.2**
AYDN				*i* S		**Sg**	**08 36 28.6**	**0.0**
AKHS	**Akhisar**	**1.01**	**49**	*i* P		**Pg**	**08 36 15.7**	**-0.1**
AKHS				*i* S		**Sb**	**08 36 30.5**	**+1.1**
AKHS	**Akhisar**	**1.01**	**49**	*i* P		**Pg**	**08 36 15.7**	**-0.1**
AKHS				*i* S		**Sb**	**08 36 30.5**	**+1.1**
AKS	**Akhisar**	**1.01**	**49**	*e*PG		**Pg**	**08 36 14.6**	**-1.2**
AKS				*e*SG		**Sg**	**08 36 28.5**	**-0.4**
AKS	**Akhisar**	**1.01**	**49**	*e*Pg		**Pg**	**08 36 14.6**	**-1.2**
AKS				*e*Sg		**Sg**	**08 36 28.5**	**-0.4**
BODT	**Bodrum**	**1.22**	**162**	*e*PN		**Pb**	**08 36 19.4**	**-0.2**
BODT	**Bodrum**	**1.22**	**162**	*e*Pn		**Pb**	**08 36 19.4**	**-0.2**
APE	**Apeiranthos**	**1.55**	**222**	*e*PN		**Pn**	**08 36 23.9**	**-0.2**
APE	**Apeiranthos**	**1.55**	**222**	*e*Pn		**Pn**	**08 36 23.9**	**-0.2**

IDC 22 09:02:51.9±7.0, 6°.50S×146°.89E, h105km±71km, mb3.1/3, mb1 3.2/5, mb1mx3.0/19, mbtmp3.0/5, ML3.1/2, Error ellipse: s-maj=74.2km s-min=30.5km az=142.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**2.90**	**175**	P		Pn	09 03 37.5	+1.1
	7.5nm,0.3s,baz=353,slow=17,SNR=22							
PMG				S		Sn	09 04 11.1	+0.5
	4.0nm,0.3s,baz=173,slow=22,SNR=12							
WRA	**Warramunga Arr**	**18.08**	**221**	P		P	09 06 55.0	-0.4
	0.1nm,0.3s,baz=40,slow=11,SNR=6.4							
ASAR	**Alice Springs**	**21.14**	**215**	P		P	09 07 28.6	-0.1
	0.2nm,0.3s,baz=53,slow=9.2,SNR=5.8							
FITZ	**Fitzroy Crossi**	**23.71**	**239**	P		P	09 07 53.9	-0.6
	1.6nm,0.7s,baz=53,slow=7.0,SNR=5.6							
ILAR	**Eielson Array**	**85.98**	**23**	P		P	09 15 19.5	-0.7
	0.1nm,0.5s,baz=246,slow=5.0,SNR=5.4							
TORD	**Torodi Ar. Bea**	**145.10**	**284**	PKPbc		PKPdf	09 22 18.3	+0.2
	0.7nm,0.7s,baz=104,slow=3.8,SNR=4.6							

IDC 22 09:12:25.2±7.4, 17°.73S×177°.67W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.7/19, mbtmp3.7/3, Error ellipse: s-maj=323.8km s-min=38.7km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**45.35**	**259**	P		P	09 20 44.8	-0.8
	0.2nm,0.4s,baz=96,slow=7.6,SNR=8.6							
ASAR	**Alice Springs**	**45.51**	**254**	P		P	09 20 47.3	+0.5
	2.7nm,0.4s,baz=89,slow=8.1,SNR=73							
ILAR	**Eielson Array**	**85.56**	**13**	P		P	09 25 04.8	0.0
	0.1nm,0.4s,baz=224,slow=5.5,SNR=4.1							

LDG ***22*** *09:25:58.4±0.1, 39°.94N×77°.30E, h10km, Mb4.9/20, Ms4.3/9, Error ellipse: s-maj=5.9km s-min=5.3km az=19.0*
NNC ***22*** *09:26:00.9±0.5, 40°.17N×77°.16E, h0km, mb5.1, mpv4.8, Error ellipse: s-maj=4.9km s-min=3.6km az=149.0*
IDC ***22*** *09:26:00.3±0.4, 40°.02N×77°.26E, h0km, mb4.5/32, mb1 4.6/38, mb1mx4.6/41, mbtmp4.5/38, ML4.1/6, MS4.4/27, Ms1 4.4/27, ms1mx4.3/37, Error ellipse: s-maj=10.0km s-min=9.0km az=31.0*
ISCJB ***22*** *09:26:01.2±0.1, 39°.97N±0°.02×77°.25E±0°.02, h18km, mb4.8/128, MS4.6/58, Error ellipse: s-maj=2.7km s-min=2.2km az=144.5*
BJI ***22*** *09:26:02.5, 40°.10N×77°.25E, h25km, mB5.2/31, mb4.8/36, ML5.1/6, Ms5.0/46, Ms7 4.7/42*
SZGRF ***22*** *09:26:02.1, 39°.18N×77°.45E, h33km, mb5.0, MS4.3, Southern Xinjiang, China*
NEIC ***22*** *09:26:03.8±1.4, 40°.03N×77°.23E, h24km±9km, mb4.9/26, Error ellipse: s-maj=5.5km s-min=4.6km az=167.0*
MOS ***22*** *09:26:03.6±1.1, 40°.01N×77°.22E, h33km, mb5.0/69, MS4.5/35, Error ellipse: s-maj=6.5km s-min=3.4km az=122.6*
DJA ***22*** *09:26:05.0±0.3, 40°N±6°×7°7E±°, h10km, M5.7/9, mB5.3/2, mb5.0/9, MLv6.1/2, Mw(mB)4.7/2*
GCMT ***22*** *09:26:06.0±0.2, 40°.21N×77°.27E, h16km, MW5.0, Moment Tensor Solution. s37,c58; s75,c126; Moment tensor: Scale 10¹⁶Nm; Mrr3.75±.19; Mθθ-3.52±.13; Mφφ-0.24±.12; Mrθ-0.65±.37; Mrφ-2.59±.11; Mθφ1.42±.42; Best double couple: M₀4.70000×10¹⁶ NP1:φ₁264.00000°, δ50.00000°, λ124.00000°. NP2:φ₂38.00000°, δ51.00000°, λ57.00000°. Principal axes: T 4.4900, Plg65.0000°, Azm243.0000°; N 0.4500, Plg25.0000°, Azm61.0000°; P -4.9500, Plg1.0000°,*

Azm151.0000°; Data Used: ll IU CN IC G.
TEH ***22*** *09:26:07.0, 40°.12N×77°.21E, h41km, ML4.9*
ISC 22 09:26:04.8±0.3, 40°.00N±0°.03×77°.20E±0°.02, h30km±2km, h29km; pP-P, n482, σ1s62/524, mb4.9/129, MS4.6/59, 34C-34D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KSH	**Kashi**	**1.06**	**243**	⇑	*i* Pg	Pb	09 26 31.4	+6.8
KSH					Sg	Sb	09 26 52.9	+14
KSH					smax	smax		
	comp=N,39μm,0.7s							
KSH					smax	smax		
	comp=E,28μm,0.7s							
ULHL	**Ulahol**	**2.36**	**342**	*i*	PN	**Pn**	**09 26 42.4**	**+0.7**
ULHL	**Ulahol**	**2.36**	**342**		P	**Pn**	**09 26 42.4**	**+0.7**
	SNR=356							
KZA	**Kyzart**	**2.55**	**325**	*i*	PN	**Pn**	**09 26 45.6**	**+1.1**
KZA	**Kyzart**	**2.55**	**325**		P	**Pn**	**09 26 45.6**	**+1.1**
	SNR=5767							
KBK	**Karagaybulak**	**3.15**	**328**	*i*	PN	**Pn**	**09 26 54.2**	**+1.7**
KBK	**Karagaybulak**	**3.15**	**328**		P	**Pn**	**09 26 54.2**	**+1.7**
	SNR=701							
TKM2	**Tokmak 2**	**3.16**	**338**	⇓	Pg	**Pn**	**09 26 55.0**	**+2.4**
	comp=E,2μm,1.3s							
TKM2				⇑	Lg	Lg	09 27 36.5	
	comp=E,4μm,0.8s							
TKM2	**Tokmak 2**	**3.16**	**338**	*i*	PN	**Pn**	**09 26 54.0**	**+1.3**
TKM2	**Tokmak 2**	**3.16**	**338**	*e*	Pn	**Pn**	**09 26 54.0**	**+1.3**
TKM2	**Tokmak 2**	**3.16**	**338**		P	**Pn**	**09 26 54.0**	**+1.3**
	SNR=842							
KNDC	**Almaty**	**3.22**	**357**	⇑	Pg	**Pn**	**09 26 56.0**	**+2.6**
KNDC				⇓	Lg	Lg	09 27 38.0	
AAK	**Ala-Archa**	**3.33**	**323**	*d*	PN	**Pn**	**09 26 56.5**	**+1.5**
AAK					pmax	pmax		
	comp=Z,2μm,1.2s							
AAK	**Ala-Archa**	**3.33**	**323**		Pn	**Pn**	**09 26 56.7**	**+1.7**
AAK					Lg	Lg	09 27 44.3	
AAK	**Ala-Archa**	**3.33**	**323**		Pn	**Pn**	**09 26 57.0**	**+2.0**
	SNR=1672							
AAK	**Ala-Archa**	**3.33**	**323**		Pn	**Pn**	**09 26 56.7**	**+1.7**
	comp=Z,27nm,0.3s,baz=129,slow=8.0,SNR=376							
AAK					Lg	Lg	09 27 44.3	
	comp=Z,318nm,0.3s,baz=338,slow=20,SNR=12							
AAK					LR	LR	09 28 24.9	
	comp=Z,11μm,18.1s,baz=125,slow=43							
AML	**Almayashu**	**3.40**	**310**	*i*	PN	**Pn**	**09 26 58.2**	**+2.0**
AML	**Almayashu**	**3.40**	**310**		P	**Pn**	**09 26 58.2**	**+2.0**
	SNR=3135							
FRU	**Bishkek**	**3.43**	**326**	⇓	ePN	**Pn**	**09 26 59.0**	**+2.7**
FRU					eS	**Sn**	**09 27 40.0**	**+4.0**
FRU					*i*		09 27 52.0	
FRU					pmax	pmax		
	comp=Z,8μm,2.0s							
FRU					pmax	pmax		
	comp=E,30μm,2.0s							
CHMS	**Chumysh**	**3.52**	**329**	*i*	PN	**Pn**	**09 26 58.9**	**+1.5**
CHMS	**Chumysh**	**3.52**	**329**		P	**Pn**	**09 26 58.9**	**+1.5**
	SNR=424							
EKS2	**Erkin-Say**	**3.70**	**317**	*e*	PN	**Pn**	**09 27 02.2**	**+2.1**
EKS2	**Erkin-Say**	**3.70**	**317**	*e*	Pn	**Pn**	**09 27 02.2**	**+2.1**
EKS2	**Erkin-Say**	**3.70**	**317**		P	**Pn**	**09 27 02.3**	**+2.1**
	SNR=1108							
USP	**Ospenovka**	**3.84**	**329**	*i*	PN	**Pn**	**09 27 02.9**	**+1.0**
USP	**Ospenovka**	**3.84**	**329**		P	**Pn**	**09 27 03.0**	**+1.0**
	SNR=173							
KK31	**Karatay Array**	**5.90**	**304**		Pn	**Pn**	**09 27 30.6**	**+0.5**
	comp=E,24nm,0.8s,baz=124,slow=9.0,SNR=558							
KK31				⇑	Pg	**Pb**	**09 27 47.1**	**+0.3**
	comp=E,232nm,0.7s,baz=125,slow=16,SNR=20							
KK31				⇑	Lg	Lg	09 29 02.4	
	comp=E,1μm,1.1s,baz=120,slow=27,SNR=4.4							
KK31	**Karatay Array**	**5.90**	**304**	*i*	PN	**Pn**	**09 27 30.6**	**+0.5**
KK31					*e*		09 27 48.5	
KK31					*i*		09 29 03.0	
KK31					pmax	pmax		
	comp=Z,9.0nm,0.4s							
KK31					pmax	pmax		
	comp=Z,264nm,0.6s							
KK31					pmax	pmax		
	comp=N,2μm,1.0s							
KKAR	**Karatay Array**	**5.90**	**304**	*e*	PN	**Pn**	**09 27 28.9**	**-1.2**
KKAR	**Karatay Array**	**5.90**	**304**	*e*	Pn	**Pn**	**09 27 28.9**	**-1.2**
CHCP	**Chirah Chowk**	**7.07**	**208**		P	Pn	09 27 49.8	+3.5
CEP	**Cherat**	**7.48**	**216**	⇑	P	**Pn**	**09 27 54.3**	**+2.3**
CEP					S	**Sn**	**09 29 19.0**	**+3.2**
THN	**Thein Dam**	**7.64**	**189**	*e*	P	**Pn**	**09 27 53.1**	**-1.0**
THN				*ex*		x	09 29 29.3	
MKAR	**Makanchi Array**	**7.74**	**27**		P	**Pn**	**09 27 55.2**	**-0.1**
MKAR							09 29 20.6	
MKAR					pmax	pmax		
	comp=Z,2.0nm,0.3s							
MKAR					smax	smax		
	comp=N,2.0nm,0.3s							
MKAR	**Makanchi Array**	**7.74**	**27**		Pn	**Pn**	**09 27 55.2**	**-0.1**
MKAR					Sn	**Sn**	**09 29 20.6**	**-1.3**
MKAR					Lg	Lg	09 30 04.9	
MKAR	**Makanchi Array**	**7.74**	**27**		Pn	**Pn**	**09 27 55.2**	**-0.1**
	comp=N,2.1nm,0.3s,baz=203,slow=14,SNR=44							
MKAR					Sn	**Sn**	**09 29 20.6**	**-1.3**
	comp=N,2.0nm,0.3s,baz=210,slow=17,SNR=2.4							
MKAR					Lg	Lg	09 30 04.9	
	comp=N,4.6nm,0.3s,baz=206,slow=28,SNR=5.2							
MKAR					LR	LR	09 30 37.1	
	comp=N,657nm,19.9s,baz=209,slow=36							
MK31	**Makanchi Array**	**7.74**	**27**	⇓	Pn	**Pn**	**09 27 55.6**	**+0.3**
	comp=N,10nm,0.5s,baz=20,slow=26,SNR=83							
MK31				⇓	Lg	Lg	09 29 58.1	
	comp=N,105nm,0.8s							
MK31	**Makanchi Array**	**7.74**	**27**		P	**Pn**	**09 27 55.6**	**+0.3**
MK31					pmax	pmax		
	comp=Z,187nm,1.2s							
MK31	**Makanchi Array**	**7.74**	**27**	*e*	Pn	**Pn**	**09 27 54.8**	**-0.5**
MK31				*e*	S	Sb	09 30 00.6	+11
DHRM	**DHARAMSHALA**	**7.77**	**186**	*e*	P	**Pn**	**09 27 56.4**	**+0.4**
DHRM					AMB	AMB	09 28 25.9	
	comp=Z,415nm,0.0s							
THW	**Thamme Wali**	**8.43**	**213**	⇓	P	**Pn**	**09 28 06.1**	**+1.2**
KBL	**Kabul**	**8.48**	**233**	*e*	P	**Pn**	**09 28 06.6**	**+0.8**
KBL	**Kabul**	**8.48**	**233**	*e*	Pn	**Pn**	**09 28 06.6**	**+0.8**
SDNR	**Sundarnagar**	**8.48**	**181**	*e*	P	**Pn**	**09 28 07.1**	**+1.5**
SDNR				*ex*		x	09 29 46.5	
BHK	**Bhakra**	**8.59**	**184**	*ex*		P	09 28 09.4	
BHK				*e*	S	**Sn**	**09 29 44.8**	**+1.9**
WMQ	**Urumqi**	**8.71**	**61**		P	**Pn**	**09 28 08.0**	**-0.7**
WMQ					S	**Sn**	**09 29 42.0**	**-3.9**
WMQ					smax	smax		
	comp=N,440nm,1.0s							
WMQ					smax	smax		
	comp=E,310nm,1.0s							
SMLA	**Simla**	**8.85**	**180**	*i*	P	**Pn**	**09 28 12.6**	**+2.0**
SMLA					AMB	AMB	09 28 22.5	
	comp=Z,98nm,0.8s							
SMLA				*i*	S	**Sn**	**09 29 52.4**	**+3.1**
SMLA				⇓			09 29 57.0	
	comp=N,4μm,0.4s							
SMLA				⇓			09 30 05.4	
	comp=E,4μm,0.5s							
SARP	**Sargodha**	**8.86**	**206**		P	**Pn**	**09 28 12.4**	**+1.7**
DDI	**Dehra Dun**	**9.68**	**176**	*e*	P	**Pn**	**09 28 23.0**	**+0.9**
DDI				*e*	S	**Sn**	**09 30 10.1**	**+0.3**
KURBB	**Kurchatov Arra**	**10.66**	**5**		Pn	**Pn**	**09 28 34.9**	**-0.6**
	comp=E,0.3nm,0.3s,baz=194,slow=12,SNR=21							
KURBB					Sn	Sn	09 30 20.4	-13
	comp=E,0.3nm,0.3s,baz=209,slow=27,SNR=4.7							
KURBB					Lg	Lg	09 31 34.8	
	comp=E,0.6nm,0.3s,baz=193,slow=33,SNR=5.3							
KURBB					LR	LR	09 32 53.8	
	comp=E,3μm,20.4s,baz=190,slow=39							
KUR19	**Kurchatov Arra**	**10.68**	**4**	⇑	Lg	Lg	09 31 34.1	
	comp=E,149nm,1.2s							
KUR20	**Kurchatov Arra**	**10.68**	**4**	⇓	Pn	**Pn**	**09 28 33.5**	**-2.1**
	comp=E,2.2nm,0.8s							
KURK	**Kurchatov**	**10.76**	**5**	⇓	Pn	**Pn**	**09 28 34.1**	**-2.7**
	comp=E,43nm,0.9s							
KURK				⇑	Lg	Lg	09 31 37.0	
	comp=E,1μm,1.3s							
KURK	**Kurchatov**	**10.76**	**5**	*c*	iP	**Pn**	**09 28 35.6**	**-1.1**
KURK					pmax	pmax		
	comp=Z,53nm,1.0s							
KURK	**Kurchatov**	**10.76**	**5**		Pn	**Pn**	**09 28 34.9**	**-1.9**
KURK					Sn	Sn	09 30 20.4	-16
KURK				*e*	Sn	Sn	09 30 31.5	-4.6
KURK					Lg	Lg	09 31 34.8	
KURK	**Kurchatov**	**10.76**	**5**		Pn	**Pn**	**09 28 36.7**	**0.0**
	SNR=9.5							
NDI	**New Delhi**	**11.29**	**180**	*e*	P	**Pn**	**09 28 43.5**	**-0.6**
NDI				*ex*		x	09 30 42.0	
PYUN	**Piuthan**	**12.80**	**156**	*e*	P	**Pn**	**09 29 02.5**	**-2.4**
	comp=Z,129nm,0.5s							
DANN	**Dangsing**	**12.82**	**153**	*e*	P	Pn	09 29 02.2	-3.1
	comp=Z,65nm,0.4s							
QUE	**Quetta**	**12.88**	**224**	*e*	P	Pn	09 29 03.0	-3.0
QUE				*e*	S	**Sn**	**09 31 28.0**	**-0.5**
QUE	**Quetta**	**12.88**	**224**	*e*	P	Pn	09 29 03.0	-3.0
QUE				*e*	S	**Sn**	**09 31 28.0**	**-0.5**
KOLN	**Koldanda**	**13.30**	**155**	*e*	P	Pn	09 29 08.9	-2.8
	comp=Z,55nm,0.5s							
VOSK	**Vostochnaya**	**13.43**	**344**	⇑	Pn	**Pn**	**09 29 10.7**	**-2.5**
	comp=Z,70nm,1.4s							
VOSK				⇑	Lg	Lg	09 33 01.8	
	comp=E,360nm,1.3s							
AJM	**Ajmer**	**13.65**	**190**	*ex*		Pn	09 29 13.0	-3.4
AJM				*ex*		x	09 31 41.0	
BVA0	**Borovoye Array**	**13.84**	**343**	⇓	Pn	**Pn**	**09 29 15.9**	**-2.8**
	comp=Z,12nm,0.9s,baz=152,slow=10,SNR=110							
BVA0				⇓	Lg	Lg	09 33 14.2	
	comp=Z,75nm,1.4s,baz=157,slow=27,SNR=4.0							
BVA0	**Borovoye Array**	**13.84**	**343**	*e*	P	**Pn**	**09 29 15.9**	**-2.8**
BVA0					pmax	pmax		
	comp=Z,18nm,1.1s							
BVA0					pmax	pmax		
	comp=Z,700nm,4.0s							
BVAR	**Borovoye Array**	**13.84**	**343**		P	Pn	09 29 15.4	-3.3
BVAR							09 31 43.2	
BVAR					pmax	pmax		
	comp=Z,2.0nm,0.3s							
BVAR					MLR	MLR		
	comp=Z,3μm,20.3s							
BVAR	**Borovoye Array**	**13.84**	**343**		Pn	Pn	09 29 15.4	-3.3
BVAR					Sn	Sn	09 31 43.2	-8.1
BVAR					Lg	Lg	09 33 14.4	
BVAR	**Borovoye Array**	**13.84**	**343**		Pn	Pn	09 29 15.4	-3.3
	comp=Z,2.4nm,0.3s,baz=152,slow=13,SNR=32							
BVAR					Sn	Sn	09 31 43.2	-8.1
	comp=Z,0.4nm,0.3s,baz=161,slow=9.4,SNR=2.8							
BVAR					Lg	Lg	09 33 14.4	
	comp=Z,1.2nm,0.3s,baz=148,slow=26,SNR=13							
BVAR					LR	LR	09 34 39.1	
	comp=Z,3μm,20.2s,baz=147,slow=38							
BRVK	**Borovoye**	**13.89**	**342**	⇑	Pn	Pn	09 29 16.0	-3.5
	comp=Z,139nm,1.2s							
BRVK				⇑	Lg	Lg	09 33 14.8	
	comp=Z,652nm,1.5s							
BRVK	**Borovoye**	**13.89**	**342**	*c*	iP	**Pn**	**09 29 17.7**	**-1.8**
BRVK					pmax	pmax		
	comp=Z,55nm,1.0s							
BRVK	**Borovoye**	**13.89**	**342**	*e*	Pn	**Pn**	**09 29 16.7**	**-2.8**
BRVK	**Borovoye**	**13.89**	**342**		Pn	**Pn**	**09 29 17.8**	**-1.8**
	SNR=37							
KKN	**Kakani**	**13.89**	**149**	*e*	P	Pn	09 29 16.5	-3.4
	comp=Z,108nm,0.6s							
IMYA	**Miami**	**13.94**	**260**	*e*	P	Pn	09 29 14.5	-5.9
DMN	**Daman**	**13.99**	**150**	*e*	P	**Pn**	**09 29 18.8**	**-2.4**
	comp=Z,81nm,0.7s							
GUN	**Gumba**	**14.03**	**147**	*e*	P	Pn	09 29 18.9	-3.0
	comp=Z,74nm,0.4s							
ZRNK	**Zerenda**	**14.12**	**339**	⇓	Pn	Pn	09 29 19.5	-3.1
	comp=Z,60nm,0.8s							
ZRNK				⇑	Lg	Lg	09 33 24.9	
	comp=Z,268nm,1.4s							
ZRNK	**Zerenda**	**14.12**	**339**		P	Pn	09 29 19.4	-3.1
ZRNK					pmax	pmax		
	comp=Z,108nm,1.2s							
ZRNK					pmax	pmax		
	comp=N,806nm,2.2s							
PKIN	**Phulchoki**	**14.13**	**149**	*e*	P	Pn	09 29 19.7	-3.4
	comp=N,112nm,0.5s							
PKI	**Pulchoki**	**14.14**	**149**	*e*	P	Pn	09 29 19.8	-3.5
	comp=N,114nm,0.5s							
PKI				*e*	S	Sn	09 31 52.6	-6.8
ISRO	**Mashad**	**14.43**	**261**	*e*	P	Pn	09 29 20.4	-6.6
IMOG	**Moghan**	**14.60**	**260**	*e*	P	Pn	09 29 22.5	-7.0
IPAY	**Payeh**	**14.74**	**262**	*e*	P	Pn	09 29 26.0	-5.4
IAKL	**Akhelmad**	**14.87**	**263**	*e*	P	Pn	09 29 27.8	-5.4
ZAA0	**Zalesovo Array**	**14.88**	**18**	*e*	Pn	**Pn**	**09 29 31.3**	**-1.6**
ZALV	**Zalesovo Beam**	**14.88**	**18**		P	**Pn**	**09 29 32.0**	**-0.9**
ZALV					pmax	pmax		
	comp=Z,1.0nm,0.3s							
ZALV					MLR	MLR		
	comp=Z,2μm,20.4s							
ZALV	**Zalesovo Beam**	**14.88**	**18**		Pn	**Pn**	**09 29 31.9**	**-0.9**
ZALV					Lg	Lg	09 33 50.5	
ZALV	**Zalesovo Beam**	**14.88**	**18**		Pn	**Pn**	**09 29 31.9**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=202,slow=10,SNR=15							
ZALV					Lg	Lg	09 33 50.5	
	comp=Z,0.3nm,0.3s,baz=196,slow=27,SNR=3.4							
ZALV					LR	LR	09 35 29.7	
	comp=Z,2μm,20.4s,baz=205,slow=38							
RAMN	**Ramite**	**15.18**	**146**	*e*	P	**Pn**	**09 29 33.1**	**-4.2**
	comp=Z,118nm,0.6s							
RAMN

GTA LR LR
comp=Z,2μm,16.2s
BOK Bokaro 17.74 153 *e*P **Pn** **09 30 07.3 -2.3**
BOK AMB AMB 09 30 13.2
comp=Z,29nm,0.9s
NGP Nagpur 18.86 175 *ex* P 09 30 17.8 -4.7
NGP *ex* x 09 33 40.7
SHL Shillong 18.92 135 *e*P **P** **09 30 22.5 -0.9**
SHL *ex* x 09 36 40.0
IANJ Anjilo 18.95 264 *e*P **P** **09 30 23.9 +0.2**
AKL Akola 19.23 181 *ex* **P** **09 30 22.8 -3.8**
AKL *i* x 09 33 58.6
ISHM Shahmirzad 19.31 265 *e*P **P** **09 30 26.7 -1.0**
IBAF Bafgh 19.42 251 *e*P **P** **09 30 27.9 -0.9**
IFIR Firoozkooh 19.78 265 *e*P **P** **09 30 32.2 -0.6**
AGT Agartala 19.97 139 *ex* pP 09 30 47.0 +4.5
SVE Sverdlovsk 20.02 333⇑ *i*P Pn 09 30 37.0 +0.2
SVE *e*S Sn 09 34 21.8 +0.9
SVE pmax pmax
comp=Z,76nm,1.5s
SVE MLR MLR
comp=Z,2μm,10.0s
MOY Mondy 20.17 47 *e*P Pn 09 30 43.0 +4.2
MOY pmax pmax
comp=Z,43nm,3.1s
IDMV Damavand 20.35 265 *e*P **P** **09 30 39.7 +0.7**
ARU Arti 20.49 330 *d i*P **P** **09 30 41.1 +1.0**
ARU 09 31 00.1
ARU S Sn 09 34 31.3 -1.0
ARU SS **SnSn** **09 34 52.6 +5.6**
ARU pmax pmax
comp=Z,43nm,1.2s
IMP Imphal 20.68 132 *e*P **P** **09 30 43.0 +0.6**
IMP *ex* x 09 31 42.0
IVRN Varamin 20.79 264 *e*P **P** **09 30 40.8 -2.8**
IVRN *e*P Pn 09 30 43.0 -3.1
ZAK Zakamensk 21.00 52 *e*P **P** **09 30 44.4 -1.4**
ZAK pmax pmax
comp=Z,22nm,1.2s
IR3 Iran Long-Peri 21.16 266 *e*P **P** **09 30 47.0 -0.5**
IZEF Zefreh 21.18 258 *e*P **P** **09 30 47.9 -0.2**
LZH Lanzhou 21.31 92 *e*P **P** **09 30 49.8 +0.5**
LZH pP **pP** **09 31 00.0 +2.7**
LZH sP **sP** **09 31 04.5 +3.4**
LZH *e*S **S** **09 34 41.1 -3.5**
LZH sS Sn 09 34 53.0 +0.3
LZH SS **SnSn** **09 35 13.0 +5.3**
LZH pmax pmax
comp=Z,51nm,1.0s
LZH pmax pmax
comp=Z,230nm,4.0s
LZH LR LR
comp=N,3μm,13.4s
LZH LR LR
comp=E,2μm,11.3s
LZH LR LR
comp=Z,2μm,14.6s
IGZV Ghazvin 21.48 269 *e*P **P** **09 30 52.4 +1.2**
LATR Latur 21.52 182 *ex* P 09 30 46.5 -4.8
LATR *ex* x 09 34 40.6
IR5 Iran Long-Peri 21.59 266 *e*Pn **P** **09 30 54.0 +1.8**
POO Poona 21.59 189⇓ *i*P **P** **09 30 50.0 -2.2**
comp=Z,120nm,1.0s
POO *i* S **S** **09 34 50.0 0.0**
TLY Talaya 21.68 49 *e*P **P** **09 30 54.7 +1.7**
TLY *e*S Sn 09 34 59.6 -1.5
TLY pmax pmax
comp=Z,6.0nm,0.8s
TLY MLR MLR
comp=Z,311nm,12.0s
IRAZ Razeghan 22.02 267 *e*P **P** **09 30 58.3 +1.3**
IRK Irkutsk 22.26 48 *e*P **P** **09 31 01.1 +2.0**
IRK pmax pmax
comp=Z,81nm,2.4s
SONM Songino Array 22.34 60 P **P** **09 31 01.1 +0.9**
SONM S Sn 09 35 12.5 -4.8
SONM Lg Lg 09 37 51.5
SONM Songino Array 22.34 60 P **P** **09 31 01.1 +0.9**
comp=Z,11nm,0.9s,baz=263,slow=9.2,SNR=23
SONM S Sn 09 35 12.5 -4.8
comp=Z,2.0nm,1.0s,baz=230,slow=13,SNR=2.5
SONM Lg Lg 09 37 51.4
comp=Z,0.7nm,0.4s,baz=264,slow=24,SNR=2.2
SONM LR LR 09 40 47.2
comp=Z,694nm,19.6s,baz=85,slow=40
IPIR Pirpir 22.36 259 *e*P **P** **09 31 01.4 +0.7**
MAK Makhachkala 22.39 287 *e*P **P** **09 31 01.6 +1.0**
MAK *e* 09 31 17.5
MAK *i* S **S** **09 35 05.3 +0.5**
MAK pmax pmax
comp=Z,246nm,1.1s
MAK MLR MLR
comp=Z,1μm,12.0s
ISRV Sarvestan 22.39 249 *e*P **P** **09 31 00.2 -0.9**
HYB Hyderabad 22.53 177 P **P** **09 31 02.0 -0.3**
HYB S **S** **09 35 12.0 +4.3**
HYB Hyderabad 22.53 177 P **P** **09 31 02.0 -0.3**
HYB S **S** **09 35 12.0 +4.3**
HYB Hyderabad 22.53 177 *i* P 09 31 07.0 +4.7
HYB *e*S **S** **09 35 08.0 +0.3**
KAD Karad 22.76 187 *e*P **P** **09 31 03.0 -1.8**
KAD *ex* x 09 35 08.0
ULN Ulaanbaatar 22.79 60 P **P** **09 31 06.8 +1.8**
SNR=15
ULN Ulaanbaatar 22.79 60 P **P** **09 31 06.3 +1.3**
comp=Z,24nm,1.7s,comp=Z,710nm
VIS Vishakhapatnam 22.83 165 *e*P **P** **09 31 06.2 +0.9**
VIS *e*P pP 09 31 06.4 -7.0
VIS *e*S **S** **09 35 15.4 +2.6**
CD2 Chengdu 23.39 105 P **P** **09 31 12.4 +1.3**
CD2 pP **pP** **09 31 22.3 +3.6**
CD2 PP **PnPn** **09 31 44.3 +6.6**
CD2 PcP **PcP** **09 35 00.3 +3.2**
CD2 S **S** **09 35 18.9 -3.3**
CD2 sS **sS** **09 35 35.3 -1.1**
CD2 SS **SnSn** **09 36 06.8 +8.4**
CD2 pmax pmax
comp=Z,40nm,0.5s
CD2 pmax pmax
comp=Z,440nm,4.0s
CD2 LR LR
comp=N,1μm,11.0s
CD2 LR LR
comp=E,2μm,9.4s
CD2 LR LR
comp=Z,2μm,9.4s
IHRS Heris 23.40 276 *e*P **P** **09 31 11.7 +0.4**
SOKR Solikamsk 23.43 333 *d i*P **P** **09 31 12.6 +1.5**
SOKR S **S** **09 35 22.0 -0.2**
SOKR pmax pmax
comp=Z,100nm,1.3s
SOKR MLR MLR
comp=Z,3μm,26.0s
DGRG David-gareji 24.10 284 P **P** **09 31 16.8 -0.9**
DGRG S sS 09 35 52.9 +5.3
ARQ Araqi 24.11 233 P **P** **09 31 19.6 +1.7**
SNR=7.3
TBLG Delisi 24.54 285 *e*P P 09 31 27.7 +6.0
TBLG Delisi 24.54 285 P P 09 31 27.6 +6.0
TBLG S sS 09 36 08.1 +14
GNI Garni 24.77 281 P **P** **09 31 25.3 +1.3**
comp=Z,5.3nm,1.1s
GNI S S 09 35 55.0 +10
GNI Lg Lg 09 39 10.9
GNI Garni 24.77 281 P **P** **09 31 26.1 +2.1**
SNR=11
GNI Garni 24.77 281 P **P** **09 31 25.3 +1.3**
comp=Z,16nm,0.8s,baz=139,slow=7.4,SNR=9.6
GNI S S 09 35 55.0 +10
comp=Z,3.6nm,0.3s,baz=32,slow=16,SNR=1.9
GNI Lg Lg 09 39 10.9
comp=Z,2.4nm,0.3s,baz=157,slow=15,SNR=2.1
SARR Saratov 24.83 308 *d e*P **P** **09 31 24.1 -0.1**
SARR pmax pmax
comp=Z,118nm,1.4s
BTO Baotou 24.96 78 *e*P **P** **09 31 27.3 +1.6**
GOR Gori 24.97 285 P **P** **09 31 23.5 -2.2**
ZEI Tsey 25.05 287 *e*P **P** **09 31 26.9 +0.3**
ZEI pmax pmax
comp=Z,20nm,1.3s
ONI Oni 25.39 287 P **P** **09 31 31.0 +1.5**
ONI S **sS** **09 36 07.1 -1.3**
AKH Akhalkalaki 25.50 284 P **P** **09 31 34.1 +3.5**

KBZ Khabaz 25.71 290 P **P** **09 31 33.7 +1.5**
KBZ pmax pmax
comp=Z,5.0nm,1.0s
KBZ MLR MLR
comp=Z,1μm,20.0s
KBZ Khabaz 25.71 290 P **P** **09 31 33.7 +1.5**
KBZ S S 09 36 09.4 +10
KBZ Lg Lg 09 39 50.1
KBZ Khabaz 25.71 290 P **P** **09 31 33.7 +1.5**
comp=Z,4.5nm,1.0s,baz=51,slow=7.6,SNR=5.0
KBZ S S 09 36 09.4 +10
comp=Z,2.7nm,0.9s,baz=53,slow=20,SNR=1.6
KBZ Lg Lg 09 39 50.1
comp=Z,2.2nm,0.9s,baz=240,slow=8.4,SNR=2.0
KBZ LR LR 09 42 28.4
comp=Z,1μm,20.0s,baz=97,slow=38
KIV Kislovodsk 25.84 290 *i* P **P** **09 31 34.2 +0.6**
KIV *i* 09 32 11.1
KIV *e*SS 09 37 03.0
KIV pmax pmax
comp=Z,33nm,1.6s
KIV MLR MLR
comp=Z,900nm,18.0s
KMI Kunming 26.02 117 P **P** **09 31 36.8 +1.3**
KMI S **S** **09 36 00.4 -4.3**
KMI sS **sS** **09 36 13.8 -5.2**
KMI pmax pmax
comp=Z,39nm,1.0s
KMI pmax pmax
comp=Z,270nm,4.4s
KMI LR LR
comp=N,550nm,12.4s
KMI LR LR
comp=E,440nm,13.4s
KMI LR LR
comp=Z,620nm,14.8s
HHC Hu-ho-hao-te 26.08 77 *e*P **P** **09 31 38.6 +2.8**
HHC S **S** **09 36 06.8 +1.6**
HHC ScP **ScP** **09 38 36.8 -3.6**
HHC pmax pmax
comp=Z,55nm,0.8s
HHC pmax pmax
comp=Z,660nm,6.9s
HHC LR LR
comp=N,2μm,15.4s
HHC LR LR
comp=E,3μm,15.8s
HHC LR LR
comp=Z,3μm,14.3s
MIB Mutribah 26.41 257 *e*P **P** **09 31 39.1 +0.3**
MIB AMb AMB 09 31 41.5
comp=Z,175nm,1.2s
KBD Kabd 26.47 255 *e*P **P** **09 31 40.0 +0.7**
KBD AMb AMB 09 31 47.0
comp=Z,125nm,1.3s
QRN Al-Qurain 26.53 254 *e*P **P** **09 31 40.2 +0.3**
QRN AMb AMB 09 31 46.4
comp=Z,145nm,1.0s
RDF Al-Radifah 26.71 255 *e*P **P** **09 31 41.5 0.0**
RDF AMb AMB 09 31 48.5
comp=Z,253nm,1.2s
NAY Al-Naaiem 26.77 256 *e*P **P** **09 31 42.4 +0.4**
NAY AMb AMB 09 31 49.4
comp=Z,102nm,1.4s
VRHR Novokhopersk 27.02 306 *e*P **P** **09 31 42.1 -1.9**
VRHR pmax pmax
comp=Z,20nm,0.9s
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.7s
BHD Baghdad 27.07 266 *ex* **P** **09 31 43.8 -0.9**
BHD *ex* x 09 36 25.7
GYA Guiyang 27.96 110 P **P** **09 31 53.8 +1.0**
GYA pP **pP** **09 32 04.3 +2.9**
GYA PP **PnPn** **09 32 44.8 +4.5**
GYA PcP **PcP** **09 35 09.0 +1.4**
GYA S **S** **09 36 33.5 -1.6**
GYA sS **sS** **09 36 52.1 +2.8**
GYA SS **SnSn** **09 37 55.4 +5.1**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,570nm,14.6s
GYA LR LR
comp=E,670nm,15.4s
GYA LR LR
comp=Z,530nm,14.7s
CHTO Chiang Mai 28.23 132 *e*ScP **ScP** **09 38 42.3 -4.7**
VORD Divnogorie 28.45 305 *e*P **P** **09 31 54.7 -2.1**
VORD pmax pmax
comp=N,60nm,0.4s
VORD pmax pmax
comp=E,50nm,0.4s
VORD pmax pmax
comp=Z,50nm,0.4s
CMAR Chiang Mai Arr 28.51 133 P **P** **09 31 59.1 +1.5**
CMAR Chiang Mai Arr 28.51 133 P **P** **09 31 59.1 +1.5**
comp=Z,1.0nm,0.4s,baz=330,slow=9.9,SNR=7.2
VSR Storozhevoye 28.56 306 *e*P **P** **09 31 56.9 -0.9**
VSR pmax pmax
comp=Z,20nm,1.3s
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,30nm,1.2s
ANN Anapa 29.54 293 *e*P **P** **09 32 09.2 +2.6**
ANN *e*S S 09 37 07.0 +7.6
ANN pmax pmax
comp=Z,61nm,1.3s
ANN MLR MLR
comp=N,559nm,15.0s
ANN MLR MLR
comp=E,935nm,15.0s
ANN MLR MLR
comp=Z,937nm,15.0s
BJI Beijing 29.69 77 P **P** **09 32 07.8 -0.1**
BJI S **S** **09 37 00.4 -1.4**
BJI sS **sS** **09 37 15.3 -0.7**
BJI pmax pmax
comp=Z,13nm,0.7s
BJI LR LR
comp=N,1μm,15.8s
BJI LR LR
comp=E,1μm,20.4s
BJI LR LR
comp=Z,720nm,20.4s
MALT Malatya 29.96 279 *e*P **P** **09 32 11.9 +1.4**
MALT pmax pmax
comp=Z,15nm,1.2s
MALT Malatya 29.96 279 *e*P **P** **09 32 11.9 +1.4**
comp=Z,15nm,1.2s
MOS Moscow 30.36 315 *e*P **P** **09 32 10.9 -2.8**
MOS *e* 09 33 29.9
MOS pmax pmax
comp=Z,65nm,1.2s
MOS MLR MLR
comp=Z,1μm,8.0s
MOS MLR MLR
comp=E,1μm,9.0s
OBN Obninsk 30.80 313 *e*P **P** **09 32 17.5 0.0**
OBN pmax pmax
comp=Z,65nm,1.6s
OBN MLR MLR
comp=Z,1μm,17.0s
WHN Wuhan 31.57 96 *e*P **P** **09 32 24.3 -0.3**
WHN S S 09 37 22.0 -9.5
WHN LR LR
comp=N,2μm,10.0s
WHN LR LR
comp=E,330nm,4.1s
WHN LR LR
comp=Z,2μm,13.6s
SIM Simferopol' 31.88 293 P **P** **09 32 28.8 +1.6**
SIM *e*PPP PPP 09 33 40.0
SIM *e*SS SS 09 39 34.0 -19
SIM pmax pmax
comp=Z,20nm,0.8s
SIM MLR MLR
comp=Z,521nm,17.3s
BR131 Keskin Array S 33.19 284 *e*P **P** **09 32 39.1 +0.2**
comp=Z,5.1nm,0.7s
BRTR Keskin Array B 33.19 284 P **P** **09 32 39.4 +0.5**
BRTR Keskin Array B 33.19 284 P **P** **09 32 39.4 +0.5**
comp=Z,8.9nm,0.8s,baz=94,slow=8.6,SNR=37
TMCR Tamitsa 33.23 330 *e*P **P** **09 32 39.5 +0.7**
TMCR pmax pmax
comp=Z,123nm,1.2s
ASF Jabal al Asfar 33.27 269 P **P** **09 32 40.4 +0.7**
ASF S S 09 38 13.3 +15
ASF Jabal al Asfar 33.27 269 P **P** **09 32 40.4 +0.7**
comp=Z,1.5nm,0.5s,baz=259,slow=4.7,SNR=12
ASF S S 09 38 13.3 +15
comp=Z,1.0nm,0.4s,baz=181,slow=5.5,SNR=1.6
MMAI Mount Meron Ar 34.07 272 P **P** **09 32 47.6 +1.0**
MMAI Mount Meron Ar 34.07 272 P **P** **09 32 47.6 +1.0**
comp=Z,0.7nm,0.3s,baz=27,slow=5.6,SNR=3.2
NJ2 Nanjing 34.36 90 *e*P **P** **09 32 50.0 +1.0**
NJ2 pP **pP** **09 32 58.1 +0.4**
NJ2 sP **sP** **09 33 01.8 +0.5**
NJ2 PP **PP** **09 34 08.1 +1.1**
NJ2 S **S** **09 38 16.0 +1.3**
NJ2 sS **sS** **09 38 29.0 -0.1**
NJ2 pmax pmax
comp=Z,20nm,0.9s
NJ2 pmax pmax
comp=Z,190nm,7.2s
NJ2 LR LR
comp=N,760nm,21.0s
NJ2 LR LR
comp=E,560nm,25.4s
NJ2 LR LR
comp=Z,660nm,21.8s
SNY Shenyang 34.77 72⇓ P **P** **09 32 53.1 +0.7**
SNY S **S** **09 38 18.0 -2.9**
SNY pmax pmax
comp=Z,140nm,4.5s
SNY LR LR
comp=N,600nm,13.2s
SNY LR LR
comp=E,1μm,12.6s
SNY LR LR
comp=Z,1μm,10.6s
AKASG Malin Array Be 34.80 304 P **P** **09 32 51.4 -1.2**
AKASG pmax pmax
comp=Z,7.0nm,0.9s
AKASG MLR MLR
comp=Z,1μm,19.3s
AKASG Malin Array Be 34.80 304 P **P** **09 32 51.4 -1.2**
AKASG S S 09 38 36.5 +15
AKASG Malin Array Be 34.80 304 P **P** **09 32 51.4 -1.2**
comp=Z,6.7nm,0.9s,baz=79,slow=7.6,SNR=20
AKASG S S 09 38 36.5 +15
comp=Z,0.2nm,0.3s,baz=200,slow=30,SNR=2.5
AKASG LR LR 09 48 32.3
comp=Z,1μm,19.3s,baz=110,slow=39
AK01 Malin Array Si 34.81 304 *e*P P 09 32 45.4 -7.2
AK01 *e*PP **PnPn** **09 34 02.4 -6.9**
KIEV Kiev 34.81 304 *e*P **P** **09 32 52.3 -0.4**
KIEV pmax pmax
comp=Z,18nm,1.1s
KIEV Kiev 34.81 304 *e*P **P** **09 32 52.3 -0.4**
comp=Z,18nm,1.1s
AK02 Malin Array Si 34.81 304 *e*P P 09 32 44.7 -8.0
AK02 *e*PP PnPn 09 34 01.7 -7.6
UBPT Khong Chiam 34.85 127 P **P** **09 32 55.0 +1.6**
comp=Z,30nm,1.1s
QIZ Qiongzhong 34.97 117 P **P** **09 32 55.8 +1.4**
QIZ S **S** **09 38 27.3 +2.9**
QIZ pmax pmax
comp=Z,11nm,1.3s
QIZ LR LR
comp=N,760nm,18.1s
QIZ LR LR
comp=E,380nm,19.6s
QIZ LR LR
comp=Z,490nm,16.1s
CLNS Chul'man 35.01 45 *e*P **P** **09 32 54.2 -0.2**
CLNS pmax pmax
comp=Z,11nm,1.5s
CLNS pmax pmax
comp=E,9.0nm,1.5s
CLNS pmax pmax
comp=N,4.0nm,1.5s
CLNS MLR MLR
comp=Z,504nm,15.0s
CLNS MLR MLR
comp=E,528nm,13.0s
KIS Kishinev 35.32 298 *e*P **P** **09 32 56.0 -1.1**
KIS *e* 09 34 12.0
KIS MLR MLR
comp=Z,800nm,15.0s
KIS MLR MLR
comp=N,400nm,14.0s
KIS MLR MLR
comp=E,500nm,14.0s
KIS MLR MLR
comp=Z,900nm,16.0s
KIS Kishinev 35.32 298 *e*P **P** **09 32 56.0 -1.1**
KIS *e*LQ LQ 09 45 40.0
KIS LRM MLR 09 49 36.0
comp=Z,900nm,16.0s
JOF Joensuu 35.51 326 *e*P **P** **09 32 58.7 +0.1**
JOF pmax pmax
comp=Z,13nm,0.6s
JOF Joensuu 35.51 326 *e*p **P** **09 32 58.7 +0.1**
comp=Z,13nm,0.6s
MICGM Minsk 35.70 311 *e* **P** **09 33 00.0 -0.2**
CN2 Changchun 35.71 68 *e*P **P** **09 33 03.0 +2.5**
CN2 *e*S **S** **09 38 34.3 -1.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,1μm,13.0s
CN2 LR LR
comp=E,1μm,13.0s
CN2 LR LR
comp=Z,1μm,12.0s
MNK Minsk 35.73 311 *e*P **P** **09 33 00.0 -0.5**
EIL Elat 35.88 267 P **P** **09 33 01.9 -0.2**
EIL Elat 35.88 267 P **P** **09 33 01.9 -0.2**
comp=Z,3.4nm,0.7s,baz=8.6,slow=4.9,SNR=6.2
LVZ Lovozero 36.22 334 *e*P **P** **09 33 05.3 +0.7**
LVZ pmax pmax
comp=Z,59nm,1.2s
NACGM Naroch 36.36 311 *e* **P** **09 33 04.0 -1.9**
APA Apatity 36.49 333⇑ *e*P P 09 33 12.8 +6.0
APA *i* 09 34 38.0
APA *i* S S 09 38 54.0 +7.4
APA *i* SS **SnSn** **09 41 14.0 -2.2**
APA MLR MLR
comp=Z,2μm,18.0s
VRI Vrincioaia 36.91 296⇑ P **P** **09 33 09.8 -0.9**
VRI Vrincioaia 36.91 296⇑ *i*P **P** **09 33 09.8 -0.9**
PLOR Plostina 36.96 296⇑ P **P** **09 33 12.3 +1.1**
PLOR Plostina 36.96 296⇑ *i*P **P** **09 33 12.3 +1.1**
MLR Muntele Rosu 37.51 296⇑ *i*P **P** **09 33 17.8 +1.8**
FIA1 FINESS Array S 37.52 322 *e*P **P** **09 33 15.8 +0.2**
FIA1 *e*PcP **PcP** **09 35 33.4 +0.2**
FINES FINESS Array B 37.52 322 P **P** **09 33 15.0 -0.7**
FINES FINESS Array B 37.52 322 P **P** **09 33 15.0 -0.7**
comp=Z,7.1nm,0.5s,baz=106,slow=8.4,SNR=27
FINES LR LR 09 49 23.6
comp=Z,2μm,18.2s,baz=268,slow=37
BUR08 Bucovina Ar. S 37.68 299 *e*P **P** **09 33 17.5 +0.2**
LVV L'vov 38.18 303 *e*P **P** **09 33 20.8 -0.6**
LVV MLR MLR
comp=N,400nm,19.0s
LVV MLR MLR
comp=E,800nm,19.0s
LVV MLR MLR
comp=Z,600nm,19.0s
YAK Yakutsk 38.26 37 *e*P **P** **09 33 21.7 -0.2**
YAK *e* 09 35 32.8
YAK *e*S **S** **09 39 09.9 -3.8**
YAK pmax pmax
comp=Z,10.0nm,1.0s
YAK pmax pmax
comp=E,7.0nm,1.5s
YAK pmax pmax
comp=Z,315nm,4.6s
YAK pmax pmax
comp=N,201nm,4.9s
YAK pmax pmax
comp=E,118nm,4.2s
YAK smax smax
comp=N,143nm,3.3s

YAK smax smax
comp=E,324nm,4.3s
MDJ Mudanjiang 38.47 65 P **P** **09 33 23.8 -0.1**
MDJ pP **pP** **09 33 32.5 -0.2**
MDJ sP **sP** **09 33 36.4 +0.1**
MDJ PP **PP** **09 34 51.6 -0.5**
MDJ S **S** **09 39 16.0 -1.3**
MDJ sS **sS** **09 39 31.8 +0.1**
MDJ pmax pmax
comp=Z,16nm,1.7s
MDJ pmax pmax
comp=Z,260nm,4.4s
MDJ LR LR
comp=N,380nm,15.3s
MDJ LR LR
comp=E,460nm,18.2s
MDJ LR LR
comp=Z,690nm,19.0s
KWP Kalwaria Pacla 39.06 303 *e*P **P** **09 33 29.2 +0.4**
KWP pmax pmax
comp=Z,41nm,1.1s
KWP Kalwaria Pacla 39.06 303 *e*P **P** **09 33 29.2 +0.4**
comp=Z,41nm,1.1s
KLR Kul'dur 39.15 58 *e*P **P** **09 33 27.7 -1.8**
KLR MLR MLR
comp=E,600nm,11.0s
KLR MLR MLR
comp=Z,3µm,11.0s
KSAR Wonju Array Be 39.20 77 P **P** **09 33 29.4 -0.6**
KSRS Korea Array 39.22 77 P **P** **09 33 29.4 -0.8**
comp=Z,5.2nm,0.9s,baz=279,slow=7.8,SNR=8.6
KSRS LR LR 09 51 31.5
comp=Z,484nm,18.5s,baz=288,slow=39
KOLS Kolonicke sedl 39.43 302 *e*P **P** **09 33 32.3 +0.4**
KOLS pmax pmax
comp=Z,12nm,1.5s
KOLS Kolonicke sedl 39.43 302 *e*P **P** **09 33 32.3 +0.4**
KOLS *e*PP **PP** **09 35 02.4 -0.1**
KOLS *e*PCP **PcP** **09 35 39.5 0.0**
UZH Uzhgorod 39.46 301 *e*P **P** **09 33 34.1 +1.9**
UZH *e*S **S** **09 39 32.5 +0.4**
UZH MLR MLR
comp=N,500nm,12.0s
UZH MLR MLR
comp=E,600nm,12.0s
UZH MLR MLR
comp=Z,450nm,12.0s
KEV Kevo 39.52 335 *e*P **P** **09 33 31.0 -1.4**
KEV pmax pmax
comp=Z,6.0nm,0.7s
KEV Kevo 39.52 335 *e*p **P** **09 33 31.0 -1.4**
comp=Z,5.7nm,0.7s
ARCES ARCESS Array B 39.93 335 P **P** **09 33 36.0 +0.1**
ARCES ARCESS Array B 39.93 335 P **P** **09 33 36.0 +0.1**
comp=Z,7.5nm,0.7s,baz=100,slow=7.8,SNR=18
ARCES LR LR 09 50 34.4
comp=Z,943nm,19.2s,baz=53,slow=37
CRVS Cervenica-Dubn 39.97 302 *e*P **P** **09 33 37.4 +1.0**
CRVS *e* 09 35 10.1
CRVS Cervenica-Dubn 39.97 302 *e*P **P** **09 33 37.4 +1.0**
CRVS *e*PP **PnPn** **09 35 10.1 -1.8**
USRK Ussuriysk Arra 40.24 65 P **P** **09 33 39.7 +1.0**
comp=Z,2.3nm,0.8s,baz=306,slow=7.8,SNR=6.3
USRK LR LR 09 52 07.1
comp=Z,962nm,18.0s,baz=271,slow=39
BZS Buzias 40.47 297 ‖P P 09 33 44.7 +4.1
BZS Buzias 40.47 297 ‖*i*P P 09 33 44.7 +4.1
KULM Kulim 40.50 142 P P 09 33 50.8 +10
OJC Ojcow 40.84 304 *e*P **P** **09 33 43.1 -0.5**
OJC *e**SP **sP** **09 33 58.1 +2.1**
OJC Ojcow 40.84 304 *e*P **P** **09 33 43.1 -0.5**
OJC *e*sP **sP** **09 33 58.1 +2.1**
VYHS Vyhne 41.75 302 *e*P **P** **09 33 51.6 +0.5**
VYHS *e*PP **PP** **09 35 28.0 +0.3**
VYHS *e*PCP **PcP** **09 35 49.4 +2.4**
OKC Ostrava-Krasne 41.95 304 *i*P **P** **09 33 53.1 +0.4**
OKC *e*S **S** **09 40 07.3 -1.9**
OKC MLR MLR
comp=Z,800nm,16.2s
OKC Ostrava-Krasne 41.95 304 *i*P **P** **09 33 53.1 +0.4**
OKC *e*S **S** **09 40 07.3 -1.9**
OKC AMS AMS 09 52 20.0
comp=Z,800nm,16.2s
MORC Moravsky Berou 42.35 304 ⇑P **P** **09 33 55.7 -0.3**
MORC Moravsky Berou 42.35 304 *e*P **P** **09 33 55.9 -0.1**
comp=Z,8.2nm,0.8s
MORC Moravsky Berou 42.35 304 ⇑*i*P **P** **09 33 55.7 -0.3**
KRLC Kraliky 42.78 304 *e*P **P** **09 33 59.5 0.0**
KRLC Kraliky 42.78 304 *e*P **P** **09 33 59.5 0.0**
ZST Bratislava 42.94 302 *e*P **P** **09 34 00.0 -0.8**
ZST Bratislava 42.94 302 *e*P **P** **09 34 00.0 -0.8**
DPC Dobruska-Polom 43.02 305 *i*P **P** **09 34 02.2 +0.7**
DPC *e* 09 35 46.8
DPC MLR MLR
comp=Z,1µm,17.5s
DPC Dobruska-Polom 43.02 305 *i*P **P** **09 34 02.2 +0.7**
DPC *e*pP **pP** **09 34 06.0 -4.3**
DPC *e*PP **PcP** **09 35 46.8 -4.5**
DPC AMS AMS 09 52 50.0
comp=Z,1µm,17.5s
UPC Upice 43.19 305 *e*P **P** **09 34 03.3 +0.6**
UPC Upice 43.19 305 *e*P **P** **09 34 03.3 +0.6**
UPC *e*pP **pP** **09 34 07.5 -4.1**
TREC Trest 43.76 304 AMS AMS 09 53 20.0
comp=Z,1µm,21.4s
CONA Conrad Observa 43.81 302 ‖*i*P **P** **09 34 08.5 +0.6**
SNR=8.4
CONA Conrad Observa 43.81 302 ‖*i*P **P** **09 34 08.5 +0.6**
PVCC Panska Ves 44.09 305 AMS AMS 09 53 20.0
comp=Z,1µm,16.3s
PRU Pruhonice 44.21 305 *i*P **P** **09 34 11.5 +0.5**
PRU *e* 09 36 02.1
PRU MLR MLR
comp=Z,1µm,16.5s
PRU Pruhonice 44.21 305 *i*P **P** **09 34 11.5 +0.5**
PRU *e*pP **pP** **09 34 16.4 -3.5**
PRU *e*PP PcP 09 36 02.1 +6.9
PRU AMS AMS 09 53 30.0
comp=Z,1µm,16.5s
BRG Berggiesshubel 44.41 306 *e*P **P** **09 34 12.9 +0.3**
comp=Z,12nm,1.0s
BRG *e*PP **PcP** **09 35 55.0 -0.9**
comp=Z,15nm,1.4s
BRG S **S** **09 40 47.0 +1.8**
BRG SS **SS** **09 44 01.0 -3.4**
BRG
comp=N,325nm,11.3s
BRG
comp=E,884nm,13.5s
BRG
comp=Z,1µm,15.9s
BRG Berggiesshubel 44.41 306 *e*P **P** **09 34 12.9 +0.3**
BRG *e* 09 35 55.0
BRG S **S** **09 40 47.0 +1.8**
BRG SS **SS** **09 44 01.0 -3.4**
BRG pmax pmax
comp=Z,2.0nm,0.9s
BRG pmax pmax
comp=Z,12nm,1.4s
BRG MLR MLR
comp=N,15µm,11.3s
BRG MLR MLR
comp=E,325nm,11.3s
BRG MLR MLR
comp=Z,884nm,15.9s
BRG Berggiesshubel 44.41 306 *e*P **P** **09 34 13.1 +0.5**
comp=Z,12nm,1.0s
NB2 NORSAR Subarra 44.65 321 P **P** **09 34 13.3 -1.0**
baz=87,slow=8.6
NB2 NORSAR Subarra 44.65 321 P **P** **09 34 13.3 -1.0**
comp=Z,47nm,1.7s,baz=87,slow=8.6
NOA NORSAR Array B 44.65 321 P **P** **09 34 13.4 -1.0**
NOA NORSAR Array B 44.65 321 P **P** **09 34 13.4 -1.0**
comp=Z,3.9nm,0.7s,baz=88,slow=7.9,SNR=12
NOA LR LR 09 53 34.1
comp=Z,1µm,19.6s,baz=85,slow=37
SOKA Soboth 44.66 300 ⇑*i*P **P** **09 34 14.4 -0.3**
SOKA Soboth 44.66 300 ⇑*i*P **P** **09 34 14.4 -0.3**
FBE Freiberg 44.77 306 *e*P **P** **09 34 16.2 +0.8**
comp=Z,28nm,1.0s
NAO01 NORSAR Array S 44.82 320 *e*P **P** **09 34 15.0 -0.7**
comp=Z,6.2nm,0.6s
MOA Molln 44.88 302 ‖*i*P **P** **09 34 16.6 +0.3**
MOA Molln 44.88 302 ‖*i*P **P** **09 34 16.6 +0.3**
CLL Collm 44.91 307 ‖*i*P **P** **09 34 16.6 +0.1**
CLL *e*S **S** **09 40 54.0 +1.7**
CLL pmax pmax
comp=Z,17nm,1.1s
CLL MLR MLR
comp=Z,600nm,18.2s
CLL Collm 44.91 307 *e*P **P** **09 34 16.6 +0.1**
comp=Z,18nm,1.1s
CLL Collm 44.91 307 ‖*i*P **P** **09 34 16.6 +0.1**
comp=Z,17nm,1.1s
CLL *i* 09 34 20.4
CLL *i*pP **pP** **09 34 22.8 -2.6**
CLL *e*PP **PcP** **09 35 59.0 +1.4**
CLL *e*S **S** **09 40 54.0 +1.7**
CLL *e* 09 41 48.0
CLL *e*SS **SS** **09 44 16.0 +2.1**
CLL Lm MLR 09 54 00.0
comp=Z,600nm,18.2s
GEC2 GERESS Array S 45.00 303 *e*P **P** **09 34 18.1 +0.7**
GEC2 pmax pmax
comp=Z,28nm,1.2s
GEC2 GERESS Array S 45.00 303 *e*P **P** **09 34 18.1 +0.7**
comp=Z,28nm,1.2s
GERES GERESS Array B 45.00 303 P **P** **09 34 17.6 +0.2**
GERES GERESS Array B 45.00 303 P **P** **09 34 17.6 +0.2**
comp=Z,8.8nm,0.7s,baz=76,slow=7.0,SNR=45
GERES LR LR 09 54 42.2
comp=Z,942nm,19.1s,baz=80,slow=38
KHC Kasperske Hory 45.01 304 *i*P **P** **09 34 17.8 +0.3**
KHC *e* 09 44 11.2
KHC MLR MLR
comp=Z,1µm,17.2s
KHC Kasperske Hory 45.01 304 *e*P **P** **09 34 17.7 +0.3**
comp=Z,14nm,1.3s
KHC Kasperske Hory 45.01 304 *i*P **P** **09 34 17.8 +0.3**
KHC *e*pP pP 09 34 20.5 -5.8
KHC *ex* x 09 36 20.8
KHC *ex* x 09 44 11.2
KHC AMS AMS 09 54 00.0
comp=Z,1µm,17.2s
TANN Tannenbergstha 45.43 306 *e*P **P** **09 34 21.1 +0.4**
comp=Z,12nm,1.1s
WET Wettzell 45.46 304 *e*P **P** **09 34 21.6 +0.6**
WET pmax pmax
comp=Z,14nm,1.0s
WET Wettzell 45.46 304 *e*P **P** **09 34 21.6 +0.6**
comp=Z,14nm,1.0s
NKC Novy Kostel 45.48 305 AMS AMS 09 54 30.0
comp=Z,2µm,15.2s
WERN Wernitzgruen 45.51 306 *e*P **P** **09 34 21.7 +0.3**
comp=Z,10.0nm,1.2s
WERD Werda 45.52 306 *e*P **P** **09 34 21.7 +0.3**
comp=Z,15nm,1.3s
GUNZ Gunzen 45.52 306 *e*P **P** **09 34 21.9 +0.5**
comp=Z,13nm,1.1s
PLN Plauen 45.60 306 *e*P **P** **09 34 22.4 +0.3**
comp=Z,64nm,1.4s
KBA Koelnbreinsper 45.68 301 ‖*i*P **P** **09 34 22.9 0.0**
KBA Koelnbreinsper 45.68 301 ‖*i*P **P** **09 34 22.9 0.0**
KBA Koelnbreinsper 45.68 301 ‖*i*P **P** **09 34 22.9 0.0**
ROTZ Rotzenmuhle 45.74 305 *e*P **P** **09 34 24.0 +0.9**
comp=Z,18nm,1.5s
MANZ Manzenberg 45.75 305 *e*P **P** **09 34 23.7 +0.5**
comp=Z,14nm,1.5s
TIP Timpagrande 45.78 289 *e*P **P** **09 34 23.6 -0.2**
comp=Z,61nm,1.4s
MOX Moxa 45.90 306 *e*P **P** **09 34 24.7 +0.3**
MOX pmax pmax
comp=Z,10.0nm,1.0s
MOX Moxa 45.90 306 *e*P **P** **09 34 24.7 +0.3**
comp=Z,10.0nm,1.0s
BSEG Bad Segeberg 46.00 311 *e*P **P** **09 34 25.9 +0.8**
BSEG pmax pmax
comp=Z,52nm,1.3s
BSEG Bad Segeberg 46.00 311 *e*P **P** **09 34 25.9 +0.8**
comp=Z,52nm,1.3s
KBS Kingsbay 46.34 346 *e*P **P** **09 34 29.1 +1.6**
KBS pmax pmax
comp=Z,9.0nm,0.7s
KBS Kingsbay 46.34 346 *e*P **P** **09 34 29.1 +1.6**
comp=Z,8.6nm,0.7s
GRF Grafenberg Arr 46.38 305 *e*P **P** **09 34 29.3 +1.1**
GRF pmax pmax
comp=Z,37nm,1.1s
GRF MLR MLR
comp=Z,400nm,21.6s
GRF Grafenberg Arr 46.38 305 *e*P **P** **09 34 29.3 +1.1**
comp=Z,37nm,1.1s
GRF *e*L L 09 54 43.7
comp=Z,393nm,21.6s
CLZ Clausthal 46.40 308 *e*P **P** **09 34 28.6 +0.3**
CLZ pmax pmax
comp=Z,14nm,1.1s
CLZ Clausthal 46.40 308 *e*P **P** **09 34 28.6 +0.3**
comp=Z,14nm,1.1s
NRDL Niedersach Rie 46.41 309 *e*P **P** **09 34 29.0 +0.7**
comp=Z,26nm,1.1s
FUR Furstenfeldbru 46.73 303 *e*P **P** **09 34 31.9 +0.9**
FUR pmax pmax
comp=Z,29nm,0.8s
FUR Furstenfeldbru 46.73 303 *e*P **P** **09 34 31.9 +0.9**
comp=Z,29nm,0.8s
MAT Matsushiro 47.20 74 P **P** **09 34 34.0 -0.8**
MAT S **S** **09 41 29.4 +3.6**
MJAR Matsushiro Arr 47.20 74 P **P** **09 34 34.2 -0.6**
MJAR Matsushiro Arr 47.20 74 P **P** **09 34 34.2 -0.6**
comp=Z,7.9nm,1.0s,baz=284,slow=8.4,SNR=9.7
MJAR LR LR 09 57 05.6
comp=Z,176nm,19.4s,baz=285,slow=40
RETA Reutte 47.25 302 ⇑*i*P **P** **09 34 34.6 -0.6**
SNR=5.6
RETA Reutte 47.25 302 ⇑*i*P **P** **09 34 34.6 -0.6**
FETA Feichten 47.41 302 ‖*e*P **P** **09 34 35.4 -1.1**
FETA Feichten 47.41 302 ‖*e*P **P** **09 34 35.4 -1.1**
IBBN Ibbenburen 47.86 309 *e*P **P** **09 34 40.0 +0.4**
comp=Z,26nm,1.2s
DAVA Damuels 47.89 302 ‖*i*P **P** **09 34 40.2 0.0**
DAVA Damuels 47.89 302 ‖*i*P **P** **09 34 40.2 0.0**
STU Stuttgart 47.90 304 *e*P **P** **09 34 40.7 +0.7**
STU pmax pmax
comp=Z,24nm,1.4s
STU Stuttgart 47.90 304 *e*P **P** **09 34 40.7 +0.7**
comp=Z,24nm,1.4s
TNS Taunus Mts 47.97 306 *e*P **P** **09 34 41.0 +0.4**
TNS pmax pmax
comp=Z,11nm,1.4s
TNS Taunus Mts 47.97 306 *e*P **P** **09 34 41.0 +0.4**
comp=Z,11nm,1.4s
BUG Bochum--Univer 48.37 308 *e*P **P** **09 34 44.0 +0.4**
comp=Z,17nm,1.3s
BFO Black Forest 48.58 304 P **P** **09 34 43.6 -1.7**
BFO pmax pmax
comp=Z,21nm,1.5s
BFO Black Forest 48.58 304 *e*P **P** **09 34 45.3 0.0**
comp=Z,8.0nm,1.0s
BFO Black Forest 48.58 304 P **P** **09 34 43.5 -1.7**
comp=Z,21nm,1.5s
SEY Seymchan 48.76 36 *e*P **P** **09 34 46.8 +0.3**
CDF Champ du Feu 49.22 304 *e*P **P** **09 34 50.1 -0.2**
comp=Z,44nm,1.3s
CDF Champ du Feu 49.22 304 *e*P **P** **09 34 50.1 -0.2**
CDF pmax pmax
comp=Z,44nm,1.3s
CDF Champ du Feu 49.22 304 *e*P **P** **09 34 50.1 -0.2**
comp=Z,44nm,1.3s
ECH Echery 49.36 304 *e*P **P** **09 34 50.2 -1.1**
ECH pmax pmax
comp=Z,17nm,1.4s
ECH Echery 49.36 304 *e*P **P** **09 34 50.2 -1.1**
comp=Z,17nm,1.4s
HINF Hinteralfeld 49.68 304 *e*P **P** **09 34 53.6 -0.1**
comp=Z,29nm,1.1s
HINF Hinteralfeld 49.68 304 *e*P **P** **09 34 53.6 -0.1**
HINF pmax pmax
comp=Z,29nm,1.1s
HINF Hinteralfeld 49.68 304 *e*P **P** **09 34 53.6 -0.1**
comp=Z,29nm,1.1s
HAU Haudompre 49.94 304 *e*P **P** **09 34 55.6 -0.1**
HAU *e*R
comp=Z,820nm,18.8s
HAU Haudompre 49.94 304 *e*P **P** **09 34 55.6 -0.1**
HAU Haudompre 49.94 304 *e*P **P** **09 34 55.6 -0.1**
LPG La Plagne 50.51 301 *e*P **P** **09 35 00.5 +0.1**
LPG La Plagne 50.51 301 *e*P **P** **09 35 00.5 +0.1**
LPG La Plagne 50.51 301 *e*P **P** **09 35 00.5 +0.1**
LPL La Plagne 50.52 301 *e*P **P** **09 35 00.4 0.0**
LPL La Plagne 50.52 301 *e*P **P** **09 35 00.4 0.0**
LPL La Plagne 50.52 301 *e*P **P** **09 35 00.4 0.0**
SBF Sospel 50.63 299 *e*P **P** **09 35 01.0 -0.1**
SBF Sospel 50.63 299 *e*P **P** **09 35 01.0 -0.1**
SBF Sospel 50.63 299 *e*P **P** **09 35 01.0 -0.1**
SFTF Sexfontaines 50.70 305 *e*P **P** **09 35 01.4 -0.1**
comp=Z,40nm,0.9s
SFTF Sexfontaines 50.70 305 *e*P **P** **09 35 01.4 -0.1**
comp=Z,40nm,0.9s
MBDF Montbardon 50.77 300 *e*P **P** **09 35 01.3 -0.9**
comp=Z,27nm,1.1s
MBDF Montbardon 50.77 300 *e*P **P** **09 35 01.3 -0.9**
MBDF pmax pmax
comp=Z,27nm,1.1s
MBDF Montbardon 50.77 300 *e*P **P** **09 35 01.3 -0.9**
comp=Z,27nm,1.1s
MYLDM Lahad Datu 50.79 122 P P 09 35 10.2 +7.8
comp=Z,35nm,1.6s
ORIF Oris-en-Rattie 51.29 300 *e*P **P** **09 35 05.3 -0.8**
comp=Z,16nm,0.8s
ORIF *e*R
comp=Z,1µm,21.8s
ORIF Oris-en-Rattie 51.29 300 *e*P **P** **09 35 05.3 -0.8**
ORIF pmax pmax
comp=Z,16nm,0.8s
ORIF Oris-en-Rattie 51.29 300 *e*P **P** **09 35 05.3 -0.8**
comp=Z,16nm,0.8s
SMF Signal de Mont 52.00 303 *e*P **P** **09 35 10.6 -0.6**
comp=Z,22nm,1.0s
SMF Signal de Mont 52.00 303 *e*P **P** **09 35 10.6 -0.6**
SMF pmax pmax
comp=Z,22nm,1.0s
SMF Signal de Mont 52.00 303 *e*P **P** **09 35 10.6 -0.6**
comp=Z,22nm,1.0s
SSF Saint Saulge 52.07 304 *e*P **P** **09 35 11.0 -0.7**
comp=Z,11nm,1.0s
SSF Saint Saulge 52.07 304 *e*P **P** **09 35 11.0 -0.7**
SSF pmax pmax
comp=Z,11nm,1.0s
SSF Saint Saulge 52.07 304 *e*P **P** **09 35 11.0 -0.7**
comp=Z,11nm,1.0s
VIVF Saint-Julien-l 52.11 301 *e*P **P** **09 35 11.9 -0.2**
comp=Z,27nm,1.0s
VIVF Saint-Julien-l 52.11 301 *e*P **P** **09 35 11.9 -0.2**
VIVF pmax pmax
comp=Z,27nm,1.0s
VIVF Saint-Julien-l 52.11 301 *e*P **P** **09 35 11.9 -0.2**
comp=Z,27nm,1.0s
AVF Avril sur Loir 52.27 303 *e*P **P** **09 35 12.6 -0.5**
comp=Z,48nm,0.9s
AVF Avril sur Loir 52.27 303 *e*P **P** **09 35 12.6 -0.5**
AVF pmax pmax
comp=Z,48nm,0.9s
AVF Avril sur Loir 52.27 303 *e*P **P** **09 35 12.6 -0.5**
comp=Z,48nm,0.9s
KEST Kesra 52.57 288 LR LR 10 03 00.8
comp=Z,60nm,18.3s,baz=266,slow=42
DAG Danmarks Havn 52.77 343 *i*P **P** **09 35 16.2 -0.3**
DAG pmax pmax
comp=Z,12nm,1.0s
DAG Danmarks Havn 52.77 343 *i*P **P** **09 35 16.2 -0.3**
comp=Z,12nm,1.0s
LASF Ste Croix 52.95 300 *e*P **P** **09 35 18.2 -0.1**
LASF Ste Croix 52.95 300 *e*P **P** **09 35 18.2 -0.1**
TCF Toulx Ste Croi 53.18 303 *e*P **P** **09 35 19.9 -0.1**
comp=Z,12nm,0.8s
TCF Toulx Ste Croi 53.18 303 *e*P **P** **09 35 19.9 -0.1**
TCF pmax pmax
comp=Z,12nm,0.8s
TCF Toulx Ste Croi 53.18 303 *e*P **P** **09 35 19.9 -0.1**
comp=Z,12nm,0.8s
BILL Bilibino 53.28 28*c i*P **P** **09 35 20.3 -0.1**
BILL *e* 09 37 23.6
BILL pmax pmax
comp=Z,9.0nm,0.8s
BILL MLR MLR
comp=Z,500nm,15.0s
BILL Bilibino 53.28 28 *e*P **P** **09 35 20.2 -0.1**
comp=Z,31nm,1.3s
LDF La Druitiere 53.79 307 *e*P **P** **09 35 23.7 -0.7**
LDF La Druitiere 53.79 307 *e*P **P** **09 35 23.7 -0.7**
LDF La Druitiere 53.79 307 *e*P **P** **09 35 23.7 -0.7**
CAF Calviac 53.80 302 *e*P **P** **09 35 24.6 0.0**
comp=Z,40nm,1.4s
CAF Calviac 53.80 302 *e*P **P** **09 35 24.6 0.0**
CAF pmax pmax
comp=Z,40nm,1.4s
CAF Calviac 53.80 302 *e*P **P** **09 35 24.6 0.0**
comp=Z,40nm,1.4s
RJF Les Rejaudoux 54.01 302 *e*P **P** **09 35 26.3 +0.3**
RJF *e*R
comp=Z,485nm,22.8s
RJF Les Rejaudoux 54.01 302 *e*P **P** **09 35 26.3 +0.3**
RJF Les Rejaudoux 54.01 302 *e*P **P** **09 35 26.3 +0.3**
PETK Petropavlovsk- 54.04 47 LR LR 10 02 06.0
comp=Z,91nm,18.3s,baz=295,slow=40
GRR Gorron 54.32 307 *e*P **P** **09 35 27.6 -0.6**
comp=Z,36nm,1.0s
GRR Gorron 54.32 307 *e*P **P** **09 35 27.6 -0.6**
GRR pmax pmax
comp=Z,36nm,1.0s
GRR Gorron 54.32 307 *e*P **P** **09 35 27.6 -0.6**
comp=Z,36nm,1.0s
MFF Saint Martin d 54.57 304 *e*P **P** **09 35 29.3 -0.8**
comp=Z,13nm,0.9s
MFF Saint Martin d 54.57 304 *e*P **P** **09 35 29.3 -0.8**
MFF pmax pmax
comp=Z,13nm,0.9s
MFF Saint Martin d 54.57 304 *e*P **P** **09 35 29.3 -0.8**
comp=Z,13nm,0.9s
LFF La Frestale 54.66 302 *e*P **P** **09 35 30.9 +0.2**
comp=Z,38nm,1.0s
LFF La Frestale 54.66 302 *e*P **P** **09 35 30.9 +0.2**
LFF pmax pmax
comp=Z,38nm,1.0s
LFF La Frestale 54.66 302 *e*P **P** **09 35 30.9 +0.2**
comp=Z,38nm,1.0s
KMBO Kilima Mbogo 54.81 232 *e*P **P** **09 35 33.5 +1.1**
comp=Z,28nm,1.3s
KMBO Kilima Mbogo 54.81 232 P **P** **09 35 34.1 +1.6**
SNR=7.8
KMBO Kilima Mbogo 54.81 232 P **P** **09 35 33.8 +1.3**
comp=Z,10nm,1.1s,baz=26,slow=10,SNR=13
KMBO LR LR 10 00 17.3
comp=Z,258nm,18.5s,baz=93,slow=38
SGMF Saint Gilles 55.42 307 *e*P **P** **09 35 35.7 -0.5**
SGMF Saint Gilles 55.42 307 *e*P **P** **09 35 35.7 -0.5**
SGMF Saint Gilles 55.42 307 *e*P **P** **09 35 35.7 -0.5**
QUIF Quistinic 55.93 307 *e*P **P** **09 35 39.3 -0.5**
comp=Z,22nm,0.9s
QUIF Quistinic 55.93 307 *e*P **P** **09 35 39.3 -0.5**
QUIF pmax pmax
comp=Z,22nm,0.9s
QUIF Quistinic 55.93 307 *e*P **P** **09 35 39.3 -0.5**
comp=Z,22nm,0.9s
MBAR Mbarara 58.50 238 P P 09 35 50.6 -8.0
SNR=13
SUMG Summit 59.32 342 *e*P **P** **09 36 06.1 +2.3**
SUMG pmax pmax
comp=Z,6.0nm,0.9s
SUMG Summit 59.32 342 *i*P **P** **09 36 02.9 -0.9**
SUMG Summit 59.32 342 *i*P **P** **09 36 06.1 +2.3**
comp=Z,6.4nm,0.9s
ESDC Sonseca Array 60.12 298 P **P** **09 36 09.2 -0.2**
ESDC Sonseca Array 60.12 298 P **P** **09 36 09.2 -0.2**
comp=Z,1.7nm,0.6s,baz=54,slow=7.2,SNR=10
ESDC LR LR 10 05 40.1
comp=Z,189nm,18.5s,baz=35,slow=40
TAM Tamanrasset 62.00 277 *e*P **P** **09 36 22.4 -0.1**
TAM pmax pmax
comp=Z,2.0nm,0.5s
TAM Tamanrasset 62.00 277 *e*P **P** **09 36 22.4 -0.1**
comp=Z,2.2nm,0.5s
MDT Midelt 64.06 292 LR LR 10 07 37.4
comp=Z,143nm,18.4s,baz=96,slow=39
RES Resolute Bay 65.48 358 P **P** **09 36 43.5 -1.0**
RES Resolute Bay 65.48 358 P **P** **09 36 43.5 -1.0**
comp=Z,1.9nm,0.9s,baz=46,slow=7.8,SNR=6.7
ILAR Eielson Array 70.00 18 P **P** **09 37 11.7 -1.5**
ILAR Eielson Array 70.00 18 P **P** **09 37 11.7 -1.5**
comp=Z,3.0nm,0.8s,baz=319,slow=4.8,SNR=40
ILAR LR LR 10 12 26.6
comp=Z,284nm,18.7s,baz=146,slow=40
TOA0 Torodi Ar. Sit 70.61 271 *e*P **P** **09 37 17.1 -0.5**
TORD Torodi Ar. Bea 70.61 271 P **P** **09 37 17.2 -0.4**
TORD Torodi Ar. Bea 70.61 271 P **P** **09 37 17.2 -0.4**
comp=Z,6.6nm,0.6s,baz=47,slow=5.4,SNR=78

FITZ	**Fitzroy Crossi**	**73.32**	**132**	P		**P**	**09 37 33.2**	**-0.4**
FITZ	**Fitzroy Crossi**	**73.32**	**132**	P		**P**	**09 37 33.2**	**-0.4**
	comp=Z,8.3nm,1.0s,baz=323,slow=3.1,SNR=10							
KDAK	**Kodiak Island**	**74.04**	**25**	P		**P**	**09 37 36.7**	**-0.7**
KDAK	**Kodiak Island**	**74.04**	**25**	P		**P**	**09 37 36.7**	**-0.7**
	comp=Z,14nm,0.9s,baz=26,slow=6.9,SNR=6.5							
YKW3	**Yellowknife Ar**	**77.34**	**6**	*e*P		**P**	**09 37 55.1**	**-1.0**
YKA	**Yellowknife Ar**	**77.41**	**6**	P		**P**	**09 37 55.0**	**-1.6**
YKA	**Yellowknife Ar**	**77.41**	**6**	P		**P**	**09 37 55.0**	**-1.6**
	comp=Z,4.7nm,0.8s,baz=346,slow=5.5,SNR=18							
WRA	**Warramunga Arr**	**79.92**	**127**	P		**P**	**09 38 10.2**	**-0.7**
WRA				PKKPbc	**PKKPbc**		**09 56 56.7**	**+0.8**
WRA	**Warramunga Arr**	**79.92**	**127**	P		**P**	**09 38 10.2**	**-0.7**
	comp=Z,8.6nm,1.1s,baz=324,slow=5.0,SNR=39							
WRA				PKKPbc	**PKKPbc**		**09 56 56.7**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=140,slow=2.0,SNR=5.0							
WRA				LR		LR	10 18 03.3	
	comp=Z,85nm,20.6s,baz=265,slow=39							
LIC	**Lamto**	**80.08**	**270**	*e*P		**P**	**09 38 11.7**	**-0.3**
	comp=Z,33nm,1.0s							
LIC				*e*R				
	comp=Z,183nm,17.8s							
LIC	**Lamto**	**80.08**	**270**	*e*P		**P**	**09 38 11.7**	**-0.3**
	comp=Z,33nm,1.0s							
SCHQ	**Schefferville**	**80.65**	**340**	P		**P**	**09 38 16.4**	**+1.9**
SCHQ	**Schefferville**	**80.65**	**340**	P		**P**	**09 38 16.4**	**+1.9**
	comp=Z,2.9nm,0.8s,baz=90,slow=19,SNR=5.2							
SCHQ				LR		LR	10 14 05.8	
	comp=Z,234nm,20.4s,baz=15,slow=36							
AS31	**Alice Springs**	**82.47**	**129**	*e*P		**P**	**09 38 23.9**	**-0.5**
AS31				*e*PcP		**PcP**	**09 38 29.8**	**+0.3**
ASAR	**Alice Springs**	**82.47**	**129**	P		**P**	**09 38 23.8**	**-0.6**
ASAR	**Alice Springs**	**82.47**	**129**	P		**P**	**09 38 23.8**	**-0.6**
	comp=Z,4.0nm,0.8s,baz=320,slow=5.4,SNR=40							
ASAR				LR		LR	10 24 40.6	
	comp=Z,82nm,18.1s,baz=312,slow=43							
BOSA	**Boshof**	**83.61**	**224**	P		**P**	**09 38 30.9**	**+0.5**
BOSA	**Boshof**	**83.61**	**224**	P		**P**	**09 38 30.9**	**+0.5**
	comp=Z,11nm,1.1s,baz=111,slow=2.4,SNR=5.0							
FFC	**Flin Flon**	**85.64**	**360**	*e*P		**P**	**09 38 39.6**	**-0.6**
FFC				pmax		pmax		
	comp=Z,29nm,1.4s							
FFC	**Flin Flon**	**85.64**	**360**	*e*P		**P**	**09 38 39.6**	**-0.6**
	comp=Z,29nm,1.4s							
FFC				*e*PcP		**PcP**	**09 38 42.5**	**-0.6**
CTA	**Charters Tower**	**87.74**	**119**	P		**P**	**09 38 51.5**	**+0.6**
CTA	**Charters Tower**	**87.74**	**119**	P		**P**	**09 38 51.5**	**+0.6**
	comp=Z,7.7nm,1.1s,baz=241,slow=3.2,SNR=3.5							
ULM	**Lac du Bonnet**	**89.92**	**356**	P		**P**	**09 39 00.9**	**+0.1**
ULM	**Lac du Bonnet**	**89.92**	**356**	P		**P**	**09 39 00.9**	**+0.1**
	comp=Z,2.8nm,0.8s,baz=8.2,slow=5.3,SNR=3.0							
ULM				LR		LR	10 22 54.1	
	comp=Z,283nm,19.4s,baz=18,slow=38							
NEW	**Newport**	**91.20**	**10**	P		**P**	**09 39 07.2**	**+0.2**
NEW	**Newport**	**91.20**	**10**	P		**P**	**09 39 07.2**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=260,slow=9.6,SNR=4.0							
AGMN	**Agassiz Nation**	**91.87**	**355**	*e*P		**P**	**09 39 09.4**	**-0.6**
	comp=Z,24nm,1.7s							
BSMT	**Bassoo Peak**	**91.88**	**8**	*e*P		**P**	**09 39 10.4**	**+0.1**
	comp=Z,5.2nm,1.0s							
SWMT	**Swartz Lake**	**92.30**	**8**	*e*P		**P**	**09 39 12.0**	**-0.1**
	comp=Z,10.0nm,1.7s							
SLMT	**Seeley Lake**	**92.62**	**7**	*e*P		**P**	**09 39 12.6**	**-1.1**
	comp=Z,1.8nm,0.7s							
STKA	**Stephens Creek**	**93.10**	**130**	LR		LR	10 24 02.1	
	comp=Z,153nm,18.6s,baz=291,slow=37							
PDAR	**Pinedale Array**	**97.39**	**5**	P		**P**	**09 39 34.8**	**-0.8**
PDAR	**Pinedale Array**	**97.39**	**5**	P		**P**	**09 39 34.8**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=318,slow=2.0,SNR=4.0							
PDAR				LR		LR	10 28 28.9	
	comp=Z,186nm,19.3s,baz=204,slow=38							
DZM	**Mont Dzumac**	**103.28**	**108**	*e*LR		LR	10 14 10.1	
	comp=Z,145nm,26.9s							
VNDA	**Vanda**	**127.54**	**164**	PKP		**PKPdf**	**09 45 05.2**	**-0.3**
VNDA	**Vanda**	**127.54**	**164**	PKP		**PKPdf**	**09 45 05.2**	**-0.3**
	comp=Z,2.3nm,0.9s,baz=225,slow=4.3,SNR=5.7							
ROSC	**El Rosal**	**128.25**	**323**	PKP		**PKPdf**	**09 45 10.3**	**+1.1**
ROSC	**El Rosal**	**128.25**	**323**	PKP		**PKPdf**	**09 45 10.3**	**+1.1**
	comp=Z,3.0nm,0.3s,baz=72,slow=20,SNR=5.4							
PPT2	**Papeete2**	**133.96**	**75**	*e*LR		LR	10 28 20.3	
	comp=Z,77nm,22.5s							
TBI	**Tubuai**	**137.46**	**81**	*e*LR		LR	10 29 56.9	
	comp=Z,101nm,23.8s							
CPUP	**Villa Florida**	**139.99**	**276**	PKP		**PKPdf**	**09 45 29.0**	**-1.3**
CPUP	**Villa Florida**	**139.99**	**276**	PKP		**PKPdf**	**09 45 29.0**	**-1.3**
	comp=Z,1.6nm,0.8s,baz=90,slow=20,SNR=3.4							
LCO	**Las Campanas**	**151.51**	**283**	*e*PKPbc		**PKPbc**	**09 45 56.3**	**0.0**
PLCA	**Paso Flores**	**155.49**	**258**	PKPab		**PKPab**	**09 46 21.3**	**+0.2**
PLCA	**Paso Flores**	**155.49**	**258**	PKPab		**PKPab**	**09 46 21.3**	**+0.2**
	comp=Z,5.7nm,0.9s,baz=73,slow=5.3,SNR=6.4							

*CSEM **22** 09:41:49.1±0.3,36.°85N×7.°29W, h25km, ML2.7/5, Error ellipse: s-maj=6.1km s-min=3.0km az=13.0*
*MDD **22** 09:41:49.1±0.9, 36.°77N×7.°35W, h26km±6km, mbLg2.2/11, Error ellipse: s-maj=9.8km s-min=5.2km az=20.0, PRXIMO*
*LDG **22** 09:41:50.3±0.4, 36.°90N×7.°21W, h10km, Ml2.8/3, Error ellipse: s-maj=6.6km s-min=3.5km az=32.0*

INMG 22 09:41:50.2±1.3, 36.°81N×7.°34W, h26km±5km, ML2.0, 3D, Error ellipse: s-maj=4.6km s-min=3.3km az=27.0, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.64**	**312**	*e*Pg	Pb	09 42 02.2	-0.6
PBDV				*e*Sg	Sb	09 42 10.8	-0.6
PBDV				A	A	09 42 11.1	
	42nm,0.3s						
PBDV	**Barranco-do-Ve**	**0.64**	**312**	Pg	Pb	09 42 02.2	-0.6
PBDV				Lg	Lg	09 42 10.8	
	42nm,0.3s						
PBDV	**Barranco-do-Ve**	**0.64**	**312**	*e*Pg	Pb	09 42 02.2	-0.6
PBDV				Lg	Lg	09 42 10.8	
	42nm,0.3s						
PVAQ	**Vaqueiros**	**0.66**	**333**	*i* Pg	Pb	09 42 02.6	-0.6
PVAQ				*e*Sg	Sb	09 42 11.5	-0.5
PVAQ				A	A	09 42 12.3	
	36nm,0.2s						
PVAQ	**Vaqueiros**	**0.66**	**333**	⇓Pg	Pb	09 42 02.6	-0.6
PVAQ				Lg	Lg	09 42 11.5	
	36nm,0.2s						
PVAQ	**Vaqueiros**	**0.66**	**333**	Pg	Pb	09 42 02.6	-0.6
PVAQ				*e*Sg	Sb	09 42 11.5	-0.5
	36nm,0.2s						
EGRO	**El Granado**	**0.73**	**351**	⇓Pg	Pb	09 42 03.6	-0.6
	13nm,0.1s,SNR=18						
EGRO				Lg	Lg	09 42 13.3	
	8.3nm,0.1s,SNR=14						
EGRO	**El Granado**	**0.73**	**351**	Pg	Pb	09 42 03.6	-0.7
	13nm,0.1s,SNR=18						
EGRO				Lg	Lg	09 42 13.3	
	8.3nm,0.1s,SNR=14						
PCVE	**Castro Verde**	**0.99**	**326**	*e*P	Pn	09 42 07.2	-1.2
PCVE				*e*S	Sb	09 42 19.9	-1.4
PCVE				A	A	09 42 20.5	
	15nm,0.6s						
PCVE	**Castro Verde**	**0.99**	**326**	Pg	Pn	09 42 07.2	-1.2
PCVE				Lg	Lg	09 42 19.9	
	15nm,0.6s						
PCVE	**Castro Verde**	**0.99**	**326**	*e*P	Pn	09 42 07.2	-1.2
PCVE				*e*S	Sb	09 42 19.9	-1.4
	15nm,0.6s						
EMIN	**Mina Concepcio**	**1.09**	**29**	Pg	Pn	09 42 08.4	-1.5
	0.6nm,0.1s,SNR=7.0						
EMIN				Lg	Lg	09 42 21.0	
	15nm,0.1s,SNR=20						
EMIN	**Mina Concepcio**	**1.09**	**29**	Pg	Pn	09 42 08.4	-1.4
	0.6nm,0.1s,SNR=7.0						
EMIN				Lg	Lg	09 42 21.0	
	15nm,0.1s,SNR=20						
MORF	**Marmelete**	**1.16**	**296**	*e*P	Pn	09 42 09.1	-1.7
MORF				*e*S	Sn	09 42 23.3	-2.5
MORF				A	A	09 42 23.4	
	29nm,0.1s						
MORF	**Marmelete**	**1.16**	**296**	Pg	Pn	09 42 09.1	-1.7
MORF				Lg	Lg	09 42 23.3	
	29nm,0.1s						
MORF	**Marmelete**	**1.16**	**296**	*e*P	Pn	09 42 09.1	-1.7
MORF				*e*S	Sn	09 42 23.3	-2.5
	29nm,0.1s						
ESPR	**Espera**	**1.19**	**87**	Pg	Pn	09 42 09.7	-1.5
	6.0nm,0.1s,SNR=7.5						
ESPR				Lg	Lg	09 42 24.7	
	110nm,0.3s,SNR=6.1						
ESPR	**Espera**	**1.19**	**87**	Pg	Pn	09 42 09.7	-1.5

BGS 22 10:00:15.5±1.1, 50.°08N×0.°82E, h6km, ML2.3, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELSH	**Elham, Standar**	**1.08**	**11**	*e*P	Pg	10 00 36.4	0.0
ELSH				AML	AML	10 00 40.6	
	comp=N,71nm,0.3s						
ELSH				AML	AML	10 00 58.8	
	comp=E,41nm,0.2s						
ELSH	**Elham, Standar**	**1.08**	**11**	P	Pg	10 00 36.4	0.0
ELSH				AML	AML	10 00 40.6	
	comp=E,71nm,0.3s						
ELSH				AML	AML	10 00 58.8	
	comp=E,41nm,0.2s						
ELSH	**Elham, Standar**	**1.08**	**11**	*e*P	Pg	10 00 36.4	0.0
ELSH				AML	AML	10 00 40.6	
	comp=N,71nm,0.3s						
ELSH				AML	AML	10 00 58.8	
	comp=E,41nm,0.2s						
WOL	**Wolverton**	**1.79**	**314**	*e*S	Sn	10 01 08.7	-1.3
WOL				AML	AML	10 01 23.8	
	comp=N,29nm,0.5s						
WOL				AML	AML	10 01 24.6	
	comp=E,24nm,0.3s						
WOL	**Wolverton**	**1.79**	**314**	*e*S	Sn	10 01 08.7	-1.3
WOL				AML	AML	10 01 23.8	
	comp=N,29nm,0.5s						
WOL				AML	AML	10 01 24.6	
	comp=E,24nm,0.3s						
JDG	**Jersey Dam (Ga**	**2.06**	**246**	*e*P	Pn	10 00 49.4	-1.3
JDG	**Jersey Dam (Ga**	**2.06**	**246**	P	Pn	10 00 49.4	-1.3
JDG	**Jersey Dam (Ga**	**2.06**	**246**	*e*P	Pn	10 00 49.4	-1.3
JDC	**Jersey Dam (Cr**	**2.07**	**245**	*e*P	Pn	10 00 49.1	-1.7
JDC	**Jersey Dam (Cr**	**2.07**	**245**	P	Pn	10 00 49.1	-1.7
JDC	**Jersey Dam (Cr**	**2.07**	**245**	*e*P	Pn	10 00 49.1	-1.7
JSA	**Saint Aubin**	**2.14**	**246**	*e*P	Pn	10 00 50.5	-1.3
JSA				*e*S	Sn	10 01 17.4	-1.3
JSA				AML	AML	10 01 32.0	
	comp=N,18nm,0.2s						
JSA				AML	AML	10 01 32.0	
	comp=E,19nm,0.3s						
JSA	**Saint Aubin**	**2.14**	**246**	P	Pn	10 00 50.5	-1.3
JSA				S	Sn	10 01 17.4	-1.3
JSA				AML	AML	10 01 32.0	
	comp=E,18nm,0.2s						
JSA				AML	AML	10 01 32.0	
	comp=E,19nm,0.3s						
JSA	**Saint Aubin**	**2.14**	**246**	*e*P	Pn	10 00 50.5	-1.3
JSA				*e*S	Sn	10 01 17.4	-1.3
JSA				AML	AML	10 01 32.0	
	comp=N,18nm,0.2s						
JSA				AML	AML	10 01 32.0	
	comp=E,19nm,0.3s						
SWN1	**Swindon**	**2.19**	**312**	*e*P	Pn	10 00 52.3	-0.2
SWN1				AML	AML	10 01 34.3	
	comp=E,27nm,0.4s						
SWN1				AML	AML	10 01 43.9	
	comp=N,47nm,0.5s						
SWN1	**Swindon**	**2.19**	**312**	P	Pn	10 00 52.3	-0.2
SWN1				AML	AML	10 01 34.3	
	comp=N,27nm,0.4s						
SWN1				AML	AML	10 01 43.9	
	comp=N,47nm,0.5s						
SWN1	**Swindon**	**2.19**	**312**	*e*P	Pn	10 00 52.3	-0.2
SWN1				AML	AML	10 01 34.3	
	comp=E,27nm,0.4s						
SWN1				AML	AML	10 01 43.9	
	comp=N,47nm,0.5s						
DYA	**Yadsworthy**	**3.07**	**278**	*e*P	Pn	10 01 03.5	-1.1
DYA	**Yadsworthy**	**3.07**	**278**	P	Pn	10 01 03.5	-1.1
DYA	**Yadsworthy**	**3.07**	**278**	*e*P	Pn	10 01 03.5	-1.1
MCH1	**Michaelchurch**	**3.08**	**310**	*e*P	Pn	10 01 03.9	-0.8
MCH1				AML	AML	10 01 57.3	
	comp=N,7.3nm,0.3s						
MCH1				AML	AML	10 02 08.2	
	comp=E,5.0nm,0.9s						
MCH1	**Michaelchurch**	**3.08**	**310**	P	Pn	10 01 03.9	-0.8
MCH1				AML	AML	10 01 57.3	
	comp=E,7.3nm,0.3s						
MCH1				AML	AML	10 02 08.2	
	comp=E,5.0nm,0.9s						
MCH1	**Michaelchurch**	**3.08**	**310**	*e*P	Pn	10 01 03.9	-0.8
MCH1				AML	AML	10 01 57.3	
	comp=N,7.3nm,0.3s						
MCH1				AML	AML	10 02 08.2	
	comp=E,5.0nm,0.9s						
HEX	**Exmoor**	**3.11**	**290**	*e*P	Pn	10 01 03.6	-1.5
HEX	**Exmoor**	**3.11**	**290**	P	Pn	10 01 03.6	-1.5
HEX	**Exmoor**	**3.11**	**290**	*e*P	Pn	10 01 03.6	-1.5
HLM1	**Long Mynd**	**3.37**	**318**	*e*P	Pn	10 01 08.0	-0.7
HLM1				AML	AML	10 01 49.2	
	comp=N,6.2nm,0.3s						
HLM1				AML	AML	10 01 49.6	
	comp=E,7.4nm,0.3s						
HLM1	**Long Mynd**	**3.37**	**318**	P	Pn	10 01 08.0	-0.7
HLM1				AML	AML	10 01 49.2	
	comp=E,6.2nm,0.3s						
HLM1				AML	AML	10 01 49.6	
	comp=E,7.4nm,0.3s						
HLM1	**Long Mynd**	**3.37**	**318**	*e*P	Pn	10 01 08.0	-0.7
HLM1				AML	AML	10 01 49.2	
	comp=N,6.2nm,0.3s						
HLM1				AML	AML	10 01 49.6	
	comp=E,7.4nm,0.3s						
HTL	**Hartland**	**3.50**	**287**	*e*P	Pn	10 01 09.5	-1.1
HTL				AML	AML	10 01 49.6	
	comp=E,5.0nm,0.8s						
HTL				AML	AML	10 02 17.0	
	comp=N,8.2nm,0.4s						
HTL	**Hartland**	**3.50**	**287**	P	Pn	10 01 09.5	-1.1
HTL				AML	AML	10 01 49.6	
	comp=N,5.0nm,0.8s						
HTL				AML	AML	10 02 17.0	
	comp=N,8.2nm,0.4s						
HTL	**Hartland**	**3.50**	**287**	*e*P	Pn	10 01 09.5	-1.1
HTL				AML	AML	10 01 49.6	
	comp=E,5.0nm,0.8s						
HTL				AML	AML	10 02 17.0	
	comp=N,8.2nm,0.4s						
WPM1	**Penmaenmawr**	**4.33**	**319**	*e*P	Pn	10 01 21.0	-0.9
WPM1	**Penmaenmawr**	**4.33**	**319**	P	Pn	10 01 21.0	-0.9
WPM1	**Penmaenmawr**	**4.33**	**319**	*e*P	Pn	10 01 21.0	-0.9
YRC	**Rhoscolyn**	**4.62**	**315**	*e*P	Pn	10 01 25.4	-0.4
YRC	**Rhoscolyn**	**4.62**	**315**	P	Pn	10 01 25.4	-0.4
YRC	**Rhoscolyn**	**4.62**	**315**	*e*P	Pn	10 01 25.4	-0.4

*NEIC **22** 10:05:47.3, 31.°14S×71.°19W, h66km, MD4.0(GUC), After GUC.*
NEIC Felt [II] at Illapel.

GUC 22 10:05:47.3±0.4, 31.°14S×71.°19W, h66km±1km, MD4.0, ML3.9, 8C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**0.16**	**103**	⇓*i*P	Pn	10 05 57.4	0.0
CMCH				*i* S	Sn	10 06 05.5	+0.8
CMCH	**Combarbala**	**0.16**	**103**	⇓*i*P	Pn	10 05 57.4	0.0
CMCH				*i* S	Sn	10 06 05.5	+0.8
CMCH				AML	AML	10 06 05.6	
	comp=N,10μm,0.1s						
CHNG	**Los Chungos**	**0.79**	**200**	⇑*i*P	Pn	10 06 03.0	0.0
CHNG				*i* S	Sn	10 06 15.2	+0.6
CHNG	**Los Chungos**	**0.79**	**200**	⇑*i*P	Pn	10 06 03.0	0.0
CHNG				*i* S	Sn	10 06 15.2	+0.6
TLL	**Tololo Astrono**	**1.02**	**19**	⇑*i*P	Pn	10 06 06.8	+0.6
TLL				*i* S	Sn	10 06 21.5	+1.2
TLL	**Tololo Astrono**	**1.02**	**19**	⇑*i*P	Pn	10 06 06.8	+0.6
TLL				*i* S	Sn	10 06 21.5	+1.2
TLL				AML	AML	10 06 24.1	
	comp=N,3μm,0.6s						
ROCH	**El Roble**	**1.83**	**175**	⇑*i*P	Pn	10 06 17.7	+0.7
ROCH				*i* S	Sn	10 06 40.8	+1.4
ROCH				AML	AML	10 06 46.6	
	comp=N,1μm,0.2s						
PEL	**Peldehue**	**2.04**	**168**	*e*P	Pn	10 06 20.2	+0.6
PEL				*i* S	Sn	10 06 44.8	+0.6
PEL				AML	AML	10 06 50.4	
	comp=E,1μm,0.4s						
LCO	**Las Campanas**	**2.16**	**11**	⇑*i*P	Pn	10 06 21.9	+0.5
LCO				*i* S	Sn	10 06 48.5	+1.1
LCO	**Las Campanas**	**2.16**	**11**	⇑*i*P	Pn	10 06 21.9	+0.5
LCO				*i* S	Sn	10 06 48.5	+1.1
LCO				AML	AML	10 06 52.7	
	comp=E,827nm,0.4s						
CLCH	**Cerro Calan**	**2.32**	**166**	*e*P	Pn	10 06 24.8	+1.5
CLCH				*i* S	Sn	10 06 52.5	+1.7
CLCH				AML	AML	10 07 02.5	
	comp=E,980nm,0.8s						
VACH	**Vallenar**	**2.58**	**8**	⇑*i*P	Pn	10 06 17.6	-9.2
VACH				*i* S	Sn	10 06 47.9	-9.2
LMEL	**Las Melosas**	**2.83**	**163**	AML	AML	10 07 15.7	
	comp=N,694nm,0.3s						
CPCH	**Copiapo**	**3.83**	**11**	*i* P	Pn	10 06 44.5	+0.6
CPCH				*i* S	Sn	10 07 27.9	+0.1
CPCH	**Copiapo**	**3.83**	**11**	*i* P	Pn	10 06 44.5	+0.6
CPCH				*i* S	Sn	10 07 27.9	+0.1
TRQA	**Tornquist**	**10.25**	**135**	*e*Pn	Pn	10 08 11.4	-0.3
TRQA				*e*Sn	Sn	10 10 02.9	-2.1

*IDC **22** 10:06:31.5±0.8, 12.°31N×144.°14E, h0km, mb3.8/9, mb1 4.1/9, mb1mx3.8/26, mbtmp3.8/9, Error ellipse: s-maj=36.9km s-min=15.9km az=111.0*
*ISCJB **22** 10:06:34.2±0.7, 12.°3N±0.°1×144.°0E±0.°2, h27km, mb3.9/10, Error ellipse: s-maj=26.3km s-min=9.3km az=31.3*
*NEIC **22** 10:06:36.8±0.6, 12.°30N×144.°18E, h35km, mb4.1/1, Error ellipse: s-maj=25.6km s-min=12.5km az=110.0*

ISC 22 10:06:35.7±0.8, 12.°3N±0.°1×144.°2E±0.°2, h27km, n21, σ0.°93/24, mb3.8/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.46**	**28**	*e*Pn	**Pn**	**10 07 00.5**	**+0.2**
GUMO				Sn	**Sb**	**10 07 19.6**	**-0.9**
GUMO				*e*S	**Sn**	**10 07 20.2**	**+1.5**
GUMO	**Guam**	**1.46**	**28**	Pn	**Pn**	**10 07 00.5**	**+0.2**
	84nm,0.3s,baz=174,slow=14,SNR=36						
GUMO				Sn	**Sb**	**10 07 19.6**	**-0.9**
	112nm,0.3s,baz=356,slow=21,SNR=19						
WRA	**Warramunga Arr**	**33.46**	**197**	P	**P**	**10 13 12.4**	**-0.3**
WRA	**Warramunga Arr**	**33.46**	**197**	P	**P**	**10 13 12.4**	**-0.3**
	1.0nm,0.7s,baz=21,slow=9.8,SNR=16						
ASAR	**Alice Springs**	**37.12**	**196**	P	**P**	**10 13 44.5**	**+0.2**
ASAR	**Alice Springs**	**37.12**	**196**	P	**P**	**10 13 44.5**	**+0.2**
	0.7nm,0.5s,baz=18,slow=11,SNR=24						
MKAR	**Makanchi Array**	**61.94**	**317**	P	**P**	**10 16 54.1**	**+0.9**
MKAR	**Makanchi Array**	**61.94**	**317**	P	**P**	**10 16 54.1**	**+0.9**
	0.3nm,0.5s,baz=91,slow=7.5,SNR=4.4						
ILAR	**Eielson Array**	**70.03**	**25**	P	**P**	**10 17 43.4**	**-1.5**
ILAR	**Eielson Array**	**70.03**	**25**	P	**P**	**10 17 43.4**	**-1.5**
	0.3nm,0.6s,baz=255,slow=5.7,SNR=6.1						
BVAR	**Borovoye Array**	**70.51**	**322**	P	**P**	**10 17 47.7**	**-0.4**
BVAR	**Borovoye Array**	**70.51**	**322**	P	**P**	**10 17 47.7**	**-0.4**
	1.1nm,0.4s,baz=114,slow=7.2,SNR=5.4						
ABKAR	**Akbulak array**	**77.03**	**318**	*e*P	**P**	**10 18 26.1**	**-0.2**
	1.1nm,0.6s						
YKA	**Yellowknife Ar**	**84.32**	**27**	P	**P**	**10 19 04.8**	**-0.2**
YKA	**Yellowknife Ar**	**84.32**	**27**	P	**P**	**10 19 04.8**	**-0.2**
	0.2nm,0.4s,baz=286,slow=5.0,SNR=10						
ARCES	**ARCESS Array B**	**88.09**	**342**	P	**P**	**10 19 24.6**	**+1.0**
ARCES	**ARCESS Array B**	**88.09**	**342**	P	**P**	**10 19 24.6**	**+1.0**
	1.7nm,0.8s,baz=73,slow=8.1,SNR=3.8						
NVAR	**Mina Array Bea**	**88.27**	**51**	P	**P**	**10 19 26.4**	**+1.1**
NVAR	**Mina Array Bea**	**88.27**	**51**	P	**P**	**10 19 26.4**	**+1.1**
	0.2nm,0.7s,baz=262,slow=6.3,SNR=3.7						
FINES	**FINESS Array B**	**92.03**	**335**	P	**P**	**10 19 40.8**	**-1.2**
FINES	**FINESS Array B**	**92.03**	**335**	P	**P**	**10 19 40.8**	**-1.2**
	0.7nm,0.3s,baz=66,slow=4.7,SNR=11						

IDC 22 10:18:25.5±5.7, 6°92S×125°17E, h503km±79km, mb3.1/2, mb1 3.1/5, mb1mx2.9/22, mbtmp3.0/5, Error ellipse: s-maj=108.4km s-min=25.6km az=53.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.12**	**178**	P	P	10 20 54.7	-0.1
	0.5nm,0.3s,baz=12,slow=10,SNR=37						
WRA	**Warramunga Arr**	**15.71**	**146**	P	P	10 21 42.8	-0.4
	0.4nm,0.3s,baz=325,slow=11,SNR=32						
WRA				S	S	10 24 26.9	+0.8
	0.0nm,0.3s,baz=320,slow=19,SNR=3.2						
ASAR	**Alice Springs**	**18.65**	**154**	P	P	10 22 11.7	-0.1
	0.4nm,0.3s,baz=332,slow=8.8,SNR=36						
STKA	**Stephens Creek**	**29.18**	**150**	P	P	10 23 45.8	+0.2
	1.6nm,0.5s,baz=322,slow=6.4,SNR=5.6						
MKAR	**Makanchi Array**	**65.61**	**329**	P	P	10 28 19.3	0.0
	0.8nm,0.5s,baz=128,slow=8.1,SNR=9.9						

*BJI **22** 10:38:10.4, 8°.27S×157°.77E, h9km, mB5.4/10, mb4.8/25, Ms5.0/4, Ms7 4.6/4*
*ISCJB **22** 10:38:11.4±0.3, 8°.58S±0°.06×157°.25E±0°.06, h13km, mb4.6/30, MS3.9/14, Error ellipse: s-maj=9.0km s-min=8.3km az=160.0*
*IDC **22** 10:38:11.7±0.6, 8°.42S×157°.02E, h0km, mb4.3/14, mb1 4.5/15, mb1mx4.4/21, mbtmp4.3/15, ML3.5/1, MS3.9/16, Ms1 3.9/16, ms1mx3.8/30, Error ellipse: s-maj=22.5km s-min=17.1km az=109.0*
*NEIC **22** 10:38:12.0±0.3, 8°.55S×157°.24E, h10km, mb4.7/7, Error ellipse: s-maj=9.1km s-min=8.9km az=79.0*

ISC 22 10:38:14.6±0.5, 8°.63S±0°.08×157°.17E±0°.07, h17km±2km, n70, σ1°71/81, mb4.7/31, MS4.0/14, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.86**	**106**	*e*Pn	Pn	10 38 55.3	-4.2
HNR				*e*S	**Sg**	**10 39 50.5**	**+3.9**
PMG	**Port Moresby**	**9.92**	**265**	*e*Pn	Pn	10 40 40.2	+3.8
PMG	**Port Moresby**	**9.92**	**265**	LR	LR	10 44 03.8	
	comp=Z,795nm,20.9s,baz=64,slow=36						
CTA	**Charters Tower**	**1.53**	**222**	LR	LR	10 47 09.5	
	comp=Z,777nm,19.2s,baz=43,slow=34						
CTAO	**Charters Tower**	**1.53**	**222**	*e*Pn	**Pn**	**10 41 53.2**	**+0.1**
	75nm,1.8s						
DZM	**Mont Dzumac**	**16.07**	**147**	Pn	**Pn**	**10 42 00.7**	**+0.7**
DZM	**Mont Dzumac**	**16.07**	**147**	Pn	**Pn**	**10 42 00.7**	**+0.7**
	0.2nm,0.3s,baz=313,slow=16,SNR=4.4						
MSVF	**Nonsavu**	**22.23**	**116**	*e*P	**P**	**10 43 08.0**	**-2.8**
	14nm,0.9s						
ARMA	**Armidale**	**22.29**	**193**	P	**P**	**10 43 10.3**	**-1.1**
	37nm,1.4s						
WRAB	**Tennant Creek**	**24.77**	**241**	*e*P	**P**	**10 43 34.0**	**-1.7**
	84nm,2.0s						
WRA	**Warramunga Arr**	**24.78**	**241**	P	**P**	**10 43 33.8**	**-2.1**
WRA				PcP	**PcP**	**10 47 11.7**	**-0.8**
WRA	**Warramunga Arr**	**24.78**	**241**	P	**P**	**10 43 33.8**	**-2.1**
	5.9nm,0.8s,baz=66,slow=9.7,SNR=27						
WRA				PcP	**PcP**	**10 47 11.7**	**-0.8**
	1.5nm,0.7s,baz=62,slow=2.4,SNR=11						
WRA				LR	LR	10 52 37.5	
	comp=Z,654nm,21.1s,baz=60,slow=35						
GUMO	**Guam**	**25.23**	**331**	LR	LR	10 52 13.4	
	comp=Z,41nm,18.1s,baz=124,slow=34						
ASAR	**Alice Springs**	**26.82**	**233**	P	**P**	**10 43 52.2**	**-2.1**
ASAR				PcP	**PcP**	**10 47 17.5**	**+0.5**
ASAR	**Alice Springs**	**26.82**	**233**	P	**P**	**10 43 52.2**	**-2.1**
	2.2nm,0.9s,baz=64,slow=9.3,SNR=13						
ASAR				PcP	**PcP**	**10 47 17.5**	**+0.5**
	0.8nm,1.1s,baz=56,slow=2.3,SNR=2.8						
ASAR				LR	LR	10 54 00.8	
	comp=Z,454nm,19.4s,baz=350,slow=35						
STKA	**Stephens Creek**	**27.29**	**210**	*e*P	**P**	**10 43 58.4**	**0.0**
	35nm,2.6s						
STKA	**Stephens Creek**	**27.29**	**210**	P	**P**	**10 43 59.9**	**+1.5**
	6.0nm,0.8s,baz=32,slow=11,SNR=10						
STKA				LR	LR	10 54 06.7	
	comp=Z,402nm,20.0s,baz=30,slow=35						
AFI	**Afiamalu**	**30.89**	**103**	LR	LR	10 54 12.9	
	comp=Z,201nm,21.9s,baz=159,slow=31						
RAO	**Raoul Island**	**31.11**	**135**	LR	LR	10 53 25.2	
	comp=Z,135nm,19.1s,baz=37,slow=29						
FITZ	**Fitzroy Crossi**	**32.04**	**250**	P	**P**	**10 44 39.8**	**-0.8**
FITZ	**Fitzroy Crossi**	**32.04**	**250**	P	**P**	**10 44 39.8**	**-0.8**
	1.0nm,0.7s,baz=200,slow=16,SNR=3.9						
FITZ				LR	LR	10 57 19.9	
	comp=Z,294nm,19.4s,baz=70,slow=36						
URZ	**Urewera**	**34.55**	**152**	LR	LR	10 56 52.8	
	comp=Z,158nm,19.2s,baz=328,slow=32						
RPZ	**Rata Peaks**	**37.00**	**163**	LR	LR	10 57 48.9	
	comp=Z,200nm,18.4s,baz=338,slow=32						
PPT	**Papeete**	**52.48**	**105**	LR	LR	11 03 04.0	
	comp=Z,22nm,21.5s,baz=320,slow=28						
KSRS	**Korea Array**	**53.39**	**331**	P	**P**	**10 47 31.4**	**-2.1**
	2.1nm,1.0s,baz=153,slow=8.4,SNR=7.0						
KSAR	**Wonju Array Be**	**53.40**	**331**	P	**P**	**10 47 31.4**	**-2.1**
NJ2	**Nanjing**	**54.54**	**320**	*e*P	**P**	**10 47 41.1**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
MDJ	**Mudanjiang**	**58.56**	**337**	P	**P**	**10 48 09.8**	**-0.5**
MDJ				pmax	pmax		
	comp=Z,19nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,290nm,4.0s						
CN2	**Changchun**	**59.59**	**334**	*e*P	**P**	**10 48 17.8**	**+0.3**
PETK	**Petropavlovsk-**	**61.50**	**0**	LR	LR	11 11 05.8	
	comp=Z,85nm,19.4s,baz=171,slow=32						
CMAR	**Chiang Mai Arr**	**63.43**	**296**	P	**P**	**10 48 42.9**	**-1.0**
CMAR	**Chiang Mai Arr**	**63.43**	**296**	P	**P**	**10 48 42.9**	**-1.0**
	comp=Z,5.1nm,1.0s,baz=113,slow=4.6,SNR=19						
CHTO	**Chiang Mai**	**63.55**	**296**	*e*P	**P**	**10 48 43.8**	**-0.9**
	comp=Z,21nm,1.6s						
CD2	**Chengdu**	**64.51**	**310**	P	**P**	**10 48 52.5**	**+1.6**
CD2				pP	**pP**	**10 48 57.3**	**+0.9**
CD2				sP	**sP**	**10 48 59.5**	**+1.0**
CD2				PcP	**PcP**	**10 49 26.1**	**+1.1**
CD2				PP	**PP**	**10 51 16.8**	**+3.8**
CD2				PcS		10 53 28.6	
CD2				S	**S**	**10 57 31.3**	**+1.7**
CD2				sS	**sS**	**10 57 38.5**	**-0.3**
CD2				SKS	**SKSac**	**10 58 44.4**	**-0.5**
CD2				SS	**SS**	**11 01 43.8**	**+3.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,80nm,5.4s						
LZH	**Lanzhou**	**66.98**	**315**	*e*P	**P**	**10 49 07.5**	**+0.6**
LZH				pP	**pP**	**10 49 11.8**	**-0.7**
LZH				sP	**sP**	**10 49 13.3**	**-1.3**
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
VNDA	**Vanda**	**68.91**	**179**	*e*P	**P**	**10 49 17.9**	**-0.2**
	comp=Z,125nm,3.0s						
VNDA	**Vanda**	**68.91**	**179**	P	**P**	**10 49 19.1**	**+0.9**
	comp=Z,2.7nm,0.9s,baz=302,slow=2.6,SNR=6.0						
GTA	**Gaotai**	**71.40**	**317**	*e*P	**P**	**10 49 35.1**	**+0.9**
GTA				pP	**pP**	**10 49 39.0**	**-0.8**
GTA				sP	**sP**	**10 49 42.0**	**+0.1**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,180nm,4.3s						
SONM	**Songino Array**	**71.87**	**327**	P	**P**	**10 49 36.4**	**-0.5**
SONM	**Songino Array**	**71.87**	**327**	P	**P**	**10 49 36.4**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=132,slow=4.2,SNR=4.9						
SHL	**Shillong**	**71.97**	**300**	*e*P	**P**	**10 49 38.0**	**0.0**
QSPA	**South Pole Qui**	**81.36**	**180**	*e*P	**P**	**10 50 29.6**	**-0.6**
	comp=Z,275nm,3.0s						
WMQ	**Urumqi**	**81.48**	**317**	P	**P**	**10 50 31.0**	**-0.2**
WMQ				pmax	pmax		
	comp=Z,16nm,1.0s						
TRF	**Thorofare Moun**	**82.12**	**21**	*e*P	**P**	**10 50 31.8**	**-2.5**
	comp=Z,40nm,2.0s						
MCK	**McKinley**	**82.77**	**21**	*e*P	**P**	**10 50 34.6**	**-2.9**
	comp=Z,18nm,1.2s						
MAW	**Mawson**	**83.73**	**203**	P	**P**	**10 50 44.6**	**+2.2**
MAW	**Mawson**	**83.73**	**203**	P	**P**	**10 50 44.6**	**+2.2**
	comp=Z,3.9nm,1.0s,baz=105,slow=2.4,SNR=5.2						
MAW				LR	LR	11 23 23.4	
	comp=Z,177nm,19.9s,baz=344,slow=32						
COLA	**College**	**83.83**	**21**	*e*P	**P**	**10 50 40.7**	**-2.1**
COLA				*e*pP	pP	10 50 55.8	+7.3
ILAR	**Eielson Array**	**84.11**	**21**	P	**P**	**10 50 41.9**	**-2.5**
	comp=Z,0.4nm,0.5s,baz=262,slow=5.3,SNR=6.9						
ILAR				LR	LR	11 26 22.0	
	comp=Z,102nm,18.0s,baz=136,slow=34						
MK31	**Makanchi Array**	**86.05**	**318**	*e*P	**P**	**10 50 52.7**	**-1.8**
MKAR	**Makanchi Array**	**86.05**	**318**	*e*P	**P**	**10 50 52.9**	**-1.6**
MKAR	**Makanchi Array**	**86.05**	**318**	P	**P**	**10 50 52.9**	**-1.6**
	comp=Z,5.7nm,0.8s,baz=102,slow=5.6,SNR=25						
EGAK	**Eagle**	**86.19**	**22**	*e*P	**P**	**10 50 55.9**	**+1.1**
	comp=Z,17nm,1.6s						
KSH	**Kashi**	**88.70**	**310**	*e*P	**P**	**10 51 09.3**	**+1.7**
KSH				pP	**pP**	**10 51 13.1**	**-0.2**
KSH				sP	**sP**	**10 51 15.8**	**+0.4**
KSH				PP	**PP**	**10 54 41.1**	**+4.5**
KSH				SKS	**SKSac**	**11 01 36.3**	**-0.3**
KSH				S	**S**	**11 01 54.6**	**+0.5**
KSH				SS	**SS**	**11 07 49.6**	**+3.6**
KSH				pmax	pmax		
	comp=Z,1.0nm,0.1s						
KSH				LR	LR		
	comp=Z,220nm,6.7s						
KURK	**Kurchatov**	**89.44**	**321**	*e*P	**P**	**10 51 09.9**	**-0.7**
	comp=Z,11nm,1.6s						
TKM2	**Tokmak 2**	**89.69**	**313**	*e*P	**P**	**10 51 11.8**	**-0.5**
	comp=Z,5.4nm,1.4s						
NVAR	**Mina Array Bea**	**91.04**	**51**	P	**P**	**10 51 18.4**	**-0.3**
NVAR	**Mina Array Bea**	**91.04**	**51**	P	**P**	**10 51 18.4**	**-0.3**
	comp=Z,1.5nm,1.0s,baz=244,slow=5.4,SNR=7.3						
BVAR	**Borovoye Array**	**94.89**	**323**	P	**P**	**10 51 32.8**	**-3.0**
BVAR	**Borovoye Array**	**94.89**	**323**	P	**P**	**10 51 32.8**	**-3.0**
	comp=Z,1.7nm,0.8s,baz=93,slow=3.3,SNR=8.2						
YKA	**Yellowknife Ar**	**96.76**	**28**	P	**P**	**10 51 42.9**	**-1.2**
YKA	**Yellowknife Ar**	**96.76**	**28**	P	**P**	**10 51 42.8**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=265,slow=4.5,SNR=18						
PDAR	**Pinedale Array**	**98.19**	**48**	LR	LR	11 29 27.7	
	comp=Z,58nm,19.9s,baz=354,slow=31						
LPAZ	**La Paz**	**128.79**	**119**	PKP	**PKPdf**	**10 57 25.1**	**+2.1**
LPAZ	**La Paz**	**128.79**	**119**	PKP	**PKPdf**	**10 57 25.1**	**+2.1**
	comp=Z,1.3nm,0.8s,baz=2.4,slow=6.0,SNR=5.4						
BDFB	**Brasilia**	**145.31**	**134**	PKPbc	**PKPbc**	**10 57 51.4**	**-1.1**
BDFB	**Brasilia**	**145.31**	**134**	PKPbc	**PKPbc**	**10 57 51.4**	**-1.1**
	comp=Z,6.5nm,0.8s,baz=65,slow=2.1,SNR=4.9						
TORD	**Torodi Ar. Bea**	**155.51**	**283**	PKPab	**PKPab**	**10 58 34.7**	**+0.5**
TORD	**Torodi Ar. Bea**	**155.51**	**283**	PKPab	**PKPab**	**10 58 34.7**	**+0.5**
	comp=Z,1.0nm,1.0s,baz=57,slow=0.4,SNR=3.7						

OTT 22 10:38:21.5±0.2, 71°44N×65°18W, h18km, ML3.6/6, Baffin Bay Seismic Zone. 165km northeast from Clyde River, Nu, Baffin Bay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILON	**Igloolik, Nuna**	**5.97**	**258**	PN	Pn	10 39 48.1	-0.7
ILON				SN	Sn	10 40 52.6	-3.8
ILON				Trac		10 41 19.4	
	comp=Z,4.9nm,0.4s						
AP3N	**Apex site 3 Nu**	**6.76**	**262**	PN	Pn	10 39 59.1	-0.6
AP3N				SN	Sn	10 41 11.6	-4.5
AP3N				Trac		10 41 15.1	
	comp=Z,1.9nm,0.1s						
SFJD	**Kangerlussuaq**	**6.82**	**124**	PN	Pn	10 40 04.3	+3.9
SFJD				SN	Sn	10 41 09.4	-8.1
SFJD				Trac		10 41 28.4	
	comp=Z,625nm,2.8s						
SFJD	**Kangerlussuaq**	**6.82**	**124**	*i* P	Pn	10 40 05.0	+4.5
SFJD				*e*S	Sn	10 41 06.4	-11
SRLN	**Sarcpa Lake, N**	**6.85**	**254**	PN	Pn	10 40 00.4	-0.6
SRLN				SN	Sn	10 41 13.6	-4.8
SRLN				Trac		10 42 08.4	
	comp=Z,9.6nm,0.7s						
FRB	**Frobisher Bay**	**7.83**	**191**	PN	Pn	10 40 13.7	-0.7
FRB				SN	Sn	10 41 36.7	-5.8
FRB				Trac		10 42 04.7	
	comp=Z,3.5nm,0.2s						
SUMG	**Summit**	**8.31**	**70**	*i* P	Pn	10 40 18.8	-2.6
SUMG				*i* S	Sn	10 41 42.6	-12
QILN	**Qililugaq Expl**	**8.94**	**248**	PN	Pn	10 40 28.5	-1.1
QILN				SN	Sn	10 42 02.9	-6.7
QILN				Trac		10 42 12.8	
	comp=Z,3.4nm,0.4s						
RES	**Resolute Bay**	**9.18**	**304**	PN	Pn	10 40 32.1	-0.7
RES				SN	Sn	10 42 08.4	-7.1
RES				Trac		10 42 13.9	
	comp=Z,2.4nm,0.5s						
KUGN	**Kugaaruk Camp,**	**9.21**	**261**	PN	Pn	10 40 31.5	-1.7
KUGN				SN	Sn	10 42 06.8	-9.3
KUGN				Trac		10 42 16.7	
	comp=Z,4.5nm,0.6s						
EUNU	**Eureka**	**10.00**	**339**	PN	Pn	10 40 42.7	-1.4
EUNU				SN	Sn	10 42 24.3	-11
EUNU				Trac		10 42 32.6	
	comp=Z,132nm,3.8s						
WAGN	**Wager Bay**	**10.39**	**250**	PN	Pn	10 40 48.8	-0.5
WAGN				SN	Sn	10 42 36.0	-9.0
WAGN				Trac		10 42 58.2	
	comp=Z,5.5nm,0.6s						
STLN	**Stellar Camp,**	**10.57**	**261**	PN	Pn	10 40 50.7	-1.1
STLN				SN	Sn	10 42 39.9	-10
STLN				Trac		10 42 58.1	
	comp=Z,13nm,1.1s						
BULN	**Bullion Camp,**	**11.17**	**257**	PN	Pn	10 40 54.1	-6.0
BULN				SN	Sn	10 42 55.0	-9.3
BULN				Trac		10 43 22.8	
	comp=Z,25nm,1.2s						
NUNN	**Nunuq Camp, NU**	**11.34**	**249**	SN	Sn	10 42 59.9	-8.4
NUNN				SN		10 43 00.2	
NUNN				Trac		10 43 40.2	
	comp=Z,163nm,3.4s						
AKVQ	**Akulivik**	**11.86**	**212**	PN	Pn	10 41 04.2	-5.3
AKVQ				SN	Sn	10 43 11.6	-10
AKVQ				Trac		10 43 24.7	
	comp=Z,60nm,1.9s						
SEDN	**First Sedna Si**	**12.84**	**243**	PN	Pn	10 41 21.4	-1.4
SEDN				SN	Sn	10 43 35.6	-9.3
SEDN				Trac		10 44 08.0	
	comp=Z,24nm,1.8s						

*IDC **22** 10:45:05.8±1.5, 1°.93S×127°.81E, h0km, mb4.0/3, mb1 4.1/5, mb1mx3.8/22, mbtmp4.0/5, ML3.9/2, MS3.4/1, Ms1 3.4/1, ms1mx2.7/31, Error ellipse: s-maj=99.2km s-min=13.7km az=68.0*
*ISCJB **22** 10:45:10.9±0.5, 2°.10S±0°.04×126°.93E±0°.05, h33km, mb4.0/3, MS3.3/1, Error ellipse: s-maj=6.9km s-min=5.6km az=160.8*
*DJA **22** 10:45:12.2±0.6, 2°.3°S±3°×12°.7E±°, h103km±11km, M4.3/7, mb4.7/2, mB4.8/2, MLv4.1/7, Mw(mB)4.1/2*
*AUST **22** 10:45:18.2±1.3, 2°.27S×127°.35E, h88km, Error ellipse: s-maj=1.6km s-min=1.1km az=297.0*

ISC 22 10:45:12.7±0.8, 2°.15S±0°.05×127°.00E±0°.07, h35km, n25, σ2°06/28, mb3.9/3, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.59**	**19**	P	**Pn**	**10 45 38.5**	**+0.2**
LBMI				S	**Sn**	**10 46 01.1**	**+3.5**
AAI	**Ambon**	**1.94**	**142**	P	**Pn**	**10 45 45.1**	**+2.0**
AAI				S	**Sn**	**10 46 09.8**	**+3.5**
AAI	**Ambon**	**1.94**	**142**	P	**Pn**	**10 45 44.6**	**+1.4**
	baz=1.6,SNR=4.6						
MSAI	**Masohi**	**2.27**	**122**	P	**Pn**	**10 45 49.0**	**+1.4**
TNTI	**Ternate**	**2.93**	**7**	P	Pn	10 45 50.5	-6.3
TNTI				S	**Sn**	**10 46 29.6**	**-1.1**
SWI	**Sorong**	**4.45**	**73**	P	**Pn**	**10 46 18.4**	**+0.7**
SWI	**Sorong**	**4.45**	**73**	P	**Pn**	**10 46 18.6**	**+0.9**
	baz=4.2,SNR=8.1						
SWI				S	**Sn**	**10 47 11.2**	**+2.9**
	baz=4.2,SNR=5.7						
FAKI	**Fak Fak**	**5.30**	**98**	P	**Pn**	**10 46 28.4**	**-1.0**
	baz=4.9,SNR=8.6						
FAKI				S	**Sn**	**10 47 27.1**	**-2.2**
	baz=4.9,SNR=5.0						
MRSI	**Marisa**	**5.69**	**297**	P	**Pn**	**10 46 33.2**	**-1.6**
	86nm,0.5s,2μm0.6nm						
TLE	**Tual**	**6.69**	**121**	P	**Pn**	**10 46 50.6**	**+2.1**
	baz=6.3,SNR=3.7						
PCI	**Palu**	**7.26**	**280**	P	**Pn**	**10 46 58.8**	**+2.4**
PCI	**Palu**	**7.26**	**280**	P	**Pn**	**10 46 59.0**	**+2.6**
	baz=7.6,SNR=7.4						
PCI				S	Sn	10 48 12.7	-5.1
	baz=7.6,SNR=6.2						
BKSI	**Bulukumba**	**7.55**	**245**	P	**Pn**	**10 47 01.5**	**+1.2**
KDU	**Kakadu**	**11.79**	**153**	P	**Pn**	**10 48 00.1**	**+1.7**
	baz=12,SNR=4.2						
FITZ	**Fitzroy Crossi**	**15.91**	**185**	Pn	**Pn**	**10 48 56.5**	**+2.5**
	0.2nm,0.3s,baz=12,slow=6.5,SNR=6.0						
FITZ	**Fitzroy Crossi**	**15.91**	**185**	P	**P**	**10 48 56.9**	**-0.4**
	baz=16,SNR=3.6						
WRA	**Warramunga Arr**	**19.08**	**158**	P	**P**	**10 49 31.0**	**-1.4**
	0.7nm,0.3s,baz=340,slow=12,SNR=59						
WRA				S	**Sn**	**10 53 03.3**	**-3.0**
	0.0nm,0.3s,baz=346,slow=21,SNR=3.9						
COEN	**Coen**	**19.83**	**127**	P	**P**	**10 49 40.3**	**-0.3**
	baz=20,SNR=7.4						
CISI	**Cisompet, Garu**	**19.85**	**254**	S	S	10 53 04.2	-19
	baz=20,SNR=4.7						
ASAR	**Alice Springs**	**22.41**	**163**	P	**P**	**10 50 06.8**	**-1.7**
	2.1nm,0.4s,baz=344,slow=12,SNR=49						
ASAR				S	**S**	**10 54 09.5**	**-3.1**
	0.9nm,1.0s,baz=348,slow=23,SNR=5.4						
GSI	**Gunungsitoli**	**29.62**	**276**	P	P	10 51 21.4	+6.5
	baz=30,SNR=3.7						
GSI				S	S	10 56 32.9	+25
	baz=30,SNR=7.5						
STKA	**Stephens Creek**	**32.61**	**157**	P	**P**	**10 51 39.7**	**-1.5**
	0.6nm,0.4s,baz=324,slow=8.4,SNR=4.0						
KSRS	**Korea Array**	**39.41**	**1**	LR	LR	11 07 13.3	
	comp=Z,46nm,19.1s,baz=145,slow=34						
MKAR	**Makanchi Array**	**62.56**	**327**	P	**P**	**10 55 32.4**	**-0.8**
	1.3nm,0.6s,baz=117,slow=8.5,SNR=7.8						
TORD	**Torodi Ar. Bea**	**124.82**	**284**	PKP	**PKPdf**	**11 04 10.1**	**+0.2**
	0.5nm,0.9s,baz=62,slow=1.2,SNR=2.3						

*ISK **22** 10:46:35.8, 40°.00N×33°.54E, h5km, MD2.6*
*ISCJB **22** 10:46:37.1±0.6, 39°.98N±0°.03×33°.57E±0°.04, h1km±8km, Error ellipse: s-maj=5.3km s-min=4.6km az=3.7*
*CSEM **22** 10:46:37.1±0.2, 39°.98N×33°.54E, h15km, MD2.9, Error ellipse: s-maj=4.7km s-min=3.9km az=142.0*
*DDA **22** 10:46:37.3, 39°.97N×33°.56E, h7km, MD2.9*

ISC 22 10:46:37.2±1.1, 39°.98N±0°.02×33°.54E±0°.03, h9km±11km, n22, σ0°56/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.51**	**351**	*e*P	**Pg**	**10 46 47.3**	**+0.1**
ELDT				*e*S	**Sb**	**10 46 55.9**	**-0.2**
ELDT	**Eldivan**	**0.51**	**351**	*e*P	**Pg**	**10 46 47.3**	**+0.1**
ELDT				*e*S	**Sb**	**10 46 55.9**	**-0.2**
BBAL	**Bala**	**0.54**	**216**	*e*P	**Pg**	**10 46 47.6**	**-0.1**
BBAL				*e*S	**Sb**	**10 46 56.5**	**-0.4**
BBAL	**Bala**	**0.54**	**216**	*e*P	**Pg**	**10 46 47.6**	**-0.1**
BBAL				*e*S	**Sb**	**10 46 56.5**	**-0.4**
ANTO	**Ankara**	**0.58**	**259**	*e*PG	**Pg**	**10 46 48.3**	**-0.2**
ANTO				*e*SG	**Sb**	**10 46 57.7**	**-0.3**
ANTO	**Ankara**	**0.58**	**259**	*e*Pg	**Pg**	**10 46 48.3**	**-0.2**
ANTO				*e*Sg	**Sb**	**10 46 57.7**	**-0.3**
KAMT	**Kaman**	**0.63**	**167**	*e*PG	**Pg**	**10 46 49.1**	**-0.3**
AFSR	**Afˆar-Bala (A**	**0.65**	**214**	*e*PG	**Pg**	**10 46 49.8**	**+0.1**
AFSR				*e*SG	**Sb**	**10 46 59.4**	**-0.4**
CDAG	**Cicekdag**	**0.74**	**119**	*i* P	**Pg**	**10 46 51.0**	**-0.4**
CDAG				*i* S	**Sg**	**10 47 01.7**	**+0.7**
CDAG	**Cicekdag**	**0.74**	**119**	*i* P	**Pg**	**10 46 51.0**	**-0.4**
CDAG				*i* S	**Sg**	**10 47 01.7**	**+0.7**
CORM	**Corum**	**0.86**	**77**	*e*PG	**Pg**	**10 46 53.7**	**-0.1**
CORM	**Corum**	**0.86**	**77**	*e*Pg	**Pg**	**10 46 53.7**	**-0.1**
ILGA	**Ilgaz**	**1.08**	**7**	*e*P	**Pg**	**10 46 57.7**	**-0.2**
ILGA				*e*S	**Sn**	**10 47 15.2**	**+1.3**
ILGA	**Ilgaz**	**1.08**	**7**	*e*P	**Pg**	**10 46 57.7**	**-0.2**
TOS	**Tosya**	**1.11**	**19**	*e*PN	**Pg**	**10 46 57.5**	**-1.1**
TOS	**Tosya**	**1.11**	**19**	*e*Pn	**Pg**	**10 46 57.5**	**-1.1**
CTKT	**Corum**	**1.15**	**56**	*e*P	**Pb**	**10 46 59.7**	**+0.3**
CTKT				*e*S	**Sg**	**10 47 14.0**	**-0.3**
CTKT	**Corum**	**1.15**	**56**	*e*P	**Pb**	**10 46 59.7**	**+0.3**
CTKT				*e*S	**Sg**	**10 47 14.0**	**-0.3**
YOZ	**Yozgat**	**1.42**	**103**	*e*PN	**Pn**	**10 47 03.6**	**+0.3**
YOZ	**Yozgat**	**1.42**	**103**	*e*Pn	**Pn**	**10 47 03.6**	**+0.3**
AVNT	**Avonos**	**1.58**	**139**	*e*P	**Pn**	**10 47 04.5**	**-1.0**
AVNT				*e*S	**Sg**	**10 47 28.7**	**+0.7**
AVNT	**Avonos**	**1.58**	**139**	*e*P	**Pn**	**10 47 04.5**	**-1.0**

GUC 22 10:55:18.5±0.6, 34°.49S×70°.13W, h14km±4km, MD3.6, ML2.8, 5C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACH	**El Canelo**	**0.54**	**314**	⇑*i* P	Pg	10 55 28.4	-0.9
CACH				*i* S	Sg	10 55 35.6	-1.0
LMEL	**Las Melosas**	**0.64**	**355**	⇑*i* P	Pg	10 55 30.6	-0.7
LMEL				*i* S	Sg	10 55 40.0	-0.1
LMEL				AML	AML	10 55 40.8	
	comp=N,641nm,0.3s						
CHCH	**Chadas Angostu**	**0.70**	**322**	⇑*i* P	Pg	10 55 31.6	-0.7
CHCH				*i* S	Sg	10 55 41.6	-0.1
SJCH	**San Jose de Ma**	**0.87**	**348**	*e*P	Pg	10 55 33.9	-1.5
SJCH				*i* S	Sg	10 55 46.4	-0.5
SJCH				AML	AML	10 55 47.3	
	comp=N,352nm,0.3s						
PCH	**Pirque**	**0.92**	**340**	⇓*i* P	Pb	10 55 35.8	-0.7
PCH

λ75.00000°. NP2:φ±230.00000°,δ29.00000°,λ119.00000°.
BJI **22** 11:24:08.4,29.88N×131.50E,h38km,mB4.9/33,mb4.6/43, Ms4.8/42,Ms7 4.7/41
JMA **22** 11:24:11.0±0.1,30.06N×131.32E,h37km±2km,M4.8 JMA Felt II J1.
ISCJB **22** 11:24:12.9±0.5,30.15N±0.03×131.01E±0.03,h46km±3km, mb4.8/119,MS4.4/40,Error ellipse: s-maj=5.2km s-min=4.0km az=41.4
NEIC **22** 11:24:12.1±0.2,30.12N×131.00E,mb4.9/52, MW4.9(NIED),Error ellipse: s-maj=5.3km s-min=4.4km az=155.0
NEIC Recorded [2 JMA] on Tanega-shima and [1 JMA] on Yaku-shima. Also recorded [1 JMA] in Kagoshima, Kyushu.
MOS **22** 11:24:12.3±0.9,30.36N×130.97E,h33km,mb5.0/62, MS4.2/13,Error ellipse: s-maj=8.9km s-min=5.3km az=110.9
IDC **22** 11:24:13.4±2.5,30.14N×131.05E,h40km±21km,mb4.3/26, mb1 4.5/30,mb1mx4.4/35,mbtmp4.4/30,ML4.1/4,MS4.2/27, Ms1 4.3/27,ms1mx4.2/37,Error ellipse: s-maj=13.8km s-min=13.0km az=52.0
ISC 22 11:24:11.9±0.4,30.13N±0.03×131.12E±0.04,h26km±1km, h25km:pP-P,n285,σ1§41/342,mb4.9/119,MS4.4/41, 13C-4D,Kyushu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
JTN	**Tanegashima 3**	**0.54**	**347**	⇓P		**Pn**		**11 24 23.8**	**-0.2**
JTN				S		**Sn**		**11 24 33.1**	**+0.9**
JKC	**Kuchinoerabu**	**0.87**	**293**	⇑P		**Pb**		**11 24 29.9**	**+1.5**
JKC				S		**Sn**		**11 24 43.9**	**+3.6**
JTSR	**Tashiro 2**	**1.05**	**350**	⇑P		**Pn**		**11 24 31.3**	**+0.3**
JTSR				S		**Sb**		**11 24 46.3**	**+1.5**
JNN	**Nakanoshima**	**1.12**	**255**	⇑P		**Pb**		**11 24 33.0**	**+0.3**
JNAR	**Kushima--Naru**	**1.40**	**5**	⇑P		**Pn**		**11 24 35.9**	**+0.1**
JSU	**Suzuyama**	**1.49**	**337**	⇑P		**Pn**		**11 24 37.8**	**+0.8**
JSU				S		**Sb**		**11 24 58.1**	**+0.7**
JTZ	**Takazaki**	**1.77**	**359**	⇑P		**Pn**		**11 24 41.3**	**+0.5**
JTZ				S		**Sn**		**11 25 03.9**	**+1.4**
JZO	**Okuchi**	**2.05**	**347**	⇑P		**Pn**		**11 24 45.3**	**+0.5**
JZO				S		**Sb**		**11 25 11.9**	**-1.8**
JZK	**Kikaishima**	**2.07**	**209**	P		**Pn**		**11 24 45.5**	**+0.4**
JTSN	**Tsuno**	**2.13**	**9**	⇑P		**Pn**		**11 24 45.4**	**-0.5**
JTSN				S		**Sn**		**11 25 11.3**	**-0.3**
JAM	**Amami Oshima**	**2.17**	**218**	P		**Pn**		**11 24 46.6**	**+0.2**
JAM				S		**Sn**		**11 25 13.2**	**+0.8**
JNU	**Nakatsue**	**2.99**	**356**	Pn		**Pn**		**11 24 58.4**	**+0.7**
JNU				Sn		**Sn**		**11 25 32.3**	**-0.4**
JNU	**Nakatsue**	**2.99**	**356**	Pn		**Pn**		**11 24 58.4**	**+0.7**
	34nm,0.3s,baz=164,slow=5.2,SNR=135								
JNU				Sn		**Sn**		**11 25 32.3**	**-0.4**
	55nm,0.3s,baz=227,slow=13,SNR=6.4								
KSAR	**Wonju Array Be**	**7.77**	**341**	Pn		**Pn**		**11 26 05.0**	**+1.6**
KSAR				Lg		Lg		11 28 29.1	
KSRS	**Korea Array**	**7.77**	**341**	Pn		**Pn**		**11 26 05.0**	**+1.6**
	1.8nm,0.3s,baz=160,slow=15,SNR=26								
KSRS				Lg		Lg		11 28 29.1	
	baz=173,slow=33,SNR=4.4								
JHJ	**Hachijo jima 2**	**7.96**	**66**	Pn		**Pn**		**11 26 06.9**	**+0.9**
	18nm,0.3s,baz=83,slow=17,SNR=5.4								
SSE	**Sheshan**	**8.62**	**279**	P		Pn		11 26 10.9	-4.1
SSE				S		**Sn**		**11 27 47.4**	**-4.0**
SSE				pmax		pmax			
	comp=Z,15nm,0.6s								
SSE				pmax		pmax			
	comp=Z,33nm,3.7s								
SSE				LR		LR			
	comp=N,2μm,14.1s								
SSE				LR		LR			
	comp=E,1μm,14.1s								
SSE				LR		LR			
	comp=Z,4μm,12.6s								
MAJO	**Matsushiro**	**8.71**	**41**	*e*P		**Pn**		**11 26 16.6**	**+0.2**
MAJO	**Matsushiro**	**8.71**	**41**	*e*Pn		**Pn**		**11 26 16.6**	**+0.2**
MAT	**Matsushiro**	**8.71**	**41**	P		**Pn**		**11 26 16.7**	**+0.4**
MAT				S		**Sn**		**11 27 51.4**	**-2.4**
MJAR	**Matsushiro Arr**	**8.71**	**41**	Pn		**Pn**		**11 26 17.2**	**+0.8**
MJAR	**Matsushiro Arr**	**8.71**	**41**	Pn		**Pn**		**11 26 17.2**	**+0.8**
	comp=Z,3.0nm,0.3s,baz=252,slow=23,SNR=31								
NJ2	**Nanjing**	**10.69**	**283**	*e*P		**Pn**		**11 26 41.9**	**-1.5**
NJ2				S		**Sn**		**11 28 41.0**	**-1.3**
NJ2				sS				11 28 50.0	
NJ2				pmax		pmax			
	comp=Z,30nm,0.9s								
NJ2				pmax		pmax			
	comp=Z,190nm,4.8s								
NJ2				LR		LR			
	comp=N,1μm,16.0s								
NJ2				LR		LR			
	comp=E,3μm,14.8s								
NJ2				LR		LR			
	comp=Z,3μm,16.1s								
USRK	**Ussuriysk Arra**	**14.06**	**3**	Pn		**P**		**11 27 34.4**	**-2.5**
	comp=Z,0.9nm,0.3s,baz=182,slow=13,SNR=24								
USRK				LR		LR		11 32 48.0	
	comp=Z,1μm,21.3s,baz=170,slow=37								
CN2	**Changchun**	**14.37**	**343**	*e*P		**P**		**11 27 41.3**	**+0.9**
CN2				*e*S		Sn		11 30 19.5	+7.3
CN2				pmax		pmax			
	comp=Z,70nm,0.8s								
CN2				pmax		pmax			
	comp=Z,200nm,4.0s								
CN2				LR		LR			
	comp=N,4μm,14.0s								
CN2				LR		LR			
	comp=E,1μm,14.0s								
CN2				LR		LR			
	comp=Z,4μm,14.0s								
WHN	**Wuhan**	**14.49**	**276**	P		P		11 27 54.8	+13
WHN				S		**S**		**11 30 31.5**	**-2.9**
WHN				LR		LR			
	comp=N,720nm,6.2s								
WHN				LR		LR			
	comp=E,4μm,12.6s								
WHN				LR		LR			
	comp=Z,4μm,13.2s								
MDJ	**Mudanjiang**	**14.51**	**356**	P		**Pn**		**11 27 37.4**	**+1.9**
MDJ				S		**Sn**		**11 30 20.4**	**+4.9**
MDJ				PcP		**PcP**		**11 32 49.4**	**+0.2**
MDJ				pmax		pmax			
	comp=Z,15nm,1.5s								
MDJ				pmax		pmax			
	comp=Z,480nm,4.2s								
MDJ				LR		LR			
	comp=N,1μm,11.9s								
MDJ				LR		LR			
	comp=E,770nm,11.3s								
MDJ				LR		LR			
	comp=Z,1μm,12.4s								
BJI	**Beijing**	**15.71**	**313**	P		**P**		**11 27 56.9**	**+1.6**
BJI				S		**Sn**		**11 30 43.9**	**-0.8**
BJI				pmax		pmax			
	comp=Z,37nm,0.8s								
BJI				LR		LR			
	comp=N,2μm,13.8s								
BJI				LR		LR			
	comp=E,4μm,13.0s								
BJI				LR		LR			
	comp=Z,2μm,15.5s								
ASAJ	**Asahikawa**	**16.66**	**30**	Pn		**P**		**11 28 09.8**	**+3.9**
ASAJ	**Asahikawa**	**16.66**	**30**	Pn		**P**		**11 28 09.8**	**+3.9**
	comp=Z,0.8nm,0.3s,baz=187,slow=17,SNR=5.7								
ASAJ				LR		LR		11 34 47.6	
	comp=Z,1μm,20.4s,baz=242,slow=38								
KLR	**Kul'dur**	**19.08**	**1**	*e*P		**P**		**11 28 28.7**	**-3.7**
KLR				MLR		MLR			
	comp=E,900nm,15.0s								
KLR				MLR		MLR			
	comp=Z,2μm,15.0s								
HHC	**Hu-ho-hao-te**	**19.14**	**309**	*e*P		Pn		11 28 40.0	+5.7
HHC				pP		pP		11 28 46.3	+6.0
HHC				sP		sP		11 28 51.0	+7.3
HHC				PP		PnPn		11 28 56.9	+10
HHC				S		**S**		**11 32 12.6**	**+3.8**
HHC				SS		SnSn		11 32 36.9	+15
HHC				pmax		pmax			
	comp=Z,39nm,1.2s								
HHC				pmax		pmax			
	comp=Z,780nm,8.3s								
HHC				LR		LR			
	comp=N,2μm,14.3s								
HHC				LR		LR			
	comp=E,3μm,13.1s								
HHC				LR		LR			
	comp=Z,4μm,13.1s								
GUMO	**Guam**	**20.79**	**139**	LR		LR		11 36 23.6	
	comp=Z,284nm,19.0s,baz=272,slow=35								
GYA	**Guiyang**	**21.84**	**266**	⇓*i*P		**P**		**11 29 03.3**	**+0.7**
GYA				pP		**pP**		**11 29 09.4**	**-0.3**
GYA				PP		**PnPn**		**11 29 27.6**	**+3.4**
GYA				S		**S**		**11 32 57.0**	**-5.9**
GYA				pmax		pmax			
	comp=Z,20nm,0.8s								
GYA				pmax		pmax			
	comp=Z,120nm,4.8s								
GYA				LR		LR			
	comp=N,550nm,14.9s								
GYA				LR		LR			
	comp=E,520nm,15.3s								
GYA				LR		LR			
	comp=Z,560nm,14.5s								
QIZ	**Qiongzhong**	**22.25**	**245**	P		**P**		**11 29 07.3**	**+0.3**
QIZ				sP		**sP**		**11 29 16.1**	**-1.2**
QIZ				S		**S**		**11 33 11.1**	**+0.6**
QIZ				pmax		pmax			
	comp=Z,8.0nm,0.9s								
QIZ				pmax		pmax			
	comp=Z,88nm,5.0s								
QIZ				LR		LR			
	comp=Z,1μm,16.2s								
DAV	**Davao City (W)**	**23.53**	**194**	LR		LR		11 38 25.2	
	comp=Z,389nm,20.4s,baz=357,slow=36								
LZH	**Lanzhou**	**23.57**	**292**	*e*P		P		11 29 26.3	+5.6
LZH				pP		pP		11 29 33.5	+5.5
LZH				sP		sP		11 29 37.0	+5.7
LZH				S		**S**		**11 33 34.1**	**+0.6**
LZH				sS		sS		11 33 46.0	0.0
LZH				SS		SnSn		11 34 22.0	+11
LZH				pmax		pmax			
	comp=Z,36nm,1.3s								
LZH				pmax		pmax			
	comp=Z,110nm,5.8s								
LZH				LR		LR			
	comp=N,2μm,16.4s								
LZH				LR		LR			
	comp=E,2μm,14.0s								
LZH				LR		LR			
	comp=Z,3μm,15.4s								
CD2	**Chengdu**	**23.57**	**279**	P		**P**		**11 29 20.4**	**-0.2**
CD2				pP		**pP**		**11 29 27.3**	**-0.7**
CD2				sP		**sP**		**11 29 30.8**	**-0.4**
CD2				PP		**PnPn**		**11 29 52.0**	**+4.2**
CD2				S		**S**		**11 33 27.9**	**-5.4**
CD2				pmax		pmax			
	comp=Z,50nm,0.6s								
CD2				pmax		pmax			
	comp=Z,110nm,4.9s								
CD2				LR		LR			
	comp=N,2μm,12.7s								
CD2				LR		LR			
	comp=E,2μm,12.7s								
CD2				LR		LR			
	comp=Z,3μm,13.2s								
ULN	**Ulaanbaatar**	**25.59**	**321**	*e*P		**P**		**11 29 38.0**	**-1.1**
	comp=Z,14nm,1.0s								
KMI	**Kunming**	**25.60**	**266**	P		**P**		**11 29 40.3**	**+0.8**
KMI				pP		**pP**		**11 29 49.0**	**+1.9**
KMI				PP		**PnPn**		**11 30 21.1**	**+5.2**
KMI				S		**S**		**11 34 04.8**	**-1.5**
KMI				sS		**sS**		**11 34 19.5**	**+0.6**
KMI				pmax		pmax			
	comp=Z,23nm,0.8s								
KMI				pmax		pmax			
	comp=Z,120nm,3.9s								
KMI				LR		LR			
	comp=N,940nm,13.4s								
KMI				LR		LR			
	comp=E,740nm,13.2s								
KMI				LR		LR			
	comp=Z,1μm,14.1s								
SONM	**Songino Array**	**25.94**	**320**	P		**P**		**11 29 41.8**	**-0.5**
SONM	**Songino Array**	**25.94**	**320**	P		**P**		**11 29 41.8**	**-0.5**
	comp=Z,8.6nm,0.7s,baz=130,slow=9.1,SNR=22								
SONM				LR		LR		11 40 50.5	
	comp=Z,870nm,21.8s,baz=109,slow=38								
GTA	**Gaotai**	**27.22**	**298**	*e*P		**P**		**11 29 53.1**	**-0.8**
GTA				pP		**pP**		**11 30 01.6**	**+0.1**
GTA				sP		**sP**		**11 30 05.1**	**+0.4**
GTA				PP		**PnPn**		**11 30 40.4**	**+2.7**
GTA				PcP		**PcP**		**11 33 14.6**	**+1.0**
GTA				S		**S**		**11 34 28.4**	**-3.1**
GTA				pmax		pmax			
	comp=Z,6.0nm,0.8s								
GTA				pmax		pmax			
	comp=Z,100nm,5.2s								
GTA				LR		LR			
	comp=N,760nm,15.2s								
GTA				LR		LR			
	comp=E,2μm,14.3s								
GTA				LR		LR			
	comp=Z,2μm,12.8s								
ZAK	**Zakamensk**	**29.06**	**322**	⇑*i*P		**P**		**11 30 08.3**	**-1.8**
ZAK				pmax		pmax			
	comp=Z,5.0nm,1.4s								
IRK	**Irkutsk**	**29.64**	**326**	*e*P		**P**		**11 30 13.9**	**-1.3**
IRK				pmax		pmax			
	comp=Z,35nm,0.7s								
PETK	**Petropavlovsk-**	**30.05**	**33**	P		**P**		**11 30 19.0**	**+0.2**
PETK				pmax		pmax			
	comp=Z,5.0nm,0.8s								
PETK				MLR		MLR			
	comp=Z,293nm,18.6s								
PETK	**Petropavlovsk-**	**30.05**	**33**	P		**P**		**11 30 18.9**	**+0.2**
PETK	**Petropavlovsk-**	**30.05**	**33**	P		**P**		**11 30 18.9**	**+0.2**
	comp=Z,4.8nm,0.8s,baz=208,slow=6.0,SNR=4.8								
PETK				LR		LR		11 43 52.9	
	comp=Z,292nm,18.6s,baz=40,slow=39								
MOY	**Mondy**	**30.97**	**323**	*e*P		**P**		**11 30 26.2**	**-0.9**
CHTO	**Chiang Mai**	**31.28**	**256**	*e*P		**P**		**11 30 29.9**	**-0.1**
CHTO	**Chiang Mai**	**31.28**	**256**	*e*P		**P**		**11 30 29.9**	**-0.1**
CM31	**Chiang Mai Arr**	**31.44**	**256**	*e*P		**P**		**11 30 31.2**	**-0.3**
	comp=Z,4.2nm,0.6s								
CMAR	**Chiang Mai Arr**	**31.44**	**256**	P		**P**		**11 30 31.2**	**-0.2**
CMAR				PcP		**PcP**		**11 33 25.1**	**+0.6**
CMAR	**Chiang Mai Arr**	**31.44**	**256**	P		**P**		**11 30 31.2**	**-0.2**
	comp=Z,3.4nm,0.6s,baz=49,slow=8.8,SNR=23								
CMAR				PcP		**PcP**		**11 33 25.1**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=36,slow=2.3,SNR=6.3								
CMAR				LR		LR		11 45 05.7	
	comp=Z,811nm,19.0s,baz=71,slow=40								
YAK	**Yakutsk**	**31.92**	**359**	*e*P		**P**		**11 30 34.0**	**-1.1**
YAK				*e*				11 31 42.3	
YAK				*e*				11 33 19.8	
YAK				*e*S		**S**		**11 35 39.9**	**-4.5**
YAK				pmax		pmax			
	comp=Z,18nm,1.1s								
YAK				pmax		pmax			
	comp=N,13nm,1.5s								
YAK				pmax		pmax			
	comp=Z,167nm,4.6s								
YAK				pmax		pmax			
	comp=N,116nm,4.2s								
YAK				pmax		pmax			
	comp=E,135nm,5.2s								
YAK				smax		smax			
	comp=N,222nm,20.1s								
SEY	**Seymchan**	**35.56**	**17**	*e*P		**P**		**11 31 07.2**	**+0.5**
WMQ	**Urumqi**	**36.87**	**304**	P		**P**		**11 31 18.0**	**-0.3**
WMQ				pP		**pP**		**11 31 25.0**	**-1.0**
WMQ				sP		**sP**		**11 31 29.0**	**-0.2**
WMQ				PP		**PnPn**		**11 32 43.0**	**+0.5**
WMQ				PcP		**PcP**		**11 33 41.0**	**+1.3**
WMQ				S		**S**		**11 36 59.5**	**-1.9**
WMQ				ScP		**ScP**		**11 37 24.0**	**-0.8**
WMQ				ScS		**ScS**		**11 41 30.0**	**-1.9**
WMQ				pmax		pmax			
	comp=Z,16nm,1.0s								
WMQ				pmax		pmax			
	comp=Z,120nm,5.0s								
WMQ				LR		LR			
	comp=N,490nm,15.0s								
WMQ				LR		LR			
	comp=E,610nm,15.0s								
WMQ				LR		LR			
	comp=Z,620nm,15.0s								
TAPN	**Taplejung**	**38.00**	**277**	*e*P		**P**		**11 31 27.7**	**-0.6**
	comp=Z,13nm,0.5s								
ODAN	**Odare**	**38.40**	**276**	*e*P		**P**		**11 31 30.9**	**-0.8**
	comp=Z,50nm,0.7s								
RAMN	**Ramite**	**39.06**	**277**	*e*P		**P**		**11 31 36.4**	**-0.8**
	comp=Z,20nm,0.6s								
GUN	**Gumba**	**39.43**	**278**	*e*P		**P**		**11 31 40.2**	**-0.2**
	comp=Z,178nm,0.7s								
PKI	**Pulchoki**	**39.92**	**278**	*e*P		**P**		**11 31 44.0**	**-0.5**
	comp=Z,61nm,0.9s								
PKIN	**Phulchoki**	**39.93**	**278**	*e*P		**P**		**11 31 43.6**	**-0.9**
	comp=Z,32nm,0.6s								
KKN	**Kakani**	**39.98**	**278**	*e*P		**P**		**11 31 44.3**	**-0.5**
	comp=Z,44nm,0.5s								
DMN	**Daman**	**40.17**	**278**	*e*P		**P**		**11 31 45.7**	**-0.8**
ZAA0	**Zalesovo Array**	**40.83**	**319**	*e*P		**P**		**11 31 50.2**	**-1.1**
ZALV	**Zalesovo Beam**	**40.83**	**319**	P		**P**		**11 31 50.3**	**-0.9**
ZALV								11 33 51.2	
ZALV				pmax		pmax			
	comp=Z,3.0nm,0.4s								
ZALV				pmax		pmax			
	comp=Z,4.0nm,0.8s								
ZALV	**Zalesovo Beam**	**40.83**	**319**	P		**P**		**11 31 50.3**	**-0.9**
ZALV				PcP		**PcP**		**11 33 51.1**	**-0.6**
ZALV	**Zalesovo Beam**	**40.83**	**319**	P		**P**		**11 31 50.3**	**-0.9**
	comp=Z,2.7nm,0.4s,baz=101,slow=8.0,SNR=15								
ZALV				PcP		**PcP**		**11 33 51.1**	**-0.6**
	comp=Z,3.8nm,0.8s,baz=90,slow=4.6,SNR=6.3								
MK31	**Makanchi Array**	**41.00**	**308**	*i* P		**P**		**11 31 52.5**	**-0.3**
MK31				pmax		pmax			
	comp=Z,8.0nm,0.8s								
MKAR	**Makanchi Array**	**41.00**	**308**	P		**P**		**11 31 52.2**	**-0.6**
MKAR								11 33 51.7	
MKAR				pmax		pmax			
	comp=Z,5.0nm,0.5s								
MKAR				pmax		pmax			
	comp=Z,3.0nm,0.7s								
MKAR				MLR		MLR			
	comp=Z,281nm,21.2s								
MKAR	**Makanchi Array**	**41.00**	**308**	P		**P**		**11 31 52.1**	**-0.6**
MKAR				PcP		**PcP**		**11 33 51.7**	**-0.8**
MKAR	**Makanchi Array**	**41.00**	**308**	P		**P**		**11 31 52.1**	**-0.6**
	comp=Z,4.6nm,0.5s,baz=92,slow=11,SNR=31								
MKAR				PcP		**PcP**		**11 33 51.7**	**-0.8**
	comp=Z,2.8nm,0.7s,baz=83,slow=3.8,SNR=5.4								
MKAR				LR		LR		11 50 35.4	
	comp=Z,281nm,21.2s,baz=204,slow=39								
DANN	**Dangsing**	**41.14**	**280**	*e*P		**P**		**11 31 54.1**	**-0.4**
	comp=Z,65nm,0.5s								
KOLN	**Koldanda**	**41.42**	**279**	*e*P		**P**		**11 31 56.1**	**-0.6**
	comp=Z,28nm,0.6s								
PYUN	**Piuthan**	**41.86**	**280**	*e*P		**P**		**11 31 59.8**	**-0.5**
	comp=Z,85nm,0.8s								
NVS	**Novosibirsk**	**41.97**	**320**	*e*P		**P**		**11 31 58.4**	**-2.2**
NVS				pmax		pmax			
	comp=N,5.0nm,1.3s								
NVS				pmax		pmax			
	comp=E,11nm,1.3s								
NVS				pmax		pmax			
	comp=Z,17nm,1.3s								
BILL	**Bilibino**	**43.18**	**18**	*e*P		**P**		**11 32 09.5**	**-0.7**
BILL				*e*				11 32 20.3	
BILL				*e*				11 33 57.8	
BILL				*e*S		**S**		**11 38 40.6**	**+5.6**
BILL				pmax		pmax			
	comp=Z,8.0nm,1.3s								
BILL				MLR		MLR			
	comp=Z,100nm,16.0s								
KURK	**Kurchatov**	**43.88**	**313**	*c i*P		**P**		**11 32 14.8**	**-1.3**
KURK				pmax		pmax			
	comp=Z,18nm,1.2s								
KURK	**Kurchatov**	**43.88**	**313**	*e*P		**P**		**11 32 15.3**	**-0.8**
KURK				*e*pP		**pP**		**11 32 23.8**	**-0.1**
KURBB	**Kurchatov Arra**	**43.92**	**313**	P		**P**		**11 32 14.9**	**-1.6**
	comp=Z,3.2nm,0.4s,baz=100,slow=9.1,SNR=44								
KSH	**Kashi**	**45.62**	**297**	P		P		11 32 33.9	+3.6
KSH				pP		pP		11 32 40.9	+2.8
KSH				sP		sP		11 32 44.0	+2.7
KSH				PcP		**PcP**		**11 34 10.4**	**+2.0**
KSH				PP		**PP**		**11 34 21.6**	**+4.4**
KSH				ScP		**ScP**		**11 38 00.4**	**+0.8**
KSH				PcS		**PcS**		**11 38 04.1**	**+1.5**
KSH				S		**S**		**11 39 15.0**	**+3.6**
KSH				ScS		**ScS**		**11 42 25.8**	**+0.7**
KSH				SS		**SS**		**11 42 31.4**	**-4.0**
KSH				pmax		pmax			
	comp=Z,4.0nm,0.3s								
KSH				LR		LR			
	comp=N,460nm,7.7s								
KSH				LR		LR			
	comp=E,310nm,10.1s								
KSH				LR		LR			
	comp=Z,290nm,5.3s								
AAK	**Ala-Archa**	**46.47**	**302**	*c i*P		**P**		**11 32 37.1**	**0.0**
AAK				pmax		pmax			
	comp=Z,18nm,0.7s								
AAK	**Ala-Archa**	**46.47**	**302**	P		**P**		**11 32 37.0**	**0.0**
AAK				*e*pP		**pP**		**11 32 44.0**	**-0.9**
AAK	**Ala-Archa**	**46.47**	**302**	P		**P**		**11 32 37.0**	**0.0**
	comp=Z,7.9nm,0.6s,baz=109,slow=5.3,SNR=3.5								
FITZ	**Fitzroy Crossi**	**48.24**	**187**	*e*P		**P**		**11 32 51.1**	**+0.4**
	comp=Z,2.5nm,0.7s								
FITZ				*e*pP		**pP**		**11 33 00.3**	**+1.7**
VOSK	**Vostochnaya**	**48.79**	**315**	P		**P**		**11 32 53.3**	**-1.4**
VOSK				pmax		pmax			
	comp=Z,14nm,0.9s								
BVA0	**Borovoye Array**	**49.17**	**316**	*i* P		**P**		**11 32 56.7**	**-0.8**
BVA0				pmax		pmax			
	comp=Z,3.0nm,0.8s								
BVAR	**Borovoye Array**	**49.17**	**316**	P		**P**		**11 32 56.5**	**-1.1**
BVAR				pmax		pmax			
	comp=Z,12nm,0.6s								
BVAR				MLR		MLR			
	comp=Z,238nm,18.1s								
BVAR	**Borovoye Array**	**49.17**	**316**	P		**P**		**11 32 56.5**	**-1.1**
BVAR	**Borovoye Array**	**49.17**	**316**	P		**P**		**11 32 56.5**	**-1.1**
	comp=Z,12nm,0.6s,baz=94,slow=9.4,SNR=64								
BVAR				LR		LR		11 57 48.5	
	comp=Z,238nm,18.1s,baz=324,slow=41								
BRVK	**Borovoye**	**49.23**	**316**	*e*P		**P**		**11 32 57.5**	**-0.5**
BRVK				*e*PP		**pP**		**11 33 06.1**	**+0.1**
BRVK				pmax		pmax			
	comp=Z,23nm,0.8s								
BRVK	**Borovoye**	**49.23**	**316**	*e*P		**P**		**11 32 57.5**	**-0.5**
	comp=Z,23nm,0.8s								
BRVK				*e*pP		**pP**		**11 33 06.1**	**+0.1**
KK31	**Karatay Array**	**49.35**	**303**	*i* P		**P**		**11 32 58.9**	**-0.2**
KK31				pmax		pmax			
	comp=Z,11nm,0.6s								
KKAR	**Karatay Array**	**49.35**	**303**	*e*P		**P**		**11 32 59.3**	**+0.2**
KKAR	**Karatay Array**	**49.35**	**303**	*e*P		**P**		**11 32 59.3**	**+0.2**
WRAB	**Tennant Creek**	**49.87**	**176**	*e*P		**P**		**11 33 03.3**	**+0.1**
WRAB				pmax		pmax			
	comp=Z,3.0nm,0.8s								
WRAB	**Tennant Creek**	**49.87**	**176**	*e*P		**P**		**11 33 03.3**	**+0.1**
	comp=Z,3.4nm,0.8s								
WRA	**Warramunga Arr**	**49.88**	**176**	P		**P**		**11 33 02.8**	**-0.4**
WRA	**Warramunga Arr**	**49.88**	**176**	P		**P**		**11 33 02.8**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=356,slow=8.5,SNR=27								
ZRNK	**Zerenda**	**50.00**	**316**	P		**P**		**11 33 02.9**	**-1.0**
ZRNK				pmax		pmax			
	comp=Z,22nm,0.7s								
TNA	**Tin City**	**51.01**	**28**	*e*P		**P**		**11

ARU	**Arti**	**55.98**	**320**	*d*	*i* P		**P**	**11 33 47.4**	**-0.5**
ARU								11 35 51.1	
ARU					S		**S**	**11 41 34.4**	**+0.1**
ARU					SS		SS	11 45 08.9	-11
ARU					pmax		pmax		
	comp=Z,29nm,1.2s								
ARU					MLR		MLR		
	comp=Z,1μm,17.0s								
SOKR	**Solikamsk**	**56.70**	**324**	*e*	P		**P**	**11 33 52.7**	**-0.2**
SOKR					pmax		pmax		
	comp=Z,20nm,0.9s								
SOKR					MLR		MLR		
	comp=Z,520nm,19.0s								
AKTO	**Aktyubinsk**	**56.98**	**313**		P		**P**	**11 33 53.8**	**-1.3**
AKTO					pmax		pmax		
	comp=Z,2.0nm,1.0s								
AKTO	**Aktyubinsk**	**56.98**	**313**		P		**P**	**11 33 54.1**	**-1.0**
AKTO	**Aktyubinsk**	**56.98**	**313**		P		**P**	**11 33 54.1**	**-1.0**
	comp=Z,3.8nm,0.6s,baz=75,slow=13,SNR=15								
RSO	**Redoubt South**	**57.53**	**35**	*e*	P		**P**	**11 34 02.0**	**+2.9**
RSO					epP		**pP**	**11 34 08.2**	**+1.1**
PPLA	**Purkeypile**	**57.63**	**32**	*e*	P		**P**	**11 34 00.5**	**+0.8**
	comp=Z,18nm,1.1s								
SPU	**Mount Spurr**	**57.82**	**34**	*e*	P		**P**	**11 34 03.2**	**+2.3**
KDAK	**Kodiak Island**	**57.88**	**38**		P		**P**	**11 34 00.9**	**-0.4**
KDAK	**Kodiak Island**	**57.88**	**38**		P		**P**	**11 34 00.9**	**-0.4**
	comp=Z,5.3nm,0.6s,baz=328,slow=5.1,SNR=9.5								
COLD	**Coldfoot**	**58.24**	**27**	*e*	P		**P**	**11 34 06.5**	**+2.7**
	comp=Z,38nm,2.1s								
MCK	**McKinley**	**59.03**	**31**	*e*	P		**P**	**11 34 09.6**	**+0.3**
MCK					pmax		pmax		
	comp=Z,17nm,1.1s								
MCK	**McKinley**	**59.03**	**31**	*e*	P		**P**	**11 34 09.6**	**+0.3**
	comp=Z,17nm,1.1s								
PMR	**Palmer**	**59.18**	**33**	*e*	P		**P**	**11 34 10.1**	**-0.2**
PMR					pmax		pmax		
	comp=Z,23nm,1.4s								
PMR	**Palmer**	**59.18**	**33**	*e*	P		**P**	**11 34 10.1**	**-0.2**
	comp=Z,23nm,1.4s								
PMR				*e*	ScP		**ScP**	**11 38 58.6**	**+1.0**
SML	**Sawmill**	**59.53**	**33**	*e*	P		**P**	**11 34 13.1**	**+0.3**
SML					pmax		pmax		
	comp=Z,4.0nm,1.1s								
SML	**Sawmill**	**59.53**	**33**	*e*	P		**P**	**11 34 13.1**	**+0.3**
	comp=Z,3.7nm,1.1s								
ILAR	**Eielson Array**	**59.80**	**29**		P		**P**	**11 34 14.0**	**-0.6**
ILAR	**Eielson Array**	**59.80**	**29**		P		**P**	**11 34 14.0**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=263,slow=5.5,SNR=13								
ILAR					LR		LR	12 00 47.1	
	comp=Z,135nm,19.5s,baz=308,slow=37								
PAX	**Paxson**	**60.68**	**31**	*e*	P		**P**	**11 34 20.0**	**-0.7**
PAX					pmax		pmax		
	comp=Z,8.0nm,1.3s								
PAX	**Paxson**	**60.68**	**31**	*e*	P		**P**	**11 34 20.0**	**-0.7**
	comp=Z,7.6nm,1.3s								
DOT	**Dot Lake**	**61.19**	**30**	*e*	P		**P**	**11 34 24.1**	**-0.1**
	comp=Z,28nm,1.0s								
BMRM	**Bremner River**	**61.43**	**34**	*e*	P		**P**	**11 34 26.6**	**+0.7**
	comp=Z,15nm,0.9s								
MENT	**Mentasta**	**61.47**	**31**	*e*	P		**P**	**11 34 26.7**	**+0.6**
STKA	**Stephens Creek**	**62.47**	**170**		P		**P**	**11 34 31.8**	**-1.1**
STKA	**Stephens Creek**	**62.47**	**170**		P		**P**	**11 34 31.8**	**-1.1**
	comp=Z,2.8nm,0.6s,baz=168,slow=13,SNR=2.8								
STKA					LR		LR	12 02 41.3	
	comp=Z,125nm,21.0s,baz=22,slow=37								
TMCR	**Tamitsa**	**64.63**	**331**	*e*	P		**P**	**11 34 46.0**	**-0.9**
TMCR					pmax		pmax		
	comp=Z,37nm,0.7s								
MAK	**Makhachkala**	**65.81**	**307**		P		P	11 34 45.1	-10
MAK					MLR		MLR		
	comp=Z,848nm,15.0s								
SKAG	**Skagway**	**66.29**	**34**	*e*	P		**P**	**11 34 58.9**	**+1.1**
	comp=Z,21nm,1.1s								
KEV	**Kevo**	**66.75**	**338**	*e*	P		**P**	**11 34 59.0**	**-1.5**
KEV					pmax		pmax		
	comp=Z,5.0nm,0.5s								
KEV	**Kevo**	**66.75**	**338**	*e*	p		**P**	**11 34 59.0**	**-1.5**
	comp=Z,5.3nm,0.5s								
VRHR	**Novokhopersk**	**66.89**	**317**	*e*	P		**P**	**11 34 59.8**	**-2.0**
VRHR					pmax		pmax		
	comp=Z,20nm,0.7s								
VRHR					pmax		pmax		
	comp=N,10.0nm,0.4s								
VRHR					pmax		pmax		
	comp=E,20nm,0.7s								
ARCES	**ARCESS Array B**	**67.32**	**338**		P		**P**	**11 35 03.5**	**-0.7**
ARCES	**ARCESS Array B**	**67.32**	**338**		P		**P**	**11 35 03.5**	**-0.7**
	comp=E,2.2nm,0.4s,baz=70,slow=7.9,SNR=39								
ARCES					LR		LR	12 10 00.2	
	comp=E,591nm,18.6s,baz=46,slow=41								
MOS	**Moscow**	**67.54**	**322**	*e*	P		**P**	**11 35 04.2**	**-1.6**
MOS					MLR		MLR		
	comp=Z,800nm,18.0s								
JOF	**Joensuu**	**67.88**	**331**	*e*	P		**P**	**11 35 06.4**	**-1.4**
JOF					pmax		pmax		
	comp=Z,31nm,0.5s								
JOF	**Joensuu**	**67.88**	**331**	*e*	p		**P**	**11 35 06.4**	**-1.4**
	comp=Z,31nm,0.5s								
VSR	**Storozhevoye**	**68.30**	**317**	*e*	P		**P**	**11 35 09.7**	**-1.0**
VSR					pmax		pmax		
	comp=Z,10.0nm,0.7s								
VSR					pmax		pmax		
	comp=N,10.0nm,0.6s								
VSR					pmax		pmax		
	comp=E,10.0nm,0.5s								
VORD	**Divnogorie**	**68.32**	**317**	*e*	P		**P**	**11 35 09.6**	**-1.1**
VORD					pmax		pmax		
	comp=Z,5.0nm,0.5s								
VORD					pmax		pmax		
	comp=N,7.0nm,0.6s								
VORD					pmax		pmax		
	comp=E,10.0nm,0.7s								
OBN	**Obninsk**	**68.33**	**322**	⇓*e*	P		**P**	**11 35 10.1**	**-0.6**
OBN				*i*				11 35 21.4	
OBN				*i*				11 35 27.8	
OBN				*e*				11 35 34.6	
OBN				*e*				11 37 39.8	
OBN					pmax		pmax		
	comp=Z,32nm,1.2s								
OBN					MLR		MLR		
	comp=Z,700nm,16.0s								
ZEI	**Tsey**	**68.36**	**308**	*e*	P		**P**	**11 35 10.4**	**-1.1**
ZEI					pmax		pmax		
	comp=Z,21nm,0.7s								
KBZ	**Khabaz**	**68.69**	**309**		P		**P**	**11 35 13.5**	**+0.3**
KBZ					pmax		pmax		
	comp=Z,20nm,0.8s								
KBZ					MLR		MLR		
	comp=Z,222nm,18.9s								
KBZ	**Khabaz**	**68.69**	**309**		P		**P**	**11 35 13.4**	**+0.3**
KBZ	**Khabaz**	**68.69**	**309**		P		**P**	**11 35 13.4**	**+0.3**
	comp=Z,20nm,0.8s,baz=87,slow=3.8,SNR=37								
KBZ					LR		LR	12 08 54.1	
	comp=Z,222nm,18.9s,baz=277,slow=39								
KIV	**Kislovodsk**	**68.75**	**309**	*c*	*i* P		**P**	**11 35 13.5**	**-0.2**
KIV					*e*			11 35 24.5	
KIV					pmax		pmax		
	comp=Z,66nm,1.2s								
KIV					MLR		MLR		
	comp=Z,300nm,16.0s								
DLBC	**Dease Lake**	**69.22**	**34**	*e*	P		**P**	**11 35 17.2**	**+0.8**
KAF	**Kangasniemi**	**70.33**	**331**	*e*	P		**P**	**11 35 20.9**	**-2.1**
KAF					pmax		pmax		
	comp=Z,17nm,0.6s								
KAF	**Kangasniemi**	**70.33**	**331**	*e*	p		**P**	**11 35 20.9**	**-2.1**
	comp=Z,16nm,0.6s								
UMR	**Umm Al-Rimmam**	**70.62**	**293**	*e*	P		**P**	**11 35 23.7**	**-1.7**
FIA1	**FINESS Array S**	**70.73**	**331**	*e*	P		**P**	**11 35 24.3**	**-1.2**
FINES	**FINESS Array B**	**70.73**	**331**		P		**P**	**11 35 25.0**	**-0.5**
FINES	**FINESS Array B**	**70.73**	**331**		P		**P**	**11 35 25.0**	**-0.5**
	comp=Z,13nm,0.5s,baz=64,slow=6.1,SNR=62								
MIB	**Mutribah**	**70.82**	**294**	*e*	P		**P**	**11 35 25.6**	**-1.0**
MIB					AMb		AMB	11 35 27.3	
	comp=Z,43nm,0.7s								
RDF	**Al-Radifah**	**71.01**	**293**	*e*	P		**P**	**11 35 26.4**	**-1.4**
RDF					AMb		AMB	11 35 28.4	
	comp=Z,72nm,0.6s								
NAY	**Al-Naaiem**	**71.13**	**293**	*e*	P		**P**	**11 35 27.1**	**-1.4**
NAY					AMb		AMB	11 35 29.4	
	comp=Z,31nm,0.7s								
RES	**Resolute Bay**	**71.24**	**12**	*e*	P		**P**	**11 35 28.1**	**-0.1**
	comp=Z,8.8nm,0.7s								
RES	**Resolute Bay**	**71.24**	**12**		P		**P**	**11 35 28.2**	**-0.1**
	comp=Z,4.6nm,0.8s,baz=310,slow=6.5,SNR=28								
BHD	**Baghdad**	**71.70**	**298**	*ex*			**P**	**11 35 29.8**	**-2.0**
BHD				*ex*			x	11 44 45.8	
DAG	**Danmarks Havn**	**71.72**	**353**	*i* P			**P**	**11 35 30.2**	**-1.0**
DAG					pmax		pmax		
	comp=Z,4.0nm,0.8s								
DAG	**Danmarks Havn**	**71.72**	**353**	*i* P			**P**	**11 35 30.2**	**-1.0**
	comp=Z,5.8nm,0.8s								
ANN	**Anapa**	**71.88**	**312**	*e* P			**P**	**11 35 31.1**	**-1.6**
ANN				*e* S			**S**	**11 44 52.0**	**+0.1**
ANN					pmax		pmax		
	comp=Z,70nm,1.0s								
YKW3	**Yellowknife Ar**	**73.88**	**26**	*e* P			**P**	**11 35 44.0**	**-0.2**
	comp=Z,0.1nm,1.0s								
YKA	**Yellowknife Ar**	**73.92**	**26**	P			**P**	**11 35 44.4**	**-0.1**
YKA	**Yellowknife Ar**	**73.92**	**26**	P			**P**	**11 35 44.4**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=305,slow=5.6,SNR=40								
AKASG	**Malin Array Be**	**74.22**	**320**	P			**P**	**11 35 45.6**	**-0.9**
AKASG					pmax		pmax		
	comp=Z,3.0nm,0.4s								
AKASG					MLR		MLR		
	comp=Z,293nm,18.1s								
AKASG	**Malin Array Be**	**74.22**	**320**	P			**P**	**11 35 45.6**	**-0.9**
AKASG	**Malin Array Be**	**74.22**	**320**	P			**P**	**11 35 45.6**	**-0.9**
	comp=Z,2.7nm,0.4s,baz=51,slow=6.1,SNR=15								
AKASG					LR		LR	12 12 42.2	
	comp=Z,293nm,18.1s,baz=60,slow=39								
AK01	**Malin Array Si**	**74.23**	**320**	*e* P			P	11 35 38.8	-7.8
KIEV	**Kiev**	**74.24**	**320**	*e* P			**P**	**11 35 45.0**	**-1.5**
KIEV					pmax		pmax		
	comp=Z,12nm,1.2s								
KIEV	**Kiev**	**74.24**	**320**	*e* P			**P**	**11 35 45.0**	**-1.5**
	comp=Z,12nm,1.2s								
AK02	**Malin Array Si**	**74.26**	**320**	*e* P			P	11 35 39.1	-7.6
BR131	**Keskin Array S**	**76.65**	**308**	*e* P			**P**	**11 36 00.0**	**-0.8**
	comp=Z,11nm,0.8s								
BR131				*e* P			**pP**	**11 36 08.4**	**-0.7**
BRTR	**Keskin Array B**	**76.65**	**308**	P			**P**	**11 35 59.0**	**-1.9**
BRTR	**Keskin Array B**	**76.65**	**308**	P			**P**	**11 35 59.0**	**-1.9**
	comp=Z,9.8nm,0.7s,baz=100,slow=4.1,SNR=36								
BRTR					LR		LR	12 14 48.7	
	comp=Z,120nm,20.0s,baz=220,slow=40								
NB2	**NORSAR Subarra**	**76.93**	**334**	P			**P**	**11 36 00.3**	**-1.6**
	comp=Z,5nm,0.5s,baz=50,slow=5.9								
NOA	**NORSAR Array B**	**76.93**	**334**	P			**P**	**11 36 00.0**	**-1.9**
NOA	**NORSAR Array B**	**76.93**	**334**	P			**P**	**11 36 00.0**	**-1.9**
	comp=Z,6.6nm,0.5s,baz=50,slow=5.6,SNR=46								
NOA					LR		LR	12 15 57.7	
	comp=Z,336nm,18.8s,baz=45,slow=40								
SUMG	**Summit**	**77.32**	**357**	*i* P			**P**	**11 36 04.5**	**+0.2**
SUMG					pmax		pmax		
	comp=Z,13nm,0.7s								
SUMG	**Summit**	**77.32**	**357**	*e* P			**P**	**11 36 04.4**	**+0.2**
	comp=Z,17nm,0.6s								
SUMG	**Summit**	**77.32**	**357**	*i* P			**P**	**11 36 04.5**	**+0.2**
	comp=Z,13nm,0.7s								
SCO	**Scoresbysund**	**77.83**	**351**	*e* P			**P**	**11 36 06.5**	**-0.1**
SCO					pmax		pmax		
	comp=Z,4.0nm,1.3s								
SCO	**Scoresbysund**	**77.83**	**351**	*i* P			**P**	**11 36 06.5**	**-0.1**
	comp=Z,3.7nm,1.3s								
ASF	**Jabal al Asfar**	**77.85**	**300**	LR			LR	12 14 25.9	
	comp=Z,71nm,19.8s,baz=84,slow=39								
BUR08	**Bucovina Ar. S**	**78.04**	**318**	*e* P			**P**	**11 36 08.0**	**-0.4**
MMAI	**Mount Meron Ar**	**78.56**	**301**	LR			LR	12 16 51.7	
	comp=Z,87nm,19.2s,baz=80,slow=40								
KOLS	**Kolonicke sedl**	**79.00**	**321**	*e* P			**P**	**11 36 12.5**	**-1.0**
KOLS				*e*				11 36 21.3	
KOLS	**Kolonicke sedl**	**79.00**	**321**	*e* P			**P**	**11 36 12.5**	**-1.0**
KOLS				*e* P			**PcP**	**11 36 21.3**	**-0.7**
UZH	**Uzhgorod**	**79.15**	**320**	*e* P			**P**	**11 36 16.5**	**+2.2**
CRVS	**Cervenica-Dubn**	**79.46**	**321**	*e* P			**P**	**11 36 15.7**	**-0.4**
CRVS				*e*				11 36 23.7	
CRVS	**Cervenica-Dubn**	**79.46**	**321**	*e* P			**P**	**11 36 15.6**	**-0.5**
CRVS				*e* P			**PcP**	**11 36 23.6**	**-0.5**
OJC	**Ojcow**	**79.61**	**323**	*e* P			**P**	**11 36 16.5**	**-0.3**
OJC	**Ojcow**	**79.61**	**323**	*e* P			**P**	**11 36 16.5**	**-0.3**
OJC	**Ojcow**	**79.61**	**323**	*e* P			**P**	**11 36 16.3**	**-0.5**
EIL	**Elat**	**80.51**	**299**	LR			LR	12 18 58.0	
	comp=Z,225nm,18.3s,baz=266,slow=41								
NEW	**Newport**	**80.96**	**39**	*e* P			**P**	**11 36 24.0**	**-0.2**
	comp=Z,4.7nm,0.8s								
NEW				*e* P			**pP**	**11 36 33.4**	**+0.9**
VYHS	**Vyhne**	**81.12**	**321**	*e* P			**P**	**11 36 26.7**	**+1.7**
VYHS	**Vyhne**	**81.12**	**321**	*e* P			**P**	**11 36 26.7**	**+1.7**
CLL	**Collm**	**82.39**	**326**	*e* P			**P**	**11 36 33.0**	**+1.4**
CLL					pmax		pmax		
	comp=Z,8.0nm,0.9s								
CLL	**Collm**	**82.39**	**326**	*e* P			**P**	**11 36 33.0**	**+1.4**
	comp=Z,8.0nm,0.9s								
CLL				*e* P			**pP**	**11 36 39.0**	**-0.9**
BSMT	**Bassoo Peak**	**82.47**	**38**	*e* P			**P**	**11 36 33.5**	**+1.1**
MOD	**Modoc**	**82.74**	**46**	*e* P			**P**	**11 36 34.1**	**+0.2**
	comp=Z,9.8nm,1.0s								
BMO	**Blue Mountains**	**82.85**	**42**	*e* P			**P**	**11 36 34.8**	**+0.5**
BMO					pmax		pmax		
	comp=Z,9.0nm,1.1s								
BMO	**Blue Mountains**	**82.85**	**42**	*e* P			**P**	**11 36 34.8**	**+0.5**
	comp=Z,8.5nm,1.1s								
SWMT	**Swartz Lake**	**83.10**	**38**	*e* P			**P**	**11 36 36.1**	**+0.5**
SFJD	**Kangerlussuaq**	**83.17**	**1**	*i* P			**P**	**11 36 35.1**	**-0.2**
	comp=Z,8.3nm,0.7s								
WVOR	**Wild Horse Val**	**83.46**	**44**	*e* P			**P**	**11 36 37.7**	**+0.1**
WVOR					pmax		pmax		
	comp=Z,3.0nm,0.8s								
WVOR	**Wild Horse Val**	**83.46**	**44**	*e* P			**P**	**11 36 37.6**	**+0.1**
	comp=Z,2.5nm,0.8s								
KHC	**Kasperske Hory**	**83.49**	**324**	*e* P			**P**	**11 36 36.0**	**-1.4**
KHC				*e*				11 36 45.0	
KHC	**Kasperske Hory**	**83.49**	**324**	*e* P			**P**	**11 36 36.0**	**-1.4**
KHC				*e* P			**pP**	**11 36 45.0**	**-0.8**
SLMT	**Seeley Lake**	**83.54**	**38**	*e* P			**P**	**11 36 38.3**	**+0.4**
GERES	**GERESS Array B**	**83.60**	**324**	P			**P**	**11 36 36.7**	**-1.4**
GERES	**GERESS Array B**	**83.60**	**324**	P			**P**	**11 36 36.7**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=46,slow=5.8,SNR=6.4								
GERES					LR		LR	12 20 13.9	
	comp=Z,475nm,19.1s,baz=57,slow=40								
BEKR	**Beckworth**	**83.85**	**47**	*e* P			**P**	**11 36 39.7**	**+0.1**
	comp=Z,2.2nm,0.8s								
FFC	**Flin Flon**	**83.97**	**28**	*e* P			**P**	**11 36 39.6**	**-0.1**
FFC					pmax		pmax		
	comp=Z,13nm,1.1s								
FFC	**Flin Flon**	**83.97**	**28**	*e* P			**P**	**11 36 39.6**	**-0.1**
	comp=Z,14nm,1.1s								
MFID	**Camas Ranch**	**84.56**	**42**	*e* P			**P**	**11 36 43.7**	**+0.7**
	comp=Z,12nm,1.2s								
HRY	**Holter Researc**	**84.76**	**38**	*e* P			**P**	**11 36 44.5**	**+0.4**
	comp=Z,5.2nm,0.7s								
CMB	**Columbia Colle**	**84.86**	**49**	*e* P			**P**	**11 36 44.6**	**-0.1**
CMB					pmax		pmax		
	comp=Z,7.0nm,1.1s								
CMB	**Columbia Colle**	**84.86**	**49**	*e* P			**P**	**11 36 44.6**	**-0.1**
	comp=Z,7.3nm,1.1s								
VISS	**Visnje**	**84.92**	**321**	*i* P			P	11 36 53.2	+8.5
LRM	**Limekiln Ridge**	**84.98**	**39**	*e* P			**P**	**11 36 45.8**	**+0.4**
	comp=Z,99nm,1.4s								
EGMT	**Eagleton**	**85.00**	**36**	*e* P			**P**	**11 36 45.5**	**+0.4**
	comp=Z,20nm,1.1s								
DLMT	**Dillon**	**85.19**	**39**	*e* P			**P**	**11 36 46.8**	**+0.5**
	comp=Z,8.8nm,1.0s								
JAVS	**Javornik**	**85.28**	**321**	*i* P			**P**	**11 36 47.0**	**+0.4**
HLID	**Hailey**	**85.28**	**42**	*e* P			**P**	**11 36 47.5**	**+0.7**
	comp=Z,7.2nm,1.0s								
BOZ	**Bozeman (W)**	**85.54**	**39**	*e* P			**P**	**11 36 47.9**	**-0.2**
BOZ					pmax		pmax		
	comp=Z,6.0nm,1.3s								
BOZ	**Bozeman (W)**	**85.54**	**39**	*e* P			**P**	**11 36 47.9**	**-0.2**
	comp=Z,6.2nm,1.3s								
NVAR	**Mina Array Bea**	**85.98**	**47**	P			**P**	**11 36 50.5**	**+0.1**
NVAR	**Mina Array Bea**	**85.98**	**47**	P			**P**	**11 36 50.5**	**+0.1**
	comp=Z,4.0nm,0.8s,baz=292,slow=5.3,SNR=26								
YMR	**Madison River**	**86.53**	**39**	*e* P			**P**	**11 36 53.0**	**-0.1**
	comp=Z,7.1nm,1.0s								
LKWY	**Lake**	**86.90**	**39**	*e* P			**P**	**11 36 55.2**	**+0.3**
LKWY					pmax		pmax		
	comp=Z,13nm,1.0s								
LKWY	**Lake**	**86.90**	**39**	*e* P			**P**	**11 36 55.2**	**+0.3**
	comp=Z,13nm,1.0s								
IMW	**Indian Meadow**	**87.04**	**40**	*e* P			**P**	**11 36 56.6**	**+1.0**
	comp=Z,7.6nm,1.1s								
CDF	**Champ du Feu**	**87.08**	**326**	*e* P			**P**	**11 36 55.4**	**-0.1**
	comp=Z,5.7nm,0.6s								
CDF	**Champ du Feu**	**87.08**	**326**	*e* P			**P**	**11 36 55.4**	**-0.1**
CDF					pmax		pmax		
	comp=Z,6.0nm,0.6s								
CDF	**Champ du Feu**	**87.08**	**326**	*e* P			**P**	**11 36 55.4**	**-0.1**
	comp=Z,5.7nm,0.6s								
RLMT	**Red Lodge**	**87.15**	**38**	*e* P			**P**	**11 36 55.6**	**-0.5**
	comp=Z,14nm,1.2s								
TPAW	**Teton Pass**	**87.29**	**40**	*e* P			**P**	**11 36 57.4**	**+0.5**
	comp=Z,4.8nm,1.0s								
LOHW	**Long Hollow**	**87.41**	**40**	*e* P			**P**	**11 36 58.7**	**+1.4**
	comp=Z,3.2nm,1.2s								
SNOW	**Snow King Moun**	**87.42**	**40**	*e* P			**P**	**11 36 58.4**	**+0.9**
	comp=Z,5.4nm,0.9s								
HWUT	**Hardware Ranch**	**88.15**	**42**	*e* P			**P**	**11 37 01.9**	**+1.1**
	comp=Z,11nm,1.0s								
DUG	**Dugway**	**88.31**	**44**	*e* P			**P**	**11 37 02.0**	**+0.4**
DUG					pmax		pmax		
	comp=Z,6.0nm,0.9s								
DUG	**Dugway**	**88.31**	**44**	*e* P			**P**	**11 37 02.0**	**+0.4**
	comp=Z,6.0nm,0.9s								
PDAR	**Pinedale Array**	**88.54**	**40**	P			**P**	**11 37 02.8**	**0.0**
PDAR	**Pinedale Array**	**88.54**	**40**	P			**P**	**11 37 02.8**	**0.0**
	comp=Z,3.6nm,0.9s,baz=305,slow=1.4,SNR=26								
DAU	**Daniels Canyon**	**89.09**	**43**	*e* P			**P**	**11 37 06.4**	**+0.9**
DAU					pmax		pmax		
	comp=Z,12nm,1.4s								
DAU	**Daniels Canyon**	**89.09**	**43**	*e* P			**P**	**11 37 06.4**	**+0.9**
	comp=Z,12nm,1.4s								
ARUT	**Antelope Range**	**89.43**	**46**	P			**P**	**11 37 08.4**	**+1.5**
ARUT	**Antelope Range**	**89.43**	**46**	P			**P**	**11 37 08.4**	**+1.5**
MVU	**Marysvale**	**89.73**	**45**	*e* P			**P**	**11 37 09.4**	**+0.9**
	comp=Z,2.4nm,0.9s								
ULM	**Lac du Bonnet**	**89.79**	**28**	P			**P**	**11 37 08.0**	**-0.1**
ULM	**Lac du Bonnet**	**89.79**	**28**	P			**P**	**11 37 08.0**	**-0.1**
	comp=Z,1.8nm,0.4s,baz=327,slow=7.1,SNR=4.0								
ULM					LR		LR	12 23 04.7	
	comp=Z,86nm,19.9s,baz=272,slow=39								
PPT	**Papeete**	**89.79**	**110**		LR		LR	12 08 35.1	
	comp=Z,62nm,21.9s,baz=334,slow=30								
SMF	**Signal de Mont**	**89.97**	**327**	*e* P			**P**	**11 37 09.5**	**+0.4**
SMF	**Signal de Mont**	**89.97**	**327**	*e* P			**P**	**11 37 09.5**	**+0.4**
SMF	**Signal de Mont**	**89.97**	**327**	*e* P			**P**	**11 37 09.5**	**+0.4**
SRU	**San Rafael**	**90.36**	**43**	*e* P			**P**	**11 37 12.0**	**+0.7**
SRU					pmax		pmax		
	comp=Z,4.0nm,0.7s								
SRU	**San Rafael**	**90.36**	**43**	*e* P			**P**	**11 37 12.0**	**+0.7**
	comp=Z,4.1nm,0.7s								
RSSD	**Black Hills**	**90.57**	**36**	*e* P			**P**	**11 37 12.6**	**+0.4**
RSSD					pmax		pmax		
	comp=Z,14nm,1.3s								
RSSD	**Black Hills**	**90.57**	**36**	*e* P			**P**	**11 37 12.6**	**+0.4**
	comp=Z,14nm,1.3s								
WUAZ	**Wupatki**	**92.15**	**46**	*e* P			**P**	**11 37 20.8**	**+1.2**
	comp=Z,5.2nm,1.0s								
PV01	**Paradox Valley**	**92.16**	**43**	*e* P			**P**	**11 37 20.8**	**+1.1**
	comp=Z,1μm,1.0s								
SMCO	**Snowmass**	**92.39**	**41**	*e* P			**P**	**11 37 21.9**	**+1.0**
	comp=Z,5.1nm,0.9s								
ISCO	**Idaho Springs**	**92.73**	**40**	*e* P			**P**	**11 37 23.3**	**+0.9**
ISCO					pmax		pmax		
	comp=Z,3.0nm,0.9s								
ISCO	**Idaho Springs**	**92.73**	**40**	*e* P			**P**	**11 37 23.2**	**+0.9**
	comp=Z,2.7nm,0.9s								
KMBO	**Kilima Mbogo**	**93.91**	**271**		LR		LR	12 17 49.2	
	comp=Z,78nm,20.0s,baz=93,slow=34								
SCHQ	**Schefferville**	**93.98**	**10**		LR		LR	12 21 24.2	
	comp=Z,159nm,18.9s,baz=9.4,slow=36								
KEST	**Kesra**	**94.64**	**316**		LR		LR	12 27 29.6	
	comp=Z,109nm,18.2s,baz=293,slow=40								
ESDC	**Sonseca Array**	**98.97**	**327**		LR		LR	12 31 51.7	
	comp=Z,307nm,18.7s,baz=15,slow=41								
TXAR	**Lajitas Array**	**101.11**	**47**		P		**Pdif**	**11 38 01.2**	**+1.0**
TXAR	**Lajitas Array**	**101.11**	**47**		P		**Pdif**	**11 38 01.2**	**+1.0**
	comp=Z,0.1nm,0.5s,baz=279,slow=2.4,SNR=4.5								
TORD	**Torodi Ar. Bea**	**115.03**	**304**		PKP		**PKPdf**	**11 42 50.7**	**

KSRS	Korea Array	7.89	340	P		Pn	11 33 50.4	+2.2
	0.3nm,0.3s,baz=208,slow=39,SNR=3.7							
MAJO	Matsushiro	8.69	40	*e*Pn		Pn	11 34 01.1	+1.8
MJAR	Matsushiro Arr	8.69	40	P		Pn	11 34 01.6	+2.4
	0.9nm,0.3s,baz=252,slow=23,SNR=9.1							
USRK	Ussuriysk Arra	14.13	2	P		P	11 35 19.3	-1.6
	0.2nm,0.3s,baz=182,slow=9.5,SNR=4.2							
SONM	Songino Array	26.08	320	P		P	11 37 25.7	-1.0
	0.9nm,0.3s,baz=140,slow=10,SNR=4.3							
CMAR	Chiang Mai Arr	31.55	256	P		P	11 38 15.7	+0.3
	0.7nm,0.5s,baz=48,slow=8.7,SNR=4.2							
TAPN	Taplejung	38.14	277	*e*P		P	11 39 13.2	+0.6
ODAN	Odare	38.54	276	*e*P		P	11 39 15.9	0.0
RAMN	Ramite	39.20	277	*e*P		P	11 39 21.2	-0.2
	4.9nm,0.4s							
GUN	Gumba	39.57	278	*e*P		P	11 39 24.7	+0.1
	19nm,0.4s							
PKI	Pulchoki	40.06	278	*e*P		P	11 39 28.7	0.0
PKIN	Phulchoki	40.07	278	*e*P		P	11 39 28.7	0.0
	5.6nm,0.4s							
KKN	Kakani	40.12	279	*e*P		P	11 39 28.9	-0.1
MKAR	Makanchi Array	41.15	308	P		P	11 39 37.2	+0.2
	0.7nm,0.4s,baz=89,slow=10,SNR=14							
DANN	Dangsing	41.28	280	*e*P		P	11 39 38.5	-0.2
	12nm,0.4s							
KOLN	Koldanda	41.56	279	*e*P		P	11 39 40.5	-0.4
	3.9nm,0.2s							
PYUN	Piuthan	42.00	280	*e*P		P	11 39 44.7	+0.2
	5.4nm,0.3s							
KURBB	Kurchatov Arra	44.07	313	P		P	11 40 00.6	-0.1
	0.6nm,0.3s,baz=95,slow=9.3,SNR=6.2							
TKM2	Tokmak 2	45.80	302	*e*P		P	11 40 15.3	+0.5
	2.9nm,0.7s							
TKM2				*e*pP		pP	11 40 23.6	-0.4
AAK	Ala-Archa	46.62	302	P		P	11 40 21.4	+0.2
	0.8nm,0.5s,baz=151,slow=8.5,SNR=4.1							
BVAR	Borovoye Array	49.31	316	P		P	11 40 41.5	-0.2
	1.5nm,0.4s,baz=92,slow=9.2,SNR=7.5							
KKAR	Karatay Array	49.50	303	*e*P		P	11 40 44.0	+0.7
	2.3nm,0.6s							
KKAR				*e*pP		pP	11 40 52.2	-0.3
WRA	Warramunga Arr	49.79	176	P		P	11 40 47.5	+1.8
	0.5nm,0.8s,baz=350,slow=8.1,SNR=4.1							
ASAR	Alice Springs	53.47	177	P		P	11 41 14.8	+1.7
	0.5nm,0.9s,baz=10.0,slow=13,SNR=6.4							
ABKAR	Akbulak array	56.06	312	*e*P		P	11 41 31.6	0.0
	1.5nm,0.4s							
ILAR	Eielson Array	59.80	29	P		P	11 41 57.5	-0.1
	0.2nm,0.7s,baz=270,slow=7.2,SNR=2.9							
KEV	Kevo	66.88	338	*e*p		P	11 42 43.6	-0.7
	0.5nm,0.4s							
ARCES	ARCESS Array B	67.44	338	P		P	11 42 47.9	-0.1
	5.6nm,1.1s,baz=64,slow=7.1,SNR=8.8							
JOF	Joensuu	68.01	331	*e*p		P	11 42 51.2	-0.4
	4.9nm,0.5s							
KBZ	Khabaz	68.84	309	P		P	11 42 58.2	+1.1
	2.6nm,0.7s,baz=20,slow=2.0,SNR=5.7							
FINES	FINESS Array B	70.87	331	P		P	11 43 08.9	-0.4
	2.3nm,0.4s,baz=64,slow=6.9,SNR=14							
YKA	Yellowknife Ar	73.93	26	P		P	11 43 25.5	-2.0
	0.3nm,0.8s,baz=283,slow=5.0,SNR=4.6							
AKASG	Malin Array Be	74.37	320	P		P	11 43 29.3	-1.0
	0.9nm,0.4s,baz=58,slow=6.5,SNR=2.1							
BRTR	Keskin Array B	76.80	308	P		P	11 43 43.5	-1.2
	1.1nm,0.7s,baz=96,slow=5.1,SNR=5.1							
NB2	NORSAR Subarra	77.06	334	P		P	11 43 45.9	+0.3
	comp=Z,0.8nm,0.5s,baz=48,slow=5.9							
NOA	NORSAR Array B	77.06	334	P		P	11 43 46.1	+0.5
	comp=Z,0.8nm,0.5s,baz=49,slow=5.7,SNR=6.9							
NVAR	Mina Array Bea	85.94	48	P		P	11 44 32.7	-0.5
	comp=Z,0.1nm,0.4s,baz=217,slow=37,SNR=2.6							
PDAR	Pinedale Array	88.51	40	P		P	11 44 45.8	+0.2
	comp=Z,0.5nm,0.8s,baz=289,slow=2.8,SNR=3.4							

SKO 22 11:34:19.0, 41.65N×22.35E, h15km, M0.7, ML1.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VAY	Valandovo	0.37	153	*e*Pg		Pg	11 34 26.5	-0.1
VAY				*e*Sg		Sb	11 34 32.5	-0.3
VAY				*e*Lg		Lg	11 34 32.6	
	comp=E,18nm,0.2s							
VAY				*e*Lg		Lg	11 34 33.0	
	comp=N,15nm,0.3s							

CSEM 22 11:35:46.4, 41.19N×1.88E, h0km, ML1.6, Mining explosion. After MDD, Spain

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EPOB	Poblet	0.62	285	Pg		Pg	11 35 57.3	-1.2
	2.1nm,0.5s,SNR=8.8							
EPOB				Lg		Lg	11 36 06.2	
	1.4nm,0.1s,SNR=7.9							
CFON	Fontmartina	0.71	36	Pg		Pg	11 35 59.6	-0.6
	6.2nm,0.8s,SNR=7.6							
CFON				Lg		Lg	11 36 08.1	
	5.1nm,0.1s,SNR=6.6							
EMIR	Miracle	0.77	340	Pg		Pg	11 36 01.1	-0.2
	15nm,1.2s,SNR=9.6							
EMIR				Lg		Lg	11 36 11.2	
	1.3nm,0.1s,SNR=5.0							
CLLI	Llivia	1.29	3	Pg		Pg	11 36 10.0	-1.4
	SNR=7.9							
CLLI				Lg		Lg	11 36 26.9	
	0.4nm,0.1s,SNR=7.9							
CSOR	Sort	1.31	335	Pg		Pg	11 36 10.6	-1.1
	9.9nm,1.0s,SNR=6.9							
CSOR				Lg		Lg	11 36 28.0	
	2.2nm,0.1s,SNR=6.2							
ESAC	San Caprasio	1.84	288	Pg		Pn	11 36 20.1	+0.7
	SNR=7.9							
ESAC				Lg		Lg	11 36 45.6	
	3.3nm,0.2s,SNR=7.9							
IEPA	Eparoz	2.83	305	Pg		Pb	11 36 38.3	+0.4
	SNR=7.9							
IEPA				Lg		Lg	11 36 58.0	
	5.7nm,0.3s,SNR=7.9							
IELO	Elcoad	2.85	307	Pg		Pb	11 36 37.7	-0.5
	SNR=7.9							

IDC 22 12:16:09.9±3.3, 4.70S×128.86E, h0km, mb3.6/1, mb1 3.5/3, mb1mx3.4/21, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=319.2km s-min=30.0km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	Warramunga Arr	16.06	161	Pn		Pn	12 19 55.4	-1.9
	0.1nm,0.3s,baz=337,slow=14,SNR=5.3							
ASAR	Alice Springs	19.47	166	P		Pn	12 20 39.2	-0.4
	0.2nm,0.3s,baz=351,slow=11,SNR=19							
MKAR	Makanchi Array	65.69	327	P		P	12 26 56.3	0.0
	0.3nm,0.5s,baz=127,slow=8.0,SNR=4.6							

IDC 22 12:22:54.8±1.4, 12.93S×167.74E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/20, mbtmp3.7/7, ML3.9/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/27, Error ellipse: s-maj=54.1km s-min=24.1km az=128.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	Mont Dzumac	9.18	188	Pn		Pn	12 25 08.6	-0.1
	1.3nm,0.3s,baz=353,slow=24,SNR=13							
CTA	Charters Tower	21.78	248	LR		LR	12 34 43.9	
	comp=Z,62nm,19.3s,baz=230,slow=33							
STKA	Stephens Creek	30.52	228	P		P	12 29 10.8	+0.8
	1.4nm,0.6s,baz=33,slow=9.8,SNR=5.5							
WRA	Warramunga Arr	32.74	253	P		P	12 29 28.7	-1.0
	0.6nm,0.6s,baz=85,slow=9.5,SNR=6.9							
ASAR	Alice Springs	33.77	247	P		P	12 29 38.2	-0.4
	0.4nm,0.5s,baz=74,slow=9.3,SNR=16							
ILAR	Eielson Array	84.68	18	P		P	12 35 30.1	-0.1
	0.5nm,0.9s,baz=239,slow=5.6,SNR=4.4							
YKA	Yellowknife Ar	95.75	27	P		P	12 36 21.6	-0.8
	0.1nm,0.7s,baz=255,slow=4.9,SNR=3.2							
MKAR	Makanchi Array	96.22	316	P		P	12 36 26.2	+1.1
	0.2nm,0.6s,baz=90,slow=9.2,SNR=2.7							

*ISCJB **22** 12:32:24.9±0.2, 42.58N×0.02×12.79E±0.02, h12km±2km, Error ellipse: s-maj=2.6km s-min=2.5km az=31.7*

*CSEM **22** 12:32:25.5±0.1, 42.58N×12.81E, h5km, ML3.7/14, Error ellipse: s-maj=2.2km s-min=1.8km az=43.0*
*ROM **22** 12:32:25.3±0.1, 42.58N×12.83E, h9km±1km, Ml3.6/13, Error ellipse: s-maj=0.9km s-min=0.9km az=109.0*
*LDG **22** 12:32:25.4±0.1, 42.60N×12.84E, h2km, Ml3.2/8, Error ellipse: s-maj=5.1km s-min=3.0km az=43.0*
*PRU **22** 12:32:26.5, 42.56N×12.85E, h0km*

ISC 22 12:32:25.8±0.7, 42.58N±0.02×12.82E±0.02, h12km±4km, n143, σ1°06/184, 1C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GAVE	Gavelli	0.13	25	Pg		Pg	12 32 28.8	-0.3
GAVE	Gavelli	0.13	25	Pg		Pg	12 32 28.8	-0.3
LNSS	Leonessa	0.16	81	Pg		Pg	12 32 29.4	-0.2
LNSS				Sg		Sg	12 32 32.3	0.0
	90μm,0.5s							
LNSS	Leonessa	0.16	81	Pg		Pg	12 32 29.4	-0.2
LNSS				Sg		Sg	12 32 32.3	0.0
	90μm,0.5s							
CESX	Cesi	0.18	280	Pg		Pg	12 32 29.5	-0.4
CESX				Sg		Sg	12 32 32.3	-0.4
	20μm,1.0s							
CESX	Cesi	0.18	280	Pg		Pg	12 32 29.5	-0.4
CESX				Sg		Sg	12 32 32.3	-0.4
	20μm,1.0s							
MNS	Montasola	0.22	209	Pg		Pg	12 32 30.6	+0.1
MNS				Sg		Sb	12 32 34.3	+0.6
	14μm,0.5s							
MNS	Montasola	0.22	209	Pg		Pg	12 32 30.6	+0.1
MNS				Sg		Sb	12 32 34.3	+0.6
	14μm,0.5s							
NRCA	Norcia	0.33	40	Pg		Pg	12 32 32.3	-0.3
NRCA				Sg		Sg	12 32 37.6	+0.5
	5μm,0.4s							
NRCA	Norcia	0.33	40	Pg		Pg	12 32 32.3	-0.3
NRCA				Sg		Sg	12 32 37.6	+0.5
	5μm,0.4s							
FIAM	Fiamignano	0.38	145	Pg		Pg	12 32 33.2	-0.2
FIAM				Sg		Sg	12 32 39.1	+0.6
	9μm,1.1s							
FIAM	Fiamignano	0.38	145	Pg		Pg	12 32 33.2	-0.2
FIAM				Sg		Sg	12 32 39.1	+0.6
	9μm,1.1s							
CESI	CESI - Serrava	0.43	8	Pg		Pg	12 32 34.2	-0.2
CESI				Sg		Sg	12 32 40.9	+0.8
CESI	CESI - Serrava	0.43	8	Pg		Pg	12 32 34.2	-0.2
CESI				Sg		Sg	12 32 40.9	+0.8
CAMP	Campotosto	0.43	95	Pg		Pg	12 32 34.2	-0.2
CAMP				Sg		Sg	12 32 41.0	+0.7
	3μm,0.6s							
CAMP	Campotosto	0.43	95	Pg		Pg	12 32 34.2	-0.2
CAMP				Sg		Sg	12 32 41.0	+0.7
	3μm,0.6s							
ASSB	Assisi San Ben	0.48	345	Pg		Pg	12 32 34.9	-0.4
ASSB				Sg		Sg	12 32 42.6	+0.9
	4μm,0.4s							
ASSB	Assisi San Ben	0.48	345	Pg		Pg	12 32 34.9	-0.4
ASSB				Sg		Sg	12 32 42.6	+0.9
	4μm,0.4s							
AQU	L'Aquila	0.48	117	Pg		Pg	12 32 35.1	-0.2
AQU				Sg		Sg	12 32 41.7	0.0
	4μm,0.7s							
AQU	L'Aquila	0.48	117	Pg		Pg	12 32 35.1	-0.2
AQU				Sg		Sg	12 32 41.7	0.0
	4μm,0.7s							
FDMO	Fiordimonte	0.50	23	Pg		Pg	12 32 35.3	-0.3
FDMO				Sg		Sg	12 32 42.9	+0.7
	4μm,0.2s							
FDMO	Fiordimonte	0.50	23	Pg		Pg	12 32 35.3	-0.3
FDMO				Sg		Sg	12 32 42.9	+0.7
	4μm,0.2s							
MTCE	Montecelio	0.56	186	Pg		Pg	12 32 36.4	-0.3
	1μm,0.5s							
MTCE	Montecelio	0.56	186	Pg		Pg	12 32 36.4	-0.3
	1μm,0.5s							
TERO	Teramo	0.58	85	Pg		Pg	12 32 36.4	-0.7
TERO				Sg		Sg	12 32 44.5	-0.3
	2μm,0.5s							
TERO	Teramo	0.58	85	Pg		Pg	12 32 36.4	-0.7
TERO				Sg		Sg	12 32 44.5	-0.3
	2μm,0.5s							
MGAB	Montegabbione	0.62	303	Pg		Pg	12 32 37.6	-0.3
MGAB	Montegabbione	0.62	303	Pg		Pg	12 32 37.6	-0.3
CERT	Cerreto	0.64	169	Pg		Pg	12 32 37.5	-0.7
	5μm,0.9s							
CERT	Cerreto	0.64	169	Pg		Pg	12 32 37.5	-0.7
	5μm,0.9s							
FAGN	Fagnano	0.64	119	Pg		Pg	12 32 37.6	-0.7
FAGN	Fagnano	0.64	119	Pg		Pg	12 32 37.6	-0.7
SNTG	Esanatoglia	0.68	7	Pg		Pg	12 32 38.3	-0.8
SNTG	Esanatoglia	0.68	7	Pg		Pg	12 32 38.3	-0.8
PTQR	Pietraquaria	0.70	142	Pg		Pg	12 32 38.4	-1.0
PTQR	Pietraquaria	0.70	142	Pg		Pg	12 32 38.4	-1.0
MURB	Monte Urbino	0.72	342	Pg		Pg	12 32 39.4	-0.4
MURB	Monte Urbino	0.72	342	Pg		Pg	12 32 39.4	-0.4
SACS	San Casciano d	0.73	292	Pg		Pg	12 32 39.5	-0.4
OFFI	Offida	0.73	60	Pg		Pg	12 32 40.1	+0.2
OFFI	Offida	0.73	60	Pg		Pg	12 32 40.1	+0.2
LATE	Laterza	0.75	273	Pg		Pb	12 32 40.6	-0.3
LATE	Laterza	0.75	273	Pg		Pb	12 32 40.6	-0.3
RMP	Rome, Mte Porz	0.77	187	Pg		Pb	12 32 40.6	-0.6
RMP	Rome, Mte Porz	0.77	187	Pg		Pb	12 32 40.6	-0.6
VCEL	Villa Celiera	0.77	103	Pg		Pg	12 32 40.1	-0.7
VCEL	Villa Celiera	0.77	103	Pg		Pg	12 32 40.1	-0.7
TOLF	Tolfa	0.80	230	Pg		Pg	12 32 41.0	-0.2
TOLF	Tolfa	0.80	230	Pg		Pg	12 32 41.0	-0.2
RDP	Rocca di Papa	0.82	186	Pg		Pg	12 32 41.4	-0.3
RDP	Rocca di Papa	0.82	186	Pg		Pg	12 32 41.4	-0.3
TRTR	Tortoreto Alta	0.84	74	Pg		Pg	12 32 42.4	+0.4
TRTR	Tortoreto Alta	0.84	74	Pg		Pg	12 32 42.4	+0.4
CING	Cingoli	0.84	19	Pg		Pb	12 32 41.3	-1.1
CING	Cingoli	0.84	19	Pg		Pb	12 32 41.3	-1.1
GUAR	Guarcino	0.86	155	Pg		Pg	12 32 42.5	0.0
GUAR	Guarcino	0.86	155	Pg		Pg	12 32 42.5	0.0
VVLD	Villa Vallelon	0.92	140	Pg		Pg	12 32 43.5	-0.1
VVLD	Villa Vallelon	0.92	140	Pg		Pg	12 32 43.5	-0.1
ARVD	Arcevia	0.92	5	Pg		Pb	12 32 42.5	-1.3
ARVD				Sg		Sb	12 32 56.0	-0.1
ARVD	Arcevia	0.92	5	Pg		Pb	12 32 42.5	-1.3
ARVD				Sg		Sb	12 32 56.0	-0.1
GUMA	Gualdo di Mace	0.95	59	Pg		Pb	12 32 37.6	-6.7
GUMA				Sg		Sb	12 32 46.6	-10
	6μm,0.5s							
CAFI	Castiglion Fio	0.98	320	Pg		Pb	12 32 43.9	-0.9
CAFI	Castiglion Fio	0.98	320	Pg		Pb	12 32 43.9	-0.9
PIEI	Pieia	0.98	348	Pg		Pb	12 32 43.9	-0.9
PIEI	Pieia	0.98	348	Pg		Pb	12 32 43.9	-0.9
INTR	Introdacqua	0.98	125	Pg		Pb	12 32 44.3	-0.5
INTR	Introdacqua	0.98	125	Pg		Pb	12 32 44.3	-0.5
BADI	Badiali	1.02	336	Pg		Pb	12 32 44.9	-0.6
BADI	Badiali	1.02	336	Pg		Pb	12 32 44.9	-0.6
ARCI	Arcidosso	1.03	286	Pg		Pb	12 32 45.3	-0.4
ARCI	Arcidosso	1.03	286	Pg		Pb	12 32 45.3	-0.4
GIUL	Giuliano Di Ro	1.07	162	Pg		Pb	12 32 45.2	-1.0
GIUL	Giuliano Di Ro	1.07	162	Pg		Pb	12 32 45.2	-1.0
FSSB	Fossombrone	1.11	358	Pg		Pb	12 32 46.1	-1.0
FSSB	Fossombrone	1.11	358	Pg		Pb	12 32 46.1	-1.0
AOI	Ancona	1.13	30	Pg		Pb	12 32 47.2	-0.1
AOI	Ancona	1.13	30	Pg		Pb	12 32 47.2	-0.1
LPEL	Lama dei Pelig	1.14	117	Pg		Pb	12 32 45.8	-1.7
LPEL	Lama dei Pelig	1.14	117	Pg		Pb	12 32 45.8	-1.7
PARC	Parchiule	1.15	338	Pg		Pb	12 32 47.6	-0.1
PARC	Parchiule	1.15	338	Pg		Pb	12 32 47.6	-0.1
CSNT	Castellina Chi	1.44	309	Pg		Pb	12 32 52.0	-0.5
CSNT	Castellina Chi	1.44	309	Pg		Pb	12 32 52.0	-0.5
MAIM	Mastiano	2.17	309	P		Pn	12 33 02.0	+0.3
NVLJ	Novalja	2.48	36	*e*Pn		Pn	12 33 07.1	+1.0
NVLJ				Sn		Sb	12 33 38.7	-2.1
NVLJ	Novalja	2.48	36	*e*Pn		Pn	12 33 07.0	+1.0
NVLJ				Sn		Sb	12 33 38.7	-2.1
PGF	Pioggiola	2.83	271	*e*Pn		Pn	12 33 10.8	-0.1
PGF				*e*Sn		Sn	12 33 46.1	+1.2
	11nm,0.6s							
PGF	Pioggiola	2.83	271	*e*Pn		Pn	12 33 10.8	-0.1
PGF				*e*Sn		Sn	12 33 46.1	+1.2
	5.3nm,0.6s							
SKDS	Skadanscina	3.09	16	*i* Pn		Pn	12 33 15.0	+0.6
SKDS				*i* Sn		Sn	12 33 52.4	+1.0
SKDS	Skadanscina	3.09	16	Pn		Pn	12 33 15.0	+0.6
SKDS				*i* Sn		Sn	12 33 52.3	+1.0
BOJS	Bojanci	3.41	30	*i* Pn		Pn	12 33 21.1	+2.3
BOJS				*i* Sn		Sb	12 34 03.2	-4.3
JAVS	Javornik	3.43	15	*i* Pn		Pn	12 33 20.2	+1.0
JAVS				*i* Sn		Sn	12 34 02.4	+2.5
VOY	Vojsko	3.54	12	*e*Pn		Pn	12 33 21.8	+1.1
VOY				*e*Sn		Sn	12 34 02.9	+0.4
STON	Ston	3.60	84	*i* Pn		Pn	12 33 23.5	+2.1
STON				Sn		Sn	12 34 05.1	+1.2
STON	Ston	3.60	84	*i* Pn		Pn	12 33 23.5	+2.1
STON				Sn		Sn	12 34 05.1	+1.2
MYKA	Terra Mystica	4.09	8	||*i* Pn		Pn	12 33 29.8	+1.5
MYKA	Terra Mystica	4.09	8	Pn		Pn	12 33 29.8	+1.5
SBF	Sospel	4.14	290	*e*Pn		Pn	12 33 29.3	+0.4
SBF	Sospel	4.14	290	*e*Pn		Pn	12 33 29.3	+0.4
ABTA	Abfaltersbach	4.17	357	||*i* Pn		Pn	12 33 31.0	+1.6
	SNR=14							
ABTA	Abfaltersbach	4.17	357	Pn		Pn	12 33 31.0	+1.6
	SNR=14							
KBA	Koelnbreinsper	4.52	5	||*i* Pn		Pn	12 33 35.0	+0.8
	SNR=13							
KBA	Koelnbreinsper	4.52	5	Pn		Pn	12 33 35.0	+0.8
	SNR=13							
FRF	La Foret Royal	4.63	284	*e*Pn		Pn	12 33 35.5	-0.1
FRF	La Foret Royal	4.63	284	*e*Pn		Pn	12 33 35.5	-0.1
LMR	La Mourre	4.70	281	*e*Pn		Pn	12 33 36.0	-0.5
LMR	La Mourre	4.70	281	*e*Pn		Pn	12 33 36.0	-0.5
MBDF	Montbardon	4.89	298	*e*P		Pn	12 33 41.3	+2.0
MBDF	Montbardon	4.89	298	*e*P		Pn	12 33 41.3	+2.0
LPG	La Plagne	5.26	306	*e*P		Pn	12 33 47.1	+2.6
LPG				*e*Sn		Sn	12 34 46.4	+1.2
	2.9nm,0.3s							
LPL	La Plagne	5.28	306	*e*P		Pn	12 33 47.2	+2.5
LPL				*e*Sn		Sn	12 34 45.6	0.0
	6.4nm,0.4s							
SMRF	Simiane la Rot	5.47	287	*e*P		Pn	12 33 48.7	+1.5
SMRF	Simiane la Rot	5.47	287	*e*P		Pn	12 33 48.7	+1.5
ORIF	Oris-en-Rattie	5.55	297	*e*P		Pn	12 33 51.7	+3.4
CABF	La Chapelle	6.28	312	*e*Pn		Pn	12 33 58.8	+0.6
CABF	La Chapelle	6.28	312	*e*Pn		Pn	12 33 58.8	+0.6
VIVF	Saint-Julien-l	6.33	294	*e*Pn		Pn	12 34 00.6	+1.6
KHC	Kasperske Hory	6.58	4	*e*PN		Pn	12 34 03.0	+0.7
KHC				*ex*		x	12 34 14.5	
KHC				*ex*		x	12 35 16.7	
KHC				*ex*		x	12 35 38.0	
KHC	Kasperske Hory	6.58	4	Pn		Pn	12 34 03.0	+0.7
KHC				Sn		Sn	12 35 16.7	-0.5
HINF	Hinteralfeld	6.72	323	*e*Pn		Pn	12 34 03.4	-1.0
HINF				*e*Sn		Sn	12 35 19.7	-1.2
	4.6nm,0.3s							
HINF	Hinteralfeld	6.72	323	*e*Pn		Pn	12 34 03.4	-1.0
CDF	Champ du Feu	7.01	328	*e*Pn		Pn	12 34 06.8	-1.6
CDF				*e*Sn		Sn	12 35 26.8	-1.3
	7.2nm,0.5s							
CDF	Champ du Feu	7.01	328	*e*Pn		Pn	12 34 06.8	-1.6
CDF				*e*Sn		Sn	12 35 26.8	-1.3
	3.6nm,0.5s							
HAU	Haudompre	7.09	322	*e*Pn		Pn	12 34 08.6	-0.8
HAU				*e*Sn		Sn	12 35 27.4	-2.5
	15nm,0.4s							
HAU	Haudompre	7.09	322	*e*Pn		Pn	12 34 08.6	-0.8
VYHS	Vyhne	7.27	33	*e*PN		Pn	12 34 15.3	+3.5
VYHS				*e*SN		Sn	12 35 30.5	-3.7
SMF	Signal de Mont	7.59	305	*e*Pn		Pn	12 34 16.3	+0.1
SMF				*e*Sn		Sn	12 35 40.9	-1.2
	2.3nm,0.3s							
SMF	Signal de Mont	7.59	305	*e*Pn		Pn	12 34 16.3	+0.1
SMF				*e*Sn		Sn	12 35 40.9	-1.2
	1.1nm,0.3s							
LOR	Lormes	7.90	309	*e*Pn		Pn	12 34 20.0	-0.5
LOR				*e*Sn		Sn	12 35 49.5	-0.3
	1.9nm,0.4s							
LOR	Lormes	7.90	309	*e*Pn		Pn	12 34 20.0	-0.5
AVF	Avril sur Loir	7.95	305	*e*Pn		Pn	12 34 20.8	-0.4
AVF	Avril sur Loir	7.95	305	*e*Pn		Pn	12 34 20.8	-0.4
CAF	Calviac	8.13	290	*e*P		Pn	12 34 25.1	+1.4
CAF	Calviac	8.13	290	*e*P		Pn	12 34 25.1	+1.4
BGF	Bois d'Agland	8.16	303	*e*Pn		Pn	12 34 24.3	+0.3
BGF	Bois d'Agland	8.16	303	*e*Pn		Pn	12 34 24.3	+0.3
RJF	Les Rejaudoux	8.60	292	*e*P		Pn	12 34 32.4	+2.3
RJF	Les Rejaudoux	8.60	292	*e*P		Pn	12 34 32.4	+2.3
CLL	Collm	8.73	1	*e*(Sn)		Sn	12 36 18.0	+7.8
CLL				*e*Sg		Sg	12 37 15.0	+9.1
CRVS	Cervenica-Dubn	8.74

	comp=Z,427nm,0.5s							
MIB	**Mutribah**	**1.24**	**226**	*e*P	**Pg**	**13 53 03.0**	**+0.1**
MIB				*e*S	**Sn**	**13 53 21.4**	**+0.6**
UMR	**Umm Al-Rimmam**	**1.25**	**207**	*e*P	**Pb**	**13 53 03.0**	**-0.4**
UMR				*e*S	**Sn**	**13 53 21.1**	**0.0**
UMR				AML	AML	13 53 23.5	
	comp=Z,592nm,0.4s						
UMR	**Umm Al-Rimmam**	**1.25**	**207**	*e*P	**Pb**	**13 53 03.0**	**-0.4**
UMR				*e*S	**Sn**	**13 53 21.1**	**0.0**
	comp=Z,592nm,0.4s						
SHGR	**Shooshtar-Gavs**	**1.48**	**14**	*e*Pg	**Pg**	**13 53 06.6**	**-1.0**
SHGR				*e*Sg	**Sg**	**13 53 28.2**	**+1.4**
KBD	**Kabd**	**1.60**	**202**	*e*P	**Pb**	**13 53 08.8**	**-0.6**
KBD				*e*S	**Sg**	**13 53 31.8**	**+1.3**
KBD				AML	AML	13 53 34.2	
	comp=Z,204nm,0.5s						
KBD	**Kabd**	**1.60**	**202**	*e*P	**Pb**	**13 53 08.8**	**-0.6**
KBD				*e*S	**Sg**	**13 53 31.8**	**+1.3**
	comp=Z,204nm,0.5s						
NAY	**Al-Naaiem**	**1.72**	**215**	*e*P	**Pb**	**13 53 10.9**	**-0.6**
NAY				AML	AML	13 53 40.4	
	comp=Z,101nm,0.6s						
NAY	**Al-Naaiem**	**1.72**	**215**	*e*P	**Pb**	**13 53 10.9**	**-0.6**
RDF	**Al-Radifah**	**1.88**	**202**	*e*P	**Pb**	**13 53 13.1**	**-1.0**
RDF				*e*S	**Sg**	**13 53 39.4**	**-0.1**
RDF				AML	AML	13 53 41.2	
	comp=Z,234nm,0.6s						
RDF	**Al-Radifah**	**1.88**	**202**	*e*P	**Pb**	**13 53 13.1**	**-1.0**
RDF				*e*S	**Sg**	**13 53 39.4**	**-0.1**
QRN	**Al-Qurain**	**1.96**	**192**	*e*P	**Pb**	**13 53 14.6**	**-1.0**
QRN				*e*S	**Sb**	**13 53 40.5**	**+0.1**
QRN				AML	AML	13 53 44.0	
	comp=Z,301nm,0.4s						
KHMZ	**Khomeyn**	**3.34**	**23**	*e*Pn	**Pn**	**13 53 33.3**	**+0.6**
BHD	**Baghdad**	**4.27**	**308**	*ex*	**Pn**	**13 53 44.8**	**-0.3**
BHD				*ex*	x	13 54 05.8	
BHD				*ex*	x	13 54 40.0	
BHD				*i* x	x	13 55 05.0	
BHD	**Baghdad**	**4.27**	**308**	*e*Pn	**Pn**	**13 53 44.8**	**-0.3**
NASN	**Na'in**	**4.34**	**60**	*e*Pn	**Pn**	**13 53 47.2**	**+0.7**
GHVR	**GHOM**	**4.53**	**32**	*e*Pn	**Pn**	**13 53 49.3**	**+0.4**
GHIR	**Ghir-Karzin**	**4.67**	**119**	*e*Pn	**Pn**	**13 53 50.6**	**-0.3**

MDD ***22*** *13:54:12.3±2.1,35.°03N×9.°62W, h0km, mb4.0/5, Error ellipse: s-maj=21.2km s-min=18.1km az=112.0, PRXIMO*
LDG ***22*** *13:54:12.3±0.4,34.°94N×9.°61W, h2km, Ml3.2/3, Error ellipse: s-maj=10.1km s-min=7.5km az=106.0*
CSEM ***22*** *13:54:13.4±0.5,35.°11N×9.°54W, h10km, mb4.0/5, Error ellipse: s-maj=10.1km s-min=9.0km az=92.0*
INMG ***22*** *13:54:13.4±1.2,34.°83N×9.°73W, h31km, ML2.1, Error ellipse: s-maj=9.2km s-min=6.5km az=107.0*

ISC 22 13:54:10.4±3.8, 35.°0N±0.°2×9.°6W±0.°1, h10km, n43, σ1§21/80, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MORF	**Marmelete**	**2.46**	**19**	*e*Pn	**Pn**	**13 54 51.6**	**+1.1**
MORF				*e*Sn	**Sn**	**13 55 20.9**	**+0.3**
MORF				A	A	13 55 22.0	
	7.2nm,0.2s						
MORF	**Marmelete**	**2.46**	**19**	P	**Pn**	**13 54 51.6**	**+1.1**
MORF				S	**Sn**	**13 55 20.9**	**+0.3**
	7.2nm,0.2s						
MORF	**Marmelete**	**2.46**	**19**	P	**Pn**	**13 54 51.6**	**+1.1**
MORF				S	**Sn**	**13 55 20.9**	**+0.3**
	7.2nm,0.2s						
PBDV	**Barranco-do-Ve**	**2.65**	**31**	*e*Pn	**Pn**	**13 54 54.6**	**+1.4**
PBDV				*e*Sn	**Sn**	**13 55 26.2**	**+0.8**
PBDV				A	A	13 55 36.3	
	5.0nm,0.6s						
PBDV	**Barranco-do-Ve**	**2.65**	**31**	P	**Pn**	**13 54 54.6**	**+1.4**
PBDV				S	**Sn**	**13 55 26.2**	**+0.8**
	5.0nm,0.6s						
PBDV	**Barranco-do-Ve**	**2.65**	**31**	P	**Pn**	**13 54 54.6**	**+1.4**
PBDV				S	**Sn**	**13 55 26.2**	**+0.8**
	5.0nm,0.6s						
PTEO	**Sao Teotonio**	**2.67**	**16**	*e*Pn	**Pn**	**13 54 54.4**	**+1.0**
PTEO				*e*Sn	**Sn**	**13 55 25.1**	**-0.6**
PTEO				A	A	13 55 28.1	
	6.8nm,0.5s						
PTEO	**Sao Teotonio**	**2.67**	**16**	P	**Pn**	**13 54 54.4**	**+1.0**
PTEO				S	**Sn**	**13 55 25.1**	**-0.6**
	3.4nm,0.5s						
PTEO	**Sao Teotonio**	**2.67**	**16**	P	**Pn**	**13 54 54.4**	**+1.0**
PTEO				S	**Sn**	**13 55 25.1**	**-0.6**
	3.4nm,0.5s						
PVAQ	**Vaqueiros**	**2.88**	**32**	*e*Pn	**Pn**	**13 54 57.5**	**+1.2**
PVAQ				*e*Sn	**Sn**	**13 55 31.2**	**+0.3**
PVAQ				A	A	13 55 36.1	
	3.4nm,0.1s						
PVAQ	**Vaqueiros**	**2.88**	**32**	P	**Pn**	**13 54 57.5**	**+1.2**
PVAQ				S	**Sn**	**13 55 31.2**	**+0.3**
	3.4nm,0.1s						
PVAQ	**Vaqueiros**	**2.88**	**32**	P	**Pn**	**13 54 57.5**	**+1.2**
PVAQ				S	**Sn**	**13 55 31.2**	**+0.3**
	3.4nm,0.1s						
PCVE	**Castro Verde**	**2.94**	**26**	*e*Pn	**Pn**	**13 54 59.3**	**+2.1**
PCVE				*e*Sn	**Sn**	**13 55 33.0**	**+0.4**
PCVE				A	A	13 55 37.5	
	2.9nm,0.1s						
PCVE	**Castro Verde**	**2.94**	**26**	P	**Pn**	**13 54 59.3**	**+2.1**
PCVE				S	**Sn**	**13 55 33.0**	**+0.4**
	2.9nm,0.1s						
PCVE	**Castro Verde**	**2.94**	**26**	P	**Pn**	**13 54 59.3**	**+2.1**
PCVE				S	**Sn**	**13 55 33.0**	**+0.4**
	2.9nm,0.1s						
EGRO	**El Granado**	**3.09**	**34**	P	**Pn**	**13 55 00.5**	**+1.3**
	1.9nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**13 55 35.8**	**-0.4**
	3.3nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**3.09**	**34**	P	**Pn**	**13 55 00.5**	**+1.3**
	1.9nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**13 55 35.8**	**-0.4**
	3.3nm,0.1s,SNR=7.9						
ESPR	**Espera**	**3.60**	**57**	P	**Pn**	**13 55 07.6**	**+1.3**
	1.2nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**13 55 47.2**	**-1.7**
	5.8nm,0.2s,SNR=7.9						
ESPR	**Espera**	**3.60**	**57**	P	**Pn**	**13 55 07.6**	**+1.3**
	1.2nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**13 55 47.2**	**-1.7**
	5.8nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.67**	**40**	P	**Pn**	**13 55 07.9**	**+0.7**
	0.4nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**13 55 49.1**	**-1.4**
	1.7nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.67**	**40**	P	**Pn**	**13 55 07.9**	**+0.7**
	0.4nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**13 55 49.1**	**-1.4**
	1.7nm,0.1s,SNR=7.9						
EVOP	**Sao Brissos**	**3.74**	**19**	*e*Pn	**Pn**	**13 55 09.5**	**+1.3**
EVOP				*e*Sn	**Sn**	**13 55 51.2**	**-1.1**
	1.9nm,0.3s						
EVO	**Evora**	**3.78**	**20**	*e*Pn	**Pn**	**13 55 09.5**	**+0.8**
EVO				*e*Sn	**Sn**	**13 55 51.2**	**-2.0**
	3.8nm,0.3s						
PBAR	**Barrancos**	**3.81**	**33**	*e*Pn	**Pn**	**13 55 10.6**	**+1.4**
PBAR				*e*Sn	**Sn**	**13 55 53.1**	**-1.0**
PBAR				A	A	13 56 03.9	
	3.6nm,0.7s						
PBAR	**Barrancos**	**3.81**	**33**	P	**Pn**	**13 55 10.6**	**+1.4**
PBAR				S	**Sn**	**13 55 53.1**	**-1.0**
	3.6nm,0.7s						
PBAR	**Barrancos**	**3.81**	**33**	P	**Pn**	**13 55 10.6**	**+1.4**
PBAR				S	**Sn**	**13 55 53.1**	**-1.0**
	3.6nm,0.7s						
PMAFR	**Mafra**	**3.98**	**4**	P	**Pn**	**13 55 11.0**	**-0.4**
	5.0nm,0.2s,SNR=4.0						
PMAFR				S	**Sn**	**13 55 56.4**	**-1.7**
	11nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**3.98**	**4**	P	**Pn**	**13 55 11.0**	**-0.4**
	5.0nm,0.2s,SNR=4.0						
PMAFR				S	**Sn**	**13 55 56.4**	**-1.7**
	11nm,0.2s,SNR=7.9						
PMTG	**Montargil**	**4.24**	**15**	*e*Pn	**Pn**	**13 55 16.2**	**+1.3**
PMTG				*e*Sn	**Sn**	**13 56 02.7**	**-1.7**
PMTG				A	A	13 56 05.0	
	3.0nm,0.2s						
PMTG	**Montargil**	**4.24**	**15**	*e*Pn	**Pn**	**13 55 16.2**	**+1.3**
PMTG				*e*Sn	**Sn**	**13 56 02.7**	**-1.7**
	3.0nm,0.2s						
EBAD	**Badajoz**	**4.32**	**28**	P	**Pn**	**13 55 17.0**	**+0.9**
	1.6nm,0.1s,SNR=7.2						
EBAD				S	**Sn**	**13 56 06.0**	**-0.5**
	1.3nm,0.1s,SNR=4.8						
EBAD	**Badajoz**	**4.32**	**28**	P	**Pn**	**13 55 17.0**	**+0.9**
	1.6nm,0.1s,SNR=7.2						
EBAD				S	**Sn**	**13 56 06.0**	**-0.5**
	1.3nm,0.1s,SNR=4.8						
PMRV	**Marv??o**	**4.79**	**21**	*e*Pn	**Pn**	**13 55 23.9**	**+1.3**
PMRV				*e*Sn	**Sn**	**13 56 17.0**	**-1.1**
PMRV	**Marv??o**	**4.79**	**21**	P	**Pn**	**13 55 23.9**	**+1.3**
PMRV				S	**Sn**	**13 56 17.0**	**-1.1**
PMRV	**Marv??o**	**4.79**	**21**	P	**Pn**	**13 55 23.9**	**+1.3**
PMRV				S	**Sn**	**13 56 17.0**	**-1.1**
EADA	**Adamuz**	**5.17**	**51**	P	**Pn**	**13 55 28.8**	**+1.0**
	1.0nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**13 56 24.9**	**-2.7**
	3.9nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**5.17**	**51**	P	**Pn**	**13 55 28.8**	**+1.0**
	1.0nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**13 56 24.9**	**-2.7**
	3.9nm,0.1s,SNR=7.9						
SJPF	**Ste Jean**	**10.42**	**36**	*e*Pn	**Pn**	**13 56 40.3**	**+0.4**
SJPF				*e*Sn	Sn	13 58 30.8	-5.9
	0.9nm,0.2s						
SJPF	**Ste Jean**	**10.42**	**36**	*e*Pn	**Pn**	**13 56 40.3**	**+0.4**
ETSF	**Etsaut**	**10.60**	**39**	*e*Pn	**Pn**	**13 56 43.1**	**+0.7**
ETSF				*e*Sn	Sn	13 58 35.5	-5.7
	0.7nm,0.2s						
ETSF	**Etsaut**	**10.60**	**39**	*e*Pn	**Pn**	**13 56 43.1**	**+0.7**
EPF	**Esparros**	**11.17**	**41**	*e*Pn	**Pn**	**13 56 50.0**	**-0.1**
EPF	**Esparros**	**11.17**	**41**	*e*Pn	**Pn**	**13 56 50.0**	**-0.1**

IDC ***22*** *14:02:35.7±2.4,30.°69N×48.°25E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/25, mbtmp3.7/5, Error ellipse: s-maj=57.2km s-min=28.7km az=153.0*
KISR ***22*** *14:02:37.9±0.9,30.°65N×48.°33E, h13km±3km, ML3.2*
CSEM ***22*** *14:02:38.8±0.2,30.°69N×48.°37E, h2km, ML3.2, Error ellipse: s-maj=14.9km s-min=3.7km az=120.0*

ISC 22 14:02:37.6±1.5, 30.°76N±0.°04×48.°19E±0.°07, h4km±11km, n22, σ1§18/33, mb3.7/5, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIB	**Mutribah**	**1.21**	**218**	*e*P	**Pn**	**14 03 01.8**	**+0.5**
MIB				*e*S	**Sn**	**14 03 20.4**	**+2.2**
MIB				AML	AML	14 03 25.7	
	comp=Z,284nm,0.5s						
MIB	**Mutribah**	**1.21**	**218**	*e*P	**Pn**	**14 03 01.8**	**+0.5**
MIB				*e*S	**Sn**	**14 03 20.4**	**+2.2**
UMR	**Umm Al-Rimmam**	**1.27**	**199**	*e*P	**Pg**	**14 03 01.7**	**-0.3**
UMR				*e*S	**Sn**	**14 03 20.6**	**+0.8**
UMR				AML	AML	14 03 21.9	
	comp=Z,588nm,0.4s						
UMR	**Umm Al-Rimmam**	**1.27**	**199**	*e*P	**Pg**	**14 03 01.7**	**-0.3**
UMR				*e*S	**Sn**	**14 03 20.6**	**+0.8**
SHGR	**Shooshtar-Gavs**	**1.44**	**21**	*e*Sg	**Sn**	**14 03 27.4**	**+3.5**
KBD	**Kabd**	**1.64**	**195**	*e*P	**Pb**	**14 03 08.5**	**+0.1**
KBD				*e*S	**Sg**	**14 03 30.8**	**+0.5**
KBD				AML	AML	14 03 33.7	
	comp=Z,233nm,0.5s						
KBD	**Kabd**	**1.64**	**195**	*e*P	**Pb**	**14 03 08.5**	**+0.1**
KBD				*e*S	**Sg**	**14 03 30.8**	**+0.5**
NAY	**Al-Naaiem**	**1.72**	**209**	*e*P	**Pb**	**14 03 09.8**	**0.0**
NAY				*e*S	**Sg**	**14 03 33.5**	**+0.6**
NAY	**Al-Naaiem**	**1.72**	**209**	*e*P	**Pb**	**14 03 09.8**	**0.0**
NAY				*e*S	**Sg**	**14 03 33.5**	**+0.6**
RDF	**Al-Radifah**	**1.91**	**197**	*e*P	**Pn**	**14 03 12.0**	**+1.0**
RDF				*e*S	**Sb**	**14 03 37.7**	**+0.3**
RDF				AML	AML	14 03 40.5	
	comp=Z,238nm,0.4s						
RDF	**Al-Radifah**	**1.91**	**197**	*e*P	**Pn**	**14 03 12.0**	**+1.0**
RDF				*e*S	**Sb**	**14 03 37.7**	**+0.3**
	comp=Z,238nm,0.4s						
QRN	**Al-Qurain**	**2.02**	**187**	*e*P	**Pn**	**14 03 13.8**	**+1.2**
QRN				*e*S	**Sb**	**14 03 39.7**	**-0.9**
QRN				AML	AML	14 03 42.5	
	comp=Z,197nm,0.5s						
KHMZ	**Khomeyn**	**3.32**	**26**	*e*Pn	**Pn**	**14 03 32.5**	**+1.8**
BHD	**Baghdad**	**4.09**	**309**	*ex*	**Pb**	**14 03 50.0**	**-0.3**
BHD				*ex*	x	14 04 45.0	
BHD				*i* x	x	14 05 07.0	
BHD	**Baghdad**	**4.09**	**309**	*e*Pn	**Pb**	**14 03 50.0**	**-0.3**
NASN	**Na'in**	**4.42**	**61**	*e*Pn	**Pn**	**14 03 45.8**	**-0.1**
GHVR	**GHOM**	**4.54**	**34**	*e*Pn	**Pn**	**14 03 48.2**	**+1.0**
MKAR	**Makanchi Array**	**30.73**	**49**	P	**P**	**14 08 53.0**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=252,slow=7.5,SNR=3.9						
FINES	**FINESS Array B**	**33.95**	**341**	P	**P**	**14 09 20.8**	**-1.0**
	comp=Z,1.5nm,0.9s,baz=146,slow=9.6,SNR=7.8						
ZALV	**Zalesovo Beam**	**35.03**	**38**	P	**P**	**14 09 29.6**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=244,slow=9.6,SNR=3.3						
ARCES	**ARCESS Array B**	**40.91**	**348**	P	**P**	**14 10 20.3**	**-0.4**
	comp=Z,4.6nm,1.1s,baz=147,slow=10,SNR=4.0						
TORD	**Torodi Ar. Bea**	**46.19**	**258**	P	**P**	**14 11 02.7**	**-1.2**
	comp=Z,1.0nm,1.2s,baz=58,slow=7.0,SNR=4.5						

GUC 22 14:06:04.8±0.6, 32.°41S×71.°20W, h46km±1km, MD3.6, ML2.7, 2C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JACH	**Jahuel**	**0.57**	**118**	*i*P	Pn	14 06 17.3	+0.4
JACH				*i* S	Sn	14 06 26.8	+1.2
ROCH	**El Roble**	**0.58**	**164**	*e*P	Pn	14 06 17.7	+0.5
ROCH				*i* S	Sn	14 06 27.5	+1.5
ROCH				AML	AML	14 06 28.3	
	comp=N,863nm,0.3s						
CHNG	**Los Chungos**	**0.59**	**334**	*e*P	Pn	14 06 17.0	0.0
CHNG				*i* S	Sn	14 06 26.5	+0.9
CHNG				AML	AML	14 06 28.2	
	comp=E,550nm,0.3s						
PEL	**Peldehue**	**0.84**	**150**	⇑*i*P	Pn	14 06 21.2	+0.8
PEL				*i* S	Sn	14 06 33.2	+1.4
PEL				AML	AML	14 06 34.2	
	comp=E,402nm,0.4s						
LCCH	**Las Cruces**	**1.10**	**196**	*e*P	Pn	14 06 24.7	+0.9
LCCH				*i* S	Sn	14 06 39.1	+1.1
RCDM	**Rinconada Maip**	**1.12**	**163**	*e*P	Pn	14 06 24.7	+0.5
RCDM				*i* S	Sn	14 06 39.6	+1.1
RCDM				AML	AML	14 06 43.1	
	comp=E,597nm,0.2s						
CLCH	**Cerro Calan**	**1.12**	**151**	⇓*i*P	Pn	14 06 24.9	+0.6
CLCH				*i* S	Sn	14 06 39.9	+1.2
CLCH				AML	AML	14 06 41.1	
	comp=N,161nm,0.4s						
FCH	**Farellones**	**1.19**	**140**	*e*P	Pn	14 06 24.7	-0.8
FCH				*i* S	Sn	14 06 40.7	-0.1
FCH				AML	AML	14 06 41.9	
	comp=E,183nm,0.2s						
ANTU	**Antumapu**	**1.25**	**158**	*e*S	Sn	14 06 42.8	+1.2
ANTU				AML	AML	14 06 44.4	
	comp=N,178nm,0.2s						
CMCH	**Combarbala**	**1.25**	**8**	*e*S	Sn	14 06 40.8	-0.9
PCH	**Pirque**	**1.33**	**155**	*e*P	Pn	14 06 27.7	+0.6
PCH				*i* S	Sn	14 06 45.5	+1.6
CHCH	**Chadas Angostu**	**1.58**	**163**	*i* S	Sn	14 06 51.2	+1.4
LMEL	**Las Melosas**	**1.66**	**150**	⇑*i*P	Pn	14 06 32.6	+1.0
LMEL				*i* S	Sn	14 06 53.4	+1.6
LMEL				AML	AML	14 06 57.5	
	comp=N,301nm,0.2s						
CACH	**El Canelo**	**1.77**	**164**	*e*P	Pn	14 06 34.4	+1.3
TLL	**Tololo Astrono**	**2.27**	**9**	*e*P	Pn	14 06 41.0	+0.9
TLL				*e*S	Sn	14 07 08.3	+1.2
TLL				AML	AML	14 07 13.7	
	comp=E,62nm,0.3s						

IDC ***22*** *14:12:12.0±2.1,8.°77S×116.°50E, h0km, mb3.5/2, mb1 3.9/4, mb1mx3.6/23, mbtmp3.8/4, ML3.6/2, Error ellipse: s-maj=40.8km s-min=30.4km az=83.0*
AUST ***22*** *14:12:28.6,9.°48S×116.°94E, h100km*

ISC 22 14:12:15.1±1.4, 8.°80S±0.°09×116.°7E±0.°1, h10km, n10, σ1§36/10, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**3.64**	**104**	P	**Pg**	**14 13 23.4**	**-1.4**
	baz=3.3,SNR=3.1						
WSI				S	**Sg**	**14 14 12.9**	**+0.8**
	baz=3.3,SNR=3.2						
KAPI	**Kappang**	**4.82**	**39**	Pn	**Pn**	**14 13 28.1**	**+0.4**
	3.5nm,0.3s,baz=219,slow=3.2,SNR=19						
KAPI				Sn	**Sn**	**14 14 24.5**	**+0.8**
	3.8nm,0.3s,baz=59,slow=23,SNR=17						
PCI	**Palu**	**8.44**	**22**	P	Pb	14 14 33.2	-8.1
	baz=9.0,SNR=12						
PCI				S	Sb	14 16 26.0	+4.1
	baz=9.0,SNR=12						
FITZ	**Fitzroy Crossi**	**12.68**	**138**	Pn	**Pn**	**14 15 15.2**	**-0.3**
	0.2nm,0.3s,baz=320,slow=7.9,SNR=7.3						
FITZ				Sn	Sn	14 17 29.4	-7.5
	0.1nm,0.3s,baz=180,slow=20,SNR=3.2						
FITZ	**Fitzroy Crossi**	**12.68**	**138**	P	**Pn**	**14 15 15.2**	**-0.3**
	baz=12,SNR=4.4						
MTN	**Manton Dam**	**14.72**	**107**	P	**Pn**	**14 15 43.4**	**-0.1**
	baz=14,SNR=4.7						
MEEK	**Meekatharra**	**17.83**	**174**	P	**P**	**14 16 26.4**	**+2.2**
	baz=17,SNR=3.8						
MEEK				S	Sn	14 19 26.5	-16
	baz=17,SNR=7.2						
WRA	**Warramunga Arr**	**20.33**	**125**	P	Pn	14 16 52.2	-1.5
	1.4nm,0.5s,baz=299,slow=12,SNR=18						
ASAR	**Alice Springs**	**22.12**	**134**	P	**P**	**14 17 11.3**	**+0.4**
	2.1nm,0.5s,baz=308,slow=9.4,SNR=34						
TORD	**Torodi Ar. Bea**	**116.20**	**280**	PKP	**PKPdf**	**14 30 57.8**	**-2.0**
	0.3nm,0.5s,baz=88,slow=1.6,SNR=5.8						

NIED ***22*** *14:32:00, 45.°80N×152.°20E, h17km, Mw4.1 Best double couple: M0 1.82000×10^15 NP1:φs317.00000°, δ82.00000°, λ31.00000°. NP2:φs223.00000°, δ60.00000°, λ171.00000°.*
BJI ***22*** *14:32:26.2, 46.°32N×153.°16E, h20km, mB4.9/8, mb4.9/12*
IDC ***22*** *14:32:30.9±0.6, 45.°85N×151.°83E, h0km, mb4.0/22, mb1 4.2/27, mb1mx4.2/34, mbtmp4.0/27, ML3.8/5, MS3.4/10, Ms1 3.5/10, ms1mx3.1/51, Error ellipse: s-maj=18.3km s-min=12.8km az=145.0*
JMA ***22*** *14:32:33.6±0.7, 45.°78N×152.°24E, h30km, M4.9*
ISCJB ***22*** *14:32:33.2±1.1, 45.°71N±0.°05×152.°06E±0.°06, h29km±8km, mb4.2/38, MS3.6/6, Error ellipse: s-maj=9.5km s-min=4.3km az=145.1*
SKHL ***22*** *14:32:34.1±1.3, 45.°66N×152.°44E, h49km±18km, mb4.9/6, Ms3.9/1*
MOS ***22*** *14:32:35.1±1.3, 45.°84N×152.°05E, h45km, mb4.5/23, Error ellipse: s-maj=10.1km s-min=7.0km az=83.0*

ISC 22 14:32:35.2±0.9, 45.°67N±0.°07×152.°12E±0.°06, h34km±2km, n125, σ1§66/138, mb4.4/38, MS3.6/6, 2C-3D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.03**	**263**	*e*PN	**Pn**	**14 33 22.6**	**+1.9**
KUR				*e*S	**Sn**	**14 33 58.0**	**+2.3**
KUR				pmax	pmax		
	comp=N,110nm,0.6s						
KUR				pmax	pmax		
	comp=Z,340nm,0.6s						
KUR				pmax	pmax		
	comp=E,90nm,0.3s						
KUR				smax	smax		
	comp=N,610nm,0.6s						
KUR				smax	smax		
	comp=E,2μm,0.6s						
KUR	**Kuril'sk**	**3.03**	**263**	*e*P	**Pn**	**14 33 22.6**	**+1.9**
KUR				AMB	AMB	14 33 26.0	
	comp=E,90nm,0.3s						
KUR				AMB	AMB	14 33 26.0	
	comp=E,110nm,0.6s						
KUR				AMB	AMB	14 33 26.0	
	comp=E,340nm,0.6s						
KUR				*e*S	**Sn**	**14 33 58.0**	**+2.3**
KUR				A	A	14 34 08.5	
	comp=E,610nm,0.6s						
KUR				A	A	14 34 08.5	
	comp=E,2μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.74**	**252**	*c i*PN	**Pn**	**14 33 46.1**	**+1.9**
YUK				*i* S	**Sn**	**14 34 42.7**	**+4.7**
YUK				pmax	pmax		
	comp=N,7.0nm,0.2s						
YUK				pmax	pmax		
	comp=Z,137nm,0.3s						
YUK				pmax	pmax		
	comp=E,63nm,0.3s						
YUK				smax	smax		
	comp=E,231nm,0.7s						
YUK				smax	smax		
	comp=N,348nm,0.7s						
YUK	**Yuzh-Kuril'sk**	**4.74**	**252**	⇑*i*P	**Pn**	**14 33 46.2**	**+2.0**
YUK				AMB	AMB	14 33 47.5	
	comp=N,7.0nm,0.2s						
YUK				AMB	AMB	14 33 47.5	
	comp=N,63nm,0.3s						
YUK				AMB	AMB	14 33 47.5	
	comp=N,137nm,0.3s						
YUK				*i* S	**Sn**	**14 34 42.8**	**+4.7**
YUK				A	A	14 35 02.9	
	comp=N,350nm,0.7s						
YUK				A	A	14 35 02.9	
	comp=N,230nm,0.7s						
NEM2	**Nemuro 2**	**5.11**	**245**	P	**Pn**	**14 33 48.8**	**-0.5**
NEM2				*e*S	**Sn**	**14 34 44.4**	**-2.7**
JRA	**Rausu**	**5.27**	**253**	P	**Pn**	**14 33 53.4**	**+1.9**
JRA				*e*S	**Sn**	**14 34 53.5**	**+2.4**
JNK	**Nakash**	**5.68**	**251**	P	**Pn**	**14 33 58.2**	**+1.1**
JNK				*e*S	**Sn**	**14 35 01.4**	**+0.3**
SKR	**Severo-Kuril's**	**5.68**	**27**	*e*PN	**Pn**	**14 33 55.5**	**-1.6**
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR	**Severo-Kuril's**	**5.68**	**27**	*e*P	**Pn**	**14 33 55.5**	**-1.6**
SKR				AMB	AMB	14 33 56.2	
	comp=Z,50nm,0.5s						
SKR				*e*S	**Sn**	**14 34 57.5**	**-3.6**
SKR				A	A	14 35 17.3	
	comp=Z,80nm,0.6s						
SKR				A	A	14 35 17.3	
	comp=Z,120nm,0.6s						
SKR				A	A	14 35 17.3	
	comp=Z,60nm,0.6s						
JAK	**Akkeshi**	**5.96**	**246**	P	**Pn**	**14 34 00.6**	**-0.3**
J

PETK					MLR	MLR			
	comp=Z,73nm,21.0s								
PETK	**Petropavlovsk-**	**8.28**	**24**	Pn	**Pn**	**14 34 33.3**	**+0.5**		
	comp=Z,0.9nm,0.3s,baz=172,slow=13,SNR=11								
PETK					LR	LR	14 37 50.6		
	comp=Z,73nm,21.0s,baz=36,slow=39								
PET	**Petropavlovsk**	**8.50**	**28**	*e*PN	**Pn**	**14 34 34.9**	**-0.9**		
JNB	**Noboribetsu**	**8.60**	**252**	P	**Pn**	**14 34 37.8**	**+0.6**		
JNB				*e*S	**Sn**	**14 36 11.1**	**-1.8**		
JKB	**Kayabe**	**8.87**	**249**	P	**Pn**	**14 34 40.2**	**-0.7**		
JKB				*e*S	**Sn**	**14 36 13.8**	**-5.7**		
JYM2	**Yakumo 2**	**9.20**	**251**	P	**Pn**	**14 34 45.9**	**+0.5**		
JANG	**Nango**	**9.40**	**239**	P	Pn	14 34 45.5	-2.6		
JANG				*e*S	Sn	14 36 24.4	-8.2		
JTM	**Tenmabayashi**	**9.43**	**243**	P	**Pn**	**14 34 47.0**	**-1.5**		
JTM				*e*S	Sn	14 36 25.6	-7.7		
JTH	**Tanohata**	**9.47**	**236**	*e*S	Sn	14 36 24.4	-10		
JOSM	**Okushiri--Mats**	**9.81**	**253**	P	**Pn**	**14 34 54.0**	**+0.2**		
NKL	**Nikolayevsk**	**10.55**	**319**	*e*P	**Pn**	**14 35 04.5**	**+0.6**		
NKL				AMB	AMB	14 35 05.8			
	comp=Z,13nm,1.0s								
NKL				AMB	AMB	14 35 05.8			
	comp=Z,17nm,1.0s								
NKL				AMB	AMB	14 35 05.8			
	comp=Z,22nm,1.0s								
NKL				*e*L	L	14 38 34.0			
JIO	**Ouri**	**10.77**	**232**	*e*S	Sn	14 36 55.1	-11		
MJAR	**Matsushiro Arr**	**13.88**	**234**	Pn	**Pn**	**14 35 47.4**	**-2.1**		
	comp=Z,0.4nm,0.3s,baz=27,slow=14,SNR=5.7								
USRK	**Ussuriysk Arra**	**14.33**	**271**	Pn	**Pn**	**14 35 53.5**	**-2.0**		
	comp=Z,1.3nm,0.3s,baz=78,slow=13,SNR=20								
USRK				LR	LR	14 41 16.0			
	comp=Z,144nm,19.3s,baz=6.6,slow=37								
FX1	**Attu Island--F**	**15.48**	**55**	Pn	**Pn**	**14 36 11.7**	**+1.0**		
	comp=Z,2.0nm,0.3s,baz=274,slow=13,SNR=6.7								
SEY	**Seymchan**	**17.30**	**0**	*e*P	**Pn**	**14 36 33.1**	**-0.6**		
ZEA	**Zeya**	**17.93**	**306**	*e*P	**Pn**	**14 36 37.6**	**-4.0**		
KSRS	**Korea Array**	**19.83**	**254**	P	**P**	**14 37 03.3**	**+0.5**		
	comp=Z,0.3nm,0.3s,baz=60,slow=11,SNR=7.7								
KSRS				LR	LR	14 43 54.6			
	comp=Z,68nm,19.5s,baz=50,slow=35								
JNU	**Nakatsue**	**20.58**	**240**	P	**P**	**14 37 11.9**	**+0.7**		
	comp=Z,14nm,1.2s,baz=14,slow=19,SNR=2.7								
YAK	**Yakutsk**	**20.88**	**330**	*e*P	**P**	**14 37 12.7**	**-1.4**		
YAK				*e**PP	pP	14 37 32.1	+9.1		
YAK				*e*S	**S**	**14 41 00.4**	**-4.4**		
YAK				*e*		14 41 16.9			
YAK				*e**SS	sS	14 41 35.0	+16		
YAK				pmax	pmax				
	comp=Z,16nm,1.1s								
YAK				pmax	pmax				
	comp=N,6.0nm,1.4s								
YAK				smax	smax				
	comp=N,168nm,4.3s								
YAK				smax	smax				
	comp=E,52nm,3.7s								
BILL	**Bilibino**	**23.60**	**13**	*e*P	**P**	**14 37 41.4**	**-1.2**		
BILL				pmax	pmax				
	comp=Z,3.0nm,1.2s								
WHN	**Wuhan**	**33.00**	**256**	*e*P	P	14 39 00.1	-6.8		
LZH	**Lanzhou**	**37.24**	**273**	*e*P	**P**	**14 39 44.5**	**+0.8**		
LZH				pP	pP	14 39 50.0	-3.5		
LZH				sP	sP	14 39 53.4	-4.1		
LZH				pmax	pmax				
	comp=Z,25nm,1.0s								
ILAR	**Eielson Array**	**37.82**	**38**	P	**P**	**14 39 48.3**	**+0.3**		
	comp=Z,0.3nm,0.8s,baz=258,slow=4.5,SNR=5.5								
GTA	**Gaotai**	**38.47**	**280**	*e*P	**P**	**14 39 55.3**	**+1.4**		
GTA				pP	**pP**	**14 40 03.8**	**0.0**		
GTA				sP	**sP**	**14 40 07.8**	**0.0**		
GTA				pmax	pmax				
	comp=Z,12nm,0.6s								
ZALV	**Zalesovo Beam**	**42.69**	**306**	P	**P**	**14 40 26.5**	**-1.9**		
ZALV						14 42 20.3			
ZALV				pmax	pmax				
	comp=Z,1.0nm,0.4s								
ZALV				MLR	MLR				
	comp=Z,78nm,18.1s								
ZALV	**Zalesovo Beam**	**42.69**	**306**	P	**P**	**14 40 26.5**	**-1.9**		
	comp=Z,0.3nm,0.4s,baz=111,slow=8.0,SNR=2.4								
ZALV				PcP	**PcP**	**14 42 20.3**	**+0.6**		
	comp=Z,0.9nm,0.4s,baz=64,slow=3.4,SNR=7.0								
ZALV				LR	LR	14 59 19.4			
	comp=Z,78nm,18.1s,baz=72,slow=38								
MKAR	**Makanchi Array**	**46.83**	**298**	P	**P**	**14 41 00.2**	**-1.3**		
MKAR						14 42 34.8			
MKAR				pmax	pmax				
	comp=Z,1.0nm,0.5s								
MKAR				pmax	pmax				
	comp=Z,1.0nm,0.7s								
MKAR				MLR	MLR				
	comp=Z,97nm,18.6s								
MKAR	**Makanchi Array**	**46.83**	**298**	P	**P**	**14 41 00.2**	**-1.3**		
	comp=Z,0.9nm,0.5s,baz=73,slow=7.6,SNR=16								
MKAR				PcP	**PcP**	**14 42 34.8**	**+0.6**		
	comp=Z,1.0nm,0.7s,baz=64,slow=3.6,SNR=5.7								
MKAR				LR	LR	15 01 39.8			
	comp=Z,96nm,18.6s,baz=153,slow=38								
KURK	**Kurchatov**	**47.39**	**304**	*e*P	**P**	**14 41 05.5**	**-0.3**		
KURK				pmax	pmax				
	comp=Z,2.0nm,1.3s								
KURBB	**Kurchatov Arra**	**47.48**	**304**	P	**P**	**14 41 04.5**	**-2.1**		
	comp=Z,1.2nm,0.2s,baz=68,slow=8.4,SNR=7.4								
KURBB				PcP	**PcP**	**14 42 37.5**	**+1.2**		
	comp=Z,0.9nm,0.2s,baz=71,slow=3.0,SNR=4.4								
BVAR	**Borovoye Array**	**51.02**	**310**	P	P	14 41 30.3	-3.2		
BVAR				pmax	pmax				
	comp=Z,1.0nm,0.5s								
BVAR				MLR	MLR				
	comp=Z,55nm,19.8s								
BVAR	**Borovoye Array**	**51.02**	**310**	P	P	14 41 30.3	-3.2		
	comp=Z,0.7nm,0.5s,baz=64,slow=11,SNR=5.2								
BVAR				LR	LR	15 05 07.6			
	comp=Z,55nm,19.8s,baz=99,slow=39								
CMAR	**Chiang Mai Arr**	**51.45**	**256**	P	**P**	**14 41 38.3**	**+1.2**		
	comp=Z,0.8nm,0.4s,baz=33,slow=7.8,SNR=7.2								
CMAR				LR	LR	15 02 28.4			
	comp=Z,44nm,19.8s,baz=180,slow=35								
RES	**Resolute Bay**	**52.08**	**18**	P	**P**	**14 41 41.2**	**+0.1**		
	comp=Z,0.8nm,0.6s,baz=335,slow=2.2,SNR=4.1								
YKA	**Yellowknife Ar**	**52.20**	**36**	P	**P**	**14 41 43.0**	**+0.9**		
	comp=Z,0.5nm,0.7s,baz=300,slow=7.3,SNR=8.5								
TAPN	**Taplejung**	**53.47**	**273**	*e*P	**P**	**14 41 52.7**	**+0.2**		
	comp=Z,3.9nm,0.3s								
AAK	**Ala-Archa**	**53.70**	**297**	*e*P	**P**	**14 41 53.4**	**-0.4**		
AAK				pmax	pmax				
	comp=Z,7.0nm,0.8s								
AAK	**Ala-Archa**	**53.70**	**297**	P	**P**	**14 41 53.8**	**+0.1**		
	comp=Z,2.9nm,0.8s,baz=69,slow=5.5,SNR=13								
AAK				LR	LR	15 05 50.6			
	comp=Z,83nm,18.3s,baz=230,slow=37								
ODAN	**Odare**	**54.00**	**273**	*e*P	**P**	**14 41 56.9**	**+0.7**		
	comp=Z,12nm,0.5s								
SVE	**Sverdlovsk**	**54.15**	**317**	*e*P	**P**	**14 41 55.6**	**-1.0**		
GUN	**Gumba**	**54.41**	**275**	*e*P	**P**	**14 42 00.8**	**+1.4**		
	comp=Z,15nm,0.3s								
RAMN	**Ramite**	**54.50**	**274**	*e*P	**P**	**14 42 00.5**	**+0.6**		
KKN	**Kakani**	**54.90**	**275**	*e*P	**P**	**14 42 03.4**	**+0.6**		
	comp=Z,13nm,0.6s								
PKI	**Pulchoki**	**54.95**	**275**	*e*P	**P**	**14 42 03.6**	**+0.4**		
	comp=Z,4.5nm,0.3s								
PKIN	**Phulchoki**	**54.95**	**275**	*e*P	**P**	**14 42 03.7**	**+0.5**		
	comp=Z,5.4nm,0.5s								
DMN	**Daman**	**55.13**	**275**	*e*P	**P**	**14 42 05.6**	**+1.1**		
	comp=Z,12nm,0.4s								
ARU	**Arti**	**55.34**	**318**	*d i*P	**P**	**14 42 04.4**	**-0.9**		
ARU						14 44 04.7			
ARU				S	**S**	**14 49 48.2**	**+1.4**		
ARU				SS	**SS**	**14 53 30.9**	**+0.1**		
ARU				pmax	pmax				
	comp=Z,14nm,2.5s								
DANN	**Dangsing**	**55.62**	**277**	*e*P	**P**	**14 42 09.3**	**+1.3**		
	comp=Z,24nm,0.6s								
KOLN	**Koldanda**	**56.09**	**276**	*e*P	**P**	**14 42 12.3**	**+1.0**		
	comp=Z,15nm,0.6s								
PYUN	**Piuthan**	**56.31**	**277**	*e*P	**P**	**14 42 14.2**	**+1.3**		
	comp=Z,10nm,0.5s								
KEV	**Kevo**	**58.13**	**340**	*e*P	**P**	**14 42 22.8**	**-2.0**		
KEV	**Kevo**	**58.13**	**340**	*e*p	**P**	**14 42 22.8**	**-2.0**		
	comp=Z,0.4nm,0.3s								
ARCES	**ARCESS Array B**	**58.64**	**341**	P	**P**	**14 42 27.7**	**-0.7**		
	comp=Z,1.8nm,0.7s,baz=43,slow=5.1,SNR=7.3								
SUMG	**Summit**	**61.82**	**4**	*i* P	**P**	**14 42 51.0**	**+0.4**		
SUMG				pmax	pmax				
	comp=Z,5.0nm,0.8s								
SUMG	**Summit**	**61.82**	**4**	*i* P	**P**	**14 42 51.0**	**+0.4**		
	comp=Z,5.1nm,0.8s								
JOF	**Joensuu**	**61.99**	**334**	*e*P	**P**	**14 42 50.2**	**-1.2**		
JOF				pmax	pmax				
	comp=Z,2.0nm,0.6s								
JOF	**Joensuu**	**61.99**	**334**	*e*p	**P**	**14 42 50.2**	**-1.2**		
	comp=Z,1.6nm,0.6s								
NVAR	**Mina Array Bea**	**63.55**	**61**	P	**P**	**14 43 04.1**	**+1.6**		
	comp=Z,0.5nm,0.8s,baz=296,slow=4.8,SNR=4.2								
FINES	**FINESS Array B**	**64.72**	**335**	P	**P**	**14 43 07.9**	**-1.6**		
	comp=Z,3.5nm,0.6s,baz=47,slow=6.1,SNR=17								
PDAR	**Pinedale Array**	**65.94**	**53**	P	P	14 43 21.0	+3.0		
	comp=Z,0.3nm,0.8s,baz=338,slow=2.1,SNR=3.1								
WRA	**Warramunga Arr**	**67.27**	**198**	P	**P**	**14 43 26.6**	**+0.3**		
	comp=Z,1.0nm,0.9s,baz=16,slow=6.8,SNR=7.0								
NB2	**NORSAR Subarra**	**69.02**	**341**	P	**P**	**14 43 36.1**	**-0.8**		
	comp=Z,8.1nm,1.0s,baz=28,slow=6.2								
NOA	**NORSAR Array B**	**69.02**	**341**	P	**P**	**14 43 36.4**	**-0.5**		
	comp=Z,2.4nm,0.4s,baz=28,slow=6.4,SNR=26								
ASAR	**Alice Springs**	**70.97**	**198**	P	**P**	**14 43 50.7**	**+1.5**		
	comp=Z,0.9nm,0.8s,baz=14,slow=6.1,SNR=17								
KIV	**Kislovodsk**	**71.06**	**314**	*e*P	**P**	**14 43 50.8**	**+1.1**		
KIV				pmax	pmax				
	comp=Z,8.0nm,1.0s								
KBZ	**Khabaz**	**71.11**	**314**	P	**P**	**14 43 50.9**	**+1.0**		
KBZ				pmax	pmax				
	comp=Z,6.0nm,0.8s								
KBZ	**Khabaz**	**71.11**	**314**	P	**P**	**14 43 50.9**	**+1.0**		
	comp=Z,5.9nm,0.8s,baz=42,slow=4.4,SNR=10								
AKASG	**Malin Array Be**	**72.06**	**326**	P	**P**	**14 43 54.2**	**-1.3**		
AKASG				pmax	pmax				
	comp=Z,2.0nm,0.4s								
AKASG	**Malin Array Be**	**72.06**	**326**	P	**P**	**14 43 54.2**	**-1.3**		
	comp=Z,1.9nm,0.4s,baz=33,slow=6.0,SNR=4.4								
KOLS	**Kolonicke sedl**	**76.13**	**329**	*e*P	**P**	**14 44 19.6**	**+0.3**		
KOLS				pmax	pmax				
	comp=Z,5.0nm,1.0s								
KOLS	**Kolonicke sedl**	**76.13**	**329**	*e*P	**P**	**14 44 19.6**	**+0.3**		
CRVS	**Cervenica-Dubn**	**76.45**	**329**	*e*P	**P**	**14 44 21.4**	**+0.2**		
CRVS				pmax	pmax				
	comp=Z,7.0nm,1.8s								
CRVS	**Cervenica-Dubn**	**76.45**	**329**	*e*P	**P**	**14 44 21.4**	**+0.2**		
DPC	**Dobruska-Polom**	**76.97**	**333**	*e*P	**P**	**14 44 24.6**	**+0.5**		
DPC	**Dobruska-Polom**	**76.97**	**333**	*e*P	**P**	**14 44 24.6**	**+0.5**		
CLL	**Collm**	**77.16**	**335**	*e*P	**P**	**14 44 25.0**	**-0.1**		
CLL				*e*		14 44 40.0			
CLL				pmax	pmax				
	comp=Z,6.0nm,0.8s								
CLL	**Collm**	**77.16**	**335**	*e*P	**P**	**14 44 25.0**	**-0.1**		
	comp=Z,6.0nm,0.8s								
CLL				*e*		14 44 40.0			
VYHS	**Vyhne**	**77.73**	**330**	*e*P	**P**	**14 44 29.6**	**+1.3**		
VYHS	**Vyhne**	**77.73**	**330**	*e*P	**P**	**14 44 29.6**	**+1.3**		
VRAC	**Vranov**	**77.78**	**332**	LR	LR	15 18 48.5			
	comp=Z,24nm,21.1s,baz=91,slow=36								
PRU	**Pruhonice**	**77.85**	**334**	*e*P	**P**	**14 44 30.4**	**+1.4**		
PRU	**Pruhonice**	**77.85**	**334**	*e*P	**P**	**14 44 30.4**	**+1.4**		
TXAR	**Lajitas Array**	**78.63**	**60**	P	**P**	**14 44 35.0**	**+1.2**		
	comp=Z,0.4nm,0.3s,baz=305,slow=4.4,SNR=4.9								
MIB	**Mutribah**	**78.63**	**301**	*e*P	**P**	**14 44 33.9**	**+0.2**		
MIB				AMb	AMB	14 44 36.0			
	comp=Z,16nm,0.9s								
BRTR	**Keskin Array B**	**78.70**	**316**	P	**P**	**14 44 31.7**	**-2.3**		
	comp=Z,3.7nm,1.1s,baz=19,slow=14,SNR=4.8								
KHC	**Kasperske Hory**	**78.90**	**334**	*e*P	**P**	**14 44 35.5**	**+0.6**		
KHC	**Kasperske Hory**	**78.90**	**334**	*e*P	**P**	**14 44 35.5**	**+0.6**		
NAY	**Al-Naaiem**	**79.09**	**301**	*e*P	**P**	**14 44 36.4**	**+0.2**		
NAY				AMb	AMB	14 44 38.2			
	comp=Z,7.7nm,0.9s								
GERES	**GERESS Array B**	**79.12**	**333**	P	**P**	**14 44 34.4**	**-1.7**		
	comp=Z,0.4nm,0.4s,baz=12,slow=5.0,SNR=2.2								
RDF	**Al-Radifah**	**79.14**	**300**	*e*P	**P**	**14 44 37.0**	**+0.6**		
RDF				AMb	AMB	14 44 39.3			
	comp=Z,29nm,1.0s								
GIVF	**Givet**	**80.47**	**339**	*e*P	**P**	**14 44 42.9**	**-0.4**		
LDF	**La Druitiere**	**83.03**	**342**	*e*P	**P**	**14 44 56.6**	**-0.2**		
GRR	**Gorron**	**83.39**	**342**	*e*P	**P**	**14 45 00.2**	**+1.6**		
	comp=Z,8.5nm,0.6s								
MBDF	**Montbardon**	**84.90**	**336**	*e*P	**P**	**14 45 06.0**	**-0.6**		
	comp=Z,7.0nm,0.8s								
MFF	**Saint Martin d**	**84.92**	**341**	*e*P	**P**	**14 45 05.8**	**-0.7**		
TORD	**Torodi Ar. Bea**	**115.65**	**328**	PKP	**PKPdf**	**14 51 13.5**	**-0.6**		
	comp=Z,0.1nm,0.4s,baz=322,slow=1.1,SNR=3.4								

CSEM ***22*** *14:44:24.1,38°.54N×22°.34E,h19km,MD2.6,After ATH*

ATH 22 14:44:24.7,38°.55N×22°.30E,h17km±5km,MD2.6/7,
Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KALE	**Kalithea**	**0.20**	**218**	*e*PB		Pg	14 44 29.3	-0.4
KALE				*e*SB		Sg	14 44 32.9	-0.1
KALE	**Kalithea**	**0.20**	**218**	*e*Pb		Pg	14 44 29.3	-0.4
KALE				*e*Sb		Sg	14 44 32.9	-0.1
TRIZ	**Trizonia**	**0.26**	**224**	*e*PB		Pg	14 44 29.8	-0.6
TRIZ				*e*SB		Sb	14 44 34.9	-0.1
TRIZ	**Trizonia**	**0.26**	**224**	*e*Pb		Pg	14 44 29.8	-0.6
TRIZ				*e*Sb		Sb	14 44 34.9	-0.1
EFP	**Efpalio**	**0.33**	**248**	*e*PB		Pb	14 44 32.2	0.0
EFP				*e*SB		Sb	14 44 37.8	+0.6
EFP	**Efpalio**	**0.33**	**248**	*e*Pb		Pb	14 44 32.2	0.0
EFP				*e*Sb		Sb	14 44 37.8	+0.6
LAKA	**Lakka**	**0.40**	**219**	*e*PB		Pg	14 44 32.6	-0.4
LAKA	**Lakka**	**0.40**	**219**	*e*Pb		Pg	14 44 32.6	-0.4
AGG	**Agios Georgios**	**0.47**	**3**	*e*PB		Pb	14 44 34.8	+0.1
AGG				*e*SB		Sg	14 44 40.7	-0.1
AGG	**Agios Georgios**	**0.47**	**3**	*e*Pb		Pb	14 44 34.8	+0.1
AGG				*e*Sb		Sg	14 44 40.7	-0.1
KLV	**Kalavryta, Ach**	**0.52**	**193**	*e*PN		Pg	14 44 34.6	-0.6
KLV				*e*SN		Sb	14 44 43.0	+0.2
KLV	**Kalavryta, Ach**	**0.52**	**193**	*e*Pn		Pg	14 44 34.6	-0.6
KLV				*e*Sn		Sb	14 44 43.0	+0.2
EVR	**Evrytania**	**0.53**	**314**	*e*PN		Pg	14 44 34.7	-0.8
EVR	**Evrytania**	**0.53**	**314**	*e*Pn		Pg	14 44 34.7	-0.8

IDC ***22*** *14:46:56.1±3.0,17°.87S×178°.04W,h478km±31km,*
mb3.4/13,mb1 3.6/13,mb1mx3.6/21,mbtmp3.4/13,Error
ellipse: s-maj=20.4km s-min=14.9km az=123.0
AUST ***22*** *14:46:57.3,17°.06S×178°.54W,h450km*
ISCJB ***22*** *14:47:04.2±0.6,17°.9S±0°.1×178°.27W±0°.10,h590km,*
mb3.8/13,Error ellipse: s-maj=18.1km s-min=11.4km
az=162.2

ISC 22 14:47:05.8±0.7,17°.9S±0°.2×178°.2W±0°.1,h590km,n29,
σ1s24/28,mb3.9/13,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.35**	**58**	P		P	14 48 49.3	-10
	1.1nm,0.3s,baz=197,slow=11,SNR=3.9							
AFI				S		S	14 50 14.8	-17
	0.3nm,0.3s,baz=327,slow=22,SNR=1.0							
NIUE	**Niue**	**7.96**	**100**	P		P	14 48 58.9	-5.6
	baz=8.4,SNR=6.6							
RAR	**Rarotonga**	**17.70**	**104**	P		**P**	**14 50 37.2**	**-2.0**
	0.5nm,0.3s,baz=278,slow=7.1,SNR=7.0							
MGCD	**Mangrove Creek**	**31.45**	**235**	S		S	14 57 23.7	+16
	baz=32,SNR=5.5							
QLP	**Quilpie**	**35.71**	**249**	P		**P**	**14 53 15.0**	**-1.2**
	baz=36,SNR=8.3							
STKA	**Stephens Creek**	**38.80**	**241**	P		**P**	**14 53 41.1**	**-0.2**
	2.8nm,0.6s,baz=94,slow=11,SNR=8.3							
STKA	**Stephens Creek**	**38.80**	**241**	P		**P**	**14 53 41.2**	**-0.1**
	baz=39,SNR=5.4							
JAY	**Jayapura**	**43.07**	**286**	P		**P**	**14 54 14.8**	**-0.6**
	baz=43,SNR=4.1							
BBOO	**Buckleboo**	**43.57**	**241**	P		**P**	**14 54 18.4**	**-0.5**
	baz=44,SNR=14							
WRA	**Warramunga Arr**	**44.81**	**259**	P		**P**	**14 54 26.8**	**-2.0**
	1.7nm,0.7s,baz=92,slow=6.9,SNR=51							
WRA				PcP		**PcP**	**14 55 58.2**	**+0.5**
	0.7nm,0.6s,baz=91,slow=3.5,SNR=5.1							
ASAR	**Alice Springs**	**44.97**	**254**	P		**P**	**14 54 28.8**	**-1.1**
	17nm,0.6s,baz=89,slow=7.9,SNR=457							
ASAR				PcP		**PcP**	**14 55 58.8**	**+0.5**
	0.9nm,0.6s,baz=97,slow=4.2,SNR=4.7							
ASAR				ScP		ScP	14 59 03.1	+8.0
	0.4nm,0.6s,baz=105,slow=4.6,SNR=5.3							
KDU	**Kakadu**	**47.73**	**269**	P		**P**	**14 54 49.6**	**-1.1**
	baz=47,SNR=4.6							
BNDI	**Bandanaira**	**52.41**	**278**	S		**S**	**15 02 10.7**	**+2.8**
	baz=52,SNR=11							
SWI	**Sorong**	**52.41**	**283**	P		**P**	**14 55 24.2**	**-0.7**
	baz=52,SNR=7.4							
FITZ	**Fitzroy Crossi**	**53.21**	**260**	P		**P**	**14 55 30.0**	**-0.5**
	baz=53,SNR=4.6							
MJAR	**Matsushiro Arr**	**67.99**	**323**	P		**P**	**14 57 05.8**	**-1.4**
	2.6nm,0.6s,baz=160,slow=6.3,SNR=8.8							
ASAJ	**Asahikawa**	**71.34**	**331**	P		**P**	**14 57 27.4**	**+0.6**
	8.0nm,0.6s,baz=180,slow=8.1,SNR=5.8							
QSPA	**South Pole Qui**	**72.17**	**180**	P		**P**	**14 57 32.9**	**+1.3**
	2.3nm,0.6s,baz=72,slow=3.9,SNR=19							
PETK	**Petropavlovsk-**	**73.70**	**345**	P		**P**	**14 57 39.1**	**-1.1**
	4.2nm,0.7s,baz=138,slow=9.0,SNR=5.6							
KSRS	**Korea Array**	**74.80**	**318**	P		**P**	**14 57 47.3**	**+0.5**
	0.7nm,0.5s,baz=137,slow=6.8,SNR=4.7							
NVAR	**Mina Array Bea**	**79.28**	**44**	P		**P**	**14 58 11.9**	**+0.5**
	0.3nm,0.6s,baz=221,slow=6.7,SNR=3.2							
ILAR	**Eielson Array**	**85.82**	**13**	P		**P**	**14 58 41.9**	**-1.4**
	0.6nm,0.4s,baz=224,slow=5.1,SNR=19							
TXAR	**Lajitas Array**	**85.83**	**58**	P		**P**	**14 58 45.9**	**+1.6**
	0.6nm,0.6s,baz=201,slow=6.7,SNR=6.2							
CMAR	**Chiang Mai Arr**	**89.04**	**290**	P		**P**	**14 59 00.8**	**+1.4**
	1.5nm,0.9s,baz=115,slow=2.9,SNR=8.2							
YKA	**Yellowknife Ar**	**94.23**	**25**	P		**P**	**14 59 21.8**	**-0.5**
	0.3nm,0.7s,baz=250,slow=4.4,SNR=4.6							
AKASG	**Malin Array Be**	**140.62**	**332**	PKP		**PKPdf**	**15 05 30.7**	**+1.9**
	0.2nm,0.3s,baz=47,slow=3.4,SNR=4.8							
BRTR	**Keskin Array B**	**144.89**	**315**	PKPbc		**PKPab**	**15 05 38.0**	**-0.6**
	1.2nm,0.5s,baz=107,slow=3.1,SNR=7.1							
GERES	**GERESS Array B**	**147.63**	**345**	PKPbc		**PKPbc**	**15 05 45.2**	**+0.4**
	1.3nm,0.5s,baz=29,slow=3.0,SNR=7.7							
DAVOX	**Davos/Dischmat**	**150.41**	**349**	PKPbc		**PKPbc**	**15 05 52.5**	**+0.7**
	4.7nm,0.6s,baz=136,slow=3.7,SNR=4.5							

ISCJB ***22*** *14:57:01.6±0.4,39°.42N±0°.04×111°.09W±0°.05,h8km,*
mb2.5/1,Error ellipse: s-maj=6.4km s-min=4.4km
az=145.6
NEIC ***22*** *14:57:01.0,39°.41N×111°.09W,h7km,ML2.6(SLC),After*
SLC.
IDC ***22*** *14:57:02.3±1.4,39°.35N×110°.66W,h0km,mb2.6/1,*
mb1 3.0/5,mb1mx3.0/30,mbtmp2.7/5,ML2.7/4,Error
ellipse: s-maj=16.3km s-min=10.4km az=135.0

ISC 22 14:57:01.9±0.9,39°.41N±0°.03×110°.99W±0°.04,h8km,n29,
σ1s45/27,Utah

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SRU	**San Rafael**	**0.47**	**129**	*e*Pg		**Pb**	**14 57 11.2**	**-1.3**
SRU				*e*Sg		**Sb**	**14 57 18.8**	**-0.9**
MPU	**Maple Canyon**	**0.78**	**321**	*e*Pg		**Pg**	**14 57 15.5**	**-1.5**
DAU	**Daniels Canyon**	**1.02**	**349**	*e*Pg		**Pg**	**14 57 20.5**	**-1.1**
JLU	**Jordanelle**	**1.24**	**344**	*e*P		**Pn**	**14 57 24.6**	**-1.1**
MSU	**Marysvale**	**1.29**	**226**	*e*P		Pn	14 57 24.3	-2.1
MVU	**Marysvale**	**1.31**	**227**	*e*P		Pn	14 57 24.8	-2.0
CTU	**Camp Tracy**	**1.41**	**336**	*e*P		**Pn**	**14 57 27.1**	**-0.9**
DUG	**Dugway**	**1.61**	**300**	*e*Pn		**Pn**	**14 57 29.2**	**-1.5**
PV04	**Paradox Valley**	**1.92**	**121**	*e*Pn		**Pg**	**14 57 37.8**	**-0.8**
HWUT	**Hardware Ranch**	**2.24**	**349**	*e*Pn		**Pn**	**14 57 40.1**	**+0.7**
PV01	**Paradox Valley**	**2.28**	**123**	*e*Pn		**Pb**	**14 57 42.4**	**-1.1**
ARUT	**Antelope Range**	**2.51**	**231**	*e*Pn		**Pn**	**14 57 44.1**	**+0.9**
CCUT	**Cedar City**	**2.63**	**226**	*e*Pn		**Pn**	**14 57 45.0**	**+0.2**
HVU	**Hansel Valley**

THL				*e*Sn	**Sg**	15 09 58.7	-0.3
KLV	**Kalavryta, Ach**	**0.90**	**150**	*e*PB	**Pb**	15 09 48.9	-0.4
KLV				*e*SB	**Sb**	15 09 58.7	-2.3
KLV	**Kalavryta, Ach**	**0.90**	**150**	*e*Pn	**Pb**	15 09 48.9	-0.4
KLV				*e*Sn	**Sb**	15 09 58.7	-2.3
VLS	**Valsamata**	**1.01**	**230**	*e*PB	Pg	15 09 57.0	+5.3

*THR **22** 15:16:34.1±0.3,30.˝56N×48.˝24E,h15$^{km}_{\pm 4}$, ML3.5*
*IDC **22** 15:16:36.8±23.0, 31.˝17N×48.˝31E, h0^{km}, mb3.7/3, mb1 3.7/4, mb1mx3.3/26, mbtmp3.6/4, ML3.0/1, Error ellipse: s-maj=464.2km s-min=40.6km az=11.0*
*ISCJB **22** 15:16:38.1±0.5,30.˝70N±0.˝06×48.˝38E±0.˝10, h33^{km}, mb3.7/3, Error ellipse: s-maj=13.6km s-min=6.1km az=29.8*
*CSEM **22** 15:16:38.1±0.3,30.˝63N×48.˝37E, h20^{km}, ML3.5, Error ellipse: s-maj=16.4km s-min=7.0km az=108.0*

ISC 22 15:16:38.9±1.0,**30.˝63N**±0.˝05×**48.˝37E**±0.˝06,**h35**^{km},**n22**, σ1§**41**/**24**,**mb3.7**/**3**,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UMR	**Umm Al-Rimmam**	**1.21**	**208**	*e*P	**Pn**	**15 16 59.5**	**+0.2**
UMR	**Umm Al-Rimmam**	**1.21**	**208**	*e*P	**Pn**	**15 16 59.5**	**+0.2**
MIB	**Mutribah**	**1.21**	**228**	*e*P	**Pn**	**15 16 59.3**	**-0.1**
MIB				AML	AML	15 17 21.6	
	comp=Z,474nm,0.5s						
SHGR	**Shooshtar-Gavs**	**1.52**	**14**	*e*Pg	**Pn**	**15 17 03.6**	**-0.1**
SHGR				*e*Sg	**Sn**	**15 17 25.2**	**+2.9**
SHGR				AML	AML	15 17 28.2	
	comp=E,1μm,0.6s						
SHGR	**Shooshtar-Gavs**	**1.52**	**14**	*e*Pg	**Pn**	**15 17 03.6**	**-0.1**
SHGR				*e*Sg	**Sn**	**15 17 25.2**	**+2.9**
KBD	**Kabd**	**1.56**	**202**	*e*P	**Pn**	**15 17 05.7**	**+1.6**
KBD				AML	AML	15 17 30.1	
	comp=Z,74nm,0.5s						
NAY	**Al-Naaiem**	**1.68**	**216**	*e*P	**Pn**	**15 17 07.2**	**+1.4**
RDF	**Al-Radifah**	**1.84**	**203**	*e*P	**Pn**	**15 17 09.3**	**+1.4**
RDF				AML	AML	15 17 37.0	
	comp=E,81nm,0.5s						
QRN	**Al-Qurain**	**1.92**	**192**	*e*P	**Pn**	**15 17 10.5**	**+1.5**
KHMZ	**Khomeyn**	**3.38**	**23**	*e*Pn	**Pn**	**15 17 30.1**	**+0.6**
KHMZ	**Khomeyn**	**3.38**	**23**	*e*Pn	**Pn**	**15 17 30.1**	**+0.6**
BHD	**Baghdad**	**4.30**	**309**	*ex*	**Pn**	**15 17 43.7**	**+1.9**
BHD				*ex*	x	15 18 40.0	
NASN	**Na'in**	**4.36**	**59**	*e*Pn	**Pn**	**15 17 43.9**	**+1.0**
NASN	**Na'in**	**4.36**	**59**	*e*Pn	**Pn**	**15 17 43.9**	**+1.0**
GHVR	**GHOM**	**4.57**	**32**	*e*Pn	**Pn**	**15 17 46.1**	**+0.6**
GHVR				AML	AML	15 19 10.0	
	comp=E,26nm,0.5s						
GHVR				AML	AML	15 19 17.4	
	comp=N,23nm,0.8s						
GHVR	**GHOM**	**4.57**	**32**	*e*Pn	**Pn**	**15 17 46.2**	**+0.6**
GHIR	**Ghir-Karzin**	**4.65**	**119**	*e*Pn	**Pn**	**15 17 47.1**	**+0.3**
GHIR	**Ghir-Karzin**	**4.65**	**119**	*e*Pn	**Pn**	**15 17 47.1**	**+0.3**
BRTR	**Keskin Array B**	**15.07**	**311**	Pn	**Pn**	**15 20 07.5**	**-1.9**
	comp=N,0.1nm,0.3s,baz=125,slow=14,SNR=2.6						
MKAR	**Makanchi Array**	**30.71**	**49**	P	**P**	**15 22 50.6**	**+0.1**
	comp=N,0.2nm,0.3s,baz=245,slow=8.8,SNR=3.8						
FINES	**FINESS Array B**	**34.13**	**341**	P	**P**	**15 23 17.8**	**-2.4**
	comp=N,1.2nm,0.6s,baz=141,slow=9.0,SNR=6.7						
ZALV	**Zalesovo Beam**	**35.04**	**38**	P	**P**	**15 23 27.8**	**-0.4**
	comp=N,0.5nm,0.5s,baz=231,slow=9.5,SNR=3.0						

*AUST **22** 15:18:16.0±0.0, 17.˝19S×174.˝12W, h167^{km}, Error ellipse: s-maj=1.2km s-min=1.0km az=264.0*
*MOS **22** 15:18:16.2±1.3, 16.˝93S×174.˝55W, h164^{km}, mb4.7/18, Error ellipse: s-maj=10.9km s-min=8.7km az=140.6*
*ISCJB **22** 15:18:19.0±0.1, 17.˝18S±0.˝04×174.˝46W±0.˝03, h200^{km}, mb4.7/100, Error ellipse: s-maj=5.8km s-min=3.0km az=147.1*
*NEIC **22** 15:18:19.1±0.2, 17.˝23S×174.˝45W, mb4.7/60, Error ellipse: s-maj=7.1km s-min=4.0km az=149.0*
*IDC **22** 15:18:19.2±0.4, 17.˝25S×174.˝47W, h190$^{km}_{\pm 4}$, mb4.4/26, mb1 4.5/28, mb1mx4.5/32, mbtmp4.4/28, MS3.6/4, Ms1 3.5/4, ms1mx3.2/30, Error ellipse: s-maj=11.5km s-min=7.1km az=140.0*
*BJI **22** 15:18:20.7, 17.˝01S×173.˝87W, h223^{km}, mB5.2/20, mb4.9/33*
*GCMT **22** 15:18:22.1±0.3, 17.˝17S×174.˝14W, h196$^{km}_{\pm 2}$, MW5.1, Moment Tensor Solution. s34,c43; s81,c121; Moment tensor: Scale 10^{16}Nm; M_{rr}2.32±.14; $M_{\theta\theta}$-3.87±.17; $M_{\phi\phi}$1.54±.17; $M_{r\theta}$1.35±.14; $M_{\theta\phi}$3.58±.14; $M_{r\phi}$2.89±.13; Best double couple: $M_0$5.90000×10^{16} NP1:ϕ$_s$79.00000°, δ62.00000°, λ31.00000°. NP2:ϕ$_s$334.00000°, δ63.00000°, λ148.00000°. Principal axes: T 6.0500, Plg41.0000°, Azm296.0000°; N -0.4100, Plg49.0000°, Azm117.0000°; P -5.6500, Plg1.0000°, Azm27.0000°; Data Used: II IU IC G CN.*
*DJA **22** 15:19:23.6±6.5, 18.˝3S±17.˝17W±5.˝9, h619$^{km}_{\pm 45}$, M4.8/18, mB5.2/3, mb4.9/18, Mw(mB)4.5/3*

ISC 22 15:18:20.9±0.3,**17.˝22S**±0.˝05×**174.˝32W**±0.˝05,
h209$^{km}_{\pm 2}$**km**,**h210**^{km}:**pP-P**,**n692**,σ1§**19**/766,**mb4.7**/100,
157C-146D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.11**	**37**	*e*Pn	Pn	15 19 17.1	-7.3
AFI				*e*S	S	15 19 59.1	-15
AFI				S	S	15 20 00.7	-13
AFI	**Afiamalu**	**4.11**	**37**	P	Pn	15 19 17.2	-7.3
	460nm,0.3s,baz=22,slow=1.2,SNR=788						
AFI				S	S	15 20 00.7	-13
	527nm,0.3s,baz=223,slow=22,SNR=15						
AFI				LR	LR	15 20 23.9	
	comp=Z,398nm,18.7s,baz=292,slow=30						
NIUE	**Niue**	**4.57**	**115**	P	Pn	15 19 25.0	-5.0
	baz=4.4,SNR=181						
MSVF	**Nonsavu**	**7.30**	**265**	*e*P	**Pn**	**15 20 06.5**	**+1.4**
MSVF				pmax	pmax		
	comp=Z,113nm,1.0s						
MSVF	**Nonsavu**	**7.30**	**265**	*e*Pn	**Pn**	**15 20 06.5**	**+1.4**
	comp=Z,113nm,1.0s						
FUNA	**Funafuti**	**10.70**	**323**	*e*Pn	**Pn**	**15 20 48.3**	**-0.8**
	comp=Z,940nm,1.6s						
RAR	**Rarotonga**	**14.30**	**108**	*e*Pn	**P**	**15 21 36.6**	**+1.1**
	comp=Z,229nm,1.3s						
RAR				S	**S**	**15 24 14.3**	**+1.5**
RAR	**Rarotonga**	**14.30**	**108**	P	**P**	**15 21 36.7**	**+1.2**
	comp=Z,3.6nm,0.3s,baz=255,slow=7.3,SNR=32						
RAR				S	**S**	**15 24 14.3**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=230,slow=11,SNR=1.2						
DZM	**Mont Dzumac**	**18.74**	**252**	P	**P**	**15 22 23.4**	**-0.9**
	comp=Z,59nm,1.4s						
DZM	**Mont Dzumac**	**18.74**	**252**	P	**P**	**15 22 23.5**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=67,slow=15,SNR=6.3						
PUZ	**Puketiti**	**21.77**	**196**	PN	**P**	**15 22 55.4**	**-0.7**
PUZ				S	**S**	**15 26 44.5**	**+2.4**
MKAZ	**Moumakai**	**21.88**	**203**	PN	**P**	**15 22 57.5**	**+0.4**
CNGZ	**Carnagh Statio**	**22.17**	**196**	PN	**P**	**15 23 01.3**	**+1.4**
MWZ	**Matawai**	**22.22**	**197**	PN	**P**	**15 23 00.0**	**-0.3**
MWZ				*e*SN	**S**	**15 26 47.8**	**-1.4**
URZ	**Urewera**	**22.27**	**198**	*e*P	**P**	**15 22 58.5**	**-2.2**
	comp=Z,130nm,0.8s						
URZ				S	**S**	**15 26 49.0**	**-0.9**
URZ	**Urewera**	**22.27**	**198**	PN	**P**	**15 22 58.8**	**-1.9**
URZ				SN	**S**	**15 26 49.2**	**-0.7**
URZ	**Urewera**	**22.27**	**198**	P	**P**	**15 22 59.1**	**-1.6**
	comp=Z,71nm,0.5s,baz=313,slow=2.3,SNR=92						
URZ				S	**S**	**15 26 49.0**	**-0.9**
	comp=Z,11nm,0.9s,baz=340,slow=23,SNR=2.4						
BKZ	**Black Stump Fm**	**23.29**	**198**	PN	**P**	**15 23 08.1**	**-1.9**
PAE	**Paea**	**23.61**	**95**	*e*pP	pP	15 23 45.5	-6.2
	comp=Z,16nm,1.3s						
PPT2	**Papeete2**	**23.61**	**95**	*e*pP	pP	15 23 46.1	-5.8
	comp=Z,72nm,1.2s						
PPT	**Papeete**	**23.62**	**95**	LR	LR	15 30 19.1	
	comp=Z,206nm,19.1s,baz=264,slow=30						
KAHZ	**Kahuranaki**	**23.76**	**197**	PN	**P**	**15 23 15.5**	**+1.2**
TIAR	**Tiarei**	**23.84**	**95**	*e*pP	pP	15 23 47.7	-6.5
	comp=Z,90nm,1.0s						
TVO	**Taravao**	**23.91**	**95**	*e*pP	pP	15 23 48.7	-6.4
	comp=Z,178nm,1.3s						
PXZ	**Pawanui**	**23.98**	**197**	PN	**P**	**15 23 17.1**	**+0.8**
TBI	**Tubuai**	**24.09**	**109**	*e*pP	pP	15 23 50.8	-6.0
	comp=Z,187nm,1.4s						
BFZ	**Birch Farm**	**24.76**	**197**	PN	**P**	**15 23 22.6**	**-0.7**
QRZ	**Quartz Range**	**26.12**	**203**	PN	**P**	**15 23 35.7**	**+0.2**
HNR	**Honiara**	**26.18**	**284**	*e*P	**P**	**15 23 34.5**	**-1.9**
	comp=Z,137nm,1.1s						
THZ	**Tophouse**	**26.80**	**202**	PN	**P**	**15 23 40.9**	**-0.8**
KHZ	**Kahutara**	**27.17**	**200**	*e*P	**P**	**15 23 42.3**	**-2.6**
	comp=Z,27nm,0.8s						
LTZ	**Lake Taylor**	**27.93**	**201**	*e*PN	**P**	**15 23 49.6**	**-2.0**
RPZ	**Rata Peaks**	**29.17**	**202**	*e*P	**P**	**15 24 01.0**	**-1.6**
RPZ	**Rata Peaks**	**29.17**	**202**	P	**P**	**15 24 01.5**	**-1.1**
	comp=Z,6.1nm,0.7s,baz=12,slow=2.1,SNR=9.4						
EIDS	**Eidsvold**	**33.16**	**250**	P	**P**	**15 24 37.1**	**-0.7**
	baz=33,SNR=6.5						
ARMA	**Armidale**	**33.66**	**241**	P	**P**	**15 24 42.0**	**-0.2**
	baz=34,SNR=7.3						
RMQ	**Roma**	**35.38**	**248**	P	**P**	**15 24 56.2**	**-0.6**
	baz=36,SNR=7.2						
CTA	**Charters Tower**	**37.40**	**259**	P	**P**	**15 25 12.6**	**-1.5**
CTA	**Charters Tower**	**37.40**	**259**	P	**P**	**15 25 12.6**	**-1.5**
	comp=Z,25nm,0.8s,baz=93,slow=10,SNR=22						
CTAO	**Charters Tower**	**37.40**	**259**	⇑*i*P	**P**	**15 25 11.8**	**-2.2**
CTAO				pmax	pmax		
	comp=Z,29nm,0.9s						
CTAO	**Charters Tower**	**37.40**	**259**	⇑*i*P	**P**	**15 25 11.8**	**-2.2**
	comp=Z,29nm,0.9s						
PMG	**Port Moresby**	**38.22**	**277**	*e*P	**P**	**15 25 20.2**	**-0.7**
	comp=Z,30nm,0.8s						
PMG	**Port Moresby**	**38.22**	**277**	P	**P**	**15 25 20.0**	**-0.9**
	comp=Z,42nm,0.9s						
PMG	**Port Moresby**	**38.22**	**277**	P	**P**	**15 25 21.1**	**+0.2**
	comp=Z,27nm,0.7s,baz=84,slow=6.8,SNR=13						
CMSA	**Cobar Meteorol**	**38.88**	**241**	P	**P**	**15 25 25.6**	**-0.6**
	baz=39,SNR=38						
QLP	**Quilpie**	**39.42**	**249**	P	**P**	**15 25 29.8**	**-0.9**
	baz=40,SNR=13						
TOO	**Toolangi**	**40.64**	**232**	P	**P**	**15 25 40.9**	**+0.3**
	baz=41,SNR=7.5						
COEN	**Coen**	**41.01**	**268**	*e*P	**P**	**15 25 42.6**	**-1.3**
	comp=Z,199nm,1.2s						
COEN	**Coen**	**41.01**	**268**	P	**P**	**15 25 43.4**	**-0.5**
	baz=41,SNR=12						
STKA	**Stephens Creek**	**42.38**	**241**	*e*P	**P**	**15 25 54.0**	**-0.7**
	comp=Z,12nm,0.9s						
STKA				PcP	**PcP**	**15 27 45.7**	**+1.6**
STKA	**Stephens Creek**	**42.38**	**241**	P	**P**	**15 25 54.8**	**0.0**
	comp=Z,49nm,0.9s,baz=88,slow=9.7,SNR=66						
STKA				PcP	**PcP**	**15 27 45.7**	**+1.6**
	comp=Z,6.2nm,0.8s,baz=351,slow=7.2,SNR=3.2						
STKA	**Stephens Creek**	**42.38**	**241**	P	**P**	**15 25 54.6**	**-0.1**
	baz=42,SNR=23						
QIS	**Mount Isa**	**43.61**	**258**	P	**P**	**15 26 03.4**	**-1.5**
	baz=44,SNR=7.1						
JAY	**Jayapura**	**46.50**	**283**	P	**P**	**15 26 28.3**	**+0.6**
	baz=47,SNR=8.3						
BBOO	**Buckleboo**	**47.15**	**241**	*e*P	**P**	**15 26 31.8**	**-0.6**
	comp=Z,381nm,1.0s						
BBOO	**Buckleboo**	**47.15**	**241**	P	**P**	**15 26 32.0**	**-0.4**
	baz=47,SNR=9.3						
WRAB	**Tennant Creek**	**48.58**	**258**	*e*P	**P**	**15 26 41.7**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,22nm,0.6s						
WRAB	**Tennant Creek**	**48.58**	**258**	*e*P	**P**	**15 26 41.7**	**-1.9**
	comp=Z,22nm,0.6s						
WRA	**Warramunga Arr**	**48.59**	**258**	P	**P**	**15 26 41.8**	**-1.8**
WRA				PcP	**PcP**	**15 28 06.6**	**+0.6**
WRA				S	S	15 33 22.7	-6.7
WRA	**Warramunga Arr**	**48.59**	**258**	P	**P**	**15 26 41.8**	**-1.8**
	comp=Z,21nm,0.6s,baz=94,slow=7.1,SNR=579						
WRA				PcP	**PcP**	**15 28 06.6**	**+0.6**
	comp=Z,8.0nm,1.0s,baz=94,slow=4.3,SNR=7.4						
WRA				S	S	15 33 22.7	-6.7
	comp=Z,18nm,1.0s,baz=212,slow=34,SNR=3.2						
AS31	**Alice Springs**	**48.72**	**253**	*e*P	**P**	**15 26 43.5**	**-1.2**
ASAR	**Alice Springs**	**48.73**	**253**	P	**P**	**15 26 43.7**	**-1.0**
ASAR				PcP	**PcP**	**15 28 03.8**	**-2.7**
ASAR				S	**S**	**15 33 27.6**	**-3.7**
ASAR	**Alice Springs**	**48.73**	**253**	P	**P**	**15 26 43.7**	**-1.0**
	comp=Z,262nm,0.8s,baz=88,slow=8.6,SNR=2265						
ASAR				PcP	**PcP**	**15 28 03.8**	**-2.7**
	comp=Z,6.5nm,0.7s,baz=92,slow=6.5,SNR=3.3						
ASAR				S	**S**	**15 33 27.6**	**-3.7**
	comp=Z,5.1nm,0.9s,baz=89,slow=15,SNR=24						
KDU	**Kakadu**	**51.47**	**267**	P	**P**	**15 27 04.7**	**-0.6**
	baz=52,SNR=7.6						
MTN	**Manton Dam**	**52.72**	**267**	P	**P**	**15 27 14.2**	**-0.3**
	baz=53,SNR=4.8						
FAKI	**Fak Fak**	**54.30**	**279**	P	**P**	**15 27 25.1**	**-0.9**
	comp=Z,58nm,1.3s,comp=Z,715nm						
FAKI	**Fak Fak**	**54.30**	**279**	P	**P**	**15 27 25.7**	**-0.3**
	baz=54,SNR=6.5						
SWI	**Sorong**	**55.91**	**281**	P	**P**	**15 27 37.7**	**+0.1**
	baz=56,SNR=54						
PALU	**Palau**	**56.18**	**291**	P	**P**	**15 27 40.3**	**+0.9**
	baz=56,SNR=5.8						
FITZ	**Fitzroy Crossi**	**56.98**	**259**	*e*P	**P**	**15 27 44.2**	**-0.9**
	comp=Z,11nm,1.0s						
FITZ	**Fitzroy Crossi**	**56.98**	**259**	P	**P**	**15 27 44.4**	**-0.6**
	comp=Z,6.6nm,0.7s,baz=143,slow=6.2,SNR=12						
FITZ	**Fitzroy Crossi**	**56.98**	**259**	P	**P**	**15 27 44.6**	**-0.4**
	baz=57,SNR=6.3						
MSAI	**Masohi**	**57.30**	**277**	P	P	15 27 52.9	+5.6
	comp=Z,19nm,0.7s,comp=Z,541nm						
AAI	**Ambon**	**57.89**	**277**	P	**P**	**15 27 51.4**	**-0.1**
	comp=Z,128nm,0.9s,comp=Z,1μm						
AAI	**Ambon**	**57.89**	**277**	P	**P**	**15 27 51.2**	**-0.2**
	baz=58,SNR=7.5						
VNDA	**Vanda**	**61.49**	**186**	P	**P**	**15 28 16.9**	**+1.9**
VNDA				pP	**PcP**	**15 28 57.1**	**+2.4**
VNDA	**Vanda**	**61.49**	**186**	P	**P**	**15 28 16.9**	**+1.9**
	comp=Z,3.1nm,1.1s,baz=22,slow=4.8,SNR=6.9						
VNDA				pP	**PcP**	**15 28 57.1**	**+2.4**
	comp=Z,2.7nm,1.0s,baz=358,slow=8.3,SNR=3.0						
MBWA	**Marble Bar**	**62.02**	**255**	*e*P	**P**	**15 28 18.5**	**-0.9**
	comp=Z,42nm,1.1s						
MEEK	**Meekatharra**	**62.32**	**249**	P	**P**	**15 28 20.6**	**-0.8**
	baz=62,SNR=15						
KLBR	**Kellerberrin**	**62.62**	**243**	P	**P**	**15 28 22.9**	**-0.3**
	baz=63,SNR=10						
BLDU	**Ballidu**	**63.59**	**244**	P	**P**	**15 28 29.6**	**-0.1**
	baz=64,SNR=8.0						
LUWI	**Luwuk**	**63.86**	**277**	P	**P**	**15 28 32.6**	**+1.0**
	baz=64,SNR=5.9						
BKSI	**Bulukumba**	**65.11**	**272**	P	**P**	**15 28 39.5**	**-0.2**
	comp=Z,26nm,1.6s						
KAPI	**Kappang**	**65.55**	**272**	*e*P	**P**	**15 28 41.3**	**-1.3**
KAPI	**Kappang**	**65.55**	**272**	P	**P**	**15 28 42.0**	**-0.6**
	comp=Z,48nm,1.0s						
KAPI	**Kappang**	**65.55**	**272**	P	**P**	**15 28 41.1**	**-1.5**
	comp=Z,16nm,0.5s,baz=117,slow=4.2,SNR=12						
PCI	**Palu**	**66.69**	**277**	P	P	15 28 53.3	+3.5
	baz=67,SNR=4.0						
KHKI	**Kahang-Kahang**	**68.60**	**268**	P	**P**	**15 29 01.2**	**-0.5**
	comp=Z,64nm,1.6s						
MJAR	**Matsushiro Arr**	**69.76**	**321**	P	**P**	**15 29 08.0**	**-0.4**
MJAR	**Matsushiro Arr**	**69.76**	**321**	P	**P**	**15 29 08.0**	**-0.4**
	comp=Z,13nm,0.9s,baz=166,slow=5.8,SNR=21						
MAJO	**Matsushiro**	**69.77**	**321**	*e*P	**P**	**15 29 08.2**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,16nm,0.9s						
MAJO	**Matsushiro**	**69.77**	**321**	*e*P	**P**	**15 29 08.2**	**-0.3**
	comp=Z,16nm,0.9s						
MAT	**Matsushiro**	**69.77**	**321**	P	**P**	**15 29 08.0**	**-0.4**
KMMI	**Kalianget**	**70.51**	**268**	P	**P**	**15 29 14.4**	**+0.9**
	comp=Z,110nm,1.1s						
BLJI	**Banyuglugur**	**70.68**	**268**	P	**P**	**15 29 14.5**	**0.0**
	comp=Z,168nm,0.9s						
PWJI	**Pagerwojo**	**72.32**	**267**	P	**P**	**15 29 24.5**	**+0.2**
UGM	**Wanagama**	**73.57**	**267**	P	**P**	**15 29 32.1**	**+0.4**
	baz=74,SNR=4.6						
PEA0B	**Petropavlovsk-**	**74.09**	**343**	*e*P	**P**	**15 29 33.7**	**0.0**
PETK	**Petropavlovsk-**	**74.09**	**343**	P	**P**	**15 29 33.8**	**0.0**
PETK	**Petropavlovsk-**	**74.09**	**343**	P	**P**	**15 29 33.8**	**0.0**
PETK	**Petropavlovsk-**	**74.09**	**343**	P	**P**	**15 29 33.7**	**0.0**
	comp=Z,26nm,0.7s,baz=140,slow=9.7,SNR=17						
BFSC	**Mount Baldy Ra**	**74.32**	**46**	⇓P	**P**	**15 29 35.9**	**+0.2**
	baz=75						
MONP	**Monument Peak**	**74.44**	**48**	⇓P	**P**	**15 29 37.2**	**+0.7**
	baz=75						
EDW2	**Edwards Air Fo**	**74.45**	**45**	⇑P	**P**	**15 29 37.1**	**+0.7**
	baz=75						
ISA	**Isabella**	**74.57**	**44**	*e*P	**P**	**15 29 37.6**	**+0.6**
ISA				pmax	pmax		
	comp=Z,11nm,1.3s						
ISA	**Isabella**	**74.57**	**44**	*e*P	**P**	**15 29 37.6**	**+0.6**
	comp=Z,11nm,1.3s						
ISA	**Isabella**	**74.57**	**44**	⇑P	**P**	**15 29 37.5**	**+0.6**
	baz=75						
PFO	**Pinyon Flat Ob**	**74.80**	**47**	P	**P**	**15 29 37.7**	**-0.7**
PFO				pP	**pP**	**15 30 25.3**	**-3.0**
PFO	**Pinyon Flat Ob**	**74.80**	**47**	P	**P**	**15 29 37.7**	**-0.7**
	comp=Z,1.4nm,0.5s,baz=319,slow=2.0,SNR=2.6						
PFO				pP	**pP**	**15 30 25.3**	**-3.0**
	comp=Z,2.8nm,0.8s,baz=264,slow=7.2,SNR=3.3						
WDC	**Whiskeytown Da**	**74.95**	**38**	*e*P	**P**	**15 29 39.1**	**+0.1**
WDC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WDC	**Whiskeytown Da**	**74.95**	**38**	*e*P	**P**	**15 29 39.1**	**+0.1**
	comp=Z,4.3nm,0.9s						
LRMC	**Laurel Mountai**	**74.99**	**45**	⇑P	**P**	**15 29 40.1**	**+0.6**
	baz=75						
CWC	**Cottonwood Cre**	**75.27**	**44**	⇓P	**P**	**15 29 41.8**	**+0.7**
	baz=76						
BELC	**Belle Mtn. Jos**	**75.34**	**47**	⇑P	**P**	**15 29 42.3**	**+0.8**
	baz=76						
MPMC	**Manual Prospec**	**75.45**	**44**	⇑P	**P**	**15 29 43.3**	**+1.1**
	baz=76						
GSC	**Goldstone**	**75.49**	**45**	*e*P	**P**	**15 29 43.2**	**+0.9**
GSC				pmax	pmax		
	comp=Z,11nm,1.2s						
GSC	**Goldstone**	**75.49**	**45**	*e*P	**P**	**15 29 43.2**	**+0.9**
	comp=Z,11nm,1.2s						
GSC	**Goldstone**	**75.49**	**45**	⇓P	**P**	**15 29 43.4**	**+1.1**
	baz=76						
BC3	**Big Chuckawall**	**75.53**	**48**	⇓P	**P**	**15 29 43.2**	**+0.6**
	baz=76						
HEC	**Hector,Ludlow**	**75.56**	**46**	⇓P	**P**	**15 29 43.5**	**+0.8**
	baz=76						
YBH	**Yreka Blue Hor**	**75.58**	**37**	*e*P	**P**	**15 29 43.7**	**+1.0**
	comp=Z,12nm,0.8s						
YBH	**Yreka Blue Hor**	**75.58**	**37**	P	**P**	**15 29 43.8**	**+1.2**
	comp=Z,14nm,0.8s,baz=147,slow=1.2,SNR=25						
BEKR	**Beckworth**	**75.83**	**40**	*e*P	**P**	**15 29 44.2**	**0.0**
	comp=Z,4.3nm,1.0s						
GMRC	**Granite Mounta**	**75.99**	**46**	⇓P	**P**	**15 29 46.1**	**+0.9**
	baz=76						
HUMO	**Hull Mountain**	**75.99**	**36**	*e*P	**P**	**15 29 45.6**	**+0.7**
	comp=Z,11nm,1.0s						
IRM	**Iron Mountain**	**76.02**	**47**	⇓P	**P**	**15 29 45.9**	**+0.7**
	baz=76						
GRAC	**Grapevine Rang**	**76.06**	**44**	⇓P	**P**	**15 29 46.3**	**+0.9**
	baz=76						
TUQ	**Turquoise Moun**	**76.17**	**46**	⇓P	**P**	**15 29 46.9**	**+0.8**
	baz=76						
NVAR	**Mina Array Bea**	**76.27**	**42**	P	**P**	**15 29 47.6**	**+0.8**
NVAR				pP	**pP**	**15 30 34.3**	**-2.5**
NVAR	**Mina Array Bea**	**76.27**	**42**	P	**P**	**15 29 47.6**	**+0.8**
	comp=Z,5.8nm,0.8s,baz=227,slow=9.4,SNR=35						
NVAR				pP	**pP**	**15 30 34.3**	**-2.5**
	comp=Z,3.4nm,0.9s,baz=228,slow=9.1,SNR=4.6						
NV11	**Mina Array Sit**	**76.36**	**42**	*e*P	**P**	**15 29 47.9**	**+0.7**
KSM	**Kuching**	**76.48**	**276**	P	**P**	**15 29 49.3**	**+1.1**
	baz=77,SNR=21						
LDFC	**Landfair**	**76.53**	**46**	*e*P	**P**	**15 29 49.4**	**+1.2**
	comp=Z,26nm,1.3s						
214A	**Organ Pipe Nat**	**76.55**	**50**	⇓P	**P**	**15 29 49.1**	**+0.8**
	baz=77						
LEM	**Lembang**	**76.64**	**267**	P	**P**	**15 29 50.2**	**+0.9**
	baz=77,SNR=7.2						
PDMCI	**Parker Dam,Lak**	**76.80**	**48**	⇓P	**P**	**15 29 50.3**	**+0.7**
	baz=77						
KSRS	**Korea Array**	**76.84**	**316**	P	**P**	**15 29 51.2**	**+1.6**
	comp=Z,14nm,0.9s,baz=131,slow=6.2,SNR=33						
KSAR	**Wonju Array Be**	**76.86**	**316**	P	**P**	**15 29 51.2**	**+1.4**
KDAK	**Kodiak Island**	**76.87**	**12**	P	**P**	**15 29 49.8**	**+0.4**
KDAK	**Kodiak Island**	**76.87**	**12**	P	**P**	**15 29 49.8**	**+0.4**
	comp=Z,13nm,1.0s,baz=308,slow=2.3,SNR=4.8						
MOD	**Modoc**	**77.09**	**38**	*e*P	**P**	**15 29 51.8**	**+0.6**
	comp=Z,21nm,1.1s						
Z14A	**Wintersburg**	**77.17**	**49**	⇓P	**P**	**15 29 51.9**	**+0.3**
	baz=77						
W13A	**Hualapai Mount**	**77.39**	**47**	⇑P	**P**	**15 29 53.8**	**+0.6**
	baz=78						
Y14A	**Wickenburg**	**77.42**	**48**	⇑P	**P**	**15 29 53.6**	**+0.5**
	baz=78						
**R

baz=82
DIV Divide 81.36 14 eP P 15 30 13.8 0.0
comp=Z,43nm,0.9s
S18A Hurst Farm, Bl 81.41 46 ⇓P P 15 30 15.9 +1.1
baz=82
X21A Alamocita Cree 81.44 50 ⇓P P 15 30 16.1 +1.0
baz=82
BMRM Bremner River 81.49 14 eP P 15 30 14.4 0.0
comp=Z,40nm,1.2s
L14A Malta 81.49 41 ⇓P P 15 30 16.1 +1.1
baz=82
Z22A Elephant Butte 81.51 51 ⇓P P 15 30 16.5 +1.2
baz=82,SNR=8.6
V20A Brimhall 81.58 49 ⇑P P 15 30 16.5 +0.8
baz=82
HLID Hailey 81.59 39 eP P 15 30 16.3 +0.8
comp=Z,15nm,1.4s
HLID Hailey 81.59 39 ⇓P P 15 30 16.2 +0.7
baz=82,SNR=9.7
J13A Cove Ranch, Pi 81.64 40 ⇑P P 15 30 16.9 +1.1
baz=82,SNR=6.9
SRU San Rafael 81.75 45 eP P 15 30 17.3 +0.8
SRU San Rafael 81.75 45 eP P 15 30 17.3 +0.8
SRU San Rafael 81.75 45 ⇑P P 15 30 17.4 +0.8
baz=82,SNR=7.5
P17A Butcher Ranch, 81.79 44 ⇑P P 15 30 18.1 +1.4
baz=82
K14A Jones Ranch, D 81.80 41 ⇓P P 15 30 18.0 +1.4
baz=82
U20A Newcomb 81.81 48 ⇓P P 15 30 18.1 +1.2
baz=82
Y22A Socorro 81.81 51 ⇓P P 15 30 18.0 +1.1
baz=82
DL2 Dalian 81.82 315 P P 15 30 17.8 +1.2
DL2 pmax pmax
comp=Z,20nm,0.7s
324A Moseley Ranch, 81.83 54 ⇑P P 15 30 17.7 +0.7
baz=82,SNR=7.3
W21A San Fidel 81.85 50 ⇓P P 15 30 18.2 +1.1
baz=82
H12A Diamond D Ranc 81.87 38 ⇓P P 15 30 17.1 +0.1
baz=82,SNR=8.4
LAZ Ladron 81.90 50 eP P 15 30 18.9 +1.5
comp=Z,11nm,1.7s
CN2 Changchun 81.91 321 eP P 15 30 18.1 +1.1
CN2 esP sP 15 31 30.6 +0.9
CN2 eS S 15 40 03.5 -9.4
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,200nm,5.0s
DAU Daniels Canyon 81.92 43 eP P 15 30 18.7 +1.2
DAU Daniels Canyon 81.92 43 eP P 15 30 18.7 +1.2
425A Indio Mountain 81.93 54 ⇓P P 15 30 18.6 +1.0
baz=82,SNR=15
I13A Wildhorse Cree 81.96 39 ⇓P P 15 30 18.0 +0.5
baz=82
J14A Carey 82.01 40 ⇑P P 15 30 18.9 +1.2
baz=82,SNR=10.0
L15A Malad City 82.01 42 ⇓P P 15 30 18.3 +0.6
baz=82,SNR=6.6
X22A Bernardo 82.04 50 ⇑P P 15 30 18.9 +0.8
baz=82
Z23A Rita Site, Whi 82.06 52 ⇓P P 15 30 19.0 +0.8
baz=82
224A Cornudas Mount 82.07 53 ⇑P P 15 30 19.4 +1.1
baz=82,SNR=11
626A Big Bend Ranch 82.08 56 ⇑P P 15 30 19.3 +1.0
baz=82,SNR=11
BNM Barren Site 82.16 51 eP P 15 30 20.1 +1.3
comp=Z,5.6nm,1.0s
V21A Milan 82.18 49 ⇑P P 15 30 19.9 +1.1
baz=82,SNR=6.8
325A Bean Ranch, Si 82.19 54 ⇑P P 15 30 19.7 +0.8
baz=82,SNR=17
MVCO Mesa Verde 82.22 47 ⇑P P 15 30 19.9 +0.8
baz=82
LPM Los Pinos Moun 82.23 51 eP P 15 30 20.5 +1.4
comp=Z,11nm,1.1s
K15A Arbon 82.28 41 ⇑P P 15 30 19.9 +0.8
baz=82
F12A Elk City 82.31 37 ⇑P P 15 30 19.3 +0.1
baz=83,SNR=28
526A Mary Lane Ranc 82.32 55 ⇓P P 15 30 20.6 +1.0
baz=83,SNR=10
HWUT Hardware Ranch 82.33 42 eP P 15 30 19.6 +0.1
comp=Z,309nm,0.9s
TXAR Lajitas Array 82.36 56 P P 15 30 21.5 +1.8
TXAR pP pP 15 31 07.4 -3.1
TXAR Lajitas Array 82.36 56 P P 15 30 21.5 +1.8
comp=Z,4.1nm,0.9s,baz=212,slow=6.9,SNR=27
TXAR pP pP 15 31 07.4 -3.1
comp=Z,3.2nm,1.0s,baz=226,slow=5.0,SNR=4.1
I14A Mackay 82.37 40 ⇓P P 15 30 20.5 +0.9
baz=83
124A Stringfield Ra 82.40 53 ⇑P P 15 30 21.2 +1.1
baz=83,SNR=5.1
U21A Nageezi 82.45 48 ⇓P P 15 30 21.5 +1.2
baz=83,SNR=37
N17A Moffit Pass 82.47 43 ⇑P P 15 30 20.8 +0.5
baz=83,SNR=5.6
Y23A Lovelace Mesa, 82.49 51 ⇓P P 15 30 21.0 +0.5
baz=83
PV04 Paradox Valley 82.50 46 eP P 15 30 21.5 +1.0
Q19A Hogan Spring (82.53 45 ⇓P P 15 30 21.4 +0.9
baz=83,SNR=7.6
G13A Cobalt 82.54 38 ⇑P P 15 30 20.9 +0.5
baz=83
TRF Thorofare Moun 82.56 11 eP P 15 30 18.8 -1.4
comp=Z,23nm,0.8s
PV01 Paradox Valley 82.61 46 eP P 15 30 21.8 +0.7
S20A Disappointment 82.61 47 ⇑P P 15 30 21.9 +0.8
baz=83,SNR=12
225A Deer Hill, Car 82.62 53 ⇓P P 15 30 22.2 +1.0
baz=83,SNR=6.1
426A McDonald Obser 82.63 55 ⇓P P 15 30 22.5 +1.3
baz=83,SNR=12
627A Terlingua Ranc 82.63 56 ⇑P P 15 30 22.5 +1.3
baz=83,SNR=12
L16A Fish Haven 82.63 42 ⇑P P 15 30 21.4 +0.4
baz=83,SNR=5.5
ANMO Albuquerque 82.64 50 eP P 15 30 22.1 +0.8
comp=Z,15nm,1.3s
ANMO pP pP 15 31 09.1 -2.9
ANMO Albuquerque 82.64 50 P P 15 30 22.6 +1.3
comp=Z,7.7nm,0.9s,baz=230,slow=7.3,SNR=12
ANMO pP pP 15 31 09.1 -2.9
comp=Z,1.1nm,0.6s,baz=208,slow=5.4,SNR=1.7
TNA Tin City 82.67 3 eP P 15 30 21.9 +1.5
comp=Z,36nm,1.4s
X23A Hourglass Bar 82.68 51 ⇑P P 15 30 22.3 +0.9
baz=83
Z24A Sheeppen Canyo 82.74 52 ⇓P P 15 30 22.2 +0.5
baz=83
SKAG Skagway 82.74 19 eP P 15 30 22.1 +1.3
comp=Z,8.9nm,0.8s
V22A San Miguel Ran 82.75 49 ⇓P P 15 30 22.5 +0.7
baz=83
QIZ Qiongzhong 82.77 292 P P 15 30 22.3 +0.4
R20A Redvale 82.77 46 ⇓P P 15 30 22.5 +0.6
baz=83
H14A Leadore 82.79 39 ⇓P P 15 30 22.2 +0.4
baz=83,SNR=6.3
T21A Navajo Lake 82.80 48 ⇓P P 15 30 22.4 +0.4
baz=83
M17A Scullys Gap (B 82.84 43 ⇑P P 15 30 22.3 +0.2
baz=83
F13A Darby 82.86 38 ⇑P P 15 30 21.9 -0.2
baz=83,SNR=8.5
C11A Tepee Creek (N 82.93 35 ⇓P P 15 30 22.5 +0.3
baz=83,SNR=14
S21A Coal Bank Pass 82.93 47 ⇑P P 15 30 23.5 +0.7
baz=83,SNR=20
Y24A Capitan 82.95 51 ⇑P P 15 30 23.7 +0.9
baz=83,SNR=18
K16A Soda Springs 82.95 41 ⇑P P 15 30 23.2 +0.6
baz=83,SNR=7.5
W23A Werner Place, 82.96 50 ⇑P P 15 30 23.7 +0.8
baz=83
125A Gardner Draw, 82.98 53 ⇓P P 15 30 24.0 +1.0
baz=83
U22A Llaves 83.00 49 ⇓P P 15 30 23.8 +0.7
baz=83
GDL2 Guadalupe Moun 83.01 53 eP P 15 30 24.6 +1.5
comp=Z,5.4nm,0.7s
628A Black Gap, Mar 83.04 56 ⇑P P 15 30 24.0 +0.8
baz=83,SNR=5.8
P19A Cripple Cowboy 83.05 45 ⇓P P 15 30 23.8 +0.6
baz=83,SNR=8.4
PAX Paxson 83.07 13 eP P 15 30 22.0 -0.6
PAX pmax pmax
comp=Z,5.0nm,0.8s
PAX Paxson 83.07 13 eP P 15 30 22.0 -0.6
comp=Z,4.7nm,0.8s
MCK McKinley 83.07 11 eP P 15 30 22.1 -0.4
MCK pmax pmax
comp=Z,40nm,0.9s
MCK McKinley 83.07 11 eP P 15 30 22.1 -0.4
comp=Z,40nm,0.9s
G14A Jackson 83.08 38 ⇓P P 15 30 24.1 +0.8
baz=83
226B Tecolote Peak, 83.11 54 ⇑P P 15 30 24.6 +1.0
baz=83,SNR=7.7
J16A Bone 83.16 41 ⇓P P 15 30 24.6 +0.9
baz=83,SNR=11
427A Hayter Ranch, 83.19 55 ⇓P P 15 30 24.6 +0.6
baz=83
Q20A Ridgley Place, 83.19 46 ⇑P P 15 30 24.6 +0.7
baz=84,SNR=11
V23A Ortiz Mt. (NFS 83.20 49 ⇑P P 15 30 25.6 +1.4
baz=84,SNR=6.7
Z25A Roswell 83.21 52 ⇓P P 15 30 25.4 +1.3
baz=84,SNR=5.2
M18A Lyman 83.21 43 ⇑P P 15 30 24.4 +0.4
baz=84,SNR=9.7
MCMT McKenzie Canyo 83.22 39 eP P 15 30 24.6 +0.6
comp=Z,5.8nm,1.0s
AHID Auburn Hatcher 83.22 41 eP P 15 30 24.8 +0.8
comp=Z,9.6nm,1.0s
H15A Lima 83.23 39 ⇓P P 15 30 24.9 +0.9
baz=84,SNR=8.0
N18A Larsen Ranch, 83.25 44 ⇑P P 15 30 24.4 +0.2
baz=84,SNR=6.7
T22A Edith 83.26 48 ⇑P P 15 30 24.9 +0.5
baz=84
O19A Miners Draw (B 83.28 44 ⇓P P 15 30 25.0 +0.7
baz=84
E13A Victor 83.31 37 ⇓P P 15 30 24.1 -0.1
baz=84,SNR=5.7
K17A Gardner Place, 83.33 42 ⇓P P 15 30 25.1 +0.5
baz=84
WHN Wuhan 83.38 305 eP P 15 30 28.5 +3.7
P20A De Beque 83.39 45 ⇑P P 15 30 25.6 +0.7
baz=84,SNR=12
528A Cox Ranch, San 83.39 56 ⇑P P 15 30 26.1 +1.0
baz=84,SNR=5.5
MENT Mentasta 83.42 14 eP P 15 30 24.6 +0.2
R21A Cimarron 83.43 47 ⇓P P 15 30 26.4 +1.2
baz=84,SNR=23
U23A El Rito 83.46 49 ⇑P P 15 30 26.5 +1.1
baz=84
126A Clayton Basin, 83.47 53 ⇑P P 15 30 26.4 +1.0
baz=84
L18A Fontenelle, Gr 83.48 43 ⇑P P 15 30 26.2 +0.8
baz=84
Y25A Mesa, Roswell 83.50 52 ⇓P P 15 30 26.6 +1.1
baz=84,SNR=16
D13A Huson 83.51 36 ⇑P P 15 30 25.1 -0.2
baz=84,SNR=10
N19A John Jarvie Ra 83.53 44 ⇓P P 15 30 25.7 +0.1
baz=84,SNR=6.8
W24A Lazy 6 Ranch, 83.53 50 ⇑P P 15 30 26.5 +0.7
baz=84,SNR=18
I16A Newdale 83.55 40 ⇓P P 15 30 26.8 +1.1
baz=84,SNR=7.9
G15A Dillon 83.62 39 ⇑P P 15 30 26.6 +0.7
baz=84,SNR=11
Q21A Lamborn Mesa, 83.63 46 ⇑P P 15 30 27.2 +1.0
baz=84,SNR=5.2
S22A 4UR Ranch, Cre 83.65 47 ⇓P P 15 30 27.6 +1.2
baz=84,SNR=24
TPAW Teton Pass 83.69 41 eP P 15 30 26.9 +0.5
comp=Z,16nm,1.0s
E14A Clinton 83.69 37 ⇓P P 15 30 26.1 -0.2
baz=84,SNR=8.9
DLBC Dease Lake 83.71 22 eP P 15 30 26.3 +0.3
DLBC Dease Lake 83.71 22 P P 15 30 26.9 +1.0
comp=Z,7.2nm,0.9s,baz=227,slow=6.5,SNR=15
BSMT Bassoo Peak 83.75 36 eP P 15 30 26.3 -0.3
comp=Z,2.4nm,0.7s
Z26A Caprock 83.76 53 ⇑P P 15 30 27.5 +0.7
baz=84,SNR=18
J17A Brown Place, J 83.77 41 ⇓P P 15 30 27.2 +0.4
baz=84,SNR=5.3
C13A Hot Springs 83.77 36 ⇓P P 15 30 26.9 +0.4
baz=84
X25A Clemmons Ranch 83.78 51 ⇑P P 15 30 27.5 +0.4
baz=84,SNR=6.7
O20A White River Ci 83.79 45 ⇓P P 15 30 27.8 +0.8
baz=84
SNOW Snow King Moun 83.80 41 eP P 15 30 28.0 +1.0
comp=Z,15nm,0.9s
529A Stev Forest Ra 83.83 56 ⇑P P 15 30 27.6 +0.4
baz=84
K18A Toltan Ranch, 83.83 42 ⇓P P 15 30 28.0 +0.8
baz=84,SNR=14
M19A Rock Springs 83.84 43 ⇑P P 15 30 27.3 0.0
baz=84,SNR=5.7
V24A Rampart Ranch, 83.86 50 ⇑P P 15 30 28.0 +0.5
baz=84,SNR=7.5
328A Wristen Ranch, 83.87 55 ⇓P P 15 30 28.2 +0.7
baz=84
IMW Indian Meadow 83.90 41 eP P 15 30 28.1 +0.6
comp=Z,14nm,1.0s
R22A Saguache, Gunn 83.92 47 ⇓P P 15 30 28.4 +0.6
baz=84,SNR=10
MOOW Moose Ponds 83.95 41 eP P 15 30 28.0 +0.3
comp=Z,7.3nm,1.3s
F15A Butte 83.97 38 ⇓P P 15 30 28.1 +0.3
baz=84
127A Arkansas Junct 83.98 53 ⇓P P 15 30 28.0 0.0
baz=84
L19A Farson 84.00 43 ⇓P P 15 30 28.6 +0.6
baz=84,SNR=8.7
SEY Seymchan 84.04 345 ⇑iP P 15 30 27.6 +0.2
D14A Greenough 84.05 37 ⇓P P 15 30 27.8 -0.3
baz=84
G16A Moss Hill, Enn 84.06 39 ⇓P P 15 30 28.5 +0.3
baz=84,SNR=5.5
QLMT Earthquake Lak 84.08 40 eP P 15 30 29.3 +0.9
comp=Z,2.2nm,1.1s
CHMT Chamberlain Mo 84.10 37 eP P 15 30 28.1 -0.4
comp=Z,3.5nm,1.1s
Q22A Crested Butte, 84.10 46 ⇓P P 15 30 29.2 +0.5
baz=84,SNR=7.7
N20A Spence Gulch, 84.11 44 ⇓P P 15 30 29.2 +0.6
baz=84,SNR=9.2
H16A Russell Place, 84.12 40 ⇑P P 15 30 29.7 +1.1
baz=84,SNR=18
J18A Kendall Valley 84.13 41 ⇓P P 15 30 29.3 +0.6
baz=84,SNR=45
I17A Pilgrim Ck. 84.14 41 ⇓P P 15 30 29.6 +0.9
baz=84,SNR=8.0
Y26A Elida 84.15 52 ⇓P P 15 30 29.3 +0.4
baz=84,SNR=9.5
E15A Deer Lodge 84.19 38 ⇓P P 15 30 29.1 +0.3
baz=84
BW06 Boulder Array 84.20 42 ⇑P P 15 30 29.4 +0.3
baz=84,SNR=17
PDAR Pinedale Array 84.20 42 P P 15 30 29.0 0.0
PDAR pP pP 15 31 15.5 -4.5
PDAR Pinedale Array 84.20 42 P P 15 30 29.0 0.0
comp=Z,8.8nm,0.8s,baz=213,slow=3.1,SNR=52
PDAR pP pP 15 31 15.5 -4.5
comp=Z,1.5nm,0.7s,baz=202,slow=2.5,SNR=2.5
PDAR LR LR 16 06 56.7
comp=Z,21nm,18.1s,baz=78,slow=35
SMCO Snowmass 84.20 46 eP P 15 30 29.9 +0.5
B13A Whitefish 84.22 35 ⇑P P 15 30 29.0 +0.3
baz=84
W25A X Bar L Ranch, 84.23 51 ⇓P P 15 30 29.5 +0.2
baz=84,SNR=8.0
YMR Madison River 84.28 40 eP P 15 30 31.1 +1.7
429A Davenport Ranc 84.29 56 ⇑P P 15 30 29.8 +0.3
baz=84,SNR=13
COLA College 84.31 11 eP P 15 30 28.3 -0.4
COLA pmax pmax
comp=Z,53nm,0.8s
COLA College 84.31 11 eP P 15 30 28.3 -0.4
comp=Z,53nm,0.8s
228A UT Block 9, Go 84.34 54 ⇓P P 15 30 30.1 +0.2
baz=85
Z27A Tatum 84.36 53 ⇑P P 15 30 30.3 +0.4
baz=85,SNR=5.5
H17A Grant Village 84.38 40 ⇓P P 15 30 31.3 +1.4
baz=85
BOZ Bozeman (W) 84.38 39 eP P 15 30 29.1 -0.7
BOZ pmax pmax
comp=Z,11nm,1.2s
BOZ Bozeman (W) 84.38 39 eP P 15 30 29.1 -0.7
comp=Z,11nm,1.2s
BOZ Bozeman (W) 84.38 39 ⇓P P 15 30 30.5 +0.7
baz=85,SNR=6.5
V25A Rancho No Teng 84.39 50 ⇓P P 15 30 30.5 +0.4
baz=85
ILAR Eielson Array 84.39 11 P P 15 30 28.9 -0.3
ILAR pP pP 15 31 16.3 -3.9
ILAR Eielson Array 84.39 11 P P 15 30 28.9 -0.3
comp=Z,12nm,0.9s,baz=232,slow=5.9,SNR=112
ILAR pP pP 15 31 16.3 -3.9
comp=Z,1.1nm,0.7s,baz=231,slow=6.0,SNR=1.4
X26A CR and CF Fran 84.43 51 ⇓P P 15 30 30.6 +0.3
baz=85
F16A Kennard Place, 84.46 39 ⇑P P 15 30 31.0 +0.9
baz=85
M20A Sweetwater, Wa 84.47 44 ⇓P P 15 30 31.0 +0.6
baz=85,SNR=7.7
I18A Diamond G Ranc 84.50 41 ⇓P P 15 30 31.5 +1.0
baz=85
530A J-C Ranch, Com 84.54 56 ⇓P P 15 30 31.2 +0.4
baz=85
P22A Eagle 84.55 46 ⇑P P 15 30 31.6 +0.7
baz=85
R23A Moffat 84.56 47 ⇓P P 15 30 31.4 +0.5
baz=85
A13A Flathead Natio 84.56 35 ⇓P P 15 30 30.9 +0.4
baz=85
329A Wagon Wheel Ra 84.56 55 ⇓P P 15 30 31.7 +0.8
baz=85,SNR=6.7
N21A Black Mountain 84.57 45 ⇓P P 15 30 31.6 +0.7
baz=85,SNR=14
D15A Lincoln 84.59 37 ⇑P P 15 30 31.5 +0.7
baz=85
T24A Torres, Weston 84.61 49 ⇑P P 15 30 32.5 +1.3
baz=85
L20A Wamsutter 84.62 43 ⇓P P 15 30 31.5 +0.4
baz=85,SNR=14
128A Castleberry Fa 84.63 54 ⇓P P 15 30 32.1 +0.9
baz=85,SNR=12
Y27A Causey 84.64 52 ⇑P P 15 30 31.8 +0.5
baz=85,SNR=9.5
K19A Absolon Red Bu 84.69 42 ⇑P P 15 30 31.8 +0.4
baz=85
S24A Houchin Ranch, 84.74 48 ⇑P P 15 30 32.1 +0.2
baz=85
J19A Crowheart 84.77 42 ⇑P P 15 30 32.1 +0.3
baz=85,SNR=12
U25A Circle Dot Ran 84.78 50 ⇓P P 15 30 32.6 +0.6
baz=85
E16A East Helena 84.82 38 ⇓P P 15 30 32.1 +0.2
baz=85
631A Perdido Creek 84.86 57 ⇑P P 15 30 32.9 +0.6
baz=85
430A Baggett Ranch, 84.87 56 ⇓P P 15 30 33.0 +0.6
baz=85
Q23A Hartsel 84.87 47 ⇑P P 15 30 33.2 +0.6
baz=85
229A Bryant Ranch, 84.89 54 ⇑P P 15 30 33.1 +0.6
baz=85
C15A Salmond Ranch, 84.94 37 ⇓P P 15 30 32.3 -0.1
baz=85
O22A Kremmling 84.95 45 ⇑P P 15 30 33.1 +0.2
baz=85,SNR=7.9
MSTX Muleshoe 84.97 52 ⇓P P 15 30 33.6 +0.7
baz=85,SNR=7.2
Z28A Tucker Farm, M 84.98 53 ⇑P P 15 30 32.8 -0.2
baz=85
X27A F and S Farms, 85.00 52 ⇓P P 15 30 33.4 +0.3
baz=85
M21A Separation Pea 85.07 44 ⇓P P 15 30 33.5 +0.1
baz=85,SNR=8.3
P23A Jefferson 85.08 46 ⇑P P 15 30 34.1 +0.4
baz=85
R24A Sanders Place, 85.08 48 ⇑P P 15 30 34.3 +0.8
baz=85
732A Laxson Ranch, 85.08 58 ⇓P P 15 30 33.7 +0.3
baz=85
H18A Shoshone NF, C 85.08 40 ⇑P P 15 30 34.6 +1.2
baz=85
F17A Fitzpatrick Pl 85.10 39 ⇑P P 15 30 34.4 +1.1
baz=85
129A Stewart Farms, 85.11 54 ⇑P P 15 30 34.5 +0.9
baz=85
A14A Double T Ranch 85.13 35 ⇑P P 15 30 33.6 +0.2
baz=85
D16A Dana Ranch, Ca 85.15 38 ⇑P P 15 30 34.2 +0.7
baz=85
330A Mertzon 85.16 55 ⇑P P 15 30 34.2 +0.3
baz=85
531A Rocksprings 85.17 57 ⇑P P 15 30 35.0 +1.0
baz=85
I19A Meeteetse 85.19 41 ⇑P P 15 30 34.3 +0.4
baz=85
W27A Bowe Ranch, En 85.20 51 ⇓P P 15 30 34.7 +0.6
baz=85
L21A Rawlins 85.24 44 ⇑P P 15 30 34.2 0.0
baz=86
B15A Bradely Ranch, 85.25 36 ⇑P P 15 30 33.9 -0.1
baz=86
U26A Atchley Ranch, 85.25 50 ⇑P P 15 30 34.5 +0.1
baz=86
N22A Wattenberg Ran 85.31 45 ⇓P P 15 30 35.0 +0.4
baz=86,SNR=8.4
S25A Robets Cordova 85.31 48 ⇓P P 15 30 35.0 +0.4
baz=86
Q24A Divide 85.38 47 ⇓P P 15 30 35.3 +0.2
baz=86
O23A Lake Granby, G 85.40 46 ⇓P P 15 30 35.5 +0.3
baz=86
ISCO Idaho Springs 85.42 46 ⇑P P 15 30 35.9 +0.6
baz=86
J20A Shoshoni 85.43 42 ⇑P P 15 30 35.5 +0.4
baz=86
C16A Fuhringer Ranc 85.44 37 ⇓P P 15 30 35.1 +0.1
baz=86
G18A Lazy EL Ranch, 85.47 40 ⇓P P 15 30 35.7 +0.5
baz=86,SNR=5.2
M22A Cedar Creek Ra 85.49 44 ⇓P P 15 30 35.9 +0.4
baz=86
Z29A Hungry Hill Ra 85.49 53 ⇓P P 15 30 35.8 +0.3
baz=86
A15A Johnson Ranch, 85.51 36 ⇑P P 15 30 35.1 -0.2
baz=86
632A Uvalde 85.53 57 ⇑P P 15 30 36.0 +0.3
baz=86
RLMT Red Lodge 85.55 40 ⇑P P 15 30 36.7 +1.1
baz=86
EGAK Eagle 85.59 14 eP P 15 30 35.2 +0.1
comp=Z,26nm,0.9s
R25A Fountain Ranch 85.63 48 ⇑P P 15 30 36.9 +0.7
baz=86
K21A Alcova 85.63 43 ⇓P P 15 30 36.5 +0.4
baz=86
F18A Big Timber 85.67 39 ⇑P P 15 30 36.6 +0.5
baz=86
532A Rocksprings 85.67 57 ⇑P P 15 30 36.7 +0.3
baz=86
I20A Worland 85.69 42 ⇓P P 15 30 37.1 +0.9
baz=86
N23A Red Feather La 85.69 45 ⇑P P 15 30 36.9 +0.4
baz=86,SNR=5.3
T26A Comanche Natio 85.70 49 ⇑P P 15 30 36.8 +0.2
baz=86
331A San Angelo 85.71 56 ⇑P P 15 30 36.7 +0.1
baz=86
D17A Six Diamond Ra 85.72 38 ⇑P P 15 30 37.3 +0.9
baz=86
Y29A Porterfield Fa 85.76 53 ⇑P P 15 30 37.4 +0.6
baz=86
B16A M & M Farms, S 85.79 36 ⇓P P 15 30 36.2 -0.4
baz=86
MAW Mawson 85.79 199 P P 15 30 37.4 +1.2
MAW Mawson 85.79 199 P P 15 30 37.4 +1.2
comp=Z,9.5nm,0.7s,baz=119,slow=7.0,SNR=20
MAW Mawson 85.79 199 P P 15 30 37.5 +1.3
baz=86,SNR=11
130A Snyder 85.80 54 ⇓P P 15 30 37.6 +0.7
baz=86
J21A Lysite 85.84 42 ⇓P P 15 30 37.0 -0.1
baz=86,SNR=7.6
JCT Junction City 85.89 57 eP P 15 30 38.1 +0.6
JCT pmax pmax
comp=Z,8.0nm,0.9s
JCT Junction City 85.89 57 eP P 15 30 38.1 +0.6

	comp=Z,8.0nm,0.9s								
C17A	Wharram Farm, baz=86	85.92	37	⇑P		P		15 30 36.3	-1.0
Z30A	Sanderson Ranc baz=86	85.94	54	⇓P		P		15 30 38.0	+0.3
S26A	Kim baz=86	85.98	49	⇓P		P		15 30 37.1	-0.8
H20A	Greybull baz=86	86.03	41	⇓P		P		15 30 38.2	+0.3
231A	Bronte baz=86	86.04	55	⇓P		P		15 30 38.2	0.0
432A	Menard baz=86	86.05	56	⇑P		P		15 30 37.7	-0.6
COLD	Coldfoot comp=Z,17nm,1.2s	86.07	9	*e*P		P		15 30 37.0	-0.4
BJI	Beijing	86.08	314	P		P		15 30 39.3	+1.2
BJI				S		S		15 40 56.6	+2.1
BJI				sS		sS		15 42 25.8	+1.9
BJI	comp=Z,23nm,1.3s			pmax		pmax			
M23A	Laramie baz=86	86.10	45	⇑P		P		15 30 38.6	+0.1
F19A	Roth Farm, Mol baz=86	86.11	40	⇑P		P		15 30 38.5	+0.2
A16A	West Butte Ran baz=86	86.13	36	⇑P		P		15 30 38.3	0.0
I21A	Big Trails, Te baz=86	86.16	42	⇓P		P		15 30 38.4	-0.2
AMTX	Amarillo baz=86	86.16	52	⇑P		P		15 30 38.6	-0.1
BILL	Bilibino	86.19	353	*c* *i*P		P		15 30 38.0	0.0
BILL	comp=Z,25nm,1.2s			pmax		pmax			
IPM	Ipoh comp=Z,42nm,1.1s	86.22	276	*e*P		P		15 30 40.3	+0.9
B17A	L&G Farms, Che baz=86	86.24	37	⇑P		P		15 30 39.0	+0.2
131A	Roby baz=86	86.27	54	⇓P		P		15 30 39.7	+0.4
332A	Millersview baz=86	86.28	56	⇑P		P		15 30 39.6	+0.2
R26A	Arlington baz=86	86.29	48	⇓P		P		15 30 39.3	0.0
T27A	Campo baz=86	86.29	50	⇑P		P		15 30 39.4	0.0
P25A	Willow Gulch B baz=87	86.30	47	⇓P		P		15 30 39.2	-0.2
L23A	Garrett baz=87	86.41	44	⇓P		P		15 30 40.2	+0.2
J22A	Midwest baz=87	86.49	43	⇓P		P		15 30 40.8	+0.5
232A	Coleman baz=87	86.55	55	⇑P		P		15 30 40.8	+0.1
Z31A	Sharp Cattle R baz=87	86.72	54	⇓P		P		15 30 41.4	0.0
ABTX	Abilene, Hawle baz=87	86.83	55	⇑P		P		15 30 42.4	+0.4
C19A	Slack Wire Ran baz=87	86.97	38	⇓P		P		15 30 43.1	+0.7
Z32A	Haskell baz=88	87.22	54	⇓P		P		15 30 44.8	+0.9
PSI	Prapat baz=88,SNR=7.3	87.72	274	P		P		15 30 47.4	+0.6
GYA	Guiyang	88.11	298	⇑*i*P		P		15 30 49.8	+1.5
GYA				pP		pP		15 31 42.0	+2.2
GYA				sP		sP		15 32 05.4	+3.7
GYA				PP		PP		15 34 20.8	+2.2
GYA				SKS		SKSac		15 40 53.6	-3.7
GYA				S		S		15 41 12.0	-2.8
GYA	comp=Z,20nm,0.8s			pmax		pmax			
H24A	Dirks Ranch, A baz=89	88.33	42	⇑P		P		15 30 49.4	+0.5
K26A	Motz Farm, Whi baz=89	88.34	44	⇑P		P		15 30 49.5	+0.5
OGNE	Ogallala baz=89	88.39	46	⇑P		P		15 30 49.5	+0.3
D22A	Cohagen baz=89	88.41	39	⇑P		P		15 30 49.8	+0.7
GSI	Gunungsitoli baz=89,SNR=4.9	88.57	272	P		P		15 30 52.7	+2.1
B22A	Reddig Ranch S baz=89	89.05	38	⇑P		P		15 30 52.8	+0.7
C23A	Lambert baz=90	89.31	39	⇓P		P		15 30 53.9	+0.5
CLNS	Chul'man	89.39	331	*e*P		P		15 30 53.9	+0.4
CLNS	comp=Z,26nm,0.9s			pmax		pmax			
CLNS	comp=E,11nm,1.0s			pmax		pmax			
CLNS	comp=N,18nm,1.3s			pmax		pmax			
HHC	Hu-ho-hao-te	89.61	313	⇑P		P		15 30 56.0	+1.0
HHC				pP		pP		15 31 49.6	+3.1
HHC				sP		sP		15 32 12.3	+3.9
HHC				PP		PP		15 34 31.3	+1.1
HHC				SKS		SKSac		15 41 02.6	-2.9
HHC				S		SKKSac		15 41 21.6	+2.7
HHC				sS		sS		15 42 59.1	+0.8
HHC	comp=Z,61nm,1.3s			pmax		pmax			
DGMT	comp=Z,260nm,8.3s Dagmar baz=90	90.19	39	⇓P		P		15 30 58.2	+0.8
YAK	Yakutsk	90.43	337	*e*P		P		15 30 56.5	-1.6
YAK	comp=Z,18nm,0.9s			pmax		pmax			
KMI	Kunming	91.01	296	P		P		15 31 04.1	+2.1
KMI	comp=Z,21nm,0.9s			pmax		pmax			
VNA3	Neumayer Olymp	91.13	175	*e*P		P		15 31 01.5	0.0
SNAA	Sanae	91.14	177	*e*P		P		15 31 01.9	+0.3
VNA2	Neumayer--Watz	91.62	176	*e*P		P		15 31 04.2	+0.5
VNA1	Neumayer--Stat	91.82	175	*e*P		P		15 31 06.7	+2.1
CD2	Chengdu	92.00	302	P		P		15 31 06.5	+0.3
CD2				pP		pP		15 31 59.8	+1.9
CD2				sP		sP		15 32 22.3	+2.6
CD2				PP		PP		15 34 51.8	+2.6
CD2				SKS		SKSac		15 41 16.9	-2.5
CD2				S		S		15 41 46.6	-3.5
CD2				sS		sS		15 43 20.4	-0.4
CD2				SS		SS		15 48 04.6	-0.1
CD2	comp=Z,10.0nm,0.5s			pmax		pmax			
YKA	comp=Z,80nm,5.2s Yellowknife Ar	92.11	24	P		P		15 31 05.7	-0.2
YKA				pP		pP		15 31 54.9	-2.6
YKA				PKKPbc		PKKPdf		15 48 19.4	-1.9
YKA	Yellowknife Ar comp=Z,1.4nm,0.9s,baz=240,slow=4.3,SNR=21	92.11	24	P		P		15 31 05.7	-0.2
YKA				pP		pP		15 31 54.9	-2.6
YKA	comp=Z,0.6nm,0.9s,baz=235,slow=4.2,SNR=2.6			PKKPbc		PKKPdf		15 48 19.4	-1.9
CM31	comp=Z,0.2nm,0.6s,baz=38,slow=2.4,SNR=4.9 Chiang Mai Arr	92.34	288	*e*P		P		15 31 09.8	+1.7
CMAR	comp=Z,5.3nm,0.9s Chiang Mai Arr	92.34	288	P		P		15 31 09.8	+1.8
CMAR	Chiang Mai Arr comp=Z,7.2nm,0.8s,baz=98,slow=2.6,SNR=44	92.34	288	P		P		15 31 09.8	+1.8
CHTO	Chiang Mai	92.45	289	*e*P		P		15 31 09.9	+1.4
CHTO	comp=Z,8.0nm,0.8s			pmax		pmax			
CHTO	Chiang Mai comp=Z,7.8nm,0.8s	92.45	289	*e*P		P		15 31 09.9	+1.4
LZH	Lanzhou	93.59	307	*e*P		P		15 31 14.5	+0.9
LZH				pP		pP		15 32 06.5	+1.3
LZH				sP		sP		15 32 31.3	+4.2
LZH	comp=Z,15nm,1.0s			pmax		pmax			
ULN	Ulaanbaatar comp=Z,2.8nm,0.9s	95.20	318	*e*P		P		15 31 20.5	-0.1
ULM	Lac du Bonnet comp=Z,37nm,21.7s,baz=342,slow=32	95.90	39	LR		LR		16 10 14.3	
GTA	Gaotai	97.62	309	*e*P		Pdif		15 31 32.6	+0.8
GTA				pP		pP		15 32 25.9	+2.3
GTA				sP		sP		15 32 46.6	+1.2
GTA	comp=Z,3.0nm,1.0s			pmax		pmax			
ZALV	Zalesovo Beam	110.11	322	PKiKP		PKiKP		15 36 27.1	-0.2
ZALV				PP		PP		15 36 57.6	-6.9
ZALV	Zalesovo Beam comp=Z,1.3nm,0.7s,baz=90,slow=0.3,SNR=7.0	110.11	322	PKiKP		PKiKP		15 36 27.1	-0.2
ZALV				PP		PP		15 36 57.6	-6.9
	comp=Z,1.7nm,0.8s,baz=90,slow=8.6,SNR=3.0								

MK31	Makanchi Array	111.46	314	*e*PKIKP				15 36 30.0	
MK31	Makanchi Array	111.46	314	*e*PKiKP		PKiKP		15 36 30.0	-0.1
MKAR	Makanchi Array	111.46	314	P		Pdif		15 32 33.1	0.0
MKAR				*i*				15 36 30.0	
MKAR								15 37 12.8	
MKAR	Makanchi Array	111.46	314	Pdif		Pdif		15 32 33.0	0.0
MKAR				PKiKP		PKiKP		15 36 30.0	-0.1
MKAR				PP		PP		15 37 12.8	-1.7
MKAR	Makanchi Array comp=Z,0.2nm,0.7s,baz=113,slow=3.7,SNR=2.5	111.46	314	Pdiff		Pdif		15 32 33.0	0.0
MKAR				PKiKP		PKiKP		15 36 30.0	-0.1
	comp=Z,2.3nm,0.7s,baz=67,slow=2.2,SNR=19								
MKAR				PP		PP		15 37 12.8	-1.7
	comp=Z,0.2nm,0.4s,baz=81,slow=8.9,SNR=2.2								
KURK	Kurchatov	113.91	318	*c* *i*PKiKP		PKiKP		15 36 34.4	-0.2
KURK	comp=Z,6.0nm,1.2s			pmax		pmax			
KSH	Kashi	115.83	306	*e*PKP		PKPdf		15 36 39.0	+0.1
KSH				PP		PP		15 37 53.1	+7.4
KSH				sPKP				15 37 59.0	
KSH				PKS		PKSdf		15 40 14.1	-1.5
KSH				SKS		SKSdf		15 43 27.1	-4.1
KSH				SKKS		SKKSac		15 44 21.6	-3.8
KSH				SS		SS		15 53 34.0	+3.4
KSH	comp=Z,140nm,4.1s			AMB		AMB			
KSH	comp=Z,220nm,5.0s			LR		LR			
TKM2	Tokmak 2	116.15	310	*e*PKIKP		PKPdf		15 36 39.4	-0.1
TKM2	Tokmak 2	116.15	310	*e*PKiPdf		PKPdf		15 36 39.4	-0.1
AAK	Ala-Archa	116.96	309	*c* *i*PKIKP		PKPdf		15 36 41.2	+0.2
AAK	comp=Z,15nm,1.7s			pmax		pmax			
AAK	Ala-Archa	116.96	309	*e*PKiPdf		PKPdf		15 36 40.7	-0.3
BRVK	Borovoye	118.81	322	*c* *i*PKIKP		PKPdf		15 36 44.0	0.0
BRVK	comp=Z,9.0nm,1.0s			pmax		pmax			
BRVK	Borovoye	118.81	322	*e*PKPdf		PKPdf		15 36 43.8	-0.2
KKAR	Karatay Array	119.87	310	*e*PKIKP		PKPdf		15 36 46.1	-0.3
KKAR	Karatay Array	119.87	310	*e*PKPdf		PKPdf		15 36 46.1	-0.3
KBL	Kabul	121.31	300	*e*PKIKP		PKPdf		15 36 49.0	-0.7
KBL	Kabul	121.31	300	*e*PKiPdf		PKPdf		15 36 49.0	-0.7
SVE	Sverdlovsk	123.19	327	*e*PKIKP		PKPdf		15 36 52.5	+0.2
SVE	comp=Z,11nm,1.0s			pmax		pmax			
ARU	Arti	124.40	328	*i* PKIKP		PKPdf		15 36 54.9	+0.3
ARU								15 38 46.1	
ARU								15 43 35.5	
ABKAR	Akbulak array	126.01	319	*e*PKPdf		PKPdf		15 36 58.4	+0.5
ARCES	ARCESS Array B	126.27	351	PKP		PKPdf		15 36 58.5	+0.6
ARCES	ARCESS Array B comp=Z,5.1nm,0.7s,baz=355,slow=1.5,SNR=9.2	126.27	351	PKP		PKPdf		15 36 58.5	+0.6
BOSA	Boshof	130.66	203	PKP		PKPdf		15 37 09.0	+1.3
BOSA	Boshof comp=Z,2.3nm,0.7s,baz=168,slow=6.1,SNR=4.9	130.66	203	PKP		PKPdf		15 37 09.0	+1.3
JOF	Joensuu	130.99	345	*e*PKIKP		PKPdf		15 37 06.1	-0.9
JOF	comp=Z,4.0nm,0.6s			pmax		pmax			
JOF	Joensuu comp=Z,4.0nm,0.6s	130.99	345	*e*p		PKPdf		15 37 06.1	-0.9
KAF	Kangasniemi	132.86	347	*e*PKIKP		PKPdf		15 37 09.8	-0.7
KAF	comp=Z,2.0nm,0.5s			pmax		pmax			
KAF	Kangasniemi comp=Z,1.7nm,0.5s	132.86	347	*e*p		PKPdf		15 37 09.8	-0.7
FINES	FINESS Array B	133.51	347	PKP		PKPdf		15 37 12.2	+0.5
FINES	FINESS Array B comp=Z,3.4nm,0.7s,baz=82,slow=4.0,SNR=12	133.51	347	PKP		PKPdf		15 37 12.2	+0.5
OBN	Obninsk	135.40	335	⇓*i*PKIKP		PKPdf		15 37 15.6	+0.1
OBN	comp=Z,14nm,1.4s			pmax		pmax			
NOA	NORSAR Array B	136.06	356	PKP		PKPdf		15 37 16.3	-0.4
NOA	NORSAR Array B comp=Z,1.0nm,0.7s,baz=14,slow=3.8,SNR=3.7	136.06	356	PKP		PKPdf		15 37 16.3	-0.4
ZEI	Tsey	138.76	316	*i* PKIKP		PKPdf		15 37 25.1	+2.7
ZEI	comp=Z,4.0nm,0.9s			pmax		pmax			
AKASG	Malin Array Be	141.65	336	PKHKP		PKPpre		15 37 21.9	
AKASG								15 37 26.3	
AKASG	Malin Array Be	141.65	336	PKPpre		PKPpre		15 37 21.9	
AKASG				PKP		PKPdf		15 37 26.3	-0.8
AKASG	Malin Array Be comp=Z,2.6nm,0.7s,baz=40,slow=4.2,SNR=5.9	141.65	336	PKhKP		PKPpre		15 37 21.9	
AKASG	comp=Z,2.8nm,0.7s,baz=40,slow=4.0,SNR=7.9			PKP		PKPdf		15 37 26.3	-0.8
ANN	Anapa	141.74	323	*i* PKHKP		PKPpre		15 37 20.1	
ANN	comp=Z,105nm,1.7s			pmax		pmax			
KMBO	Kilima Mbogo	143.93	243	*e*PKPdf		PKPdf		15 37 32.0	-0.6
KMBO				PKP		PKPbc		15 37 32.2	+1.2
KMBO	Kilima Mbogo comp=Z,19nm,0.8s,baz=65,slow=5.3,SNR=49	143.93	243	PKP		PKPdf		15 37 32.2	-0.4
LVV	L'vov	144.26	340	*e*PKIKP		PKPab		15 37 29.9	-0.3
MALT	Malatya	144.49	313	⇓PKIKP		PKPdf		15 37 33.7	+1.1
MALT	Malatya	144.49	313	*e*PKPdf		PKPdf		15 37 33.1	+0.5
MALT	Malatya	144.49	313	⇓P		PKPdf		15 37 33.7	+1.1
NRDL	Niedersach Rie	144.63	355	*e*PKPbc		PKPbc		15 37 31.8	+0.3
AKCD	Akcadag	144.85	313	*i* P		PKPdf		15 37 35.0	+1.7
KWP	Kalwaria Pacla	144.86	341	⇓PKIKP		PKPdf		15 37 33.4	+0.6
KWP	Kalwaria Pacla	144.86	341	⇓*i*P		PKPdf		15 37 33.3	+0.5
KWP	Kalwaria Pacla	144.86	341	*i* PKPc		PKPdf		15 37 33.1	+0.3
IBBN	Ibbenburen	144.95	358	*e*PKPbc		PKPdf		15 37 33.2	+0.4
OJC	Ojcow	145.17	344	*e*PKIKP		PKPab		15 37 34.0	+0.4
OJC	Ojcow	145.17	344	*e*PKP		PKPab		15 37 34.0	+0.4
CLZ	Clausthal	145.26	355	*e*PKIKP		PKPab		15 37 34.4	+0.5
CLZ	Clausthal	145.26	355	*e*PKPbc		PKPab		15 37 34.4	+0.5
KSP	Ksiaz	145.40	348	*e*PKIKP		PKPab		15 37 34.8	+0.4
KSP	Ksiaz	145.40	348	*i* PKPc		PKPab		15 37 34.8	+0.4
CLL	Collm	145.49	352	⇑*i*PKIKP		PKPab		15 37 34.9	+0.1
CLL	comp=Z,78nm,1.0s			pmax		pmax			
CLL	Collm	145.49	352	*e*PKPbc		PKPab		15 37 34.7	-0.1
CLL	Collm comp=Z,78nm,1.0s	145.49	352	⇑*i*PKPbc		PKPab		15 37 34.9	+0.1
GZT	Gaziantep	145.53	312	*i* P		PKPab		15 37 36.1	+0.5
KOLS	Kolonicke sedl	145.61	341	*e*PKP2		PKPab		15 37 35.6	+0.3
KOLS	Kolonicke sedl	145.61	341	*e*PKP		PKPab		15 37 35.6	+0.3
BUR08	Bucovina Ar. S	145.68	336	*e*PKPdf		PKPab		15 37 35.6	-0.2
UPC	Upice	145.77	348	*i* PKP2		PKPab		15 37 36.2	+0.3
UPC	Upice	145.77	348	*i* PKP		PKPab		15 37 36.2	+0.3
BRG	Berggiesshubel comp=Z,51nm,1.1s	145.78	351	*i* PKP		PKPab		15 37 35.8	-0.1
BRG	Berggiesshubel comp=Z,5.0nm,1.1s	145.78	351	*i* PKP2		PKPab		15 37 35.8	-0.1
BRG	Berggiesshubel	145.78	351	*e*PKPbc		PKPab		15 37 36.0	+0.1
FBE	Freiberg	145.82	351	*e*PKPbc		PKPab		15 37 36.4	+0.4
BUG	Bochum--Univer	145.83	358	*e*PKPbc		PKPab		15 37 35.9	-0.1
DPC	Dobruska-Polom	145.86	348	*i* PKP2		PKPab		15 37 36.7	+0.4
DPC	Dobruska-Polom	145.86	348	*i* PKP		PKPab		15 37 36.7	+0.4
DPC				*ep*PKP		pPKPdf		15 38 27.1	-1.7
UZH	Uzhgorod	145.87	340	*e*PKP2		PKPbc		15 37 35.2	-0.3
CRVS	Cervenica-Dubn	145.89	341	*e*PKIKP		PKPdf		15 37 35.0	+0.4
CRVS	Cervenica-Dubn	145.89	341	*e*PKP		PKPdf		15 37 35.0	+0.4
OKC	Ostrava-Krasne	145.94	346	*i* PKP2		PKPab		15 37 36.6	+0.1
OKC	Ostrava-Krasne	145.94	346	*i* PKP		PKPab		15 37 36.6	+0.1
OKC				epPKP		pPKPdf		15 38 27.1	-1.7
PVCC	Panska Ves	146.01	350	*i* PKP2		PKPab		15 37 37.0	+0.2
PVCC	Panska Ves	146.01	350	*i* PKP		PKPab		15 37 37.0	+0.2
PVCC				epPKP		pPKPdf		15 38 26.5	-2.4
MORC	Moravsky Berou	146.14	346	⇑PKP2		PKPab		15 37 37.9	+0.5
MORC	Moravsky Berou	146.14	346	*e*PKPbc		PKPbc		15 37 36.3	-0.1
MORC	Moravsky Berou	146.14	346	⇑*i*P		PKPab		15 37 37.9	+0.5
TRPA	Tarpa	146.22	340	⇑*i*P		PKPbc		15 37 37.1	+0.5
TRPA	Tarpa	146.22	340	⇑*e*		PKPbc		15 37 37.0	+0.5
UBBA	Unterbreizbach	146.30	355	*e*PKPbc		PKPbc		15 37 37.0	+0.4
MOX	Moxa	146.32	353	*e*PKP2		PKPbc		15 37 37.4	+0.6
MOX	Moxa	146.32	353	*e*PKPbc		PKPbc		15 37 37.4	+0.6
PLN	Plauen	146.41	353	*e*PKPbc		PKPbc		15 37 37.8	-0.5
WERD	Werda	146.43	352	*e*PKPbc		PKPbc		15 37 37.8	+0.7
TANN	Tannenbergstha	146.44	352	*e*PKPbc		PKPab		15 37 38.0	-0.5
VRI	Vrincioaia	146.48	333	⇓PKP2		PKPab		15 37 38.4	-0.4
VRI	Vrincioaia	146.48	333	⇓*i*P		PKPab		15 37 38.3	-0.5
GUNZ	Gunzen	146.51	352	*e*PKPbc		PKPab		15 37 38.2	-0.6
PRU	Pruhonice	146.54	350	*i* PKP2		PKPab		15 37 38.3	-0.5
PRU	Pruhonice	146.54	350	*i* PKP		PKPab		15 37 38.3	-0.5
PRU				epPKP		pPKPdf		15 38 29.2	-0.6
WERN	Wernitzgruen	146.57	352	*e*PKPbc		PKPab		15 37 38.7	-0.3
NKC	Novy Kostel	146.62	352	*i* PKP2		PKPab		15 37 38.6	-0.6
NKC	Novy Kostel	146.62	352	*i* PKP		PKPab		15 37 38.6	-0.6
MEM	Membach	146.69	360	PKP		PKPbc		15 37 38.5	+0.6
AVNT	Avonos	146.69	316	*i* P		PKPbc		15 37 38.0	-0.5

SNF	Seneffe	146.77	2	PKP		PKPab		15 37 39.3	-0.4
VRAC	Vranov	146.79	347	⇑*i*P		PKPab		15 37 41.2	+1.3
BCLA	Clavier	146.88	0	PKP		PKPbc		15 37 39.1	+0.8
MANZ	Manzenberg	146.91	352	*e*PKPbc		PKPbc		15 37 39.3	+0.8
BR131	Keskin Array S	146.96	318	*e*PKPdf		PKPdf		15 37 37.4	+0.5
BR131				*e*PKPbc		PKPbc		15 37 39.2	0.0
BRTR	Keskin Array B	146.96	318	PKP		PKPdf		15 37 37.5	+0.6
BRTR				PKPbc		PKPbc		15 37 39.7	+0.5
BRTR	comp=Z,19nm,0.9s,baz=135,slow=2.4,SNR=46			pPKPbc		pPKPbc		15 38 28.9	-3.8
BRTR	Keskin Array B	146.96	318	PKP		PKPdf		15 37 37.5	+0.6
BRTR	comp=Z,19nm,0.9s,baz=134,slow=3.4,SNR=47			PKPbc		PKPbc		15 37 39.7	+0.5
BRTR				pPKPbc		pPKPbc		15 38 28.9	-3.8
TNS	comp=Z,5.7nm,1.1s,baz=48,slow=1.8,SNR=1.6 Taunus Mts	147.00	357	*e*PKP2		PKPbc		15 37 39.5	+0.7
TNS	Taunus Mts	147.00	357	*e*PKPbc		PKPbc		15 37 39.5	+0.7
VYHS	Vyhne	147.01	344	*e*PKP2		PKPbc		15 37 39.8	+1.0
VYHS	Vyhne	147.01	344	*e*PKP		PKPbc		15 37 39.8	+1.0
TREC	Trest	147.03	348	*e*PKP2		PKPbc		15 37 39.7	+0.8
TREC	Trest	147.03	348	*e*PKP		PKPbc		15 37 39.7	+0.8
ROTZ	Rotzenmuhle	147.11	352	*e*PKPbc		PKPbc		15 37 40.1	+1.1
MLR	Muntele Rosu	147.12	333	⇓*i*P		PKPab		15 37 40.5	-1.0
YAYL	Yayladag	147.17	311	*i* P		PKPbc		15 37 40.8	+0.9
DOU	Dourbes	147.19	1	PKP		PKPbc		15 37 40.1	+0.8
PSZ	Piszkesteto	147.24	342	PKP2		PKPab		15 37 41.0	-0.8
PSZ	Piszkesteto	147.24	342	*e*PKPbc		PKPbc		15 37 39.9	+0.4
PSZ	Piszkesteto	147.24	342	⇓*e*		PKPbc		15 37 40.6	+1.1
GRF	Grafenberg Arr	147.30	353	*e*PKP2		PKPbc		15 37 40.7	+1.1
GRF	Grafenberg Arr	147.30	353	*e*PKPbc		PKPbc		15 37 40.7	+1.1
GRFO	Grafenberg	147.30	353	*e*PKIKP		PKPdf		15 37 36.8	-0.1
GRFO	Grafenberg	147.30	353	*e*PKPdf		PKPdf		15 37 36.8	-0.1
DRGR		147.31	338	⇑PKP2		PKPbc		15 37 40.5	+0.7
DRGR		147.31	338	⇑*i*P		PKPbc		15 37 40.5	+0.7
SMOL	Smolenice	147.34	345	*e*PKP2		PKPab		15 37 41.4	-0.7
SMOL	Smolenice	147.34	345	*e*PKP		PKPab		15 37 41.3	-0.8
KHC	Kasperske Hory	147.53	350	*e*PKIKP		PKPdf		15 37 38.6	+1.2
KHC				*e*				15 37 41.3	
KHC	Kasperske Hory	147.53	350	*e*PKPbc		PKPbc		15 37 40.9	+0.7
KHC	Kasperske Hory	147.53	350	*e*PKP		PKPdf		15 37 38.6	+1.2
KHC				*ex*		x		15 37 41.3	
KHC				*ep*PKP		pPKPdf		15 38 27.7	-3.9
VOIR		147.54	334	⇓PKP2		PKPab		15 37 42.1	-1.0
VOIR		147.54	334	⇓*i*P		PKPab		15 37 42.1	-1.0
WET	Wettzell	147.62	351	*e*PKP2		PKPbc		15 37 41.4	+0.9
WET	Wettzell	147.62	351	*e*PKPbc		PKPbc		15 37 41.4	+0.9
WLF	Walferdange	147.63	359	PKP		PKPab		15 37 41.9	-1.2
WLF	Walferdange	147.63	359	*e*PKP2		PKPbc		15 37 41.7	+1.3
WLF	Walferdange	147.63	359	*e*PKPbc		PKPab		15 37 42.0	-1.2
WLF	Walferdange	147.63	359	*e*PKPbc		PKPbc		15 37 41.7	+1.3
ZST	Bratislava	147.72	346	*e*PKP2		PKPbc		15 37 40.8	+0.1
ZST	Bratislava	147.72	346	*e*PKP		PKPbc		15 37 40.8	+0.1
GEC2	GERESS Array S	147.79	350	*e*PKP2		PKPbc		15 37 41.7	+0.7
GEC2	GERESS Array S	147.79	350	*e*PKPbc		PKPbc		15 37 41.7	+0.7
GERES	GERESS Array B	147.79	350	PKP		PKPdf		15 37 38.5	+0.7
GERES				PKPbc		PKPbc		15 37 41.7	+0.7
GERES	GERESS Array B comp=Z,11nm,0.8s,baz=64,slow=2.3,SNR=44	147.79	350	PKP		PKPdf		15 37 38.5	+0.7
GERES				PKPbc		PKPbc		15 37 41.7	+0.7
BUD	comp=Z,11nm,0.8s,baz=29,slow=3.0,SNR=60 Budapest	147.88	343	⇓*e*		PKPab		15 37 42.4	+1.2
CONA	Conrad Observa SNR=23	148.25	347	*i* PKiKP		PKiKP		15 37 43.4	-0.4
LANF	Langenberg	148.27	357	PKP		PKPbc		15 37 43.1	+0.9
STU	Stuttgart	148.40	356	*e*PKPbc		PKPbc		15 37 43.5	+1.0
MOA	Molln SNR=8.1	148.65	349	⇑*i*PKiKP		PKiKP		15 37 44.0	-0.6
BZS	Buzias	148.71	338	⇑PKP2		PKPbc		15 37 44.0	+0.6
BZS	Buzias	148.71	338	⇑*i*P		PKPbc		15 37 44.0	+0.6
FUR	Furstenfeldbru	148.80	353	*e*PKP2		PKPbc		15 37 44.4	+0.8
FUR	Furstenfeldbru	148.80	353	*e*PKPbc		PKPbc		15 37 44.4	+0.8
BFO	Black Forest	148.90	357	*e*PKP2		PKPbc		15 37 44.4	+0.6
BFO	Black Forest	148.90	357	*e*PKPbc		PKPbc		15 37 44.4	+0.6
BFO	Black Forest	148.90	357	*e*PKPbc		PKPbc		15 37

s-maj=50.7km s-min=30.0km az=34.0, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**44.13**	**90**	P	P	16 15 32.0	+0.9
	0.8nm,0.8s,baz=248,slow=5.4,SNR=2.9						
SIV	**San Ignacio**	**50.71**	**92**	P	P	16 16 19.9	-1.7
	1.0nm,0.8s,baz=266,slow=13,SNR=3.6						
TXAR	**Lajitas Array**	**53.10**	**12**	P	P	16 16 40.7	+1.5
	0.3nm,0.9s,baz=164,slow=10,SNR=2.5						
NVAR	**Mina Array Bea**	**61.22**	**357**	P	P	16 17 36.8	+0.1
	0.6nm,0.7s,baz=189,slow=8.2,SNR=5.2						
PDAR	**Pinedale Array**	**65.62**	**4**	P	P	16 18 05.4	-0.4
	0.5nm,0.8s,baz=210,slow=5.0,SNR=4.0						
YKA	**Yellowknife Ar**	**85.21**	**360**	P	P	16 19 56.0	-1.6
	0.3nm,0.8s,baz=178,slow=4.9,SNR=6.4						
ZALV	**Zalesovo Beam**	**145.81**	**340**	PKPbc	PKPbc	16 27 00.6	0.0
	0.2nm,0.3s,baz=2.9,slow=2.9,SNR=2.7						
CMAR	**Chiang Mai Arr**	**148.35**	**268**	PKPbc	PKPbc	16 27 09.2	+0.3
	1.0nm,1.0s,baz=80,slow=2.2,SNR=3.8						
BRTR	**Keskin Array B**	**148.39**	**51**	PKPbc	PKPbc	16 27 08.3	-0.3
	0.7nm,0.8s,baz=116,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**152.65**	**334**	PKPbc	PKPbc	16 27 17.1	-1.3
	0.2nm,0.6s,baz=27,slow=3.5,SNR=2.6						

*ISCJB **22** 16:35:08.4±0.3,24.2°24N±0.0°05×122.2°98E±0.0°02,h58km, Error ellipse: s-maj=7.5km s-min=2.5km az=167.9*
*TAP **22** 16:35:08.9,24.3°32N×122.2°90E,h72km±2km,ML3.1,D*
*JMA **22** 16:35:09.1±0.1,24.4°40N×123.0°00E,h49km±1km,M2.4*
ISC 22 16:35:08.7±1.2,24°27N±0.0°06×122°99E±0.0°03,h58km,n26, σ0.97/48,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.20**	**7**	P	**Pn**	**16 35 16.6**	**-1.3**
YOJ				S	**Sn**	**16 35 21.9**	**-2.6**
IRIF	**Iriomote-Funau**	**0.68**	**84**	P	**Pn**	**16 35 22.3**	**-0.3**
IRIF				S	**Sn**	**16 35 32.4**	**-0.4**
HATJ	**Hateruma jima**	**0.78**	**106**	P	**Pn**	**16 35 24.3**	**+0.5**
HATJ				*e*S	**Sn**	**16 35 35.5**	**+0.7**
JKRS	**Kuro-shima**	**0.93**	**92**	P	**Pn**	**16 35 26.3**	**+0.5**
JKRS				S	**Sn**	**16 35 39.2**	**+0.8**
JIJ	**Ishigaki jima**	**1.06**	**85**	P	**Pn**	**16 35 27.4**	**0.0**
JIJ				S	**Sn**	**16 35 40.6**	**-0.8**
TWC	**Suao**	**1.09**	**288**	*e*P	**Pn**	**16 35 27.6**	**-0.3**
	baz=291						
ENA	**Nanau**	**1.15**	**278**	*e*P	**Pn**	**16 35 28.0**	**-0.6**
	baz=275						
TWE	**Neicheng**	**1.28**	**291**	*e*P	**Pn**	**16 35 30.3**	**-0.1**
	baz=296						
ENTT	**Nioudou**	**1.35**	**286**	*e*P	**Pn**	**16 35 31.8**	**+0.5**
	baz=290						
NNS	**Nan Shan**	**1.48**	**277**	*e*P	**Pn**	**16 35 34.9**	**+1.6**
	baz=273						
NNS				*e*S	**Sn**	**16 35 51.6**	**-0.1**
	baz=273						
ESL	**Shilin**	**1.49**	**253**	*e*P	**Pn**	**16 35 32.6**	**-0.6**
	baz=242						
ESL				*e*S	**Sn**	**16 35 50.6**	**-1.1**
	baz=242						
NSK	**Sanguang**	**1.54**	**286**	*e*P	**Pn**	**16 35 35.3**	**+1.4**
	baz=273						
NSK				*e*S	**Sn**	**16 35 52.2**	**-0.7**
	baz=273						
WHF	**Hehuan Shan**	**1.58**	**266**	P	**Pn**	**16 35 35.4**	**+0.6**
	baz=262						
WHF				*e*S	**Sn**	**16 35 54.4**	**0.0**
	baz=262						
JTJ	**Tarama**	**1.61**	**76**	P	**Pn**	**16 35 35.5**	**+0.7**
JTJ				S	**Sn**	**16 35 54.6**	**+0.1**
EHY	**Hungye**	**1.70**	**244**	*e*P	**Pn**	**16 35 36.1**	**0.0**
	baz=249						
EHY				*e*S	**Sn**	**16 35 56.1**	**-0.7**
	baz=249						
TWF1	**Yuli**	**1.79**	**240**	*e*P	**Pn**	**16 35 37.6**	**+0.3**
	baz=229						
TWF1				*e*S	**Sn**	**16 35 58.5**	**-0.6**
	baz=229						
CHKT	**Chengkung**	**1.89**	**232**	*e*P	**Pn**	**16 35 37.6**	**-1.0**
	baz=222						
CHKT				*e*S	**Sn**	**16 35 59.0**	**-2.3**
	baz=222						
SMLT	**Sun Moon Lake**	**1.94**	**259**	*e*P	**Pn**	**16 35 39.6**	**+0.2**
	baz=255						
SMLT				*e*S	**Sn**	**16 36 03.5**	**+0.6**
	baz=255						
TYC	**Yuchr**	**1.98**	**260**	*e*P	**Pn**	**16 35 40.9**	**+1.1**
	baz=250						
TYC				*e*S	**Sn**	**16 36 03.6**	**+0.1**
	baz=250						
ELDTW	**Lidau**	**2.10**	**240**	*e*P	**Pn**	**16 35 41.1**	**-0.5**
	baz=236						
ELDTW				*e*S	**Sn**	**16 36 04.7**	**-1.9**
	baz=236						
ALS	**Alishan**	**2.13**	**250**	*e*P	**Pn**	**16 35 43.0**	**+0.8**
	baz=246						
ALS				*e*S	**Sn**	**16 36 08.2**	**+0.4**
	baz=246						
CHN5	**Tsauling**	**2.21**	**253**	*e*P	**Pn**	**16 35 44.7**	**+1.6**
	baz=249						
CHN5				*e*S	**Sn**	**16 36 10.5**	**+1.1**
	baz=249						
TWG	**Pinlang**	**2.27**	**231**	*e*P	**Pn**	**16 35 43.5**	**-0.4**
	baz=237						
TWG				*e*S	**Sn**	**16 36 09.7**	**-1.0**
	baz=237						
CHN4	**Tsaushan**	**2.37**	**248**	*e*P	**Pn**	**16 35 46.5**	**+1.2**
	baz=244						
CHN4				*e*S	**Sn**	**16 36 14.0**	**+0.8**
	baz=244						
WTP	**Ta-pu**	**2.40**	**245**	*e*P	**Pn**	**16 35 46.3**	**+0.6**
	baz=249						
WTP				*e*S	**Sn**	**16 36 14.6**	**+0.6**
	baz=249						
CHN1	**Nanshi**	**2.50**	**245**	*e*P	**Pn**	**16 35 48.1**	**+1.1**
	baz=252						
CHN1				*e*S	**Sn**	**16 36 16.9**	**+0.7**
	baz=252						

GUC 22 16:41:59.5±0.8,32°51S×71°44W,h35km±2km,MD3.9, ML3.3,5C-4D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.54**	**198**	*e*P	Pn	16 42 10.4	-0.3
IHA				*i* S	Sn	16 42 18.5	-0.1
ROCH	**El Roble**	**0.59**	**142**	⇑*i*P	Pn	16 42 11.7	0.0
ROCH				*i* S	Sn	16 42 20.8	+0.4
ROCH				AML	AML	16 42 22.3	
	comp=N,2μm,0.5s						
CHNG	**Los Chungos**	**0.63**	**356**	⇑*i*P	Pn	16 42 11.8	-0.1
CHNG				*i* S	Sn	16 42 20.9	+0.2
JACH	**Jahuel**	**0.74**	**104**	⇑*i*P	Pn	16 42 14.2	+0.6
JACH				*i* S	Sn	16 42 24.4	+0.7
PEL	**Peldehue**	**0.90**	**135**	⇑*i*P	Pn	16 42 16.4	+0.7
PEL				*i* S	Sn	16 42 28.8	+1.2
PEL				AML	AML	16 42 29.8	
	comp=E,4μm,0.4s						
RCDM	**Rinconada Maip**	**1.11**	**151**	⇑*i*P	Pn	16 42 17.9	-0.8
RCDM				*i* S	Sn	16 42 32.9	+0.1
RCDM				AML	AML	16 42 34.1	
	comp=E,2μm,0.1s						
CLCH	**Cerro Calan**	**1.17**	**139**	⇓*i*P	Pn	16 42 20.2	+0.8
CLCH				*i* S	Sn	16 42 35.8	+1.6
CLCH				AML	AML	16 42 37.7	
	comp=N,779nm,0.3s						
ANTU	**Antumapu**	**1.26**	**147**	⇓*i*P	Pn	16 42 21.9	+1.3
ANTU				*i* S	Sn	16 42 38.2	+1.8
ANTU				AML	AML	16 42 41.6	
	comp=E,750nm,0.3s						
FCH	**Farellones**	**1.27**	**130**	⇓*i*P	Pn	16 42 22.2	+1.1
FCH				*i* S	Sn	16 42 38.0	+0.7
FCH				AML	AML	16 42 38.6	
	comp=N,835nm,0.4s						
CMCH	**Combarbala**	**1.39**	**16**	*e*P	Pn	16 42 23.4	+1.0
CMCH				*e*S	Sn	16 42 41.7	+2.1
CMCH				AML	AML	16 42 43.4	
	comp=E,4μm,0.7s						
SJCH	**San Jose de Ma**	**1.45**	**141**	*e*P	Pn	16 42 23.3	-0.1
SJCH				*i* S	Sn	16 42 42.3	+1.0
SJCH				AML	AML	16 42 43.4	
	comp=N,294nm,0.6s						
CHCH	**Chadas Angostu**	**1.57**	**155**	*e*P	Pn	16 42 26.6	+1.7
LMEL	**Las Melosas**	**1.69**	**142**	⇓*i*P	Pn	16 42 28.1	+1.3
LMEL				*i* S	Sn	16 42 50.0	+2.6
LMEL				AML	AML	16 42 54.8	
	comp=N,1μm,0.2s						
CACH	**El Canelo**	**1.75**	**156**	*e*P	Pn	16 42 29.7	+2.2
CACH				*i* S	Sn	16 42 53.0	+4.2
TLL	**Tololo Astrono**	**2.40**	**13**	*e*P	Pn	16 42 38.0	+1.4
TLL				AML	AML	16 43 18.0	
	comp=N,228nm,0.5s						

*ISCJB **22** 16:48:01.3±0.9,19.6°60S±0.0°06×177.9°90W±0.0°05, h504km±10km,mb4.6/74, Error ellipse: s-maj=9.9km s-min=5.9km az=156.9*
*IDC **22** 16:48:04.3±0.7,19.6°64S×177.8°87W,h531km±7km,mb4.0/13, mb1 4.2/16,mb1mx4.1/22,mbtmp4.0/16, Error ellipse: s-maj=12.2km s-min=8.4km az=141.0*
*BJI **22** 16:48:04.5,19.8°75S×177.6°64W,h555km,mB5.1/10, mb4.5/15*
*NEIC **22** 16:48:04.3±0.2,19.6°68S×177.8°82W,mb4.6/57,Error ellipse: s-maj=9.0km s-min=4.3km az=148.0*
*BGS **22** 16:48:04.3±3.7,19.6°68S×177.8°82W,h534km,mb4.6(NEIC)*
ISC 22 16:48:04.4±0.4,19.8°88S±0.0°06×177.9°69W±0.0°06, h540km±3km,h540km;pP-P,n548,σ0.9/96/604,mb4.6/74, 188C-164D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.56**	**297**	*e*P	**P**	**16 49 30.1**	**-0.1**
AFI	**Afiamalu**	**8.20**	**45**	*e*P	P	16 49 59.4	-4.7
	196nm,0.6s						
AFI				S	S	16 51 32.8	-9.3
AFI	**Afiamalu**	**8.20**	**45**	P	P	16 49 59.9	-4.2
	39nm,0.3s,baz=30,slow=1.7,SNR=50						
AFI				S	S	16 51 32.8	-9.3
	20nm,0.3s,baz=15,slow=23,SNR=12						
RAO	**Raoland**	**9.34**	**181**	S	**S**	**16 52 01.8**	**-1.0**
	104nm,0.3s,baz=111,slow=22,SNR=2.4						
FUNA	**Funafuti**	**11.68**	**345**	*e*P	P	16 50 33.1	-6.6
	258nm,1.0s						
DZM	**Mont Dzumac**	**14.98**	**259**	*e*P	**P**	**16 51 12.8**	**-1.2**
DZM	**Mont Dzumac**	**14.98**	**259**	P	**P**	**16 51 13.4**	**-0.5**
DZM	**Mont Dzumac**	**14.98**	**259**	P	**P**	**16 51 13.4**	**-0.5**
	4.8nm,0.3s,baz=86,slow=17,SNR=48						
NOUC	**Port Laguerre**	**15.11**	**259**	*e*P	**P**	**16 51 15.8**	**+0.6**
RAR	**Rarotonga**	**16.84**	**98**	*e*P	**P**	**16 51 33.2**	**+1.0**
RAR	**Rarotonga**	**16.84**	**98**	P	**P**	**16 51 33.1**	**+0.9**
	1.4nm,0.3s,baz=262,slow=8.4,SNR=9.7						
URZ	**Urewera**	**18.86**	**193**	P	**P**	**16 51 50.7**	**+0.3**
URZ				S	**S**	**16 54 49.8**	**-4.5**
URZ	**Urewera**	**18.86**	**193**	P	**P**	**16 51 50.7**	**+0.3**
	4.9nm,0.3s,baz=281,slow=2.2,SNR=41						
URZ				S	**S**	**16 54 49.8**	**-4.5**
	1.0nm,0.3s,baz=28,slow=23,SNR=11						
SNZO	**South Karori**	**22.32**	**195**	P	**P**	**16 52 21.7**	**0.0**
	29nm,0.8s						
RPZ	**Rata Peaks**	**25.57**	**199**	*e*P	**P**	**16 52 51.0**	**+0.5**
	28nm,1.2s						
RPZ	**Rata Peaks**	**25.57**	**199**	P	**P**	**16 52 51.0**	**+0.5**
	6.0nm,0.5s,baz=265,slow=3.0,SNR=11						
CAN	**Canberra**	**33.10**	**235**	*e*P	**P**	**16 53 57.2**	**+1.2**
	67nm,1.1s						
CTA	**Charters Tower**	**33.84**	**263**	P	**P**	**16 54 02.4**	**0.0**
CTA	**Charters Tower**	**33.84**	**263**	P	**P**	**16 54 02.4**	**0.0**
	68nm,0.5s,baz=86,slow=11,SNR=34						
CTAO	**Charters Tower**	**33.84**	**263**	⇓*i*P	**P**	**16 54 02.4**	**0.0**
	68nm,0.5s						
PMG	**Port Moresby**	**35.49**	**282**	⇑*e*P	**P**	**16 54 15.0**	**-1.1**
	38nm,0.6s						
COEN	**Coen**	**37.84**	**273**	⇓*i*P	**P**	**16 54 35.2**	**-0.2**
	208nm,0.4s						
STKA	**Stephens Creek**	**38.32**	**244**	⇓*i*P	**P**	**16 54 40.2**	**+1.0**
	16nm,0.9s						
STKA				ScP	**ScP**	**16 59 39.1**	**+3.3**
STKA	**Stephens Creek**	**38.32**	**244**	P	**P**	**16 54 40.3**	**+1.1**
	61nm,0.9s,baz=91,slow=9.5,SNR=103						
STKA				ScP	**ScP**	**16 59 39.1**	**+3.3**
	2.3nm,0.8s,baz=39,slow=6.0,SNR=3.6						
BBOO	**Buckleboo**	**43.08**	**243**	*e*P	**P**	**16 55 17.6**	**+0.5**
	1μm,0.6s						
AS31	**Alice Springs**	**44.94**	**256**	*e*P	**P**	**16 55 31.7**	**0.0**
ASAR	**Alice Springs**	**44.94**	**256**	P	**P**	**16 55 31.8**	**+0.1**
ASAR				ScP	**ScP**	**17 00 05.8**	**+3.2**
ASAR				S	**S**	**17 01 29.5**	**-1.3**
ASAR	**Alice Springs**	**44.94**	**256**	P	**P**	**16 55 31.8**	**+0.1**
	206nm,0.7s,baz=91,slow=8.1,SNR=2380						
ASAR				ScP	**ScP**	**17 00 05.8**	**+3.2**
	1.6nm,0.9s,baz=78,slow=4.9,SNR=4.7						
ASAR				S	**S**	**17 01 29.5**	**-1.3**
	5.6nm,0.8s,baz=89,slow=15,SNR=20						
WRAB	**Tennant Creek**	**44.97**	**261**	*e*P	**P**	**16 55 30.9**	**-0.9**
	85nm,0.7s						
WRA	**Warramunga Arr**	**44.98**	**261**	P	**P**	**16 55 31.0**	**-1.0**
WRA				ScP	**ScP**	**17 00 05.5**	**+2.7**
WRA				S	**S**	**17 01 29.2**	**-2.1**
WRA	**Warramunga Arr**	**44.98**	**261**	P	**P**	**16 55 31.0**	**-1.0**
	46nm,0.3s,baz=97,slow=7.8,SNR=1085						
WRA				ScP	**ScP**	**17 00 05.5**	**+2.7**
	1.9nm,1.0s,baz=95,slow=3.4,SNR=4.0						
WRA				S	**S**	**17 01 29.2**	**-2.1**
	4.5nm,0.8s,baz=95,slow=13,SNR=12						
FORT	**Forrest**	**49.81**	**246**	*e*P	**P**	**16 56 07.9**	**-0.2**
	127nm,0.7s						
FITZ	**Fitzroy Crossi**	**53.40**	**262**	*e*P	**P**	**16 56 34.0**	**-0.1**
	15nm,0.5s						
MBWA	**Marble Bar**	**58.27**	**257**	*e*P	**P**	**16 57 07.3**	**-0.5**
	20nm,0.6s						
VNDA	**Vanda**	**58.55**	**185**	P	P	16 57 12.2	+3.5
VNDA				ScP	**ScP**	**17 01 03.5**	**+3.0**
VNDA	**Vanda**	**58.55**	**185**	P	P	16 57 12.2	+3.5
	3.0nm,0.6s,baz=351,slow=7.6,SNR=24						
VNDA				ScP	**ScP**	**17 01 03.5**	**+3.0**
	0.8nm,0.8s,baz=333,slow=5.1,SNR=4.9						
MJAR	**Matsushiro Arr**	**69.88**	**323**	P	**P**	**16 58 19.7**	**-1.5**
MJAR	**Matsushiro Arr**	**69.88**	**323**	P	**P**	**16 58 19.7**	**-1.5**
	4.2nm,0.6s,baz=158,slow=6.3,SNR=18						
FX1	**Attu Island--F**	**72.89**	**354**	*e*P	**P**	**16 58 36.1**	**-2.3**
UNV	**Unalaska Valle**	**74.05**	**7**	*e*P	**P**	**16 58 43.0**	**-1.9**
PEA0B	**Petropavlovsk-**	**75.75**	**345**	*e*P	**P**	**16 58 53.1**	**-1.4**
PETK	**Petropavlovsk-**	**75.75**	**345**	P	**P**	**16 58 53.4**	**-1.2**
PETK	**Petropavlovsk-**	**75.75**	**345**	P	**P**	**16 58 53.4**	**-1.2**
	18nm,0.8s,baz=134,slow=8.5,SNR=22						
BSC	**Santa Cruz Isl**	**76.96**	**46**	⇓P	**P**	**16 59 02.3**	**+0.6**
	baz=77						
SCI	**San Clemente I**	**77.14**	**48**	⇓P	**P**	**16 59 03.3**	**+0.6**
	baz=77						
PKM	**Peak Mountain**	**77.36**	**46**	⇓P	**P**	**16 59 04.9**	**+0.9**
	baz=78						
SAO	**San Andreas Ge**	**77.38**	**43**	*e*P	**P**	**16 59 04.6**	**+0.7**
	31nm,1.3s						
BLG	**Laguna Peak**	**77.42**	**47**	⇓P	**P**	**16 59 05.0**	**+0.8**
	baz=78						
CIS	**Catalina Islan**	**77.48**	**47**	⇓P	**P**	**16 59 05.4**	**+0.9**
	baz=78						
CHGN	**Chignik**	**77.61**	**11**	*e*P	**P**	**16 59 02.9**	**-1.7**
MWC	**Mount Wilson**	**78.17**	**47**	*e*P	**P**	**16 59 08.9**	**+0.4**
	19nm,0.8s						
MURC	**Murrieta**	**78.42**	**48**	⇑P	**P**	**16 59 10.3**	**+0.7**
	baz=79						
BFSC	**Mount Baldy Ra**	**78.45**	**47**	⇑P	**P**	**16 59 10.2**	**+0.3**
	baz=79,SNR=5.2						
EDW2	**Edwards Air Fo**	**78.58**	**46**	⇓P	**P**	**16 59 11.0**	**+0.5**
	baz=79,SNR=13						
MONP	**Monument Peak**	**78.58**	**49**	⇑P	**P**	**16 59 11.4**	**+0.7**
	baz=79,SNR=13						
USRK	**Ussuriysk Arra**	**78.61**	**326**	P	**P**	**16 59 09.3**	**-1.0**
	4.3nm,0.8s,baz=163,slow=4.2,SNR=8.5						
DVTC	**Desert V Tower**	**78.69**	**49**	⇑P	**P**	**16 59 12.3**	**+1.2**
	baz=79						
ISA	**Isabella**	**78.70**	**46**	*e*P	**P**	**16 59 11.8**	**+0.7**
	12nm,0.9s						
ISA	**Isabella**	**78.70**	**46**	⇑P	**P**	**16 59 11.7**	**+0.7**
	baz=79,SNR=12						
CMB	**Columbia Colle**	**78.81**	**43**	*e*P	**P**	**16 59 11.2**	**-0.4**
	14nm,0.9s						
PFO	**Pinyon Flat Ob**	**78.95**	**48**	⇑P	**P**	**16 59 13.1**	**+0.5**
	baz=79						
WDC	**Whiskeytown Da**	**79.01**	**40**	*e*P	**P**	**16 59 13.0**	**+0.5**
	23nm,1.4s						
SWSC	**Sam W. Stewart**	**79.06**	**49**	⇑P	**P**	**16 59 14.1**	**+1.2**
	baz=79						
LRMC	**Laurel Mountai**	**79.12**	**46**	⇑P	**P**	**16 59 14.2**	**+0.8**
	baz=79						
BELC	**Belle Mtn. Jos**	**79.48**	**48**	⇑P	**P**	**16 59 16.1**	**+0.8**
	baz=80,SNR=12						
OHAK	**Old Harbor**	**79.48**	**13**	*e*P	**P**	**16 59 13.6**	**-1.0**
	7.7nm,0.5s						
MPMC	**Manual Prospec**	**79.58**	**46**	⇓P	**P**	**16 59 16.6**	**+0.6**
	baz=80,SNR=5.9						
GSC	**Goldstone**	**79.62**	**47**	*e*P	**P**	**16 59 16.1**	**+0.1**
	4.8nm,0.9s						
GSC	**Goldstone**	**79.62**	**47**	⇓P	**P**	**16 59 16.8**	**+0.7**
	baz=80						
YBH	**Yreka Blue Hor**	**79.63**	**39**	*e*P	**P**	**16 59 16.4**	**+0.5**
	16nm,1.0s						
TIN	**Tinemaha**	**79.65**	**44**	⇑P	**P**	**16 59 17.2**	**+1.1**
	baz=80						
BC3	**Big Chuckawall**	**79.68**	**49**	⇓P	**P**	**16 59 17.2**	**+0.8**
	baz=80,SNR=6.9						
HEC	**Hector,Ludlow**	**79.69**	**47**	⇓P	**P**	**16 59 16.7**	**+0.3**
	baz=80,SNR=11						
NJ2	**Nanjing**	**79.71**	**309**	*e*P	**P**	**16 59 16.8**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GLA	**Glamis**	**79.80**	**49**	*e*P	**P**	**16 59 18.2**	**+1.2**
	comp=Z,31nm,1.4s						
GLA	**Glamis**	**79.80**	**49**	⇑P	**P**	**16 59 18.1**	**+1.1**
	baz=80,SNR=5.7						
BEKR	**Beckworth**	**79.91**	**41**	*e*P	**P**	**16 59 17.9**	**+0.3**
	comp=Z,8.2nm,1.2s						
HUMO	**Hull Mountain**	**80.03**	**38**	*e*P	**P**	**16 59 18.5**	**+0.6**
	comp=Z,12nm,1.0s						
GMRC	**Granite Mounta**	**80.13**	**48**	⇑P	**P**	**16 59 19.4**	**+0.6**
	baz=80,SNR=6.7						
IRM	**Iron Mountain**	**80.16**	**48**	⇓P	**P**	**16 59 19.7**	**+0.9**
	baz=80,SNR=11						
MDJ	**Mudanjiang**	**80.18**	**325**	P	**P**	**16 59 19.0**	**+0.4**
MDJ				pP	**pP**	**17 01 14.3**	**+0.1**
MDJ				sP	**sP**	**17 02 09.5**	**+0.1**
MDJ				PP	**PP**	**17 02 30.8**	**-0.4**
MDJ				SS	**SS**	**17 14 03.9**	**-2.2**
MDJ				pmax	pmax		
	comp=Z,15nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,370nm,4.5s						
GRAC	**Grapevine Rang**	**80.18**	**45**	⇑P	**P**	**16 59 20.0**	**+1.2**
	baz=80						
FURC	**Furnace Creek,**	**80.23**	**46**	⇑P	**P**	**16 59 20.0**	**+1.0**
	baz=80						
TUQ	**Turquoise Moun**	**80.30**	**47**	⇑P	**P**	**16 59 20.3**	**+0.7**
	baz=80						
NVAR	**Mina Array Bea**	**80.38**	**43**	P	**P**	**16 59 20.7**	**+0.6**
NVAR	**Mina Array Bea**	**80.38**	**43**	P	**P**	**16 59 20.7**	**+0.6**
	comp=Z,9.3nm,0.8s,baz=225,slow=8.9,SNR=60						
Y12C	**Blythe**	**80.39**	**49**	⇑P	**P**	**16 59 21.2**	**+1.3**
	baz=80						
113A	**Mohawk Valley,**	**80.42**	**50**	⇑P	**P**	**16 59 21.1**	**+1.0**
	baz=81,SNR=8.0						
NV11	**Mina Array Sit**	**80.47**	**43**	*e*P	**P**	**16 59 20.8**	**+0.3**
214A	**Organ Pipe Nat**	**80.70**	**51**	⇓P	**P**	**16 59 22.9**	**+1.3**
	baz=81,SNR=6.2						
PDMCI	**Parker Dam,Lak**	**80.94**	**49**	⇓P	**P**	**16 59 23.8**	**+1.0**
	baz=81,SNR=7.2						
MOD	**Modoc**	**81.16**	**40**	*e*P	**P**	**16 59 24.0**	**0.0**
	comp=Z,31nm,0.8s						
Z14A	**Wintersburg**	**81.31**	**50**	⇓P	**P**	**16 59 26.0**	**+1.3**
	baz=81,SNR=8.8						
W13A	**Hualapai Mount**	**81.54**	**48**	⇓P	**P**	**16 59 26.8**	**+0.6**
	baz=82,SNR=5.7						
Y14A	**Wickenburg**	**81.56**	**49**	⇓P	**P**	**16 59 26.9**	**+0.8**
	baz=82,SNR=8.1						
H04A	**Detroit Lake**	**81.76**	**36**	P	**P**	**16 59 26.9**	**+0.1**
CN2	**Changchun**	**81.99**	**322**	*e*P	**P**	**16 59 28.3**	**+0.4**
CN2				*e*pP	**pP**	**17 01 25.4**	**+1.2**
CN2				*e*S	**S**	**17 08 57.8**	**+0.3**
CN2				SS	**SS**	**17 14 35.6**	**+2.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
R11A	**Troy Canyon, C**	**82.11**	**45**	⇓P	**P**	**16 59 29.4**	**+0.5**
	baz=82						
BMN	**Battle Mountai**	**82.20**	**42**	*e*P	**P**	**16 59 29.7**	**+0.4**
	comp=Z,39nm,1.3s						
TUC	**Tucson**	**82.37**	**52**	*e*P	**P**	**16 59 31.6**	**+1.3**
	comp=Z,5.7nm,1.1s						
WVOR	**Wild Horse Val**	**82.47**	**40**	*e*P	**P**	**16 59 31.0**	**+0.4**
	comp=Z,20nm,0.9s						
LVP	**Lakeview Peak**	**82.50**	**35**	P	**P**	**16 59 31.1**	**+0.5**
VIPM	**Ingram Point**	**82.54**	**37**	P	**P**	**16 59 31.4**	**+0.5**
OSR	**Olympics--Salm**	**82.59**	**33**	P	**P**	**16 59 32.0**	**+1.0**
FL2	**Flat Top 2**	**82.61**	**35**	P	**P**	**16 59 32.2**	**+1.0**
TDL	**Tradedollar La**	**82.78**	**35**	P	**P**	**16 59 32.8**	**+0.8**
X16A	**Lo Mia Camp, P**	**82.92**	**50**	⇓P	**P**	**16 59 34.4**	**+1.3**
	baz=83,SNR=12						
SEW	**Seward**	**82.95**	**14**	*e*P	**P**	**16 59 29.8**	**-2.5**
	comp=Z,17nm,0.8s						
319A	**Douglas**	**83.05**	**53**	⇑P	**P**	**16 59 35.5**	**+1.8**
	baz=83,SNR=15						
HDW	**Hoodsport**	**83.15**	**34**	P	**P**	**16 59 34.5**	**+0.7**
CCUT	**Cedar City**	**83.17**	**46**	*e*P	**P**	**16 59 35.1**	**+0.7**
	comp=Z,12nm,0.9s						
ARUT	**Antelope Range**	**83.24**	**46**	*e*P	**P**	**16 59 34.1**	**-0.5**
	comp=Z,11nm,1.1s						
LON	**Longmire**	**83.25**	**35**	*e*P	**P**	**16 59 33.9**	**-0.4**
	comp=Z,5.7nm,0.8s						
U15A	**North Rim**	**83.33**	**48**	⇓P	**P**	**16 59 36.4**	**+1.1**
	baz=84

TRF	Thorofare Moun	85.78	12	eP		P	16 59 44.0	-2.4	
	comp=Z,25nm,0.8s								
SRU	San Rafael	85.89	46	eP		P	16 59 47.8	+0.3	
SRU	San Rafael	85.89	46	⇑P		P	16 59 48.1	+0.6	
	baz=86								
H12A	Diamond D Ranc	85.94	40	⇓P		P	16 59 47.8	+0.2	
	baz=86,SNR=22								
U20A	Newcomb	85.96	49	⇓P		P	16 59 48.8	+0.9	
	baz=86								
Y22A	Socorro	85.96	52	⇑P		P	16 59 49.0	+1.0	
	baz=86								
324A	Moseley Ranch,	85.97	55	⇑P		P	16 59 49.0	+1.0	
	baz=86,SNR=11								
G12A	Big Creek, Yel	85.97	39	⇓P		P	16 59 48.2	+0.5	
	baz=86								
I13A	Wildhorse Cree	86.04	40	⇓P		P	16 59 48.8	+0.6	
	baz=86,SNR=8.5								
LENM	Lemitar	86.06	52	eP		P	16 59 49.2	+0.8	
	comp=Z,3.8nm,0.9s								
425A	Indio Mountain	86.06	55	⇓P		P	16 59 49.7	+1.2	
	baz=86,SNR=9.8								
J14A	Carey	86.09	41	⇑P		P	16 59 49.4	+1.0	
	baz=86								
X22A	Bernardo	86.19	51	⇓P		P	16 59 50.3	+1.3	
	baz=86								
626A	Big Bend Ranch	86.20	57	⇓P		P	16 59 50.6	+1.5	
	baz=86,SNR=15								
Z23A	Rita Site, Whi	86.20	53	⇓P		P	16 59 50.6	+1.5	
	baz=86								
224A	Cornudas Mount	86.22	54	⇓P		P	16 59 50.6	+1.4	
	baz=86,SNR=8.2								
H13A	Challis	86.30	40	⇓P		P	16 59 50.0	+0.6	
	baz=86								
BNM	Barren Site	86.31	52	eP		P	16 59 50.5	+0.8	
	comp=Z,2.6nm,0.7s								
V21A	Milan	86.33	50	⇓P		P	16 59 50.3	+0.6	
	baz=86								
P18A	Preston Nutter	86.33	46	⇓P		P	16 59 50.3	+0.5	
	baz=86								
325A	Bean Ranch, Si	86.33	55	⇓P		P	16 59 50.5	+0.7	
	baz=86,SNR=11								
F12A	Elk City	86.36	38	⇓P		P	16 59 49.7	+0.2	
	baz=86,SNR=69								
LPM	Los Pinos Moun	86.38	52	eP		P	16 59 50.6	+0.6	
	comp=Z,5.3nm,0.9s								
K15A	Arbon	86.38	42	⇓P		P	16 59 50.3	+0.6	
	baz=86								
526A	Mary Lane Ranc	86.45	56	⇓P		P	16 59 51.6	+1.2	
	baz=87,SNR=12								
I14A	Mackay	86.45	41	⇓P		P	16 59 50.9	+0.8	
	baz=87,SNR=9.1								
TXAR	Lajitas Array	86.48	57	P		P	16 59 52.0	+1.5	
TXAR				pP		pP	17 01 49.0	+0.7	
TXAR	Lajitas Array	86.48	57	P		P	16 59 52.0	+1.5	
	comp=Z,6.1nm,0.7s,baz=218,slow=6.6,SNR=55								
TXAR				pP		pP	17 01 49.0	+0.7	
	comp=Z,1.2nm,1.2s,baz=256,slow=3.6,SNR=2.8								
124A	Stringfield Ra	86.54	54	⇑P		P	16 59 51.9	+1.1	
	baz=87								
N17A	Moffit Pass	86.59	44	⇓P		P	16 59 51.2	+0.3	
	baz=87								
GYA	Guiyang	86.59	300	P		P	16 59 51.0	-0.1	
GYA				pP		pP	17 01 50.3	+1.3	
GYA				sP		sP	17 02 44.8	+1.1	
GYA				SKS		SKSac	17 09 24.5	-2.2	
GYA				S		S	17 09 41.8	-1.4	
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s								
U21A	Nageezi	86.60	49	⇓P		P	16 59 51.8	+0.8	
	baz=87								
G13A	Cobalt	86.60	39	⇓P		P	16 59 51.0	+0.3	
	baz=87,SNR=12								
Y23A	Lovelace Mesa,	86.63	52	⇓P		P	16 59 51.9	+0.7	
	baz=87								
PV04	Paradox Valley	86.64	47	eP		P	16 59 51.3	+0.2	
Q19A	Hogan Spring (	86.67	47	⇑P		P	16 59 51.6	+0.5	
	baz=87								
NEW	Newport	86.70	36	eP		P	16 59 50.3	-0.7	
	comp=Z,2.9nm,0.8s								
NEW	Newport	86.70	36	⇑P		P	16 59 50.9	-0.1	
	baz=87								
L16A	Fish Haven	86.73	43	⇓P		P	16 59 51.7	+0.2	
	baz=87								
627A	Terlingua Ranc	86.75	57	⇓P		P	16 59 53.0	+1.3	
	baz=87,SNR=17								
S20A	Disappointment	86.76	48	⇑P		P	16 59 52.3	+0.5	
	baz=87								
426A	McDonald Obser	86.76	56	⇑P		P	16 59 53.1	+1.2	
	baz=87,SNR=16								
225A	Deer Hill, Car	86.76	54	⇓P		P	16 59 52.8	+1.0	
	baz=87,SNR=6.7								
ANMO	Albuquerque	86.79	51	eP		P	16 59 52.2	+0.3	
	comp=Z,7.2nm,0.9s								
J15A	Blackfoot	86.81	42	⇑P		P	16 59 52.8	+1.1	
	baz=87								
527A	Woodward Ranch	86.86	57	⇓P		P	16 59 53.0	+0.7	
	baz=87								
H14A	Leadore	86.87	40	⇓P		P	16 59 52.6	+0.6	
	baz=87,SNR=11								
Z24A	Sheeppen Canyo	86.89	53	⇓P		P	16 59 53.4	+1.0	
	baz=87								
V22A	San Miguel Ran	86.90	50	⇑P		P	16 59 53.3	+0.8	
	baz=87								
F13A	Darby	86.92	39	⇑P		P	16 59 52.2	0.0	
	baz=87,SNR=26								
C11A	Tepee Creek (N	86.94	36	⇑P		P	16 59 52.4	+0.2	
	baz=87,SNR=18								
T21A	Navajo Lake	86.95	49	⇑P		P	16 59 53.2	+0.6	
	baz=87								
M17A	Scullys Gap (B	86.96	44	⇓P		P	16 59 52.9	+0.3	
	baz=87								
D12A	Red Ives Fores	87.01	37	⇑P		P	16 59 52.0	-0.5	
	baz=87,SNR=12								
K16A	Soda Springs	87.05	42	⇑P		P	16 59 53.5	+0.6	
	baz=87,SNR=5.2								
326A	Caldwell Ranch	87.07	55	⇑P		P	16 59 54.2	+1.0	
	baz=87								
S21A	Coal Bank Pass	87.08	48	⇓P		P	16 59 53.8	+0.4	
	baz=87,SNR=9.6								
I15A	Monteview	87.09	41	⇑P		P	16 59 53.9	+0.9	
	baz=87								
Y24A	Capitan	87.09	52	⇓P		P	16 59 54.1	+0.7	
	baz=87,SNR=13								
W23A	Werner Place,	87.11	51	⇑P		P	16 59 54.1	+0.7	
	baz=87								
125A	Gardner Draw,	87.13	54	⇑P		P	16 59 54.2	+0.7	
	baz=87								
G14A	Jackson	87.14	40	⇓P		P	16 59 53.7	+0.3	
	baz=87,SNR=5.1								
U22A	Llaves	87.15	50	⇓P		P	16 59 54.4	+0.8	
	baz=87								
GDL2	Guadalupe Moun	87.15	54	eP		P	16 59 54.6	+1.0	
	comp=Z,25nm,1.2s								
628A	Black Gap, Mar	87.16	57	⇓P		P	16 59 54.8	+1.2	
	baz=87,SNR=7.6								
P19A	Cripple Cowboy	87.18	46	⇑P		P	16 59 54.1	+0.5	
	baz=87								
226B	Tecolote Peak,	87.25	55	⇓P		P	16 59 55.0	+1.0	
	baz=87,SNR=7.9								
J16A	Bone	87.26	42	⇓P		P	16 59 54.6	+0.6	
	baz=87,SNR=12								
MCMT	McKenzie Canyo	87.29	40	eP		P	16 59 54.7	+0.6	
	comp=Z,14nm,1.1s								
C12B	Naegeli Ranch,	87.31	37	⇓P		P	16 59 53.9	+0.1	
	baz=87								
H15A	Lima	87.31	40	⇓P		P	16 59 54.4	+0.3	
	baz=87,SNR=9.3								
427A	Hayter Ranch,	87.32	56	⇑P		P	16 59 55.7	+1.3	
	baz=88,SNR=24								
M18A	Lyman	87.33	44	⇓P		P	16 59 54.6	+0.3	
	baz=87								
Q20A	Ridgley Place,	87.33	47	⇑P		P	16 59 54.6	+0.3	
	baz=88								
V23A	Ortiz Mt. (NFS	87.35	51	⇑P		P	16 59 55.6	+1.0	
	baz=88								
Z25A	Roswell	87.35	53	⇓P		P	16 59 55.8	+1.3	
	baz=88								
E13A	Victor	87.35	38	⇑P		P	16 59 53.8	-0.3	
	baz=88								
N18A	Larsen Ranch,	87.37	45	⇓P		P	16 59 54.7	+0.3	
	baz=88								
DLBC	Dease Lake	87.37	23	eP		P	16 59 53.5	-0.4	
O19A	Miners Draw (B	87.41	45	⇓P		P	16 59 55.2	+0.6	
	baz=88								
T22A	Edith	87.41	49	⇑P		P	16 59 55.6	+0.7	
	baz=88								
K17A	Gardner Place,	87.43	43	⇓P		P	16 59 55.4	+0.7	
	baz=88								
F14A	Wisdom	87.50	39	⇓P		P	16 59 55.2	+0.2	
	baz=88								
528A	Cox Ranch, San	87.52	57	⇓P		P	16 59 56.3	+1.0	
	baz=88,SNR=7.2								
D13A	Huson	87.55	38	⇑P		P	16 59 55.0	0.0	
	baz=88,SNR=6.7								
R21A	Cimarron	87.57	48	⇑P		P	16 59 56.1	+0.5	
	baz=88,SNR=5.5								
U23A	El Rito	87.61	50	⇑P		P	16 59 56.3	+0.5	
	baz=88								
126A	Clayton Basin,	87.61	54	⇑P		P	16 59 56.5	+0.8	
	baz=88								
I16A	Newdale	87.64	41	⇓P		P	16 59 56.3	+0.6	
	baz=88,SNR=6.4								
ILAR	Eielson Array	87.65	13	P		P	16 59 53.5	-1.5	
ILAR				pP		pP	17 01 51.1	-2.2	
ILAR				PP		PP	17 03 22.6	-8.0	
ILAR	Eielson Array	87.65	13	P		P	16 59 53.5	-1.5	
	comp=Z,7.0nm,0.7s,baz=223,slow=5.4,SNR=105								
ILAR				pP		pP	17 01 51.1	-2.2	
	comp=Z,1.6nm,1.2s,baz=224,slow=7.6,SNR=4.5								
ILAR				PP		PP	17 03 22.6	-8.0	
	comp=Z,2.1nm,1.1s,baz=230,slow=7.5,SNR=5.7								
Y25A	Mesa, Roswell	87.65	53	⇑P		P	16 59 56.2	+0.3	
	baz=88,SNR=7.5								
N19A	John Jarvie Ra	87.66	45	⇓P		P	16 59 55.7	-0.1	
	baz=88								
W24A	Lazy 6 Ranch,	87.68	51	⇑P		P	16 59 56.4	+0.3	
	baz=88,SNR=5.1								
G15A	Dillon	87.69	40	⇑P		P	16 59 56.4	+0.5	
	baz=88,SNR=27								
MSO	Missoula	87.70	38	⇓P		P	16 59 55.5	-0.3	
	baz=88								
DLMT	Dillon	87.72	40	eP		P	16 59 56.4	+0.4	
	comp=Z,26nm,1.2s								
E14A	Clinton	87.75	39	⇑P		P	16 59 55.9	-0.1	
	baz=88,SNR=8.4								
BSMT	Bassoo Peak	87.77	37	eP		P	16 59 55.4	-0.8	
	comp=Z,6.9nm,0.9s								
Q21A	Lamborn Mesa,	87.77	47	⇓P		P	16 59 57.0	+0.5	
	baz=88								
S22A	4UR Ranch, Cre	87.79	49	⇑P		P	16 59 57.3	+0.6	
	baz=88,SNR=12								
C13A	Hot Springs	87.80	37	⇑P		P	16 59 56.2	0.0	
	baz=88								
428A	Kincaid Ranch,	87.83	56	⇑P		P	16 59 57.6	+0.8	
	baz=88								
J17A	Brown Place, J	87.87	42	⇓P		P	16 59 57.3	+0.5	
	baz=88,SNR=6.6								
Z26A	Caprock	87.91	54	⇓P		P	16 59 57.8	+0.7	
	baz=88,SNR=6.1								
O20A	White River Ci	87.92	46	⇑P		P	16 59 57.5	+0.4	
	baz=88								
K18A	Toltan Ranch,	87.94	43	⇑P		P	16 59 57.6	+0.5	
	baz=88,SNR=14								
529A	Stev Forest Ra	87.95	57	⇓P		P	16 59 58.3	+1.0	
	baz=88								
M19A	Rock Springs	87.96	44	⇑P		P	16 59 57.3	0.0	
	baz=88								
IMW	Indian Meadow	88.00	42	eP		P	16 59 58.2	+0.7	
	comp=Z,20nm,1.1s								
V24A	Rampart Ranch,	88.01	51	⇑P		P	16 59 58.2	+0.5	
	baz=88								
328A	Wristen Ranch,	88.01	56	⇑P		P	16 59 58.5	+0.9	
	baz=88								
F15A	Butte	88.04	39	⇑P		P	16 59 57.8	+0.3	
	baz=88,SNR=10.0								
MOOW	Moose Ponds	88.04	42	eP		P	16 59 57.0	-0.6	
LRM	Limekiln Ridge	88.05	39	eP		P	16 59 57.6	-0.1	
	comp=Z,93nm,1.0s								
LOHW	Long Hollow	88.06	42	eP		P	16 59 57.7	0.0	
R22A	Saguache, Gunn	88.06	48	⇓P		P	16 59 58.7	+0.7	
	baz=88								
D14A	Greenough	88.09	38	⇓P		P	16 59 57.1	-0.6	
	baz=88,SNR=9.0								
L19A	Farson	88.12	44	⇓P		P	16 59 58.2	+0.2	
	baz=88,SNR=5.6								
127A	Arkansas Junct	88.13	54	⇑P		P	16 59 58.7	+0.6	
	baz=88								
G16A	Moss Hill, Enn	88.14	40	⇑P		P	16 59 58.4	+0.4	
	baz=88,SNR=6.3								
CHMT	Chamberlain Mo	88.15	38	eP		P	16 59 57.7	-0.4	
	comp=Z,7.0nm,1.0s								
QLMT	Earquake Lak	88.16	41	eP		P	16 59 59.2	+1.1	
	comp=Z,4.8nm,1.1s								
SLMT	Seeley Lake	88.18	38	eP		P	16 59 57.0	-1.1	
	comp=Z,6.6nm,1.3s								
H16A	Russell Place,	88.21	41	⇑P		P	16 59 59.4	+1.0	
	baz=88,SNR=31								
I17A	Pilgrim Ck.	88.23	42	⇑P		P	16 59 59.6	+1.1	
	baz=88								
J18A	Kendall Valley	88.23	43	⇑P		P	16 59 58.8	+0.2	
	baz=88,SNR=38								
B13A	Whitefish	88.24	37	⇓P		P	16 59 57.9	-0.3	
	baz=88								
N20A	Spence Gulch,	88.24	45	⇑P		P	16 59 59.1	+0.5	
	baz=88								
Q22A	Crested Butte,	88.25	48	⇓P		P	16 59 58.9	+0.1	
	baz=88,SNR=6.7								
E15A	Deer Lodge	88.25	39	⇑P		P	16 59 58.5	+0.1	
	baz=88								
Y26A	Elida	88.30	53	⇓P		P	16 59 60.0	+1.0	
	baz=88,SNR=6.6								
BW06	Boulder Array	88.31	43	⇓P		P	16 59 58.9	-0.1	
	baz=88,SNR=12								
PDAR	Pinedale Array	88.31	43	P		P	16 59 58.9	-0.1	
PDAR				pP		pP	17 01 57.9	+0.4	
PDAR				PP		PP	17 03 23.6	-13	
PDAR	Pinedale Array	88.31	43	P		P	16 59 58.9	-0.1	
	comp=Z,6.6nm,0.8s,baz=208,slow=3.0,SNR=41								
PDAR				pP		pP	17 01 57.9	+0.4	
	comp=Z,0.6nm,0.8s,baz=243,slow=8.0,SNR=1.7								
PDAR				PP		PP	17 03 23.6	-13	
	comp=Z,0.4nm,0.8s,baz=266,slow=13,SNR=2.5								
C14A	Swan Lake	88.32	37	⇑P		P	16 59 58.7	+0.1	
	baz=88								
SMCO	Snowmass	88.34	47	eP		P	16 59 59.3	-0.1	
W25A	X Bar L Ranch,	88.38	52	⇓P		P	16 59 59.7	+0.4	
	baz=88,SNR=8.2								
429A	Davenport Ranc	88.41	57	⇓P		P	17 00 00.1	+0.6	
	baz=88,SNR=24								
BOZ	Bozeman (W)	88.45	40	eP		P	16 59 59.8	+0.4	
	comp=Z,24nm,1.2s								
BOZ	Bozeman (W)	88.45	40	⇓P		P	16 59 59.7	+0.4	
	baz=89,SNR=14								
H17A	Grant Village	88.47	41	⇑P		P	17 00 01.2	+1.5	
	baz=89,SNR=8.8								
228A	UT Block 9, Go	88.48	55	⇓P		P	17 00 00.4	+0.7	
	baz=89								
Z27A	Tatum	88.50	54	⇓P		P	17 00 00.2	+0.3	
	baz=89,SNR=5.3								
F16A	Kennard Place,	88.53	40	⇑P		P	17 00 00.4	+0.7	
	baz=89								
V25A	Rancho No Teng	88.53	51	⇑P		P	17 00 00.5	+0.4	
	baz=89,SNR=5.3								
A13A	Flathead Natio	88.57	36	⇓P		P	17 00 00.4	+0.6	
	baz=89								
M20A	Sweetwater, Wa	88.60	45	⇓P		P	17 00 00.8	+0.5	
	baz=89								
I18A	Diamond G Ranc	88.60	42	⇑P		P	17 00 00.6	+0.3	
	baz=89,SNR=5.6								
D15A	Lincoln	88.64	38	⇓P		P	17 00 00.3	+0.1	
	baz=89,SNR=7.2								
530A	J-C Ranch, Com	88.66	57	⇑P		P	17 00 01.5	+0.9	
	baz=89,SNR=5.8								
P22A	Eagle	88.68	47	⇑P		P	17 00 01.0	+0.3	
	baz=89								
329A	Wagon Wheel Ra	88.70	56	⇓P		P	17 00 01.5	+0.7	
	baz=89,SNR=6.6								
R23A	Moffat	88.70	49	⇑P		P	17 00 01.3	+0.5	
	baz=89								
N21A	Black Mountain	88.70	46	⇓P		P	17 00 01.2	+0.5	
	baz=89,SNR=8.4								
L20A	Wamsutter	88.74	44	⇑P		P	17 00 01.3	+0.4	
	baz=89,SNR=7.0								
T24A	Torres, Weston	88.76	50	⇑P		P	17 00 01.5	+0.3	
	baz=89								
128A	Castleberry Fa	88.77	55	⇑P		P	17 00 01.8	+0.7	
	baz=89,SNR=8.3								
Y27A	Causey	88.78	53	⇓P		P	17 00 01.5	+0.4	
	baz=89								
K19A	Absolon Red Bu	88.80	43	⇑P		P	17 00 00.7	-0.4	
	baz=89,SNR=6.2								
G17A	Pierce Place,	88.83	40	⇑P		P	17 00 01.3	+0.1	
	baz=89								
W26A	Owens Ranch, T	88.84	52	⇑P		P	17 00 02.1	+0.6	
	baz=89								
J19A	Crowheart	88.88	43	⇑P		P	17 00 01.5	0.0	
	baz=89,SNR=13								
E16A	East Helena	88.88	39	⇑P		P	17 00 01.5	+0.2	
	baz=89,SNR=12								
S24A	Houchin Ranch,	88.89	49	⇑P		P	17 00 02.5	+0.7	
	baz=89								
B14A	Marquette Ranc	88.90	37	⇑P		P	17 00 01.2	-0.2	
	baz=89								
U25A	Circle Dot Ran	88.93	51	⇓P		P	17 00 02.5	+0.7	
	baz=89								
EGAK	Eagle	88.93	15	eP		P	17 00 00.1	-0.9	
	comp=Z,16nm,0.8s								
631A	Perdido Creek	88.97	58	⇓P		P	17 00 02.9	+0.9	
	baz=89								
C15A	Salmond Ranch,	88.97	38	⇑P		P	17 00 01.7	-0.1	
	baz=89,SNR=8.4								
430A	Baggett Ranch,	89.00	57	⇓P		P	17 00 03.0	+0.9	
	baz=89								
229A	Bryant Ranch,	89.02	56	⇓P		P	17 00 03.1	+0.9	
	baz=89								
K20A	Yellowstone Ra	89.05	44	⇑P		P	17 00 02.0	-0.3	
	baz=89								
O22A	Kremmling	89.09	46	⇓P		P	17 00 03.1	+0.4	
	baz=89,SNR=7.9								
MSTX	Muleshoe	89.11	53	⇑P		P	17 00 03.1	+0.4	
	baz=89,SNR=7.8								
V26A	Tequesquite Ra	89.12	51	⇑P		P	17 00 03.2	+0.4	
	baz=89								
HHC	Hu-ho-hao-te	89.13	314	eP		P	17 00 03.8	+1.2	
HHC				pP		pP	17 02 03.8	+2.5	
HHC				sP		sP	17 02 57.3	+1.6	
HHC				PP		PP	17 03 46.0	+3.0	
HHC				SKS		SKSac	17 09 41.6	+0.6	
HHC				S		S	17 10 06.0	0.0	
HHC				sS		sS	17 13 35.8	-2.0	
HHC				SS		SS	17 16 19.8	+3.1	
HHC				pmax		pmax			
	comp=Z,43nm,0.8s								
HHC				pmax		pmax			
	comp=Z,170nm,7.1s								
A14A	Double T Ranch	89.14	36	⇓P		P	17 00 02.7	+0.2	
	baz=89								
X27A	F and S Farms,	89.15	53	⇑P		P	17 00 03.4	+0.5	
	baz=89								
F17A	Fitzpatrick Pl	89.17	40	⇓P		P	17 00 03.6	+0.8	
	baz=89,SNR=10								
H18A	Shoshone NF, C	89.18	41	⇓P		P	17 00 03.2	+0.3	
	baz=89								
732A	Laxson Ranch,	89.19	59	⇓P		P	17 00 04.4	+1.4	
	baz=89								
M21A	Separation Pea	89.20	45	⇑P		P	17 00 03.1	0.0	
	baz=89,SNR=7.5								
D16A	Dana Ranch, Ca	89.21	39	⇑P		P	17 00 03.0	+0.2	
	baz=89,SNR=8.2								
R24A	Sanders Place,	89.22	49	⇑P		P	17 00 04.2	+1.0	
	baz=89								
T25A	Trinidad	89.25	50	⇓P		P	17 00 04.0	+0.6	
	baz=89								
B15A	Bradely Ranch,	89.28	37	⇓P		P	17 00 03.0	-0.1	
	baz=89								
I19A	Meeteetse	89.29	42	⇑P		P	17 00 03.8	+0.4	
	baz=89,SNR=11								
330A	Mertzon	89.29	56	⇑P		P	17 00 04.3	+0.8	
	baz=89								
531A	Rocksprings	89.29	58	⇑P		P	17 00 04.4	+0.9	
	baz=89								
E17A	Martinsdale	89.33	39	⇑P		P	17 00 03.8	+0.3	
	baz=89								
W27A	Bowe Ranch, En	89.35	52	⇑P		P	17 00 03.9	+0.2	
	baz=90,SNR=5.1								
L21A	Rawlins	89.36	45	⇑P		P	17 00 04.1	+0.3	
	baz=90								
U26A	Atchley Ranch,	89.41	51	⇑P		P	17 00 04.4	+0.3	
	baz=90								
N22A	Wattenberg Ran	89.44	46	⇑P		P	17 00 04.7	+0.4	
	baz=90,SNR=10								
S25A	Robets Cordova	89.45	49	⇓P		P	17 00 04.8	+0.5	
	baz=90								
C16A	Fuhringer Ranc	89.49	38	⇓P		P	17 00 04.3	+0.2	
	baz=90								
A15A	Johnson Ranch,	89.53	37	⇓P		P	17 00 04.4	+0.1	
	baz=90								
230A	Sterling City	89.53	56	⇑P		P	17 00 05.6	+1.0	
	baz=90								
O23A	Lake Granby, G	89.54	47	⇓P		P	17 00 05.4	+0.7	
	baz=90								
J20A	Shoshoni	89.54	43	⇑P		P	17 00 04.9	+0.4	
	baz=90,SNR=20								
G18A	Lazy EL Ranch,	89.55	41	⇑P		P	17 00 05.0	+0.5	
	baz=90,SNR=7.2								
ISCO	Idaho Springs	89.56	47	⇑P		P	17 00 05.8	+0.9	
	baz=90								
H19A	Powell	89.60	42	⇓P		P	17 00 05.5	+0.8	
	baz=90								
M22A	Cedar Creek Ra	89.62	45	⇓P		P	17 00 05.5	+0.5	
	baz=90,SNR=6.8								
Z29A	Hungry Hill Ra	89.63	54	⇓P		P	17 00 05.8	+0.7	
	baz=90								
RLMT	Red Lodge	89.64	41	⇓P		P	17 00 05.5	+0.5	
	baz=90,SNR=6.2								
632A	Uvalde	89.64	58	⇑P		P	17 00 06.4	+1.2	
	baz=90								
F18A	Big Timber	89.74	40	⇑P		P	17 00 06.0	+0.7	
	baz=90,SNR=7.0								
K21A	Alcova	89.75	44	⇓P		P	17 00 05.7	+0.2	
	baz=90,SNR=9.2								
R25A	Fountain Ranch	89.77	49	⇑P		P	17 00 06.6	+0.9	
	baz=90								
D17A	Six Diamond Ra	89.78	39	⇓P		P	17 00 06.0	+0.5	
	baz=90,SNR=6.4								
532A	Rocksprings	89.79	58	⇑P		P	17 00 07

T27A	Campo	90.44	51	⇓P		P	17 00 09.3	+0.5
	baz=91							
Y30A	Stafford Cattl	90.50	54	⇓P		P	17 00 09.8	+0.8
	baz=91							
L23A	Garrett	90.53	45	⇑P		P	17 00 09.5	+0.2
	baz=91,SNR=9.6							
E19A	Rath Farm, Rou	90.58	40	⇓P		P	17 00 09.1	0.0
	baz=91							
J22A	Midwest	90.61	44	⇓P		P	17 00 09.6	+0.2
	baz=91,SNR=8.7							
Q26A	Hugo	90.65	49	⇓P		P	17 00 10.0	+0.2
	baz=91							
F20A	Billings	90.66	41	⇓P		P	17 00 09.9	+0.4
	baz=91							
232A	Coleman	90.68	56	⇑P		P	17 00 10.8	+0.9
	baz=91							
H21A	Big Horn, Sher	90.80	42	⇑P		P	17 00 10.3	0.0
	baz=91							
I22A	9 Mile Ranch,	90.82	43	⇑P		P	17 00 10.8	+0.4
	baz=91,SNR=7.2							
M24A	Cheyenne	90.84	46	⇑P		P	17 00 11.0	+0.4
	baz=91							
Z31A	Sharp Cattle R	90.85	55	⇑P		P	17 00 11.3	+0.6
	baz=91							
D19A	Cripps Ranch,	90.86	40	⇓P		P	17 00 10.8	+0.4
	baz=91							
K23A	Bowen Ranch, D	90.87	44	⇑P		P	17 00 11.0	+0.3
	baz=91							
R27A	Eads	90.89	49	⇓P		P	17 00 11.5	+0.7
	baz=91							
T28A	Walsh	90.90	51	⇓P		P	17 00 11.1	+0.2
	baz=91							
ABTX	Abilene, Hawle	90.97	56	⇓P		P	17 00 11.9	+0.7
	baz=91							
E20A	Meyer Farm, Mu	91.00	40	⇑P		P	17 00 11.6	+0.6
	baz=91							
L24A	Wheatland	91.02	45	⇑P		P	17 00 11.7	+0.4
	baz=91							
C19A	Slack Wire Ran	91.03	39	⇑P		P	17 00 11.9	+0.7
	baz=91							
H22A	Clearmont	91.22	43	⇑P		P	17 00 13.1	+0.9
	baz=91							
F21A	Absaloka Mine,	91.30	41	⇓P		P	17 00 13.0	+0.5
	baz=91							
Z32A	Haskell	91.36	55	⇓P		P	17 00 14.0	+1.0
	baz=92							
K24A	Anderson Ranch	91.39	45	⇑P		P	17 00 13.3	+0.2
	baz=92							
X31A	McDonald Ranch	91.49	54	⇑P		P	17 00 13.6	+0.1
	baz=92							
C20A	Veseth Ranch,	91.64	39	⇑P		P	17 00 14.8	+0.8
	baz=92							
N26A	Koester Ranch,	91.66	47	⇓P		P	17 00 15.2	+0.9
	baz=92							
Y32A	R-V Farms, Ver	91.66	54	⇓P		P	17 00 14.8	+0.4
	baz=92							
L25A	Engebretsen Ra	91.71	46	⇓P		P	17 00 15.3	+0.8
	baz=92							
W31A	Holland Ranch,	91.74	53	⇑P		P	17 00 15.2	+0.5
	baz=92							
J24A	Dixon Ranch, L	91.76	44	⇑P		P	17 00 15.1	+0.4
	baz=92							
A19A	Klindworth Far	91.78	38	⇓P		P	17 00 15.0	+0.4
	baz=92							
K25A	Mack Ranch, Ha	91.97	45	⇓P		P	17 00 15.9	+0.2
	baz=92							
G23A	Biddle	92.11	42	⇓P		P	17 00 16.2	0.0
	baz=92							
A20A	Cobblestone Ra	92.24	38	⇓P		P	17 00 17.6	+0.9
	baz=92							
C21A	Desert Coulee	92.24	39	⇓P		P	17 00 17.4	+0.7
	baz=92							
F23A	Volborg	92.33	42	⇑P		P	17 00 18.0	+0.8
	baz=92							
H24A	Dirks Ranch, A	92.44	43	⇓P		P	17 00 18.1	+0.3
	baz=93							
K26A	Motz Farm, Whi	92.47	45	⇑P		P	17 00 18.4	+0.5
	baz=93							
D22A	Cohagen	92.48	40	⇑P		P	17 00 18.6	+0.7
	baz=93							
RSSD	Black Hills	92.51	44	*e*P		P	17 00 18.1	-0.2
	comp=Z,12nm,1.3s							
A21A	Bergtoll Ranch	92.87	39	⇓P		P	17 00 19.5	0.0
	baz=93							
C22A	Vida	92.93	40	⇓P		P	17 00 20.6	+0.8
	baz=93							
F24A	Ekalaka	92.99	42	⇓P		P	17 00 20.8	+0.5
	baz=93							
C23A	Lambert	93.38	40	⇑P		P	17 00 22.4	+0.5
	baz=94							
A22A	Carney Farms,	93.47	39	⇑P		P	17 00 22.7	+0.3
	baz=94							
D24A	Glendive	93.61	41	⇓P		P	17 00 23.6	+0.6
	baz=94							
B23A	Brockton	93.78	40	⇓P		P	17 00 24.4	+0.6
	baz=94							
DGMT	Dagmar	94.27	40	*e*P		P	17 00 26.3	+0.3
	comp=Z,31nm,1.0s							
DGMT	Dagmar	94.27	40	⇓P		P	17 00 26.7	+0.8
	baz=94							
YKA	Yellowknife Ar	95.83	25	P		P	17 00 31.6	-0.9
YKA				PP		PP	17 04 24.0	-10
YKA	Yellowknife Ar	95.83	25	P		P	17 00 31.6	-0.9
	comp=Z,1.3nm,0.8s,baz=242,slow=4.6,SNR=26							
YKA				PP		PP	17 04 24.0	-10
	comp=Z,0.4nm,0.8s,baz=246,slow=6.8,SNR=5.6							
MKAR	Makanchi Array	110.98	314	PKiKP		PKiKP	17 05 35.2	-1.2
MKAR	Makanchi Array	110.98	314	PKiKP		PKiKP	17 05 35.2	-1.2
	comp=Z,0.4nm,0.6s,baz=195,slow=0.4,SNR=5.9							
KSH	Kashi	114.77	305	*e*PKP		PKPdf	17 05 44.3	+0.2
KSH				PP		PP	17 06 58.8	+6.2
KSH				sPKP			17 08 45.4	
KSH				PKS		PKSdf	17 09 18.9	-1.9
KSH				SKS		SKSdf	17 12 05.1	-0.1
KSH				SKKS		SKKSac	17 12 54.8	-2.7
KSH				SS		SS	17 22 11.4	+4.7
KSH				AMB		AMB		
	comp=Z,34nm,3.2s							
ARCES	ARCESS Array B	128.36	350	PKP		PKPdf	17 06 08.5	-0.6
ARCES	ARCESS Array B	128.36	350	PKP		PKPdf	17 06 08.5	-0.6
	comp=Z,14nm,1.2s,baz=23,slow=1.6,SNR=12							
FINES	FINESS Array B	135.26	344	PKPpre		PKPpre	17 06 15.0	
FINES				PKP		PKPdf	17 06 22.3	+0.1
FINES				SKPbc		SKPbc	17 09 02.5	-0.2
FINES	FINESS Array B	135.26	344	PKhKP		PKPpre	17 06 15.0	
	comp=Z,0.2nm,0.4s,baz=185,slow=34,SNR=3.8							
FINES				PKP		PKPdf	17 06 22.3	+0.1
	comp=Z,0.9nm,0.5s,baz=355,slow=2.1,SNR=6.0							
FINES				SKPbc		SKPbc	17 09 02.5	-0.2
	comp=Z,2.5nm,0.9s,baz=58,slow=4.7,SNR=5.3							
NB2	NORSAR Subarra	138.40	353	PKP		PKPpre	17 06 16.6	
	comp=Z,0.6nm,0.7s,baz=17,slow=2.6							
NOA	NORSAR Array B	138.40	353	PKPpre		PKPpre	17 06 17.0	
NOA				PKP		PKiKP	17 06 29.6	-0.8
NOA				SKPbc		SKPbc	17 09 12.9	+1.0
NOA	NORSAR Array B	138.40	353	PKhKP		PKPpre	17 06 17.0	
	comp=Z,0.6nm,0.7s,baz=339,slow=2.4,SNR=3.4							
NOA				PKP		PKiKP	17 06 29.6	-0.8
	comp=Z,1.0nm,0.6s,baz=14,slow=4.0,SNR=5.7							
NOA				SKPbc		SKPbc	17 09 12.9	+1.0
	comp=Z,1.4nm,0.9s,baz=14,slow=4.5,SNR=4.1							
AKASG	Malin Array Be	142.61	332	PKPpre		PKPpre	17 06 31.3	
AKASG	Malin Array Be	142.61	332	PKhKP		PKPpre	17 06 31.3	
	comp=Z,2.9nm,0.5s,baz=39,slow=4.4,SNR=12							
EAB	Aberfoyle	143.40	6	*e*P		PKPab	17 06 34.4	-1.0
PGBU	Glenifferbraes	143.76	6	*e*P		PKPab	17 06 35.6	-1.3
PGBU	Glenifferbraes	143.76	6	P		PKPab	17 06 35.6	-1.3
EAU	Auchinoon	143.83	5	*e*P		PKPbc	17 06 36.4	-0.7
EBL	Broad Law	143.94	5	*e*P		PKPbc	17 06 36.2	-1.2
ESK	Eskdalemuir	144.37	5	*e*P		PKPbc	17 06 38.0	-0.8
ECK	Cauldkaine Hil	144.51	5	*e*P		PKPdf	17 06 38.4	-0.8
GAL1	Galloway	144.66	7	*e*P		PKPdf	17 06 38.3	-1.1
BSEG	Bad Segeberg	145.45	352	*e*PKPbc		PKPbc	17 06 41.7	-0.3
KWP	Kalwaria Pacla	146.14	336	⇑*i*P		PKPbc	17 06 43.9	-0.3
KWP	Kalwaria Pacla	146.14	336	*e*PKP		PKPbc	17 06 43.9	-0.3
BRTR	Keskin Array B	146.63	313	PKPbc		PKPbc	17 06 45.5	-0.5
BRTR	Keskin Array B	146.63	313	PKPbc		PKPbc	17 06 45.5	-0.5
	comp=Z,2.4nm,0.7s,baz=124,slow=3.0,SNR=7.0							
BUR08	Bucovina Ar. S	146.65	331	*e*PKPbc		PKPbc	17 06 46.9	+1.1
KOLS	Kolonicke sedl	146.87	336	*e*PKP		PKPbc	17 06 46.3	+0.1
NRDL	Niedersach Rie	146.88	351	*e*PKPbc		PKPbc	17 06 45.7	-0.3
HLM1	Long Mynd	147.17	6	*e*P		PKPbc	17 06 45.7	-1.2
KSP	Ksiaz	147.18	344	*e*PKP		PKPbc	17 06 46.9	0.0
CRVS	Cervenica-Dubn	147.21	336	*e*PKP		PKPbc	17 06 46.5	-0.6
TRPA	Tarpa	147.41	335	⇑*i*P		PKPbc	17 06 47.3	-0.3
CLZ	Clausthal	147.48	351	*e*PKPbc		PKPbc	17 06 47.7	0.0
CLL	Collm	147.52	347	*e*PKPbc		PKPbc	17 06 47.6	-0.2
CLL				*e*PKP		PKPab	17 06 50.4	-1.3
UPC	Upice	147.56	344	⇑*i*PKP		PKPbc	17 06 47.8	-0.1
UPC				*e*PKPAB		PKPab	17 06 51.9	0.0
DPC	Dobruska-Polom	147.62	343	⇑*i*PKP		PKPbc	17 06 48.1	-0.1
DPC				*e*PKPAB		PKPab	17 06 51.8	-0.4
MCH1	Michaelchurch	147.68	6	*e*P		PKPbc	17 06 47.2	-1.0
BRG	Berggiesshubel	147.73	346	*e*PKPbc		PKPbc	17 06 48.3	0.0
KRLC	Kraliky	147.74	342	⇑*i*PKP		PKPbc	17 06 48.6	+0.1
MORC	Moravsky Berou	147.78	341	*e*PKPbc		PKPbc	17 06 47.9	-0.7
MORC				*e*PKPab		PKPab	17 06 52.4	-0.6
FBE	Freiberg	147.81	347	*e*PKPbc		PKPbc	17 06 48.8	+0.3
FBE				*e*PKP		PKPab	17 06 51.9	-1.0
PVCC	Panska Ves	147.91	345	⇑*i*PKP		PKPbc	17 06 48.9	+0.1
PRU	Pruhonice	148.41	345	⇑*i*PKP		PKPbc	17 06 49.9	-0.2
PRU				*e*PKPAB		PKPab	17 06 54.9	-0.5
MOX	Moxa	148.43	349	*e*PKPbc		PKPbc	17 06 49.9	-0.2
MOX				*e*PKP		PKPab	17 06 54.3	-1.2
PLN	Plauen	148.47	348	*e*PKPbc		PKPbc	17 06 50.2	0.0
PLN				*e*PKP		PKPab	17 06 54.5	-1.2
TANN	Tannenbergstha	148.48	348	*e*PKPbc		PKPbc	17 06 50.3	0.0
TANN				*e*PKP		PKPab	17 06 54.7	-1.1
WERD	Werda	148.48	348	*e*PKPbc		PKPbc	17 06 50.3	0.0
WERD				*e*PKP		PKPab	17 06 55.0	-0.7
VYHS	Vyhne	148.49	339	*e*PKP		PKPbc	17 06 50.5	+0.1
GUNZ	Gunzen	148.56	348	*e*PKPbc		PKPbc	17 06 50.7	+0.2
GUNZ				*e*PKP		PKPab	17 06 55.0	-1.1
WERN	Wernitzgruen	148.62	348	*e*PKPbc		PKPbc	17 06 50.7	0.0
WERN				*e*PKP		PKPab	17 06 55.4	-0.9
NKC	Novy Kostel	148.66	347	⇑*i*PKP		PKPbc	17 06 50.7	0.0
NKC				*e*PKPAB		PKPab	17 06 55.8	-0.7
TREC	Trest	148.81	343	⇑*i*PKP		PKPbc	17 06 51.0	-0.1
SMOL	Smolenice	148.94	340	*e*PKP		PKPbc	17 06 51.9	+0.5
MANZ	Manzenberg	148.96	348	*e*PKPbc		PKPbc	17 06 51.5	0.0
HGN	Heimansgroeve	149.05	356	*e*PKP		PKPab	17 06 57.1	-0.9
	comp=Z,51nm,0.7s							
ROTZ	Rotzenmuhle	149.15	347	*e*PKPbc		PKPbc	17 06 52.1	+0.2
MEM	Membach	149.19	355	PKPbc		PKPbc	17 06 51.8	-0.2
ZST	Bratislava	149.32	340	*e*PKP		PKPbc	17 06 51.7	-0.6
TNS	Taunus Mts	149.33	352	*e*PKPbc		PKPbc	17 06 52.4	0.0
GRF	Grafenberg Arr	149.41	349	*e*PKP		PKPab	17 06 58.7	-0.9
BCLA	Clavier	149.43	356	PKPbc		PKPbc	17 06 52.2	-0.4
BCLA				PKPab		PKPab	17 06 58.4	-1.2
KHC	Kasperske Hory	149.44	345	*e*PKPbc		PKPbc	17 06 52.6	-0.1
KHC				*e*PKPab		PKPab	17 06 59.6	-0.2
KHC	Kasperske Hory	149.44	345	⇑*i*PKP		PKPbc	17 06 52.7	0.0
KHC				*e*PKPAB		PKPab	17 06 59.4	-0.4
WET	Wettzell	149.59	346	*e*PKPbc		PKPbc	17 06 53.0	0.0
WET				*e*PKP		PKPab	17 06 59.5	-0.9
GEC2	GERESS Array S	149.68	345	*e*PKPbc		PKPbc	17 06 53.1	-0.2
GERES	GERESS Array B	149.68	345	PKPbc		PKPbc	17 06 53.1	-0.2
GERES	GERESS Array B	149.68	345	PKPbc		PKPbc	17 06 53.1	-0.2
	comp=Z,8.3nm,0.8s,baz=38,slow=2.4,SNR=44							
BZS	Buzias	149.79	333	⇑*i*P		PKPbc	17 06 53.3	-0.3
DOU	Dourbes	149.79	357	PKPbc		PKPbc	17 06 53.1	-0.3
CONA	Conrad Observa	149.94	342	⇑*i*PKiKP		PKPbc	17 06 53.9	-0.1
CONA	Conrad Observa	149.94	342	⇑*i*P		PKPbc	17 06 53.9	-0.1
WLF	Walferdange	150.12	355	*e*PKPbc		PKPbc	17 06 54.7	+0.5
WLF	Walferdange	150.12	355	*e*PKPbc		PKPbc	17 06 54.5	+0.3
WLF				*e*PKPab		PKPab	17 07 01.2	-1.3
MOA	Molln	150.46	344	⇑*i*PKPbc		PKPbc	17 06 54.5	-0.6
MOA	Molln	150.46	344	⇑*i*P		PKPbc	17 06 54.5	-0.6
JSA	Saint Aubin	150.54	6	*e*P		PKPbc	17 06 54.4	-0.7
JSA	Saint Aubin	150.54	6	P		PKPbc	17 06 54.4	-0.7
STU	Stuttgart	150.65	351	*e*PKPbc		PKPbc	17 06 55.6	+0.1
FUR	Furstenfeldbru	150.86	348	*e*PKPbc		PKPbc	17 06 56.1	+0.1
FUR				*e*PKP		PKPab	17 07 05.0	-0.7
RJOB	Jochberg	150.93	345	*e*PKPbc		PKPbc	17 06 55.7	-0.5
RJOB				*e*PKP		PKPab	17 07 05.9	-0.2
BFO	Black Forest	151.20	352	*e*PKPbc		PKPbc	17 06 56.4	-0.4
BFO				*e*PKP		PKPab	17 07 05.5	-1.6
SOKA	Soboth	151.31	342	⇑*i*PKPbc		PKPbc	17 06 56.3	-0.9
SOKA	Soboth	151.31	342	⇑*i*P		PKPbc	17 06 56.3	-0.9
KBA	Koelnbreinsper	151.41	344	⇑*i*PKPbc		PKPbc	17 06 56.3	-1.2
KBA	Koelnbreinsper	151.41	344	⇑*i*P		PKPbc	17 06 56.3	-1.2
WTTA	Wattenberg	151.64	347	⇑*i*PKPbc		PKPbc	17 06 57.6	-0.4
WTTA	Wattenberg	151.64	347	⇑*i*P		PKPbc	17 06 57.6	-0.4
MOTA	Moosalm	151.68	347	⇑*i*PKPbc		PKPbc	17 06 56.7	-1.4
MOTA	Moosalm	151.68	347	⇑*i*P		PKPbc	17 06 56.6	-1.4
MYKA	Terra Mystica	151.75	343	⇑*i*PKPbc		PKPbc	17 06 56.9	-1.2
MYKA	Terra Mystica	151.75	343	⇑*i*P		PKPbc	17 06 56.9	-1.2
ABTA	Abfaltersbach	151.93	345	⇑*i*PKPbc		PKPbc	17 06 57.4	-1.1
ABTA	Abfaltersbach	151.93	345	⇑*i*P		PKPbc	17 06 57.4	-1.1
FETA	Feichten	152.06	348	⇑*i*PKPbc		PKPbc	17 06 58.6	-0.4
FETA	Feichten	152.06	348	⇑*i*P		PKPbc	17 06 58.6	-0.4
PBRG	Braganca	156.83	17	*e*PKPab		PKPab	17 07 31.1	-0.3
POLO	Lamas de Olo	156.91	20	*e*PKPab		PKPab	17 07 31.0	-0.9
MVO	Moncorvo	157.34	19	*e*PKPab		PKPab	17 07 33.7	0.0
PMRV	Marv??o	158.80	21	*e*PKPab		PKPab	17 07 39.5	-0.5
PMTG	Montargil	158.82	23	*e*PKPab		PKPab	17 07 39.1	-1.0
PESTR	Estremoz	159.23	22	*e*PKPab		PKPab	17 07 41.0	-0.9
ESDC	Sonseca Array	159.54	14	PKPab		PKPab	17 07 42.5	-0.8
ESDC	Sonseca Array	159.54	14	PKPab		PKPab	17 07 42.5	-0.8
	comp=Z,1.6nm,0.7s,baz=342,slow=4.0,SNR=9.8							
PCVE	Castro Verde	160.15	25	*e*PKPab		PKPab	17 07 45.5	-0.4
PVAQ	Vaqueiros	160.47	24	*e*PKPab		PKPab	17 07 47.0	-0.4
TORD	Torodi Ar. Bea	173.28	175	PKP		PKPdf	17 07 12.6	0.0
TORD				PKPab		PKPab	17 08 45.6	+1.3
TORD				pPKPab		pPKPab	17 10 44.8	+0.8
TORD	Torodi Ar. Bea	173.28	175	PKP		PKPdf	17 07 12.6	0.0
	comp=Z,0.8nm,0.9s,baz=347,slow=1.9,SNR=3.5							
TORD				PKPab		PKPab	17 08 45.6	+1.3
	comp=Z,0.6nm,0.9s,baz=206,slow=2.4,SNR=3.3							
TORD				pPKPab		pPKPab	17 10 44.8	+0.8
	comp=Z,0.8nm,0.9s,baz=183,slow=3.5,SNR=3.9							

IDC 22 17:21:58.6±2.5, 2°16N×128°44E, h0km, mb3.5/2, mb1 3.6/2, mb1mx3.3/19, mbtmp3.5/2, Error ellipse: s-maj=207.4km s-min=25.6km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.72	166	P	P	17 27 02.8	+0.5
	0.4nm,0.5s,baz=344,slow=10,SNR=15						
ASAR	Alice Springs	26.22	169	P	P	17 27 35.2	-0.2
	0.2nm,0.5s,baz=349,slow=8.5,SNR=8.2						
STKA	Stephens Creek	36.09	161	P	P	17 29 01.6	-0.6
	1.6nm,0.9s,baz=348,slow=9.7,SNR=6.4						
MKAR	Makanchi Array	59.81	325	P	P	17 32 06.1	+0.3
	0.1nm,0.4s,baz=115,slow=7.9,SNR=4.1						

ISK 22 17:35:52.9, 39.°18N×28.°87E, h6km, MD2.6
ISCJB 22 17:35:54.4±0.6, 39.°15N±0.°05×28.°98E±0.°05, h18km±11km, Error ellipse: s-maj=9.2km s-min=5.1km az=144.9
CSEM 22 17:35:54.1±0.1, 39.°15N±0.°05×28.°96E, h15km, MD2.6, Error ellipse: s-maj=3.9km s-min=3.0km az=138.0
DDA 22 17:35:54.7, 39.°07N×29.°03E, h7km, MD2.6

ISC 22 17:35:54.5±1.0, 39.°14N±0.°03×28.°99E±0.°03, h15km±8km, n17, σ0.69/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEMI	Demirci	0.23	246	*i* P	Pg	17 36 00.2	+0.5
DEMI				*i* S	Sg	17 36 03.6	+0.4
DEMI	Demirci	0.23	246	*i* P	Pg	17 36 00.2	+0.5
DEMI				*i* S	Sg	17 36 03.6	+0.4
GDZ	Gediz	0.38	97	*i* P	Pg	17 36 02.0	-0.3
GDZ				*i* S	Sg	17 36 06.9	-0.7
GDZ	Gediz	0.38	97	*i* P	Pg	17 36 02.0	-0.3
GDZ				*i* S	Sg	17 36 06.9	-0.7
TVSB	Tavsanli	0.48	49	*e*PG	Pg	17 36 03.8	-0.3
TVSB				*e*SG	Sg	17 36 10.7	+0.1
TVSB	Tavsanli	0.48	49	*e*Pg	Pg	17 36 03.8	-0.3
TVSB				*e*Sg	Sg	17 36 10.7	+0.1
KULA	Kula-Manisa	0.67	203	*e*PG	Pg	17 36 06.6	-1.0
KULA				*e*SG	Sg	17 36 16.1	-0.5
MANT	Manisa	0.73	208	*i* P	Pg	17 36 08.7	0.0
MANT				*i* S	Sg	17 36 18.0	-0.4
MANT	Manisa	0.73	208	*i* P	Pg	17 36 08.7	0.0
MANT				*i* S	Sg	17 36 18.0	-0.4
ALT	Altintas	0.88	95	*e*PG	Pn	17 36 12.3	-0.1
ALT				*e*SG	Sn	17 36 26.4	+1.5
ALT	Altintas	0.88	95	*e*Pg	Pn	17 36 12.3	-0.1
ALT				*e*Sg	Sn	17 36 26.4	+1.5
KHL	Karahalli	0.91	153	*e*PG	Pn	17 36 12.7	-0.2
KHL	Karahalli	0.91	153	*e*Pg	Pn	17 36 12.7	-0.2
GONE	Gonen-Balikesi	1.36	312	*e*PN	Pn	17 36 17.6	-1.3
GONE	Gonen-Balikesi	1.36	312	*e*Pn	Pn	17 36 17.6	-1.3
ARMT	Armutlu	1.43	356	*e*Pn	Pn	17 36 19.8	-0.1
ARMT	Armutlu	1.43	356	*e*Pn	Pn	17 36 19.8	-0.1

IDC 22 17:36:48.6±0.8, 36.°26N×21.°57E, h0km, mb4.0/13, mb1 4.0/19, mb1mx3.9/33, mbtmp3.9/19, ML3.6/6, MS3.6/5, Ms1 3.6/5, ms1mx3.0/38, Error ellipse: s-maj=17.6km s-min=16.2km az=23.0
BEO 22 17:36:50.0±0.9, 36.°22N×20.°91E, h0km, ML4.0/7
CSEM 22 17:36:51.7±0.3, 36.°24N×21.°20E, h20km, ML4.1/3, Mw4.3, Error ellipse: s-maj=7.6km s-min=4.9km az=62.0
ATH 22 17:36:52.0, 36.°28N×21.°41E, h26km±2km, MD3.6/17, ML4.0
THE 22 17:36:54.1, 36.°32N×21.°44E, h11km±1km, ML4.1/3, Error ellipse: s-maj=2.7km s-min=1.6km az=142.0

ISC 22 17:36:50.9±0.8, 36.°25N±0.°03×21.°27E±0.°03, h20km±2km, n159, σ1.§51/177, mb4.2/21, MS3.6/4, 1C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	PYLOS	0.75	31	P	Pb	17 37 04.7	-0.6
PYL				S	Sg	17 37 15.6	0.0
DYR	Agios Nikonas	1.00	59	P	Pb	17 37 09.6	0.0
DYR				S	Sg	17 37 22.9	-0.6
DYR	Agios Nikonas	1.00	59	P	Pb	17 37 09.6	0.0
DYR				S	Sg	17 37 22.9	-0.6
ITM	Ithomi	1.06	30	*e*PN	Pn	17 37 11.0	+0.2
ITM				*e*SN	Sn	17 37 25.0	-0.1
ITM	Ithomi	1.06	30	*e*Pn	Pn	17 37 11.0	+0.2
ITM				*e*Sn	Sn	17 37 25.0	-0.1
VLI	Veliai	1.42	70	*e*PN	Pg	17 37 17.5	-0.9
VLI	Veliai	1.42	70	*e*Pn	Pg	17 37 17.5	-0.9
VLX	Vlachokerasia	1.43	38	P	Pb	17 37 17.2	+0.2
VLX				S	Sb	17 37 35.5	+0.7
VLX	Vlachokerasia	1.43	38	P	Pb	17 37 17.2	+0.2
VLX				S	Sb	17 37 35.5	+0.7
KYTH	Kithira	1.43	88	*e*PN	Pb	17 37 16.5	-0.4
ANKY	Antikythira Is	1.69	103	*e*PN	Pb	17 37 21.1	-0.3
ANKY	Antikythira Is	1.69	103	*e*Pn	Pb	17 37 21.1	-0.3
RLS	Riolos of Patr	1.81	5	*e*PB	Pn	17 37 22.3	+1.3
GUR	Goura	1.89	27	P	Pb	17 37 24.0	-0.8
GUR				S	Sb	17 37 47.5	-0.5
GUR	Goura	1.89	27	P	Pb	17 37 24.0	-0.8
GUR				S	Sb	17 37 47.5	-0.5
K1V	Kalavryta, Ach	1.92	21	*e*PN	Pb	17 37 24.4	-1.0
KLV				*e*SN	Sn	17 37 47.0	+0.7
KLV	Kalavryta, Ach	1.92	21	*e*Pn	Pb	17 37 24.4	-1.0
KLV				*e*Sn	Sn	17 37 47.0	+0.7
DIDY	Didyma	1.98	51	P	Pn	17 37 24.6	+1.1
DIDY	Didyma	1.98	51	P	Pn	17 37 24.6	+1.1
VLS	Valsamata	2.00	344	*e*PB	Pb	17 37 26.0	-0.6
VLS				*e*SN	Sb	17 37 52.2	+1.1
VLS	Valsamata	2.00	344	*e*Pb	Pb	17 37 26.0	-0.6
VLS				*e*Sn	Sb	17 37 52.2	+1.1
DID	Didima	2.01	51	P	Pn	17 37 25.1	+1.2
DID				S	Sn	17 37 49.6	+1.1
DID	Didima	2.01	51	P	Pn	17 37 25.1	+1.2
DID				S	Sn	17 37 49.6	+1.1
LAKA	Lakka	2.06

BRTR Keskin Array B 10.36 67 Pn Pn 17 39 21.6 +3.0
0.1nm,0.3s,baz=248,slow=15,SNR=5.4
JAVS Javornik 11.05 333 *i* Pn Pn 17 39 33.0 +5.0
JAVS *i* Sn **Sn** **17 41 27.9 -3.2**
PERS Pernice 11.35 338 *i* Pn **Pn** **17 39 32.7 +0.7**
PERS *i* Sn Sn 17 41 31.6 -6.6
OBKA Obir 11.42 336 *i* Pn **Pn** **17 39 35.7 +2.8**
MMAI Mount Meron Ar 12.08 101 Pn **Pn** **17 39 39.2 -2.9**
0.9nm,0.3s,baz=283,slow=12,SNR=5.6
MMAI Sn Sn 17 41 45.6 -11
1.1nm,0.3s,baz=299,slow=18,SNR=4.0
VYHS Vyhne 12.36 352 *e*PN **Pn** **17 39 44.3 -1.5**
VYHS *e* 17 39 54.3
VYHS Vyhne 12.36 352 *e*SN Sn 17 41 55.5 -7.5
CRVS Cervenica-Dubn 12.64 1 *e*PN **Pn** **17 39 48.8 -0.8**
KOLS Kolonicke sedl 12.69 3 *e*PN Pn 17 39 54.8 +4.5
EIL Elat 13.22 116 Pn **Pn** **17 39 55.7 -1.9**
0.4nm,0.3s,baz=340,slow=18,SNR=6.5
EIL Sn Sn 17 42 11.9 -12
0.5nm,0.3s,baz=310,slow=16,SNR=4.3
GERES GERESS Array B 13.76 339 Pn **Pn** **17 40 05.9 +1.0**
0.2nm,0.3s,baz=155,slow=13,SNR=5.0
AKASG Malin Array Be 15.54 19 Pn **Pn** **17 40 27.6 -1.2**
0.6nm,0.3s,baz=207,slow=12,SNR=3.7
HINF Hinteralfeld 15.72 322 *e*P **P** **17 40 37.8 +2.6**
CDF Champ du Feu 15.93 324 *e*P **P** **17 40 40.3 +2.8**
6.8nm,0.8s
HAU Haudompre 16.10 321 *e*P **P** **17 40 42.4 +3.0**
36nm,1.1s
KBZ Khabaz 18.15 59 P **P** **17 41 03.0 +1.2**
0.3nm,0.3s,baz=238,slow=7.7,SNR=6.6
KBZ LR LR 17 49 54.8
comp=Z,79nm,18.4s,baz=106,slow=44
ONI Oni 18.25 63 P **P** **17 41 03.9 +0.8**
MFF Saint Martin d 19.04 310 *e*P Pn 17 41 17.6 +5.0
BHD Baghdad 19.21 92 *ex* **P** **17 41 13.0 -0.7**
BHD *ex* x 17 45 38.5
DGRG David-gareji 19.45 67 P **Pn** **17 41 17.3 -0.3**
LDF La Druitiere 19.96 315 *e*P **Pn** **17 41 24.3 +0.8**
ESDC Sonseca Array 20.17 287 P Pn 17 41 27.9 +1.8
0.8nm,0.5s,baz=81,slow=11,SNR=5.4
FLN La Foliniere 20.25 315 *e*P Pn 17 41 28.7 +1.8
GRR Gorron 20.28 314 *e*P Pn 17 41 30.6 +3.3
QUIF Quistinic 21.46 310 *e*P **P** **17 41 41.6 +3.6**
22nm,1.0s
ROSF Rostrenen 21.70 311 *e*P **P** **17 41 44.3 +3.8**
MIB Mutribah 22.75 99 *e*P **P** **17 41 50.2 -1.7**
MIB AMb AMB 17 42 00.9
comp=Z,25nm,0.7s
NAY Al-Naaiem 22.89 100 *e*P **P** **17 41 51.9 -1.5**
NAY AMb AMB 17 41 54.7
comp=Z,14nm,0.8s
UMR Umm Al-Rimmam 23.15 99 *e*P **P** **17 41 55.2 -0.8**
UMR AMb AMB 17 41 57.2
comp=Z,41nm,1.6s
RDF Al-Radifah 23.27 101 *e*P **P** **17 41 55.7 -1.6**
RDF AMb AMB 17 41 58.6
comp=Z,19nm,0.8s
HFS Hagfors 24.39 351 P **P** **17 42 07.3 -0.5**
comp=Z,1.8nm,0.5s,baz=153,slow=12,SNR=14
FINES FINESS Array B 25.39 5 P **P** **17 42 17.0 +0.3**
comp=Z,2.3nm,0.6s,baz=162,slow=12,SNR=11
FINES PcP **PcP** **17 45 49.5 +0.9**
comp=Z,1.4nm,0.9s,baz=147,slow=3.3,SNR=3.4
FINES LR LR 17 53 30.7
comp=Z,226nm,18.0s,baz=206,slow=40
NB2 NORSAR Subarra 25.62 349 P **P** **17 42 18.8 -0.1**
comp=Z,0.3nm,0.6s,baz=154,slow=10
NB2 NORSAR Subarra 25.62 349 P **P** **17 42 18.8 -0.1**
comp=Z,0.3nm,0.6s,SNR=6.8
NOA NORSAR Array B 25.62 349 P **P** **17 42 19.1 +0.3**
comp=Z,1.9nm,0.6s,baz=157,slow=9.0,SNR=18
KAF Kangasniemi 26.08 5 *ep* **P** **17 42 23.2 +0.3**
comp=Z,1.6nm,0.5s
JOF Joensuu 27.41 10 *ep* **P** **17 42 33.6 -1.3**
comp=Z,1.5nm,0.6s
TORD Torodi Ar. Bea 28.96 222 P **P** **17 42 51.0 +1.8**
comp=Z,1.2nm,0.9s,baz=35,slow=8.7,SNR=7.3
TORD LR LR 17 55 30.4
comp=Z,92nm,18.5s,baz=30,slow=38
ARCES ARCESS Array B 33.42 3 P **P** **17 43 28.1 +0.1**
comp=Z,4.7nm,1.0s,baz=191,slow=9.5,SNR=7.7
ARCES LR LR 17 58 28.2
comp=Z,223nm,18.5s,baz=29,slow=39
KEV Kevo 33.71 4 *ep* **P** **17 43 30.4 0.0**
comp=Z,0.6nm,0.4s
MKAR Makanchi Array 45.82 57 P **P** **17 45 10.2 -1.3**
comp=Z,2.9nm,0.4s,baz=269,slow=7.5,SNR=99
MKAR PcP **PcP** **17 46 49.7 +1.0**
comp=Z,0.6nm,0.6s,baz=274,slow=3.1,SNR=2.3
ZALV Zalesovo Beam 46.55 47 P **P** **17 45 15.8 -1.3**
comp=Z,6.2nm,0.4s,baz=268,slow=9.2,SNR=37
ZALV LR LR 18 08 32.0
comp=Z,38nm,18.6s,baz=215,slow=41
PYUN Piuthan 52.11 80 *e*P **P** **17 45 58.1 -2.1**
comp=Z,10nm,0.5s
DANN Dangsing 52.61 80 *e*P **P** **17 46 03.6 -0.4**
comp=Z,24nm,0.7s
KOLN Koldanda 52.74 80 *e*P P 17 46 00.6 -4.2
DMN Daman 54.01 80 *e*P P 17 46 09.8 -4.4
comp=Z,18nm,0.7s
KKN Kakani 54.06 80 *e*P **P** **17 46 12.1 -2.5**
comp=Z,5.6nm,0.5s
PKIN Phulchoki 54.25 80 *e*P P 17 46 12.7 -3.3
GUN Gumba 54.49 79 *e*P **P** **17 46 15.8 -2.0**
RAMN Ramite 55.49 80 *e*P P 17 46 17.7 -7.3
ODAN Odare 56.16 80 *e*P P 17 46 22.6 -7.2
TAPN Taplejung 56.19 79 *e*P P 17 46 26.2 -3.9
GTA Gaotai 60.22 61 *e*P **P** **17 46 57.5 -0.4**
GTA pP **pP** **17 47 03.8 -0.4**
GTA sP **sP** **17 47 07.0 +0.5**
GTA pmax pmax
comp=Z,5.0nm,0.8s
SCHQ Schefferville 60.28 318 P **P** **17 47 00.1 +2.1**
comp=Z,2.4nm,0.5s,baz=62,slow=7.3,SNR=7.7
CMAR Chiang Mai Arr 69.57 82 P **P** **17 47 58.8 -0.1**
comp=Z,1.4nm,0.8s,baz=303,slow=7.1,SNR=9.2
YKA Yellowknife Ar 75.40 340 P **P** **17 48 34.3 +1.4**
comp=Z,0.4nm,0.5s,baz=34,slow=5.4,SNR=10
ILAR Eielson Array 78.88 355 P **P** **17 48 53.9 +1.5**
comp=Z,0.2nm,0.8s,baz=353,slow=6.7,SNR=2.1
KSRS Korea Array 80.08 51 P **P** **17 48 59.5 +0.1**
comp=Z,1.3nm,0.6s,baz=311,slow=4.8,SNR=6.3
WRA Warramunga Arr 119.84 94 PKP **PKPdf** **17 55 39.3 -0.9**
comp=Z,0.3nm,0.8s,baz=324,slow=1.5,SNR=4.4
ASAR Alice Springs 121.35 98 PKP **PKPdf** **17 55 42.4 -0.7**
comp=Z,0.3nm,0.7s,baz=309,slow=1.2,SNR=5.7

*IDC **22** 17:47:08.6±0.7, 7.°50N×77.°07W, h0km, mb4.1/16, mb1 4.3/16, mb1mx4.2/22, mbtmp4.1/16, MS3.4/4, Ms1 3.3/4, ms1mx2.9/23, Error ellipse: s-maj=26.1km s-min=16.0km az=60.0*
*ISCJB **22** 17:47:11.5±0.7, 7.°5N×0.°1×77.°2W×0.°2, h31km, mb4.1/18, MS3.3/4, Error ellipse: s-maj=26.0km s-min=13.1km az=147.8*
ISC 22 17:47:13.2±0.8, 7.°5N±0.°2×77.°1W±0.°2, h31km, n26, σ1s05/24, mb4.0/18, MS3.4/4, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**3.80**	**133**	Pn		Pb		17 48 15.6	-4.4
	12nm,0.3s,baz=328,slow=2.6,SNR=26								
ROSC				Lg		Lg		17 49 08.9	
	13nm,0.3s,baz=90,slow=20,SNR=2.9								
LPAZ	**La Paz**	**25.22**	**159**	P		**P**		**17 52 37.7**	**+0.5**
	1.6nm,0.8s,baz=339,slow=13,SNR=8.3								
SIV	**San Ignacio**	**28.21**	**146**	P		**P**		**17 53 02.7**	**-0.8**
	1.0nm,0.5s,baz=324,slow=9.4,SNR=5.7								
SIV				LR		LR		18 04 28.6	
	comp=Z,127nm,19.6s,slow=37								
TXAR	**Lajitas Array**	**33.12**	**314**	P		**P**		**17 53 45.9**	**-1.0**
	0.5nm,0.8s,baz=134,slow=7.2,SNR=5.1								
BDFB	**Brasilia**	**36.86**	**129**	LR		LR		18 10 48.6	
	comp=Z,55nm,18.8s,baz=360,slow=38								
CPUP	**Villa Florida**	**38.70**	**151**	LR		LR		18 13 48.9	
	comp=Z,54nm,18.5s,baz=4.1,slow=41								
PDAR	**Pinedale Array**	**45.28**	**326**	P		**P**		**17 55 28.4**	**+0.1**
	1.6nm,0.8s,baz=119,slow=8.6,SNR=11								
ULM	**Lac du Bonnet**	**45.43**	**343**	P		**P**		**17 55 28.6**	**-0.5**
	6.3nm,0.7s,baz=152,slow=9.2,SNR=9.2								
ULM				LR		LR		18 15 16.3	
	comp=Z,17nm,20.2s,baz=321,slow=37								
SCHQ	**Schefferville**	**47.96**	**8**	P		**P**		**17 55 49.2**	**+0.3**
	6.9nm,0.6s,baz=193,slow=6.9,SNR=12								
NVAR	**Mina Array Bea**	**48.23**	**316**	P		**P**		**17 55 53.2**	**+1.6**
	0.8nm,0.7s,baz=120,slow=6.4,SNR=7.1								
NVAR				PcP		**PcP**		**17 57 18.9**	**+0.4**
	0.4nm,0.6s,baz=141,slow=4.4,SNR=3.9								
YKA	**Yellowknife Ar**	**61.34**	**341**	P		**P**		**17 57 25.1**	**-0.7**
	3.7nm,0.7s,baz=132,slow=7.1,SNR=85								
SFJD	**Kangerlussuaq**	**62.14**	**11**	*i* P		**PcP**		**17 58 14.8**	**+3.8**
	8.4nm,0.8s								
RES	**Resolute Bay**	**67.96**	**355**	P		**P**		**17 58 07.8**	**-1.0**
	2.0nm,0.8s,baz=163,slow=9.9,SNR=10								
SUMG	**Summit**	**69.13**	**12**	*i* P		**P**		**17 58 16.6**	**0.0**
	8.8nm,0.7s								
ESDC	**Sonseca Array**	**72.32**	**51**	P		**P**		**17 58 36.0**	**-0.3**
	0.2nm,0.4s,baz=282,slow=7.3,SNR=4.2								
ILAR	**Eielson Array**	**74.72**	**335**	P		**P**		**17 58 49.6**	**-0.2**
	1.6nm,0.8s,baz=112,slow=4.6,SNR=20								
DAG	**Danmarks Havn**	**75.82**	**12**	*i* P		**P**		**17 58 55.4**	**-0.5**
	3.6nm,0.8s								
TORD	**Torodi Ar. Bea**	**77.51**	**78**	P		**P**		**17 59 06.3**	**-0.3**
	0.5nm,0.7s,baz=286,slow=4.1,SNR=3.8								
NB2	**NORSAR Subarra**	**82.73**	**29**	P		**P**		**17 59 34.4**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=271,slow=5.3								
NOA	**NORSAR Array B**	**82.73**	**29**	P		**P**		**17 59 35.0**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=276,slow=5.1,SNR=4.8								
GERES	**GERESS Array B**	**84.99**	**42**	P		**P**		**17 59 45.7**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=266,slow=5.4,SNR=5.5								
ARCES	**ARCESS Array B**	**87.45**	**20**	P		**P**		**17 59 57.8**	**+0.4**
	comp=Z,3.0nm,0.6s,baz=263,slow=3.1,SNR=15								
FINES	**FINESS Array B**	**89.76**	**28**	P		**P**		**18 00 08.4**	**0.0**
	comp=Z,2.3nm,0.9s,baz=282,slow=3.7,SNR=4.1								
ASAR	**Alice Springs**	**146.16**	**238**	PKPbc		**PKPbc**		**18 06 51.4**	**0.0**
	comp=Z,1.9nm,0.6s,baz=118,slow=3.7,SNR=51								
WRA	**Warramunga Arr**	**147.08**	**245**	PKPbc		**PKPbc**		**18 06 53.6**	**-0.4**
	comp=Z,6nm,0.5s,baz=99,slow=3.3,SNR=12								
CMAR	**Chiang Mai Arr**	**153.96**	**9**	PKPab		**PKPab**		**18 07 23.6**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=339,slow=4.3,SNR=5.9								

IDC 22 18:03:16.8±5.7, 30.°76S×178.°60W, h0km, mb3.5/1, mb1 3.7/1, mb1mx3.5/16, mbtmp3.5/1, Error ellipse: s-maj=218.4km s-min=57.6km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.57**	**268**	P		P		18 11 14.1	-0.7
	0.5nm,0.6s,baz=108,slow=7.5,SNR=18								
WRA	**Warramunga Arr**	**43.60**	**273**	P		P		18 11 23.4	+0.4
	0.9nm,0.7s,baz=113,slow=8.1,SNR=11								
FINES	**FINESS Array B**	**145.31**	**339**	PKPbc		PKPbc		18 22 54.8	-0.8
	1.7nm,0.7s,baz=103,slow=4.1,SNR=5.1								

KRSC 22 18:12:16.6±0.5, 52.°92N×160.°14E, h46km±26km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.19**	**338**	P		Pn		18 12 24.5	0.0
SPN				*e*S		Sn		18 12 29.7	-0.3
NLC	**Nalytchevo**	**0.54**	**298**	*e*P		Pn		18 12 28.0	-0.1
NLC				*e*S		Sn		18 12 36.2	-0.1
SDLR	**Sedlovina**	**0.84**	**296**	P		Pn		18 12 32.4	+0.2
SDLR				*e*S		Sn		18 12 43.4	-0.2
UGLR	**Uglovaya**	**0.84**	**291**	P		Pn		18 12 32.5	+0.2
SMAR	**Somma**	**0.88**	**294**	P		Pn		18 12 32.8	-0.1
PET	**Petropavlovsk**	**0.91**	**277**	*e*P		Pn		18 12 33.0	+0.1
PET				*e*S		Sn		18 12 44.7	-0.2
AVH	**Avacha**	**0.91**	**293**	P		Pn		18 12 33.6	+0.4
KRER	**Koryakskii**	**0.92**	**295**	P		Pn		18 12 33.9	+0.4
KRER				*e*S		Sn		18 12 46.2	+0.4
KOK	**Koryaka**	**0.98**	**293**	P		Pn		18 12 34.4	+0.3
RUS	**Russkaya**	**1.10**	**244**	P		Pn		18 12 35.7	+0.1
RUS				*e*S		Sn		18 12 49.6	-0.1
KII	**Karymskiy**	**1.19**	**340**	*e*P		Pn		18 12 37.7	+0.7
KII				*e*S		Sn		18 12 53.1	+1.0
MTVR	**Mutnovka**	**1.27**	**251**	*e*P		Pn		18 12 38.4	+0.3
MTVR				*e*S		Sn		18 12 54.0	-0.1
GRL	**Gorelyy**	**1.31**	**254**	P		Pn		18 12 39.5	+0.9
GRL				*e*S		Sn		18 12 56.0	+1.0
ASAK	**Asacha**	**1.47**	**249**	P		Pn		18 12 41.8	+1.1
ASAK				*e*S		Sn		18 13 00.6	-1.8
APC	**Apacha**	**1.81**	**271**	*e*P		Pn		18 12 47.1	+1.9
APC				*e*S		Sn		18 13 09.0	+2.1
MKZ	**Mys Kozlova**	**1.89**	**29**	*e*P		Pn		18 12 46.2	-0.2
MKZ				*e*S		Sn		18 13 07.8	-1.2
MIPR	**Malaya Ipel'ka**	**2.16**	**254**	*e*P		Pn		18 12 51.9	+1.8
MIPR				*e*S		Sn		18 13 18.4	+2.7
TUMR	**Tumrok**	**2.37**	**0**	*e*P		Pn		18 12 55.0	+1.9
TUMR				*e*S		Sn		18 13 23.4	+2.4
PAU	**Pauzhetka**	**2.51**	**236**	*e*P		Pn		18 12 57.3	+2.4
PAU				*e*S		Sn		18 13 27.8	+3.5
KMNR	**Kamenistaya**	**2.84**	**1**	*e*P		Pn		18 13 01.6	+2.0
BZMR	**Bezymyannaya**	**3.03**	**4**	*e*P		Pn		18 13 04.2	+2.0
BZGR	**Bezymyannyi-Gr**	**3.04**	**6**	*e*P		Pn		18 13 04.9	+2.6
BZGR				*e*S		Sn		18 13 39.3	+1.7
KPT	**Kopyto**	**3.05**	**1**	P		Pn		18 13 04.5	+2.1
ESO	**Esso**	**3.13**	**345**	*e*P		Pn		18 13 04.9	+1.5
KRSR	**Krestovskiy**	**3.31**	**4**	P		Pn		18 13 06.7	+0.7
KRSR				S		Sn		18 13 43.8	-0.4
SKR	**Severo-Kuril's**	**3.35**	**230**	*e*P		Pn		18 13 08.1	+1.7
SKR				*e*S		Sn		18 13 46.5	+1.5
KLY	**Klyuchi**	**3.41**	**5**	S		Sn		18 13 48.3	+1.9
SRDR	**Sredinnyy**	**3.41**	**356**	*e*P		Pn		18 13 07.9	+0.6
KBTR	**Krutoberegovo**	**3.65**	**24**	*e*P		Pn		18 13 12.8	+2.4
KBTR				*e*S		Sn		18 13 54.8	+2.7
SMKR	**Semkarok**	**3.75**	**11**	*e*P		Pn		18 13 13.0	+1.0
SMKR				*e*S		Sn		18 13 54.8	-0.1
SRKR	**Sorokina**	**3.79**	**9**	*e*P		Pn		18 13 15.0	+2.5
SRKR				*e*S		Sn		18 13 57.6	+1.7
BKI	**Bering**	**4.13**	**54**	*e*S		Sn		18 14 00.3	-3.7

*IDC **22** 18:41:57.1±1.5, 13.°25N×120.°23E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.1/24, mbtmp3.3/2, Error ellipse: s-maj=30.8km s-min=12.2km az=121.0*
*ISCJB **22** 18:42:04.2±0.8, 13.°96N±0.°07×120.°6E±0.°1, h120km, mb3.3/3, Error ellipse: s-maj=16.0km s-min=9.2km az=173.9*
*MAN **22** 18:42:04, 13.°85N×120.°44E, h68km, mb4.7, ML3.6, MS3.6*
ISC 22 18:42:04.1±1.2, 13.°88N±0.°09×120.°5E±0.°1, h120km, n10, σ2s38/12, mb3.3/3, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.46**	**61**	*i* P		**Pn**		**18 42 20.5**	**-1.4**
TGY				*e*S		**Sn**		**18 42 31.0**	**-4.3**
TGY	**Tagaytay City**	**0.46**	**61**	Pg		**Pn**		**18 42 20.0**	**-1.9**
	1µm,0.3s,baz=250,slow=1.6,SNR=174								
TGY				Lg		Lg		18 42 31.4	
	1µm,0.3s,baz=116,slow=18,SNR=22								
PCPH	**Palayan**	**1.76**	**18**	*e*P		**Pn**		**18 42 33.8**	**-0.9**
PCPH				*e*S		**Sn**		**18 42 56.3**	**-1.7**
SCZP	**Santa Cruz**	**1.98**	**343**	*e*P		**Pn**		**18 42 34.7**	**-2.6**
SCZP				*e*S		**Sn**		**18 43 01.3**	**-1.4**
BALP	**Baler**	**2.11**	**29**	*e*P		**Pn**		**18 42 39.9**	**+0.9**
BOLP	**Bolinao**	**2.56**	**347**	*e*P		**Pn**		**18 42 44.4**	**-0.3**
CAUP	**Cauayan**	**3.29**	**22**	*e*P		**Pn**		**18 42 56.4**	**+2.1**
CMAR	**Chiang Mai Arr**	**21.22**	**285**	P		**P**		**18 46 43.2**	**+2.7**
	1.1nm,0.8s,baz=94,slow=9.0,SNR=6.3								
WRA	**Warramunga Arr**	**36.25**	**158**	P		**P**		**18 48 57.4**	**+1.5**
	0.2nm,0.5s,baz=336,slow=10,SNR=4.5								
ASAR	**Alice Springs**	**39.54**	**161**	P		P		18 49 26.4	+2.8
	0.2nm,0.5s,baz=338,slow=7.3,SNR=4.7								

*ISK **22** 18:56:34.9, 38.°86N×26.°84E, h9km, MD3.3*
*ISCJB **22** 18:56:35.5±0.5, 38.°84N±0.°02×26.°82E±0.°04, h8km±4km, Error ellipse: s-maj=5.0km s-min=3.0km az=162.9*
*CSEM **22** 18:56:35.7±0.1, 38.°84N×26.°83E, h10km, MD3.2, Error ellipse: s-maj=3.3km s-min=2.0km az=83.0*
*DDA **22** 18:56:35.4, 38.°84N×26.°87E, h7km, MD3.2*
ISC 22 18:56:35.4±1.1, 38.°85N±0.°02×26.°83E±0.°03, h8km±10km, n71, σ0s48/92, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.47**	**347**	*i* P		**Pb**		**18 56 45.5**	**-0.4**
AYVA				*i* S		**Sb**		**18 56 52.3**	**-0.8**
AYVA	**Ayvalik**	**0.47**	**347**	*i* P		**Pb**		**18 56 45.5**	**-0.4**
AYVA				*i* S		**Sb**		**18 56 52.3**	**-0.8**
BLCB	**Balcova**	**0.49**	**160**	*e*PG		**Pg**		**18 56 44.8**	**-0.1**
BLCB						*e*SG		**Sg**	**18 56 51.6**	**+0.3**
BLCB	**Balcova**	**0.49**	**160**	*e*Pg		**Pg**		**18 56 44.8**	**-0.1**
BLCB						*e*Sg		**Sg**	**18 56 51.6**	**+0.3**
URLA	**Izmir**	**0.52**	**200**	*i* P		**Pg**		**18 56 45.2**	**-0.2**
URLA				*i* S		**Sb**		**18 56 53.9**	**-0.6**
URLA	**Izmir**	**0.52**	**200**	*i* P		**Pg**		**18 56 45.2**	**-0.2**
URLA				*i* S		**Sb**		**18 56 53.9**	**-0.6**
IZM	**Izmir**	**0.56**	**143**	*e*PG		**Pg**		**18 56 46.5**	**+0.2**
IZM				*e*SG		**Sb**		**18 56 55.7**	**-0.1**
IZM	**Izmir**	**0.56**	**143**	*e*Pg		**Pg**		**18 56 46.5**	**+0.2**
IZM				*e*Sg		**Sb**		**18 56 55.7**	**-0.1**
AKS	**Akhisar**	**0.77**	**87**	*e*PG		**Pg**		**18 56 50.3**	**+0.1**
AKS	**Akhisar**	**0.77**	**87**	*e*Pg		**Pg**		**18 56 50.3**	**+0.1**
AKHS	**Akhisar**	**0.77**	**87**	*i* P		**Pb**		**18 56 51.1**	**0.0**
AKHS				*i* S		**Sb**		**18 57 02.2**	**+0.4**
AKHS	**Akhisar**	**0.77**	**87**	*i* P		**Pb**		**18 56 51.1**	**0.0**
AKHS				*i* S		**Sb**		**18 57 02.2**	**+0.4**
EZN	**Ezine**	**1.05**	**338**	*e*PG		**Pg**		**18 56 55.1**	**-0.5**
EZN				*e*SG		**Sb**		**18 57 10.3**	**+0.5**
EZN	**Ezine**	**1.05**	**338**	*e*Pg		**Pg**		**18 56 55.1**	**-0.5**
EZN				*e*Sg		**Sb**		**18 57 10.3**	**+0.5**
BALY	**Balya**	**1.08**	**34**	*i* P		**Pb**		**18 56 56.5**	**+0.1**
BALY				*i* S		**Sn**		**18 57 12.5**	**+0.3**
BALY	**Balya**	**1.08**	**34**	*i* P		**Pb**		**18 56 56.5**	**+0.1**
BALY				*i* S		**Sn**		**18 57 12.5**	**+0.3**
BALB	**Balikesir**	**1.14**	**46**	*e*PN		**Pg**		**18 56 56.9**	**-0.3**
BALB	**Balikesir**	**1.14**	**46**	*e*Pn		**Pg**		**18 56 56.9**	**-0.3**
BOZC	**Bozcaada**	**1.16**	**329**	*i* P		**Pn**		**18 56 58.2**	**+0.2**
BOZC				*i* S		**Sn**		**18 57 14.7**	**+0.7**
GCAM	**G?zelcaml?**	**1.19**	**164**	*i* P		**Pg**		**18 56 57.9**	**-0.3**
GCAM	**G?zelcaml?**	**1.19**	**164**	*i* P		**Pg**		**18 56 57.9**	**-0.3**
GONE	**Gonen-Balikesi**	**1.37**	**29**	*e*PN		**Pn**		**18 57 00.4**	**-0.4**
GONE	**Gonen-Balikesi**	**1.37**	**29**	*e*Pn		**Pn**		**18 57 00.4**	**-0.4**
MANT	**Manisa**	**1.40**	**104**	*i* P		**Pn**		**18 57 01.1**	**-0.4**
MANT				*i* S		**Sg**		**18 57 20.5**	**0.0**
MANT	**Manisa**	**1.40**	**104**	*i* P		**Pn**		**18 57 01.1**	**-0.4**
MANT				*i* S		**Sg**		**18 57 20.5**	**0.0**
AYDN	**Tasoluk**	**1.45**	**145**	*i* P		**Pn**		**18 57 00.9**	**-1.0**
AYDN				*i* S		**Sn**		**18 57 20.3**	**-0.8**
AYDN	**Tasoluk**	**1.45**	**145**	*i* P		**Pn**		**18 57 00.9**	**-1.0**
AYDN				*i* S		**Sn**		**18 57 20.3**	**-0.8**
KULA	**Kula-Manisa**	**1.47**	**102**	*e*PN		**Pn**		**18 57 01.9**	**-0.4**
KULA	**Kula-Manisa**	**1.47**	**102**	*e*Pn		**Pn**		**18 57 01.9**	**-0.4**
DURS	**Dursunbey**	**1.48**	**59**	*i* P		**Pn**		**18 57 02.4**	**-0.1**
DURS				*i* S		**Sb**		**18 57 22.3**	**0.0**
DURS	**Dursunbey**	**1.48**	**59**	*i* P		**Pn**		**18 57 02.4**	**-0.1**
DURS				*i* S		**Sb**		**18 57 22.3**	**0.0**
LPK	**Lapseki**	**1.52**	**358**	*e*PN		**Pn**		**18 57 03.1**	**+0.2**
LPK	**Lapseki**	**1.52**	**358**	*e*Pn		**Pn**		**18 57 03.1**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.57**	**350**	*e*PN		**Pn**		**18 57 04.2**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.57**	**350**	*e*Pn		**Pn**		**18 57 04.2**	**+0.6**
DST	**Dursunbey**	**1.58**	**61**	*e*PN		**Pn**		**18 57 03.5**	**-0.3**
DST	**Dursunbey**	**1.58**	**61**	*e*Pn		**Pn**		**18 57 03.5**	**-0.3**
KRBG	**Karabiga-Canak**	**1.58**	**13**	*e*PN		**Pn**		**18 57 03.2**	**-0.6**
KRBG	**Karabiga-Canak**	**1.58**	**13**	*e*Pn		**Pn**		**18 57 03.2**	**-0.6**
MLSB	**Milas**	**1.72**	**154**	*e*PN		**Pn**		**18 57 05.9**	**+0.2**
MLSB	**Milas**	**1.72**	**154**	*e*Pn		**Pn**		**18 57 05.9**	**+0.2**
BNT	**Bandirma**	**1.73**	**29**	*e*PN		**Pn**		**18 57 05.7**	**0.0**
BNT	**Bandirma**	**1.73**	**29**	*e*Pn		**Pn**		**18 57 05.7**	**0.0**
BODT	**Bodrum**	**1.82**	**168**	*e*PN		**Pn**		**18 57 07.7**	**+0.6**
BODT	**Bodrum**	**1.82**	**168**	*e*Pn		**Pn**		**18 57 07.7**	**+0.6**
KCTX	**Karacabey (Bur**	**1.84**	**39**	*e*PN		**Pn**		**18 57 06.7**	**-0.7**
KCTX	**Karacabey (Bur**	**1.84**	**39**	*e*Pn		**Pn**		**18 57 06.7**	**-0.7**
MRMT	**Marmara Adasi**	**1.85**	**18**	*e*PN		**Pn**		**18 57 07.8**	**+0.3**
MRMT	**Marmara Adasi**	**1.85**	**18**	*e*Pn		**Pn**		**18 57 07.8**	**+0.3**
ENEZ	**Enez**	**1.96**	**345**	*e*PN		**Pn**		**18 57 09.4**	**+0.5**
ENEZ	**Enez**	**1.96**	**345**	*e*Pn		**Pn**		**18 57 09.4**	**+0.5**
MFT	**Murefte**	**1.97**	**10**	*e*PN		**Pn**		**18 57 09.3**	**+0.2**
MFT	**Murefte**	**1.97**	**10**	*e*Pn		**Pn**		**18 57 09.3**	**+0.2**
ORLT	**Orhaneli**	**2.00**	**53**	*e*PN		**Pn**		**18 57 10.1**	**+0.6**
ORLT	**Orhaneli**	**2.00**	**53**	*e*Pn		**Pn**		**18 57 10.1**	**+0.6**
APE	**Apeiranthos**	**2.05**	**210**	*e*PN		**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.6nm,0.3s,baz=347,slow=12,SNR=22						
MKAR	Makanchi Array	59.75	326	P	P	19 19 09.8	-0.1
	0.2nm,0.4s,baz=124,slow=6.9,SNR=4.9						

ISCJB ***22*** *19:14:32.0±0.7, 6°.98N±0°.08×73°.0W±0°.1, h156km±8km, mb3.8/2, Error ellipse: s-maj=20.3km s-min=7.1km az=38.9*
IDC ***22*** *19:14:34.0±2.8, 6°.74N×73°.23W, h179km±20km, mb3.5/2, mb1 3.7/3, mb1mx3.1/22, mbtmp3.6/3, Error ellipse: s-maj=85.4km s-min=24.8km az=101.0*
FUNV ***22*** *19:14:36.2, 6°.94N×72°.86W, h147km, MW3.6*
ISC 22 19:14:31.8±0.9**, 6°.89N**±0°.08×**72°.91W**±0°.09**, h162**km±8km**, n20,** σ2§04/29**, 1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.14	31	⇓iP	Pn	19 15 01.1	+2.0
CAPV				eS	Sn	19 15 18.8	-1.4
ROSC	El Rosal	2.46	215	P	Pn	19 15 13.6	+0.1
	54nm,0.3s,baz=355,slow=1.3,SNR=30						
ROSC				S	Sn	19 15 44.3	-1.4
	56nm,0.3s,baz=107,slow=15,SNR=8.1						
SOCV	Socops	2.47	56	eP	Pn	19 15 14.9	+1.7
SOCV				eS	Sn	19 15 43.8	-1.4
VIGV	El Vigia	2.47	38	eP	Pn	19 15 15.4	+2.1
VIGV				eS	Sn	19 15 44.5	-0.9
ELOV	Elorza	3.41	88	eP	Pn	19 15 27.1	+2.3
QARV	Quebrada Arrib	4.06	35	eP	Pn	19 15 35.4	+2.2
QARV				eS	Sn	19 16 17.6	-3.5
SANV	Sanarito	4.23	52	eP	Pn	19 15 36.9	+1.4
SANV				eS	Sn	19 16 22.8	-2.4
CURV	Curarigua	4.26	43	eP	Pn	19 15 37.4	+1.5
CURV				eS	Sn	19 16 22.9	-3.0
DABV	Dabajuro	4.60	29	eP	Pn	19 15 42.2	+2.0
DABV				eS	Sn	19 16 30.8	-2.8
TEPV	Terepaima	4.78	50	eP	Pn	19 15 44.3	+1.6
SIQV	Siquisique	4.84	39	eP	Pn	19 15 44.7	+1.3
SIQV				eS	Sn	19 16 35.0	-4.3
BAUV	El Baul	5.24	67	eP	Pn	19 15 49.3	+0.7
MAPV	Macapo	5.29	56	eP	Pn	19 15 50.5	+1.1
MONV	Montecano	5.81	30	eP	Pn	19 15 57.1	+0.9
TURV	Turiamo	6.14	54	eP	Pn	19 16 02.2	+1.7
SCHQ	Schefferville	48.06	5	P	P	19 22 56.5	+1.8
	2.4nm,0.5s,baz=178,slow=7.6,SNR=5.9						
YKA	Yellowknife Ar	63.27	340	P	P	19 24 43.3	+0.3
	0.5nm,0.6s,baz=131,slow=6.8,SNR=14						
MKAR	Makanchi Array	122.19	20	PKP	PKPdf	19 33 07.5	-0.2
	0.2nm,0.4s,baz=318,slow=1.9,SNR=4.6						
ASAR	Alice Springs	149.32	234	PKPbc	PKPbc	19 34 01.4	-1.1
	0.3nm,0.5s,baz=120,slow=3.6,SNR=7.6						
WRA	Warramunga Arr	150.55	241	PKPbc	PKPbc	19 34 04.4	-1.1
	38nm,0.3s,baz=108,slow=2.5,SNR=2.0						

IDC ***22*** *19:35:49.2±1.8, 17°.85S×168°.28E, h0km, mb4.0/3, mb1 4.3/4, mb1mx3.9/18, mbtmp4.2/4, ML4.6/1, MS3.7/12, Ms1 3.7/12, ms1mx3.5/29, Error ellipse: s-maj=73.0km s-min=29.0km az=129.0*
NOU ***22*** *19:35:54.2±1.7, 18°.01S×168°.61E, h30km, MD3.3, ML3.5*
ISCJB ***22*** *19:35:56.5±2.5, 18°.3S±0°.2×168°.4E±0°.3, h75km±28km, mb3.8/3, Error ellipse: s-maj=59.8km s-min=18.9km az=29.6*
ISC 22 19:35:56.7±4.4**, 18°.2S**±0°.3×**168°.4E**±0°.3**, h59**km±45km**, n21,** σ**1§31**/16**, mb4.1**/3**, MS3.7**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	4.19	199	eP	Pn	19 36 58.4	+0.3
BAYA				eS	Sn	19 37 46.5	+0.8
DZM	Mont Dzumac	4.27	205	ePn	Pn	19 36 59.6	+0.3
	82nm,0.2s						
DZM				eSn	Sn	19 37 45.6	-2.3
	145nm,0.3s						
DZM				eLR	LR	19 37 55.5	
	1μm,24.6s						
DZM	Mont Dzumac	4.27	205	eP	Pn	19 36 58.5	-0.8
DZM				eS	Sn	19 37 47.5	-0.4
DZM				AMP		19 38 25.7	
	comp=Z,1μm,4.3s						
DZM	Mont Dzumac	4.27	205	Pn	Pn	19 36 59.0	-0.3
	comp=Z,30nm,0.3s,baz=23,slow=13,SNR=113						
DZM				Sn	Sn	19 37 45.8	-2.1
	comp=Z,28nm,0.3s,baz=151,slow=23,SNR=8.4						
DZM				LR	LR	19 38 35.5	
	comp=Z,784nm,20.5s,baz=66,slow=37						
NOUC	Port Laguerre	4.36	206	eP	Pn	19 37 01.8	+1.5
NOUC				eS	Sn	19 37 51.3	+1.5
NOUC				AMP		19 38 08.5	
	comp=Z,38nm,0.0s						
LASL	Noumea	4.38	203	eP	Pn	19 37 01.4	+0.8
LASL				eS	Sn	19 37 49.6	-0.8
LASL				AMP		19 37 56.5	
	comp=Z,376nm,8.0s						
AFI	Afiamalu	19.54	80	LR	LR	19 46 21.8	
	comp=Z,195nm,19.4s,baz=140,slow=32						
CTA	Charters Tower	20.98	261	LR	LR	19 46 09.4	
	comp=Z,124nm,19.6s,baz=71,slow=30						
STKA	Stephens Creek	27.74	235	P	P	19 41 41.3	+1.5
	comp=Z,4.3nm,0.9s,baz=88,slow=10,SNR=9.7						
STKA				LR	LR	19 51 43.1	
	comp=Z,157nm,18.9s,baz=23,slow=34						
RAR	Rarotonga	30.11	101	LR	LR	19 51 13.1	
	comp=Z,154nm,18.9s,baz=119,slow=30						
ASAR	Alice Springs	32.60	254	P	P	19 42 22.3	-0.6
	comp=Z,1.2nm,0.4s,baz=82,slow=8.4,SNR=46						
ASAR				LR	LR	19 55 10.0	
	comp=Z,174nm,18.8s,baz=156,slow=36						
GUMO	Guam	39.17	322	LR	LR	19 57 13.1	
	comp=Z,38nm,19.9s,baz=49,slow=33						
TBI	Tubuai	39.66	105	eLR	LR	19 54 18.3	
	comp=Z,77nm,34.0s						
PPT2	Papeete2	39.96	96	eLR	LR	19 55 07.2	
	comp=Z,144nm,25.2s						
FITZ	Fitzroy Crossi	40.54	263	LR	LR	20 00 15.2	
	comp=Z,144nm,18.7s,baz=152,slow=36						
VNDA	Vanda	59.45	182	LR	LR	20 07 39.7	
	comp=Z,133nm,20.2s,baz=203,slow=32						
PFO	Pinyon Flat Ob	88.16	54	LR	LR	20 22 01.2	
	comp=Z,75nm,18.1s,baz=43,slow=32						
NVAR	Mina Array Bea	88.72	49	LR	LR	20 19 18.1	
	comp=Z,63nm,19.3s,baz=334,slow=29						
ILAR	Eielson Array	89.48	18	P	P	19 48 46.1	-0.8
	comp=Z,0.2nm,0.6s,baz=227,slow=3.6,SNR=4.2						
PDAR	Pinedale Array	96.50	47	LR	LR	20 27 19.6	
	comp=Z,25nm,20.6s,baz=70,slow=32						
ARCES	ARCESS Array B	123.84	345	PKP	PKPdf	19 54 48.1	+0.7
	comp=Z,5.2nm,1.0s,baz=54,slow=3.1,SNR=5.6						

IDC 22 19:45:39.6±1.4**, 4°.31N**×**127°.09E, h0**km**, mb4.0**/6**, mb1 4.2**/6**, mb1mx3.8**/24**, mbtmp4.1**/6**, Error ellipse: s-maj=71.2km s-min=21.3km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.31	184	P	P	19 50 38.7	-0.2
	2.3nm,0.8s,baz=356,slow=6.5,SNR=6.4						
CMAR	Chiang Mai Arr	30.90	299	P	P	19 51 58.3	+0.1
	0.8nm,0.7s,baz=121,slow=6.6,SNR=6.0						
STKA	Stephens Creek	38.54	160	P	P	19 53 04.0	-0.1
	0.8nm,0.4s,baz=334,slow=12,SNR=4.6						
MKAR	Makanchi Array	57.29	325	P	P	19 55 29.2	0.0
	1.8nm,0.6s,baz=124,slow=8.3,SNR=29						
ZALV	Zalesovo Beam	60.24	333	P	P	19 55 49.1	-0.4
	0.7nm,0.5s,baz=109,slow=6.7,SNR=5.2						
ARCES	ARCESS Array B	90.03	340	P	P	19 58 41.1	+0.2
	4.9nm,0.9s,baz=86,slow=6.4,SNR=3.9						

AUST ***22*** *19:46:43.2, 3°.99S×129°.01E, h20km*
ISCJB ***22*** *19:46:44.9±1.2, 3°.86S±0°.05×129°.0E±0°.1, h100km, mb3.3/1, Error ellipse: s-maj=15.4km s-min=5.8km az=16.5*
IDC ***22*** *19:46:52.5±4.5, 3°.98S×128°.84E, h181km±41km, mb3.3/2, mb1 3.4/3, mb1mx3.1/22, mbtmp3.2/3, Error ellipse: s-maj=89.3km s-min=13.7km az=71.0*
ISC 22 19:46:44.4±1.2**, 3°.89S**±0°.07×**128°.9E**±0°.1**, h100**km**, n14,** σ**1§95**/11**, Seram**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAI	Ambon	0.77	285	S	Pn	19 47 07.2	+4.8
	baz=0.9,SNR=188						
BNDI	Bandanaira	1.15	123	S	Pn	19 47 12.6	+6.2
	baz=1.0,SNR=11						
FAKI	Fak Fak	3.44	74	P	Pn	19 47 39.4	+3.3
	baz=3.4,SNR=23						
FAKI				S	Sn	19 48 15.4	-0.6
	baz=3.4,SNR=6.6						
SWI	Sorong	3.79	38	P	Pn	19 47 42.1	+1.3
	baz=3.8,SNR=22						
SWI				S	Sn	19 48 23.2	-1.3
	baz=3.8,SNR=9.0						
MTN	Manton Dam	9.16	166	P	Pn	19 48 58.6	+4.9
	baz=9.1,SNR=10						
MTN				S	Sn	19 50 36.8	+1.8
	baz=9.1,SNR=5.0						
KDU	Kakadu	9.41	158	P	Pn	19 48 60.0	+2.8
	baz=9.3,SNR=20						
KDU				S	Sn	19 50 43.0	+1.8
	baz=9.3,SNR=6.2						
FITZ	Fitzroy Crossi	14.49	193	P	P	19 50 09.0	+0.5
	0.1nm,0.3s,baz=33,slow=12,SNR=5.0						
FITZ	Fitzroy Crossi	14.49	193	P	P	19 50 10.9	+2.3
	baz=14,SNR=3.4						
WRA	Warramunga Arr	16.80	162	P	P	19 50 35.2	+1.0
	6.5nm,0.3s,baz=341,slow=13,SNR=1.3						
WRA				S	Sn	19 53 36.8	-3.5
	baz=341,slow=20,SNR=1.6						
COEN	Coen	17.24	126	P	P	19 50 42.5	+3.4
	baz=17,SNR=6.4						
QIS	Mount Isa	19.55	149	P	Pn	19 51 06.6	0.0
	baz=20,SNR=14						
ASAR	Alice Springs	20.24	167	P	Pn	19 51 13.8	-0.8
	3.0nm,0.3s,baz=346,slow=12,SNR=71						
ASAR				S	S	19 54 51.0	-2.5
	2.3nm,0.9s,baz=348,slow=20,SNR=9.7						
EIDS	Eidsvold	30.14	137	P	P	19 53 07.1	+22
	baz=30,SNR=8.8						
MKAR	Makanchi Array	65.06	327	P	P	19 57 13.6	-0.7
	0.2nm,0.4s,baz=119,slow=7.7,SNR=3.1						

IDC 22 20:04:13.8±1.8**, 13°.85N**×**92°.53W, h0**km**, mb3.8**/5**, mb1 4.2**/8**, mb1mx3.9**/24**, mbtmp3.8**/8**, ML3.9**/2**, Error ellipse: s-maj=41.7km s-min=28.7km az=25.0, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	3.95	325	Pn	Pn	20 05 13.7	-2.0
	2.5nm,0.3s,baz=144,slow=11,SNR=16						
CMIG				Sn	Sn	20 06 02.3	-0.4
	5.1nm,0.3s,baz=156,slow=21,SNR=6.4						
TEIG	Tepich	7.53	32	Pn	Pn	20 06 06.7	+1.7
	5.9nm,0.3s,baz=88,slow=0.8,SNR=20						
TEIG				Sn	Sn	20 07 33.5	+2.4
	1.3nm,0.3s,baz=0.6,slow=17,SNR=4.6						
TXAR	Lajitas Array	18.55	328	Pn	P	20 08 32.0	-0.3
	baz=151,slow=14,SNR=5.4						
PDAR	Pinedale Array	32.35	336	P	P	20 10 45.2	0.0
	0.3nm,0.6s,baz=123,slow=6.6,SNR=2.2						
NVAR	Mina Array Bea	33.47	322	P	P	20 10 56.4	+1.3
	1.4nm,0.7s,baz=132,slow=8.3,SNR=11						
YKA	Yellowknife Ar	51.06	347	P	P	20 13 17.4	-0.2
	3.6nm,0.7s,baz=150,slow=7.5,SNR=68						
YKA				PcP	PcP	20 14 33.4	-0.1
	0.2nm,0.6s,baz=139,slow=3.7,SNR=4.0						
ILAR	Eielson Array	62.78	337	P	P	20 14 40.5	-0.3
	0.9nm,0.7s,baz=112,slow=6.0,SNR=15						
ESDC	Sonseca Array	80.21	52	P	P	20 16 25.6	-1.0
	0.1nm,0.3s,baz=284,slow=5.2,SNR=2.6						
CMAR	Chiang Mai Arr	145.97	340	PKPbc	PKPbc	20 23 56.2	-0.1
	1.7nm,0.8s,baz=342,slow=3.7,SNR=9.7						

IDC 22 20:08:01.5±2.5**, 14°.14N**×**92°.83W, h0**km**, mb4.0**/4**, mb1 4.2**/7**, mb1mx3.9**/24**, mbtmp3.9**/7**, ML3.8**/3**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.5**/33**, Error ellipse: s-maj=49.9km s-min=38.4km az=155.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	3.54	326	Pn	Pn	20 08 58.8	+1.1
	5.1nm,0.3s,baz=140,slow=11,SNR=5.8						
TEIG	Tepich	7.45	35	Pn	Pn	20 09 52.3	+0.8
	4.6nm,0.3s,baz=138,slow=0.8,SNR=8.3						
TEIG				Sn	Sn	20 11 17.6	+0.8
	baz=270,slow=20,SNR=2.6						
TXAR	Lajitas Array	18.14	328	Pn	P	20 12 17.1	+1.7
	0.1nm,0.3s,baz=152,slow=14,SNR=6.8						
ANMO	Albuquerque	24.09	332	LR	LR	20 23 28.1	
	comp=Z,26nm,18.1s,baz=64,slow=38						
NVAR	Mina Array Bea	33.06	322	P	P	20 14 39.0	-0.1
	1.0nm,0.8s,baz=130,slow=8.3,SNR=8.3						
ULM	Lac du Bonnet	36.09	357	P	P	20 15 03.9	-1.0
	1.0nm,0.3s,baz=180,slow=8.1,SNR=3.2						
YKA	Yellowknife Ar	50.70	347	P	P	20 17 02.5	-0.1
	3.1nm,0.7s,baz=150,slow=7.5,SNR=54						
YKA				PcP	PcP	20 18 21.3	+1.4
	0.3nm,0.8s,baz=147,slow=4.3,SNR=3.5						
ILAR	Eielson Array	62.39	337	P	P	20 18 25.2	-0.7
	0.7nm,0.6s,baz=110,slow=6.3,SNR=12						
CMAR	Chiang Mai Arr	145.59	340	PKPbc	PKPdf	20 27 41.2	-1.5
	1.5nm,0.8s,baz=337,slow=3.8,SNR=8.6						

CASC 22 20:13:44.9±5.4**, 8°.74N**×**83°.17W, h12**km±15km**, MD3.5, 3C, Costa Rica**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.09	179	⇑iP	Pg	20 13 46.8	-0.9
ACR				⇑iP	Pg	20 13 46.8	-0.9
ACR				eS	Sg	20 13 49.1	-0.8
ACR				eS	Sg	20 13 50.0	+0.2
BRU2	Volcan	0.47	84	⇑iP	Pg	20 13 54.9	+0.4
BRU2				eS	Sb	20 14 03.7	+1.2
BRU	Baru	0.60	84	eP	Pg	20 13 57.3	0.0
BRU				eS	Sn	20 14 09.7	-0.2
BUS	Buena Vista	1.00	324	eP	Pb	20 14 01.4	-3.3
BUS				eP	Pg	20 14 02.1	-2.7
BUS				eS	Sb	20 14 17.5	-0.7
QCR	Quepos	1.20	305	eP	Pn	20 14 03.2	-4.2
QCR				eS	Sb	20 14 20.5	-2.3
QCR				eS	Sg	20 14 20.7	-2.8
LAJ	Bijagual	1.46	320	eP	Pg	20 14 13.0	-0.3
LAJ				eS	Sg	20 14 35.5	+3.1
SJS	Escuela Geolog	1.48	324	eS	Sb	20 14 31.2	-0.1
CGA2	Cerro Gallo 2	1.80	315	eP	Pn	20 14 14.9	-1.0
CGA2				eS	Sn	20 14 38.2	-0.6
FORC	Fortuna	2.26	319	eP	Pn	20 14 22.1	0.0
FORC				eS	Sb	20 14 52.0	-1.7

NOU ***22*** *20:21:55.9±0.6, 23°.77S×170°.12E, h10km, MD2.9, ML4.0*
IDC 22 20:21:53.5±3.0**, 22°.12S**×**170°.22E, h0**km**, mb3.3**/1**, mb1 3.7**/2**, mb1mx3.5**/17**, mbtmp3.6**/2**, Error ellipse: s-maj=149.4km s-min=39.0km az=167.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	3.09	269	eS	Sn	20 23 22.1	+0.8
DZM	Mont Dzumac	3.50	270	eP	Pn	20 22 51.2	+1.8
DZM				eS	Sn	20 23 32.5	+0.9
DZM				AMP		20 23 37.0	
	comp=Z,862nm,2.3s						
DZM	Mont Dzumac	3.50	270	Pn	Pn	20 22 51.4	+2.1
	comp=Z,19nm,0.3s,baz=142,slow=12,SNR=248						
DZM				Sn	Sn	20 23 31.4	-0.2
	comp=Z,18nm,0.3s,baz=135,slow=24,SNR=13						
NOUC	Port Laguerre	3.63	270	eS	Sn	20 23 36.8	+2.3
NOUC				AMP		20 23 41.2	
	comp=Z,36nm,9.4s						
ASAR	Alice Springs	33.43	260	P	P	20 28 34.1	-0.3
	comp=Z,0.4nm,0.9s,baz=96,slow=9.4,SNR=3.9						
WRA	Warramunga Arr	33.51	267	P	P	20 28 34.2	-0.9
	comp=Z,42nm,0.4s,baz=94,slow=8.3,SNR=2.4						
GERES	GERESS Array B	147.45	331	PKPbc	PKPbc	20 41 39.1	-0.4
	comp=Z,0.7nm,0.8s,baz=357,slow=2.7,SNR=6.0						

AUST ***22*** *21:14:14.0±18.0, 25°.42S×179°.79E, h298km, Error ellipse: s-maj=9.9km s-min=3.5km az=293.0*
IDC 22 21:12:51.2±26.0**, 22°.42S**×**173°.71W, h0**km**, mb4.6**/3**, mb1 4.7**/3**, mb1mx3.9**/20**, mbtmp4.6**/3**, Error ellipse: s-maj=479.3km s-min=137.9km az=77.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EIDS	Eidsvold	32.27	258	P	P	21 19 21.2	-0.6
	baz=26,SNR=4.9						
CMSA	Cobar Meteorol	37.13	247	P	P	21 20 03.5	-0.2
	baz=30,SNR=7.5						
CTA	Charters Tower	37.31	266	P	P	21 20 05.8	+0.4
	10nm,0.4s,baz=95,slow=12,SNR=21						
STKA	Stephens Creek	40.63	247	P	P	21 20 33.2	+0.1
	4.3nm,0.8s,baz=76,slow=10,SNR=8.2						
MMPI	Merauke	46.18	280	S	S	21 26 50.7	-75
	baz=41,SNR=3.7						
ASAR	Alice Springs	47.99	258	P	P	21 21 31.8	-0.5
	5.9nm,0.8s,baz=97,slow=7.7,SNR=44						
WRA	Warramunga Arr	48.31	263	P	P	21 21 34.3	-0.4
	47nm,0.4s,baz=102,slow=8.3,SNR=2.5						
KDU	Kakadu	51.98	271	S	S	21 28 35.0	-52
	baz=46,SNR=6.6						
FORT	Forrest	52.24	248	P	P	21 22 04.4	+0.1
	baz=46,SNR=15						
FITZ	Fitzroy Crossi	56.74	263	P	P	21 22 39.3	+2.1
	baz=50,SNR=4.6						
MORW	Morawa	62.80	248	P	P	21 23 21.0	+2.1
	baz=56,SNR=3.9						
PCI	Palu	67.94	278	P	P	21 24 05.0	+13
	baz=63,SNR=4.0						

NIED ***22*** *21:19:00, 46°.20N×152°.30E, h32km, Mw4.0 Best double couple: Mo1.30000×10[15] NP1:φs326.00000°, δ82.00000°, λ25.00000°. NP2:φs232.00000°, δ65.00000°, λ171.00000°.*
JMA ***22*** *21:19:37.4±0.7, 46°.21N×152°.27E, h30km, M4.5*
MOS ***22*** *21:19:43.1±1.0, 46°.13N×151°.78E, h56km, mb4.3/6, Error ellipse: s-maj=20.5km s-min=11.3km az=51.0*
IDC ***22*** *21:19:44.0±2.8, 45°.97N×151°.90E, h50km±25km, mb3.5/9, mb1 3.7/13, mb1mx3.6/28, mbtmp3.6/13, ML3.3/4, MS3.3/8, Ms1 3.3/8, ms1mx2.9/36, Error ellipse: s-maj=26.8km s-min=17.8km az=141.0*
ISC 22 21:19:39.0±0.9**, 45°.4N**±0°.1×**152°.4E**±0°.1**, h30**km**, n49,** σ**1§89**/58**, mb3.8**/9**, MS3.5**/4**, 1C, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.20	269	ePN	Pn	21 20 27.3	+0.1
KUR				eS	Sn	21 21 05.0	+0.8
KUR				pmax	pmax		
	comp=Z,190nm,0.5s						
KUR				smax	smax		
	comp=N,530nm,0.6s						
KUR				smax	smax		
	comp=E,760nm,0.6s						
YUK	Yuzh-Kuril'sk	4.85	256	⇑PN	Pn	21 20 52.8	+3.0
YUK				eS	Sb	21 21 53.1	-7.8
YUK				pmax	pmax		
	comp=N,60nm,0.4s						
YUK				pmax	pmax		
	comp=E,52nm,0.4s						
YUK				pmax	pmax		
	comp=Z,109nm,0.4s						
YUK				smax	smax		
	comp=E,142nm,0.7s						
YUK				smax	smax		
	comp=N,183nm,0.7s						
NEM2	Nemuro 2	5.18	249	P	Pn	21 20 55.5	+1.1
NEM2				eS	Sn	21 21 52.7	-0.3
JRA	Rausu	5.38	257	P	Pn	21 21 00.0	+2.8
JNK	Nakash	5.78	255	P	Pn	21 21 04.6	+2.0
SKR	Severo-Kuril's	5.86	24	ePN	Pn	21 21 03.4	-0.4
SKR				e		21 22 13.0	
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
JAK	Akkeshi	6.03	249	P	Pn	21 21 07.0	+1.0
JAK				eS	Sn	21 22 14.4	+0.5
JTKR	Abashiri--Toko	6.21	260	P	Pn	21 21 10.8	+2.2
JAR	Ashorobuto	6.53	254	P	Pn	21 21 15.1	+2.2
JAR				eS	Sn	21 22 29.0	+2.7
JOB	Onbets	6.64	251	P	Pn	21 21 16.4	+2.0
JOB				eS	Sn	21 22 30.0	+1.0
JKK2	Kamakawa 2	7.05	261	P	Pn	21 21 22.6	+2.5
JCH	Churui	7.08	250	P	Pn	21 21 21.7	+1.3
JCH				eS	Sn	21 22 38.5	-1.3
ASAJ	Asahikawa	7.09	263	P	Pn	21 21 23.5	+2.9
ASAJ	Asahikawa	7.09	263	P	Pn	21 21 22.6	+2.0
	comp=Z,1.2nm,0.3s,baz=103,slow=17,SNR=8.8						
ASAJ				LR	LR	21 24 04.9	
	comp=Z,177nm,21.9s,baz=4.1,slow=38						
JFR	Furan	7.38	256	P	Pn	21 21 27.0	+2.4
JEM	Erimo	7.49	247	P	Pn	21 21 28.6	+2.5
JEM				eS	Sn	21 22 50.2	+0.2
JNBK	Urakawa-nobuka	7.63	249	P	Pn	21 21 28.9	+0.9
JNBK				eS	Sn	21 22 52.1	-1.3
JBT2	Biratori 2	7.68	254	P	Pn	21 21 30.2	+1.5
PETK	Petropavlovsk-	8.47	22	PN	Pn	21 21 38.0	-1.6
PETK	Petropavlovsk-	8.47	22	P	Pn	21 21 38.0	-1.6
	comp=Z,0.4nm,0.3s,baz=176,slow=16,SNR=4.1						
JKB	Kayabe	8.95	251	P	Pn	21 21 46.6	+0.5
JKB				eS	Sn	21 23 21.5	-4.3
JTH	Tanohata	9.47	239	eS	Sn	21 23 33.7	-5.0
JTM	Tenmabayashi	9.47	245	P	Pn	21 21 54.0	+0.7
JTM				eS	Sn	21 23 34.4	-4.3
MJAR	Matsushiro Arr	13.87	235	P	P	21 23 01.7	+0.3
	comp=Z,0.2nm,0.3s,baz=40,slow=6.4,SNR=4.8						
MJAR				LR	LR	21 28 51.2	
	comp=Z,56nm,18.6s,baz=30,slow=39						
USRK	Ussuriysk Arra	14.53	273	P	Pn	21 23 01.1	-1.3
	comp=Z,0.3nm,0.3s,baz=80,slow=13,SNR=8.5						
USRK				LR	LR	21 28 57.0	
	comp=Z,119nm,18.7s,baz=28,slow=39						
KSRS	Korea Array	19.94	255	P	Pn	21 24 10.9	+0.8
	comp=Z,0.1nm,0.3s,baz=57,slow=12,SNR=3.2						
KSRS				LR	LR	21 31 39.6	
	comp=Z,34nm,20.8s,baz=155,slow=36						
ZALV	Zalesovo Beam	43.02	307	PcP	PcP	21 29 24.7	-0.5
	comp=Z,0.9nm,0.8s,baz=48,slow=2.2,SNR=5.5						
ZALV				LR	LR	21 46 17.2	
	comp=Z,54nm,19.1s,baz=74,slow=38						
MKAR	Makanchi Array	47.14	298	P	P	21 28 06.1	-2.2
MKAR						21 29 40.3	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR				MLR	MLR		
	comp=Z,68nm,18.3s						
MKAR	Makanchi Array	47.14	298	P	P	21 28 06.1	-2.2
	comp=Z,0.6nm,0.5s,baz=75,slow=8.3,SNR=13						
MKAR				PcP	PcP	21 29 40.3	+0.7
	comp=Z,0.7nm,0.8s,baz=66,slow=3.0,SNR=4.8						
MKAR				LR	LR	21 48 45.9	
	comp=Z,68nm,18.3s,baz=250,slow=37						
BVAR	Borovoye Array	51.35	310	LR	LR	21 51 54.7	
	comp=Z,45nm,18.6s,baz=78,slow=38						
CMAR	Chiang Mai Arr	51.56	257	P	P	21 28 43.8	+1.4
	comp=Z,0.5nm,0.4s,baz=45,slow=7.8,SNR=5.1						
YKA	Yellowknife Ar	52.32	36	P	P	21 28 48.5	+1.1
	comp=Z,0.1nm,0.5s,baz=297,slow=7.0,SNR=4.0						
AAK	Ala-Archa	54.00	297	P	P	21 28 59.0	-1.3
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	54.00	297	P	P	21 28 59.0	-1.3
	comp=Z,1.7nm,0.8s,baz=168,slow=4.1,SNR=8.6						
GUN	Gumba	54.63	275	eP	P	21 29 05.9	+0.6
	comp=Z,5.3nm,0.4s						
RAMN	Ramite	54.71	274	eP	P	21 29 06.5	+0.7
	comp=Z,4.1nm,0.3s						
KKN	Kakani	55.12	276	eP	P	21 29 09.4	+0.7
PKIN	Phulchoki	55.17	275	eP	P	21 29 09.4	+0.3
DMN	Daman	55.35	276	eP	P	21 29 11.5	+1.1
	comp=Z,8.7nm,0.6s						
DANN	Dangsing	55.85	277	eP	P	21 29 15.0	+1.0
	comp=Z,14nm,0.7s						
KOLN	Koldanda	56.31	277	eP	P	21 29 17.8	+0.6
	comp=Z,10nm,0.7s						
PYUN	Piuthan	56.54	278	eP	P	21 29 19.7	+0.9
	comp=Z,12nm,0.9s						
FINES	FINESS Array B	65.06	335	P	P	21 30 13.4	-2.6
	comp=Z,3.6nm,0.9s,baz=40,slow=6.2,SNR=9.3						
NB2	NORSAR Subarra	69.36	341	P	P	21 30 42.4	-0.9
	comp=Z,0.8nm,0.5s,baz=28,slow=6.5						
NOA	NORSAR Array B	69.36	341	P	P	21 30 42.4	-0.9
	comp=Z,1.0nm,0.4s,baz=28,slow=6.4,SNR=10.0						
NOA				LR	LR	22 09 21.9	
	comp=Z,15nm,18.1s,baz=0.0,slow=43						
ASAR	Alice Springs	70.75	198	P	P	21 30 57.1	+4.9

comp=Z,0.3nm,0.6s,baz=24,slow=7.1,SNR=3.5

AKASG	**Malin Array Be**	**72.41**	**326**	P	**P**	**21 31 00.7**	**-1.2**
AKASG				pmax	pmax		

comp=Z,1.0nm,0.4s

AKASG	**Malin Array Be**	**72.41**	**326**	P	**P**	**21 31 00.7**	**-1.2**

comp=Z,1.0nm,0.4s,baz=40,slow=6.1,SNR=5.8

TXAR	**Lajitas Array**	**78.61**	**60**	P	**P**	**21 31 40.9**	**+2.9**

comp=Z,0.1nm,0.3s,baz=336,slow=2.0,SNR=2.7

IDC ***22*** *21:32:13.6±4.3,37.06N×71.72E,h79km±38km,mb3.7/10, mb1 3.8/15,mb1mx3.6/29,mbtmp3.7/15,MS5.0/1, Ms1 5.0/1,ms1mx2.8/33,Error ellipse: s-maj=23.4km s-min=19.1km az=165.0*

ISCJB ***22*** *21:32:16.4±0.3,37.08N±0.02×72.10E±0.05,h142km, mb4.1/14, Error ellipse: s-maj=5.7km s-min=3.1km az=168.6*

NNC ***22*** *21:32:22.6±3.6,37.66N×71.45E,h156km±38km,mb3.2, mpv3.9,Error ellipse: s-maj=31.4km s-min=16.1km az=17.0*

ISC 22 21:32:16.9±0.6,37.11N±0.05×72.09E±0.07,h142km,n57, σ1§26/53,mb4.1/14,7C-2D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.29**	**183**	P	**Pn**	**21 33 08.4**	**+0.6**
CEP				S	**Sn**	**21 33 47.0**	**-0.1**
CHCP	**Chirah Chowk**	**3.58**	**164**	⇑P	**Pn**	**21 33 13.8**	**+2.3**
THW	**Thamme Wali**	**4.32**	**184**	P	**Pn**	**21 33 21.1**	**-0.1**
AML	**Almayashu**	**5.16**	**13**	P	**Pn**	**21 33 32.9**	**+0.3**
	SNR=282						
SARP	**Sargodha**	**5.20**	**175**	P	**Pn**	**21 33 32.6**	**-0.3**
KZA	**Kyzart**	**5.53**	**25**	P	**Pn**	**21 33 39.1**	**+1.6**
	SNR=15						
EKS2	**Erkin-Say**	**5.69**	**13**	P	**Pn**	**21 33 40.4**	**+0.9**
	SNR=22						
AAK	**Ala-Archa**	**5.81**	**18**	P	**Pn**	**21 33 42.5**	**+1.4**
	4.7nm,0.3s,baz=185,slow=6.3,SNR=85						
AAK				S	**Sn**	**21 34 46.8**	**-0.1**
	2.2nm,0.3s,baz=98,slow=22,SNR=9.6						
KBK	**Karagaybulak**	**5.96**	**21**	P	**Pn**	**21 33 45.3**	**+2.2**
	SNR=9.1						
DHRM	**DHARAMSHALA**	**5.96**	**143**	*e*P	**Pn**	**21 33 44.5**	**+1.2**
DHRM				*e*S	**Sn**	**21 34 50.2**	**-0.5**
DHRM				AML	AML	21 34 57.0	
	comp=E,782nm,0.4s						
DHRM				AML	AML	21 34 57.7	
	comp=N,507nm,0.4s						
ULHL	**Ulahol**	**6.04**	**31**	P	**Pn**	**21 33 46.4**	**+2.2**
	SNR=8.7						
KK31	**Karatay Array**	**6.10**	**349**	P	**Pn**	**21 33 42.8**	**-2.1**
	comp=N,7.8nm,0.5s,baz=178,slow=12,SNR=271						
KK31				⇓S	Sn	21 34 45.9	-7.7
	comp=N,8.6nm,0.3s,baz=165,slow=20,SNR=8.9						
CHMS	**Chumysh**	**6.22**	**18**	P	**Pn**	**21 33 47.8**	**+1.3**
	SNR=14						
TKM2	**Tokmak 2**	**6.39**	**24**	⇑P	**Pn**	**21 33 50.7**	**+1.8**
	comp=N,5.8nm,0.6s						
TKM2				⇑S	**Sn**	**21 35 01.2**	**+0.3**
	comp=N,15nm,0.8s						
TKM2	**Tokmak 2**	**6.39**	**24**	P	**Pn**	**21 33 50.4**	**+1.5**
	SNR=8.7						
USP	**Ospenovka**	**6.42**	**16**	P	**Pn**	**21 33 49.4**	**+0.4**
	SNR=9.6						
SMLA	**Simla**	**7.30**	**143**	*i* P	**Pn**	**21 34 01.7**	**+0.7**
SMLA				*i* S	**Sn**	**21 35 20.6**	**-1.9**
SMLA						21 35 26.6	
	comp=N,2μm,0.2s						
SMLA						21 35 27.1	
	comp=E,3μm,0.3s						
DDI	**Dehra Dun**	**8.40**	**142**	*e*P	**Pn**	**21 34 16.4**	**+0.7**
DDI				*e*S	**Sn**	**21 35 47.9**	**-1.2**
DDI				AML	AML	21 35 54.5	
	comp=N,650nm,0.6s						
DDI				AML	AML	21 35 55.8	
	comp=E,532nm,0.4s						
MK31	**Makanchi Array**	**12.28**	**35**	P	**Pn**	**21 35 09.6**	**+2.6**
	comp=E,1.5nm,0.7s,baz=224,slow=14,SNR=18						
MKAR	**Makanchi Array**	**12.28**	**35**	P	**Pn**	**21 35 09.3**	**+2.3**
	comp=E,0.2nm,0.3s,baz=222,slow=14,SNR=22						
PYUN	**Piuthan**	**12.84**	**131**	*e*P	**Pn**	**21 35 14.6**	**0.0**
	comp=E,80nm,0.4s						
PYUN				*e*S	Sn	21 37 27.2	-10
DANN	**Dangsing**	**13.14**	**128**	*e*P	**Pn**	**21 35 17.5**	**-0.9**
	comp=E,28nm,0.4s						
KOLN	**Koldanda**	**13.45**	**131**	*e*P	**Pn**	**21 35 22.4**	**0.0**
	comp=E,42nm,0.5s						
KURBB	**Kurchatov Arra**	**14.27**	**17**	P	**Pn**	**21 35 31.5**	**-0.8**
	comp=E,0.0nm,0.3s,baz=207,slow=11,SNR=6.0						
KURK	**Kurchatov**	**14.38**	**17**	⇑P	**Pn**	**21 35 34.7**	**+1.0**
	comp=E,3.9nm,0.8s						
KKN	**Kakani**	**14.49**	**126**	*e*P	**Pn**	**21 35 34.7**	**-0.9**
	comp=E,36nm,0.5s						
DMN	**Daman**	**14.51**	**127**	*e*P	**Pn**	**21 35 35.6**	**-0.2**
	comp=E,40nm,0.6s						
BHPL	**Bhopal**	**14.57**	**160**	*e*P	**P**	**21 35 38.0**	**-1.0**
BHPL				*ex*	x	21 38 07.8	
PKIN	**Phulchoki**	**14.71**	**126**	*e*P	**Pn**	**21 35 37.6**	**-0.8**
	comp=E,29nm,0.6s						
PKI	**Pulchoki**	**14.73**	**126**	*e*P	**Pn**	**21 35 38.4**	**-0.2**
	comp=E,43nm,0.7s						
GUN	**Gumba**	**14.80**	**124**	*e*P	**Pn**	**21 35 38.6**	**-1.0**
	comp=E,42nm,0.6s						
AB31	**Akbulak array**	**15.00**	**328**	P	Pn	21 35 37.1	-4.3
	comp=E,2.9nm,0.6s,baz=139,slow=12,SNR=39						
AB31				⇑S	Sn	21 38 10.9	-17
	comp=E,3.5nm,0.7s,baz=146,slow=24,SNR=8.3						
RAMN	**Ramite**	**15.92**	**125**	*e*P	**Pn**	**21 35 53.1**	**-0.2**
	comp=E,62nm,0.8s						
BVA0	**Borovoye Array**	**15.96**	**356**	P	**Pn**	**21 35 52.4**	**-0.9**
	comp=E,0.4nm,0.6s,baz=160,slow=12,SNR=17						
BVAR	**Borovoye Array**	**15.96**	**356**	P	**Pn**	**21 35 51.7**	**-1.5**
	comp=E,1.2nm,0.3s,baz=161,slow=10.0,SNR=21						
BRVK	**Borovoye**	**15.99**	**356**	⇓P	**Pn**	**21 35 52.6**	**-1.1**
	comp=E,7.3nm,0.8s						
TAPN	**Taplejung**	**16.39**	**122**	*e*P	**Pn**	**21 35 58.6**	**-0.6**
	comp=E,16nm,0.6s						
ODAN	**Odare**	**16.50**	**124**	*e*P	**P**	**21 36 00.1**	**-0.4**
	comp=E,21nm,0.6s						
AKTO	**Aktyubinsk**	**16.71**	**327**	⇑P	**P**	**21 35 59.6**	**-2.7**
	comp=E,2.4nm,0.5s						
AKTO				⇑S	S	21 38 58.0	-11
	comp=E,0.9nm,0.9s						
AKTO	**Aktyubinsk**	**16.71**	**327**	P	**Pn**	**21 36 00.9**	**-1.6**
	comp=E,4.2nm,0.3s,baz=129,slow=11,SNR=80						
AKTO				S	S	21 38 53.0	-16
	comp=E,0.2nm,0.3s,baz=336,slow=20,SNR=3.9						
AKTO				LR	LR	21 43 37.7	
	comp=E,6μm,21.0s,baz=111,slow=41						
ZALV	**Zalesovo Beam**	**19.00**	**24**	P	**Pn**	**21 36 30.9**	**+1.2**
	comp=E,1.0nm,0.3s,baz=230,slow=11,SNR=23						
SHL	**Shillong**	**20.41**	**119**	*e*P	Pn	21 36 49.2	+2.5
MIB	**Mutribah**	**21.86**	**258**	*e*P	**P**	**21 36 58.1**	**-0.2**
MIB				AMb	AMB	21 37 04.1	
	comp=Z,19nm,0.9s						
RDF	**Al-Radifah**	**22.09**	**255**	*e*P	**P**	**21 37 00.5**	**-0.2**
RDF				AMb	AMB	21 37 03.2	
	comp=Z,20nm,0.7s						
NAY	**Al-Naaiem**	**22.18**	**257**	*e*P	**P**	**21 37 01.3**	**-0.2**
NAY				AMb	AMB	21 37 10.9	
	comp=Z,5.8nm,0.6s						
BRTR	**Keskin Array B**	**30.09**	**287**	P	**P**	**21 38 13.8**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=92,slow=8.7,SNR=3.8						
AKASG	**Malin Array Be**	**33.25**	**308**	P	P	21 38 42.5	+2.2
	comp=Z,2.1nm,0.6s,baz=81,slow=7.1,SNR=4.4						
FINES	**FINESS Array B**	**37.47**	**325**	P	P	21 39 18.1	+1.8
	comp=Z,1.8nm,0.7s,baz=115,slow=8.6,SNR=7.7						
ARCES	**ARCESS Array B**	**40.92**	**337**	P	P	21 39 47.6	+2.8
	comp=Z,3.2nm,0.7s,baz=112,slow=8.5,SNR=16						
NB2	**NORSAR Subarra**	**44.42**	**323**	P	P	21 40 15.1	+1.9
	comp=Z,2.9nm,0.6s,baz=92,slow=7						
NOA	**NORSAR Array B**	**44.42**	**323**	P	P	21 40 15.3	+2.2
	comp=Z,2.4nm,0.6s,baz=94,slow=7.7,SNR=18						
KMBO	**Kilima Mbogo**	**49.89**	**228**	P	**P**	**21 40 57.1**	**+0.8**
	comp=Z,1.6nm,0.5s,baz=52,slow=17,SNR=5.1						
ESDC	**Sonseca Array**	**57.94**	**298**	P	**P**	**21 41 55.5**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=56,slow=7.3,SNR=7.5						
TORD	**Torodi Ar. Bea**	**66.61**	**269**	P	**P**	**21 42 53.3**	**+1.0**
	comp=Z,1.6nm,0.5s,baz=50,slow=6.0,SNR=39						
ILAR	**Eielson Array**	**73.95**	**16**	P	P	21 43 39.5	+3.4
	comp=Z,0.3nm,1.0s,baz=279,slow=3.3,SNR=4.1						
YKA	**Yellowknife Ar**	**80.59**	**3**	P	P	21 44 17.3	+4.2
	comp=Z,0.7nm,0.4s,baz=350,slow=5.5,SNR=20						
WRA	**Warramunga Arr**	**81.58**	**123**	P	P	21 44 24.9	+5.9
	comp=Z,118nm,0.5s,baz=325,slow=5.2,SNR=3.0						

IDC ***22*** *21:46:15.2±2.5,31.41N×48.48E,h0km,mb3.5/4, mb1 3.6/5,mb1mx3.4/27,mbtmp3.6/5,ML3.7/1,Error ellipse: s-maj=60.4km s-min=26.7km az=150.0*

CSEM ***22*** *21:46:17.1±0.2,31.20N×48.51E,h10km,ML3.4,Error ellipse: s-maj=4.9km s-min=3.6km az=113.0*

TEH ***22*** *21:46:18.1,31.11N×48.41E,h26km,ML3.5*

ISC 22 21:46:16.6±1.6,31.22N±0.04×48.41E±0.04,h13km±11km, n72,σ1§14/77,mb4.0/5,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**0.95**	**20**	*e*Pg	**Pg**	**21 46 33.9**	**-1.0**
SHGR				*e*Sg	**Sb**	**21 46 47.8**	**+0.5**
MIB	**Mutribah**	**1.69**	**214**	*e*P	**Pn**	**21 46 47.3**	**+1.6**
MIB				AML	AML	21 47 14.0	
	comp=Z,394nm,0.5s						
MIB	**Mutribah**	**1.69**	**214**	*e*P	**Pn**	**21 46 47.3**	**+1.6**
UMR	**Umm Al-Rimmam**	**1.77**	**200**	*e*P	**Pn**	**21 46 48.0**	**+1.2**
UMR	**Umm Al-Rimmam**	**1.77**	**200**	*e*P	**Pn**	**21 46 48.0**	**+1.2**
KBD	**Kabd**	**2.13**	**197**	*e*P	**Pn**	**21 46 53.0**	**+1.2**
KBD				AML	AML	21 47 24.6	
	comp=Z,46nm,0.4s						
KBD	**Kabd**	**2.13**	**197**	*e*P	**Pn**	**21 46 53.0**	**+1.2**
NAY	**Al-Naaiem**	**2.21**	**208**	*e*P	**Pn**	**21 46 54.0**	**+1.1**
NAY	**Al-Naaiem**	**2.21**	**208**	*e*P	**Pn**	**21 46 54.0**	**+1.1**
RDF	**Al-Radifah**	**2.40**	**198**	*e*P	**Pn**	**21 46 56.9**	**+1.3**
RDF				AML	AML	21 47 29.1	
	comp=Z,57nm,0.5s						
RDF	**Al-Radifah**	**2.40**	**198**	*e*P	**Pn**	**21 46 56.9**	**+1.3**
IPIR	**Pirpir**	**2.57**	**55**	*e*Pn	**Pn**	**21 46 59.2**	**+1.1**
IPIR				*e*Sg	**Sg**	**21 47 41.0**	**+1.9**
IPIR				*e*		21 47 47.5	
	comp=Z,2μm,0.3s						
IPIR	**Pirpir**	**2.57**	**55**	*e*Pn	**Pn**	**21 46 59.2**	**+1.1**
IPIR				*e*Sg	**Sg**	**21 47 41.0**	**+1.9**
KHMZ	**Khomeyn**	**2.83**	**27**	*e*Pn	**Pn**	**21 47 02.8**	**+1.1**
IKOM	**Komasi**	**3.04**	**346**	*e*Pn	**Pn**	**21 47 06.2**	**+1.6**
IKOM				*e*	Sg	21 48 07.8	+13
	comp=Z,2μm,0.3s						
IKOM	**Komasi**	**3.04**	**346**	*e*Pn	**Pn**	**21 47 06.2**	**+1.6**
IGAR	**Gharneh**	**3.31**	**68**	*e*		21 47 10.6	
	comp=Z,2μm,0.1s						
IGAR				*e*Pn	**Pn**	**21 47 09.4**	**+1.1**
IKLH	**Kolahrood**	**3.40**	**51**	*e*Pn	**Pn**	**21 47 11.0**	**+1.4**
IKLH				*e*		21 47 12.1	
	comp=Z,2μm,0.2s						
IKLH	**Kolahrood**	**3.40**	**51**	*e*Pn	**Pn**	**21 47 11.0**	**+1.4**
IVIS	**Veis**	**3.55**	**339**	*e*Pn	**Pn**	**21 47 12.9**	**+1.4**
IVIS				*e*	**Sb**	**21 48 03.0**	**+0.6**
	comp=Z,680nm,0.1s						
IVIS	**Veis**	**3.55**	**339**	*e*Pn	**Pn**	**21 47 12.9**	**+1.4**
IZEF	**Zefreh**	**3.72**	**62**	*e*Pn	**Pn**	**21 47 14.5**	**+0.5**
IZEF				*e*		21 47 17.6	
	comp=Z,536nm,0.1s						
IZEF	**Zefreh**	**3.72**	**62**	*e*Pn	**Pn**	**21 47 14.5**	**+0.5**
IDHR	**Dehrash**	**3.87**	**334**	*e*Pn	**Pn**	**21 47 17.0**	**+1.1**
IDHR				*e*	**Sb**	**21 48 10.8**	**-0.8**
	comp=Z,2μm,0.1s						
IDHR	**Dehrash**	**3.87**	**334**	*e*Pn	**Pn**	**21 47 17.0**	**+1.1**
BHD	**Baghdad**	**3.98**	**302**	*ex*	Pn	21 47 21.3	+4.0
BHD				*ex*	x	21 48 13.5	
BHD	**Baghdad**	**3.98**	**302**	*e*Pn	Pn	21 47 21.3	+4.0
NASN	**Na'in**	**4.05**	**66**	*e*Pn	**Pn**	**21 47 19.1**	**+0.5**
GHVR	**GHOM**	**4.06**	**36**	*e*Pn	**Pn**	**21 47 18.9**	**+0.4**
IRAZ	**Razeghan**	**4.37**	**17**	*e*Pn	**Pn**	**21 47 24.0**	**+1.2**
IRAZ				*e*		21 47 25.5	
	comp=Z,696nm,0.2s						
IRAZ	**Razeghan**	**4.37**	**17**	*e*Pn	**Pn**	**21 47 24.0**	**+1.2**
IR5	**Iran Long-Peri**	**4.38**	**24**	*e*Pn	**Pn**	**21 47 23.8**	**+0.9**
IR5	**Iran Long-Peri**	**4.38**	**24**	*e*Pn	**Pn**	**21 47 23.8**	**+0.9**
ISRV	**Sarvestan**	**4.46**	**113**	*e*Pn	**Pn**	**21 47 22.8**	**-1.4**
ISRV				*e*	**Sn**	**21 48 19.5**	**+3.4**
	comp=Z,393nm,0.1s						
ISRV	**Sarvestan**	**4.46**	**113**	*e*Pn	**Pn**	**21 47 22.8**	**-1.4**
IVRN	**Varamin**	**4.68**	**36**	*e*Pn	**Pn**	**21 47 27.3**	**+0.3**
IVRN				*e*Pn	**Pn**	**21 47 28.0**	**+1.0**
IVRN				*e*		21 47 47.8	
	comp=Z,257nm,0.2s						
IVRN	**Varamin**	**4.68**	**36**	*e*Pn	**Pn**	**21 47 28.0**	**+1.0**
IR3	**Iran Long-Peri**	**4.78**	**27**	*e*Pn	**Pn**	**21 47 29.3**	**+1.0**
IR3	**Iran Long-Peri**	**4.78**	**27**	*e*Pn	**Pn**	**21 47 29.3**	**+1.0**
GHIR	**Ghir-Karzin**	**4.94**	**125**	*e*Pn	**Pn**	**21 47 29.5**	**-1.1**
CHTH	**Charan**	**5.20**	**25**	*e*Pn	**Pn**	**21 47 35.1**	**+0.8**
ICHK	**Chekchek**	**5.21**	**77**	*e*Pn	**Pn**	**21 47 34.4**	**0.0**
ICHK				*e*		21 47 41.2	
	comp=Z,191nm,0.2s						
ICHK	**Chekchek**	**5.21**	**77**	*e*Pn	**Pn**	**21 47 34.4**	**0.0**
IDMV	**Damavand**	**5.30**	**34**	*e*Pn	**Pn**	**21 47 36.2**	**+0.5**
IDMV				*e*		21 48 11.0	
	comp=Z,178nm,0.2s						
IDMV	**Damavand**	**5.30**	**34**	*e*Pn	**Pn**	**21 47 36.2**	**+0.5**
IMEH	**Mehriz**	**5.31**	**87**	*e*Pn	**Pn**	**21 47 35.6**	**-0.2**
IMEH				*e*		21 47 38.6	
	comp=Z,151nm,0.1s						
IMEH	**Mehriz**	**5.31**	**87**	*e*Pn	**Pn**	**21 47 35.6**	**-0.2**
IGZV	**Ghazvin**	**5.37**	**16**	*e*Pn	**Pn**	**21 47 37.2**	**+0.6**
IGZV				*e*		21 48 03.5	
	comp=Z,187nm,0.3s						
IGZV	**Ghazvin**	**5.37**	**16**	*e*Pn	**Pn**	**21 47 37.2**	**+0.6**
ZNJK	**Zanjan**	**5.44**	**2**	*e*Pn	**Pn**	**21 47 38.9**	**+1.3**
IFIR	**Firoozkooh**	**5.71**	**38**	*e*Pn	**Pn**	**21 47 42.2**	**+0.8**
IFIR				*e*		21 47 44.0	
	comp=Z,119nm,0.1s						
IFIR	**Firoozkooh**	**5.71**	**38**	*e*Pn	**Pn**	**21 47 42.2**	**+0.8**
IPRN	**Peran**	**5.98**	**32**	*e*Pn	**Pn**	**21 47 45.0**	**0.0**
IPRN				*e*		21 48 10.1	
	comp=Z,203nm,0.3s						
ISHM	**Shahmirzad**	**6.13**	**40**	*e*Pn	**Pn**	**21 47 47.6**	**+0.5**
ISHM				*e*		21 47 49.0	
	comp=Z,264nm,0.2s						
ISHM	**Shahmirzad**	**6.13**	**40**	*e*Pn	**Pn**	**21 47 47.6**	**+0.5**
IBAF	**Bafgh**	**6.13**	**85**	*e*Pn	**Pn**	**21 47 46.1**	**-0.9**
IBAF				*e*		21 47 49.2	
	comp=Z,78nm,0.1s						
IBAF	**Bafgh**	**6.13**	**85**	*e*Pn	**Pn**	**21 47 46.1**	**-0.9**
IANJ	**Anjilo**	**6.26**	**46**	*e*Pn	**Pn**	**21 47 48.5**	**-0.3**
IANJ	**Anjilo**	**6.26**	**46**	*e*Pn	**Pn**	**21 47 48.5**	**-0.3**
ISRB	**Sarab**	**6.62**	**355**	*e*Pn	**Pn**	**21 47 54.6**	**+0.8**
ISRB				*e*		21 47 57.3	
	comp=Z,187nm,0.1s						
ISRB	**Sarab**	**6.62**	**355**	*e*Pn	**Pn**	**21 47 54.6**	**+0.8**
IHRS	**Heris**	**7.17**	**351**	*e*Pn	**Pn**	**21 48 01.1**	**-0.3**
IHRS				*e*		21 48 57.5	
	comp=Z,214nm,0.0s						
IHRS	**Heris**	**7.17**	**351**	*e*Pn	**Pn**	**21 48 01.1**	**-0.3**
ISFR	**Sfrayin**	**9.85**	**51**	*e*Pn	**Pn**	**21 48 37.6**	**-0.5**
ISFR	**Sfrayin**	**9.85**	**51**	*e*Pn	**Pn**	**21 48 37.6**	**-0.5**
ASF	**Jabal al Asfar**	**9.86**	**279**	Pn	**Pn**	**21 48 39.9**	**+1.9**
	comp=Z,0.7nm,0.3s,baz=180,slow=20,SNR=4.7						
ASF				Sn	Sn	21 50 23.1	-5.5
	comp=Z,0.3nm,0.3s,baz=212,slow=19,SNR=3.7						
AKTO	**Aktyubinsk**	**20.50**	**18**	P	**P**	**21 50 52.5**	**-1.6**
	comp=Z,0.8nm,0.6s,baz=196,slow=8.6,SNR=3.6						
MKAR	**Makanchi Array**	**30.30**	**49**	P	**P**	**21 52 27.0**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=245,slow=8.1,SNR=3.6						
JOF	**Joensuu**	**33.56**	**346**	*ep*	**P**	**21 52 54.6**	**-1.2**
	comp=Z,1.2nm,0.6s						
FINES	**FINESS Array B**	**33.58**	**341**	P	**P**	**21 52 55.0**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=141,slow=9.9,SNR=12						
KAF	**Kangasniemi**	**34.06**	**342**	*ep*	**P**	**21 52 58.5**	**-1.8**
	comp=Z,1.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**46.47**	**258**	P	**P**	**21 54 44.6**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=60,slow=7.8,SNR=5.3						

ISCJB ***22*** *21:48:31.8±0.5,39.16N±0.03×29.05E±0.04,h10km±5km, Error ellipse: s-maj=4.9km s-min=4.4km az=7.0*

CSEM ***22*** *21:48:31.9±0.2,39.15N×29.04E,h12km,MD2.8,Error ellipse: s-maj=4.6km s-min=3.8km az=86.0*

ISK ***22*** *21:48:31.1,39.20N×28.98E,h5km,MD2.9*

DDA ***22*** *21:48:32.5,39.08N×29.06E,h7km,MD2.8*

ISC 22 21:48:31.8±0.9,39.17N±0.02×29.02E±0.03,h14km±9km, n28,σ0§9/42,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEMI	**Demirci**	**0.27**	**242**	*i* P	**Pb**	**21 48 38.3**	**-0.3**
DEMI				*i* S	**Sg**	**21 48 42.3**	**+0.9**
DEMI	**Demirci**	**0.27**	**242**	*i* P	**Pb**	**21 48 38.3**	**-0.3**
DEMI				*i* S	**Sg**	**21 48 42.3**	**+0.9**
GDZ	**Gediz**	**0.37**	**103**	*i* P	**Pg**	**21 48 39.1**	**-0.2**
GDZ				*i* S	**Sg**	**21 48 44.1**	**-0.2**
TVSB	**Tavsanli**	**0.44**	**50**	*e*PG	**Pg**	**21 48 40.5**	**-0.1**
TVSB				*e*SG	**Sg**	**21 48 46.8**	**+0.2**
TVSB	**Tavsanli**	**0.44**	**50**	*e*Pg	**Pg**	**21 48 40.5**	**-0.1**
TVSB				*e*Sg	**Sg**	**21 48 46.8**	**+0.2**
DURS	**Dursunbey**	**0.60**	**316**	*i* P	**Pn**	**21 48 45.9**	**-0.3**
DURS				*i* S	**Sb**	**21 48 54.4**	**+1.7**
DURS	**Dursunbey**	**0.60**	**316**	*i* P	**Pn**	**21 48 45.9**	**-0.3**
DURS				*i* S	**Sb**	**21 48 54.4**	**+1.7**
KULA	**Kula-Manisa**	**0.71**	**203**	*e*PG	**Pg**	**21 48 45.5**	**-0.2**
KULA	**Kula-Manisa**	**0.71**	**203**	*e*Pg	**Pg**	**21 48 45.5**	**-0.2**
MANT	**Manisa**	**0.77**	**208**	*i* P	**Pg**	**21 48 46.7**	**-0.1**
MANT				*i* S	**Sg**	**21 48 56.0**	**-0.9**
MANT	**Manisa**	**0.77**	**208**	*i* P	**Pn**	**21 48 46.7**	**-0.1**
MANT				*i* S	**Sg**	**21 48 56.0**	**-0.9**
ALT	**Altintas**	**0.85**	**97**	*e*PG	**Pb**	**21 48 49.0**	**+0.4**
ALT	**Altintas**	**0.85**	**97**	*e*Pg	**Pb**	**21 48 49.0**	**+0.5**
KHAL	**Karahalli**	**0.88**	**155**	*i* P	**Pg**	**21 48 48.3**	**-0.6**
KHAL				*i* S	**Sg**	**21 48 58.9**	**-1.5**
KHAL	**Karahalli**	**0.88**	**155**	*i* P	**Pg**	**21 48 48.3**	**-0.6**
KHAL				*i* S	**Sg**	**21 48 58.9**	**-1.5**
ORLT	**Orhaneli**	**0.88**	**354**	*e*PG	**Pg**	**21 48 47.8**	**-1.1**
ORLT				*e*SG	**Sg**	**21 49 00.1**	**-0.4**
ORLT	**Orhaneli**	**0.88**	**354**	*e*Pg	**Pg**	**21 48 47.8**	**-1.1**
ORLT				*e*Sg	**Sg**	**21 49 00.1**	**-0.4**
KHL	**Karahalli**	**0.93**	**155**	*e*PG	**Pg**	**21 48 50.3**	**+0.4**
KHL	**Karahalli**	**0.93**	**155**	*e*Pg	**Pg**	**21 48 50.3**	**+0.4**
GEMT	**Gemlik**	**1.27**	**6**	*e*PN	**Pn**	**21 48 55.1**	**0.0**
GEMT	**Gemlik**	**1.27**	**6**	*e*Pn	**Pn**	**21 48 55.2**	**0.0**
GONE	**Gonen-Balikesi**	**1.35**	**311**	*e*PN	**Pn**	**21 48 56.3**	**-0.1**
GONE	**Gonen-Balikesi**	**1.35**	**311**	*e*Pn	**Pn**	**21 48 56.3**	**-0.1**
ARMT	**Armutlu**	**1.40**	**355**	*e*PN	**Pb**	**21 48 57.7**	**-0.1**
ARMT	**Armutlu**	**1.40**	**355**	*e*Pn	**Pb**	**21 48 57.7**	**-0.1**
GULT	**Gulveren**	**1.71**	**42**	*e*PN	**Pb**	**21 49 02.8**	**-0.3**
GULT	**Gulveren**	**1.71**	**42**	*e*Pn	**Pb**	**21 49 02.8**	**-0.3**

ISK ***22*** *22:15:29.6,38.63N×31.14E,h5km,MD3.2*

CSEM ***22*** *22:15:30.3±0.1,38.61N×31.14E,h2km,MD3.0,Error ellipse: s-maj=3.3km s-min=2.1km az=5.0*

DDA ***22*** *22:15:30.2,38.60N×31.14E,h7km,MD3.0*

ISC 22 22:15:30.6±1.0,38.61N±0.03×31.14E±0.02,h6km±9km, n40,σ0§65/61,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLV	**Bolvadin**	**0.18**	**307**	*i* P	**Pg**	**22 15 34.2**	**-0.1**
BOLV				*i* S	**Sg**	**22 15 37.7**	**+0.9**
BOLV	**Bolvadin**	**0.18**	**307**	*i* P	**Pg**	**22 15 34.2**	**-0.1**
BOLV				*i* S	**Sg**	**22 15 37.7**	**+0.9**
SHUT	**Suhut-Afyon**	**0.46**	**263**	*e*PG	**Pg**	**22 15 38.8**	**-0.8**
SHUT				*e*SG	**Sg**	**22 15 46.6**	**+0.9**
SHUT	**Suhut-Afyon**	**0.46**	**263**	*e*Pg	**Pg**	**22 15 38.8**	**-0.8**
KIZT	**Kizilcal**	**0.64**	**65**	*e*PG	**Pg**	**22 15 42.7**	**-0.3**
KIZT				*e*SG	**Sg**	**22 15 51.8**	**+0.4**
KIZT	**Kizilcal**	**0.64**	**65**	*e*Pg	**Pg**	**22 15 42.7**	**-0.3**
KIZT				*e*Sg	**Sg**	**22 15 51.8**	**+0.4**
KDHN	**Kadinhani**	**0.77**	**96**	*i* P	**Pg**	**22 15 44.5**	**-1.0**
KDHN				*i* S	**Sb**	**22 15 56.7**	**-0.6**
KDHN	**

FITZ				Sn	Sn	22 34 36.5	-6.9
	0.9nm,0.3s,baz=225,slow=14,SNR=3.2						
WRA	**Warramunga Arr**	**13.22**	**139**	Pn	Pn	22 34 23.2	-0.4
	0.2nm,0.3s,baz=316,slow=14,SNR=6.4						
WRA				Sn	Sn	22 36 46.1	-5.3
	0.2nm,0.3s,baz=303,slow=23,SNR=4.4						
ASAR	**Alice Springs**	**15.89**	**149**	Pn	Pn	22 34 59.5	-0.2
	0.1nm,0.3s,baz=320,slow=12,SNR=5.7						
ASAR				Sn	Sn	22 37 50.1	-6.6
	0.1nm,0.3s,baz=307,slow=22,SNR=4.0						
STKA	**Stephens Creek**	**26.51**	**147**	LR	LR	22 48 01.7	
	comp=Z,91nm,19.8s,baz=26,slow=38						
MKAR	**Makanchi Array**	**68.30**	**330**	P	P	22 42 17.3	0.0
	0.6nm,0.8s,baz=147,slow=7.1,SNR=7.0						

IDC 22 22:31:53.4±75.0, 24°13'S×178°02'W, h515km±301km, mb3.2/3, mb1 3.3/4, mb1mx3.0/19, mbtmp3.2/4, Error ellipse: s-maj=940.3km s-min=108.5km az=84.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.44**	**275**	P	P	22 34 58.0	+0.2
	1.1nm,0.3s,baz=106,slow=18,SNR=8.5						
THZ	**Tophouse**	**19.14**	**201**	*e*PN	P	22 35 53.8	+10
KHZ	**Kahutara**	**19.54**	**199**	*e*PN	P	22 35 58.4	+12
LTZ	**Lake Taylor**	**20.27**	**201**	*e*PN	P	22 36 03.2	+10
STKA	**Stephens Creek**	**36.32**	**249**	P	P	22 38 12.8	-0.6
	1.5nm,0.4s,baz=93,slow=12,SNR=6.7						
ASAR	**Alice Springs**	**43.78**	**260**	P	P	22 39 13.1	-0.4
	0.7nm,0.5s,baz=98,slow=7.3,SNR=7.4						
WRA	**Warramunga Arr**	**44.20**	**266**	P	P	22 39 16.9	+0.3
	1.4nm,0.3s,baz=101,slow=8.2,SNR=32						

SKO 22 22:45:15.5, 41°34'N×19°65'E, h14km, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIA	**Bitola**	**1.30**	**104**	*e*Pg	Pn	22 45 38.4	-0.9
BIA				*e*Sg	Sb	22 45 56.5	0.0
STON	**Ston**	**2.11**	**317**	*e*Pn	Pn	22 45 51.0	+0.7
STON				Sn	Sn	22 46 17.1	+0.8
NVLJ	**Novalja**	**4.76**	**314**	*e*Pn	Pn	22 46 25.8	-1.0
NVLJ				Sn	Sn	22 47 17.2	-4.5
NVLJ	**Novalja**	**4.76**	**314**	Sn	Sn	22 47 17.2	-4.5

*CSEM **22** 22:46:07.6±0.1, 42°32N×13°39E, h15km, ML1.8/7, Error ellipse: s-maj=1.9km s-min=1.7km az=60.0*
ROM 22 22:46:07.6±0.1, 42°31N×13°38E, h11km, Md2.1/14, Ml1.5/5, Error ellipse: s-maj=0.9km s-min=0.8km az=58.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**18**	Pg	Pg	22 46 10.1	+0.3
AQU				Sg	Sg	22 46 11.7	+0.4
	492nm,0.3s						
AQU	**L'Aquila**	**0.04**	**18**	Pg	Pg	22 46 10.1	+0.3
AQU				Sg	Sg	22 46 11.7	+0.4
	492nm,0.3s						
FAGN	**Fagnano**	**0.15**	**107**	Pg	Pg	22 46 11.7	+0.5
FAGN				Sg	Sg	22 46 14.8	+1.1
	358nm,0.4s						
FAGN	**Fagnano**	**0.15**	**107**	Pg	Pg	22 46 11.7	+0.5
FAGN				Sg	Sg	22 46 14.8	+1.1
	358nm,0.4s						
FIAM	**Fiamignano**	**0.20**	**258**	Pg	Pg	22 46 12.6	+0.5
FIAM				Sg	Sg	22 46 16.1	+1.0
	46nm,0.3s						
FIAM	**Fiamignano**	**0.20**	**258**	Pg	Pg	22 46 12.6	+0.5
FIAM				Sg	Sg	22 46 16.1	+1.0
	46nm,0.3s						
CAMP	**Campotosto**	**0.22**	**5**	Pg	Pg	22 46 12.6	+0.1
CAMP				Sg	Sg	22 46 17.1	+1.3
	59nm,0.3s						
CAMP	**Campotosto**	**0.22**	**5**	Pg	Pg	22 46 12.6	+0.1
CAMP				Sg	Sg	22 46 17.1	+1.3
	59nm,0.3s						
PTQR	**Pietraquaria**	**0.29**	**178**	Pg	Pg	22 46 14.0	+0.4
PTQR				Sg	Sg	22 46 18.7	+1.1
	9.0nm,0.2s						
PTQR	**Pietraquaria**	**0.29**	**178**	Pg	Pg	22 46 14.0	+0.4
PTQR				Sg	Sg	22 46 18.7	+1.1
	9.0nm,0.2s						
VCEL	**Villa Celiera**	**0.35**	**76**	Pg	Pg	22 46 15.2	+0.5
VCEL				Sg	Sg	22 46 20.3	+0.8
VCEL	**Villa Celiera**	**0.35**	**76**	Pg	Pg	22 46 15.2	+0.5
VCEL				Sg	Sg	22 46 20.3	+0.8
TERO	**Teramo**	**0.35**	**28**	Pg	Pg	22 46 14.3	-0.4
TERO				Sg	Sg	22 46 20.4	+0.9
	42nm,0.3s						
TERO	**Teramo**	**0.35**	**28**	Pg	Pg	22 46 14.3	-0.4
TERO				Sg	Sg	22 46 20.4	+0.9
	42nm,0.3s						
LNSS	**Leonessa**	**0.39**	**319**	Pg	Pg	22 46 15.9	+0.5
	32nm,0.4s						
LNSS	**Leonessa**	**0.39**	**319**	Pg	Pg	22 46 15.9	+0.5
	32nm,0.4s						
CERT	**Cerreto**	**0.47**	**220**	Pg	Pg	22 46 17.1	+0.2
CERT				Sg	Sb	22 46 24.6	-0.5
CERT	**Cerreto**	**0.47**	**220**	Pg	Pg	22 46 17.1	+0.2
CERT				Sg	Sb	22 46 24.6	-0.5
VVLD	**Villa Vallelon**	**0.47**	**158**	Pg	Pg	22 46 16.7	-0.3
VVLD	**Villa Vallelon**	**0.47**	**158**	Pg	Pg	22 46 16.7	-0.3
INTR	**Introdacqua**	**0.49**	**128**	Pg	Pg	22 46 17.3	0.0
INTR				Sg	Sb	22 46 24.8	-0.9
INTR	**Introdacqua**	**0.49**	**128**	Pg	Pg	22 46 17.3	0.0
INTR				Sg	Sb	22 46 24.8	-0.9
MNS	**Montasola**	**0.53**	**278**	Pg	Pg	22 46 17.8	-0.2
MNS	**Montasola**	**0.53**	**278**	Pg	Pg	22 46 17.8	-0.2
NRCA	**Norcia**	**0.56**	**339**	Pg	Pg	22 46 18.6	0.0
NRCA				Sg	Sb	22 46 27.2	-0.5
	7.0nm,0.3s						
NRCA	**Norcia**	**0.56**	**339**	Pg	Pg	22 46 18.6	0.0
NRCA				Sg	Sb	22 46 27.2	-0.5
	7.0nm,0.3s						
LPEL	**Lama dei Pelig**	**0.65**	**114**	Pg	Pg	22 46 20.3	0.0
LPEL				Sg	Sb	22 46 29.9	-0.4
LPEL	**Lama dei Pelig**	**0.65**	**114**	Pg	Pg	22 46 20.3	0.0
LPEL				Sg	Sb	22 46 29.9	-0.4
SDI	**San Donato**	**0.68**	**152**	Pg	Pg	22 46 20.8	-0.1
	3.0nm,0.2s						
SDI	**San Donato**	**0.68**	**152**	Pg	Pg	22 46 20.8	-0.1
	3.0nm,0.2s						

*IDC **22** 23:08:02.9±5.5, 6°84N×75°00W, h157km±104km, mb3.3/1, mb1 3.6/2, mb1mx3.0/22, mbtmp3.4/2, Error ellipse: s-maj=422.9km s-min=36.8km az=86.0*
*FUNV **22** 23:08:04.9, 7°00N×72°74W, h146km, MW3.5*
*ISCJB **22** 23:08:06.1±1.7, 7°2N±0°1×72°5W±0°2, h153km±11km, mb3.6/1, Error ellipse: s-maj=29.2km s-min=14.3km az=25.1*
ISC 22 23:08:03.5±1.9, 7°1N±0°1×72°7W±0°1, h159km±10km, n17, σ1§29/21, 3C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**0.82**	**25⇑**	*i*P	Pn	**23 08 28.1**	**0.0**
CAPV				*e*S	Sn	**23 08 46.0**	**-0.9**
SOCV	**Socops**	**2.14**	**57**	*e*P	Pn	**23 08 42.7**	**+1.9**
VIGV	**El Vigia**	**2.15**	**37**	*e*P	Pn	**23 08 42.4**	**+1.5**
VIGV				*e*S	Sn	**23 09 09.7**	**-0.1**
ROSC	**El Rosal**	**2.79**	**216**	P	Pn	23 08 40.0	-9.0
	30nm,0.3s,baz=273,slow=18,SNR=89						
ROSC				S	Sn	23 09 08.9	-16
	34nm,0.3s,baz=75,slow=21,SNR=9.2						
QARV	**Quebrada Arrib**	**3.73**	**34**	*e*P	Pn	**23 09 02.2**	**+1.6**
QARV				*e*S	Sn	**23 09 44.6**	**-0.5**
SANV	**Sanarito**	**3.90**	**52**	*e*P	Pn	**23 09 04.3**	**+1.4**
CURV	**Curarigua**	**3.93**	**43**	*e*P	Pn	**23 09 04.6**	**+1.3**
CURV				*e*S	Sn	**23 09 47.9**	**-1.9**
DABV	**Dabajuro**	**4.28**	**28**	*e*P	Pn	**23 09 09.0**	**+1.3**
DABV				*e*S	Sn	**23 09 56.3**	**-1.5**
TEPV	**Terepaima**	**4.45**	**50**	*e*P	Pn	**23 09 11.4**	**+1.4**
SIQV	**Siquisique**	**4.51**	**39**	*e*P	Pn	**23 09 11.5**	**+0.8**
SIQV				*e*S	Sn	**23 10 01.7**	**-1.4**
BAUV	**El Baul**	**4.93**	**68⇑**	*e*P	Pn	**23 09 16.1**	**-0.1**
MAPV	**Macapo**	**4.96**	**57⇑**	*e*P	Pn	**23 09 18.0**	**+1.3**
MONV	**Montecano**	**5.50**	**29**	*e*P	Pn	**23 09 24.2**	**+0.5**
TURV	**Turiamo**	**5.81**	**55**	*e*P	Pn	**23 09 28.8**	**+1.0**
CUPV	**Cœpira**	**7.41**	**66**	*e*P	Pn	**23 09 49.3**	**+0.2**
YKA	**Yellowknife Ar**	**63.15**	**340**	P	P	23 18 10.2	-3.9
	0.5nm,0.5s,baz=134,slow=6.6,SNR=17						
WRA	**Warramunga Arr**	**150.87**	**241**	PKPbc	**PKPdf**	**23 27 32.1**	**-0.4**
	0.1nm,0.4s,baz=106,slow=2.6,SNR=3.7						

IDC 22 23:39:39.2±5.2, 5°88S×147°55E, h200km±55km, mb3.2/2, mb1 3.3/4, mb1mx3.0/19, mbtmp3.1/4, MS2.6/1, Ms1 2.6/1, ms1mx2.5/14, Error ellipse: s-maj=101.3km s-min=46.5km az=126.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.52**	**186**	P	Pn	23 40 36.0	+0.9
	6.9nm,0.3s,baz=357,slow=5.9,SNR=20						
PMG				S	Sn	23 41 19.0	0.0
	2.6nm,0.3s,baz=196,slow=19,SNR=3.8						
WRA	**Warramunga Arr**	**18.98**	**221**	P	P	23 43 46.0	+0.2
	0.2nm,0.3s,baz=45,slow=9.8,SNR=5.1						
GUMO	**Guam**	**19.53**	**352**	LR	LR	23 49 29.1	
	comp=Z,20nm,21.7s,baz=38,slow=30						
ASAR	**Alice Springs**	**22.02**	**215**	P	P	23 44 18.1	+0.4
	0.5nm,0.4s,baz=50,slow=8.2,SNR=7.1						
FITZ	**Fitzroy Crossi**	**24.59**	**239**	P	P	23 44 40.9	-0.3
	1.7nm,0.3s,baz=54,slow=13,SNR=7.3						
TORD	**Torodi Ar. Bea**	**145.59**	**285**	PKPbc	PKPdf	23 58 54.1	-0.6
	0.2nm,0.9s,baz=67,slow=3.4,SNR=4.1						

*ISCJB **22** 23:50:12.9±0.4, 43°53N±0°02×0°63W±0°02, h2km±3km, Error ellipse: s-maj=3.4km s-min=2.5km az=42.0*
*STR **22** 23:50:14.5±0.2, 43°50N×0°61W, h5km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **22** 23:50:14.0±0.1, 43°51N×0°62W, h2km, ML2.4/13, Error ellipse: s-maj=2.2km s-min=1.7km az=139.0*
*LDG **22** 23:50:15.8±0.1, 43°43N×0°62W, h10km, Md2.6/3, Ml2.5/8, Error ellipse: s-maj=2.5km s-min=1.9km az=144.0*
*MDD **22** 23:50:15.1±0.4, 43°50N×0°63W, h0km, mbLg1.7/15, Error ellipse: s-maj=3.4km s-min=2.4km az=164.0, PRXIMO*
ISC 22 23:50:14.7±1.0, 43°51N±0°02×0°65W±0°02, h6km±9km, n77, σ0§91/123, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORDF	**Ordiarp**	**0.36**	**216**	Pg	**Pg**	**23 50 21.5**	**-0.2**
ORDF				Sg	**Sg**	**23 50 27.3**	**+0.9**
ORDF	**Ordiarp**	**0.36**	**216**	Pg	**Pg**	**23 50 21.5**	**-0.2**
ORDF				Lg	Lg	23 50 26.7	
ORDF				Sg	**Sg**	**23 50 27.3**	**+0.9**
REYF	**Montagne du Re**	**0.47**	**157**	Pg	**Pg**	**23 50 23.2**	**-0.6**
REYF				Sg	**Sg**	**23 50 29.8**	**-0.2**
REYF	**Montagne du Re**	**0.47**	**157**	Pg	**Pg**	**23 50 23.2**	**-0.6**
REYF				Lg	Lg	23 50 29.7	
REYF				Sg	**Sg**	**23 50 29.8**	**-0.2**
OSSF	**Osses**	**0.51**	**241**	Pg	**Pg**	**23 50 24.9**	**+0.3**
OSSF				Sg	**Sg**	**23 50 32.4**	**+1.1**
OSSF	**Osses**	**0.51**	**241**	Pg	**Pg**	**23 50 23.9**	**-0.7**
OSSF				Lg	Lg	23 50 32.2	
OSSF				Sg	**Sg**	**23 50 32.4**	**+1.1**
LARF	**Larrau**	**0.53**	**208**	Pg	**Pg**	**23 50 24.3**	**-0.6**
LARF				Sg	**Sg**	**23 50 32.2**	**+0.4**
LARF	**Larrau**	**0.53**	**208**	Pg	**Pg**	**23 50 24.5**	**-0.4**
LARF				Sg	**Sg**	**23 50 32.2**	**+0.4**
LARF				Lg	Lg	23 50 32.2	
SJPF	**Ste Jean**	**0.58**	**227**	*e*Pg	**Pg**	**23 50 25.4**	**-0.4**
SJPF				*e*Sg	**Sg**	**23 50 33.0**	**-0.3**
	21nm,0.2s						
SJPF	**Ste Jean**	**0.58**	**227**	Pg	**Pg**	**23 50 25.4**	**-0.4**
SJPF				*e*Sg	**Sg**	**23 50 33.0**	**-0.3**
	10nm,0.2s						
ETSF	**Etsaut**	**0.61**	**174**	*e*Pg	**Pg**	**23 50 25.3**	**-1.1**
ETSF				*e*Sg	**Sg**	**23 50 33.3**	**-1.0**
	22nm,0.2s						
ETSF	**Etsaut**	**0.61**	**174**	Pg	**Pg**	**23 50 25.3**	**-1.1**
ETSF				*e*Sg	**Sg**	**23 50 33.3**	**-1.0**
	11nm,0.2s						
LABF	**Labassere**	**0.70**	**131**	Pg	**Pg**	**23 50 27.4**	**-0.7**
LABF				Sg	**Sg**	**23 50 37.1**	**0.0**
LABF	**Labassere**	**0.70**	**131**	Pg	**Pg**	**23 50 27.4**	**-0.7**
LABF				Sg	**Sg**	**23 50 37.1**	**0.0**
LABF				Lg	Lg	23 50 37.3	
ELIZ	**Elizondo**	**0.73**	**242**	Pg	**Pg**	**23 50 28.4**	**-0.3**
	18nm,0.2s,SNR=71						
ELIZ				Lg	Lg	23 50 38.9	
	25nm,0.2s,SNR=16						
ELIZ	**Elizondo**	**0.73**	**242**	Pg	**Pg**	**23 50 28.4**	**-0.3**
	18nm,0.2s,SNR=71						
ELIZ				Lg	Lg	23 50 38.9	
	25nm,0.2s,SNR=16						
IELO	**Elcoad**	**0.79**	**213**	Pg	**Pg**	**23 50 29.4**	**-0.5**
	2.6nm,0.2s,SNR=7.9						
IELO				Lg	Lg	23 50 40.5	
	32nm,0.5s,SNR=7.9						
IELO	**Elcoad**	**0.79**	**213**	Pg	**Pg**	**23 50 29.4**	**-0.5**
	2.6nm,0.2s,SNR=7.9						
IELO				Lg	Lg	23 50 40.5	
	32nm,0.5s,SNR=7.9						
VIEF	**Viey**	**0.79**	**142**	Pg	**Pg**	**23 50 28.9**	**-0.9**
VIEF				Sg	**Sg**	**23 50 39.7**	**-0.4**
VIEF	**Viey**	**0.79**	**142**	Pg	**Pg**	**23 50 29.0**	**-0.9**
VIEF				Sg	**Sg**	**23 50 39.7**	**-0.4**
VIEF				Lg	Lg	23 50 40.1	
IEPA	**Eparoz**	**0.86**	**212**	Pg	**Pg**	**23 50 31.6**	**+0.5**
	3.1nm,0.2s,SNR=7.9						
IEPA				Lg	Lg	23 50 42.9	
	27nm,0.3s,SNR=7.9						
IEPA	**Eparoz**	**0.86**	**212**	Pg	**Pg**	**23 50 31.6**	**+0.5**
	3.1nm,0.2s,SNR=7.9						
IEPA				Lg	Lg	23 50 42.9	
	27nm,0.3s,SNR=7.9						
EPF	**Esparros**	**0.86**	**123**	*e*Pg	**Pg**	**23 50 30.2**	**-1.0**
EPF				*e*Sg	**Sg**	**23 50 41.9**	**-0.5**
	20nm,0.3s						
EPF	**Esparros**	**0.86**	**123**	Pg	**Pg**	**23 50 30.2**	**-1.0**
EPF				*e*Sg	**Sg**	**23 50 41.9**	**-0.5**
	10.0nm,0.3s						
IUNC	**Unciti**	**0.97**	**220**	Pg	**Pg**	**23 50 33.6**	**+0.2**
	6.1nm,0.3s,SNR=7.9						
IUNC				Lg	Lg	23 50 47.1	
	18nm,0.4s,SNR=7.9						
IUNC	**Unciti**	**0.97**	**220**	Pg	**Pg**	**23 50 33.6**	**+0.2**
	6.1nm,0.3s,SNR=7.9						
IUNC				Lg	Lg	23 50 47.1	
	18nm,0.4s,SNR=7.9						
CSOR	**Sort**	**1.73**	**130**	Pg	**Pn**	**23 50 46.9**	**+1.5**
	2.6nm,0.2s,SNR=12						
CSOR				Lg	Lg	23 51 09.6	
	13nm,0.3s,SNR=8.2						
CSOR	**Sort**	**1.73**	**130**	Pg	**Pn**	**23 50 46.9**	**+1.5**
	2.6nm,0.2s,SNR=12						
CSOR				Lg	Lg	23 51 09.6	
	13nm,0.3s,SNR=8.2						
LFF	**La Frestale**	**1.75**	**34**	*e*Pn	**Pn**	**23 50 45.5**	**0.0**
LFF	**La Frestale**	**1.75**	**34**	*e*P	**Pg**	**23 50 48.4**	**+0.2**
LFF				*e*Sg	**Sg**	**23 51 12.2**	**+1.4**
	15nm,0.4s						
LFF	**La Frestale**	**1.75**	**34**	Pn	**Pn**	**23 50 45.5**	**0.0**
LFF	**La Frestale**	**1.75**	**34**	*e*P	**Pg**	**23 50 48.4**	**+0.2**
LFF				*e*Sg	**Sg**	**23 51 12.2**	**+1.4**
	7.6nm,0.4s						
ESAC	**San Caprasio**	**1.79**	**176**	Pg	**Pn**	**23 50 47.8**	**+1.7**
	9.9nm,0.2s,SNR=13						
ESAC				Sn	**Sn**	**23 51 10.6**	**+1.4**
	124nm,0.3s,SNR=5.0						
ESAC	**San Caprasio**	**1.79**	**176**	Pg	**Pn**	**23 50 47.8**	**+1.7**
	9.9nm,0.2s,SNR=13						
ESAC				Sn	**Sn**	**23 51 10.6**	**+1.4**
	124nm,0.3s,SNR=5.0						
ELAN	**Lanestosa**	**2.05**	**263**	Pn	**Pn**	**23 50 49.9**	**+0.2**
	0.3nm,0.3s,SNR=7.9						
ELAN				Pg	**Pb**	**23 50 53.7**	**+1.3**
	0.7nm,0.2s,SNR=6.8						
ELAN				Lg	Lg	23 51 20.5	
	2.4nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**2.05**	**263**	Pn	**Pn**	**23 50 49.9**	**+0.2**
	0.3nm,0.3s,SNR=7.9						
MTLF	**Montolieu**	**2.09**	**94**	*e*Pn	**Pn**	**23 50 49.5**	**-0.8**
MTLF				*e*Sg	**Sb**	**23 51 21.1**	**+1.8**
	5.1nm,0.4s						
MTLF	**Montolieu**	**2.09**	**94**	Pn	**Pn**	**23 50 49.5**	**-0.8**
MTLF				Lg	Lg	23 51 21.1	
	1.2nm,0.4s						
CLLI	**Llivia**	**2.18**	**117**	Pn	**Pn**	**23 50 52.5**	**+0.9**
	0.3nm,0.2s,SNR=7.9						
CLLI				Sn	**Sn**	**23 51 20.1**	**+1.1**
	0.7nm,0.3s,SNR=5.7						
CLLI	**Llivia**	**2.18**	**117**	Pn	**Pn**	**23 50 52.5**	**+0.9**
	0.3nm,0.2s,SNR=7.9						
CLLI				Sn	**Sn**	**23 51 20.1**	**+1.1**
	0.7nm,0.3s,SNR=5.7						
EMIR	**Miracle**	**2.26**	**134**	Pn	**Pn**	**23 50 52.5**	**-0.1**
	1.1nm,0.2s,SNR=8.2						
EMIR				Sn	**Sn**	**23 51 21.2**	**+0.4**
	2.2nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**2.26**	**134**	Pn	**Pn**	**23 50 52.5**	**-0.1**
	1.1nm,0.2s,SNR=8.2						
EMIR				Sn	**Sn**	**23 51 21.2**	**+0.4**
	2.2nm,0.2s,SNR=7.9						
RJF	**Les Rejaudoux**	**2.37**	**40**	*e*Pn	**Pn**	**23 50 54.1**	**-0.1**
RJF				*e*Sg	**Sg**	**23 51 31.8**	**+0.9**
	4.9nm,0.2s						
RJF	**Les Rejaudoux**	**2.37**	**40**	Pn	**Pn**	**23 50 54.1**	**-0.1**
RJF				*e*Sg	**Sg**	**23 51 31.8**	**+0.9**
	2.5nm,0.2s						
CAF	**Calviac**	**2.41**	**53**	*e*Pn	**Pn**	**23 50 53.3**	**-1.4**
CAF				*e*Sg	**Sg**	**23 51 32.6**	**+0.5**
	2.7nm,0.2s						
CAF	**Calviac**	**2.41**	**53**	Pn	**Pn**	**23 50 53.3**	**-1.4**
CAF				*e*Sg	**Sg**	**23 51 32.6**	**+0.5**
	1.4nm,0.2s						
EPOB	**Poblet**	**2.50**	**149**	Pg	**Pb**	**23 51 00.5**	**+0.5**
	0.4nm,0.1s,SNR=7.9						
EPOB				Sn	**Sn**	**23 51 28.0**	**+1.2**
	2.1nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**2.50**	**149**	Pg	**Pb**	**23 51 00.5**	**+0.5**
	0.4nm,0.1s,SNR=7.9						
EPOB				Sn	**Sn**	**23 51 28.0**	**+1.2**
	2.1nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**2.65**	**164**	Pg	**Pb**	**23 51 02.8**	**+0.3**
	0.7nm,0.2s,SNR=7.9						
ERTA				Lg	Lg	23 51 36.7	
	3.1nm,0.4s,SNR=7.9						
ERTA	**Horta de San J**	**2.65**	**164**	Pg	**Pb**	**23 51 02.8**	**+0.3**
	0.7nm,0.2s,SNR=7.9						
ERTA				Lg	Lg	23 51 36.7	
	3.1nm,0.4s,SNR=7.9						
CFON	**Fontmartina**	**2.86**	**126**	Pn	**Pn**	**23 51 01.5**	**+0.5**
	0.8nm,0.2s,SNR=7.9						
CFON				Sn	**Sn**	**23 51 36.5**	**+0.7**
	2.9nm,0.2s,SNR=7.9						
CFON				Lg	Lg	23 51 48.1	
	9.7nm,0.3s,SNR=7.9						
CFON	**Fontmartina**	**2.86**	**126**	Pn	**Pn**	**23 51 01.5**	**+0.5**
	0.8nm,0.2s,SNR=7.9						
CFON				Sn	**Sn**	**23 51 36.5**	**+0.7**
	2.9nm,0.2s,SNR=7.9						
CFON				Lg	Lg	23 51 48.1	
	9.7nm,0.3s,SNR=7.9						
ETOR	**Torete**	**2.88**	**202**	Pn	**Pn**	**23 51 01.4**	**+0.2**
	2.0nm,0.1s,SNR=7.9						
ETOR				Sn	**Sn**	**23 51 35.9**	**-0.4**
	2.6nm,0.3s,SNR=7.9						
ETOR	**Torete**	**2.88**	**202**	Pn	**Pn**	**23 51 01.5**	**+0.2**
	2.0nm,0.1s,SNR=7.9						
ETOR				Sn	**Sn**	**23 51 35.9**	**-0.4**
	2.6nm,0.3s,SNR=7.9						
MFF	**Saint Martin d**	**3.12**	**6**	*e*Pn	**Pn**	**23 51 03.5**	**-0.9**
MFF				*e*Sg	**Sg**	**23 51 55.5**	**+0.7**
	3.1nm,0.3s						
MFF	**Saint Martin d**	**3.12**	**6**	Pn	**Pn**	**23 51 03.5**	**-0.9**
MFF				*e*Sg	**Sg**	**23 51 55.5**	**+0.7**
	1.5nm,0.3s						
EMOS	**Mosqueruela**	**3.14**	**178**	Pn	**Pn**	**23 51 04.1**	**-0.8**
	0.3nm,0.3s,SNR=7.9						
EMOS				Pg	**Pg**	**23 51 14.1**	**-0.8**
	0.5nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**3.14**	**178**	Pn	**Pn**	**23 51 04.1**	**-0.8**
	0.3nm,0.3s,SNR=7.9						
LASF	**Ste Croix**	**3.31**	**79**	*e*Pn	**Pn**	**23 51 06.4**	**-0.7**
LASF				*e*Sg	**Sg**	**23 51 59.7**	**-1.3**
	1.4nm,0.3s						
LASF	**Ste Croix**	**3.31**	**79**	Pn	**Pn**	**23 51 06.4**	**-0.7**
LASF				Lg	Lg	23 51 59.7	
	0.3nm,0.3s						
LASF				*e*Sg	**Sg**	**23 51 59.7**	**-1.3**
	0.7nm,0.3s						
EARI	**Arriondas**	**3.33**	**268**	Pn	**Pn**	**23 51 07.8**	**+0.4**
	0.1nm,0.2s,SNR=7.9						
EARI				Sn	**Sn**	**23 51 44.6**	**-2.7**
	0.4nm,0.4s,SNR=7.9						
EARI	**Arriondas**	**3.33**	**268**	Pn	**Pn**	**23 51 07.8**	**+0.4**
	0.1nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**3.87**	**224**	Sn	**Sn**	**23 51 59.1**	**-1.7**
	0.4nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**3.87**	**224**	Sn	**Sn**	**23 51 59.1**	**-1.7**
	0.4nm,0.3s,SNR=7.9						
BGF	**Bois d'Agland**	**3.93**	**38**	*e*Pn	**Pn**	**23 51 14.7**	**-0.9**
BGF				*e*Sg	**Sg**	**23 52 20.3**	**-0.6**
	7.9nm,0.4s						
BGF	**Bois d'Agland**	**3.93**	**38**	Pn	**Pn**	**23 51 14.7**	**-0.9**
BGF				*e*Sg	**Sg**	**23 52 20.3**	**-0.6**
	4.0nm,0.4s						
ESDC	**Sonseca Array**	**4.56**	**214**	Pn	**Pn**	**23 51 23.4**	**-0.9**
	0.3nm,0.1s,baz=41,slow=13,SNR=3.6						
ESDC	**Sonseca Array**	**4.56**	**214**	Pn	**Pn**	**23 51 23.4**	**-0.9**
	0.3nm,0.1

PVCC	**Panska Ves**	**1.38**	**224**	*e*PG	**Pg**	**00 11 01.3**	**+0.2**
PVCC				*e*SG	**Sn**	**00 11 20.7**	**+0.6**
	comp=Z,142nm,0.2s						
PVCC	**Panska Ves**	**1.38**	**224**	Pg	**Pg**	**00 11 01.3**	**+0.2**
PVCC				Sg	**Sn**	**00 11 20.7**	**+0.6**
	142nm,0.2s						
BRG	**Berggiesshubel**	**1.49**	**245**	PN	**Pn**	**00 11 02.6**	**-0.1**
BRG				PG	**Pb**	**00 11 03.4**	**+0.2**
BRG				SG	**Sn**	**00 11 23.8**	**+0.9**
	138nm,0.4s						
KRLC	**Kraliky**	**1.52**	**163**	*e*PG	**Pn**	**00 11 03.1**	**0.0**
KRLC	**Kraliky**	**1.52**	**163**	Pg	**Pn**	**00 11 03.1**	**0.0**
PRU	**Pruhonice**	**1.82**	**213**	*e*PN	**Pn**	**00 11 07.0**	**-0.2**
PRU				*e*PG	**Pb**	**00 11 08.6**	**-0.2**
PRU				*e*SG	**Sb**	**00 11 32.6**	**+0.5**
	comp=Z,37nm,0.3s						
PRU	**Pruhonice**	**1.82**	**213**	Pn	**Pn**	**00 11 07.0**	**-0.2**
PRU	**Pruhonice**	**1.82**	**213**	Pg	**Pb**	**00 11 08.6**	**-0.2**
PRU				Sg	**Sb**	**00 11 32.6**	**+0.5**
	37nm,0.3s						
GKP	**Gorka Klasztor**	**1.89**	**22**	*e*Pg	Pg	00 11 14.3	+3.4
GKP				*e*Sg	**Sg**	**00 11 37.4**	**+2.1**
GKP	**Gorka Klasztor**	**1.89**	**22**	*e*Pg	Pg	00 11 14.3	+3.4
GKP				*e*Sg	**Sg**	**00 11 37.5**	**+2.1**
CLL	**Collm**	**1.94**	**265**	*e*Pn	**Pn**	**00 11 08.0**	**-0.8**
CLL				*e*Pg	**Pb**	**00 11 11.0**	**+0.2**
CLL				*e*		00 11 14.0	
CLL				*e*Sg	**Sg**	**00 11 37.0**	**+0.1**
	comp=Z,33nm,0.7s						
MORC	**Moravsky Berou**	**1.98**	**151**	*e*Pn	**Pn**	**00 11 08.6**	**-0.9**
	baz=335						
MORC				*e*Sg	**Sb**	**00 11 37.1**	**+0.3**
	comp=Z,29nm,0.6s,baz=335						
OKC	**Ostrava-Krasne**	**2.14**	**141**	*e*PG	**Pb**	**00 11 14.0**	**-0.2**
OKC				*e*SG	**Sg**	**00 11 42.9**	**-0.4**
OKC	**Ostrava-Krasne**	**2.14**	**141**	Pg	**Pb**	**00 11 14.0**	**-0.2**
OKC				Sg	**Sg**	**00 11 42.9**	**-0.4**
VRAC	**Vranov**	**2.24**	**171**	*e*Pn	**Pn**	**00 11 12.9**	**-0.1**
	baz=353						
VRAC				*e*Sg	**Sb**	**00 11 45.7**	**+1.4**
	comp=Z,30nm,0.6s,baz=353						
TREC	**Trest**	**2.26**	**190**	*e*PN	**Pn**	**00 11 13.8**	**+0.5**
TREC				*e*PG	**Pb**	**00 11 17.1**	**+0.7**
TREC	**Trest**	**2.26**	**190**	Pn	**Pn**	**00 11 13.8**	**+0.5**
KRUC	**Moravsky**	**2.47**	**175**	*e*Pn	**Pn**	**00 11 16.0**	**-0.2**
	baz=357						
KRUC				*e*Sg	**Sg**	**00 11 53.3**	**-0.7**
	comp=Z,16nm,0.5s,baz=357						
NKC	**Novy Kostel**	**2.64**	**242**	*e*PN	**Pn**	**00 11 18.6**	**+0.1**
NKC				*e*PG	**Pg**	**00 11 25.6**	**+0.4**
NKC				*e*SG	**Sg**	**00 12 00.5**	**+1.2**
	comp=Z,93nm,0.3s						
NKC	**Novy Kostel**	**2.64**	**242**	Pn	**Pn**	**00 11 18.6**	**+0.1**
OJC	**Ojcow**	**2.69**	**118**	*e*Pg	**Pg**	**00 11 26.4**	**+0.2**
OJC				*e*Sg	**Sg**	**00 12 01.4**	**+0.3**
OJC	**Ojcow**	**2.69**	**118**	*e*Pg	**Pg**	**00 11 26.4**	**+0.2**
OJC				*e*Sg	**Sg**	**00 12 01.4**	**+0.3**
KHC	**Kasperske Hory**	**2.88**	**215**	*e*PN	**Pn**	**00 11 21.8**	**0.0**
KHC				*e*PG	**Pb**	**00 11 27.9**	**+1.0**
KHC				*e*SN	**Sn**	**00 11 56.4**	**-0.8**
KHC				*e*Sg	**Sg**	**00 12 06.4**	**-0.7**
	comp=Z,9.1nm,0.4s						
KHC	**Kasperske Hory**	**2.88**	**215**	Pn	**Pn**	**00 11 21.8**	**0.0**
ZST	**Bratislava**	**3.39**	**168**	*e*	**Pg**	**00 11 38.8**	**-0.9**
ZST	**Bratislava**	**3.39**	**168**	*e*SG	**Sb**	**00 12 20.6**	**+3.2**
VYHS	**Vyhne**	**3.51**	**149**	*e*PN	**Pn**	**00 11 30.3**	**-0.2**
VYHS				*e*		00 11 41.8	
VYHS	**Vyhne**	**3.51**	**149**	*e*SG	**Sg**	**00 12 25.6**	**-1.9**
CONA	**Conrad Observa**	**3.60**	**182**	⇑*i*Pn	**Pn**	**00 11 31.5**	**-0.3**
CONA				⇑*i*Sg	**Sg**	**00 12 28.9**	**-1.3**
CONA	**Conrad Observa**	**3.60**	**182**	Pn	**Pn**	**00 11 31.5**	**-0.3**
CONA				Sg	**Sg**	**00 12 28.9**	**-1.3**
BSD	**Bornholm Skovb**	**3.67**	**349**	*i*P	**Pn**	**00 11 31.2**	**-1.4**
BSD				*i*S	**Sn**	**00 12 11.5**	**-4.9**
MOA	**Molln**	**3.86**	**198**	⇑*i*Pn	**Pn**	**00 11 34.9**	**-0.4**
MOA				⇑*i*Sg	**Sg**	**00 12 37.7**	**-0.9**
MOA	**Molln**	**3.86**	**198**	Pn	**Pn**	**00 11 34.9**	**-0.4**
MOA				Sg	**Sg**	**00 12 37.7**	**-0.9**
CRVS	**Cervenica-Dubn**	**4.34**	**125**	*e*PN	**Pn**	**00 11 42.0**	**+0.2**
CRVS				*e*		00 11 58.9	
KWP	**Kalwaria Pacla**	**4.63**	**112**	*e*Pg	**Pg**	**00 12 03.7**	**+0.4**
KWP	**Kalwaria Pacla**	**4.63**	**112**	*e*Pg	**Pg**	**00 12 03.8**	**+0.4**
KOLS	**Kolonicke sedl**	**4.75**	**121**	*e*PN	**Pn**	**00 11 47.2**	**-0.2**
KOLS				*e*		00 12 06.0	
KBA	**Koelnbreinsper**	**4.79**	**203**	⇓*i*Pn	**Pn**	**00 11 47.0**	**-1.2**
KBA				⇑*i*Sg	**Sg**	**00 13 07.5**	**-1.1**
KBA	**Koelnbreinsper**	**4.79**	**203**	Pn	**Pn**	**00 11 47.0**	**-1.2**
KBA				Sg	**Sg**	**00 13 07.5**	**-1.1**

JMA 23 00:19:13.2±0.1, 36°48N×137°66E, h1km±2km, M0.3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNG	**Nsakai**	**0.36**	**102**	P	Pg	00 19 20.7	+0.4
JGN	**Niukaw**	**0.38**	**227**	P	Pg	00 19 21.0	+0.4
MAT	**Matsushiro**	**0.45**	**82**	P	Pg	00 19 22.0	+0.2

JMA 23 00:19:18.0±0.1, 36°48N×137°66E, h1km±2km, M1.2, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTT	**Ttatey**	**0.29**	**295**	*e*S	Sg	00 19 28.8	+1.4
JNG	**Nsakai**	**0.36**	**102**	P	Pg	00 19 25.4	+0.3
JNG				*e*S	Sg	00 19 30.3	+0.4
JGN	**Niukaw**	**0.38**	**227**	P	Pg	00 19 25.5	+0.1
JGN				*e*S	Sg	00 19 30.7	+0.3
MAT	**Matsushiro**	**0.45**	**82**	P	Pg	00 19 26.8	+0.2
MAT				S	Sg	00 19 32.7	+0.3
MAT	**Matsushiro**	**0.45**	**82**	P	Pg	00 19 26.8	+0.2
MAT				*e*S	Sg	00 19 32.6	+0.2

*NSSC **23** 00:26:12.8±2.3, 36°.77N×42°.68E, h0km±119km, ML3.3*
*ISCJB **23** 00:26:16.1±0.9, 36°.54N±0°.03×42°.58E±0°.04, h9km±7km, Error ellipse: s-maj=6.2km s-min=4.0km az=143.3*
*CSEM **23** 00:26:17.3±0.2, 36°.58N×42°.57E, h10km, MD3.7, Error ellipse: s-maj=5.1km s-min=3.9km az=153.0*
*ISK **23** 00:26:17.4, 36°.80N×42°.51E, h5km, ML3.9*
*DDA **23** 00:26:19.6, 36°.93N×42°.40E, h22km, MD3.7*
ISC 23 00:26:17.0±1.4, 36°.63N±0°.03×42°.53E±0°.03, h3km±11km, n69, σ1°31/96, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUKT	**Cukurca**	**1.06**	**54**	*e*PG	**Pg**	**00 26 37.6**	**+0.2**
CUKT				*e*SG	**Sb**	**00 26 52.2**	**-0.3**
CUKT	**Cukurca**	**1.06**	**54**	*e*Pg	**Pg**	**00 26 37.6**	**+0.2**
CUKT				*e*Sg	**Sb**	**00 26 52.2**	**-0.3**
HAKT	**HAKKARI**	**1.32**	**45**	*i*P	**Pn**	**00 26 41.8**	**-0.8**
HAKT				*i*S	**Sb**	**00 26 59.6**	**-0.5**
HAKT	**HAKKARI**	**1.32**	**45**	*i*P	**Pn**	**00 26 41.8**	**-0.8**
HAKT				*i*S	**Sb**	**00 26 59.6**	**-0.5**
HKR	**Hakkari**	**1.36**	**45**	*e*PN	**Pn**	**00 26 42.2**	**-0.8**
HKR				*e*SN	**Sb**	**00 27 00.5**	**-0.5**
HKR	**Hakkari**	**1.36**	**45**	*e*Pn	**Pn**	**00 26 42.2**	**-0.8**
HKR				*e*Sn	**Sb**	**00 27 00.5**	**-0.5**
MARD	**Mardin**	**1.56**	**297**	*i*P	**Pn**	**00 26 43.5**	**-2.2**
MARD				*i*S	**Sn**	**00 27 04.4**	**-2.1**
BEST	**Besiri**	**1.61**	**322**	*i*P	**Pn**	**00 26 44.8**	**-1.6**
BEST				*i*S	**Sn**	**00 27 05.9**	**-1.8**
KBSD	**Kabsdagh**	**1.63**	**284**	*e*P	**Pn**	**00 26 44.9**	**-1.8**
KBSD				*e*S	**Sn**	**00 27 06.7**	**-1.6**
KBSD				AML	AML	00 27 08.5	
	comp=Z,549nm,0.3s						
KBSD	**Kabsdagh**	**1.63**	**284**	*e*P	**Pn**	**00 26 44.8**	**-1.8**
	SNR=45						
KBSD				*e*S	**Sn**	**00 27 06.7**	**-1.6**
	comp=Z,549nm,0.3s,SNR=40						
MZRK	**Al-Mazaregh**	**1.71**	**243**	*e*P	**Pn**	**00 26 47.3**	**-0.5**
MZRK				*e*S	**Sb**	**00 27 11.1**	**0.0**
MZRK				AML	AML	00 27 37.2	
	comp=Z,550nm,0.7s						
MZRK	**Al-Mazaregh**	**1.71**	**243**	*e*P	**Pn**	**00 26 47.3**	**-0.5**
	SNR=45						
MZRK				*e*S	**Sb**	**00 27 11.1**	**0.0**
	comp=Z,550nm,0.7s,SNR=40						
GEVA	**Gevas**	**1.73**	**14**	*i*P	**Pn**	**00 26 48.1**	**-0.1**
GEVA				*i*S	**Sb**	**00 27 12.1**	**+0.3**
BTMT	**Batman**	**1.77**	**332**	*e*PN	**Pn**	**00 26 47.8**	**-0.7**
BTMT				*e*SN	**Sn**	**00 27 11.2**	**-0.3**
BTMT	**Batman**	**1.77**	**332**	*e*Pn	**Pn**	**00 26 47.8**	**-0.7**
BTMT				*e*Sn	**Sn**	**00 27 11.3**	**-0.3**
TATV	**Tatvan**	**1.89**	**354**	*i*P	**Pn**	**00 26 50.1**	**-0.2**
TATV				*i*S	**Sn**	**00 27 15.3**	**+0.6**
TATV	**Tatvan**	**1.89**	**354**	*i*P	**Pn**	**00 26 50.1**	**-0.2**
TATV				*i*S	**Sn**	**00 27 15.3**	**+0.6**
SFNV	**Sufian**	**1.96**	**265**	*e*P	**Pn**	**00 26 50.0**	**-1.1**
SFNV				*e*S	**Sn**	**00 27 15.4**	**-0.8**
SFNV				AML	AML	00 27 25.2	
	comp=Z,265nm,0.6s						
SFNV	**Sufian**	**1.96**	**265**	*e*P	**Pn**	**00 26 50.0**	**-1.1**
	SNR=45						
SFNV				*e*S	**Sn**	**00 27 15.4**	**-0.8**
	comp=Z,265nm,0.6s,SNR=40						
VANB	**Van**	**2.08**	**19**	*e*PN	**Pn**	**00 26 52.6**	**-0.3**
VANB	**Van**	**2.08**	**19**	*e*Pn	**Pn**	**00 26 52.6**	**-0.3**
DIY	**Diyarbakir**	**2.23**	**305**	*e*PN	**Pn**	**00 26 55.6**	**+0.7**
DIY	**Diyarbakir**	**2.23**	**305**	*e*Pn	**Pn**	**00 26 55.6**	**+0.7**
DIYA	**Diyarbakir**	**2.31**	**305**	*i*P	**Pn**	**00 26 56.0**	**0.0**
DIYA				*i*S	**Sb**	**00 27 27.3**	**-1.1**
DIYA	**Diyarbakir**	**2.31**	**305**	*i*P	**Pn**	**00 26 56.0**	**0.0**
DIYA				*i*S	**Sb**	**00 27 27.3**	**-1.1**
VRTB	**Varto-Mus**	**2.67**	**342**	*e*PN	**Pn**	**00 27 00.7**	**-0.3**
VRTB	**Varto-Mus**	**2.67**	**342**	*e*Pn	**Pn**	**00 27 00.7**	**-0.3**
CLDR	**Caldiran**	**2.74**	**23**	*e*PN	**Pn**	**00 27 02.8**	**+0.7**
CLDR	**Caldiran**	**2.74**	**23**	*e*Pn	**Pn**	**00 27 02.8**	**+0.7**
BINT	**Bingol**	**2.76**	**325**	*e*Pn	**Pn**	**00 27 03.3**	**+1.0**
BNGB	**Bing¶ll**	**2.77**	**329**	*e*PN	**Pn**	**00 27 03.3**	**+0.8**
KSRV	**Kasrt alli**	**2.95**	**256**	*e*P	**Pn**	**00 27 04.4**	**-0.3**
KSRV				*e*S	**Sb**	**00 27 46.1**	**-0.5**
KSRV				AML	AML	00 27 55.1	
	comp=Z,187nm,0.6s						
KSRV	**Kasrt alli**	**2.95**	**256**	*e*P	**Pn**	**00 27 04.4**	**-0.3**
	SNR=45						
URFA	**Urfa**	**3.07**	**286**	*e*PN	**Pn**	**00 27 08.0**	**+1.5**
URFA	**Urfa**	**3.07**	**286**	*e*Pn	**Pn**	**00 27 08.0**	**+1.5**
SVRC	**Sivrice-ELAZID**	**3.10**	**305**	*e*PN	**Pn**	**00 27 07.5**	**+0.5**
SVRC	**Sivrice-ELAZID**	**3.10**	**305**	*e*Pn	**Pn**	**00 27 07.5**	**+0.5**
PTK	**Pertek**	**3.36**	**313**	*e*PN	**Pn**	**00 27 10.5**	**0.0**
PTK	**Pertek**	**3.36**	**313**	*e*Pn	**Pn**	**00 27 10.5**	**0.0**
ELZG	**Elazig**	**3.38**	**305**	*e*P	**Pb**	**00 27 17.7**	**+0.2**
ELZG				*i*S	**Sb**	**00 28 00.8**	**+1.7**
EZM	**Erzurum**	**3.40**	**345**	*e*PN	**Pn**	**00 27 11.5**	**+0.3**
JHLN	**Al Jahlan**	**3.44**	**255**	*e*P	**Pn**	**00 27 10.3**	**-1.2**
JHLN				*e*S	**Sn**	**00 27 52.1**	**-0.6**
JHLN				AML	AML	00 28 13.4	
	comp=Z,155nm,0.6s						
JHLN	**Al Jahlan**	**3.44**	**255**	*e*P	**Pn**	**00 27 10.3**	**-1.2**
	SNR=45						
JHLN				*e*S	**Sn**	**00 27 52.2**	**-0.6**
	comp=Z,155nm,0.6s,SNR=40						
ATAB	**Bozova**	**3.49**	**285**	*e*P	**Pb**	**00 27 19.9**	**+0.5**
ATAB				*i*S	**Sb**	**00 28 05.4**	**+3.3**
MALT	**Malatya**	**3.67**	**299**	*e*PN	**Pn**	**00 27 17.0**	**+2.3**
MALT	**Malatya**	**3.67**	**299**	*e*Pn	**Pn**	**00 27 17.0**	**+2.3**
MYA	**Malatasya**	**3.67**	**299**	*e*PN	**Pn**	**00 27 16.3**	**+1.5**
MYA	**Malatasya**	**3.67**	**299**	*e*Pn	**Pn**	**00 27 16.3**	**+1.5**
BHD	**Baghdad**	**3.68**	**155**	*ex*	**Pg**	**00 27 29.5**	**+2.0**
BHD				*ex*	x	00 28 17.8	
BHD				*i* x	x	00 28 27.9	
ERZN	**Erzincan**	**3.69**	**324**	*e*PN	**Pn**	**00 27 15.3**	**+0.2**
GNI	**Garni**	**3.92**	**26**	*e*PN	**Pn**	**00 27 19.6**	**+1.3**
GNI	**Garni**	**3.92**	**26**	*e*Pn	**Pn**	**00 27 19.6**	**+1.3**
EZC	**Erzincan**	**4.00**	**322**	*e*Pn	Pn	00 27 15.3	-4.0
AKCD	**Akcadag**	**4.02**	**296**	*i*P	Pn	00 27 15.3	-4.3
AKCD				*i*S	**Sg**	**00 28 23.4**	**-2.8**
KEMA	**Kemaliye**	**4.13**	**311**	*i*P	**Pg**	**00 27 36.9**	**+0.6**
KEMA				*i*S	**Sn**	**00 28 13.3**	**+3.3**
GAZ	**Gaziantep**	**4.29**	**279**	*e*PN	**Pn**	**00 27 25.7**	**+2.4**
GAZ	**Gaziantep**	**4.29**	**279**	*e*Pn	**Pn**	**00 27 25.7**	**+2.4**
DARE	**Darende-Malaty**	**4.40**	**303**	*e*PN	**Pn**	**00 27 27.6**	**+2.9**
DARE	**Darende-Malaty**	**4.40**	**303**	*e*Pn	**Pn**	**00 27 27.6**	**+2.9**
KMRS	**Kahramanmaras**	**4.58**	**283**	*e*PN	**Pn**	**00 27 29.7**	**+2.5**
KMRS	**Kahramanmaras**	**4.58**	**283**	*e*Pn	**Pn**	**00 27 29.7**	**+2.5**
ANDN	**Andirin**	**5.03**	**283**	*i*P	Pn	00 27 38.3	+4.8
ANDN				*i*S	**Sg**	**00 28 56.9**	**-1.6**
MIB	**Mutribah**	**7.91**	**148**	*e*P	**Pn**	**00 28 12.0**	**-0.9**
MIB				AML	AML	00 29 44.1	
	comp=Z,12nm,0.6s						
MIB	**Mutribah**	**7.91**	**148**	*e*P	**Pn**	**00 28 12.0**	**-0.9**
NAY	**Al-Naaiem**	**8.36**	**150**	*e*P	**Pn**	**00 28 17.7**	**-1.3**
NAY				AML	AML	00 29 49.7	
	comp=Z,4.1nm,0.6s						
NAY	**Al-Naaiem**	**8.36**	**150**	*e*P	**Pn**	**00 28 17.7**	**-1.3**
RDF	**Al-Radifah**	**8.77**	**150**	*e*P	**Pn**	**00 28 23.8**	**-0.9**
RDF				AML	AML	00 30 00.5	
	comp=Z,7.0nm,0.7s						
RDF	**Al-Radifah**	**8.77**	**150**	*e*P	**Pn**	**00 28 23.8**	**-0.9**

IDC 23 00:35:37.9±1.6, 16°.01S×176°.83W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.8/19, mbtmp3.7/5, Error ellipse: s-maj=151.4km s-min=22.0km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.88**	**240**	P	P	00 43 21.8	-0.1
	1.0nm,0.3s,baz=92,slow=8.9,SNR=5.7						
WRA	**Warramunga Arr**	**46.49**	**258**	P	P	00 44 07.0	-0.3
	0.2nm,0.5s,baz=94,slow=7.6,SNR=9.8						
ASAR	**Alice Springs**	**46.78**	**252**	P	P	00 44 09.6	0.0
	3.1nm,0.5s,baz=90,slow=7.9,SNR=33						
NVAR	**Mina Araya Bea**	**77.01**	**43**	P	P	00 47 32.6	-0.5
	0.3nm,0.6s,baz=236,slow=9.5,SNR=2.9						
TXAR	**Lajitas Array**	**83.70**	**57**	P	P	00 48 09.7	+0.6
	0.1nm,0.3s,baz=224,slow=3.8,SNR=3.1						

IDC 23 00:57:09.6±2.6, 4°.73N×127°.68E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.4/23, mbtmp3.3/3, MS3.3/1, Ms1 3.3/1, ms1mx2.8/10, Error ellipse: s-maj=218.2km s-min=27.1km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.38**	**165**	P	P	01 02 36.8	-2.0
	1.2nm,0.8s,baz=345,slow=9.5,SNR=5.6						
ASAR	**Alice Springs**	**28.87**	**168**	P	P	01 03 12.1	+1.9
	0.2nm,0.4s,baz=343,slow=9.6,SNR=3.1						
ASAR				LR	LR	01 15 16.7	
	comp=Z,54nm,19.7s,baz=249,slow=38						
MKAR	**Makanchi Array**	**57.29**	**324**	P	P	01 06 59.2	0.0
	0.1nm,0.5s,baz=126,slow=8.9,SNR=3.8						
TORD	**Torodi Ar. Bea**	**123.50**	**289**	PKP	PKPdf	01 16 09.6	-0.5
	0.2nm,0.8s,baz=48,slow=2.1,SNR=3.6						

IDC 23 01:19:31.7±8.7, 1°.46N×98°.55W, h0km, mb3.4/4, mb1 3.9/4, mb1mx3.7/19, mbtmp3.4/4, MS3.5/4, Ms1 3.5/4, ms1mx3.1/15, Error ellipse: s-maj=363.5km s-min=134.1km az=96.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**25.22**	**334**	LR	LR	01 32 06.0	
	comp=Z,21nm,18.1s,baz=183,slow=30						
TXAR	**Lajitas Array**	**28.14**	**351**	P	P	01 25 26.1	+0.2
	0.7nm,0.8s,baz=175,slow=10.0,SNR=7.6						
TXAR				LR	LR	01 35 10.0	
	comp=Z,144nm,18.9s,baz=180,slow=33						
PDAR	**Pinedale Array**	**42.29**	**348**	P	P	01 27 26.8	-0.6
	1.7nm,0.9s,baz=155,slow=11,SNR=5.0						
PLCA	**Paso Flores**	**49.13**	**152**	LR	LR	01 44 58.8	
	comp=Z,142nm,18.2s,baz=98,slow=31						
SCHQ	**Schefferville**	**59.16**	**21**	LR	LR	01 55 31.5	
	comp=Z,51nm,20.2s,baz=6.6,slow=36						
YKA	**Yellowknife Ar**	**62.07**	**352**	P	P	01 29 54.2	+0.3
	0.2nm,0.7s,baz=156,slow=6.6,SNR=3.4						
ILAR	**Eielson Array**	**72.08**	**340**	P	P	01 30 57.4	-0.2
	0.2nm,0.8s,baz=145,slow=5.5,SNR=3.8						

IDC 23 01:20:46.6±2.5, 19°.83S×70°.14W, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.6/18, mbtmp3.7/4, ML3.7/2, Error ellipse: s-maj=67.1km s-min=43.8km az=175.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.00**	**29**	Pn	Pn	01 21 49.4	-0.7
	2.6nm,0.3s,baz=244,slow=6.9,SNR=137						
SIV	**San Ignacio**	**9.44**	**68**	Pn	Pn	01 23 04.8	+0.8
	0.5nm,0.3s,baz=278,slow=11,SNR=14						
TORD	**Torodi Ar. Bea**	**77.89**	**71**	P	P	01 32 46.7	-0.2
	0.2nm,0.4s,baz=259,slow=4.9,SNR=6.4						
YKA	**Yellowknife Ar**	**89.23**	**341**	P	P	01 33 44.1	+0.1
	0.4nm,0.5s,baz=133,slow=4.8,SNR=19						

IDC 23 01:22:46.2±6.0, 4°.77S×133°.92E, h0km, mb3.5/1, mb1 4.0/3, mb1mx3.7/17, mbtmp3.8/3, ML3.7/2, Error ellipse: s-maj=340.0km s-min=31.4km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDU	**Kakadu**	**7.99**	**190**	P	Sn	01 26 14.1	-0.9
	baz=4.0,SNR=4.3						
MTN	**Manton Dam**	**8.48**	**199**	P	Sn	01 26 25.7	-1.1
	baz=5.1,SNR=5.1						
WRA	**Warramunga Arr**	**15.09**	**178**	Pn	Pn	01 26 20.2	-0.6
	0.3nm,0.3s,baz=356,slow=13,SNR=12						
WRA				Sn	Sn	01 29 01.6	-7.2
	0.3nm,0.3s,baz=360,slow=23,SNR=7.7						
MTSU	**Mount Surprise**	**16.73**	**143**	P	P	01 27 17.1	+33
	baz=8.7,SNR=70						
ASAR	**Alice Springs**	**18.79**	**180**	P	P	01 27 07.4	+0.1
	0.4nm,0.3s,baz=5.0,slow=10,SNR=27						
ASAR				S	Sn	01 30 27.5	-11
	0.1nm,0.3s,baz=358,slow=26,SNR=3.5						
MKAR	**Makanchi Array**	**68.59**	**325**	P	P	01 33 51.0	0.0
	0.4nm,0.6s,baz=111,slow=7.9,SNR=5.4						

*IDC **23** 01:24:10.7±2.6, 52°.22N×161°.85E, h0km, mb3.2/4, mb1 3.6/5, mb1mx3.4/28, mbtmp3.3/5, ML3.3/1, Error ellipse: s-maj=86.4km s-min=21.4km az=4.0*
*KRSC **23** 01:24:13.8±0.9, 52°.41N×161°.60E, h10km±10km, ML3.8*
ISC 23 01:24:11.6±2.2, 52°.33N±0°.07×161°.66E±0°.06, h4km±13km, n26, σ1°13/42, mb3.3/4, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.26**	**308**	*e*P	**Pg**	**01 24 36.6**	**+0.9**
SPN				*i*S	**Sn**	**01 24 53.7**	**+0.5**
NLC	**Nalytchevo**	**1.64**	**302**	*e*P	**Pb**	**01 24 42.4**	**+0.1**
NLC				*i*S	**Sg**	**01 25 03.4**	**-0.8**
RUS	**Russkaya**	**1.93**	**274**	*i*P	**Pn**	**01 24 46.3**	**+1.2**
RUS				*i*S	**Sn**	**01 25 09.8**	**0.0**
SDLR	**Sedlovina**	**1.93**	**300**	*e*P	**Pb**	**01 24 47.1**	**-0.3**
SDLR				*i*S	**Sb**	**01 25 11.3**	**-0.6**
UGLR	**Uglovaya**	**1.94**	**298**	*e*P	**Pb**	**01 24 47.2**	**-0.2**
UGLR				*i*S	**Sb**	**01 25 11.8**	**-0.1**
PET	**Petropavlovsk**	**1.96**	**292**	P	**Pb**	**01 24 47.4**	**-0.3**
PET				*i*S	**Sb**	**01 25 11.5**	**-1.0**
SMAR	**Somma**	**1.97**	**299**	P	**Pb**	**01 24 48.1**	**0.0**
SMAR				*i*S	**Sb**	**01 25 13.0**	**-0.1**
AVH	**Avacha**	**2.01**	**299**	*e*P	**Pb**	**01 24 48.4**	**-0.2**
AVH				*i*S	**Sb**	**01 25 13.5**	**-0.4**
KRER	**Koryakskii**	**2.02**	**300**	*e*P	**Pb**	**01 24 48.7**	**-0.2**
KRER				*i*S	**Sb**	**01 25 13.9**	**-0.5**
KOK	**Koryaka**	**2.07**	**299**	*e*P	**Pb**	**01 24 49.5**	**-0.3**
KOK				*e*S	**Sb**	**01 25 15.2**	**-0.7**
MTVR	**Mutnovka**	**2.14**	**275**	*e*P	**Pn**	**01 24 49.7**	**+1.6**
MTVR				*i*S	**Sb**	**01 25 16.0**	**-1.8**
KII	**Karymskiy**	**2.16**	**323**	*e*P	**Pb**	**01 24 50.3**	**-1.0**
KII				*i*S	**Sb**	**01 25 16.9**	**-1.6**
GRL	**Gorelyy**	**2.21**	**277**	P	**Pb**	**01 24 51.8**	**-0.3**
GRL				*i*S	**Sb**	**01 25 19.2**	**-0.6**
MKZ	**Mys Kozlova**	**2.23**	**1**	*e*P	**Pn**	**01 24 50.1**	**+0.9**
MKZ				*i*S	**Sn**	**01 25 16.4**	**-0.7**
PETK	**Petropavlovsk-**	**2.53**	**289**	Pn	**Pb**	**01 24 55.9**	**-1.7**
	5.0nm,0.3s,baz=103,slow=19,SNR=17						
PETK				Sn	**Sb**	**01 25 28.4**	**-0.6**
	8.2nm,0.3s,baz=90,slow=33,SNR=13						
GNL	**Ganaly**	**2.63**	**303**	*e*P	**Pb**	**01 24 58.0**	**-1.2**
GNL				*i*S	**Sb**	**01 25 30.3**	**-1.6**
APC	**Apac

WTVZ	West Tongariro	3.02	43	*e*PN		Pn		01 36 33.6	+0.2
BHHZ	Black Hill Sta	3.02	52	PN		Pn		01 36 32.8	-0.5
OTVZ	Oturere	3.02	44	PN		Pn		01 36 33.8	+0.3
HIZ	Hauiti	3.21	28	PN		Pn		01 36 36.4	+0.8
PXZ	Pawanui	3.25	67	PN		Pn		01 36 34.9	-1.3
FOZ	Fox Glacier	3.27	227	⇑PN		Pn		01 36 34.3	-2.0
KAHZ	Kahuranaki	3.37	63	PN		Pn		01 36 36.5	-1.4
BKZ	Black Stump Fm	3.48	52	PN		Pn		01 36 38.4	-1.0
LBZ	Lake Benmore	3.64	213	PN		Pn		01 36 39.7	-1.6
ODZ	Otahua Downs	4.04	204	PN		Pn		01 36 45.7	-0.9
JCZ	Jackson Bay	4.11	228	PN		Pn		01 36 46.4	-1.3
MKAZ	Moumakai	4.59	23	PN		Pn		01 36 55.1	+1.1
EAZ	Earnscleugh	4.69	213	PN		Pn		01 36 53.7	-1.6
TUZ	Tuapeka	5.18	207	⇑PN		Pn		01 37 01.4	-0.5
DCZ	Deep Cove	5.89	224	PN		Pn		01 37 10.9	-0.7
APZ	The Paps	6.53	212	PN		Pn		01 37 18.6	-1.6

IDC 23 01:39:06.3±1.9, 10°64S×124°81E, **h0**km, **mb3.5**/1, **mb1 3.5**/4, **mb1mx3.4**/20, **mbtmp3.3**/4, **ML3.2**/3, **Error ellipse: s-maj=98.8km s-min=28.1km az=64.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**7.46**	**174**	Pn	Pn	01 40 56.9	+0.3
	0.2nm,0.3s,baz=359,slow=13,SNR=19						
FITZ				Sn	Sn	01 42 16.2	-5.8
	1.9nm,0.3s,baz=274,slow=23,SNR=13						
WRA	**Warramunga Arr**	**13.04**	**136**	Pn	Pn	01 42 12.2	-0.8
	0.1nm,0.3s,baz=307,slow=14,SNR=6.4						
WRA				Sn	Sn	01 44 31.1	-7.8
	0.7nm,0.3s,baz=309,slow=24,SNR=9.7						
ASAR	**Alice Springs**	**15.59**	**147**	Pn	Pn	01 42 48.2	+0.5
	0.3nm,0.3s,baz=324,slow=11,SNR=13						
ASAR				Sn	Sn	01 45 34.2	-7.0
	0.3nm,0.3s,baz=317,slow=23,SNR=7.2						
MKAR	**Makanchi Array**	**68.62**	**330**	P	P	01 50 11.3	0.0
	0.3nm,0.6s,baz=126,slow=7.6,SNR=4.2						

IDC 23 01:53:23.0±2.6, 22°52S×170°13E, **h0**km, **mb3.5**/3, **mb1 3.7**/4, **mb1mx3.7**/18, **mbtmp3.5**/4, **ML3.3**/1, **MS3.7**/2, **Ms1 3.8**/2, **ms1mx3.0**/23, **Error ellipse: s-maj=108.1km s-min=30.9km az=166.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.44**	**277**	*e*P	Pn	01 54 19.0	+0.9
DZM				*e*S	Sn	01 55 00.8	+1.1
DZM	**Mont Dzumac**	**3.44**	**277**	Pn	Pn	01 54 19.3	+1.2
	2.8nm,0.3s,baz=127,slow=16,SNR=95						
DZM				Sn	Sn	01 55 00.6	+0.9
	5.4nm,0.3s,baz=88,slow=18,SNR=8.5						
RPZ	**Rata Peaks**	**21.15**	**178**	LR	LR	02 04 55.8	
	comp=Z,11nm,20.9s,baz=164,slow=33						
ASAR	**Alice Springs**	**33.29**	**261**	P	P	02 00 03.6	+1.0
	0.5nm,0.7s,baz=78,slow=9.6,SNR=3.9						
WRA	**Warramunga Arr**	**33.41**	**268**	P	P	02 00 02.3	-1.4
	0.7nm,1.1s,baz=97,slow=8.5,SNR=4.8						
VNDA	**Vanda**	**55.20**	**182**	LR	LR	02 23 19.5	
	comp=Z,128nm,18.5s,baz=102,slow=32						
ILAR	**Eielson Array**	**93.11**	**17**	P	P	02 06 39.8	+1.4
	0.2nm,0.8s,baz=235,slow=4.3,SNR=3.4						
GERES	**GERESS Array B**	**147.75**	**330**	PKPbc	PKPdf	02 13 07.9	+0.9
	0.3nm,0.6s,baz=97,slow=2.3,SNR=3.5						

*IDC **23** 01:59:21.7±0.8, 4°72S×133°87E, h0km, mb4.0/5, mb1 4.4/10, mb1mx4.2/20, mbtmp4.3/10, ML4.1/5, MS3.4/2, Ms1 3.4/2, ms1mx2.8/22, Error ellipse: s-maj=29.5km s-min=17.8km az=63.0*

*ISCJB **23** 01:59:23.0±0.3, 4°75S±0°03×133°93E±0°04, h21km, mb4.2/10, MS3.3/2, Error ellipse: s-maj=6.6km s-min=4.5km az=152.7*

*NEIC **23** 01:59:26.6±0.5, 4°84S×133°84E, h35km, mb4.4/6, Error ellipse: s-maj=13.2km s-min=9.6km az=54.0*

*AUST **23** 01:59:27.7±3.2, 4°90S×133°94E, h31km, Error ellipse: s-maj=1.5km s-min=0.7km az=35.0*

*DJA **23** 01:59:30.5±0.6, 4°S±3°×13°4E±°, h30km±7km, M4.9/11, mb5.2/5, mB5.7/5, MLv4.6/11, Mw(mB)5.3/5*

ISC 23 01:59:24.7±0.5, 4°65S±0°04×134°01E±0°05, **h21**km, **n63**, σ**1**§**79**/64, **mb4.3**/10, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**1.03**	**343**	P	**Pb**	**01 59 43.6**	**-0.2**
TLE	**Tual**	**1.60**	**232**	P	**Pb**	**01 59 55.0**	**+1.4**
TLE				S	Sb	02 00 22.2	+8.8
TLE	**Tual**	**1.60**	**232**	P	**Pb**	**01 59 53.1**	**-0.5**
	baz=1.4,SNR=5.9						
FAKI	**Fak Fak**	**2.46**	**314**	P	**Pn**	**02 00 02.9**	**-0.8**
FAKI	**Fak Fak**	**2.46**	**314**	P	**Pn**	**02 00 02.8**	**-0.8**
	baz=2.6,SNR=39						
RKPI	**Ransiki, Papua**	**3.12**	**3**	P	**Pn**	**02 00 13.7**	**+1.0**
RKPI				S	**Sn**	**02 00 46.6**	**-2.8**
BAKI	**Biak**	**4.02**	**31**	P	**Pn**	**02 00 27.0**	**+1.9**
BNDI	**Bandanaira**	**4.10**	**272**	P	**Pn**	**02 00 27.3**	**+1.2**
	baz=4.0,SNR=7.3						
BNDI				S	**Sn**	**02 01 17.6**	**+4.1**
	baz=4.0,SNR=3.5						
SWI	**Sorong**	**4.66**	**324**	P	**Pn**	**02 00 33.8**	**-0.1**
MSAI	**Masohi**	**5.24**	**284**	P	**Pn**	**02 00 41.4**	**-0.4**
AAI	**Ambon**	**5.88**	**279**	P	**Pn**	**02 00 50.8**	**+0.1**
	214nm,0.7s,18µm0.9nm						
AAI	**Ambon**	**5.88**	**279**	P	**Pn**	**02 00 51.3**	**+0.6**
	baz=5.9,SNR=5.0						
NLAI	**Namlea**	**7.04**	**281**	P	**Pn**	**02 01 08.7**	**+2.1**
	117nm,0.6s,2µm0.4nm						
LBMI	**Labuha**	**7.63**	**301**	P	**Pn**	**02 01 14.9**	**+0.2**
KDU	**Kakadu**	**8.13**	**191**	P	**Pn**	**02 01 21.5**	**0.0**
	baz=7.9,SNR=50						
MTN	**Manton Dam**	**8.62**	**199**	P	Pn	02 01 11.3	-17
	baz=8.4,SNR=3.9						
MTN				S	**Sn**	**02 03 05.3**	**+0.3**
	baz=8.4,SNR=4.6						
LUWI	**Luwuk**	**11.79**	**287**	S	**Sn**	**02 04 23.0**	**+0.3**
	baz=12,SNR=6.5						
PALU	**Palau**	**11.93**	**2**	S	**Sn**	**02 04 25.0**	**-1.1**
	baz=12,SNR=4.3						
COEN	**Coen**	**12.93**	**136**	*e*Pn	**Pn**	**02 02 25.7**	**-1.6**
	76nm,0.6s						
COEN	**Coen**	**12.93**	**136**	P	**Pn**	**02 02 25.7**	**-1.6**
	baz=13,SNR=20						
PMG	**Port Moresby**	**13.87**	**111**	Pn	**Pn**	**02 02 42.9**	**+2.7**
	23nm,0.9s						
PMG	**Port Moresby**	**13.87**	**111**	Pn	**Pn**	**02 02 42.7**	**+2.5**
	0.7nm,0.3s,baz=270,slow=13,SNR=4.4						
KAPI	**Kappang**	**14.22**	**268**	Pn	**Pn**	**02 02 41.8**	**-3.1**
KAPI	**Kappang**	**14.22**	**268**	Pn	**Pn**	**02 02 41.8**	**-3.1**
	0.5nm,0.3s,baz=68,slow=16,SNR=1.9						
WRAB	**Tennant Creek**	**15.19**	**179**	*e*Pn	**Pn**	**02 02 56.1**	**-2.1**
	40nm,0.6s						
WRAB				*e*S	Sn	02 05 34.8	-11
WRA	**Warramunga Arr**	**15.20**	**179**	Pn	**Pn**	**02 02 54.5**	**-3.7**
WRA				Sn	Sn	02 05 36.5	-10
WRA	**Warramunga Arr**	**15.20**	**179**	Pn	**Pn**	**02 02 54.5**	**-3.7**
	1.7nm,0.3s,baz=355,slow=13,SNR=60						
WRA				Sn	Sn	02 05 36.5	-10
	0.8nm,0.3s,baz=360,slow=23,SNR=5.3						
FITZ	**Fitzroy Crossi**	**15.68**	**211**	*e*Pn	**Pn**	**02 03 00.7**	**-3.7**
FITZ				*e*S	Sn	02 05 46.0	-12
FITZ	**Fitzroy Crossi**	**15.68**	**211**	Pn	**Pn**	**02 03 00.7**	**-3.7**
	1.3nm,0.3s,baz=40,slow=10,SNR=48						
FITZ				Sn	Sn	02 05 44.4	-13
	2.4nm,0.3s,baz=192,slow=13,SNR=8.9						
FITZ	**Fitzroy Crossi**	**15.68**	**211**	P	**Pn**	**02 02 59.9**	**-4.5**
	baz=16,SNR=43						
FITZ				S	Sn	02 05 46.7	-11
	baz=16,SNR=6.1						
QIS	**Mount Isa**	**16.72**	**161**	P	**Pn**	**02 03 17.1**	**-0.7**
	baz=17,SNR=5.3						
MTSU	**Mount Surprise**	**16.77**	**144**	P	**Pn**	**02 03 18.4**	**0.0**
	baz=17,SNR=11						
ASAR	**Alice Springs**	**18.90**	**180**	P	**P**	**02 03 43.2**	**-0.9**
ASAR				S	Sn	02 07 04.3	-12
ASAR	**Alice Springs**	**18.90**	**180**	P	**P**	**02 03 43.2**	**-0.9**
	2.0nm,0.3s,baz=356,slow=11,SNR=70						
ASAR				S	Sn	02 07 04.3	-12
	0.2nm,0.3s,baz=0.8,slow=26,SNR=4.1						
CTA	**Charters Tower**	**19.43**	**143**	P	**Pn**	**02 03 51.0**	**0.0**
CTA	**Charters Tower**	**19.43**	**143**	P	**Pn**	**02 03 51.0**	**0.0**
	0.5nm,0.3s,baz=326,slow=11,SNR=14						
CTAO	**Charters Tower**	**19.43**	**143**	*e*Pn	**Pn**	**02 03 52.2**	**+1.2**
	15nm,0.8s						
GUMO	**Guam**	**21.08**	**31**	LR	LR	02 10 51.1	
	comp=Z,64nm,20.2s,baz=342,slow=32						
MBWA	**Marble Bar**	**21.48**	**219**	*e*P	**P**	**02 04 12.3**	**+0.2**
	18nm,0.8s						
QLP	**Quilpie**	**23.90**	**157**	P	**P**	**02 04 38.3**	**+1.3**
	baz=24,SNR=16						
KSM	**Kuching**	**24.45**	**284**	S	**S**	**02 09 03.5**	**+1.9**
	baz=24,SNR=4.1						
HNR	**Honiara**	**26.16**	**102**	P	**P**	**02 04 58.0**	**+0.1**
HNR	**Honiara**	**26.16**	**102**	P	**P**	**02 04 58.0**	**+0.1**
	66nm,0.4s,baz=275,slow=12,SNR=3.4						
STKA	**Stephens Creek**	**28.00**	**166**	P	**P**	**02 05 14.2**	**0.0**
STKA	**Stephens Creek**	**28.00**	**166**	P	**P**	**02 05 14.2**	**0.0**
	4.1nm,0.8s,baz=320,slow=6.5,SNR=4.7						
STKA				LR	LR	02 18 10.1	
	comp=Z,141nm,18.6s,baz=202,slow=40						
BBOO	**Buckleboo**	**28.08**	**176**	P	**P**	**02 05 15.7**	**+0.9**
	baz=28,SNR=6.4						
USRK	**Ussuriysk Arra**	**48.66**	**358**	P	**P**	**02 08 08.1**	**+1.0**
	1.2nm,0.7s,baz=191,slow=8.6,SNR=4.7						
MK31	**Makanchi Array**	**68.55**	**325**	*e*P	**P**	**02 10 26.5**	**+0.7**
MKAR	**Makanchi Array**	**68.55**	**325**	P	**P**	**02 10 26.7**	**+0.8**
MKAR	**Makanchi Array**	**68.55**	**325**	P	**P**	**02 10 26.7**	**+0.8**
	1.7nm,0.7s,baz=120,slow=7.4,SNR=19						
TKM2	**Tokmak 2**	**70.80**	**319**	*e*P	**P**	**02 10 40.3**	**+0.3**
	3.4nm,0.8s						
ZALV	**Zalesovo Beam**	**71.33**	**332**	P	**P**	**02 10 42.5**	**-0.3**
ZALV	**Zalesovo Beam**	**71.33**	**332**	P	**P**	**02 10 42.5**	**-0.3**
	0.6nm,0.7s,baz=134,slow=4.2,SNR=3.3						
KURK	**Kurchatov**	**72.68**	**327**	*e*Pn	**P**	**02 10 51.7**	**+0.8**
	3.1nm,1.0s						
ABKAR	**Akbulak array**	**83.20**	**321**	*e*P	**P**	**02 11 48.9**	**-0.5**
	1.8nm,0.8s						
ILAR	**Eielson Array**	**89.54**	**25**	P	**P**	**02 12 21.4**	**+1.2**
ILAR	**Eielson Array**	**89.54**	**25**	P	**P**	**02 12 21.4**	**+1.2**
	0.3nm,0.6s,baz=261,slow=5.1,SNR=5.1						
TXAR	**Lajitas Array**	**120.30**	**59**	PKP	**PKPdf**	**02 18 14.7**	**-0.5**
TXAR	**Lajitas Array**	**120.30**	**59**	PKP	**PKPdf**	**02 18 14.7**	**-0.5**
	0.6nm,1.1s,baz=103,slow=2.7,SNR=3.7						
NNA	**Nana**	**145.15**	**119**	PKPbc	**PKPbc**	**02 18 59.4**	**-2.0**
NNA	**Nana**	**145.15**	**119**	PKPbc	**PKPbc**	**02 18 59.4**	**-2.0**
	2.8nm,0.3s,baz=251,slow=5.5,SNR=3.8						
LPAZ	**La Paz**	**149.79**	**134**	PKPbc	**PKPbc**	**02 19 17.3**	**+2.4**
LPAZ	**La Paz**	**149.79**	**134**	PKPbc	**PKPbc**	**02 19 17.3**	**+2.4**
	1.4nm,0.9s,baz=243,slow=4.5,SNR=2.9						

*ISCJB **23** 01:11:22.5±0.5, 37°55S±0°03×72°0W±0°1, h91km±9km, mb3.5/3, Error ellipse: s-maj=15.6km s-min=4.9km az=11.5*

*GUC **23** 01:11:22.7±0.5, 37°56S×71°98W, h93km±5km, ML4.2*

*NEIC **23** 01:11:22.7, 37°56S×71°98W, h93km, MG4.2(GUC), After GUC.*

NEIC Felt [III] at Cabrero and Los Angeles and [II] at Mulchen.

*IDC **23** 01:11:25.2±3.5, 37°48S×71°58W, h90km±21km, mb3.4/3, mb1 3.5/5, mb1mx3.4/16, mbtmp3.4/5, Error ellipse: s-maj=80.7km s-min=18.4km az=96.0*

ISC 23 01:11:23.5±0.9, **37°53S**±0°04×**72°06W**±0°09, **h90**km±10km, **n23**, σ**0**§**84**/38, **mb3.6**/3, **8C-4D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGCH	**Angol**	**0.58**	**241**	⇑*i*P	**Pn**	**02 11 38.8**	**-0.1**
AGCH				*i* S	**Sn**	**02 11 51.2**	**+0.8**
AGCH	**Angol**	**0.58**	**241**	⇑*i*P	**Pn**	**02 11 38.8**	**-0.1**
AGCH				AML	AML	02 11 50.6	
	comp=E,16µm,0.2s						
AGCH				*i* S	**Sn**	**02 11 51.2**	**+0.8**
TMU	**Temuco**	**1.28**	**199**	⇑*i*P	**Pn**	**02 11 46.3**	**-0.2**
TMU				*i* S	**Sn**	**02 12 03.4**	**-0.4**
TMU	**Temuco**	**1.28**	**199**	⇑*i*P	**Pn**	**02 11 46.3**	**-0.2**
TMU				*i* S	**Sn**	**02 12 03.4**	**-0.4**
COCH	**Cobquecura**	**1.51**	**337**	⇑*i*P	**Pn**	**02 11 49.8**	**+0.4**
COCH				*i* S	**Sn**	**02 12 10.1**	**+1.2**
COCH	**Cobquecura**	**1.51**	**337**	⇑*i*P	**Pn**	**02 11 49.8**	**+0.4**
COCH				*i* S	**Sn**	**02 12 10.1**	**+1.2**
COCH				AML	AML	02 12 10.2	
	comp=E,1µm,0.5s						
TALC	**Talca**	**2.15**	**9**	*e*P	**Pn**	**02 11 57.8**	**+0.1**
TALC				*i* S	**Sn**	**02 12 24.2**	**+0.5**
TALC	**Talca**	**2.15**	**9**	*e*P	**Pn**	**02 11 57.8**	**+0.1**
TALC				*i* S	**Sn**	**02 12 24.2**	**+0.5**
TALC				AML	AML	02 12 26.1	
	comp=E,2µm,0.1s						
VLCH	**Valdivia**	**2.46**	**202**	⇑*i*P	**Pn**	**02 12 01.2**	**-0.5**
VLCH				*i* S	**Sn**	**02 12 30.5**	**-0.5**
VLCH	**Valdivia**	**2.46**	**202**	⇑*i*P	**Pn**	**02 12 01.2**	**-0.5**
VLCH				*i* S	**Sn**	**02 12 30.5**	**-0.5**
VLCH				AML	AML	02 12 37.8	
	comp=N,2µm,0.1s						
PLCA	**Paso Flores**	**3.41**	**160**	*e*Pn	**Pn**	**02 12 15.3**	**+0.8**
PLCA	**Paso Flores**	**3.41**	**160**	P	**Pn**	**02 12 15.6**	**+1.0**
	comp=N,6.5nm,0.3s,baz=330,slow=13,SNR=148						
CACH	**El Canelo**	**3.60**	**20**	⇓*i*P	**Pn**	**02 12 17.5**	**+0.2**
CACH				*i* S	**Sn**	**02 12 58.9**	**0.0**
CACH	**El Canelo**	**3.60**	**20**	⇓*i*P	**Pn**	**02 12 17.5**	**+0.2**
CACH				*i* S	**Sn**	**02 12 58.9**	**0.0**
CHCH	**Chadas Angostu**	**3.76**	**18**	⇓*i*P	**Pn**	**02 12 19.3**	**-0.1**
CHCH				*i* S	**Sn**	**02 13 02.5**	**-0.1**
CHCH	**Chadas Angostu**	**3.76**	**18**	⇓*i*P	**Pn**	**02 12 19.3**	**-0.1**
CHCH				*i* S	**Sn**	**02 13 02.5**	**-0.1**
CFAA	**Coronel Fontan**	**6.69**	**29**	P	**Pn**	**02 12 57.6**	**-1.6**
	comp=N,0.2nm,0.3s,baz=182,slow=13,SNR=48						
CFAA				S	**Sn**	**02 14 11.2**	**-2.9**
	comp=N,0.3nm,0.3s,baz=108,slow=20,SNR=4.0						
TRQA	**Tornquist**	**8.00**	**97**	*e*Pn	**Pn**	**02 13 17.1**	**+0.2**
LCO	**Las Campanas**	**8.57**	**8**	*e*Pn	**Pn**	**02 13 22.8**	**-2.1**
LPAZ	**La Paz**	**21.44**	**10**	P	**P**	**02 16 05.7**	**+0.7**
	comp=N,0.8nm,0.7s,baz=219,slow=14,SNR=2.8						
BOSA	**Boshof**	**78.46**	**117**	P	**P**	**02 23 14.5**	**-0.3**
	comp=N,1.6nm,0.5s,baz=212,slow=5.0,SNR=3.1						
TORD	**Torodi Ar. Bea**	**85.43**	**70**	P	**P**	**02 23 51.5**	**+0.2**
	comp=N,0.5nm,0.8s,baz=211,slow=5.4,SNR=7.3						
MKAR	**Makanchi Array**	**158.93**	**56**	PKPab	**PKPab**	**02 31 46.9**	**-0.2**
	comp=N,0.2nm,0.5s,baz=306,slow=3.4,SNR=3.3						

*BJI **23** 02:11:40.1, 55°78N×161°08E, h134km, mB5.1/30, mb4.9/44*

*SZGRF **23** 02:11:41.6, 55°43N×161°68E, h153km, mb5.4, Near east coast of Kamchatka Peninsula, Russia*

*MOS **23** 02:11:41.5±0.8, 55°85N×161°08E, h137km, mb5.0/142, Error ellipse: s-maj=6.9km s-min=3.5km az=93.9*

MOS Felt (II) at Petropavlovsk-Kamchatskiy.

*BGS **23** 02:11:41.3±1.6, 55°28N×158°34E, h137km, mb5.0*

*ISCJB **23** 02:11:42.9±0.1, 55°79N±0°02×161°10E±0°02, h153km±1km, mb4.9/310, Error ellipse: s-maj=2.8km s-min=1.9km az=165.4*

*NEIC **23** 02:11:43.1±0.5, 55°86N×161°07E, h137km±4km, mb5.0/163, Error ellipse: s-maj=3.7km s-min=2.0km az=172.0*

*IDC **23** 02:11:43.6±0.5, 55°90N×161°04E, h142km±4km, mb4.6/32, mb1 4.8/33, mb1mx4.8/34, mbtmp4.6/33, MS3.8/10, Ms1 3.8/10, ms1mx3.4/44, Error ellipse: s-maj=10.2km s-min=7.2km az=154.0*

*KRSC **23** 02:11:44.6±0.5, 55°64N×161°41E, h130km±20km, ML5.2*

*GCMT **23** 02:11:47.3±0.2, 55°83N×161°53E, h148km±1km, MW5.2, Moment Tensor Solution. s61,c79; s94,c162; Moment tensor: Scale 10^16^Nm; Mrr3.40±.18; Mθθ-1.67±.23; Mφφ-1.73±.23; Mrθ-0.21±.15; Mθφ2.34±.19; Mφr6.24±.14; Best double couple: M0 7.20000×10^16^ NP1:φ≈113.00000°, δ23.00000°, λ36.00000°. NP2:φ≈349.00000°, δ77.00000°, λ109.00000°. Principal axes: T 7.7200, Plg54.0000°, Azm282.0000°; N -0.9600, Plg18.0000°, Azm165.0000°; P -6.7600, Plg29.0000°, Azm64.0000°; Data Used: II IU CN G IC.*

*DJA **23** 02:11:50.9±4.9, 56°N±9°×16°1E±1°7, h206km±44km, M4.9/16, mB5.6/3, mb4.9/16, Mw(mB)5.1/3*

ISC 23 02:11:42.8±0.2, **55.75N**±0°03×**161°26E**±0°02, **h140**km±1km, **h139**km:**pP-P, n1320**, σ**1**§**25**/1526, **mb5.0**/310, **399C-205D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BZGR	**Bezymyannyi-Gr**	**0.37**	**302**	*i* P	**Pn**	**02 12 04.6**	**+2.1**
ZLN	**Zelenaya**	**0.37**	**317**	*i* P	**Pn**	**02 12 04.8**	**+2.3**
LGNR	**Loginova**	**0.46**	**317**	*i* P	**Pn**	**02 12 05.3**	**+2.2**
CIRR	**Tsirk**	**0.47**	**322**	*i* P	**Pn**	**02 12 04.9**	**+1.9**
BZMR	**Bezymyannaya**	**0.47**	**294**	*i* P	**Pn**	**02 12 04.9**	**+1.9**
BZWR	**Bezymyannyi-We**	**0.48**	**297**	*i* P	**Pn**	**02 12 05.2**	**+2.1**
KIRR	**Kirishev**	**0.56**	**292**	*i* P	**Pn**	**02 12 05.4**	**+2.0**
KMNR	**Kamenistaya**	**0.58**	**271**	*i* P	**Pn**	**02 12 05.9**	**+2.4**
KRSR	**Krestovskiy**	**0.61**	**321**	*i* P	**Pn**	**02 12 05.4**	**+1.7**
KPT	**Kopyto**	**0.62**	**291**	*i* P	**Pn**	**02 12 05.9**	**+2.1**
KPT				*i* S	**Sn**	**02 12 21.4**	**+1.7**
KLY	**Klyuchi**	**0.66**	**329**	PN	**Pn**	**02 12 05.3**	**+1.4**
KLY	**Klyuchi**	**0.66**	**329**	*i* P	**Pn**	**02 12 05.3**	**+1.4**
TUMR	**Tumrok**	**0.79**	**234**	*i* P	**Pn**	**02 12 07.7**	**+2.7**
BDR	**Baidarnaya**	**0.82**	**358**	*i* P	**Pn**	**02 12 06.6**	**+1.4**
KOZR	**Kozyr**	**0.83**	**293**	PN	**Pn**	**02 12 07.4**	**+2.2**
KOZR				S	**Sn**	**02 12 24.1**	**+1.9**
KOZ	**Kozyrevsk**	**0.84**	**292**	*i* P	**Pn**	**02 12 07.4**	**+2.2**
KOZ				*e*S	**Sn**	**02 12 24.1**	**+1.8**
SMKR	**Semkarok**	**0.84**	**8**	*i* P	**Pn**	**02 12 06.5**	**+1.2**
SRKR	**Sorokina**	**0.91**	**357**	*i* P	**Pn**	**02 12 07.3**	**+1.4**
KBTR	**Krutoberegovo**	**0.99**	**62**	PN	**Pn**	**02 12 06.6**	**+0.1**
KBTR	**Krutoberegovo**	**0.99**	**62**	*i* P	**Pn**	**02 12 06.6**	**+0.1**
SRDR	**Sredinnyy**	**1.04**	**304**	*i* P	**Pn**	**02 12 08.9**	**+1.9**
MKZ	**Mys Kozlova**	**1.23**	**167**	PN	**Pn**	**02 12 09.4**	**+0.7**
MKZ				S	**Sn**	**02 12 27.0**	**-1.3**
MKZ	**Mys Kozlova**	**1.23**	**167**	*i* P	**Pn**	**02 12 09.4**	**+0.7**
MKZ				*e*S	**Sn**	**02 12 27.0**	**-1.3**
ESO	**Esso**	**1.45**	**278**	PN	**Pn**	**02 12 13.6**	**+2.5**
ESO				S	**Sn**	**02 12 34.3**	**+1.6**
ESO	**Esso**	**1.45**	**278**	*i* P	**Pn**	**02 12 13.6**	**+2.5**
ESO				*i* S	**Sn**	**02 12 34.3**	**+1.6**
KII	**Karymskiy**	**2.01**	**212**	*i* P	**Pn**	**02 12 20.1**	**+2.6**
KII				*i* S	**Sn**	**02 12 45.8**	**+1.8**
BKI	**Bering**	**2.74**	**100**	PN	**Pn**	**02 12 26.6**	**+0.3**
BKI				S	**Sn**	**02 12 58.2**	**-1.7**
BKI	**Bering**	**2.74**	**100**	*i* P	**Pn**	**02 12 26.6**	**+0.3**
BKI				*i* S	**Sn**	**02 12 58.2**	**-1.7**
SPN	**Mys Shipunski**	**2.75**	**196**	PN	**Pn**	**02 12 26.8**	**+0.2**
SPN				S	**Sn**	**02 12 57.7**	**-2.6**
SPN	**Mys Shipunski**	**2.75**	**196**	*i* P	**Pn**	**02 12 26.8**	**+0.2**
SPN				*i* S	**Sn**	**02 12 57.7**	**-2.6**
NLC	**Nalytchevo**	**2.81**	**204**	PN	**Pn**	**02 12 28.6**	**+1.3**
NLC				S	**Sn**	**02 13 00.9**	**-0.7**
NLC	**Nalytchevo**	**2.81**	**204**	*i* P	**Pn**	**02 12 28.6**	**+1.3**
NLC				*i* S	**Sn**	**02 13 00.9**	**-0.7**
GNL	**Ganaly**	**2.82**	**224**	*i* P	**Pn**	**02 12 30.3**	**+2.8**
SDLR	**Sedlovina**	**2.84**	**210**	*i* P	**Pn**	**02 12 29.8**	**+2.0**
SDLR				*i* S	**Sn**	**02 13 02.7**	**+0.3**
KRER	**Koryakskii**	**2.85**	**212**	*i* P	**Pn**	**02 12 31.0**	**+3.0**
KRER				*i* S	**Sn**	**02 13 04.4**	**+1.5**
SMAR	**Somma**	**2.87**	**211**	*i* P	**Pn**	**02 12 30.6**	**+2.3**
SMAR				*i* S	**Sn**	**02 13 03.4**	**0.0**
AVH	**Avacha**	**2.89**	**212**	*i* P	**Pn**	**02 12 31.2**	**+2.8**
AVH				*i* S	**Sn**	**02 13 04.8**	**+1.3**
KOK	**Koryaka**	**2.90**	**213**	*i* P	**Pn**	**02 12 31.5**	**+3.0**
KOK				*e*S	**Sn**	**02 13 05.0**	**+1.3**
UGLR	**Uglovaya**	**2.91**	**210**	*i* P	**Pn**	**02 12 31.0**	**+2.3**
UGLR				*e*S	**Sn**	**02 13 03.9**	**-0.2**
INSR	**Institute**	**3.10**	**211**	*e*P	**Pn**	**02 12 33.1**	**+2.1**
INSR				*i* S	**Sn**	**02 13 08.1**	**-0.2**
PET	**Petropavlovsk**	**3.13**	**210**	⇓*i*PN	**Pn**	**02 12 33.3**	**+2.0**
PET				*i* S	**Sn**	**02 13 11.2**	**+2.4**
PET				pmax	pmax		
	comp=Z,4µm,1.4s						
PET				pmax	pmax		
	comp=Z,2µm,0.4s						
PET				smax	smax		
	comp=E,3µm,0.4s						
PET				smax	smax		
	comp=N,3µm,0.7s						
PET				MLR	MLR		
	comp=Z,2µm,10.0s						
PET				MLR	MLR		
	comp=Z,4µm,5.0s						
PET	**Petropavlovsk**	**3.13**	**210**	*i* P	**Pn**	**02 12 33.4**	**+2.1**
PET				*i* S	**Sn**	**02 13 09.1**	**+0.3**
PEA0B	**Petropavlovsk-**	**3.36**	**220**	*e*Pn	**Pn**	**02 12 36.8**	**+2.4**
PEA0B				*e*S	**Sn**	**02 13

YUK MLR MLR
comp=Z,267nm,14.0s
GAMB Gambell 15.70 48 *e*Pn **Pn 02 15 16.6 +0.6**
comp=Z,118nm,1.1s
ASAJ Asahikawa 16.66 233 P **Pn 02 15 30.9 +2.9**
ASAJ Asahikawa 16.66 233 P **Pn 02 15 30.9 +2.9**
comp=Z,11nm,0.3s,baz=57,slow=6.1,SNR=51
NIKO Nikolski 17.57 87 *e*Pn **Pn 02 15 41.1 +2.4**
comp=Z,240nm,1.0s
TNA Tin City 17.81 44 *e*Pn **Pn 02 15 42.9 +1.4**
comp=Z,158nm,0.9s
ERM Erimo 18.10 228 *e*P **P 02 15 44.1 +0.4**
ERM pmax pmax
comp=Z,94nm,0.7s
ERM Erimo 18.10 228 *e*Pn **P 02 15 44.3 +0.6**
comp=Z,171nm,0.5s
ERM Erimo 18.10 228 P **P 02 15 44.2 +0.5**
comp=Z,2µm,0.5s,SNR=48
UNV Unalaska Valle 18.60 82 *e*Pn **P 02 15 50.1 +1.2**
comp=Z,432nm,0.8s
AKUT Akutan 18.91 81 *e*P **Pn 02 15 53.9 -0.7**
comp=Z,1µm,1.7s
KLR Kul'dur 19.02 262 *e*P **P 02 15 51.6 -2.0**
KLR MLR MLR
comp=E,600nm,12.0s
KLR MLR MLR
comp=Z,1µm,12.0s
CLNS Chul'man 20.07 288 *e*P **P 02 16 04.8 -0.1**
CLNS *e*S **S 02 19 43.5 +1.0**
CLNS pmax pmax
comp=Z,106nm,0.9s
CLNS pmax pmax
comp=E,137nm,1.0s
CLNS pmax pmax
comp=N,63nm,0.9s
CLNS smax smax
comp=N,72nm,11.2s
CLNS smax smax
comp=E,118nm,12.0s
CLNS MLR MLR
comp=E,357nm,18.0s
CLNS MLR MLR
comp=N,103nm,14.0s
CLNS MLR MLR
comp=Z,207nm,12.0s
USRK Ussuriysk Arra 21.90 250 P **P 02 16 23.3 -1.2**
comp=Z,3.3nm,0.3s,baz=43,slow=12,SNR=24
USRK PcP **PcP 02 20 17.8 0.0**
comp=Z,1.8nm,0.7s,baz=102,slow=1.1,SNR=4.7
USRK ScP **ScP 02 23 42.8 +1.1**
comp=Z,5.1nm,0.9s,baz=19,slow=1.0,SNR=9.4
CHGN Chignik 22.32 72 *e*P **P 02 16 24.4 -4.2**
SVW2 Sparrevohn 22.88 59 *e*P **P 02 16 33.8 -0.2**
comp=Z,207nm,1.8s
MDJ Mudanjiang 22.92 254 P **P 02 16 33.8 -0.7**
MDJ pP **pP 02 16 59.8 -1.1**
MDJ sP **sP 02 17 15.8 -2.3**
MDJ PcP **PcP 02 20 15.5 -4.4**
MDJ S **S 02 20 31.8 -1.8**
MDJ sS sS 02 21 26.3 +5.2
MDJ ScP **ScP 02 23 41.8 -2.6**
MDJ PcS **PcS 02 23 55.6 -3.3**
MDJ ScS **ScS 02 27 28.1 -2.1**
MDJ pmax pmax
comp=Z,14nm,0.9s
MDJ pmax pmax
comp=Z,300nm,4.3s
PPLA Purkeypile 24.32 54 *e*P **P 02 16 47.6 +0.4**
comp=Z,459nm,1.8s
RSO Redoubt South 24.34 60 *e*P **P 02 16 48.6 +1.1**
MAJO Matsushiro 24.77 229 *e*P **P 02 16 52.2 +0.8**
MAJO pmax pmax
comp=Z,135nm,0.8s
MAJO Matsushiro 24.77 229 *e*P **P 02 16 52.2 +0.8**
comp=Z,135nm,0.8s
MAT Matsushiro 24.77 229 P **P 02 16 52.2 +0.8**
MAT S **S 02 21 07.0 +3.6**
MJAR Matsushiro Arr 24.77 229 P **P 02 16 52.4 +1.0**
MJAR PcP **PcP 02 20 24.6 +0.5**
MJAR ScP **ScP 02 23 50.0 +0.5**
MJAR Matsushiro Arr 24.77 229 P **P 02 16 52.4 +1.0**
comp=Z,66nm,0.8s,baz=22,slow=7.6,SNR=114
MJAR PcP **PcP 02 20 24.6 +0.5**
comp=Z,1.5nm,0.4s,baz=13,slow=1.4,SNR=4.1
MJAR ScP **ScP 02 23 50.1 +0.5**
comp=Z,3.0nm,0.8s,baz=265,slow=1.5,SNR=5.3
OHAK Old Harbor 24.79 68 *e*P **P 02 16 50.4 -1.0**
comp=Z,90nm,1.0s
KDAK Kodiak Island 25.00 66 *e*P **P 02 16 52.7 -0.6**
comp=Z,75nm,0.8s
KDAK Kodiak Island 25.00 66 P **P 02 16 52.0 -1.3**
comp=Z,542nm,0.7s,SNR=21
KDAK Kodiak Island 25.00 66 P **P 02 16 52.5 -0.8**
comp=Z,68nm,0.7s,baz=318,slow=4.5,SNR=62
KDAK LR LR 02 26 13.1
comp=Z,171nm,18.7s,baz=294,slow=35
COLD Coldfoot 25.11 43 *e*P **P 02 16 54.3 +0.1**
comp=Z,36nm,0.8s
TRF Thorofare Moun 25.13 52 *e*P **P 02 16 54.4 -0.2**
comp=Z,85nm,0.8s
MCK McKinley 25.71 52 *e*P **P 02 16 59.5 -0.1**
MCK pmax pmax
comp=Z,55nm,1.1s
MCK McKinley 25.71 52 *e*P **P 02 16 59.5 -0.1**
comp=Z,55nm,1.1s
CN2 Changchun 25.72 257 *e*P **P 02 16 58.1 -1.8**
CN2 *es*P sP 02 17 40.1 -5.3
CN2 *e*S **S 02 21 18.4 +0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
PMR Palmer 25.90 57 *e*P **P 02 17 00.2 -1.1**
PMR pmax pmax
comp=Z,15nm,0.8s
PMR Palmer 25.90 57 *e*P **P 02 17 00.2 -1.1**
comp=Z,15nm,0.8s
SEW Seward 26.03 60 *e*P **P 02 17 01.7 -0.8**
comp=Z,102nm,1.0s
COLA College 26.09 49 *e*P **P 02 17 03.1 +0.2**
COLA pmax pmax
comp=Z,46nm,0.9s
COLA College 26.09 49 *e*P **P 02 17 03.1 +0.2**
comp=Z,46nm,0.9s
SML Sawmill 26.23 56 *e*P **P 02 17 04.5 +0.1**
SML pmax pmax
comp=Z,28nm,1.0s
SML Sawmill 26.23 56 *e*P **P 02 17 04.5 +0.1**
comp=Z,28nm,1.0s
ILAR Eielson Array 26.51 49 P **P 02 17 06.5 -0.3**
ILAR ScP **ScP 02 23 52.0 -2.1**
ILAR Eielson Array 26.51 49 P **P 02 17 06.5 -0.3**
comp=Z,18nm,0.7s,baz=273,slow=8.6,SNR=234
ILAR ScP **ScP 02 23 52.0 -2.1**
comp=Z,0.9nm,0.6s,baz=279,slow=3.3,SNR=9.1
PAX Paxson 27.36 53 *e*P **P 02 17 14.1 -0.4**
PAX pmax pmax
comp=Z,20nm,1.0s
PAX Paxson 27.36 53 *e*P **P 02 17 14.1 -0.4**
comp=Z,20nm,1.0s
DIV Divide 27.57 57 *e*P **P 02 17 16.9 +0.5**
comp=Z,44nm,0.9s
DOT Dot Lake 27.87 51 *e*P **P 02 17 17.9 -1.1**
comp=Z,55nm,0.8s
SNY Shenyang 28.06 256 ⇓P **P 02 17 19.8 -1.0**
SNY pmax pmax
comp=Z,13nm,0.4s
MENT Mentasta 28.15 53 *e*P **P 02 17 21.5 0.0**
BMRM Bremner River 28.16 57 *e*P **P 02 17 21.9 +0.3**
comp=Z,92nm,0.8s
RAGM Ragged Mountai 28.27 58 *e*P **P 02 17 23.2 +0.6**
comp=Z,37nm,0.8s
KSRS Korea Array 28.91 245 P **P 02 17 28.1 -0.3**
comp=Z,4.6nm,0.4s,baz=37,slow=9.0,SNR=21
KSRS pP pP 02 18 03.7 +5.7
comp=Z,5.7nm,0.9s,baz=43,slow=8.9,SNR=3.8
KSRS PcP **PcP 02 20 35.0 +1.2**
comp=Z,7.3nm,0.7s,baz=13,slow=2.5,SNR=23
KSRS ScP **ScP 02 24 02.9 +1.0**
comp=Z,2.5nm,0.7s,baz=50,slow=2.7,SNR=9.9
KSAR Wonju Array Be 28.94 245 P **P 02 17 28.1 -0.6**
KSAR pP pP 02 18 03.7 +5.4
KSAR PcP **PcP 02 20 35.0 +1.1**
KSAR ScP **ScP 02 24 02.9 +0.9**
EGAK Eagle 28.94 48 *e*P **P 02 17 27.5 -0.9**
comp=Z,59nm,0.7s
PNL Peninsula 31.02 58 *e*P **P 02 17 47.3 +0.5**
comp=Z,132nm,0.8s

INK Inuvik 31.37 40 P **P 02 17 50.4 +0.6**
INK PcP **PcP 02 20 40.2 +0.6**
INK Inuvik 31.37 40 P **P 02 17 50.4 +0.6**
comp=Z,28nm,0.7s,baz=283,slow=7.9
INK PcP **PcP 02 20 40.2 +0.6**
baz=243,slow=4.5
SKAG Skagway 33.03 57 *e*P **P 02 18 06.0 +1.7**
comp=Z,87nm,0.8s
BJI Beijing 33.38 261 P **P 02 18 06.3 -1.3**
BJI S **S 02 23 19.6 +1.6**
BJI sS **sS 02 24 12.8 +2.2**
BJI pmax pmax
comp=Z,12nm,0.7s
BJI LR LR
comp=N,350nm,13.8s
BJI LR LR
comp=E,280nm,14.2s
BJI LR LR
comp=Z,200nm,32.1s
TLY Talaya 33.49 288⇑ *i*P **P 02 18 07.0 -1.4**
TLY *e* 02 18 53.9
TLY *e* 02 19 23.0
TLY pmax pmax
comp=Z,11nm,1.0s
TLY MLR MLR
comp=Z,88nm,16.0s
ULN Ulaanbaatar 33.65 280 *e*P **P 02 18 09.1 -0.9**
comp=Z,9.4nm,1.1s
ULN Ulaanbaatar 33.65 280 P **P 02 18 09.6 -0.4**
SNR=5.2
ULN Ulaanbaatar 33.65 280 P **P 02 18 11.1 +1.1**
comp=Z,12nm,2.0s
SONM Songino Array 34.03 280 P **P 02 18 13.0 -0.3**
SONM PcP **PcP 02 20 47.8 +0.1**
SONM ScP **ScP 02 24 19.7 +0.5**
SONM Songino Array 34.03 280 P **P 02 18 13.0 -0.3**
comp=Z,8.5nm,0.5s,baz=60,slow=8.0,SNR=18
SONM PcP **PcP 02 20 47.8 +0.1**
comp=Z,6.3nm,0.7s,baz=88,slow=1.9,SNR=6.6
SONM ScP **ScP 02 24 19.7 +0.5**
comp=Z,6.8nm,0.9s,baz=110,slow=1.7,SNR=6.7
ZAK Zakamensk 34.35 286⇑ *i*P **P 02 18 15.9 -0.1**
ZAK *e* 02 19 02.2
ZAK *e* 02 20 48.6
ZAK pmax pmax
comp=Z,10.0nm,1.0s
MOY Mondy 34.92 289 *e*P **P 02 18 21.0 +0.1**
MOY *e* 02 19 45.9
MOY pmax pmax
comp=Z,45nm,2.2s
HHC Hu-ho-hao-te 35.43 266 *e*P **P 02 18 24.3 -1.0**
HHC pP **pP 02 18 54.9 -0.7**
HHC sP **sP 02 19 12.1 +0.6**
HHC PP **PP 02 19 47.3 -1.1**
HHC S **S 02 23 44.3 -5.4**
HHC sS **sS 02 24 38.4 -4.1**
HHC SS SnSn 02 26 09.0 -16
HHC pmax pmax
comp=Z,33nm,0.8s
DLBC Dease Lake 35.96 57 *e*P **P 02 18 31.7 +2.0**
NJ2 Nanjing 37.80 249 *e*P **P 02 18 44.1 -1.3**
NJ2 pP **pP 02 19 18.3 +2.4**
NJ2 PP **PnPn 02 20 17.3 0.0**
NJ2 S **S 02 24 21.5 -4.2**
NJ2 sS **sS 02 25 22.5 +3.6**
NJ2 pmax pmax
comp=Z,20nm,0.8s
NJ2 pmax pmax
comp=Z,130nm,5.4s
NJ2 LR LR
comp=N,640nm,20.8s
NJ2 LR LR
comp=E,710nm,22.5s
NJ2 LR LR
comp=Z,650nm,19.7s
ALE Alert 40.19 8 P **P 02 19 05.0 +0.3**
comp=Z,68nm,1.0s,SNR=7.6
RES Resolute Bay 40.61 23 *e*P **P 02 19 08.5 +0.4**
comp=Z,3.9nm,0.6s
YKW3 Yellowknife Ar 40.73 45 *e*P **P 02 19 09.8 +0.5**
comp=Z,0.3nm,0.8s
YKA Yellowknife Ar 40.77 45 P **P 02 19 10.2 +0.6**
YKA pP **pP 02 19 41.1 +0.6**
YKA PcP **PcP 02 21 08.2 +0.3**
YKA ScP **ScP 02 24 43.5 -0.5**
YKA Yellowknife Ar 40.77 45 P **P 02 19 10.2 +0.6**
comp=Z,15nm,0.7s,baz=301,slow=8.0,SNR=266
YKA pP **pP 02 19 41.1 +0.6**
comp=Z,6.0nm,0.9s,baz=300,slow=8.1,SNR=3.1
YKA PcP **PcP 02 21 08.1 +0.3**
comp=Z,0.7nm,0.6s,baz=309,slow=3.4,SNR=5.8
YKA ScP **ScP 02 24 43.5 -0.5**
comp=Z,1.8nm,0.7s,baz=303,slow=4.0,SNR=19
WHN Wuhan 41.38 252 P **P 02 19 13.0 -2.0**
ZAA0 Zalesovo Array 41.96 301 *e*P **P 02 19 18.0 -1.5**
ZALV Zalesovo Beam 41.96 301 P **P 02 19 17.8 -1.6**
ZALV 02 21 00.5
ZALV 02 21 11.5
ZALV pmax pmax
comp=Z,10.0nm,0.9s
ZALV pmax pmax
comp=Z,9.0nm,0.9s
ZALV MLR MLR
comp=Z,110nm,18.5s
ZALV Zalesovo Beam 41.96 301 P **P 02 19 17.8 -1.6**
ZALV PP **PP 02 21 00.5 +1.5**
ZALV PcP **PcP 02 21 11.5 -0.4**
ZALV ScP **ScP 02 24 48.1 -0.9**
ZALV Zalesovo Beam 41.96 301 P **P 02 19 17.8 -1.6**
comp=Z,10nm,0.9s,baz=59,slow=7.1,SNR=21
ZALV PP **PP 02 21 00.5 +1.5**
comp=Z,9.2nm,0.9s,baz=48,slow=8.9,SNR=11
ZALV PcP **PcP 02 21 11.5 -0.4**
comp=Z,4.0nm,0.4s,baz=64,slow=3.4,SNR=9.2
ZALV ScP **ScP 02 24 48.1 -0.9**
comp=Z,4.0nm,0.8s,baz=46,slow=4.3,SNR=9.8
ZALV LR LR 02 38 26.8
comp=Z,110nm,18.5s,baz=243,slow=38
NVS Novosibirsk 42.21 303 *e*P **P 02 19 19.9 -1.5**
NVS *e* 02 19 54.5
NVS *e* 02 21 32.7
NVS pmax pmax
comp=N,25nm,1.5s
NVS pmax pmax
comp=E,58nm,1.5s
NVS pmax pmax
comp=Z,104nm,1.5s
GTA Gaotai 43.03 274 *e*P **P 02 19 27.9 -0.6**
GTA pP **pP 02 19 57.1 -2.5**
GTA sP **sP 02 20 10.8 -4.5**
GTA PcP **PcP 02 21 16.4 +0.4**
GTA S **S 02 25 42.3 -1.2**
GTA sS **sS 02 26 33.3 -4.3**
GTA SS SS 02 28 49.8 -11
GTA pmax pmax
comp=Z,11nm,1.3s
GTA pmax pmax
comp=Z,190nm,7.8s
GTA LR LR
comp=N,220nm,10.9s
GTA LR LR
comp=E,150nm,14.5s
GTA LR LR
comp=Z,220nm,13.3s
LZH Lanzhou 43.09 268 *e*P **P 02 19 28.4 -0.6**
LZH pP **pP 02 19 57.5 -2.6**
LZH sP **sP 02 20 14.0 -1.8**
LZH PP **PP 02 21 11.8 +0.2**
LZH *e*S **S 02 25 42.5 -1.9**
LZH sS **sS 02 26 36.5 -2.0**
LZH pmax pmax
comp=Z,31nm,1.1s
LZH pmax pmax
comp=Z,140nm,4.6s
LZH LR LR
comp=N,440nm,16.0s
LZH LR LR
comp=E,380nm,16.5s
LZH LR LR
comp=Z,690nm,15.4s
YULB Yu-li 43.63 239 *e*P **P 02 19 32.0 -1.3**
KBS Kingsbay 44.34 352 *e*P **P 02 19 39.0 +0.8**
KBS Kingsbay 44.34 352 *e*P **P 02 19 39.0 +0.8**
KBS pmax pmax
comp=Z,31nm,0.8s

KBS Kingsbay 44.34 352 *e*P **P 02 19 39.0 +0.8**
comp=Z,32nm,0.8s
NLWA Neilton Lookou 45.13 68 *e*P **P 02 19 47.1 +2.1**
comp=Z,55nm,0.8s
MBW Mount Baker 45.27 65 P **P 02 19 47.2 +1.1**
JCW Jim Creek 45.63 66 P **P 02 19 50.1 +1.3**
RPW Rockport 45.68 65 P **P 02 19 50.3 +1.0**
NLW Nelson Butte 46.52 65 P **P 02 19 57.0 +1.0**
LON Longmire 46.62 67 *e*P **P 02 19 57.6 +0.9**
LON pmax pmax
comp=Z,9.0nm,0.7s
LON Longmire 46.62 67 *e*P **P 02 19 57.6 +0.9**
comp=Z,9.1nm,0.7s
WMQ Urumqi 46.77 288 P **P 02 19 58.0 +0.1**
WMQ pP **pP 02 20 27.0 -2.5**
WMQ sP **sP 02 20 41.0 -4.1**
WMQ PP **PP 02 21 50.0 +0.8**
WMQ ScP **ScP 02 25 10.0 +1.0**
WMQ S **S 02 26 36.0 -1.1**
WMQ sS **sS 02 27 28.0 -3.8**
WMQ ScS **ScS 02 29 36.0 -1.6**
WMQ SS **SS 02 29 59.0 -5.7**
WMQ pmax pmax
comp=Z,110nm,1.0s
WMQ pmax pmax
comp=Z,210nm,5.0s
WMQ LR LR
comp=N,270nm,16.0s
WMQ LR LR
comp=E,280nm,16.0s
WMQ LR LR
comp=Z,250nm,16.0s
WPW White Pass 46.80 67 P **P 02 19 59.7 +1.6**
TWW Teanaway 46.86 66 P **P 02 20 00.1 +1.6**
KURK Kurchatov 46.94 300*c i*P **P 02 19 57.8 -1.2**
KURK pmax pmax
comp=Z,154nm,1.3s
KURK Kurchatov 46.94 300 *e*P **P 02 19 57.9 -1.2**
KURK *e*PcP **PcP 02 21 28.6 -0.6**
KURK PP **PP 02 21 50.2 -0.3**
KURK ScP **ScP 02 25 08.6 -0.9**
KURK PKKP **PKKPdf 02 42 48.4 -0.1**
KURK Kurchatov 46.94 300 P **P 02 19 58.3 -0.7**
SNR=45
KURK Kurchatov 46.94 300 P **P 02 19 58.7 -0.3**
comp=Z,752nm,0.8s
CD2 Chengdu 46.94 263 P **P 02 19 59.5 +0.1**
CD2 pP **pP 02 20 29.8 -1.2**
CD2 sP **sP 02 20 45.0 -1.5**
CD2 PcP **PcP 02 21 31.1 +1.6**
CD2 PP **PP 02 21 51.0 0.0**
CD2 ScP **ScP 02 25 10.9 +1.0**
CD2 PcS **PcS 02 25 24.8 -0.1**
CD2 S **S 02 26 38.3 -1.5**
CD2 sS **sS 02 27 31.4 -3.2**
CD2 ScS **ScS 02 29 37.6 -1.5**
CD2 SS SS 02 30 00.4 -7.6
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,190nm,6.2s
WTV Waterville 46.97 65 P **P 02 20 00.5 +1.1**
KURBB Kurchatov Arra 47.05 300 P **P 02 19 58.8 -1.1**
comp=Z,28nm,0.4s,baz=56,slow=7.9,SNR=475
KURBB PcP **PcP 02 21 29.0 -0.5**
comp=Z,12nm,0.9s,baz=49,slow=2.7,SNR=8.2
KURBB PP **PP 02 21 50.2 -1.2**
comp=Z,5.6nm,0.8s,baz=50,slow=11,SNR=4.8
KURBB ScP **ScP 02 25 08.6 -1.3**
comp=Z,2.8nm,1.0s,baz=45,slow=3.4,SNR=4.7
KURBB LR LR 02 40 26.8
comp=Z,94nm,19.9s,baz=30,slow=37
KURBB PKKP **PKKPdf 02 42 48.4 0.0**
comp=Z,0.2nm,0.3s,baz=148,slow=2.5,SNR=4.7
COR Corvallis 47.27 70 *e*P **P 02 20 03.4 +1.8**
COR Corvallis 47.27 70 *e*P **P 02 20 03.4 +1.8**
VLL Laurance Lake 47.54 68 P **P 02 20 05.2 +1.4**
TRW Toppenish Ridg 47.59 67 P **P 02 20 05.7 +1.5**
MK31 Makanchi Array 47.65 294 *e*P **P 02 20 03.2 -1.5**
MK31 pmax pmax
comp=Z,20nm,0.5s
MK31 Makanchi Array 47.65 294 *e*P **P 02 20 03.1 -1.5**
MKAR Makanchi Array 47.65 294 P **P 02 20 03.0 -1.6**
MKAR pmax pmax
comp=Z,16nm,0.4s
MKAR Makanchi Array 47.65 294 P **P 02 20 03.0 -1.6**
MKAR ScP **ScP 02 25 13.1 +0.4**
MKAR Makanchi Array 47.65 294 P **P 02 20 03.0 -1.6**
comp=Z,16nm,0.4s,baz=52,slow=6.3,SNR=281
MKAR ScP **ScP 02 25 13.1 +0.4**
comp=Z,0.3nm,0.5s,baz=34,slow=3.7,SNR=3.0
DAG Danmarks Havn 47.75 360 *i*P **P 02 20 04.4 -0.5**
DAG *i* *PP **pP 02 20 39.0 +2.4**
DAG pmax pmax
comp=Z,10.0nm,0.9s
DAG Danmarks Havn 47.75 360 *i*P **P 02 20 04.4 -0.5**
comp=Z,12nm,0.8s
DAG *i* pP **pP 02 20 39.0 +2.4**
NEW Newport 48.03 63 *e*P **P 02 20 07.8 +0.3**
comp=Z,23nm,0.9s
NEW Newport 48.03 63 ⇓P **P 02 20 08.0 +0.5**
baz=48,SNR=20
HAWA Hanford 48.04 66 *e*P **P 02 20 08.1 +0.6**
comp=Z,26nm,0.9s
B12A Libby 48.66 62 ⇑P **P 02 20 13.2 +0.8**
baz=48
C11A Tepee Creek (N 48.75 63 ⇑P **P 02 20 13.7 +0.6**
baz=49,SNR=40
GYA Guiyang 48.76 256⇑ *i*P **P 02 20 14.6 +1.1**
GYA pP **pP 02 20 45.3 0.0**
GYA sP **sP 02 21 01.6 +0.8**
GYA PcP **PcP 02 21 37.8 +1.6**
GYA PP **PP 02 22 08.4 +0.7**
GYA ScP **ScP 02 25 18.3 +0.6**
GYA PcS **PcS 02 25 33.0 +0.1**
GYA S **S 02 27 05.9 +0.2**
GYA sS **sS 02 27 58.4 -2.4**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.2s
HUMO Hull Mountain 48.79 72 *e*P **P 02 20 15.1 +1.8**
A13A Flathead Natio 48.94 60 ⇑P **P 02 20 15.4 +0.9**
baz=49
WALA Waterton Lakes 49.10 60 *e*P **P 02 20 16.4 +0.6**
comp=Z,21nm,0.9s
C12B Naegeli Ranch, 49.23 62 ⇓P **P 02 20 17.7 +1.1**
baz=49,SNR=19
VOSK Vostochnaya 49.23 307 P **P 02 20 15.2 -1.4**
VOSK pmax pmax
comp=Z,25nm,0.4s
B13A Whitefish 49.28 61 ⇑P **P 02 20 18.0 +0.9**
baz=49,SNR=18
BVA0 Borovoye Array 49.30 307 *i*P **P 02 20 16.0 -1.1**
BVA0 pmax pmax
comp=Z,4.0nm,0.5s
BVAR Borovoye Array 49.30 307 P **P 02 20 16.1 -0.9**
BVAR 02 21 37.2
BVAR 02 22 14.6
BVAR pmax pmax
comp=Z,19nm,0.4s
BVAR pmax pmax
comp=N,4.0nm,0.8s
BVAR pmax pmax
comp=Z,8.0nm,0.8s
BVAR MLR MLR
comp=Z,83nm,19.6s
BVAR Borovoye Array 49.30 307 P **P 02 20 16.1 -0.9**
BVAR PcP **PcP 02 21 37.2 -0.4**
BVAR PP **PP 02 22 14.6 +2.7**
BVAR ScP **ScP 02 25 18.6 -0.8**
BVAR Borovoye Array 49.30 307 P **P 02 20 16.1 -0.9**
comp=Z,19nm,0.4s,baz=64,slow=8.1,SNR=117
BVAR PcP **PcP 02 21 37.2 -0.4**
comp=Z,3.9nm,0.3s,baz=78,slow=3.3,SNR=9.3
BVAR PP **PP 02 22 14.6 +2.7**
comp=Z,7.6nm,0.8s,baz=54,slow=7.3,SNR=5.6
BVAR ScP **ScP 02 25 18.6 -0.8**
comp=Z,3.9nm,0.8s,baz=66,slow=3.7,SNR=7.6
BVAR LR LR 02 43 09.8
comp=Z,83nm,19.6s,baz=73,slow=38
BRVK Borovoye 49.32 307*c i*P **P 02 20 16.3 -1.0**
BRVK pmax pmax
comp=Z,46nm,1.0s
BRVK Borovoye 49.32 307 *e*P **P 02 20 16.2 -1.0**

BRVK ePcP **PcP** **02 21 37.4 -0.3**
BRVK ePP **PP** **02 22 13.5 +1.4**
BRVK eScP **ScP** **02 25 18.4 -1.1**
BRVK Borovoye **49.32 307** P **P** **02 20 16.7 -0.6**
SNR=18
BRVK Borovoye **49.32 307** P **P** **02 20 16.0 -1.2**
comp=Z,395nm,0.4s,SNR=33
BSMT Bassoo Peak **49.48 62** *eP* **P** **02 20 19.8 +1.1**
YBH Yreka Blue Hor **49.52 73** *eP* **P** **02 20 20.7 +1.7**
comp=Z,23nm,0.8s
KHMM Horse Mountain **49.57 74** *eP* **P** **02 20 21.6 +2.2**
comp=Z,65nm,1.1s
C13A Hot Springs **49.70 62** ⇑P **P** **02 20 21.3 +1.1**
baz=50,SNR=64
A15A Johnson Ranch, **49.73 59** ⇑P **P** **02 20 20.5 0.0**
baz=50,SNR=13
D12A Red Ives Fores **49.73 63** ⇑P **P** **02 20 20.9 +0.4**
baz=50
JTMT Jette **49.80 62** *eP* **P** **02 20 22.0 +0.9**
B14A Marquette Ranc **49.88 60** ⇓P **P** **02 20 22.1 +0.4**
baz=50,SNR=12
ZRNK Zerenda **49.97 308** P **P** **02 20 21.0 -1.1**
ZRNK pmax pmax
comp=Z,31nm,0.5s
C14A Swan Lake **50.05 61** ⇓P **P** **02 20 23.8 +0.9**
baz=50
SWMT Swartz Lake **50.10 62** *eP* **P** **02 20 24.1 +0.8**
D13A Huson **50.15 62** ⇑P **P** **02 20 24.3 +0.6**
baz=50,SNR=20
BMO Blue Mountains **50.23 66** *eP* **P** **02 20 25.2 +0.8**
comp=Z,27nm,0.9s
B15A Bradely Ranch, **50.26 60** ⇑P **P** **02 20 24.7 +0.1**
baz=50,SNR=32
A16A West Butte Ran **50.30 59** ⇓P **P** **02 20 25.0 +0.1**
baz=50
SOKR Solikamsk **50.35 320***c iP* **P** **02 20 24.0 -0.9**
SOKR pmax pmax
comp=Z,40nm,0.9s
WDC Whiskeytown Da **50.42 74** *eP* **P** **02 20 27.0 +1.3**
WDC pmax pmax
comp=Z,17nm,1.1s
WDC Whiskeytown Da **50.42 74** *eP* **P** **02 20 27.0 +1.3**
comp=Z,17nm,1.1s
KEV Kevo **50.51 341** *eP* **P** **02 20 24.4 -1.6**
KEV pmax pmax
comp=Z,3.0nm,0.4s
KEV Kevo **50.51 341** *ep* **P** **02 20 24.4 -1.6**
comp=Z,2.9nm,0.4s
SLMT Seeley Lake **50.53 62** *eP* **P** **02 20 27.4 +0.7**
MSO Missoula **50.59 62** *eP* **P** **02 20 27.9 +0.8**
comp=Z,21nm,1.1s
MSO Missoula **50.59 62** ⇓P **P** **02 20 27.7 +0.6**
baz=50,SNR=23
C15A Salmond Ranch, **50.61 61** ⇓P **P** **02 20 28.0 +0.8**
baz=50,SNR=14
B16A M & M Farms, S **50.61 59** ⇓P **P** **02 20 26.9 -0.2**
baz=50,SNR=7.4
D14A Greenough **50.64 62** ⇑P **P** **02 20 28.0 +0.6**
baz=50,SNR=36
F12A Elk City **50.67 64** ⇑P **P** **02 20 28.5 +0.9**
baz=50,SNR=36
MOD Modoc **50.70 71** *eP* **P** **02 20 29.6 +1.6**
comp=Z,53nm,0.8s
FFC Flin Flon **50.71 48** *eP* **P** **02 20 28.3 +0.6**
FFC Flin Flon **50.71 48** *eP* **P** **02 20 28.3 +0.6**
FFC eScP **ScP** **02 25 25.5 0.0**
FFC Flin Flon **50.71 48** P **P** **02 20 28.6 +0.9**
comp=Z,133nm,0.8s,SNR=15
E13A Victor **50.73 63** ⇑P **P** **02 20 28.6 +0.4**
baz=51,SNR=16
A17A Triple J Farms **50.74 58** ⇑P **P** **02 20 28.2 +0.1**
baz=50,SNR=23
SVE Sverdlovsk **50.83 316***deP* **P** **02 20 28.3 -0.2**
SVE *eS* **S** **02 27 35.4 +2.1**
SVE *e* 02 32 51.8
SVE pmax pmax
comp=Z,54nm,0.9s
CHMT Chamberlain Mo **50.88 62** *eP* **P** **02 20 29.9 +0.6**
ARCES ARCESS Array B **50.98 342** P **P** **02 20 28.2 -1.3**
ARCES PcP **PcP** **02 21 43.1 -0.4**
ARCES ARCESS Array B **50.98 342** P **P** **02 20 28.2 -1.3**
comp=Z,16nm,0.9s,baz=26,slow=7.9,SNR=49
ARCES PcP **PcP** **02 21 43.1 -0.4**
comp=Z,4.8nm,0.9s,baz=35,slow=4.4,SNR=3.7
C16A Fuhringer Ranc **51.01 60** ⇑P **P** **02 20 30.5 +0.3**
baz=51,SNR=14
APA Apatity **51.06 337**⇓*eP* **P** **02 20 31.0 +0.9**
APA MLR MLR
comp=Z,2µm,16.0s
G12A Big Creek, Yel **51.06 65** ⇑P **P** **02 20 31.5 +0.8**
baz=51
E14A Clinton **51.10 62** ⇑P **P** **02 20 31.8 +0.8**
baz=51,SNR=29
F13A Darby **51.11 63** ⇓P **P** **02 20 31.4 +0.4**
baz=51,SNR=21
B17A L&G Farms, Che **51.14 59** ⇑P **P** **02 20 31.2 +0.2**
baz=51
D15A Lincoln **51.15 61** ⇑P **P** **02 20 32.0 +0.7**
baz=51,SNR=15
A18A Metzger Ranch, **51.16 58** ⇓P **P** **02 20 31.3 +0.1**
baz=51,SNR=11
WVOR Wild Horse Val **51.21 69** *eP* **P** **02 20 32.8 +1.0**
WVOR pmax pmax
comp=Z,27nm,0.9s
WVOR Wild Horse Val **51.21 69** *eP* **P** **02 20 32.8 +1.0**
comp=Z,27nm,0.9s
SUMG Summit **51.24 7** *i* P **P** **02 20 32.1 +0.3**
SUMG pmax pmax
comp=Z,34nm,0.9s
SUMG Summit **51.24 7** *eP* **P** **02 20 32.1 +0.3**
comp=Z,46nm,1.0s
SUMG Summit **51.24 7** *i* P **P** **02 20 32.1 +0.3**
comp=Z,34nm,0.9s
E15A Deer Lodge **51.52 62** ⇑P **P** **02 20 34.8 +0.7**
baz=51,SNR=42
B18A Beardsley Farm **51.56 58** ⇑P **P** **02 20 34.8 +0.6**
baz=51,SNR=16
F14A Wisdom **51.58 63** ⇓P **P** **02 20 35.1 +0.6**
baz=51
C17A Wharram Farm, **51.61 60** ⇑P **P** **02 20 34.8 +0.2**
baz=51,SNR=16
D16A Dana Ranch, Ca **51.64 61** ⇓P **P** **02 20 35.8 +0.8**
baz=52,SNR=33
G13A Cobalt **51.65 64** ⇓P **P** **02 20 35.4 +0.4**
baz=52,SNR=23
A19A Klindworth Far **51.68 57** ⇑P **P** **02 20 35.5 +0.4**
baz=52,SNR=14
H12A Diamond D Ranc **51.71 65** ⇑P **P** **02 20 36.0 +0.5**
baz=52
HRY Holter Researc **51.72 61** *eP* **P** **02 20 36.6 +1.1**
EGMT Eagleton **51.83 59** *eP* **P** **02 20 36.0 -0.2**
comp=Z,28nm,0.8s
EGMT Eagleton **51.83 59** ⇓P **P** **02 20 36.6 +0.4**
baz=52,SNR=7.3
KTK1 Kautokeino **51.83 342** *eP* **P** **02 20 35.3 -0.5**
KTK1 AMB AMB 02 20 36.5
comp=Z,207nm,1.3s
OHCM Honcut **51.87 74** *eP* **P** **02 20 37.5 +1.0**
B19A Brinkman Farms **51.92 58** ⇓P **P** **02 20 37.4 +0.5**
baz=52,SNR=13
ARU Arti **51.92 316***c iP* **P** **02 20 35.7 -0.9**
ARU 02 21 45.3
ARU 02 22 32.5
ARU PPP PPP 02 23 41.1
ARU S **S** **02 27 48.4 +0.1**
ARU SS **SS** **02 31 24.7 -1.4**
ARU pmax pmax
comp=Z,64nm,0.7s
ARU Arti **51.92 316** P **P** **02 20 35.6 -1.0**
comp=Z,761nm,0.9s,SNR=25
E16A East Helena **51.92 61** ⇑P **P** **02 20 38.0 +1.0**
baz=52,SNR=32
G14A Jackson **51.93 63** ⇓P **P** **02 20 37.4 +0.2**
baz=52
D17A Six Diamond Ra **51.98 60** ⇑P **P** **02 20 38.0 +0.6**
baz=52,SNR=25
MFID Camas Ranch **52.00 67** *eP* **P** **02 20 38.5 +0.9**
comp=Z,18nm,0.9s
MFID Camas Ranch **52.00 67** ⇓P **P** **02 20 38.6 +1.0**
baz=52
F15A Butte **52.00 62** ⇑P **P** **02 20 38.3 +0.6**
baz=52,SNR=15
H13A Challis **52.00 65** ⇓P **P** **02 20 38.2 +0.5**
baz=52,SNR=40
LRM Limekiln Ridge **52.03 62** *eP* **P** **02 20 38.6 +0.7**
I12A Atlanta **52.09 66** ⇓P **P** **02 20 39.3 +0.9**
baz=52
BEKR Beckworth **52.10 73** *eP* **P** **02 20 39.4 +0.9**
comp=Z,12nm,1.0s
A20A Cobblestone Ra **52.10 57** ⇓P **P** **02 20 38.9 +0.7**
baz=52,SNR=28
DLMT Dillon **52.28 63** *eP* **P** **02 20 41.0 +1.2**
comp=Z,28nm,1.1s
B20A Solberg Farm, **52.37 57** ⇑P **P** **02 20 40.8 +0.7**
baz=52
C19A Slack Wire Ran **52.37 58** ⇑P **P** **02 20 41.3 +1.1**
baz=52,SNR=44
E17A Martinsdale **52.38 61** ⇑P **P** **02 20 41.8 +1.3**
baz=52,SNR=34
D18A Linhart Farms, **52.38 59** ⇓P **P** **02 20 41.1 +0.8**
baz=52
H14A Leadore **52.42 64** ⇑P **P** **02 20 41.1 +0.4**
baz=52,SNR=9.7
F16A Kennard Place, **52.47 62** ⇓P **P** **02 20 41.9 +0.8**
baz=52
G15A Dillon **52.48 63** ⇓P **P** **02 20 41.9 +0.7**
baz=52,SNR=49
A21A Bergtoll Ranch **52.50 56** ⇑P **P** **02 20 42.1 +1.0**
baz=52
I13A Wildhorse Cree **52.53 65** ⇑P **P** **02 20 42.7 +1.0**
baz=52,SNR=30
MCMT McKenzie Canyo **52.53 63** *eP* **P** **02 20 42.2 +0.5**
comp=Z,7.8nm,0.9s
MCMT *e* 02 21 22.1
BOZ Bozeman (W) **52.57 62** *eP* **P** **02 20 42.9 +1.1**
BOZ Bozeman (W) **52.57 62** *eP* **P** **02 20 42.9 +1.1**
BOZ *e* 02 21 23.2
BOZ Bozeman (W) **52.57 62** ⇑P **P** **02 20 43.0 +1.1**
baz=52,SNR=20
HLID Hailey **52.62 66** *eP* **P** **02 20 43.1 +0.8**
comp=Z,8.6nm,0.9s
HLID Hailey **52.62 66** ⇓P **P** **02 20 43.3 +1.1**
baz=52,SNR=16
TMCR Tamitsa **52.72 333** *eP* **P** **02 20 41.2 -1.2**
TMCR pmax pmax
comp=Z,37nm,1.3s
E18A Harlowton **52.77 60** ⇓P **P** **02 20 44.4 +1.2**
baz=53,SNR=18
G16A Moss Hill, Enn **52.77 62** ⇑P **P** **02 20 44.4 +1.0**
baz=53,SNR=31
H15A Lima **52.78 63** ⇑P **P** **02 20 43.9 +0.4**
baz=53,SNR=6.0
WCN Washoe City **52.83 73** *eP* **P** **02 20 44.7 +0.8**
WCN pmax pmax
comp=Z,18nm,0.8s
WCN Washoe City **52.83 73** *eP* **P** **02 20 44.7 +0.8**
comp=Z,18nm,0.8s
B21A Ellsworth Farm **52.85 57** ⇑P **P** **02 20 44.1 +0.4**
baz=53
D19A Cripps Ranch, **52.85 59** ⇓P **P** **02 20 44.5 +0.7**
baz=53,SNR=13
I14A Mackay **52.86 65** ⇓P **P** **02 20 44.7 +0.7**
baz=53,SNR=14
J13A Cove Ranch, Pi **52.87 66** ⇑P **P** **02 20 45.1 +1.1**
baz=53,SNR=6.7
F17A Fitzpatrick Pl **52.87 61** ⇓P **P** **02 20 45.2 +1.2**
baz=53,SNR=12
C20A Veseth Ranch, **52.89 58** ⇑P **P** **02 20 44.9 +0.9**
baz=53,SNR=43
A22A Carney Farms, **52.97 55** ⇑P **P** **02 20 45.2 +0.6**
baz=53,SNR=13
QIZ Qiongzhong **53.06 248** P **P** **02 20 45.6 +0.1**
QIZ pP **pP** **02 21 17.8 0.0**
QIZ S **S** **02 28 05.6 +0.8**
QIZ pmax pmax
comp=Z,19nm,1.4s
QIZ pmax pmax
comp=Z,89nm,4.2s
C21A Desert Coulee **53.24 57** ⇓P **P** **02 20 47.3 +0.7**
baz=53,SNR=12
G17A Pierce Place, **53.24 62** ⇓P **P** **02 20 48.1 +1.4**
baz=53,SNR=9.8
QLMT Earthquake Lak **53.24 63** *eP* **P** **02 20 48.4 +1.5**
J14A Carey **53.26 65** ⇑P **P** **02 20 48.6 +1.7**
baz=53,SNR=21
D20A Manuel Ranch, **53.26 58** ⇑P **P** **02 20 47.8 +1.1**
baz=53,SNR=14
I15A Monteview **53.30 64** ⇓P **P** **02 20 48.2 +1.0**
baz=53
F18A Big Timber **53.34 61** ⇑P **P** **02 20 48.6 +1.3**
baz=53,SNR=24
BMN Battle Mountai **53.38 70** *eP* **P** **02 20 49.2 +1.4**
BMN pmax pmax
comp=Z,21nm,0.9s
BMN Battle Mountai **53.38 70** *eP* **P** **02 20 49.2 +1.4**
comp=Z,21nm,0.9s
E19A Rath Farm, Rou **53.40 59** ⇓P **P** **02 20 48.8 +1.0**
baz=53,SNR=14
CMB Columbia Colle **53.40 74** *eP* **P** **02 20 49.4 +1.5**
CMB pmax pmax
comp=Z,15nm,0.9s
CMB Columbia Colle **53.40 74** *eP* **P** **02 20 49.4 +1.5**
comp=Z,15nm,0.9s
B22A Redig Ranch S **53.42 56** ⇑P **P** **02 20 48.7 +0.8**
baz=53
H16A Russell Place, **53.43 63** ⇓P **P** **02 20 49.4 +1.2**
baz=53,SNR=29
GCMT Greycliff **53.44 61** *eP* **P** **02 20 49.0 +0.8**
comp=Z,5.6nm,0.7s
YMR Madison River **53.59 62** *eP* **P** **02 20 50.7 +1.3**
comp=Z,30nm,1.0s
E20A Meyer Farm, Mu **53.68 59** ⇓P **P** **02 20 51.0 +1.1**
baz=54,SNR=13
SAO San Andreas Ge **53.74 76** *eP* **P** **02 20 52.1 +1.8**
SAO pmax pmax
comp=Z,12nm,0.8s
SAO San Andreas Ge **53.74 76** *eP* **P** **02 20 52.1 +1.8**
comp=Z,12nm,0.8s
F19A Roth Farm, Mol **53.75 60** ⇑P **P** **02 20 51.5 +1.1**
baz=54,SNR=12
J15A Blackfoot **53.76 64** ⇑P **P** **02 20 51.8 +1.3**
baz=54
TKM2 Tokmak 2 **53.77 295** *eP* **P** **02 20 49.8 -0.9**
TKM2 *e* 02 21 54.0
TKM2 Tokmak 2 **53.77 295** *eP* **P** **02 20 49.8 -0.9**
TKM2 *ePcP* **PcP** **02 21 54.0 -0.7**
TKM2 Tokmak 2 **53.77 295** P **P** **02 20 50.4 -0.3**
SNR=13
B23A Brockton **53.77 55** ⇓P **P** **02 20 51.0 +0.6**
baz=54,SNR=7.9
G18A Lazy EL Ranch, **53.83 61** ⇑P **P** **02 20 51.6 +0.6**
baz=54,SNR=6.8
D21A La Casta Ranch **53.83 58** ⇑P **P** **02 20 51.9 +1.0**
baz=54,SNR=6.2
C22A Vida **53.87 57** ⇑P **P** **02 20 51.9 +0.7**
baz=54,SNR=6.1
I16A Newdale **53.90 63** ⇓P **P** **02 20 53.3 +1.7**
baz=54,SNR=8.2
A24A Westby **53.90 54** ⇑P **P** **02 20 52.0 +0.7**
baz=54,SNR=11
ULHL Ulahol **53.92 294** *i* P **P** **02 20 51.2 -0.6**
ULHL Ulahol **53.92 294** P **P** **02 20 51.2 -0.6**
SNR=10
LKWY Lake **53.95 62** *eP* **P** **02 20 54.6 +2.5**
LKWY Lake **53.95 62** *eP* **P** **02 20 54.6 +2.5**
H17A Grant Village **53.98 62** ⇓P **P** **02 20 54.8 +2.5**
baz=54,SNR=34
K14A Jones Ranch, D **53.99 66** ⇑P **P** **02 20 54.2 +2.0**
baz=54,SNR=24
USP Ospenovka **54.08 296** *i* P **P** **02 20 52.2 -0.5**
USP Ospenovka **54.08 296** P **P** **02 20 52.2 -0.5**
SNR=35
RLMT Red Lodge **54.11 61** *eP* **P** **02 20 54.1 +0.9**
RLMT *e* 02 21 34.8
RLMT Red Lodge **54.11 61** ⇓P **P** **02 20 54.6 +1.4**
baz=54,SNR=36
DGMT Dagmar **54.14 55** *eP* **P** **02 20 54.0 +0.8**
comp=Z,23nm,0.8s
DGMT Dagmar **54.14 55** ⇓P **P** **02 20 53.9 +0.8**
baz=54
CHMS Chumysh **54.14 295** *i* P **P** **02 20 53.2 0.0**
CHMS Chumysh **54.14 295** P **P** **02 20 53.2 0.0**
SNR=6.2
IMW Indian Meadow **54.16 63** *eP* **P** **02 20 54.9 +1.3**
comp=Z,18nm,0.9s
D22A Cohagen **54.16 57** ⇑P **P** **02 20 54.3 +1.0**
baz=54,SNR=11
C23A Lambert **54.16 56** ⇓P **P** **02 20 54.4 +1.1**
baz=54,SNR=17
E21A Keefer Ranch, **54.17 58** ⇓P **P** **02 20 54.6 +1.2**
baz=54
ELK Elko **54.21 69** *eP* **P** **02 20 55.8 +1.9**
comp=Z,211nm,0.9s
K15A Arbon **54.22 65** ⇑P **P** **02 20 55.9 +2.1**
baz=54,SNR=21
H18A Shoshone NF, C **54.24 62** ⇑P **P** **02 20 55.3 +1.2**
baz=54,SNR=6.0
NVAR Mina Array Bea **54.25 73** P **P** **02 20 56.1 +1.9**
NVAR pP **pP** **02 21 29.6 +2.9**
NVAR ScP **ScP** **02 25 42.0 +0.5**
NVAR Mina Array Bea **54.25 73** P **P** **02 20 56.1 +1.9**
comp=Z,36nm,0.8s,baz=296,slow=7.5,SNR=122
NVAR pP **pP** **02 21 29.6 +2.9**
comp=Z,1.2nm,0.7s,baz=294,slow=12,SNR=1.3
NVAR ScP **ScP** **02 25 42.0 +0.5**
comp=Z,0.6nm,0.5s,baz=309,slow=2.6,SNR=4.3
DCID1 Drake Creek **54.25 63** *eP* **P** **02 20 56.1 +2.0**
comp=Z,31nm,0.9s
J16A Bone **54.26 64** ⇓P **P** **02 20 55.8 +1.5**
baz=54
KBK Karagaybulak **54.29 295** *i* P **P** **02 20 54.5 +0.1**
KBK Karagaybulak **54.29 295** P **P** **02 20 54.5 +0.1**
SNR=5.0
L14A Malta **54.32 66** ⇓P **P** **02 20 56.5 +1.9**
baz=54
I17A Pilgrim Ck. **54.32 63** ⇑P **P** **02 20 56.6 +1.9**
baz=54
NV11 Mina Array Sit **54.32 73** *eP* **P** **02 20 55.9 +1.2**
NV11 *e* 02 21 36.1
FRU Bishkek **54.33 295** *eP* **P** **02 20 54.0 -0.6**
FRU *e* 02 21 51.0
FRU pmax pmax
comp=Z,60nm,2.0s
MOOW Moose Ponds **54.36 63** *eP* **P** **02 20 56.1 +1.1**
comp=Z,14nm,1.1s
TPAW Teton Pass **54.44 63** *eP* **P** **02 20 57.1 +1.5**
TPAW *e* 02 21 37.5
LOHW Long Hollow **54.53 63** *eP* **P** **02 20 57.3 +1.1**
comp=Z,26nm,1.1s
LOHW *e* 02 21 38.0
AAK Ala-Archa **54.54 295***c iP* **P** **02 20 55.3 -0.9**
AAK pmax pmax
comp=Z,29nm,0.9s
AAK Ala-Archa **54.54 295** *eP* **P** **02 20 55.5 -0.7**
AAK PcP **PcP** **02 21 57.5 -0.1**
AAK Ala-Archa **54.54 295** P **P** **02 20 56.0 -0.2**
SNR=11
AAK Ala-Archa **54.54 295** P **P** **02 20 55.0 -1.2**
comp=Z,108nm,0.4s,SNR=17
AAK Ala-Archa **54.54 295** P **P** **02 20 55.8 -0.4**
comp=Z,7.0nm,0.4s,baz=76,slow=4.3,SNR=36
AAK PcP **PcP** **02 21 57.5 -0.1**
comp=Z,9.6nm,1.0s,baz=63,slow=2.5,SNR=3.9
KZA Kyzart **54.55 294** *i* P **P** **02 20 56.2 -0.4**
KZA Kyzart **54.55 294** P **P** **02 20 56.2 -0.4**
SNR=19
G20A Bridger **54.56 60** ⇑P **P** **02 20 57.1 +0.8**
baz=54,SNR=26
SNOW Snow King Moun **54.56 63** *eP* **P** **02 20 58.7 +2.2**
comp=Z,33nm,1.3s
H19A Powell **54.58 61** ⇑P **P** **02 20 57.9 +1.5**
baz=54,SNR=5.2
K16A Soda Springs **54.59 64** ⇓P **P** **02 20 58.4 +1.8**
baz=54,SNR=13
D23A Lindsay **54.60 57** ⇑P **P** **02 20 57.4 +1.0**
baz=54
J17A Brown Place, J **54.66 63** ⇓P **P** **02 20 58.8 +1.7**
baz=54,SNR=12
HVU Hansel Valley **54.74 66** *eP* **P** **02 20 59.0 +1.3**
HVU Hansel Valley **54.74 66** *eP* **P** **02 20 59.0 +1.3**
E22A Miles City **54.78 58** ⇑P **P** **02 20 58.7 +1.0**
baz=55
L15A Malad City **54.78 66** ⇓P **P** **02 20 59.5 +1.6**
baz=55,SNR=32
I18A Diamond G Ranc **54.86 62** ⇓P **P** **02 21 00.4 +1.8**
baz=55,SNR=6.0
EKS2 Erkin-Say **54.88 296** *eP* **P** **02 20 58.2 -0.5**
EKS2 *e* 02 21 58.2
EKS2 pmax pmax
comp=Z,18nm,0.9s
EKS2 Erkin-Say **54.88 296** *eP* **P** **02 20 58.2 -0.5**
comp=Z,18nm,0.9s
EKS2 *ePcP* **PcP** **02 21 58.2 -0.8**
EKS2 Erkin-Say **54.88 296** P **P** **02 20 58.2 -0.5**
SNR=24
MTUM Tungsten Hills **54.89 74** *eP* **P** **02 21 00.8 +2.0**
LSA Lhasa **54.97 272** P **P** **02 21 02.8 +2.9**
LSA pmax pmax
comp=Z,20nm,0.7s
G21A Lodge Grass **55.05 60** ⇑P **P** **02 21 00.5 +0.7**
baz=55
D24A Glendive **55.06 56** ⇑P **P** **02 21 01.2 +1.5**
baz=55
F22A Rosebud **55.11 58** ⇓P **P** **02 21 01.0 +0.8**
baz=55
J18A Kendall Valley **55.12 63** ⇑P **P** **02 21 01.8 +1.4**
baz=55
H20A Greybull **55.20 61** ⇓P **P** **02 21 01.4 +0.6**
baz=55,SNR=6.8
L16A Fish Haven **55.27 65** ⇓P **P** **02 21 03.1 +1.6**
baz=55
SFJD Kangerlussuaq **55.27 15** *eP* **P** **02 21 00.4 -0.5**
RCTC Rector, Farmer **55.28 75** ⇑P **P** **02 21 03.0 +1.5**
baz=55
TIN Tinemaha **55.29 74** ⇓P **P** **02 21 03.6 +2.0**
baz=55,SNR=6.4
AML Almayashu **55.31 295** *i* P **P** **02 21 02.3 +0.3**
AML Almayashu **55.31 295** P **P** **02 21 02.3 +0.3**
SNR=22
JOF Joensuu **55.45 335** *eP* **P** **02 21 00.4 -1.8**
JOF pmax pmax
comp=Z,12nm,0.5s
JOF Joensuu **55.45 335** *ep* **P** **02 21 00.4 -1.8**
comp=Z,12nm,0.5s
E24A Baker **55.47 57** ⇑P **P** **02 21 03.6 +0.9**
baz=55
L17A Cokeville **55.49 64** ⇑P **P** **02 21 04.5 +1.4**
baz=55
HWUT Hardware Ranch **55.49 65** *eP* **P** **02 21 04.7 +1.6**
comp=Z,30nm,0.8s
G22A Birney **55.50 59** ⇓P **P** **02 21 03.9 +0.9**
baz=55,SNR=5.5
K18A Toltan Ranch, **55.52 64** ⇓P **P** **02 21 05.1 +1.8**
baz=55,SNR=37
I20A Warland **55.52 61** ⇓P **P** **02 21 04.4 +1.1**
baz=55,SNR=9.5
F23A Volborg **55.56 58** ⇑P **P** **02 21 04.3 +0.9**
baz=55,SNR=9.5
J19A Crowheart **55.56 62** ⇓P **P** **02 21 05.2 +1.6**
baz=55,SNR=8.5
H21A Big Horn, Sher **55.56 60** ⇓P **P** **02 21 04.5 +1.0**
baz=55
SMMC Simmler **55.61 76** ⇑P **P** **02 21 05.7 +1.9**
baz=56
BW06 Boulder Array **55.67 63** ⇑P **P** **02 21 05.5 +1.1**
baz=56,SNR=30
PDAR Pinedale Array **55.67 63** P **P** **02 21 05.4 +1.0**
PDAR Pinedale Array **55.67 63** P **P** **02 21 05.4 +1.0**
comp=Z,10nm,0.7s,baz=326,slow=2.5,SNR=84
VES Vestal, Richgr **55.72 75** ⇑P **P** **02 21 05.6 +1.1**
baz=56
R11A Troy Canyon, C **55.76 71** ⇓P **P** **02 21 06.4 +1.4**
baz=56,SNR=14
GRAC Grapevine Rang **55.80 73** ⇑P **P** **02 21 07.3 +2.2**
baz=56
CWC Cottonwood Cre **55.82 74** ⇓P **P** **02 21 07.3 +1.8**
baz=56
MOR8 Moi Rana **55.85 344** *eP* **P** **02 21 03.1 -2.0**
MOR8 AMB AMB 02 21 07.4
comp=Z,24nm,1.0s
DUG Dugway **55.88 67** *eP* **P** **02 21 07.4 +1.6**
DUG pmax pmax
comp=Z,30nm,0.8s
DUG Dugway **55.88 67** *eP* **P** **02 21 07.4 +1.6**
comp=Z,30nm,0.8s
DUG *e* 02 21 47.8
DUG Dugway **55.88 67** ⇓P **P** **02 21 07.5 +1.7**
baz=56,SNR=41
H22A Clearmont **55.93 60** ⇑P **P** **02 21 06.9 +0.8**
baz=56
F24A Ekalaka **55.93 57** ⇑P **P** **02 21 06.9 +0.9**
baz=56
G23A Biddle **55.95 58** ⇓P **P** **02 21 07.0 +0.8**
baz=56
J20A Shoshoni **55.98 62** ⇑P **P** **02 21 07.9 +1.4**
baz=56,SNR=14
K19A Absolon Red Bu **55.99 63** ⇑P **P** **02 21 07.1 +0.4**
baz=56,SNR=8.7
PKM Peak Mountain **56.01 77** ⇓P **P** **02 21 08.8 +1.9**
baz=56,SNR=7.8
KSH Kashi **56.04 292** P **P** **02 21 10.0 +3.1**

KSH pP **pP** 02 21 40.3 +0.8
KSH sP **sP** 02 21 53.8 -1.1
KSH PcP **PcP** 02 22 06.8 +3.3
KSH PP PP 02 23 19.1 +6.2
KSH ScP **ScP** 02 25 52.5 +3.3
KSH PcS **PcS** 02 26 04.8 +0.7
KSH S **S** 02 28 48.0 +3.6
KSH sS **sS** 02 29 40.1 -0.6
KSH ScS **ScS** 02 30 43.0 +1.0
KSH SS **SS** 02 32 37.0 +5.1
KSH pmax pmax
comp=Z,34nm,1.3s
KSH LR LR
comp=N,310nm,4.9s
KSH LR LR
comp=E,250nm,5.8s
KSH LR LR
comp=Z,180nm,4.3s
I21A Big Trails, Te 56.04 61 ⇑P **P** 02 21 07.5 +0.6
baz=56
L18A Fontenelle, Gr 56.04 64 ⇑P **P** 02 21 08.2 +1.2
baz=56,SNR=15
M17A Scullys Gap (B 56.05 65 ⇑P **P** 02 21 08.3 +1.2
baz=56,SNR=8.1
CTU Camp Tracy 56.06 66 *eP* **P** 02 21 09.0 +1.8
comp=Z,20nm,0.8s
ISA Isabella 56.18 75 *eP* **P** 02 21 08.4 +0.5
ISA pmax pmax
comp=Z,13nm,1.0s
ISA Isabella 56.18 75 *eP* **P** 02 21 08.4 +0.5
comp=Z,13nm,1.0s
ISA Isabella 56.18 75 ⇓P **P** 02 21 08.5 +0.6
baz=56,SNR=11
KK31 Karatay Array 56.21 298 *i P* **P** 02 21 06.9 -1.1
KK31 pmax pmax
comp=Z,20nm,0.7s
KKAR Karatay Array 56.21 298 *eP* **P** 02 21 07.3 -0.7
KKAR pmax pmax
comp=Z,12nm,0.5s
KKAR Karatay Array 56.21 298 *eP* **P** 02 21 07.2 -0.7
comp=Z,12nm,0.5s
L19A Farson 56.26 63 ⇓P **P** 02 21 09.4 +0.8
baz=56,SNR=6.7
JLU Jordanelle 56.29 66 *eP* **P** 02 21 10.4 +1.6
J21A Lysite 56.30 61 ⇑P **P** 02 21 10.0 +1.2
baz=56,SNR=8.0
G24A Alzada 56.32 58 ⇑P **P** 02 21 09.4 +0.6
baz=56,SNR=5.1
K20A Yellowstone Ra 56.36 62 ⇓P **P** 02 21 09.8 +0.5
baz=56
I22A 9 Mile Ranch, 56.38 60 ⇓P **P** 02 21 10.2 +0.9
baz=56,SNR=6.7
M18A Lyman 56.39 65 ⇓P **P** 02 21 10.7 +1.1
baz=56,SNR=5.4
MPMC Manual Prospec 56.42 74 ⇓P **P** 02 21 11.0 +1.2
baz=56,SNR=20
FURC Furnace Creek, 56.46 73 ⇑P **P** 02 21 11.5 +1.8
baz=56,SNR=8.3
DAU Daniels Canyon 56.53 66 *eP* **P** 02 21 12.5 +1.9
DAU Daniels Canyon 56.53 66 *eP* **P** 02 21 12.5 +1.9
ULM Lac du Bonnet 56.53 49 P **P** 02 21 10.4 +0.3
ULM Lac du Bonnet 56.53 49 P **P** 02 21 10.4 +0.3
comp=Z,8.4nm,0.7s,baz=316,slow=6.6,SNR=12
AKTO Aktyubinsk 56.55 312 P **P** 02 21 09.4 -0.8
AKTO pmax pmax
comp=Z,35nm,0.4s
AKTO pmax pmax
comp=N,2.0nm,0.8s
AKTO Aktyubinsk 56.55 312 P **P** 02 21 09.4 -0.8
AKTO ScP **ScP** 02 25 49.0 -2.0
AKTO Aktyubinsk 56.55 312 P **P** 02 21 09.4 -0.8
comp=N,34nm,0.4s,baz=68,slow=8.2,SNR=310
AKTO ScP **ScP** 02 25 49.0 -2.0
comp=N,1.7nm,0.8s,baz=55,slow=9.6,SNR=4.4
AB31 Akbulak array 56.60 310 *eP* **P** 02 21 09.8 -0.8
AB31 pmax pmax
comp=Z,19nm,0.4s
ABKAR Akbulak array 56.60 310 *eP* **P** 02 21 10.1 -0.6
comp=Z,21nm,0.4s
MPU Maple Canyon 56.62 67 *eP* **P** 02 21 12.5 +1.3
comp=Z,29nm,0.9s
H24A Dirks Ranch, A 56.69 58 ⇑P **P** 02 21 11.8 +0.4
baz=56,SNR=7.8
MDND Maddock 56.69 53 ⇑P **P** 02 21 12.4 +1.1
baz=56
J22A Midwest 56.73 61 ⇑P **P** 02 21 12.7 +0.8
baz=56,SNR=11
LRMC Laurel Mountai 56.75 75 ⇓P **P** 02 21 13.2 +1.2
baz=57,SNR=11
M19A Rock Springs 56.80 64 ⇑P **P** 02 21 13.4 +1.0
baz=57
OSI Osito Adit 56.82 76 ⇑P **P** 02 21 14.0 +1.6
baz=57
L20A Wamsutter 56.84 63 ⇑P **P** 02 21 13.6 +0.9
baz=57,SNR=13
N18A Larsen Ranch, 56.92 65 ⇓P **P** 02 21 14.2 +0.9
baz=57,SNR=11
EDW2 Edwards Air Fo 57.03 75 ⇓P **P** 02 21 15.1 +1.2
baz=57,SNR=21
N19A John Jarvie Ra 57.24 64 ⇓P **P** 02 21 16.4 +1.0
baz=57,SNR=10
K22A Casper 57.27 61 ⇑P **P** 02 21 16.7 +1.0
baz=57,SNR=6.5
M20A Sweetwater, Wa 57.30 63 ⇑P **P** 02 21 17.6 +1.6
baz=57,SNR=15
I24A Kuemmerle Ranc 57.31 59 ⇓P **P** 02 21 16.8 +1.0
baz=57
KAF Kangasniemi 57.31 337 *eP* **P** 02 21 14.5 -0.9
KAF pmax pmax
comp=Z,7.0nm,0.5s
KAF Kangasniemi 57.31 337 *ep* **P** 02 21 14.5 -0.9
comp=Z,7.2nm,0.5s
DECC Green Verdugo 57.31 76 ⇑P **P** 02 21 17.0 +1.1
baz=57
ARUT Antelope Range 57.32 70 *eP* **P** 02 21 17.3 +1.3
ARUT pmax pmax
comp=Z,10.0nm,0.8s
ARUT Antelope Range 57.32 70 *eP* **P** 02 21 17.3 +1.3
comp=Z,9.9nm,0.8s
GSC Goldstone 57.36 74 *eP* **P** 02 21 17.7 +1.4
GSC *e* 02 21 51.4
GSC Goldstone 57.36 74 *eP* **P** 02 21 17.7 +1.4
GSC *e* 02 21 51.4
GSC Goldstone 57.36 74 ⇓P **P** 02 21 17.7 +1.4
baz=57,SNR=20
L21A Rawlins 57.36 62 ⇓P **P** 02 21 17.2 +0.9
baz=57,SNR=7.6
TMUT Trail Mountain 57.37 67 *eP* **P** 02 21 18.6 +2.0
RSSD Black Hills 57.40 58 *eP* **P** 02 21 17.6 +1.0
RSSD pmax pmax
comp=Z,19nm,0.7s
RSSD Black Hills 57.40 58 *eP* **P** 02 21 17.6 +1.0
comp=Z,18nm,0.7s
MVU Marysvale 57.44 68 *eP* **P** 02 21 18.8 +1.9
comp=Z,279nm,1.3s
MSU Marysvale 57.45 68 *eP* **P** 02 21 19.1 +2.1
MSU Marysvale 57.45 68 *eP* **P** 02 21 19.1 +2.1
MWC Mount Wilson 57.48 76 *eP* **P** 02 21 18.8 +1.6
MWC pmax pmax
comp=Z,26nm,0.9s
MWC Mount Wilson 57.48 76 *eP* **P** 02 21 18.8 +1.6
comp=Z,26nm,0.9s
P17A Butcher Ranch, 57.49 67 ⇑P **P** 02 21 18.7 +1.5
baz=57,SNR=9.0
CCUT Cedar City 57.54 70 *eP* **P** 02 21 19.1 +1.4
comp=Z,6.9nm,0.6s
M21A Separation Pea 57.63 63 ⇑P **P** 02 21 18.9 +0.6
baz=57,SNR=8.9
K23A Bowen Ranch, D 57.64 61 ⇓P **P** 02 21 18.5 +0.3
baz=57
Q16A Castle Valley 57.67 67 ⇑P **P** 02 21 20.2 +1.6
baz=58,SNR=13
J24A Dixon Ranch, L 57.68 59 ⇑P **P** 02 21 19.1 +0.6
baz=58
BFSC Mount Baldy Ra 57.69 76 ⇓P **P** 02 21 19.9 +1.3
baz=58,SNR=5.8
O19A Miners Draw (B 57.71 65 ⇓P **P** 02 21 19.9 +1.2
baz=58,SNR=8.1
TUQ Turquoise Moun 57.74 73 ⇓P **P** 02 21 20.4 +1.5
baz=58,SNR=5.7
N20A Spence Gulch, 57.75 64 ⇑P **P** 02 21 20.8 +1.7
baz=58,SNR=28
L22A Ellis Ranch, M 57.78 62 ⇓P **P** 02 21 21.0 +1.8
baz=58,SNR=8.4
SRU San Rafael 57.87 67 *eP* **P** 02 21 21.5 +1.6
SRU pmax pmax
comp=Z,22nm,0.7s
SRU San Rafael 57.87 67 *eP* **P** 02 21 21.5 +1.6
comp=Z,22nm,0.7s
SRU *e* 02 22 02.3
SRU San Rafael 57.87 67 ⇑P **P** 02 21 21.4 +1.5
baz=58,SNR=29
FIA1 FINESS Array S 57.95 336 *eP* **P** 02 21 19.3 -0.5
FINES FINESS Array B 57.95 336 P **P** 02 21 19.4 -0.4
FINES FINESS Array B 57.95 336 P **P** 02 21 19.4 -0.4
comp=Z,11nm,0.5s,baz=28,slow=7.4,SNR=86
FINES LR LR 02 48 21.7
comp=Z,64nm,21.8s,baz=39,slow=38
HEC Hector,Ludlow 57.97 74 ⇓P **P** 02 21 22.0 +1.4
baz=58,SNR=9.7
AGMN Agassiz Nation 58.01 50 *eP* **P** 02 21 20.8 +0.3
comp=Z,19nm,1.0s
BBRC Big Bear Solar 58.07 75 ⇓P **P** 02 21 22.6 +1.2
baz=58
L23A Garrett 58.08 61 ⇑P **P** 02 21 22.2 +0.8
baz=58,SNR=18
M22A Cedar Creek Ra 58.16 62 ⇑P **P** 02 21 22.8 +0.8
baz=58
N21A Black Mountain 58.18 63 ⇓P **P** 02 21 23.3 +1.2
baz=58,SNR=7.8
P19A Cripple Cowboy 58.27 65 ⇑P **P** 02 21 23.9 +1.1
baz=58
O20A White River Ci 58.28 64 ⇓P **P** 02 21 23.9 +1.1
baz=58,SNR=20
GMRC Granite Mounta 58.37 74 ⇑P **P** 02 21 24.8 +1.5
baz=58,SNR=19
MURC Murrieta 58.42 76 ⇓P **P** 02 21 24.7 +1.1
baz=58
LDFC Landfair 58.45 73 *eP* **P** 02 21 24.9 +1.0
UBPT Khong Chiam 58.48 249 P **P** 02 21 25.2 +1.1
comp=Z,25nm,1.9s
L24A Wheatland 58.51 61 ⇑P **P** 02 21 25.1 +0.9
baz=58
M23A Laramie 58.55 62 ⇑P **P** 02 21 25.3 +0.6
baz=58
K25A Mack Ranch, Ha 58.60 60 ⇑P **P** 02 21 25.8 +0.9
baz=58
O21A Pagoda 58.61 64 ⇓P **P** 02 21 26.3 +1.1
baz=58
Q19A Hogan Spring (58.64 66 ⇓P **P** 02 21 26.1 +1.0
baz=58,SNR=39
N22A Wattenberg Ran 58.68 63 ⇓P **P** 02 21 27.1 +1.4
baz=58,SNR=12
TAPN Taplejung 58.71 273 *eP* **P** 02 21 25.1 -0.9
comp=Z,40nm,0.4s
BELC Belle Mtn. Jos 58.77 75 ⇓P **P** 02 21 27.0 +0.8
baz=59,SNR=8.0
PFO Pinyon Flat Ob 58.82 75 *eP* **P** 02 21 27.0 +0.5
comp=Z,9.0nm,1.0s
PFO Pinyon Flat Ob 58.82 75 ⇓P **P** 02 21 27.4 +0.9
baz=59
N23A Red Feather La 58.87 62 ⇓P **P** 02 21 28.2 +1.3
baz=58,SNR=15
K26A Motz Farm, Whi 58.87 59 ⇑P **P** 02 21 27.1 +0.4
baz=59
U15A North Rim 58.94 70 ⇓P **P** 02 21 29.0 +1.5
baz=59,SNR=13
W13A Hualapai Mount 59.09 72 ⇓P **P** 02 21 29.8 +1.3
baz=59,SNR=6.8
IRM Iron Mountain 59.11 74 ⇑P **P** 02 21 29.9 +1.5
baz=59,SNR=12
CMMT Chiang Mai 59.12 258 P **P** 02 21 29.8 +1.2
comp=Z,16nm,1.3s
CHTO Chiang Mai 59.12 258 P **P** 02 21 29.3 +0.7
comp=Z,17nm,1.1s
Q20A Ridgley Place, 59.13 65 ⇑P **P** 02 21 29.2 +0.5
baz=59,SNR=7.4
P21A Newcastle 59.14 64 ⇑P **P** 02 21 30.1 +1.4
baz=59,SNR=13
S18A Hurst Farm, Bl 59.20 67 ⇑P **P** 02 21 30.2 +0.9
baz=59,SNR=30
PV04 Paradox Valley 59.24 66 *eP* **P** 02 21 30.2 +0.8
ODAN Odare 59.27 273 *eP* **P** 02 21 28.6 -1.2
comp=Z,35nm,0.5s
GUN Gumba 59.31 275 *eP* **P** 02 21 29.1 -1.1
comp=Z,152nm,0.4s
K27A Flueckinger Fa 59.33 58 ⇓P **P** 02 21 30.5 +0.7
baz=59
BC3 Big Chuckawall 59.33 74 ⇑P **P** 02 21 30.9 +0.9
baz=59,SNR=8.2
MONP Monument Peak 59.38 76 ⇑P **P** 02 21 31.4 +0.9
baz=59
O23A Lake Granby, G 59.40 63 ⇑P **P** 02 21 32.6 +2.0
baz=59,SNR=15
M25A Palm-Egli Farm 59.40 61 ⇑P **P** 02 21 31.9 +1.4
baz=59
CMAR Chiang Mai Arr 59.41 258 P **P** 02 21 29.9 -0.7
CMAR PcP **PcP** 02 22 17.6 +0.7
CMAR Chiang Mai Arr 59.41 258 P **P** 02 21 29.8 -0.7
comp=Z,6.8nm,0.9s,baz=22,slow=7.0,SNR=24
CMAR PcP **PcP** 02 22 17.6 +0.7
comp=Z,11nm,0.7s,baz=14,slow=3.2,SNR=19
P22A Eagle 59.44 64 ⇓P **P** 02 21 32.1 +1.3
baz=59,SNR=10
N24A Carr 59.45 62 ⇓P **P** 02 21 31.8 +1.0
baz=59
BRSD Miller 59.55 55 ⇓P **P** 02 21 31.6 +0.3
baz=59
PDMCI Parker Dam,Lak 59.55 73 ⇑P **P** 02 21 32.5 +1.1
baz=59,SNR=7.5
Q21A Lanborn Mesa, 59.59 65 ⇑P **P** 02 21 33.0 +1.2
baz=59,SNR=7.7
SMCO Snowmass 59.64 64 *eP* **P** 02 21 33.3 +0.9
comp=Z,21nm,1.0s
RAMN Ramite 59.65 274 *eP* **P** 02 21 31.2 -1.2
comp=Z,140nm,0.4s
R20A Redvale 59.67 66 ⇓P **P** 02 21 33.5 +1.1
baz=60,SNR=5.5
DVTC Desert V Tower 59.73 76 ⇓P **P** 02 21 33.7 +1.0
baz=60
KKN Kakani 59.74 276 *eP* **P** 02 21 32.1 -0.9
comp=Z,45nm,0.5s
L27A T5 Ranch, Ells 59.76 59 ⇓P **P** 02 21 33.7 +0.9
baz=60
Y12C Blythe 59.76 74 ⇓P **P** 02 21 34.1 +1.3
baz=60,SNR=6.2
M26A McRoberts Ranc 59.83 60 ⇓P **P** 02 21 34.5 +1.2
baz=60
PKI Pulchoki 59.84 275 *eP* **P** 02 21 32.6 -1.2
comp=Z,39nm,0.5s
PKIN Phulchoki 59.84 275 *eP* **P** 02 21 32.5 -1.2
comp=Z,22nm,0.4s
N25A Grover 59.85 61 ⇓P **P** 02 21 34.9 +1.4
baz=60
ISCO Idaho Springs 59.86 63 *eP* **P** 02 21 35.6 +1.8
ISCO pmax pmax
comp=Z,15nm,1.0s
ISCO Idaho Springs 59.86 63 *eP* **P** 02 21 35.6 +1.8
comp=Z,15nm,1.0s
ISCO Idaho Springs 59.86 63 ⇑P **P** 02 21 35.6 +1.8
baz=60,SNR=16
O24A Longmont 59.89 62 ⇓P **P** 02 21 35.9 +2.1
baz=60
Q22A Crested Butte, 59.91 64 ⇑P **P** 02 21 35.6 +1.4
baz=60,SNR=11
S20A Disappointment 59.95 66 ⇑P **P** 02 21 35.5 +1.1
baz=60
R21A Cimarron 59.96 65 ⇓P **P** 02 21 35.9 +1.5
baz=60,SNR=23
DMN Daman 59.98 276 *eP* **P** 02 21 33.1 -1.6
comp=Z,27nm,0.4s
P23A Jefferson 60.07 63 ⇑P **P** 02 21 37.2 +1.9
baz=60,SNR=8.7
WUAZ Wupatki 60.12 70 *eP* **P** 02 21 36.9 +1.4
comp=Z,25nm,1.3s
WUAZ Wupatki 60.12 70 ⇑P **P** 02 21 37.2 +1.8
baz=60,SNR=11
GLA Glamis 60.13 74 *eP* **P** 02 21 37.0 +1.6
GLA Glamis 60.13 74 *eP* **P** 02 21 37.0 +1.6
GLA Glamis 60.13 74 ⇑P **P** 02 21 36.8 +1.4
baz=60,SNR=6.6
EYMN Ely 60.14 48 *eP* **P** 02 21 35.3 +0.1
comp=Z,28nm,0.8s
M27A Reverse DX Ran 60.15 59 ⇓P **P** 02 21 36.5 +1.0
baz=60
DANN Dangsing 60.16 277 *eP* **P** 02 21 34.9 -1.1
comp=Z,26nm,0.3s
MOL Molde 60.25 346 *eP* **P** 02 21 35.5 -0.1
MOL AMB AMB 02 21 37.9
comp=Z,25nm,1.1s
N26A Koester Ranch, 60.27 60 ⇑P **P** 02 21 37.7 +1.4
baz=60,SNR=6.8
MVCO Mesa Verde 60.35 67 *eP* **P** 02 21 38.1 +1.1
comp=Z,7.3nm,0.7s
MVCO Mesa Verde 60.35 67 ⇓P **P** 02 21 38.2 +1.1
baz=60,SNR=6.1
S21A Coal Bank Pass 60.37 66 ⇓P **P** 02 21 39.0 +1.7
baz=60,SNR=15
Q23A Hartsel 60.43 64 ⇓P **P** 02 21 39.2 +1.5
baz=60,SNR=10
P24A Kohler Place, 60.43 63 ⇑P **P** 02 21 39.3 +1.7
baz=60
Y14A Wickenburg 60.44 72 ⇑P **P** 02 21 38.9 +1.4
baz=60,SNR=11
R22A Saguache, Gunn 60.47 65 ⇑P **P** 02 21 39.9 +1.9
baz=60,SNR=8.0
OBN Obninsk 60.65 327 *c iP* **P** 02 21 37.6 -0.8
OBN *i* 02 22 21.0
OBN *e* 02 23 51.3
OBN pmax pmax
comp=Z,36nm,1.7s
O26A Horse Wrangler 60.67 61 ⇑P **P** 02 21 40.2 +1.1
baz=60
KOLN Koldanda 60.70 277 *eP* **P** 02 21 38.3 -1.2
comp=Z,40nm,0.5s
Q24A Divide 60.73 63 ⇑P **P** 02 21 41.0 +1.3
baz=61
OGNE Ogallala 60.76 60 ⇓P **P** 02 21 40.8 +1.1
baz=61
PYUN Piuthan 60.79 278 *eP* **P** 02 21 39.0 -1.1
comp=Z,202nm,1.0s
S22A 4UR Ranch, Cre 60.80 65 ⇑P **P** 02 21 41.9 +1.7
baz=61,SNR=17
P25A Willow Gulch B 60.80 62 ⇓P **P** 02 21 41.7 +1.6
baz=61,SNR=12
Z14A Wintersburg 60.91 73 ⇓P **P** 02 21 42.0 +1.3
baz=61
X16A Lo Mia Camp, P 60.92 71 ⇑P **P** 02 21 42.8 +1.9
baz=61,SNR=20
113A Mohawk Valley, 60.92 74 ⇓P **P** 02 21 41.8 +1.2
baz=61,SNR=5.5
U20A Newcomb 60.97 67 ⇑P **P** 02 21 42.5 +1.3
baz=61
R23A Moffat 60.98 64 ⇑P **P** 02 21 43.0 +1.6
baz=61,SNR=7.3
SDKM Sandakan 60.99 232 P **P** 02 21 41.2 -0.2
T21A Navajo Lake 61.01 66 ⇑P **P** 02 21 43.0 +1.5
baz=61
KKM Kota Kinabalu 61.08 234 P **P** 02 21 42.1 +0.1
O27A Beecher Island 61.12 60 ⇓P **P** 02 21 43.2 +1.1
baz=61,SNR=5.7
NB2 NORSAR Subarra 61.18 344 P **P** 02 21 41.5 -0.6
baz=19,slow=6.9
NB2 NORSAR Subarra 61.18 344 P **P** 02 21 41.5 -0.6
comp=Z,80nm,1.1s,baz=19,slow=6.9
NOA NORSAR Array B 61.18 344 P **P** 02 21 41.4 -0.6
NOA NORSAR Array B 61.18 344 P **P** 02 21 41.4 -0.6
comp=Z,36nm,0.8s,baz=19,slow=6.8,SNR=184
P26A Davis Ranch, A 61.18 61 ⇑P **P** 02 21 43.8 +1.3
baz=61,SNR=15
ECSD EROS Data Cent 61.18 54 *eP* **P** 02 21 42.2 -0.1
comp=Z,12nm,0.7s
Q25A Bedland, Calha 61.22 63 ⇓P **P** 02 21 44.2 +1.2
baz=61,SNR=8.0
S23A Nye Farm, Mont 61.26 65 ⇓P **P** 02 21 44.8 +1.6
baz=61
R24A Sanders Place, 61.31 64 ⇓P **P** 02 21 45.0 +1.5
baz=61,SNR=8.2
T22A Edith 61.32 66 ⇓P **P** 02 21 45.2 +1.6
baz=61,SNR=12
U21A Nageezi 61.38 67 ⇓P **P** 02 21 45.4 +1.3
baz=61,SNR=9.9
NAO01 NORSAR Array S 61.41 344 *eP* **P** 02 21 42.6 -0.9
comp=Z,23nm,0.8s
NAO01 *e* 02 22 24.2
P27A Ficken Ranch, 61.56 61 ⇓P **P** 02 21 46.1 +1.1
baz=61
Q26A Hugo 61.58 62 ⇑P **P** 02 21 46.4 +1.2
baz=61,SNR=11
X18A Snowflake 61.62 70 ⇑P **P** 02 21 47.4 +1.7
baz=62,SNR=17
S24A Houchin Ranch, 61.71 64 ⇑P **P** 02 21 47.7 +1.4
baz=62,SNR=8.8
SPMN St. Paul 61.72 51 ⇓P **P** 02 21 46.3 +0.5
baz=62
R25A Fountain Ranch 61.79 63 ⇑P **P** 02 21 47.8 +1.1
baz=62,SNR=9.3
DDI Dehra Dun 61.82 283 *eP* **P** 02 21 44.8 -2.1
U22A Llaves 61.83 66 ⇑P **P** 02 21 48.5 +1.5
baz=62,SNR=5.5
V21A Milan 61.87 67 ⇑P **P** 02 21 48.5 +1.2
baz=62,SNR=6.7
TSM Tawau 61.89 231 P **P** 02 21 47.9 +0.6
W20A Ramah 61.93 68 ⇑P **P** 02 21 49.1 +1.3
baz=62,SNR=6.6
214A Organ Pipe Nat 62.06 74 ⇑P **P** 02 21 49.6 +1.2
baz=62,SNR=7.6
S25A Robets Cordova 62.09 64 ⇓P **P** 02 21 49.3 +0.6
baz=62,SNR=7.1
R26A Arlington 62.09 62 ⇓P **P** 02 21 49.7 +1.1
baz=62,SNR=23
V22A San Miguel Ran 62.16 67 ⇓P **P** 02 21 50.3 +1.1
baz=62,SNR=5.6
U23A El Rito 62.21 66 ⇑P **P** 02 21 51.1 +1.5
baz=62,SNR=7.0
T24A Torres, Weston 62.23 64 ⇓P **P** 02 21 51.3 +1.6
baz=62,SNR=12
BGNE Belgrade 62.27 57 ⇑P **P** 02 21 50.3 +0.7
baz=62
VRHR Novokhopersk 62.36 322 *eP* **P** 02 21 47.7 -2.3
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR pmax pmax
comp=Z,40nm,0.9s
X20A Quemado 62.38 69 ⇑P **P** 02 21 52.4 +1.7
baz=62,SNR=25
R27A Eads 62.43 62 ⇓P **P** 02 21 51.6 +0.8
baz=62,SNR=6.7
T25A Trinidad 62.50 64 ⇓P **P** 02 21 52.3 +0.8
baz=62,SNR=5.8
ASK Askoy 62.57 347 *eP* **P** 02 21 50.3 -1.0
ASK AMB AMB 02 22 07.8
comp=Z,140nm,2.1s
S26A Kim 62.60 63 ⇓P **P** 02 21 52.5 +0.4
baz=62,SNR=9.2
RUND Rundenannen 62.62 347 *eP* **P** 02 21 50.6 -1.0
RUND AMB AMB 02 21 51.9
comp=Z,119nm,1.7s
BER Bergen 62.65 347 *eP* **P** 02 21 50.9 -0.9
V23A Ortiz Mt. (NFS 62.67 66 ⇓P **P** 02 21 54.6 +2.0
baz=62,SNR=16
KONO Kongsberg 62.75 344 *eP* **P** 02 21 52.5 0.0
KONO AMB AMB 02 21 55.0
comp=Z,39nm,1.5s
EGD Espegrend 62.77 347 *eP* **P** 02 21 51.6 -1.0
EGD AMB AMB 02 21 52.9
comp=Z,85nm,1.7s
W22A Albuquerque 62.83 67 ⇓P **P** 02 21 55.7 +2.0
baz=63
X21A Alamocita Cree 62.83 68 ⇓P **P** 02 21 55.6 +1.9
baz=63,SNR=36
TUC Tucson 62.88 72 *eP* **P** 02 21 55.1 +1.2
TUC Tucson 62.88 72 *eP* **P** 02 21 55.1 +1.2
comp=Z,1.9nm,1.3s
T26A Comanche Natio 62.89 63 ⇑P **P** 02 21 54.4 +0.4
baz=63,SNR=15
ODD1 Odda 62.93 346 *eP* **P** 02 21 53.4 -0.4
ODD1 AMB AMB 02 21 54.9
comp=Z,23nm,1.3s
Y20A Horse Springs, 62.94 69 ⇑P **P** 02 21 56.4 +1.9
baz=63,SNR=15
SCHQ Schefferville 62.98 29 P **P** 02 21 53.4 -0.8
SCHQ Schefferville 62.98 29 P **P** 02 21 53.4 -0.8
comp=Z,2.9nm,0.5s,baz=323,slow=5.5,SNR=14
U25A Circle Dot Ran 63.07 64 ⇑P **P** 02 21 56.2 +1.0
baz=63
VSR Storozhevoye 63.11 323 *eP* **P** 02 21 53.8 -1.2
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=Z,30nm,0.8s
W23A Werner Place, 63.13 67 ⇓P **P** 02 21 57.0 +1.3
baz=63,SNR=6.8
ANMO Albuquerque 63.14 67 *eP* **P** 02 21 56.6 +0.9
comp=Z,7.7nm,0.8s
ANMO *e* 02 22 31.1
V24A Rampart Ranch, 63.15 66 ⇓P **P** 02 21 57.1 +1.3
baz=63,SNR=12

X22A **Bernardo** 63.19 68 ⇑P P 02 21 58.1 +2.0
baz=63
LAZ **Ladron** 63.20 68 eP P 02 21 58.0 +1.9
comp=Z,1.5nm,0.6s
LAZ e 02 22 32.6
Y21A **Point of Rocks** 63.23 68 ⇓P P 02 21 58.1 +1.8
baz=63,SNR=9.4
VORD **Divnogorie** 63.28 323 eP P 02 21 55.1 -1.0
VORD pmax pmax
comp=N,9.0nm,0.5s
VORD pmax pmax
comp=E,6.0nm,0.5s
VORD pmax pmax
comp=Z,10.0nm,0.5s
V25A **Rancho No Teng** 63.40 65 ⇑P P 02 21 58.5 +1.0
baz=63,SNR=9.3
T27A **Campo** 63.41 63 ⇑P P 02 21 57.8 +0.4
baz=63,SNR=9.5
U26A **Atchley Ranch,** 63.42 64 ⇑P P 02 21 58.1 +0.6
baz=63,SNR=8.3
BLS5 **Blasjo** 63.43 346 eP P 02 21 56.8 -0.2
BLS5 AMB AMB 02 21 57.9
comp=Z,11nm,0.6s
Z20A **Nine Sixteen R** 63.43 70 ⇑P P 02 21 59.2 +1.6
baz=63,SNR=11
LENM **Lemitar** 63.47 68 eP P 02 21 59.8 +1.8
comp=Z,11nm,1.1s
W24A **Lazy 6 Ranch** 63.48 66 ⇓P P 02 21 59.3 +1.3
baz=63,SNR=9.3
X23A **Hourglass Bar** 63.56 67 ⇑P P 02 21 60.0 +1.5
baz=63
Y22D **IRIS PASSCAL I** 63.57 68 ⇑P P 02 22 00.5 +2.0
baz=63
Y22A **Socorro** 63.66 68 ⇑P P 02 22 00.8 +1.7
baz=64,SNR=13
BNM **Barren Site** 63.67 68 eP P 02 22 00.8 +1.6
comp=Z,11nm,1.3s
T28A **Walsh** 63.67 62 ⇓P P 02 21 59.5 +0.4
baz=64
Z21A **St. Cloud Mine** 63.77 69 ⇓P P 02 22 01.6 +1.7
baz=64,SNR=14
120A **U Bar Ranch, L** 63.85 70 ⇑P P 02 22 02.0 +1.7
baz=64,SNR=5.9
V26A **Tequesquite Ra** 63.86 64 ⇓P P 02 22 01.0 +0.6
baz=64
U27A **Thompson Grove** 63.86 63 ⇓P P 02 22 00.9 +0.6
baz=64,SNR=11
W25A **X Bar L Ranch,** 63.96 65 ⇑P P 02 22 02.0 +1.0
baz=64,SNR=10
X24A **Lazy VL Ranch,** 63.97 66 ⇓P P 02 22 02.7 +1.5
baz=64,SNR=6.3
T29A **Hugoton** 64.06 62 ⇓P P 02 22 01.6 +0.1
baz=64
Y23A **Lovelace Mesa,** 64.14 67 ⇑P P 02 22 03.8 +1.6
baz=64,SNR=14
Z22A **Elephant Butte** 64.18 68 ⇓P P 02 22 04.1 +1.5
baz=64,SNR=9.7
HOMB **Homborsund** 64.24 344 eP P 02 21 59.6 -2.7
121A **Cookes Peak, D** 64.31 70 ⇑P P 02 22 05.1 +1.7
baz=64,SNR=9.7
SNART **Snartemo** 64.37 345 eP P 02 22 01.2 -1.9
SNART AMB AMB 02 22 02.2
comp=Z,37nm,0.6s
V27A **Dan Oppiter Fa** 64.37 64 ⇓P P 02 22 03.9 +0.2
baz=64
X25A **Clemmons Ranch** 64.40 66 ⇑P P 02 22 05.1 +1.2
baz=64
220A **Playas Peak, P** 64.41 71 ⇑P P 02 22 05.3 +1.3
baz=64,SNR=9.5
319A **Douglas** 64.41 71 ⇑P P 02 22 05.5 +1.5
baz=64,SNR=5.5
W26A **Owens Ranch, T** 64.42 65 ⇑P P 02 22 05.0 +1.0
baz=64
Y24A **Capitan** 64.46 67 ⇓P P 02 22 05.7 +1.3
baz=64,SNR=29
122A **Conniff Cattle** 64.60 69 ⇓P P 02 22 07.1 +1.9
baz=64
V28A **Channing** 64.69 63 ⇓P P 02 22 05.7 0.0
baz=64
221A **Mesquite Ranch** 64.72 70 ⇑P P 02 22 07.8 +1.8
baz=65,SNR=9.6
W27A **Bowe Ranch, En** 64.80 64 ⇓P P 02 22 07.6 +1.1
baz=65
X26A **CR and CF Fran** 64.82 65 ⇓P P 02 22 07.4 +0.8
baz=65,SNR=5.0
320A **Kipp Ranch, An** 64.85 71 ⇑P P 02 22 08.2 +1.4
baz=65,SNR=5.7
Y25A **Mesa, Roswell** 64.85 66 ⇓P P 02 22 07.8 +1.0
baz=65,SNR=18
T31A **Randall Ranch,** 64.90 61 ⇑P P 02 22 06.7 -0.3
baz=65
Z24A **Sheeppen Canyo** 64.96 67 ⇓P P 02 22 09.0 +1.3
baz=65,SNR=20
222A **Williams Famil** 65.01 69 ⇓P P 02 22 09.2 +1.3
baz=65
W28A **Vega** 65.08 64 ⇑P P 02 22 08.8 +0.6
baz=65
X27A **F and S Farms,** 65.11 65 ⇑P P 02 22 09.4 +0.9
baz=65
Y26A **Elida** 65.30 66 ⇑P P 02 22 10.5 +0.8
baz=65
SUW **Suwalki** 65.32 334 eP P 02 22 08.7 -0.6
Z25A **Roswell** 65.34 67 ⇓P P 02 22 11.3 +1.3
baz=65,SNR=5.4
124A **Stringfield Ra** 65.41 68 ⇓P P 02 22 11.8 +1.2
baz=65,SNR=7.4
AMTX **Amarillo** 65.64 64 eP P 02 22 12.0 +0.1
comp=Z,6.3nm,0.8s
AMTX **Amarillo** 65.64 64 ⇑P P 02 22 11.8 0.0
baz=66
X28A **Dimmitt** 65.67 64 ⇓P P 02 22 12.2 +0.1
baz=66
Y27A **Causey** 65.67 65 ⇓P P 02 22 12.9 +0.8
baz=66,SNR=19
Z26A **Caprock** 65.73 66 ⇑P P 02 22 13.3 +0.9
baz=66,SNR=21
MSTX **Muleshoe** 65.80 65 ⇑P P 02 22 13.3 +0.4
baz=66,SNR=6.7
125A **Gardner Draw,** 65.86 67 ⇑P P 02 22 14.4 +1.1
baz=66,SNR=13
224A **Cornudas Mount** 65.86 68 ⇑P P 02 22 14.6 +1.2
baz=66,SNR=9.6
V31A **Spring Creek L** 65.86 62 ⇑P P 02 22 13.6 +0.4
baz=66
MUD **Monsted U'grnd** 65.88 343 ⇓iP P 02 22 13.5 +0.6
MUD pmax pmax
comp=Z,13nm,0.8s
MUD **Monsted U'grnd** 65.88 343 ⇓iP P 02 22 13.5 +0.6
comp=Z,13nm,0.8s
W30A **Crocket Farms** 65.96 63 ⇑P P 02 22 14.4 +0.5
baz=66
PMG **Port Moresby** 65.97 195 eP P 02 22 15.1 +1.2
comp=Z,18nm,0.8s
PMG **Port Moresby** 65.97 195 P P 02 22 15.8 +1.9
comp=Z,38nm,0.9s
X29A **Tulia** 65.98 64 ⇓P P 02 22 14.7 +0.7
baz=66
MVH1 **Achvaich** 66.07 352⇑eP P 02 22 13.8 -0.2
MVH1 **Achvaich** 66.07 352 P P 02 22 13.8 -0.2
SBUM **Sibu** 66.09 236 P P 02 22 15.1 +0.4
SBUM **Sibu** 66.09 236 P P 02 22 16.3 +1.5
comp=Z,99nm,1.1s,comp=Z,1µm
Z27A **Tatum** 66.09 66 ⇓P P 02 22 15.3 +0.5
baz=66,SNR=15
Y28A **McKinney Farm,** 66.12 65 ⇓P P 02 22 15.0 +0.1
baz=66
BSD **Bornholm Skovb** 66.13 340 iP P 02 22 14.5 0.0
BSD pmax pmax
comp=Z,35nm,0.9s
BSD **Bornholm Skovb** 66.13 340 iP P 02 22 14.5 0.0
comp=Z,35nm,0.8s
126A **Clayton Basin,** 66.20 67 ⇓P P 02 22 16.2 +0.8
baz=66,SNR=5.2
225A **Deer Hill, Car** 66.20 68 ⇑P P 02 22 16.6 +1.0
baz=66,SNR=8.3
ABKT **Ailbek** 66.22 303 P P 02 22 15.0 -0.4
comp=Z,224nm,0.9s,SNR=9.1
W31A **Holland Ranch,** 66.28 62 ⇑P P 02 22 16.0 +0.1
baz=66
MCD **Coleburn Disti** 66.33 351⇑iP P 02 22 15.7 -0.1
MCD **Coleburn Disti** 66.33 351 P P 02 22 15.7 -0.1
324A **Moseley Ranch,** 66.38 69 ⇑P P 02 22 17.5 +0.8
baz=66,SNR=6.1
X30A **Coker Ranch, T** 66.39 63 ⇓P P 02 22 16.8 +0.2
baz=66,SNR=7.0
LLD **Lille Linde** 66.43 341 iP P 02 22 16.8 +0.4
LLD pmax pmax
comp=Z,6.0nm,0.7s
LLD **Lille Linde** 66.43 341 iP P 02 22 16.8 +0.4
comp=Z,6.2nm,0.7s
Y29A **Porterfield Fa** 66.45 64 ⇓P P 02 22 17.5 +0.5
baz=66
Z28A **Tucker Farm, M** 66.54 65 ⇓P P 02 22 18.0 +0.4
baz=66
MDO **Dochfour** 66.57 352⇑eP P 02 22 17.1 -0.2
MDO **Dochfour** 66.57 352 P P 02 22 17.1 -0.2
226B **Tecolote Peak,** 66.57 67 ⇑P P 02 22 18.6 +0.8
baz=66,SNR=12
AKASG **Malin Array Be** 66.68 329 P P 02 22 17.2 -0.9
AKASG pmax pmax
comp=Z,4.0nm,0.3s
AKASG **Malin Array Be** 66.68 329 P P 02 22 17.2 -0.9
AKASG **Malin Array Be** 66.68 329 P P 02 22 17.2 -0.9
comp=Z,4.0nm,0.3s,baz=26,slow=7.0,SNR=23
KIEV **Kiev** 66.69 329 eP P 02 22 16.8 -1.3
KIEV pmax pmax
comp=Z,6.0nm,0.6s
KIEV **Kiev** 66.69 329 eP P 02 22 16.8 -1.3
comp=Z,6.4nm,0.6s
AK01 **Malin Array Si** 66.70 329 eP P 02 22 17.4 -0.7
X31A **McDonald Ranch** 66.70 63 ⇑P P 02 22 19.2 +0.6
baz=66,SNR=18
325A **Bean Ranch, Si** 66.70 68 ⇓P P 02 22 19.6 +0.8
baz=67,SNR=13
AK02 **Malin Array Si** 66.73 329 eP P 02 22 17.3 -1.1
Y30A **Stafford Cattl** 66.83 64 ⇓P P 02 22 19.8 +0.4
baz=67,SNR=5.3
MAK **Makhachkala** 66.87 313 eP P 02 22 23.0 +3.6
MAK MLR MLR
comp=Z,134nm,14.0s
KSB **Sheil Bridge** 66.88 352⇑eP P 02 22 19.1 -0.2
KSB **Sheil Bridge** 66.88 352 P P 02 22 19.1 -0.2
Z29A **Hungry Hill Ra** 66.91 65 ⇑P P 02 22 20.6 +0.6
baz=67,SNR=7.4
DRUM **Mains of Drumt** 66.92 350⇑eP P 02 22 18.7 -0.8
DRUM AMB AMB 02 22 20.8
comp=Z,43nm,0.9s
DRUM **Mains of Drumt** 66.92 350 P P 02 22 18.7 -0.8
DRUM AMB AMB 02 22 20.8
comp=Z,43nm,0.9s
HDIL **Hopedale** 67.00 51 eP P 02 22 19.9 -0.3
comp=Z,34nm,0.7s
HDIL e 02 23 00.6
128A **Castleberry Fa** 67.01 66 ⇑P P 02 22 21.1 +0.4
baz=67,SNR=12
Y31A **Rekieta Farm,** 67.09 63 ⇓P P 02 22 21.1 +0.2
baz=67
425A **Indio Mountain** 67.16 69 ⇑P P 02 22 22.8 +1.2
baz=67,SNR=19
Z30A **Sanderson Ranc** 67.18 64 ⇓P P 02 22 21.8 +0.2
baz=67,SNR=13
WMOK **Wichita Mounta** 67.21 62 eP P 02 22 22.1 +0.3
WMOK pmax pmax
comp=Z,21nm,0.8s
WMOK **Wichita Mounta** 67.21 62 eP P 02 22 22.1 +0.3
comp=Z,21nm,0.8s
326A **Caldwell Ranch** 67.27 68 ⇓P P 02 22 23.3 +1.0
baz=67
129A **Stewart Farms,** 67.32 65 ⇓P P 02 22 22.8 +0.2
baz=67
228A **UT Block 9, Go** 67.36 66 ⇑P P 02 22 23.1 +0.3
baz=67
GKP **Gorka Klasztor** 67.38 338 eP P 02 22 22.7 +0.3
Y32A **R-V Farms, Ver** 67.47 63 ⇑P P 02 22 23.6 +0.3
baz=67,SNR=14
ELO **Logie Almond** 67.47 351 eP P 02 22 22.6 -0.4
ELO **Logie Almond** 67.47 351 P P 02 22 22.6 -0.4
Z31A **Sharp Cattle R** 67.66 64 ⇓P P 02 22 24.6 0.0
baz=68,SNR=9.9
TUL1 **Tulsa** 67.74 59 ⇑P P 02 22 25.0 0.0
baz=68,SNR=7.2
426A **McDonald Obser** 67.75 68 ⇑P P 02 22 26.1 +0.6
baz=68,SNR=13
EAB **Aberfoyle** 67.81 351⇑iP P 02 22 24.8 -0.3
EAB **Aberfoyle** 67.81 351 P P 02 22 24.8 -0.3
130A **Snyder** 67.81 65 ⇓P P 02 22 25.8 +0.2
baz=68,SNR=10
328A **Wristen Ranch,** 67.83 67 ⇑P P 02 22 26.1 +0.4
baz=68,SNR=13
KSM **Kuching** 67.84 237 eP P 02 22 26.9 +1.0
comp=Z,14nm,0.6s
KSM **Kuching** 67.84 237 P P 02 22 26.2 +0.3
KSM **Kuching** 67.84 237 P P 02 22 26.9 +1.0
comp=Z,44nm,1.7s
229A **Bryant Ranch,** 67.88 66 ⇑P P 02 22 26.1 +0.1
baz=68
BEL **Belsk** 67.90 335 eP P 02 22 26.3 +0.6
ESY **Stoneypath** 67.92 350⇑iP P 02 22 25.4 -0.4
ESY **Stoneypath** 67.92 350 P P 02 22 25.4 -0.4
427A **Hayter Ranch,** 67.94 68 ⇑P P 02 22 27.3 +0.8
baz=68,SNR=8.9
KIV **Kislovodsk** 67.96 317 eP P 02 22 26.8 +0.4
KIV e 02 22 51.1
KIV e 02 24 57.1
KIV eS S 02 31 12.3 -1.6
KIV pmax pmax
comp=Z,6.0nm,0.8s
Z32A **Haskell** 68.00 63 ⇑P P 02 22 26.7 0.0
baz=68,SNR=10.0
131A **Roby** 68.05 64 ⇓P P 02 22 27.4 +0.4
baz=68,SNR=8.6
EAU **Auchinoon** 68.07 351 eP P 02 22 26.7 -0.1
EAU **Auchinoon** 68.07 351 P P 02 22 26.7 -0.1
KBZ **Khabaz** 68.07 317 P P 02 22 26.8 -0.1
KBZ pmax pmax
comp=Z,13nm,0.8s
KBZ **Khabaz** 68.07 317 P P 02 22 26.8 -0.1
KBZ **Khabaz** 68.07 317 P P 02 22 26.8 -0.1
comp=Z,13nm,0.8s,baz=71,slow=3.5,SNR=26
KTGM **Kuala Trenggan** 68.08 246 P P 02 22 27.2 -0.1
BSEG **Bad Segeberg** 68.10 342 eP P 02 22 27.2 +0.3
BSEG pmax pmax
comp=Z,40nm,1.0s
BSEG **Bad Segeberg** 68.10 342 eP P 02 22 27.2 +0.3
comp=Z,40nm,1.0s
329A **Wagon Wheel Ra** 68.17 66 ⇑P P 02 22 28.4 +0.5
baz=68,SNR=11
PGBU **Glenifferbraes** 68.19 351⇑eP P 02 22 26.9 -0.6
PGBU AMB AMB 02 22 28.6
comp=Z,92nm,0.8s
PGBU **Glenifferbraes** 68.19 351 P P 02 22 26.9 -0.6
PGBU AMB AMB 02 22 28.6
comp=Z,92nm,0.8s
526A **Mary Lane Ranc** 68.20 69 ⇓P P 02 22 29.4 +1.2
baz=68,SNR=15
HLG **Helgoland** 68.27 344 eP P 02 22 30.0 +2.0
comp=Z,278nm,1.2s
230A **Sterling City** 68.30 65 ⇑P P 02 22 28.7 +0.1
baz=68,SNR=7.6
527A **Woodward Ranch** 68.39 68 ⇓P P 02 22 29.9 +0.5
baz=68
428A **Kincaid Ranch,** 68.41 67 ⇓P P 02 22 30.7 +1.3
baz=68,SNR=24
ZEI **Tsey** 68.49 315 eP P 02 22 28.6 -1.3
ZEI pmax pmax
comp=Z,25nm,1.5s
ESK **Eskdalemuir** 68.57 351⇑eP P 02 22 29.5 -0.4
ESK AMB AMB 02 22 30.8
comp=Z,35nm,1.0s
ESK **Eskdalemuir** 68.57 351 P P 02 22 29.5 -0.4
ESK AMB AMB 02 22 30.8
comp=Z,35nm,1.0s
ESK **Eskdalemuir** 68.57 351 iP P 02 22 30.1 +0.2
ESK **Eskdalemuir** 68.57 351 P P 02 22 29.3 -0.6
comp=Z,245nm,1.0s,SNR=9.2
626A **Big Bend Ranch** 68.58 69 ⇑P P 02 22 31.3 +0.8
baz=68,SNR=16
330A **Mertzon** 68.65 66 ⇓P P 02 22 31.0 +0.1
baz=68,SNR=6.4
231A **Bronte** 68.67 65 ⇑P P 02 22 30.9 -0.1
baz=68
ECK **Cauldkaine Hil** 68.70 350⇑iP P 02 22 30.5 -0.2
ECK **Cauldkaine Hil** 68.70 350 P P 02 22 30.5 -0.2
528A **Cox Ranch, San** 68.81 68 ⇑P P 02 22 33.1 +1.2
baz=69,SNR=16
ONI **Oni** 68.81 316 P P 02 22 32.6 +0.9
RUE **Ruedersdorf** 68.84 339 eP P 02 22 31.7 +0.2
comp=Z,48nm,1.0s
429A **Davenport Ranc** 68.90 67 ⇑P P 02 22 32.6 +0.2
baz=69,SNR=5.5
LVV **L'vov** 68.93 332 eP P 02 22 29.8 -2.4
DGRG **David-gareji** 69.00 314 P P 02 22 32.8 0.0
TXAR **Lajitas Array** 69.00 69 P P 02 22 34.1 +1.0
TXAR pP pP 02 23 08.0 +1.0
TXAR P'P' 02 50 40.1
TXAR **Lajitas Array** 69.00 69 P P 02 22 34.1 +1.0
comp=Z,12nm,0.7s,baz=301,slow=4.4,SNR=196
TXAR pP pP 02 23 08.0 +1.0
comp=Z,2.2nm,0.6s,baz=335,slow=5.5,SNR=2.4
TXAR PKPPKP P'P'df 02 50 40.1 -5.1
comp=Z,0.2nm,0.9s,baz=186,slow=3.8,SNR=3.4
TBLG **Delisi** 69.02 314 eP P 02 22 32.9 -0.1
TBLG **Delisi** 69.02 314 P P 02 22 32.9 -0.1
232A **Coleman** 69.05 64 ⇓P P 02 22 33.3 0.0
baz=69
GOR **Gori** 69.06 315 P P 02 22 34.5 +1.3
331A **San Angelo** 69.11 65 ⇑P P 02 22 33.8 +0.2
baz=69,SNR=19
430A **Baggett Ranch,** 69.11 66 ⇑P P 02 22 33.9 +0.2
baz=69,SNR=11
529A **Stev Forest Ra** 69.13 67 ⇓P P 02 22 34.6 +0.8
baz=69,SNR=8.4
ANN **Anapa** 69.20 321 eP P 02 22 36.7 +2.8
ANN pmax pmax
comp=Z,57nm,1.1s
KESW **Keswick, Cumbr** 69.28 350⇑eP P 02 22 34.0 -0.3
KESW **Keswick, Cumbr** 69.28 350 P P 02 22 34.0 -0.3
628A **Black Gap, Mar** 69.29 68 ⇑P P 02 22 35.6 +0.8
baz=69,SNR=17
KULM **Kulim** 69.40 248 eP P 02 22 35.7 +0.2
comp=Z,133nm,1.5s
KULM **Kulim** 69.40 248 P P 02 22 35.5 -0.1
KULM **Kulim** 69.40 248 P P 02 22 36.0 +0.5
comp=Z,76nm,1.1s,comp=Z,1µm
332A **Millersview** 69.40 64 ⇓P P 02 22 35.7 +0.3
baz=69,SNR=15
SOC **Sochi** 69.41 319c iP P 02 22 34.2 -1.0
SOC e 02 22 54.8
SOC e*PP pP 02 23 07.7 -1.4
SOC e*SP sP 02 23 27.0 +2.8
SOC eS S 02 31 28.4 -2.4
SOC pmax pmax
comp=Z,10.0nm,0.6s
KWP **Kalwaria Pacla** 69.45 333 ⇑P P 02 22 35.9 +0.5
KWP **Kalwaria Pacla** 69.45 333 eP P 02 22 35.3 -0.1
comp=Z,84nm,1.1s
KWP **Kalwaria Pacla** 69.45 333⇑iP P 02 22 35.9 +0.5
KWP **Kalwaria Pacla** 69.45 333 eP P 02 22 35.8 +0.4
KZR **Kazreti** 69.45 314 P P 02 22 35.0 -0.6
KAPI **Kappang** 69.50 225 eP P 02 22 35.8 -0.3
comp=Z,25nm,1.0s
KAPI **Kappang** 69.50 225 P P 02 22 36.2 +0.1
SNR=6.4
KAPI **Kappang** 69.50 225 P P 02 22 35.9 -0.2
comp=Z,38nm,1.7s
NRDL **Niedersach Rie** 69.52 342 eP P 02 22 35.6 -0.1
comp=Z,14nm,1.0s
431A **Sonora** 69.52 66 ⇓P P 02 22 36.5 +0.3
baz=69,SNR=18
530A **J-C Ranch, Com** 69.57 66 ⇓P P 02 22 37.1 +0.6
baz=69,SNR=10
OJC **Ojcow** 69.63 335 eP P 02 22 36.8 +0.3
OJC **Ojcow** 69.63 335 eP P 02 22 36.8 +0.3
432A **Menard** 69.78 65 ⇑P P 02 22 38.1 +0.3
baz=70,SNR=7.4
AKH **Akhalkalaki** 69.80 315 P P 02 22 38.6 +0.7
KSP **Ksiaz** 69.86 337⇑eP P 02 22 38.0 +0.1
KSP e*PP pP 02 23 15.1 +3.3
KSP **Ksiaz** 69.86 337 eP P 02 22 38.2 +0.3
IPM **Ipoh** 69.89 247 eP P 02 22 38.1 -0.4
comp=Z,35nm,0.8s
IPM **Ipoh** 69.89 247 P P 02 22 38.4 -0.1
MIAR **Mount Ida** 69.91 58 eP P 02 22 38.7 +0.2
MIAR pmax pmax
comp=Z,11nm,0.8s
MIAR **Mount Ida** 69.91 58 eP P 02 22 38.7 +0.2
comp=Z,11nm,0.8s
531A **Rocksprings** 69.97 66 ⇑P P 02 22 39.1 +0.1
baz=70,SNR=7.2
PARMO **Parma** 69.97 54 eP P 02 22 39.3 +0.5
PARMO e 02 23 20.0
WHTX **Lake Whitney** 70.07 62 ⇓P P 02 22 39.3 -0.2
baz=70
JCT **Junction City** 70.10 65 eP P 02 22 40.1 +0.3
JCT pmax pmax
comp=Z,25nm,0.8s
JCT **Junction City** 70.10 65 eP P 02 22 40.1 +0.3
comp=Z,25nm,0.8s
JCT **Junction City** 70.10 65 ⇑P P 02 22 40.0 +0.3
baz=70,SNR=13
CLZ **Clausthal** 70.10 341 eP P 02 22 39.7 +0.3
comp=Z,50nm,1.2s
CLZ epP pP 02 23 16.9 +3.6
IBBN **Ibbenburen** 70.10 343 eP P 02 22 39.3 0.0
comp=Z,32nm,1.1s
CLL **Collm** 70.11 339⇑iP P 02 22 38.9 -0.4
CLL e*PP pP 02 23 17.0 +3.7
CLL eS S 02 31 41.0 +2.3
CLL pmax pmax
comp=Z,64nm,1.3s
CLL **Collm** 70.11 339 eP P 02 22 39.0 -0.4
comp=Z,65nm,1.3s
CLL epP pP 02 23 15.8 +2.5
CLL **Collm** 70.11 339⇑iP P 02 22 38.9 -0.4
comp=Z,64nm,1.3s
CLL epP pP 02 23 17.0 +3.7
CLL ePP PP 02 25 16.0 +0.5
CLL eS S 02 31 41.0 +2.3
CLL eScS ScS 02 32 31.0 +2.7
CLL eSS SS 02 36 06.0 -3.8
CLL eSSS SSS 02 39 30.0
CLL eSSSS 02 40 36.0
KOLS **Kolonicke sedl** 70.20 333 eP P 02 22 40.1 +0.1
KOLS pmax pmax
comp=Z,15nm,1.1s
KOLS **Kolonicke sedl** 70.20 333 eP P 02 22 40.1 +0.1
UPC **Upice** 70.24 337 eP P 02 22 40.5 +0.3
UPC **Upice** 70.24 337⇑eP P 02 22 40.5 +0.3
DPC **Dobruska-Polom** 70.32 337⇑iP P 02 22 41.3 +0.6
DPC e 02 23 18.4
DPC **Dobruska-Polom** 70.32 337⇑iP P 02 22 41.3 +0.6
DPC epP pP 02 23 18.4 +3.7
532A **Rocksprings** 70.33 65 ⇓P P 02 22 41.1 0.0
baz=70,SNR=10
BRG **Berggiesshubel** 70.33 339 iP P 02 22 40.6 -0.1
comp=Z,33nm,1.1s
BRG **Berggiesshubel** 70.33 339 eP P 02 22 40.5 -0.2
comp=Z,33nm,1.1s
BRG epP pP 02 23 17.9 +3.2
GNI **Garni** 70.35 313 eP P 02 22 41.3 0.0
comp=Z,27nm,1.0s
GNI **Garni** 70.35 313 P P 02 22 43.1 +1.8
SNR=9.0
OKC **Ostrava-Krasne** 70.38 336⇑iP P 02 22 41.4 +0.3
OKC e 02 23 18.1
OKC **Ostrava-Krasne** 70.38 336⇑iP P 02 22 41.4 +0.3
OKC epP pP 02 23 18.1 +3.1
FBE **Freiberg** 70.40 339 eP P 02 22 41.3 +0.1
comp=Z,55nm,1.1s
FBE epP pP 02 23 18.0 +2.8
KBI1 **Birley Grange** 70.44 349⇑eP P 02 22 40.9 -0.5
KBI1 **Birley Grange** 70.44 349 P P 02 22 40.9 -0.5
CRVS **Cervenica-Dubn** 70.44 333 eP P 02 22 40.9 -0.6
CRVS pmax pmax
comp=Z,56nm,2.2s
CRVS **Cervenica-Dubn** 70.44 333 eP P 02 22 40.8 -0.7
NEUB **Neuenburg** 70.44 340 eP P 02 22 41.2 -0.2
comp=Z,34nm,1.1s
KRLC **Kraliky** 70.47 337⇑iP P 02 22 42.0 +0.3
KRLC e 02 23 19.0
KRLC **Kraliky** 70.47 337⇑iP P 02 22 42.0 +0.3
KRLC epP pP 02 23 19.0 +3.3
UZH **Uzhgorod** 70.47 332 eP P 02 22 40.7 -0.9
UZH e 02 23 09.9
PVCC **Panska Ves** 70.53 338⇑iP P 02 22 42.2 +0.3
PVCC **Panska Ves** 70.53 338⇑iP P 02 22 42.2 +0.3
631A **Perdido Creek** 70.55 66 ⇑P P 02 22 42.6 +0.2
baz=70,SNR=26
MORC **Moravsky Berou** 70.58 336 ⇑P P 02 22 43.0 +0.7
MORC **Moravsky Berou** 70.58 336 eP P 02 22 42.4 +0.1
comp=Z,29nm,0.9s
MORC e 02 23 20.3
MORC **Moravsky Berou** 70.58 336⇑iP P 02 22 43.0 +0.7
WTSB **Winterswijk** 70.59 344 eP P 02 22 40.6 -1.7
comp=Z,293nm,3.3s
BUR08 **Bucovina Ar. S** 70.59 330 eP P 02 22 42.1 -0.4
BURAR **Bucovina Array** 70.61 330⇑iP P 02 22 42.3 -0.3
FRIM **Kepong** 70.63 246 P P 02 22 44.0 +1.0

MYKOM **Kota Tinggi** 70.73 243 P P 02 22 43.8 +0.2
MYKOM **Kota Tinggi** 70.73 243 P P 02 22 45.5 +1.9
comp=Z,35nm,1.4s
LEOM **Leova** 70.76 328 ⇓P P 02 22 42.6 -0.8
LEOM **Leova** 70.76 328 ⇓*i*P P 02 22 42.6 -0.8
KGM **Kluang** 70.81 244 P P 02 22 44.5 +0.3
TRPA **Tarpa** 70.87 332 ⇑*i*P P 02 22 44.3 +0.3
TRPA **Tarpa** 70.87 332 ⇑*e*P P 02 22 44.3 +0.3
632A **Uvalde** 70.89 66 ⇓P P 02 22 44.7 +0.2
baz=71,SNR=12
MOX **Moxa** 71.01 340 *e*P P 02 22 44.8 -0.1
MOX pmax pmax
comp=Z,33nm,1.1s
MOX **Moxa** 71.01 340 *e*P P 02 22 44.8 -0.1
comp=Z,33nm,1.1s
BUG **Bochum--Univer** 71.02 343 *e*P P 02 22 44.6 -0.3
comp=Z,31nm,1.1s
PRU **Pruhonice** 71.04 338 ⇑*i*P P 02 22 45.3 +0.2
PRU *e* 02 23 22.5
PRU **Pruhonice** 71.04 338 ⇑*i*P P 02 22 45.3 +0.2
PRU *e*pP pP 02 23 22.5 +3.4
PLN **Plauen** 71.06 340 *e*P P 02 22 45.3 +0.1
comp=Z,146nm,1.0s
PLN *e*pP pP 02 23 22.3 +3.1
WERD **Werda** 71.06 340 *e*P P 02 22 45.3 +0.1
comp=Z,41nm,1.0s
WERD *e*pP pP 02 23 22.4 +3.1
TANN **Tannenbergstha** 71.06 339 *e*P P 02 22 45.4 +0.1
comp=Z,24nm,1.1s
GUNZ **Gunzen** 71.14 340 *e*P P 02 22 45.9 +0.2
comp=Z,32nm,1.0s
GUNZ *e*pP pP 02 23 23.1 +3.4
UBBA **Unterbreizbach** 71.15 341 *e*P P 02 22 45.6 +0.1
comp=Z,41nm,1.6s
TESR 71.20 329 ⇓*i*P P 02 22 45.6 -0.5
WERN **Wernitzgruen** 71.20 340 *e*P P 02 22 46.3 +0.2
comp=Z,39nm,0.9s
WERN *e*pP pP 02 23 23.5 +3.4
VRAC **Vranov** 71.23 336 ⇓*i*P P 02 22 47.0 +0.7
VRAC **Vranov** 71.23 336 LR LR 02 57 35.4
comp=Z,74nm,18.1s,baz=174,slow=39
NKC **Novy Kostel** 71.24 339 ⇑*i*P P 02 22 46.5 +0.2
NKC **Novy Kostel** 71.24 339 ⇑*i*P P 02 22 46.5 +0.2
WVT **Waverly** 71.29 53 *e*P P 02 22 47.1 +0.3
WVT *e* 02 23 22.0
WVT pmax pmax
comp=Z,7.0nm,0.8s
WVT **Waverly** 71.29 53 *e*P P 02 22 47.1 +0.3
comp=Z,6.9nm,0.8s
WVT *e* 02 23 22.0
HLM1 **Long Mynd** 71.31 350 ⇑*e*P P 02 22 46.3 -0.4
HLM1 AMB AMB 02 22 47.0
comp=Z,52nm,1.3s
HLM1 **Long Mynd** 71.31 350 P P 02 22 46.3 -0.4
HLM1 AMB AMB 02 22 47.0
comp=Z,52nm,1.3s
732A **Laxson Ranch,** 71.42 66 ⇓P P 02 22 48.4 +0.8
baz=71,SNR=9.8
VYHS **Vyhne** 71.47 335 *e*P P 02 22 48.1 +0.4
VYHS pmax pmax
comp=Z,13nm,1.1s
VYHS **Vyhne** 71.47 335 *e*P P 02 22 48.1 +0.4
TREC **Trest** 71.49 337 ⇑*i*P P 02 22 48.1 +0.3
TREC *e* 02 23 25.7
TREC **Trest** 71.49 337 ⇑*i*P P 02 22 48.1 +0.3
TREC *e*pP pP 02 23 25.7 +3.8
MANZ **Manzenberg** 71.54 340 *e*P P 02 22 48.1 0.0
comp=Z,27nm,1.0s
HYB **Hyderabad** 71.70 274 *e*P P 02 22 48.0 -1.6
HYB **Hyderabad** 71.70 274 *e*P P 02 22 48.0 -1.6
HYB **Hyderabad** 71.70 274 *i*P P 02 22 48.0 -1.6
HYB *e*PcP PcP 02 23 06.5 -1.3
ROTZ **Rotzenmuhle** 71.73 339 *e*P P 02 22 49.7 +0.5
comp=Z,33nm,1.1s
PSZ **Piszkesteto** 71.75 334 ⇓P P 02 22 50.0 +0.5
PSZ **Piszkesteto** 71.75 334 *e*P P 02 22 49.4 0.0
comp=Z,8.3nm,0.8s
PSZ **Piszkesteto** 71.75 334 ⇓*i*P P 02 22 50.0 +0.5
PSZ **Piszkesteto** 71.75 334 ⇑*e*P P 02 22 49.9 +0.5
MCH1 **Michaelchurch** 71.83 350 ⇑*e*P P 02 22 49.3 -0.4
MCH1 AMB AMB 02 22 59.7
comp=Z,37nm,2.8s
MCH1 **Michaelchurch** 71.83 350 P P 02 22 49.3 -0.4
MCH1 AMB AMB 02 22 59.7
comp=Z,37nm,2.8s
SKP1 **Kophill** 71.87 348 ⇑*e*P P 02 22 48.7 -1.3
SKP1 **Kophill** 71.87 348 P P 02 22 48.7 -1.3
HGN **Heimansgroeve** 71.89 344 *e*P P 02 22 49.9 -0.3
comp=Z,153nm,1.1s
OXF **Oxford** 71.90 55 *e*P P 02 22 50.8 +0.3
OXF *e* 02 23 26.2
OXF pmax pmax
comp=Z,40nm,1.2s
OXF **Oxford** 71.90 55 *e*P P 02 22 50.8 +0.3
comp=Z,40nm,1.2s
OXF *e* 02 23 26.2
CFR **Carcaliu** 71.96 327 ⇓P P 02 22 50.4 -0.2
CFR **Carcaliu** 71.96 327 ⇓*i*P P 02 22 50.4 -0.2
GRF **Grafenberg Arr** 72.00 340 *e*P P 02 22 51.2 +0.4
GRF pmax pmax
comp=Z,54nm,1.0s
GRF **Grafenberg Arr** 72.00 340 *e*P P 02 22 51.2 +0.4
comp=Z,54nm,1.0s
TNS **Taunus Mts** 72.00 342 *e*P P 02 22 50.7 -0.2
TNS pmax pmax
comp=Z,16nm,1.1s
TNS **Taunus Mts** 72.00 342 *e*P P 02 22 50.7 -0.2
comp=Z,16nm,1.1s
MEM **Membach** 72.03 344 P P 02 22 50.8 -0.2
comp=Z,31nm,1.0s
DRGR 72.06 331 ⇑P P 02 22 51.4 +0.1
DRGR 72.06 331 ⇑*i*P P 02 22 51.4 +0.1
KHC **Kasperske Hory** 72.06 338 ⇑*i*P P 02 22 51.7 +0.5
KHC *e* 02 23 05.0
KHC *e* 02 23 28.8
KHC **Kasperske Hory** 72.06 338 *e*P P 02 22 51.6 +0.4
comp=Z,32nm,1.0s
KHC *e* 02 23 29.2
KHC **Kasperske Hory** 72.06 338 ⇑*i*P P 02 22 51.7 +0.5
KHC *ex* x 02 23 05.0
KHC *e*pP pP 02 23 28.8 +3.5
GRER 72.13 328 ⇑*i*P P 02 22 53.5 +1.9
ZST **Bratislava** 72.16 336 *e*P P 02 22 51.9 +0.1
ZST **Bratislava** 72.16 336 *e*P P 02 22 51.9 +0.1
WET **Wettzell** 72.19 339 *e*P P 02 22 52.5 +0.5
WET *e**PP pP 02 23 29.4 +3.3
WET pmax pmax
comp=Z,38nm,1.1s
WET **Wettzell** 72.19 339 *e*P P 02 22 52.5 +0.5
comp=Z,38nm,1.1s
WET *e*pP pP 02 23 29.4 +3.3
GEC2 **GERESS Array S** 72.30 338 *e*P P 02 22 52.8 0.0
GEC2 pmax pmax
comp=Z,24nm,1.0s
GEC2 **GERESS Array S** 72.30 338 *e*P P 02 22 52.8 0.0
comp=Z,24nm,1.0s
GERES **GERESS Array B** 72.30 338 P P 02 22 52.5 -0.3
GERES **GERESS Array B** 72.30 338 P P 02 22 52.5 -0.3
comp=Z,13nm,0.8s,baz=27,slow=4.5,SNR=97
GERES LR LR 02 58 26.5
comp=Z,65nm,18.1s,baz=272,slow=39
BCLA **Clavier** 72.32 344 P P 02 22 52.5 -0.2
comp=Z,9.3nm,1.5s
MLR **Muntele Rosu** 72.33 329 ⇑*i*P P 02 22 53.6 +0.6
BUD **Budapest** 72.37 334 ⇑*e* P 02 22 54.0 +1.0
SNF **Seneffe** 72.39 345 P P 02 22 53.1 0.0
TOD **Tromm** 72.53 342 *e*P P 02 22 53.7 -0.3
TOD **Tromm** 72.53 342 *e*P P 02 22 53.7 -0.3
PKSG 72.61 335 ⇑*e* P 02 22 55.2 +0.8
VOIR 72.64 329 ⇓P P 02 22 55.5 +0.7
VOIR 72.64 329 ⇓*i*P P 02 22 55.5 +0.7
CONA **Conrad Observa** 72.70 336 ⇑*i*P P 02 22 55.6 +0.5
SNR=18
CONA **Conrad Observa** 72.70 336 ⇑*i*P P 02 22 55.6 +0.5
GIVF **Givet** 72.70 344 ⇑*i*P P 02 22 54.6 -0.4
comp=Z,11nm,0.4s
GIVF **Givet** 72.70 344 ⇑*i*P P 02 22 54.6 -0.4
GIVF pmax pmax
comp=Z,11nm,0.4s
GIVF **Givet** 72.70 344 ⇑*i*P P 02 22 54.6 -0.4
comp=Z,11nm,0.4s
RUP **Ruppelstein** 72.74 343 *e*P P 02 22 55.0 -0.3
RUP **Ruppelstein** 72.74 343 *e*P P 02 22 55.0 -0.3
PKS7 **Kunszentmiklos** 72.74 334 ⇑*e*P P 02 22 56.1 +0.9
DOU **Dourbes** 72.75 345 P P 02 22 54.8 -0.4
comp=Z,4.7nm,0.9s
SOP **Sopron** 72.77 336 ⇑*e*P P 02 22 56.3 +0.9
PKST **T''s** 72.82 335 ⇑*e*P P 02 22 56.0 +0.3
HEX **Exmoor** 72.83 350 *e*P P 02 22 55.1 -0.6
HEX **Exmoor** 72.83 350 P P 02 22 55.1 -0.6
BAIF **Baives** 72.84 345 ⇑*i*P P 02 22 55.6 -0.2
comp=Z,23nm,0.8s
BAIF **Baives** 72.84 345 ⇑*i*P P 02 22 55.6 -0.2
BAIF pmax pmax
comp=Z,23nm,0.8s
BAIF **Baives** 72.84 345 ⇑*i*P P 02 22 55.6 -0.2
comp=Z,23nm,0.8s
SWET **Sewanee** 72.90 52 *e*P P 02 22 56.0 -0.4
comp=Z,12nm,0.8s
SWET *e* 02 23 31.8
WLF **Walferdange** 72.92 343 P P 02 22 55.9 -0.3
comp=Z,6.7nm,1.0s
WLF **Walferdange** 72.92 343 *e*P P 02 22 56.0 -0.3
WLF pmax pmax
comp=Z,18nm,1.0s
WLF **Walferdange** 72.92 343 *e*P P 02 22 56.4 +0.1
comp=Z,26nm,1.2s
WLF **Walferdange** 72.92 343 *e*P P 02 22 56.0 -0.3
comp=Z,18nm,1.0s
LOT **Lotru** 73.00 330 ⇓*i*P P 02 22 56.5 -0.4
MOA **Molln** 73.13 337 ⇓*i*P P 02 22 57.7 +0.2
SNR=11
MOA **Molln** 73.13 337 ⇓*i*P P 02 22 57.7 +0.2
STU **Stuttgart** 73.26 341 *e*P P 02 22 58.1 -0.2
comp=Z,34nm,1.4s
LANF **Langenberg** 73.31 342 *e*P P 02 22 58.5 -0.1
LANF **Langenberg** 73.31 342 *e*P P 02 22 58.5 -0.1
LANF **Langenberg** 73.31 342 *e*P P 02 22 58.5 -0.1
GZR **Gura Zlata** 73.32 331 P P 02 22 58.5 -0.3
ARSA **Arzberg** 73.41 336 *i*P P 02 22 59.9 +0.7
SNR=11
ARSA **Arzberg** 73.41 336 *i*P P 02 22 59.9 +0.7
BZS **Buzias** 73.43 332 ⇑P P 02 22 59.0 -0.3
BZS **Buzias** 73.43 332 ⇑*i*P P 02 22 59.0 -0.3
FUR **Furstenfeldbru** 73.44 340 *e*P P 02 22 59.5 +0.1
FUR pmax pmax
comp=Z,31nm,1.0s
FUR **Furstenfeldbru** 73.44 340 *e*P P 02 22 59.5 +0.1
comp=Z,31nm,1.0s
RJOB **Jochberg** 73.55 338 *e*P P 02 23 00.4 +0.3
comp=Z,27nm,0.9s
BFO **Black Forest** 73.84 342 *e*P P 02 23 01.4 -0.3
BFO pmax pmax
comp=Z,29nm,1.4s
BFO **Black Forest** 73.84 342 *e*P P 02 23 01.4 -0.3
comp=Z,29nm,1.4s
BFO **Black Forest** 73.84 342 *e*P P 02 23 01.4 -0.3
comp=Z,4.0nm,0.6s
BFO **Black Forest** 73.84 342 P P 02 23 01.1 -0.6
comp=Z,85nm,1.1s,SNR=7.3
BEHE **Becsehely** 73.86 335 ⇑*e*P P 02 23 02.5 +0.7
CDF **Champ du Feu** 73.95 342 ⇑*i*P P 02 23 02.2 -0.2
comp=Z,61nm,0.9s
CDF **Champ du Feu** 73.95 342 ⇑*i*P P 02 23 02.2 -0.2
CDF pmax pmax
comp=Z,61nm,0.9s
CDF **Champ du Feu** 73.95 342 ⇑*i*P P 02 23 02.2 -0.2
comp=Z,61nm,0.9s
SPAK **Spaichingen-Ko** 73.98 341 *e*P P 02 23 02.5 -0.1
KBA **Koelnbreinsper** 74.06 338 ⇑*i*P P 02 23 04.0 +0.8
KBA **Koelnbreinsper** 74.06 338 ⇑*i*P P 02 23 04.0 +0.8
SNR=38
KBA **Koelnbreinsper** 74.06 338 ⇑*i*P P 02 23 04.0 +0.8
SOKA **Soboth** 74.06 337 ⇑*i*P P 02 23 03.5 +0.4
SOKA **Soboth** 74.06 337 ⇑*i*P P 02 23 03.5 +0.4
PAGF **Fort de Pagny** 74.07 343 ⇑*i*P P 02 23 03.2 +0.2
comp=Z,13nm,0.7s
PAGF **Fort de Pagny** 74.07 343 ⇑*i*P P 02 23 03.2 +0.2
comp=Z,13nm,0.7s
PERS **Pernice** 74.09 336 *i*P P 02 23 03.7 +0.5
LIBD **Limburg** 74.14 342 *e*P P 02 23 03.4 0.0
LIBD **Limburg** 74.14 342 *e*P P 02 23 03.4 0.0
ECH **Echery** 74.16 342 *e*P P 02 23 03.2 -0.3
ECH pmax pmax
comp=Z,29nm,1.1s
ECH **Echery** 74.16 342 *e*P P 02 23 03.2 -0.3
comp=Z,29nm,1.1s
ECH **Echery** 74.16 342 *e*P P 02 23 03.3 -0.3
GROS **Grobnik** 74.16 336 *i*P P 02 23 03.9 +0.2
WATA **Walderalm** 74.18 339 *i*P P 02 23 04.0 +0.1
SNR=14
WATA **Walderalm** 74.18 339 *i*P P 02 23 04.0 +0.1
RETA **Reutte** 74.19 340 ⇑*i*P P 02 23 03.9 +0.1
RETA **Reutte** 74.19 340 ⇑*i*P P 02 23 04.0 +0.1
MEZF **Maizieres J'vi** 74.23 344 ⇑*i*P P 02 23 04.0 +0.1
comp=Z,20nm,0.5s
MEZF **Maizieres J'vi** 74.23 344 ⇑*i*P P 02 23 04.0 +0.1
comp=Z,20nm,0.5s
WTTA **Wattenberg** 74.23 339 ⇑*i*P P 02 23 04.7 +0.5
WTTA **Wattenberg** 74.23 339 ⇑*i*P P 02 23 04.7 +0.5
SNR=17
WTTA **Wattenberg** 74.23 339 ⇑*i*P P 02 23 04.7 +0.5
LRAL **Lakeview Retre** 74.24 54 *e*P P 02 23 03.7 -0.5
comp=Z,6.9nm,0.8s
LRAL *e* 02 23 39.1
MOTA **Moosalm** 74.26 339 *i*P P 02 23 04.9 +0.6
MOTA **Moosalm** 74.26 339 *i*P P 02 23 04.9 +0.6
SNR=23
MOTA **Moosalm** 74.26 339 *i*P P 02 23 04.9 +0.6
OBKA **Obir** 74.33 337 *i*P P 02 23 05.2 +0.5
SNR=28
OBKA **Obir** 74.33 337 *i*P P 02 23 05.2 +0.5
FELD **Feldberg im Sc** 74.34 342 *e*P P 02 23 04.4 -0.4
THEF **They Montfort** 74.34 343 *e*P P 02 23 04.5 -0.1
THEF **They Montfort** 74.34 343 *e*P P 02 23 04.5 -0.1
THEF **They Montfort** 74.34 343 *e*P P 02 23 04.5 -0.1
MYKA **Terra Mystica** 74.42 337 ⇑*i*P P 02 23 05.2 0.0
MYKA **Terra Mystica** 74.42 337 ⇑*i*P P 02 23 05.2 0.0
MALT **Malatya** 74.45 317 ⇓P P 02 23 05.8 +0.3
MALT **Malatya** 74.45 317 *e*P P 02 23 05.5 0.0
comp=Z,32nm,1.5s
MALT **Malatya** 74.45 317 ⇓*i*P P 02 23 05.8 +0.3
HAU **Haudompre** 74.50 343 ⇑*i*P P 02 23 05.3 -0.2
comp=Z,24nm,0.6s
HAU **Haudompre** 74.50 343 ⇑*i*P P 02 23 05.3 -0.2
HAU pmax pmax
comp=Z,24nm,0.6s
HAU **Haudompre** 74.50 343 ⇑*i*P P 02 23 05.3 -0.2
comp=Z,24nm,0.6s
MOF **Molkenrain** 74.51 342 *e*P P 02 23 05.3 -0.4
MOF **Molkenrain** 74.51 342 *e*P P 02 23 05.3 -0.4
MOF **Molkenrain** 74.51 342 *e*P P 02 23 05.3 -0.4
SFTF **Sexfontaines** 74.52 344 ⇑*i*P P 02 23 05.4 -0.2
comp=Z,49nm,0.4s
SFTF **Sexfontaines** 74.52 344 ⇑*i*P P 02 23 05.4 -0.2
comp=Z,49nm,0.4s
JSA **Saint Aubin** 74.52 349 ⇑*e*P P 02 23 04.7 -0.9
JSA AMB AMB 02 23 05.7
comp=Z,34nm,1.1s
JSA **Saint Aubin** 74.52 349 P P 02 23 04.7 -0.9
JSA AMB AMB 02 23 05.7
comp=Z,34nm,1.1s
ABTA **Abfaltersbach** 74.55 338 ⇑*i*P P 02 23 06.0 +0.1
SNR=28
ABTA **Abfaltersbach** 74.55 338 ⇑*i*P P 02 23 06.0 +0.1
HINF **Hinteralfeld** 74.59 342 ⇑*i*P P 02 23 05.6 -0.5
comp=Z,10nm,0.6s
HINF **Hinteralfeld** 74.59 342 ⇑*i*P P 02 23 05.6 -0.5
HINF pmax pmax
comp=Z,10.0nm,0.6s
HINF **Hinteralfeld** 74.59 342 ⇑*i*P P 02 23 05.6 -0.5
comp=Z,10nm,0.6s
FETA **Feichten** 74.65 340 *i*P P 02 23 07.0 +0.5
SNR=44
FETA **Feichten** 74.65 340 *i*P P 02 23 07.0 +0.5
GCIS **Gornji Cirnik** 74.69 336 *i*P P 02 23 06.7 0.0
FLN **La Foliniere** 74.74 348 ⇑*i*P P 02 23 06.3 -0.6
comp=Z,27nm,0.6s
FLN *e*R
comp=Z,44nm,23.0s
FLN **La Foliniere** 74.74 348 ⇑*i*P P 02 23 06.3 -0.6
FLN pmax pmax
comp=Z,27nm,0.6s
FLN **La Foliniere** 74.74 348 ⇑*i*P P 02 23 06.3 -0.6
comp=Z,27nm,0.6s
CADS **Cadrg** 74.78 337 *i*P P 02 23 06.6 -0.6
LJU **Ljubljana** 74.78 337 *i*P P 02 23 06.5 -0.6
BBS **Basel-Blauen** 74.82 342 *e*P P 02 23 07.2 -0.2
BBS **Basel-Blauen** 74.82 342 *e*P P 02 23 07.2 -0.2
LDF **La Druitiere** 74.87 347 ⇑*i*P P 02 23 06.9 -0.7
comp=Z,21nm,0.8s
LDF **La Druitiere** 74.87 347 ⇑*i*P P 02 23 06.9 -0.7
LDF pmax pmax
comp=Z,21nm,0.8s
LDF **La Druitiere** 74.87 347 ⇑*i*P P 02 23 06.9 -0.7
comp=Z,21nm,0.8s
BR131 **Keskin Array S** 75.00 321 *e*P P 02 23 08.3 -0.4
comp=Z,5.1nm,0.6s
BRTR **Keskin Array B** 75.00 321 P P 02 23 08.2 -0.5
BRTR **Keskin Array B** 75.00 321 P P 02 23 08.2 -0.5
comp=Z,6.5nm,0.5s,baz=11,slow=3.1,SNR=48
LOMF **Lomont** 75.05 342 *e*P P 02 23 08.2 -0.6
LOMF **Lomont** 75.05 342 *e*P P 02 23 08.2 -0.6
LOMF **Lomont** 75.05 342 *e*P P 02 23 08.2 -0.6
BOJS **Bojanci** 75.12 336 *i*P P 02 23 09.2 0.0
GRR **Gorron** 75.16 348 ⇑*i*P P 02 23 08.9 -0.4
comp=Z,34nm,0.6s
GRR **Gorron** 75.16 348 ⇑*i*P P 02 23 08.9 -0.4
GRR pmax pmax
comp=Z,34nm,0.6s
GRR **Gorron** 75.16 348 ⇑*i*P P 02 23 08.9 -0.4
comp=Z,34nm,0.6s
TRI **Trieste** 75.27 337 *e*P P 02 23 09.1 -0.8
TRI pmax pmax
comp=Z,13nm,1.0s
TRI **Trieste** 75.27 337 *e*P P 02 23 09.1 -0.8
comp=Z,13nm,1.0s
TUE **Stuetta** 75.44 340 *e*P P 02 23 11.3 +0.1
comp=Z,12nm,0.6s
ROSF **Rostrenen** 75.48 349 ⇑*i*P P 02 23 10.9 -0.2
comp=Z,52nm,0.9s
ROSF **Rostrenen** 75.48 349 ⇑*i*P P 02 23 10.9 -0.2
ROSF pmax pmax
comp=Z,52nm,0.9s
ROSF **Rostrenen** 75.48 349 ⇑*i*P P 02 23 10.9 -0.2
comp=Z,52nm,0.9s
SGMF **Saint Gilles** 75.48 349 ⇑*i*P P 02 23 10.8 -0.3
comp=Z,59nm,0.9s
SGMF **Saint Gilles** 75.48 349 ⇑*i*P P 02 23 10.8 -0.3
SGMF pmax pmax
comp=Z,59nm,0.9s
SGMF **Saint Gilles** 75.48 349 ⇑*i*P P 02 23 10.8 -0.3
comp=Z,59nm,0.9s
BST **Brest** 75.59 350 *e*P P 02 23 10.8 -1.0
BST **Brest** 75.59 350 *e*P P 02 23 10.8 -1.0
LOR **Lormes** 75.61 344 ⇑*i*P P 02 23 11.5 -0.4
comp=Z,27nm,0.7s
LOR *e*R
comp=Z,62nm,20.5s
LOR **Lormes** 75.61 344 ⇑*i*P P 02 23 11.5 -0.4
comp=Z,27nm,0.7s
VTS **Vitosha** 75.78 329 ⇑P P 02 23 12.5 -0.6
VTS **Vitosha** 75.78 329 ⇑*i*P P 02 23 12.5 -0.6
SSF **Saint Saulge** 75.87 345 ⇑*i*P P 02 23 13.0 -0.4
comp=Z,12nm,0.7s
SSF **Saint Saulge** 75.87 345 ⇑*i*P P 02 23 13.0 -0.4
SSF pmax pmax
comp=Z,12nm,0.6s
SSF **Saint Saulge** 75.87 345 ⇑*i*P P 02 23 13.0 -0.4
comp=Z,12nm,0.6s
QUIF **Quistinic** 75.88 349 ⇑*i*P P 02 23 13.1 -0.3
comp=Z,27nm,0.7s
QUIF **Quistinic** 75.88 349 ⇑*i*P P 02 23 13.1 -0.3
QUIF pmax pmax
comp=Z,27nm,0.7s
QUIF **Quistinic** 75.88 349 ⇑*i*P P 02 23 13.1 -0.3
comp=Z,27nm,0.7s
CABF **La Chapelle** 75.89 343 ⇑*i*P P 02 23 13.8 +0.2
comp=Z,32nm,0.8s
CABF **La Chapelle** 75.89 343 ⇑*i*P P 02 23 13.8 +0.2
CABF pmax pmax
comp=Z,32nm,0.8s
CABF **La Chapelle** 75.89 343 ⇑*i*P P 02 23 13.8 +0.2
comp=Z,32nm,0.8s
NVLJ **Novalja** 76.10 336 P P 02 23 13.8 -0.8
PLE **Pljevlja** 76.15 332 *e*P P 02 23 14.5 -0.7
AVF **Avril sur Loir** 76.16 345 ⇑*i*P P 02 23 14.7 -0.3
comp=Z,37nm,1.0s
AVF **Avril sur Loir** 76.16 345 ⇑*i*P P 02 23 14.7 -0.3
AVF pmax pmax
comp=Z,37nm,1.0s
AVF **Avril sur Loir** 76.16 345 ⇑*i*P P 02 23 14.7 -0.3
comp=Z,37nm,1.0s
SMF **Signal de Mont** 76.22 344 ⇑*i*P P 02 23 15.0 -0.4
comp=Z,41nm,1.1s
SMF **Signal de Mont** 76.22 344 ⇑*i*P P 02 23 15.0 -0.4
SMF pmax pmax
comp=Z,41nm,1.1s
SMF **Signal de Mont** 76.22 344 ⇑*i*P P 02 23 15.0 -0.4
comp=Z,41nm,1.1s
BHD **Baghdad** 76.34 310 *ex* P P 02 23 14.3 -1.9
BHD *ex* x 02 32 45.7
UPM **Unac-Piva** 76.39 333 ⇑*i*P P 02 23 15.6 -1.0
IVA **Berane** 76.44 332 ⇑*i*P P 02 23 16.1 -0.7
BGF **Bois d'Agland** 76.46 345 *e*P P 02 23 16.5 -0.2
comp=Z,16nm,0.9s
BGF **Bois d'Agland** 76.46 345 *e*P P 02 23 16.5 -0.2
BGF pmax pmax
comp=Z,16nm,0.9s
BGF **Bois d'Agland** 76.46 345 *e*P P 02 23 16.5 -0.2
comp=Z,16nm,0.9s
CTAO **Charters Tower** 76.60 194 *e*P P 02 23 18.7 +1.0
CTAO pmax pmax
comp=Z,47nm,1.1s
CTAO **Charters Tower** 76.60 194 *e*P P 02 23 18.7 +1.0
comp=Z,47nm,1.1s
PVY **Plav** 76.68 332 ⇑*i*P P 02 23 17.1 -1.1
NKY **Niksic** 76.73 332 ⇑*i*P P 02 23 17.6 -0.8
BRY **Bratogost** 76.77 333 ⇑*i*P P 02 23 17.1 -1.6
TCF **Toulx Ste Croi** 76.81 345 ⇑*i*P P 02 23 18.5 -0.2
comp=Z,22nm,1.1s
TCF **Toulx Ste Croi** 76.81 345 ⇑*i*P P 02 23 18.5 -0.2
TCF pmax pmax
comp=Z,22nm,1.1s
TCF **Toulx Ste Croi** 76.81 345 ⇑*i*P P 02 23 18.5 -0.2
comp=Z,22nm,1.1s
MFF **Saint Martin d** 76.83 347 ⇑*i*P P 02 23 18.7 -0.1
comp=Z,28nm,0.9s
MFF **Saint Martin d** 76.83 347 ⇑*i*P P 02 23 18.7 -0.1
MFF pmax pmax
comp=Z,28nm,0.9s
MFF **Saint Martin d** 76.83 347 ⇑*i*P P 02 23 18.7 -0.1
comp=Z,28nm,0.9s
LPL **La Plagne** 76.84 342 ⇑*i*P P 02 23 20.0 +0.8
comp=Z,81nm,1.0s
LPL **La Plagne** 76.84 342 ⇑*i*P P 02 23 20.0 +0.8
LPL pmax pmax
comp=Z,81nm,1.0s
LPL **La Plagne** 76.84 342 ⇑*i*P P 02 23 20.0 +0.8
comp=Z,81nm,1.0s
LPG **La Plagne** 76.86 342 ⇑*i*P P 02 23 20.2 +0.9
comp=Z,127nm,1.1s
LPG **La Plagne** 76.86 342 ⇑*i*P P 02 23 20.2 +0.9
LPG pmax pmax
comp=Z,127nm,1.1s
LPG **La Plagne** 76.86 342 ⇑*i*P P 02 23 20.2 +0.9
comp=Z,127nm,1.1s
AGO **Saint Agoulin** 76.91 345 *e*P P 02 23 19.6 +0.3
AGO **Saint Agoulin** 76.91 345 *e*P P 02 23 19.6 +0.3
STON **Ston** 77.01 333 P P 02 23 18.6 -1.2
TTG **Podgorica** 77.02 332 ⇑*i*P P 02 23 19.2 -0.7
VAY **Valandovo** 77.14 329 *e*P P 02 23 19.6 -1.0
HCY **Herceg Novi** 77.21 333 ⇑*i*P P 02 23 19.7 -1.3
PYM **Petit Puy Mans** 77.22 345 *e*P P 02 23 21.2 +0.1
PYM **Petit Puy Mans** 77.22 345 *e*P P 02 23 21.2 +0.1
PYM **Petit Puy Mans** 77.22 345 *e*P P 02 23 21.2 +0.1
BUM **Brajici-Budva** 77.24 332 ⇑*i*P P 02 23 19.8 -1.4
SSB **Saint Sauveur** 77.44 343 *e*P P 02 23 21.8 -0.5
SSB pmax pmax
comp=Z,17nm,0.9s
SSB **Saint Sauveur** 77.44 343 *e*P P 02 23 21.8 -0.5
comp=Z,16nm,0.9s
SSB **Saint Sauveur** 77.44 343 *e*P P 02 23 22.5 +0.2
VLC **Villacollemand** 77.46 339 *e*P P 02 23 23.1 +0.8
comp=Z,59nm,1.5s
ORIF **Oris-en-Rattie** 77.57 342 ⇑*i*P P 02 23 23.8 +0.7
comp=Z,39nm,0.9s
ORIF *e*R
comp=Z,51nm,17.0s
ORIF **Oris-en-Rattie** 77.57 342 ⇑*i*P P 02 23 23.8 +0.7
ORIF pmax pmax
comp=Z,39nm,0.9s
ORIF **Oris-en-Rattie** 77.57 342 ⇑*i*P P 02 23 23.8 +0.7

comp=Z,39nm,0.9s
MBDF Montbardon 77.60 342⇑ *i*P P 02 23 23.8 +0.5
comp=Z,22nm,0.8s
MBDF Montbardon 77.60 342⇑ *i*P P 02 23 23.8 +0.5
MBDF pmax pmax
comp=Z,22nm,0.8s
MBDF Montbardon 77.60 342⇑ *i*P P 02 23 23.8 +0.5
comp=Z,22nm,0.8s
LBL Lubilhac 77.69 344 *e*P P 02 23 24.0 +0.3
LBL Lubilhac 77.69 344 *e*P P 02 23 24.0 +0.3
LBL Lubilhac 77.69 344 *e*P P 02 23 24.0 +0.3
BIA Bitola 77.77 330 *e*P P 02 23 23.3 -0.9
VIVF Saint-Julien-l 77.83 343⇑ *i*P P 02 23 24.9 +0.5
comp=Z,48nm,1.1s
VIVF Saint-Julien-l 77.83 343⇑ *i*P P 02 23 24.9 +0.5
VIVF pmax pmax
comp=Z,48nm,1.1s
VIVF Saint-Julien-l 77.83 343⇑ *i*P P 02 23 24.9 +0.5
comp=Z,48nm,1.1s
TIR Tirane 77.87 331 *e*P P 02 23 24.4 -0.3
TIR pmax pmax
comp=Z,34nm,0.8s
TIR Tirane 77.87 331 *e*P P 02 23 24.4 -0.3
comp=Z,34nm,0.8s
RJF Les Rejaudoux 77.88 346 *e*P P 02 23 24.7 +0.1
RJF *e*R
comp=Z,69nm,21.5s
RJF Les Rejaudoux 77.88 346 *e*P P 02 23 24.7 +0.1
RJF Les Rejaudoux 77.88 346 *e*P P 02 23 24.7 +0.1
MIB Mutribah 77.96 306 *e*P P 02 23 23.9 -1.4
MIB AMb AMB 02 23 25.4
comp=Z,109nm,0.7s
UMR Umm Al-Rimmam 78.00 305 *e*P P 02 23 24.1 -1.5
CAF Calviac 78.17 345⇑ *i*P P 02 23 26.7 +0.4
comp=Z,36nm,1.1s
CAF Calviac 78.17 345⇑ *i*P P 02 23 26.7 +0.4
CAF pmax pmax
comp=Z,37nm,1.0s
CAF Calviac 78.17 345⇑ *i*P P 02 23 26.7 +0.4
comp=Z,36nm,1.0s
TOUF Mont Tournerai 78.20 341 *e*P P 02 23 26.4 -0.3
TOUF Mont Tournerai 78.20 341 *e*P P 02 23 26.4 -0.3
TOUF Mont Tournerai 78.20 341 *e*P P 02 23 26.4 -0.3
SBF Sospel 78.32 341 *e*P P 02 23 26.0 -1.2
comp=Z,81nm,1.2s
SBF Sospel 78.32 341 *e*P P 02 23 26.0 -1.2
SBF pmax pmax
comp=Z,81nm,1.2s
SBF Sospel 78.32 341 *e*P P 02 23 26.0 -1.2
comp=Z,81nm,1.2s
LFF La Frestale 78.34 346⇑ *i*P P 02 23 27.5 +0.3
comp=Z,40nm,1.0s
LFF La Frestale 78.34 346⇑ *i*P P 02 23 27.5 +0.3
LFF pmax pmax
comp=Z,40nm,1.0s
LFF La Frestale 78.34 346⇑ *i*P P 02 23 27.5 +0.3
comp=Z,40nm,1.0s
REVF Revere 78.45 341 *e*P P 02 23 27.8 -0.1
REVF Revere 78.45 341 *e*P P 02 23 27.8 -0.1
REVF Revere 78.45 341 *e*P P 02 23 27.8 -0.1
NAY Al-Naaiem 78.47 305 *e*P P 02 23 26.7 -1.5
NAY AMb AMB 02 23 28.2
comp=Z,54nm,1.2s
AQU L'Aquila 78.53 336 *e*P P 02 23 28.9 +0.6
comp=Z,30nm,0.8s
SMRF Simiane la Rot 78.54 342⇑ *i*P P 02 23 29.1 +0.8
comp=Z,18nm,0.8s
SMRF Simiane la Rot 78.54 342⇑ *i*P P 02 23 29.1 +0.8
comp=Z,18nm,0.8s
RDF Al-Radifah 78.60 305 *e*P P 02 23 27.5 -1.4
RDF AMb AMB 02 23 29.2
comp=Z,170nm,1.0s
LASF Ste Croix 78.72 344 *e*P P 02 23 29.6 +0.3
comp=Z,8.3nm,0.5s
LASF Ste Croix 78.72 344 *e*P P 02 23 29.6 +0.3
comp=Z,8.3nm,0.5s
FRF La Foret Royal 78.75 341 *e*P P 02 23 28.9 -0.6
FRF La Foret Royal 78.75 341 *e*P P 02 23 28.9 -0.6
FRF La Foret Royal 78.75 341 *e*P P 02 23 28.9 -0.6
WRAB Tennant Creek 78.77 206 *e*P P 02 23 30.4 +0.8
WRAB pmax pmax
comp=Z,39nm,1.0s
WRAB Tennant Creek 78.77 206 *e*P P 02 23 30.4 +0.8
comp=Z,39nm,1.0s
WRAB Tennant Creek 78.77 206 P P **02 23 30.5 +0.8**
comp=Z,230nm,1.0s,SNR=14
WRA Warramunga Arr 78.78 206 P P **02 23 30.3 +0.6**
WRA pP **pP 02 24 06.0 +1.6**
WRA PKKPbc **PKKPbc 02 42 22.6 +1.0**
WRA Warramunga Arr 78.78 206 P P **02 23 30.3 +0.6**
comp=Z,28nm,1.0s,baz=20,slow=6.1,SNR=110
WRA pP **pP 02 24 06.0 +1.6**
comp=Z,6.8nm,1.0s,baz=21,slow=5.9,SNR=3.3
WRA PKKPbc **PKKPbc 02 42 22.6 +1.0**
comp=Z,0.4nm,1.0s,baz=215,slow=1.8,SNR=5.1
JMDO Jabal Madar 78.87 293 P P **02 23 29.9 -0.6**
SNR=7.9
LMR La Mourre 79.00 342⇑ *i*P P 02 23 31.0 +0.2
comp=Z,14nm,0.6s
LMR La Mourre 79.00 342⇑ *i*P P 02 23 31.0 +0.2
LMR pmax pmax
comp=Z,14nm,0.6s
LMR La Mourre 79.00 342⇑ *i*P P 02 23 31.0 +0.2
comp=Z,14nm,0.6s
BSY Bisya 79.03 294 P P **02 23 30.5 -0.9**
SNR=8.2
PGF Pioggiola 79.29 340⇑ *i*P P 02 23 32.6 +0.1
comp=Z,60nm,1.0s
PGF Pioggiola 79.29 340⇑ *i*P P 02 23 32.6 +0.1
PGF pmax pmax
comp=Z,61nm,1.0s
PGF Pioggiola 79.29 340⇑ *i*P P 02 23 32.6 +0.1
comp=Z,60nm,1.0s
FITZ Fitzroy Crossi 79.49 214 *e*P P 02 23 34.0 +0.4
comp=Z,37nm,1.3s
MTLF Montolieu 79.70 345⇑ *i*P P 02 23 35.2 +0.6
comp=Z,31nm,1.0s
MTLF Montolieu 79.70 345⇑ *i*P P 02 23 35.2 +0.6
MTLF pmax pmax
comp=Z,31nm,1.0s
MTLF Montolieu 79.70 345⇑ *i*P P 02 23 35.2 +0.6
comp=Z,31nm,1.0s
CUC Castrocucco 80.20 334 *e*P P 02 23 36.4 -1.0
comp=Z,8.6nm,0.8s
EPF Esparros 80.27 346⇑ *i*P P 02 23 37.6 -0.2
EPF Esparros 80.27 346⇑ *i*P P 02 23 37.6 -0.2
EPF Esparros 80.27 346⇑ *i*P P 02 23 37.6 -0.2
SJPF Ste Jean 80.40 347 *e*P P 02 23 38.5 +0.1
comp=Z,14nm,0.8s
SJPF Ste Jean 80.40 347 *e*P P 02 23 38.5 +0.1
SJPF pmax pmax
comp=Z,14nm,0.8s
SJPF Ste Jean 80.40 347 *e*P P 02 23 38.5 +0.1
comp=Z,14nm,0.8s
ETSF Etsaut 80.52 347⇑ *i*P P 02 23 39.9 +0.8
comp=Z,23nm,0.8s
ETSF Etsaut 80.52 347⇑ *i*P P 02 23 39.9 +0.8
ETSF pmax pmax
comp=Z,23nm,0.8s
ETSF Etsaut 80.52 347⇑ *i*P P 02 23 39.9 +0.8
comp=Z,23nm,0.8s
TIP Timpagrande 80.72 333 *e*P P 02 23 40.3 0.0
comp=Z,62nm,1.1s
CEL Celeste 81.81 333 *e*P P 02 23 45.7 -0.3
comp=Z,28nm,1.0s
PGAV Gavieira, Arco 82.25 352 *e*P P 02 23 48.8 +0.5
PBRG Braganca 82.28 351 *e*P P 02 23 48.3 -0.1
PMOR Pomariorio Ree 82.37 131 *e*T T 03 53 50.1
comp=Z,6.4nm,0.2s
ASAR Alice Springs 82.46 205 P P **02 23 50.4 +1.1**
ASAR pP **pP 02 24 26.4 +2.1**
ASAR PKKPbc **PKKPbc 02 42 14.3 +0.9**
ASAR Alice Springs 82.46 205 P P **02 23 50.4 +1.1**
comp=Z,20nm,0.8s,baz=11,slow=4.8,SNR=94
ASAR pP **pP 02 24 26.4 +2.1**
comp=Z,3.6nm,0.8s,baz=12,slow=4.8,SNR=2.7
ASAR PKKPbc **PKKPbc 02 42 14.3 +0.9**
comp=Z,0.2nm,0.4s,baz=204,slow=2.6,SNR=4.3
PCAB Cabril 82.49 352 *e*P P 02 23 50.0 +0.6
POLO Lamas de Olo 82.80 352 *e*P P 02 23 51.8 +0.7
comp=Z,14nm,2.1s
PVRL Vila Real 82.89 352 *e*P P 02 23 51.8 +0.2
comp=Z,30nm,0.9s
MVO Moncorvo 82.94 351 *e*P P 02 23 51.8 -0.1
comp=Z,25nm,1.1s
EIL Elat 83.41 315 LR LR 03 02 25.5
comp=Z,44nm,20.6s,baz=210,slow=37
PVIS Viseu 83.46 352 *e*P P 02 23 54.6 +0.1
comp=Z,29nm,1.6s
MTE Manteigas 83.75 351 *e*P P 02 23 56.3 +0.3
comp=Z,28nm,1.9s
PPT Papeete 83.96 133 LR LR 02 59 51.6
comp=Z,25nm,18.5s,baz=140,slow=34
PPT2 Papeete2 83.98 133 eLR LR 02 50 20.7
comp=Z,70nm,23.0s
ESDC Sonseca Array 84.11 349 P P **02 23 58.3 +0.5**
ESDC Sonseca Array 84.11 349 P P **02 23 58.3 +0.5**
comp=Z,17nm,0.9s,baz=2.7,slow=5.0,SNR=82
ESLA Sonseca Array 84.11 349 *e*P P 02 23 58.0 +0.1
comp=Z,7.1nm,1.0s
PAB San Pablo 84.28 349 *e*P P 02 23 58.9 +0.2
PAB pmax pmax
comp=Z,19nm,1.0s
PAB San Pablo 84.28 349 *e*P P 02 23 58.9 +0.2
comp=Z,19nm,1.0s
PCBR Castelo Branco 84.30 351 *e*P P 02 23 58.6 -0.1
comp=Z,45nm,1.0s
PTOM Tomar 84.59 352 *e*P P 02 24 00.6 +0.4
comp=Z,49nm,1.0s
PMRV Marv??o 84.70 351 *e*P P 02 24 00.4 -0.3
comp=Z,24nm,1.8s
PMTG Montargil 85.13 352 *e*P P 02 24 02.8 0.0
comp=Z,32nm,2.1s
PESTR Estremoz 85.27 351 *e*P P 02 24 03.6 0.0
comp=Z,28nm,1.1s
ABTO Aybut 85.53 294 P P **02 24 04.0 -1.2**
SNR=6.6
EVO Evora 85.64 352 *e*P P 02 24 05.2 -0.2
comp=Z,23nm,1.1s
EVO Evora 85.64 352⇑ *i*P P 02 24 05.3 -0.2
comp=Z,31nm,1.1s
EVOP Sao Brissos 85.66 352⇑ *i*P P 02 24 05.3 -0.1
EVOP pmax pmax
comp=Z,31nm,1.1s
EVOP Sao Brissos 85.66 352⇑ *i*P P 02 24 05.3 -0.1
comp=Z,31nm,1.1s
KEST Kesra 85.77 337 *e*P P 02 24 06.2 0.0
KEST Kesra 85.77 337 P P **02 24 06.2 0.0**
comp=Z,1.9nm,0.4s,baz=274,slow=5.2,SNR=28
PBAR Barrancos 85.91 351 *e*P P 02 24 06.6 -0.1
comp=Z,40nm,1.4s
PBEJ Beja 86.13 351 *e*P P 02 24 08.3 +0.5
comp=Z,24nm,1.6s
STKA Stephens Creek 88.88 197 P P **02 24 21.8 +1.0**
STKA Stephens Creek 88.88 197 P P **02 24 21.8 +1.0**
comp=Z,3.4nm,0.5s,baz=6.4,slow=8.1,SNR=6.8
TORD Torodi Ar. Bea 109.25 339 PKiKP **PKiKP 02 29 55.6 -0.7**
TORD PKKPbc **PKKPbc 02 41 00.3 +0.4**
TORD Torodi Ar. Bea 109.25 339 PKiKP **PKiKP 02 29 55.6 -0.7**
comp=Z,0.3nm,0.4s,baz=17,slow=2.6,SNR=13
TORD PKKPbc **PKKPbc 02 41 00.3 +0.4**
comp=Z,0.5nm,1.1s,baz=188,slow=2.8,SNR=6.8
LPAZ La Paz 125.69 64 PKP **PKPdf 02 30 28.8 +0.5**
LPAZ La Paz 125.69 64 PKP **PKPdf 02 30 28.8 +0.5**
comp=Z,0.6nm,0.4s,baz=312,slow=1.2,SNR=4.2
CASY Casey 127.55 203 *e*PKPdf **PKPdf 02 30 30.7 +1.1**
SIV San Ignacio 128.89 56 PKP **PKPdf 02 30 33.9 +0.1**
SIV San Ignacio 128.89 56 PKP **PKPdf 02 30 33.9 +0.1**
comp=Z,0.7nm,0.5s,baz=335,slow=7.2,SNR=4.1
VNDA Vanda 133.00 180 PKP **PKPdf 02 30 41.1 +1.4**
VNDA Vanda 133.00 180 PKP **PKPdf 02 30 41.1 +1.4**
comp=Z,0.9nm,0.5s,baz=315,slow=6.0,SNR=6.1
BDFB Brasilia 134.12 41 PKP **PKPdf 02 30 44.5 +0.7**
BDFB Brasilia 134.12 41 PKP **PKPdf 02 30 44.5 +0.7**
comp=Z,0.0nm,0.4s,baz=0.0,slow=2.0,SNR=3.2
BOSA Boshof 138.64 292 PKPpre PKPpre 02 30 48.7
BOSA Boshof 138.64 292 PKhKP PKPpre 02 30 48.7
comp=Z,2.4nm,0.4s,baz=270,slow=12,SNR=7.7
MAW Mawson 142.51 219 PKPpre PKPpre 02 30 55.2
MAW Mawson 142.51 219 PKhKP PKPpre 02 30 55.2
comp=Z,4.1nm,0.7s,baz=28,slow=3.4,SNR=7.0
QSPA South Pole Qui 145.50 180 *e*PKPdf PKPdf 02 31 02.6 0.0
QSPA pPKPbc pPKPbc 02 31 40.2 +0.5
QSPA South Pole Qui 145.50 180 PKPbc **PKPdf 02 31 02.7 0.0**
comp=Z,14nm,0.6s,baz=350,slow=1.4,SNR=47
QSPA pPKPbc pPKPbc 02 31 40.2 +0.5
comp=Z,23nm,0.9s,baz=328,slow=2.8,SNR=5.7
SYO Syowa Base 151.21 220⇑ *e*X PKiKP 02 31 17.4 -0.9
SYO Syowa Base 151.21 220⇓ *e*PKiKP PKiKP 02 31 21.4 +3.1
SNAA Sanae 162.65 197 *e*P PKPab 02 32 15.8 0.0
SNAA Sanae 162.65 197 PKPab **PKPab 02 32 15.7 -0.1**
SNAA Sanae 162.65 197 PKPab **PKPab 02 32 15.7 -0.1**
comp=Z,2.5nm,0.8s,baz=158,slow=3.2,SNR=14
VNA3 Neumayer Olymp 163.96 191 *e*P PKPab 02 32 21.4 -0.1
VNA2 Neumayer--Watz 163.99 194 *e*P PKPab 02 32 22.0 +0.4
VNA1 Neumayer--Stat 164.36 193 *e*P PKPab 02 32 23.7 +0.5

GUC 23 02:22:42.4±0.8, 32°.46S×71°.83W, h27km±4km, MD3.5, ML3.0, 7C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.59**	**165**	⇓*i*P		Pb	02 22 53.5	-0.7
CHNG	**Los Chungos**	**0.64**	**26**	⇓*i*P		Pb	02 22 54.5	-0.4
CHNG				*i* S		Sb	02 23 03.9	+0.4
CHNG				AML		AML	02 23 06.2	
comp=N,490nm,0.3s								
JACH	**Jahuel**	**1.07**	**103**	⇓*i*P		Pn	02 23 01.3	-0.4
JACH				*i* S		Sn	02 23 15.7	-0.2
PEL	**Peldehue**	**1.18**	**126**	⇑*i*P		Pn	02 23 03.2	-0.1
PEL				*i* S		Sb	02 23 19.0	-0.2
PEL				AML		AML	02 23 20.1	
comp=E,2μm,0.3s								
SAN	**Santiago**	**1.40**	**136**	⇑*i*P		Pn	02 23 06.8	+0.6
SAN				*i* S		Sb	02 23 24.7	-0.7
SAN				AML		AML	02 23 29.6	
comp=N,474nm,0.3s								
STL	**Santa Lucia**	**1.40**	**135**	*e*P		Pn	02 23 06.3	+0.1
STL				*e*S		Sn	02 23 24.6	+0.7
STL				AML		AML	02 23 24.8	
comp=N,95nm,0.2s								
TACH	**Talagante**	**1.41**	**148**	⇑*i*P		Pn	02 23 06.8	+0.4
TACH				*e*S		Sb	02 23 25.3	-0.4
CLCH	**Cerro Calan**	**1.44**	**131**	⇑*i*P		Pn	02 23 07.3	+0.5
CLCH				*e*S		Sb	02 23 26.0	-0.6
CLCH				AML		AML	02 23 27.5	
comp=N,530nm,0.5s								
CLCH				AML		AML	02 23 28.0	
comp=N,738nm,0.5s								
CMCH	**Combarbala**	**1.46**	**29**	⇑*i*P		Pn	02 23 07.1	-0.1
CMCH				*i* S		Sb	02 23 26.8	-0.5
CMCH				AML		AML	02 23 32.7	
comp=E,1μm,0.4s								
ANTU	**Antumapu**	**1.50**	**138**	*e*P		Pn	02 23 08.4	+0.7
ANTU				*e*S		Sn	02 23 27.2	+0.8
PCH	**Pirque**	**1.60**	**137**	⇑*i*P		Pn	02 23 10.1	+0.9
PCH				*i* S		Sb	02 23 31.5	0.0
SJCH	**San Jose de Ma**	**1.71**	**134**	*e*P		Pn	02 23 10.6	-0.1
SJCH				*e*S		Sn	02 23 32.4	+0.6
SJCH				AML		AML	02 23 36.8	
comp=N,182nm,0.2s								
CHCH	**Chadas Angostu**	**1.77**	**147**	⇑*i*P		Pn	02 23 12.3	+0.9
CHCH				*e*S		Sb	02 23 35.8	-0.4
LMEL	**Las Melosas**	**1.95**	**136**	⇓*i*P		Pn	02 23 15.1	+1.1
LMEL				*i* S		Sb	02 23 41.0	-0.5
CACH	**El Canelo**	**1.95**	**149**	⇓*i*P		Pn	02 23 15.4	+1.4
CACH				*e*S		Sb	02 23 41.5	0.0

IDC 23 02:25:27.7±1.2, 19°.03N×120°.71E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.4/24, mbtmp3.3/4, 1D, Error ellipse: s-maj=80.1km s-min=25.4km az=70.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.70**	**187**	⇓*i*P		Sb	02 25 55.0	+1.8
WRA	**Warramunga Arr**	**40.97**	**160**	P		P	02 33 11.9	-0.6
0.8nm,0.5s,baz=343,slow=9.1,SNR=15								
MKAR	**Makanchi Array**	**41.86**	**320**	P		P	02 33 19.0	-0.6
0.1nm,0.5s,baz=120,slow=8.9,SNR=3.3								
ASAR	**Alice Springs**	**44.35**	**163**	P		P	02 33 40.4	+0.5
0.2nm,0.4s,baz=341,slow=6.3,SNR=4.8								
YKA	**Yellowknife Ar**	**87.88**	**22**	P		P	02 38 19.3	+0.3
0.1nm,0.5s,baz=304,slow=4.7,SNR=3.4								

*CSEM **23** 02:56:03.8±0.1, 39°.14N×29°.09E, h2km, ML3.6, Error ellipse: s-maj=2.2km s-min=2.0km az=76.0*
*DDA **23** 02:56:03.0, 39°.14N×29°.06E, h8km, ML3.6*

*ISK **23** 02:56:03.3, 39°.15N×29°.10E, h4km, MD3.3*
ISC 23 02:56:02.5±1.1, 39°.14N±0°.02×29°.06E±0°.02, h5km±10km, n116, σ1s02/133, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.28**	**251**	*i* P		Pb	02 56 09.1	-1.0
DEMI				*i* S		Sg	02 56 13.1	+1.2
DEMI	**Demirci**	**0.28**	**251**	*i* P		Pb	02 56 09.1	-1.0
DEMI				*i* S		Sg	02 56 13.1	+1.2
TVSB	**Tavsanli**	**0.44**	**45**	*e*PG		Pb	02 56 12.0	-0.8
TVSB				*e*SG		Sb	02 56 18.0	-1.8
TVSB	**Tavsanli**	**0.44**	**45**	*e*Pg		Pb	02 56 12.0	-0.8
TVSB				*e*Sg		Sb	02 56 18.0	-1.8
DST	**Dursunbey**	**0.58**	**324**	*e*PG		Pb	02 56 14.6	-0.6
DST				*e*SG		Sb	02 56 23.1	-0.6
DST	**Dursunbey**	**0.58**	**324**	*e*Pg		Pb	02 56 14.6	-0.6
DST				*e*Sg		Sb	02 56 23.1	-0.6
DURS	**Dursunbey**	**0.65**	**316**	*i* P		Pb	02 56 15.8	-0.6
DURS	**Dursunbey**	**0.65**	**316**	*i* P		Pb	02 56 15.8	-0.6
MANT	**Manisa**	**0.75**	**212**	*i* P		Pb	02 56 17.5	-0.7
MANT				*i* S		Sg	02 56 27.0	+0.2
MANT	**Manisa**	**0.75**	**212**	*i* P		Pb	02 56 17.5	-0.7
MANT				*i* S		Sg	02 56 27.0	+0.2
ALT	**Altintas**	**0.82**	**95**	*e*PG		Pb	02 56 19.1	-0.2
ALT				*e*SG		Sb	02 56 30.7	0.0
ALT	**Altintas**	**0.82**	**95**	*e*Pg		Pb	02 56 19.1	-0.2
ALT				*e*Sg		Sb	02 56 30.7	0.0
KHL	**Karahalli**	**0.89**	**156**	*e*PG		Pb	02 56 20.5	+0.1
KHL	**Karahalli**	**0.89**	**156**	*e*Pg		Pb	02 56 20.5	+0.1
ORLT	**Orhaneli**	**0.92**	**352**	PG		Pb	02 56 21.0	+0.1
ORLT	**Orhaneli**	**0.92**	**352**	*i* Pg		Pb	02 56 21.0	+0.1
AKHS	**Akhisar**	**1.00**	**256**	*i* P		Pb	02 56 22.7	+0.3
AKHS				*i* S		Sn	02 56 38.0	+0.3
AKHS	**Akhisar**	**1.00**	**256**	*i* P		Pb	02 56 22.7	+0.3
AKHS				*i* S		Sn	02 56 38.0	+0.3
AKS	**Akhisar**	**1.01**	**256**	*e*PG		Pn	02 56 23.1	-0.2
AKS	**Akhisar**	**1.01**	**256**	*e*Pg		Pn	02 56 23.1	-0.2
BALB	**Balikesir**	**1.04**	**299**	*e*PG		Pn	02 56 24.8	+1.0
BALB	**Balikesir**	**1.04**	**299**	*e*Pg		Pn	02 56 24.8	+1.0
MDNY	**Mudanya-Bursa**	**1.24**	**354**	PN		Pn	02 56 27.4	+1.0
MDNY	**Mudanya-Bursa**	**1.24**	**354**	*i* Pn		Pn	02 56 27.4	+1.0
BALY	**Balya**	**1.27**	**299**	*i* P		Pn	02 56 27.4	+0.5
BALY				*i* S		Sn	02 56 44.3	0.0
BALY	**Balya**	**1.27**	**299**	*i* P		Pn	02 56 27.4	+0.5
BALY				*i* S		Sn	02 56 44.3	0.0
SHUT	**Suhut-Afyon**	**1.30**	**116**	*e*PN		Pn	02 56 28.1	+0.7
SHUT	**Suhut-Afyon**	**1.30**	**116**	*e*Pn		Pn	02 56 28.1	+0.7
GEMT	**Gemlik**	**1.30**	**4**	*e*PN		Pn	02 56 27.7	+0.4
GEMT	**Gemlik**	**1.30**	**4**	*e*Pn		Pn	02 56 27.7	+0.4
DENT	**Denizli**	**1.38**	**181**	*e*PN		Pb	02 56 30.1	+1.3
DENT	**Denizli**	**1.38**	**181**	*e*Pn		Pb	02 56 30.1	+1.3
GONE	**Gonen-Balikesi**	**1.40**	**311**	*e*PN		Pb	02 56 29.8	+0.7
GONE	**Gonen-Balikesi**	**1.40**	**311**	*e*Pn		Pb	02 56 29.8	+0.7
ARMT	**Armutlu**	**1.44**	**354**	*e*PN		Pb	02 56 31.0	+1.3
ARMT	**Armutlu**	**1.44**	**354**	*e*Pn		Pb	02 56 31.0	+1.3
ESKT	**Eskisehir**	**1.44**	**74**	*e*PN		Pb	02 56 30.5	+0.7
ESKT	**Eskisehir**	**1.44**	**74**	*e*Pn		Pb	02 56 30.5	+0.7
DNZL	**Cakiroluk**	**1.44**	**180**	*i* P		Pb	02 56 30.3	+0.3
DNZL				*i* S		Sg	02 56 44.3	-4.6
DNZL	**Cakiroluk**	**1.44**	**180**	*i* P		Pb	02 56 30.3	+0.3
YLV	**Yalova**	**1.45**	**9**	*e*PN		Pb	02 56 31.1	+1.1
YLV	**Yalova**	**1.45**	**9**	*e*Pn		Pb	02 56 31.1	+1.1
GPA	**Golpazari**	**1.50**	**39**	PN		Pg	02 56 31.4	+0.1
GPA	**Golpazari**	**1.50**	**39**	*i* Pn		Pg	02 56 31.4	+0.1
BNT	**Bandirma**	**1.50**	**325**	*e*PN		Pg	02 56 32.0	+0.6
BNT	**Bandirma**	**1.50**	**325**	*e*Pn		Pg	02 56 32.0	+0.6
EDC	**Edincik**	**1.52**	**323**	*e*PN		Pg	02 56 32.6	+0.9
EDC	**Edincik**	**1.52**	**323**	*e*Pn		Pg	02 56 32.6	+0.9
IZM	**Izmir**	**1.59**	**243**	*e*PN		Pg	02 56 33.4	+0.5
IZM	**Izmir**	**1.59**	**243**	*e*Pn		Pg	02 56 33.4	+0.5
GULT	**Gulveren**	**1.71**	**40**	*e*PN		Pg	02 56 34.6	-0.7
GULT	**Gulveren**	**1.71**	**40**	*e*Pn		Pg	02 56 34.6	-0.7
AYDN	**Tasoluk**	**1.74**	**213**	*i* P		Pg	02 56 35.6	-0.3
AYDN				*i* S		Sb	02 56 56.9	-0.2
AYDN	**Tasoluk**	**1.74**	**213**	*i* P		Pg	02 56 35.6	-0.3
AYDN				*i* S		Sb	02 56 56.9	-0.2
ISP	**Isparta**	**1.74**	**138**	*e*PN		Pg	02 56 35.5	-0.4
ISP	**Isparta**	**1.74**	**138**	*e*Pn		Pg	02 56 35.5	-0.4
BLCB	**Balcova**	**1.75**	**245**	*e*PN		Pg	02 56 35.2	-0.8
BLCB	**Balcova**	**1.75**	**245**	*e*Pn		Pg	02 56 35.2	-0.8
HRT	**Hereke**	**1.75**	**15**	*e*PN		Pg	02 56 35.2	-0.7
HRT	**Hereke**	**1.75**	**15**	*e*Pn		Pg	02 56 35.3	-0.7
SPNC	**Sapanca-Adapaz**	**1.82**	**31**	*e*PN		Pb	02 56 36.0	-0.2
SPNC	**Sapanca-Adapaz**	**1.82**	**31**	*e*Pn		Pb	02 56 36.1	-0.2
MRMT	**Marmara Adasi**	**1.85**	**323**	*e*PN		Pg	02 56 37.1	-0.9
MRMT	**Marmara Adasi**	**1.85**	**323**	*e*Pn		Pg	02 56 37.1	-0.9
AYVA	**Ayvalik**	**1.85**	**276**	*i* P		Pg	02 56 38.2	+0.3
AYVA				*i* S		Sg	02 57 04.0	+2.0
AYVA	**Ayvalik**	**1.85**	**276**	*i* P		Pg	02 56 38.2	+0.3
KRBG	**Karabiga-Canak**	**1.85**	**313**	*e*PN		Pb	02 56 37.1	+0.2
KRBG	**Karabiga-Canak**	**1.85**	**313**	*e*Pn		Pb	02 56 37.0	+0.2
ISK	**Istanbul-Kandi**	**1.93**	**360**	*e*PN		Pb	02 56 38.3	+0.2
ISK	**Istanbul-Kandi**	**1.93**	**360**	*e*Pn		Pb	02 56 38.3	+0.2
SVRH	**Sivrihisar-ESK**	**1.94**	**80**	*e*PN		Pb	02 56 36.9	+0.8
SVRH	**Sivrihisar-ESK**	**1.94**	**80**	*e*Pn		Pn	02 56 36.9	+0.8
GLHS	**Glhisar (BURDU**	**2.01**	**170**	*e*PN		Pb	02 56 39.5	0.0
GLHS	**Glhisar (BURDU**	**2.01**	**170**	*e*Pn		Pb	02 56 39.5	0.0
BGKT	**Bogazkoy**	**2.06**	**354**	*e*PN		Pb	02 56 39.2	-1.1
BGKT	**Bogazkoy**	**2.06**	**354**	*e*Pn		Pb	02 56 39.2	-1.1
BCK	**Bucak**	**2.06**	**144**	*e*PN		Pb	02 56 39.5	-0.9
BCK	**Bucak**	**2.06**	**144**	*e*Pn		Pb	02 56 39.5	-0.9
SILT	**Sile**	**2.06**	**12**	*e*PN		Pb	02 56 39.8	-0.6
SILT	**Sile**	**2.06**	**12**	*e*Pn		Pb	02 56 39.8	-0.6
URLA	**Izmir**	**2.08**	**249**	*i* P		Pg	02 56 43.4	+1.1
YER	**Yerkesik**	**2.09**	**197**	*e*PN		Pb	02 56 41.2	+0.4
YER	**Yerkesik**	**2.09**	**197**	*e*Pn		Pb	02 56 41.3	+0.4
MLSB	**Milas**	**2.10**	**209**	*e*PN		Pb	02 56 40.6	-0.4
MLSB	**Milas**	**2.10**	**209**	*e*Pn		Pb	02 56 40.6	-0.4
RKY	**Sarkoy-Tekirda**	**2.12**	**318**	*e*PN		Pb	02 56 40.9	-0.6
RKY	**Sarkoy-Tekirda**	**2.12**	**318**	*e*Pn		Pb	02 56 40.9	-0.6
CTKS	**Kestanelik-??a**	**2.14**	**349**	*e*PN		Pb	02 56 40.3	-1.4
CTKS	**Kestanelik-??a**	**2.14**	**349**	*e*Pn		Pb	02 56 40.3	-1.4
MFT	**Murefte**	**2.14**	**321**	*e*PN		Pb	02 56 41.5	-0.3
MFT	**Murefte**	**2.14**	**321**	*e*Pn		Pb	02 56 41.5	-0.3
LPK	**Lapseki**	**2.16**	**306**	*e*PN		Pb	02 56 40.9	-1.2
LPK	**Lapseki**	**2.16**	**306**	*e*Pn		Pb	02 56 40.9	-1.2
SLVT	**Silivri**	**2.19**	**343**	*

IDC ***23*** *03:59:52.2±4.8, 9.90S×119.83E±48km, mb3.1/1, mb1 3.7/5, mb1mx3.4/21, mbtmp3.5/5, ML3.6/4, Error ellipse: s-maj=128.2km s-min=22.5km az=63.0*

ISC 23 03:59:53.5±1.4, 9.89S±0.08×120.2E±0.2, h35km, n11, σ1°67/11, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**0.26**	**33**	S	**Sn**	**04 00 07.0**	**+1.0**
	baz=0.5,SNR=9.4						
KAPI	**Kappang**	**4.86**	**355**	P	**Pn**	**04 01 02.8**	**-1.4**
	2.4nm,0.3s,baz=198,slow=12,SNR=9.5						
KAPI				S	Sn	04 01 53.2	-6.1
	2.8nm,0.3s,baz=63,slow=23,SNR=9.7						
PCI	**Palu**	**8.93**	**358**	S	Sn	04 03 22.1	-18
	baz=9.1,SNR=6.6						
FITZ	**Fitzroy Crossi**	**9.74**	**148**	P	**Pn**	**04 02 12.5**	**+1.2**
	0.5nm,0.3s,baz=330,slow=12,SNR=35						
FITZ				S	**Sn**	**04 03 56.2**	**-3.3**
	0.9nm,0.3s,baz=187,slow=21,SNR=12						
FITZ	**Fitzroy Crossi**	**9.74**	**148**	P	**Pn**	**04 02 12.8**	**+1.5**
	baz=9.8,SNR=15						
FITZ				S	**Sn**	**04 03 58.4**	**-1.1**
	baz=9.8,SNR=4.8						
MTN	**Manton Dam**	**11.16**	**106**	P	**Pn**	**04 02 31.5**	**+0.9**
	baz=11,SNR=3.7						
MTN				S	Sn	04 04 27.6	-6.6
	baz=11,SNR=8.4						
KDU	**Kakadu**	**12.40**	**104**	P	**Pn**	**04 02 48.8**	**+1.1**
	baz=13,SNR=4.2						
MEEK	**Meekatharra**	**16.72**	**185**	P	**P**	**04 03 48.3**	**+1.0**
	baz=17,SNR=3.5						
WRA	**Warramunga Arr**	**16.95**	**128**	P	**Pn**	**04 03 48.6**	**+0.5**
	0.2nm,0.3s,baz=301,slow=14,SNR=13						
WRA				S	Sn	04 06 45.6	-10
	0.2nm,0.3s,baz=306,slow=24,SNR=5.7						
ASAR	**Alice Springs**	**18.98**	**138**	P	**P**	**04 04 12.4**	**+0.2**
	0.3nm,0.3s,baz=322,slow=12,SNR=7.3						
ASAR				S	Sn	04 07 38.1	-6.5
	0.1nm,0.3s,baz=316,slow=25,SNR=2.6						
MKAR	**Makanchi Array**	**65.76**	**332**	P	P	04 10 31.2	-3.7
	0.2nm,0.5s,baz=130,slow=7.3,SNR=3.6						

IDC 23 04:20:25.0±1.6, 1.02N×126.00E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.4/23, mbtmp3.4/4, Error ellipse: s-maj=178.2km s-min=21.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.38**	**159**	P	P	04 25 25.2	+0.1
	0.2nm,0.3s,baz=338,slow=10,SNR=9.5						
ASAR	**Alice Springs**	**25.71**	**163**	P	P	04 25 56.9	-0.3
	0.4nm,0.6s,baz=342,slow=7.8,SNR=6.0						
MKAR	**Makanchi Array**	**59.37**	**327**	P	P	04 30 29.3	+0.1
	0.7nm,0.7s,baz=115,slow=8.3,SNR=4.3						
MKAR				PcP	PcP	04 31 17.4	+0.2
	0.3nm,0.7s,baz=107,slow=5.0,SNR=2.2						
KURBB	**Kurchatov Arra**	**63.63**	**328**	P	P	04 30 57.5	-0.4
	0.4nm,0.6s,baz=124,slow=6.6,SNR=7.0						

IDC ***23*** *04:43:52.2±3.1, 58.67S×25.56W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/16, mbtmp4.0/3, Error ellipse: s-maj=111.2km s-min=35.3km az=168.0*

ISC 23 04:43:57.3±1.0, 58.8S±0.2×25.6W±0.2, h35km, n9, σ1°18/9, mb4.0/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.96**	**156**	*e*Pn	**P**	**04 47 19.4**	**-0.4**
VNA3	**Neumayer Olymp**	**14.15**	**159**	*e*Pn	**P**	**04 47 21.4**	**-0.5**
VNA2	**Neumayer--Watz**	**14.36**	**155**	*e*Pn	**P**	**04 47 23.5**	**-0.8**
SNAA	**Sanae**	**15.92**	**153**	*e*Pn	**P**	**04 47 44.3**	**+2.6**
PLCA	**Paso Flores**	**33.36**	**283**	P	**P**	**04 50 32.2**	**+0.3**
	2.0nm,0.8s,baz=145,slow=1.8,SNR=6.3						
LPAZ	**La Paz**	**52.63**	**305**	P	**P**	**04 53 08.1**	**-0.3**
	0.5nm,0.4s,baz=149,slow=10,SNR=7.2						
TORD	**Torodi Ar. Bea**	**75.05**	**28**	P	**P**	**04 55 34.9**	**-0.2**
	1.6nm,0.5s,baz=199,slow=6.4,SNR=26						
YKA	**Yellowknife Ar**	**138.72**	**315**	PKP	**PKPdf**	**05 03 17.9**	**+0.1**
	1.1nm,0.7s,baz=129,slow=2.2,SNR=31						
ILAR	**Eielson Array**	**152.50**	**307**	PKPbc	**PKPbc**	**05 03 48.4**	**+0.3**
	0.6nm,0.8s,baz=147,slow=2.3,SNR=8.8						

ISCJB ***23*** *05:14:18.9±0.4, 38.50N±0.03×21.37E±0.03, h21km±5km, Error ellipse: s-maj=4.9km s-min=3.6km az=175.2*
CSEM ***23*** *05:14:18.4±0.2, 38.53N×21.37E, h2km, ML2.6/4*
ATH ***23*** *05:14:18.4, 38.50N×21.36E, h20km±2km, MD2.9/13*
THE ***23*** *05:14:18.5, 38.52N×21.38E, h17km±1km, ML2.6/4, Error ellipse: s-maj=1.4km s-min=0.5km az=197.0*

ISC 23 05:14:18.6±1.0, 38.50N±0.02×21.38E±0.02, h13km±11km, n50, σ0°56/80, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.39**	**124**	P	**Pg**	**05 14 26.1**	**-0.2**
UPR				S	**Sb**	**05 14 33.3**	**+0.2**
UPR	**University Cam**	**0.39**	**124**	P	**Pg**	**05 14 26.1**	**-0.2**
UPR				S	**Sb**	**05 14 33.3**	**+0.2**
EFP	**Efpalio**	**0.42**	**100**	P	**Pg**	**05 14 26.5**	**-0.4**
EFP				S	**Sb**	**05 14 34.0**	**-0.1**
EFP	**Efpalio**	**0.42**	**100**	P	**Pg**	**05 14 26.5**	**-0.4**
EFP				S	**Sb**	**05 14 34.0**	**-0.1**
PSA1	**Psathopyrgos**	**0.43**	**113**	*e*PB	**Pg**	**05 14 27.2**	**0.0**
RLS	**Riolos of Patr**	**0.45**	**171**	*e*PB	**Pg**	**05 14 27.8**	**+0.4**
RLS				*e*SB	**Sb**	**05 14 34.7**	**-0.1**
RLS	**Riolos of Patr**	**0.45**	**171**	*e*Pb	**Pg**	**05 14 27.8**	**+0.4**
RLS				*e*Sb	**Sb**	**05 14 34.7**	**-0.1**
EVR	**Evrytania**	**0.54**	**39**	*e*PN	**Pg**	**05 14 28.5**	**-0.7**
EVR				*e*SN	**Sb**	**05 14 37.8**	**+0.2**
EVR	**Evrytania**	**0.54**	**39**	*e*Pn	**Pg**	**05 14 28.5**	**-0.7**
EVR				*e*Sn	**Sb**	**05 14 37.8**	**+0.2**
LAKA	**Lakka**	**0.54**	**118**	P	**Pg**	**05 14 28.6**	**-0.5**
LAKA				S	**Sb**	**05 14 37.3**	**-0.2**
LAKA	**Lakka**	**0.54**	**118**	*e*PN	**Pg**	**05 14 29.1**	**0.0**
LAKA				*e*SN	**Sb**	**05 14 37.4**	**-0.1**
LAKA	**Lakka**	**0.54**	**118**	P	**Pg**	**05 14 28.6**	**-0.5**
LAKA	**Lakka**	**0.54**	**118**	*e*Pn	**Pg**	**05 14 29.1**	**0.0**
LAKA				S	**Sb**	**05 14 37.3**	**-0.2**
TRIZ	**Trizonia**	**0.56**	**103**	P	**Pg**	**05 14 29.0**	**-0.6**
TRIZ				S	**Sb**	**05 14 38.5**	**+0.3**
TRIZ	**Trizonia**	**0.56**	**103**	*e*PN	**Pg**	**05 14 29.4**	**-0.2**
TRIZ	**Trizonia**	**0.56**	**103**	P	**Pg**	**05 14 29.0**	**-0.6**
TRIZ	**Trizonia**	**0.56**	**103**	*e*Pn	**Pg**	**05 14 29.4**	**-0.2**
TRIZ				S	**Sb**	**05 14 38.5**	**+0.3**
KALE	**Kalithea**	**0.61**	**100**	P	**Pg**	**05 14 30.1**	**-0.4**
KALE				S	**Sb**	**05 14 39.4**	**-0.2**
KALE	**Kalithea**	**0.61**	**100**	*e*PB	**Pg**	**05 14 30.1**	**-0.4**
KALE				*e*SN	**Sb**	**05 14 39.4**	**-0.2**
KALE	**Kalithea**	**0.61**	**100**	P	**Pg**	**05 14 30.1**	**-0.4**
KALE				S	**Sb**	**05 14 39.4**	**-0.2**
KFL	**Anninata**	**0.61**	**230**	P	**Pg**	**05 14 30.3**	**-0.1**
KFL				S	**Sb**	**05 14 40.1**	**+0.6**
KFL	**Anninata**	**0.61**	**230**	P	**Pg**	**05 14 30.3**	**-0.1**
KFL				S	**Sb**	**05 14 40.1**	**+0.6**
LKD2	**Lefkada island**	**0.64**	**297**	P	**Pg**	**05 14 30.5**	**-0.5**
LKD2				S	**Sg**	**05 14 39.7**	**+0.3**
LKD2	**Lefkada island**	**0.64**	**297**	P	**Pg**	**05 14 30.5**	**-0.5**
LKD2				S	**Sg**	**05 14 39.7**	**+0.3**
VLS	**Valsamata**	**0.70**	**243**	*e*PB	**Pg**	**05 14 31.4**	**-0.8**
VLS				*e*SN	**Sb**	**05 14 42.8**	**+0.6**
VLS	**Valsamata**	**0.70**	**243**	*e*Pb	**Pg**	**05 14 31.4**	**-0.8**
VLS				*e*Sn	**Sb**	**05 14 42.8**	**+0.6**
MAKR	**Makrakomi, Fth**	**0.78**	**49**	P	**Pg**	**05 14 33.3**	**-0.5**
MAKR	**Makrakomi, Fth**	**0.78**	**49**	P	**Pg**	**05 14 33.3**	**-0.5**
DSF	**Desfina**	**0.91**	**95**	P	**Pb**	**05 14 35.2**	**-1.0**
DSF				S	**Sg**	**05 14 47.9**	**0.0**
DSF	**Desfina**	**0.91**	**95**	P	**Pb**	**05 14 35.2**	**-1.0**
DSF				S	**Sg**	**05 14 47.9**	**0.0**
AGG	**Agios Georgios**	**0.91**	**55**	P	**Pb**	**05 14 35.7**	**-0.6**
AGG				S	**Sb**	**05 14 48.5**	**+0.2**
AGG	**Agios Georgios**	**0.91**	**55**	P	**Pb**	**05 14 35.7**	**-0.6**
AGG				S	**Sb**	**05 14 48.5**	**+0.2**
GUR	**Goura**	**0.94**	**126**	P	**Pb**	**05 14 35.7**	**-1.2**
GUR				S	**Sg**	**05 14 50.2**	**+1.0**
GUR	**Goura**	**0.94**	**126**	P	**Pb**	**05 14 35.7**	**-1.2**
GUR				S	**Sg**	**05 14 50.2**	**+1.0**
AXAR	**Agios Charalam**	**1.04**	**75**	P	**Pb**	**05 14 37.6**	**-0.8**
AXAR	**Agios Charalam**	**1.04**	**75**	P	**Pb**	**05 14 37.6**	**-0.8**
THL	**Klokotos Trika**	**1.17**	**25**	*e*PN	**Pg**	**05 14 42.6**	**+1.4**
THL				*e*SN	**Sg**	**05 14 57.4**	**+0.9**
THL	**Klokotos Trika**	**1.17**	**25**	*e*Pn	**Pg**	**05 14 42.6**	**+1.4**
THL				*e*Sn	**Sg**	**05 14 57.4**	**+0.9**
LKR	**Lokris**	**1.28**	**83**	*e*PN	**Pn**	**05 14 42.2**	**0.0**
LKR	**Lokris**	**1.28**	**83**	*e*Pn	**Pn**	**05 14 42.2**	**0.0**
ITM	**Ithomi**	**1.39**	**162**	*e*PN	**Pb**	**05 14 44.4**	**0.0**
ITM	**Ithomi**	**1.39**	**162**	*e*Pn	**Pb**	**05 14 44.4**	**0.0**
NEO	**Neokhori**	**1.65**	**60**	*e*PN	**Pb**	**05 14 49.0**	**+0.1**
NEO	**Neokhori**	**1.65**	**60**	*e*Pn	**Pb**	**05 14 49.0**	**+0.1**
KEK	**Kerkira**	**1.73**	**315**	*e*PN	**Pb**	**05 14 49.2**	**-0.9**
KEK	**Kerkira**	**1.73**	**315**	*e*Pn	**Pb**	**05 14 49.3**	**-0.9**
NAIG	**Nisos Aigina**	**1.82**	**113**	*e*PN	**Pb**	**05 14 51.9**	**+0.2**
NAIG	**Nisos Aigina**	**1.82**	**113**	*e*Pn	**Pb**	**05 14 51.9**	**+0.2**
VLI	**Veliai**	**2.17**	**145**	*e*PN	**Pb**	**05 14 57.2**	**-0.4**
VLI	**Veliai**	**2.17**	**145**	*e*Pn	**Pb**	**05 14 57.3**	**-0.4**

IDC ***23*** *05:53:46.5±2.6, 20.22S×177.82W, h519km±26km, mb3.2/11, mb1 3.5/12, mb1mx3.3/21, mbtmp3.2/12, Error ellipse: s-maj=43.5km s-min=15.0km az=149.0*
ISCJB ***23*** *05:53:50.2±1.1, 20.25S±0.3×178.1W±0.2, h569km, mb3.7/11, Error ellipse: s-maj=40.5km s-min=14.0km az=148.5*
AUST ***23*** *05:54:34.1, 20.36S×176.39E, h600km*

ISC 23 05:53:51.1±0.8, 20.25S±0.2×178.0W±0.1, h569km, n26, σ0°83/25, mb3.7/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**7.65**	**83**	P	**S**	**05 57 20.9**	**+0.7**
	baz=13,SNR=3.1						
AFI	**Afiamalu**	**8.62**	**44**	P	P	05 55 48.2	-7.5
	1.2nm,0.3s,baz=208,slow=19,SNR=2.4						
AFI				S	S	05 57 24.0	-14
	5.5nm,0.3s,baz=334,slow=21,SNR=8.8						
DZM	**Mont Dzumac**	**14.67**	**260**	P	**P**	**05 56 59.0**	**+1.9**
	0.4nm,0.3s,baz=92,slow=18,SNR=5.4						
CTA	**Charters Tower**	**33.56**	**264**	P	**P**	**05 59 44.6**	**-0.4**
	3.0nm,0.2s,baz=76,slow=10.0,SNR=5.3						
QLP	**Quilpie**	**35.18**	**252**	P	**P**	**05 59 58.1**	**-0.3**
	baz=30,SNR=5.2						
STKA	**Stephens Creek**	**37.95**	**244**	P	**P**	**06 00 20.8**	**-0.3**
	1.1nm,0.5s,baz=51,slow=6.5,SNR=4.3						
BBOO	**Buckleboo**	**42.71**	**243**	P	**P**	**06 00 58.3**	**-0.7**
	baz=38,SNR=7.8						
ASAR	**Alice Springs**	**44.62**	**256**	P	**P**	**06 01 13.6**	**-0.3**
	4.4nm,0.6s,baz=97,slow=7.5,SNR=44						
ASAR				PcP	**PcP**	**06 02 44.4**	**0.0**
	0.5nm,0.5s,baz=95,slow=4.4,SNR=4.6						
WRA	**Warramunga Arr**	**44.68**	**262**	P	**P**	**06 01 13.5**	**-0.9**
	4.2nm,0.7s,baz=96,slow=7.7,SNR=74						
KDU	**Kakadu**	**47.99**	**271**	P	**P**	**06 01 38.9**	**-0.5**
	baz=43,SNR=5.7						
MTN	**Manton Dam**	**49.20**	**270**	P	**P**	**06 01 47.8**	**-0.6**
	baz=44,SNR=3.3						
FITZ	**Fitzroy Crossi**	**53.11**	**262**	P	**P**	**06 02 16.3**	**-0.4**
	1.1nm,0.5s,baz=113,slow=7.7,SNR=7.3						
FITZ	**Fitzroy Crossi**	**53.11**	**262**	P	**P**	**06 02 16.2**	**-0.4**
	baz=48,SNR=4.2						
MJAR	**Matsushiro Arr**	**70.02**	**324**	P	**P**	**06 04 06.3**	**0.0**
	1.3nm,0.4s,baz=153,slow=6.2,SNR=4.3						
USRK	**Ussuriysk Arra**	**78.76**	**326**	P	**P**	**06 04 55.8**	**+0.6**
	1.2nm,0.5s,baz=145,slow=7.0,SNR=4.6						
TXAR	**Lajitas Array**	**86.87**	**57**	P	**P**	**06 05 37.1**	**+0.7**
	0.2nm,0.7s,baz=230,slow=6.7,SNR=3.3						
ILAR	**Eielson Array**	**88.04**	**13**	P	**P**	**06 05 39.9**	**-1.0**
	0.5nm,0.7s,baz=215,slow=5.4,SNR=12						
PDAR	**Pinedale Array**	**88.73**	**43**	P	**P**	**06 05 44.8**	**-0.2**
	0.3nm,0.6s,baz=201,slow=7.4,SNR=2.9						
CMAR	**Chiang Mai Arr**	**90.06**	**290**	P	**P**	**06 05 53.0**	**+1.7**
	0.5nm,0.3s,baz=138,slow=3.0,SNR=4.8						
MKAR	**Makanchi Array**	**111.04**	**313**	PKiKP	**PKiKP**	**06 11 19.1**	**-1.3**
	0.2nm,0.6s,baz=73,slow=2.4,SNR=2.8						
KURBB	**Kurchatov Arra**	**113.87**	**317**	PKiKP	**PKiKP**	**06 11 24.5**	**-1.1**
	0.4nm,1.1s,baz=86,slow=2.0,SNR=4.4						
BVAR	**Borovoye Array**	**118.90**	**320**	PKP	**PKPdf**	**06 11 34.7**	**-0.5**
	0.7nm,0.5s,baz=70,slow=1.7,SNR=3.7						
AKASG	**Malin Array Be**	**142.79**	**331**	PKhKP	PKPpre	06 12 14.1	
	2.8nm,0.6s,baz=41,slow=4.6,SNR=9.7						
BRTR	**Keskin Array B**	**146.69**	**313**	PKPbc	**PKPbc**	**06 12 29.5**	**-0.6**
	0.9nm,0.6s,baz=146,slow=3.6,SNR=3.9						
GERES	**GERESS Array B**	**149.95**	**345**	PKPbc	**PKPbc**	**06 12 37.8**	**0.0**
	0.4nm,0.5s,baz=324,slow=3.8,SNR=4.7						
TORD	**Torodi Ar. Bea**	**172.96**	**177**	PKP	**PKPdf**	**06 12 56.6**	**+0.3**
	0.6nm,1.0s,baz=265,slow=3.3,SNR=4.6						

IDC ***23*** *05:57:44.0±0.9, 39.41N×74.04E, h0km, mb3.7/8, mb1 3.9/11, mb1mx3.7/29, mbtmp3.7/11, ML3.6/3, MS2.9/1, Ms1 3.0/1, ms1mx2.3/39, Error ellipse: s-maj=24.3km s-min=12.6km az=86.0*
BJI ***23*** *05:57:43.5, 39.55N×73.38E, h7km, mb3.9/2, ML3.4/3*
NNC ***23*** *05:57:44.8±2.1, 39.49N×73.81E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=17.2km s-min=12.3km az=3.0*

ISC 23 05:57:48.3±0.9, 39.59N±0.07×74.06E±0.06, h28km, n35, σ1°88/30, mb3.7/8, 11C-15D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.48**	**92**	Pg	**Pn**	**05 58 12.8**	**-0.4**
KSH				Sg	**Sn**	**05 58 31.8**	**+0.1**
KSH				*s*max	*s*max		
	comp=N,510nm,0.7s						
KSH				*s*max	*s*max		
	comp=E,340nm,0.6s						
AML	**Almayashu**	**2.55**	**354**	P	**Pb**	**05 58 30.8**	**-2.8**
	SNR=103						
KZA	**Kyzart**	**2.64**	**20**	P	**Pb**	**05 58 34.2**	**-1.0**
	SNR=104						
UCH	**Uchtor**	**2.66**	**7**	P	**Pb**	**05 58 36.9**	**+1.4**
	SNR=11						
AAK	**Ala-Archa**	**3.06**	**6**	Pn	**Pb**	**05 58 39.4**	**-2.7**
	comp=E,7.2nm,0.3s,baz=164,slow=7.0,SNR=72						
AAK				Sn	**Sb**	**05 59 21.2**	**+2.1**
	comp=E,4.5nm,0.3s,baz=292,slow=19,SNR=8.6						
AAK				Lg	Lg	05 59 27.8	
	comp=E,9.5nm,0.3s,baz=302,slow=19,SNR=6.9						
EKS2	**Erkin-Say**	**3.08**	**356**	P	**Pb**	**05 58 42.7**	**+0.3**
	SNR=14						
ULHL	**Ulahol**	**3.12**	**31**	P	Pb	05 58 46.2	+2.9
	SNR=30						
KBK	**Karagaybulak**	**3.13**	**12**	P	**Pb**	**05 58 40.8**	**-2.7**
	SNR=24						
CHMS	**Chumysh**	**3.44**	**8**	P	Pb	05 58 44.6	-4.0
	SNR=6.9						
TKM2	**Tomak 2**	**3.52**	**19**	⇑Pn	Pn	05 58 44.2	+2.8
	comp=E,21nm,0.6s						
TKM2				⇑Lg	Lg	05 59 41.6	
	comp=E,48nm,0.8s						
TKM2	**Tomak 2**	**3.52**	**19**	P	**Pb**	**05 58 48.9**	**-1.2**
	SNR=19						
USP	**Ospenovka**	**3.69**	**5**	P	**Pb**	**05 58 49.7**	**-3.1**
	SNR=8.0						
KK31	**Karatay Array**	**4.41**	**324**	Pn	**Pn**	**05 58 53.5**	**+0.1**
	comp=E,5.0nm,0.5s,baz=134,slow=13,SNR=171						
KK31				⇑Pg	**Pb**	**05 59 03.3**	**-1.7**
	comp=E,9.9nm,0.4s,baz=140,slow=14,SNR=23						
KK31				⇑Sn	**Sn**	**05 59 46.1**	**+2.2**
	comp=E,7.3nm,0.3s,baz=137,slow=25,SNR=6.0						
KK31				⇑Lg	Lg	06 00 04.0	
	comp=E,20nm,0.5s,baz=134,slow=29,SNR=4.7						
MK31	**Makanchi Array**	**9.37**	**37**	⇑Lg	Lg	06 02 47.2	
	comp=E,6.6nm,1.3s,baz=231,slow=24,SNR=3.7						
MKAR	**Makanchi Array**	**9.37**	**37**	Pn	Pn	06 00 07.2	+5.7
	baz=200,slow=12,SNR=2.1						
MKAR				Lg	Lg	06 02 47.4	
	comp=E,0.1nm,0.3s,baz=226,slow=30,SNR=3.7						
KURBB	**Kurchatov Arra**	**11.47**	**14**	Lg	Lg	06 03 56.1	
	comp=E,0.0nm,0.3s,baz=202,slow=28,SNR=11						
KUR14	**Kurchatov Arra**	**11.47**	**15**	⇑Lg	Lg	06 03 51.2	
	comp=E,1.2nm,1.3s						
KURK	**Kurchatov**	**11.58**	**15**	⇓Lg	Lg	06 03 56.3	
	comp=E,21nm,1.3s						
VOSK	**Vostochnaya**	**13.31**	**352**	⇑P	**Pn**	**06 00 56.4**	**+1.2**
	comp=E,2.5nm,1.0s						
VOSK				⇓Lg	Lg	06 04 48.3	
	comp=E,3.4nm,1.2s						
BVA0	**Borovoye Array**	**13.67**	**351**	⇓P	**Pn**	**06 00 59.1**	**-1.1**
	comp=E,1.1nm,1.4s,baz=173,slow=13,SNR=10						
BVA0				⇑Lg	Lg	06 04 59.6	
	comp=E,0.3nm,0.6s						
BVAR	**Borovoye Array**	**13.67**	**351**	Pn	**Pn**	**06 00 59.2**	**-1.0**
	comp=E,0.3nm,0.3s,baz=163,slow=12,SNR=9.3						
BVAR				Sn	**Sn**	**06 03 27.3**	**-3.7**
	comp=E,0.1nm,0.3s,baz=177,slow=29,SNR=2.8						
BRVK	**Borovoye**	**13.72**	**350**	⇓Lg	Lg	06 05 00.7	
	comp=E,3.2nm,0.6s						
ZRNK	**Zerenda**	**13.81**	**347**	⇑P	**Pn**	**06 01 01.1**	**-1.0**
	comp=E,0.9nm,0.5s						
ZRNK				⇑Lg	Lg	06 05 03.8	
	comp=E,2.0nm,0.8s						
AB31	**Akbulak array**	**13.95**	**318**	P	Pn	06 00 59.2	-4.7
	comp=E,1.0nm,0.5s,baz=127,slow=13,SNR=19						
AKTO	**Aktyubinsk**	**15.66**	**319**	⇓P	**Pn**	**06 01 24.4**	**-2.5**
	comp=E,1.7nm,1.6s						
AKTO	**Aktyubinsk**	**15.66**	**319**	Pn	**Pn**	**06 01 24.6**	**-2.2**
	comp=E,0.2nm,0.3s,baz=123,slow=13,SNR=6.2						
FINES	**FINESS Array B**	**36.37**	**323**	P	**P**	**06 04 51.6**	**+1.9**
	comp=E,0.7nm,0.4s,baz=108,slow=8.9,SNR=6.6						
ARCES	**ARCESS Array B**	**39.28**	**335**	P	**P**	**06 05 16.7**	**+2.5**
	comp=E,1.5nm,0.5s,baz=111,slow=9.2,SNR=11						
NB2	**NORSAR Subarra**	**43.44**	**321**	P	**P**	**06 05 49.9**	**+1.4**
	comp=Z,1.2nm,0.7s,baz=89,slow=7.9						
NOA	**NORSAR Array B**	**43.44**	**321**	P	**P**	**06 05 49.9**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=91,slow=7.8,SNR=5.8						
NOA				LR	LR	06 27 32.7	
	comp=Z,14nm,18.8s,baz=260,slow=41						
TORD	**Torodi Ar. Bea**	**68.19**	**269**	P	**P**	**06 08 45.2**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=44,slow=6.2,SNR=5.8						
ILAR	**Eielson Array**	**71.13**	**17**	P	**P**	**06 09 04.3**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=309,slow=4.5,SNR=4.7						
YKA	**Yellowknife Ar**	**78.02**	**4**	P	**P**	**06 09 44.4**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=351,slow=5.8,SNR=8.5						
WRA	**Warramunga Arr**	**81.65**	**124**	P	**P**	**06 10 04.4**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=326,slow=5.1,SNR=14						
ASAR	**Alice Springs**	**84.11**	**127**	P	**P**	**06 10 16.5**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=316,slow=5.2,SNR=3.3						

AUST ***23*** *06:07:58.7±0.2, 0.54S×133.79E, h4km±1km, Error ellipse: s-maj=3.7km s-min=1.5km az=38.0*
IDC ***23*** *06:07:59.4±1.2, 0.69S×133.67E, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.7/23, mbtmp3.6/6, ML3.6/2, MS3.9/2, Ms1 3.9/2, ms1mx2.7/32, Error ellipse: s-maj=57.2km s-min=20.4km az=84.0*

ISC 23 06:08:03.5±1.1, 0.95S±0.07×133.58E±0.10, h29km, n15, σ3°15/13, mb3.7/4, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**2.32**	**272**	P	**Pn**	**06 08 41.2**	**+1.4**
	baz=2.6,SNR=22						
SWI				S	**Sb**	**06 09 12.0**	**-1.0**
	baz=2.6,SNR=5.6						
FAKI	**Fak Fak**	**2.37**	**214**	P	**Pb**	**06 08 44.8**	**-0.7**
	baz=2.8,SNR=14						
FAKI				S	**Sb**	**06 09 17.5**	**+3.1**
	baz=2.8,SNR=5.7						
TLE	**Tual**	**4.74**	**190**	P	Pb	06 09 19.5	-6.4
	baz=5.2,SNR=3.8						
KDU	**Kakadu**	**11.72**	**185**	P	Pn	06 10 53.4	+4.6
	baz=12,SNR=6.8						
MTN	**Manton Dam**	**12.07**	**191**	P	Pn	06 10 56.8	+3.2
	baz=13,SNR=16						
WSI	**Waingapu**	**15.80**	**236**	S	S	06 15 18.6	+26
	baz=16,SNR=4.5						
FITZ	**Fitzroy Crossi**	**18.75**	**204**	P	**Pn**	**06 12 22.9**	**+2.0**
	0.2nm,0.3s,baz=33,slow=11,SNR=7.2						
FITZ				S	**Sn**	**06 15 43.4**	**-6.5**
	0.1nm,0.3s,baz=195,slow=20,SNR=3.0						
FITZ	**Fitzroy Crossi**	**18.75**	**204**	P	Pn	06 12 26.0	+5.2
	baz=19,SNR=5.1						
FITZ				S	**Sn**	**06 15 48.7**	**-1.3**
	baz=19,SNR=3.2						
WRA	**Warramunga Arr**	**18.90**	**178**	P	**Pn**	**06 12 24.3**	**+1.6**
	0.2nm,0.3s,baz=356,slow=11,SNR=14						
WRA				S	**Sn**	**06 15 48.3**	**-5.2**
	0.0nm,0.3s,baz=355,slow=23,SNR=2.8						
ASAR	**Alice Springs**	**22.59**	**179**	P	**P**	**06 13 04.6**	**+2.7**
	1.1nm,0.7s,baz=6.2,slow=11,SNR=9.3						
RAO	**Raoul Island**

az=164.8
IDC ***23*** *06:44:04.6±0.7,9.°15S×74.°66W,h19km±4km,mb3.9/11, mb1 4.2/15,mb1mx4.1/24,mbtmp4.0/15,ML3.9/4,MS3.0/3, Ms1 3.1/3,ms1mx2.8/29,Error ellipse: s-maj=23.4km s-min=12.6km az=63.0*
NEIC ***23*** *06:44:05.0±0.3,9.°23S×74.°71W,mb4.4/3,ML4.2(ARE), Error ellipse: s-maj=9.6km s-min=5.7km az=56.0*
NEIC Felt [II] at Puerto Inca.
ISC 23 06:44:03.9±0.4,**9.°25S**±0.°05×**74.°62W**±0.°07,**h10**km,**n56,** σ1§**49**/**72**,**mb4.1**/16,**Central Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.49**	**219**	Pn		**Pn**	**06 44 58.9**	**+0.6**
NNA				*e*Sn		**Sn**	**06 45 39.4**	**-0.4**
NNA				Sn		**Sn**	**06 45 39.9**	**0.0**
NNA	**Nana**	**3.49**	**219**	Pn		**Pn**	**06 44 58.9**	**+0.6**
	9.0nm,0.3s,baz=17,slow=12,SNR=19							
NNA				Sn		**Sn**	**06 45 39.9**	**0.0**
	65nm,0.3s,baz=165,slow=20,SNR=10							
ATAH	**Atahualpa**	**4.29**	**299**	Pn		**Pn**	**06 45 09.6**	**-0.1**
ATAH				Sn		**Sn**	**06 46 01.9**	**+2.0**
ATAH	**Atahualpa**	**4.29**	**299**	Pn		**Pn**	**06 45 09.6**	**-0.1**
	3.6nm,0.3s,baz=135,slow=13,SNR=25							
ATAH				Sn		**Sn**	**06 46 01.9**	**+2.0**
	12nm,0.3s,baz=104,slow=17,SNR=5.5							
ATAH				LR		LR	06 47 07.7	
	comp=Z,295nm,18.8s,baz=344,slow=44							
LPAZ	**La Paz**	**9.43**	**139**	*e*Pn		**Pn**	**06 46 22.9**	**+2.3**
	4.5nm,0.6s							
LPAZ				*e*Sn		Sn	06 48 53.5	+46
LPAZ				Lg		Lg	06 49 09.9	
LPAZ	**La Paz**	**9.43**	**139**	Pn		**Pn**	**06 46 22.8**	**+2.3**
	0.3nm,0.3s,baz=329,slow=15,SNR=9.8							
LPAZ				Lg		Lg	06 49 09.9	
	1.3nm,0.3s,baz=21,slow=20,SNR=5.1							
LPAZ				LR		LR	06 50 52.0	
	comp=Z,102nm,21.1s,baz=279,slow=43							
OTAV	**Otavalo**	**10.17**	**338**	*e*Pn		**Pn**	**06 46 32.0**	**+1.6**
SAML	**Samuel**	**11.30**	**89**	*e*Pn		**Pn**	**06 46 46.7**	**+1.2**
	4.1nm,0.6s							
SAML				*e*Sn		Sn	06 48 46.6	-5.3
ROSC	**El Rosal**	**14.01**	**1**	Pn		**Pn**	**06 47 23.9**	**+0.9**
ROSC				Lg		Lg	06 51 29.8	
ROSC	**El Rosal**	**14.01**	**1**	Pn		**Pn**	**06 47 24.9**	**+1.9**
	0.4nm,0.3s,baz=213,slow=14,SNR=3.3							
ROSC				Lg		Lg	06 51 29.8	
	0.5nm,0.3s,baz=269,slow=23,SNR=4.4							
ROSC				LR		LR	06 53 16.0	
	comp=Z,47nm,21.9s,baz=238,slow=40							
SIV	**San Ignacio**	**14.82**	**118**	Pn		**Pn**	**06 47 35.3**	**+1.6**
SIV				Lg		Lg	06 51 51.0	
SIV	**San Ignacio**	**14.82**	**118**	Pn		**Pn**	**06 47 35.3**	**+1.6**
	1.3nm,0.3s,baz=303,slow=14,SNR=22							
SIV				Lg		Lg	06 51 51.0	
	2.0nm,0.3s,baz=53,slow=23,SNR=3.0							
CFAA	**Coronel Fontan**	**23.02**	**166**	P		**P**	**06 49 09.8**	**+0.5**
CFAA	**Coronel Fontan**	**23.02**	**166**	P		**P**	**06 49 09.8**	**+0.5**
	0.2nm,0.6s,baz=334,slow=12,SNR=5.6							
CPUP	**Villa Florida**	**23.61**	**138**	P		**P**	**06 49 15.4**	**+0.3**
CPUP	**Villa Florida**	**23.61**	**138**	P		**P**	**06 49 15.4**	**+0.3**
	1.7nm,0.5s,baz=321,slow=13,SNR=14							
PLCA	**Paso Flores**	**31.56**	**174**	P		**P**	**06 50 26.4**	**-0.2**
PLCA	**Paso Flores**	**31.56**	**174**	P		**P**	**06 50 26.4**	**-0.2**
	2.3nm,0.9s,baz=348,slow=8.1,SNR=2.8							
TXAR	**Lajitas Array**	**47.49**	**325**	P		**P**	**06 52 38.4**	**-1.0**
TXAR				pP		**pP**	**06 52 44.8**	**+2.2**
TXAR	**Lajitas Array**	**47.49**	**325**	P		**P**	**06 52 38.4**	**-1.0**
	1.0nm,0.4s,baz=150,slow=8.8,SNR=35							
TXAR				pP		**pP**	**06 52 44.8**	**+2.2**
	0.7nm,0.5s,baz=147,slow=7.5,SNR=7.4							
PV01	**Paradox Valley**	**56.80**	**328**	*e*P		**P**	**06 53 48.0**	**-0.8**
	173nm,1.0s							
PV01				*e*pP		**pP**	**06 53 54.6**	**+2.6**
MSU	**Marysvale**	**59.01**	**326**	*e*P		**P**	**06 54 03.7**	**-0.6**
	5.8nm,1.6s							
DUG	**Dugway**	**60.55**	**327**	*e*P		**P**	**06 54 13.9**	**-0.9**
	0.9nm,0.7s							
DUG				*e*pP		**pP**	**06 54 20.7**	**+2.7**
PDAR	**Pinedale Array**	**60.80**	**331**	P		**P**	**06 54 15.1**	**-1.4**
PDAR	**Pinedale Array**	**60.80**	**331**	P		**P**	**06 54 15.1**	**-1.4**
	0.4nm,0.6s,baz=143,slow=7.5,SNR=4.5							
ULM	**Lac du Bonnet**	**62.08**	**345**	P		**P**	**06 54 22.8**	**-1.9**
ULM	**Lac du Bonnet**	**62.08**	**345**	P		**P**	**06 54 22.8**	**-1.9**
	2.3nm,0.4s,baz=164,slow=6.4,SNR=4.1							
NVAR	**Mina Array Bea**	**62.49**	**322**	P		**P**	**06 54 26.7**	**-1.3**
NVAR	**Mina Array Bea**	**62.49**	**322**	P		**P**	**06 54 26.7**	**-1.3**
	0.9nm,0.7s,baz=134,slow=7.7,SNR=9.2							
SCHQ	**Schefferville**	**64.17**	**5**	P		**P**	**06 54 37.6**	**-0.9**
SCHQ	**Schefferville**	**64.17**	**5**	P		**P**	**06 54 37.6**	**-0.9**
	4.0nm,1.1s,baz=219,slow=6.5,SNR=3.5							
MFID	**Camas Ranch**	**64.42**	**328**	*e*P		**P**	**06 54 39.6**	**-0.9**
	6.0nm,1.0s							
MFID				*e*pP		**pP**	**06 54 46.8**	**+3.0**
VNA2	**Neumayer--Watz**	**73.95**	**162**	*e*P		**P**	**06 55 40.1**	**+1.0**
SNAA	**Sanae**	**75.58**	**162**	*e*P		**P**	**06 55 49.3**	**+0.7**
YKA	**Yellowknife Ar**	**77.89**	**342**	P		**P**	**06 56 00.0**	**-1.6**
YKA				pP		**pP**	**06 56 05.1**	**+0.2**
YKA	**Yellowknife Ar**	**77.89**	**342**	P		**P**	**06 56 00.0**	**-1.6**
	1.5nm,0.8s,baz=137,slow=6.0,SNR=32							
YKA				pP		**pP**	**06 56 05.1**	**+0.2**
	2.1nm,0.8s,baz=137,slow=6.1,SNR=20							
TORD	**Torodi Ar. Bea**	**78.96**	**75**	P		**P**	**06 56 07.8**	**-0.7**
TORD	**Torodi Ar. Bea**	**78.96**	**75**	P		**P**	**06 56 07.8**	**-0.7**
	1.5nm,0.9s,baz=260,slow=4.8,SNR=6.7							
INK	**Inuvik**	**87.63**	**341**	P		**P**	**06 56 50.9**	**-1.2**
INK	**Inuvik**	**87.63**	**341**	P		**P**	**06 56 50.9**	**-1.2**
	1.7nm,0.8s,baz=137,slow=5.9,SNR=5.7							
ILAR	**Eielson Array**	**90.88**	**336**	P		**P**	**06 57 06.3**	**-1.2**
ILAR				pP		**pP**	**06 57 13.2**	**+2.4**
ILAR	**Eielson Array**	**90.88**	**336**	P		**P**	**06 57 06.3**	**-1.2**
	0.1nm,0.5s,baz=163,slow=3.8,SNR=4.8							
ILAR				pP		**pP**	**06 57 13.2**	**+2.4**
	0.9nm,1.0s,baz=156,slow=4.3,SNR=6.1							
ZALV	**Zalesovo Beam**	**132.46**	**16**	PKP		**PKPdf**	**07 03 18.1**	**-0.5**
ZALV				pPKP		**pPKPdf**	**07 03 24.2**	**+2.2**
ZALV	**Zalesovo Beam**	**132.46**	**16**	PKP		**PKPdf**	**07 03 18.1**	**-0.5**
	0.7nm,0.4s,baz=221,slow=1.8,SNR=5.0							
ZALV				pPKP		**pPKPdf**	**07 03 24.2**	**+2.2**
	0.7nm,0.5s,baz=272,slow=4.3,SNR=3.2							
KURK	**Kurchatov**	**133.12**	**23**	PKP		**PKPdf**	**07 03 19.3**	**-0.6**
KURBB	**Kurchatov Arra**	**133.16**	**23**	PKP		**PKPdf**	**07 03 19.3**	**-0.7**
	0.5nm,0.6s,baz=326,slow=3.2,SNR=2.6							
ASAR	**Alice Springs**	**137.02**	**220**	PKP		**PKPdf**	**07 03 26.3**	**-1.8**
ASAR	**Alice Springs**	**137.02**	**220**	PKP		**PKPdf**	**07 03 26.3**	**-1.8**
	0.6nm,0.6s,baz=127,slow=1.9,SNR=8.5							
MKAR	**Makanchi Array**	**137.72**	**24**	PKP		**PKPdf**	**07 03 26.7**	**-2.0**
MKAR	**Makanchi Array**	**137.72**	**24**	PKP		**PKPdf**	**07 03 26.7**	**-2.0**
	0.5nm,0.8s,baz=325,slow=1.8,SNR=4.2							
WRA	**Warramunga Arr**	**139.33**	**224**	PKP		**PKPdf**	**07 03 31.0**	**-1.4**
WRA	**Warramunga Arr**	**139.33**	**224**	PKP		**PKPdf**	**07 03 31.0**	**-1.4**
	1.3nm,0.9s,baz=127,slow=1.7,SNR=12							
KSRS	**Korea Array**	**145.31**	**328**	PKPbc		**PKPbc**	**07 03 40.2**	**-2.0**
	1.4nm,0.6s,baz=50,slow=3.3,SNR=5.7							
KSAR	**Wonju Array Be**	**145.34**	**328**	PKPbc		**PKPbc**	**07 03 40.2**	**-2.1**
FITZ	**Fitzroy Crossi**	**146.26**	**216**	PKPbc		**PKPdf**	**07 03 43.8**	**-0.9**
FITZ	**Fitzroy Crossi**	**146.26**	**216**	PKPbc		**PKPdf**	**07 03 43.8**	**-0.9**
	4.0nm,0.8s,baz=110,slow=2.9,SNR=11							

IDC ***23*** *06:47:28.4±2.4,7.°95S×107.°59E,h0km,mb3.7/6, mb1 3.8/6,mb1mx3.6/26,mbtmp3.7/6,Error ellipse: s-maj=144.6km s-min=20.1km az=49.0*
AUST ***23*** *06:47:32.0,7.°38S×107.°40E,h100km*
ISCJB ***23*** *06:47:36.1±0.5,8.°01S±0.°06×107.°77E±0.°05,h70km, mb3.6/5,Error ellipse: s-maj=8.7km s-min=5.4km az=149.0*
DJA ***23*** *06:47:36.9±0.8,8.°5S±5.°×10.°8E±.°,h17km±8km,M4.1/12, MLv4.1/12*
ISC 23 06:47:37.5±0.8,**8.°05S**±0.°06×**107.°83E**±0.°05,**h70**km,**n24,** σ1§**62**/**26**,**mb3.7**/5,**Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.49**	**358**	P		**Pn**	**06 47 49.4**	**-0.9**
CISI				S		**Sn**	**06 47 57.4**	**-2.3**
CISI	**Cisompet, Garu**	**0.49**	**358**	P		**Pn**	**06 47 49.0**	**-1.4**
	baz=0.4,SNR=161							
CLJI	**Cilicap**	**1.22**	**75**	S		**Sn**	**06 48 15.1**	**+0.3**
LEM	**Lembang**	**1.23**	**350**	P		**Pn**	**06 48 00.3**	**+1.2**
LEM	**Lembang**	**1.23**	**350**	S		Sn	06 48 00.5	-15
	baz=0.6,SNR=20							
TGJI	**Tegal**	**1.74**	**48**	P		**Pn**	**06 48 04.6**	**-1.0**
DBJI	**Dramaga**	**1.83**	**324**	P		**Pn**	**06 48 09.2**	**+2.3**
BJII	**Banjamegara**	**2.00**	**69**	P		**Pn**	**06 48 09.9**	**+0.7**
CGJI	**Cibinong**	**2.55**	**304**	P		Pn	06 48 19.8	+3.1
UGM	**Wanagama**	**2.67**	**87**	P		**Pn**	**06 48 17.9**	**-0.4**
UGM	**Wanagama**	**2.67**	**87**	P		**Pn**	**06 48 17.6**	**-0.7**
	baz=3.1,SNR=9.6							
SMRI	**Semarang**	**2.77**	**69**	P		**Pn**	**06 48 21.1**	**+1.4**
SMRI	**Semarang**	**2.77**	**69**	P		**Pn**	**06 48 20.7**	**+1.0**
	baz=3.0,SNR=3.7							
SMRI				S		**Sn**	**06 48 54.1**	**+2.0**
	baz=3.0,SNR=6.0							
XMI	**Christmas Isla**	**3.19**	**221**	P		**Pn**	**06 48 25.3**	**0.0**
	baz=3.5,SNR=11							
XMI				S		**Sn**	**06 49 03.0**	**+0.8**
	baz=3.5,SNR=4.4							
XMIS	**Christmas Isla**	**3.23**	**221**	P		**Pn**	**06 48 25.6**	**-0.4**
	baz=3.5,SNR=32							
SJI	**Sawahan**	**3.91**	**86**	P		**Pn**	**06 48 35.4**	**+0.1**
PWJI	**Pagerwojo**	**3.94**	**90**	P		**Pn**	**06 48 36.3**	**+0.8**
FITZ	**Fitzroy Crossi**	**20.00**	**122**	P		**P**	**06 52 06.1**	**+1.5**
	1.1nm,0.6s,baz=315,slow=11,SNR=4.2							
FITZ				S		**S**	**06 55 40.9**	**-4.9**
	1.1nm,0.8s,baz=330,slow=20,SNR=2.1							
WRA	**Warramunga Arr**	**28.26**	**118**	P		**P**	**06 53 25.4**	**+1.0**
	0.4nm,0.5s,baz=289,slow=12,SNR=5.4							
STKA	**Stephens Creek**	**39.33**	**132**	P		**P**	**06 55 01.7**	**+1.6**
	1.2nm,0.4s,baz=318,slow=6.9,SNR=4.2							
MKAR	**Makanchi Array**	**59.15**	**340**	P		**P**	**06 57 29.3**	**-1.7**
	0.7nm,0.6s,baz=154,slow=7.6,SNR=11							
KURBB	**Kurchatov Arra**	**63.71**	**340**	P		**P**	**06 58 00.5**	**-1.1**
	0.2nm,0.3s,baz=156,slow=5.5,SNR=4.2							
BVAR	**Borovoye Array**	**68.65**	**337**	P		**P**	**06 58 32.8**	**-0.4**
	0.7nm,0.7s,baz=131,slow=6.5,SNR=3.7							
YKA	**Yellowknife Ar**	**117.55**	**21**	PKP		**PKPdf**	**07 06 15.4**	**+0.4**
	0.1nm,0.6s,baz=335,slow=1.9,SNR=5.6							

ISCJB ***23*** *07:05:08.8±0.7,48.°28S±0.°06×75.°6W±0.°2,h10km, mb4.2/11,MS3.8/5,Error ellipse: s-maj=20.3km s-min=8.4km az=178.9*
IDC ***23*** *07:05:08.4±0.7,48.°30S×75.°72W,h0km,mb4.0/8, mb1 4.1/11,mb1mx4.0/19,mbtmp4.0/11,ML3.1/3,MS3.8/6, Ms1 3.8/6,ms1mx3.6/16,Error ellipse: s-maj=32.0km s-min=14.7km az=97.0*
NEIC ***23*** *07:05:13.6±0.4,48.°31S×75.°62W,h35km,mb4.7/5,Error ellipse: s-maj=13.4km s-min=7.0km az=95.0*
ISC 23 07:05:11.7±0.7,**48.°25S**±0.°07×**75.°5W**±0.°2,**h10**km,**n52,** σ1§**87**/**40**,**mb4.2**/**11**,**MS4.0**/5,**Southern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
USHA	**Ushuaia**	**7.91**	**149**	Pn		**Pn**	**07 07 05.8**	**-0.8**
USHA	**Ushuaia**	**7.91**	**149**	Pn		**Pn**	**07 07 05.8**	**-0.8**
	0.6nm,0.3s,baz=334,slow=19,SNR=12							
PLCA	**Paso Flores**	**8.30**	**27**	Pn		**Pn**	**07 07 13.4**	**+1.3**
PLCA				Lg		Lg	07 09 33.3	
PLCA	**Paso Flores**	**8.30**	**27**	Pn		**Pn**	**07 07 13.4**	**+1.3**
	0.1nm,0.3s,baz=217,slow=13,SNR=6.1							
PLCA				Lg		Lg	07 09 33.3	
	0.1nm,0.3s,baz=276,slow=15,SNR=5.6							
PLCA				LR		LR	07 10 28.7	
	comp=Z,717nm,18.6s,baz=5.2,slow=38							
TRQA	**Tornquist**	**14.14**	**49**	*e*Pn		**Pn**	**07 08 31.9**	**-0.2**
CFAA	**Coronel Fontan**	**17.51**	**21**	P		**Pn**	**07 09 15.2**	**-0.7**
CFAA	**Coronel Fontan**	**17.51**	**21**	P		**Pn**	**07 09 15.2**	**-0.7**
	0.0nm,0.3s,baz=199,slow=12,SNR=11							
CFAA				LR		LR	07 17 12.6	
	comp=Z,20nm,19.2s,baz=194,slow=41							
LCO	**Las Campanas**	**19.56**	**13**	*e*P		**P**	**07 09 40.9**	**+1.0**
	36nm,1.1s							
CPUP	**Villa Florida**	**26.08**	**39**	P		**P**	**07 10 44.8**	**-0.6**
CPUP	**Villa Florida**	**26.08**	**39**	P		**P**	**07 10 44.8**	**-0.6**
	1.5nm,0.6s,baz=202,slow=10,SNR=5.5							
CPUP				LR		LR	07 22 09.4	
	comp=Z,217nm,20.5s,baz=6.5,slow=39							
LPAZ	**La Paz**	**32.44**	**13**	*e*P		**P**	**07 11 41.6**	**-1.1**
	18nm,1.4s							
LPAZ				PcP		**PcP**	**07 14 27.7**	**-2.2**
LPAZ				*e*PcP		PcP	07 14 28.1	-1.7
LPAZ	**La Paz**	**32.44**	**13**	P		**P**	**07 11 42.4**	**-0.4**
	6.2nm,1.2s,baz=168,slow=4.9,SNR=10							
LPAZ				PcP		**PcP**	**07 14 27.7**	**-2.2**
	1.5nm,1.0s,baz=174,slow=4.7,SNR=3.4							
VNA3	**Neumayer Olymp**	**37.58**	**151**	*e*P		**P**	**07 12 26.2**	**+0.4**
VNA2	**Neumayer--Watz**	**38.32**	**151**	*e*P		**P**	**07 12 31.3**	**-0.7**
BDFB	**Brasilia**	**39.58**	**44**	P		**P**	**07 12 42.8**	**-0.5**
BDFB	**Brasilia**	**39.58**	**44**	P		**P**	**07 12 42.8**	**-0.5**
	3.9nm,0.7s,baz=199,slow=7.4,SNR=4.6							
BDFB				LR		LR	07 30 21.1	
	comp=Z,435nm,18.6s,baz=216,slow=38							
SNAA	**Sanae**	**39.75**	**152**	*e*P		**P**	**07 12 44.8**	**+0.7**
SNAA	**Sanae**	**39.75**	**152**	P		P	07 12 41.8	-2.4
SNAA	**Sanae**	**39.75**	**152**	P		P	07 12 41.8	-2.4
	2.1nm,1.1s,baz=262,slow=7.1,SNR=11							
SAML	**Samuel**	**40.52**	**19**	*e*P		**P**	**07 12 50.0**	**-1.0**
	11nm,1.2s							
QSPA	**South Pole Qui**	**41.99**	**180**	P		**P**	**07 13 01.8**	**-1.0**
QSPA	**South Pole Qui**	**41.99**	**180**	P		**P**	**07 13 01.7**	**-1.0**
	0.8nm,0.3s,baz=280,slow=3.4,SNR=38							
OTAV	**Otavalo**	**48.37**	**356**	*e*P		P	07 13 52.4	-1.8
	4.8nm,1.1s							
ROSC	**El Rosal**	**52.90**	**1**	P		**P**	**07 14 27.9**	**-0.4**
ROSC	**El Rosal**	**52.90**	**1**	P		**P**	**07 14 27.9**	**-0.4**
	2.3nm,0.3s,baz=126,slow=4.3,SNR=4.1							
RKT	**Rikitea**	**52.95**	**276**	*e*T		T	08 10 39.9	
	1.7nm,0.2s							
MAW	**Mawson**	**60.28**	**163**	LR		LR	07 38 46.9	
	comp=Z,126nm,21.2s,baz=127,slow=34							
TBI	**Tubuai**	**62.45**	**265**	*e*LR		LR	07 33 52.3	
	127nm,26.2s							
MEH	**Mehetia**	**65.34**	**270**	*e*T		T	08 26 10.8	
	37nm,0.2s							
TVO	**Taravao**	**66.20**	**270**	*e*T		T	08 27 15.5	
	2.4nm,0.2s							
PAE	**Paea**	**66.50**	**270**	*e*T		T	08 27 38.4	
	0.8nm,0.3s							
PPT2	**Papeete2**	**66.55**	**270**	*e*LR		LR	07 35 45.5	
	119nm,23.2s							
PPT	**Papeete**	**66.57**	**270**	LR		LR	07 38 35.1	
	comp=Z,12nm,18.3s,baz=145,slow=30							
BOSA	**Boshof**	**75.81**	**117**	LR		LR	07 45 55.4	
	comp=Z,81nm,18.7s,baz=176,slow=32							
TXAR	**Lajitas Array**	**81.27**	**335**	P		P	07 17 25.6	-2.4
TXAR	**Lajitas Array**	**81.27**	**335**	P		P	07 17 25.6	-2.4
	1.0nm,1.0s,baz=167,slow=8.2,SNR=3.6							
JCT	**Junction City**	**81.36**	**339**	*e*P		P	07 17 25.5	-2.8
	10nm,1.1s							
TORD	**Torodi Ar. Bea**	**91.34**	**72**	P		**P**	**07 18 16.7**	**-1.0**
TORD	**Torodi Ar. Bea**	**91.34**	**72**	P		**P**	**07 18 16.7**	**-1.0**
	0.6nm,0.9s,baz=223,slow=3.4,SNR=3.1							
YKA	**Yellowknife Ar**	**114.72**	**341**	PKP		PKPdf	07 23 47.5	-3.5
YKA	**Yellowknife Ar**	**114.72**	**341**	PKP		PKPdf	07 23 47.5	-3.5
	0.3nm,0.9s,baz=141,slow=2.4,SNR=3.2							
GERES	**GERESS Array B**	**123.50**	**52**	PKP		**PKPdf**	**07 24 06.9**	**-1.6**
GERES	**GERESS Array B**	**123.50**	**52**	PKP		**PKPdf**	**07 24 06.9**	**-1.6**
	0.3nm,0.3s,baz=174,slow=1.3,SNR=6.0							
ILAR	**Eielson Array**	**125.51**	**330**	PKP		**PKPdf**	**07 24 09.1**	**-2.7**
ILAR	**Eielson Array**	**125.51**	**330**	PKP		**PKPdf**	**07 24 09.1**	**-2.7**
	0.9nm,1.0s,baz=145,slow=1.1,SNR=6.8							
PETK	**Petropavlovsk-**	**146.62**	**299**	PKPbc		**PKPdf**	**07 24 50.1**	**-0.8**
PETK	**Petropavlovsk-**	**146.62**	**299**	PKPbc		**PKPdf**	**07 24 50.1**	**-0.8**
	3.3nm,0.8s,baz=101,slow=2.9,SNR=3.7							
CMAR	**Chiang Mai Arr**	**149.93**	**169**	PKPbc		**PKPdf**	**07 25 00.7**	**+3.2**
CMAR				PKPab		**PKiKP**	**07 25 05.5**	**+2.2**
CMAR	**Chiang Mai Arr**	**149.93**	**169**	PKPbc		**PKPdf**	**07 25 00.7**	**+3.2**
	0.8nm,0.3s,baz=228,slow=1.1,SNR=4.3							
CMAR				PKPab		**PKiKP**	**07 25 05.5**	**+2.2**
	1.2nm,0.5s,baz=218,slow=4.1,SNR=6.9							
AKTO	**Aktyubinsk**	**149.99**	**68**	PKPbc		**PKPdf**	**07 25 00.2**	**+3.6**
AKTO	**Aktyubinsk**	**149.99**	**68**	PKPbc		**PKPdf**	**07 25 00.2**	**+3.6**
	0.8nm,0.3s,baz=236,slow=5.0,SNR=4.1							
ABKAR	**Akbulak array**	**150.90**	**71**	*e*PKPbc		**PKPdf**	**07 25 01.8**	**+3.8**
ABKAR				*e*PKPab		**PKiKP**	**07 25 07.8**	**+3.5**

IDC 23 07:15:40.7±1.0,**30.°44N**×**108.°55E,h0**km,**mb3.8**/5, **mb1 4.0**/6,**mb1mx3.7**/28,**mbtmp3.8**/6,**ML3.9**/1,**MS3.9**/2, **Ms1 3.9**/2,**ms1mx2.8**/41,**Error ellipse: s-maj=47.6km s-min=19.9km az=60.0,Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.78**	**218**	Pn		Pn	07 19 10.9	-0.3
	0.2nm,0.3s,baz=38,slow=10,SNR=4.4							
MKAR	**Makanchi Array**	**26.05**	**316**	P		P	07 21 15.9	+0.1
	1.1nm,0.6s,baz=110,slow=11,SNR=17							
KURBB	**Kurchatov Arra**	**30.13**	**321**	P		P	07 21 51.9	-0.2
	0.2nm,0.4s,baz=128,slow=9.1,SNR=4.2							
FX1	**Attu Island--F**	**51.29**	**45**	LR		LR	07 48 05.0	
	comp=Z,156nm,20.9s,baz=72,slow=38							
WRA	**Warramunga Arr**	**55.90**	**150**	P		P	07 25 20.2	-0.3
	1.3nm,0.5s,baz=341,slow=7.9,SNR=14							
ASAR	**Alice Springs**	**59.04**	**153**	P		P	07 25 42.8	+0.1
	1.5nm,0.3s,baz=334,slow=6.9,SNR=36							
KMBO	**Kilima Mbogo**	**74.52**	**259**	LR		LR	07 58 09.8	
	comp=Z,60nm,20.2s,baz=96,slow=34							
YKA	**Yellowknife Ar**	**81.14**	**19**	P		P	07 27 57.8	0.0
	0.1nm,0.7s,baz=331,slow=4.7,SNR=3.1							

BJI ***23*** *07:37:00.1,46.°27N×152.°43E,h45km,mB5.0/31,mb4.9/42, Ms4.6/32,Ms7 4.3/34*
JMA ***23*** *07:37:00.9±0.7,46.°13N×152.°39E,h30km,M5.2*
NIED ***23*** *07:37:00,46.°10N×152.°40E,h47km,Mw4.8 Best double couple: M0 1.76000×10^16 NP1:φs324.00000°,δ86.00000°, λ41.00000°. NP2:φs231.00000°,δ49.00000°,λ175.00000°.*
ISCJB ***23*** *07:37:02.9±0.4,46.°17N±0.°03×151.°88E±0.°02,h45km±4km, mb4.9/209,MS4.3/41,Error ellipse: s-maj=5.1km s-min=2.2km az=169.0*
MOS ***23*** *07:37:03.9±0.9,46.°24N×151.°91E,h52km,mb5.2/83, MS4.1/27,Error ellipse: s-maj=6.4km s-min=4.1km az=97.2*
SKHL ***23*** *07:37:03.4±0.8,46.°09N×152.°31E,h59km±12km,mb5.6/2, mbh5.4/1,Ms4.4/3,msh5.6/2*
IDC ***23*** *07:37:03.1±3.2,46.°25N×151.°87E,h33km±23km,mb4.4/28, mb1 4.6/31,mb1mx4.6/33,mbtmp4.4/31,ML4.6/3,MS4.1/26, Ms1 4.1/26,ms1mx4.0/41,Error ellipse: s-maj=14.8km s-min=9.8km az=151.0*
NEIC ***23*** *07:37:04.7±0.5,46.°21N×151.°84E,h46km±4km,mb5.0/120, Error ellipse: s-maj=5.1km s-min=2.5km az=166.0*
GCMT ***23*** *07:37:07.4±0.3,46.°21N×152.°04E,h38km±1km,MW4.9, Moment Tensor Solution. s32,c35; s52,c63; Moment tensor: Scale 10^16Nm; Mrr2.42±.16; Mθθ-1.03±.13; Mφφ-1.39±.12; Mrθ0.89±.14; Mrφ-1.46±.08; Mθφ1.53±.10; Best double couple: M0 3.10000×10^16 NP1:φs229.00000°, δ28.00000°,λ103.00000°. NP2:φs35.00000°,δ62.00000°, λ83.00000°. Principal axes: T 3.0000, Plg72.0000°, Azm289.0000°; N 0.2300, Plg6.0000°, Azm38.0000°; P -3.2200, Plg17.0000°, Azm130.0000°; Data Used: II IU IC G CN.*
SZGRF ***23*** *07:37:14.9,48.°08N×151.°43E,h33km,mb5.2,MS4.2,Kuril Islands, Russia*
ISC 23 07:37:04.3±0.4,**46.°16N**±0.°05×**151.°93E**±0.°04,**h46**km±2km, **h46**km:**pP-P,n1031,**σ0§**94**/1114,**mb4.9**/209,**MS4.3**/41, **303C-224D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.99**	**253**	*e*PN		**Pn**	**07 37 50.8**	**+1.6**
KUR				*e*S		**Sn**	**07 38 27.0**	**+3.2**
KUR				pmax		pmax		
	comp=Z,840nm,0.6s							
KUR				pmax		pmax		
	comp=N,160nm,0.4s							
KUR				pmax		pmax		

YSS MLR MLR
comp=E,1μm,16.0s
YSS MLR MLR
comp=Z,2μm,16.0s
YSS Yuzh-Sakhalins 6.38 280 ⇓ *i*P Pn 07 38 39.6 +4.0
YSS AMB AMB 07 38 41.0
comp=Z,90nm,0.9s
YSS AMB AMB 07 38 41.0
comp=Z,50nm,0.9s
YSS AMB AMB 07 38 41.0
comp=Z,50nm,0.7s
YSS *e*S **Sn 07 39 49.6 +2.6**
YSS A A 07 39 55.0
comp=Z,90nm,1.0s
YSS *e*LR LR 07 40 38.0
YSS AMS AMS 07 41 05.0
comp=Z,1μm,16.0s
YSS AMS AMS 07 41 05.0
comp=Z,2μm,16.0s
JMP Maruseppu 6.44 254 P Pn 07 38 40.0 +3.5
JAR Ashorobuto 6.48 247 P **Pn 07 38 39.2 +2.1**
JAR *e*S **Sn 07 39 51.7 +2.1**
JOB Onbets 6.64 244 P **Pn 07 38 40.1 +0.9**
JOB *e*S **Sn 07 39 53.1 -0.4**
JKK2 Kamakawa 2 6.90 254 P Pn 07 38 46.2 +3.4
ASAJ Asahikawa 6.91 256 *e*Pn Pn 07 38 46.8 +3.8
ASAJ Asahikawa 6.91 256 P Pn 07 38 46.7 +3.8
ASAJ Asahikawa 6.91 256 Pn Pn 07 38 46.8 +3.8
comp=Z,16nm,0.3s,baz=86,slow=13,SNR=58
ASAJ LR LR 07 41 24.9
comp=Z,2μm,19.6s,baz=160,slow=38
JWK2 Keihoku 7.07 267 P Pn 07 38 51.1 +6.0
JCH Churui 7.09 243 P **Pn 07 38 45.6 +0.2**
JCH *e*S **Sn 07 40 03.4 -1.2**
UGL Uglegorsk 7.28 297 ⇑ *i*PN Pn 07 38 52.5 +4.6
UGL pmax pmax
comp=Z,180nm,0.8s
UGL MLR MLR
comp=N,2μm,20.0s
UGL MLR MLR
comp=E,2μm,20.0s
UGL Uglegorsk 7.28 297 ⇑ *i*P Pn 07 38 52.5 +4.6
UGL ⇑ *i*P Pn 07 38 52.5 +4.6
UGL AMB AMB 07 38 53.0
comp=E,180nm,0.8s
UGL AMS AMS 07 41 19.0
comp=E,2μm,20.0s
JFR Furan 7.30 249 P **Pn 07 38 50.8 +2.5**
JAB Ashibetsu 7.39 252 P Pn 07 38 53.3 +3.7
ERM Erimo 7.55 240 *c i*PN **Pn 07 38 53.1 +1.3**
ERM pmax pmax
comp=Z,108nm,1.0s
ERM Erimo 7.55 240 *e*Pn **Pn 07 38 51.4 -0.4**
ERM *e*Sn **Sn 07 40 21.8 +5.8**
JEM Erimo 7.55 240 P **Pn 07 38 52.7 +0.9**
JBT2 Biratori 2 7.63 247 P **Pn 07 38 53.6 +0.7**
JNBK Urakawa-nobuka 7.65 243 P **Pn 07 38 52.9 -0.2**
JNBK *e*S **Sn 07 40 16.3 -2.0**
TYV Tymovskoe 7.75 311 *e*P Pn 07 38 58.0 +3.6
TYV AMB AMB 07 38 58.8
comp=Z,40nm,1.0s
TYV AMB AMB 07 38 58.8
comp=Z,33nm,0.8s
TYV AMB AMB 07 38 58.8
comp=Z,46nm,0.8s
TYV AMS AMS 07 41 48.0
comp=Z,2μm,18.0s
TYV AMS AMS 07 41 48.0
comp=Z,2μm,20.0s
PEA0B Petropavlovsk- 7.89 26 *e*Pn **Pn 07 38 57.8 +1.4**
PETK Petropavlovsk- 7.89 26 PN **Pn 07 38 57.6 +1.1**
PETK pmax pmax
comp=Z,2.0nm,0.3s
PETK MLR MLR
comp=Z,418nm,20.9s
PETK Petropavlovsk- 7.89 26 Pn **Pn 07 38 57.5 +1.1**
PETK Petropavlovsk- 7.89 26 Pn **Pn 07 38 57.5 +1.1**
comp=Z,2.3nm,0.3s,baz=182,slow=14,SNR=24
PETK LR LR 07 42 00.7
comp=Z,418nm,20.9s,baz=210,slow=38
PET Petropavlovsk 8.14 30 ⇑ *i*PN **Pn 07 39 01.5 +1.8**
PET MLR MLR
comp=Z,500nm,15.0s
PET MLR MLR
comp=Z,900nm,15.0s
JKB Kayabe 8.94 245 P **Pn 07 39 10.9 +0.2**
JKB *e*S **Sn 07 40 45.8 -4.1**
JSH Shimam 9.20 252 P **Pn 07 39 16.5 +2.1**
JYM2 Yakumo 2 9.24 248 P **Pn 07 39 15.2 +0.3**
OKH Okha 9.40 325 *e*PN Pn 07 39 20.9 +3.9
OKH pmax pmax
comp=Z,900nm,4.0s
OKH MLR MLR
comp=Z,900nm,10.0s
OKH Okha 9.40 325 *e*P Pn 07 39 20.9 +3.9
OKH AMB AMB 07 39 21.6
comp=Z,900nm,4.0s
OKH AMB AMB 07 39 23.0
comp=Z,300nm,1.0s
OKH *e*S **Sn 07 41 03.2 +2.1**
OKH *e*LQ LQ 07 42 11.8
OKH AMS AMS 07 44 56.2
comp=Z,900nm,10.0s
OKH AMS AMS 07 44 56.2
comp=Z,900nm,10.0s
JSR Shiriuchi 9.52 245 P **Pn 07 39 18.4 -0.3**
JANG Nango 9.54 236 P **Pn 07 39 16.4 -2.7**
JANG *e*S Sn 07 40 57.3 -7.6
JTM Tenmabayashi 9.55 240 P **Pn 07 39 18.1 -1.0**
JTM *e*S Sn 07 40 58.1 -6.8
JTH Tanohata 9.64 233 *e*S Sn 07 40 58.2 -9.0
JOSM Okushiri--Mats 9.84 250 P **Pn 07 39 23.4 +0.3**
NKL Nikolayevsk 10.10 318 *i*P **Pn 07 39 26.0 -0.5**
NKL AMB AMB 07 39 29.0
comp=Z,95nm,1.5s
NKL AMB AMB 07 39 29.0
comp=Z,120nm,1.5s
NKL AMB AMB 07 39 29.0
comp=Z,300nm,1.5s
NKL AMB AMB 07 39 29.5
comp=Z,450nm,4.0s
NKL AMB AMB 07 39 29.5
comp=Z,500nm,4.0s
NKL *e*L L 07 42 20.0
NKL AMS AMS 07 44 00.0
comp=Z,1μm,15.0s
NKL AMS AMS 07 44 00.0
comp=Z,500nm,15.0s
NKL AMS AMS 07 44 00.0
comp=Z,2μm,15.0s
OFUJ Ofunato 10.35 230 P **Pn 07 39 27.2 -2.9**
OFUJ *e*S Sn 07 41 16.2 -8.4
JRG Rokugo 10.70 235 P **Pn 07 39 33.3 -1.6**
JIO Ouri 10.98 229 P **Pn 07 39 36.3 -2.4**
KLR Kul'dur 13.93 290 *e*P **Pn 07 40 20.0 +1.1**
KLR MLR MLR
comp=Z,2μm,13.0s
MAJO Matsushiro 14.07 232 *e*P **Pn 07 40 18.7 -2.2**
MAJO Matsushiro 14.07 232 *e*Pn **Pn 07 40 18.7 -2.2**
MAT Matsushiro 14.07 232 P **Pn 07 40 18.7 -2.2**
MJAR Matsushiro Arr 14.07 232 Pn **Pn 07 40 18.6 -2.3**
MJAR Matsushiro Arr 14.07 232 Pn **Pn 07 40 18.6 -2.3**
comp=Z,1.2nm,0.3s,baz=29,slow=13,SNR=16
MJAR LR LR 07 46 47.8
comp=Z,253nm,18.2s,baz=40,slow=42
USRK Ussuriysk Arra 14.19 269 Pn **Pn 07 40 23.8 +1.4**
comp=Z,1.8nm,0.3s,baz=86,slow=14,SNR=26
USRK LR LR 07 45 50.7
comp=Z,841nm,19.0s,baz=63,slow=37
VLA Vladivostok 14.58 265 *i*P **Pn 07 40 28.5 +0.9**
FX1 Attu Island--F 15.31 56 *e*Pn **Pn 07 40 36.0 -1.1**
FX1 *e*Sn Sn 07 43 11.9 -14
FX1 Sn Sn 07 43 12.1 -13
FX1 Attu Island--F 15.31 56 Pn **Pn 07 40 35.6 -1.5**
comp=Z,14nm,0.3s,baz=192,slow=13,SNR=32
FX1 Sn Sn 07 43 12.1 -13
comp=Z,4.1nm,0.3s,baz=248,slow=19,SNR=4.9
MDJ Mudanjiang 15.76 272 P **Pn 07 40 43.3 +0.3**
MDJ S **Sn 07 43 34.0 -2.5**
MDJ PcP **PcP 07 45 41.0 +0.7**
MDJ ScP **ScP 07 49 09.8 -0.8**
MDJ PcS **PcS 07 49 14.1 -1.6**
MDJ ScS **ScS 07 52 48.3 -0.7**
MDJ pmax pmax
comp=Z,17nm,0.8s
MDJ pmax pmax
comp=Z,190nm,4.4s
MDJ LR LR
comp=N,280nm,25.8s
MDJ LR LR
comp=E,500nm,25.8s
MDJ LR LR
comp=Z,870nm,22.6s
SEY Seymchan 16.81 1 ⇑ *i*P **Pn 07 40 56.4 +0.3**
ZEA Zeya 17.53 305 *e*P **Pn 07 41 03.4 -1.7**
ZEA AMB AMB 07 41 07.4
comp=Z,47nm,1.0s
ZEA AMB AMB 07 41 07.4
comp=Z,35nm,1.0s
ZEA AMB AMB 07 41 07.4
comp=Z,52nm,1.0s
CN2 Changchun 18.85 272 *e*P **Pn 07 41 20.8 -0.5**
CN2 *e*pP **pP 07 41 30.3 -0.9**
CN2 *e*S **Sn 07 44 44.8 -6.4**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,700nm,12.0s
CN2 LR LR
comp=E,600nm,12.0s
CN2 LR LR
comp=Z,900nm,17.0s
CLNS Chul'man 19.80 312 *e*P **Pn 07 41 34.3 +1.9**
CLNS *e*S **S 07 45 11.3 +0.4**
CLNS pmax pmax
comp=Z,12nm,1.1s
CLNS pmax pmax
comp=E,8.0nm,0.9s
CLNS pmax pmax
comp=N,7.0nm,1.1s
CLNS smax smax
comp=E,205nm,12.8s
CLNS smax smax
comp=N,57nm,13.2s
CLNS MLR MLR
comp=N,300nm,16.0s
CLNS MLR MLR
comp=Z,548nm,16.0s
CLNS MLR MLR
comp=E,362nm,14.0s
KSRS Korea Array 19.84 253 P **P 07 41 31.9 +0.8**
comp=E,1.2nm,0.3s,baz=58,slow=11,SNR=44
KSRS PcP **PcP 07 45 47.8 +0.6**
comp=E,0.4nm,0.3s,baz=341,slow=1.3,SNR=6.5
KSRS LR LR 07 48 12.9
comp=E,418nm,20.8s,baz=50,slow=34
KSAR Wonju Array Be 19.87 253 P **P 07 41 31.9 +0.4**
KSAR PcP **PcP 07 45 47.8 +0.6**
YAK Yakutsk 20.39 329 *e*P Pn 07 41 41.7 +2.4
YAK *e* 07 41 57.2
YAK *e*SS Sn 07 45 57.0 +29
YAK pmax pmax
comp=Z,238nm,0.9s
YAK pmax pmax
comp=E,121nm,1.4s
YAK pmax pmax
comp=N,113nm,1.2s
YAK pmax pmax
comp=N,124nm,1.5s
YAK pmax pmax
comp=Z,80nm,1.1s
YAK pmax pmax
comp=E,88nm,1.2s
YAK MLR MLR
comp=Z,457nm,21.0s
YAK MLR MLR
comp=E,361nm,18.0s
YAK MLR MLR
comp=N,373nm,22.0s
INCN Inchon 20.68 254 *e*Pn **P 07 41 41.3 +1.0**
comp=N,40nm,0.9s
JNU Nakatsue 20.71 238 P **P 07 41 41.8 +1.1**
JNU Nakatsue 20.71 238 P **P 07 41 41.8 +1.1**
comp=N,27nm,1.0s,baz=54,slow=14,SNR=7.5
JNU LR LR 07 49 49.8
comp=N,394nm,20.6s,baz=38,slow=37
BILL Bilibino 23.15 14 ⇓ *e*P **P 07 42 05.3 -1.0**
BILL *i* *PP **pP 07 42 18.5 +1.0**
BILL *i* 07 42 24.7
BILL *e* 07 42 30.2
BILL *i* S **S 07 46 13.0 -1.0**
BILL pmax pmax
comp=Z,15nm,1.0s
BILL MLR MLR
comp=Z,400nm,16.0s
BILL Bilibino 23.15 14 *e*P **P 07 42 05.4 -0.9**
comp=Z,17nm,0.9s
BJI Beijing 26.65 270 P **P 07 42 37.3 -1.3**
BJI S **S 07 47 10.1 -0.2**
BJI LR LR
comp=N,300nm,14.8s
BJI LR LR
comp=E,650nm,17.8s
BJI LR LR
comp=Z,460nm,19.2s
TNA Tin City 28.98 34 *e*P **P 07 42 59.9 +0.9**
comp=Z,3.3nm,0.7s
HHC Hu-ho-hao-te 29.52 274 *e*P **P 07 43 06.3 +2.0**
HHC pP **pP 07 43 17.8 +1.3**
HHC sP **sP 07 43 23.9 +1.9**
HHC PP **PnPn 07 44 01.6 +1.5**
HHC S **S 07 47 54.4 -1.3**
HHC sS **sS 07 48 14.6 -1.6**
HHC pmax pmax
comp=Z,40nm,0.8s
HHC pmax pmax
comp=Z,260nm,4.0s
HHC LR LR
comp=N,550nm,10.2s
HHC LR LR
comp=E,920nm,9.6s
HHC LR LR
comp=Z,920nm,14.6s
SONM Songino Array 30.76 290 P **P 07 43 15.5 +0.3**
SONM PcP **PcP 07 46 11.8 +0.2**
SONM Songino Array 30.76 290 P **P 07 43 15.5 +0.3**
comp=Z,0.8nm,0.4s,baz=95,slow=7.2,SNR=4.0
SONM PcP **PcP 07 46 11.8 +0.2**
comp=Z,1.0nm,0.7s,baz=125,slow=2.3,SNR=4.2
SONM LR LR 07 56 32.4
comp=Z,345nm,19.0s,baz=79,slow=38
TLY Talaya 31.73 298 *e*P **P 07 43 21.9 -1.6**
TLY pmax pmax
comp=Z,4.0nm,0.8s
TLY MLR MLR
comp=Z,494nm,18.0s
ZAK Zakamensk 32.19 296 *e*P **P 07 43 26.7 -1.0**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
WHN Wuhan 32.99 255 ⇑ P **P 07 43 35.3 +0.6**
WHN S **S 07 48 47.8 -2.0**
WHN LR LR
comp=Z,550nm,18.7s
GUMO Guam 33.01 193 LR LR 07 56 57.8
comp=Z,200nm,18.4s,baz=252,slow=36
XAN Xi'an 34.65 265 P **P 07 43 49.8 +0.6**
XAN pP **pP 07 44 03.8 +2.3**
XAN pmax pmax
comp=Z,8.0nm,1.1s
XAN pmax pmax
comp=Z,18nm,5.2s
KDAK Kodiak Island 35.11 50 P **P 07 43 52.2 -0.6**
KDAK Kodiak Island 35.11 50 P **P 07 43 52.2 -0.6**
comp=Z,7.2nm,0.8s,baz=283,slow=7.1,SNR=4.7
PPLA Purkeypile 35.15 41 *e*P **P 07 43 53.1 -0.2**
comp=Z,22nm,1.3s
SPU Mount Spurr 35.20 44 *e*P **P 07 43 54.6 +1.0**
SPU *e*pP **pP 07 44 07.0 +1.0**
COLD Coldfoot 36.28 34 *e*P **P 07 44 02.2 -0.6**
comp=Z,4.5nm,0.8s
COLD *e*PcP **PcP 07 46 27.5 +0.8**
RC01 Rabbit Creek A 36.32 44 *e*P **P 07 44 02.9 -0.4**
comp=Z,12nm,1.0s
RC01 *e*pP **pP 07 44 16.3 +0.7**
RC01 *e*PcP **PcP 07 46 27.0 +0.1**
PMR Palmer 36.59 43 *e*P **P 07 44 05.3 -0.2**
PMR pmax pmax
comp=Z,8.0nm,0.8s
PMR Palmer 36.59 43 *e*P **P 07 44 05.3 -0.2**
comp=Z,7.8nm,0.8s
LZH Lanzhou 37.09 272 ⇑ P **P 07 44 11.0 +0.8**
LZH pP **pP 07 44 23.3 +0.7**
LZH sP **sP 07 44 28.5 +0.4**
LZH PP **PnPn 07 45 38.0 +2.1**
LZH PcP **PcP 07 46 31.0 +1.1**
LZH *e*S **S 07 49 53.0 -0.1**
LZH sS **ScP 07 50 12.5 -0.4**
LZH pmax pmax
comp=Z,43nm,1.0s
LZH pmax pmax
comp=Z,130nm,4.5s
LZH LR LR
comp=N,400nm,13.2s
LZH LR LR
comp=E,530nm,14.0s
LZH LR LR
comp=Z,610nm,16.2s
COLA College 37.10 38 *e*P **P 07 44 10.3 +0.5**
COLA pmax pmax
comp=Z,13nm,0.8s
COLA College 37.10 38 *e*P **P 07 44 10.2 +0.5**
comp=Z,13nm,0.8s
ILAR Eielson Array 37.52 38 P **P 07 44 12.7 -0.7**
ILAR Eielson Array 37.52 38 P **P 07 44 12.6 -0.7**
comp=Z,4.3nm,1.0s,baz=262,slow=7.1,SNR=29
ILAR LR LR 08 01 53.1
comp=Z,143nm,18.4s,baz=306,slow=40
PAX Paxson 38.22 41 *e*P **P 07 44 19.6 +0.3**
PAX *e* 07 46 33.0
PAX pmax pmax
comp=Z,8.0nm,1.3s
PAX Paxson 38.22 41 *e*P **P 07 44 19.6 +0.3**
comp=Z,8.3nm,1.3s
PAX *e*PcP **PcP 07 46 33.0 +0.1**
GTA Gaotai 38.25 279 *e*P **P 07 44 19.0 -1.0**
GTA pP **pP 07 44 31.3 -1.1**
GTA sP **sP 07 44 36.3 -1.6**
GTA PcP **PcP 07 46 34.9 +1.5**
GTA S **S 07 50 06.9 -3.8**
GTA sS **sS 07 50 29.0 -2.5**
GTA pmax pmax
comp=Z,5.0nm,0.5s
GTA pmax pmax
comp=Z,120nm,6.9s
GTA LR LR
comp=N,220nm,17.3s
GTA LR LR
comp=E,150nm,15.7s
GTA LR LR
comp=Z,180nm,20.7s
BMRM Bremner River 38.82 44 *e*P **P 07 44 24.5 +0.1**
comp=Z,12nm,0.8s
MENT Mentasta 39.02 41 *e*P **P 07 44 25.8 -0.2**
EGAK Eagle 39.97 38 *e*P **P 07 44 33.5 -0.3**
comp=Z,11nm,1.0s
CD2 Chengdu 40.01 265 P **P 07 44 34.8 +0.1**
CD2 pP **pP 07 44 47.0 -0.1**
CD2 sP **sP 07 44 52.5 -0.1**
CD2 PP **PnPn 07 46 11.3 +0.4**
CD2 PcP **PcP 07 46 40.5 +1.5**
CD2 PcS **PcS 07 50 29.8 +0.4**
CD2 S **S 07 50 35.9 -1.2**
CD2 sS **sS 07 50 56.5 -1.5**
CD2 ScS **ScS 07 54 36.1 -1.4**
CD2 pmax pmax
comp=Z,40nm,0.4s
CD2 pmax pmax
comp=Z,110nm,4.7s
CD2 LR LR
comp=N,590nm,13.2s
CD2 LR LR
comp=Z,240nm,15.2s
GYA Guiyang 40.79 257 P **P 07 44 40.8 -0.4**
GYA pP **pP 07 44 53.3 -0.4**
GYA sP **sP 07 44 58.0 -1.1**
GYA PP **PnPn 07 46 19.4 -0.7**
GYA PcP **PcP 07 46 42.3 +0.7**
GYA ScP **ScP 07 50 27.0 -0.2**
GYA S **S 07 50 47.5 -1.3**
GYA sS **sS 07 51 08.3 -1.4**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.0s
GYA LR LR
comp=N,560nm,17.9s
GYA LR LR
comp=E,510nm,18.0s
GYA LR LR
comp=Z,540nm,17.8s
ZALV Zalesovo Beam 42.29 306 P **P 07 44 52.9 -0.1**
ZALV 07 46 46.1
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV MLR MLR
comp=Z,696nm,19.0s
ZALV Zalesovo Beam 42.29 306 P **P 07 44 52.9 -0.1**
ZALV PcP **PcP 07 46 46.1 +0.2**
ZALV Zalesovo Beam 42.29 306 P **P 07 44 52.9 -0.1**
comp=Z,0.9nm,0.5s,baz=79,slow=7.7,SNR=4.4
ZALV PcP **PcP 07 46 46.1 +0.2**
comp=Z,5.4nm,0.7s,baz=67,slow=3.9,SNR=13
ZALV LR LR 08 03 39.2
comp=Z,696nm,19.0s,baz=76,slow=38
INK Inuvik 42.59 32 P **P 07 44 55.5 +0.3**
INK Inuvik 42.59 32 P **P 07 44 55.5 +0.3**
comp=Z,9.2nm,0.8s,baz=276,slow=17
KMI Kunming 44.33 259 P **P 07 45 10.8 +0.7**
KMI pP **pP 07 45 23.8 +1.1**
KMI pmax pmax
comp=Z,16nm,0.9s
WMQ Urumqi 44.38 291 P **P 07 45 11.0 +0.9**
WMQ pP **pP 07 45 23.0 +0.3**
WMQ sP **sP 07 45 29.0 +0.9**
WMQ PP **PP 07 46 55.0 +1.0**
WMQ ScP **ScP 07 50 43.0 +1.7**
WMQ S **S 07 51 40.0 -1.2**
WMQ sS **sS 07 52 00.0 -2.3**
WMQ ScS **ScS 07 55 04.0 0.0**
WMQ pmax pmax
comp=Z,15nm,1.0s
WMQ pmax pmax
comp=Z,240nm,5.0s
WMQ LR LR
comp=N,250nm,15.0s
WMQ LR LR
comp=E,270nm,15.0s
WMQ LR LR
comp=Z,190nm,15.0s
MK31 Makanchi Array 46.48 297 *i*P **P 07 45 25.1 -1.6**
MK31 pmax pmax
comp=Z,7.0nm,0.7s
MK31 Makanchi Array 46.48 297 *e*P **P 07 45 25.4 -1.2**
MK31 *e*PcP **PcP 07 46 59.3 -1.2**
MKAR Makanchi Array 46.48 297 P **P 07 45 25.8 -0.9**
MKAR 07 47 00.6
MKAR pmax pmax
comp=Z,8.0nm,0.9s
MKAR MLR MLR
comp=Z,451nm,19.7s
MKAR Makanchi Array 46.48 297 P **P 07 45 25.8 -0.9**
MKAR PcP **PcP 07 47 00.6 +0.1**
MKAR ScP **ScP 07 50 50.1 +0.2**
MKAR Makanchi Array 46.48 297 P **P 07 45 25.8 -0.9**
comp=Z,7.9nm,0.9s,baz=67,slow=7.0,SNR=40
MKAR PcP **PcP 07 47 00.6 +0.1**
comp=Z,5.4nm,0.8s,baz=62,slow=3.5,SNR=9.7
MKAR ScP **ScP 07 50 50.1 +0.2**
comp=Z,0.9nm,0.9s,baz=64,slow=3.1,SNR=3.9
MKAR LR LR 08 05 59.8
comp=Z,451nm,19.7s,baz=57,slow=37
DLBC Dease Lake 46.59 45 P **P 07 45 28.0 +0.6**
DLBC *e*pP **pP 07 45 42.1 +2.0**
DLBC Dease Lake 46.59 45 P **P 07 45 28.0 +0.6**
comp=Z,5.5nm,0.8s,baz=283,slow=7.7,SNR=14
KURK Kurchatov 47.01 304 *de*P **P 07 45 28.9 -1.7**
KURK pmax pmax
comp=Z,6.0nm,0.8s
KURK Kurchatov 47.01 304 P **P 07 45 29.8 -0.9**
comp=Z,1.2nm,0.5s
KURK *e*PcP **PcP 07 47 01.5 -0.7**
KURK PcP **PcP 07 47 02.6 +0.4**
KURBB Kurchatov Arra 47.10 304 P **P 07 45 29.8 -1.6**
comp=Z,3.9nm,0.6s,baz=69,slow=8.5,SNR=19

KURBB PcP **PcP** 07 47 02.6 +0.1
comp=Z,3.5nm,0.8s,baz=72,slow=3.5,SNR=8.4
KURBB LR LR 08 06 14.9
comp=Z,186nm,19.5s,baz=65,slow=37
LSA Lhasa 49.49 273 P **P** 07 45 52.3 +1.7
LSA pmax pmax
comp=Z,30nm,0.7s
BVAR Borovoye Array 50.60 309 LR LR 08 08 58.1
comp=Z,403nm,20.4s,baz=75,slow=38
BRVK Borovoye 50.64 309⇓ *e*P **P** 07 45 58.7 +0.2
BRVK pmax pmax
comp=Z,5.0nm,1.1s
BRVK Borovoye 50.64 309 *e*P **P** 07 45 58.0 -0.4
CHTO Chiang Mai 51.18 256 *e*P **P** 07 46 04.1 +1.1
CHTO pmax pmax
comp=Z,27nm,0.9s
CHTO Chiang Mai 51.18 256 *e*P **P** 07 46 04.1 +1.1
comp=Z,27nm,0.9s
CM31 Chiang Mai Arr 51.43 256 *e*P **P** 07 46 06.5 +1.7
comp=Z,7.3nm,0.6s
CMAR Chiang Mai Arr 51.43 256 P **P** 07 46 06.4 +1.5
CMAR PcP **PcP** 07 47 19.2 +0.4
CMAR Chiang Mai Arr 51.43 256 P **P** 07 46 06.4 +1.5
comp=Z,11nm,0.8s,baz=36,slow=7.7,SNR=55
CMAR PcP **PcP** 07 47 19.2 +0.4
comp=Z,0.4nm,0.3s,baz=26,slow=3.6,SNR=4.3
CMAR LR LR 08 09 16.0
comp=Z,170nm,19.0s,baz=21,slow=38
RES Resolute Bay 51.65 18 P **P** 07 46 05.3 -0.4
comp=Z,2.0nm,0.8s
RES Resolute Bay 51.65 18 P **P** 07 46 05.3 -0.4
comp=Z,3.3nm,0.8s,baz=314,slow=7.4,SNR=22
YKW3 Yellowknife Ar 51.85 36 *e*P **P** 07 46 07.5 +0.1
comp=Z,0.2nm,0.8s
YKA Yellowknife Ar 51.88 36 P **P** 07 46 07.7 +0.1
YKA PcP **PcP** 07 47 19.9 +0.1
YKA Yellowknife Ar 51.88 36 P **P** 07 46 07.7 +0.1
comp=Z,9.0nm,0.8s,baz=296,slow=7.0,SNR=122
YKA PcP **PcP** 07 47 19.9 +0.1
comp=Z,1.6nm,0.8s,baz=293,slow=4.2,SNR=5.1
TKM2 Tokmak 2 52.52 296 P **P** 07 46 11.7 -1.2
TKM2 pmax pmax
comp=Z,6.0nm,1.3s
TKM2 Tokmak 2 52.52 296 *e*P **P** 07 46 12.5 -0.4
comp=Z,1.6nm,0.5s
TKM2 *e*PcP **PcP** 07 47 23.4 +0.6
KBS Kingsbay 52.95 351⇑ *e*P **P** 07 46 14.8 -0.5
KBS pmax pmax
comp=Z,74nm,2.5s
TAPN Taplejung 53.31 273 *e*P **P** 07 46 20.1 +1.0
comp=Z,53nm,0.9s
AAK Ala-Archa 53.36 296⇑ *i*P **P** 07 46 18.6 -0.5
AAK pmax pmax
comp=Z,10.0nm,0.9s
AAK Ala-Archa 53.36 296 *e*P **P** 07 46 18.8 -0.3
comp=Z,1.0nm,0.8s
AAK *e*PcP **PcP** 07 47 26.4 +0.4
AAK Ala-Archa 53.36 296 LR LR 08 09 50.4
comp=Z,251nm,21.6s,baz=344,slow=37
SVE Sverdlovsk 53.70 317 *e*P **P** 07 46 21.3 +0.2
SVE *e*S **pS** 07 54 07.8 +1.5
SVE *e*SSS SSS 07 59 20.9
SVE pmax pmax
comp=Z,14nm,0.8s
SVE MLR MLR
comp=Z,274nm,16.0s
EKS2 Erkin-Say 53.79 297 *e*P **P** 07 46 21.5 -0.7
EKS2 *e* 07 47 28.5
EKS2 pmax pmax
comp=Z,6.0nm,0.7s
EKS2 Erkin-Say 53.79 297 *e*P **P** 07 46 21.5 -0.7
comp=Z,5.6nm,0.7s
EKS2 *e*PcP **PcP** 07 47 28.5 +0.9
ODAN Odare 53.84 273 *e*P **P** 07 46 22.9 0.0
KSH Kashi 54.12 292 P P 07 46 29.0 +4.4
KSH pP pP 07 46 41.8 +4.3
KSH sP sP 07 46 47.1 +4.2
KSH PcP **PcP** 07 47 32.8 +4.0
KSH PP PP 07 48 31.6 +5.4
KSH ScP **ScP** 07 51 24.8 +1.9
KSH PcS **PcS** 07 51 29.8 +1.5
KSH S **S** 07 54 01.8 +3.9
KSH sS sS 07 54 23.1 +3.7
KSH ScS **ScS** 07 56 09.6 -0.3
KSH SS **SS** 07 57 44.1 +4.6
KSH pmax pmax
comp=Z,5.0nm,0.5s
KSH pmax pmax
comp=Z,220nm,3.3s
KSH LR LR
comp=N,190nm,4.5s
KSH LR LR
comp=E,140nm,4.2s
KSH LR LR
comp=Z,500nm,5.8s
GUN Gumba 54.23 275 *e*P **P** 07 46 26.6 +0.8
comp=Z,32nm,0.5s
RAMN Ramite 54.33 273 *e*P **P** 07 46 27.2 +0.7
comp=Z,65nm,0.7s
KKN Kakani 54.72 275 *e*P **P** 07 46 30.1 +0.9
comp=Z,85nm,0.9s
PKI Pulchoki 54.77 275 *e*P **P** 07 46 30.3 +0.6
comp=Z,69nm,1.1s
PKIN Phulchoki 54.77 275 *e*P **P** 07 46 31.0 +1.3
comp=Z,11nm,0.6s
ARU Arti 54.89 317 *d i*P **P** 07 46 28.9 -0.9
ARU *PP **pP** 07 46 43.5 +0.8
ARU 07 47 30.0
ARU 07 48 30.3
ARU S **S** 07 54 05.1 -2.4
ARU SS SS 07 57 42.4 -8.2
ARU pmax pmax
comp=Z,18nm,1.2s
DMN Daman 54.96 275 *e*P **P** 07 46 32.1 +1.1
comp=Z,80nm,0.9s
DANN Dangsing 55.43 276 *e*P **P** 07 46 35.8 +1.4
comp=Z,111nm,0.6s
KK31 Karatay Array 55.56 299 *e*P **P** 07 46 33.8 -1.1
KK31 pmax pmax
comp=Z,1.0nm,0.3s
KKAR Karatay Array 55.56 299 *e*P **P** 07 46 33.8 -1.1
KKAR pmax pmax
comp=Z,2.0nm,0.6s
KKAR Karatay Array 55.56 299 *e*P **P** 07 46 33.8 -1.1
comp=Z,2.4nm,0.6s
KOLN Koldanda 55.90 276 *e*P **P** 07 46 38.7 +1.0
comp=Z,92nm,0.8s
PYUN Piuthan 56.11 277 *e*P **P** 07 46 40.3 +1.1
comp=Z,220nm,0.9s
APA Apatity 57.55 336⇓ *e*P P 07 46 44.0 -4.5
APA MLR MLR
comp=Z,1μm,10.0s
KEV Kevo 57.62 340 *e*P **P** 07 46 47.8 -1.2
KEV pmax pmax
comp=Z,1.0nm,0.4s
KEV Kevo 57.62 340 *ep* **P** 07 46 47.8 -1.2
comp=Z,0.7nm,0.4s
DDI Dehra Dun 58.12 282 *ex* **P** 07 46 52.0 -1.2
ARCES ARCESS Array B 58.14 341 P **P** 07 46 52.1 -0.6
ARCES PcP **PcP** 07 47 43.7 0.0
ARCES ARCESS Array B 58.14 341 P **P** 07 46 52.1 -0.6
comp=Z,4.5nm,1.0s,baz=43,slow=7.3,SNR=20
ARCES PcP **PcP** 07 47 43.7 0.0
comp=Z,6.8nm,1.0s,baz=28,slow=4.1,SNR=4.6
ARCES LR LR 08 15 03.3
comp=Z,157nm,18.8s,baz=1.1,slow=39
AB31 Akbulak array 58.17 310 *e*P **P** 07 46 51.5 -1.7
AB31 pmax pmax
comp=Z,3.0nm,0.4s
ABKAR Akbulak array 58.17 310 *e*P **P** 07 46 52.4 -0.8
comp=Z,2.8nm,0.4s
TMCR Tamitsa 58.47 332 *e*P **P** 07 46 53.8 -1.2
TMCR pmax pmax
comp=Z,25nm,0.5s
A13A Flathead Natio 59.25 50⇑ P **P** 07 47 01.3 +0.5
baz=59
C12B Naegeli Ranch, 59.41 52⇓ P **P** 07 47 02.5 +0.7
baz=59
WALA Waterton Lakes 59.45 50 *e*P **P** 07 47 02.8 +0.6
comp=Z,0.3nm,0.8s
B13A Whitefish 59.55 51⇑ P **P** 07 47 02.8 -0.1
baz=59,SNR=8.6
BSMT Bassoo Peak 59.69 51 *e*P **P** 07 47 04.7 +0.7
NDI New Delhi 59.71 281 *e*P **P** 07 47 02.5 -1.7
A14A Double T Ranch 59.76 49⇑ P **P** 07 47 04.6 +0.2
baz=60,SNR=9.0
BLMT Blacktail Moun 59.83 51 *e*P **P** 07 47 05.9 +1.0
BLMT *epP* **pP** 07 47 20.5 +2.4
D12A Red Ives Fores 59.86 52⇑ P **P** 07 47 06.2 +1.1
baz=60
C13A Hot Springs 59.91 51⇓ P **P** 07 47 05.9 +0.5
baz=60,SNR=5.2
MOD Modoc 60.09 59 *e*P **P** 07 47 07.8 +1.0
comp=Z,4.9nm,0.8s
A15A Johnson Ranch, 60.12 49⇑ P **P** 07 47 06.6 -0.2
baz=60,SNR=5.6
B14A Marquette Ranc 60.20 50⇓ P **P** 07 47 08.0 +0.5
baz=60,SNR=5.9
C14A Swan Lake 60.30 51⇓ P **P** 07 47 08.7 +0.6
baz=60
D13A Huson 60.33 52⇓ P **P** 07 47 08.6 +0.4
baz=60,SNR=5.6
SWMT Swartz Lake 60.33 51 *e*P **P** 07 47 08.9 +0.7
B15A Bradely Ranch, 60.61 50⇓ P **P** 07 47 10.3 +0.2
baz=60,SNR=8.1
F12A Elk City, 60.70 53⇓ P **P** 07 47 11.5 +0.6
baz=60,SNR=11
SLMT Seeley Lake 60.76 51 *e*P **P** 07 47 11.8 +0.5
WVOR Wild Horse Val 60.76 58 *e*P **P** 07 47 12.1 +0.7
WVOR pmax pmax
comp=Z,14nm,1.4s
WVOR Wild Horse Val 60.76 58 *e*P **P** 07 47 12.1 +0.7
comp=Z,14nm,1.4s
MSO Missoula 60.77 52 *e*P **P** 07 47 11.9 +0.6
comp=Z,8.2nm,0.9s
D14A Grough 60.85 51⇓ P **P** 07 47 12.3 +0.5
baz=61,SNR=21
E13A Victor 60.87 52⇑ P **P** 07 47 12.5 +0.5
baz=61,SNR=6.0
C15A Salmond Ranch, 60.91 50⇓ P **P** 07 47 13.0 +0.7
baz=61,SNR=21
OHCM Honcut 60.92 62 *e*P **P** 07 47 12.7 +0.5
B16A M & M Farms, S 61.00 49⇑ P **P** 07 47 13.0 +0.2
baz=61
G12A Big Creek, Yel 61.04 54⇑ P **P** 07 47 13.7 +0.5
baz=61
CHMT Chamberlain Mo 61.09 51 *e*P **P** 07 47 13.7 +0.1
F13A Darby 61.19 53⇑ P **P** 07 47 14.5 +0.3
baz=61,SNR=8.0
A17A Triple J Farms 61.20 48⇓ P **P** 07 47 14.2 +0.1
baz=61
E14A Clinton 61.27 52⇑ P **P** 07 47 15.2 +0.4
baz=61,SNR=12
SUMG Summit 61.34 4 *i* P **P** 07 47 15.1 0.0
SUMG pmax pmax
comp=Z,28nm,0.9s
SUMG Summit 61.34 4 *e*P **P** 07 47 15.2 0.0
comp=Z,41nm,1.0s
SUMG Summit 61.34 4 *i* P **P** 07 47 15.1 0.0
comp=Z,28nm,0.9s
C16A Fuhringer Ranc 61.35 50⇑ P **P** 07 47 15.9 +0.7
baz=61,SNR=11
D15A Lincoln 61.41 51⇓ P **P** 07 47 16.3 +0.6
baz=61
JOF Joensuu 61.49 333 *e*P **P** 07 47 14.1 -1.7
JOF pmax pmax
comp=Z,1.0nm,0.3s
JOF Joensuu 61.49 333 *ep* **P** 07 47 14.1 -1.7
comp=Z,1.4nm,0.3s
KBL Kabul 61.52 291 *e*P **P** 07 47 16.4 -0.3
KBL pmax pmax
comp=Z,22nm,0.9s
KBL Kabul 61.52 291 *e*P **P** 07 47 16.4 -0.3
comp=Z,22nm,0.9s
B17A L&G Farms, Che 61.55 49⇓ P **P** 07 47 16.9 +0.4
baz=61
A18A Metzger Ranch, 61.65 48⇓ P **P** 07 47 17.5 +0.3
baz=61
H12A Diamond D Ranc 61.66 54⇓ P **P** 07 47 17.8 +0.4
baz=62,SNR=5.9
G13A Cobalt 61.67 53⇓ P **P** 07 47 17.9 +0.4
baz=62,SNR=14
F14A Wisdom 61.70 52⇑ P **P** 07 47 18.2 +0.4
baz=62
FFC Flin Flon 61.71 39 *e*P **P** 07 47 17.8 +0.4
FFC pmax pmax
comp=Z,8.0nm,0.8s
FFC Flin Flon 61.71 39 *e*P **P** 07 47 17.8 +0.4
comp=Z,8.0nm,0.8s
E15A Deer Lodge 61.73 51⇓ P **P** 07 47 18.3 +0.5
baz=62,SNR=12
MFID Camas Ranch 61.80 56 *e*P **P** 07 47 19.0 +0.7
comp=Z,3.2nm,0.9s
MFID *epP* **pP** 07 47 32.6 +1.1
MFID Camas Ranch 61.80 56⇑ P **P** 07 47 18.9 +0.7
baz=62
D16A Dana Ranch, Ca 61.94 50⇓ P **P** 07 47 20.0 +0.8
baz=62,SNR=11
I12A Atlanta 61.96 55⇓ P **P** 07 47 20.2 +0.7
baz=62,SNR=8.7
H13A Challis 61.98 54⇓ P **P** 07 47 20.1 +0.5
baz=62,SNR=14
HRY Holter Researc 61.98 51 *e*P **P** 07 47 20.8 +1.2
G14A Jackson 62.01 53⇓ P **P** 07 47 20.4 +0.6
baz=62
B18A Beardsley Farm 62.02 48⇓ P **P** 07 47 20.1 +0.5
baz=62
F15A Butte 62.17 52⇑ P **P** 07 47 21.5 +0.6
baz=62,SNR=9.4
E16A East Helena 62.18 51⇑ P **P** 07 47 21.7 +0.9
baz=62,SNR=5.3
LRM Limekiln Ridge 62.20 52 *e*P **P** 07 47 22.3 +1.1
A19A Kilndworth Far 62.22 47⇓ P **P** 07 47 21.3 +0.3
baz=62
EGMT Eagleton 62.26 49 *e*P **P** 07 47 22.3 +0.9
comp=Z,19nm,1.1s
D17A Six Diamond Ra 62.32 50⇓ P **P** 07 47 22.3 +0.5
baz=62,SNR=7.6
CMB Columbia Colle 62.40 63 *e*P **P** 07 47 23.2 +0.9
CMB pmax pmax
comp=Z,7.0nm,0.8s
CMB Columbia Colle 62.40 63 *e*P **P** 07 47 23.2 +0.9
comp=Z,6.5nm,0.8s
DLMT Dillon 62.41 52 *e*P **P** 07 47 23.0 +0.5
comp=Z,8.3nm,1.3s
B19A Brinkman Farms 62.41 48⇓ P **P** 07 47 22.8 +0.6
baz=62,SNR=5.4
H14A Leadore 62.45 53⇓ P **P** 07 47 23.1 +0.4
baz=62
I13A Wildhorse Cree 62.47 54⇓ P **P** 07 47 23.8 +0.9
baz=62,SNR=8.1
HLID Hailey 62.52 55 *e*P **P** 07 47 24.1 +0.9
comp=Z,7.0nm,1.1s
SAO San Andreas Ge 62.53 65 *e*P **P** 07 47 25.1 +2.0
SAO San Andreas Ge 62.53 65 *e*P **P** 07 47 25.1 +2.0
G15A Dillon 62.59 52⇑ P **P** 07 47 24.1 +0.4
baz=62,SNR=12
MCMT McKenzie Canyo 62.60 53 *e*P **P** 07 47 24.3 +0.5
comp=Z,2.1nm,0.9s
A20A Cobblestone Ra 62.66 47⇓ P **P** 07 47 24.7 +0.7
baz=62
E17A Martinsdale 62.66 51⇑ P **P** 07 47 25.2 +1.1
baz=62,SNR=16
F16A Kennard Place, 62.68 52⇓ P **P** 07 47 24.9 +0.8
baz=62
J13A Cove Ranch, Pi 62.76 55⇑ P **P** 07 47 25.7 +0.9
baz=63,SNR=8.5
BOZ Bozeman (W) 62.76 52 *e*P **P** 07 47 25.9 +1.1
BOZ pmax pmax
comp=Z,52nm,1.9s
BOZ Bozeman (W) 62.76 52 *e*P **P** 07 47 25.9 +1.1
comp=Z,52nm,1.9s
D18A Linhart Farms, 62.76 49⇓ P **P** 07 47 25.1 +0.5
baz=62
C19A Slack Wire Ran 62.81 49⇑ P **P** 07 47 25.8 +0.8
baz=63,SNR=10
I14A Mackay 62.83 54⇑ P **P** 07 47 26.4 +1.1
baz=63,SNR=12
H15A Lima 62.85 53⇓ P **P** 07 47 25.9 +0.4
baz=63
B20A Solberg Farm, 62.90 47⇓ P **P** 07 47 25.9 +0.4
baz=63
G16A Moss Hill, Enn 62.93 52⇑ P **P** 07 47 26.6 +0.6
baz=63,SNR=23
PSI Prapat 63.09 243 LR LR 08 17 26.7
comp=Z,243nm,19.3s,baz=25,slow=38
A21A Bergtoli Ranch 63.10 46⇑ P **P** 07 47 27.6 +0.8
baz=63
E18A Harlowton 63.10 50⇓ P **P** 07 47 27.7 +0.7
baz=63
F17A Fitzpatrick Pl 63.12 51⇑ P **P** 07 47 28.0 +0.8
baz=63,SNR=5.5
J14A Carey 63.17 55⇑ P **P** 07 47 29.1 +1.5
baz=63,SNR=11
D19A Cripps Ranch, 63.27 49⇓ P **P** 07 47 28.7 +0.7
baz=63,SNR=6.8
C20A Veseth Ranch, 63.37 48⇑ P **P** 07 47 29.5 +0.9
baz=63,SNR=11
QLMT Earthquake Lak 63.39 52 *e*P **P** 07 47 30.4 +1.4
NVAR Mina Array Bea 63.43 61 P **P** 07 47 30.4 +1.0
NVAR Mina Array Bea 63.43 61 P **P** 07 47 30.4 +1.0
comp=Z,5.2nm,0.8s,baz=295,slow=6.9,SNR=42
G17A Pierce Place, 63.45 51⇑ P **P** 07 47 30.5 +1.1
baz=63,SNR=7.3
NV11 Mina Array Sit 63.52 61 *e*P **P** 07 47 30.5 +0.5
H16A Russell Place, 63.57 52⇑ P **P** 07 47 30.9 +0.7
baz=63,SNR=11
SCO Scoresbysund 63.58 358 *i* P **P** 07 47 29.7 +0.1
SCO pmax pmax
comp=Z,8.0nm,1.0s
SCO Scoresbysund 63.58 358 *i* P **P** 07 47 29.7 +0.1
comp=Z,8.0nm,0.9s
MLAC Mammoth Lakes 63.61 62⇓ P **P** 07 47 31.8 +1.2
baz=63
KAF Kangasniemi 63.63 335 *e*P **P** 07 47 28.2 -1.8
KAF pmax pmax
comp=Z,4.0nm,0.7s
KAF Kangasniemi 63.63 335 *ep* **P** 07 47 28.2 -1.8
comp=Z,3.9nm,0.7s
F18A Big Timber 63.63 50⇑ P **P** 07 47 31.3 +0.9
baz=63,SNR=11
D20A Manuel Ranch, 63.70 49⇓ P **P** 07 47 31.7 +0.9
baz=64,SNR=15
GCMT Greycliff 63.73 51 *e*P **P** 07 47 32.0 +0.8
comp=Z,8.9nm,1.1s
J15A Blackfoot 63.74 54⇓ P **P** 07 47 32.6 +1.3
baz=64,SNR=9.0
C21A Desert Coulee 63.77 48⇑ P **P** 07 47 32.1 +0.9
baz=64
E19A Rath Farm, Rou 63.77 50⇑ P **P** 07 47 32.0 +0.7
baz=64,SNR=5.9
ELK Elko 63.81 58 *e*P **P** 07 47 32.8 +0.9
K14A Jones Ranch, D 63.86 55⇓ P **P** 07 47 33.2 +1.2
baz=64,SNR=6.5
MTUM Tungsten Hills 63.95 62 *e*P **P** 07 47 34.6 +1.8
I16A Newdale 63.96 53⇓ P **P** 07 47 33.9 +1.2
baz=64,SNR=5.1
B22A Reddig Ranch S 64.02 47⇑ P **P** 07 47 33.5 +0.6
baz=64
F19A Roth Farm, Mol 64.08 50⇑ P **P** 07 47 34.4 +1.0
baz=64,SNR=14
E20A Meyer Farm, Mu 64.09 49⇑ P **P** 07 47 34.3 +0.9
baz=64
G18A Lazy EL Ranch, 64.09 51⇑ P **P** 07 47 34.3 +0.7
baz=64
LKWY Lake 64.12 52 *e*P **P** 07 47 36.5 +2.6
LKWY pmax pmax
comp=Z,6.0nm,0.8s
LKWY Lake 64.12 52 *e*P **P** 07 47 36.5 +2.6
comp=Z,5.9nm,0.8s
H17A Grant Village 64.13 52⇓ P **P** 07 47 35.9 +1.9
baz=64
K15A Arbon 64.14 55⇑ P **P** 07 47 35.2 +1.3
baz=64,SNR=6.1
L14A Malta 64.15 56⇓ P **P** 07 47 35.1 +1.1
baz=64,SNR=6.4
RCTC Rector, Farmer 64.19 64⇑ P **P** 07 47 35.2 +1.1
baz=64
FINES FINESS Array B 64.22 334 P **P** 07 47 32.4 -1.5
FINES FINESS Array B 64.22 334 P **P** 07 47 32.4 -1.5
comp=Z,5.5nm,0.7s,baz=36,slow=7.0,SNR=26
FINES LR LR 08 18 13.3
comp=Z,228nm,18.4s,baz=16,slow=38
IMW Indian Meadow 64.25 53 *e*P **P** 07 47 36.4 +1.6
comp=Z,10nm,1.1s
IMW *epP* **pP** 07 47 47.8 -0.2
J16A Bone 64.28 54⇓ P **P** 07 47 35.8 +0.9
baz=64,SNR=7.9
DCID1 Drake Creek 64.31 53 *e*P **P** 07 47 36.1 +1.0
comp=Z,20nm,1.1s
D21A La Casta Ranch 64.31 48⇑ P **P** 07 47 35.5 +0.7
baz=64,SNR=7.4
TIN Tinemaha 64.35 63⇑ P **P** 07 47 36.5 +1.2
baz=64
RLMT Red Lodge 64.38 51 *e*P **P** 07 47 36.6 +1.1
comp=Z,17nm,1.4s
RRI2 Red Ridge 64.40 53 *e*P **P** 07 47 37.1 +1.4
comp=Z,20nm,0.9s
B23A Brockton 64.41 46⇓ P **P** 07 47 35.8 +0.4
baz=64,SNR=6.4
C22A Vida 64.44 47⇑ P **P** 07 47 36.0 +0.4
baz=64
H18A Shoshone NF, C 64.45 51⇑ P **P** 07 47 36.8 +0.7
baz=64
MOOW Moose Ponds 64.46 53 *e*P **P** 07 47 37.5 +1.5
comp=Z,10nm,1.1s
TPAW Teton Pass 64.51 53 *e*P **P** 07 47 38.2 +1.7
comp=Z,17nm,0.9s
K16A Soda Springs 64.58 54⇓ P **P** 07 47 38.3 +1.5
baz=64,SNR=9.3
VES Vestal, Richgr 64.59 64⇓ P **P** 07 47 37.0 +0.2
baz=64
A24A Westby 64.60 45⇑ P **P** 07 47 37.0 +0.3
baz=64
E21A Keefer Ranch, 64.61 49⇓ P **P** 07 47 37.8 +1.0
baz=64
LOHW Long Hollow 64.62 53 *e*P **P** 07 47 38.2 +1.0
comp=Z,15nm,1.3s
LOHW *epP* **pP** 07 47 50.7 +0.3
SNOW Snow King Moun 64.64 53 *e*P **P** 07 47 39.3 +2.0
comp=Z,12nm,0.9s
REDW Red Top Meadow 64.65 53 *e*P **P** 07 47 38.3 +0.9
REDW *ePP* **PP** 07 49 58.6 -0.8
L15A Malad City 64.66 55⇓ P **P** 07 47 38.2 +0.9
baz=64
D22A Cohagen 64.68 48⇑ P **P** 07 47 37.8 +0.6
baz=64,SNR=6.5
J17A Brown Place, J 64.72 53⇑ P **P** 07 47 38.4 +0.6
baz=64,SNR=8.8
PKM Peak Mountain 64.73 65⇑ P **P** 07 47 39.1 +1.1
baz=65
C23A Lambert 64.75 47⇑ P **P** 07 47 38.4 +0.7
baz=64
DGMT Dagmar 64.80 46 *e*P **P** 07 47 38.5 +0.5
H19A Powell 64.82 51⇑ P **P** 07 47 39.3 +1.0
baz=65,SNR=5.3
CWC Cottonwood Cre 64.83 63⇓ P **P** 07 47 39.7 +1.1
baz=65
G20A Bridger 64.88 50⇓ P **P** 07 47 39.0 +0.4
baz=65,SNR=5.4
GRAC Grapevine Rang 64.91 62⇓ P **P** 07 47 40.1 +1.2
baz=65
I18A Diamond G Ranc 65.00 52⇓ P **P** 07 47 40.9 +1.2
baz=65
K17A Gardner Place, 65.00 54⇑ P **P** 07 47 40.4 +0.8
baz=65
ISA Isabella 65.08 64 *e*P **P** 07 47 40.0 -0.1
ISA pmax pmax
comp=Z,4.0nm,0.8s
ISA Isabella 65.08 64 *e*P **P** 07 47 40.0 -0.1
comp=Z,4.2nm,0.8s
ISA Isabella 65.08 64⇑ P **P** 07 47 39.9 -0.1
baz=65,SNR=5.2
SBC Santa Barbara 65.09 66⇓ P **P** 07 47 41.2 +1.2
baz=65
R11A Troy Canyon, C 65.13 60⇓ P **P** 07 47 41.1 +0.6
baz=65,SNR=12
D23A Lindsay 65.16 47⇓ P **P** 07 47 40.9 +0.6
baz=65
L16A Fish Haven 65.19 55⇑ P **P** 07 47 41.6 +0.7
baz=65,SNR=5.9
ARVC Arvin 65.20 65⇓ P **P** 07 47 41.5 +0.7
baz=65
J18A Kendall Valley 65.21 53⇑ P **P** 07 47 41.1 +0.1
baz=65,SNR=6.2
I19A Meeteetse 65.23 52⇓ P **P** 07 47 41.8 +0.7
baz=65,SNR=6.1
E22A Miles City 65.27 48⇓ P **P** 07 47 41.8 +0.7
baz=65
C24A Savage 65.32 46⇓ P **P** 07 47 42.3 +0.9
baz=65
OBN Obninsk 65.33 325⇑ *e*P **P** 07 47 40.2 -1.0
OBN *e* 07 50 03.6
OBN pmax pmax
comp=Z,6.0nm,0.5s
OBN MLR MLR
comp=Z,200nm,22.0s
HWUT Hardware Ranch 65.38 55 *e*P **P** 07 47 43.1 +1.0
comp=Z,16nm,1.3s
BSC Santa Cruz Isl 65.43 66⇑ P **P** 07 47 44.0 +1.8
baz=65

MPMC **Manual Prospec** 65.44 63 ⇑P P 07 47 43.2 +0.6
baz=65,SNR=14
L17A **Cokeville** 65.45 54 ⇓P P 07 47 43.4 +0.9
baz=65
H20A **Greybull** 65.47 51 ⇓P P 07 47 42.8 +0.3
baz=65
F22A **Rosebud** 65.55 49 ⇑P P 07 47 43.4 +0.5
baz=65,SNR=12
E23A **Ismay** 65.56 48 ⇓P P 07 47 43.7 +0.8
baz=65,SNR=6.5
FURC **Furnace Creek,** 65.56 62 ⇓P P 07 47 43.9 +0.9
baz=65,SNR=19
K18A **Toltan Ranch,** 65.57 53 ⇓P P 07 47 44.2 +0.9
baz=65,SNR=11
DUG **Dugway** 65.58 57 *eP* P 07 47 44.3 +1.0
DUG pmax pmax
comp=Z,15nm,1.1s
DUG **Dugway** 65.58 57 *eP* P 07 47 44.3 +1.0
comp=Z,15nm,1.1s
OSI **Osito Adit** 65.60 65 ⇓P P 07 47 44.7 +1.2
baz=65
D24A **Glendive** 65.64 47 ⇓P P 07 47 44.4 +0.9
baz=65
LRMC **Laurel Mountai** 65.69 64 ⇓P P 07 47 44.9 +0.8
baz=66
J19A **Crowheart** 65.71 52 ⇓P P 07 47 45.0 +0.8
baz=66,SNR=12
BW06 **Boulder Array** 65.75 53 *eP* P 07 47 44.9 +0.4
comp=Z,12nm,0.9s
PDAR **Pinedale Array** 65.75 53 P P 07 47 44.9 +0.4
PDAR **Pinedale Array** 65.75 53 P P 07 47 44.9 +0.4
comp=Z,8.5nm,0.8s,baz=300,slow=1.8,SNR=65
PDAR LR LR 08 17 24.0
comp=Z,35nm,20.5s,baz=143,slow=37
I20A **Worland** 65.76 51 ⇑P P 07 47 45.4 +1.0
baz=66,SNR=7.8
EDW2 **Edwards Air Fo** 65.89 64 ⇓P P 07 47 46.0 +0.7
baz=66,SNR=10
H21A **Big Horn, Sher** 65.89 50 ⇑P P 07 47 45.8 +0.6
baz=66
G22A **Birney** 65.90 49 ⇑P P 07 47 45.8 +0.6
baz=66
M17A **Scullys Gap (B** 65.98 55 ⇑P P 07 47 46.5 +0.6
baz=66
F23A **Volborg** 66.03 48 ⇓P P 07 47 46.4 +0.4
baz=66,SNR=15
L18A **Fontenelle, Gr** 66.04 54 ⇓P P 07 47 46.7 +0.4
baz=66
VRHR **Novokhopersk** 66.05 320 *eP* P 07 47 42.9 -3.0
VRHR pmax pmax
comp=N,4.0nm,0.4s
VRHR pmax pmax
comp=Z,8.0nm,0.4s
VRHR pmax pmax
comp=E,2.0nm,0.2s
JLU **Jordanelle** 66.10 56 *eP* P 07 47 47.5 +0.7
comp=E,10.0nm,1.3s
K19A **Absolon Red Bu** 66.11 53 ⇑P P 07 47 46.9 +0.2
baz=66,SNR=6.1
H22A **Clearmont** 66.28 50 ⇑P P 07 47 48.1 +0.4
baz=66
SHOC **Shoshone** 66.29 62 ⇑P P 07 47 48.7 +0.9
baz=66
I21A **Big Trails, Te** 66.30 51 ⇓P P 07 47 48.3 +0.3
baz=66,SNR=16
L19A **Farson** 66.30 53 ⇑P P 07 47 48.4 +0.4
baz=66
DAU **Daniels Canyon** 66.34 56 *eP* P 07 47 49.5 +1.1
DAU **Daniels Canyon** 66.34 56 *eP* P 07 47 49.5 +1.1
M18A **Lyman** 66.35 54 ⇑P P 07 47 48.8 +0.5
baz=66
GSC **Goldstone** 66.36 63 *eP* P 07 47 49.0 +0.7
GSC pmax pmax
comp=Z,7.0nm,0.9s
GSC **Goldstone** 66.36 63 *eP* P 07 47 49.0 +0.7
comp=Z,7.1nm,0.9s
GSC **Goldstone** 66.36 63 ⇓P P 07 47 48.7 +0.4
baz=66,SNR=5.5
MPU **Maple Canyon** 66.38 56 *eP* P 07 47 49.3 +0.7
comp=Z,13nm,1.1s
G23A **Biddle** 66.38 49 ⇑P P 07 47 48.3 0.0
baz=66,SNR=9.9
F24A **Ekalaka** 66.44 48 ⇓P P 07 47 49.0 +0.3
baz=66
K20A **Yellowstone Ra** 66.50 52 ⇑P P 07 47 48.9 -0.3
baz=66,SNR=7.2
BFSC **Mount Baldy Ra** 66.51 65 ⇑P P 07 47 50.0 +0.7
baz=66
J21A **Lysite** 66.53 51 ⇑P P 07 47 50.0 +0.6
baz=66,SNR=7.5
I22A **9 Mile Ranch,** 66.68 50 ⇑P P 07 47 50.8 +0.5
baz=66,SNR=8.6
G24A **Alzada** 66.81 48 ⇓P P 07 47 51.0 0.0
baz=67
TUQ **Turquoise Moun** 66.81 63 ⇑P P 07 47 51.8 +0.5
baz=67,SNR=5.5
N18A **Larsen Ranch,** 66.87 55 ⇑P P 07 47 52.0 +0.3
baz=67,SNR=5.8
L20A **Wamsutter** 66.93 53 ⇑P P 07 47 52.4 +0.3
baz=67,SNR=5.7
HEC **Hector,Ludlow** 66.96 63 ⇓P P 07 47 52.6 +0.5
baz=67
BBRC **Big Bear Solar** 66.96 64 ⇓P P 07 47 52.9 +0.5
baz=67,SNR=6.2
CCUT **Cedar City** 66.98 59 *eP* P 07 47 53.1 +0.6
comp=Z,10nm,1.2s
J22A **Midwest** 67.01 51 ⇑P P 07 47 52.8 +0.4
baz=67,SNR=10
MVU **Marysvale** 67.04 58 *eP* P 07 47 54.0 +1.2
comp=Z,4.3nm,0.8s
MSU **Marysvale** 67.05 58 *eP* P 07 47 53.9 +1.0
MSU **Marysvale** 67.05 58 *eP* P 07 47 53.9 +1.0
VSR **Storozhevoye** 67.06 321 *eP* P 07 47 51.6 -0.7
VSR pmax pmax
comp=N,2.0nm,0.5s
VSR pmax pmax
comp=E,4.0nm,0.5s
VSR pmax pmax
comp=Z,8.0nm,0.5s
VSR MLR MLR
comp=N,440nm,20.0s
VSR MLR MLR
comp=Z,750nm,20.0s
VSR MLR MLR
comp=E,160nm,10.0s
TMUT **Trail Mountain** 67.10 57 *eP* P 07 47 53.9 +0.6
comp=E,10nm,1.1s
VORD **Divnogorie** 67.18 321 *eP* P 07 47 52.0 -1.1
VORD pmax pmax
comp=N,10.0nm,0.4s
VORD pmax pmax
comp=E,20nm,0.4s
VORD pmax pmax
comp=Z,10.0nm,0.4s
VORD MLR MLR
comp=N,370nm,17.0s
VORD MLR MLR
comp=Z,370nm,17.0s
VORD MLR MLR
comp=E,310nm,15.0s
N19A **John Jarvie Ra** 67.21 54 ⇓P P 07 47 53.9 +0.2
baz=67,SNR=6.1
MURC **Murrieta** 67.22 65 ⇑P P 07 47 54.5 +0.7
baz=67
P17A **Butcher Ranch,** 67.26 56 ⇓P P 07 47 54.8 +0.7
baz=67,SNR=5.8
M20A **Sweetwater, Wa** 67.36 53 ⇑P P 07 47 55.4 +0.6
baz=67,SNR=9.2
Q16A **Castle Valley** 67.38 57 ⇓P P 07 47 55.6 +0.7
baz=67,SNR=7.1
GMRC **Granite Mounta** 67.41 63 ⇑P P 07 47 55.7 +0.7
baz=67,SNR=8.7
MDND **Maddock** 67.47 44 ⇑P P 07 47 55.5 +0.4
baz=67
K22A **Casper** 67.50 51 ⇓P P 07 47 55.7 +0.2
baz=67,SNR=7.1
L21A **Rawlins** 67.50 52 ⇑P P 07 47 55.8 +0.1
baz=67,SNR=5.8
ULM **Lac du Bonnet** 67.50 40 *eP* P 07 47 55.1 -0.1
ULM **Lac du Bonnet** 67.50 40 P P 07 47 54.6 -0.6
comp=E,7.4nm,0.8s,baz=298,slow=6.2,SNR=9.4
LDFC **Landfair** 67.55 62 *eP* P 07 47 56.7 +0.8
comp=E,19nm,0.8s
SRU **San Rafael** 67.62 57 *eP* P 07 47 57.2 +0.8
SRU pmax pmax
comp=Z,18nm,0.9s
SRU **San Rafael** 67.62 57 *eP* P 07 47 57.2 +0.8
comp=Z,18nm,0.9s

O19A **Miners Draw (B** 67.64 55 ⇓P P 07 47 56.6 +0.2
baz=67
PFO **Pinyon Flat Ob** 67.68 64 ⇑P P 07 47 57.3 +0.5
baz=68
I24A **Kuemmerle Ranc** 67.69 50 ⇓P P 07 47 57.0 +0.3
baz=68
WRA **Warramunga Arr** 67.70 198 P P 07 47 56.3 -0.3
WRA **Warramunga Arr** 67.70 198 P P 07 47 56.3 -0.3
comp=Z,3.2nm,0.8s,baz=15,slow=6.6,SNR=20
BELC **Belle Mtn. Jos** 67.71 64 ⇑P P 07 47 57.3 +0.3
baz=68
M21A **Separation Pea** 67.74 53 ⇑P P 07 47 57.4 +0.2
baz=68,SNR=5.3
N20A **Spence Gulch,** 67.76 54 ⇑P P 07 47 58.2 +0.8
baz=68,SNR=14
RSSD **Black Hills** 67.83 49 *eP* P 07 47 57.3 -0.4
RSSD **Black Hills** 67.83 49 *eP* P 07 47 57.2 -0.4
K23A **Bowen Ranch, D** 67.92 51 ⇑P P 07 47 58.2 +0.1
baz=68
L22A **Ellis Ranch, M** 67.97 52 ⇑P P 07 47 59.3 +0.7
baz=68,SNR=12
IRM **Iron Mountain** 68.13 63 ⇓P P 07 48 00.2 +0.7
baz=68,SNR=10.0
P19A **Cripple Cowboy** 68.16 55 ⇑P P 07 48 00.1 +0.2
baz=68,SNR=9.2
MONP **Monument Peak** 68.18 65 ⇓P P 07 48 00.6 +0.6
baz=68
N21A **Black Mountain** 68.23 54 ⇑P P 07 48 00.4 +0.1
baz=68,SNR=5.7
O20A **White River Ci** 68.24 54 ⇓P P 07 48 00.4 +0.1
baz=68,SNR=5.8
BC3 **Big Chuckawall** 68.28 64 ⇓P P 07 48 00.9 +0.4
baz=68,SNR=5.6
W13A **Hualapai Mount** 68.29 62 ⇓P P 07 48 01.1 +0.4
baz=68,SNR=8.0
M22A **Cedar Creek Ra** 68.30 53 ⇓P P 07 48 00.9 +0.2
baz=68,SNR=11
L23A **Garrett** 68.31 51 ⇓P P 07 48 00.6 -0.1
baz=68
U15A **North Rim** 68.37 60 ⇑P P 07 48 02.1 +0.9
baz=68,SNR=15
Q19A **Hogan Spring (** 68.46 56 ⇓P P 07 48 01.5 -0.1
baz=68,SNR=18
NB2 **NORSAR Subarra** 68.52 341 P P 07 48 00.4 -1.0
baz=28,slow=6.5
NB2 **NORSAR Subarra** 68.52 341 P P 07 48 00.4 -1.0
comp=Z,19nm,1.0s,baz=28,slow=6.5
NOA **NORSAR Array B** 68.52 341 P P 07 48 01.0 -0.5
NOA **NORSAR Array B** 68.52 341 P P 07 48 01.0 -0.5
comp=Z,5.0nm,0.5s,baz=28,slow=6.3,SNR=33
NOA LR LR 08 21 57.4
comp=Z,140nm,18.3s,baz=30,slow=39
P20A **De Beque** 68.59 55 ⇓P P 07 48 02.2 -0.2
baz=68,SNR=6.4
PDMCI **Parker Dam,Lak** 68.66 62 ⇑P P 07 48 03.4 +0.7
baz=68,SNR=7.9
POO **Poona** 68.70 275 *ex* P 07 48 01.0 -2.2
M23A **Laramie** 68.74 52 ⇑P P 07 48 03.6 +0.2
baz=68
N22A **Wattenberg Ran** 68.79 53 ⇓P P 07 48 04.0 +0.2
baz=69,SNR=6.5
Y12C **Blythe** 68.79 63 ⇑P P 07 48 04.3 +0.7
baz=69
S18A **Hurst Farm, Bl** 68.88 57 ⇓P P 07 48 04.6 +0.1
baz=69,SNR=16
AGMN **Agassiz Nation** 68.91 41 *eP* P 07 48 03.7 -0.4
comp=Z,7.6nm,0.7s
K25A **Mack Ranch, Ha** 68.95 50 ⇑P P 07 48 04.8 +0.2
baz=69
N23A **Red Feather La** 69.01 53 ⇓P P 07 48 05.5 +0.4
baz=69,SNR=9.2
Q20A **Ridgley Place,** 69.01 55 ⇓P P 07 48 05.4 +0.3
baz=69,SNR=6.1
PV04 **Paradox Valley** 69.04 56 *eP* P 07 48 06.4 +1.1
GLA **Glamis** 69.07 64 *eP* P 07 48 06.7 +1.3
GLA pmax pmax
comp=Z,10.0nm,0.9s
GLA **Glamis** 69.07 64 *eP* P 07 48 06.7 +1.3
comp=Z,9.9nm,0.9s
GLA **Glamis** 69.07 64 ⇓P P 07 48 06.2 +0.9
baz=69
P21A **Newcastle** 69.11 54 ⇓P P 07 48 06.3 +0.6
baz=69,SNR=14
NACGM **Naroch** 69.16 330 *e* P 07 48 03.0 -2.5
DZM **Mont Dzumac** 69.17 166 *eLR* LR 07 47 05.4
DZM **Mont Dzumac** 69.17 166 *eLR* LR 08 09 07.2
comp=Z,159nm,23.2s
O22A **Kremmling** 69.18 53 ⇓P P 07 48 06.7 +0.4
baz=69,SNR=6.2
L25A **Engebretsen Ra** 69.22 50 ⇑P P 07 48 06.5 +0.2
baz=69
M24A **Cheyenne** 69.23 51 ⇓P P 07 48 07.1 +0.6
baz=69,SNR=6.4
PV01 **Paradox Valley** 69.41 56 *eP* P 07 48 07.3 -0.3
comp=Z,416nm,0.8s
P22A **Eagle** 69.45 54 ⇓P P 07 48 08.2 +0.4
baz=69,SNR=7.8
R20A **Redvale** 69.48 56 ⇓P P 07 48 08.6 +0.6
baz=69,SNR=6.1
O23A **Lake Granby, G** 69.50 53 ⇓P P 07 48 09.0 +0.7
baz=69,SNR=12
Q21A **Lamborn Mesa,** 69.51 55 ⇓P P 07 48 08.8 +0.6
baz=69,SNR=6.1
WUAZ **Wupatki** 69.53 60 *eP* P 07 48 09.4 +1.1
comp=Z,8.4nm,0.9s
Y14A **Wickenburg** 69.60 62 ⇓P P 07 48 09.5 +0.9
baz=69,SNR=13
N24A **Carr** 69.64 52 ⇑P P 07 48 09.8 +0.9
baz=69
S20A **Disappointment** 69.74 56 ⇑P P 07 48 09.9 +0.2
baz=70,SNR=8.6
K27A **Fleckinger Fa** 69.75 49 ⇓P P 07 48 09.7 +0.2
baz=70
R21A **Cimarron** 69.84 55 ⇓P P 07 48 11.1 +0.8
baz=70,SNR=15
Q22A **Crested Butte,** 69.86 55 ⇓P P 07 48 11.1 +0.6
baz=70,SNR=10
113A **Mohawk Valley,** 69.92 63 ⇓P P 07 48 11.3 +0.7
baz=70
ISCO **Idaho Springs** 69.95 53 *eP* P 07 48 12.0 +1.0
ISCO pmax pmax
comp=Z,10.0nm,0.8s
ISCO **Idaho Springs** 69.95 53 *eP* P 07 48 12.0 +1.0
comp=Z,9.7nm,0.8s
O24A **Longmont** 70.02 53 ⇑P P 07 48 12.1 +0.8
baz=70
Z14A **Wintersburg** 70.03 62 ⇓P P 07 48 12.4 +1.2
baz=70
MVCO **Mesa Verde** 70.08 57 *eP* P 07 48 12.4 +0.6
comp=Z,11nm,0.9s
P23A **Jefferson** 70.11 54 ⇑P P 07 48 13.0 +0.9
baz=70
M26A **McRoberts Ranc** 70.14 51 ⇑P P 07 48 13.1 +1.2
baz=70
S21A **Coal Bank Pass** 70.18 56 ⇓P P 07 48 13.4 +0.9
baz=70,SNR=6.8
X16A **Lo Mia Camp, P** 70.23 61 ⇓P P 07 48 13.8 +1.1
baz=70,SNR=19
R22A **Saguache, Gunn** 70.39 55 ⇓P P 07 48 14.8 +1.1
baz=70,SNR=17
Q23A **Hartsel** 70.44 54 ⇓P P 07 48 14.9 +0.9
baz=70
O25A **Wiggins** 70.56 52 ⇓P P 07 48 15.3 +0.8
baz=70
KIV **Kislovodsk** 70.62 314 *ciP* P 07 48 15.5 +0.7
KIV *e* 07 48 33.4
KIV pmax pmax
comp=Z,25nm,1.0s
KIV MLR MLR
comp=Z,200nm,18.0s
KBZ **Khabaz** 70.67 313 P P 07 48 15.6 +0.6
KBZ pmax pmax
comp=Z,20nm,0.9s
KBZ MLR MLR
comp=Z,257nm,18.8s
KBZ **Khabaz** 70.67 313 P P 07 48 15.6 +0.6
KBZ **Khabaz** 70.67 313 P P 07 48 15.6 +0.6
comp=Z,20nm,0.9s,baz=122,slow=4.5,SNR=35
KBZ LR LR 08 23 45.6
comp=Z,257nm,18.8s,baz=56,slow=40
S22A **4UR Ranch, Cre** 70.68 55 ⇑P P 07 48 16.4 +0.9
baz=70,SNR=13
W18A **Petrified Fore** 70.78 59 ⇓P P 07 48 16.8 +0.7
baz=71
Q24A **Divide** 70.79 54 ⇑P P 07 48 16.7 +0.6
baz=71
T21A **Navajo Lake** 70.79 56 ⇓P P 07 48 16.9 +0.8
baz=71
ZEI **Tsey** 70.85 312 *eP* P 07 48 16.0 -0.4
ZEI pmax pmax
comp=Z,10.0nm,0.9s
O26A **Horse Wrangler** 70.91 52 ⇓P P 07 48 17.0 +0.3
baz=71
N27A **Anderson Farm,** 70.93 51 ⇑P P 07 48 17.2 +0.4
baz=71,SNR=8.1
R23A **Moffat** 70.94 55 ⇑P P 07 48 17.9 +0.8
baz=71,SNR=12
P25A **Willow Gulch B** 70.95 53 ⇓P P 07 48 17.9 +0.9
baz=71
X18A **Snowflake** 71.06 60 ⇑P P 07 48 18.4 +0.7
baz=71
214A **Organ Pipe Nat** 71.06 63 ⇑P P 07 48 18.3 +0.7
baz=71
V20A **Brimhall** 71.07 58 ⇑P P 07 48 18.2 +0.5
baz=71
OGNE **Ogallala** 71.10 50 *eP* P 07 48 18.2 +0.4
comp=Z,39nm,0.8s
U21A **Nageezi** 71.11 57 ⇑P P 07 48 18.5 +0.5
baz=71,SNR=6.6
T22A **Edith** 71.14 56 ⇓P P 07 48 19.0 +0.7
baz=71,SNR=7.7
EYMN **Ely** 71.14 39 *eP* P 07 48 17.4 -0.4
comp=Z,9.3nm,0.8s
S23A **Nye Farm, Mont** 71.18 55 ⇓P P 07 48 19.4 +0.9
baz=71
R24A **Sanders Place,** 71.32 54 ⇓P P 07 48 19.9 +0.6
baz=71,SNR=9.0
Q25A **Bedland, Calha** 71.32 53 ⇑P P 07 48 19.7 +0.4
baz=71,SNR=12
P26A **Davis Ranch, A** 71.37 52 ⇓P P 07 48 19.6 +0.1
baz=71
O27A **Beecher Island** 71.39 51 ⇑P P 07 48 19.8 +0.3
baz=71
ASAR **Alice Springs** 71.40 197 P P 07 48 20.2 +0.8
ASAR **Alice Springs** 71.40 197 P P 07 48 20.2 +0.8
comp=Z,1.8nm,0.7s,baz=11,slow=5.1,SNR=22
SDCO **Great Sand Dun** 71.44 55 *eP* P 07 48 20.7 +0.6
comp=Z,4.7nm,0.9s
W20A **Ramah** 71.51 58 ⇑P P 07 48 21.1 +0.5
baz=71,SNR=5.4
V21A **Milan** 71.55 57 ⇑P P 07 48 21.2 +0.5
baz=71
AKASG **Malin Array Be** 71.57 326 P P 07 48 19.2 -1.1
AKASG pmax pmax
comp=Z,7.0nm,0.4s
AKASG MLR MLR
comp=Z,251nm,20.4s
AKASG **Malin Array Be** 71.57 326 P P 07 48 19.2 -1.1
AKASG **Malin Array Be** 71.57 326 P P 07 48 19.2 -1.1
comp=Z,6.6nm,0.4s,baz=34,slow=6.3,SNR=30
AKASG LR LR 08 21 58.1
comp=Z,251nm,20.4s,baz=35,slow=38
KIEV **Kiev** 71.59 326 *eP* P 07 48 19.3 -1.1
KIEV pmax pmax
comp=Z,18nm,0.9s
KIEV **Kiev** 71.59 326 *eP* P 07 48 19.3 -1.1
comp=Z,18nm,0.9s
AK01 **Malin Array Si** 71.59 326 *eP* P 07 48 19.2 -1.1
U22A **Llaves** 71.61 57 ⇑P P 07 48 21.6 +0.5
baz=71
AK02 **Malin Array Si** 71.62 326 *eP* P 07 48 19.3 -1.3
T23A **Casias Ranch,** 71.62 56 ⇑P P 07 48 21.8 +0.6
baz=71
S24A **Houchin Ranch,** 71.67 55 ⇓P P 07 48 22.1 +0.6
baz=72,SNR=5.3
Q26A **Hugo** 71.72 53 ⇑P P 07 48 21.7 +0.1
baz=72,SNR=6.3
P27A **Ficken Ranch,** 71.79 52 ⇓P P 07 48 21.9 0.0
baz=72
R25A **Fountain Ranch** 71.84 54 ⇑P P 07 48 22.5 +0.2
baz=72
ECSD **EROS Data Cent** 71.88 45 *eP* P 07 48 22.0 -0.3
comp=Z,20nm,1.0s
V22A **San Miguel Ran** 71.90 57 ⇑P P 07 48 23.4 +0.6
baz=72
X20A **Quemado** 71.92 59 ⇓P P 07 48 24.1 +1.1
baz=72,SNR=11
U23A **El Rito** 72.03 56 ⇓P P 07 48 24.4 +0.8
baz=72,SNR=20
TUC **Tucson** 72.07 62 *eP* P 07 48 24.8 +1.0
TUC **Tucson** 72.07 62 *eP* P 07 48 24.8 +1.0
S25A **Robets Cordova** 72.10 54 ⇑P P 07 48 24.1 +0.2
baz=72
KSCO **Kaye Shedlock'** 72.15 52 ⇓P P 07 48 24.7 +0.5
baz=72
T24A **Torres, Weston** 72.16 55 ⇑P P 07 48 25.3 +0.8
baz=72,SNR=7.6
R26A **Arlington** 72.20 53 ⇑P P 07 48 24.8 +0.3
baz=72,SNR=9.6
X21A **Alamocita Cree** 72.41 59 ⇑P P 07 48 27.0 +1.1
baz=72,SNR=8.4
Y20A **Horse Springs,** 72.43 59 ⇓P P 07 48 27.3 +1.2
baz=72,SNR=6.3
V23A **Ortiz Mt. (NFS** 72.44 57 ⇑P P 07 48 27.2 +1.2
baz=72,SNR=5.7
T25A **Trinidad** 72.48 55 ⇑P P 07 48 26.8 +0.5
baz=72,SNR=7.4
R27A **Eads** 72.57 53 ⇑P P 07 48 26.4 -0.3
baz=72
SPMN **St. Paul** 72.60 42 ⇓P P 07 48 26.5 0.0
baz=72
S26A **Kim** 72.67 54 ⇓P P 07 48 26.8 -0.5
baz=72
Y21A **Point of Rocks** 72.78 59 ⇑P P 07 48 29.2 +1.1
baz=73
BGNE **Belgrade** 72.81 48 ⇓P P 07 48 27.8 -0.1
baz=73
LAZ **Ladron** 72.82 58 *eP* P 07 48 29.4 +1.1
comp=Z,10nm,1.7s
X22A **Bernardo** 72.82 58 ⇑P P 07 48 29.8 +1.5
baz=73
ANMO **Albuquerque** 72.84 57 *eP* P 07 48 28.7 +0.3
Z20A **Nine Sixteen R** 72.85 60 ⇑P P 07 48 29.5 +1.1
baz=73,SNR=5.6
W23A **Werner Place,** 72.87 57 ⇓P P 07 48 29.3 +0.7
baz=73,SNR=5.6
T26A **Comanche Natio** 72.92 54 ⇓P P 07 48 28.7 -0.1
baz=73,SNR=16
V24A **Rampart Ranch,** 72.98 56 ⇓P P 07 48 30.1 +0.8
baz=73,SNR=6.7
U25A **Circle Dot Ran** 73.00 55 ⇑P P 07 48 29.7 +0.4
baz=73,SNR=8.0
Y22A **Socorro** 73.25 58 ⇑P P 07 48 31.3 +0.5
baz=73
W24A **Lazy 6 Ranch,** 73.27 57 ⇑P P 07 48 32.0 +1.1
baz=73,SNR=13
Z21A **St. Cloud Mine** 73.27 59 ⇑P P 07 48 31.9 +0.9
baz=73
V25A **Rancho No Teng** 73.28 56 ⇑P P 07 48 31.5 +0.5
baz=73
U26A **Atchley Ranch,** 73.38 55 ⇓P P 07 48 32.0 +0.4
baz=73
T27A **Campo** 73.48 54 ⇓P P 07 48 32.5 +0.4
baz=73
319A **Douglas** 73.64 62 ⇑P P 07 48 34.0 +0.9
baz=74,SNR=12
X24A **Lazy VL Ranch,** 73.71 57 ⇑P P 07 48 34.4 +0.8
baz=74
Z22A **Elephant Butte** 73.73 59 ⇑P P 07 48 34.4 +0.8
baz=74,SNR=8.8
220A **Playas Peak, P** 73.73 61 ⇑P P 07 48 34.3 +0.7
baz=74,SNR=8.5
121A **Cookes Peak, D** 73.74 60 ⇑P P 07 48 34.4 +0.7
baz=74,SNR=9.2
T28A **Walsh** 73.78 53 ⇓P P 07 48 34.0 +0.2
baz=74
V26A **Tequesquite Ra** 73.78 55 ⇓P P 07 48 34.3 +0.5
baz=74
Y23A **Lovelace Mesa,** 73.79 58 ⇓P P 07 48 34.7 +0.7
baz=74,SNR=9.3
W25A **X Bar L Ranch,** 73.81 56 ⇓P P 07 48 34.4 +0.4
baz=74,SNR=12
U27A **Thompson Grove** 73.88 54 ⇑P P 07 48 34.2 -0.2
baz=74,SNR=7.3
122A **Conniff Cattle** 74.09 59 ⇑P P 07 48 36.6 +0.9
baz=74
221A **Mesquite Ranch** 74.11 60 ⇑P P 07 48 36.4 +0.6
baz=74
320A **Kipp Ranch, An** 74.13 61 ⇑P P 07 48 36.8 +0.9
baz=74
Y24A **Capitan** 74.16 58 ⇑P P 07 48 36.4 +0.3
baz=74,SNR=12
Z23A **Rita Site, Whi** 74.16 58 ⇑P P 07 48 37.0 +0.9
baz=74
SCHQ **Schefferville** 74.17 22 *eP* P 07 48 35.5 -0.1

SCHQ **Schefferville** 74.17 22 P P 07 48 35.2 -0.4
comp=Z,9.5nm,0.9s,baz=6.2,slow=7.0,SNR=11
X25A **Clemmons Ranch** 74.18 57 ⇓P P 07 48 37.0 +0.8
baz=74,SNR=7.8
T29A **Hugoton** 74.21 53 ⇓P P 07 48 36.4 +0.2
baz=74
LVV **L'vov** 74.26 328 *eP* P 07 48 37.2 +1.0
W26A **Owens Ranch, T** 74.30 56 ⇓P P 07 48 37.6 +0.7
baz=74
V27A **Dan Oppiter Fa** 74.35 55 ⇓P P 07 48 37.3 +0.1
baz=74,SNR=5.8
222A **Williams Famil** 74.45 60 ⇓P P 07 48 38.5 +0.6
baz=74
Y25A **Mesa, Roswell** 74.59 57 ⇓P P 07 48 39.0 +0.3
baz=74,SNR=6.7
Z24A **Sheeppen Canyo** 74.62 58 ⇓P P 07 48 39.3 +0.4
baz=74,SNR=6.4
X26A **CR and CF Fran** 74.66 56 ⇓P P 07 48 39.3 +0.3
baz=74,SNR=5.4
V28A **Channing** 74.70 54 ⇓P P 07 48 39.2 0.0
baz=74
W27A **Bowe Ranch, En** 74.72 55 ⇓P P 07 48 39.6 +0.3
baz=74
KWP **Kalwaria Pacla** 74.90 329 ⇓P P 07 48 40.8 +0.8
KWP **Kalwaria Pacla** 74.90 329 *eP* P 07 48 40.1 +0.1
comp=Z,52nm,1.0s
KWP **Kalwaria Pacla** 74.90 329 ⇓*i*P P 07 48 40.8 +0.8
KWP **Kalwaria Pacla** 74.90 329 *eP* P 07 48 40.6 +0.6
SCIA **State Center** 74.91 45 *eP* P 07 48 40.6 +0.4
comp=Z,29nm,0.9s
223A **Chaparral, Ant** 74.93 60 ⇓P P 07 48 41.3 +0.7
baz=75
X27A **F and S Farms,** 75.00 56 ⇑P P 07 48 41.7 +0.8
baz=75
124A **Stringfield Ra** 75.02 58 ⇑P P 07 48 41.8 +0.6
baz=75
U30A **WK&E Inc. Balk** 75.02 53 ⇓P P 07 48 40.6 -0.4
baz=75
Z25A **Roswell** 75.04 58 ⇑P P 07 48 41.9 +0.8
baz=75
W28A **Vega** 75.07 55 ⇑P P 07 48 41.5 +0.2
baz=75,SNR=5.5
Y26A **Elida** 75.10 57 ⇑P P 07 48 41.9 +0.3
baz=75
T31A **Randall Ranch,** 75.14 52 ⇓P P 07 48 41.3 -0.3
baz=75
KSU1 **Kansas State U** 75.30 48 *eP* P 07 48 41.2 -1.2
comp=Z,11nm,0.9s
224A **Cornudas Mount** 75.42 59 ⇓P P 07 48 43.9 +0.5
baz=75
OJC **Ojcow** 75.43 331 *eP* P 07 48 42.7 -0.3
OJC pmax pmax
comp=Z,26nm,1.1s
OJC **Ojcow** 75.43 331 *eP* P 07 48 42.7 -0.3
comp=Z,26nm,1.1s
OJC **Ojcow** 75.43 331 *eP* P 07 48 43.5 +0.5
Z26A **Caprock** 75.47 57 ⇑P P 07 48 43.9 +0.2
baz=75,SNR=26
W29A **Amarillo** 75.48 54 ⇓P P 07 48 44.6 +0.9
baz=75
Y27A **Causey** 75.51 56 ⇓P P 07 48 44.1 +0.2
baz=75,SNR=13
125A **Gardner Draw,** 75.52 58 ⇓P P 07 48 44.2 +0.3
baz=75,SNR=8.6
V30A **Spur Ranch, Mi** 75.56 53 ⇓P P 07 48 44.4 +0.3
baz=75
U31A **Nine Bar Ranch** 75.58 52 ⇑P P 07 48 44.4 +0.3
baz=75
BUR08 **Bucovina Ar. S** 75.60 326 *eP* P 07 48 44.0 -0.1
X28A **Dimmitt** 75.61 55 ⇓P P 07 48 44.7 +0.3
baz=75
BURAR **Bucovina Array** 75.62 326⇑*i*P P 07 48 44.4 +0.1
AMTX **Amarillo** 75.64 55 *eP* P 07 48 45.1 +0.6
comp=Z,20nm,0.8s
KOLS **Kolonicke sedl** 75.64 328 *eP* P 07 48 44.5 +0.3
KOLS pmax pmax
comp=Z,11nm,0.9s
KOLS **Kolonicke sedl** 75.64 328 *eP* P 07 48 44.5 +0.3
MSTX **Muleshoe** 75.67 56 ⇑P P 07 48 45.0 +0.2
baz=76,SNR=7.8
225A **Deer Hill, Car** 75.81 58 ⇑P P 07 48 46.2 +0.5
baz=76
Z27A **Tatum** 75.89 57 ⇓P P 07 48 46.1 +0.1
baz=76,SNR=24
324A **Moseley Ranch,** 75.89 59 ⇓P P 07 48 46.1 -0.1
baz=76
126A **Clayton Basin,** 75.90 58 ⇑P P 07 48 46.4 +0.3
baz=76
X29A **Tulia** 75.94 55 ⇑P P 07 48 46.6 +0.3
baz=76,SNR=9.2
TESR 75.95 324⇑*i*P P 07 48 45.8 -0.2
CRVS **Cervenica-Dubn** 75.96 329 *eP* P 07 48 45.6 -0.5
CRVS pmax pmax
comp=Z,8.0nm,0.9s
CRVS **Cervenica-Dubn** 75.96 329 *eP* P 07 48 45.6 -0.5
GDL2 **Guadalupe Moun** 76.02 58 *eP* P 07 48 47.4 +0.6
GDL2 *e*pP PcP 07 48 59.5 +0.5
V31A **Spring Creek L** 76.02 53 ⇓P P 07 48 47.1 +0.4
baz=76
Y28A **McKinney Farm,** 76.02 56 ⇑P P 07 48 46.9 +0.2
baz=76
KSP **Ksiaz** 76.06 333 *eP* P 07 48 46.7 +0.2
KSP **Ksiaz** 76.06 333 *eP* P 07 48 46.7 +0.2
TRPA **Tarpa** 76.21 328⇓*i*P P 07 48 47.9 +0.5
TRPA **Tarpa** 76.21 328⇑*e*P P 07 48 48.2 +0.8
226B **Tecolote Peak,** 76.22 58 ⇑P P 07 48 48.3 +0.4
baz=76,SNR=12
325A **Bean Ranch, Si** 76.25 59 ⇓P P 07 48 48.3 +0.1
baz=76,SNR=7.5
OKC **Ostrava-Krasne** 76.32 331 *i*P P 07 48 48.8 +0.8
OKC **Ostrava-Krasne** 76.32 331⇑*i*P P 07 48 48.8 +0.8
Y29A **Porterfield Fa** 76.38 55 ⇑P P 07 48 49.3 +0.5
baz=76
Z28A **Tucker Farm, M** 76.39 56 ⇑P P 07 48 48.9 +0.1
baz=76
W31A **Holland Ranch,** 76.39 53 ⇑P P 07 48 49.1 +0.4
baz=76
NRDL **Niedersach Rie** 76.42 337 *eP* P 07 48 48.4 0.0
comp=Z,19nm,1.0s
CFR **Carcaliu** 76.42 323 ⇑P P 07 48 48.8 +0.2
CFR **Carcaliu** 76.42 323⇑*i*P P 07 48 48.8 +0.2
UPC **Upice** 76.44 333 *i*P P 07 48 49.1 +0.4
UPC **Upice** 76.44 333⇑*i*P P 07 48 49.1 +0.4
VRI **Vrincioaia** 76.44 324 ⇓P P 07 48 49.4 +0.5
VRI **Vrincioaia** 76.44 324⇓*i*P P 07 48 49.4 +0.5
DPC **Dobruska-Polom** 76.47 333 *i*P P 07 48 49.4 +0.4
DPC MLR MLR
comp=Z,300nm,19.7s
DPC **Dobruska-Polom** 76.47 333 *eP* P 07 48 49.5 +0.4
comp=Z,42nm,1.1s
DPC **Dobruska-Polom** 76.47 333 *i*P P 07 48 49.4 +0.4
DPC AMS AMS 08 26 40.0
comp=Z,300nm,19.7s
MORC **Moravsky Berou** 76.57 332 ⇓P P 07 48 49.8 +0.3
MORC **Moravsky Berou** 76.57 332 *eP* P 07 48 49.9 +0.4
comp=Z,24nm,1.0s
MORC **Moravsky Berou** 76.57 332⇓*i*P P 07 48 49.8 +0.3
CLL **Collm** 76.66 335⇑*i*P P 07 48 49.6 -0.3
CLL pmax pmax
comp=Z,33nm,1.1s
CLL MLR MLR
comp=Z,200nm,19.8s
CLL **Collm** 76.66 335 *eP* P 07 48 49.6 -0.3
comp=Z,33nm,1.1s
CLL **Collm** 76.66 335⇑*i*P P 07 48 49.6 -0.3
comp=Z,33nm,1.1s
CLL LmV 08 25 00.0
comp=Z,200nm,19.8s
425A **Indio Mountain** 76.66 59 ⇓P P 07 48 51.1 +0.6
baz=76,SNR=11
BRG **Berggiesshubel** 76.76 334 *eP* P 07 48 50.0 -0.4
comp=Z,8.0nm,1.1s
BRG **Berggiesshubel** 76.76 334 *eP* P 07 48 50.1 -0.4
comp=Z,15nm,1.4s
X31A **McDonald Ranch** 76.78 54 ⇑P P 07 48 51.1 +0.2
baz=77
Z29A **Hungry Hill Ra** 76.80 56 ⇓P P 07 48 51.7 +0.5
baz=77,SNR=10.0
128A **Castleberry Fa** 76.81 57 ⇑P P 07 48 51.7 +0.4
baz=77,SNR=8.8
326A **Caldwell Ranch** 76.88 58 ⇓P P 07 48 52.0 +0.4
baz=77,SNR=11
FBE **Freiberg** 76.89 335 *eP* P 07 48 51.2 -0.1
comp=Z,21nm,1.2s
CLZ **Clausthal** 76.93 337 *eP* P 07 48 51.8 +0.3
CLZ pmax pmax
comp=Z,32nm,1.1s
CLZ **Clausthal** 76.93 337 *eP* P 07 48 51.8 +0.3
comp=Z,32nm,1.1s
MALT **Malatya** 76.95 312 ⇓P P 07 48 53.4 +1.4
MALT **Malatya** 76.95 312 *eP* P 07 48 53.3 +1.4
comp=Z,13nm,0.9s
MALT **Malatya** 76.95 312⇓*i*P P 07 48 53.4 +1.4
MLR **Muntele Rosu** 77.07 324⇓*i*P P 07 48 53.1 +0.6
NEUB **Neuenburg** 77.10 336 *eP* P 07 48 52.2 -0.2
comp=Z,31nm,1.1s
Y31A **Rekieta Farm,** 77.11 54 ⇓P P 07 48 52.8 -0.1
baz=77
Z30A **Sanderson Ranc** 77.11 55 ⇑P P 07 48 53.1 +0.2
baz=77,SNR=6.8
228A **UT Block 9, Go** 77.11 57 ⇑P P 07 48 53.3 +0.3
baz=77
ISR **Istrita** 77.13 324 ⇑P P 07 48 53.5 +0.7
ISR **Istrita** 77.13 324⇑*i*P P 07 48 53.5 +0.7
129A **Stewart Farms,** 77.16 56 ⇑P P 07 48 53.4 +0.2
baz=77
VYHS **Vyhne** 77.23 330 *eP* P 07 48 53.8 +0.6
VYHS pmax pmax
comp=Z,11nm,1.1s
VYHS **Vyhne** 77.23 330 *eP* P 07 48 53.8 +0.6
DRGR 77.27 327 ⇓P P 07 48 53.9 +0.4
DRGR 77.27 327⇓*i*P P 07 48 53.9 +0.4
VRAC **Vranov** 77.29 332⇓*i*P P 07 48 54.3 +0.8
426A **McDonald Obser** 77.31 59 ⇑P P 07 48 54.4 +0.1
baz=77
PRU **Pruhonice** 77.35 333 *i*P P 07 48 53.9 0.0
PRU **Pruhonice** 77.35 333⇑*i*P P 07 48 53.9 0.0
PSZ **Piszkesteto** 77.35 329 ⇑P P 07 48 54.5 +0.5
PSZ **Piszkesteto** 77.35 329 *eP* P 07 48 54.7 +0.7
comp=Z,25nm,1.1s
PSZ **Piszkesteto** 77.35 329⇑*i*P P 07 48 54.5 +0.5
PSZ **Piszkesteto** 77.35 329⇓*e*P P 07 48 54.9 +0.9
WMOK **Wichita Mounta** 77.36 53 *eP* P 07 48 54.2 -0.1
WMOK pmax pmax
comp=Z,5.0nm,0.9s
WMOK **Wichita Mounta** 77.36 53 *eP* P 07 48 54.1 -0.1
comp=Z,4.9nm,0.9s
VOIR 77.47 325 ⇓P P 07 48 55.7 +1.0
VOIR 77.47 325⇓*i*P P 07 48 55.7 +1.0
328A **Wristen Ranch,** 77.52 58 ⇓P P 07 48 55.5 +0.3
baz=77,SNR=16
Y32A **R-V Farms, Ver** 77.54 54 ⇓P P 07 48 55.2 0.0
baz=77
427A **Hayter Ranch,** 77.56 58 ⇓P P 07 48 55.7 +0.3
baz=77,SNR=6.0
TANN **Tannenbergstha** 77.61 335 *eP* P 07 48 55.3 -0.1
comp=Z,8.0nm,1.3s
WERD **Werda** 77.62 335 *eP* P 07 48 55.2 -0.2
comp=Z,13nm,1.1s
PLN **Plauen** 77.63 335 *eP* P 07 48 55.4 0.0
comp=Z,73nm,1.2s
Z31A **Sharp Cattle R** 77.65 55 ⇑P P 07 48 55.8 -0.1
baz=77,SNR=8.3
MOX **Moxa** 77.65 335 *eP* P 07 48 55.5 0.0
MOX pmax pmax
comp=Z,20nm,1.2s
MOX **Moxa** 77.65 335 *eP* P 07 48 55.5 0.0
comp=Z,20nm,1.2s
TREC **Trest** 77.66 332 *i*P P 07 48 55.8 +0.2
TREC **Trest** 77.66 332⇑*i*P P 07 48 55.8 +0.2
229A **Bryant Ranch,** 77.68 57 ⇑P P 07 48 56.4 +0.4
baz=78,SNR=6.6
GUNZ **Gunzen** 77.69 335 *eP* P 07 48 55.9 +0.1
comp=Z,16nm,1.0s
SMOL **Smolenice** 77.70 331 *eP* P 07 48 56.9 +1.1
SMOL **Smolenice** 77.70 331 *eP* P 07 48 56.9 +1.1
130A **Snyder** 77.71 56 ⇑P P 07 48 56.3 +0.1
baz=78
526A **Mary Lane Ranc** 77.72 59 ⇓P P 07 48 56.6 +0.2
baz=78,SNR=12
WERN **Wernitzgruen** 77.75 335 *eP* P 07 48 56.2 +0.1
comp=Z,18nm,1.0s
WTSB **Winterswijk** 77.76 339 *eP* P 07 48 55.8 -0.2
comp=Z,26nm,0.6s
NKC **Novy Kostel** 77.77 335 *i*P P 07 48 56.6 +0.4
NKC **Novy Kostel** 77.77 335⇑*i*P P 07 48 56.6 +0.4
329A **Wagon Wheel Ra** 77.93 57 ⇓P P 07 48 58.0 +0.5
baz=78,SNR=8.9
527A **Woodward Ranch** 77.94 59 ⇓P P 07 48 57.7 0.0
baz=78,SNR=6.1
UBBA **Unterbreizbach** 77.95 336 *eP* P 07 48 56.9 -0.1
comp=Z,16nm,1.5s
LOT **Lotru** 77.97 326 ⇓*i*P P 07 48 56.4 -1.2
131A **Roby** 77.98 55 ⇑P P 07 48 58.1 +0.3
baz=78
BUD **Budapest** 78.03 329⇓*e*P P 07 48 58.8 +1.1
Z32A **Haskell** 78.03 54 ⇑P P 07 48 58.0 0.0
baz=78
626A **Big Bend Ranch** 78.06 60 ⇑P P 07 48 58.5 +0.2
baz=78,SNR=9.9
428A **Kincaid Ranch,** 78.07 58 ⇑P P 07 48 58.8 +0.5
baz=78,SNR=6.1
ZST **Bratislava** 78.08 331 *eP* P 07 48 57.9 0.0
ZST **Bratislava** 78.08 331 *eP* P 07 48 57.9 0.0
MANZ **Manzenberg** 78.09 335 *eP* P 07 48 58.0 0.0
comp=Z,11nm,1.0s
TUL1 **Tulsa** 78.12 50 ⇑P P 07 48 58.1 -0.2
baz=78
BUG **Bochum--Univer** 78.12 338 *eP* P 07 48 58.1 0.0
comp=Z,31nm,1.1s
230A **Sterling City** 78.14 56 ⇑P P 07 48 58.9 +0.3
baz=78
BR131 **Keskin Array S** 78.25 316 *eP* P 07 48 59.6 +0.4
comp=Z,11nm,0.9s
BRTR **Keskin Array B** 78.25 316 P P 07 48 59.7 +0.4
BRTR **Keskin Array B** 78.25 316 P P 07 48 59.7 +0.4
comp=Z,12nm,0.8s,baz=71,slow=4.8,SNR=36
BRTR LR LR 08 29 35.9
comp=Z,136nm,18.1s,baz=208,slow=40
ROTZ **Rotzenmuhle** 78.26 335 *eP* P 07 48 59.3 +0.4
comp=Z,15nm,0.9s
KHC **Kasperske Hory** 78.41 334⇑*i*P P 07 49 00.2 +0.4
KHC **Kasperske Hory** 78.41 334 *eP* P 07 49 00.1 +0.4
comp=Z,30nm,1.0s
KHC **Kasperske Hory** 78.41 334⇑*i*P P 07 49 00.2 +0.4
528A **Cox Ranch, San** 78.42 59 ⇓P P 07 49 00.7 +0.5
baz=78,SNR=8.6
330A **Mertzon** 78.46 57 ⇓P P 07 49 00.6 +0.2
baz=78,SNR=7.8
TXAR **Lajitas Array** 78.50 60 P P 07 49 01.1 +0.4
TXAR **Lajitas Array** 78.50 60 P P 07 49 01.1 +0.4
comp=Z,8.2nm,0.8s,baz=296,slow=4.2,SNR=54
ANTO **Ankara** 78.54 317 *eP* P 07 49 00.9 +0.2
ANTO pmax pmax
comp=Z,23nm,0.8s
ANTO **Ankara** 78.54 317 *eP* P 07 49 00.9 +0.2
comp=Z,23nm,0.8s
231A **Bronte** 78.56 56 ⇓P P 07 49 00.9 0.0
baz=78
WET **Wettzell** 78.61 334 *eP* P 07 49 01.3 +0.4
WET pmax pmax
comp=Z,24nm,1.0s
WET **Wettzell** 78.61 334 *eP* P 07 49 01.3 +0.4
comp=Z,24nm,1.0s
429A **Davenport Ranc** 78.61 58 ⇓P P 07 49 01.2 -0.1
baz=78
GRF **Grafenberg Arr** 78.61 335 *eP* P 07 49 01.4 +0.5
GRF pmax pmax
comp=Z,45nm,1.0s
GRF MLR MLR
comp=Z,100nm,20.2s
GRF **Grafenberg Arr** 78.61 335 *eP* P 07 49 01.4 +0.5
comp=Z,45nm,1.0s
GRF *e*L L 08 27 18.8
comp=Z,112nm,20.2s
GRFO **Grafenberg** 78.62 335 *eP* P 07 49 01.6 +0.7
GRFO pmax pmax
comp=Z,34nm,0.9s
GRFO **Grafenberg** 78.62 335 *eP* P 07 49 01.6 +0.7
comp=Z,34nm,0.9s
GEC2 **GERESS Array S** 78.62 333 *eP* P 07 49 00.9 -0.1
GEC2 pmax pmax
comp=Z,10.0nm,0.9s
GEC2 **GERESS Array S** 78.62 333 *eP* P 07 49 00.9 -0.1
comp=Z,10.0nm,0.9s
GERES **GERESS Array B** 78.62 333 P P 07 49 00.9 -0.1
GERES **GERESS Array B** 78.62 333 P P 07 49 00.9 -0.1
comp=Z,7.5nm,0.8s,baz=35,slow=4.9,SNR=41
GERES LR LR 08 26 02.6
comp=Z,160nm,21.0s,baz=191,slow=37
BZS **Buzias** 78.66 327 ⇓P P 07 49 00.5 -0.8
BZS **Buzias** 78.66 327⇓*i*P P 07 49 00.4 -0.8
SOP **Sopron** 78.71 331⇑*e*P P 07 49 02.1 +0.7
NAY **Al-Naaiem** 78.72 300 *e*P P 07 49 01.8 0.0
NAY AMb AMB 07 49 03.3
comp=Z,41nm,1.1s
CONA **Conrad Observa** 78.73 332⇑*i*P P 07 49 02.3 +0.7
SNR=9.8
CONA **Conrad Observa** 78.73 332⇑*i*P P 07 49 02.3 +0.7
529A **Stev Forest Ra** 78.78 58 ⇓P P 07 49 02.4 +0.2
baz=79,SNR=6.8
628A **Black Gap, Mar** 78.85 59 ⇓P P 07 49 02.8 +0.2
baz=79,SNR=7.3
430A **Baggett Ranch,** 78.88 57 ⇓P P 07 49 02.7 0.0
baz=79,SNR=10
TNS **Taunus Mts** 78.92 337 *eP* P 07 49 02.7 +0.1
TNS pmax pmax
comp=Z,29nm,1.0s
TNS **Taunus Mts** 78.92 337 *eP* P 07 49 02.7 +0.1
comp=Z,29nm,1.0s
331A **San Angelo** 78.96 56 ⇑P P 07 49 03.2 0.0
baz=79,SNR=5.2
232A **Coleman** 78.98 55 ⇑P P 07 49 03.3 +0.1
baz=79,SNR=5.1
HGN **Heimansgroeve** 79.08 339 *eP* P 07 49 03.2 -0.1
comp=Z,113nm,1.0s
BEBN **Eben Emael** 79.11 339 P P 07 49 03.7 +0.1
comp=Z,12nm,1.1s
MEM **Membach** 79.20 339 P P 07 49 04.5 +0.5
comp=Z,21nm,1.1s
530A **J-C Ranch, Com** 79.28 58 ⇓P P 07 49 05.4 +0.4
baz=79,SNR=7.6
332A **Millersview** 79.30 56 ⇑P P 07 49 05.2 +0.2
baz=79,SNR=5.3
MOA **Molln** 79.32 333⇓*i*P P 07 49 05.1 +0.3
MOA **Molln** 79.32 333⇓*i*P P 07 49 05.1 +0.3
431A **Sonora** 79.32 57 ⇑P P 07 49 05.0 -0.1
baz=79,SNR=6.6
TOD **Tromm** 79.38 337 *eP* P 07 49 05.3 +0.2
TOD **Tromm** 79.38 337 *eP* P 07 49 05.3 +0.2
ARSA **Arzberg** 79.43 331 ⇑P P 07 49 05.9 +0.5
ARSA **Arzberg** 79.43 331⇑*i*P P 07 49 05.9 +0.5
BCLA **Clavier** 79.55 339 P P 07 49 06.4 +0.4
432A **Menard** 79.65 56 ⇓P P 07 49 06.9 0.0
baz=79,SNR=7.4
BEHE **Becsehely** 79.69 330⇓*e*P P 07 49 07.4 +0.6
SNF **Seneffe** 79.72 340 P P 07 49 06.9 0.0
comp=Z,11nm,1.0s
MPEP **Malo Peshtene** 79.72 324 *i*P P 07 49 07.3 +0.3
531A **Rocksprings** 79.73 57 ⇓P P 07 49 07.3 -0.1
baz=80,SNR=6.8
RUP **Ruppelstein** 79.76 338 *eP* P 07 49 07.0 -0.2
RUP **Ruppelstein** 79.76 338 *eP* P 07 49 07.0 -0.2
RJOB **Jochberg** 79.88 333 *eP* P 07 49 08.4 +0.5
comp=Z,16nm,0.7s
JCT **Junction City** 79.94 56 *eP* P 07 49 08.9 +0.4
JCT pmax pmax
comp=Z,16nm,1.1s
JCT **Junction City** 79.94 56 *eP* P 07 49 08.9 +0.4
comp=Z,16nm,1.1s
FUR **Furstenfeldbru** 79.96 334 *eP* P 07 49 08.6 +0.3
FUR pmax pmax
comp=Z,39nm,0.9s
FUR **Furstenfeldbru** 79.96 334 *eP* P 07 49 08.6 +0.3
comp=Z,39nm,0.9s
GIVF **Givet** 79.97 339⇑*i*P P 07 49 08.2 0.0
comp=Z,29nm,0.8s
GIVF **Givet** 79.97 339⇑*i*P P 07 49 08.2 0.0
GIVF pmax pmax
comp=Z,29nm,0.8s
GIVF **Givet** 79.97 339⇑*i*P P 07 49 08.2 0.0
comp=Z,29nm,0.8s
STU **Stuttgart** 80.03 336 *eP* P 07 49 08.7 +0.1
comp=Z,32nm,0.9s
DOU **Douro** 80.03 339 P P 07 49 08.9 +0.3
comp=Z,8.5nm,1.3s
SOKA **Soboth** 80.10 331⇑*i*P P 07 49 09.1 0.0
SOKA **Soboth** 80.10 331⇑*i*P P 07 49 09.1 0.0
SIUC **Southern Illin** 80.10 45 *eP* P 07 49 09.3 +0.2
comp=Z,17nm,1.0s
PERS **Pernice** 80.11 331 *i*P P 07 49 09.1 0.0
GROS **Grobnik** 80.13 331 *i*P P 07 49 09.0 -0.3
532A **Rocksprings** 80.14 57 ⇓P P 07 49 09.3 -0.3
baz=80,SNR=8.3
WHTX **Lake Whitney** 80.15 54 ⇓P P 07 49 09.8 +0.3
baz=80
BAIF **Baives** 80.16 340⇑*i*P P 07 49 09.4 +0.2
comp=Z,28nm,0.9s
BAIF **Baives** 80.16 340⇑*i*P P 07 49 09.4 +0.2
BAIF pmax pmax
comp=Z,28nm,0.9s
BAIF **Baives** 80.16 340⇑*i*P P 07 49 09.4 +0.2
comp=Z,28nm,0.9s
631A **Perdido Creek** 80.27 58 ⇓P P 07 49 10.2 -0.1
baz=80,SNR=20
KBA **Koelnbreinsper** 80.29 333⇓*i*P P 07 49 10.3 0.0
KBA **Koelnbreinsper** 80.29 333⇓*i*P P 07 49 10.3 0.0
SNR=13
KBA **Koelnbreinsper** 80.29 333⇓*i*P P 07 49 10.3 0.0
MIAR **Mount Ida** 80.33 50 *eP* P 07 49 10.4 -0.1
MIAR pmax pmax
comp=Z,18nm,1.1s
MIAR **Mount Ida** 80.33 50 *eP* P 07 49 10.4 -0.1
comp=Z,18nm,1.1s
OBKA **Obir** 80.40 332⇑*i*P P 07 49 10.6 -0.2
OBKA **Obir** 80.40 332⇑*i*P P 07 49 10.6 -0.2
GOLS **Golise** 80.48 331 *i*P P 07 49 11.1 0.0
VTS **Vitosha** 80.58 324 ⇓P P 07 49 10.6 -1.2
VTS **Vitosha** 80.58 324⇓*i*P P 07 49 10.6 -1.2
VTS **Vitosha** 80.58 324 *i*P P 07 49 11.7 -0.1
MYKA **Terra Mystica** 80.59 332⇑*i*P P 07 49 11.4 -0.4
MYKA **Terra Mystica** 80.59 332⇑*i*P P 07 49 11.4 -0.4
WATA **Walderalm** 80.62 334⇑*i*P P 07 49 12.4 +0.4
WATA **Walderalm** 80.62 334⇑*i*P P 07 49 12.4 +0.4
WATA **Walderalm** 80.62 334⇑*i*P P 07 49 12.4 +0.4
LEGS **Legarje** 80.64 331 *i*P P 07 49 11.7 -0.3
WTTA **Wattenberg** 80.66 334 *i*P P 07 49 12.8 +0.6
WTTA **Wattenberg** 80.66 334 *i*P P 07 49 12.8 +0.6
SNR=13
WTTA **Wattenberg** 80.66 334 *i*P P 07 49 12.8 +0.6
632A **Uvalde** 80.66 57 ⇑P P 07 49 12.5 +0.2
baz=80
BFO **Black Forest** 80.67 336 *eP* P 07 49 11.9 -0.2
BFO pmax pmax
comp=Z,24nm,0.9s
BFO **Black Forest** 80.67 336 *eP* P 07 49 11.9 -0.2
comp=Z,24nm,0.9s
BFO **Black Forest** 80.67 336 *eP* P 07 49 12.1 0.0
comp=Z,22nm,0.9s
CRES **Cresnjev** 80.70 331 *i*P P 07 49 11.9 -0.3
RETA **Reutte** 80.73 334⇓*i*P P 07 49 12.8 +0.3
RETA **Reutte** 80.73 334⇓*i*P P 07 49 12.8 +0.3
SPAK **Spaichingen-Ko** 80.75 336 *eP* P 07 49 12.4 -0.2
MOTA **Moosalm** 80.75 334⇑*i*P P 07 49 13.0 +0.3
MOTA **Moosalm** 80.75 334⇑*i*P P 07 49 13.0 +0.3
SNR=16
MOTA **Moosalm** 80.75 334⇑*i*P P 07 49 13.0 +0.3
ABTA **Abfaltersbach** 80.85 333⇑*i*P P 07 49 12.9 -0.3
ABTA **Abfaltersbach** 80.85 333⇑*i*P P 07 49 12.9 -0.3
CDF **Champ du Feu** 80.88 337⇑*i*P P 07 49 13.4 +0.1
comp=Z,64nm,1.0s
CDF **Champ du Feu** 80.88 337⇑*i*P P 07 49 13.4 +0.1
CDF pmax pmax
comp=Z,64nm,1.0s
CDF **Champ du Feu** 80.88 337⇑*i*P P 07 49 13.4 +0.1
comp=Z,64nm,1.0s
BOJS **Bojanci** 81.05 331 *i*P P 07 49 13.9 -0.3
ECH **Echery** 81.09 337 *eP* P 07 49 14.3 -0.1
ECH **Echery** 81.09 337 *eP* P 07 49 14.3 -0.1
ECH **Echery** 81.09 337 *eP* P 07 49 14.3 -0.1
WCI **Wyandotte Cave** 81.09 43 *eP* P 07 49 14.4 -0.2
WCI pmax pmax
comp=Z,16nm,1.3s
WCI **Wyandotte Cave** 81.09 43 *eP* P 07 49 14.4 -0.2
comp=Z,16nm,1.3s
732A **Laxson Ranch,** 81.13 58 ⇑P P 07 49 15.4 +0.5
baz=81,SNR=8.6
FETA **Feichten** 81.16 334 *i*P P 07 49 15.1 +0.2
SNR=9.8
FETA **Feichten** 81.16 334 *i*P P 07 49 15.1 +0.2
PAGF **Fort de Pagny** 81.16 338⇑*i*P P 07 49 15.2 +0.5
comp=Z,26nm,0.7s
PAGF **Fort de Pagny** 81.16 338⇑*i*P P 07 49 15.2 +0.5
comp=Z,26nm,0.7s
DAVA **Damuels** 81.17 335⇑*i*P P 07 49 15.1 +0.1
DAVA **Damuels** 81.17 335⇑*i*P P 07 49 15.1 +0.1
FELD **Feldberg im Sc** 81.17 336 *eP* P 07 49 14.8 -0.1
MMB **Musomiste** 81.20 323 *i*P P 07 49 14.9 -0.1

MEZF	**Maizieres J'vi**	**81.39**	**338**	⇑*iP*	**P**	**07 49 16.3**	**+0.5**
	comp=Z,94nm,1.0s						
MEZF	**Maizieres J'vi**	**81.39**	**338**	⇑*iP*	**P**	**07 49 16.3**	**+0.5**
	comp=Z,94nm,1.0s						
THEF	**They Montfort**	**81.40**	**338**	*eP*	**P**	**07 49 16.1**	**+0.2**
THEF	**They Montfort**	**81.40**	**338**	*eP*	**P**	**07 49 16.1**	**+0.2**
THEF	**They Montfort**	**81.40**	**338**	*eP*	**P**	**07 49 16.1**	**+0.2**
PMOR	**Pomariorio Ree**	**81.43**	**122**	*eT*	T	09 18 39.7	
	comp=Z,25nm,0.2s						
MOF	**Molkenrain**	**81.44**	**337**	*eP*	**P**	**07 49 16.0**	**-0.3**
MOF	**Molkenrain**	**81.44**	**337**	*eP*	**P**	**07 49 16.0**	**-0.3**
MOF	**Molkenrain**	**81.44**	**337**	*eP*	**P**	**07 49 16.0**	**-0.3**
HAU	**Haudompre**	**81.50**	**337**	⇑*iP*	**P**	**07 49 16.5**	**0.0**
	comp=Z,34nm,0.9s						
HAU				*eR*			
	comp=Z,166nm,19.8s						
HAU	**Haudompre**	**81.50**	**337**	⇑*iP*	**P**	**07 49 16.5**	**0.0**
HAU				pmax	pmax		
	comp=Z,34nm,0.9s						
HAU	**Haudompre**	**81.50**	**337**	⇑*iP*	**P**	**07 49 16.5**	**0.0**
	comp=Z,34nm,0.9s						
HINF	**Hinteralfeld**	**81.54**	**337**	⇑*iP*	**P**	**07 49 16.5**	**-0.3**
	comp=Z,24nm,0.9s						
HINF	**Hinteralfeld**	**81.54**	**337**	⇑*iP*	**P**	**07 49 16.5**	**-0.3**
HINF				pmax	pmax		
	comp=Z,24nm,0.9s						
HINF	**Hinteralfeld**	**81.54**	**337**	⇑*iP*	**P**	**07 49 16.5**	**-0.3**
	comp=Z,24nm,0.9s						
SFTF	**Sexfontaines**	**81.67**	**338**	⇑*iP*	**P**	**07 49 17.6**	**+0.3**
	comp=Z,97nm,0.8s						
SFTF	**Sexfontaines**	**81.67**	**338**	⇑*iP*	**P**	**07 49 17.6**	**+0.3**
	comp=Z,97nm,0.8s						
BBS	**Basel-Blauen**	**81.69**	**336**	*eP*	**P**	**07 49 17.5**	**0.0**
BBS	**Basel-Blauen**	**81.69**	**336**	*eP*	**P**	**07 49 17.5**	**0.0**
SKO	**Skopje**	**81.81**	**325**	*eP*	**P**	**07 49 16.5**	**-1.7**
VAY	**Valandovo**	**81.90**	**324**	*eP*	**P**	**07 49 17.1**	**-1.5**
LOMF	**Lomont**	**81.98**	**337**	*eP*	**P**	**07 49 19.3**	**+0.2**
LOMF	**Lomont**	**81.98**	**337**	*eP*	**P**	**07 49 19.3**	**+0.2**
LOMF	**Lomont**	**81.98**	**337**	*eP*	**P**	**07 49 19.3**	**+0.2**
WVT	**Waverly**	**82.03**	**45**	*eP*	**P**	**07 49 19.4**	**-0.1**
WVT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WVT	**Waverly**	**82.03**	**45**	*eP*	**P**	**07 49 19.4**	**-0.1**
	comp=Z,4.8nm,0.9s						
TUE	**Stuetta**	**82.06**	**335**	*eP*	**P**	**07 49 19.4**	**-0.3**
FLN	**La Foliniere**	**82.44**	**342**	⇑*iP*	**P**	**07 49 21.4**	**0.0**
	comp=Z,42nm,0.9s						
FLN				*eR*			
	comp=Z,135nm,19.8s						
FLN	**La Foliniere**	**82.44**	**342**	⇑*iP*	**P**	**07 49 21.4**	**0.0**
FLN				pmax	pmax		
	comp=Z,42nm,0.9s						
FLN	**La Foliniere**	**82.44**	**342**	⇑*iP*	**P**	**07 49 21.4**	**0.0**
	comp=Z,42nm,0.9s						
PPT	**Papeete**	**82.48**	**125**	LR	LR	08 17 27.6	
	comp=Z,229nm,21.5s,baz=343,slow=29						
PPT2	**Papeete2**	**82.50**	**125**	*e*LR	LR	08 15 20.6	
	comp=Z,259nm,24.5s						
PPT2				*eT*	T	09 20 03.9	
	comp=Z,1.8nm,0.2s						
LDF	**La Druitiere**	**82.53**	**342**	⇑*iP*	**P**	**07 49 21.8**	**0.0**
	comp=Z,24nm,0.9s						
LDF	**La Druitiere**	**82.53**	**342**	⇑*iP*	**P**	**07 49 21.8**	**0.0**
LDF				pmax	pmax		
	comp=Z,24nm,0.9s						
LDF	**La Druitiere**	**82.53**	**342**	⇑*iP*	**P**	**07 49 21.8**	**0.0**
	comp=Z,24nm,0.9s						
LOR	**Lormes**	**82.83**	**339**	⇑*iP*	**P**	**07 49 23.6**	**+0.1**
	comp=Z,57nm,0.9s						
LOR				*eR*			
	comp=Z,270nm,22.8s						
LOR	**Lormes**	**82.83**	**339**	⇑*iP*	**P**	**07 49 23.6**	**+0.1**
	comp=Z,57nm,0.9s						
CABF	**La Chapelle**	**82.86**	**337**	⇑*iP*	**P**	**07 49 24.0**	**+0.3**
	comp=Z,13nm,0.7s						
CABF	**La Chapelle**	**82.86**	**337**	⇑*iP*	**P**	**07 49 24.0**	**+0.3**
CABF				pmax	pmax		
	comp=Z,13nm,0.7s						
CABF	**La Chapelle**	**82.86**	**337**	⇑*iP*	**P**	**07 49 24.0**	**+0.3**
	comp=Z,13nm,0.7s						
GRR	**Gorron**	**82.88**	**342**	⇑*iP*	**P**	**07 49 23.9**	**+0.2**
	comp=Z,66nm,1.0s						
GRR	**Gorron**	**82.88**	**342**	⇑*iP*	**P**	**07 49 23.9**	**+0.2**
GRR				pmax	pmax		
	comp=Z,66nm,1.0s						
GRR	**Gorron**	**82.88**	**342**	⇑*iP*	**P**	**07 49 23.9**	**+0.2**
	comp=Z,66nm,1.0s						
SSF	**Saint Saulge**	**83.11**	**339**	⇑*iP*	**P**	**07 49 25.1**	**+0.2**
	comp=Z,31nm,0.9s						
SSF	**Saint Saulge**	**83.11**	**339**	⇑*iP*	**P**	**07 49 25.1**	**+0.2**
SSF				pmax	pmax		
	comp=Z,31nm,0.9s						
SSF	**Saint Saulge**	**83.11**	**339**	⇑*iP*	**P**	**07 49 25.1**	**+0.2**
	comp=Z,31nm,0.9s						
SGMF	**Saint Gilles**	**83.36**	**343**	⇑*iP*	**P**	**07 49 26.3**	**+0.2**
	comp=Z,16nm,0.6s						
SGMF	**Saint Gilles**	**83.36**	**343**	⇑*iP*	**P**	**07 49 26.3**	**+0.2**
SGMF				pmax	pmax		
	comp=Z,16nm,0.6s						
SGMF	**Saint Gilles**	**83.36**	**343**	⇑*iP*	**P**	**07 49 26.3**	**+0.2**
	comp=Z,16nm,0.6s						
AVF	**Avril sur Loir**	**83.41**	**339**	⇑*iP*	**P**	**07 49 26.7**	**+0.3**
	comp=Z,54nm,0.9s						
AVF	**Avril sur Loir**	**83.41**	**339**	⇑*iP*	**P**	**07 49 26.7**	**+0.3**
AVF				pmax	pmax		
	comp=Z,54nm,0.9s						
AVF	**Avril sur Loir**	**83.41**	**339**	⇑*iP*	**P**	**07 49 26.7**	**+0.3**
	comp=Z,54nm,0.9s						
SMF	**Signal de Mont**	**83.42**	**338**	⇑*iP*	**P**	**07 49 26.9**	**+0.4**
	comp=Z,125nm,1.0s						
SMF	**Signal de Mont**	**83.42**	**338**	⇑*iP*	**P**	**07 49 26.9**	**+0.4**
SMF				pmax	pmax		
	comp=Z,125nm,1.0s						
SMF	**Signal de Mont**	**83.42**	**338**	⇑*iP*	**P**	**07 49 26.9**	**+0.4**
	comp=Z,125nm,1.0s						
ROSF	**Rostrenen**	**83.42**	**344**	⇑*iP*	**P**	**07 49 26.7**	**+0.2**
	comp=Z,25nm,1.0s						
ROSF	**Rostrenen**	**83.42**	**344**	⇑*iP*	**P**	**07 49 26.7**	**+0.2**
ROSF				pmax	pmax		
	comp=Z,25nm,1.0s						
ROSF	**Rostrenen**	**83.42**	**344**	⇑*iP*	**P**	**07 49 26.7**	**+0.2**
	comp=Z,25nm,1.0s						
LPL	**La Plagne**	**83.69**	**336**	⇑*iP*	**P**	**07 49 28.9**	**+0.7**
	comp=Z,20nm,0.7s						
LPL	**La Plagne**	**83.69**	**336**	⇑*iP*	**P**	**07 49 28.9**	**+0.7**
LPL				pmax	pmax		
	comp=Z,20nm,0.7s						
LPL	**La Plagne**	**83.69**	**336**	⇑*iP*	**P**	**07 49 28.9**	**+0.7**
	comp=Z,20nm,0.7s						
SWET	**Sewanee**	**83.69**	**44**	*eP*	**P**	**07 49 27.9**	**-0.2**
	comp=Z,16nm,1.0s						
LPG	**La Plagne**	**83.70**	**336**	⇑*iP*	**P**	**07 49 29.1**	**+0.8**
	comp=Z,36nm,0.9s						
LPG	**La Plagne**	**83.70**	**336**	⇑*iP*	**P**	**07 49 29.1**	**+0.8**
LPG				pmax	pmax		
	comp=Z,36nm,0.9s						
LPG	**La Plagne**	**83.70**	**336**	⇑*iP*	**P**	**07 49 29.1**	**+0.8**
	comp=Z,36nm,0.9s						
BGF	**Bois d'Agland**	**83.75**	**339**	⇑*iP*	**P**	**07 49 28.6**	**+0.4**
	comp=Z,18nm,0.7s						
BGF	**Bois d'Agland**	**83.75**	**339**	⇑*iP*	**P**	**07 49 28.6**	**+0.4**
BGF				pmax	pmax		
	comp=Z,18nm,0.7s						
BGF	**Bois d'Agland**	**83.75**	**339**	⇑*iP*	**P**	**07 49 28.6**	**+0.4**
	comp=Z,18nm,0.7s						
VLC	**Villacollemand**	**83.83**	**333**	*eP*	**P**	**07 49 29.7**	**+1.0**
AGO	**Saint Agoulin**	**84.15**	**339**	*eP*	**P**	**07 49 30.9**	**+0.6**
AGO	**Saint Agoulin**	**84.15**	**339**	*eP*	**P**	**07 49 30.9**	**+0.6**
TCF	**Toulx Ste Croi**	**84.16**	**339**	⇑*iP*	**P**	**07 49 30.8**	**+0.5**
	comp=Z,28nm,0.9s						
TCF	**Toulx Ste Croi**	**84.16**	**339**	⇑*iP*	**P**	**07 49 30.8**	**+0.5**
TCF				pmax	pmax		
	comp=Z,29nm,0.9s						
TCF	**Toulx Ste Croi**	**84.16**	**339**	⇑*iP*	**P**	**07 49 30.8**	**+0.5**
	comp=Z,28nm,0.9s						
APE	**Apeiranthos**	**84.17**	**320**	⇑P	P	07 49 23.9	-6.7
APE	**Apeiranthos**	**84.17**	**320**	⇑*iP*	P	07 49 23.9	-6.7
CPCT	**Cooper Cave**	**84.17**	**43**	*eP*	**P**	**07 49 30.6**	**+0.1**
MBDF	**Montbardon**	**84.40**	**336**	*eP*	**P**	**07 49 31.1**	**-0.6**
	comp=Z,17nm,0.7s						
MBDF	**Montbardon**	**84.40**	**336**	*eP*	**P**	**07 49 31.1**	**-0.6**
MBDF				pmax	pmax		
	comp=Z,17nm,0.7s						
MBDF	**Montbardon**	**84.40**	**336**	*eP*	**P**	**07 49 31.1**	**-0.6**
	comp=Z,17nm,0.7s						
MFF	**Saint Martin d**	**84.42**	**341**	*eP*	**P**	**07 49 32.0**	**+0.4**
MFF	**Saint Martin d**	**84.42**	**341**	*eP*	**P**	**07 49 32.0**	**+0.4**
PYM	**Petit Puy Mans**	**84.46**	**339**	*eP*	**P**	**07 49 32.6**	**+0.7**
PYM	**Petit Puy Mans**	**84.46**	**339**	*eP*	**P**	**07 49 32.6**	**+0.7**
PYM	**Petit Puy Mans**	**84.46**	**339**	*eP*	**P**	**07 49 32.6**	**+0.7**
ORIF	**Oris-en-Rattie**	**84.47**	**337**	⇑*iP*	**P**	**07 49 32.8**	**+0.8**
	comp=Z,32nm,0.7s						
ORIF				*eR*			
	comp=Z,195nm,22.2s						
ORIF	**Oris-en-Rattie**	**84.47**	**337**	⇑*iP*	**P**	**07 49 32.8**	**+0.8**
ORIF				pmax	pmax		
	comp=Z,32nm,0.7s						
ORIF	**Oris-en-Rattie**	**84.47**	**337**	⇑*iP*	**P**	**07 49 32.8**	**+0.8**
	comp=Z,32nm,0.7s						
SSB	**Saint Sauveur**	**84.50**	**338**	*eP*	**P**	**07 49 32.2**	**+0.1**
SSB				pmax	pmax		
	comp=Z,22nm,0.9s						
SSB	**Saint Sauveur**	**84.50**	**338**	*eP*	**P**	**07 49 32.2**	**+0.1**
	comp=Z,22nm,0.9s						
SAOF	**Saorge**	**84.85**	**335**	*eP*	**P**	**07 49 33.3**	**-0.6**
SAOF	**Saorge**	**84.85**	**335**	*eP*	**P**	**07 49 33.3**	**-0.6**
SAOF	**Saorge**	**84.85**	**335**	*eP*	**P**	**07 49 33.3**	**-0.6**
VIVF	**Saint-Julien-l**	**84.86**	**337**	⇑*iP*	**P**	**07 49 34.8**	**+0.9**
	comp=Z,41nm,0.9s						
VIVF	**Saint-Julien-l**	**84.86**	**337**	⇑*iP*	**P**	**07 49 34.8**	**+0.9**
VIVF				pmax	pmax		
	comp=Z,41nm,0.9s						
VIVF	**Saint-Julien-l**	**84.86**	**337**	⇑*iP*	**P**	**07 49 34.8**	**+0.9**
	comp=Z,41nm,0.9s						
TOUF	**Mont Tournerai**	**84.91**	**335**	*eP*	**P**	**07 49 33.7**	**-0.7**
TOUF	**Mont Tournerai**	**84.91**	**335**	*eP*	**P**	**07 49 33.7**	**-0.7**
TOUF	**Mont Tournerai**	**84.91**	**335**	*eP*	**P**	**07 49 33.7**	**-0.7**
SBF	**Sospel**	**85.00**	**335**	⇑*iP*	**P**	**07 49 34.4**	**-0.2**
	comp=Z,36nm,0.8s						
SBF	**Sospel**	**85.00**	**335**	⇑*iP*	**P**	**07 49 34.4**	**-0.2**
SBF				pmax	pmax		
	comp=Z,36nm,0.8s						
SBF	**Sospel**	**85.00**	**335**	⇑*iP*	**P**	**07 49 34.4**	**-0.2**
	comp=Z,36nm,0.8s						
MVIF	**Mont Vial**	**85.05**	**335**	*eP*	**P**	**07 49 35.0**	**0.0**
MVIF	**Mont Vial**	**85.05**	**335**	*eP*	**P**	**07 49 35.0**	**0.0**
MVIF	**Mont Vial**	**85.05**	**335**	*eP*	**P**	**07 49 35.0**	**0.0**
REVF	**Revere**	**85.13**	**335**	*eP*	**P**	**07 49 34.9**	**-0.4**
REVF	**Revere**	**85.13**	**335**	*eP*	**P**	**07 49 34.9**	**-0.4**
REVF	**Revere**	**85.13**	**335**	*eP*	**P**	**07 49 34.9**	**-0.4**
RJF	**Les Rejaudoux**	**85.25**	**340**	*eP*	**P**	**07 49 36.4**	**+0.6**
RJF				*eR*			
	comp=Z,205nm,22.0s						
RJF	**Les Rejaudoux**	**85.25**	**340**	*eP*	**P**	**07 49 36.4**	**+0.6**
RJF	**Les Rejaudoux**	**85.25**	**340**	*eP*	**P**	**07 49 36.4**	**+0.6**
SMRF	**Simiane la Rot**	**85.42**	**336**	*eP*	**P**	**07 49 37.7**	**+0.9**
	comp=Z,10nm,0.7s						
SMRF	**Simiane la Rot**	**85.42**	**336**	*eP*	**P**	**07 49 37.7**	**+0.9**
	comp=Z,10nm,0.7s						
CAF	**Calviac**	**85.47**	**339**	*eP*	**P**	**07 49 37.2**	**+0.3**
CAF	**Calviac**	**85.47**	**339**	*eP*	**P**	**07 49 37.2**	**+0.3**
CAF	**Calviac**	**85.47**	**339**	*eP*	**P**	**07 49 37.2**	**+0.3**
FRF	**La Foret Royal**	**85.50**	**335**	*eP*	**P**	**07 49 37.2**	**+0.1**
FRF	**La Foret Royal**	**85.50**	**335**	*eP*	**P**	**07 49 37.2**	**+0.1**
FRF	**La Foret Royal**	**85.50**	**335**	*eP*	**P**	**07 49 37.2**	**+0.1**
PGF	**Pioggiola**	**85.72**	**333**	⇑*iP*	**P**	**07 49 38.3**	**0.0**
	comp=Z,31nm,0.9s						
PGF	**Pioggiola**	**85.72**	**333**	⇑*iP*	**P**	**07 49 38.3**	**0.0**
PGF				pmax	pmax		
	comp=Z,31nm,0.9s						
PGF	**Pioggiola**	**85.72**	**333**	⇑*iP*	**P**	**07 49 38.3**	**0.0**
	comp=Z,31nm,0.9s						
LMR	**La Mourre**	**85.75**	**335**	*eP*	**P**	**07 49 38.7**	**+0.4**
	comp=Z,65nm,1.1s						
LMR	**La Mourre**	**85.75**	**335**	*eP*	**P**	**07 49 38.7**	**+0.4**
LMR				pmax	pmax		
	comp=Z,65nm,1.1s						
LMR	**La Mourre**	**85.75**	**335**	*eP*	**P**	**07 49 38.7**	**+0.4**
	comp=Z,65nm,1.1s						
LFF	**La Frestale**	**85.78**	**340**	*eP*	**P**	**07 49 38.4**	**0.0**
LFF	**La Frestale**	**85.78**	**340**	*eP*	**P**	**07 49 38.4**	**0.0**
LFF	**La Frestale**	**85.78**	**340**	*eP*	**P**	**07 49 38.4**	**0.0**
LASF	**Ste Croix**	**85.80**	**338**	*eP*	**P**	**07 49 38.4**	**-0.2**
	comp=Z,21nm,0.9s						
LASF	**Ste Croix**	**85.80**	**338**	*eP*	**P**	**07 49 38.4**	**-0.2**
	comp=Z,21nm,0.9s						
KMSC	**Kings Mountain**	**85.91**	**41**	⇑*iP*	**P**	**07 49 39.2**	**-0.1**
	baz=86						
TIP	**Timpagrande**	**86.03**	**327**	*eP*	**P**	**07 49 39.6**	**-0.3**
	comp=Z,37nm,1.2s						
MTLF	**Montolieu**	**86.91**	**338**	*eP*	**P**	**07 49 45.1**	**+1.0**
MTLF	**Montolieu**	**86.91**	**338**	*eP*	**P**	**07 49 45.1**	**+1.0**
MTLF	**Montolieu**	**86.91**	**338**	*eP*	**P**	**07 49 45.1**	**+1.0**
TBI	**Tubuai**	**87.17**	**128**	*e*LR	LR	08 17 16.3	
	comp=Z,178nm,30.0s						
TBI				*eT*	T	09 25 56.5	
	comp=Z,11nm,0.2s						
EPF	**Esparros**	**87.67**	**340**	*eP*	**P**	**07 49 48.1**	**+0.3**
EPF	**Esparros**	**87.67**	**340**	*eP*	**P**	**07 49 48.1**	**+0.3**
EPF	**Esparros**	**87.67**	**340**	*eP*	**P**	**07 49 48.1**	**+0.3**
TIGA	**Tifton**	**87.89**	**45**	⇓*iP*	**P**	**07 49 49.6**	**+0.6**
	baz=88						
SJPF	**Ste Jean**	**87.97**	**341**	*eP*	**P**	**07 49 50.0**	**+0.9**
SJPF	**Ste Jean**	**87.97**	**341**	*eP*	**P**	**07 49 50.0**	**+0.9**
SJPF	**Ste Jean**	**87.97**	**341**	*eP*	**P**	**07 49 50.0**	**+0.9**
ETSF	**Etsaut**	**88.01**	**340**	*eP*	**P**	**07 49 49.0**	**-0.4**
	comp=Z,11nm,0.9s						
ETSF	**Etsaut**	**88.01**	**340**	*eP*	**P**	**07 49 49.0**	**-0.4**
ETSF				pmax	pmax		
	comp=Z,11nm,0.9s						
ETSF	**Etsaut**	**88.01**	**340**	*eP*	**P**	**07 49 49.0**	**-0.4**
	comp=Z,11nm,0.9s						
KEST	**Kesra**	**91.78**	**330**	*eP*	**P**	**07 50 07.1**	**-0.1**
KEST	**Kesra**	**91.78**	**330**	P	**P**	**07 50 07.5**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=59,slow=5.9,SNR=4.0						
KEST				LR	LR	08 37 26.9	
	comp=Z,45nm,18.9s,baz=237,slow=40						
ESDC	**Sonseca Array**	**91.86**	**342**	P	**P**	**07 50 07.0**	**-0.5**
ESDC	**Sonseca Array**	**91.86**	**342**	P	**P**	**07 50 07.0**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=2.5,slow=4.9,SNR=5.6						
TORD	**Torodi Ar. Bea**	**115.16**	**328**	PKP	**PKPdf**	**07 55 39.7**	**-1.1**
TORD	**Torodi Ar. Bea**	**115.16**	**328**	PKP	**PKPdf**	**07 55 39.7**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=16,slow=1.3,SNR=3.4						
LPAZ	**La Paz**	**135.34**	**62**	PKP	**PKPdf**	**07 56 20.4**	**+0.5**
LPAZ	**La Paz**	**135.34**	**62**	PKP	**PKPdf**	**07 56 20.4**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=342,slow=3.2,SNR=6.7						
BDFB	**Brasilia**	**145.30**	**35**	PKPbc	**PKPbc**	**07 56 36.8**	**-0.3**
BDFB	**Brasilia**	**145.30**	**35**	PKPbc	**PKPbc**	**07 56 36.8**	**-0.3**
	comp=Z,6.4nm,0.8s,baz=334,slow=4.7,SNR=5.8						
PLCA	**Paso Flores**	**148.97**	**95**	PKPbc	**PKPbc**	**07 56 46.8**	**+0.1**
PLCA	**Paso Flores**	**148.97**	**95**	PKPbc	**PKPbc**	**07 56 46.8**	**+0.1**
	comp=Z,5.1nm,0.9s,baz=286,slow=3.5,SNR=9.0						
CPUP	**Villa Florida**	**149.47**	**60**	PKPbc	**PKPbc**	**07 56 48.1**	**-0.1**
CPUP	**Villa Florida**	**149.47**	**60**	PKPbc	**PKPbc**	**07 56 48.1**	**-0.1**
	comp=Z,4.7nm,0.7s,baz=316,slow=6.5,SNR=9.9						
SNAA	**Sanae**	**151.76**	**197**	*e*PKP	**PKPbc**	**07 56 50.3**	**-2.1**
SNAA	**Sanae**	**151.76**	**197**	PKPbc	**PKPbc**	**07 56 51.8**	**-0.6**
SNAA	**Sanae**	**151.76**	**197**	PKPbc	**PKPbc**	**07 56 51.8**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=193,slow=2.1,SNR=19						
VNA2	**Neumayer--Watz**	**153.23**	**195**	*e*PKP	**PKPbc**	**07 56 55.6**	**0.0**
VNA2	**Neumayer--Watz**	**153.23**	**195**	*e*Kuril	**PKPab**	**07 57 08.4**	**+0.7**
VNA3	**Neumayer Olymp**	**153.34**	**193**	*e*PKP	**PKPbc**	**07 56 53.4**	**-2.5**
VNA3	**Neumayer Olymp**	**153.34**	**193**	*e*Kuril	**PKPab**	**07 57 08.6**	**+0.4**

MAN 23 07:44:22.9±0.46N×125°.76E,h1km,mb4.4,ML3.3,MS3.1, 2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGP	**Cagayan de Oro**	**1.45**	**227**	⇑*iP*	Pn	07 44 48.4	-1.0
CGP				*i* S	Sn	07 45 09.4	+0.4
PLP	**Palo**	**1.86**	**336**	⇑*eP*	Pn	07 44 55.3	+0.2
PLP				*eS*	Sb	07 45 21.3	+0.6
TBP	**Tagbilaran**	**1.88**	**277**	*eP*	Pb	07 44 56.4	-0.8
TBP				*eS*	Sb	07 45 20.9	-0.4

*IDC **23** 07:54:12.9±0.7,7°.15S×154°.32E,h0km,mb4.4/17, mb1 4.6/17,mb1mx4.5/21,mbtmp4.4/17,MS3.7/5, Ms1 3.7/5,ms1mx3.2/30,Error ellipse: s-maj=23.8km s-min=15.8km az=111.0*

*ISCJB **23** 07:54:17.3±0.3,7°.06S±0°.05×154°.21E±0°.04,h33km, mb4.5/24,MS4.0/3,Error ellipse: s-maj=7.1km s-min=5.9km az=173.0*

*NEIC **23** 07:54:21.7±1.2,7°.16S×154°.23E,h63km±11km,mb4.6/8, Error ellipse: s-maj=10.3km s-min=7.6km az=165.0*

*AUST **23** 07:55:15.5±5.9,9°.79S×151°.86E,h323km,Error ellipse: s-maj=4.5km s-min=1.4km az=246.0*

ISC 23 07:54:19.1±0.4,6°.98S±0°.07×154°.23E±0°.05,h35km,n84, σ1944/89,mb4.5/23,MS4.0/3,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.17**	**114**	Pn	**Pn**	**07 55 49.0**	**+1.2**
HNR				Sn	**Sn**	**07 56 59.8**	**+2.6**
HNR	**Honiara**	**6.17**	**114**	Pn	**Pn**	**07 55 49.0**	**+1.2**
	baz=304,slow=18,SNR=2.1						
HNR				Sn	**Sn**	**07 56 59.7**	**+2.6**
	15nm,0.3s,baz=180,slow=19,SNR=2.7						
HNR				LR	LR	07 57 53.2	
	comp=Z,336nm,18.1s,baz=284,slow=37						
PMG	**Port Moresby**	**7.40**	**250**	Pn	**Pn**	**07 56 06.3**	**+1.6**
PMG				Sn	**Sn**	**07 57 29.3**	**+1.8**
PMG	**Port Moresby**	**7.40**	**250**	Pn	**Pn**	**07 56 06.3**	**+1.6**
	4.8nm,0.3s,baz=62,slow=11,SNR=15						
PMG				Sn	**Sn**	**07 57 29.3**	**+1.8**
	3.7nm,0.3s,baz=73,slow=18,SNR=14						
CTA	**Charters Tower**	**15.16**	**210**	Pn	**Pn**	**07 57 51.3**	**+0.5**
CTA	**Charters Tower**	**15.16**	**210**	Pn	**Pn**	**07 57 51.3**	**+0.5**
	0.2nm,0.3s,baz=30,slow=12,SNR=1.9						
CTA				LR	LR	08 02 47.5	
	comp=Z,163nm,19.2s,baz=23,slow=34						
DZM	**Mont Dzumac**	**19.09**	**143**	P	**P**	**07 58 38.6**	**-0.4**
DZM	**Mont Dzumac**	**19.09**	**143**	P	**P**	**07 58 38.6**	**-0.4**
	1.3nm,0.3s,baz=346,slow=11,SNR=19						
QIS	**Mount Isa**	**19.57**	**225**	P	**P**	**07 58 43.8**	**-0.4**
	baz=16,SNR=5.7						
RMQ	**Roma**	**20.09**	**194**	P	**P**	**07 58 49.5**	**-0.3**
	baz=17,SNR=10						
QLP	**Quilpie**	**21.70**	**205**	P	**P**	**07 59 06.3**	**-0.8**
	baz=18,SNR=12						
WRAB	**Tennant Creek**	**23.19**	**234**	*eP*	**P**	**07 59 21.4**	**-1.6**
	13nm,0.8s						
WRA	**Warramunga Arr**	**23.20**	**234**	P	**P**	**07 59 21.3**	**-1.9**
WRA				PcP	**PcP**	**08 03 10.5**	**-0.3**
WRA	**Warramunga Arr**	**23.20**	**234**	P	**P**	**07 59 21.3**	**-1.9**
	6.6nm,0.8s,baz=58,slow=9.8,SNR=23						
WRA				PcP	**PcP**	**08 03 10.5**	**-0.3**
	2.5nm,0.9s,baz=53,slow=2.3,SNR=7.5						
PALU	**Palau**	**24.30**	**305**	P	P	08 00 05.1	+32
	baz=24,SNR=14						
AS31	**Alice Springs**	**25.62**	**227**	*eP*	**P**	**07 59 44.1**	**-1.4**
ASAR	**Alice Springs**	**25.62**	**227**	P	**P**	**07 59 43.9**	**-1.7**
ASAR	**Alice Springs**	**25.62**	**227**	P	**P**	**07 59 43.9**	**-1.7**
	4.7nm,0.8s,baz=61,slow=9.3,SNR=20						
CMSA	**Cobar Meteorol**	**25.71**	**197**	P	**P**	**07 59 48.9**	**+2.7**
	baz=22,SNR=7.2						
STKA	**Stephens Creek**	**27.44**	**204**	P	**P**	**07 59 59.1**	**-2.7**
	35nm,1.0s						
STKA	**Stephens Creek**	**27.44**	**204**	P	**P**	**07 59 59.1**	**-2.7**
	3.3nm,0.7s,baz=23,slow=8.2,SNR=7.0						
STKA	**Stephens Creek**	**27.44**	**204**	P	**P**	**08 00 05.1**	**+3.3**
	baz=24,SNR=6.0						
FITZ	**Fitzroy Crossi**	**29.97**	**246**	*eP*	**P**	**08 00 23.8**	**-0.7**
FITZ	**Fitzroy Crossi**	**29.97**	**246**	P	**P**	**08 00 22.4**	**-2.0**
	5.1nm,0.8s,baz=99,slow=8.1,SNR=10						
FITZ	**Fitzroy Crossi**	**29.97**	**246**	P	**P**	**08 00 24.0**	**-0.5**
	baz=27,SNR=4.4						
WSI	**Waingapu**	**33.67**	**263**	P	P	08 01 15.2	+18
	baz=31,SNR=7.2						
KAPI	**Kappang**	**34.34**	**271**	*eP*	**P**	**08 01 02.7**	**-0.2**
	6.7nm,0.8s						
PCI	**Palu**	**34.82**	**278**	P	P	08 01 21.3

mb1 3.6/4, mb1mx3.4/24, mbtmp3.4/4, Error ellipse: s-maj=106.1km s-min=24.9km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.27**	**184**	P	P	08 08 15.7	-0.5
	0.5nm,0.4s,baz=28,slow=8.0,SNR=6.9						
WRA	**Warramunga Arr**	**25.11**	**164**	P	P	08 08 44.1	+0.1
	0.5nm,0.3s,baz=344,slow=11,SNR=13						
ASAR	**Alice Springs**	**28.56**	**167**	P	P	08 09 15.2	+0.1
	0.2nm,0.6s,baz=342,slow=7.0,SNR=3.4						
MKAR	**Makanchi Array**	**57.29**	**325**	P	P	08 13 06.9	0.0
	0.3nm,0.6s,baz=120,slow=7.1,SNR=5.9						

CSEM ***23*** *08:40:36.4±0.5, 38°.04N×43°.07E, h15km, ML3.1, Error ellipse: s-maj=12.5km s-min=10.8km az=37.0*

DDA 23 08:40:35.2, 37.98N×43.04E, h28km, MD2.8, ML3.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	**Gevas**	**0.33**	**3**	*i* P	Pb	08 40 42.7	-0.7
GEVA				*i* S	Sb	08 40 49.5	+0.7
GEVA	**Gevas**	**0.33**	**3**	*i* P	Pb	08 40 42.7	-0.6
GEVA				*i* S	Sb	08 40 49.5	+0.7
HAKT	**HAKKARI**	**0.68**	**128**	*i* P	Pn	08 40 49.1	-0.2
HAKT				*i* S	Sn	08 41 01.6	+2.5
HAKT	**HAKKARI**	**0.68**	**128**	*i* P	Pn	08 40 49.1	-0.2
HAKT				*i* S	Sn	08 41 01.6	+2.5
SIRN	**S¨–rnak**	**0.69**	**226**	*i* P	Pn	08 40 51.9	+2.6
SIRN				*i* S	Sn	08 40 59.4	+0.3
SIRN	**S¨–rnak**	**0.69**	**226**	*i* P	Pn	08 40 51.9	+2.6
SIRN				*i* S	Sn	08 40 59.4	+0.3
BEST	**Besiri**	**1.40**	**267**	*i* P	Pb	08 41 01.4	+0.5
BEST				*i* S	Sb	08 41 20.7	+2.2
MARD	**Mardin**	**1.91**	**250**	*e*P	Pb	08 41 08.5	-1.2
MARD				*i* S	Sb	08 41 33.6	+0.4
DIYA	**Diyarbakir**	**2.31**	**270**	*i* P	Pn	08 41 13.6	+2.1
DIYA				*i* S	Sb	08 41 43.6	-0.9
DIYA	**Diyarbakir**	**2.31**	**270**	*i* P	Pn	08 41 13.6	+2.1
DIYA				*i* S	Sb	08 41 43.6	-0.9
BHD	**Baghdad**	**4.82**	**167**	*ex*	x	08 41 50.0	
BHD				*ex*	x	08 42 50.7	
BHD	**Baghdad**	**4.82**	**167**	*e*Pn	Pn	08 41 50.0	+4.1

BJI ***23*** *08:59:29.6, 18°.32S×176°.52W, h383km, mB5.0/9, mb4.5/10*

IDC ***23*** *08:59:30.4±1.3, 17°.52S×177°.24W, h331km±13km, mb4.1/15, mb1 4.3/17, mb1mx4.1/24, mbtmp4.1/17, Error ellipse: s-maj=14.5km s-min=8.8km az=134.0*

ISCJB ***23*** *08:59:35.6±1.0, 17°.64S±0°.07×177°.41W±0°.05, h395km±10km, mb4.4/59, Error ellipse: s-maj=12.8km s-min=6.4km az=152.7*

NEIC ***23*** *08:59:35.9±0.7, 17°.63S×177°.35W, h387km±7km, mb4.5/42, Error ellipse: s-maj=8.9km s-min=4.5km az=146.0*

ISC 23 08:59:36.0±0.5, 17°.60S±0°.08×177°.28W±0°.07, h387km±4km, h387km; pP-P, n470, σ0s85/503, mb4.5/59, 164C-141D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.45**	**268**	*e*Pn	**Pn**	**09 00 51.6**	**-0.3**
MSVF				*e*Sn	**S**	**09 01 53.7**	**+0.3**
AFI	**Afiamalu**	**6.44**	**56**	*e*Pn	Pn	09 01 05.1	-8.1
AFI				S	S	09 02 20.7	-12
AFI	**Afiamalu**	**6.44**	**56**	P	Pn	09 01 05.2	-8.1
	55nm,0.3s,baz=12,slow=1.5,SNR=98						
AFI				S	S	09 02 20.7	-12
	baz=293,slow=18,SNR=1.6						
DZM	**Mont Dzumac**	**15.94**	**251**	P	**P**	**09 02 58.8**	**-0.5**
DZM	**Mont Dzumac**	**15.94**	**251**	P	**P**	**09 02 58.8**	**-0.5**
	1.1nm,0.3s,baz=71,slow=16,SNR=16						
URZ	**Urewera**	**21.16**	**192**	P	**P**	**09 03 50.6**	**-1.3**
URZ				S	**S**	**09 07 25.6**	**+5.0**
URZ	**Urewera**	**21.16**	**192**	P	**P**	**09 03 50.6**	**-1.3**
	4.3nm,0.3s,baz=17,slow=3.6,SNR=9.0						
URZ				S	**S**	**09 07 25.6**	**+5.0**
	8.7nm,1.1s,baz=131,slow=20,SNR=4.8						
TUWZ	**Tuamarina**	**24.92**	**196**	*e*PN	**P**	**09 04 25.6**	**-0.2**
RPZ	**Rata Peaks**	**27.84**	**198**	P	**P**	**09 04 50.7**	**-0.9**
RPZ	**Rata Peaks**	**27.84**	**198**	P	**P**	**09 04 50.7**	**-0.9**
	5.3nm,0.6s,baz=1.9,slow=6.1,SNR=6.4						
EIDS	**Eidsvold**	**30.38**	**250**	*e*P	**P**	**09 05 13.2**	**-1.0**
	16nm,0.6s						
ARMA	**Armidale**	**31.02**	**240**	*e*P	**P**	**09 05 19.6**	**-0.2**
	25nm,0.6s						
CTA	**Charters Tower**	**34.56**	**260**	P	**P**	**09 05 49.7**	**-0.5**
CTA	**Charters Tower**	**34.56**	**260**	P	**P**	**09 05 49.7**	**-0.5**
	17nm,0.8s,baz=83,slow=11,SNR=16						
CTAO	**Charters Tower**	**34.56**	**260**	*e*P	**P**	**09 05 49.3**	**-0.9**
	26nm,0.9s						
STKA	**Stephens Creek**	**39.72**	**241**	*e*P	**P**	**09 06 32.6**	**-0.3**
	3.3nm,0.6s						
STKA	**Stephens Creek**	**39.72**	**241**	P	**P**	**09 06 32.8**	**-0.1**
	18nm,0.6s,baz=94,slow=10,SNR=85						
WRAB	**Tennant Creek**	**45.73**	**259**	*e*P	**P**	**09 07 19.3**	**-1.5**
	9.0nm,0.7s						
WRA	**Warramunga Arr**	**45.74**	**259**	P	**P**	**09 07 19.4**	**-1.5**
WRA				PcP	**PcP**	**09 08 51.0**	**-0.4**
WRA				S	**S**	**09 13 31.8**	**-3.0**
WRA	**Warramunga Arr**	**45.74**	**259**	P	**P**	**09 07 19.4**	**-1.5**
	9.0nm,0.5s,baz=97,slow=7.1,SNR=241						
WRA				PcP	**PcP**	**09 08 51.0**	**-0.4**
	0.6nm,0.6s,baz=88,slow=3.6,SNR=3.0						
WRA				S	**S**	**09 13 31.8**	**-3.0**
	0.3nm,0.8s,baz=93,slow=12,SNR=2.7						
AS31	**Alice Springs**	**45.91**	**254**	*e*P	**P**	**09 07 21.2**	**-0.9**
ASAR	**Alice Springs**	**45.91**	**254**	P	**P**	**09 07 21.4**	**-0.8**
ASAR				PcP	**PcP**	**09 08 51.5**	**-0.3**
ASAR				ScP	**ScP**	**09 12 11.0**	**+3.6**
ASAR				S	**S**	**09 13 35.7**	**-1.4**
ASAR	**Alice Springs**	**45.91**	**254**	P	**P**	**09 07 21.4**	**-0.8**
	76nm,0.6s,baz=90,slow=8.2,SNR=1265						
ASAR				PcP	**PcP**	**09 08 51.5**	**-0.3**
	1.7nm,0.7s,baz=105,slow=4.7,SNR=3.1						
ASAR				ScP	**ScP**	**09 12 11.0**	**+3.6**
	0.6nm,0.6s,baz=99,slow=4.9,SNR=4.5						
ASAR				S	**S**	**09 13 35.7**	**-1.4**
	3.3nm,1.0s,baz=91,slow=16,SNR=12						
FORT	**Forrest**	**51.11**	**244**	*e*P	**P**	**09 08 00.1**	**-1.1**
	72nm,0.6s						
FITZ	**Fitzroy Crossi**	**54.14**	**260**	*e*P	**P**	**09 08 22.8**	**-0.4**
	9.5nm,0.6s						
MBWA	**Marble Bar**	**59.19**	**256**	*e*P	**P**	**09 08 57.9**	**-0.5**
	20nm,0.9s						
MJAR	**Matsushiro Arr**	**68.31**	**323**	P	**P**	**09 09 56.0**	**-0.8**
MJAR	**Matsushiro Arr**	**68.31**	**323**	P	**P**	**09 09 56.0**	**-0.8**
	2.3nm,0.7s,baz=167,slow=6.9,SNR=6.5						
QSPA	**South Pole Qui**	**72.46**	**180**	*e*P	**P**	**09 10 21.3**	**-0.1**
	4.6nm,1.1s						
KSRS	**Korea Array**	**75.19**	**318**	P	**P**	**09 10 37.0**	**-0.3**
	1.7nm,1.1s,baz=110,slow=5.8,SNR=4.7						
KSAR	**Wonju Array Be**	**75.21**	**318**	P	**P**	**09 10 37.0**	**-0.4**
VES	**Vestal, Richgr**	**76.51**	**45**	⇑P	**P**	**09 10 44.6**	**-0.1**
	baz=77						
MURC	**Murrieta**	**76.61**	**48**	⇑P	**P**	**09 10 45.3**	**-0.1**
	baz=77						
BFSC	**Mount Baldy Ra**	**76.63**	**47**	⇑P	**P**	**09 10 45.4**	**-0.2**
	baz=77						
RCTC	**Rector, Farmer**	**76.67**	**45**	⇑P	**P**	**09 10 45.4**	**-0.2**
	baz=77						
EDW2	**Edwards Air Fo**	**76.74**	**47**	⇑P	**P**	**09 10 46.1**	**-0.1**
	baz=77,SNR=6.3						
MONP	**Monument Peak**	**76.80**	**49**	⇓P	**P**	**09 10 46.8**	**+0.1**
	baz=77,SNR=6.9						
ISA	**Isabella**	**76.83**	**46**	*e*P	**P**	**09 10 46.6**	**0.0**
	6.9nm,1.1s						
ISA	**Isabella**	**76.83**	**46**	⇓P	**P**	**09 10 46.7**	**+0.1**
	baz=77						
CMB	**Columbia Colle**	**76.88**	**43**	*e*P	**P**	**09 10 46.9**	**0.0**
	3.8nm,1.2s						
CMB				*e*PcP	**PcP**	**09 10 56.6**	**+0.4**
DVTC	**Desert V Tower**	**76.91**	**49**	⇓P	**P**	**09 10 47.2**	**+0.1**
	baz=77						
PFO	**Pinyon Flat Ob**	**77.15**	**48**	⇑P	**P**	**09 10 48.4**	**-0.1**
	baz=77						
LRMC	**Laurel Mountai**	**77.27**	**46**	⇓P	**P**	**09 10 49.2**	**+0.1**
	baz=78						
SWSC	**Sam W. Stewart**	**77.28**	**49**	⇓P	**P**	**09 10 49.5**	**+0.5**
	baz=78						
CWC	**Cottonwood Cre**	**77.52**	**45**	⇑P	**P**	**09 10 50.4**	**-0.1**
	baz=78						
BELC	**Belle Mtn. Jos**	**77.67**	**48**	⇓P	**P**	**09 10 51.6**	**+0.2**
	baz=78,SNR=9.3						
MPMC	**Manual Prospec**	**77.72**	**46**	⇓P	**P**	**09 10 51.8**	**+0.2**
	baz=78						
GSC	**Goldstone**	**77.78**	**47**	*e*P	**P**	**09 10 52.1**	**+0.2**
GSC	**Goldstone**	**77.78**	**47**	⇓P	**P**	**09 10 51.8**	**-0.1**
	baz=78						
HEC	**Hector,Ludlow**	**77.87**	**47**	⇑P	**P**	**09 10 52.2**	**-0.1**
	baz=78,SNR=9.8						
BC3	**Big Chuckawall**	**77.89**	**49**	⇓P	**P**	**09 10 52.9**	**+0.4**
	baz=78						
GLA	**Glamis**	**78.03**	**50**	⇓P	**P**	**09 10 53.7**	**+0.4**
	baz=78						
GRAC	**Grapevine Rang**	**78.30**	**45**	⇑P	**P**	**09 10 55.1**	**+0.5**
	baz=78						
GMRC	**Granite Mounta**	**78.31**	**48**	⇑P	**P**	**09 10 54.8**	**0.0**
	baz=79,SNR=6.1						
IRM	**Iron Mountain**	**78.36**	**48**	⇑P	**P**	**09 10 55.4**	**+0.4**
	baz=79,SNR=7.8						
FURC	**Furnace Creek,**	**78.36**	**46**	⇑P	**P**	**09 10 54.9**	**+0.1**
	baz=79						
NVAR	**Mina Array Bea**	**78.46**	**43**	P	**P**	**09 10 55.6**	**0.0**
NVAR	**Mina Array Bea**	**78.46**	**43**	P	**P**	**09 10 55.6**	**0.0**
	6.1nm,0.7s,baz=225,slow=9.4,SNR=53						
SHOC	**Shoshone**	**78.46**	**46**	⇓P	**P**	**09 10 55.3**	**-0.1**
	baz=79						
NV11	**Mina Array Sit**	**78.56**	**43**	*e*P	**P**	**09 10 56.1**	**0.0**
Y12C	**Blythe**	**78.60**	**49**	⇑P	**P**	**09 10 56.7**	**+0.5**
	baz=79						
113A	**Mohawk Valley,**	**78.67**	**50**	⇓P	**P**	**09 10 57.1**	**+0.5**
	baz=79						
214A	**Organ Pipe Nat**	**78.98**	**51**	⇓P	**P**	**09 10 58.7**	**+0.4**
	baz=79						
PDMCI	**Parker Dam,Lak**	**79.15**	**49**	⇑P	**P**	**09 10 59.7**	**+0.5**
	baz=79						
Z14A	**Wintersburg**	**79.56**	**50**	⇑P	**P**	**09 11 01.9**	**+0.6**
	baz=80						
W13A	**Hualapai Mount**	**79.73**	**48**	⇓P	**P**	**09 11 02.7**	**+0.1**
	baz=80,SNR=8.2						
Y14A	**Wickenburg**	**79.80**	**50**	⇓P	**P**	**09 11 02.9**	**+0.2**
	baz=80,SNR=7.9						
R11A	**Troy Canyon, C**	**80.22**	**45**	⇑P	**P**	**09 11 05.1**	**+0.1**
	baz=80						
CN2	**Changchun**	**80.44**	**322**	*e*P	**P**	**09 11 06.8**	**+1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WVOR	**Wild Horse Val**	**80.48**	**40**	*e*P	**P**	**09 11 06.3**	**+0.1**
	comp=Z,6.2nm,0.8s						
TUC	**Tucson**	**80.66**	**52**	*e*P	**P**	**09 11 08.3**	**+1.0**
	comp=Z,2.0nm,0.8s						
SPU	**Mount Spurr**	**81.07**	**12**	*e*P	**P**	**09 11 07.5**	**-1.3**
X16A	**Lo Mia Camp, P**	**81.16**	**50**	⇓P	**P**	**09 11 10.7**	**+0.7**
	baz=81,SNR=14						
319A	**Douglas**	**81.38**	**53**	⇑P	**P**	**09 11 11.9**	**+0.7**
	baz=82						
ARUT	**Antelope Range**	**81.39**	**46**	*e*P	**P**	**09 11 11.6**	**+0.5**
U15A	**North Rim**	**81.52**	**48**	⇑P	**P**	**09 11 12.5**	**+0.6**
	baz=82,SNR=11						
ELK	**Elko**	**81.70**	**43**	*e*P	**P**	**09 11 13.0**	**+0.3**
WUAZ	**Wupatki**	**81.73**	**49**	*e*P	**P**	**09 11 13.9**	**+0.9**
	comp=Z,8.2nm,1.0s						
320A	**Kipp Ranch, An**	**81.94**	**54**	⇓P	**P**	**09 11 15.2**	**+1.1**
	baz=82,SNR=9.6						
PMR	**Palmer**	**82.05**	**13**	*e*P	**P**	**09 11 12.9**	**-0.8**
	comp=Z,18nm,1.4s						
220A	**Playas Peak, P**	**82.19**	**53**	⇑P	**P**	**09 11 16.3**	**+0.9**
	baz=82,SNR=8.6						
X18A	**Snowflake**	**82.30**	**50**	⇓P	**P**	**09 11 16.6**	**+0.7**
	baz=82,SNR=6.7						
120A	**U Bar Ranch, L**	**82.39**	**53**	⇑P	**P**	**09 11 17.3**	**+0.9**
	baz=83,SNR=5.4						
MVU	**Marysvale**	**82.58**	**46**	*e*P	**P**	**09 11 18.4**	**+1.1**
	comp=Z,9.3nm,1.0s						
MSU	**Marysvale**	**82.61**	**46**	*e*P	**P**	**09 11 17.9**	**+0.4**
Z20A	**Nine Sixteen R**	**82.67**	**52**	⇑P	**P**	**09 11 18.9**	**+1.1**
	baz=83,SNR=9.9						
W18A	**Petrified Fore**	**82.73**	**50**	⇑P	**P**	**09 11 18.6**	**+0.5**
	baz=83						
MFID	**Camas Ranch**	**82.74**	**40**	*e*P	**P**	**09 11 18.1**	**+0.2**
	comp=Z,8.4nm,1.1s						
MFID	**Camas Ranch**	**82.74**	**40**	⇓P	**P**	**09 11 18.2**	**+0.3**
	baz=83						
221A	**Mesquite Ranch**	**82.81**	**53**	⇑P	**P**	**09 11 19.5**	**+1.0**
	baz=83,SNR=5.1						
DUG	**Dugway**	**83.01**	**44**	*e*P	**P**	**09 11 19.6**	**+0.2**
	comp=Z,5.3nm,1.0s						
121A	**Cookes Peak, D**	**83.03**	**53**	⇑P	**P**	**09 11 20.6**	**+0.9**
	baz=83,SNR=5.8						
Y20A	**Horse Springs,**	**83.19**	**51**	⇑P	**P**	**09 11 21.5**	**+1.0**
	baz=83,SNR=14						
TNA	**Tin City**	**83.21**	**4**	*e*P	**P**	**09 11 20.5**	**+1.0**
	comp=Z,14nm,0.8s						
222A	**Williams Famil**	**83.37**	**53**	⇑P	**P**	**09 11 21.9**	**+0.6**
	baz=84						
I12A	**Atlanta**	**83.37**	**40**	⇑P	**P**	**09 11 21.4**	**+0.3**
	baz=84,SNR=11						
X20A	**Quemado**	**83.38**	**51**	⇑P	**P**	**09 11 22.2**	**+0.8**
	baz=84,SNR=6.3						
Z21A	**St. Cloud Mine**	**83.45**	**52**	⇓P	**P**	**09 11 22.9**	**+1.0**
	baz=84						
Q16A	**Castle Valley**	**83.49**	**46**	⇑P	**P**	**09 11 22.3**	**+0.4**
	baz=84						
W20A	**Ramah**	**83.64**	**50**	⇑P	**P**	**09 11 23.3**	**+0.6**
	baz=84,SNR=11						
TMUT	**Trail Mountain**	**83.65**	**46**	*e*P	**P**	**09 11 22.2**	**-0.6**
	comp=Z,16nm,1.0s						
TMUT				*e*pP	**pP**	**09 12 46.4**	**-4.8**
L14A	**Malta**	**83.65**	**42**	⇓P	**P**	**09 11 22.8**	**+0.3**
	baz=84						
HLID	**Hailey**	**83.69**	**41**	*e*P	**P**	**09 11 23.2**	**+0.5**
	comp=Z,7.7nm,0.8s						
122A	**Conniff Cattle**	**83.70**	**53**	⇓P	**P**	**09 11 24.2**	**+1.2**
	baz=84						
S18A	**Hurst Farm, BI**	**83.73**	**47**	⇓P	**P**	**09 11 22.9**	**-0.3**
	baz=84						
Y21A	**Point of Rocks**	**83.75**	**52**	⇑P	**P**	**09 11 24.3**	**+0.9**
	baz=84,SNR=7.0						
J13A	**Cove Ranch, Pi**	**83.76**	**41**	⇓P	**P**	**09 11 23.5**	**+0.5**
	baz=84,SNR=12						
HVU	**Hansel Valley**	**83.82**	**43**	*e*P	**P**	**09 11 23.8**	**+0.3**
	comp=Z,6.7nm,0.8s						
X21A	**Alamocita Cree**	**83.86**	**51**	⇓P	**P**	**09 11 24.5**	**+0.6**
	baz=84						
H12A	**Diamond D Ranc**	**83.94**	**40**	⇓P	**P**	**09 11 23.8**	**-0.2**
	baz=84,SNR=10						
K14A	**Jones Ranch, D**	**83.95**	**42**	⇓P	**P**	**09 11 24.2**	**+0.2**
	baz=84						
G12A	**Big Creek, Yel**	**83.96**	**39**	⇓P	**P**	**09 11 24.0**	**0.0**
	baz=84,SNR=15						
V20A	**Brimhall**	**83.96**	**50**	⇑P	**P**	**09 11 24.5**	**+0.1**
	baz=84						
Z22A	**Elephant Butte**	**83.96**	**53**	⇓P	**P**	**09 11 25.0**	**+0.7**
	baz=84,SNR=6.4						
MCK	**McKinley**	**84.01**	**12**	*e*P	**P**	**09 11 22.6**	**-1.1**
	comp=Z,16nm,0.8s						
SRU	**San Rafael**	**84.03**	**46**	*e*P	**P**	**09 11 24.7**	**+0.2**
	comp=Z,10nm,0.9s						
SKAG	**Skagway**	**84.04**	**20**	*e*P	**P**	**09 11 24.1**	**+0.3**
	comp=Z,8.1nm,1.0s						
P17A	**Butcher Ranch,**	**84.05**	**46**	⇑P	**P**	**09 11 25.3**	**+0.7**
	baz=84						
I13A	**Wildhorse Cree**	**84.06**	**40**	⇑P	**P**	**09 11 25.0**	**+0.3**
	baz=84,SNR=6.0						
JLU	**Jordanelle**	**84.11**	**44**	*e*P	**P**	**09 11 25.1**	**+0.1**
	comp=Z,4.9nm,0.9s						
JLU				*e*PP	**PP**	**09 14 46.9**	**+1.0**
J14A	**Carey**	**84.13**	**41**	⇑P	**P**	**09 11 25.8**	**+0.8**
	baz=84,SNR=6.8						
L15A	**Malad City**	**84.19**	**43**	⇑P	**P**	**09 11 25.1**	**-0.2**
	baz=84,SNR=6.1						
Y22A	**Socorro**	**84.25**	**52**	⇓P	**P**	**09 11 26.2**	**+0.4**
	baz=84						
H13A	**Challis**	**84.31**	**40**	⇓P	**P**	**09 11 25.9**	**+0.1**
	baz=85,SNR=7.2						
324A	**Moseley Ranch,**	**84.34**	**55**	⇑P	**P**	**09 11 26.7**	**+0.5**
	baz=84,SNR=15						
F12A	**Elk City**	**84.34**	**38**	⇑P	**P**	**09 11 25.8**	**-0.1**
	baz=85,SNR=24						
K15A	**Arbon**	**84.43**	**42**	⇑P	**P**	**09 11 26.7**	**+0.3**
	baz=85						
425A	**Indio Mountain**	**84.46**	**55**	⇓P	**P**	**09 11 27.7**	**+0.9**
	baz=85,SNR=12						
MENT	**Mentasta**	**84.47**	**15**	*e*P	**P**	**09 11 25.6**	**-0.3**
I14A	**Mackay**	**84.48**	**41**	⇑P	**P**	**09 11 27.3**	**+0.6**
	baz=85,SNR=7.0						
Z23A	**Rita Site, Whi**	**84.52**	**53**	⇓P	**P**	**09 11 27.5**	**+0.4**
	baz=85						
HWUT	**Hardware Ranch**	**84.53**	**43**	*e*P	**P**	**09 11 26.2**	**-0.7**
	comp=Z,3.3nm,0.9s						
V21A	**Milan**	**84.57**	**50**	⇑P	**P**	**09 11 27.8**	**+0.4**
	baz=85						
224A	**Cornudas Mount**	**84.57**	**54**	⇑P	**P**	**09 11 28.1**	**+0.7**
	baz=85,SNR=17						
G13A	**Cobalt**	**84.60**	**39**	⇓P	**P**	**09 11 27.1**	**-0.1**
	baz=85						
626A	**Big Bend Ranch**	**84.64**	**57**	⇑P	**P**	**09 11 28.8**	**+1.1**
	baz=85,SNR=20						
325A	**Bean Ranch, Si**	**84.71**	**55**	⇑P	**P**	**09 11 28.5**	**+0.4**
	baz=85,SNR=10						
PV10	**Paradox Valley**	**84.72**	**47**	*e*P	**P**	**09 11 27.9**	**-0.1**
L16A	**Fish Haven**	**84.81**	**43**	⇑P	**P**	**09 11 28.4**	**0.0**
	baz=85						
Q19A	**Hogan Spring (**	**84.82**	**47**	⇑P	**P**	**09 11 28.5**	**0.0**
	baz=85						
U21A	**Nageezi**	**84.83**	**49**	⇑P	**P**	**09 11 28.8**	**+0.2**
	baz=85,SNR=10						
J15A	**Blackfoot**	**84.85**	**41**	⇑P	**P**	**09 11 29.3**	**+0.8**
	baz=85,SNR=6.6						
526A	**Mary Lane Ranc**	**84.87**	**56**	⇓P	**P**	**09 11 29.7**	**+0.8**
	baz=85,SNR=13						
124A	**Stringfield Ra**	**84.88**	**54**	⇑P	**P**	**09 11 29.1**	**+0.1**
	baz=85						
H14A	**Leadore**	**84.88**	**40**	⇑P	**P**	**09 11 29.0**	**+0.4**
	baz=85,SNR=6.2						
F13A	**Darby**	**84.90**	**39**	⇑P	**P**	**09 11 28.3**	**-0.4**
	baz=85,SNR=11						
TXAR	**Lajitas Array**	**84.92**	**57**	P	**P**	**09 11 30.2**	**+1.1**
TXAR	**Lajitas Array**	**84.92**	**57**	P	**P**	**09 11 30.2**	**+1.1**
	comp=Z,9.5nm,0.8s,baz=222,slow=6.9,SNR=83						
PV01	**Paradox Valley**	**84.94**	**48**	*e*P	**P**	**09 11 28.9**	**-0.2**
Y23A	**Lovelace Mesa,**	**84.94**	**52**	⇑P	**P**	**09 11 29.2**	**0.0**
	baz=85						
S20A	**Disappointment**	**84.95**	**48**	⇑P	**P**	**09 11 29.1**	**-0.1**
	baz=85						
D12A	**Red Ives Fores**	**84.97**	**37**	⇑P	**P**	**09 11 28.7**	**-0.3**
	baz=85						
M17A	**Scullys Gap (B**	**85.05**	**44**	⇑P	**P**	**09 11 29.4**	**-0.2**
	baz=85						
R20A	**Redvale**	**85.09**	**48**	⇓P	**P**	**09 11 29.7**	**-0.1**
	baz=85						
K16A	**Soda Springs**	**85.11**	**42**	⇑P	**P**	**09 11 29.9**	**+0.1**
	baz=85						
X23A	**Hourglass Bar**	**85.11**	**52**	⇑P	**P**	**09 11 30.4**	**+0.3**
	baz=85						
I15A	**Monteview**	**85.12**	**41**	⇓P	**P**	**09 11 30.2**	**+0.5**
	baz=85						
225A	**Deer Hill, Car**	**85.12**	**54**	⇑P	**P**	**09 11 30.7**	**+0.6**
	baz=85,SNR=7.3						
DLBC	**Dease Lake**	**85.13**	**23**	*e*P	**P**	**09 11 29.5**	**+0.2**
G14A	**Jackson**	**85.15**	**40**	⇓P	**P**	**09 11 30.1**	**+0.2**
	baz=85						
V22A	**San Miguel Ran**	**85.15**	**50**	⇑P	**P**	**09 11 30.7**	**+0.4**
	baz=85						
T21A	**Navajo Lake**	**85.16**	**49**	⇓P	**P**	**09 11 30.4**	**+0.2**
	baz=85						
426A	**McDonald Obser**	**85.16**	**56**	⇓P	**P**	**09 11 31.1**	**+0.7**
	baz=85,SNR=21						
Z24A	**Sheeppen Canyo**	**85.21**	**53**	⇑P	**P**	**09 11 30.7**	**+0.1**
	baz=85						
COLA	**College**	**85.24**	**12**	*e*P	**P**	**09 11 28.7**	**-0.9**
	comp=Z,17nm,0.7s						
C12B	**Naegeli Ranch,**	**85.25**	**37**	⇓P	**P**	**09 11 30.2**	**0.0**
	baz=86						
S21A	**Coal Bank Pass**	**85.27**	**48**	⇓P	**P**	**09 11 31.0**	**0.0**
	baz=86						
527A	**Woodward Ranch**	**85.29**	**57**	⇓P	**P**	**09 11 31.4**	**+0.5**
	baz=86,SNR=18						
MCMT	**McKenzie Canyo**	**85.31**	**40**	*e*P	**P**	**09 11 31.4**	**+0.6**
J16A	**Bone**	**85.31**	**42**	⇑P	**P**	**09 11 30.8**	**-0.1**
	baz=86						
H15A	**Lima**	**85.33**	**40**	⇑P	**P**	**09 11 31.2**	**+0.3**
	baz=86,SNR=7.8						
P19A	**Cripple Cowboy**	**85.33**	**46**	⇓P	**P**	**09 11 30.6**	**-0.5**
	baz=86						
E13A	**Victor**	**85.33**	**38**	⇑P	**P**	**09 11 31.1**	**+0.4**
	baz=86,SNR=5.3						
ILAR	**Eielson Array**	**85.35**	**13**	P	**P**	**09 11 29.2**	**-1.0**
ILAR	**Eielson Array**	**85.35**	**13**	P	**P**	**09 11 29.2**	**-1.0**
	comp=Z,5.2nm,0.5s,baz=225,slow=5.4,SNR=209						
U22A	**Llaves**	**85.39**	**50**	⇓P	**P**	**09 11 31.3**	**-0.1**
	baz=86						
Y24A	**Capitan**	**85.40**	**52**	⇓P	**P**	**09 11 31.5**	**0.0**
	baz=86,SNR=7.6						
M18A	**Lyman**	**85.43**	**44**	⇑P	**P**	**09 11 31.3**	**-0.1**
	baz=86						
326A	**Caldwell Ranch**	**85.46**	**55**	⇑P	**P**	**09 11

D14A	Greenough	86.06	38	⇓P		P	09 11 33.9	-0.4	
	baz=86								
O20A	White River Ci	86.06	46	⇓P		P	09 11 34.3	-0.2	
	baz=86								
LOHW	Long Hollow	86.12	42	*e*P		P	09 11 35.0	+0.3	
	comp=Z,6.6nm,1.5s								
CHMT	Chamberlain Mo	86.13	38	*e*P		P	09 11 34.4	-0.3	
G16A	Moss Hill, Enn	86.15	40	⇓P		P	09 11 34.7	-0.1	
	baz=86,SNR=6.8								
QLMT	Earthquake Lak	86.19	41	*e*P		P	09 11 35.8	+0.8	
L19A	Farson	86.21	44	⇓P		P	09 11 35.0	-0.2	
	baz=86,SNR=7.6								
BILL	Bilibino	86.23	354	*e*P		P	09 11 34.3	-0.2	
	comp=Z,4.5nm,0.6s								
H16A	Russell Place,	86.24	41	⇓P		P	09 11 36.1	+0.9	
	baz=86,SNR=16								
E15A	Deer Lodge	86.24	39	⇑P		P	09 11 35.1	-0.1	
	baz=86								
Z26A	Caprock	86.24	54	⇓P		P	09 11 35.5	0.0	
	baz=86,SNR=5.5								
428A	Kincaid Ranch,	86.25	56	⇑P		P	09 11 36.3	+0.8	
	baz=86								
R22A	Saguache, Gunn	86.26	48	⇑P		P	09 11 35.8	+0.1	
	baz=86,SNR=6.2								
V24A	Rampart Ranch,	86.27	51	⇓P		P	09 11 35.8	0.0	
	baz=86								
J18A	Kendall Valley	86.30	43	⇓P		P	09 11 35.5	-0.1	
	baz=86,SNR=11								
N20A	Spence Gulch,	86.36	45	⇓P		P	09 11 36.1	+0.1	
	baz=87								
529A	Stev Forest Ra	86.39	57	⇑P		P	09 11 36.6	+0.5	
	baz=87,SNR=7.9								
PDAR	Pinedale Array	86.39	43	P		P	09 11 35.6	-0.4	
PDAR	Pinedale Array	86.39	43	P		P	09 11 35.6	-0.4	
	comp=Z,1.6nm,0.7s,baz=209,slow=3.1,SNR=15								
328A	Wristen Ranch,	86.41	56	⇑P		P	09 11 36.6	+0.4	
	baz=87								
Q22A	Crested Butte,	86.42	47	⇑P		P	09 11 36.4	0.0	
	baz=87,SNR=5.3								
BOZ	Bozeman (W)	86.46	40	*e*P		P	09 11 36.2	0.0	
	comp=Z,6.1nm,1.0s								
H17A	Grant Village	86.51	41	⇑P		P	09 11 37.6	+0.9	
	baz=87								
SMCO	Snowmass	86.52	47	*e*P		P	09 11 36.8	-0.2	
	comp=Z,29nm,1.9s								
F16A	Kennard Place,	86.53	40	⇑P		P	09 11 36.8	+0.2	
	baz=87,SNR=6.8								
D15A	Lincoln	86.62	38	⇓P		P	09 11 36.9	-0.1	
	baz=87,SNR=6.5								
Y26A	Elida	86.62	53	⇑P		P	09 11 37.3	0.0	
	baz=87								
EGAK	Eagle	86.64	15	*e*P		P	09 11 36.3	-0.1	
	comp=Z,5.5nm,0.8s								
I18A	Diamond G Ranc	86.66	42	⇓P		P	09 11 37.6	+0.3	
	baz=87								
W25A	X Bar L Ranch,	86.67	52	⇓P		P	09 11 37.6	+0.1	
	baz=87								
LKWY	Lake	86.70	41	*e*P		P	09 11 39.5	+1.9	
M20A	Sweetwater, Wa	86.71	45	⇓P		P	09 11 37.9	+0.2	
	baz=87								
V25A	Rancho No Teng	86.80	51	⇑P		P	09 11 38.2	0.0	
	baz=87								
N21A	Black Mountain	86.84	46	⇑P		P	09 11 38.5	+0.2	
	baz=87								
429A	Davenport Ranc	86.84	57	⇓P		P	09 11 38.5	+0.2	
	baz=87,SNR=16								
L20A	Wamsutter	86.84	44	⇑P		P	09 11 38.4	+0.2	
	baz=87								
P22A	Eagle	86.85	47	⇓P		P	09 11 38.4	+0.1	
	baz=87								
Z27A	Tatum	86.85	54	⇑P		P	09 11 38.5	+0.1	
	baz=87								
G17A	Pierce Place,	86.85	40	⇓P		P	09 11 38.8	+0.7	
	baz=87,SNR=5.2								
WALA	Waterton Lakes	86.85	36	*e*P		P	09 11 37.8	-0.2	
B14A	Marquette Ranc	86.86	37	⇓P		P	09 11 37.5	-0.5	
	baz=87,SNR=6.5								
HRY	Holter Researc	86.87	39	*e*P		P	09 11 38.3	+0.2	
	comp=Z,6.1nm,0.7s								
E16A	East Helena	86.87	39	⇓P		P	09 11 38.2	0.0	
	baz=87,SNR=6.7								
R23A	Moffat	86.90	48	⇓P		P	09 11 38.3	-0.4	
	baz=87,SNR=5.1								
COLD	Coldfoot	86.92	10	*e*P		P	09 11 37.8	+0.1	
	comp=Z,2.3nm,0.8s								
C15A	Salmond Ranch,	86.94	38	⇓P		P	09 11 38.0	-0.5	
	baz=87,SNR=7.5								
J19A	Crowheart	86.95	43	⇓P		P	09 11 38.8	+0.1	
	baz=87								
T24A	Torres, Weston	86.99	50	⇑P		P	09 11 38.8	-0.3	
	baz=87								
A14A	Double T Ranch	87.08	36	⇑P		P	09 11 38.8	-0.3	
	baz=87,SNR=9.4								
329A	Wagon Wheel Ra	87.10	56	⇑P		P	09 11 39.7	+0.2	
	baz=87								
530A	J-C Ranch, Com	87.11	57	⇓P		P	09 11 39.9	+0.4	
	baz=87								
Y27A	Causey	87.11	53	⇓P		P	09 11 39.3	-0.3	
	baz=87								
S24A	Houchin Ranch,	87.11	49	⇓P		P	09 11 40.1	+0.4	
	baz=87								
128A	Castleberry Fa	87.14	55	⇑P		P	09 11 39.8	+0.1	
	baz=87								
F17A	Fitzpatrick Pl	87.18	40	⇓P		P	09 11 40.2	+0.5	
	baz=87,SNR=7.2								
U25A	Circle Dot Ran	87.19	51	⇑P		P	09 11 40.1	+0.1	
	baz=87								
D16A	Dana Ranch, Ca	87.19	39	⇓P		P	09 11 39.7	+0.1	
	baz=87,SNR=7.5								
H18A	Shoshone NF, C	87.22	41	⇑P		P	09 11 40.2	+0.3	
	baz=88								
B15A	Bradely Ranch,	87.24	37	⇑P		P	09 11 39.3	-0.5	
	baz=88								
O22A	Kremmling	87.24	46	⇑P		P	09 11 40.1	-0.2	
	baz=88								
M21A	Separation Pea	87.32	45	⇑P		P	09 11 40.2	-0.3	
	baz=88								
E17A	Martinsdale	87.33	39	⇓P		P	09 11 40.3	-0.1	
	baz=88								
I19A	Meeteetse	87.34	42	⇑P		P	09 11 40.6	+0.1	
	baz=88								
430A	Baggett Ranch,	87.43	57	⇓P		P	09 11 41.2	+0.2	
	baz=88								
R24A	Sanders Place,	87.43	49	⇓P		P	09 11 41.1	0.0	
	baz=88								
MSTX	Muleshoe	87.44	53	⇓P		P	09 11 41.1	-0.1	
	baz=88								
631A	Perdido Creek	87.45	58	⇓P		P	09 11 41.6	+0.5	
	baz=88,SNR=10								
C16A	Fuhringer Ranc	87.46	38	⇓P		P	09 11 40.4	-0.4	
	baz=88,SNR=6.5								
X27A	F and S Farms,	87.46	53	⇑P		P	09 11 41.6	+0.4	
	baz=88								
A15A	Johnson Ranch,	87.48	37	⇑P		P	09 11 40.5	-0.4	
	baz=88								
T25A	Trinidad	87.49	50	⇓P		P	09 11 41.5	+0.1	
	baz=88								
G18A	Lazy EL Ranch,	87.58	41	⇓P		P	09 11 41.9	+0.3	
	baz=88,SNR=7.4								
N22A	Wattenberg Ran	87.58	46	⇓P		P	09 11 42.0	+0.2	
	baz=88								
129A	Stewart Farms,	87.63	55	⇓P		P	09 11 42.3	+0.3	
	baz=88								
H19A	Powell	87.64	42	⇑P		P	09 11 42.3	+0.4	
	baz=88,SNR=7.2								
W27A	Bowe Ranch, En	87.65	52	⇓P		P	09 11 42.3	+0.2	
	baz=88								
RLMT	Red Lodge	87.67	41	*e*P		P	09 11 42.8	+0.7	
	comp=Z,6.0nm,0.8s								
U26A	Atchley Ranch,	87.67	51	⇑P		P	09 11 42.4	+0.1	
	baz=88								
S25A	Robets Cordova	87.68	49	⇑P		P	09 11 42.7	+0.4	
	baz=88								
732A	Laxson Ranch,	87.69	59	⇑P		P	09 11 42.9	+0.7	
	baz=88								
O23A	Lake Granby, G	87.70	47	⇓P		P	09 11 42.5	+0.1	
	baz=88								
GCMT	Greycliff	87.74	40	*e*P		P	09 11 42.8	+0.5	
531A	Rocksprings	87.75	58	⇑P		P	09 11 42.8	+0.2	
	baz=88,SNR=13								
F18A	Big Timber	87.76	40	⇑P		P	09 11 42.9	+0.5	
	baz=88,SNR=7.2								
D17A	Six Diamond Ra	87.77	39	⇑P		P	09 11 42.7	+0.3	
	baz=88,SNR=9.0								
Y28A	McKinney Farm,	87.82	54	⇑P		P	09 11 42.7	-0.2	
	baz=88								
HHC	Hu-ho-hao-te	87.83	314	*e*P		P	09 11 43.5	+0.7	
HHC				pP		pP	09 13 12.0	-0.1	
HHC					sP	sP	09 13 50.8	-1.5	
HHC					PP	PP	09 15 18.3	+2.9	
HHC					SKS	SKSac	09 21 32.3	-1.1	
HHC					S	S	09 21 51.8	-0.3	
HHC					pmax	pmax			
	comp=Z,18nm,1.2s								
HHC					pmax	pmax			
	comp=Z,200nm,3.9s								
I20A	Worland	87.86	42	⇓P		P	09 11 42.8	-0.1	
	baz=88,SNR=6.1								
E18A	Harlowton	87.95	40	⇑P		P	09 11 43.7	+0.4	
	baz=88								
N23A	Red Feather La	87.97	46	⇓P		P	09 11 43.9	+0.3	
	baz=88								
J21A	Lysite	88.03	43	⇓P		P	09 11 43.8	0.0	
	baz=88,SNR=8.2								
X28A	Dimmitt	88.10	53	⇑P		P	09 11 43.9	-0.3	
	baz=88								
632A	Uvalde	88.12	58	⇑P		P	09 11 45.0	+0.7	
	baz=88,SNR=7.1								
H20A	Greybull	88.19	42	⇑P		P	09 11 44.9	+0.5	
	baz=88								
F19A	Roth Farm, Mol	88.22	41	⇑P		P	09 11 44.5	0.0	
	baz=88,SNR=6.3								
Y29A	Porterfield Fa	88.25	54	⇑P		P	09 11 44.9	+0.1	
	baz=88								
532A	Rocksprings	88.25	58	⇓P		P	09 11 45.3	+0.4	
	baz=88								
B17A	L&G Farms, Che	88.25	38	⇑P		P	09 11 44.8	+0.3	
	baz=88								
331A	San Angelo	88.27	56	⇑P		P	09 11 44.9	0.0	
	baz=88								
I21A	Big Trails, Te	88.34	43	⇑P		P	09 11 44.8	-0.4	
	baz=89,SNR=7.8								
M23A	Laramie	88.37	45	⇓P		P	09 11 46.0	+0.5	
	baz=89								
S26A	Kim	88.37	50	⇑P		P	09 11 45.4	-0.1	
	baz=89								
G20A	Bridger	88.38	41	⇓P		P	09 11 45.5	+0.2	
	baz=89								
X29A	Tulia	88.45	53	⇓P		P	09 11 45.6	-0.2	
	baz=89								
Z30A	Sanderson Ranc	88.45	54	⇑P		P	09 11 45.5	-0.3	
	baz=89								
JCT	Junction City	88.46	57	*e*P		P	09 11 46.1	+0.2	
231A	Bronte	88.58	56	⇑P		P	09 11 46.3	-0.1	
	baz=89								
E19A	Rath Farm, Rou	88.59	40	⇑P		P	09 11 46.5	+0.3	
	baz=89,SNR=5.5								
432A	Menard	88.61	57	⇑P		P	09 11 46.5	-0.1	
	baz=89,SNR=8.7								
A17A	Triple J Farms	88.62	37	⇓P		P	09 11 46.4	+0.2	
	baz=89								
P25A	Willow Gulch B	88.63	48	⇑P		P	09 11 46.8	+0.1	
	baz=89								
L23A	Garrett	88.66	45	⇑P		P	09 11 46.8	0.0	
	baz=89								
R26A	Arlington	88.66	49	⇓P		P	09 11 46.6	-0.1	
	baz=89								
N24A	Carr	88.67	46	⇓P		P	09 11 47.1	+0.3	
	baz=89								
J22A	Midwest	88.69	44	⇓P		P	09 11 46.8	0.0	
	baz=89								
131A	Roby	88.80	55	⇓P		P	09 11 47.9	+0.5	
	baz=89								
332A	Milesview	88.84	57	⇑P		P	09 11 47.6	0.0	
	baz=89								
D19A	Cripps Ranch,	88.86	39	⇑P		P	09 11 47.9	+0.5	
	baz=89								
B18A	Beardsley Farm	88.90	38	⇓P		P	09 11 47.9	+0.4	
	baz=89								
I22A	9 Mile Ranch,	88.90	43	⇓P		P	09 11 48.0	+0.2	
	baz=89								
E20A	Meyer Farm, Mu	89.02	40	⇓P		P	09 11 48.6	+0.5	
	baz=89								
C19A	Slack Wire Ran	89.02	39	⇓P		P	09 11 48.6	+0.5	
	baz=89								
232A	Coleman	89.10	56	⇓P		P	09 11 49.0	+0.2	
	baz=89								
A18A	Metzger Ranch,	89.11	38	⇓P		P	09 11 48.7	+0.2	
	baz=89								
Z31A	Sharp Cattle R	89.23	55	⇑P		P	09 11 49.2	-0.2	
	baz=89								
D20A	Manuel Ranch,	89.28	40	⇑P		P	09 11 49.8	+0.4	
	baz=90,SNR=6.5								
H22A	Clearmont	89.29	42	⇑P		P	09 11 49.7	+0.2	
	baz=90								
ABTX	Abilene, Hawle	89.36	56	⇓P		P	09 11 50.0	0.0	
	baz=90								
Y31A	Rekieta Farm,	89.37	54	⇑P		P	09 11 50.3	+0.2	
	baz=90								
C20A	Veseth Ranch,	89.64	39	⇑P		P	09 11 51.2	+0.2	
	baz=90								
E21A	Keefer Ranch,	89.68	41	⇑P		P	09 11 52.2	+1.0	
	baz=90								
Z32A	Haskell	89.74	55	⇑P		P	09 11 52.3	+0.5	
	baz=90								
A19A	Klindworth Far	89.75	38	⇓P		P	09 11 51.9	+0.4	
	baz=90								
CMAR	Chiang Mai Arr	89.79	289	P		P	09 11 54.3	+2.0	
CMAR	Chiang Mai Arr	89.79	289	P		P	09 11 54.3	+2.0	
	comp=Z,1.5nm,0.7s,baz=105,slow=2.3,SNR=7.0								
J24A	Dixon Ranch, L	89.86	44	⇑P		P	09 11 52.8	+0.6	
	baz=90								
D21A	La Casta Ranch	89.97	40	⇑P		P	09 11 53.2	+0.7	
	baz=90								
Y32A	R-V Farms, Ver	90.02	54	⇓P		P	09 11 53.5	+0.4	
	baz=90								
W31A	Holland Ranch,	90.06	53	⇓P		P	09 11 53.1	-0.1	
	baz=90								
G23A	Biddle	90.17	42	⇑P		P	09 11 53.6	+0.1	
	baz=90								
A20A	Cobblestone Ra	90.21	38	⇑P		P	09 11 54.0	+0.4	
	baz=90								
C21A	Desert Coulee	90.24	39	⇓P		P	09 11 54.1	+0.4	
	baz=90								
V31A	Spring Creek L	90.36	53	⇑P		P	09 11 54.9	+0.3	
	baz=91								
F23A	Volborg	90.38	42	⇑P		P	09 11 54.9	+0.4	
	baz=91								
D22A	Cedagen	90.50	40	⇑P		P	09 11 55.8	+0.8	
	baz=91								
B21A	Ellsworth Farm	90.55	39	⇓P		P	09 11 55.9	+0.7	
	baz=91								
U31A	Nine Bar Ranch	90.57	52	⇓P		P	09 11 55.8	+0.2	
	baz=91								
K26A	Motz Farm, Whi	90.60	45	⇓P		P	09 11 56.0	+0.3	
	baz=91								
RSSD	Black Hills	90.60	44	*e*P		P	09 11 55.4	-0.3	
	comp=Z,7.3nm,1.1s								
PLCA	Paso Flores	90.77	133	P		P	09 11 56.7	+0.2	
PLCA	Paso Flores	90.77	133	P		P	09 11 56.7	+0.2	
	comp=Z,2.8nm,0.8s,baz=258,slow=5.2,SNR=4.6								
E23A	Ismay	90.77	41	⇑P		P	09 11 56.9	+0.7	
	baz=91								
G24A	Alzada	90.84	42	⇓P		P	09 11 57.0	+0.3	
	baz=91								
WHTX	Lake Whitney	90.87	57	⇑P		P	09 11 57.2	+0.2	
	baz=91								
F24A	Ekalaka	91.04	42	⇑P		P	09 11 57.7	+0.2	
	baz=91								
B22A	Reddig Ranch S	91.11	39	⇓P		P	09 11 58.4	+0.6	
	baz=91								
D23A	Lindsay	91.11	40	⇓P		P	09 11 58.7	+0.9	
	baz=91								
K27A	Flueckinger Fa	91.24	45	⇓P		P	09 11 59.3	+0.8	
	baz=92								
C23A	Lambert	91.39	40	⇓P		P	09 11 60.0	+0.9	
	baz=92								
E24A	Baker	91.42	41	⇓P		P	09 12 00.1	+0.8	
	baz=92								
A22A	Carney Farms,	91.45	39	⇑P		P	09 11 59.7	+0.3	
	baz=92								
LZH	Lanzhou	91.55	307	P		P	09 12 01.5	+1.2	
LZH				pP		pP	09 13 32.3	+2.2	
LZH				sP		sP	09 14 11.3	+1.2	
LZH				PP		PP	09 15 48.1	+3.1	
LZH				pmax		pmax			
	comp=Z,21nm,1.1s								
LZH				pmax		pmax			
	comp=Z,58nm,7.9s								
D24A	Glendive	91.64	41	⇓P		P	09 12 01.1	+0.9	
	baz=92								
C24A	Savage	91.74	40	⇓P		P	09 12 01.5	+0.8	
	baz=92								
B23A	Brockton	91.78	39	⇑P		P	09 12 01.6	+0.7	
	baz=92								
DGMT	Dagmar	92.27	40	*e*P		P	09 12 03.9	+0.8	
	comp=Z,25nm,0.8s								
A24A	Westby	92.57	39	⇑P		P	09 12 04.9	+0.4	
	baz=93								
YKA	Yellowknife Ar	93.60	24	P		P	09 12 08.3	-0.5	
YKA	Yellowknife Ar	93.60	24	P		P	09 12 08.3	-0.5	
	comp=Z,2.2nm,0.7s,baz=246,slow=4.6,SNR=59								
ECSD	EROS Data Cent	95.44	46	*e*P		P	09 12 17.2	-0.5	
MKAR	Makanchi Array	109.69	314	PKiKP		PKiKP	09 17 22.4	+0.8	
MKAR				PKKPbc		PKKPbc	09 28 25.9	-1.9	
MKAR	Makanchi Array	109.69	314	PKiKP		PKiKP	09 17 22.4	+0.8	
	comp=Z,0.5nm,0.6s,baz=225,slow=1.5,SNR=6.1								
MKAR				PKKPbc		PKKPbc	09 28 25.9	-1.9	
	comp=Z,0.1nm,0.5s,baz=268,slow=4.3,SNR=3.8								
KSH	Kashi	113.77	306	*e*PKP			09 17 26.8		
KSH				PP		PP	09 18 32.8	+3.3	
KSH				PKS		PKSdf	09 21 05.1	-1.4	
KSH				SKS		SKSdf	09 23 58.3	-6.2	
KSH				AMB		AMB			
	comp=Z,190nm,4.8s								
KSH				LR		LR			
	comp=Z,160nm,6.1s								
ARCES	ARCESS Array B	126.20	350	PKP		PKPdf	09 17 52.1	-0.4	
ARCES	ARCESS Array B	126.20	350	PKP		PKPdf	09 17 52.1	-0.4	
	comp=Z,4.0nm,0.6s,baz=64,slow=1.8,SNR=16								
FINES	FINESS Array B	133.18	345	PKP		PKPdf	09 18 05.7	-0.2	
FINES	FINESS Array B	133.18	345	PKP		PKPdf	09 18 05.7	-0.2	
	comp=Z,2.0nm,0.7s,baz=8.5,slow=2.8,SNR=5.5								
NB2	NORSAR Subarra	136.19	354	PKP		PKPdf	09 18 12.7	+1.0	
	comp=Z,0.9nm,0.6s,baz=17,slow=2.6								
NOA	NORSAR Array B	136.19	354	PKP		PKPdf	09 18 11.9	+0.2	
NOA	NORSAR Array B	136.19	354	PKP		PKPdf	09 18 11.9	+0.2	
	comp=Z,1.0nm,0.7s,baz=15,slow=3.9,SNR=4.8								
HFS	Hagfors	136.78	352	PKhKP		PKPpre	09 18 00.3		
	comp=Z,2.5nm,1.0s,baz=37,slow=3.6,SNR=3.0								
AKASG	Malin Array Be	140.78	333	PKP		PKPdf	09 18 22.0	+1.7	
AKASG	Malin Array Be	140.78	333	PKP		PKPdf	09 18 22.0	+1.7	
	comp=Z,0.7nm,0.5s,baz=41,slow=1.8,SNR=4.1								
BUR08	Bucovina Ar. S	144.82	333	*e*PKPbc		PKPab	09 18 28.7	+0.6	
BURAR	Bucovina Array	144.83	333	⇓*i*P		PKPab	09 18 28.8	+0.7	
KOLS	Kolonicke sedl	144.94	337	*e*PKP		PKPab	09 18 28.5	+0.1	
TESR		145.02	331	⇑*i*P		PKPbc	09 18 28.5	+0.2	
IBBN	Ibbenburen	145.14	355	*e*PKPbc		PKPbc	09 18 28.5	+0.1	
CFR	Carcaliu	145.26	328	⇑*i*P		PKPbc	09 18 29.3	+0.3	
CRVS	Cervenica-Dubn	145.26	338	*e*PKP		PKPdf	09 18 28.0	-0.3	
CLZ	Clausthal	145.30	352	*e*PKPbc		PKPbc	09 18 29.1	+0.1	
BR131	Keskin Array S	145.32	316	*e*PKPbc		PKPbc	09 18 29.6	+0.1	
BRTR	Keskin Array B	145.32	316	PKPbc		PKPdf	09 18 29.1	+0.3	
BRTR	Keskin Array B	145.32	316	PKPbc		PKPdf	09 18 29.1	+0.3	
	comp=Z,17nm,1.2s,baz=104,slow=2.9,SNR=15								
CLL	Collm	145.38	349	*e*PKPbc		PKPbc	09 18 29.1	-0.1	
CLL	Collm	145.38	349	⇓*i*PKPbc		PKPbc	09 18 28.9	-0.3	
	comp=Z,26nm,1.0s								
CLL				*i* PKiKP		PKiKP	09 18 31.8	-0.7	
CLL	Collm	145.38	349	*i* PKP		PKPab	09 18 36.1	+6.2	
	comp=Z,9.0nm,0.6s								
VRI	Vrincioaia	145.46	330	⇓*i*P		PKPab	09 18 30.3	-0.2	
UPC	Upice	145.48	345	*e*PKP		PKPbc	09 18 29.7	+0.2	
TRPA	Tarpa	145.51	336	⇓*i*P		PKPab	09 18 30.3	-0.2	
PLOR	Plostina	145.51	330	⇑*i*P		PKPab	09 18 30.4	-0.3	
OKC	Ostrava-Krasne	145.52	342	*e*PKP		PKPbc	09 18 29.9	+0.3	
DPC	Dobruska-Polom	145.55	345	*e*PKP		PKPbc	09 18 30.3	+0.5	
BRG	Berggiesshubel	145.61	347	*i* PKP		PKPbc	09 18 29.8	0.0	
	comp=Z,25nm,1.4s								
BRG	Berggiesshubel	145.61	347	*e*PKPbc		PKPbc	09 18 29.9	0.0	
FBE	Freiberg	145.68	348	*e*PKPbc		PKPbc	09 18 30.5	+0.4	
NEUB	Neuenburg	145.70	350	*e*PKPbc		PKPbc	09 18 30.0	-0.1	
MORC	Moravsky Berou	145.74	343	⇑*i*P		PKPbc	09 18 30.8	+0.4	
DOPR	Dopca	146.01	331	⇓*i*P		PKPab	09 18 32.4	-0.2	
ISR	Istrita	146.09	329	⇓*i*P		PKPbc	09 18 32.1	+0.6	
MLR	Muntele Rosu	146.11	330	PKPbc		PKPbc	09 18 31.4	-0.3	
MLR	Muntele Rosu	146.11	330	⇑*i*P		PKPbc	09 18 31.7	0.0	
MLR	Muntele Rosu	146.11	330	PKPbc		PKPbc	09 18 31.4	-0.3	
	comp=Z,1.5nm,0.8s,baz=294,slow=1.8,SNR=6.7								
PRU	Pruhonice	146.31	346	*e*PKP		PKPbc	09 18 31.9	0.0	
PLN	Plauen	146.33	349	*e*PKPbc		PKPbc	09 18 32.1	+0.1	
WERD	Werda	146.34	349	*e*PKPbc		PKPbc	09 18 32.0	0.0	
TANN	Tannenbergstha	146.34	349	*e*PKPbc		PKPbc	09 18 32.2	+0.1	
WERN	Wernitzgruen	146.48	349	*e*PKPbc		PKPbc	09 18 32.6	+0.2	
VYHS	Vyhne	146.50	340	*e*PKP		PKPbc	09 18 33.1	+0.6	
DRGR		146.53	335	⇓*i*P		PKPbc	09 18 32.9	+0.2	
MANZ	Manzenberg	146.82	349	*e*PKPbc		PKPbc	09 18 33.6	+0.2	
MMAI	Mount Meron Ar	146.87	304	PKPbc		PKPbc	09 18 34.2	+0.1	
MMAI	Mount Meron Ar	146.87	304	PKPbc		PKPbc	09 18 34.2	+0.1	
	comp=Z,3.9nm,0.6s,baz=131,slow=4.7,SNR=3.7								
ROTZ	Rotzenmuhle

VCEL	**Villa Celiera**	**0.32**	**63**	Pg	Pb	09 01 50.6	-0.6
VCEL				Sg	Sb	09 01 56.3	-0.2
	58nm,0.3s						
VCEL	**Villa Celiera**	**0.32**	**63**	Pg	Pb	09 01 50.6	-0.6
VCEL				Sg	Sb	09 01 56.3	-0.2
	58nm,0.3s						
TERO	**Teramo**	**0.39**	**16**	Pg	Pg	09 01 50.9	-0.1
TERO				Sg	Sb	09 01 57.9	-0.5
	29nm,0.3s						
TERO	**Teramo**	**0.39**	**16**	Pg	Pg	09 01 50.9	-0.1
TERO				Sg	Sb	09 01 57.9	-0.5
	29nm,0.3s						
VVLD	**Villa Vallelon**	**0.40**	**162**	Pg	Pg	09 01 51.7	+0.5
VVLD	**Villa Vallelon**	**0.40**	**162**	Pg	Pg	09 01 51.7	+0.5
INTR	**Introdacqua**	**0.41**	**126**	Pg	Pg	09 01 51.7	+0.3
INTR				Sg	Sb	09 01 58.0	-1.0
INTR	**Introdacqua**	**0.41**	**126**	Pg	Pg	09 01 51.7	+0.3
INTR				Sg	Sb	09 01 58.0	-1.0
LNSS	**Leonessa**	**0.47**	**319**	Pg	Pb	09 01 53.3	-0.5
	35nm,0.7s						
LNSS	**Leonessa**	**0.47**	**319**	Pg	Pb	09 01 53.3	-0.5
	35nm,0.7s						
LPEL	**Lama dei Pelig**	**0.58**	**110**	Pg	Pg	09 01 54.3	-0.2
LPEL				Sg	Sg	09 02 02.9	+0.8
	36nm,0.2s						
LPEL	**Lama dei Pelig**	**0.58**	**110**	Pg	Pg	09 01 54.3	-0.2
LPEL				Sg	Sg	09 02 02.9	+0.8
	36nm,0.2s						
NRCA	**Norcia**	**0.64**	**337**	Pg	Pb	09 01 56.2	-0.4
NRCA	**Norcia**	**0.64**	**337**	Pg	Pb	09 01 56.2	-0.4

*ATH **23** 09:02:12.6,36°44N×21°72E,h9km±3km,MD3.4/14*
*CSEM **23** 09:02:12.7±0.5,36°45N×21°73E,h2km,MD3.4, Error ellipse: s-maj=9.6km s-min=5.2km az=46.0*
*THE **23** 09:02:13.1,36°45N×21°76E,h0km±4km,ML3.0/2, Error ellipse: s-maj=5.3km s-min=1.3km az=211.0*

ISC 23 09:02:12.7±1.9, 36°44N±0°06×21°72E±0°06, h5km±12km, n44, σ0.9s53/60, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.45**	**2**	P	**Pg**	**09 02 21.1**	**-0.4**
PYL				S	**Sg**	**09 02 28.2**	**+0.8**
PYL	**PYLOS**	**0.45**	**2**	*e*PB	**Pg**	**09 02 21.1**	**-0.4**
PYL				*e*SB	**Sg**	**09 02 28.2**	**+0.8**
PYL	**PYLOS**	**0.45**	**2**	P	**Pg**	**09 02 21.1**	**-0.4**
PYL				S	**Sg**	**09 02 28.2**	**+0.8**
DYR	**Agios Nikonas**	**0.59**	**57**	P	**Pg**	**09 02 23.0**	**-1.0**
DYR				S	**Sg**	**09 02 32.2**	**+0.5**
DYR	**Agios Nikonas**	**0.59**	**57**	*e*PB	**Pg**	**09 02 23.1**	**-1.0**
DYR				*e*SB	**Sg**	**09 02 32.4**	**+0.7**
DYR	**Agios Nikonas**	**0.59**	**57**	*e*Pb	**Pg**	**09 02 23.1**	**-1.0**
DYR				*e*Sb	**Sg**	**09 02 32.4**	**+0.7**
ITM	**Ithomi**	**0.76**	**13**	P	**Pg**	**09 02 27.2**	**0.0**
ITM	**Ithomi**	**0.76**	**13**	*e*PG	**Pg**	**09 02 26.8**	**-0.4**
ITM				*e*SB	**Sb**	**09 02 38.3**	**-0.7**
ITM	**Ithomi**	**0.76**	**13**	*e*Pg	**Pg**	**09 02 26.8**	**-0.4**
ITM	**Ithomi**	**0.76**	**13**	P	**Pg**	**09 02 27.2**	**0.0**
ITM				*e*Sb	**Sb**	**09 02 38.3**	**-0.7**
VLI	**Veliai**	**1.02**	**74**	P	**Pg**	**09 02 31.7**	**-0.5**
VLI				S	**Sg**	**09 02 45.7**	**+0.2**
VLI	**Veliai**	**1.02**	**74**	*e*PG	**Pg**	**09 02 31.7**	**-0.5**
VLI				*e*SB	**Sb**	**09 02 46.1**	**-0.4**
VLI	**Veliai**	**1.02**	**74**	P	**Pg**	**09 02 31.7**	**-0.5**
VLI				S	**Sg**	**09 02 45.7**	**+0.2**
VLI				*e*Sb	**Sb**	**09 02 46.1**	**-0.4**
VLX	**Vlachokerasia**	**1.07**	**30**	P	**Pg**	**09 02 32.5**	**-0.7**
VLX				S	**Sb**	**09 02 48.8**	**+0.8**
VLX	**Vlachokerasia**	**1.07**	**30**	*e*PG	**Pg**	**09 02 32.5**	**-0.7**
VLX				*e*SB	**Sb**	**09 02 48.1**	**+0.1**
VLX	**Vlachokerasia**	**1.07**	**30**	P	**Pg**	**09 02 32.5**	**-0.7**
VLX				*e*Sb	**Sb**	**09 02 48.1**	**+0.1**
VLX				S	**Sb**	**09 02 48.8**	**+0.8**
KYTH	**Kithira**	**1.07**	**98**	P	**Pg**	**09 02 32.8**	**-0.5**
KYTH	**Kithira**	**1.07**	**98**	*e*PB	**Pg**	**09 02 33.0**	**-0.3**
KYTH	**Kithira**	**1.07**	**98**	P	**Pg**	**09 02 32.8**	**-0.5**
ANKY	**Antikythira Is**	**1.40**	**114**	*e*PB	**Pb**	**09 02 39.6**	**+0.2**
ANKY	**Antikythira Is**	**1.40**	**114**	*e*Pb	**Pb**	**09 02 39.6**	**+0.2**
GUR	**Goura**	**1.57**	**18**	P	**Pn**	**09 02 41.6**	**+0.2**
GUR	**Goura**	**1.57**	**18**	*e*PG	**Pn**	**09 02 41.6**	**+0.2**
GUR	**Goura**	**1.57**	**18**	P	**Pn**	**09 02 41.6**	**+0.2**
DID	**Didima**	**1.61**	**48**	P	**Pn**	**09 02 42.4**	**+0.5**
DID	**Didima**	**1.61**	**48**	*e*PG	**Pn**	**09 02 42.3**	**+0.4**
DID	**Didima**	**1.61**	**48**	P	**Pn**	**09 02 42.4**	**+0.5**
RLS	**Riolos of Patr**	**1.62**	**353**	P	**Pn**	**09 02 41.8**	**-0.2**
RLS	**Riolos of Patr**	**1.62**	**353**	P	**Pn**	**09 02 41.8**	**-0.2**
KLV	**Kalavryta, Ach**	**1.64**	**12**	*e*PG	**Pn**	**09 02 42.4**	**+0.2**
KLV	**Kalavryta, Ach**	**1.64**	**12**	*e*Pg	**Pn**	**09 02 42.4**	**+0.2**
LAKA	**Lakka**	**1.81**	**6**	P	**Pn**	**09 02 45.0**	**+0.5**
LAKA	**Lakka**	**1.81**	**6**	*e*PN	**Pb**	**09 02 45.9**	**-0.4**
LAKA	**Lakka**	**1.81**	**6**	P	**Pn**	**09 02 45.0**	**+0.5**
LAKA	**Lakka**	**1.81**	**6**	*e*Pn	**Pb**	**09 02 45.9**	**-0.4**
LTK	**Loutraki**	**1.87**	**32**	P	**Pn**	**09 02 45.9**	**+0.6**
LTK	**Loutraki**	**1.87**	**32**	*e*PN	**Pn**	**09 02 46.1**	**+0.8**
LTK	**Loutraki**	**1.87**	**32**	P	**Pn**	**09 02 45.9**	**+0.6**
TRIZ	**Trizonia**	**1.94**	**8**	*e*PN	**Pb**	**09 02 48.2**	**-0.3**
TRIZ	**Trizonia**	**1.94**	**8**	*e*Pn	**Pb**	**09 02 48.2**	**-0.3**
KALE	**Kalithea**	**1.97**	**10**	P	**Pn**	**09 02 46.5**	**-0.4**
KALE	**Kalithea**	**1.97**	**10**	*e*PG	**Pb**	**09 02 49.0**	**-0.2**
KALE	**Kalithea**	**1.97**	**10**	P	**Pn**	**09 02 46.5**	**-0.4**
KALE	**Kalithea**	**1.97**	**10**	*e*Pg	**Pb**	**09 02 49.0**	**-0.2**

*ISCJB **23** 09:12:13.8±1.6,37°02N±0°07×37°11E±0°05, h2km±8km, Error ellipse: s-maj=12.6km s-min=6.3km az=177.0*
*CSEM **23** 09:12:14.5±0.9,37°06N×37°12E, h8km, MD2.9, Error ellipse: s-maj=19.9km s-min=9.9km az=6.0*
*ISK **23** 09:12:14.2, 37°10N×37°10E, h4km, MD2.8*
*DDA **23** 09:12:15.4, 37°11N×37°13E, h7km, MD2.9*

ISC 23 09:12:14.6±1.4, 37°12N±0°07×37°10E±0°04, h9km±7km, n19, σ0.9s90/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZ	**Gaziantep**	**0.10**	**60**	P	**Pg**	**09 12 16.8**	**-0.4**
GAZ				*e*SG	**Sg**	**09 12 19.6**	**+0.6**
GAZ	**Gaziantep**	**0.10**	**60**	*i* Pg	**Pg**	**09 12 16.8**	**-0.4**
GAZ				*e*Sg	**Sg**	**09 12 19.6**	**+0.6**
KMRS	**Kahramanmaras**	**0.41**	**337**	*e*PG	**Pg**	**09 12 23.1**	**+0.3**
KMRS				*e*SG	**Sb**	**09 12 30.1**	**-0.6**
KMRS	**Kahramanmaras**	**0.41**	**337**	*e*Pg	**Pg**	**09 12 23.2**	**+0.4**
KMRS				*e*Sg	**Sb**	**09 12 30.1**	**-0.5**
GZT	**Gaziantep**	**0.43**	**58**	*i* P	**Pg**	**09 12 23.2**	**0.0**
GZT				*i* S	**Sb**	**09 12 31.7**	**+0.4**
ANDN	**Andirin**	**0.76**	**307**	*i* P	**Pn**	**09 12 31.6**	**0.0**
ANDN				*i* S	**Sn**	**09 12 43.0**	**-0.3**
ANDN	**Andirin**	**0.76**	**307**	*i* P	**Pn**	**09 12 31.6**	**0.0**
ANDN				*i* S	**Sn**	**09 12 43.0**	**-0.3**
KOZT	**Kozan**	**1.08**	**290**	*e*PN	**Pn**	**09 12 36.0**	**+0.1**
KOZT	**Kozan**	**1.08**	**290**	*e*Pn	**Pn**	**09 12 36.0**	**+0.1**
AKCD	**Akcadag**	**1.34**	**29**	*i* P	**Pg**	**09 12 40.6**	**+0.2**
AKCD				*i* S	**Sg**	**09 12 59.6**	**+1.8**
AKCD	**Akcadag**	**1.34**	**29**	*i* P	**Pg**	**09 12 40.6**	**+0.2**
AKCD				*i* S	**Sg**	**09 12 59.6**	**+1.8**
URFA	**Urfa**	**1.41**	**76**	*e*PN	**Pb**	**09 12 41.0**	**-0.1**
URFA				*e*SN	**Sg**	**09 13 01.4**	**+1.5**
URFA	**Urfa**	**1.41**	**76**	*e*Pn	**Pb**	**09 12 41.0**	**-0.1**
URFA				*e*Sn	**Sg**	**09 13 01.4**	**+1.5**
MALT	**Malatya**	**1.59**	**41**	*e*PN	**Pb**	**09 12 43.8**	**-0.4**
MALT	**Malatya**	**1.59**	**41**	*e*Pn	**Pb**	**09 12 43.8**	**-0.4**
SARI	**SarD1z-Kayseri**	**1.59**	**348**	*e*PN	**Pn**	**09 12 41.4**	**-1.7**
SARI	**SarD1z-Kayseri**	**1.59**	**348**	*e*Pn	**Pn**	**09 12 41.4**	**-1.7**
DARE	**Darende-Malaty**	**1.91**	**17**	*e*PN	Pn	09 12 43.2	-4.3
DARE	**Darende-Malaty**	**1.91**	**17**	*e*Pn	Pn	09 12 43.2	-4.3

*CSEM **23** 09:22:48.0±0.6,37°85N×36°48E, h2km, MD2.8, Error ellipse: s-maj=14.4km s-min=11.7km az=130.0*
*ISK **23** 09:22:48.8,37°70N×36°57E, h5km, MD2.6*
*DDA **23** 09:22:49.2,37°66N×36°55E, h7km, MD2.8*

ISC 23 09:22:49.2±1.0, 37°68N±0°05×36°53E±0°03, h8km±10km, n14, σ0.9s47/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.17**	**235**	*i* P	**Pg**	**09 22 52.2**	**-0.6**
ANDN				*i* S	**Sg**	**09 22 56.3**	**+1.0**
ANDN	**Andirin**	**0.17**	**235**	*i* P	**Pg**	**09 22 52.2**	**-0.6**
ANDN				*i* S	**Sg**	**09 22 56.3**	**+1.0**
KMRS	**Kahramanmaras**	**0.35**	**120**	*e*PG	**Pg**	**09 22 55.6**	**-0.4**
KMRS				*e*SG	**Sg**	**09 23 00.8**	**+0.2**
KMRS	**Kahramanmaras**	**0.35**	**120**	*e*Pg	**Pg**	**09 22 55.6**	**-0.4**
KMRS				*e*Sg	**Sg**	**09 23 00.8**	**+0.2**
AYKD	**Aykdinkavak**	**0.35**	**140**	*i* P	**Pg**	**09 22 55.5**	**-0.6**
AYKD				*i* S	**Sg**	**09 23 00.8**	**+0.2**
KOZT	**Kozan**	**0.59**	**250**	*e*PG	**Pb**	**09 23 01.6**	**-0.2**
KOZT				*e*SG	**Sb**	**09 23 10.5**	**+0.2**
KOZT	**Kozan**	**0.59**	**250**	*e*Pg	**Pb**	**09 23 01.6**	**-0.2**
KOZT				*e*Sg	**Sb**	**09 23 10.5**	**+0.2**
SARI	**SarD1z-Kayseri**	**0.73**	**353**	*e*PG	**Pg**	**09 23 02.9**	**-0.4**
SARI	**SarD1z-Kayseri**	**0.73**	**353**	*e*Pg	**Pg**	**09 23 02.9**	**-0.4**
GZT	**Gaziantep**	**0.89**	**111**	*i* P	**Pg**	**09 23 06.2**	**-0.1**
GZT				*i* S	**Sg**	**09 23 18.3**	**+0.5**
AKCD	**Akcadag**	**1.26**	**61**	*i* P	**Pn**	**09 23 13.2**	**-0.1**
AKCD				*i* S	**Sn**	**09 23 30.9**	**+0.3**
AKCD	**Akcadag**	**1.26**	**61**	*i* P	**Pn**	**09 23 13.2**	**-0.1**
AKCD				*i* S	**Sn**	**09 23 30.9**	**+0.3**
MALT	**Malatya**	**1.63**	**67**	*e*PN	**Pn**	**09 23 18.3**	**0.0**
MALT	**Malatya**	**1.63**	**67**	*e*Pn	**Pn**	**09 23 18.3**	**0.0**

IDC 23 09:28:14.7±10.0, 2°42N×128°48E, h141km±97km, mb3.4/7, mb1 3.5/8, mb1mx3.3/26, mbtmp3.5/8, Error ellipse: s-maj=85.0km s-min=16.7km az=59.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**11.43**	**230**	P	Pn	09 30 54.0	+0.2
	0.9nm,0.3s,baz=88,slow=11,SNR=4.0						
FITZ	**Fitzroy Crossi**	**20.59**	**188**	P	P	09 32 43.5	+0.7
	1.1nm,0.7s,baz=9.5,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	**22.96**	**166**	P	P	09 33 06.8	-0.3
	1.2nm,0.3s,baz=345,slow=11,SNR=62						
ASAR	**Alice Springs**	**26.46**	**169**	P	P	09 33 38.4	-0.4
	0.2nm,0.4s,baz=346,slow=7.1,SNR=8.1						
STKA	**Stephens Creek**	**36.31**	**161**	P	P	09 35 05.1	+0.1
	1.5nm,0.3s,baz=354,slow=7.9,SNR=18						
MKAR	**Makanchi Array**	**59.62**	**325**	P	P	09 38 03.6	-0.4
	0.7nm,0.6s,baz=121,slow=8.5,SNR=8.9						
KURBB	**Kurchatov Arra**	**63.78**	**327**	P	P	09 38 31.9	+0.3
	0.3nm,0.3s,baz=124,slow=6.0,SNR=4.7						
BVAR	**Borovoye Array**	**69.36**	**327**	P	P	09 39 07.6	+0.4
	0.8nm,0.5s,baz=123,slow=7.1,SNR=3.2						
TORD	**Torodi Ar. Bea**	**124.98**	**288**	PKP	PKPdf	09 46 58.5	-0.8
	0.2nm,0.4s,baz=110,slow=1.8,SNR=3.8						

*CSEM **23** 09:40:16.1,36°11N×21°14E, h5km, MD3.6, After ATH*

ATH 23 09:40:15.9, 36°11N×21°14E, h5km, MD3.6/12, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.92**	**32**	*e*PB	Pg	09 40 33.6	0.0
PYL				*e*SB	Sb	09 40 46.6	-0.4
PYL	**PYLOS**	**0.92**	**32**	*e*Pg	Pg	09 40 33.6	0.0
PYL				*e*Sb	Sb	09 40 46.6	-0.4
DYR	**Agios Nikonas**	**1.16**	**56**	*e*PB	Pg	09 40 38.0	-0.3
DYR				*e*SB	Sn	09 40 54.7	-0.5
DYR	**Agios Nikonas**	**1.16**	**56**	*e*Pb	Pg	09 40 38.0	-0.3
DYR				*e*Sb	Sn	09 40 54.7	-0.5
ITM	**Ithomi**	**1.24**	**30**	*e*PB	Pg	09 40 39.8	0.0
ITM	**Ithomi**	**1.24**	**30**	*e*Pb	Pg	09 40 39.8	0.0
KYTH	**Kithira**	**1.54**	**83**	*e*PB	Pg	09 40 45.6	0.0
KYTH	**Kithira**	**1.54**	**83**	*e*Pb	Pg	09 40 45.6	0.0
VLI	**Veliai**	**1.57**	**67**	*e*PB	Pg	09 40 45.8	-0.3
VLI	**Veliai**	**1.57**	**67**	*e*Pb	Pg	09 40 45.8	-0.3
VLX	**Vlachokerasia**	**1.60**	**38**	*e*PB	Pb	09 40 46.3	+0.1
VLX	**Vlachokerasia**	**1.60**	**38**	*e*Pb	Pb	09 40 46.3	+0.1
GUR	**Goura**	**2.06**	**27**	*e*PG	Pb	09 40 54.3	+0.3
GUR	**Goura**	**2.06**	**27**	*e*Pg	Pb	09 40 54.3	+0.3
KLV	**Kalavryta, Ach**	**2.09**	**22**	*e*PN	Pb	09 40 54.3	-0.2
KLV	**Kalavryta, Ach**	**2.09**	**22**	*e*Pg	Pb	09 40 54.3	-0.2
DID	**Didima**	**2.19**	**50**	*e*PB	Pn	09 40 54.2	+1.2
DID	**Didima**	**2.19**	**50**	*e*Pb	Pn	09 40 54.2	+1.2
LAKA	**Lakka**	**2.23**	**17**	*e*PG	Pb	09 40 57.5	+0.8
LAKA	**Lakka**	**2.23**	**17**	*e*Pg	Pb	09 40 57.5	+0.8
LTK	**Loutraki**	**2.40**	**37**	*e*PB	Pn	09 40 57.0	+1.0
LTK	**Loutraki**	**2.40**	**37**	*e*Pb	Pn	09 40 57.0	+1.0
KALE	**Kalithea**	**2.41**	**19**	*e*PN	Pb	09 40 59.6	-0.3
KALE	**Kalithea**	**2.41**	**19**	*e*Pn	Pb	09 40 59.6	-0.3

*ISCJB **23** 09:55:13.2±0.6,21°72S±0°04×67°36W±0°09, h195km±8km, mb3.4/5, Error ellipse: s-maj=13.0km s-min=6.5km az=1.0*
*IDC **23** 09:55:13.6±1.6,21°66S×67°18W, h182km±16km, mb3.4/5, mb1 3.6/9, mb1mx3.5/19, mbtmp3.5/9, Error ellipse: s-maj=27.1km s-min=13.5km az=86.0*
*GUC **23** 09:55:15.0±0.5,21°68S×67°54W, h192km±15km, ML4.9*

ISC 23 09:55:13.4±0.8, 21°70S±0°05×67°28W±0°09, h182km±10km, n20, σ1.9s27/27, mb3.6/5, 4C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.12**	**254**	*e*P	Pn	09 56 00.2	+8.3
PB04				*i* S	Sn	09 56 34.9	+13
PB01	**Plate Boundary**	**2.16**	**287**	↑*i*P	**Pn**	**09 55 53.4**	**+0.9**
PB01				*e*S	**Sn**	**09 56 22.3**	**-0.4**
PB01				AML	AML	09 56 24.2	
	comp=N,4μm,0.3s						
PB06	**Plate Boundary**	**2.34**	**244**	↓*e*P	**Pn**	**09 55 55.8**	**+1.1**
PB06				*e*S	**Sn**	**09 56 27.1**	**+0.4**
PB07	**Plate Boundary**	**2.42**	**269**	↓*i*P	**Pn**	**09 55 56.5**	**+1.0**
PB07				*e*S	**Sn**	**09 56 27.7**	**-0.5**
PB07				AML	AML	09 56 28.7	
	comp=N,2μm,0.3s						
HMBC	**Humberston**	**2.82**	**300**	↑*i*P	**Pn**	**09 56 00.3**	**+0.2**
HMBC				*e*S	**Sn**	**09 56 35.0**	**-1.4**
HMBC				AML	AML	09 56 36.0	
	comp=N,4μm,0.3s						
PB11	**Plate Boundary**	**2.94**	**311**	↑*i*P	**Pn**	**09 56 02.1**	**+0.4**
PB11				*i* S	**Sn**	**09 56 38.6**	**-0.6**
PB11				AML	AML	09 56 40.4	
	comp=E,8μm,0.3s						
CEN1	**Los Morros**	**3.18**	**238**	*e*P	Pn	09 56 08.3	+3.8
MNMC	**Miæe Miæ**	**3.35**	**319**	↑*i*P	**Pn**	**09 56 07.7**	**+0.8**
MNMC				*e*S	**Sn**	**09 56 48.5**	**0.0**
MNMC				AML	AML	09 56 50.8	
	comp=N,2μm,0.4s						
ANCH	**Antofagasta**	**3.50**	**235**	*e*P	**Pn**	**09 56 09.4**	**+1.2**
ANCH				*e*S	**Sn**	**09 56 51.3**	**+0.2**
LPAZ	**La Paz**	**5.44**	**351**	P	**Pn**	**09 56 34.8**	**+0.9**
	comp=N,11nm,0.3s,baz=169,slow=13,SNR=212						
LPAZ				S	**Sn**	**09 57 37.8**	**+0.8**
	baz=127,slow=5.1,SNR=1.5						
SIV	**San Ignacio**	**8.17**	**47**	P	**Pn**	**09 57 07.1**	**-2.1**
	comp=N,11nm,0.3s,baz=241,slow=11,SNR=214						
SIV				S	Sn	09 58 33.5	-7.4
	comp=N,9.2nm,0.3s,baz=142,slow=22,SNR=13						
CFAA	**Coronel Fontan**	**9.90**	**185**	P	**Pn**	**09 57 30.9**	**-0.8**
	comp=N,0.2nm,0.3s,baz=7.7,slow=13,SNR=35						
CFAA				S	**Sn**	**09 59 17.8**	**-4.1**
	comp=N,0.2nm,0.3s,baz=97,slow=23,SNR=6.5						
CPUP	**Villa Florida**	**10.20**	**119**	P	**Pn**	**09 57 37.1**	**+1.6**
	comp=N,1.0nm,0.3s,baz=267,slow=15,SNR=6.4						
PLCA	**Paso Flores**	**19.18**	**188**	P	**P**	**09 59 24.0**	**+0.8**
	comp=N,0.3nm,0.3s,baz=352,slow=6.4,SNR=3.9						
SNAA	**Sanae**	**61.60**	**161**	P	**P**	**10 05 12.5**	**+1.2**
	comp=N,0.2nm,0.4s,baz=270,slow=8.7,SNR=9.8						
PDAR	**Pinedale Array**	**75.05**	**329**	P	**P**	**10 06 34.8**	**-0.5**
	comp=N,0.3nm,0.8s,baz=125,slow=7.9,SNR=3.4						
ULM	**Lac du Bonnet**	**75.97**	**342**	P	**P**	**10 06 39.6**	**-0.4**
	comp=N,1.1nm,0.4s,baz=173,slow=7.5,SNR=2.9						
TORD	**Torodi Ar. Bea**	**76.00**	**70**	P	**P**	**10 06 40.5**	**-0.5**
	comp=N,0.5nm,0.4s,baz=256,slow=5.4,SNR=17						
YKA	**Yellowknife Ar**	**91.89**	**340**	P	**P**	**10 08 00.8**	**+0.3**
	comp=N,0.4nm,0.6s,baz=131,slow=4.7,SNR=12						
MKAR	**Makanchi Array**	**144.89**	**37**	PKP	**PKPdf**	**10 14 28.8**	**+0.1**
	comp=N,0.3nm,0.7s,baz=313,slow=1.3,SNR=3.1						

IDC 23 10:07:27.6±1.1, 6°42S×154°17E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.8/20, mbtmp3.9/8, ML2.5/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/32, Error ellipse: s-maj=48.7km s-min=19.5km az=132.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.55**	**246**	Pn	Pn	10 09 18.3	-0.7
	0.4nm,0.3s,baz=90,slow=15,SNR=2.0						
PMG				Sn	Sn	10 10 48.5	+3.2
	0.6nm,0.3s,baz=280,slow=18,SNR=3.5						
CTA	**Charters Tower**	**15.61**	**209**	LR	LR	10 16 00.9	
	comp=Z,95nm,18.4s,baz=219,slow=33						
WRA	**Warramunga Arr**	**23.48**	**233**	P	P	10 12 38.9	-0.3
	2.9nm,0.7s,baz=56,slow=9.3,SNR=23						
ASAR	**Alice Springs**	**25.95**	**227**	P	P	10 13 01.3	-0.7
	0.7nm,0.7s,baz=54,slow=9.5,SNR=10						
STKA	**Stephens Creek**	**27.92**	**203**	P	P	10 13 21.0	+1.4
	1.7nm,0.8s,baz=29,slow=16,SNR=3.9						
FITZ	**Fitzroy Crossi**	**30.14**	**245**	P	P	10 13 38.8	-0.7
	2.1nm,0.9s,baz=58,slow=8.4,SNR=4.6						
MKAR	**Makanchi Array**	**82.43**	**319**	P	P	10 19 53.2	+1.3
	1.1nm,0.7s,baz=111,slow=4.5,SNR=17						
ILAR	**Eielson Array**	**83.14**	**22**	P	P	10 19 53.8	-1.3
	0.2nm,0.6s,baz=243,slow=5.1,SNR=4.1						
NVAR	**Mina Array Bea**	**92.01**	**52**	P	P	10 20 39.6	+0.5
	0.2nm,0.4s,baz=276,slow=2.5,SNR=3.7						
TORD	**Torodi Ar. Bea**	**152.08**	**286**	PKPbc	PKPbc	10 27 25.8	-0.3
	1.1nm,0.6s,baz=71,slow=2.6,SNR=13						

*IDC **23** 10:30:45.1±1.0, 51°08N×177°84W, h0km, mb3.5/9, mb1 3.8/11, mb1mx3.6/31, mbtmp3.6/11, ML2.5/1, Error ellipse: s-maj=28.6km s-min=16.1km az=166.0*
*NEIC **23** 10:30:50.3, 51°06N×178°11W, h17km, ML3.5(AEIC), After AEIC,*

ISC 23 10:30:49.9±0.9, 51°1N±0°1×178°12W±0°04, h34km, n21, σ2.3s36/27, mb3.5/9, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERAA	**Semis' Rag'd T**	**1.61**	**302**	P	**Pn**	**10 31 17.2**	**+1.4**
AMKA	**Amchitka**	**1.65**	**282**	P	**Pn**	**10 31 17.8**	**+1.4**
AMKA				S	**Sb**	**10 31 40.2**	**+0.1**
CERB	**Semis' Cerberu**	**1.65**	**302**	P	**Pn**	**10 31 18.0**	**+1.5**
CERB				S	**Sb**	**10 31 40.1**	**0.0**
LSSE	**Little Sitkin**	**2.24**	**294**	P	**Pb**	**10 31 27.6**	**-2.2**
LSPA	**Little Sitkin**	**2.25**	**295**	P	**Pn**	**10 31 27.0**	**+2.3**
LSPA				S	**Sb**	**10 31 56.2**	**-1.0**
LSNW	**Little Sitkin**	**2.29**	**295**	P	**Pn**	**10 31 28.1**	**+2.9**
KOWE	**Korovin West**	**2.73**	**60**	P	**Pn**	**10 31 33.7**	**+2.4**
KOWE				S	**Sn**	**10 32 06.2**	**+3.0**
KOKL	**Mount Kliuchef**	**2.74**	**61**	P	**Pn**	**10 31 34.3**	**+2.8**
KOFP	**Korovin Flat P**	**2.78**	**63**	P	**Pn**	**10 31 34.1**	**+2.1**
KOFP				S	**Sn**	**10 32 08.2**	**+3.8**
KOSE	**Korovin Southe**	**2.84**	**62**	P	**Pn**	**10 31 35.1**	**+2.4**
FX1	**Attu Island--F**	**5.68**	**292**	Pn	**Pn**	**10 32 13.6**	**+1.7**
	0.4nm,0.3s,baz=90,slow=16,SNR=2.0						
FX1				Sn	**Sn**	**10 33 21.5**	**+5.7**
	0.4nm,0.3s,baz=94,slow=19,SNR=2.0						
KDAK	**Kodiak Island**	**16.24**	**56**	Pn	**Pn**	**10 34 31.1**	**-4.0**
	0.8nm,0.3s,baz=282,slow=9.3,SNR=14						
ILAR	**Eielson Array**	**21.22**	**38**	P	**P**	**10 35 31.7**	**-0.7**
	0.2nm,0.5s,baz=247,slow=10,SNR=8.0						
INK	**Inuvik**	**27.47**	**34**	P	**P**	**10 36 30.6**	**-1.7**
	0.2nm,0.4s,baz=258,slow=9.3,SNR=3.2						
YKA	**Yellowknife Ar**	**35.14**	**46**	P	**P**	**10 37 38.1**	**-1.6**
	0.1nm,0.4s,baz=271,slow=9.2,SNR=6.5						
PDAR	**Pinedale Array**	**46.00**	**72**	P	**P**	**10 39 10.3**	**+0.4**
	1.5nm,0.8s,baz=303,slow=4.0,SNR=12						
TXAR	**Lajitas Array**	**58.28**	**81**	P	**P**	**10 40 41.0**	**-0.2**
	0.1nm,0.6s,baz=298,slow=6.1,SNR=2.6	

	18nm,0.6s					
MTN	**Manton Dam**	**14.57 112**	P	**P**	**10 54 33.5**	**+0.8**
	baz=14,SNR=31					
MTN			S	**S**	**10 57 08.7**	**-3.5**
	baz=14,SNR=11					
MNAI	**Manna**	**14.60 282**	P	**Pn**	**10 54 34.3**	**+0.1**
	baz=15,SNR=5.7					
MNAI			S	**S**	**10 57 08.5**	**-4.4**
	baz=15,SNR=3.1					
GIRL	**Giralia**	**15.11 191**	P	**P**	**10 54 38.1**	**-0.4**
	baz=15,SNR=5.5					
SWI	**Sorong**	**15.54 65**	P	**Pn**	**10 54 46.5**	**+1.3**
	62nm,0.8s,760nm					
FAKI	**Fak Fak**	**15.68 73**	P	**P**	**10 54 45.1**	**+0.3**
	baz=16,SNR=5.0					
KDU	**Kakadu**	**15.77 109**	S	S	10 57 28.9	-7.3
	baz=16,SNR=5.1					
MEEK	**Meekatharra**	**18.85 176**	P	**P**	**10 55 19.0**	**+0.1**
	baz=19,SNR=20					
MEEK			S	S	10 58 59.4	+23
	baz=19,SNR=4.9					
WRA	**Warramunga Arr**	**20.54 128**	P	**P**	**10 55 35.4**	**-1.2**
WRA			S	**S**	**10 59 04.7**	**-2.2**
WRA	**Warramunga Arr**	**20.54 128**	P	**P**	**10 55 35.4**	**-1.2**
	2.8nm,0.6s,baz=298,slow=12,SNR=22					
WRA			S	**S**	**10 59 04.7**	**-2.2**
	1.5nm,0.8s,baz=310,slow=15,SNR=4.4					
WRAB	**Tennant Creek**	**20.54 128**	*eP*	**P**	**10 55 37.0**	**+0.5**
	3.0nm,0.5s					
PSI	**Prapat**	**21.06 299**	P	**P**	**10 55 40.8**	**-1.0**
PSI	**Prapat**	**21.06 299**	P	**P**	**10 55 40.8**	**-1.0**
	7.2nm,0.7s,baz=131,slow=11,SNR=3.4					
MORW	**Morawa**	**21.26 183**	P	**P**	**10 55 43.4**	**+0.1**
	baz=21,SNR=9.3					
GSI	**Gunungsitoli**	**21.58 294**	P	P	10 55 57.6	+11
	baz=22,SNR=4.5					
AS31	**Alice Springs**	**22.50 137**	*eP*	**P**	**10 55 55.4**	**+0.7**
AS31			*e*PcP	**PcP**	**10 59 37.9**	**-0.1**
ASAR	**Alice Springs**	**22.50 137**	P	**P**	**10 55 55.0**	**+0.4**
ASAR			PcP	**PcP**	**10 59 37.5**	**-0.4**
ASAR			ScP	**ScP**	**11 02 44.9**	**-1.3**
ASAR	**Alice Springs**	**22.50 137**	P	**P**	**10 55 55.0**	**+0.4**
	6.6nm,0.6s,baz=309,slow=9.1,SNR=155					
ASAR			PcP	**PcP**	**10 59 37.5**	**-0.4**
	3.4nm,0.5s,baz=315,slow=1.8,SNR=15					
ASAR			ScP	**ScP**	**11 02 44.9**	**-1.3**
	1.5nm,0.8s,baz=322,slow=2.5,SNR=5.0					
BLDU	**Ballidu**	**22.77 181**	P	**P**	**10 55 56.7**	**-0.4**
	baz=23,SNR=24					
KLBR	**Kellerberrin**	**23.75 179**	P	**P**	**10 56 06.0**	**+0.1**
	baz=24,SNR=4.6					
KMBL	**Kambalda**	**23.91 170**	P	**P**	**10 56 07.8**	**+0.5**
	baz=24,SNR=7.0					
NWAO	**Narrogin (SRO)**	**25.07 180**	P	**P**	**10 56 17.6**	**-0.1**
NWAO	**Narrogin (SRO)**	**25.07 180**	P	**P**	**10 56 17.6**	**-0.1**
	10nm,0.4s,baz=353,slow=7.9,SNR=15					
COEN	**Coen**	**26.19 106**	P	**P**	**10 56 27.8**	**-0.2**
	baz=26,SNR=5.7					
MTSU	**Mount Surprise**	**28.29 114**	P	**P**	**10 56 47.5**	**+0.9**
	baz=28,SNR=5.6					
CM31	**Chiang Mai Arr**	**31.68 325**	*eP*	**P**	**10 57 18.0**	**+1.7**
	1.9nm,0.3s					
CMAR	**Chiang Mai Arr**	**31.68 325**	P	**P**	**10 57 17.8**	**+1.6**
CMAR			PcP	**PcP**	**10 59 59.6**	**-0.4**
CMAR	**Chiang Mai Arr**	**31.68 325**	P	**P**	**10 57 17.8**	**+1.6**
	7.2nm,0.6s,baz=151,slow=6.7,SNR=34					
CMAR			PcP	**PcP**	**10 59 59.6**	**-0.4**
	1.4nm,0.9s,baz=142,slow=2.3,SNR=4.6					
CMMT	**Chiang Mai**	**31.96 326**	P	**P**	**10 57 21.4**	**+2.7**
	11nm,1.1s					
CHTO	**Chiang Mai**	**31.96 326**	P	**P**	**10 57 20.9**	**+2.2**
STKA	**Stephens Creek**	**33.03 140**	*eP*	**P**	**10 57 28.3**	**+0.5**
	0.8nm,1.0s					
STKA			PcP	**PcP**	**11 00 03.4**	**-0.3**
STKA	**Stephens Creek**	**33.03 140**	P	**P**	**10 57 28.3**	**+0.5**
	2.2nm,0.4s,baz=317,slow=9.0,SNR=10					
STKA			PcP	**PcP**	**11 00 03.4**	**-0.3**
	1.3nm,0.4s,baz=282,slow=2.9,SNR=3.0					
STKA	**Stephens Creek**	**33.03 140**	P	**P**	**10 57 28.6**	**+0.8**
	baz=33,SNR=7.3					
ARPS	**Mount Arapiles**	**36.56 146**	P	**P**	**10 57 59.1**	**+1.4**
	baz=36,SNR=5.0					
XAN	**Xi'an**	**42.28 350**	P	**P**	**10 58 45.0**	**+0.2**
XAN			pmax	pmax		
	comp=Z,4.0nm,0.8s					
XAN			pmax	pmax		
	comp=Z,35nm,14.3s					
KSAR	**Wonju Array Be**	**46.02 12**	P	**P**	**10 59 15.1**	**+1.0**
KSRS	**Korea Array**	**46.04 12**	P	**P**	**10 59 15.1**	**+0.8**
	comp=Z,9.6nm,0.8s,baz=190,slow=8.6,SNR=36					
MAT	**Matsushiro**	**48.23 23**	P	**P**	**10 59 30.1**	**-1.0**
MJAR	**Matsushiro Arr**	**48.23 23**	P	**P**	**10 59 29.9**	**-1.2**
MJAR	**Matsushiro Arr**	**48.23 23**	P	**P**	**10 59 29.9**	**-1.2**
	comp=Z,5.7nm,0.8s,baz=204,slow=9.2,SNR=15					
HHC	**Hu-ho-hao-te**	**48.62 354**	*eP*	**P**	**10 59 32.3**	**-1.8**
HHC			S	**S**	**11 06 13.8**	**+1.7**
HHC			pmax	pmax		
	comp=Z,28nm,0.6s					
HHC			pmax	pmax		
	comp=Z,130nm,6.5s					
GTA	**Gaotai**	**49.61 342**	*eP*	**P**	**10 59 42.8**	**+1.2**
GTA			pmax	pmax		
	comp=Z,15nm,0.9s					
MDJ	**Mudanjiang**	**53.28 11**	P	**P**	**11 00 08.3**	**0.0**
MDJ			pmax	pmax		
	comp=Z,25nm,1.1s					
MDJ			pmax	pmax		
	comp=Z,190nm,4.4s					
USRK	**Ussuriysk Arra**	**53.38 13**	P	**P**	**11 00 09.3**	**+0.3**
	comp=Z,10nm,0.6s,baz=193,slow=6.9,SNR=31					
ULN	**Ulaanbaatar**	**56.08 352**	*eP*	**P**	**11 00 28.7**	**+0.2**
	comp=Z,8.1nm,0.8s					
SONM	**Songino Array**	**56.15 351**	P	**P**	**11 00 29.1**	**+0.2**
SONM	**Songino Array**	**56.15 351**	P	**P**	**11 00 29.1**	**+0.2**
	comp=Z,14nm,0.7s,baz=166,slow=7.9,SNR=52					
KBL	**Kabul**	**61.98 316**	*eP*	**P**	**11 01 07.5**	**-1.6**
	comp=Z,3.9nm,0.5s					
MK31	**Makanchi Array**	**62.55 334**	*eP*	**P**	**11 01 11.8**	**-0.6**
MKAR	**Makanchi Array**	**62.55 334**	P	**P**	**11 01 11.9**	**-0.4**
MKAR			PcP	**PcP**	**11 01 47.3**	**-1.0**
MKAR	**Makanchi Array**	**62.55 334**	P	**P**	**11 01 11.9**	**-0.4**
	comp=Z,3.2nm,0.4s,baz=153,slow=7.1,SNR=28					
MKAR			PcP	**PcP**	**11 01 47.3**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=146,slow=5.3,SNR=4.7					
AAK	**Ala-Archa**	**63.46 326**	*eP*	**P**	**11 01 18.2**	**-0.3**
	comp=Z,3.6nm,1.0s					
AAK			PcP	**PcP**	**11 01 51.8**	**-0.5**
AAK	**Ala-Archa**	**63.46 326**	P	**P**	**11 01 18.0**	**-0.5**
	comp=Z,4.1nm,1.0s,baz=140,slow=7.9,SNR=6.7					
AAK			PcP	**PcP**	**11 01 51.8**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=159,slow=6.6,SNR=4.0					
EKS2	**Erkin-Say**	**63.88 326**	*eP*	**P**	**11 01 21.4**	**+0.2**
	comp=Z,8.2nm,1.2s					
KKAR	**Karatay Array**	**66.02 324**	*eP*	**P**	**11 01 33.6**	**-1.1**
	comp=Z,2.3nm,0.8s					
KURBB	**Kurchatov Arra**	**67.07 334**	P	**P**	**11 01 40.4**	**-0.8**
	comp=Z,2.5nm,0.9s,baz=150,slow=5.2,SNR=18					
KURBB			PcP	**PcP**	**11 02 06.0**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=140,slow=3.8,SNR=6.2					
KURK	**Kurchatov**	**67.11 334**	P	**P**	**11 01 40.4**	**-1.0**
KURK			PcP	**PcP**	**11 02 06.0**	**-1.0**
ZALV	**Zalesovo Beam**	**67.25 340**	P	**P**	**11 01 41.4**	**-0.8**
ZALV	**Zalesovo Beam**	**67.25 340**	P	**P**	**11 01 41.4**	**-0.8**
	comp=Z,2.5nm,0.3s,baz=131,slow=4.0,SNR=3.7					
OPO	**Ambohidratompo**	**68.72 253**	P	**P**	**11 01 52.6**	**+0.3**
OPO	**Ambohidratompo**	**68.72 253**	P	**P**	**11 01 52.6**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=122,slow=5.5,SNR=6.2					
BVAR	**Borovoye Array**	**72.37 332**	P	**P**	**11 02 12.0**	**-1.3**
BVAR	**Borovoye Array**	**72.37 332**	P	**P**	**11 02 12.0**	**-1.3**
	comp=Z,4.0nm,0.8s,baz=137,slow=6.9,SNR=19					
BRVK	**Borovoye**	**72.44 332**	*eP*	**P**	**11 02 13.2**	**-0.5**
	comp=Z,31nm,1.2s					
VNDA	**Vanda**	**73.51 171**	P	**P**	**11 02 20.5**	**+0.9**
VNDA	**Vanda**	**73.51 171**	P	**P**	**11 02 20.5**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=319,slow=8.2,SNR=6.7					
ABKAR	**Akbulak array**	**75.53 325**	*eP*	**P**	**11 02 30.8**	**-0.8**
	comp=Z,4.9nm,0.8s					
AKTO	**Aktyubinsk**	**77.20 326**	P	**P**	**11 02 40.2**	**-0.7**
AKTO	**Aktyubinsk**	**77.20 326**	P	**P**	**11 02 40.2**	**-0.7**
	comp=Z,4.4nm,0.7s,baz=111,slow=5.2,SNR=18					
KMBO	**Kilima Mbogo**	**79.94 270**	P	**P**	**11 02 56.5**	**-0.3**
KMBO	**Kilima Mbogo**	**79.94 270**	P	**P**	**11 02 56.5**	**-0.3**
	comp=Z,2.7nm,0.5s,baz=56,slow=7.3,SNR=9.1					
QSPA	**South Pole Qui**	**82.26 180**	P	**P**	**11 03 07.8**	**0.0**
QSPA	**South Pole Qui**	**82.26 180**	P	**P**	**11 03 07.8**	**0.0**
	comp=Z,1.2nm,0.8s,baz=306,slow=5.1,SNR=8.0					
KBZ	**Khabaz**	**84.16 315**	P	**P**	**11 03 18.3**	**+0.6**
KBZ	**Khabaz**	**84.16 315**	P	**P**	**11 03 18.3**	**+0.6**
	comp=Z,2.7nm,1.0s,baz=134,slow=6.9,SNR=4.1					
BOSA	**Boshof**	**88.09 242**	P	**P**	**11 03 37.5**	**+0.2**
BOSA	**Boshof**	**88.09 242**	P	**P**	**11 03 37.5**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=142,slow=5.2,SNR=3.0					
SNAA	**Sanae**	**91.75 196**	P	**P**	**11 03 54.1**	**+0.8**
SNAA	**Sanae**	**91.75 196**	P	**P**	**11 03 54.1**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=148,slow=5.5,SNR=10					
FINES	**FINESS Array B**	**97.29 331**	P	**P**	**11 04 16.7**	**-1.9**
FINES	**FINESS Array B**	**97.29 331**	P	**P**	**11 04 16.7**	**-1.9**
	comp=Z,1.1nm,0.7s,baz=57,slow=5.1,SNR=3.4					
ILAR	**Eielson Array**	**99.44 26**	PKKPbc	PKKPbc	11 20 49.8	-3.4
ILAR	**Eielson Array**	**99.44 26**	PKKPbc	PKKPbc	11 20 49.8	-3.4
	comp=Z,0.2nm,0.5s,baz=97,slow=1.5,SNR=5.3					
YKA	**Yellowknife Ar**	**113.74 24**	PKiKP	**PKiKP**	**11 09 21.1**	**-1.3**
YKA	**Yellowknife Ar**	**113.74 24**	PKiKP	**PKiKP**	**11 09 21.1**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=304,slow=1.8,SNR=27					
TORD	**Torodi Ar. Bea**	**116.53 281**	PKP	**PKPdf**	**11 09 27.8**	**-1.3**
TORD	**Torodi Ar. Bea**	**116.53 281**	PKP	**PKPdf**	**11 09 27.8**	**-1.3**
	comp=Z,1.1nm,0.7s,baz=74,slow=1.7,SNR=17					
NVAR	**Mina Array Bea**	**121.53 49**	PKP	**PKPdf**	**11 09 38.8**	**+0.4**
NVAR	**Mina Array Bea**	**121.53 49**	PKP	**PKPdf**	**11 09 38.8**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=229,slow=1.0,SNR=7.9					
TXAR	**Lajitas Array**	**135.97 55**	PKP	**PKPdf**	**11 10 07.2**	**+1.3**
TXAR	**Lajitas Array**	**135.97 55**	PKP	**PKPdf**	**11 10 07.2**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=242,slow=1.9,SNR=5.4					
CPUP	**Villa Florida**	**145.74 189**	PKPbc	**PKPdf**	**11 10 23.8**	**+0.4**
CPUP	**Villa Florida**	**145.74 189**	PKPbc	**PKPdf**	**11 10 23.8**	**+0.4**
	comp=Z,6.1nm,0.6s,baz=146,slow=2.7,SNR=19					
LRAL	**Lakeview Retre**	**146.26 38**	*e*PKPbc	**PKPbc**	**11 10 25.3**	**-0.5**
BDFB	**Brasilia**	**152.57 212**	PKPbc	**PKPbc**	**11 10 42.3**	**+0.4**
BDFB	**Brasilia**	**152.57 212**	PKPbc	**PKPbc**	**11 10 42.3**	**+0.4**
	comp=Z,4.7nm,0.5s,baz=106,slow=2.2,SNR=6.6					

*ISCJB **23** 11:04:56.2±0.5, 4.°07N±0.°06×126.°6E±0.°1, h10km, mb4.1/14, MS3.4/7, Error ellipse: s-maj=18.2km s-min=7.9km az=165.0*
*IDC **23** 11:04:56.6±0.7, 4.°12N×126.°67E, h0km, mb4.1/13, mb1 4.2/13, mb1mx4.1/26, mbtmp4.1/13, MS3.5/7, Ms1 3.5/7, ms1mx3.1/35, Error ellipse: s-maj=42.1km s-min=13.5km az=71.0*
*NEIC **23** 11:05:01.6±0.4, 4.°06N×126.°68E, h35km, mb4.2/3, Error ellipse: s-maj=12.0km s-min=6.5km az=76.0*

ISC 23 11:04:58.2±0.7, 4.°13N±0.°07×126.°6E±0.°1, h10km, n42, σ0.°91/37, mb4.1/14, MS3.6/7, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**3.84**	**323**	*i*P		**Pb**	**11 06 03.3**		**-2.7**
BUKP	**Musuan**	**4.01**	**338**	*e*P		**Pb**	**11 06 07.8**		**-1.3**
BUKP				*e*S		Pg	11 06 23.8		+8.7
PAGZ	**Pagadian**	**4.86**	**320**	*e*P		**Pn**	**11 06 11.7**		**+0.2**
PAGZ				*e*S		Pn	11 06 17.9		+6.5
KAPI	**Kappang**	**11.34**	**217**	*e*Pn		**Pn**	**11 07 40.3**		**-0.2**
KSM	**Kuching**	**16.44**	**261**	*e*P		**P**	**11 08 52.4**		**+0.4**
	18nm,1.0s								
GUMO	**Guam**	**20.37**	**61**	LR		LR	11 17 20.7		
	comp=Z,31nm,19.5s,baz=274,slow=37								
FITZ	**Fitzroy Crossi**	**22.11**	**182**	P		**P**	**11 09 53.8**		**-0.1**
FITZ	**Fitzroy Crossi**	**22.11**	**182**	P		**P**	**11 09 53.8**		**-0.1**
	2.0nm,0.4s,baz=6.2,slow=8.3,SNR=11								
WRAB	**Tennant Creek**	**25.11**	**163**	*e*P		**P**	**11 10 22.1**		**-1.3**
	23nm,1.1s								
WRA	**Waramunga Arr**	**25.11**	**163**	P		**P**	**11 10 22.4**		**-1.0**
WRA	**Warramunga Arr**	**25.11**	**163**	P		**P**	**11 10 22.4**		**-1.0**
	13nm,0.9s,baz=344,slow=11,SNR=44								
AS31	**Alice Springs**	**28.54**	**166**	*e*P		**P**	**11 10 53.1**		**-1.3**
ASAR	**Alice Springs**	**28.54**	**166**	P		**P**	**11 10 53.7**		**-0.6**
ASAR	**Alice Springs**	**28.54**	**166**	P		**P**	**11 10 53.7**		**-0.6**
	0.7nm,0.6s,baz=340,slow=7.1,SNR=15								
CMAR	**Chiang Mai Arr**	**30.52**	**300**	P		**P**	**11 11 13.8**		**+1.8**
CMAR	**Chiang Mai Arr**	**30.52**	**300**	P		**P**	**11 11 13.8**		**+1.8**
	1.3nm,0.8s,baz=116,slow=6.2,SNR=6.5								
KSAR	**Wonju Array Be**	**33.18**	**2**	P		**P**	**11 11 35.5**		**+0.4**
KSRS	**Korea Array**	**33.19**	**2**	P		**P**	**11 11 35.5**		**+0.3**
	0.8nm,0.6s,baz=181,slow=9.7,SNR=3.9								
MJAR	**Matsushiro Arr**	**33.99**	**17**	LR		LR	11 23 00.1		
	comp=Z,53nm,21.9s,baz=215,slow=32								
HNR	**Honiara**	**35.90**	**112**	LR		LR	11 26 11.4		
	comp=Z,61nm,18.2s,baz=48,slow=36								
STKA	**Stephens Creek**	**38.56**	**159**	*e*P		**P**	**11 12 20.5**		**-0.8**
	1.3nm,0.7s								
STKA	**Stephens Creek**	**38.56**	**159**	P		**P**	**11 12 21.2**		**-0.1**
	7.2nm,0.9s,baz=345,slow=7.9,SNR=12								
STKA				LR		LR	11 30 22.3		
	comp=Z,88nm,18.2s,baz=26,slow=40								
SONM	**Songino Array**	**46.87**	**341**	P		**P**	**11 13 29.2**		**+0.5**
SONM	**Songino Array**	**46.87**	**341**	P		**P**	**11 13 29.2**		**+0.5**
	0.5nm,0.6s,baz=168,slow=7.4,SNR=3.0								
MK31	**Makanchi Array**	**57.13**	**325**	*e*P		**P**	**11 14 45.1**		**-0.1**
MKAR	**Makanchi Array**	**57.13**	**325**	P		**P**	**11 14 45.2**		**+0.1**
MKAR	**Makanchi Array**	**57.13**	**325**	P		**P**	**11 14 45.2**		**+0.1**
	1.0nm,0.4s,baz=122,slow=8.4,SNR=25								
MKAR				LR		LR	11 40 38.2		
	comp=Z,68nm,18.3s,baz=261,slow=37								
ZALV	**Zalesovo Beam**	**60.16**	**333**	LR		LR	11 43 04.7		
	comp=Z,53nm,19.5s,baz=303,slow=38								
BVAR	**Borovoye Array**	**66.89**	**327**	P		**P**	**11 15 50.4**		**-0.2**
BVAR	**Borovoye Array**	**66.89**	**327**	P		**P**	**11 15 50.4**		**-0.2**
	2.4nm,0.8s,baz=120,slow=8.5,SNR=7.9								
ABKAR	**Akbulak array**	**71.73**	**321**	*e*P		**P**	**11 16 20.7**		**0.0**
AKTO	**Aktyubinsk**	**73.24**	**322**	P		**P**	**11 16 29.9**		**+0.2**
AKTO	**Aktyubinsk**	**73.24**	**322**	P		**P**	**11 16 29.9**		**+0.2**
	1.1nm,0.6s,baz=121,slow=5.9,SNR=5.1								
ILAR	**Eielson Array**	**84.82**	**25**	P		**P**	**11 17 33.1**		**+0.3**
ILAR	**Eielson Array**	**84.82**	**25**	P		**P**	**11 17 33.1**		**+0.3**
	0.5nm,1.0s,baz=255,slow=5.8,SNR=4.3								
ARCES	**ARCESS Array B**	**90.02**	**340**	P		**P**	**11 17 57.4**		**-0.4**
ARCES	**ARCESS Array B**	**90.02**	**340**	P		**P**	**11 17 57.4**		**-0.4**
	4.6nm,1.0s,baz=83,slow=7.4,SNR=3.7								
FINES	**FINESS Array B**	**91.40**	**332**	P		**P**	**11 18 03.8**		**-0.6**
FINES	**FINESS Array B**	**91.40**	**332**	P		**P**	**11 18 03.8**		**-0.6**
	1.5nm,0.8s,baz=57,slow=5.3,SNR=2.3								
NOA	**NORSAR Array B**	**98.36**	**334**	LR		LR	12 07 03.0		
	comp=Z,26nm,20.7s,baz=140,slow=38								
TORD	**Torodi Ar. Bea**	**122.63**	**288**	PKP		**PKPdf**	**11 23 56.5**		**+1.2**
TORD	**Torodi Ar. Bea**	**122.63**	**288**	PKP		**PKPdf**	**11 23 56.5**		**+1.2**
	0.3nm,0.6s,baz=60,slow=2.2,SNR=2.8								

IDC 23 11:08:19.8±2.3, 6.°74S×129.°24E, h0km, mb3.4/1, mb1 3.8/4, mb1mx3.5/20, mbtmp3.6/4, ML3.4/3, Error ellipse: s-maj=98.8km s-min=29.4km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.83**	**197**	Pn			Pn	11 11 09.4	-0.4
	0.3nm,0.3s,baz=18,slow=13,SNR=6.5								
FITZ				Sn			Sn	11 13 09.1	-14
	0.6nm,0.3s,baz=83,slow=19,SNR=6.7								
WRA	**Warramunga Arr**	**14.03**	**160**	Pn			Pn	11 11 40.5	+0.5
	0.1nm,0.3s,baz=344,slow=12,SNR=2.6								
WRA				Sn			Sn	11 14 01.0	-16
	0.7nm,0.3s,baz=337,slow=22,SNR=8.4								
ASAR	**Alice Springs**	**17.42**	**166**	P			Pn	11 12 24.4	-0.1
	0.3nm,0.3s,baz=339,slow=10,SNR=5.7								
ASAR				S			Sn	11 15 25.0	-14
	0.2nm,0.3s,baz=342,slow=24,SNR=6.0								
MKAR	**Makanchi Array**	**67.60**	**327**	P			P	11 19 18.4	0.0
	0.2nm,0.4s,baz=119,slow=8.3,SNR=4.2								

IDC 23 11:21:07.6±5.1, 8.°58S×158.°78E, h93km±75km, mb3.4/3, mb1 3.6/3, mb1mx3.2/18, mbtmp3.4/3, Error ellipse: s-maj=79.5km s-min=35.4km az=123.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.43**	**126**	P			Pn	11 21 33.0	+0.3
	20nm,0.3s,baz=280,slow=1.7,SNR=16								
HNR				S			Sn	11 21 51.4	-0.1
	133nm,0.3s,baz=263,slow=24,SNR=48								
WRA	**Warramunga Arr**	**26.20**	**242**	P			P	11 26 34.2	+0.3
	0.4nm,0.5s,baz=68,slow=9.3,SNR=8.4								
ASAR	**Alice Springs**	**28.14**	**235**	P			P	11 26 50.9	-0.4
	0.5nm,0.4s,baz=64,slow=9.6,SNR=15								
SONM	**Songino Array**	**72.72**	**326**	P			P	11 32 25.9	0.0
	0.5nm,0.8s,baz=134,slow=6.2,SNR=3.5								

*CSEM **23** 11:56:18.2, 45.°59N×26.°35E, h154km, MD3.5/2, After BUC*

BUC 23 11:56:18.2±1.1, 45.°59N×26.°35E, h154km±9km, MD3.5/2, 33C-9D, Error ellipse: s-maj=9.3km s-min=6.4km az=323.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.30**	**250**	*i*P			Pn	11 56 39.7	+0.3
MLR	**Muntele Rosu**	**0.30**	**250**	*i*P			Pn	11 56 39.7	+0.3
MLR				*i*S			Sn	11 56 54.9	-0.5
MLR	**Muntele Rosu**	**0.30**	**250**	*i*P			Pn	11 56 39.7	+0.3
MLR				*i*S			Sn	11 56 54.9	-0.5
PLOR	**Plostina**	**0.33**	**39**	*i*P			Pn	11 56 39.3	0.0
PLOR	**Plostina**	**0.33**	**39**	*i*P			Pn	11 56 39.3	0.0
PLOR				*i*S			Sn	11 56 54.2	-1.3
PLOR	**Plostina**	**0.33**	**39**	*i*P			Pn	11 56 39.3	0.0
PLOR				*i*S			Sn	11 56 54.2	-1.3
VRI	**Vrincioaia**	**0.38**	**44**	*i*P			Pn	11 56 39.7	+0.3
VRI	**Vrincioaia**	**0.38**	**44**	*i*P			Pn	11 56 39.7	+0.3
VRI				*i*S			Sn	11 56 55.1	-0.6
VRI	**Vrincioaia**	**0.38**	**44**	*i*P			Pn	11 56 39.7	+0.3
VRI				*i*S			Sn	11 56 55.1	-0.6
ISR	**Istrita**	**0.49**	**164**	S			Sn	11 56 57.6	+1.0
ISR	**Istrita**	**0.49**	**164**	*i*S			Sn	11 56 57.6	+1.0
ISR	**Istrita**	**0.49**	**164**	*i*S			Sn	11 56 57.6	+1.0
SECR		**0.59**	**200**	S			Sn	11 56 58.2	+0.8
SECR		**0.59**	**200**	*i*S			Sn	11 56 58.2	+0.8
SECR		**0.59**	**200**	*i*S			Sn	11 56 58.2	+0.8
PETR		**0.63**	**78**	*i*P			Pn	11 56 41.5	+0.9
PETR		**0.63**	**78**	*i*P			Pn	11 56 41.5	+0.9
PETR				*i*S			Sn	11 56 58.1	+0.4
PETR		**0.63**	**78**	*i*P			Pn	11 56 41.5	+0.9
PETR				*i*S			Sn	11 56 58.1	+0.4
DOPR	**Dopca**	**0.77**	**299**	*i*P			Pn	11 56 41.7	+0.2
DOPR	**Dopca**	**0.77**	**299**	*i*P			Pn	11 56 41.7	+0.2
DOPR				*i*S			Sn	11 56 59.3	-0.1
DOPR	**Dopca**	**0.77**	**299**	*i*P			Pn	11 56 41.7	+0.2
DOPR				*i*S			Sn	11 56 59.3	-0.1
VOIR		**0.93**	**261**	*i*P			Pn	11 56 43.0	+0.2
VOIR		**0.93**	**261**	*i*P			Pn	11 56 43.0	+0.2
VOIR				*i*S			Sn	11 56 59.8	-1.8
VOIR		**0.93**	**261**	*i*P			Pn	11 56 43.0	+0.2
VOIR				*i*S			Sn	11 56 59.8	-1.8
TESR		**0.94**	**13**	*i*P			Pn	11 56 42.8	0.0
TESR		**0.94**	**13**	*i*P			Pn	11 56 42.8	0.0
TESR				*i*S			Sn	11 57 00.1	-1.7
TESR		**0.94**	**13**	*i*P			Pn	11 56 42.8	0.0
TESR				*i*S			Sn	11 57 00.1	-1.7
CFR	**Carcaliu**	**1.33**	**108**	*i*P			Pn	11 56 46.3	+0.1
CFR	**Carcaliu**	**1.33**	**108**	*i*P			Pn	11 56 46.3	+0.1
CFR				*i*S			Sn	11 57 06.6	-1.1
CFR	**Carcaliu**	**1.33**	**108**	*i*P			Pn	11 56 46.3	+0.1
CFR				*i*S			Sn	11 57 06.6	-1.1
HUMR	**Humele**	**1.44**	**223**	*i*P			Pn	11 56 47.6	+0.2
HUMR	**Humele**	**1.44**	**223**	*i*P			Pn	11 56 47.6	+0.2
HUMR				*i*S			Sn	11 57 09.2	-0.6
HUMR	**Humele**	**1.44**

JANG eS Sn 12 15 15.3 -9.0
JTM Tenmabayashi 10.03 241 P Pn 12 13 29.9 -4.0
JTM eS Sn 12 15 16.6 -7.9
JTH Tanohata 10.11 235 P Pn 12 13 30.9 -4.1
JTH eS Sn 12 15 17.1 -9.3
JOSM Okushiri--Mats 10.32 250 P **Pn** **12 13 35.8 -2.2**
OFUJ Ofunato 10.81 232 P Pn 12 13 40.1 -4.5
JRG Rokugo 11.17 236 P Pn 12 13 46.4 -3.1
JRG eS Sn 12 15 43.9 -8.4
JIO Ouri 11.44 230 eS Sn 12 15 48.4 -10
MAT Matsushiro 14.54 233 P **P** **12 14 37.7 +0.1**
MJAR Matsushiro Arr 14.54 233 P **P** **12 14 39.4 +1.8**
comp=Z,0.3nm,0.3s,baz=42,slow=8.6,SNR=4.5
MJAR LR LR 12 19 50.4
comp=Z,96nm,20.0s,baz=120,slow=35
USRK Ussuriysk Arra 14.65 269 P **Pn** **12 14 35.3 +0.1**
comp=Z,1.1nm,0.3s,baz=75,slow=13,SNR=14
USRK LR LR 12 20 12.5
comp=Z,101nm,21.5s,baz=143,slow=37
FX1 Attu Island--F 14.84 56 P Pn 12 14 31.2 -6.2
comp=Z,2.2nm,0.3s,baz=308,slow=22,SNR=9.7
FX1 S Sn 12 17 01.4 -19
comp=Z,0.6nm,0.3s,baz=244,slow=19,SNR=4.1
KSRS Korea Array 20.32 253 P Pn 12 15 43.9 -0.1
comp=Z,2.1nm,0.6s,baz=57,slow=10,SNR=12
KSRS PP PnPn 12 16 10.4 +7.4
comp=Z,4.1nm,0.6s,baz=53,slow=10,SNR=11
BILL Bilibino 22.88 13‖ *eP* **P** **12 16 07.2 -0.6**
BILL pmax pmax
comp=Z,16nm,1.0s
SONM Songino Array 31.13 290 P **P** **12 17 22.5 +0.3**
comp=Z,0.6nm,0.8s,baz=69,slow=7.9,SNR=2.7
ILAR Eielson Array 37.10 38 P **P** **12 18 11.7 -1.7**
comp=Z,0.7nm,1.0s,baz=269,slow=6.7,SNR=7.0
ILAR pP **pP** **12 18 36.5 +0.6**
comp=Z,0.6nm,0.6s,baz=270,slow=6.1,SNR=4.3
INK Inuvik 42.20 32 P **P** **12 18 54.4 -1.1**
comp=Z,0.8nm,0.5s,baz=268,slow=5.5,SNR=10
ZALV Zalesovo Beam 42.56 306 PcP **PcP** **12 20 50.5 +1.3**
comp=Z,0.9nm,0.3s,baz=36,slow=2.7,SNR=2.7
ZALV pPcP 12 21 14.6
comp=Z,0.8nm,0.3s,baz=90,slow=4.4,SNR=4.6
MKAR Makanchi Array 46.81 297 P **P** **12 19 31.3 -1.3**
MKAR *PP **pP** **12 19 56.3 +0.5**
MKAR 12 21 05.1
MKAR 12 21 30.1
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 46.81 297 P **P** **12 19 31.3 -1.3**
comp=Z,1.1nm,0.5s,baz=64,slow=7.0,SNR=15
MKAR pP **pP** **12 19 56.3 +0.5**
comp=Z,1.8nm,0.6s,baz=68,slow=8.6,SNR=10
MKAR PcP **PcP** **12 21 05.0 +1.0**
comp=Z,1.2nm,0.8s,baz=51,slow=5.4,SNR=5.2
MKAR pPcP 12 21 30.1
comp=Z,1.6nm,0.8s,baz=67,slow=4.1,SNR=5.7
KURK Kurchatov 47.29 304 P **P** **12 19 34.8 -1.4**
KURK *PP **pP** **12 19 59.8 +0.3**
KURK 12 21 07.1
KURK 12 21 32.0
KURK pmax pmax
comp=Z,1.0nm,0.4s
KURK pmax pmax
comp=Z,2.0nm,0.8s
KURK pmax pmax
comp=Z,1.0nm,0.4s
KURK pmax pmax
comp=Z,1.0nm,0.6s
KURBB Kurchatov Arra 47.38 304 P **P** **12 19 34.8 -2.1**
comp=Z,0.9nm,0.4s,baz=69,slow=8.5,SNR=5.9
KURBB pP **pP** **12 19 59.8 -0.4**
comp=Z,2.4nm,0.8s,baz=68,slow=8.5,SNR=7.6
KURBB PcP **PcP** **12 21 07.1 +1.1**
comp=Z,0.5nm,0.4s,baz=75,slow=3.9,SNR=4.1
KURBB pPcP 12 21 32.0
comp=Z,0.7nm,0.6s,baz=69,slow=3.3,SNR=5.9
BVAR Borovoye Array 50.84 309 P **P** **12 20 01.9 -1.3**
comp=Z,0.8nm,0.4s,baz=58,slow=6.3,SNR=5.3
BVAR PcP **PcP** **12 21 19.4 +0.9**
comp=Z,0.8nm,0.5s,baz=79,slow=3.1,SNR=3.1
BVAR pPcP 12 21 44.3
comp=Z,1.4nm,0.6s,baz=57,slow=5.5,SNR=6.0
RES Resolute Bay 51.35 18 P **P** **12 20 05.5 -1.2**
comp=Z,0.4nm,0.5s,baz=340,slow=4.9,SNR=6.4
YKA Yellowknife Ar 51.48 36 P **P** **12 20 06.9 -0.9**
comp=Z,0.3nm,0.5s,baz=298,slow=6.9,SNR=9.5
YKA pP **pP** **12 20 31.6 +0.2**
comp=Z,0.5nm,0.6s,baz=295,slow=7.1,SNR=5.5
YKA pPcP 12 21 46.2
comp=Z,0.3nm,0.5s,baz=302,slow=3.6,SNR=6.7
CMAR Chiang Mai Arr 51.92 256 P **P** **12 20 14.3 +2.7**
comp=Z,1.6nm,0.8s,baz=34,slow=7.1,SNR=9.6
CMAR pP **pP** **12 20 39.2 +3.9**
comp=Z,2.0nm,0.7s,baz=35,slow=7.5,SNR=6.9
TAPN Taplejung 53.76 273 *eP* **P** **12 20 26.8 +1.3**
comp=Z,4.5nm,0.4s
ODAN Odare 54.29 273 *eP* **P** **12 20 32.1 +2.8**
comp=Z,8.0nm,0.5s
GUN Gumba 54.67 275 *eP* **P** **12 20 33.6 +1.4**
RAMN Ramite 54.78 274 *eP* **P** **12 20 34.4 +1.6**
comp=Z,10.0nm,0.4s
KKN Kakani 55.16 275 *eP* **P** **12 20 37.7 +2.1**
comp=Z,17nm,0.7s
PKI Pulchoki 55.21 275 *eP* **P** **12 20 37.5 +1.4**
PKIN Phulchoki 55.22 275 *eP* **P** **12 20 37.9 +1.9**
comp=Z,7.8nm,0.6s
DMN Daman 55.40 275 *eP* **P** **12 20 39.0 +1.7**
comp=Z,13nm,0.4s
DANN Dangsing 55.86 277 *eP* **P** **12 20 42.7 +2.0**
comp=Z,19nm,0.6s
KOLN Koldanda 56.33 276 *eP* **P** **12 20 45.7 +1.8**
comp=Z,20nm,0.9s
PYUN Piuthan 56.55 277 *eP* **P** **12 20 47.0 +1.6**
ARCES ARCESS Array B 58.13 341 P **P** **12 20 54.0 -1.7**
comp=Z,4.2nm,0.9s,baz=21,slow=7.7,SNR=4.8
JOF Joensuu 61.55 334 *eP* P 12 21 15.7 -3.4
JOF pmax pmax
comp=Z,1.0nm,0.6s
JOF Joensuu 61.55 334 *ep* P 12 21 15.7 -3.4
comp=Z,1.2nm,0.6s
NVAR Mina Array Bea 62.95 62 PcP **PcP** **12 22 09.0 +2.6**
comp=Z,0.6nm,0.6s,baz=290,slow=6.7,SNR=4.2
KAF Kangasniemi 63.67 335 *eP* **P** **12 21 31.2 -2.0**
KAF pmax pmax
comp=Z,2.0nm,0.5s
KAF Kangasniemi 63.67 335 *ep* **P** **12 21 31.2 -2.0**
comp=Z,2.0nm,0.5s
FINES FINESS Array B 64.26 335 P **P** **12 21 35.9 -1.2**
comp=Z,3.5nm,0.5s,baz=33,slow=8.3,SNR=12
FINES pP **pP** **12 22 00.6 -1.0**
comp=Z,4.6nm,0.5s,baz=33,slow=8.2,SNR=8.4
PDAR Pinedale Array 65.29 53 P **P** **12 21 45.5 +1.1**
comp=Z,0.4nm,0.8s,baz=316,slow=2.5,SNR=2.6
NB2 NORSAR Subarra 68.50 341 P **P** **12 22 03.0 -1.3**
comp=Z,1.6nm,0.6s,baz=28,slow=6.2
NB2 NORSAR Subarra 68.50 341 P pP 12 22 27.8 -1.2
comp=Z,4.7nm,0.6s,baz=30,slow=6.5
NOA NORSAR Array B 68.50 341 P **P** **12 22 02.6 -1.7**
comp=Z,1.8nm,0.5s,baz=27,slow=6.4,SNR=11
NOA pP **PcP** **12 22 28.1 -0.8**
comp=Z,3.6nm,0.6s,baz=27,slow=6.3,SNR=8.3
AKASG Malin Array Be 71.69 326 P **P** **12 22 22.8 -1.0**
AKASG *PP **pP** **12 22 47.7 -1.1**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG pmax pmax
comp=Z,6.0nm,0.4s
AKASG Malin Array Be 71.69 326 P **P** **12 22 22.8 -1.0**
comp=Z,3.8nm,0.4s,baz=35,slow=6.1,SNR=10
AKASG pP **pP** **12 22 47.7 -1.1**
comp=Z,5.6nm,0.4s,baz=35,slow=5.9,SNR=12
TXAR Lajitas Array 78.02 60 P **P** **12 23 01.6 +0.8**
comp=Z,0.5nm,0.6s,baz=308,slow=5.1,SNR=9.6
BRTR Keskin Array B 78.44 316 P **P** **12 23 03.5 +0.5**
comp=Z,1.2nm,0.7s,baz=76,slow=1.9,SNR=5.7
BRTR pP **pP** **12 23 28.8 +0.4**
comp=Z,2.5nm,0.9s,baz=91,slow=4.0,SNR=6.7
GERES GERESS Array B 78.67 334 P **P** **12 23 03.9 -0.2**
comp=Z,0.6nm,0.4s,baz=27,slow=6.8,SNR=6.7
GERES pP **pP** **12 23 28.7 -0.7**
comp=Z,1.8nm,0.6s,baz=33,slow=5.4,SNR=4.3

TORD Torodi Ar. Bea 115.26 328 PKP PKPdf 12 29 43.1 -0.1
comp=Z,0.5nm,1.1s,baz=4.2,slow=1.9,SNR=4.2
TORD pPKP PKiKP 12 30 08.6 +25
comp=Z,1.0nm,1.2s,baz=86,slow=2.2,SNR=2.5

*IDC **23** 12:16:12.3±0.3, 4.°45N×126.°81E, h0km, mb4.9/34, mb1 5.0/35, mb1mx5.0/36, mbtmp4.9/35, ML5.5/1, MS4.5/33, Ms1 4.5/33, ms1mx4.4/40, Error ellipse: s-maj=15.3km s-min=9.2km az=77.0*
*MOS **23** 12:16:15.7±1.0, 4.°46N×126.°81E, h33km, mb5.5/47, MS4.6/13, Error ellipse: s-maj=9.5km s-min=5.1km az=111.3*
*BJI **23** 12:16:16.2, 3.°85N×126.°80E, h74km, mB5.2/40, mb5.0/61, Ms4.9/61, Ms7 4.8/56*
*NEIC **23** 12:16:19.3±0.8, 4.°42N×126.°82E, h52km±7km, mb5.2/54, Error ellipse: s-maj=4.8km s-min=3.2km az=76.0*
NEIC Felt [IV] at Beo and [III] at Melonguanne.
*GCMT **23** 12:16:20.1±0.1, 4.°48N×126.°94E, h26km, MW5.5, Moment Tensor Solution. s77,c115; s88,c155; Moment tensor: Scale 10^17 Nm; Mrr=0.02±.02; Mθθ=0.11±.02; Mϕϕ=-0.09±.02; Mrθ=-0.29±.03; Mθϕ=-0.27±.01; Mϕr=2.45±.06; Best double couple: Mo=2.50000×10^17 NP1:ϕ=263.00000°, δ7.00000°, λ180.00000°. NP2:ϕ=353.00000°, δ90.00000°, λ83.00000°. Principal axes: T 2.4600, Plg45.0000°, Azm256.0000°; N 0.0400, Plg7.0000°, Azm353.0000°; P -2.5000, Plg45.0000°, Azm90.0000°; Data Used: II IU G CN IC.*
*ISCJB **23** 12:16:20.4±0.4, 4.°38N±0.°02×126.°89E±0.°02, h77km±3km, mb5.1/135 Error ellipse: s-maj=3.7km s-min=2.7km az=160.7*
*AUST **23** 12:16:20.1±0.2, 4.°42N×126.°95E, h58km, Error ellipse: s-maj=0.8km s-min=0.5km az=226.0*
*DJA **23** 12:16:21.9±0.3, 4.°N±2.°×12.°7E±.°, h62km±3km, M5.7/3, mB5.3/1, mb5.4/3, MLv5.8/1, Mw(mB)4.8/1*
*TEH **23** 12:16:22.0, 4.°33N×126.°74E, h75km, ML5.4*
*MAN **23** 12:16:23, 4.°50N×126.°67E, h31km, mb5.8, ML4.9, MS5.4*

ISC 23 12:16:20.9±0.4, 4.°39N±0.°03×126.°84E±0.°04, h66km±3km, h66km:pP-P, n527, σ1s60/563, mb5.2/133, 30C-26D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.94**	**335**	*e*Pn		Pn	12 17 07.8	+2.5
DAV				*e*Sn		**Sn**	**12 17 41.6**	**+2.1**
DAV				Sn		Sn	12 17 49.8	+10
DAV	**Davao City (W)** SNR=30	**2.94**	**335**	P		**Pn**	**12 17 05.8**	**+0.4**
DAV	**Davao City (W)**	**2.94**	**335**	P		**Pn**	**12 17 04.6**	**-0.8**
DAV	**Davao City (W)** 63nm,0.3s,baz=74,slow=4.0,SNR=17	**2.94**	**335**	Pn		Pn	12 17 07.4	+2.0
DAV	481nm,0.3s,baz=259,slow=19,SNR=8.7			Sn		Sn	12 17 49.8	+10
DMPH	**Davao City--Mi**	**2.99**	**334**‖	*e*P		Pn	12 17 09.8	+3.8
DMPH				*e*S		Sn	12 17 28.8	-12
KCP	**Kidapawan**	**3.13**	**326**‖↓	*e*P		Pn	12 17 11.6	+3.6
KCP				*i* S		Sn	12 17 56.0	+12
MNI	**Manado**	**3.54**	**214**	P		Pn	12 17 14.9	+1.4
MNI				S		**Sn**	**12 17 57.4**	**+3.2**
TNTI	**Ternate**	**3.63**	**172**	P		**Pn**	**12 17 14.9**	**+0.1**
TNTI				S		**Sn**	**12 17 57.0**	**+0.6**
CGP	**Cagayan de Oro**	**4.57**	**332**↑	*e*P		Pn	12 17 33.4	+5.8
CGP				*e*S		Sn	12 18 26.9	+7.5
KMSI	**Cibinong**	**4.74**	**217**	P		**Pn**	**12 17 31.3**	**+1.4**
LBMI	**Labuha**	**5.04**	**172**	P		**Pn**	**12 17 34.1**	**+0.1**
LBMI				S		**Sn**	**12 18 31.8**	**+0.9**
ZMPH	**Zamboanga City**	**5.39**	**298**↑	*i* P		**Pn**	**12 17 39.4**	**+0.6**
ZMPH				*i* S		**Sn**	**12 18 42.5**	**+3.0**
DCPH	**Dipolog City**	**5.42**	**320**↑	*e*P		Pn	12 17 44.1	+4.9
TBP	**Tagbilaran**	**6.04**	**331**	*e*P		Pn	12 17 51.7	+4.0
SNPH	**Sibulan**	**6.08**	**324**	*e*P		Pn	12 17 43.2	-5.1
MRSI	**Marisa**	**6.25**	**232**	P		Pn	12 17 52.5	+2.0
LLP	**Lapu-Lapu**	**6.54**	**334**	*e*P		Pn	12 17 57.9	+3.3
LLP				*e*S		**Sn**	**12 19 10.0**	**+2.2**
LUWI	**Luwuk**	**6.75**	**217**	P		Pn	12 18 00.4	+2.9
LUWI	**Luwuk** baz=6.9,SNR=4.9	**6.75**	**217**	P		Pn	12 18 02.9	+5.5
SWI	**Sorong**	**6.84**	**140**	P		**Pn**	**12 17 56.1**	**-2.5**
SWI				S		**Sn**	**12 19 11.0**	**-4.1**
SWI	**Sorong** baz=6.8,SNR=36	**6.84**	**140**	P		**Pn**	**12 17 56.9**	**-1.7**
SWI	baz=6.8,SNR=15			S		**Sn**	**12 19 10.5**	**-4.6**
PLP	**Palo**	**6.98**	**345**‖	*i* P		Pn	12 18 02.8	+2.2
MSAI	**Masohi**	**7.96**	**165**	P		Pn	12 18 16.1	+2.1
AAI	**Ambon**	**8.13**	**170**	P		**Pn**	**12 18 17.1**	**+0.7**
AAI	**Ambon** baz=8.2,SNR=10	**8.13**	**170**	P		**Pn**	**12 18 16.2**	**-0.2**
RCP	**Roxas**	**8.20**	**331**	*e*P		Pn	12 18 19.9	+2.7
MYLDM	**Lahad Datu**	**8.34**	**276**	P		Pn	12 18 24.3	+5.1
TSM	**Tawau**	**8.94**	**270**	P		Pn	12 18 30.5	+3.1
FAKI	**Fak Fak**	**9.05**	**143**	P		**Pn**	**12 18 30.2**	**+1.2**
FAKI				S		**Sn**	**12 20 08.1**	**-1.3**
FAKI	**Fak Fak** baz=9.0,SNR=16	**9.05**	**143**	P		**Pn**	**12 18 27.8**	**-1.2**
FAKI	baz=9.0,SNR=3.4			S		**Sn**	**12 20 06.2**	**-3.2**
BNDI	**Bandanaira**	**9.37**	**161**	P		Pn	12 18 27.6	-5.6
BNDI	**Bandanaira** baz=9.4,SNR=3.4	**9.37**	**161**	P		Pn	12 18 38.3	+5.1
RKPI	**Ransiki, Papua**	**9.39**	**128**	P		**Pn**	**12 18 33.9**	**+0.3**
SDKM	**Sandakan**	**9.68**	**278**	P		Pn	12 18 41.8	+4.2
KKSI	**Kolaka, Sulawe**	**9.96**	**211**	P		**Pn**	**12 18 39.6**	**-1.7**
TTSI	**Tana Toraja**	**10.18**	**224**	P		Pn	12 18 47.0	+2.6
KDM	**Kudat**	**10.27**	**285**	P		Pn	12 18 52.5	+7.0
BBSI	**Bau Bau**	**10.69**	**204**	P		**Pn**	**12 18 52.9**	**+1.5**
KKM	**Kota Kinabalu** 138nm,1.0s	**10.70**	**279**	*e*Pn		Pn	12 18 55.3	+3.7
KKM	**Kota Kinabalu**	**10.70**	**279**	P		Pn	12 18 57.8	+6.2
KKM	**Kota Kinabalu** baz=11,SNR=13	**10.70**	**279**	P		Pn	12 18 56.1	+4.4
SMKI	**Samarinda**	**10.75**	**244**	P		Pn	12 18 55.4	+3.2
BAKI	**Biak**	**10.79**	**121**	P		**Pn**	**12 18 54.5**	**+1.7**
SPSI	**Sidrap Palu**	**10.89**	**220**	P		**Pn**	**12 18 55.5**	**+1.4**
SRPI	**Serui, Papua**	**11.27**	**123**	P		**Pn**	**12 19 00.9**	**+1.7**
TLE	**Tual**	**11.57**	**149**	P		**Pn**	**12 19 03.9**	**+0.5**
TLE	**Tual** baz=12,SNR=13	**11.57**	**149**	P		**Pn**	**12 19 04.5**	**+1.2**
KAPI	**Kappang**	**11.72**	**217**	*e*Pn		**Pn**	**12 19 05.0**	**-0.4**
KAPI				Sn		**Sn**	**12 21 14.3**	**-0.2**
KAPI				*e*Sn		Sn	12 21 14.8	+0.2
KAPI	**Kappang** 424nm,0.5s,SNR=10	**11.72**	**217**	Pn		**Pn**	**12 19 05.1**	**-0.3**
KAPI	**Kappang**	**11.72**	**217**	P		**Pn**	**12 19 04.9**	**-0.4**
KAPI	**Kappang** 7.4nm,0.3s,baz=66,slow=6.0,SNR=15	**11.72**	**217**	Pn		**Pn**	**12 19 04.7**	**-0.6**
KAPI	0.8nm,0.3s,baz=0.0,slow=20,SNR=1.8			Sn		**Sn**	**12 21 14.3**	**-0.2**
KAPI	comp=Z,3μm,18.7s,baz=199,slow=42			LR		LR	12 24 28.1	
BKSI	**Bulukumba**	**11.75**	**215**	P		**Pn**	**12 19 04.3**	**-1.5**
BSSI	**Bau Bau, Buton**	**12.23**	**211**	P		**Pn**	**12 19 11.8**	**-0.6**
MTKI	**Muara Teweh, K**	**13.05**	**246**	P		Pn	12 19 25.2	+1.6
KBKI	**Kotabaru**	**13.11**	**235**	P		Pn	12 19 26.1	+1.7
MMRI	**Maumere**	**13.72**	**200**	P		**Pn**	**12 19 31.5**	**-1.1**
BTM	**Bintulu**	**13.77**	**266**	P		P	12 19 42.2	+2.6
BBKI	**Banjar Baru**	**14.30**	**237**	P		**P**	**12 19 42.7**	**-2.7**
SBUM	**Sibu**	**14.71**	**263**	P		**P**	**12 19 48.2**	**-1.9**
WSI	**Waingapu**	**15.41**	**205**	P		**Pn**	**12 19 55.0**	**+0.5**
JAY	**Jayapura**	**15.46**	**116**	P		**Pn**	**12 19 53.2**	**-2.0**
JAY	**Jayapura** baz=15,SNR=9.2	**15.46**	**116**	P		**Pn**	**12 19 53.8**	**-1.4**
STKI	**Sintang**	**15.93**	**255**	P		**P**	**12 20 03.5**	**-0.1**
PBKI	**Pangkalan Bun**	**16.71**	**245**	P		**P**	**12 20 12.4**	**+0.2**
KSM	**Kuching**	**16.76**	**261**	*e*Pn		**P**	**12 20 11.2**	**-1.5**
KSM	**Kuching**	**16.76**	**261**	P		**P**	**12 20 14.8**	**+2.1**
KSM	**Kuching** baz=17,SNR=43	**16.76**	**261**	P		**P**	**12 20 14.2**	**+1.5**
KHKI	**Kahang-Kahang**	**16.91**	**221**	P		**Pn**	**12 20 12.1**	**-1.2**
SRBI	**Singaraja**	**16.97**	**223**	P		**Pn**	**12 20 13.4**	**-0.7**
KMMI	**Kalianget**	**17.15**	**229**	P		**P**	**12 20 16.3**	**-0.7**
IGBI	**Denpasar**	**17.55**	**222**	P		**Pn**	**12 20 19.4**	**-1.8**
MTN	**Manton Dam** baz=18,SNR=130	**17.64**	**166**	P		**Pn**	**12 20 19.2**	**-3.2**
BYJI	**Banyuwangi**	**17.65**	**225**	P		**P**	**12 20 24.7**	**+2.1**
KDU	**Kakadu** baz=18,SNR=22	**17.86**	**162**	P		**Pn**	**12 20 22.1**	**-3.0**
BLJI	**Banyuglugur**	**17.88**	**228**	P		**P**	**12 20 26.5**	**+1.4**
GMJI	**Gumukmas**	**18.35**	**227**	P		**Pn**	**12 20 29.7**	**-1.2**
MMPI	**Merauke**	**18.59**	**133**	P		**P**	**12 20 31.3**	**-1.6**
KRKI	**Karangkates**	**19.00**	**229**	P		**Pn**	**12 20 39.6**	**+0.8**
TWG	**Pinlang** 139nm,0.6s	**19.16**	**344**	*e*P		**P**	**12 20 37.1**	**-2.0**
SJI	**Sawahan**	**19.26**	**231**	P		**Pn**	**12 20 41.1**	**-0.9**
PWJI	**Pagerwojo**	**19.41**	**231**	P		**P**	**12 20 41.6**	**-0.3**
YULB	**Yu-li** 58nm,0.9s	**19.64**	**345**	*e*P		**P**	**12 20 42.2**	**-2.1**
TPUB	**Ta-pu** 124nm,0.8s	**19.73**	**343**	*e*P		**P**	**12 20 43.9**	**-1.5**
SMRI	**Semarang**	**19.92**	**235**	P		**Pn**	**12 20 49.8**	**+0.1**
GUMO	**Guam**	**20.00**	**62**	P		**P**	**12 20 46.8**	**-1.6**
GUMO	**Guam** 13nm,0.3s,baz=287,slow=7.4,SNR=4.6	**20.00**	**62**	P		**P**	**12 20 46.8**	**-1.6**
GUMO	comp=Z,2μm,21.3s,baz=227,slow=33			LR		LR	12 27 06.9	
PCJI	**Pacitan**	**20.00**	**231**	P		Pn	12 20 53.4	+2.8
SSLB	**Suanglung** 87nm,0.7s	**20.11**	**344**	*e*P		**P**	**12 20 48.8**	**-0.6**
UGM	**Wanagama**	**20.35**	**233**	*e*Pn		Pn	12 20 53.3	-1.5
UGM	**Wanagama** baz=20,SNR=9.7	**20.35**	**233**	P		Pn	12 20 53.4	-1.4
TPI	**Tanjungpandan**	**20.44**	**250**	P		Pn	12 20 54.5	-1.3
BJII	**Banjamegara**	**20.68**	**236**	P		Pn	12 20 56.8	-1.9
YHNB	**Yeheng** 94nm,0.8s	**20.84**	**346**	*e*P		**P**	**12 20 57.5**	**+0.1**
TGJI	**Tegal**	**20.92**	**238**	P		Pn	12 20 59.7	-1.8
PPBI	**Pangkal Pinang**	**21.68**	**253**	P		**P**	**12 21 07.4**	**+0.9**
QZH	**Quanzhou**	**21.92**	**340**	P		**P**	**12 21 12.1**	**+3.2**
QZH				S		**S**	**12 25 05.1**	**-2.3**
QZH	comp=Z,120nm,1.0s			pmax	pmax			
QZH	comp=N,3μm,20.6s			LR	LR			
QZH	comp=E,1μm,10.4s			LR	LR			
QZH	comp=Z,4μm,30.5s			LR	LR			
QIZ	**Qiongzhong**	**22.07**	**313**	P		**P**	**12 21 11.4**	**+0.8**
QIZ				sP		sP	12 21 35.6	+2.5
QIZ				S		**S**	**12 25 09.6**	**-0.7**
QIZ	comp=Z,27nm,0.9s			pmax	pmax			
QIZ	comp=Z,250nm,8.1s			pmax	pmax			
QIZ	comp=N,2μm,14.5s			LR	LR			
QIZ	comp=Z,3μm,27.9s			LR	LR			
LEM	**Lembang**	**22.18**	**240**	P		**P**	**12 21 13.3**	**+1.3**
LEM	**Lembang** baz=22,SNR=6.4	**22.18**	**240**	P		**P**	**12 21 13.4**	**+1.4**
JOW	**Kunigami** comp=Z,37nm,0.8s	**22.36**	**3**	*e*P		**P**	**12 21 14.2**	**+0.6**
FITZ	**Fitzroy Crossi**	**22.38**	**183**	*e*P		**P**	**12 21 12.8**	**-1.1**
FITZ				S		**S**	**12 25 11.1**	**-4.4**
FITZ				*e*S		Sn	12 25 13.4	-19
FITZ	**Fitzroy Crossi** comp=Z,48nm,0.6s,baz=13,slow=9.7,SNR=98	**22.38**	**183**	P		**P**	**12 21 12.4**	**-1.4**
FITZ	comp=Z,45nm,1.1s,baz=167,slow=14,SNR=9.9			S		**S**	**12 25 11.1**	**-4.4**
FITZ	**Fitzroy Crossi** baz=23,SNR=151	**22.38**	**183**	P		**P**	**12 21 12.2**	**-1.6**
FITZ	baz=23,SNR=11			S		**S**	**12 25 14.2**	**-1.4**
CISI	**Cisompet, Garu**	**22.38**	**238**	P		**P**	**12 21 13.6**	**-0.5**
CBJI	**Citeko**	**22.66**	**242**	P		**P**	**12 21 16.9**	**0.0**
DBJI	**Dramaga**	**22.81**	**242**	P		**P**	**12 21 18.3**	**-0.2**
MYKOM	**Kota Tinggi**	**23.09**	**264**	P		**P**	**12 21 22.0**	**+0.6**
PMBI	**Palembang**	**23.21**	**252**	P		**P**	**12 21 24.1**	**+1.6**
KGM	**Kluang**	**23.60**	**265**	P		**P**	**12 21 27.0**	**+0.8**
KTGM	**Kuala Trenggan**	**23.63**	**273**	P		**P**	**12 21 27.4**	**+0.9**
BLSI	**Bandar Lampung**	**23.64**	**246**	P		**P**	**12 21 26.4**	**-0.1**
UBPT	**Khong Chiam**	**23.64**	**299**	P		**P**	**12 21 25.8**	**-0.7**
CGJI	**Cibinong**	**23.77**	**243**	P		**P**	**12 21 26.9**	**-0.7**
KASI	**Kota Agung**	**24.39**	**139**	*e*P		**P**	**12 21 33.4**	**+1.2**
COEN	**Coen** comp=Z,263nm,0.9s	**24.39**	**139**	*e*P		**P**	**12 21 33.4**	**+0.1**
COEN	**Coen** baz=24,SNR=17	**24.39**	**139**	P		**P**	**12 21 33.4**	**+0.1**
PMG	**Port Moresby** comp=Z,128nm,1.8s	**24.45**	**124**	*e*P		**P**	**12 21 34.2**	**+0.3**
PMG	**Port Moresby**	**24.45**	**124**	P		P	12 21 46.8	+13
PMG	**Port Moresby** comp=Z,3μm,21.6s,baz=15,slow=38	**24.45**	**124**	LR		LR	12 31 31.3	
LWLI	**Liwa**	**24.59**	**248**	P		**P**	**12 21 34.7**	**-0.6**
FRIM	**Kepong**	**25.18**	**268**	P		**P**	**12 21 41.1**	**+0.6**
WRAB	**Tennant Creek**	**25.27**	**163**	*e*P		**P**	**12 21 41.0**	**-0.2**
WRAB	comp=Z,219nm,0.9s			pmax	pmax			
WRAB	**Tennant Creek** comp=Z,219nm,0.9s	**25.27**	**163**	*e*P		**P**	**12 21 41.0**	**-0.2**
WRAB	**Tennant Creek** comp=Z,572nm,0.7s,SNR=29	**25.27**	**163**	P		**P**	**12 21 40.1**	**-1.1**
WRA	**Warramunga Arr**	**25.28**	**163**	P		**P**	**12 21 40.1**	**-1.2**
WRA				S		**S**	**12 26 00.3**	**-2.3**
WRA	**Warramunga Arr** comp=Z,64nm,0.8s,baz=345,slow=10,SNR=155	**25.28**	**163**	P		**P**	**12 21 40.1**	**-1.2**
WRA	comp=Z,2.5nm,0.8s,baz=340,slow=14,SNR=6.2			S		**S**	**12 26 00.3**	**-2.3**
KSI	**Kapahiang**	**25.50**	**252**	P		**P**	**12 21 46.6**	**+3.1**
CHBT	**CHBT**	**25.60**	**290**	P		**P**	**12 21 45.3**	**+1.1**
IPM	**Ipoh** comp=Z,57nm,0.8s	**25.73**	**271**	*e*P		**P**	**12 21 44.9**	**-0.6**
IPM	**Ipoh**	**25.73**	**271**	P		**P**	**12 21 45.6**	**+0.1**
BKNI	**Bangkinang**	**26.08**	**262**	P		**P**	**12 21 49.3**	**+0.6**
KULM	**Kulim** comp=Z,169nm,0.8s	**26.11**	**273**	*e*P		**P**	**12 21 48.2**	**-0.7**
KULM	**Kulim**	**26.11**	**273**	P		**P**	**12 21 49.9**	**+1.1**
KRJI	**Kerinci**	**26.16**	**256**	P		**P**	**12 21 50.1**	**+0.6**
MBWA	**Marble Bar** comp=Z,126nm,0.8s	**26.33**	**195**	*e*P		**P**	**12 21 51.1**	**+0.4**
MBWA	**Marble Bar** SNR=10	**26.33**	**195**	P		**P**	**12 21 51.7**	**+1.0**
PPI	**Padang Panjang**	**26.85**	**260**	P		**P**	**12 21 55.9**	**+0.3**
SSE	**Sheshan**	**27.09**	**349**	P		**P**	**12 21 52.9**	**-4.6**
SSE				S		**S**	**12 26 29.8**	**-1.2**
SSE				sS		sS	12 26 44.4	-14
SSE	comp=Z,31nm,0.8s			pmax	pmax			
SSE	comp=Z,150nm,4.6s			pmax	pmax			
SSE	comp=N,880nm,25.6s			LR	LR			
SSE	comp=E,670nm,25.6s			LR	LR			
SSE	comp=Z,1μm,54.5s			LR	LR			
MNSI	**Mandailing Nat**	**27.46**	**263**	P		**P**	**12 22 00.2**	**-0.8**
QIS	**Mount Isa** baz=28,SNR=61	**27.78**	**154**	P		**P**	**12 22 03.6**	**-0.2**
PSI	**Prapat**	**27.90**	**268**	P		**P**	**12 22 04.8**	**-0.3**
PSI	**Prapat** comp=Z

comp=Z,8.6nm,0.7s,baz=345,slow=6.3,SNR=64
ASAR PcP PcP 12 25 24.0 +2.7
comp=Z,3.5nm,0.4s,baz=352,slow=2.3,SNR=7.4
ASAR S S 12 27 01.7 +4.8
comp=Z,2.5nm,0.9s,baz=349,slow=19,SNR=2.6
JNU Nakatsue 28.84 7 *e*P P 12 22 14.8 +1.7
JNU Nakatsue 28.84 7 P P 12 22 12.8 -0.3
comp=Z,17nm,0.9s,baz=214,slow=11,SNR=8.5
JNU LR LR 12 34 34.1
comp=Z,573nm,18.8s,baz=325,slow=38
GYA Guiyang 29.23 321 ⇑ *i*P P 12 22 16.4 -0.4
GYA pP pP 12 22 37.0 +4.2
GYA sP sP 12 22 46.5 +5.9
GYA PP **PnPn 12 23 15.6 +2.8**
GYA PcP **PcP 12 25 24.8 +2.1**
GYA S **S 12 27 05.3 +0.3**
GYA sS sS 12 27 36.0 +3.6
GYA SS **SnSn 12 28 41.3 +5.0**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,140nm,4.8s
GYA LR LR
comp=N,860nm,17.6s
GYA LR LR
comp=E,710nm,18.2s
GYA LR LR
comp=Z,940nm,17.9s
GSI Gunungsitoli 29.38 265 P P 12 22 17.6 -0.6
GSI Gunungsitoli 29.38 265 P P 12 22 17.9 -0.3
baz=30,SNR=11
GIRL Giralia 29.55 204 P P 12 22 22.6 +3.1
baz=30,SNR=4.1
CM31 Chiang Mai Arr 30.64 299 *e*P P 12 22 30.0 +0.7
comp=Z,18nm,0.8s
CMAR Chiang Mai Arr 30.64 299 P P 12 22 29.4 +0.2
CMAR ScP ScP 12 29 13.8 +10
CMAR Chiang Mai Arr 30.64 299 P P 12 22 29.4 +0.2
comp=Z,22nm,0.9s,baz=120,slow=7.2,SNR=68
CMAR ScP ScP 12 29 13.8 +10
comp=Z,2.6nm,0.8s,baz=125,slow=1.5,SNR=7.7
CMAR LR LR 12 34 19.7
comp=Z,1μm,21.8s,baz=118,slow=36
CMMT Chiang Mai 30.78 300 P P 12 22 30.5 0.0
CHTO Chiang Mai 30.78 300 *e*P P 12 22 30.3 -0.2
CHTO pmax pmax
comp=Z,23nm,0.7s
CHTO Chiang Mai 30.78 300 *e*P P 12 22 30.2 -0.2
comp=Z,23nm,0.7s
CHTO Chiang Mai 30.78 300 P P 12 22 32.3 +1.8
SNR=6.4
CHTO Chiang Mai 30.78 300 P P 12 22 29.5 -1.0
CTA Charters Tower 30.91 143 P P 12 22 32.4 +0.7
CTA Charters Tower 30.91 143 P P 12 22 32.4 +0.7
comp=Z,17nm,0.8s,baz=322,slow=9.7,SNR=9.7
CTA LR LR 12 36 14.4
comp=Z,884nm,19.2s,baz=340,slow=39
CTAO Charters Tower 30.91 143 *e*P P 12 22 32.4 +0.7
CTAO pmax pmax
comp=Z,24nm,1.1s
CTAO Charters Tower 30.91 143 *e*P P 12 22 32.4 +0.7
comp=Z,24nm,1.1s
KMI Kunming 31.00 314 P P 12 22 33.1 +0.5
KMI pP **pP 12 22 48.0 -0.6**
KMI PP **PP 12 23 40.8 -2.8**
KMI S **S 12 27 31.3 -1.7**
KMI pmax pmax
comp=Z,27nm,0.9s
KMI pmax pmax
comp=Z,140nm,4.7s
KMI LR LR
comp=N,850nm,20.4s
KMI LR LR
comp=E,1μm,22.2s
KMI LR LR
comp=Z,2μm,24.3s
JHJ Hachijo jima 2 31.04 21 LR LR 12 34 34.3
comp=Z,1μm,18.7s,baz=227,slow=36
MEEK Meekatharra 31.85 194 P P 12 22 40.1 +0.3
baz=32,SNR=68
KSAR Wonju Array Be 32.91 2 P P 12 22 48.6 -0.3
KSAR PcP **PcP 12 25 34.9 +2.8**
KSRS Korea Array 32.92 2 P P 12 22 48.6 -0.4
comp=Z,5.4nm,0.9s,baz=177,slow=9.6,SNR=13
KSRS PcP **PcP 12 25 34.9 +2.7**
comp=Z,2.2nm,0.7s,baz=186,slow=3.1,SNR=3.9
KSRS LR LR 12 36 20.5
comp=Z,688nm,20.8s,baz=189,slow=37
MAJO Matsushiro 33.67 17 *e*P P 12 22 56.3 +0.7
MAJO Matsushiro 33.67 17 *e*P P 12 22 56.3 +0.7
MAT Matsushiro 33.67 17 P P 12 22 55.9 +0.3
MJAR Matsushiro Arr 33.67 17 P P 12 22 53.0 -2.6
MJAR Matsushiro Arr 33.67 17 P P 12 22 53.0 -2.6
comp=Z,4.5nm,0.6s,baz=186,slow=9.8,SNR=15
MJAR LR LR 12 34 38.4
comp=Z,975nm,20.5s,baz=200,slow=33
XAN Xi'an 33.88 333 P P 12 22 56.4 -1.1
XAN pP **pP 12 23 14.5 +0.8**
XAN sP sP 12 23 22.8 +1.4
XAN PP **PnPn 12 24 10.9 -1.4**
XAN PcP **PcP 12 25 35.3 +0.3**
XAN S **S 12 28 14.0 -3.3**
XAN pmax pmax
comp=Z,10.0nm,1.0s
XAN pmax pmax
comp=Z,29nm,6.5s
XAN LR LR
comp=N,2μm,27.3s
XAN LR LR
comp=E,440nm,27.0s
XAN LR LR
comp=Z,330nm,34.1s
CD2 Chengdu 34.18 323 P P 12 23 00.3 +0.2
CD2 pP pP 12 23 18.3 +2.0
CD2 sP sP 12 23 27.4 +3.3
CD2 PP **PP 12 24 17.3 -1.4**
CD2 PcP **PcP 12 25 35.3 -0.6**
CD2 S **S 12 28 20.8 -1.2**
CD2 sS sS 12 28 51.8 +2.1
CD2 PcS **PcS 12 29 20.6 -1.7**
CD2 SS **SnSn 12 30 34.5 -1.8**
CD2 pmax pmax
comp=Z,40nm,0.4s
CD2 pmax pmax
comp=Z,230nm,4.5s
CD2 LR LR
comp=N,2μm,21.6s
CD2 LR LR
comp=E,1μm,18.6s
CD2 LR LR
comp=Z,2μm,22.1s
DL2 Dalian 34.69 353 *e*P P 12 23 05.4 +1.1
DL2 *e*S **S 12 28 30.0 +0.6**
DL2 pmax pmax
comp=Z,10.0nm,0.7s
DL2 pmax pmax
comp=Z,100nm,2.7s
DL2 LR LR
comp=E,200nm,23.7s
DL2 LR LR
comp=Z,200nm,22.0s
MORW Morawa 34.84 197 P P 12 23 06.1 +0.3
baz=35,SNR=23
FORT Forrest 34.99 178 *e*P P 12 23 06.8 -0.2
comp=Z,122nm,0.7s
FORT Forrest 34.99 178 P P 12 23 07.3 +0.3
baz=35,SNR=13
QLP Quilpie 35.09 152 P P 12 23 07.8 -0.1
baz=35,SNR=42
KMBL Kambalda 35.87 187 P P 12 23 15.0 +0.5
baz=36,SNR=13
BLDU Ballidu 36.13 195 P P 12 23 17.1 +0.4
baz=36,SNR=52
BJI Beijing 36.78 346 P P 12 23 23.0 +0.8
BJI S **S 12 29 01.4 0.0**
BJI sS **ScP 12 29 30.5 +6.0**
BJI pmax pmax
comp=Z,100nm,0.8s
BJI pmax pmax
comp=Z,200nm,3.5s
BJI LR LR
comp=N,450nm,24.6s
BJI LR LR
comp=E,770nm,24.6s
BJI LR LR
comp=Z,670nm,24.0s
KLBR Kellerberrin 36.81 193 P P 12 23 23.1 +0.4
baz=37,SNR=27
RMQ Roma 37.31 146 P P 12 23 27.2 +0.2
baz=37,SNR=15
SNY Shenyang 37.39 356 ⇑P P 12 23 28.6 +1.2
SNY S **S 12 29 12.1 +1.4**
SNY pmax pmax
comp=Z,21nm,0.6s
SNY LR LR
comp=N,690nm,21.8s
SNY LR LR
comp=E,530nm,27.8s
SNY LR LR
comp=Z,970nm,20.6s
EIDS Eidsvold 37.80 143 *e*P P 12 23 31.0 -0.2
comp=Z,52nm,1.0s
EIDS Eidsvold 37.80 143 P P 12 23 30.9 -0.2
baz=38,SNR=12
LZH Lanzhou 37.99 329 ⇑P P 12 23 32.6 -0.2
LZH pP pP 12 23 51.3 +2.1
LZH sP sP 12 24 00.1 +3.2
LZH PP **PnPn 12 25 05.3 +2.5**
LZH PcP **PcP 12 25 47.5 +0.2**
LZH S **S 12 29 16.6 -3.8**
LZH sS sS 12 29 50.8 +2.5
LZH SS **SnSn 12 32 00.5 -8.0**
LZH pmax pmax
comp=Z,43nm,1.0s
LZH pmax pmax
comp=Z,230nm,5.6s
LZH LR LR
comp=N,730nm,11.6s
LZH LR LR
comp=E,740nm,15.0s
LZH LR LR
comp=Z,2μm,18.2s
BBOO Buckleboo 38.02 167 *e*P P 12 23 33.5 +0.7
comp=Z,18μm,2.5s
BBOO Buckleboo 38.02 167 P P 12 23 33.0 +0.2
baz=38,SNR=16
NWAO Narrogin (SRO) 38.21 193 *e*P P 12 23 35.3 +0.9
comp=Z,76nm,1.1s
NWAO Narrogin (SRO) 38.21 193 LR LR 12 39 32.9
comp=Z,207nm,20.5s,baz=19,slow=37
STKA Stephens Creek 38.70 160 *e*P P 12 23 39.2 +0.6
STKA Stephens Creek 38.70 160 P P 12 23 39.5 +0.9
comp=Z,159nm,0.7s,baz=334,slow=8.3,SNR=94
STKA LR LR 12 40 59.1
comp=Z,822nm,21.4s,baz=333,slow=38
STKA Stephens Creek 38.70 160 P P 12 23 39.2 +0.6
baz=39,SNR=125
HHC Hu-ho-hao-te 38.81 341 *e*P P 12 23 40.5 +1.0
HHC pP pP 12 23 58.9 +3.0
HHC sP sP 12 24 07.8 +4.2
HHC PP **PnPn 12 25 16.3 +3.9**
HHC S **S 12 29 33.1 +0.6**
HHC sS sS 12 30 04.9 +4.5
HHC SS **SS 12 32 21.3 -4.7**
HHC pmax pmax
comp=Z,42nm,1.1s
HHC pmax pmax
comp=Z,410nm,4.2s
HHC LR LR
comp=N,1μm,12.1s
HHC LR LR
comp=E,970nm,13.1s
HHC LR LR
comp=Z,1μm,17.8s
BTO Baotou 39.11 340 *e*P P 12 23 55.0 +13
CN2 Changchun 39.27 358 *e*P P 12 23 45.5 +2.4
CN2 *e*pP pP 12 24 03.8 +4.2
CN2 *e*sP sP 12 24 12.9 +5.6
CN2 *e*S **S 12 29 43.1 +4.0**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,500nm,19.0s
CN2 LR LR
comp=E,400nm,19.0s
CN2 LR LR
comp=Z,400nm,19.0s
USRK Ussuriysk Arra 39.91 6 P P 12 23 48.3 -0.1
comp=Z,7.6nm,0.7s,baz=189,slow=7.6,SNR=17
USRK LR LR 12 40 44.7
comp=Z,647nm,21.0s,baz=179,slow=37
CMSA Cobar Meteorol 39.99 155 P P 12 23 50.1 +0.8
baz=40,SNR=22
MDJ Mudanjiang 40.14 3 P P 12 23 50.6 +0.2
MDJ pP **pP 12 24 07.8 +1.0**
MDJ sP sP 12 24 16.0 +1.5
MDJ PP **PP 12 25 24.3 +0.4**
MDJ PcP **PcP 12 25 53.5 -0.2**
MDJ ScP **ScP 12 29 35.3 -1.9**
MDJ PcS **PcS 12 29 44.0 0.0**
MDJ S **S 12 29 56.3 +4.2**
MDJ SS **SS 12 32 51.1 -1.1**
MDJ ScS **ScS 12 33 48.1 -2.6**
MDJ pmax pmax
comp=Z,8.0nm,1.3s
MDJ pmax pmax
comp=Z,140nm,4.9s
MDJ LR LR
comp=N,670nm,27.0s
MDJ LR LR
comp=E,170nm,26.6s
MDJ LR LR
comp=Z,770nm,28.7s
ASAJ Asahikawa 41.94 17 P P 12 24 05.1 0.0
ASAJ Asahikawa 41.94 17 P P 12 24 05.1 0.0
comp=Z,19nm,0.7s,baz=204,slow=9.1,SNR=13
ARMA Armidale 41.96 147 *e*P P 12 24 06.2 +0.5
comp=Z,73nm,0.9s
ARMA Armidale 41.96 147 P P 12 24 06.5 +0.9
baz=42,SNR=25
LSA Lhasa 42.09 311 P P 12 24 07.9 +0.7
LSA pmax pmax
comp=Z,20nm,0.6s
GTA Gaotai 42.59 329 *e*P P 12 24 10.4 -0.3
GTA pP **pP 12 24 28.5 +1.2**
GTA sP sP 12 24 38.3 +3.3
GTA S **S 12 30 27.1 -1.8**
GTA sS sS 12 30 57.9 +0.8
GTA pmax pmax
comp=Z,5.0nm,0.9s
GTA pmax pmax
comp=Z,170nm,5.5s
GTA LR LR
comp=N,830nm,29.0s
GTA LR LR
comp=E,1μm,26.6s
GTA LR LR
comp=Z,990nm,22.8s
YUK Yuzh-Kuril'sk 42.90 20 *i* P P 12 24 12.7 -0.2
YUK *i* PPP PPP 12 26 21.6
YUK *i* S S 12 30 25.9 -7.0
YUK *i* SS SS 12 33 37.1 -10
YUK *i* SSS SSS 12 34 04.5
YUK pmax pmax
comp=N,1μm,1.8s
YUK pmax pmax
comp=E,367nm,1.8s
YUK pmax pmax
comp=Z,900nm,1.8s
YUK pmax pmax
comp=Z,1μm,1.8s
ARPS Mount Arapiles 43.28 162 P P 12 24 17.6 +1.5
baz=44,SNR=75
YNG Young 43.52 154 P P 12 24 19.7 +1.6
baz=44,SNR=20
TAPN Taplejung 43.72 306 *e*P P 12 24 19.6 -0.6
comp=Z,96nm,0.7s
ODAN Odare 43.78 305 *e*P P 12 24 20.1 -0.5
comp=Z,101nm,0.6s
MGCD Mangrove Creek 43.90 150 P P 12 24 24.9 +3.8
baz=44,SNR=5.7
RAMN Ramite 44.46 305 *e*P P 12 24 25.7 -0.4
comp=Z,86nm,0.6s
YSS Yuzh-Sakhalins 44.58 16 *e*P P 12 24 26.7 +0.3
YSS *e* 12 24 33.0
YSS *e*S S 12 31 08.0 +11
YSS pmax pmax
comp=Z,40nm,1.2s
YSS MLR MLR
comp=N,400nm,20.0s
YSS MLR MLR
comp=Z,500nm,20.0s
CAN Canberra 44.65 154 *e*P P 12 24 27.4 +0.2
CAN pmax pmax
comp=Z,95nm,1.1s
CAN Canberra 44.65 154 *e*P P 12 24 27.4 +0.2
comp=Z,95nm,1.1s
CNB Canberra Magne 44.81 154 P P 12 24 30.5 +2.1
baz=45,SNR=14
KLR Kul'dur 44.88 5 *e*P P 12 24 26.3 -2.4
KLR *e* 12 26 54.5
KLR *e*S **S 12 31 07.5 +5.9**
KLR *e*SS ScS 12 34 14.0 -5.8
KLR MLR MLR
comp=E,500nm,13.0s
KLR MLR MLR
comp=Z,1μm,13.0s
TOO Toolangi 45.21 159 P P 12 24 33.5 +1.9
baz=45,SNR=20
GUN Gumba 45.43 305 *e*P P 12 24 33.3 -0.6
comp=Z,137nm,0.8s
PKI Pulchoki 45.68 305 *e*P P 12 24 34.9 -1.0
comp=Z,41nm,0.7s
PKIN Phulchoki 45.69 305 *e*P P 12 24 34.9 -1.0
comp=Z,25nm,0.6s
KKN Kakani 45.87 305 *e*P P 12 24 36.5 -0.7
comp=Z,73nm,0.8s
DMN Daman 45.94 305 *e*P P 12 24 37.4 -0.5
comp=Z,80nm,0.9s
MILA Mila 46.19 155 P P 12 24 42.9 +3.6
baz=46,SNR=7.1
ULN Ulaanbaatar 46.53 342 *e*P P 12 24 42.1 +0.1
comp=Z,31nm,0.8s
ULN Ulaanbaatar 46.53 342 P P 12 24 42.5 +0.5
SNR=26
ULN Ulaanbaatar 46.53 342 P P 12 24 42.2 +0.2
SONM Songino Array 46.71 341 P P 12 24 43.7 +0.3
SONM ScP ScP 12 30 11.9 +7.8
SONM Songino Array 46.71 341 P P 12 24 43.7 +0.3
comp=Z,12nm,0.7s,baz=158,slow=9.1,SNR=50
SONM ScP ScP 12 30 11.9 +7.8
comp=Z,2.9nm,1.0s,baz=149,slow=2.2,SNR=3.9
SONM LR LR 12 45 30.7
comp=Z,737nm,20.9s,baz=157,slow=38
DZM Mont Dzumac 46.83 126 *e*P P 12 24 44.3 -0.3
comp=Z,65nm,1.2s
DZM *e*S **S 12 31 34.2 +3.6**
DZM comp=Z,953nm,30.4s
DZM *e*LR LR 12 37 59.7
comp=Z,2μm,26.9s
DZM Mont Dzumac 46.83 126 *e*P P 12 24 43.4 -1.3
comp=Z,16nm,0.6s
KOLN Koldanda 47.24 304 *e*P P 12 24 47.3 -0.6
comp=Z,252nm,0.7s
DANN Dangsing 47.32 305 *e*P P 12 24 47.8 -0.9
comp=Z,235nm,0.6s
PYUN Piuthan 47.86 304 *e*P P 12 24 52.4 -0.4
comp=Z,200nm,0.8s
HYB Hyderabad 49.00 289 *i* P P 12 25 00.0 -1.4
ZAK Zakamensk 49.94 340 *e*P P 12 25 08.0 -0.2
ZAK pmax pmax
comp=Z,8.0nm,1.4s
MOO Moorlands 50.14 160 P P 12 25 14.7 +5.1
baz=50,SNR=5.2
TLY Talaya 50.94 342 *e*P P 12 25 15.1 -0.5
TLY pmax pmax
comp=Z,30nm,1.0s
TLY MLR MLR
comp=Z,681nm,23.0s
TLY Talaya 50.94 342 P P 12 25 16.4 +0.8
comp=Z,150nm,0.8s,SNR=13
IRK Irkutsk 51.24 342 *e*P P 12 25 18.6 +0.8
IRK pmax pmax
comp=Z,46nm,2.1s
MOY Mondy 51.80 340 *e*P P 12 25 22.9 +0.7
MOY pmax pmax
comp=Z,42nm,2.6s
WMQ Urumqi 52.25 325 P P 12 25 26.0 +0.4
WMQ pP pP 12 25 45.0 +2.4
WMQ sP sP 12 25 54.0 +3.8
WMQ PcP **PcP 12 26 37.0 +0.8**
WMQ PP **PP 12 27 26.0 +1.3**
WMQ ScP **ScP 12 30 26.0 -1.7**
WMQ S **S 12 32 43.0 -2.8**
WMQ sS sS 12 33 16.0 +1.3
WMQ ScS **ScS 12 35 06.0 -3.6**
WMQ SS **SS 12 36 20.0 -4.2**
WMQ pmax pmax
comp=Z,32nm,1.0s
WMQ pmax pmax
comp=Z,120nm,5.0s
WMQ LR LR
comp=N,1μm,17.0s
WMQ LR LR
comp=E,980nm,17.0s
WMQ LR LR
comp=Z,1μm,17.0s
CLNS Chul'man 52.33 359 *e*P P 12 25 25.1 -0.7
CLNS *e**PP **pP 12 25 43.1 +0.2**
CLNS *e* 12 26 34.3
CLNS *e* 12 27 26.4
CLNS *e*PPP PPP 12 28 29.5
CLNS *e*S **S 12 32 45.4 -0.9**
CLNS pmax pmax
comp=E,3.0nm,0.7s
CLNS pmax pmax
comp=Z,14nm,1.0s
CLNS pmax pmax
comp=N,13nm,1.0s
CLNS pmax pmax
comp=E,3.0nm,0.8s
CLNS pmax pmax
comp=N,9.0nm,0.9s
CLNS pmax pmax
comp=Z,4.0nm,1.0s
CLNS smax smax
comp=E,172nm,12.0s
CLNS smax smax
comp=N,116nm,12.0s
CLNS MLR MLR
comp=E,130nm,14.0s
CLNS MLR MLR
comp=Z,149nm,13.0s
CLNS MLR MLR
comp=E,222nm,13.0s
NDI New Delhi 52.85 303 *e*P P 12 25 26.5 -3.7
POO Poona 53.59 290 *e*P **P 12 25 34.0 -1.8**
PEA0B Petropavlovsk- 54.78 22 *e*P **P 12 25 44.3 +0.5**
PETK Petropavlovsk- 54.78 22 P P **12 25 43.8 -0.1**
PETK Petropavlovsk- 54.78 22 P P **12 25 43.8 -0.1**
PETK Petropavlovsk- 54.78 22 P P **12 25 43.8 -0.1**
comp=E,11nm,0.6s,baz=185,slow=5.1,SNR=37
PETK LR LR 12 45 42.2
comp=E,274nm,21.8s,baz=214,slow=32
PET Petropavlovsk 55.09 23 *e*P **P 12 25 45.9 -0.1**
PET *e*S **S 12 33 27.7 +4.1**
PET MLR MLR
comp=Z,200nm,20.0s
MSVF Nonsavu 55.09 115 *e*P **P 12 25 46.7 -0.1**
MSVF pmax pmax
comp=Z,32nm,1.0s
MSVF Nonsavu 55.09 115 *e*P **P 12 25 46.7 -0.1**
comp=Z,32nm,1.0s
MK31 Makanchi Array 57.08 325 *i* P **P 12 25 59.8 -0.6**
MK31 pmax pmax
comp=Z,16nm,0.5s
MK31 Makanchi Array 57.08 325 *e*P **P 12 26 00.3 -0.2**
MKAR Makanchi Array 57.08 325 P **P 12 25 59.9 -0.5**
MKAR Makanchi Array 57.08 325 P **P 12 25 59.9 -0.5**
MKAR Makanchi Array 57.08 325 P **P 12 25 59.9 -0.5**
comp=Z,16nm,0.8s,baz=122,slow=8.0,SNR=86
MKAR LR LR 12 51 30.2
comp=Z,817nm,20.1s,baz=114,slow=37
YAK Yakutsk 57.55 2 *e*P **P 12 26 02.9 -0.5**
YAK *e* 12 28 16.5
YAK *e*S **S 12 33 55.4 -0.6**
YAK pmax pmax
comp=Z,32nm,0.9s
YAK pmax pmax
comp=N,11nm,1.2s
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=Z,15nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.3s

YAK pmax pmax
comp=E,12nm,1.2s
YAK smax smax
comp=N,133nm,4.7s
YAK smax smax
comp=E,234nm,5.1s
YAK MLR MLR
comp=N,225nm,19.0s
YAK MLR MLR
comp=Z,304nm,19.0s
YAK MLR MLR
comp=E,251nm,23.0s
KSH Kashi 57.66 315 P **P** **12 26 05.8 +1.0**
KSH pP pP 12 26 25.3 +3.2
KSH sP sP 12 26 34.0 +4.4
KSH PcP **PcP** **12 26 57.3 +0.1**
KSH PP **PP** **12 28 15.8 +2.5**
KSH ScP **ScP** **12 30 49.4 -2.2**
KSH PcS **PcS** **12 30 57.9 -0.7**
KSH S **S** **12 33 56.0 -2.5**
KSH sS sS 12 34 31.0 +3.2
KSH ScS **ScS** **12 35 43.8 -4.8**
KSH SS **SS** **12 37 50.6 +0.9**
KSH pmax pmax
comp=Z,7.0nm,0.4s
KSH LR LR
comp=N,400nm,4.7s
KSH LR LR
comp=E,680nm,13.1s
KSH LR LR
comp=Z,450nm,9.1s
KRAR Krasnoyarsk 58.17 338⇓*i* P **P** **12 26 08.6 +0.7**
KRAR pmax pmax
comp=Z,21nm,0.5s
ULHL Ulahol 58.61 318 P **P** **12 26 11.7 +0.2**
SNR=5.9
KZA Kyzart 59.20 317 P **P** **12 26 16.4 +0.5**
SNR=22
TKM2 Tokmak 2 59.33 318 *i* P **P** **12 26 16.3 -0.1**
TKM2 Tokmak 2 59.33 318 P **P** **12 26 16.4 -0.1**
SNR=15
AAK Ala-Archa 59.94 318 *e*P **P** **12 26 20.3 -0.3**
AAK pmax pmax
comp=Z,13nm,0.8s
AAK Ala-Archa 59.94 318 *e*P **P** **12 26 20.3 -0.3**
comp=Z,13nm,0.8s
AAK Ala-Archa 59.94 318 P **P** **12 26 21.0 +0.4**
SNR=11
AAK Ala-Archa 59.94 318 P **P** **12 26 20.0 -0.6**
comp=Z,39nm,1.1s,SNR=6.5
AAK Ala-Archa 59.94 318 P **P** **12 26 20.6 0.0**
comp=Z,4.7nm,0.8s,baz=115,slow=6.5,SNR=9.4
AAK LR LR 12 56 02.0
comp=Z,566nm,21.7s,baz=84,slow=40
FRU Bishkek 59.94 318 *e*P **P** **12 26 21.5 +1.0**
FRU *e* 12 26 36.0
ZAA0 Zalesovo Array 60.05 333 *e*P **P** **12 26 20.6 -0.3**
ZALV Zalesovo Beam 60.05 333 P **P** **12 26 20.6 -0.3**
ZALV Zalesovo Beam 60.05 333 P **P** **12 26 20.6 -0.3**
ZALV Zalesovo Beam 60.05 333 P **P** **12 26 20.6 -0.3**
comp=Z,9.2nm,0.5s,baz=130,slow=7.0,SNR=7.7
ZALV LR LR 12 55 35.0
comp=Z,212nm,20.2s,baz=131,slow=39
USP Ospenovka 60.20 318 P **P** **12 26 22.0 -0.3**
SNR=20
AML Almayashu 60.28 317 P **P** **12 26 23.5 +0.3**
SNR=25
EKS2 Erkin-Say 60.44 317 *e*P **P** **12 26 24.1 +0.1**
EKS2 Erkin-Say 60.44 317 *e*P **P** **12 26 24.1 +0.1**
EKS2 Erkin-Say 60.44 317 P **P** **12 26 24.2 +0.3**
SNR=8.7
KBL Kabul 61.21 307 *e*P **P** **12 26 28.7 -0.8**
KBL pmax pmax
comp=Z,30nm,0.8s
KBL Kabul 61.21 307 *e*P **P** **12 26 28.7 -0.8**
comp=Z,30nm,0.8s
KURBB Kurchatov Arra 61.25 327 P **P** **12 26 28.7 -0.4**
comp=Z,28nm,0.9s,baz=124,slow=6.2,SNR=181
KURBB LR LR 12 55 05.2
comp=Z,330nm,21.5s,baz=95,slow=38
KURK Kurchatov 61.25 327*c i*P **P** **12 26 28.8 -0.3**
KURK pmax pmax
comp=Z,42nm,1.0s
KURK Kurchatov 61.25 327 *e*P **P** **12 26 28.7 -0.4**
comp=Z,46nm,0.6s
KURK Kurchatov 61.25 327 P **P** **12 26 29.2 +0.1**
SNR=24
KURK Kurchatov 61.25 327 P **P** **12 26 28.4 -0.7**
comp=Z,494nm,0.5s,SNR=39
NVS Novosibirsk 61.34 333 *e*P **P** **12 26 27.7 -1.9**
NVS *e*S **S** **12 34 42.8 -2.2**
NVS *e* 12 36 11.5
NVS pmax pmax
comp=Z,56nm,1.4s
NVS pmax pmax
comp=N,43nm,1.9s
NVS pmax pmax
comp=E,41nm,1.7s
NVS smax smax
comp=E,38nm,2.3s
NVS smax smax
comp=N,39nm,3.1s
SEY Seymchan 61.37 13*ce*P **P** **12 26 32.2 +2.5**
FX1 Attu Island--F 61.46 30 *e*P **P** **12 26 30.4 -0.2**
FX1 Attu Island--F 61.46 30 P **P** **12 26 30.0 -0.5**
comp=N,14nm,0.6s,baz=326,slow=13,SNR=13
RPZ Rata Peaks 62.24 145 *e*P **P** **12 26 36.5 +0.6**
comp=N,34nm,1.0s
RPZ Rata Peaks 62.24 145 P **P** **12 26 36.6 +0.8**
comp=N,16nm,0.7s,baz=225,slow=5.7,SNR=9.1
KK31 Karatay Array 62.83 317 *i* P **P** **12 26 39.4 -0.5**
KK31 pmax pmax
comp=Z,7.0nm,0.5s
KKAR Karatay Array 62.83 317 *e*P **P** **12 26 39.5 -0.4**
KKAR pmax pmax
comp=Z,13nm,0.7s
KKAR Karatay Array 62.83 317 *e*P **P** **12 26 39.5 -0.4**
comp=Z,13nm,0.7s
URZ Urewera 62.95 137 *e*P **P** **12 26 38.9 -1.8**
comp=Z,43nm,1.3s
BVA0 Borovoye Array 66.83 327 *i* P **P** **12 27 05.7 0.0**
BVA0 pmax pmax
comp=Z,7.0nm,1.1s
BVAR Borovoye Array 66.83 327 P **P** **12 27 05.3 -0.4**
BVAR Borovoye Array 66.83 327 P **P** **12 27 05.3 -0.4**
BVAR Borovoye Array 66.83 327 P **P** **12 27 05.3 -0.4**
comp=Z,23nm,0.9s,baz=120,slow=8.5,SNR=76
BVAR LR LR 13 01 27.9
comp=Z,261nm,19.9s,baz=351,slow=41
BRVK Borovoye 66.90 327*c i*P **P** **12 27 06.1 0.0**
BRVK pmax pmax
comp=Z,40nm,1.0s
BRVK Borovoye 66.90 327 *e*P **P** **12 27 06.0 -0.2**
comp=Z,47nm,0.8s
BRVK Borovoye 66.90 327 P **P** **12 27 06.3 +0.2**
SNR=21
BRVK Borovoye 66.90 327 P **P** **12 27 06.8 +0.7**
comp=Z,344nm,0.9s,SNR=17
IDAH Dahanechah 68.30 303 *e*P **P** **12 27 15.9 +0.2**
IMYA Miami 68.72 307 *e*P **P** **12 27 19.0 +0.8**
BILL Bilibino 68.89 15⇓*i*P **P** **12 27 20.5 +2.1**
BILL *i* 12 27 35.1
BILL *e* 12 27 44.4
BILL *e* 12 29 54.0
BILL *i* S **S** **12 36 18.8 +1.5**
BILL pmax pmax
comp=Z,10.0nm,1.4s
BILL Bilibino 68.89 15 *e*P **P** **12 27 17.9 -0.4**
comp=Z,20nm,1.2s
IKOO Kooshah 68.98 303 *e*P **P** **12 27 19.9 0.0**
ISRO Mashad 69.22 307 *e*P **P** **12 27 21.1 -0.1**
ITEG Tejag 69.26 303 *e*P **P** **12 27 21.6 0.0**
IMOG Moghan 69.29 307 *e*P **P** **12 27 22.4 +0.5**
IAKL Akhelmad 69.84 307 *e*P P 12 27 17.9 -7.3
IKRD Kardeh 70.06 307 *e*P P 12 27 23.0 -3.5
ISHV Shirvan 70.83 308 *e*P **P** **12 27 29.9 -1.2**
NIKO Nikolski 71.22 35 *e*P **P** **12 27 33.1 +0.3**
CASY Casey 71.48 187 *e*P **P** **12 27 34.7 +0.6**
comp=Z,30nm,0.8s
AB31 Akbulak array 71.71 321 *i* P **P** **12 27 35.5 -0.4**
AB31 pmax pmax
comp=Z,4.0nm,0.4s
ABKAR Akbulak array 71.71 321 *e*P **P** **12 27 35.5 -0.5**
IBAF Bafgh 71.77 302 *e*P **P** **12 27 36.2 -0.7**
UNV Unalaska Valle 72.83 35 *e*P **P** **12 27 42.9 +0.4**
comp=Z,35nm,0.5s
AKTO Aktyubinsk 73.21 321 P **P** **12 27 44.8 -0.1**
AKTO Aktyubinsk 73.21 321 P **P** **12 27 44.8 -0.1**
AKTO Aktyubinsk 73.21 321 P **P** **12 27 44.8 -0.1**
baz=111,slow=5.3,SNR=54
AKUT Akutan 73.32 35 *e*P **P** **12 27 45.2 -0.1**
comp=Z,50nm,0.5s
SVE Sverdlovsk 73.46 328*d i*P **P** **12 27 46.4 +0.2**
SVE *e*S S 12 37 02.2 -8.2
SVE pmax pmax
comp=Z,75nm,1.0s
SVE MLR MLR
comp=Z,485nm,22.0s
IANJ Anjilo 73.56 306 *e*P **P** **12 27 47.4 -0.2**
ISRV Sarvestan 73.68 299 *e*P **P** **12 27 48.1 -0.3**
GAMB Gambell 73.76 24 *e*P **P** **12 27 46.9 -0.8**
comp=Z,14nm,0.8s
ARU Arti 74.44 328*c i*P **P** **12 27 51.4 -0.5**
ARU 12 30 36.8
ARU S **S** **12 37 26.3 +4.8**
ARU SS **SS** **12 42 08.9 -0.1**
ARU pmax pmax
comp=Z,70nm,1.0s
ARU Arti 74.44 328 P **P** **12 27 51.4 -0.5**
comp=Z,356nm,0.8s,SNR=17
MIR Mirnyy 74.82 193⇑*i*P **P** **12 27 55.3 +1.5**
MIR *i* 12 28 03.5
MIR pmax pmax
comp=Z,42nm,1.0s
IVRN Varamin 75.30 305 *e*P **P** **12 27 57.2 -0.2**
TNA Tin City 75.95 23 *e*P **P** **12 28 01.0 +0.7**
comp=Z,24nm,1.7s
SOKR Solikamsk 76.19 330 *e*P **P** **12 28 02.2 +0.4**
SOKR pmax pmax
comp=Z,20nm,0.9s
IMHD Mahdasht 76.22 306 *e*P **P** **12 28 02.8 +0.1**
KBD Kabd 78.40 299 *e*P **P** **12 28 13.4 -1.4**
KBD AMb AMB 12 28 14.6
comp=Z,24nm,0.9s
RDF Al-Radifah 78.52 298 *e*P **P** **12 28 14.1 -1.5**
RDF AMb AMB 12 28 18.1
comp=Z,58nm,1.2s
MIB Mutribah 78.72 299 *e*P **P** **12 28 15.4 -1.2**
MIB AMb AMB 12 28 17.6
comp=Z,94nm,0.9s
NAY Al-Naaiem 78.79 299 *e*P **P** **12 28 15.6 -1.5**
NAY AMb AMB 12 28 17.5
comp=Z,33nm,0.9s
MAK Makhachkala 79.22 313 P **P** **12 28 18.1 -0.9**
MAK *e*S **S** **12 38 10.8 -3.2**
MAK *e* 12 38 33.0
MAK pmax pmax
comp=Z,30nm,0.3s
MAK MLR MLR
comp=Z,342nm,12.0s
IDHR Dehrash 79.67 304 *e*P **P** **12 28 20.5 -1.5**
DGRG David-gareji 80.71 311 P **P** **12 28 27.9 +0.6**
OHAK Old Harbor 80.85 33 *e*P **P** **12 28 27.4 -0.2**
comp=Z,17nm,0.7s
GNI Garni 81.14 310 LR LR 13 11 42.3
comp=Z,118nm,20.5s,baz=240,slow=41
TBLG Delisi 81.20 311 *e*P **P** **12 28 28.7 -1.1**
TBLG Delisi 81.20 311 P **P** **12 28 28.7 -1.1**
KDAK Kodiak Island 81.28 32 *e*P **P** **12 28 30.8 +0.9**
KDAK Kodiak Island 81.28 32 P **P** **12 28 30.9 +1.1**
comp=Z,196nm,0.5s,SNR=13
KDAK Kodiak Island 81.28 32 P **P** **12 28 30.0 +0.2**
comp=Z,22nm,0.6s,baz=280,slow=4.6,SNR=45
BHD Baghdad 81.31 303 *ex* P **12 28 28.0 -2.5**
BHD *ex* **S** **12 38 41.3 +5.0**
OPO Ambohidratompo 81.61 251 LR LR 13 01 19.4
comp=Z,391nm,19.9s,baz=158,slow=33
ABPO Ambohimpanom 81.63 250 *e*P **P** **12 28 30.9 -1.8**
ABPO pmax pmax
comp=Z,16nm,0.7s
ABPO Ambohimpanom 81.63 250 *e*P **P** **12 28 30.9 -1.8**
comp=Z,16nm,0.7s
ZEI Tsey 81.85 312⇓*i*P **P** **12 28 34.2 +0.7**
ZEI pmax pmax
comp=Z,18nm,1.0s
PPLA Purkeypile 82.00 27 *e*P **P** **12 28 33.6 -0.2**
comp=Z,8.4nm,0.5s
AKH Akhalkalaki 82.12 311 P **P** **12 28 36.0 +1.1**
KBZ Khabaz 82.61 313 P **P** **12 28 37.2 +0.1**
KBZ Khabaz 82.61 313 P **P** **12 28 37.2 +0.1**
KBZ Khabaz 82.61 313 P **P** **12 28 37.2 +0.1**
comp=Z,11nm,1.0s,baz=100,slow=6.1,SNR=12
KBZ LR LR 13 13 07.4
comp=Z,212nm,18.7s,baz=242,slow=41
KIV Kislovodsk 82.76 314*d i*P **P** **12 28 39.7 +1.6**
KIV *e*S **S** **12 38 53.9 +2.8**
KIV pmax pmax
comp=Z,28nm,1.3s
KIV MLR MLR
comp=Z,400nm,22.0s
TRF Thorofare Moun 82.91 27 *e*P **P** **12 28 37.6 -0.9**
comp=Z,26nm,1.1s
COLD Coldfoot 83.25 23 *e*P **P** **12 28 40.5 +0.5**
comp=Z,10nm,0.6s
ATD Arta Tunnel 83.26 281 LR LR 13 04 25.6
comp=Z,124nm,21.5s,baz=342,slow=35
MCK McKinley 83.53 26 *e*P **P** **12 28 41.0 -0.5**
MCK pmax pmax
comp=Z,59nm,1.1s
MCK McKinley 83.53 26 *e*P **P** **12 28 41.0 -0.5**
comp=Z,59nm,1.1s
VRHR Novokhopersk 83.60 321 *e*P **P** **12 28 41.3 -0.8**
VRHR *e* 12 38 54.4
VRHR pmax pmax
comp=E,20nm,0.9s
VRHR pmax pmax
comp=Z,60nm,0.9s
VRHR pmax pmax
comp=N,5.0nm,0.4s
COLA College 84.06 25 *e*P **P** **12 28 44.0 -0.1**
COLA pmax pmax
comp=Z,9.0nm,0.8s
COLA College 84.06 25 *e*P **P** **12 28 44.0 -0.1**
comp=Z,9.0nm,0.8s
VNDA Vanda 84.06 173 *e*P **P** **12 28 44.3 +0.4**
VNDA Vanda 84.06 173 P **P** **12 28 44.0 +0.1**
comp=Z,8.3nm,0.9s,baz=316,slow=7.1,SNR=16
VNDA LR LR 13 06 03.5
comp=Z,337nm,18.8s,baz=346,slow=36
MAW Mawson 84.40 200 P **P** **12 28 46.6 +0.9**
MAW Mawson 84.40 200 P **P** **12 28 46.6 +0.9**
comp=Z,4.5nm,0.8s,baz=94,slow=21,SNR=4.5
ILAR Eielson Array 84.47 25 P **P** **12 28 45.2 -1.0**
ILAR Eielson Array 84.47 25 P **P** **12 28 45.2 -1.0**
comp=Z,3.6nm,0.5s,baz=250,slow=5.6,SNR=111
ILAR LR LR 13 03 59.9
comp=Z,202nm,21.3s,baz=77,slow=34
SOC Sochi 84.92 313*c i*P **P** **12 28 47.5 -1.4**
SOC *e**SP pP 12 29 01.4 -5.9
SOC *e* 12 32 13.3
SOC *e*S S 12 39 06.9 -5.6
SOC *e*SS **SS** **12 44 46.5 +0.2**
SOC pmax pmax
comp=Z,27nm,0.7s
PAX Paxson 85.07 27 *e*P **P** **12 28 49.6 +0.2**
PAX pmax pmax
comp=Z,7.0nm,0.6s
PAX Paxson 85.07 27 *e*P **P** **12 28 49.6 +0.2**
comp=Z,7.2nm,0.6s
VSR Storozhevoye 85.15 321 *e*P **P** **12 28 49.3 -0.6**
VSR *e* 12 39 09.2
VSR pmax pmax
comp=N,7.0nm,0.7s
VSR pmax pmax
comp=E,20nm,0.7s
VSR pmax pmax
comp=Z,60nm,0.7s
PPT Papeete 85.22 108 LR LR 13 00 23.3
comp=Z,454nm,20.5s,baz=313,slow=31
PPT2 Papeete2 85.22 108 *e*S **S** **12 39 18.6 +2.0**
comp=Z,189nm,27.5s
PPT2 *e*LR LR 12 55 41.7
comp=Z,2µm,29.5s,baz=274
BMRM Bremner River 85.50 29 *e*P **P** **12 28 52.0 +0.5**
comp=Z,34nm,1.0s
TMCR Tamitsa 85.56 334 *e*P **P** **12 28 52.9 +1.3**
TMCR pmax pmax
comp=Z,46nm,0.8s
DOT Dot Lake 85.70 27 *e*P **P** **12 28 52.4 0.0**
comp=Z,7.5nm,0.8s
TBI Tubuai 85.95 114 *e*S **S** **12 39 25.0 +1.6**
comp=Z,438nm,32.2s
TBI *e*LR LR 12 56 04.5
comp=Z,2µm,29.0s,baz=292
MOS Moscow 85.96 325 *e*P **P** **12 28 53.1 -0.7**
MOS *e* 12 32 13.3
MOS *e* 12 39 13.1
MOS *i* 12 39 22.7
MOS pmax pmax
comp=Z,132nm,0.9s
MALT Malatya 86.06 308 *e*P **P** **12 28 55.1 +0.2**
MALT pmax pmax
comp=Z,22nm,1.0s
MALT Malatya 86.06 308 *e*P **P** **12 28 55.1 +0.2**
comp=Z,22nm,1.0s
MALT Malatya 86.06 308⇓*i*P **P** **12 28 56.7 +1.8**
ANN Anapa 86.52 315 *e*P **P** **12 28 55.5 -1.3**
ANN *e*S S 12 39 18.1 -10
ANN pmax pmax
comp=Z,156nm,1.1s
OBN Obninsk 86.59 325⇓*i*P **P** **12 28 57.7 +0.8**
OBN *e*S S 12 39 19.1 -9.3
OBN pmax pmax
comp=Z,115nm,1.0s
OBN MLR MLR
comp=Z,400nm,21.0s
EGAK Eagle 86.92 25 *e*P **P** **12 28 58.0 -0.4**
comp=Z,5.1nm,0.8s
APA Apatity 87.29 337⇑*e*P P 12 29 04.0 +3.9
JOF Joensuu 88.64 333 *e*P **P** **12 29 05.1 -1.5**
JOF pmax pmax
comp=Z,12nm,0.6s
JOF Joensuu 88.64 333 *ep* P **12 29 05.1 -1.5**
comp=Z,12nm,0.6s
KEV Kevo 89.31 340 *e*P **P** **12 29 10.3 +0.7**
KEV pmax pmax
comp=Z,6.0nm,0.6s
KEV Kevo 89.31 340 *ep* P **12 29 10.3 +0.7**
comp=Z,6.0nm,0.6s
INK Inuvik 89.52 22 P P **12 29 10.1 -0.5**
INK Inuvik 89.52 22 P P **12 29 10.1 -0.5**
comp=Z,2.4nm,0.6s,baz=302,slow=4.2,SNR=9.0
KMBO Kilima Mbogo 89.67 269 *e*P **P** **12 29 13.1 +0.3**
comp=Z,17nm,1.3s
KMBO Kilima Mbogo 89.67 269 P **P** **12 29 13.1 +0.3**
comp=Z,11nm,0.9s,baz=56,slow=7.1,SNR=19
KMBO LR LR 13 09 10.6
comp=Z,141nm,20.1s,baz=96,slow=36
KMBO Kilima Mbogo 89.67 269 P **P** **12 29 13.8 +1.0**
baz=90,SNR=4.7
BR131 Keskin Array S 89.69 310 *e*P **P** **12 29 11.7 -0.6**
comp=Z,15nm,0.9s
BRTR Keskin Array B 89.69 310 P **P** **12 29 11.4 -0.8**
BRTR Keskin Array B 89.69 310 P **P** **12 29 11.4 -0.8**
comp=Z,18nm,0.9s,baz=119,slow=5.1,SNR=54
BRTR LR LR 13 18 25.6
comp=Z,94nm,20.3s,baz=220,slow=42
ARCES ARCESS Array B 89.87 340 P **P** **12 29 11.7 -0.6**
ARCES ARCESS Array B 89.87 340 P **P** **12 29 11.7 -0.6**
comp=Z,8.7nm,0.7s,baz=79,slow=5.7,SNR=19
ARCES LR LR 13 11 25.1
comp=Z,460nm,18.4s,baz=86,slow=37
SKAG Skagway 90.23 30 *e*P **P** **12 29 14.2 +0.1**
comp=Z,6.6nm,1.0s
KAF Kangasniemi 91.07 332 *e*P **P** **12 29 16.8 -1.1**
KAF pmax pmax
comp=Z,7.0nm,0.6s
KAF Kangasniemi 91.07 332 *ep* P **12 29 16.8 -1.1**
comp=Z,7.4nm,0.6s
FINES FINESS Array B 91.31 332 P **P** **12 29 18.4 -0.6**
FINES FINESS Array B 91.31 332 P **P** **12 29 18.4 -0.6**
comp=Z,4.6nm,0.6s,baz=64,slow=6.5,SNR=12
FINES LR LR 13 13 52.8
comp=Z,415nm,20.5s,baz=65,slow=38
AKASG Malin Array Be 91.45 321 P **P** **12 29 19.1 -0.9**
AKASG Malin Array Be 91.45 321 P **P** **12 29 19.1 -0.9**
AKASG Malin Array Be 91.45 321 P **P** **12 29 19.1 -0.9**
comp=Z,4.3nm,0.7s,baz=71,slow=4.1,SNR=13
AKASG LR LR 13 16 56.7
comp=Z,274nm,20.5s,baz=80,slow=40
AK01 Malin Array Si 91.46 321 *e*P **P** **12 29 19.4 -0.6**
AK02 Malin Array Si 91.47 321 *e*P **P** **12 29 19.5 -0.6**
MICGM Minsk 91.65 325 *e* P **12 29 21.0 +0.2**
MNK Minsk 91.68 325 *e*P **P** **12 29 21.0 +0.1**
NACGM Naroch 92.21 325 *e* P **12 29 22.0 -1.4**
TLCR 92.56 315⇑*i*P **P** **12 29 25.6 +0.4**
CFR Carcaliu 93.03 316⇓*i*P **P** **12 29 27.3 -0.1**
SYO Syowa Base 93.07 201⇓*e*P **P** **12 29 27.4 +0.4**
GRER 93.81 316⇑*i*P **P** **12 29 32.4 +1.4**
TESR 93.83 317⇓*i*P **P** **12 29 31.5 +0.4**
VRI Vrincioaia 93.89 316⇑*i*P **P** **12 29 32.5 +1.1**
PLOR Plostina 93.95 316⇑*i*P **P** **12 29 32.6 +0.9**
QSPA South Pole Qui 94.29 180 *e*P **P** **12 29 33.7 +0.9**
comp=Z,15nm,1.1s
MLR Muntele Rosu 94.50 316⇑*i*P **P** **12 29 34.5 +0.1**
BURAR Bucovina Array 94.58 318⇑*i*P **P** **12 29 35.2 +0.5**
BUR08 Bucovina Ar. S 94.59 318 *e*P **P** **12 29 35.2 +0.5**
DOP5 Dropca 94.79 317⇓*i*P **P** **12 29 36.2 +0.9**
HUMR Humele 95.36 315⇓*i*P **P** **12 29 38.2 +0.1**
KWP Kalwaria Pacla 95.77 321 *e*P **P** **12 29 39.9 0.0**
KWP pmax pmax
comp=Z,7.0nm,0.8s
KWP Kalwaria Pacla 95.77 321 *e*P **P** **12 29 39.9 0.0**
comp=Z,6.8nm,0.8s
KWP Kalwaria Pacla 95.77 321⇓*i*P **P** **12 29 40.5 +0.6**
LOT Lotru 96.01 316⇑*i*P **P** **12 29 42.0 +0.8**
KOLS Kolonicke sedl 96.21 320 *e*P **P** **12 29 44.2 +2.3**
KOLS *e* 12 29 58.9
KOLS Kolonicke sedl 96.21 320 *e*P **P** **12 29 44.2 +2.3**
KOLS *ep*P **pP** **12 29 58.9 -1.6**
TRPA Tarpa 96.23 319⇓*i*P **P** **12 29 42.7 +0.7**
UZH Uzhgorod 96.27 320 *e*P **P** **12 29 42.7 +0.5**
UZH *e* 12 29 56.5
DRGR 96.43 318⇓*i*P **P** **12 29 44.2 +1.1**
DEV Deva 96.51 317⇓*i*P **P** **12 29 44.4 +1.1**
GZR Gura Zlata 96.70 317⇑*i*P **P** **12 29 44.5 +0.2**
CRVS Cervenica-Dubn 96.74 320 *e*P **P** **12 29 44.9 +0.6**
CRVS *e* 12 29 51.1
CRVS pmax pmax
comp=Z,18nm,1.1s
CRVS Cervenica-Dubn 96.74 320 *e*P **P** **12 29 44.9 +0.6**
CRVS *e* 12 29 51.1
VTS Vitosha 97.02 314⇑*i*P **P** **12 29 45.8 -0.1**
RES Resolute Bay 97.15 10 P Pdif 12 29 46.3 +0.6
RES Resolute Bay 97.15 10 P Pdif 12 29 46.3 +0.6
comp=Z,1.8nm,0.8s,baz=304,slow=6.3,SNR=11
BZS Buzias 97.44 317⇑*i*P **P** **12 29 45.2 -2.4**
VAY Valandovo 97.76 313 *e*P **P** **12 29 47.7 -1.4**
PSZ Piszkesteto 98.00 319⇑*i*P Pdif 12 29 52.7 +2.5
NB2 NORSAR Subarra 98.25 334 P **P** **12 29 49.2 -1.7**
comp=Z,3.3nm,0.8s,baz=66,slow=4.6
NOA NORSAR Array B 98.25 334 P **P** **12 29 49.1 -1.8**
NOA NORSAR Array B 98.25 334 P **P** **12 29 49.1 -1.8**
comp=Z,2.3nm,0.8s,baz=66,slow=4.5,SNR=7.6
NOA LR LR 13 20 37.0
comp=Z,278nm,20.7s,baz=60,slow=39
VYHS Vyhne 98.52 320 *e*P Pdif 12 29 52.7 +0.3
VYHS Vyhne 98.52 320 P PDIF Pdif 12 29 52.7 +0.3
VYHS *e* 12 30 12.7
VYHS *e* 12 30 17.9
YKA Yellowknife Ar 98.86 24 P **P** **12 29 52.8 -0.8**
YKA PKKPbc **PKKPbc** **12 46 19.6 -3.5**
YKA Yellowknife Ar 98.86 24 P **P** **12 29 52.7 -0.8**
comp=Z,0.8nm,0.7s,baz=297,slow=4.2,SNR=13
YKA PKKPbc **PKKPbc** **12 46 19.5 -3.5**
comp=Z,0.2nm,0.7s,baz=117,slow=2.3,SNR=3.9
MORC Moravsky Berou 98.96 322⇓*i*P Pdif 12 29 54.1 -0.2
RKT Rikitea 99.23 113 *e*LR LR 13 02 13.3
comp=Z,1µm,34.0s
LSZ Lusaka 99.47 255 *e*P **Pdif** **12 29 56.5 -1.0**
comp=Z,3.2nm,0.8s
DPC Dobruska-Polom 99.53 323 *e*P **Pdif** **12 29 58.3 +1.4**
DPC MLR MLR
comp=Z,500nm,20.3s
DPC Dobruska-Polom 99.53 323 *e*PDIFF **Pdif** **12 29 58.3 +1.4**
DPC AMS AMS 13 18 20.0
comp=Z,500nm,20.3s
VRAC Vranov 99.69 321⇑*i*P **Pdif** **12 29 57.0 -0.6**
TREC Trest 100.38 322 AMS AMS 13 22 50.0
comp=Z,300nm,22.2s
PVCC Panska Ves 100.52 323 AMS AMS 13 17 30.0
comp=Z,500nm,19.1s
PRU Pruhonice 100.73 323 AMS AMS 13 19 30.0
comp=Z,400nm,18.7s

BRG	**Berggiesshubel**	**100.78**	**324**	*e*P		**Pdif**	**12 30 02.5**	**+0.1**
	comp=Z,5.0nm,0.7s							
BRG								
	comp=N,427nm,21.3s							
BRG								
	comp=E,334nm,19.7s							
BRG								
	comp=Z,456nm,18.2s							
CLL	**Collm**	**101.17**	**324**	*e*SKSac		**SKSac**	**12 40 35.0**	**-2.6**
CLL				*e*Sdif		**Sdif**	**12 41 38.0**	**+0.1**
CLL				*e*PS		**PS**	**12 43 24.0**	**+6.7**
CLL				*e*SS		SS	12 49 12.0	+34
CLL				*e*(SSS)			12 53 12.0	
CLL				*e*SSSS			12 55 48.0	
CLL				LmV			13 19 00.0	
	comp=Z,300nm,21.7s							
KHC	**Kasperske Hory**	**101.61**	**322**	*e*P		**Pdif**	**12 30 00.0**	**-6.2**
KHC	**Kasperske Hory**	**101.61**	**322**	*e*PDIFF		**Pdif**	**12 30 00.0**	**-6.2**
KHC				*e*sP			12 30 27.0	
GERES	**GERESS Array B**	**101.64**	**322**	P		**Pdif**	**12 30 06.7**	**+0.3**
GERES	**GERESS Array B**	**101.64**	**322**	P		**Pdif**	**12 30 06.7**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=54,slow=5.0,SNR=8.2							
NKC	**Novy Kostel**	**101.90**	**323**	AMS		AMS	13 18 20.0	
	comp=Z,400nm,18.1s							
NVAR	**Mina Array Bea**	**106.39**	**48**	PKKPbc		PKKPbc	12 46 00.5	0.0
NVAR	**Mina Array Bea**	**106.39**	**48**	PKKPbc		PKKPbc	12 46 00.5	0.0
	comp=Z,0.7nm,0.7s,baz=104,slow=2.9,SNR=5.9							
PDAR	**Pinedale Array**	**110.79**	**41**	PKKPbc		PKKPbc	12 45 45.2	-1.4
PDAR	**Pinedale Array**	**110.79**	**41**	PKKPbc		PKKPbc	12 45 45.2	-1.4
	comp=Z,0.7nm,0.9s,baz=98,slow=4.6,SNR=3.5							
J22A	**Midwest**	**112.46**	**39**	⇑P		**PKiKP**	**12 34 50.5**	**+0.4**
	baz=112							
SCHQ	**Schefferville**	**119.91**	**9**	PKP		**PKPdf**	**12 35 05.3**	**+1.5**
SCHQ	**Schefferville**	**119.91**	**9**	PKP		**PKPdf**	**12 35 05.3**	**+1.5**
	comp=Z,4.8nm,0.7s,baz=337,slow=2.5,SNR=9.0							
526A	**Mary Lane Ranc**	**120.47**	**51**	⇓P		**PKPdf**	**12 35 06.4**	**+0.6**
	baz=120							
626A	**Big Bend Ranch**	**120.65**	**52**	⇓P		**PKPdf**	**12 35 07.2**	**+1.1**
	baz=121							
527A	**Woodward Ranch**	**120.80**	**51**	⇓P		**PKPdf**	**12 35 07.6**	**+1.1**
	baz=121							
328A	**Wristen Ranch,**	**120.85**	**49**	⇑P		**PKPdf**	**12 35 07.6**	**+1.2**
	baz=121							
TXAR	**Lajitas Array**	**121.11**	**52**	PKP		**PKPdf**	**12 35 08.6**	**+1.5**
TXAR				PKKPbc		**PKKPbc**	**12 45 08.1**	**-1.9**
TXAR	**Lajitas Array**	**121.11**	**52**	PKP		**PKPdf**	**12 35 08.6**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=232,slow=1.0,SNR=8.0							
TXAR				PKKPbc		**PKKPbc**	**12 45 08.1**	**-1.9**
	comp=Z,0.4nm,0.7s,baz=127,slow=5.8,SNR=4.6							
428A	**Kincaid Ranch,**	**121.25**	**50**	⇓P		**PKPdf**	**12 35 08.6**	**+1.3**
	baz=121							
627A	**Terlingua Ranc**	**121.28**	**52**	⇓P		**PKPdf**	**12 35 08.2**	**+0.9**
	baz=121							
529A	**Stev Forest Ra**	**121.88**	**50**	⇑P		**PKPdf**	**12 35 08.4**	**0.0**
	baz=122							
429A	**Davenport Banc**	**121.90**	**50**	⇓P		**PKPdf**	**12 35 09.4**	**+0.9**
	baz=122							
TOA0	**Torodi Ar. Sit**	**122.81**	**289**	*e*PKPdf		**PKPdf**	**12 35 10.8**	**+0.3**
TORD	**Torodi Ar. Bea**	**122.81**	**289**	PKP		**PKPdf**	**12 35 10.8**	**+0.4**
TORD				PKKPbc		**PKKPbc**	**12 45 02.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**122.81**	**289**	PKP		**PKPdf**	**12 35 10.8**	**+0.4**
	comp=Z,5.8nm,0.8s,baz=63,slow=1.3,SNR=42							
TORD				PKKPbc		**PKKPbc**	**12 45 02.9**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=266,slow=2.5,SNR=9.0							
431A	**Sonora**	**122.85**	**49**	⇑P		**PKPdf**	**12 35 10.0**	**-0.2**
	baz=123							
531A	**Rocksprings**	**123.14**	**50**	⇓P		**PKPdf**	**12 35 11.2**	**+0.3**
	baz=123							
JCT	**Junction City**	**123.55**	**49**	*e*PKIKP		**PKPdf**	**12 35 12.8**	**+1.2**
JCT	**Junction City**	**123.55**	**49**	*e*PKPdf		**PKPdf**	**12 35 12.8**	**+1.2**
MIAR	**Mount Ida**	**125.72**	**41**	*e*PKIKP		**PKPdf**	**12 35 17.8**	**+2.2**
MIAR	**Mount Ida**	**125.72**	**41**	*e*PKPdf		**PKPdf**	**12 35 17.8**	**+2.2**
PLCA	**Paso Flores**	**140.58**	**159**	PKP		**PKPdf**	**12 35 44.6**	**+1.3**
PLCA	**Paso Flores**	**140.58**	**159**	PKP		**PKPdf**	**12 35 44.6**	**+1.3**
	comp=Z,4.0nm,0.8s,baz=292,slow=1.3,SNR=6.9							
JTS	**JuntasAbangare**	**145.15**	**65**	*e*PKPbc		**PKPdf**	**12 35 52.8**	**+0.8**
TRQA	**Tornquist**	**145.53**	**168**	*e*PKPbc		**PKPab**	**12 35 52.6**	**+0.1**
CFAA	**Coronel Fontan**	**149.44**	**154**	PKPbc		**PKPbc**	**12 36 03.6**	**+0.3**
CFAA	**Coronel Fontan**	**149.44**	**154**	PKPbc		**PKPbc**	**12 36 03.6**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=200,slow=3.4,SNR=4.4							
LCO	**Las Campanas**	**150.39**	**148**	*e*PKPbc		**PKPbc**	**12 36 07.3**	**+1.3**
SDDR	**Presa de Saban**	**150.71**	**37**	*e*PKPbc		**PKPbc**	**12 36 07.8**	**+1.1**
ATAH	**Atahualpa**	**154.75**	**97**	PKPbc		**PKPbc**	**12 36 20.2**	**+4.0**
ATAH	**Atahualpa**	**154.75**	**97**	PKPbc		**PKPbc**	**12 36 20.2**	**+4.0**
	comp=Z,5.0nm,0.6s,baz=304,slow=3.6,SNR=4.4							
CPUP	**Villa Florida**	**157.82**	**170**	PKPab		**PKPab**	**12 36 43.7**	**+0.2**
CPUP	**Villa Florida**	**157.82**	**170**	PKPab		**PKPab**	**12 36 43.7**	**+0.2**
	comp=Z,4.5nm,0.8s,baz=272,slow=20,SNR=5.8							
LPAZ	**La Paz**	**161.14**	**130**	*e*PKPdf		**PKPdf**	**12 36 11.2**	**-4.5**
RCBR	**Riachuelo**	**162.75**	**265**	PKPab		**PKPab**	**12 37 06.2**	**+0.5**
RCBR	**Riachuelo**	**162.75**	**265**	PKPab		**PKPab**	**12 37 06.2**	**+0.5**
	comp=Z,9.9nm,0.9s,baz=103,slow=3.9,SNR=3.7							
SIV	**San Ignacio**	**166.09**	**147**	PKP		**PKPdf**	**12 36 20.0**	**+0.5**
SIV				PKPab		**PKPab**	**12 37 21.6**	**+1.6**
SIV	**San Ignacio**	**166.09**	**147**	PKP		**PKPdf**	**12 36 20.0**	**+0.5**
	comp=Z,2.9nm,0.9s,baz=274,slow=3.2,SNR=8.2							
SIV				PKPab		**PKPab**	**12 37 21.6**	**+1.6**
	comp=Z,2.4nm,0.8s,baz=230,slow=4.6,SNR=4.5							
SAML	**Samuel**	**169.07**	**115**	*e*PKPdf		**PKPdf**	**12 36 22.7**	**+1.0**

WEL 23 12:18:11.7±0.3, 39.03S×175.04E, h195km±2km, ML3.8/15, 17C-12D, Error ellipse: s-maj=2.2km s-min=2.2km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRZ	**Vera Road**	**0.24**	**245**	⇑PN	Pn	12 18 36.9	-0.6
VRZ				SN	Sn	12 18 57.0	-0.4
PKVZ	**Pokaka**	**0.36**	**138**	⇑PN	Pn	12 18 37.6	-0.2
PKVZ				SN	Sn	12 18 57.5	-0.7
FWVZ	**Far West T-bar**	**0.46**	**120**	⇑PN	Pn	12 18 38.2	-0.2
FWVZ				SN	Sn	12 18 57.7	-1.4
NGZ	**Ngauruhoe**	**0.47**	**109**	PN	Pn	12 18 38.1	-0.2
TRVZ	**Turoa**	**0.48**	**125**	⇑PN	Pn	12 18 38.3	-0.2
MTVZ	**Mangateitei**	**0.49**	**137**	⇑PN	Pn	12 18 38.2	-0.1
WNVZ	**Wahianoa**	**0.53**	**125**	PN	Pn	12 18 38.5	-0.1
DREZ	**Durham Road**	**0.67**	**255**	PN	Pn	12 18 38.6	-0.4
MOVZ	**Moawhango**	**0.68**	**125**	PN	Pn	12 18 38.8	-0.3
WAZ	**Wanganui**	**0.73**	**183**	⇑PN	Pn	12 18 39.6	+0.3
WAZ				SN	Sn	12 19 00.8	-0.1
NEZ	**North Egmont**	**0.77**	**251**	PN	Pn	12 18 39.5	-0.1
BHHZ	**Black Hill Sta**	**0.92**	**120**	PN	Pn	12 18 40.1	-0.5
BHHZ				SN	Sn	12 19 01.0	-1.9
BKZ	**Black Stump Fm**	**1.14**	**98**	⇓PN	Pn	12 18 41.4	-0.7
TSZ	**Takapari Road**	**1.26**	**146**	PN	Pn	12 18 43.0	+0.1
PNHZ	**Pukenui**	**1.27**	**135**	PN	Pn	12 18 43.1	+0.1
MCHZ	**McNeill Hill**	**1.36**	**109**	⇓PN	Pn	12 18 44.1	+0.4
NMHZ	**Naumai**	**1.38**	**94**	⇓PN	Pn	12 18 44.2	+0.1
POWZ	**Post Office Ro**	**1.48**	**158**	PN	Pn	12 18 44.6	-0.2
WPHZ	**Waipukurau**	**1.50**	**134**	PN	Pn	12 18 45.1	+0.1
DVHZ	**Dannevirke**	**1.54**	**146**	⇑PN	Pn	12 18 45.2	-0.2
RAHZ	**Arahi**	**1.60**	**87**	PN	Pn	12 18 45.4	-0.5
KAHZ	**Kahuranaki**	**1.62**	**119**	⇓PN	Pn	12 18 46.3	+0.2
MRZ	**Mangatainoka R**	**1.69**	**166**	⇑PN	Pn	12 18 46.3	-0.4
MRZ				*e*SN	Sn	12 19 12.0	-2.2
CKHZ	**Cape Kidnapper**	**1.71**	**112**	⇓PN	Pn	12 18 47.0	+0.2
PXZ	**Pawanui**	**1.73**	**126**	⇓PN	Pn	12 18 47.0	-0.1
PRHZ	**Porangahau**	**1.75**	**136**	⇓PN	Pn	12 18 47.3	0.0
URZ	**Urewera**	**1.79**	**65**	⇓PN	Pn	12 18 45.7	-2.1
TIWZ	**Tintock**	**1.87**	**160**	⇑PN	Pn	12 18 48.1	-0.4
BFZ	**Birch Farm**	**1.90**	**151**	⇑PN	Pn	12 18 48.3	-0.5
HOWZ	**Holdsworth Sta**	**1.91**	**169**	⇑PN	Pn	12 18 48.3	-0.6
DUWZ	**D'Urville Isla**	**1.97**	**205**	PN	Pn	12 18 48.8	-0.8
KNZ	**Kokohu**	**2.06**	**91**	PN	Pn	12 18 49.4	-1.0
MWZ	**Matawai**	**2.07**	**71**	PN	Pn	12 18 48.8	-1.9
CAW	**Cannon Point**	**2.08**	**179**	⇑PN	Pn	12 18 50.1	-0.6
MTW	**Mount Morrison**	**2.16**	**171**	⇑PN	Pn	12 18 50.6	-1.0
TMWZ	**Te Maipa**	**2.18**	**163**	⇑PN	Pn	12 18 51.0	-0.8
PRGZ	**Paritu Road**	**2.22**	**88**	PN	Pn	12 18 51.2	-1.1
MHGZ	**Mahia Peninsul**	**2.24**	**94**	*e*PN	Pn	12 18 51.7	-0.7
TCW	**Tory Channel**	**2.26**	**195**	⇑PN	Pn	12 18 51.9	-0.7
WEL	**Wellington**	**2.27**	**185**	⇓PN	Pn	12 18 51.8	-0.9
SNZO	**South Karori**	**2.30**	**186**	PN	Pn	12 18 51.9	-1.0
PAWZ	**Paruwai Farm**	**2.37**	**173**	⇑PN	Pn	12 18 52.8	-1.1
MSWZ	**Moikau Station**	**2.39**	**176**	PN	Pn	12 18 52.9	-1.2
TRWZ	**Traveller**	**2.42**	**168**	PN	Pn	12 18 53.4	-1.0
NNZ	**Nelson**	**2.53**	**210**	⇑PN	Pn	12 18 54.0	-1.6
CNGZ	**Carnagh Statio**	**2.54**	**79**	PN	Pn	12 18 54.5	-1.2
TUWZ	**Tuamarina**	**2.54**	**199**	⇓PN	Pn	12 18 54.6	-1.1
PLWZ	**Palliser**	**2.55**	**176**	PN	Pn	12 18 54.5	-1.4
QRZ	**Quartz Range**	**2.64**	**226**	PN	Pn	12 18 54.2	-2.6
PUZ	**Puketiti**	**2.70**	**70**	PN	Pn	12 18 55.2	-2.4
BSWZ	**Blackbirch Sta**	**2.83**	**198**	PN	Pn	12 18 58.2	-0.9
THZ	**Tophouse**	**3.18**	**210**	⇓PN	Pn	12 19 01.2	-2.2
KHZ	**Kahutara**	**3.58**	**198**	PN	Pn	12 19 06.4	-1.5
DSZ	**Denniston Nort**	**3.67**	**221**	PN	Pn	12 19 06.2	-3.0
LTZ	**Lake Taylor**	**4.30**	**208**	PN	Pn	12 19 14.0	-3.1
CRLZ	**Canterbury Las**	**4.90**	**201**	PN	Pn	12 19 21.2	-3.3
MQZ	**McQueen's Vall**	**5.01**	**200**	PN	Pn	12 19 22.4	-3.6
WVZ	**Waitaha Valley**	**5.19**	**217**	PN	Pn	12 19 24.9	-3.5
RPZ	**Rata Peaks**	**5.56**	**211**	⇑PN	Pn	12 19 29.3	-3.9
FOZ	**Fox Glacier**	**6.06**	**220**	PN	Pn	12 19 34.5	-5.1
LBZ	**Lake Benmore**	**6.47**	**213**	PN	Pn	12 19 40.7	-4.3
ODZ	**Otahua Downs**	**6.84**	**207**	PN	Pn	12 19 46.5	-3.3
JCZ	**Jackson Bay**	**6.90**	**221**	PN	Pn	12 19 45.9	-4.8
WKZ	**Wanaka**	**7.33**	**210**	PN	Pn	12 19 51.2	-5.0
TUZ	**Tuapeka**	**7.99**	**208**	PN	Pn	12 20 01.6	-3.2

IDC 23 12:27:25.2±2.1, 6.89S×129.12E, h0km, mb3.6/1, mb1 4.2/4, mb1mx3.8/20, mbtmp4.0/4, ML4.2/3, Error ellipse: s-maj=96.1km s-min=27.5km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.65**	**197**	Pn	Pn	12 30 12.3	-0.5
	0.9nm,0.3s,baz=22,slow=11,SNR=48						
FITZ				Sn	Sn	12 32 06.2	-18
	1.7nm,0.3s,baz=283,slow=19,SNR=6.8						
WRA	**Warramunga Arr**	**13.93**	**159**	Pn	Pn	12 30 43.7	-0.4
	1.4nm,0.3s,baz=334,slow=15,SNR=39						
WRA				Sn	Sn	12 33 07.4	-12
	0.7nm,0.3s,baz=332,slow=23,SNR=5.7						
ASAR	**Alice Springs**	**17.31**	**165**	P	Pn	12 31 29.1	+0.7
	0.7nm,0.3s,baz=346,slow=12,SNR=42						
ASAR				S	Sn	12 34 27.9	-14
	0.2nm,0.3s,baz=311,slow=22,SNR=4.1						
MKAR	**Makanchi Array**	**67.65**	**327**	P	P	12 38 24.1	0.0
	0.3nm,0.5s,baz=117,slow=7.8,SNR=7.4						

ISCJB 23 12:46:07.7±0.5, 18.85N±0.06×121.57E±0.07, h10km, mb4.0/24, MS3.5/4, Error ellipse: s-maj=10.5km s-min=5.7km az=39.7
IDC 23 12:46:07.6±0.7, 18.78N×121.59E, h0km, mb4.1/17, mb1 4.3/19, mb1mx4.2/30, mbtmp4.1/19, ML3.8/2, MS3.6/5, Ms1 3.6/5, ms1mx3.1/44, Error ellipse: s-maj=20.9km s-min=15.7km az=70.0
NEIC 23 12:46:08.8±0.4, 18.74N×121.60E, h10km, mb4.3/7, Error ellipse: s-maj=10.3km s-min=6.0km az=98.0
MAN 23 12:46:13, 18.65N×121.30E, h1km, mb4.7, ML3.6, MS3.6
ISC 23 12:46:08.7±0.5, 18.73N±0.05×121.57E±0.07, h10km, n66, σ1§14/65, mb4.2/24, MS3.5/4, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**0.99**	**246**	⇓*i*P	**Pg**	**12 46 27.4**	**-0.4**
PIP				*e*S	**Sn**	**12 46 42.8**	**0.0**
CVP	**Callao Caves**	**1.05**	**167**	⇑*i*P	Pn	12 46 35.1	+5.5
CVP				*i* S	Sn	12 46 52.2	+7.9
TWG	**Pinlang**	**4.09**	**354**	*e*Pn	**Pn**	**12 47 09.5**	**-1.9**
TPUB	**Ta-pu**	**4.63**	**349**	*e*Pn	**Pn**	**12 47 17.4**	**-1.4**
TGY	**Tagaytay City**	**4.64**	**188**	Pg	**Pg**	**12 47 35.2**	**-2.6**
TGY	**Tagaytay City**	**4.64**	**188**	Pg	**Pg**	**12 47 35.2**	**-2.6**
	13nm,0.3s,baz=107,slow=14,SNR=3.0						
YULB	**Yu-li**	**4.64**	**357**	*e*Pn	**Pn**	**12 47 18.9**	**-0.1**
GQP	**Guinayangan**	**4.87**	**170**	⇓*e*P	**Pb**	**12 47 33.3**	**-0.9**
GQP				*e*S	**Sb**	**12 48 36.7**	**+3.8**
NACB	**Ninganchiao**	**5.42**	**0**	*e*Pn	**Pn**	**12 47 29.2**	**-0.3**
	51nm,0.6s						
JNU	**Nakatsue**	**16.58**	**28**	Pn	**Pn**	**12 50 01.8**	**+0.3**
JNU	**Nakatsue**	**16.58**	**28**	Pn	**Pn**	**12 50 01.8**	**+0.3**
	0.2nm,0.3s,baz=171,slow=13,SNR=4.4						
JNU				LR	LR	12 56 44.4	
	comp=Z,232nm,18.7s,baz=337,slow=38						
KSAR	**Wonju Array Be**	**19.44**	**15**	P	**Pn**	**12 50 35.2**	**-1.4**
KSRS	**Korea Array**	**19.46**	**15**	P	**P**	**12 50 35.2**	**-0.4**
	0.5nm,0.3s,baz=200,slow=12,SNR=14						
KSM	**Kuching**	**20.40**	**214**	*e*P	Pn	12 50 47.5	-0.6
	14nm,1.3s						
CMAR	**Chiang Mai Arr**	**21.45**	**273**	P	**P**	**12 50 59.2**	**+1.8**
CMAR	**Chiang Mai Arr**	**21.45**	**273**	P	**P**	**12 50 59.2**	**+1.8**
	5.4nm,1.0s,baz=74,slow=9.5,SNR=18						
JHJ	**Hachijo jima 2**	**21.71**	**45**	LR	LR	12 58 03.7	
	comp=Z,217nm,21.0s,baz=240,slow=33						
GUMO	**Guam**	**22.95**	**99**	LR	LR	12 58 53.5	
	comp=Z,145nm,20.2s,baz=89,slow=33						
MAJO	**Matsushiro**	**23.00**	**36**	P	**P**	**12 51 13.3**	**-0.5**
MAT	**Matsushiro**	**23.00**	**36**	P	**P**	**12 51 17.6**	**+3.8**
MJAR	**Matsushiro Arr**	**23.00**	**36**	P	**P**	**12 51 13.7**	**-0.1**
MJAR	**Matsushiro Arr**	**23.00**	**36**	P	**P**	**12 51 13.7**	**-0.1**
	2.8nm,0.7s,baz=217,slow=11,SNR=7.6						
MJAR				LR	LR	12 59 55.6	
	comp=Z,97nm,18.4s,baz=200,slow=36						
USRK	**Ussuriysk Arra**	**26.86**	**17**	P	**P**	**12 51 49.0**	**-0.5**
	2.1nm,0.8s,baz=224,slow=7.3,SNR=5.4						
ASAJ	**Asahikawa**	**30.84**	**30**	LR	LR	13 04 48.8	
	comp=Z,134nm,18.7s,baz=5.9,slow=36						
ULN	**Ulaanbaatar**	**31.38**	**341**	*e*P	**P**	**12 52 29.9**	**0.0**
	4.6nm,1.0s						
SONM	**Songino Array**	**31.56**	**340**	P	**P**	**12 52 32.0**	**+0.6**
SONM	**Songino Array**	**31.56**	**340**	P	**P**	**12 52 32.0**	**+0.6**
	5.2nm,0.9s,baz=157,slow=8.5,SNR=25						
TAPN	**Taplejung**	**32.24**	**292**	*e*P	**P**	**12 52 37.1**	**-0.8**
RAMN	**Ramite**	**33.17**	**291**	*e*P	**P**	**12 52 43.9**	**-2.0**
GUN	**Gumba**	**33.92**	**292**	*e*P	**P**	**12 52 51.7**	**-0.9**
	32nm,0.9s						
DANN	**Dangsing**	**35.84**	**293**	*e*P	**P**	**12 53 08.8**	**-0.3**
	10nm,0.8s						
KOLN	**Koldanda**	**35.91**	**292**	*e*P	**P**	**12 53 09.4**	**-0.2**
	10nm,0.7s						
PYUN	**Piuthan**	**36.48**	**292**	*e*P	**P**	**12 53 14.1**	**-0.4**
	29nm,0.9s						
WRA	**Warramunga Arr**	**40.42**	**161**	P	**P**	**12 53 47.7**	**+0.3**
WRA	**Warramunga Arr**	**40.42**	**161**	P	**P**	**12 53 47.7**	**+0.3**
	1.3nm,0.7s,baz=344,slow=9.0,SNR=17						
MK31	**Makanchi Array**	**42.61**	**320**	*e*P	**P**	**12 54 05.6**	**+0.4**
MKAR	**Makanchi Array**	**42.61**	**320**	P	**P**	**12 54 05.7**	**+0.5**
MKAR	**Makanchi Array**	**42.61**	**320**	P	**P**	**12 54 05.7**	**+0.5**
	3.4nm,0.7s,baz=112,slow=9.7,SNR=28						
ASAR	**Alice Springs**	**43.83**	**164**	P	**P**	**12 54 16.1**	**+1.0**
ASAR	**Alice Springs**	**43.83**	**164**	P	**P**	**12 54 16.1**	**+1.0**
	1.1nm,0.6s,baz=343,slow=6.9,SNR=21						
ZALV	**Zalesovo Beam**	**45.06**	**330**	P	**P**	**12 54 24.8**	**+0.1**
ZALV	**Zalesovo Beam**	**45.06**	**330**	P	**P**	**12 54 24.8**	**+0.1**
	1.3nm,0.3s,baz=111,slow=7.9,SNR=4.0						
AAK	**Ala-Archa**	**46.23**	**312**	P	**P**	**12 54 35.1**	**+0.7**
AAK	**Ala-Archa**	**46.23**	**312**	P	**P**	**12 54 35.1**	**+0.7**
	1.8nm,0.8s,baz=120,slow=9.2,SNR=5.5						
KURK	**Kurchatov**	**46.58**	**323**	P	**P**	**12 54 37.1**	**+0.4**
KURBB	**Kurchatov Arra**	**46.59**	**323**	P	**P**	**12 54 37.1**	**+0.3**
	3.3nm,0.7s,baz=123,slow=7.5,SNR=12						
EKS2	**Erkin-Say**	**46.75**	**311**	*e*P	**P**	**12 54 39.5**	**+1.1**
	1.8nm,0.7s						
KKAR	**Karatay Array**	**49.19**	**311**	*e*P	**P**	**12 54 57.5**	**+0.3**
	9.8nm,1.1s						
BVAR	**Borovoye Array**	**52.18**	**323**	P	**P**	**12 55 19.6**	**+0.1**
BVAR				PcP	**PcP**	**12 56 31.4**	**+0.2**
BVAR	**Borovoye Array**	**52.18**	**323**	P	**P**	**12 55 19.6**	**+0.1**
	2.4nm,0.9s,baz=123,slow=10,SNR=8.6						
BVAR				PcP	**PcP**	**12 56 31.4**	**+0.2**
	1.8nm,0.7s,baz=104,slow=4.6,SNR=5.3						
ABKAR	**Akbulak array**	**57.57**	**317**	*e*P	**P**	**12 55 58.7**	**+0.1**
	0.8nm,0.4s						
AKTO	**Aktyubinsk**	**58.98**	**318**	P	**P**	**12 56 08.3**	**-0.2**
AKTO	**Aktyubinsk**	**58.98**	**318**	P	**P**	**12 56 08.3**	**-0.2**
	0.7nm,0.3s,baz=117,slow=2.3,SNR=4.0						
KBZ	**Khabaz**	**69.22**	**311**	P	**P**	**12 57 15.2**	**-0.6**
KBZ	**Khabaz**	**69.22**	**311**	P	**P**	**12 57 15.2**	**-0.6**
	2.1nm,0.9s,baz=181,slow=1.7,SNR=5.8						
MCK	**McKinley**	**73.17**	**28**	*e*P	**P**	**12 57 39.1**	**-0.4**
	4.6nm,1.0s						
ILAR	**Eielson Array**	**73.89**	**26**	P	**P**	**12 57 44.8**	**+1.1**
ILAR	**Eielson Array**	**73.89**	**26**	P	**P**	**12 57 44.8**	**+1.1**
	0.5nm,0.7s,baz=263,slow=4.7,SNR=11						
EGAK	**Eagle**	**76.29**	**26**	*e*P	**P**	**12 57 58.0**	**+0.6**
	2.4nm,0.8s						
FINES	**FINESS Array B**	**76.33**	**331**	P	**P**	**12 57 57.4**	**-0.4**
FINES	**FINESS Array B**	**76.33**	**331**	P	**P**	**12 57 57.4**	**-0.4**
	2.2nm,0.8s,baz=134,slow=6.0,SNR=5.7						
NOA	**NORSAR Array B**	**83.20**	**333**	P	**P**	**12 58 33.5**	**-1.6**
NOA	**NORSAR Array B**	**83.20**	**333**	P	**P**	**12 58 33.5**	**-1.6**
	0.6nm,0.7s,baz=65,slow=5.3,SNR=3.5						
YKW3	**Yellowknife Ar**	**87.79**	**23**	*e*P	**P**	**12 58 59.1**	**+1.2**
	0.1nm,0.6s						
YKA	**Yellowknife Ar**	**87.83**	**23**	P	**P**	**12 58 58.8**	**+0.6**
YKA	**Yellowknife Ar**	**87.83**	**23**	P	**P**	**12 58 58.7**	**+0.6**
	1.0nm,0.5s,baz=306,slow=4.5,SNR=24						

IDC 23 12:46:39.9±5.0, 13.14N×92.32E, h0km, mb4.0/2, mb1 4.1/3, mb1mx3.4/26, mbtmp3.8/3, ML3.3/1, Error ellipse: s-maj=113.8km s-min=47.5km az=108.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**8.28**	**49**	Pn	Pn	12 48 41.6	+0.2
	0.1nm,0.3s,baz=238,slow=16,SNR=2.9						
WRA	**Warramunga Arr**	**52.82**	**128**	P	P	12 55 57.1	-0.5
	1.1nm,0.5s,baz=308,slow=7.7,SNR=18						
WRA				PcP	PcP	12 57 07.1	0.0
	0.3nm,0.5s,baz=323,slow=3.1,SNR=4.7						
ASAR	**Alice Springs**	**54.70**	**132**	P	P	12 56 11.3	+0.1
	0.9nm,0.5s,baz=308,slow=7.1,SNR=16						

IDC 23 13:14:35.9±8.4, 33.35S×179.81W, h79km±66km, mb3.2/2, mb1 3.5/3, mb1mx3.4/18, mbtmp3.3/3, ML3.9/1, Error ellipse: s-maj=77.3km s-min=37.3km az=36.0
ISC 23 13:14:35.5±1.5, 33.44S±0.10×179.9W±0.2, h79km, n32, σ1§58/32, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.38**	**199**	PN	**Pn**	**13 15 42.1**	**+2.6**
MXZ				*e*SN	**Sn**	**13 16 27.5**	**-1.7**
PUZ	**Puketiti**	**4.87**	**198**	PN	**Pn**	**13 15 48.3**	**+2.0**
PUZ				SN	**Sn**	**13 16 39.8**	**-1.5**
CNGZ	**Carnagh Statio**	**5.27**	**196**	PN	**Pn**	**13 15 54.0**	**+2.3**
MWZ	**Matawai**	**5.32**	**202**	PN	**Pn**	**13 15 54.4**	**+2.0**
MWZ				SN	**Sn**	**13 16 52.0**	**-0.4**
MARZ	**Manawahe**	**5.33**	**211**	*e*PN	Pn	13 15 56.4	+3.8
URZ	**Urewera**	**5.40**	**206**	P

	baz=297							
ENA				*e*S		Sn	13 36 36.5	+1.1
	baz=297							
IRIF	**Iriomote-Funau**	**0.97**	**113**	P		Pn	13 36 22.8	0.0
IRIF				S		Sn	13 36 35.3	-0.2
TWE	**Neicheng**	**0.98**	**270**	*e*P		Pn	13 36 27.3	+4.3
	baz=310							
ENTT	**Nioudou**	**1.08**	**266**	*e*P		Pn	13 36 27.8	+3.5
	baz=303							
TWD	**Chiawan**	**1.23**	**239**	*e*P		Pn	13 36 24.6	-1.7
	baz=274							
JKRS	**Kuro-shima**	**1.24**	**112**	P		Pn	13 36 26.8	+0.3
JKRS				*e*S		Sn	13 36 43.1	+1.0
NSK	**Sanguang**	**1.27**	**268**	*e*P		Pn	13 36 31.0	+4.1
	baz=285							
HWA	**Hwalien**	**1.28**	**235**	*e*P		Pn	13 36 24.4	-2.5
	baz=252							
NNS	**Nan Shan**	**1.28**	**258**	*e*P		Pn	13 36 29.2	+2.0
	baz=275							
JIJ	**Ishigaki jima**	**1.32**	**105**	P		Pn	13 36 27.8	+0.3
JIJ				S		Sn	13 36 45.4	+1.5
WHF	**Hehuan Shan**	**1.47**	**247**	P		Pn	13 36 29.0	-1.2
	baz=262							
ESL	**Shilin**	**1.50**	**233**	*e*P		Pn	13 36 26.1	-3.9
	baz=245							
ESL				*e*S		Sn	13 36 41.7	-6.8
	baz=245							
NSTT	**Nanjuang**	**1.59**	**267**	*e*P		Pn	13 36 33.1	+1.8
	baz=293							
EHY	**Hungye**	**1.78**	**227**	*e*P		Pn	13 36 30.2	-3.6
	baz=247							
SMLT	**Sun Moon Lake**	**1.88**	**244**	*e*P		Pn	13 36 34.0	-1.4
	baz=254							
TWF1	**Yuli**	**1.90**	**225**	*e*P		Pn	13 36 30.1	-5.4
	baz=227							
TYC	**Yuchr**	**1.91**	**245**	*e*P		Pn	13 36 36.1	+0.5
	baz=266							
ALS	**Alishan**	**2.15**	**236**	*e*P		Pn	13 36 36.5	-2.7
	baz=252							
ALS				*e*S		Sn	13 36 58.2	-6.8
	baz=252							
CHN4	**Tsaushan**	**2.40**	**236**	*e*P		Pn	13 36 40.2	-2.1
	baz=249							
CHN4				*e*S		Sn	13 37 07.3	-3.2
	baz=249							
WTP	**Ta-pu**	**2.44**	**234**	*e*P		Pn	13 36 40.9	-2.1
	baz=247							
CHN1	**Nanshi**	**2.54**	**234**	*e*P		Pn	13 36 41.7	-2.6
	baz=245							
CHN1				*e*S		Sn	13 37 09.9	-4.2
	baz=245							

*ISCJB **23** 13:45:05.9±0.5,38˚.16N±0˚.03×22˚.68E±0˚.04,h11km±6km, Error ellipse: s-maj=5.7km s-min=4.6km az=39.1*
*CSEM **23** 13:45:05.8±0.1,38˚.17N×22˚.71E,h10km,ML1.8/3,Error ellipse: s-maj=2.9km s-min=2.5km az=59.0*
*THE **23** 13:45:05.6,38˚.16N×22˚.69E,h16km±3km,ML1.8/3,Error ellipse: s-maj=3.1km s-min=0.6km az=153.0*
*ATH **23** 13:45:06.1,38˚.15N×22˚.67E,h5km±2km,MD3.0/4*
ISC 23 13:45:06.2±1.0,38˚.16N±0˚.03×22˚.70E±0˚.03,h13km±10km, n15,σ0s48/30,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LTK	**Loutraki**	**0.26**	**123**	P		**Pg**	**13 45 11.2**	**-0.4**
LTK				S		**Sg**	**13 45 15.7**	**+0.5**
LTK	**Loutraki**	**0.26**	**123**	*e*PG		**Pg**	**13 45 11.2**	**-0.4**
LTK				*e*SG		**Sg**	**13 45 15.8**	**+0.5**
LTK	**Loutraki**	**0.26**	**123**	P		**Pg**	**13 45 11.2**	**-0.4**
LTK				S		**Sg**	**13 45 15.7**	**+0.5**
DSF	**Desfina**	**0.28**	**332**	P		**Pg**	**13 45 11.7**	**-0.3**
DSF				S		**Sg**	**13 45 16.3**	**+0.4**
DSF	**Desfina**	**0.28**	**332**	P		**Pg**	**13 45 11.7**	**-0.3**
DSF				S		**Sg**	**13 45 16.3**	**+0.4**
GUR	**Goura**	**0.36**	**231**	P		**Pg**	**13 45 12.9**	**-0.5**
GUR				S		**Sg**	**13 45 17.9**	**-0.3**
GUR	**Goura**	**0.36**	**231**	*e*PB		**Pg**	**13 45 13.0**	**-0.5**
GUR				*e*SB		**Sg**	**13 45 18.0**	**-0.3**
GUR	**Goura**	**0.36**	**231**	*e*Pb		**Pg**	**13 45 13.0**	**-0.5**
GUR				*e*Sb		**Sg**	**13 45 18.0**	**-0.3**
KALE	**Kalithea**	**0.49**	**298**	P		**Pg**	**13 45 15.7**	**-0.2**
KALE				S		**Sg**	**13 45 23.0**	**+0.5**
KALE	**Kalithea**	**0.49**	**298**	*e*PB		**Pg**	**13 45 15.7**	**-0.2**
KALE				*e*SB		**Sg**	**13 45 22.9**	**+0.5**
KALE	**Kalithea**	**0.49**	**298**	P		**Pg**	**13 45 15.7**	**-0.2**
KALE				S		**Sg**	**13 45 23.0**	**+0.5**
LKR	**Lokris**	**0.54**	**26**	P		**Pg**	**13 45 15.8**	**-1.0**
LKR				S		**Sg**	**13 45 24.3**	**+0.3**
LKR	**Lokris**	**0.54**	**26**	P		**Pg**	**13 45 15.8**	**-1.0**
LKR				S		**Sg**	**13 45 24.3**	**+0.3**
DID	**Didima**	**0.78**	**147**	*e*PB		**Pb**	**13 45 21.7**	**0.0**
DID				*e*SB		**Sb**	**13 45 32.7**	**+0.4**
DID	**Didima**	**0.78**	**147**	*e*Pb		**Pb**	**13 45 21.7**	**0.0**
DID				*e*Sb		**Sb**	**13 45 32.7**	**+0.4**

*IDC **23** 14:00:26.5±3.0,25˚.95S×70˚.43W,h0km,mb4.2/1, mb1 3.8/2,mb1mx3.5/16,mbtmp3.7/2,ML3.0/1,Error ellipse: s-maj=104.4km s-min=64.7km az=84.0*
*GUC **23** 14:00:30.6±0.5,25˚.90S×71˚.44W,h43km±9km,ML4.1*
*NEIC **23** 14:00:30.6,25˚.90S×71˚.44W,h43km,MG4.1(GUC),After GUC.*
NEIC Felt [III] at Taltal.
ISC 23 14:00:26.7±2.9,25˚.72S±0˚.06×71˚.2W±0˚.3,h12km±13km, n24,σ1s41/29,2C,Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CDCH	**Caldera**	**1.38**	**166**	*e*P		**Pg**	**14 00 53.3**	**+0.1**
CDCH				*i* S		**Sg**	**14 01 10.4**	**-0.7**
CDCH	**Caldera**	**1.38**	**166**	*e*P		**Pg**	**14 00 53.3**	**+0.1**
CDCH				*i* S		**Sg**	**14 01 10.4**	**-0.7**
ANCH	**Antofagasta**	**2.15**	**19**	*e*P		**Pn**	**14 01 03.6**	**+1.1**
ANCH				*e*S		**Sb**	**14 01 32.8**	**+0.5**
ANCH	**Antofagasta**	**2.15**	**19**	*e*P		**Pn**	**14 01 03.6**	**+1.1**
ANCH				*e*S		**Sb**	**14 01 32.8**	**+0.5**
ANCH				AML		AML	14 01 40.2	
	comp=E,826nm,0.7s							
CEN1	**Los Morros**	**2.49**	**21**	*e*P		**Pn**	**14 01 05.2**	**-2.1**
CEN1				*e*S		**Sn**	**14 01 35.3**	**-2.3**
CEN1	**Los Morros**	**2.49**	**21**	*e*P		**Pn**	**14 01 05.2**	**-2.1**
CEN1				*e*S		**Sn**	**14 01 35.3**	**-2.3**
VACH	**Vallenar**	**2.87**	**173**	*e*P		Pn	14 01 04.3	-8.0
VACH				*e*S		Sn	14 01 37.1	-10
VACH	**Vallenar**	**2.87**	**173**	*e*P		Pn	14 01 04.3	-8.0
VACH				*e*S		Sn	14 01 37.1	-10
LCO	**Las Campanas**	**3.30**	**173**	*e*Pn		**Pn**	**14 01 20.0**	**+1.4**
LCO				*e*S		**Sn**	**14 01 58.1**	**+0.3**
LCO	**Las Campanas**	**3.30**	**173**	*e*P		**Pn**	**14 01 20.3**	**+1.8**
LCO				*e*S		**Sn**	**14 01 58.1**	**+0.3**
LCO				AML		AML	14 02 18.1	
	comp=E,328nm,0.5s							
PB06	**Plate Boundary**	**3.34**	**26**	*e*P		**Pn**	**14 01 19.5**	**+0.5**
PB06	**Plate Boundary**	**3.34**	**26**	*e*P		**Pn**	**14 01 19.5**	**+0.5**
PB06				*e*S		**Sn**	**14 02 01.8**	**+3.0**
PB06				AML		AML	14 02 14.9	
	comp=N,409nm,0.9s							
PB04	**Plate Boundary**	**3.78**	**25**	*e*P		Pn	14 01 21.8	-2.9
PB04	**Plate Boundary**	**3.78**	**25**	*e*P		Pn	14 01 21.8	-2.9
PB09	**Plate Boundary**	**4.29**	**25**	*e*P		**Pn**	**14 01 33.2**	**+1.1**
PB09	**Plate Boundary**	**4.29**	**25**	*e*P		**Pn**	**14 01 33.2**	**+1.1**
LPAZ	**La Paz**	**9.81**	**17**	Pn		**Pn**	**14 02 50.0**	**+1.7**
LPAZ	**La Paz**	**9.81**	**17**	Pn		**Pn**	**14 02 50.0**	**+1.7**
	comp=N,0.1nm,0.3s,baz=186,slow=10,SNR=2.4							
TORD	**Torodi Ar. Bea**	**80.73**	**71**	P		**P**	**14 12 39.2**	**-1.2**
TORD	**Torodi Ar. Bea**	**80.73**	**71**	P		**P**	**14 12 39.2**	**-1.2**
	comp=N,1.5nm,0.6s,baz=256,slow=5.0,SNR=24							
ZALV	**Zalesovo Beam**	**146.65**	**26**	PKPbc		**PKPab**	**14 20 09.0**	**-0.1**
ZALV	**Zalesovo Beam**	**146.65**	**26**	PKPbc		**PKPab**	**14 20 09.0**	**-0.1**
	comp=N,0.4nm,0.3s,baz=337,slow=3.3,SNR=4.6							
MKAR	**Makanchi Array**	**150.25**	**38**	PKPbc		**PKPbc**	**14 20 18.2**	**+0.5**
MKAR	**Makanchi Array**	**150.25**	**38**	PKPbc		**PKPbc**	**14 20 18.2**	**+0.5**
	comp=N,0.4nm,0.6s,baz=303,slow=2.1,SNR=6.0							

IDC 23 14:07:45.0±5.5,47˚.75N×151˚.40E,h56km±101km,mb3.0/3, mb1 3.2/4,mb1mx3.0/26,mbtmp3.1/4,ML2.3/1,Error ellipse: s-maj=252.9km s-min=36.2km az=132.0,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.70**	**35**	P		Pn	14 09 20.7	0.0
	0.1nm,0.3s,baz=220,slow=13,SNR=3.0							
KSRS	**Korea Array**	**20.04**	**248**	P		P	14 12 13.6	+0.4
	1.0nm,0.8s,baz=49,slow=9.8,SNR=3.7							
MKAR	**Makanchi Array**	**45.45**	**296**	P		P	14 15 58.0	-0.1
	0.1nm,0.4s,baz=73,slow=7.1,SNR=4.3							
FINES	**FINESS Array B**	**62.63**	**334**	P		P	14 18 03.0	0.0
	0.4nm,0.4s,baz=23,slow=7.5,SNR=2.5							

*IDC **23** 14:17:34.5±0.8,11˚.05S×163˚.57E,h0km,mb4.1/10, mb1 4.3/13,mb1mx4.2/22,mbtmp4.1/13,ML4.3/3,MS3.6/13, Ms1 3.6/13,ms1mx3.5/26,Error ellipse: s-maj=25.9km s-min=18.0km az=143.0*
*ISCJB **23** 14:17:37.2±0.5,11˚.24S±0˚.06×163˚.58E±0˚.07,h31km, mb4.3/14,MS3.7/11,Error ellipse: s-maj=10.7km s-min=7.2km az=144.6*
*NEIC **23** 14:17:40.6±1.6,11˚.13S×163˚.53E,h44km±14km,mb4.6/3, Error ellipse: s-maj=13.4km s-min=13.3km az=151.0*
ISC 23 14:17:39.1±0.6,11˚.13S±0˚.07×163˚.61E±0˚.09,h31km,n43, σ0s95/38,mb4.1/14,MS3.7/11,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.98**	**295**	Pn		**Pn**	**14 18 37.5**	**-0.6**
HNR				*e*Pn		**Pn**	**14 18 38.4**	**+0.4**
HNR	**Honiara**	**3.98**	**295**	Pn		**Pn**	**14 18 37.4**	**-0.6**
	41nm,0.3s,baz=154,slow=3.5,SNR=28							
HNR				LR		LR	14 19 19.3	
	comp=Z,134nm,19.0s,baz=132,slow=27							
HNR				Sn		**Sn**	**14 19 25.2**	**+1.5**
	56nm,0.3s,baz=129,slow=13,SNR=3.0							
DZM	**Mont Dzumac**	**11.21**	**166**	*e*Pn		**Pn**	**14 20 18.8**	**+1.4**
	5.9nm,0.2s							
DZM				*e*LR		LR	14 22 56.5	
	1µm,27.9s							
DZM	**Mont Dzumac**	**11.21**	**166**	Pn		**Pn**	**14 20 18.2**	**+0.8**
DZM				Sn		**Sn**	**14 22 20.8**	**-1.0**
DZM	**Mont Dzumac**	**11.21**	**166**	Pn		**Pn**	**14 20 18.2**	**+0.8**
	2.5nm,0.3s,baz=331,slow=9.6,SNR=41							
DZM				Sn		**Sn**	**14 22 20.8**	**-1.0**
	0.7nm,0.3s,baz=342,slow=19,SNR=4.5							
CTA	**Charters Tower**	**18.93**	**240**	P		**Pn**	**14 21 58.5**	**+0.2**
CTA	**Charters Tower**	**18.93**	**240**	P		**Pn**	**14 21 58.5**	**+0.2**
	0.3nm,0.3s,baz=59,slow=9.5,SNR=5.0							
CTA				LR		LR	14 26 32.8	
	comp=Z,70nm,20.5s,baz=58,slow=28							
AFI	**Afiamalu**	**24.18**	**99**	LR		LR	14 30 54.4	
	comp=Z,111nm,20.5s,baz=97,slow=33							
RAO	**Raoul Island**	**24.95**	**139**	LR		LR	14 29 32.2	
	comp=Z,172nm,19.8s,baz=115,slow=29							
STKA	**Stephens Creek**	**28.97**	**221**	P		**P**	**14 23 37.3**	**+1.4**
STKA	**Stephens Creek**	**28.97**	**221**	P		**P**	**14 23 37.3**	**+1.4**
	8.6nm,1.2s,baz=37,slow=10,SNR=4.2							
STKA				LR		LR	14 34 45.9	
	comp=Z,158nm,18.6s,baz=29,slow=36							
WRA	**Warramunga Arr**	**29.49**	**249**	P		**P**	**14 23 39.5**	**-1.2**
WRA				PcP		**PcP**	**14 26 46.9**	**+1.0**
WRA	**Warramunga Arr**	**29.49**	**249**	P		**P**	**14 23 39.5**	**-1.2**
	2.0nm,0.6s,baz=80,slow=9.2,SNR=12							
WRA				PcP		**PcP**	**14 26 46.9**	**+1.0**
	0.7nm,0.7s,baz=80,slow=3.0,SNR=2.4							
URZ	**Urewera**	**29.59**	**158**	LR		LR	14 32 47.5	
	comp=Z,184nm,21.4s,baz=161,slow=31							
GUMO	**Guam**	**30.80**	**322**	LR		LR	14 34 26.0	
	comp=Z,133nm,20.5s,baz=149,slow=33							
ASAR	**Alice Springs**	**30.89**	**242**	P		**P**	**14 23 52.3**	**-0.8**
ASAR				PcP		**PcP**	**14 26 49.0**	**-0.5**
ASAR	**Alice Springs**	**30.89**	**242**	P		**P**	**14 23 52.3**	**-0.8**
	2.0nm,0.6s,baz=64,slow=10.0,SNR=26							
ASAR				PcP		**PcP**	**14 26 49.0**	**-0.5**
	0.7nm,0.7s,baz=65,slow=2.0,SNR=7.0							
FITZ	**Fitzroy Crossi**	**37.34**	**255**	*e*P		**P**	**14 24 46.4**	**-2.6**
	3.1nm,0.6s							
PPT2	**Papeete2**	**45.71**	**104**	*e*LR		LR	14 39 04.2	
	72nm,26.0s							
TBI	**Tubuai**	**46.24**	**112**	*e*LR		LR	14 39 10.8	
	82nm,32.8s							
MJAR	**Matsushiro Arr**	**53.11**	**334**	LR		LR	14 45 10.3	
	comp=Z,41nm,19.5s,baz=195,slow=31							
ERM	**Erimo**	**56.13**	**342**	*e*P		P	14 27 06.3	-9.3
	59nm,0.4s							
KSRS	**Korea Array**	**58.79**	**327**	LR		LR	14 50 47.2	
	comp=Z,64nm,18.8s,baz=1.9,slow=34							
RKT	**Rikitea**	**59.52**	**110**	*e*LR		LR	14 45 22.0	
	981nm,38.5s							
PETK	**Petropavlovsk-**	**64.18**	**356**	LR		LR	14 50 43.5	
	comp=Z,49nm,21.7s,baz=332,slow=31							
FX1	**Attu Island--F**	**64.28**	**6**	LR		LR	14 53 24.8	
	comp=Z,91nm,18.8s,baz=110,slow=34							
CMAR	**Chiang Mai Arr**	**70.23**	**294**	P		**P**	**14 28 49.1**	**-0.6**
CMAR	**Chiang Mai Arr**	**70.23**	**294**	P		**P**	**14 28 49.1**	**-0.6**
	0.4nm,0.3s,baz=126,slow=4.6,SNR=3.9							
SONM	**Songino Array**	**77.51**	**325**	P		**P**	**14 29 32.6**	**+0.7**
SONM	**Songino Array**	**77.51**	**325**	P		**P**	**14 29 32.6**	**+0.7**
	1.2nm,0.7s,baz=142,slow=5.2,SNR=9.8							
SONM				LR		LR	15 01 53.4	
	comp=Z,42nm,18.3s,baz=257,slow=34							
BILL	**Bilibino**	**78.99**	**1**	*e*P		**P**	**14 29 39.6**	**+0.2**
	12nm,1.4s							
MAW	**Mawson**	**83.85**	**202**	LR		LR	15 05 37.5	
	comp=Z,116nm,18.1s,baz=309,slow=34							
ILAR	**Eielson Array**	**84.27**	**19**	P		**P**	**14 30 07.7**	**+0.2**
ILAR	**Eielson Array**	**84.27**	**19**	P		**P**	**14 30 07.7**	**+0.2**
	0.8nm,0.8s,baz=224,slow=4.6,SNR=11							
EGAK	**Eagle**	**86.19**	**21**	*e*P		**P**	**14 30 16.8**	**-0.2**
	4.5nm,0.9s							
NVAR	**Mina Array Bea**	**87.69**	**50**	P		**P**	**14 30 26.2**	**+0.9**
NVAR	**Mina Array Bea**	**87.69**	**50**	P		**P**	**14 30 26.2**	**+0.9**
	2.1nm,0.9s,baz=234,slow=7.0,SNR=10							
MKAR	**Makanchi Array**	**92.16**	**317**	P		**P**	**14 30 44.8**	**-0.9**
MKAR	**Makanchi Array**	**92.16**	**317**	P		**P**	**14 30 44.8**	**-0.9**
	0.7nm,0.8s,baz=100,slow=5.0,SNR=8.1							
PDAR	**Pinedale Array**	**95.15**	**48**	P		**P**	**14 30 59.5**	**-0.3**
PDAR	**Pinedale Array**	**95.15**	**48**	P		**P**	**14 30 59.5**	**-0.3**
	0.4nm,0.9s,baz=242,slow=1.9,SNR=3.0							
YKA	**Yellowknife Ar**	**96.01**	**28**	P		**P**	**14 31 02.6**	**-0.4**
YKA	**Yellowknife Ar**	**96.01**	**28**	P		**P**	**14 31 02.6**	**-0.4**
	0.7nm,0.9s,baz=251,slow=4.8,SNR=9.9							

*NIED **23** 14:24:00,36˚.10N×143˚.00E,h5km,Mw4.4 Best double couple: M0=4.70000×10^15 NP1:φs=199.00000°,δ=59.00000°, λ=-98.00000°. NP2:φs=34.00000°,δ=32.00000°,λ=-77.00000°.*
*IDC **23** 14:24:36.4±0.5,35˚.93N×143˚.23E,h0km,mb4.5/20, mb1 4.6/27,mb1mx4.5/33,mbtmp4.4/27,ML4.0/7,MS3.6/8, Ms1 3.6/8,ms1mx3.2/46,Error ellipse: s-maj=16.0km s-min=12.8km az=155.0*
*ISCJB **23** 14:24:38.5±0.9,36˚.16N±0˚.03×143˚.08E±0˚.02,h15km±5km, mb4.6/73,MS3.9/16,Error ellipse: s-maj=5.7km s-min=2.8km az=177.8*
*JMA **23** 14:24:40.5±0.3,36˚.06N×143˚.00E,h96km,M4.4*
*MOS **23** 14:24:41.1±0.9,36˚.25N×143˚.15E,h33km,mb4.8/42,Error ellipse: s-maj=9.0km s-min=6.0km az=111.7*
*NEIC **23** 14:24:42.4±0.4,36˚.07N×143˚.12E,mb4.6/20, MW4.4(NIED),Error ellipse: s-maj=12.4km s-min=6.7km az=166.0*
*BJI **23** 14:24:43.7,36˚.37N×142˚.80E,h40km,mB4.9/32,mb4.6/43, Ms4.4/31,Ms7 4.0/34*
ISC 23 14:24:42.4±0.5,36˚.09N±0˚.06×143˚.17E±0˚.05,h34km±4km, h34km:pP-P,n349,σ1s04/389,mb4.7/73,MS3.8/16, 90C-86D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.91**	**259**	P		**Pn**	**14 25 10.4**	**-2.2**
CHOJ				*e*S		**Sn**	**14 25 33.8**	**-1.7**
ONAJ	**Iwakimizuishiy**	**2.16**	**299**	P		**Pn**	**14 25 14.1**	**-1.9**
JHO	**Hitachi**	**2.16**	**285**	P		Pn	14 25 13.6	-2.4
JHO				*e*S		**Sn**	**14 25 37.7**	**-3.9**
BSO1	**Boso 1**	**2.29**	**232**	P		Pn	14 25 14.5	-2.8
JFT	**Otama**	**2.68**	**303**	P		**Pn**	**14 25 22.1**	**-1.0**
JFT				*e*S		**Sn**	**14 25 52.9**	**-1.5**
JAG	**Ashikaga**	**3.02**	**277**	P		**Pn**	**14 25 25.8**	**-2.0**
JAG				*e*S		**Sn**	**14 25 59.4**	**-3.4**
JMK	**Ichinoseki**	**3.25**	**332**	P		**Pn**	**14 25 29.2**	**-1.7**
JMK				*e*S		**Sn**	**14 26 06.2**	**-2.1**
JOD2	**Odawara 2**	**3.42**	**257**	P		**Pn**	**14 25 31.1**	**-2.2**
JOD2				*e*S		**Sn**	**14 26 09.5**	**-3.2**
JRY	**Ryogami san**	**3.46**	**270**	P		**Pn**	**14 25 31.7**	**-2.1**
JRY				*e*S		**Sn**	**14 26 11.1**	**-2.5**
JYK	**Kaneyama**	**3.60**	**322**	P		**Pn**	**14 25 34.1**	**-1.6**
JYK				*e*S		**Sn**	**14 26 16.3**	**-0.7**
JOM	**Ohasama**	**3.69**	**337**	P		**Pn**	**14 25 35.2**	**-1.8**
JOM				*e*S		**Sn**	**14 26 17.2**	**-2.0**
JYN	**Shimob**	**3.80**	**262**	P		**Pn**	**14 25 36.9**	**-1.7**
MJAR	**Matsushiro Arr**	**4.03**	**278**	Pn		**Pn**	**14 25 40.5**	**-1.1**
MJAR	**Matsushiro Arr**	**4.03**	**278**	Pn		**Pn**	**14 25 40.5**	**-1.1**
	20nm,0.3s,baz=94,slow=15,SNR=110							
MJAR				LR		LR	14 27 27.7	
	comp=Z,563nm,21.7s,baz=110,slow=42							
MAJO	**Matsushiro**	**4.03**	**278**	*e*P		**Pn**	**14 25 40.4**	**-1.3**
MAJO	**Matsushiro**	**4.03**	**278**	*e*Pn		**Pn**	**14 25 40.4**	**-1.3**
MAT	**Matsushiro**	**4.03**	**278**	P		**Pn**	**14 25 40.8**	**-0.9**
MAT				*e*S		Sn	14 26 23.0	-4.7
JHJ2	**Mitsune**	**4.06**	**224**	P		Pn	14 25 37.9	-4.2
JHJ2				*e*S		Sn	14 26 21.1	-7.3
JHJ	**Hachijo jima 2**	**4.07**	**224**	Pn		Pn	14 25 38.0	-4.2
	77nm,0.3s,baz=59,slow=18,SNR=58							
JHJ				Sn		Sn	14 26 21.1	-7.6
	421nm,0.3s,baz=61,slow=23,SNR=16							
JOT	**Ohata**	**5.54**	**343**	P		**Pn**	**14 26 01.5**	**-0.8**
JOT				*e*S		**Sn**	**14 27 00.2**	**-4.5**
JIE	**Ise**	**5.55**	**254**	P		**Pn**	**14 26 01.9**	**-0.7**
ERM	**Erimo**	**5.91**	**360**	*i* P		Pn	14 26 04.4	-3.1
ASAJ	**Asahikawa**	**8.03**	**357**	Pn		**Pn**	**14 26 34.3**	**-2.2**
ASAJ				Sn		Sn	14 28 01.8	-4.3
ASAJ	**Asahikawa**	**8.03**	**357**	Pn		**Pn**	**14 26 34.3**	**-2.2**
	5.4nm,0.3s,baz=214,slow=11,SNR=34							
ASAJ				Sn		Sn	14 28 01.8	-4.3
	1.6nm,0.3s,baz=204,slow=20,SNR=3.7							
YUK	**Yuzh-Kuril'sk**	**8.20**	**14**	*i* P		**Pn**	**14 26 37.5**	**-1.3**
YUK				*i* S		Sn	14 28 03.0	-7.2
YUK				pmax		pmax		
	comp=E,26nm,0.9s							
YUK				pmax		pmax		
	comp=N,44nm,0.9s							
YUK				pmax		pmax		
	comp=Z,54nm,0.9s							
YUK				MLR		MLR		
	comp=N,322nm,17.0s							
YUK				MLR		MLR		
	comp=E,223nm,17.0s							
YUK				MLR		MLR		
	comp=Z,197nm,17.0s							
JNU	**Nakatsue**	**10.55**	**257**	Pn		Pn	14 27 08.2	-3.0
JNU	**Nakatsue**	**10.55**	**257**	Pn		Pn	14 27 08.2	-3.0
	comp=Z,1.0nm,0.3s,baz=38,slow=5.1,SNR=10							
YSS	**Yuzh-Sakhalins**	**10.86**	**359**	*e*P		**Pn**	**14 27 14.2**	**-1.1**
YSS				*e*S		**Sn**	**14 29 12.2**	**-3.3**
YSS				pmax		pmax		
	comp=Z,30nm,0.9s							
YSS				MLR		MLR		
	comp=N,400nm,14.0s							
YSS				MLR		MLR		
	comp=Z,300nm,14.0s							
USRK	**Ussuriysk Arra**	**11.76**	**317**	Pn		**Pn**	**14 27 29.1**	**+1.4**
	comp=Z,0.9nm,0.3s,baz=130,slow=13,SNR=24							
USRK				LR		LR	14 31 30.0	
	comp=Z,345nm,20.8s,baz=135,slow=35							
KSRS	**Korea Array**	**12.30**	**281**	Pn		**Pn**	**14 27 36.1**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=105,slow=13,SNR=14							
KSRS				LR		LR	14 32 01.1	
	comp=Z,201nm,21.2s,baz=255,slow=36							
KSAR	**Wonju Array Be**	**12.33**	**281**	Pn		**Pn**	**14 27 36.1**	**+0.6**
MDJ	**Mudanjiang**	**13.39**	**314**	P		Pn	14 27 46.5	-3.4
MDJ				pmax		pmax		
	comp=Z,9.0nm,2.0s							
MDJ				pmax		pmax		
	comp=Z,110nm,3.5s							
KLR	**Kul'dur**	**15.56**	**331**	*e*P		Pn	14 28 13.0	-6.1
KLR				MLR		MLR		
	comp=E,500nm,14.0s							
KLR				MLR		MLR		
	comp=Z,1µm,14.0s							
CN2	**Changchun**	**15.60**	**305**	*e*P		Pn	14 28 14.8	-4.8
CN2				*e*pP		**P**	**14 28 23.4**	**-0.1**
CN2				*e*sP		sP	14 28 30.0	-6.7
CN2				*e*S		Sn	14 31 03.8	-7.5
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
CN2				pmax		pmax		
	comp=Z,200nm,4.0s							
CN2				LR		LR		
	comp=N,300nm,13.0s							
CN2				LR		LR		
	comp=E,400nm,13.0s							
CN2				LR		LR		
	comp=Z,400nm,14.0s							
PETK	**Petropavlovsk-**	**19.84**	**26**	P		**Pn**	**14 29 11.4**	**-0.6**
PETK	**Petropavlovsk-**	**19.84**	**26**	Pn		**Pn**	**14 29 11.4**	**-0.6**
PETK	**Petropavlovsk-**	**19.84**	**26**	Pn		**Pn**	**14 29 11.4**	**-0.6**
	comp=Z,0.1n

SONM PcP **PcP** **14 33 47.6 -0.5**
comp=Z,0.6nm,0.5s,baz=100,slow=1.6,SNR=4.3
SONM LR LR 14 42 30.6
comp=Z,96nm,18.5s,baz=240,slow=36
LZH Lanzhou 31.63 282 *e*P **P** **14 31 02.5 +0.1**
LZH pP pP 14 31 14.5 +2.3
LZH sP sP 14 31 19.8 +3.5
LZH PP **PnPn** **14 32 07.6 +1.0**
LZH pmax pmax
comp=Z,21nm,1.1s
LZH pmax pmax
comp=Z,65nm,4.7s
LZH LR LR
comp=N,260nm,13.5s
LZH LR LR
comp=E,310nm,13.1s
LZH LR LR
comp=Z,360nm,14.8s
ZAK Zakamensk 31.96 309 *e*P **P** **14 31 05.4 +0.3**
ZAK pmax pmax
comp=Z,5.0nm,1.1s
TLY Talaya 32.01 312 *e*P P 14 31 02.3 -3.1
TLY pmax pmax
comp=Z,4.0nm,0.8s
TLY MLR MLR
comp=Z,169nm,17.0s
GYA Guiyang 32.48 263 *e*P **P** **14 31 11.0 +1.1**
GYA pmax pmax
comp=Z,10.0nm,0.8s
CD2 Chengdu 33.11 273 P **P** **14 31 16.0 +0.7**
CD2 pP pP 14 31 27.5 +2.4
CD2 sP sP 14 31 32.5 +3.3
CD2 PP **PnPn** **14 32 27.3 +1.9**
CD2 PcP **PcP** **14 33 59.4 +1.4**
CD2 S **S** **14 36 30.3 -2.0**
CD2 sS sS 14 36 49.8 +1.3
CD2 PcS **PcS** **14 37 43.6 0.0**
CD2 SS **SnSn** **14 38 31.8 -0.7**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,80nm,4.4s
CD2 LR LR
comp=N,320nm,9.3s
CD2 LR LR
comp=E,260nm,11.7s
CD2 LR LR
comp=Z,300nm,11.7s
QIZ Qiongzhong 33.87 249 P **P** **14 31 22.3 +0.4**
QIZ sP sP 14 31 38.0 +2.1
QIZ S **S** **14 36 44.4 +0.3**
QIZ pmax pmax
comp=Z,12nm,1.4s
QIZ LR LR
comp=Z,150nm,17.9s
GTA Gaotai 34.20 289 *e*P **P** **14 31 25.3 +0.5**
GTA pP pP 14 31 37.8 +3.2
GTA sP sP 14 31 43.3 +4.6
GTA S **S** **14 36 49.0 -0.1**
GTA sS sS 14 37 09.4 +4.0
GTA pmax pmax
comp=Z,6.0nm,1.2s
GTA pmax pmax
comp=Z,130nm,6.4s
GTA LR LR
comp=N,100nm,13.8s
GTA LR LR
comp=E,74nm,13.8s
GTA LR LR
comp=Z,89nm,15.0s
BILL Bilibino 34.55 15⇓ *i*P **P** **14 31 26.5 -0.8**
BILL *e* 14 32 41.7
BILL *e* 14 34 02.5
BILL pmax pmax
comp=Z,38nm,1.6s
BILL Bilibino 34.55 15 *e*P P 14 31 24.7 -2.6
comp=Z,14nm,1.6s
CHTO Chiang Mai 42.45 258 *e*P **P** **14 32 34.5 +0.2**
CHTO pmax pmax
comp=Z,2.0nm,0.8s
CHTO Chiang Mai 42.45 258 *e*P **P** **14 32 34.5 +0.2**
comp=Z,2.2nm,0.8s
WMQ Urumqi 42.53 298 P **P** **14 32 35.0 +0.4**
WMQ pP pP 14 32 47.0 +2.4
WMQ sP sP 14 32 53.0 +4.3
WMQ PP **PP** **14 34 17.0 +3.6**
WMQ PcP **PcP** **14 34 27.0 +0.2**
WMQ ScP **ScP** **14 38 13.0 -1.9**
WMQ S **S** **14 38 53.0 -1.7**
WMQ sS sS 14 39 15.0 +3.8
WMQ SS SS 14 41 57.0 -7.7
WMQ ScS **ScS** **14 42 31.0 -2.5**
WMQ pmax pmax
comp=Z,15nm,1.0s
WMQ pmax pmax
comp=Z,120nm,5.0s
WMQ LR LR
comp=N,140nm,16.0s
WMQ LR LR
comp=E,130nm,16.0s
WMQ LR LR
comp=Z,100nm,16.0s
CMAR Chiang Mai Arr 42.65 258 P **P** **14 32 34.8 -1.1**
CMAR Chiang Mai Arr 42.65 258 P **P** **14 32 34.7 -1.1**
comp=Z,0.9nm,0.3s,baz=47,slow=6.6,SNR=10
ZAA0 Zalesovo Array 43.59 313 *e*P **P** **14 32 41.6 -1.4**
ZAA0 *e*pP pP 14 32 54.5 +1.5
ZALV Zalesovo Beam 43.59 313 P **P** **14 32 43.4 +0.4**
ZALV 14 34 29.3
ZALV pmax pmax
comp=Z,11nm,0.8s
ZALV pmax pmax
comp=Z,4.0nm,0.6s
ZALV MLR MLR
comp=Z,96nm,18.5s
ZALV Zalesovo Beam 43.59 313 P **P** **14 32 43.4 +0.4**
ZALV PcP **PcP** **14 34 29.3 -0.7**
ZALV Zalesovo Beam 43.59 313 P **P** **14 32 43.4 +0.4**
comp=Z,10nm,0.8s,baz=91,slow=6.7,SNR=42
ZALV PcP **PcP** **14 34 29.3 -0.7**
comp=Z,3.6nm,0.6s,baz=87,slow=3.2,SNR=8.6
ZALV LR LR 14 51 39.5
comp=Z,96nm,18.5s,baz=64,slow=37
NVS Novosibirsk 44.51 314 *e*P **P** **14 32 49.6 -0.7**
NVS pmax pmax
comp=Z,14nm,1.2s
NVS pmax pmax
comp=E,11nm,1.1s
MK31 Makanchi Array 45.81 303 *e*P **P** **14 32 59.2 -1.7**
MK31 Makanchi Array 45.81 303 *e*P **P** **14 32 59.2 -1.7**
MKAR Makanchi Array 45.81 303 P **P** **14 33 01.2 +0.3**
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MKAR MLR MLR
comp=Z,83nm,21.6s
MKAR Makanchi Array 45.81 303 P **P** **14 33 01.2 +0.3**
MKAR Makanchi Array 45.81 303 P **P** **14 33 01.2 +0.3**
comp=Z,3.6nm,0.7s,baz=89,slow=9.6,SNR=38
MKAR LR LR 14 52 19.0
comp=Z,82nm,21.6s,baz=268,slow=36
KDAK Kodiak Island 46.86 41 P **P** **14 33 08.7 -0.1**
KDAK Kodiak Island 46.86 41 P **P** **14 33 08.7 -0.1**
comp=Z,9.8nm,0.7s,baz=280,slow=12,SNR=5.9
TAPN Taplejung 47.43 276 *e*P **P** **14 33 14.2 +0.1**
comp=Z,6.3nm,0.5s
KURK Kurchatov 47.62 309 *e*P **P** **14 33 14.3 -0.6**
KURK *e**PP pP 14 33 26.0 +1.0
KURK pmax pmax
comp=Z,29nm,0.8s
KURK Kurchatov 47.62 309 *e*P **P** **14 33 14.3 -0.6**
comp=Z,29nm,0.8s
KURK *e*pP pP 14 33 26.0 +1.0
ODAN Odare 47.89 275 *e*P **P** **14 33 18.1 +0.5**
TRF Thorofare Moun 48.02 34 *e*P P 14 33 16.5 -1.6
RAMN Ramite 48.49 276 *e*P **P** **14 33 22.5 +0.2**
GUN Gumba 48.66 277 *e*P **P** **14 33 23.9 +0.2**
comp=Z,30nm,1.0s
COLA College 49.13 32 *e*P **P** **14 33 25.2 -1.0**
COLA pmax pmax
comp=Z,7.0nm,1.1s
COLA College 49.13 32 *e*P **P** **14 33 25.2 -1.0**
comp=Z,6.5nm,1.1s
PKIN Phulchoki 49.19 277 *e*P **P** **14 33 27.0 -0.7**
comp=Z,8.1nm,0.6s
ILAR Eielson Array 49.54 32 P **P** **14 33 29.6 +0.1**
ILAR PcP **PcP** **14 34 49.2 -1.6**
ILAR Eielson Array 49.54 32 P **P** **14 33 29.6 +0.1**
comp=Z,3.1nm,0.7s,baz=264,slow=6.5,SNR=43
ILAR PcP **PcP** **14 34 49.2 -1.6**
comp=Z,0.8nm,0.7s,baz=279,slow=3.4,SNR=5.8
DANN Dangsing 50.18 279 *e*P **P** **14 33 35.4 +0.2**
comp=Z,54nm,0.7s
KOLN Koldanda 50.55 278 *e*P **P** **14 33 38.1 +0.2**
comp=Z,8.7nm,0.7s
PYUN Piuthan 50.90 279 *e*P **P** **14 33 39.7 -0.9**
comp=Z,45nm,0.9s
TKM2 Tokmak 2 51.32 300 *e*P **P** **14 33 41.8 -1.7**
TKM2 pmax pmax
comp=Z,27nm,0.6s
TKM2 Tokmak 2 51.32 300 *e*P **P** **14 33 41.8 -1.7**
comp=Z,27nm,0.6s
KSH Kashi 52.08 295 *e*P **P** **14 33 51.0 +1.9**
KSH pP pP 14 34 03.9 +4.5
KSH sP sP 14 34 08.9 +5.5
KSH PcP **PcP** **14 35 03.0 +2.1**
KSH PP **PP** **14 35 51.0 +3.7**
KSH ScP **ScP** **14 38 53.9 -1.3**
KSH PcS **PcS** **14 38 59.8 +0.6**
KSH S **S** **14 41 11.1 +0.2**
KSH sS sS 14 41 33.1 +5.4
KSH ScS **ScS** **14 43 34.0 -2.7**
KSH SS **SS** **14 44 47.1 -0.9**
KSH pmax pmax
comp=Z,8.0nm,0.3s
KSH LR LR
comp=N,68nm,5.6s
KSH LR LR
comp=E,100nm,4.8s
KSH LR LR
comp=Z,420nm,5.7s
AAK Ala-Archa 52.18 300⇓ *i*P **P** **14 33 50.2 +0.3**
AAK pmax pmax
comp=Z,8.0nm,1.2s
BVA0 Borovoye Array 52.25 313 *i* P **P** **14 33 50.1 +0.1**
BVA0 pmax pmax
comp=Z,1.0nm,1.0s
BRVK Borovoye 52.30 313 *ce*P **P** **14 33 50.2 -0.2**
BRVK pmax pmax
comp=Z,6.0nm,0.6s
KKAR Karatay Array 54.82 301 *e*P P 14 34 05.6 -3.5
KKAR pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 54.82 301 *e*P P 14 34 05.6 -3.5
comp=Z,6.3nm,0.8s
WRA Warramunga Arr 56.35 190 P **P** **14 34 17.8 -2.3**
WRA Warramunga Arr 56.35 190 P **P** **14 34 17.8 -2.3**
comp=Z,3.2nm,0.7s,baz=11,slow=7.5,SNR=16
SVE Sverdlovsk 56.78 319⇓ *e*P **P** **14 34 24.1 +1.3**
SVE pmax pmax
comp=Z,20nm,0.9s
ARU Arti 58.00 319 *d i*P **P** **14 34 31.7 +0.3**
ARU 14 36 37.5
ARU S **S** **14 42 29.8 +0.5**
ARU SS **SS** **14 46 17.3 -2.8**
ARU pmax pmax
comp=Z,37nm,1.7s
AB31 Akbulak array 59.62 311 *i* P **P** **14 34 42.3 -0.5**
AB31 pmax pmax
comp=Z,7.0nm,0.5s
ABKAR Akbulak array 59.62 311 *e*P **P** **14 34 40.5 -2.3**
comp=Z,8.8nm,0.5s
ABKAR *e*pP pP 14 34 53.9 +0.7
ASAR Alice Springs 60.08 190 P **P** **14 34 44.3 -1.9**
ASAR Alice Springs 60.08 190 P **P** **14 34 44.3 -1.9**
comp=Z,1.9nm,0.8s,baz=2.8,slow=7.2,SNR=14
RES Resolute Bay 63.16 15 *e*P P 14 35 03.6 -2.6
comp=Z,6.3nm,0.8s
YKA Yellowknife Ar 63.91 30 P **P** **14 35 10.4 -1.0**
YKA PcP **PcP** **14 35 46.3 -0.5**
YKA Yellowknife Ar 63.91 30 P **P** **14 35 10.4 -1.0**
comp=Z,1.3nm,0.7s,baz=301,slow=6.7,SNR=23
YKA PcP **PcP** **14 35 46.3 -0.5**
comp=Z,0.6nm,0.7s,baz=301,slow=4.3,SNR=6.6
TMCR Tamitsa 64.24 332 *e*P **P** **14 35 14.3 +0.7**
TMCR pmax pmax
comp=Z,19nm,1.1s
ARCES ARCESS Array B 65.37 340 P **P** **14 35 20.5 -0.4**
ARCES ARCESS Array B 65.37 340 P **P** **14 35 20.5 -0.4**
comp=Z,2.4nm,0.7s,baz=55,slow=9.1,SNR=6.7
JOF Joensuu 67.45 333 *e*P **P** **14 35 34.1 -0.2**
JOF pmax pmax
comp=Z,3.0nm,0.4s
JOF Joensuu 67.45 333 *ep* **P** **14 35 34.1 -0.2**
comp=Z,2.6nm,0.4s
VRHR Novokhopersk 69.33 319 *e*P P 14 35 52.9 +6.7
VRHR pmax pmax
comp=N,20nm,0.5s
VRHR pmax pmax
comp=Z,30nm,0.5s
VRHR pmax pmax
comp=E,3.0nm,0.3s
OBN Obninsk 69.69 324⇑ *i*P **P** **14 35 48.8 +0.5**
OBN pmax pmax
comp=Z,10.0nm,0.5s
OBN MLR MLR
comp=Z,100nm,15.0s
KAF Kangasniemi 69.78 333 *e*P **P** **14 35 47.5 -1.3**
KAF pmax pmax
comp=Z,4.0nm,0.7s
KAF Kangasniemi 69.78 333 *ep* **P** **14 35 47.5 -1.3**
comp=Z,3.6nm,0.7s
C11A Tepee Creek (N 70.53 45⇑ P **P** **14 35 54.1 +0.3**
baz=70
VSR Storozhevoye 70.56 320 *e*P **P** **14 35 53.6 -0.2**
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,4.0nm,0.6s
VSR pmax pmax
comp=Z,7.0nm,0.6s
VORD Divnogorie 70.64 319 *e*P **P** **14 35 53.6 -0.6**
VORD pmax pmax
comp=Z,5.0nm,0.6s
VORD pmax pmax
comp=N,1.0nm,0.3s
VORD pmax pmax
comp=E,6.0nm,0.6s
B13A Whitefish 71.25 43⇓ P **P** **14 35 58.4 +0.2**
baz=71
A14A Double T Ranch 71.50 43⇓ P **P** **14 35 59.6 -0.1**
baz=71
C13A Hot Springs 71.57 44⇑ P **P** **14 36 00.7 +0.6**
baz=71
B14A Marquette Ranc 71.92 43⇓ P **P** **14 36 02.9 +0.6**
baz=72,SNR=5.5
D13A Huson 71.96 45⇑ P **P** **14 36 03.1 +0.6**
baz=72
F12A Elk City 72.24 46⇓ P **P** **14 36 04.7 +0.5**
baz=72
BEKR Beckworth 72.29 53 *e*P **P** **14 36 03.9 -0.8**
comp=E,2.9nm,0.8s
BEKR *e*pP pP 14 36 15.2 -0.1
B15A Bradely Ranch, 72.34 43⇑ P **P** **14 36 05.0 +0.3**
baz=72
SLMT Seeley Lake 72.42 44 *e*P **P** **14 36 04.4 -1.0**
comp=E,3.7nm,0.7s
SLMT *e*pP pP 14 36 16.7 +0.8
ZEI Tsey 72.50 310 *e*P **P** **14 36 05.7 -0.2**
ZEI pmax pmax
comp=Z,5.0nm,0.8s
D14A Greenough 72.51 44⇓ P **P** **14 36 06.0 +0.2**
baz=72
KBZ Khabaz 72.58 312 P **P** **14 36 06.4 +0.3**
KBZ pmax pmax
comp=Z,9.0nm,0.9s
KBZ MLR MLR
comp=Z,72nm,18.5s
KBZ Khabaz 72.58 312 P **P** **14 36 06.3 +0.3**
KBZ Khabaz 72.58 312 P **P** **14 36 06.3 +0.3**
comp=Z,9.0nm,0.8s,baz=57,slow=4.5,SNR=20
KBZ LR LR 15 12 35.7
comp=Z,72nm,18.5s,baz=250,slow=40
KIV Kislovodsk 72.59 312 *c i*P **P** **14 36 07.9 +1.6**
KIV pmax pmax
comp=Z,33nm,1.1s
C15A Salmond Ranch, 72.62 43⇑ P **P** **14 36 07.2 +0.8**
baz=72,SNR=5.4
F13A Darby 72.76 46⇑ P **P** **14 36 06.7 -0.7**
baz=73
C16A Fuhringer Ranc 73.08 43⇓ P **P** **14 36 09.4 +0.3**
baz=73,SNR=5.7
H12A Diamond D Ranc 73.15 47⇓ P **P** **14 36 10.0 +0.3**
baz=73
MFID Camas Ranch 73.20 48⇑ P **P** **14 36 10.3 +0.3**
baz=73
G13A Cobalt 73.21 46⇑ P **P** **14 36 10.4 +0.3**
baz=73
B17A L&G Farms, Che 73.31 42⇓ P **P** **14 36 11.0 +0.6**
baz=73
E15A Deer Lodge 73.37 44⇑ P **P** **14 36 11.2 +0.3**
baz=73
I12A Atlanta 73.41 48⇑ P **P** **14 36 11.3 +0.1**
baz=73
H13A Challis 73.50 47⇑ P **P** **14 36 11.8 +0.1**
baz=73
D16A Dana Ranch, Ca 73.63 43⇑ P **P** **14 36 12.9 +0.4**
baz=73,SNR=5.4
F15A Butte 73.79 45⇓ P **P** **14 36 14.0 +0.5**
baz=74,SNR=11
LRM Limekiln Ridge 73.83 45 *e*P **P** **14 36 13.1 -0.6**
comp=Z,78nm,0.8s
LRM *e*pP **pP** **14 36 25.5 +1.1**
H14A Leadore 73.99 46⇑ P **P** **14 36 14.6 -0.1**
baz=74
A19A Klindworth Far 74.04 41⇑ P **P** **14 36 14.8 +0.1**
baz=74
D17A Six Diamond Ra 74.04 43⇓ P **P** **14 36 15.1 +0.3**
baz=74
G15A Dillon 74.18 45⇑ P **P** **14 36 15.8 0.0**
baz=74
J13A Cove Ranch, Pi 74.21 48⇑ P **P** **14 36 16.1 +0.3**
baz=74
B19A Brinkman Farms 74.21 41⇓ P **P** **14 36 15.8 +0.1**
baz=74
F16A Kennard Place, 74.32 45⇑ P **P** **14 36 16.7 +0.2**
baz=74,SNR=5.2
I14A Mackay 74.33 47⇑ P **P** **14 36 16.9 +0.2**
baz=74
E17A Martinsdale 74.35 44⇓ P **P** **14 36 17.0 +0.2**
baz=74
BOZ Bozeman (W) 74.39 45 *e*P **P** **14 36 16.1 -0.9**
BOZ *e**PP **pP** **14 36 28.8 +1.2**
BOZ pmax pmax
comp=Z,3.0nm,0.8s
BOZ Bozeman (W) 74.39 45 *e*P **P** **14 36 16.1 -0.9**
comp=Z,3.0nm,0.8s
BOZ *e*pP **pP** **14 36 28.8 +1.2**
NVAR Mina Array Bea 74.41 54 P **P** **14 36 18.3 +1.0**
NVAR Mina Array Bea 74.41 54 P **P** **14 36 18.3 +1.0**
comp=Z,4.1nm,0.7s,baz=286,slow=6.0,SNR=32
G16A Moss Hill, Enn 74.54 45⇓ P **P** **14 36 18.6 +0.8**
baz=74
C19A Slack Wire Ran 74.59 42⇓ P **P** **14 36 18.9 +1.0**
baz=74
J14A Carey 74.64 47⇓ P **P** **14 36 19.2 +0.7**
baz=74
F17A Fitzpatrick Pl 74.79 44⇓ P **P** **14 36 19.3 0.0**
baz=75
D19A Cripps Ranch, 75.03 42⇑ P **P** **14 36 20.7 +0.2**
baz=75
C20A Veseth Ranch, 75.17 41⇓ P **P** **14 36 21.6 +0.4**
baz=75
H16A Russell Place, 75.17 45⇑ P **P** **14 36 21.9 +0.4**
baz=75
J15A Blackfoot 75.24 47⇓ P **P** **14 36 22.2 +0.4**
baz=75
B21A Ellsworth Farm 75.25 40⇑ P **P** **14 36 21.7 0.0**
baz=75
K14A Jones Ranch, D 75.30 48⇓ P **P** **14 36 22.5 +0.3**
baz=75
F18A Big Timber 75.32 44⇓ P **P** **14 36 22.7 +0.5**
baz=75,SNR=6.8
VES Vestal, Richgr 75.33 56⇓ P **P** **14 36 22.6 +0.2**
baz=75
D20A Manuel Ranch, 75.47 42⇑ P **P** **14 36 23.1 +0.1**
baz=75
E19A Rath Farm, Rou 75.50 43⇑ P **P** **14 36 23.5 +0.2**
baz=75
L14A Malta 75.56 48⇑ P **P** **14 36 24.2 +0.5**
baz=75
NB2 NORSAR Subarra 75.59 338 P **P** **14 36 23.8 +0.3**
comp=Z,6.9nm,0.8s,baz=38,slow=5.9
NOA NORSAR Array B 75.59 338 P **P** **14 36 23.7 +0.3**
NOA NORSAR Array B 75.59 338 P **P** **14 36 23.7 +0.3**
comp=Z,7.3nm,0.9s,baz=38,slow=5.7,SNR=18
NOA LR LR 15 12 08.1
comp=Z,40nm,18.4s,baz=295,slow=38
H17A Grant Village 75.74 45⇑ P **P** **14 36 27.4 +2.5**
baz=76,SNR=5.6
F19A Roth Farm, Mol 75.78 43⇑ P **P** **14 36 25.2 +0.3**
baz=76
E20A Meyer Farm, Mu 75.83 42⇓ P **P** **14 36 25.0 -0.1**
baz=76
ISA Isabella 75.84 56⇑ P **P** **14 36 26.1 +0.7**
baz=76
AKASG Malin Array Be 75.90 323 P **P** **14 36 25.3 0.0**
AKASG pmax pmax
comp=Z,6.0nm,0.5s
AKASG Malin Array Be 75.90 323 P **P** **14 36 25.2 0.0**
AKASG Malin Array Be 75.90 323 P **P** **14 36 25.2 0.0**
comp=Z,5.6nm,0.5s,baz=47,slow=5.7,SNR=23
KIEV Kiev 75.91 323 *e*P P 14 36 22.0 -3.3
KIEV *e**PP pP 14 36 36.2 +0.2
KIEV pmax pmax
comp=Z,68nm,1.8s
KIEV Kiev 75.91 323 *e*P P 14 36 22.0 -3.3
comp=Z,68nm,1.8s
KIEV *e*pP pP 14 36 36.1 +0.2
K16A Soda Springs 76.08 47⇓ P **P** **14 36 27.4 +0.7**
baz=76
R11A Troy Canyon, C 76.22 53⇓ P **P** **14 36 28.2 +0.6**
baz=76
MPMC Manual Prospec 76.28 55⇑ P **P** **14 36 28.1 +0.1**
baz=76
B23A Brockton 76.28 39⇑ P **P** **14 36 28.0 +0.5**
baz=76
LRMC Laurel Mountai 76.48 56⇑ P **P** **14 36 29.4 +0.3**
baz=76
D22A Cohagen 76.49 41⇑ P **P** **14 36 29.3 +0.5**
baz=76
G20A Bridger 76.58 44⇓ P **P** **14 36 29.0 -0.4**
baz=76
C23A Lambert 76.60 40⇑ P **P** **14 36 29.1 -0.3**
baz=76
EDW2 Edwards Air Fo 76.61 57⇓ P **P** **14 36 29.6 -0.1**
baz=76
J18A Kendall Valley 76.77 46⇑ P **P** **14 36 31.3 +0.6**
baz=77
I19A Meeteetse 76.86 45⇓ P **P** **14 36 30.7 -0.5**
baz=77
DUG Dugway 76.89 50 *e*P **P** **14 36 30.3 -1.1**
DUG *e* 14 36 43.4
DUG pmax pmax
comp=Z,5.0nm,0.8s
DUG Dugway 76.89 50 *e*P **P** **14 36 30.2 -1.1**
comp=Z,4.6nm,0.8s
DUG *e*PcP **PcP** **14 36 43.4 +1.0**
D23A Lindsay 76.99 41⇓ P **P** **14 36 31.7 +0.1**
baz=77
E22A Miles City 77.06 42⇓ P **P** **14 36 31.9 -0.1**
baz=77
K18A Toltan Ranch, 77.11 46⇓ P **P** **14 36 32.0 -0.6**
baz=77
G21A Lodge Grass 77.13 43⇑ P **P** **14 36 32.1 -0.4**
baz=77
GSC Goldstone 77.17 56⇓ P **P** **14 36 33.1 +0.2**
baz=77
BFSC Mount Baldy Ra 77.20 57⇑ P **P** **14 36 33.5 +0.3**
baz=77
J19A Crowheart 77.30 45⇓ P **P** **14 36 34.3 +0.7**
baz=77,SNR=6.6
F22A Rosebud 77.31 42⇓ P **P** **14 36 33.3 -0.1**
baz=77
PDAR Pinedale Array 77.31 46 P **P** **14 36 34.0 +0.2**
PDAR Pinedale Array 77.31 46 P **P** **14 36 34.0 +0.2**
comp=Z,2.6nm,0.7s,baz=267,slow=2.3,SNR=24
I20A Worland 77.41 45⇑ P **P** **14 36 34.2 +0.1**
baz=77
M17A Scullys Gap (B 77.44 48⇓ P **P** **14 36 34.8 +0.3**
baz=77
L18A Fontenelle, Gr 77.54 47⇓ P **P** **14 36 35.7 +0.7**
baz=77
H21A Big Horn, Sher 77.60 43⇓ P **P** **14 36 35.6 +0.4**
baz=77
K19A Absolon Red Bu 77.69 46⇓ P **P** **14 36 36.0 +0.2**
baz=78
DAU Daniels Canyon 77.72 49 *e*P **P** **14 36 36.3 +0.1**
DAU *e**PP **pP** **14 36 47.8 +1.0**

DAU					pmax	pmax		
	comp=Z,6.0nm,1.0s							
DAU	**Daniels Canyon**	**77.72**	**49**	*e*P	**P**	**14 36 36.3 +0.1**		
	comp=Z,5.9nm,1.0s							
DAU				*e*pP	**pP**	**14 36 47.8 +1.0**		
HEC	**Hector,Ludlow**	**77.76**	**56**	⇓P	**P**	**14 36 36.8 +0.6**		
	baz=78							
F23A	**Volborg**	**77.81**	**42**	⇑P	**P**	**14 36 36.8 +0.6**		
	baz=78							
M18A	**Lyman**	**77.82**	**47**	⇓P	**P**	**14 36 36.7 0.0**		
	baz=78							
L19A	**Farson**	**77.83**	**47**	⇓P	**P**	**14 36 36.7 0.0**		
	baz=78							
ARUT	**Antelope Range**	**77.92**	**52**	*e*P	**P**	**14 36 36.5 -0.7**		
ARUT				*e**PP	**pP**	**14 36 50.1 +2.3**		
ARUT				pmax	pmax			
	comp=Z,4.0nm,0.5s							
ARUT	**Antelope Range**	**77.92**	**52**	*e*P	**P**	**14 36 36.5 -0.7**		
	comp=Z,4.2nm,0.5s							
ARUT				*e*pP	**pP**	**14 36 50.1 +2.3**		
I21A	**Big Trails, Te**	**77.97**	**44**	⇓P	**P**	**14 36 37.2 -0.1**		
	baz=78							
J21A	**Lysite**	**78.17**	**45**	⇑P	**P**	**14 36 38.7 +0.3**		
	baz=78							
F24A	**Ekalaka**	**78.24**	**41**	⇑P	**P**	**14 36 38.6 -0.1**		
	baz=78							
N18A	**Larsen Ranch,**	**78.33**	**48**	⇓P	**P**	**14 36 39.3 -0.2**		
	baz=78							
I22A	**9 Mile Ranch,**	**78.37**	**44**	⇑P	**P**	**14 36 39.2 -0.3**		
	baz=78							
PFO	**Pinyon Flat Ob**	**78.38**	**57**	⇑P	**P**	**14 36 39.8 +0.1**		
	baz=78							
P17A	**Butcher Ranch,**	**78.61**	**49**	⇑P	**P**	**14 36 41.2 +0.3**		
	baz=78							
Q16A	**Castle Valley**	**78.67**	**50**	⇓P	**P**	**14 36 41.4 0.0**		
	baz=78							
J22A	**Midwest**	**78.68**	**44**	⇓P	**P**	**14 36 41.2 -0.1**		
	baz=78,SNR=6.4							
N19A	**John Jarvie Ra**	**78.68**	**47**	⇑P	**P**	**14 36 41.1 -0.3**		
	baz=78							
IRM	**Iron Mountain**	**78.94**	**56**	⇑P	**P**	**14 36 42.1 -0.5**		
	baz=79							
SRU	**San Rafael**	**78.96**	**50**	*e*P	**P**	**14 36 42.3 -0.6**		
SRU				*e**PP	**pP**	**14 36 55.1 +1.5**		
SRU				pmax	pmax			
	comp=Z,8.0nm,0.7s							
SRU	**San Rafael**	**78.96**	**50**	*e*P	**P**	**14 36 42.3 -0.6**		
	comp=Z,8.0nm,0.7s							
SRU				*e*pP	**pP**	**14 36 55.1 +1.5**		
L21A	**Rawlins**	**79.08**	**46**	⇓P	**P**	**14 36 42.8 -0.7**		
	baz=79							
O19A	**Miners Draw (B**	**79.08**	**48**	⇑P	**P**	**14 36 43.4 -0.1**		
	baz=79							
N20A	**Spence Gulch,**	**79.26**	**47**	⇑P	**P**	**14 36 45.5 +0.9**		
	baz=79,SNR=9.0							
M21A	**Separation Pea**	**79.31**	**46**	⇑P	**P**	**14 36 44.9 +0.1**		
	baz=79							
U15A	**North Rim**	**79.47**	**53**	⇓P	**P**	**14 36 46.0 +0.1**		
	baz=79							
PDMCI	**Parker Dam,Lak**	**79.53**	**55**	⇑P	**P**	**14 36 46.2 +0.3**		
	baz=79							
L22A	**Ellis Ranch, M**	**79.58**	**45**	⇓P	**P**	**14 36 46.6 +0.4**		
	baz=79							
P19A	**Cripple Cowboy**	**79.58**	**48**	⇑P	**P**	**14 36 46.8 +0.4**		
	baz=79							
N21A	**Black Mountain**	**79.75**	**47**	⇑P	**P**	**14 36 47.7 +0.5**		
	baz=80							
Q19A	**Hogan Spring (**	**79.83**	**49**	⇑P	**P**	**14 36 47.8 +0.2**		
	baz=80							
M22A	**Cedar Creek Ra**	**79.88**	**46**	⇑P	**P**	**14 36 48.4 +0.5**		
	baz=80							
BUR08	**Bucovina Ar. S**	**79.91**	**323**	*e*P	**P**	**14 36 47.7 -0.1**		
BUR08				*e*pP	**pP**	**14 36 59.8 +1.3**		
L23A	**Garrett**	**79.94**	**45**	⇑P	**P**	**14 36 47.7 -0.5**		
	baz=80							
S18A	**Hurst Farm, Bl**	**80.16**	**50**	⇓P	**P**	**14 36 49.5 0.0**		
	baz=80							
M23A	**Laramie**	**80.35**	**45**	⇓P	**P**	**14 36 50.3 -0.1**		
	baz=80							
KOLS	**Kolonicke sedl**	**80.41**	**325**	*e*P	**P**	**14 36 51.0 +0.7**		
KOLS	**Kolonicke sedl**	**80.41**	**325**	*e*P	**P**	**14 36 51.0 +0.7**		
Q20A	**Ridgley Place,**	**80.42**	**49**	⇑P	**P**	**14 36 50.9 +0.1**		
	baz=80							
Y14A	**Wickenburg**	**80.50**	**55**	⇑P	**P**	**14 36 50.9 -0.2**		
	baz=80							
BR131	**Keskin Array S**	**80.53**	**313**	*e*P	**P**	**14 36 50.5 -0.8**		
	comp=Z,3.0nm,0.6s							
BR131				*e*pP	**pP**	**14 37 02.9 +0.9**		
BRTR	**Keskin Array B**	**80.53**	**313**	P	**P**	**14 36 51.6 +0.3**		
BRTR	**Keskin Array B**	**80.53**	**313**	P	**P**	**14 36 51.6 +0.3**		
	comp=Z,4.4nm,0.7s,baz=97,slow=4.1,SNR=20							
N23A	**Red Feather La**	**80.59**	**46**	⇓P	**P**	**14 36 52.7 +0.9**		
	baz=80,SNR=5.6							
WUAZ	**Wupatki**	**80.61**	**53**	*e*P	**P**	**14 36 51.6 -0.2**		
	comp=Z,5.6nm,1.0s							
WUAZ				*e*pP	**pP**	**14 37 04.1 +1.5**		
O22A	**Kremmling**	**80.70**	**47**	⇓P	**P**	**14 36 52.9 +0.4**		
	baz=80,SNR=6.3							
PV01	**Paradox Valley**	**80.76**	**49**	*e*P	**P**	**14 36 52.5 -0.2**		
	comp=Z,914nm,1.3s							
CRVS	**Cervenica-Dubn**	**80.80**	**325**	*e*P	**P**	**14 36 52.4 -0.1**		
CRVS	**Cervenica-Dubn**	**80.80**	**325**	*e*P	**P**	**14 36 52.4 -0.1**		
R20A	**Redvale**	**80.85**	**49**	⇑P	**P**	**14 36 53.5 +0.4**		
	baz=81							
M24A	**Cheyenne**	**80.86**	**45**	⇓P	**P**	**14 36 53.7 +0.5**		
	baz=81							
P22A	**Eagle**	**80.94**	**47**	⇓P	**P**	**14 36 54.4 +0.8**		
	baz=81							
K26A	**Motz Farm, Whi**	**80.98**	**43**	⇑P	**P**	**14 36 53.4 -0.3**		
	baz=81							
O23A	**Lake Granby, G**	**81.04**	**46**	⇓P	**P**	**14 36 55.2 +0.9**		
	baz=81,SNR=8.0							
S20A	**Disappointment**	**81.08**	**49**	⇑P	**P**	**14 36 54.8 +0.3**		
	baz=81							
X16A	**Lo Mia Camp, P**	**81.24**	**54**	⇑P	**P**	**14 36 56.2 +0.9**		
	baz=81							
Q22A	**Crested Butte,**	**81.31**	**48**	⇑P	**P**	**14 36 56.5 +0.7**		
	baz=81							
S21A	**Coal Bank Pass**	**81.54**	**49**	⇑P	**P**	**14 36 57.3 +0.4**		
	baz=81							
P23A	**Jefferson**	**81.62**	**47**	⇓P	**P**	**14 36 57.3 -0.1**		
	baz=81							
R22A	**Saguache, Gunn**	**81.81**	**48**	⇑P	**P**	**14 36 59.0 +0.6**		
	baz=82							
DPC	**Dobruska-Polom**	**82.00**	**329**	*e*P	**P**	**14 36 59.8 +1.0**		
DPC	**Dobruska-Polom**	**82.00**	**329**	*e*P	**P**	**14 36 59.8 +1.0**		
S22A	**4UR Ranch, Cre**	**82.07**	**49**	⇑P	**P**	**14 37 00.5 +0.7**		
	baz=82							
V20A	**Brimhall**	**82.29**	**51**	⇓P	**P**	**14 37 01.5 +0.7**		
	baz=82							
VYHS	**Vyhne**	**82.30**	**326**	*e*P	**P**	**14 37 00.1 -0.3**		
VYHS				pmax	pmax			
	comp=Z,10.0nm,2.0s							
VYHS	**Vyhne**	**82.30**	**326**	*e*P	**P**	**14 37 00.1 -0.3**		
Q24A	**Divide**	**82.30**	**47**	⇓P	**P**	**14 37 01.1 +0.2**		
	baz=82							
R23A	**Moffat**	**82.39**	**48**	⇓P	**P**	**14 37 02.3 +0.9**		
	baz=82							
U21A	**Nageezi**	**82.40**	**50**	⇑P	**P**	**14 37 02.1 +0.6**		
	baz=82							
T22A	**Edith**	**82.50**	**49**	⇓P	**P**	**14 37 02.5 +0.6**		
	baz=82							
CLL	**Collm**	**82.61**	**331**	*i* P	**P**	**14 37 01.9 0.0**		
CLL				*i*		14 37 13.2		
CLL				pmax	pmax			
	comp=Z,8.0nm,1.0s							
CLL	**Collm**	**82.61**	**331**	*i* P	**P**	**14 37 01.9 0.0**		
	comp=Z,8.0nm,1.0s							
CLL				*i* pP	**pP**	**14 37 13.2 +0.6**		
R24A	**Sanders Place,**	**82.80**	**48**	⇓P	**P**	**14 37 04.1 +0.7**		
	baz=83							
Q25A	**Bedland, Calha**	**82.86**	**47**	⇑P	**P**	**14 37 03.9 +0.2**		
	baz=83							
P26A	**Davis Ranch, A**	**82.96**	**46**	⇑P	**P**	**14 37 04.2 0.0**		
	baz=83							
X20A	**Quemado**	**83.07**	**52**	⇑P	**P**	**14 37 05.6 +0.7**		
	baz=83							
S24A	**Houchin Ranch,**	**83.12**	**48**	⇓P	**P**	**14 37 05.8 +0.6**		
	baz=83							
V22A	**San Miguel Ran**	**83.20**	**50**	⇓P	**P**	**14 37 06.2 +0.6**		
	baz=83							
Y20A	**Horse Springs,**	**83.54**	**53**	⇓P	**P**	**14 37 07.8 +0.4**		
	baz=83							
S25A	**Robets Cordova**	**83.58**	**48**	⇑P	**P**	**14 37 07.7 +0.2**		
	baz=83							
X21A	**Alamocita Cree**	**83.58**	**52**	⇓P	**P**	**14 37 08.0 +0.4**		
	baz=83							
T24A	**Torres, Weston**	**83.59**	**48**	⇑P	**P**	**14 37 08.0 +0.4**		
	baz=83							
R26A	**Arlington**	**83.74**	**47**	⇓P	**P**	**14 37 08.7 +0.5**		
	baz=84							
Z20A	**Nine Sixteen R**	**83.91**	**53**	⇓P	**P**	**14 37 09.7 +0.6**		
	baz=84,SNR=5.3							
Y21A	**Point of Rocks**	**83.93**	**52**	⇑P	**P**	**14 37 10.2 +0.8**		
	baz=84							
T25A	**Trinidad**	**83.93**	**48**	⇓P	**P**	**14 37 09.1 -0.2**		
	baz=84							
KHC	**Kasperske Hory**	**84.08**	**329**	*e*P	**P**	**14 37 10.3 +0.7**		
KHC	**Kasperske Hory**	**84.08**	**329**	*e*P	**P**	**14 37 10.3 +0.7**		
ANMO	**Albuquerque**	**84.10**	**51**	P	**P**	**14 37 10.2 0.0**		
ANMO	**Albuquerque**	**84.10**	**51**	P	**P**	**14 37 10.2 0.0**		
	comp=Z,1.3nm,0.4s,baz=254,slow=2.8,SNR=5.6							
120A	**U Bar Ranch, L**	**84.24**	**54**	⇓P	**P**	**14 37 11.6 +0.7**		
	baz=84							
GERES	**GERESS Array B**	**84.25**	**329**	P	**P**	**14 37 10.2 -0.3**		
GERES	**GERESS Array B**	**84.25**	**329**	P	**P**	**14 37 10.2 -0.3**		
	comp=Z,1.4nm,0.7s,baz=36,slow=5.0,SNR=8.6							
V24A	**Rampart Ranch,**	**84.33**	**50**	⇓P	**P**	**14 37 11.7 +0.3**		
	baz=84							
T26A	**Comanche Natio**	**84.40**	**48**	⇑P	**P**	**14 37 11.9 +0.2**		
	baz=84							
U25A	**Circle Dot Ran**	**84.42**	**49**	⇑P	**P**	**14 37 12.5 +0.7**		
	baz=84							
Y22A	**Socorro**	**84.43**	**52**	⇑P	**P**	**14 37 12.2 +0.4**		
	baz=84							
319A	**Douglas**	**84.55**	**55**	⇓P	**P**	**14 37 12.8 +0.4**		
	baz=84							
W24A	**Lazy 6 Ranch,**	**84.58**	**50**	⇑P	**P**	**14 37 13.2 +0.5**		
	baz=84							
V25A	**Rancho No Teng**	**84.66**	**49**	⇓P	**P**	**14 37 13.0 0.0**		
	baz=84							
220A	**Playas Peak, P**	**84.72**	**54**	⇓P	**P**	**14 37 13.5 +0.2**		
	baz=84							
121A	**Cookes Peak, D**	**84.80**	**53**	⇓P	**P**	**14 37 14.0 +0.3**		
	baz=85							
U26A	**Atchley Ranch,**	**84.83**	**48**	⇑P	**P**	**14 37 13.8 0.0**		
	baz=85							
Z22A	**Elephant Butte**	**84.87**	**52**	⇑P	**P**	**14 37 14.2 +0.2**		
	baz=85							
Y23A	**Lovelace Mesa,**	**85.01**	**51**	⇓P	**P**	**14 37 14.7 0.0**		
	baz=85							
320A	**Kipp Ranch, An**	**85.07**	**55**	⇑P	**P**	**14 37 15.2 +0.1**		
	baz=85							
W25A	**X Bar L Ranch,**	**85.17**	**49**	⇓P	**P**	**14 37 15.7 +0.2**		
	baz=85							
Z23A	**Rita Site, Whi**	**85.33**	**52**	⇑P	**P**	**14 37 16.3 -0.1**		
	baz=85							
U27A	**Thompson Grove**	**85.36**	**48**	⇑P	**P**	**14 37 16.7 +0.3**		
	baz=85							
SCHQ	**Schefferville**	**85.84**	**17**	P	**P**	**14 37 18.1 -0.1**		
SCHQ	**Schefferville**	**85.84**	**17**	P	**P**	**14 37 18.1 -0.1**		
	comp=Z,2.7nm,0.7s,baz=270,slow=8.1,SNR=3.7							
W27A	**Bowe Ranch, En**	**86.12**	**49**	⇑P	**P**	**14 37 20.6 +0.4**		
	baz=86							
124A	**Stringfield Ra**	**86.19**	**52**	⇓P	**P**	**14 37 20.7 -0.1**		
	baz=86							
Z25A	**Roswell**	**86.28**	**51**	⇓P	**P**	**14 37 21.1 0.0**		
	baz=86							
224A	**Cornudas Mount**	**86.56**	**52**	⇓P	**P**	**14 37 22.4 -0.1**		
	baz=86							
Z26A	**Caprock**	**86.75**	**51**	⇓P	**P**	**14 37 23.1 -0.2**		
	baz=87							
T31A	**Randall Ranch,**	**86.75**	**45**	⇑P	**P**	**14 37 22.9 -0.2**		
	baz=86							
425A	**Indio Mountain**	**87.75**	**53**	⇓P	**P**	**14 37 28.7 +0.5**		
	baz=88							
427A	**Hayter Ranch,**	**88.72**	**52**	⇓P	**P**	**14 37 32.6 -0.1**		
	baz=88							
328A	**Wristen Ranch,**	**88.74**	**51**	⇓P	**P**	**14 37 32.7 -0.1**		
	baz=89							
526A	**Mary Lane Ranc**	**88.81**	**53**	⇑P	**P**	**14 37 33.1 -0.2**		
	baz=89							
527A	**Woodward Ranch**	**89.06**	**53**	⇑P	**P**	**14 37 33.4 -1.0**		
	baz=89							
626A	**Big Bend Ranch**	**89.11**	**54**	⇑P	**P**	**14 37 33.7 -0.9**		
	baz=89							
TXAR	**Lajitas Array**	**89.56**	**53**	P	**P**	**14 37 36.7 0.0**		
TXAR	**Lajitas Array**	**89.56**	**53**	P	**P**	**14 37 36.7 0.0**		
	comp=Z,2.0nm,0.7s,baz=302,slow=3.5,SNR=18							
528A	**Cox Ranch, San**	**89.58**	**52**	⇑P	**P**	**14 37 36.3 -0.5**		
	baz=89							
529A	**Stev Forest Ra**	**89.96**	**52**	⇑P	**P**	**14 37 37.6 -1.0**		
	baz=90							
MIAR	**Mount Ida**	**92.04**	**44**	*e*P	P	14 37 46.0 -2.0		
MIAR				pmax	pmax			
	comp=Z,10.0nm,1.1s							
MIAR	**Mount Ida**	**92.04**	**44**	*e*P	P	14 37 46.0 -2.0		
	comp=Z,10nm,1.1s							
TORD	**Torodi Ar. Bea**	**118.99**	**316**	PP	PP	14 44 41.6 -5.1		
TORD	**Torodi Ar. Bea**	**118.99**	**316**	PP	PP	14 44 41.6 -5.1		
	comp=Z,0.7nm,0.9s,baz=36,slow=6.1,SNR=3.9							
LPAZ	**La Paz**	**145.91**	**63**	*e*P	**PKPdf**	**14 44 16.1 -2.8**		
LPAZ				PKPbc	**PKPdf**	**14 44 18.1 -0.8**		
LPAZ				PP	**PP**	**14 47 40.4 -0.4**		
LPAZ	**La Paz**	**145.91**	**63**	PKPbc	**PKPdf**	**14 44 18.1 -0.8**		
	comp=Z,5.2nm,0.8s,baz=320,slow=3.4,SNR=16							
LPAZ				PP	**PP**	**14 47 40.4 -0.4**		
	comp=Z,1.2nm,0.6s,baz=10,slow=5.4,SNR=3.8							

IDC 23 14:30:50.0±2.1, 10°01N×104°34W, h0km, mb3.7/4, mb1 4.0/6, mb1mx3.8/20, mbtmp3.7/6, ML3.5/2, MS3.3/4, Ms1 3.4/4, ms1mx3.1/29, Error ellipse: s-maj=59.3km s-min=29.5km az=57.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**11.57**	**52**	Pn	Pn	14 33 36.9	+0.2
	0.1nm,0.3s,baz=226,slow=11,SNR=4.9						
CMIG				LR	LR	14 36 58.2	
	comp=Z,223nm,21.0s,baz=45,slow=32						
LPIG	**La Paz**	**15.12**	**339**	LR	LR	14 38 39.2	
	comp=Z,23nm,20.2s,baz=352,slow=31						
TXAR	**Lajitas Array**	**19.23**	**2**	P	P	14 35 16.1	0.0
	0.1nm,0.3s,baz=183,slow=14,SNR=7.4						
ANMO	**Albuquerque**	**24.89**	**356**	P	P	14 36 16.0	+1.0
	0.5nm,0.3s,baz=180,slow=8.1,SNR=2.9						
PFO	**Pinyon Flat Ob**	**25.99**	**336**	LR	LR	14 44 38.5	
	comp=Z,113nm,18.8s,baz=309,slow=32						
LPAZ	**La Paz**	**44.35**	**126**	P	P	14 39 03.1	-0.1
	1.2nm,0.8s,baz=326,slow=3.6,SNR=2.2						
LPAZ				LR	LR	14 54 21.8	
	comp=Z,84nm,21.8s,baz=48,slow=32						
YKA	**Yellowknife Ar**	**52.92**	**354**	P	P	14 40 06.8	-0.9
	0.8nm,0.9s,baz=165,slow=7.4,SNR=10.0						
ILAR	**Eielson Array**	**62.16**	**341**	P	P	14 41 12.9	+0.1
	0.8nm,0.8s,baz=151,slow=4.8,SNR=11						

CSEM 23 14:35:05.8, 42°27N×13°49E, h9km, MD1.7/5, After ROM

ROM 23 14:35:05.8±0.1, 42°27N×13°49E, h9km±1km, Md1.7/5, Ml1.6/1, 2C, Error ellipse: s-maj=1.5km s-min=1.3km az=46.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.07**	**92**	*i*Pg	Pg	14 35 08.5	+0.5
FAGN				Sg	Sg	14 35 10.0	+0.4
	465nm,0.4s						
FAGN	**Fagnano**	**0.07**	**92**	*i*Pg	Pg	14 35 08.5	+0.5
FAGN				Sg	Sg	14 35 10.0	+0.4
	465nm,0.4s						
AQU	**L'Aquila**	**0.11**	**323**	Pg	Pg	14 35 09.0	+0.4
AQU				Sg	Sg	14 35 10.9	+0.4
	190nm,0.4s						
AQU	**L'Aquila**	**0.11**	**323**	Pg	Pg	14 35 09.0	+0.4
AQU				Sg	Sg	14 35 10.9	+0.4
	190nm,0.4s						
PTQR	**Pietraquaria**	**0.26**	**195**	Pg	Pb	14 35 12.3	-0.4
PTQR				Sg	Sg	14 35 15.9	+1.3
PTQR	**Pietraquaria**	**0.26**	**195**	Pg	Pb	14 35 12.3	-0.4
PTQR				Sg	Sg	14 35 15.9	+1.3
INTR	**Introdacqua**	**0.40**	**130**	Pg	Pg	14 35 14.2	+0.4
INTR				Sg	Sg	14 35 20.3	+1.1
INTR	**Introdacqua**	**0.40**	**130**	Pg	Pg	14 35 14.2	+0.4
INTR				Sg	Sg	14 35 20.3	+1.1
LPEL	**Lama dei Pelig**	**0.56**	**113**	Pg	Pg	14 35 17.2	+0.4
LPEL				Sg	Sb	14 35 25.3	-0.7
LPEL	**Lama dei Pelig**	**0.56**	**113**	Pg	Pg	14 35 17.2	+0.4
LPEL				Sg	Sb	14 35 25.3	-0.7

IDC 23 14:48:22.2±0.6, 15°23S×172°10W, h0km, mb4.2/11, mb1 4.5/11, mb1mx4.3/21, mbtmp4.2/11, MS4.1/25, Ms1 4.1/25, ms1mx4.0/35, Error ellipse: s-maj=30.0km s-min=16.3km az=140.0

ISCJB 23 14:48:23.6±0.4, 14°97S±0°08×172°3W±0°1, h18km, mb4.3/20, MS4.2/24, Error ellipse: s-maj=17.1km s-min=7.8km az=30.0

NEIC 23 14:48:28.3±0.6, 14°90S×172°32W, h40km, mb4.6/8, Error ellipse: s-maj=28.3km s-min=11.8km az=138.0

GCMT 23 14:48:29.8±0.3, 15°43S×171°72W, h12km±1km, MW5.0, Moment Tensor Solution. s27,c33; s67,c94; Moment tensor: Scale 10^16 Nm; Mrr-2.67±.19; Mθθ-0.19±.13; Mφφ2.86±.14; Mrθ0.20±.41; Mrφ-1.73±.09; Mθφ-2.13±.40; Best double couple: M0 3.80000×10^16 NP1:φs138.00000°, δ31.00000°, λ-118.00000°. NP2:φs350.00000°, δ63.00000°, λ-74.00000°. Principal axes: T 4.2400, Plg17.0000°, Azm68.0000°; N -0.8000, Plg14.0000°, Azm162.0000°; P -3.4400, Plg68.0000°, Azm290.0000°; Data Used: II IU G IC CN.

ISC 23 14:48:25.1±0.5, 14°98S±0°10×172°2W±0°1, h18km, n84, σ1§51/68, mb4.4/20, MS4.1/24, 2D, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.12**	**19**	*e*Pn	**Pn**	**14 48 43.7**	**-2.3**
AFI	**Afiamalu**	**1.12**	**19**	Pn	**Pn**	**14 48 44.1**	**-1.8**
	343nm,0.3s,baz=209,slow=19,SNR=834						
AFI				Sn	**Sb**	**14 48 58.6**	**-1.7**
	3μm,0.3s,baz=114,slow=20,SNR=56						
RAR	**Rarotonga**	**13.30**	**120**	Pn	Pn	14 51 21.2	-12
RAR				Sn	Sn	14 53 37.2	-23
RAR	**Rarotonga**	**13.30**	**120**	Pn	Pn	14 51 21.2	-12
	1.4nm,0.3s,baz=309,slow=13,SNR=4.5						
RAR				Sn	Sn	14 53 37.2	-23
	0.7nm,0.3s,baz=307,slow=20,SNR=3.8						
RAR				LR	LR	14 55 04.6	
	comp=Z,1μm,19.3s,baz=278,slow=31						
DZM	**Mont Dzumac**	**21.47**	**248**	*e*S	S	14 56 59.4	-11
	294nm,26.1s						
DZM				*e*LR	LR	14 58 19.1	
	2μm,26.9s						
DZM	**Mont Dzumac**	**21.47**	**248**	LR	LR	14 59 05.4	
	comp=Z,197nm,18.8s,baz=38,slow=30						
PPT	**Papeete**	**21.82**	**100**	LR	LR	14 59 52.2	
	comp=Z,416nm,19.6s,baz=82,slow=32						
PPT2	**Papeete2**	**21.82**	**100**	*e*S	S	14 57 06.7	-11
	3μm,27.0s						
PPT2				*e*LR	LR	14 58 17.8	
	1μm,25.5s						
TBI	**Tubuai**	**22.97**	**115**	*e*S	S	14 57 26.4	-12
	2μm,28.5s						
TBI				*e*LR	LR	14 58 54.0	
	1μm,25.2s,baz=287						
URZ	**Urewera**	**25.06**	**200**	*e*P	**P**	**14 53 48.7**	**+0.3**
URZ	**Urewera**	**25.06**	**200**	P	**P**	**14 53 48.2**	**-0.2**
	5.2nm,0.4s,baz=112,slow=4.0,SNR=13						
HNR	**Honiara**	**27.80**	**278**	*e*P	**P**	**14 54 10.9**	**-2.6**
	30nm,0.5s						
HNR	**Honiara**	**27.80**	**278**	LR	LR	15 03 32.6	
	comp=Z,701nm,20.5s,baz=102,slow=33						
RKT	**Rikitea**	**35.98**	**109**	*e*LR	LR	15 05 00.5	
	744nm,24.0s						
STKA	**Stephens Creek**	**45.29**	**240**	P	**P**	**14 56 40.5**	**-1.5**
STKA	**Stephens Creek**	**45.29**	**240**	P	**P**	**14 56 40.5**	**-1.5**
	5.6nm,0.8s,baz=70,slow=4.6,SNR=6.5						
STKA				LR	LR	15 12 49.2	
	comp=Z,246nm,19.8s,baz=287,slow=32						
WRA	**Warramunga Arr**	**51.11**	**256**	P	**P**	**14 57 25.5**	**-1.7**
WRA				PcP	**PcP**	**14 58 43.4**	**+0.6**
WRA	**Warramunga Arr**	**51.11**	**256**	P	**P**	**14 57 25.5**	**-1.7**
	1.7nm,0.8s,baz=98,slow=6.0,SNR=19						
WRA				PcP	**PcP**	**14 58 43.4**	**+0.6**
	1.2nm,0.8s,baz=89,slow=3.6,SNR=5.1						
WRA				LR	LR	15 17 31.4	
	comp=Z,426nm,20.5s,baz=80,slow=34						
AS31	**Alice Springs**	**51.38**	**252**	*e*P	**P**	**14 57 27.6**	**-1.6**
ASAR	**Alice Springs**	**51.39**	**252**	P	**P**	**14 57 27.8**	**-1.5**
ASAR	**Alice Springs**	**51.39**	**252**	P	**P**	**14 57 27.8**	**-1.5**
	7.8nm,0.6s,baz=86,slow=7.9,SNR=109						
ASAR				LR	LR	15 17 20.9	
	comp=Z,692nm,20.9s,baz=82,slow=34						
FITZ	**Fitzroy Crossi**	**59.48**	**258**	LR	LR	15 21 45.9	
	comp=Z,472nm,21.2s,baz=117,slow=34						
VNDA	**Vanda**	**63.92**	**186**	LR	LR	15 23 50.0	
	comp=Z,96nm,18.6s,baz=9.9,slow=33						
DAV	**Davao City (W)**	**65.48**	**285**	LR	LR	15 22 28.0	
	comp=Z,102nm,19.8s,baz=54,slow=31						
KAPI	**Kappang**	**67.57**	**271**	LR	LR	15 27 35.8	
	comp=Z,111nm,20.8s,baz=90,slow=35						
MJAR	**Matsushiro Arr**	**69.40**	**319**	P	**P**	**14 59 33.7**	**+1.6**
MJAR	**Matsushiro Arr**	**69.40**	**319**	P	**P**	**14 59 33.7**	**+1.6**
	1.8nm,0.7s,baz=164,slow=7.5,SNR=7.1						
MJAR				LR	LR	15 23 58.5	
	comp=Z,128nm,21.7s,baz=105,slow=31						
JNU	**Nakatsue**	**72.40**	**312**	LR	LR	15 25 53.3	
	comp=Z,64nm,20.3s,baz=54,slow=31

2.1nm,0.9s,baz=41,slow=6.3,SNR=4.7
DPC Dobruska-Polom 144.05 351 *e*PKP **PKPdf 15 07 59.5 -0.2**
DPC *ep*PKP **pPKPdf 15 08 12.0 +6.1**
KOLS Kolonicke sedl 144.12 344 *e*PKP **PKPdf 15 08 00.2 +0.4**
OKC Ostrava-Krasne 144.23 349 *e*PKP **PKPdf 15 08 00.0 +0.1**
CRVS Cervenica-Dubn 144.37 345 *e*PKP PKPbc 15 07 59.1 +0.5
PRU Pruhonice 144.66 353 *e*PKP **PKPdf 15 08 01.3 +0.6**
TRPA Tarpa 144.78 343|| *e*PKPbc **PKPdf 15 08 01.0 +0.1**
TREC Trest 145.21 351 *e*PKP **PKPdf 15 08 02.5 +0.8**
VYHS Vyhne 145.37 347 *e*PKP **PKPab 15 08 03.8 +1.8**
KHC Kasperske Hory 145.62 353 *e*PKP **PKPab 15 08 04.1 +1.2**
PSC Piszkesteto 145.67 346|| *e*PKPbc **PKPab 15 08 05.1 +2.7**
GERES GERESS Array B 145.88 353 PKPbc **PKPab 15 08 04.2 +0.2**
GERES GERESS Array B 145.88 353 PKPbc **PKPab 15 08 04.2 +0.2**
1.5nm,0.8s,baz=29,slow=3.0,SNR=8.8
ZST Bratislava 146.00 349 *e*PKP **PKPab 15 08 05.2 +0.9**
BRTR Keskin Array B 146.57 322 PKPbc **PKPab 15 08 07.0 +0.1**
BRTR Keskin Array B 146.57 322 PKPbc **PKPab 15 08 07.0 +0.1**
2.4nm,0.7s,baz=125,slow=2.3,SNR=12
KMBO Kilima Mbogo 146.80 244 PKPbc **PKPbc 15 08 07.5 0.0**
KMBO Kilima Mbogo 146.80 244 PKPbc **PKPbc 15 08 07.5 0.0**
2.6nm,0.8s,baz=94,slow=2.9,SNR=6.6
TORD Torodi Ar. Bea 173.76 106 PKP **PKPdf 15 08 33.5 -1.0**
TORD PKPab **PKPab 15 10 02.7 -1.9**
TORD Torodi Ar. Bea 173.76 106 PKP **PKPdf 15 08 33.5 -1.0**
0.6nm,0.8s,baz=319,slow=1.1,SNR=4.1
TORD PKPab **PKPab 15 10 02.7 -1.9**
0.6nm,0.7s,baz=256,slow=3.6,SNR=3.0

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*ISCJB **23** 14:50:39.8±0.7,33°97N±0.03×36°16E±0.07,h6km±9km, Error ellipse: s-maj=10.3km s-min=5.3km az=168.0*
*NSSC **23** 14:50:39.0±1.1,33°99N×36°07E,h12km±6km,ML1.6*
*CSEM **23** 14:50:40.0±0.2,33°97N×36°13E,h12km,ML2.9,Error ellipse: s-maj=4.0km s-min=2.4km az=52.0*
*GRAL **23** 14:50:40.4±0.3,33°99N×36°15E,h20km±9km,MD2.9*
ISC 23 14:50:40.2±1.1,33°97N±0.03×36°14E±0.05,h12km±10km, n14,σ0§44/28,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWQ	**Hawqa**	**0.35**	**333**	*e*P	**Pg**	**14 50 47.1**	**-0.2**
HWQ				*e*S	**Sg**	**14 50 52.1**	**0.0**
HWQ	**Hawqa**	**0.35**	**333**	*e*P	**Pg**	**14 50 47.1**	**-0.2**
HWQ				*e*S	**Sg**	**14 50 52.1**	**0.0**
BHL	**Bhannes**	**0.41**	**262**	*e*P	**Pg**	**14 50 48.4**	**0.0**
BHL				*e*S	**Sg**	**14 50 54.3**	**+0.4**
BHL	**Bhannes**	**0.41**	**262**	*e*P	**Pg**	**14 50 48.4**	**0.0**
BHL				*e*S	**Sg**	**14 50 54.3**	**+0.4**
QASN	**Qassioun**	**0.45**	**165**	*e*P	**Pg**	**14 50 48.7**	**-0.3**
QASN				*e*S	**Sg**	**14 50 55.1**	**+0.2**
QASN				AML	AML	14 51 00.0	
	comp=N,260nm,0.3s						
QASN				AML	AML	14 51 01.6	
	comp=E,81nm,0.4s						
QASN	**Qassioun** SNR=95	**0.45**	**165**	*e*P	**Pg**	**14 50 48.7**	**-0.3**
QASN				*e*S	**Sg**	**14 50 55.1**	**+0.2**
	comp=E,81nm,0.4s,SNR=100						
RCY	**Rachaya**	**0.53**	**209**	*e*P	**Pg**	**14 50 50.5**	**-0.1**
RCY				*e*S	**Sg**	**14 50 58.0**	**+0.3**
BRBR	**Barbar**	**0.57**	**196**	*e*P	**Pg**	**14 50 50.0**	**-1.5**
BRBR				*e*S	**Sg**	**14 50 59.3**	**+0.2**
BRBR				AML	AML	14 51 03.0	
	comp=E,38nm,0.7s						
BRBR				AML	AML	14 51 09.4	
	comp=N,31nm,0.5s						
TOTH	**TOTAH**	**0.65**	**158**	*e*P	**Pg**	**14 50 53.0**	**+0.2**
TOTH				*e*S	**Sb**	**14 51 03.0**	**+0.6**
TOTH				AML	AML	14 51 04.7	
	comp=E,22nm,0.5s						
TOTH				AML	AML	14 51 09.0	
	comp=N,30nm,0.6s						
TOTH	**TOTAH** SNR=93	**0.65**	**158**	*e*P	**Pg**	**14 50 53.0**	**+0.2**
TOTH				*e*S	**Sb**	**14 51 03.0**	**+0.6**
	comp=N,30nm,0.6s,SNR=97						
SALA	**Sala**	**1.34**	**158**	*e*P	**Pn**	**14 51 04.8**	**-0.1**
SALA				*e*S	**Sb**	**14 51 22.1**	**-0.5**
SALA				AML	AML	14 51 27.8	
	comp=N,9.2nm,0.3s						
SALA				AML	AML	14 51 30.8	
	comp=E,1.2nm,0.4s						
SALA	**Sala** SNR=66	**1.34**	**158**	*e*P	**Pn**	**14 51 04.8**	**-0.1**
SALA				*e*S	**Sb**	**14 51 22.1**	**-0.5**
	comp=E,1.2nm,0.4s,SNR=62						
ZALF	**Zalf**	**1.44**	**136**	*e*P	**Pn**	**14 51 06.3**	**+0.2**
ZALF				*e*S	**Sn**	**14 51 24.9**	**-0.1**
ZALF				AML	AML	14 51 29.6	
	comp=E,11nm,0.7s						
ZALF				AML	AML	14 51 31.5	
	comp=N,12nm,0.4s						
ZALF	**Zalf** SNR=66	**1.44**	**136**	*e*P	**Pn**	**14 51 06.3**	**+0.2**
ZALF				*e*S	**Sn**	**14 51 24.9**	**-0.1**
	comp=N,12nm,0.4s,SNR=62						

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*LDG **23** 15:14:08.9±0.1,42°.26N×13°.47E,h2km,Ml3.8/10,Error ellipse: s-maj=3.7km s-min=2.5km az=38.0*
*ISCJB **23** 15:14:08.3±0.2,42°.27N±0°.01×13°.43E±0°.02,h8km±1km, mb4.0/19,MS3.1/1,Error ellipse: s-maj=2.3km s-min=1.7km az=33.9*
*ROM **23** 15:14:08.3±0.1,42°.25N×13°.48E,h10km,Ml4.0/11,Error ellipse: s-maj=0.8km s-min=0.7km az=43.0*
*NEIC **23** 15:14:08.0,42°.25N×13°.49E,h10km,mb3.7/3, ML4.1(PDG),ML4.0(VIE),MW4.1(ROM),After ROM.*
NEIC Felt [IV] at Aielli, Cerchio, L'Aquila and Popoli; [III] at Avezzano, Celano, Pescina, Scoppito, Sulmona and Teramo. Felt [II] throughout Abruzzo and in parts of Lazio, Marche, Molise and Umbria.
*PDG **23** 15:14:09.2±0.7,42°.26N×13°.49E,h4km,ML3.7/10,Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*SZGRF **23** 15:14:09.0,41°.95N×13°.77E,h10km,Southern Italy*
*CSEM **23** 15:14:09.2±0.1,42°.25N×13°.42E,h2km,mb4.2/8,ML4.5/5, Mw4.1,Error ellipse: s-maj=2.4km s-min=1.9km az=25.0*
*BEO **23** 15:14:09.6±0.9,42°.11N×13°.45E,h0km,ML3.9/6*
*MOS **23** 15:14:09.7±1.0,42°.42N×13°.43E,h10km,mb4.0/12,Error ellipse: s-maj=6.1km s-min=3.6km az=89.0*
*IDC **23** 15:14:09.1±0.8,42°.39N×13°.35E,h0km,mb3.7/10, mb1 3.9/18,mb1mx3.8/33,mbtmp3.7/18,ML3.8/7,MS2.9/4, Ms1 3.0/4,ms1mx2.5/42,Error ellipse: s-maj=15.4km s-min=12.6km az=114.0*
*PRU **23** 15:14:11.8,42°.38N×13°.48E,h0km,M3.7*
*STR **23** 15:14:18.1±1.2,42°.75N×13°.00E,h5km,Ml3.8,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 23 15:14:09.6±0.5,42°27N±0°.01×13°45E±0°.01,h11km±3km, n490,σ1§59/480,mb4.0/19,54C-19D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.09**	**339**	*e*Pg	**Pg**	**15 14 11.7**	**-0.6**
AQU				*e*Sg	**Sg**	**15 14 14.7**	**+0.5**
AQU	**L'Aquila**	**0.09**	**339**	Pg	**Pg**	**15 14 11.7**	**-0.6**
AQU				Sg	**Sg**	**15 14 14.0**	**-0.2**
AQU	**L'Aquila**	**0.09**	**339**	Pg	**Pg**	**15 14 11.7**	**-0.6**
AQU				Sg	**Sg**	**15 14 14.0**	**-0.2**
FIAM	**Fiamignano**	**0.24**	**270**	P	**Pb**	**15 14 14.5**	**-1.7**
FIAM				S	**Sb**	**15 14 19.0**	**+0.8**
FIAM	**Fiamignano**	**0.24**	**270**	Pg	**Pb**	**15 14 14.5**	**-1.7**
FIAM				Sg	**Sb**	**15 14 19.0**	**+0.8**
	22μm,0.6s						
FIAM	**Fiamignano**	**0.24**	**270**	Pg	**Pb**	**15 14 14.5**	**-1.7**
PTQR	**Pietraquaria**	**0.25**	**188**	P	**Pb**	**15 14 14.0**	**-2.2**
PTQR	**Pietraquaria**	**0.25**	**188**	⇑*i*Pg	**Pb**	**15 14 14.0**	**-2.2**
PTQR	**Pietraquaria**	**0.25**	**188**	⇑*i*Pg	**Pb**	**15 14 14.0**	**-2.2**
CAMP	**Campotosto**	**0.27**	**354**	P	**Pg**	**15 14 14.7**	**-0.5**
CAMP				S	**Sg**	**15 14 18.9**	**0.0**
CAMP	**Campotosto**	**0.27**	**354**	Pg	**Pg**	**15 14 14.7**	**-0.5**
CAMP				Sg	**Sg**	**15 14 18.9**	**0.0**
	21μm,0.6s						
CAMP	**Campotosto**	**0.27**	**354**	Pg	**Pg**	**15 14 14.7**	**-0.5**
CAMP				Sg	**Sg**	**15 14 18.9**	**0.0**
	21μm,0.6s						
VCEL	**Villa Celiera**	**0.32**	**67**	P	**Pg**	**15 14 14.7**	**-1.4**
VCEL				S	**Sb**	**15 14 20.0**	**-2.7**
VCEL	**Villa Celiera**	**0.32**	**67**	Pg	**Pg**	**15 14 14.7**	**-1.4**
VCEL				Sg	**Sb**	**15 14 20.0**	**-2.7**
	32μm,0.8s						
VCEL	**Villa Celiera**	**0.32**	**67**	Pg	**Pg**	**15 14 14.7**	**-1.4**
VCEL				Sg	**Sb**	**15 14 20.0**	**-2.7**
	32μm,0.8s						
TERO	**Teramo**	**0.37**	**18**	P	**Pg**	**15 14 16.1**	**-1.0**
TERO				S	**Sb**	**15 14 22.9**	**-1.3**
TERO	**Teramo**	**0.37**	**18**	Pg	**Pg**	**15 14 16.1**	**-1.0**
TERO				Sg	**Sb**	**15 14 22.9**	**-1.3**
	28μm,0.5s						
TERO	**Teramo**	**0.37**	**18**	Pg	**Pg**	**15 14 16.1**	**-1.0**
TERO				Sg	**Sb**	**15 14 22.9**	**-1.3**
	28μm,0.5s						
VVLD	**Villa Vallelon**	**0.42**	**162**	P	**Pb**	**15 14 16.5**	**-2.6**
VVLD				S	**Sb**	**15 14 22.6**	**-2.9**
VVLD	**Villa Vallelon**	**0.42**	**162**	Pg	**Pb**	**15 14 16.5**	**-2.6**
VVLD				Sg	**Sb**	**15 14 22.6**	**-2.9**
VVLD	**Villa Vallelon**	**0.42**	**162**	Pg	**Pb**	**15 14 16.5**	**-2.6**
VVLD				Sg	**Sb**	**15 14 22.6**	**-2.9**
INTR	**Introdacqua**	**0.43**	**127**	P	**Pg**	**15 14 16.4**	**-1.6**
INTR				S	**Sb**	**15 14 22.6**	**-3.1**
INTR	**Introdacqua**	**0.43**	**127**	Pg	**Pg**	**15 14 16.5**	**-1.6**
INTR				Sg	**Sb**	**15 14 22.6**	**-3.1**
	24μm,0.7s						
INTR	**Introdacqua**	**0.43**	**127**	Pg	**Pg**	**15 14 16.5**	**-1.6**
INTR				Sg	**Sb**	**15 14 22.6**	**-3.1**
	24μm,0.7s						
LNSS	**Leonessa**	**0.45**	**318**	P	**Pg**	**15 14 17.9**	**-0.6**
LNSS				S	**Sb**	**15 14 26.8**	**+0.3**
LNSS	**Leonessa**	**0.45**	**318**	Pg	**Pg**	**15 14 17.9**	**-0.6**
LNSS				Sg	**Sb**	**15 14 25.7**	**-0.8**
	13μm,0.5s						
LNSS	**Leonessa**	**0.45**	**318**	Pg	**Pg**	**15 14 17.9**	**-0.6**
LNSS				S	**Sb**	**15 14 26.8**	**+0.3**
CERT	**Cerreto**	**0.47**	**227**	P	**Pb**	**15 14 18.0**	**-2.0**
CERT	**Cerreto**	**0.47**	**227**	Pg	**Pb**	**15 14 18.0**	**-2.0**
	18μm,0.7s						
CERT	**Cerreto**	**0.47**	**227**	Pg	**Pb**	**15 14 18.0**	**-2.0**
	18μm,0.7s						
GUAR	**Guarcino**	**0.48**	**192**	P	**Pb**	**15 14 17.9**	**-2.3**
GUAR	**Guarcino**	**0.48**	**192**	Pg	**Pb**	**15 14 18.0**	**-2.3**
	16μm,1.2s						
GUAR	**Guarcino**	**0.48**	**192**	Pg	**Pb**	**15 14 18.0**	**-2.3**
	16μm,1.2s						
MTCE	**Montecelio**	**0.58**	**245**	Pg	**Pb**	**15 14 20.1**	**-1.7**
	7μm,1.1s						
MTCE	**Montecelio**	**0.58**	**245**	Pg	**Pb**	**15 14 20.1**	**-1.7**
	7μm,1.1s						
MNS	**Montasola**	**0.58**	**282**	Pg	**Pg**	**15 14 20.0**	**-0.9**
	8μm,0.8s						
MNS	**Montasola**	**0.58**	**282**	Pg	**Pg**	**15 14 20.0**	**-0.9**
	8μm,0.8s						
LPEL	**Lama dei Pelig**	**0.59**	**112**	Pg	**Pg**	**15 14 19.1**	**-2.0**
LPEL				Sg	**Sb**	**15 14 27.6**	**-2.9**
	8μm,0.4s						
LPEL	**Lama dei Pelig**	**0.59**	**112**	Pg	**Pg**	**15 14 19.1**	**-2.0**
LPEL				Sg	**Sb**	**15 14 27.6**	**-2.9**
	8μm,0.4s						
NRCA	**Norcia**	**0.62**	**337**	Pg	**Pg**	**15 14 20.5**	**-1.1**
NRCA	**Norcia**	**0.62**	**337**	Pg	**Pg**	**15 14 20.5**	**-1.1**
SDI	**San Donato**	**0.62**	**154**	Pg	**Pg**	**15 14 19.8**	**-1.9**
SDI	**San Donato**	**0.62**	**154**	Pg	**Pg**	**15 14 19.8**	**-1.9**
TRTR	**Tortoreto Alta**	**0.64**	**33**	Pg	**Pb**	**15 14 22.1**	**-0.8**
TRTR	**Tortoreto Alta**	**0.64**	**33**	Pg	**Pb**	**15 14 22.1**	**-0.8**
CAFR	**Castel Frentan**	**0.67**	**93**	Pg	**Pb**	**15 14 21.1**	**-2.3**
CAFR	**Castel Frentan**	**0.67**	**93**	Pg	**Pb**	**15 14 21.1**	**-2.3**
OFFI	**Offida**	**0.69**	**15**	Pg	**Pb**	**15 14 22.4**	**-1.3**
OFFI	**Offida**	**0.69**	**15**	Pg	**Pb**	**15 14 22.4**	**-1.3**
RMP	**Rome, Mte Porz**	**0.72**	**231**	Pg	**Pg**	**15 14 22.3**	**-1.2**
RMP	**Rome, Mte Porz**	**0.72**	**231**	Pg	**Pg**	**15 14 22.3**	**-1.2**
GIUL	**Giuliano Di Ro**	**0.72**	**191**	Pg	**Pg**	**15 14 22.0**	**-1.6**
GIUL	**Giuliano Di Ro**	**0.72**	**191**	Pg	**Pg**	**15 14 22.0**	**-1.6**
CESX	**Cesi**	**0.73**	**298**	Pg	**Pg**	**15 14 22.8**	**-0.9**
CESX	**Cesi**	**0.73**	**298**	Pg	**Pg**	**15 14 22.8**	**-0.9**
RNI2	**Rionero Sannit**	**0.77**	**137**	Pg	**Pg**	**15 14 22.6**	**-2.0**
RNI2	**Rionero Sannit**	**0.77**	**137**	Pg	**Pg**	**15 14 22.6**	**-2.0**
CERA	**Filignano**	**0.80**	**147**	Pg	**Pg**	**15 14 22.6**	**-2.4**
CERA	**Filignano**	**0.80**	**147**	Pg	**Pg**	**15 14 22.6**	**-2.4**
FDMO	**Fiordimonte**	**0.81**	**341**	Pg	**Pg**	**15 14 23.9**	**-1.4**
FDMO	**Fiordimonte**	**0.81**	**341**	Pg	**Pg**	**15 14 23.9**	**-1.4**
ROM9	**Roma**	**0.82**	**238**	Pg	**Pg**	**15 14 24.3**	**-1.2**
ROM9	**Roma**	**0.82**	**238**	Pg	**Pg**	**15 14 24.3**	**-1.2**
CESI	**CESI - Serrava**	**0.84**	**332**	Pg	**Pg**	**15 14 24.3**	**-1.5**
CESI	**CESI - Serrava**	**0.84**	**332**	Pg	**Pg**	**15 14 24.3**	**-1.5**
MIDA	**Miranda**	**0.87**	**136**	Pg	**Pg**	**15 14 23.8**	**-2.6**
MIDA	**Miranda**	**0.87**	**136**	Pg	**Pg**	**15 14 23.8**	**-2.6**
GUMA	**Gualdo di Mace**	**0.87**	**24**	Pg	**Pg**	**15 14 24.2**	**-2.3**
GUMA	**Gualdo di Mace**	**0.87**	**24**	Pg	**Pg**	**15 14 24.2**	**-2.3**
ASSB	**Assisi San Ben**	**0.97**	**323**	Pg	**Pg**	**15 14 27.0**	**-1.3**
ASSB	**Assisi San Ben**	**0.97**	**323**	Pg	**Pg**	**15 14 27.0**	**-1.3**
VAGA	**Valle Agricola**	**1.04**	**145**	Pg	**Pg**	15 14 26.7	-2.9
BSSO	**Busso**	**1.12**	**130**	Pg	**Pb**	**15 14 28.6**	**-2.5**
BSSO	**Busso**	**1.12**	**130**	Pg	**Pb**	**15 14 28.6**	**-2.5**
SGG	**Gregorio Mates**	**1.12**	**141**	Pg	**Pb**	**15 14 28.3**	**-2.8**
ARVD	**Arcevia**	**1.28**	**343**	Pg	**Pb**	**15 14 32.6**	**-1.3**
ARVD	**Arcevia**	**1.28**	**343**	Pg	**Pb**	**15 14 32.6**	**-1.3**
MS1	**Monte Sant'Ang**	**1.94**	**106**	*e*Sn	**Sg**	**15 15 11.5**	**-0.6**
CDT	**Castel del Mon**	**2.43**	**118**	*e*Pn	**Pg**	**15 14 53.5**	**-2.7**
NVLJ	**Novalja**	**2.52**	**24**	*e*Pn	**Pn**	**15 14 51.0**	**+0.4**
NVLJ				Sn	**Sb**	**15 15 22.4**	**-3.4**
NVLJ	**Novalja**	**2.52**	**24**	*e*Pn	**Pn**	**15 14 50.9**	**+0.4**
NVLJ				Sn	**Sb**	**15 15 22.4**	**-3.4**
MAIM	**Mastiano**	**2.72**	**308**	P	Pb	15 14 55.0	-3.3
BAI	**Bari**	**2.82**	**113**	*e*Pn	Pb	15 14 55.8	-4.2
CUC	**Castrocucco**	**2.89**	**141**	*e*Pn	Pb	15 14 56.5	-4.8
CUC	**Castrocucco**	**2.89**	**141**	*e*Pn	Pb	15 14 56.5	-4.8
VLC	**Villacollemand**	**2.93**	**311**	*e*Pn	**Pn**	**15 14 57.9**	**+1.7**
VLC	**Villacollemand**	**2.93**	**311**	*e*Pn	**Pn**	**15 14 57.9**	**+1.7**
STON	**Ston**	**3.20**	**78**	*e*Pn	**Pn**	**15 14 59.6**	**-0.3**
STON				Sn	**Sn**	**15 15 37.2**	**-0.8**
STON	**Ston**	**3.20**	**78**	*e*Pn	**Pn**	**15 14 59.5**	**-0.3**
STON				Sn	**Sn**	**15 15 37.2**	**-0.8**
SKDS	**Skadanscina**	**3.30**	**7**	*i* Pn	**Pn**	**15 15 01.3**	**0.0**
SKDS				*i* Sn	**Sn**	**15 15 41.8**	**+1.2**
SKDS	**Skadanscina**	**3.30**	**7**	Pn	**Pn**	**15 15 01.3**	**0.0**
SKDS				*i* Sn	**Sn**	**15 15 41.8**	**+1.2**
PGF	**Pioggiola**	**3.31**	**276**	*e*Pn	**Pn**	**15 15 02.2**	**+0.8**
PGF				*e*Sn	**Sn**	**15 15 42.3**	**+1.5**
	43nm,0.6s						
PGF	**Pioggiola**	**3.31**	**276**	*e*Pn	**Pn**	**15 15 02.2**	**+0.8**
PGF				*e*Sn	**Sn**	**15 15 42.3**	**+1.5**
	22nm,0.6s						
TRI	**Trieste**	**3.45**	**4**	*e*P	**Pn**	**15 15 03.8**	**+0.5**
TRI	**Trieste**	**3.45**	**4**	*e*Pn	**Pn**	**15 15 03.8**	**+0.5**
TRI	**Trieste**	**3.45**	**4**	*e*P	**Pn**	**15 15 03.8**	**+0.5**
BLY	**Banja Luka**	**3.68**	**46**	*e*Pn	Pb	15 15 10.0	-4.7
BLY	**Banja Luka**	**3.68**	**46**	*e*Pn	Pb	15 15 10.0	-4.7
HCY	**Herceg Novi**	**3.75**	**86**	⇑*i*Pn	**Pn**	15 15 08.9	+1.5
HCY				*e*Sn	**Sn**	**15 15 53.4**	**+1.9**
HCY	**Herceg Novi**	**3.75**	**86**	P	Pn	15 15 08.7	+1.3
HCY				S	Sb	15 15 54.6	-6.6
HCY	**Herceg Novi**	**3.75**	**86**	P	Pn	15 15 08.7	+1.3
HCY				S	Sb	15 15 54.6	-6.6
HCY	**Herceg Novi**	**3.75**	**86**	P	Pn	15 15 08.7	+1.3
HCY				*e*Sn	**Sn**	**15 15 53.4**	**+1.9**
HCY				S	Sb	15 15 54.6	-6.6
VOY	**Vojsko**	**3.78**	**5**	*e*Pn	**Pn**	**15 15 08.7**	**+0.8**
VOY				*e*		15 15 12.1	
VOY				*e*Sn	**Sn**	**15 15 53.6**	**+1.2**
VOY	**Vojsko**	**3.78**	**5**	*e*Pn	**Pn**	**15 15 08.7**	**+0.8**
VOY				*e*Sn	**Sn**	**15 15 53.6**	**+1.2**
BRY	**Bratogost**	**3.81**	**79**	⇑*i*Pn	**Pn**	15 15 09.9	+1.4
BRY				*e*Sn	**Sn**	**15 15 55.8**	**+2.4**
BRY	**Bratogost**	**3.81**	**79**	P	**Pn**	**15 15 09.7**	**+1.2**
BRY				S	**Sn**	**15 15 56.2**	**+2.8**
BRY	**Bratogost**	**3.81**	**79**	P	**Pn**	**15 15 09.7**	**+1.2**
BRY				S	**Sn**	**15 15 56.2**	**+2.8**
BRY	**Bratogost**	**3.81**	**79**	P	**Pn**	**15 15 09.7**	**+1.2**
BRY				*e*Sn	**Sn**	**15 15 55.8**	**+2.4**
BRY				S	**Sn**	**15 15 56.2**	**+2.8**
VNDS	**Vrh nad Dolski**	**3.94**	**13**	*i* Pn	**Pn**	**15 15 11.0**	**+0.9**
VNDS				*e*Sn	**Sn**	**15 15 56.9**	**+0.7**
TIP	**Timpagrande**	**3.98**	**140**	*e*Pn	Pb	15 15 13.8	-6.1
TIP	**Timpagrande**	**3.98**	**140**	*e*Pn	Pb	15 15 13.8	-6.1
BUM	**Brajici-Budva**	**4.04**	**88**	⇑*i*Pn	Pn	15 15 13.0	+1.5
BUM				*e*Sn	**Sn**	**15 16 01.1**	**+2.2**
BUM	**Brajici-Budva**	**4.04**	**88**	⇑*i*Pn	Pn	15 15 13.0	+1.5
BUM				*e*Sn	**Sn**	**15 16 01.1**	**+2.2**
UPM	**Unac-Piva**	**4.13**	**75**	⇑*i*Pn	**Pn**	**15 15 13.8**	**+1.0**
UPM				*e*Sn	**Sn**	**15 16 03.1**	**+1.9**
UPM	**Unac-Piva**	**4.13**	**75**	⇑*i*Pn	**Pn**	**15 15 13.8**	**+1.0**
UPM				*e*Sn	**Sn**	**15 16 03.1**	**+1.9**
NKY	**Niksic**	**4.13**	**81**	⇓*i*Pn	**Pn**	**15 15 14.1**	**+1.3**
NKY				*e*Sn	**Sn**	**15 16 03.5**	**+2.2**
NKY	**Niksic**	**4.13**	**81**	⇑P	Pn	15 15 14.2	+1.3
NKY				S	**Sn**	**15 16 04.0**	**+2.7**
NKY	**Niksic**	**4.13**	**81**	⇑P	Pn	15 15 14.2	+1.3
NKY				S	**Sn**	**15 16 04.0**	**+2.7**
NKY	**Niksic**	**4.13**	**81**	⇓*i*Pn	Pn	15 15 14.1	+1.3
NKY				*e*Sn	**Sn**	**15 16 03.5**	**+2.2**
NKY				S	**Sn**	**15 16 04.0**	**+2.7**
VSL	**Villasalto**	**4.14**	**229**	*e*Pn	**Pn**	**15 15 13.4**	**+0.5**
VSL	**Villasalto**	**4.14**	**229**	*e*Pn	**Pn**	**15 15 13.4**	**+0.5**
PDG	**Podgorica**	**4.31**	**86**	*e*Pn	**Pn**	**15 15 16.3**	**+1.2**
PDG	**Podgorica**	**4.31**	**86**	*e*Pn	**Pn**	**15 15 16.3**	**+1.2**
PDG				*e*Sn	**Sn**	**15 16 07.5**	**+2.2**
TTG	**Podgorica**	**4.31**	**86**	⇑*i*Pn	**Pn**	**15 15 16.3**	**+1.2**
TTG				*e*Sn	**Sn**	**15 16 07.5**	**+2.2**
TTG	**Podgorica**	**4.31**	**86**	⇓P	**Pn**	**15 15 16.3**	**+1.2**
TTG				S	**Sn**	**15 16 07.9**	**+2.5**
TTG	**Podgorica**	**4.31**	**86**	⇓P	**Pn**	**15 15 16.3**	**+1.2**
TTG				S	**Sn**	**15 16 07.9**	**+2.5**
TTG	**Podgorica**	**4.31**	**86**	P	**Pn**	**15 15 16.3**	**+1.2**
TTG				S	**Sn**	**15 16 07.9**	**+2.5**
OBKA	**Obir**	**4.31**	**10**	*e*Pn	**Pn**	**15 15 16.8**	**+1.5**
ULC	**Ulcinj**	**4.32**	**92**	⇑*i*Pn	**Pn**	**15 15 16.0**	**+0.6**
ULC				*e*Sn	**Sn**	**15 16 07.4**	**+1.6**
ULC	**Ulcinj**	**4.32**	**92**	⇑P	**Pn**	**15 15 16.5**	**+1.1**
ULC				S	**Sn**	**15 16 08.1**	**+2.3**
ULC	**Ulcinj**	**4.32**	**92**	⇑P	**Pn**	**15 15 16.5**	**+1.1**
ULC				S	**Sn**	**15 16 08.1**	**+2.3**
ULC	**Ulcinj**	**4.32**	**92**	⇑*i*Pn	**Pn**	**15 15 16.0**	**+0.6**
ULC	**Ulcinj**	**4.32**	**92**	P	**Pn**	**15 15 16.5**	**+1.1**
ULC				*e*Sn	**Sn**	**15 16 07.4**	**+1.6**
ULC				S	**Sn**	**15 16 08.1**	**+2.3**
MYKA	**Terra Mystica**	**4.36**	**2**	⇓*i*Pn	**Pn**	**15 15 16.4**	**+0.4**
MYKA	**Terra Mystica**	**4.36**	**2**	⇓*i*Pn	**Pn**	**15 15 16.4**	**+0.4**
MYKA	**Terra Mystica**	**4.36**	**2**	⇓*i*Pn	**Pn**	**15 15 16.4**	**+0.4**
CEL	**Celeste**	**4.42**	**154**	*e*Pn	**Pn**	**15 15 17.2**	**+0.5**
CEL	**Celeste**	**4.42**	**154**	*e*Pn	**Pn**	**15 15 17.2**	**+0.5**
PLE	**Pljevlja**	**4.50**	**74**	*e*Pn	Pn	15 15 19.4	+1.5
PLE				*e*Sn	**Sn**	**15 16 12.3**	**+2.0**
PLE	**Pljevlja**	**4.50**	**74**	⇑P	Pn	15 15 19.8	+1.9
PLE				S	**Sn**	**15 16 13.7**	**+3.4**
PLE	**Pljevlja**	**4.50**	**74**	⇑P	Pn	15 15 19.8	+1.9
PLE				S	**Sn**	**15 16 13.7**	**+3.4**
PLE	**Pljevlja**	**4.50**	**74**	*e*Pn	Pn	15 15 19.4	+1.5
PLE	**Pljevlja**	**4.50**	**74**	P	Pn	15 15 19.8	+1.9
PLE				*e*Sn	**Sn**	**15 16 12.3**	**+2.0**
PLE				S	**Sn**	**15 16 13.7**	**+3.4**
ABTA	**Abfaltersbach** SNR=38	**4.53**	**352**	⇓*i*Pn	**Pn**	**15 15 19.1**	**+0.9**
ABTA	**Abfaltersbach**	**4.53**	**352**	⇓*i*Pn	**Pn**	**15 15 19.1**	**+0.9**
ABTA	**Abfaltersbach**	**4.53**	**352**	⇓*i*Pn	**Pn**	**15 15 19.1**	**+0.9**
SAOF	**Saorge**	**4.64**	**294**	P	**Pn**	**15 15 21.2**	**+1.5**
SAOF	**Saorge**	**4.64**	**294**	P	**Pn**	**15 15 21.2**	**+1.5**
SAOF	**Saorge**	**4.64**	**294**	P	**Pn**	**15 15 21.2**	**+1.5**
SAOF	**Saorge**	**4.64**	**294**	P	**Pn**	**15 15 21.2**	**+1.5**
BBLS	**Lazići**	**4.65**	**68**	*e*Pn	**Pn**	**15 15 21.2**	**+1.3**
BBLS				*e

GRUS	**Gruza**	**5.56**	**71**	*e*Pn	**Pn**	**15 15 33.1 +0.7**
GRUS				*e*Sn	**Sn**	**15 16 36.4 +0.1**
GRUS	**Gruza**	**5.56**	**71**	*e*Pn	**Pn**	**15 15 33.1 +0.7**
GRUS				*e*Sn	**Sn**	**15 16 36.4 +0.1**
OBER	**Oberstdorf**	**5.61**	**338**	*e*Pn	Pn	15 15 36.5 +3.5
OBER				*e*Sn	**Sn**	**15 16 38.4 +1.0**
MOA	**Molln**	**5.61**	**6**	*e*Pn	**Pn**	**15 15 34.4 +1.4**
MOA				*e*Sn	**Sn**	**15 16 37.0 -0.5**
MOA	**Molln**	**5.61**	**6**	⇑*i*Pn	**Pn**	**15 15 34.2 +1.2**
	SNR=15					
MOA	**Molln**	**5.61**	**6**	⇑*i*Pn	**Pn**	**15 15 34.2 +1.2**
MOA	**Molln**	**5.61**	**6**	⇑*i*Pn	**Pn**	**15 15 34.2 +1.2**
DAVA	**Damuels**	**5.62**	**334**	*e*Pn	Pn	15 15 36.1 +2.8
DAVA	**Damuels**	**5.62**	**334**	⇑*i*Pn	Pn	15 15 35.5 +2.2
	SNR=17					
DAVA	**Damuels**	**5.62**	**334**	⇑*i*Pn	Pn	15 15 35.5 +2.2
DAVA	**Damuels**	**5.62**	**334**	⇑*i*Pn	Pn	15 15 35.5 +2.2
BNI	**Bardonecchia**	**5.64**	**302**	*e*P	**Pn**	**15 15 35.6 +2.0**
BNI				pmax	pmax	
	comp=Z,16nm,0.8s					
BNI	**Bardonecchia**	**5.64**	**302**	*e*Pn	**Pn**	**15 15 35.6 +2.0**
	comp=Z,16nm,0.8s					
BNI	**Bardonecchia**	**5.64**	**302**	*e*P	**Pn**	**15 15 35.6 +2.0**
	comp=Z,16nm,0.8s					
SELS	**Selova**	**5.73**	**78**	*e*Pn	**Pn**	**15 15 35.3 +0.6**
SELS	**Selova**	**5.73**	**78**	*e*Pn	**Pn**	**15 15 35.3 +0.6**
KBN	**Korca**	**5.76**	**104**	*e*PN	Pn	15 15 38.0 +2.9
KBN	**Korca**	**5.76**	**104**	*e*Pn	Pn	15 15 38.0 +2.9
LPG	**La Plagne**	**5.81**	**306**	*e*P	Pn	15 15 38.6 +2.5
LPG				*e*Sn	**Sn**	**15 16 37.7 -5.2**
	comp=Z,34nm,0.7s					
LPG	**La Plagne**	**5.81**	**306**	*e*P	Pn	15 15 38.6 +2.5
LPL	**La Plagne**	**5.84**	**306**	*e*P	Pn	15 15 38.7 +2.4
LPL				*e*Sn	Sn	15 16 36.9 -6.4
	comp=Z,18nm,0.7s					
LPL	**La Plagne**	**5.84**	**306**	*e*P	Pn	15 15 38.7 +2.4
CONA	**Conrad Observa**	**5.91**	**16**	‖*i*Pn	**Pn**	**15 15 37.7 +0.5**
	SNR=12					
CONA	**Conrad Observa**	**5.91**	**16**	‖*i*Pn	**Pn**	**15 15 37.7 +0.5**
CONA	**Conrad Observa**	**5.91**	**16**	‖*i*Pn	**Pn**	**15 15 37.7 +0.5**
SMRF	**Simiane la Rot**	**6.01**	**289**	*e*P	**Pn**	**15 15 40.1 +1.6**
SMRF	**Simiane la Rot**	**6.01**	**289**	*e*P	**Pn**	**15 15 40.1 +1.6**
ORIF	**Oris-en-Rattie**	**6.10**	**298**	*e*P	Pn	15 15 43.2 +3.4
FNA	**Florina**	**6.13**	**101**	*e*P	**Pn**	**15 15 41.1 +0.8**
BARS	**Barje**	**6.21**	**82**	*e*Pn	**Pn**	**15 15 41.9 +0.7**
BARS				*e*Sn	**Sn**	**15 16 51.9 -0.3**
BARS	**Barje**	**6.21**	**82**	*e*Pn	**Pn**	**15 15 41.9 +0.7**
ZST	**Bratislava**	**6.46**	**22**	*e*P	**Pn**	**15 15 44.8 +0.1**
ZST				*e*		15 16 52.4
ZST				MLR	MLR	
	comp=Z,4μm,2.5s					
ZST	**Bratislava**	**6.46**	**22**	*e*PN	**Pn**	**15 15 44.8 +0.1**
ZST				*e*SN	Sn	15 16 52.4 -6.1
ZST				*e*SG	Sg	15 17 48.9 +12
ZST	**Bratislava**	**6.46**	**22**	*e*P	**Pn**	**15 15 44.8 +0.1**
LKD2	**Lefkada island**	**6.50**	**120**	*e*P	**Pn**	**15 15 42.9 -2.4**
GEC2	**GERESS Array S**	**6.58**	**1**	*e*P	**Pn**	**15 15 48.2 +1.8**
GEC2				*e*		15 17 00.1
GEC2	**GERESS Array S**	**6.58**	**1**	*e*Pn	**Pn**	**15 15 48.2 +1.8**
GEC2				*e*Sn	**Sn**	**15 17 00.1 -1.4**
GEC2	**GERESS Array S**	**6.58**	**1**	*e*P	**Pn**	**15 15 48.2 +1.8**
GERES	**GERESS Array B**	**6.58**	**1**	Pn	**Pn**	**15 15 46.4 0.0**
GERES	**GERESS Array B**	**6.58**	**1**	Pn	**Pn**	**15 15 46.4 0.0**
	comp=Z,1.3nm,0.3s,baz=179,slow=13,SNR=36					
GERES				Sn	**Sn**	**15 16 58.0 -3.4**
	comp=Z,3.0nm,0.3s,baz=173,slow=22,SNR=7.1					
GERES	**GERESS Array B**	**6.58**	**1**	P	**Pn**	**15 15 46.4 0.0**
	comp=Z,1.0nm,0.3s					
FELD	**Feldberg im Sc**	**6.80**	**327**	P	**Pn**	**15 15 50.2 +0.7**
FELD				S	**Sn**	**15 17 07.8 +0.8**
FELD	**Feldberg im Sc**	**6.80**	**327**	P	**Pn**	**15 15 50.2 +0.7**
FELD				S	**Sn**	**15 17 07.8 +0.8**
CABF	**La Chapelle**	**6.82**	**312**	*e*Pn	**Pn**	**15 15 50.1 +0.3**
CABF	**La Chapelle**	**6.82**	**312**	*e*Pn	**Pn**	**15 15 50.1 +0.3**
VLS	**Valsamata**	**6.82**	**124**	*e*P	**Pn**	**15 15 50.0 +0.3**
ZAPS	**Zavoj**	**6.84**	**78**	*e*Pn	Pn	15 15 51.4 +1.5
ZAPS	**Zavoj**	**6.84**	**78**	*e*Pn	Pn	15 15 51.4 +1.5
GRG	**Griva**	**6.84**	**98**	*e*P	**Pn**	**15 15 49.2 -0.7**
SMOL	**Smolenice**	**6.84**	**23**	*e*P	**Pn**	**15 15 47.4 -2.6**
SMOL	**Smolenice**	**6.84**	**23**	*e*PN	**Pn**	**15 15 47.3 -2.7**
KHC	**Kasperske Hory**	**6.86**	**1**	*e*P	**Pn**	**15 15 51.3 +1.0**
KHC				*e*		15 17 05.1
KHC	**Kasperske Hory**	**6.86**	**1**	*e*Pn	**Pn**	**15 15 48.6 -1.7**
	comp=Z,9.9nm,0.7s					
KHC				*e*Sn	**Sn**	**15 17 05.1 -3.3**
KHC	**Kasperske Hory**	**6.86**	**1**	*e*PN	**Pn**	**15 15 51.3 +1.0**
KHC				*ex*	x	15 15 57.0
KHC				*e*PG	Pg	15 16 24.5 +3.5
KHC				*e*SN	**Sn**	**15 17 05.1 -3.3**
KHC	**Kasperske Hory**	**6.86**	**1**	Pn	**Pn**	**15 15 51.3 +1.0**
VIVF	**Saint-Julien-l**	**6.88**	**295**	*e*Pn	**Pn**	**15 15 52.0 +1.6**
VIVF	**Saint-Julien-l**	**6.88**	**295**	*e*Pn	**Pn**	**15 15 52.0 +1.6**
WET	**Wettzell**	**6.89**	**357**	*e*P	**Pn**	**15 15 50.9 +0.3**
WET				*e*		15 17 06.5
WET	**Wettzell**	**6.89**	**357**	*e*Pn	**Pn**	**15 15 50.9 +0.3**
WET				*e*Sn	**Sn**	**15 17 06.5 -2.4**
WET	**Wettzell**	**6.89**	**357**	*e*P	**Pn**	**15 15 50.9 +0.3**
LOMF	**Lomont**	**6.92**	**319**	P	**Pn**	**15 15 52.8 +1.7**
LOMF				S	**Sn**	**15 17 08.8 -1.1

KOZT				*e*Sg	Sb	15 17 19.8	-0.8
CEYT	**Ceyhan**	**0.55**	**158**	*e*PG	Pg	15 17 19.4	-0.2
CEYT				*e*SG	Sb	15 17 29.1	+0.4
CEYT	**Ceyhan**	**0.55**	**158**	*e*Pg	Pg	15 17 19.4	-0.2
CEYT				*e*Sg	Sb	15 17 29.1	+0.4
GULE	**Gulek**	**0.62**	**248**	*e*P	Pg	15 17 19.2	-1.9
GULE				*i* S	Sg	15 17 29.7	+0.2
GULE	**Gulek**	**0.62**	**248**	*e*P	Pg	15 17 19.2	-2.0
GULE				*i* S	Sg	15 17 29.7	+0.2
ANDN	**Andirin**	**0.68**	**85**	*e*P	Pg	15 17 21.8	-0.4
ANDN				*i* S	Sn	15 17 34.7	-1.0
ANDN	**Andirin**	**0.68**	**85**	*e*P	Pg	15 17 21.8	-0.4
ANDN				*i* S	Sn	15 17 34.7	-1.0
NIG	**Nigde**	**0.91**	**310**	*e*PG	Pg	15 17 26.0	-0.9
NIG				*e*SG	Sb	15 17 40.5	+0.7
NIG	**Nigde**	**0.91**	**310**	*e*Pg	Pg	15 17 26.0	-0.9
NIG				*e*Sg	Sb	15 17 40.6	+0.8
KRTS	**Karatas**	**0.95**	**186**	*e*PG	Pg	15 17 27.3	+0.1
KRTS				*e*SG	Sn	15 17 41.2	-0.9
KRTS	**Karatas**	**0.95**	**186**	*e*Pg	Pg	15 17 27.3	+0.1
KRTS				*e*Sg	Sn	15 17 41.2	-0.9
MERS	**Mersin**	**1.01**	**230**	*e*PG	Pb	15 17 28.8	0.0
MERS	**Mersin**	**1.01**	**230**	*e*Pg	Pb	15 17 28.8	0.0
KMRS	**Kahramanmaras**	**1.12**	**90**	*e*PN	Pg	15 17 30.4	-0.1
KMRS	**Kahramanmaras**	**1.12**	**90**	*e*Pn	Pg	15 17 30.4	-0.1
SARI	**SarD1z-Kayseri**	**1.15**	**39**	*e*PN	Pb	15 17 30.7	-0.4
BNN	**Bunyan**	**1.36**	**12**	*e*PN	Pg	15 17 35.2	0.0
BNN	**Bunyan**	**1.36**	**12**	*e*Pn	Pg	15 17 35.2	0.0
GAZ	**Gaziantep**	**1.41**	**104**	*e*PN	Pn	15 17 34.6	-0.3
GAZ	**Gaziantep**	**1.41**	**104**	*e*Pn	Pn	15 17 34.6	-0.3
YOZ	**Yozgat**	**2.12**	**356**	*e*PN	Pn	15 17 45.9	+1.1
YOZ	**Yozgat**	**2.12**	**356**	*e*Pn	Pn	15 17 45.9	+1.2
MALT	**Malatya**	**2.45**	**70**	||P	Pn	15 17 58.9	+2.9
BRTR	**Keskin Array B**	**2.64**	**327**	Pn	Pn	15 17 50.8	-1.0
BRTR	**Keskin Array B**	**2.64**	**327**	Pn	Pn	15 17 50.8	-1.0
	0.1nm,0.3s,baz=303,slow=13,SNR=2.8						
BRTR	**Keskin Array B**	**2.64**	**327**	P	Pn	15 17 50.8	-1.0

MEX 23 15:22:02.6±1.1, 15.82N×99.32W, h18km±497km, MD3.6, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**1.17**	**334**	*i* P	Pn	15 22 21.1	-3.0
ACX				*i* S	Sb	15 22 34.9	-4.3
PNIG	**Pinotepa**	**1.28**	**63**	*i* P	Pn	15 22 21.9	-3.7
PNIG				*i* S	Sn	15 22 37.1	-5.3
CAIG	**El Cayaco**	**1.53**	**324**	*i* P	Pn	15 22 26.5	-2.4
CAIG				*i* S	Sn	15 22 43.4	-4.9
UTMO	**Huajuapan**	**2.47**	**36**	*i* P	Pn	15 22 40.0	-2.3
UTMO				*i* S	Sn	15 23 09.3	-3.0
ARIG	**Puente Sto Nin**	**2.64**	**338**	*i* P	Pn	15 22 41.1	-3.2
ARIG				*i* S	Sn	15 23 12.2	-3.8
PPM	**Popocatepetl**	**3.30**	**11**	*i* P	Pn	15 22 49.7	-4.3
PPM				*i* S	Sn	15 23 29.8	-3.5

JMA 23 16:08:10.7±0.1, 27.08N×130.01E, h44km, M2.4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.18**	**307**	P	Pn	16 08 31.2	+0.5
JTK				*e*S	Sn	16 08 45.6	0.0
JZK	**Kikaishima**	**1.23**	**358**	*e*S	Sn	16 08 49.0	+2.1
JAM	**Amami Oshima**	**1.37**	**345**	P	Pn	16 08 34.2	+0.8
JAM				*e*S	Sn	16 08 50.4	0.0
JAMN	**Amaminishikomi**	**1.38**	**328**	P	Pn	16 08 33.8	+0.4
JAMN				*e*S	Sn	16 08 50.2	-0.2
JOW	**Kunigami**	**1.57**	**261**	P	Pn	16 08 37.1	+1.0
JOW				*e*S	Sn	16 08 55.6	+0.4
JMZ	**Minamidaito 2**	**1.66**	**139**	P	Pn	16 08 37.9	+0.6
JMZ				*e*S	Sn	16 08 57.6	+0.2
JIH	**Iheya**	**1.82**	**269**	P	Pn	16 08 40.8	+1.2
JIH				*e*S	Sn	16 09 03.0	+1.6
JJT2	**Tamagusuku 2**	**2.23**	**246**	P	Pn	16 08 46.4	+1.2
JAGN	**Aguni-jima**	**2.52**	**259**	P	Pn	16 08 49.9	+0.8
JAGN				*e*S	Sn	16 09 19.3	+0.7
JKE	**Kume jima 2**	**2.98**	**256**	P	Pn	16 08 56.6	+1.1
JKE				*e*S	Sn	16 09 31.1	+1.1

NIED ***23*** *16:09:00, 27.10N×130.00E, h5km, Mw4.5 Best couple: M0=6.08000×10^15 NP1:ϕs=196.00000°, δ55.00000°, λ=82.00000°. NP2:ϕs=3.00000°, δ35.00000°, λ=101.00000°.*
IDC ***23*** *16:09:51.1±0.5, 27.15N×129.90E, h0km, mb4.2/20, mb1 4.3/24, mb1mx4.3/32, mbtmp4.2/24, ML3.6/4, MS3.6/17, Ms1 3.6/17, ms1mx3.4/36, Error ellipse: s-maj=19.0km s-min=12.3km az=79.0*
BJI ***23*** *16:09:52.9, 26.95N×129.96E, h29km, mB4.7/20, mb4.5/31, Ms4.4/23, Ms7 4.3/22*
ISCJB ***23*** *16:09:52.0±0.8, 27.11N±0.02×130.03E±0.03, h18km±5km, mb4.4/51, MS4.0/21, Error ellipse: s-maj=4.5km s-min=3.8km az=42.4*
JMA ***23*** *16:09:53.7, 27.11N×130.03E, h60km, M4.3*
MOS ***23*** *16:09:54.3±1.2, 27.17N×129.92E, h33km, mb4.8/22, Error ellipse: s-maj=11.6km s-min=6.4km az=100.3*
NEIC ***23*** *16:09:56.7±0.3, 27.13N×129.84E, h40km, mb4.5/13, MW4.5(NIED), Error ellipse: s-maj=8.5km s-min=6.4km az=112.0*

ISC 23 16:09:55.3±0.5, 27.13N±0.03×130.03E±0.04, h28km±3km, h27km:pP-P,n156,σ1§61/191,mb4.5/51,MS4.0/21,6C-4D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.16**	**305**	P	**Pn**	**16 10 14.2**	**-1.5**
JTK				S	**Sn**	**16 10 29.1**	**-1.5**
JZK	**Kikaishima**	**1.18**	**358**	P	**Pn**	**16 10 15.0**	**-1.0**
JZK				S	**Sn**	**16 10 30.2**	**-0.9**
JAM	**Amami Oshima**	**1.33**	**344**	P	**Pn**	**16 10 16.8**	**-1.2**
JAM				S	**Sn**	**16 10 33.2**	**-1.6**
JAMN	**Amaminishikomi**	**1.34**	**326**	P	**Pn**	**16 10 16.6**	**-1.6**
JAMN				S	**Sn**	**16 10 33.6**	**-1.5**
JOW	**Kunigami**	**1.59**	**260**	*e*Pn	**Pn**	**16 10 20.2**	**-1.5**
JOW				*e*Sn	**Sn**	**16 10 41.0**	**-0.3**
JOW	**Kunigami**	**1.59**	**260**	P	**Pn**	**16 10 20.4**	**-1.3**
JOW				S	**Sn**	**16 10 39.5**	**-1.8**
JMZ	**Minamidaito 2**	**1.69**	**140**	P	**Pn**	**16 10 20.9**	**-2.1**
JMZ				S	**Sn**	**16 10 41.7**	**-2.0**
JIH	**Iheya**	**1.84**	**267**	P	**Pn**	**16 10 23.8**	**-1.2**
JIH				S	**Sn**	**16 10 46.3**	**-1.1**
JJT2	**Tamagusuku 2**	**2.27**	**245**	P	**Pn**	**16 10 29.6**	**-1.3**
JJT2				S	**Sn**	**16 10 56.3**	**-1.7**
JAGN	**Aguni-jima**	**2.55**	**258**	P	**Pn**	**16 10 33.3**	**-1.5**
JAGN				S	**Sn**	**16 11 03.3**	**-1.5**
JNN	**Nakanoshima**	**2.70**	**357**	P	**Pn**	**16 10 35.3**	**-1.6**
JNN				S	**Sn**	**16 11 07.3**	**-1.5**
JKE	**Kume jima 2**	**3.01**	**255**	P	**Pn**	**16 10 39.1**	**-2.0**
JKE				S	**Sn**	**16 11 14.7**	**-1.6**
JKC	**Kuchinoerabu**	**3.32**	**3**	P	**Pn**	**16 10 44.3**	**-1.1**
JKC				S	**Sn**	**16 11 20.7**	**-3.3**
JTN	**Tanegashima 3**	**3.61**	**13**	P	**Pn**	**16 10 48.1**	**-1.3**
JTN				S	**Sn**	**16 11 28.7**	**-2.4**
JNU	**Nakatsue**	**6.02**	**7**	Pn	**Pn**	**16 11 21.9**	**-0.6**
JNU				Sn	**Sn**	**16 12 25.9**	**-4.6**
JNU	**Nakatsue**	**6.02**	**7**	Pn	**Pn**	**16 11 21.9**	**-0.6**
	11nm,0.3s,baz=201,slow=3.0,SNR=60						
JNU				Sn	**Sn**	**16 12 25.9**	**-4.6**
	4.1nm,0.3s,baz=218,slow=19,SNR=3.1						
NACB	**Ninganchiao**	**8.16**	**251**	*e*Pn	Pn	16 11 47.8	-4.1
YHNB	**Yeheng**	**8.17**	**254**	*e*Pn	**Pn**	**16 11 51.0**	**-1.1**
	44nm,0.9s						
SSE	**Sheshan**	**8.68**	**299**	P	**Pn**	**16 11 56.9**	**-2.2**
SSE				S	**Sn**	**16 13 32.5**	**-3.5**
SSE				pmax	pmax		
	comp=Z,23nm,0.7s						
SSE				pmax	pmax		
	comp=Z,55nm,3.5s						
SSE				LR	LR		
	comp=N,820nm,12.6s						
SSE				LR	LR		
	comp=E,1μm,12.6s						
SSE				LR	LR		
	comp=Z,2μm,12.8s						
SSLB	**Suanglung**	**8.85**	**250**	*e*Pn	Pn	16 11 57.5	-3.9
	comp=Z,19nm,0.6s						
JHJ	**Hachijo jima 2**	**10.34**	**52**	LR	LR	16 15 43.4	
	comp=Z,157nm,18.4s,baz=291,slow=34						
KSAR	**Wonju Array Be**	**10.44**	**351**	Pn	**Pn**	**16 12 22.1**	**-1.0**
KSRS	**Korea Array**	**10.45**	**351**	Pn	**Pn**	**16 12 22.1**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=170,slow=13,SNR=4.8						
KSRS				LR	LR	16 16 35.5	
	comp=Z,98nm,19.8s,baz=170,slow=39						
NJ2	**Nanjing**	**10.89**	**299**	*e*P	**Pn**	**16 12 31.3**	**+2.0**
NJ2				pP		16 12 39.8	
NJ2				PP	**PnPn**	**16 12 41.1**	**+4.1**
NJ2				sP		16 12 43.6	
NJ2				S	**Sn**	**16 14 33.5**	**+3.3**
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,170nm,5.9s						
NJ2				LR	LR		
	comp=N,630nm,9.6s						
NJ2				LR	LR		
	comp=E,2μm,12.2s						
NJ2				LR	LR		
	comp=Z,2μm,10.0s						
MJAR	**Matsushiro Arr**	**11.67**	**34**	Pn	**Pn**	**16 12 39.4**	**-0.7**
MJAR	**Matsushiro Arr**	**11.67**	**34**	Pn	**Pn**	**16 12 39.4**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=225,slow=12,SNR=3.3						
MJAR				LR	LR	16 17 02.2	
	comp=Z,132nm,18.9s,baz=180,slow=37						
WHN	**Wuhan**	**14.16**	**288**	P	**P**	**16 13 21.3**	**+0.1**
WHN				S	Sn	16 15 58.1	+8.0
WHN				LR	LR		
	comp=N,3μm,13.0s						
WHN				LR	LR		
	comp=E,2μm,11.0s						
WHN				LR	LR		
	comp=Z,3μm,12.3s						
SNY	**Shenyang**	**15.59**	**342**	||P	**Pn**	**16 13 33.9**	**+0.9**
SNY				S	**Sn**	**16 16 24.8**	**0.0**
SNY				pmax	pmax		
	comp=Z,17nm,0.8s						
SNY				LR	LR		
	comp=N,690nm,10.8s						
SNY				LR	LR		
	comp=Z,710nm,11.2s						
CN2	**Changchun**	**17.04**	**349**	*e*P	**P**	**16 13 52.4**	**-0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,500nm,11.0s						
CN2				LR	LR		
	comp=E,700nm,11.0s						
CN2				LR	LR		
	comp=Z,900nm,12.0s						
USRK	**Ussuriysk Arra**	**17.11**	**5**	P	**Pn**	**16 13 52.6**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=196,slow=11,SNR=11						
USRK				LR	LR	16 20 08.4	
	comp=Z,64nm,20.5s,baz=359,slow=36						
BJI	**Beijing**	**17.26**	**322**	P	**P**	**16 13 56.8**	**+1.2**
BJI				S	**S**	**16 17 13.0**	**-0.9**
BJI				pmax	pmax		
	comp=Z,100nm,0.8s						
BJI				LR	LR		
	comp=N,570nm,13.2s						
BJI				LR	LR		
	comp=E,400nm,13.5s						
BJI				LR	LR		
	comp=Z,170nm,16.7s						
ERM	**Erimo**	**18.33**	**33**	*e*P	**Pn**	**16 14 08.7**	**+1.2**
GUMO	**Guam**	**19.34**	**131**	LR	LR	16 19 56.1	
	comp=Z,230nm,21.2s,baz=281,slow=31						
XAN	**Xi'an**	**19.41**	**296**	P	**P**	**16 14 18.8**	**-0.6**
XAN				pP	**pP**	**16 14 26.5**	**-0.4**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
QIZ	**Qiongzhong**	**20.23**	**251**	P	**P**	**16 14 26.9**	**-1.4**
QIZ				S	**S**	**16 18 12.3**	**-1.7**
QIZ				pmax	pmax		
	comp=Z,21nm,1.7s						
QIZ				LR	LR		
	comp=N,350nm,14.6s						
QIZ				LR	LR		
	comp=Z,250nm,12.2s						
HHC	**Hu-ho-hao-te**	**20.48**	**317**	*e*P	**P**	**16 14 31.4**	**+0.4**
HHC				PP	**PnPn**	**16 14 52.8**	**+4.1**
HHC				S	**S**	**16 18 15.0**	**-3.9**
HHC				PcP	**PcP**	**16 18 41.6**	**-0.6**
HHC				ScP	**ScP**	**16 22 13.6**	**-3.3**
HHC				PcS	**PcS**	**16 22 18.4**	**-1.6**
HHC				pmax	pmax		
	comp=Z,29nm,0.6s						
HHC				pmax	pmax		
	comp=Z,220nm,5.4s						
HHC				LR	LR		
	comp=N,700nm,12.2s						
HHC				LR	LR		
	comp=E,920nm,11.4s						
HHC				LR	LR		
	comp=Z,820nm,12.1s						
GYA	**Guiyang**	**20.86**	**273**	P	**P**	**16 14 35.1**	**-0.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**21.16**	**33**	*c* ||P	P	16 14 47.0	+8.8
YUK				*i*		16 15 10.4	
YUK				*i* S	S	16 18 24.7	-7.3
YUK				*i* SS	Sn	16 18 43.6	+4.2
YUK				pmax	pmax		
	comp=Z,59nm,1.2s						
YUK				pmax	pmax		
	comp=N,63nm,1.2s						
YUK				pmax	pmax		
	comp=E,33nm,1.2s						
KLR	**Kul'dur**	**22.11**	**3**	*e*P	**P**	**16 14 46.1**	**-2.2**
KLR				MLR	MLR		
	comp=Z,900nm,13.0s						
YSS	**Yuzh-Sakhalins**	**22.19**	**24**	*e*P	**P**	**16 14 50.7**	**+1.5**
YSS				pmax	pmax		
	comp=Z,40nm,1.2s						
LZH	**Lanzhou**	**23.96**	**298**	*e*P	**P**	**16 15 07.5**	**0.0**
LZH				pP	**pP**	**16 15 17.3**	**+1.7**
LZH				sP	**sP**	**16 15 21.6**	**+2.6**
LZH				PP	**PnPn**	**16 15 41.0**	**+4.5**
LZH				*e*S	**S**	**16 19 19.8**	**-3.0**
LZH				sS	**sS**	**16 19 34.5**	**-1.5**
LZH				*e*SS	**SnSn**	**16 20 10.3**	**+6.6**
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,150nm,6.0s						
LZH				LR	LR		
	comp=N,540nm,12.5s						
LZH				LR	LR		
	comp=E,1μm,12.0s						
LZH				LR	LR		
	comp=Z,1μm,13.7s						
KMI	**Kunming**	**24.57**	**271**	P	**P**	**16 15 14.6**	**+1.4**
KMI				S	**S**	**16 19 31.6**	**-1.1**
KMI				pmax	pmax		
	comp=Z,26nm,1.0s						
KMI				pmax	pmax		
	comp=Z,93nm,3.2s						
KMI				LR	LR		
	comp=N,430nm,11.1s						
KMI				LR	LR		
	comp=E,610nm,13.9s						
KMI				LR	LR		
	comp=Z,640nm,12.7s						
ULN	**Ulaanbaatar**	**27.40**	**325**	*e*P	**P**	**16 15 38.0**	**-0.6**
	comp=Z,5.6nm,1.1s						
SONM	**Songino Array**	**27.71**	**324**	P	**P**	**16 15 40.4**	**-0.9**
SONM	**Songino Array**	**27.71**	**324**	P	**P**	**16 15 40.4**	**-0.9**
	comp=Z,3.3nm,0.7s,baz=133,slow=9.6,SNR=18						
SONM				LR	LR	16 28 17.0	
	comp=Z,168nm,18.4s,baz=353,slow=40						
GTA	**Gaotai**	**27.94**	**304**	*e*P	**P**	**16 15 41.8**	**-1.6**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,62nm,6.2s						
GTA				LR	LR		
	comp=N,470nm,12.8s						
GTA				LR	LR		
	comp=E,600nm,12.1s						
GTA				LR	LR		
	comp=Z,800nm,13.1s						
CHTO	**Chiang Mai**	**29.73**	**260**	*e*P	**P**	**16 16 00.1**	**+0.7**
CHTO				*e*		16 16 12.2	
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CHTO	**Chiang Mai**	**29.73**	**260**	*e*P	**P**	**16 16 00.1**	**+0.7**
	comp=Z,9.8nm,0.9s						
CHTO				*e*		16 16 12.2	
CM31	**Chiang Mai Arr**	**29.86**	**260**	P	**P**	**16 15 58.5**	**-2.1**
CMAR	**Chiang Mai Arr**	**29.86**	**260**	P	**P**	**16 15 59.6**	**-1.0**
CMAR	**Chiang Mai Arr**	**29.86**	**260**	P	**P**	**16 15 59.6**	**-1.0**
	comp=Z,2.3nm,0.9s,baz=71,slow=7.6,SNR=11						
CMAR				LR	LR	16 30 16.5	
	comp=Z,165nm,18.6s,baz=255,slow=41						
KSM	**Kuching**	**31.76**	**220**	*e*P	**P**	**16 16 15.7**	**-1.6**
	comp=Z,8.4nm,1.0s						
PETK	**Petropavlovsk-**	**33.10**	**31**	P	**P**	**16 16 30.4**	**+1.7**
PETK	**Petropavlovsk-**	**33.10**	**31**	P	**P**	**16 16 30.4**	**+1.7**
PETK	**Petropavlovsk-**	**33.10**	**31**	P	**P**	**16 16 30.4**	**+1.7**
	comp=Z,1.8nm,0.7s,baz=242,slow=8.0,SNR=3.5						
KAPI	**Kappang**	**33.47**	**199**	LR	LR	16 28 47.2	
	comp=Z,75nm,19.3s,baz=219,slow=34						
YAK	**Yakutsk**	**34.90**	**360**	*e*P	**P**	**16 16 43.8**	**-0.3**
YAK				*e*		16 16 53.5	
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
TAPN	**Taplejung**	**37.49**	**280**	*e*P	**P**	**16 17 07.7**	**+0.5**
	comp=N,36nm,1.2s						
ODAN	**Odare**	**37.86**	**280**	*e*P	**P**	**16 17 09.6**	**-0.6**
	comp=N,55nm,0.9s						
RAMN	**Ramite**	**38.54**	**280**	*e*P	**P**	**16 17 15.4**	**-0.5**
	comp=N,24nm,0.9s						
SEY	**Seymchan**	**38.70**	**16**	||*i*P	**P**	**16 17 18.3**	**+1.8**
GUN	**Gumba**	**39.00**	**282**	*e*P	**P**	**16 17 21.3**	**+1.4**
	comp=N,41nm,0.9s						
PKI	**Pulchoki**	**39.47**	**281**	*e*P	**P**	**16 17 23.8**	**0.0**
	comp=N,28nm,0.8s						
PKIN	**Phulchoki**	**39.48**	**281**	*e*P	**P**	**16 17 24.2**	**+0.4**
	comp=N,15nm,0.7s						
KKN	**Kakani**	**39.55**	**282**	*e*P	**P**	**16 17 24.6**	**+0.3**
	comp=N,70nm,1.1s						
DMN	**Daman**	**39.73**	**281**	*e*P	**P**	**16 17 26.4**	**+0.5**
	comp=N,63nm,1.1s						
DANN	**Dangsing**	**40.77**	**283**	*e*P	**P**	**16 17 35.6**	**+1.0**
	comp=N,25nm,0.6s						
KOLN	**Koldanda**	**41.01**	**282**	*e*P	**P**	**16 17 37.0**	**+0.5**
	comp=N,62nm,1.5s						
PYUN	**Piuthan**	**41.49**	**283**	*e*P	**P**	**16 17 40.5**	**+0.1**
	comp=N,117nm,1.0s						
MK31	**Makanchi Array**	**42.15**	**311**	*e*P	**P**	**16 17 43.6**	**-1.8**
MK31	**Makanchi Array**	**42.15**	**311**	*e*P	**P**	**16 17 43.5**	**-1.8**
MKAR	**Makanchi Array**	**42.15**	**311**	P	**P**	**16 17 43.3**	**-2.1**
MKAR						16 19 39.8	
MKAR	**Makanchi Array**	**42.15**	**311**	P	**P**	**16 17 43.3**	**-2.1**
MKAR				PcP	**PcP**	**16 19 39.8**	**+0.4**
MKAR	**Makanchi Array**	**42.15**	**311**	P	**P**	**16 17 43.3**	**-2.1**
	comp=N,1.0nm,0.6s,baz=95,slow=9.8,SNR=11						
MKAR				PcP	**PcP**	**16 19 39.8**	**+0.4**
	comp=N,0.7nm,0.8s,baz=112,slow=2.4,SNR=3.4						
MKAR				LR	LR	16 37 40.8	
	comp=N,102nm,18.8s,baz=53,slow=40						
ZALV	**Zalesovo Beam**	**42.52**	**322**	P	**P**	**16 17 46.4**	**-1.8**
ZALV						16 19 39.5	
ZALV	**Zalesovo Beam**	**42.52**	**322**	P	**P**	**16 17 46.4**	**-1.8**
ZALV				PcP	**PcP**	**16 19 39.5**	**-1.0**
ZALV	**Zalesovo Beam**	**42.52**	**322**	P	**P**	**16 17 46.4**	**-1.8**
	comp=N,0.7nm,0.5s,baz=106,slow=9.6,SNR=6.4						
ZALV				PcP	**PcP**	**16 19 39.5**	**-1.0**
	comp=N,1.0nm,0.7s,baz=107,slow=3.5,SNR=4.1						
ZALV				LR	LR	16 37 28.3	
	comp=N,59nm,18.8s,baz=67,slow=39						
FITZ	**Fitzroy Crossi**	**45.16**	**186**	P	**P**	**16 18 09.0**	**-0.8**
FITZ	**Fitzroy Crossi**	**45.16**	**186**	P	**P**	**16 18 09.0**	**-0.8**
	comp=N,5.6nm,1.0s,baz=30,slow=8.3,SNR=7.3						
KURK	**Kurchatov**	**45.29**	**316**	*c*e P	**P**	**16 18 08.7**	**-1.7**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KURK	**Kurchatov**	**45.29**	**316**	P	**P**	**16 18 08.8**	**-1.6**
KURK				PcP	**PcP**	**16 19 49.1**	**-0.8**
KURK				*e*PP	**PP**	**16 19 55.1**	**-1.4**
KURBB	**Kurchatov Arra**	**45.33**	**315**	P	**P**	**16 18 08.8**	**-1.9**
	comp=Z,2.6nm,0.8s,baz=101,slow=8.8,SNR=18						
KURBB				PcP	**PcP**	**16 19 49.1**	**-1.0**
	comp=Z,0.6nm,0.9s,baz=92,slow=4.7,SNR=2.9						
BILL	**Bilibino**	**46.32**	**18**	||*i*P	**P**	**16 18 18.5**	**+0.2**
BILL				*i*		16 18 28.8	
BILL				*i*		16 18 34.3	
BILL				*e*		16 19 54.8	
BILL				*i*		16 20 05.6	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BILL	**Bilibino**	**46.32**	**18**	*e*P	**P**	**16 18 17.9**	**-0.4**
	comp=Z,6.3nm,1.1s						
TKM2	**Tokmak 2**	**46.48**	**305**	*e*P	**P**	**16 18 18.1**	**-2.2**
TKM2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TKM2	**Tokmak 2**	**46.48**	**305**	*e*P	**P**	**16 18 18.1**	**-2.2**
	comp=Z,3.5nm,1.0s						
WRAB	**Tennant Creek**	**46.97**	**174**	*e*P	**P**	**16 18 23.4**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,15nm,1.4s						
WRAB	**Tennant Creek**	**46.97**	**174**	*e*P	**P**	**16 18 23.4**	**-0.6**
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**46.98**	**174**	P	**P**	**16 18 23.6**	**-0.4**
WRA	**Warramunga Arr**	**46.98**	**174**	P	**P**	**16 18 23.6**	**-0.4**
	comp=Z,7.3nm,0.9s,baz=351,slow=8.3,SNR=39						
MBWA	**Marble Bar**	**49.03**	**193**	*e*P	**P**	**16 18 39.2**	**-0.6**
	comp=Z,7.8nm,0.8s						
CTA	**Charters Tower**	**49.50**	**160**	P	**P**	**16 18 44.4**	**+0.8**
CTA	**Charters Tower**	**49.50**	**160**	P	**P**	**16 18 44.4**	**+0.8**
	comp=Z,14nm,0.7s,baz=336,slow=7.6,SNR=16						
CTA				LR	LR	16 39 57.5	
	comp=Z,74nm,18.4s,baz=159,slow=36						
CTAO	**Charters Tower**	**49.50**	**160**	*e*P	**P**	**16 18 44.3**	**+0.8**
CTAO	**Charters Tower**	**49.50**	**160**	*e*P	**P**	**16 18 44.3**	**+0.8**
KKAR	**Karatay Array**	**50.21**	**305**	P	**P**	**16 18 44.4**	**-4.4**
KKAR	**Karatay Array**	**50.21**	**305**	P	**P**	**16 18 44.4**	**-4.4**
AS31	**Alice Springs**	**50.64**	**175**	*e*P	**P**	**16 18 52.1**	**0.0**
ASAR	**Alice Springs**	**50.64**	**175**	P	**P**	**16 18 52.3**	**+0.1**
ASAR				PcP	**PcP**	**16 20 09.7**	**+0.3**
ASAR	**Alice Springs**	**50.64**	**175**	P	**P**	**16 18 52.3**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=6.1,slow=14,SNR=54						
ASAR				PcP	**PcP**	**16 20 09.7**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=6.6,slow=4.0,SNR=6.3						
BVAR	**Borovoye Array**	**50.68**	**318**	P	**P**	**16 18 51.4**	**-0

ZEI	**Tsey**	**69.44**	**308**	*e*P	**P**	**16**	**21**	**01.9**	**+0.6**
ZEI				pmax	pmax				
	comp=Z,9.0nm,0.9s								
KBZ	**Khabaz**	**69.83**	**310**	P	**P**	**16**	**21**	**04.0**	**+0.6**
KBZ	**Khabaz**	**69.83**	**310**	P	**P**	**16**	**21**	**04.0**	**+0.6**
KBZ	**Khabaz**	**69.83**	**310**	P	**P**	**16**	**21**	**04.0**	**+0.6**
	comp=Z,6.0nm,0.8s,baz=121,slow=5.3,SNR=13								
KBZ				LR	LR	16	54	27.9	
	comp=Z,77nm,18.4s,baz=259,slow=38								
VSR	**Storozhevoye**	**69.86**	**318**	*e*P	**P**	**16**	**21**	**02.2**	**-1.3**
VSR				*e**SP	**sP**	**16**	**21**	**13.4**	**-2.0**
VSR				pmax	pmax				
	comp=N,5.0nm,0.9s								
VSR				pmax	pmax				
	comp=E,10.0nm,0.9s								
VSR				pmax	pmax				
	comp=Z,5.0nm,0.9s								
VORD	**Divnogorie**	**69.87**	**318**	*e*P	**P**	**16**	**21**	**02.4**	**-1.1**
VORD				*e**SP	**sP**	**16**	**21**	**13.4**	**-2.0**
VORD				pmax	pmax				
	comp=N,4.0nm,0.6s								
VORD				pmax	pmax				
	comp=E,3.0nm,0.6s								
VORD				pmax	pmax				
	comp=Z,3.0nm,0.6s								
KIV	**Kislovodsk**	**69.90**	**310**	⇓*i*P	**P**	**16**	**21**	**04.8**	**+0.8**
KIV				pmax	pmax				
	comp=Z,23nm,1.4s								
KIV				MLR	MLR				
	comp=Z,100nm,15.0s								
JOF	**Joensuu**	**70.03**	**331**	*e*P	P	16	21	00.3	-4.0
JOF				pmax	pmax				
	comp=Z,4.0nm,0.7s								
JOF	**Joensuu**	**70.03**	**331**	*e*p	P	16	21	00.3	-4.0
	comp=Z,4.0nm,0.7s								
OBN	**Obninsk**	**70.10**	**322**	*e*P	**P**	**16**	**21**	**05.3**	**+0.5**
OBN				*e*		16	21	15.2	
OBN				pmax	pmax				
	comp=Z,10.0nm,1.0s								
OBN				MLR	MLR				
	comp=Z,100nm,15.0s								
KAF	**Kangasniemi**	**72.49**	**331**	*e*P	P	16	21	13.4	-5.7
KAF				pmax	pmax				
	comp=Z,3.0nm,0.7s								
KAF	**Kangasniemi**	**72.49**	**331**	*e*p	P	16	21	13.4	-5.7
	comp=Z,2.7nm,0.7s								
FINES	**FINESS Array B**	**72.87**	**331**	P	**P**	**16**	**21**	**20.9**	**-0.5**
FINES	**FINESS Array B**	**72.87**	**331**	P	**P**	**16**	**21**	**20.9**	**-0.5**
	comp=Z,2.8nm,0.6s,baz=72,slow=6.2,SNR=14								
FINES				LR	LR	16	56	19.4	
	comp=Z,73nm,19.3s,baz=103,slow=38								
RES	**Resolute Bay**	**74.36**	**11**	*e*P	**P**	**16**	**21**	**30.4**	**+0.4**
	comp=Z,3.4nm,0.7s								
AKASG	**Malin Array Be**	**75.89**	**320**	P	**P**	**16**	**21**	**39.2**	**0.0**
AKASG	**Malin Array Be**	**75.89**	**320**	P	**P**	**16**	**21**	**39.2**	**0.0**
AKASG	**Malin Array Be**	**75.89**	**320**	P	**P**	**16**	**21**	**39.2**	**0.0**
	comp=Z,2.7nm,0.7s,baz=58,slow=6.2,SNR=6.8								
AKASG				LR	LR	16	57	50.7	
	comp=Z,138nm,19.5s,baz=65,slow=38								
YKA	**Yellowknife Ar**	**77.03**	**26**	P	**P**	**16**	**21**	**45.6**	**+0.2**
YKA	**Yellowknife Ar**	**77.03**	**26**	P	**P**	**16**	**21**	**45.6**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=302,slow=5.5,SNR=22								
BRTR	**Keskin Array B**	**77.75**	**308**	P	**P**	**16**	**21**	**51.3**	**+1.2**
BRTR	**Keskin Array B**	**77.75**	**308**	P	**P**	**16**	**21**	**51.3**	**+1.2**
	comp=Z,2.4nm,0.8s,baz=78,slow=6.4,SNR=8.8								
BRTR				LR	LR	16	59	34.1	
	comp=Z,31nm,19.8s,baz=185,slow=38								
NB2	**NORSAR Subarra**	**79.21**	**334**	P	**P**	**16**	**21**	**57.7**	**+0.1**
	comp=Z,7.9nm,1.2s,baz=53,slow=5.9								
NOA	**NORSAR Array B**	**79.21**	**334**	P	**P**	**16**	**21**	**57.5**	**-0.2**
NOA	**NORSAR Array B**	**79.21**	**334**	P	**P**	**16**	**21**	**57.5**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=50,slow=5.5,SNR=4.9								
KOLS	**Kolonicke sedl**	**80.69**	**320**	*e*P	P	16	22	12.2	+6.4
KOLS	**Kolonicke sedl**	**80.69**	**320**	*e*PCP	P	16	22	12.2	+6.4
CRVS	**Cervenica-Dubn**	**81.17**	**321**	*e*P	P	16	22	16.3	+7.9
CRVS	**Cervenica-Dubn**	**81.17**	**321**	*e*PCP	P	16	22	16.3	+7.9
VYHS	**Vyhne**	**82.85**	**321**	*e*P	**P**	**16**	**22**	**19.5**	**+2.3**
VYHS	**Vyhne**	**82.85**	**321**	*e*P	**P**	**16**	**22**	**19.5**	**+2.3**
VYHS				*e*PCP	**pP**	**16**	**22**	**24.2**	**-1.9**
CLL	**Collm**	**84.32**	**326**	*e*P	**P**	**16**	**22**	**27.0**	**+2.3**
CLL				*i*		16	22	35.4	
CLL				*e*S	S	16	32	41.0	-7.6
CLL				pmax	pmax				
	comp=Z,5.0nm,0.9s								
CLL	**Collm**	**84.32**	**326**	*e*(P)	**P**	**16**	**22**	**27.0**	**+2.3**
	comp=Z,5.0nm,0.9s								
CLL				*i* pP	**pP**	**16**	**22**	**35.4**	**+1.8**
CLL				*e*S	S	16	32	41.0	-7.6
GERES	**GERESS Array B**	**85.44**	**324**	P	**P**	**16**	**22**	**31.8**	**+1.3**
GERES	**GERESS Array B**	**85.44**	**324**	P	**P**	**16**	**22**	**31.8**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=67,slow=4.5,SNR=7.3								
GERES				LR	LR	17	02	09.1	
	comp=Z,89nm,19.1s,baz=62,slow=37								
FFC	**Flin Flon**	**87.06**	**27**	*i* P	**P**	**16**	**22**	**39.4**	**+1.2**
PPT	**Papeete**	**89.67**	**110**	LR	LR	16	59	29.8	
	comp=Z,30nm,19.2s,baz=357,slow=33								
PDAR	**Pinedale Array**	**91.45**	**39**	P	**P**	**16**	**22**	**59.5**	**+0.1**
PDAR	**Pinedale Array**	**91.45**	**39**	P	**P**	**16**	**22**	**59.5**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=270,slow=1.5,SNR=9.5								

*CSEM **23** 17:03:54.9±0.1,51.14N×5.99E,h15km,ML2.6,Error ellipse: s-maj=2.3km s-min=1.9km az=144.0*
*UCC **23** 17:03:55.6±0.4,51.13N×5.99E,h16km±1km,ML2.1*
*ISCJB **23** 17:03:55.1±0.3,51.14N±0.02×5.94E±0.03,h22km±2km, Error ellipse: s-maj=3.3km s-min=2.7km az=148.9*
*BGR **23** 17:03:55.7±0.4,51.15N×6.03E,h10km,ML2.6/7,Error ellipse: s-maj=4.4km s-min=2.2km az=104.0*
*LDG **23** 17:03:55.4±0.1,51.16N×5.95E,h5km,Ml2.9/23,Error ellipse: s-maj=1.5km s-min=1.0km az=147.0*
*BNS **23** 17:03:56.3±1.0,51.15N×6.03E,h11km±4km,ML2.2*
*STR **23** 17:04:01.5±1.4,50.78N×5.94E,h10km,Ml2.9,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 23 17:03:54.3±0.9,51.13N±0.02×5.97E±0.01,h19km±2km, n108,σ1§13/198,5C-2D,The Netherlands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RODG	**Roetgen-Dahlhe**	**0.14**	**85**	⇑*i*Pg		**Pg**	**17 03 59.0**	**+0.4**
RODG				*e*Sg		**Sg**	**17 04 01.7**	**+0.3**
	2μm,0.4s							
RODG	**Roetgen-Dahlhe**	**0.14**	**85**	Pg		**Pg**	**17 03 59.0**	**+0.4**
RODG				Sg		**Sg**	**17 04 01.7**	**+0.3**
	2μm,0.4s							
HKB	**Herkenbosch**	**0.14**	**66**	P		**Pg**	**17 03 58.9**	**+0.3**
HKB				S		**Sg**	**17 04 01.7**	**+0.3**
BOPT	**Opiter**	**0.21**	**264**	P		**Pg**	**17 04 00.7**	**+1.2**
BOPT				S		**Sg**	**17 04 04.6**	**+1.6**
BD11	**Borschemich**	**0.30**	**100**	*e*Pg		**Pb**	**17 04 01.9**	**+0.8**
BD09	**Hochneukirch**	**0.32**	**97**	*e*Pg		**Pb**	**17 04 02.2**	**+0.8**
HGN	**Heimansgroeve**	**0.37**	**183**	*e*Pg		**Pb**	**17 04 02.9**	**+0.5**
	66nm,0.3s,baz=11							
HGN				*e*Sg		**Sb**	**17 04 08.2**	**+0.4**
HGN	**Heimansgroeve**	**0.37**	**183**	*e*Pg		**Pb**	**17 04 02.9**	**+0.5**
	66nm,0.3s							
HGN				*e*Sg		**Sb**	**17 04 08.2**	**+0.4**
BEBN	**Eben Emael**	**0.38**	**208**	⇑P		**Pb**	**17 04 03.3**	**+0.7**
BEBN				S		**Sb**	**17 04 08.7**	**+0.5**
	comp=N,106nm,0.2s							
BEBN	**Eben Emael**	**0.38**	**208**	P		**Pb**	**17 04 03.3**	**+0.7**
BEBN				S		**Sb**	**17 04 08.6**	**+0.5**
	comp=N,106nm,0.2s							
OPLO	**Oploo**	**0.47**	**348**	*e*Pg		**Pb**	**17 04 04.4**	**+0.4**
	comp=N,20nm,0.3s,baz=162							
OPLO				*e*Sg		**Sb**	**17 04 11.6**	**+1.1**
OPLO	**Oploo**	**0.47**	**348**	*e*Pg		**Pb**	**17 04 04.4**	**+0.4**
	comp=N,20nm,0.3s							
OPLO				Sg		**Sb**	**17 04 10.9**	**+0.4**
DREG	**Dreilaegerbach**	**0.50**	**160**	*e*Pg		**Pn**	**17 04 05.5**	**-1.0**
DREG				*e*Sg		**Sb**	**17 04 12.7**	**+1.3**
	comp=N,133nm,0.3s							
DREG	**Dreilaegerbach**	**0.50**	**160**	Pg		**Pn**	**17 04 05.5**	**-1.0**
DREG				Sg		**Sb**	**17 04 12.7**	**+1.3**
	comp=N,133nm,0.3s							
MEM	**Membach**	**0.53**	**177**	⇑P		**Pb**	**17 04 05.8**	**+0.9**
MEM				S		**Sb**	**17 04 13.0**	**+1.0**
	comp=E,45nm,0.2s							
MEM	**Membach**	**0.53**	**177**	*e*Pg		**Pb**	**17 04 05.8**	**+0.9**
MEM				*e*Sg		**Sb**	**17 04 13.1**	**+1.0**
MEM	**Membach**	**0.53**	**177**	Pg		**Pb**	**17 04 05.8**	**+0.9**
MEM				Sg		**Sb**	**17 04 13.1**	**+1.0**
KLL	**Kalltalsperre**	**0.53**	**156**	*e*Pg		**Pn**	**17 04 06.0**	**-1.0**
KLL	**Kalltalsperre**	**0.53**	**156**	Pg		**Pn**	**17 04 06.0**	**-1.0**

BMOL	**Mol**	**0.56**	**279**	P		**Pg**	**17 04 06.3**	**+0.8**
BMOL				S		**Sg**	**17 04 13.9**	**+0.8**
LAUG	**Laupendahl**	**0.65**	**70**	*e*Pg		**Pg**	**17 04 07.4**	**+0.1**
LAUG				*e*Sg		**Sg**	**17 04 15.8**	**-0.2**
	comp=E,110nm,0.3s							
LAUG	**Laupendahl**	**0.65**	**70**	Pg		**Pg**	**17 04 07.4**	**+0.1**
LAUG				Sg		**Sg**	**17 04 15.8**	**-0.2**
	comp=E,110nm,0.3s							
STB	**Steinbach**	**0.77**	**134**	*e*Pg		**Pn**	**17 04 10.8**	**+0.6**
STB				*e*Sg		**Sn**	**17 04 20.4**	**-0.9**
	comp=E,77nm,0.1s							
STB	**Steinbach**	**0.77**	**134**	Pg		**Pn**	**17 04 10.8**	**+0.6**
STB				Sg		**Sn**	**17 04 20.4**	**-0.9**
	comp=E,77nm,0.1s							
BNS	**Bensberg**	**0.78**	**102**	⇑*i*Pg		**Pn**	**17 04 10.7**	**+0.3**
BNS				*e*Sg		**Sn**	**17 04 20.5**	**-1.0**
	comp=E,181nm,0.5s							
BNS	**Bensberg**	**0.78**	**102**	Pg		**Pn**	**17 04 10.6**	**+0.3**
BNS				Sg		**Sn**	**17 04 20.5**	**-1.0**
	comp=E,181nm,0.5s							
BUG	**Bochum--Univer**	**0.88**	**69**	*e*Pg		**Pn**	**17 04 11.6**	**0.0**
BUG				*e*Sg		**Sg**	**17 04 23.2**	**+0.2**
HOBG	**Hohbusch**	**0.88**	**99**	⇑*e*Pg		**Pn**	**17 04 12.3**	**+0.7**
HOBG				*e*Sg		**Sn**	**17 04 23.4**	**-0.5**
	comp=E,148nm,0.6s							
HOBG	**Hohbusch**	**0.88**	**99**	Pg		**Pn**	**17 04 12.3**	**+0.7**
HOBG				Sg		**Sn**	**17 04 23.4**	**-0.5**
	comp=E,148nm,0.6s							
BGES	**Gesves**	**0.93**	**217**	P		**Pg**	**17 04 13.2**	**+0.7**
BGES				S		**Sn**	**17 04 25.3**	**0.0**
HILG	**Hillesheim**	**0.96**	**151**	*e*Pg		**Pg**	**17 04 13.8**	**+0.8**
HILG				*e*Sg		**Sn**	**17 04 26.6**	**+0.7**
	comp=E,70nm,0.5s							
HILG	**Hillesheim**	**0.96**	**151**	Pg		**Pg**	**17 04 13.8**	**+0.8**
HILG				Sg		**Sn**	**17 04 26.6**	**+0.7**
	comp=E,70nm,0.5s							
WTSB	**Winterswijk**	**0.98**	**32**	*e*Pg		**Pn**	**17 04 13.2**	**+0.1**
WTSB				*e*Sg		**Sg**	**17 04 26.1**	**-0.3**
WTSB	**Winterswijk**	**0.98**	**32**	*e*Pg		**Pg**	**17 04 13.5**	**0.0**
	comp=E,14nm,0.2s,baz=210							
WTSB				*e*Sg		**Sn**	**17 04 26.7**	**+0.2**
WTSB	**Winterswijk**	**0.98**	**32**	Pg		**Pn**	**17 04 13.2**	**+0.1**
WTSB				Sg		**Sg**	**17 04 26.1**	**-0.3**
LKLB	**Kalborn**	**1.04**	**175**	P		**Pg**	**17 04 15.2**	**+0.7**
LKLB				S		**Sg**	**17 04 28.2**	**0.0**
	comp=E,43nm,0.2s							
UCC	**Uccle**	**1.07**	**252**	P		Pb	17 04 08.2	-6.0
BRQR	**Ronqui˜ıre**	**1.22**	**245**	P		**Pb**	**17 04 17.5**	**+0.7**
GIVF	**Givet**	**1.26**	**216**	*e*Pn		**Pb**	**17 04 18.3**	**+0.8**
GIVF	**Givet**	**1.26**	**216**	*e*Pg		**Pg**	**17 04 19.8**	**+1.1**
GIVF				*e*Sg		**Sg**	**17 04 35.5**	**+0.2**
	comp=E,48nm,0.2s							
GIVF	**Givet**	**1.26**	**216**	*e*Pn		**Pb**	**17 04 18.3**	**+0.8**
GIVF	**Givet**	**1.26**	**216**	*e*Pg		**Pg**	**17 04 19.8**	**+1.1**
GIVF				*e*Sg		**Sg**	**17 04 35.5**	**+0.2**
	comp=E,24nm,0.2s							
BGG	**Burgeitz**	**1.27**	**136**	*e*Pg		**Pb**	**17 04 17.8**	**+0.1**
BGG				*e*Sg		**Sg**	**17 04 35.7**	**+0.1**
	comp=E,55nm,0.1s							
BGG	**Burgeitz**	**1.27**	**136**	Pg		**Pb**	**17 04 17.8**	**+0.1**
BGG				Sg		**Sg**	**17 04 35.7**	**+0.1**
	comp=E,55nm,0.1s							
BSKQ	**Steenkerk**	**1.29**	**249**	P		**Pb**	**17 04 18.2**	**+0.3**
BSKQ				S		**Sn**	**17 04 34.5**	**+0.5**
	comp=E,26nm,0.2s							
KOE	**Koeppel**	**1.33**	**122**	*e*Pg		**Pb**	**17 04 18.2**	**-0.4**
KOE	**Koeppel**	**1.33**	**122**	Pg		**Pb**	**17 04 18.2**	**-0.4**
DOU	**Dourbes**	**1.36**	**221**	⇓P		**Pb**	**17 04 19.6**	**+0.4**
DOU				S		**Sg**	**17 04 37.6**	**-0.6**
	comp=N,14nm,0.2s							
DOU	**Dourbes**	**1.36**	**221**	P		**Pb**	**17 04 19.5**	**+0.4**
DOU				S		**Sg**	**17 04 37.6**	**-0.6**
	comp=N,14nm,0.2s							
WLF	**Walferdange**	**1.48**	**175**	⇓P		**Pg**	**17 04 22.6**	**-0.2**
WLF				S		**Sg**	**17 04 41.3**	**-0.7**
	comp=E,20nm,0.2s							
WLF	**Walferdange**	**1.48**	**175**	*e*Pg		**Pg**	**17 04 22.8**	**0.0**
WLF				*e*Sg		**Sg**	**17 04 42.0**	**0.0**
WLF	**Walferdange**	**1.48**	**175**	P		**Pg**	**17 04 22.5**	**-0.2**
WLF	**Walferdange**	**1.48**	**175**	Pg		**Pg**	**17 04 22.8**	**0.0**
WLF				S		**Sg**	**17 04 41.3**	**-0.7**
	comp=E,20nm,0.2s							
WLF				Sg		**Sg**	**17 04 42.0**	**0.0**
BBOU	**Bougnies**	**1.48**	**241**	P		**Pb**	**17 04 22.1**	**+0.8**
BAIF	**Baives**	**1.55**	**227**	*e*Pn		**Pb**	**17 04 22.0**	**-0.4**
BAIF	**Baives**	**1.55**	**227**	*e*Pg		**Pg**	**17 04 24.2**	**0.0**
BAIF				*e*Sn		**Sn**	**17 04 41.3**	**+0.8**
	comp=E,21nm,0.3s							
BAIF	**Baives**	**1.55**	**227**	*e*Pn		**Pb**	**17 04 22.0**	**-0.4**
BAIF	**Baives**	**1.55**	**227**	*e*P		**Pg**	**17 04 24.2**	**0.0**
BAIF				*e*Sn		**Sn**	**17 04 41.3**	**+0.8**
	comp=E,10nm,0.3s							
RUP	**Ruppelstein**	**1.59**	**154**	Sg		**Sg**	**17 04 44.6**	**-1.2**
IBBN	**Ibbenburen**	**1.62**	**43**	*e*Pg		**Pg**	**17 04 25.1**	**-0.4**
IBBN				*e*Sg		**Sg**	**17 04 45.7**	**-0.9**
IBBN	**Ibbenburen**	**1.62**	**43**	Pg		**Pg**	**17 04 25.1**	**-0.4**
IBBN				Sg		**Sg**	**17 04 45.7**	**-0.9**
TNS	**Taunus Mts**	**1.82**	**119**	*e*Pn		**Pb**	**17 04 26.4**	**-0.7**
TNS				*e*Pg		**Pg**	**17 04 30.2**	**+0.8**
TNS				*e*Sg		**Sg**	**17 04 52.0**	**-1.1**
TNS	**Taunus Mts**	**1.82**	**119**	Pn		**Pb**	**17 04 26.4**	**-0.7**
GTTG	**Gvttingen**	**2.54**	**79**	*e*Pn		**Pn**	**17 04 36.4**	**+1.9**
GTTG				*e*Sg		**Sg**	**17 05 14.1**	**-1.9**
GTTG	**Gvttingen**	**2.54**	**79**	Pn		**Pn**	**17 04 36.4**	**+1.9**
GTTG				Sg		**Sg**	**17 05 14.1**	**-1.9**
PAGF	**Fort de Pagny**	**2.59**	**184**	*e*Pn		**Pn**	**17 04 36.7**	**+1.6**
	baz=0.0							
PAGF				*e*Sn		**Sn**	**17 05 07.2**	**+1.2**
	comp=E,4.0nm,0.4s							
PAGF	**Fort de Pagny**	**2.59**	**184**	*e*Pn		**Pn**	**17 04 36.7**	**+1.6**
PAGF				*e*Sn		**Sn**	**17 05 07.2**	**+1.2**
	comp=E,2.0nm,0.4s							
MEZF	**Maizieres J'vi**	**2.70**	**193**	*e*Pn		**Pn**	**17 04 38.1**	**+1.4**
	baz=20							
MEZF				*e*Sg		**Sg**	**17 05 20.8**	**-0.3**
	comp=E,18nm,0.4s							
MEZF	**Maizieres J'vi**	**2.70**	**193**	*e*Pn		**Pn**	**17 04 38.1**	**+1.4**
	baz=20							
MEZF				*e*Sg		**Sg**	**17 05 20.8**	**-0.3**
	comp=E,8.8nm,0.4s							
CLZ	**Clausthal**	**2.84**	**74**	*e*Sg		**Sg**	**17 05 23.0**	**-2.8**
CDF	**Champ du Feu**	**2.85**	**162**	*e*Pn		**Pn**	**17 04 40.6**	**+1.7**
CDF				*e*Sn		**Sn**	**17 05 13.6**	**+0.8**
	comp=E,3.1nm,0.2s							
CDF	**Champ du Feu**	**2.85**	**162**	*e*Pn		**Pn**	**17 04 40.6**	**+1.7**
CDF				*e*Sn		**Sn**	**17 05 13.6**	**+0.8**
	comp=E,1.5nm,0.2s							
THEF	**They Montfort**	**2.91**	**180**	Pg		**Pg**	**17 04 49.9**	**-0.2**
THEF	**They Montfort**	**2.91**	**180**	Pg		**Pg**	**17 04 49.9**	**-0.2**
SFTF	**Sexfontaines**	**2.99**	**192**	*e*Pn		**Pn**	**17 04 42.1**	**+1.4**
SFTF				*e*Sg		**Sg**	**17 05 29.9**	**-0.6**
	comp=E,14nm,0.2s							
SFTF	**Sexfontaines**	**2.99**	**192**	*e*Pn		**Pn**	**17 04 42.1**	**+1.4**
SFTF				*e*Sg		**Sg**	**17 05 29.9**	**-0.6**
	comp=E,7.1nm,0.2s							
ECH	**Echery**	**3.02**	**165**	Pg		**Pg**	**17 04 52.5**	**+0.3**
ECH				Sg		**Sg**	**17 05 28.8**	**-2.6**
ECH	**Echery**	**3.02**	**165**	Pg		**Pg**	**17 04 52.5**	**+0.3**
ECH				Sg		**Sg**	**17 05 28.8**	**-2.6**
ASSE	**Asse, Remlinge**	**3.10**	**69**	*e*Sg		**Sg**	**17 05 31.9**	**-1.9**
ASSE	**Asse, Remlinge**	**3.10**	**69**	Sg		**Sg**	**17 05 31.9**	**-1.9**
HAU	**Haudompre**	**3.14**	**175**	*e*Pn		**Pn**	**17 04 44.2**	**+1.4**
HAU				*e*Sn		**Sn**	**17 05 20.7**	**+0.9**
	comp=E,9.0nm,0.3s							
HAU	**Haudompre**	**3.14**	**175**	*e*Pn		**Pn**	**17 04 44.2**	**+1.4**
HAU				*e*Sn		**Sn**	**17 05 20.7**	**+0.9**
	comp=E,4.5nm,0.3s							
HINF	**Hinteralfeld**	**3.37**	**170**	*e*Pn		**Pn**	**17 04 47.5**	**+1.5**
HINF				*e*Sn		**Sn**	**17 05 26.1**	**+0.7**
	comp=E,3.4nm,0.2s							
HINF	**Hinteralfeld**	**3.37**	**170**	*e*Pn		**Pn**	**17 04 47.5**	**+1.5**
LOR	**Lormes**	**4.11**	**200**	*e*Pn		**Pn**	**17 04 57.1**	**+1.0**
	baz=18							
LOR				*e*Sn		**Sn**	**17 05 43.0**	**-0.6**
LOR				*e*Sg		**Sg**	**17 06 04.6**	**-1.6**
	comp=E,9.9nm,0.3s							
LOR	**Lormes**	**4.11**	**200**	*e*Pn		**Pn**	**17 04 57.1**	**+1.0**
	baz=18							
LOR				*e*Sn		**Sn**	**17 05 43.0**	**-0.6**
LOR				*e*Sg		**Sg**	**17 06 04.6**	**-1.6**
	comp=E,4.9nm,0.3s							
SSF	**Saint Saulge**	**4.38**	**203**	*e*Pn		**Pn**	**17 05 00.4**	**+0.5**
SSF				*e*Sn		**Sn**	**17 05 49.6**	**-0.8**
SSF				*e*Sg		**Sg**	**17 06 13.1**	**-1.9**
	comp=E,2.9nm,0.4s							
CABF	**La Chapelle**	**4.53**	**179**	*e*Pn		**Pn**	**17 05 02.8**	**+0.9**
CABF				*e*Sg		**Sg**	**17 06 18.0**	**-1.6**
	comp=E,6.3nm,0.6s							
CABF	**La Chapelle**	**4.53**	**179**	*e*Pn		**Pn**	**17 05 02.8**	**+0.9**
CABF				*e*Sg		**Sg**	**17 06 18.0**	**-1.6**
	comp=E,3.2nm,0.6s							
AVF	**Avril sur Loir**	**4.67**	**203**	*e*Pn		**Pn**	**17 05 04.4**	**+0.6**
AVF				*e*Sg		**Sg**	**17 06 22.3**	**-2.0**
	comp=E,2.0nm,0.3s							
AVF	**Avril sur Loir**	**4.67**	**203**	*e*Pn		**Pn**	**17 05 04.4**	**+0.6**
AVF				*e*Sg		**Sg**	**17 06 22.3**	**-2.0**
	comp=E,1.0nm,0.3s							
LDF	**La Druitiere**	**4.69**	**240**	*e*Pn		**Pn**	**17 05 04.6**	**+0.6**
LDF				*e*Sn		**Sn**	**17 05 56.1**	**-1.7**
LDF				*e*Sg		**Sg**	**17 06 21.8**	**-2.9**
	comp=E,2.3nm,0.3s							
LDF	**La Druitiere**	**4.69**	**240**	*e*Pn		**Pn**	**17 05 04.6**	**+0.6**
LDF				*e*Sn		**Sn**	**17 05 56.1**	**-1.7**
LDF				*e*Sg		**Sg**	**17 06 21.8**	**-2.9**
	comp=E,1.1nm,0.3s							
SMF	**Signal de Mont**	**4.71**	**198**	*e*Pn		**Pn**	**17 05 04.9**	**+0.6**
SMF				*e*Sg		**Sg**	**17 06 23.4**	**-1.9**
	comp=E,3.9nm,0.3s							
SMF	**Signal de Mont**	**4.71**	**198**	*e*Pn		**Pn**	**17 05 04.9**	**+0.6**
SMF				*e*Sg		**Sg**	**17 06 23.4**	**-1.9**
	comp=E,2.0nm,0.3s							
FLN	**La Foliniere**	**4.79**	**243**	*e*Pn		**Pn**	**17 05 06.1**	**+0.7**
	baz=63							
FLN				*e*Sn		**Sn**	**17 05 58.8**	**-1.6**
FLN				*e*Sg		**Sg**	**17 06 24.3**	**-3.7**
	comp=E,4.4nm,0.4s							
BGF	**Bois d'Agland**	**5.02**	**205**	*e*Pn		**Pn**	**17 05 09.4**	**+0.8**
BGF				*e*Sg		**Sg**	**17 06 33.1**	**-2.3**
	comp=E,10nm,0.4s							
BGF	**Bois d'Agland**	**5.02**	**205**	*e*Pn		**Pn**	**17 05 09.4**	**+0.8**
BGF				*e*Sg		**Sg**	**17 06 33.1**	**-2.3**
	comp=E,5.2nm,0.4s							
GRR	**Gorron**	**5.21**	**241**	*e*Pn		**Pn**	**17 05 11.5**	**+0.4**
GRR				*e*Sn		**Sn**	**17 06 08.7**	**-1.9**
	comp=E,8.5nm,0.3s							
GRR	**Gorron**	**5.21**	**241**	*e*Pn		**Pn**	**17 05 11.5**	**+0.4**
GRR				*e*Sn		**Sn**	**17 06 08.7**	**-1.9**
	comp=E,4.2nm,0.3s							
TCF	**Toulx Ste Croi**	**5.45**	**209**	*e*Pn		**Pn**	**17 05 15.5**	**+1.0**
TCF	**Toulx Ste Croi**	**5.45**	**209**	*e*Pg		**Pg**	**17 05 36.4**	**-2.2**
TCF				*e*Sg		**Sg**	**17 06 46.3**	**-2.8**
	comp=E,3.6nm,0.5s							
TCF	**Toulx Ste Croi**	**5.45**	**209**	*e*Pn		**Pn**	**17 05 15.5**	**+1.0**
LPL	**La Plagne**	**5.64**	**175**	*e*Pn		**Pn**	**17 05 18.4**	**+1.0**
LPL				*e*Sn		**Sn**	**17 06 20.3**	**-1.4**
	comp=E,2.4nm,0.6s							
LPL	**La Plagne**	**5.64**	**175**	*e*Pn		**Pn**	**17 05 18.4**	**+1.0**
LPG	**La Plagne**	**5.66**	**174**	*e*Pn		**Pn**	**17 05 19.0**	**+1.3**
LPG				*e*Sn		**Sn**	**17 06 21.0**	**-1.3**
	comp=E,1.8nm,0.5s							
LPG	**La Plag

mb1 3.8/2, mb1mx3.6/16, mbtmp3.4/2, MS3.7/5, Ms1 3.7/5, ms1mx3.5/12, Error ellipse: s-maj=669.9km s-min=69.1km az=111.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**32.91**	**81**	LR	LR	18 13 01.2	
	comp=Z,65nm,20.9s,baz=98,slow=29						
LPAZ	**La Paz**	**41.46**	**98**	LR	LR	18 17 55.6	
	comp=Z,48nm,19.8s,baz=220,slow=30						
PLCA	**Paso Flores**	**43.99**	**135**	LR	LR	18 19 16.2	
	comp=Z,151nm,18.0s,baz=351,slow=30						
CPUP	**Villa Florida**	**51.51**	**112**	LR	LR	18 23 32.5	
	comp=Z,61nm,18.1s,baz=218,slow=31						
PDAR	**Pinedale Array**	**56.84**	**1**	P	P	18 06 49.0	-0.5
	0.6nm,0.9s,baz=179,slow=9.0,SNR=3.1						
PMSA	**Palmer Station**	**59.66**	**159**	LR	LR	18 24 32.1	
	comp=Z,195nm,20.5s,baz=24,slow=28						
YKA	**Yellowknife Ar**	**76.63**	**358**	P	P	18 08 55.6	+0.6
	0.4nm,0.8s,baz=175,slow=5.4,SNR=6.8						
MKAR	**Makanchi Array**	**145.75**	**344**	PKPbc	PKPdf	18 16 42.0	-1.6
	0.3nm,0.9s,baz=33,slow=2.8,SNR=3.4						
CMAR	**Chiang Mai Arr**	**150.89**	**282**	PKPbc	PKPbc	18 16 58.5	+0.1
	0.2nm,0.4s,baz=37,slow=2.3,SNR=3.2						

*CSEM **23** 18:01:28.8, 39.58N×38.68E, h13km, MD2.9, After ISK*
ISK 23 18:01:28.8, 39.58N×38.68E, h13km, MD2.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILIC	**ilic-Erzincan**	**0.15**	**214**	PG	Pg	18 01 32.6	-0.1
ILIC				eSG	Sg	18 01 36.0	+0.7
ILIC	**ilic-Erzincan**	**0.15**	**214**	*i* Pg	Pg	18 01 32.6	-0.1
ILIC				eSg	Sg	18 01 36.0	+0.6
EZC	**Erzincan**	**0.55**	**71**	*e*Pg	Pn	18 01 44.4	+1.8
EZC				eSg	Sn	18 01 56.9	+5.1
ERZN	**Erzincan**	**0.81**	**89**	*e*PG	Pg	18 01 44.4	-0.3
ERZN				eSG	Sb	18 01 56.9	+1.1
PTK	**Pertek**	**0.88**	**141**	*e*PG	Pg	18 01 46.0	-0.2
PTK				eSG	Sn	18 01 59.2	-0.8
PTK	**Pertek**	**0.88**	**141**	*e*Pg	Pg	18 01 46.0	-0.2
PTK				eSg	Sn	18 01 59.2	-0.9
DARE	**Darende-Malaty**	**0.92**	**228**	*e*PN	Pn	18 01 54.8	+7.1
DARE	**Darende-Malaty**	**0.92**	**228**	*e*Pn	Pn	18 01 54.8	+7.2
MALT	**Malatya**	**1.28**	**189**	*e*PN	Pn	18 01 52.3	-0.2
MALT	**Malatya**	**1.28**	**189**	*e*Pn	Pn	18 01 52.3	-0.2
SVRC	**Sivrice-ELAZID**	**1.29**	**158**	*e*PN	Pb	18 01 53.2	-0.1
SVRC	**Sivrice-ELAZID**	**1.29**	**158**	*e*Pn	Pb	18 01 53.2	-0.1
RSDY	**Resadiye-TOKAT**	**1.32**	**309**	*e*PN	Pg	18 01 54.0	-0.2
RSDY	**Resadiye-TOKAT**	**1.32**	**309**	*e*Pn	Pg	18 01 54.1	-0.2
ESPY	**Espiye-Giresun**	**1.34**	**2**	*e*PN	Pg	18 01 54.2	-0.4
ESPY	**Espiye-Giresun**	**1.34**	**2**	*e*Pn	Pb	18 01 54.2	+0.4
BAYT	**Ayd¨–ntepe-Bay**	**1.39**	**54**	*e*PN	Pn	18 01 54.2	+0.1
BAYT	**Ayd¨–ntepe-Bay**	**1.39**	**54**	*e*Pn	Pn	18 01 54.2	+0.1

MEX 23 18:10:13.7±0.9, 14.50N×93.59W, h24km±47km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.35**	**72**	*i* P	Pn	18 10 34.4	-2.6
THIG				*i* S	Sn	18 10 50.0	-4.2
CCIG	**Comitan**	**2.26**	**38**	*e*P	Pn	18 10 48.4	-1.5
CCIG				*i* S	Sn	18 11 13.8	-3.5
TGIG		**2.31**	**11**	*i* P	Pn	18 10 48.8	-1.6
TGIG				*i* S	Sn	18 11 14.5	-3.8
HUIG	**Huatulco**	**2.74**	**298**	*i* P	Pn	18 10 53.6	-2.7
HUIG				*i* S	Sn	18 11 25.7	-2.9
CMIG	**Matias Romero**	**2.86**	**334**	*i* P	Pn	18 10 55.5	-2.5
CMIG				*i* S	Sn	18 11 29.2	-2.6
VHO	**Vista Hermosa**	**3.96**	**311**	*i* P	Pn	18 11 10.7	-2.6
VHO				*i* S	Sn	18 11 56.2	-3.1
PNIG	**Pinotepa**	**4.76**	**294**	*i* P	Pn	18 11 22.2	-1.9
PNIG				*i* S	Sn	18 12 16.1	-2.6
UTMO	**Huajuapan**	**5.23**	**310**	*i* P	Pn	18 11 29.9	-0.9
UTMO				*i* S	Sn	18 12 28.0	-2.6

IDC 23 18:15:23.6±6.7, 6.27S×154.68E, h59km±53km, mb3.3/6, mb1 3.6/7, mb1mx3.4/20, mbtmp3.5/7, ML3.6/1, Error ellipse: s-maj=44.4km s-min=25.8km az=97.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.09**	**121**	P	Pn	18 16 58.2	+7.0
	3.5nm,0.3s,baz=263,slow=8.1,SNR=4.2						
HNR				S	Sn	18 18 15.6	+16
	3.5nm,0.3s,baz=88,slow=22,SNR=8.4						
PMG	**Port Moresby**	**8.07**	**247**	P	Pn	18 17 18.2	0.0
	4.8nm,0.3s,baz=42,slow=11,SNR=25						
PMG				S	Sn	18 18 48.6	+0.5
	0.8nm,0.3s,baz=166,slow=19,SNR=1.5						
DZM	**Mont Dzumac**	**19.39**	**145**	P	Pn	18 19 49.2	+2.5
	0.1nm,0.3s,baz=324,slow=17,SNR=2.3						
WRA	**Warramunga Arr**	**23.98**	**234**	P	P	18 20 33.1	+0.3
	0.4nm,0.5s,baz=57,slow=9.7,SNR=11						
WRA				PcP	PcP	18 24 13.6	-0.3
	0.1nm,0.4s,baz=56,slow=2.8,SNR=4.3						
ASAR	**Alice Springs**	**26.42**	**227**	P	P	18 20 54.7	-0.4
	0.2nm,0.4s,baz=57,slow=9.1,SNR=7.0						
ASAR				pP	pP	18 21 07.8	-1.8
	0.6nm,0.5s,baz=58,slow=8.7,SNR=8.8						
ASAR				PcP	PcP	18 24 19.0	-0.4
	0.5nm,0.5s,baz=60,slow=2.3,SNR=9.8						
CMAR	**Chiang Mai Arr**	**60.19**	**295**	P	P	18 25 25.8	-0.1
	0.4nm,0.7s,baz=106,slow=4.0,SNR=3.8						
SONM	**Songino Array**	**68.56**	**327**	P	P	18 26 21.3	+1.0
	0.4nm,0.5s,baz=143,slow=5.8,SNR=7.5						
ILAR	**Eielson Array**	**82.82**	**22**	P	P	18 27 40.6	-0.7
	0.4nm,0.7s,baz=252,slow=5.9,SNR=5.2						
QSPA	**South Pole Qui**	**83.70**	**180**	P	P	18 27 46.7	+0.7
	2.2nm,0.8s,baz=344,slow=3.9,SNR=11						
TORD	**Torodi Ar. Bea**	**152.52**	**286**	PKPbc	PKPbc	18 35 12.9	-1.5
	0.6nm,0.8s,baz=26,slow=2.3,SNR=3.5						

*IDC **23** 18:42:11.8±0.9, 35.97N×69.84E, h0km, mb3.8/10, mb1 3.9/15, mb1mx3.7/30, mbtmp3.8/15, ML3.7/5, MS2.9/3, Ms1 3.0/3, ms1mx2.5/44, Error ellipse: s-maj=19.2km s-min=16.3km az=87.0*
*NNC **23** 18:42:19.3±2.4, 36.27N×69.44E, h84km±32km, mb3.8, mpv4.2, Error ellipse: s-maj=17.7km s-min=16.1km az=3.0*
ISC 23 18:42:15.7±0.9, 36.02N±0.06×69.51E±0.10, h50km, n50, σ1.9s94/54, mb3.5/10, 6C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.95**	**137**	P	Pn	18 43 06.0	+5.8
CEP				S	Sn	18 43 46.0	+11
THW	**Thamme Wali**	**3.71**	**149**	P	Pn	18 43 16.1	+5.6
AML	**Almayashu**	**6.92**	**27**	P	**Pn**	**18 43 55.4**	**+0.5**
	SNR=45						
KK31	**Karatay Array**	**7.12**	**6**	P	**Pn**	**18 43 58.2**	**+0.9**
	7.6nm,0.5s,baz=195,slow=14,SNR=139						
KK31				⇓S	**Sn**	**18 45 14.5**	**-2.3**
	2.8nm,0.3s,baz=189,slow=23,SNR=3.9						
EKS2	**Erkin-Say**	**7.42**	**25**	P	**Pn**	**18 44 02.2**	**+0.8**
	SNR=12						
KZA	**Kyzart**	**7.52**	**35**	P	**Pn**	**18 44 04.0**	**+0.8**
	SNR=10.0						
AAK	**Ala-Archa**	**7.66**	**29**	P	**Pn**	**18 44 05.6**	**+0.8**
	SNR=17						
AAK	**Ala-Archa**	**7.66**	**29**	Pn	**Pn**	**18 44 05.7**	**+1.0**
	3.2nm,0.3s,baz=197,slow=7.5,SNR=30						
AAK				Sn	**Sn**	**18 45 29.0**	**-1.2**
	2.9nm,0.3s,baz=331,slow=23,SNR=6.5						
AAK				LR	LR	18 47 19.6	
	comp=Z,44nm,20.1s,baz=324,slow=41						
KBK	**Karagaybulak**	**7.86**	**31**	P	**Pn**	**18 44 08.8**	**+1.2**
	SNR=8.7						
SMLA	**Simla**	**8.04**	**125**	*i* P	Pn	18 44 13.4	+3.5
SMLA				*i* S	**Sn**	**18 45 41.2**	**+1.9**
SMLA				*i* S	**Sn**	**18 45 42.4**	**+3.0**
SMLA				⇓		18 45 43.6	
	comp=E,414nm,0.4s						
SMLA						18 45 43.8	
	comp=N,392nm,0.3s						
CHMS	**Chumysh**	**8.06**	**29**	P	**Pn**	**18 44 10.9**	**+0.7**
	SNR=8.9						
ULHL	**Ulahol**	**8.13**	**38**	P	**Pn**	**18 44 13.1**	**+1.9**
	SNR=8.7						
USP	**Ospenovka**	**8.20**	**26**	P	**Pn**	**18 44 12.7**	**+0.6**
	SNR=11						
TKM2	**Tokmak 2**	**8.35**	**32**	⇑P	**Pn**	**18 44 14.4**	**+0.1**
	comp=N,12nm,0.8s						
TKM2				⇑S	**Sn**	**18 45 46.9**	**-0.4**
	comp=N,6.3nm,0.6s						
TKM2	**Tokmak 2**	**8.35**	**32**	P	**Pn**	**18 44 14.9**	**+0.6**
	SNR=10						
KHET	**Khetri**	**9.55**	**144**	*e*P	**Pn**	**18 44 31.2**	**+0.6**
KHET				*e*S	**Sn**	**18 46 14.0**	**-2.6**
KHET				AML	AML	18 47 22.7	
	comp=E,59nm,0.0s						
KHET				AML	AML	18 47 23.6	
	comp=N,78nm,0.2s						
KUDL	**Kundal**	**9.83**	**141**	*e*P	**Pn**	**18 44 35.5**	**+1.1**
KUDL				*e*S	**Sn**	**18 46 20.1**	**-3.2**
KUDL				AML	AML	18 46 25.1	
	comp=N,7.3nm,0.3s						
KUDL				AML	AML	18 46 25.3	
	comp=E,9.6nm,0.3s						
AYAN	**Aya Nagar**	**9.90**	**137**	*e*P	**Pn**	**18 44 35.6**	**+0.3**
AYAN				*e*S	**Sn**	**18 46 21.4**	**-3.6**
SONA	**Sohna**	**10.06**	**138**	*e*P	**Pn**	**18 44 39.2**	**+1.7**
SONA				*e*S	**Sn**	**18 46 26.6**	**-2.3**
SONA				AML	AML	18 46 34.8	
	comp=E,20nm,0.3s						
SONA				AML	AML	18 46 35.8	
	comp=N,11nm,0.0s						
AGRA	**Agra**	**11.33**	**138**	*e*S	**Sn**	**18 46 56.8**	**-3.2**
AGRA				AML	AML	18 48 30.1	
	comp=N,44nm,0.6s						
AGRA				AML	AML	18 48 30.2	
	comp=E,48nm,0.3s						
PYUN	**Piuthan**	**13.88**	**121**	*e*P	**Pn**	**18 45 27.5**	**-2.5**
	comp=E,22nm,0.6s						
PYUN				*e*S	**Sn**	**18 47 58.2**	**-4.5**
DANN	**Dangsing**	**14.28**	**118**	*e*P	**Pn**	**18 45 34.3**	**-1.1**
	comp=E,9.2nm,0.4s						
MK31	**Makanchi Array**	**14.40**	**38**	⇑P	**Pn**	**18 45 36.5**	**-0.1**
	comp=E,1.4nm,0.6s,baz=216,slow=9.9,SNR=11						
MKAR	**Makanchi Array**	**14.40**	**38**	Pn	**Pn**	**18 45 34.8**	**-1.9**
	comp=E,0.1nm,0.3s,baz=219,slow=15,SNR=6.1						
KOLN	**Koldanda**	**14.51**	**121**	*e*P	**Pn**	**18 45 36.2**	**-2.2**
	comp=E,9.3nm,0.3s						
AB31	**Akbulak array**	**14.97**	**335**	⇑P	**Pn**	**18 45 42.2**	**-1.8**
	comp=E,1.8nm,0.5s,baz=256,slow=2.9,SNR=48						
AB31				S	**Sn**	**18 48 25.4**	**-3.2**
	comp=E,0.9nm,0.5s,baz=156,slow=23,SNR=3.4						
KKN	**Kakani**	**15.69**	**117**	*e*P	**Pn**	**18 45 51.6**	**-2.1**
	comp=E,12nm,0.5s						
PKIN	**Phulchoki**	**15.90**	**117**	*e*P	**Pn**	**18 45 54.8**	**-1.7**
	comp=E,12nm,0.4s						
PKIN				*e*S	**Sn**	**18 48 48.5**	**-3.3**
PKI	**Pulchoki**	**15.91**	**117**	*e*P	**Pn**	**18 45 54.5**	**-2.2**
	comp=E,7.2nm,0.3s						
KURBB	**Kurchatov Arra**	**15.99**	**21**	Pn	**Pn**	**18 45 53.3**	**-3.8**
	comp=E,0.1nm,0.3s,baz=212,slow=12,SNR=6.1						
GUN	**Gumba**	**16.06**	**116**	*e*P	**Pn**	**18 45 58.1**	**-0.5**
	comp=E,8.4nm,0.3s						
AKTO	**Aktyubinsk**	**16.64**	**334**	Pn	**P**	**18 46 07.0**	**-0.1**
	comp=E,0.3nm,0.3s,baz=132,slow=15,SNR=8.9						
VOSK	**Vostochnaya**	**16.74**	**3**	⇑P	**Pn**	**18 46 05.0**	**-1.6**
	comp=E,3.8nm,0.8s						
ZRNK	**Zerenda**	**16.94**	**359**	⇑P	**Pn**	**18 46 08.6**	**-0.4**
	comp=E,1.7nm,0.6s						
BVAR	**Borovoye Array**	**17.02**	**2**	Pn	**Pn**	**18 46 08.5**	**-1.5**
	comp=E,0.6nm,0.3s,baz=163,slow=12,SNR=11						
BRVK	**Borovoye**	**17.05**	**2**	⇓P	**Pn**	**18 46 09.6**	**-0.8**
	comp=E,13nm,1.1s						
RAMN	**Ramite**	**17.13**	**117**	*e*P	**Pn**	**18 46 10.5**	**-1.4**
	comp=E,10nm,0.4s						
TAPN	**Taplejung**	**17.72**	**114**	*e*P	**P**	**18 46 19.8**	**+0.3**
	comp=E,6.7nm,0.4s						
ODAN	**Odare**	**17.76**	**116**	*e*P	**Pn**	**18 46 18.7**	**-0.9**
	comp=E,10nm,0.5s						
ZALV	**Zalesovo Beam**	**20.87**	**26**	P	**P**	**18 46 54.1**	**+0.8**
	comp=E,7.2nm,0.4s,baz=220,slow=11,SNR=41						
ZALV				LR	LR	18 55 56.5	
	comp=E,25nm,18.4s,baz=70,slow=40						
SONM	**Songino Array**	**29.60**	**55**	P	**P**	**18 48 18.2**	**+2.1**
	comp=E,0.6nm,0.7s,baz=267,slow=8.5,SNR=6.6						
CMAR	**Chiang Mai Arr**	**31.30**	**116**	P	**P**	**18 48 33.0**	**+1.8**
	comp=E,0.3nm,0.6s,baz=300,slow=8.9,SNR=5.0						
FINES	**FINESS Array B**	**37.22**	**327**	P	P	18 49 26.6	+4.6
	comp=E,1.4nm,0.8s,baz=116,slow=13,SNR=2.7						
ARCES	**ARCESS Array B**	**41.14**	**338**	P	P	18 49 58.3	+3.7
	comp=E,2.8nm,0.8s,baz=113,slow=9.3,SNR=6.1						
NOA	**NORSAR Array B**	**44.05**	**323**	P	P	18 50 25.8	+7.5
	comp=E,0.7nm,0.8s,baz=99,slow=8.0,SNR=3.5						
NOA				LR	LR	19 11 18.5	
	comp=E,32nm,18.2s,baz=85,slow=40						
TORD	**Torodi Ar. Bea**	**64.50**	**268**	P	P	18 52 52.0	+4.4
	comp=E,0.5nm,0.5s,baz=47,slow=5.6,SNR=8.2						
ILAR	**Eielson Array**	**75.57**	**15**	P	**P**	**18 53 57.1**	**+2.4**
	comp=E,0.6nm,0.9s,baz=293,slow=4.4,SNR=5.9						
YKA	**Yellowknife Ar**	**81.78**		P	P	18 54 32.7	+3.9
	comp=E,0.2nm,0.6s,baz=350,slow=5.3,SNR=9.2						
WRA	**Warramunga Arr**	**82.77**	**121**	P	**P**	**18 54 36.3**	**+1.6**
	comp=E,0.3nm,0.6s,baz=323,slow=4.7,SNR=7.9						
ASAR	**Alice Springs**	**84.98**	**124**	P	**P**	**18 54 46.7**	**+0.9**
	comp=E,0.7nm,0.9s,baz=312,slow=4.8,SNR=8.6						

*CSEM **23** 19:02:04.7, 42.31N×13.45E, h10km, MD2.3/15, After ROM*
ROM 23 19:02:04.7±0.1, 42.31N×13.45E, h10km±1km, Md2.3/15, Ml1.8/9, Error ellipse: s-maj=1.4km s-min=1.0km az=110.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**319**	Pg	Pg	19 02 07.2	+0.4
AQU				Sg	Sg	19 02 08.4	+0.1
	820nm,0.2s						
AQU	**L'Aquila**	**0.05**	**319**	Pg	Pg	19 02 07.2	+0.4
AQU				Sg	Sg	19 02 08.4	+0.1
	820nm,0.2s						
CAMP	**Campotosto**	**0.22**	**352**	Pg	Pg	19 02 10.1	+0.6
CAMP				Sg	Sg	19 02 13.8	+1.0
	61nm,0.4s						
CAMP	**Campotosto**	**0.22**	**352**	Pg	Pg	19 02 10.1	+0.6
CAMP				Sg	Sg	19 02 13.8	+1.0
	61nm,0.4s						
FIAM	**Fiamignano**	**0.25**	**260**	Pg	Pb	19 02 10.8	-0.7
FIAM				Sg	Sb	19 02 14.9	-1.2
	162nm,0.5s						
FIAM	**Fiamignano**	**0.25**	**260**	Pg	Pb	19 02 10.8	-0.7
FIAM				Sg	Sb	19 02 14.9	-1.2
	162nm,0.5s						
PTQR	**Pietraquaria**	**0.29**	**187**	Pg	Pg	19 02 11.2	+0.5
PTQR				Sg	Sg	19 02 15.8	+1.0
	14nm,0.2s						
PTQR	**Pietraquaria**	**0.29**	**187**	Pg	Pg	19 02 11.2	+0.5
PTQR				Sg	Sg	19 02 15.8	+1.0
	14nm,0.2s						
VCEL	**Villa Celiera**	**0.30**	**74**	Pg	Pb	19 02 11.7	-0.7
VCEL				Sg	Sb	19 02 16.6	-1.0
	155nm,0.3s						
VCEL	**Villa Celiera**	**0.30**	**74**	Pg	Pb	19 02 11.7	-0.7
VCEL				Sg	Sb	19 02 16.6	-1.0
	155nm,0.3s						
TERO	**Teramo**	**0.33**	**20**	Pg	Pg	19 02 11.6	+0.2
TERO				Sg	Sg	19 02 16.8	+1.0
	134nm,0.2s						
TERO	**Teramo**	**0.33**	**20**	Pg	Pg	19 02 11.6	+0.2
TERO				Sg	Sg	19 02 16.8	+1.0
	134nm,0.2s						
LNSS	**Leonessa**	**0.42**	**314**	Pg	Pg	19 02 13.7	+0.6
	82nm,0.6s						
LNSS	**Leonessa**	**0.42**	**314**	Pg	Pg	19 02 13.7	+0.6
	82nm,0.6s						
INTR	**Introdacqua**	**0.45**	**132**	Pg	Pg	19 02 14.1	+0.4
INTR				Sg	Sb	19 02 21.1	-0.8
	82nm,0.4s						
INTR	**Introdacqua**	**0.45**	**132**	Pg	Pg	19 02 14.1	+0.4
INTR				Sg	Sb	19 02 21.1	-0.8
	82nm,0.4s						
VVLD	**Villa Vallelon**	**0.46**	**164**	Pg	Pg	19 02 13.9	0.0
VVLD				Sg	Sg	19 02 20.8	+0.8
	39nm,0.3s						
VVLD	**Villa Vallelon**	**0.46**	**164**	Pg	Pg	19 02 13.9	0.0
VVLD				Sg	Sg	19 02 20.8	+0.8
	39nm,0.3s						
CERT	**Cerreto**	**0.50**	**224**	Pg	Pg	19 02 14.9	+0.3
CERT	**Cerreto**	**0.50**	**224**	Pg	Pg	19 02 14.9	+0.3
NRCA	**Norcia**	**0.57**	**335**	Pg	Pg	19 02 16.3	+0.3
NRCA				Sg	Sb	19 02 25.3	-0.1
	9.0nm,0.1s						
NRCA	**Norcia**	**0.57**	**335**	Pg	Pg	19 02 16.3	+0.3
NRCA				Sg	Sb	19 02 25.3	-0.1
	9.0nm,0.1s						
LPEL	**Lama dei Pelig**	**0.61**	**116**	Pg	Pg	19 02 16.5	-0.1
LPEL				Sg	Sb	19 02 26.0	-0.3
	40nm,0.3s						
LPEL	**Lama dei Pelig**	**0.61**	**116**	Pg	Pg	19 02 16.5	-0.1
LPEL				Sg	Sb	19 02 26.0	-0.3
	40nm,0.3s						
POFI	**Posta Fibreno**	**0.63**	**162**	Pg	Pg	19 02 17.4	+0.4
POFI	**Posta Fibreno**	**0.63**	**162**	Pg	Pg	19 02 17.4	+0.4
SDI	**San Donato**	**0.66**	**156**	Pg	Pb	19 02 18.5	0.0
	18nm,0.2s						
SDI	**San Donato**	**0.66**	**156**	Pg	Pb	19 02 18.5	0.0
	18nm,0.2s						
GIUL	**Giuliano Di Ro**	**0.77**	**191**	Pg	Pb	19 02 20.7	+0.4
	18nm,0.8s						
GIUL	**Giuliano Di Ro**	**0.77**	**191**	Pg	Pb	19 02 20.7	+0.4
	18nm,0.8s						

*ISCJB **23** 19:03:22.2±0.3, 43.44N±0.02×19.72E±0.02, h9km±4km, Error ellipse: s-maj=2.9km s-min=2.3km az=34.6*
*CSEM **23** 19:03:22.8±0.1, 43.44N×19.71E, h2km, ML2.4/8, Error ellipse: s-maj=3.1km s-min=2.3km az=118.0*
*PDG **23** 19:03:23.2±0.3, 43.43N×19.67E, h11km, MD2.6/1, ML2.4/8, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
*BEO **23** 19:03:24.1±0.3, 43.43N×19.71E, h4km±3km, ML2.8/1*
ISC 23 19:03:23.1±1.0, 43.44N±0.02×19.70E±0.02, h7km±8km, n56, σ0.992/100, 26C-8D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLE	**Pljevlja**	**0.25**	**244**	⇓*i* Pg	**Pg**	**19 03 27.2**	**-0.9**
PLE				eSg	**Sg**	**19 03 31.4**	**-0.1**
PLE	**Pljevlja**	**0.25**	**244**	⇓*i* Pg	**Pg**	**19 03 27.2**	**-0.9**
PLE				eSg	**Sg**	**19 03 31.4**	**-0.1**
SJES	**Sjenica**	**0.27**	**132**	*e*Pg	**Pg**	**19 03 28.0**	**-0.4**
SJES				eSg	**Sg**	**19 03 33.0**	**+1.0**
IVAS	**Ivanjica**	**0.36**	**67**	*e*Pg	**Pg**	**19 03 30.2**	**+0.1**
IVAS				eSg	**Sg**	**19 03 36.3**	**+1.4**
BBLS	**Lazići**	**0.48**	**334**	⇑*i* Pg	**Pg**	**19 03 32.0**	**-0.4**
BBLS				eSg	**Sb**	**19 03 40.6**	**-0.6**
BBLS	**Lazići**	**0.48**	**334**	⇑*i* Pg	**Pg**	**19 03 32.0**	**-0.4**
BBLS				eSg	**Sb**	**19 03 40.6**	**-0.6**
BEY	**Berane**	**0.58**	**166**	⇑*i* Pg	**Pg**	**19 03 34.1**	**-0.3**
BEY				eSg	**Sg**	**19 03 42.8**	**+0.8**
IVA	**Berane**	**0.58**	**166**	⇑*i* Pg	**Pg**	**19 03 34.1**	**-0.3**
IVA				eSg	**Sg**	**19 03 42.8**	**+0.8**
UPM	**Unac-Piva**	**0.62**	**248**	⇓*i* Pg	**Pg**	**19 03 34.6**	**-0.6**
UPM				eSg	**Sg**	**19 03 43.6**	**+0.2**
UPM	**Unac-Piva**	**0.62**	**248**	⇓*i* Pg	**Pg**	**19 03 34.6**	**-0.6**
UPM				eSg	**Sg**	**19 03 43.6**	**+0.2**
DIVS	**Divibare**	**0.69**	**18**	⇑*i* Pg	**Pg**	**19 03 36.2**	**-0.3**
DIVS				eSg	**Sg**	**19 03 46.3**	**+0.8**
DIVS	**Divibare**	**0.69**	**18**	⇑*i* Pg	**Pg**	**19 03 36.2**	**-0.3**
DIVS				eSg	**Sg**	**19 03 46.3**	**+0.8**
NKY	**Niksic**	**0.81**	**220**	⇑*i* Pg	**Pg**	**19 03 38.1**	**-0.6**
NKY				eSg	**Sg**	**19 03 49.7**	**+0.4**
NKY	**Niksic**	**0.81**	**220**	⇑*i* Pg	**Pg**	**19 03 38.1**	**-0.6**
NKY				eSg	**Sg**	**19 03 49.7**	**+0.4**
GRUS	**Gruza**	**0.86**	**58**	⇑*i* Pg	**Pg**	**19 03 39.9**	**+0.2**
GRUS				eSg	**Sb**	**19 03 52.1**	**-0.1**
PVY	**Plav**	**0.87**	**167**	⇓*i* Pg	**Pg**	**19 03 39.3**	**-0.5**
PVY				eSg	**Sb**	**19 03 52.1**	**-0.3**
PVY	**Plav**	**0.87**	**167**	⇓*i* Pg	**Pg**	**19 03 39.3**	**-0.5**
PVY				eSg	**Sb**	**19 03 52.1**	**-0.3**
BRY	**Bratogost**	**1.00**	**238**	⇑*i* Pg	**Pg**	**19 03 41.2**	**-1.2**
BRY				eSg	**Sg**	**19 03 56.2**	**+0.8**
BRY	**Bratogost**	**1.00**	**238**	⇑*i* Pg	**Pg**	**19 03 41.2**	**-1.2**
BRY				eSg	**Sg**	**19 03 56.2**	**+0.8**
PDG	**Podgorica**	**1.06**	**198**	⇑*i* Pg	**Pg**	**19 03 42.9**	**-0.5**
PDG				eSg	**Sb**	**19 03 58.0**	**+0.2**
PDG	**Podgorica**	**1.06**	**198**	⇑*i* Pg	**Pg**	**19 03 42.9**	**-0.5**
PDG				eSg	**Sb**	**19 03 58.0**	**+0.2**
SELS	**Selova**	**1.06**	**101**	⇑*i* Pg	**Pg**	**19 03 43.2**	**-0.2**
SELS				eSg	**Sg**	**19 03 56.9**	**-0.3**
TTG	**Podgorica**	**1.06**	**198**	⇑*i* Pg	**Pg**	**19 03 42.1**	**-1.3**
TTG				eSg	**Sn**	**19 03 58.7**	**-0.6**
TEKS	**Tekeris**	**1.12**	**354**	*e*Pg	**Pg**	**19 03 44.4**	**-0.1**
TEKS				eSg	**Sb**	**19 04 00.1**	**+0.6**
TEKS	**Tekeris**	**1.12**	**354**	*e*Pg	**Pg**	**19 03 44.4**

λ-61.00000°.
IDC ***23*** *19:15:42.7±0.8, 27.06N×129.84E, h0km, mb3.7/13, mb1 3.8/16, mb1mx3.8/28, mbtmp3.7/16, ML3.1/3, Error ellipse: s-maj=30.3km s-min=17.3km az=79.0*
ISCJB ***23*** *19:15:45.0±0.4, 27.11N±0.03×130.01E±0.04, h29km, mb3.6/13, Error ellipse: s-maj=4.8km s-min=3.7km az=31.0*
JMA ***23*** *19:15:44.9±0.1, 27.08N×130.02E, h55km, MS3.9*
ISC 23 19:15:46.8±0.6, 27.13N±0.04×129.99E±0.05, h29km, n39, σ1¶44/54, mb3.7/13, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**1.14**	**306**	P	**Pn**	**19 16 05.4**	**-1.4**
JTK				S	**Sb**	**19 16 20.9**	**-1.4**
JZK	**Kikaishima**	**1.19**	**359**	P	**Pn**	**19 16 06.9**	**-0.5**
JZK				S	**Sb**	**19 16 22.1**	**-1.5**
JAM	**Amami Oshima**	**1.33**	**345**	P	**Pn**	**19 16 08.2**	**-1.2**
JAM				S	**Sn**	**19 16 25.0**	**-1.1**
JAMN	**Amaminishikomi**	**1.33**	**327**	P	**Pn**	**19 16 07.9**	**-1.5**
JAMN				S	**Sn**	**19 16 25.0**	**-1.1**
JOW	**Kunigami**	**1.56**	**260**	P	**Pn**	**19 16 11.5**	**-1.1**
JOW				S	**Sn**	**19 16 30.3**	**-1.6**
JMZ	**Minamidaito 2**	**1.70**	**139**	P	Pn	19 16 11.9	-2.7
JMZ				S	**Sn**	**19 16 31.7**	**-3.7**
JIH	**Iheya**	**1.81**	**268**	P	**Pn**	**19 16 15.2**	**-0.8**
JIH				S	**Sn**	**19 16 37.4**	**-0.6**
JJT2	**Tamagusuku 2**	**2.24**	**244**	P	**Pn**	**19 16 20.7**	**-1.2**
JJT2				S	**Sn**	**19 16 46.8**	**-1.7**
JAGN	**Aguni-jima**	**2.52**	**258**	P	**Pn**	**19 16 24.4**	**-1.3**
JAGN				S	**Sn**	**19 16 53.0**	**-2.4**
JNN	**Nakanoshima**	**2.71**	**358**	P	**Pn**	**19 16 27.3**	**-1.1**
JNN				S	**Sn**	**19 16 58.3**	**-1.9**
JKE	**Kume jima 2**	**2.98**	**255**	P	**Pn**	**19 16 30.6**	**-1.5**
JKE				S	**Sn**	**19 17 04.7**	**-2.1**
JKC	**Kuchinoerabu**	**3.33**	**3**	P	**Pn**	**19 16 36.0**	**-0.9**
JKC				S	**Sn**	**19 17 12.5**	**-3.0**
JTN	**Tanegashima 3**	**3.62**	**14**	P	**Pn**	**19 16 39.8**	**-1.2**
JTN				S	**Sn**	**19 17 21.5**	**-1.2**
JNU	**Nakatsue**	**6.03**	**7**	Pn	**Pn**	**19 17 14.4**	**+0.4**
	1.6nm,0.3s,baz=172,slow=4.6,SNR=48						
JNU				Sn	**Sn**	**19 18 18.4**	**-3.6**
	1.3nm,0.3s,baz=357,slow=18,SNR=6.2						
KSRS	**Korea Array**	**10.45**	**351**	Pn	**Pn**	**19 18 14.9**	**+0.3**
	0.1nm,0.3s,baz=163,slow=13,SNR=4.6						
USRK	**Ussuriysk Arra**	**17.11**	**5**	Pn	**P**	**19 19 46.0**	**+0.7**
	0.1nm,0.3s,baz=187,slow=12,SNR=6.5						
SONM	**Songino Array**	**27.70**	**325**	P	**P**	**19 21 32.3**	**-0.2**
	0.9nm,0.9s,baz=134,slow=7.9,SNR=6.4						
TAPN	**Taplejung**	**37.46**	**280**	*eP*	**P**	**19 23 00.7**	**+2.4**
	15nm,1.2s						
ODAN	**Odare**	**37.83**	**280**	*eP*	**P**	**19 23 01.6**	**+0.3**
	9.9nm,0.7s						
RAMN	**Ramite**	**38.51**	**280**	*eP*	**P**	**19 23 08.1**	**+1.1**
GUN	**Gumba**	**38.97**	**282**	*eP*	**P**	**19 23 12.6**	**+1.6**
	13nm,0.9s						
PKI	**Pulchoki**	**39.44**	**281**	*eP*	**P**	**19 23 15.8**	**+0.9**
PKIN	**Phulchoki**	**39.45**	**281**	*eP*	**P**	**19 23 15.9**	**+1.0**
KKN	**Kakani**	**39.52**	**282**	*eP*	**P**	**19 23 16.6**	**+1.2**
DANN	**Dangsing**	**40.75**	**283**	*eP*	**P**	**19 23 27.5**	**+1.8**
	17nm,0.8s						
KOLN	**Koldanda**	**40.98**	**282**	*eP*	**P**	**19 23 28.7**	**+1.1**
	4.7nm,0.6s						
PYUN	**Piuthan**	**41.46**	**283**	*eP*	**P**	**19 23 32.0**	**+0.5**
	27nm,1.1s						
MKAR	**Makanchi Array**	**42.13**	**311**	P	**P**	**19 23 36.4**	**-0.1**
	0.3nm,0.6s,baz=97,slow=9.9,SNR=4.7						
MKAR				PcP	**PcP**	**19 25 31.3**	**+0.7**
	0.2nm,0.6s,baz=62,slow=3.7,SNR=3.3						
ZALV	**Zalesovo Beam**	**42.51**	**322**	P	**P**	**19 23 39.0**	**-0.4**
	0.4nm,0.5s,baz=123,slow=7.6,SNR=4.0						
ZALV				PcP	**PcP**	**19 25 32.6**	**+0.9**
	0.3nm,0.4s,baz=114,slow=3.6,SNR=2.5						
WRA	**Warramunga Arr**	**46.98**	**174**	P	**P**	**19 24 14.9**	**-0.4**
	1.7nm,1.0s,baz=354,slow=8.2,SNR=7.5						
ASAR	**Alice Springs**	**50.63**	**175**	P	**P**	**19 24 43.5**	**+0.1**
	0.6nm,0.6s,baz=7.6,slow=14,SNR=11						
ILAR	**Eielson Array**	**62.90**	**29**	P	**P**	**19 26 10.9**	**+0.9**
	0.3nm,0.9s,baz=219,slow=7.0,SNR=3.2						
INK	**Inuvik**	**67.44**	**24**	P	**P**	**19 26 40.0**	**+0.6**
	0.7nm,0.7s,baz=285,slow=5.0,SNR=3.0						
KBZ	**Khabaz**	**69.81**	**310**	P	**P**	**19 26 53.6**	**-1.0**
	3.0nm,0.9s,baz=39,slow=6.5,SNR=5.8						
FINES	**FINESS Array B**	**72.86**	**331**	P	**P**	**19 27 13.0**	**+0.3**
	0.4nm,0.5s,baz=90,slow=7.6,SNR=5.9						
AKASG	**Malin Array Be**	**75.87**	**320**	P	**P**	**19 27 31.3**	**+0.9**
	0.7nm,0.5s,baz=55,slow=6.1,SNR=4.7						
YKA	**Yellowknife Ar**	**77.05**	**25**	P	**P**	**19 27 38.0**	**+1.2**
	0.2nm,0.6s,baz=300,slow=5.6,SNR=4.6						
BRTR	**Keskin Array B**	**77.72**	**308**	P	**P**	**19 27 41.9**	**+0.6**
	1.2nm,0.8s,baz=98,slow=5.1,SNR=6.5						
NOA	**NORSAR Array B**	**79.20**	**334**	P	**P**	**19 27 49.3**	**+0.4**
	0.7nm,0.8s,baz=58,slow=5.1,SNR=3.5						

NIED ***23*** *19:19:00, 27.90N×130.20E, h20km, Mw4.5 Best double couple: M0 6.16000×10^15 NP1:φ=29.00000°, δ=57.00000°, λ=96.00000°. NP2:φ=197.00000°, δ=33.00000°, λ=80.00000°.*
IDC ***23*** *19:19:24.6±0.7, 28.16N×130.02E, h0km, mb4.1/18, mb1 4.3/21, mb1mx4.2/30, mbtmp4.1/21, ML3.6/2, MS3.8/7, Ms1 3.9/7, ms1mx3.4/30, Error ellipse: s-maj=20.4km s-min=16.3km az=99.0*
ISCJB ***23*** *19:19:26.6±0.8, 28.00N±0.03×130.17E±0.04, h26km±4km, mb4.5/41, MS4.1/8, Error ellipse: s-maj=6.6km s-min=3.7km az=32.4*
BJI ***23*** *19:19:26.6, 27.96N×129.84E, h23km, mB4.6/14, mb4.4/16, Ms4.4/13, Ms7 4.2/13*
JMA ***23*** *19:19:26.0±0.2, 28.00N×130.24E, h34km±2km, M4.4*
JMA Felt II J1.
SZGRF ***23*** *19:20:14.7, 34.01N×123.65E, h33km, mb5.0, Yellow Sea*
ISC 23 19:19:27.2±0.7, 28.03N±0.03×130.15E±0.04, h25km±4km, n103, σ0¶91/81, mb4.7/41, MS4.1/8, 9C-6D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**0.33**	**331**	P	**Pb**	**19 19 34.9**	**+0.3**
JZK				S	**Sn**	**19 19 41.7**	**-0.6**
JAM	**Amami Oshima**	**0.61**	**308**	P	**Pn**	**19 19 39.4**	**-1.0**
JAM				S	**Sn**	**19 19 48.2**	**-1.2**
JAMN	**Amaminishikomi**	**0.89**	**284**	P	**Pn**	**19 19 43.7**	**-0.4**
JAMN				S	**Sn**	**19 19 54.7**	**-1.5**
JTK	**Tokunoshima**	**1.09**	**257**	P	**Pb**	**19 19 46.8**	**-0.6**
JTK				S	**Sb**	**19 20 02.1**	**+0.9**
JNN	**Nakanoshima**	**1.82**	**352**	P	**Pn**	**19 19 57.1**	**+0.1**
JNN				S	**Sn**	**19 20 19.6**	**+0.3**
JOW	**Kunigami**	**2.05**	**235**	P	**Pn**	**19 20 00.0**	**-0.1**
JOW				S	**Sn**	**19 20 25.3**	**+0.4**
JIH	**Iheya**	**2.18**	**243**	P	**Pn**	**19 20 01.6**	**-0.3**
JIH				S	**Sn**	**19 20 27.9**	**-0.1**
JMZ	**Minamidaito 2**	**2.40**	**156**	P	**Pn**	**19 20 04.5**	**-0.4**
JMZ				S	**Sn**	**19 20 31.8**	**-1.7**
JKC	**Kuchinoerabu**	**2.42**	**1**	P	**Pn**	**19 20 05.8**	**+0.5**
JKC				S	**Sn**	**19 20 34.7**	**+0.6**
JTN	**Tanegashima 3**	**2.71**	**15**	P	**Pn**	**19 20 09.6**	**+0.3**
JTN				S	**Sn**	**19 20 41.8**	**+0.5**
JJT2	**Tamagusuku 2**	**2.85**	**229**	P	**Pn**	**19 20 11.4**	**+0.3**
JJT2				S	**Sn**	**19 20 45.4**	**+0.7**
JAGN	**Aguni-jima**	**2.96**	**242**	P	**Pn**	**19 20 12.2**	**-0.4**
JAGN				S	**Sn**	**19 20 49.8**	**+2.5**
JKE	**Kume jima 2**	**3.44**	**241**	P	**Pn**	**19 20 18.5**	**-0.8**
JKE				S	**Sn**	**19 20 59.0**	**-0.3**
JNU	**Nakatsue**	**5.11**	**7**	Pn	**Pn**	**19 20 43.6**	**+1.3**
	10nm,0.3s,baz=184,slow=6.8,SNR=54						
JNU				Sn	**Sn**	**19 21 39.3**	**-1.3**
	1.8nm,0.3s,baz=223,slow=14,SNR=2.4						
KSRS	**Korea Array**	**9.58**	**349**	Pn	Pn	19 21 46.3	+2.7
	0.5nm,0.3s,baz=171,slow=14,SNR=17						
KSRS				LR	LR	19 25 46.4	
	comp=Z,354nm,19.3s,baz=166,slow=40						
MJAR	**Matsushiro Arr**	**10.88**	**37**	Pn	Pn	19 22 03.3	+1.9
	0.2nm,0.3s,baz=248,slow=14,SNR=4.2						
CN2	**Changchun**	**16.19**	**348**	*eP*	**P**	**19 23 17.6**	**+1.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,500nm,13.0s						
CN2				LR	LR		
	comp=E,900nm,13.0s						
CN2				LR	LR		
	comp=Z,800nm,13.0s						
USRK	**Ussuriysk Arra**	**16.21**	**5**	Pn	**P**	**19 23 13.8**	**-2.3**
	baz=119,slow=4.3,SNR=2.6						
ASAJ	**Asahikawa**	**18.91**	**29**	P	**Pn**	**19 23 46.1**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=149,slow=4.1,SNR=8.1						
XAN	**Xi'an**	**19.14**	**293**	P	**Pn**	**19 23 48.8**	**-0.8**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,35nm,11.1s						
XAN				LR	LR		
	comp=N,250nm,11.2s						
XAN				LR	LR		
	comp=E,170nm,12.4s						
XAN				LR	LR		
	comp=Z,140nm,11.6s						
GUMO	**Guam**	**19.86**	**133**	LR	LR	19 31 01.1	
	comp=Z,138nm,19.9s,baz=294,slow=35						
HHC	**Hu-ho-hao-te**	**19.91**	**315**	*eP*	**Pn**	**19 23 57.1**	**-1.8**
HHC				PP	**PnPn**	**19 24 14.0**	**+0.9**
HHC				S	S	19 27 25.6	-15
HHC				ScP	ScP	19 31 52.8	+4.6
HHC				PcS	PcS	19 31 56.8	+5.8
HHC				pmax	pmax		
	comp=E,16nm,0.5s						
HHC				pmax	pmax		
	comp=Z,220nm,5.2s						
HHC				LR	LR		
	comp=N,680nm,12.0s						
HHC				LR	LR		
	comp=E,660nm,12.4s						
HHC				LR	LR		
	comp=Z,880nm,11.6s						
LZH	**Lanzhou**	**23.65**	**296**	*eP*	**P**	**19 24 36.8**	**0.0**
LZH				pP	**pP**	**19 24 43.6**	**-0.5**
LZH				sP	**sP**	**19 24 47.3**	**+0.1**
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,130nm,5.1s						
LZH				LR	LR		
	comp=N,560nm,13.0s						
LZH				LR	LR		
	comp=E,470nm,12.3s						
LZH				LR	LR		
	comp=Z,680nm,13.5s						
KMI	**Kunming**	**24.66**	**270**	P	**P**	**19 24 47.1**	**+0.7**
KMI				pP	**pP**	**19 24 54.3**	**+0.5**
KMI				pmax	pmax		
	comp=Z,18nm,1.1s						
KMI				LR	LR		
	comp=N,330nm,13.2s						
KMI				LR	LR		
	comp=E,340nm,14.0s						
KMI				LR	LR		
	comp=Z,290nm,11.8s						
SONM	**Songino Array**	**27.05**	**323**	P	**P**	**19 25 06.6**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=142,slow=9.9,SNR=9.7						
SONM				PcP	**PcP**	**19 28 29.5**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=143,slow=2.9,SNR=2.8						
GTA	**Gaotai**	**27.54**	**302**	*eP*	**P**	**19 25 11.6**	**-0.6**
GTA				pP	pP	19 25 15.8	-3.8
GTA				sP	sP	19 25 18.8	-3.9
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,40nm,6.2s						
GTA				LR	LR		
	comp=N,310nm,14.0s						
GTA				LR	LR		
	comp=E,620nm,13.1s						
GTA				LR	LR		
	comp=Z,770nm,12.8s						
CMAR	**Chiang Mai Arr**	**30.14**	**258**	P	**P**	**19 25 36.7**	**+1.4**
	comp=Z,1.2nm,0.7s,baz=51,slow=7.8,SNR=7.9						
CMAR				PcP	**PcP**	**19 28 38.6**	**+2.1**
	comp=Z,0.5nm,0.7s,baz=70,slow=1.1,SNR=3.6						
CMAR				LR	LR	19 39 32.4	
	comp=Z,275nm,19.8s,baz=270,slow=40						
PETK	**Petropavlovsk-**	**32.28**	**31**	LR	LR	19 41 06.3	
	comp=Z,97nm,18.6s,baz=88,slow=40						
TAPN	**Taplejung**	**37.45**	**279**	*eP*	**P**	**19 26 39.1**	**0.0**
	comp=Z,17nm,1.0s						
ODAN	**Odare**	**37.83**	**279**	*eP*	**P**	**19 26 42.5**	**+0.3**
	comp=Z,42nm,0.6s						
RAMN	**Ramite**	**38.50**	**279**	*eP*	**P**	**19 26 48.1**	**+0.2**
GUN	**Gumba**	**38.94**	**281**	*eP*	**P**	**19 26 52.4**	**+0.7**
	comp=Z,25nm,0.4s						
PKI	**Pulchoki**	**39.41**	**280**	*eP*	**P**	**19 26 55.6**	**0.0**
	comp=Z,53nm,0.9s						
PKIN	**Phulchoki**	**39.42**	**280**	*eP*	**P**	**19 26 55.8**	**+0.2**
	comp=Z,9.4nm,0.6s						
KKN	**Kakani**	**39.48**	**281**	*eP*	**P**	**19 26 56.3**	**+0.2**
	comp=Z,46nm,1.0s						
DMN	**Daman**	**39.67**	**280**	*eP*	**P**	**19 26 58.5**	**+0.8**
DANN	**Dangsing**	**40.69**	**282**	*eP*	**P**	**19 27 06.7**	**+0.5**
	comp=Z,35nm,0.8s						
KOLN	**Koldanda**	**40.94**	**281**	*eP*	**P**	**19 27 08.4**	**+0.2**
	comp=Z,8.1nm,0.6s						
PYUN	**Piuthan**	**41.41**	**282**	*eP*	**P**	**19 27 12.5**	**+0.5**
	comp=Z,30nm,0.7s						
MKAR	**Makanchi Array**	**41.65**	**310**	P	**P**	**19 27 12.3**	**-1.2**
	comp=Z,1.1nm,0.8s,baz=92,slow=10,SNR=12						
MKAR				PcP	**PcP**	**19 29 11.4**	**+1.3**
	comp=Z,1.8nm,0.8s,baz=81,slow=3.2,SNR=9.1						
ZALV	**Zalesovo Beam**	**41.89**	**321**	P	**P**	**19 27 13.9**	**-1.4**
	comp=Z,0.8nm,0.4s,baz=102,slow=9.2,SNR=6.2						
ZALV				PcP	**PcP**	**19 29 11.3**	**+0.6**
	comp=Z,3.4nm,0.8s,baz=97,slow=3.6,SNR=12						
ZALV				LR	LR	19 46 23.4	
	comp=Z,98nm,19.6s,baz=68,slow=39						
WRA	**Warramunga Arr**	**47.86**	**175**	P	P	19 28 04.4	+1.2
	comp=Z,1.5nm,0.8s,baz=353,slow=8.4,SNR=9.3						
ASAR	**Alice Springs**	**51.52**	**176**	P	P	19 28 32.9	+1.8
	comp=Z,0.7nm,0.7s,baz=6.6,slow=15,SNR=14						
ILAR	**Eielson Array**	**62.05**	**29**	P	**P**	**19 29 44.8**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=273,slow=5.1,SNR=4.5						
INK	**Inuvik**	**66.56**	**24**	P	P	19 30 16.2	+1.4
	comp=Z,0.9nm,0.8s,baz=97,slow=0.1,SNR=4.2						
KEV	**Kevo**	**68.39**	**339**	*ep*	**P**	**19 30 25.8**	**-0.5**
	comp=Z,3.9nm,0.6s						
ARCES	**ARCESS Array B**	**68.96**	**339**	P	**P**	**19 30 29.8**	**-0.1**
	comp=Z,5.1nm,1.0s,baz=76,slow=7.6,SNR=9.2						
ARCES				LR	LR	20 06 23.6	
	comp=Z,115nm,18.1s,baz=244,slow=41						
JOF	**Joensuu**	**69.30**	**331**	*ep*	**P**	**19 30 32.0**	**-0.1**
	comp=Z,8.2nm,0.7s						
KBZ	**Khabaz**	**69.35**	**309**	P	**P**	**19 30 32.9**	**+0.2**
	comp=Z,3.2nm,0.8s,baz=40,slow=5.6,SNR=6.9						
MIB	**Mutribah**	**70.89**	**294**	*eP*	**P**	**19 30 42.8**	**+0.3**
MIB				AMb	AMB	19 30 43.9	
	comp=Z,19nm,0.9s						
RDF	**Al-Radifah**	**71.05**	**293**	*eP*	**P**	**19 30 44.6**	**+1.2**
RDF				AMb	AMB	19 30 46.2	
	comp=Z,28nm,1.1s						
NAY	**Al-Naaiem**	**71.18**	**294**	*eP*	**P**	**19 30 44.9**	**+0.7**
NAY				AMb	AMB	19 30 45.6	
	comp=Z,12nm,0.7s						
KAF	**Kangasniemi**	**71.75**	**331**	*ep*	**P**	**19 30 46.3**	**-0.8**
	comp=Z,5.0nm,0.7s						
FINES	**FINESS Array B**	**72.14**	**331**	P	**P**	**19 30 49.5**	**+0.2**
	comp=Z,5.2nm,0.5s,baz=62,slow=5.9,SNR=55						
RES	**Resolute Bay**	**73.46**	**11**	P	P	19 30 58.1	+1.2
	comp=Z,1.8nm,0.8s,baz=323,slow=3.4,SNR=5.9						
MALT	**Malatya**	**74.47**	**305**	*i*P	P	19 31 06.4	+2.7
AKASG	**Malin Array Be**	**75.27**	**320**	P	**P**	**19 31 08.7**	**+0.7**
	comp=Z,4.5nm,0.7s,baz=54,slow=6.0,SNR=12						
YKA	**Yellowknife Ar**	**76.17**	**26**	P	P	19 31 14.7	+1.8
	comp=Z,0.8nm,0.8s,baz=304,slow=5.2,SNR=14						
BRTR	**Keskin Array B**	**77.28**	**308**	P	**P**	**19 31 20.6**	**+0.8**
	comp=Z,4.3nm,0.9s,baz=101,slow=3.9,SNR=14						
NB2	**NORSAR Subarra**	**78.45**	**334**	P	**P**	**19 31 25.3**	**-0.5**
	comp=Z,3.4nm,0.7s,baz=49,slow=5.6						
NOA	**NORSAR Array B**	**78.45**	**334**	P	**P**	**19 31 25.9**	**+0.1**
	comp=Z,5.5nm,0.9s,baz=51,slow=5.5,SNR=13						
TESR		**78.72**	**317**	*i*P	**P**	**19 31 28.4**	**+0.9**
VRI	**Vrincioaia**	**78.99**	**316**	*i*P	P	19 31 30.4	+1.4
BURAR	**Bucovina Array**	**79.04**	**318**	*i*P	**P**	**19 31 28.8**	**-0.6**
PLOR	**Plostina**	**79.04**	**316**	*i*P	P	19 31 32.0	+2.7
SUMG	**Summit**	**79.36**	**357**	*i* P	P	19 31 32.5	+1.5
	comp=Z,6.1nm,0.9s						
KWP	**Kalwaria Pacla**	**79.46**	**321**	*i*P	P	19 31 33.0	+1.5
KWP	**Kalwaria Pacla**	**79.46**	**321**	*eP*	P	19 31 33.2	+1.7
MLR	**Muntele Rosu**	**79.65**	**316**	*i*P	P	19 31 35.1	+2.3
KOLS	**Kolonicke sedl**	**80.07**	**320**	*eP*	P	19 31 36.4	+1.6
CRVS	**Cervenica-Dubn**	**80.54**	**321**	*eP*	P	19 31 39.4	+2.0
HUMR	**Humele**	**80.72**	**316**	*i*P	**P**	**19 31 39.1**	**+0.7**
OJC	**Ojcow**	**80.75**	**322**	*eP*	P	19 31 39.6	+1.2
GZR	**Gura Zlata**	**81.62**	**317**	*i*P	P	19 31 45.5	+2.3
MORC	**Moravsky Berou**	**82.21**	**323**	*i*P	P	19 31 47.7	+1.5
VYHS	**Vyhne**	**82.22**	**321**	*eP*	P	19 31 47.8	+1.5
DPC	**Dobruska-Polom**	**82.52**	**324**	*eP*	P	19 31 49.7	+1.9
DPC				*e*PCP	pP	19 31 56.9	+1.0
DPC				*ep*P	pwP	19 32 00.9	+5.0
UPC	**Upice**	**82.59**	**324**	*eP*	P	19 31 51.3	+3.2
UPC				*e*PCP	pP	19 31 57.0	+0.7
VTS	**Vitosha**	**82.82**	**315**	*i*P	P	19 31 52.3	+2.6
VRAC	**Vranov**	**82.98**	**323**	*i*P	P	19 31 52.1	+1.9
BRG	**Berggiesshubel**	**83.44**	**325**	*eP*	P	19 31 54.6	+2.1
	comp=Z,5.6nm,1.1s						
TREC	**Trest**	**83.58**	**323**	*eP*	P	19 31 54.6	+1.3
CLL	**Collm**	**83.64**	**326**	*eP*	P	19 31 54.6	+1.1
	comp=Z,11nm,0.9s						
CLL	**Collm**	**83.64**	**326**	*i*P	P	19 31 54.7	+1.2
	comp=Z,11nm,0.9s						
PRU	**Pruhonice**	**83.66**	**324**	*eP*	P	19 31 55.4	+1.7
FBE	**Freiberg**	**83.70**	**325**	*eP*	P	19 31 55.3	+1.4
	comp=Z,12nm,0.9s						
CONA	**Conrad Observa**	**84.18**	**322**	*i*PcP	**PcP**	**19 31 58.4**	**-1.8**
NRDL	**Niedersach Rie**	**84.30**	**328**	*eP*	P	19 31 58.0	+1.2
	comp=Z,10.0nm,1.2s						
NEUB	**Neuenburg**	**84.31**	**326**	*eP*	P	19 31 58.3	+1.4
	comp=Z,18nm,0.9s						
TANN	**Tannenbergstha**	**84.46**	**325**	*eP*	**P**	**19 31 58.8**	**+1.0**
	comp=Z,18nm,1.9s						
PLN	**Plauen**	**84.57**	**325**	*eP*	P	19 31 59.4	+1.1
	comp=Z,37nm,1.2s						
NKC	**Novy Kostel**	**84.58**	**325**	*eP*	P	19 32 00.0	+1.6
WERN	**Wernitzgruen**	**84.58**	**325**	*eP*	P	19 31 59.8	+1.4
	comp=Z,15nm,1.4s						
CLZ	**Clausthal**	**84.59**	**327**	*eP*	P	19 32 00.0	+1.6
	comp=Z,24nm,1.2s						
KHC	**Kasperske Hory**	**84.68**	**324**	*eP*	P	19 32 00.5	+1.6
KHC				*e*PCP	pP	19 32 04.2	-2.9
MOX	**Moxa**	**84.74**	**326**	*eP*	P	19 32 00.2	+1.0
	comp=Z,37nm,2.8s						
GEC2	**GERESS Array S**	**84.79**	**324**	*eP*	**P**	**19 32 00.5**	**+0.9**
	comp=Z,52nm,2.6s						
GERES	**GERESS Array B**	**84.79**	**324**	P	P	19 32 00.7	+1.1
	comp=Z,2.5nm,0.8s,baz=42,slow=4.3,SNR=22						
GERES				LR	LR	20 13 48.3	
	comp=Z,166nm,19.0s,baz=259,slow=39						
ROTZ	**Rotzenmuhle**	**84.99**	**325**	*eP*	P	19 32 02.0	+1.5
	comp=Z,12nm,1.3s						
GRF	**Grafenberg Arr**	**85.54**	**325**	*eP*	P	19 32 05.7	+2.5
	comp=Z,21nm,1.3s						
RJOB	**Jochberg**	**85.94**	**323**	*eP*	P	19 32 06.9	+1.6
	comp=Z,7.0nm,0.9s						
KBA	**Koelnbreinsper**	**86.06**	**322**	*i*P	**P**	**19 32 06.6**	**+0.6**
FRB	**Frobisher Bay**	**87.35**	**8**	P	**P**	**19 32 11.3**	**-0.4**
	comp=Z,3.4nm,0.7s,baz=351,slow=5.6,SNR=4.8						

IDC 23 19:34:19.5±0.7, 12.43S×65.28E, h0km, mb4.0/10, mb1 4.1/11, mb1mx3.9/27, mbtmp4.0/11, ML3.8/1, MS3.9/11, Ms1 3.9/11, ms1mx3.7/26, Error ellipse: s-maj=25.7km s-min=18.1km az=157.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**18.47**	**248**	P	Pn	19 38 38.4	+1.1
	0.3nm,0.3s,baz=108,slow=20,SNR=2.4						
OPO				LR	LR	19 44 12.5	
	comp=Z,414nm,18.5s,baz=228,slow=32						
KMBO	**Kilima Mbogo**	**29.97**	**290**	LR	LR	19 50 13.4	
	comp=Z,182nm,21.0s,baz=95,slow=32						
LSZ	**Lusaka**	**36.10**	**261**	P	P	19 41 22.3	-1.3
	1.4nm,0.8s,baz=56,slow=11,SNR=3.3						
LBTB	**Lobatse**	**39.47**	**246**	P	P	19 41 51.8	-0.2
	2.3nm,0.6s,baz=100,slow=6.5,SNR=4.9						
BOSA	**Boshof**	**40.57**	**240**	P	P	19 42 01.7	+0.5
	1.9nm,0.9s,baz=32,slow=17,SNR=3.7						
BOSA				LR	LR	19 56 48.3	
	comp=Z,174nm,18.6s,baz=265,slow=33						
CMAR	**Chiang Mai Arr**	**45.21**	**48**	LR	LR	19 59 29.7	
	comp=Z,96nm,18.1s,baz=26,slow=33						
MAW	**Mawson**	**55.15**	**181**	LR	LR	20 00 48.9	
	comp=Z,179nm,18.4s,baz=170,slow=29						
MKAR	**Makanchi Array**	**60.89**	**13**	P	P	19 44 33.0	-1.0
	0.6nm,0.9s,baz=210,slow=7.0,SNR=4.2						
MKAR				PcP	PcP	19 45 17.8	+0.2
	1.0nm,1.0s,baz=195,slow=4.4,SNR=4.0						
MKAR				LR	LR	20 09 51.1	
	comp=Z,40nm,19.0s,baz=342,slow=35						
ASAR	**Alice Springs**	**65.68**	**110**	P	P	19 45 05.8	-0.5
	1.3

SPN	**Mys Shipunski**	**1.22**	**206**	*i* P		Pn	19 39 41.6 +0.3
SPN				*e*S		Sn	19 39 56.7 -0.1
SDLR	**Sedlovina**	**1.51**	**234**	*i* P		Pn	19 39 46.8 +1.3
SDLR				*e*S		Sn	19 40 05.8 +1.6
KRER	**Koryakskii**	**1.56**	**236**	*e*P		Pn	19 39 47.9 +1.7
KRER				S		Sn	19 40 07.3 +1.7
SMAR	**Somma**	**1.56**	**234**	*i* P		Pn	19 39 47.6 +1.4
SMAR				S		Sn	19 40 06.9 +1.3
UGLR	**Uglovaya**	**1.58**	**232**	*i* P		Pn	19 39 48.0 +1.6
UGLR				*e*S		Sn	19 40 07.8 +1.9
AVH	**Avacha**	**1.59**	**235**	*e*P		Pn	19 39 48.3 +1.9
AVH				*e*S		Sn	19 40 08.4 +2.4
KMNR	**Kamenistaya**	**1.62**	**346**	*i* P		Pn	19 39 48.7 +1.8
KMNR				*e*S		Sn	19 40 08.7 +1.9
KOK	**Koryaka**	**1.62**	**237**	*e*P		Pn	19 39 48.5 +1.6
KOK				S		Sn	19 40 08.0 +1.1
BZGR	**Bezymyannyi-Gr**	**1.76**	**356**	*e*P		Pn	19 39 50.6 +1.8
BZGR				*e*S		Sn	19 40 11.7 +1.5
BZMR	**Bezymyannaya**	**1.77**	**352**	*e*P		Pn	19 39 50.7 +1.8
BZMR				*e*S		Sn	19 40 12.6 +2.1
PET	**Petropavlovsk**	**1.78**	**230**	*e*P		Pn	19 39 50.4 +1.5
PET				*e*S		Sn	19 40 11.9 +1.4
BZWR	**Bezymyannyi-We**	**1.79**	**353**	*e*P		Pn	19 39 51.0 +1.7
BZWR				*e*S		Sn	19 40 12.9 +1.7
GNL	**Ganaly**	**1.82**	**255**	*i* P		Pn	19 39 51.2 +1.5
GNL				S		Sn	19 40 13.3 +1.5
KPT	**Kopyto**	**1.82**	**348**	*e*P		Pn	19 39 50.9 +1.3
KPT				S		Sn	19 40 12.7 +1.0
ZLN	**Zelenaya**	**1.83**	**358**	*e*P		Pn	19 39 51.7 +1.9
ZLN				*e*S		Sn	19 40 14.3 +2.3
LGNR	**Loginova**	**1.90**	**356**	*e*P		Pn	19 39 53.3 +2.3
LGNR				*e*S		Sn	19 40 16.6 +2.5
CIRR	**Tsirk**	**1.93**	**357**	*e*P		Pn	19 39 53.1 +1.9
CIRR				*e*S		Sn	19 40 16.2 +1.7
KOZ	**Kozyrevsk**	**1.96**	**343**	S		Sn	19 40 15.6 +0.6
KRSR	**Krestovskiy**	**2.04**	**355**	*e*P		Pn	19 39 54.2 +1.6
KRSR				*e*S		Sn	19 40 18.4 +1.3
KLY	**Klyuchi**	**2.13**	**356**	*e*P		Pn	19 39 55.3 +1.6
KLY				*e*S		Sn	19 40 20.3 +1.3
ESO	**Esso**	**2.15**	**325**	*e*P		Pn	19 39 55.0 +1.0
ESO				*e*S		Sn	19 40 21.1 +1.5
SRDR	**Sredinnyy**	**2.24**	**343**	*i* P		Pn	19 39 56.1 +0.9
SRDR				*e*S		Sn	19 40 23.2 +1.4
RUS	**Russkaya**	**2.27**	**220**	*e*P		Pn	19 39 56.5 +0.9
RUS				*e*S		Sn	19 40 22.6 +0.2
KBTR	**Krutoberegovo**	**2.30**	**28**	*e*P		Sn	19 39 56.7 +0.7
KBTR				S		Sn	19 40 23.2 +0.1
GRL	**Gorelyy**	**2.36**	**227**	*e*P		Pn	19 39 59.1 +2.1
GRL				*e*S		Sn	19 40 26.9 +1.9
MTVR	**Mutnovka**	**2.37**	**225**	*e*P		Pn	19 39 58.8 +1.7
MTVR				*e*S		Sn	19 40 25.8 +0.7
BDR	**Baidarnaya**	**2.39**	**4**	*e*P		Pn	19 39 59.3 +2.0
BDR				*e*S		Sn	19 40 27.2 +1.7
SMKR	**Semkarok**	**2.42**	**7**	*i* P		Pn	19 39 59.3 +1.6
SMKR				*e*S		Sn	19 40 26.8 +0.6
SRKR	**Sorokina**	**2.47**	**3**	*e*P		Pn	19 40 00.1 +1.6
SRKR				*e*S		Sn	19 40 28.1 +0.5
APC	**Apacha**	**2.57**	**242**	P		Pn	19 40 01.8 +2.1
APC				S		Sn	19 40 31.4 +1.7
BKI	**Bering**	**3.11**	**69**	*e*P		Pn	19 40 06.8 -0.2
BKI				*e*S		Sn	19 40 39.9 -2.9
MIPR	**Malaya Ipel'ka**	**3.15**	**234**	P		Pn	19 40 10.2 +2.6
SKR	**Severo-Kuril's**	**4.58**	**222**	S		Sn	19 41 21.1 +2.2

*ATH **23** 19:40:17.5, 36°.45N×21°.74E, h5km±2km, MD3.6/18*
*CSEM **23** 19:40:18.8±0.6, 36°.50N×21°.80E, h0km±1km, ML3.0/3, Error ellipse: s-maj=10.1km s-min=5.5km az=44.0*
*THE **23** 19:40:20.8, 36°.56N×21°.86E, h0km±2km, ML3.0/3, Error ellipse: s-maj=3.4km s-min=1.2km az=228.0*

ISC 23 19:40:18.7±1.5, 36°.48N±0°.04×21°.78E±0°.04, h7km±10km, n64, σ0s56/92, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.41**	**356**	P	**Pg**	**19 40 26.2**	**-0.5**
PYL				S	**Sg**	**19 40 32.8**	**+0.6**
PYL	**PYLOS**	**0.41**	**356**	*e*PB	**Pg**	**19 40 26.3**	**-0.5**
PYL				*e*SB	**Sg**	**19 40 33.3**	**+1.1**
PYL	**PYLOS**	**0.41**	**356**	P	**Pg**	**19 40 26.2**	**-0.5**
PYL				S	**Sg**	**19 40 32.8**	**+0.6**
PYL				*e*Sb	**Sg**	**19 40 33.3**	**+1.1**
DYR	**Agios Nikonas**	**0.53**	**58**	P	**Pg**	**19 40 28.1**	**-0.7**
DYR				S	**Sg**	**19 40 36.4**	**+0.7**
DYR	**Agios Nikonas**	**0.53**	**58**	*e*PG	**Pg**	**19 40 28.2**	**-0.6**
DYR				*e*SB	**Sb**	**19 40 37.2**	**-0.8**
DYR	**Agios Nikonas**	**0.53**	**58**	*e*Pg	**Pg**	**19 40 28.2**	**-0.6**
DYR				S	**Sg**	**19 40 36.4**	**+0.7**
DYR				*e*Sb	**Sb**	**19 40 37.2**	**-0.8**
ITM	**Ithomi**	**0.71**	**10**	P	**Pg**	**19 40 32.0**	**-0.2**
ITM				S	**Sg**	**19 40 41.9**	**+0.4**
ITM	**Ithomi**	**0.71**	**10**	*e*PB	**Pg**	**19 40 32.1**	**-0.2**
ITM				*e*SB	**Sb**	**19 40 42.9**	**-0.3**
ITM	**Ithomi**	**0.71**	**10**	P	**Pg**	**19 40 32.0**	**-0.2**
ITM				S	**Sg**	**19 40 41.9**	**+0.4**
ITM				*e*Sb	**Sb**	**19 40 42.9**	**-0.3**
VLI	**Veliai**	**0.96**	**75**	P	**Pg**	**19 40 36.8**	**-0.3**
VLI				S	**Sb**	**19 40 50.2**	**-0.3**
VLI	**Veliai**	**0.96**	**75**	*e*PB	**Pg**	**19 40 36.9**	**-0.2**
VLI				*e*SB	**Sb**	**19 40 50.6**	**+0.1**
VLI	**Veliai**	**0.96**	**75**	*e*Pb	**Pg**	**19 40 36.9**	**-0.2**
VLI				S	**Sb**	**19 40 50.2**	**-0.3**
VLI				*e*Sb	**Sb**	**19 40 50.6**	**+0.1**
VLX	**Vlachokerasia**	**1.01**	**28**	P	**Pg**	**19 40 37.6**	**-0.4**
VLX				S	**Sg**	**19 40 51.7**	**+0.5**
VLX	**Vlachokerasia**	**1.01**	**28**	*e*PB	**Pg**	**19 40 37.6**	**-0.4**
VLX	**Vlachokerasia**	**1.01**	**28**	P	**Pg**	**19 40 37.6**	**-0.4**
VLX				S	**Sg**	**19 40 51.7**	**+0.5**
KYTH	**Kithira**	**1.03**	**101**	P	**Pg**	**19 40 38.0**	**-0.5**
KYTH	**Kithira**	**1.03**	**101**	*e*PN	**Pg**	**19 40 37.9**	**-0.5**
KYTH	**Kithira**	**1.03**	**101**	P	**Pg**	**19 40 38.0**	**-0.5**
AMT	**Artemida-Makis**	**1.05**	**357**	P	**Pg**	**19 40 38.1**	**-0.7**
AMT				S	**Sn**	**19 40 54.8**	**+0.1**
AMT	**Artemida-Makis**	**1.05**	**357**	*e*PB	**Pg**	**19 40 38.2**	**-0.6**
AMT	**Artemida-Makis**	**1.05**	**357**	*e*Pb	**Pg**	**19 40 38.2**	**-0.6**
DIDY	**Didyma**	**1.52**	**49**	P	**Pb**	**19 40 46.8**	**-0.4**
DIDY				S	**Sg**	**19 41 08.0**	**+0.6**
DIDY	**Didyma**	**1.52**	**49**	P	**Pb**	**19 40 46.8**	**-0.4**
DIDY				S	**Sg**	**19 41 08.0**	**+0.6**
GUR	**Goura**	**1.52**	**17**	P	**Pn**	**19 40 46.3**	**0.0**
GUR				S	**Sb**	**19 41 07.1**	**+0.4**
GUR	**Goura**	**1.52**	**17**	*e*PG	**Pn**	**19 40 46.4**	**+0.1**
GUR	**Goura**	**1.52**	**17**	P	**Pn**	**19 40 46.3**	**0.0**
GUR				S	**Sb**	**19 41 07.1**	**+0.4**
DID	**Didima**	**1.55**	**48**	P	**Pb**	**19 40 47.4**	**-0.3**
DID	**Didima**	**1.55**	**48**	*e*PB	**Pb**	**19 40 47.5**	**-0.3**
DID	**Didima**	**1.55**	**48**	P	**Pb**	**19 40 47.4**	**-0.3**
KLV	**Kalavryta, Ach**	**1.59**	**11**	*e*PG	**Pb**	**19 40 47.8**	**-0.5**
KLV	**Kalavryta, Ach**	**1.59**	**11**	*e*Pb	**Pb**	**19 40 47.8**	**-0.5**
RLS	**Riolos of Patr**	**1.59**	**351**	P	**Pb**	**19 40 48.1**	**-0.3**
RLS	**Riolos of Patr**	**1.59**	**351**	*e*PB	**Pb**	**19 40 48.1**	**-0.3**
RLS	**Riolos of Patr**	**1.59**	**351**	P	**Pb**	**19 40 48.1**	**-0.3**
LAKA	**Lakka**	**1.76**	**5**	P	**Pb**	**19 40 51.2**	**-0.1**
LAKA	**Lakka**	**1.76**	**5**	*e*PN	**Pb**	**19 40 51.2**	**-0.1**
LAKA	**Lakka**	**1.76**	**5**	P	**Pb**	**19 40 51.2**	**-0.1**
LTK	**Loutraki**	**1.81**	**31**	P	**Pn**	**19 40 50.9**	**+0.7**
LTK				S	**Sb**	**19 41 14.7**	**-0.2**
LTK	**Loutraki**	**1.81**	**31**	*e*PG	**Pb**	**19 40 52.0**	**-0.1**
LTK	**Loutraki**	**1.81**	**31**	P	**Pb**	**19 40 50.9**	**+0.7**
LTK	**Loutraki**	**1.81**	**31**	*e*Pg	**Pb**	**19 40 52.0**	**-0.1**
LTK				S	**Sb**	**19 41 14.7**	**-0.2**
TRIZ	**Trizonia**	**1.90**	**7**	P	**Pb**	**19 40 53.2**	**-0.3**
TRIZ				S	**Sb**	**19 41 16.5**	**-0.9**
TRIZ	**Trizonia**	**1.90**	**7**	*e*PG	**Pb**	**19 40 53.3**	**-0.3**
TRIZ	**Trizonia**	**1.90**	**7**	*e*Pg	**Pb**	**19 40 53.3**	**-0.3**
TRIZ				S	**Sb**	**19 41 16.5**	**-0.9**
KALE	**Kalithea**	**1.93**	**8**	P	**Pb**	**19 40 53.6**	**-0.5**
KALE	**Kalithea**	**1.93**	**8**	*e*PG	**Pb**	**19 40 53.6**	**-0.5**
KALE	**Kalithea**	**1.93**	**8**	P	**Pb**	**19 40 53.6**	**-0.5**
VLS	**Valsamata**	**1.94**	**331**	P	**Pb**	**19 40 54.5**	**+0.2**
EFP	**Efpalio**	**1.94**	**3**	P	**Pb**	**19 40 54.7**	**+0.3**
EFP	**Efpalio**	**1.94**	**3**	*e*PN	**Pg**	**19 40 55.2**	**-0.7**
EFP	**Efpalio**	**1.94**	**3**	P	**Pb**	**19 40 54.7**	**+0.3**
EFP	**Efpalio**	**1.94**	**3**	*e*Pn	**Pg**	**19 40 55.2**	**-0.7**
DSF	**Desfina**	**2.02**	**17**	P	**Pn**	**19 40 53.5**	**+0.4**
DSF	**Desfina**	**2.02**	**17**	P	**Pn**	**19 40 53.5**	**+0.4**
VAM	**Vamos**	**2.24**	**118**	P	**Pb**	**19 40 58.9**	**-0.5**
VAM				S	**Sb**	**19 41 29.0**	**+1.8**
VAM	**Vamos**	**2.24**	**118**	*e*PN	**Pb**	**19 40 58.8**	**-0.6**
VAM	**Vamos**	**2.24**	**118**	*e*Pn	**Pb**	**19 40 58.8**	**-0.6**
PTL	**Penteli**	**2.28**	**46**	*e*PG	**Pb**	**19 41 00.0**	**-0.2**
PTL	**Penteli**	**2.28**	**46**	*e*Pg	**Pb**	**19 41 00.0**	**-0.2**
LKR	**Lokris**	**2.37**	**24**	P	**Pn**	**19 40 58.3**	**+0.4**
LKR	**Lokris**	**2.37**	**24**	P	**Pn**	**19 40 58.3**	**+0.4**
IDI	**Anoyia**	**2.79**	**114**	P	**Pb**	**19 41 07.3**	**-1.6**
APE	**Apeiranthos**	**3.07**	**78**	P	**Pn**	**19 41 08.4**	**+0.8**
APE	**Apeiranthos**	**3.07**	**78**	P	**Pn**	**19 41 08.4**	**+0.8**

WEL 23 19:42:09.5±0.5, 38°.71S×175°.71E, h149km±3km, ML3.5/13, 7C-4D, Error ellipse: s-maj=3.3km s-min=3.1km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NGZ	**Ngauruhoe**	**0.47**	**191**	PN	Pn	19 42 30.7	-0.1
FWVZ	**Far West T-bar**	**0.56**	**193**	⇓PN	Pn	19 42 31.0	-0.3
FWVZ				SN	Sn	19 42 47.4	-0.6
TUVZ	**Tukino**	**0.56**	**185**	PN	Pn	19 42 31.2	0.0
TUVZ				SN	Sn	19 42 47.4	-0.4
TRVZ	**Turoa**	**0.60**	**192**	⇑PN	Pn	19 42 31.5	-0.1
TRVZ				SN	Sn	19 42 48.2	-0.3
WNVZ	**Wahianoa**	**0.62**	**188**	PN	Pn	19 42 31.5	-0.1
PKVZ	**Pokaka**	**0.65**	**206**	PN	Pn	19 42 31.4	-0.2
MOVZ	**Moawhango**	**0.70**	**177**	⇑PN	Pn	19 42 31.6	-0.4
MOVZ				SN	Sn	19 42 47.6	-1.6
MTVZ	**Mangateitei**	**0.70**	**196**	⇓PN	Pn	19 42 31.9	0.0
BKZ	**Black Stump Fm**	**0.76**	**127**	⇑PN	Pn	19 42 32.0	-0.3
BHHZ	**Black Hill Sta**	**0.82**	**161**	PN	Pn	19 42 32.5	-0.3
NMHZ	**Naumai**	**0.94**	**115**	PN	Pn	19 42 34.4	+0.7
MCHZ	**McNeill Hill**	**1.06**	**134**	PN	Pn	19 42 35.4	+0.7
URZ	**Urewera**	**1.19**	**68**	PN	Pn	19 42 34.7	-1.1
WAZ	**Wanganui**	**1.19**	**208**	PN	Pn	19 42 35.7	-0.1
PNHZ	**Pukenui**	**1.26**	**163**	⇓PN	Pn	19 42 36.5	0.0
TSZ	**Takapari Road**	**1.36**	**172**	⇑PN	Pn	19 42 37.4	-0.2
KAHZ	**Kahuranaki**	**1.41**	**141**	PN	Pn	19 42 38.3	+0.2
WPHZ	**Waipukurau**	**1.47**	**158**	PN	Pn	19 42 38.4	-0.1
PXZ	**Pawanui**	**1.59**	**146**	⇑PN	Pn	19 42 39.7	-0.1
PXZ				SN	Sn	19 43 01.9	-1.3
DVHZ	**Dannevirke**	**1.62**	**168**	⇑PN	Pn	19 42 39.7	-0.6
POWZ	**Post Office Ro**	**1.68**	**179**	PN	Pn	19 42 40.3	-0.6
PRHZ	**Porangahau**	**1.71**	**156**	⇑PN	Pn	19 42 41.0	-0.2
BFZ	**Birch Farm**	**2.01**	**168**	PN	Pn	19 42 43.8	-0.8
BFZ				SN	Sn	19 43 07.6	-4.1
TIWZ	**Tintock**	**2.07**	**176**	PN	Pn	19 42 44.4	-0.9
HOWZ	**Holdsworth Sta**	**2.19**	**184**	PN	Pn	19 42 45.4	-1.4
TMWZ	**Te Maipa**	**2.40**	**177**	PN	Pn	19 42 47.9	-1.4
CAW	**Cannon Point**	**2.44**	**191**	PN	Pn	19 42 48.4	-1.5
MTW	**Mount Morrison**	**2.45**	**184**	PN	Pn	19 42 48.2	-1.6
PAWZ	**Paruwai Farm**	**2.68**	**185**	⇓PN	Pn	19 42 50.9	-1.8
TRWZ	**Traveller**	**2.69**	**180**	PN	Pn	19 42 51.2	-1.6
SNZO	**South Karori**	**2.71**	**196**	PN	Pn	19 42 51.0	-2.0
MSWZ	**Moikau Station**	**2.72**	**187**	PN	Pn	19 42 51.4	-1.9
TCW	**Tory Channel**	**2.73**	**203**	PN	Pn	19 42 51.6	-1.7
PLWZ	**Palliser**	**2.88**	**187**	PN	Pn	19 42 53.1	-2.2
TUWZ	**Tuamarina**	**3.04**	**206**	PN	Pn	19 42 55.1	-2.1
THZ	**Tophouse**	**3.73**	**214**	*e*PN	Pn	19 43 04.3	-1.9
KHZ	**Kahutara**	**4.05**	**203**	PN	Pn	19 43 07.9	-2.4

MAN 23 19:44:16, 12°.94N×122°.73E, h21km, mb4.4, ML3.3, MS3.2, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**1.00**	**344**	⇓*e*P	Pn	19 44 35.1	+0.4

MAN 23 20:04:35, 11°.83N×125°.28E, h32km, mb4.4, ML3.3, MS3.1, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.27**	**145**	*e*P	Pn	20 04 44.2	+1.4
BESP				*e*S	Sn	20 04 50.4	+2.6
PLP	**Palo**	**0.72**	**204**	⇑*e*P	Pb	20 04 49.9	+0.8
PLP				*e*S	Sn	20 04 59.2	+0.3
CNP	**Catarman**	**0.91**	**319**	*e*P	Pb	20 04 52.0	-0.3
CNP				*e*S	Sb	20 05 03.9	-0.2
MSLP	**Maasin**	**1.73**	**194**	*e*P	Pb	20 05 06.0	-0.2
LLP	**Lapu-Lapu**	**1.98**	**221**	*e*P	Pn	20 05 07.1	+0.9
LLP				*e*S	Sn	20 05 29.8	-0.1
RCP	**Roxas**	**2.49**	**264**	*e*P	Pn	20 05 16.2	+2.8
TBP	**Tagbilaran**	**2.54**	**213**	*e*P	Pn	20 05 15.9	+1.9
GUIM	**Jordan**	**2.89**	**246**	*e*P	Pn	20 05 21.1	+2.2

JMA 23 20:12:04.0±0.1, 27°.13N×130°.06E, h44km, M2.3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.18**	**304**	P	Pn	20 12 24.5	+0.4
JTK				S	Sn	20 12 38.9	-0.2
JAM	**Amami Oshima**	**1.34**	**343**	P	Pn	20 12 26.9	+0.7
JAM				S	Sn	20 12 43.6	+0.8
JAMN	**Amaminishikomi**	**1.36**	**325**	P	Pn	20 12 26.7	+0.2
JAMN				S	Sn	20 12 43.2	-0.1
JOW	**Kunigami**	**1.62**	**260**	P	Pn	20 12 30.9	+0.8
JOW				S	Sn	20 12 50.2	+0.4
JMZ	**Minamidaito 2**	**1.67**	**141**	P	Pn	20 12 31.6	+0.8
JMZ				S	Sn	20 12 51.1	+0.1
JIH	**Iheya**	**1.87**	**268**	P	Pn	20 12 34.6	+1.1
JIH				S	Sn	20 12 57.0	+1.1
JJT2	**Tamagusuku 2**	**2.29**	**245**	P	Pn	20 12 40.2	+0.9
JKE	**Kume jima 2**	**3.04**	**255**	S	Sn	20 13 26.0	+1.4

*NIED **23** 20:12:00, 27°.10N×130°.00E, h5km, Mw3.7 Best double couple: Mo3.86000×10¹⁴ NP1:φs357.00000°, δ78.00000°, λ-131.00000°. NP2:φs253.00000°, δ42.00000°, λ-19.00000°.*

JMA 23 20:12:54.0, 27°.08N×130°.03E, h51km, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.19**	**306**	P	Pn	20 13 14.8	+0.5
JTK				S	Sn	20 13 29.3	-0.1
JAM	**Amami Oshima**	**1.38**	**344**	P	Pn	20 13 17.6	+0.7
JAM				S	Sn	20 13 34.4	+0.4
JAMN	**Amaminishikomi**	**1.39**	**327**	P	Pn	20 13 17.3	+0.4
JAMN				S	Sn	20 13 33.9	-0.2
JOW	**Kunigami**	**1.59**	**261**	P	Pn	20 13 20.5	+0.8
JOW				S	Sn	20 13 39.5	+0.4
JMZ	**Minamidaito 2**	**1.65**	**139**	P	Pn	20 13 21.1	+0.6
JMZ				S	Sn	20 13 40.9	+0.3
JIH	**Iheya**	**1.84**	**269**	P	Pn	20 13 24.0	+0.8
JIH				S	Sn	20 13 46.4	+1.1
JJT2	**Tamagusuku 2**	**2.25**	**246**	P	Pn	20 13 29.6	+0.9
JJT2				S	Sn	20 13 56.2	+0.9
JAGN	**Aguni-jima**	**2.54**	**260**	P	Pn	20 13 33.5	+0.8
JAGN				S	Sn	20 14 02.1	-0.3
JNN	**Nakanoshima**	**2.75**	**357**	S	Sn	20 14 09.4	+1.6
JKE	**Kume jima 2**	**3.00**	**256**	S	Sn	20 13 39.4	+0.4
JKE				S	Sn	20 14 14.4	+0.7
JTN	**Tanegashima 3**	**3.66**	**13**	P	Pn	20 13 49.3	+1.2
JTN				S	Sn	20 14 31.9	+1.9

IDC 23 20:46:51.4±1.8, 0°.27S×19°.66W, h0km, mb3.5/2, mb1 3.6/2, mb1mx3.4/26, mbtmp3.4/2, Error ellipse: s-maj=64.1km s-min=53.5km az=164.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**25.02**	**57**	P	P	20 52 17.3	0.0
	0.5nm,0.7s,baz=235,slow=10.0,SNR=4.7						
YKA	**Yellowknife Ar**	**92.53**	**332**	P	P	21 00 04.3	-0.1
	0.1nm,0.4s,baz=87,slow=4.5,SNR=3.7						
ASAR	**Alice Springs**	**145.00**	**135**	PKPbc	PKPab	21 06 30.1	-0.8
	2.5nm,0.8s,baz=226,slow=2.5,SNR=20						

IDC 23 20:47:34.6±0.8, 18°.91S×173°.92E, h0km, mb4.1/11, mb1 4.4/13, mb1mx4.2/23, mbtmp4.2/13, ML4.7/2, MS3.8/18, Ms1 3.8/18, ms1mx3.6/34, Error ellipse: s-maj=23.9km s-min=20.9km az=86.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.68**	**245**	*e*LR	LR	20 51 10.0	
	590nm,25.6s						
DZM	**Mont Dzumac**	**7.68**	**245**	Pn	Pn	20 49 30.9	+3.0
	0.3nm,0.3s,baz=82,slow=21,SNR=6.0						
DZM				LR	LR	20 51 52.9	
	comp=Z,312nm,18.8s,baz=223,slow=34						
AFI	**Afiamalu**	**14.59**	**72**	LR	LR	20 55 10.8	
	comp=Z,173nm,19.8s,baz=170,slow=31						
HNR	**Honiara**	**16.49**	**303**	Pn	Pn	20 51 28.8	+1.3
	9.5nm,0.3s,baz=190,slow=17,SNR=3.4						
HNR				LR	LR	20 56 46.3	
	comp=Z,236nm,20.1s,baz=116,slow=34						
URZ	**Urewera**	**19.48**	**172**	P	Pn	20 52 04.7	+0.5
	0.6nm,0.3s,baz=354,slow=5.5,SNR=3.8						
URZ				LR	LR	20 57 34.5	
	comp=Z,298nm,20.6s,baz=19,slow=31						
RAR	**Rarotonga**	**24.81**	**100**	LR	LR	20 59 51.7	
	comp=Z,328nm,19.1s,baz=141,slow=30						
CTA	**Charters Tower**	**26.10**	**263**	P	P	20 53 11.4	+1.1
	17nm,1.0s,baz=92,slow=11,SNR=7.7						
CTA				LR	LR	21 01 51.0	
	comp=Z,211nm,20.9s,baz=70,slow=33						
STKA	**Stephens Creek**	**31.80**	**240**	P	P	20 54 01.6	+0.6
	2.9nm,0.9s,baz=36,slow=8.7,SNR=3.6						
STKA				LR	LR	21 05 37.9	
	comp=Z,112nm,18.6s,baz=219,slow=34						
TBI	**Tubuai**	**34.38**	**104**	*e*LR	LR	21 03 26.8	
	301nm,30.2s						
PPT2	**Papeete2**	**34.65**	**94**	*e*LR	LR	21 03 35.7	
	378nm,28.8s						
PPT	**Papeete**	**34.66**	**94**	LR	LR	21 04 14.0	
	comp=Z,172nm,20.5s,baz=339,slow=29						
WRA	**Warramunga Arr**	**37.29**	**262**	P	P	20 54 47.3	-1.3
	1.8nm,0.9s,baz=91,slow=9.1,SNR=12						
ASAR	**Ice Springs**	**37.50**	**256**	P	P	20 54 49.5	-0.9
	8.9nm,0.9s,baz=86,slow=9.5,SNR=64						
ASAR				LR	LR	21 10 27.2	
	comp=Z,196nm,18.2s,baz=102,slow=37						
VNDA	**Vanda**	**58.95**	**183**	LR	LR	21 17 50.9	
	comp=Z,165nm,19.9s,baz=12,slow=31						
JHJ	**Hachijo jima 2**	**61.16**	**327**	LR	LR	21 22 06.4	
	comp=Z,42nm,19.1s,baz=294,slow=34						
MJAR	**Matsushiro Arr**	**64.66**	**329**	P	P	20 58 13.7	-0.6
	2.4nm,0.9s,baz=14,slow=4.5,SNR=6.0						
QSPA	**South Pole Qui**	**71.14**	**180**	P	P	20 58 54.5	-0.5
	2.4nm,0.9s,baz=14,slow=4.5,SNR=4.2						
PETK	**Petropavlovsk-**	**73.08**	**350**	LR	LR	21 27 33.8	
	comp=Z,48nm,18.7s,baz=340,slow=33						
USRK	**Ussuriysk Arra**	**73.57**	**330**	P	P	20 59 10.1	+0.6
	1.1nm,0.8s,baz=140,slow=5.2,SNR=5.9						
CMAR	**Chiang Mai Arr**	**82.44**	**292**	P	P	20 59 59.5	+0.2
	1.9nm,0.9s,baz=119,slow=3.7,SNR=8.1						
CMAR				LR	LR	21 37 23.1	
	comp=Z,86nm,19.6s,baz=265,slow=36						
PFO	**Pinyon Flat Ob**	**84.40**	**52**	LR	LR	21 27 18.8	
	comp=Z,58nm,21.3s,baz=143,slow=28						
NVAR	**Mina Array Bea**	**85.31**	**47**	P	P	21 00 14.1	+0.2
	0.4nm,0.5s,baz=224,slow=3.3,SNR=2.9						
BBB	**Bella Bella**	**86.83**	**32**	LR	LR	21 34 41.8	
	comp=Z,54nm,18.4s,baz=109,slow=33						
ILAR	**Eielson Array**	**88.66**	**16**	LR	LR	21 33 41.8	
	comp=Z,51nm,19.1s,baz=317,slow=31						
SNAA	**Sanae**	**89.62**	**181**	P	P	21 00 33.1	-0.9
	0.4nm,0.7s,baz=253,slow=11,SNR=3.4						
SONM	**Songino Array**	**89.67**	**321**	P	P	21 00 34.1	-0.4
	0.1nm,0.3s,baz=48,slow=4.3,SNR=3.5						
SONM				LR	LR	21 38 46.2	
	comp=Z,31nm,19.2s,baz=261,slow=34						
INK	**Inuvik**	**94.88**	**17**	LR	LR	21 36 57.8	
	comp=Z,40nm,20.0s,baz=81,slow=31						
GERES	**GERESS Array B**	**146.13**	**336**	PKPbc	PKPdf	21 07 15.9	0.0
	0.6nm,0.6s,baz=27,slow=

TXAR	**Lajitas Array**	**81.18**	**336**	P	**P**	**21 00 42.4**	**+0.3**
TXAR	**Lajitas Array**	**81.18**	**336**	P	**P**	**21 00 42.4**	**+0.3**
	1.2nm,0.9s,baz=148,slow=10,SNR=8.2						
JCT	**Junction City**	**81.27**	**339**	*e*P	**P**	**21 00 42.1**	**-0.4**
	8.2nm,0.9s						
DZM	**Mont Dzumac**	**90.67**	**235**	*e*LR	LR	21 30 21.6	
	103nm,24.1s						
TORD	**Torodi Ar. Bea**	**91.50**	**72**	P	**P**	**21 01 32.5**	**-0.7**
TORD	**Torodi Ar. Bea**	**91.50**	**72**	P	**P**	**21 01 32.5**	**-0.7**
	1.6nm,0.9s,baz=222,slow=4.7,SNR=8.3						
PDAR	**Pinedale Array**	**95.40**	**336**	P	**P**	**21 01 49.9**	**-0.9**
PDAR	**Pinedale Array**	**95.40**	**336**	P	**P**	**21 01 49.9**	**-0.9**
	0.3nm,0.7s,baz=128,slow=9.6,SNR=3.6						
YKA	**Yellowknife Ar**	**114.64**	**341**	PKP	PKPdf	21 07 04.5	-0.9
YKA	**Yellowknife Ar**	**114.64**	**341**	PKP	PKPdf	21 07 04.5	-0.9
	0.2nm,0.5s,baz=159,slow=2.3,SNR=5.5						
GERES	**GERESS Array B**	**123.63**	**53**	PKP	**PKPdf**	**21 07 23.4**	**+0.1**
GERES	**GERESS Array B**	**123.63**	**53**	PKP	**PKPdf**	**21 07 23.4**	**+0.1**
	3.6nm,0.9s,baz=298,slow=2.9,SNR=22						
KHC	**Kasperske Hory**	**123.74**	**52**	*e*PKPdf	PKPdf	21 07 14.5	-8.9
BRG	**Berggiesshubel**	**124.95**	**51**	*e*P	**PKPdf**	**21 07 25.6**	**0.0**
	6.2nm,1.3s						
ILAR	**Eielson Array**	**125.40**	**330**	PKP	**PKPdf**	**21 07 25.4**	**-0.7**
ILAR	**Eielson Array**	**125.40**	**330**	PKP	**PKPdf**	**21 07 25.4**	**-0.7**
	2.0nm,0.8s,baz=172,slow=2.0,SNR=16						
NOA	**NORSAR Array B**	**129.22**	**39**	PKP	**PKPdf**	**21 07 33.7**	**+0.1**
NOA	**NORSAR Array B**	**129.22**	**39**	PKP	**PKPdf**	**21 07 33.7**	**+0.1**
	0.4nm,0.5s,baz=338,slow=17,SNR=2.9						
BRTR	**Keskin Array B**	**130.12**	**72**	PKP	**PKPdf**	**21 07 35.2**	**-0.9**
BRTR	**Keskin Array B**	**130.12**	**72**	PKP	**PKPdf**	**21 07 35.2**	**-0.9**
	2.1nm,1.2s,baz=140,slow=4.0,SNR=4.0						
AKASG	**Malin Array Be**	**133.12**	**57**	PKP	**PKPdf**	**21 07 39.9**	**-1.3**
AKASG	**Malin Array Be**	**133.12**	**57**	PKP	**PKPdf**	**21 07 39.9**	**-1.3**
	1.2nm,0.6s,baz=252,slow=2.9,SNR=5.2						
KBZ	**Khabaz**	**138.11**	**72**	PKP	**PKPdf**	**21 07 51.6**	**+0.9**
KBZ	**Khabaz**	**138.11**	**72**	PKP	**PKPdf**	**21 07 51.6**	**+0.9**
	1.4nm,0.8s,baz=36,slow=7.1,SNR=3.7						
PETK	**Petropavlovsk-**	**146.46**	**299**	PKPbc	**PKPbc**	**21 08 06.2**	**-0.5**
PETK	**Petropavlovsk-**	**146.46**	**299**	PKPbc	**PKPbc**	**21 08 06.2**	**-0.5**
	5.4nm,0.7s,baz=140,slow=9.5,SNR=4.6						
CMAR	**Chiang Mai Arr**	**149.99**	**170**	PKP	**PKPdf**	**21 08 12.3**	**+0.2**
CMAR				PKPbc	**PKPbc**	**21 08 17.1**	**0.0**
CMAR	**Chiang Mai Arr**	**149.99**	**170**	PKP	**PKPdf**	**21 08 12.3**	**+0.2**
	2.1nm,0.8s,baz=242,slow=3.7,SNR=4.1						
CMAR				PKPbc	**PKPbc**	**21 08 17.1**	**0.0**
	2.4nm,0.9s,baz=214,slow=2.7,SNR=14						
CHTO	**Chiang Mai**	**150.34**	**170**	*e*PKPbc	**PKPbc**	**21 08 17.1**	**-0.7**
ABKAR	**Akbulak array**	**151.06**	**71**	*e*PKPbc	**PKPbc**	**21 08 18.4**	**-0.2**
MJAR	**Matsushiro Arr**	**152.57**	**257**	PKPbc	**PKPbc**	**21 08 20.4**	**-2.2**
MJAR	**Matsushiro Arr**	**152.57**	**257**	PKPbc	**PKPbc**	**21 08 20.3**	**-2.2**
	1.9nm,0.8s,baz=168,slow=3.7,SNR=5.4						
KSRS	**Korea Array**	**159.67**	**247**	PKPab	**PKPab**	**21 09 04.1**	**+0.5**
	1.2nm,0.7s,baz=131,slow=4.2,SNR=4.7						
KSAR	**Wonju Array Be**	**159.68**	**247**	PKPab	**PKPab**	**21 09 04.1**	**+0.5**
MKAR	**Makanchi Array**	**165.08**	**87**	PKP	**PKPdf**	**21 08 29.4**	**-0.5**
MKAR				PKPab	**PKPab**	**21 09 25.6**	**-1.5**
MKAR	**Makanchi Array**	**165.08**	**87**	PKP	**PKPdf**	**21 08 29.4**	**-0.5**
	0.4nm,0.8s,baz=207,slow=1.4,SNR=4.2						
MKAR				PKPab	**PKPab**	**21 09 25.6**	**-1.5**
	1.2nm,0.9s,baz=254,slow=5.3,SNR=8.5						
ZALV	**Zalesovo Beam**	**166.52**	**58**	PKP	**PKPdf**	**21 08 28.7**	**-2.1**
ZALV				PKPab	**PKPab**	**21 09 31.7**	**-1.5**
ZALV				PP	**PP**	**21 13 22.6**	**+1.0**
ZALV	**Zalesovo Beam**	**166.52**	**58**	PKP	**PKPdf**	**21 08 28.7**	**-2.1**
	0.4nm,0.4s,baz=280,slow=8.9,SNR=3.5						
ZALV				PKPab	**PKPab**	**21 09 31.7**	**-1.5**
	0.4nm,0.3s,baz=305,slow=5.1,SNR=3.5						
ZALV				PP	**PP**	**21 13 22.6**	**+1.0**
	0.2nm,0.3s,baz=284,slow=12,SNR=2.7						
SONM	**Songino Array**	**178.52**	**255**	PKP	**PKPdf**	**21 08 35.2**	**-1.2**
SONM				PKPab		21 10 26.1	
SONM				PP	**PP**	**21 14 25.9**	**+4.9**
SONM	**Songino Array**	**178.52**	**255**	PKP	**PKPdf**	**21 08 35.2**	**-1.2**
	0.7nm,1.0s,baz=177,slow=2.8,SNR=4.6						
SONM				PKPab		21 10 26.1	
	0.1nm,0.4s,baz=242,slow=3.1,SNR=2.8						
SONM				PP	**PP**	**21 14 25.9**	**+4.9**
	0.4nm,0.8s,baz=280,slow=2.6,SNR=4.6						

IDC 23 21:08:08.4±4.3, 12°65S×167°02E, h0km, mb3.9/4, mb1 3.9/4, mb1mx3.6/19, mbtmp3.8/4, Error ellipse: s-maj=157.5km s-min=82.6km az=172.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**80.69**	**323**	P	P	21 20 23.8	+0.3
	0.3nm,0.7s,baz=131,slow=4.4,SNR=3.5						
ILAR	**Eielson Array**	**84.64**	**18**	P	P	21 20 43.6	0.0
	0.4nm,0.6s,baz=240,slow=5.7,SNR=6.8						
MKAR	**Makanchi Array**	**95.54**	**317**	P	P	21 21 35.6	+0.1
	0.4nm,0.6s,baz=91,slow=6.4,SNR=7.5						
ZALV	**Zalesovo Beam**	**95.58**	**324**	P	P	21 21 34.8	-0.7
	0.3nm,0.6s,baz=101,slow=2.2,SNR=2.9						
ARCES	**ARCESS Array B**	**118.19**	**346**	PKP	PKPdf	21 26 56.9	-0.2
	5.2nm,1.0s,baz=65,slow=2.8,SNR=8.8						

IDC 23 21:24:45.4±1.1, 33°31N×80°20E, h0km, mb3.2/7, mb1 3.3/10, mb1mx3.2/30, mbtmp3.2/10, ML3.0/3, Error ellipse: s-maj=34.0km s-min=21.3km az=69.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**10.34**	**336**	Pn	Pn	21 27 19.0	+3.8
	0.1nm,0.3s,baz=156,slow=7.6,SNR=4.2						
MKAR	**Makanchi Array**	**13.57**	**6**	Pn	Pn	21 27 57.2	-1.9
	0.1nm,0.3s,baz=181,slow=13,SNR=6.7						
KURBB	**Kurchatov Arra**	**17.35**	**356**	P	Pn	21 28 47.4	-1.4
	0.0nm,0.3s,baz=180,slow=11,SNR=3.2						
ZALV	**Zalesovo Beam**	**20.90**	**8**	P	P	21 29 29.3	+0.2
	0.2nm,0.3s,baz=213,slow=10,SNR=2.2						
BVAR	**Borovoye Array**	**20.93**	**345**	P	P	21 29 30.3	+0.8
	0.8nm,0.7s,baz=146,slow=10,SNR=4.1						
SONM	**Songino Array**	**24.48**	**46**	P	P	21 30 07.6	+1.3
	0.2nm,0.7s,baz=218,slow=9.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**73.37**	**275**	P	P	21 36 19.8	+0.2
	0.4nm,0.6s,baz=43,slow=4.6,SNR=5.4						
WRA	**Warramunga Arr**	**73.97**	**128**	P	P	21 36 22.5	-0.4
	0.1nm,0.4s,baz=326,slow=5.6,SNR=6.0						
ASAR	**Alice Springs**	**76.33**	**130**	P	P	21 36 37.2	+0.7
	0.3nm,0.7s,baz=303,slow=5.3,SNR=3.3						
YKA	**Yellowknife Ar**	**83.79**	**7**	P	P	21 37 14.6	-1.6
	0.2nm,0.6s,baz=340,slow=5.2,SNR=4.6						

*IDC **23** 21:30:12.7±6.8, 37°01N×71°78E, h92km±46km, mb3.4/4, mb1 3.4/8, mb1mx3.1/30, mbtmp3.3/8, Error ellipse: s-maj=68.4km s-min=32.7km az=143.0*

*ISCJB **23** 21:30:15.0±0.7, 37°10N±0°05×72°1E±0°1, h142km, mb3.5/4, Error ellipse: s-maj=14.0km s-min=5.9km az=160.9*

ISC 23 21:30:15.9±1.0, 37°13N±0°08×72°1E±0°1, h142km, n25, σ1§43/23, mb3.3/4, 1C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.14**	**13**	P	**Pn**	**21 31 31.1**	**-0.2**
	SNR=43						
UCH	**Uchtor**	**5.41**	**19**	P	**Sn**	**21 32 33.5**	**-3.2**
	SNR=6.5						
KZA	**Kyzart**	**5.50**	**25**	P	**Pn**	**21 31 37.4**	**+1.2**
	SNR=7.8						
EKS2	**Erkin-Say**	**5.67**	**12**	P	**Pn**	**21 31 38.1**	**0.0**
	SNR=6.2						
AAK	**Ala-Archa**	**5.79**	**18**	P	**Pn**	**21 31 40.6**	**+0.7**
	SNR=8.5						
AAK	**Ala-Archa**	**5.79**	**18**	P	**Pn**	**21 31 40.5**	**+0.7**
	1.4nm,0.3s,baz=209,slow=7.7,SNR=28						
AAK				S	**Sn**	**21 32 45.0**	**-0.4**
	1.0nm,0.3s,baz=318,slow=22,SNR=15						
KK31	**Karatay Array**	**6.09**	**349**	P	**Pn**	**21 31 40.6**	**-3.0**
	0.8nm,0.3s,baz=173,slow=12,SNR=54						
KK31				⇓S	Sn	21 32 44.2	-8.1
	2.8nm,0.5s,baz=173,slow=22,SNR=5.0						
CHMS	**Chumysh**	**6.20**	**18**	P	**Pn**	**21 31 45.4**	**+0.3**
	SNR=5.6						
USP	**Ospenovka**	**6.39**	**16**	P	**Pn**	**21 31 47.8**	**0.0**
	SNR=6.9						
PYUN	**Piuthan**	**12.84**	**131**	*e*P	**Pn**	**21 33 12.1**	**-1.4**
	5.8nm,0.3s						
DANN	**Dangsing**	**13.13**	**128**	*e*P	**Pn**	**21 33 15.3**	**-2.1**
KOLN	**Koldanda**	**13.45**	**131**	*e*P	**Pn**	**21 33 20.3**	**-1.0**
	5.2nm,0.6s						
KURBB	**Kurchatov Arra**	**14.25**	**17**	P	**Pn**	**21 33 30.2**	**-0.9**
	0.0nm,0.3s,baz=206,slow=10,SNR=2.6						
PKIN	**Phulchoki**	**14.71**	**127**	*e*P	**Pn**	**21 33 36.9**	**-0.4**
	2.4nm,0.3s						
GUN	**Gumba**	**14.79**	**124**	*e*P	**Pn**	**21 33 37.5**	**-1.0**
	4.1nm,0.5s						
AB31	**Akbulak array**	**15.00**	**328**	⇑P	Pn	21 33 35.3	-5.2
	1.0nm,0.5s,baz=117,slow=52,SNR=12						
BVAR	**Borovoye Array**	**15.94**	**356**	P	**P**	**21 33 54.4**	**+1.6**
	0.2nm,0.3s,baz=155,slow=9.6,SNR=4.0						
TAPN	**Taplejung**	**16.39**	**122**	*e*P	**Pn**	**21 33 58.2**	**+0.1**
ODAN	**Odare**	**16.49**	**124**	*e*P	**P**	**21 34 00.6**	**+1.2**
AKTO	**Aktyubinsk**	**16.71**	**327**	P	**Pn**	**21 34 01.8**	**+0.3**
	0.2nm,0.3s,baz=139,slow=10,SNR=3.6						
ZALV	**Zalesovo Beam**	**18.97**	**24**	P	**Pn**	**21 34 28.9**	**+0.6**
	0.3nm,0.3s,baz=209,slow=11,SNR=7.1						
ARCES	**ARCESS Array B**	**40.91**	**337**	P	**P**	**21 37 45.8**	**+2.0**
	5.5nm,1.2s,baz=116,slow=8.2,SNR=5.4						
TORD	**Torodi Ar. Bea**	**66.63**	**269**	P	**P**	**21 40 50.8**	**-0.7**
	0.6nm,1.0s,baz=59,slow=5.6,SNR=3.3						
INK	**Inuvik**	**73.13**	**10**	P	P	21 41 34.2	+3.9
	0.4nm,0.7s,baz=315,slow=8.6,SNR=3.1						
YKA	**Yellowknife Ar**	**80.57**	**3**	P	P	21 42 15.4	+3.4
	0.2nm,0.4s,baz=349,slow=5.6,SNR=5.7						

WEL 23 21:31:54.7±0.4, 36°83S×176°98E, h251km±4km, ML4.1/9, 7C-4D, Error ellipse: s-maj=4.7km s-min=4.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**1.07**	**199**	PN	Pn	21 32 31.0	+0.8
MARZ	**Manawahe**	**1.18**	**192**	*e*PN	Pn	21 32 32.2	+1.3
MXZ	**Matakaoa Point**	**1.28**	**125**	PN	Pn	21 32 31.4	-0.1
MXZ				SN	S	21 33 00.4	-0.2
URZ	**Urewera**	**1.43**	**176**	PN	Pn	21 32 32.4	-0.1
URZ				SN	S	21 33 02.1	-0.3
MWZ	**Matawai**	**1.56**	**164**	PN	Pn	21 32 33.8	+0.2
PUZ	**Puketiti**	**1.60**	**141**	⇑PN	Pn	21 32 33.9	+0.1
PUZ				*e*SN	S	21 33 04.2	-0.6
CNGZ	**Carnagh Statio**	**1.91**	**150**	PN	Pn	21 32 37.1	+0.6
RAHZ	**Arahi**	**2.08**	**178**	⇓PN	Pn	21 32 38.5	+0.5
PRGZ	**Paritu Road**	**2.21**	**161**	PN	Pn	21 32 39.6	+0.4
KNZ	**Kokohu**	**2.25**	**166**	PN	Pn	21 32 39.5	0.0
KNZ				SN	S	21 33 13.7	-1.3
NMHZ	**Naumai**	**2.27**	**183**	PN	Pn	21 32 40.4	+0.6
BKZ	**Black Stump Fm**	**2.36**	**189**	PN	Pn	21 32 40.1	-0.6
BKZ				SN	S	21 33 16.2	-0.9
BKZ				*e*SN		21 33 16.4	
MHGZ	**Mahia Peninsul**	**2.43**	**163**	PN	Pn	21 32 41.9	+0.6
OTVZ	**Oturere**	**2.55**	**204**	PN	Pn	21 32 43.2	+0.5
NGZ	**Ngauruhoe**	**2.58**	**205**	PN	Pn	21 32 43.5	+0.5
MCHZ	**McNeill Hill**	**2.62**	**185**	⇓PN	Pn	21 32 43.5	+0.4
FWVZ	**Far West T-bar**	**2.67**	**205**	⇑PN	Pn	21 32 43.9	-0.1
TRVZ	**Turoa**	**2.71**	**204**	⇑PN	Pn	21 32 44.5	+0.1
WNVZ	**Wahianoa**	**2.72**	**203**	PN	Pn	21 32 44.4	0.0
MOVZ	**Moawhango**	**2.75**	**200**	PN	Pn	21 32 44.1	-0.5
BHHZ	**Black Hill Sta**	**2.75**	**195**	⇑PN	Pn	21 32 44.1	-0.5
BHHZ				SN	S	21 33 23.9	-0.3
PKVZ	**Pokaka**	**2.77**	**207**	PN	Pn	21 32 45.2	+0.3
MTVZ	**Mangateitei**	**2.81**	**205**	PN	Pn	21 32 45.4	+0.1
KAHZ	**Kahuranaki**	**2.96**	**182**	⇑PN	Pn	21 32 46.6	-0.3
PNHZ	**Pukenui**	**3.14**	**191**	PN	Pn	21 32 47.8	-1.0
PXZ	**Pawanui**	**3.20**	**182**	⇑PN	Pn	21 32 48.5	-0.8
PXZ				SN	S	21 33 31.0	-1.6
WAZ	**Wanganui**	**3.31**	**208**	⇓PN	Pn	21 32 50.7	0.0
TSZ	**Takapari Road**	**3.32**	**194**	⇑PN	Pn	21 32 49.7	-1.0
PRHZ	**Porangahau**	**3.44**	**184**	PN	Pn	21 32 51.0	-1.0
DVHZ	**Dannevirke**	**3.52**	**190**	PN	Pn	21 32 51.7	-1.3
POWZ	**Post Office Ro**	**3.68**	**195**	PN	Pn	21 32 53.5	-1.3
BFZ	**Birch Farm**	**3.89**	**188**	PN	Pn	21 32 55.7	-1.4
MRZ	**Mangatainoka R**	**3.98**	**196**	⇓PN	Pn	21 32 56.5	-1.7
MRZ				SN	S	21 33 46.4	-2.3
TIWZ	**Tintock**	**4.03**	**192**	PN	Pn	21 32 57.5	-1.4
HOWZ	**Holdsworth Sta**	**4.22**	**195**	PN	Pn	21 32 59.1	-1.9
MTW	**Mount Morrison**	**4.47**	**194**	PN	Pn	21 33 01.9	-2.1
CAW	**Cannon Point**	**4.52**	**199**	*e*PN	Pn	21 33 02.4	-2.2
DUWZ	**D'Urville Isla**	**4.63**	**210**	PN	Pn	21 33 03.9	-2.1
TRWZ	**Traveller**	**4.67**	**192**	PN	Pn	21 33 05.0	-1.4
PAWZ	**Paruwai Farm**	**4.70**	**194**	PN	Pn	21 33 05.0	-1.8
MSWZ	**Moikau Station**	**4.77**	**196**	PN	Pn	21 33 05.1	-2.6
TCW	**Tory Channel**	**4.86**	**205**	PN	Pn	21 33 06.4	-2.2
PLWZ	**Palliser**	**4.92**	**195**	PN	Pn	21 33 07.0	-2.5
NNZ	**Nelson**	**5.20**	**212**	PN	Pn	21 33 10.9	-2.0
BSWZ	**Blackbirch Sta**	**5.44**	**205**	PN	Pn	21 33 13.7	-2.1
THZ	**Tophouse**	**5.85**	**211**	PN	Pn	21 33 19.1	-1.9
KHZ	**Kahutara**	**6.18**	**204**	PN	Pn	21 33 22.6	-2.3
DSZ	**Denniston Nort**	**6.34**	**218**	PN	Pn	21 33 24.5	-2.6
LTZ	**Lake Taylor**	**6.96**	**210**	PN	Pn	21 33 32.4	-2.5
MQZ	**McQueen's Vall**	**7.62**	**204**	PN	Pn	21 33 39.5	-3.6

GUC 23 21:34:38.5±0.8, 31°41S×71°72W, h3km±3km, MD3.5, ML2.7, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.51**	**159**	⇓*i*P	Pg	21 34 49.0	+0.8
CHNG				*i* S	Sg	21 34 56.3	+1.5
CHNG				AML	AML	21 34 56.7	
	comp=E,397nm,0.5s						
CMCH	**Combarbala**	**0.66**	**69**	⇑*i*P	Pb	21 34 52.0	-0.7
CMCH				*i* S	Sb	21 35 02.1	-0.3
CMCH				AML	AML	21 35 03.5	
	comp=N,1μm,0.3s						
TLL	**Tololo Astrono**	**1.47**	**33**	*e*P	Pn	21 35 05.6	-0.6
TLL				*i* S	Sb	21 35 25.9	-0.1
TLL				AML	AML	21 35 28.6	
	comp=N,165nm,0.5s						
ROCH	**El Roble**	**1.67**	**159**	*e*P	Pn	21 35 08.4	-0.6
ROCH				AML	AML	21 35 34.6	
	comp=N,144nm,0.3s						
PEL	**Peldehue**	**1.94**	**153**	*e*P	Pn	21 35 12.1	-0.3
PEL				*i* S	Sb	21 35 38.8	-0.4
PEL				AML	AML	21 35 41.7	
	comp=E,210nm,0.4s						
LCO	**Las Campanas**	**2.55**	**20**	*e*P	Pn	21 35 20.0	-1.1
LCO				*i* S	Sn	21 35 53.2	+0.3
LCO				AML	AML	21 35 57.0	
	comp=E,50nm,0.4s						

IDC 23 21:37:55.6±2.0, 2°04N×127°50E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/22, mbtmp3.6/5, Error ellipse: s-maj=211.7km s-min=20.1km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.86**	**163**	P	P	21 43 00.9	+0.1
	0.8nm,0.4s,baz=341,slow=9.9,SNR=15						
ASAR	**Alice Springs**	**26.30**	**167**	P	P	21 43 32.6	-0.6
	0.6nm,0.5s,baz=345,slow=6.7,SNR=9.1						
STKA	**Stephens Creek**	**36.29**	**160**	P	P	21 45 00.9	-0.2
	0.9nm,0.3s,baz=335,slow=6.2,SNR=3.3						
MKAR	**Makanchi Array**	**59.37**	**325**	P	P	21 48 01.0	+1.2
	0.2nm,0.4s,baz=109,slow=7.1,SNR=5.7						
KURBB	**Kurchatov Arra**	**63.56**	**328**	P	P	21 48 27.3	-0.8
	0.2nm,0.5s,baz=131,slow=6.5,SNR=3.9						

*ISCJB **23** 21:45:09.6±0.6, 36°35N±0°05×70°68E±0°09, h188km, mb3.4/8, Error ellipse: s-maj=10.6km s-min=6.9km az=163.0*

*IDC **23** 21:45:10.3±4.1, 36°34N×70°93E, h188km±36km, mb3.2/9, mb1 3.2/14, mb1mx3.0/32, mbtmp3.0/14, Error ellipse: s-maj=29.2km s-min=17.4km az=26.0*

*NNC **23** 21:45:11.4±10.0, 36°87N×70°73E, h0km, mb4.2, mpv4.1, Error ellipse: s-maj=80.3km s-min=71.3km az=15.0*

ISC 23 21:45:11.4±0.8, 36°48N±0°07×70°83E±0°10, h188km, n32, σ1§63/34, mb3.4/8, 3C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.07**	**21**	P	**Pn**	**21 46 41.2**	**+1.5**
	SNR=139						
KZA	**Kyzart**	**6.56**	**30**	P	**Pn**	**21 46 47.2**	**+1.0**
	SNR=13						
EKS2	**Erkin-Say**	**6.58**	**19**	P	**Pn**	**21 46 47.8**	**+1.7**
	SNR=14						
KK31	**Karatay Array**	**6.62**	**358**	⇓P	**Pn**	**21 46 47.7**	**+1.2**
	3.4nm,0.3s,baz=183,slow=12,SNR=186						
KK31				⇑S	**Sn**	**21 47 58.6**	**-3.2**
	6.5nm,0.6s,baz=190,slow=26,SNR=6.7						
AAK	**Ala-Archa**	**6.77**	**24**	P	**Pn**	**21 46 50.1**	**+1.5**
	SNR=33						
AAK	**Ala-Archa**	**6.77**	**24**	P	**Pn**	**21 46 50.4**	**+1.8**
	3.6nm,0.3s,baz=187,slow=6.2,SNR=116						
AAK				S	**Sn**	**21 48 04.6**	**-1.0**
	1.2nm,0.3s,baz=292,slow=23,SNR=6.5						
KBK	**Karagaybulak**	**6.95**	**26**	P	**Pn**	**21 46 52.7**	**+1.8**
	SNR=16						
ULHL	**Ulahol**	**7.13**	**34**	P	**Pn**	**21 46 55.2**	**+1.9**
	SNR=16						
CHMS	**Chumysh**	**7.18**	**24**	P	**Pn**	**21 46 55.9**	**+2.0**
	SNR=8.4						
USP	**Ospenovka**	**7.35**	**21**	P	**Pn**	**21 46 57.6**	**+1.6**
	SNR=8.9						
TKM2	**Tokmak 2**	**7.41**	**28**	⇑P	**Pn**	**21 46 58.3**	**+1.2**
	19nm,0.8s						
TKM2				⇑S	**Sn**	**21 48 17.3**	**-3.5**
	2.7nm,1.1s						
TKM2	**Tokmak 2**	**7.41**	**28**	P	**Pn**	**21 46 58.2**	**+1.2**
	SNR=21						
PYUN	**Piuthan**	**13.24**	**126**	*e*P	**Pn**	**21 48 12.1**	**-0.5**
MKAR	**Makanchi Array**	**13.39**	**36**	P	**Pn**	**21 48 14.8**	**+0.7**
	0.1nm,0.3s,baz=224,slow=18,SNR=8.0						
KKN	**Kakani**	**14.98**	**121**	*e*P	**P**	**21 48 37.2**	**+2.1**
	3.2nm,0.4s						
AB31	**Akbulak array**	**15.04**	**332**	P	**P**	**21 48 37.3**	**+2.0**
	0.7nm,0.5s,baz=148,slow=12,SNR=15						
KURBB	**Kurchatov Arra**	**15.19**	**19**	P	**Pn**	**21 48 35.6**	**-0.6**
	0.0nm,0.3s,baz=210,slow=11,SNR=5.7						
PKIN	**Phulchoki**	**15.20**	**122**	*e*P	**P**	**21 48 37.9**	**+0.4**
GUN	**Gumba**	**15.33**	**120**	*e*P	**P**	**21 48 42.2**	**+3.2**
RAMN	**Ramite**	**16.42**	**121**	*e*P	**P**	**21 48 50.4**	**-0.6**
	7.2nm,0.7s						
BVAR	**Borovoye Array**	**16.55**	**359**	P	**Pn**	**21 48 54.1**	**+1.4**
	0.2nm,0.3s,baz=156,slow=11,SNR=4.0						
AKTO	**Aktyubinsk**	**16.73**	**330**	P	**P**	**21 48 54.0**	**+0.1**
	0.3nm,0.3s,baz=121,slow=12,SNR=5.0						
ODAN	**Odare**	**17.03**	**120**	*e*P	**P**	**21 48 57.0**	**-0.7**
ZALV	**Zalesovo Beam**	**20.00**	**25**	P	**P**	**21 49 29.7**	**+0.4**
	1.9nm,0.4s,baz=222,slow=11,SNR=12						
SONM	**Songino Array**	**28.46**	**55**	P	P	21 50 45.9	-2.9
	0.2nm,0.9s,baz=256,slow=12,SNR=2.9						
FINES	**FINESS Array B**	**37.42**	**326**	P	**P**	**21 52 06.3**	**+0.2**
	0.9nm,0.8s,baz=110,slow=16,SNR=3.5						
ARCES	**ARCESS Array B**	**41.11**	**339**	P	**P**	**21 52 37.0**	**+0.5**
	2.8nm,0.9s,baz=96,slow=7.4,SNR=6.7						
HFS	**Hagfors**	**43.00**	**322**	P	**P**	**21 52 52.2**	**+0.5**
	1.3nm,0.9s,baz=104,slow=12,SNR=4.8						
TORD	**Torodi Ar. Bea**	**65.58**	**269**	P	**P**	**21 55 33.7**	**-1.6**
	0.8nm,0.9s,baz=46,slow=5.7,SNR=6.8						
YKA	**Yellowknife Ar**	**81.28**	**3**	P	**P**	**21 57 05.8**	**-0.3**
	0.3nm,0.5s,baz=348,slow=5.1,SNR=7.2						
WRA	**Warramunga Arr**	**82.10**	**122**	P	**P**	**21 57 09.4**	**-1.6**
	0.3nm,0.6s,baz=325,slow=5.0,SNR=8.3						
ASAR	**Alice Springs**	**84.36**	**125**	P	**P**	**21 57 21.3**	**-1.3**
	0.4nm,0.7s,baz=308,slow=4.6,SNR=3.3						

TAP 23 21:45:32.4, 24°13N×121°53E, h25km, ML3.8, 8C-5D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.07**	**129**	⇑*i*P	Pb	21 45 37.0	+0.2
	baz=125						
TWD				*i* S	Sb	21 45 40.0	+0.2
	baz=125						
HWA	**Hwalien**	**0.16**	**156**	⇑*i*P	Pb	21 45 38.0	+0.3
	baz=159						
HWA				*e*S	Sb	21 45 41.8	+0.7
	baz=159						
WHF	**Hehuan Shan**	**0.24**	**274**	⇓*i*P	Pb	21 45 39.2	0.0
	baz=280						
WHF				*e*S	Sb	21 45 43.9	0.0
	baz=280						
ESF	**Shoufeng Towns**	**0.26**	**185**	*e*P	Pb	21 45 38.5	-0.3
	baz=190						
ESF				*e*S	Sb	21 45 43.3	+0.2

CHN5	**Tsauling** baz=234	**0.94**	**236**	*e*P		Pb	21 45 50.9	+0.6
CHN5	baz=234			S		Sn	21 46 04.8	+1.7
NWF	**Wu-fen Shan** baz=21	**0.97**	**14**	*e*P		Pb	21 45 50.7	0.0
NWF	baz=21			*e*S		Sn	21 46 03.7	+0.1
TWB1	**Santiao Chiao** baz=23	**0.97**	**25**	*e*P		Pb	21 45 50.8	+0.2
TWB1	baz=23			*e*S		Sn	21 46 04.2	+0.6
TWS1	**Kuangyinshan** baz=7.0	**0.97**	**354**	P		Pb	21 45 51.5	+0.8
TWS1	baz=7.0			S		Sn	21 46 06.1	+2.5
WGK	**Gukeng** baz=242	**0.99**	**244**	P		Pb	21 45 52.2	+1.3
WGK	baz=242			*e*S		Sn	21 46 06.0	+2.0
CHKT	**Chengkung** baz=187	**1.03**	**189**	*e*P		Pn	21 45 49.7	-1.6
ELDTW	**Lidau** baz=194	**1.05**	**207**	*e*P		Pn	21 45 49.9	-1.9
ELDTW	baz=194			*e*S		Sn	21 46 05.6	0.0
TWY	**Chenhua** baz=356	**1.15**	**3**	P		Pb	21 45 54.1	+0.5
TWY	baz=356			*e*S		Sb	21 46 09.2	+1.1
CHN4	**Tsaushan** baz=214	**1.16**	**228**	*e*P		Pb	21 45 54.7	+0.9
CHN4	baz=214			*e*S		Sb	21 46 11.6	+3.2
WTCT	**Ta-ch'eng** baz=255	**1.17**	**257**	*e*P		Pb	21 45 55.6	+1.6
WTCT	baz=255			*e*S		Sb	21 46 11.2	+2.3
CHY	**Chiayi** baz=236	**1.19**	**239**	*e*P		Pb	21 45 55.3	+1.0
CHY	baz=236			*e*S		Sb	21 46 12.3	+3.0
WTP	**Ta-pu** baz=221	**1.22**	**224**	P		Pb	21 45 55.5	+0.7
WTP	baz=221			*e*S		Sb	21 46 13.2	+3.0
TWK	**Hsinying** baz=212	**1.28**	**228**	*e*P		Pb	21 45 56.6	+0.6
TWK	baz=212			*e*S		Sb	21 46 14.0	+1.9
WSF	**Szhu** baz=245	**1.29**	**248**	*e*P		Pb	21 45 56.3	+0.2
WSF	baz=245			*e*S		Sb	21 46 14.4	+2.1
CHN1	**Nanshi** baz=209	**1.31**	**225**	*e*P		Pb	21 45 57.2	+0.7
CHN1	baz=209			*e*S		Sb	21 46 15.0	+2.0
TWG	**Pinlang** baz=183	**1.37**	**198**	*e*P		Pn	21 45 54.7	-1.3
YOJ	**Yonaguni jima** baz=91	**1.39**	**76**	⇑P		Pn	21 45 56.0	-0.3
YOJ	baz=91			*e*S		Sb	21 46 14.8	-0.2
CHN8	**Yiju** baz=221	**1.44**	**238**	*e*P		Pb	21 45 58.8	+0.2
CHN8	baz=221			*e*S		Sb	21 46 18.2	+1.8
CHN3	**Shinhua** baz=222	**1.50**	**226**	*e*S		Sb	21 46 22.1	+4.0
SCLT	**Jiali** baz=213	**1.55**	**233**	*e*P		Pb	21 46 00.3	-0.2
SCLT	baz=213			*e*S		Sb	21 46 21.8	+2.2
ECL	**Taimali** baz=186	**1.61**	**199**	*e*P		Pn	21 45 58.5	-0.9
TAI1	**Yung-k'ang** baz=221	**1.61**	**228**	*e*P		Pb	21 46 01.6	+0.1
TWM1	**Shoushan** baz=214	**1.65**	**218**	*e*P		Pb	21 46 01.8	-0.5
EAST	**Anshuo** baz=188	**1.85**	**200**	*e*P		Pb	21 46 04.4	-1.1
PNG	**Penghu** baz=246	**1.89**	**253**	*e*P		Pn	21 46 03.2	0.0
WDGT	**Dungji** baz=239	**1.92**	**244**	*e*P		Pn	21 46 04.5	+0.9
WDGT	baz=239			*e*S		Sn	21 46 28.6	+1.6
SCZT	**Fangliau** baz=188	**1.94**	**206**	*e*P		Pb	21 46 05.5	-1.5
TWK1	**Hengchun** baz=183	**2.27**	**197**	*e*P		Pn	21 46 09.7	+1.3
KNM	**Kinmen** baz=271	**2.84**	**276**	*e*P		Pn	21 46 17.2	+1.0

SZGRF ***23*** *21:48:57.8, 41.70N× 13.89E, h10km, Southern Italy*
ISCJB ***23*** *21:49:00.7±0.2, 42.26N±0.01×13.46E±0.01, h9km±1km, mb4.0/25, MS3.4/8, Error ellipse: s-maj=2.1km s-min=1.5km az=32.0*
ROM ***23*** *21:49:00.8±0.1, 42.23N× 13.49E, h10km± 1km, Ml4.2/40, Error ellipse: s-maj=0.9km s-min=0.7km az=59.0*
NEIC ***23*** *21:49:00.0, 42.23N× 13.48E, h9km, mb4.2/3, ML4.2(PDG), ML4.0(VIE), MW4.3(ROM), After ROM.*
NEIC Felt [IV] at L'Aquila, Pescara and Trasacco; [III] at Aielli, Avezzano, Borgorose, Celano, Cepagatti, Chieti Scalo, Introdacqua, Loreto Aprutino, Luco dei Marsi, Magliano de' Marsi, Manoppello, Pacentro, Pettorano sul Gizio, Popoli, Pratola Peligna, Raiano, San Benedetto dei Marsi, San Demetrio ne' Vestini, San Flaviano, Scanno, Secinaro, Sulmona and Vittorito. Felt [II] throughout Abruzzo and in parts of Lazio, Marche, Molise and Umbria.
LDG ***23*** *21:49:01.0±0.1, 42.22N× 13.48E, h2km, Ml3.9/11, Error ellipse: s-maj=3.5km s-min=2.4km az=39.0*
IDC ***23*** *21:49:01.2±0.8, 42.33N× 13.28E, h0km, mb3.9/16, mb1 4.0/25, mb1mx4.0/38, mbtmp3.9/25, ML3.6/7, MS3.4/12, Ms1 3.4/12, ms1mx3.1/45, Error ellipse: s-maj=12.9km s-min=12.3km az=45.0*
CSEM ***23*** *21:49:01.8±0.1, 42.27N× 13.45E, h2km, mb4.2/6, ML4.6/7, Mw4.3, Error ellipse: s-maj=2.4km s-min=2.0km az=14.0*
MOS ***23*** *21:49:01.9±0.9, 42.38N× 13.48E, h10km, mb4.5/10, Error ellipse: s-maj=5.1km s-min=3.3km az=81.0*
PDG ***23*** *21:49:02.3±0.3, 42.32N× 13.56E, h11km, ML4.1/7, Error ellipse: s-maj=0.6km s-min=1.2km az=0.0*
BEO ***23*** *21:49:03.3±0.9, 42.27N× 13.56E, h0km, ML4.2/6*
PRU ***23*** *21:49:03.4, 42.31N× 13.54E, h0km, M4.2*
STR ***23*** *21:49:13.5± 1.2, 42.75N× 12.75E, h10km, Ml3.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 23 21:49:02.1±0.7, 42.25N±0.01×13.47E±0.01, h9km±4km, n624, σ1§54/727, mb4.1/25, MS3.5/8, 45C-49D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
AQU	**L'Aquila**	**0.11**	**335**	*e*Pg		**Pg**	**21**	**49**	**04.2**	**-0.7**
AQU				*e*Sg		**Sg**	**21**	**49**	**06.0**	**-0.7**
AQU	**L'Aquila**	**0.11**	**335**	Pg		**Pg**	**21**	**49**	**04.6**	**-0.3**
AQU				Sg		**Sg**	**21**	**49**	**07.0**	**+0.2**
	62μm,0.5s									
AQU	**L'Aquila**	**0.11**	**335**	*e*P		**Pg**	**21**	**49**	**04.2**	**-0.7**
AQU				*e*Sg		**Sg**	**21**	**49**	**06.1**	**-0.7**
PTQR	**Pietraquaria**	**0.23**	**192**	P		**Pg**	**21**	**49**	**06.4**	**-0.5**
PTQR	**Pietraquaria**	**0.23**	**192**	⇑*i*Pg		**Pg**	**21**	**49**	**06.4**	**-0.5**
PTQR	**Pietraquaria**	**0.23**	**192**	⇑*i*Pg		**Pg**	**21**	**49**	**06.4**	**-0.5**
FIAM	**Fiamignano**	**0.26**	**274**	P		**Pg**	**21**	**49**	**07.2**	**-0.3**
FIAM				S		**Sg**	**21**	**49**	**11.6**	**+0.7**
FIAM	**Fiamignano**	**0.26**	**274**	⇑*i*Pg		**Pg**	**21**	**49**	**07.1**	**-0.3**
FIAM				Sg		**Sg**	**21**	**49**	**11.6**	**+0.7**
	35μm,1.0s									
FIAM	**Fiamignano**	**0.26**	**274**	P		**Pg**	**21**	**49**	**07.2**	**-0.3**
FIAM				Sg		**Sg**	**21**	**49**	**11.6**	**+0.7**
	35μm,1.0s									
CAMP	**Campotosto**	**0.29**	**351**	Pg		**Pg**	**21**	**49**	**07.2**	**-0.7**
CAMP				Sg		**Sb**	**21**	**49**	**13.6**	**-1.0**
	20μm,0.8s									
CAMP	**Campotosto**	**0.29**	**351**	Pg		**Pg**	**21**	**49**	**07.2**	**-0.7**
CAMP				Sg		**Sb**	**21**	**49**	**13.6**	**-1.0**
	20μm,0.8s									
VCEL	**Villa Celiera**	**0.31**	**63**	Pg		**Pg**	**21**	**49**	**07.4**	**-1.0**
VCEL				Sg		**Sg**	**21**	**49**	**13.7**	**+1.1**
	52μm,0.6s									
VCEL	**Villa Celiera**	**0.31**	**63**	Pg		**Pg**	**21**	**49**	**07.4**	**-1.0**
VCEL				Sg		**Sg**	**21**	**49**	**13.7**	**+1.1**
	52μm,0.6s									
TERO	**Teramo**	**0.38**	**15**	P		**Pg**	**21**	**49**	**08.6**	**-1.1**
TERO				S		**Sg**	**21**	**49**	**15.5**	**+0.7**
TERO	**Teramo**	**0.38**	**15**	Pg		**Pg**	**21**	**49**	**08.6**	**-1.1**
TERO				Sg		**Sg**	**21**	**49**	**15.5**	**+0.7**
	29μm,0.8s									
TERO	**Teramo**	**0.38**	**15**	Pg		**Pg**	**21**	**49**	**08.6**	**-1.1**
TERO				Sg		**Sg**	**21**	**49**	**15.5**	**+0.7**
	29μm,0.8s									
VVLD	**Villa Vallelon**	**0.40**	**163**	P		**Pg**	**21**	**49**	**08.8**	**-1.1**
VVLD				S		**Sg**	**21**	**49**	**14.7**	**-0.5**
VVLD	**Villa Vallelon**	**0.40**	**163**	Pg		**Pg**	**21**	**49**	**08.8**	**-1.1**
VVLD				Sg		**Sg**	**21**	**49**	**14.7**	**-0.5**
	18μm,0.5s									
VVLD	**Villa Vallelon**	**0.40**	**163**	P		**Pg**	**21**	**49**	**08.9**	**-1.1**
VVLD				Sg		**Sg**	**21**	**49**	**14.7**	**-0.5**
	18μm,0.5s									
INTR	**Introdacqua**	**0.40**	**126**	P		**Pg**	**21**	**49**	**08.9**	**-1.2**
INTR				S		**Sg**	**21**	**49**	**15.5**	**+0.1**
INTR	**Introdacqua**	**0.40**	**126**	Pg		**Pg**	**21**	**49**	**08.9**	**-1.2**
INTR				Sg		**Sg**	**21**	**49**	**14.8**	**-0.6**
	31μm,0.6s									
INTR	**Introdacqua**	**0.40**	**126**	Pg		**Pg**	**21**	**49**	**08.9**	**-1.2**
INTR				Sg		**Sg**	**21**	**49**	**14.8**	**-0.6**
	31μm,0.6s									
INTR				S		**Sg**	**21**	**49**	**15.5**	**+0.1**
CERT	**Cerreto**	**0.47**	**230**	P		**Pg**	**21**	**49**	**10.5**	**-0.8**
CERT	**Cerreto**	**0.47**	**230**	Pg		**Pg**	**21**	**49**	**10.5**	**-0.8**
CERT				Sg		**Sg**	**21**	**49**	**18.2**	**+0.7**
	32μm,0.8s									
CERT	**Cerreto**	**0.47**	**230**	Pg		**Pg**	**21**	**49**	**10.5**	**-0.8**
CERT				Sg		**Sg**	**21**	**49**	**18.2**	**+0.7**
	32μm,0.8s									
GUAR	**Guarcino**	**0.47**	**194**	P		**Pg**	**21**	**49**	**10.3**	**-1.0**
GUAR				S		**Sg**	**21**	**49**	**17.9**	**+0.4**
GUAR	**Guarcino**	**0.47**	**194**	Pg		**Pg**	**21**	**49**	**10.3**	**-1.0**
GUAR				Sg		**Sg**	**21**	**49**	**16.1**	**-1.4**
	9μm,0.5s									
GUAR	**Guarcino**	**0.47**	**194**	Pg		**Pg**	**21**	**49**	**10.3**	**-1.0**
GUAR				S		**Sg**	**21**	**49**	**17.9**	**+0.4**
LNSS	**Leonessa**	**0.47**	**318**	Pg		**Pg**	**21**	**49**	**10.7**	**-0.7**
	15μm,0.8s									
LNSS	**Leonessa**	**0.47**	**318**	Pg		**Pg**	**21**	**49**	**10.7**	**-0.7**
	15μm,0.8s									
POFI	**Posta Fibreno**	**0.56**	**161**	Pg		**Pg**	**21**	**49**	**11.5**	**-1.6**
	6μm,0.6s									
POFI	**Posta Fibreno**	**0.56**	**161**	Pg		**Pg**	**21**	**49**	**11.5**	**-1.6**
	6μm,0.6s									
LPEL	**Lama dei Pelig**	**0.57**	**111**	Pg		**Pg**	**21**	**49**	**11.6**	**-1.6**
LPEL				Sg		**Sg**	**21**	**49**	**19.8**	**-0.9**
	24μm,0.5s									
LPEL	**Lama dei Pelig**	**0.57**	**111**	Pg		**Pg**	**21**	**49**	**11.6**	**-1.6**
LPEL				Sg		**Sg**	**21**	**49**	**19.8**	**-0.9**
	24μm,0.5s									
MTCE	**Montecelio**	**0.59**	**247**	Pg		**Pg**	**21**	**49**	**12.5**	**-1.0**
	12μm,1.2s									
MTCE	**Montecelio**	**0.59**	**247**	Pg		**Pg**	**21**	**49**	**12.5**	**-1.0**
	12μm,1.2s									
MNS	**Montasola**	**0.60**	**283**	Pg		**Pg**	**21**	**49**	**12.7**	**-1.0**
	7μm,0.5s									
MNS	**Montasola**	**0.60**	**283**	Pg		**Pg**	**21**	**49**	**12.7**	**-1.0**
	7μm,0.5s									
SDI	**San Donato**	**0.60**	**155**	Pg		**Pg**	**21**	**49**	**12.1**	**-1.6**
SDI	**San Donato**	**0.60**	**155**	Pg		**Pg**	**21**	**49**	**12.1**	**-1.6**
NRCA	**Norcia**	**0.64**	**336**	P		**Pg**	**21**	**49**	**13.4**	**-1.1**
NRCA				S		**Sg**	**21**	**49**	**19.2**	**-3.6**
NRCA	**Norcia**	**0.64**	**336**	Pg		**Pg**	**21**	**49**	**13.4**	**-1.1**
NRCA	**Norcia**	**0.64**	**336**	Pg		**Pg**	**21**	**49**	**13.4**	**-1.1**
NRCA				S		**Sg**	**21**	**49**	**19.2**	**-3.6**
TRTR	**Tortoreto Alta**	**0.65**	**31**	Pg		**Pg**	**21**	**49**	**14.3**	**-0.3**
	94μm,1.2s									
TRTR	**Tortoreto Alta**	**0.65**	**31**	Pg		**Pg**	**21**	**49**	**14.3**	**-0.3**
	94μm,1.2s									
CAFR	**Castel Frentan**	**0.65**	**92**	Pg		**Pg**	**21**	**49**	**13.7**	**-1.1**
	31μm,0.4s									
CAFR	**Castel Frentan**	**0.65**	**92**	Pg		**Pg**	**21**	**49**	**13.7**	**-1.1**
	31μm,0.4s									
OFFI	**Offida**	**0.70**	**13**	P		**Pg**	**21**	**49**	**15.3**	**-0.4**
OFFI	**Offida**	**0.70**	**13**	Pg		**Pg**	**21**	**49**	**15.3**	**-0.4**
	39μm,0.8s									
OFFI	**Offida**	**0.70**	**13**	Pg		**Pg**	**21**	**49**	**15.3**	**-0.4**
	39μm,0.8s									
GIUL	**Giuliano Di Ro**	**0.71**	**193**	Pg		**Pg**	**21**	**49**	**14.3**	**-1.5**
	8μm,0.6s									
GIUL	**Giuliano Di Ro**	**0.71**	**193**	Pg		**Pg**	**21**	**49**	**14.3**	**-1.5**
	8μm,0.6s									
RMP	**Rome, Mte Porz**	**0.72**	**233**	Pg		**Pg**	**21**	**49**	**14.7**	**-1.3**
	9μm,0.6s									
RMP	**Rome, Mte Porz**	**0.72**	**233**	Pg		**Pg**	**21**	**49**	**14.7**	**-1.3**
	9μm,0.6s									
RDP	**Rocca di Papa**	**0.75**	**229**	Pg		**Pg**	**21**	**49**	**15.2**	**-1.3**
	19μm,0.5s									
RDP	**Rocca di Papa**	**0.75**	**229**	Pg		**Pg**	**21**	**49**	**15.2**	**-1.3**
	19μm,0.5s									
CESX	**Cesi**	**0.75**	**299**	Pg		**Pg**	**21**	**49**	**15.1**	**-1.5**
	9μm,0.7s									
CESX	**Cesi**	**0.75**	**299**	Pg		**Pg**	**21**	**49**	**15.1**	**-1.5**
	9μm,0.7s									
RNI2	**Rionero Sannit**	**0.75**	**137**	Pg		**Pg**	**21**	**49**	**15.0**	**-1.6**
	15μm,1.0s									
RNI2	**Rionero Sannit**	**0.75**	**137**	Pg		**Pg**	**21**	**49**	**15.0**	**-1.6**
	15μm,1.0s									
MA9	**Marino**	**0.77**	**232**	Pg		**Pg**	**21**	**49**	**15.4**	**-1.6**
	11μm,0.7s									
MA9	**Marino**	**0.77**	**232**	Pg		**Pg**	**21**	**49**	**15.4**	**-1.6**
	11μm,0.7s									
CERA	**Filignano**	**0.77**	**148**	Pg		**Pg**	**21**	**49**	**14.9**	**-2.1**
	8μm,0.5s									
CERA	**Filignano**	**0.77**	**148**	Pg		**Pg**	**21**	**49**	**14.9**	**-2.1**
	8μm,0.5s									
LAV9	**Lanuvio**	**0.81**	**225**	Pg		**Pg**	**21**	**49**	**16.5**	**-1.2**
LAV9	**Lanuvio**	**0.81**	**225**	Pg		**Pg**	**21**	**49**	**16.5**	**-1.2**
ROM9	**Roma**	**0.82**	**239**	Pg		**Pg**	**21**	**49**	**16.8**	**-1.2**
	13μm,1.1s									
ROM9	**Roma**	**0.82**	**239**	Pg		**Pg**	**21**	**49**	**16.8**	**-1.2**
	13μm,1.1s									
FDMO	**Fiordimonte**	**0.83**	**340**	Pg		**Pg**	**21**	**49**	**17.0**	**-1.2**
	3μm,0.5s									
FDMO	**Fiordimonte**	**0.83**	**340**	Pg		**Pg**	**21**	**49**	**17.0**	**-1.2**
	3μm,0.5s									
MIDA	**Miranda**	**0.85**	**136**	Pg		**Pg**	**21**	**49**	**16.2**	**-2.2**
	10μm,0.9s									
MIDA	**Miranda**	**0.85**	**136**	Pg		**Pg**	**21**	**49**	**16.2**	**-2.2**
	10μm,0.9s									
CESI	**CESI - Serrava**	**0.86**	**331**	Pg		**Pg**	**21**	**49**	**17.5**	**-1.2**
CESI	**CESI - Serrava**	**0.86**	**331**	Pg		**Pg**	**21**	**49**	**17.5**	**-1.2**
GUMA	**Gualdo di Mace**	**0.88**	**23**	Pg		**Pg**	**21**	**49**	**16.8**	**-2.3**
	19μm,0.7s									
GUMA	**Gualdo di Mace**	**0.88**	**23**	Pg		**Pg**	**21**	**49**	**16.8**	**-2.3**
	19μm,0.7s									
FRES	**Fresagrandinar**	**0.94**	**107**	Pg		**Pg**	**21**	**49**	**17.7**	**-2.4**
	5μm,0.6s									
FRES	**Fresagrandinar**	**0.94**	**107**	Pg		**Pg**	**21**	**49**	**17.7**	**-2.4**
	5μm,0.6s									
TRIV	**Trivento**	**0.94**	**121**	Pg		**Pg**	**21**	**49**	**18.0**	**-2.2**
	8μm,1.2s									
TRIV	**Trivento**	**0.94**	**121**	Pg		**Pg**	**21**	**49**	**18.0**	**-2.2**
	8μm,1.2s									
ASSB	**Assisi San Ben**	**0.99**	**323**	Pg		**Pg**	**21**	**49**	**20.0**	**-1.2**
	4μm,0.7s									
ASSB	**Assisi San Ben**	**0.99**	**323**	Pg		**Pg**	**21**	**49**	**20.0**	**-1.2**
	4μm,0.7s									
VAGA	**Valle Agricola**	**1.01**	**145**	Pg		**Pg**	**21**	**49**	**19.2**	**-2.4**
	4μm,0.8s									
VAGA	**Valle Agricola**	**1.01**	**145**	Pg		**Pg**	**21**	**49**	**19.2**	**-2.4**
	4μm,0.8s									
BSSO	**Busso**	**1.10**	**130**	Pg		**Pg**	**21**	**49**	**20.9**	**-2.3**
	5μm,0.9s									
BSSO	**Busso**	**1.10**	**130**	Pg		**Pg**	**21**	**49**	**20.9**	**-2.3**
	5μm,0.9s									
SGG	**Gregorio Mates**	**1.10**	**141**	Pg		**Pg**	**21**	**49**	**21.0**	**-2.3**
	3μm,0.6s									
SGG	**Gregorio Mates**	**1.10**	**141**	Pg		**Pg**	**21**	**49**	**21.0**	**-2.3**
	3μm,0.6s									
TOLF	**Tolfa**	**1.11**	**261**	Pg		**Pg**	**21**	**49**	**21.7**	**-1.7**
TOLF	**Tolfa**	**1.11**	**261**	Pg		**Pg**	**21**	**49**	**21.7**	**-1.7**
CING	**Cingoli**	**1.14**	**350**	Pg		**Pb**	**21**	**49**	**22.2**	**-1.9**
	3μm,0.6s									
CING	**Cingoli**	**1.14**	**350**	Pg		**Pb**	**21**	**49**	**22.2**	**-1.9**
	3μm,0.6s									
PTRJ	**Pietraroja**	**1.19**	**138**	Pg		**Pb**	**21**	**49**	**22.1**	**-2.8**
	12μm,0.9s									
MGAB	**Montegabbione**	**1.20**	**304**	Pg		**Pb**	**21**	**49**	**23.5**	**-1.6**
	3μm,0.8s									
MGAB	**Montegabbione**	**1.20**	**304**	Pg		**Pb**	**21**	**49**	**23.5**	**-1.6**
	3μm,0.8s									
MURB	**Monte Urbino** 10μm,1.2s	**1.23**	**326**	Pg		**Pn**	**21**	**49**	**24.8**	**-0.8**
MURB	**Monte Urbino** 10μm,1.2s	**1.23**	**326**	Pg		**Pn**	**21**	**49**	**24.8**	**-0.8**
SACR	**S. Croce Del S** 3μm,1.0s	**1.26**	**132**	Pg		**Pn**	**21**	**49**	**24.1**	**-1.9**
SACR	**S. Croce Del S** 3μm,1.0s	**1.26**	**132**	Pg		**Pn**	**21**	**49**	**24.1**	**-1.9**
ARVD	**Arcevia** 5μm,0.9s	**1.30**	**343**	Pg		**Pn**	**21**	**49**	**25.6**	**-1.0**
ARVD	**Arcevia** 5μm,0.9s	**1.30**	**343**	Pg		**Pn**	**21**	**49**	**25.6**	**-1.0**
MS1	**Monte Sant'Ang**	**1.93**	**106**	*e*Pn		**Pb**	**21**	**49**	**36.6**	**-0.8**
MS1				*e*Sn		**Sg**	**21**	**50**	**04.6**	**+0.6**
CDT	**Castel del Mon**	**2.41**	**118**	*e*Pn		**Pn**	**21**	**49**	**43.2**	**+1.5**
NVLJ	**Novalja**	**2.53**	**23**	*e*Pn		**Pn**	**21**	**49**	**42.7**	**-0.7**
NVLJ				Sn		**Sn**	**21**	**50**	**15.6**	**+1.4**
NVLJ	**Novalja**	**2.53**	**23**	*e*Pn		**Pn**	**21**	**49**	**42.6**	**-0.7**
NVLJ				Sn		**Sn**	**21**	**50**	**15.6**	**+1.4**
MAIM	**Mastiano**	**2.74**	**308**	P		**Pn**	**21**	**49**	**48.5**	**+2.2**
BAI	**Bari**	**2.80**	**113**	*e*Pn		**Pn**	**21**	**49**	**47.4**	**+0.3**
BAI				*e*Sn		**Sn**	**21**	**50**	**22.2**	**+1.2**
CUC	**Castrocucco**	**2.87**	**141**	*e*Pn		**Pn**	**21**	**49**	**49.9**	**+1.8**
CUC	**Castrocucco**	**2.87**	**141**	*e*Pn		**Pn**	**21**	**49**	**49.9**	**+1.8**
VLC	**Villacollemand**	**2.95**	**311**	*e*Pn		**Pn**	**21**	**49**	**50.3**	**+1.1**
VLC	**Villacollemand**	**2.95**	**311**	*e*Pn		**Pn**	**21**	**49**	**50.3**	**+1.1**
STON	**Ston**	**3.19**	**77**	*e*Pn		**Pn**	**21**	**49**	**51.5**	**-0.9**
STON				Sn		**Sn**	**21**	**50**	**29.6**	**-1.0**
STON	**Ston**	**3.19**	**77**	*e*Pn		**Pn**	**21**	**49**	**51.5**	**-0.9**
STON				Sn		**Sn**	**21**	**50**	**29.5**	**-1.0**
SKDS	**Skadanscina**	**3.32**	**7**	*i* Pn		**Pn**	**21**	**49**	**54.2**	**-0.1**
SKDS	**Skadanscina**	**3.32**	**7**	Pn		**Pn**	**21**	**49**	**54.2**	**-0.1**
PGF	**Pioggiola**	**3.32**	**277**	*e*Pn		**Pn**	**21**	**49**	**54.8**	**+0.4**
PGF				*e*Sn		**Sn**	**21**	**50**	**34.9**	**+0.9**
	115nm,0.8s									
PGF	**Pioggiola**	**3.32**	**277**	*e*Pn		**Pn**	**21**	**49**	**54.8**	**+0.4**
TRI	**Trieste**	**3.46**	**3**	*e*P		**Pn**	**21**	**49**	**57.8**	**+1.6**
TRI	**Trieste**	**3.46**	**3**	*e*Pn		**Pn**	**21**	**49**	**57.8**	**+1.6**
TRI	**Trieste**	**3.46**	**3**	*e*P		**Pn**	**21**	**49**	**57.8**	**+1.6**
VISS	**Visnje**	**3.69**	**15**	*i* Pn		**Pn**	**21**	**49**	**59.4**	**+0.1**
VISS				*i* Sn		**Sn**	**21**	**50**	**42.3**	**-0.6**
VISS	**Visnje**	**3.69**	**15**	*i* Pn		**Pn**	**21**	**49**	**59.4**	**+0.1**
VISS				*i* Sn		**Sn**	**21**	**50**	**42.3**	**-0.6**
VOY	**Vojsko**	**3.79**	**4**	*e*Pn		**Pn**	**21**	**50**	**00.5**	**-0.3**
VOY				*e*			21	50	02.2	
VOY				*e*Sn		**Sn**	**21**	**50**	**45.5**	**-0.1**
VOY	**Vojsko**	**3.79**	**4**	*e*Pn		**Pn**	**21**	**50**	**00.5**	**-0.3**
VOY				*e*Sn		**Sn**	**21**	**50**	**45.5**	**-0.1**
BRY	**Bratogost**	**3.80**	**78**	⇓*i*Pn		**Pn**	**21**	**50**	**01.2**	**+0.2**
BRY				*e*Sn		**Sn**	**21**	**50**	**45.6**	**-0.3**
BRY	**Bratogost**	**3.80**	**78**	⇓P		**Pn**	**21**	**50**	**01.5**	**+0.5**
BRY				S		**Sn**	**21**	**50**	**47.6**	**+1.7**
BRY	**Bratogost**	**3.80**	**78**	⇓P		**Pn**	**21**	**50**	**01.5**	**+0.5**
BRY				S		**Sn**	**21**	**50**	**47.6**	**+1.7**
BRY	**Bratogost**	**3.80**	**78**	⇓*i*Pn		**Pn**	**21**	**50**	**01.2**	**+0.2**
BRY	**Bratogost**	**3.80**	**78**	P		**Pn**	**21**	**50**	**01.5**	**+0.5**
BRY				*e*Sn		**Sn**	**21**	**50**	**45.6**	**-0.3**
BRY				S		**Sn**	**21**	**50**	**47.6**	**+1.7**
TIP	**Timpagrande**	**3.96**	**140**	*e*Pn		Pb	21	50	08.8	-3.3
TIP	**Timpagrande**	**3.96**	**140**	*e*Pn		Pb	21	50	08.8	-3.3
UPM	**Unac-Piva**	**4.12**	**75**	⇓*i*Pn		**Pn**	**21**	**50**	**06.0**	**+0.6**
UPM				*e*Sn		**Sn**	**21**	**50**	**53.9**	**+0.1**
UPM	**Unac-Piva**	**4.12**	**75**	⇓*i*Pn		**Pn**	**21**	**50**	**06.0**	**+0.6**
UPM				*e*Sn		**Sn**	**21**	**50**	**53.9**	**+0.1**
NKY	**Niksic**	**4.12**	**80**	⇑*i*Pn		**Pn**	**21**	**50**	**05.2**	**-0.2**
NKY				*e*Sn		**Sn**	**21**	**50**	**53.3**	**-0.5**
NKY	**Niksic**	**4.12**	**80**	⇓P		**Pn**	**21**	**50**	**05.8**	**+0.4**
NKY				S		**Sn**	**21**	**50**	**55.4**	**+1.6**
NKY	**Niksic**	**4.12**	**80**	⇓P		**Pn**	**21**	**50**	**05.8**	**+0.4**
NKY				S		**Sn**	**21**	**50**	**55.4**	**+1.6**
NKY	**Niksic**	**4.12**	**80**	⇑*i*Pn		**Pn**	**21**	**50**	**05.2**	**-0.2**
NKY	**Niksic**	**4.12**	**80**	P		**Pn**	**21**	**50**	**05.8**	**+0.4**
NKY				*e*Sn		**Sn**	**21**	**50**	**53.3**	**-0.5**
NKY				S		**Sn**	**21**	**50**	**55.4**	**+1.6**
VSL	**Villasalto**	**4.15**

TIR eSn **Sn** 21 51 09.1 -2.9
VLO Vlora 4.87 109 ePN **Pn** 21 50 16.9 +1.3
VLO Vlora 4.87 109 P **Pn** 21 50 17.1 +1.5
VLO Vlora 4.87 109 P **Pn** 21 50 17.1 +1.5
TOUF Mont Tournerai 4.88 293 P **Pn** 21 50 16.8 +0.9
TOUF Mont Tournerai 4.88 293 P **Pn** 21 50 16.8 +0.9
TOUF Mont Tournerai 4.88 293 P **Pn** 21 50 16.8 +0.9
TOUF Mont Tournerai 4.88 293 P **Pn** 21 50 16.8 +0.9
BCI Bajram Curri 4.90 86 ePN **Pn** 21 50 17.0 +1.1
BCI Bajram Curri 4.90 86 ePn **Pn** 21 50 17.0 +1.1
TEKS Tekeris 4.98 60 ePn **Pn** 21 50 18.1 +1.0
TEKS Tekeris 4.98 60 ePn **Pn** 21 50 18.1 +1.0
CALN Calern 5.05 289 P **Pn** 21 50 19.0 +0.8
CALN Calern 5.05 289 P **Pn** 21 50 19.0 +0.8
CALN Calern 5.05 289 P **Pn** 21 50 19.0 +0.8
CALN Calern 5.05 289 P **Pn** 21 50 19.0 +0.8
IVAS Ivanjica 5.08 73 ePn **Pn** 21 50 18.9 +0.3
IVAS Ivanjica 5.08 73 ePn **Pn** 21 50 18.9 +0.3
DIVS Divibare 5.12 67 P **Pn** 21 50 19.3 +0.3
DIVS Divibare 5.12 67 ePn **Pn** 21 50 19.5 +0.5
DIVS eSn **Sn** 21 51 16.2 -2.0
DIVS Divibare 5.12 67 ePn **Pn** 21 50 19.5 +0.5
DIVS eSn **Sn** 21 51 16.2 -2.0
TUE Stuetta 5.15 326 ePn **Pn** 21 50 20.0 +0.4
41nm,0.8s
TUE eSn **Sn** 21 51 14.9 -4.3
TUE Stuetta 5.15 326 ePn **Pn** 21 50 20.0 +0.4
41nm,0.8s
TUE eSn **Sn** 21 51 14.9 -4.3
FETA Feichten 5.15 339 ⇓*i* Pn **Pn** 21 50 20.9 +1.3
SNR=23
FETA Feichten 5.15 339 ⇓*i* Pn **Pn** 21 50 20.9 +1.3
FETA Feichten 5.15 339 Pn **Pn** 21 50 20.9 +1.3
SNR=23
FRF La Foret Royal 5.18 287 ePn **Pn** 21 50 19.5 -0.3
FRF eSn **Sn** 21 51 14.4 -5.2
19nm,0.8s
FRF La Foret Royal 5.18 287 ePn **Pn** 21 50 19.5 -0.3
WTTA Wattenberg 5.18 346 ⇓*i* P **Pn** 21 50 20.9 +0.9
WTTA Wattenberg 5.18 346 ePn **Pn** 21 50 22.4 +2.4
WTTA Wattenberg 5.18 346 ⇓*i* Pn **Pn** 21 50 20.9 +0.9
SNR=20
WTTA Wattenberg 5.18 346 ⇓*i* Pn **Pn** 21 50 20.9 +0.9
WTTA Wattenberg 5.18 346 *i* P **Pn** 21 50 20.9 +0.9
DAVOX Davos/Dischmat 5.20 332 Pn **Pn** 21 50 22.3 +2.0
DAVOX Sn **Sn** 21 51 21.3 +0.8
DAVOX Davos/Dischmat 5.20 332 Pn **Pn** 21 50 22.3 +2.0
4.6nm,0.3s,baz=164,slow=18,SNR=39
DAVOX Sn **Sn** 21 51 21.3 +0.8
0.9nm,0.3s,baz=118,slow=22,SNR=1.3
DAVOX Davos/Dischmat 5.20 332 P **Pn** 21 50 22.3 +2.0
DAVOX S **Sn** 21 51 21.3 +0.8
ARSA Arzberg 5.21 16 ePn **Pn** 21 50 20.4 +0.1
ARSA Arzberg 5.21 16 ⇓*i* Pn **Pn** 21 50 20.3 +0.1
SNR=6.1
ARSA Arzberg 5.21 16 ⇓*i* Pn **Pn** 21 50 20.3 +0.1
ARSA Arzberg 5.21 16 Pn **Pn** 21 50 20.3 +0.1
SNR=6.1
PHP Peshkopia 5.23 94 ePN **Pn** 21 50 21.0 +0.4
PHP Peshkopia 5.23 94 P **Pn** 21 50 21.4 +0.8
PHP Peshkopia 5.23 94 ePn **Pn** 21 50 21.0 +0.4
PHP Peshkopia 5.23 94 P **Pn** 21 50 21.4 +0.8
LMR La Mourre 5.23 284 ePn **Pn** 21 50 20.1 -0.4
LMR eSn **Sn** 21 51 15.9 -5.1
42nm,0.9s
LMR La Mourre 5.23 284 ePn **Pn** 21 50 20.1 -0.4
WATA Walderalm 5.26 346 ⇑*i* P **Pn** 21 50 22.8 +1.7
WATA Walderalm 5.26 346 ⇑*i* Pn **Pn** 21 50 22.8 +1.7
SNR=9.4
WATA Walderalm 5.26 346 ⇑*i* Pn **Pn** 21 50 22.8 +1.7
WATA Walderalm 5.26 346 *i* P **Pn** 21 50 22.8 +1.7
SURF Saint Ours 5.34 297 P **Pn** 21 50 24.4 +2.2
SURF Saint Ours 5.34 297 P **Pn** 21 50 24.4 +2.2
SURF Saint Ours 5.34 297 P **Pn** 21 50 24.4 +2.2
MOTA Moosalm 5.36 343 ⇑*i* P **Pn** 21 50 24.4 +1.9
MOTA Moosalm 5.36 343 ⇑*i* Pn **Pn** 21 50 24.4 +1.9
SNR=25
MOTA Moosalm 5.36 343 ⇑*i* Pn **Pn** 21 50 24.4 +1.9
MOTA Moosalm 5.36 343 *i* P **Pn** 21 50 24.4 +1.9
KEK Kerkira 5.42 116 P **Pn** 21 50 24.0 +0.9
KEK Kerkira 5.42 116 eP **Pn** 21 50 22.9 -0.2
FGSL Fruska Gora 5.44 56 ePn **Pn** 21 50 24.4 +1.0
FRGS Fruska Gora 5.44 56 ePn **Pn** 21 50 24.4 +1.0
MBDF Montbardon 5.46 299 eP **Pn** 21 50 25.3 +1.4
RJOB Jochberg 5.51 355 ePn **Pn** 21 50 25.6 +1.2
RJOB eSn **Sn** 21 51 29.0 +1.2
PKS9 Tamasi 5.54 37 epPn **Pn** 21 50 26.0 +1.3
GRUS Gruza 5.56 70 ePn **Pn** 21 50 24.7 -0.3
GRUS eSn **Sn** 21 51 27.3 -1.6
RETA Reutte 5.58 341 ⇓*i* Pn **Pn** 21 50 27.4 +2.1
SNR=14
RETA Reutte 5.58 341 ⇓*i* Pn **Pn** 21 50 27.4 +2.1
RETA Reutte 5.58 341 Pn **Pn** 21 50 27.4 +2.1
SNR=14
MOA Molln 5.63 5 ePn **Pn** 21 50 26.9 +0.9
MOA eSn **Sn** 21 51 32.4 +1.7
MOA Molln 5.63 5 ⇓*i* Pn **Pn** 21 50 25.5 -0.5
SNR=53
MOA Molln 5.63 5 ⇓*i* Pn **Pn** 21 50 25.5 -0.5
MOA Molln 5.63 5 Pn **Pn** 21 50 25.5 -0.5
SNR=53
OBER Oberstdorf 5.63 337 ePn Pn 21 50 29.8 +3.8
OBER eSn **Sn** 21 51 32.5 +1.7
DAVA Damuels 5.64 334 ePn **Pn** 21 50 28.7 +2.4
DAVA eSn **Sn** 21 51 37.0 +5.6
DAVA Damuels 5.64 334 ⇑*i* Pn **Pn** 21 50 28.5 +2.1
SNR=18
DAVA Damuels 5.64 334 ⇑*i* Pn **Pn** 21 50 28.5 +2.1
DAVA Damuels 5.64 334 Pn **Pn** 21 50 28.5 +2.1
SNR=18
BNI Bardonecchia 5.66 302 eP **Pn** 21 50 28.8 +2.2
BNI pmax pmax
comp=Z,20nm,0.9s
BNI Bardonecchia 5.66 302 ePn **Pn** 21 50 28.8 +2.2
comp=Z,20nm,0.9s
BNI Bardonecchia 5.66 302 eP **Pn** 21 50 28.8 +2.2
comp=Z,20nm,0.9s
SELS Selova 5.72 78 ePn **Pn** 21 50 27.1 -0.1
KBN Korca 5.74 104 ePN **Pn** 21 50 28.3 +0.7
KBN Korca 5.74 104 P **Pn** 21 50 28.9 +1.3
OG25 Le Caire 5.79 294 P **Pn** 21 50 30.9 +2.5
OG25 Le Caire 5.79 294 P **Pn** 21 50 30.9 +2.5
LPG La Plagne 5.84 306 eP **Pn** 21 50 31.2 +2.1
LPG eSn Sn 21 51 30.4 -5.9
comp=Z,52nm,1.0s
SOP Sopron 5.86 21 ⇓epPn **Pn** 21 50 29.7 +0.6
LPL La Plagne 5.86 306 eP **Pn** 21 50 31.3 +1.9
LPL eSn Sn 21 51 29.5 -7.2
comp=Z,40nm,0.9s
IGT Igoumenitsa 5.87 115 P **Pn** 21 50 30.3 +1.0
PKS2 Kecel 5.91 42 epPn **Pn** 21 50 30.9 +1.1
CONA Conrad Observa 5.92 16 ⇑*i* Pn **Pn** 21 50 29.8 -0.3
SNR=23
CONA Conrad Observa 5.92 16 ⇑*i* Pn **Pn** 21 50 29.8 -0.3
CONA Conrad Observa 5.92 16 Pn **Pn** 21 50 29.8 -0.3
SNR=23
SKO Skopje 5.94 90 *i* Pn **Pn** 21 50 32.9 +2.6
SKO eSg **Sn** 21 51 38.6 +0.3
PKST T"s 5.97 31 epPn **Pn** 21 50 30.5 -0.2
PKST eSn **Sn** 21 51 36.8 -2.3
NEST Nestorio 6.00 105 P **Pn** 21 50 32.6 +1.5
SVIS Svilajnac 6.00 68 ePn **Pn** 21 50 32.1 +1.0
BIA Bitola 6.01 99 *i* Pn **Pn** 21 50 31.5 +0.2
BIA eSg **Sn** 21 51 38.0 -2.3
SMRF Simiane la Rot 6.03 289 eP **Pn** 21 50 32.7 +1.2
FNA Florina 6.12 101 P **Pn** 21 50 33.8 +1.1
FNA Florina 6.12 101 eP **Pn** 21 50 33.6 +0.9
ORIF Oris-en-Rattie 6.12 298 eP **Pn** 21 50 35.9 +3.1
JAN Janina 6.16 112 P **Pn** 21 50 35.0 +1.7
JAN Janina 6.16 112 eP **Pn** 21 50 33.9 +0.6
BARS Barje 6.19 82 ePn **Pn** 21 50 33.8 0.0
PKSG 6.22 33 epPn **Pn** 21 50 33.8 -0.2
OCF Saint Nazaire 6.38 294 P **Pn** 21 50 38.9 +2.5
OG26 St.-Nazaire-De 6.38 294 P **Pn** 21 50 38.9 +2.5
ZST Bratislava 6.47 22 eP **Pn** 21 50 38.5 +0.9
ZST *e* 21 51 46.1
ZST Bratislava 6.47 22 ePN **Pn** 21 50 38.5 +0.9
ZST eSN **Sn** 21 51 46.1 -5.4
ZST Bratislava 6.47 22 eP **Pn** 21 50 38.5 +0.9
LKD2 Lefkada island 6.48 120 P **Pn** 21 50 38.8 +1.1
LKD2 Lefkada island 6.48 120 eP **Pn** 21 50 37.8 +0.1
PKSN Nyarlorinc 6.51 42 epPn **Pn** 21 50 40.2 +2.1

PKSN eSn **Sn** 21 51 50.4 -2.1
KZN Kozani 6.55 104 eP **Pn** 21 50 41.7 +3.0
BUD Budapest 6.55 35 ⇓epPn Pn 21 50 42.7 +4.1
GEC2 GERESS Array S 6.60 1 eP **Pn** 21 50 39.3 -0.1
GEC2 *e* 21 51 54.5
GEC2 GERESS Array S 6.60 1 ePn **Pn** 21 50 39.3 -0.1
GEC2 eSn **Sn** 21 51 54.5 -0.2
GEC2 GERESS Array S 6.60 1 eP **Pn** 21 50 39.3 -0.1
GEC2 eS **Sn** 21 51 54.5 -0.2
GERES GERESS Array B 6.60 1 Pn **Pn** 21 50 39.0 -0.3
GERES Sn **Sn** 21 51 53.6 -1.1
GERES GERESS Array B 6.60 1 Pn **Pn** 21 50 39.0 -0.3
comp=Z,1.2nm,0.3s,baz=172,slow=13,SNR=22
GERES Sn **Sn** 21 51 53.6 -1.1
comp=Z,2.2nm,0.3s,baz=173,slow=24,SNR=7.0
GERES GERESS Array B 6.60 1 P **Pn** 21 50 39.0 -0.3
GERES S **Sn** 21 51 53.6 -1.1
SPAK Spaichingen-Ko 6.72 332 P **Pn** 21 50 42.8 +1.8
BZS Buzias 6.78 57 ⇓P **Pn** 21 50 42.1 +0.4
BZS Buzias 6.78 57 ⇓*i* P **Pn** 21 50 42.1 +0.4
BZS Buzias 6.78 57 P **Pn** 21 50 42.1 +0.4
VLS Valsamata 6.80 124 P **Pn** 21 50 43.6 +1.5
VLS Valsamata 6.80 124 eP **Pn** 21 50 42.8 +0.7
GRG Griva 6.82 98 eP **Pn** 21 50 43.1 +0.7
FELD Feldberg im Sc 6.82 327 P **Pn** 21 50 42.8 +0.3
ZAPS Zavoj 6.82 78 ePn **Pn** 21 50 43.0 +0.6
ZAPS eSn **Sn** 21 51 56.7 -3.5
CABF La Chapelle 6.85 312 ePn **Pn** 21 50 42.7 -0.1
SMOL Smolenice 6.85 23 eP **Pn** 21 50 41.0 -1.8
SMOL *e* 21 51 59.1
SMOL Smolenice 6.85 23 ePN **Pn** 21 50 41.0 -1.8
SMOL *e* 21 50 51.1
SMOL Smolenice 6.85 23 eSN **Sn** 21 51 59.1 -1.8
SMOL Smolenice 6.85 23 eP **Pn** 21 50 41.0 -1.8
SMOL eS **Sn** 21 51 59.1 -1.8
VAY Valandovo 6.87 95 P **Pn** 21 50 43.6 +0.6
VAY Valandovo 6.87 95 *i* Pn **Pn** 21 50 43.3 +0.3
VAY eSg Sn 21 51 55.2 -6.0
KHC Kasperske Hory 6.88 1 eP **Pn** 21 50 43.7 +0.5
KHC *e* 21 51 59.4
KHC MLR MLR
comp=Z,400nm,7.4s
KHC Kasperske Hory 6.88 1 ePn **Pn** 21 50 42.2 -1.0
comp=Z,11nm,0.6s
KHC eSn **Sn** 21 52 00.0 -1.6
KHC Kasperske Hory 6.88 1 ePN **Pn** 21 50 43.7 +0.5
KHC *ex* x 21 50 51.5
KHC eSN **Sn** 21 51 59.4 -2.2
KHC *ex* x 21 52 18.0
KHC AMS AMS 21 55 20.0
comp=Z,400nm,7.4s
KHC Kasperske Hory 6.88 1 Pn **Pn** 21 50 43.7 +0.5
KHC Sn **Sn** 21 51 59.4 -2.2
VIVF Saint-Julien-l 6.90 295 ePn **Pn** 21 50 44.6 +1.1
WET Wettzell 6.91 357 eP **Pn** 21 50 44.1 +0.6
WET Wettzell 6.91 357 ePn **Pn** 21 50 44.1 +0.6
WET Wettzell 6.91 357 eP **Pn** 21 50 44.1 +0.6
LOMF Lomont 6.95 319 P **Pn** 21 50 45.9 +1.7
LOMF Lomont 6.95 319 P **Pn** 21 50 45.9 +1.7
LOMF Lomont 6.95 319 P **Pn** 21 50 45.9 +1.7
THL Klokotos Trika 7.01 110 P **Pn** 21 50 47.2 +2.3
THL Klokotos Trika 7.01 110 eP **Pn** 21 50 45.2 +0.3
BFO Black Forest 7.07 331 eP **Pn** 21 50 46.4 +0.6
BFO *e* 21 52 06.0
BFO Black Forest 7.07 331 ePn **Pn** 21 50 46.4 +0.6
BFO eSn **Sn** 21 52 06.0 -0.4
BFO Black Forest 7.07 331 ePn **Pn** 21 50 44.7 -1.1
comp=Z,11nm,0.8s
BFO eSn **Sn** 21 52 03.5 -2.9
BFO Black Forest 7.07 331 eP **Pn** 21 50 46.4 +0.6
BFO eS **Sn** 21 52 06.0 -0.4
SSB Saint Sauveur 7.13 298 eP **Pn** 21 50 48.3 +1.6
SSB pmax pmax
comp=Z,8.0nm,0.8s
SSB Saint Sauveur 7.13 298 ePn **Pn** 21 50 48.3 +1.6
comp=Z,8.3nm,0.8s
SSB Saint Sauveur 7.13 298 eP **Pn** 21 50 48.3 +1.6
comp=Z,8.0nm,0.8s
LIT Litokhoron 7.14 105 eP **Pn** 21 50 46.2 -0.5
EVR Evrytania 7.17 115 P **Pn** 21 50 49.6 +2.4
EVR Evrytania 7.17 115 eP **Pn** 21 50 49.2 +2.0
MOF Molkenrain 7.17 323 P **Pn** 21 50 47.1 -0.2
MOF S **Sn** 21 52 07.9 -1.0
MOF Molkenrain 7.17 323 P **Pn** 21 50 47.1 -0.2
MOF S **Sn** 21 52 07.9 -1.0
MOF Molkenrain 7.17 323 P **Pn** 21 50 47.1 -0.2
MOF S **Sn** 21 52 07.9 -1.0
TREC Trest 7.18 11 eP **Pn** 21 50 47.0 -0.3
TREC *e* 21 52 06.4
TREC MLR MLR
comp=Z,800nm,10.9s
TREC Trest 7.18 11 ePN **Pn** 21 50 47.0 -0.3
TREC eSN **Sn** 21 52 06.4 -2.6
TREC AMS AMS 21 54 00.0
comp=Z,800nm,10.9s
TREC Trest 7.18 11 Pn **Pn** 21 50 47.0 -0.3
TREC Sn **Sn** 21 52 06.4 -2.6
LIBD Limburg 7.21 327 P **Pn** 21 50 48.3 +0.7
LIBD Limburg 7.21 327 P **Pn** 21 50 48.3 +0.7
VTS Vitosha 7.22 84 P **Pn** 21 50 47.3 -0.3
VTS Vitosha 7.22 84 ⇓P **Pn** 21 50 48.5 +0.5
VTS Vitosha 7.22 84 ⇓*i* P **Pn** 21 50 48.5 +0.5
VTS Vitosha 7.22 84 ePn **Pn** 21 50 48.4 +0.5
VTS eSn **Sn** 21 52 07.2 -2.9
VTS Vitosha 7.22 84 P **Pn** 21 50 48.5 +0.5
KEST Kesra 7.26 208 ePn Pn 21 50 52.5 +4.0
KEST Sn **Sn** 21 52 11.6 +0.6
KEST Kesra 7.26 208 Pn Pn 21 50 52.7 +4.3
comp=Z,1.6nm,0.3s,baz=297,slow=3.6,SNR=70
KEST Sn **Sn** 21 52 11.6 +0.6
baz=194,slow=22,SNR=1.0
KEST LR LR 21 53 48.5
comp=Z,114nm,20.4s,baz=347,slow=40
LASF Ste Croix 7.26 288 ePn **Pn** 21 50 48.1 -0.3
PSZ Piszkesteto 7.26 37 ⇑P **Pn** 21 50 50.1 +1.6
PSZ Piszkesteto 7.26 37 ⇑*i* P **Pn** 21 50 50.1 +1.6
PSZ Piszkesteto 7.26 37 ⇓epPn **Pn** 21 50 49.0 +0.5
PSZ Piszkesteto 7.26 37 P **Pn** 21 50 50.1 +1.6
HINF Hinteralfeld 7.27 322 ePn **Pn** 21 50 47.4 -1.2
HINF eSn Sn 21 52 03.7 -7.6
comp=Z,113nm,1.0s
VYHS Vyhne 7.30 29 eP **Pn** 21 50 48.6 -0.3
VYHS *e* 21 52 07.4
VYHS Vyhne 7.30 29 ePN **Pn** 21 50 48.6 -0.3
VYHS eSN **Sn** 21 52 07.4 -4.4
VYHS eSG Sg 21 53 09.4 +13
VYHS Vyhne 7.30 29 eP **Pn** 21 50 48.6 -0.3
VRAC Vranov 7.39 16 Pn **Pn** 21 50 50.6 +0.4
VRAC Sn Sn 21 52 08.1 -6.0
VRAC Vranov 7.39 16 ⇑*i* P **Pn** 21 50 50.2 +0.1
VRAC Vranov 7.39 16 Pn **Pn** 21 50 50.6 +0.4
comp=Z,0.4nm,0.3s,baz=204,slow=16,SNR=4.1
VRAC Sn Sn 21 52 08.1 -6.0
comp=Z,0.4nm,0.3s,baz=283,slow=19,SNR=2.4
VRAC LR LR 21 53 53.0
comp=Z,272nm,18.0s,baz=205,slow=40
VRAC Vranov 7.39 16 P **Pn** 21 50 50.2 +0.1
GZR Gura Zlata 7.43 62 ⇓P **Pn** 21 50 50.8 0.0
GZR Gura Zlata 7.43 62 ⇓*i* P **Pn** 21 50 50.8 0.0
GZR Gura Zlata 7.43 62 P **Pn** 21 50 50.8 0.0
ECH Echery 7.44 325 eP **Pn** 21 50 50.4 -0.5
ECH *e* 21 52 11.7
ECH pmax pmax
comp=Z,8.0nm,0.5s
ECH Echery 7.44 325 ePn **Pn** 21 50 50.4 -0.5
comp=Z,8.5nm,0.5s
ECH eSn **Sn** 21 52 11.7 -3.7
ECH Echery 7.44 325 P **Pn** 21 50 51.2 +0.3
ECH S **Sn** 21 52 13.3 -2.1
ECH Echery 7.44 325 eP **Pn** 21 50 50.4 -0.5
comp=Z,8.0nm,0.5s
AGG Agios Georgios 7.47 113 eP **Pn** 21 50 52.7 +1.4
EFP Efpalio 7.49 118 eP **Pn** 21 50 53.1 +1.5
CDF Champ du Feu 7.55 327 ePn **Pn** 21 50 51.0 -1.4
CDF eSn Sn 21 52 10.8 -7.3
comp=Z,56nm,0.9s
SOH Sokhos 7.55 98 eP **Pn** 21 50 51.4 -1.1
TRIZ Trizonia 7.63 118 eP **Pn** 21 50 55.0 +1.5
HAU Haudompre 7.64 321 ePn **Pn** 21 50 52.7 -0.9
HAU eSn Sn 21 52 11.3 -9.0
comp=Z,65nm,0.9s
LAKA Lakka 7.64 119 eP **Pn** 21 50 53.7 0.0

KALE Kalithea 7.67 117 eP **Pn** 21 50 56.9 +2.9
PLG Polygyros 7.74 101 eP **Pn** 21 50 55.3 +0.2
PRU Pruhonice 7.77 5 eP **Pn** 21 50 55.8 +0.4
PRU *e* 21 52 20.4
PRU MLR MLR
comp=Z,500nm,7.8s
PRU Pruhonice 7.77 5 ePN **Pn** 21 50 55.8 +0.4
PRU eSN **Sn** 21 52 20.4 -3.1
PRU AMS AMS 21 54 30.0
comp=Z,500nm,7.8s
PRU Pruhonice 7.77 5 Pn **Pn** 21 50 55.8 +0.4
PRU Sn **Sn** 21 52 20.4 -3.1
LANF Langenberg 7.81 331 P **Pn** 21 50 59.2 +3.3
LANF Langenberg 7.81 331 P **Pn** 21 50 59.2 +3.3
LANF Langenberg 7.81 331 P **Pn** 21 50 59.2 +3.3
NVR Nevrokopi 7.82 93 P **Pn** 21 50 56.4 +0.3
NVR Nevrokopi 7.82 93 eP **Pn** 21 50 55.6 -0.5
KLV Kalavryta, Ach 7.87 119 eP **Pn** 21 50 59.3 +2.5
AMT Artemida-Makis 7.89 124 eP Pn 21 51 01.2 +4.1
NEO Neokhori 7.97 108 eP Pn 21 51 01.4 +3.3
THEF They Montfort 7.97 321 P **Pn** 21 50 58.0 -0.1
THEF They Montfort 7.97 321 P **Pn** 21 50 58.0 -0.1
THEF They Montfort 7.97 321 P **Pn** 21 50 58.0 -0.1
LBL Lubilhac 7.98 295 P **Pn** 21 51 01.3 +3.0
LBL Lubilhac 7.98 295 P **Pn** 21 51 01.3 +3.0
LBL Lubilhac 7.98 295 P **Pn** 21 51 01.3 +3.0
DRGR 8.01 52 ⇓P **Pn** 21 50 59.0 +0.2
DRGR 8.01 52 ⇓*i* P **Pn** 21 50 59.0 +0.2
DRGR 8.01 52 P **Pn** 21 50 59.0 +0.2
NKC Novy Kostel 8.02 355 eP **Pn** 21 50 59.1 +0.4
NKC *e* 21 52 25.9
NKC MLR MLR
comp=Z,400nm,10.7s
NKC Novy Kostel 8.02 355 ePN **Pn** 21 50 59.1 +0.4
NKC eSN **Sn** 21 52 25.9 -3.6
NKC AMS AMS 21 54 30.0
comp=Z,400nm,10.7s
NKC Novy Kostel 8.02 355 Pn **Pn** 21 50 59.1 +0.4
NKC Sn **Sn** 21 52 25.9 -3.6
MORC Moravsky Berou 8.04 19 ⇑P **Pn** 21 51 01.5 +2.4
MORC Moravsky Berou 8.04 19 ePn **Pn** 21 50 59.3 +0.1
comp=Z,5.5nm,0.8s
MORC Moravsky Berou 8.04 19 ⇑*i* P **Pn** 21 51 01.5 +2.4
MORC Moravsky Berou 8.04 19 P **Pn** 21 51 01.5 +2.4
GUR Goura 8.05 119 P **Pn** 21 51 01.4 +2.0
GUR Goura 8.05 119 eP **Pn** 21 51 01.2 +1.8
PAIG Paliouri 8.05 103 eP **Pn** 21 50 57.9 -1.4
LKR Lokris 8.11 113 eP **Pn** 21 51 02.5 +2.5
SMF Signal de Mont 8.17 306 ePn **Pn** 21 51 00.3 -0.5
OKC Ostrava-Krasne 8.25 22 eP **Pn** 21 51 01.8 -0.2
OKC MLR MLR
comp=Z,600nm,15.7s
OKC Ostrava-Krasne 8.25 22 ePN **Pn** 21 51 01.8 -0.2
OKC AMS AMS 21 55 10.0
comp=Z,600nm,15.7s
OKC Ostrava-Krasne 8.25 22 Pn **Pn** 21 51 01.8 -0.2
PYM Petit Puy Mans 8.31 298 P **Pn** 21 51 04.8 +1.9
PYM Petit Puy Mans 8.31 298 P **Pn** 21 51 04.8 +1.9
PYM Petit Puy Mans 8.31 298 P **Pn** 21 51 04.8 +1.9
PVCC Panska Ves 8.31 5 eP **Pn** 21 51 02.8 0.0
PVCC *e* 21 52 33.0
PVCC Panska Ves 8.31 5 ePN **Pn** 21 51 02.8 0.0
PVCC eSN **Sn** 21 52 33.0 -3.8
PVCC Panska Ves 8.31 5 Pn **Pn** 21 51 02.8 0.0
PVCC Sn **Sn** 21 52 33.0 -3.8
PAGF Fort de Pagny 8.33 322 ePn **Pn** 21 51 02.2 -0.8
PYL PYLOS 8.33 127 P **Pn** 21 51 04.4 +1.3
PYL PYLOS 8.33 127 eP **Pn** 21 51 03.8 +0.7
DPC Dobruska-Polom 8.34 13 eP **Pn** 21 51 03.3 +0.1
DPC *e* 21 52 33.5
DPC MLR MLR
comp=Z,600nm,13.1s
DPC Dobruska-Polom 8.34 13 ePN **Pn** 21 51 03.3 +0.1
DPC eSN **Sn** 21 52 33.5 -3.9
DPC AMS AMS 21 54 30.0
comp=Z,600nm,13.1s
DPC Dobruska-Polom 8.34 13 Pn **Pn** 21 51 03.3 +0.1
DPC Sn **Sn** 21 52 33.5 -3.9
AGO Saint Agoulin 8.35 301 P **Pn** 21 51 05.9 +2.6
AGO Saint Agoulin 8.35 301 P **Pn** 21 51 05.9 +2.6
MTLF Montolieu 8.35 281 ePn **Pn** 21 51 02.8 -0.5
LTK Loutraki 8.41 117 eP **Pn** 21 51 04.6 +0.4
SFTF Sexfontaines 8.41 318 ePn **Pn** 21 51 03.1 -1.1
SFTF eSn Sn 21 52 29.7 -10
comp=Z,47nm,1.2s
VLX Vlachokerasia 8.41 122 eP **Pn** 21 51 07.2 +2.9
UPC Upice 8.44 11 eP **Pn** 21 51 04.3 -0.3
UPC *e* 21 52 35.8
UPC Upice 8.44 11 ePN **Pn** 21 51 04.3 -0.3
UPC eSN **Sn** 21 52 35.8 -4.2
UPC Upice 8.44 11 Pn **Pn** 21 51 04.3 -0.3
UPC Sn **Sn** 21 52 35.8 -4.2
LOR Lormes 8.48 310 ePn **Pn** 21 51 04.2 -0.9
LOR eSn Sn 21 52 33.6 -7.2
comp=Z,9.9nm,0.8s
MOX Moxa 8.49 352 eP **Pn** 21 51 05.6 +0.3
MOX Moxa 8.49 352 ePn **Pn** 21 51 05.6 +0.3
MOX Moxa 8.49 352 eP **Pn** 21 51 05.6 +0.3
AVF Avril sur Loir 8.53 306 ePn **Pn** 21 51 04.9 -0.9
SSF Saint Saulge 8.57 308 ePn **Pn** 21 51 05.4 -1.0
MEZF Maizieres J'vi 8.61 319 ePn **Pn** 21 51 06.0 -0.8
MEZF eSn Sn 21 52 36.3 -7.7
comp=Z,41nm,1.1s
BRG Berggiesshubel 8.63 2 PN Pn 21 51 11.3 +4.1
BRG SN Sn 21 52 53.1 +8.5
BRG SG Sg 21 53 55.5 +16
comp=Z,24nm,1.3s
BRG
comp=N,362nm,15.0s
BRG
comp=E,298nm,11.9s
BRG
comp=Z,258nm,22.6s
RUP Ruppelstein 8.68 331 P **Pn** 21 51 10.4 +2.5
RUP Ruppelstein 8.68 331 P **Pn** 21 51 10.4 +2.5
TRPA Tarpa 8.69 44 ⇑*i* P Pn 21 51 11.8 +3.8
TRPA Tarpa 8.69 44 ⇓epPn **Pn** 21 51 10.8 +2.8
CRVS Cervenica-Dubn 8.69 37 eP **Pn** 21 51 09.6 +1.5
CRVS *e* 21 52 42.8
CRVS MLR MLR
comp=Z,100nm,2.9s
CRVS Cervenica-Dubn 8.69 37 ePN **Pn** 21 51 09.5 +1.5
CRVS eSN **Sn** 21 52 42.8 -3.4
CRVS Cervenica-Dubn 8.69 37 eP **Pn** 21 51 09.6 +1.5
comp=Z,100nm,2.9s
CAF Calviac 8.70 292 eP **Pn** 21 51 09.2 +1.1
BGF Bois d'Agland 8.73 303 ePn **Pn** 21 51 08.2 -0.4
DID Didima 8.88 119 eP **Pn** 21 51 12.4 +1.8
UZH Uzhgorod 8.89 41 eP **Pn** 21 51 11.2 +0.4
UZH eS **Sn** 21 52 51.0 0.0
UZH Uzhgorod 8.89 41 eP **Pn** 21 51 11.2 +0.4
UZH eS **Sn** 21 52 51.0 0.0
VOIR 8.96 65 ⇓P **Pn** 21 51 14.6 +2.9
VOIR 8.96 65 ⇓*i* P **Pn** 21 51 14.6 +2.9
VOIR 8.96 65 P **Pn** 21 51 14.6 +2.9
CLL Collm 9.06 358 eP **Pn** 21 51 15.0 +1.9
CLL Collm 9.06 358 ePn **Pn** 21 51 15.0 +1.9
CLL eSn Sn 21 52 38.0 -17
CLL eSb 21 53 13.0
CLL *e* 21 53 34.0
CLL *e* 21 53 50.0
CLL *i* Sg 21 53 55.8
comp=E,600nm,19.1s
CLL L L 21 54 30.0
comp=Z,200nm,18.5s
CLL Lmax 21 56 00.0
CLL Collm 9.06 358 eP **Pn** 21 51 15.0 +1.9
KOLS Kolonicke sedl 9.09 40 eP Pn 21 51 18.8 +5.3
KOLS *e* 21 52 54.0
KOLS MLR MLR
comp=Z,200nm,3.5s
KOLS Kolonicke sedl 9.09 40 ePN Pn 21 51 18.8 +5.3
KOLS *e* 21 52 10.2
KOLS Kolonicke sedl 9.09 40 eSN **Sn** 21 52 54.0 -1.9
KOLS Kolonicke sedl 9.09 40 eS **Sn** 21 52 54.0 -1.9
comp=Z,200nm,3.5s
RJF Les Rejaudoux 9.17 293 eP **Pn** 21 51 16.4 +1.9
KYTH Kithira 9.52 126 eP **Pn** 21 51 21.4 +2.0
MLR Muntele Rosu 9.57 66 Pn **Pn** 21 51 22.3 +2.1
MLR Muntele Rosu 9.57 66 ⇑*i* P **Pn** 21 51 22.0 +1.8
MLR Muntele Rosu 9.57 66 Pn **Pn** 21 51 22.3 +2.1
comp=Z,0.2nm,0.3s,baz=265,slow=5.4,SNR=25

MLR	Muntele Rosu	9.57	66	P	Pn	21 51 22.0	+1.8
LFF	La Frestale	9.62	291	eP	Pn	21 51 22.4	+1.7
KWP	Kalwaria Pacla	9.79	38	⇑P	Pn	21 51 27.5	+4.5
KWP	Kalwaria Pacla	9.79	38	ePn	Pn	21 51 27.2	+4.2
	comp=Z,54nm,1.4s						
KWP	Kalwaria Pacla	9.79	38	⇑iP	Pn	21 51 27.5	+4.5
KWP	Kalwaria Pacla	9.79	38	eP	Pn	21 51 27.6	+4.5
GIVF	Givet	9.87	326	ePn	Pn	21 51 24.0	-0.2
ISR	Istrita	9.90	69	⇑P	Pn	21 51 27.6	+3.0
ISR	Istrita	9.90	69	⇑iP	Pn	21 51 27.6	+3.0
ISR	Istrita	9.90	69	P	Pn	21 51 27.6	+3.0
BURAR	Bucovina Array	9.90	53	⇓iP	Pn	21 51 28.1	+3.4
BUR08	Bucovina Ar. S	9.91	53	ePn	Pn	21 51 26.4	+1.6
BAIF	Baives	10.10	324	ePn	Pn	21 51 26.3	-1.0
PLOR	Plostina	10.15	65	⇓P	Pn	21 51 29.1	+1.1
PLOR	Plostina	10.15	65	⇓iP	Pn	21 51 29.1	+1.1
PLOR	Plostina	10.15	65	P	Pn	21 51 29.1	+1.1
VRI	Vrincioaia	10.21	65	⇑P	Pn	21 51 30.7	+1.9
VRI	Vrincioaia	10.21	65	⇑iP	Pn	21 51 30.6	+1.8
VRI	Vrincioaia	10.21	65	P	Pn	21 51 30.7	+1.9
TESR		10.35	61	⇓iP	Pn	21 51 34.8	+4.1
LVV	L'vov	10.54	40	eP	Pn	21 51 36.2	+2.9
LVV				e		21 53 32.4	
LVV				MLR	MLR		
	comp=N,300nm,8.0s						
LVV				MLR	MLR		
	comp=E,200nm,8.0s						
LVV				MLR	MLR		
	comp=Z,300nm,8.0s						
LVV	L'vov	10.54	40	eP	Pn	21 51 36.2	+2.9
LVV				eS	Sn	21 53 32.4	+1.0
CFR	Carcaliu	11.01	70	⇑P	Pn	21 51 42.3	+2.5
CFR	Carcaliu	11.01	70	⇑iP	Pn	21 51 42.3	+2.5
CFR	Carcaliu	11.01	70	P	Pn	21 51 42.3	+2.5
IDI	Anoyia	11.30	124	eP	Pn	21 51 38.1	-5.7
LAST	Lasithi	11.75	123	eP	Pn	21 51 49.0	-1.0
KIS	Kishinev	11.92	61	eP	Pn	21 51 54.0	+1.8
KIS				MLR	MLR		
	comp=Z,500nm,14.0s						
KIS				MLR	MLR		
	comp=Z,600nm,16.0s						
KIS	Kishinev	11.92	61	eP	Pn	21 51 54.0	+1.8
KIS				LRM	MLR	21 57 25.0	
	comp=Z,500nm,14.0s						
KIS	Kishinev	11.92	61	eP	Pn	21 51 54.0	+1.8
	comp=Z,600nm,16.0s						
ZKR	Zakros	12.24	121	eP	Pn	21 51 58.4	+1.8
ESDC	Sonseca Array	13.42	265	Pn	Pn	21 52 10.2	-2.6
ESDC	Sonseca Array	13.42	265	Pn	Pn	21 52 10.2	-2.6
	baz=70,slow=14,SNR=10						
ESDC				LR	LR	21 56 27.4	
	comp=Z,63nm,19.9s,baz=240,slow=34						
AKASG	Malin Array Be	13.74	47	P	Pn	21 52 18.3	+1.4
AKASG	Malin Array Be	13.74	47	Pn	Pn	21 52 18.3	+1.4
AKASG	Malin Array Be	13.74	47	Pn	Pn	21 52 18.3	+1.4
	comp=Z,0.3nm,0.3s,baz=227,slow=11,SNR=4.4						
AKASG	Malin Array Be	13.74	47	P	Pn	21 52 18.3	+1.4
BRTR	Keskin Array B	15.44	93	Pn	Pn	21 52 42.2	+2.0
BRTR	Keskin Array B	15.44	93	Pn	Pn	21 52 42.2	+2.0
	comp=Z,0.0nm,0.3s,baz=291,slow=12,SNR=2.9						
HFS	Hagfors	17.91	0	P	Pn	21 53 11.4	+0.2
HFS	Hagfors	17.91	0	P	Pn	21 53 11.4	+0.2
	comp=Z,0.1nm,0.3s,baz=180,slow=8.6,SNR=3.6						
HFS	Hagfors	17.91	0	P	Pn	21 53 11.4	+0.2
NB2	NORSAR Subarra	18.87	357	P	Pn	21 53 22.9	-0.1
	comp=Z,2.9nm,0.8s,baz=178,slow=10						
NB2	NORSAR Subarra	18.87	357	P	Pn	21 53 22.9	-0.1
	comp=Z,2.9nm,0.8s,SNR=8.4						
NOA	NORSAR Array B	18.87	357	P	Pn	21 53 23.2	+0.2
NOA	NORSAR Array B	18.87	357	P	Pn	21 53 23.2	+0.2
	comp=Z,0.1nm,0.3s,baz=176,slow=11,SNR=6.1						
NOA				LR	LR	22 00 46.6	
	comp=Z,61nm,20.4s,baz=210,slow=38						
NOA	NORSAR Array B	18.87	357	P	Pn	21 53 23.2	+0.2
MMAI	Mount Meron Ar	19.62	111	P	Pn	21 53 33.8	+1.4
MMAI	Mount Meron Ar	19.62	111	P	Pn	21 53 33.8	+1.4
	baz=314,slow=16,SNR=4.2						
VSR	Storozhevoye	19.68	54	eP	Pn	21 53 33.6	+0.8
VSR				pmax	pmax		
	comp=N,1.0nm,0.5s						
VSR				pmax	pmax		
	comp=E,5.0nm,0.5s						
VSR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
VSR	Storozhevoye	19.68	54	eP	Pn	21 53 33.6	+0.8
OBN	Obninsk	19.84	42	⇑iP	P	21 53 33.2	+0.2
OBN				pmax	pmax		
	comp=Z,28nm,1.5s						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s						
OBN	Obninsk	19.84	42	iP	P	21 53 33.2	+0.2
	comp=Z,100nm,15.0s						
TAM	Tamanrasset	20.51	201	eP	Pn	21 53 43.8	+0.8
TAM				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TAM	Tamanrasset	20.51	201	ePn	Pn	21 53 43.8	+0.8
	comp=Z,10nm,1.4s						
TAM	Tamanrasset	20.51	201	eP	Pn	21 53 43.8	+0.8
	comp=Z,10.0nm,1.4s						
FINES	FINESS Array B	20.67	17	P	P	21 53 41.4	-0.6
FINES	FINESS Array B	20.67	17	P	P	21 53 41.4	-0.6
	comp=Z,8.2nm,0.8s,baz=198,slow=7.2,SNR=13						
FINES				LR	LR	22 02 33.2	
	comp=Z,186nm,18.6s,baz=94,slow=39						
FINES	FINESS Array B	20.67	17	P	P	21 53 41.4	-0.6
FIA1	FINESS Array S	20.67	17	eP	P	21 53 37.7	-4.3
MOS	Moscow	20.68	41	eP	P	21 53 41.2	-0.9
MOS				pmax	pmax		
	comp=Z,34nm,1.3s						
MOS	Moscow	20.68	41	eP	P	21 53 41.2	-0.9
	comp=Z,34nm,1.3s						
ASF	Jabal al Asfar	21.14	111	LR	LR	22 04 19.3	
	comp=Z,30nm,18.6s,baz=57,slow=43						
VRHR	Novokhopersk	21.14	56	eP	P	21 53 48.3	+1.1
VRHR				pmax	pmax		
	comp=N,10.0nm,0.7s						
VRHR				pmax	pmax		
	comp=E,6.0nm,0.7s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VRHR	Novokhopersk	21.14	56	eP	P	21 53 48.3	+1.1
KAF	Kangasniemi	21.31	17	eP	P	21 53 48.2	-0.8
KAF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KAF	Kangasniemi	21.31	17	ep	P	21 53 48.2	-0.8
	comp=Z,2.9nm,0.8s						
KAF	Kangasniemi	21.31	17	eP	P	21 53 48.2	-0.8
	comp=Z,3.0nm,0.8s						
KIV	Kislovodsk	21.36	75	⇓iP	P	21 53 52.1	+2.4
KIV				e		21 54 09.2	
KIV				pmax	pmax		
	comp=Z,34nm,1.4s						
KIV	Kislovodsk	21.36	75	iP	P	21 53 52.1	+2.4
	comp=Z,34nm,1.4s						
KBZ	Khabaz	21.53	76	P	P	21 53 53.1	+1.7
KBZ	Khabaz	21.53	76	P	P	21 53 53.1	+1.7
KBZ	Khabaz	21.53	76	P	P	21 53 53.1	+1.7
	comp=Z,6.6nm,0.9s,baz=279,slow=12,SNR=6.9						
KBZ	Khabaz	21.53	76	P	P	21 53 53.1	+1.7
ZEI	Tsey	22.39	78	eP	P	21 54 04.1	+3.2
ZEI				pmax	pmax		
	comp=Z,18nm,1.8s						
ZEI	Tsey	22.39	78	eP	P	21 54 04.1	+3.2
	comp=Z,18nm,1.8s						
TBLG	Delisi	23.19	81	P	P	21 54 16.3	+7.2
TBLG	Delisi	23.19	81	P	P	21 54 16.3	+7.2
JOF	Joensuu	23.21	21	eP	P	21 54 09.0	-0.1
JOF				pmax	pmax		
	comp=Z,2.0nm,0.7s						
JOF	Joensuu	23.21	21	ep	P	21 54 09.0	-0.1
	comp=Z,2.2nm,0.7s						
JOF	Joensuu	23.21	21	eP	P	21 54 09.0	-0.1
	comp=Z,2.0nm,0.7s						
GNI	Garni	23.56	85	eP	P	21 54 08.7	-4.3
	comp=Z,26nm,1.1s						
GNI	Garni	23.56	85	P	P	21 54 15.4	+2.3
	comp=Z,16nm,0.9s,baz=308,slow=2.1,SNR=12						
GNI				LR	LR	22 03 48.8	
	comp=Z,34nm,20.5s,baz=72,slow=38						
GNI	Garni	23.56	85	iP	P	21 54 16.0	+3.0
	comp=Z,41nm,1.6s						
DGRG	David-gareji	23.71	81	P	P	21 54 16.6	+2.3
BHD	Baghdad	25.92	100	ex	P	21 54 35.0	+0.5
BHD				ex	x	21 59 08.0	
ARCES	ARCESS Array B	28.06	9	P	P	21 54 53.4	-0.1
	comp=Z,2.0nm,0.8s,baz=12,slow=12,SNR=3.6						
ARCES	ARCESS Array B	28.06	9	P	P	21 54 53.4	-0.1
TOA0	Torodi Ar. Sit	30.75	203	eP	P	21 55 17.9	+0.1
TORD	Torodi Ar. Bea	30.75	203	P	P	21 55 18.4	+0.7
TORD	Torodi Ar. Bea	30.75	203	P	P	21 55 18.4	+0.7
	comp=Z,2.6nm,0.8s,baz=15,slow=8.2,SNR=16						
TORD				LR	LR	22 07 48.1	
	comp=Z,47nm,18.6s,baz=0.0,slow=37						
ARU	Arti	31.98	48	iP	P	21 55 31.8	+3.5
ARU						21 56 33.2	
ARU				S	S	22 00 43.6	+3.9
ARU				SS	SnSn	22 02 25.2	-3.0
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ARU	Arti	31.98	48	iP	P	21 55 31.8	+3.5
	comp=Z,8.0nm,1.0s						
BRVK	Borovoye	38.80	54	ceP	P	21 56 30.8	+3.9
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BVAR	Borovoye Array	38.86	54	P	P	21 56 30.3	+2.8
BVAR						21 57 55.9	
BVAR	Borovoye Array	38.86	54	P	P	21 56 30.3	+2.8
BVAR				PP	PP	21 57 55.9	-0.4
BVAR	Borovoye Array	38.86	54	P	P	21 56 30.3	+2.8
	comp=Z,1.2nm,0.8s,baz=274,slow=7.3,SNR=6.9						
BVAR				PP	PP	21 57 55.9	-0.4
	comp=Z,0.7nm,0.8s,baz=292,slow=12,SNR=3.2						
AAK	Ala-Archa	44.15	68	ceP	P	21 57 14.2	+3.0
AAK				pmax	pmax		
	comp=Z,13nm,1.7s						
AAK	Ala-Archa	44.15	68	eP	P	21 57 13.2	+2.0
	comp=Z,4.8nm,1.3s						
AAK	Ala-Archa	44.15	68	P	P	21 57 14.1	+2.8
	comp=Z,1.4nm,0.8s,baz=241,slow=4.9,SNR=2.2						
KURBB	Kurchatov Arra	44.29	56	P	P	21 57 12.4	+0.4
	comp=Z,0.3nm,0.6s,baz=309,slow=7.7,SNR=4.3						
KURBB				PP	PP	21 58 54.6	-0.4
	comp=Z,0.8nm,0.9s,baz=293,slow=10,SNR=5.3						
KURBB				LR	LR	22 17 21.0	
	comp=Z,58nm,18.3s,baz=275,slow=38						
KURK	Kurchatov	44.32	56	ceP	P	21 57 14.4	+2.2
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURK	Kurchatov	44.32	56	P	P	21 57 12.4	+0.2
KURK				PP	PP	21 58 54.6	-0.7
NVS	Novosibirsk	45.97	49	eP	P	21 57 26.0	+0.7
NVS				e		21 59 17.8	
ZALV	Zalesovo Beam	47.10	50	P	P	21 57 34.0	-0.1
ZALV						21 59 24.0	
ZALV	Zalesovo Beam	47.10	50	P	P	21 57 34.0	-0.1
ZALV				PP	PP	21 59 23.9	-0.7
ZALV	Zalesovo Beam	47.10	50	P	P	21 57 34.0	-0.1
	comp=Z,0.7nm,0.6s,baz=302,slow=8.5,SNR=5.3						
ZALV				PP	PP	21 59 23.9	-0.7
	comp=Z,0.9nm,0.7s,baz=278,slow=10.0,SNR=4.2						
ZALV				LR	LR	22 19 30.6	
	comp=Z,153nm,18.1s,baz=71,slow=39						
MK31	Makanchi Array	47.85	60	eP	P	21 57 38.8	-1.4
MK31	Makanchi Array	47.85	60	eP	P	21 57 38.8	-1.4
MKAR	Makanchi Array	47.85	60	P	P	21 57 39.8	-0.4
MKAR	Makanchi Array	47.85	60	P	P	21 57 39.8	-0.4
MKAR	Makanchi Array	47.85	60	P	P	21 57 39.8	-0.4
	comp=Z,1.0nm,0.6s,baz=286,slow=6.2,SNR=11						
FRB	Frobisher Bay	49.77	325	P	P	21 57 54.3	-0.2
FRB	Frobisher Bay	49.77	325	P	P	21 57 54.3	-0.2
	comp=Z,2.2nm,0.6s,baz=95,slow=7.4,SNR=5.3						
SCHQ	Schefferville	51.77	313	P	P	21 58 09.1	-0.8
SCHQ	Schefferville	51.77	313	P	P	21 58 09.1	-0.8
	comp=Z,1.8nm,0.6s,baz=83,slow=11,SNR=4.1						
SONM	Songino Array	62.00	50	P	P	21 59 22.9	+0.3
SONM	Songino Array	62.00	50	P	P	21 59 22.9	+0.3
	comp=Z,1.3nm,1.0s,baz=290,slow=9.1,SNR=9.5						
YKA	Yellowknife Ar	67.62	337	P	P	21 59 58.9	0.0
YKA	Yellowknife Ar	67.62	337	P	P	21 59 58.8	0.0
	comp=Z,0.5nm,0.5s,baz=40,slow=5.8,SNR=11						
FFC	Flin Flon	68.86	326	iP	P	22 00 08.2	+1.5
ILAR	Eielson Array	72.21	351	P	P	22 00 26.1	-0.9
ILAR	Eielson Array	72.21	351	P	P	22 00 26.1	-0.9
	comp=Z,0.6nm,0.9s,baz=4.0,slow=5.5,SNR=7.9						
CMAR	Chiang Mai Arr	74.55	79	P	P	22 00 39.9	-1.6
CMAR	Chiang Mai Arr	74.55	79	P	P	22 00 39.9	-1.6
	comp=Z,0.6nm,0.9s,baz=306,slow=8.1,SNR=4.1						
NJ2	Nanjing	79.25	56	eP	P	22 01 09.9	+2.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PDAR	Pinedale Array	81.07	321	P	P	22 01 17.9	+0.1
PDAR	Pinedale Array	81.07	321	P	P	22 01 17.9	+0.1
	comp=Z,0.7nm,0.8s,baz=64,slow=6.8,SNR=5.6						
ROSC	El Rosal	85.14	272	LR	LR	22 37 23.4	
	comp=Z,28nm,19.6s,baz=285,slow=34						
MJAR	Matsushiro Arr	86.77	42	LR	LR	22 45 07.3	
	comp=Z,54nm,18.5s,baz=45,slow=39						

NIED ***23*** *22:11:00,24.˚10N×125.˚30E,h35km,Mw3.8 Best double couple: M0 6.39000×10^14 NP1:ϕs 104.00000°, δ86.00000°, λ26.00000°. NP2:ϕs 12.00000°, δ64.00000°, λ175.00000°.*
IDC ***23*** *22:11:24.2±0.8,24.˚24N×125.˚23E,h0km,mb3.8/10, mb1 4.0/10,mb1mx3.8/26,mbtmp3.8/10,Error ellipse: s-maj=35.1km s-min=17.3km az=65.0*
JMA ***23*** *22:11:29.2±0.1,24.˚13N×125.˚26E,h43km,M4.2*

ISC 23 22:11:24.6±1.7,24.˚14N±0.˚07×125.˚33E±0.˚04,h6km±11km, n26,σ1s38/34,mb3.8/10,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JOGS	Gusukube	0.62	6	P		Pn	22 11 41.8	+1.9
JOGS				S		Sn	22 11 51.4	+1.2
JMJ	Miyako jima 2	0.67	357	P		Pn	22 11 42.3	+1.7
JMJ				eS		Sn	22 11 51.9	+0.5
JTJ	Tarama	0.76	311	P		Pn	22 11 43.0	+1.2
JTJ				eS		Sn	22 11 52.6	-1.0
JIJ	Ishigaki jima	1.11	282	P		Pn	22 11 47.8	+1.2
JIJ				eS		Sn	22 12 01.0	-1.2
JKRS	Kuro-shima	1.21	275	P		Pg	22 11 49.7	+1.8
JKRS				eS		Sn	22 12 04.4	-0.4
HATJ	Hateruma jima	1.40	267	P		Pg	22 11 51.8	+0.3
HATJ				eS		Sb	22 12 07.7	-1.5
IRIF	Iriomote-Funau	1.48	278	P		Pg	22 11 53.1	+0.2
IRIF				eS		Sb	22 12 10.4	-1.0
YOJ	Yonaguni jima	2.14	279	P		Pb	22 12 02.2	-1.6
JKE	Kume jima 2	2.54	31	P		Pb	22 12 08.1	-2.5
JAGN	Aguni-jima	2.99	35	P		Pb	22 12 16.2	-2.0
JIH	Iheya	3.73	39	P		Pn	22 12 25.3	+2.5
JIH				eS		Sn	22 13 06.9	-0.2
JOW	Kunigami	3.77	44	P		Pn	22 12 24.8	+1.4
JTK	Tokunoshima	4.88	41	P		Pn	22 12 39.0	+0.5
JTK				eS		Sn	22 13 33.6	-1.6
JAMN	Amaminishikomi	5.35	39	P		Pn	22 12 45.1	+0.1
JMZ	Minamidaito 2	5.60	71	P		Pn	22 12 47.7	-0.7
MJAR	Matsushiro Arr	16.60	39	Pn		P	22 15 23.6	+3.1
	0.1nm,0.3s,baz=227,slow=11,SNR=5.8							
SONM	Songino Array	28.02	332	P		P	22 17 15.1	-1.5
	0.5nm,0.3s,baz=151,slow=9.3,SNR=5.4							
MKAR	Makanchi Array	41.04	314	P		P	22 19 08.4	-0.3
	2.0nm,0.5s,baz=100,slow=10,SNR=62							
ZALV	Zalesovo Beam	42.39	325	P		P	22 19 18.1	-1.6
	0.9nm,0.5s,baz=109,slow=8.4,SNR=7.5							
KURBB	Kurchatov Arra	44.61	319	P		P	22 19 37.1	-0.5
	1.5nm,0.6s,baz=108,slow=10,SNR=20							
WRA	Warramunga Arr	44.69	168	P		P	22 19 39.6	+1.0
	1.2nm,0.6s,baz=348,slow=8.8,SNR=17							
AAK	Ala-Archa	45.55	307	P		P	22 19 45.6	+0.1
	0.3nm,0.3s,baz=116,slow=7.6,SNR=5.9							
ASAR	Alice Springs	48.25	169	P		P	22 20 07.9	+1.4
	0.6nm,0.6s,baz=357,slow=13,SNR=8.6							
ILAR	Eielson Array	67.50	28	P		P	22 22 21.5	+0.3
	0.3nm,0.8s,baz=260,slow=5.4,SNR=3.8							
FINES	FINESS Array B	73.38	330	P		P	22 22 56.8	-0.3
	0.8nm,0.6s,baz=60,slow=7.7,SNR=5.3							
YKA	Yellowknife Ar	81.50	24	P		P	22 23 43.5	+0.9
	0.8nm,0.8s,baz=301,slow=5.1,SNR=11							

ISCJB ***23*** *22:17:41.3±0.5,37.˚04N×139.˚52E±0.˚07, h152km±3km,mb3.1/5, Error ellipse: s-maj=9.7km s-min=6.8km az=5.7*
JMA ***23*** *22:17:42.4±0.1,37.˚02N×139.˚54E,h147km±1km,M2.8*
IDC ***23*** *22:17:42.8±1.3,36.˚96N×139.˚47E,h153km±10km,mb2.9/5, mb1 3.1/6,mb1mx2.9/27,mbtmp3.0/6,Error ellipse: s-maj=27.3km s-min=12.3km az=65.0*

ISC 23 22:17:42.3±0.8,37.˚04N±0.˚05×139.˚52E±0.˚06,h149km±6km, n22,σ0s55/35,mb3.2/5,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JSB	Shiboa	0.33	102	P		Pn	22 18 03.0	+0.2
JSB				eS		Sn	22 18 18.5	+0.1
JKT	Katashina	0.35	219	P		Pn	22 18 02.9	-0.1
JKT				eS		Sn	22 18 18.6	-0.1
JFY	Yanaizu	0.40	22	P		Pn	22 18 02.9	-0.2
JFY				eS		Sn	22 18 18.4	-0.6
JHK	Hiroka	0.46	298	P		Pn	22 18 03.2	-0.1
JHK				S		Sn	22 18 18.8	-0.5
JAG	Ashikaga	0.61	185	P		Pn	22 18 04.0	-0.2
JNS	Sasagawa	0.80	348	P		Pn	22 18 05.2	-0.1
JNS				eS		Sn	22 18 22.1	-0.9
JFT	Otama	0.81	53	P		Pn	22 18 05.6	+0.2
JFT				S		Sn	22 18 23.2	+0.1
JIZZ	Izumozaki	0.81	308	P		Pn	22 18 06.2	+0.8
JIZZ				eS		Sn	22 18 24.3	+1.2
JRY	Ryogami san	1.13	206	P		Pn	22 18 08.5	+0.3
JRY				S		Sn	22 18 27.8	-0.1
MJAR	Matsushiro Arr	1.16	245	P		Pn	22 18 08.4	-0.1
	7.8nm,0.3s,baz=52,slow=7.8,SNR=81							
MJAR				S		Sn	22 18 28.5	+0.1
	1.4nm,0.3s,baz=76,slow=17,SNR=9.0							
MAT	Matsushiro	1.16	245	P		Pn	22 18 08.5	+0.1
MAT				S		Sn	22 18 28.6	+0.2
MAT	Matsushiro	1.16	245	P		Pn	22 18 08.6	+0.1
MAT				S		Sn	22 18 28.5	+0.2
JSD	Sado	1.42	315	P		Pn	22 18 10.4	-0.4
JSD				S		Sn	22 18 30.9	-1.8
JAW	Awa shima	1.43	351	P		Pn	22 18 11.1	+0.1
JYN	Shimob	1.73	207	P		Pn	22 18 14.5	+0.2
JOD2	Odawara 2	1.80	191	P		Pn	22 18 14.6	-0.6
JHJ	Hachijo jima 2	3.91	177	P		Pn	22 18 41.5	0.0
	8.7nm,0.3s,baz=284,slow=17,SNR=6.1							
JHJ				S		Sn	22 19 26.5	-0.8
	16nm,0.3s,baz=107,slow=19,SNR=4.4							
SONM	Songino Array	26.53	304	P		P	22 23 05.8	-0.3
	0.3nm,0.6s,baz=107,slow=11,SNR=2.9							
ZALV	Zalesovo Beam	40.79	312	P		P	22 25 09.4	+0.7
	0.2nm,0.4s,baz=85,slow=9.4,SNR=2.8							
KURBB	Kurchatov Arra	44.80	308	P		P	22 25 40.9	-0.1
	0.4nm,0.4s,baz=84,slow=8.2,SNR=5.5							
ILAR	Eielson Array	50.30	32	P		P	22 26 23.8	+0.5
	0.2nm,0.6s,baz=278,slow=6.2,SNR=3.3							
WRA	Warramunga Arr	56.88	186	P		P	22 27 11.3	-0.3
	0.1nm,0.3s,baz=1.3,slow=7.5,SNR=6.1							

ISK ***23*** *22:20:08.3,38.˚91N×38.˚77E,h5km,MD2.8*
DDA ***23*** *22:20:09.8,38.˚88N×38.˚82E,h7km,MD2.9*
CSEM ***23*** *22:20:10.3±0.2,38.˚87N×38.˚80E,h2km,MD2.9,Error ellipse: s-maj=5.1km s-min=4.0km az=114.0*

ISC 23 22:20:10.7±1.1,38.˚87N±0.˚02×38.˚81E±0.˚02,h6km±12km, n20,σ0s86/36,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
ELZG	Elazig	0.40	160	eP		Pg	22 20 18.0	-0.5
ELZG				eS		Sg	22 20 24.4	+0.7
ELZG	Elazig	0.40	160	eP		Pg	22 20 18.0	-0.5
ELZG				eS		Sg	22 20 24.4	+0.7
PTK	Pertek	0.46	87	ePG		Pg	22 20 18.7	-0.9
PTK				eSG		Sg	22 20 26.7	+1.1
PTK	Pertek	0.46	87	ePg		Pg	22 20 18.7	-0.9
PTK				eSg		Sg	22 20 26.7	+1.1
KEMA	Kemaliye	0.47	328	eP		Pg	22 20 19.3	-0.5
KEMA				eS		Sg	22 20 26.1	+0.2
KEMA	Kemaliye	0.47	328	eP		Pg	22 20 19.3	-0.5
KEMA				eS		Sg	22 20 26.1	+0.2
MYA	Malataya	0.62	209	ePG		Pg	22 20 22.0	-0.7
MYA				eSG		Sb	22 20 31.9	-1.1
MYA	Malataya	0.62	209	ePg		Pg	22 20 22.0	-0.7
MYA				eSg		Sb	22 20 31.9	-1.1
SVRC	Sivrice-ELAZID	0.63	141	ePg		Pg	22 20 21.8	-1.0
SVRC				eSG		Sb	22 20 32.6	-0.6
SVRC	Sivrice-ELAZID	0.63	141	ePg		Pg	22 20 21.8	-1.0
SVRC				eSg		Sb	22 20 32.7	-0.6
MALT	Malatya	0.63	208	ePG		Pg	22 20 22.2	-0.6
MALT				eSG		Sg	22 20 31.9	+0.8
MALT	Malatya	0.63	208	ePg		Pg	22 20 22.3	-0.6
MALT				eSg		Sg	22 20 31.9	+0.8
DARE	Darende-Malaty	0.79	276	ePG		Pn	22 20 29.6	+1.2
DARE	Darende-Malaty	0.79	276	ePg		Pn	22 20 29.7	+1.2
AKCD	Akcadag	0.90	231	eP		Pg	22 20 27.5	-0.5
AKCD				eS		Sb	22 20 40.4	-0.7
AKCD	Akcadag	0.90	231	eP		Pg	22 20 27.5	-0.5
AKCD				eS		Sb	22 20 40.4	-0.7
EZC	Erzincan	0.98	25	ePg		Pg	22 20 28.7	-0.8

KII	**Karymskiy**	**3.66**	**15**	P	**Pn**	**22 39 35.2**	**+2.3**
KII				S	**Sn**	**22 40 15.6**	**+0.8**
MKZ	**Mys Kozlova**	**4.69**	**29**	PN	**Pn**	**22 39 47.3**	**+0.4**
MKZ	**Mys Kozlova**	**4.69**	**29**	P	**Pn**	**22 39 47.3**	**+0.4**
MKZ				*e*S	**Sn**	**22 40 38.7**	**-1.2**
TUMR	**Tumrok**	**4.97**	**15**	P	**Pn**	**22 39 53.5**	**+2.6**
TUMR				S	**Sn**	**22 40 48.0**	**+0.9**
ESO	**Esso**	**5.44**	**5**	PN	**Pn**	**22 40 00.4**	**+3.1**
ESO	**Esso**	**5.44**	**5**	P	**Pn**	**22 40 00.4**	**+3.1**
KMNR	**Kamenistaya**	**5.44**	**14**	P	**Pn**	**22 40 00.1**	**+2.8**
SRDR	**Sredinnyy**	**5.91**	**10**	P	**Pn**	**22 40 06.7**	**+2.9**
KBTR	**Krutoberegovo**	**6.43**	**26**	PN	**Pn**	**22 40 12.5**	**+1.7**
KBTR	**Krutoberegovo**	**6.43**	**26**	P	**Pn**	**22 40 12.5**	**+1.7**
SRKR	**Sorokina**	**6.46**	**17**	P	**Pn**	**22 40 13.2**	**+2.0**
BKI	**Bering**	**6.80**	**43**	S	**Sn**	**22 41 26.4**	**-5.3**

CSEM ***23*** *22:51:48.4±0.1, 42˚.24N×13˚.47E, h8km, ML3.0/10, Error ellipse: s-maj=2.5km s-min=1.8km az=69.0*

ROM 23 22:51:48.0±0.1, 42˚.24N×13˚.48E, h10km±1km, MI2.7/25, Error ellipse: s-maj=1.0km s-min=0.7km az=59.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.13**	**333**	Pg	Pg	22 51 51.7	+0.6
AQU				Sg	Sg	22 51 53.8	+0.5
	3μm,0.4s						
AQU	**L'Aquila**	**0.13**	**333**	Pg	Pg	22 51 51.7	+0.6
AQU				Sg	Sg	22 51 53.8	+0.5
	3μm,0.4s						
PTQR	**Pietraquaria**	**0.23**	**195**	Pg	Pg	22 51 53.6	+0.8
PTQR				Sg	Sg	22 51 57.1	+1.1
PTQR	**Pietraquaria**	**0.23**	**195**	Pg	Pg	22 51 53.6	+0.8
PTQR				Sg	Sg	22 51 57.1	+1.1
FIAM	**Fiamignano**	**0.27**	**276**	Pg	Pg	22 51 54.3	+0.7
FIAM				Sg	Sg	22 51 58.5	+1.1
	1μm,0.7s						
FIAM	**Fiamignano**	**0.27**	**276**	Pg	Pg	22 51 54.3	+0.7
FIAM				Sg	Sg	22 51 58.5	+1.1
	1μm,0.7s						
CAMP	**Campotosto**	**0.30**	**350**	Pg	Pg	22 51 54.3	+0.1
CAMP				Sg	Sb	22 52 00.2	-0.7
	681nm,0.6s						
CAMP	**Campotosto**	**0.30**	**350**	Pg	Pg	22 51 54.3	+0.1
CAMP				Sg	Sb	22 52 00.2	-0.7
	681nm,0.6s						
VCEL	**Villa Celiera**	**0.31**	**60**	Pg	Pg	22 51 54.7	+0.3
VCEL				Sg	Sg	22 51 59.7	+1.1
	1μm,0.4s						
VCEL	**Villa Celiera**	**0.31**	**60**	Pg	Pg	22 51 54.7	+0.3
VCEL				Sg	Sg	22 51 59.7	+1.1
	1μm,0.4s						
VVLD	**Villa Vallelon**	**0.38**	**164**	Pg	Pg	22 51 56.2	+0.5
VVLD				Sg	Sb	22 52 02.2	-1.0
	575nm,0.7s						
VVLD	**Villa Vallelon**	**0.38**	**164**	Pg	Pg	22 51 56.2	+0.5
VVLD				Sg	Sb	22 52 02.2	-1.0
	575nm,0.7s						
INTR	**Introdacqua**	**0.39**	**126**	Pg	Pg	22 51 56.2	+0.4
INTR				Sg	Sg	22 52 01.8	+0.7
	979nm,0.8s						
INTR	**Introdacqua**	**0.39**	**126**	Pg	Pg	22 51 56.2	+0.4
INTR				Sg	Sg	22 52 01.8	+0.7
	979nm,0.8s						
TERO	**Teramo**	**0.39**	**13**	Pg	Pg	22 51 56.0	+0.1
TERO				Sg	Sg	22 52 02.1	+0.9
	971nm,0.6s						
TERO	**Teramo**	**0.39**	**13**	Pg	Pg	22 51 56.0	+0.1
TERO				Sg	Sg	22 52 02.1	+0.9
	971nm,0.6s						
GUAR	**Guarcino**	**0.46**	**196**	Pg	Pg	22 51 57.6	+0.5
	343nm,0.3s						
GUAR	**Guarcino**	**0.46**	**196**	Pg	Pg	22 51 57.6	+0.5
	343nm,0.3s						
CERT	**Cerreto**	**0.47**	**232**	Pg	Pg	22 51 57.7	+0.4
	860nm,0.6s						
CERT	**Cerreto**	**0.47**	**232**	Pg	Pg	22 51 57.7	+0.4
	860nm,0.6s						
LNSS	**Leonessa**	**0.49**	**318**	Pg	Pg	22 51 57.8	+0.1
	545nm,0.4s						
LNSS	**Leonessa**	**0.49**	**318**	Pg	Pg	22 51 57.8	+0.1
	545nm,0.4s						
POFI	**Posta Fibreno**	**0.55**	**162**	Pg	Pg	22 51 59.0	+0.2
POFI				Sg	Sb	22 52 07.6	-0.3
	174nm,0.8s						
POFI	**Posta Fibreno**	**0.55**	**162**	Pg	Pg	22 51 59.0	+0.2
POFI				Sg	Sb	22 52 07.6	-0.3
	174nm,0.8s						
LPEL	**Lama dei Pelig**	**0.56**	**110**	Pg	Pg	22 51 59.0	+0.1
LPEL				Sg	Sb	22 52 07.5	-0.6
	501nm,0.5s						
LPEL	**Lama dei Pelig**	**0.56**	**110**	Pg	Pg	22 51 59.0	+0.1
LPEL				Sg	Sb	22 52 07.5	-0.6
	501nm,0.5s						
SDI	**San Donato**	**0.58**	**155**	Pg	Pg	22 51 59.7	+0.3
SDI				Sg	Sb	22 52 08.6	-0.3
	200nm,0.2s						
SDI	**San Donato**	**0.58**	**155**	Pg	Pg	22 51 59.7	+0.3
SDI				Sg	Sb	22 52 08.6	-0.3
	200nm,0.2s						
MTCE	**Montecelio**	**0.59**	**249**	Pg	Pg	22 51 59.6	+0.1
	210nm,0.3s						
MTCE	**Montecelio**	**0.59**	**249**	Pg	Pg	22 51 59.6	+0.1
	210nm,0.3s						
MNS	**Montasola**	**0.61**	**284**	Pg	Pg	22 51 59.8	-0.1
	292nm,0.4s						
MNS	**Montasola**	**0.61**	**284**	Pg	Pg	22 51 59.8	-0.1
	292nm,0.4s						
CAFR	**Castel Frentan**	**0.64**	**91**	Pg	Pb	22 52 01.0	-0.4
CAFR	**Castel Frentan**	**0.64**	**91**	Pg	Pb	22 52 01.0	-0.4
NRCA	**Norcia**	**0.65**	**336**	Pg	Pg	22 52 00.5	-0.3
NRCA	**Norcia**	**0.65**	**336**	Pg	Pg	22 52 00.5	-0.3
GIUL	**Giuliano Di Ro**	**0.70**	**194**	Pg	Pg	22 52 01.7	+0.1
	138nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.70**	**194**	Pg	Pg	22 52 01.7	+0.1
	138nm,0.6s						
OFFI	**Offida**	**0.71**	**12**	Pg	Pb	22 52 02.9	+0.3
	1μm,0.6s						
OFFI	**Offida**	**0.71**	**12**	Pg	Pb	22 52 02.9	+0.3
	1μm,0.6s						
RMP	**Rome, Mte Porz**	**0.72**	**234**	Pg	Pg	22 52 02.0	0.0
	403nm,0.5s						
RMP	**Rome, Mte Porz**	**0.72**	**234**	Pg	Pg	22 52 02.0	0.0
	403nm,0.5s						
CERA	**Filignano**	**0.76**	**148**	Pg	Pg	22 52 02.5	-0.2
	237nm,0.5s						
CERA	**Filignano**	**0.76**	**148**	Pg	Pg	22 52 02.5	-0.2
	237nm,0.5s						
CESX	**Cesi**	**0.76**	**299**	Pg	Pb	22 52 03.5	+0.1
	318nm,0.5s						
CESX	**Cesi**	**0.76**	**299**	Pg	Pb	22 52 03.5	+0.1
	318nm,0.5s						
MIDA	**Miranda**	**0.83**	**136**	Pg	Pg	22 52 03.7	-0.5
	115nm,0.5s						
MIDA	**Miranda**	**0.83**	**136**	Pg	Pg	22 52 03.7	-0.5
	115nm,0.5s						
FDMO	**Fiordimonte**	**0.85**	**340**	Pg	Pg	22 52 03.8	-0.6
	246nm,0.6s						
FDMO	**Fiordimonte**	**0.85**	**340**	Pg	Pg	22 52 03.8	-0.6
	246nm,0.6s						
CESI	**CESI - Serrava**	**0.88**	**331**	Pg	Pg	22 52 05.0	0.0
	97nm,0.7s						
CESI	**CESI - Serrava**	**0.88**	**331**	Pg	Pg	22 52 05.0	0.0
	97nm,0.7s						
GUMA	**Gualdo di Mace**	**0.89**	**22**	Pg	Pg	22 52 04.4	-0.8
	934nm,0.5s						
GUMA	**Gualdo di Mace**	**0.89**	**22**	Pg	Pg	22 52 04.4	-0.8
	934nm,0.5s						
ASSB	**Assisi San Ben**	**1.00**	**323**	Pg	Pg	22 52 07.2	-0.3
	120nm,0.4s						
ASSB	**Assisi San Ben**	**1.00**	**323**	Pg	Pg	22 52 07.2	-0.3
	120nm,0.4s						
CING	**Cingoli**	**1.15**	**350**	Pg	Pb	22 52 09.7	-0.5
	96nm,0.4s						
CING	**Cingoli**	**1.15**	**350**	Pg	Pb	22 52 09.7	-0.5
	96nm,0.4s						
NVLJ	**Novalja**	**2.53**	**23**	*e*Pn	Pn	22 52 30.5	+1.3
NVLJ				Sn	Sn	22 52 57.2	-3.0
NVLJ	**Novalja**	**2.53**	**23**	*e*Pn	Pn	22 52 30.4	+1.2
NVLJ				Sn	Sn	22 52 57.1	-3.0
STON	**Ston**	**3.18**	**77**	*e*Pn	Pn	22 52 40.6	+2.5
STON	**Ston**	**3.18**	**77**	*e*Pn	Pn	22 52 40.6	+2.5

CSEM ***23*** *22:52:15.1, 42˚.25N×13˚.48E, h10km, After ROM*

ROM 23 22:52:15.1±0.1, 42˚.25N×13˚.48E, h10km, MI2.7/11, Error ellipse: s-maj=0.9km s-min=0.6km az=76.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.12**	**331**	Pg	Pg	22 52 18.9	+0.8
AQU				Sg	Sg	22 52 20.6	+0.3
	3μm,0.4s						
AQU	**L'Aquila**	**0.12**	**331**	Pg	Pg	22 52 18.9	+0.8
AQU				Sg	Sg	22 52 20.6	+0.3
	3μm,0.4s						
PTQR	**Pietraquaria**	**0.23**	**195**	Pg	Pg	22 52 20.8	+0.8
PTQR				Sg	Sg	22 52 24.7	+1.4
PTQR	**Pietraquaria**	**0.23**	**195**	Pg	Pg	22 52 20.8	+0.8
PTQR				Sg	Sg	22 52 24.7	+1.4
FIAM	**Fiamignano**	**0.27**	**275**	Pg	Pg	22 52 21.5	+0.7
FIAM				Sg	Sb	22 52 26.0	-1.1
	1μm,0.7s						
FIAM	**Fiamignano**	**0.27**	**275**	Pg	Pg	22 52 21.5	+0.7
FIAM				Sg	Sb	22 52 26.0	-1.1
	1μm,0.7s						
CAMP	**Campotosto**	**0.30**	**349**	Pg	Pg	22 52 21.8	+0.5
CAMP				Sg	Sg	22 52 26.3	+0.9
	681nm,0.6s						
CAMP	**Campotosto**	**0.30**	**349**	Pg	Pg	22 52 21.8	+0.5
CAMP				Sg	Sg	22 52 26.3	+0.9
	681nm,0.6s						
VCEL	**Villa Celiera**	**0.30**	**60**	Pg	Pg	22 52 21.9	+0.5
VCEL				Sg	Sb	22 52 27.3	-0.8
	1μm,0.4s						
VCEL	**Villa Celiera**	**0.30**	**60**	Pg	Pg	22 52 21.9	+0.5
VCEL				Sg	Sb	22 52 27.3	-0.8
	1μm,0.4s						
TERO	**Teramo**	**0.39**	**13**	Pg	Pg	22 52 23.2	+0.3
TERO				Sg	Sb	22 52 29.8	-0.5
	971nm,0.6s						
TERO	**Teramo**	**0.39**	**13**	Pg	Pg	22 52 23.2	+0.3
TERO				Sg	Sb	22 52 29.8	-0.5
	971nm,0.6s						
VVLD	**Villa Vallelon**	**0.39**	**164**	Pg	Pg	22 52 23.4	+0.5
	575nm,0.7s						
VVLD	**Villa Vallelon**	**0.39**	**164**	Pg	Pg	22 52 23.4	+0.5
	575nm,0.7s						
INTR	**Introdacqua**	**0.39**	**127**	Pg	Pg	22 52 23.4	+0.5
INTR				Sg	Sb	22 52 29.4	-1.0
	979nm,0.8s						
INTR	**Introdacqua**	**0.39**	**127**	Pg	Pg	22 52 23.4	+0.5
INTR				Sg	Sb	22 52 29.4	-1.0
	979nm,0.8s						
GUAR	**Guarcino**	**0.47**	**196**	Pg	Pg	22 52 24.6	+0.3
	343nm,0.3s						
GUAR	**Guarcino**	**0.47**	**196**	Pg	Pg	22 52 24.6	+0.3
	343nm,0.3s						
CERT	**Cerreto**	**0.48**	**232**	Pg	Pg	22 52 24.9	+0.4
	860nm,0.6s						
CERT	**Cerreto**	**0.48**	**232**	Pg	Pg	22 52 24.9	+0.4
	860nm,0.6s						
LNSS	**Leonessa**	**0.48**	**318**	Pg	Pg	22 52 25.3	+0.5
	545nm,0.4s						
LNSS	**Leonessa**	**0.48**	**318**	Pg	Pg	22 52 25.3	+0.5
	545nm,0.4s						
LPEL	**Lama dei Pelig**	**0.56**	**111**	Pg	Pg	22 52 26.1	+0.1
LPEL				Sg	Sb	22 52 34.5	-0.7
	501nm,0.5s						
LPEL	**Lama dei Pelig**	**0.56**	**111**	Pg	Pg	22 52 26.1	+0.1
LPEL				Sg	Sb	22 52 34.5	-0.7
	501nm,0.5s						
NRCA	**Norcia**	**0.65**	**335**	Pg	Pg	22 52 27.9	+0.1
NRCA	**Norcia**	**0.65**	**335**	Pg	Pg	22 52 27.9	+0.1

NIED ***23*** *22:53:00, 37˚.20N×135˚.20E, h380km, Mw4.3 Best double couple: M0 3.33000×10^15 NP1:φs 172.00000°, δ77.00000°, λ.109.00000°. NP2:φs 295.00000°, δ23.00000°, λ.35.00000°.*

ISCJB ***23*** *22:53:34.5±0.2, 37˚.30N±0˚.04×135˚.10E±0˚.04, h372km±3km, mb3.8/24, Error ellipse: s-maj=6.9km s-min=5.1km az=161.9*

JMA ***23*** *22:53:34.9±0.1, 37˚.24N×135˚.15E, h373km±2km, M3.5*

BJI ***23*** *22:53:34.1, 37˚.19N×135˚.11E, h389km, mB4.5/12, mb4.5/23*

IDC ***23*** *22:53:35.4±0.6, 37˚.27N×135˚.04E, h364km±6km, mb3.4/17, mb1 3.7/23, mb1mx3.6/32, mbtmp3.5/23, Error ellipse: s-maj=9.7km s-min=8.9km az=171.0*

ISC 23 22:53:35.2±0.5, 37˚.28N±0˚.06×135˚.08E±0˚.05, h366km±5km, n67, σ0s99/93, mb3.9/24, 1C, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**1.41**	**104**	P	**Pn**	**22 54 25.0**	**+0.5**
JJH				*e*S	**S**	**22 55 03.9**	**-0.2**
JKG	**Kaga**	**1.42**	**134**	P	**Pn**	**22 54 24.8**	**+0.2**
JKG				*e*S	**S**	**22 55 03.9**	**-0.4**
SAI	**Saigo**	**1.76**	**233**	P	**Pn**	**22 54 27.2**	**+0.7**
JSZ	**Suzu**	**1.83**	**84**	P	**Pn**	**22 54 27.3**	**+0.4**
JWT	**Wachi**	**2.01**	**172**	P	**Pn**	**22 54 28.5**	**+0.3**
JWT				S	**S**	**22 55 09.7**	**-1.0**
JGM	**Miyama**	**2.06**	**139**	P	**Pn**	**22 54 28.5**	**0.0**
JGM				S	**S**	**22 55 10.1**	**-1.3**
MAT	**Matsushiro**	**2.62**	**105**	P	**Pn**	**22 54 32.6**	**0.0**
MAT				S	**S**	**22 55 19.1**	**+0.3**
MAT	**Matsushiro**	**2.62**	**105**	P	**Pn**	**22 54 32.7**	**+0.1**
MAT				S	**S**	**22 55 18.3**	**-0.5**
MJAR	**Matsushiro Arr**	**2.62**	**105**	P	**Pn**	**22 54 32.9**	**+0.3**
	8.6nm,0.3s,baz=279,slow=10,SNR=246						
MJAR				S	**S**	**22 55 18.8**	**0.0**
	baz=276,slow=8.4,SNR=0.8						
JSD	**Sado**	**2.64**	**72**	P	**Pn**	**22 54 32.7**	**0.0**
JSD				*e*S	**S**	**22 55 17.3**	**-1.7**
JHS	**Saijyo**	**2.77**	**215**	P	**Pn**	**22 54 34.3**	**+0.3**
JHS				S	**S**	**22 55 20.9**	**-0.4**
JIE	**Ise**	**3.17**	**155**	P	**Pn**	**22 54 38.0**	**+0.6**
JIE				*e*S	**S**	**22 55 26.1**	**-1.4**
JRY	**Ryogami san**	**3.33**	**111**	P	**Pn**	**22 54 37.8**	**-1.0**
JRY				*e*S	**S**	**22 55 28.6**	**-1.4**
JWZ	**Kozaga**	**3.78**	**172**	P	**Pn**	**22 54 43.0**	**-0.1**
JOD2	**Odawara 2**	**3.82**	**121**	P	**Pn**	**22 54 43.3**	**-0.1**
JOD2				*e*S	**S**	**22 55 38.0**	**-0.5**
JTO	**Tosashimizu**	**4.79**	**204**	P	**Pn**	**22 54 54.0**	**+0.6**
JMK	**Ichinoseki**	**5.12**	**69**	P	**Pn**	**22 54 56.2**	**-0.6**
JMK				*e*S	**S**	**22 56 02.4**	**-0.6**
JNU	**Nakatsue**	**5.39**	**221**	P	**Pn**	**22 55 00.6**	**+0.6**
	1.9nm,0.3s,baz=24,slow=7.6,SNR=14						
JNU				S	**S**	**22 56 08.5**	**0.0**
	baz=85,slow=12,SNR=3.0						
BSO1	**Boso 1**	**5.46**	**117**	P	**Pn**	**22 54 58.9**	**-1.1**
BSO1				*e*S	**S**	**22 56 06.1**	**-2.8**
JHJ	**Hachijo jima 2**	**5.66**	**136**	P	**Pn**	**22 55 04.0**	**+1.1**
	1.5nm,0.3s,baz=288,slow=18,SNR=5.4						
JHJ				S	**S**	**22 56 15.0**	**+1.0**
	11nm,0.3s,baz=54,slow=21,SNR=6.1						
JHJ2	**Mitsune**	**5.69**	**136**	*e*S	**S**	**22 56 13.8**	**-0.7**
KSRS	**Korea Array**	**5.70**	**274**	P	**Pn**	**22 55 04.6**	**+1.4**
	3.1nm,0.3s,baz=94,slow=12,SNR=83						
KSRS				S	**S**	**22 56 16.2**	**+1.7**
	baz=94,slow=21,SNR=6.3						
JOSM	**Okushiri--Mats**	**5.88**	**34**	P	**Pn**	**22 55 04.6**	**-0.4**
JOT	**Ohata**	**6.18**	**47**	P	**Pn**	**22 55 08.4**	**-0.1**
USRK	**Usuriysk Arra**	**7.30**	**342**	P	**P**	**22 55 22.8**	**+0.4**
	0.7nm,0.3s,baz=165,slow=11,SNR=29						
ASAJ	**Asahikawa**	**8.90**	**38**	P	**Pn**	**22 55 38.9**	**-1.2**
	13nm,0.3s,baz=241,slow=12,SNR=65						
ASAJ				S	S	22 57 14.6	-7.7
	2.9nm,0.3s,baz=311,slow=32,SNR=12						
CN2	**Changchun**	**9.80**	**315**	*e*P	**P**	**22 55 51.9**	**+0.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC	**Hu-ho-hao-te**	**18.59**	**288**	*e*P	**P**	**22 57 25.6**	**-2.0**
HHC				S	**S**	**23 00 34.6**	**-5.5**
HHC				pmax	pmax		
	comp=Z,37nm,0.7s						
HHC				pmax	pmax		
	comp=Z,220nm,4.7s						
XAN	**Xi'an**	**21.47**	**269**	P	**P**	**22 57 54.4**	**-1.1**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,20nm,6.2s						
SONM	**Songino Array**	**23.48**	**306**	P	**P**	**22 58 13.5**	**-0.1**
	comp=Z,2.7nm,0.6s,baz=110,slow=9.4,SNR=19						
LZH	**Lanzhou**	**25.02**	**277**	*e*P	**P**	**22 58 27.0**	**-0.7**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
GYA	**Guiyang**	**26.34**	**254**	*i*P	**P**	**22 58 39.0**	**-0.4**
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GTA	**Gaotai**	**27.63**	**285**	*e*P	**P**	**22 58 50.4**	**-0.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**36.75**	**249**	P	**P**	**23 00 09.7**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=44,slow=7.7,SNR=14						
ZALV	**Zalesovo Beam**	**38.01**	**312**	P	**P**	**23 00 18.8**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=108,slow=7.5,SNR=7.7						
ZALV				PcP	**PcP**	**23 02 26.1**	**0.0**
	comp=Z,1.3nm,0.7s,baz=80,slow=3.0,SNR=7.1						
ZALV				ScP	**ScP**	**23 05 36.6**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=89,slow=2.2,SNR=3.7						
MKAR	**Makanchi Array**	**39.67**	**301**	P	**P**	**23 00 32.6**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=89,slow=8.7,SNR=18						
MKAR				PcP	**PcP**	**23 02 31.6**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=159,slow=1.1,SNR=3.0						
MKAR				ScP	**ScP**	**23 05 43.6**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=111,slow=2.2,SNR=3.4						
TAPN	**Taplejung**	**40.87**	**270**	*e*P	**P**	**23 00 43.6**	**+0.2**
	comp=Z,13nm,0.3s						
ODAN	**Odare**	**41.34**	**270**	*e*P	**P**	**23 00 47.6**	**+0.4**
	comp=Z,8.3nm,0.3s						
RAMN	**Ramite**	**41.94**	**270**	*e*P	**P**	**23 00 51.9**	**0.0**
	comp=Z,11nm,0.5s						
GUN	**Gumba**	**42.09**	**272**	*e*P	**P**	**23 00 53.4**	**+0.2**
	comp=Z,33nm,0.7s						
PKI	**Pulchoki**	**42.61**	**272**	*e*P	**P**	**23 00 56.8**	**-0.6**
	comp=Z,6.3nm,0.5s						
KKN	**Kakani**	**42.62**	**272**	*e*P	**P**	**23 00 56.6**	**-0.7**
	comp=Z,16nm,0.8s						
PKIN	**Phulchoki**	**42.62**	**272**	*e*P	**P**	**23 00 57.8**	**+0.4**
	comp=Z,6.7nm,0.6s						
DMN	**Daman**	**42.84**	**272**	*e*P	**P**	**23 00 58.6**	**-0.5**
DANN	**Dangsing**	**43.59**	**274**	*e*P	**P**	**23 01 05.4**	**+0.3**
	comp=Z,43nm,0.7s						
KOLN	**Koldanda**	**43.97**	**273**	*e*P	**P**	**23 01 08.0**	**+0.1**
	comp=Z,6.0nm,0.4s						
PYUN	**Piuthan**	**44.31**	**274**	*e*P	**P**	**23 01 10.8**	**+0.2**
	comp=Z,56nm,0.8s						
ILAR	**Eielson Array**	**51.99**	**32**	P	**P**	**23 02 08.4**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=266,slow=6.2,SNR=29						
WRA	**Warramunga Arr**	**56.92**	**181**	P	**P**	**23 02 43.2**	**-0.3**
	comp=Z,3.2nm,0.4s,baz=357,slow=7.6,SNR=84						
WRA				PcP	**PcP**	**23 03 34.9**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=355,slow=4.5,SNR=5.0						
ASAR	**Alice Springs**	**60.63**	**181**	P	**P**	**23 03 08.7**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=16,slow=13,SNR=11						
ARCES	**ARCESS Array B**	**61.92**	**338**	P	**P**	**23 03 17.0**	**+0.2**
	comp=Z,5.7nm,1.1s,baz=76,slow=10,SNR=3.7						
JOF	**Joensuu**	**63.30**	**330**	*e*p	**P**	**23 03 25.2**	**-0.6**
	comp=Z,1.1nm,0.6s						
KAF	**Kangasniemi**	**65.69**	**331**	*e*p	**P**	**23 03 40.1**	**-1.0**
	comp=Z,1.3nm,0.5s						
YKA	**Yellowknife Ar**	**66.07**	**28**	P	**P**	**23 03 44.1**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=309,slow=6.6,SNR=15						
YKA				PcP	**PcP**	**23 04 12.1**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=306,slow=4.2,SNR=3.8						
YKA				pP	**pP**	**23 05 03.9**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=307,slow=7.1,SNR=4.0						
FINES	**FINESS Array B**	**66.16**	**330**	P	**P**	**23 03 44.2**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=80,slow=5.2,SNR=16						
FINES				PcP	**PcP**	**23 04 10.7**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=51,slow=4.5,SNR=5.0						
AKASG	**Malin Array Be**	**70.92**	**320**	P	**P**	**23 04 13.1**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=50,slow=6.0,SNR=6.3						
NB2	**NORSAR Subarra**	**71.91**	**335**	P	**P**	**23 04 19.2**	**0.0**
	comp=Z,2.1nm,0.7s,baz=44,slow=6.2						
NOA	**NORSAR Array B**	**71.91**	**335**	P	**P**	**23 04 19.2**	**0.0**
	comp=Z,2.2nm,0.7s,baz=42,slow=6.0,SNR=9.4						
CLL	**Collm**	**78.25**	**327**	*i*P	**P**	**23 04 55.5**	**+0.4**
	comp=Z,5.0nm,1.0s						
NVAR	**Mina Array Bea**	**78.81**	**50**	P	**P**	**23 05 00.4**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=288,slow=5.8,SNR=6.5						
GERES	**GERESS Array B**	**79.72**	**325**	P	**P**	**23 05 03.4**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=38,slow=6.8,SNR=4.1						
PDAR	**Pinedale Array**	**81.00**	**42**	P	**P**	**23 05 11.0**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=239,slow=0.8,SNR=10.0						
SCHQ	**Schefferville**	**86.34**	**12**	P	**P**	**23 05 37.2**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=312,slow=11,SNR=7.7						
TXAR	**Lajitas Array**	**93.87**	**48**	P	**P**	**23 06 13.6**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=314,slow=3.9,SNR=8.0						
TORD	**Torodi Ar. Bea**	**113.41**	**310**	PKiKP	**PKiKP**	**23 11 29.6**	**-1.1**
	comp=Z,0.5nm,1.1s,baz=7.0,slow=3.7,SNR=4.3						
QSPA	**South Pole Qui**	**127.02**	**180**	PKP	**PKPdf**	**23 11 55.3**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=40,slow=2.0,SNR=6.5						
LPAZ	**La Paz**	**150.71**	**51**	PKPbc	**PKPbc**	**23 12 46.1**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=266,slow=5.4,SNR=5.9						

**IDC 23 23:03:34.1±1.1, 31˚.45S×177˚.72W, h0km, mb4.

ellipse: s-maj=11.5km s-min=6.4km az=153.0

ISC 23 23:23:00.0±1.1,38°65N±0°04×39°82E±0°03,h15km±10km, n20,σ0s76/28,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.41**	**306**	*e*PG	**Pg**	**23 23 08.6**	**+0.1**
PTK				*e*SG	**Sg**	**23 23 14.7**	**+0.5**
PTK	**Pertek**	**0.41**	**306**	*e*Pg	**Pg**	**23 23 08.6**	**+0.1**
PTK				*e*Sg	**Sg**	**23 23 14.7**	**+0.5**
SVRC	**Sivrice-ELAZIG**	**0.49**	**236**	*e*PG	**Pg**	**23 23 09.7**	**-0.1**
SVRC				*e*SG	**Sb**	**23 23 17.6**	**+0.1**
SVRC	**Sivrice-ELAZIG**	**0.49**	**236**	*e*Pg	**Pg**	**23 23 09.7**	**-0.1**
SVRC				*e*Sg	**Sb**	**23 23 17.6**	**+0.1**
BINT	**Bingol**	**0.57**	**66**	*e*Pg	**Pn**	**23 23 14.4**	**+0.7**
BINT				*e*Sg	**Sn**	**23 23 24.5**	**+1.6**
ELZG	**Elazig**	**0.67**	**257**	*e*P	**Pb**	**23 23 12.8**	**-0.8**
ELZG	**Elazig**	**0.67**	**257**	*e*P	**Pb**	**23 23 12.8**	**-0.8**
BNGB	**Bing ¶ll**	**0.75**	**63**	*e*PG	**Pb**	**23 23 14.4**	**-0.5**
BNGB				*e*SG	**Sg**	**23 23 24.5**	**-0.1**
ERZN	**Erzincan**	**0.94**	**355**	*e*PG	**Pb**	**23 23 17.3**	**-0.9**
MYA	**Malataya**	**1.14**	**254**	*e*PN	**Pn**	**23 23 21.3**	**-0.3**
MYA	**Malataya**	**1.14**	**254**	*e*Pn	**Pn**	**23 23 21.3**	**-0.3**
MALT	**Malatya**	**1.15**	**253**	*e*PN	**Pn**	**23 23 20.8**	**-0.8**
MALT	**Malatya**	**1.15**	**253**	*e*Pn	**Pn**	**23 23 20.8**	**-0.8**
ILIC	**ilic-Erzincan**	**1.26**	**310**	*e*PN	**Pn**	**23 23 22.6**	**-0.6**
ILIC	**ilic-Erzincan**	**1.26**	**310**	*e*Pn	**Pn**	**23 23 22.7**	**-0.6**
BEST	**Besiri**	**1.37**	**123**	*e*P	**Pn**	**23 23 24.6**	**-0.1**
BEST				*e*S	**Sb**	**23 23 43.5**	**+0.7**
BTMT	**Batman**	**1.39**	**109**	*e*PN	**Pn**	**23 23 23.1**	**-1.9**
AKCD	**Akcadag**	**1.53**	**257**	*e*P	**Pb**	**23 23 28.3**	**+0.1**
AKCD				*e*S	**Sg**	**23 23 50.7**	**+1.2**
AKCD	**Akcadag**	**1.53**	**257**	*e*P	**Pb**	**23 23 28.3**	**+0.1**
EZM	**Erzurum**	**1.73**	**43**	*e*PN	**Pn**	**23 23 29.2**	**-0.7**

IDC 23 23:30:52.2±1.1,31°46S×177°73W,h0km,mb4.2/3, mb1 4.4/4,mb1mx4.0/19,mbtmp4.2/4,ML4.3/1,MS3.5/1, Ms1 3.5/1,ms1mx2.7/30,Error ellipse: s-maj=35.5km s-min=26.5km az=113.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.20**	**356**	Pn	Pn	23 31 29.6	-0.5
	97nm,0.3s,baz=108,slow=19,SNR=2.7						
RAO				Sn	Sn	23 31 59.3	+1.3
	162nm,0.3s,baz=75,slow=22,SNR=3.1						
URZ	**Urewera**	**8.00**	**211**	Pn	Pn	23 32 45.0	-4.7
	0.5nm,0.3s,baz=82,slow=15,SNR=6.8						
URZ				Sn	Sn	23 34 12.5	-8.4
	4.8nm,0.3s,baz=169,slow=15,SNR=11						
DZM	**Mont Dzumac**	**16.93**	**300**	LR	LR	23 39 41.4	
	comp=Z,164nm,20.4s,baz=216,slow=31						
STKA	**Stephens Creek**	**34.48**	**258**	P	P	23 37 42.2	+0.3
	2.5nm,0.8s,baz=150,slow=18,SNR=3.3						
ASAR	**Alice Springs**	**43.29**	**268**	P	P	23 38 55.6	-0.3
	0.7nm,0.3s,baz=106,slow=7.2,SNR=10						
WRA	**Warramunga Arr**	**44.38**	**273**	P	P	23 39 04.0	-0.6
	4.1nm,0.6s,baz=111,slow=8.0,SNR=36						
MKAR	**Makanchi Array**	**118.62**	**310**	PKP	PKPdf	23 49 40.9	-1.0
	0.1nm,0.6s,baz=89,slow=6.2,SNR=2.2						
KAF	**Kangasniemi**	**145.62**	**340**	*e*p	PKPdf	23 50 30.0	-1.7
	0.9nm,0.5s						
FINES	**FINESS Array B**	**146.21**	**340**	PKPbc	PKPdf	23 50 33.0	+0.2
	2.4nm,0.6s,baz=51,slow=3.4,SNR=18						
HFS	**Hagfors**	**150.32**	**348**	PKPbc	PKPbc	23 50 43.7	-1.0
	0.6nm,0.7s,baz=117,slow=4.0,SNR=3.1						
MMAI	**Mount Meron Ar**	**151.99**	**282**	PKPbc	PKPbc	23 50 50.0	+0.4
	1.0nm,0.4s,baz=84,slow=7.7,SNR=9.1						
BRTR	**Keskin Array B**	**153.29**	**297**	PKPbc	PKPbc	23 50 54.1	+1.8
	0.9nm,1.0s,baz=100,slow=7.5,SNR=3.3						
TORD	**Torodi Ar. Bea**	**161.77**	**178**	PKPab	PKPab	23 51 40.0	-1.0
	0.4nm,0.8s,baz=164,slow=2.6,SNR=3.9						

*ISCJB **23** 23:56:21.6±0.5,33°86N±0°02×117°81W±0°02,h4km±3km, mb3.1/2,Error ellipse: s-maj=4.3km s-min=2.5km az=40.2*
*NEIC **23** 23:56:23.1,33°89N×117°79W,h5km,MW3.6(PAS),After PAS.*
NEIC Felt [V] at Yorba Linda; [IV] at Anaheim, Brea and Placentia; [III] at Fullerton, Los Angeles, Orange, Santa Ana and Villa Park. Felt from Glendora to Aliso Viejo and as far east as Riverside.
*IDC **23** 23:56:24.9±2.1,33°89N×117°58W,h6km±12km,mb3.0/2, mb1 3.4/8,mb1mx3.3/30,mbtmp3.1/8,ML3.3/6,Error ellipse: s-maj=21.8km s-min=8.6km az=50.0*

ISC 23 23:56:22.3±1.1,33°88N±0°02×117°80W±0°02,h2km±9km, n59,σ1s37/75,16C-21D,Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BFSC	**Mount Baldy Ra**	**0.38**	**18**	⇑P	**Pg**	**23 56 30.0**	**+0.3**
	baz=0.4						
BFSC				⇑S	**Sg**	**23 56 35.1**	**+0.4**
	baz=0.4						
MWC	**Mount Wilson**	**0.41**	**329**	*e*Pg	**Pg**	**23 56 30.2**	**0.0**
MWC				*e*Sg	**Sg**	**23 56 35.5**	**0.0**
PASC	**Pasadena Art C**	**0.43**	**313**	*e*Pg	**Pg**	**23 56 30.6**	**-0.1**
PASC				*e*Sg	**Sg**	**23 56 36.1**	**-0.3**
FMP	**Fort Macarthur**	**0.44**	**249**	⇑P	**Pg**	**23 56 31.4**	**+0.6**
	baz=0.5						
MURC	**Murrieta**	**0.57**	**119**	⇑P	**Pg**	**23 56 33.8**	**+0.6**
	baz=0.6						
MURC				⇓S	**Sg**	**23 56 41.6**	**+1.0**
	baz=0.6						
DECC	**Green Verdugo**	**0.58**	**311**	⇑P	**Pg**	**23 56 33.3**	**-0.1**
	baz=0.6						
CIS	**Catalina Islan**	**0.69**	**227**	⇓P	**Pg**	**23 56 35.9**	**+0.5**
	baz=0.7						
BBRC	**Big Bear Solar**	**0.83**	**62**	⇓P	**Pg**	**23 56 38.1**	**-0.1**
	baz=0.8						
EDW2	**Edwards Air Fo**	**1.01**	**351**	⇓P	**Pg**	**23 56 41.1**	**-0.6**
	baz=1.0						
OSI	**Osito Adit**	**1.06**	**314**	*e*Pn	**Pg**	**23 56 41.9**	**-0.8**
OSI				*e*Sn	**Sb**	**23 56 57.7**	**-0.1**
OSI	**Osito Adit**	**1.06**	**314**	⇓P	**Pg**	**23 56 42.0**	**-0.7**
	baz=1.1						
OSI				⇓S	**Sb**	**23 56 57.8**	**-0.1**
	baz=1.1						
BLG	**Laguna Peak**	**1.07**	**283**	⇓P	**Pg**	**23 56 42.3**	**-0.6**
	baz=1.1						
109C	**Camp Elliot, M**	**1.14**	**149**	⇓P	**Pb**	**23 56 42.9**	**-1.9**
	baz=1.2						
PFO	**Pinyon Flat Ob**	**1.15**	**103**	*e*Pg	**Pb**	**23 56 43.6**	**-1.5**
PFO				Lg	Lg	23 56 58.8	
PFO				*e*Sg	**Sb**	**23 56 59.0**	**-1.5**
PFO	**Pinyon Flat Ob**	**1.15**	**103**	⇑P	**Pb**	**23 56 43.8**	**-1.3**
	baz=1.1						
PFO				⇓S	**Sb**	**23 56 59.1**	**-1.5**
	baz=1.1						
PFO	**Pinyon Flat Ob**	**1.15**	**103**	Pg	**Pb**	**23 56 43.6**	**-1.5**
	143nm,0.3s,baz=287,slow=15,SNR=337						
PFO				Lg	Lg	23 56 58.8	
	393nm,0.3s,baz=42,slow=4.3,SNR=26						
RRX	**Edison Barstow**	**1.20**	**33**	⇓P	**Pb**	**23 56 44.8**	**-1.0**
	baz=1.2						
RRX				⇑S	**Sg**	**23 57 01.3**	**+0.4**
	baz=1.2						
BELC	**Belle Mtn. Jos**	**1.50**	**85**	⇑Pg	**Pn**	**23 56 50.3**	**-0.2**
	baz=1.5						
BELC				⇓Sb	**Sb**	**23 57 10.3**	**-0.4**
	baz=1.5						
ARVC	**Arvin**	**1.51**	**326**	⇓Pb	**Pn**	**23 56 49.8**	**-0.6**
	baz=1.5						
MONP	**Monument Peak**	**1.52**	**130**	⇓Pb	**Pn**	**23 56 49.7**	**-1.0**
	baz=1.5						
MONP				⇓S	**Sn**	**23 57 09.3**	**-1.9**
	baz=1.5						
BAR	**Barrett**	**1.52**	**141**	*e*Pn	**Pn**	**23 56 49.0**	**-1.7**
BAR				*e*Sn	**Sn**	**23 57 08.9**	**-2.2**
HEC	**Hector,Ludlow**	**1.54**	**52**	⇑Pb	**Pn**	**23 56 50.5**	**-0.5**
	baz=1.5						
LRMC	**Laurel Mountai**	**1.60**	**3**	⇓Pb	**Pn**	**23 56 51.1**	**-0.7**
	baz=1.6						
LRMC				⇑S	**Sn**	**23 57 11.6**	**-1.6**
	baz=1.6						
GSC	**Goldstone**	**1.64**	**30**	*e*Pn	**Pn**	**23 56 52.0**	**-0.3**
GSC				*e*Sn	**Sn**	**23 57 13.1**	**-1.1**
GSC	**Goldstone**	**1.64**	**30**	⇑Pb	**Pn**	**23 56 52.1**	**-0.3**
	baz=1.6						
GSC				⇓Sb	**Sb**	**23 57 13.4**	**-1.3**
	baz=1.6						
ISA	**Isabella**	**1.87**	**343**	*e*Pn	**Pn**	**23 56 54.6**	**-0.8**
ISA				*e*Sn	**Sn**	**23 57 14.2**	**-5.5**
	baz=1.9						
DVTC	**Desert V Tower**	**1.87**	**130**	⇑Sb	**Sb**	**23 57 20.5**	**-0.7**
	baz=1.9						
SWSC	**Sam W. Stewart**	**1.92**	**119**	⇑Pg	**Pb**	**23 56 58.7**	**+0.7**
	baz=1.9						
PKM	**Peak Mountain**	**1.96**	**302**	⇓Pb	**Pn**	**23 56 57.1**	**+0.3**
	baz=1.9						
BC3	**Big Chuckawall**	**1.97**	**96**	⇑Pb	**Pn**	**23 56 57.4**	**+0.5**
	baz=2.0						
GMRC	**Granite Mounta**	**1.99**	**62**	⇓P	**Pn**	**23 56 56.3**	**-0.9**
	baz=2.0						
MPMC	**Manual Prospec**	**2.19**	**7**	⇓P	**Pn**	**23 56 59.4**	**-0.6**
	baz=2.2						
MPMC				⇑Sb	**Sb**	**23 57 31.7**	**+1.0**
	baz=2.2						
IRM	**Iron Mountain**	**2.22**	**82**	⇓P	**Pn**	**23 56 59.5**	**-0.8**
	baz=2.2						
IRM				⇓Sb	**Sg**	**23 57 32.4**	**-1.2**
	baz=2.2						
DAC	**Darwin (Calif)**	**2.40**	**4**	*e*Pn	**Pn**	**23 57 02.5**	**-0.4**
DAC				*e*Sn	**Sg**	**23 57 38.4**	**-1.2**
LDFC	**Landfair**	**2.53**	**61**	*e*Pn	**Pn**	**23 57 04.4**	**-0.1**
LDFC				*e*Sn	**Sb**	**23 57 39.7**	**-0.4**
GLA	**Glamis**	**2.62**	**107**	*e*Pn	**Pn**	**23 57 07.4**	**+1.7**
GLA				*e*Sn	**Sn**	**23 57 35.3**	**-2.8**
SAO	**San Andreas Ge**	**4.15**	**315**	*e*Pn	**Pn**	**23 57 25.4**	**-1.3**
NV11	**Mina Array Sit**	**4.56**	**356**	*e*Pn	**Pn**	**23 57 34.1**	**+1.7**
NVAR	**Mina Array Bea**	**4.56**	**355**	Pn	Pn	23 57 35.5	+2.9
NVAR				Pg	Pb	23 57 46.5	+3.3
NVAR				Lg	Lg	23 58 50.6	
NVAR	**Mina Array Bea**	**4.56**	**355**	Pn	Pn	23 57 35.5	+2.9
	0.3nm,0.3s,baz=184,slow=15,SNR=6.8						
NVAR				Pg	Pb	23 57 46.5	+3.3
	1.0nm,0.3s,baz=177,slow=15,SNR=5.2						
NVAR				Lg	Lg	23 58 50.7	
	baz=234,slow=45,SNR=1.4						
CMB	**Columbia Colle**	**4.65**	**334**	*e*Pn	**Pn**	**23 57 32.7**	**-1.0**
CCUT	**Cedar City**	**5.15**	**43**	*e*Pn	**Pn**	**23 57 42.0**	**+1.4**
	857nm,0.8s						
CCUT				*e*Sn	**Sn**	**23 58 39.4**	**-1.3**
ARUT	**Antelope Range**	**5.27**	**41**	*e*Pn	**Pn**	**23 57 44.0**	**+1.7**
WUAZ	**Wupatki**	**5.54**	**71**	*e*Pn	**Pn**	**23 57 47.0**	**+1.0**
	12nm,0.7s						
ELK	**Elko**	**7.15**	**16**	Pn	**Pn**	**23 58 10.2**	**+2.0**
ELK				Pg	Pg	23 58 35.5	-3.8
ELK				Lg	Lg	00 00 06.0	
ELK	**Elko**	**7.15**	**16**	Pn	**Pn**	**23 58 10.2**	**+2.0**
	0.3nm,0.3s,baz=210,slow=12,SNR=8.4						
ELK				Pg	Pg	23 58 35.5	-3.8
	0.6nm,0.3s,baz=204,slow=14,SNR=9.9						
ELK				Lg	Lg	00 00 06.0	
	0.5nm,0.3s,baz=106,slow=19,SNR=5.5						
YBH	**Yreka Blue Hor**	**8.75**	**335**	Pn	Pn	23 58 34.1	+4.1
YBH	**Yreka Blue Hor**	**8.75**	**335**	Pn	Pn	23 58 34.1	+4.1
	0.2nm,0.3s,baz=134,slow=3.2,SNR=3.0						
ANMO	**Albuquerque**	**9.43**	**80**	Pn	**Pn**	**23 58 41.2**	**+1.7**
ANMO				Pg		23 59 10.3	
ANMO				Lg	Lg	00 01 18.9	
ANMO	**Albuquerque**	**9.43**	**80**	Pn	**Pn**	**23 58 41.2**	**+1.7**
	0.1nm,0.3s,baz=312,slow=14,SNR=2.6						
ANMO				Pg		23 59 10.3	
	0.2nm,0.3s,baz=279,slow=11,SNR=3.7						
ANMO				Lg	Lg	00 01 18.9	
	0.1nm,0.3s,baz=9.8,slow=15,SNR=3.6						
PDAR	**Pinedale Array**	**10.98**	**34**	Pn	**Pn**	**23 59 02.1**	**+1.4**
PDAR	**Pinedale Array**	**10.98**	**34**	Pn	**Pn**	**23 59 02.1**	**+1.4**
	0.1nm,0.3s,baz=211,slow=6.9,SNR=2.6						
TXAR	**Lajitas Array**	**12.87**	**107**	Pn	Pn	23 59 30.1	+3.7
TXAR	**Lajitas Array**	**12.87**	**107**	Pn	Pn	23 59 30.1	+3.7
	0.1nm,0.3s,baz=285,slow=14,SNR=4.1						
YKA	**Yellowknife Ar**	**28.71**	**3**	P	**P**	**00 02 22.7**	**+2.1**
YKA	**Yellowknife Ar**	**28.71**	**3**	P	**P**	**00 02 22.7**	**+2.1**
	0.1nm,0.5s,baz=179,slow=8.0,SNR=3.5						
ILAR	**Eielson Array**	**35.62**	**339**	P	**P**	**00 03 23.1**	**+1.8**
ILAR	**Eielson Array**	**35.62**	**339**	P	**P**	**00 03 23.1**	**+1.8**
	0.4nm,0.8s,baz=158,slow=7.7,SNR=3.8						

KRSC 24 00:19:22.9±1.8,50°23N×156°75E,h215km±64km,ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.61**	**319**	*e*P	Pn	00 19 53.6	+1.6
MIPR	**Malaya Ipel'ka**	**2.05**	**0**	*e*P	Pn	00 20 01.1	-1.8
MTVR	**Mutnovka**	**2.43**	**21**	P	Pn	00 20 09.1	+2.0
MTVR				S	S	00 20 42.8	+1.4
RUS	**Russkaya**	**2.47**	**26**	P	Pn	00 20 09.4	+2.2
RUS				*e*S	S	00 20 43.3	+1.5
UGLR	**Uglovaya**	**3.25**	**23**	*e*P	Pn	00 20 18.7	+2.4
AVH	**Avacha**	**3.28**	**21**	P	Pn	00 20 18.9	+2.3
SMAR	**Somma**	**3.29**	**22**	P	Pn	00 20 19.6	+2.7
SDLR	**Sedlovina**	**3.33**	**23**	P	Pn	00 20 19.1	+1.9
SPN	**Mys Shipunski**	**3.52**	**34**	S	S	00 21 04.0	+0.6
GNL	**Ganaly**	**3.55**	**12**	P	Pn	00 20 22.2	+2.4
MKZ	**Mys Kozlova**	**5.30**	**33**	P	Pn	00 20 42.7	+1.5
BKI	**Bering**	**7.49**	**45**	S	S	00 22 32.1	-2.2

IDC 24 00:32:13.1±2.0,11°31N×95°22E,h0km,mb3.7/6, mb1 3.8/6,mb1mx3.6/25,mbtmp3.7/6,Error ellipse: s-maj=96.6km s-min=21.9km az=60.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.02**	**345**	P	P	00 39 24.6	-0.1
	1.3nm,0.9s,baz=170,slow=7.4,SNR=9.7						
SONM	**Songino Array**	**37.60**	**12**	P	P	00 39 29.0	-0.7
	0.1nm,0.3s,baz=241,slow=43,SNR=1.6						
ZALV	**Zalesovo Beam**	**43.33**	**351**	P	P	00 40 17.5	+0.7
	0.7nm,0.5s,baz=176,slow=7.1,SNR=5.1						
WRA	**Warramunga Arr**	**49.48**	**129**	P	P	00 41 05.2	-0.4
	1.2nm,0.9s,baz=309,slow=8.4,SNR=5.3						
ASAR	**Alice Springs**	**51.38**	**133**	P	P	00 41 20.3	+0.3
	0.6nm,0.9s,baz=318,slow=7.5,SNR=4.3						
FINES	**FINESS Array B**	**70.20**	**331**	P	P	00 43 27.1	-0.5
	0.5nm,0.8s,baz=170,slow=36,SNR=1.9						

IDC 24 00:42:44.0±0.8,21°64N×143°90E,h0km,mb3.8/8, mb1 4.0/8,mb1mx3.7/28,mbtmp3.8/8,Error ellipse: s-maj=39.7km s-min=19.9km az=105.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.37**	**193**	P	P	00 50 39.9	-0.4
	0.5nm,0.4s,baz=16,slow=8.6,SNR=19						
FITZ	**Fitzroy Crossi**	**43.36**	**206**	P	P	00 50 49.4	+1.2
	2.3nm,1.1s,baz=188,slow=20,SNR=1.4						
ASAR	**Alice Springs**	**46.07**	**193**	P	P	00 51 09.0	-0.9
	0.2nm,0.3s,baz=13,slow=6.8,SNR=1.6						
MKAR	**Makanchi Array**	**55.22**	**313**	P	P	00 52 17.6	-1.2
	0.2nm,0.3s,baz=112,slow=7.6,SNR=6.6						
KDAK	**Kodiak Island**	**57.87**	**34**	P	P	00 52 37.6	+0.2
	7.6nm,1.0s,baz=309,slow=18,SNR=1.7						
YKA	**Yellowknife Ar**	**76.19**	**28**	P	P	00 54 34.1	+0.3
	0.3nm,0.5s,baz=291,slow=5.7,SNR=8.9						
NVAR	**Mina Array Bea**	**82.66**	**52**	P	P	00 55 09.2	-0.8
	5.0nm,1.2s,baz=267,slow=5.9,SNR=4.5						
FINES	**FINESS Array B**	**83.52**	**335**	P	P	00 55 14.5	+1.0
	0.6nm,0.3s,baz=67,slow=5.3,SNR=15						
TORD	**Torodi Ar. Bea**	**129.29**	**310**	PKP	PKPdf	01 01 55.2	-0.1
	0.3nm,1.0s,baz=38,slow=2.7,SNR=1.9						

IDC 24 00:49:33.0±2.1,10°38N×93°65E,h0km,mb3.6/4, mb1 3.8/5,mb1mx3.5/26,mbtmp3.7/5,ML4.4/1,Error ellipse: s-maj=77.8km s-min=23.8km az=65.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.53**	**32**	Pn	Pn	00 51 51.7	+0.1
	1.0nm,0.3s,baz=214,slow=15,SNR=4.2						
MKAR	**Makanchi Array**	**37.55**	**347**	P	P	00 56 48.6	-0.4
	1.1nm,0.9s,baz=172,slow=11,SNR=4.5						
ZALV	**Zalesovo Beam**	**44.02**	**352**	P	P	00 57 42.4	+0.1
	0.5nm,0.3s,baz=187,slow=7.5,SNR=4.4						
WRA	**Warramunga Arr**	**50.13**	**127**	P	P	00 58 29.7	-0.8
	0.8nm,1.1s,baz=307,slow=8.5,SNR=6.2						
ASAR	**Alice Springs**	**51.91**	**131**	P	P	00 58 44.4	+0.5
	0.6nm,0.9s,baz=317,slow=5.4,SNR=5.1						

*ISCJB **24** 01:16:22.2±0.5,37°44N±0°02×27°69E±0°04,h9km±5km, Error ellipse: s-maj=5.4km s-min=4.0km az=163.6*
*CSEM **24** 01:16:22.4±0.2,37°45N×27°72E,h5km,MD2.7,Error ellipse: s-maj=4.0km s-min=2.8km az=72.0*
*DDA **24** 01:16:22.5,37°48N×27°70E,h7km,MD2.8*
*ISK **24** 01:16:22.1,37°44N×27°69E,h5km,MD2.7*

ISC 24 01:16:22.5±0.9,37°45N±0°02×27°71E±0°03,h12km±7km, n26,σ0s64/42,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.16**	**162**	*e*PG	**Pg**	**01 16 26.0**	**-0.2**
MLSB				*e*SG	**Sg**	**01 16 28.9**	**+0.2**
MLSB	**Milas**	**0.16**	**162**	*e*Pg	**Pg**	**01 16 26.0**	**-0.2**
MLSB				*e*Sg	**Sg**	**01 16 28.9**	**+0.2**
AYDN	**Tasoluk**	**0.25**	**31**	*i* P	**Pg**	**01 16 27.8**	**0.0**
AYDN				*i* S	**Sg**	**01 16 31.3**	**-0.1**
AYDN	**Tasoluk**	**0.25**	**31**	*i* P	**Pg**	**01 16 27.8**	**0.0**
AYDN				*i* S	**Sg**	**01 16 31.3**	**-0.1**
GCAM	**G?zelcaml?**	**0.46**	**304**	*i* P	**Pg**	**01 16 30.9**	**-0.6**
GCAM				*i* S	**Sg**	**01 16 37.0**	**-0.6**
GCAM	**G?zelcaml?**	**0.46**	**304**	*i* P	**Pg**	**01 16 30.9**	**-0.6**
GCAM				*i* S	**Sg**	**01 16 37.0**	**-0.6**
BODT	**Bodrum**	**0.50**	**220**	*e*PG	**Pg**	**01 16 32.0**	**-0.3**
BODT				*e*SG	**Sg**	**01 16 39.1**	**+0.3**
BODT	**Bodrum**	**0.50**	**220**	*e*Pg	**Pg**	**01 16 32.0**	**-0.3**
BODT				*e*Sg	**Sg**	**01 16 39.2**	**+0.3**
YER	**Yerkesik**	**0.55**	**124**	*e*PG	**Pg**	**01 16 33.4**	**+0.2**
YER				*e*SG	**Sb**	**01 16 42.0**	**0.0**
YER	**Yerkesik**	**0.55**	**124**	*e*Pg	**Pg**	**01 16 33.4**	**+0.2**
YER				*e*Sg	**Sb**	**01 16 42.0**	**0.0**
DAT	**Datca**	**0.72**	**189**	*e*PG	**Pg**	**01 16 36.8**	**+0.3**
DAT				*e*SG	**Sg**	**01 16 46.7**	**+0.7**
DAT	**Datca**	**0.72**	**189**	*e*Pg	**Pg**	**01 16 36.8**	**+0.3**
DAT				*e*Sg	**Sg**	**01 16 46.7**	**+0.7**
TURN	**Turunc**	**0.91**	**129**	*i* P	**Pg**	**01 16 37.9**	**-2.2**
TURN				*i* S	**Sg**	**01 16 51.0**	**-0.9**
TURN	**Turunc**	**0.91**	**129**	*i* P	**Pg**	**01 16 37.9**	**-2.2**
TURN				*i* S	**Sg**	**01 16 51.0**	**-0.9**
DALY	**Dalyan (Mu¨la**	**0.98**	**130**	*e*PG	**Pg**	**01 16 41.3**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.98**	**130**	*e*Pg	**Pg**	**01 16 41.3**	**0.0**
IZM	**Izmir**	**1.02**	**340**	*e*PG	**Pb**	**01 16 42.0**	**-0.1**
IZM	**Izmir**	**1.02**	**340**	*e*Pg	**Pb**	**01 16 42.0**	**-0.1**
BLCB	**Balcova**	**1.08**	**331**	*e*PG	**Pb**	**01 16 42.8**	**-0.3**
BLCB	**Balcova**	**1.08**	**331**	*e*Pg	**Pb**	**01 16 42.8**	**-0.3**
MANT	**Manisa**	**1.24**	**32**	*i* P	Pn	**01 16 46.0**	**+0.1**
MANT				*i* S	**Sb**	**01 17 02.6**	**+0.6**
MANT	**Manisa**	**1.24**	**32**	*i* P	Pn	**01 16 46.0**	**+0.1**
MANT				*i* S	**Sb**	**01 17 02.6**	**+0.6**
KULA	**Kula-Manisa**	**1.30**	**35**	*e*PN	**Pg**	**01 16 47.8**	**+0.2**
KULA	**Kula-Manisa**	**1.30**	**35**	*e*Pn	**Pg**	**01 16 47.8**	**+0.2**
AKS	**Akhisar**	**1.43**	**3**	*e*PN	**Pb**	**01 16 49.6**	**+0.4**
AKS	**Akhisar**	**1.43**	**3**	*e*Pn	**Pb**	**01 16 49.6**	**+0.4**

*ATH **24** 01:46:03.4,40°41N×24°05E,h28km±4km,MD3.1/7*
*ISCJB **24** 01:46:04.3±0.5,40°41N±0°03×23°97E±0°05,h22km±5km, Error ellipse: s-maj=6.1km s-min=5.2km az=170.4*
*CSEM **24** 01:46:04.3±0.2,40°45N×23°98E,h15km,ML1.5/2,Error ellipse: s-maj=4.6km s-min=4.2km az=80.0*
*THE **24** 01:46:05.2,40°47N×23°94E,h5km±7km,ML1.5/2,Error ellipse: s-maj=7.8km s-min=0.6km az=174.0*

ISC 24 01:46:04.9±0.9,40°45N±0°02×23°95E±0°03,h15km±7km, n27,σ0s44/39,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.12**	**166**	P	**Pg**	**01 46 08.2**	**-0.1**
OUR				S	**Sg**	**01 46 10.4**	**-0.2**
OUR	**Ouranopolis**	**0.12**	**166**	P	**Pg**	**01 46 08.2**	**-0.1**
OUR				S	**Sg**	**01 46 10.4**	**-0.2**
PLG	**Polygyros**	**0.39**	**259**	P	**Pg**	**01 46 12.6**	**-0.2**
PLG	**Polygyros**	**0.39**	**259**	*e*PB	**Pg**	**01 46 12.7**	**-0.1**
PLG				*e*SB	**Sg**	**01 46 18.4**	**+0.3**
PLG	**Polygyros**	**0.39**	**259**	*e*Pb	**Pg**	**01 46 12.7**	**-0.1**
PLG				*e*Sb	**Sg**	**01 46 18.4**	**+0.3**
PAIG	**Paliouri**	**0.56**	**201**	P	**Pg**	**01 46 15.7**	**-0.2**
PAIG	**Paliouri**	**0.56**	**201**	*e*PN	**Pg**	**01 46 15.8**	**-0.2**
PAIG				*e*SN	**Sg**	**01 46

IDC 24 02:12:50.5±2.3, 10°.90S×162°.70E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.6/20, mbtmp3.8/5, ML4.7/1, Error ellipse: s-maj=45.2km s-min=37.7km az=109.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.08**	**298**	Pn	Pn	02 13 40.8	+0.4
	101nm,0.3s,baz=141,slow=5.6,SNR=16						
HNR				Sn	Sn	02 14 18.8	+0.9
	50nm,0.3s,baz=141,slow=18,SNR=3.6						
WRA	**Warramunga Arr**	**28.73**	**248**	P	P	02 18 49.0	-1.0
	0.2nm,0.5s,baz=78,slow=8.8,SNR=6.1						
ASAR	**Alice Springs**	**30.20**	**241**	P	P	02 19 04.0	+1.0
	0.2nm,0.3s,baz=65,slow=10,SNR=1.7						
SONM	**Songino Array**	**76.80**	**325**	P	P	02 24 44.9	+0.6
	1.0nm,0.7s,baz=134,slow=6.2,SNR=11						
MKAR	**Makanchi Array**	**91.38**	**317**	P	P	02 25 57.5	-1.0
	0.5nm,0.8s,baz=92,slow=6.1,SNR=4.9						

IDC 24 02:31:55.0±2.1, 15°.38S×73°.03W, h90km±21km, mb3.4/3, mb1 3.7/5, mb1mx3.4/19, mbtmp3.5/5, Error ellipse: s-maj=33.0km s-min=16.1km az=43.0, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.80**	**101**	P	Pn	02 33 04.3	-1.5
	2.8nm,0.3s,baz=288,slow=9.2,SNR=53						
NNA	**Nana**	**5.01**	**312**	P	Pn	02 33 08.9	+1.0
	9.4nm,0.3s,baz=126,slow=11,SNR=13						
NNA				S	Sn	02 34 05.3	+0.7
	12nm,0.3s,baz=207,slow=21,SNR=9.9						
SIV	**San Ignacio**	**11.54**	**95**	P	Pn	02 34 30.4	-6.4
	0.5nm,0.3s,baz=289,slow=10,SNR=9.3						
BDFB	**Brasilia**	**24.11**	**94**	P	P	02 36 59.0	-3.8
	0.6nm,0.4s,baz=270,slow=7.1,SNR=3.3						
PLCA	**Paso Flores**	**25.35**	**176**	P	P	02 37 13.8	0.0
	2.4nm,0.9s,baz=35,slow=22,SNR=2.7						
TORD	**Torodi Ar. Bea**	**79.17**	**73**	P	P	02 43 51.9	+1.2
	0.2nm,0.5s,baz=253,slow=5.1,SNR=8.3						
YKA	**Yellowknife Ar**	**84.17**	**342**	P	P	02 44 14.7	-1.2
	0.4nm,0.7s,baz=134,slow=5.0,SNR=14						

IDC 24 02:42:34.6±4.4, 15°.71N×92°.25W, h0km, mb3.7/3, mb1 4.0/5, mb1mx3.7/23, mbtmp3.7/5, ML3.2/2, Error ellipse: s-maj=90.6km s-min=23.7km az=9.0, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**2.88**	**299**	Pn	Pn	02 43 21.8	-0.1
	2.1nm,0.3s,baz=142,slow=11,SNR=15						
CMIG				Lg	Lg	02 44 06.2	
	3.9nm,0.3s,baz=88,slow=17,SNR=6.6						
TEIG	**Tepich**	**5.87**	**39**	Pn	Pn	02 44 03.0	+0.1
	1.1nm,0.3s,baz=15,slow=18,SNR=2.3						
NVAR	**Mina Array Bea**	**32.21**	**320**	P	P	02 49 05.0	+0.1
	0.1nm,0.3s,baz=132,slow=8.2,SNR=4.0						
YKA	**Yellowknife Ar**	**49.32**	**347**	P	P	02 51 25.3	+0.1
	2.7nm,0.8s,baz=150,slow=7.5,SNR=44						
ILAR	**Eielson Array**	**61.19**	**336**	P	P	02 52 50.6	-0.3
	0.3nm,0.5s,baz=118,slow=5.4,SNR=6.6						

*IDC **24** 02:50:30.0±1.6, 35°.36N×25°.97E, h0km, mb3.8/3, mb1 3.7/4, mb1mx3.4/25, mbtmp3.6/4, ML2.7/1, Error ellipse: s-maj=60.5km s-min=26.1km az=138.0*
*ISK **24** 02:50:31.5, 34°.88N×26°.28E, h40km, ML3.6*
*DDA **24** 02:50:32.3, 35°.00N×26°.67E, h11km, MD3.9*
*ISCJB **24** 02:50:33.3±0.7, 35°.01N±0°.05×26°.34E±0°.03, h27km±4km, mb3.7/3, Error ellipse: s-maj=9.1km s-min=3.6km az=168.6*
*ATH **24** 02:50:34.1, 35°.12N×26°.28E, h30km±1km, MD3.4/11*
*CSEM **24** 02:50:34.4±0.3, 35°.07N×26°.32E, h20km, MD3.4, Error ellipse: s-maj=8.1km s-min=2.9km az=167.0*
*THE **24** 02:50:35.3, 35°.26N×26°.23E, h0km±1km, ML3.1/1, Error ellipse: s-maj=1.1km s-min=0.7km az=90.0*

ISC 24 02:50:34.1±0.9, 35°.04N±0°.05×26°.32E±0°.02, h26km±5km, n92, σ1s01/118, mb3.5/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.11**	**309**	P	**Pb**	**02 50 38.5**	**-0.6**
ZKR				S	**Sb**	**02 50 42.3**	**-0.1**
ZKR	**Zakros**	**0.11**	**309**	*e*PB	**Pb**	**02 50 39.0**	**-0.1**
ZKR				*e*SB	**Sb**	**02 50 43.0**	**+0.6**
ZKR	**Zakros**	**0.11**	**309**	P	**Pb**	**02 50 38.5**	**-0.6**
ZKR	**Zakros**	**0.11**	**309**	*e*Pb	**Pb**	**02 50 39.0**	**-0.1**
ZKR				S	**Sb**	**02 50 42.3**	**-0.1**
ZKR				*e*Sb	Sb	02 50 43.0	+0.6
NPS	**Neapolis**	**0.62**	**291**	P	**Pb**	**02 50 46.0**	**-0.4**
NPS				S	**Sb**	**02 50 54.6**	**-0.2**
NPS	**Neapolis**	**0.62**	**291**	*e*PN	**Pb**	**02 50 46.1**	**-0.4**
NPS				*e*SN	**Sb**	**02 50 54.7**	**-0.1**
NPS	**Neapolis**	**0.62**	**291**	P	**Pb**	**02 50 46.0**	**-0.4**
NPS				S	**Sb**	**02 50 54.6**	**-0.2**
LAST	**Lasithi**	**0.70**	**280**	P	**Pb**	**02 50 47.1**	**-0.7**
LAST				S	**Sn**	**02 50 57.8**	**-0.6**
LAST	**Lasithi**	**0.70**	**280**	*e*PN	**Pb**	**02 50 47.2**	**-0.6**
LAST				*e*SN	**Sn**	**02 50 57.8**	**-0.6**
LAST	**Lasithi**	**0.70**	**280**	P	**Pb**	**02 50 47.1**	**-0.7**
LAST				S	**Sn**	**02 50 57.8**	**-0.6**
KARP	**Karpathos**	**0.85**	**54**	*e*PN	**Pb**	**02 50 50.3**	**0.0**
KARP				*e*SN	**Sn**	**02 51 03.4**	**+1.3**
KARP	**Karpathos**	**0.85**	**54**	*e*Pn	**Pb**	**02 50 50.3**	**0.0**
KARP				*e*Sn	**Sn**	**02 51 03.4**	**+1.3**
IDI	**Anoyia**	**1.20**	**282**	P	**Pn**	**02 50 55.5**	**+0.3**
IDI				S	**Sb**	**02 51 12.2**	**+0.9**
IDI	**Anoyia**	**1.20**	**282**	*e*PN	**Pn**	**02 50 55.6**	**+0.3**
IDI				*e*SN	**Sb**	**02 51 11.4**	**+0.1**
IDI	**Anoyia**	**1.20**	**282**	*e*Pn	**Pn**	**02 50 55.6**	**+0.3**
IDI				*e*Sn	**Sb**	**02 51 11.4**	**+0.1**
IDI				S	**Sb**	**02 51 12.2**	**+0.9**
SIVA	**Sivas**	**1.24**	**269**	P	**Pb**	**02 50 57.1**	**+0.2**
SIVA				S	**Sb**	**02 51 14.8**	**+2.3**
SIVA	**Sivas**	**1.24**	**269**	*e*PN	**Pb**	**02 50 56.5**	**-0.4**
SIVA	**Sivas**	**1.24**	**269**	*e*Pn	**Pb**	**02 50 56.5**	**-0.4**
SIVA	**Sivas**	**1.24**	**269**	P	**Pb**	**02 50 57.1**	**+0.2**
SIVA				S	**Sb**	**02 51 14.8**	**+2.3**
THR1	**Thera Island**	**1.50**	**332**	P	**Pn**	**02 50 59.0**	**-0.4**
THR1	**Thera Island**	**1.50**	**332**	P	**Pn**	**02 50 59.0**	**-0.4**
THR3	**Thira Island,**	**1.55**	**331**	P	**Pn**	**02 50 59.7**	**-0.4**
THR3	**Thira Island,**	**1.55**	**331**	P	**Pn**	**02 50 59.7**	**-0.4**
THR2	**Thira island,**	**1.57**	**333**	P	**Pn**	**02 51 00.2**	**-0.2**
THR2	**Thira island,**	**1.57**	**333**	P	**Pn**	**02 51 00.2**	**-0.2**
NIS1	**Nisyros Isl.**	**1.70**	**24**	P	**Pn**	**02 51 03.0**	**+0.8**
NIS1	**Nisyros Isl.**	**1.70**	**24**	*e*PB	**Pn**	**02 51 02.8**	**+0.6**
NIS1	**Nisyros Isl.**	**1.70**	**24**	P	**Pn**	**02 51 03.0**	**+0.8**
VAM	**Vamos**	**1.77**	**282**	P	**Pn**	**02 51 04.0**	**+0.9**
VAM	**Vamos**	**1.77**	**282**	*e*PN	**Pb**	**02 51 05.1**	**-0.9**
VAM	**Vamos**	**1.77**	**282**	P	**Pn**	**02 51 04.0**	**+0.9**
VAM	**Vamos**	**1.77**	**282**	*e*Pn	**Pb**	**02 51 05.1**	**-0.9**
ARG	**Arkhangelos**	**1.88**	**51**	P	**Pb**	**02 51 06.6**	**-1.2**
ARG				S	**Sb**	**02 51 30.9**	**+0.1**
ARG	**Arkhangelos**	**1.88**	**51**	*e*PB	**Pb**	**02 51 06.6**	**-1.2**
ARG	**Arkhangelos**	**1.88**	**51**	P	**Pb**	**02 51 06.6**	**-1.2**
ARG				S	**Sb**	**02 51 30.9**	**+0.1**
DAT	**Datca**	**1.97**	**31**	*e*PN	**Pn**	**02 51 06.0**	**+0.1**
DAT				*e*SN	**Sn**	**02 51 30.8**	**+1.1**
DAT	**Datca**	**1.97**	**31**	*e*Pn	**Pn**	**02 51 06.0**	**+0.1**
DAT				*e*Sn	**Sn**	**02 51 30.8**	**+1.1**
APE	**Apeiranthos**	**2.12**	**343**	*e*PN	**Pn**	**02 51 07.8**	**-0.1**
APE	**Apeiranthos**	**2.12**	**343**	P	**Pn**	**02 51 07.5**	**-0.4**
APE				S	**Sn**	**02 51 33.0**	**-0.4**
APE	**Apeiranthos**	**2.12**	**343**	*e*PN	**Pn**	**02 51 07.6**	**-0.4**
APE	**Apeiranthos**	**2.12**	**343**	P	**Pn**	**02 51 07.5**	**-0.4**
APE	**Apeiranthos**	**2.12**	**343**	*e*Pn	**Pn**	**02 51 07.8**	**-0.1**
APE				S	**Sn**	**02 51 33.0**	**-0.4**
BODT	**Bodrum**	**2.17**	**21**	*e*PN	**Pn**	**02 51 08.7**	**+0.1**
BODT	**Bodrum**	**2.17**	**21**	*e*Pn	**Pn**	**02 51 08.7**	**+0.1**
MLSB	**Milas**	**2.54**	**27**	*e*PN	**Pn**	**02 51 13.9**	**+0.3**
MLSB	**Milas**	**2.54**	**27**	*e*Pn	**Pn**	**02 51 14.0**	**+0.3**
DALY	**Dalyan (Mu˘la**	**2.59**	**46**	*e*PN	**Pn**	**02 51 14.3**	**0.0**
DALY	**Dalyan (Mu˘la**	**2.59**	**46**	*e*Pn	**Pn**	**02 51 14.3**	**0.0**
TURN	**Turunc**	**2.60**	**45**	*e*P	Pn	02 51 10.1	-4.3
TURN				*e*S	**Sn**	**02 51 41.7**	**-3.5**
TURN	**Turunc**	**2.60**	**45**	*e*P	Pn	02 51 10.1	-4.3
TURN				*e*S	**Sn**	**02 51 41.7**	**-3.5**
YER	**Yerkesik**	**2.62**	**37**	*e*PN	**Pn**	**02 51 14.9**	**+0.1**
YER	**Yerkesik**	**2.62**	**37**	*e*Pn	**Pn**	**02 51 15.0**	**+0.1**
FETY	**Fethiye**	**2.75**	**54**	*e*PN	**Pn**	**02 51 16.3**	**-0.2**
FETY	**Fethiye**	**2.75**	**54**	*e*Pn	**Pn**	**02 51 16.3**	**-0.2**
AYDN	**Tasoluk**	**2.90**	**25**	*e*P	**Pn**	**02 51 20.6**	**+2.0**
AYDN				*e*S	**Sn**	**02 51 53.3**	**+0.6**
AYDN	**Tasoluk**	**2.90**	**25**	*e*P	**Pn**	**02 51 20.6**	**+2.0**
AYDN				*e*S	**Sn**	**02 51 53.3**	**+0.6**
AKAS	**Kas**	**2.93**	**65**	*e*P	**Pn**	**02 51 20.0**	**+0.9**
AKAS				*e*S	**Sn**	**02 51 52.6**	**-0.9**
AKAS	**Kas**	**2.93**	**65**	*e*P	**Pn**	**02 51 20.0**	**+0.9**
AKAS				*e*S	**Sn**	**02 51 52.6**	**-0.9**
KYTH	**Kithira**	**2.94**	**296**	*e*PN	**Pn**	**02 51 19.9**	**+0.6**
KYTH	**Kithira**	**2.94**	**296**	*e*Pn	**Pn**	**02 51 19.9**	**+0.6**
VLI	**Veliai**	**3.21**	**302**	*e*PN	**Pn**	**02 51 23.1**	**+0.2**
VLI	**Veliai**	**3.21**	**302**	*e*Pn	**Pn**	**02 51 23.1**	**+0.2**
GLHS	**Glhisar (BURDU**	**3.33**	**50**	*e*PN	**Pn**	**02 51 24.8**	**+0.3**
GLHS	**Glhisar (BURDU**	**3.33**	**50**	*e*Pn	**Pn**	**02 51 24.8**	**+0.3**
ELL	**Elmali**	**3.37**	**59**	*e*PN	**Pn**	**02 51 25.2**	**0.0**
ELL	**Elmali**	**3.37**	**59**	*e*Pn	**Pn**	**02 51 25.2**	**0.0**
BLCB	**Balcova**	**3.38**	**10**	*e*PN	**Pn**	**02 51 26.0**	**+0.7**
BLCB	**Balcova**	**3.38**	**10**	*e*Pn	**Pn**	**02 51 26.0**	**+0.7**
GOLH	**Golhisar**	**3.42**	**49**	*e*P	**Pn**	**02 51 27.7**	**+1.9**
GOLH				*e*S	**Sn**	**02 52 07.2**	**+1.7**
GOLH	**Golhisar**	**3.42**	**49**	*e*P	**Pn**	**02 51 27.7**	**+1.9**
GOLH				*e*S	**Sn**	**02 52 07.2**	**+1.7**
IZM	**Izmir**	**3.43**	**12**	*e*PN	**Pn**	**02 51 26.6**	**+0.6**
IZM	**Izmir**	**3.43**	**12**	*e*Pn	**Pn**	**02 51 26.6**	**+0.6**
DNZL	**Cakiroluk**	**3.44**	**39**	*e*P	**Pn**	**02 51 28.5**	**+2.3**
DNZL	**Cakiroluk**	**3.44**	**39**	*e*P	**Pn**	**02 51 28.5**	**+2.3**
KULA	**Kula-Manisa**	**3.94**	**28**	*e*PN	**Pn**	**02 51 34.0**	**+1.0**
KULA	**Kula-Manisa**	**3.94**	**28**	*e*Pn	**Pn**	**02 51 34.0**	**+1.0**
KHL	**Karahalli**	**4.16**	**37**	*e*PN	**Pn**	**02 51 36.8**	**+0.7**
KHL	**Karahalli**	**4.16**	**37**	*e*Pn	**Pn**	**02 51 36.8**	**+0.7**
SHUT	**Suhut-Afyon**	**4.88**	**43**	*e*PN	**Pn**	**02 51 47.3**	**+1.4**
SHUT	**Suhut-Afyon**	**4.88**	**43**	*e*Pn	**Pn**	**02 51 47.3**	**+1.4**
DST	**Dursunbey**	**4.91**	**21**	*e*PN	**Pn**	**02 51 47.7**	**+1.5**
DST	**Dursunbey**	**4.91**	**21**	*e*Pn	**Pn**	**02 51 47.7**	**+1.5**
TVSB	**Tavsanli**	**5.06**	**29**	*e*PN	**Pn**	**02 51 50.1**	**+1.7**
TVSB	**Tavsanli**	**5.06**	**29**	*e*Pn	**Pn**	**02 51 50.1**	**+1.7**
LEF	**Lefka**	**5.39**	**87**	*e*PN	**Pn**	**02 51 52.4**	**-0.4**
LEF	**Lefka**	**5.39**	**87**	*e*Pn	**Pn**	**02 51 52.4**	**-0.4**
BRTR	**Keskin Array B**	**7.47**	**49**	Pn	**Pn**	**02 52 22.4**	**+0.9**
	0.1nm,0.3s,baz=226,slow=15,SNR=5.9						
KOLS	**Kolonicke sedl**	**14.20**	**349**	*e*PN	Pn	02 53 49.0	-4.4
VYHS	**Vyhne**	**14.54**	**340**	*e*PN	Pn	02 53 51.5	-6.6
TORD	**Torodi Ar. Bea**	**31.15**	**232**	P	**P**	**02 56 50.6**	**-0.3**
	0.5nm,0.6s,baz=37,slow=8.0,SNR=4.7						
ARCES	**ARCESS Array B**	**34.55**	**359**	P	P	02 57 16.9	-3.1
	1.9nm,0.9s,baz=171,slow=8.6,SNR=5.8						
MKAR	**Makanchi Array**	**43.04**	**57**	P	**P**	**02 58 31.2**	**-0.3**
	0.5nm,0.5s,baz=275,slow=7.0,SNR=9.6						

GUC 24 02:57:09.9±0.7, 31°.76S×69°.43W, h153km±13km, ML3.9, 1C-4D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JACH	**Jahuel**	**1.35**	**227**	⇓*i*P	Pn	02 57 38.7	+0.5
JACH				*i* S	Sn	02 58 00.6	+0.6
CMCH	**Combarbala**	**1.46**	**293**	⇓*i*P	Pn	02 57 39.7	+0.3
CMCH				*i* S	Sn	02 58 02.4	+0.4
CMCH				AML	AML	02 58 05.1	
	comp=E,5μm,0.6s						
PEL	**Peldehue**	**1.74**	**217**	⇑*i*P	Pn	02 57 42.4	+0.1
PEL				*i* S	Sn	02 58 07.3	0.0
PEL				AML	AML	02 58 08.9	
	comp=E,819nm,0.4s						
CHNG	**Los Chungos**	**1.76**	**265**	*e*P	Pn	02 57 43.0	+0.5
CHNG				*i* S	Sn	02 58 07.6	+0.1
CHNG				AML	AML	02 58 17.1	
	comp=E,540nm,0.5s						
ROCH	**El Roble**	**1.80**	**227**	⇓*i*P	Pn	02 57 43.3	+0.1
ROCH				*i* S	Sn	02 58 08.9	+0.1
ROCH				AML	AML	02 58 10.5	
	comp=E,1μm,0.4s						
CLCH	**Cerro Calan**	**1.88**	**209**	⇓*i*P	Pn	02 57 44.4	+0.5
CLCH				*i* S	Sn	02 58 10.8	+0.7
CLCH				AML	AML	02 58 12.6	
	comp=E,1μm,0.4s						
SAN	**Santiago**	**1.98**	**211**	*e*S	Sn	02 58 12.4	+0.3
SAN				AML	AML	02 58 17.3	
	comp=N,420nm,0.4s						
ANTU	**Antumapu**	**2.07**	**209**	*e*S	Sn	02 58 14.5	+0.5
LMEL	**Las Melosas**	**2.18**	**197**	*e*P	Pn	02 57 48.0	+0.5
LMEL				AML	AML	02 58 25.0	
	comp=N,313nm,0.2s						

*ISK **24** 03:12:21.6, 39°.16N×29°.06E, h5km, MD2.6*
*ISCJB **24** 03:12:23.1±0.6, 39°.16N±0°.03×29°.06E±0°.04, h9km±6km, Error ellipse: s-maj=5.9km s-min=4.8km az=30.8*
*CSEM **24** 03:12:23.3±0.3, 39°.15N×29°.07E, h15km, MD2.8, Error ellipse: s-maj=8.2km s-min=6.4km az=100.0*
*DDA **24** 03:12:24.5, 39°.09N×29°.04E, h7km, MD2.8*

ISC 24 03:12:22.7±1.1, 39°.17N±0°.03×29°.06E±0°.03, h6km±11km, n20, σ0s58/32, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEMI	**Demirci**	**0.29**	**245**	*i* P	**Pb**	**03 12 30.2**	**-0.2**
DEMI				*i* S	**Sg**	**03 12 33.6**	**+1.4**
DEMI	**Demirci**	**0.29**	**245**	*i* P	**Pb**	**03 12 30.2**	**-0.2**
DEMI				*i* S	**Sg**	**03 12 33.6**	**+1.4**
GDZ	**Gediz**	**0.34**	**103**	*e*P	**Pb**	**03 12 32.0**	**+0.8**
GDZ				*e*S	**Sb**	**03 12 36.8**	**-0.1**
GDZ	**Gediz**	**0.34**	**103**	*e*P	**Pb**	**03 12 32.0**	**+0.8**
GDZ				*e*S	**Sb**	**03 12 36.8**	**-0.1**
TVSB	**Tavsanli**	**0.42**	**48**	*e*PG	**Pg**	**03 12 30.5**	**-0.4**
TVSB				*e*SG	**Sg**	**03 12 36.2**	**-0.3**
TVSB	**Tavsanli**	**0.42**	**48**	*e*Pg	**Pg**	**03 12 30.5**	**-0.4**
TVSB				*e*Sg	**Sg**	**03 12 36.2**	**-0.3**
DURS	**Dursunbey**	**0.63**	**314**	*e*P	**Pn**	**03 12 37.6**	**-0.7**
DURS				*e*S	**Sn**	**03 12 49.7**	**+1.0**
DURS	**Dursunbey**	**0.63**	**314**	*e*P	**Pn**	**03 12 37.6**	**-0.7**
KULA	**Kula-Manisa**	**0.72**	**206**	*e*PG	**Pg**	**03 12 36.1**	**-0.4**
KULA				*e*SG	**Sg**	**03 12 45.7**	**-0.1**
KULA	**Kula-Manisa**	**0.72**	**206**	*e*Pg	**Pg**	**03 12 36.1**	**-0.4**
KULA				*e*Sg	**Sg**	**03 12 45.7**	**-0.1**
KHAL	**Karahalli**	**0.86**	**157**	*e*P	**Pn**	**03 12 41.0**	**-0.5**
KHAL				*e*S	**Sb**	**03 12 51.7**	**-0.3**
KHAL	**Karahalli**	**0.86**	**157**	*e*P	**Pn**	**03 12 41.0**	**-0.5**
KHAL				*e*S	**Sb**	**03 12 51.7**	**-0.3**
KHL	**Karahalli**	**0.92**	**156**	*e*PG	**Pg**	**03 12 40.0**	**-0.3**
KHL				*e*SG	**Sg**	**03 12 52.6**	**+0.4**
KHL	**Karahalli**	**0.92**	**156**	*e*Pg	**Pg**	**03 12 40.0**	**-0.3**
KHL				*e*Sg	**Sg**	**03 12 48.6**	**-0.3**
ARMT	**Armutlu**	**1.41**	**354**	*e*PN	**Pn**	**03 12 48.0**	**-0.3**
ARMT	**Armutlu**	**1.41**	**354**	*e*Pn	**Pn**	**03 12 48.0**	**-0.3**
YLV	**Yalova**	**1.42**	**10**	*e*PN	**Pn**	**03 12 49.2**	**+0.1**
YLV	**Yalova**	**1.42**	**10**	*e*Pn	**Pn**	**03 12 49.2**	**+0.1**
GULT	**Gulveren**	**1.69**	**41**	*e*PN	**Pn**	**03 12 52.5**	**-0.4**
GULT	**Gulveren**	**1.69**	**41**	*e*Pn	**Pn**	**03 12 52.5**	**-0.4**

*ISCJB **24** 03:27:50.0±0.2, 33°.88N±0°.02×117°.80W±0°.02, h10km, mb3.3/3, MS3.4/1, Error ellipse: s-maj=2.6km s-min=1.7km az=35.5*
*NEIC **24** 03:27:50.7, 33°.89N×117°.79W, h4km, MW3.8(PAS), After PAS.*
NEIC Felt [V] at Brea and Yorba Linda; [IV] at Anaheim and Placentia; [III] at Chino Hills, Corona, Diamond Bar, Fullerton, Garden Grove, La Habra, Orange, Rowland Heights, Santa Ana, Seal Beach and Villa Park. Felt from Glendora to San Clemente and as far east as San Jacinto. Also felt in parts of San Diego and Ventura Counties.
*IDC **24** 03:27:52.1±1.8, 33°.85N×117°.58W, h0km, mb3.3/3, mb1 3.6/8, mb1mx3.5/30, mbtmp3.3/8, ML3.4/5, MS3.0/5, Ms1 3.1/5, ms1mx2.8/19, Error ellipse: s-maj=25.4km s-min=8.0km az=44.0*

ISC 24 03:27:50.8±0.6, 33°.87N±0°.02×117°.78W±0°.02, h10km, n92, σ1s43/121, mb3.3/3, 25C-27D, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BFSC	**Mount Baldy Ra**	**0.39**	**15**	⇑P	**Pg**	**03 27 57.5**	**-1.0**
	baz=0.4						
BFSC				⇓S	**Sg**	**03 28 02.9**	**-0.8**
	baz=0.4						
MWC	**Mount Wilson**	**0.43**	**327**	*e*Pg	**Pg**	**03 27 57.8**	**-1.6**
MWC				*e*Sg	**Sg**	**03 28 03.1**	**-1.9**
FMP	**Fort Macarthur**	**0.46**	**251**	⇓P	**Pg**	**03 27 59.1**	**-0.7**
	baz=0.5						
PASC	**Pasadena Art C**	**0.46**	**312**	*e*Pg	**Pg**	**03 27 57.9**	**-1.9**
PASC				*e*Sg	**Sg**	**03 28 03.7**	**-2.2**
MURC	**Murrieta**	**0.55**	**119**	⇓P	**Pg**	**03 28 01.4**	**-0.1**
	baz=0.6						
MURC				⇓S	**Sg**	**03 28 09.4**	**+0.6**
	baz=0.6						
DECC	**Green Verdugo**	**0.60**	**310**	⇓P	**Pg**	**03 28 01.0**	**-1.5**
	baz=0.6						
CIS	**Catalina Islan**	**0.69**	**229**	⇓P	**Pg**	**03 28 03.7**	**-0.6**
	baz=0.7						
CIS				⇑S	**Sg**	**03 28 14.0**	**+0.6**
	baz=0.7						
BBRC	**Big Bear Solar**	**0.81**	**61**	⇑P	**Pg**	**03 28 05.8**	**-0.8**
	baz=0.8						
EDW2	**Edwards Air Fo**	**1.03**	**350**	⇑P	**Pg**	**03 28 08.8**	**-1.8**
	baz=1.0						
OSI	**Osito Adit**	**1.08**	**314**	*e*Pg	**Pb**	**03 28 09.8**	**-2.0**
OSI				*e*Sn	**Sn**	**03 28 27.6**	**+0.3**
OSI	**Osito Adit**	**1.08**	**314**	⇓P	**Pb**	**03 28 09.7**	**-2.0**
	baz=1.1						
OSI				⇓S	**Sg**	**03 28 24.9**	**-0.9**
	baz=1.1						
BLG	**Laguna Peak**	**1.10**	**283**	⇑P	**Pb**	**03 28 10.0**	**-1.9**
	baz=1.1						
109C	**Camp Elliot, M**	**1.12**	**150**	⇓P	**Pb**	**03 28 10.6**	**-1.8**
	baz=1.2						
109C				⇓S	**Sb**	**03 28 26.4**	**-0.7**
	baz=1.2						
PFO	**Pinyon Flat Ob**	**1.13**	**103**	*e*Pg	**Pb**	**03 28 11.5**	**-1.1**
PFO				*e*Sg	**Sb**	**03 28 26.2**	**-1.2**
PFO				Sn	**Sb**	**03 28 26.6**	**-0.8**
PFO	**Pinyon Flat Ob**	**1.13**	**103**	⇓P	**Pb**	**03 28 11.4**	**-1.2**
	baz=1.1						
PFO				⇓S	**Sb**	**03 28 26.0**	**-1.3**
	baz=1.1						
PFO	**Pinyon Flat Ob**	**1.13**	**103**	Pg	**Pb**	**03 28 11.4**	**-1.2**
	140nm,0.3s,baz=290,slow=14,SNR=506						
PFO				Sn	**Sb**	**03 28 26.6**	**-0.8**
	780nm,0.3s,baz=38,slow=12,SNR=60						
RRX	**Edison Barstow**	**1.20**	**32**	⇑Pg	**Pb**	**03 28 12.4**	**-1.2**
	baz=1.2						
RRX				⇑S	**Sb**	**03 28 28.6**	**-0.7**
	baz=1.2						
BELC	**Belle Mtn. Jos**	**1.48**	**84**	⇑Pg	**Pn**	**03 28 18.0**	**+0.2**
	baz=1.5						
BELC				⇑Sb	**Sb**	**03 28 37.9**	**+0.3**
	baz=1.5						
MONP	**Monument Peak**	**1.50**	**130**	⇑Pb	**Pn**	**03 28 17.3**	**-0.7**
	baz=1.5						
MONP				⇑Sb	**Sn**	**03 28 37.3**	**-0.3**
	baz=1.5						
BAR	**Barrett**	**1.50**	**142**	*e*Pn	**Pn**	**03 28 16.9**	**-1.0**
BAR				*e*Sn	**Sn**	**03 28 37.3**	**-0.2**
ARVC	**Arvin**	**1.53**	**326**	⇓Pb	**Pn**	**03 28 17.3**	**-1.0**
	baz=1.5						
HEC	**Hector,Ludlow**	**1.54**	**51**	⇑Pb	**Pn**	**03 28 17.9**	**-0.6**
	baz=1.5						
HEC				⇑Sb	**Sn**	**03 28 38.3**	**-0.2**
	baz=1.5						
LRMC	**Laurel Mountai**	**1.61**	**3**	⇓Pb	**Pn**	**03 28 18.7**	**-0.8**
	baz=1.6						
LRMC				⇓Sb	**Sn**	**03 28 39.2**	**-1.2**
	baz=1.6						
GSC	**Goldstone**	**1.64**	**29**	*e*Pn	**Pn**	**03 28 19.5**	**-0.4**
GSC				*e*Sn	**Sn**	**03 28 41.0**	**-0.1**
GSC	**Goldstone**	**1.64**	**29**	⇓Pb	**Pn**	**03 28 19.8**	**-0.1**
	baz=1.6						
GSC				⇑Sb	**Sn**	**03 28 41.0**	**-0.1**
	baz=1.6						
SBC	**Santa Barbara**	**1.71**	**290**	⇑Pb	**Pn**	**03 28 20.6**	**-0.1**
	baz=1.7

ELK	**Elko**	**7.16**	**16**	*e*Pn		**Pn**	**03 29 35.1**	**-0.7**
ELK				*e*Pg		Pb	03 30 01.3	+5.9
ELK				*e*Sg		Sg	03 31 33.4	-7.2
ELK				Lg		Lg	03 31 35.7	
ELK	**Elko**	**7.16**	**16**	Pn		**Pn**	**03 29 38.5**	**+2.7**
	0.3nm,0.3s,baz=189,slow=13,SNR=5.4							
ELK				Lg		Lg	03 31 35.7	
	1.8nm,0.3s,baz=115,slow=23,SNR=6.7							
DUG	**Dugway**	**7.46**	**31**	*e*Pn		**Pn**	**03 29 40.5**	**+0.6**
DUG				*e*Pg		Pg	03 30 07.1	-6.6
DUG				*e*Sg		Sg	03 31 41.9	-8.4
TMUT	**Trail Mountain**	**7.57**	**42**	*e*Pn		**Pn**	**03 29 42.2**	**+0.7**
SRU	**San Rafael**	**7.84**	**46**	*e*Pn		**Pn**	**03 29 43.9**	**-1.2**
SRU				*e*Pb		**Pb**	**03 30 07.4**	**+0.4**
SRU				*e*Pg		Pg	03 30 17.1	-3.9
SRU				*e*Sg		Sb	03 31 51.0	+10
MVCO	**Mesa Verde**	**8.27**	**64**	*e*Pn		**Pn**	**03 29 52.4**	**+1.4**
MVCO				*e*Pg		Pb	03 30 19.5	+5.3
MVCO				*e*Sg		Sb	03 32 03.6	+11
DAU	**Daniels Canyon**	**8.35**	**37**	*e*Pn		Pn	03 29 55.4	+3.1
	42nm,0.7s							
JLU	**Jordanelle**	**8.40**	**35**	*e*Pn		Pn	03 29 57.1	+4.2
PV04	**Paradox Valley**	**8.48**	**55**	*e*Pn		**Pn**	**03 29 56.8**	**+2.9**
PV04				*e*Sg		Sg	03 32 16.3	-6.7
PV01	**Paradox Valley**	**8.59**	**58**	*e*Pn		**Pn**	**03 29 57.9**	**+2.4**
	1µm,0.8s							
PV01				*e*Pg		Pg	03 30 30.8	-4.5
PV01				*e*Sg		Sg	03 32 17.4	-9.1
YBH	**Yreka Blue Hor**	**8.77**	**335**	LR		LR	03 33 53.7	
	comp=Z,45nm,20.2s,baz=7.1,slow=41							
LAZ	**Ladron**	**8.84**	**84**	*e*Pn		**Pn**	**03 30 01.0**	**+2.2**
	2.7nm,1.0s							
HWUT	**Hardware Ranch**	**9.16**	**31**	*e*Pn		Pn	03 30 06.6	+3.4
BNM	**Barren Site**	**9.26**	**85**	*e*Pn		**Pn**	**03 30 06.0**	**+1.3**
	5.0nm,0.9s							
ANMO	**Albuquerque**	**9.42**	**80**	*e*Pn		**Pn**	**03 30 08.9**	**+2.1**
ANMO	**Albuquerque**	**9.42**	**80**	Pn		Pn	**03 30 08.9**	**+2.1**
	0.1nm,0.3s,baz=269,slow=12,SNR=5.7							
SMCO	**Snowmass**	**10.18**	**56**	*e*Pn		**Pn**	**03 30 19.1**	**+1.7**
BW06	**Boulder Array**	**10.98**	**34**	*e*Pn		**Pn**	**03 30 29.5**	**+1.4**
PDAR	**Pinedale Array**	**10.98**	**34**	Pn		Pn	03 30 32.5	+4.3
PDAR	**Pinedale Array**	**10.98**	**34**	Pn		Pn	03 30 32.5	+4.3
	0.1nm,0.3s,baz=215,slow=13,SNR=7.5							
SNOW	**Snow King Moun**	**11.04**	**28**	*e*Pn		**Pn**	**03 30 30.7**	**+1.7**
LOHW	**Long Hollow**	**11.22**	**28**	*e*Pn		Pn	03 30 35.7	+4.2
	3.7nm,1.1s							
TXAR	**Lajitas Array**	**12.85**	**107**	Pn		Pn	03 30 57.4	+3.8
TXAR	**Lajitas Array**	**12.85**	**107**	Pn		Pn	03 30 57.4	+3.8
	0.1nm,0.3s,baz=290,slow=12,SNR=4.9							
SLMT	**Seeley Lake**	**13.75**	**12**	*e*Pn		P	03 31 10.8	-3.8
	2.7nm,0.6s							
NEW	**Newport**	**14.39**	**2**	LR		LR	03 37 39.9	
	comp=Z,38nm,21.5s,baz=45,slow=41							
BBB	**Bella Bella**	**19.77**	**341**	LR		LR	03 39 45.3	
	comp=Z,52nm,18.8s,baz=60,slow=36							
DLBC	**Dease Lake**	**25.92**	**345**	LR		LR	03 44 42.1	
	comp=Z,110nm,20.0s,baz=224,slow=39							
YKA	**Yellowknife Ar**	**28.72**	**3**	P		**P**	**03 33 49.0**	**+1.0**
YKA	**Yellowknife Ar**	**28.72**	**3**	P		**P**	**03 33 48.9**	**+1.0**
	0.1nm,0.5s,baz=180,slow=9.1,SNR=5.3							
ILAR	**Eielson Array**	**35.64**	**339**	P		P	03 34 51.9	+3.3
ILAR	**Eielson Array**	**35.64**	**339**	P		P	03 34 51.9	+3.3
	0.3nm,0.7s,baz=160,slow=8.3,SNR=6.8							
INK	**Inuvik**	**35.65**	**350**	P		**P**	**03 34 50.1**	**+1.6**
INK	**Inuvik**	**35.65**	**350**	P		**P**	**03 34 50.1**	**+1.6**
	0.9nm,1.0s,baz=188,slow=5.6,SNR=2.4							

MEX 24 03:30:02.7±0.6, 17.54N×94.32W, h201km±9km, MD4.2, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.70**	**231**	*e*P	Pn	03 30 29.1	-1.7
CMIG				*e*S	S	03 30 50.1	-2.4
CCIG	**Comitan**	**2.43**	**121**	*e*P	Pn	03 30 44.6	-1.5
CCIG				*e*S	S	03 31 18.2	-1.1
TPIG	**Tehuac#an**	**3.03**	**287**	*e*P	Pn	03 30 51.9	-1.1
TPIG				*e*S	S	03 31 30.8	-0.8
UTMO	**Huajuapan**	**3.34**	**276**	*e*P	Pn	03 30 56.1	-0.6
UTMO				*e*S	S	03 31 35.9	-2.4
PNIG	**Pinotepa**	**3.82**	**253**	*e*P	Pn	03 31 00.8	-1.6
PNIG				*e*S	S	03 31 47.8	-0.7

*IDC **24** 03:33:41.4±1.7, 0.°23N×122.°34E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/23, mbtmp3.5/3, Error ellipse: s-maj=199.0km s-min=26.6km az=61.0*
*ISCJB **24** 03:33:58.7±0.9, 0.°27N±0.°09×122.°63E±0.°10, h150km, mb3.3/3, Error ellipse: s-maj=14.0km s-min=12.5km az=176.2*
*DJA **24** 03:34:00.2±1.4, 0.°N±5.°×12.°3E±.°, h140km±12km, M4.4/3, MLv4.4/3*
ISC 24 03:33:59.1±1.1, 0.°26N±0.°09×122.°59E±0.°09, h150km, n7, σ1§40/10, mb3.3/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.68**	**289**	P	**Pn**	**03 34 22.1**	**+0.6**
MRSI				S	**Sn**	**03 34 40.0**	**+1.5**
LUWI	**Luwuk**	**1.30**	**172**	P	**Pn**	**03 34 28.0**	**+1.3**
LUWI				S	**Sn**	**03 34 48.4**	**+0.6**
KMSI	**Cibinong**	**1.43**	**77**	P	**Pn**	**03 34 29.1**	**+1.2**
APSI	**Ampana**	**1.49**	**219**	P	**Pn**	**03 34 29.1**	**+0.5**
APSI				S	**Sn**	**03 34 52.2**	**+1.0**
WRA	**Warramunga Arr**	**23.14**	**151**	P	**P**	**03 38 50.7**	**-1.6**
	1.7nm,0.6s,baz=327,slow=10,SNR=28						
ASAR	**Alice Springs**	**26.20**	**156**	P	**P**	**03 39 18.3**	**-1.7**
	0.5nm,0.7s,baz=344,slow=14,SNR=1.8						
MKAR	**Makanchi Array**	**58.18**	**328**	P	**P**	**03 43 36.6**	**-0.8**
	0.1nm,0.3s,baz=130,slow=8.9,SNR=4.5						

*ISCJB **24** 03:50:18.7±0.7, 41.°03N±0.°03×25.°81E±0.°03, h2km±7km, Error ellipse: s-maj=4.5km s-min=4.3km az=44.3*
*ATH **24** 03:50:18.7, 41.°05N×25.°81E, h4km, MD3.2/4*
*CSEM **24** 03:50:19.2±0.1, 41.°03N×25.°80E, h5km, ML2.2/5, Error ellipse: s-maj=3.1km s-min=2.3km az=9.0*
*THE **24** 03:50:19.6, 40.°98N×25.°87E, h14km±2km, ML2.2/5, Error ellipse: s-maj=3.5km s-min=0.8km az=85.0*
*ISK **24** 03:50:19.6, 41.°04N×25.°91E, h5km, MD3.1*
ISC 24 03:50:19.2±1.0, 41.°03N±0.°02×25.°80E±0.°02, h8km±9km, n51, σ0§49/76, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALN	**Alexandroupoli**	**0.23**	**126**	P	**Pg**	**03 50 23.6**	**-0.2**
ALN				S	**Sg**	**03 50 26.5**	**-0.3**
ALN	**Alexandroupoli**	**0.23**	**126**	*e*PG	**Pg**	**03 50 23.6**	**-0.2**
ALN				*e*SG	**Sg**	**03 50 26.6**	**-0.3**
ALN	**Alexandroupoli**	**0.23**	**126**	P	**Pg**	**03 50 23.6**	**-0.2**
ALN				*e*Sg	**Sg**	**03 50 26.6**	**-0.3**
ENEZ	**Enez**	**0.40**	**138**	*e*PG	**Pg**	**03 50 27.2**	**+0.3**
ENEZ				*e*SG	**Sg**	**03 50 32.8**	**+0.6**
ENEZ	**Enez**	**0.40**	**138**	*e*Pg	**Pg**	**03 50 27.2**	**+0.3**
ENEZ				*e*Sg	**Sg**	**03 50 32.8**	**+0.6**
SMTH	**Samothraki Isl**	**0.60**	**200**	*e*PB	**Pg**	**03 50 31.2**	**+0.5**
SMTH				*e*SG	**Sg**	**03 50 38.9**	**+0.4**
SMTH	**Samothraki Isl**	**0.60**	**200**	*e*Pb	**Pg**	**03 50 31.2**	**+0.5**
SMTH				*e*Sg	**Sg**	**03 50 38.9**	**+0.4**
GELI	**Tayfur-Gelibol**	**0.81**	**141**	*e*PG	**Pb**	**03 50 35.7**	**+0.2**
GELI				*e*SG	**Sg**	**03 50 45.6**	**+0.2**
GELI	**Tayfur-Gelibol**	**0.81**	**141**	*e*Pg	**Pb**	**03 50 35.7**	**+0.2**
GELI				*e*Sg	**Sg**	**03 50 45.6**	**+0.2**
KAVA	**Kavala**	**0.98**	**268**	P	**Pb**	**03 50 38.7**	**+0.4**
KAVA				S	**Sn**	**03 50 53.1**	**0.0**
KAVA	**Kavala**	**0.98**	**268**	P	**Pb**	**03 50 38.7**	**+0.4**
KAVA				S	**Sn**	**03 50 53.1**	**0.0**
LPK	**Lapseki**	**0.98**	**132**	*e*PG	**Pg**	**03 50 37.9**	**-0.2**
LPK				*e*SG	**Sg**	**03 50 50.9**	**+0.1**
LPK	**Lapseki**	**0.98**	**132**	*e*Pg	**Pg**	**03 50 37.9**	**-0.2**
LPK				*e*Sg	**Sg**	**03 50 50.9**	**+0.1**
EDRB	**Edirne**	**1.08**	**41**	*e*PG	**Pg**	**03 50 39.4**	**-0.5**
EDRB				*e*SG	**Sg**	**03 50 54.1**	**+0.2**
EDRB	**Edirne**	**1.08**	**41**	*e*Pg	**Pg**	**03 50 39.4**	**-0.5**
EDRB				*e*Sg	**Sg**	**03 50 54.1**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.10**	**108**	*e*PG	**Pg**	**03 50 39.8**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.10**	**108**	*e*Pg	**Pg**	**03 50 39.8**	**-0.4**
MFT	**Murefte**	**1.15**	**102**	*e*PG	**Pg**	**03 50 41.0**	**-0.2**
MFT	**Murefte**	**1.15**	**102**	*e*Pg	**Pg**	**03 50 41.0**	**-0.2**
LIA	**Limnos Island**	**1.23**	**203**	P	**Pn**	**03 50 41.7**	**-0.9**
LIA				S	**Sb**	**03 50 57.5**	**-1.0**
LIA	**Limnos Island**	**1.23**	**203**	*e*PN	**Pg**	**03 50 42.9**	**+0.2**
LIA				*e*SB	**Sb**	**03 50 58.5**	**0.0**
LIA	**Limnos Island**	**1.23**	**203**	P	**Pn**	**03 50 41.7**	**-0.9**
LIA	**Limnos Island**	**1.23**	**203**	*e*Pn	**Pg**	**03 50 42.9**	**+0.2**
LIA				S	**Sb**	**03 50 57.5**	**-1.0**
LIA				*e*Sb	**Sb**	**03 50 58.5**	**0.0**
EZN	**Ezine**	**1.27**	**162**	*e*PN	**Pb**	**03 50 43.2**	**0.0**
EZN	**Ezine**	**1.27**	**162**	*e*Pn	**Pb**	**03 50 43.3**	**0.0**
KRBG	**Karabiga-Canak**	**1.30**	**119**	*e*PN	**Pn**	**03 50 43.4**	**-0.2**
KRBG	**Karabiga-Canak**	**1.30**	**119**	*e*Pn	**Pn**	**03 50 43.4**	**-0.2**
TKR	**Tekirdag**	**1.31**	**91**	*e*PN	**Pb**	**03 50 44.0**	**0.0**
TKR	**Tekirdag**	**1.31**	**91**	*e*Pn	**Pb**	**03 50 44.0**	**0.0**
PLD	**Plovdiv**	**1.35**	**323**	P	**Pg**	**03 50 45.1**	**0.0**
PLD				S	**Sg**	**03 51 02.8**	**+0.2**
PLD	**Plovdiv**	**1.35**	**323**	P	**Pg**	**03 50 45.1**	**0.0**
PLD				S	**Sg**	**03 51 02.8**	**+0.2**
MRMT	**Marmara Adasi**	**1.43**	**107**	*e*PN	**Pb**	**03 50 45.9**	**-0.1**
MRMT	**Marmara Adasi**	**1.43**	**107**	*e*Pn	**Pb**	**03 50 45.9**	**-0.1**
CRLT	**Corlu**	**1.47**	**86**	*e*PN	**Pb**	**03 50 46.7**	**+0.1**
CRLT	**Corlu**	**1.47**	**86**	*e*Pn	**Pb**	**03 50 46.7**	**+0.1**
NVR	**Nevrokopi**	**1.50**	**283**	P	**Pn**	**03 50 46.0**	**-0.3**
NVR				S	**Sn**	**03 51 06.0**	**-0.1**
NVR	**Nevrokopi**	**1.50**	**283**	*e*PN	**Pn**	**03 50 46.8**	**+0.5**
NVR	**Nevrokopi**	**1.50**	**283**	P	**Pn**	**03 50 46.0**	**-0.3**
NVR	**Nevrokopi**	**1.50**	**283**	*e*Pn	**Pn**	**03 50 46.8**	**+0.5**
NVR				S	**Sn**	**03 51 06.0**	**-0.1**
OUR	**Ouranopolis**	**1.55**	**244**	P	**Pn**	**03 50 45.9**	**-1.1**
OUR				S	**Sb**	**03 51 07.8**	**0.0**
OUR	**Ouranopolis**	**1.55**	**244**	P	**Pn**	**03 50 45.9**	**-1.1**
OUR				S	**Sb**	**03 51 07.8**	**0.0**
EDC	**Edincik**	**1.71**	**113**	*e*PN	**Pb**	**03 50 50.4**	**-0.4**
EDC	**Edincik**	**1.71**	**113**	*e*Pn	**Pb**	**03 50 50.4**	**-0.4**
GONE	**Gonen-Balikesi**	**1.74**	**124**	*e*PN	**Pn**	**03 50 50.4**	**+0.8**
GONE	**Gonen-Balikesi**	**1.74**	**124**	*e*Pn	**Pn**	**03 50 50.4**	**+0.8**
CTKS	**Kestanelik-??a**	**2.05**	**83**	*e*PN	**Pn**	**03 50 55.2**	**+1.3**
CTKS	**Kestanelik-??a**	**2.05**	**83**	*e*Pn	**Pn**	**03 50 55.2**	**+1.3**
BALB	**Balikesir**	**2.11**	**131**	*e*PN	**Pn**	**03 50 55.7**	**+1.0**
BALB	**Balikesir**	**2.11**	**131**	*e*Pn	**Pn**	**03 50 55.7**	**+1.0**
BGKT	**Bogazkoy**	**2.25**	**85**	*e*PN	**Pn**	**03 50 56.8**	**+0.2**
BGKT	**Bogazkoy**	**2.25**	**85**	*e*Pn	**Pn**	**03 50 56.8**	**+0.2**

*IDC **24** 03:58:31.3±0.9, 11.°83N×94.°92E, h0km, mb3.8/12, mb1 4.0/13, mb1mx3.8/27, mbtmp3.8/13, ML4.1/1, MS3.5/20, Ms1 3.5/20, ms1mx3.3/48, Error ellipse: s-maj=30.2km s-min=17.9km az=55.0*
*ISCJB **24** 03:58:33.0±0.6, 11.°83N±0.°08×95.°13E±0.°09, h21km, mb3.9/16, MS3.6/18, Error ellipse: s-maj=14.4km s-min=8.5km az=137.6*
*NEIC **24** 03:58:35.8±5.5, 11.°87N×95.°01E, h29km±37km, mb4.5/5, Error ellipse: s-maj=20.4km s-min=9.5km az=50.0*
ISC 24 03:58:34.4±0.9, 11.8N±0.1×95.0E±0.1, h21km, n57, σ0§79/43, mb3.9/16, MS3.5/18, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.63**	**29**	Pn	**Pn**	**04 00 24.1**	**-0.4**
CMAR	**Chiang Mai Arr**	**7.63**	**29**	Pn	**Pn**	**04 00 24.1**	**-0.4**
	0.7nm,0.3s,baz=220,slow=14,SNR=12						
CMAR				LR	LR	04 03 34.3	
	comp=Z,147nm,20.4s,baz=192,slow=40						
CHTO	**Chiang Mai**	**7.94**	**28**	*e*Pn	**Pn**	**04 00 28.3**	**-0.4**
PSI	**Prapat**	**9.74**	**156**	LR	LR	04 04 46.1	
	comp=Z,356nm,18.9s,baz=145,slow=38						
SHL	**Shillong**	**14.02**	**348**	*e*P	**Pn**	**04 01 54.0**	**+1.9**
ODAN	**Odare**	**16.62**	**335**	*e*P	**P**	**04 02 28.0**	**-0.8**
	14nm,0.4s						
RAMN	**Ramite**	**17.03**	**333**	*e*P	**P**	**04 02 34.2**	**+0.8**
	100nm,1.2s						
PKI	**Pulchoki**	**18.10**	**332**	*e*P	**P**	**04 02 46.1**	**+0.8**
	170nm,1.6s						
PKIN	**Phulchoki**	**18.11**	**331**	*e*P	**P**	**04 02 46.3**	**+0.9**
GUN	**Gumba**	**18.18**	**333**	*e*P	**P**	**04 02 46.8**	**+0.6**
	60nm,1.0s						
DMN	**Daman**	**18.28**	**331**	*e*P	**P**	**04 02 48.2**	**+1.0**
KKN	**Kakani**	**18.35**	**332**	*e*P	**P**	**04 02 47.4**	**-0.5**
	6.2nm,0.3s						
KOLN	**Koldanda**	**19.16**	**328**	*e*P	**Pn**	**04 02 58.1**	**+0.3**
	23nm,0.7s						
DANN	**Dangsing**	**19.55**	**329**	*e*P	**P**	**04 03 00.8**	**-0.4**
	36nm,0.9s						
PYUN	**Piuthan**	**19.75**	**327**	*e*P	**P**	**04 03 03.8**	**+0.5**
	89nm,1.2s						
KAPI	**Kappang**	**29.73**	**123**	LR	LR	04 16 22.9	
	comp=Z,101nm,19.7s,baz=310,slow=36						
AAK	**Ala-Archa**	**35.53**	**334**	*e*P	**P**	**04 05 31.6**	**+1.3**
	1.1nm,0.5s						
AAK	**Ala-Archa**	**35.53**	**334**	LR	LR	04 21 53.1	
	comp=Z,88nm,20.6s,baz=132,slow=40						
MK31	**Makanchi Array**	**36.51**	**345**	*e*P	**P**	**04 05 38.3**	**0.0**
MKAR	**Makanchi Array**	**36.51**	**345**	P	**P**	**04 05 37.9**	**-0.4**
MKAR	**Makanchi Array**	**36.51**	**345**	P	**P**	**04 05 37.9**	**-0.4**
	1.2nm,1.0s,baz=155,slow=9.0,SNR=7.2						
MKAR				LR	LR	04 23 32.5	
	comp=Z,30nm,20.8s,baz=164,slow=41						
SONM	**Songino Array**	**37.17**	**13**	P	**P**	**04 05 44.2**	**+0.2**
SONM	**Songino Array**	**37.17**	**13**	P	**P**	**04 05 44.2**	**+0.2**
	1.3nm,0.8s,baz=198,slow=6.3,SNR=5.1						
KSAR	**Wonju Array Be**	**38.96**	**43**	P	**P**	**04 05 58.8**	**-0.4**
KSRS	**Korea Array**	**38.99**	**43**	P	**P**	**04 05 58.8**	**-0.6**
	0.8nm,0.5s,baz=135,slow=55,SNR=3.3						
KSRS				LR	LR	04 22 19.4	
	comp=Z,47nm,18.2s,baz=238,slow=37						
JNU	**Nakatsue**	**39.07**	**51**	LR	LR	04 24 32.8	
	comp=Z,35nm,20.5s,baz=62,slow=40						
KURBB	**Kurchatov Arra**	**41.01**	**344**	P	**P**	**04 06 16.2**	**+0.2**
	0.9nm,1.0s,baz=157,slow=8.0,SNR=4.6						
KURK	**Kurchatov**	**41.07**	**344**	*e*P	**P**	**04 06 16.9**	**+0.4**
	4.7nm,0.9s						
KURK				*e*pP	pP	04 06 28.8	+5.8
ZALV	**Zalesovo Beam**	**42.83**	**351**	P	**P**	**04 06 31.3**	**+0.5**
ZALV	**Zalesovo Beam**	**42.83**	**351**	P	**P**	**04 06 31.3**	**+0.5**
	0.3nm,0.3s,baz=56,slow=30,SNR=0.9						
ZALV				LR	LR	04 29 20.0	
	comp=Z,29nm,18.4s,baz=189,slow=43						
BVAR	**Borovoye Array**	**45.62**	**339**	LR	LR	04 29 05.9	
	comp=Z,58nm,19.4s,baz=73,slow=40						
MJAR	**Matsushiro Arr**	**45.95**	**50**	LR	LR	04 28 11.7	
	comp=Z,81nm,20.2s,baz=275,slow=39						
WRA	**Warramunga Arr**	**49.92**	**129**	P	**P**	**04 07 28.3**	**+1.2**
WRA	**Warramunga Arr**	**49.92**	**129**	P	**P**	**04 07 28.3**	**+1.2**
	1.8nm,0.7s,baz=308,slow=8.3,SNR=26						
WRAB	**Tennant Creek**	**49.93**	**129**	*e*P	**P**	**04 07 28.0**	**+0.9**
	4.4nm,0.7s						
ASAR	**Alice Springs**	**51.84**	**133**	P	**P**	**04 07 42.0**	**+0.6**
ASAR	**Alice Springs**	**51.84**	**133**	P	**P**	**04 07 42.0**	**+0.6**
	1.3nm,0.6s,baz=312,slow=6.5,SNR=17						
ASF	**Jabal al Asfar**	**56.90**	**301**	LR	LR	04 36 10.9	
	comp=Z,30nm,18.1s,baz=6.3,slow=40						
BR131	**Keskin Array S**	**60.60**	**309**	*e*P	**P**	**04 08 42.9**	**-1.1**
	0.7nm,0.5s						
BRTR	**Keskin Array B**	**60.60**	**309**	P	**P**	**04 08 42.8**	**-1.2**
BRTR	**Keskin Array B**	**60.60**	**309**	P	**P**	**04 08 42.8**	**-1.2**
	1.0nm,0.8s,baz=106,slow=6.5,SNR=6.4						
BRTR				LR	LR	04 36 50.6	
	comp=Z,27nm,18.1s,baz=222,slow=38						
STKA	**Stephens Creek**	**62.23**	**136**	LR	LR	04 35 56.7	
	comp=Z,88nm,18.7s,baz=26,slow=36						
FINES	**FINESS Array B**	**69.69**	**331**	P	**P**	**04 09 42.0**	**-0.4**
FINES	**FINESS Array B**	**69.69**	**331**	P	**P**	**04 09 42.0**	**-0.4**
	0.4nm,0.4s,baz=298,slow=36,SNR=1.2						
FINES				LR	LR	04 42 56.4	
	comp=Z,62nm,20.5s,baz=149,slow=38						
ARCES	**ARCESS Array B**	**71.90**	**340**	LR	LR	04 45 23.3	
	comp=Z,67nm,20.0s,baz=292,slow=39						
BILL	**Bilibino**	**72.15**	**22**	*e*P	**P**	**04 09 57.0**	**-0.2**
	5.7nm,1.8s						
VRAC	**Vranov**	**73.61**	**318**	LR	LR	04 43 25.0	
	comp=Z,40nm,19.2s,baz=300,slow=37						
GERES	**GERESS Array B**	**75.52**	**318**	P	**P**	**04 10 16.9**	**-0.6**
GERES	**GERESS Array B**	**75.52**	**318**	P	**P**	**04 10 16.9**	**-0.6**
	0.3nm,0.5s,baz=72,slow=4.3,SNR=5.6						
HFS	**Hagfors**	**75.54**	**329**	LR	LR	04 44 52.0	
	comp=Z,80nm,18.9s,baz=98,slow=37						
NOA	**NORSAR Array B**	**76.77**	**330**	LR	LR	04 50 58.0	
	comp=Z,32nm,18.3s,baz=285,slow=41						
BOSA	**Boshof**	**78.40**	**237**	LR	LR	04 40 24.2	
	comp=Z,63nm,18.4s,baz=344,slow=32						
RPZ	**Rata Peaks**	**88.19**	**135**	LR	LR	04 56 05.0	
	comp=Z,11nm,19.7s,baz=121,slow=39						
TORD	**Torodi Ar. Bea**	**90.54**	**283**	P	**P**	**04 11 36.4**	**+0.7**
TORD	**Torodi Ar. Bea**	**90.54**	**283**	P	**P**	**04 11 36.4**	**+0.7**
	0.4nm,0.9s,baz=126,slow=3.0,SNR=2.2						
ILAR	**Eielson Array**	**90.81**	**22**	P	**P**	**04 11 35.2**	**-0.8**
ILAR	**Eielson Array**	**90.81**	**22**	P	**P**	**04 11 35.2**	**-0.8**
	0.2nm,0.6s,baz=324,slow=35,SNR=2.7						

*DDA **24** 04:16:58.7, 38.°96N×29.°65E, h11km, MD2.9*
*ISCJB **24** 04:16:59.2±0.4, 38.°96N±0.°02×29.°64E±0.°02, h3km±4km, Error ellipse: s-maj=4.0km s-min=3.1km az=7.8*
*CSEM **24** 04:16:59.3±0.1, 38.°98N×29.°65E, h2km, MD2.9, Error ellipse: s-maj=3.2km s-min=2.6km az=5.0*
*ISK **24** 04:16:59.0, 38.°98N×29.°61E, h5km, MD2.9*
ISC 24 04:16:59.2±1.0, 38.°97N±0.°02×29.°66E±0.°02, h5km±9km, n48, σ0§53/76, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.18**	**310**	*i* P	**Pg**	**04 17 02.7**	**-0.2**
GDZ				*i* S	**Sg**	**04 17 05.5**	**+0.1**
GDZ	**Gediz**	**0.18**	**310**	*i* P	**Pg**	**04 17 02.7**	**-0.2**
GDZ				*i* S	**Sg**	**04 17 05.5**	**+0.1**
ALT	**Altintas**	**0.36**	**76**	*e*PG	**Pg**	**04 17 06.3**	**+0.2**
ALT				*e*SG	**Sb**	**04 17 13.1**	**-0.9**
ALT	**Altintas**	**0.36**	**76**	*e*Pg	**Pg**	**04 17 06.3**	**+0.2**
ALT				*e*Sg	**Sb**	**04 17 13.1**	**-0.9**
TVSB	**Tavsanli**	**0.50**	**342**	*e*PG	**Pg**	**04 17 08.6**	**-0.3**
TVSB				*e*SG	**Sg**	**04 17 16.0**	**+0.6**
TVSB	**Tavsanli**	**0.50**	**342**	*e*Pg	**Pg**	**04 17 08.6**	**-0.3**
TVSB				*e*Sg	**Sg**	**04 17 16.0**	**+0.6**
KHAL	**Karahalli**	**0.61**	**193**	*i* P	**Pg**	**04 17 09.9**	**-1.1**
KHAL	**Karahalli**	**0.61**	**193**	*i* P	**Pg**	**04 17 09.9**	**-1.1**
KHL	**Karahalli**	**0.66**	**190**	*e*PG	**Pb**	**04 17 12.6**	**-0.5**
KHL				*e*SG	**Sg**	**04 17 20.9**	**+0.6**
KHL	**Karahalli**	**0.66**	**190**	*e*Pg	**Pb**	**04 17 12.6**	**-0.5**
KHL				*e*Sg	**Sg**	**04 17 20.9**	**+0.6**
DEMI	**Demirci**	**0.74**	**276**	*i* P	**Pg**	**04 17 13.3**	**-0.1**
DEMI				*i* S	**Sg**	**04 17 23.1**	**+0.1**
DEMI	**Demirci**	**0.74**	**276**	*i* P	**Pg**	**04 17 13.3**	**-0.1**
DEMI				*i* S	**Sg**	**04 17 23.1**	**+0.1**
SHUT	**Suhut-Afyon**	**0.81**	**121**	*e*PG	**Pb**	**04 17 16.4**	**+0.6**
SHUT				*e*SG	**Sb**	**04 17 28.1**	**+1.1**
SHUT	**Suhut-Afyon**	**0.81**	**121**	*e*Pg	**Pb**	**04 17 16.4**	**+0.6**
SHUT				*e*Sg	**Sb**	**04 17 28.1**	**+1.1**
KULA	**Kula-Manisa**	**0.91**	**240**	*e*PG	**Pg**	**04 17 16.5**	**-0.1**
KULA				*e*SG	**Sg**	**04 17 28.8**	**+0.5**
KULA	**Kula-Manisa**	**0.91**	**240**	*e*Pg	**Pg**	**04 17 16.5**	**-0.1**
KULA				*e*Sg	**Sg**	**04 17 28.8**	**+0.5**
MANT	**Manisa**	**0.99**	**241**	*i* P	**Pg**	**04 17 18.2**	**+0.1**
MANT				*i* S	**Sg**	**04 17 30.3**	**-0.7**
MANT	**Manisa**	**0.99**	**241**	*i* P	**Pg**	**04 17 18.2**	**+0.1**
MANT				*i* S	**Sg**	**04 17 30.3**	**-0.7**
DST	**Dursunbey**	**1.03**	**308**	*e*PG	**Pg**	**04 17 18.5**	**-0.4**
DST	**Dursunbey**	**1.03**	**308**	*e*Pg	**Pg**	**04 17 18.5**	**-0.4**
BOLV	**Bolvadin**	**1.04**	**104**	*i* P	**Pb**	**04 17 19.6**	**-0

NVAR	Mina Array Bea	79.58	43	P		P		04 45 49.4	+0.3
	0.9nm,0.7s,baz=222,slow=9.6,SNR=7.0								
TXAR	Lajitas Array	85.90	57	P		P		04 46 21.8	+1.0
	0.5nm,0.8s,baz=224,slow=3.5,SNR=4.0								
ILAR	Eielson Array	86.53	13	P		P		04 46 21.4	-1.3
	0.7nm,0.4s,baz=229,slow=5.1,SNR=30								
PDAR	Pinedale Array	87.51	43	P		P		04 46 28.2	+0.1
	0.6nm,0.8s,baz=226,slow=3.9,SNR=5.4								
YKA	Yellowknife Ar	94.80	25	P		P		04 46 59.9	-1.0
	0.3nm,0.7s,baz=244,slow=4.3,SNR=6.5								

*ISCJB **24** 04:36:17.1±0.3,42°.26N±0°.02×13°.47E±0°.03,h13km±3km, Error ellipse: s-maj=3.4km s-min=2.5km az=153.7*
*CSEM **24** 04:36:17.4±0.1,42°.27N×13°.48E,h2km,ML3.5/8, Error ellipse: s-maj=2.7km s-min=1.9km az=61.0*
*ROM **24** 04:36:17.1±0.1,42°.25N×13°.47E,h8km±1km,Ml3.0/30, Error ellipse: s-maj=0.9km s-min=0.7km az=51.0*
*LDG **24** 04:36:21.4±0.8,42°.44N×13°.35E,h2km,Ml2.6/6, Error ellipse: s-maj=17.8km s-min=11.1km az=103.0*

ISC 24 04:36:17.2±0.8,42°.28N±0°.02×13°.48E±0°.02,h16km±5km, n96,σ1§21/124,1C,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.09	323	Pg		Pg	04 36 20.6	-0.1
AQU				Sg		Sg	04 36 22.5	-0.5
AQU	L'Aquila	0.09	323	Pg		Pg	04 36 20.6	-0.1
AQU				Sg		Sg	04 36 22.5	-0.5
CAMP	Campotosto	0.26	349	Pg		Pg	04 36 23.5	+0.4
CAMP				Sg		Sb	04 36 28.7	+0.7
	539nm,0.7s							
CAMP	Campotosto	0.26	349	Pg		Pg	04 36 23.5	+0.4
PTQR	Pietraquaria	0.26	193	Pg		Pg	04 36 23.0	-0.1
PTQR				Sg		Sg	04 36 26.1	-0.9
PTQR	Pietraquaria	0.26	193	Pg		Pg	04 36 23.0	-0.1
PTQR				Sg		Sg	04 36 26.1	-0.9
FIAM	Fiamignano	0.27	268	Pg		Pg	04 36 23.3	+0.1
FIAM				Sg		Sb	04 36 27.6	-0.5
	3µm,0.5s							
FIAM	Fiamignano	0.27	268	Pg		Pg	04 36 23.3	+0.1
FIAM				Sg		Sb	04 36 27.6	-0.5
	3µm,0.5s							
VCEL	Villa Celiera	0.29	66	Pg		Pg	04 36 23.9	+0.3
VCEL				Sg		Sb	04 36 29.2	+0.4
VCEL	Villa Celiera	0.29	66	Pg		Pg	04 36 23.9	+0.3
VCEL				Sg		Sb	04 36 29.2	+0.4
TERO	Teramo	0.36	15	Pg		Pg	04 36 24.8	+0.1
TERO				Sg		Sb	04 36 31.0	+0.4
	3µm,0.4s							
TERO	Teramo	0.36	15	Pg		Pg	04 36 24.8	+0.1
TERO				Sg		Sb	04 36 31.0	+0.4
	3µm,0.4s							
INTR	Introdacqua	0.41	130	Pg		Pg	04 36 25.7	0.0
INTR				Sg		Sg	04 36 32.0	+0.6
	2µm,0.8s							
INTR	Introdacqua	0.41	130	Pg		Pg	04 36 25.7	0.0
INTR				Sg		Sg	04 36 32.0	+0.6
	2µm,0.8s							
VVLD	Villa Vallelon	0.42	165	Pg		Pg	04 36 25.5	-0.3
VVLD				Sg		Sg	04 36 32.0	+0.4
	2µm,0.7s							
VVLD	Villa Vallelon	0.42	165	Pg		Pg	04 36 25.5	-0.3
VVLD				Sg		Sg	04 36 32.0	+0.4
	2µm,0.7s							
LNSS	Leonessa	0.46	315	Pg		Pg	04 36 26.8	+0.3
LNSS				Sg		Sb	04 36 34.7	+1.1
	2µm,0.4s							
LNSS	Leonessa	0.46	315	Pg		Pg	04 36 26.8	+0.3
CERT	Cerreto	0.49	228	Pg		Pg	04 36 27.0	-0.1
CERT				Sg		Sb	04 36 34.6	0.0
	2µm,0.4s							
CERT	Cerreto	0.49	228	Pg		Pg	04 36 27.0	-0.1
CERT				Sg		Sb	04 36 34.6	0.0
	2µm,0.4s							
GUAR	Guarcino	0.50	194	Pg		Pg	04 36 26.9	-0.3
	923nm,0.7s							
GUAR	Guarcino	0.50	194	Pg		Pg	04 36 26.9	-0.3
	923nm,0.7s							
LPEL	Lama dei Pelig	0.57	114	Pg		Pg	04 36 28.4	-0.2
LPEL				Sg		Sb	04 36 37.3	+0.5
	925nm,0.8s							
LPEL	Lama dei Pelig	0.57	114	Pg		Pg	04 36 28.4	-0.2
LPEL				Sg		Sb	04 36 37.3	+0.5
	925nm,0.8s							
POFI	Posta Fibreno	0.59	163	Pg		Pg	04 36 28.6	-0.3
	498nm,0.8s							
POFI	Posta Fibreno	0.59	163	Pg		Pg	04 36 28.6	-0.3
	498nm,0.8s							
MNS	Montasola	0.60	280	Pg		Pg	04 36 28.8	-0.3
	615nm,0.6s							
MNS	Montasola	0.60	280	Pg		Pg	04 36 28.8	-0.3
	615nm,0.6s							
MTCE	Montecelio	0.60	245	Pg		Pg	04 36 28.8	-0.4
	651nm,0.6s							
MTCE	Montecelio	0.60	245	Pg		Pg	04 36 28.8	-0.4
	651nm,0.6s							
NRCA	Norcia	0.62	334	Pg		Pg	04 36 29.3	-0.1
NRCA				Sg		Sb	04 36 39.1	+1.0
	506nm,0.2s							
NRCA	Norcia	0.62	334	Pg		Pg	04 36 29.3	-0.1
NRCA				Sg		Sb	04 36 39.1	+1.0
	506nm,0.2s							
SDI	San Donato	0.62	156	Pg		Pg	04 36 29.3	-0.2
SDI				Sg		Sb	04 36 38.5	+0.3
	421nm,0.4s							
SDI	San Donato	0.62	156	Pg		Pg	04 36 29.3	-0.2
SDI				Sg		Sb	04 36 38.5	+0.3
	421nm,0.4s							
CAFR	Castel Frentan	0.65	94	Pg		Pb	04 36 30.9	+0.8
CAFR	Castel Frentan	0.65	94	Pg		Pb	04 36 30.9	+0.8
OFFI	Offida	0.67	13	Pg		Pn	04 36 31.6	-0.5
	2µm,0.6s							
OFFI	Offida	0.67	13	Pg		Pn	04 36 31.6	-0.5
	2µm,0.6s							
GIUL	Giuliano Di Ro	0.74	193	Pg		Pb	04 36 31.0	-0.7
	418nm,0.8s							
GIUL	Giuliano Di Ro	0.74	193	Pg		Pb	04 36 31.0	-0.7
	418nm,0.8s							
CESX	Cesi	0.74	297	Pg		Pg	04 36 31.7	-0.1
	453nm,0.5s							
CESX	Cesi	0.74	297	Pg		Pg	04 36 31.7	-0.1
	453nm,0.5s							
RMP	Rome, Mte Porz	0.74	231	Pg		Pb	04 36 31.1	-0.7
	691nm,0.5s							
RMP	Rome, Mte Porz	0.74	231	Pg		Pb	04 36 31.1	-0.7
	691nm,0.5s							
RNI2	Rionero Sannit	0.76	139	Pg		Pb	04 36 32.0	-0.2
	843nm,0.9s							
RNI2	Rionero Sannit	0.76	139	Pg		Pb	04 36 32.0	-0.2
	843nm,0.9s							
CERA	Filignano	0.79	149	Pg		Pb	04 36 31.8	-0.8
	540nm,0.6s							
CERA	Filignano	0.79	149	Pg		Pb	04 36 31.8	-0.8
	540nm,0.6s							
FDMO	Fiordimonte	0.81	339	Pg		Pb	04 36 32.7	-0.3
	368nm,0.5s							
FDMO	Fiordimonte	0.81	339	Pg		Pb	04 36 32.7	-0.3
	368nm,0.5s							
CESI	CESI - Serrava	0.84	330	Pg		Pb	04 36 33.3	-0.2
	151nm,0.4s							
CESI	CESI - Serrava	0.84	330	Pg		Pb	04 36 33.3	-0.2
	151nm,0.4s							
GUMA	Gualdo di Mace	0.85	23	Pg		Pb	04 36 32.9	-0.8
	2µm,0.6s							
GUMA	Gualdo di Mace	0.85	23	Pg		Pb	04 36 32.9	-0.8
	2µm,0.6s							
MIDA	Miranda	0.86	137	Pg		Pb	04 36 33.0	-0.8
	307nm,0.6s							
MIDA	Miranda	0.86	137	Pg		Pb	04 36 33.0	-0.8
	307nm,0.6s							
ASSB	Assisi San Ben	0.97	322	Pg		Pb	04 36 35.9	+0.1
	329nm,0.6s							
ASSB	Assisi San Ben	0.97	322	Pg		Pb	04 36 35.9	+0.1
	329nm,0.6s							
VAGA	Valle Agricola	1.03	147	Pg		Pb	04 36 36.2	-0.5
	172nm,0.7s							
VAGA	Valle Agricola	1.03	147	Pg		Pb	04 36 36.2	-0.5
	172nm,0.7s							
SNTG	Esanatoglia	1.05	338	Pg		Pb	04 36 37.0	-0.1
	99nm,0.4s							
SNTG	Esanatoglia	1.05	338	Pg		Pb	04 36 37.0	-0.1
	99nm,0.4s							
CING	Cingoli	1.12	349	Pg		Pb	04 36 38.3	+0.1
	231nm,0.5s							
CING	Cingoli	1.12	349	Pg		Pb	04 36 38.3	+0.1
	231nm,0.5s							
TOLF	Tolfa	1.12	259	Pg		Pg	04 36 38.4	-0.5
	218nm,1.0s							
TOLF	Tolfa	1.12	259	Pg		Pg	04 36 38.4	-0.5
	218nm,1.0s							
MGAB	Montegabbione	1.19	303	Pg		Pg	04 36 40.5	+0.3
	256nm,0.4s							
MGAB	Montegabbione	1.19	303	Pg		Pg	04 36 40.5	+0.3
	256nm,0.4s							
MURB	Monte Urbino	1.21	325	Pg		Pg	04 36 40.5	-0.1
	590nm,0.4s							
MURB	Monte Urbino	1.21	325	Pg		Pg	04 36 40.5	-0.1
	590nm,0.4s							
ARVD	Arcevia	1.28	342	Pg		Pb	04 36 41.5	+0.5
	229nm,0.9s							
ARVD	Arcevia	1.28	342	Pg		Pb	04 36 41.5	+0.5
	229nm,0.9s							
NVLJ	Novalja	2.50	23	*e*Pn		Pn	04 36 59.4	+2.2
NVLJ				Sn		Sb	04 37 31.1	-1.2
NVLJ	Novalja	2.50	23	*e*Pn		Pn	04 36 59.3	+2.2
NVLJ				Sn		Sb	04 37 31.0	-1.2
PGF	Pioggiola	3.33	276	*e*Pn		Pn	04 37 11.4	+2.7
PGF				*e*Sn		Sn	04 37 51.5	+3.6
	2.1nm,0.4s							
PGF	Pioggiola	3.33	276	*e*Pn		Pn	04 37 11.4	+2.7
PGF				*e*Sn		Sn	04 37 51.5	+3.6
	1.0nm,0.4s							
ABTA	Abfaltersbach	4.52	352	↑*i*Pn		Pn	04 37 25.5	+0.5
ABTA	Abfaltersbach	4.52	352	Pn		Pn	04 37 25.5	+0.5
SBF	Sospel	4.70	292	*e*Pn		Pn	04 37 29.8	+2.3
SBF				*e*Sn		Sn	04 38 19.9	-1.8
	1.5nm,0.3s							
SBF	Sospel	4.70	292	*e*Pn		Pn	04 37 29.8	+2.3
SBF				*e*Sn		Sn	04 38 19.9	-1.8
	0.8nm,0.3s							
FRF	La Foret Royal	5.18	287	*e*Pn		Pn	04 37 36.1	+2.1
FRF	La Foret Royal	5.18	287	*e*Pn		Pn	04 37 36.1	+2.1
LMR	La Mourre	5.23	284	*e*Pn		Pn	04 37 36.6	+1.8
LMR	La Mourre	5.23	284	*e*Pn		Pn	04 37 36.6	+1.8
MBDF	Montbardon	5.46	299	*e*P		Pn	04 37 42.0	+4.0
MBDF	Montbardon	5.46	299	*e*P		Pn	04 37 42.0	+4.0
LPG	La Plagne	5.83	306	*e*P		Pn	04 37 47.8	+4.6
LPG				*e*Sn		Sn	04 38 46.9	-2.9
	0.8nm,0.3s							
LPL	La Plagne	5.85	306	*e*P		Pn	04 37 47.9	+4.5
LPL				*e*Sn		Sn	04 38 46.0	-4.2
	0.9nm,0.4s							
SMRF	Simiane la Rot	6.03	289	*e*P		Pn	04 37 49.3	+3.6
SMRF	Simiane la Rot	6.03	289	*e*P		Pn	04 37 49.3	+3.6
HINF	Hinteralfeld	7.26	322	*e*Pn		Pn	04 38 03.8	+1.2
HINF				*e*Sn		Sn	04 39 20.4	-4.2
	1.8nm,0.3s							
HINF	Hinteralfeld	7.26	322	*e*Pn		Pn	04 38 03.8	+1.2
CDF	Champ du Feu	7.53	327	*e*Pn		Pn	04 38 07.6	+1.3
CDF				*e*Sn		Sn	04 39 27.3	-4.0
	1.9nm,0.5s							
CDF	Champ du Feu	7.53	327	*e*Pn		Pn	04 38 07.6	+1.3
HAU	Haudompre	7.63	321	*e*Pn		Pn	04 38 09.1	+1.5
HAU	Haudompre	7.63	321	*e*Pn		Pn	04 38 09.1	+1.5
GRG	Griva	1.63	98	*e*Pn		Pn	04 41 13.8	-0.3
GRG				*e*Sn		Sb	04 41 35.7	-0.4
BEY	Berane	1.68	350	↑*i*Pn		Pg	04 41 16.9	-0.2
BEY				*e*Sn		Sg	04 41 41.3	+2.4
IVA	Berane	1.68	350	↑*i*Pn		Pg	04 41 16.9	-0.2
IVA				*e*Sn		Sg	04 41 41.3	+2.4
VAY	Valandovo	1.73	86	*e*Pn		Pn	04 41 15.8	+0.3
VAY				*i* Sg		Sg	04 41 40.7	0.0
VAY				*e*Lg		Lg	04 41 41.6	
	comp=N,41nm,0.6s							
VAY				*e*Lg		Lg	04 41 41.9	
	comp=E,25nm,0.4s							
VAY	Valandovo	1.73	86	*e*Pn		Pb	04 41 16.2	-0.9
VAY				*i* Sg		Sg	04 41 41.1	+0.4
VAY				*e*Lg		Lg	04 41 42.3	
	comp=E,25nm,0.4s							
NKY	Niksic	1.86	330	↑*i*Pn		Pn	04 41 18.1	+0.8
NKY				*e*Sn		Sg	04 41 44.7	0.0
NKY	Niksic	1.86	330	↑*i*Pn		Pn	04 41 18.1	+0.8
NKY				*e*Sn		Sg	04 41 44.7	0.0
BARS	Barje	1.97	35	*e*Pn		Pb	04 41 21.3	+0.2
BARS				*e*Sn		Sg	04 41 52.1	+3.9
BARS	Barje	1.97	35	*e*Pn		Pb	04 41 21.3	+0.2
KNT	Kendrikon	1.98	91	P		Pn	04 41 18.4	-0.5
KNT	Kendrikon	1.98	91	P		Pn	04 41 18.4	-0.5
LIT	Litokhoron	2.02	123	*e*PN		Pn	04 41 20.4	+0.9
LIT	Litokhoron	2.02	123	*e*Pn		Pn	04 41 20.4	+0.9
SELS	Selova	2.10	17	*e*Pn		Pb	04 41 23.2	-0.1
THL	Klokotos Trika	2.12	141	*e*PN		Pb	04 41 22.1	-1.6
THL				*e*SN		Sb	04 41 49.7	-0.5
THL	Klokotos Trika	2.12	141	*e*Pn		Pb	04 41 22.1	-1.6
THL				*e*Sn		Sb	04 41 49.7	-0.5
BRY	Bratogost	2.12	323	↓*i*Pn		Pn	04 41 21.4	+0.4
BRY				*e*Sn		Sb	04 41 50.4	0.0
BRY	Bratogost	2.12	323	↓*i*Pn		Pn	04 41 21.4	+0.4
BRY				*e*Sn		Sb	04 41 50.4	0.0
UPM	Unac-Piva	2.23	333	*e*Pn		Pb	04 41 24.1	-1.6
UPM				*e*Sn		Sb	04 41 53.6	0.0
UPM	Unac-Piva	2.23	333	*e*Pn		Pb	04 41 24.1	-1.6
UPM				*e*Sn		Sb	04 41 53.6	0.0
IVAS	Ivanjica	2.36	358	*e*Pn		Pb	04 41 26.4	-1.4
IVAS	Ivanjica	2.36	358	*e*Pn		Pb	04 41 26.4	-1.4
SOH	Sokhos	2.36	99	*e*PN		Pn	04 41 23.9	-0.3
SOH	Sokhos	2.36	99	*e*Pn		Pn	04 41 23.9	-0.3
LKD2	Lefkada island	2.44	173	*e*PN		Pn	04 41 26.7	+1.4
LKD2	Lefkada island	2.44	173	*e*Pn		Pn	04 41 26.7	+1.4
STON	Ston	2.53	312	*e*Pn		Pn	04 41 26.2	-0.3
STON				Sn		Sg	04 42 04.1	-2.2
STON	Ston	2.53	312	*e*Pn		Pn	04 41 26.1	-0.3
PLG	Polygyros	2.55	108	*e*PN		Pn	04 41 27.1	+0.3
PLG	Polygyros	2.55	108	*e*Pb		Pn	04 41 27.1	+0.3
EVR	Evrytania	2.58	152	*e*PB		Pn	04 41 29.2	+1.9
EVR				*e*SN		Sb	04 42 01.4	-2.2
EVR	Evrytania	2.58	152	*e*Pb		Pn	04 41 29.2	+1.9
EVR				*e*Sn		Sb	04 42 01.4	-2.2
VTS	Vitosha	2.59	57	*e*Pn		Pn	04 41 29.2	+1.8
VTS				*e*Sn		Sg	04 42 07.7	-0.3
VTS	Vitosha	2.59	57	*e*Pn		Pn	04 41 29.2	+1.8
AGG	Agios Georgios	2.70	144	*e*PN		Pn	04 41 29.9	+1.1
AGG				*e*SN		Sn	04 42 03.6	+1.8
AGG	Agios Georgios	2.70	144	*e*Pn		Pn	04 41 29.9	+1.1
AGG				*e*Sn		Sn	04 42 03.6	+1.8
ZAPS	Zavoj	2.70	40	*e*Pn		Pb	04 41 32.9	-0.7
ZAPS	Zavoj	2.70	40	*e*Pn		Pb	04 41 32.9	-0.7
NVR	Nevrokopi	2.71	86	*e*PN		Pn	04 41 29.0	+0.1
BBLS	Lazi?i	2.73	347	*e*Pn		Pn	04 41 31.1	+1.9
BBLS	Lazi?i	2.73	347	*e*Pn		Pn	04 41 31.1	+1.9
DIVS	Divibare	2.89	356	*e*Pn		Pn	04 41 33.4	+1.9
DIVS				*e*Sn		Sb	04 42 13.0	+0.6
DIVS	Divibare	2.89	356	*e*Pn		Pn	04 41 33.4	+1.9
PAIG	Paliouri	2.90	115	*e*PN		Pn	04 41 31.9	+0.4
PAIG	Paliouri	2.90	115	*e*Pn		Pn	04 41 31.9	+0.4
NEO	Neokhori	2.96	129	*e*PN		Pn	04 41 33.1	+0.8
NEO	Neokhori	2.96	129	*e*Pn		Pn	04 41 33.1	+0.8
VLS	Valsamata	3.04	175	*e*PN		Pn	04 41 36.1	+2.5
VLS	Valsamata	3.04	175	*e*Pn		Pn	04 41 36.1	+2.5
LKR	Lokris	3.31	140	*e*PN		Pn	04 41 39.1	+1.9
LKR	Lokris	3.31	140	*e*Pn		Pn	04 41 39.1	+1.9
NVLJ	Novalja	5.19	312	Sn		Sn	04 43 02.5	-0.6
NVLJ	Novalja	5.19	312	Sn		Sn	04 43 02.5	-0.6
CRVS	Cervenica-Dubn	7.73	6	*e*PN		Pn	04 42 36.0	-1.9

*BEO **24** 04:40:40.8±0.8,40°.82N×19°.92E,h0km,ML2.7/4*
*TIR **24** 04:40:43.9,41°.21N×20°.27E,h1km,ML3.1*
*SKO **24** 04:40:43.6,41°.19N×20°.29E,h10km,M2.2,ML2.8*
*ATH **24** 04:40:44.1,41°.34N×20°.31E,h19km±1km,MD3.4/11*
*THE **24** 04:40:44.5,41°.22N×20°.30E,h0km±2km,ML2.9/2, Error ellipse: s-maj=2.4km s-min=0.5km az=306.0*
*PDG **24** 04:40:45.0±0.3,41°.16N×20°.15E,h10km,ML2.7/6, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*CSEM **24** 04:40:45.1±0.2,41°.22N×20°.28E,h2km,ML3.1, Error ellipse: s-maj=5.3km s-min=2.8km az=53.0*

ISC 24 04:40:44.9±1.0,41°.22N±0°.02×20°.27E±0°.02,h7km±8km, n95,σ1§25/153,8C-4D,Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.33	293	*e*PG		Pg	04 40 50.8	-0.7
TIR				*e*SG		Sg	04 40 56.6	+0.7
TIR	Tirane	0.33	293	P		Pg	04 40 50.8	-0.7
TIR				S		Sg	04 40 56.5	+0.6
TIR	Tirane	0.33	293	*e*Pg		Pg	04 40 50.8	-0.7
TIR				*e*Sg		Sg	04 40 57.2	+1.3
TIR	Tirane	0.33	293	P		Pg	04 40 50.8	-0.7
TIR				S		Sg	04 40 56.5	+0.6
TIR				*e*Sb		Sb	04 40 56.8	-2.0
PHP	Peshkopia	0.48	15	*e*PG		Pg	04 40 53.8	-0.5
PHP				*e*SG		Sg	04 41 01.8	+1.1
PHP	Peshkopia	0.48	15	P		Pg	04 40 53.8	-0.5
PHP				S		Sg	04 41 01.2	+0.5
PHP	Peshkopia	0.48	15	P		Pg	04 40 53.8	-0.5
PHP				S		Sg	04 41 01.2	+0.5
PHP				*e*Sg		Sg	04 41 01.8	+1.1
KBN	Korca	0.71	146	*e*PG		Pg	04 40 58.1	-0.5
KBN				*e*SG		Sb	04 41 09.2	-0.5
KBN	Korca	0.71	146	P		Pg	04 40 58.1	-0.5
KBN				S		Sg	04 41 08.8	+1.0
KBN	Korca	0.71	146	P		Pg	04 40 58.1	-0.5
KBN				S		Sg	04 41 08.8	+1.0
KBN				*e*Sg		Sb	04 41 09.2	-0.5
BIA	Bitola	0.82	104	P		Pg	04 40 59.1	-1.6
BIA				S		Sg	04 41 11.1	-0.2
BIA	Bitola	0.82	104	*i* Pg		Pg	04 40 59.0	-1.6
BIA				*i* Sg		Sg	04 41 11.5	+0.2
BIA	Bitola	0.82	104	P		Pg	04 40 59.1	-1.6
BIA				S		Sg	04 41 11.1	-0.2
BIA				*i* Sg		Sg	04 41 11.4	+0.2
PUK	Puka	0.87	341	*e*PG		Pg	04 41 01.3	-0.4
PUK				*e*SG		Sn	04 41 15.5	-1.3
PUK	Puka	0.87	341	*e*Pg		Pg	04 41 01.3	-0.4
FNA	Florina	0.94	117	P		Pg	04 41 01.7	-1.2
FNA				S		Sb	04 41 15.9	-0.4
FNA	Florina	0.94	117	*e*PB		Pg	04 41 01.8	-1.2
FNA				*e*SN		Sb	04 41 16.7	+0.4
FNA	Florina	0.94	117	*e*Pb		Pg	04 41 01.8	-1.2
FNA				S		Sb	04 41 15.9	-0.4
FNA				*e*Sn		Sb	04 41 16.7	+0.4
NEST	Nestorio	0.99	143	P		Pg	04 41 03.4	-0.6
NEST				S		Sb	04 41 17.9	0.0
NEST	Nestorio	0.99	143	P		Pg	04 41 03.4	-0.6
NEST				S		Sb	04 41 17.9	0.0
ULC	Ulcinj	1.07	314	↑*i*Pg		Pg	04 41 03.6	-1.9
ULC				*e*Sg		Sn	04 41 21.2	-0.5
ULC	Ulcinj	1.07	314	↑*i*Pg		Pg	04 41 03.6	-1.9
ULC				*e*Sg		Sn	04 41 21.2	-0.5
SKO	Skopje	1.16	49	P		Pb	04 41 06.9	-0.4
SKO	Skopje	1.16	49	*e*Pg		Pb	04 41 06.0	-1.2
SKO				*i* Sg		Sn	04 41 22.7	-1.0
SKO				*e*Lg		Lg	04 41 26.5	
	comp=N,173nm,0.5s							
SKO				*e*Lg		Lg	04 41 26.6	
	comp=E,98nm,0.6s							
SKO	Skopje	1.16	49	P		Pb	04 41 06.9	-0.4
SKO				*i* Sg		Sn	04 41 23.1	-0.6
SKO				*e*Lg		Lg	04 41 27.0	
	comp=E,98nm,0.6s							
BCI	Bajram Curri	1.16	352	*e*PG		Pn	04 41 06.3	-1.0
BCI				*e*SG		Sn	04 41 23.9	+0.2
BCI	Bajram Curri	1.16	352	*e*Pg		Pb	04 41 06.3	-1.0
PVY	Plav	1.40	350	↓*i*Pg		Pb	04 41 11.6	+0.1
PVY				*e*Sg		Sg	04 41 34.0	+4.1
PVY	Plav	1.40	350	↓*i*Pg		Pb	04 41 11.6	+0.1
PDG	Podgorica	1.43	328	*e*Pn		Pn	04 41 10.5	-0.8
PDG				*e*Sn		Sg	04 41 33.6	+2.6
PDG	Podgorica	1.43	328	*e*Pn		Pn	04 41 10.5	-0.8
PDG	Podgorica	1.43	328	↑*i*Pg		Pb	04 41 10.9	-0.4
PDG				*e*Sn		Sg	04 41 33.6	+2.6
PDG				*e*Sg		Sg	04 41 34.0	+3.0
TTG	Podgorica	1.43	328	↑*i*Pg		Pn	04 41 10.9	-0.4
TTG				*e*Sg		Sg	04 41 34.0	+3.0
KZN	Kozani	1.46	128	*e*PN		Pg	04 41 12.7	-0.1
KZN				*e*SN		Sg	04 41 33.2	+1.5
KZN	Kozani	1.46	128	*e*Pn		Pg	04 41 12.7	-0.1
KZN				*e*Sn		Sg	04 41 33.2	+1.5
KEK	Kerkira	1.54	194	*e*PN		Pg	04 41 14.4	-0.1
KEK	Kerkira	1.54	194	*e*Pn		Pg	04 41 14.4	-0.1
JAN	Janina	1.62	164	*e*PN		Pb	04 41 15.4	+0.2
JAN	Janina	1.62	164	*e*Pn		Pb	04 41 15.4	+0.2
GRG	Griva	1.63	98	P		Pn	04 41 13.6	-0.5
GRG	Griva	1.63	98	*e*PN		Pn	04 41 13.8	-0.3
GRG				*e*SN		Sb	04 41 35.7	-0.4

**IDC 24 05:04:23.6±0.8,13°.72N×145°.12E,h115km±7km,mb3.3/7, mb1 3.6/7,mb

ASAR Alice Springs 149.37 234 PKPbc **PKPbc 05 39 57.9 -1.1**
0.4nm,0.5s,baz=126,slow=3.2,SNR=5.4
WRA Warramunga Arr 150.60 241 PKPbc **PKPbc 05 40 00.8 -1.2**
0.5nm,0.4s,baz=106,slow=2.8,SNR=9.6

IDC 24 05:30:58.8±1.6, 3.74N×125.83E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.6/24, mbtmp3.9/5, Error ellipse: s-maj=186.6km s-min=19.6km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.98**	**161**	P	P	05 36 24.0	-0.4
	1.6nm,0.6s,baz=339,slow=11,SNR=20						
ASAR	**Alice Springs**	**28.36**	**164**	P	P	05 36 55.7	+0.8
	0.4nm,0.5s,baz=339,slow=10,SNR=2.6						
STKA	**Stephens Creek**	**38.47**	**158**	P	P	05 38 22.2	-0.5
	2.1nm,0.7s,baz=223,slow=5.1,SNR=3.0						
MKAR	**Makanchi Array**	**57.03**	**326**	P	P	05 40 46.7	0.0
	0.6nm,0.5s,baz=120,slow=8.7,SNR=12						
KURBB	**Kurchatov Arra**	**61.24**	**328**	P	P	05 41 15.7	0.0
	0.8nm,0.5s,baz=128,slow=6.1,SNR=7.9						

*IDC **24** 05:33:13.5±0.7, 8.41S×157.60E, h0km, mb4.2/10, mb1 4.4/12, mb1mx4.2/20, mbtmp4.1/12, ML4.2/2, Error ellipse: s-maj=22.8km s-min=18.2km az=157.0*
*ISCJB **24** 05:33:14.6±0.5, 8.40S±0.08×157.50E±0.06, h16km, mb4.1/14, Error ellipse: s-maj=12.2km s-min=8.4km az=5.3*
*NEIC **24** 05:33:19.6±1.6, 8.55S×157.65E, h47km±15km, mb4.3/5, Error ellipse: s-maj=16.8km s-min=8.2km az=149.0*
ISC 24 05:33:15.9±0.6, 8.5S±0.1×157.64E±0.07, h16km, n30, σ0.985/34, mb4.2/14, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.47**	**113**	*e*Pn	**Pn**	**05 33 57.0**	**+1.5**
HNR				*e*Sn	**Sb**	**05 34 30.4**	**+0.3**
HNR	**Honiara**	**2.47**	**113**	Pn	**Pn**	**05 33 57.4**	**+1.9**
	102nm,0.3s,baz=267,slow=3.5,SNR=16						
HNR				Sn	**Sb**	**05 34 28.3**	**-1.8**
	207nm,0.3s,baz=64,slow=24,SNR=17						
CTA	**Charters Tower**	**15.96**	**222**	Pn	**Pn**	**05 37 00.2**	**+0.3**
CTA	**Charters Tower**	**15.96**	**222**	Pn	**Pn**	**05 37 00.2**	**+0.3**
	0.4nm,0.3s,baz=29,slow=7.9,SNR=2.1						
WRAB	**Tennant Creek**	**25.25**	**241**	*e*P	**P**	**05 38 40.7**	**-0.8**
	4.0nm,0.7s						
WRA	**Warramunga Arr**	**25.26**	**241**	P	**P**	**05 38 41.1**	**-0.5**
WRA				PcP	**PcP**	**05 42 15.3**	**+0.3**
WRA	**Warramunga Arr**	**25.26**	**241**	P	**P**	**05 38 41.1**	**-0.5**
	4.6nm,0.8s,baz=66,slow=9.5,SNR=22						
WRA				PcP	**PcP**	**05 42 15.3**	**+0.3**
	0.5nm,0.6s,baz=71,slow=2.9,SNR=7.6						
ASAR	**Alice Springs**	**27.29**	**234**	P	**P**	**05 38 59.6**	**-0.4**
ASAR	**Alice Springs**	**27.29**	**234**	P	**P**	**05 38 59.6**	**-0.4**
	0.7nm,1.0s,baz=188,slow=28,SNR=5.0						
STKA	**Stephens Creek**	**27.66**	**210**	*e*P	**P**	**05 39 03.6**	**+0.4**
	1.1nm,0.9s						
STKA	**Stephens Creek**	**27.66**	**210**	P	**P**	**05 39 03.7**	**+0.6**
	3.4nm,0.8s,baz=34,slow=14,SNR=4.3						
CMAR	**Chiang Mai Arr**	**63.78**	**295**	P	**P**	**05 43 48.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**63.78**	**295**	P	**P**	**05 43 48.5**	**+0.7**
	0.8nm,0.3s,baz=124,slow=6.4,SNR=5.1						
SONM	**Songino Array**	**72.00**	**326**	P	**P**	**05 44 39.9**	**+0.8**
SONM	**Songino Array**	**72.00**	**326**	P	**P**	**05 44 39.9**	**+0.8**
	0.8nm,0.8s,baz=137,slow=5.4,SNR=6.4						
QSPA	**South Pole Qui**	**81.51**	**180**	*e*P	**P**	**05 45 31.3**	**-1.2**
	3.6nm,1.1s						
MCK	**McKinley**	**82.46**	**21**	*e*P	**P**	**05 45 36.5**	**-0.8**
	22nm,0.9s						
COLA	**College**	**83.52**	**20**	*e*P	**P**	**05 45 42.2**	**-0.5**
	6.5nm,0.8s						
ILAR	**Eielson Array**	**83.80**	**21**	P	**P**	**05 45 43.1**	**-1.0**
ILAR	**Eielson Array**	**83.80**	**21**	P	**P**	**05 45 43.1**	**-1.0**
	4.3nm,1.0s,baz=248,slow=4.9,SNR=29						
MKAR	**Makanchi Array**	**86.24**	**318**	P	**P**	**05 45 56.6**	**-0.3**
MKAR	**Makanchi Array**	**86.24**	**318**	P	**P**	**05 45 56.6**	**-0.3**
	0.8nm,0.6s,baz=98,slow=6.3,SNR=14						
NVAR	**Mina Array Bea**	**90.58**	**51**	P	**P**	**05 46 18.9**	**+0.9**
NVAR	**Mina Array Bea**	**90.58**	**51**	P	**P**	**05 46 18.9**	**+0.9**
	1.2nm,0.8s,baz=238,slow=7.5,SNR=7.0						
YKA	**Yellowknife Ar**	**96.41**	**28**	P	**P**	**05 46 43.8**	**-0.2**
YKA	**Yellowknife Ar**	**96.41**	**28**	P	**P**	**05 46 43.7**	**-0.2**
	0.5nm,0.7s,baz=265,slow=5.0,SNR=10						
PDAR	**Pinedale Array**	**97.74**	**48**	P	**P**	**05 46 50.1**	**-0.7**
PDAR	**Pinedale Array**	**97.74**	**48**	P	**P**	**05 46 50.1**	**-0.7**
	0.4nm,0.8s,baz=224,slow=4.1,SNR=3.7						
BDFB	**Brasilia**	**145.07**	**133**	PKPbc	**PKPbc**	**05 52 52.3**	**-0.9**
BDFB	**Brasilia**	**145.07**	**133**	PKPbc	**PKPbc**	**05 52 52.3**	**-0.9**
	2.6nm,0.8s,baz=128,slow=1.7,SNR=4.6						

*IDC **24** 05:37:33.8±0.5, 31.34S×177.51W, h0km, mb4.7/19, mb1 4.8/21, mb1mx4.8/23, mbtmp4.7/21, ML4.8/2, MS4.6/22, Ms1 4.6/22, ms1mx4.5/29, Error ellipse: s-maj=16.5km s-min=15.1km az=155.0*
*BJI **24** 05:37:34.3, 31.05S×177.03W, h12km, mB5.6/18, mb5.3/24, Ms5.3/16, Ms7 4.9/17*
*ISCJB **24** 05:37:34.2±0.2, 31.83S±0.04×177.52W±0.05, h12km, mb5.0/43, MS4.7/27, Error ellipse: s-maj=7.5km s-min=4.0km az=41.8*
*NEIC **24** 05:37:35.1±0.3, 31.67S×177.61W, h10km, mb5.2/20, Error ellipse: s-maj=11.8km s-min=7.5km az=129.0*
*MOS **24** 05:37:37.9±1.7, 31.41S×177.64W, h33km, mb5.2/10, MS5.0/4, Error ellipse: s-maj=13.1km s-min=9.7km az=94.0*
*GCMT **24** 05:37:37.9±0.2, 31.44S×177.13W, h12km, MW5.1, Moment Tensor Solution. s36,c45; s87,c134; Moment tensor: Scale 10^16Nm; Mrr4.45±.11; Mθθ0.09±.12; Mφφ-4.54±.09; Mrθ-0.50±.44; Mθφ0.03±.09; Mφr4.80±.32; Best double couple: M0 6.60000×10^16 NP1:φs184.00000°, δ22.00000°, λ98.00000°. NP2:φs356.00000°, δ69.00000°, λ87.00000°. Principal axes: T 6.5600, Plg66.0000°, Azm260.0000°; N 0.0700, Plg3.0000°, Azm357.0000°; P -6.6300, Plg23.0000°, Azm88.0000°; Data Used: II IU G CN IC.*
*AUST **24** 05:38:09.6±6.3, 32.26S×178.19W, h292km Error ellipse: s-maj=2.2km s-min=1.4km az=40.0*
ISC 24 05:37:35.4±0.6, 31.65S±0.04×177.50W±0.06, h13km±3km, h12km:pP-P, n328, σ1§54/311, mb5.1/41, MS4.8/27, 35C-28D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.41**	**351**	*e*Pn	Pn	05 38 10.5	-4.1
RAO				*e*Sn	**Sn**	**05 38 39.8**	**-4.2**
RAO	**Raoul Island**	**2.41**	**351**	Pn	Pn	05 38 10.6	-4.0
	360nm,0.3s,baz=114,slow=5.2,SNR=21						
RAO				LR	LR	05 38 54.2	
	comp=Z,4μm,19.9s,baz=183,slow=38						
PUZ	**Puketiti**	**7.30**	**207**	*e*PN	Pn	05 39 18.7	-3.0
PUZ				*e*SN	**Sn**	**05 40 43.3**	**-1.2**
URZ	**Urewera**	**7.95**	**212**	*e*Pn	**Pn**	**05 39 28.2**	**-2.4**
URZ				*e*Sn	**Sn**	**05 41 00.6**	**+0.3**
URZ	**Urewera**	**7.95**	**212**	*e*PN	Pn	05 39 27.7	-2.9
URZ				*e*SN	**Sn**	**05 40 58.7**	**-1.6**
URZ	**Urewera**	**7.95**	**212**	Pn	**Pn**	**05 39 30.1**	**-0.5**
	3.8nm,0.3s,baz=105,slow=12,SNR=16						
URZ				Sn	**Sn**	**05 40 58.5**	**-1.8**
	4.6nm,0.3s,baz=359,slow=14,SNR=4.4						
URZ				LR	LR	05 42 33.4	
	comp=Z,3μm,19.0s,baz=35,slow=37						
NMHZ	**Naumai**	**8.77**	**210**	*e*SN	**Sn**	**05 41 17.9**	**-2.8**
BFZ	**Birch Farm**	**10.34**	**208**	*e*SN	**Sn**	**05 41 54.2**	**-4.8**
THZ	**Tophouse**	**12.69**	**215**	*e*SN	Sn	05 42 46.9	-10
KHZ	**Kahutara**	**12.91**	**211**	*e*Pn	**Pn**	**05 40 36.0**	**-2.5**
KHZ				*e*Sn	Sn	05 42 53.8	-8.2
MQZ	**McQueen's Vall**	**14.33**	**210**	*e*SN	Sn	05 43 22.1	-15
MSVF	**Nonsavu**	**14.43**	**343**	*e*P	**Pn**	**05 40 57.5**	**-2.0**
MSVF	**Nonsavu**	**14.43**	**343**	*e*Pn	**Pn**	**05 40 57.5**	**-2.0**
RPZ	**Rata Peaks**	**15.06**	**214**	*e*Pn	**Pn**	**05 41 05.8**	**-2.1**
	40nm,0.8s						
RPZ	**Rata Peaks**	**15.06**	**214**	Pn	**Pn**	**05 41 05.8**	**-2.1**
	1.9nm,0.3s,baz=87,slow=2.1,SNR=11						
ODZ	**Otahua Downs**	**16.27**	**211**	*e*P	**Pn**	**05 41 21.1**	**-2.5**
	30nm,0.9s						
DZM	**Mont Dzumac**	**17.19**	**300**	*e*P	**P**	**05 41 39.8**	**+2.7**
	220nm,1.3s						
DZM				*e*LQ	LQ	05 45 05.3	
	3μm,28.7s						
DZM				*e*LR	LR	05 45 41.6	
	5μm,25.5s						
DZM	**Mont Dzumac**	**17.19**	**300**	*e*P	**P**	**05 41 38.4**	**+1.3**
DZM	**Mont Dzumac**	**17.19**	**300**	Pn	**P**	**05 41 39.7**	**+2.6**
DZM	**Mont Dzumac**	**17.19**	**300**	Pn	**P**	**05 41 39.7**	**+2.6**
	0.3nm,0.3s,baz=108,slow=14,SNR=15						
DZM				LR	LR	05 46 51.2	
	comp=Z,3μm,19.0s,baz=302,slow=33						
NOUC	**Port Laguerre**	**17.28**	**299**	*e*P	**P**	**05 41 39.5**	**+1.6**
AFI	**Afiamalu**	**18.42**	**18**	*e*P	**Pn**	**05 41 52.2**	**+1.6**
	311nm,1.6s						
RAR	**Rarotonga**	**18.95**	**61**	*e*P	**P**	**05 41 52.3**	**-3.9**
	40nm,0.8s						
RAR	**Rarotonga**	**18.95**	**61**	P	**P**	**05 41 54.3**	**-2.0**
	2.3nm,0.3s,baz=228,slow=6.9,SNR=10.0						
RAR				LR	LR	05 48 11.1	
	comp=Z,2μm,18.8s,baz=235,slow=34						
TBI	**Tubuai**	**26.15**	**79**	*e*LQ	LQ	05 48 19.8	
	2μm,14.0s						
TBI				*e*LR	LR	05 49 25.6	
	3μm,28.0s,baz=246						
ARMA	**Armidale**	**26.44**	**265**	*e*P	**P**	**05 43 15.4**	**+3.1**
	67nm,1.6s						
ARMA	**Armidale**	**26.44**	**265**	P	**P**	**05 43 16.2**	**+4.0**
	baz=26,SNR=4.3						
MGCD	**Mangrove Creek**	**26.50**	**258**	P	**P**	**05 43 16.8**	**+4.2**
	baz=26,SNR=5.1						
EIDS	**Eidsvold**	**28.25**	**275**	*e*P	**P**	**05 43 29.0**	**+0.6**
	32nm,1.1s						
EIDS	**Eidsvold**	**28.25**	**275**	P	**P**	**05 43 29.4**	**+1.1**
	baz=28,SNR=3.9						
YNG	**Young**	**28.66**	**255**	P	**P**	**05 43 35.1**	**+3.2**
	baz=28,SNR=8.2						
PPT2	**Papeete2**	**28.88**	**68**	*e*LQ	LQ	05 49 24.9	
	2μm,13.2s						
PPT2				*e*LR	LR	05 50 36.5	
	2μm,27.0s,baz=233						
PPT	**Papeete**	**28.89**	**68**	P	**P**	**05 43 33.6**	**-0.5**
PPT	**Papeete**	**28.89**	**68**	P	**P**	**05 43 33.6**	**-0.5**
	29nm,0.9s,baz=96,slow=12,SNR=3.8						
PPT				LR	LR	05 52 48.3	
	comp=Z,1μm,20.2s,baz=216,slow=32						
RMQ	**Roma**	**29.86**	**271**	P	**P**	**05 43 45.5**	**+2.7**
	baz=29,SNR=6.6						
TOO	**Toolangi**	**30.89**	**249**	P	**P**	**05 43 53.2**	**+1.5**
	baz=30,SNR=4.0						
CMSA	**Cobar Meteorol**	**31.26**	**260**	P	**P**	**05 43 56.7**	**+1.7**
	baz=30,SNR=11						
QLP	**Quilpie**	**33.69**	**269**	P	**P**	**05 44 16.9**	**+0.6**
	baz=33,SNR=7.7						
ARPS	**Mount Arapiles**	**33.83**	**250**	P	**P**	**05 44 19.7**	**+2.2**
	baz=33,SNR=5.6						
CTA	**Charters Tower**	**34.44**	**281**	P	**P**	**05 44 24.0**	**+1.1**
CTA	**Charters Tower**	**34.44**	**281**	P	**P**	**05 44 24.0**	**+1.1**
	19nm,0.8s,baz=102,slow=10.0,SNR=18						
CTA				LR	LR	05 56 50.8	
	comp=Z,2μm,18.5s,baz=120,slow=34						
CTAO	**Charters Tower**	**34.44**	**281**	*e*P	**P**	**05 44 24.0**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,262nm,2.2s						
CTAO	**Charters Tower**	**34.44**	**281**	*e*P	**P**	**05 44 24.0**	**+1.1**
	comp=Z,262nm,2.2s						
STKA	**Stephens Creek**	**34.64**	**259**	*e*P	**P**	**05 44 25.4**	**+1.0**
	comp=Z,27nm,1.8s						
STKA	**Stephens Creek**	**34.64**	**259**	P	**P**	**05 44 26.0**	**+1.4**
	comp=Z,16nm,0.7s,baz=101,slow=9.5,SNR=24						
STKA				LR	LR	05 57 31.7	
	comp=Z,1μm,18.8s,baz=95,slow=34						
STKA	**Stephens Creek**	**34.64**	**259**	P	**P**	**05 44 25.9**	**+1.4**
	baz=34,SNR=19						
MTSU	**Mount Surprise**	**36.97**	**282**	P	**P**	**05 44 45.9**	**+1.3**
	baz=36,SNR=17						
RKT	**Rikitea**	**38.51**	**88**	*e*LR	LR	05 55 11.9	
	comp=Z,2μm,29.0s,baz=250						
BBOO	**Buckleboo**	**39.06**	**256**	*e*P	**P**	**05 45 01.7**	**-0.4**
	comp=Z,428nm,0.7s						
BBOO	**Buckleboo**	**39.06**	**256**	P	**P**	**05 45 02.1**	**-0.1**
	baz=38,SNR=20						
QIS	**Mount Isa**	**39.85**	**275**	P	**P**	**05 45 10.2**	**+1.3**
	baz=39,SNR=7.5						
AS31	**Alice Springs**	**43.48**	**268**	*e*P	**P**	**05 45 38.2**	**-0.5**
ASAR	**Alice Springs**	**43.48**	**268**	P	**P**	**05 45 38.5**	**-0.1**
ASAR				ScP	**ScP**	**05 51 21.9**	**+4.0**
ASAR	**Alice Springs**	**43.48**	**268**	P	**P**	**05 45 38.5**	**-0.1**
	comp=Z,16nm,0.8s,baz=105,slow=7.6,SNR=79						
ASAR				ScP	**ScP**	**05 51 21.9**	**+4.0**
	comp=Z,2.9nm,0.9s,baz=127,slow=4.6,SNR=9.2						
ASAR				LR	LR	06 03 35.8	
	comp=Z,1μm,18.4s,baz=295,slow=36						
WRAB	**Tennant Creek**	**44.58**	**273**	*e*P	**P**	**05 45 46.5**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,27nm,0.7s						
WRAB	**Tennant Creek**	**44.58**	**273**	*e*P	**P**	**05 45 46.5**	**-0.9**
	comp=Z,27nm,0.7s						
WRAB	**Tennant Creek**	**44.58**	**273**	P	**P**	**05 45 46.3**	**-1.2**
	comp=Z,266nm,0.7s,SNR=9.2						
WRA	**Warramunga Arr**	**44.59**	**273**	P	**P**	**05 45 46.5**	**-1.0**
WRA	**Warramunga Arr**	**44.59**	**273**	P	**P**	**05 45 46.5**	**-1.0**
	comp=Z,31nm,0.7s,baz=115,slow=7.5,SNR=153						
WRA				LR	LR	06 03 41.4	
	comp=Z,2μm,18.2s,baz=110,slow=35						
PATS	**Pohnpei**	**44.70**	**325**	S	S	05 52 02.0	-23
	baz=45,SNR=3.8						
FORT	**Forrest**	**46.16**	**256**	*e*P	**P**	**05 45 59.0**	**-0.8**
	comp=Z,40nm,0.7s						
VNDA	**Vanda**	**46.90**	**186**	P	P	05 46 08.4	+3.4
VNDA	**Vanda**	**46.90**	**186**	P	P	05 46 08.4	+3.4
	comp=Z,1.3nm,0.6s,baz=5.0,slow=6.8,SNR=6.6						
VNDA				LR	LR	06 02 29.3	
	comp=Z,495nm,18.9s,baz=7.5,slow=32						
KDU	**Kakadu**	**49.56**	**281**	P	**P**	**05 46 27.0**	**+0.6**
	baz=49,SNR=3.5						
MTN	**Manton Dam**	**50.61**	**280**	P	**P**	**05 46 34.8**	**+0.5**
	baz=50,SNR=3.3						
FITZ	**Fitzroy Crossi**	**52.80**	**271**	*e*P	**P**	**05 46 50.0**	**-0.6**
	comp=Z,27nm,1.0s						
FITZ	**Fitzroy Crossi**	**52.80**	**271**	P	**P**	**05 46 50.2**	**-0.4**
	comp=Z,19nm,0.8s,baz=141,slow=7.0,SNR=19						
FITZ	**Fitzroy Crossi**	**52.80**	**271**	P	**P**	**05 46 50.2**	**-0.4**
	baz=52,SNR=13						
CASY	**Casey**	**54.25**	**208**	*e*P	**P**	**05 47 02.1**	**+1.5**
	comp=Z,64nm,1.6s						
MEEK	**Meekatharra**	**55.33**	**258**	P	**P**	**05 47 08.0**	**-1.2**
	baz=54,SNR=5.1						
BNDI	**Bandanaira**	**56.13**	**287**	S	S	05 54 40.1	-24
	baz=56,SNR=3.6						
QSPA	**South Pole Qui**	**58.47**	**180**	*e*P	**P**	**05 47 32.4**	**+1.5**
	comp=Z,41nm,1.0s						
QSPA	**South Pole Qui**	**58.47**	**180**	P	**P**	**05 47 33.7**	**+2.8**
	comp=Z,6.6nm,0.8s,baz=35,slow=3.3,SNR=24						
PALU	**Palau**	**60.04**	**302**	S	S	05 55 32.7	-22
	baz=60,SNR=4.9						
MIR	**Mirnyy**	**61.21**	**207**	*i*P	P	05 47 54.0	+4.4
MIR				pmax	pmax		
	comp=Z,38nm,1.5s						
WSI	**Waingapu**	**61.36**	**276**	S	S	05 55 48.1	-24
	baz=61,SNR=3.2						
MAW	**Mawson**	**71.30**	**201**	P	**P**	**05 48 55.6**	**+1.4**
MAW	**Mawson**	**71.30**	**201**	P	**P**	**05 48 55.6**	**+1.4**
	comp=Z,5.9nm,0.8s,baz=126,slow=6.0,SNR=4.7						
MAW				LR	LR	06 21 24.7	
	comp=Z,795nm,18.1s,baz=116,slow=37						
KSM	**Kuching**	**75.68**	**281**	P	P	05 49 32.6	+12
	baz=75,SNR=3.6						
SYO	**Syowa Base**	**76.00**	**193**	*e*P	**P**	**05 49 20.8**	**-1.0**
SYO	**Syowa Base**	**76.00**	**193**	*e*PcP	**PcP**	**05 49 33.9**	**-0.2**
SNAA	**Sanae**	**76.90**	**178**	*e*P	**P**	**05 49 27.9**	**+0.9**
SNAA	**Sanae**	**76.90**	**178**	*e*PcP	**PcP**	**05 49 40.0**	**+1.9**
SNAA	**Sanae**	**76.90**	**178**	*e*P	**P**	**05 49 27.2**	**+0.2**
	comp=Z,39nm,1.4s						
VNA3	**Neumayer Olymp**	**77.04**	**176**	*e*P	**P**	**05 49 28.1**	**+0.4**
VNA3	**Neumayer Olymp**	**77.04**	**176**	*e*PcP	**PcP**	**05 49 40.9**	**+2.3**
MJAR	**Matsushiro Arr**	**79.51**	**325**	P	**P**	**05 49 39.8**	**-1.9**
MJAR	**Matsushiro Arr**	**79.51**	**325**	P	**P**	**05 49 39.8**	**-1.9**
	comp=Z,3.3nm,0.9s,baz=170,slow=6.2,SNR=6.7						
MJAR				LR	LR	06 20 07.3	
	comp=Z,126nm,19.5s,baz=115,slow=32						
PLCA	**Paso Flores**	**81.35**	**133**	P	**P**	**05 49 54.0**	**+2.1**
PLCA	**Paso Flores**	**81.35**	**133**	P	**P**	**05 49 54.0**	**+2.1**
	comp=Z,2.5nm,0.8s,baz=237,slow=3.7,SNR=4.2						
PLCA				LR	LR	06 17 55.9	
	comp=Z,468nm,18.1s,baz=225,slow=30						
YUK	**Yuzh-Kuril'sk**	**82.42**	**334**	*d*P	**P**	**05 49 57.9**	**+0.9**
YUK				*t*S	**S**	**06 00 10.8**	**-2.0**
YUK				pmax	pmax		
	comp=E,161nm,0.2s						
YUK				pmax	pmax		
	comp=N,77nm,0.2s						
YUK				pmax	pmax		
	comp=Z,119nm,0.2s						
FX1	**Attu Island--F**	**84.56**	**354**	LR	LR	06 24 51.4	
	comp=Z,393nm,19.0s,baz=341,slow=34						
KSRS	**Korea Array**	**85.57**	**319**	P	**P**	**05 50 13.4**	**+0.2**
	comp=Z,3.3nm,0.7s,baz=140,slow=5.9,SNR=8.5						
KSRS				LR	LR	06 26 16.2	
	comp=Z,107nm,18.6s,baz=275,slow=34						
KSAR	**Wonju Array Be**	**85.58**	**319**	P	**P**	**05 50 13.4**	**+0.1**
QIZ	**Qiongzhong**	**85.91**	**295**	P	**P**	**05 50 15.6**	**+0.2**
QIZ				S	**S**	**06 00 49.3**	**+0.4**
QIZ				pmax	pmax		
	comp=Z,22nm,1.7s						
QIZ				LR	LR		
	comp=Z,240nm,39.1s						
PSI	**Prapat**	**85.99**	**276**	P	**P**	**05 50 15.8**	**-0.3**
	baz=85,SNR=4.4						
YSS	**Yuzh-Sakhalins**	**86.05**	**334**	*e*P	**P**	**05 50 17.0**	**+1.6**
YSS				*e*		05 50 28.9	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,500nm,18.0s						
BFSC	**Mount Baldy Ra**	**86.41**	**46**	⇑P	**P**	**05 50 19.0**	**+1.3**
	baz=87						
ISA	**Isabella**	**86.88**	**44**	*e*P	**P**	**05 50 19.4**	**-0.5**
ISA				pmax	pmax		
	comp=Z,27nm,1.4s						
ISA	**Isabella**	**86.88**	**44**	*e*P	**P**	**05 50 19.4**	**-0.5**
	comp=Z,27nm,1.4s						
ISA	**Isabella**	**86.88**	**44**	⇑P	**P**	**05 50 19.9**	**-0.1**
	baz=87						
PETK	**Petropavlovsk-**	**87.12**	**345**	P	**P**	**05 50 20.2**	**-0.3**
PETK	**Petropavlovsk-**	**87.12**	**345**	P	**P**	**05 50 20.2**	**-0.3**
PETK	**Petropavlovsk-**	**87.12**	**345**	P	**P**	**05 50 20.2**	**-0.3**
	comp=Z,5.3nm,0.6s,baz=131,slow=8.1,SNR=3.8						
PETK				LR	LR	06 30 28.1	
	comp=Z,247nm,18.5s,baz=138,slow=37						
NJ2	**Nanjing**	**87.38**	**310**	*e*P	**P**	**05 50 23.8**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,20nm,1.1s						
BC3	**Big Chuckawall**	**87.39**	**48**	⇑P	**P**	**05 50 24.9**	**+2.4**
	baz=88						
GLA	**Glamis**	**87.40**	**48**	*e*P	**P**	**05 50 23.9**	**+1.5**
GLA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GLA	**Glamis**	**87.40**	**48**	*e*P	**P**	**05 50 23.9**	**+1.5**
	comp=Z,6.3nm,1.1s						
GLA	**Glamis**	**87.40**	**48**	⇑P	**P**	**05 50 23.3**	**+0.8**
	baz=88						
CMB	**Columbia Colle**	**87.40**	**42**	*e*P	**P**	**05 50 23.1**	**+0.7**
CMB				pmax	pmax		
	comp=Z,15nm,1.5s						
CMB	**Columbia Colle**	**87.40**	**42**	*e*P	**P**	**05 50 23.1**	**+0.7**
	comp=Z,15nm,1.5s						
GSC	**Goldstone**	**87.64**	**46**	*e*P	**P**	**05 50 25.7**	**+2.0**
GSC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GSC	**Goldstone**	**87.64**	**46**	*e*P	**P**	**05 50 25.7**	**+2.0**
	comp=Z,3.8nm,0.7s						
113A	**Mohawk Valley,**	**87.89**	**49**	⇑P	**P**	**05 50 26.4**	**+1.7**
	baz=88						
IRM	**Iron Mountain**	**87.91**	**47**	⇑P	**P**	**05 50 25.7**	**+0.8**
	baz=88						
GMRC	**Granite Mounta**	**88.00**	**47**	⇓P	**P**	**05 50 25.8**	**+0.3**
	baz=88						
CFAA	**Coronel Fontan**	**88.15**	**126**	LR	LR	06 22 52.2	
	comp=Z,34nm,18.1s,baz=213,slow=31						
USRK	**Ussuriysk Arra**	**88.43**	**326**	P	**P**	**05 50 27.3**	**+0.3**
	comp=Z,7.1nm,0.7s,baz=128,slow=3.8,SNR=20						
USRK				LR	LR	06 28 32.5	
	comp=Z,266nm,19.4s,baz=128,slow=35						
GRAC	**Grapevine Rang**	**88.44**	**44**	⇑P	**P**	**05 50 27.5**	**+0.2**
	baz=89						
LDFC	**Landfair**	**88.54**	**47**	*e*P	**P**	**05 50 29.9**	**+1.9**
	comp=Z,32nm,1.6s						
PDMCI	**Parker Dam,Lak**	**88.64**	**48**	⇑P	**P**	**05 50 28.7**	**+0.4**
	baz=89						
NVAR	**Mina Array Bea**	**88.86**	**42**	P	**P**	**05 50 28.4**	**-1.1**
NVAR	**Mina Array Bea**	**88.86**	**42**	P	**P**	**05 50 28.4**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=226,slow=9.3,SNR=9.7						
NV11	**Mina Array Sit**	**88.95**	**43**	*e*P	**P**	**05 50 31.7**	**+1.9**
Y14A	**Wickenburg**	**89.13**	**49**	⇑P	**P**	**05 50 31.8**	**+1.1**
	baz=89						
TUC	**Tucson**	**89.55**	**51**	*e*P	**P**	**05 50 35.1**	**+2.4**
TUC				pmax	pmax		
	comp=Z,7.0nm,1.8s						
TUC	**Tucson**	**89.55**	**51**	*e*P	**P**	**05 50 35.1**	**+2.4**
	comp=Z,6.8nm,1.8s						
MDJ	**Mudanjiang**	**89.89**	**325**	P	**P**	**05 50 34.1**	**+0.2**
MDJ		

PDAR				LR	LR	06 28 17.4		
	comp=Z,309nm,18.2s,baz=254,slow=32							
CD2	**Chengdu**	**97.11**	**302**	P	Pdif	05 51 09.1	+1.5	
CD2				pP	pP	05 51 13.9	+2.0	
CD2				PP	**PP**	**05 55 08.1**	**+4.1**	
CD2				SKS	**SKSac**	**06 01 45.1**	**+0.6**	
CD2				S	**S**	**06 02 29.3**	**-1.3**	
CD2				sS	sS	06 02 36.8	-1.0	
CD2				SS	**SS**	**06 09 10.4**	**+2.1**	
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
CD2				pmax	pmax			
	comp=Z,120nm,5.4s							
TNA	**Tin City**	**97.17**	**4**	*e*P	Pdif	05 51 08.3	+1.4	
	comp=Z,4.1nm,1.1s							
LPAZ	**La Paz**	**97.24**	**114**	LR	LR	06 30 23.1		
	comp=Z,126nm,18.4s,baz=54,slow=32							
BOZ	**Bozeman (W)**	**97.33**	**40**	⇓P	Pdif	05 51 10.3	+1.9	
	baz=98							
HHC	**Hu-ho-hao-te**	**97.41**	**314**	*e*P	Pdif	05 51 11.5	+2.7	
HHC				PP	PP	05 55 12.8	+6.6	
HHC				S	**S**	**06 02 31.6**	**-1.2**	
HHC				pmax	pmax			
	comp=Z,27nm,0.9s							
HHC				pmax	pmax			
	comp=Z,180nm,5.2s							
HHC				LR	LR			
	comp=N,420nm,15.2s							
HHC				LR	LR			
	comp=E,780nm,13.7s							
HHC				LR	LR			
	comp=Z,310nm,14.3s							
CPUP	**Villa Florida**	**98.88**	**128**	LR	LR	06 30 19.5		
	comp=Z,221nm,18.7s,baz=59,slow=32							
ILAR	**Eielson Array**	**99.04**	**13**	P	**Pdif**	**05 51 14.0**	**-1.4**	
ILAR	**Eielson Array**	**99.04**	**13**	P	**Pdif**	**05 51 14.0**	**-1.4**	
	comp=Z,0.4nm,0.7s,baz=64,slow=28,SNR=2.5							
LZH	**Lanzhou**	**99.81**	**306**	*e*P	**Pdif**	**05 51 21.5**	**+1.8**	
LZH				pP	**pP**	**05 51 25.1**	**+1.1**	
LZH				sP	**sP**	**05 51 26.3**	**+0.7**	
LZH				*e*PP	**PP**	**05 55 25.6**	**+0.9**	
LZH				SKS	**SKSac**	**06 01 57.4**	**-0.8**	
LZH				*e*S	**ScS**	**06 02 47.5**	**-5.9**	
LZH				pmax	pmax			
	comp=Z,16nm,1.5s							
LZH				pmax	pmax			
	comp=Z,93nm,9.1s							
LZH				LR	LR			
	comp=N,280nm,19.0s							
LZH				LR	LR			
	comp=E,250nm,18.6s							
LZH				LR	LR			
	comp=Z,400nm,20.0s							
BILL	**Bilibino**	**100.12**	**354**	*e*P	**Pdif**	**05 51 19.4**	**-0.6**	
BILL				*e*		05 55 28.5		
BILL				*e*		06 01 53.6		
BILL				*e*PS	**PS**	**06 04 24.7**	**-0.4**	
BILL				pmax	pmax			
	comp=Z,11nm,0.9s							
WMQ	**Urumqi**	**114.33**	**308**	PKP	PKPdf	05 56 14.9	+0.2	
MK31	**Makanchi Array**	**118.90**	**309**	*e*PKIKP	**PKPdf**	**05 56 21.2**	**-2.2**	
MK31	**Makanchi Array**	**118.90**	**309**	*e*PKPdf	**PKPdf**	**05 56 21.2**	**-2.2**	
MKAR	**Makanchi Array**	**118.90**	**309**	PKIKP	**PKPdf**	**05 56 22.3**	**-1.1**	
MKAR	**Makanchi Array**	**118.90**	**309**	PKP	**PKPdf**	**05 56 22.3**	**-1.1**	
MKAR	**Makanchi Array**	**118.90**	**309**	PKP	**PKPdf**	**05 56 22.3**	**-1.1**	
	comp=Z,0.7nm,0.6s,baz=215,slow=1.6,SNR=9.6							
KSH	**Kashi**	**121.24**	**300**	*e*PKP	**PKPdf**	**05 56 31.5**	**+3.3**	
KSH				PP	PP	05 58 05.8	+6.5	
KSH				PKS	**PKSdf**	**06 00 05.8**	**+0.8**	
KSH				SKS	**SKSdf**	**06 03 40.9**	**+0.8**	
KSH				SKKS	**SKKSac**	**06 04 57.6**	**-0.6**	
KSH				SS	**SS**	**06 14 38.3**	**+5.2**	
KSH				AMB	AMB			
	comp=Z,66nm,3.9s							
KSH				LR	LR			
	comp=N,130nm,4.2s							
KSH				LR	LR			
	comp=E,100nm,3.9s							
KSH				LR	LR			
	comp=Z,210nm,4.6s							
KURK	**Kurchatov**	**122.22**	**313**	PKIKP	**PKPdf**	**05 56 27.5**	**-2.0**	
KURK	**Kurchatov**	**122.22**	**313**	PKP	**PKPdf**	**05 56 27.5**	**-2.0**	
KURK				*e*PKPdf	**PKiKP**	**05 56 29.8**	**+0.1**	
KURBB	**Kurchatov Arra**	**122.25**	**313**	PKP	**PKPdf**	**05 56 27.5**	**-2.1**	
	comp=Z,2.5nm,0.7s,baz=107,slow=2.0,SNR=15							
AAK	**Ala-Archa**	**123.16**	**303**	*i* PKIKP	**PKPdf**	**05 56 32.0**	**+0.1**	
BVAR	**Borovoye Array**	**127.59**	**315**	PKIKP	**PKPdf**	**05 56 39.7**	**-0.1**	
BVAR	**Borovoye Array**	**127.59**	**315**	PKP	**PKPdf**	**05 56 39.7**	**-0.1**	
BVAR	**Borovoye Array**	**127.59**	**315**	PKP	**PKPdf**	**05 56 39.7**	**-0.1**	
	comp=Z,1.6nm,0.7s,baz=93,slow=3.0,SNR=7.7							
BRVK	**Borovoye**	**127.66**	**315**	*e*PKP	**PKPdf**	**05 56 39.4**	**-0.5**	
BRVK	**Borovoye**	**127.66**	**315**	*e*PKPdf	**PKPdf**	**05 56 39.4**	**-0.5**	
ARU	**Arti**	**134.32**	**320**	*i* PKIKP	**PKPdf**	**05 56 50.5**	**-1.9**	
ARU						05 59 20.3		
ARU				SS	SS	06 17 15.6	+1.4	
AKTO	**Aktyubinsk**	**135.25**	**312**	PKIKP	**PKPdf**	**05 56 56.0**	**+1.6**	
AKTO	**Aktyubinsk**	**135.25**	**312**	PKP	**PKPdf**	**05 56 56.0**	**+1.6**	
AKTO	**Aktyubinsk**	**135.25**	**312**	PKP	**PKPdf**	**05 56 56.0**	**+1.6**	
	comp=Z,2.0nm,0.5s,baz=4.9,slow=2.7,SNR=6.5							
ARCES	**ARCESS Array B**	**139.90**	**348**	PKPpre	PKPpre	05 56 57.7		
ARCES	**ARCESS Array B**	**139.90**	**348**	PKhKP	PKPpre	05 56 57.7		
	comp=Z,2.5nm,0.8s,baz=305,slow=4.3,SNR=4.3							
JOF	**Joensuu**	**143.73**	**338**	*e*PKIKP	PKPab	05 57 06.0	-0.2	
JOF				pmax	pmax			
	comp=Z,3.0nm,0.6s							
JOF	**Joensuu**	**143.73**	**338**	*e*pkp	PKPab	05 57 06.0	-0.2	
	comp=Z,2.5nm,0.6s							
DGRG	**David-gareji**	**144.51**	**298**	P	**PKPdf**	**05 57 11.0**	**-0.5**	
BHD	**Baghdad**	**144.79**	**284**	*ex*	PKPab	05 57 00.0	-11	
TBLG	**Delisi**	**144.97**	**299**	*e*PKIKP	**PKPab**	**05 57 10.8**	**-0.8**	
TBLG	**Delisi**	**144.97**	**299**	P	**PKPab**	**05 57 10.8**	**-0.8**	
GNI	**Garni**	**145.02**	**296**	*e*P	**PKPbc**	**05 57 08.4**	**-3.6**	
GNI	**Garni**	**145.02**	**296**	*e*PKPdf	**PKPab**	**05 57 12.2**	**+0.2**	
KZR	**Kazreti**	**145.23**	**298**	P	**PKPdf**	**05 57 17.1**	**+4.3**	
VRHR	**Novokhopersk**	**145.33**	**316**	*e*PKHKP	PKPpre	05 57 08.3		
VRHR				pmax	pmax			
	comp=N,7.0nm,0.6s							
VRHR				pmax	pmax			
	comp=E,10.0nm,0.6s							
VRHR				pmax	pmax			
	comp=Z,10.0nm,0.6s							
GOR	**Gori**	**145.43**	**299**	P	PKPbc	05 57 05.1	-7.9	
ZEI	**Tsey**	**145.53**	**301**	⇑*i*PKIKP	**PKPab**	**05 57 14.0**	**+0.1**	
ZEI				pmax	pmax			
	comp=Z,50nm,1.3s							
MOS	**Moscow**	**145.60**	**325**	*e*PKP2	**PKPdf**	**05 57 11.5**	**-1.3**	
MOS				pmax	pmax			
	comp=Z,143nm,1.1s							
MOS				pmax	pmax			
	comp=Z,100nm,1.1s							
MOS				MLR	MLR			
	comp=Z,1μm,23.0s							
CLDR	**Caldiran**	**145.65**	**294**	*e*P	**PKPdf**	**05 57 13.2**	**-0.6**	
HAKT	**HAKKARI**	**145.78**	**291**	*i* P	**PKPbc**	**05 57 14.9**	**+0.3**	
DYDN	**Diyadin**	**145.83**	**295**	*i* P	**PKPab**	**05 57 16.6**	**+1.5**	
CUKT	**Cukurca**	**145.84**	**291**	*e*P	**PKPdf**	**05 57 13.3**	**-0.8**	
KAF	**Kangasniemi**	**145.86**	**340**	*e*PKIKP	**PKPdf**	**05 57 10.9**	**-2.2**	
KAF	**Kangasniemi**	**145.86**	**340**	*e*pkp	**PKPdf**	**05 57 10.9**	**-2.2**	
ONI	**Oni**	**145.87**	**300**	P	**PKPab**	**05 57 15.6**	**+0.7**	
AKH	**Akhalkalaki**	**145.92**	**298**	P	**PKPdf**	**05 57 14.4**	**+0.3**	
VANB	**Van**	**146.06**	**293**	*e*P	**PKPdf**	**05 57 14.9**	**+0.5**	
KBZ	**Khabaz**	**146.15**	**302**	PKP2	**PKPab**	**05 57 16.2**	**+0.4**	
KBZ	**Khabaz**	**146.15**	**302**	PKPbc	**PKPab**	**05 57 16.2**	**+0.4**	
KBZ	**Khabaz**	**146.15**	**302**	PKPbc	**PKPab**	**05 57 16.2**	**+0.4**	
	comp=Z,14nm,1.0s,baz=104,slow=5.4,SNR=13							
KIV	**Kislovodsk**	**146.27**	**303**	*i* PKP2	**PKPab**	**05 57 16.8**	**+0.3**	
KIV				*e*		06 04 20.2		
KIV				pmax	pmax			
	comp=Z,19nm,1.4s							
OBN	**Obninsk**	**146.43**	**324**	*i* PKP2	**PKPdf**	**05 57 15.1**	**+0.8**	
OBN				*e*		06 04 22.2		
OBN				*e*SS	SS	06 19 33.9	-1.7	
OBN				pmax	pmax			
	comp=Z,42nm,1.4s							
FIA1	**FINESS Array S**	**146.46**	**340**	*e*PKPdf	**PKPdf**	**05 57 14.4**	**+0.2**	
FINES	**FINESS Array B**	**146.46**	**340**	PKPbc	**PKPdf**	**05 57 13.7**	**-0.4**	
FINES	**FINESS Array B**	**146.46**	**340**	PKPbc	**PKPdf**	**05 57 13.7**	**-0.4**	
	comp=Z,18nm,0.7s,baz=48,slow=3.1,SNR=61							
TUTA	**Tutak**	**146.51**	**295**	*i* P	**PKPbc**	**05 57 16.9**	**+0.1**	
VSR	**Storozhevoye**	**146.74**	**317**	*e*PKP2	**PKPbc**	**05 57 16.1**	**-0.6**	
VSR				pmax	pmax			
	comp=N,4.0nm,0.6s							
VSR				pmax	pmax			
	comp=E,10.0nm,0.6s							
VSR				pmax	pmax			
	comp=Z,20nm,0.6s							
VORD	**Divnogorie**	**146.76**	**316**	*e*PKP2	**PKPbc**	**05 57 16.6**	**-0.1**	
VORD				pmax	pmax			
	comp=N,10.0nm,0.5s							
VORD				pmax	pmax			
	comp=E,30nm,0.5s							
VORD				pmax	pmax			
	comp=Z,20nm,0.5s							
DAGI	**Agillar**	**147.13**	**298**	*i* P	**PKPbc**	**05 57 18.1**	**-0.2**	
DDEM	**Demirkent**	**147.27**	**297**	*i* P	**PKPab**	**05 57 19.8**	**-0.7**	
DBAD	**Bademkaya**	**147.30**	**298**	*i* P	**PKPbc**	**05 57 19.0**	**+0.3**	
EZM	**Erzurum**	**147.62**	**296**	*e*P	**PKPbc**	**05 57 18.9**	**-1.0**	
MARD	**Mardin**	**148.10**	**291**	*i* P	**PKPbc**	**05 57 21.2**	**+0.2**	
BNGB	**Bing¨ll**	**148.18**	**294**	*e*P	**PKPdf**	**05 57 14.9**	**-3.0**	
KOPT	**Kop Dagi**	**148.27**	**296**	*i* P	**PKPdf**	**05 57 19.9**	**+1.7**	
BAYT	**Ayd¨–ntepe-Bay**	**148.52**	**297**	*e*P	**PKPdf**	**05 57 18.3**	**-0.2**	
GUMT	**Gumushane**	**149.02**	**297**	*e*P	**PKPdf**	**05 57 20.2**	**+1.0**	
PTK	**Pertek**	**149.18**	**294**	*e*P	**PKPbc**	**05 57 23.7**	**-0.2**	
KELT	**Kelkit**	**149.22**	**296**	*i* P	**PKPbc**	**05 57 24.1**	**+0.2**	
URFA	**Urfa**	**149.66**	**291**	*e*P	**PKPdf**	**05 57 21.2**	**+0.9**	
ILIC	**ilic-Erzincan**	**149.79**	**295**	*e*P	**PKPbc**	**05 57 24.6**	**-0.6**	
ANN	**Anapa**	**149.82**	**306**	*i* PKIKP	**PKPdf**	**05 57 15.3**	**-4.9**	
ANN				*e*		05 57 29.9		
ANN				pmax	pmax			
	comp=Z,47nm,1.6s							
KEMA	**Kemaliye**	**149.86**	**295**	*i* P	**PKPbc**	**05 57 26.1**	**+0.7**	
MALT	**Malatya**	**149.96**	**293**	*e*P	**PKPbc**	**05 57 24.5**	**-1.2**	
MALT	**Malatya**	**149.96**	**293**	*e*PKP2	**PKPbc**	**05 57 26.4**	**+0.7**	
MALT	**Malatya**	**149.96**	**293**	*e*PKPbc	**PKPbc**	**05 57 26.4**	**+0.7**	
SUSE	**Susehri**	**150.01**	**297**	*i* P	**PKPbc**	**05 57 26.8**	**+1.0**	
NB2	**NORSAR Subarra**	**150.04**	**352**	PKP	**PKPbc**	**05 57 23.4**	**-1.7**	
	comp=Z,41nm,1.7s,baz=17,slow=3.1							
NOA	**NORSAR Array B**	**150.04**	**352**	PKPbc	**PKPbc**	**05 57 24.9**	**-0.1**	
NOA	**NORSAR Array B**	**150.04**	**352**	PKPbc	**PKPbc**	**05 57 24.9**	**-0.1**	
	comp=Z,4.7nm,1.0s,baz=14,slow=4.2,SNR=4.0							
GZT	**Gaziantep**	**150.66**	**291**	*i* P	**PKPbc**	**05 57 27.6**	**+0.1**	
AYKD	**Aykdinkavak**	**151.26**	**291**	*i* P	**PKPbc**	**05 57 29.0**	**+0.2**	
AKASG	**Malin Array Be**	**152.54**	**322**	PKIKP	**PKPbc**	**05 57 29.0**	**-2.1**	
AKASG						05 57 40.7		
AKASG	**Malin Array Be**	**152.54**	**322**	PKPbc	**PKPbc**	**05 57 29.0**	**-2.1**	
AKASG				PKPab	**PKPab**	**05 57 40.7**	**-0.9**	
AKASG	**Malin Array Be**	**152.54**	**322**	PKPbc	**PKPbc**	**05 57 29.0**	**-2.1**	
	comp=Z,1.8nm,0.5s,baz=50,slow=3.0,SNR=6.9							
AKASG				PKPab	**PKPab**	**05 57 40.7**	**-0.9**	
	comp=Z,8.4nm,0.7s,baz=44,slow=4.1,SNR=16							
KIEV	**Kiev**	**152.56**	**322**	*e*PKIKP	**PKPbc**	**05 57 30.2**	**-0.9**	
KIEV	**Kiev**	**152.56**	**322**	*e*PKPbc	**PKPbc**	**05 57 30.2**	**-0.9**	
BR131	**Keskin Array S**	**153.55**	**296**	*e*PKPbc	**PKPbc**	**05 57 34.3**	**+0.3**	
BR131				*e*PKPab	**PKPab**	**05 57 44.7**	**-1.7**	
BRTR	**Keskin Array B**	**153.55**	**296**	PKPbc	**PKPbc**	**05 57 35.1**	**+1.2**	
BRTR				PKPab	**PKPab**	**05 57 45.5**	**-1.0**	
BRTR	**Keskin Array B**	**153.55**	**296**	PKPbc	**PKPbc**	**05 57 35.1**	**+1.2**	
	comp=Z,4.2nm,1.1s,baz=45,slow=0.3,SNR=6.6							
BRTR				PKPab	**PKPab**	**05 57 45.5**	**-1.0**	
	comp=Z,3.8nm,0.7s,baz=107,slow=4.0,SNR=13							
CFR	**Carcaliu**	**155.92**	**311**	⇓PKP2	**PKPab**	**05 57 55.9**	**-0.2**	
CFR	**Carcaliu**	**155.92**	**311**	⇓*i*P	**PKPab**	**05 57 55.9**	**-0.2**	
TIRR	**Tirgusor**	**156.03**	**310**	⇓PKP2	**PKPab**	**05 57 56.9**	**+0.3**	
TIRR	**Tirgusor**	**156.03**	**310**	⇓*i*P	**PKPab**	**05 57 56.9**	**+0.3**	
TESR		**156.22**	**316**	⇑*i*P	**PKPab**	**05 57 57.5**	**+0.1**	
BUR08	**Bucovina Ar. S**	**156.45**	**319**	*e*PKPab	**PKPab**	**05 57 58.3**	**-0.2**	
BURAR	**Bucovina Array**	**156.46**	**319**	⇑*i*P	**PKPab**	**05 57 58.3**	**-0.2**	
VRI	**Vrincioaia**	**156.49**	**314**	⇑PKP2	**PKPab**	**05 57 59.4**	**+0.8**	
VRI	**Vrincioaia**	**156.49**	**314**	⇑*i*P	**PKPab**	**05 57 59.4**	**+0.8**	
PLOR	**Plostina**	**156.54**	**314**	⇑PKP2	**PKPab**	**05 57 59.3**	**+0.5**	
PLOR	**Plostina**	**156.54**	**314**	⇑*i*P	**PKPab**	**05 57 59.3**	**+0.5**	
BSEG	**Bad Segeberg**	**157.02**	**348**	*e*PKPab	PKPab	05 58 10.4	+10	
MLR	**Muntele Rosu**	**157.15**	**314**	⇓*i*P	**PKPab**	**05 58 02.3**	**+0.7**	
KOLS	**Kolonicke sedl**	**157.19**	**325**	*e*PKP2	**PKPab**	**05 58 01.6**	**+0.1**	
KOLS	**Kolonicke sedl**	**157.19**	**325**	*e*PKP	**PKPab**	**05 58 01.6**	**+0.1**	
DOPR	**Dopca**	**157.25**	**315**	⇓*i*P	**PKPab**	**05 58 02.2**	**+0.3**	
UZH	**Uzhgorod**	**157.38**	**324**	⇑*i*PKP2	**PKPab**	**05 58 01.6**	**-0.6**	
TRPA	**Tarpa**	**157.58**	**323**	⇓*e*	**PKPab**	**05 58 03.1**	**0.0**	
CRVS	**Cervenica-Dubn**	**157.60**	**326**	*e*PKP2	**PKPab**	**05 58 02.2**	**-1.0**	
CRVS	**Cervenica-Dubn**	**157.60**	**326**	*e*PKP	**PKPab**	**05 58 02.1**	**-1.1**	
KSP	**Ksiaz**	**158.26**	**336**	*e*PKP2	**PKPab**	**05 58 05.2**	**-0.8**	
DRGR		**158.32**	**320**	⇓PKP2	**PKPab**	**05 58 06.4**	**-0.1**	
DRGR		**158.32**	**320**	⇓*i*P	**PKPab**	**05 58 06.3**	**-0.2**	
NRDL	**Niedersach Rie**	**158.44**	**347**	*e*PKPab	PKPab	05 58 16.0	+9.4	
LOT	**Lotru**	**158.49**	**316**	⇓*i*P	**PKPab**	**05 58 08.2**	**+0.9**	
UPC	**Upice**	**158.64**	**336**	*e*PKP2	**PKPab**	**05 58 07.5**	**-0.2**	
UPC	**Upice**	**158.64**	**336**	*e*PKPAB	**PKPab**	**05 58 07.5**	**-0.2**	
UPC				*ex*	x	05 58 19.6		
DPC	**Dobruska-Polom**	**158.66**	**335**	*e*PKP2	**PKPab**	**05 58 07.7**	**-0.1**	
DPC				MLR	MLR			
	comp=Z,200nm,14.8s							
DPC	**Dobruska-Polom**	**158.66**	**335**	*e*PKPAB	**PKPab**	**05 58 07.7**	**-0.1**	
DPC				*ex*	x	05 58 19.0		
DPC				AMS	AMS	07 09 30.0		
	comp=Z,200nm,14.8s							
MORC	**Moravsky Berou**	**158.67**	**332**	⇑PKP2	PKPab	05 58 00.7	-7.2	
MORC	**Moravsky Berou**	**158.67**	**332**	⇑*i*P	PKPab	05 58 00.7	-7.2	
KRLC	**Kraliky**	**158.72**	**334**	*e*PKP2	**PKPab**	**05 58 07.4**	**-0.7**	
KRLC	**Kraliky**	**158.72**	**334**	*e*PKPAB	**PKPab**	**05 58 07.4**	**-0.7**	
KRLC				*ex*	x	05 58 18.1		
CLL	**Collm**	**158.88**	**341**	*e*PKPab	PKPab	05 58 18.3	+10	
CLL	**Collm**	**158.88**	**341**	*e*PKPab	**PKPab**	**05 58 11.0**	**+2.4**	
CLL				*i* pPKPab	**pPKPab**	**05 58 16.9**	**+3.9**	
	comp=Z,37nm,1.6s							
CLL				*e*(PP)		06 01 56.0		
CLL				LmH		07 27 00.0		
	comp=N,100nm,19.3s							
CLL				LmH		07 27 00.0		
	comp=E,100nm,18.7s							
CLL				LmH		07 27 00.0		
	comp=Z,200nm,18.2s							
BRG	**Berggiesshubel**	**159.00**	**339**	*e*PKP	**PKPab**	**05 58 07.8**	**-1.4**	
	comp=Z,18nm,1.8s							
BRG				*e*		05 58 19.4		
	comp=Z,38nm,1.7s							
BRG				*e*		05 58 40.1		
	comp=Z,20nm,1.5s							
BRG	**Berggiesshubel**	**159.00**	**339**	*e*PKP2	**PKPab**	**05 58 07.8**	**-1.4**	
BRG				pmax	pmax			
	comp=Z,18nm,1.8s							
BRG				pmax	pmax			
	comp=Z,38nm,1.7s							
BRG				pmax	pmax			
	comp=Z,20nm,1.5s							
BRG	**Berggiesshubel**	**159.00**	**339**	*e*PKPab	PKPab	05 58 19.2	+10	
PSZ	**Piszkesteto**	**159.04**	**326**	⇑PKP2	**PKPab**	**05 58 09.8**	**+0.2**	
PSZ	**Piszkesteto**	**159.04**	**326**	⇑*i*P	**PKPab**	**05 58 09.8**	**+0.2**	
PSZ	**Piszkesteto**	**159.04**	**326**	⇓*e*pPKPdf	**PKPab**	**05 58 08.4**	**-1.2**	
PVCC	**Panska Ves**	**159.11**	**338**	*e*PKP2	**PKPab**	**05 58 12.3**	**+2.7**	
PVCC	**Panska Ves**	**159.11**	**338**	*e*PKPAB	**PKPab**	**05 58 12.3**	**+2.7**	
PVCC				*ex*	x	05 58 20.8		
VYHS	**Vyhne**	**159.11**	**328**	*e*PKP2	**PKPab**	**05 58 09.4**	**-0.4**	
VYHS	**Vyhne**	**159.11**	**328**	*e*PKP	**PKPab**	**05 58 09.4**	**-0.4**	
FBE	**Freiberg**	**159.13**	**340**	*e*PKPab	PKPab	05 58 20.1	+10	
PRU	**Pruhonice**	**159.58**	**337**	*e*PKP2	**PKPab**	**05 58 11.6**	**-0.1**	
PRU				MLR	MLR			
	comp=Z,200nm,16.0s							
PRU	**Pruhonice**	**159.58**	**337**	*e*PKPAB	**PKPab**	**05 58 11.6**	**-0.1**	
PRU				*ex*	x	05 58 22.8		
PRU				AMS	AMS	07 18 40.0		
	comp=Z,200nm,16.0s							
TANN	**Tannenbergstha**	**159.83**	**341**	*e*PKPab	PKPab	05 58 23.1	+10	
MOX	**Moxa**	**159.84**	**343**	*e*PKPab	PKPab	05 58 22.7	+10	
MOX				*e*		05 58 43.8		
MOX				*e*L	L	07 11 44.2		
	comp=Z,252nm,19.6s							
WERD	**Werda**	**159.85**	**342**	*e*PKPab	PKPab	05 58 23.0	+10	
GUNZ	**Gunzen**	**159.92**	**341**	*e*PKPab	PKPab	05 58 23.4	+10	
WERN	**Wernitzgruen**	**159.97**	**341**	*e*PKPab	PKPab	05 58 23.7	+10	
NKC	**Novy Kostel**	**160.00**	**341**	*e*PKP2	**PKPab**	**05 58 13.6**	**0.0**	
NKC	**Novy Kostel**	**160.00**	**341**	*e*PKPAB	**PKPab**	**05 58 13.6**	**0.0**	
NKC				*ex*	x	05 58 24.0		
VTS	**Vitosha**	**160.25**	**309**	⇓PKP2	PKPab	05 58 04.9	-10	
VTS	**Vitosha**	**160.25**	**309**	⇓*i*P	PKPab	05 58 04.8	-10	
MANZ	**Manzenberg**	**160.32**	**341**	*e*PKPab	PKPab	05 58 25.1	+10	
ROTZ	**Rotzenmuhle**	**160.49**	**341**	*e*PKPab	PKPab	05 58 26.4	+11	
KHC	**Kasperske Hory**	**160.64**	**338**	*e*PKP2	**PKPab**	**05 58 16.2**	**-0.2**	
KHC	**Kasperske Hory**	**160.64**	**338**	*e*PKPAB	**PKPab**	**05 58 16.2**	**-0.2**	
KHC				*ex*	x	05 58 26.6		
CONA	**Conrad Observa**	**160.82**	**332**	⇑*i*PKPab	**PKPab**	**05 58 17.2**	**-0.1**	
GRF	**Grafenberg Arr**	**160.82**	**343**	*e*PKPab	PKPab	05 58 27.5	+10	
GRF				*e*		05 58 48.8		
GRF				*e*L	L	07 14 12.8		
	comp=Z,253nm,18.5s							
GEC2	**GERESS Array S**	**160.85**	**337**	*e*PKPab	PKPab	05 58 27.4	+10	
GERES	**GERESS Array B**	**160.85**	**337**	PKPab	**PKPab**	**05 58 17.4**	**0.0**	
GERES	**GERESS Array B**	**160.85**	**337**	PKPab	**PKPab**	**05 58 17.4**	**0.0**	
	comp=Z,0.5nm,0.5s,baz=64,slow=3.1,SNR=8.2							
WET	**Wettzell**	**160.85**	**339**	*e*PKPab	PKPab	05 58 27.9	+11	
TNS	**Taunus Mts**	**160.92**	**348**	*e*PKPab	PKPab	05 58 27.1	+10	
TORD	**Torodi Ar. Bea**	**161.57**	**178**	PKP	**PKPdf**	**05 57 36.8**	**0.0**	
TORD				PKPab	**PKPab**	**05 58 22.6**	**+1.4**	
TORD	**Torodi Ar. Bea**	**161.57**	**178**	PKP	**PKPdf**	**05 57 36.8**	**0.0**	
	comp=Z,1.6nm,1.1s,baz=307,slow=1.0,SNR=4.9							
TORD				PKPab	**PKPab**	**05 58 22.6**	**+1.4**	
	comp=Z,1.0nm,0.6s,baz=192,slow=2.4,SNR=5.0							
RJOB	**Jochberg**	**162.11**	**337**	*e*PKPab	PKPab	05 58 33.4	+10	
SOKA	**Soboth**	**162.15**	**331**	⇑*i*PKPab	**PKPab**	**05 58 22.2**	**-1.0**	
FUR	**Furstenfeldbru**	**162.20**	**340**	*e*PKPab	PKPab	05 58 33.6	+10	
BFO	**Black Forest**	**162.76**	**347**	*e*PKPab	PKPab	05 58 35.0	+9.3	
WTTA	**Wattenberg**	**162.90**	**338**	⇑*i*PKPab	**PKPab**	**05 58 26.1**	**-0.4**	
DAVA	**Damuels**	**163.39**	**342**	⇑*i*PKPab	**PKPab**	**05 58 28.0**	**-0.7**	
FETA	**Feichten**	**163.40**	**340**	⇓*i*PKPab	**PKPab**	**05 58 28.5**	**-0.2**	

CSEM ***24*** *05:56:20.9, 42°.43N×13°.30E, h11km, MD2.0/8, After ROM*
ROM 24 05:56:20.9±0.1, 42°.43N×13°.30E, h11km±1km, Md2.0/8, MI1.7/7, Error ellipse: s-maj=1.5km s-min=1.1km az=113.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.10**	**133**	Pg	Pg	05 56 24.3	+0.5
AQU				Sg	Sg	05 56 26.5	+0.6
	486nm,0.3s						
AQU	**L'Aquila**	**0.10**	**133**	Pg	Pg	05 56 24.3	+0.5
AQU				Sg	Sg	05 56 26.5	+0.6
	486nm,0.3s						
CAMP	**Campotosto**	**0.14**	**37**	Pg	Pg	05 56 24.8	+0.4
CAMP				Sg	Sg	05 56 27.4	+0.6
	116nm,0.4s						
CAMP	**Campotosto**	**0.14**	**37**	Pg	Pg	05 56 24.8	+0.4
CAMP				Sg	Sg	05 56 27.4	+0.6
	116nm,0.4s						
FIAM	**Fiamignano**	**0.21**	**221**	Pg	Pg	05 56 25.8	+0.3
FIAM				Sg	Sg	05 56 29.6	+1.0
	91nm,0.4s						
FIAM	**Fiamignano**	**0.21**	**221**	Pg	Pg	05 56 25.8	+0.3
FIAM				Sg	Sg	05 56 29.

0.3nm,0.5s,baz=159,slow=7.5,SNR=3.2
MKAR Makanchi Array 77.13 320 P P 06 42 50.5 +0.5
0.2nm,0.5s,baz=99,slow=8.9,SNR=3.2
ILAR Eielson Array 84.91 23 P P 06 43 29.7 -1.0
0.3nm,0.8s,baz=237,slow=5.9,SNR=4.7
TORD Torodi Ar. Bea 145.06 285 PKPbc PKPbc 06 50 31.9 -1.1
0.3nm,0.6s,baz=78,slow=4.7,SNR=4.0

*DDA **24** 06:45:36.8, 39.°14N×29.°02E, h6km, MD3.2*
*CSEM **24** 06:45:37.4±0.1, 39.°10N×29.°02E, h2km, MD3.2, Error ellipse: s-maj=2.1km s-min=1.9km az=18.0*
*ISK **24** 06:45:37.0, 39.°11N×29.°02E, h5km, MD3.3*
ISC 24 06:45:37.3±1.0, 39.°11N±0.°02×29.°02E±0.°02, h7km±9km, n61, σ0°55/78, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.25**	**254**	*i* Pg	**Pg**	**06 45 42.5**	**+0.3**
DEMI				*i* Sg	**Sg**	**06 45 45.8**	**+0.2**
GDZ	**Gediz**	**0.36**	**93**	*i* P	**Pg**	**06 45 44.3**	**0.0**
GDZ				*i* S	**Sg**	**06 45 49.1**	**+0.1**
TVSB	**Tavsanli**	**0.48**	**45**	*e*Pg	**Pg**	**06 45 46.5**	**-0.1**
TVSB				*e*Sg	**Sg**	**06 45 53.2**	**+0.3**
TVSB	**Tavsanli**	**0.48**	**45**	*e*Pg	**Pg**	**06 45 46.5**	**-0.1**
TVSB				*e*Sg	**Sg**	**06 45 53.2**	**+0.3**
DST	**Dursunbey**	**0.58**	**328**	*e*Pg	**Pg**	**06 45 48.6**	**0.0**
DST				*e*Sg	**Sg**	**06 45 56.6**	**+0.4**
DST	**Dursunbey**	**0.58**	**328**	*e*Pg	**Pg**	**06 45 48.6**	**0.0**
DST				*e*Sg	**Sg**	**06 45 56.6**	**+0.4**
DURS	**Dursunbey**	**0.65**	**319**	*e*P	**Pg**	**06 45 49.8**	**0.0**
DURS				*e*S	**Sg**	**06 45 56.4**	**-1.9**
KULA	**Kula-Manisa**	**0.66**	**206**	*e*Pg	**Pg**	**06 45 49.8**	**-0.2**
KULA				*e*Sg	**Sg**	**06 45 58.6**	**0.0**
KULA	**Kula-Manisa**	**0.66**	**206**	*e*Pg	**Pg**	**06 45 49.8**	**-0.2**
KULA				*e*Sg	**Sg**	**06 45 58.6**	**0.0**
KHAL	**Karahalli**	**0.82**	**153**	*i* P	**Pg**	**06 45 53.1**	**0.0**
KHAL				*i* S	**Sg**	**06 46 03.4**	**-0.5**
KHAL	**Karahalli**	**0.82**	**153**	*i* P	**Pg**	**06 45 53.1**	**0.0**
KHAL				*i* S	**Sg**	**06 46 03.4**	**-0.5**
ALT	**Altintas**	**0.85**	**93**	*e*PG	**Pg**	**06 45 53.8**	**+0.3**
ALT				*e*SG	**Sb**	**06 46 06.2**	**+0.2**
ALT	**Altintas**	**0.85**	**93**	*e*Pg	**Pg**	**06 45 53.8**	**+0.3**
ALT				*e*Sg	**Sb**	**06 46 06.2**	**+0.2**
KHL	**Karahalli**	**0.88**	**153**	*e*PG	**Pg**	**06 45 54.0**	**-0.1**
KHL	**Karahalli**	**0.88**	**153**	*e*Pg	**Pg**	**06 45 54.0**	**-0.1**
AKHS	**Akhisar**	**0.97**	**257**	*e*P	**Pb**	**06 45 56.2**	**-0.2**
AKHS				*e*S	**Sb**	**06 46 09.1**	**-0.4**
AKHS	**Akhisar**	**0.97**	**257**	*e*P	**Pb**	**06 45 56.2**	**-0.2**
AKHS				*e*S	**Sb**	**06 46 09.1**	**-0.4**
AKS	**Akhisar**	**0.97**	**257**	*e*PG	**Pb**	**06 45 56.1**	**-0.2**
AKS	**Akhisar**	**0.97**	**257**	*e*Pg	**Pb**	**06 45 56.2**	**-0.2**
BALB	**Balikesir**	**1.03**	**301**	*e*PG	**Pb**	**06 45 57.7**	**+0.2**
BALB	**Balikesir**	**1.03**	**301**	*e*Pg	**Pb**	**06 45 57.7**	**+0.2**
BALY	**Balya**	**1.26**	**301**	*e*P	**Pg**	**06 46 01.3**	**-0.1**
BALY				*e*S	**Sn**	**06 46 18.1**	**-0.4**
BALY	**Balya**	**1.26**	**301**	*e*P	**Pg**	**06 46 01.3**	**-0.1**
BALY				*e*S	**Sn**	**06 46 18.1**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.26**	**355**	*e*PN	**Pn**	**06 46 00.9**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.26**	**355**	*e*Pn	**Pn**	**06 46 00.9**	**-0.4**
KCTX	**Karacabey (Bur**	**1.26**	**336**	*e*PN	**Pn**	**06 46 01.3**	**-0.1**
KCTX	**Karacabey (Bur**	**1.26**	**336**	*e*Pn	**Pn**	**06 46 01.3**	**-0.1**
SHUT	**Suhut-Afyon**	**1.32**	**115**	*e*PN	**Pg**	**06 46 02.6**	**+0.1**
SHUT	**Suhut-Afyon**	**1.32**	**115**	*e*Pn	**Pg**	**06 46 02.6**	**+0.1**
GEMT	**Gemlik**	**1.33**	**5**	*e*PN	**Pg**	**06 46 03.0**	**+0.2**
GEMT	**Gemlik**	**1.33**	**5**	*e*Pn	**Pg**	**06 46 03.0**	**+0.2**
GONE	**Gonen-Balikesi**	**1.39**	**313**	*e*PN	**Pb**	**06 46 03.5**	**-0.1**
GONE	**Gonen-Balikesi**	**1.39**	**313**	*e*Pn	**Pb**	**06 46 03.5**	**-0.1**
ESKT	**Eskisehir**	**1.48**	**73**	*e*PN	**Pb**	**06 46 05.0**	**-0.1**
ESKT	**Eskisehir**	**1.48**	**73**	*e*Pn	**Pb**	**06 46 05.0**	**-0.1**
YLV	**Yalova**	**1.48**	**10**	*e*PN	**Pg**	**06 46 05.7**	**+0.1**
YLV	**Yalova**	**1.48**	**10**	*e*Pn	**Pg**	**06 46 05.7**	**+0.1**
EDC	**Edincik**	**1.52**	**324**	*e*PN	**Pb**	**06 46 06.0**	**+0.1**
EDC	**Edincik**	**1.52**	**324**	*e*Pn	**Pb**	**06 46 06.0**	**+0.1**
GPA	**Golpazari**	**1.54**	**40**	*e*PN	**Pg**	**06 46 06.7**	**-0.1**
GPA	**Golpazari**	**1.54**	**40**	*e*Pn	**Pg**	**06 46 06.7**	**-0.1**
BLCB	**Balcova**	**1.71**	**246**	*e*PN	**Pn**	**06 46 07.3**	**-0.1**
BLCB	**Balcova**	**1.71**	**246**	*e*Pn	**Pn**	**06 46 07.3**	**-0.1**
GULT	**Gulveren**	**1.75**	**41**	*e*PN	**Pb**	**06 46 09.5**	**-0.3**
GULT	**Gulveren**	**1.75**	**41**	*e*Pn	**Pb**	**06 46 09.5**	**-0.3**
HRT	**Hereke**	**1.78**	**16**	*e*PN	**Pb**	**06 46 09.5**	**-0.7**
HRT	**Hereke**	**1.78**	**16**	*e*Pn	**Pb**	**06 46 09.5**	**-0.7**
MRMT	**Marmara Adasi**	**1.85**	**324**	*e*PN	**Pb**	**06 46 10.7**	**-0.8**
MRMT	**Marmara Adasi**	**1.85**	**324**	*e*Pn	**Pb**	**06 46 10.7**	**-0.8**
SVRH	**Sivrihisar-ESK**	**1.97**	**79**	*e*PN	**Pb**	**06 46 12.4**	**-1.0**
SVRH	**Sivrihisar-ESK**	**1.97**	**79**	*e*Pn	**Pb**	**06 46 12.5**	**-1.0**
YER	**Yerkesik**	**2.06**	**197**	*e*PN	**Pn**	**06 46 13.4**	**+1.1**
YER	**Yerkesik**	**2.06**	**197**	*e*Pn	**Pn**	**06 46 13.4**	**+1.1**
RKY	**Sarkoy-Tekirda**	**2.12**	**319**	*e*PN	**Pn**	**06 46 14.2**	**+1.0**
RKY	**Sarkoy-Tekirda**	**2.12**	**319**	*e*Pn	**Pn**	**06 46 14.2**	**+1.0**
MDUB	**Mudurnu**	**2.16**	**50**	*e*PN	**Pn**	**06 46 14.4**	**+0.7**
MDUB	**Mudurnu**	**2.16**	**50**	*e*Pn	**Pn**	**06 46 14.4**	**+0.7**
CTKS	**Kestanelik-??a**	**2.16**	**355**	*e*PN	**Pn**	**06 46 15.1**	**+1.4**
CTKS	**Kestanelik-??a**	**2.16**	**355**	*e*Pn	**Pn**	**06 46 15.1**	**+1.4**
EZN	**Ezine**	**2.21**	**290**	*e*PN	**Pn**	**06 46 15.3**	**+1.0**
EZN	**Ezine**	**2.21**	**290**	*e*Pn	**Pn**	**06 46 15.3**	**+1.0**

DJA 24 07:04:10.0±1.6, 3°S±6°×12°3E±1°2, h85km±121km, M3.9/3, MLv3.9/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKSI	**Soroako, Sulaw**	**1.94**	**293**	P	Pn	07 04 40.9	-0.5
BBSI	**Bau Bau**	**2.24**	**194**	P	Pn	07 04 45.6	+0.3
LUWI	**Luwuk**	**2.27**	**351**	P	Pn	07 04 45.6	-0.1
SPSI	**Sidrap Palu**	**3.41**	**259**	P	Pn	07 05 02.3	+1.3
BKSI	**Bulukumba**	**3.60**	**236**	P	Pn	07 05 01.9	-1.7

*IDC **24** 07:42:25.4±0.7, 4.°19N×126.°86E, h0km, mb4.1/15, mb1 4.2/15, mb1mx4.1/28, mbtmp4.1/15, Error ellipse: s-maj=41.1km s-min=12.7km az=73.0*
*ISCJB **24** 07:42:28.9±0.5, 4.°16N±0.°08×126.°8E±0.°2, h36km, mb4.1/17, Error ellipse: s-maj=27.8km s-min=8.8km az=164.7*
*NEIC **24** 07:42:30.6±0.5, 4.°17N×126.°88E, h35km, mb4.1/4, Error ellipse: s-maj=26.1km s-min=8.1km az=74.0*
ISC 24 07:42:30.9±0.7, 4.°17N±0.°09×126.°9E±0.°2, h36km, n33, σ0°94/32, mb4.2/17, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**4.00**	**319**	*i*P	Pn	07 43 36.4	+6.7
FITZ	**Fitzroy Crossi**	**22.16**	**183**	*e*P	**P**	**07 47 23.2**	**-0.6**
	4.6nm,0.9s						
FITZ	**Fitzroy Crossi**	**22.16**	**183**	P	**P**	**07 47 22.9**	**-0.9**
	3.1nm,0.6s,baz=5.4,slow=8.9,SNR=9.1						
WRAB	**Tennant Creek**	**25.05**	**163**	*e*P	**P**	**07 47 51.4**	**-0.6**
	6.4nm,0.6s						
WRA	**Warramunga Arr**	**25.06**	**163**	P	**P**	**07 47 51.6**	**-0.4**
WRA				S	S	07 52 33.6	+19
WRA	**Warramunga Arr**	**25.06**	**163**	P	**P**	**07 47 51.6**	**-0.4**
	5.5nm,0.7s,baz=343,slow=10,SNR=33						
WRA				S	S	07 52 33.6	+19
	0.4nm,0.8s,baz=346,slow=17,SNR=3.0						
ASAR	**Alice Springs**	**28.50**	**166**	P	**P**	**07 48 22.9**	**-0.1**
ASAR	**Alice Springs**	**28.50**	**166**	P	**P**	**07 48 22.9**	**-0.1**
	0.7nm,0.5s,baz=352,slow=7.7,SNR=17						
CMAR	**Chiang Mai Arr**	**30.78**	**300**	P	**P**	**07 48 44.4**	**+1.1**
CMAR	**Chiang Mai Arr**	**30.78**	**300**	P	**P**	**07 48 44.4**	**+1.1**
	0.9nm,0.3s,baz=105,slow=6.7,SNR=4.3						
KSAR	**Wonju Array Be**	**33.13**	**1**	P	**P**	**07 49 04.8**	**+1.1**
KSRS	**Korea Array**	**33.14**	**2**	P	**P**	**07 49 04.8**	**+1.0**
	0.9nm,0.5s,baz=185,slow=9.0,SNR=4.0						
NWAO	**Narrogin (SRO)**	**38.01**	**193**	P	**P**	**07 49 46.2**	**+0.6**
NWAO	**Narrogin (SRO)**	**38.01**	**193**	P	**P**	**07 49 46.2**	**+0.6**
	6.9nm,0.8s,baz=353,slow=8.1,SNR=2.9						
STKA	**Stephens Creek**	**38.49**	**160**	*e*P	**P**	**07 49 49.8**	**+0.2**
	1.2nm,0.8s						
STKA	**Stephens Creek**	**38.49**	**160**	P	**P**	**07 49 50.1**	**+0.5**
	6.0nm,0.8s,baz=358,slow=11,SNR=6.4						
SONM	**Songino Array**	**46.93**	**341**	P	**P**	**07 50 57.3**	**-0.8**
SONM	**Songino Array**	**46.93**	**341**	P	**P**	**07 50 57.3**	**-0.8**
	0.4nm,0.5s,baz=170,slow=9.0,SNR=3.9						
MK31	**Makanchi Array**	**57.28**	**325**	*e*P	**P**	**07 52 14.3**	**-0.7**
MKAR	**Makanchi Array**	**57.28**	**325**	P	**P**	**07 52 14.6**	**-0.4**
MKAR	**Makanchi Array**	**57.28**	**325**	P	**P**	**07 52 14.6**	**-0.4**
	1.5nm,0.6s,baz=122,slow=8.2,SNR=28						
ZALV	**Zalesovo Beam**	**60.27**	**333**	P	**P**	**07 52 36.5**	**+1.0**
ZALV	**Zalesovo Beam**	**60.27**	**333**	P	**P**	**07 52 36.5**	**+1.0**
	2.0nm,0.4s,baz=128,slow=6.9,SNR=6.6						
KURBB	**Kurchatov Arra**	**61.45**	**327**	P	**P**	**07 52 43.2**	**-0.5**
	2.0nm,0.6s,baz=123,slow=6.5,SNR=24						
KURK	**Kurchatov**	**61.45**	**327**	*e*P	**P**	**07 52 43.2**	**-0.4**
	2.3nm,0.5s						
BVAR	**Borovoye Array**	**67.03**	**327**	P	**P**	**07 53 18.4**	**-1.9**
BVAR	**Borovoye Array**	**67.03**	**327**	P	**P**	**07 53 18.4**	**-1.9**
	1.9nm,0.7s,baz=120,slow=8.8,SNR=10.0						
AKTO	**Aktyubinsk**	**73.41**	**322**	P	**P**	**07 53 59.6**	**+0.3**
AKTO	**Aktyubinsk**	**73.41**	**322**	P	**P**	**07 53 59.6**	**+0.3**
	1.4nm,0.7s,baz=89,slow=6.8,SNR=7.2						
ILAR	**Eielson Array**	**84.65**	**25**	P	**P**	**07 55 01.1**	**+0.5**
ILAR	**Eielson Array**	**84.65**	**25**	P	**P**	**07 55 01.1**	**+0.5**
	0.6nm,1.1s,baz=272,slow=5.6,SNR=4.3						
ARCES	**ARCESS Array B**	**90.09**	**340**	P	**P**	**07 55 25.1**	**-1.6**
ARCES	**ARCESS Array B**	**90.09**	**340**	P	**P**	**07 55 25.1**	**-1.6**
	3.9nm,1.0s,baz=46,slow=3.5,SNR=4.0						

*IDC **24** 07:43:22.5±0.7, 4.°10N×126.°64E, h0km, mb4.2/14, mb1 4.3/15, mb1mx4.2/28, mbtmp4.2/15, ML4.4/1, MS3.3/6, Ms1 3.3/6, ms1mx2.9/38, Error ellipse: s-maj=43.3km s-min=13.1km az=71.0*
*NEIC **24** 07:43:25.6±3.3, 4.°09N×126.°66E, h22km±24km, mb4.5/6, Error ellipse: s-maj=22.6km s-min=6.6km az=71.0*
*ISCJB **24** 07:43:26.6±0.5, 4.°08N±0.°08×126.°6E±0.°2, h45km, mb4.2/18, MS3.2/5, Error ellipse: s-maj=26.6km s-min=8.4km az=163.7*
ISC 24 07:43:28.7±0.6, 4.°11N±0.°10×126.°7E±0.°2, h45km, n40, σ0°80/39, mb4.3/18, MS3.1/5, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.13**	**340**	Pn	**Pn**	**07 44 13.9**	**-1.7**
DAV	**Davao City (W)**	**3.13**	**340**	Pn	**Pn**	**07 44 13.9**	**-1.7**
	45nm,0.3s,baz=104,slow=15,SNR=3.3						
DAV				LR	LR	07 45 34.4	
	comp=Z,529nm,19.2s,baz=218,slow=42						
GUMO	**Guam**	**20.29**	**61**	LR	LR	07 54 44.8	
	comp=Z,47nm,18.4s,baz=111,slow=34						
FITZ	**Fitzroy Crossi**	**22.10**	**183**	*e*P	**P**	**07 48 19.0**	**-1.3**
	5.1nm,0.7s						
FITZ	**Fitzroy Crossi**	**22.10**	**183**	P	**P**	**07 48 19.9**	**-0.4**
	6.3nm,0.8s,baz=350,slow=4.9,SNR=6.2						
WRAB	**Tennant Creek**	**25.06**	**163**	*e*P	**P**	**07 48 48.3**	**-0.8**
	14nm,0.8s						
WRA	**Warramunga Arr**	**25.07**	**163**	P	**P**	**07 48 48.5**	**-0.6**
WRA	**Warramunga Arr**	**25.07**	**163**	P	**P**	**07 48 48.5**	**-0.6**
	12nm,0.8s,baz=343,slow=10,SNR=13						
ASAR	**Alice Springs**	**28.50**	**166**	P	**P**	**07 49 19.9**	**0.0**
ASAR	**Alice Springs**	**28.50**	**166**	P	**P**	**07 49 19.9**	**0.0**
	1.2nm,0.6s,baz=348,slow=8.1,SNR=6.5						
CMAR	**Chiang Mai Arr**	**30.62**	**300**	P	**P**	**07 49 40.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**30.62**	**300**	P	**P**	**07 49 40.0**	**+1.1**
	1.0nm,0.3s,baz=113,slow=7.7,SNR=4.8						
CTA	**Charters Tower**	**30.80**	**142**	LR	LR	08 02 46.7	
	comp=Z,40nm,19.0s,baz=140,slow=38						
KSAR	**Wonju Array Be**	**33.19**	**2**	P	**P**	**07 50 01.7**	**+0.5**
KSRS	**Korea Array**	**33.20**	**2**	P	**P**	**07 50 01.7**	**+0.4**
	1.7nm,0.8s,baz=192,slow=11,SNR=3.9						
MJAR	**Matsushiro Arr**	**33.98**	**17**	LR	LR	08 01 47.8	
	comp=Z,22nm,18.4s,baz=95,slow=32						
STKA	**Stephens Creek**	**38.51**	**159**	*e*P	**P**	**07 50 46.2**	**-0.6**
	1.8nm,0.8s						
STKA	**Stephens Creek**	**38.51**	**159**	P	**P**	**07 50 46.5**	**-0.3**
	9.4nm,0.8s,baz=349,slow=10,SNR=6.8						
USRK	**Ussuriysk Arra**	**40.20**	**6**	P	**P**	**07 51 01.6**	**+0.9**
	0.9nm,0.7s,baz=181,slow=9.3,SNR=2.9						
SONM	**Songino Array**	**46.92**	**341**	P	**P**	**07 51 55.2**	**+0.2**
SONM	**Songino Array**	**46.92**	**341**	P	**P**	**07 51 55.2**	**+0.2**
	1.0nm,0.8s,baz=147,slow=9.5,SNR=5.3						
SONM				LR	LR	08 13 06.6	
	comp=Z,59nm,19.0s,baz=74,slow=38						
MK31	**Makanchi Array**	**57.21**	**325**	*e*P	**P**	**07 53 10.0**	**-1.3**
MKAR	**Makanchi Array**	**57.21**	**325**	P	**P**	**07 53 10.4**	**-1.0**
MKAR				PcP	**PcP**	**07 54 05.8**	**+0.3**
MKAR	**Makanchi Array**	**57.21**	**325**	P	**P**	**07 53 10.4**	**-1.0**
	2.1nm,0.5s,baz=124,slow=8.3,SNR=12						
MKAR				PcP	**PcP**	**07 54 05.8**	**+0.3**
	1.2nm,0.7s,baz=123,slow=4.1,SNR=3.9						
MKAR				LR	LR	08 18 33.0	
	comp=Z,70nm,18.4s,baz=171,slow=37						
ZALV	**Zalesovo Beam**	**60.22**	**333**	P	**P**	**07 53 32.3**	**+0.2**
ZALV	**Zalesovo Beam**	**60.22**	**333**	P	**P**	**07 53 32.3**	**+0.2**
	0.9nm,0.5s,baz=110,slow=6.7,SNR=3.1						
KURBB	**Kurchatov Arra**	**61.38**	**327**	P	**P**	**07 53 39.5**	**-0.5**
	3.7nm,0.7s,baz=125,slow=6.1,SNR=12						
KURK	**Kurchatov**	**61.39**	**327**	*e*P	**P**	**07 53 39.3**	**-0.8**
	5.9nm,0.6s						
BVAR	**Borovoye Array**	**66.97**	**327**	P	**P**	**07 54 17.0**	**+0.3**
BVAR	**Borovoye Array**	**66.97**	**327**	P	**P**	**07 54 17.0**	**+0.3**
	2.7nm,0.8s,baz=120,slow=8.5,SNR=8.6						
BRVK	**Borovoye**	**67.04**	**327**	*e*P	**P**	**07 54 16.7**	**-0.4**
	4.8nm,0.8s						
AKTO	**Aktyubinsk**	**73.32**	**322**	P	**P**	**07 54 56.7**	**+1.0**
AKTO	**Aktyubinsk**	**73.32**	**322**	P	**P**	**07 54 56.7**	**+1.0**
	2.2nm,0.7s,baz=97,slow=6.0,SNR=4.8						
MCK	**McKinley**	**83.85**	**26**	*e*P	**P**	**07 55 53.5**	**+0.1**
	2.0nm,0.6s						
FINES	**FINESS Array B**	**91.47**	**332**	P	**P**	**07 56 29.5**	**-0.5**
FINES	**FINESS Array B**	**91.47**	**332**	P	**P**	**07 56 29.5**	**-0.5**
	1.3nm,0.7s,baz=35,slow=5.1,SNR=3.9						
TXAR	**Lajitas Array**	**121.42**	**52**	PKP	**PKPdf**	**08 02 18.9**	**+0.9**
TXAR	**Lajitas Array**	**121.42**	**52**	PKP	**PKPdf**	**08 02 18.9**	**+0.9**
	0.3nm,0.9s,baz=130,slow=1.4,SNR=2.9						
TORD	**Torodi Ar. Bea**	**122.74**	**288**	PKP	**PKPdf**	**08 02 21.1**	**+0.4**
TORD	**Torodi Ar. Bea**	**122.74**	**288**	PKP	**PKPdf**	**08 02 21.1**	**+0.4**
	0.6nm,0.9s,baz=80,slow=3.0,SNR=3.0						

IDC 24 07:45:37.7±1.4, 20.°96N×145.°61E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/28, mbtmp3.8/6, Error ellipse: s-maj=45.8km s-min=27.6km az=87.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**41.35**	**320**	P	P	07 53 25.6	+0.1
	0.6nm,0.7s,baz=128,slow=7.2,SNR=3.7						
WRA	**Warramunga Arr**	**42.12**	**196**	P	P	07 53 31.7	-0.1
	0.2nm,0.8s,baz=16,slow=8.8,SNR=3.7						
MKAR	**Makanchi Array**	**56.86**	**313**	P	P	07 55 24.1	-0.1
	0.8nm,0.5s,baz=89,slow=8.9,SNR=5.6						
KURBB	**Kurchatov Arra**	**59.60**	**317**	P	P	07 55 43.1	-0.2
	1.2nm,0.4s,baz=86,slow=7.9,SNR=7.6						
ILAR	**Eielson Array**	**61.67**	**27**	P	P	07 55 57.2	0.0
	0.3nm,0.7s,baz=240,slow=7.1,SNR=5.6						
BVAR	**Borovoye Array**	**64.70**	**320**	P	P	07 56 17.4	-0.1
	1.3nm,0.3s,baz=94,slow=7.7,SNR=7.3						

IDC 24 08:00:48.4±2.1, 16.°96S×178.°84W, h539km±41km, mb2.8/4, mb1 3.0/6, mb1mx2.9/22, mbtmp2.9/6, Error ellipse: s-maj=156.1km s-min=19.4km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.46**	**67**	P	P	08 02 40.7	+0.1
	1.7nm,0.3s,baz=278,slow=14,SNR=3.2						
DZM	**Mont Dzumac**	**14.77**	**248**	P	P	08 03 55.0	-0.8
	0.4nm,0.3s,baz=67,slow=15,SNR=6.5						
CTA	**Charters Tower**	**33.21**	**259**	P	P	08 06 40.5	-0.4
	1.8nm,0.7s,baz=97,slow=6.1,SNR=2.6						
WRA	**Warramunga Arr**	**44.41**	**259**	P	P	08 08 12.0	+0.4
	0.2nm,0.4s,baz=92,slow=7.6,SNR=4.7						
ASAR	**Alice Springs**	**44.66**	**253**	P	P	08 08 13.2	-0.2
	1.0nm,0.5s,baz=86,slow=8.2,SNR=16						
ILAR	**Eielson Array**	**85.06**	**13**	P	P	08 12 26.5	-0.3
	0.2nm,0.4s,baz=222,slow=4.8,SNR=7.4						
MKAR	**Makanchi Array**	**108.18**	**314**	PKiKP	PKiKP	08 18 14.0	-1.3
	0.1nm,0.5s,baz=116,slow=3.4,SNR=2.9						
GERES	**GERESS Array B**	**146.60**	**345**	PKPbc	PKPbc	08 19 29.4	-0.2
	0.6nm,0.4s,baz=357,slow=3.3,SNR=4.3						

*IDC **24** 08:04:38.2±1.3, 31.°91N×104.°48E, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.4/28, mbtmp3.4/5, ML2.9/1, Error ellipse: s-maj=58.2km s-min=22.8km az=68.0*
*BJI **24** 08:04:39.6, 32.°54N×105.°42E, h18km, ML3.8/10, Ms3.6/1, Ms7 3.3/2*
ISC 24 08:04:41.1±0.9, 32.°40N±0.°05×105.°12E±0.°10, h15km, n8, σ1°69/10, mb3.7/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.89**	**218**	Pn	**Pb**	**08 05 15.3**	**0.0**
CD2				Pg	Pg	08 05 20.1	+2.7
CD2				Sn	**Sg**	**08 05 43.4**	**+1.5**
CD2				Sg	Sb	08 05 46.9	+8.2
CD2				smax	smax		
	comp=N,3μm,0.5s						
CD2				smax	smax		
	comp=E,2μm,0.5s						
XAN	**Xi'an**	**3.58**	**62**	Pn	Pn	08 05 31.1	-5.0
XAN				Pg	Pb	08 05 37.9	-6.3
XAN				Sg	**Sn**	**08 06 19.6**	**+1.4**
XAN				smax	smax		
	comp=N,230nm,0.5s						
XAN				smax	smax		
	comp=E,120nm,0.5s						
LZH	**Lanzhou**	**3.82**	**344**	Pn	**Pn**	**08 05 38.8**	**-0.8**
LZH				Pg	**Pb**	**08 05 47.8**	**-0.6**
LZH				Sg	**Sb**	**08 06 35.3**	**+0.8**
LZH				smax	smax		
	comp=N,430nm,1.0s						
LZH				smax	smax		
	comp=E,520nm,1.0s						
LZH				LR	LR		
	comp=N,380nm,6.2s						
LZH				LR	LR		
	comp=E,560nm,6.5s						
LZH				LR	LR		
	comp=Z,570nm,8.0s						
SONM	**Songino Array**	**15.44**	**3**	Pn	**P**	**08 08 25.8**	**+2.9**
	comp=Z,0.1nm,0.3s,baz=180,slow=14,SNR=3.7						
MKAR	**Makanchi Array**	**22.61**	**316**	P	**P**	**08 09 40.0**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=128,slow=12,SNR=7.1						
WRA	**Warramunga Arr**	**59.09**	**148**	P	**P**	**08 14 39.0**	**-1.9**
	comp=Z,0.6nm,0.5s,baz=341,slow=7.5,SNR=7.8						
ASAR	**Alice Springs**	**62.17**	**150**	P	**P**	**08 15 01.0**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=338,slow=7.2,SNR=4.0						
ILAR	**Eielson Array**	**68.29**	**26**	P	P	08 15 44.8	+3.7
	comp=Z,0.2nm,0.6s,baz=304,slow=4.9,SNR=2.9						

*MAN **24** 08:11:34, 8.°68N×125.°75E, h10km, mb4.9, ML3.8, MS3.8*
*ISCJB **24** 08:11:35.7±0.7, 8.°73N±0.°03×125.°88E±0.°05, h34km±7km, mb3.9/13, MS3.2/7, Error ellipse: s-maj=9.1km s-min=5.1km az=168.1*
*IDC **24** 08:11:38.8±3.5, 8.°69N×126.°01E, h50km±34km, mb3.7/11, mb1 3.8/12, mb1mx3.7/25, mbtmp3.7/12, ML3.9/1, MS3.3/7, Ms1 3.3/7, ms1mx3.1/30, Error ellipse: s-maj=41.6km s-min=16.1km az=76.0*
ISC 24 08:11:35.6±1.2, 8.°69N±0.°03×125.°81E±0.°06, h24km±8km, n38, σ1°50/41, mb4.0/13, MS3.2/7, 4C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.34**	**325**	*e*P	**Pb**	**08 11 42.0**	**-1.1**
BUTP				*e*S	**Sb**	**08 11 48.5**	**+0.4**
BUKP	**Musuan**	**1.10**	**223**	*e*P	**Pn**	**08 11 53.7**	**-1.8**
BUKP				*e*S	**Sb**	**08 12 11.3**	**+1.4**
CGP	**Cagayan de Oro**	**1.13**	**258**	*i*P	**Pn**	**08 11 53.9**	**-2.1**
CGP				*i* S	**Sn**	**08 12 10.2**	**-0.6**
DMPH	**Davao City--Mi**	**1.63**	**191**	*e*P	**Pb**	**08 12 05.1**	**+0.1**
DMPH				*e*S	**Sn**	**08 12 22.6**	**-0.5**
DAV	**Davao City (W)**	**1.63**	**188**	P	**Pb**	**08 12 05.1**	**+0.1**
	143nm,0.3s,baz=60,slow=6.9,SNR=15						
MSLP	**Maasin**	**1.71**	**327**	*e*P	**Pn**	**08 12 03.1**	**-0.9

ONAJ	**Iwakimizuishiy**	**2.19**	**299**	P		**Pn**	**08 25 10.9**	**-0.5**
ONAJ				*e*S		Sn	08 25 35.5	-2.1
BSO1	**Boso 1**	**2.28**	**233**	P		**Pn**	**08 25 11.8**	**-0.3**
BSO1				*e*S		**Sn**	**08 25 38.7**	**-0.2**
JFT	**Otama**	**2.71**	**304**	P		**Pn**	**08 25 19.4**	**+0.8**
JFT				S		**Sn**	**08 25 50.0**	**-0.5**
JAG	**Ashikaga**	**3.04**	**278**	P		**Pn**	**08 25 23.3**	**+0.3**
JAG				*e*S		Sn	08 25 54.8	-3.7
JMK	**Ichinoseki**	**3.29**	**332**	P		**Pn**	**08 25 26.6**	**+0.1**
JMK				S		**Sn**	**08 26 03.4**	**-1.3**
JOD2	**Odawara 2**	**3.42**	**258**	P		**Pn**	**08 25 28.7**	**+0.3**
JOD2				S		**Sn**	**08 26 06.9**	**-1.2**
JRY	**Ryogami san**	**3.47**	**271**	P		**Pn**	**08 25 29.1**	**+0.1**
JRY				*e*S		**Sn**	**08 26 08.0**	**-1.2**
JYK	**Kaneyama**	**3.64**	**323**	P		**Pn**	**08 25 31.8**	**+0.5**
JYK				S		Sn	08 26 12.2	-1.1
JOM	**Ohasama**	**3.73**	**337**	P		**Pn**	**08 25 33.0**	**+0.4**
JOM				S		Sn	08 26 14.1	-1.5
JYN	**Shimob**	**3.81**	**263**	P		**Pn**	**08 25 34.8**	**+1.1**
JYN				*e*S		**Sn**	**08 26 16.3**	**-1.4**
JHJ2	**Mitsune**	**4.04**	**224**	P		**Pn**	**08 25 35.7**	**-1.1**
JHJ2				S		Sn	08 26 18.0	-5.1
MJAR	**Matsushiro Arr**	**4.05**	**278**	Pn		Pn	08 25 38.4	+1.5
	2.3nm,0.3s,baz=132,slow=9.5,SNR=12							
MJAR				Sn		**Sn**	**08 26 25.5**	**+2.0**
	2.0nm,0.3s,baz=136,slow=4.0,SNR=4.7							
MAT	**Matsushiro**	**4.05**	**278**	P		Pn	08 25 38.2	+1.2
MAT				S		Sn	08 26 22.1	-1.4
JHJ	**Hachijo jima 2**	**4.05**	**225**	Pn		**Pn**	**08 25 35.5**	**-1.5**
	21nm,0.3s,baz=66,slow=20,SNR=17							
JHJ				Sn		Sn	08 26 18.2	-5.3
	58nm,0.3s,baz=88,slow=21,SNR=7.7							
JANG	**Nango**	**4.51**	**344**	P		**Pn**	**08 25 43.4**	**+0.1**
JANG				S		Sn	08 26 31.7	-3.2
ASAJ	**Asahikawa**	**8.07**	**357**	Pn		**Pn**	**08 26 32.9**	**+0.8**
	0.9nm,0.3s,baz=228,slow=16,SNR=4.5							
ASAJ				Sn		**Sn**	**08 28 01.2**	**-1.2**
	0.6nm,0.3s,baz=311,slow=20,SNR=4.1							
SONM	**Songino Array**	**29.52**	**305**	P		P	08 30 43.2	+4.4
	0.3nm,0.4s,baz=99,slow=8.9,SNR=2.4							
MKAR	**Makanchi Array**	**45.85**	**303**	P		P	08 32 58.8	+2.4
	0.2nm,0.6s,baz=86,slow=6.8,SNR=2.4							
KURBB	**Kurchatov Arra**	**47.73**	**309**	P		P	08 33 12.8	+1.8
	0.3nm,0.3s,baz=83,slow=7.9,SNR=4.8							
WRA	**Warramunga Arr**	**56.31**	**190**	P		**P**	**08 34 15.2**	**0.0**
	0.5nm,0.6s,baz=8.1,slow=7.2,SNR=7.3							
FITZ	**Fitzroy Crossi**	**56.36**	**200**	P		**P**	**08 34 15.5**	**0.0**
	3.7nm,1.1s,baz=9.5,slow=6.1,SNR=2.0							
ASAR	**Alice Springs**	**60.04**	**190**	P		**P**	**08 34 41.8**	**+0.5**
	0.3nm,0.5s,baz=1.7,slow=6.4,SNR=6.3							
NVAR	**Mina Array Bea**	**74.43**	**54**	P		P	08 36 15.5	+2.7
	0.5nm,0.6s,baz=289,slow=5.6,SNR=4.0							
TXAR	**Lajitas Array**	**89.58**	**53**	P		P	08 37 34.2	+2.0
	0.2nm,0.7s,baz=312,slow=3.1,SNR=3.7							

CASC 24 08:29:37.9±1.6, 12°98N×89°06W, h13km±8km, MD3.6, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.64**	**0**	*i*P	Pg	08 29 50.9	+0.2
SNVI	**San Vicente**	**0.67**	**19**	*e*P	Pg	08 29 51.3	+0.1
SNVI				*e*S	Sb	08 30 00.7	-0.3
SNET	**Serv Nac Est T**	**0.73**	**347**	*e*P	Pg	08 29 51.8	-0.4
SNET				*e*S	Sg	08 30 01.9	0.0
LBRS	**Las Brisas**	**0.76**	**1**	*e*P	Pg	08 29 52.6	-0.2
LFU	**La Fuente**	**0.77**	**356**	*e*P	Pg	08 29 52.7	-0.3
LFU				*e*S	Sb	08 30 03.7	-0.1
BOQS	**Boqueron**	**0.79**	**344**	*e*P	Pg	08 29 53.0	-0.5
BOQS				*e*S	Sg	08 30 04.2	+0.2
VSM	**San Miguel**	**0.89**	**60**	*e*P	Pg	08 29 54.8	-0.7
VSM				*e*S	Sg	08 30 07.2	-0.2
BLLM	**Bellamira**	**0.93**	**60**	*e*P	Pg	08 29 54.8	-1.2
SBLS	**San Blas**	**1.02**	**328**	*e*P	Pb	08 29 56.6	-1.1
SBLS				*e*S	Sb	08 30 10.4	-0.8
SNJE	**San Jose**	**1.03**	**329**	*e*P	Pb	08 29 56.4	-1.5
SNJE				*e*S	Sb	08 30 10.8	-0.8
RTR	**El Retiro**	**1.08**	**328**	*e*P	Pb	08 29 57.4	-1.3
CAHU	**Cacacuatique**	**1.15**	**46**	*e*P	Pb	08 29 57.8	-2.1
CNCH	**Conchagua**	**1.23**	**76**	*e*P	Pn	08 29 59.2	-1.8
CNCH				*e*S	Sb	08 30 15.2	-2.0
RBDL	**Robledal**	**1.28**	**332**	*e*P	Pn	08 30 00.1	-1.7
FUG	**Fuego 3**	**2.27**	**310**	*e*P	Pn	08 30 15.4	+0.1
FUG				*e*S	Sn	08 30 44.1	+0.7

*THE **24** 08:30:50.6, 38°.38N×21°.80E, h11km±2km, ML2.0/3, Error ellipse: s-maj=2.3km s-min=0.9km az=86.0*
*CSEM **24** 08:30:50.8±0.1, 38°.37N×21°.84E, h10km, ML2.0/3, Error ellipse: s-maj=2.6km s-min=1.9km az=117.0*
*ISCJB **24** 08:30:51.1±0.4, 38°.37N±0°.02×21°.84E±0°.03, h11km±2km, Error ellipse: s-maj=4.2km s-min=3.3km az=34.2*
*ATH **24** 08:30:51.2, 38°.36N×21°.83E, h12km±1km, MD3.0/14*
ISC 24 08:30:50.9±0.8, 38°37N±0°.02×21°83E±0°.02, h12km±4km, n44, σ0°57/79, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSA1	**Psathopyrgos**	**0.06**	**134**	*e*PG	**Pg**	**08 30 52.9**	**-0.4**
PSA1				*e*SG	**Sg**	**08 30 55.3**	**+0.2**
EFP	**Efpalio**	**0.09**	**47**	P	**Pg**	**08 30 52.9**	**-0.6**
EFP				S	**Sg**	**08 30 54.8**	**-0.8**
EFP	**Efpalio**	**0.09**	**47**	*e*PG	**Pg**	**08 30 53.0**	**-0.6**
EFP				*e*SG	**Sg**	**08 30 56.1**	**+0.5**
EFP	**Efpalio**	**0.09**	**47**	*e*Pg	**Pg**	**08 30 53.0**	**-0.6**
EFP				S	**Sg**	**08 30 54.8**	**-0.8**
EFP				*e*Sg	Sg	08 30 56.1	+0.5
UPR	**University Cam**	**0.09**	**200**	P	**Pg**	**08 30 53.3**	**-0.3**
UPR	**University Cam**	**0.09**	**200**	*e*PG	**Pg**	**08 30 53.6**	**0.0**
UPR				*e*SG	**Sg**	**08 30 56.3**	**+0.7**
UPR	**University Cam**	**0.09**	**200**	P	**Pg**	**08 30 53.3**	**-0.3**
UPR	**University Cam**	**0.09**	**200**	*e*Pg	**Pg**	**08 30 53.6**	**0.0**
UPR				S	**Sg**	**08 30 55.2**	**-0.4**
UPR				*e*Sg	Sg	08 30 56.3	+0.7
LAKA	**Lakka**	**0.18**	**137**	P	**Pg**	**08 30 55.0**	**+0.1**
LAKA				S	**Sg**	**08 30 58.9**	**+1.2**
LAKA	**Lakka**	**0.18**	**137**	*e*PG	**Pg**	**08 30 55.0**	**+0.1**
LAKA				*e*SG	**Sg**	**08 30 58.5**	**+0.8**
LAKA	**Lakka**	**0.18**	**137**	P	**Pg**	**08 30 55.0**	**+0.1**
LAKA				S	**Sg**	**08 30 58.3**	**+0.6**
TRIZ	**Trizonia**	**0.19**	**91**	P	**Pg**	**08 30 55.1**	**-0.1**
TRIZ				S	**Sg**	**08 30 58.7**	**+0.6**
TRIZ	**Trizonia**	**0.19**	**91**	*e*PG	**Pg**	**08 30 55.1**	**-0.1**
TRIZ				*e*SG	**Sg**	**08 30 58.8**	**+0.6**
TRIZ	**Trizonia**	**0.19**	**91**	P	**Pg**	**08 30 55.1**	**-0.1**
TRIZ				S	**Sg**	**08 30 58.7**	**+0.6**
KALE	**Kalithea**	**0.25**	**85**	P	**Pg**	**08 30 55.9**	**-0.2**
KALE	**Kalithea**	**0.25**	**85**	*e*PG	**Pg**	**08 30 55.8**	**-0.3**
KALE				*e*SG	**Sg**	**08 31 00.4**	**+0.7**
KALE	**Kalithea**	**0.25**	**85**	*e*Pg	**Pg**	**08 30 55.8**	**-0.3**
KALE				S	**Sg**	**08 31 00.2**	**+0.5**
KLV	**Kalavryta, Ach**	**0.41**	**142**	*e*PG	**Pg**	**08 30 58.1**	**-1.0**
KLV				*e*SB	**Sg**	**08 31 03.8**	**-0.8**
KLV	**Kalavryta, Ach**	**0.41**	**142**	*e*Pb	**Pg**	**08 30 58.1**	**-1.0**
KLV				*e*Sb	**Sg**	**08 31 03.8**	**-0.8**
RLS	**Riolos of Patr**	**0.42**	**222**	*e*PG	**Pg**	**08 30 59.1**	**-0.2**
RLS				*e*SB	**Sb**	**08 31 05.7**	**-0.9**
RLS	**Riolos of Patr**	**0.42**	**222**	P	**Pg**	**08 30 59.0**	**-0.2**
RLS				*e*Sb	**Sb**	**08 31 05.7**	**-0.9**
RLS				S	**Sg**	**08 31 06.0**	**+1.2**
EVR	**Evrytania**	**0.55**	**359**	*e*PG	**Pg**	**08 31 01.7**	**0.0**
EVR				*e*SB	**Sg**	**08 31 09.7**	**+0.7**
EVR	**Evrytania**	**0.55**	**359**	*e*Pg	**Pg**	**08 31 01.7**	**0.0**
EVR				*e*Sb	**Sg**	**08 31 09.7**	**+0.7**
DSF	**Desfina**	**0.55**	**85**	P	**Pg**	**08 31 01.0**	**-0.7**
DSF				S	**Sg**	**08 31 09.7**	**+0.6**
DSF	**Desfina**	**0.55**	**85**	P	**Pg**	**08 31 01.0**	**-0.7**
DSF				S	**Sg**	**08 31 09.7**	**+0.6**
GUR	**Goura**	**0.59**	**137**	P	**Pg**	**08 31 02.0**	**-0.5**
GUR				S	**Sb**	**08 31 11.4**	**-0.3**
GUR	**Goura**	**0.59**	**137**	*e*PB	**Pg**	**08 31 01.9**	**-0.5**
GUR				*e*SB	**Sg**	**08 31 10.9**	**+0.5**
GUR	**Goura**	**0.59**	**137**	P	**Pg**	**08 31 02.0**	**-0.5**
GUR				*e*Sb	**Sg**	**08 31 10.9**	**+0.5**
GUR				S	**Sb**	**08 31 11.4**	**-0.3**
MAKR	**Makrakomi, Fth**	**0.69**	**20**	P	**Pg**	**08 31 03.6**	**-0.7**
MAKR				S	**Sb**	**08 31 14.7**	**+0.4**
MAKR	**Makrakomi, Fth**	**0.69**	**20**	P	**Pg**	**08 31 03.6**	**-0.7**
MAKR				S	**Sb**	**08 31 14.7**	**+0.4**
AGG	**Agios Georgios**	**0.76**	**31**	*e*PB	**Pb**	**08 31 05.9**	**-0.3**
AGG				*e*SB	**Sb**	**08 31 16.8**	**+0.3**
AGG	**Agios Georgios**	**0.76**	**31**	*e*Pb	**Pb**	**08 31 05.9**	**-0.3**
AGG				*e*Sb	**Sb**	**08 31 16.8**	**+0.3**
AMT	**Artemida-Makis**	**0.84**	**186**	P	**Pg**	**08 31 06.2**	**-0.9**
AMT	**Artemida-Makis**	**0.84**	**186**	*e*PB	**Pb**	**08 31 07.9**	**+0.5**
AMT				*e*SB	**Sb**	**08 31 19.0**	**+0.3**
AMT	**Artemida-Makis**	**0.84**	**186**	P	**Pg**	**08 31 06.2**	**-0.9**
AMT	**Artemida-Makis**	**0.84**	**186**	*e*Pb	**Pb**	**08 31 07.9**	**+0.5**
AMT				*e*Sb	**Sb**	**08 31 19.0**	**+0.3**
LKR	**Lokris**	**0.96**	**73**	*e*PB	**Pb**	**08 31 09.7**	**+0.2**
LKR	**Lokris**	**0.96**	**73**	*e*Pb	**Pb**	**08 31 09.7**	**+0.2**
VLS	**Valsamata**	**0.99**	**259**	*e*PB	**Pb**	**08 31 10.3**	**+0.3**
VLS				*e*SB	**Sn**	**08 31 24.3**	**-0.3**
VLS	**Valsamata**	**0.99**	**259**	*e*Pb	**Pb**	**08 31 10.3**	**+0.3**
VLS				*e*Sb	**Sn**	**08 31 24.3**	**-0.3**
ITM	**Ithomi**	**1.19**	**176**	*e*PB	**Pg**	**08 31 13.6**	**-0.2**
ITM	**Ithomi**	**1.19**	**176**	*e*Pb	**Pg**	**08 31 13.6**	**-0.2**
DID	**Didima**	**1.41**	**127**	*e*PB	**Pg**	**08 31 18.1**	**+0.1**
DID	**Didima**	**1.41**	**127**	*e*Pb	**Pg**	**08 31 18.1**	**+0.1**

*NEIC **24** 08:37:54.7±0.3, 2°.53N×79°.78W, h10km, mb4.5/51, Error ellipse: s-maj=7.9km s-min=4.6km az=216.0*
*ISCJB **24** 08:37:55.2±0.2, 2°.60N±0°.04×79°.70W±0°.03, h20km, mb4.4/66, MS3.9/11, Error ellipse: s-maj=6.6km s-min=3.3km az=37.8*
*IDC **24** 08:38:02.9±2.4, 2°.79N×79°.70W, h69km±21km, mb4.0/14, mb1 4.2/18, mb1mx4.1/24, mbtmp4.0/18, MS3.6/10, Ms1 3.6/10, ms1mx3.3/28, Error ellipse: s-maj=17.9km s-min=15.1km az=56.0*
ISC 24 08:37:56.2±0.4, 2°.57N±0°.05×79°.82W±0°.06, h20km, n445, σ1°20/445, mb4.5/66, MS3.8/11, 148C-148D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMC	**Tumaco**	**1.31**	**124**	*i*P	**Pn**	**08 38 17.5**	**-2.0**
TUMC				*e*S	**Sn**	**08 38 33.8**	**-2.6**
OTAV	**Otavalo**	**2.69**	**149**	*e*Pn	**Pn**	**08 38 37.3**	**-1.5**
MALC	**Bahia Malaga**	**2.87**	**60**	*i*P	**Pn**	**08 38 39.0**	**-1.9**
CRUC	**La Cruz**	**3.06**	**110**	*e*P	**Pn**	**08 38 42.8**	**-1.0**
CRUC				*e*S	**Sn**	**08 39 19.5**	**-0.5**
PRAC	**Prado**	**5.04**	**77**	*e*P	**Pn**	**08 39 11.1**	**+0.3**
ROSC	**El Rosal**	**5.93**	**67**	*e*Pn	**Pn**	**08 39 23.9**	**+0.5**
ROSC				S	**Sn**	**08 40 32.6**	**+1.6**
ROSC	**El Rosal**	**5.93**	**67**	P	**Pn**	**08 39 24.3**	**+0.9**
	11nm,0.3s,baz=265,slow=3.8,SNR=51						
ROSC				S	**Sn**	**08 40 32.6**	**+1.6**
	2.9nm,0.3s,baz=291,slow=17,SNR=1.9						
ROSC				LR	LR	08 41 58.6	
	comp=Z,493nm,18.7s,baz=227,slow=41						
BCIP	**Isla Barro Col**	**6.56**	**360**	*e*Pn	**Pn**	**08 39 30.9**	**-0.7**
ATAH	**Atahualpa**	**9.74**	**172**	P	Pn	08 40 24.7	+9.0
ATAH				S	**Sn**	**08 42 06.4**	**+1.6**
ATAH	**Atahualpa**	**9.74**	**172**	P	Pn	08 40 24.7	+9.0
	0.9nm,0.3s,baz=47,slow=12,SNR=5.3						
ATAH				S	**Sn**	**08 42 06.4**	**+1.6**
	0.2nm,0.3s,baz=270,slow=20,SNR=2.6						
NNA	**Nana**	**14.76**	**168**	P	**P**	**08 41 31.9**	**+1.9**
NNA	**Nana**	**14.76**	**168**	P	**P**	**08 41 31.9**	**+1.9**
	1.1nm,0.3s,baz=41,slow=12,SNR=2.9						
TEIG	**Tepich**	**19.40**	**335**	P	**P**	**08 42 20.8**	**-0.3**
TEIG	**Tepich**	**19.40**	**335**	P	**P**	**08 42 20.8**	**-0.3**
	2.3nm,0.3s,baz=5.5,slow=6.2,SNR=14						
SAML	**Samuel**	**20.15**	**125**	*e*P	**P**	**08 42 28.5**	**-0.9**
	14nm,0.7s						
AOPR	**Arecibo Observ**	**20.25**	**38**	*e*Pn	Pn	08 42 32.6	+0.1
	74nm,0.8s						
GRGR	**Grenville**	**20.35**	**61**	*e*P	**P**	**08 42 31.8**	**+0.1**
	143nm,0.9s						
SJG	**San Juan**	**20.45**	**40**	*e*P	**P**	**08 42 33.3**	**+0.6**
	19nm,0.8s						
CMIG	**Matias Romero**	**20.67**	**315**	P	**P**	**08 42 33.4**	**-1.7**
CMIG	**Matias Romero**	**20.67**	**315**	P	**P**	**08 42 33.4**	**-1.7**
	5.9nm,0.9s,baz=72,slow=11,SNR=5.2						
CMIG				LR	LR	08 48 26.9	
	comp=Z,44nm,21.2s,baz=243,slow=30						
CBYP	**Canovanas**	**20.76**	**40**	*e*P	Pn	08 42 37.8	-0.8
	26nm,0.8s						
STVI	**Saint Thomas**	**21.41**	**42**	*e*P	**P**	**08 42 45.4**	**+2.4**
	28nm,0.8s						
LPAZ	**La Paz**	**22.01**	**149**	*e*P	**P**	**08 42 49.6**	**-0.5**
	5.0nm,0.7s						
LPAZ	**La Paz**	**22.01**	**149**	P	**P**	**08 42 50.5**	**+0.3**
	3.6nm,1.0s,baz=357,slow=6.3,SNR=7.9						
FDF	**Fort de France**	**22.04**	**56**	*e*P	**P**	**08 42 51.1**	**+1.3**
	76nm,0.8s						
SIV	**San Ignacio**	**26.14**	**135**	P	**P**	**08 43 29.4**	**0.0**
SIV	**San Ignacio**	**26.14**	**135**	P	**P**	**08 43 29.4**	**0.0**
	1.8nm,0.6s,baz=310,slow=12,SNR=5.7						
SIV				LR	LR	08 54 01.5	
	comp=Z,144nm,20.0s,slow=37						
LRAL	**Lakeview Retre**	**31.05**	**348**	*e*P	**P**	**08 44 12.7**	**-0.2**
	14nm,1.0s						
JSC	**Jenkinsville**	**31.58**	**358**	*e*P	**P**	**08 44 17.9**	**+0.3**
KMSC	**Kings Mountain**	**32.44**	**358**	⇓P	**P**	**08 44 25.7**	**+0.6**
	baz=33						
632A	**Uvalde**	**32.83**	**327**	⇓P	**P**	**08 44 29.5**	**+0.9**
	baz=33						
SWET	**Sewanee**	**32.98**	**351**	*e*P	**P**	**08 44 29.3**	**-0.6**
	5.2nm,0.7s						
CPCT	**Cooper Cave**	**33.01**	**353**	*e*P	**P**	**08 44 30.2**	**+0.1**
TKL	**Tuckaleechee C**	**33.13**	**354**	P	**P**	**08 44 30.9**	**-0.3**
TKL	**Tuckaleechee C**	**33.13**	**354**	P	**P**	**08 44 30.9**	**-0.3**
	2.9nm,0.8s,baz=164,slow=15,SNR=4.7						
631A	**Perdido Creek**	**33.20**	**326**	⇑P	**P**	**08 44 33.0**	**+1.1**
	baz=33						
532A	**Rocksprings**	**33.38**	**327**	⇓P	**P**	**08 44 34.7**	**+1.2**
	baz=34						
531A	**Rocksprings**	**33.75**	**327**	⇑P	**P**	**08 44 39.3**	**+2.6**
	baz=34						
530A	**J-C Ranch, Com**	**34.18**	**326**	⇓P	**P**	**08 44 41.7**	**+1.3**
	baz=34,SNR=8.2						
431A	**Sonora**	**34.19**	**327**	⇓P	**P**	**08 44 41.0**	**+0.5**
	baz=34						
WVT	**Waverly**	**34.21**	**348**	*e*P	**P**	**08 44 38.8**	**-1.7**
	5.1nm,0.8s						
332A	**Millersview**	**34.28**	**329**	⇑P	**P**	**08 44 41.7**	**+0.4**
	baz=34						
628A	**Black Gap, Mar**	**34.60**	**323**	⇓P	**P**	**08 44 45.8**	**+1.8**
	baz=35						
430A	**Baggett Ranch,**	**34.61**	**326**	⇑P	**P**	**08 44 45.3**	**+1.1**
	baz=35						
529A	**Stev Forest Ra**	**34.67**	**325**	⇑P	**P**	**08 44 46.4**	**+1.7**
	baz=35,SNR=5.5						
429A	**Davenport Ranc**	**34.86**	**325**	⇑P	**P**	**08 44 47.6**	**+1.2**
	baz=35,SNR=7.7						
627A	**Terlingua Ranc**	**34.88**	**322**	⇓P	**P**	**08 44 47.9**	**+1.4**
	baz=35,SNR=6.9						
TXAR	**Lajitas Array**	**34.96**	**322**	P	**P**	**08 44 48.1**	**+0.9**
TXAR				PcP	**PcP**	**08 47 20.6**	**+0.9**
TXAR	**Lajitas Array**	**34.96**	**322**	P	**P**	**08 44 48.1**	**+0.9**
	0.8nm,0.8s,baz=140,slow=7.9,SNR=8.9						
TXAR				PcP	**PcP**	**08 47 20.6**	**+0.9**
	2.6nm,0.9s,baz=134,slow=5.4,SNR=16						
528A	**Cox Ranch, San**	**35.03**	**324**	⇓P	**P**	**08 44 49.3**	**+1.4**
	baz=35						
ABTX	**Abilene, Hawle**	**35.22**	**330**	⇓P	**P**	**08 44 50.3**	**+0.9**
	baz=35						
428A	**Kincaid Ranch,**	**35.38**	**325**	⇓P	**P**	**08 44 52.8**	**+1.9**
	baz=36,SNR=5.7						
626A	**Big Bend Ranch**	**35.41**	**322**	⇓P	**P**	**08 44 52.7**	**+1.7**
	baz=36,SNR=5.9						
527A	**Woodward Ranch**	**35.51**	**323**	⇓P	**P**	**08 44 53.4**	**+1.3**
	baz=36,SNR=8.8						
329A	**Wagon Wheel Ra**	**35.56**	**326**	⇑P	**P**	**08 44 53.5**	**+1.2**
	baz=36						
Z32A	**Haskell**	**35.69**	**331**	⇑P	**P**	**08 44 54.0**	**+0.5**
	baz=36,SNR=7.1						
CFAA	**Coronel Fontan**	**35.72**	**163**	P	P	08 45 00.1	+6.4
CFAA	**Coronel Fontan**	**35.72**	**163**	P	P	08 45 00.1	+6.4
	0.4nm,1.0s,baz=342,slow=8.1,SNR=4.0						
526A	**Mary Lane Ranc**	**35.74**	**322**	⇑P	**P**	**08 44 55.4**	**+1.4**
	baz=36,SNR=6.6						
229A	**Bryant Ranch,**	**35.83**	**327**	⇑P	**P**	**08 44 55.5**	**+0.8**
	baz=36						
130A	**Snyder**	**35.87**	**329**	⇑P	**P**	**08 44 55.8**	**+0.8**
	baz=36						
427A	**Hayter Ranch,**	**35.89**	**324**	⇓P	**P**	**08 44 56.9**	**+1.6**
	baz=36						
328A	**Wristen Ranch,**	**35.94**	**325**	⇓P	**P**	**08 44 56.7**	**+1.0**
	baz=36						
WCI	**Wyandotte Cave**	**35.98**	**351**	*e*P	**P**	**08 44 54.8**	**-1.0**
	7.4nm,0.8s						
Z31A	**Sharp Cattle R**	**36.03**	**330**	⇑P	**P**	**08 44 56.8**	**+0.5**
	baz=36						
CPUP	**Villa Florida**	**36.03**	**144**	P	P	08 45 02.5	+6.2
CPUP	**Villa Florida**	**36.03**	**144**	P	P	08 45 02.5	+6.2
	4.8nm,0.8s,baz=272,slow=20,SNR=6.9						
CPUP				LR	LR	09 03 26.5	
	comp=Z,77nm,18.3s,baz=153,slow=42						
SIUC	**Southern Illin**	**36.03**	**347**	*e*P	**P**	**08 44 55.0**	**-1.1**
	17nm,1.0s						
426A	**McDonald Obser**	**36.13**	**323**	⇓P	**P**	**08 44 58.7**	**+1.3**
	baz=36						
BDFB	**Brasilia**	**36.29**	**121**	LR	LR	09 00 14.5	
	comp=Z,108nm,18.6s,baz=200,slow=37						
TUL1	**Tulsa**	**36.33**	**338**	⇓P	**P**	**08 44 58.2**	**-0.6**
	baz=36						
129A	**Stewart Farms,**	**36.37**	**328**	⇑P	**P**	**08 44 59.9**	**+0.6**
	baz=36						
228A	**UT Block 9, Go**	**36.37**	**326**	⇑P	**P**	**08 45 00.0**	**+0.7**
	baz=36						
Z30A	**Sanderson Ranc**	**36.50**	**329**	⇑P	**P**	**08 45 01.0**	**+0.6**
	baz=37						
FVM	**French Village**	**36.57**	**346**	*e*P	**P**	**08 45 00.3**	**-0.5**
	11nm,1.0s						
326A	**Caldwell Ranch**	**36.57**	**324**	⇑P	**P**	**08 45 02.2**	**+1.2**
	baz=37,SNR=7.6						
Y31A	**Rekieta Farm,**	**36.60**	**331**	⇑P	**P**	**08 45 02.3**	**+1.1**
	baz=37						
227A	**Bennet, Jal**	**36.69**	**326**	⇑P	**P**	**08 45 03.3**	**+1.3**
	baz=37						
Z29A	**Hungry Hill Ra**	**36.77**	**329**	⇑P	**P**	**08 45 03.3**	**+0.6**
	baz=37						
425A	**Indio Mountain**	**36.80**	**322**	⇑P	**P**	**08 45 04.1**	**+1.0**
	baz=37,SNR=9.7						
Y30A	**Stafford Cattl**	**36.85**	**330**	⇑P	**P**	**08 45 04.1**	**+0.7**
	baz=37						
BLO	**Bloomington**	**36.94**	**351**	*e*P	**P**	**08 45 02.8**	**-1.2**
	17nm,0.7s						
X31A	**McDonald Ranch**	**37.01**	**332**	⇓P	**P**	**08 45 05.3**	**+0.6**
	baz=37						
325A	**Bean Ranch, Si**	**37.20**	**323**	⇓P	**P**	**08 45 07.4**	**+0.9**
	baz=37						
Y29A	**Porterfield Fa**	**37.23**	**329**	⇓P	**P**	**08 45 07.5**	**+0.9**
	baz=37,SNR=8.8						
226B	**Tecolote Peak,**	**37.23**	**325**	⇑P	**P**	**08 45 08.2**	**+1.5**
	baz=37,SNR=18						
X30A	**Coker Ranch, T**	**37.29**	**331**	⇓P	**P**	**08 45 07.8**	**+0.7**
	baz=38,SNR=6.5						
MVL	**Millersville**	**37.39**	**4**	*e*P	**P**	**08 45 08.7**	**+0.9**
	7.4nm,0.8s						
GDL2	**Guadalupe Moun**	**37.44**	**325**	*e*P	**P**	**08 45 10.2**	**+1.8**
324A	**Moseley Ranch,**	**37.56**	**323**	⇑P	**P**	**08 45 10.3**	**+0.7**
	baz=38,SNR=14						
126A	**Clayton Basin,**	**37.57**	**325**	⇓P	**P**	**08 45 11.1**	**+1.6**
	baz=38						
Z27A	**Tatum**	**37.62**	**327**	⇑P	**P**	**08 45 10.8**	**+0.8**
	baz=38						
225A	**Deer Hill, Car**	**37.64**	**324**	⇑P	**P**	**08 45 11.7**	**+1.4**
	baz=38						
X29A	**Tulia**	**37.70**	**330**	⇓P	**P**	**08 45 11.4**	**+0.8**
	baz=38						
MSTX	**Muleshoe**	**37.88**	**328**	⇑P	**P**	**08 45 12.9**	**+0.7**
	baz=38,SNR=5.7						
V31A	**Spring Creek L**	**37.89**	**333**	⇓P	**P**	**08 45 13.1**	**+0.9**
	baz=38						
125A	**Gardner Draw,**	**37.94**	**325**	⇑P	**P**	**08 45 13.7**	**+0.9**
	baz=38,SNR=7.9						
Z26A	**Caprock**	**38.01**	**326**	⇑P	**P**	**08 45 14.7**	**+1.4**
	baz=38,SNR=7.8						
X28A	**Dimmitt**	**38.01**	**329**	⇑P	**P**	**08

X22A	Bernardo baz=41	40.63 325	⇓P	P	08 45 37.0 +1.7
LAZ	Ladron 5.1nm,1.2s	40.63 324	eP	P	08 45 37.1 +1.8
Y21A	Point of Rocks baz=41,SNR=6.6	40.67 323	⇑P	P	08 45 37.8 +2.2
Y20A	Horse Springs, baz=41,SNR=9.1	41.02 323	⇑P	P	08 45 40.3 +1.8
X21A	Alamocita Cree baz=41,SNR=5.8	41.04 324	⇑P	P	08 45 40.8 +2.1
V23A	Ortiz Mt. (NFS baz=41	41.06 327	⇑P	P	08 45 40.9 +2.1
U24A	Moreno Valley baz=41	41.07 328	⇑P	P	08 45 41.0 +2.0
S26A	Kim baz=41,SNR=7.1	41.09 331	⇑P	P	08 45 40.4 +1.4
T25A	Trinidad baz=41,SNR=7.3	41.18 330	⇓P	P	08 45 41.5 +1.8
R27A	Eads baz=42,SNR=11	41.30 332	⇑P	P	08 45 41.5 +0.8
W21A	San Fidel baz=42	41.43 325	⇑P	P	08 45 43.8 +2.0
T24A	Torres, Weston baz=42,SNR=6.0	41.45 329	⇑P	P	08 45 43.9 +1.8
TUC	Tucson 0.7nm,1.0s	41.49 319	eP	P	08 45 43.3 +1.1
U23A	El Rito baz=42,SNR=19	41.50 327	⇑P	P	08 45 44.4 +2.0
X20A	Quemado baz=42	41.53 323	⇑P	P	08 45 44.7 +2.0
V22A	San Miguel Ran baz=42,SNR=6.5	41.59 326	⇑P	P	08 45 44.9 +1.7
S25A	Robets Cordova baz=42,SNR=5.9	41.59 330	⇓P	P	08 45 44.9 +1.7
R26A	Arlington baz=42	41.62 332	⇑P	P	08 45 44.7 +1.5
KSCO	Kaye Shedlock' baz=42,SNR=5.5	41.81 333	⇑P	P	08 45 45.9 +1.1
U22A	Llaves baz=42,SNR=10	41.89 327	⇓P	P	08 45 47.6 +1.9
V21A	Milan baz=42	41.92 325	⇑P	P	08 45 47.4 +1.6
W20A	Ramah baz=42,SNR=8.2	41.94 324	⇑P	P	08 45 47.8 +1.8
T23A	Casias Ranch, baz=42,SNR=8.5	41.94 328	⇑P	P	08 45 47.9 +1.8
S24A	Houchin Ranch, baz=42	41.97 329	⇓P	P	08 45 48.2 +1.9
SDCO	Great Sand Dun 9.6nm,0.9s	42.20 329	eP	P	08 45 49.9 +1.7
P27A	Ficken Ranch, baz=42	42.23 334	⇑P	P	08 45 49.3 +1.1
R24A	Sanders Place, baz=43	42.37 330	⇓P	P	08 45 51.4 +1.9
U21A	Nageezi baz=42,SNR=6.9	42.37 326	⇓P	P	08 45 51.1 +1.5
T22A	Edith baz=43	42.39 327	⇓P	P	08 45 51.4 +1.7
X18A	Snowflake baz=43	42.40 322	⇑P	P	08 45 51.7 +1.9
W18A	Petrified Fore baz=43	42.66 323	⇓P	P	08 45 53.5 +1.5
R23A	Moffat baz=43	42.70 329	⇓P	P	08 45 54.0 +1.7
O27A	Beecher Island baz=43	42.71 334	⇓P	P	08 45 53.4 +1.3
T21A	Navajo Lake baz=43	42.71 327	⇓P	P	08 45 54.1 +1.8
U20A	Newcomb baz=43,SNR=5.5	42.82 325	⇑P	P	08 45 54.9 +1.7
S22A	4UR Ranch, Cre baz=43	42.89 328	⇑P	P	08 45 55.6 +1.8
P25A	Willow Gulch B baz=43	42.92 332	⇓P	P	08 45 55.5 +1.6
R22A	Saguache, Gunn baz=43,SNR=6.3	43.21 329	⇓P	P	08 45 58.0 +1.5
X16A	Lo Mia Camp, P baz=43,SNR=7.7	43.26 321	⇓P	P	08 45 58.4 +1.6
MVCO	Mesa Verde 6.1nm,0.8s	43.40 326	eP	P	08 45 59.1 +1.2
MVCO	Mesa Verde baz=44,SNR=5.7	43.40 326	⇓P	P	08 45 59.1 +1.2
Z14A	Wintersburg baz=44	43.57 318	⇓P	P	08 46 01.1 +2.1
P23A	Jefferson baz=44	43.62 330	⇓P	P	08 46 01.5 +1.7
R21A	Cimarron baz=44	43.73 328	⇑P	P	08 46 01.9 +1.4
Q22A	Crested Butte, baz=44,SNR=12	43.77 329	⇑P	P	08 46 02.3 +1.4
S20A	Disappointment baz=44	43.77 327	⇑P	P	08 46 02.3 +1.4
O24A	Longmont baz=44,SNR=5.2	43.83 332	⇓P	P	08 46 02.6 +1.3
ISCO	Idaho Springs 3.9nm,0.9s	43.84 331	eP	P	08 46 02.8 +1.4
ISCO	Idaho Springs baz=44	43.84 331	⇓P	P	08 46 02.5 +1.0
PLCA	Paso Flores	43.92 170	P	P	08 46 03.4 +1.6
PLCA	Paso Flores 3.4nm,0.8s,baz=337,slow=7.9,SNR=7.2	43.92 170	P	P	08 46 03.4 +1.6
PLCA	comp=Z,111nm,19.0s,baz=354,slow=35		LR	LR	09 04 05.8
WUAZ	Wupatki 12nm,0.9s	43.93 322	eP	P	08 46 04.0 +1.9
WUAZ	Wupatki baz=44,SNR=5.0	43.93 322	⇓P	P	08 46 03.8 +1.7
Y14A	Wickenburg baz=44	43.96 319	⇓P	P	08 46 03.5 +1.2
SMCO	Snowmass 5.0nm,0.8s	44.04 329	eP	P	08 46 04.5 +1.3
R20A	Redvale baz=44	44.04 327	⇓P	P	08 46 04.4 +1.4
PV01	Paradox Valley 338nm,1.0s	44.11 327	eP	P	08 46 04.9 +1.3
P22A	Eagle baz=44,SNR=5.7	44.24 330	⇑P	P	08 46 06.2 +1.6
N24A	Carr baz=44	44.30 333	⇑P	P	08 46 06.5 +1.5
O23A	Lake Granby, G baz=44,SNR=5.3	44.30 331	⇑P	P	08 46 06.6 +1.4
M25A	Palm-Egli Farm baz=45	44.41 334	⇑P	P	08 46 07.6 +1.7
PV04	Paradox Valley	44.48 327	eP	P	08 46 07.8 +1.3
PV10	Paradox Valley 169nm,0.9s	44.54 327	eP	P	08 46 07.3 +0.3
P21A	Newcastle baz=45,SNR=10	44.54 329	⇓P	P	08 46 08.5 +1.5
Q20A	Ridgley Place, baz=45	44.56 328	⇓P	P	08 46 09.2 +2.1
O22A	Kremmling baz=45,SNR=5.5	44.57 331	⇑P	P	08 46 08.1 +0.7
S18A	Hurst Farm, Bl baz=45	44.59 325	⇑P	P	08 46 08.5 +1.1
RCBR	Riachuelo comp=Z,96nm,18.7s,baz=282,slow=37	44.65 101	LR	LR	09 05 31.3
K27A	Flueckinger Fa baz=45	44.70 336	⇓P	P	08 46 08.8 +0.8
M24A	Cheyenne baz=45	44.78 333	⇑P	P	08 46 10.3 +1.4
N23A	Red Feather La baz=45	44.85 332	⇑P	P	08 46 11.0 +1.5
Q19A	Hogan Spring (baz=45,SNR=9.5	45.08 327	⇑P	P	08 46 12.0 +0.8
U15A	North Rim baz=45	45.09 322	⇑P	P	08 46 12.7 +1.2
W13A	Hualapai Mount baz=45,SNR=7.1	45.25 320	⇑P	P	08 46 14.1 +1.4
K25A	Mack Ranch, Ha baz=46	45.29 335	⇓P	P	08 46 14.1 +1.3
L24A	Wheatland baz=46	45.29 334	⇓P	P	08 46 14.6 +1.8
O20A	White River Ci baz=46	45.40 329	⇑P	P	08 46 15.2 +1.4
P19A	Cripple Cowboy baz=46	45.42 328	⇑P	P	08 46 15.1 +1.1
N21A	Black Mountain baz=46	45.51 330	⇓P	P	08 46 16.3 +1.7
IRM	Iron Mountain baz=46	45.52 318	⇑P	P	08 46 16.0 +1.4
L23A	Garrett baz=46	45.70 333	⇓P	P	08 46 17.0 +0.9
SRU	San Rafael 10.0nm,0.9s	45.88 326	eP	P	08 46 18.8 +1.2
SRU	San Rafael baz=46,SNR=7.6	45.88 326	⇓P	P	08 46 18.7 +1.1
N20A	Spence Gulch, baz=46	45.93 330	⇓P	P	08 46 19.0 +1.0
L22A	Ellis Ranch, M baz=46	45.97 332	⇑P	P	08 46 19.7 +1.5
O19A	Miners Draw (B baz=46,SNR=5.1	45.98 329	⇓P	P	08 46 19.1 +0.8
M21A	Separation Pea baz=46	46.08 331	⇑P	P	08 46 20.2 +1.0
K23A	Bowen Ranch, D baz=46	46.17 334	⇓P	P	08 46 21.0 +1.2
J24A	Dixon Ranch, L baz=46	46.22 335	⇑P	P	08 46 21.5 +1.4
GMRC	Granite Mounta baz=46	46.22 318	⇓P	P	08 46 21.3 +1.0
P17A	Butcher Ranch, baz=46	46.25 327	⇑P	P	08 46 21.7 +1.2
L21A	Rawlins baz=46	46.35 332	⇑P	P	08 46 22.8 +1.4
MVU	Marysvale 2.5nm,0.8s	46.41 325	eP	P	08 46 23.1 +1.2
N19A	John Jarvie Ra baz=47,SNR=5.8	46.44 329	⇑P	P	08 46 22.7 +0.7
CCUT	Cedar City 4.4nm,1.2s	46.47 323	eP	P	08 46 24.5 +2.2
RSSD	Black Hills 9.6nm,0.7s	46.60 336	eP	P	08 46 23.9 +0.6
K21A	Alcova baz=47	46.81 332	⇑P	P	08 46 25.9 +1.0
L20A	Wamsutter baz=47	46.85 331	⇓P	P	08 46 26.2 +0.9
MPU	Maple Canyon 5.4nm,1.0s	47.12 326	eP	P	08 46 28.2 +0.8
DAU	Daniels Canyon	47.19 327	eP	P	08 46 29.4 +1.4
M18A	Lyman baz=48	47.29 329	⇑P	P	08 46 29.4 +0.7
H24A	Dirks Ranch, A baz=48	47.33 336	⇑P	P	08 46 29.9 +1.1
K20A	Yellowstone Ra baz=48,SNR=5.0	47.35 331	⇓P	P	08 46 29.7 +0.7
L19A	Farson baz=48	47.43 330	⇑P	P	08 46 30.5 +0.8
JLU	Jordanelle 6.5nm,0.8s	47.43 327	eP	P	08 46 30.7 +0.9
I22A	9 Mile Ranch, baz=48	47.45 334	⇓P	P	08 46 30.8 +1.0
J21A	Lysite baz=48	47.46 333	⇑P	P	08 46 30.9 +1.0
M17A	Scullys Gap (B baz=48	47.63 329	⇓P	P	08 46 32.1 +0.7
L18A	Fontenelle, Gr baz=48	47.64 329	⇓P	P	08 46 32.1 +0.8
K19A	Absolon Red Bu baz=48,SNR=6.4	47.72 331	⇑P	P	08 46 32.3 +0.4
I21A	Big Trails, Te baz=48	47.75 333	⇓P	P	08 46 32.7 +0.6
G24A	Alzada baz=48	47.75 337	⇓P	P	08 46 32.8 +0.8
J20A	Shoshoni baz=48	47.76 332	⇓P	P	08 46 33.2 +1.1
EDW2	Edwards Air Fo baz=48	47.85 317	⇓P	P	08 46 33.9 +1.0
DUG	Dugway 9.5nm,1.4s	47.90 326	eP	P	08 46 34.8 +1.4
DUG	Dugway baz=48	47.90 326	⇑P	P	08 46 34.5 +1.1
H22A	Clearmont baz=48	47.96 335	⇑P	P	08 46 34.5 +0.9
FURC	Furnace Creek, baz=48	48.00 319	⇓P	P	08 46 35.7 +1.8
BW06	Boulder Array 12nm,1.7s	48.02 331	eP	P	08 46 34.4 0.0
BW06	Boulder Array baz=48	48.02 331	⇑P	P	08 46 34.6 +0.3
PDAR	Pinedale Array	48.02 331	P	P	08 46 34.4 +0.1
PDAR			PcP	PcP	08 48 01.6 -0.6
PDAR	Pinedale Array 1.8nm,0.9s,baz=124,slow=9.9,SNR=14	48.02 331	P	P	08 46 34.4 +0.1
PDAR	1.4nm,0.8s,baz=136,slow=6.1,SNR=6.7		PcP	PcP	08 48 01.6 -0.6
G23A	Biddle baz=48	48.04 336	⇑P	P	08 46 34.9 +0.7
J19A	Crowheart baz=48	48.15 331	⇑P	P	08 46 36.1 +0.9
K18A	Toltan Ranch, baz=48,SNR=14	48.16 330	⇑P	P	08 46 36.3 +0.9
L17A	Cokeville baz=48	48.19 329	⇓P	P	08 46 36.8 +1.1
F24A	Ekalaka baz=48	48.19 337	⇓P	P	08 46 36.0 +0.6
HWUT	Hardware Ranch 7.3nm,0.8s	48.20 328	eP	P	08 46 36.3 +0.6
I20A	Worland baz=48,SNR=5.9	48.24 333	⇓P	P	08 46 36.6 +0.7
R11A	Troy Canyon, C baz=48	48.33 322	⇑P	P	08 46 38.1 +1.4
G22A	Birney baz=49	48.43 335	⇓P	P	08 46 37.8 +0.5
F23A	Volborg baz=49,SNR=12	48.47 336	⇓P	P	08 46 38.2 +0.6
J18A	Kendall Valley baz=49,SNR=9.3	48.58 331	⇓P	P	08 46 39.1 +0.5
H20A	Greybull baz=49	48.60 333	⇓P	P	08 46 38.9 +0.3
K17A	Gardner Place, baz=49	48.69 330	⇓P	P	08 46 39.6 +0.2
E24A	Baker baz=49	48.74 338	⇓P	P	08 46 40.7 +1.1
I18A	Diamond G Ranc baz=49	48.84 331	⇓P	P	08 46 41.3 +0.6
F22A	Rosebud baz=49	48.87 336	⇑P	P	08 46 41.4 +0.8
L15A	Malad City baz=49,SNR=9.2	48.91 328	⇓P	P	08 46 41.5 +0.4
J17A	Brown Place, J baz=49,SNR=9.4	49.03 330	⇓P	P	08 46 42.9 +0.8
K16A	Soda Springs baz=49	49.09 329	⇑P	P	08 46 43.6 +1.1
SNOW	Snow King Moun 5.0nm,0.9s	49.12 330	eP	P	08 46 43.4 +0.5
LOHW	Long Hollow 3.3nm,1.0s	49.16 331	eP	P	08 46 43.6 +0.5
D24A	Glendive baz=49,SNR=8.7	49.21 338	⇑P	P	08 46 43.8 +0.7
G20A	Bridger baz=49	49.26 334	⇑P	P	08 46 44.1 +0.3
E22A	Miles City baz=50	49.28 336	⇓P	P	08 46 43.9 +0.2
MOOW	Moose Ponds 3.8nm,0.9s	49.33 331	eP	P	08 46 44.8 +0.4
I17A	Pilgrim Ck. baz=50	49.37 331	⇓P	P	08 46 45.8 +1.1
L14A	Malta baz=50	49.39 327	⇓P	P	08 46 45.6 +0.8
J16A	Bone baz=50	49.42 330	⇓P	P	08 46 45.9 +0.9
ULM	Lac du Bonnet	49.43 346	P	P	08 46 42.5 -2.2
ULM	Lac du Bonnet 4.7nm,0.8s,baz=165,slow=9.7,SNR=5.0	49.43 346	P	P	08 46 42.5 -2.2
K15A	Arbon baz=50	49.47 328	⇓P	P	08 46 46.5 +1.1
IMW	Indian Meadow 4.5nm,0.8s	49.53 331	eP	P	08 46 46.5 +0.5
D23A	Lindsay baz=50	49.59 337	⇑P	P	08 46 47.1 +1.0
C24A	Savage baz=50	49.59 338	⇑P	P	08 46 47.1 +1.0
MTUM	Tungsten Hills	49.63 319	eP	P	08 46 46.7 0.0
ELK	Elko	49.65 325	eP	P	08 46 47.7 +0.8
RLMT	Red Lodge 1.0nm,0.6s	49.66 333	eP	P	08 46 47.0 +0.1
RLMT	Red Lodge baz=50	49.66 333	⇓P	P	08 46 47.3 +0.4
K14A	Jones Ranch, D baz=50	49.71 328	⇓P	P	08 46 47.8 +0.6
J15A	Blackfoot baz=50,SNR=5.8	49.92 329	⇑P	P	08 46 49.4 +0.5
G18A	Lazy EL Ranch, baz=50	49.94 333	⇑P	P	08 46 49.4 +0.4
D22A	Cohagen baz=50	49.95 337	⇓P	P	08 46 49.9 +1.1
F19A	Roth Farm, Mol baz=50	50.08 334	⇑P	P	08 46 50.5 +0.6
NVAR	Mina Array Bea	50.08 320	P	P	08 46 51.6 +1.4
NVAR			PcP	PcP	08 48 10.3 +0.6
NVAR	Mina Array Bea 2.1nm,0.7s,baz=136,slow=7.1,SNR=13	50.08 320	P	P	08 46 51.6 +1.4
NVAR	3.5nm,0.7s,baz=132,slow=4.3,SNR=12		PcP	PcP	08 48 10.3 +0.6
C23A	Lambert baz=50	50.10 338	⇓P	P	08 46 50.9 +1.0
D21A	La Casta Ranch baz=50	50.21 336	⇓P	P	08 46 51.9 +1.1
E20A	Meyer Farm, Mu baz=50,SNR=10	50.23 335	⇓P	P	08 46 51.8 +0.8
H16A	Russell Place, baz=50	50.28 331	⇑P	P	08 46 52.8 +1.2
DGMT	Dagmar baz=50	50.30 339	⇑P	P	08 46 52.2 +0.8
C22A	Vida baz=50	50.32 337	⇓P	P	08 46 52.7 +1.0
GCMT	Greycliff 1.3nm,0.8s	50.35 333	eP	P	08 46 52.2 +0.2
J14A	Carey baz=51,SNR=10	50.43 328	⇓P	P	08 46 53.9 +1.2
F18A	Big Timber baz=51,SNR=11	50.46 333	⇑P	P	08 46 53.6 +0.8
E19A	Rath Farm, Rou baz=51,SNR=5.6	50.48 334	⇓P	P	08 46 53.9 +1.0
G17A	Pierce Place, baz=51,SNR=6.2	50.49 332	⇓P	P	08 46 54.8 +1.7
B23A	Brockton baz=51	50.58 339	⇑P	P	08 46 54.5 +0.9
A24A	Westby baz=51	50.62 340	⇑P	P	08 46 55.0 +1.2
D20A	Manuel Ranch, baz=51,SNR=5.7	50.70 335	⇓P	P	08 46 55.3 +0.8
I14A	Mackay baz=51	50.82 329	⇑P	P	08 46 56.6 +0.9
J13A	Cove Ranch, Pi baz=51	50.83 328	⇑P	P	08 46 56.6 +0.9
C21A	Desert Coulee baz=51,SNR=5.5	50.86 337	⇓P	P	08 46 56.7 +1.0
F17A	Fitzpatrick Pl baz=51	50.89 333	⇑P	P	08 46 57.1 +1.0
H15A	Lima baz=51,SNR=7.9	50.90 330	⇓P	P	08 46 57.6 +1.4
G16A	Moss Hill, Enn baz=51,SNR=5.2	50.93 331	⇑P	P	08 46 57.6 +1.2
E18A	Harlowton baz=51	51.06 334	⇓P	P	08 46 57.8 +0.5
D19A	Cripps Ranch, baz=51,SNR=6.3	51.07 335	⇓P	P	08 46 58.0 +0.7
HLID	Hailey 3.2nm,0.8s	51.07 328	eP	P	08 46 58.0 +0.5
HLID			ePcP	PcP	08 48 14.3 +1.0
HLID	Hailey baz=51,SNR=6.0	51.07 328	⇑P	P	08 46 58.4 +0.8
C20A	Veseth Ranch, baz=51	51.14 336	⇓P	P	08 46 58.8 +1.0
MCMT	McKenzie Canyo 0.5nm,0.7s	51.15 330	eP	P	08 46 59.1 +0.9
BOZ	Bozeman (W) 4.3nm,0.8s	51.15 332	eP	P	08 46 58.6 +0.6
BOZ	Bozeman (W) baz=51,SNR=7.8	51.15 332	⇓P	P	08 46 58.7 +0.6
I13A	Wildhorse Cree baz=51	51.16 328	⇑P	P	08 46 59.2 +1.0
G15A	Dillon baz=51,SNR=5.4	51.22 331	⇓P	P	08 46 59.9 +1.3
F16A	Kennard Place, baz=51	51.25 332	⇓P	P	08 47 00.0 +1.2
H14A	Leadore baz=51	51.26 330	⇓P	P	08 47 00.1 +1.2
B21A	Ellsworth Farm baz=52	51.32 337	⇓P	P	08 47 00.2 +1.1
A22A	Carney Farms, baz=52,SNR=5.1	51.36 338	⇑P	P	08 47 00.3 +0.8
E17A	Martinsdale baz=52	51.40 333	⇑P	P	08 47 00.9 +0.9
D18A	Linhart Farms, baz=52	51.49 334	⇑P	P	08 47 01.5 +1.0
C19A	Slack Wire Ran baz=52,SNR=5.7	51.59 335	⇑P	P	08 47 02.0 +0.8
I12A	Atlanta baz=52	51.61 328	⇑P	P	08 47 02.5 +0.9
LRM	Limekiln Ridge	51.67 331	eP	P	08 47 02.7 +0.6
H13A	Challis baz=52	51.68 329	⇓P	P	08 47 02.6 +0.6
F15A	Butte baz=52	51.71 331	⇑P	P	08 47 02.9 +0.6
MFID	Camas Ranch 10nm,1.2s	51.73 327	eP	P	08 47 03.2 +0.8
MFID	Camas Ranch baz=52,SNR=6.8	51.73 327	⇑P	P	08 47 03.1 +0.7
G14A	Jackson baz=52	51.75 330	⇑P	P	08 47 03.5 +0.9
E16A	East Helena baz=52	51.83 332	⇓P	P	08 47 04.1 +1.0
D17A	Six Diamond Ra baz=52	51.85 334	⇓P	P	08 47 04.1 +0.9
H12A	Diamond D Ranc baz=52	51.98 329	⇓P	P	08 47 05.2 +0.9
A20A	Cobblestone Ra baz=52	52.04 337	⇓P	P	08 47 05.7 +1.2
EGMT	Eagleton baz=52	52.11 335	⇑P	P	08 47 05.8 +0.7
F14A	Wisdom baz=52	52.11 331	⇑P	P	08 47 06.0 +0.7
D16A	Dana Ranch, Ca baz=52,SNR=5.9	52.14 333	⇑P	P	08 47 06.1 +0.7
E15A	Deer Lodge baz=52	52.20 332	⇑P	P	08 47 06.6 +0.7
C17A	Wharram Farm, baz=52,SNR=8.8	52.24 334	⇓P	P	08 47 06.6 +0.5
A19A	Klindworth Far baz=53	52.40 336	⇓P	P	08 47 08.0 +0.8
B18A	Beardsley Farm baz=53	52.41 335	⇑P	P	08 47 08.0 +0.7
F13A	Darby baz=53	52.57 330	⇑P	P	08 47 09.3 +0.7
D15A	Lincoln baz=53	52.60 332	⇓P	P	08 47 09.7 +0.8
E14A	Clinton baz=53	52.60 331	⇓P	P	08 47 09.8 +0.9
WVOR	Wild Horse Val 19nm,1.5s	52.69 324	eP	P	08 47 09.9 +0.3
A18A	Metzger Ranch, baz=53,SNR=5.4	52.85 336	⇓P	P	08 47 10.4 -0.1
E13A	Victor baz=53	52.96 331	⇑P	P	08 47 12.4 +0.9
F12A	Elk City baz=53,SNR=10	53.01 329	⇓P	P	08 47 12.4 +0.4
MSO	Missoula baz=53	53.12 331	⇑P	P	08 47 13.4 +0.8
SCHQ	Schefferville	53.17 9	P	P	08 47 12.1 -0.7
SCHQ	Schefferville 5.9nm,1.0s,baz=196,slow=2.3,SNR=3.7	53.17 9	P	P	08 47 12.1 -0.7
C15A	Salmond Ranch, baz=53	53.18 333	⇓P	P	08 47 14.0 +0.9
A17A	Triple J Farms baz=53	53.22 335	⇓P	P	08 47 13.9 +0.6
D13A	Huson baz=54,SNR=5.9	53.55 331	⇓P	P	08 47 16.3 +0.5
B15A	Bradely Ranch, baz=54	53.55 333	⇓P	P	08 47 16.4 +0.6
B14A	Marquette Ranc baz=54,SNR=6.5	53.91 333	⇑P	P	08 47 19.1 +0.6
D12A	Red Ives Fores baz=54	53.96 331	⇑P	P	08 47 19.3 +0.5
C13A	Hot Springs baz=54	54.02 332	⇓P	P	08 47 20.2 +1.0
A15A	Johnson Ranch, baz=54	54.12 334	⇓P	P	08 47 20.9 +0.9
BSMT	Bassoo Peak	54.25 332	eP	P	08 47 21.8 +0.8
B13A	Whitefish baz=55	54.47 332	⇑P	P	08 47 23.6 +1.2
C12B	Naegeli Ranch, baz=55,SNR=7.1	54.48 331	⇑P	P	08 47 23.4 +0.9
NEW	Newport baz=56	55.66 331	⇓P	P	08 47 31.8 +0.8
YKA	Yellowknife Ar	65.14 343	P	P	08 48 34.5 -1.0
YKA	Yellowknife Ar 2.3nm,0.7s,baz=138,slow=6.2,SNR=55	65.14 343	P	P	08 48 34.5 -1.0
YKW3	Yellowknife Ar	65.20 343	eP	P	08 48 35.0 -0.9
PPT	Papeete comp=Z,18nm,19.5s,baz=9.3,slow=29	71.55 251	LR	LR	09 12 11.3
SUMG	Summit 18nm,1.1s	74.44 12	eP	P	08 49 32.3 -0.7
SUMG	Summit 9.2nm,0.8s	74.44 12	i P	P	08 49 32.2 -0.9
DOT	Dot Lake 6.0nm,0.7s	76.49 336	eP	P	08 49 45.0 +0.4
ESDC	Sonseca Array	77.49 50	P	P	08 49 51.0 +0.3
ESDC	Sonseca Array 0.7nm,0.5s,baz=257,slow=6.5,SNR=5.7	77.49 50	P	P	08 49 51.0 +0.3
ILAR	Eielson Array	78.05 336	P	P	08 49 53.0 -0.2
ILAR	Eielson Array 1.8nm,0.8s,baz=117,slow=4.5,SNR=21	78.05 336	P	P	08 49 53.0 -0.2

MCK	McKinley	78.56	335	*eP*		P	08 49 56.0	-0.1
	2.3nm,0.7s							
DAG	Danmarks Havn	81.13	12	*i P*		P	08 50 08.4	-1.4
	3.1nm,1.1s							
TOA0	Torodi Ar. Sit	81.16	77	*eP*		P	08 50 10.0	-1.1
TORD	Torodi Ar. Bea	81.16	77	P		P	08 50 10.6	-0.6
TORD	Torodi Ar. Bea	81.16	77	P		P	08 50 10.6	-0.6
	1.8nm,0.5s,baz=282,slow=6.6,SNR=30							
NOA	NORSAR Array B	88.28	29	P		P	08 50 46.5	+0.3
NOA	NORSAR Array B	88.28	29	P		P	08 50 46.5	+0.3
	4.6nm,0.9s,baz=270,slow=4.5,SNR=6.7							
NOA				LR		LR	09 27 36.5	
	comp=Z,54nm,18.1s,baz=50,slow=34							
ARCES	ARCESS Array B	92.94	20	P		P	08 51 07.2	-0.5
ARCES	ARCESS Array B	92.94	20	P		P	08 51 07.2	-0.5
	3.9nm,1.0s,baz=254,slow=2.3,SNR=6.4							
VYHS	Vyhne	93.83	41	*eP*		P	08 51 05.5	-6.8
FINES	FINESS Array B	95.31	28	P		P	08 51 16.8	-1.9
FINES	FINESS Array B	95.31	28	P		P	08 51 16.8	-1.9
	1.4nm,0.8s,baz=256,slow=5.7,SNR=4.3							
FINES				LR		LR	09 31 46.2	
	comp=Z,64nm,18.0s,baz=141,slow=34							
PLOR	Plostina	99.56	43	S		SKKSac	09 02 49.4	+1.1
VRI	Vrincioaia	99.61	43	S		SKKSac	09 02 49.5	+0.9
KIS	Kishinev	100.73	41	*e*			09 07 12.0	
MDJ	Mudanjiang	126.18	334	PKP		PKPdf	08 56 56.3	-1.3
MDJ				AMB		AMB		
	comp=Z,31nm,4.6s							
MKAR	Makanchi Array	128.38	16	PKP		PKPdf	08 57 00.1	-1.7
MKAR	Makanchi Array	128.38	16	PKP		PKPdf	08 57 00.1	-1.7
	comp=Z,0.5nm,0.4s,baz=4.6,slow=3.0,SNR=5.7							
SONM	Songino Array	129.51	355	PKP		PKPdf	08 57 03.1	-1.0
SONM	Songino Array	129.51	355	PKP		PKPdf	08 57 03.1	-1.0
	comp=Z,0.5nm,0.6s,baz=292,slow=1.8,SNR=5.4							
WMQ	Urumqi	132.48	12	PKP		PKPdf	08 57 09.5	-0.2
KSH	Kashi	132.58	26	*e*PKP		PKPdf	08 57 12.9	+2.8
KSH				PP		PP	08 59 40.0	+7.1
KSH				PKS		PKSdf	09 00 46.4	-0.3
KSH				SKS		SKSdf	09 04 21.6	+0.8
KSH				SKKS		SKKSac	09 06 31.0	+1.7
KSH				SS		SS	09 17 19.0	+7.5
KSH				AMB		AMB		
	comp=Z,100nm,6.3s							
KSH				LR		LR		
	comp=Z,130nm,4.1s							
HHC	Hu-ho-hao-te	135.56	348	*e*PKP		PKPdf	08 57 11.8	-3.8
HHC				PP		PP	08 59 51.8	+0.3
HHC				PKS		PKSdf	09 00 46.4	-5.6
HHC				AMB		AMB		
	comp=Z,250nm,6.5s							
HHC				LR		LR		
	comp=N,170nm,15.5s							
HHC				LR		LR		
	comp=E,240nm,14.3s							
HHC				LR		LR		
	comp=Z,140nm,13.5s							
ASAR	Alice Springs	141.22	234	PKPpre		PKPpre	08 57 20.2	
ASAR	Alice Springs	141.22	234	PKhKP		PKPpre	08 57 20.2	
	comp=Z,0.7nm,0.8s,baz=117,slow=4.0,SNR=7.1							
LZH	Lanzhou	141.40	355	*e*PKP		PKPdf	08 57 26.5	-0.1
LZH				sPKP			08 57 31.0	
LZH				LR		LR		
	comp=N,120nm,18.1s							
LZH				LR		LR		
	comp=E,120nm,18.4s							
LZH				LR		LR		
	comp=Z,170nm,20.1s							
WRA	Warramunga Arr	142.44	240	PKPpre		PKPpre	08 57 23.2	
WRA	Warramunga Arr	142.44	240	PKhKP		PKPpre	08 57 23.2	
	comp=Z,1.3nm,0.7s,baz=110,slow=2.8,SNR=10							
PYUN	Piuthan	145.32	27	*eP*		PKPbc	08 57 33.0	-0.5
	comp=Z,68nm,0.8s							
DANN	Dangsing	145.45	26	*eP*		PKPbc	08 57 33.8	-0.2
	comp=Z,79nm,0.7s							
KOLN	Koldanda	145.88	27	*eP*		PKPdf	08 57 34.4	-0.3
	comp=Z,7.0nm,0.6s							
KKN	Kakani	146.58	24	*eP*		PKPdf	08 57 36.5	+0.6
DMN	Daman	146.67	25	*eP*		PKPdf	08 57 35.7	-0.4
GUN	Gumba	146.72	23	*eP*		PKPbc	08 57 37.7	-0.2
	comp=Z,31nm,0.8s							
PKI	Pulchoki	146.83	24	*eP*		PKPdf	08 57 37.1	+0.6
RAMN	Ramite	147.86	23	*eP*		PKPdf	08 57 37.4	-0.7
	comp=Z,16nm,0.8s							
TAPN	Taplejung	147.92	21	*eP*		PKPdf	08 57 38.8	+0.5
	comp=Z,18nm,1.0s							
ODAN	Odare	148.25	22	*eP*		PKPdf	08 57 38.4	-0.3
	comp=Z,16nm,0.8s							
FITZ	Fitzroy Crossi	150.65	237	*e*PKPbc		PKPbc	08 57 46.9	-1.0
SHL	Shillong	150.90	16	*eP*		PKPbc	08 57 48.0	-0.6
CMAR	Chiang Mai Arr	159.07	3	PKPab		PKPab	08 58 29.9	-0.4
CMAR	Chiang Mai Arr	159.07	3	PKPab		PKPab	08 58 29.9	-0.4
	comp=Z,2.3nm,0.3s,baz=329,slow=5.4,SNR=5.1							

*ISCJB **24** 08:43:58.9±0.6, 60.6°S±0.1°×27.2°W±0.3, h19km, mb4.1/8, MS4.3/1, Error ellipse: s-maj=23.7km s-min=9.9km az=144.4*
*IDC **24** 08:43:58.2±1.2, 60.49°S×27.10°W, h0km, mb4.0/6, mb1 4.1/7, mb1mx4.0/17, mbtmp4.1/7, ML3.9/1, MS3.5/2, Ms1 3.5/2, ms1mx3.1/16, Error ellipse: s-maj=47.2km s-min=21.8km az=19.0*
*NEIC **24** 08:43:59.2±0.5, 60.59°S×27.15°W, h10km, mb4.6/3, Error ellipse: s-maj=23.0km s-min=12.0km az=41.0*

ISC 24 08:44:00.9±0.7, 60.6°S±0.2×27.2°W±0.2, h19km, n27, σ0.9s1/25, mb4.1/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	12.71	151	*eP*		Pn	08 47 01.4	+1.0
VNA3	Neumayer Olymp	12.81	154	*eP*		Pn	08 47 01.9	+0.1
SNAA	Sanae	14.72	149	*eP*		Pn	08 47 26.8	-1.0
SNAA	Sanae	14.72	149	*e*Pn		Pn	08 47 26.2	-1.6
	5.6nm,0.5s							
SNAA	Sanae	14.72	149	Pn		Pn	08 47 26.9	-1.0
	0.6nm,0.3s,baz=319,slow=13,SNR=50							
SNAA				LR		LR	08 51 50.0	
	comp=Z,40nm,21.6s,baz=293,slow=32							
QSPA	South Pole Qui	29.69	180	*eP*		P	08 50 09.6	+4.3
	17nm,1.6s							
CFAA	Coronel Fontan	39.54	298	P		P	08 51 30.9	+0.5
CFAA	Coronel Fontan	39.54	298	P		P	08 51 30.9	+0.5
	0.7nm,0.7s,baz=149,slow=8.8,SNR=18							
CPUP	Villa Florida	39.92	315	P		P	08 51 33.9	+0.3
CPUP	Villa Florida	39.92	315	P		P	08 51 33.9	+0.3
	1.2nm,0.5s,baz=90,slow=16,SNR=5.8							
BOSA	Boshof	47.22	72	P		P	08 52 33.5	+1.1
BOSA	Boshof	47.22	72	P		P	08 52 33.5	+1.1
	1.0nm,0.5s,baz=200,slow=9.1,SNR=5.0							
SIV	San Ignacio	50.77	316	P		P	08 52 58.0	-1.7
SIV	San Ignacio	50.77	316	P		P	08 52 58.0	-1.7
	0.8nm,0.4s,baz=184,slow=13,SNR=8.8							
LPAZ	La Paz	53.09	308	*eP*		P	08 53 18.4	+0.8
	8.6nm,1.5s							
LPAZ	La Paz	53.09	308	P		P	08 53 18.7	+1.1
	1.5nm,0.5s,baz=177,slow=9.5,SNR=15							
OTAV	Otavalo	72.22	305	*eP*		P	08 55 24.5	-0.6
	1.1nm,0.6s							
TOA0	Torodi Ar. Sit	76.99	29	*eP*		P	08 55 51.2	-0.9
TORD	Torodi Ar. Bea	76.99	29	P		P	08 55 51.5	-0.5
TORD	Torodi Ar. Bea	76.99	29	P		P	08 55 51.5	-0.5
	1.6nm,0.4s,baz=199,slow=6.3,SNR=47							
ASAR	Alice Springs	94.68	163	LR		LR	09 40 25.9	
	comp=Z,93nm,19.2s,baz=328,slow=36							
YKA	Yellowknife Ar	139.44	314	PKP		PKPdf	09 03 25.4	+0.1
YKA	Yellowknife Ar	139.44	314	PKP		PKPdf	09 03 25.4	+0.1
	0.4nm,0.7s,baz=127,slow=2.2,SNR=8.1							
SONM	Songino Array	150.67	94	PKPbc		PKPbc	09 03 50.7	0.0
SONM	Songino Array	150.67	94	PKPbc		PKPbc	09 03 50.7	0.0
	1.2nm,0.8s,baz=230,slow=3.7,SNR=6.2							
ILAR	Eielson Array	152.94	305	PKPbc		PKPbc	09 03 55.4	+0.2
ILAR	Eielson Array	152.94	305	PKPbc		PKPbc	09 03 55.4	+0.2
	0.6nm,0.7s,baz=19,slow=0.3,SNR=7.8							

WEL 24 08:52:02.3±0.5, 36.20°S×177.42°E, h33km, ML3.5/3, Error ellipse: s-maj=5.3km s-min=3.4km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	Puketiti	1.99	161	*e*PN		Pn	08 52 33.3	-0.4
PUZ				SN		Sn	08 52 56.0	-1.4
URZ	Urewera	2.07	187	P*		Pn	08 52 34.7	-0.1
URZ				*e*S*		Sn	08 52 59.6	+0.2
MWZ	Matawai	2.13	178	P*		Pn	08 52 35.5	-0.3
MWZ				*e*S*		Sn	08 53 00.1	-1.0
NMHZ	Naumai	2.94	189	PN		Pn	08 52 45.7	-1.1

MEX 24 09:01:26.0±0.7, 18.17°N×94.55°W, h49km±10km, MD4.1, Bay of Campeche

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	1.12	196	*eP*		Pn	09 01 43.6	-1.7
CMIG				*i* S		Sn	09 01 57.6	-2.1
TGIG		1.94	135	*eP*		Pn	09 01 55.0	-1.7
TGIG				*i* S		Sn	09 02 17.4	-2.6
VHO	Vista Hermosa	2.35	243	*eP*		Pn	09 02 01.6	-0.8
VHO				*i* S		Sn	09 02 28.4	-1.8
TPIG	Tehuac#an	2.68	276	*i* P		Pn	09 02 05.4	-1.5
TPIG				*i* S		Sn	09 02 36.2	-2.1
HUIG	Huatulco	2.81	212	*eP*		Pn	09 02 07.0	-1.5
HUIG				*i* S		Sn	09 02 39.1	-2.1
CCIG	Comitan	2.98	129	*i* P		Pn	09 02 10.4	-0.6
CCIG				*i* S		Sn	09 02 43.0	-2.7
UTMO	Huajuapan	3.11	264	*i* P		Pn	09 02 18.0	-0.9
UTMO				*i* S		Sn	09 02 46.2	-2.8
PNIG	Pinotepa	3.84	243	*eP*		Pn	09 02 20.2	-2.5
PNIG				*i* S		Sn	09 03 05.7	-1.0

*DDA **24** 09:10:27.0, 37.11°N×27.69°E, h7km, MD2.7*
*ISK **24** 09:10:28.4, 37.28°N×28.23°E, h11km, MD2.6*
*ISCJB **24** 09:10:29.0±0.6, 37.23°N±0.06°×28.20°E±0.06, h14km±6km, Error ellipse: s-maj=12.8km s-min=4.6km az=38.0*
*CSEM **24** 09:10:29.0±0.1, 37.23°N×28.21°E, h16km±1km, MD2.6, Error ellipse: s-maj=4.4km s-min=2.2km az=34.0*

ISC 24 09:10:29.0±0.9, 37.24N±0.04°×28.20E±0.04, h14km±6km, n18, σ0.9s1/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	Yerkesik	0.12	148	*e*PG		Pg	09 10 32.2	-0.3
YER				*e*SG		Sg	09 10 35.2	+0.4
YER	Yerkesik	0.12	148	*e*Pg		Pg	09 10 32.2	-0.3
YER				*e*Sg		Sg	09 10 35.2	+0.4
MLSB	Milas	0.35	280	*e*PG		Pg	09 10 36.0	0.0
MLSB				*e*SG		Sb	09 10 42.0	-0.3
MLSB	Milas	0.35	280	*e*Pg		Pg	09 10 36.1	0.0
MLSB				*e*Sg		Sb	09 10 42.0	-0.3
TURN	Turunc	0.48	138	*i* P		Pg	09 10 38.4	-0.2
TURN				*i* S		Sb	09 10 45.7	-0.5
TURN	Turunc	0.48	138	*i* P		Pg	09 10 38.4	-0.2
TURN				*i* S		Sb	09 10 45.7	-0.5
AYDN	Tasoluk	0.50	329	*i* P		Pb	09 10 39.5	0.0
AYDN				*i* S		Sg	09 10 46.1	+0.5
AYDN	Tasoluk	0.50	329	*i* P		Pb	09 10 39.5	0.0
AYDN				*i* S		Sg	09 10 46.1	+0.5
DALY	Dalyan (Mu¨la	0.55	139	*e*PG		Pg	09 10 40.0	+0.1
DALY				*e*SG		Sb	09 10 48.6	+0.5
DALY	Dalyan (Mu¨la	0.55	139	*e*Pg		Pg	09 10 40.0	+0.1
DALY				*e*Sg		Sb	09 10 48.6	+0.5
DAT	Datca	0.71	225	*e*PG		Pb	09 10 43.2	0.0
DAT	Datca	0.71	225	*e*Pg		Pb	09 10 43.2	0.0
BODT	Bodrum	0.73	257	*e*PG		Pg	09 10 43.3	0.0
BODT	Bodrum	0.73	257	*e*Pg		Pg	09 10 43.3	0.0
FETY	Fethiye	0.93	130	*e*PG		Pb	09 10 46.8	0.0
FETY	Fethiye	0.93	130	*e*Pg		Pb	09 10 46.8	0.0
KULA	Kula-Manisa	1.33	16	*e*PN		Pn	09 10 53.0	-0.2
KULA	Kula-Manisa	1.33	16	*e*Pn		Pn	09 10 53.0	-0.2

*DDA **24** 09:24:49.9, 37.56°N×35.70°E, h5km, MD3.2*
*ISCJB **24** 09:24:50.4±0.5, 37.57°N±0.03°×35.72°E±0.04, h12km±4km, Error ellipse: s-maj=4.8km s-min=4.6km az=22.7*
*CSEM **24** 09:24:50.4±0.1, 37.56°N×35.70°E, h15km, MD3.0, Error ellipse: s-maj=3.5km s-min=3.4km az=58.0*
*ISK **24** 09:24:50.0, 37.56°N×35.73°E, h20km, MD3.0*

ISC 24 09:24:50.7±0.8, 37.53N±0.02°×35.71E±0.02, h18km±5km, n41, σ0.9s65/55, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	Kozan	0.11	119	PG		Pg	09 24 54.3	-0.1
KOZT				*e*SG		Sg	09 24 56.8	-0.1
KOZT	Kozan	0.11	119	*i* Pg		Pg	09 24 54.3	-0.1
KOZT				*e*Sg		Sg	09 24 56.8	-0.1
CEYT	Ceyhan	0.52	177	*e*PG		Pb	09 25 01.3	-0.1
CEYT				*e*SG		Sb	09 25 10.0	+1.4
CEYT	Ceyhan	0.52	177	*e*Pg		Pb	09 25 01.3	-0.1
CEYT				*e*Sg		Sb	09 25 10.0	+1.4
YURE	YUREGIR	0.71	185	*i* P		Pg	09 25 04.3	-0.3
YURE				*i* S		Sn	09 25 15.5	-0.9
YURE	YUREGIR	0.71	185	*i* P		Pg	09 25 04.3	-0.3
YURE				*i* S		Sn	09 25 15.5	-0.9
GULE	Gulek	0.78	252	*i* P		Pb	09 25 05.7	-0.2
GULE				*i* S		Sn	09 25 17.8	-0.7
GULE	Gulek	0.78	252	*i* P		Pb	09 25 05.7	-0.2
GULE				*i* S		Sn	09 25 17.8	-0.7
KMRS	Kahramanmaras	0.95	91	*e*PG		Pb	09 25 08.8	+0.2
KMRS				*e*SG		Sn	09 25 22.0	-0.4
KMRS	Kahramanmaras	0.95	91	*e*Pg		Pb	09 25 08.8	+0.2
KMRS				*e*Sg		Sn	09 25 22.0	-0.4
KRTS	Karatas	0.99	196	*e*PG		Pb	09 25 09.7	+0.3
KRTS	Karatas	0.99	196	*e*Pg		Pb	09 25 09.7	+0.3
NIG	Nigde	1.04	304	*e*PG		Pb	09 25 10.2	-0.2
NIG	Nigde	1.04	304	*e*Pg		Pb	09 25 10.2	-0.2
MERS	Mersin	1.16	235	*e*PN		Pn	09 25 12.1	0.0
MERS	Mersin	1.16	235	*e*Pn		Pn	09 25 12.1	0.0
GAZ	Gaziantep	1.25	106	*e*PN		Pn	09 25 12.9	-0.5
GAZ	Gaziantep	1.25	106	*e*Pn		Pn	09 25 12.9	-0.5
PINB	Pinarbasi	1.27	25	*i* P		Pb	09 25 14.5	+0.3
PINB				*i* S		Sg	09 25 34.5	+2.7
PINB	Pinarbasi	1.27	25	*i* P		Pb	09 25 14.5	+0.3
BNN	Bunyan	1.32	5	*e*PN		Pn	09 25 13.7	-0.8
BNN	Bunyan	1.32	5	*e*Pn		Pn	09 25 13.7	-0.8
KUZU	Kuzuini	1.33	124	*i* P		Pb	09 25 15.2	0.0
KUZU				*i* S		Sg	09 25 33.6	-0.1
KUZU	Kuzuini	1.33	124	*i* P		Pb	09 25 15.2	0.0
KUZU				*i* S		Sg	09 25 33.6	-0.1
SARI	SarD1z-Kayseri	1.39	34	*e*PG		Pn	09 25 10.4	-5.0
AVNT	Avonos	1.42	332	*i* P		Pb	09 25 17.0	+0.3
AVNT				*i* S		Sg	09 25 36.0	-0.5
AVNT	Avonos	1.42	332	*i* P		Pb	09 25 17.0	+0.3
AVNT				*i* S		Sg	09 25 36.0	-0.5
HTY	Hatay	1.45	166	*e*PN		Pn	09 25 15.6	-0.5
HTY	Hatay	1.45	166	*e*Pn		Pn	09 25 15.6	-0.5
GZT	Gaziantep	1.49	96	*i* P		Pb	09 25 18.0	+0.1
SULT	Sultanhani-AKS	1.86	292	*e*PN		Pn	09 25 21.8	0.0
SULT	Sultanhani-AKS	1.86	292	*e*Pn		Pn	09 25 21.8	0.0
YOZ	Yozgat	2.13	352	*e*PN		Pn	09 25 24.7	-0.8
YOZ	Yozgat	2.13	352	*e*Pn		Pn	09 25 24.7	-0.8
DARE	Darende-Malaty	2.17	49	*e*PN		Pn	09 25 19.6	-6.6
MALT	Malatya	2.29	69	*e*PN		Pn	09 25 27.6	-0.1
MALT	Malatya	2.29	69	*e*Pn		Pn	09 25 27.6	-0.1
MYA	Malataya	2.29	69	*e*PN		Pn	09 25 27.1	-0.6
MYA	Malataya	2.29	69	*e*Pn		Pn	09 25 27.1	-0.6
ERMK	Ermenek	2.41	249	*i* P		Pb	09 25 34.1	+0.5
ERMK				*i* S		Sg	09 26 09.4	+1.3
ERMK	Ermenek	2.41	249	*i* P		Pb	09 25 34.1	+0.5

*ISK **24** 09:42:52.4, 38.09°N×38.53°E, h14km, MD3.3*
*ISCJB **24** 09:42:53.1±0.5, 38.09°N±0.02°×38.54°E±0.03, h7km±4km, Error ellipse: s-maj=4.0km s-min=3.9km az=10.5*
*CSEM **24** 09:42:53.5±0.2, 38.10°N×38.52°E, h10km, MD3.3, Error ellipse: s-maj=4.2km s-min=4.0km az=87.0*
*NSSC **24** 09:42:53.5±2.4, 38.09°N×38.65°E, h3km±29km, MD1.7, ML2.4*
*DDA **24** 09:42:53.6, 38.11°N×38.48°E, h13km, MD3.2*

ISC 24 09:42:53.7±0.9, 38.12N±0.02°×38.51E±0.02, h12km±7km, n51, σ1.9s04/77, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MALT	Malatya	0.21	341	PG		Pg	09 42 58.4	+0.1
MALT				*e*SG		Sg	09 43 01.9	+0.4
MALT	Malatya	0.21	341	*i* Pg		Pg	09 42 58.4	+0.1
MALT				*e*Sg		Sg	09 43 01.9	+0.4
MYA	Malataya	0.22	342	PG		Pg	09 42 58.4	-0.1
MYA				*e*SG		Sg	09 43 02.3	+0.5
MYA	Malataya	0.22	342	*i* Pg		Pg	09 42 58.4	-0.1
MYA				*e*Sg		Sg	09 43 02.3	+0.5
AKCD	Akcadag	0.50	291	*i* P		Pg	09 43 03.5	-0.1
AKCD				*i* S		Sg	09 43 10.6	+0.4
AKCD	Akcadag	0.50	291	*i* P		Pg	09 43 03.5	-0.1
AKCD				*i* S		Sg	09 43 10.6	+0.4
ELZG	Elazig	0.53	44	*i* P		Pg	09 43 04.7	+0.5
ELZG				*i* S		Sb	09 43 12.5	-0.3
ELZG	Elazig	0.53	44	*i* P		Pg	09 43 04.7	+0.5
ELZG				*i* S		Sb	09 43 12.5	-0.3
SVRC	Sivrice-ELAZID	0.68	67	*e*PG		Pg	09 43 06.2	-0.7
SVRC	Sivrice-ELAZID	0.68	67	*e*Pg		Pg	09 43 06.2	-0.7
URFA	Urfa	0.72	160	*e*PG		Pg	09 43 06.6	-1.0
URFA				*e*SG		Sg	09 43 16.1	-0.9
URFA	Urfa	0.72	160	*e*Pg		Pg	09 43 06.6	-1.0
URFA				*e*Sg		Sg	09 43 16.1	-0.9
DARE	Darende-Malaty	1.00	327	*e*PG		Pb	09 43 10.4	-2.7
PTK	Pertek	1.04	41	*e*PG		Pb	09 43 12.6	-1.1
PTK	Pertek	1.04	41	*e*Pg		Pb	09 43 12.6	-1.1
GZT	Gaziantep	1.07	225	*i* P		Pb	09 43 14.2	0.0
GZT				*i* S		Sn	09 43 30.5	+1.1
KEMA	Kemaliye	1.15	359	*i* P		Pb	09 43 15.1	-0.5
KEMA				*i* S		Sn	09 43 32.6	+1.1
KEMA	Kemaliye	1.15	359	*i* P		Pb	09 43 15.1	-0.5
KEMA				*i* S		Sn	09 43 32.6	+1.1
DIYA	Diyarbakir	1.28	98	*i* P		Pg	09 43 19.1	+0.7
DIYA				*i* S		Sg	09 43 37.8	+2.7
DIYA	Diyarbakir	1.28	98	*i* P		Pg	09 43 19.1	+0.7
DIYA				*i* S		Sg	09 43 37.8	+2.7
ILIC	ilic-Erzincan	1.33	2	*e*PN		Pn	09 43 17.7	-0.6
ILIC	ilic-Erzincan	1.33	2	*e*Pn		Pn	09 43 17.7	-0.6
GAZ	Gaziantep	1.40	228	*e*PN		Pn	09 43 18.2	-0.9
GAZ	Gaziantep	1.40	228	*e*Pn		Pn	09 43 18.2	-0.9
KMRS	Kahramanmaras	1.42	245	*e*PN		Pn	09 43 18.5	-0.8
KMRS	Kahramanmaras	1.42	245	*e*Pn		Pn	09 43 18.5	-0.8
SARI	SarD1z-Kayseri	1.53	292	*e*PN		Pb	09 43 22.4	+0.3
SARI	SarD1z-Kayseri	1.53	292	*e*Pn		Pb	09 43 22.5	+0.3
BINT	Bingol	1.73	63	*e*Pn		Pb	09 43 25.6	+0.2
ERZN	Erzincan	1.75	32	*e*PN		Pn	09 43 23.2	-0.7
EZC	Erzincan	1.76	22	*e*Pn		Pn	09 43 23.3	-0.8
KUZU	Kuzuini	1.76	221	*i* P		Pb	09 43 25.4	-0.6
KUZU				*i* S		Sg	09 43 50.4	0.0
KUZU	Kuzuini	1.76	221	*i* P		Pb	09 43 25.4	-0.6
BNGB	Bing¯l¶l	1.91	62	*e*PN		Pn	09 43 25.6	-0.5
KBSD	Kabsdagh	1.96	124	*e*P		Pn	09 43 27.1	+0.3
KBSD				*e*S		Sn	09 43 49.1	-2.2
KBSD				AML		AML	09 44 00.7	
	comp=Z,29nm,0.2s							
KBSD	Kabsdagh	1.96	124	*e*P		Pn	09 43 27.1	+0.3
	SNR=45							
KBSD				*e*S		Sn	09 43 49.1	-2.2
	comp=Z,29nm,0.2s,SNR=40							
MARD	Mardin	1.97	113	*i* P		Pn	09 43 27.9	+1.0
MARD				*i* S		Sg	09 43 59.6	+2.6
DRWC	Darouich	2.10	225	*e*P		Pb	09 43 32.0	+0.3
DRWC				*e*S		Sb	09 43 57.8	+0.1
DRWC				AML		AML	09 44 06.2	
	comp=E,29nm,0.3s							
DRWC				AML		AML	09 44 12.5	
	comp=N,49nm,0.3s							
DRWC	Darouich	2.10	225	*e*P		Pb	09 43 32.0	+0.3
	SNR=45							
DRWC				*e*S		Sb	09 43 57.8	+0.1
	comp=N,49nm,0.3s,SNR=40							
SFNV	Sufian	2.12	143	*e*P		Pn	09 43 28.5	-0.5
SFNV				*e*S		Sn	09 43 55.1	-0.2
SFNV				AML		AML	09 44 06.4	
	comp=Z,39nm,0.6s							
SFNV	Sufian	2.12	143	*e*P		Pn	09 43 28.5	-0.5
	SNR=45							
SFNV				*e*S		Sn	09 43 55.1	-0.2
	comp=Z,39nm,0.6s,SNR=40							
BEST	Besiri	2.19	95	*i* P		Pn	09 43 30.9	+0.9
BEST				*i* S		Sg	09 44 05.0	+0.9
BNN	Bunyan	2.22	290	*e*PN		Pn	09 43 30.1	-0.3
BNN	Bunyan	2.22	290	*e*Pn		Pn	09 43 30.1	-0.3
KOZT	Kozan	2.22	254	*e*PN		Pn	09 43 29.9	-0.5
KOZT	Kozan	2.22	254	*e*Pn		Pn	09 43 29.9	-0.5
BTMT	Batman	2.35	87	*e*PN		Pn	09 43 29.1	-3.1
BTCH	Batrach	2.65	219	*e*P		Pn	09 43 36.6	+0.4
BTCH				*e*S		Sn	09 44 10.0	+1.7
BTCH				AML		A

SRS				S		**Sb**	**10 07 33.1**	**-1.1**
SOH	**Sokhos**	**0.78**	**247**	P		**Pg**	**10 07 29.4**	**-0.1**
SOH				S		**Sb**	**10 07 41.8**	**+0.5**
SOH	**Sokhos**	**0.78**	**247**	P		**Pg**	**10 07 29.4**	**-0.1**
SOH				S		**Sb**	**10 07 41.8**	**+0.5**
PLG	**Polygyros**	**0.99**	**221**	*e*PB		**Pb**	**10 07 34.1**	**-0.2**
PLG				*e*SB		**Sn**	**10 07 49.0**	**-0.5**
PLG	**Polygyros**	**0.99**	**221**	*e*Pb		**Pb**	**10 07 34.1**	**-0.2**
PLG				*e*Sb		**Sn**	**10 07 49.0**	**-0.5**
PLD	**Plovdiv**	**1.02**	**17**	P		**Pn**	**10 07 35.4**	**-0.1**
PLD	**Plovdiv**	**1.02**	**17**	*e*Sg		**Sn**	**10 07 50.7**	**+0.6**
KNT	**Kendrikon**	**1.05**	**272**	P		**Pg**	**10 07 34.5**	**-0.4**
KNT				S		**Sn**	**10 07 49.9**	**-1.1**
KNT	**Kendrikon**	**1.05**	**272**	P		**Pg**	**10 07 34.5**	**-0.4**
KNT				S		**Sn**	**10 07 49.9**	**-1.1**
SMTH	**Samothraki Isl**	**1.15**	**125**	*e*PN		**Pn**	**10 07 36.4**	**-0.9**
SMTH				*e*SB		**Sn**	**10 07 52.5**	**-0.8**
SMTH	**Samothraki Isl**	**1.15**	**125**	*e*Pn		**Pn**	**10 07 36.4**	**-0.9**
SMTH				*e*Sb		**Sn**	**10 07 52.5**	**-0.8**
ALN	**Alexandroupoli**	**1.35**	**99**	P		**Pn**	**10 07 39.1**	**-0.9**
ALN				S		**Sn**	**10 07 58.0**	**-0.2**
ALN	**Alexandroupoli**	**1.35**	**99**	*e*PB		**Pg**	**10 07 39.9**	**-0.6**
ALN				*e*SB		**Sn**	**10 07 58.2**	**0.0**
ALN	**Alexandroupoli**	**1.35**	**99**	P		**Pn**	**10 07 39.1**	**-0.9**
ALN	**Alexandroupoli**	**1.35**	**99**	*e*Pb		**Pg**	**10 07 39.9**	**-0.6**
ALN				*e*Sb		**Sn**	**10 07 58.2**	**0.0**
LIA	**Limnos Island**	**1.41**	**151**	*e*PG		**Pg**	**10 07 41.9**	**+0.3**
LIA				*e*SB		**Sg**	**10 08 02.6**	**+2.7**
LIA	**Limnos Island**	**1.41**	**151**	*e*Pg		**Pg**	**10 07 41.9**	**+0.3**
LIA				*e*Sb		**Sg**	**10 08 02.6**	**+2.7**
GRG	**Griva**	**1.44**	**264**	*e*PB		**Pg**	**10 07 42.5**	**+0.2**
GRG				*e*SB		**Sg**	**10 08 02.6**	**+1.6**
GRG	**Griva**	**1.44**	**264**	*e*Pb		**Pg**	**10 07 42.5**	**+0.2**
GRG				*e*Sb		**Sg**	**10 08 02.6**	**+1.6**
VTS	**Vitosha**	**1.67**	**331**	*e*Sg		**Sg**	**10 08 08.4**	**+0.1**
VTS	**Vitosha**	**1.67**	**331**	*e*Sg		**Sg**	**10 08 08.4**	**+0.1**
ZAPS	**Zavoj**	**2.47**	**331**	*e*Pn		**Pg**	**10 08 02.9**	**+0.9**
ZAPS				*e*Sn		**Sb**	**10 08 31.5**	**+1.4**
BARS	**Barje**	**2.50**	**313**	*e*Pn		**Pg**	**10 08 05.0**	**+2.5**
BARS				*e*Sn		**Sb**	**10 08 32.0**	**+1.1**

IDC 24 10:12:47.9±2.6, 15°97S×175°17W, h0km, mb3.8/5, mb1 4.2/6, mb1mx3.9/19, mbtmp3.9/6, ML2.7/1, MS3.7/13, Ms1 3.7/13, ms1mx3.5/32, Error ellipse: s-maj=145.1km s-min=22.0km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.87**	**58**	Pn	Pn	10 13 47.9	-0.9
	29nm,0.3s,baz=25,slow=2.7,SNR=34						
AFI				Sn	Sn	10 14 30.5	-4.4
	57nm,0.3s,baz=190,slow=21,SNR=15						
AFI				LR	LR	10 15 08.5	
	comp=Z,735nm,21.5s,baz=257,slow=36						
RAO	**Raoul Island**	**13.46**	**190**	LR	LR	10 19 53.0	
	comp=Z,697nm,18.5s,baz=71,slow=32						
DZM	**Mont Dzumac**	**18.41**	**248**	*e*LR	LR	10 21 38.5	
	614nm,24.9s						
DZM	**Mont Dzumac**	**18.41**	**248**	P	P	10 17 07.6	+2.7
	0.2nm,0.3s,baz=76,slow=19,SNR=5.9						
DZM				LR	LR	10 23 06.6	
	comp=Z,277nm,18.1s,baz=35,slow=34						
URZ	**Urewera**	**23.22**	**196**	LR	LR	10 25 18.8	
	comp=Z,254nm,20.8s,baz=220,slow=32						
PPT	**Papeete**	**24.55**	**97**	LR	LR	10 24 58.6	
	comp=Z,132nm,20.8s,baz=282,slow=30						
PPT2	**Papeete2**	**24.55**	**97**	*e*LQ	LQ	10 23 09.5	
	827nm,25.2s						
PPT2				*e*LR	LR	10 24 12.1	
	158nm,24.2s						
HNR	**Honiara**	**25.12**	**282**	LR	LR	10 26 00.2	
	comp=Z,405nm,21.8s,baz=118,slow=32						
TBI	**Tubuai**	**25.27**	**111**	*e*LQ	LQ	10 23 32.7	
	667nm,27.8s						
TBI				*e*LR	LR	10 24 39.9	
	225nm,27.2s						
WRA	**Warramunga Arr**	**48.06**	**257**	P	P	10 21 30.4	+0.8
	4.3nm,1.1s,baz=89,slow=7.6,SNR=16						
ASAR	**Alice Springs**	**48.32**	**252**	P	P	10 21 30.6	-0.9
	5.8nm,0.9s,baz=86,slow=7.5,SNR=25						
GUMO	**Guam**	**49.23**	**304**	LR	LR	10 38 53.4	
	comp=Z,46nm,20.6s,baz=90,slow=32						
VNDA	**Vanda**	**62.64**	**185**	LR	LR	10 47 46.2	
	comp=Z,74nm,18.1s,baz=2.3,slow=34						
PFO	**Pinyon Flat Ob**	**74.56**	**48**	LR	LR	10 50 57.8	
	comp=Z,68nm,20.7s,baz=353,slow=31						
LPIG	**La Paz**	**74.79**	**59**	LR	LR	10 49 18.2	
	comp=Z,7.6nm,19.9s,baz=355,slow=29						
YBH	**Yreka Blue Hor**	**75.08**	**38**	LR	LR	10 49 54.4	
	comp=Z,66nm,20.4s,baz=206,slow=30						
TXAR	**Lajitas Array**	**82.34**	**57**	P	P	10 25 15.6	+3.4
	0.9nm,0.9s,baz=229,slow=8.2,SNR=2.6						
TXAR				LR	LR	10 52 37.1	
	comp=Z,74nm,21.9s,baz=0.0,slow=29						
ILAR	**Eielson Array**	**83.34**	**12**	P	P	10 25 16.7	+0.3
	1.0nm,1.1s,baz=220,slow=5.5,SNR=3.7						
PDAR	**Pinedale Array**	**83.83**	**42**	P	P	10 25 20.9	+1.2
	0.5nm,0.8s,baz=225,slow=3.7,SNR=4.2						
PDAR				LR	LR	10 55 29.0	
	comp=Z,44nm,20.3s,baz=91,slow=31						
YKA	**Yellowknife Ar**	**91.30**	**24**	P	P	10 25 54.4	-0.6
	0.1nm,0.4s,baz=234,slow=5.0,SNR=2.7						
BRTR	**Keskin Array B**	**145.50**	**319**	PKPbc	PKPdf	10 32 26.8	-1.8
	1.3nm,0.9s,baz=66,slow=3.0,SNR=5.8						

IDC 24 10:13:30.9±8.4, 6°65S×153°81E, h110km±59km, mb3.3/4, mb1 3.4/5, mb1mx3.2/19, mbtmp3.3/5, Error ellipse: s-maj=85.1km s-min=33.5km az=95.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.13**	**247**	P	Pn	10 15 12.8	+0.1
	1.4nm,0.3s,baz=49,slow=9.3,SNR=4.7						
WRA	**Warramunga Arr**	**23.06**	**233**	P	P	10 18 27.3	+0.1
	1.1nm,0.5s,baz=59,slow=9.9,SNR=25						
ASAR	**Alice Springs**	**25.54**	**226**	P	P	10 18 49.9	+0.2
	0.3nm,0.5s,baz=57,slow=9.1,SNR=8.6						
STKA	**Stephens Creek**	**27.57**	**203**	P	P	10 19 07.4	-0.4
	1.2nm,0.6s,baz=12,slow=9.3,SNR=3.1						
MKAR	**Makanchi Array**	**82.37**	**319**	P	P	10 25 40.7	-0.1
	0.2nm,0.5s,baz=91,slow=5.8,SNR=2.6						

IDC 24 10:21:37.5±0.7, 4°.19N×126°.88E, h0km, mb4.0/12, mb1 4.2/12, mb1mx4.0/24, mbtmp4.0/12, MS3.0/1, Ms1 3.0/1, ms1mx2.1/41, Error ellipse: s-maj=41.4km s-min=14.3km az=73.0
ISCJB 24 10:21:41.0±0.5, 4°.23N±0°.06×126°.98E±0°.06, h36km, mb4.1/15, Error ellipse: s-maj=9.9km s-min=6.8km az=37.5
NEIC 24 10:21:42.8±0.3, 4°.14N×126°.81E, h35km, mb4.5/4, Error ellipse: s-maj=14.8km s-min=6.3km az=79.0
DJA 24 10:21:45.8±1.3, 5°.N±6°×12°.6E±°, h19km±13km, M4.6/9, mb4.6/5, mB5.0/1, MLv4.6/9, Mw(mB)4.3/1

ISC 24 10:21:42.8±0.6, 4°.14N±0°.08×126°.91E±0°.10, h36km, n43, σ0°62/35, mb4.2/15, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.45**	**252**	P	**Pn**	**10 22 06.9**	**+0.4**
SGSI				S	**Sn**	**10 22 25.0**	**+0.7**
GAMI	**Galela, Maluku**	**2.45**	**159**	P	Pn	10 22 37.1	+17
TNTI	**Ternate**	**3.38**	**172**	P	Pn	10 22 48.3	+15
MNI	**Manado**	**3.38**	**218**	P	Pn	10 22 40.9	+7.8
CTBH	**Cotabato--PC H**	**4.05**	**319**	i/P	Pn	10 22 46.5	+4.2
KMSI	**Cibinong**	**4.59**	**220**	P	Pn	10 22 54.8	+5.1
LBMI	**Labuha**	**4.78**	**173**	P	Pn	10 23 08.1	+16
	50nm,0.9s,0.3nm						
MRSI	**Marisa**	**6.16**	**234**	P	Pn	10 23 14.2	+3.0
	68nm,0.5s,1μm0.3nm						
MRSI				S	Sn	10 24 24.5	+4.1
	68nm,0.5s,1μm0.3nm						
SWI	**Sorong**	**6.60**	**139**	P	Pn	10 23 35.9	+19
	35nm,0.9s,0.1nm						
LUWI	**Luwuk**	**6.60**	**219**	P	Pn	10 23 23.8	+6.4
	84nm,1.0s,0.3nm						
MYLDM	**Lahad Datu**	**8.45**	**277**	P	Pn	10 23 35.7	-7.0
KAPI	**Kappang**	**11.57**	**218**	*e*Pn	**Pn**	**10 24 24.2**	**-1.3**
KAPI	**Kappang**	**11.57**	**218**	LR	LR	10 28 50.9	
	comp=Z,72nm,19.5s,baz=279,slow=37						
FITZ	**Fitzroy Crossi**	**22.14**	**183**	*e*P	**P**	**10 26 36.4**	**+1.0**
	0.9nm,0.4s						
FITZ	**Fitzroy Crossi**	**22.14**	**183**	P	**P**	**10 26 35.7**	**+0.2**
	1.9nm,0.5s,baz=68,slow=10,SNR=7.5						
WRAB	**Tennant Creek**	**25.01**	**163**	*e*P	**P**	**10 27 03.7**	**+0.1**
	7.5nm,0.8s						
WRA	**Warramunga Arr**	**25.02**	**163**	P	**P**	**10 27 04.1**	**+0.5**
WRA	**Warramunga Arr**	**25.02**	**163**	P	**P**	**10 27 04.1**	**+0.5**
	4.4nm,0.7s,baz=345,slow=11,SNR=39						
ASAR	**Alice Springs**	**28.47**	**166**	P	**P**	**10 27 35.0**	**+0.4**
ASAR	**Alice Springs**	**28.47**	**166**	P	**P**	**10 27 35.0**	**+0.4**
	0.3nm,0.5s,baz=345,slow=6.9,SNR=8.8						
CMAR	**Chiang Mai Arr**	**30.82**	**300**	P	**P**	**10 27 55.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**30.82**	**300**	P	**P**	**10 27 55.4**	**-0.3**
	1.6nm,0.7s,baz=113,slow=7.3,SNR=7.3						
KSAR	**Wonju Array Be**	**33.16**	**1**	P	**P**	**10 28 16.5**	**+0.7**
KSRS	**Korea Array**	**33.17**	**1**	P	**P**	**10 28 16.5**	**+0.6**
	1.4nm,0.8s,baz=179,slow=9.0,SNR=4.7						
STKA	**Stephens Creek**	**38.45**	**160**	P	**P**	**10 29 01.1**	**-0.1**
STKA	**Stephens Creek**	**38.45**	**160**	P	**P**	**10 29 01.1**	**-0.1**
	3.5nm,0.8s,baz=316,slow=13,SNR=5.7						
SONM	**Songino Array**	**46.97**	**341**	P	**P**	**10 30 11.0**	**+0.7**
SONM				PcP	**PcP**	**10 31 42.5**	**+0.1**
SONM	**Songino Array**	**46.97**	**341**	P	**P**	**10 30 11.0**	**+0.7**
	0.5nm,0.4s,baz=156,slow=8.1,SNR=4.1						
SONM				PcP	**PcP**	**10 31 42.5**	**+0.1**
	1.0nm,0.8s,baz=166,slow=2.9,SNR=4.5						
MK31	**Makanchi Array**	**57.33**	**325**	*e*P	**P**	**10 31 26.6**	**-0.6**
MKAR	**Makanchi Array**	**57.33**	**325**	P	**P**	**10 31 26.8**	**-0.5**
MKAR	**Makanchi Array**	**57.33**	**325**	P	**P**	**10 31 26.8**	**-0.5**
	2.6nm,0.8s,baz=123,slow=8.5,SNR=25						
ZALV	**Zalesovo Beam**	**60.31**	**333**	P	**P**	**10 31 46.5**	**-1.3**
ZALV	**Zalesovo Beam**	**60.31**	**333**	P	**P**	**10 31 46.5**	**-1.3**
	1.0nm,0.3s,baz=126,slow=6.7,SNR=6.0						
KURK	**Kurchatov**	**61.49**	**327**	*e*P	**P**	**10 31 55.6**	**-0.3**
	3.6nm,0.5s						
BRVK	**Borovoye**	**67.15**	**327**	*e*P	**P**	**10 32 33.3**	**+0.4**
	5.6nm,0.8s						
ILAR	**Eielson Array**	**84.66**	**25**	P	**P**	**10 34 12.3**	**-0.2**
ILAR	**Eielson Array**	**84.66**	**25**	P	**P**	**10 34 12.3**	**-0.2**
	0.8nm,0.9s,baz=242,slow=6.3,SNR=11						
ARCES	**ARCESS Array B**	**90.13**	**340**	P	**P**	**10 34 38.3**	**-0.6**
ARCES	**ARCESS Array B**	**90.13**	**340**	P	**P**	**10 34 38.3**	**-0.6**
	2.3nm,0.9s,baz=319,slow=3.5,SNR=4.8						
FINES	**FINESS Array B**	**91.56**	**332**	P	**P**	**10 34 45.1**	**-0.5**
FINES	**FINESS Array B**	**91.56**	**332**	P	**P**	**10 34 45.1**	**-0.5**
	0.5nm,0.5s,baz=54,slow=3.3,SNR=3.8						
TORD	**Torodi Ar. Bea**	**122.96**	**288**	PKP	**PKPdf**	**10 40 36.8**	**+0.4**
TORD	**Torodi Ar. Bea**	**122.96**	**288**	PKP	**PKPdf**	**10 40 36.7**	**+0.4**
	0.4nm,0.6s,baz=89,slow=1.3,SNR=3.9						

IDC 24 10:25:33.3±0.7, 22°.87S×175°.35W, h0km, mb4.3/14, mb1 4.5/15, mb1mx4.4/23, mbtmp4.3/15, ML4.1/1, MS3.8/5, Ms1 3.8/5, ms1mx3.4/37, Error ellipse: s-maj=24.2km s-min=18.7km az=139.0
NEIC 24 10:25:34.7±0.3, 22°.79S×175°.34W, h10km, mb4.5/6, Error ellipse: s-maj=10.5km s-min=7.9km az=152.0
ISCJB 24 10:25:36.9±0.5, 22°.80S±0°.08×175°.46W±0°.09, h34km, mb4.3/18, MS3.9/3, Error ellipse: s-maj=13.4km s-min=9.7km az=42.6

ISC 24 10:25:38.3±0.5, 22°.79S±0°.09×175°32W±0°.08, h34km, n56, σ1°09/52, mb4.5/18, MS4.1/3, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.00**	**308**	Pn	**Pn**	**10 27 31.8**	**-0.5**
	48nm,0.8s						
AFI	**Afiamalu**	**9.45**	**21**	*e*Pn	**Pn**	**10 27 50.7**	**-1.5**
AFI				Sn	Sn	10 29 23.2	-14
AFI				*e*Sn	Sn	10 29 39.7	+2.3
AFI	**Afiamalu**	**9.45**	**21**	Pn	Pn	10 27 47.0	-5.2
	3.7nm,0.3s,baz=162,slow=6.4,SNR=4.7						
AFI				Sn	Sn	10 29 23.2	-14
	1.5nm,0.3s,baz=37,slow=20,SNR=2.4						
RAR	**Rarotonga**	**14.51**	**87**	*e*Pn	**Pn**	**10 29 00.4**	**-0.9**
RAR	**Rarotonga**	**14.51**	**87**	Pn	Pn	10 28 53.0	-8.3
	2.8nm,0.3s,baz=256,slow=12,SNR=4.3						
RAR				LR	LR	10 32 10.6	
	comp=Z,247nm,20.8s,baz=331,slow=27						
URZ	**Urewera**	**16.73**	**201**	*e*P	**Pn**	**10 29 29.9**	**-0.2**
URZ				Sn	Sn	10 32 16.3	-19
URZ	**Urewera**	**16.73**	**201**	Pn	**Pn**	**10 29 28.7**	**-1.4**
	0.7nm,0.3s,baz=87,slow=3.7,SNR=6.3						
URZ				Sn	Sn	10 32 16.3	-19
	0.2nm,0.3s,baz=321,slow=21,SNR=4.0						
DZM	**Mont Dzumac**	**16.88**	**269**	*e*LR	LR	10 33 18.9	
	376nm,25.9s						
DZM	**Mont Dzumac**	**16.88**	**269**	Pn	**Pn**	**10 29 30.6**	**-1.6**
	14nm,1.0s						
DZM	**Mont Dzumac**	**16.88**	**269**	Pn	**P**	**10 29 35.0**	**+1.1**
	0.0nm,0.3s,baz=120,slow=20,SNR=2.1						
DZM				LR	LR	10 33 32.1	
	comp=Z,215nm,19.0s,baz=336,slow=28						
TBI	**Tubuai**	**23.79**	**96**	*e*LR	LR	10 36 02.0	
	351nm,30.8s						
PPT2	**Papeete2**	**24.70**	**83**	*e*LR	LR	10 36 25.8	
	468nm,28.5s						
HNR	**Honiara**	**27.16**	**295**	LR	LR	10 40 05.6	
	comp=Z,128nm,20.7s,baz=135,slow=32						
CTA	**Charters Tower**	**35.80**	**267**	P	**P**	**10 32 34.4**	**-0.4**
CTA	**Charters Tower**	**35.80**	**267**	P	**P**	**10 32 34.4**	**-0.4**
	4.7nm,0.6s,baz=93,slow=11,SNR=6.6						
STKA	**Stephens Creek**	**39.12**	**247**	LR	LR	10 48 46.3	
	comp=Z,254nm,18.4s,baz=34,slow=36						
AS31	**Alice Springs**	**46.46**	**258**	*e*P	P	10 33 58.6	-3.8
ASAR	**Alice Springs**	**46.46**	**258**	P	**P**	**10 34 01.1**	**-1.3**
ASAR	**Alice Springs**	**46.46**	**258**	P	**P**	**10 34 01.1**	**-1.3**
	6.2nm,0.9s,baz=92,slow=8.2,SNR=44						
ASAR				LR	LR	10 54 01.8	
	comp=Z,235nm,18.7s,baz=92,slow=37						
WRAB	**Tennant Creek**	**46.78**	**264**	*e*P	**P**	**10 34 03.6**	**-1.2**
	4.5nm,0.8s						
WRA	**Warramunga Arr**	**46.79**	**264**	P	**P**	**10 34 03.5**	**-1.5**
WRA	**Warramunga Arr**	**46.79**	**264**	P	**P**	**10 34 03.5**	**-1.5**
	5.0nm,0.7s,baz=102,slow=8.1,SNR=50						
FITZ	**Fitzroy Crossi**	**55.21**	**263**	*e*P	**P**	**10 35 08.3**	**0.0**
	4.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**55.21**	**263**	P	**P**	**10 35 07.3**	**-1.1**
	3.7nm,0.7s,baz=119,slow=3.9,SNR=8.8						
VNDA	**Vanda**	**55.88**	**186**	P	**P**	**10 35 13.6**	**+1.4**
VNDA	**Vanda**	**55.88**	**186**	P	**P**	**10 35 13.6**	**+1.4**
	2.2nm,0.9s,baz=30,slow=6.1,SNR=3.7						
MJAR	**Matsushiro Arr**	**73.53**	**322**	P	**P**	**10 37 08.0**	**+0.2**
MJAR	**Matsushiro Arr**	**73.53**	**322**	P	**P**	**10 37 08.0**	**+0.2**
	2.1nm,0.9s,baz=152,slow=4.6,SNR=4.7						
ASAJ	**Asahikawa**	**76.93**	**330**	P	**P**	**10 37 29.3**	**+2.1**
ASAJ	**Asahikawa**	**76.93**	**330**	P	**P**	**10 37 29.3**	**+2.1**
	8.8nm,0.9s,baz=233,slow=8.6,SNR=5.5						
MAW	**Mawson**	**80.25**	**199**	P	**P**	**10 37 45.3**	**+0.1**
MAW	**Mawson**	**80.25**	**199**	P	**P**	**10 37 45.3**	**+0.1**
	6.6nm,1.1s,baz=89,slow=5.7,SNR=6.7						
NVAR	**Mina Array Bea**	**81.01**	**42**	P	**P**	**10 37 50.7**	**+0.7**
NVAR	**Mina Array Bea**	**81.01**	**42**	P	**P**	**10 37 50.7**	**+0.7**
	1.1nm,0.6s,baz=227,slow=9.6,SNR=6.9						
USRK	**Ussuriysk Arra**	**82.25**	**325**	P	**P**	**10 37 58.0**	**+1.9**
	4.6nm,0.9s,baz=96,slow=4.7,SNR=11						
WVOR	**Wild Horse Val**	**83.32**	**39**	*e*P	**P**	**10 38 02.5**	**+0.7**
	3.0nm,1.0s						
TXAR	**Lajitas Array**	**86.22**	**56**	P	**P**	**10 38 17.0**	**+0.3**
TXAR	**Lajitas Array**	**86.22**	**56**	P	**P**	**10 38 17.0**	**+0.3**
	0.8nm,1.0s,baz=214,slow=6.0,SNR=5.4						
TRF	**Thorofare Moun**	**88.18**	**11**	*e*P	**P**	**10 38 24.9**	**-0.6**
	2.6nm,0.6s						
PAX	**Paxon**	**88.67**	**13**	*e*P	**P**	**10 38 28.5**	**+0.7**
	0.7nm,0.4s						
PDAR	**Pinedale Array**	**88.94**	**42**	P	**P**	**10 38 29.1**	**-0.7**
PDAR	**Pinedale Array**	**88.94**	**42**	P	**P**	**10 38 29.1**	**-0.7**
	0.5nm,0.8s,baz=196,slow=1.1,SNR=4.2						
ILAR	**Eielson Array**	**90.01**	**12**	P	**P**	**10 38 33.9**	**0.0**
ILAR	**Eielson Array**	**90.01**	**12**	P	**P**	**10 38 33.9**	**0.0**
	0.4nm,0.7s,baz=230,slow=5.5,SNR=7.4						
CMAR	**Chiang Mai Arr**	**93.21**	**289**	P	**P**	**10 38 52.0**	**+2.1**
CMAR	**Chiang Mai Arr**	**93.21**	**289**	P	**P**	**10 38 52.0**	**+2.1**
	3.9nm,0.9s,baz=132,slow=3.3,SNR=17						
ARE0	**ARCESS Array S**	**131.59**	**350**	*e*PKPdf	**PKPdf**	**10 44 46.2**	**-0.6**
AKASG	**Malin Array Be**	**146.21**	**332**	PKPbc	**PKPbc**	**10 45 14.6**	**-0.4**
AKASG	**Malin Array Be**	**146.21**	**332**	PKPbc	**PKPbc**	**10 45 14.6**	**-0.4**
	3.5nm,0.8s,baz=40,slow=4.1,SNR=9.8						
MALT	**Malatya**	**147.29**	**306**	*e*PKPdf	**PKPdf**	**10 45 16.1**	**-0.1**
MALT				*e*PKPbc	**PKPab**	**10 45 19.7**	**-0.8**
MALT				*e*PKPab	**PKiKP**	**10 45 20.6**	**-0.3**
BRTR	**Keskin Array B**	**150.21**	**311**	PKPbc	**PKPbc**	**10 45 26.0**	**-0.2**
BRTR	**Keskin Array B**	**150.21**	**311**	PKPbc	**PKPbc**	**10 45 26.0**	**-0.2**
	1.3nm,0.8s,baz=131,slow=3.4,SNR=6.6						
CLL	**Collm**	**150.81**	**349**	*i* PKPbc	**PKPbc**	**10 45 27.7**	**+0.7**
CLL				*i* pPKPbc	**PKiKP**	**10 45 29.5**	**+1.9**
CLL				*i* PKPab	**PKPab**	**10 45 34.7**	**+0.6**
	comp=Z,6.0nm,0.8s						
BRG	**Berggiesshubel**	**151.05**	**348**	*e*P	**PKPbc**	**10 45 28.1**	**+0.5**
	comp=Z,8.3nm,1.1s						
TORD	**Torodi Ar. Bea**	**170.00**	**163**	PKPab	**PKPab**	**10 46 57.0**	**-1.2**
TORD	**Torodi Ar. Bea**	**170.00**	**163**	PKPab	**PKPab**	**10 46 57.0**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=200,slow=3.8,SNR=2.7						

ATH 24 10:27:36.7, 36°.38N×20°.76E, h22km, MD3.6/12
CSEM 24 10:27:36.8, 36°.38N×20°.77E, h22km, MD3.6, After ATH

ISC 24 10:27:35.5±2.6, 36°.4N±0°.1×20°.66E±0°.10, h22km±8km, n32, σ1°18/46, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**1.01**	**59**	*e*PN	**Pn**	**10 27 54.7**	**+0.3**
PYL				*e*SN	**Sn**	**10 28 08.3**	**+0.3**
PYL	**PYLOS**	**1.01**	**59**	*e*Pn	**Pn**	**10 27 54.7**	**+0.3**
PYL				*e*Sn	**Sn**	**10 28 08.3**	**+0.3**
ITM	**Ithomi**	**1.30**	**52**	*e*PN	**Pb**	**10 28 00.0**	**+0.9**
ITM	**Ithomi**	**1.30**	**52**	*e*Pn	**Pb**	**10 28 00.0**	**+0.9**
DYR	**Agios Nikonas**	**1.40**	**74**	*e*PN	**Pb**	**10 28 01.7**	**+0.7**
DYR	**Agios Nikonas**	**1.40**	**74**	*e*Pn	**Pb**	**10 28 01.7**	**+0.7**
AMT	**Artemida-Makis**	**1.43**	**36**	*e*PN	**Pb**	**10 28 02.7**	**+1.3**
AMT				*e*SN	**Sb**	**10 28 21.6**	**+2.5**
AMT	**Artemida-Makis**	**1.43**	**36**	*e*Pn	**Pb**	**10 28 02.7**	**+1.3**
AMT				*e*Sn	**Sb**	**10 28 21.6**	**+2.5**
VLX	**Vlachokerasia**	**1.70**	**54**	*e*PN	**Pb**	**10 28 06.3**	**+0.2**
VLX				*e*SN	**Sb**	**10 28 27.8**	**+0.8**
VLX	**Vlachokerasia**	**1.70**	**54**	*e*Pn	**Pb**	**10 28 06.3**	**+0.2**
VLX				*e*Sn	**Sb**	**10 28 27.8**	**+0.8**
RLS	**Riolos of Patr**	**1.80**	**21**	*e*PN	**Pb**	**10 28 08.7**	**+1.0**
RLS	**Riolos of Patr**	**1.80**	**21**	*e*Pn	**Pb**	**10 28 08.7**	**+1.0**
VLS	**Valsamata**	**1.80**	**358**	*e*PB	**Pb**	**10 28 08.2**	**+0.5**
VLS	**Valsamata**	**1.80**	**358**	*e*Pb	**Pb**	**10 28 08.2**	**+0.5**
VLI	**Veliai**	**1.87**	**79**	*e*PN	**Pb**	**10 28 08.7**	**-0.2**
VLI				*e*SN	**Sb**	**10 28 32.0**	**+0.2**
VLI	**Veliai**	**1.87**	**79**	*e*Pn	**Pb**	**10 28 08.7**	**-0.2**
VLI				*e*Sn	**Sb**	**10 28 32.0**	**+0.2**
KLV	**Kalavryta, Ach**	**2.05**	**35**	*e*PB	**Pb**	**10 28 11.1**	**-0.9**
KLV	**Kalavryta, Ach**	**2.05**	**35**	*e*Pn	**Pb**	**10 28 11.1**	**-0.9**
GUR	**Goura**	**2.06**	**40**	*e*PN	**Pb**	**10 28 11.6**	**-0.6**
GUR	**Goura**	**2.06**	**40**	*e*Pn	**Pb**	**10 28 11.6**	**-0.6**
LAKA	**Lakka**	**2.14**	**29**	*e*PB	**Pb**	**10 28 12.7**	**-0.8**
LAKA				*e*SN	**Sb**	**10 28 39.2**	**-0.4**
LAKA	**Lakka**	**2.14**	**29**	*e*Pb	**Pb**	**10 28 12.7**	**-0.8**
LAKA				*e*Sn	**Sb**	**10 28 39.2**	**-0.4**
TRIZ	**Trizonia**	**2.28**	**29**	*e*PB	**Pb**	**10 28 15.2**	**-0.7**
TRIZ	**Trizonia**	**2.28**	**29**	*e*Pb	**Pb**	**10 28 15.2**	**-0.7**
KALE	**Kalithea**	**2.33**	**30**	*e*

*IDC **24** 10:55:48.9±2.3, 18°.93N×121°.43E, h40km±19km, mb4.3/28, mb1 4.4/30, mb1mx4.4/36, mbtmp4.3/30, ML4.3/2, MS4.2/28, Ms1 4.2/28, ms1mx4.1/35, Error ellipse: s-maj=15.2km s-min=8.8km az=74.0*

*NEIC **24** 10:55:48.2±0.2, 18°.95N×121°.36E, mb4.9/32, Error ellipse: s-maj=6.3km s-min=4.3km az=91.0*

NEIC Felt [IV PIVS] at Sanchez Mira and [III PIVS] at Aparri and San Antonio.

*ISCJB **24** 10:55:49.6±0.4, 19°.08N±0°.02×121°.29E±0°.03, h54km±4km, mb4.7/104, MS4.2/40, Error ellipse: s-maj=5.0km s-min=3.9km az=2.7*

*GCMT **24** 10:55:52.6±0.3, 19°.20N×121°.01E, h46km±1km, MW5.0, Moment Tensor Solution. s49,c56; s63,c92; Moment tensor: Scale 10^{16}Nm; M_{rr}3.59±.20; $M_{\theta\theta}$0.08±.15; $M_{\phi\phi}$-3.67±.16; $M_{r\theta}$-0.55±.10; $M_{\theta\phi}$-2.24±.09; $M_{\phi r}$-1.85±.13; Best double couple: M_o4.60000×10^{16} NP1:ϕ_s31.00000°, δ33.00000°, λ100.00000°. NP2:ϕ_s200.00000°, δ58.00000°, λ84.00000°. Principal axes: T 4.0300, Plg77.0000°, Azm91.0000°; N 1.1000, Plg5.0000°, Azm203.0000°; P -5.1300, Plg12.0000°, Azm294.0000°; Data Used: II IU IC G CN.*

*MAN **24** 10:55:54, 18°.58N×121°.15E, h3km, mb5.4, ML4.4, MS4.8*

MAN INTENSITY IV - SANCHEZ MIRA CAGAYAN; INTENSITY III - BGY SAN ANTONIO APARRI CAGAYAN.

*DJA **24** 10:56:05.7±0.8, 19°.N±6°×12°.1E±°, h17.4km±14km, M4.7/15, mB5.1/8, mb4.5/15, ML4.9/1, Mw(mB)4.5/8*

ISC 24 10:55:49.5±0.3, **19°.02N**±0°.02×**121°.33E**±0°.03, **h41**km±2km, **h41**km:**pP-P, n286,** σ1**9**58/338, **mb4.7**/104, **MS4.2**/40, **21C-15D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
PIP	**Pasuquin**	**0.96**	**224**	⇓*i*P	**Pn**	**10 56 05.5**	**-1.0**
PIP				*e*S	**Sn**	**10 56 18.7**	**-0.3**
CVP	**Callao Caves**	**1.39**	**160**	⇑*i*P	**Pn**	10 56 15.4	+2.9
CVP				*i* S	**Sn**	**10 56 35.0**	**+5.4**
ABRA	**Dolores**	**1.48**	**203**	*e*P	**Pn**	**10 56 14.6**	**+0.9**
ABRA				*e*S	Sn	10 56 37.8	+6.0
CAUP	**Cauayan**	**2.12**	**167**	*e*P	Pn	10 56 27.6	+5.2
PALP	**Palanan**	**2.21**	**152**	*e*P	Pn	10 56 27.7	+4.1
PALP				*e*S	Sn	10 57 00.4	+11
BCPH	**Baguio City Da**	**2.71**	**195**	⇑*i*P	Pn	10 56 34.0	+3.2
BOLP	**Bolinao**	**2.95**	**207**	*e*P	Pn	10 56 36.5	+2.6
BALP	**Baler**	**3.27**	**176**	*e*P	Pn	10 56 41.2	+3.0
PCPH	**Palayan**	**3.44**	**184**	⇓*e*P	Pn	10 56 44.5	+3.9
PCPH				*e*S	Sn	10 57 30.3	+10
TPUB	**Ta-pu**	**4.31**	**351**	*e*Pn	**Pn**	**10 56 51.5**	**-1.1**
SSLB	**Suanglung**	**4.76**	**356**	*e*Pn	**Pn**	**10 56 58.1**	**-0.7**
LQP	**Lukban**	**4.88**	**178**	*e*P	Pn	10 57 14.7	+14
TGY	**Tagaytay City**	**4.90**	**184**	P	Pn	10 57 05.6	+4.9
TGY	**Tagaytay City**	**4.90**	**184**	*e*P	Pn	10 57 15.3	+15
TGY	**Tagaytay City**	**4.90**	**184**	P	Pn	10 57 05.6	+4.9
	48nm,0.3s,baz=179,slow=2.2,SNR=11						
NACB	**Ninganchiao**	**5.14**	**3**	*e*Pn	**Pn**	**10 57 04.0**	**0.0**
GQP	**Guinayangan**	**5.20**	**168**	⇑*e*P	Pn	10 57 08.3	+3.5
GQP				*e*S	**Sn**	**10 58 06.0**	**+2.5**
TATO	**Taipei**	**5.93**	**1**	*e*Pn	**Pn**	**10 57 16.5**	**+1.6**
TATO				*e*Sn	**Sn**	**10 58 25.9**	**+4.3**
QZH	**Quanzhou**	**6.42**	**337**	⇑*i*Pn	**Pn**	**10 57 20.3**	**-1.3**
QZH				Sn	Sn	10 58 26.8	-6.8
QZH				smax	smax		
	comp=N,300nm,1.0s						
QZH				smax	smax		
	comp=E,280nm,0.8s						
QZH				LR	LR		
	comp=N,2μm,10.4s						
QZH				LR	LR		
	comp=E,1μm,12.5s						
QZH				LR	LR		
	comp=Z,4μm,22.8s						
JOW	**Kunigami**	**10.07**	**38**	*e*Pn	**Pn**	**10 58 13.4**	**+1.7**
QIZ	**Qiongzhong**	**10.86**	**272**	P	**Pn**	**10 58 22.6**	**+0.1**
QIZ				S	**Sn**	**11 00 24.3**	**+1.5**
QIZ				LR	LR		
	comp=N,990nm,16.6s						
QIZ				LR	LR		
	comp=E,640nm,21.4s						
QIZ				LR	LR		
	comp=Z,2μm,23.7s						
SSE	**Sheshan**	**12.03**	**359**	P	**Pn**	**10 58 39.3**	**+0.9**
SSE				S	**Sn**	**11 00 56.0**	**+4.8**
SSE				pmax	pmax		
	comp=Z,20nm,0.7s						
SSE				pmax	pmax		
	comp=Z,56nm,3.5s						
SSE				LR	LR		
	comp=N,740nm,22.2s						
SSE				LR	LR		
	comp=E,310nm,22.2s						
SSE				LR	LR		
	comp=Z,910nm,21.6s						
DAV	**Davao City (W)**	**12.57**	**160**	Pn	**Pn**	**10 58 45.0**	**-1.0**
DAV	**Davao City (W)**	**12.57**	**160**	LR	LR	11 04 16.5	
	comp=Z,3μm,21.0s,baz=0.8,slow=41						
NJ2	**Nanjing**	**13.17**	**351**	*e*P	Pn	10 58 57.0	+3.0
NJ2				S	**Sn**	**11 01 23.0**	**+3.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=N,2μm,10.8s						
NJ2				LR	LR		
	comp=E,2μm,11.4s						
NJ2				LR	LR		
	comp=Z,1μm,11.0s						
KKM	**Kota Kinabalu**	**13.82**	**202**	P	P	10 59 22.7	+12
MYLDM	**Lahad Datu**	**14.03**	**192**	P	P	10 59 17.2	+4.4
	comp=Z,38nm,1.5s,comp=Z,812nm						
GYA	**Guiyang**	**15.41**	**301**	*e*P	**Pn**	**10 59 24.8**	**+0.5**
GYA				S	**Sn**	**11 02 15.4**	**+1.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,80nm,4.6s						
GYA				LR	LR		
	comp=N,360nm,14.6s						
GYA				LR	LR		
	comp=E,210nm,15.2s						
GYA				LR	LR		
	comp=Z,440nm,13.9s						
UBPT	**Khong Chiam**	**15.60**	**259**	P	**Pn**	**10 59 27.3**	**+0.7**
	comp=Z,27nm,2.1s						
JNU	**Nakatsue**	**16.45**	**29**	*e*Pn	**Pn**	**10 59 38.7**	**+1.4**
	comp=Z,32nm,1.1s						
JNU	**Nakatsue**	**16.45**	**29**	P	**Pn**	**10 59 37.2**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=161,slow=7.0,SNR=11						
JNU				LR	LR	11 06 18.3	
	comp=Z,438nm,19.7s,baz=206,slow=38						
PALU	**Palau**	**17.26**	**130**	P	P	10 59 53.3	+4.6
	baz=20,SNR=4.9						
KMI	**Kunming**	**18.26**	**293**	P	**P**	**10 59 59.5**	**-0.4**
KMI				pP	**pP**	**11 00 07.4**	**-2.6**
KMI				sP	**sP**	**11 00 12.6**	**-2.6**
KMI				PP	**PnPn**	**11 00 16.3**	**+4.2**
KMI				S	**Sn**	**11 03 22.8**	**-0.4**
KMI				pmax	pmax		
	comp=Z,30nm,1.7s						
KMI				pmax	pmax		
	comp=Z,460nm,5.7s						
KMI				LR	LR		
	comp=N,690nm,12.1s						
KMI				LR	LR		
	comp=E,1μm,14.0s						
KMI				LR	LR		
	comp=Z,1μm,14.0s						
MRSI	**Marisa**	**18.43**	**178**	P	Pn	11 00 13.5	+11
XAN	**Xi'an**	**18.60**	**326**	P	**P**	**11 00 03.6**	**+0.1**
XAN				S	**Sn**	**11 03 29.8**	**-1.3**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,110nm,4.0s						
XAN				LR	LR		
	comp=N,510nm,16.4s						
XAN				LR	LR		
	comp=E,110nm,17.1s						
XAN				LR	LR		
	comp=Z,190nm,14.6s						
SBUM	**Sibu**	**18.72**	**210**	P	**Pn**	**11 00 06.0**	**+0.5**
	comp=Z,60nm,1.8s,comp=Z,740nm						
KSAR	**Wonju Array Be**	**19.23**	**16**	P	**P**	**11 00 10.2**	**-0.1**
KSRS	**Korea Array**	**19.26**	**16**	P	**P**	**11 00 10.2**	**-0.4**
	comp=Z,1.9nm,0.3s,baz=198,slow=11,SNR=27						
CHBT	**CHBT**	**19.29**	**254**	P	**Pn**	**11 00 14.3**	**+1.9**
	comp=Z,32nm,1.6s,comp=Z,4μm						
CD2	**Chengdu**	**19.82**	**310**	⇓P	**P**	**11 00 17.3**	**+0.5**
CD2				pP	**pP**	**11 00 26.1**	**-0.8**
CD2				sP	**sP**	**11 00 30.8**	**-1.3**
CD2				PP	**PnPn**	**11 00 36.5**	**+3.3**
CD2				S	**S**	**11 03 54.0**	**-3.9**
CD2				sS	Sn	11 04 07.3	+6.9
CD2				SS	**SnSn**	**11 04 22.3**	**+7.1**
CD2				pmax	pmax		
	comp=Z,70nm,0.8s						
CD2				pmax	pmax		
	comp=Z,520nm,4.0s						
CD2				LR	LR		
	comp=N,1μm,15.6s						
CD2				LR	LR		
	comp=E,1μm,14.2s						
CD2				LR	LR		
	comp=Z,1μm,16.6s						
LUWI	**Luwuk**	**19.98**	**176**	P	**Pn**	**11 00 22.2**	**+1.6**
	comp=Z,50nm,1.0s,comp=Z,2μm						
KSM	**Kuching**	**20.51**	**213**	*e*Pn	Pn	11 00 28.2	+1.4
	comp=Z,31nm,0.7s						
CMMT	**Chiang Mai**	**21.17**	**273**	P	**P**	**11 00 32.3**	**+0.8**
	comp=Z,24nm,1.6s,comp=Z,542nm						
CHTO	**Chiang Mai**	**21.17**	**273**	*e*P	**P**	**11 00 31.7**	**+0.1**
CHTO				*e*S	**S**	**11 04 25.4**	**+0.4**
CHTO				*e*		11 04 36.8	
CHTO				pmax	pmax		
	comp=Z,31nm,1.2s						
CHTO	**Chiang Mai**	**21.17**	**273**	*e*P	**P**	**11 00 31.7**	**+0.1**
	comp=Z,31nm,1.2s						
CHTO				*e*S	**S**	**11 04 25.4**	**+0.4**
CHTO				*e*PcP	**PcP**	**11 04 36.8**	**+0.6**
CHTO	**Chiang Mai**	**21.17**	**273**	P	**P**	**11 00 31.9**	**+0.4**
	comp=Z,24nm,1.2s,comp=Z,451nm						
CMAR	**Chiang Mai Arr**	**21.20**	**272**	P	**P**	**11 00 31.9**	**0.0**
CMAR				PcP	**PcP**	**11 04 37.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**21.20**	**272**	P	**P**	**11 00 31.9**	**0.0**
	comp=Z,11nm,0.9s,baz=80,slow=8.7,SNR=33						
CMAR				PcP	**PcP**	**11 04 37.1**	**+0.8**
	comp=Z,5.1nm,0.8s,baz=50,slow=1.0,SNR=13						
CMAR				LR	LR	11 09 37.1	
	comp=Z,638nm,18.1s,baz=41,slow=39						
BJI	**Beijing**	**21.42**	**349**	P	**P**	**11 00 34.4**	**+0.5**
BJI				sP	**sP**	**11 00 47.9**	**-1.4**
BJI				S	**S**	**11 04 28.3**	**-1.1**
BJI				pmax	pmax		
	comp=Z,17nm,1.0s						
BJI				LR	LR		
	comp=N,480nm,18.7s						
BJI				LR	LR		
	comp=E,420nm,18.7s						
BJI				LR	LR		
	comp=Z,390nm,29.0s						
JHJ	**Hachijo jima 2**	**21.68**	**46**	LR	LR	11 07 35.4	
	comp=Z,517nm,20.9s,baz=227,slow=33						
TTSI	**Tana Toraja**	**21.97**	**184**	P	P	11 00 46.9	+6.8
	comp=Z,26nm,0.8s						
KBKI	**Kotabaru**	**22.75**	**193**	P	**P**	**11 00 51.5**	**+3.1**
	comp=Z,25nm,1.1s,comp=Z,2μm						
SNY	**Shenyang**	**22.82**	**4**	⇓P	**P**	**11 00 49.0**	**+0.1**
SNY				pmax	pmax		
	comp=Z,25nm,1.0s						
SNY				pmax	pmax		
	comp=Z,160nm,4.3s						
SNY				LR	LR		
	comp=N,260nm,22.0s						
SNY				LR	LR		
	comp=E,500nm,14.2s						
SNY				LR	LR		
	comp=Z,380nm,25.5s						
MAJO	**Matsushiro**	**22.91**	**37**	*e*P	**P**	**11 00 49.4**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,46nm,1.4s						
MAJO	**Matsushiro**	**22.91**	**37**	*e*P	**P**	**11 00 49.4**	**-0.6**
	comp=Z,46nm,1.4s						
MAT	**Matsushiro**	**22.91**	**37**	P	**P**	**11 00 48.7**	**-1.3**
MAT				S	**S**	**11 04 58.2**	**+1.1**
MJAR	**Matsushiro Arr**	**22.91**	**37**	P	**P**	**11 00 49.9**	**-0.1**
MJAR	**Matsushiro Arr**	**22.91**	**37**	P	**P**	**11 00 49.9**	**-0.1**
	comp=Z,6.0nm,0.8s,baz=230,slow=12,SNR=11						
MJAR				LR	LR	11 08 36.4	
	comp=Z,149nm,19.7s,baz=235,slow=34						
LZH	**Lanzhou**	**22.94**	**321**	⇓P	**P**	**11 00 50.5**	**0.0**
LZH				pP	**pP**	**11 01 00.6**	**-0.1**
LZH				PP	**PnPn**	**11 01 20.3**	**+4.2**
LZH				S	**S**	**11 04 54.5**	**-3.4**
LZH				sS	Sn	11 05 09.6	-6.0
LZH				SS	**SnSn**	**11 05 40.3**	**+8.3**
LZH				pmax	pmax		
	comp=Z,56nm,1.1s						
LZH				pmax	pmax		
	comp=Z,210nm,4.5s						
LZH				LR	LR		
	comp=N,610nm,14.5s						
LZH				LR	LR		
	comp=E,410nm,13.8s						
LZH				LR	LR		
	comp=Z,860nm,16.5s						
GUMO	**Guam**	**23.22**	**100**	LR	LR	11 07 58.9	
	comp=Z,609nm,21.8s,baz=270,slow=32						
BBKI	**Banjar Baru**	**23.23**	**197**	P	**P**	**11 00 53.9**	**+0.6**
	comp=Z,90nm,1.0s						
HHC	**Hu-ho-hao-te**	**23.31**	**341**	*e*P	P	11 00 57.8	+3.8
HHC				PcP	**PcP**	**11 04 44.4**	**+4.1**
HHC				S	**S**	**11 05 00.3**	**-3.5**
HHC				pmax	pmax		
	comp=Z,46nm,0.9s						
HHC				pmax	pmax		
	comp=Z,400nm,3.6s						
HHC				LR	LR		
	comp=N,2μm,12.9s						
HHC				LR	LR		
	comp=E,860nm,10.9s						
HHC				LR	LR		
	comp=Z,2μm,14.3s						
KAPI	**Kappang**	**23.93**	**184**	*e*P	**P**	**11 00 59.5**	**-0.4**
	comp=Z,14nm,0.8s						
KAPI	**Kappang**	**23.93**	**184**	P	**P**	**11 01 00.3**	**+0.4**
	comp=Z,19nm,1.3s						
KAPI	**Kappang**	**23.93**	**184**	P	**P**	**11 00 58.2**	**-1.7**
	comp=Z,6.3nm,0.4s,baz=347,slow=8.0,SNR=9.2						
KAPI				LR	LR	11 11 15.2	
	comp=Z,433nm,19.0s,baz=228,slow=39						
BKSI	**Bulukumba**	**24.21**	**183**	P	P	11 01 09.2	+6.7
	comp=Z,14nm,0.8s						
CN2	**Changchun**	**24.95**	**7**	*e*P	**P**	**11 01 08.4**	**-0.6**
CN2				*e*PP	**PnPn**	**11 01 46.8**	**+3.4**
CN2				*e*S	**S**	**11 05 28.3**	**-1.5**
CN2				*e*SS	**SnSn**	**11 06 28.3**	**+7.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,400nm,14.0s						
CN2				LR	LR		
	comp=E,500nm,14.0s						
CN2				LR	LR		
	comp=Z,500nm,17.0s						
MDJ	**Mudanjiang**	**26.44**	**13**	P	**P**	**11 01 22.3**	**-0.2**
MDJ				pP	**pP**	**11 01 30.8**	**-2.8**
MDJ				sP	sP	11 01 34.6	-4.0
MDJ				S	**S**	**11 05 54.0**	**+0.6**
MDJ				sS	**sS**	**11 06 09.0**	**-3.0**
MDJ				ScP	**ScP**	**11 08 24.8**	**+1.0**
MDJ				PcS	**PcS**	**11 08 28.5**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,30nm,3.0s						
MDJ				LR	LR		
	comp=N,230nm,19.7s						
MDJ				LR	LR		
	comp=E,570nm,20.4s						
MDJ				LR	LR		
	comp=Z,450nm,20.1s						
MDJ	**Mudanjiang**	**26.44**	**13**	*e*P	**P**	**11 01 22.9**	**+0.4**
USRK	**Ussuriysk Arra**	**26.66**	**17**	P	**P**	**11 01 24.1**	**-0.3**
	comp=Z,5.2nm,0.9s,baz=210,slow=8.7,SNR=9.7						
USRK				LR	LR	11 13 16.8	
	comp=Z,164nm,18.0s,baz=294,slow=39						
PSI	**Prapat**	**27.20**	**236**	P	**P**	**11 01 29.2**	**-0.6**
PSI	**Prapat**	**27.20**	**236**	P	**P**	**11 01 29.2**	**-0.6**
	comp=Z,3.1nm,0.5s,baz=34,slow=11,SNR=4.2						
PSI				LR	LR	11 12 29.1	
	comp=Z,450nm,18.2s,baz=231,slow=37						
KHKI	**Kahang-Kahang**	**27.79**	**192**	P	**P**	**11 01 37.0**	**+2.2**
	comp=Z,61nm,1.0s						
SHL	**Shillong**	**27.97**	**289**	*e*P	**P**	**11 01 37.0**	**+0.3**
PPI	**Padang Panjang**	**28.23**	**229**	P	**P**	**11 01 39.6**	**+0.8**
HIA	**Hailar**	**30.20**	**358**	*e*P	**P**	**11 01 55.6**	**-0.5**
	comp=Z,48nm,1.4s						
ASAJ	**Asahikawa**	**30.72**	**31**	LR	LR	11 14 37.2	
	comp=Z,234nm,20.8s,baz=229,slow=37						
ULN	**Ulaanbaatar**	**31.04**	**341**	*e*P	**P**	**11 02 04.6**	**+1.0**
	comp=Z,16nm,1.1s						
SONM	**Songino Array**	**31.21**	**340**	P	**P**	**11 02 06.0**	**+0.9**
SONM				PcP	**PcP**	**11 04 59.3**	**+0.2**
SONM	**Songino Array**	**31.21**	**340**	P	**P**	**11 02 06.0**	**+0.9**
	comp=Z,6.6nm,0.9s,baz=156,slow=9.2,SNR=36						
SONM				PcP	**PcP**	**11 04 59.3**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=162,slow=4.6,SNR=4.6						
SONM				LR	LR	11 15 53.6	
	comp=Z,648nm,18.6s,baz=156,slow=38						
KLR	**Kul'dur**	**31.29**	**13**	*e*P	**P**	**11 02 02.8**	**-2.8**
KLR				MLR	MLR		
	comp=Z,800nm,13.0s						
TAPN	**Taplejung**	**31.92**	**291**	*e*P	**P**	**11 02 11.9**	**+0.2**
ODAN	**Odare**	**32.14**	**290**	*e*P	**P**	**11 02 13.7**	**+0.1**
	comp=Z,88nm,1.2s						
ODAN	**Odare**	**32.14**	**290**	*e*P	**PcP**	**11 05 02.6**	**+0.5**
	comp=Z,22nm,0.8s						
RAMN	**Ramite**	**32.85**	**290**	*e*P	**P**	**11 02 19.5**	**-0.4**
	comp=Z,62nm,0.9s						
RAMN	**Ramite**	**32.85**	**290**	*e*P	**PcP**	**11 05 04.2**	**+0.1**
YSS	**Yuzh-Sakhalins**	**32.94**	**27**	⇑*e*P	**P**	**11 02 21.0**	**+0.9**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
GUN	**Gumba**	**33.60**	**292**	*e*P	**P**	**11 02 26.5**	**0.0**
	comp=Z,51nm,0.8s						
GUN	**Gumba**	**33.60**	**292**	*e*P	**PcP**	**11 05 06.2**	**-0.1**
	comp=Z,13nm,0.6s						
PKI	**Pulchoki**	**33.97**	**291**	*e*P	**P**	**11 02 30.0**	**+0.2**
	comp=Z,17nm,0.7s						
PKI	**Pulchoki**	**33.97**	**291**	*e*P	**PcP**	**11 05 07.0**	**-0.4**
	comp=Z,41nm,0.9s						
PKIN	**Phulchoki**	**33.98**	**291**	*e*P	**P**	**11 02 29.5**	**-0.3**
	comp=Z,13nm,0.8s						
KKN	**Kakani**	**34.11**	**292**	*e*P	**P**	**11 02 30.8**	**0.0**
	comp=Z,45nm,0.9s						
KKN	**Kakani**	**34.11**	**292**	*e*P	**PcP**	**11 05 07.5**	**-0.1**
DMN	**Daman**	**34.24**	**291**	*e*P	**P**	**11 02 32.1**	**+0.1**
DMN	**Daman**	**34.24**	**291**	*e*P	**PcP**	**11 05 07.7**	**-0.4**
	comp=Z,13nm,0.6s						
ZAK	**Zakamensk**	**34.44**	**339**	*e*P	**P**	**11 02 32.5**	**-0.7**
ZAK				*e*		11 05 08.2	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TLY	**Talaya**	**35.45**	**341**	*e*P	**P**	**11 02 41.3**	**-0.5**
TLY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,359nm,19.0s						
DANN	**Dangsing**	**35.51**	**292**	*e*P	**P**	**11 02 42.3**	**-0.7**
	comp=Z,113nm,1.3s						
KOLN	**Koldanda**	**35.59**	**291**	*e*P	**P**	**11 02 43.6**	**0.0**
	comp=Z,27nm,0.9s						
PYUN	**Piuthan**	**36.16**	**292**	*e*P	**P**	**11 02 47.7**	**-0.8**
	comp=Z,69nm,1.0s						
MOY	**Mondy**	**36.30**	**339**	*e*P	**P**	**11 02 50.1**	**+0.9**
MOY				pmax	pmax		
	comp=Z,23nm,3.4s						
FITZ	**Fitzroy Crossi**	**37.13**	**173**	*e*P	**P**	**11 02 54.8**	**-1.6**
	comp=Z,3.4nm,0.6s						
FITZ				PcP	**PcP**	**11 05 16.9**	**+0.7**
FITZ	**Fitzroy Crossi**	**37.13**	**173**	P	**P**	**11 02 54.6**	**-1.8**
	comp=Z,4.5nm,0.8s,baz=22,slow=1.8,SNR=7.0						
FITZ				PcP	**PcP**	**11 05 16.9**	**+0.7**
	comp=Z,5.1nm,0.7s,baz=42,slow=1.0,SNR=5.5						
WMQ	**Urumqi**	**37.47**	**319**	P	**P**	**11 03 01.0**	**+1.8**
WMQ				pP	**pP**	**11 03 11.0**	**+0.4**
WMQ				sP	**sP**	**11 03 15.0**	**-0.5**
WMQ				PP	**PnPn**	**11 04 30.0**	**+3.8**
WMQ				PcP	**PcP**	**11 05 20.0**	**+2.9**
WMQ				S	**S**	**11 08 47.0**	**+1.8**
WMQ				ScP	**ScP**	**11 09 03.0**	**+1.8**
WMQ				SS	**SnSn**	**11 11 20.0**	**-5.0**
WMQ				ScS	**ScS**	**11 13 10.0**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,15nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,130nm,5.0s						
WMQ				LR	LR		
	comp=N,240nm,14.0s						
WMQ				LR	LR		
	comp=E,260nm,14.0s						
WMQ				LR	LR		
	comp=Z,310nm,14.0s						
CLNS	**Chul'man**	**37.86**	**3**	*e*P	**P**	**11 03 00.5**	**-1.8**
CLNS				pmax	pmax		
	comp=N,6.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,13nm,1.0s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.9s						
WRAB	**Tennant Creek**	**40.76**	**161**	*e*P	**P**	**11 03 24.7**	**-2.1**
WRAB				*e*		11 05 28.3	
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WRAB	**Tennant Creek**	**40.76**	**161**	*e*P	**P**	**11 03 24.7**	**-2.1**
	comp=Z,5.8nm,0.7s						
WRAB				*e*PcP	**PcP**	**11 05 28.3**	**+0.7**
WRA	**Warramunga Arr**	**40.77**	**161**	P	**P**	**11 03 24.5**	**-2.4**
WRA				PcP	**PcP**	**11 05 28.0**	**+0.3**
WRA				S	**S**	**11 09 30.9**	**-4.0**
WRA	**Warramunga Arr**	**40.77**	**161**	P	**P**	**11 03 24.5**	**-2.4**
	comp=Z,1.9nm,0.3s,baz=334,slow=10,SNR=28						
WRA				PcP	**PcP**	**11 05 28.0**	**+0.3**
	comp=Z,4.7nm,0.7s,baz=342,slow=3.5,SNR=12						
WRA				S	**S**	**11 09 30.9**	**-4.0**
	comp=Z,0.8nm,0.8s,baz=344,slow=16,SNR=5.1						
MK31	**Makanchi Array**	**42.25**	**320**	*i* P	**P**	**11 03 39.6**	**+0.8**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MK31	**Makanchi Array**	**42.25**	**320**	*e*P	**P**	**11 03 39.2**	**+0.4**
MKAR	**Makanchi Array**	**42.25**	**320**	P	**P**	**11 03 39.9**	**+1.1**
MKAR						11 05 32.3	
MKAR	**Makanchi Array**	**42.25**	**320**	P	**P**	**11 03 39.9**	**+1.1**
MKAR				PcP	**PcP**	**11 05 32.3**	**+0.1**
MKAR	**Makanchi Array**	**42.25**	**320**	P	**P**	**11 03 39.9**	**+1.1**
	comp=Z,4.5nm,0.8s,baz=112,slow=9.5,SNR=42						
MKAR				PcP	**PcP**	**11 05 32.3**	**+0.1**
	comp=Z,8.9nm,0.9s,baz=102,slow=5.1,SNR=6.1						
MKAR				LR	LR	11 23 04.7	
	comp=Z,307nm,18.4s,baz=128,slow=39						
YAK	**Yakutsk**	**43.37**	**6**	*e*P	**P**	**11 03 47.2**	**-0.4**
YAK				pmax	pmax		
	comp=N,11nm,1.3s						
YAK				pmax	pmax		
	comp=Z,17nm,1.1s						
KSH	**Kashi**	**43.98**	**308**	P	P	11 03 57.0	+3.9
KSH				pP	pP	11 04 07.3	+2.7
KSH				sP	sP	11 04 10.8	+1.4
KSH				PP	**PcP**	**11 05 40.0**	**+1.7**
KSH				PcP	PP	11 05 42.0	+6.0
KSH				ScP	**ScP**	**11 09 29.8**	**+2.8**
KSH				PcS	**PcS**	**11 09 33.3**	**+1.8**
KSH				S	S	11 10 26.9	+4.5
KSH				sS	sS	11 10 43.9	+

ASAR				PcP	**PcP**	**11 05 38.9**	**-0.1**		
ASAR				ScP	**ScP**	**11 09 27.1**	**-0.6**		
ASAR	**Alice Springs**	**44.16**	**163**	P	**P**	**11 03 53.0**	**-1.4**		
	comp=Z,2.8nm,0.3s,baz=342,slow=6.8,SNR=71								
ASAR				PcP	**PcP**	**11 05 38.9**	**-0.1**		
	comp=Z,1.8nm,0.8s,baz=346,slow=3.4,SNR=3.3								
ASAR				ScP	**ScP**	**11 09 27.1**	**-0.6**		
	comp=Z,1.4nm,1.0s,baz=345,slow=3.2,SNR=4.7								
ZAA0	**Zalesovo Array**	**44.70**	**330**	*e*P	**P**	**11 03 58.3**	**-0.2**		
ZALV	**Zalesovo Beam**	**44.70**	**330**	P	**P**	**11 03 58.2**	**-0.2**		
ZALV	**Zalesovo Beam**	**44.70**	**330**	P	**P**	**11 03 58.2**	**-0.2**		
ZALV	**Zalesovo Beam**	**44.70**	**330**	P	**P**	**11 03 58.2**	**-0.2**		
	comp=Z,7.6nm,0.9s,baz=124,slow=7.8,SNR=14								
ZALV				LR	LR	11 23 44.2			
	comp=Z,419nm,19.3s,baz=117,slow=37								
AAK	**Ala-Archa**	**45.87**	**311**⇑	*e*P	P	11 04 10.2	+2.1		
AAK				pmax	pmax				
	comp=Z,8.0nm,1.0s								
AAK	**Ala-Archa**	**45.87**	**311**	P	**P**	**11 04 09.8**	**+1.7**		
AAK				PcP	**PcP**	**11 05 45.0**	**+0.2**		
AAK	**Ala-Archa**	**45.87**	**311**	P	**P**	**11 04 09.8**	**+1.7**		
	comp=Z,1.8nm,0.7s,baz=8.1,slow=7.1,SNR=2.1								
AAK				PcP	**PcP**	**11 05 45.0**	**+0.2**		
	comp=Z,4.7nm,0.7s,baz=151,slow=5.9,SNR=7.0								
AAK				LR	LR	11 25 29.1			
	comp=Z,467nm,20.2s,baz=87,slow=39								
CTA	**Charters Tower**	**45.91**	**147**	P	P	11 04 05.4	-3.0		
CTA	**Charters Tower**	**45.91**	**147**	P	P	11 04 05.4	-3.0		
	comp=Z,2.2nm,0.5s,baz=311,slow=9.3,SNR=2.3								
NVS	**Novosibirsk**	**45.98**	**330**	*e*P	**P**	**11 04 09.0**	**+0.5**		
NVS				pmax	pmax				
	comp=Z,14nm,1.5s								
NVS				pmax	pmax				
	comp=N,6.0nm,1.3s								
NVS				pmax	pmax				
	comp=E,12nm,1.4s								
KURK	**Kurchatov**	**46.21**	**323**⇑	*e*P	**P**	**11 04 10.8**	**+0.4**		
KURK				pmax	pmax				
	comp=Z,7.0nm,0.8s								
KURK	**Kurchatov**	**46.21**	**323**	*e*P	**P**	**11 04 10.9**	**+0.4**		
	comp=Z,16nm,1.1s								
KURK				PcP	**PcP**	**11 05 44.6**	**-1.0**		
KURBB	**Kurchatov Arra**	**46.22**	**323**	P	**P**	**11 04 11.1**	**+0.6**		
	comp=Z,5.1nm,0.7s,baz=122,slow=7.9,SNR=39								
KURBB				PcP	**PcP**	**11 05 44.6**	**-1.0**		
	comp=Z,1.8nm,0.6s,baz=115,slow=4.3,SNR=4.5								
KBL	**Kabul**	**48.65**	**300**	*e*P	**P**	**11 04 30.4**	**+0.4**		
KBL				*e**PP	**pP**	**11 04 38.4**	**-3.2**		
KBL				pmax	pmax				
	comp=Z,19nm,0.9s								
KBL	**Kabul**	**48.65**	**300**	*e*P	**P**	**11 04 30.4**	**+0.4**		
	comp=Z,19nm,0.9s								
KBL				*e*pP	**pP**	**11 04 38.4**	**-3.2**		
SEY	**Seymchan**	**48.79**	**18**⇑	*e*P	**P**	**11 04 30.5**	**+0.2**		
KK31	**Karatay Array**	**48.83**	**311**	*i* P	**P**	**11 04 31.8**	**+0.9**		
KK31				pmax	pmax				
	comp=Z,4.0nm,0.7s								
KKAR	**Karatay Array**	**48.83**	**311**	*e*P	**P**	**11 04 32.2**	**+1.3**		
KKAR				*e**PP	**pP**	**11 04 40.5**	**-2.1**		
KKAR				*e*		11 05 55.0			
KKAR				pmax	pmax				
	comp=Z,1.0nm,0.3s								
KKAR	**Karatay Array**	**48.83**	**311**	*e*P	**P**	**11 04 32.2**	**+1.3**		
	comp=Z,0.9nm,0.3s								
KKAR				*e*pP	**pP**	**11 04 40.5**	**-2.1**		
KKAR				*e*PcP	**PcP**	**11 05 55.0**	**-0.2**		
VOSK	**Vostochnaya**	**51.37**	**323**	P	**P**	**11 04 49.7**	**-0.3**		
VOSK				pmax	pmax				
	comp=Z,10.0nm,1.3s								
NWAO	**Narrogin (SRO)**	**51.80**	**184**	P	**P**	**11 04 52.6**	**-0.7**		
NWAO	**Narrogin (SRO)**	**51.80**	**184**	P	**P**	**11 04 52.6**	**-0.7**		
	comp=Z,14nm,1.0s,baz=204,slow=4.4,SNR=9.5								
BVA0	**Borovoye Array**	**51.81**	**323**	*i* P	**P**	**11 04 53.8**	**+0.5**		
BVA0				pmax	pmax				
	comp=Z,1.0nm,1.0s								
BVAR	**Borovoye Array**	**51.81**	**323**	P	**P**	**11 04 53.6**	**+0.3**		
BVAR						11 06 05.5			
BVAR	**Borovoye Array**	**51.81**	**323**	P	**P**	**11 04 53.6**	**+0.3**		
BVAR				PcP	**PcP**	**11 06 05.5**	**-0.5**		
BVAR	**Borovoye Array**	**51.81**	**323**	P	**P**	**11 04 53.6**	**+0.3**		
	comp=Z,3.4nm,0.7s,baz=115,slow=11,SNR=20								
BVAR				PcP	**PcP**	**11 06 05.5**	**-0.5**		
	comp=Z,6.7nm,0.7s,baz=110,slow=4.6,SNR=9.9								
BVAR				LR	LR	11 29 06.4			
	comp=Z,215nm,18.1s,baz=232,slow=38								
BRVK	**Borovoye**	**51.88**	**323**	*e*P	**P**	**11 04 54.7**	**+0.9**		
BRVK				*e**PP	**pP**	**11 05 03.4**	**-2.2**		
BRVK				*e*		11 06 05.8			
BRVK				pmax	pmax				
	comp=Z,32nm,1.4s								
BRVK	**Borovoye**	**51.88**	**323**	*e*P	**P**	**11 04 54.7**	**+0.9**		
	comp=Z,32nm,1.4s								
BRVK				*e*pP	**pP**	**11 05 03.4**	**-2.2**		
BRVK				*e*PcP	**PcP**	**11 06 05.8**	**-0.4**		
FX1	**Attu Island--F**	**52.27**	**37**	LR	LR	11 27 44.8			
	comp=Z,72nm,20.1s,baz=102,slow=37								
STKA	**Stephens Creek**	**54.21**	**159**	LR	LR	11 28 46.6			
	comp=Z,133nm,18.6s,baz=23,slow=37								
BILL	**Bilibino**	**56.50**	**19**	*e*P	**P**	**11 05 26.9**	**-0.3**		
BILL				pmax	pmax				
	comp=Z,22nm,1.0s								
BILL	**Bilibino**	**56.50**	**19**	*e*P	**P**	**11 05 26.9**	**-0.3**		
	comp=Z,22nm,1.0s								
AB31	**Akbulak array**	**57.21**	**317**	P	**P**	**11 05 32.1**	**-0.4**		
AB31				pmax	pmax				
	comp=Z,8.0nm,0.9s								
SVE	**Sverdlovsk**	**58.32**	**326**⇑	*i* P	**P**	**11 05 40.8**	**+0.6**		
SVE				*e*		11 06 33.7			
SVE				*e*S	**S**	**11 13 37.1**	**-2.5**		
SVE				*e*		11 15 17.2			
SVE				*e*		11 17 33.6			
SVE				pmax	pmax				
	comp=Z,30nm,0.9s								
AKTO	**Aktyubinsk**	**58.62**	**318**	P	**P**	**11 05 42.5**	**+0.1**		
AKTO	**Aktyubinsk**	**58.62**	**318**	P	**P**	**11 05 42.5**	**+0.1**		
AKTO	**Aktyubinsk**	**58.62**	**318**	P	**P**	**11 05 42.5**	**+0.1**		
	comp=Z,4.8nm,0.9s,baz=103,slow=10,SNR=9.7								
ARU	**Arti**	**59.35**	**325***c*	*i* P	**P**	**11 05 47.2**	**-0.1**		
ARU						11 07 57.4			
ARU				S	**S**	**11 13 55.8**	**+2.9**		
ARU				pmax	pmax				
	comp=Z,24nm,1.0s								
DZM	**Mont Dzumac**	**60.12**	**131**	*e*S	**S**	**11 14 06.5**	**+2.6**		
	comp=Z,99nm,25.1s								
DZM				*e*LR	LR	11 23 41.9			
	comp=Z,449nm,22.2s								
SOKR	**Solikamsk**	**60.93**	**328**	*e*P	**P**	**11 05 58.5**	**+0.4**		
SOKR				pmax	pmax				
	comp=Z,10.0nm,0.6s								
SOKR				MLR	MLR				
	comp=Z,270nm,12.0s								
MAK	**Makhachkala**	**65.58**	**309**	*e*P	P	11 06 31.7	+2.5		
MAK				MLR	MLR				
	comp=Z,397nm,14.0s								
RDF	**Al-Radifah**	**67.20**	**294**	*e*P	**P**	**11 06 38.5**	**-1.4**		
RDF				AMb	AMB	11 06 40.3			
	comp=Z,44nm,0.9s								
MIB	**Mutribah**	**67.23**	**295**	*e*P	**P**	**11 06 38.1**	**-1.9**		
MIB				AMb	AMB	11 06 39.2			
	comp=Z,14nm,0.7s								
NAY	**Al-Naaiem**	**67.41**	**294**	*e*P	**P**	**11 06 39.4**	**-1.8**		
NAY				AMb	AMB	11 06 40.6			
	comp=Z,15nm,0.7s								
ZEI	**Tsey**	**68.23**	**309**	*e*P	**P**	**11 06 46.2**	**-0.2**		
ZEI				pmax	pmax				
	comp=Z,11nm,0.9s								
KBZ	**Khabaz**	**68.86**	**310**	LR	LR	11 40 59.4			
	comp=Z,244nm,19.0s,baz=242,slow=39								
KIV	**Kislovodsk**	**68.98**	**311**⇓	*e*P	**P**	**11 06 51.3**	**+0.4**		
KIV				*e*		11 06 58.4			
KIV				*e*		11 07 04.8			
KIV				*e*		11 07 12.9			
KIV				*e*SS	SS	11 20 27.2	+8.4		
KIV				pmax	pmax				
	comp=Z,23nm,1.0s								
KIV				MLR	MLR				
	comp=Z,200nm,18.0s								
VRHR	**Novokhopersk**	**69.02**	**318**	*e*P	**P**	**11 06 48.5**	**-2.3**		
VRHR				pmax	pmax				
	comp=N,20nm,0.8s								
VRHR				pmax	pmax				
	comp=Z,10.0nm,0.8s								
VRHR				pmax	pmax				
	comp=E,4.0nm,0.4s								
TMCR	**Tamitsa**	**70.15**	**332**	*e*P	**P**	**11 06 56.8**	**-0.7**		
TMCR				pmax	pmax				
	comp=Z,27nm,0.3s								
VORD	**Divnogorie**	**70.50**	**318**	*e*P	**P**	**11 06 58.8**	**-1.1**		
VORD				pmax	pmax				
	comp=N,4.0nm,0.6s								
VORD				pmax	pmax				
	comp=E,10.0nm,0.6s								
VORD				pmax	pmax				
	comp=Z,5.0nm,0.6s								
VSR	**Storozhevoye**	**70.55**	**319**	*e*P	**P**	**11 06 59.4**	**-0.8**		
VSR				pmax	pmax				
	comp=N,2.0nm,0.6s								
VSR				pmax	pmax				
	comp=Z,7.0nm,0.6s								
VSR				pmax	pmax				
	comp=E,3.0nm,0.3s								
OBN	**Obninsk**	**71.65**	**323**	*i* P	**P**	**11 07 05.2**	**-1.6**		
OBN				*e*		11 07 23.7			
OBN				*e*SS	SS	11 21 01.8	+2.9		
OBN				pmax	pmax				
	comp=Z,22nm,1.1s								
OBN				MLR	MLR				
	comp=Z,100nm,16.0s								
PPLA	**Purkeypile**	**71.67**	**29**	*e*P	**P**	**11 07 07.6**	**+0.6**		
	comp=Z,46nm,1.5s								
APA	**Apatity**	**71.80**	**336**⇑	*e*P	**P**	**11 07 07.4**	**-0.1**		
APA				MLR	MLR				
	comp=Z,900nm,18.0s								
COLD	**Coldfoot**	**72.05**	**24**	*e*P	**P**	**11 07 09.7**	**+0.7**		
	comp=Z,8.6nm,1.0s								
TRF	**Thorofare Moun**	**72.46**	**28**	*e*P	**P**	**11 07 12.1**	**+0.3**		
	comp=Z,7.3nm,0.8s								
MALT	**Malatya**	**73.02**	**305**	⇑P	**P**	**11 07 15.8**	**+0.3**		
MALT	**Malatya**	**73.02**	**305**	*e*P	**P**	**11 07 16.2**	**+0.7**		
	comp=Z,6.6nm,0.9s								
MALT	**Malatya**	**73.02**	**305**⇑	*i* P	**P**	**11 07 15.8**	**+0.3**		
MCK	**McKinley**	**73.02**	**28**	*e*P	**P**	**11 07 14.2**	**-0.7**		
MCK				pmax	pmax				
	comp=Z,42nm,1.1s								
MCK	**McKinley**	**73.02**	**28**	*e*P	**P**	**11 07 14.2**	**-0.7**		
	comp=Z,42nm,1.1s								
PMR	**Palmer**	**73.26**	**30**	*e*P	**P**	**11 07 15.4**	**-0.9**		
PMR				pmax	pmax				
	comp=Z,20nm,1.1s								
PMR	**Palmer**	**73.26**	**30**	*e*P	**P**	**11 07 15.4**	**-0.9**		
	comp=Z,20nm,1.1s								
JOF	**Joensuu**	**73.27**	**331**	*e*P	**P**	**11 07 14.9**	**-1.4**		
JOF				pmax	pmax				
	comp=Z,3.0nm,0.4s								
JOF	**Joensuu**	**73.27**	**331**	*e*p	**P**	**11 07 14.9**	**-1.4**		
	comp=Z,3.3nm,0.4s								
SML	**Sawmill**	**73.60**	**30**	*e*P	**P**	**11 07 18.7**	**+0.3**		
SML				pmax	pmax				
	comp=Z,12nm,1.3s								
SML	**Sawmill**	**73.60**	**30**	*e*P	**P**	**11 07 18.7**	**+0.3**		
	comp=Z,12nm,1.3s								
ILAR	**Eielson Array**	**73.74**	**27**	P	**P**	**11 07 17.9**	**-1.2**		
ILAR	**Eielson Array**	**73.74**	**27**	P	**P**	**11 07 17.9**	**-1.2**		
	comp=Z,3.2nm,0.8s,baz=293,slow=4.8,SNR=31								
ILAR				LR	LR	11 42 42.6			
	comp=Z,78nm,19.1s,baz=291,slow=38								
KEV	**Kevo**	**73.81**	**339**	*e*P	**P**	**11 07 18.2**	**-1.2**		
KEV				pmax	pmax				
	comp=Z,10.0nm,0.7s								
KEV	**Kevo**	**73.81**	**339**	*e*p	**P**	**11 07 18.2**	**-1.2**		
	comp=Z,9.6nm,0.7s								
ARCES	**ARCESS Array B**	**74.37**	**339**	P	**P**	**11 07 22.5**	**-0.2**		
ARCES	**ARCESS Array B**	**74.37**	**339**	P	**P**	**11 07 22.5**	**-0.2**		
	comp=Z,12nm,0.9s,baz=79,slow=8.0,SNR=26								
ARCES				LR	LR	11 43 53.0			
	comp=Z,185nm,19.0s,baz=317,slow=39								
PAX	**Paxson**	**74.70**	**28**	*e*P	**P**	**11 07 25.1**	**+0.3**		
PAX				pmax	pmax				
	comp=Z,9.0nm,1.0s								
PAX	**Paxson**	**74.70**	**28**	*e*P	**P**	**11 07 25.1**	**+0.3**		
	comp=Z,9.2nm,1.0s								
KIP	**Kipapa**	**74.89**	**72**⇑	*e*P	P	11 07 20.9	-5.7		
KIP				pmax	pmax				
	comp=Z,84nm,2.5s								
DIV	**Divide**	**74.93**	**30**	*e*P	**P**	**11 07 26.6**	**+0.4**		
	comp=Z,72nm,1.5s								
KBS	**Kingsbay**	**75.10**	**349**	*ce*P	**P**	**11 07 27.7**	**+0.9**		
KBS				pmax	pmax				
	comp=Z,7.0nm,1.2s								
MENT	**Mentasta**	**75.48**	**28**	*e*P	**P**	**11 07 29.5**	**+0.2**		
BMRM	**Bremner River**	**75.52**	**30**	*e*P	**P**	**11 07 29.8**	**+0.2**		
	comp=Z,24nm,1.2s								
KAF	**Kangasniemi**	**75.70**	**331**	*e*P	**P**	**11 07 28.6**	**-1.9**		
KAF				pmax	pmax				
	comp=Z,4.0nm,0.7s								
KAF	**Kangasniemi**	**75.70**	**331**	*e*p	**P**	**11 07 28.6**	**-1.9**		
	comp=Z,3.7nm,0.7s								
FINES	**FINESS Array B**	**75.97**	**330**	P	**P**	**11 07 31.3**	**-0.7**		
FINES	**FINESS Array B**	**75.97**	**330**	P	**P**	**11 07 31.3**	**-0.7**		
	comp=Z,6.1nm,0.9s,baz=90,slow=7.6,SNR=15								
FINES				LR	LR	11 45 09.4			
	comp=Z,243nm,19.6s,baz=87,slow=39								
EGAK	**Eagle**	**76.14**	**26**	*e*P	**P**	**11 07 33.0**	**+0.1**		
	comp=Z,14nm,0.9s								
BRTR	**Keskin Array B**	**76.37**	**308**	P	**P**	**11 07 34.4**	**-0.5**		
BRTR	**Keskin Array B**	**76.37**	**308**	P	**P**	**11 07 34.4**	**-0.5**		
	comp=Z,2.1nm,1.1s,baz=101,slow=6.4,SNR=8.0								
AKASG	**Malin Array Be**	**76.83**	**319**	P	**P**	**11 07 36.0**	**-1.1**		
AKASG	**Malin Array Be**	**76.83**	**319**	P	**P**	**11 07 36.0**	**-1.1**		
AKASG	**Malin Array Be**	**76.83**	**319**	P	**P**	**11 07 36.0**	**-1.1**		
	comp=Z,4.4nm,0.8s,baz=63,slow=5.7,SNR=9.8								
RPZ	**Rata Peaks**	**77.27**	**145**	P	**P**	**11 07 39.6**	**0.0**		
RPZ	**Rata Peaks**	**77.27**	**145**	P	**P**	**11 07 39.6**	**0.0**		
	comp=Z,22nm,0.9s,baz=213,slow=23,SNR=5.3								
CFR	**Carcaliu**	**78.95**	**314**	⇓P	**P**	**11 07 48.4**	**-0.6**		
CFR	**Carcaliu**	**78.95**	**314**	⇓*i* P	**P**	**11 07 48.3**	**-0.7**		
VRI	**Vrincioaia**	**79.70**	**315**	⇓P	**P**	**11 07 53.4**	**+0.2**		
VRI	**Vrincioaia**	**79.70**	**315**	⇓*i* P	**P**	**11 07 53.4**	**+0.2**		
PLOR	**Plostina**	**79.76**	**315**	⇑P	**P**	**11 07 53.9**	**+0.4**		
PLOR	**Plostina**	**79.76**	**315**	⇑*i* P	**P**	**11 07 53.9**	**+0.4**		
BURAR	**Bucovina Array**	**80.19**	**317**	⇓*i* P	**P**	**11 07 55.5**	**-0.4**		
MLR	**Muntele Rosu**	**80.34**	**315**	⇓*i* P	**P**	**11 07 56.5**	**-0.2**		
KWP	**Kalwaria Pacla**	**81.15**	**319**	⇓P	**P**	**11 08 00.7**	**-0.1**		
KWP	**Kalwaria Pacla**	**81.15**	**319**	⇓*i* P	**P**	**11 08 00.7**	**-0.1**		
KWP	**Kalwaria Pacla**	**81.15**	**319**	*e*P	**P**	**11 08 00.1**	**-0.7**		
DAG	**Danmarks Havn**	**81.47**	**351**	*i* P	**P**	**11 08 00.3**	**-1.7**		
DAG				*i*		11 08 10.6			
DAG				pmax	pmax				
	comp=Z,5.0nm,0.8s								
DAG	**Danmarks Havn**	**81.47**	**351**	*i* P	**P**	**11 08 00.3**	**-1.7**		
	comp=Z,7.1nm,0.8s								
DAG				*i*		11 08 10.6			
CRVS	**Cervenica-Dubn**	**82.16**	**319**	*e*P	**P**	**11 08 05.5**	**-0.7**		
CRVS				pmax	pmax				
	comp=Z,5.0nm,1.2s								
CRVS	**Cervenica-Dubn**	**82.16**	**319**	*e*P	**P**	**11 08 05.5**	**-0.7**		
CRVS				*e*pP	**pP**	**11 08 16.8**	**-1.8**		
CRVS				*e*sP	**sP**	**11 08 25.8**	**+2.6**		
GZR	**Gura Zlata**	**82.49**	**315**	⇑P	**P**	**11 08 08.4**	**+0.4**		
GZR	**Gura Zlata**	**82.49**	**315**	⇑*i* P	**P**	**11 08 08.4**	**+0.4**		
NB2	**NORSAR Subarra**	**82.84**	**333**	P	**P**	**11 08 07.7**	**-1.8**		
	comp=Z,6.5nm,1.0s,baz=65,slow=5.3								
NOA	**NORSAR Array B**	**82.84**	**333**	P	**P**	**11 08 08.3**	**-1.2**		
NOA	**NORSAR Array B**	**82.84**	**333**	P	**P**	**11 08 08.3**	**-1.2**		
	comp=Z,2.9nm,0.8s,baz=64,slow=5.0,SNR=11								
NOA				LR	LR	11 48 05.6			
	comp=Z,348nm,19.9s,baz=60,slow=38								
VTS	**Vitosha**	**83.12**	**313**	⇑P	**P**	**11 08 11.2**	**-0.3**		
VTS	**Vitosha**	**83.12**	**313**	⇑*i* P	**P**	**11 08 11.2**	**-0.3**		
DLBC	**Dease Lake**	**83.32**	**30**	*e*P	**P**	**11 08 13.4**	**+1.3**		
BSD	**Bornholm Skovb**	**83.60**	**326**	*i* P	**P**	**11 08 12.4**	**-1.0**		
BSD				pmax	pmax				
	comp=Z,7.0nm,1.0s								
BSD	**Bornholm Skovb**	**83.60**	**326**	*i* P	**P**	**11 08 12.4**	**-1.0**		
	comp=Z,7.2nm,1.0s								
RES	**Resolute Bay**	**83.72**	**9**	*e*P	**P**	**11 08 13.3**	**-0.4**		
	comp=Z,16nm,1.1s								
VYHS	**Vyhne**	**83.93**	**319**	*e*P	**P**	**11 08 14.7**	**-0.6**		
VYHS				pmax	pmax				
	comp=Z,4.0nm,1.2s								
VYHS	**Vyhne**	**83.93**	**319**	*e*P	**P**	**11 08 14.7**	**-0.6**		
VYHS				*e*pP	**pP**	**11 08 26.6**	**-1.2**		
KSP	**Ksiaz**	**84.55**	**322**	*e*P	**P**	**11 08 17.5**	**-0.9**		
KMBO	**Kilima Mbogo**	**84.76**	**267**	*e*P	**P**	**11 08 21.2**	**+0.8**		
	comp=Z,26nm,1.8s								
KMBO	**Kilima Mbogo**	**84.76**	**267**	P	**P**	**11 08 20.6**	**+0.2**		
	comp=Z,3.6nm,0.8s,baz=47,slow=14,SNR=6.0								
KMBO				LR	LR	11 43 59.9			
	comp=Z,145nm,21.0s,baz=86,slow=34								
VRAC	**Vranov**	**84.98**	**321**	⇓*i* P	**P**	**11 08 19.9**	**-0.8**		
BRG	**Berggiesshubel**	**85.90**	**323**	*e*P	**P**	**11 08 24.5**	**-0.7**		
	comp=Z,12nm,1.4s								
BRG	**Berggiesshubel**	**85.90**	**323**	*e*P	**P**	**11 08 24.5**	**-0.7**		
BRG				pmax	pmax				
	comp=Z,12nm,1.4s								
MUD	**Monsted U'grnd**	**85.91**	**329**	*e*P	**P**	**11 08 24.3**	**-0.7**		
MUD				pmax	pmax				
	comp=Z,6.0nm,0.8s								
MUD	**Monsted U'grnd**	**85.91**	**329**	*i* P	**P**	**11 08 24.3**	**-0.7**		
	comp=Z,5.8nm,0.8s								
CLL	**Collm**	**86.25**	**323**	*e*P	**P**	**11 08 26.0**	**-0.9**		
CLL	**Collm**	**86.25**	**323**	*e*P	**P**	**11 08 26.0**	**-0.9**		
GERES	**GERESS Array B**	**86.91**	**321**	P	**P**	**11 08 29.8**	**-0.5**		
GERES	**GERESS Array B**	**86.91**	**321**	P	**P**	**11 08 29.8**	**-0.5**		
	comp=Z,1.5nm,0.9s,baz=18,slow=1.7,SNR=5.4								
GERES				LR	LR	11 49 55.5			
	comp=Z,124nm,19.9s,baz=82,slow=37								
YKW3	**Yellowknife Ar**	**87.62**	**23**	*e*P	**P**	**11 08 33.1**	**-0.1**		
	comp=Z,1.5nm,1.5s								
YKW3				*e*pP	**pP**	**11 08 44.3**	**-1.4**		
SUMG	**Summit**	**87.63**	**354**	*i* P	**P**	**11 08 33.4**	**-0.3**		
SUMG				pmax	pmax				
	comp=Z,5.0nm,1.0s								
SUMG	**Summit**	**87.63**	**354**	*e*P	**P**	**11 08 33.6**	**-0.1**		
	comp=Z,9.2nm,1.1s								
SUMG	**Summit**	**87.63**	**354**	*i* P	**P**	**11 08 33.4**	**-0.3**		
	comp=Z,5.4nm,1.0s								
YKA	**Yellowknife Ar**	**87.66**	**23**	P	**P**	**11 08 33.4**	**-0.1**		
YKA	**Yellowknife Ar**	**87.66**	**23**	P	**P**	**11 08 33.4**	**-0.1**		
	comp=Z,12nm,0.8s,baz=314,slow=4.7,SNR=177								
CEL	**Celeste**	**89.91**	**311**	*e*P	**P**	**11 08 44.2**	**-0.5**		
	comp=Z,11nm,1.0s								
CEL				*e*pP	**pP**	**11 08 56.5**	**-0.8**		
LPG	**La Plagne**	**92.66**	**320**	*e*P	**P**	**11 08 57.1**	**-0.5**		
	comp=Z,15nm,0.8s								
LPG	**La Plagne**	**92.66**	**320**	*e*P	**P**	**11 08 57.1**	**-0.5**		
LPG				pmax	pmax				
	comp=Z,15nm,0.8s								
LPG	**La Plagne**	**92.66**	**320**	*e*P	**P**	**11 08 57.1**	**-0.5**		
	comp=Z,15nm,0.8s								
LPL	**La Plagne**	**92.67**	**320**	*e*P	**P**	**11 08 57.2**	**-0.4**		
LPL	**La Plagne**	**92.67**	**320**	*e*P	**P**	**11 08 57.2**	**-0.4**		
LPL	**La Plagne**	**92.67**	**320**	*e*P	**P**	**11 08 57.2**	**-0.4**		
PPT	**Papeete**	**94.76**	**107**	LR	LR	11 42 37.3			
	comp=Z,168nm,20.9s,baz=332,slow=30								
PPT2	**Papeete2**	**94.77**	**107**	*e*LR	LR	11 39 40.6			
	comp=Z,205nm,24.2s								
MAW	**Mawson**	**96.29**	**199**	LR	LR	11 47 15.1			
	comp=Z,106nm,19.3s,baz=97,slow=32								
TBI	**Tubuai**	**96.64**	**112**	*e*LR	LR	11 40 32.8			
	comp=Z,161nm,30.5s								
FFC	**Flin Flon**	**97.79**	**24**	*e*P	**P**	**11 09 20.2**	**-0.3**		
FFC				*e**PP	**pP**	**11 09 30.0**	**-3.0**		
FFC				pmax	pmax				
	comp=Z,5.0nm,1.1s								
FFC	**Flin Flon**	**97.79**	**24**	*e*P	**P**	**11 09 20.2**	**-0.3**		
	comp=Z,4.9nm,1.1s								
FFC				*e*pP	**pP**	**11 09 30.0**	**-3.0**		
VNDA	**Vanda**	**99.19**	**172**	LR	LR	11 58 29.0			
	comp=Z,99nm,19.4s,baz=335,slow=38								
TORD	**Torodi Ar. Bea**	**112.48**	**294**	PKKPbc	PKKPbc	11 25 12.7	+1.5		
TORD	**Torodi Ar. Bea**	**112.48**	**294**	PKKPbc	PKKPbc	11 25 12.7	+1.5		
	comp=Z,5.5nm,1.0s,baz=233,slow=3.3,SNR=4.2								
TXAR	**Lajitas Array**	**115.24**	**43**	PKP	**PKPdf**	**11 14 27.2**	**-0.1**		
TXAR	**Lajitas Array**	**115.24**	**43**	PKP	**PKPdf**	**11 14 27.2**	**-0.1**		
	comp=Z,0.7nm,0.7s,baz=276,slow=1.1,SNR=3.5								
BCIP	**Isla Barro Col**	**145.08**	**39**	*e*PKPbc	**PKPab**	**11 15 22.9**	**0.0**		
SDV	**Santo Domingo**	**149

8.0nm,1.0s,baz=104,slow=7.4,SNR=6.5
CTA LR LR 12 35 42.3
comp=Z,74nm,18.2s,baz=298,slow=36
ASAR Alice Springs 42.21 274 P **P** **12 22 57.8 +0.1**
2.4nm,0.9s,baz=113,slow=7.6,SNR=14
WRA Warramunga Arr 43.74 279 P **P** **12 23 09.2 -0.8**
4.4nm,0.6s,baz=119,slow=7.7,SNR=31
WRA LR LR 12 41 34.2
comp=Z,163nm,20.7s,baz=140,slow=36
FITZ Fitzroy Crossi 51.68 275 LR LR 12 46 15.3
comp=Z,113nm,18.0s,baz=187,slow=36
KSRS Korea Array 88.33 321 LR LR 13 04 16.7
comp=Z,20nm,18.1s,baz=225,slow=33
PETK Petropavlovsk- 91.38 346 P **P** **12 28 09.1 +0.3**
2.3nm,0.7s,baz=115,slow=9.7,SNR=3.8
KURBB Kurchatov Arra 124.42 311 PKP **PKPdf** **12 34 03.1 +1.5**
0.5nm,0.6s,baz=113,slow=2.1,SNR=7.2
JOF Joensuu 147.52 334 *ep* **PKPbc** **12 34 47.0 +0.6**
2.3nm,0.6s
KAF Kangasniemi 149.76 336 *ep* **PKPbc** **12 34 51.2 -0.9**
2.2nm,0.5s
FINES FINESS Array B 150.32 336 PKPbc **PKPbc** **12 34 54.2 +0.8**
1.7nm,0.5s,baz=58,slow=4.0,SNR=10
TORD Torodi Ar. Bea 156.85 182 PKPab **PKPab** **12 35 28.4 -0.5**
0.3nm,0.7s,baz=160,slow=2.3,SNR=3.3

*ISCJB **24** 12:23:31.7±0.6,31°24'N±0'.06×104°.0E±0°.1,h14km, mb3.6/6, Error ellipse: s-maj=13.8km s-min=6.2km az=24.9*
*IDC **24** 12:23:31.4±0.9,31°.23N×103°.92E,h0km,mb3.6/7, mb1 3.8/9,mb1mx3.6/28,mbtmp3.6/9,ML3.6/2,MS2.9/1, Ms1 2.9/1,ms1mx2.1/32, Error ellipse: s-maj=34.1km s-min=17.5km az=62.0*
*BJI **24** 12:23:35.4,31°.28N×103°.76E,h21km,ML3.5/15*
ISC 24 12:23:33.0±0.8,31°.26N±0'.05×103°.98E±0'.07,h14km,n12, σ1§12/14,mb3.5/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.40**	**209**	Pg	**Pg**	**12 23 39.5**	**-1.5**
CD2				Sg	**Sg**	**12 23 44.9**	**-1.5**
CD2				*s*max	*s*max		
	comp=N,12μm,0.7s						
CD2				*s*max	*s*max		
	comp=E,12μm,0.5s						
LZH	**Lanzhou**	**4.82**	**359**	*e*Pn	Pb	12 24 52.8	-4.5
LZH				Pg	**Pg**	**12 25 05.1**	**-0.2**
LZH				Sg	**Sg**	**12 26 06.0**	**-1.7**
LZH				*s*max	*s*max		
	comp=N,43nm,1.1s						
LZH				*s*max	*s*max		
	comp=E,68nm,1.0s						
LZH				LR	LR		
	comp=N,430nm,7.2s						
LZH				LR	LR		
	comp=E,330nm,5.1s						
LZH				LR	LR		
	comp=Z,440nm,8.2s						
XAN	**Xi'an**	**5.01**	**55**	Pn	Pn	12 24 50.9	+3.2
XAN				Pg	**Pg**	**12 25 07.9**	**-1.0**
XAN				Sg	**Sg**	**12 26 12.8**	**-0.9**
XAN				*s*max	*s*max		
	comp=N,63nm,1.0s						
XAN				*s*max	*s*max		
	comp=E,26nm,0.9s						
CMAR	**Chiang Mai Arr 13.54 201**			Pn	**Pn**	**12 26 46.4**	**+1.7**
	comp=E,0.2nm,0.3s,baz=4.9,slow=13,SNR=2.7						
SONM	**Songino Array 16.66 6**			Pn	**P**	**12 27 27.8**	**-0.7**
	comp=E,0.1nm,0.3s,baz=199,slow=12,SNR=3.7						
SONM				LR	LR	12 33 33.5	
	comp=E,36nm,18.8s,baz=69,slow=36						
KSRS	**Korea Array 20.68 66**			P	Pn	12 28 14.2	-0.8
	comp=E,1.7nm,0.7s,baz=263,slow=10,SNR=4.9						
MKAR	**Makanchi Array 22.79 319**			P	**P**	**12 28 35.4**	**+0.2**
	comp=E,0.5nm,0.7s,baz=132,slow=12,SNR=5.1						
ZALV	**Zalesovo Beam 26.54 334**			P	**P**	**12 29 11.0**	**+0.9**
	comp=E,1.2nm,0.7s,baz=136,slow=10,SNR=4.6						
KURBB	**Kurchatov Arra 27.05 323**			P	**P**	**12 29 14.9**	**+0.2**
	comp=E,0.4nm,0.6s,baz=128,slow=9.1,SNR=7.7						
WRA	**Warramunga Arr 58.66 146**			P	**P**	**12 33 30.6**	**+0.5**
	comp=E,3.3nm,0.5s,baz=338,slow=7.9,SNR=18						
ASAR	**Alice Springs 61.68 149**			P	**P**	**12 33 51.0**	**+0.4**
	comp=E,0.6nm,0.7s,baz=337,slow=6.9,SNR=7.6						
YKA	**Yellowknife Ar 81.58 17**			P	**P**	**12 35 50.4**	**+0.5**
	comp=E,0.2nm,0.6s,baz=329,slow=5.3,SNR=6.6						

*IDC **24** 12:37:20.2±1.2,6°.20N×86°.48E,h0km,mb3.9/10, mb1 4.0/11,mb1mx3.8/29,mbtmp3.9/11,ML2.7/1,MS3.5/1, Ms1 3.5/1,ms1mx2.8/32,Error ellipse: s-maj=37.3km s-min=19.9km az=58.0*
*ISCJB **24** 12:37:21.6±0.8,6°.45N±0°.08×86°.91E±0°.08,h10km, mb4.0/10,MS3.5/1,Error ellipse: s-maj=12.0km s-min=11.4km az=1.3*
ISC 24 12:37:22.3±1.0,6°.4N±0°.1×86°.77E±0°.10,h10km,n34, σ1§98/29,mb4.0/10,Bay of Bengal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**7.14**	**85**	*e*S	Sn	12 40 15.1	-13
CMBY				AML	AML	12 40 24.6	
	comp=E,268nm,0.8s						
CMBY				AML	AML	12 40 28.9	
	comp=N,1.9nm,0.2s						
PBA	**Port Blair**	**7.88**	**48**	*e*P	Pn	12 39 13.0	-4.1
PBA				*e*S	Sn	12 40 41.2	-5.2
PBA				AML	AML	12 40 50.2	
	comp=N,224nm,0.2s						
PBA				AML	AML	12 40 52.7	
	comp=E,300nm,0.6s						
DGPR	**DIGLIPUR**	**9.07**	**42**	*e*P	**Pn**	**12 39 31.5**	**-1.9**
DGPR				*e*S	**Sn**	**12 41 13.9**	**-1.7**
DGPR				AML	AML	12 41 15.8	
	comp=N,248nm,0.2s						
DGPR				AML	AML	12 41 15.9	
	comp=E,323nm,0.3s						
TRD	**Trivandrum**	**9.95**	**283**	*e*P	**Pn**	**12 39 44.8**	**-0.6**
TRD				*ex*	x	12 41 26.5	
VIS	**Vishakhapatnam**	**11.75**	**344**	*e*P	**Pn**	**12 40 09.9**	**-0.2**
VIS				*e*S	Sn	12 42 14.3	-7.0
HYB	**Hyderabad**	**13.58**	**324**	*e*P	**Pn**	**12 40 34.5**	**-0.6**
NGP	**Nagpur**	**16.46**	**334**	*e*P	**Pn**	**12 41 12.9**	**-0.6**
NGP				*ex*	x	12 41 15.9	
CMAR	**Chiang Mai Arr 16.87 44**			P	**P**	**12 41 20.9**	**+0.1**
	comp=E,0.0nm,0.3s,baz=235,slow=15,SNR=5.2						
BOK	**Bokaro 17.32**		**357**	*e*P	**Pn**	**12 41 23.0**	**-1.3**
BHPL	**Bhopal 19.01**		**333**	*e*P	**P**	**12 41 43.2**	**-1.3**
SHL	**Shillong 19.68**		**14**	*ex*	**P**	**12 41 52.4**	**+0.5**
ODAN	**Odare 20.36**		**2**	*e*P	Pn	12 42 02.5	+1.0
	comp=E,46nm,0.5s						
RAMN	**Ramite 20.44**		**360**	*e*P	Pn	12 42 04.1	+1.7
	comp=E,92nm,0.5s						
TAPN	**Taplejung 20.86**		**2**	*e*P	Pn	12 42 08.2	+0.8
PKI	**Pulchoki 21.10**		**357**	*e*P	**P**	**12 42 10.8**	**+3.3**
	comp=E,98nm,0.6s						
PKIN	**Phulchoki 21.11**		**357**	*e*P	**P**	**12 42 11.4**	**+3.9**
	comp=E,26nm,0.3s						
DMN	**Daman 21.16**		**356**	*e*P	**P**	**12 42 11.2**	**+3.2**
	comp=E,115nm,0.5s						
KKN	**Kakani 21.32**		**356**	*e*P	**P**	**12 42 12.7**	**+2.9**
	comp=E,76nm,0.6s						
GUN	**Gumba 21.41**		**358**	*e*P	**P**	**12 42 13.5**	**+2.6**
	comp=E,132nm,0.6s						
KOLN	**Koldanda 21.47**		**352**	*e*P	**P**	**12 42 13.9**	**+2.6**
	comp=E,79nm,0.4s						
PYUN	**Piuthan 21.88**		**351**	*e*P	**P**	**12 42 18.1**	**+2.4**
	comp=E,241nm,0.7s						
DANN	**Dangsing 22.02**		**353**	*e*P	**P**	**12 42 19.4**	**+2.1**
	comp=E,80nm,0.5s						
SMLA	**Simla 26.20**		**341**	*ex*	**P**	**12 43 00.5**	**+3.3**
AAK	**Ala-Archa 37.69**		**345**	P	**P**	**12 44 37.6**	**-0.5**
	comp=E,1.5nm,0.6s,baz=102,slow=20,SNR=8.4						
MKAR	**Makanchi Array 40.43**		**355**	P	**P**	**12 45 02.2**	**+1.3**
	comp=E,1.2nm,0.6s,baz=182,slow=8.8,SNR=22						
SONM	**Songino Array 44.56**		**19**	P	**P**	**12 45 36.1**	**+1.5**
	comp=E,3.3nm,0.7s,baz=200,slow=8.7,SNR=24						
KURBB	**Kurchatov Arra 44.62**		**353**	P	**P**	**12 45 36.0**	**+1.3**
	comp=E,2.7nm,0.7s,baz=171,slow=7.3,SNR=41						
ZALV	**Zalesovo Beam 47.44**		**358**	P	**P**	**12 45 57.7**	**+0.8**
	comp=E,4.2nm,0.6s,baz=184,slow=7.0,SNR=18						
BVAR	**Borovoye Array 48.38**		**347**	P	**P**	**12 46 05.2**	**+0.9**
	comp=E,0.7nm,0.5s,baz=190,slow=7.5,SNR=4.1						
WRA	**Warramunga Arr 53.61**		**120**	P	**P**	**12 46 45.0**	**+0.7**
	comp=E,0.6nm,0.7s,baz=305,slow=8.1,SNR=8.0						
ASAR	**Alice Springs 54.85**		**125**	P	**P**	**12 46 53.5**	**+0.2**
	comp=E,1.0nm,1.1s,baz=297,slow=7.0,SNR=4.5						
MJAR	**Matsushiro Arr 55.63**		**50**	LR	LR	13 10 22.4	
	comp=E,46nm,20.4s,baz=250,slow=35						
FINES	**FINESS Array B 70.68**		**334**	P	**P**	**12 48 37.6**	**-0.5**
	comp=E,1.4nm,0.8s,baz=108,slow=4.2,SNR=4.2						
TORD	**Torodi Ar. Bea 83.79**		**283**	P	**P**	**12 49 50.9**	**-1.7**
	comp=E,0.4nm,0.6s,baz=105,slow=5.6,SNR=5.1						

*CSEM **24** 13:06:42.5±0.3,39°.06N×27°.52E,h1km,MD2.6,Error ellipse: s-maj=5.6km s-min=4.5km az=6.0*
DDA 24 13:06:43.0,39°.12N×27°.57E,h7km,MD2.6,Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.31**	**141**	*i*	P	Pg	13 06 49.2	+0.2
AKHS				*i*	S	Sg	13 06 54.6	+1.5
AKHS	**Akhisar**	**0.31**	**141**	*i*	P	Pg	13 06 49.2	+0.2
AKHS				*i*	S	Sb	13 06 54.6	-1.5
BALY	**Balya**	**0.62**	**4**	*i*	P	Pg	13 06 55.4	+0.4
BALY				*i*	S	Sb	13 07 05.0	-0.3
BALY	**Balya**	**0.62**	**4**	*i*	P	Pg	13 06 55.4	+0.3
BALY				*i*	S	Sb	13 07 05.0	-0.3
DURS	**Dursunbey**	**0.85**	**55**	*i*	P	Pb	13 06 60.0	-0.3
DURS				*i*	S	Sn	13 07 13.3	-1.1
DURS	**Dursunbey**	**0.85**	**55**	*i*	P	Pb	13 07 00.0	-0.2
DURS				*i*	S	Sn	13 07 13.3	-1.1
DEMI	**Demirci**	**0.90**	**94**	*i*	P	Pg	13 07 00.6	+0.3
DEMI				*i*	S	Sb	13 07 13.1	-0.1
DEMI	**Demirci**	**0.90**	**94**	*i*	P	Pg	13 07 00.6	+0.3
DEMI				*i*	S	Sb	13 07 13.1	-0.2
MANT	**Manisa**	**1.00**	**129**	*i*	P	Pg	13 07 01.4	-1.0
MANT				*i*	S	Sb	13 07 16.8	+0.4
MANT	**Manisa**	**1.00**	**129**	*i*	P	Pg	13 07 01.4	-1.0
MANT				*i*	S	Sb	13 07 16.7	+0.3
AYDN	**Tasoluk**	**1.48**	**170**	*i*	P	Pn	13 07 08.8	-1.3
AYDN				*i*	S	Sn	13 07 27.3	-2.4
AYDN	**Tasoluk**	**1.48**	**170**	*i*	P	Pn	13 07 08.8	-1.2
AYDN				*i*	S	Sn	13 07 27.3	-2.3
ULDT	**Uludag**	**1.59**	**49**	*i*	P	Pn	13 07 12.3	+0.5
ULDT				*i*	S	Sg	13 07 35.3	+0.8
ULDT	**Uludag**	**1.59**	**49**	*i*	P	Pn	13 07 12.3	+0.6
ULDT				*i*	S	Sg	13 07 35.3	+0.9
KHAL	**Karahalli**	**1.68**	**116**	*i*	P	Pn	13 07 11.2	-1.7
KHAL	**Karahalli**	**1.68**	**116**	*i*	P	Pn	13 07 11.2	-1.7

*CSEM **24** 13:07:50.0±0.1,39°.01N×24°.16E,h10km,MD3.1,Error ellipse: s-maj=2.7km s-min=2.1km az=98.0*
*ATH **24** 13:07:50.0,39°.01N×24°.17E,h25km,MD3.1/14,ML2.7*
THE 24 13:07:50.5,38°.99N×24°.16E,h9km,ML2.4/12,Error ellipse: s-maj=0.8km s-min=0.5km az=274.0,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.28**	**309**		P	Pg	13 07 55.6	-0.5
AOS					S	Sg	13 08 00.1	+0.2
AOS	**Alonnisos**	**0.28**	**309**	*e*	PB	Pg	13 07 56.0	-0.1
AOS	**Alonnisos**	**0.28**	**309**		P	Pg	13 07 55.6	-0.5
AOS	**Alonnisos**	**0.28**	**309**	*e*	Pb	Pg	13 07 56.0	-0.1
AOS					S	Sg	13 08 00.1	+0.2
MRKA	**Markates**	**0.53**	**238**		P	Pg	13 07 59.9	-0.9
MRKA					S	Sg	13 08 08.7	+0.8
MRKA	**Markates**	**0.53**	**238**		S	Sg	13 08 08.7	+0.8
MRKA	**Markates**	**0.53**	**238**		P	Pg	13 07 59.9	-0.9
SKIA	**Skiathos**	**0.57**	**288**		P	Pg	13 08 01.2	-0.3
SKIA					S	Sb	13 08 10.3	-0.6
SKIA	**Skiathos**	**0.57**	**288**		S	Sb	13 08 10.3	-0.6
SKIA	**Skiathos**	**0.57**	**288**		P	Pg	13 08 01.2	-0.3
SMIA	**Simia**	**0.75**	**262**		P	Pg	13 08 04.5	-0.5
SMIA					S	Sb	13 08 15.7	-0.5
SMIA	**Simia**	**0.75**	**262**		S	Sb	13 08 15.7	-0.5
SMIA	**Simia**	**0.75**	**262**		P	Pg	13 08 04.5	-0.5
NEO	**Neokhori**	**0.79**	**294**	*e*	PN	Pg	13 08 05.6	-0.2
NEO				*e*	SN	Sg	13 08 16.8	+0.6
NEO	**Neokhori**	**0.79**	**294**	*e*	Pn	Pg	13 08 05.6	-0.2
NEO				*e*	Sn	Sg	13 08 16.8	+0.6
XOR	**Xorichti**	**0.84**	**297**		P	Pg	13 08 06.7	0.0
XOR					S	Sb	13 08 18.9	+0.1
XOR	**Xorichti**	**0.84**	**297**		S	Sb	13 08 18.9	+0.1
XOR	**Xorichti**	**0.84**	**297**		P	Pg	13 08 06.7	0.0
ATAL	**Atalanti**	**0.94**	**252**		P	Pg	13 08 07.6	-1.0
ATAL					S	Sg	13 08 20.8	0.0
ATAL	**Atalanti**	**0.94**	**252**		S	Sg	13 08 20.8	0.0
ATAL	**Atalanti**	**0.94**	**252**		P	Pg	13 08 07.6	-1.0
MRMA	**Marmari**	**0.95**	**169**		P	Pg	13 08 08.8	0.0
MRMA					S	Sb	13 08 21.9	0.0
MRMA	**Marmari**	**0.95**	**169**		P	Pg	13 08 08.8	0.0
MRMA					S	Sb	13 08 21.9	0.0
LKR	**Lokris**	**0.97**	**250**		P	Pg	13 08 08.6	-0.5
LKR					S	Sb	13 08 23.0	+0.6
LKR	**Lokris**	**0.97**	**250**	*e*	PN	Pg	13 08 08.5	-0.6
LKR				*e*	SN	Sb	13 08 22.8	+0.4
LKR	**Lokris**	**0.97**	**250**		S	Sb	13 08 23.0	+0.6
LKR	**Lokris**	**0.97**	**250**		P	Pg	13 08 08.6	-0.5
LKR				*e*	Sn	Sb	13 08 22.8	+0.4
PTL	**Penteli**	**0.97**	**194**		P	Pg	13 08 08.2	-1.0
PTL					S	Sb	13 08 22.9	+0.4
PTL	**Penteli**	**0.97**	**194**	*e*	PN	Pg	13 08 09.1	-0.1
PTL				*e*	SN	Sb	13 08 22.2	-0.3
PTL	**Penteli**	**0.97**	**194**		P	Pg	13 08 08.2	-1.0
PTL	**Penteli**	**0.97**	**194**	*e*	Pn	Pg	13 08 09.1	-0.1
PTL				*e*	Sn	Sb	13 08 22.2	-0.3
PTL					S	Sg	13 08 22.9	+1.0
PAIG	**Paliouri**	**1.00**	**338**		P	Pg	13 08 09.3	-0.5
PAIG					S	Sn	13 08 24.4	-0.7
PAIG	**Paliouri**	**1.00**	**338**	*e*	PN	Pg	13 08 09.1	-0.7
PAIG				*e*	SN	Sg	13 08 23.1	+0.2
PAIG	**Paliouri**	**1.00**	**338**		P	Pg	13 08 09.3	-0.5
PAIG				*e*	Sn	Sg	13 08 23.1	+0.2
PAIG					S	Sn	13 08 24.4	-0.7
ATHU	**Athens Univers**	**1.07**	**196**		P	Pg	13 08 10.8	-0.2
ATHU					S	Sb	13 08 25.8	+0.6
ATHU	**Athens Univers**	**1.07**	**196**		P	Pg	13 08 10.8	-0.2
ATHU					S	Sb	13 08 25.8	+0.6
ATH	**Athens Observa**	**1.08**	**199**		P	Pb	13 08 11.3	0.0
ATH	**Athens Observa**	**1.08**	**199**	*e*	PN	Pb	13 08 11.3	0.0
ATH				*e*	SN	Sn	13 08 26.3	-0.5
ATH	**Athens Observa**	**1.08**	**199**		P	Pb	13 08 11.3	0.0
ATH				*e*	Sn	Sn	13 08 26.3	-0.5
AXAR	**Agios Charalam**	**1.19**	**260**		P	Pb	13 08 12.7	-0.6
AXAR					S	Sn	13 08 29.6	-0.2
AXAR	**Agios Charalam**	**1.19**	**260**		S	Sn	13 08 29.6	-0.2
AXAR	**Agios Charalam**	**1.19**	**260**		P	Pb	13 08 12.7	-0.6
LIA	**Limnos Island**	**1.20**	**41**		P	Pb	13 08 12.0	-1.5
LIA					S	Sg	13 08 29.5	+0.3
LIA	**Limnos Island**	**1.20**	**41**	*e*	PN	Pb	13 08 12.8	-0.7
LIA				*e*	SN	Sg	13 08 29.3	+0.1
LIA	**Limnos Island**	**1.20**	**41**		P	Pb	13 08 12.0	-1.5
LIA	**Limnos Island**	**1.20**	**41**	*e*	Pn	Pb	13 08 12.8	-0.7
LIA				*e*	Sn	Sg	13 08 29.3	+0.1
NAIG	**Nisos Aigina**	**1.34**	**203**	*e*	PN	Pn	13 08 15.4	0.0
NAIG	**Nisos Aigina**	**1.34**	**203**	*e*	Pn	Pn	13 08 15.4	0.0
LTK	**Loutraki**	**1.35**	**224**		P	Pn	13 08 14.4	-1.1
LTK					S	Sb	13 08 33.4	+0.1
LTK	**Loutraki**	**1.35**	**224**		P	Pn	13 08 14.4	-1.1
LTK					S	Sb	13 08 33.4	+0.1
OUR	**Ouranopolis**	**1.35**	**354**		P	Pn	13 08 14.4	-1.1
OUR	**Ouranopolis**	**1.35**	**354**		P	Pn	13 08 14.4	-1.1
DSF	**Desfina**	**1.40**	**246**		P	Pn	13 08 15.2	-1.2
DSF					S	Sb	13 08 34.5	-0.5
DSF	**Desfina**	**1.40**	**246**		P	Pn	13 08 15.2	-1.2
DSF					S	Sb	13 08 34.5	-0.5
AGG	**Agios Georgios**	**1.43**	**272**		P	Pn	13 08 15.5	-1.1
AGG					S	Sn	13 08 35.0	-0.6
AGG	**Agios Georgios**	**1.43**	**272**	*e*	PN	Pn	13 08 16.5	-0.1
AGG				*e*	SN	Sn	13 08 35.6	0.0
AGG	**Agios Georgios**	**1.43**	**272**		S	Sn	13 08 35.0	-0.6
AGG	**Agios Georgios**	**1.43**	**272**		P	Pn	13 08 15.5	-1.1
AGG	**Agios Georgios**	**1.43**	**272**	*e*	Pn	Pn	13 08 16.5	-0.1
AGG				*e*	Sn	Sn	13 08 35.6	0.0
PLG	**Polygyros**	**1.49**	**338**		P	Pn	13 08 16.4	-1.1
PLG	**Polygyros**	**1.49**	**338**	*e*	PN	Pn	13 08 16.4	-1.1
PLG				*e*	SN	Sn	13 08 35.6	-1.5
PLG	**Polygyros**	**1.49**	**338**		P	Pn	13 08 16.4	-1.1
PLG				*e*	Sn	Sn	13 08 35.6	-1.5
CHOS	**Chios island**	**1.60**	**112**	*e*	PN	Pn	13 08 18.6	-0.5
CHOS	**Chios island**	**1.60**	**112**	*e*	Pn	Pn	13 08 18.6	-0.5
DID	**Didima**	**1.65**	**206**		P	Pn	13 08 18.4	-1.3
DID					S	Sn	13 08 40.6	-0.5
DID	**Didima**	**1.65**	**206**	*e*	PN	Pn	13 08 19.9	+0.2
DID	**Didima**	**1.65**	**206**		P	Pn	13 08 18.4	-1.3
DID	**Didima**	**1.65**	**206**	*e*	Pn	Pn	13 08 19.9	+0.2
DID					S	Sn	13 08 40.6	-0.5
PRK	**Paraskevi**	**1.66**	**81**	*e*	PN	Pn	13 08 19.4	-0.4
PRK				*e*	SN	Sn	13 08 41.1	-0.2
PRK	**Paraskevi**	**1.66**	**81**	*e*	Pn	Pn	13 08 19.4	-0.4
PRK				*e*	Sn	Sn	13 08 41.1	-0.2
DIDY	**Didyma**	**1.69**	**207**		P	Pn	13 08 19.7	-0.6
DIDY	**Didyma**	**1.69**	**207**		P	Pn	13 08 19.7	-0.6
KALE	**Kalithea**	**1.69**	**250**		P	Pn	13 08 19.6	-0.7
KALE					S	Sn	13 08 42.1	-0.1
KALE	**Kalithea**	**1.69**	**250**		P	Pn	13 08 19.6	-0.7
KALE					S	Sn	13 08 42.1	-0.1
LIT	**Litokhoron**	**1.70**	**311**		P	Pn	13 08 19.2	-1.2
LIT	**Litokhoron**	**1.70**	**311**		P	Pn	13 08 19.2	-1.2
TRIZ	**Trizonia**	**1.75**	**250**		P	Pn	13 08 20.7	-0.3
TRIZ	**Trizonia**	**1.75**	**250**		P	Pn	13 08 20.7	-0.3
GUR	**Goura**	**1.77**	**234**		P	Pn	13 08 21.1	-0.4
GUR					S	Sn	13 08 43.8	-0.5
GUR	**Goura**	**1.77**	**234**	*e*	PN	Pn	13 08 21.5	0.0
GUR	**Goura**	**1.77**	**234**		P	Pn	13 08 21.1	-0.4
GUR	**Goura**	**1.77**	**234**	*e*	Pn	Pn	13 08 21.5	0.0
GUR					S	Sn	13 08 43.8	-0.5
KLV	**Kalavryta, Ach**	**1.84**	**240**	*e*	PN	Pb	13 08 23.7	-0.7
KLV	**Kalavryta, Ach**	**1.84**	**240**	*e*	Pn	Pb	13 08 23.7	-0.7
LAKA	**Lakka**	**1.87**	**247**		P	Pn	13 08 21.4	-1.3
LAKA	**Lakka**	**1.87**	**247**		P	Pn	13 08 21.4	-1.3
SOH	**Sokhos**	**1.93**	**342**	*e*	PB	Pn	13 08 23.0	-0.6
KNT	**Kendrikon**	**2.37**	**336**		P	Pn	13 08 29.7	0.0
KNT	**Kendrikon**	**2.37**	**336**		P	Pn	13 08 29.7	0.0
GRG	**Griva**	**2.38**	**326**	*e*	PN	Pn	13 08 29.5	-0.3
GRG	**Griva**	**2.38**	**326**	*e*	Pn	Pn	13 08 29.5	-0.3
VLI	**Veliai**	**2.47**	**203**		P	Pn	13 08 30.1	-0.8
VLI	**Veliai**	**2.47**	**203**		P	Pn	13 08 30.1	-0.8

*NNC **24** 13:23:05.0±10.0,38°.33N×72°.56E,h0km,mb3.8,mpv3.8, Error ellipse: s-maj=84.0km s-min=55.6km az=173.0*
*IDC **24** 13:23:10.5±1.2,39°.09N×73°.04E,h0km,mb3.4/6, mb1 3.5/11,mb1mx3.4/31,mbtmp3.4/11,ML3.1/5,Error ellipse: s-maj=24.1km s-min=16.8km az=123.0*
ISC 24 13:23:12.7±1.0,39°.25N±0°.08×73°.01E±0°.09,h10km,n24, σ1§43/19,mb3.4/6,3C-3D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.31**	**82**	⇑*i*	Pg	13 23 43.1	-7.8
KSH					Sg	Sn	13 24 01.5	-18
KSH				*s*max	*s*max		
	comp=N,850nm,0.5s						
KSH				*s*max	*s*max		
	comp=E,460nm,0.6s						
AML	**Almayashu**	**2.92**	**10**	P	**Pb**	**13 24 04.0**	**-1.1**
	SNR=69						
KZA	**Kyzart**	**3.30**	**30**	P	Pn	13 24 07.2	+2.5
	SNR=9.2						
EKS2	**Erkin-Say**	**3.46**	**9**	P	**Pb**	**13 24 13.3**	**-0.8**
	SNR=20						
AAK	**Ala-Archa**	**3.56**	**18**	P	**Pb**	**13 24 13.5**	**-2.4**
	SNR=36						
AAK	**Ala-Archa**	**3.56**	**18**	Pn	Pb	13 24 12.5	-3.4
	comp=E,3.9nm,0.3s,baz=165,slow=5.8,SNR=56						
AAK					Sn	**Sb**	**13 24 57.8**	**-1.4**
	comp=E,2.5nm,0.3s,baz=33,slow=18,SNR=8.0						
KBK	**Karagaybulak**	**3.71**	**23**	P	Pb	13 24 14.7	-3.6
	SNR=9.2						
ULHL	**Ulahol**	**3.87**	**38**	P	**Pb**	**13 24 22.0**	**+0.9**
	SNR=23						
CHMS	**Chumysh**	**3.97**	**19**	P	Pb	13 24 18.7	-4.0
	SNR=5.2						
TKM2	**Tokmak 2**	**4.16**	**27**	⇓*i*	Pn	13 24 20.5	+4.1
	comp=E,9.0nm,0.5s						
TKM2				⇓*i*	**Sg**	**13 25 27.1**	**+1.0**
	comp=E,23nm,0.8s						
TKM2	**Tokmak 2**	**4.16**	**27**	P	Pn	13 24 20.3	+4.0
	SNR=5.4						
KK31	**Karatay Array**	**4.29**	**335**	Pn	**Pb**	13 24 24.1	-4.1
	comp=E,5.9nm,0.5s,baz=168,slow=16,SNR=76						
KK31				⇓*i*	Sn	**Sb**	**13 25 20.1**	**+0.2**
	comp=E,27nm,0.7s,baz=156,slow=23,SNR=12						
MKAR	**Makanchi Array**	**10.14**	**39**	Pn	**Pn**	**13 25 40.2**	**+1.9**
	comp=E,0.0nm,0.3s,baz=225,slow=8.4,SNR=3.6						
KURBB	**Kurchatov

NAY	**Al-Naaiem**	**3.38**	**193**	*eP*	**Pn**	**13 33 57.5**	**-0.2**
KBD	**Kabd**	**3.39**	**186**	*eP*	**Pn**	**13 33 57.6**	**-0.2**
KBD				*eS*	**Sn**	**13 34 39.1**	**+0.6**
KBD				AML	AML	13 34 40.2	
	comp=Z,22nm,0.3s						
KBD	**Kabd**	**3.39**	**186**	*eP*	**Pn**	**13 33 57.6**	**-0.2**
KBD				*eS*	**Sn**	**13 34 39.1**	**+0.6**
	comp=Z,22nm,0.3s						
IZEF	**Zefreh**	**3.57**	**83**	*e*Pn	**Pn**	**13 34 00.9**	**+0.4**
IZEF				*e*		13 34 02.1	
	comp=Z,686nm,0.2s						
IZEF	**Zefreh**	**3.57**	**83**	*e*Pn	**Pn**	**13 34 00.9**	**+0.4**
RDF	**Al-Radifah**	**3.65**	**188**	AML	AML	13 34 48.6	
	comp=Z,40nm,0.3s						
IR3	**Iran Long-Peri**	**3.79**	**39**	*e*Pn	**Pn**	**13 34 03.1**	**-0.2**
IR3	**Iran Long-Peri**	**3.79**	**39**	*e*Pn	**Pn**	**13 34 03.1**	**-0.2**
QRN	**Al-Qurain**	**3.80**	**183**	*e*P	**Pn**	**13 34 03.3**	**-0.2**
QRN				AML	AML	13 34 49.2	
	comp=Z,64nm,0.3s						
IVRN	**Varamin**	**3.87**	**50**	*e*Pn	**Pn**	**13 34 04.3**	**-0.2**
IVRN	**Varamin**	**3.87**	**50**	*e*	Pg	13 34 24.0	+5.8
	comp=Z,646nm,0.3s						
NASN	**Na'in**	**3.97**	**85**	*e*Pn	**Pn**	**13 34 05.1**	**-1.0**
THKV	**Tehran--Karaj**	**4.06**	**34**	*e*Pn	**Pn**	**13 34 06.5**	**-0.7**
IDMV	**Damavand**	**4.43**	**46**	*e*Pn	**Pn**	**13 34 12.2**	**-0.2**
IDMV				*e*		13 34 15.5	
	comp=Z,474nm,0.2s						
IDMV	**Damavand**	**4.43**	**46**	*e*Pn	**Pn**	**13 34 12.2**	**-0.2**
ILAS	**Lasjerd**	**4.92**	**54**	*e*Pn	**Pn**	**13 34 18.7**	**-0.3**
ILAS				*e*	Sn	13 35 06.3	-10
	comp=Z,1μm,0.1s						
ILAS	**Lasjerd**	**4.92**	**54**	*e*Pn	**Pn**	**13 34 18.7**	**-0.3**
ICHK	**Chekchek**	**5.33**	**92**	*e*Pn	**Pn**	**13 34 24.4**	**-0.4**
ICHK				*e*		13 34 32.6	
	comp=Z,217nm,0.2s						
ICHK	**Chekchek**	**5.33**	**92**	*e*Pn	**Pn**	**13 34 24.4**	**-0.4**
ISRV	**Sarvestan**	**5.34**	**125**	*e*Pn	**Pn**	**13 34 24.8**	**-0.1**
ISRV	**Sarvestan**	**5.34**	**125**	*e*Pn	**Pn**	**13 34 24.8**	**-0.1**
ISHM	**Shahmirzad**	**5.38**	**52**	*e*Pn	**Pn**	**13 34 25.1**	**-0.3**
ISHM				*e*		13 34 26.1	
	comp=Z,632nm,0.2s						
ISHM	**Shahmirzad**	**5.38**	**52**	*e*Pn	**Pn**	**13 34 25.1**	**-0.3**
IMEH	**Mehriz**	**5.65**	**100**	*e*Pn	**Pn**	**13 34 28.7**	**-0.3**
IMEH				*e*	**Sb**	**13 35 48.7**	**-2.8**
	comp=Z,111nm,0.3s						
IMEH	**Mehriz**	**5.65**	**100**	*e*Pn	**Pn**	**13 34 28.7**	**-0.3**
IBAF	**Bafgh**	**6.40**	**97**	*e*Pn	**Pn**	**13 34 38.9**	**-0.5**
IBAF	**Bafgh**	**6.40**	**97**	*e*Pn	**Pn**	**13 34 38.9**	**-0.5**

IDC 24 13:36:53.1±1.9,2°34′N×124°94′E,h0km,mb3.2/4, mb1 3.4/4,mb1mx3.3/24,mbtmpb3.3/4,Error ellipse: s-maj=124.9km s-min=24.9km az=67.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.32**	**178**	P	Pn	13 41 32.9	0.0
	1.4nm,0.8s,baz=18,slow=13,SNR=7.9						
WRA	**Warramunga Arr**	**23.99**	**158**	P	P	13 42 08.8	-0.8
	0.2nm,0.3s,baz=335,slow=11,SNR=5.9						
ASAR	**Alice Springs**	**27.28**	**162**	P	P	13 42 39.6	+0.1
	0.1nm,0.4s,baz=344,slow=14,SNR=4.9						
MKAR	**Makanchi Array**	**57.70**	**327**	P	P	13 46 45.1	-0.5
	0.1nm,0.3s,baz=119,slow=8.8,SNR=5.1						

NEIC 24 13:37:00.8,54°47N×161°67W,h4km,ML3.1(AEIC)**,After AEIC.,Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRIA	**Deer Island**	**0.61**	**325**	P	Pb	13 37 13.6	-0.4
DOL	**Dolgoi Island**	**0.69**	**350**	P	Pb	13 37 15.1	-0.3
DOL				S	Sb	13 37 26.6	+1.3
DT1	**Dutton Round H**	**0.73**	**331**	P	Pg	13 37 15.3	+0.4
DTNA	**Dutton South F**	**0.76**	**334**	P	Pb	13 37 16.0	-0.6
DTNA				S	Sb	13 37 28.1	+0.8
PS4A	**Pavlof South-4**	**0.89**	**353**	P	Pb	13 37 18.5	-0.2
PVV	**Pavlof Volcano**	**0.91**	**355**	P	Pb	13 37 18.7	-0.4
FALS	**False Pass**	**1.09**	**292**	P	Pg	13 37 21.6	0.0
FALS				S	Sn	13 37 38.9	+0.7
SDPT	**Sand Point**	**1.12**	**37**	P	Pg	13 37 20.9	-1.3
SDPT				S	Sg	13 37 36.9	+0.2
SSLW	**Shishaldin Wes**	**1.46**	**283**	P	Pn	13 37 27.7	-0.2
WESE	**West Dahl East**	**1.71**	**271**	P	Pn	13 37 30.8	-0.6
CHGN	**Chignik**	**2.61**	**44**	*e*Pn	Pn	13 37 43.5	0.0
CHGN				*e*Sn	Sn	13 38 15.8	+0.1

*ISCJB **24** 13:38:53.2±0.2,42°.52N±0°.02×13°.34E±0°.02,h11km±2km, Error ellipse: s-maj=3.0km s-min=2.2km az=40.9*
*CSEM **24** 13:38:53.7±0.1,42°.52N×13°.31E,h2km,ML3.5/11,Error ellipse: s-maj=2.4km s-min=1.8km az=48.0*
*ROM **24** 13:38:53.4±0.1,42°.52N×13°.35E,h9km,Ml3.2/33,Error ellipse: s-maj=1.1km s-min=0.7km az=71.0*
*LDG **24** 13:38:53.7±0.1,42°.52N×13°.33E,h2km,Ml3.2/6,Error ellipse: s-maj=5.2km s-min=3.5km az=45.0*
*BEO **24** 13:38:54.2±1.1,42°.48N×13°.23E,h0km,ML3.5/8*

ISC 24 13:38:54.1±0.8,42°.53N±0°.02×13°.35E±0°.02,h10km±4km, n137,σ1℘37/190,1C,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.04**	**85**	Pg	**Pg**	**13 38 55.8**	**-0.4**
CAMP				Sg	**Sg**	**13 38 57.0**	**-0.6**
	13μm,0.5s						
CAMP	**Campotosto**	**0.04**	**85**	Pg	**Pg**	**13 38 55.8**	**-0.4**
CAMP				Sg	**Sg**	**13 38 57.0**	**-0.6**
	13μm,0.5s						
AQU	**L'Aquila**	**0.18**	**168**	Pg	**Pg**	**13 38 57.9**	**-0.1**
AQU				Sg	**Sg**	**13 39 01.0**	**+0.4**
	8μm,0.5s						
AQU	**L'Aquila**	**0.18**	**168**	Pg	**Pg**	**13 38 57.9**	**-0.1**
AQU				Sg	**Sg**	**13 39 01.0**	**+0.4**
	8μm,0.5s						
TERO	**Teramo**	**0.21**	**64**	Pg	**Pg**	**13 38 58.2**	**-0.3**
TERO				Sg	**Sg**	**13 39 01.5**	**+0.1**
	6μm,0.2s						
TERO	**Teramo**	**0.21**	**64**	Pg	**Pg**	**13 38 58.2**	**-0.3**
TERO				Sg	**Sg**	**13 39 01.5**	**+0.1**
	6μm,0.2s						
LNSS	**Leonessa**	**0.24**	**287**	Pg	**Pg**	**13 38 59.1**	**+0.1**
LNSS				Sg	**Sg**	**13 39 03.2**	**+0.8**
	9μm,0.3s						
LNSS	**Leonessa**	**0.24**	**287**	Pg	**Pg**	**13 38 59.1**	**+0.1**
FIAM	**Fiamignano**	**0.32**	**213**	Pg	**Pg**	**13 39 00.2**	**-0.2**
FIAM				Sg	**Sg**	**13 39 05.7**	**+1.1**
	4μm,0.8s						
FIAM	**Fiamignano**	**0.32**	**213**	Pg	**Pg**	**13 39 00.2**	**-0.2**
FIAM				Sg	**Sg**	**13 39 05.7**	**+1.1**
	4μm,0.8s						
NRCA	**Norcia**	**0.35**	**330**	Pg	**Pg**	**13 39 00.9**	**-0.1**
NRCA				Sg	**Sg**	**13 39 06.5**	**+0.8**
	3μm,0.1s						
NRCA	**Norcia**	**0.35**	**330**	Pg	**Pg**	**13 39 00.9**	**-0.1**
NRCA				Sg	**Sg**	**13 39 06.5**	**+0.8**
	3μm,0.1s						
GAVE	**Gavelli**	**0.37**	**296**	Pg	**Pg**	**13 39 01.3**	**-0.2**
GAVE				Sg	**Sg**	**13 39 07.6**	**+1.2**
GAVE	**Gavelli**	**0.37**	**296**	Pg	**Pg**	**13 39 01.3**	**-0.2**
VCEL	**Villa Celiera**	**0.39**	**111**	Pg	**Pg**	**13 39 01.4**	**-0.4**
	5μm,0.5s						
VCEL	**Villa Celiera**	**0.39**	**111**	Pg	**Pg**	**13 39 01.4**	**-0.4**
	5μm,0.5s						
OFFI	**Offida**	**0.47**	**31**	Pg	**Pg**	**13 39 03.9**	**+0.6**
	8μm,0.5s						
OFFI	**Offida**	**0.47**	**31**	Pg	**Pg**	**13 39 03.9**	**+0.6**
	8μm,0.5s						
TRTR	**Tortoreto Alta**	**0.50**	**56**	Pg	**Pb**	**13 39 04.7**	**-0.3**
	7μm,0.4s						
TRTR	**Tortoreto Alta**	**0.50**	**56**	Pg	**Pb**	**13 39 04.7**	**-0.3**
	7μm,0.4s						
PTQR	**Pietraquaria**	**0.51**	**176**	Pg	**Pg**	**13 39 03.3**	**-0.7**
PTQR				Sg	**Sg**	**13 39 10.6**	**-0.2**
	120nm,0.3s						
PTQR	**Pietraquaria**	**0.51**	**176**	Pg	**Pg**	**13 39 03.3**	**-0.7**
PTQR				Sg	**Sg**	**13 39 10.6**	**-0.2**
	120nm,0.3s						
MNS	**Montasola**	**0.52**	**254**	Pg	**Pg**	**13 39 03.5**	**-0.6**
	1μm,0.5s						
MNS	**Montasola**	**0.52**	**254**	Pg	**Pg**	**13 39 03.5**	**-0.6**
	1μm,0.5s						
FDMO	**Fiordimonte**	**0.54**	**339**	Pg	**Pg**	**13 39 04.1**	**-0.5**
FDMO				Sg	**Sg**	**13 39 12.6**	**+0.9**
	779nm,0.2s						
FDMO	**Fiordimonte**	**0.54**	**339**	Pg	**Pg**	**13 39 04.1**	**-0.5**
FDMO				Sg	**Sg**	**13 39 12.6**	**+0.9**
	779nm,0.2s						
CESX	**Cesi**	**0.57**	**278**	Pg	**Pg**	**13 39 04.5**	**-0.7**
	910nm,0.4s						
CESX	**Cesi**	**0.57**	**278**	Pg	**Pg**	**13 39 04.5**	**-0.7**
	910nm,0.4s						
CESI	**CESI - Serrava**	**0.57**	**325**	Pg	**Pg**	**13 39 04.9**	**-0.4**
CESI				Sg	**Sb**	**13 39 13.8**	**-0.9**
	290nm,0.4s						
CESI	**CESI - Serrava**	**0.57**	**325**	Pg	**Pg**	**13 39 04.9**	**-0.4**
CESI				Sg	**Sb**	**13 39 13.8**	**-0.9**
	290nm,0.4s						
CERT	**Cerreto**	**0.64**	**205**	Pg	**Pg**	**13 39 05.6**	**-1.0**
	3μm,0.6s						
CERT	**Cerreto**	**0.64**	**205**	Pg	**Pg**	**13 39 05.6**	**-1.0**
	3μm,0.6s						
INTR	**Introdacqua**	**0.66**	**141**	Pg	**Pg**	**13 39 06.1**	**-0.8**
INTR				Sg	**Sg**	**13 39 16.3**	**+0.7**
	927nm,0.3s						
INTR	**Introdacqua**	**0.66**	**141**	Pg	**Pg**	**13 39 06.1**	**-0.8**
INTR				Sg	**Sg**	**13 39 16.3**	**+0.7**
	927nm,0.3s						
MTCE	**Montecelio**	**0.68**	**222**	Pg	**Pg**	**13 39 06.0**	**-1.2**
	446nm,0.6s						
MTCE	**Montecelio**	**0.68**	**222**	Pg	**Pg**	**13 39 06.0**	**-1.2**
	446nm,0.6s						
GUMA	**Gualdo di Mace**	**0.68**	**39**	Pg	**Pg**	**13 39 04.4**	**-2.9**
GUMA				Sg	**Sg**	**13 39 13.1**	**-3.2**
	4μm,0.5s						
VVLD	**Villa Vallelon**	**0.69**	**163**	Pg	**Pg**	**13 39 06.8**	**-0.7**
	983nm,0.7s						
VVLD	**Villa Vallelon**	**0.69**	**163**	Pg	**Pg**	**13 39 06.8**	**-0.7**
	983nm,0.7s						
ASSB	**Assisi San Ben**	**0.72**	**315**	Pg	**Pg**	**13 39 07.3**	**-0.7**
	940nm,0.6s						
ASSB	**Assisi San Ben**	**0.72**	**315**	Pg	**Pg**	**13 39 07.3**	**-0.7**
	940nm,0.6s						
GUAR	**Guarcino**	**0.74**	**182**	Pg	**Pg**	**13 39 08.3**	**0.0**
	659nm,0.7s						
GUAR	**Guarcino**	**0.74**	**182**	Pg	**Pg**	**13 39 08.3**	**0.0**
	659nm,0.7s						
SNTG	**Esanatoglia**	**0.78**	**338**	Pg	**Pg**	**13 39 08.5**	**-0.7**
	204nm,0.3s						
SNTG	**Esanatoglia**	**0.78**	**338**	Pg	**Pg**	**13 39 08.5**	**-0.7**
	204nm,0.3s						
LPEL	**Lama dei Pelig**	**0.79**	**128**	Pg	**Pg**	**13 39 07.9**	**-1.3**
LPEL				Sg	**Sg**	**13 39 19.6**	**+0.1**
	729nm,0.3s						
LPEL	**Lama dei Pelig**	**0.79**	**128**	Pg	**Pg**	**13 39 07.9**	**-1.3**
LPEL				Sg	**Sg**	**13 39 19.6**	**+0.1**
	729nm,0.3s						
CING	**Cingoli**	**0.85**	**352**	Pg	**Pg**	**13 39 09.8**	**-0.7**
	1μm,0.3s						
CING	**Cingoli**	**0.85**	**352**	Pg	**Pg**	**13 39 09.8**	**-0.7**
	1μm,0.3s						
POFI	**Posta Fibreno**	**0.86**	**162**	Pg	**Pg**	**13 39 09.6**	**-1.0**
POFI	**Posta Fibreno**	**0.86**	**162**	Pg	**Pg**	**13 39 09.6**	**-1.0**
SDI	**San Donato**	**0.89**	**157**	Pg	**Pg**	**13 39 10.3**	**-0.9**
	195nm,0.4s						
SDI	**San Donato**	**0.89**	**157**	Pg	**Pg**	**13 39 10.3**	**-0.9**
	195nm,0.4s						
MURB	**Monte Urbino**	**0.95**	**321**	Pg	**Pg**	**13 39 11.7**	**-0.7**
	1μm,0.4s						
MURB	**Monte Urbino**	**0.95**	**321**	Pg	**Pg**	**13 39 11.7**	**-0.7**
	1μm,0.4s						
GIUL	**Giuliano Di Ro**	**0.98**	**184**	Pg	**Pg**	**13 39 12.8**	**-0.1**
	304nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.98**	**184**	Pg	**Pg**	**13 39 12.8**	**-0.1**
	304nm,0.5s						
MGAB	**Montegabbione**	**0.99**	**293**	Pg	**Pg**	**13 39 12.1**	**-1.0**
MGAB	**Montegabbione**	**0.99**	**293**	Pg	**Pg**	**13 39 12.1**	**-1.0**
ARVD	**Arcevia**	**1.01**	**343**	Pg	**Pg**	**13 39 12.6**	**-0.9**
	470nm,0.6s						
ARVD	**Arcevia**	**1.01**	**343**	Pg	**Pg**	**13 39 12.6**	**-0.9**
	470nm,0.6s						
AOI	**Ancona**	**1.03**	**10**	Pg	**Pg**	**13 39 13.5**	**-0.5**
	464nm,0.5s						
AOI	**Ancona**	**1.03**	**10**	Pg	**Pg**	**13 39 13.5**	**-0.5**
	464nm,0.5s						
CERA	**Filignano**	**1.06**	**152**	Pg	**Pg**	**13 39 12.7**	**-1.7**
	406nm,0.6s						
CERA	**Filignano**	**1.06**	**152**	Pg	**Pg**	**13 39 12.7**	**-1.7**
	406nm,0.6s						
SACS	**San Casciano d**	**1.11**	**287**	Pg	**Pb**	**13 39 14.6**	**-0.8**
	593nm,1.1s						
MIDA	**Miranda**	**1.11**	**143**	Pg	**Pb**	**13 39 14.0**	**-1.6**
	223nm,0.7s						
MIDA	**Miranda**	**1.11**	**143**	Pg	**Pb**	**13 39 14.0**	**-1.6**
	223nm,0.7s						
PIEI	**Pieia**	**1.17**	**330**	Pg	**Pb**	**13 39 15.5**	**-0.9**
	214nm,0.4s						
PIEI	**Pieia**	**1.17**	**330**	Pg	**Pb**	**13 39 15.5**	**-0.9**
	214nm,0.4s						
FSSB	**Fossombrone**	**1.23**	**340**	Pg	**Pn**	**13 39 16.7**	**-0.8**
	837nm,0.4s						
FSSB	**Fossombrone**	**1.23**	**340**	Pg	**Pn**	**13 39 16.7**	**-0.8**
	837nm,0.4s						
BADI	**Badiali**	**1.27**	**321**	Pg	**Pn**	**13 39 17.5**	**-0.5**
	371nm,0.7s						
BADI	**Badiali**	**1.27**	**321**	Pg	**Pn**	**13 39 17.5**	**-0.5**
	371nm,0.7s						
CAFI	**Castiglion Fio**	**1.29**	**309**	Pg	**Pn**	**13 39 17.7**	**-0.6**
	255nm,0.6s						
CAFI	**Castiglion Fio**	**1.29**	**309**	Pg	**Pn**	**13 39 17.7**	**-0.6**
	255nm,0.6s						
PARC	**Parchiule**	**1.38**	**324**	Pg	**Pn**	**13 39 19.6**	**+0.1**
	228nm,0.6s						
PARC	**Parchiule**	**1.38**	**324**	Pg	**Pn**	**13 39 19.6**	**+0.1**
	228nm,0.6s						
MS1	**Monte Sant'Ang**	**2.10**	**112**	*e*Pn	**Pb**	**13 39 31.6**	**-0.7**
MS1				*e*Sn	**Sg**	**13 40 02.1**	**+0.6**
NVLJ	**Novalja**	**2.31**	**28**	*e*Pn	**Pn**	**13 39 32.3**	**0.0**
NVLJ				Sn	**Sn**	**13 40 01.0**	**+0.2**
NVLJ	**Novalja**	**2.31**	**28**	*e*Pn	**Pn**	**13 39 32.3**	**0.0**
NVLJ				Sn	**Sn**	**13 40 00.9**	**+0.2**
MAIM	**Mastiano**	**2.50**	**304**	P	**Pn**	**13 39 34.3**	**-0.6**
SKDS	**Skadanscina**	**3.05**	**9**	*i* Pn	**Pn**	**13 39 42.8**	**+0.3**
SKDS				*i* Sn	**Sn**	**13 40 20.9**	**+1.8**
SKDS	**Skadanscina**	**3.05**	**9**	Pn	**Pn**	**13 39 42.8**	**+0.3**
SKDS				*i* Sn	**Sn**	**13 40 20.9**	**+1.8**
PGF	**Pioggiola**	**3.21**	**272**	*e*Pn	**Pn**	**13 39 44.0**	**-0.8**
PGF				*e*Sn	**Sn**	**13 40 24.1**	**+0.9**
	18nm,0.8s						
PGF	**Pioggiola**	**3.21**	**272**	*e*Pn	**Pn**	**13 39 44.0**	**-0.8**
PGF				*e*Sn	**Sn**	**13 40 24.1**	**+0.9**
	9.1nm,0.8s						
STON	**Ston**	**3.22**	**82**	*e*Pn	**Pn**	**13 39 45.1**	**+0.3**
STON				Sn	**Sn**	**13 40 23.5**	**+0.2**
STON	**Ston**	**3.22**	**82**	*e*Pn	**Pn**	**13 39 45.1**	**+0.3**
STON				Sn	**Sn**	**13 40 23.4**	**+0.2**
BOJS	**Bojanci**	**3.27**	**24**	*i* Pn	**Pn**	**13 39 46.4**	**+0.9**
BOJS	**Bojanci**	**3.27**	**24**	*i* Pn	**Pn**	**13 39 46.4**	**+0.9**
JAVS	**Javornik**	**3.40**	**8**	*i* Pn	**Pn**	**13 39 48.0**	**+0.6**
JAVS				*i* Sn	**Sn**	**13 40 29.9**	**+2.1**
JAVS	**Javornik**	**3.40**	**8**	*i* Pn	**Pn**	**13 39 48.0**	**+0.6**
JAVS				*i* Sn	**Sn**	**13 40 29.9**	**+2.1**
VOY	**Vojsko**	**3.52**	**6**	*e*Pn	**Pn**	**13 39 50.6**	**+1.6**
VOY				*e*Sn	**Sn**	**13 40 33.2**	**+2.4**
VOY	**Vojsko**	**3.52**	**6**	*e*Pn	**Pn**	**13 39 50.6**	**+1.6**
VOY				*e*Sn	**Sn**	**13 40 33.2**	**+2.4**
ABTA	**Abfaltersbach**	**4.26**	**352**	*i* Pn	**Pn**	**13 39 58.8**	**-0.3**
ABTA	**Abfaltersbach**	**4.26**	**352**	Pn	**Pn**	**13 39 58.8**	**-0.3**
PDG	**Podgorica**	**4.37**	**89**	*e*Pn	**Pn**	**13 40 02.5**	**+2.0**
PDG				*e*Sn	**Sn**	**13 40 54.4**	**+2.9**
PDG	**Podgorica**	**4.37**	**89**	*e*Pn	**Pn**	**13 40 02.5**	**+2.0**
PDG				*e*Sn	**Sn**	**13 40 54.4**	**+2.9**
SBF	**Sospel**	**4.52**	**289**	*e*Pn	**Pn**	**13 40 02.4**	**-0.3**
SBF	**Sospel**	**4.52**	**289**	*e*Pn	**Pn**	**13 40 02.4**	**-0.3**
BBLS	**Lazići**	**4.62**	**71**	*e*Pn	**Pn**	**13 40 06.2**	**+2.1**
BBLS				*e*Sn	**Sn**	**13 41 00.2**	**+2.3**
BBLS	**Lazići**	**4.62**	**71**	*e*Pn	**Pn**	**13 40 06.2**	**+2.1**
BBLS				*e*Sn	**Sn**	**13 41 00.2**	**+2.3**
FRF	**La Foret Royal**	**5.02**	**284**	*e*Pn	**Pn**	**13 40 08.7**	**-0.8**
FRF	**La Foret Royal**	**5.02**	**284**	*e*Pn	**Pn**	**13 40 08.7**	**-0.8**
LMR	**La Mourre**	**5.09**	**281**	*e*Pn	**Pn**	**13 40 09.2**	**-1.2**
LMR	**La Mourre**	**5.09**	**281**	*e*Pn	**Pn**	**13 40 09.2**	**-1.2**
DIVS	**Divibare**	**5.09**	**70**	*e*Sn	**Sn**	**13 41 11.8**	**+2.3**
DIVS	**Divibare**	**5.09**	**70**	*e*Sn	**Sn**	**13 41 11.8**	**+2.3**
IVAS	**Ivanjica**	**5.09**	**76**	*e*Pn	**Pn**	**13 40 12.3**	**+1.7**
IVAS				*e*Sn	**Sn**	**13 41 11.6**	**+2.1**
IVAS	**Ivanjica**	**5.09**	**76**	*e*Pn	**Pn**	**13 40 12.3**	**+1.7**
IVAS				*e*Sn	**Sn**	**13 41 11.6**	**+2.1**
MBDF	**Montbardon**	**5.25**	**297**	*e*P	**Pn**	**13 40 14.5**	**+1.6**
MBDF	**Montbardon**	**5.25**	**297**	*e*P	**Pn**	**13 40 14.5**	**+1.6**
GRUS	**Gruza**	**5.55**	**73**	*e*Pn	**Pn**	**13 40 18.4**	**+1.6**
GRUS				*e*Sn	**Sn**	**13 41 22.0**	**+1.3**
GRUS	**Gruza**	**5.55**	**73**	*e*Pn	**Pn**	**13 40 18.4**	**+1.6**
GRUS				*e*Sn	**Sn**	**13 41 22.0**	**+1.3**
LPG	**La Plagne**	**5.61**	**304**	*e*P	**Pn**	**13 40 20.3**	**+2.5**
LPG				*e*Sn	**Sn**	**13 41 19.5**	**-2.9**
	2.8nm,0.3s						
LPG	**La Plagne**	**5.61**	**304**	*e*P	**Pn**	**13 40 20.3**	**+2.5**
LPL	**La Plagne**	**5.63**	**304**	*e*P	**Pn**	**13 40 20.4**	**+2.4**
LPL				*e*Sn	**Sn**	**13 41 18.8**	**-4.0**
	2.2nm,0.3s						
LPL	**La Plagne**	**5.63**	**304**	*e*P	**Pn**	**13 40 20.4**	**+2.4**
SMRF	**Simiane la Rot**	**5.86**	**287**	*e*P	**Pn**	**13 40 21.8**	**+0.7**
SMRF	**Simiane la Rot**	**5.86**	**287**	*e*P	**Pn**	**13 40 21.8**	**+0.7**
ORIF	**Oris-en-Rattie**	**5.92**	**296**	*e*P	Pn	13 40 25.0	+3.1
BARS	**Barje**	**6.25**	**85**	*e*Pn	**Pn**	**13 40 27.9**	**+1.5**
BARS				*e*Sn	**Sn**	**13 41 38.7**	**+0.9**
BARS	**Barje**	**6.25**	**85**	*e*Pn	**Pn**	**13 40 27.9**	**+1.5**
BARS				*e*Sn	**Sn**	**13 41 38.7**	**+0.9**
CABF	**La Chapelle**	**6.60**	**311**	*e*Pn	**Pn**	**13 40 32.0**	**+0.8**
CABF	**La Chapelle**	**6.60**	**311**	*e*Pn	**Pn**	**13 40 32.0**	**+0.8**
KHC	**Kasperske Hory**	**6.60**	**1**	*e*PN	**Pn**	**13 40 34.0**	**+2.8**
KHC				*ex*	x	13 40 41.0	
KHC				*ex*	x	13 41 29.5	
KHC				*e*SN	**Sn**	**13 41 41.5**	**-5.1**
KHC				*ex*	x	13 42 00.0	
ZAPS	**Zavoj**	**6.86**	**81**	*e*Pn	**Pn**	**13 40 37.0**	**+2.2**
ZAPS				*e*Sn	**Sn**	**13 41 52.7**	**-0.2**
ZAPS	**Zavoj**	**6.86**	**81**	*e*Pn	**Pn**	**13 40 37.0**	**+2.2**
ZAPS				*e*Sn	**Sn**	**13 41 52.7**	**-0.2**
HINF	**Hinteralfeld**	**7.00**	**321**	*e*Pn	**Pn**	**13 40 36.5**	**-0.2**
HINF				*e*Sn	**Sn**	**13 41 52.9**	**-3.4**
	6.0nm,0.5s						
HINF	**Hinteralfeld**	**7.00**	**321**	*e*Pn	**Pn**	**13 40 36.5**	**-0.2**
VYHS	**Vyhne**	**7.10**	**31**	*e*PN	Pn	13 40 42.8	+4.8
VYHS				*e*SN	**Sn**	**13 41 56.8**	**-1.9**
CDF	**Champ du Feu**	**7.26**	**326**	*e*Pn	**Pn**	**13 40 40.1**	**-0.3**
CDF				*e*Sn	**Sn**	**13 41 59.9**	**-3.1**
	6.4nm,0.5s						
CDF	**Champ du Feu**	**7.26**	**326**	*e*Pn	**Pn**	**13 40 40.1**	**-0.3**
VTS	**Vitosha**	**7.28**	**86**	*e*Sn	**Sn**	**13 42 03.0**	**-0.5**
VTS	**Vitosha**	**7.28**	**86**	*e*Sn	**Sn**	**13 42 03.0**	**-0.5**
HAU	**Haudompre**	**7.37**	**320**	*e*Pn	**Pn**	**13 40 41.8**	**0.0**
HAU				*e*Sn	**Sn**	**13 42 00.6**	**-4.9**
	11nm,0.4s						
HAU	**Haudompre**	**7.37**	**320**	*e*Pn	**Pn**	**13 40 41.8**	**0.0**

WEL 24 13:42:58.2±0.3,41°.28S×172°.68E,h209km±2km,ML3.8/12, 20C-7D,Error ellipse: s-maj=2.3km s-min=2.2km az=90.0,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QRZ	**Quartz Range**	**0.47**	**346**	PN	Pn	13 43 25.9	-0.3
QRZ				SN	S	13 43 46.5	-1.6
THZ	**Tophouse**	**0.51**	**161**	⇑PN	Pn	13 43 26.6	+0.2
NNZ	**Nelson**	**0.53**	**83**	⇑PN	Pn	13 43 26.2	-0.2
NNZ				SN	S	13 43 47.6	-0.7
DSZ	**Denniston Nort**	**0.80**	**235**	⇓PN	Pn	13 43 27.3	-0.4
TUWZ	**Tuamarina**	**0.96**	**99**	⇑PN	Pn	13 43 28.6	+0.1
BSWZ	**Blackbirch Sta**	**1.00**	**116**	⇑PN	Pn	13 43 28.9	+0.1
DUWZ	**D'Urville Isla**	**1.06**	**63**	⇑PN	Pn	13 43 29.1	-0.2
TCW	**Tory Channel**	**1.21**	**87**	⇑PN	Pn	13 43 30.2	0.0
TCW				SN	S	13 43 54.0	-1.0
CMWZ	**Cape Campbell**	**1.24**	**112**	PN	Pn	13 43 30

LZH	**Lanzhou**	**3.82**	**342**	Pn	**Pn**	**13 45 22.8**	**-0.2**
LZH				Pg	**Pb**	**13 45 32.0**	**+0.2**
LZH				Sg	**Sb**	**13 46 18.3**	**+0.4**
LZH				smax	smax		
	comp=N,220nm,1.0s						
LZH				smax	smax		
	comp=E,250nm,1.0s						
LZH				LR	LR		
	comp=N,300nm,4.3s						
LZH				LR	LR		
	comp=E,330nm,5.3s						
LZH				LR	LR		
	comp=Z,340nm,8.0s						
GTA	**Gaotai**	**8.24**	**329**	*e*P	Pn	13 46 33.3	+10
GTA				pP	Pb	13 46 37.6	-9.5
GTA				sP		13 46 40.6	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SONM	**Songino Array**	**15.38**	**3**	Pn	**P**	**13 48 04.4**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=181,slow=9.3,SNR=6.0						
MKAR	**Makanchi Array**	**22.68**	**316**	P	**P**	**13 49 24.2**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=114,slow=9.9,SNR=6.7						
AKASG	**Malin Array Be**	**57.21**	**313**	P	**P**	**13 54 10.7**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=70,slow=8.3,SNR=4.3						
WRA	**Warramunga Arr**	**59.05**	**148**	P	**P**	**13 54 25.2**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=340,slow=7.5,SNR=6.9						
ASAR	**Alice Springs**	**62.14**	**150**	P	**P**	**13 54 47.4**	**+2.1**
	comp=Z,0.3nm,0.6s,baz=330,slow=6.4,SNR=6.1						

*CSEM **24** 14:08:47.1±0.1,34.°64N×47.°61E,h2km,ML3.5,Error ellipse: s-maj=3.7km s-min=2.6km az=174.0*
*TEH **24** 14:08:48.1,34.°60N×47.°63E,h4km,ML3.5*
ISC 24 14:08:46.3±1.2,34.°66N±0.°03×47.°63E±0.°02,h5km±12km, n37,σ1§34/50,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IKOM	**Komasi**	**0.49**	**191**	*e*Pg	**Pg**	**14 08 56.0**	**+0.2**
IKOM				*e*Sg	**Sg**	**14 09 01.6**	**-0.6**
IKOM				*e*		14 09 06.7	
	comp=Z,73μm,0.1s						
IKOM	**Komasi**	**0.49**	**191**	*e*Pg	**Pg**	**14 08 56.0**	**+0.2**
IKOM				*e*Sg	**Sg**	**14 09 01.6**	**-0.6**
ILIN	**Lien**	**0.61**	**296**	*e*Pg	**Pg**	**14 08 58.1**	**+0.1**
ILIN				*e*Sg	**Sb**	**14 09 08.1**	**-0.5**
ILIN				*e*		14 09 10.7	
	comp=Z,30μm,0.2s						
ILIN	**Lien**	**0.61**	**296**	*e*Pg	**Pg**	**14 08 58.1**	**+0.1**
ILIN				*e*Sg	**Sb**	**14 09 08.1**	**-0.5**
IVIS	**Veis**	**0.66**	**259**	*e*Pg	**Pb**	**14 08 59.2**	**-1.1**
IVIS				*e*Sg	**Sb**	**14 09 08.2**	**-1.6**
IVIS				*e*		14 09 13.3	
	comp=Z,33μm,0.1s						
IVIS	**Veis**	**0.66**	**259**	*e*Pg	**Pb**	**14 08 59.2**	**-1.1**
IVIS				*e*Sg	**Sb**	**14 09 08.2**	**-1.6**
IGHG	**Ghaleghazi**	**0.93**	**250**	*e*		14 09 06.1	
	comp=Z,37μm,0.1s						
IGHG				*e*Pg	**Pb**	**14 09 04.5**	**-0.7**
IGHG				*e*Sg	**Sg**	**14 09 16.6**	**+0.2**
IDHR	**Dehrash**	**1.02**	**273**	*e*Sg	**Sn**	**14 09 21.2**	**-1.3**
IDHR				*e*Pg	**Pb**	**14 09 06.2**	**-0.5**
IDHR				*e*		14 09 26.4	
	comp=Z,23μm,0.2s						
ASAO	**Ashtian**	**1.98**	**92**	*e*Pg	**Pg**	**14 09 24.2**	**-0.1**
IRAZ	**Razeghan**	**2.03**	**68**	*e*Pn	**Pb**	**14 09 22.7**	**-1.2**
IRAZ				*e*		14 09 29.8	
	comp=Z,4μm,0.2s						
IRAZ				*e*Sg	**Sg**	**14 09 51.7**	**+0.1**
IRAZ	**Razeghan**	**2.03**	**68**	*e*Pn	**Pb**	**14 09 22.7**	**-1.2**
IRAZ				*e*Sg	**Sg**	**14 09 51.7**	**+0.1**
IR5	**Iran Long-Peri**	**2.49**	**76**	*e*Pn	**Pb**	**14 09 29.7**	**-1.9**
IR5	**Iran Long-Peri**	**2.49**	**76**	*e*Pn	**Pb**	**14 09 29.7**	**-1.9**
SHGR	**Shooshtar-Gavs**	**2.72**	**159**	*e*Pn	**Pb**	**14 09 35.5**	**-0.1**
SHGR				*e*Sg	**Sg**	**14 10 15.0**	**+1.2**
IR3	**Iran Long-Peri**	**2.90**	**73**	*e*Pn	**Pn**	**14 09 34.9**	**+1.6**
IR3				*e*Sg	**Sg**	**14 10 19.8**	**+0.2**
IR3	**Iran Long-Peri**	**2.90**	**73**	*e*Pn	**Pn**	**14 09 34.9**	**+1.6**
IR3				*e*Sg	**Sg**	**14 10 19.8**	**+0.2**
THKV	**Tehran--Karaj**	**2.94**	**64**	*e*Pn	**Pn**	**14 09 36.0**	**+2.0**
GHVR	**GHOM**	**3.03**	**92**	*e*Pn	**Pn**	**14 09 36.5**	**+1.4**
CHTH	**Charan**	**3.12**	**65**	*e*Pn	**Pn**	**14 09 37.9**	**+1.4**
ISRB	**Sarab**	**3.16**	**1**	*e*Pn	**Pn**	**14 09 39.2**	**+2.2**
ISRB				*e*		14 09 49.1	
	comp=Z,867nm,0.1s						
ISRB	**Sarab**	**3.16**	**1**	*e*Pn	**Pn**	**14 09 39.2**	**+2.2**
IPIR	**Pirpir**	**3.36**	**125**	*e*Pn	**Pn**	**14 09 41.2**	**+1.4**
IPIR				*e*		14 10 50.2	
	comp=Z,1μm,0.2s						
IPIR	**Pirpir**	**3.36**	**125**	*e*Pn	**Pn**	**14 09 41.2**	**+1.4**
IKLH	**Kolahrood**	**3.54**	**111**	*e*Pn	**Pn**	**14 09 43.6**	**+1.3**
IKLH				*e*		14 10 50.6	
	comp=Z,1μm,0.3s						
IKLH	**Kolahrood**	**3.54**	**111**	*e*Pn	**Pn**	**14 09 43.6**	**+1.3**
IZEF	**Zefreh**	**4.29**	**113**	*e*Pn	**Pn**	**14 09 53.7**	**+1.1**
IZEF	**Zefreh**	**4.29**	**113**	*e*Pn	**Pn**	**14 09 53.7**	**+1.1**
IGAR	**Gharneh**	**4.32**	**120**	*e*Pn	**Pn**	**14 09 53.7**	**+0.8**
IGAR				*e*		14 10 46.5	
	comp=Z,368nm,0.1s						
IMRD	**Marand**	**4.33**	**340**	*e*Pn	**Pn**	**14 09 55.1**	**+2.0**
IMRD				*e*		14 10 11.9	
	comp=Z,397nm,0.3s						
IMRD	**Marand**	**4.33**	**340**	*e*Pn	**Pn**	**14 09 55.1**	**+2.0**
NASN	**Na'in**	**4.70**	**112**	*e*Pn	**Pn**	**14 10 00.2**	**+2.0**
MIB	**Mutribah**	**4.84**	**183**	*e*P	**Pn**	**14 10 01.5**	**+1.6**
MIB				AML	AML	14 10 57.3	
	comp=Z,19nm,0.6s						
MIB	**Mutribah**	**4.84**	**183**	*e*P	**Pn**	**14 10 01.5**	**+1.6**
NAY	**Al-Naaiem**	**5.40**	**184**	*e*P	**Pn**	**14 10 08.8**	**+1.2**
NAY				AML	AML	14 11 07.6	
	comp=Z,4.6nm,0.4s						
NAY	**Al-Naaiem**	**5.40**	**184**	*e*P	**Pn**	**14 10 08.8**	**+1.2**
RDF	**Al-Radifah**	**5.71**	**181**	*e*P	**Pn**	**14 10 13.6**	**+1.7**
RDF				AML	AML	14 11 18.9	
	comp=Z,25nm,0.6s						
RDF	**Al-Radifah**	**5.71**	**181**	*e*P	**Pn**	**14 10 13.6**	**+1.7**

IDC 24 14:15:52.0±1.9,4.°15N×126.°75E,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.4/24,mbtmp3.5/4,Error ellipse: s-maj=107.0km s-min=23.6km az=69.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.14**	**183**	P	P	14 20 48.9	-0.5
	0.9nm,0.7s,baz=12,slow=14,SNR=2.4						
WRA	**Warramunga Arr**	**25.07**	**163**	P	P	14 21 17.1	-1.3
	1.1nm,0.6s,baz=343,slow=11,SNR=21						
ASAR	**Alice Springs**	**28.51**	**166**	P	P	14 21 51.2	+1.8
	0.2nm,0.7s,baz=342,slow=7.9,SNR=2.9						
MKAR	**Makanchi Array**	**57.23**	**325**	P	P	14 25 41.1	0.0
	0.3nm,0.5s,baz=115,slow=7.8,SNR=8.1						

*ISCJB **24** 14:16:42.5±0.6,39.°08N±0.°04×29.°05E±0.°04,h3km±10km, Error ellipse: s-maj=6.6km s-min=4.9km az=140.9*
*CSEM **24** 14:16:42.8±0.1,39.°10N×29.°03E,h5km,MD2.9,Error ellipse: s-maj=2.5km s-min=2.0km az=114.0*
*ISK **24** 14:16:42.3,39.°09N×29.°04E,h6km,MD2.5*
*DDA **24** 14:16:43.0,39.°10N×28.°99E,h7km,MD2.9*
ISC 24 14:16:42.8±1.0,39.°09N±0.°02×29.°04E±0.°03,h8km±13km, n22,σ0§19/31,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEMI	**Demirci**	**0.25**	**259**	*i* P	**Pg**	**14 16 48.0**	**+0.1**
DEMI				*i* S	**Sg**	**14 16 51.3**	**0.0**
DEMI	**Demirci**	**0.25**	**259**	*i* P	**Pg**	**14 16 48.0**	**+0.1**
DEMI				*i* S	**Sg**	**14 16 51.3**	**0.0**
TVSB	**Tavsanli**	**0.49**	**43**	*e*PG	**Pg**	**14 16 52.0**	**-0.3**
TVSB				*e*SG	**Sg**	**14 16 58.8**	**+0.1**
TVSB	**Tavsanli**	**0.49**	**43**	*e*Pg	**Pg**	**14 16 52.0**	**-0.3**
TVSB				*e*Sg	**Sg**	**14 16 58.8**	**+0.1**
KULA	**Kula-Manisa**	**0.65**	**207**	*e*PG	**Pg**	**14 16 55.4**	**+0.2**
KULA				*e*SG	**Sg**	**14 17 03.8**	**+0.1**
KULA	**Kula-Manisa**	**0.65**	**207**	*e*Pg	**Pg**	**14 16 55.4**	**+0.2**
MANT	**Manisa**	**0.71**	**212**	*i* P	**Pg**	**14 16 56.4**	**0.0**
MANT				*i* S	**Sg**	**14 17 05.5**	**-0.1**
MANT	**Manisa**	**0.71**	**212**	*i* P	**Pg**	**14 16 56.4**	**0.0**
MANT				*i* S	**Sg**	**14 17 05.5**	**-0.1**
KHAL	**Karahalli**	**0.80**	**153**	*i* P	**Pb**	**14 16 59.1**	**0.0**
KHAL				*i* S	**Sg**	**14 17 08.2**	**-0.5**
KHAL	**Karahalli**	**0.80**	**153**	*i* P	**Pb**	**14 16 59.1**	**0.0**
ALT	**Altintas**	**0.84**	**92**	*e*PG	**Pg**	**14 16 59.2**	**+0.3**
ALT	**Altintas**	**0.84**	**92**	*e*Pg	**Pg**	**14 16 59.2**	**+0.3**
KHL	**Karahalli**	**0.86**	**153**	*e*PG	**Pg**	**14 16 59.4**	**+0.2**
KHL	**Karahalli**	**0.86**	**153**	*e*Pg	**Pg**	**14 16 59.4**	**+0.2**
AKS	**Akhisar**	**0.98**	**258**	*e*PG	**Pb**	**14 17 01.8**	**-0.2**
KCTX	**Karacabey (Bur**	**1.28**	**336**	*e*PN	**Pg**	**14 17 07.5**	**+0.1**
KCTX	**Karacabey (Bur**	**1.28**	**336**	*e*Pn	**Pg**	**14 17 07.5**	**+0.1**
GONE	**Gonen-Balikesi**	**1.41**	**313**	*e*PN	**Pb**	**14 17 09.4**	**0.0**
GONE	**Gonen-Balikesi**	**1.41**	**313**	*e*Pn	**Pb**	**14 17 09.4**	**0.0**
YLV	**Yalova**	**1.50**	**10**	*e*PN	**Pb**	**14 17 10.9**	**0.0**
GULT	**Gulveren**	**1.76**	**40**	*e*PN	**Pn**	**14 17 13.7**	**+0.1**
GULT	**Gulveren**	**1.76**	**40**	*e*Pn	**Pn**	**14 17 13.7**	**+0.1**

*ISCJB **24** 14:24:07.6±0.3,42.°38N±0.°02×13.°36E±0.°03,h10km±2km, Error ellipse: s-maj=3.5km s-min=2.8km az=153.0*
*ROM **24** 14:24:07.5±0.1,42.°38N×13.°39E,h8km,Ml3.1/28,Error ellipse: s-maj=0.9km s-min=0.7km az=88.0*
*CSEM **24** 14:24:08.1±0.1,42.°38N×13.°36E,h2km,ML3.5/9,Error ellipse: s-maj=3.0km s-min=2.3km az=62.0*
*LDG **24** 14:24:09.9±0.8,42.°43N×13.°32E,h2km,Ml2.9/6,Error ellipse: s-maj=16.7km s-min=13.2km az=113.0*
ISC 24 14:24:08.2±0.8,42.°39N±0.°02×13.°35E±0.°02,h8km±5km, n101,σ1§39/133,1D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.05**	**132**	Pg	**Pg**	**14 24 09.5**	**-0.5**
AQU				Sg	**Sg**	**14 24 10.4**	**-0.8**
	21μm,0.5s						
AQU	**L'Aquila**	**0.05**	**132**	Pg	**Pg**	**14 24 09.5**	**-0.5**
AQU				Sg	**Sg**	**14 24 10.4**	**-0.8**
	21μm,0.5s						
CAMP	**Campotosto**	**0.15**	**17**	Pg	**Pg**	**14 24 11.6**	**+0.1**
CAMP				Sg	**Sg**	**14 24 14.2**	**+0.4**
	2μm,0.6s						
CAMP	**Campotosto**	**0.15**	**17**	Pg	**Pg**	**14 24 11.6**	**+0.1**
CAMP				Sg	**Sg**	**14 24 14.2**	**+0.4**
	2μm,0.6s						
FIAM	**Fiamignano**	**0.21**	**235**	Pg	**Pg**	**14 24 13.3**	**+0.8**
FIAM				Sg	**Sg**	**14 24 16.9**	**+1.5**
	6μm,0.6s						
FIAM	**Fiamignano**	**0.21**	**235**	Pg	**Pg**	**14 24 13.3**	**+0.8**
FIAM				Sg	**Sg**	**14 24 16.9**	**+1.5**
	6μm,0.6s						
TERO	**Teramo**	**0.30**	**39**	Pg	**Pg**	**14 24 13.8**	**-0.4**
TERO				Sg	**Sg**	**14 24 18.2**	**0.0**
	5μm,0.5s						
TERO	**Teramo**	**0.30**	**39**	Pg	**Pg**	**14 24 13.8**	**-0.4**
TERO				Sg	**Sg**	**14 24 18.2**	**0.0**
	5μm,0.5s						
LNSS	**Leonessa**	**0.31**	**313**	Pg	**Pb**	**14 24 15.0**	**-1.2**
LNSS				Sg	**Sb**	**14 24 20.7**	**-0.8**
	6μm,0.5s						
LNSS	**Leonessa**	**0.31**	**313**	Pg	**Pb**	**14 24 15.0**	**-1.2**
LNSS				Sg	**Sb**	**14 24 20.7**	**-0.8**
	6μm,0.5s						
VCEL	**Villa Celiera**	**0.36**	**89**	Pg	**Pg**	**14 24 14.9**	**-0.5**
VCEL				Sg	**Sg**	**14 24 20.8**	**+0.6**
	6μm,0.7s						
VCEL	**Villa Celiera**	**0.36**	**89**	Pg	**Pg**	**14 24 14.9**	**-0.5**
VCEL				Sg	**Sg**	**14 24 20.8**	**+0.6**
	6μm,0.7s						
PTQR	**Pietraquaria**	**0.37**	**174**	Pg	**Pg**	**14 24 15.3**	**-0.2**
PTQR				Sg	**Sg**	**14 24 21.2**	**+0.8**
PTQR	**Pietraquaria**	**0.37**	**174**	Pg	**Pg**	**14 24 15.3**	**-0.2**
PTQR				Sg	**Sg**	**14 24 21.2**	**+0.8**
NRCA	**Norcia**	**0.48**	**339**	Pg	**Pg**	**14 24 17.5**	**0.0**
NRCA				Sg	**Sb**	**14 24 25.6**	**-0.6**
	950nm,0.4s						
NRCA	**Norcia**	**0.48**	**339**	Pg	**Pg**	**14 24 17.5**	**0.0**
NRCA				Sg	**Sb**	**14 24 25.6**	**-0.6**
	950nm,0.4s						
MNS	**Montasola**	**0.49**	**270**	Pg	**Pg**	**14 24 18.0**	**+0.2**
	3μm,1.3s						
MNS	**Montasola**	**0.49**	**270**	Pg	**Pg**	**14 24 18.0**	**+0.2**
	3μm,1.3s						
CERT	**Cerreto**	**0.52**	**212**	Pg	**Pg**	**14 24 18.3**	**0.0**
	2μm,0.4s						
CERT	**Cerreto**	**0.52**	**212**	Pg	**Pg**	**14 24 18.3**	**0.0**
	2μm,0.4s						
VVLD	**Villa Vallelon**	**0.56**	**159**	Pg	**Pg**	**14 24 18.3**	**-0.7**
	1μm,0.6s						
VVLD	**Villa Vallelon**	**0.56**	**159**	Pg	**Pg**	**14 24 18.3**	**-0.7**
	1μm,0.6s						
INTR	**Introdacqua**	**0.56**	**132**	Pg	**Pg**	**14 24 18.2**	**-0.9**
INTR				Sg	**Sg**	**14 24 26.9**	**+0.5**
	2μm,0.7s						
INTR	**Introdacqua**	**0.56**	**132**	Pg	**Pg**	**14 24 18.2**	**-0.9**
INTR				Sg	**Sg**	**14 24 26.9**	**+0.5**
	2μm,0.7s						
MTCE	**Montecelio**	**0.58**	**231**	Pg	**Pg**	**14 24 19.6**	**+0.2**
	625nm,0.9s						
MTCE	**Montecelio**	**0.58**	**231**	Pg	**Pg**	**14 24 19.6**	**+0.2**
	625nm,0.9s						
TRTR	**Tortoreto Alta**	**0.59**	**45**	Pg	**Pb**	**14 24 20.2**	**-0.7**
TRTR	**Tortoreto Alta**	**0.59**	**45**	Pg	**Pb**	**14 24 20.2**	**-0.7**
GUAR	**Guarcino**	**0.60**	**183**	Pg	**Pg**	**14 24 19.7**	**0.0**
	760nm,0.6s						
GUAR	**Guarcino**	**0.60**	**183**	Pg	**Pg**	**14 24 19.7**	**0.0**
	760nm,0.6s						
OFFI	**Offida**	**0.60**	**24**	Pg	**Pg**	**14 24 20.3**	**+0.5**
	6μm,0.6s						
OFFI	**Offida**	**0.60**	**24**	Pg	**Pg**	**14 24 20.3**	**+0.5**
	6μm,0.6s						
CESX	**Cesi**	**0.61**	**291**	Pg	**Pg**	**14 24 20.0**	**0.0**
	614nm,0.4s						
CESX	**Cesi**	**0.61**	**291**	Pg	**Pg**	**14 24 20.0**	**0.0**
	614nm,0.4s						
FDMO	**Fiordimonte**	**0.67**	**343**	Pg	**Pg**	**14 24 20.9**	**-0.3**
	669nm,0.3s						
FDMO	**Fiordimonte**	**0.67**	**343**	Pg	**Pg**	**14 24 20.9**	**-0.3**
	669nm,0.3s						
CESI	**CESI - Serrava**	**0.70**	**332**	Pg	**Pg**	**14 24 21.4**	**-0.3**
	294nm,0.7s						
CESI	**CESI - Serrava**	**0.70**	**332**	Pg	**Pg**	**14 24 21.4**	**-0.3**
	294nm,0.7s						
LPEL	**Lama dei Pelig**	**0.71**	**119**	Pg	**Pg**	**14 24 20.6**	**-1.3**
LPEL				Sg	**Sg**	**14 24 31.4**	**+0.3**
	836nm,0.7s						
LPEL	**Lama dei Pelig**	**0.71**	**119**	Pg	**Pg**	**14 24 20.6**	**-1.3**
LPEL				Sg	**Sg**	**14 24 31.4**	**+0.3**
	836nm,0.7s						
CAFR	**Castel Frentan**	**0.76**	**102**	Pg	**Pg**	**14 24 22.2**	**-0.6**
	1μm,0.4s						
CAFR	**Castel Frentan**	**0.76**	**102**	Pg	**Pg**	**14 24 22.2**	**-0.6**
	1μm,0.4s						
SDI	**San Donato**	**0.76**	**153**	Pg	**Pg**	**14 24 21.9**	**-1.0**
	370nm,0.5s						
SDI	**San Donato**	**0.76**	**153**	Pg	**Pg**	**14 24 21.9**	**-1.0**
	370nm,0.5s						
GUMA	**Gualdo di Mace**	**0.80**	**33**	Pg	**Pg**	**14 24 20.9**	**-2.7**
	2μm,0.4s						
ASSB	**Assisi San Ben**	**0.83**	**322**	Pg	**Pg**	**14 24 23.8**	**-0.3**
	484nm,0.4s						
ASSB	**Assisi San Ben**	**0.83**	**322**	Pg	**Pg**	**14 24 23.8**	**-0.3**
	484nm,0.4s						
GIUL	**Giuliano Di Ro**	**0.83**	**185**	Pg	**Pg**	**14 24 23.6**	**-0.7**
	593nm,1.1s						
GIUL	**Giuliano Di Ro**	**0.83**	**185**	Pg	**Pg**	**14 24 23.6**	**-0.7**
	593nm,1.1s						
RNI2	**Rionero Sannit**	**0.91**	**139**	Pg	**Pg**	**14 24 24.7**	**-1.0**
	1μm,1.2s						
RNI2	**Rionero Sannit**	**0.91**	**139**	Pg	**Pg**	**14 24 24.7**	**-1.0**
	1μm,1.2s						
SNTG	**Esanatoglia**	**0.92**	**341**	Pg	**Pg**	**14 24 25.2**	**-0.6**
	145nm,0.3s						
SNTG	**Esanatoglia**	**0.92**	**341**	Pg	**Pg**	**14 24 25.2**	**-0.6**
	145nm,0.3s						
CERA	**Filignano**	**0.94**	**148**	Pg	**Pg**	**14 24 24.6**	**-1.6**
	770nm,0.8s						
CERA	**Filignano**	**0.94**	**148**	Pg	**Pg**	**14 24 24.6**	**-1.6**
	770nm,0.8s						
CING	**Cingoli**	**0.99**	**354**	Pg	**Pg**	**14 24 26.7**	**-0.6**
	435nm,0.6s						
CING	**Cingoli**	**0.99**	**354**	Pg	**Pg**	**14 24 26.7**	**-0.6**
	435nm,0.6s						
MURB	**Monte Urbino**	**1.06**	**325**	Pg	**Pb**	**14 24 28.6**	**-0.4**
	763nm,0.4s						
MURB	**Monte Urbino**	**1.06**	**325**	Pg	**Pb**	**14 24 28.6**	**-0.4**
	763nm,0.4s						
ARVD	**Arcevia**	**1.15**	**345**	Pg	**Pg**	**14 24 29.5**	**-0.8**
	356nm,0.6s						
ARVD	**Arcevia**	**1.15**	**345**	Pg	**Pg**	**14 24 29.5**	**-0.8**
	356nm,0.6s						
AOI	**Ancona**	**1.17**	**9**	Pg	**Pg**	**14 24 30.4**	**-0.4**
	305nm,0.6s						
AOI	**Ancona**	**1.17**	**9**	Pg	**Pg**	**14 24 30.4**	**-0.4**
	305nm,0.6s						
PIEI	**Pieia**	**1.29**	**333**	Pg	**Pn**	**14 24 32.0**	**-0.7**
	195nm,0.7s						
PIEI	**Pieia**	**1.29**	**333**	Pg	**Pn**	**14 24 32.0**	**-0.7**
	195nm,0.7s						
MS1	**Monte Sant'Ang**	**2.05**	**109**	*e*Pn	**Pg**	**14 24 47.2**	**-0.3**
SKDS	**Skadanscina**	**3.19**	**8**	*i* Pn	**Pn**	**14 24 60.0**	**+1.2**
SKDS				*i* Sn	**Sn**	**14 25 39.4**	**+2.3**
SKDS	**Skadanscina**	**3.19**	**8**	Pn	**Pn**	**14 25 00.0**	**+1.2**
SKDS				*i* Sn	**Sn**	**14 25 39.4**	**+2.3**
PGF	**Pioggiola**	**3.22**	**274**	*e*Pn	**Pn**	**14 24 59.8**	**+0.5**
PGF	**Pioggiola**	**3.22**	**274**	*e*Pn	**Pn**	**14 24 59.8**	**+0.5**
BOJS	**Bojanci**	**3.40**	**23**	*i* Pn	**Pn**	**14 25 03.4**	**+1.7**
BOJS				*i* Sn	**Sb**	**14 25 50.3**	**0.0**
BOJS	**Bojanci**	**3.40**	**23**	*i* Pn	**Pn**	**14 25 03.4**	**+1.7**
JAVS	**Javornik**	**3.54**	**8**	*i* Pn	**Pn**	**14 25 04.5**	**+0.8**
JAVS				*i* Sn	**Sn**	**14 25 47.6**	**+1.8**
JAVS	**Javornik**	**3.54**	**8**	*i* Pn	**Pn**	**14 25 04.4**	**+0.8**
JAVS				*i* Sn	**Sn**	**14 25 47.6**	**+1.8**
VOY	**Vojsko**	**3.66**	**6**	*e*Pn	**Pn**	**14 25 07.2**	**+1.9**
VOY	**Vojsko**	**3.66**	**6**	*e*Pn	**Pn**	**14 25 07.2**	**+1.9**
ABTA	**Abfaltersbach**	**4.40**	**352**	||*i*Pn	**Pn**	**14 25 15.3**	**-0.1**
ABTA	**Abfaltersbach**	**4.40**	**352**	Pn	**Pn**	**14 25 15.3**	**-0.1**
SBF	**Sospel**	**4.57**	**291**	*e*Pn	**Pn**	**14 25 18.2**	**+0.4**
SBF				*e*Sn	**Sn**	**14 26 08.3**	**-2.8**
	7.9nm,0.4s						
SBF	**Sospel**	**4.57**	**291**	*e*Pn	**Pn**	**14 25 18.2**	**+0.4**
SBF				*e*Sn	**Sn**	**14 26 08.3**	**-2.8**
	4.0nm,0.4s						
BBLS	**Lazići**	**4.67**	**70**	*e*P	**Pn**	**14 25 22.3**	**+3.1**
LMR	**La Mourre**	**5.12**	**283**	*e*Pn	**Pn**	**14 25 25.0**	**-0.2**
LMR				*e*Sn	**Sn**	**14 26 20.9**	**-3.5**
	2.0nm,0.4s						
LMR	**La Mourre**	**5.12**	**283**	*e*Pn	**Pn**	**14 25 25.0**	**-0.2**
LMR				*e*Sn	**Sn**	**14 26 20.9**	**-3.5**
	1.0nm,0.4s						
IVAS	**Ivanjica**	**5.13**	**74**	*e*P	**Pn**	**14 25 26.9**	**+1.4**
DIVS	**Divibare**	**5.14**	**68**	*e*P	Pn	14 25 30.8	+5.1
MBDF	**Montbardon**	**5.32**	**298**	*e*P	**Pn**	**14 25 30.4**	**+2.3**
MBDF	**Montbardon**	**5.32**	**298**	*e*P	**Pn**	**14 25 30.4**	**+2.3**
LPG	**La Plagne**	**5.69**	**305**	*e*P	**Pn**	**14 25 36.2**	**+2.9**
LPG				*e*Sn	**Sn**	**14 26 35.3**	**-3.6**
	2.0nm,0.4s						
LPG	**La Plagne**	**5.69**	**305**	*e*P	**Pn**	**14 25 36.2**	**+2.9**
LPL	**La Plagne**	**5.71**	**305**	*e*P	**Pn**	**14 25 36.4**	**+2.9**
LPL				*e*Sn	**Sn**	**14 26 34.4**	**-4.9**
	2.2nm,0.3s						
LPL	**La Plagne**	**5.71**	**305**	*e*P	**Pn**	**14 25 36.4**	**+2.9**
SMRF	**Simiane la Rot**	**5.90**	**288**	*e*P	**Pn**	**14 25 37.7**	**+1.7**
SMRF	**Simiane la Rot**	**5.90**	**288**	*e*P	**Pn**	**14 25 37.7**	**+1.7**
BARS	**Barje**	**6.26**	**83**	*e*P	**Pn**	**14 25 42.8**	**+1.8**
KHC	**Kasperske Hory**	**6.74**	**1**	*e*PN	**Pn**	**14 25 48.0**	**+0.4**
KHC				*ex*	x	14 26 24.5	
KHC				*e*SN	**Sn**	**14 27 04.0**	**-0.6**
KHC				*ex*	x	14 27 21.5	
HINF	**Hinteralfeld**	**7.11**	**322**	*e*Pn	**Pn**	**14 25 52.3**	**-0.3**
HINF	**Hinteralfeld**	**7.11**	**322**	*e*Pn	**Pn**	**14 25 52.3**	**-0.3**
CDF	**Champ du Feu**	**7.38**	**327**	*e*Pn	**Pn**	**14 25 55.9**	**-0.5**
CDF				*e*Sn	**Sn**	**14 27 15.8**	**-4.6**
	1.3nm,0.3s						
CDF	**Champ du Feu**	**7.38**	**327**	*e*Pn	**Pn**	**14 25 55.9**	**-0.5**
HAU	**Haudompre**	**7.48**	**321**	*e*Pn	**Pn**	**14 25 57.7**	**0.0**
HAU				*e*Sn	Sn	14 27 16.4	-6.3
	4.1nm,0.3s						
HAU	**Haudompre**	**7.48**	**321**	*e*Pn	**Pn**	**14 25 57.7**	**0.0**

*ISCJB **24** 14:35:27.7±0.6,8.°67S±0.°05×120.°81E±0.°06,h100km, mb4.2/1,Error ellipse: s-maj=9.0km s-min=6.9km az=171.5*
*AUST **24** 14:35:27.6,8.°50S×120.°98E,h100km*
*IDC **24** 14:35:28.4±2.6,8.°99S×120.°56E,h88km±33km,mb4.2/1, mb1 3.9/5,mb1mx3.4/23,mbtmp3.7/5,Error ellipse: s-maj=114.1km s-min=23.2km az=66.0*
**ISC

JFK	**Kawauchi**	**1.30 234**	⇓P	**Pn**	14 37 43.9	**-0.8**
JFK			*e*S	**Sn**	14 37 59.1	**-1.7**
JOM	**Ohasama**	**1.50 333**	⇓P	**Pn**	14 37 47.4	**-0.1**
JOM			*e*S	**Sn**	14 38 05.8	**-0.1**
JFT	**Otama**	**1.59 248**	⇓P	**Pn**	14 37 49.1	**+0.3**
JFT			*e*S	**Sn**	14 38 08.7	**+0.6**
JYK	**Kaneyama**	**1.63 299**	⇓P	**Pn**	14 37 49.4	**+0.1**
JYS	**Shirataka**	**1.67 273**	P	**Pn**	14 37 49.9	**0.0**
JYS			*e*S	**Sn**	14 38 10.6	**+0.5**
JRG	**Rokugo**	**1.75 316**	P	**Pn**	14 37 51.3	**+0.4**
MJAR	**Matsushiro Arr**	**3.55 244**	P	Pn	14 38 18.5	+2.8
	2.9nm,0.3s,baz=54,slow=9.7,SNR=28					
MJAR			LR	LR	14 39 52.6	
	comp=Z,134nm,18.1s,baz=90,slow=42					
MAT	**Matsushiro**	**3.55 245**	P	Pn	14 38 18.9	+3.2
MAT			S	**Sn**	14 39 00.7	**+4.3**
JHJ	**Hachijo jima 2**	**5.38 202**	P	**Pn**	14 38 41.1	**+0.2**
	9.1nm,0.3s,baz=64,slow=21,SNR=10					
JHJ			S	Sn	14 39 35.6	-5.9
	8.7nm,0.3s,baz=66,slow=19,SNR=4.4					
ASAJ	**Asahikawa**	**5.98 3**	P	**Pn**	14 38 49.5	**+0.5**
	1.8nm,0.3s,baz=188,slow=12,SNR=28					
USRK	**Ussuriysk Arra**	**9.78 311**	P	**Pn**	14 39 41.7	**+0.6**
	0.3nm,0.3s,baz=117,slow=14,SNR=6.6					
USRK			LR	LR	14 43 08.1	
	comp=Z,67nm,21.3s,baz=181,slow=35					
KSRS	**Korea Array**	**11.31 271**	P	**Pn**	14 40 04.2	**+2.0**
	0.1nm,0.3s,baz=78,slow=13,SNR=2.9					
KSRS			LR	LR	14 43 51.3	
	comp=Z,27nm,20.5s,baz=205,slow=34					
SONM	**Songino Array**	**27.70 302**	P	**P**	14 43 07.3	**-0.6**
	0.4nm,0.4s,baz=114,slow=2.5,SNR=4.6					
ZALV	**Zalesovo Beam**	**41.63 311**	P	**P**	14 45 07.5	**-0.1**
	1.2nm,0.5s,baz=73,slow=7.0,SNR=6.9					
MKAR	**Makanchi Array**	**44.06 301**	P	**P**	14 45 27.4	**-0.1**
	0.6nm,0.5s,baz=88,slow=10.0,SNR=5.4					
KURBB	**Kurchatov Arra**	**45.81 307**	P	**P**	14 45 41.0	**-0.2**
	3.3nm,0.6s,baz=80,slow=8.0,SNR=36					
ILAR	**Eielson Array**	**48.23 33**	P	**P**	14 46 00.3	**+0.3**
	0.3nm,0.7s,baz=268,slow=5.9,SNR=5.6					
WRA	**Warramunga Arr**	**58.24 189**	P	**P**	14 47 13.5	**-0.5**
	0.3nm,0.4s,baz=6.6,slow=7.0,SNR=2.7					
YKA	**Yellowknife Ar**	**62.54 31**	P	**P**	14 47 42.9	**0.0**
	0.1nm,0.4s,baz=301,slow=6.2,SNR=2.8					
FINES	**FINESS Array B**	**68.12 332**	P	**P**	14 48 18.4	**-0.6**
	1.1nm,0.7s,baz=34,slow=14,SNR=4.0					

CASC 24 14:38:47.6±3.4, 8.15N×83.00W, h0km±16km, MD4.0, 1C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**0.52**	**341**	⇑*e*P	Pb	14 38 59.5	-0.2
BRU2	**Volcan**	**0.71**	**26**	*e*P	Pb	14 39 02.5	-0.5
BRU2				*e*S	Sb	14 39 14.1	+0.6
TBS2		**0.72**	**28**	*e*P	Pb	14 39 04.0	+0.8
TBS2				*e*S	Sn	14 39 16.3	-0.9
BRU	**Baru**	**0.78**	**34**	*e*P	Pg	14 39 03.7	+0.5
BUS	**Buena Vista**	**1.58**	**332**	*e*P	Pn	14 39 17.3	-0.3
BUS				*e*S	Sg	14 39 40.3	+0.7
QCR	**Quepos**	**1.71**	**318**	*e*P	Pn	14 39 18.9	+0.2
QCR				*e*S	Sg	14 39 44.7	+2.1
LAJ	**Bijagual**	**2.03**	**327**	*e*P	Pn	14 39 23.7	+0.4
SJS	**Escuela Geolog**	**2.06**	**330**	*e*P	Pn	14 39 23.1	-0.6
CGA2	**Cerro Gallo 2**	**2.35**	**322**	*e*P	Pn	14 39 26.9	-0.9
FORC	**Fortuna**	**2.83**	**324**	*e*P	Pn	14 39 36.4	+2.2
BCIP	**Isla Barro Col**	**3.28**	**72**	*e*P	Pn	14 39 40.7	+0.3
BCIP				*e*S	Sn	14 40 22.6	+2.5

IDC 24 14:42:18.6±1.8, 16.87S×179.13W, h529km±22km, mb3.4/6, mb1 3.6/8, mb1mx3.2/23, mbtmp3.5/8, Error ellipse: s-maj=73.9km s-min=19.0km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.68**	**68**	P	P	14 44 12.7	0.0
	3.9nm,0.3s,baz=259,slow=18,SNR=6.4						
DZM	**Mont Dzumac**	**14.55**	**247**	P	P	14 45 23.5	-0.4
	0.6nm,0.3s,baz=68,slow=16,SNR=8.4						
CTA	**Charters Tower**	**32.95**	**259**	P	P	14 48 09.7	0.0
	3.0nm,0.5s,baz=88,slow=14,SNR=8.2						
STKA	**Stephens Creek**	**38.54**	**240**	P	P	14 48 55.6	-0.2
	6.2nm,0.9s,baz=104,slow=12,SNR=8.1						
WRA	**Warramunga Arr**	**44.15**	**259**	P	P	14 49 39.8	-0.7
	2.3nm,0.5s,baz=94,slow=7.9,SNR=35						
ASAR	**Alice Springs**	**44.42**	**253**	P	P	14 49 42.2	-0.3
	22nm,0.5s,baz=89,slow=7.8,SNR=577						
ASAR				ScP	ScP	14 54 16.0	-0.6
	0.5nm,0.7s,baz=92,slow=4.7,SNR=6.1						
FITZ	**Fitzroy Crossi**	**52.52**	**260**	P	P	14 50 43.3	+0.5
	1.5nm,0.4s,baz=126,slow=7.2,SNR=17						
ILAR	**Eielson Array**	**85.04**	**13**	P	P	14 53 57.7	-0.1
	0.1nm,0.4s,baz=225,slow=5.2,SNR=4.8						
BRTR	**Keskin Array B**	**143.57**	**315**	PKP	PKPbc	15 00 52.5	+0.3
	0.6nm,0.6s,baz=90,slow=2.5,SNR=6.0						

IDC 24 14:49:59.7±5.0, 16.19S×175.96W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/19, mbtmp4.1/3, Error ellipse: s-maj=182.3km s-min=98.9km az=154.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.51**	**240**	P	P	14 57 49.2	+0.3
	2.8nm,0.9s,baz=101,slow=13,SNR=6.3						
WRA	**Warramunga Arr**	**47.27**	**258**	P	P	14 58 34.9	-0.3
	0.7nm,0.8s,baz=91,slow=6.9,SNR=5.0						
ASAR	**Alice Springs**	**47.52**	**253**	P	P	14 58 36.9	-0.4
	4.1nm,0.5s,baz=90,slow=7.8,SNR=139						
ASAR				PcP	PcP	15 00 07.3	-0.2
	0.3nm,0.5s,baz=102,slow=4.1,SNR=5.2						

IDC 24 15:09:30.1±8.4, 11.49S×166.52E, h258km±90km, mb3.3/6, mb1 3.5/7, mb1mx3.2/20, mbtmp3.3/7, Error ellipse: s-maj=77.2km s-min=24.3km az=155.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.52**	**180**	P	Pn	15 11 55.6	+0.4
	0.4nm,0.3s,baz=107,slow=21,SNR=6.2						
STKA	**Stephens Creek**	**30.65**	**225**	P	P	15 15 21.1	+0.3
	2.9nm,0.9s,baz=56,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**32.05**	**251**	P	P	15 15 33.0	-0.2
	0.3nm,0.4s,baz=85,slow=9.2,SNR=3.4						
ASAR	**Alice Springs**	**33.28**	**244**	P	P	15 15 43.2	-0.5
	0.5nm,0.6s,baz=69,slow=10,SNR=12						
ILAR	**Eielson Array**	**83.69**	**18**	P	P	15 21 29.6	-0.1
	1.0nm,0.7s,baz=226,slow=5.4,SNR=15						
MKAR	**Makanchi Array**	**94.36**	**317**	P	P	15 22 21.7	+1.1
	0.4nm,0.5s,baz=88,slow=6.4,SNR=7.1						
YKA	**Yellowknife Ar**	**95.02**	**27**	P	P	15 22 22.0	-1.1
	0.2nm,0.4s,baz=259,slow=4.8,SNR=6.9						
ARCES	**ARCESS Array B**	**116.95**	**346**	PKP	PKPdf	15 27 43.6	0.0
	6.8nm,1.1s,baz=61,slow=2.3,SNR=3.9						

TRN 24 15:16:53.6, 14.82N×60.35W, h15km, MD3.7, M3.5(FDF), **2C-5D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MVM	**Montagne Vaucl**	**0.59**	**244**	*e*P	Pn	15 17 08.7	+1.2
BIM	**Bigot**	**0.76**	**247**	⇓*e*P	Pb	15 17 08.8	+0.1
FDF	**Fort de France**	**0.78**	**264**	*i* P	Pn	15 17 11.1	+0.9
FDF	**Fort de France**	**0.78**	**264**	⇓*e*P	Pn	15 17 11.2	+1.0
FDF				*e*S	Sn	15 17 23.9	+2.2
FDF				⇓*e*S	Sn	15 17 24.0	+2.4
SLW	**Petit Monier**	**0.97**	**216**	*e*P	Pn	15 17 13.0	+0.2
SLW				*e*S	Sn	15 17 27.3	+0.9
DFBT	**Forest Bistro**	**1.06**	**294**	⇑*i*P	Pg	15 17 16.0	+1.8
DFBT				*e*S	Sn	15 17 31.1	+2.6
DBCT	**Belle View Cho**	**1.06**	**295**	⇓*e*P	Pg	15 17 16.0	+1.7
DBCT				*e*S	Sn	15 17 31.9	+3.2
DSHT	**Scott's Head**	**1.07**	**292**	⇑*e*P	Pg	15 17 16.2	+1.9
DSHT				*e*S	Sn	15 17 31.8	+3.2
DPMT	**Pointe Michel**	**1.09**	**294**	⇓*e*P	Pg	15 17 16.2	+1.6
DPMT				*e*S	Sn	15 17 32.5	+3.4
MDN	**Morne-Daniel**	**1.12**	**297**	*e*P	Pg	15 17 17.0	+1.6
MDN				*e*S	Sg	15 17 33.6	+3.5
SLB	**Belfond**	**1.19**	**214**	*e*P	Pg	15 17 17.4	+0.7
SLB				*e*S	Sg	15 17 36.3	+4.0
SLB	**Belfond**	**1.19**	**214**	*e*	Sn	15 17 38.7	+6.9
MGG	**Marie-Galante**	**1.44**	**320**	*e*P	Pg	15 17 21.4	+0.1
DEG	**La Desirade**	**1.64**	**335**	*e*P	Pn	15 17 21.6	-0.4
DEG				*e*S	Sn	15 17 41.2	-1.7
BHS	**Barnard House**	**1.69**	**207**	*e*P	Pb	15 17 24.1	-0.4
SVV	**Soufriere Volc**	**1.71**	**210**	*e*P	Pb	15 17 24.3	-0.5
SVV				*e*S	Sg	15 17 47.8	-1.1
PHG	**Guadaloupe-2**	**1.73**	**314**	*e*P	Pb	15 17 24.8	-0.4
SCG	**Saint Claude**	**1.76**	**313**	*e*P	Pb	15 17 25.8	+0.1
FCV	**Fort Charlotte**	**1.86**	**208**	*e*P	Pb	15 17 26.7	-0.7
FCV	**Fort Charlotte**	**1.86**	**208**	*e*	Pg	15 17 29.1	-0.4
FCV				*e*S	Sb	15 17 51.0	+0.4
LZG	**Guadaloupe-1**	**1.90**	**314**	*e*P	Pb	15 17 26.9	-1.2
GRW	**Mount Saint Ca**	**2.93**	**206**	*e*P	Pn	15 17 41.8	+2.0
GRW				*e*S	Sn	15 18 17.2	+2.3

RSPR ***24*** *15:19:11.1, 19°.19N×64°.59W, h25km±18km, MD3.5/14*
NEIC ***24*** *15:19:11.1, 19°.19N×64°.59W, h25km, MD3.5(RSPR), After RSPR.*

ISC 24 15:19:12.0±2.7, 19°.1N±0°.1×64°.7W±0°.1, h42km, n60, σ0.66/72, 54C-8D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBVI	**Tortola**	**0.69**	**176**	⇑*i*P	**Pn**	**15 19 23.9**	**-1.4**
TBVI	**Tortola**	**0.69**	**176**	*i* Pu	**Pn**	**15 19 23.9**	**-1.4**
TBVI	**Tortola**	**0.69**	**176**	⇑*i*P	**Pn**	**15 19 23.9**	**-1.4**
STVI	**Saint Thomas**	**0.80**	**200**	⇑*e*P	**Pn**	**15 19 25.7**	**-1.1**
STVI	**Saint Thomas**	**0.80**	**200**	⇑*e*P	**Pn**	**15 19 25.9**	**-0.9**
STVI	**Saint Thomas**	**0.80**	**200**	⇑*e*P	**Pn**	**15 19 25.7**	**-1.1**
STVI				⇑*e*P	**Pn**	**15 19 25.9**	**-0.9**
STVI				*e*S	**Sn**	**15 19 37.9**	**+0.4**
STVI	**Saint Thomas**	**0.80**	**200**	⇑*e*P	**Pn**	**15 19 25.7**	**-1.1**
STVI	**Saint Thomas**	**0.80**	**200**	⇑*e*P	**Pn**	**15 19 25.9**	**-0.9**
STVI				*e*S	**Sn**	**15 19 37.9**	**+0.4**
MTP	**Monte Pirata**	**1.30**	**220**	⇑*e*P	**Pn**	**15 19 33.1**	**-0.7**
MTP	**Monte Pirata**	**1.30**	**220**	⇑*e*P	**Pn**	**15 19 33.1**	**-0.7**
MTP				*e*S	**Sn**	**15 19 50.2**	**+0.1**
MTP	**Monte Pirata**	**1.30**	**220**	⇑*e*P	**Pn**	**15 19 33.1**	**-0.7**
MTP				*e*S	**Sn**	**15 19 50.2**	**+0.1**
CDVI	**St. Croix**	**1.35**	**184**	⇑*e*P	**Pn**	**15 19 35.3**	**+1.0**
CDVI	**St. Croix**	**1.35**	**184**	⇑*e*P	**Pn**	**15 19 35.4**	**+1.0**
CDVI	**St. Croix**	**1.35**	**184**	⇑*e*P	**Pn**	**15 19 35.4**	**+1.0**
CDVI	**St. Croix**	**1.35**	**184**	⇑*e*P	**Pn**	**15 19 35.3**	**+1.0**
CDVI	**St. Croix**	**1.35**	**184**	⇑*e*P	**Pn**	**15 19 35.4**	**+1.0**
CBYP	**Canovanas**	**1.40**	**234**	⇑*e*P	**Pn**	**15 19 34.5**	**-0.6**
CBYP	**Canovanas**	**1.40**	**234**	⇑*e*P	**Pn**	**15 19 34.6**	**-0.5**
CBYP	**Canovanas**	**1.40**	**234**	⇑*e*P	**Pn**	**15 19 34.5**	**-0.6**
CBYP				⇑*e*P		15 19 34.6	
CBYP	**Canovanas**	**1.40**	**234**	⇑*e*P	**Pn**	**15 19 34.5**	**-0.6**
CBYP	**Canovanas**	**1.40**	**234**	⇑*e*P	**Pn**	**15 19 34.6**	**-0.5**
HUMP	**Col San Antoni**	**1.47**	**230**	⇑*e*P	**Pn**	**15 19 35.6**	**-0.5**
HUMP	**Col San Antoni**	**1.47**	**230**	⇑*e*P	**Pn**	**15 19 35.4**	**-0.7**
HUMP	**Col San Antoni**	**1.47**	**230**	⇑*e*P	**Pn**	**15 19 35.4**	**-0.7**
HUMP				⇑*e*P		15 19 35.6	
HUMP				*e*S	**Sn**	**15 19 54.9**	**+0.8**
HUMP	**Col San Antoni**	**1.47**	**230**	⇑*e*P	**Pn**	**15 19 35.4**	**-0.7**
HUMP	**Col San Antoni**	**1.47**	**230**	⇑*e*P	**Pn**	**15 19 35.6**	**-0.5**
HUMP				*e*S	**Sn**	**15 19 54.9**	**+0.8**
CPD	**Cerro la Pandu**	**1.59**	**228**	⇑*e*P	**Pn**	**15 19 37.2**	**-0.5**
CPD	**Cerro la Pandu**	**1.59**	**228**	⇑*e*P	**Pn**	**15 19 37.2**	**-0.5**
CPD	**Cerro la Pandu**	**1.59**	**228**	⇑*e*P	**Pn**	**15 19 37.2**	**-0.5**
SJG	**San Juan**	**1.72**	**235**	⇑*e*P	**Pn**	**15 19 39.0**	**-0.4**
SJG	**San Juan**	**1.72**	**235**	⇓*e*P	**Pn**	**15 19 39.3**	**-0.2**
SJG				⇓*e*P		15 19 39.3	
SJG				*e*S	**Sn**	**15 20 00.4**	**+0.2**
SJG				*e*S		15 20 00.9	
SJG	**San Juan**	**1.72**	**235**	⇓*e*P	**Pn**	**15 19 39.3**	**-0.2**
SJG	**San Juan**	**1.72**	**235**	⇑*e*P	**Pn**	**15 19 39.4**	**0.0**
SJG				*e*S	**Sn**	**15 20 00.4**	**+0.2**
SJG				*e*S		15 20 00.9	
CELP	**Cerrillos**	**2.08**	**241**	⇑*e*P	**Pn**	**15 19 44.3**	**-0.2**
CELP	**Cerrillos**	**2.08**	**241**	⇑*e*P	**Pn**	**15 19 44.3**	**-0.2**
CELP	**Cerrillos**	**2.08**	**241**	⇑*e*P	**Pn**	**15 19 44.3**	**-0.2**
AOPR	**Arecibo Observ**	**2.11**	**249**	⇑*e*P	**Pn**	**15 19 44.3**	**-0.6**
AOPR	**Arecibo Observ**	**2.11**	**249**	⇑*e*P	**Pn**	**15 19 44.3**	**-0.6**
AOPR	**Arecibo Observ**	**2.11**	**249**	⇑*e*P	**Pn**	**15 19 44.3**	**-0.6**
OBIP	**Obispado Ponce**	**2.12**	**240**	⇑*e*P	**Pn**	**15 19 44.7**	**-0.2**
OBIP	**Obispado Ponce**	**2.12**	**240**	⇑*e*P	**Pn**	**15 19 44.7**	**-0.2**
OBIP				*e*S	**Sn**	**15 20 10.3**	**+0.2**
OBIP	**Obispado Ponce**	**2.12**	**240**	⇑*e*P	**Pn**	**15 19 44.7**	**-0.2**
OBIP				*e*S	**Sn**	**15 20 10.3**	**+0.2**
LRS	**Lares**	**2.21**	**249**	⇓*e*P	**Pn**	**15 19 45.7**	**-0.6**
LRS	**Lares**	**2.21**	**249**	⇓*e*P	**Pn**	**15 19 45.7**	**-0.6**
LRS	**Lares**	**2.21**	**249**	⇓*e*P	**Pn**	**15 19 45.7**	**-0.6**
AGPR	**Aguadilla, PR**	**2.40**	**255**	⇑*e*P	**Pn**	**15 19 48.1**	**-0.7**
AGPR	**Aguadilla, PR**	**2.40**	**255**	⇑*e*P	**Pn**	**15 19 48.1**	**-0.7**
AGPR	**Aguadilla, PR**	**2.40**	**255**	⇑*e*P	**Pn**	**15 19 48.8**	**0.0**
LSP	**Las Mesas**	**2.47**	**248**	⇑*e*P	**Pn**	**15 19 49.1**	**-0.7**
LSP	**Las Mesas**	**2.47**	**248**	⇑*e*P	**Pn**	**15 19 49.1**	**-0.7**
LSP	**Las Mesas**	**2.47**	**248**	⇑*e*P	**Pn**	**15 19 49.1**	**-0.7**
CRPR	**Cabo Rojo, PR**	**2.56**	**245**	⇑*e*P	**Pn**	**15 19 50.9**	**-0.2**
CRPR	**Cabo Rojo, PR**	**2.56**	**245**	⇑*e*P	**Pn**	**15 19 50.9**	**-0.2**
CRPR	**Cabo Rojo, PR**	**2.56**	**245**	⇑*e*P	**Pn**	**15 19 50.9**	**-0.2**
DR12	**Loma Pena Alta**	**4.47**	**267**	⇓*e*P	**Pn**	**15 20 17.2**	**-0.2**
DR12	**Loma Pena Alta**	**4.47**	**267**	⇓*e*P	**Pn**	**15 20 17.2**	**-0.2**
SDDR	**Presa de Saban**	**6.26**	**270**	⇑*e*P	**Pn**	**15 20 42.2**	**+0.2**
SDDR	**Presa de Saban**	**6.26**	**270**	⇑*e*P	**Pn**	**15 20 42.2**	**+0.2**
SDDR	**Presa de Saban**	**6.26**	**270**	⇑*e*P	**Pn**	**15 20 42.2**	**+0.2**

NEIC ***24*** *15:20:38.7±1.4, 6°.55S×129°.30E, h184km±15km, mb4.7/11, Error ellipse: s-maj=11.5km s-min=7.3km az=47.0*
ISCJB ***24*** *15:20:39.5±0.2, 6°.63S±0°.02×129°.35E±0°.03, h200km, mb4.2/27, Error ellipse: s-maj=4.8km s-min=3.0km az=155.1*
AUST ***24*** *15:20:39.8, 6°.48S×129°.53E, h200km*
IDC ***24*** *15:20:41.7±2.1, 6°.48S×129°.33E, h207km±21km, mb3.8/14, mb1 3.9/16, mb1mx3.9/22, mbtmp3.8/16, MS3.0/2, Ms1 3.0/2, ms1mx2.4/33, Error ellipse: s-maj=14.4km s-min=9.7km az=74.0*
DJA ***24*** *15:20:42.5±0.3, 7°S±3°×12°9E±°, h172km±7km, M4.7/24, mB5.1/15, mb4.8/24, MLv5.2/10, Mw(mB)4.4/15*

ISC 24 15:20:39.5±0.3, 6.72S±0.03×129.28E±0.04, h200km, n131, σ1.978/106, mb4.3/27, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**2.27**	**16**	P	Pn	15 21 22.1	+1.2
BNDI	**Bandanaira**	**2.27**	**16**	P	Pn	15 21 22.2	+1.2
	baz=2.0,SNR=64						
AAI	**Ambon**	**3.20**	**340**	P	Pn	15 21 32.9	+1.3
AAI	**Ambon**	**3.20**	**340**	P	Pn	15 21 32.9	+1.3
	baz=3.1,SNR=17						
MSAI	**Masohi**	**3.37**	**354**	P	Pn	15 21 34.7	+1.1
TLE	**Tual**	**3.60**	**73**	P	Pn	15 21 38.4	+2.0
TLE	**Tual**	**3.60**	**73**	P	Pn	15 21 38.4	+2.0
	baz=3.3,SNR=219						
TLE				S	**Sn**	**15 22 16.4**	**-4.5**
	baz=3.3,SNR=12						
FAKI	**Fak Fak**	**4.80**	**38**	P	**Pn**	**15 21 49.3**	**-2.1**
FAKI	**Fak Fak**	**4.80**	**38**	P	**Pn**	**15 21 49.3**	**-2.1**
	baz=4.5,SNR=262						
FAKI				S	Sn	15 22 40.9	-7.1
	baz=4.5,SNR=29						
SWI	**Sorong**	**6.15**	**19**	P	**Pn**	**15 22 06.0**	**-2.7**
	251nm,0.4s,9μm1.7nm						
SWI	**Sorong**	**6.15**	**19**	P	**Pn**	**15 22 05.9**	**-2.8**
	baz=5.9,SNR=206						
SWI				S	Sn	15 23 10.4	-8.9
	baz=5.9,SNR=8.5						
LBMI	**Labuha**	**6.30**	**344**	P	Pn	15 22 11.3	+0.6
	488nm,0.8s,4μm1.8nm						
MTN	**Manton Dam**	**6.35**	**163**	P	Pn	15 22 14.7	+3.4
	baz=6.6,SNR=293						
MTN				S	**Sn**	**15 23 24.7**	**+0.6**
	baz=6.6,SNR=10						
KDU	**Kakadu**	**6.71**	**152**	P	Pn	15 22 19.2	+3.3
	baz=6.8,SNR=108						
KDU				S	**Sn**	**15 23 32.6**	**+0.1**
	baz=6.8,SNR=5.7						
BBSI	**Bau Bau**	**6.78**	**280**	P	Pn	15 22 21.4	+4.5
	200nm,1.0s,2μm0.7nm						
TNTI	**Ternate**	**7.68**	**346**	P	**Pn**	**15 22 28.6**	**-0.1**
	172nm,0.8s,1μm0.6nm						
LUWI	**Luwuk**	**8.60**	**311**	P	Pn	15 22 50.8	+10
BAKI	**Biak**	**8.75**	**51**	P	**Pn**	**15 22 42.7**	**+0.1**
	591nm,0.8s,7μm						
KMSI	**Cibinong**	**8.97**	**324**	P	Pn	15 22 59.2	+14
BKSI	**Bulukumba**	**9.21**	**278**	P	Pn	15 22 51.5	+2.9
	18nm,0.8s,331nm						
WSI	**Waingapu**	**9.36**	**251**	S	**Sn**	**15 24 31.0**	**-4.4**
	baz=9.7,SNR=6.9						
KAPI	**Kappang**	**9.63**	**280**	*e*Pn	**Pn**	**15 22 52.8**	**-1.2**
KAPI	**Kappang**	**9.63**	**280**	P	Pn	15 22 58.8	+4.8
	15nm,1.7s						
KAPI	**Kappang**	**9.63**	**280**	P	Pn	15 22 56.3	+2.4
	0.5nm,0.3s,baz=178,slow=8.7,SNR=5.3						
SPSI	**Sidrap Palu**	**9.86**	**286**	P	Pn	15 23 01.7	+4.8
	74nm,0.7s,933nm						
TTSI	**Tana Toraja**	**10.11**	**291**	P	**P**	**15 23 06.7**	**-1.4**
	37nm,1.3s						
MRSI	**Marisa**	**10.23**	**314**	P	P	15 23 04.3	-5.2
	115nm,0.9s,943nm						
PCI	**Palu**	**11.05**	**301**	S	**S**	**15 25 14.1**	**-1.9**
	baz=11,SNR=15						
FITZ	**Fitzroy Crossi**	**11.86**	**197**	*e*Pn	**Pn**	**15 23 24.1**	**+1.5**
FITZ				*e*Sn	**Sn**	**15 25 32.0**	**-2.9**
FITZ				S	**Sn**	**15 25 32.1**	**-2.7**
FITZ	**Fitzroy Crossi**	**11.86**	**197**	P	**Pn**	**15 23 24.4**	**+1.8**
	15nm,0.3s,baz=30,slow=11,SNR=236						
FITZ				S	**Sn**	**15 25 32.1**	**-2.7**
	6.0nm,0.3s,baz=91,slow=18,SNR=3.5						
FITZ				LR	LR	15 28 48.2	
	comp=Z,55nm,18.6s,baz=132,slow=40						
FITZ	**Fitzroy Crossi**	**11.86**	**197**	P	**Pn**	**15 23 24.1**	**+1.5**
	baz=12,SNR=135						
KBKI	**Kotabaru**	**13.50**	**284**	P	P	15 23 47.4	+1.6
	45nm,1.0s,466nm						
KHKI	**Kahang-Kahang**	**13.65**	**262**	P	**P**	**15 23 47.4**	**-0.1**
	34nm,0.9s						
WRAB	**Tennant Creek**	**14.03**	**160**	*e*Pn	**P**	**15 23 51.3**	**-0.3**
WRAB				*e*S	**S**	**15 26 21.9**	**-4.1**
WRA	**Warramunga Arr**	**14.03**	**160**	P	**P**	**15 23 51.0**	**-0.8**
WRA				S	**S**	**15 26 24.2**	**-2.0**
WRA	**Warramunga Arr**	**14.03**	**160**	P	**P**	**15 23 51.0**	**-0.8**
	2.3nm,0.3s,baz=343,slow=12,SNR=77						
WRA				S	**S**	**15 26 24.2**	**-2.0**
	12nm,0.3s,baz=332,slow=22,SNR=7.9						
CTBH	**Cotabato--PC H**	**14.73**	**340**	⇓*i*P	**P**	**15 23 59.3**	**-0.2**
BBKI	**Banjar Baru**	**14.74**	**282**	P	P	15 24 04.9	+5.3
	238nm,0.8s,2μm						
PALU	**Palau**	**14.90**	**20**	P	**P**	**15 24 00.9**	**-0.5**
	baz=15,SNR=11						
KMMI	**Kalianget**	**15.21**	**268**	P	P	15 24 13.9	+9.1
	45nm,1.0s						
COEN	**Coen**	**15.44**	**119**	*e*Pn	**P**	**15 24 06.3**	**-1.0**
	213nm,0.8s						
COEN	**Coen**	**15.44**	**119**	P	**P**	**15 24 09.8**	**+2.4**
	baz=15,SNR=23						
BLJI	**Banyuglugur**	**15.59**	**265**	P	Pn	15 24 13.3	+4.3
	156nm,0.6s,1μm						
MYLDM	**Lahad Datu**	**15.98**	**317**	P	Pn	15 24 23.3	+10
QIS	**Mount Isa**	**17.01**	**145**	P	**Pn**	**15 24 29.0**	**+3.1**
	baz=17,SNR=16						
QIS				S	**S**	**15 27 32.3**	**+0.5**
	baz=17,SNR=6.3						
MBWA	**Marble Bar**	**17.07**	**212**	*e*P	**Pn**	**15 24 27.5**	**+0.9**
	24nm,0.6s						
SJI	**Sawahan**	**17.40**	**266**	P	Pn	15 24 37.8	+7

CD2				PcP	**PcP**	**15 30 14.3**	**+2.6**
CD2				PP	**PP**	**15 30 24.3**	**+2.8**
CD2				S	**S**	**15 34 56.3**	**+2.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH	**Lanzhou**	**48.83**	**332**	*eP*	P	15 29 08.5	+3.6
LZH				pP	pP	15 29 54.3	+5.4
LZH				sP	sP	15 30 17.5	+6.4
LZH				PP	PP	15 31 04.6	+4.3
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,63nm,6.0s						
HHC	**Hu-ho-hao-te**	**50.06**	**342**	*eP*	P	15 29 17.1	+3.0
HHC				pP	pP	15 30 02.0	+3.7
HHC				sP	sP	15 30 25.3	+4.8
HHC				PP	PP	15 31 14.9	+3.6
HHC				S	**S**	**15 36 11.3**	**+1.5**
HHC				pmax	pmax		
	comp=Z,35nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,3.9s						
CN2	**Changchun**	**50.41**	**356**	*eP*	P	15 29 18.8	+2.4
USRK	**Ussuriysk Arra**	**50.74**	**3**	P	**P**	**15 29 18.7**	**-0.2**
	comp=Z,2.9nm,0.6s,baz=182,slow=6.9,SNR=9.7						
MDJ	**Mudanjiang**	**51.10**	**0**	P	P	15 29 26.3	+4.7
MDJ				pP	pP	15 30 10.5	+4.5
MDJ				sP	sP	15 30 33.0	+4.8
MDJ				S	S	15 36 30.6	+6.9
MDJ				sS	sS	15 37 48.9	+7.5
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,13nm,2.9s						
ODAN	**Odare**	**52.54**	**311**	*eP*	**P**	**15 29 33.3**	**+0.4**
	comp=Z,15nm,0.6s						
TAPN	**Taplejung**	**52.57**	**312**	*eP*	**P**	**15 29 33.6**	**+0.4**
	comp=Z,12nm,0.5s						
RAMN	**Ramite**	**53.18**	**311**	*eP*	**P**	**15 29 38.3**	**+0.7**
	comp=Z,31nm,0.6s						
GUN	**Gumba**	**54.23**	**311**	*eP*	**P**	**15 29 45.9**	**+0.6**
	comp=Z,23nm,0.6s						
PKI	**Pulchoki**	**54.40**	**311**	*eP*	**P**	**15 29 46.7**	**+0.2**
PKIN	**Phulchoki**	**54.41**	**311**	*eP*	**P**	**15 29 46.9**	**+0.3**
	comp=Z,4.6nm,0.5s						
KKN	**Kakani**	**54.62**	**311**	*eP*	**P**	**15 29 48.2**	**+0.3**
	comp=Z,9.1nm,0.6s						
DMN	**Daman**	**54.65**	**311**	*eP*	**P**	**15 29 48.3**	**+0.1**
	comp=Z,12nm,0.5s						
KOLN	**Koldanda**	**55.87**	**310**	*eP*	**P**	**15 29 57.5**	**+0.6**
	comp=Z,16nm,0.5s						
DANN	**Dangsing**	**56.05**	**311**	*eP*	**P**	**15 29 58.3**	**0.0**
	comp=Z,11nm,0.5s						
PYUN	**Piuthan**	**56.51**	**310**	*eP*	**P**	**15 30 02.0**	**+0.6**
	comp=Z,44nm,0.9s						
ULN	**Ulaanbaatar**	**57.78**	**342**	*eP*	**P**	**15 30 09.4**	**-0.5**
	comp=Z,2.1nm,0.5s						
SONM	**Songino Array**	**57.95**	**342**	P	**P**	**15 30 12.0**	**+1.0**
SONM	**Songino Array**	**57.95**	**342**	P	**P**	**15 30 12.0**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=152,slow=7.3,SNR=10						
WMQ	**Urumqi**	**62.77**	**327**	P	P	15 30 46.1	+2.4
WMQ				pmax	pmax		
	comp=Z,13nm,1.0s						
PETK	**Petropavlovsk-**	**64.29**	**19**	P	**P**	**15 30 54.0**	**+0.7**
PETK	**Petropavlovsk-**	**64.29**	**19**	P	**P**	**15 30 54.0**	**+0.7**
	comp=Z,4.4nm,0.6s,baz=165,slow=4.4,SNR=21						
KSH	**Kashi**	**67.33**	**318**	*eP*	P	15 31 15.3	+2.1
KSH				PcP	**PcP**	**15 31 41.1**	**+1.7**
KSH				pP	pP	15 32 05.1	+5.1
KSH				sP	sP	15 32 27.3	+5.7
KSH				PP	PP	15 33 49.0	+4.5
KSH				ScP		15 35 23.1	
KSH				PcS		15 35 44.8	
KSH				S	**S**	**15 39 54.3**	**+1.8**
KSH				ScS	**SKiKP**	**15 40 49.8**	**-1.7**
KSH				sS	sS	15 41 18.8	+4.6
KSH				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,90nm,6.2s						
KSH				LR	LR		
	comp=N,120nm,6.9s						
KSH				LR	LR		
	comp=E,86nm,4.4s						
KSH				LR	LR		
	comp=Z,280nm,7.5s						
MK31	**Makanchi Array**	**67.60**	**327**	*eP*	**P**	**15 31 14.1**	**-0.6**
MKAR	**Makanchi Array**	**67.60**	**327**	P	**P**	**15 31 15.3**	**+0.7**
MKAR	**Makanchi Array**	**67.60**	**327**	P	**P**	**15 31 15.3**	**+0.7**
	comp=Z,2.7nm,0.5s,baz=121,slow=9.0,SNR=6.3						
ZALV	**Zalesovo Beam**	**71.02**	**334**	P	**P**	**15 31 35.3**	**-0.1**
ZALV	**Zalesovo Beam**	**71.02**	**334**	P	**P**	**15 31 35.3**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=95,slow=3.6,SNR=5.3						
KURK	**Kurchatov**	**71.91**	**329**	*eP*	**P**	**15 31 40.3**	**-0.5**
	comp=Z,3.4nm,0.8s						
VNDA	**Vanda**	**72.81**	**173**	P	P	15 31 48.5	+2.8
VNDA	**Vanda**	**72.81**	**173**	P	P	15 31 48.5	+2.8
	comp=Z,0.7nm,0.8s,baz=350,slow=6.1,SNR=2.2						
ILAR	**Eielson Array**	**93.40**	**25**	P	**P**	**15 33 30.6**	**-1.1**
ILAR	**Eielson Array**	**93.40**	**25**	P	**P**	**15 33 30.6**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=239,slow=5.0,SNR=11						
YKA	**Yellowknife Ar**	**107.82**	**26**	PKKPbc	PKKPbc	15 49 58.0	-1.1
YKA	**Yellowknife Ar**	**107.82**	**26**	PKKPbc	PKKPbc	15 49 58.0	-1.1
	comp=Z,0.1nm,0.5s,baz=112,slow=3.8,SNR=3.9						
TORD	**Torodi Ar. Bea**	**128.05**	**281**	PKP	**PKPdf**	**15 39 24.1**	**+1.4**
TORD	**Torodi Ar. Bea**	**128.05**	**281**	PKP	**PKPdf**	**15 39 24.1**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=67,slow=1.9,SNR=3.1						

*CASC **24** 15:44:05.2±2.5, 13.06N×89.62W, h1km±7km, MD3.8, ML3.9*
*IDC **24** 15:44:32.2±7.1, 15.44N×90.65W, h0km, mb3.4/2, mb1 3.8/4, mb1mx3.6/22, mbtmp3.4/4, ML3.3/1, Error ellipse: s-maj=153.1km s-min=32.9km az=8.0*
ISC 24 15:44:05.3±1.7, 13.06N±0.08×89.54W±0.04, h12km±11km, n24, σ0=58/29, 2C-4D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SNET	**Serv Nac Est T**	**0.69**	**26**	⇓*eP*	**Pn**		**15 44 20.5**	**-0.6**
SNET				AML	AML		15 44 33.2	
	comp=Z,4μm,0.2s							
BOQS	**Boqueron**	**0.72**	**21**	⇑*eP*	**Pn**		**15 44 21.0**	**-0.6**
SBLS	**San Blas**	**0.78**	**354**	*eP*	**Pb**		**15 44 21.3**	**+0.2**
LFU	**La Fuente**	**0.80**	**31**	⇓*eP*	**Pn**		**15 44 22.6**	**0.0**
LFU				*eS*	**Sn**		**15 44 34.7**	**+0.2**
SNJE	**San Jose**	**0.80**	**356**	*eP*	**Pb**		**15 44 21.6**	**+0.2**
LBRS	**Las Brisas**	**0.83**	**36**	*eP*	**Pn**		**15 44 23.0**	**0.0**
RTR	**El Retiro**	**0.84**	**353**	*eP*	**Pb**		**15 44 22.1**	**+0.2**
SNVI	**San Vicente**	**0.88**	**51**	⇓*eP*	**Pn**		**15 44 24.0**	**+0.3**
RBDL	**Robledal**	**1.05**	**352**	⇑*eP*	**Pb**		**15 44 25.2**	**-0.5**
VSM	**San Miguel**	**1.29**	**73**	*eP*	**Pg**		**15 44 30.5**	**+0.4**
BLLM	**Bellamira**	**1.32**	**73**	*eP*	**Pg**		**15 44 31.0**	**+0.2**
MTO2	**Montecristo 2**	**1.34**	**7**	⇓*eP*	**Pn**		**15 44 29.6**	**-0.6**
MTO2				*eS*	**Sb**		**15 44 47.3**	**-0.6**
IXG	**Ixpaco**	**1.42**	**321**	*eP*	**Pn**		**15 44 29.9**	**-1.3**
IXG				*eS*	**Sg**		**15 44 50.9**	**-0.2**
CAHU	**Cacacuatique**	**1.47**	**61**	*eP*	**Pb**		**15 44 32.6**	**-0.3**
CNCH	**Conchagua**	**1.68**	**82**	*eP*	**Pb**		**15 44 35.9**	**-0.4**
PCG	**Pacaya**	**1.68**	**322**	*eP*	**Pn**		**15 44 34.4**	**-0.5**
PCG				*eS*	**Sg**		**15 45 00.1**	**+0.6**
NBG	**Las Nubes**	**1.71**	**333**	*eP*	**Pn**		**15 44 35.6**	**+0.3**
NBG				*eS*	**Sg**		**15 45 00.7**	**+0.3**
FUG	**Fuego 3**	**1.87**	**318**	*eP*	**Pn**		**15 44 36.5**	**-0.9**
MRL	**Marmol**	**2.00**	**356**	*eP*	**Pb**		**15 44 42.0**	**+0.2**
MRL				*eS*	**Sg**		**15 45 09.2**	**-0.5**
JAT	**Jato**	**2.39**	**302**	*eP*	**Pn**		**15 44 44.3**	**-0.1**
JAT				*eS*	**Sn**		**15 45 15.0**	**+1.3**
CMIG	**Matias Romero**	**6.53**	**308**	Pn	**Pn**		**15 45 40.5**	**-0.9**
	comp=Z,1.4nm,0.3s,baz=129,slow=12,SNR=9.2							
CMIG				Lg	Lg		15 46 51.3	
	comp=Z,1.1nm,0.3s,baz=267,slow=18,SNR=2.1							
TXAR	**Lajitas Array**	**20.84**	**323**	P	**P**		**15 48 47.5**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=144,slow=12,SNR=7.3							
NVAR	**Mina Array Bea**	**35.91**	**320**	P	P		15 51 13.0	+7.1
	comp=Z,0.5nm,0.6s,baz=113,slow=6.9,SNR=2.0							
YKA	**Yellowknife Ar**	**52.50**	**346**	P	P		15 53 27.5	+9.4
	comp=Z,0.1nm,0.7s,baz=145,slow=7.8,SNR=4.3							

*ISCJB **24** 16:03:56.9±0.3, 43.44N±0.02×19.71E±0.02, h1km±9km,*

Error ellipse: s-maj=3.4km s-min=2.2km az=38.1
*CSEM **24** 16:03:57.1±0.1, 43.43N×19.69E, h10km, ML2.0/8, Error ellipse: s-maj=3.2km s-min=2.1km az=130.0*
*PDG **24** 16:03:57.5±0.4, 43.44N×19.66E, h1km±1km, ML2.0/8, Error ellipse: s-maj=0.5km s-min=0.9km az=0.0*
*BEO **24** 16:03:58.4±0.4, 43.41N×19.68E, h7km±5km, ML2.5/8*
ISC 24 16:03:57.4±1.0, 43.44N±0.02×19.68E±0.02, h8km±8km, n45, σ0=73/85, 8C-10D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PLE	**Pljevlja**	**0.24**	**244**	⇓*iPg*	**Pg**		**16 04 01.7**	**-0.5**
PLE				*eSg*	**Sg**		**16 04 05.4**	**0.0**
PLE	**Pljevlja**	**0.24**	**244**	⇓*iPg*	**Pg**		**16 04 01.7**	**-0.5**
PLE				*eSg*	**Sg**		**16 04 05.4**	**0.0**
IVAS	**Ivanjica**	**0.37**	**68**	*ePg*	**Pg**		**16 04 04.5**	**-0.1**
IVAS				*eSg*	**Sb**		**16 04 11.9**	**-0.4**
IVAS	**Ivanjica**	**0.37**	**68**	*ePg*	**Pg**		**16 04 04.5**	**-0.1**
IVAS				*eSg*	**Sb**		**16 04 11.9**	**-0.4**
BBLS	**Lazići**	**0.47**	**335**	*ePg*	**Pg**		**16 04 06.3**	**-0.3**
BBLS	**Lazići**	**0.47**	**335**	*ePg*	**Pg**		**16 04 06.3**	**-0.3**
BEY	**Berane**	**0.58**	**165**	⇑*iPg*	**Pg**		**16 04 08.6**	**-0.1**
BEY				*eSg*	**Sb**		**16 04 17.9**	**-0.5**
IVA	**Berane**	**0.59**	**164**	⇑*iPg*	**Pg**		**16 04 08.6**	**-0.1**
IVA				*eSg*	**Sb**		**16 04 17.9**	**-0.6**
UPM	**Unac-Piva**	**0.61**	**248**	⇓*iPg*	**Pg**		**16 04 08.9**	**-0.3**
UPM				*eSg*	**Sg**		**16 04 17.7**	**+0.4**
UPM	**Unac-Piva**	**0.61**	**248**	⇓*iPg*	**Pg**		**16 04 08.9**	**-0.3**
UPM				*eSg*	**Sg**		**16 04 17.7**	**+0.4**
DIVS	**Divibare**	**0.70**	**19**	*ePg*	**Pg**		**16 04 10.7**	**-0.2**
DIVS				*eSg*	**Sb**		**16 04 22.0**	**+0.2**
DIVS	**Divibare**	**0.70**	**19**	*ePg*	**Pg**		**16 04 10.7**	**-0.2**
DIVS				*eSg*	**Sb**		**16 04 22.0**	**+0.2**
NKY	**Niksic**	**0.80**	**219**	⇑*iPg*	**Pg**		**16 04 11.8**	**-1.0**
NKY				*eSg*	**Sb**		**16 04 25.2**	**+0.5**
NKY	**Niksic**	**0.80**	**219**	⇑*iPg*	**Pg**		**16 04 11.8**	**-1.0**
NKY				*eSg*	**Sb**		**16 04 25.2**	**+0.5**
PVY	**Plav**	**0.86**	**166**	⇑*iPg*	**Pg**		**16 04 13.9**	**-0.1**
PVY				*eSg*	**Sb**		**16 04 26.8**	**+0.2**
PVY	**Plav**	**0.86**	**166**	⇑*iPg*	**Pg**		**16 04 13.9**	**-0.1**
PVY				*eSg*	**Sb**		**16 04 26.8**	**+0.2**
GRUS	**Gruza**	**0.88**	**59**	*ePg*	**Pg**		**16 04 14.2**	**0.0**
GRUS				*eSg*	**Sb**		**16 04 27.1**	**+0.4**
GRUS	**Gruza**	**0.88**	**59**	*ePg*	**Pg**		**16 04 14.2**	**0.0**
GRUS				*eSg*	**Sb**		**16 04 27.1**	**+0.4**
TRUS	**Trudelj**	**0.95**	**33**	*ePg*	**Pg**		**16 04 15.6**	**0.0**
TRUS				*eSg*	**Sn**		**16 04 29.8**	**-1.0**
TRUS	**Trudelj**	**0.95**	**33**	*ePg*	**Pg**		**16 04 15.6**	**0.0**
TRUS				*eSg*	**Sn**		**16 04 29.8**	**-1.0**
BRY	**Bratogost**	**0.99**	**238**	⇓*iPg*	**Pg**		**16 04 15.3**	**-1.1**
BRY				*eSg*	**Sn**		**16 04 31.6**	**-0.5**
BRY	**Bratogost**	**0.99**	**238**	⇓*iPg*	**Pg**		**16 04 15.3**	**-1.1**
BRY				*eSg*	**Sn**		**16 04 31.6**	**-0.5**
PDG	**Podgorica**	**1.05**	**197**	*ePg*	**Pg**		**16 04 17.3**	**-0.4**
PDG	**Podgorica**	**1.05**	**197**	⇓*iPg*	**Pg**		**16 04 17.2**	**-0.4**
PDG				*eSg*	**Sn**		**16 04 33.2**	**-0.1**
TTG	**Podgorica**	**1.05**	**197**	⇓*iPg*	**Pg**		**16 04 17.2**	**-0.3**
TTG				*eSg*	**Sn**		**16 04 33.2**	**-0.1**
SELS	**Selova**	**1.07**	**101**	*ePg*	**Pg**		**16 04 17.5**	**-0.4**
SELS				*eSg*	**Sg**		**16 04 31.9**	**+0.1**
SELS	**Selova**	**1.07**	**101**	*ePg*	**Pg**		**16 04 17.5**	**-0.4**
SELS				*eSg*	**Sg**		**16 04 31.9**	**+0.1**
TEKS	**Tekeris**	**1.12**	**354**	*ePg*	**Pb**		**16 04 18.9**	**-0.1**
TEKS				*eSg*	**Sn**		**16 04 35.0**	**-0.1**
TEKS	**Tekeris**	**1.12**	**354**	*ePg*	**Pb**		**16 04 18.9**	**-0.1**
TEKS				*eSg*	**Sn**		**16 04 35.0**	**-0.1**
BUM	**Brajici-Budva**	**1.27**	**207**	⇓*iPg*	**Pg**		**16 04 21.5**	**-0.3**
BUM				*eSg*	**Sn**		**16 04 40.9**	**+2.0**
BUM	**Brajici-Budva**	**1.27**	**207**	⇓*iPg*	**Pg**		**16 04 21.5**	**-0.3**
HCY	**Herceg Novi**	**1.32**	**222**	*ePg*	**Pn**		**16 04 21.4**	**-0.7**
HCY				*eSg*	**Sn**		**16 04 42.3**	**+2.4**
HCY	**Herceg Novi**	**1.32**	**222**	*ePg*	**Pn**		**16 04 21.4**	**-0.7**
SVIS	**Svilajnac**	**1.39**	**53**	*ePg*	**Pg**		**16 04 24.0**	**+0.1**
SVIS				*eSg*	**Sg**		**16 04 43.5**	**+1.6**
ULC	**Ulcinj**	**1.51**	**193**	⇑*iPg*	**Pg**		**16 04 25.8**	**-0.5**
ULC				*eSg*	**Sg**		**16 04 47.7**	**+1.9**
ULC	**Ulcinj**	**1.51**	**193**	⇑*iPg*	**Pg**		**16 04 25.8**	**-0.5**
ULC				*eSg*	**Sg**		**16 04 47.7**	**+1.9**
STON	**Ston**	**1.56**	**249**	*ePn*	**Pb**		**16 04 26.1**	**-0.3**
STON				Sn	**Sg**		**16 04 49.3**	**+1.9**
STON	**Ston**	**1.56**	**249**	*ePn*	**Pb**		**16 04 26.1**	**-0.3**
STON				Sn	**Sg**		**16 04 49.3**	**+1.9**
BARS	**Barje**	**1.68**	**111**	*ePg*	**Pg**		**16 04 29.3**	**-0.3**
BARS				*eSg*	**Sg**		**16 04 52.0**	**+0.6**
BARS	**Barje**	**1.68**	**111**	*ePg*	**Pg**		**16 04 29.3**	**-0.3**
BARS				*eSg*	**Sg**		**16 04 52.0**	**+0.6**
BOLS	**Boljevac**	**1.69**	**76**	*ePg*	**Pb**		**16 04 28.8**	**0.0**
BOLS				*eSg*	**Sg**		**16 04 51.5**	**-0.3**
BOLS	**Boljevac**	**1.69**	**76**	*ePg*	**Pb**		**16 04 28.8**	**0.0**
BOLS				*eSg*	**Sg**		**16 04 51.5**	**-0.3**
FGSL	**Fruska Gora**	**1.72**	**3**	*ePg*	**Pg**		**16 04 30.5**	**+0.1**
FGSL				*eSg*	**Sg**		**16 04 53.9**	**+1.1**
FRGS	**Fruska Gora**	**1.72**	**3**	*ePg*	**Pg**		**16 04 30.5**	**+0.1**
FRGS				*eSg*	**Sg**		**16 04 53.9**	**+1.1**
ZAPS	**Zavoj**	**2.16**	**93**	*ePg*	**Pb**		**16 04 37.1**	**+0.3**
ZAPS				*eSg*	**Sg**		**16 05 07.0**	**+0.3**

IDC 24 16:09:16.9±0.9, 47.27N×155.87E, h0km, mb3.5/7, mb1 3.7/8, mb1mx3.5/26, mbtmp3.5/8, ML3.0/1, Error ellipse: s-maj=31.0km s-min=18.8km az=111.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PETK	**Petropavlovsk-**	**5.96**	**11**	Pn	Pn		16 10 47.6	+1.3
	0.4nm,0.3s,baz=185,slow=14,SNR=16							
PETK				Sn	Sn		16 11 57.6	+2.4
	0.3nm,0.3s,baz=129,slow=17,SNR=3.3							
ILAR	**Eielson Array**	**34.96**	**39**	P	P		16 16 09.8	-0.4
	0.4nm,0.6s,baz=253,slow=7.6,SNR=10							
ZALV	**Zalesovo Beam**	**43.83**	**306**	P	P		16 17 24.9	+0.6
	0.6nm,0.4s,baz=60,slow=7.7,SNR=4.7							
MKAR	**Makanchi Array**	**48.37**	**298**	P	P		16 18 00.5	+0.3
	0.2nm,0.5s,baz=72,slow=7.1,SNR=3.6							
YKA	**Yellowknife Ar**	**49.37**	**38**	P	P		16 18 07.9	+0.4
	0.4nm,1.0s,baz=292,slow=6.5,SNR=3.4							
FINES	**FINESS Array B**	**64.35**	**336**	P	P		16 19 52.2	-1.7
	0.5nm,0.4s,baz=42,slow=8.8,SNR=5.8							
WRA	**Warramunga Arr**	**69.66**	**202**	P	P		16 20 27.7	-0.4
	0.4nm,0.9s,baz=29,slow=7.0,SNR=10							
ASAR	**Alice Springs**	**73.34**	**201**	P	P		16 20 50.9	+0.6
	0.3nm,0.6s,baz=12,slow=5.4,SNR=8.4							

IDC 24 16:23:23.1±1.7, 2.36N×95.71E, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.4/27, mbtmp3.5/7, ML3.1/1, Error ellipse: s-maj=45.6km s-min=20.1km az=52.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PSI	**Prapat**	**3.24**	**82**	Pn	Pn		16 24 15.9	+0.6
	1.9nm,0.3s,baz=291,slow=2.9,SNR=4.2							
PSI				Sn	Sn		16 24 53.6	-1.2
	2.4nm,0.3s,baz=145,slow=3.5,SNR=3.7							
CMAR	**Chiang Mai Arr**	**16.31**	**11**	Pn	P		16 27 15.3	-1.5
	baz=191,slow=10.0,SNR=4.7							
WRA	**Warramunga Arr**	**43.91**	**122**	P	P		16 31 31.6	-0.3
	0.2nm,0.6s,baz=300,slow=9.0,SNR=2.4							
ASAR	**Alice Springs**	**45.27**	**127**	P	P		16 31 43.0	+0.1
	0.3nm,0.8s,baz=299,slow=7.1,SNR=2.8							
MKAR	**Makanchi Array**	**45.78**	**347**	P	P		16 31 46.6	+0.1
	1.1nm,0.7s,baz=164,slow=8.2,SNR=18							
SONM	**Songino Array**	**46.23**	**10**	P	P		16 31 49.8	-0.4
	1.0nm,0.8s,baz=190,slow=8.0,SNR=6.2							
ZALV	**Zalesovo Beam**	**52.20**	**352**	P	P		16 32 35.0	-0.5
	0.7nm,0.5s,baz=177,slow=8.4,SNR=5.3							

*ISCJB **24** 16:46:16.5±0.7, 22.02N±0.04×121.47E±0.04, h83km±7km, Error ellipse: s-maj=6.3km s-min=5.5km az=161.3*
*TAP **24** 16:46:16.1, 21.97N×121.40E, h85km, ML3.4, C*
*JMA **24** 16:46:17.7±0.2, 22.08N×121.63E, h139km*
ISC 24 16:46:17.6±1.8, 22.03N±0.07×121.44E±0.04, h79km±13km, n41, σ0=72/73, 3C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
TSEB	**Hengchuen, Pin**	**0.52**	**255**	*i* P	**Pn**		**16 46 31.4**	**0.0**
	baz=264							
TSEB				S	**Sn**		**16 46 42.5**	**+0.9**
	baz=264							
TWK1	**Hengchun**	**0.59**	**261**	⇓*i*P	**Pn**		**16 46 31.7**	**-0.4**
	baz=266							
TWK1				*i* S	**Sn**		**16 46 42.8**	**0.0**
	baz=266							
TAW	**Tawu**	**0.60**	**303**	*e*P	**Pn**		**16 46 31.5**	**-0.6**
	baz=316							
TAW				*e*S	**Sn**		**16 46 42.7**	**-0.1**
	baz=316							
EAST	**Anshuo**	**0.65**	**303**	⇑*i*P	**Pn**		**16 46 32.3**	**-0.4**
	baz=313							
EAST				S	**Sn**		**16 46 43.6**	**-0.3**
	baz=313							
HEN	**Hengchun**	**0.65**	**268**	P	**Pn**		**16 46 32.5**	**-0.2**
	baz=283							
HEN				S	**Sn**		**16 46 44.1**	**+0.3**
	baz=283							
ECL	**Taimali**	**0.72**	**321**	*e*P	**Pn**		**16 46 33.0**	**-0.3**
	baz=323							
ECL				S	**Sn**		**16 46 44.5**	**-0.5**
	baz=323							
ECL	**Taimali**	**0.72**	**321**	*e*S	Sn		16 46 32.7	-12
	baz=89							
TTN	**Taitung**	**0.77**	**339**	*e*P	**Pn**		**16 46 33.8**	**-0.1**
	baz=338							
SCZT	**Fangliau**	**0.83**	**294**	*e*P	**Pn**		**16 46 33.7**	**-0.9**
	baz=299							
SCZT				*e*S	**Sn**		**16 46 46.7**	**-0.5**
	baz=299							
TWG	**Pinlang**	**0.85**	**337**	P	**Pn**		**16 46 34.3**	**-0.6**
	baz=341							
TWG				S	**Sn**		**16 46 47.3**	**-0.4**
	baz=341							
TWP	**Hsiaoliuchiu**	**1.04**	**287**	*e*P	**Pn**		**16 46 37.6**	**+0.5**
	baz=291							
TWP				*e*S	**Sn**		**16 46 53.5**	**+1.8**
	baz=291							
CHKT	**Chengkung**	**1.06**	**356**	P	**Pn**		**16 46 37.6**	**+0.3**
	baz=353							
CHKT				*e*S	**Sn**		**16 46 53.0**	**+0.9**
	baz=353							
ELDTW	**Lidau**	**1.21**	**341**	*e*P	**Pn**		**16 46 38.9**	**-0.4**
	baz=344							
ELDTW				*e*S	**Sn**		**16 46 57.7**	**+2.1**
	baz=344							
TWM1	**Shoushan**	**1.22**	**310**	*e*P	**Pn**		**16 46 40.0**	**+0.6**
	baz=313							
TWM1				*e*S	**Sn**		**16 46 57.5**	**+1.7**
	baz=313							
TWF1	**Yuli**	**1.32**	**354**	*e*P	**Pn**		**16 46 40.5**	**-0.1**
	baz=349							
TWF1				*e*S	**Sn**		**16 46 57.6**	**-0.2**
	baz=349							
CHN1	**Nanshi**	**1.42**	**324**	⇑*i*P	**Pn**		**16 46 41.9**	**0.0**
	baz=326							
CHN1				*i* S	**Sn**		**16 47 00.1**	**-0.1**
	baz=326							
WTP	**Ta-pu**	**1.43**	**328**	⇑*i*P	**Pn**		**16 46 42.1**	**+0.1**
	baz=320							
WTP				S	**Sn**		**16 47 00.7**	**+0.4**
	baz=320							
EHY	**Hungye**	**1.47**	**356**	*e*P	**Pn**		**16 46 42.0**	**-0.5**
	baz=351							
EHY				S	**Sn**		**16 47 00.6**	**-0.7**
	baz=351							
TWK	**Hsinying**	**1.51**	**325**	*e*P	**Pn**		**16 46 42.9**	**-0.1**
	baz=327							
TWK				*e*S	**Sn**		**16 47 02.2**	**-0.1**
	baz=327							
ALS	**Alishan**	**1.58**	**338**	*e*P	**Pn**		**16 46 44.6**	**+0.4**
	baz=330							
ALS				*e*S	**Sn**		**16 47 04.6**	**+0.3**
	baz=330							
SCLT	**Jiali**	**1.62**	**315**	*e*P	**Pn**		**16 46 44.2**	**-0.2**
	baz=325							
SCLT				*e*S	**Sn**		**16 47 05.0**	**+0.3**
	baz=325							
CHN5	**Tsauling**	**1.71**	**336**	*e*P	**Pn**		**16 46 45.6**	**0.0**
	baz=329							
CHN5				S	**Sn**		**16 47 07.1**	**+0.2**
	baz=329							
CHN8	**Yiju**	**1.73**	**319**	*e*P	**Pn**		**16 46 44.7**	**-1.2**
	baz=321							
CHN8				*e*S	**Sn**		**16 47 06.3**	**-1.0**
	baz=321							
CHY	**Chiayi**	**1.73**	**327**	*e*P	**Pn**		**16 46 45.3**	**-0.6**
	baz=329

CNP	**Catarman**	**4.14**	**336**	*e*P	Pn	16 52 25.4 +1.4

*ISCJB **24** 16:54:10.8±0.5, 36°.93N±0°.03×29°.09E±0°.04, h5km±5km, Error ellipse: s-maj=5.4km s-min=4.0km az=136.4*
*CSEM **24** 16:54:10.8±0.2, 36°.93N×29°.08E, h8km, MD2.9, Error ellipse: s-maj=3.5km s-min=3.1km az=149.0*
*DDA **24** 16:54:10.6, 36°.93N×29°.08E, h7km, MD3.2*
*ISK **24** 16:54:10.3, 36°.94N×29°.08E, h6km, MD2.9*

ISC 24 16:54:10.7±1.1, 36°.93N±0°.02×29°.07E±0°.02, h6km±10km, n39, σ963/54, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.29**	**179**	*e*P		**Pg**		**16 54 16.3**	**-0.2**
FETY				*e*Sg		**Sb**		**16 54 22.0**	**-1.6**
FETY	**Fethiye**	**0.29**	**179**	*e*Pg		**Pg**		**16 54 16.3**	**-0.2**
FETY				*e*Sg		**Sb**		**16 54 22.0**	**-1.6**
DALY	**Dalyan (Mu¨la**	**0.36**	**252**	*e*PG		**Pg**		**16 54 17.5**	**-0.2**
DALY				*e*SG		**Sb**		**16 54 24.1**	**-1.2**
DALY	**Dalyan (Mu¨la**	**0.36**	**252**	*e*Pg		**Pg**		**16 54 17.5**	**-0.2**
DALY				*e*Sg		**Sb**		**16 54 24.1**	**-1.2**
TURN	**Turunc**	**0.38**	**262**	*i* P		**Pn**		**16 54 23.6**	**+0.8**
TURN				*i* S		Sb		16 54 33.4	+7.3
GLHS	**Glhisar (BURDU**	**0.41**	**56**	*e*PG		**Pg**		**16 54 17.9**	**-0.8**
GLHS				*e*SG		**Sg**		**16 54 25.1**	**+1.0**
GLHS	**Glhisar (BURDU**	**0.41**	**56**	*e*Pg		**Pg**		**16 54 17.9**	**-0.8**
GLHS				*e*Sg		**Sg**		**16 54 25.1**	**+1.0**
GOLH	**Golhisar**	**0.49**	**52**	*i* P		**Pg**		**16 54 19.9**	**-0.4**
GOLH				*i* S		**Sg**		**16 54 27.5**	**+0.7**
GOLH	**Golhisar**	**0.49**	**52**	*i* P		**Pg**		**16 54 19.9**	**-0.4**
GOLH				*i* S		**Sg**		**16 54 27.5**	**+0.7**
YER	**Yerkesik**	**0.67**	**288**	*e*PG		**Pg**		**16 54 23.6**	**0.0**
YER	**Yerkesik**	**0.67**	**288**	*e*Pg		**Pg**		**16 54 23.6**	**0.0**
ELL	**Elmali**	**0.69**	**105**	*e*PG		**Pg**		**16 54 24.0**	**-0.1**
ELL	**Elmali**	**0.69**	**105**	*e*Pg		**Pg**		**16 54 24.0**	**-0.1**
DNZL	**Cakiroluk**	**0.76**	**358**	*i* P		**Pg**		**16 54 25.0**	**-0.3**
DNZL				*i* S		**Sb**		**16 54 37.1**	**-0.1**
DNZL	**Cakiroluk**	**0.76**	**358**	*i* P		**Pg**		**16 54 25.0**	**-0.3**
DNZL				*i* S		**Sb**		**16 54 37.1**	**-0.1**
AKAS	**Kas**	**0.82**	**148**	*i* P		**Pb**		**16 54 27.3**	**-0.1**
AKAS				*i* S		**Sn**		**16 54 43.5**	**+2.1**
AKAS	**Kas**	**0.82**	**148**	*i* P		**Pb**		**16 54 27.3**	**-0.1**
DENT	**Denizli**	**0.82**	**358**	*e*PG		**Pb**		**16 54 27.2**	**-0.3**
DENT	**Denizli**	**0.82**	**358**	*e*Pg		**Pb**		**16 54 27.2**	**-0.3**
MLSB	**Milas**	**1.10**	**290**	*e*PN		**Pg**		**16 54 31.5**	**-0.4**
MLSB	**Milas**	**1.10**	**290**	*e*Pn		**Pg**		**16 54 31.5**	**-0.4**
AYDN	**Tasoluk**	**1.20**	**308**	*i* P		**Pb**		**16 54 33.9**	**0.0**
AYDN				*i* S		**Sn**		**16 54 50.8**	**0.0**
AYDN	**Tasoluk**	**1.20**	**308**	*i* P		**Pb**		**16 54 33.9**	**0.0**
AYDN				*i* S		**Sn**		**16 54 50.8**	**0.0**
DAT	**Datca**	**1.22**	**261**	*e*PN		**Pg**		**16 54 33.7**	**-0.4**
DAT	**Datca**	**1.22**	**261**	*e*Pn		**Pg**		**16 54 33.7**	**-0.4**
BCK	**Bucak**	**1.32**	**66**	*e*PN		**Pn**		**16 54 35.8**	**0.0**
BCK	**Bucak**	**1.32**	**66**	*e*Pn		**Pn**		**16 54 35.8**	**0.0**
BODT	**Bodrum**	**1.42**	**276**	*e*PN		**Pg**		**16 54 37.8**	**-0.2**
BODT	**Bodrum**	**1.42**	**276**	*e*Pn		**Pg**		**16 54 37.8**	**-0.2**
KHL	**Karahalli**	**1.44**	**14**	*e*PN		**Pn**		**16 54 37.1**	**-0.3**
KHL	**Karahalli**	**1.44**	**14**	*e*Pn		**Pn**		**16 54 37.1**	**-0.3**
ISP	**Isparta**	**1.46**	**52**	*e*PN		**Pn**		**16 54 37.7**	**0.0**
ISP	**Isparta**	**1.46**	**52**	*e*Pn		**Pn**		**16 54 37.7**	**0.0**
KHAL	**Karahalli**	**1.48**	**13**	*i* P		**Pb**		**16 54 38.7**	**0.0**
KHAL				*i* S		**Sg**		**16 54 58.2**	**0.0**
KHAL	**Karahalli**	**1.48**	**13**	*i* P		**Pb**		**16 54 38.7**	**0.0**
KHAL				*i* S		**Sg**		**16 54 58.2**	**0.0**
KULA	**Kula-Manisa**	**1.61**	**348**	*e*PN		**Pn**		**16 54 40.3**	**+0.4**
KULA	**Kula-Manisa**	**1.61**	**348**	*e*Pn		**Pn**		**16 54 40.3**	**+0.4**
TVSB	**Tavsanli**	**2.53**	**7**	*e*PN		**Pn**		**16 54 52.9**	**+0.4**
TVSB	**Tavsanli**	**2.53**	**7**	*e*Pn		**Pn**		**16 54 52.9**	**+0.4**

GUC 24 17:01:17.8±1.0, 32°.62S×71°.05W, h3km±6km, MD3.5, ML2.4, 2C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.35**	**174**	⇑*i*P			Pg	17 01 25.3	+0.3
ROCH				*i* S			Sg	17 01 31.3	+1.6
ROCH					AML		AML	17 01 33.4	
	comp=E,380nm,0.4s								
PEL	**Peldehue**	**0.61**	**149**	⇓*i*P			Pg	17 01 30.2	+0.7
PEL				*i* S			Sb	17 01 39.2	-0.9
PEL					AML		AML	17 01 44.7	
	comp=E,485nm,0.4s								
CHNG	**Los Chungos**	**0.83**	**333**	⇓*i*P			Pb	17 01 34.4	-0.4
CHNG				*i* S			Sb	17 01 45.9	-0.5
CHNG					AML		AML	17 01 48.3	
	comp=E,227nm,0.5s								
CLCH	**Cerro Calan**	**0.89**	**151**	⇑*i*P			Pb	17 01 35.7	-0.3
CLCH				*i* S			Sb	17 01 48.3	0.0
CLCH					AML		AML	17 01 51.3	
	comp=E,137nm,0.7s								
FCH	**Farellones**	**0.95**	**138**		AML		AML	17 02 02.7	
	comp=N,79nm,0.2s								
TLL	**Tololo Astrono**	**2.46**	**5**		AML		AML	17 02 41.9	
	comp=N,120nm,0.5s								
LCO	**Las Campanas**	**3.61**	**5**		AML		AML	17 03 14.7	
	comp=E,25nm,0.3s								

PRE 24 17:10:32.5±3.8, 21°.26S×33°.37E, h10km, ML4.5, Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.29**	**250**	*e*P			Pn	17 11 27.4	+3.1
MSNA				*e*S			Sn	17 12 05.9	+2.3
MSNA					AML		AML	17 12 15.7	
	comp=Z,192nm,0.4s								
BLWY	**Bulawayo**	**4.60**	**283**	*i* P			Pn	17 11 44.1	+1.8
BLWY				*i*				17 11 44.5	
	baz=318,slow=16								
BLWY				*i* S			Sb	17 12 49.0	-0.1
CNG	**Changalane**	**5.12**	**192**	*e*P			Pn	17 11 51.3	+1.9
CNG				*e*S			Sn	17 12 47.4	-1.1
POGA	**Pongola**	**6.29**	**194**	*e*P			Pn	17 12 06.9	+1.5
POGA				*e*S			Sn	17 13 13.2	-4.1
POGA					AML		AML	17 14 05.3	
	comp=Z,42nm,0.6s								
SLR	**Silverton**	**6.45**	**225**	*e*P			Pn	17 12 10.7	+2.9
SLR				*e*S			Sn	17 13 21.3	-0.4
SLR					AML		AML	17 14 05.2	
	comp=Z,70nm,0.6s								
ERPM	**east rand prop**	**6.90**	**222**	*e*P			Pn	17 12 15.2	+1.2
ERPM				*e*S			Sn	17 13 27.9	-5.0
ERPM					AML		AML	17 14 18.2	
	comp=Z,30nm,0.5s								
KLOF	**Kloof**	**7.31**	**225**	*e*P			Pn	17 12 20.7	+1.0
KLOF				*e*S			Sn	17 13 39.6	-3.4
KLOF					AML		AML	17 14 31.3	
	comp=Z,38nm,0.6s								
KSR	**Koster**	**7.49**	**231**	*e*P			Pn	17 12 24.9	+2.8
KSR				*e*S			Sn	17 13 44.9	-2.5
KSR					AML		AML	17 14 41.4	
	comp=Z,40nm,0.5s								
LSZ	**Lusaka**	**7.73**	**320**	*e*P			Pn	17 12 25.6	+0.3
LSZ				*e*S			Sn	17 13 47.5	-5.6
PRYS	**Parys**	**7.87**	**223**	*e*P			Pn	17 12 28.0	+0.7
PRYS				*e*S			Sn	17 13 52.1	-4.5
PRYS					AML		AML	17 14 48.0	
	comp=Z,29nm,0.6s								
LBTB	**Lobatse**	**8.07**	**241**	*e*P			Pn	17 12 30.8	+0.8
LBTB				*e*S			Sn	17 13 58.2	-3.3
LBTB					AML		AML	17 14 51.9	
	comp=Z,40nm,0.6s								
SEK	**Senekal**	**8.76**	**215**	*e*P			Pn	17 12 40.0	+0.5
SEK				*e*S			Sn	17 14 12.4	-6.0
SEK					AML		AML	17 15 18.6	
	comp=Z,22nm,0.9s								
SWZ	**Schweizer**	**9.41**	**230**	*e*P			Pn	17 12 49.4	+1.0
SWZ				*e*S			Sn	17 14 28.1	-6.3
SWZ					AML		AML	17 15 33.3	
	comp=Z,27nm,0.7s								
KSD	**Kokstad**	**9.90**	**200**	*e*S			Sn	17 14 41.8	-4.7
KSD					AML		AML	17 15 48.6	
	comp=Z,16nm,0.6s								
BOSA	**Boshof**	**10.38**	**224**	*e*P			Pn	17 13 00.5	-1.2
BOSA				*e*S			Sn	17 14 49.0	-9.2
BOSA					AML		AML	17 16 10.4	
	comp=Z,15nm,0.7s								
UPI	**Upington**	**13.07**	**235**	*e*P			Pn	17 13 38.4	-0.1
UPI				*e*S			Sn	17 15 55.5	-8.6
UPI					AML		AML	17 17 18.3	
	comp=Z,8.7nm,0.6s								
TSUM	**Tsumeb**	**14.96**	**275**	*e*P			Pn	17 14 05.0	+0.6
TSUM				*e*S			Sn	17 16 44.4	-6.0
SUR	**Sutherland**	**15.74**	**223**	*e*P			Pn	17 14 16.2	+1.6
SUR				*e*S			Sn	17 16 58.2	-11
SUR					AML		AML	17 19 06.7	
	comp=Z,4.3nm,0.7s								

IDC 24 17:33:06.8±1.6, 5°.36S×127°.26E, h0km, mb3.5/2, mb1 3.5/4, mb1mx3.3/22, mbtmp3.3/4, ML3.2/1, Error ellipse: s-maj=148.3km s-min=26.5km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.05**	**155**	Pn		P		17 36 56.2	-1.5
	0.1nm,0.3s,baz=334,slow=12,SNR=11								
ASAR	**Alice Springs**	**19.30**	**161**	P		P		17 37 32.7	-0.8
	0.1nm,0.3s,baz=342,slow=11,SNR=17								
MKAR	**Makanchi Array**	**65.38**	**328**	P		P		17 43 51.7	+0.4
	0.2nm,0.4s,baz=126,slow=8.2,SNR=6.8								
KURBB	**Kurchatov Arra**	**69.71**	**329**	P		P		17 44 18.1	-0.4
	0.3nm,0.5s,baz=134,slow=4.6,SNR=6.0								

IDC 24 17:34:37.3±0.9, 55°.31S×26°.97W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/15, mbtmp3.8/3, Error ellipse: s-maj=42.7km s-min=32.6km az=83.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**47.32**	**183**	P		P		17 43 11.9	0.0
	0.7nm,0.6s,baz=166,slow=6.9,SNR=8.1								
LPAZ	**La Paz**	**50.06**	**304**	P		P		17 43 34.3	-0.2
	0.5nm,0.5s,baz=205,slow=5.7,SNR=3.7								
TORD	**Torodi Ar. Bea**	**72.35**	**29**	P		P		17 46 05.0	+0.3
	0.8nm,0.8s,baz=199,slow=5.9,SNR=4.7								
YKA	**Yellowknife Ar**	**135.71**	**318**	PKP		PKPdf		17 53 57.1	-1.0
	0.1nm,0.6s,baz=131,slow=2.0,SNR=4.5								
ILAR	**Eielson Array**	**149.71**	**313**	PKPbc		PKPbc		17 54 26.9	-0.5
	1.1nm,0.8s,baz=132,slow=2.6,SNR=12								
SONM	**Songino Array**	**150.55**	**85**	PKPbc		PKPbc		17 54 30.0	-0.1
	0.7nm,0.7s,baz=221,slow=2.9,SNR=6.9								
SONM				PKPab		PKPab		17 54 36.0	-1.0
	0.6nm,0.8s,baz=214,slow=3.4,SNR=3.9								

*IDC **24** 17:49:45.1±1.9, 0°.96N×126°.43E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/21, mbtmp3.8/3, Error ellipse: s-maj=167.1km s-min=23.7km az=65.0*
*DJA **24** 17:49:48.9±2.5, 1°.2×23°.2E±1°.2, h64km±38km, M4.1/7, mb4.3/2, MLv4.0/7*
*ISCJB **24** 17:49:49.4±0.8, 0°.9N±0°.1×126°.22E±0°.05, h39km, mb3.8/3, Error ellipse: s-maj=16.1km s-min=6.6km az=5.2*

ISC 24 17:49:50.5±1.1, 1°.0N±0°.1×126°.27E±0°.05, h39km, n12, σ1911/12, mb3.7/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.12**	**102**	P			**Pn**	**17 50 09.0**	**-0.7**
TNTI				S			**Sn**	**17 50 24.9**	**+1.0**
MNI	**Manado**	**1.49**	**287**	P			**Pn**	**17 50 14.3**	**-0.5**
LBMI	**Labuha**	**2.05**	**143**	P			**Pn**	**17 50 22.5**	**0.0**
KMSI	**Cibinong**	**2.33**	**259**	P			**Pn**	**17 50 25.1**	**-1.2**
LUWI	**Luwuk**	**4.05**	**240**	P			**Pn**	**17 50 51.1**	**+1.1**
MRSI	**Marisa**	**4.36**	**263**	P			**Pn**	**17 50 53.8**	**-0.4**
TTSI	**Tana Toraja**	**7.61**	**238**	P			**Pn**	**17 51 39.0**	**+0.2**
	14nm,0.7s,0.1nm								
SPSI	**Sidrap Palu**	**8.16**	**233**	P			**Pn**	**17 51 46.2**	**-0.3**
WRA	**Warramunga Arr**	**22.28**	**160**	P			**P**	**17 54 42.4**	**-2.1**
	1.6nm,0.5s,baz=338,slow=11,SNR=21								
ASAR	**Alice Springs**	**25.63**	**164**	P			**P**	**17 55 16.1**	**-0.5**
	1.2nm,0.5s,baz=346,slow=11,SNR=34								
MKAR	**Makanchi Array**	**59.53**	**326**	P			**P**	**17 59 51.2**	**+1.3**
	0.9nm,0.6s,baz=123,slow=8.5,SNR=13								
PPT2	**Papeete2**	**84.73**	**108**	*e*LR		LR		18 02 51.6	
	158nm,30.8s								

*IDC **24** 18:17:53.5±1.7, 38°.46N×72°.21E, h0km, mb3.7/4, mb1 3.6/10, mb1mx3.4/32, mbtmp3.5/10, ML3.2/6, MS3.0/1, Ms1 2.9/1, ms1mx2.2/48, Error ellipse: s-maj=31.2km s-min=15.4km az=133.0*
*NNC **24** 18:17:55.9±5.4, 38°.48N×72°.16E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=48.8km s-min=35.1km az=19.0*

ISC 24 18:18:01.7±1.6, 38°.8N±0°.1×71°.8E±0°.1, h42km, n26, σ1979/23, mb3.7/4, 7C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.67**	**23**	P			**Pn**	**18 18 58.1**	**+1.8**
	SNR=68								
EKS2	**Erkin-Say**	**4.18**	**21**	P			**Pn**	**18 19 06.1**	**+3.0**
	SNR=13								
KZA	**Kyzart**	**4.24**	**38**	P			Pn	18 19 11.6	+7.5
	SNR=8.5								
AAK	**Ala-Archa**	**4.38**	**27**	P			**Pn**	**18 19 08.2**	**+2.3**
	SNR=12								
AAK	**Ala-Archa**	**4.38**	**27**	Pn			**Pn**	**18 19 06.2**	**+0.3**
	1.7nm,0.3s,baz=174,slow=6.2,SNR=28								
AAK				Sn			Sn	18 20 02.8	+7.1
	2.1nm,0.3s,baz=333,slow=22,SNR=8.2								
KK31	**Karatay Array**	**4.44**	**348**	⇓Pn			**Pn**	**18 19 08.5**	**+2.0**
	3.5nm,0.3s,baz=157,slow=12,SNR=121								
KK31				⇓Sn			Sn	18 20 07.4	+11
	3.8nm,0.3s,baz=162,slow=23,SNR=3.1								
KBK	**Karagaybulak**	**4.57**	**31**	P			**Pn**	**18 19 11.1**	**+2.5**
	SNR=9.5								
CHMS	**Chumysh**	**4.79**	**27**	P			**Pn**	**18 19 13.8**	**+2.4**
	SNR=11								
TKM2	**Tokmak 2**	**5.06**	**34**	⇑Pn			**Pn**	**18 19 16.8**	**+1.5**
	10nm,0.7s								
TKM2				⇑Lg			Lg	18 20 34.9	
	18nm,1.0s								
TKM2	**Tokmak 2**	**5.06**	**34**	P			Sn	18 20 03.7	-8.8
	SNR=5.3								
MK31	**Makanchi Array**	**11.13**	**40**	⇓P			Pn	18 20 36.0	-2.2
	3.3nm,1.1s,baz=225,slow=14,SNR=9.6								
MKAR	**Makanchi Array**	**11.13**	**40**	Pn			**Pn**	**18 20 36.6**	**-1.6**
	0.1nm,0.3s,baz=227,slow=12,SNR=8.1								
MKAR				Lg			Lg	18 23 48.2	
	0.0nm,0.3s,baz=234,slow=28,SNR=3.7								
KURBB	**Kurchatov Arra**	**12.78**	**20**	Pn			**Pn**	**18 20 59.0**	**-1.7**
	0.0nm,0.3s,baz=214,slow=13,SNR=5.9								
KURBB				Lg			Lg	18 24 44.8	
	0.0nm,0.3s,baz=190,slow=29,SNR=6.4								
AB31	**Akbulak array**	**13.49**	**325**	⇑P			**Pn**	**18 21 08.1**	**-2.3**
	3.0nm,0.7s,baz=137,slow=12,SNR=33								
VOSK	**Vostochnaya**	**13.97**	**358**	⇑P			**Pn**	**18 21 16.5**	**-0.4**
	1.3nm,0.6s								
BVA1	**Borovoye Array**	**14.29**	**357**	⇑P			**P**	**18 21 28.7**	**+1.1**
	0.3nm,0.5s								
BVAR	**Borovoye Array**	**14.29**	**357**	Pn			**Pn**	**18 21 19.8**	**-1.6**
	0.2nm,0.3s,baz=170,slow=9.5,SNR=3.1								
BVAR				Sn			**Sn**	**18 23 57.7**	**-0.7**
	0.1nm,0.3s,baz=165,slow=24,SNR=5.0								
ZRNK	**Zerenda**	**14.32**	**353**	⇑P			**Pn**	**18 21 21.6**	**0.0**
	0.7nm,0.5s								
AKTO	**Aktyubinsk**	**15.21**	**325**	⇑P			**P**	**18 21 38.0**	**+0.2**
	0.9nm,0.7s								
AKTO	**Aktyubinsk**	**15.21**	**325**	Pn			**Pn**	**18 21 31.4**	**-2.0**
	0.1nm,0.3s,baz=126,slow=18,SNR=3.7								
ZALV	**Zalesovo Beam**	**17.61**	**26**	P			**Pn**	**18 22 01.9**	**-1.8**
	0.2nm,0.3s,baz=216,slow=11,SNR=9.3								
KBZ	**Khabaz**	**22.22**	**292**	LR			LR	18 33 54.6	
	comp=Z,40nm,20.4s,baz=256,slow=42								
FINES	**FINESS Array B**	**35.98**	**324**	P			**P**	**18 24 58.5**	**+0.3**
	0.7nm,0.5s,baz=101,slow=9.5,SNR=8.6								
ARCES	**ARCESS Array B**	**39.30**	**336**	P			**P**	**18 25 26.0**	**-0.2**
	2.4nm,0.8s,baz=104,slow=9.1,SNR=5.0								
TORD	**Torodi Ar. Bea**	**66.40**	**268**	P			**P**	**18 28 48.3**	**+1.6**
	0.2nm,0.4s,baz=45,slow=4.9,SNR=3.0								
YKA	**Yellowknife Ar**	**78.95**	**3**	P			**P**	**18 29 58.8**	**-1.7**
	0.1nm,0.5s,baz=346,slow=5.1,SNR=4.6								

IDC 24 18:20:44.9±4.1, 17°.37S×69°.27W, h161km±24km, mb3.4/2, mb1 3.6/4, mb1mx3.2/19, mbtmp3.6/4, Error ellipse: s-maj=71.8km s-min=23.7km az=11.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.53**	**46**	P			Pn	18 21 17.0	+0.5
	43nm,0.3s,baz=222,slow=5.4,SNR=1747								
LPAZ				S			Sn	18 21 40.3	-0.3
	1.5nm,0.3s,baz=114,slow=22,SNR=2.8								
SIV	**San Ignacio**	**7.97**	**81**	P			Pn	18 22 38.3	+0.2
	2.0nm,0.3s,baz=280,slow=14,SNR=21								
SIV				S			Sn	18 24 02.7	-4.5
	0.3nm,0.3s,baz=334,slow=22,SNR=7.8								
NNA	**Nana**	**9.07**	**305**	P			Pn	18 22 50.9	-1.6
	2.7nm,0.3s,baz=142,slow=12,SNR=5.2								
TORD	**Torodi Ar. Bea**	**76.33**	**71**	P			P	18 32 16.1	-0.6
	0.9nm,0.6s,baz=254,slow=4.8,SNR=9.5								
YKA	**Yellowknife Ar**	**87.19**	**341**	P			P	18 33 13.3	+0.9
	0.3nm,0.5s,baz=133,slow=4.8,SNR=9.7								

*NSSP **24** 18:28:32.1, 38°.47N×45°.20E, h25km, Ms3.7*
*AZER **24** 18:28:46.4, 38°.42N×45°.18E, h0km*
*THR **24** 18:28:48.5±0.6, 38°.51N×45°.22E, h14km±13km, ML3.6*
*CSEM **24** 18:28:49.3±0.2, 38°.54N×45°.31E, h2km, ML3.6, Error ellipse: s-maj=6.4km s-min=4.9km az=31.0*
*ISK **24** 18:28:49.1, 38°.48N×45°.10E, h5km, MD3.7*
*IDC **24** 18:28:50.3±2.3, 38°.71N×45°.35E, h0km, mb3.3/3, mb1 3.4/4, mb1mx3.1/24, mbtmp3.3/4, ML2.5/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/24, Error ellipse: s-maj=37.2km s-min=18.4km az=44.0*
*TEH **24** 18:28:51.8, 38°.47N×45°.41E, h4km, ML3.6*

ISC 24 18:28:49.5±1.1, 38°.57N±0°.02×45°.28E±0°.02, h9km±9km, n84, σ1963/106, mb3.1/3, 17C-20D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IMRD	**Marand**	**0.36**	**66**	⇑*e*Pg			**Pb**	**18 28 57.9**	**-0.4**
IMRD				*e*				18 28 58.2	
	comp=Z,62μm,0.1s								
IMRD	**Marand**	**0.36**	**66**	⇑*e*Pg			**Pb**	**18 28 57.9**	**-0.4**
ITBZ	**Tabriz**	**0.76**	**116**	*e*				18 29 15.1	
	comp=Z,59μm,0.1s								
ITBZ				⇑*e*Pg			**Pg**	**18 29 02.9**	**-1.2**
MGRZ	**Megri**	**0.82**	**66**	⇓*i*P			Pg	18 28 49.2	-16
MGRZ				⇓*i*S			Sg	18 29 02.1	-14
KDR	**Kadzharan**	**0.86**	**47**	⇓*i*P			Pg	18 28 50.5	-16
KDR				⇓*i*S			Sg	18 29 04.4	-14
MAKU	**Maku**	**0.92**	**330**	*e*Pg			**Pg**	**18 29 06.2**	**-1.0**
MAKU				*e*Sg			**Sg**	**18 29 19.4**	**+0.3**
MAKU					AML		AML	18 29 22.3	
	comp=N,2μm,0.2s								
MAKU	**Maku**	**0.92**	**330**	*e*Pg			**Pg**	**18 29 06.2**	**-1.0**
MAKU				*e*Sg			**Sg**	**18 29 19.4**	**+0.3**
IFTB	**Fath-abad**	**1.03**	**122**	*e*Pg			**Pg**	**18 29 07.9**	**-1.5**
IFTB	**Fath-abad**	**1.03**	**122**	*e*Pg			**Pg**	**18 29 07.9**	**-1.5**
XTNZ	**Xhotanan**	**1.11**	**50**	⇓*i*P			Pb	18 28 54.1	-17
XTNZ				⇓*i*S			Sb	18 29 10.8	-15
CLDR	**Caldiran**	**1.21**	**299**	*e*PN			**Pn**	**18 29 10.9**	**-2.0**
CLDR				*e*SN			**Sb**	**18 29 27.7**	**-1.0**
CLDR	**Caldiran**	**1.21**	**299**	*e*Pn			**Pn**	**18 29 10.9**	**-2.0**
CLDR				*e*Sn			**Sb**	**18 29 27.7**	**-1.0**
GRS	**Goris**	**1.24**	**41**	⇓*i*P			**Pn**	**18 29 12.0**	**-1.3**
GRS				⇓*i*S			**Sn**	**18 29 31.0**	**+0.8**
GRS	**Goris**	**1.24**	**41**	⇓P			**Pn**	**18 29 12.0**	**-1.3**
GRS				S			**Sn**	**18 29 31.0**	**+0.8**
IHRS	**Heris**	**1.40**	**100**	*e*Pg			**Pb**	**18 29 15.1**	**-1.0**
IHRS				*e*				18 29 38.5	
	comp=Z,17μm,0.1s								
IHRS	**Heris**	**1.40**	**100**	*e*Pg			**Pb**	**18 29 15.1**	**-1.0**
VANB	**Van**	**1.48**	**272**	*e*PN			**Pn**	**18 29 15.1**	**-1.5**
VANB				*e*SN			**Sn**	**18 29 33.9**	**-2.3**
VANB	**Van**	**1.48**	**272**	*e*Pn			**Pn**	**18 29 15.1**	**-1.5**
VANB				*e*Sn			**Sn**	**18 29 33.9**	**-2.3**
GNI	**Garni**	**1.64**	**345**	*e*PN			**Pb**	**18 29 20.1**	**+0.1**
GNI	**Garni**	**1.64**	**345**	⇓*i*P			**Pb**	**18 29 19.6**	**-0.4**
GNI				⇑*i*S			**Sg**	**18 29 44.1**	**+2.0**
GNI	**Garni**	**1.64**	**345**	Pn			**Pb**	**18 29 19.7**	**-0.3**
	comp=Z,35nm,0.3s,baz=217,slow=1.0,SNR=75								
GNI				Sn			**Sg**	**18 29

BINT	**Bingol**	**3.76**	**276**	*e*Pn	**Pn**	**18 29 45.7**	**-2.2**
IDHR	**Dehrash**	**3.96**	**167**	*e*Pn	**Pn**	**18 29 51.5**	**+0.8**
IDHR				*e*		18 30 04.1	
	comp=Z,1μm,0.4s						
IDHR	**Dehrash**	**3.96**	**167**	*e*Pn	**Pn**	**18 29 51.5**	**+0.8**
BCA	**Borcka**	**4.02**	**317**	*e*PN	**Pn**	**18 29 52.1**	**+0.7**
BCA	**Borcka**	**4.02**	**317**	*e*Pn	**Pn**	**18 29 52.1**	**+0.7**
ONI	**Oni**	**4.25**	**341**	P	Sn	18 30 31.5	-13
PTK	**Pertek**	**4.62**	**276**	*e*PN	**Pn**	**18 30 00.8**	**+1.1**
PTK	**Pertek**	**4.62**	**276**	*e*Pn	**Pn**	**18 30 00.8**	**+1.1**
IRAZ	**Razeghan**	**4.88**	**129**	*e*		18 30 25.1	
	comp=Z,310nm,0.3s						
IRAZ				*e*Pn	**Pn**	**18 30 03.3**	**0.0**
BHD	**Baghdad**	**5.34**	**188**	*ex*	**Pn**	**18 30 10.0**	**+0.6**
BHD				*ex*	x	18 31 14.0	
BHD	**Baghdad**	**5.34**	**188**	*e*Pn	**Pn**	**18 30 10.0**	**+0.6**
BHD				*e*Sn	**Sn**	**18 31 14.0**	**+3.0**
MALT	**Malatya**	**5.39**	**269**	*e*PN	**Pn**	**18 30 11.4**	**+1.2**
MALT	**Malatya**	**5.39**	**269**	*e*Pn	**Pn**	**18 30 11.4**	**+1.2**
BRTR	**Keskin Array B**	**9.12**	**281**	Pn	Pn	18 31 05.1	+3.6
	comp=Z,0.1nm,0.3s,baz=108,slow=14,SNR=7.3						
EIL	**Elat**	**12.32**	**227**	LR	LR	18 36 32.9	
	comp=Z,32nm,20.4s,baz=192,slow=37						
AKTO	**Aktyubinsk**	**14.92**	**33**	Pn	**Pn**	**18 32 22.2**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=190,slow=4.7,SNR=4.2						
FINES	**FINESS Array B**	**25.82**	**339**	P	**P**	**18 34 22.4**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=140,slow=9.1,SNR=4.0						
KURBB	**Kurchatov Arra**	**26.34**	**52**	P	**P**	**18 34 26.9**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=259,slow=8.8,SNR=4.4						
MKAR	**Makanchi Array**	**28.21**	**61**	P	**P**	**18 34 44.0**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=266,slow=8.1,SNR=3.1						

*JMA **24** 18:35:40.8±0.5,38°.65N×133°.80E,h506km,M3.6*
*ISCJB **24** 18:35:43.7±0.4,38°.76N±0°.08×133°.80E±0°.07,h447km, mb3.2/7,Error ellipse: s-maj=10.9km s-min=6.6km az=15.1*
*IDC **24** 18:35:45.0±1.1,38°.59N×133°.71E,h457km±18km,mb2.7/7, mb1 2.8/12,mb1mx2.7/33,mbtmp2.8/12,Error ellipse: s-maj=29.0km s-min=17.4km az=168.0*
ISC 24 18:35:44.5±0.9,38°.7N±0°.1×133°.86E±0°.08,h447km,n21, σ1§09/23,mb3.3/7,Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWT	**Wachi**	**3.58**	**159**	P	**P**	**18 36 57.3**	**+1.3**
JHS	**Saijyo**	**3.70**	**190**	P	**P**	**18 36 57.4**	**+0.4**
MAT	**Matsushiro**	**4.04**	**120**	P	**P**	**18 37 00.6**	**+0.7**
MAT	**Matsushiro**	**4.04**	**120**	P	**P**	**18 37 00.9**	**+1.0**
MJAR	**Matsushiro Arr**	**4.05**	**120**	P	**P**	**18 37 01.4**	**+1.5**
	1.5nm,0.3s,baz=291,slow=9.2,SNR=43						
JNG	**Nsakai**	**4.05**	**122**	P	**P**	**18 37 01.0**	**+1.0**
KSRS	**Korea Array**	**4.84**	**257**	P	**P**	**18 37 07.9**	**+0.8**
	0.5nm,0.3s,baz=72,slow=7.2,SNR=11						
JFT	**Otama**	**5.23**	**101**	P	**P**	**18 37 11.5**	**+0.5**
JOD2	**Odawara 2**	**5.38**	**127**	P	**P**	**18 37 13.0**	**+0.4**
JMM	**Marumori**	**5.51**	**96**	P	**P**	**18 37 14.1**	**+0.4**
JMM				S	**S**	**18 38 25.8**	**-0.8**
USRK	**Ussuriysk Arra**	**5.71**	**346**	P	**P**	**18 37 17.6**	**+2.1**
	0.4nm,0.3s,baz=171,slow=9.7,SNR=11						
JMK	**Ichinoseki**	**5.76**	**85**	P	**P**	**18 37 15.8**	**-0.4**
JMK				*e*S	**S**	**18 38 29.2**	**-1.8**
JNU	**Nakatsue**	**6.03**	**205**	P	**P**	**18 37 19.1**	**0.0**
	1.6nm,0.3s,baz=318,slow=22,SNR=17						
ASAJ	**Asahikawa**	**8.54**	**47**	P	**P**	**18 37 46.1**	**+0.6**
	1.2nm,0.3s,baz=236,slow=12,SNR=18						
SONM	**Songino Array**	**21.91**	**304**	P	**P**	**18 40 02.9**	**-0.6**
	0.7nm,0.6s,baz=114,slow=10,SNR=6.3						
ZALV	**Zalesovo Beam**	**36.38**	**311**	P	**P**	**18 42 07.7**	**-1.3**
	0.4nm,0.3s,baz=88,slow=7.0,SNR=4.1						
MKAR	**Makanchi Array**	**38.15**	**299**	P	**P**	**18 42 22.9**	**-1.0**
	0.6nm,0.7s,baz=82,slow=11,SNR=7.9						
KURBB	**Kurchatov Arra**	**40.25**	**306**	P	**P**	**18 42 39.8**	**-0.9**
	0.6nm,0.4s,baz=80,slow=7.5,SNR=15						
BVAR	**Borovoye Array**	**45.01**	**310**	P	**P**	**18 43 17.1**	**-1.2**
	0.2nm,0.4s,baz=101,slow=7.9,SNR=3.7						
ILAR	**Eielson Array**	**51.35**	**33**	P	**P**	**18 44 07.0**	**+1.3**
	0.3nm,0.6s,baz=289,slow=7.7,SNR=6.0						
FINES	**FINESS Array B**	**64.49**	**330**	P	**P**	**18 45 34.7**	**-0.7**
	0.8nm,0.8s,baz=77,slow=8.2,SNR=4.9						

*CSEM **24** 18:37:09.1±0.1,60°.24N×10°.72E,h15km,ML2.2,Error ellipse: s-maj=2.8km s-min=2.3km az=111.0*
*ISCJB **24** 18:37:09.5±0.4,60°.22N±0°.02×10°.71E±0°.05,h23km±5km, Error ellipse: s-maj=4.3km s-min=3.9km az=36.4*
*HEL **24** 18:37:09.4±0.2,60°.21N×10°.68E,h13km±1km,ML2.2, ML2.0(BER),ML1.5(UPP)*
*BER **24** 18:37:10.7±2.9,60°.21N×10°.75E,h15km±10km,MD2.4, ML2.0,ML2.2(NAO)*
*UPP **24** 18:37:10.6,60°.16N×10°.78E,h23km,ML1.5*
*NAO **24** 18:37:10.0±1.8,60°.27N×10°.80E,h6km±9km,ML2.2*
ISC 24 18:37:08.9±1.0,60°.21N±0°.02×10°.81E±0°.02,h12km±8km, n96,σ1§49/125,Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAO	**NORSAR Subarra**	**0.62**	**1**	Pg	**Pg**	**18 37 21.1**	**+0.1**
NAO				Lg	Lg	18 37 29.2	
NAO	**NORSAR Subarra**	**0.62**	**1**	Pg	**Pg**	**18 37 21.1**	**+0.1**
NAO				Lg	Lg	18 37 29.2	
NC6	**NORSAR Subarra**	**0.63**	**31**	Pg	**Pg**	**18 37 21.4**	**+0.2**
NC6				Lg	Lg	18 37 30.3	
NC6	**NORSAR Subarra**	**0.63**	**31**	Pg	**Pg**	**18 37 21.4**	**+0.2**
NC6				Lg	Lg	18 37 30.3	
NC602	**NORSAR Array S**	**0.64**	**34**	*e*P	**Pg**	**18 37 21.9**	**+0.4**
NC602				*e*S	**Sg**	**18 37 30.5**	**+0.6**
NC602	**NORSAR Array S**	**0.64**	**34**	*i* P	**Pg**	**18 37 21.9**	**+0.4**
NC602				*i* S	**Sg**	**18 37 30.5**	**+0.6**
NC602	**NORSAR Array S**	**0.64**	**34**	*e*P	**Pg**	**18 37 21.9**	**+0.4**
	SNR=90						
NC602				*e*S	**Sg**	**18 37 30.5**	**+0.6**
	SNR=90						
NBO	**NORSAR Subarra**	**0.83**	**359**	Pg	**Pg**	**18 37 24.7**	**-0.2**
NBO				Lg	Lg	18 37 35.4	
NBO	**NORSAR Subarra**	**0.83**	**359**	Pg	**Pg**	**18 37 24.7**	**-0.2**
NBO				Lg	Lg	18 37 35.3	
KONO	**Kongsberg**	**0.83**	**228**	*e*P	**Pg**	**18 37 24.8**	**-0.1**
KONO				*e*S	**Sg**	**18 37 35.5**	**-0.2**
KONO				AML	AML	18 37 38.0	
	comp=Z,16nm,0.1s						
KONO	**Kongsberg**	**0.83**	**228**	*e*P	**Pg**	**18 37 24.8**	**-0.1**
KONO				*e*S	**Sg**	**18 37 35.5**	**-0.2**
KONO				AML	AML	18 37 38.0	
	comp=Z,16nm,0.1s						
KONO	**Kongsberg**	**0.83**	**228**	*e*P	**Pg**	**18 37 24.8**	**-0.1**
	SNR=90						
KONO				S	**Sg**	**18 37 35.5**	**-0.2**
	comp=Z,16nm,0.1s						
NB2	**NORSAR Subarra**	**0.86**	**13**	Pg	**Pg**	**18 37 25.4**	**-0.2**
	baz=193,slow=18						
NB2				Lg	Lg	18 37 37.1	
NB2	**NORSAR Subarra**	**0.86**	**13**	Pg	**Pg**	**18 37 25.4**	**-0.2**
	baz=193,slow=18						
NB2				Lg	Lg	18 37 37.1	
NB2	**NORSAR Subarra**	**0.86**	**13**	*i* PG	**Pg**	**18 37 25.4**	**-0.2**
NB2				*i* SG	**Sb**	**18 37 37.1**	**-0.2**
NB2	**NORSAR Subarra**	**0.86**	**13**	Pg	**Pg**	**18 37 25.4**	**-0.2**
	baz=193,slow=17,SNR=140						
NB2				Sg	**Sb**	**18 37 37.0**	**-0.2**
NB2				Lg	Lg	18 37 37.1	
NC4	**NORSAR Subarra**	**0.98**	**27**	Pg	**Pg**	**18 37 27.9**	**0.0**
NC4				Lg	Lg	18 37 41.3	
NC4	**NORSAR Subarra**	**0.98**	**27**	Pg	**Pg**	**18 37 27.9**	**0.0**
NC4				Lg	Lg	18 37 41.3	
NC2	**NORSAR Subarra**	**1.08**	**1**	Pg	**Pg**	**18 37 29.0**	**-0.7**
NC2				Lg	Lg	18 37 43.0	
NC2	**NORSAR Subarra**	**1.08**	**1**	Pg	**Pg**	**18 37 29.0**	**-0.7**
NC2				Lg	Lg	18 37 43.0	
NC3	**NORSAR Subarra**	**1.10**	**15**	Pg	**Pg**	**18 37 29.7**	**-0.4**
NC3				Lg	Lg	18 37 44.4	
NC3	**NORSAR Subarra**	**1.10**	**15**	Pg	**Pg**	**18 37 29.7**	**-0.4**
NC3				Lg	Lg	18 37 44.4	
FINU	**Finntorp**	**1.17**	**133**	*e*P	**Pg**	**18 37 31.4**	**0.0**
FINU				*e*S	**Sg**	**18 37 47.7**	**+1.1**
FINU	**Finntorp**	**1.17**	**133**	P	**Pg**	**18 37 31.4**	**0.0**
FINU				S	**Sg**	**18 37 47.6**	**+1.1**
STRU	**Stroemstad**	**1.19**	**171**	*e*P	**Pg**	**18 37 31.3**	**-0.5**
STRU				*e*S	**Sg**	**18 37 47.9**	**+0.6**
STRU	**Stroemstad**	**1.19**	**171**	P	**Pg**	**18 37 31.3**	**-0.5**
STRU				S	**Sg**	**18 37 47.9**	**+0.6**
UDD	**Uddeholm**	**1.41**	**94**	*e*P	**Pn**	**18 37 34.9**	**+0.6**
UDD				*e*S	**Sb**	**18 37 55.0**	**+2.1**
UDD	**Uddeholm**	**1.41**	**94**	P	**Pn**	**18 37 34.9**	**+0.6**
UDD				S	**Sb**	**18 37 55.0**	**+2.1**
HFS	**Hagfors**	**1.45**	**92**	Pn	**Pn**	**18 37 35.4**	**+0.5**
	baz=270,slow=14						
HFS				Lg	Lg	18 37 55.7	
	baz=275,slow=37						
HFS	**Hagfors**	**1.45**	**92**	Pn	**Pn**	**18 37 35.4**	**+0.5**
	baz=270,slow=14						
HFS				Lg	Lg	18 37 55.7	
	baz=275,slow=37						
HFS	**Hagfors**	**1.45**	**92**	*e*P	**Pn**	**18 37 35.4**	**+0.5**
HFS				*e*SN	**Sn**	**18 37 55.7**	**+2.0**
HFS	**Hagfors**	**1.45**	**92**	P	**Pn**	**18 37 35.3**	**+0.5**
HFS				Sn	**Sn**	**18 37 55.7**	**+2.0**
HFS				Lg	Lg	18 37 55.7	
	baz=275,slow=31,SNR=2.2						
NASU	**Vaermlandsnaes**	**1.77**	**136**	*e*P	**Pn**	**18 37 39.3**	**+0.1**
NASU	**Vaermlandsnaes**	**1.77**	**136**	P	**Pn**	**18 37 39.3**	**+0.1**
VANU	**Vaenersborg**	**1.84**	**159**	*e*P	**Pn**	**18 37 40.6**	**+0.4**
VANU	**Vaenersborg**	**1.84**	**159**	P	**Pn**	**18 37 40.6**	**+0.4**
DOMB	**Dombas**	**2.03**	**336**	*e*P	**Pn**	**18 37 45.1**	**+2.3**
DOMB				*e*Sg	**Sb**	**18 38 11.3**	**+0.6**
DOMB	**Dombas**	**2.03**	**336**	*e*P	**Pn**	**18 37 45.1**	**+2.3**
DOMB				*e*SG	**Sb**	**18 38 11.3**	**+0.6**
ODD1	**Odda**	**2.12**	**264**	*e*P	**Pn**	**18 37 44.9**	**+0.8**
ODD1				*e*Sg	**Sn**	**18 38 13.7**	**+3.4**
ODD1				AML	AML	18 38 18.0	
	comp=Z,55nm,0.3s						
ODD1	**Odda**	**2.12**	**264**	*e*P	**Pn**	**18 37 44.9**	**+0.8**
ODD1				*e*SG	**Sn**	**18 38 13.7**	**+3.4**
ODD1				AML	AML	18 38 18.0	
	comp=Z,55nm,0.3s						
ODD1	**Odda**	**2.12**	**264**	*e*P	**Pn**	**18 37 44.9**	**+0.8**
	SNR=50						
ODD1				Sg	**Sn**	**18 38 13.7**	**+3.4**
	comp=Z,55nm,0.3s						
TJOU	**Tjoern**	**2.22**	**169**	*e*P	**Pn**	**18 37 45.8**	**+0.3**
TJOU	**Tjoern**	**2.22**	**169**	P	**Pn**	**18 37 45.8**	**+0.3**
BLS5	**Blasjo**	**2.33**	**252**	*e*P	**Pn**	**18 37 47.3**	**+0.2**
BLS5				*e*S	**Sn**	**18 38 14.8**	**-0.8**
BLS5				AML	AML	18 38 20.7	
	comp=Z,18nm,0.3s						
BLS5	**Blasjo**	**2.33**	**252**	*e*P	**Pn**	**18 37 47.3**	**+0.2**
BLS5				*e*S	**Sn**	**18 38 14.8**	**-0.8**
BLS5				AML	AML	18 38 20.7	
	comp=Z,18nm,0.3s						
BLS5	**Blasjo**	**2.33**	**252**	*e*P	**Pn**	**18 37 47.3**	**+0.2**
	SNR=50						
BLS5				S	**Sn**	**18 38 14.8**	**-0.8**
	comp=Z,18nm,0.3s						
ASKU	**Askersund**	**2.44**	**121**	*e*P	**Pn**	**18 37 49.1**	**+0.7**
ASKU	**Askersund**	**2.44**	**121**	P	**Pn**	**18 37 49.1**	**+0.7**
FKPU	**Falk**	**2.54**	**143**	P	**Pn**	**18 37 49.9**	**0.0**
SNART	**Snartemo**	**2.63**	**226**	*e*P	Pn	18 37 49.0	-2.1
SNART				*e*Sg	**Sn**	**18 38 27.7**	**+4.8**
SNART	**Snartemo**	**2.63**	**226**	*e*P	Pn	18 37 49.0	-2.1
SNART				*e*SG	**Sn**	**18 38 27.7**	**+4.8**
RUND	**Rundenannen**	**2.71**	**277**	*e*Sg	**Sn**	**18 38 29.5**	**+4.5**
RUND	**Rundenannen**	**2.71**	**277**	*e*SG	**Sn**	**18 38 29.5**	**+4.5**
BER	**Bergen**	**2.73**	**276**	*e*Sg	**Sb**	**18 38 30.5**	**-0.4**
BER	**Bergen**	**2.73**	**276**	*e*SG	**Sb**	**18 38 30.6**	**-0.4**
BER	**Bergen**	**2.73**	**276**	*e*Sg	**Sb**	**18 38 30.5**	**-0.4**
	comp=Z,23nm,0.2s,SNR=90						
ROTU	**Roteberg**	**2.74**	**61**	*e*P	**Pn**	**18 37 54.0**	**+1.4**
ROTU	**Roteberg**	**2.74**	**61**	P	**Pn**	**18 37 53.9**	**+1.4**
EGD	**Espegrend**	**2.78**	**274**	*e*P	**Pn**	**18 37 52.7**	**-0.5**
EGD				*e*Sg	**Sb**	**18 38 31.6**	**-0.8**
EGD				AML	AML	18 38 40.4	
	comp=Z,12nm,0.4s						
EGD	**Espegrend**	**2.78**	**274**	*e*P	**Pn**	**18 37 52.7**	**-0.5**
EGD				*e*SG	**Sb**	**18 38 31.6**	**-0.8**
EGD				AML	AML	18 38 40.4	
	comp=Z,12nm,0.4s						
EGD	**Espegrend**	**2.78**	**274**	P	**Pn**	**18 37 52.6**	**-0.5**
ASK	**Askoy**	**2.80**	**278**	*e*P	**Pn**	**18 37 52.6**	**-0.8**
ASK				*e*Sg	**Sb**	**18 38 32.3**	**-0.8**
ASK				AML	AML	18 38 33.3	
	comp=Z,23nm,0.2s						
ASK	**Askoy**	**2.80**	**278**	*e*P	**Pn**	**18 37 52.6**	**-0.8**
ASK				*e*SG	**Sb**	**18 38 32.3**	**-0.8**
ASK				AML	AML	18 38 33.3	
	comp=Z,23nm,0.2s						
MOL	**Molde**	**2.84**	**328**	*e*Sg	**Sb**	**18 38 33.7**	**-0.5**
MOL	**Molde**	**2.84**	**328**	*e*SB	**Sb**	**18 38 33.7**	**-0.5**
MOL	**Molde**	**2.84**	**328**	Sb	**Sb**	**18 38 33.7**	**-0.5**
ESKU	**Eskilstuna**	**3.00**	**107**	*e*P	**Pn**	**18 37 57.5**	**+1.4**
ESKU	**Eskilstuna**	**3.00**	**107**	P	**Pn**	**18 37 57.5**	**+1.4**
OSTU	**Oestervaala**	**3.16**	**87**	*e*P	**Pn**	**18 37 60.0**	**+1.6**
OSTU	**Oestervaala**	**3.16**	**87**	P	**Pn**	**18 37 59.9**	**+1.6**
FABU	**Falkenberg**	**3.37**	**162**	*e*P	**Pn**	**18 38 01.5**	**+0.3**
FABU	**Falkenberg**	**3.37**	**162**	P	**Pn**	**18 38 01.5**	**+0.3**
HASU	**Hassela**	**3.42**	**53**	*e*P	**Pn**	**18 38 03.6**	**+1.6**
HASU	**Hassela**	**3.42**	**53**	P	**Pn**	**18 38 03.5**	**+1.6**
VIKU	**Vikbolandet**	**3.47**	**117**	*e*P	**Pn**	**18 38 04.1**	**+1.5**
VIKU	**Vikbolandet**	**3.47**	**117**	P	**Pn**	**18 38 04.1**	**+1.5**
BJUU	**Bjuv**	**4.31**	**163**	P	**Pn**	**18 38 14.6**	**+0.5**
RAF	**Rauma**	**5.46**	**77**	*e*P	**Pn**	**18 38 28.6**	**-1.3**
RAF				*e*S	**Sn**	**18 39 31.5**	**-1.0**
RAF				*e*SG	**Sg**	**18 39 59.6**	**-4.4**
RAF				MSG		18 40 08.5	
	comp=Z,2.2nm,0.3s						
RAF	**Rauma**	**5.46**	**77**	P	**Pn**	**18 38 28.6**	**-1.3**
RAF				S	**Sn**	**18 39 31.5**	**-1.0**
VAF	**Ylistaro**	**6.33**	**58**	*e*P	Pn	18 38 38.6	-3.2
VAF				*e*S	**Sn**	**18 39 53.3**	**-0.6**
VAF				*e*SG	Sg	18 40 24.1	-7.7
VAF				MSG		18 40 26.0	
	comp=Z,1.5nm,0.4s						
MEF	**Metsahovi**	**6.77**	**84**	*e*S	**Sn**	**18 40 02.2**	**-2.6**
MEF				*e*SG	Sg	18 40 38.6	-7.5
MEF				MSG		18 40 46.7	
	comp=Z,1.8nm,0.2s						
MTSE	**Matsula**	**6.80**	**97**	*e*S	**Sn**	**18 40 02.4**	**-3.0**
KEF	**Keuruu**	**7.08**	**68**	*e*P	Pn	18 38 49.0	-3.1
KEF				*e*S	**Sn**	**18 40 09.9**	**-2.4**
KEF				*e*SG	Sg	18 40 48.2	-7.5
KEF				MSG		18 40 53.5	
	comp=Z,1.2nm,0.3s						
PVF	**Pernaja**	**7.47**	**81**	*e*SG	Sg	18 41 00.1	-8.3
FIA0	**FINESS Array S**	**7.57**	**74**	Pn	**Pn**	**18 38 59.5**	**+0.7**
	baz=273,slow=11						
FIA0				Lg	Lg	18 41 01.1	
	baz=265,slow=28						
FIA0	**FINESS Array S**	**7.57**	**74**	Pn	**Pn**	**18 38 59.5**	**+0.7**
	baz=273,slow=11						
FIA0				Lg	Lg	18 41 01.1	
	baz=265,slow=28						
FIA0	**FINESS Array S**	**7.57**	**74**	*e*P	Pn	18 38 55.1	-3.7
FIA0				*e*S	**Sn**	**18 40 21.8**	**-2.6**
FIA0				*e*SG	Sg	18 41 04.2	-7.2
FIA0	**FINESS Array S**	**7.57**	**74**	Pn	**Pn**	**18 38 59.5**	**+0.7**
	baz=273,slow=10,SNR=5.9						
FIA0				Lg	Lg	18 41 01.1	
	baz=265,slow=25,SNR=6.3						
KAF	**Kangasniemi**	**7.73**	**69**	*e*S	**Sn**	**18 40 27.6**	**-0.9**
KAF				*e*SG	Sg	18 41 09.7	-7.1
KAF	**Kangasniemi**	**7.73**	**69**	S	**Sn**	**18 40 27.5**	**-0.9**
SUIF	**Sumiainen**	**7.76**	**64**	*e*S	**Sn**	**18 40 26.4**	**-2.9**
SUIF				*e*SG	Sg	18 41 09.2	-8.6
KJN	**Kajaani**	**8.81**	**57**	*e*SG	Sg	18 41 41.3	-10
ARA0	**ARCESS Array S**	**11.21**	**27**	Pn	**Pn**	**18 39 47.1**	**-1.6**
ARA0				Sn	Sn	18 41 43.8	-10
ARA0	**ARCESS Array S**	**11.21**	**27**	P	**Pn**	**18 39 47.1**	**-1.6**
ARA0				Sn	Sn	18 41 43.8	-10
ARA0	**ARCESS Array S**	**11.21**	**27**	*e*P	**Pn**	**18 39 47.1**	**-1.6**
ARA0				*e*S	Sn	18 41 43.8	-10
ARA0	**ARCESS Array S**	**11.21**	**27**	P	**Pn**	**18 39 47.1**	**-1.6**
	SNR=47						

*IDC **24** 18:37:07.5±0.8,0°.44S×132°.78E,h0km,mb4.0/10, mb1 4.2/13,mb1mx4.0/26,mbtmp4.1/13,ML4.0/3,MS2.7/1, Ms1 2.7/1,ms1mx2.1/33,Error ellipse: s-maj=33.1km s-min=11.5km az=75.0*
*NEIC **24** 18:37:12.6±0.3,0°.51S×132°.70E,h35km,mb4.2/7,Error ellipse: s-maj=11.8km s-min=5.7km az=68.0*
*DJA **24** 18:37:14.4±0.5,0°.5S±4°×13°.3E±°,h61km±11km,M4.7/6, mb4.9/6,mB5.2/5,MLv4.6/4,Mw(mB)4.6/5*
ISC 24 18:37:08.3±1.6,0°.41S±0°.06×132°.75E±0°.05,h1km±10km, n45,σ1§45/53,mb4.3/15,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**1.56**	**253**	P	**Pg**	**18 37 39.0**	**+0.8**
SWI				S	**Sg**	**18 37 59.6**	**+1.2**
RKPI	**Ransiki, Papua**	**1.80**	**128**	P	**Pb**	**18 37 42.6**	**+0.6**
RKPI				S	**Sb**	**18 38 05.9**	**+0.9**
FAKI	**Fak Fak**	**2.54**	**191**	P	**Pn**	**18 37 52.0**	**+1.3**
FAKI				S	**Sn**	**18 38 23.0**	**+0.6**
SRPI	**Serui, Papua**	**3.78**	**113**	P	**Pn**	**18 38 10.1**	**+2.4**
SRPI				S	**Sn**	**18 38 55.5**	**+2.7**
MSAI	**Masohi**	**4.81**	**233**	P	**Pn**	**18 38 23.4**	**+1.6**
MSAI				S	**Sn**	**18 39 19.4**	**+1.2**
TLE	**Tual**	**5.20**	**180**	P	**Pn**	**18 38 29.0**	**+1.8**
	350nm,0.7s,5μm1.1nm						
TLE				S	**Sn**	**18 39 29.3**	**+1.5**
	350nm,0.7s,5μm1.1nm						
LBMI	**Labuha**	**5.26**	**267**	P	**Pn**	**18 38 29.4**	**+1.4**
	58nm,1.1s,1μm0.3nm						
TNTI	**Ternate**	**5.51**	**282**	P	**Pn**	**18 38 33.7**	**+2.2**
	46nm,0.8s,939nm0.2nm						
AAI	**Ambon**	**5.60**	**234**	P	**Pn**	**18 38 34.7**	**+2.0**
	188nm,0.7s,2μm0.8nm						
LUWI	**Luwuk**	**10.00**	**266**	P	**Pn**	**18 39 33.9**	**+0.7**
BKSI	**Bulukumba**	**13.52**	**249**	P	Pn	18 40 25.0	+3.6
KAPI	**Kappang**	**13.77**	**250**	Pn	**Pn**	**18 40 24.5**	**-0.2**
KAPI	**Kappang**	**13.77**	**250**	Pn	**Pn**	**18 40 24.5**	**-0.2**
	0.2nm,0.3s,baz=62,slow=18,SNR=2.2						
KAPI				LR	LR	18 45 55.6	
	comp=Z,34nm,21.3s,baz=311,slow=38						
FITZ	**Fitzroy Crossi**	**18.92**	**201**	P	**P**	**18 41 28.4**	**-2.2**
FITZ				S	Sn	18 44 50.0	-14
FITZ	**Fitzroy Crossi**	**18.92**	**201**	P	**P**	**18 41 28.4**	**-2.2**
	0.3nm,0.3s,baz=17,slow=22,SNR=18						
FITZ				S	Sn	18 44 50.0	-14
	0.3nm,0.3s,baz=211,slow=17,SNR=4.6						
WRAB	**Tennant Creek**	**19.47**	**175**	*e*P	**P**	**18 41 35.3**	**-1.3**
	7.2nm,0.7s						
WRAB				*e*S	Sn	18 45 01.8	-15
WRA	**Warramunga Arr**	**19.48**	**176**	P	**P**	**18 41 36.0**	**-0.7**
WRA				S	Sn	18 45 03.3	-14
WRA	**Warramunga Arr**	**19.48**	**176**	P	**P**	**18 41 36.0**	**-0.7**
	1.1nm,0.3s,baz=354,slow=11,SNR=59						
WRA				S	Sn	18 45 03.3	-14
	0.3nm,0.3s,baz=4.9,slow=21,SNR=6.8						
AS31	**Alice Springs**	**23.15**	**177**	*e*P	**P**	**18 42 15.0**	**-1.3**
AS31				*e*S	**S**	**18 46 29.7**	**+0.8**
ASAR	**Alice Springs**	**23.15**	**177**	P	**P**	**18 42 15.2**	**-1.1**
ASAR				S	**S**	**18 46 30.1**	**+1.3**
ASAR	**Alice Springs**	**23.15**	**177**	P	**P**	**18 42 15.2**	**-1.1**
	14nm,0.6s,baz=358,slow=10,SNR=243						
ASAR				S	**S**	**18 46 30.1**	**+1.3**
	1.4nm,0.8s,baz=1.2,slow=31,SNR=6.5						
CTA	**Charters Tower**	**23.61**	**147**	P	**P**	**18 42 21.0**	**+0.1**
CTA	**Charters Tower**	**23.61**	**147**	P	**P**	**18 42 21.0**	**+0.1**
	6.7nm,0.8s,baz=331,slow=11,SNR=9.2						
CTAO	**Charters Tower**	**23.61**	**147**	*e*P	**P**	**18 42 20.5**	**-0.4**
	9.4nm,1.0s						
STKA	**Stephens Creek**	**32.40**	**166**	*e*P	**P**	**18 43 37.6**	**-2.1**
	1.6nm,0.7s						
STKA	**Stephens Creek**	**32.40**	**166**	P	**P**	**18 43 38.0**	**-1.7**
	3.4nm,0.3s,baz=339,slow=8.5,SNR=17						
CMAR	**Chiang Mai Arr**	**38.15**	**301**	P	**P**	**18 44 29.0**	**-0.4**
CMAR	**Chiang Mai Arr**	**38.15**	**301**	P	**P**	**18 44 29.0**	**-0.4**
	0.9nm,0.8s,baz=128,slow=7.6,SNR=6.9						
CHTO	**Chiang Mai**	**38.30**	**302**	P	**P**	**18 44 30.4**	**-0.3**
	2.4nm,0.8s						
HHC	**Hu-ho-hao-te**	**45.36**	**337**	*e*P	P	18 45 33.1	+4.8
HHC				S	**S**	**18 52 14.6**	**+4.4**
HHC				pmax	pmax		
	comp=Z,17nm,0.7s						
HHC				pmax	pmax		
	comp=

AKS	**Akhisar**	**0.97**	**257**	*e*PG	**Pb**	**18 53 52.3**	**-0.1**
AKS	**Akhisar**	**0.97**	**257**	*e*Pg	**Pb**	**18 53 52.3**	**-0.1**
BALB	**Balikesir**	**1.04**	**302**	*e*PG	**Pb**	**18 53 53.6**	**+0.1**
BALY	**Balya**	**1.26**	**301**	*i* P	**Pg**	**18 53 58.3**	**+0.2**
BALY				*i* S	**Sg**	**18 54 14.9**	**+0.3**
BALY	**Balya**	**1.26**	**301**	*i* P	**Pg**	**18 53 58.3**	**+0.2**
BALY				*i* S	**Sg**	**18 54 14.9**	**+0.3**
KCTX	**Karacabey (Bur**	**1.27**	**336**	*e*PN	**Pn**	**18 53 57.1**	**-0.1**
GEMT	**Gemlik**	**1.34**	**5**	*e*PN	**Pn**	**18 53 57.3**	**-0.7**
GEMT	**Gemlik**	**1.34**	**5**	*e*Pn	**Pn**	**18 53 57.3**	**-0.7**
GONE	**Gonen-Balikesi**	**1.40**	**313**	*e*PN	**Pn**	**18 53 58.7**	**-0.2**
GONE	**Gonen-Balikesi**	**1.40**	**313**	*e*Pn	**Pn**	**18 53 58.7**	**-0.2**
ARMT	**Armutlu**	**1.47**	**355**	*e*PN	**Pn**	**18 53 59.2**	**-0.6**
YLV	**Yalova**	**1.49**	**10**	*e*PN	**Pn**	**18 53 59.5**	**-0.7**
YLV	**Yalova**	**1.49**	**10**	*e*Pn	**Pn**	**18 53 59.5**	**-0.7**
GULT	**Gulveren**	**1.76**	**40**	*e*PN	**Pn**	**18 54 04.0**	**+0.1**
GULT	**Gulveren**	**1.76**	**40**	*e*Pn	**Pn**	**18 54 04.0**	**+0.1**

MAN 24 18:57:39.7±15.5N×124°07.E, h56km, mb3.8, ML2.6, MS2.1, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.19**	**69**	⇑*i*P	Pn	18 57 49.8	+1.8
CTBH				*i* S	Sn	18 57 56.8	+2.4
PAGZ	**Pagadian**	**0.97**	**316**	*e*P	Pn	18 57 57.8	+1.3
PAGZ				*e*S	Sn	18 58 02.6	-6.8
IPIL	**Ipil**	**1.61**	**293**	⇓*e*P	Pn	18 58 06.0	+0.9
IPIL				*e*S	Sn	18 58 25.2	+0.4

*ISCJB **24** 19:05:00.8±0.5, 33°.94S±0°.03×71°.41W±0°.06, h66km±4km, mb3.9/7, Error ellipse: s-maj=8.1km s-min=5.3km az=6.2*
*GUC **24** 19:05:01.6±0.6, 33°.92S×71°.41W, h46km±1km, ML4.1*
*NEIC **24** 19:05:01.0, 33°.92S×71°.40W, h46km, mb3.6/1, After GUC.*
NEIC Felt [III] at Rancagua and [II] at Cartagena, Casa Blanca, Melipilla, San Antonio, San Fernando and Santiago.
*IDC **24** 19:05:06.0±2.4, 33°.74S×71°.16W, h91km±20km, mb3.8/6, mb1 3.8/9, mb1mx3.7/19, mbtmp3.7/9, MS3.3/1, Ms1 3.2/1, ms1mx2.1/26, Error ellipse: s-maj=30.7km s-min=14.6km az=95.0*

ISC 24 19:05:01.1±0.9, 33°.92S±0°.03×71°.45W±0°.04, h51km±8km, n61, σ1°31/87, mb3.9/7, 11C-15D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCH	**Las Cruces**	**0.45**	**348**	⇓*i*P	**Pn**	**19 05 12.4**	**+0.5**
LCCH	**Las Cruces**	**0.45**	**348**	⇓*i*P	**Pn**	**19 05 12.4**	**+0.5**
TACH	**Talagante**	**0.51**	**59**	⇑*i*P	**Pn**	**19 05 12.9**	**+0.3**
TACH	**Talagante**	**0.51**	**59**	⇑*i*P	**Pn**	**19 05 12.9**	**+0.3**
CHCH	**Chadas Angostu**	**0.67**	**92**	*e*P	**Pn**	**19 05 14.6**	**0.0**
CHCH	**Chadas Angostu**	**0.67**	**92**	*e*P	**Pn**	**19 05 14.6**	**0.0**
RCDM	**Rinconada Maip**	**0.69**	**52**	⇓*i*P	**Pn**	**19 05 14.9**	**+0.1**
RCDM				*i* S	**Sn**	**19 05 24.9**	**+0.2**
RCDM	**Rinconada Maip**	**0.69**	**52**	⇓*i*P	**Pn**	**19 05 14.9**	**+0.1**
RCDM				*i* S	**Sn**	**19 05 24.9**	**+0.2**
RCDM				AML	AML	19 05 26.1	
	comp=E,33μm,0.1s						
CACH	**El Canelo**	**0.74**	**106**	⇓*i*P	**Pn**	**19 05 16.1**	**+0.6**
CACH	**El Canelo**	**0.74**	**106**	⇓*i*P	**Pn**	**19 05 16.1**	**+0.6**
ANTU	**Antumapu**	**0.77**	**63**	⇓*i*P	**Pn**	**19 05 16.2**	**+0.4**
ANTU				*i* S	**Sn**	**19 05 27.2**	**+0.6**
ANTU	**Antumapu**	**0.77**	**63**	⇓*i*P	**Pn**	**19 05 16.2**	**+0.4**
ANTU				*i* S	**Sn**	**19 05 27.2**	**+0.6**
ANTU				AML	AML	19 05 29.9	
	comp=E,9μm,0.4s						
SAN	**Santiago**	**0.81**	**55**	⇑*i*P	**Pn**	**19 05 16.7**	**+0.4**
SAN				*i* S	**Sn**	**19 05 28.0**	**+0.6**
SAN	**Santiago**	**0.81**	**55**	⇑*i*P	**Pn**	**19 05 16.7**	**+0.4**
SAN				*i* S	**Sn**	**19 05 28.0**	**+0.6**
PCH	**Pirque**	**0.84**	**70**	⇑*i*P	**Pn**	**19 05 17.1**	**+0.3**
PCH	**Pirque**	**0.84**	**70**	⇑*i*P	**Pn**	**19 05 17.1**	**+0.3**
FSR	**Penalolen**	**0.89**	**61**	*e*P	**Pn**	**19 05 17.9**	**+0.4**
FSR				*i* S	**Sn**	**19 05 30.5**	**+1.0**
FSR	**Penalolen**	**0.89**	**61**	*e*P	**Pn**	**19 05 17.9**	**+0.4**
FSR				*i* S	**Sn**	**19 05 30.5**	**+1.0**
IHA	**Instituto Hidr**	**0.90**	**350**	⇑*i*P	**Pn**	**19 05 18.5**	**+0.9**
IHA	**Instituto Hidr**	**0.90**	**350**	⇑*i*P	**Pn**	**19 05 18.5**	**+0.9**
CLCH	**Cerro Calan**	**0.93**	**56**	⇓*i*P	**Pn**	**19 05 18.5**	**+0.5**
CLCH				*i* S	**Sn**	**19 05 31.4**	**+1.1**
CLCH				AML	AML	19 05 33.7	
	comp=E,7μm,0.8s						
SJCH	**San Jose de Ma**	**0.96**	**74**	⇓*i*P	**Pn**	**19 05 17.8**	**-0.6**
SJCH				*i* S	**Sn**	**19 05 30.8**	**-0.3**
SJCH	**San Jose de Ma**	**0.96**	**74**	⇓*i*P	**Pn**	**19 05 17.8**	**-0.6**
SJCH				*i* S	**Sn**	**19 05 30.8**	**-0.3**
SJCH				AML	AML	19 05 31.6	
	comp=N,9μm,0.4s						
PEL	**Peldehue**	**1.00**	**40**	⇑*i*P	**Pn**	**19 05 19.8**	**+0.8**
PEL				*i* S	**Sn**	**19 05 33.7**	**+1.6**
PEL				AML	AML	19 05 38.4	
	comp=N,12μm,0.2s						
ROCH	**El Roble**	**1.01**	**22**	⇓*i*P	**Pn**	**19 05 20.2**	**+0.9**
ROCH				*i* S	**Sn**	**19 05 34.7**	**+2.0**
LMEL	**Las Melosas**	**1.04**	**87**	⇓*i*P	**Pn**	**19 05 19.9**	**+0.3**
LMEL				*i* S	**Sn**	**19 05 34.2**	**+0.9**
LMEL	**Las Melosas**	**1.04**	**87**	⇓*i*P	**Pn**	**19 05 19.9**	**+0.3**
LMEL				*i* S	**Sn**	**19 05 34.2**	**+0.9**
LMEL				AML	AML	19 05 34.8	
	comp=N,11μm,0.2s						
FCH	**Farellones**	**1.14**	**59**	⇓*i*P	**Pn**	**19 05 20.5**	**-0.6**
FCH				*i* S	**Sn**	**19 05 35.8**	**+0.1**
FCH				AML	AML	19 05 36.5	
	comp=N,11μm,0.3s						
TALC	**Talca**	**1.48**	**186**	⇑*i*P	**Pn**	**19 05 26.2**	**+0.7**
TALC				*i* S	**Sn**	**19 05 45.5**	**+1.8**
TALC	**Talca**	**1.48**	**186**	⇑*i*P	**Pn**	**19 05 26.2**	**+0.7**
TALC				*i* S	**Sn**	**19 05 45.5**	**+1.8**
CHNG	**Los Chungos**	**2.03**	**359**	*e*P	**Pn**	**19 05 33.4**	**+0.5**
CHNG				*i* S	**Sn**	**19 05 58.5**	**+1.4**
CHNG	**Los Chungos**	**2.03**	**359**	*e*P	**Pn**	**19 05 33.4**	**+0.5**
CHNG				*i* S	**Sn**	**19 05 58.5**	**+1.4**
CFAA	**Coronel Fontan**	**3.56**	**50**	P	**Pn**	**19 05 55.1**	**+1.3**
CFAA				S	**Sn**	**19 06 38.4**	**+3.7**
CFAA	**Coronel Fontan**	**3.56**	**50**	P	**Pn**	**19 05 55.1**	**+1.3**
	comp=N,1.8nm,0.3s,baz=217,slow=13,SNR=44						
CFAA				S	**Sn**	**19 06 38.4**	**+3.7**
	comp=N,2.5nm,0.3s,baz=250,slow=13,SNR=3.4						
LCO	**Las Campanas**	**4.93**	**8**	*e*Pn	**Pn**	**19 06 13.3**	**+0.3**
LCO				*e*Sn	**Sn**	**19 07 08.2**	**-0.7**
PLCA	**Paso Flores**	**6.84**	**174**	*e*Pn	**Pn**	**19 06 39.4**	**+0.5**
	comp=N,14nm,1.0s						
PLCA				S	Sn	19 08 12.8	+17
PLCA	**Paso Flores**	**6.84**	**174**	P	**Pn**	**19 06 39.8**	**+0.8**
	comp=N,1.7nm,0.3s,baz=337,slow=12,SNR=32						
PLCA				S	Sn	19 08 12.8	+17
	comp=N,0.1nm,0.3s,baz=70,slow=7.3,SNR=1.7						
TRQA	**Tornquist**	**8.72**	**121**	*e*Pn	**Pn**	**19 07 02.9**	**-1.6**
	comp=N,6.7nm,1.3s						
CPUP	**Villa Florida**	**14.36**	**62**	P	**Pn**	**19 08 18.6**	**-2.9**
CPUP				S	**Sn**	**19 11 04.0**	**+4.6**
CPUP	**Villa Florida**	**14.36**	**62**	P	**Pn**	**19 08 18.6**	**-2.9**
	comp=N,0.3nm,0.3s,baz=82,slow=19,SNR=2.4						
CPUP				S	**Sn**	**19 11 04.0**	**+4.6**
	comp=N,0.5nm,0.3s,baz=269,slow=20,SNR=2.1						
SIV	**San Ignacio**	**20.15**	**30**	P	**P**	**19 09 29.8**	**-1.5**
SIV	**San Ignacio**	**20.15**	**30**	P	**P**	**19 09 29.8**	**-1.5**
	comp=N,0.4nm,0.3s,baz=238,slow=8.2,SNR=10.0						
EFI	**East Falkland**	**20.23**	**155**	*e*P	**P**	**19 09 30.1**	**-1.5**
SAML	**Samuel**	**25.99**	**19**	*e*P	**P**	**19 10 30.8**	**+1.6**
	comp=N,1.8nm,0.9s						
BDFB	**Brasilia**	**27.89**	**55**	LR	LR	19 21 27.8	
	comp=N,61nm,21.9s,baz=334,slow=36						
SNAA	**Sanae**	**51.48**	**158**	P	**P**	**19 14 00.9**	**-0.1**
SNAA	**Sanae**	**51.48**	**158**	P	**P**	**19 14 00.9**	**-0.1**
	comp=N,0.7nm,0.5s,baz=297,slow=8.5,SNR=4.9						
QSPA	**South Pole Qui**	**56.32**	**180**	P	**P**	**19 14 36.7**	**+0.2**
QSPA	**South Pole Qui**	**56.32**	**180**	P	**P**	**19 14 36.7**	**+0.2**
	comp=N,2.0nm,1.0s,baz=108,slow=1.5,SNR=5.9						
TXAR	**Lajitas Array**	**69.90**	**330**	P	**P**	**19 16 07.6**	**+0.8**
TXAR	**Lajitas Array**	**69.90**	**330**	P	**P**	**19 16 07.6**	**+0.8**
	comp=N,0.7nm,0.5s,baz=153,slow=7.2,SNR=9.4						
BOSA	**Boshof**	**79.68**	**117**	P	**P**	**19 17 03.2**	**-0.4**
BOSA	**Boshof**	**79.68**	**117**	P	**P**	**19 17 03.2**	**-0.4**
	comp=N,6.1nm,1.0s,baz=236,slow=6.0,SNR=6.8						
TORD	**Torodi Ar. Bea**	**83.73**	**70**	P	**P**	**19 17 23.8**	**-1.2**
TORD	**Torodi Ar. Bea**	**83.73**	**70**	P	**P**	**19 17 23.8**	**-1.2**
	comp=N,1.8nm,0.8s,baz=237,slow=3.1,SNR=9.9						
ELK	**Elko**	**84.55**	**328**	P	**P**	**19 17 29.4**	**+0.7**
ELK	**Elko**	**84.55**	**328**	P	**P**	**19 17 29.4**	**+0.7**
	comp=N,0.4nm,0.5s,baz=111,slow=5.0,SNR=3.7						
ZALV	**Zalesovo Beam**	**153.90**	**33**	PKPbc	**PKPbc**	**19 24 53.4**	**-0.7**
ZALV				PKPab	**PKPab**	**19 25 07.3**	**-0.1**
ZALV	**Zalesovo Beam**	**153.90**	**33**	PKPbc	**PKPbc**	**19 24 53.4**	**-0.7**
	comp=N,2.2nm,0.6s,baz=305,slow=3.3,SNR=12						
ZALV				PKPab	**PKPab**	**19 25 07.3**	**-0.1**
	comp=N,1.3nm,0.7s,baz=318,slow=2.0,SNR=6.4						
MKAR	**Makanchi Array**	**156.34**	**49**	PKPab	**PKPab**	**19 25 17.8**	**-0.5**
MKAR	**Makanchi Array**	**156.34**	**49**	PKPab	**PKPab**	**19 25 17.7**	**-0.5**
	comp=N,0.1nm,0.6s,baz=292,slow=30,SNR=4.1						

IDC 24 19:10:09.4±7.8, 17°.25S×177°.38W, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.8/19, mbtmp3.8/4, MS3.9/13, Ms1 3.9/13, ms1mx3.7/32, Error ellipse: s-maj=383.6km s-min=30.2km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.34**	**59**	LR	LR	19 13 34.8	
	comp=Z,422nm,21.5s,baz=236,slow=32						
DZM	**Mont Dzumac**	**15.97**	**250**	*e*P	P	19 14 05.7	+6.3
	36nm,1.4s						
DZM				*e*LR	LR	19 17 45.3	
	832nm,25.5s						
RAR	**Rarotonga**	**17.09**	**106**	LR	LR	19 19 06.4	
	comp=Z,292nm,19.0s,baz=261,slow=31						
URZ	**Urewera**	**21.49**	**192**	LR	LR	19 22 42.3	
	comp=Z,307nm,18.2s,baz=29,slow=35						
HNR	**Honiara**	**23.37**	**287**	LR	LR	19 23 11.3	
	comp=Z,285nm,19.8s,baz=321,slow=34						
PPT2	**Papeete2**	**26.52**	**95**	*e*LR	LR	19 22 08.7	
	678nm,27.2s						
PPT	**Papeete**	**26.53**	**95**	LR	LR	19 23 42.7	
	comp=Z,142nm,18.1s,baz=187,slow=31						
TBI	**Tubuai**	**26.85**	**108**	*e*LR	LR	19 22 25.2	
	661nm,28.8s						
CTA	**Charters Tower**	**34.53**	**260**	LR	LR	19 29 19.5	
	comp=Z,284nm,20.4s,baz=87,slow=33						
STKA	**Stephens Creek**	**39.81**	**241**	LR	LR	19 30 33.9	
	comp=Z,92nm,19.5s,baz=205,slow=31						
RKT	**Rikitea**	**40.13**	**106**	*e*LR	LR	19 28 20.9	
	577nm,30.8s						
WRA	**Warramunga Arr**	**45.72**	**259**	P	P	19 18 32.2	-0.5
	0.8nm,1.1s,baz=95,slow=7.1,SNR=3.9						
WRA				LR	LR	19 36 45.8	
	comp=Z,180nm,18.8s,baz=55,slow=35						
ASAR	**Alice Springs**	**45.91**	**254**	P	P	19 18 34.2	0.0
	4.6nm,1.0s,baz=88,slow=7.5,SNR=26						
ASAR				LR	LR	19 37 17.0	
	comp=Z,262nm,18.1s,baz=101,slow=35						
VNDA	**Vanda**	**61.19**	**185**	LR	LR	19 42 34.7	
	comp=Z,69nm,18.8s,baz=229,slow=32						
PETK	**Petropavlovsk-**	**73.30**	**345**	LR	LR	19 57 00.4	
	comp=Z,30nm,18.1s,baz=322,slow=38						
MAW	**Mawson**	**84.81**	**200**	LR	LR	19 55 41.2	
	comp=Z,144nm,19.2s,baz=314,slow=32						
ILAR	**Eielson Array**	**85.03**	**13**	P	P	19 22 45.2	-1.2
	1.7nm,1.2s,baz=224,slow=5.0,SNR=4.4						
ILAR				LR	LR	19 53 15.8	
	comp=Z,63nm,20.3s,baz=162,slow=30						
YKA	**Yellowknife Ar**	**93.33**	**24**	P	P	19 23 25.7	-0.2
	0.1nm,0.8s,baz=243,slow=7.6,SNR=3.6						
BRTR	**Keskin Array B**	**145.00**	**316**	PKPbc	PKPab	19 29 47.1	-1.3
	3.5nm,1.0s,baz=56,slow=2.6,SNR=10						
GERES	**GERESS Array B**	**147.22**	**346**	PKPbc	PKPab	19 29 56.2	-0.2
	0.2nm,0.2s,baz=334,slow=6.5,SNR=3.6						

*DDA **24** 19:31:08.8, 38°.91N×26°.92E, h7km, MD3.3*
*ISK **24** 19:31:08.5, 38°.89N×26°.88E, h14km, MD3.1*
*ISCJB **24** 19:31:09.1±0.4, 38°.89N±0°.02×26°.91E±0°.03, h9km±4km, Error ellipse: s-maj=3.4km s-min=3.1km az=139.2*
*ATH **24** 19:31:09.7, 38°.86N×26°.83E, h31km±2km, MD3.3/5*
*CSEM **24** 19:31:09.5±0.1, 38°.90N×26°.94E, h10km, MD3.3, Error ellipse: s-maj=2.9km s-min=2.8km az=25.0*
*THE **24** 19:31:10.7, 38°.83N×26°.84E, h0km±2km, ML2.3/4, Error ellipse: s-maj=4.1km s-min=1.6km az=107.0*

ISC 24 19:31:09.6±1.0, 38°.89N±0°.02×26°.91E±0°.02, h12km±8km, n76, σ0°64/109, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.45**	**338**	*i* P	**Pg**	**19 31 18.7**	**+0.2**
AYVA				*i* S	**Sg**	**19 31 24.9**	**+0.3**
AYVA	**Ayvalik**	**0.45**	**338**	*i* P	**Pg**	**19 31 18.7**	**+0.2**
AYVA				*i* S	**Sg**	**19 31 24.9**	**+0.3**
BLCB	**Balcova**	**0.51**	**168**	*e*PG	**Pg**	**19 31 19.2**	**-0.3**
BLCB				*e*SG	**Sg**	**19 31 26.9**	**+0.4**
BLCB	**Balcova**	**0.51**	**168**	*e*Pg	**Pg**	**19 31 19.3**	**-0.3**
BLCB				*e*Sg	**Sg**	**19 31 26.9**	**+0.4**
URLA	**Izmir**	**0.58**	**205**	*i* P	**Pg**	**19 31 20.6**	**-0.3**
URLA				*i* S	**Sb**	**19 31 29.7**	**-0.2**
URLA	**Izmir**	**0.58**	**205**	*i* P	**Pg**	**19 31 20.6**	**-0.3**
URLA				*i* S	**Sb**	**19 31 29.7**	**-0.2**
PRK	**Paraskevi**	**0.61**	**306**	P	**Pb**	**19 31 22.0**	**-0.2**
PRK				S	**Sn**	**19 31 33.1**	**-0.7**
PRK	**Paraskevi**	**0.61**	**306**	*e*PN	**Pg**	**19 31 21.5**	**0.0**
PRK				*e*SN	**Sb**	**19 31 31.0**	**+0.3**
PRK	**Paraskevi**	**0.61**	**306**	*e*Pn	**Pg**	**19 31 21.5**	**0.0**
PRK	**Paraskevi**	**0.61**	**306**	P	**Pb**	**19 31 22.0**	**-0.2**
PRK				*e*Sn	**Sb**	**19 31 31.0**	**+0.3**
PRK				S	**Sn**	**19 31 33.1**	**-0.7**
AKS	**Akhisar**	**0.71**	**90**	*e*PG	**Pg**	**19 31 23.2**	**-0.1**
AKS				*e*SG	**Sg**	**19 31 33.2**	**+0.6**
AKS	**Akhisar**	**0.71**	**90**	*e*Pg	**Pg**	**19 31 23.2**	**-0.1**
AKS				*e*Sg	**Sg**	**19 31 33.2**	**+0.6**
CHOS	**Chios island**	**0.83**	**233**	P	**Pg**	**19 31 25.2**	**-0.5**
CHOS				S	**Sg**	**19 31 36.5**	**-0.2**
CHOS	**Chios island**	**0.83**	**233**	*e*PN	**Pg**	**19 31 25.2**	**-0.5**
CHOS				*e*SN	**Sg**	**19 31 36.3**	**-0.4**
CHOS	**Chios island**	**0.83**	**233**	P	**Pg**	**19 31 25.3**	**-0.5**
CHOS				S	**Sg**	**19 31 36.5**	**-0.2**
SIGR	**SIGRI**	**0.88**	**292**	P	**Pg**	**19 31 26.6**	**0.0**
SIGR				S	**Sn**	**19 31 39.9**	**-0.6**
SIGR	**SIGRI**	**0.88**	**292**	P	**Pg**	**19 31 26.6**	**0.0**
SIGR				S	**Sn**	**19 31 39.9**	**-0.6**
BALY	**Balya**	**1.01**	**33**	*i* P	**Pb**	**19 31 28.9**	**-0.2**
BALY				*i* S	**Sn**	**19 31 44.7**	**+0.8**
BALY	**Balya**	**1.01**	**33**	*i* P	**Pb**	**19 31 28.9**	**-0.2**
EZN	**Ezine**	**1.04**	**334**	*e*PG	**Pb**	**19 31 28.9**	**-0.5**
EZN				*e*SG	**Sg**	**19 31 43.1**	**0.0**
EZN	**Ezine**	**1.04**	**334**	*e*Pg	**Pb**	**19 31 29.0**	**-0.5**
EZN				*e*Sg	**Sg**	**19 31 43.1**	**0.0**
BALB	**Balikesir**	**1.06**	**45**	*e*PN	**Pb**	**19 31 30.0**	**+0.1**
BALB				*e*SN	**Sn**	**19 31 45.8**	**+0.8**
BALB	**Balikesir**	**1.06**	**45**	*e*Pn	**Pb**	**19 31 30.0**	**+0.1**
BALB				*e*Sn	**Sn**	**19 31 45.8**	**+0.8**
BOZC	**Bozcaada**	**1.16**	**325**	*i* P	**Pb**	**19 31 31.0**	**-0.6**
BOZC				*i* S	**Sb**	**19 31 46.6**	**0.0**
GONE	**Gonen-Balikesi**	**1.30**	**27**	*e*PN	**Pn**	**19 31 33.4**	**-0.2**
GONE	**Gonen-Balikesi**	**1.30**	**27**	*e*Pn	**Pn**	**19 31 33.4**	**-0.2**
DURS	**Dursunbey**	**1.41**	**59**	*i* P	**Pn**	**19 31 35.0**	**-0.2**
DURS				*i* S	**Sn**	**19 31 53.3**	**-0.4**
DURS	**Dursunbey**	**1.41**	**59**	*i* P	**Pn**	**19 31 35.0**	**-0.2**
DURS				*i* S	**Sn**	**19 31 53.3**	**-0.4**
DEMI	**Demirci**	**1.42**	**83**	*i* P	**Pg**	**19 31 36.6**	**-0.2**
DEMI				*i* S	**Sb**	**19 31 54.8**	**+0.7**
DEMI	**Demirci**	**1.42**	**83**	*i* P	**Pg**	**19 31 36.6**	**-0.2**
DEMI				*i* S	**Sb**	**19 31 54.8**	**+0.7**
KULA	**Kula-Manisa**	**1.42**	**105**	*e*PN	**Pn**	**19 31 34.6**	**-0.7**
KULA	**Kula-Manisa**	**1.42**	**105**	*e*Pn	**Pn**	**19 31 34.6**	**-0.7**
AYDN	**Tasoluk**	**1.45**	**148**	*i* P	**Pn**	**19 31 35.1**	**-0.5**
AYDN				*i* S	**Sn**	**19 31 54.5**	**0.0**
AYDN	**Tasoluk**	**1.45**	**148**	*i* P	**Pn**	**19 31 35.1**	**-0.5**
AYDN				*i* S	**Sn**	**19 31 54.5**	**0.0**
LPK	**Lapseki**	**1.49**	**356**	*e*PN	**Pn**	**19 31 35.3**	**-0.8**
LPK	**Lapseki**	**1.49**	**356**	*e*Pn	**Pn**	**19 31 35.3**	**-0.8**
KRBG	**Karabiga-Canak**	**1.53**	**11**	*e*PN	**Pn**	**19 31 36.1**	**-0.7**
KRBG	**Karabiga-Canak**	**1.53**	**11**	*e*Pn	**Pn**	**19 31 36.1**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.54**	**348**	*e*PN	**Pn**	**19 31 36.4**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.54**	**348**	*e*Pn	**Pn**	**19 31 36.4**	**-0.5**
EDC	**Edincik**	**1.63**	**27**	*e*PN	**Pn**	**19 31 37.6**	**-0.5**
EDC	**Edincik**	**1.63**	**27**	*e*Pn	**Pn**	**19 31 37.7**	**-0.5**
BNT	**Bandirma**	**1.66**	**28**	*e*PN	**Pn**	**19 31 37.9**	**-0.6**
BNT	**Bandirma**	**1.66**	**28**	*e*Pn	**Pn**	**19 31 37.9**	**-0.6**
LIA	**Limnos Island**	**1.67**	**308**	P	**Pn**	**19 31 38.8**	**+0.1**
LIA				S	**Sg**	**19 32 02.8**	**-0.6**
LIA	**Limnos Island**	**1.67**	**308**	*e*PB	**Pn**	**19 31 38.3**	**-0.4**
LIA	**Limnos Island**	**1.67**	**308**	*e*Pb	**Pn**	**19 31 38.3**	**-0.4**
LIA	**Limnos Island**	**1.67**	**308**	P	**Pn**	**19 31 38.8**	**+0.1**
LIA				S	**Sg**	**19 32 02.8**	**-0.6**
KCTX	**Karacabey (Bur**	**1.77**	**39**	*e*PN	**Pn**	**19 31 39.2**	**-0.9**
KCTX	**Karacabey (Bur**	**1.77**	**39**	*e*Pn	**Pn**	**19 31 39.2**	**-0.9**
MRMT	**Marmara Adasi**	**1.79**	**17**	*e*PN	**Pn**	**19 31 39.5**	**-0.9**
MRMT	**Marmara Adasi**	**1.79**	**17**	*e*Pn	**Pn**	**19 31 39.5**	**-0.9**
RKY	**Sarkoy-Tekirda**	**1.81**	**7**	*e*PN	**Pn**	**19 31 40.6**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.81**	**7**	*e*Pn	**Pn**	**19 31 40.6**	**0.0**
SMTH	**Samothraki Isl**	**1.91**	**327**	*e*PN	**Pn**	**19 31 42.0**	**+0.1**
SMTH	**Samothraki Isl**	**1.91**	**327**	*e*Pn	**Pn**	**19 31 42.0**	**+0.1**
ENEZ	**Enez**	**1.94**	**343**	*e*PN	**Pn**	**19 31 41.9**	**-0.4**
ENEZ	**Enez**	**1.94**	**343**	*e*Pn	**Pn**	**19 31 41.9**	**-0.4**
TVSB	**Tavsanli**	**2.06**	**73**	*e*PN	**Pn**	**19 31 44.3**	**+0.1**
TVSB	**Tavsanli**	**2.06**	**73**	*e*Pn	**Pn**	**19 31 44.3**	**+0.1**
ALN	**Alexandroupoli**	**2.11**	**342**	P	**Pb**	**19 31 46.7**	**-1.1**
ALN				S	**Sb**	**19 32 14.6**	**+0.6**
ALN	**Alexandroupoli**	**2.11**	**342**	*e*PB	**Pn**	**19 31 46.1**	**+1.4**
ALN	**Alexandroupoli**	**2.11**	**342**	*e*Pb	**Pn**	**19 31 46.1**	**+1.4**
ALN	**Alexandroupoli**	**2.11**	**342**	P	**Pb**	**19 31 46.7**	**-1.1**
ALN				S	**Sb**	**19 32 14.6**	**+0.6**
APE	**Apeiranthos**	**2.12**	**211**	P	**Pn**	**19 31 46.2**	**+1.4**
APE	**Apeiranthos**	**2.12**	**211**	P	**Pn**	**19 31 46.2**	**+1.4**
CRLT	**Corlu**	**2.33**	**16**	*e*PN	**Pn**	**19 31 48.0**	**+0.3**
CRLT	**Corlu**	**2.33**	**16**	*e*Pn	**Pn**	**19 31 48.0**	**+0.3**
AOS	**Alonnisos**	**2.38**	**278**	P	**Pn**	**19 31 50.1**	**+1.8**
AOS	**Alonnisos**	**2.38**	**278**	P	**Pn**	**19 31 50.1**	**+1.8**
CTKS	**Kestanelik-??a**	**2.65**	**27**	*e*PN	**Pn**	**19 31 52.0**	**-0.1**
CTKS	**Kestanelik-??a**	**2.65**	**27**	*e*Pn	**Pn**	**19 31 52.0**	**-0.1**
PAIG	**Paliouri**	**2.71**	**294**	P	**Pn**	**19 31 54.5**	**+1.6**
PAIG	**Paliouri**	**2.71**	**294**	P	**Pn**	**19 31 54.5**	**+1.6**
EDRB	**Edirne**	**2.96**	**358**	*e*PN	**Pn**	**19 31 57.0**	**+0.7**
EDRB	**Edirne**	**2.96**	**358**	*e*Pn	**Pn**	**19 31 57.0**	**+0.7**

*CSEM **24** 19:33:02.8±0.6, 36°.37N×21°.65E, h2km, ML2.1/6, Error ellipse: s-maj=9.8km s-min=5.0km az=51.0*
*ATH **24** 19:33:04.0, 36°.42N×21°.71E, h5km±2km, MD3.2/12*

THE 24 19:33:05.1, 36°.44N×21°.74E, h0km±2km, ML2.1/6, Error ellipse: s-maj=2.8km s-min=0.9km az=217.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.45**	**1**	P	Pg	19 33 13.4	-0.4
PYL				S	Sg	19 33 20.7	+1.0
PYL	**PYLOS**	**0.45**	**1**	*e*PB	Pg	19 33 12.9	-0.9
PYL				*e*SB	Sg	19 33 20.1	+0.4
**P

SWZ					AML	AML	20 02 47.2		
	comp=Z,219nm,0.2s								
LBTB	**Lobatse**	**2.20**	**308**	ǁ *i* P		Pn	20 02 20.5	+0.9	
LBTB				*eS*		Sn	20 02 48.1	+0.6	
LBTB					AML	AML	20 02 51.3		
	comp=Z,215nm,0.7s								
BOSA	**Boshof**	**2.97**	**222**	⇑ *i* P		Pn	20 02 30.1	-0.1	
BOSA				*eS*		Sn	20 03 04.0	-2.4	
BOSA					AML	AML	20 03 13.2		
	comp=Z,40nm,0.3s								
POGA	**Pongola**	**3.80**	**106**	*e*P		Pn	20 02 43.0	+1.6	
POGA				*eS*		Sn	20 03 25.6	-1.1	
POGA					AML	AML	20 03 43.5		
	comp=Z,72nm,0.5s								
KSD	**Kokstad**	**4.46**	**158**	*e*P		Pn	20 02 52.0	+1.4	
KSD				*eS*		Sn	20 03 42.1	-1.1	
KSD					AML	AML	20 04 05.4		
	comp=Z,58nm,0.5s								
MSNA	**Messina**	**4.65**	**30**	*e*P		Pn	20 02 54.6	+1.4	
MSNA				*eS*		Sn	20 03 46.2	-1.6	
MSNA					AML	AML	20 04 11.6		
	comp=Z,25nm,0.3s								
BLWY	**Bulawayo**	**6.32**	**10**	*i* P		Pn	20 03 15.8	-0.5	
BLWY				*i*			20 03 16.4		
	baz=340,slow=14								
BLWY				*i* S		Sn	20 04 25.1	-4.1	
SUR	**Sutherland**	**8.33**	**223**	*e*P		Pn	20 03 44.6	+0.7	
SUR				*eS*		Sn	20 05 13.6	-5.3	
SUR					AML	AML	20 06 18.4		
	comp=Z,7.2nm,0.4s								

DJA ***24*** *20:12:13.2±1.1,3˚N±6˚×9˚6E±1˚0,h10km,M4.6/4,mb4.8/4, mB5.1/2,MLv4.5/4,Mw(mB)4.5/2*

IDC ***24*** *20:12:13.7±0.6,2.˚64N×95.˚93E,h0km,mb4.3/19, mb1 4.4/21,mb1mx4.3/29,mbtmp4.3/21,ML3.9/2,MS3.9/9, Ms1 3.9/9,ms1mx3.4/43,Error ellipse: s-maj=20.2km s-min=12.4km az=42.0*

MOS ***24*** *20:12:16.9±0.8,2.˚66N×95.˚95E,h33km,mb4.8/20,Error ellipse: s-maj=12.3km s-min=7.1km az=110.9*

ISCJB ***24*** *20:12:18.6±0.8,2.˚70N±0.˚05×95.˚99E±0.˚05,h46km±7km, mb4.5/52,MS4.1/19,Error ellipse: s-maj=10.6km s-min=4.7km az=138.5*

NEIC ***24*** *20:12:19.7±1.5,2.˚69N×96.˚01E,h41km±13km,mb4.6/12, Error ellipse: s-maj=13.1km s-min=5.2km az=55.0*

BJI ***24*** *20:12:20.1,2.˚38N×96.˚17E,h86km,mB4.9/26,mb4.8/41, Ms4.4/26,Ms7 4.2/23*

ISC 24 20:12:21.0±1.0,2.˚70N±0.˚05×96.˚03E±0.˚07,h54km±8km, n150,σ1§42/159,mb4.5/52,MS4.1/19,6C-3D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**2.07**	**132**	P		**Pn**		**20 12 51.6**	**-1.8**
GSI				S		**Sn**		**20 13 16.2**	**-1.9**
TSI	**Tuntungan**	**2.65**	**72**	P		Pn		20 13 03.3	+2.0
BSI	**Banda Aceh**	**2.87**	**345**	P		**Pn**		**20 13 01.3**	**-3.1**
BSI				S		**Sn**		**20 13 35.8**	**-2.0**
PSI	**Prapat**	**2.89**	**88**	Pn		**Pn**		**20 13 04.4**	**-0.3**
PSI	**Prapat**	**2.89**	**88**	P		**Pn**		**20 13 05.1**	**+0.4**
PSI	**Prapat**	**2.89**	**88**	Pn		**Pn**		**20 13 04.4**	**-0.3**
	8.5nm,0.3s,baz=286,slow=6.6,SNR=35								
PSI					LR	LR		20 14 08.4	
	comp=Z,336nm,19.6s,baz=267,slow=38								
CMBY	**CAMPBELL BAY**	**4.77**	**334**	*e*P		Pn		20 13 26.4	-3.9
CMBY				*eS*		**Sn**		**20 14 22.6**	**-1.8**
KULM	**Kulim**	**5.28**	**61**	P		**Pn**		**20 13 38.8**	**+1.5**
KULM	**Kulim**	**5.28**	**61**	P		**Pn**		**20 13 37.8**	**+0.5**
	248nm,0.9s,2μm								
IPM	**Ipoh**	**5.29**	**70**	P		**Pn**		**20 13 38.8**	**+1.3**
IPM	**Ipoh**	**5.29**	**70**	P		**Pn**		**20 13 38.2**	**+0.7**
	142nm,1.2s,2μm								
PPI	**Padang Panjang**	**5.37**	**126**	P		**Pn**		**20 13 38.6**	**-0.1**
	56nm,1.1s								
FRIM	**Kepong**	**5.61**	**84**	P		**Pn**		**20 13 42.7**	**+0.8**
KGM	**Kluang**	**7.31**	**95**	P		**Pn**		**20 14 05.9**	**+0.6**
KTGM	**Kuala Trenggan**	**7.55**	**70**	P		**Pn**		**20 14 09.5**	**+1.0**
MYKOM	**Kota Tinggi**	**7.86**	**96**	P		**Pn**		**20 14 13.7**	**+0.8**
MYKOM	**Kota Tinggi**	**7.86**	**96**	P		**Pn**		**20 14 13.6**	**+0.8**
PBA	**Port Blair**	**9.48**	**340**	*e*P		Pn		20 14 31.3	-3.6
PBA					AMB	AMB		20 14 34.9	
	comp=Z,29nm,1.8s								
PBA				*eS*		Sn		20 16 15.5	-4.5
DGPR	**DIGLIPUR**	**10.85**	**344**	*ex*		x		20 14 47.9	
CM31	**Chiang Mai Arr**	**15.92**	**10**	*e*Pn		**Pn**		**20 16 00.5**	**-1.2**
	comp=Z,13nm,0.9s								
CMAR	**Chiang Mai Arr**	**15.92**	**10**	Pn		**Pn**		**20 16 00.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**15.92**	**10**	Pn		**Pn**		**20 16 00.8**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=197,slow=13,SNR=26								
CMAR					LR	LR		20 21 51.3	
	comp=Z,175nm,21.0s,baz=200,slow=36								
SBUM	**Sibu**	**16.17**	**91**	P		**P**		**20 16 05.6**	**-1.7**
CHTO	**Chiang Mai**	**16.27**	**10**	*e*P		**Pn**		**20 16 04.5**	**-1.5**
CHTO					pmax	pmax			
	comp=Z,12nm,1.0s								
CHTO	**Chiang Mai**	**16.27**	**10**	*e*P		**Pn**		**20 16 04.5**	**-1.5**
	comp=Z,12nm,1.0s								
BTM	**Bintulu**	**17.04**	**88**	P		**P**		**20 16 18.3**	**+1.5**
KKM	**Kota Kinabalu**	**20.39**	**80**	P		**P**		**20 16 52.4**	**-1.4**
QIZ	**Qiongzhong**	**21.12**	**39**	P		**P**		**20 16 59.4**	**-2.0**
QIZ				S		S		20 20 45.1	-8.5
QIZ					LR	LR			
	comp=N,400nm,16.2s								
QIZ					LR	LR			
	comp=E,290nm,16.7s								
QIZ					LR	LR			
	comp=Z,280nm,19.3s								
KDM	**Kudat**	**21.14**	**78**	P		**P**		**20 17 02.6**	**+0.9**
SDKM	**Sandakan**	**21.30**	**81**	P		**P**		**20 17 05.3**	**+1.8**
MYLDM	**Lahad Datu**	**22.55**	**83**	P		**P**		**20 17 18.4**	**+1.6**
HYB	**Hyderabad**	**22.55**	**312**	*i* P		**P**		**20 17 18.0**	**+1.2**
SHL	**Shillong**	**23.08**	**350**	*e*P		**P**		**20 17 21.0**	**-1.4**
BOK	**Bokaro**	**23.15**	**336**	*e*P		**P**		**20 17 22.1**	**-0.8**
KMI	**Kunming**	**23.21**	**16**	P		**P**		**20 17 24.9**	**+1.2**
KMI				S		S		20 21 22.8	-9.0
KMI					pmax	pmax			
	comp=Z,13nm,1.2s								
KMI					LR	LR			
	comp=N,410nm,15.6s								
KMI					LR	LR			
	comp=E,190nm,13.3s								
KMI					LR	LR			
	comp=Z,380nm,15.0s								
KAPI	**Kappang**	**24.90**	**108**	*e*P		**P**		**20 17 39.0**	**-0.2**
	comp=Z,22nm,1.0s								
KAPI	**Kappang**	**24.90**	**108**	P		**P**		**20 17 39.4**	**+0.2**
	comp=Z,19nm,0.8s,baz=274,slow=12,SNR=12								
ODAN	**Odare**	**25.41**	**342**	*e*P		**P**		**20 17 45.3**	**+1.4**
	comp=Z,78nm,0.8s								
RAMN	**Ramite**	**25.75**	**340**	*e*P		**P**		**20 17 48.4**	**+1.4**
	comp=Z,143nm,0.8s								
TAPN	**Taplejung**	**25.77**	**343**	*e*P		**P**		**20 17 48.6**	**+1.3**
	comp=Z,80nm,0.9s								
PKI	**Pulchoki**	**26.74**	**339**	*e*P		**P**		**20 17 56.6**	**+0.6**
	comp=Z,60nm,0.9s								
PKIN	**Phulchoki**	**26.75**	**339**	*e*P		**P**		**20 17 57.2**	**+1.2**
	comp=Z,25nm,0.7s								
GUN	**Gumba**	**26.88**	**340**	*e*P		**P**		**20 17 58.3**	**+1.0**
	comp=Z,120nm,0.8s								
DMN	**Daman**	**26.88**	**338**	*e*P		**P**		**20 17 58.1**	**+0.9**
	comp=Z,54nm,0.9s								
KKN	**Kakani**	**26.98**	**339**	*e*P		**P**		**20 17 58.8**	**+0.7**
	comp=Z,90nm,0.9s								
BHPL	**Bhopal**	**27.24**	**320**	*e*P		**P**		**20 17 58.2**	**-2.0**
LSA	**Lhasa**	**27.25**	**351**	P		**P**		**20 18 02.0**	**+1.3**
LSA					pmax	pmax			
	comp=Z,10.0nm,0.8s								
LSA	**Lhasa**	**27.25**	**351**	*e*P		**P**		**20 18 01.2**	**+0.5**
LSA					pmax	pmax			
	comp=Z,29nm,0.8s								
LSA	**Lhasa**	**27.25**	**351**	*e*P		**P**		**20 18 01.2**	**+0.5**
	comp=Z,28nm,0.8s								
KOLN	**Koldanda**	**27.62**	**336**	*e*P		**P**		**20 18 04.7**	**+0.9**
	comp=Z,57nm,0.7s								
DANN	**Dangsing**	**28.07**	**337**	*e*P		**P**		**20 18 08.7**	**+0.8**
	comp=Z,62nm,0.6s								
PYUN	**Piuthan**	**28.16**	**335**	*e*P		**P**		**20 18 09.2**	**+0.6**
	comp=Z,52nm,0.8s								
CD2	**Chengdu**	**28.99**	**14**	P		**P**		**20 18 16.0**	**+0.2**
CD2				PP		**PnPn**		**20 19 12.1**	**+2.1**
CD2				PcP		**PcP**		**20 21 24.6**	**+1.1**
CD2				S		S		20 22 56.0	-7.2
CD2					pmax	pmax			
	comp=Z,30nm,0.5s								
CD2					pmax	pmax			
	comp=Z,70nm,4.7s								
CD2					LR	LR			
	comp=N,430nm,15.2s								
CD2					LR	LR			
	comp=E,340nm,16.2s								
CD2					LR	LR			
	comp=Z,430nm,12.3s								
DDI	**Dehra Dun**	**32.32**	**330**	*ex*		P		20 18 39.8	-5.4
SMLA	**Simla**	**33.42**	**330**	*e*P		**P**		**20 18 54.6**	**0.0**
SMLA					AMB	AMB		20 18 55.5	
	comp=Z,11nm,0.6s								
XAN	**Xi'an**	**33.42**	**20**	P		**P**		**20 18 54.3**	**-0.4**
XAN					pmax	pmax			
	comp=Z,5.0nm,1.0s								
XAN					pmax	pmax			
	comp=Z,19nm,5.8s								
XAN					LR	LR			
	comp=N,120nm,16.9s								
XAN					LR	LR			
	comp=E,40nm,11.3s								
XAN					LR	LR			
	comp=Z,62nm,17.2s								
LZH	**Lanzhou**	**34.00**	**11**	*e*P		**P**		**20 19 01.5**	**+1.6**
LZH					pP	pP		20 19 23.8	+10
LZH					PP	**PP**		**20 20 17.3**	**-0.4**
LZH					pmax	pmax			
	comp=Z,20nm,1.1s								
LZH					pmax	pmax			
	comp=Z,65nm,5.0s								
LZH					LR	LR			
	comp=N,320nm,13.5s								
LZH					LR	LR			
	comp=E,350nm,12.8s								
LZH					LR	LR			
	comp=Z,390nm,16.7s								
DHRM	**DHARAMSHALA**	**34.76**	**330**	*e*P		**P**		**20 19 06.4**	**-0.2**
FITZ	**Fitzroy Crossi**	**35.75**	**126**	P		**P**		**20 19 14.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**35.75**	**126**	P		**P**		**20 19 14.6**	**-0.4**
	comp=Z,2.5nm,0.8s,baz=323,slow=5.1,SNR=5.2								
NJ2	**Nanjing**	**36.24**	**34**	*e*P		**P**		**20 19 19.9**	**+0.9**
NJ2					S	S		20 24 48.5	-7.2
NJ2					pmax	pmax			
	comp=Z,20nm,0.6s								
NJ2					LR	LR			
	comp=N,190nm,14.8s								
NJ2					LR	LR			
	comp=E,220nm,14.8s								
GTA	**Gaotai**	**36.70**	**5**	*e*P		**P**		**20 19 23.8**	**+0.8**
GTA					S	S		20 24 56.8	-6.1
GTA					pmax	pmax			
	comp=Z,23nm,1.0s								
GTA					pmax	pmax			
	comp=Z,92nm,5.0s								
GTA					LR	LR			
	comp=N,89nm,11.2s								
GTA					LR	LR			
	comp=E,110nm,11.6s								
GTA					LR	LR			
	comp=Z,150nm,16.2s								
HHC	**Hu-ho-hao-te**	**40.48**	**18**	*e*P		**P**		**20 19 53.5**	**-1.2**
HHC					PP	**PnPn**		**20 21 30.8**	**-2.2**
HHC					S	S		20 25 52.1	-7.7
HHC					pmax	pmax			
	comp=Z,32nm,1.1s								
HHC					pmax	pmax			
	comp=Z,190nm,3.7s								
HHC					LR	LR			
	comp=N,220nm,11.9s								
HHC					LR	LR			
	comp=E,410nm,11.9s								
HHC					LR	LR			
	comp=Z,320nm,13.1s								
KSH	**Kashi**	**40.93**	**336**	P		**P**		**20 19 57.6**	**-0.9**
KSH				PP		**PnPn**		**20 21 36.3**	**-2.1**
KSH				PcP		**PcP**		**20 21 56.3**	**-1.8**
KSH				ScP		**ScP**		**20 25 38.3**	**-5.1**
KSH				PcS		**PcS**		**20 25 45.9**	**-3.2**
KSH				S		S		20 25 56.3	-10
KSH					pmax	pmax			
	comp=Z,2.0nm,0.3s								
KSH					pmax	pmax			
	comp=Z,62nm,3.0s								
KSH					LR	LR			
	comp=N,38nm,3.9s								
KSH					LR	LR			
	comp=E,91nm,4.4s								
KSH					LR	LR			
	comp=Z,290nm,4.8s								
BJI	**Beijing**	**41.41**	**24**	P		**P**		**20 20 03.9**	**+1.7**
BJI				S		**S**		**20 26 09.1**	**-4.3**
BJI					pmax	pmax			
	comp=Z,70nm,0.8s								
BJI					LR	LR			
	comp=N,120nm,16.8s								
BJI					LR	LR			
	comp=E,150nm,18.1s								
WMQ	**Urumqi**	**41.61**	**351**	P		**P**		**20 20 05.0**	**+1.1**
WMQ				pP		pP		20 20 28.0	+10
WMQ				PP		**PnPn**		**20 21 45.0**	**-1.1**
WMQ				PcP		**PcP**		**20 22 03.0**	**+2.9**
WMQ				S		**S**		**20 26 12.0**	**-4.4**
WMQ				ScS		**ScS**		**20 29 57.0**	**-5.5**
WMQ					pmax	pmax			
	comp=Z,16nm,1.0s								
WMQ					pmax	pmax			
	comp=Z,130nm,5.0s								
WMQ					LR	LR			
	comp=N,250nm,14.0s								
WMQ					LR	LR			
	comp=E,240nm,14.0s								
WMQ					LR	LR			
	comp=Z,250nm,14.0s								
WRA	**Warramunga Arr**	**43.82**	**123**	P		**P**		**20 20 22.2**	**+0.1**
WRA	**Warramunga Arr**	**43.82**	**123**	P		**P**		**20 20 22.2**	**+0.1**
	comp=Z,2.3nm,0.7s,baz=303,slow=9.3,SNR=14								
WRAB	**Tennant Creek**	**43.82**	**123**	*e*P		**P**		**20 20 22.2**	**+0.1**
WRAB					pmax	pmax			
	comp=Z,14nm,1.2s								
WRAB	**Tennant Creek**	**43.82**	**123**	*e*P		**P**		**20 20 22.2**	**+0.1**
	comp=Z,14nm,1.2s								
AAK	**Ala-Archa**	**44.17**	**337**	⇑ *e*P		**P**		**20 20 25.8**	**+1.1**
AAK					pmax	pmax			
	comp=Z,15nm,1.0s								
AAK					MLR	MLR			
	comp=Z,233nm,20.0s								
AAK	**Ala-Archa**	**44.17**	**337**	*e*P		**P**		**20 20 25.4**	**+0.7**
	comp=Z,4.0nm,0.8s								
AAK				*e*				20 22 09.3	
ASAR	**Alice Springs**	**45.23**	**128**	P		**P**		**20 20 33.4**	**+0.1**
ASAR	**Alice Springs**	**45.23**	**128**	P		**P**		**20 20 33.4**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=301,slow=7.9,SNR=21								
KSAR	**Wonju Array Be**	**45.28**	**36**	P		**P**		**20 20 34.0**	**+0.6**
KSRS	**Korea Array**	**45.31**	**36**	P		**P**		**20 20 34.0**	**+0.4**
	comp=Z,4.6nm,0.8s,baz=230,slow=9.4,SNR=9.6								
KSRS					LR	LR		20 41 54.4	
	comp=Z,160nm,18.7s,baz=225,slow=39								
MK31	**Makanchi Array**	**45.52**	**347**	*e*P		**P**		**20 20 35.6**	**+0.4**
MK31	**Makanchi Array**	**45.52**	**347**	*e*P		**P**		**20 20 35.6**	**+0.4**
MKAR	**Makanchi Array**	**45.52**	**347**	P		**P**		**20 20 35.9**	**+0.6**
MKAR	**Makanchi Array**	**45.52**	**347**	P		**P**		**20 20 35.9**	**+0.6**
MKAR	**Makanchi Array**	**45.52**	**347**	P		**P**		**20 20 35.9**	**+0.6**
	comp=Z,8.3nm,0.7s,baz=159,slow=8.6,SNR=101								
SONM	**Songino Array**	**45.84**	**10**	P		**P**		**20 20 38.6**	**+0.7**
SONM					PcP	**PcP**		**20 22 15.6**	**+1.1**
SONM	**Songino Array**	**45.84**	**10**	P		**P**		**20 20 38.6**	**+0.7**
	comp=Z,7.7nm,0.8s,baz=189,slow=8.7,SNR=36								
SONM					PcP	**PcP**		**20 22 15.6**	**+1.1**
	comp=Z,2.1nm,0.8s,baz=192,slow=4.0,SNR=3.7								
ULN	**Ulaanbaatar**	**45.99**	**10**	*e*P		**P**		**20 20 39.0**	**-0.1**
	comp=Z,6.0nm,0.9s								
ZAK	**Zakamensk**	**47.91**	**6**	*e*P		**P**		**20 20 54.2**	**+0.3**
ZAK					pmax	pmax			
	comp=Z,3.0nm,1.1s								
CN2	**Changchun**	**48.52**	**28**	*e*P		**P**		**20 20 57.0**	**-1.7**
KURK	**Kurchatov**	**50.06**	**346**	⇑ *e*P		**P**		**20 21 11.0**	**+0.8**
KURK					pmax	pmax			
	comp=Z,7.0nm,0.7s								
KURK					MLR	MLR			
	comp=Z,97nm,21.0s								
KURK	**Kurchatov**	**50.06**	**346**	*e*P		**P**		**20 21 10.9**	**+0.8**
	comp=Z,8.7nm,0.8s								
MDJ	**Mudanjiang**	**51.15**	**30**	P		**P**		**20 21 16.6**	**-2.0**
MDJ				S		S		20 28 24.5	-8.3
MDJ					pmax	pmax			
	comp=Z,8.0nm,1.9s								
MDJ					pmax	pmax			
	comp=Z,47nm,2.9s								
MJAR	**Matsushiro Arr**	**51.40**	**44**	LR		LR		20 45 15.0	
	comp=Z,78nm,18.4s,baz=240,slow=38								
ZAA0	**Zalesovo Array**	**51.91**	**352**	*e*P		**P**		**20 21 24.6**	**+0.5**
ZALV	**Zalesovo Beam**	**51.91**	**352**	P		**P**		**20 21 24.7**	**+0.6**
ZALV	**Zalesovo Beam**	**51.91**	**352**	P		**P**		**20 21 24.7**	**+0.6**
ZALV	**Zalesovo Beam**	**51.91**	**352**	P		**P**		**20 21 24.7**	**+0.6**
	comp=Z,2nm,0.7s,baz=181,slow=5.9,SNR=73								
USRK	**Ussuriysk Arra**	**52.12**	**32**	P		**P**		**20 21 26.0**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=197,slow=6.1,SNR=5.1								
NVS	**Novosibirsk**	**53.01**	**351**	*e*P		**P**		**20 21 31.7**	**-0.5**
NVS					pmax	pmax			
	comp=Z,9.0nm,1.0s								
NVS					pmax	pmax			
	comp=N,5.0nm,0.9s								
CTAO	**Charters Tower**	**54.22**	**117**	*e*P		**P**		**20 21 42.5**	**+0.8**
CTAO					pmax	pmax			
	comp=Z,4.0nm,0.8s								
CTAO	**Charters Tower**	**54.22**	**117**	*e*P		**P**		**20 21 42.5**	**+0.8**
	comp=Z,4.4nm,0.8s								
BRVK	**Borovoye**	**54.52**	**341**	*d* iP		**P**		**20 21 43.7**	**+0.4**
BRVK					pmax	pmax			
	comp=Z,11nm,1.2s								
BRVK	**Borovoye**	**54.52**	**341**	*e*P		**P**		**20 21 43.2**	**-0.1**
	comp=Z,7.4nm,0.9s								
STKA	**Stephens Creek**	**55.22**	**132**	P		**P**		**20 21 48.6**	**-0.2**
STKA	**Stephens Creek**	**55.22**	**132**	P		**P**		**20 21 48.6**	**-0.2**
	comp=Z,2.6nm,0.9s,baz=314,slow=11,SNR=4.7								
STKA					LR	LR		20 47 53.9	
	comp=Z,101nm,20.5s,baz=220,slow=39								
KMBO	**Kilima Mbogo**	**58.89**	**267**	P		**P**		**20 22 16.4**	**+1.1**
KMBO	**Kilima Mbogo**	**58.89**	**267**	P		**P**		**20 22 16.4**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=53,slow=15,SNR=2.2								
SVE	**Sverdlovsk**	**60.87**	**339**	⇑ *i* P		**P**		**20 22 28.6**	**+0.8**
SVE					pmax	pmax			
	comp=Z,19nm,0.9s								
ZEI	**Tsey**	**61.11**	**318**	*e*P		**P**		**20 22 29.9**	**-0.1**
ZEI					pmax	pmax			
	comp=Z,2.0nm,0.8s								
ARU	**Arti**	**61.36**	**337**	*c* iP		**P**		**20 22 30.9**	**-0.2**
ARU					S	**S**		**20 30 52.8**	**+5.1**
ARU					SS	**SS**		**20 34 49.0**	**-0.1**
ARU					pmax	pmax			
	comp=Z,13nm,1.0s								
KBZ	**Khabaz**	**62.18**	**319**	P		**P**		**20 22 36.9**	**0.0**
KBZ	**Khabaz**	**62.18**	**319**	P		**P**		**20 22 36.9**	**0.0**
KBZ	**Khabaz**	**62.18**	**319**	P		**P**		**20 22 36.9**	**0.0**
	comp=Z,2.6nm,0.8s,baz=147,slow=5.4,SNR=8.6								
KIV	**Kislovodsk**	**62.42**	**319**	ǁ *eP*		**P**		**20 22 38.9**	**+0.3**
KIV				*eS*		**S**		**20 31 06.0**	**+4.2**
KIV					pmax	pmax			
	comp=Z,6.0nm,1.4s								
MALT	**Malatya**	**63.27**	**312**	P		**P**		**20 22 45.3**	**+0.9**
MALT					pmax	pmax			
	comp=Z,3.0nm,0.9s								
MALT	**Malatya**	**63.27**	**312**	P		**P**		**20 22 45.3**	**+0.9**
	comp=Z,2.9nm,0.9s								
SOKR	**Solikamsk**	**64.27**	**339**	*e*P		**P**		**20 22 51.5**	**+1.1**
SOKR					pmax	pmax			
	comp=Z,10.0nm,0.6s								
YAK	**Yakutsk**	**64.32**	**17**	*c* iP		**P**		**20 22 50.7**	**0.0**
YAK					pmax	pmax			
	comp=Z,30nm,1.1s								
YAK					pmax	pmax			
	comp=E,7.0nm,1.3s								
YAK					pmax	pmax			
	comp=N,6.0nm,0.9s								
BRTR	**Keskin Array B**	**67.25**	**312**	P		**P**		**20 23 09.7**	**-0.6**
BRTR	**Keskin Array B**	**67.25**	**312**	P		**P**		**20 23 09.7**	**-0.6**
	comp=N,0.8nm,0.8s,baz=157,slow=6.7,SNR=5.4								
OBN	**Obninsk**	**70.74**	**328**	ǁ *eP*		**P**		**20 23 31.4**	**+0.1**
OBN					*e*			20 23 38.4	
OBN					*e*			20 23 48.3	
OBN					*e*			20 26 09.8	
OBN					pmax	pmax			
	comp=Z,9.0nm,1.0s								
SEY	**Seymchan**	**72.85**	**23**	ǁ *eP*		**P**		**20 23 44.8**	**+0.9**
AKASG	**Malin Array Be**	**73.37**	**322**	P		**P**		**20 23 46.2**	**-1.0**
AKASG	**Malin Array Be**	**73.37**	**322**	P		**P**		**20 23 46.2**	**-1.0**
AKASG	**Malin Array Be**	**73.37**	**322**	P		**P**		**20 23 46.2**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=99,slow=5.1,SNR=6.7								
LBTB	**Lobatse**	**73.51**	**243**	P		P		20 23 54.9	+6.2
	comp=Z,3.0nm,0.6s								
MAW	**Mawson**	**73.91**	**193**	LR		LR		20 51 49.7	
	comp=Z,154nm,18.0s,baz=140,slow=32								
JOF	**Joensuu**	**76.30**	**335**	*e*P		**P**		**20 24 02.5**	**-1.4**
JOF					pmax	pmax			
	comp=Z,2.0nm,0.6s								
JOF	**Joensuu**	**76.30**	**335**	*ep*		**P**		**20 24 02.5**	**-1.4**
	comp=Z,2.0nm,0.6s								
FINES	**FINESS Array B**	**78.14**	**333**	P		**P**		**20 24 14.3**	**+0.1**
FINES	**FINESS Array B**	**78.14**	**333**	P		**P**		**20 24 14.3**	**+0.1**
	comp=Z,4.0nm,0.7s,baz=117,slow=6.8,SNR=16								
KAF	**Kangasniemi**	**78.23**	**333**	*e*P		**P**		**20 24 14.5**	**-0.2**
KAF					pmax	pmax			
	comp=Z,5.0nm,0.7s								
KAF	**Kangasniemi**	**78.23**	**333**	*ep*		**P**		**20 24 14.5**	**-0.2**
	comp=Z,5.2nm,0.7s								
ARCES	**ARCESS Array B**	**80.74**	**340**	P		**P**		**20 24 28.9**	**+0.7**
ARCES	**ARCESS Array B**	**80.74**	**340**	P		**P**		**20 24 28.9**	**+0.7**
	comp=Z,4.2nm,0.8s,baz=96,slow=6.3,SNR=13								
ARCES					LR	LR		21 07 04.9	
	comp=Z,110nm,18.1s,baz=84,slow=41								
BRG	**Berggiesshubel**	**82.92**	**321**	*e*(P

MCHZ	McNeill Hill	7.24	193	ePN	P	20 19 01.1	+1.0
WHVZ	Whangaehu Hut	7.36	200	ePN	P	20 19 01.3	-0.3
BHHZ	Black Hill Sta	7.42	197	ePN	Pn	20 19 01.9	+0.6
PKVZ	Pokaka	7.44	202	ePN	P	20 19 03.7	+1.3
KAHZ	Kahuranaki	7.54	192	ePN	P	20 19 04.6	+1.0
PXZ	Pawanui	7.78	191	ePN	P	20 19 06.4	+0.2
PNHZ	Pukenui	7.79	195	ePN	Pn	20 19 06.1	+0.6
WPHZ	Waipukurau	7.89	194	ePN	P	20 19 07.6	+0.1
WAZ	Wanganui	7.97	202	ePN	P	20 19 09.4	+0.9
TSZ	Takapari Road	7.99	196	ePN	Pn	20 19 07.9	+0.2
DVHZ	Dannevirke	8.17	195	ePN	Pn	20 19 10.8	+0.9
BFZ	Birch Farm	8.52	194	ePN	Pn	20 19 14.8	+0.9
BFZ				eSN	S	20 20 52.0	-0.6
MRZ	Mangatainoka R	8.65	197	ePN	Pn	20 19 16.0	+0.5
MRZ				eSN	S	20 20 55.2	-0.1
HOWZ	Holdsworth Sta	8.89	197	ePN	Pn	20 19 17.9	-0.4
HOWZ				SN	S	20 20 58.3	-2.3
MTW	Mount Morrison	9.14	196	ePN	Pn	20 19 21.3	+0.1
MTW				SN	S	20 21 05.3	-0.7
CAW	Cannon Point	9.20	198	ePN	Pn	20 19 21.2	-0.7
TCW	Tory Channel	9.52	201	ePN	Pn	20 19 25.1	-0.5
PLWZ	Palliser	9.59	196	ePN	Pn	20 19 26.6	+0.1
QRZ	Quartz Range	9.82	209	ePN	P	20 19 30.3	+0.4
TUWZ	Tuamarina	9.83	202	ePN	Pn	20 19 28.8	-0.4
NNZ	Nelson	9.83	205	ePN	Pn	20 19 29.0	-0.2
BSWZ	Blackbirch Sta	10.10	202	ePN	Pn	20 19 32.8	+0.3
THZ	Tophouse	10.48	205	ePN	Pn	20 19 36.9	-0.1
KHZ	Kahutara	10.85	201	ePN	P	20 19 40.6	-0.6
OXZ	Oxford	12.15	204	ePN	P	20 19 55.9	+0.2
RPZ	Rata Peaks	12.85	206	P	P	20 20 03.7	+0.3
	2.2nm,0.3s,baz=40,slow=3.2,SNR=6.4						
RPZ				S	S	20 22 22.3	-1.8
	0.4nm,0.3s,baz=135,slow=19,SNR=3.0						
DZM	Mont Dzumac	15.09	310	P	P	20 20 29.8	+1.5
	0.2nm,0.3s,baz=122,slow=16,SNR=4.2						
STKA	Stephens Creek	31.46	261	P	P	20 23 03.9	+1.9
	3.1nm,1.0s,baz=93,slow=13,SNR=3.5						
ASAR	Alice Springs	40.39	271	P	P	20 24 16.9	-0.2
	0.5nm,0.6s,baz=104,slow=7.4,SNR=12						
WRA	Warramunga Arr	41.57	276	P	P	20 24 26.0	-0.6
	1.2nm,0.3s,baz=115,slow=7.7,SNR=44						
FINES	FINESS Array B	146.02	337	PKPbc	PKPdf	20 36 03.3	-4.6
	1.3nm,1.0s,baz=36,slow=2.6,SNR=5.2						

*ISCJB **24** 20:26:58.8±0.6, 6.24N±0.07×73.48W±0.08, h131km±6km, mb3.8/5, Error ellipse: s-maj=16.7km s-min=7.2km az=40.5*

*IDC **24** 20:26:59.1±0.8, 6.25N×73.47W, h122km±7km, mb3.6/5, mb1 3.8/6, mb1mx3.4/22, mbtmp3.7/6, Error ellipse: s-maj=22.9km s-min=10.8km az=103.0*

*FUNV **24** 20:27:06.1, 6.25N×72.82W, h5km, MW3.6*

ISC 24 20:26:59.5±0.8, 6.26N±0.08×73.32W±0.08, h122km±6km, n20, σ2°12/24, mb4.0/5, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ROSC	El Rosal	1.72	216	P		P	Pn	20 27 28.2	-1.8
	79nm,0.3s,baz=273,slow=9.7,SNR=62								
ROSC				S		S	Sn	20 27 51.1	-2.1
	57nm,0.3s,baz=100,slow=22,SNR=7.9								
CAPV	Capacho	1.88	32	i	P		Pn	20 27 36.2	+4.4
CAPV					eS		Sn	20 27 58.0	+1.5
SOCV	Socops	3.17	50	e	P		Pn	20 27 51.7	+3.6
SOCV					eS		Sn	20 28 24.2	-1.4
VIGV	El Vigia	3.21	37	e	P		Pn	20 27 52.6	+3.9
VIGV					eS		Sn	20 28 27.5	+0.7
ELOV	Elorza	3.88	79	e	P		Pn	20 27 58.9	+1.4
ELOV					eS		Sn	20 28 37.4	-5.1
SANV	Sanarito	4.94	49	e	P		Pn	20 28 14.9	+3.1
CURV	Curarigua	5.00	42	e	P		Pn	20 28 15.5	+2.9
CURV					eS		Sn	20 29 07.8	-1.5
TEPV	Terepaima	5.50	48	e	P		Pn	20 28 22.4	+3.1
TEPV					eS		Sn	20 29 18.6	-2.9
SIQV	Siquisique	5.58	38	e	P		Pn	20 28 23.3	+3.0
BAUV	El Baul	5.87	63	e	P		Pn	20 28 26.5	+2.2
MAPV	Macapo	5.98	53	e	P		Pn	20 28 28.2	+2.4
TURV	Turiamo	6.84	52	e	P		Pn	20 28 39.3	+2.1
BIRV	Birongo	8.14	59	e	P		Pn	20 28 56.6	+1.7
CUPV	Cœpira	8.36	63	e	P		Pn	20 28 59.5	+1.6
CUPV					eS		Sn	20 30 23.3	-7.4
TEIG	Tepich	20.09	315	P		P	P	20 31 23.7	+0.1
	1.5nm,0.3s,baz=135,slow=14,SNR=5.5								
LPAZ	La Paz	22.98	167	P		P	P	20 31 53.5	-1.0
	0.8nm,0.5s,baz=10,slow=3.4,SNR=3.6								
LPAZ					pP		pP	20 32 20.0	+1.9
	3.2nm,0.7s,baz=341,slow=12,SNR=7.4								
ULM	Lac du Bonnet	47.74	341	P		P	P	20 35 22.5	-1.6
	1.2nm,0.3s,baz=145,slow=1.6,SNR=2.8								
YKA	Yellowknife Ar	63.72	340	P		P	P	20 37 17.0	-0.8
	1.1nm,0.5s,baz=134,slow=6.6,SNR=30								
YKA					pP		pP	20 37 47.0	-0.5
	0.5nm,0.5s,baz=134,slow=6.7,SNR=4.9								
YKA					sP		sP	20 37 59.7	-1.1
	0.4nm,0.5s,baz=134,slow=6.8,SNR=3.3								
TORD	Torodi Ar. Bea	74.05	78	P		P	P	20 38 22.9	+0.1
	0.2nm,0.3s,baz=279,slow=6.7,SNR=5.2								
ARCES	ARCESS Array B	87.26	20	P		P	P	20 39 32.7	+0.6
	6.0nm,1.0s,baz=293,slow=4.6,SNR=2.5								

*TIF **24** 20:28:28.6, 41.16N×43.96E, h14km±3km*

*CSEM **24** 20:28:31.6, 40.03N×43.21E, h28km, MD3.0, After ISK*

*ISK **24** 20:28:31.6, 40.03N×43.21E, h28km, MD3.0*

*DDA **24** 20:28:54.2, 41.19N×41.76E, h11km, MD3.0*

ISC 24 20:28:28.9±1.4, 41.13N±0.03×43.89E±0.04, h7km±13km, n15, σ0°78/29, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AKH	Akhalkalaki	0.41	313	P		P	Pg	20 28 37.5	+0.7
AKH				S		S	Sg	20 28 43.2	+1.0
KARS	Kars	0.80	231	e	PG	P	Pb	20 28 44.6	-0.5
KARS				e	SG	S	Sg	20 28 53.2	-1.2
KARS	Kars	0.80	231	e	Pg	P	Pb	20 28 44.6	-0.5
KARS				e	Sg	S	Sg	20 28 53.3	-1.2
GOR	Gori	0.87	11	P		P	Pb	20 28 45.6	-0.7
GOR				S		S	Sb	20 28 57.6	-0.5
TBLG	Delisi	0.87	47	P		Pb	Pb	20 28 45.3	-1.1
TBLG				S		S	Sb	20 28 57.1	-1.2
DGRG	David-gareji	1.16	74	P		P	Pn	20 28 51.2	-0.4
DGRG				S		S	Sb	20 29 06.0	-0.6
GNI	Garni	1.18	146	e	PN	P	Pn	20 28 52.4	+0.5
GNI				e	SN	S	Sb	20 29 08.2	+1.0
GNI	Garni	1.18	146	e	Pn	P	Pn	20 28 52.4	+0.5
GNI				e	Sn	S	Sb	20 29 08.2	+1.1
ARTV	Artvin	1.48	273	i	P	P	Pg	20 28 57.4	+0.1
ARTV				i	S	S	Sg	20 29 16.4	-0.1
ONI	Oni	1.49	348	P		P	Pn	20 28 56.6	+0.4
ONI				S		S	Sn	20 29 16.7	+0.8
DAGI	Agillar	1.49	269	i	P	P	Pg	20 28 57.3	-0.2
DAGI				i	S	S	Sg	20 29 18.1	+1.2
DDEM	Demirkent	1.64	262	i	P	P	Pg	20 29 00.1	-0.1
DDEM				i	S	S	Sg	20 29 20.7	-0.8
DBOC	Borcka	1.69	278	i	P	P	Pn	20 28 57.8	-1.0
DBOC				i	S	S	Sg	20 29 22.4	-0.7
BCA	Borcka	1.74	281	e	PN	P	Pb	20 29 01.5	+0.4
BCA				e	SN	S	Sg	20 29 24.8	+0.2
BCA	Borcka	1.74	281	e	Pn	P	Pb	20 29 01.5	+0.4
BCA				e	Sn	S	Sg	20 29 24.8	+0.2

*ISCJB **24** 20:38:30.1±0.4, 6.69S±0.04×129.79E±0.04, h177km±6km, mb3.9/6, Error ellipse: s-maj=7.7km s-min=5.7km az=151.0*

*IDC **24** 20:38:31.2±2.8, 6.68S×129.70E, h170km±25km, mb3.7/7, mb1 3.9/9, mb1mx3.6/21, mbtmp3.8/9, Error ellipse: s-maj=32.2km s-min=13.6km az=63.0*

*AUST **24** 20:38:31.1±0.0, 6.70S×129.88E, h164km, Error ellipse: s-maj=0.8km s-min=0.7km az=233.0*

*DJA **24** 20:38:32.2±0.5, 7°S±4'×13°0E±°, h169km±15km, M4.4/4, mB5.3/4, mb4.7/4, MLv4.1/3, Mw(mB)4.8/4*

ISC 24 20:38:30.3±0.7, 6.71S±0.05×129.83E±0.05, h165km±8km, n46, σ1°60/55, mb4.0/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.18	2	P		P	Pn	20 39 10.2	+1.8
BNDI	Bandanaira	2.18	2	P		P	Pn	20 39 10.0	+1.6
	baz=2.2,SNR=7.2								
TLE	Tual	3.08	70	P		P	Pn	20 39 20.2	+0.9
TLE						S	Sn	20 39 58.0	+0.6
TLE	Tual	3.08	70	P		P	Pn	20 39 20.9	+1.6
	baz=3.0,SNR=151								
TLE						S	Sn	20 39 59.1	+1.8
	baz=3.0,SNR=10								
MSAI	Masohi	3.46	345	P		P	Pn	20 39 25.6	+1.5
MSAI				S		S	Sn	20 40 07.8	+1.8
FAKI	Fak Fak	4.47	33	P		P	Pn	20 39 35.6	-1.5
FAKI				S		S	Sn	20 40 24.3	-5.1
FAKI	Fak Fak	4.47	33	P		P	Pn	20 39 35.3	-1.9
	baz=4.5,SNR=53								
FAKI						S	Sn	20 40 21.7	-7.6
	baz=4.5,SNR=32								
SWI	Sorong	5.99	14	P		P	Pn	20 39 55.4	-1.5
	26nm,0.4s,6μm								
SWI	Sorong	5.99	14	P		P	Pn	20 39 55.1	-1.8
	baz=6.0,SNR=16								
SWI						S	Sn	20 40 57.4	-7.6
	baz=6.0,SNR=12								
MTN	Manton Dam	6.23	168	P		P	Pn	20 40 00.8	+0.6
	baz=6.3,SNR=90								
MTN						S	Sn	20 41 08.5	-2.3
	baz=6.3,SNR=26								
LBMI	Labuha	6.46	339	P		P	Pn	20 40 04.6	+1.3
	90nm,0.8s,4μm								
KDU	Kakadu	6.48	156	P		P	Pn	20 40 03.9	+0.3
	baz=6.5,SNR=167								
KDU						S	Sn	20 41 12.8	-4.0
	baz=6.5,SNR=9.5								
BAKI	Biak	8.33	49	P		P	Pn	20 40 30.0	+2.0
WSI	Waingapu	9.88	252	P		P	Pn	20 40 47.8	-0.7
	baz=9.9,SNR=5.6								
WSI						S	Sn	20 42 37.5	-0.7
	baz=9.9,SNR=3.5								
PCI	Palu	11.51	300	P		P	P	20 41 15.8	-1.1
	baz=12,SNR=5.6								
FITZ	Fitzroy Crossi	12.03	199	P		P	Pn	20 41 15.3	-1.3
	1.4nm,0.3s,baz=39,slow=11,SNR=34								
FITZ						S	Sn	20 43 21.9	-8.1
	3.1nm,0.3s,baz=93,slow=22,SNR=8.3								
FITZ	Fitzroy Crossi	12.03	199	P		P	Pn	20 41 16.6	0.0
	baz=12,SNR=29								
FITZ						S	Sn	20 43 23.5	-6.5
	baz=12,SNR=4.4								
WRA	Warramunga Arr	13.86	162	P		P	Pn	20 41 37.4	-2.5
	1.3nm,0.3s,baz=346,slow=11,SNR=56								
WRA						S	Sn	20 44 04.7	-9.3
	2.1nm,0.3s,baz=333,slow=22,SNR=9.4								
COEN	Coen	14.97	120	P		P	P	20 41 56.1	+0.9
	baz=15,SNR=17								
COEN						S	Sn	20 44 30.8	-10
	baz=15,SNR=6.6								
QIS	Mount Isa	16.71	146	P		P	Pn	20 42 16.0	+1.0
	baz=17,SNR=41								
ASAR	Alice Springs	17.31	167	P		P	Pn	20 42 22.4	+0.2
	2.4nm,0.3s,baz=331,slow=8.7,SNR=107								
ASAR						S	S	20 45 32.3	-0.6
	0.8nm,0.3s,baz=352,slow=26,SNR=6.7								
ASAR						ScP	ScP	20 50 12.4	-2.2
	baz=353,slow=1.4,SNR=4.4								
MTSU	Mount Surprise	18.12	130	P		P	Pn	20 42 32.0	+0.2
	baz=18,SNR=19								
CTA	Charters Tower	20.76	131	P		P	P	20 43 00.3	+1.9
	7.5nm,0.6s,baz=313,slow=10,SNR=12								
CISI	Cisompet, Garu	21.86	266	P		P	P	20 43 11.1	+0.9
	baz=22,SNR=5.0								
MEEK	Meekatharra	22.51	207	P		P	P	20 43 17.5	+1.2
	baz=23,SNR=4.1								
QLP	Quilpie	24.06	147	P		P	P	20 43 31.9	+1.5
	baz=24,SNR=22								
STKA	Stephens Creek	27.34	158	P		P	P	20 44 00.6	+0.7
	4.4nm,0.4s,baz=326,slow=8.7,SNR=34								
STKA	Stephens Creek	27.34	158	P		P	P	20 44 01.1	+1.2
	baz=27,SNR=24								
NWAO	Narrogin (SRO)	28.59	203	P		P	P	20 44 12.3	+1.3
	9.8nm,1.0s,baz=29,slow=10,SNR=2.7								
CMSA	Cobar Meteorol	28.81	151	P		P	P	20 44 14.7	+1.8
	baz=29,SNR=32								
ARPS	Mount Arapiles	31.87	162	P		P	P	20 44 41.8	+2.0
	baz=32,SNR=18								
YNG	Young	32.37	150	P		P	P	20 44 46.5	+2.2
	baz=32,SNR=16								
CMAR	Chiang Mai Arr	39.42	310	P		P	P	20 45 43.8	-0.6
	0.5nm,0.5s,baz=137,slow=6.6,SNR=5.1								
ODAN	Odare	52.94	311	e	P	P	P	20 47 28.8	-1.4
	7.6nm,0.6s								
TAPN	Taplejung	52.97	312	e	P	P	P	20 47 29.8	-0.6
	7.3nm,0.3s								
RAMN	Ramite	53.58	311	e	P	P	P	20 47 34.7	-0.2
	13nm,0.4s								
GUN	Gumba	54.63	311	e	P	P	P	20 47 42.1	-0.5
	10nm,0.4s								
PKI	Pulchoki	54.81	311	e	P	P	P	20 47 43.2	-0.6
	3.5nm,0.4s								
PKIN	Phulchoki	54.82	311	e	P	P	P	20 47 43.7	-0.2
	1.6nm,0.3s								
KKN	Kakani	55.02	311	e	P	P	P	20 47 44.6	-0.6
	3.7nm,0.5s								
KOLN	Koldanda	56.29	310	e	P	P	P	20 47 53.9	-0.3
	4.4nm,0.3s								
PYUN	Piuthan	56.92	310	e	P	P	P	20 47 58.4	-0.3
MKAR	Makanchi Array	67.89	327	P		P	P	20 49 11.3	+0.3
	3.9nm,0.5s,baz=116,slow=8.2,SNR=78								
ZALV	Zalesovo Beam	71.25	334	P		P	P	20 49 30.5	-0.9
	0.2nm,0.3s,baz=132,slow=4.1,SNR=2.7								
VNDA	Vanda	72.75	173	P		P	P	20 49 40.4	+0.4
	1.0nm,0.9s,baz=5.7,slow=2.2,SNR=5.8								
LPAZ	La Paz	151.05	142	PKPbc		PKPbc	PKPbc	20 58 06.5	+1.0
	0.6nm,0.4s,baz=39,slow=5.2,SNR=4.5								

*ISCJB **24** 20:55:17.0±0.7, 36.25N±0.03×21.41E±0.03, h15km±5km, mb3.8/15, MS3.3/7, Error ellipse: s-maj=5.2km s-min=3.5km az=137.9*

*THE **24** 20:55:18.6, 36.33N×21.57E, h0km±1km, ML3.9/14, Error ellipse: s-maj=2.3km s-min=0.9km az=208.0*

*CSEM **24** 20:55:18.4±0.3, 36.35N×21.55E, h2km, MD3.5, Error ellipse: s-maj=6.7km s-min=3.6km az=44.0*

*BEO **24** 20:55:18.7±0.9, 36.33N×21.22E, h0km, ML3.9/6*

*IDC **24** 20:55:18.4±0.9, 36.56N×21.70E, h0km, mb3.7/13, mb1 3.7/21, mb1mx3.7/36, mbtmp3.6/21, ML3.3/7, MS3.2/9, Ms1 3.2/9, ms1mx2.9/47, Error ellipse: s-maj=18.5km s-min=15.0km az=3.0*

*PRU **24** 20:55:20.6, 36.60N×20.38E, h0km*

*ATH **24** 20:55:22.3, 36.55N×21.91E, h16km±2km, MD3.5/33, ML3.7*

ISC 24 20:55:18.9±1.3, 36.36N±0.03×21.60E±0.03, h7km±8km, n245, σ1°31/288, mb3.9/15, MS3.2/7, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.55	12	P		P	Pg	20 55 28.9	-0.6
PYL				S		S	Sb	20 55 38.8	0.0
PYL	PYLOS	0.55	12	e	PB	P	Pg	20 55 28.9	-0.6
PYL	PYLOS	0.55	12	P		P	Pg	20 55 28.9	-0.6
PYL				S		S	Sb	20 55 38.8	0.0
DYR	Agios Nikonas	0.71	55	P		P	Pg	20 55 32.2	-0.4
DYR				S		S	Sb	20 55 45.0	+1.4
DYR	Agios Nikonas	0.71	55	e	PB	P	Pg	20 55 30.5	-2.1
DYR	Agios Nikonas	0.71	55	P		P	Pg	20 55 32.2	-0.4
DYR				S		S	Sb	20 55 45.0	+1.4
ITM	Ithomi	0.86	18	P		P	Pg	20 55 34.4	-1.0
ITM				S		S	Sb	20 55 49.5	+1.6
ITM	Ithomi	0.86	18	e	PN	P	Pg	20 55 34.5	-1.0
ITM	Ithomi	0.86	18	P		P	Pg	20 55 34.4	-1.0
ITM				S		S	Sb	20 55 49.5	+1.6
VLI	Veliai	1.13	71	P		P	Pg	20 55 39.3	-1.3
VLI				S		S	Sn	20 55 58.0	+1.1
VLI	Veliai	1.13	71	e	PN	P	Pg	20 55 38.9	-1.7
VLI	Veliai	1.13	71	P		P	Pg	20 55 39.3	-1.3
VLI				S		S	Sn	20 55 58.0	+1.1
KYTH	Kithira	1.16	93	P		P	Pg	20 55 40.5	-0.7
KYTH				S		S	Sn	20 55 58.9	+1.3
KYTH	Kithira	1.16	93	e	PN	P	Pg	20 55 40.4	-0.7
KYTH	Kithira	1.16	93	P		P	Pg	20 55 40.5	-0.7
KYTH				S		S	Sn	20 55 58.9	+1.3
AMT	Artemida-Makis	1.18	4	P		P	Pg	20 55 40.7	-0.7
AMT				S		S	Sn	20 55 59.7	+1.7
AMT	Artemida-Makis	1.18	4	e	PB	P	Pg	20 55 40.4	-1.0
AMT	Artemida-Makis	1.18	4	e	Pb	P	Pg	20 55 40.4	-1.0
AMT	Artemida-Makis	1.18	4	P		P	Pg	20 55 40.7	-0.7
AMT				S		S	Sn	20 55 59.7	+1.7
VLX	Vlachokerasia	1.19	31	P		P	Pg	20 55 40.1	-1.6
VLX				S		S	Sb	20 55 59.1	+1.8
VLX	Vlachokerasia	1.19	31	e	PN	P	Pg	20 55 39.5	-2.2
VLX	Vlachokerasia	1.19	31	P		P	Pg	20 55 40.1	-1.6
VLX				S		P	Sb	20 55 59.1	+1.8
GUR	Goura	1.68	20	P		P	Pn	20 55 48.9	+0.1
GUR				S		S	Sg	20 56 13.8	+0.8
GUR	Goura	1.68	20	e	PN	P	Pn	20 55 49.1	+0.3
GUR	Goura	1.68	20	e	Pn	P	Pn	20 55 49.1	+0.3
GUR				S		S	Sg	20 56 13.8	+0.8
RLS	Riolos of Patr	1.70	356	P		P	Pb	20 55 50.1	-0.3
RLS	Riolos of Patr	1.70	356	e	PN	P	Pg	20 55 52.1	+0.6
RLS	Riolos of Patr	1.70	356	P		P	Pb	20 55 50.1	-0.3
DIDY	Didyma	1.71	49	P		P	Pn	20 55 48.9	-0.2
DIDY	Didyma	1.71	49	P		P	Pn	20 55 48.9	-0.2
KLV	Kalavryta, Ach	1.74	14	e	PN	P	Pn	20 55 49.9	+0.4
KLV	Kalavryta, Ach	1.74	14	e	Pn	P	Pn	20 55 49.9	+0.4
DID	Didima	1.74	48	P		P	Pn	20 55 49.9	+0.4
DID				S		S	Sb	20 56 14.9	+1.7
DID	Didima	1.74	48	e	PN	P	Pn	20 55 49.4	-0.1
DID	Didima	1.74	48	e	Pn	P	Pn	20 55 49.4	-0.1
DID	Didima	1.74	48	P		P	Pn	20 55 49.9	+0.4
DID				S		S	Sb	20 56 14.9	+1.7
KFL	Anninata	1.86	340	P		P	Pn	20 55 51.2	0.0
KFL	Anninata	1.86	340	P		P	Pn	20 55 51.2	0.0
LAKA	Lakka	1.90	9	P		P	Pn	20 55 52.2	+0.5
LAKA				S		S	Sn	20 56 18.1	+2.2
LAKA	Lakka	1.90	9	e	PN	P	Pb	20 55 53.3	-0.6
LAKA	Lakka	1.90	9	P		P	Pn	20 55 52.2	+0.5
LAKA	Lakka	1.90	9	e	Pn	P	Pb	20 55 53.3	-0.6
LAKA				S		S	Sn	20 56 18.1	+2.2
UPR	University Cam	1.93	4	P		P	Pn	20 55 52.7	+0.7
UPR				S		S	Sn	20 56 18.7	+2.2
UPR	University Cam	1.93	4	e	PN	P	Pg	20 55 55.2	-0.6
UPR	University Cam	1.93	4	P		P	Pn	20 55 52.7	+0.7
UPR				S		S	Sn	20 56 18.7	+2.2
LTK	Loutraki	1.99	33	P		P	Pn	20 55 53.4	+0.5
LTK				S		S	Sn	20 56 20.1	+2.1
LTK	Loutraki	1.99	33	e	PN	P	Pn	20 55 53.1	+0.2
LTK	Loutraki	1.99	33	e	Pn	P	Pn	20 55 53.1	+0.2
LTK	Loutraki	1.99	33	P		P	Pn	20 55 53.4	+0.5
LTK				S		S	Sn	20 56 20.1	+2.1
VLS	Valsamata	1.99	336	P		P	Pn	20 55 53.4	+0.5
VLS				S		S	Sb	20 56 20.5	+0.2
VLS	Valsamata	1.99	336	P		P	Pn	20 55 53.4	+0.5
VLS				S		S	Sb	20 56 20.5	+0.2
TRIZ	Trizonia	2.04	10	P		P	Pn	20 55 54.9	+1.4
TRIZ				S		S	Sb	20 56 22.9	+1.2
TRIZ	Trizonia	2.04	10	e	PN	P	Pb	20 55 55.7	-0.5
TRIZ	Trizonia	2.04	10	P		P	Pn	20 55 54.9	+1.4
TRIZ	Trizonia	2.04	10	e	Pn	P	Pb	20 55 55.7	-0.5
TRIZ				S		S	Sb	20 56 22.9	+1.2
NAIG	Nisos Aigina	2.06	47	e	PN	P	Pn	20 55 54.3	+0.5
NAIG	Nisos Aigina	2.06	47	e	Pn	P	Pn	20 55 54.3	+0.5
KALE	Kalithea	2.07	12	P		P	Pn	20 55 55.4	+1.3
KALE				S		S	Sn	20 56 22.3	+2.1
KALE	Kalithea	2.07	12	e	PN	P	Pb	20 56 20.0	-0.8
KALE	Kalithea	2.07	12	P		P	Pn	20 55 55.4	+1.3
KALE	Kalithea	2.07	12	e	Pn	P	Pb	20 56 20.0	-0.8
KALE				S		S	Sn	20 56 22.3	+2.1
EFP	Efpalio	2.08	7	P		P	Pb	20 56 56.4	-0.5
EFP				S		S	Sn	20 56 22.4	+2.2
EFP	Efpalio	2.08	7	e	PN	P	Pb	20 55 57.7	+0.8
EFP	Efpalio	2.08	7	P		P	Pb	20 55 56.4	-0.5
EFP				S		S	Sn	20 56 22.4	+2.2
KARN	Karanos	2.11	116	P		P	Pn	20 55 55.1	+1.0
KARN	Karanos	2.11	116	e	PN	P	Pb	20 55 57.5	+0.1
KARN				e	SN	S	Sn	20 56 22.4	+1.4
KARN	Karanos	2.11	116	P		P	Pn	20 55 55.1	+1.0
KARN	Karanos	2.11	116	e	Pn	P	Pb	20 55 57.5	+0.1
KARN				e	Sn	S	Sn	20 56 22.4	+1.4
DSF	Desfina	2.18	20	P		P	Pn	20 55 56.2	+0.7
DSF				S		S	Sb	20 56 25.9	+0.1
DSF	Desfina	2.18	20	P		P	Pn	20 55 56.2	+0.7
DSF				S		S	Sb	20 56 25.9	+0.1
VAM	Vamos	2.31	113	P		P	Pn	20 55 58.7	+1.4
VAM	Vamos	2.31	113	e	PN	P	Pb	20 56 00.1	-0.8
VAM	Vamos	2.31	113	P		P	Pn	20 55 58.7	+1.4
VAM	Vamos	2.31	113	e	Pn	P	Pb	20 56 00.1	-0.8
ATH	Athens Observa	2.33	46	P		P	Pn	20 55 57.8	+0.2
ATH				S		S	Sb	20 56 29.8	-0.4
ATH	Athens Observa	2.33	46	e	PN	P

PLG	**Polygyros**	**4.26**	**19**	P		**Pn**	**20 56 24.8 +0.6**
PLG	**Polygyros**	**4.26**	**19**	*e*PN		**Pn**	**20 56 27.0 +2.8**
PLG	**Polygyros**	**4.26**	**19**	P		**Pn**	**20 56 24.8 +0.6**
OUR	**Ouranopolis**	**4.39**	**25**	P		**Pn**	**20 56 26.9 +1.1**
OUR	**Ouranopolis**	**4.39**	**25**	P		**Pn**	**20 56 26.9 +1.1**
HORT	**Hortiatis**	**4.39**	**15**	P		**Pn**	**20 56 28.0 +2.0**
HORT	**Hortiatis**	**4.39**	**15**	P		**Pn**	**20 56 28.0 +2.0**
LIA	**Limnos Island**	**4.52**	**38**	P		**Pn**	**20 56 29.7 +2.0**
LIA	**Limnos Island**	**4.52**	**38**	P		**Pn**	**20 56 29.7 +2.0**
GRG	**Griva**	**4.63**	**8**	P		**Pn**	**20 56 30.2 +0.9**
GRG	**Griva**	**4.63**	**8**	P		**Pn**	**20 56 30.2 +0.9**
SOH	**Sokhos**	**4.66**	**17**	P		**Pn**	**20 56 32.2 +2.5**
SOH	**Sokhos**	**4.66**	**17**	P		**Pn**	**20 56 32.2 +2.5**
KNT	**Kendrikon**	**4.90**	**12**	P		**Pn**	**20 56 34.0 +1.1**
KNT	**Kendrikon**	**4.90**	**12**	P		**Pn**	**20 56 34.0 +1.1**
SRS	**Serrai**	**5.00**	**18**	P		**Pn**	**20 56 35.0 +0.7**
SRS	**Serrai**	**5.00**	**18**	P		**Pn**	**20 56 35.0 +0.7**
VAY	**Valandovo**	**5.01**	**8**	*i* Pn		**Pn**	**20 56 34.8 +0.4**
VAY	**Valandovo**	**5.01**	**8**	*i* Pn		**Pn**	**20 56 35.2 +0.8**
TIR	**Tirane**	**5.16**	**345**	*e*Pn		**Pn**	**20 56 36.7 +0.2**
TIR				*e*Sn		**Sn**	**20 57 34.1 -2.2**
TIR	**Tirane**	**5.16**	**345**	*e*Pn		**Pn**	**20 56 36.7 +0.2**
TIR				*e*Sn		**Sn**	**20 57 34.1 -2.2**
ALN	**Alexandroupoli**	**5.71**	**36**	P		**Pn**	**20 56 47.1 +3.1**
PDG	**Podgorica**	**6.33**	**344**	*e*Pn		**Pn**	**20 56 52.1 -0.4**
PDG				*e*Sn		**Sn**	**20 58 02.2 -2.8**
PDG	**Podgorica**	**6.33**	**344**	*e*Pn		**Pn**	**20 56 52.1 -0.4**
PDG				*e*Sn		**Sn**	**20 58 02.2 -2.8**
VTS	**Vitosha**	**6.35**	**11**	*e*Pn		**Pn**	**20 56 54.4 +1.5**
VTS				*e*Sn		**Sn**	**20 58 05.6 -0.1**
VTS	**Vitosha**	**6.35**	**11**	*e*Pn		**Pn**	**20 56 54.4 +1.5**
VTS				*e*Sn		**Sn**	**20 58 05.6 -0.1**
BARS	**Barje**	**6.45**	**1**	*e*Pn		**Pn**	**20 56 54.2 0.0**
BARS				*e*Sn		**Sn**	**20 58 07.4 -0.7**
BARS	**Barje**	**6.45**	**1**	*e*Pn		**Pn**	**20 56 54.2 0.0**
BARS				*e*Sn		**Sn**	**20 58 07.4 -0.7**
SELS	**Selova**	**6.86**	**357**	*e*Pn		**Pn**	**20 56 59.3 -0.6**
ZAPS	**Zavoj**	**6.95**	**6**	*e*Pn		**Pn**	**20 57 02.1 +1.0**
STON	**Ston**	**7.17**	**336**	*e*Pn		**Pn**	**20 57 02.8 -1.3**
STON					Sn	Sn	20 58 19.0 -6.6
STON	**Ston**	**7.17**	**336**	*e*Pn		**Pn**	**20 57 02.7 -1.3**
IVAS	**Ivanjica**	**7.29**	**352**	*e*Pn		**Pn**	**20 57 05.3 -0.5**
IVAS	**Ivanjica**	**7.29**	**352**	*e*Pn		**Pn**	**20 57 05.3 -0.5**
GRUS	**Gruza**	**7.55**	**355**	*e*Pn		**Pn**	**20 57 08.4 -0.9**
GRUS	**Gruza**	**7.55**	**355**	*e*Pn		**Pn**	**20 57 08.4 -0.9**
BBLS	**Lazići**	**7.69**	**348**	*e*Pn		**Pn**	**20 57 11.0 -0.2**
BBLS				*e*Sn		**Sn**	**20 58 34.7 -3.8**
BBLS	**Lazići**	**7.69**	**348**	*e*Pn		**Pn**	**20 57 11.0 -0.2**
BBLS				*e*Sn		**Sn**	**20 58 34.7 -3.8**
DIVS	**Divibare**	**7.83**	**351**	*e*Pn		**Pn**	**20 57 11.8 -1.4**
DIVS				*e*Sn		**Sn**	**20 58 37.8 -4.2**
DIVS	**Divibare**	**7.83**	**351**	*e*Pn		**Pn**	**20 57 11.8 -1.4**
NVLJ	**Novalja**	**9.66**	**330**	*e*Pn		**Pn**	**20 57 37.4 -0.9**
NVLJ					Sn	Sn	20 59 20.5 -6.5
NVLJ	**Novalja**	**9.66**	**330**	*e*Pn		**Pn**	**20 57 37.3 -0.9**
MLR	**Muntele Rosu**	**9.70**	**18**	Pn		**Pn**	**20 57 37.3 -1.5**
	0.0nm,0.3s,baz=225,slow=1.4,SNR=1.9						
KEST	**Kesra**	**9.95**	**270**	Pn		**Pn**	**20 57 42.1 -0.2**
	0.1nm,0.3s,baz=45,slow=7.1,SNR=3.0						
KEST				LR		LR	21 02 09.5
	comp=Z,22nm,19.5s,baz=146,slow=41						
BRTR	**Keskin Array B**	**10.07**	**67**	Pn		**Pn**	**20 57 45.0 +1.0**
	0.1nm,0.3s,baz=243,slow=13,SNR=2.4						
BOJS	**Bojanci**	**10.32**	**334**	*i* Pn		**Pn**	**20 57 46.4 -0.8**
BOJS				*i* Sn		Sn	20 59 37.5 -5.6
BOJS	**Bojanci**	**10.32**	**334**	Pn		**Pn**	**20 57 46.4 -0.8**
SKDS	**Skadanscina**	**10.82**	**330**	*i* Pn		**Pn**	**20 57 53.9 -0.2**
SKDS				*i* Sn		**Sn**	**20 59 50.9 -4.5**
SKDS	**Skadanscina**	**10.82**	**330**	*i* Pn		**Pn**	**20 57 53.9 -0.2**
PERS	**Pernice**	**11.36**	**337**	*i* Pn		**Pn**	**20 58 00.4 -1.1**
PERS				*i* Sn		Sn	21 00 01.8 -6.8
PERS	**Pernice**	**11.36**	**337**	*i* Pn		**Pn**	**20 58 00.4 -1.1**
MMAI	**Mount Meron Ar**	**11.84**	**102**	Pn		**Pn**	**20 58 08.8 +0.7**
	0.4nm,0.3s,baz=305,slow=15,SNR=3.2						
MMAI					Sn	Sn	21 00 14.4 -6.2
	0.7nm,0.3s,baz=279,slow=27,SNR=3.0						
VYHS	**Vyhne**	**12.30**	**351**	*e*PN		**Pn**	**20 58 13.8 -0.5**
VYHS	**Vyhne**	**12.30**	**351**	*e*SN		Sn	21 00 22.2 -9.4
CRVS	**Cervenica-Dubn**	**12.54**	**360**	*e*PN		**Pn**	**20 58 19.0 +1.4**
KOLS	**Kolonicke sedl**	**12.58**	**2**	*e*PN		**Pn**	**20 58 20.3 +2.2**
EIL	**Elat**	**13.03**	**117**	Pn		**Pn**	**20 58 25.9 +1.6**
	0.1nm,0.3s,baz=246,slow=17,SNR=2.5						
DAVOX	**Davos/Dischmat**	**13.60**	**324**	Pn		**Pn**	**20 58 35.0 +2.8**
	0.1nm,0.3s,baz=162,slow=20,SNR=2.2						
GERES	**GERESS Array B**	**13.76**	**338**	Pn		**Pn**	**20 58 32.7 -1.6**
	0.1nm,0.3s,baz=161,slow=9.3,SNR=2.8						
KHC	**Kasperske Hory**	**14.05**	**338**	*e*P		**Pn**	**20 58 40.0 +1.8**
KHC				*ex*		x	20 58 48.0
LPG	**La Plagne**	**14.45**	**314**	*e*P		P	20 58 55.7 +4.8
	10.0nm,1.0s						
LPL	**La Plagne**	**14.47**	**314**	*e*P		P	20 58 56.2 +5.1
AKASG	**Malin Array Be**	**15.35**	**19**	Pn		**Pn**	**20 58 53.0 -2.7**
	0.6nm,0.3s,baz=208,slow=12,SNR=3.9						
HINF	**Hinteralfeld**	**15.81**	**321**	*e*P		**P**	**20 59 07.3 +1.6**
	3.8nm,0.7s						
HINF	**Hinteralfeld**	**15.81**	**321**	*e*P		**P**	**20 59 07.3 +1.6**
	3.0nm,0.7s						
HAU	**Haudompre**	**16.19**	**321**	*e*P		**P**	**20 59 12.2 +2.3**
	7.8nm,0.7s						
SUW	**Suwalki**	**17.69**	**3**	*e*P		**Pn**	**20 59 24.4 -1.0**
SUW	**Suwalki**	**17.69**	**3**	*e*P		**Pn**	**20 59 24.5 -1.0**
KBZ	**Khabaz**	**17.86**	**59**	P		**Pn**	**20 59 27.2 -0.5**
	0.1nm,0.3s,baz=323,slow=6.5,SNR=3.7						
GNI	**Garni**	**18.55**	**71**	P		**P**	**20 59 35.7 -0.5**
	0.2nm,0.3s,baz=193,slow=18,SNR=2.9						
GNI					LR	LR	21 07 18.9
	comp=Z,40nm,19.1s,baz=118,slow=39						
ESDC	**Sonseca Array**	**20.39**	**287**	P		Pn	20 59 57.5 -0.8
	0.2nm,0.4s,baz=83,slow=10,SNR=3.2						
MDT	**Midelt**	**21.85**	**268**	LR		LR	21 09 21.5
	comp=Z,55nm,19.3s,baz=162,slow=38						
HFS	**Hagfors**	**24.33**	**350**	P		**P**	**21 00 35.2 -1.7**
	1.7nm,0.5s,baz=161,slow=11,SNR=21						
FINES	**FINESS Array B**	**25.27**	**5**	P		**P**	**21 00 44.0 -1.4**
	1.7nm,0.6s,baz=154,slow=11,SNR=12						
EKA	**Eskdalemuir Ar**	**25.40**	**326**	P		**P**	**21 00 46.4 -0.4**
	2.2nm,0.8s,baz=127,slow=8.2,SNR=6.0						
NB2	**NORSAR Subarra**	**25.57**	**348**	P		**P**	**21 00 48.6 +0.4**
	comp=Z,2.5nm,0.8s,baz=160,slow=10						
NB2	**NORSAR Subarra**	**25.57**	**348**	P		**P**	**21 00 48.6 +0.4**
	comp=Z,2.5nm,0.8s,SNR=8.0						
NOA	**NORSAR Array B**	**25.57**	**348**	P		**P**	**21 00 48.0 -0.2**
	comp=Z,1.4nm,0.6s,baz=156,slow=8.9,SNR=3.6						
NOA					LR	LR	21 11 09.7
	comp=Z,68nm,18.3s,baz=295,slow=38						
KAF	**Kangasniemi**	**25.95**	**5**	*e*p		**P**	**21 00 49.5 -2.0**
	comp=Z,3.4nm,0.7s						
JOF	**Joensuu**	**27.26**	**10**	*e*p		P	21 00 57.0 -6.3
	comp=Z,1.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**29.22**	**223**	P		**P**	**21 01 23.8 +2.5**
	comp=Z,1.8nm,0.8s,baz=28,slow=9.1,SNR=7.8						
TORD					LR	LR	21 14 39.0
	comp=Z,54nm,18.5s,baz=165,slow=39						
ARCES	**ARCESS Array B**	**33.30**	**2**	P		**P**	**21 01 55.7 -1.0**
	comp=Z,2.5nm,0.8s,baz=188,slow=11,SNR=4.2						
LIC	**Lamto**	**38.65**	**226**	*e*P		P	21 02 47.8 +4.7
	comp=Z,13nm,0.9s						
MKAR	**Makanchi Array**	**45.54**	**57**	P		**P**	**21 03 37.5 -1.6**
	comp=Z,0.5nm,0.4s,baz=273,slow=7.1,SNR=11						
MKAR					LR	LR	21 25 52.1
	comp=Z,28nm,18.5s,baz=175,slow=40						
ZALV	**Zalesovo Beam**	**46.28**	**47**	P		**P**	**21 03 42.6 -2.1**
	comp=Z,0.8nm,0.4s,baz=280,slow=8.9,SNR=5.2						
ZALV					LR	LR	21 23 31.6
	comp=Z,15nm,19.5s,baz=56,slow=37						
DANN	**Dangsing**	**52.33**	**80**	*e*P		**P**	**21 04 30.7 -1.1**
	comp=Z,15nm,0.6s						
KOLN	**Koldanda**	**52.45**	**81**	*e*P		**P**	**21 04 30.8 -1.8**
GUN	**Gumba**	**54.20**	**79**	*e*P		P	21 04 40.6 -5.0
	comp=Z,18nm,1.0s						
RAMN	**Ramite**	**55.21**	**80**	*e*P		P	21 04 42.6 -10
SCHQ	**Schefferville**	**60.38**	**318**	P		**P**	**21 05 29.1 +0.7**
	comp=Z,1.6nm,0.7s,baz=68,slow=11,SNR=3.6						
SONM	**Songino Array**	**60.95**	**50**	P		**P**	**21 05 32.1 -0.5**
	comp=Z,0.2nm,0.5s,baz=318,slow=5.8,SNR=2.3						
CMAR	**Chiang Mai Arr**	**69.29**	**82**	P		**P**	**21 06 26.9 -0.1**
	comp=Z,1.0nm,0.9s,baz=304,slow=8.2,SNR=4.3						
YKA	**Yellowknife Ar**	**75.39**	**341**	P		**P**	**21 07 02.4 -0.3**
	comp=Z,0.1nm,0.5s,baz=32,slow=5.3,SNR=2.8						
PETK	**Petropavlovsk-**	**83.09**	**25**	LR		LR	21 50 55.7
	comp=Z,18nm,19.2s,baz=239,slow=40						
CPUP	**Villa Florida**	**96.97**	**243**	LR		LR	21 53 36.0
	comp=Z,81nm,18.3s,baz=358,slow=36						

MAN 24 20:56:03,17°.18N×122°.47E,h13km,mb4.6,ML3.5,MS3.5, 3C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.12**	**201**	⇑*iP*		Pb	20 56 07.8	+0.6
CAUP	**Cauayan**	**0.66**	**249**	*e*P		Pb	20 56 16.8	+0.4
CAUP				*e*S		Sn	20 56 26.9	-1.4
CVP	**Callao Caves**	**0.81**	**310**	⇓*iP*		Pb	20 56 18.9	-0.1
CVP				*i* S		Sn	20 56 30.9	-1.1
BALP	**Baler**	**1.67**	**211**	*e*P		Pn	20 56 32.2	+0.3
ABRA	**Dolores**	**1.74**	**286**	*e*P		Pn	20 56 32.1	-0.9
PCPH	**Palayan**	**2.08**	**220**	⇑*e*P		Pb	20 56 39.1	-1.5
PCPH				*e*S		Sb	20 57 05.7	-0.7
PIP	**Pasuquin**	**2.10**	**303**	⇑*iP*		Pn	20 56 37.3	-0.6
PIP				*e*S		Sb	20 57 05.9	-1.1
BOLP	**Bolinao**	**2.57**	**252**	*e*P		Pn	20 56 46.2	+1.8

PRU 24 20:56:33.0,49°.83N×18°.43E,h0km,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.18**	**272**	*e*PG		Pg	20 56 36.4	-0.1
OKC				*e*SG		Sg	20 56 39.3	+0.4
	comp=Z,8.0nm,0.3s							
DPC	**Dobruska-Polom**	**1.45**	**292**	*e*SG		Sg	20 57 19.1	-0.8

*ISCJB **24** 21:05:48.9±0.5, 10°.54N±0°.04×62°.64W±0°.03, h82km±7km, Error ellipse: s-maj=6.4km s-min=4.1km az=166.2*
*TRN **24** 21:05:52.8, 10°.83N×62°.35W, h77km, MD3.4*
*FUNV **24** 21:05:53.0, 10°.45N×62°.63W, h55km, MW3.6*

ISC 24 21:05:48.5±1.3,10°.59N±0°.04×62°.60W±0°.03,h94km±10km, n22,σ1§97/37,1C-1D,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.38**	**81**	⇑*iP*		**Pn**	**21 06 03.8**	**+1.1**
GUIV				*e*S		**Sn**	**21 06 11.9**	**-1.5**
CRUV	**Carupano**	**0.63**	**278**	⇓*e*P		**Pn**	**21 06 06.0**	**+1.3**
CRUV				*e*S		**Sn**	**21 06 14.2**	**-2.6**
TPP	**Pointe-a-Pierr**	**1.16**	**103**	*e*S		**Sn**	**21 06 27.9**	**+1.2**
TRN	**Trinidad (W)**	**1.18**	**87**	*e*P		**Pn**	**21 06 12.8**	**+2.3**
TRN				*i* S		**Sn**	**21 06 27.5**	**+0.5**
TBH	**Brigand Hill**	**1.51**	**94**	*e*P		**Pn**	**21 06 17.0**	**+2.5**
TBH				*e*S		**Sn**	**21 06 34.2**	**-0.2**
ORIV	**Oritupano**	**1.70**	**208**	*e*P		**Pn**	**21 06 18.2**	**+1.2**
ORIV				*e*S		**Sn**	**21 06 36.2**	**-2.4**
GRW	**Mount Saint Ca**	**1.82**	**30**	*e*P		**Pn**	**21 06 19.7**	**+1.2**
GRW				*e*S		**Sn**	**21 06 38.3**	**-3.0**
GRHS	**Sauteurs**	**1.88**	**30**	*e*P		**Pn**	**21 06 20.2**	**+1.0**
TPR	**Prospect**	**1.89**	**71**	*e*P		**Pn**	**21 06 20.9**	**+1.5**
TPR				*e*S		**Sn**	**21 06 41.1**	**-1.8**
BOT	**Bacolet**	**1.94**	**72**	*e*P		**Pn**	**21 06 21.4**	**+1.5**
GRSS	**Sisters**	**1.96**	**30**	*e*P		**Pn**	**21 06 21.4**	**+1.1**
GRSS				*e*S		**Sn**	**21 06 42.0**	**-2.5**
GRIC	**Isle de Caille**	**1.96**	**30**	*e*P		**Pn**	**21 06 20.3**	**0.0**
GRIC				*e*S		**Sn**	**21 06 41.9**	**-2.0**
PCRV	**Puerto La Cruz**	**2.04**	**259**	*e*P		**Pn**	**21 06 23.4**	**+2.0**
PCRV				*e*S		**Sn**	**21 06 45.1**	**-1.5**
RIOV	**Rio Grande**	**2.62**	**163**	*e*P		**Pn**	**21 06 30.8**	**+1.8**
RIOV				*e*S		**Sn**	**21 06 58.6**	**-1.6**
GURV	**El Guri**	**2.85**	**190**	*e*P		**Pn**	**21 06 33.3**	**+1.2**
GURV				*e*S		**Sn**	**21 07 03.1**	**-2.6**
CUPV	**Cœpira**	**3.18**	**261**	*e*P		**Pn**	**21 06 39.3**	**+2.7**
CUPV				*e*S		**Sn**	**21 07 13.0**	**-0.8**
BIRV	**Birongo**	**3.61**	**269**	*e*P		**Pn**	**21 06 45.0**	**+2.7**
BIRV				*e*S		**Sn**	**21 07 23.6**	**-0.4**
MERV	**Las Mercedes**	**3.88**	**250**	*e*S		**Sn**	**21 07 28.6**	**-1.8**
LUEV	**Luepa**	**4.84**	**166**	*e*P		**Pn**	**21 06 59.7**	**+0.5**
LUEV				*e*S		**Sn**	**21 07 50.2**	**-4.0**
TURV	**Turiamo**	**5.16**	**269**	*e*P		**Pn**	**21 07 05.3**	**+2.0**
BAUV	**El Baul**	**5.61**	**254**	*e*P		**Pn**	**21 07 10.5**	**+1.1**
MAPV	**Macapo**	**5.81**	**263**	*e*P		**Pn**	**21 07 13.8**	**+1.5**

IDC 24 21:25:08.7±1.3,32°.57S×177°.66W,h0km,mb4.1/3, mb1 4.3/3,mb1mx3.9/19,mbtmp4.1/3,MS3.6/2,Ms1 3.6/2, ms1mx2.9/32,Error ellipse: s-maj=62.0km s-min=36.2km az=10.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.11**	**215**	Pn		Pn	21 26 59.7	+5.8
	0.6nm,0.3s,baz=77,slow=15,SNR=2.5							
URZ					Sn	Sn	21 28 21.0	+5.6
	0.8nm,0.3s,baz=15,slow=20,SNR=4.1							
DZM	**Mont Dzumac**	**17.55**	**303**	LR		LR	21 33 59.5	
	comp=Z,160nm,18.1s,baz=56,slow=30							
CTA	**Charters Tower**	**34.48**	**282**	P		P	21 31 59.2	+0.6
	2.3nm,0.5s,baz=105,slow=13,SNR=5.8							
ASAR	**Alice Springs**	**43.33**	**269**	P		P	21 33 12.4	-0.2
	1.3nm,0.8s,baz=109,slow=7.2,SNR=9.3							
WRA	**Warramunga Arr**	**44.51**	**274**	P		P	21 33 21.5	-0.7
	2.6nm,0.8s,baz=114,slow=7.7,SNR=18							
NNA	**Nana**	**92.55**	**106**	LR		LR	22 14 02.6	
	comp=Z,28nm,18.5s,baz=160,slow=32							
KURBB	**Kurchatov Arra**	**122.78**	**313**	PKP		PKPdf	21 44 06.0	-0.1
	0.3nm,0.6s,baz=107,slow=1.6,SNR=5.5							
FINES	**FINESS Array B**	**147.27**	**339**	PKPbc		PKPbc	21 44 52.6	-0.7
	3.3nm,0.8s,baz=45,slow=4.1,SNR=18							
BRTR	**Keskin Array B**	**153.83**	**295**	PKPbc		PKPbc	21 45 09.9	-0.1
	0.4nm,0.5s,baz=116,slow=3.4,SNR=2.7							
BRTR				PKPab		PKPab	21 45 22.6	-0.4
	1.2nm,0.9s,baz=90,slow=1.9,SNR=4.4							
TORD	**Torodi Ar. Bea**	**160.66**	**178**	PKPab		PKPab	21 45 52.1	-0.5
	0.6nm,1.2s,baz=181,slow=3.4,SNR=2.7							

IDC 24 21:32:22.0±1.3,24°.75S×176°.14W,h0km,mb4.2/5, mb1 4.4/7,mb1mx4.1/21,mbtmp4.3/7,ML5.2/2,Error ellipse: s-maj=40.0km s-min=26.7km az=145.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.75**	**199**	Pn		Pn	21 33 32.8	-2.1
	256nm,0.3s,baz=61,slow=19,SNR=4.4							
URZ	**Urewera**	**14.64**	**201**	Pn		Pn	21 35 52.2	+1.8
	0.2nm,0.3s,baz=325,slow=16,SNR=2.6							
URZ					Sn	Sn	21 38 26.3	-7.1
	0.2nm,0.3s,baz=183,slow=19,SNR=2.1							
RAR	**Rarotonga**	**15.47**	**80**	Pn		Pn	21 36 02.1	+0.5
	3.5nm,0.3s,baz=287,slow=9.1,SNR=6.8							
RAR					Sn	Sn	21 38 38.3	-16
	1.0nm,0.3s,baz=90,slow=15,SNR=3.1							
DZM	**Mont Dzumac**	**16.21**	**276**	Pn		P	21 36 18.3	+3.7
	0.2nm,0.3s,baz=86,slow=18,SNR=4.7							
CTA	**Charters Tower**	**35.00**	**270**	P		P	21 39 16.5	+0.1
	3.3nm,0.4s,baz=89,slow=11,SNR=15							
STKA	**Stephens Creek**	**37.70**	**249**	P		P	21 39 41.2	+1.8
	5.3nm,1.2s,baz=109,slow=15,SNR=2.8							
ASAR	**Alice Springs**	**45.37**	**261**	P		P	21 40 42.0	-0.6
	2.8nm,0.9s,baz=85,slow=7.5,SNR=15							
WRA	**Warramunga Arr**	**45.86**	**266**	P		P	21 40 44.8	-1.6
	1.1nm,0.6s,baz=102,slow=8.2,SNR=24							
CMAR	**Chiang Mai Arr**	**93.13**	**289**	P		P	21 45 39.8	+1.3
	0.7nm,0.8s,baz=112,slow=4.4,SNR=4.7							
BVAR	**Borovoye Array**	**123.41**	**318**	PKP		PKPdf	21 51 19.9	-1.0
	0.2nm,0.4s,baz=48,slow=2.1,SNR=3.0							
AKASG	**Malin Array Be**	**147.54**	**330**	PKPbc		PKPbc	21 52 06.7	-1.2
	0.6nm,0.3s,baz=39,slow=4.5,SNR=4.8							
BRTR	**Keskin Array B**	**150.89**	**308**	PKPbc		PKPbc	21 52 17.5	+0.5
	0.3nm,0.4s,baz=50,slow=4.5,SNR=3.4							
BRTR				PKPab		PKPab	21 52 23.2	-1.0
	0.8nm,0.5s,baz=117,slow=3.2,SNR=5.2							

*IDC **24** 21:40:04.6±3.5, 22°.29S×170°.63E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.7/19, mbtmp3.8/4, ML4.1/1, MS3.2/3, Ms1 3.2/3, ms1mx2.9/27, Error ellipse: s-maj=153.3km s-min=43.3km az=164.0*

NOU 24 21:40:09.9±1.5,20°.41S×169°.96E,h30km,MD2.9,ML2.8, MS2.9,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.35**	**238**	*e*P		Pn	21 40 59.0	-1.2
BAYA				*e*S		Sn	21 41 34.6	-4.4
PLUM	**Mont Dore**	**3.61**	**238**	*e*P		Pn	21 41 02.2	-1.5
PLUM				*e*S		Sn	21 41 42.6	-2.8
PLUM				AMP			21 41 48.1	
	comp=Z,122nm,3.4s							
DZM	**Mont Dzumac**	**3.67**	**243**	*e*P		Pn	21 41 03.8	-1.0
DZM				*e*S		Sn	21 41 44.5	-2.7
DZM				AMP			21 41 53.6	
	comp=Z,454nm,10.8s							
DZM	**Mont Dzumac**	**3.67**	**243**	Pn		Pn	21 41 04.8	+0.1
	comp=Z,14nm,0.3s,baz=102,slow=19,SNR=444							
DZM					Sn	Sn	21 41 45.4	-1.8
	comp=Z,13nm,0.3s,baz=115,slow=23,SNR=10.0							
NORM	**Noumea**	**3.71**	**240**	*e*P		Pn	21 41 04.1	-1.1
NORM				*e*S		Sn	21 41 43.2	-4.7
NOUC	**Port Laguerre**	**3.80**	**243**	*e*P		Pn	21 41 06.3	-0.2
NOUC				*e*S		Sn	21 41 47.6	-2.6
NOUC				AMP			21 41 53.5	
	comp=Z,23nm,0.0s							
HNR	**Honiara**	**14.57**	**317**	LR		LR	21 48 58.3	
	comp=Z,34nm,21.4s,baz=190,slow=33							
URZ	**Urewera**	**18.84**	**162**	LR		LR	21 48 15.7	
	comp=Z,82nm,20.3s,baz=150,slow=29							
CTA	**Charters Tower**	**22.24**	**267**	P		P	21 45 10.6	+6.2
	comp=Z,1.9nm,0.7s,baz=93,slow=17,SNR=3.0							
WRA	**Warramunga Arr**	**33.40**	**264**	P		P	21 46 48.5	+2.4
	comp=Z,0.3nm,0.5s,baz=100,slow=8.3,SNR=5.6							
ASAR	**Alice Springs**	**33.52**	**258**	P		P	21 46 48.4	+1.2
	comp=Z,0.3nm,0.6s,baz=88,slow=8.8,SNR=5.4							
NWAO	**Narrogin (SRO)**	**48.29**	**244**	LR		LR	22 09 46.9	
	comp=Z,75nm,18.3s,baz=360,slow=37							
GERES	**GERESS Array B**	**145.83**	**332**	PKPbc		PKPab	21 59 50.8	+4.1
	comp=Z,0.2nm,0.4s,baz=104,slow=4.1,SNR=2.5							

IDC 24 21:40:35.3±1.6,3°.65N×126°.92E,h0km,mb3.6/5, mb1 3.8/5,mb1mx3.5/25,mbtmp3.6/5,Error ellipse: s-maj=113.7km s-min=19.2km az=70.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.65**	**183**	P		P	21 45 27.9	+0.4
	5.2nm,1.2s,baz=9.4,slow=9.4,SNR=4.1							
WRA	**Warramunga Arr**	**24.55**	**163**	P		P	21 45 55.7	-1.3
	0.7nm,0.4s,baz=342,slow=9.6,SNR=12							
ASAR	**Alice Springs**	**27.99**	**166**	P		P	21 46 29.1	+1.0
	0.3nm,0.7s,baz=340,slow=9.9,SNR=3.3							
MKAR	**Makanchi Array**	**57.73**	**325**	P		P	21 50 27.4	-0.6
	0.3nm,0.5s,baz=121,slow=7.8,SNR=6.9							
KURBB	**Kurchatov Arra**	**61.91**	**327**	P		P	21 50 57.1	+0.5
	0.5nm,0.6s,baz=131,slow=6.2,SNR=11							

*IDC **24** 21:44:09.8±1.6, 34°.71N×141°.60E, h0km, mb3.6/6, mb1 3.7/9, mb1mx3.5/29, mbtmp3.6/9, ML3.4/3, Error ellipse: s-maj=40.9km s-min=19.4km az=78.0*
*ISCJB **24** 21:44:12.0±1.5, 34°.67N±0°.05×141°.58E±0°.08, h25km±7km, mb3.6/6, Error ellipse: s-maj=11.6km s-min=7.5km az=172.3*
*JMA **24**

CALA	**Caldeira**	**0.68**	**85**	*e*P	Pg	22 15 22.9	-1.2
CALA				*e*S	Sg	22 15 31.9	-1.2
CALA	**Caldeira**	**0.68**	**85**	*e*P	Pg	22 15 22.9	-1.2
CALA				*e*S	Sg	22 15 31.9	-1.2
PCED	**Cedros**	**0.69**	**81**	*e*P	Pg	22 15 22.8	-1.3
PCED				*e*S	Sg	22 15 31.8	-1.3
PCED				A	A	22 15 32.5	
	90nm,0.2s						
PCED	**Cedros**	**0.69**	**81**	*e*P	Pg	22 15 22.8	-1.3
PCED				*e*S	Sg	22 15 31.8	-1.3
HOR	**Horta**	**0.74**	**89**	*e*P	Pg	22 15 23.4	-1.6
HOR				*e*S	Sg	22 15 32.9	-1.7
HOR	**Horta**	**0.74**	**89**	*e*P	Pg	22 15 23.4	-1.6
HOR				*e*S	Sg	22 15 32.9	-1.7
PCAN	**Candelaria**	**0.85**	**93**	*e*P	Pg	22 15 25.1	-2.2
PCAN				*e*S	Sg	22 15 36.0	-2.4
PCAN				A	A	22 15 37.5	
	119nm,0.1s						
PCAN	**Candelaria**	**0.85**	**93**	*e*P	Pg	22 15 25.1	-2.2
PCAN				*e*S	Sg	22 15 36.0	-2.4
PICO	**Pico**	**0.90**	**91**	*e*P	Pg	22 15 25.9	-2.3
PICO				*e*S	Sg	22 15 37.0	-2.9
PICO	**Pico**	**0.90**	**91**	*e*P	Pg	22 15 25.9	-2.3
PICO				*e*S	Sg	22 15 37.0	-2.9
ROSA	**Rosais**	**1.06**	**79**	*e*P	Pg	22 15 28.0	-3.2
ROSA				A	A	22 15 40.6	
	85nm,0.5s						
ROSA				*e*S	Sg	22 15 40.8	-4.2
ROSA	**Rosais**	**1.06**	**79**	*e*P	Pg	22 15 28.0	-3.2
ROSA				*e*S	Sg	22 15 40.8	-4.2
PID	**Ribeirinha**	**1.14**	**93**	*e*P	Pg	22 15 29.4	-3.4
PID				*e*S	Sg	22 15 42.8	-4.9
PID	**Ribeirinha**	**1.14**	**93**	*e*P	Pg	22 15 29.4	-3.4
PID				*e*S	Sg	22 15 42.8	-4.9
PMAN	**Manadas**	**1.17**	**84**	*e*P	Pg	22 15 29.5	-3.8
PMAN				*e*S	Sg	22 15 43.6	-4.8
PMAN				A	A	22 15 44.0	
	43nm,0.2s						
PMAN	**Manadas**	**1.17**	**84**	*e*P	Pg	22 15 29.5	-3.8
PMAN				*e*S	Sg	22 15 43.6	-4.8

*ISCJB **24** 22:51:29.2±0.2, 42˚.26N±0˙.01×13˚.51E±0˙.03, h13km±2km, Error ellipse: s-maj=3.1km s-min=2.3km az=172.0*
*CSEM **24** 22:51:29.7±0.1, 42˚.26N×13˚.51E, h5km, ML3.5/9, Error ellipse: s-maj=2.3km s-min=1.8km az=68.0*
*ROM **24** 22:51:29.5±0.1, 42˚.27N×13˚.51E, h11km±1km, MI3.0/32, Error ellipse: s-maj=1.0km s-min=0.8km az=60.0*
*NEIC **24** 22:51:29.0, 42˚.27N×13˚.51E, h11km, ML3.0(ROM), After ROM.*
NEIC Felt [II] at Avezzano, L'Aquila, Montorio al Vomano and Pratola Peligna.

ISC 24 22:51:29.8±0.8, 42˚26N±0˙.01×13˚52E±0˙.02, h12km±5km, n103, σ0s82/150, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.13**	**318**	*e*Pg	**Pg**	**22 51 32.6**	**-0.5**
AQU				*e*Sg	**Sg**	**22 51 34.8**	**-0.7**
AQU	**L'Aquila**	**0.13**	**318**	Pg	**Pg**	**22 51 33.0**	**-0.1**
AQU				Sg	**Sg**	**22 51 35.1**	**-0.3**
AQU	**L'Aquila**	**0.13**	**318**	*e*Pg	**Pg**	**22 51 32.6**	**-0.5**
AQU				*e*Sg	**Sg**	**22 51 34.8**	**-0.7**
PTQR	**Pietraquaria**	**0.25**	**200**	P	**Pg**	**22 51 35.4**	**+0.3**
PTQR				S	**Sg**	**22 51 39.2**	**+0.5**
PTQR	**Pietraquaria**	**0.25**	**200**	Pg	**Pg**	**22 51 35.4**	**+0.3**
PTQR				Sg	**Sg**	**22 51 39.2**	**+0.5**
PTQR	**Pietraquaria**	**0.25**	**200**	Pg	**Pg**	**22 51 35.4**	**+0.3**
PTQR				Sg	**Sg**	**22 51 39.2**	**+0.5**
VCEL	**Villa Celiera**	**0.28**	**61**	P	**Pg**	**22 51 35.4**	**-0.2**
VCEL				S	**Sg**	**22 51 40.1**	**+0.6**
VCEL	**Villa Celiera**	**0.28**	**61**	Pg	**Pg**	**22 51 35.4**	**-0.2**
VCEL				Sg	**Sg**	**22 51 40.1**	**+0.6**
	4µm,0.4s						
VCEL	**Villa Celiera**	**0.28**	**61**	Pg	**Pg**	**22 51 35.4**	**-0.2**
VCEL				Sg	**Sg**	**22 51 40.1**	**+0.6**
	4µm,0.4s						
CAMP	**Campotosto**	**0.29**	**344**	P	**Pg**	**22 51 35.6**	**-0.2**
CAMP				S	**Sg**	**22 51 40.0**	**+0.2**
CAMP	**Campotosto**	**0.29**	**344**	Pg	**Pg**	**22 51 35.6**	**-0.2**
CAMP				Sg	**Sg**	**22 51 40.0**	**+0.2**
	485nm,0.7s						
CAMP	**Campotosto**	**0.29**	**344**	Pg	**Pg**	**22 51 35.6**	**-0.2**
CAMP				Sg	**Sg**	**22 51 40.0**	**+0.2**
	485nm,0.7s						
FIAM	**Fiamignano**	**0.30**	**272**	P	**Pg**	**22 51 36.0**	**+0.1**
FIAM				S	**Sg**	**22 51 40.9**	**+0.8**
FIAM	**Fiamignano**	**0.30**	**272**	Pg	**Pg**	**22 51 36.0**	**+0.1**
FIAM				Sg	**Sg**	**22 51 40.8**	**+0.8**
	3µm,0.7s						
FIAM	**Fiamignano**	**0.30**	**272**	Pg	**Pg**	**22 51 36.0**	**+0.1**
FIAM				Sg	**Sg**	**22 51 40.8**	**+0.8**
	3µm,0.7s						
TERO	**Teramo**	**0.37**	**10**	P	**Pg**	**22 51 36.8**	**-0.4**
TERO				S	**Sg**	**22 51 42.8**	**+0.6**
TERO	**Teramo**	**0.37**	**10**	Pg	**Pg**	**22 51 36.8**	**-0.4**
TERO				Sg	**Sg**	**22 51 42.8**	**+0.6**
	3µm,0.7s						
TERO	**Teramo**	**0.37**	**10**	Pg	**Pg**	**22 51 36.8**	**-0.4**
TERO				Sg	**Sg**	**22 51 42.8**	**+0.6**
	3µm,0.7s						
INTR	**Introdacqua**	**0.38**	**130**	P	**Pg**	**22 51 37.7**	**+0.2**
INTR				S	**Sb**	**22 51 43.9**	**-0.5**
INTR	**Introdacqua**	**0.38**	**130**	Pg	**Pg**	**22 51 37.7**	**+0.2**
INTR				Sg	**Sb**	**22 51 43.9**	**-0.5**
	3µm,0.3s						
INTR	**Introdacqua**	**0.38**	**130**	Pg	**Pg**	**22 51 37.7**	**+0.2**
INTR				Sg	**Sb**	**22 51 43.9**	**-0.5**
	3µm,0.3s						
VVLD	**Villa Vallelon**	**0.40**	**168**	P	**Pg**	**22 51 37.9**	**+0.2**
VVLD				S	**Sb**	**22 51 44.3**	**-0.6**
VVLD	**Villa Vallelon**	**0.40**	**168**	Pg	**Pg**	**22 51 37.9**	**+0.2**
VVLD				Sg	**Sb**	**22 51 44.3**	**-0.6**
	3µm,0.7s						
VVLD	**Villa Vallelon**	**0.40**	**168**	Pg	**Pg**	**22 51 37.9**	**+0.2**
VVLD				Sg	**Sb**	**22 51 44.3**	**-0.6**
	3µm,0.7s						
GUAR	**Guarcino**	**0.49**	**198**	P	**Pg**	**22 51 39.4**	**0.0**
GUAR				S	**Sg**	**22 51 46.4**	**+0.5**
GUAR	**Guarcino**	**0.49**	**198**	Pg	**Pg**	**22 51 39.4**	**0.0**
GUAR				Sg	**Sg**	**22 51 46.4**	**+0.5**
	1µm,0.4s						
GUAR	**Guarcino**	**0.49**	**198**	Pg	**Pg**	**22 51 39.4**	**0.0**
GUAR				Sg	**Sg**	**22 51 46.4**	**+0.5**
	1µm,0.4s						
LNSS	**Leonessa**	**0.49**	**314**	Pg	**Pg**	**22 51 39.1**	**-0.4**
	2µm,0.7s						
LNSS	**Leonessa**	**0.49**	**314**	Pg	**Pg**	**22 51 39.1**	**-0.4**
	2µm,0.7s						
CERT	**Cerreto**	**0.50**	**232**	P	**Pg**	**22 51 39.6**	**-0.1**
CERT				S	**Sg**	**22 51 46.0**	**-0.4**
CERT	**Cerreto**	**0.50**	**232**	Pg	**Pg**	**22 51 39.6**	**-0.1**
CERT				Sg	**Sg**	**22 51 46.0**	**-0.4**
	2µm,0.7s						
CERT	**Cerreto**	**0.50**	**232**	Pg	**Pg**	**22 51 39.6**	**-0.1**
CERT				Sg	**Sg**	**22 51 46.0**	**-0.4**
	2µm,0.7s						
LPEL	**Lama dei Pelig**	**0.54**	**113**	Pg	**Pg**	**22 51 40.2**	**-0.2**
LPEL				Sg	**Sg**	**22 51 48.4**	**+0.8**
	2µm,0.5s						
LPEL	**Lama dei Pelig**	**0.54**	**113**	Pg	**Pg**	**22 51 40.2**	**-0.2**
LPEL				Sg	**Sg**	**22 51 48.4**	**+0.8**
	2µm,0.5s						
POFI	**Posta Fibreno**	**0.56**	**165**	P	**Pg**	**22 51 40.2**	**-0.6**
POFI				S	**Sg**	**22 51 47.9**	**-0.4**
POFI	**Posta Fibreno**	**0.56**	**165**	Pg	**Pg**	**22 51 40.2**	**-0.6**
	585nm,0.8s						
POFI	**Posta Fibreno**	**0.56**	**165**	Pg	**Pg**	**22 51 40.2**	**-0.6**
	585nm,0.8s						
POFI				S	**Sg**	**22 51 47.9**	**-0.4**
SDI	**San Donato**	**0.59**	**158**	P	**Pg**	**22 51 41.2**	**-0.2**
SDI				S	**Sb**	**22 51 50.2**	**-0.3**
SDI	**San Donato**	**0.59**	**158**	Pg	**Pg**	**22 51 41.2**	**-0.2**
SDI				Sg	**Sb**	**22 51 50.2**	**-0.3**
SDI	**San Donato**	**0.59**	**158**	Pg	**Pg**	**22 51 41.2**	**-0.2**
SDI				Sg	**Sb**	**22 51 50.2**	**-0.3**
CAFR	**Castel Frentan**	**0.62**	**93**	Pg	**Pb**	**22 51 42.2**	**-0.3**
	3µm,0.4s						
CAFR	**Castel Frentan**	**0.62**	**93**	Pg	**Pb**	**22 51 42.2**	**-0.3**
	3µm,0.4s						
MTCE	**Montecelio**	**0.62**	**248**	Pg	**Pg**	**22 51 41.5**	**-0.4**
	391nm,0.6s						
MTCE	**Montecelio**	**0.62**	**248**	Pg	**Pg**	**22 51 41.5**	**-0.4**
	391nm,0.6s						
TRTR	**Tortoreto Alta**	**0.62**	**28**	Pg	**Pb**	**22 51 43.1**	**+0.5**
TRTR	**Tortoreto Alta**	**0.62**	**28**	Pg	**Pb**	**22 51 43.1**	**+0.5**
MNS	**Montasola**	**0.63**	**282**	Pg	**Pg**	**22 51 41.4**	**-0.7**
	415nm,0.5s						
MNS	**Montasola**	**0.63**	**282**	Pg	**Pg**	**22 51 41.4**	**-0.7**
	415nm,0.5s						
NRCA	**Norcia**	**0.65**	**333**	Pg	**Pg**	**22 51 41.5**	**-0.9**
	136nm,0.5s						
NRCA	**Norcia**	**0.65**	**333**	Pg	**Pg**	**22 51 41.5**	**-0.9**
	136nm,0.5s						
OFFI	**Offida**	**0.69**	**11**	Pg	**Pb**	**22 51 43.3**	**-0.4**
	3µm,0.6s						
OFFI	**Offida**	**0.69**	**11**	Pg	**Pb**	**22 51 43.3**	**-0.4**
	3µm,0.6s						
GIUL	**Giuliano Di Ro**	**0.73**	**196**	Pg	**Pg**	**22 51 43.2**	**-0.7**
	787nm,0.7s						
GIUL	**Giuliano Di Ro**	**0.73**	**196**	Pg	**Pg**	**22 51 43.2**	**-0.7**
	787nm,0.7s						
RNI2	**Rionero Sannit**	**0.73**	**139**	Pg	**Pg**	**22 51 43.8**	**-0.2**
	1µm,0.8s						
RNI2	**Rionero Sannit**	**0.73**	**139**	Pg	**Pg**	**22 51 43.8**	**-0.2**
	1µm,0.8s						
RMP	**Rome, Mte Porz**	**0.75**	**234**	Pg	**Pg**	**22 51 43.8**	**-0.6**
	1µm,0.5s						
RMP	**Rome, Mte Porz**	**0.75**	**234**	Pg	**Pg**	**22 51 43.8**	**-0.6**
	1µm,0.5s						
CERA	**Filignano**	**0.76**	**150**	Pg	**Pg**	**22 51 43.9**	**-0.6**
	912nm,0.6s						
CERA	**Filignano**	**0.76**	**150**	Pg	**Pg**	**22 51 43.9**	**-0.6**
	912nm,0.6s						
CESX	**Cesi**	**0.78**	**297**	Pg	**Pg**	**22 51 44.7**	**-0.1**
	256nm,0.4s						
CESX	**Cesi**	**0.78**	**297**	Pg	**Pg**	**22 51 44.7**	**-0.1**
	256nm,0.4s						
RDP	**Rocca di Papa**	**0.78**	**230**	Pg	**Pb**	**22 51 45.1**	**-0.2**
	1µm,0.5s						
RDP	**Rocca di Papa**	**0.78**	**230**	Pg	**Pb**	**22 51 45.1**	**-0.2**
	1µm,0.5s						
MIDA	**Miranda**	**0.83**	**138**	Pg	**Pg**	**22 51 45.1**	**-0.7**
	443nm,0.4s						
MIDA	**Miranda**	**0.83**	**138**	Pg	**Pg**	**22 51 45.1**	**-0.7**
	443nm,0.4s						
FDMO	**Fiordimonte**	**0.84**	**338**	Pg	**Pg**	**22 51 44.9**	**-1.1**
	278nm,0.8s						
FDMO	**Fiordimonte**	**0.84**	**338**	Pg	**Pg**	**22 51 44.9**	**-1.1**
	278nm,0.8s						
GUMA	**Gualdo di Mace**	**0.86**	**21**	Pg	**Pg**	**22 51 44.8**	**-1.6**
	1µm,0.5s						
GUMA	**Gualdo di Mace**	**0.86**	**21**	Pg	**Pg**	**22 51 44.8**	**-1.6**
	1µm,0.5s						
CESI	**CESI - Serrava**	**0.87**	**329**	Pg	**Pg**	**22 51 45.7**	**-0.9**
	178nm,0.8s						
CESI	**CESI - Serrava**	**0.87**	**329**	Pg	**Pg**	**22 51 45.7**	**-0.9**
	178nm,0.8s						
TRIV	**Trivento**	**0.92**	**122**	Pg	**Pb**	**22 51 46.8**	**-0.8**
TRIV	**Trivento**	**0.92**	**122**	Pg	**Pb**	**22 51 46.8**	**-0.8**
VAGA	**Valle Agricola**	**1.00**	**147**	Pg	**Pb**	**22 51 48.2**	**-0.9**
	300nm,0.7s						
VAGA	**Valle Agricola**	**1.00**	**147**	Pg	**Pb**	**22 51 48.2**	**-0.9**
	300nm,0.7s						
ASSB	**Assisi San Ben**	**1.01**	**321**	Pg	**Pb**	**22 51 48.5**	**-0.7**
	280nm,0.5s						
ASSB	**Assisi San Ben**	**1.01**	**321**	Pg	**Pb**	**22 51 48.5**	**-0.7**
	280nm,0.5s						
BSSO	**Busso**	**1.08**	**131**	Pg	**Pb**	**22 51 49.6**	**-0.8**
	215nm,0.7s						
BSSO	**Busso**	**1.08**	**131**	Pg	**Pb**	**22 51 49.6**	**-0.8**
	215nm,0.7s						
SGG	**Gregorio Mates**	**1.08**	**143**	Pg	**Pb**	**22 51 49.9**	**-0.6**
	268nm,0.6s						
SGG	**Gregorio Mates**	**1.08**	**143**	Pg	**Pb**	**22 51 49.9**	**-0.6**
	268nm,0.6s						
CING	**Cingoli**	**1.14**	**348**	Pg	**Pb**	**22 51 50.5**	**-1.0**
	509nm,1.4s						
CING	**Cingoli**	**1.14**	**348**	Pg	**Pb**	**22 51 50.5**	**-1.0**
	509nm,1.4s						
TOLF	**Tolfa**	**1.14**	**261**	Pg	**Pg**	**22 51 51.9**	**+0.1**
	143nm,0.7s						
TOLF	**Tolfa**	**1.14**	**261**	Pg	**Pg**	**22 51 51.9**	**+0.1**
	143nm,0.7s						
PTRJ	**Pietraroja**	**1.17**	**139**	Pg	**Pn**	**22 51 51.2**	**-0.9**
	514nm,0.6s						
PTRJ	**Pietraroja**	**1.17**	**139**	Pg	**Pn**	**22 51 51.2**	**-0.9**
	514nm,0.6s						
MS1	**Monte Sant'Ang**	**1.89**	**106**	*e*Pn	**Pg**	**22 52 05.8**	**-0.3**
NVLJ	**Novalja**	**2.51**	**23**	*e*Pn	**Pn**	**22 52 11.2**	**+0.8**
NVLJ				Sn	**Sn**	**22 52 41.1**	**+0.3**
NVLJ	**Novalja**	**2.51**	**23**	*e*Pn	**Pn**	**22 52 11.1**	**+0.8**
NVLJ				Sn	**Sn**	**22 52 41.0**	**+0.3**
CUC	**Castrocucco**	**2.85**	**142**	*e*Pn	**Pn**	**22 52 16.0**	**+0.8**
CUC	**Castrocucco**	**2.85**	**142**	*e*Pn	**Pn**	**22 52 16.0**	**+0.8**
STON	**Ston**	**3.15**	**77**	*e*Pn	**Pn**	**22 52 20.1**	**+0.8**
STON				Sn	**Sn**	**22 52 56.9**	**+0.2**
STON	**Ston**	**3.15**	**77**	*e*Pn	**Pn**	**22 52 20.0**	**+0.8**
STON				Sn	**Sn**	**22 52 56.9**	**+0.2**
SKDS	**Skadanscina**	**3.31**	**6**	*i* Pn	**Pb**	**22 52 25.8**	**-2.6**
SKDS				*i* Sn	**Sn**	**22 53 02.0**	**+1.4**
SKDS	**Skadanscina**	**3.31**	**6**	Pn	**Pb**	**22 52 25.8**	**-2.6**
SKDS				*i* Sn	**Sn**	**22 53 02.0**	**+1.4**
BOJS	**Bojanci**	**3.48**	**21**	*i* Pn	**Pn**	**22 52 26.1**	**+2.4**
BOJS				*i* Sn	**Sn**	**22 53 05.5**	**+0.8**
BOJS	**Bojanci**	**3.48**	**21**	*i* Pn	**Pn**	**22 52 26.1**	**+2.4**
BOJS				*i* Sn	**Sn**	**22 53 05.6**	**+0.8**
JAVS	**Javornik**	**3.65**	**6**	*i* Pn	**Pn**	**22 52 29.1**	**+2.9**
JAVS				*i* Sn	**Sn**	**22 53 09.8**	**+0.5**
JAVS	**Javornik**	**3.65**	**6**	*i* Pn	**Pn**	**22 52 29.1**	**+2.9**
JAVS				*i* Sn	**Sn**	**22 53 09.8**	**+0.5**
VOY	**Vojsko**	**3.78**	**4**	*e*	Sn	22 53 05.5	-6.9
VOY				*e*		22 53 43.5	
KHC	**Kasperske Hory**	**6.87**	**0**	*e*PN	**Pn**	**22 53 12.0**	**+1.6**
KHC				*ex*	x	22 54 20.0	
KHC				*e*SN	**Sn**	**22 54 27.0**	**-1.5**

*IDC **24** 22:54:45.2±0.7, 11˚.21S×119˚.18E, h0km, mb4.1/8, mb1 4.3/11, mb1mx4.1/23, mbtmp4.2/11, ML4.3/3, MS3.3/4, Ms1 3.3/4, ms1mx2.9/28, Error ellipse: s-maj=39.0km s-min=14.6km az=57.0*
*ISCJB **24** 22:54:48.1±0.3, 11˚.49S±0˙.03×118˚.98E±0˙.03, h33km, mb4.0/8, MS3.3/2, Error ellipse: s-maj=5.0km s-min=3.7km az=40.6*
*AUST **24** 22:54:49.8, 11˚.49S×118˚.94E, h35km*
*DJA **24** 22:54:56.3±0.5, 11˚.5S±5˚×11˚.9E±˚, h92km±17km, M5.0/13, mb4.9/13, mB5.4/7, MLv5.1/13, Mw(mB)4.9/7*

ISC 24 22:54:50.5±0.5, 11˚46S±0˙05×118˚95E±0˙05, h35km, n53, σ1s91/56, mb4.0/8, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.22**	**37**	P	Pn	22 55 32.4	+7.5
WSI	**Waingapu**	**2.22**	**37**	S	**Sn**	**22 55 48.4**	**-2.7**
	baz=2.3,SNR=4.1						
MMRI	**Maumere**	**4.29**	**49**	P	Pn	22 56 05.2	+12
KHKI	**Kahang-Kahang**	**4.51**	**313**	P	**Pn**	**22 55 57.6**	**+1.2**
KHKI				S	**Sn**	**22 56 47.9**	**+0.3**
IGBI	**Denpasar**	**4.58**	**305**	P	**Pn**	**22 55 57.2**	**-0.1**
DNP	**Denpasar**	**4.61**	**307**	P	**Pn**	**22 55 58.8**	**+1.1**
DNP				S	**Sn**	**22 56 50.5**	**+0.4**
SRBI	**Singaraja**	**4.98**	**312**	P	**Pn**	**22 56 04.3**	**+1.4**
BKSI	**Bulukumba**	**6.21**	**11**	P	**Pn**	**22 56 20.2**	**+0.4**
	137nm,0.5s,2µm0.6nm						
GMJI	**Gumukmas**	**6.28**	**300**	P	**Pn**	**22 56 21.5**	**+0.7**
	75nm,0.7s,6µm0.9nm						
BLJI	**Banyuglugur**	**6.45**	**305**	P	**Pn**	**22 56 23.4**	**+0.4**
	140nm,0.5s,5µm1.4nm						
KAPI	**Kappang**	**6.46**	**7**	P	**Pn**	**22 56 24.3**	**+1.1**
	30nm,0.7s,765nm0.3nm						
KAPI	**Kappang**	**6.46**	**7**	Pn	**Pn**	**22 56 22.3**	**-0.9**
	4.4nm,0.3s,baz=198,slow=7.4,SNR=11						
KAPI				Sn	Sn	22 57 30.4	-5.3
	18nm,0.3s,baz=62,slow=22,SNR=11						
KAPI				LR	LR	22 59 09.7	
	comp=Z,140nm,20.1s,baz=132,slow=43						
KRKI	**Karangkates**	**7.20**	**297**	P	Pn	22 56 37.3	+4.0
	244nm,0.3s,2.4nm						
KRKI				S	**Sn**	**22 57 53.7**	**-0.2**
	244nm,0.3s,2.4nm						
SPSI	**Sidrap Palu**	**7.50**	**6**	P	**Pn**	**22 56 39.7**	**+2.3**
	21nm,0.6s,0.1nm						
GRJI	**Gresik**	**7.83**	**305**	S	**Sn**	**22 58 06.1**	**-3.3**
PWJI	**Pagerwojo**	**7.83**	**295**	P	**Pn**	**22 56 43.7**	**+1.7**
	87nm,0.5s,6µm0.8nm						
PWJI				S	**Sn**	**22 58 05.4**	**-4.1**
	87nm,0.5s,6µm0.8nm						
SJI	**Sawahan**	**7.99**	**297**	P	**Pn**	**22 56 46.5**	**+2.1**
	156nm,0.5s,6µm1.1nm						
SJI				S	**Sn**	**22 58 13.7**	**+0.1**
	156nm,0.5s,6µm1.1nm						
PCJI	**Pacitan**	**8.32**	**292**	P	**Pn**	**22 56 50.1**	**+1.4**
	201nm,0.6s,3µm						
BBKI	**Banjar Baru**	**8.93**	**333**	P	**Pn**	**22 56 59.1**	**+1.9**
	61nm,1.1s						
UGM	**Wanagama**	**9.03**	**292**	P	**Pn**	**22 56 59.7**	**+1.2**
	baz=9.0,SNR=41						
UGM				S	**Sn**	**22 58 34.6**	**-4.3**
	baz=9.0,SNR=5.7						
FITZ	**Fitzroy Crossi**	**9.24**	**136**	Pn	**Pn**	**22 57 00.5**	**-0.8**
	2.5nm,0.3s,baz=328,slow=7.8,SNR=55						
FITZ				Sn	Sn	22 58 36.0	-8.2
	5.2nm,0.3s,baz=173,slow=18,SNR=14						
FITZ				LR	LR	23 00 46.5	
	comp=Z,160nm,18.3s,baz=354,slow=39						
FITZ	**Fitzroy Crossi**	**9.24**	**136**	P	**Pn**	**22 57 00.4**	**-1.0**
	baz=9.3,SNR=48						
FITZ				S	Sn	22 58 37.2	-7.0
	baz=9.3,SNR=11						
BJII	**Banjamegara**	**10.00**	**293**	P	Pn	22 57 15.5	+3.7
	47nm,0.7s						
PCI	**Palu**	**10.53**	**5**	P	**Pn**	**22 57 20.2**	**+1.2**
	baz=11,SNR=6.8						
PCI				S	**Sn**	**22 59 19.1**	**+3.3**
	baz=11,SNR=4.0						
CISI	**Cisompet, Garu**	**11.65**	**288**	P	Pn	22 57 42.6	+8.2
CISI	**Cisompet, Garu**	**11.65**	**288**	P	**Pn**	**22 57 35.0**	**+0.6**
	baz=12,SNR=10						
CISI				S	**Sn**	**22 59 40.7**	**-2.6**
	baz=12,SNR=7.5						
MTN	**Manton Dam**	**11.99**	**98**	P	**Pn**	**22 57 37.7**	**-1.4**
	baz=12,SNR=12						
MTN				S	Sn	22 59 39.5	-12
	baz=12,SNR=12						
GIRL	**Giralia**	**11.99**	**201**	P	**Pn**	**22 57 41.0**	**+2.0**
	baz=12,SNR=7.9						
GIRL				S	**Sn**	**22 59 50.1**	**-1.6**
	baz=12,SNR=5.0						
KDU	**Kakadu**	**13.28**	**97**	P	**Pn**	**22 57 55.8**	**-0.9**
	baz=13,SNR=4.3						
MEEK	**Meekatharra**	**15.10**	**181**	P	**Pn**	**22 58 20.4**	**-1.0**
	baz=15,SNR=38						
MEEK				S	Sn	23 00 55.9	-12
	baz=15,SNR=9.9						
FAKI	**Fak Fak**	**15.68**	**58**	P	**Pn**	**22 58 29.8**	**+0.8**
	baz=16,SNR=4.1						
WRA	**Warramunga Arr**	**17.03**	**122**	Pn	**Pn**	**22 58 42.8**	**-3.4**
	0.9nm,0.3s,baz=306,slow=14,SNR=5.3						
WRA				Sn	Sn	23 01 36.7	-18
	0.5nm,0.3s,baz=297,slow=21,SNR=4.4						
MNAI	**Manna**	**17.33**	**293**	P	**Pn**	**22 58 48.6**	**-1.3**
	baz=17,SNR=5.3						
MORW	**Morawa**	**17.73**	**188**	P	**P**	**22 58 55.8**	**+0.5**
	baz=18,SNR=22						
MORW				S	Sn	23 01 54.6	-17
	baz=18,SNR=9.1						
KSI	**Kapahiang**	**17.97**	**294**	P	**Pn**	**22 58 57.4**	**-0.4**
ASAR	**Alice Springs**	**18.70**	**132**	P	**P**	**22 59 06.4**	**+0.3**
	0.8nm,0.3s,baz=301,slow=11,SNR=47						
ASAR				S	Sn	23 02 21.2	-14
	0.7nm,0.3s,baz=309,slow=24,SNR=8.7						
BLDU	**Ballidu**	**19.17**	**186**	P	**Pn**	**22 59 14.6**	**+2.3**
	baz=19,SNR=10						
BLDU				S	Sn	23 02 26.9	-19
	baz=19,SNR=5.9						
KLBR	**Kellerberrin**	**20.06**	**183**	P	Pn	22 59 27.8	+4.9
	baz=20,SNR=7.8						
KLBR				S	S	23 02 51.5	-13
	baz=20,SNR=6.6						
NWAO	**Narrogin (SRO)**	**21.42**	**184**	P	**P**	**22 59 37.3**	**+1.8**
	5.4nm,0.6s,baz=12,slow=18,SNR=6.2						
NWAO				S	S	23 03 19.9	-12
	7.4nm,0.4s,baz=99,slow=19,SNR=4.6						
COEN	**Coen**	**23.76**	**99**	P	**P**	**23 00 02.9**	**+3.0**
	baz=24,SNR=5.8						
COEN				S	**S**	**23 04 07.0**	**-6.3**
	baz=24,SNR=7.9						
MTSU	**Mount Surprise**	**25.39**	**108**	P	**P**	**23 00 15.1**	**+0.2**
	baz=25,SNR=7.1						
CTA	**Charters Tower**	**27.61**	**111**	P	**P**	**23 00 34.0**	**-0.8**
	2.6nm,0.6s,baz=293,slow=14,SNR=5.2						
CTA				LR	LR	23 12 04.2	
	comp=Z,60nm,19.1s,baz=47,slow=38						
STKA	**Stephens Creek**	**29.13**	**138**	P	**P**	**23 00 48.5**	**+0.1**
	1.8nm,0.7s,baz=321,slow=12,SNR=7.2						
STKA				LR	LR	23 12 34.3	
	comp=Z,100nm,19.6s,baz=1.6,slow=37						
CMAR	**Chiang Mai Arr**	**35.69**	**326**	P	**P**	**23 01 45.8**	**0.0**
	0.9nm,0.6s,baz=155,slow=6.6,S

	31nm,0.3s						
MORC	**Moravsky Berou**	**2.02**	**153**	*e*Pn	**Pn**	**23 04 01.9**	**-0.8**
	baz=333						
MORC				*e*Sg	**Sb**	**23 04 30.4**	**-0.2**
	11nm,0.2s,baz=333						
OKC	**Ostrava-Krasne**	**2.17**	**142**	*e*PG	**Pb**	**23 04 07.9**	**+0.4**
OKC				*e*SG	**Sb**	**23 04 35.2**	**+0.3**
	comp=Z,13nm,0.3s						
OKC	**Ostrava-Krasne**	**2.17**	**142**	Pg	**Pb**	**23 04 07.9**	**+0.4**
OKC				Sg	**Sb**	**23 04 35.2**	**+0.3**
	13nm,0.3s						
VRAC	**Vranov**	**2.29**	**172**	*e*Pn	**Pn**	**23 04 06.2**	**-0.2**
	baz=352						
VRAC				*e*Sg	**Sb**	**23 04 38.5**	**+0.1**
	11nm,0.3s,baz=352						
TREC	**Trest**	**2.32**	**190**	*e*PN	**Pn**	**23 04 07.7**	**+1.0**
TREC				*e*PG	**Pb**	**23 04 10.3**	**+0.3**
TREC	**Trest**	**2.32**	**190**	Pn	**Pn**	**23 04 07.7**	**+1.0**
KRUC	**Moravsky**	**2.52**	**176**	*e*Pn	**Pn**	**23 04 09.4**	**-0.1**
	baz=356						
KRUC				*e*Sg	**Sb**	**23 04 46.1**	**+1.1**
	baz=356						
NKC	**Novy Kostel**	**2.68**	**241**	*e*PN	**Pn**	**23 04 12.5**	**+0.8**
NKC				*e*PG	**Pg**	**23 04 18.5**	**-0.1**
NKC				*e*SG	**Sg**	**23 04 53.5**	**+0.3**
	comp=Z,36nm,0.3s						
NKC	**Novy Kostel**	**2.68**	**241**	Pn	**Pn**	**23 04 12.5**	**+0.8**
OJC	**Ojcow**	**2.71**	**119**	*e*Pg	**Pg**	**23 04 18.5**	**-0.6**
OJC				*e*Sg	**Sg**	**23 04 54.1**	**0.0**
OJC	**Ojcow**	**2.71**	**119**	*e*Pg	**Pg**	**23 04 18.5**	**-0.6**
OJC				*e*Sg	**Sg**	**23 04 54.1**	**0.0**
KHC	**Kasperske Hory**	**2.93**	**214**	*e*PN	**Pn**	**23 04 15.3**	**+0.1**
KHC				*e*PG	**Pb**	**23 04 21.4**	**+0.9**
KHC				*e*SN	**Sn**	**23 04 50.5**	**-0.7**
KHC				*e*SG	**Sg**	**23 05 00.2**	**-1.3**
	comp=Z,10.0nm,0.4s						
KHC	**Kasperske Hory**	**2.93**	**214**	Pn	**Pn**	**23 04 15.3**	**+0.1**
NIE	**Niedzica**	**3.45**	**127**	*e*P	**Pg**	**23 04 33.1**	**-0.2**
NIE				*e*s	**Sg**	**23 05 18.1**	**+0.1**
VYHS	**Vyhne**	**3.55**	**149**	*e*PN	**Pn**	**23 04 23.3**	**-0.4**
VYHS				*e*		23 04 36.0	
VYHS	**Vyhne**	**3.55**	**149**	*e*SG	**Sg**	**23 05 20.7**	**-0.7**
BSD	**Bornholm Skovb**	**3.62**	**349**	*i* P	**Pn**	**23 04 25.3**	**+0.8**
BSD				*i* S	**Sn**	**23 05 05.5**	**-2.3**
BSD	**Bornholm Skovb**	**3.62**	**349**	*i* P	**Pn**	**23 04 25.3**	**+0.8**
BSD				*i* S	**Sn**	**23 05 05.5**	**-2.3**
CONA	**Conrad Observa**	**3.66**	**183**	⇑*i*Pn	**Pn**	**23 04 26.0**	**+0.9**
CONA				⇑*i*Sg	**Sb**	**23 05 20.4**	**+2.7**
CONA	**Conrad Observa**	**3.66**	**183**	Pn	**Pn**	**23 04 26.0**	**+0.9**
CONA				Sg	**Sb**	**23 05 20.4**	**+2.7**
MOA	**Molln**	**3.92**	**198**	⇑*i*Pn	**Pn**	**23 04 28.7**	**0.0**
MOA				⇑*i*Sg	**Sg**	**23 05 30.3**	**-2.8**
MOA	**Molln**	**3.92**	**198**	Pn	**Pn**	**23 04 28.7**	**0.0**
MOA				Sg	**Sg**	**23 05 30.3**	**-2.8**
CRVS	**Cervenica-Dubn**	**4.36**	**126**	*e*PN	**Pn**	**23 04 36.7**	**+2.0**
CRVS				*e*	**Pg**	**23 04 51.1**	**+0.3**
CRVS	**Cervenica-Dubn**	**4.36**	**126**	*e*SG	**Sg**	**23 05 45.0**	**-2.2**
KOLS	**Kolonicke sedl**	**4.76**	**121**	*e*	**Pg**	**23 05 00.0**	**+1.5**

NIED **24** *23:05:00,45.60N×152.00E,h20km,Mw4.7 Best double couple: M0=1.17000×10^16 NP1:φs=207.00000°,δ61.00000°, λ117.00000°. NP2:φs=341.00000°,δ39.00000°,λ51.00000°.*
ISCJB **24** *23:05:04.2±0.7,45.52N±0.03×151.76E±0.02,h29km±5km, mb4.9/206,MS4.1/27,Error ellipse: s-maj=4.5km s-min=2.0km az=169.6*
JMA **24** *23:05:04.1±0.5,45.55N×152.00E,h30km,M5.2*
SKHL **24** *23:05:05.3±0.4,45.50N×152.11E,h52km±19km,mb5.4/1, Ms4.4/4,msh4.7/2*
MOS **24** *23:05:05.7±1.0,45.62N×151.81E,h38km,mb5.2/94, MS4.0/17,Error ellipse: s-maj=6.3km s-min=4.0km az=100.2*
BJI **24** *23:05:07.9,45.51N×151.68E,h57km,mB4.9/33,mb4.7/45, Ms4.4/39,Ms7 4.2/40*
IDC **24** *23:05:09.1±0.5,45.59N×151.74E,h57km±4km,mb4.4/29, mb1 4.5/32,mb1mx4.5/34,mbtmp4.4/32,MS3.9/9, Ms1 4.0/9,ms1mx3.7/25,Error ellipse: s-maj=13.0km s-min=9.2km az=147.0*
NEIC **24** *23:05:09.7±0.2,45.63N×151.72E,mb5.0/120,Error ellipse: s-maj=5.8km s-min=2.9km az=168.0*
SZGRF **24** *23:05:13.9,47.33N×151.16E,h33km,mb5.2,MS4.1,Kuril Islands, Russia*

ISC 24 23:05:09.1±0.3, 45.51N±0.04×151.70E±0.03, h58km±2km, h58km:pP-P,n988,σ1§09/1144,mb5.0/206,MS4.1/27, 275C-171D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.72**	**265**	*i* PN	**Pn**	**23 05 49.3**	**-1.0**
KUR				*e*S	**Sn**	**23 06 22.0**	**0.0**
KUR				pmax	pmax		
	comp=Z,1μm,0.8s						
KUR				pmax	pmax		
	comp=N,380nm,0.5s						
KUR				pmax	pmax		
	comp=E,100nm,0.3s						
KUR				smax	smax		
	comp=N,3μm,0.7s						
KUR				smax	smax		
	comp=E,2μm,0.8s						
KUR				smax	smax		
	comp=N,10μm,1.0s						
KUR				smax	smax		
	comp=E,4μm,1.0s						
KUR	**Kuril'sk**	**2.72**	**265**	*i* P	**Pn**	**23 05 49.3**	**-1.0**
KUR				AMB	AMB	23 05 52.5	
	comp=E,180nm,0.3s						
KUR				AMB	AMB	23 05 52.5	
	comp=E,380nm,0.5s						
KUR				AMB	AMB	23 05 52.5	
	comp=E,1μm,0.8s						
KUR				*e*S	**Sn**	**23 06 22.0**	**0.0**
KUR				A	A	23 06 27.0	
	comp=E,3μm,0.8s						
KUR				A	A	23 06 27.0	
	comp=E,2μm,0.8s						
KUR				A	A	23 06 28.0	
	comp=E,10μm,1.0s						
KUR				A	A	23 06 28.0	
	comp=E,4μm,1.0s						
YUK	**Yuzh-Kuril'sk**	**4.42**	**253**	*d i* PN	**Pn**	**23 06 13.1**	**-0.4**
YUK				pmax	pmax		
	comp=Z,507nm,0.4s						
YUK				pmax	pmax		
	comp=N,144nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1μm,0.3s						
YUK				pmax	pmax		
	comp=E,100nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**4.42**	**253**	⇓*i* P	**Pn**	**23 06 13.1**	**-0.4**
YUK				AMB	AMB	23 06 15.6	
	comp=E,140nm,0.4s						
YUK				AMB	AMB	23 06 15.6	
	comp=E,100nm,0.4s						
YUK				AMB	AMB	23 06 15.6	
	comp=E,510nm,0.4s						
YUK				*i* S	**Sn**	**23 07 04.0**	**+0.4**
YUK				A	A	23 07 12.1	
	comp=E,450nm,0.4s						
YUK				A	A	23 07 12.1	
	comp=E,160nm,0.4s						
NEM2	**Nemuro 2**	**4.78**	**245**	P	**Pn**	**23 06 16.0**	**-2.5**
NEM2				*e*S	**Sn**	**23 07 09.5**	**-3.0**
JRA	**Rausu**	**4.95**	**254**	P	**Pn**	**23 06 20.7**	**-0.1**
JNK	**Nakash**	**5.35**	**251**	P	**Pn**	**23 06 25.5**	**-0.8**
JNK				*e*S	**Sn**	**23 07 24.4**	**-2.2**
JAK	**Akkeshi**	**5.63**	**246**	P	**Pn**	**23 06 27.7**	**-2.4**
JAK				*e*S	**Sn**	**23 07 29.6**	**-3.7**
JTKR	**Abashiri--Toko**	**5.76**	**257**	P	**Pn**	**23 06 32.2**	**+0.2**
SKR	**Severo-Kuril's**	**5.96**	**28**	*e*PN	Pn	23 06 29.0	-5.6
SKR				pmax	pmax		
	comp=Z,230nm,0.6s						
SKR				MLR	MLR		
	comp=E,3μm,12.0s						
SKR				MLR	MLR		
	comp=Z,3μm,12.0s						
SKR	**Severo-Kuril's**	**5.96**	**28**	*e*P	Pn	23 06 29.0	-5.6
SKR				AMB	AMB	23 06 31.5	
	comp=Z,230nm,0.6s						
SKR				*e*S	Sn	23 07 32.0	-9.4
SKR				A	A	23 07 49.5	
	comp=Z,250nm,0.6s						
SKR				A	A	23 07 49.5	
	comp=Z,140nm,0.6s						
SKR				A	A	23 07 49.5	
	comp=Z,110nm,0.6s						
SKR				AMS	AMS	23 08 18.0	
	comp=Z,3μm,12.0s						
SKR				AMS	AMS	23 08 18.0	
	comp=Z,3μm,12.0s						
JAR	**Ashorobuto**	**6.10**	**252**	P	**Pn**	**23 06 36.1**	**-0.5**
JAR				*e*S	**Sn**	**23 07 43.0**	**-2.0**
JMP	**Maruseppu**	**6.13**	**259**	P	**Pn**	**23 06 37.4**	**+0.4**
JOB	**Onbets**	**6.23**	**248**	P	**Pn**	**23 06 36.9**	**-1.4**
JOB				*e*S	**Sn**	**23 07 45.9**	**-2.2**
YSS	**Yuzh-Sakhalins**	**6.37**	**286**	⇓*i* PN	**Pn**	**23 06 42.2**	**+1.9**
YSS				pmax	pmax		
	comp=Z,80nm,0.8s						
YSS				MLR	MLR		
	comp=E,1μm,16.0s						
YSS				MLR	MLR		
	comp=Z,2μm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.37**	**286**	⇓*i* P	**Pn**	**23 06 42.2**	**+1.9**
YSS				AMB	AMB	23 06 43.0	
	comp=Z,80nm,0.8s						
YSS				AMB	AMB	23 06 43.0	
	comp=Z,80nm,0.8s						
YSS				*e*S	**Sn**	**23 07 50.0**	**-1.6**
YSS				A	A	23 07 58.0	
	comp=Z,90nm,0.6s						
YSS				*e*LQ	LQ	23 08 28.0	
YSS				*e*LR	LR	23 08 44.0	
YSS				AMS	AMS	23 09 08.0	
	comp=Z,1μm,16.0s						
YSS				AMS	AMS	23 09 08.0	
	comp=Z,2μm,16.0s						
JSE	**Soyaes**	**6.46**	**268**	P	**Pn**	**23 06 43.0**	**+1.4**
JKK2	**Kamakawa 2**	**6.59**	**259**	P	**Pn**	**23 06 43.9**	**+0.6**
ASAJ	**Asahikawa**	**6.63**	**261**	*e*Pn	**Pn**	**23 06 44.7**	**+1.0**
ASAJ	**Asahikawa**	**6.63**	**261**	P	**Pn**	**23 06 44.8**	**+1.0**
ASAJ	**Asahikawa**	**6.63**	**261**	P	**Pn**	**23 06 45.0**	**+1.2**
	comp=Z,11nm,0.3s,baz=83,slow=15,SNR=58						
JCH	**Churui**	**6.67**	**247**	P	**Pn**	**23 06 42.5**	**-1.9**
JCH				*e*S	**Sn**	**23 07 54.8**	**-4.2**
JWK2	**Keihoku**	**6.91**	**272**	P	**Pn**	**23 06 50.5**	**+2.9**
JFR	**Furan**	**6.94**	**253**	P	**Pn**	**23 06 47.8**	**-0.3**
JFR				*e*S	**Sn**	**23 08 05.2**	**-0.5**
JAB	**Ashibetsu**	**7.07**	**257**	P	**Pn**	**23 06 51.1**	**+1.2**
JEM	**Erimo**	**7.11**	**244**	P	**Pn**	**23 06 49.4**	**-1.0**
JEM				*e*S	**Sn**	**23 08 05.1**	**-4.5**
ERM	**Erimo**	**7.11**	**244**	⇑*e*PN	**Pn**	**23 06 49.5**	**-0.9**
ERM				pmax	pmax		
	comp=Z,274nm,1.0s						
ERM	**Erimo**	**7.11**	**244**	*e*Pn	**Pn**	**23 06 50.2**	**-0.1**
ERM				*e*Sn	**Sn**	**23 08 05.2**	**-4.4**
ERM	**Erimo**	**7.11**	**244**	Pn	**Pn**	**23 06 49.9**	**-0.5**
	comp=Z,1μm,0.8s,SNR=91						
JNBK	**Urakawa-nobuka**	**7.23**	**247**	P	**Pn**	**23 06 49.7**	**-2.3**
JNBK				*e*S	**Sn**	**23 08 08.5**	**-4.1**
JBT2	**Biratori 2**	**7.25**	**251**	P	**Pn**	**23 06 50.9**	**-1.5**
JHR	**Hokuryu**	**7.34**	**260**	P	**Pn**	**23 06 55.0**	**+1.5**
UGL	**Uglegorsk**	**7.46**	**302**	PN	**Pn**	**23 06 57.5**	**+2.3**
UGL				pmax	pmax		
	comp=Z,69nm,0.3s						
UGL				MLR	MLR		
	comp=N,650nm,14.0s						
UGL				MLR	MLR		
	comp=E,1μm,14.0s						
UGL	**Uglegorsk**	**7.46**	**302**	*e*P	**Pn**	**23 06 57.5**	**+2.3**
UGL				AMB	AMB	23 06 59.5	
	comp=E,69nm,0.3s						
UGL				*e*S	**Sn**	**23 08 20.5**	**+2.2**
UGL				A	A	23 08 24.0	
	comp=E,100nm,0.6s						
UGL				A	A	23 08 24.0	
	comp=E,210nm,0.6s						
UGL				*e*L	L	23 09 05.0	
UGL				AMS	AMS	23 10 17.0	
	comp=E,650nm,14.0s						
UGL				AMS	AMS	23 10 17.0	
	comp=E,1μm,14.0s						
JEW	**Eniwo**	**7.84**	**254**	P	**Pn**	**23 07 00.6**	**+0.2**
TYV	**Tymovskoe**	**8.07**	**315**	*e*P	**Pn**	**23 07 05.5**	**+1.9**
TYV				AMB	AMB	23 07 06.8	
	comp=E,8.0nm,0.6s						
TYV				AMB	AMB	23 07 06.8	
	comp=E,15nm,0.8s						
TYV				AMB	AMB	23 07 06.8	
	comp=E,24nm,0.8s						
TYV				*e*S	**Sn**	**23 08 33.0**	**-0.3**
TYV				A	A	23 08 38.0	
	comp=E,59nm,0.8s						
TYV				A	A	23 08 38.0	
	comp=E,55nm,0.8s						
TYV				A	A	23 08 50.0	
	comp=E,1μm,10.0s						
TYV				AMS	AMS	23 10 16.0	
	comp=E,2μm,16.0s						
TYV				AMS	AMS	23 10 16.0	
	comp=E,1μm,16.0s						
JNB	**Noboribetsu**	**8.27**	**252**	P	**Pn**	**23 07 04.9**	**-1.4**
JNB				*e*S	**Sn**	**23 08 35.0**	**-3.2**
JSK	**Shakotan**	**8.32**	**259**	P	**Pn**	**23 07 08.8**	**+1.8**
JKB	**Kayabe**	**8.54**	**249**	P	**Pn**	**23 07 07.8**	**-2.1**
JKB				*e*S	Sn	23 08 37.8	-6.9
PEA0B	**Petropavlovsk-**	**8.55**	**25**	*e*Pn	Pn	23 07 06.9	-3.2
PETK	**Petropavlovsk-**	**8.55**	**25**	PN	Pn	23 07 06.7	-3.4
PETK				S	**Sn**	**23 08 49.7**	**+4.7**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				smax	smax		
	comp=N,1.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,376nm,18.1s						
PETK	**Petropavlovsk-**	**8.55**	**25**	P	Pn	23 07 06.7	-3.4
PETK				S	**Sn**	**23 08 49.7**	**+4.7**
PETK	**Petropavlovsk-**	**8.55**	**25**	P	Pn	23 07 06.7	-3.4
	comp=Z,0.7nm,0.3s,baz=185,slow=15,SNR=4.2						
PETK				S	**Sn**	**23 08 49.7**	**+4.7**
	comp=Z,0.7nm,0.3s,baz=167,slow=32,SNR=2.3						
PETK				LR	LR	23 11 09.2	
	comp=Z,376nm,18.1s,baz=211,slow=42						
PET	**Petropavlovsk**	**8.78**	**29**	*e*PN	Pn	23 07 08.9	-4.3
PET				pmax	pmax		
	comp=Z,38nm,0.8s						
PET				MLR	MLR		
	comp=Z,700nm,16.0s						
PET				MLR	MLR		
	comp=Z,800nm,15.0s						
JYM2	**Yakumo 2**	**8.87**	**252**	P	**Pn**	**23 07 12.8**	**-1.7**
JANG	**Nango**	**9.06**	**239**	P	Pn	23 07 12.7	-4.5
JTM	**Tenmabayashi**	**9.09**	**242**	P	Pn	23 07 14.2	-3.4
JTM				*e*S	Sn	23 08 50.0	-8.4
JSR	**Shiriuchi**	**9.11**	**248**	P	**Pn**	**23 07 15.6**	**-2.2**
JTH	**Tanohata**	**9.13**	**236**	P	Pn	23 07 13.8	-4.3
JTH				*e*S	Sn	23 08 48.4	-11
JOSM	**Okushiri--Mats**	**9.48**	**253**	P	**Pn**	**23 07 21.6**	**-1.3**
OFUJ	**Ofunato**	**9.82**	**233**	P	Pn	23 07 22.6	-5.0
OFUJ				*e*S	Sn	23 09 05.3	-11
OKH	**Okha**	**9.85**	**328**	*e*PN	**Pn**	**23 07 28.0**	**+0.1**
OKH				MLR	MLR		
	comp=Z,700nm,10.0s						
OKH	**Okha**	**9.85**	**328**	*e*P	**Pn**	**23 07 28.0**	**+0.1**
OKH				*e*S	**Sn**	**23 09 16.6**	**-0.2**
OKH				*e*LQ	LQ	23 10 02.8	
OKH				AMS	AMS	23 12 40.0	
	comp=Z,500nm,11.0s						
OKH				AMS	AMS	23 12 40.0	
	comp=Z,500nm,9.0s						
OKH				AMS	AMS	23 12 40.0	
	comp=Z,700nm,10.0s						
JRG	**Rokugo**	**10.21**	**237**	P	Pn	23 07 29.2	-3.6
JRG				*e*S	Sn	23 09 17.1	-8.5
JIO	**Ouri**	**10.44**	**231**	P	Pn	23 07 31.7	-4.3
JIO				*e*S	Sn	23 09 20.2	-11
NKL	**Nikolayevsk**	**10.49**	**321**	*i* P	**Pn**	**23 07 37.0**	**+0.5**
NKL				AMB	AMB	23 07 38.0	
	comp=Z,200nm,2.0s						
NKL				AMB	AMB	23 07 43.0	
	comp=Z,130nm,1.9s						
NKL				*e*S	**Sn**	**23 09 32.0**	**-0.3**
NKL				*e*L	L	23 10 24.0	
NKL				AMS	AMS	23 12 22.0	
	comp=Z,800nm,16.0s						
NKL				AMS	AMS	23 12 22.0	
	comp=Z,600nm,15.0s						
JFK	**Kawauchi**	**11.49**	**229**	*e*S	Sn	23 09 45.0	-12
MAJO	**Matsushiro**	**13.55**	**233**	*e*P	**Pn**	**23 08 15.3**	**-3.2**
MAJO	**Matsushiro**	**13.55**	**233**	*e*Pn	**Pn**	**23 08 15.3**	**-3.2**
MAT	**Matsushiro**	**13.55**	**233**	P	Pn	23 08 14.8	-3.7
MAT				*e*S	**Sn**	**23 10 48.3**	**+1.0**
MJAR	**Matsushiro Arr**	**13.55**	**233**	P	Pn	23 08 14.9	-3.6
MJAR	**Matsushiro Arr**	**13.55**	**233**	P	Pn	23 08 14.9	-3.6
	comp=Z,1.0nm,0.3s,baz=24,slow=14,SNR=15						
KLR	**Kul'dur**	**14.02**	**293**	*e*P	**Pn**	**23 08 23.0**	**-1.6**
KLR				pmax	pmax		
	comp=E,48nm,1.4s						
KLR				pmax	pmax		
	comp=Z,43nm,1.4s						
KLR				MLR	MLR		
	comp=E,500nm,13.0s						
KLR				MLR	MLR		
	comp=Z,2μm,13.0s						
USRK	**Ussuriysk Arra**	**14.04**	**272**	P	**Pn**	**23 08 23.7**	**-1.2**
	comp=Z,1.0nm,0.3s,baz=91,slow=12,SNR=16						
VLA	**Vladivostok**	**14.38**	**267**	*i* P	**Pn**	**23 08 26.6**	**-2.8**
VLA				pmax	pmax		
	comp=Z,44nm,1.0s						
MDJ	**Mudanjiang**	**15.65**	**275**	P	**Pn**	**23 08 44.5**	**-1.3**
MDJ				S	**Sn**	**23 11 35.3**	**-2.7**
MDJ				ScP	**ScP**	**23 17 14.8**	**+2.3**
MDJ				PcS	**PcS**	**23 17 20.6**	**+1.8**
MDJ				ScS	**ScS**	**23 20 53.1**	**+2.2**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,96nm,3.8s						
MDJ				LR	LR		
	comp=N,210nm,14.6s						
MDJ				LR	LR		
	comp=E,410nm,16.9s						
MDJ				LR	LR		
	comp=Z,570nm,18.3s						
MDJ	**Mudanjiang**	**15.65**	**275**	*e*Pn	**Pn**	**23 08 43.8**	**-2.0**
	comp=Z,35nm,0.9s						
FX1	**Attu Island--F**	**15.81**	**54**	*e*Pn	**Pn**	**23 08 43.2**	**-4.6**
FX1				*e*Sn	Sn	23 11 22.9	-19
FX1	**Attu Island--F**	**15.81**	**54**	P	**Pn**	**23 08 44.0**	**-3.8**
	comp=Z,3.8nm,0.3s,baz=106,slow=20,SNR=16						
FX1				S	Sn	23 11 22.1	-20
	comp=Z,1.3nm,0.3s,baz=285,slow=20,SNR=3.3						
SEY	**Seymchan**	**17.46**	**1**	⇓*e*P	**Pn**	**23 09 05.4**	**-2.9**
ZEA	**Zeya**	**17.78**	**306**	*e*P	**Pn**	**23 09 11.7**	**-0.6**
ZEA				AMB	AMB	23 09 20.8	
	comp=E,85nm,1.6s						
ZEA				AMB	AMB	23 09 20.8	
	comp=E,74nm,1.4s						
ZEA				A	A	23 12 53.0	
	comp=Z,300nm,10.0s						
CN2	**Changchun**	**18.73**	**274**	*e*P	**P**	**23 09 23.3**	**+0.4**
CN2				*e*pP	**pP**	**23 09 33.5**	**-2.0**
CN2				*e*S	Sn	23 12 43.9	-8.7
CN2				*e*SS	**SnSn**	**23 13 10.4**	**+3.4**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,500nm,14.0s						
CN2				LR	LR		
	comp=E,600nm,14.0s						
CN2				LR	LR		
	comp=Z,500nm,16.0s						
KSRS	**Korea Array**	**19.50**	**254**	P	**Pn**	**23 09 33.0**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=56,slow=10,SNR=15						
KSAR	**Wonju Array Be**	**19.53**	**254**	P	**Pn**	**23 09 33.0**	**-0.5**
CLNS	**Chul'man**	**20.13**	**314**	*e*P	Pn	23 09 39.5	-0.9
CLNS				pmax	pmax		
	comp=Z,21nm,0.8s						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.9s						
JNU	**Nakatsue**	**20.25**	**240**	P	Pn	23 09 41.8	-0.1
JNU	**Nakatsue**	**20.25**	**240**	P	Pn	23 09 41.8	-0.1
	comp=E,6.5nm,0.7s,baz=84,slow=9.2,SNR=3.7						
JNU				LR	LR	23 18 18.8	
	comp=E,400nm,19.1s,baz=40,slow=39						
SNY	**Shenyang**	**20.63**	**270**	⇑P	**P**	**23 09 43.9**	**+0.3**
SNY				pmax	pmax		
	comp=Z,16nm,1.2s						
SNY				pmax	pmax		
	comp=Z,140nm,3.5s						
SNY				LR	LR		
	comp=N,180nm,14.2s						
SNY				LR	LR		
	comp=E,580nm,13.3s						
SNY				LR	LR		
	comp=Z,480nm,15.5s						
YAK	**Yakutsk**	**20.87**	**330**	*e*P	**P**	**23 09 42.5**	**-3.5**
YAK				*e*		23 09 58.0	
YAK				*e*S	**S**	**23 13 31.7**	**-3.5**
YAK				*e*SS	**SnSn**	**23 13 53.6**	**-5.6**
YAK				pmax	pmax		
	comp=Z,15nm,0.8s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
YAK				smax	smax		
	comp=N,71nm,2.0s						
YAK				smax	smax		
	comp=E,42nm,2.5s						
YAK				MLR	MLR		
	comp=Z,126nm,20.0s						
YAK				MLR	MLR		
	comp=N,205nm,16.0s						
YAK				MLR	MLR		
	comp=E,137nm,17.0s						
BILL	**Bilibino**	**23.82**	**14**	*de*P	**P**	**23 10 13.9**	**-2.4**
BILL				*e**PP	**pP**	**23 10 27.6**	**-2.8**
BILL				*e*		23 10 42.7	
BILL				*e*		23 13 58.4	
BILL				*e*S	**S**	**23 14 28.5**	**+0.9**
BILL				*e*SS	**SnSn**	**23 15 08.9**	**-2.4**
BILL				pmax	pmax		
	comp=Z,18nm,0.9s						
BILL				MLR	MLR		
	comp=Z,400nm,17.0s						
BILL	**Bilibino**	**23.82**	**14**	*e*P	**P**	**23 10 13.9**	**-2.4**
	comp=Z,15nm,0.6s						
BJI	**Beijing**	**26.50**	**271**	P	**P**	**23 10 43.4**	**+2.5**
BJI				S	**S**	**23 15 08.6**	**-2.1**
BJI				pmax	pmax		
	comp=Z,38nm,0.8s						
BJI				LR	LR		
	comp=N,240nm,16.3s						
BJI				LR	LR		
	comp=E,320nm,17.4s						
BJI				LR	LR		
	comp=Z,270nm,22.6s						
SSE	**Sheshan**	**27.74**	**249**	P	**P**	**23 10 51.3**	**-0.8**
SSE				S	**S**	**23 15 35.4**	**+5.0**
SSE				pmax	pmax		
	comp=Z,28nm,0.7s						
SSE				pmax	pmax		
	comp=Z,140nm,3.8s						
SSE				LR	LR		
	comp=N,140nm,25.9s						
SSE				LR	LR		
	comp=E,130nm,25.9s						
SSE				LR	LR		
	comp=Z,170nm,24.5s						
TIXI	**Tiksi**	**28.39**	**345**	*e*P	P	23 10 54.1	-3.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TIXI	**Tiksi**	**28.39**	**345**	*e*P	P	23 10 54.1	-3.4
	comp=Z,5.4nm,0.6s						
NJ2	**Nanjing**	**28.70**	**254**	*e*P	**P**	**23 11 01.1**	**+0.5**
NJ2				pP	**pP**	**23 11 14.3**	**-0.7**
NJ2				sP	**sP**	**23 11 22.0**	**+0.1**
NJ2				S	**S**	**23 15 48.0**	**+2.5**
NJ2				sS	**sS**	**23 16 10.5**	**+0.5**
NJ2

comp=Z,3µm,16.0s
HHC Hu-ho-hao-te 29.42 275 *e*P **P** **23 11 06.5 -0.6**
HHC S **S** **23 15 55.8 -1.1**
HHC SS **SnSn** **23 17 27.1 -1.2**
HHC pmax pmax
comp=Z,43nm,1.0s
HHC pmax pmax
comp=Z,180nm,3.8s
HHC LR LR
comp=N,250nm,12.7s
HHC LR LR
comp=E,800nm,10.8s
HHC LR LR
comp=Z,970nm,13.3s
ULN Ulaanbaatar 30.40 291 *e*P **P** **23 11 16.0 +0.3**
comp=Z,2.8nm,1.0s
TLY Talaya 31.90 299 *e*P **P** **23 11 27.5 -1.2**
TLY pmax pmax
comp=Z,3.0nm,0.9s
TLY MLR MLR
comp=Z,321nm,17.0s
ZAK Zakamensk 32.33 296 *e*P **P** **23 11 30.3 -2.3**
ZAK *e* 23 14 17.6
ZAK pmax pmax
comp=Z,3.0nm,1.4s
KDAK Kodiak Island 35.65 49 *e*P **P** **23 11 59.9 -1.2**
comp=Z,33nm,0.6s
KDAK Kodiak Island 35.65 49 P **P** **23 11 59.6 -1.5**
comp=Z,295nm,0.6s,SNR=9.0
KDAK Kodiak Island 35.65 49 P **P** **23 11 59.6 -1.5**
comp=Z,33nm,0.7s,baz=286,slow=5.0,SNR=32
PPLA Purkeypile 35.74 41 *e*P **P** **23 12 02.8 +0.7**
comp=Z,35nm,1.6s
TRF Thorofare Moun 36.62 40 *e*P **P** **23 12 08.3 -1.2**
comp=Z,6.9nm,0.9s
COLD Coldfoot 36.91 33 *e*P **P** **23 12 10.9 -0.9**
comp=Z,3.9nm,0.8s
LZH Lanzhou 36.95 272 *e*P **P** **23 12 15.0 +2.3**
LZH pP **pP** **23 12 30.3 +2.9**
LZH sP **sP** **23 12 37.5 +3.3**
LZH *e*PP **PnPn** **23 13 42.1 +3.7**
LZH *e*S **S** **23 17 54.3 +0.5**
LZH sS **sS** **23 18 20.5 +1.8**
LZH pmax pmax
comp=Z,31nm,1.2s
LZH pmax pmax
comp=Z,100nm,5.0s
LZH LR LR
comp=N,200nm,13.1s
LZH LR LR
comp=E,170nm,13.0s
LZH LR LR
comp=Z,280nm,14.6s
MCK McKinley 37.23 39 *e*P **P** **23 12 13.6 -0.9**
MCK pmax pmax
comp=Z,12nm,1.1s
MCK McKinley 37.23 39 *e*P **P** **23 12 13.6 -0.9**
comp=Z,12nm,1.1s
SML Sawmill 37.54 42 *e*P **P** **23 12 17.3 0.0**
SML pmax pmax
comp=Z,9.0nm,0.8s
SML Sawmill 37.54 42 *e*P **P** **23 12 17.2 0.0**
comp=Z,9.0nm,0.8s
COLA College 37.72 37 *e*P **P** **23 12 18.1 -0.5**
COLA pmax pmax
comp=Z,12nm,0.8s
COLA College 37.72 37 *e*P **P** **23 12 18.1 -0.5**
comp=Z,12nm,0.8s
ILAR Eielson Array 38.13 38 P **P** **23 12 20.9 -1.1**
ILAR Eielson Array 38.13 38 P **P** **23 12 20.9 -1.1**
comp=Z,2.5nm,0.7s,baz=259,slow=7.1,SNR=43
GTA Gaotai 38.20 280 *e*P **P** **23 12 24.9 +1.7**
GTA pP **pP** **23 12 40.1 +2.1**
GTA sP **sP** **23 12 47.8 +3.1**
GTA PcP **PcP** **23 14 38.8 +2.2**
GTA S **S** **23 18 13.8 +1.2**
GTA sS **sS** **23 18 38.8 +1.2**
GTA SS **SnSn** **23 20 53.4 -7.7**
GTA pmax pmax
comp=Z,13nm,1.0s
GTA pmax pmax
comp=Z,59nm,6.2s
GTA LR LR
comp=N,200nm,15.4s
GTA LR LR
comp=E,230nm,14.0s
GTA LR LR
comp=Z,290nm,15.4s
BMRM Bremner River 39.40 44 *e*P **P** **23 12 32.5 -0.3**
comp=Z,18nm,0.9s
DOT Dot Lake 39.40 39 *e*P **P** **23 12 31.8 -1.0**
comp=Z,13nm,0.9s
CD2 Chengdu 39.80 266 P **P** **23 12 36.0 -0.5**
CD2 pP **pP** **23 12 51.3 0.0**
CD2 sP **sP** **23 12 58.4 +0.3**
CD2 PP **PnPn** **23 14 12.3 -0.1**
CD2 PcP **PcP** **23 14 41.3 -0.4**
CD2 PcS **PcS** **23 18 31.4 -0.6**
CD2 S **S** **23 18 34.9 -1.7**
CD2 sS **sS** **23 19 00.8 -0.9**
CD2 SS **SS** **23 21 25.8 -8.5**
CD2 pmax pmax
comp=Z,10.0nm,0.4s
CD2 pmax pmax
comp=Z,70nm,5.5s
CD2 LR LR
comp=N,160nm,16.1s
CD2 LR LR
comp=Z,250nm,17.1s
GYA Guiyang 40.49 258 P **P** **23 12 42.8 +0.4**
GYA pP **pP** **23 12 58.8 +1.6**
GYA sP **sP** **23 13 05.3 +1.3**
GYA PP **PnPn** **23 14 21.0 +0.3**
GYA PcP **PcP** **23 14 46.5 +2.5**
GYA ScP **ScP** **23 18 28.3 +0.1**
GYA PcS **PcS** **23 18 35.0 0.0**
GYA S **S** **23 18 47.3 +0.2**
GYA SS **SS** **23 21 42.9 -5.4**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.1s
GYA LR LR
comp=N,560nm,16.6s
GYA LR LR
comp=E,510nm,17.2s
GYA LR LR
comp=Z,640nm,16.9s
EGAK Eagle 40.58 37 *e*P **P** **23 12 41.4 -1.1**
comp=Z,58nm,1.8s
ZALV Zalesovo Beam 42.55 306 P **P** **23 12 57.4 -1.4**
ZALV 23 14 50.0
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 42.55 306 P **P** **23 12 57.4 -1.4**
ZALV PcP **PcP** **23 14 50.0 -0.2**
ZALV pPcP 23 15 03.1
ZALV Zalesovo Beam 42.55 306 P **P** **23 12 57.4 -1.4**
comp=Z,0.7nm,0.4s,baz=71,slow=6.2,SNR=4.3
ZALV PcP **PcP** **23 14 50.0 -0.2**
comp=Z,6.5nm,0.9s,baz=90,slow=3.0,SNR=15
ZALV pPcP 23 15 03.1
comp=Z,3.8nm,0.9s,baz=57,slow=5.3,SNR=4.5
INK Inuvik 43.22 32 P **P** **23 13 03.9 0.0**
INK Inuvik 43.22 32 P **P** **23 13 03.9 0.0**
comp=Z,7.2nm,0.6s,baz=296,slow=7.2,SNR=47
QIZ Qiongzhong 43.46 247 P **P** **23 13 07.8 +1.3**
QIZ S **S** **23 19 33.1 +2.3**
QIZ LR LR
comp=N,220nm,19.9s
QIZ LR LR
comp=Z,190nm,23.6s
KMI Kunming 44.05 260 P **P** **23 13 12.6 +1.1**
KMI pP **pP** **23 13 24.8 -1.7**
KMI S **S** **23 19 40.3 +0.5**
KMI pmax pmax
comp=Z,14nm,1.5s
KMI LR LR
comp=N,140nm,16.0s
KMI LR LR
comp=E,180nm,18.5s
KMI LR LR
comp=Z,190nm,21.7s
WMQ Urumqi 44.47 292 P **P** **23 13 16.0 +1.6**
WMQ pP **pP** **23 13 32.0 +2.6**
WMQ sP **sP** **23 13 39.0 +2.9**
WMQ PP **PP** **23 15 02.0 +3.2**
WMQ ScP **ScP** **23 18 44.0 +0.1**
WMQ S **S** **23 19 46.0 +0.8**
WMQ sS **sS** **23 20 12.0 +1.5**
WMQ SS SS 23 22 56.0 -10
WMQ ScS **ScS** **23 23 06.0 -0.8**
WMQ pmax pmax
comp=Z,14nm,0.8s
WMQ pmax pmax
comp=Z,130nm,5.0s
WMQ LR LR
comp=N,240nm,14.0s
WMQ LR LR
comp=E,220nm,14.0s
WMQ LR LR
comp=Z,260nm,14.0s
MK31 Makanchi Array 46.65 298 *e*P **P** **23 13 30.8 -0.7**
MK31 *e* 23 15 04.7
MK31 Makanchi Array 46.65 298 *e*P **P** **23 13 30.8 -0.7**
MK31 *e*PcP **PcP** **23 15 04.7 +0.2**
MKAR Makanchi Array 46.65 298 *e*P **P** **23 13 31.4 -0.2**
MKAR 23 15 04.9
MKAR 23 15 18.9
MKAR Makanchi Array 46.65 298 *e*P **P** **23 13 31.4 -0.2**
MKAR PcP **PcP** **23 15 04.9 +0.4**
MKAR pPcP 23 15 18.9
MKAR Makanchi Array 46.65 298 P **P** **23 13 31.3 -0.2**
comp=Z,2.2nm,0.5s,baz=68,slow=6.6,SNR=27
MKAR PcP **PcP** **23 15 04.9 +0.4**
comp=Z,2.8nm,0.6s,baz=59,slow=3.5,SNR=8.6
MKAR pPcP 23 15 18.9
comp=Z,1.7nm,0.9s,baz=90,slow=2.4,SNR=4.7
DLBC Dease Lake 47.16 45 *e*P **P** **23 13 36.5 +1.1**
KURK Kurchatov 47.24 304 *e*P **P** **23 13 34.6 -1.4**
KURK pmax pmax
comp=Z,4.0nm,0.7s
KURK Kurchatov 47.24 304 *e*P **P** **23 13 34.3 -1.7**
comp=Z,4.3nm,0.5s
KURK Kurchatov 47.24 304 P **P** **23 13 35.1 -0.9**
comp=Z,43nm,0.5s,SNR=5.9
LSA Lhasa 49.36 273 SP P 23 13 56.8 +3.6
LSA pmax pmax
comp=Z,30nm,0.6s
LSA Lhasa 49.36 273 *e*P **P** **23 13 55.8 +2.6**
LSA pmax pmax
comp=Z,7.0nm,0.6s
LSA Lhasa 49.36 273 *e*P **P** **23 13 55.8 +2.6**
comp=Z,7.3nm,0.6s
CHTO Chiang Mai 50.88 256 *e*P **P** **23 14 06.0 +1.8**
CHTO *e* 23 15 20.4
CHTO pmax pmax
comp=Z,9.0nm,0.9s
CHTO Chiang Mai 50.88 256 *e*P **P** **23 14 06.0 +1.8**
comp=Z,9.3nm,0.9s
CHTO *e*PcP **PcP** **23 15 20.4 +0.3**
BRVK Borovoye 50.93 310 *e*P **P** **23 14 02.8 -1.4**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
BRVK Borovoye 50.93 310 *e*P **P** **23 14 02.6 -1.6**
comp=Z,2.0nm,0.6s
BRVK *e*PcP **PcP** **23 15 20.4 +0.6**
CMAR Chiang Mai Arr 51.12 256 P **P** **23 14 07.0 +1.0**
CMAR pP **pP** **23 14 20.1 -1.2**
CMAR Chiang Mai Arr 51.12 256 P **P** **23 14 07.0 +1.0**
comp=Z,0.7nm,0.3s,baz=16,slow=8.8,SNR=5.0
CMAR pP **pP** **23 14 20.1 -1.2**
comp=Z,2.4nm,0.6s,baz=38,slow=7.5,SNR=3.2
CMAR LR LR 23 38 27.0
comp=Z,109nm,18.6s,baz=55,slow=39
SHL Shillong 51.36 268 *e*P **P** **23 14 10.0 +2.0**
RES Resolute Bay 52.32 18 *e*P **P** **23 14 13.3 -0.9**
comp=Z,6.6nm,1.0s
RES *e*PcP **PcP** **23 15 24.5 0.0**
RES Resolute Bay 52.32 18 P **P** **23 14 13.3 -0.9**
comp=Z,4.1nm,0.8s,baz=315,slow=6.6,SNR=23
RES PcP **PcP** **23 15 24.7 +0.1**
comp=Z,3.4nm,0.8s,baz=295,slow=4.5,SNR=5.4
YKW3 Yellowknife Ar 52.47 36 *e*P **P** **23 14 15.2 -0.3**
comp=Z,0.4nm,0.8s
YKA Yellowknife Ar 52.50 36 P **P** **23 14 15.7 -0.1**
YKA Yellowknife Ar 52.50 36 P **P** **23 14 15.6 -0.1**
comp=Z,16nm,0.8s,baz=296,slow=7.0,SNR=214
ULHL Ulahol 52.60 295 *i* P **P** **23 14 18.2 +1.1**
ULHL Ulahol 52.60 295 P **P** **23 14 18.2 +1.1**
SNR=34
TKM2 Tokmak 2 52.66 296 *e*P **P** **23 14 18.8 +1.3**
TKM2 pmax pmax
comp=Z,6.0nm,0.9s
TKM2 Tokmak 2 52.66 296 *e*P **P** **23 14 18.8 +1.3**
comp=Z,6.4nm,0.9s
USP Ospenovka 53.18 297 *i* P **P** **23 14 21.9 +0.8**
USP Ospenovka 53.18 297 P **P** **23 14 22.0 +0.9**
SNR=27
TAPN Taplejung 53.19 273 *e*P **P** **23 14 22.8 +1.1**
comp=Z,24nm,0.9s
KZA Kyzart 53.32 296 *i* P **P** **23 14 24.3 +1.7**
KZA Kyzart 53.32 296 P **P** **23 14 24.3 +1.7**
SNR=19
AAK Ala-Archa 53.51 296 P **P** **23 14 24.3 +0.6**
AAK pmax pmax
comp=Z,9.0nm,0.7s
AAK Ala-Archa 53.51 296 *e*P **P** **23 14 24.4 +0.7**
AAK Ala-Archa 53.51 296 P **P** **23 14 24.3 +0.6**
SNR=15
AAK Ala-Archa 53.51 296 P **P** **23 14 24.0 +0.3**
comp=Z,80nm,0.8s,SNR=12
AAK Ala-Archa 53.51 296 P **P** **23 14 24.3 +0.6**
comp=Z,8.9nm,0.7s,baz=94,slow=4.7,SNR=53
KBS Kingsbay 53.57 351 *i* P **P** **23 14 22.6 -0.8**
KBS pmax pmax
comp=Z,20nm,0.8s
KBS Kingsbay 53.57 351 *e*P **P** **23 14 23.1 -0.2**
comp=Z,18nm,0.7s
ODAN Odare 53.72 273 *e*P **P** **23 14 26.5 +1.0**
comp=Z,11nm,0.7s
EKS2 Erkin-Say 53.94 297 *e*P **P** **23 14 27.8 +1.0**
EKS2 pmax pmax
comp=Z,14nm,0.7s
EKS2 Erkin-Say 53.94 297 *e*P **P** **23 14 27.8 +1.0**
comp=Z,14nm,0.7s
EKS2 Erkin-Say 53.94 297 P **P** **23 14 27.8 +1.0**
SNR=24
SVE Sverdlovsk 54.07 317 *e*P **P** **23 14 26.1 -1.3**
GUN Gumba 54.13 275 *e*P **P** **23 14 30.0 +1.4**
RAMN Ramite 54.21 274 *e*P **P** **23 14 30.0 +0.9**
comp=Z,50nm,0.8s
KSH Kashi 54.22 292 *i* P P 23 14 33.3 +4.4
KSH pP pP 23 14 49.0 +4.7
KSH sP sP 23 14 56.3 +5.4
KSH PcP **PcP** **23 15 36.4 +3.8**
KSH PP PP 23 16 36.4 +5.6
KSH ScP **ScP** **23 19 27.5 +1.9**
KSH PcS **PcS** **23 19 33.9 +1.7**
KSH S **S** **23 22 04.3 +2.5**
KSH sS sS 23 22 33.0 +5.2
KSH ScS **ScS** **23 24 14.6 +1.7**
KSH SS **SS** **23 25 48.0 +4.2**
KSH pmax pmax
comp=Z,3.0nm,0.6s
KSH LR LR
comp=N,160nm,6.2s
KSH LR LR
comp=E,220nm,4.5s
KSH LR LR
comp=Z,220nm,4.4s
AML Almayashu 54.28 296 *i* P **P** **23 14 30.8 +1.2**
AML Almayashu 54.28 296 P **P** **23 14 30.8 +1.2**
SNR=10
KKN Kakani 54.62 275 *e*P **P** **23 14 33.1 +1.0**
comp=Z,23nm,0.7s
PKI Pulchoki 54.67 275 *e*P **P** **23 14 33.4 +0.9**
PKIN Phulchoki 54.67 275 *e*P **P** **23 14 34.3 +1.8**
ARU Arti 55.26 318 *d* P **P** **23 14 35.3 -0.7**
ARU *e* 23 15 35.4
ARU 23 16 37.3
ARU S **S** **23 22 15.1 0.0**
ARU SS **SS** **23 25 57.7 -1.6**
ARU pmax pmax
comp=Z,10.0nm,1.2s
DANN Dangsing 55.35 277 *e*P **P** **23 14 38.8 +1.4**
comp=Z,97nm,1.1s
NLWA Neilton Lookou 55.38 55 *e*P **P** **23 14 37.5 +0.4**
KKAR Karatay Array 55.74 299 *e*P **P** **23 14 39.8 +0.1**
KKAR Karatay Array 55.74 299 *e*P **P** **23 14 39.8 +0.1**
KOLN Koldanda 55.81 276 *e*P **P** **23 14 42.5 +1.9**
comp=Z,33nm,0.8s
PYUN Piuthan 56.04 277 *e*P **P** **23 14 43.8 +1.6**
comp=Z,126nm,1.1s
ETW Entiat 57.29 53 P **P** **23 14 50.8 0.0**
VLL Laurance Lake 57.70 56 P **P** **23 14 54.6 +1.0**
DAG Danmarks Havn 57.84 357 *i* P **P** **23 14 52.8 -1.2**
DAG pmax pmax
comp=Z,11nm,0.8s
DAG Danmarks Havn 57.84 357 *i* P **P** **23 14 52.8 -1.2**
comp=Z,15nm,0.8s
VFP Flag Point 57.91 56 P **P** **23 14 56.2 +1.0**
KEV Kevo 58.18 340 *e*P **P** **23 14 55.0 -1.4**
KEV pmax pmax
comp=Z,11nm,0.5s
KEV Kevo 58.18 340 *e*p **P** **23 14 55.0 -1.4**
comp=Z,11nm,0.5s
ARCES ARCESS Array B 58.70 341 P **P** **23 14 59.3 -0.8**
ARCES PcP **PcP** **23 15 49.6 +0.2**
ARCES ARCESS Array B 58.70 341 P **P** **23 14 59.3 -0.8**
comp=Z,12nm,0.8s,baz=37,slow=7.0,SNR=30
ARCES PcP **PcP** **23 15 49.6 +0.2**
comp=Z,4.7nm,0.6s,baz=46,slow=5.2,SNR=5.0
ARCES LR LR 23 43 28.9
comp=Z,103nm,18.3s,baz=217,slow=39
NEW Newport 58.71 51 *e*P **P** **23 15 00.4 -0.1**
comp=Z,9.6nm,1.0s
NEW *e*pP **pP** **23 15 16.7 +0.6**
NEW Newport 58.71 51 ⇑P **P** **23 15 00.4 -0.1**
baz=58,SNR=7.0
NEW Newport 58.71 51 P **P** **23 15 00.2 -0.4**
comp=Z,4.8nm,0.9s,baz=314,slow=7.4,SNR=8.5
TMCR Tamitsa 58.97 332 *e*P **P** **23 15 00.2 -1.8**
TMCR pmax pmax
comp=Z,19nm,1.1s
A12A Yaak River Ran 59.13 50 ⇑P **P** **23 15 03.6 +0.1**
baz=59
B12A Libby 59.43 51 ⇓P **P** **23 15 05.8 +0.3**
baz=59
C12B Naegeli Ranch, 59.93 51 ⇑P **P** **23 15 09.1 +0.1**
baz=60
WDC Whiskeytown Da 59.97 61 *e*P **P** **23 15 09.5 +0.2**
WDC *e**PP **pP** **23 15 25.2 +0.3**
WDC pmax pmax
comp=Z,16nm,1.1s
WDC Whiskeytown Da 59.97 61 *e*P **P** **23 15 09.5 +0.2**
comp=Z,16nm,1.1s
WDC *e*pP **pP** **23 15 25.2 +0.3**
WALA Waterton Lakes 59.99 49 *e*P **P** **23 15 08.9 -0.5**
comp=Z,0.7nm,1.3s
B13A Whitefish 60.09 50 ⇑P **P** **23 15 10.7 +0.6**
baz=60,SNR=15
BSMT Bassoo Peak 60.23 51 *e*P **P** **23 15 12.0 +0.8**
A14A Double T Ranch 60.30 49 ⇓P **P** **23 15 11.4 -0.2**
baz=60,SNR=9.6
BLMT Blacktail Moun 60.36 50 *e*P **P** **23 15 12.9 +0.8**
BLMT *e*pP **pP** **23 15 29.5 +1.7**
C13A Hot Springs 60.44 51 ⇓P **P** **23 15 12.8 +0.3**
baz=60
MOD Modoc 60.56 59 *e*P **P** **23 15 13.4 -0.1**
comp=Z,18nm,0.8s
YBMT Yellow Bay 60.64 50 *e*P **P** **23 15 14.1 +0.2**
comp=Z,3.2nm,0.5s
YBMT *e*pP **pP** **23 15 30.0 +0.4**
A15A Johnson Ranch, 60.66 49 ⇑P **P** **23 15 13.5 -0.5**
baz=60,SNR=9.6
B14A Marquette Ranc 60.74 50 ⇑P **P** **23 15 14.8 +0.2**
baz=60,SNR=10
D13A Huson 60.85 51 ⇓P **P** **23 15 15.4 0.0**
baz=60
SWMT Swartz Lake 60.86 51 *e*P **P** **23 15 16.0 +0.6**
B15A Bradely Ranch, 61.15 49 ⇓P **P** **23 15 17.1 -0.3**
baz=61,SNR=13
F12A Elk City 61.21 53 ⇓P **P** **23 15 18.1 +0.3**
baz=61,SNR=14
WVOR Wild Horse Val 61.24 58 *e*P **P** **23 15 18.3 +0.2**
WVOR *e**PP **pP** **23 15 33.5 -0.3**
WVOR pmax pmax
comp=Z,17nm,1.0s
WVOR Wild Horse Val 61.24 58 *e*P **P** **23 15 18.3 +0.2**
comp=Z,17nm,1.0s
WVOR *e*pP **pP** **23 15 33.5 -0.3**
SLMT Seeley Lake 61.29 51 *e*P **P** **23 15 18.5 +0.1**
SLMT *e*pP **pP** **23 15 35.0 +0.8**
MSO Missoula 61.30 51 *e*P **P** **23 15 18.4 0.0**
comp=Z,12nm,1.0s
MSO *e*pP **pP** **23 15 34.3 +0.2**
MSO Missoula 61.30 51 ⇑P **P** **23 15 18.4 0.0**
baz=61,SNR=8.6
OHCM Honcut 61.37 62 *e*P **P** **23 15 19.1 +0.3**
OHCM *e*pP **pP** **23 15 34.6 +0.1**
D14A Greenough 61.38 51 ⇑P **P** **23 15 18.9 0.0**
baz=61,SNR=27
E13A Victor 61.39 52 ⇓P **P** **23 15 18.8 -0.2**
baz=61
C15A Salmond Ranch, 61.45 50 ⇓P **P** **23 15 20.0 +0.6**
baz=61,SNR=20
B16A M & M Farms, S 61.54 49 ⇑P **P** **23 15 19.7 -0.3**
baz=61,SNR=9.4
G12A Big Creek, Yel 61.55 54 ⇑P **P** **23 15 19.9 -0.2**
baz=61,SNR=6.3
KBL Kabul 61.61 291 *e*P **P** **23 15 20.9 +0.1**
KBL *e**PP **pP** **23 15 34.6 -1.9**
KBL pmax pmax
comp=Z,21nm,1.1s
KBL Kabul 61.61 291 *e*P **P** **23 15 20.9 +0.1**
comp=Z,21nm,1.1s
KBL *e*pP **pP** **23 15 34.5 -1.9**
CHMT Chamberlain Mo 61.62 51 *e*P **P** **23 15 20.6 -0.2**
CHMT *e*pP **pP** **23 15 36.6 +0.2**
F13A Darby 61.71 52 ⇓P **P** **23 15 20.9 -0.3**
baz=61,SNR=9.8
A17A Triple J Farms 61.75 48 ⇑P **P** **23 15 21.0 -0.4**
baz=61,SNR=5.1
E14A Clinton 61.79 51 ⇓P **P** **23 15 21.8 0.0**
baz=62,SNR=8.4
C16A Fuhringer Ranc 61.90 49 ⇓P **P** **23 15 22.7 +0.3**
baz=62,SNR=20
D15A Lincoln 61.94 50 ⇑P **P** **23 15 22.8 0.0**
baz=62,SNR=5.6
SUMG Summit 62.00 3 *e*P **P** **23 15 22.7 -0.3**
SUMG pmax pmax
comp=Z,59nm,0.8s
SUMG Summit 62.00 3 *e*P **P** **23 15 22.7 -0.3**
comp=Z,59nm,0.8s
SUMG Summit 62.00 3 *i* P **P** **23 15 23.0 0.0**
comp=Z,50nm,0.7s
JOF Joensuu 62.01 333 *e*P **P** **23 15 21.0 -1.7**
JOF pmax pmax
comp=Z,11nm,0.6s
JOF Joensuu 62.01 333 *e*p **P** **23 15 21.0 -1.7**
comp=Z,11nm,0.6s
B17A L&G Farms, Che 62.10 49 ⇑P **P** **23 15 23.6 -0.1**
baz=62
H12A Diamond D Ranc 62.16 54 ⇓P **P** **23 15 24.2 -0.2**
baz=62,SNR=7.2
G13A Cobalt 62.19 53 ⇓P **P** **23 15 24.3 -0.2**
baz=62,SNR=15
A18A Metzger Ranch, 62.21 48 ⇑P **P** **23 15 24.1 -0.3**
baz=62,SNR=6.4
F14A Wisdom 62.23 52 ⇓P **P** **23 15 24.6 -0.2**
baz=62
E15A Deer Lodge 62.25 51 ⇓P **P** **23 15 24.8 -0.1**
baz=62,SNR=15
MFID Camas Ranch 62.30 55 *e*P **P** **23 15 25.5 +0.3**
comp=Z,7.8nm,0.9s
MFID *e*pP **pP** **23 15 41.4 +0.5**
MFID Camas Ranch 62.30 55 ⇑P **P** **23 15 25.4 +0.3**
baz=62,SNR=6.5
FFC Flin Flon 62.32 39 *ce*P **P** **23 15 25.0 +0.1**
FFC Flin Flon 62.32 39 *e*P **P** **23 15 25.0 +0.1**
comp=Z,30nm,0.8s
FFC *e*pP **pP** **23 15 41.6 +1.0**
I12A Atlanta 62.47 55 ⇓P **P** **23 15 26.5 +0.2**
baz=62,SNR=19
D16A Dana Ranch, Ca 62.47 50 ⇓P **P** **23 15 26.6 +0.3**
baz=62,SNR=14
H13A Challis 62.50 54 ⇑P **P** **23 15 26.6 +0.1**
baz=62,SNR=7.9
HRY Holter Researc 62.52 50 *e*P **P** **23 15 26.3 -0.3**
C17A Wharram Farm, 62.52 49 ⇓P **P** **23 15 26.5 -0.1**
baz=62,SNR=10
G14A Jackson 62.53 53 ⇓P **P** **23 15 26.3 -0.5**
baz=62
B18A Beardsley Farm 62.57 48 ⇓P **P** **23 15 27.1 +0.2**
baz=62,SNR=6.4

F15A **Butte** 62.69 52 ⇓P P 23 15 28.0 +0.1
baz=62,SNR=19
E16A **East Helena** 62.71 50 ⇓P P 23 15 28.2 +0.3
baz=62
LRM **Limekiln Ridge** 62.73 52 eP P 23 15 28.4 +0.2
LRM epP pP 23 15 44.2 +0.3
A19A **Klindworth Far** 62.77 47 ⇓P P 23 15 28.3 +0.1
baz=62
EGMT **Eagleton** 62.81 48 eP P 23 15 28.8 +0.4
comp=Z,21nm,1.1s
EGMT epP pP 23 15 44.9 +0.6
EGMT **Eagleton** 62.81 48 ⇓P P 23 15 28.4 -0.1
baz=62,SNR=5.1
CMB **Columbia Colle** 62.84 62 eP P 23 15 29.4 +0.6
CMB e*PP pP 23 15 44.7 +0.2
CMB pmax pmax
comp=Z,14nm,0.9s
CMB **Columbia Colle** 62.84 62 eP P 23 15 29.4 +0.6
comp=Z,14nm,0.9s
CMB epP pP 23 15 44.7 +0.2
D17A **Six Diamond Ra** 62.86 49 ⇓P P 23 15 28.9 0.0
baz=62,SNR=9.2
DLMT **Dillon** 62.93 52 eP P 23 15 29.1 -0.3
comp=Z,2.2nm,0.8s
DLMT epP pP 23 15 45.3 +0.2
B19A **Brinkman Farms** 62.97 48 ⇑P P 23 15 29.6 +0.1
baz=63,SNR=6.5
I13A **Wildhorse Cree** 62.97 54 ⇑P P 23 15 30.0 +0.2
baz=63,SNR=12
HLID **Hailey** 63.02 54 eP P 23 15 30.1 0.0
comp=Z,7.1nm,1.0s
HLID epP pP 23 15 46.6 +0.8
HLID **Hailey** 63.02 54 ⇑P P 23 15 30.3 +0.3
baz=63,SNR=9.9
G15A **Dillon** 63.11 52 ⇑P P 23 15 30.7 +0.1
baz=63,SNR=10
MCMT **McKenzie Canyo** 63.12 53 eP P 23 15 30.5 -0.3
comp=Z,2.1nm,0.9s
MCMT epP pP 23 15 46.9 +0.4
E17A **Martinsdale** 63.20 50 ⇑P P 23 15 31.5 +0.3
baz=63,SNR=12
F16A **Kennard Place,** 63.20 51 ⇑P P 23 15 31.2 0.0
baz=63,SNR=5.3
A20A **Cobblestone Ra** 63.22 47 ⇓P P 23 15 31.3 +0.2
baz=63
J13A **Cove Ranch, Pi** 63.26 54 ⇓P P 23 15 32.1 +0.4
baz=63,SNR=7.9
BOZ **Bozeman (W)** 63.29 51 eP P 23 15 32.3 +0.5
BOZ e*PP pP 23 15 48.9 +1.4
BOZ pmax pmax
comp=Z,9.0nm,0.8s
BOZ **Bozeman (W)** 63.29 51 eP P 23 15 32.3 +0.5
comp=Z,8.7nm,0.8s
BOZ epP pP 23 15 48.9 +1.4
BOZ **Bozeman (W)** 63.29 51 ⇑P P 23 15 32.1 +0.4
baz=63,SNR=19
BMN **Battle Mountai** 63.30 59 eP P 23 15 32.7 +0.7
BMN e*PP pP 23 15 48.9 +1.2
BMN pmax pmax
comp=Z,14nm,0.7s
BMN **Battle Mountai** 63.30 59 eP P 23 15 32.7 +0.7
comp=Z,14nm,0.7s
BMN epP pP 23 15 48.9 +1.2
D18A **Linhart Farms,** 63.30 49 ⇑P P 23 15 31.9 +0.2
baz=63
I14A **Mackay** 63.34 54 ⇑P P 23 15 32.9 +0.7
baz=63,SNR=17
C19A **Slack Wire Ran** 63.36 48 ⇓P P 23 15 32.7 +0.6
baz=63,SNR=13
H15A **Lima** 63.37 53 ⇓P P 23 15 32.1 -0.3
baz=63
B20A **Solberg Farm,** 63.45 47 ⇓P P 23 15 32.7 0.0
baz=63
G16A **Moss Hill, Enn** 63.45 52 ⇓P P 23 15 33.0 +0.1
baz=63,SNR=13
E18A **Harlowton** 63.64 50 ⇓P P 23 15 34.4 +0.4
baz=63
F17A **Fitzpatrick Pl** 63.66 51 ⇑P P 23 15 34.7 +0.5
baz=63,SNR=7.0
A21A **Bergtoll Ranch** 63.66 46 ⇓P P 23 15 34.1 +0.1
baz=63
D19A **Cripps Ranch,** 63.81 49 ⇑P P 23 15 35.4 +0.3
baz=64,SNR=5.4
I15A **Monteview** 63.84 53 ⇑P P 23 15 35.5 0.0
baz=64
NVAR **Mina Array Bea** 63.88 61 P P 23 15 36.2 +0.3
NVAR pP pP 23 15 52.3 +0.6
NVAR **Mina Array Bea** 63.88 61 P P 23 15 36.2 +0.3
comp=Z,12nm,0.7s,baz=288,slow=7.4,SNR=43
NVAR pP pP 23 15 52.3 +0.6
comp=Z,11nm,0.8s,baz=286,slow=7.1,SNR=12
NVAR LR LR 23 40 48.5
comp=Z,66nm,20.9s,baz=208,slow=34
QLMT **Earthquake Lak** 63.91 52 eP P 23 15 36.8 +0.8
QLMT epP pP 23 15 52.8 +1.1
C20A **Veseth Ranch,** 63.92 48 ⇑P P 23 15 36.2 +0.4
baz=64,SNR=7.1
NV11 **Mina Array Sit** 63.97 61 eP P 23 15 36.2 -0.2
NV11 epP pP 23 15 51.5 -0.7
B21A **Ellsworth Farm** 63.98 47 ⇓P P 23 15 36.2 +0.2
baz=64
G17A **Pierce Place,** 63.98 51 ⇑P P 23 15 36.9 +0.6
baz=64,SNR=6.0
MLAC **Mammoth Lakes** 64.05 62 ⇓P P 23 15 37.2 +0.2
baz=64
H16A **Russell Place,** 64.09 52 ⇑P P 23 15 37.5 +0.4
baz=64,SNR=8.8
KAF **Kangasniemi** 64.15 335 eP P 23 15 34.5 -2.4
KAF pmax pmax
comp=Z,19nm,0.6s
KAF **Kangasniemi** 64.15 335 ep P 23 15 34.5 -2.4
comp=Z,19nm,0.6s
F18A **Big Timber** 64.17 50 ⇓P P 23 15 38.0 +0.6
baz=64,SNR=16
A22A **Carney Farms,** 64.17 46 ⇓P P 23 15 37.3 -0.1
baz=64,SNR=7.9
SCO **Scoresbysund** 64.23 358 i P P 23 15 37.3 0.0
SCO pmax pmax
comp=Z,9.0nm,1.0s
SCO **Scoresbysund** 64.23 358 i P P 23 15 37.3 0.0
comp=Z,8.6nm,1.0s
J15A **Blackfoot** 64.25 54 ⇑P P 23 15 38.9 +0.8
baz=64,SNR=5.7
D20A **Manuel Ranch,** 64.25 48 ⇑P P 23 15 38.5 +0.5
baz=64,SNR=15
ELK **Elko** 64.29 57 eP P 23 15 39.1 +0.5
ELK epP pP 23 15 55.3 +1.0
E19A **Rath Farm, Rou** 64.31 49 ⇑P P 23 15 38.9 +0.5
baz=64,SNR=11
C21A **Desert Coulee** 64.32 47 ⇑P P 23 15 38.6 +0.2
baz=64
K14A **Jones Ranch, D** 64.36 55 ⇑P P 23 15 39.6 +0.8
baz=64,SNR=5.4
I16A **Newdale** 64.48 53 ⇑P P 23 15 40.1 +0.4
baz=64
B22A **Reddig Ranch S** 64.58 46 ⇓P P 23 15 40.1 0.0
baz=64
F19A **Roth Farm, Mol** 64.61 50 ⇓P P 23 15 40.8 +0.4
baz=64,SNR=12
E20A **Meyer Farm, Mu** 64.63 49 ⇓P P 23 15 40.7 +0.2
baz=64
K15A **Arbon** 64.64 54 ⇑P P 23 15 41.6 +0.9
baz=64,SNR=6.8
LKWY **Lake** 64.65 52 eP P 23 15 42.8 +2.0
LKWY pmax pmax
comp=Z,6.0nm,1.0s
LKWY **Lake** 64.65 52 eP P 23 15 42.8 +2.0
comp=Z,5.6nm,1.0s
H17A **Grant Village** 64.66 52 ⇓P P 23 15 42.7 +1.8
baz=64,SNR=7.1
FIA1 **FINESS Array S** 64.74 334 eP P 23 15 39.6 -1.2
FINES **FINESS Array B** 64.74 334 P P 23 15 39.4 -1.4
FINES PcP PcP 23 16 13.9 0.0
FINES **FINESS Array B** 64.74 334 P P 23 15 39.4 -1.4
comp=Z,30nm,0.6s,baz=35,slow=7.4,SNR=167
FINES PcP PcP 23 16 13.9 0.0
comp=Z,6.1nm,0.7s,baz=56,slow=5.2,SNR=4.2
IMW **Indian Meadow** 64.77 52 eP P 23 15 42.3 +0.6
comp=Z,9.2nm,1.0s
IMW epP pP 23 15 58.8 +1.3
TIN **Tinemaha** 64.79 62 ⇑P P 23 15 42.3 +0.6
baz=64
J16A **Bone** 64.79 53 ⇑P P 23 15 42.4 +0.7
baz=64,SNR=9.4
D21A **La Casta Ranch** 64.86 48 ⇓P P 23 15 42.2 +0.2
baz=64
RLMT **Red Lodge** 64.91 51 eP P 23 15 43.4 +0.9
comp=Z,26nm,1.5s
RLMT epP pP 23 15 59.3 +1.0
RLMT **Red Lodge** 64.91 51 ⇓P P 23 15 42.8 +0.3
baz=65,SNR=11
RRI2 **Red Ridge** 64.91 53 eP P 23 15 42.9 +0.3
comp=Z,20nm,0.8s
I17A **Pilgrim Ck.** 64.96 52 ⇑P P 23 15 43.7 +0.9
baz=65
MOOW **Moose Ponds** 64.98 52 eP P 23 15 43.7 +0.8
comp=Z,19nm,1.4s
MOOW epP pP 23 15 59.6 +0.9
B23A **Brockton** 64.98 46 ⇑P P 23 15 42.2 -0.4
baz=65
H18A **Shoshone NF, C** 64.98 51 ⇑P P 23 15 43.3 +0.3
baz=65,SNR=9.5
C22A **Vida** 65.00 47 ⇑P P 23 15 42.7 -0.1
baz=65
TPAW **Teton Pass** 65.03 53 eP P 23 15 44.5 +1.1
comp=Z,16nm,0.8s
TPAW epP pP 23 15 59.5 +0.4
HVU **Hansel Valley** 65.08 55 eP P 23 15 44.4 +0.8
HVU e*PP pP 23 15 59.9 +0.5
HVU pmax pmax
comp=Z,11nm,1.0s
HVU **Hansel Valley** 65.08 55 eP P 23 15 44.4 +0.8
comp=Z,11nm,1.0s
HVU epP pP 23 15 59.9 +0.5
K16A **Soda Springs** 65.09 54 ⇑P P 23 15 44.5 +0.9
baz=65,SNR=7.3
LOHW **Long Hollow** 65.14 52 eP P 23 15 45.0 +1.0
comp=Z,34nm,1.7s
LOHW epP pP 23 16 01.0 +1.2
PKM **Peak Mountain** 65.15 65 ⇑P P 23 15 44.5 +0.3
baz=65
SNOW **Snow King Moun** 65.15 53 eP P 23 15 45.0 +0.9
comp=Z,13nm,1.1s
SNOW epP pP 23 16 00.8 +0.9
L15A **Malad City** 65.16 55 ⇑P P 23 15 44.3 +0.2
baz=65
E21A **Keefer Ranch,** 65.16 48 ⇑P P 23 15 44.2 +0.3
baz=65
A24A **Westby** 65.17 45 ⇓P P 23 15 43.9 0.0
baz=65
D22A **Cohagen** 65.23 47 ⇓P P 23 15 44.5 +0.2
baz=65,SNR=5.7
J17A **Brown Place, J** 65.24 53 ⇓P P 23 15 45.4 +0.7
baz=65,SNR=9.5
CWC **Cottonwood Cre** 65.27 63 ⇑P P 23 15 44.9 0.0
baz=65
C23A **Lambert** 65.31 46 ⇑P P 23 15 44.8 0.0
baz=65
H19A **Powell** 65.35 51 ⇓P P 23 15 45.5 +0.2
baz=65
GRAC **Grapevine Rang** 65.36 62 ⇑P P 23 15 45.7 +0.5
baz=65,SNR=7.0
DGMT **Dagmar** 65.37 45 ⇑P P 23 15 45.2 0.0
baz=65
AHID **Auburn Hatcher** 65.41 53 eP P 23 15 46.1 +0.4
comp=Z,11nm,1.2s
AHID epP pP 23 16 02.4 +0.8
G20A **Bridger** 65.42 50 ⇓P P 23 15 45.4 -0.2
baz=65,SNR=5.2
CTA **Charters Tower** 65.47 186 P P 23 15 46.6 +0.7
CTA **Charters Tower** 65.47 186 P P 23 15 46.6 +0.7
comp=Z,3.4nm,0.8s,baz=12,slow=8.1,SNR=3.8
ISA **Isabella** 65.51 63 eP P 23 15 45.9 -0.5
ISA e*PP pP 23 16 02.0 -0.2
ISA pmax pmax
comp=Z,5.0nm,0.9s
ISA **Isabella** 65.51 63 eP P 23 15 45.9 -0.5
comp=Z,5.1nm,0.9s
ISA epP pP 23 16 02.0 -0.2
ISA **Isabella** 65.51 63 ⇓P P 23 15 45.6 -0.8
baz=65
R11A **Troy Canyon, C** 65.59 60 ⇑P P 23 15 47.0 0.0
baz=65,SNR=23
ARVC **Arvin** 65.63 64 ⇓P P 23 15 47.5 +0.5
baz=65
L16A **Fish Haven** 65.70 54 ⇑P P 23 15 47.8 +0.1
baz=65
D23A **Lindsay** 65.72 47 ⇓P P 23 15 47.8 +0.3
baz=65
J18A **Kendall Valley** 65.73 53 ⇓P P 23 15 47.9 0.0
baz=65
I19A **Meeteetse** 65.76 51 ⇑P P 23 15 48.3 +0.4
baz=65,SNR=6.6
OBN **Obninsk** 65.77 325 ⇑eP P 23 15 47.1 -0.4
OBN pmax pmax
comp=Z,10.0nm,1.1s
OBN MLR MLR
comp=Z,100nm,19.0s
MPMC **Manual Prospec** 65.88 63 ⇑P P 23 15 48.9 0.0
baz=66,SNR=8.9
HWUT **Hardware Ranch** 65.89 55 eP P 23 15 49.2 +0.4
comp=Z,22nm,1.4s
HWUT epP pP 23 16 04.8 +0.1
G21A **Lodge Grass** 65.95 49 ⇑P P 23 15 48.6 -0.5
baz=66
L17A **Cokeville** 65.96 54 ⇓P P 23 15 49.5 +0.1
baz=66,SNR=5.5
FURC **Furnace Creek,** 66.01 62 ⇑P P 23 15 49.7 +0.4
baz=66,SNR=5.7
H20A **Greybull** 66.01 50 ⇑P P 23 15 48.8 -0.7
baz=66
DUG **Dugway** 66.07 57 eP P 23 15 50.5 +0.5
DUG e*PP pP 23 16 06.1 +0.3
DUG pmax pmax
comp=Z,16nm,1.0s
DUG **Dugway** 66.07 57 eP P 23 15 50.5 +0.5
comp=Z,16nm,1.0s
DUG epP pP 23 16 06.0 +0.3
DUG **Dugway** 66.07 57 ⇓P P 23 15 50.3 +0.3
baz=66,SNR=13
K18A **Toltan Ranch,** 66.08 53 ⇑P P 23 15 50.7 +0.6
baz=66,SNR=7.1
F22A **Rosebud** 66.09 48 ⇑P P 23 15 49.8 -0.1
baz=66,SNR=6.9
E23A **Ismay** 66.11 47 ⇑P P 23 15 49.8 -0.2
baz=66
D24A **Glendive** 66.21 46 ⇓P P 23 15 50.9 +0.3
baz=66,SNR=5.9
J19A **Crowheart** 66.23 52 ⇓P P 23 15 51.2 +0.2
baz=66
BW06 **Boulder Array** 66.27 53 eP P 23 15 50.6 -0.7
comp=Z,5.2nm,0.9s
BW06 epP pP 23 16 06.7 -0.5
BW06 **Boulder Array** 66.27 53 ⇓P P 23 15 51.2 -0.2
baz=66,SNR=10
PDAR **Pinedale Array** 66.27 53 P P 23 15 51.1 -0.2
PDAR **Pinedale Array** 66.27 53 P P 23 15 51.1 -0.2
comp=Z,5.3nm,0.8s,baz=272,slow=1.8,SNR=44
I20A **Worland** 66.29 51 ⇓P P 23 15 51.8 +0.6
baz=66,SNR=6.5
EDW2 **Edwards Air Fo** 66.32 64 ⇓P P 23 15 51.8 +0.3
baz=66
ABKT **Ailbek** 66.39 301 P P 23 15 53.3 +1.4
comp=Z,86nm,1.3s,SNR=9.1
H21A **Big Horn, Sher** 66.43 50 ⇓P P 23 15 52.6 +0.4
baz=66
G22A **Birney** 66.44 49 ⇑P P 23 15 52.3 +0.1
baz=66
SFJD **Kangerlussuaq** 66.53 9 i P P 23 15 51.8 -0.5
comp=Z,9.1nm,0.9s
L18A **Fontenelle, Gr** 66.55 54 ⇓P P 23 15 53.3 +0.2
baz=66
F23A **Volborg** 66.58 48 ⇑P P 23 15 53.0 0.0
baz=66
K19A **Absolon Red Bu** 66.63 52 ⇑P P 23 15 53.0 -0.6
baz=66
J20A **Shoshoni** 66.70 51 ⇓P P 23 15 54.1 +0.1
baz=66,SNR=5.6
GSC **Goldstone** 66.79 63 eP P 23 15 54.5 -0.1
GSC e*PP pP 23 16 10.8 +0.3
GSC pmax pmax
comp=Z,6.0nm,0.9s
GSC **Goldstone** 66.79 63 eP P 23 15 54.5 -0.1
comp=Z,6.5nm,0.9s
GSC epP pP 23 16 10.8 +0.3
GSC **Goldstone** 66.79 63 ⇑P P 23 15 54.5 -0.1
baz=66
L19A **Farson** 66.82 53 ⇑P P 23 15 54.2 -0.6
baz=66
DAU **Daniels Canyon** 66.84 56 eP P 23 15 55.3 +0.3
DAU e*PP pP 23 16 10.0 -1.0
DAU pmax pmax
comp=Z,10.0nm,1.1s
DAU **Daniels Canyon** 66.84 56 eP P 23 15 55.3 +0.3
comp=Z,10nm,1.1s
DAU epP pP 23 16 09.9 -1.0
I21A **Big Trails, Te** 66.84 51 ⇓P P 23 15 54.8 0.0
baz=66,SNR=13
M18A **Lyman** 66.86 54 ⇓P P 23 15 55.0 -0.1
baz=66
MPU **Maple Canyon** 66.88 56 eP P 23 15 55.0 -0.1
comp=Z,4.2nm,0.8s
MPU epP pP 23 16 11.5 +0.5
BFSC **Mount Baldy Ra** 66.94 64 ⇑P P 23 15 55.5 0.0
baz=67
F24A **Ekalaka** 67.00 48 ⇓P P 23 15 55.5 -0.2
baz=67,SNR=6.2
WRAB **Tennant Creek** 67.02 198 eP P 23 15 55.7 -0.2
K20A **Yellowstone Ra** 67.02 52 ⇑P P 23 15 55.5 -0.5
baz=67
WRA **Warramunga Arr** 67.03 198 P P 23 15 55.4 -0.6
WRA pP pP 23 16 11.8 -0.1
WRA **Warramunga Arr** 67.03 198 P P 23 15 55.4 -0.6
comp=Z,4.4nm,1.0s,baz=17,slow=6.7,SNR=9.7
WRA pP pP 23 16 11.8 -0.1
comp=Z,2.3nm,0.7s,baz=15,slow=6.8,SNR=4.4
J21A **Lysite** 67.06 51 ⇓P P 23 15 55.9 -0.3
baz=67,SNR=7.1
I22A **9 Mile Ranch,** 67.22 50 ⇑P P 23 15 57.4 +0.2
baz=67,SNR=5.8
HEC **Hector,Ludlow** 67.39 63 ⇓P P 23 15 58.0 -0.3
baz=67
L20A **Wamsutter** 67.45 53 ⇑P P 23 15 58.4 -0.4
baz=67
CCUT **Cedar City** 67.45 59 eP P 23 15 58.9 0.0
comp=Z,12nm,1.1s
CCUT epP pP 23 16 15.2 +0.4
VSR **Storozhevoye** 67.46 321 eP P 23 15 57.9 -0.5
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,4.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s
MSU **Marysvale** 67.53 58 eP P 23 15 59.6 +0.2
MSU e*PP pP 23 16 15.4 +0.1
MSU pmax pmax
comp=Z,5.0nm,0.9s
MSU **Marysvale** 67.53 58 eP P 23 15 59.6 +0.2
comp=Z,5.3nm,0.9s
MSU epP pP 23 16 15.4 +0.1
J22A **Midwest** 67.54 51 ⇑P P 23 15 59.3 0.0
baz=67,SNR=8.9
VORD **Divnogorie** 67.58 321 eP P 23 15 58.6 -0.6
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.7s
VORD pmax pmax
comp=Z,10.0nm,0.7s
K21A **Alcova** 67.64 52 ⇓P P 23 15 59.6 -0.3
baz=67,SNR=7.0
MURC **Murrieta** 67.64 64 ⇑P P 23 15 59.9 0.0
baz=67
H24A **Dirks Ranch, A** 67.68 48 ⇓P P 23 15 59.4 -0.6
baz=67,SNR=6.1
P17A **Butcher Ranch,** 67.75 56 ⇑P P 23 16 01.0 +0.3
baz=67
GMRC **Granite Mounta** 67.84 63 ⇓P P 23 16 01.4 +0.1
baz=68,SNR=11
Q16A **Castle Valley** 67.86 57 ⇓P P 23 16 01.6 +0.1
baz=68
P18A **Preston Nutter** 67.94 56 ⇑P P 23 16 01.8 -0.2
baz=68
L21A **Rawlins** 68.02 52 ⇑P P 23 16 01.6 -0.8
baz=68
K22A **Casper** 68.03 51 ⇑P P 23 16 02.4 +0.1
baz=68
MDND **Maddock** 68.05 43 ⇓P P 23 16 01.9 -0.3
baz=68
ULM **Lac du Bonnet** 68.10 40 eP P 23 16 02.1 -0.3
comp=Z,28nm,1.9s
ULM **Lac du Bonnet** 68.10 40 P P 23 16 01.3 -1.2
comp=Z,4.2nm,0.7s,baz=320,slow=8.9,SNR=5.5
SRU **San Rafael** 68.11 56 eP P 23 16 03.3 +0.3
SRU e*PP pP 23 16 18.2 -0.7
SRU pmax pmax
comp=Z,17nm,0.9s
SRU **San Rafael** 68.11 56 eP P 23 16 03.2 +0.3
comp=Z,17nm,0.9s
SRU epP pP 23 16 18.1 -0.7
SRU **San Rafael** 68.11 56 ⇑P P 23 16 02.9 -0.1
baz=68,SNR=7.7
I24A **Kuemmerle Ranc** 68.24 49 ⇑P P 23 16 03.4 -0.2
baz=68
M21A **Separation Pea** 68.26 52 ⇑P P 23 16 03.2 -0.8
baz=68
N20A **Spence Gulch,** 68.27 54 ⇓P P 23 16 04.1 0.0
baz=68
RSSD **Black Hills** 68.37 49 eP P 23 16 04.2 -0.4
RSSD e*PP pP 23 16 20.4 -0.1
RSSD pmax pmax
comp=Z,7.0nm,0.9s
RSSD **Black Hills** 68.37 49 eP P 23 16 04.2 -0.4
comp=Z,7.3nm,0.9s
RSSD epP pP 23 16 20.4 -0.1
K23A **Bowen Ranch, D** 68.45 51 ⇑P P 23 16 05.1 +0.1
baz=68
L22A **Ellis Ranch, M** 68.49 52 ⇓P P 23 16 05.2 -0.1
baz=68
IRM **Iron Mountain** 68.57 63 ⇓P P 23 16 05.8 +0.1
baz=68
J24A **Dixon Ranch, L** 68.58 50 ⇑P P 23 16 05.5 -0.2
baz=68
P19A **Cripple Cowboy** 68.66 55 ⇓P P 23 16 06.1 -0.4
baz=68
BC3 **Big Chuckawall** 68.71 63 ⇑P P 23 16 06.3 -0.3
baz=68
W13A **Hualapai Mount** 68.74 61 ⇓P P 23 16 06.9 0.0
baz=68,SNR=9.1
N21A **Black Mountain** 68.74 53 ⇓P P 23 16 06.7 -0.3
baz=68
O20A **White River Ci** 68.75 54 ⇓P P 23 16 06.8 -0.2
baz=68
M22A **Cedar Creek Ra** 68.83 52 ⇑P P 23 16 07.2 -0.2
baz=68,SNR=6.2
U15A **North Rim** 68.83 59 ⇑P P 23 16 08.1 +0.5
baz=68,SNR=6.6
L23A **Garrett** 68.84 51 ⇑P P 23 16 07.0 -0.5
baz=68
NB2 **NORSAR Subarra** 69.08 341 P P 23 16 07.5 -0.9
comp=Z,21nm,0.8s,baz=28,slow=6.5
NOA **NORSAR Array B** 69.08 341 P P 23 16 07.8 -0.6
NOA **NORSAR Array B** 69.08 341 P P 23 16 07.8 -0.6
comp=Z,11nm,0.6s,baz=26,slow=6.3,SNR=45
NOA LR LR 23 47 48.1
comp=Z,120nm,20.0s,baz=265,slow=37
PDMCI **Parker Dam,Lak** 69.10 62 ⇑P P 23 16 09.3 +0.3
baz=69,SNR=6.5
Y12C **Blythe** 69.23 63 ⇑P P 23 16 09.7 0.0
baz=69
N22A **Wattenberg Ran** 69.31 53 ⇓P P 23 16 10.6 +0.1
baz=69
NAO01 **NORSAR Array S** 69.33 341 eP P 23 16 09.0 -0.9
comp=Z,20nm,1.1s
S18A **Hurst Farm, Bl** 69.37 57 ⇑P P 23 16 10.7 -0.2
baz=69,SNR=6.2
GLA **Glamis** 69.50 64 ⇑P P 23 16 11.6 +0.1
baz=69
Q20A **Ridgley Place,** 69.51 55 ⇓P P 23 16 11.4 -0.3
baz=69
N23A **Red Feather La** 69.53 52 ⇑P P 23 16 11.7 -0.2
baz=69
P21A **Newcastle** 69.61 54 ⇓P P 23 16 12.5 +0.1
baz=69,SNR=7.1
NACGM **Naroch** 69.64 330 e P P 23 16 09.0 -2.9
O22A **Kremmling** 69.69 53 ⇑P P 23 16 12.9 -0.1
baz=69
L25A **Engebretsen Ra** 69.75 50 ⇑P P 23 16 12.5 -0.5
baz=69
M24A **Cheyenne** 69.76 51 ⇑P P 23 16 13.1 -0.1
baz=69
P22A **Eagle** 69.96 54 ⇑P P 23 16 14.2 -0.3
baz=70
R20A **Redvale** 69.98 56 ⇓P P 23 16 14.6 0.0
baz=70
WUAZ **Wupatki** 70.00 60 ⇓P P 23 16 14.6 0.0
baz=70
Q21A **Lamborn Mesa,** 70.01 55 ⇓P P 23 16 14.9 +0.1
baz=70
O23A **Lake Granby, G** 70.01 53 ⇑P P 23 16 15.2 +0.4

baz=70,SNR=6.1
Y14A Wickenburg 70.05 62 ⇓P P 23 16 15.2 +0.3
baz=70
SMCO Snowmass 70.12 54 *e*P P 23 16 16.0 +0.3
comp=Z,6.8nm,0.8s
S20A Disappointment 70.23 56 ⇓P P 23 16 16.4 +0.2
baz=70
R21A Cimarron 70.34 55 ⇓P P 23 16 16.3 -0.6
baz=70
113A Mohawk Valley, 70.35 63 ⇑P P 23 16 16.5 -0.2
baz=70
Q22A Crested Butte, 70.37 54 ⇑P P 23 16 17.3 +0.2
baz=70,SNR=6.5
ISCO Idaho Springs 70.46 53 *e*P P 23 16 18.0 +0.3
ISCO *e**PP pP 23 16 34.2 +0.6
ISCO pmax pmax
comp=Z,5.0nm,0.8s
ISCO Idaho Springs 70.46 53 *e*P P 23 16 18.0 +0.3
comp=Z,5.3nm,0.8s
ISCO *e*pP pP 23 16 34.2 +0.6
ISCO Idaho Springs 70.46 53 ⇑P P 23 16 17.9 +0.2
baz=70,SNR=9.1
Z14A Wintersburg 70.47 62 ⇑P P 23 16 17.6 +0.3
baz=70
MVCO Mesa Verde 70.57 57 *e*P P 23 16 18.6 +0.4
comp=Z,7.7nm,0.8s
MVCO Mesa Verde 70.57 57 ⇑P P 23 16 18.7 +0.4
baz=70
P23A Jefferson 70.63 53 ⇓P P 23 16 18.3 -0.4
baz=70
S21A Coal Bank Pass 70.68 56 ⇓P P 23 16 19.4 +0.4
baz=70,SNR=5.7
KONO Kongsberg 70.69 341 *e*P P 23 16 18.9 +0.7
X16A Lo Mia Camp, P 70.69 60 ⇓P P 23 16 19.6 +0.6
baz=70,SNR=11
ASAR Alice Springs 70.73 197 P P 23 16 19.9 +1.0
ASAR Alice Springs 70.73 197 P P 23 16 19.9 +1.0
comp=Z,3.6nm,0.8s,baz=13,slow=5.8,SNR=25
ASAR LR LR 23 44 14.9
comp=Z,108nm,20.1s,baz=327,slow=33
R22A Saguache, Gunn 70.89 55 ⇓P P 23 16 20.3 0.0
baz=71
Q23A Hartsel 70.95 54 ⇑P P 23 16 20.9 +0.3
baz=71
KIV Kislovodsk 70.95 314 *d i*P P 23 16 21.4 +1.1
KIV *e* 23 16 38.6
KIV *e* 23 18 55.4
KIV pmax pmax
comp=Z,43nm,1.0s
KIV MLR MLR
comp=Z,100nm,17.0s
KBZ Khabaz 71.01 313 P P 23 16 21.4 +1.0
KBZ pmax pmax
comp=Z,27nm,0.8s
KBZ Khabaz 71.01 313 P P 23 16 21.4 +1.0
KBZ Khabaz 71.01 313 P P 23 16 21.4 +1.0
comp=Z,27nm,0.8s,baz=60,slow=4.5,SNR=76
ZEI Tsey 71.17 312 *e*P P 23 16 22.1 +0.3
ZEI pmax pmax
comp=Z,14nm,0.9s
S22A 4UR Ranch, Cre 71.18 55 ⇑P P 23 16 22.0 0.0
baz=71
T21A Navajo Lake 71.28 56 ⇑P P 23 16 22.4 -0.2
baz=71
DGRG David-gareji 71.32 310 P P 23 16 23.6 +1.1
O26A Horse Wrangler 71.43 51 ⇑P P 23 16 23.1 -0.2
baz=71
TBLG Delisi 71.46 311 *e*P P 23 16 24.7 +1.4
TBLG Delisi 71.46 311 P P 23 16 24.7 +1.4
N27A Anderson Farm, 71.46 50 ⇓P P 23 16 23.3 -0.2
baz=71
P25A Willow Gulch B 71.47 52 ⇑P P 23 16 23.8 +0.3
baz=71
214A Organ Pipe Nat 71.50 63 ⇑P P 23 16 24.1 +0.4
baz=71
X18A Snowflake 71.52 59 ⇑P P 23 16 24.6 +0.6
baz=71
ONI Oni 71.53 312 P P 23 16 25.3 +1.6
U21A Nageezi 71.60 57 ⇓P P 23 16 24.5 0.0
baz=71
SUW Suwalki 71.61 331 *e*P P 23 16 22.9 -1.0
SUW pmax pmax
comp=Z,28nm,0.9s
SUW Suwalki 71.61 331 *e*P P 23 16 22.9 -1.0
comp=Z,28nm,0.9s
SUW Suwalki 71.61 331 *e*P P 23 16 23.5 -0.4
T22A Edith 71.64 56 ⇓P P 23 16 24.5 -0.2
baz=71
OGNE Ogallala 71.64 50 ⇓P P 23 16 24.6 +0.2
baz=71
R24A Sanders Place, 71.83 54 ⇓P P 23 16 26.1 +0.2
baz=72
Q25A Bedland, Calha 71.84 53 ⇓P P 23 16 25.8 -0.1
baz=72
SDCO Great Sand Dun 71.94 54 *e*P P 23 16 27.0 +0.4
comp=Z,4.5nm,1.0s
W20A Ramah 71.99 58 ⇑P P 23 16 27.0 +0.2
baz=72
AKASG Malin Array Be 72.02 326 P P 23 16 25.7 -0.7
AKASG pmax pmax
comp=Z,21nm,0.7s
AKASG MLR MLR
comp=Z,112nm,20.1s
AKASG Malin Array Be 72.02 326 P P 23 16 25.7 -0.7
AKASG Malin Array Be 72.02 326 P P 23 16 25.7 -0.7
comp=Z,21nm,0.7s,baz=34,slow=6.2,SNR=38
AKASG LR LR 23 50 22.4
comp=Z,112nm,20.1s,baz=110,slow=38
KIEV Kiev 72.03 326 *e*P P 23 16 26.0 -0.5
KIEV pmax pmax
comp=Z,21nm,0.7s
KIEV Kiev 72.03 326 *e*P P 23 16 26.0 -0.5
comp=Z,21nm,0.7s
AK01 Malin Array Si 72.03 326 *e*P P 23 16 25.2 -1.3
AK02 Malin Array Si 72.06 326 *e*P P 23 16 25.6 -1.1
Q26A Hugo 72.24 52 ⇓P P 23 16 28.2 0.0
baz=72
AKH Akhalkalaki 72.35 311 P P 23 16 30.6 +1.8
R25A Fountain Ranch 72.35 53 ⇑P P 23 16 28.7 -0.1
baz=72
V22A San Miguel Ran 72.39 57 ⇑P P 23 16 29.2 0.0
baz=72
X20A Quemado 72.39 59 ⇑P P 23 16 29.7 +0.5
baz=72
ECSD EROS Data Cent 72.45 45 *e*P P 23 16 28.4 -0.8
comp=Z,21nm,1.4s
TUC Tucson 72.52 62 *e*P P 23 16 29.8 -0.1
TUC *e**PP pP 23 16 46.2 +0.3
TUC pmax pmax
comp=Z,1.0nm,1.0s
TUC Tucson 72.52 62 *e*P P 23 16 29.8 -0.1
comp=Z,1.5nm,1.0s
TUC *e*pP pP 23 16 46.2 +0.3
U23A El Rito 72.52 56 ⇑P P 23 16 30.3 +0.3
baz=72
GNI Garni 72.58 310 *e*P P 23 16 32.1 +1.9
comp=Z,22nm,1.0s
S25A Robets Cordova 72.61 54 ⇑P P 23 16 30.7 +0.3
baz=72
R26A Arlington 72.72 53 ⇑P P 23 16 30.5 -0.5
baz=72,SNR=6.8
X21A Alamocita Cree 72.88 58 ⇓P P 23 16 32.7 +0.5
baz=73,SNR=8.0
Y20A Horse Springs, 72.90 59 ⇓P P 23 16 33.1 +0.8
baz=73,SNR=6.5
T25A Trinidad 72.99 54 ⇓P P 23 16 32.3 -0.4
baz=73,SNR=6.1
R27A Eads 73.09 52 ⇑P P 23 16 32.8 -0.4
baz=73
S26A Kim 73.18 53 ⇓P P 23 16 33.2 -0.6
baz=73
Y21A Point of Rocks 73.25 58 ⇑P P 23 16 34.9 +0.5
baz=73
BSD Bornholm Skovb 73.29 336 *i* P P 23 16 33.4 -0.5
BSD pmax pmax
comp=Z,14nm,0.8s
BSD Bornholm Skovb 73.29 336 *i* P P 23 16 33.4 -0.5
comp=Z,14nm,0.7s
ANMO Albuquerque 73.33 57 *e*P P 23 16 34.7 0.0
comp=Z,3.6nm,0.9s
T26A Comanche Natio 73.42 54 ⇑P P 23 16 34.4 -0.9
baz=73,SNR=6.6
V24A Rampart Ranch, 73.48 56 ⇓P P 23 16 36.1 +0.4
baz=73
COP Copenhagen 73.48 337 *i* P P 23 16 33.7 -1.3
COP pmax pmax
comp=Z,10.0nm,0.9s
COP Copenhagen 73.48 337 *i* P P 23 16 33.7 -1.3
comp=Z,10nm,0.9s
U25A Circle Dot Ran 73.50 55 ⇑P P 23 16 35.4 -0.4
baz=73,SNR=5.0
MUD Monsted U'grnd 73.65 339 *i* P P 23 16 35.9 0.0
MUD pmax pmax
comp=Z,9.0nm,0.9s
MUD Monsted U'grnd 73.65 339 *i* P P 23 16 35.9 0.0
comp=Z,9.1nm,0.8s
120A U Bar Ranch, L 73.68 60 ⇓P P 23 16 37.1 +0.3
baz=73,SNR=13
Y22A Socorro 73.72 58 ⇑P P 23 16 37.3 +0.3
baz=73
Z21A St. Cloud Mine 73.74 59 ⇓P P 23 16 37.7 +0.5
baz=73,SNR=14
X23A Hourglass Bar 73.74 57 ⇑P P 23 16 37.2 0.0
baz=73
W24A Lazy 6 Ranch, 73.76 56 ⇑P P 23 16 37.7 +0.4
baz=74,SNR=5.4
V25A Rancho No Teng 73.78 55 ⇑P P 23 16 37.5 +0.2
baz=74
S28A Manter 74.08 52 ⇑P P 23 16 38.9 -0.1
baz=74
319A Douglas 74.09 61 ⇑P P 23 16 39.3 +0.2
baz=74,SNR=11
GKP Gorka Klasztor 74.18 334 *e*P P 23 16 39.1 0.0
220A Playas Peak, P 74.19 61 ⇑P P 23 16 40.1 +0.3
baz=74,SNR=12
Z22A Elephant Butte 74.20 59 ⇓P P 23 16 40.0 +0.1
baz=74
121A Cookes Peak, D 74.20 60 ⇑P P 23 16 40.4 +0.5
baz=74,SNR=12
BEL Belsk 74.22 331 *e*P P 23 16 40.3 +0.9
Y23A Lovelace Mesa, 74.27 58 ⇑P P 23 16 40.5 +0.2
baz=74,SNR=5.1
T28A Walsh 74.30 53 ⇓P P 23 16 39.6 -0.7
baz=74
W25A X Bar L Ranch, 74.30 56 ⇓P P 23 16 40.5 +0.1
baz=74,SNR=6.1
320A Kipp Ranch, An 74.58 61 ⇓P P 23 16 42.3 +0.2
baz=74
Z23A Rita Site, Whi 74.63 58 ⇑P P 23 16 42.5 +0.2
baz=74
Y24A Capitan 74.64 57 ⇑P P 23 16 42.2 -0.2
baz=74,SNR=9.7
X25A Clemmons Ranch 74.67 56 ⇓P P 23 16 43.0 +0.4
baz=74
LVV L'vov 74.73 328 *i* P P 23 16 41.8 -0.6
SCHQ Schefferville 74.83 22 *e*P P 23 16 42.9 0.0
comp=Z,8.8nm,0.8s
SCHQ Schefferville 74.83 22 P P 23 16 42.3 -0.6
comp=Z,8.2nm,0.8s,baz=328,slow=7.1,SNR=14
222A Williams Famil 74.92 60 ⇑P P 23 16 44.0 +0.1
baz=75
Z24A Sheeppen Canyo 75.10 58 ⇑P P 23 16 45.0 -0.1
baz=75,SNR=5.7
X26A CR and CF Fran 75.15 56 ⇓P P 23 16 45.4 +0.1
baz=75
KWP Kalwaria Pacla 75.38 329 ⇑P P 23 16 47.0 +0.8
KWP Kalwaria Pacla 75.38 329 *e*P P 23 16 46.6 +0.5
comp=Z,102nm,1.1s
KWP Kalwaria Pacla 75.38 329 ⇑*i*P P 23 16 47.0 +0.8
KWP Kalwaria Pacla 75.38 329 *e*P P 23 16 46.9 +0.8
124A Stringfield Ra 75.49 58 ⇓P P 23 16 47.3 -0.1
baz=75
Z25A Roswell 75.52 57 ⇓P P 23 16 47.6 +0.2
baz=75
BSEG Bad Segeberg 75.61 338 *e*P P 23 16 47.5 +0.2
BSEG pmax pmax
comp=Z,26nm,0.9s
BSEG Bad Segeberg 75.61 338 *e*P P 23 16 47.5 +0.2
comp=Z,26nm,0.9s
LEOM Leova 75.76 323 ⇓P P 23 16 48.4 +0.1
LEOM Leova 75.76 323 ⇓*i*P P 23 16 48.4 +0.1
224A Cornudas Mount 75.89 59 ⇑P P 23 16 49.9 +0.3
baz=76
RUE Ruedersdorf 75.92 335 *e*P P 23 16 49.3 +0.2
comp=Z,36nm,1.1s
OJC Ojcow 75.92 330 *e*P P 23 16 50.0 +0.7
OJC pmax pmax
comp=Z,36nm,1.0s
OJC Ojcow 75.92 330 *e*P P 23 16 50.0 +0.7
comp=Z,36nm,1.0s
OJC Ojcow 75.92 330 *e*P P 23 16 49.7 +0.5
Z26A Caprock 75.96 57 ⇓P P 23 16 49.6 -0.3
baz=76,SNR=12
125A Gardner Draw, 75.99 58 ⇓P P 23 16 49.8 -0.3
baz=76,SNR=7.5
Y27A Causey 76.00 56 ⇑P P 23 16 49.9 -0.2
baz=76,SNR=8.0
BUR08 Bucovina Ar. S 76.06 326 *e*P P 23 16 50.3 +0.1
BURAR Bucovina Array 76.07 326 ⇑*i*P P 23 16 50.9 +0.6
U31A Nine Bar Ranch 76.10 52 ⇓P P 23 16 50.4 -0.2
baz=76
KOLS Kolonicke sedl 76.11 328 *e*P P 23 16 50.8 +0.4
KOLS pmax pmax
comp=Z,21nm,1.0s
KOLS Kolonicke sedl 76.11 328 *e*P P 23 16 50.8 +0.4
MSTX Muleshoe 76.17 56 ⇓P P 23 16 50.9 -0.2
baz=76
225A Deer Hill, Car 76.28 58 ⇑P P 23 16 52.1 +0.3
baz=76
UZH Uzhgorod 76.36 328 ⇓*i*P P 23 16 51.1 -0.6
UZH *i* 23 17 03.5
324A Moseley Ranch, 76.36 59 ⇓P P 23 16 51.8 -0.4
baz=76
Z27A Tatum 76.38 56 ⇓P P 23 16 51.8 -0.5
baz=76,SNR=14
126A Clayton Basin, 76.38 57 ⇑P P 23 16 52.2 -0.1
baz=76
TESR 76.39 324 ⇑*i*P P 23 16 52.4 +0.4
CRVS Cervenica-Dubn 76.44 329 *e*P P 23 16 51.9 -0.3
CRVS pmax pmax
comp=Z,10.0nm,0.9s
CRVS Cervenica-Dubn 76.44 329 *e*P P 23 16 51.9 -0.3
TLCR 76.54 322 ⇓P P 23 16 53.4 +0.6
TLCR 76.54 322 ⇓*i*P P 23 16 53.4 +0.6
KSP Ksiaz 76.56 333 ⇑*e*P P 23 16 53.0 +0.1
KSP Ksiaz 76.56 333 *e*P P 23 16 53.0 +0.1
TRPA Tarpa 76.68 328 ⇑*i*P P 23 16 54.3 +0.8
TRPA Tarpa 76.68 328 ⇑*e*P P 23 16 54.1 +0.6
BMR Baia Mare 76.69 327 ⇓P P 23 16 54.7 +1.0
BMR Baia Mare 76.69 327 ⇓*i*P P 23 16 54.7 +1.0
226B Tecolote Peak, 76.70 58 ⇓P P 23 16 53.7 -0.4
baz=76,SNR=11
325A Bean Ranch, Si 76.72 59 ⇑P P 23 16 53.9 -0.5
baz=76,SNR=6.7
PETR 76.78 324 ⇓*i*P P 23 16 55.6 +1.4
OKC Ostrava-Krasne 76.81 331 ⇑*i*P P 23 16 54.5 +0.2
OKC *e* 23 17 04.4
OKC Ostrava-Krasne 76.81 331 ⇑*i*P P 23 16 54.5 +0.2
OKC *e*PCP PcP 23 17 04.4 -0.9
CFR Carcaliu 76.84 323 ⇓P P 23 16 54.8 +0.3
CFR Carcaliu 76.84 323 ⇓*i*P P 23 16 54.8 +0.3
VRI Vrincioaia 76.88 324 ⇓P P 23 16 55.1 +0.3
VRI Vrincioaia 76.88 324 ⇓*i*P P 23 16 55.0 +0.3
Z28A Tucker Farm, M 76.88 56 ⇑P P 23 16 55.0 -0.1
baz=77
PLOR Plostina 76.92 324 ⇓P P 23 16 55.9 +0.9
PLOR Plostina 76.92 324 ⇓*i*P P 23 16 55.9 +0.9
UPC Upice 76.94 333 *e*P P 23 16 55.6 +0.6
UPC Upice 76.94 333 ⇑*e*P P 23 16 55.6 +0.6
NRDL Niedersach Rie 76.95 337 *e*P P 23 16 55.1 +0.2
comp=Z,14nm,1.0s
DPC Dobruska-Polom 76.98 332 ⇑*i*P P 23 16 55.8 +0.5
DPC *e* 23 17 07.9
DPC *e* 23 17 08.2
DPC Dobruska-Polom 76.98 332 *e*P P 23 16 56.0 +0.7
comp=Z,33nm,1.2s
DPC Dobruska-Polom 76.98 332 ⇑*i*P P 23 16 55.8 +0.5
DPC *e*PCP PcP 23 17 07.9 +1.8
KRLC Kraliky 77.06 332 *e*P P 23 16 56.1 +0.3
KRLC Kraliky 77.06 332 ⇑*e*P P 23 16 56.1 +0.3
MORC Moravsky Berou 77.07 331 *e*P P 23 16 56.2 +0.4
MORC pmax pmax
comp=Z,29nm,1.0s
MORC Moravsky Berou 77.07 331 *e*P P 23 16 56.2 +0.4
comp=Z,29nm,1.0s
MORC Moravsky Berou 77.07 331 ⇓*i*P P 23 16 56.3 +0.4
425A Indio Mountain 77.12 59 ⇑P P 23 16 56.5 -0.1
baz=77,SNR=13
CLL Collm 77.18 335 ⇑*i*P P 23 16 56.2 -0.1
CLL *e* 23 17 02.0
CLL pmax pmax
comp=Z,30nm,1.1s
CLL Collm 77.18 335 *e*P P 23 16 56.1 -0.2
comp=Z,30nm,1.1s
CLL Collm 77.18 335 ⇑*i*P P 23 16 56.2 -0.1
comp=Z,30nm,1.1s
CLL *e* 23 17 02.0
CLL *e*(PcP) PcP 23 17 05.0 -1.9
CLL *e*pP pP 23 17 14.0 +1.5
MALT Malatya 77.27 312 ⇑P P 23 16 59.4 +2.2
MALT Malatya 77.27 312 *e*P P 23 16 58.8 +1.6
comp=Z,17nm,1.3s
MALT Malatya 77.27 312 ⇑*i*P P 23 16 59.4 +2.2
BRG Berggiesshubel 77.28 334 *e*P P 23 16 56.8 0.0
comp=Z,17nm,1.2s
BRG Berggiesshubel 77.28 334 *e*P P 23 16 56.8 0.0
BRG pmax pmax
comp=Z,17nm,1.3s
BRG Berggiesshubel 77.28 334 *e*P P 23 16 56.7 -0.2
comp=Z,17nm,1.2s
TIRR Tirgusor 77.30 322 ⇓P P 23 16 57.6 +0.5
TIRR Tirgusor 77.30 322 ⇓*i*P P 23 16 57.6 +0.5
Z29A Hungry Hill Ra 77.30 55 ⇓P P 23 16 57.2 -0.2
baz=77,SNR=6.3
128A Castleberry Fa 77.30 56 ⇓P P 23 16 57.2 -0.3
baz=77,SNR=5.8
326A Caldwell Ranch 77.35 58 ⇑P P 23 16 57.4 -0.3
baz=77,SNR=7.7
PVCC Panska Ves 77.38 334 ⇑*i*P P 23 16 57.7 +0.2
PVCC Panska Ves 77.38 334 ⇑*i*P P 23 16 57.7 +0.2
FBE Freiberg 77.41 334 *e*P P 23 16 57.8 +0.2
comp=Z,21nm,1.1s
CLZ Clausthal 77.46 337 *e*P P 23 16 58.5 +0.5
CLZ pmax pmax
comp=Z,46nm,1.4s
CLZ Clausthal 77.46 337 *e*P P 23 16 58.5 +0.5
comp=Z,46nm,1.4s
STKA Stephens Creek 77.57 189 P P 23 16 58.7 +0.2
STKA Stephens Creek 77.57 189 P P 23 16 58.7 +0.2
comp=Z,4.7nm,1.0s,baz=350,slow=10.0,SNR=4.3
STKA LR LR 23 52 38.8
comp=Z,95nm,18.8s,baz=203,slow=37
228A UT Block 9, Go 77.60 57 ⇓P P 23 16 59.0 -0.1
baz=77
Z30A Sanderson Ranc 77.61 55 ⇑P P 23 16 58.9 -0.3
baz=77
NEUB Neuenburg 77.63 336 *e*P P 23 16 58.7 -0.1
comp=Z,35nm,1.1s
VYHS Vyhne 77.72 330 *e*P P 23 17 00.0 +0.6
VYHS pmax pmax
comp=Z,11nm,1.1s
VYHS Vyhne 77.72 330 *e*P P 23 17 00.0 +0.6
DRGR 77.72 327 ⇑P P 23 16 59.8 +0.3
DRGR 77.72 327 ⇑*i*P P 23 16 59.8 +0.3
426A McDonald Obser 77.78 59 ⇓P P 23 16 59.9 -0.5
baz=78,SNR=6.7
VRAC Vranov 77.79 332 ⇑*i*P P 23 17 00.6 +0.8
PSZ Piszkesteto 77.83 329 ⇓P P 23 17 01.3 +1.2
PSZ Piszkesteto 77.83 329 *e*P P 23 17 01.1 +1.0
comp=Z,21nm,1.1s
PSZ Piszkesteto 77.83 329 ⇓*i*P P 23 17 01.3 +1.2
PSZ Piszkesteto 77.83 329 ⇑*e*P P 23 17 00.9 +0.8
PRU Pruhonice 77.86 333 *i* P P 23 17 00.5 +0.4
PRU *e* 23 17 09.4
PRU Pruhonice 77.86 333 ⇑*i*P P 23 17 00.5 +0.4
PRU *e*PCP PcP 23 17 09.4 -0.5
VOIR 77.92 325 ⇑P P 23 17 01.6 +1.0
VOIR 77.92 325 ⇑*i*P P 23 17 01.6 +1.0
328A Wristen Ranch, 78.00 57 ⇑P P 23 17 01.0 -0.3
baz=78,SNR=9.3
427A Hayter Ranch, 78.03 58 ⇓P P 23 17 01.5 -0.1
baz=78
TANN Tannenbergstha 78.13 335 *e*P P 23 17 02.0 +0.3
comp=Z,28nm,1.9s
WERD Werda 78.14 335 *e*P P 23 17 02.0 +0.2
comp=Z,28nm,1.8s
Z31A Sharp Cattle R 78.15 54 ⇓P P 23 17 01.7 -0.4
baz=78
PLN Plauen 78.16 335 *e*P P 23 17 02.1 +0.3
comp=Z,80nm,1.3s
TREC Trest 78.16 332 ⇑*i*P P 23 17 02.3 +0.4
TREC *e* 23 17 10.8
TREC Trest 78.16 332 ⇑*i*P P 23 17 02.3 +0.4
TREC *e*PCP PcP 23 17 10.8 -0.4
229A Bryant Ranch, 78.17 56 ⇓P P 23 17 02.2 -0.1
baz=78
MOX Moxa 78.17 335 *e*P P 23 17 02.1 +0.2
MOX pmax pmax
comp=Z,24nm,1.4s
MOX MLR MLR
comp=Z,100nm,18.7s
MOX Moxa 78.17 335 *e*P P 23 17 02.1 +0.2
comp=Z,24nm,1.4s
MOX *e*L L 23 54 34.5
comp=Z,111nm,18.7s
526A Mary Lane Ranc 78.18 59 ⇑P P 23 17 02.5 0.0
baz=78,SNR=9.2
SMOL Smolenice 78.19 331 *e*P P 23 17 02.9 +0.9
SMOL Smolenice 78.19 331 *e*P P 23 17 02.9 +0.9
GUNZ Gunzen 78.21 335 *e*P P 23 17 02.4 +0.3
comp=Z,16nm,1.0s
WERN Wernitzgruen 78.27 335 *e*P P 23 17 02.7 +0.3
comp=Z,16nm,1.1s
NKC Novy Kostel 78.29 335 *e*P P 23 17 02.9 +0.3
NKC Novy Kostel 78.29 335 ⇑*e*P P 23 17 02.9 +0.3
527A Woodward Ranch 78.41 59 ⇑P P 23 17 03.4 -0.4
baz=78,SNR=7.2
329A Wagon Wheel Ra 78.42 57 ⇑P P 23 17 03.3 -0.3
baz=78,SNR=5.5
UMR Umm Al-Rimmam 78.42 300 *e*P P 23 17 04.1 +0.6
UMR AMb AMB 23 17 04.9
comp=Z,26nm,0.6s
HDIL Hopedale 78.42 43 *e*P P 23 17 02.7 -0.7
comp=Z,7.0nm,0.6s
LOT Lotru 78.42 325 ⇓*i*P P 23 17 02.0 -1.5
MIB Mutribah 78.46 301 *e*P P 23 17 04.2 +0.4
MIB AMb AMB 23 17 05.5
comp=Z,34nm,1.0s
BUD Budapest 78.51 329 ⇑*e*P P 23 17 04.5 +0.7
626A Big Bend Ranch 78.52 60 ⇑P P 23 17 04.1 -0.2
baz=78,SNR=11
428A Kincaid Ranch, 78.55 58 ⇑P P 23 17 04.3 -0.1
baz=78
ZST Bratislava 78.57 331 *e*P P 23 17 04.1 0.0
ZST Bratislava 78.57 331 *e*P P 23 17 04.1 0.0
BR131 Keskin Array S 78.61 316 *e*P P 23 17 04.8 +0.2
comp=Z,5.1nm,0.9s
BRTR Keskin Array B 78.61 316 P P 23 17 05.3 +0.6
BRTR Keskin Array B 78.61 316 P P 23 17 05.3 +0.6
comp=Z,4.7nm,0.9s,baz=66,slow=3.0,SNR=24
MANZ Manzenberg 78.61 335 *e*P P 23 17 04.5 +0.1
comp=Z,8.0nm,0.9s
230A Sterling City 78.63 56 ⇓P P 23 17 04.6 -0.2
baz=78
TUL1 Tulsa 78.65 50 ⇑P P 23 17 04.3 -0.4
baz=78
ROTZ Rotzenmuhle 78.78 335 *e*P P 23 17 05.9 +0.7
comp=Z,19nm,1.1s
PKSG 78.81 330 ⇑*e*P P 23 17 06.2 +0.8
PKS7 Kunszentmiklos 78.83 329 ⇑*e*P P 23 17 07.4 +1.9
GZR Gura Zlata 78.86 326 ⇑P P 23 17 05.9 +0.1
GZR Gura Zlata 78.86 326 ⇑*i*P P 23 17 05.9 +0.1
528A Cox Ranch, San 78.89 58 ⇑P P 23 17 06.4 +0.1
baz=79
ANTO Ankara 78.91 317 *e*P P 23 17 05.8 -0.4
ANTO pmax pmax
comp=Z,30nm,1.4s
ANTO Ankara 78.91 317 *e*P P 23 17 05.8 -0.4
comp=Z,30nm,1.4s
KHC Kasperske Hory 78.92 333 ⇑*i*P P 23 17 06.3 +0.3
KHC *e* 23 17 22.0
KHC Kasperske Hory 78.92 333 *e*P P 23 17 06.3 +0.3
comp=Z,42nm,1.4s
KHC Kasperske Hory 78.92 333 ⇑*i*P P 23 17 06.3 +0.3
KHC *e*pP pP 23 17 22.0 -0.3
NAY Al-Naaiem 78.92 300 *e*P P 23 17 06.7 +0.3
NAY AMb AMB 23 17 08.1
comp=Z,20nm,1.1s
330A Mertzon 78.95 56 ⇑P P 23 17 06.2 -0.4
baz=79
TXAR Lajitas Array 78.96 59 P P 23 17 06.5 -0.1
TXAR pP pP 23 17 22.4 -0.5
TXAR Lajitas Array 78.96 59 P P 23 17 06.5 -0.1
comp=Z,8.3nm,0.8s,baz=299,slow=4.2,SNR=100
TXAR pP pP 23 17 22.4 -0.5
comp=Z,6.3nm,0.8s,baz=291,slow=4.3,SNR=11
RDF Al-Radifah 78.97 300 *e*P P 23 17 07.5 +0.9

RDF AMb AMB 23 17 09.6
comp=Z,48nm,0.6s
627A Terlingua Ranc 79.04 59 ⇓P P 23 17 06.8 -0.3
baz=79,SNR=6.1
PKST T"s 79.05 330⇑*eP* P 23 17 07.2 +0.4
231A Bronte 79.06 55 ⇑P P 23 17 06.8 -0.4
baz=79
429A Davenport Ranc 79.09 57 ⇑P P 23 17 06.4 -1.0
baz=79
BZS Buzias 79.12 327 ⇑P P 23 17 07.0 -0.2
BZS Buzias 79.12 327⇑*iP* P 23 17 07.0 -0.2
WET Wettzell 79.12 334 *eP* P 23 17 07.8 +0.6
WET pmax pmax
comp=Z,29nm,1.4s
WET Wettzell 79.12 334 *eP* P 23 17 07.8 +0.6
comp=Z,29nm,1.4s
GEC2 GERESS Array S 79.13 333 *eP* P 23 17 07.1 -0.2
GEC2 GERESS Array S 79.13 333 *eP* P 23 17 07.4 +0.1
comp=Z,19nm,1.6s
GEC2 GERESS Array S 79.13 333 *eP* P 23 17 07.0 -0.2
comp=Z,4µm,1.5s
GERES GERESS Array B 79.13 333 P P 23 17 07.3 0.0
GERES GERESS Array B 79.13 333 P P 23 17 07.3 0.0
comp=Z,3.4nm,0.6s,baz=37,slow=5.7,SNR=38
GRF Grafenberg Arr 79.14 335 *eP* P 23 17 07.8 +0.6
GRF pmax pmax
comp=Z,62nm,1.6s
GRF MLR MLR
comp=Z,100nm,18.8s
GRF Grafenberg Arr 79.14 335 *eP* P 23 17 07.8 +0.6
comp=Z,62nm,1.6s
GRF *eL* L 23 54 30.8
comp=Z,94nm,18.8s
GRFO Grafenberg 79.14 335 *eP* P 23 17 07.9 +0.7
GRFO pmax pmax
comp=Z,74nm,1.7s
GRFO Grafenberg 79.14 335 *eP* P 23 17 07.9 +0.7
comp=Z,74nm,1.7s
SOP Sopron 79.20 331⇑*eP* P 23 17 08.4 +0.8
CONA Conrad Observa 79.22 332⇑*iP* P 23 17 08.5 +0.7
CONA Conrad Observa 79.22 332⇑*iP* P 23 17 08.5 +0.7
529A Stev Forest Ra 79.26 58 ⇑P P 23 17 08.0 -0.3
baz=79,SNR=6.1
628A Black Gap, Mar 79.32 59 ⇑P P 23 17 08.6 0.0
baz=79
430A Baggett Ranch, 79.36 57 ⇑P P 23 17 08.6 -0.2
baz=79
TNS Taunus Mts 79.45 337 *eP* P 23 17 09.3 +0.3
TNS pmax pmax
comp=Z,26nm,1.5s
TNS Taunus Mts 79.45 337 *eP* P 23 17 09.3 +0.3
comp=Z,26nm,1.5s
331A San Angelo 79.45 56 ⇓P P 23 17 09.1 -0.2
baz=79
232A Coleman 79.48 55 ⇓P P 23 17 09.7 +0.2
baz=79
PKS9 Tamasi 79.54 329⇑*eP* P 23 17 09.0 -0.4
SFIN Scholer Farm 79.60 42 ⇑P P 23 17 09.2 -0.6
baz=79
MEM Membach 79.75 339 P P 23 17 10.4 0.0
comp=Z,13nm,1.3s
530A J-C Ranch, Com 79.77 57 ⇑P P 23 17 10.8 -0.3
baz=80,SNR=5.8
332A Millersview 79.80 55 ⇓P P 23 17 11.0 -0.2
baz=80
431A Sonora 79.81 57 ⇓P P 23 17 10.7 -0.5
baz=80
TOD Tromm 79.91 337 *eP* P 23 17 11.8 +0.4
TOD Tromm 79.91 337 *eP* P 23 17 11.8 +0.4
ARSA Arzberg 79.93 331⇑*iP* P 23 17 12.0 +0.5
ARSA Arzberg 79.93 331⇑*iP* P 23 17 12.0 +0.5
BCLA Clavier 80.10 339 P P 23 17 12.9 +0.5
comp=Z,8.8nm,1.5s
432A Menard 80.14 56 ⇓P P 23 17 12.7 -0.4
baz=80
531A Rocksprings 80.22 57 ⇑P P 23 17 13.0 -0.5
baz=80
RUP Ruppelstein 80.30 338 *eP* P 23 17 13.5 -0.1
RUP Ruppelstein 80.30 338 *eP* P 23 17 13.5 -0.1
RJOB Jochberg 80.39 333 *eP* P 23 17 15.0 +0.9
comp=Z,33nm,2.0s
JCT Junction City 80.43 56 *eP* P 23 17 13.9 -0.6
JCT pmax pmax
comp=Z,11nm,1.1s
JCT Junction City 80.43 56 *eP* P 23 17 13.9 -0.6
comp=Z,11nm,1.1s
JCT Junction City 80.43 56 ⇑P P 23 17 14.1 -0.5
baz=80
FUR Furstenfeldbru 80.48 334 *eP* P 23 17 15.1 +0.6
FUR pmax pmax
comp=Z,61nm,1.7s
FUR Furstenfeldbru 80.48 334 *eP* P 23 17 15.1 +0.6
comp=Z,61nm,1.7s
GIVF Givet 80.52 339 *eP* P 23 17 14.6 0.0
GIVF Givet 80.52 339 *eP* P 23 17 14.6 0.0
GIVF Givet 80.52 339 *eP* P 23 17 14.6 0.0
STU Stuttgart 80.56 336 *eP* P 23 17 15.2 +0.3
comp=Z,58nm,2.0s
GROS Grobnik 80.62 331 *i* P P 23 17 15.2 -0.1
532A Rocksprings 80.62 56 ⇓P P 23 17 14.9 -0.7
baz=80,SNR=6.1
BAIF Baives 80.71 339⇑*iP* P 23 17 15.7 +0.1
BAIF Baives 80.71 339⇑*iP* P 23 17 15.7 +0.1
BAIF Baives 80.71 339⇑*iP* P 23 17 15.7 +0.1
631A Perdido Creek 80.75 57 ⇑P P 23 17 15.9 -0.4
baz=80,SNR=11
LANF Langenberg 80.76 337 *eP* P 23 17 16.1 +0.1
LANF Langenberg 80.76 337 *eP* P 23 17 16.1 +0.1
LANF Langenberg 80.76 337 *eP* P 23 17 16.1 +0.1
KBA Koelnbreinsper 80.80 333⇓*iP* P 23 17 16.9 +0.4
KBA Koelnbreinsper 80.80 333⇓*iP* P 23 17 16.9 +0.4
SNR=16
KBA Koelnbreinsper 80.80 333⇓*iP* P 23 17 16.9 +0.4
VTS Vitosha 81.01 324 P P 23 17 18.4 +0.8
VTS Vitosha 81.01 324 ⇓P P 23 17 18.4 +0.8
VTS Vitosha 81.01 324⇓*iP* P 23 17 18.4 +0.8
632A Uvalde 81.15 57 ⇑P P 23 17 18.4 0.0
baz=81
WTTA Wattenberg 81.18 334⇑*iP* P 23 17 19.0 +0.6
WTTA Wattenberg 81.18 334⇑*iP* P 23 17 19.0 +0.6
WTTA Wattenberg 81.18 334⇑*iP* P 23 17 19.0 +0.6
ALN Alexandroupoli 81.20 321 P P 23 17 18.9 +0.5
BFO Black Forest 81.20 336 *eP* P 23 17 18.5 +0.2
BFO pmax pmax
comp=Z,44nm,1.9s
BFO Black Forest 81.20 336 *eP* P 23 17 18.5 +0.2
comp=Z,44nm,1.9s
BFO Black Forest 81.20 336 *eP* P 23 17 18.5 +0.2
PMOR Pomariorio Ree 81.22 122 *eT* T 00 46 20.9
comp=Z,6.5nm,0.2s
MOTA Moosalm 81.27 334⇑*iP* P 23 17 19.2 +0.3
MOTA Moosalm 81.27 334⇑*iP* P 23 17 19.2 +0.3
SNR=14
MOTA Moosalm 81.27 334⇑*iP* P 23 17 19.2 +0.3
SPAK Spaichingen-Ko 81.28 336 *eP* P 23 17 19.1 +0.3
CDF Champ du Feu 81.42 337⇑*iP* P 23 17 19.6 0.0
comp=Z,14nm,0.8s
CDF Champ du Feu 81.42 337⇑*iP* P 23 17 19.6 0.0
CDF pmax pmax
comp=Z,14nm,0.8s
CDF Champ du Feu 81.42 337⇑*iP* P 23 17 19.6 0.0
comp=Z,14nm,0.8s
LIBD Limburg 81.57 337 *eP* P 23 17 21.3 +1.1
LIBD Limburg 81.57 337 *eP* P 23 17 21.3 +1.1
732A Laxson Ranch, 81.61 57 ⇓P P 23 17 20.7 -0.1
baz=81
ECH Echery 81.63 337 *eP* P 23 17 20.0 -0.6
ECH pmax pmax
comp=Z,5.0nm,0.6s
ECH Echery 81.63 337 *eP* P 23 17 20.0 -0.6
comp=Z,4.8nm,0.6s
ECH Echery 81.63 337 *eP* P 23 17 20.6 0.0
FETA Feichten 81.67 334⇑*iP* P 23 17 21.2 +0.2
FETA Feichten 81.67 334⇑*iP* P 23 17 21.2 +0.2
WCI Wyandotte Cave 81.68 42 *eP* P 23 17 20.2 -0.9
WCI pmax pmax
comp=Z,12nm,0.8s
WCI Wyandotte Cave 81.68 42 *eP* P 23 17 20.2 -0.9
comp=Z,12nm,0.8s
DAVA Damuels 81.69 335⇑*iP* P 23 17 21.4 +0.2
DAVA Damuels 81.69 335⇑*iP* P 23 17 21.4 +0.2
FELD Feldberg im Sc 81.70 336 *eP* P 23 17 21.1 -0.1
PAGF Fort de Pagny 81.71 338⇑*iP* P 23 17 21.5 +0.5
comp=Z,11nm,0.6s
PAGF Fort de Pagny 81.71 338⇑*iP* P 23 17 21.5 +0.5
comp=Z,11nm,0.6s
NVR Nevrokopi 81.77 323 P P 23 17 22.0 +0.5
MEZF Maizieres J'vi 81.93 338 *eP* P 23 17 22.6 +0.4
MEZF Maizieres J'vi 81.93 338 *eP* P 23 17 22.6 +0.4
THEF They Montfort 81.94 338 *eP* P 23 17 22.4 +0.2
THEF They Montfort 81.94 338 *eP* P 23 17 22.4 +0.2
THEF They Montfort 81.94 338 *eP* P 23 17 22.4 +0.2
MOF Molkenrain 81.97 337 *eP* P 23 17 21.9 -0.6
MOF Molkenrain 81.97 337 *eP* P 23 17 21.9 -0.6
MOF Molkenrain 81.97 337 *eP* P 23 17 21.9 -0.6
HAU Haudompre 82.05 337⇑*iP* P 23 17 22.7 -0.1
comp=Z,13nm,0.7s
HAU *eR*
comp=Z,104nm,19.2s
HAU Haudompre 82.05 337⇑*iP* P 23 17 22.7 -0.1
HAU pmax pmax
comp=Z,13nm,0.7s
HAU Haudompre 82.05 337⇑*iP* P 23 17 22.7 -0.1
comp=Z,13nm,0.7s
SRS Serrai 82.07 323 P P 23 17 24.7 +1.6
HINF Hinteralfeld 82.08 337 *eP* P 23 17 22.7 -0.3
comp=Z,8.5nm,0.8s
HINF Hinteralfeld 82.08 337 *eP* P 23 17 22.7 -0.3
HINF pmax pmax
comp=Z,9.0nm,0.8s
HINF Hinteralfeld 82.08 337 *eP* P 23 17 22.7 -0.3
comp=Z,8.5nm,0.8s
FUORN Ofenpass-Fuorn 82.17 334 *eP* P 23 17 24.8 +1.0
comp=Z,11nm,0.8s
SFTF Sexfontaines 82.21 338⇑*iP* P 23 17 23.8 +0.2
comp=Z,39nm,0.7s
SFTF Sexfontaines 82.21 338⇑*iP* P 23 17 23.8 +0.2
comp=Z,39nm,0.7s
SKO Skopje 82.25 325 *eP* P 23 17 25.2 +1.2
PPT2 Papeete2 82.26 125 *e*LR LR 23 43 10.1
comp=Z,140nm,21.8s
KNT Kendrikon 82.33 324 P P 23 17 25.0 +0.6
VAY Valandovo 82.33 324 *eP* P 23 17 24.1 -0.3
LIA Limnos Island 82.39 321 P P 23 17 25.3 +0.6
CSS Prodhromos 82.46 313 P P 23 17 26.2 +1.0
LOMF Lomont 82.51 337 *eP* P 23 17 23.6 -1.7
OUR Ouranopolis 82.56 322 P P 23 17 26.0 +0.5
TUE Stuetta 82.58 335 *eP* P 23 17 26.4 +0.5
comp=Z,14nm,1.0s
GRG Griva 82.71 324 P P 23 17 26.9 +0.5
PLG Polygyros 82.75 323 P P 23 17 26.6 -0.1
PHP Peshkopia 82.89 325 P P 23 17 27.5 +0.1
FLN La Foliniere 83.02 342⇑*iP* P 23 17 27.8 0.0
comp=Z,10nm,0.6s
FLN *eR*
comp=Z,109nm,23.0s
FLN La Foliniere 83.02 342⇑*iP* P 23 17 27.8 0.0
FLN pmax pmax
comp=Z,10.0nm,0.6s
FLN La Foliniere 83.02 342⇑*iP* P 23 17 27.8 0.0
comp=Z,10nm,0.6s
PAIG Paliouri 83.02 322 P P 23 17 28.0 0.0
LDF La Druitiere 83.09 342⇑*iP* P 23 17 28.1 -0.1
LDF La Druitiere 83.09 342⇑*iP* P 23 17 28.1 -0.1
LDF La Druitiere 83.09 342⇑*iP* P 23 17 28.1 -0.1
CHOS Chios island 83.24 320 P P 23 17 29.8 +0.5
FNA Florina 83.27 324 P P 23 17 30.0 +0.6
SENIN Lac Senin/Sane 83.28 336 *eP* P 23 17 31.3 +1.8
comp=Z,52nm,1.9s
LOR Lormes 83.38 339⇑*iP* P 23 17 29.8 0.0
comp=Z,16nm,0.8s
LOR *eR*
comp=Z,109nm,18.5s
LOR Lormes 83.38 339⇑*iP* P 23 17 29.8 0.0
comp=Z,16nm,0.8s
TIR Tirane 83.41 326 *eP* P 23 17 30.4 +0.4
TIR pmax pmax
comp=Z,15nm,0.8s
TIR Tirane 83.41 326 *eP* P 23 17 30.4 +0.4
comp=Z,15nm,0.8s
GRR Gorron 83.45 342⇑*iP* P 23 17 30.1 +0.1
comp=Z,22nm,0.7s
GRR Gorron 83.45 342⇑*iP* P 23 17 30.1 +0.1
GRR pmax pmax
comp=Z,22nm,0.7s
GRR Gorron 83.45 342⇑*iP* P 23 17 30.1 +0.1
comp=Z,22nm,0.7s
AOS Alonnisos 83.56 322 P P 23 17 30.8 0.0
SSF Saint Saulge 83.66 339⇑*iP* P 23 17 31.4 +0.2
comp=Z,22nm,1.0s
SSF Saint Saulge 83.66 339⇑*iP* P 23 17 31.4 +0.2
SSF pmax pmax
comp=Z,22nm,1.0s
SSF Saint Saulge 83.66 339⇑*iP* P 23 17 31.4 +0.2
comp=Z,22nm,1.0s
XOR Xorichti 83.70 322 P P 23 17 32.0 +0.5
NEST Nestorio 83.72 324 P P 23 17 31.6 -0.1
SGMF Saint Gilles 83.94 343 *eP* P 23 17 33.8 +1.3
comp=Z,58nm,1.0s
SGMF Saint Gilles 83.94 343 *eP* P 23 17 33.8 +1.3
SGMF pmax pmax
comp=Z,58nm,1.0s
SGMF Saint Gilles 83.94 343 *eP* P 23 17 33.8 +1.3
comp=Z,58nm,1.0s
AVF Avril sur Loir 83.95 339⇑*iP* P 23 17 33.0 +0.4
comp=Z,28nm,0.8s
AVF Avril sur Loir 83.95 339⇑*iP* P 23 17 33.0 +0.4
AVF pmax pmax
comp=Z,28nm,0.8s
AVF Avril sur Loir 83.95 339⇑*iP* P 23 17 33.0 +0.4
comp=Z,28nm,0.8s
SMF Signal de Mont 83.96 338⇑*iP* P 23 17 33.1 +0.4
comp=Z,55nm,0.9s
SMF Signal de Mont 83.96 338⇑*iP* P 23 17 33.1 +0.4
SMF pmax pmax
comp=Z,55nm,0.9s
SMF Signal de Mont 83.96 338⇑*iP* P 23 17 33.1 +0.4
comp=Z,55nm,0.9s
ROSF Rostrenen 84.00 344 *eP* P 23 17 34.4 +1.5
comp=Z,27nm,0.8s
ROSF Rostrenen 84.00 344 *eP* P 23 17 34.4 +1.5
ROSF pmax pmax
comp=Z,27nm,0.8s
ROSF Rostrenen 84.00 344 *eP* P 23 17 34.4 +1.5
comp=Z,27nm,0.8s
THL Klokotos Trika 84.03 323 P P 23 17 32.0 -1.2
MRKA Markates 84.08 322 P P 23 17 33.0 -0.5
SMIA Simia 84.10 322 P P 23 17 33.4 -0.2
LPL La Plagne 84.22 336 *eP* P 23 17 35.0 +0.7
comp=Z,23nm,0.9s
LPL La Plagne 84.22 336 *eP* P 23 17 35.0 +0.7
LPL pmax pmax
comp=Z,23nm,0.9s
LPL La Plagne 84.22 336 *eP* P 23 17 35.0 +0.7
comp=Z,23nm,0.9s
LPG La Plagne 84.23 336⇑*iP* P 23 17 35.3 +0.9
comp=Z,62nm,1.2s
LPG La Plagne 84.23 336⇑*iP* P 23 17 35.3 +0.9
LPG pmax pmax
comp=Z,62nm,1.2s
LPG La Plagne 84.23 336⇑*iP* P 23 17 35.3 +0.9
comp=Z,62nm,1.2s
SWET Sewanee 84.26 44 *eP* P 23 17 34.0 -0.5
comp=Z,16nm,0.8s
SWET *epP* **pP** 23 17 49.2 -1.7
ATAL Atalanti 84.33 322 P P 23 17 34.1 -0.6
AGG Agios Georgios 84.35 323 P P 23 17 33.9 -1.0
QUIF Quistinic 84.38 343 *eP* P 23 17 36.1 +1.3
comp=Z,42nm,1.1s
QUIF Quistinic 84.38 343 *eP* P 23 17 36.1 +1.3
QUIF pmax pmax
comp=Z,42nm,1.0s
QUIF Quistinic 84.38 343 *eP* P 23 17 36.1 +1.3
comp=Z,42nm,1.0s
MAKR Makromi, Fth 84.44 323 P P 23 17 34.9 -0.4
PTL Penteli 84.50 321 P P 23 17 34.9 -0.7
BNI Bardonecchia 84.66 336 *eP* P 23 17 37.1 +0.7
BNI pmax pmax
comp=Z,18nm,1.5s
BNI Bardonecchia 84.66 336 *eP* P 23 17 37.1 +0.7
comp=Z,18nm,1.5s
TCF Toulx Ste Croi 84.71 339 *eP* P 23 17 37.1 +0.6
comp=Z,27nm,1.1s
TCF Toulx Ste Croi 84.71 339 *eP* P 23 17 37.1 +0.6
TCF pmax pmax
comp=Z,27nm,1.1s
TCF Toulx Ste Croi 84.71 339 *eP* P 23 17 37.1 +0.6
comp=Z,27nm,1.1s
CPCT Cooper Cave 84.75 43 *eP* P 23 17 35.7 -1.2
CPCT *epP* **pP** 23 17 52.2 -1.1
DSF Desfina 84.78 322 P P 23 17 35.8 -1.3
MBDF Montbardon 84.93 336 *eP* P 23 17 37.9 +0.1
comp=Z,14nm,0.7s
MBDF Montbardon 84.93 336 *eP* P 23 17 37.9 +0.1
MBDF pmax pmax
comp=Z,14nm,0.7s
MBDF Montbardon 84.93 336 *eP* P 23 17 37.9 +0.1
comp=Z,14nm,0.7s
TKL Tuckaleechee C 84.94 42 *eP* P 23 17 36.7 -1.2
TKL *epP* **pP** 23 17 53.8 -0.5
AQU L'Aquila 84.94 330 *eP* P 23 17 38.1 +0.3
comp=Z,41nm,1.2s
AQU *epP* **pP** 23 17 54.2 0.0
KALE Kalithea 84.96 323 P P 23 17 37.3 -0.7
MFF Saint Martin d 84.98 341 *eP* P 23 17 38.5 +0.7
comp=Z,15nm,0.7s
MFF Saint Martin d 84.98 341 *eP* P 23 17 38.5 +0.7
MFF pmax pmax
comp=Z,15nm,0.7s
MFF Saint Martin d 84.98 341 *eP* P 23 17 38.5 +0.7
comp=Z,15nm,0.7s
ORIF Oris-en-Rattie 85.00 336⇑*iP* P 23 17 38.9 +0.8
comp=Z,29nm,0.7s
ORIF *eR*
comp=Z,127nm,20.2s
ORIF Oris-en-Rattie 85.00 336⇑*iP* P 23 17 38.9 +0.8
ORIF pmax pmax
comp=Z,29nm,0.7s
ORIF Oris-en-Rattie 85.00 336⇑*iP* P 23 17 38.9 +0.8
comp=Z,29nm,0.7s
TRIZ Trizonia 85.01 323 P P 23 17 37.4 -0.7
EFP Efpalio 85.03 323 P P 23 17 38.6 +0.4
LAKA Lakka 85.16 323 P P 23 17 38.8 -0.1
UPR University Cam 85.20 323 P P 23 17 38.0 -1.1
DID Didima 85.23 321 P P 23 17 37.6 -1.7
GUR Goura 85.26 322 P P 23 17 38.9 -0.6
DIDY Didyma 85.26 321 P P 23 17 36.9 -2.7
VIVF Saint-Julien-l 85.40 337 *eP* P 23 17 40.8 +0.8
comp=Z,31nm,1.0s
VIVF Saint-Julien-l 85.40 337 *eP* P 23 17 40.8 +0.8
VIVF pmax pmax
comp=Z,31nm,1.0s
VIVF Saint-Julien-l 85.40 337 *eP* P 23 17 40.8 +0.8
comp=Z,31nm,1.0s
RLS Riolos of Patr 85.53 323 P P 23 17 41.0 +0.3
KFL Anninata 85.77 323 P P 23 17 41.6 -0.4
VLS Valsamata 85.80 323 P P 23 17 42.1 0.0
RJF Les Rejaudoux 85.80 339 *eP* P 23 17 41.9 -0.1
comp=Z,39nm,1.2s
RJF *eR*
comp=Z,120nm,19.8s
RJF Les Rejaudoux 85.80 339 *eP* P 23 17 41.9 -0.1
RJF pmax pmax
comp=Z,39nm,1.2s
RJF Les Rejaudoux 85.80 339 *eP* P 23 17 41.9 -0.1
comp=Z,39nm,1.2s
ZKR Zakros 85.84 318 P P 23 17 42.9 +0.6
AMT Artemida-Makis 85.87 322 P P 23 17 41.9 -0.6
VLI Veliai 86.01 321 P P 23 17 42.1 -1.1
CAF Calviac 86.02 339⇑*iP* P 23 17 43.4 +0.3
comp=Z,27nm,1.1s
CAF Calviac 86.02 339⇑*iP* P 23 17 43.4 +0.3
CAF pmax pmax
comp=Z,27nm,1.1s
CAF Calviac 86.02 339⇑*iP* P 23 17 43.4 +0.3
comp=Z,27nm,1.1s
ITM Ithomi 86.07 322 P P 23 17 42.8 -0.7
LAST Lasithi 86.15 319 P P 23 17 44.0 0.0
PGF Pioggiola 86.23 333⇑*iP* P 23 17 44.3 0.0
PGF Pioggiola 86.23 333⇑*iP* P 23 17 44.3 0.0
PGF Pioggiola 86.23 333⇑*iP* P 23 17 44.3 0.0
LMR La Mourre 86.28 335⇑*iP* P 23 17 44.7 +0.4
comp=Z,41nm,0.9s
LMR La Mourre 86.28 335⇑*iP* P 23 17 44.7 +0.4
LMR pmax pmax
comp=Z,41nm,0.9s
LMR La Mourre 86.28 335⇑*iP* P 23 17 44.7 +0.4
comp=Z,41nm,0.9s
IDI Anoyia 86.32 319 P P 23 17 43.2 -1.6
IDI Anoyia 86.32 319 *eP* P 23 17 44.7 -0.1
comp=Z,64nm,1.5s
KYTH Kithira 86.33 321 P P 23 17 43.9 -0.9
LFF La Frestale 86.33 340⇑*iP* P 23 17 44.6 0.0
comp=Z,35nm,0.8s
LFF La Frestale 86.33 340⇑*iP* P 23 17 44.6 0.0
LFF pmax pmax
comp=Z,35nm,0.8s
LFF La Frestale 86.33 340⇑*iP* P 23 17 44.6 0.0
comp=Z,35nm,0.8s
PYL PYLOS 86.39 322 P P 23 17 44.0 -1.0
TIP Timpagrande 86.49 327 *eP* P 23 17 45.4 -0.2
comp=Z,20nm,0.9s
KMSC Kings Mountain 86.51 41 ⇓P P 23 17 45.2 -0.4
baz=86
SIVA Sivas 86.58 319 P P 23 17 45.9 0.0
KARN Karanos 86.67 320 P P 23 17 45.9 -0.5
TBI Tubuai 86.89 128 *eT* T 00 53 30.6
comp=Z,7.3nm,0.2s
TIGA Tifton 88.46 45 ⇑P P 23 17 55.0 0.0
baz=88
KEST Kesra 92.27 330 *eP* P 23 18 13.2 +0.4
KEST Kesra 92.27 330 P P 23 18 12.9 +0.1
comp=Z,3.9nm,1.1s,baz=52,slow=2.9,SNR=4.6
ESDC Sonseca Array 92.43 341 P P 23 18 12.2 -1.2
ESDC Sonseca Array 92.43 341 P P 23 18 12.2 -1.2
comp=Z,0.1nm,0.3s,baz=16,slow=4.0,SNR=5.7
TORD Torodi Ar. Bea 115.63 327 PKP **PKPdf** 23 23 44.3 -0.7
TORD PP **PP** 23 24 43.5 -3.5
TORD Torodi Ar. Bea 115.63 327 PKP **PKPdf** 23 23 44.3 -0.7
comp=Z,0.4nm,0.5s,baz=9.7,slow=2.0,SNR=5.2
TORD PP **PP** 23 24 43.5 -3.5
comp=Z,0.8nm,0.9s,baz=4.5,slow=7.2,SNR=3.6
LPAZ La Paz 135.79 62 PKP **PKPdf** 23 24 23.9 -0.2
LPAZ La Paz 135.79 62 PKP **PKPdf** 23 24 23.9 -0.2
comp=Z,1.5nm,0.8s,baz=22,slow=5.2,SNR=8.3
BDFB Brasilia 145.92 35 PKPbc **PKPdf** 23 24 41.4 -0.2
BDFB Brasilia 145.92 35 PKPbc **PKPdf** 23 24 41.4 -0.2
comp=Z,3.2nm,0.6s,baz=43,slow=7.8,SNR=5.3
PLCA Paso Flores 149.06 96 PKPbc **PKPbc** 23 24 49.9 -0.4
PLCA pPKPbc **pPKPbc** 23 25 06.2 -1.1
PLCA Paso Flores 149.06 96 PKPbc **PKPbc** 23 24 49.9 -0.4
comp=Z,6.4nm,1.0s,baz=307,slow=5.1,SNR=6.1
PLCA pPKPbc **pPKPbc** 23 25 06.2 -1.1
comp=Z,5.5nm,0.9s,baz=215,slow=4.1,SNR=6.1
CPUP Villa Florida 149.93 60 PKPbc **PKPbc** 23 24 52.1 -0.6
CPUP Villa Florida 149.93 60 PKPbc **PKPbc** 23 24 52.1 -0.6
comp=Z,4.6nm,0.6s,baz=91,slow=20,SNR=18
SNAA Sanae 151.09 196 PKPbc **PKPbc** 23 24 53.7 -0.5
SNAA Sanae 151.09 196 PKPbc **PKPbc** 23 24 53.7 -0.5
comp=Z,1.3nm,0.5s,baz=196,slow=6.5,SNR=9.1

IDC 24 23:06:17.3±3.1, 47°33N×153°19E, h81km±28km, mb3.8/9, mb1 4.1/13, mb1mx3.8/29, mbtmp3.9/13, MS3.5/1, Ms1 3.5/1, ms1mx3.1/26, 1D, Error ellipse: s-maj=29.1km s-min=14.7km az=137.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.47**	**25**	P		P	Pn	23 07 49.7	-0.2
	1.1nm,0.3s,baz=190,slow=16,SNR=2.6								
FX1	**Attu Island--F**	**13.96**	**59**	P		P	Pn	23 09 29.4	-1.8
	2.2nm,0.3s,baz=96,slow=10,SNR=2.9								
FX1				S			Sn	23 11 52.5	-12
	2.6nm,0.3s,baz=108,slow=20,SNR=3.6								
USRK	**Ussuriysk Arra**	**15.11**	**266**	P		P	Pn	23 09 46.1	+0.1
	0.6nm,0.3s,baz=70,slow=13,SNR=4.1								
MJAR	**Matsushiro Arr**	**15.47**	**231**	P		P	Pn	23 09 52.0	+1.2
	0.7nm,0.3s,baz=36,slow=8.1,SNR=6.9								
JHJ	**Hachijo jima 2**	**17.46**	**220**	LR			LR	23 15 59.1	
	comp=Z,154nm,19.9s,baz=15,slow=33								
KSRS	**Korea Array**	**21.02**	**251**	P		P	P	23 10 55.6	+1.3
	4.1nm,0.7s,baz=52,slow=11,SNR=4.0								
YKA	**Yellowknife Ar**	**50.43**	**37**	P		P	P	23 15 06.4	+0.3
	2.4nm,0.7s,baz=301,slow=7.2,SNR=3.0								
CMAR	**Chiang Mai Arr**	**52.56**	**256**	P		P	P	23 15 22.8	+0.2
	2.1nm,0.6s,baz=34,slow=6.7,SNR=6.5								
FINES	**FINESS Array B**	**63.54**	**335**	P		P	P	23 16 37.9	-0.7
	1.9nm,0.5s,baz=23,slow=7.7,SNR=3.6								
PDAR	**Pinedale Array**	**64.37**	**54**	P		P	P	23 16 45.0	+0.2
	1.4nm,0.8s,baz=339,slow=2.3,SNR=6.5								
PDAR				pP		pP	P	23 16 58.8	-6.7
	2.4nm,0.8s,baz=302,slow=1.7,SNR=3.3								
WRA	**Warramunga Arr**	**69.07**	**199**	P		P	P	23 17 13.6	-0.8
	1.2nm,0.7s,baz=15,slow=6.8,SNR=2.3								
ASAR	**Alice Springs**	**72.77**	**198**	P		P	P	23 17 36.8	0.0

2.7nm,0.7s,baz=14,slow=5.0,SNR=8.0
CLL Collm 75.96 336 ǁ *i* P P 23 17 54.8 -0.2
comp=Z,9.0nm,1.0s
TXAR Lajitas Array 77.17 61 P P 23 18 03.3 +0.9
comp=Z,1.0nm,0.5s,baz=294,slow=4.8,SNR=3.8
GERES GERESS Array B 77.96 334 P P 23 18 05.9 -0.5
comp=Z,1.0nm,0.6s,baz=25,slow=4.4,SNR=4.1
CPUP Villa Florida 148.14 60 PKPbc PKPbc 23 25 53.2 -0.4
comp=Z,0.5nm,0.4s,baz=15,slow=5.4,SNR=3.4

BER 24 23:48:25.9±3.1, 77°25N×18°78E, h22km±22km, MD2.4, ML3.1, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.76**	**253**	*e*P	Pb	23 48 33.5	-6.9
HSP				*e*S	Sb	23 48 41.5	-8.8
HOPEN	**Hopen**	**1.60**	**115**	*e*P	Pn	23 48 50.7	-2.1
HOPEN				*e*S	Sn	23 49 10.9	-1.9
HOPEN				*e*Sg	Sb	23 49 14.3	-0.2
KBS	**Kingsbay**	**2.20**	**323**	*e*P	Pn	23 48 58.4	-2.7
KBS				*e*Pg	Pb	23 49 03.5	-1.4
KBS				*e*Sg	Sb	23 49 32.7	+1.0
KBS				AML	AML	23 49 39.2	
	comp=Z,628nm,0.5s						
BJO	**Bjornoya**	**2.76**	**178**	*e*P	Pn	23 49 05.5	-3.2
BJO				*e*S	Sn	23 49 39.5	-1.8
BJO				AML	AML	23 49 45.0	
	comp=Z,81nm,0.6s						

IDC 24 23:57:28.3±4.1, 10°22N×85°64W, h0km, mb3.6/7, mb1 3.9/8, mb1mx3.8/23, mbtmp3.6/8, ML3.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/29, Error ellipse: s-maj=85.4km s-min=42.0km az=178.0, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**10.27**	**346**	LR	LR	00 04 27.5	
	comp=Z,116nm,18.1s,baz=115,slow=41						
CMIG	**Matias Romero**	**11.28**	**308**	Pn	Pn	00 00 11.8	+0.8
	0.1nm,0.3s,baz=113,slow=7.7,SNR=2.7						
TKL	**Tuckaleechee C**	**25.38**	**4**	P	P	00 02 58.9	+1.6
	4.0nm,0.8s,baz=176,slow=9.9,SNR=5.2						
TXAR	**Lajitas Array**	**25.41**	**321**	P	P	00 02 57.9	0.0
	0.9nm,0.6s,baz=138,slow=10,SNR=17						
PDAR	**Pinedale Array**	**38.57**	**331**	P	P	00 04 53.0	-0.3
	0.5nm,0.8s,baz=113,slow=8.9,SNR=4.0						
NVAR	**Mina Array Bea**	**40.54**	**319**	P	P	00 05 10.4	+0.6
	0.4nm,0.5s,baz=130,slow=11,SNR=3.5						
SCHQ	**Schefferville**	**46.93**	**15**	P	P	00 06 00.2	-0.4
	2.2nm,0.9s,baz=216,slow=8.7,SNR=3.3						
YKA	**Yellowknife Ar**	**56.22**	**344**	P	P	00 07 08.2	-1.8
	0.1nm,0.4s,baz=141,slow=7.0,SNR=5.6						
YKA				PcP	PcP	00 08 08.7	+1.0
	0.3nm,0.7s,baz=143,slow=4.3,SNR=8.5						
ILAR	**Eielson Array**	**68.76**	**336**	P	P	00 08 33.2	-0.8
	0.3nm,0.9s,baz=131,slow=4.1,SNR=3.6						

MAN 25 00:00:14, 11°14N×122°49E, h70km, mb3.8, ML2.5, MS2.1, Panay

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*AUST **25** 00:03:47.0±45.0, 7°42S×170°57E, h32km±1km, Error ellipse: s-maj=3.3km s-min=1.3km az=344.0*
*IDC **25** 00:04:43.1±0.6, 10°85S×164°28E, h0km, mb4.4/21, mb1 4.5/23, mb1mx4.5/27, mbtmp4.4/23, ML4.7/2, MS3.9/15, Ms1 3.9/15, ms1mx3.8/28, Error ellipse: s-maj=21.6km s-min=14.5km az=113.0*
*ISCJB **25** 00:04:46.3±0.3, 10°95S±0°05×164°32E±0°06, h29km, mb4.6/36, MS4.0/17, Error ellipse: s-maj=9.2km s-min=6.7km az=21.8*
*NEIC **25** 00:04:46.6±1.0, 10°84S×164°31E, h21km±6km, mb4.8/11, Error ellipse: s-maj=12.3km s-min=8.2km az=126.0*
*BJI **25** 00:04:48.4, 10°79S×164°17E, h28km, mB5.0/17, mb4.8/24, Ms4.9/12, Ms7 4.6/12*
ISC 25 00:04:48.5±0.4, 10°99S±0°05×164°32E±0°07, h29km, n104, σ2s03/123, mb4.6/36, MS4.0/17, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.58**	**289**	*e*Pn	**Pn**	**00 05 54.8**	**-1.1**
HNR				*e*Sn	**Sn**	**00 06 42.7**	**-5.4**
DZM	**Mont Dzumac**	**11.21**	**170**	*e*Pn	**Pn**	**00 07 28.3**	**+1.3**
	13nm,0.2s						
DZM				*e*Sn	**Sn**	**00 09 27.0**	**-4.4**
	12nm,0.3s						
DZM				*e*LR	LR	00 09 35.3	
	323nm,22.0s						
DZM	**Mont Dzumac**	**11.21**	**170**	*e*Pn	**Pn**	**00 07 28.2**	**+1.2**
	18nm,0.4s						
DZM				*e*Sn	**Sn**	**00 09 26.7**	**-4.7**
DZM	**Mont Dzumac**	**11.21**	**170**	Pn	**Pn**	**00 07 28.2**	**+1.2**
	3.5nm,0.3s,baz=16,slow=23,SNR=71						
DZM				Sn	**Sn**	**00 09 32.4**	**+1.0**
	1.7nm,0.3s,baz=307,slow=20,SNR=4.7						
EIDS	**Eidsvold**	**19.03**	**219**	*e*Pn	**Pn**	**00 09 11.1**	**+1.9**
	24nm,1.0s						
EIDS	**Eidsvold**	**19.03**	**219**	P	**Pn**	**00 09 11.3**	**+2.2**
	baz=26,SNR=6.8						
CTA	**Charters Tower**	**19.61**	**240**	P	**Pn**	**00 09 15.5**	**-0.6**
CTA	**Charters Tower**	**19.61**	**240**	P	**Pn**	**00 09 15.5**	**-0.6**
	1.6nm,0.3s,baz=67,slow=12,SNR=59						
CTA				LR	LR	00 15 58.4	
	comp=Z,335nm,18.6s,baz=57,slow=34						
CTAO	**Charters Tower**	**19.61**	**240**	*e*P	**P**	**00 09 15.3**	**+0.6**
	41nm,0.8s						
MTSU	**Mount Surprise**	**20.62**	**248**	P	**P**	**00 09 26.4**	**+0.7**
	baz=28,SNR=9.4						
LHI	**Lord Howe Isla**	**21.01**	**193**	P	P	00 09 18.3	-11
	baz=26,SNR=3.2						
RMQ	**Roma**	**21.29**	**221**	P	**P**	**00 09 35.0**	**+2.1**
	baz=28,SNR=16						
AFI	**Afiamalu**	**23.51**	**100**	LR	LR	00 17 11.4	
	comp=Z,390nm,19.1s,baz=313,slow=32						
QLP	**Quilpie**	**24.49**	**228**	P	**P**	**00 10 06.0**	**+0.6**
	baz=32,SNR=14						
CMSA	**Cobar Meteorol**	**26.75**	**217**	P	**P**	**00 10 26.2**	**+0.5**
	baz=34,SNR=9.9						
URZ	**Urewera**	**29.48**	**159**	LR	LR	00 19 46.2	
	comp=Z,288nm,18.1s,baz=334,slow=30						
STKA	**Stephens Creek**	**29.54**	**222**	*e*P	**P**	**00 10 50.4**	**-0.3**
	1.7nm,0.8s						
STKA	**Stephens Creek**	**29.54**	**222**	P	**P**	**00 10 50.3**	**-0.4**
	7.5nm,0.9s,baz=45,slow=8.7,SNR=6.0						
STKA				LR	LR	00 21 20.6	
	comp=Z,369nm,21.6s,baz=26,slow=34						
STKA	**Stephens Creek**	**29.54**	**222**	P	**P**	**00 10 52.5**	**+1.8**
	baz=36,SNR=4.6						
WRAB	**Tennant Creek**	**30.18**	**249**	*e*P	**P**	**00 10 54.5**	**-2.0**
	9.2nm,0.7s						
WRA	**Warramunga Arr**	**30.20**	**249**	P	**P**	**00 10 54.4**	**-2.3**
WRA	**Warramunga Arr**	**30.20**	**249**	P	**P**	**00 10 54.4**	**-2.3**
	8.8nm,0.8s,baz=75,slow=9.1,SNR=27						
GUMO	**Guam**	**31.12**	**321**	LR	LR	00 22 03.1	
	comp=Z,198nm,21.1s,baz=119,slow=34						
KDU	**Kakadu**	**31.21**	**264**	P	**P**	**00 11 02.9**	**-2.8**
	baz=38,SNR=3.0						
ASAR	**Alice Springs**	**31.58**	**242**	P	**P**	**00 11 06.5**	**-2.4**
ASAR	**Alice Springs**	**31.58**	**242**	P	**P**	**00 11 06.5**	**-2.4**
	2.1nm,0.6s,baz=63,slow=9.8,SNR=30						
ASAR				LR	LR	00 23 40.0	
	comp=Z,259nm,18.8s,baz=67,slow=36						
MTN	**Manton Dam**	**32.52**	**263**	P	**P**	**00 11 15.6**	**-1.5**
	baz=39,SNR=4.6						
RPZ	**Rata Peaks**	**33.13**	**171**	P	**P**	**00 11 22.1**	**0.0**
RPZ	**Rata Peaks**	**33.13**	**171**	P	**P**	**00 11 22.1**	**0.0**
	13nm,0.8s,baz=162,slow=22,SNR=4.1						
RPZ				LR	LR	00 21 21.1	
	comp=Z,141nm,19.9s,baz=162,slow=30						
FITZ	**Fitzroy Crossi**	**38.05**	**255**	*e*P	**P**	**00 12 01.7**	**-3.1**
	15nm,0.9s						
FITZ	**Fitzroy Crossi**	**38.05**	**255**	P	**P**	**00 12 02.2**	**-2.6**
	baz=45,SNR=17						
PPT	**Papeete**	**45.06**	**104**	LR	LR	00 28 11.6	
	comp=Z,250nm,18.2s,baz=180,slow=31						
PPT2	**Papeete2**	**45.07**	**104**	*e*LQ	LQ	00 23 53.4	
	368nm,25.8s						
PPT2				*e*LR	LR	00 25 44.6	
	89nm,21.5s						
TBI	**Tubuai**	**45.65**	**112**	*e*LQ	LQ	00 24 08.5	
	383nm,33.2s						
TBI				*e*LR	LR	00 26 19.7	
	511nm,32.0s						
MEEK	**Meekatharra**	**45.72**	**243**	P	**P**	**00 13 08.0**	**+0.6**
	baz=53,SNR=4.5						
NWAO	**Narrogin (SRO)**	**48.34**	**236**	P	**P**	**00 13 27.4**	**-0.4**
MJAR	**Matsushiro Arr**	**53.29**	**334**	P	**P**	**00 14 02.8**	**-2.1**
MJAR	**Matsushiro Arr**	**53.29**	**334**	P	**P**	**00 14 02.8**	**-2.1**
	3.8nm,1.0s,baz=167,slow=7.4,SNR=5.7						
ASAJ	**Asahikawa**	**58.29**	**342**	P	**P**	**00 14 37.9**	**-2.6**
ASAJ	**Asahikawa**	**58.29**	**342**	P	**P**	**00 14 37.9**	**-2.6**
	1.8nm,0.3s,baz=110,slow=23,SNR=1.7						
RKT	**Rikitea**	**58.92**	**110**	*e*LR	LR	00 32 17.3	
	356nm,29.2s						
KSRS	**Korea Array**	**59.05**	**327**	LR	LR	00 37 43.3	
	comp=Z,64nm,19.3s,baz=325,slow=34						
NJ2	**Nanjing**	**61.00**	**316**	*e*P	**P**	**00 15 00.6**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
QIZ	**Qiongzhong**	**61.42**	**299**	P	**P**	**00 15 02.5**	**-0.1**
QIZ				S	**S**	**00 23 21.4**	**-0.8**
QIZ				pmax	pmax		
	comp=Z,17nm,2.7s						
USRK	**Ussuriysk Arra**	**62.27**	**334**	P	**P**	**00 15 06.3**	**-1.5**
	comp=Z,2.9nm,1.0s,baz=122,slow=7.1,SNR=5.2						
MDJ	**Mudanjiang**	**63.65**	**333**	P	**P**	**00 15 18.4**	**+1.4**
MDJ				sP	**sP**	**00 15 31.5**	**+2.0**
MDJ				PcP	**PcP**	**00 15 53.6**	**+0.5**
MDJ				SS	**SS**	**00 27 57.9**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,9.0nm,2.1s						
MDJ				pmax	pmax		
	comp=Z,54nm,4.0s						
MDJ				LR	LR		
	comp=N,49nm,28.1s						
MDJ				LR	LR		
	comp=E,52nm,28.1s						
PETK	**Petropavlovsk-**	**64.09**	**356**	P	**P**	**00 15 18.4**	**-1.3**
PETK	**Petropavlovsk-**	**64.09**	**356**	P	**P**	**00 15 18.4**	**-1.3**
	comp=E,4.1nm,0.9s,baz=179,slow=6.9,SNR=3.0						
CN2	**Changchun**	**64.98**	**330**	*e*P	**P**	**00 15 28.8**	**+3.1**
CASY	**Casey**	**65.93**	**201**	*e*P	**P**	**00 15 32.7**	**+1.1**
	comp=E,101nm,2.5s						
VNDA	**Vanda**	**66.53**	**181**	*e*P	**P**	**00 15 36.4**	**+1.1**
	comp=E,5.5nm,1.1s						
VNDA	**Vanda**	**66.53**	**181**	P	**P**	**00 15 36.4**	**+1.1**
	comp=E,3.1nm,1.1s,baz=3.7,slow=5.7,SNR=6.7						
VNDA				LR	LR	00 42 52.2	
	comp=E,80nm,19.0s,baz=354,slow=34						
CMAR	**Chiang Mai Arr**	**70.81**	**294**	P	**P**	**00 16 02.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**70.81**	**294**	P	**P**	**00 16 02.3**	**-0.7**
	comp=E,1.0nm,0.8s,baz=120,slow=5.3,SNR=2.8						
CMAR				LR	LR	00 45 53.3	
	comp=E,51nm,18.7s,baz=261,slow=35						
HHC	**Hu-ho-hao-te**	**70.89**	**320**	*e*P	**P**	**00 16 04.0**	**+0.9**
HHC				sP	**sP**	**00 16 18.5**	**+2.8**
HHC				PcP	**PcP**	**00 16 24.8**	**+1.2**
HHC				PP	**PP**	**00 18 43.3**	**+2.7**
HHC				S	**S**	**00 25 15.8**	**-1.0**
HHC				sS	**sS**	**00 25 32.6**	**+0.7**
HHC				SKS	**SKSac**	**00 25 59.5**	**-4.2**
HHC				ScS	**SKKSac**	**00 26 01.3**	**-2.5**
HHC				SS	**SS**	**00 29 49.1**	**-1.1**
HHC				pmax	pmax		
	comp=Z,37nm,0.7s						
HHC				pmax	pmax		
	comp=Z,190nm,7.1s						
HHC				LR	LR		
	comp=N,290nm,17.2s						
HHC				LR	LR		
	comp=E,330nm,17.0s						
HHC				LR	LR		
	comp=Z,240nm,16.7s						
CD2	**Chengdu**	**71.46**	**308**	P	**P**	**00 16 07.3**	**+0.6**
CD2				pP	**pP**	**00 16 18.1**	**+2.2**
CD2				sP	**sP**	**00 16 22.3**	**+3.0**
CD2				PP	**PP**	**00 18 47.8**	**+2.1**
CD2				S	**S**	**00 25 21.5**	**-2.2**
CD2				sS	**sS**	**00 25 39.5**	**+0.7**
CD2				SS	**SS**	**00 29 58.3**	**-0.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,80nm,5.4s						
LZH	**Lanzhou**	**73.69**	**313**	*e*P	**P**	**00 16 21.5**	**+1.5**
LZH				pP	**PcP**	**00 16 32.8**	**-2.9**
LZH				sP	**sP**	**00 16 36.5**	**+3.9**
LZH				*e*PP	**PP**	**00 19 07.6**	**+2.8**
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,73nm,6.5s						
LZH				LR	LR		
	comp=N,240nm,15.0s						
LZH				LR	LR		
	comp=E,220nm,15.6s						
LZH				LR	LR		
	comp=Z,280nm,18.2s						
KDAK	**Kodiak Island**	**77.04**	**22**	P	**P**	**00 16 38.2**	**-0.3**
KDAK	**Kodiak Island**	**77.04**	**22**	P	**P**	**00 16 38.2**	**-0.3**
	comp=Z,6.9nm,1.0s,baz=180,slow=10,SNR=2.1						
ULN	**Ulaanbaatar**	**77.44**	**325**	*e*P	**P**	**00 16 39.8**	**-1.5**
	comp=Z,12nm,1.3s						
SONM	**Songino Array**	**77.80**	**324**	P	**P**	**00 16 43.7**	**+0.5**
SONM	**Songino Array**	**77.80**	**324**	P	**P**	**00 16 43.7**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=133,slow=8.7,SNR=4.0						
SONM				LR	LR	00 49 51.4	
	comp=Z,77nm,20.9s,baz=79,slow=35						
GTA	**Gaotai**	**78.02**	**314**	*e*P	**P**	**00 16 45.9**	**+1.3**
GTA				pP	**PcP**	**00 16 55.1**	**+0.8**
GTA				sP	**sP**	**00 16 59.4**	**+2.2**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BILL	**Bilibino**	**78.83**	**1**	*e*P	**P**	**00 16 49.6**	**+1.3**
	comp=Z,7.2nm,0.9s						
DIB	**Dawson Inlet,**	**83.39**	**33**	T	T	01 48 52.9	
	SNR=6.2						
MENT	**Mentasta**	**83.78**	**21**	*e*P	**P**	**00 17 13.4**	**-1.4**
ILAR	**Eielson Array**	**83.90**	**19**	P	**P**	**00 17 13.7**	**-1.7**
ILAR	**Eielson Array**	**83.90**	**19**	P	**P**	**00 17 13.7**	**-1.7**
	comp=Z,2.6nm,0.4s,baz=234,slow=6.2,SNR=17						
ILAR				LR	LR	00 51 21.3	
	comp=Z,57nm,18.5s,baz=327,slow=33						
DOT	**Dot Lake**	**84.11**	**21**	*e*P	P	00 17 12.9	-3.5
MAW	**Mawson**	**84.25**	**202**	LR	LR	00 50 03.7	
	comp=Z,80nm,18.7s,baz=203,slow=32						
COLD	**Coldfoot**	**84.63**	**16**	*e*P	**P**	**00 17 18.4**	**-0.6**
EGAK	**Eagle**	**85.81**	**20**	*e*P	**P**	**00 17 24.2**	**-0.6**
	comp=Z,19nm,0.9s						
DLBC	**Dease Lake**	**87.02**	**29**	P	**P**	**00 17 30.0**	**-1.1**
DLBC	**Dease Lake**	**87.02**	**29**	P	**P**	**00 17 30.0**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=149,slow=20,SNR=2.2						
WMQ	**Urumqi**	**88.07**	**315**	P	P	00 17 28.0	-8.4
WMQ				pmax	pmax		
	comp=Z,15nm,1.0s						
WMQ	**Urumqi**	**88.07**	**315**	P	**P**	**00 17 36.0**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,14nm,1.0s						
LPIG	**La Paz**	**90.25**	**66**	P	**P**	**00 17 47.3**	**+0.3**
LPIG	**La Paz**	**90.25**	**66**	P	**P**	**00 17 47.3**	**+0.3**
	comp=Z,3.5nm,0.3s,baz=206,slow=5.9,SNR=2.9						
INK	**Inuvik**	**90.30**	**19**	P	**P**	**00 17 45.4**	**-0.9**
INK	**Inuvik**	**90.30**	**19**	P	**P**	**00 17 45.4**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=243,slow=6.8,SNR=4.8						
MKAR	**Makanchi Array**	**92.53**	**317**	P	**P**	**00 17 56.4**	**-0.8**
MKAR	**Makanchi Array**	**92.53**	**317**	P	**P**	**00 17 56.4**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=102,slow=6.4,SNR=5.5						
ZALV	**Zalesovo Beam**	**92.69**	**324**	P	**P**	**00 17 56.8**	**-0.9**
ZALV	**Zalesovo Beam**	**92.69**	**324**	P	**P**	**00 17 56.8**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=111,slow=6.3,SNR=4.5						
LRM	**Limekiln Ridge**	**93.11**	**44**	*e*P	**P**	**00 17 58.4**	**-1.7**
PDAR	**Pinedale Array**	**94.54**	**47**	P	**P**	**00 18 04.8**	**-2.0**
PDAR	**Pinedale Array**	**94.54**	**47**	P	**P**	**00 18 04.8**	**-2.0**
	comp=Z,0.5nm,0.8s,baz=274,slow=2.2,SNR=4.6						
PDAR				LR	LR	00 55 00.4	
	comp=Z,49nm,18.3s,baz=243,slow=32						
YKA	**Yellowknife Ar**	**95.56**	**27**	P	**P**	**00 18 07.8**	**-2.8**
YKA	**Yellowknife Ar**	**95.56**	**27**	P	**P**	**00 18 07.8**	**-2.8**
	comp=Z,0.9nm,0.9s,baz=255,slow=4.8,SNR=15						
KSH	**Kashi**	**95.63**	**309**	*e*P	**P**	**00 18 14.1**	**+2.4**
KSH				*e*pP	**pP**	**00 18 25.0**	**+3.9**
KSH				*e*sP	**sP**	**00 18 28.0**	**+3.6**
KSH				*e*PP	**PP**	**00 22 08.0**	**+4.6**
KSH				SKS	**SKSac**	**00 28 46.0**	**-0.2**
KSH				S	**S**	**00 29 25.1**	**-2.2**
KSH				sS	**sS**	**00 29 43.8**	**+0.9**
KSH				SS	**SS**	**00 36 00.1**	**+3.4**
KSH				pmax	pmax		
	comp=Z,170nm,4.1s						
KSH				LR	LR		
	comp=E,37nm,3.1s						
KSH				LR	LR		
	comp=Z,250nm,5.2s						
GDL2	**Guadalupe Moun**	**96.86**	**59**	*e*pP	pP	00 18 23.0	-3.8
TXAR	**Lajitas Array**	**97.03**	**62**	P	**P**	**00 18 17.0**	**-1.3**
TXAR	**Lajitas Array**	**97.03**	**62**	P	**P**	**00 18 17.0**	**-1.3**
	comp=Z,0.2nm,0.8s,baz=262,slow=6.3,SNR=2.2						
AAK	**Ala-Archa**	**97.22**	**312**	*e*P	**P**	**00 18 18.6**	**-0.3**
PHWY	**Pilot Hill**	**97.31**	**49**	*e*P	P	00 18 08.7	-11
	comp=Z,11nm,0.6s						
ARCES	**ARCESS Array B**	**115.92**	**345**	PKP	**PKPdf**	**00 23 25.0**	**-3.0**
ARCES	**ARCESS Array B**	**115.92**	**345**	PKP	**PKPdf**	**00 23 25.0**	**-3.0**
	comp=Z,2.7nm,0.9s,baz=86,slow=2.8,SNR=5.1						
FINES	**FINESS Array B**	**121.20**	**338**	PKP	**PKPdf**	**00 23 35.8**	**-2.5**
FINES	**FINESS Array B**	**121.20**	**338**	PKP	**PKPdf**	**00 23 35.8**	**-2.5**
	comp=Z,1.8nm,0.9s,baz=116,slow=3.2,SNR=3.4						
VYHS	**Vyhne**	**132.81**	**329**	*e*PKP	**PKPdf**	**00 24 05.8**	**+4.9**
KEST	**Kesra**	**146.51**	**321**	PKPbc	**PKPdf**	**00 24 26.7**	**+0.5**
KEST	**Kesra**	**146.51**	**321**	PKPbc	**PKPdf**	**00 24 26.7**	**+0.5**
	comp=Z,1.4nm,0.9s,baz=37,slow=4.9,SNR=5.0						
ESDC	**Sonseca Array**	**149.59**	**342**	PKPbc	**PKPbc**	**00 24 33.8**	**-1.9**
ESDC	**Sonseca Array**	**149.59**	**342**	PKPbc	**PKPbc**	**00 24 33.8**	**-1.9**
	comp=Z,0.2nm,0.5s,baz=32,slow=3.2,SNR=3.0						

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*NEIC **25** 00:29:04.2, 18°49N×68°24W, h140km, MD3.6(RSPR), After RSPR.*
RSPR 25 00:29:04.2, 18°49N×68°24W, h140km±1km, MD3.6/6, 17C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.07**	**91**	*e*P	Pn	00 29 28.5	-0.1
AGPR	**Aguadilla, PR**	**1.07**	**91**	*e*P	Pn	00 29 28.5	-0.1
DR12	**Loma Pena Alta**	**1.12**	**286**	*e*P	Pn	00 29 28.9	-0.3
DR12				*e*S	Sn	00 29 48.1	-0.2
DR12	**Loma Pena Alta**	**1.12**	**286**	*e*P	Pn	00 29 28.9	-0.3
DR12				*e*S	Sn	00 29 48.1	-0.2
CRPR	**Cabo Rojo, PR**	**1.18**	**114**	*e*P	Pn	00 29 29.6	0.0
CRPR	**Cabo Rojo, PR**	**1.18**	**114**	*e*P	Pn	00 29 29.6	0.0
CRPR				*e*S	Sn	00 29 49.2	+0.2
SMN1	**Samana, DR**	**1.20**	**306**	*e*P	Pn	00 29 29.6	-0.4
LRS	**Lares**	**1.34**	**98**	*e*P	Pn	00 29 31.4	+0.1
LRS				*e*S	Sn	00 29 51.9	-0.1
LRS	**Lares**	**1.34**	**98**	*e*P	Pn	00 29 31.4	+0.1
LRS				*e*S	Sn	00 29 51.9	-0.1
AOPR	**Arecibo Observ**	**1.42**	**95**	*e*P	Pn	00 29 31.9	-0.3
AOPR	**Arecibo Observ**	**1.42**	**95**	*e*P	Pn	00 29 31.9	-0.3
AOPR				*e*S	Sn	00 29 53.7	+0.2
OBIP	**Obispado Ponce**	**1.61**	**106**	*e*P	Pn	00 29 33.8	-0.5
OBIP	**Obispado Ponce**	**1.61**	**106**	*e*P	Pn	00 29 33.8	-0.5
OBIP				*e*S	Sn	00 29 57.1	-0.1
CELP	**Cerrillos**	**1.63**	**104**	*e*P	Pn	00 29 34.4	-0.1
CELP				*e*S	Sn	00 29 57.7	+0.1
CELP	**Cerrillos**	**1.63**	**104**	*e*P	Pn	00 29 34.4	-0.1
CELP				*e*S	Sn	00 29 57.7	+0.1
MTP	**Monte Pirata**	**2.58**	**98**	*e*P	Pn	00 29 45.8	-0.1
MTP	**Monte Pirata**	**2.58**	**98**	*e*P	Pn	00 29 45.8	-0.1

IDC 25 00:42:18.8±1.4, 33°34N×81°86E, h0km, mb3.4/5, mb1 3.6/7, mb1mx3.4/28, mbtmp3.4/7, ML2.7/2, Error ellipse: s-maj=40.2km s-min=27.9km az=70.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.44**	**1**	Pn	Pn	00 45 31.3	+0.5
	0.0nm,0.3s,baz=177,slow=12,SNR=3.5						
KURBB	**Kurchatov Arra**	**17.44**	**353**	P	Pn	00 46 22.4	-1.0
	0.0nm,0.3s,baz=176,slow=11,SNR=3.1						
ZALV	**Zalesovo Beam**	**20.71**	**5**	P	Pn	00 47 01.9	-0.9
	0.3nm,0.3s,baz=222,slow=5.8,SNR=3.8						
CMAR	**Chiang Mai Arr**	**21.30**	**130**	P	P	00 47 07.8	+0.6
	1.0nm,0.6s,baz=310,slow=11,SNR=4.5						
ARCES	**ARCESS Array B**	**47.53**	**337**	P	P	00 50 55.9	+0.4
	1.0nm,0.8s,baz=118,slow=9.3,SNR=3.4						
TORD	**Torodi Ar. Bea**	**74.76**	**276**	P	P	00 54 01.3	+0.2
	0.6nm,1.1s,baz=51,slow=4.7,SNR=7.1						
YKA	**Yellowknife Ar**	**83.58**	**8**	P	P	00 54 47.2	-1.3
	0.2nm,0.7s,baz=339,slow=5.4,SNR=7.7						

IDC 25 00:46:02.0±10.0, 19°44S×177°98W, h510km±126km, mb2.8/4, mb1 3.2/4, mb1mx2.9/19, mbtmp2.8/4, Error ellipse: s-maj=136.1km s-min=39.1km az=162.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.78**	**261**	P	P	00 53 30.1	-0.1
	0.3nm,0.4s,baz=97,slow=8.1,SNR=6.0						
ASAR	**Alice Springs**	**44.79**	**256**	P	P	00 53 29.9	-0.2
	1.2nm,0.8s,baz=92,slow=7.3,SNR=8.7						
TXAR	**Lajitas Array**	**86.47**	**57**	P	P	00 57 50.8	0.0
	0.3nm,0.8s,baz=244,slow=9.8,SNR=3.8						
ILAR	**Eielson Array**	**87.28**	**13**	P	P	00 57 53.5	-0.1
	0.1nm,0.5s,baz=216,slow=4.9,SNR=4.4						
BRTR	**Keskin Array B**	**146.13**	**313**	PKPbc	PKPbc	01 04 44.7	-0.6
	0.4nm,0.6s,

KEST Sn **Sn** **01 38 14.8 -1.2**
KEST *e*Sn Sb 01 38 15.6 -12
KEST Kesra 4.08 291 Pn **Pn** **01 37 28.5 -0.3**
0.7nm,0.3s,baz=83,slow=16,SNR=111
KEST Sn **Sn** **01 38 14.8 -1.2**
3.7nm,0.3s,baz=73,slow=19,SNR=23
KEST LR LR 01 39 09.8
comp=Z,119nm,21.8s,baz=110,slow=41
KEST Kesra 4.08 291 *e*Pn **Pn** **01 37 28.4 -0.3**
CEL Celeste 4.20 21 *e*Pn **Pn** **01 37 30.1 -0.2**
CEL *e*Sn **Sn** **01 38 20.7 +1.8**
CEL Celeste 4.20 21 *e*Pn **Pn** **01 37 30.1 -0.2**
CEL *e*Sn **Sn** **01 38 20.7 +1.8**
LSHF Shwairf 4.34 177 *i* P **Pn** **01 37 30.4 -1.9**
SNR=23
TIP Timpagrande 5.31 24 *e*Pn **Pn** **01 37 45.5 -0.1**
TIP Timpagrande 5.31 24 *e*Pn **Pn** **01 37 45.5 -0.1**
LJFR Jufra 5.44 163 *i* P **Pn** **01 37 45.2 -2.2**
SNR=23
LGHD Ghdames 5.80 223 *i* P Pn 01 37 49.0 -3.3
SNR=23
CUC Castrocucco 5.83 14 *e*Pn **Pn** **01 37 52.4 -0.3**
CUC Castrocucco 5.83 14 *e*Pn **Pn** **01 37 52.4 -0.3**
CMAH Djebel Manchou 5.85 295 P **Pn** **01 37 51.0 -2.1**
CMAH Djebel Manchou 5.85 295 P **Pn** **01 37 51.0 -2.1**
CKFL Kef-Lekhel 6.31 291 P **Pn** **01 37 57.0 -2.5**
CKFL Kef-Lekhel 6.31 291 P **Pn** **01 37 57.0 -2.5**
CASM Ain Smara 6.45 289 P **Pn** **01 37 58.9 -2.4**
CASM Ain Smara 6.45 289 P **Pn** **01 37 58.9 -2.4**
LZLA Zalla 6.51 151 *i* P **Pn** **01 38 01.3 -0.8**
14nm,0.7s,SNR=22
VLS Valsamata 6.54 52 P **Pn** **01 38 00.7 -1.9**
KFL Anninata 6.64 54 P **Pn** **01 38 02.7 -1.1**
RLS Riolos of Patr 7.07 56 P **Pn** **01 38 09.5 -0.2**
KEK Kerkira 7.08 39 P **Pn** **01 38 07.6 -2.3**
SET Setif 7.29 287 P Pn 01 38 03.0 -10
EFP Efpalio 7.55 55 P **Pn** **01 38 15.6 -0.8**
TRIZ Trizonia 7.64 56 P **Pn** **01 38 17.6 +0.1**
EVR Evrytania 7.75 52 P **Pn** **01 38 18.3 -0.9**
MAKR Makrakomi, Fth 8.01 52 P **Pn** **01 38 23.5 +0.8**
AQU L'Aquila 8.02 357 *e*Pn **Pn** **01 38 22.5 -0.3**
AQU L'Aquila 8.02 357 ⇑*i*P **Pn** **01 38 22.5 -0.3**
AQU L'Aquila 8.02 357 *e*P **Pn** **01 38 22.5 -0.3**
LUMB Murzuk 8.20 175 *i* P **Pn** **01 38 22.7 -2.6**
26nm,0.7s,SNR=22
NEST Nestorio 8.25 41 P **Pn** **01 38 25.6 -0.4**
TIR Tirane 8.39 32 *e*P **Pn** **01 38 26.8 -1.0**
TIR Tirane 8.39 32 *e*Pn **Pn** **01 38 26.8 -1.0**
TIR *e*Sn **Sn** **01 39 57.4 -4.5**
TIR Tirane 8.39 32 *e*Pn **Pn** **01 38 29.9 +2.1**
TIR *e*Sn **Sn** **01 39 59.4 -2.5**
TIR Tirane 8.39 32 *e*P **Pn** **01 38 26.8 -1.0**
FNA Florina 8.69 40 P **Pn** **01 38 30.9 -1.1**
BIA Bitola 8.83 39 *e*Pn **Pn** **01 38 31.7 -2.2**
LIT Litokhoron 8.87 47 P **Pn** **01 38 33.2 -1.3**
XOR Xorichti 8.90 53 P **Pn** **01 38 32.9 -1.9**
STON Ston 8.99 18 *i* Pn **Pn** **01 38 35.9 -0.3**
STON Sn Sn 01 40 11.2 -5.6
STON Ston 8.99 18 *i* Pn **Pn** **01 38 35.8 -0.3**
PDG Podgorica 9.06 25 *e*Pn Pn 01 38 39.8 +2.7
PDG *e*Sn **Sn** **01 40 15.5 -3.0**
PGF Pioggiola 9.10 336 *e*P Pn 01 38 40.4 +2.8
111nm,1.4s
PGF Pioggiola 9.10 336 *e*P Pn 01 38 40.4 +2.8
PGF pmax pmax
comp=Z,111nm,1.4s
PGF Pioggiola 9.10 336 *e*P Pn 01 38 40.4 +2.8
comp=Z,111nm,1.4s
AOS Alonnisos 9.26 56 P Pn 01 38 37.4 -2.4
SKO Skopje 9.60 35 *e*Sn **Sn** **01 40 27.5 -4.2**
VAY Valandovo 9.71 42 *e*Pn **Pn** **01 38 46.5 +0.5**
VAY Valandovo 9.71 42 *e*Pn Pn 01 38 48.8 +2.9
VAY *e*Sn **Sn** **01 40 31.6 -2.8**
VAY Valandovo 9.71 42 *e*Pn **Pn** **01 38 46.9 +1.0**
SOH Sokhos 9.83 46 P **Pn** **01 38 45.8 -1.9**
OUR Ouranopolis 9.93 50 P **Pn** **01 38 47.0 -2.0**
IVAS Ivanjica 10.38 26 *e*Pn Pn 01 38 57.8 +2.6
IVAS *e*Sn **Sn** **01 40 46.4 -4.7**
IVAS Ivanjica 10.38 26 *e*Pn Pn 01 38 57.8 +2.6
BBLS Lazići 10.39 22 *e*Pn **Pn** **01 38 56.7 +1.4**
BBLS *e*Sn **Sn** **01 40 46.9 -4.3**
BBLS Lazići 10.39 22 *e*Pn **Pn** **01 38 56.7 +1.4**
BARS Barje 10.43 33 *e*Pn Pn 01 38 58.8 +3.0
BARS *e*Sn **Sn** **01 40 48.2 -3.9**
SELS Selova 10.45 30 *e*Pn **Pn** **01 38 58.2 +2.1**
SELS *e*Sn Sn 01 40 47.5 -5.2
DIVS Divibare 10.79 24 *e*Pn **Pn** **01 39 03.0 +2.2**
DIVS *e*Sn Sn 01 40 55.2 -5.8
DIVS Divibare 10.79 24 *e*Pn **Pn** **01 39 03.0 +2.2**
GRUS Gruza 10.86 27 *e*Pn Pn 01 39 04.3 +2.6
GRUS Gruza 10.86 27 *e*Pn Pn 01 39 04.3 +2.6
VTS Vitosha 10.94 38 ⇓*i*P Pn 01 39 05.4 +2.5
VTS Vitosha 10.94 38 *e*Pn **Pn** **01 39 05.1 +2.2**
VTS *e*Sn Sn 01 40 59.1 -5.7
VTS Vitosha 10.94 38 *e*Pn **Pn** **01 39 05.1 +2.2**
ZAPS Zavoj 11.16 34 *e*Pn **Pn** **01 39 08.0 +2.1**
ZAPS *e*Sn **Sn** **01 41 05.1 -5.0**
TRI Trieste 11.36 359 *e*P Pn 01 39 12.8 +4.3
TRI Trieste 11.36 359 *e*Pn Pn 01 39 12.8 +4.3
SMRF Simiane la Rot 11.64 328 *e*P Pn 01 39 15.6 +3.2
comp=Z,32nm,1.2s
SMRF Simiane la Rot 11.64 328 *e*P Pn 01 39 15.6 +3.2
comp=Z,32nm,1.2s
MBDF Montbardon 11.78 334 *e*P Pn 01 39 17.0 +2.5
comp=Z,15nm,0.8s
MBDF Montbardon 11.78 334 *e*P Pn 01 39 17.0 +2.5
MBDF pmax pmax
comp=Z,15nm,0.8s
MBDF Montbardon 11.78 334 *e*P Pn 01 39 17.0 +2.5
comp=Z,15nm,0.8s
ORIF Oris-en-Rattie 12.28 332 *e*P **Pn** **01 39 19.5 -1.7**
ORIF *e*R
comp=Z,146nm,18.0s
ORIF Oris-en-Rattie 12.28 332 *e*P **Pn** **01 39 19.5 -1.7**
ORIF Oris-en-Rattie 12.28 332 *e*P **Pn** **01 39 19.5 -1.7**
ORIF Oris-en-Rattie 12.28 332 *e*P **Pn** **01 39 19.5 -1.7**
MYKA Terra Mystica 12.28 359 ⇑*i*P Pn 01 39 25.0 +3.7
MYKA Terra Mystica 12.28 359 ⇑*i*P Pn 01 39 25.0 +3.7
ABTA Abfaltersbach 12.45 355 ⇓*i*P Pn 01 39 29.3 +5.8
ABTA Abfaltersbach 12.45 355 ⇓*i*P Pn 01 39 29.3 +5.8
LPG La Plagne 12.46 336 *e*P Pn 01 39 26.8 +3.0
comp=Z,36nm,1.2s
LPG La Plagne 12.46 336 *e*P Pn 01 39 26.8 +3.0
LPG pmax pmax
comp=Z,36nm,1.2s
LPG La Plagne 12.46 336 *e*P Pn 01 39 26.8 +3.0
comp=Z,36nm,1.2s
LPL La Plagne 12.48 336 *e*P Pn 01 39 26.0 +1.9
comp=Z,30nm,1.2s
LPL La Plagne 12.48 336 *e*P Pn 01 39 26.0 +1.9
LPL pmax pmax
comp=Z,30nm,1.2s
LPL La Plagne 12.48 336 *e*P Pn 01 39 26.0 +1.9
comp=Z,30nm,1.2s
LPL La Plagne 12.48 336 *e*P Pn 01 39 26.0 +1.9
comp=Z,15nm,1.2s
TUE Stuetta 12.63 345 *e*Pn **Pn** **01 39 27.0 +0.9**
TUE Stuetta 12.63 345 *e*Pn **Pn** **01 39 27.0 +0.9**
BZS Buzias 12.68 25 ⇑*i*P **Pn** **01 39 25.7 -0.8**
BZS Buzias 12.68 25 *e*Pn Pn 01 39 29.2 +2.7
BZS *e*Sn **Sn** **01 41 42.5 -4.5**
KBA Koelnbreinsper 12.74 358 ⇓*i*P P 01 39 35.0 -3.6
KBA Koelnbreinsper 12.74 358 ⇓*i*P P 01 39 35.0 -3.6
KBA Koelnbreinsper 12.74 358 ⇓*i*P P 01 39 35.0 -3.6
DAVOX Davos/Dischmat 12.82 347 Pn Pn 01 39 31.6 +2.9
DAVOX Davos/Dischmat 12.82 347 Pn Pn 01 39 31.6 +2.9
comp=Z,0.1nm,0.3s,baz=131,slow=11,SNR=2.9
DAVOX LR LR 01 44 59.6
comp=Z,178nm,20.8s,baz=73,slow=40
GZR Gura Zlata 12.92 29 ⇑*i*P Pn 01 39 34.8 +4.9
SENIN Lac Senin/Sane 13.05 339 *e*Pn **P** **01 39 39.3 -2.8**
MOTA Moosalm 13.18 351 ⇓*i*P **P** **01 39 41.4 -2.1**
MOTA Moosalm 13.18 351 ⇓*i*P **P** **01 39 41.4 -2.1**
MOTA Moosalm 13.18 351 ⇓*i*P **P** **01 39 41.4 -2.1**
HUMR Humele 13.23 36 ⇓*i*P **P** **01 39 42.8 -1.0**
LOT Lotru 13.37 31 ⇓*i*P **P** **01 39 44.8 -0.8**
MOA Molln 13.50 1 ⇓*i*P P 01 39 43.4 -3.5
MOA Molln 13.50 1 ⇓*i*P P 01 39 43.4 -3.5
CONA Conrad Observa 13.65 5 ⇑*i*P Pn 01 39 43.5 +3.7
CONA Conrad Observa 13.65 5 ⇑*i*P Pn 01 39 43.5 +3.7
CABF La Chapelle 13.66 336 *e*P **Pn** **01 39 43.1 +3.1**
comp=Z,51nm,1.4s
CABF pmax pmax
comp=Z,51nm,1.4s
CABF La Chapelle 13.66 336 *e*P **Pn** **01 39 43.1 +3.1**
comp=Z,51nm,1.4s
LBL Lubilhac 13.66 326 *e*P P 01 39 51.0 +2.3
LBL Lubilhac 13.66 326 *e*P P 01 39 51.0 +2.3
LBL Lubilhac 13.66 326 *e*P P 01 39 51.0 +2.3
TAM Tamanrasset 13.70 215 *e*P Pn 01 39 37.5 -3.3
TAM pmax pmax
comp=Z,4.0nm,0.8s
TAM Tamanrasset 13.70 215 *e*Pn Pn 01 39 37.5 -3.3
comp=Z,3.7nm,0.8s
TAM Tamanrasset 13.70 215 *e*P Pn 01 39 37.5 -3.3
comp=Z,4.0nm,0.8s
VOIR 13.93 34 ⇓*i*P P 01 39 56.9 +5.1
DRGR 14.07 25 ⇑*i*P **P** **01 39 53.1 -0.2**
LOMF Lomont 14.09 340 *e*P P 01 39 56.8 +3.4
LOMF Lomont 14.09 340 *e*P P 01 39 56.8 +3.4
LOMF Lomont 14.09 340 *e*P P 01 39 56.8 +3.4
FELD Feldberg im Sc 14.26 343 *e*P **Pn** **01 39 50.1 +1.8**
FELD Feldberg im Sc 14.26 343 *e*P **Pn** **01 39 50.1 +1.8**
PSZ Piszkesteto 14.27 16 *e*P **Pn** **01 39 48.2 -0.1**
PSZ Piszkesteto 14.27 16 *e*Pn **Pn** **01 39 48.2 -0.1**
PSZ Piszkesteto 14.27 16 *e*Pn **Pn** **01 39 48.2 -0.1**
SPAK Spaichingen-Ko 14.30 346 *e*P Pn 01 39 50.8 +2.0
AGO Saint Agoulin 14.34 328 *e*P P 01 39 53.2 -3.0
AGO Saint Agoulin 14.34 328 *e*P P 01 39 53.2 -3.0
MLR Muntele Rosu 14.40 36 Pn Pn 01 39 52.6 +2.5
MLR Muntele Rosu 14.40 36 Pn Pn 01 39 52.7 +2.5
comp=Z,0.0nm,0.3s,baz=255,slow=16,SNR=5.6
MLR Muntele Rosu 14.40 36 Pn Pn 01 39 52.7 +2.5
ISR Istrita 14.43 38 ⇑*i*P **P** **01 39 57.9 +0.7**
ISR Istrita 14.43 38 ⇑*i*P **P** **01 39 57.9 +0.7**
MOF Molkenrain 14.46 341 *e*P **P** **01 39 57.7 +0.1**
MOF Molkenrain 14.46 341 *e*P **P** **01 39 57.7 +0.1**
MOF Molkenrain 14.46 341 *e*P **P** **01 39 57.7 +0.1**
MOF Molkenrain 14.46 341 *e*P **P** **01 39 57.7 +0.1**
GEC2 GERESS Array S 14.50 359 *e*P **P** **01 39 55.7 -2.3**
GEC2 GERESS Array S 14.50 359 *e*P **P** **01 39 56.4 -1.6**
GEC2 GERESS Array S 14.50 359 *e*Pn **P** **01 39 55.7 -2.3**
GEC2 GERESS Array S 14.50 359 *e*P **P** **01 39 55.7 -2.3**
GERES GERESS Array B 14.50 359 Pn **Pn** **01 39 53.1 +1.6**
GERES GERESS Array B 14.50 359 Pn **Pn** **01 39 53.1 +1.6**
comp=Z,0.1nm,0.3s,baz=171,slow=14,SNR=8.6
GERES LR LR 01 45 40.4
comp=Z,135nm,19.9s,baz=210,slow=38
GERES GERESS Array B 14.50 359 Pn **Pn** **01 39 53.1 +1.6**
HINF Hinteralfeld 14.50 340 *e*P **Pn** **01 39 54.2 +2.7**
HINF Hinteralfeld 14.50 340 *e*P **Pn** **01 39 54.2 +2.7**
HINF Hinteralfeld 14.50 340 *e*P **Pn** **01 39 54.2 +2.7**
SMF Signal de Mont 14.52 331 *e*P **Pn** **01 39 50.8 -0.8**
comp=Z,31nm,1.2s
SMF pmax pmax
comp=Z,31nm,1.2s
SMF Signal de Mont 14.52 331 *e*P **Pn** **01 39 50.8 -0.8**
comp=Z,31nm,1.2s
VYHS Vyhne 14.59 13 *e*P **P** **01 39 58.8 -0.2**
VYHS Vyhne 14.59 13 *e*P **P** **01 39 58.8 -0.2**
VYHS Vyhne 14.59 13 *e*P **P** **01 39 58.8 -0.2**
BFO Black Forest 14.61 345 *e*P **Pn** **01 39 54.2 +1.2**
BFO Black Forest 14.61 345 *e*P **Pn** **01 39 54.2 +1.2**
BFO Black Forest 14.61 345 *e*Pn **Pn** **01 39 52.7 -0.3**
comp=Z,22nm,1.4s
BFO Black Forest 14.61 345 *e*Pn **Pn** **01 39 52.7 -0.3**
comp=Z,22nm,1.4s
ECH Echery 14.79 342 *e*P **Pn** **01 39 56.8 +1.5**
ECH Echery 14.79 342 *e*P **Pn** **01 39 56.8 +1.5**
ECH Echery 14.79 342 *e*P **Pn** **01 39 56.8 +1.5**
KHC Kasperske Hory 14.79 359 *e*P **Pn** **01 39 57.7 +2.4**
KHC MLR MLR
comp=Z,300nm,9.4s
KHC Kasperske Hory 14.79 359 *e*Pn **Pn** **01 39 55.7 +0.4**
comp=Z,27nm,1.7s
KHC Kasperske Hory 14.79 359 *e*P **Pn** **01 39 57.7 +2.4**
KHC *ep*P **P** **01 40 03.4 +2.2**
KHC AMS AMS 01 46 20.0
comp=Z,300nm,9.4s
KHC Kasperske Hory 14.79 359 *e*Pn **Pn** **01 39 55.7 +0.4**
comp=Z,27nm,1.7s
HAU Haudompre 14.82 339 *e*P **Pn** **01 39 57.9 +2.2**
comp=Z,24nm,1.0s
HAU *e*R
comp=Z,162nm,17.5s
HAU Haudompre 14.82 339 *e*P **Pn** **01 39 57.9 +2.2**
HAU pmax pmax
comp=Z,24nm,1.0s
HAU Haudompre 14.82 339 *e*P **Pn** **01 39 57.9 +2.2**
comp=Z,24nm,1.0s
WET Wettzell 14.82 357 *e*P **P** **01 39 59.4 -2.1**
WET Wettzell 14.82 357 *e*P **P** **01 39 59.4 -2.1**
WET Wettzell 14.82 357 *e*P **P** **01 39 59.4 -2.1**
AVF Avril sur Loir 14.83 330 *e*P **Pn** **01 39 56.2 +0.3**
comp=Z,20nm,1.1s
AVF Avril sur Loir 14.83 330 *e*P **Pn** **01 39 56.2 +0.3**
AVF pmax pmax
comp=Z,20nm,1.0s
AVF Avril sur Loir 14.83 330 *e*P **Pn** **01 39 56.2 +0.3**
comp=Z,20nm,1.0s
GRER 14.83 38 ⇑*i*P P 01 40 07.2 +5.6
STU Stuttgart 14.86 347 *e*P **Pn** **01 39 56.0 -0.3**
STU Stuttgart 14.86 347 *e*P **Pn** **01 39 58.1 +1.8**
STU Stuttgart 14.86 347 *e*Pn **Pn** **01 39 56.0 -0.3**
STU Stuttgart 14.86 347 *e*Pn **Pn** **01 39 56.0 -0.3**
CDF Champ du Feu 14.94 342 *e*P **Pn** **01 39 58.2 +0.8**
comp=Z,23nm,1.3s
CDF Champ du Feu 14.94 342 *e*P **Pn** **01 39 58.2 +0.8**
CDF pmax pmax
comp=Z,23nm,1.3s
CDF Champ du Feu 14.94 342 *e*P **Pn** **01 39 58.2 +0.8**
comp=Z,23nm,1.3s
TREC Trest 14.99 4 *e*P **P** **01 40 03.2 -0.2**
TREC Trest 14.99 4 *e*P **P** **01 40 03.2 -0.2**
TREC Trest 14.99 4 *e*P **P** **01 40 03.2 -0.2**
PLOR Plostina 15.00 36 ⇓*i*P **Pn** **01 39 58.0 -0.2**
VRI Vrincioaia 15.05 36 ⇑*i*P **P** **01 40 05.8 +1.7**
VRI Vrincioaia 15.05 36 ⇑*i*P **P** **01 40 05.8 +1.7**
VRAC Vranov 15.08 6 Pn **Pn** **01 40 00.6 +1.3**
VRAC Vranov 15.08 6 Pn **Pn** **01 40 00.6 +1.3**
comp=Z,0.1nm,0.3s,baz=220,slow=5.8,SNR=4.9
VRAC LR LR 01 46 03.7
comp=Z,130nm,19.2s,baz=191,slow=38
VRAC Vranov 15.08 6 Pn **Pn** **01 40 00.6 +1.3**
BMR Baia Mare 15.11 25 ⇑*i*P P 01 40 09.9 +5.2
THEF They Montfort 15.12 339 *e*P **Pn** **01 40 01.2 +1.4**
THEF They Montfort 15.12 339 *e*P **Pn** **01 40 01.2 +1.4**
THEF They Montfort 15.12 339 *e*P **Pn** **01 40 01.2 +1.4**
TRPA Tarpa 15.18 22 ⇓*i*P **Pn** **01 40 03.0 +2.4**
CFR Carcaliu 15.31 41 ⇑*i*P P 01 40 11.5 +4.6
ESDC Sonseca Array 15.32 296 Pn **Pn** **01 40 02.9 +0.4**
ESDC Sonseca Array 15.32 296 Pn **Pn** **01 40 02.9 +0.4**
baz=101,slow=13,SNR=3.6
ESDC Sonseca Array 15.32 296 Pn **Pn** **01 40 02.9 +0.4**
SFTF Sexfontaines 15.40 337 *e*P **Pn** **01 40 05.5 +2.1**
SFTF Sexfontaines 15.40 337 *e*P **Pn** **01 40 05.5 +2.1**
SFTF Sexfontaines 15.40 337 *e*P **Pn** **01 40 05.5 +2.1**
TESR 15.48 34 ⇓*i*P **P** **01 40 12.2 +3.4**
GRA1 Grafenberg Arr 15.48 353 *e*P **P** **01 40 09.5 +0.6**
comp=Z,100nm,22.0s
GRF Grafenberg Arr 15.48 353 *e*P **P** **01 40 09.5 +0.6**
GRF pmax pmax
comp=Z,7.0nm,1.0s
GRF MLR MLR
comp=Z,100nm,22.0s
GRF Grafenberg Arr 15.48 353 *e*P **P** **01 40 09.5 +0.6**
comp=Z,7.0nm,1.0s
GRF *e*L L 01 46 15.6
comp=Z,133nm,22.0s
PAGF Fort de Pagny 15.49 339 *e*P Pn 01 39 59.3 -5.4
comp=Z,23nm,1.7s
PAGF Fort de Pagny 15.49 339 *e*P Pn 01 39 59.3 -5.4
comp=Z,23nm,1.7s
UZH Uzhgorod 15.55 21 *e*P **P** **01 40 10.9 +1.3**
UZH Uzhgorod 15.55 21 *e*P **P** **01 40 10.9 +1.3**
CRVS Cervenica-Dubn 15.57 19 *e*P **P** **01 40 11.0 +1.2**
CRVS Cervenica-Dubn 15.57 19 *e*P **P** **01 40 11.0 +1.2**
CRVS Cervenica-Dubn 15.57 19 *e*P **P** **01 40 11.0 +1.2**
MDT Midelt 15.61 270 LR LR 01 46 42.2
comp=Z,201nm,19.7s,baz=98,slow=40
MORC Moravsky Berou 15.65 8 *e*P **Pn** **01 40 05.8 -0.9**
MORC pmax pmax
comp=Z,9.0nm,1.4s
MORC Moravsky Berou 15.65 8 ⇑*i*P **Pn** **01 40 05.4 -1.3**
MORC Moravsky Berou 15.65 8 *e*Pn **Pn** **01 40 05.8 -0.9**
comp=Z,9.1nm,1.4s
PRU Pruhonice 15.65 1 *e*P **Pn** **01 40 08.3 +1.7**
PRU Pruhonice 15.65 1 *e*P **Pn** **01 40 08.3 +1.7**
PRU *ex* x 01 40 21.6
PRU Pruhonice 15.65 1 *e*P **Pn** **01 40 08.3 +1.7**
MEZF Maizieres J'vi 15.65 337 *e*P **Pn** **01 40 04.3 -2.4**
MEZF Maizieres J'vi 15.65 337 *e*P **Pn** **01 40 04.3 -2.4**
BURAR Bucovina Array 15.71 29 ⇓*i*P **Pn** **01 40 08.4 +0.9**
BUR08 Bucovina Ar. S 15.72 29 *e*Pn **Pn** **01 40 08.4 +0.6**
BUR08 Bucovina Ar. S 15.72 29 *e*Pn **Pn** **01 40 08.4 +0.6**
TOD Tromm 15.74 347 *e*P **P** **01 40 10.2 -1.5**
TOD Tromm 15.74 347 *e*P **P** **01 40 10.2 -1.5**
TOD Tromm 15.74 347 *e*P **P** **01 40 10.2 -1.5**
KOLS Kolonicke sedl 15.82 20 *e*P **P** **01 40 14.8 +2.2**
KOLS Kolonicke sedl 15.82 20 *e*P **P** **01 40 14.8 +2.2**
KOLS Kolonicke sedl 15.82 20 *e*P **P** **01 40 14.8 +2.2**
CSS Prodhromos 15.91 82 *e*Pn **Pn** **01 40 09.8 -0.3**
CSS Prodhromos 15.91 82 *e*Pn **Pn** **01 40 09.8 -0.3**
WERN Wernitzgruen 15.99 356 *e*P **P** **01 40 17.1 +2.6**
comp=Z,7.0nm,1.1s
GUNZ Gunzen 16.07 356 *e*P **P** **01 40 17.3 +1.9**
comp=Z,11nm,1.2s
DPC Dobruska-Polom 16.09 5 *e*P **Pn** **01 40 12.7 +0.3**
DPC Dobruska-Polom 16.09 5 *e*P **Pn** **01 40 12.7 +0.3**
DPC *epP* **pP** **01 40 20.9 -0.2**
TANN Tannenbergstha 16.11 356 *e*P **P** **01 40 17.3 +1.4**
comp=Z,4.0nm,1.0s
WERD Werda 16.15 356 *e*P **P** **01 40 17.1 +0.8**
PVCC Panska Ves 16.19 1 *e*P **P** **01 40 15.5 -1.2**
PVCC Panska Ves 16.19 1 *e*P **P** **01 40 15.5 -1.2**
PVCC *epP* **pP** **01 40 21.7 -0.4**
PVCC Panska Ves 16.19 1 *e*P **P** **01 40 15.5 -1.2**
UPC Upice 16.23 5 *e*P **Pn** **01 40 15.6 +1.5**
UPC Upice 16.23 5 *e*P **Pn** **01 40 15.6 +1.5**
UPC Upice 16.23 5 *e*P **Pn** **01 40 15.6 +1.5**
WLF Walferdange 16.38 342 P **P** **01 40 18.4 -0.4**
comp=Z,13nm,1.7s
WLF Walferdange 16.38 342 *e*P **Pn** **01 40 16.0 0.0**
WLF pmax pmax
comp=Z,17nm,1.1s
WLF Walferdange 16.38 342 *e*Pn **Pn** **01 40 16.0 0.0**
comp=Z,17nm,1.1s
WLF Walferdange 16.38 342 *e*Pn **Pn** **01 40 16.0 0.0**
comp=Z,17nm,1.1s
WLF Walferdange 16.38 342 P **P** **01 40 18.4 -0.4**
comp=Z,13nm,1.7s
MOX Moxa 16.39 355 *e*P **P** **01 40 19.3 +0.3**
MOX pmax pmax
comp=Z,8.0nm,1.1s
MOX MLR MLR
comp=Z,200nm,20.7s
MOX Moxa 16.39 355 *e*P **P** **01 40 19.3 +0.3**
comp=Z,8.0nm,1.1s
MOX *e*L L 01 46 30.1
comp=Z,183nm,20.7s
MOX Moxa 16.39 355 *e*P **P** **01 40 19.3 +0.3**
comp=Z,200nm,20.7s
TNS Taunus Mts 16.39 347 *e*P **Pn** **01 40 17.8 +1.5**
TNS pmax pmax
comp=Z,42nm,1.6s
TNS Taunus Mts 16.39 347 *e*P **Pn** **01 40 17.8 +1.5**
comp=Z,42nm,1.6s
TNS Taunus Mts 16.39 347 *e*P **Pn** **01 40 17.8 +1.5**
comp=Z,42nm,1.6s
BRG Berggiesshubel 16.53 360 *e*P **P** **01 40 19.8 -0.6**
comp=Z,11nm,1.2s
BRG Berggiesshubel 16.53 360 *e*P **P** **01 40 19.8 -0.6**
BRG pmax pmax
comp=Z,11nm,1.2s
BRG Berggiesshubel 16.53 360 *e*P **P** **01 40 19.8 -0.6**
comp=Z,11nm,1.2s
BRTR Keskin Array B 16.55 65 Pn **Pn** **01 40 19.6 +1.2**
BRTR Keskin Array B 16.55 65 Pn **Pn** **01 40 19.6 +1.2**
comp=Z,0.1nm,0.3s,baz=246,slow=11,SNR=13
BRTR Keskin Array B 16.55 65 Pn **Pn** **01 40 19.6 +1.2**
BR131 Keskin Array S 16.55 65 *e*Pn **Pn** **01 40 17.8 -0.7**
comp=Z,4.0nm,0.9s
BR131 Keskin Array S 16.55 65 *e*Pn **Pn** **01 40 17.8 -0.7**
comp=Z,4.0nm,0.9s
KWP Kalwaria Pacla 16.57 20 *e*P **P** **01 40 20.7 -0.2**
KWP pmax pmax
comp=Z,26nm,1.1s
KWP Kalwaria Pacla 16.57 20 *e*Pn **P** **01 40 20.7 -0.2**
comp=Z,26nm,1.1s
KWP Kalwaria Pacla 16.57 20 ⇑*i*P **P** **01 40 21.4 +0.4**
KWP Kalwaria Pacla 16.57 20 *e*P P 01 40 25.0 +4.0
KWP Kalwaria Pacla 16.57 20 *e*P **P** **01 40 20.7 -0.2**
comp=Z,26nm,1.1s
UBBA Unterbreizbach 16.73 351 *e*P **P** **01 40 23.4 +0.8**
comp=Z,22nm,1.8s
CLL Collm 16.98 358 *i* P **P** **01 40 24.8 -0.6**
CLL pmax pmax
comp=Z,4.0nm,1.0s
CLL MLR MLR
comp=Z,200nm,20.7s
CLL Collm 16.98 358 *e*P **P** **01 40 24.7 -0.6**
comp=Z,18nm,1.3s
CLL Collm 16.98 358 *i* P **P** **01 40 24.8 -0.6**
comp=Z,4.0nm,1.0s
CLL *i* sP **sP** **01 40 31.3 -2.1**
CLL *i* PP **PnPn** **01 40 37.3 +4.0**
CLL *i* 01 40 55.3
CLL LmV 01 47 00.0
comp=Z,200nm,20.7s
CLL Collm 16.98 358 *i* P **P** **01 40 24.8 -0.6**
comp=Z,200nm,20.7s
GIVF Givet 17.14 340 *e*P **P** **01 40 27.1 -0.1**
comp=Z,24nm,0.9s
GIVF Givet 17.14 340 *e*P **P** **01 40 27.1 -0.1**
GIVF pmax pmax
comp=Z,24nm,0.9s
GIVF Givet 17.14 340 *e*P **P** **01 40 27.1 -0.1**
comp=Z,24nm,0.9s
GIVF Givet 17.14 340 *e*P **P** **01 40 27.1 -0.1**
comp=Z,12nm,0.9s
BAIF Baives 17.29 338 *e*P **Pn** **01 40 27.3 -0.2**
comp=Z,25nm,1.0s
BAIF Baives 17.29 338 *e*P **Pn** **01 40 27.3 -0.2**
BAIF pmax pmax
comp=Z,25nm,1.0s
BAIF Baives 17.29 338 *e*P **Pn** **01 40 27.3 -0.2**
comp=Z,25nm,1.0s
BAIF Baives 17.29 338 *e*P **Pn** **01 40 27.3 -0.2**
comp=Z,13nm,1.0s
BCLA Clavier 17.30 341 P **Pn** **01 40 28.2 +0.7**
comp=Z,13nm,2.7s
BCLA Clavier 17.30 341 P **Pn** **01 40 28.2 +0.7**
comp=Z,13nm,2.7s
CLZ Clausthal 17.70 353 *e*P **P** **01 40 34.0 +0.6**
CLZ pmax pmax
comp=Z,12nm,1.3s
CLZ Clausthal 17.70 353 *e*P **P** **01 40 34.0 +0.6**
comp=Z,12nm,1.3s
CLZ Clausthal 17.70 353 *e*P **P** **01 40 34.0 +0.6**
comp=Z,12nm,1.3s
MMAI Mount Meron Ar 17.85 88 P **P** **01 40 36.5 +1.3**
MMAI Mount Meron Ar 17.85 88 P **P** **01 40 36.5 +1.3**
comp=Z,0.3nm,0.3s,baz=284,slow=12,SNR=3.5
MMAI Mount Meron Ar 17.85 88 P **P** **01 40 36.5 +1.3**
EIL Elat 18.34 99 P **Pn** **01 40 42.0 +1.4**
EIL Elat 18.34 99 P **Pn** **01 40 42.0 +1.4**
comp=Z,0.2nm,0.3s,baz=315,slow=15,SNR=2.6
EIL LR LR 01 51 14.3
comp=Z,54nm,19.0s,baz=275,slow=48
EIL Elat 18.34 99 P **Pn** **01 40 42.0 +1.4**
NRDL Niedersach Rie 18.37 352 *e*P Pn 01 40 45.8 +5.1
comp=Z,7.0nm,1.3s
ASF Jabal al Asfar 19.25 90 P **Pn** **01 40 53.2 +1.5**
ASF Jabal al Asfar 19.25 90 P **Pn** **01 40 53.2 +1.5**
comp=Z,0.1nm,0.3s,baz=264,slow=9.2,SNR=2.6
AK02 Malin Array Si 19.72 30 *e*P **Pn** **01 40 57.6 +0.5**
AK02 Malin Array Si 19.72 30 *e*P **Pn** **01 40 57.6 +0.5**
AK01 Malin Array Si 19.75 30 *e*P **P** **01 40 56.0 +0.1**
AK01 Malin Array Si 19.75 30 *e*P **P** **01 40 56.0 +0.1**
KIEV Kiev 19.75 30 *e*P **Pn** **01 40 58.2 +0.8**
KIEV pmax pmax
comp=Z,26nm,0.9s
KIEV Kiev 19.75 30 *e*P **Pn** **01 40 58.2 +0.8**
comp=Z,26nm,0.9s
KIEV Kiev 19.75 30 *e*P **Pn** **01 40 58.2 +0.8**
comp=Z,26nm,0.9s

AKASG **Malin Array Be** 19.76 30 P Pn 01 40 57.7 +0.2
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG **Malin Array Be** 19.76 30 P Pn 01 40 57.8 +0.2
AKASG **Malin Array Be** 19.76 30 P Pn 01 40 57.7 +0.2
comp=Z,0.8nm,0.3s,baz=219,slow=11,SNR=15
AKASG **Malin Array Be** 19.76 30 P Pn 01 40 57.7 +0.2
comp=Z,1.0nm,0.3s
BSEG **Bad Segeberg** 19.77 354 eP Pn 01 41 01.6 +4.0
BSEG pmax pmax
comp=Z,20nm,1.2s
BSEG **Bad Segeberg** 19.77 354 eP Pn 01 41 01.6 +4.0
comp=Z,20nm,1.2s
MALT **Malatya** 20.04 72 eP Pn 01 41 00.6 -0.5
MALT pmax pmax
comp=Z,19nm,1.4s
MALT **Malatya** 20.04 72 eP Pn 01 41 00.6 -0.5
comp=Z,19nm,1.4s
MALT **Malatya** 20.04 72⇑ iP Pn 01 41 01.0 -0.1
MALT **Malatya** 20.04 72 eP Pn 01 41 00.6 -0.5
comp=Z,19nm,1.4s
SUW **Suwalki** 20.71 15 eP P 01 41 04.3 -1.9
SUW pmax pmax
comp=Z,36nm,1.0s
SUW **Suwalki** 20.71 15 eP P 01 41 04.3 -1.9
comp=Z,36nm,1.0s
SUW **Suwalki** 20.71 15 eP P 01 41 05.1 -1.1
SUW **Suwalki** 20.71 15 eP P 01 41 04.3 -1.9
comp=Z,36nm,1.0s
MUD **Monsted U'grnd** 22.37 353 i P P 01 41 25.4 +1.3
MUD pmax pmax
comp=Z,12nm,1.0s
MUD **Monsted U'grnd** 22.37 353 i P P 01 41 25.4 +1.3
comp=Z,12nm,0.9s
MUD **Monsted U'grnd** 22.37 353 i P P 01 41 25.4 +1.3
comp=Z,12nm,1.0s
NACGM **Naroch** 22.41 20 e P 01 41 25.0 +0.5
TOA0 **Torodi Ar. Sit** 23.88 211 eP P 01 41 39.4 -0.3
TOA0 **Torodi Ar. Sit** 23.88 211 eP P 01 41 39.4 -0.3
TORD **Torodi Ar. Bea** 23.88 211 P P 01 41 40.1 +0.4
TORD **Torodi Ar. Bea** 23.88 211 P P 01 41 40.1 +0.4
comp=Z,2.3nm,0.9s,baz=16,slow=9.2,SNR=12
TORD LR LR 01 51 45.6
comp=Z,276nm,18.4s,baz=5.0,slow=39
TORD **Torodi Ar. Bea** 23.88 211 P P 01 41 40.1 +0.4
KIV **Kislovodsk** 24.11 58⇑ iP P 01 41 41.1 -0.8
KIV i S S 01 46 00.8 +2.1
KIV pmax pmax
comp=Z,1.0nm,0.8s
KIV **Kislovodsk** 24.11 58 i P P 01 41 41.1 -0.8
comp=Z,1.0nm,0.8s
KIV i S S 01 46 00.8 +2.1
EKA **Eskdalemuir Ar** 24.15 336 P P 01 41 41.8 -0.1
EKA **Eskdalemuir Ar** 24.15 336 P P 01 41 41.8 -0.1
comp=Z,3.4nm,0.8s,baz=149,slow=11,SNR=8.1
EKA **Eskdalemuir Ar** 24.15 336 P P 01 41 41.8 -0.1
comp=Z,3.0nm,0.8s
ESK **Eskdalemuir** 24.15 336 eP P 01 41 41.6 -0.4
ESK pmax pmax
comp=Z,11nm,0.9s
ESK **Eskdalemuir** 24.15 336 eP P 01 41 41.5 -0.4
comp=Z,11nm,0.9s
ESK **Eskdalemuir** 24.15 336 eP P 01 41 41.6 -0.4
comp=Z,11nm,0.9s
KBZ **Khabaz** 24.21 59 P P 01 41 45.5 +2.9
KBZ pmax pmax
comp=Z,4.0nm,0.9s
KBZ **Khabaz** 24.21 59 P P 01 41 45.5 +2.9
KBZ **Khabaz** 24.21 59 P P 01 41 45.5 +2.9
comp=Z,4.4nm,0.9s,baz=261,slow=7.5,SNR=8.4
KBZ **Khabaz** 24.21 59 P P 01 41 45.5 +2.9
comp=Z,4.0nm,0.9s
ONI **Oni** 24.38 62 P P 01 41 55.4 +11
ZEI **Tsey** 24.74 61 eP P 01 41 50.6 +2.9
ZEI pmax pmax
comp=Z,9.0nm,1.5s
ZEI **Tsey** 24.74 61 eP P 01 41 50.6 +2.9
comp=Z,9.0nm,1.5s
VSR **Storozhevoye** 24.82 40 eP P 01 41 47.7 -0.4
VSR pmax pmax
comp=N,1.0nm,0.4s
VSR pmax pmax
comp=E,2.0nm,0.4s
VSR pmax pmax
comp=Z,4.0nm,0.4s
VSR **Storozhevoye** 24.82 40 eP P 01 41 47.7 -0.4
GNI **Garni** 25.06 68 eP P 01 41 51.0 +0.4
comp=Z,31nm,1.6s
GNI **Garni** 25.06 68 LR LR 01 53 18.5
comp=Z,87nm,19.1s,baz=64,slow=40
GNI **Garni** 25.06 68 eP P 01 41 51.0 +0.4
comp=Z,31nm,1.6s
BHD **Baghdad** 25.21 84 ex x 01 41 23.7
BHD ex x 01 45 28.3
HFS **Hagfors** 25.81 360 P P 01 41 55.9 -1.1
HFS **Hagfors** 25.81 360 P P 01 41 55.9 -1.1
comp=Z,3.4nm,0.8s,baz=191,slow=7.1,SNR=6.5
HFS LR LR 01 52 06.1
comp=Z,144nm,19.5s,baz=77,slow=36
HFS **Hagfors** 25.81 360 P P 01 41 55.9 -1.1
comp=Z,144nm,19.5s
OBN **Obninsk** 26.02 30⇑ iP P 01 41 59.2 +0.3
OBN e 01 42 37.1
OBN eS S 01 46 34.7 +6.1
OBN pmax pmax
comp=Z,26nm,2.0s
OBN **Obninsk** 26.02 30 i P P 01 41 59.2 +0.3
comp=Z,26nm,2.0s
VRHR **Novokhopersk** 26.08 42 eP P 01 42 00.8 +1.3
VRHR pmax pmax
comp=N,40nm,0.9s
VRHR pmax pmax
comp=Z,30nm,0.9s
VRHR pmax pmax
comp=E,8.0nm,0.4s
VRHR **Novokhopersk** 26.08 42 eP P 01 42 00.8 +1.3
NB2 **NORSAR Subarra** 26.78 357 P P 01 42 05.7 -0.1
comp=Z,16nm,2.0s,baz=176,slow=11
NB2 **NORSAR Subarra** 26.78 357 P P 01 42 05.7 -0.1
comp=Z,16nm,2.0s,SNR=3.9
NOA **NORSAR Array B** 26.78 357 P P 01 42 05.3 -0.5
NOA **NORSAR Array B** 26.78 357 P P 01 42 05.3 -0.5
comp=Z,1.4nm,0.9s,baz=179,slow=9.9,SNR=3.8
NOA LR LR 01 52 56.0
comp=Z,88nm,20.4s,baz=180,slow=37
NOA **NORSAR Array B** 26.78 357 P P 01 42 05.3 -0.5
comp=Z,88nm,20.4s
MOS **Moscow** 26.89 30 eP P 01 42 08.5 +1.7
MOS e 01 42 48.1
MOS ePPP PPP 01 43 00.2
MOS pmax pmax
comp=Z,23nm,0.9s
MOS **Moscow** 26.89 30 eP P 01 42 08.5 +1.7
comp=Z,23nm,0.9s
FINES **FINESS Array B** 28.21 12 P P 01 42 17.4 -1.1
FINES **FINESS Array B** 28.21 12 P P 01 42 17.4 -1.1
comp=Z,6.4nm,1.0s,baz=205,slow=6.2,SNR=4.0
FINES LR LR 01 55 10.8
comp=Z,82nm,18.8s,baz=187,slow=40
FINES **FINESS Array B** 28.21 12 P P 01 42 17.4 -1.1
comp=Z,82nm,18.8s
ARCES **ARCESS Array B** 35.83 7 LR LR 02 00 14.8
comp=Z,80nm,18.6s,baz=48,slow=40
ARU **Arti** 37.39 40 d iP P 01 43 38.1 -0.6
ARU 01 45 01.7
ARU S S 01 49 26.3 +0.7
ARU SS SnSn 01 51 57.5 -5.1
ARU pmax pmax
comp=Z,12nm,1.7s
ARU **Arti** 37.39 40 i P P 01 43 38.1 -0.6
comp=Z,12nm,1.7s
ARU S S 01 49 26.3 +0.7
SOKR **Solikamsk** 37.58 35⇑ iP P 01 43 42.8 +2.6
SOKR pmax pmax
comp=Z,20nm,1.5s
SOKR **Solikamsk** 37.58 35 i P P 01 43 42.8 +2.6
comp=Z,20nm,1.5s
KMBO **Kilima Mbogo** 41.47 143 P P 01 44 14.9 +1.5
KMBO **Kilima Mbogo** 41.47 143 P P 01 44 14.9 +1.5
comp=Z,1.8nm,1.0s,baz=330,slow=8.1,SNR=3.0
KMBO LR LR 02 04 18.9
comp=Z,37nm,19.7s,baz=97,slow=40
KMBO **Kilima Mbogo** 41.47 143 P P 01 44 14.9 +1.5
comp=Z,37nm,19.7s
BRVK **Borovoye** 43.53 47 ceP P 01 44 29.5 0.0
BRVK pmax pmax
comp=Z,6.0nm,1.0s
BRVK **Borovoye** 43.53 47 eP P 01 44 29.3 -0.2
comp=Z,5.4nm,0.9s
BRVK **Borovoye** 43.53 47 eP P 01 44 29.5 0.0
comp=Z,6.0nm,1.0s
AAK **Ala-Archa** 47.17 61⇑ eP P 01 44 59.3 +0.6
AAK pmax pmax
comp=Z,21nm,4.2s
AAK MLR MLR
comp=Z,85nm,14.0s
AAK **Ala-Archa** 47.17 61 eP P 01 44 58.2 -0.5
comp=Z,3.1nm,1.1s
AAK **Ala-Archa** 47.17 61 eP P 01 44 59.3 +0.6
comp=Z,85nm,14.0s
KURBB **Kurchatov Arra** 48.73 50 LR LR 02 10 13.7
comp=Z,32nm,18.3s,baz=320,slow=42
KURK **Kurchatov** 48.77 50⇑ eP P 01 45 11.2 +0.4
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURK **Kurchatov** 48.77 50 eP P 01 45 11.4 +0.7
comp=Z,4.0nm,1.0s
KURK **Kurchatov** 48.77 50 eP P 01 45 11.2 +0.4
comp=Z,4.0nm,1.0s
KSH **Kashi** 48.94 65 eP P 01 45 11.3 -1.1
KSH PcP PcP 01 46 37.0 +0.5
KSH PP PP 01 47 04.1 -1.6
KSH S S 01 52 10.4 -5.2
KSH SS SS 01 55 37.6 -8.6
KSH pmax pmax
comp=Z,2.0nm,0.4s
KSH pmax pmax
comp=Z,200nm,4.3s
KSH LR LR
comp=N,110nm,4.8s
KSH LR LR
comp=E,100nm,4.7s
KSH LR LR
comp=Z,230nm,4.6s
NVS **Novosibirsk** 51.11 44 eP P 01 45 28.3 -0.1
NVS **Novosibirsk** 51.11 44 eP P 01 45 28.3 -0.1
LSZ **Lusaka** 51.15 162 eP P 01 45 29.2 0.0
comp=Z,6.2nm,1.1s
LSZ **Lusaka** 51.15 162 P P 01 45 29.1 -0.1
comp=Z,4.1nm,0.9s,baz=17,slow=8.0,SNR=6.0
LSZ **Lusaka** 51.15 162 eP P 01 45 29.2 0.0
comp=Z,6.2nm,1.1s
MK31 **Makanchi Array** 51.80 54 eP P 01 45 33.4 -0.4
MK31 **Makanchi Array** 51.80 54 eP P 01 45 33.4 -0.4
MK31 **Makanchi Array** 51.80 54 eP P 01 45 33.4 -0.4
MKAR **Makanchi Array** 51.80 54 P P 01 45 33.4 -0.4
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR **Makanchi Array** 51.80 54 P P 01 45 33.4 -0.4
MKAR **Makanchi Array** 51.80 54 P P 01 45 33.4 -0.4
comp=Z,2.2nm,0.9s,baz=290,slow=7.1,SNR=12
MKAR LR LR 02 13 03.6
comp=Z,28nm,19.6s,baz=354,slow=42
MKAR **Makanchi Array** 51.80 54 P P 01 45 33.4 -0.4
comp=Z,2.0nm,0.9s
ZAA0 **Zalesovo Array** 52.14 45 eP P 01 45 35.7 -0.5
ZAA0 **Zalesovo Array** 52.14 45 eP P 01 45 35.7 -0.5
ZALV **Zalesovo Beam** 52.14 45 P P 01 45 35.9 -0.2
ZALV pmax pmax
comp=Z,6.0nm,0.9s
ZALV MLR MLR
comp=Z,41nm,20.9s
ZALV **Zalesovo Beam** 52.14 45 P P 01 45 36.0 -0.2
ZALV **Zalesovo Beam** 52.14 45 P P 01 45 35.9 -0.2
comp=Z,6.0nm,0.9s,baz=281,slow=8.5,SNR=16
ZALV LR LR 02 08 20.6
comp=Z,41nm,20.9s,baz=255,slow=37
ZALV **Zalesovo Beam** 52.14 45 P P 01 45 36.0 -0.2
WMQ **Urumqi** 56.24 57 P P 01 46 08.3 +2.0
WMQ pmax pmax
comp=Z,16nm,1.0s
SCHQ **Schefferville** 57.72 317 P P 01 46 16.2 -0.4
SCHQ **Schefferville** 57.72 317 P P 01 46 16.2 -0.4
comp=Z,3.8nm,0.9s,baz=63,slow=6.8,SNR=3.7
SCHQ **Schefferville** 57.72 317 P P 01 46 16.2 -0.4
LBTB **Lobatse** 60.04 168 eP P 01 46 33.0 0.0
comp=Z,5.0nm,0.8s
LBTB **Lobatse** 60.04 168 eP P 01 46 33.0 0.0
comp=Z,5.0nm,0.8s
RES **Resolute Bay** 61.97 343 eP P 01 46 45.9 +0.5
RES **Resolute Bay** 61.97 343 eP P 01 46 45.9 +0.5
BOSA **Boshof** 63.51 169 eP P 01 46 55.9 -0.4
comp=Z,6.5nm,0.9s
BOSA **Boshof** 63.51 169 P P 01 46 55.7 -0.6
comp=Z,5.4nm,0.8s,baz=350,slow=6.1,SNR=4.9
BOSA LR LR 02 17 39.9
comp=Z,60nm,20.8s,baz=167,slow=39
BOSA **Boshof** 63.51 169 eP P 01 46 55.9 -0.4
comp=Z,6.0nm,0.9s
TLY **Talaya** 63.72 44 eP P 01 46 58.0 +0.5
TLY pmax pmax
comp=Z,3.0nm,0.9s
TLY **Talaya** 63.72 44 eP P 01 46 58.0 +0.5
comp=Z,3.0nm,0.9s
ZAK **Zakamensk** 64.01 45 eP P 01 46 52.3 -7.3
ZAK pmax pmax
comp=Z,2.0nm,1.5s
SONM **Songino Array** 66.93 47 P P 01 47 19.2 +0.7
SONM **Songino Array** 66.93 47 P P 01 47 19.2 +0.7
comp=Z,6.3nm,1.0s,baz=284,slow=6.0,SNR=9.5
SONM **Songino Array** 66.93 47 P P 01 47 19.2 +0.7
comp=Z,6.0nm,1.0s
LZH **Lanzhou** 70.65 59 eP P 01 47 39.3 -2.6
LZH ePP PP 01 50 17.3 -0.9
LZH pmax pmax
comp=Z,18nm,1.4s
LZH pmax pmax
comp=Z,68nm,7.0s
LZH LR LR
comp=N,210nm,16.2s
LZH LR LR
comp=E,200nm,15.5s
LZH LR LR
comp=Z,260nm,18.0s
HHC **Hu-ho-hao-te** 73.53 52 eP P 01 47 59.6 +0.5
HHC PcP PcP 01 48 16.0 +1.0
HHC S S 01 57 26.8 -1.3
HHC SKS SKSac 01 58 01.1 -3.7
HHC ScS SKKSac 01 58 04.1 -0.9
HHC SS SS 02 02 11.8 +1.5
HHC pmax pmax
comp=Z,42nm,0.7s
HHC pmax pmax
comp=Z,230nm,7.0s
HHC LR LR
comp=N,350nm,17.1s
HHC LR LR
comp=E,360nm,17.6s
HHC LR LR
comp=Z,220nm,17.1s
YKW3 **Yellowknife Ar** 75.03 338 eP P 01 48 07.4 +0.2
YKW3 **Yellowknife Ar** 75.03 338 eP P 01 48 07.4 +0.2
YKA **Yellowknife Ar** 75.08 338 P P 01 48 08.1 +0.5
YKA **Yellowknife Ar** 75.08 338 P P 01 48 08.0 +0.5
comp=Z,0.9nm,0.8s,baz=42,slow=5.7,SNR=17
YKA **Yellowknife Ar** 75.08 338 P P 01 48 08.0 +0.5
comp=Z,1.0nm,0.9s
ULM **Lac du Bonnet** 75.54 321 P P 01 48 10.3 -0.1
ULM **Lac du Bonnet** 75.54 321 P P 01 48 10.3 -0.1
comp=Z,3.7nm,0.8s,baz=38,slow=6.4,SNR=5.5
ULM **Lac du Bonnet** 75.54 321 P P 01 48 10.3 -0.1
comp=Z,4.0nm,0.8s
FFC **Flin Flon** 75.70 327 eP P 01 48 12.1 +0.8
FFC **Flin Flon** 75.70 327 eP P 01 48 12.1 +0.8
FFC **Flin Flon** 75.70 327 eP P 01 48 12.1 +0.8
BILL **Bilibino** 75.83 10⇓ eP P 01 48 11.7 0.0
BILL e*PP PcP 01 48 28.0 +3.8
BILL e 01 51 01.1
BILL eS S 01 57 48.3 -4.3
BILL pmax pmax
comp=Z,21nm,0.9s
BILL **Bilibino** 75.83 10 eP P 01 48 11.7 0.0
comp=Z,21nm,0.9s
WCI **Wyandotte Cave** 76.75 307 eP P 01 48 17.5 0.0
WCI pmax pmax
comp=Z,7.0nm,0.7s
WCI **Wyandotte Cave** 76.75 307 eP P 01 48 17.5 0.0
comp=Z,6.6nm,0.7s
WCI **Wyandotte Cave** 76.75 307 eP P 01 48 17.5 0.0
comp=Z,7.0nm,0.7s
BDFB **Brasilia** 77.09 241 P P 01 48 20.6 +0.9
BDFB **Brasilia** 77.09 241 P P 01 48 20.6 +0.9
comp=Z,2.7nm,0.8s,baz=90,slow=9.1,SNR=2.1
BDFB LR LR 02 23 17.7
comp=Z,95nm,19.9s,baz=342,slow=36
BDFB **Brasilia** 77.09 241 P P 01 48 20.6 +0.9
comp=Z,95nm,19.9s
SEY **Seymchan** 77.50 18⇑ eP P 01 48 22.5 +1.3
SEY **Seymchan** 77.50 18 eP P 01 48 22.5 +1.3
GYA **Guiyang** 77.61 66 eP P 01 48 23.0 +0.3
GYA pmax pmax
comp=Z,10.0nm,0.9s
WVT **Waverly** 78.93 306 eP P 01 48 29.1 -0.6
WVT pmax pmax
comp=Z,2.0nm,0.7s
WVT **Waverly** 78.93 306 eP P 01 48 29.1 -0.6
comp=Z,1.6nm,0.7s
WVT **Waverly** 78.93 306 eP P 01 48 29.1 -0.6
comp=Z,2.0nm,0.7s
FVM **French Village** 79.57 309 eP P 01 48 33.6 +0.4
FVM pmax pmax
comp=Z,20nm,1.3s
FVM **French Village** 79.57 309 eP P 01 48 33.6 +0.4
comp=Z,20nm,1.3s
FVM **French Village** 79.57 309 eP P 01 48 33.6 +0.4
comp=Z,20nm,1.3s
ECSD **EROS Data Cent** 79.90 316 eP P 01 48 35.5 +0.6
comp=Z,9.9nm,0.8s
ECSD **EROS Data Cent** 79.90 316 eP P 01 48 35.5 +0.6
comp=Z,9.9nm,0.8s
ILAR **Eielson Array** 80.09 352 P P 01 48 36.2 +0.8
ILAR **Eielson Array** 80.09 352 P P 01 48 36.2 +0.8
comp=Z,0.6nm,1.0s,baz=33,slow=2.2,SNR=4.0
ILAR **Eielson Array** 80.09 352 P P 01 48 36.2 +0.8
comp=Z,1.0nm,1.0s
KLR **Kul'dur** 80.12 36 eP P 01 48 31.2 -4.7
CN2 **Changchun** 80.31 43 eP P 01 48 36.1 -0.9
OXF **Oxford** 80.91 306 eP P 01 48 39.8 -0.6
OXF pmax pmax
comp=Z,19nm,1.0s
OXF **Oxford** 80.91 306 eP P 01 48 39.8 -0.6
comp=Z,19nm,1.0s
OXF **Oxford** 80.91 306 eP P 01 48 39.8 -0.6
comp=Z,19nm,1.0s
A22A **Carney Farms,** 81.35 325 ⇓P P 01 48 42.0 -0.5
baz=81
MDJ **Mudanjiang** 82.07 41 P P 01 48 45.5 -0.9
MDJ pmax pmax
comp=Z,98nm,3.7s
MDJ LR LR
comp=Z,33nm,24.3s
A19A **Klindworth Far** 82.72 326 ⇑P P 01 48 50.2 +0.4
baz=82
F24A **Ekalaka** 82.77 322 ⇓P P 01 48 51.1 +0.9
baz=83
A18A **Metzger Ranch,** 83.23 327 ⇑P P 01 48 53.8 +1.4
baz=83
C20A **Veseth Ranch,** 83.24 325 ⇑P P 01 48 53.9 +1.4
baz=83
NJ2 **Nanjing** 83.30 56 eP P 01 48 51.5 -1.5
NJ2 pmax pmax
comp=Z,20nm,0.6s
H24A **Dirks Ranch, A** 83.58 321 ⇑P P 01 48 55.0 +0.7
baz=83
A17A **Triple J Farms** 83.60 327 ⇓P P 01 48 55.6 +1.2
baz=83
USRK **Ussuriysk Arra** 83.64 40 P P 01 48 54.5 0.0
comp=Z,2.5nm,0.9s,baz=304,slow=8.0,SNR=4.2
C19A **Slack Wire Ran** 83.72 325 ⇓P P 01 48 55.9 +1.0
baz=84
RSSD **Black Hills** 83.73 320 eP P 01 48 54.7 -0.6
RSSD pmax pmax
comp=Z,4.0nm,1.1s
RSSD **Black Hills** 83.73 320 eP P 01 48 54.7 -0.6
comp=Z,3.6nm,1.1s
RSSD **Black Hills** 83.73 320 eP P 01 48 54.7 -0.6
comp=Z,4.0nm,1.1s
D20A **Manuel Ranch,** 83.74 324 ⇑P P 01 48 56.6 +1.5
baz=84,SNR=5.9
EGMT **Eagleton** 83.84 326 eP P 01 48 57.0 +1.4
comp=Z,7.9nm,1.0s
EGMT **Eagleton** 83.84 326 ⇓P P 01 48 57.3 +1.7
baz=84,SNR=7.9
EGMT **Eagleton** 83.84 326 eP P 01 48 57.0 +1.4
comp=Z,7.9nm,1.0s
A16A **West Butte Ran** 84.00 327 ⇓P P 01 48 57.2 +0.7
baz=84
QIZ **Qiongzhong** 84.11 71 P P 01 48 55.0 -2.4
QIZ S S 01 59 21.4 0.0
QIZ pmax pmax
comp=Z,24nm,2.3s
B17A **L&G Farms, Che** 84.12 327 ⇑P P 01 48 58.2 +1.2
baz=84
E20A **Meyer Farm, Mu** 84.16 324 ⇑P P 01 48 58.8 +1.5
baz=84
A15A **Johnson Ranch,** 84.48 328 ⇑P P 01 48 59.4 +0.5
baz=84,SNR=5.5
E19A **Rath Farm, Rou** 84.50 324 ⇑P P 01 49 00.1 +1.1
baz=84,SNR=5.6
SAML **Samuel** 84.59 255 eP P 01 49 00.2 +0.4
comp=Z,2.9nm,1.1s
SAML **Samuel** 84.59 255 eP P 01 49 00.2 +0.4
comp=Z,2.8nm,1.1s
C17A **Wharram Farm,** 84.59 326 ⇑P P 01 48 60.0 +0.5
baz=84,SNR=6.6
J24A **Dixon Ranch, L** 84.60 320 ⇓P P 01 49 00.6 +1.0
baz=84
K25A **Mack Ranch, Ha** 84.67 319 ⇓P P 01 48 59.7 -0.3
baz=84
A14A **Double T Ranch** 84.79 328 ⇓P P 01 49 01.2 +0.7
baz=85,SNR=9.1
B15A **Bradely Ranch,** 84.91 327 ⇑P P 01 49 01.3 +0.2
baz=85
D17A **Six Diamond Ra** 84.91 326 ⇑P P 01 49 02.2 +1.1
baz=85,SNR=5.8
C16A **Fuhringer Ranc** 84.92 327 ⇑P P 01 49 01.6 +0.5
baz=85
E18A **Harlowton** 84.97 325 ⇑P P 01 49 02.9 +1.4
baz=85,SNR=6.7
F19A **Roth Farm, Mol** 85.02 324 ⇑P P 01 49 03.0 +1.3
baz=85,SNR=9.5
G20A **Bridger** 85.11 323 ⇑P P 01 49 03.2 +1.1
baz=85,SNR=5.7
I22A **9 Mile Ranch,** 85.17 321 ⇑P P 01 49 03.5 +1.1
baz=85,SNR=9.9
B14A **Marquette Ranc** 85.18 328 ⇓P P 01 49 03.2 +0.7
baz=85
F18A **Big Timber** 85.35 324 ⇓P P 01 49 04.7 +1.3
baz=85,SNR=7.1
D16A **Dana Ranch, Ca** 85.40 326 ⇓P P 01 49 04.2 +0.7
baz=85,SNR=7.1
GCMT **Greycliff** 85.41 324 eP P 01 49 04.8 +1.1
comp=Z,6.7nm,1.0s
GCMT **Greycliff** 85.41 324 eP P 01 49 04.8 +1.1
comp=Z,6.7nm,1.0s
E17A **Martinsdale** 85.49 325 ⇓P P 01 49 04.9 +0.8
baz=85,SNR=5.7
J22A **Midwest** 85.50 321 ⇑P P 01 49 04.9 +0.7
baz=85,SNR=8.2
K23A **Bowen Ranch, D** 85.51 320 ⇓P P 01 49 05.6 +1.4
baz=85
H20A **Greybull** 85.52 323 ⇑P P 01 49 05.6 +1.4
baz=85
I21A **Big Trails, Te** 85.64 322 ⇓P P 01 49 05.7 +0.8
baz=85,SNR=8.7
B13A **Whitefish** 85.70 328 ⇓P P 01 49 06.2 +1.2
baz=86
RLMT **Red Lodge** 85.70 324 ⇑P P 01 49 05.6 +0.4
baz=86,SNR=5.3
G18A **Lazy EL Ranch,** 85.70 324 ⇑P P 01 49 06.3 +1.1
baz=86
KSRS **Korea Array** 85.80 47 LR LR 02 30 03.6
comp=Z,35nm,19.9s,baz=320,slow=38
F17A **Fitzpatrick Pl** 85.81 325 ⇓P P 01 49 06.7 +1.1
baz=86,SNR=5.4
E16A **East Helena** 85.82 326 ⇓P P 01 49 06.6 +1.0
baz=86
D15A **Lincoln** 85.83 327 ⇑P P 01 49 06.3 +0.6
baz=86
C14A **Swan Lake** 85.84 328 ⇑P P 01 49 06.2 +0.5
baz=86
H19A **Powell** 85.89 323 ⇓P P 01 49 07.6 +1.5
baz=86,SNR=13
M24A **Cheyenne** 85.97 319 ⇓P P 01 49 07.8 +1.2
baz=86
I20A **Worland** 85.97 322 ⇑P P 01 49 07.5 +1.1
baz=86,SNR=9.5
L23A **Garrett** 85.99 320 ⇓P P 01 49 08.0 +1.2
baz=86
J21A **Lysite** 86.05 321 ⇓P P 01 49 07.8 +0.9

	baz=86					
K22A	**Casper**	86.06 320	⇓P	P	01 49 07.9	+0.9
	baz=86,SNR=5.1					
JTMT	**Jette**	86.09 328	*e*P	P	01 49 07.6	+0.6
	comp=Z,5.3nm,1.2s					
JTMT	**Jette**	86.09 328	*e*P	P	01 49 07.6	+0.6
	comp=Z,5.3nm,1.2s					
SWMT	**Swartz Lake**	86.15 328	*e*P	P	01 49 07.2	-0.1
	comp=Z,2.2nm,1.0s					
SWMT	**Swartz Lake**	86.15 328	*e*P	P	01 49 07.2	-0.1
	comp=Z,2.2nm,1.0s					
H18A	**Shoshone NF, C**	86.22 323	⇓P	P	01 49 08.8	+1.0
	baz=86,SNR=14					
BSMT	**Bassoo Peak**	86.23 328	*e*P	P	01 49 07.3	-0.5
	comp=Z,7.4nm,1.5s					
BSMT	**Bassoo Peak**	86.23 328	*e*P	P	01 49 07.3	-0.5
	comp=Z,7.4nm,1.5s					
D14A	**Greenough**	86.25 327	⇓P	P	01 49 07.7	-0.1
	baz=86					
C13A	**Hot Springs**	86.27 328	⇑P	P	01 49 09.0	+1.2
	baz=86					
G17A	**Pierce Place,**	86.27 324	⇑P	P	01 49 08.4	+0.5
	baz=86					
I19A	**Meeteetse**	86.35 323	⇓P	P	01 49 09.0	+0.6
	baz=86,SNR=6.6					
R28A	**Tribune**	86.37 315	⇓P	P	01 49 09.7	+1.2
	baz=86					
J20A	**Shoshoni**	86.37 322	⇑P	P	01 49 09.9	+1.4
	baz=86					
KSCO	**Kaye Shedlock'**	86.40 316	⇓P	P	01 49 09.2	+0.6
	baz=86					
L22A	**Ellis Ranch, M**	86.44 320	⇑P	P	01 49 09.7	+0.8
	baz=86					
BOZ	**Bozeman (W)**	86.46 325	*e*P	P	01 49 10.4	+1.6
BOZ			pmax	pmax		
	comp=Z,4.0nm,1.0s					
BOZ	**Bozeman (W)**	86.46 325	*e*P	P	01 49 10.4	+1.6
	comp=Z,3.6nm,1.0s					
BOZ	**Bozeman (W)**	86.46 325	*e*P	P	01 49 10.2	+1.4
	baz=86,SNR=6.3					
BOZ	**Bozeman (W)**	86.46 325	*e*P	P	01 49 10.4	+1.6
	comp=Z,4.0nm,1.0s					
LKWY	**Lake**	86.66 324	*e*P	P	01 49 10.1	+0.1
LKWY			pmax	pmax		
	comp=Z,6.0nm,0.9s					
LKWY	**Lake**	86.66 324	*e*P	P	01 49 10.1	+0.1
	comp=Z,5.9nm,0.9s					
LKWY	**Lake**	86.66 324	*e*P	P	01 49 10.1	+0.1
	comp=Z,6.0nm,0.9s					
E14A	**Clinton**	86.75 327	⇑P	P	01 49 11.0	+0.8
	baz=86					
G16A	**Moss Hill, Enn**	86.85 325	⇑P	P	01 49 11.6	+0.8
	baz=87,SNR=6.7					
H17A	**Grant Village**	86.87 324	⇑P	P	01 49 12.0	+1.0
	baz=87,SNR=6.0					
WMOK	**Wichita Mounta**	86.88 311	*e*P	P	01 49 09.9	-1.1
WMOK			pmax	pmax		
	comp=Z,15nm,1.4s					
WMOK	**Wichita Mounta**	86.88 311	*e*P	P	01 49 09.8	-1.1
	comp=Z,14nm,1.4s					
WMOK	**Wichita Mounta**	86.88 311	*e*P	P	01 49 09.9	-1.1
	comp=Z,15nm,1.4s					
NEW	**Newport**	86.91 330	*e*P	P	01 49 11.2	+0.3
	comp=Z,2.4nm,0.9s					
NEW	**Newport**	86.91 330	*e*P	P	01 49 11.2	+0.3
	comp=Z,2.0nm,0.9s					
S28A	**Manter**	86.92 314	⇓P	P	01 49 11.8	+0.6
	baz=87					
H16A	**Russell Place,**	86.97 324	⇓P	P	01 49 12.1	+0.7
	baz=87					
R27A	**Eads**	86.98 315	⇓P	P	01 49 12.3	+0.8
	baz=87					
K20A	**Yellowstone Ra**	87.00 321	⇑P	P	01 49 12.9	+1.3
	baz=87					
E13A	**Victor**	87.04 327	⇑P	P	01 49 11.7	+0.1
	baz=87					
SIV	**San Ignacio**	87.08 249	P	P	01 49 13.6	+1.5
SIV	**San Ignacio**	87.08 249	P	P	01 49 13.6	+1.5
	comp=Z,1.1nm,0.9s,baz=82,slow=7.1,SNR=3.1					
SIV			LR	LR	02 32 59.8	
	comp=Z,57nm,18.4s,slow=39					
SIV	**San Ignacio**	87.08 249	P	P	01 49 13.6	+1.5
D12A	**Red Ives Fores**	87.09 328	⇑P	P	01 49 12.3	+0.5
	baz=87					
I17A	**Pilgrim Ck.**	87.22 323	⇓P	P	01 49 13.4	+0.8
	baz=87					
M21A	**Separation Pea**	87.24 320	⇓P	P	01 49 13.8	+0.9
	baz=87					
R26A	**Arlington**	87.35 316	⇓P	P	01 49 14.4	+1.1
	baz=87,SNR=9.8					
MOOW	**Moose Ponds**	87.43 323	*e*P	P	01 49 14.8	+1.1
	comp=Z,1.0nm,0.9s					
MOOW	**Moose Ponds**	87.43 323	*e*P	P	01 49 14.8	+1.1
	comp=Z,1.0nm,0.9s					
J18A	**Kendall Valley**	87.46 323	⇑P	P	01 49 14.9	+1.0
	baz=87,SNR=6.5					
BW06	**Boulder Array**	87.55 322	*e*P	P	01 49 14.4	+0.1
	comp=Z,2.9nm,1.1s					
BW06	**Boulder Array**	87.55 322	⇓P	P	01 49 14.4	+0.1
	baz=87					
BW06	**Boulder Array**	87.55 322	*e*P	P	01 49 14.4	+0.1
	comp=Z,2.9nm,1.1s					
PDAR	**Pinedale Array**	87.55 322	P	P	01 49 14.0	-0.3
PDAR	**Pinedale Array**	87.55 322	P	P	01 49 14.0	-0.3
	comp=Z,0.9nm,0.9s,baz=52,slow=5.8,SNR=6.0					
PDAR			LR	LR	02 29 03.1	
	comp=Z,45nm,21.3s,baz=278,slow=36					
PDAR	**Pinedale Array**	87.55 322	P	P	01 49 14.0	-0.3
ISCO	**Idaho Springs**	87.55 318	⇑P	P	01 49 15.2	+0.7
	baz=87					
S26A	**Kim**	87.82 315	⇓P	P	01 49 16.2	+0.6
	baz=88					
K18A	**Toltan Ranch,**	87.89 322	⇓P	P	01 49 15.5	-0.4
	baz=88					
R25A	**Fountain Ranch**	87.94 316	⇓P	P	01 49 17.5	+1.3
	baz=88					
P23A	**Jefferson**	87.97 318	⇓P	P	01 49 17.6	+1.0
	baz=88					
F12A	**Elk City**	88.04 327	⇓P	P	01 49 16.9	+0.4
	baz=88					
H14A	**Leadore**	88.04 325	⇓P	P	01 49 17.9	+1.3
	baz=88					
T26A	**Comanche Natio**	88.20 315	⇓P	P	01 49 18.2	+0.7
	baz=88					
J16A	**Bone**	88.20 324	⇓P	P	01 49 18.7	+1.3
	baz=88					
Z32A	**Haskell**	88.25 310	⇓P	P	01 49 17.4	-0.1
	baz=88					
S25A	**Robets Cordova**	88.36 316	⇑P	P	01 49 18.7	+0.5
	baz=88					
G12A	**Big Creek, Yel**	88.56 327	⇓P	P	01 49 19.2	+0.2
	baz=88					
M18A	**Lyman**	88.78 321	⇑P	P	01 49 20.7	+0.6
	baz=89					
H12A	**Diamond D Ranc**	88.79 326	⇓P	P	01 49 21.2	+1.1
	baz=89					
U25A	**Circle Dot Ran**	89.20 315	⇑P	P	01 49 23.9	+1.6
	baz=89					
V26A	**Tequesquite Ra**	89.25 314	⇓P	P	01 49 23.4	+1.1
	baz=89					
HLID	**Hailey**	89.33 325	*e*P	P	01 49 22.8	+0.1
	comp=Z,1.2nm,0.8s					
HLID	**Hailey**	89.33 325	⇑P	P	01 49 23.4	+0.7
	baz=89					
HLID	**Hailey**	89.33 325	*e*P	P	01 49 22.8	+0.1
	comp=Z,1.2nm,0.8s					
J13A	**Cove Ranch, Pi**	89.35 325	⇓P	P	01 49 24.2	+1.5
	baz=89					
HWUT	**Hardware Ranch**	89.41 322	*e*P	P	01 49 23.7	+0.6
	comp=Z,2.2nm,0.8s					
HWUT	**Hardware Ranch**	89.41 322	*e*P	P	01 49 23.7	+0.6
	comp=Z,2.2nm,0.8s					
BMO	**Blue Mountains**	89.66 328	*e*P	P	01 49 24.0	-0.1
	comp=Z,7.3nm,1.1s					
BMO	**Blue Mountains**	89.66 328	*e*P	P	01 49 24.0	-0.1
	comp=Z,7.3nm,1.1s					
V25A	**Rancho No Teng**	89.71 315	⇓P	P	01 49 25.0	+0.3
	baz=90					
W26A	**Owens Ranch, T**	89.72 313	⇑P	P	01 49 25.1	+0.6
	baz=90					
L14A	**Malta**	89.93 324	⇑P	P	01 49 26.9	+1.5
	baz=90					
W25A	**X Bar L Ranch,**	90.05 314	⇑P	P	01 49 26.7	+0.5
	baz=90					
MFID	**Camas Ranch**	90.11 326	⇓P	P	01 49 27.3	+1.0
	baz=90					
Y27A	**Causey**	90.17 312	⇓P	P	01 49 28.3	+1.6
	baz=90					
P18A	**Preston Nutter**	90.18 320	⇑P	P	01 49 27.8	+0.9
	baz=90					
T22A	**Edith**	90.22 317	⇓P	P	01 49 27.4	+0.4
	baz=90					
S21A	**Coal Bank Pass**	90.26 318	⇑P	P	01 49 28.6	+1.3
	baz=90					
S20A	**Disappointment**	90.46 318	⇑P	P	01 49 27.6	-0.5
	baz=90					
330A	**Mertzon**	90.58 309	⇓P	P	01 49 29.1	+0.5
	baz=90					
Z27A	**Tatum**	90.58 312	⇓P	P	01 49 28.8	+0.2
	baz=90					
CPUP	**Villa Florida**	90.59 238	LR	LR	02 31 40.9	
	comp=Z,118nm,18.4s,baz=176,slow=37					
W24A	**Lazy 6 Ranch,**	90.61 315	⇓P	P	01 49 29.0	+0.2
	baz=90					
V22A	**San Miguel Ran**	91.00 316	⇑P	P	01 49 30.7	0.0
	baz=91					
Z26A	**Caprock**	91.08 312	⇓P	P	01 49 32.6	+1.7
	baz=91					
Q16A	**Castle Valley**	91.19 320	⇑P	P	01 49 32.6	+1.2
	baz=91					
ANMO	**Albuquerque**	91.41 315	*e*P	P	01 49 33.1	+0.6
	comp=Z,2.2nm,1.1s					
ANMO	**Albuquerque**	91.41 315	*e*P	P	01 49 33.1	+0.6
	comp=Z,2.0nm,1.1s					
X23A	**Hourglass Bar**	91.51 314	⇓P	P	01 49 33.6	+0.6
	baz=91					
Y24A	**Capitan**	91.52 314	⇓P	P	01 49 34.0	+0.9
	baz=91					
Y23A	**Lovelace Mesa,**	91.88 314	⇓P	P	01 49 35.6	+0.9
	baz=92					
Z24A	**Sheeppen Canyo**	91.89 313	⇓P	P	01 49 35.4	+0.7
	baz=92					
125A	**Gardner Draw,**	91.92 312	⇓P	P	01 49 36.3	+1.5
	baz=92					
226B	**Tecolote Peak,**	92.01 312	⇑P	P	01 49 36.3	+1.1
	baz=92					
529A	**Stev Forest Ra**	92.10 309	⇑P	P	01 49 36.5	+0.9
	baz=92					
324A	**Moseley Ranch,**	93.26 312	⇓P	P	01 49 42.3	+1.2
	baz=93					
Z21A	**St. Cloud Mine**	93.28 314	⇓P	P	01 49 42.6	+1.4
	baz=93					
425A	**Indio Mountain**	93.41 311	⇓P	P	01 49 42.6	+0.8
	baz=93					
TXAR	**Lajitas Array**	93.56 309	P	P	01 49 43.9	+1.5
TXAR	**Lajitas Array**	93.56 309	P	P	01 49 43.9	+1.5
	comp=Z,0.4nm,0.9s,baz=66,slow=4.4,SNR=3.6					
TXAR	**Lajitas Array**	93.56 309	P	P	01 49 43.9	+1.5
121A	**Cookes Peak, D**	93.89 314	⇓P	P	01 49 45.1	+1.0
	baz=94					
Z20A	**Nine Sixteen R**	93.96 315	⇓P	P	01 49 44.7	+0.4
	baz=94					
X16A	**Lo Mia Camp, P**	94.65 318	⇓P	P	01 49 47.7	+0.2
	baz=94					
TUC	**Tucson**	95.81 316	*e*P	P	01 49 52.8	+0.1
TUC			pmax	pmax		
	comp=Z,1.0nm,1.2s					
TUC	**Tucson**	95.81 316	*e*P	P	01 49 52.8	+0.1
	comp=Z,0.6nm,1.2s					
TUC	**Tucson**	95.81 316	*e*P	P	01 49 52.8	+0.1
	comp=Z,1.0nm,1.2s					
WRA	**Warramunga Arr**	125.69 91	PKP	PKPdf	01 55 27.2	-0.7
WRA	**Warramunga Arr**	125.69 91	PKP	PKPdf	01 55 27.2	-0.7
	comp=Z,0.6nm,0.8s,baz=306,slow=1.8,SNR=4.4					
WRA	**Warramunga Arr**	125.69 91	PKIKP	PKPdf	01 55 27.2	-0.7
ASAR	**Alice Springs**	127.02 95	PKP	PKPdf	01 55 30.4	0.0
ASAR	**Alice Springs**	127.02 95	PKP	PKPdf	01 55 30.4	0.0
	comp=Z,0.8nm,0.8s,baz=354,slow=2.5,SNR=5.6					
ASAR	**Alice Springs**	127.02 95	PKIKP	PKPdf	01 55 30.5	0.0

CSEM ***25*** *01:52:22.8±0.2, 39.88N×38.79E, h15km, MD3.1, Error ellipse: s-maj=5.3km s-min=5.2km az=88.0*
ISK ***25*** *01:52:22.3, 39.92N×38.78E, h14km, MD2.7*
ISCJB ***25*** *01:52:23.0±0.6, 39.90N±0.03×38.79E±0.04, h11km±7km, Error ellipse: s-maj=5.7km s-min=5.2km az=1.7*
DDA ***25*** *01:52:25.3, 40.07N×38.80E, h7km, MD3.1*

ISC 25 01:52:23.0±1.0, **39.89N**±0.03×**38.79E**±0.03, **h17**km±10km, **n19**, σ**0.36**/29, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELT	**Kelkit**	0.44	55	*i* P	**Pg**	01 52 32.1	0.0
KELT				*i* S	**Sg**	01 52 38.1	-0.1
KELT	**Kelkit**	0.44	55	*i* P	**Pg**	01 52 32.1	0.0
KELT				*i* S	**Sg**	01 52 38.1	-0.1
EZC	**Erzincan**	0.46	108	*e*PG	**Pg**	01 52 32.2	-0.2
EZC				*e*SG	**Sg**	01 52 39.0	+0.3
EZC	**Erzincan**	0.46	108	*e*Pg	**Pg**	01 52 32.2	-0.2
EZC				*e*Sg	**Sg**	01 52 39.0	+0.3
ILIC	**ilic-Erzincan**	0.47	201	*e*PG	**Pg**	01 52 32.4	-0.2
ILIC				*e*SG	**Sb**	01 52 40.0	+0.4
ILIC	**ilic-Erzincan**	0.47	201	*e*Pg	**Pg**	01 52 32.4	-0.2
SUSE	**Susehri**	0.55	305	*i* P	**Pg**	01 52 34.2	+0.2
SUSE				*i* S	**Sb**	01 52 42.1	+0.2
SUSE	**Susehri**	0.55	305	*i* P	**Pg**	01 52 34.2	+0.2
SUSE				*i* S	**Sb**	01 52 42.1	+0.2
GUMT	**Gumushane**	0.78	43	*e*PG	**Pb**	01 52 37.6	-0.5
GUMT	**Gumushane**	0.78	43	*e*Pg	**Pb**	01 52 37.7	-0.5
ERZN	**Erzincan**	0.79	113	*e*PG	**Pb**	01 52 38.4	+0.1
ERZN				*e*SG	**Sg**	01 52 49.9	+1.1
ESPY	**Espiye-Giresun**	1.02	358	*e*PG	**Pb**	01 52 42.0	-0.3
ESPY	**Espiye-Giresun**	1.02	358	*e*Pg	**Pb**	01 52 42.0	-0.3
PTK	**Pertek**	1.11	155	*e*PN	**Pb**	01 52 43.5	-0.3
PTK	**Pertek**	1.11	155	*e*Pn	**Pb**	01 52 43.5	-0.3
BAYT	**Ayd¯ntepe-Bay**	1.15	64	*e*PN	**Pn**	01 52 44.3	-0.2
BAYT	**Ayd¯ntepe-Bay**	1.15	64	*e*Pn	**Pn**	01 52 44.3	-0.2
MACK	**Trabzon**	1.29	35	*i* P	**Pg**	01 52 48.1	+0.1
MACK				*i* S	**Sb**	01 53 03.6	+0.5
MACK	**Trabzon**	1.29	35	*i* P	**Pg**	01 52 48.1	+0.1
MACK				*i* S	**Sb**	01 53 03.6	+0.5

IDC 25 02:05:42.1±1.2, **5.31S**×**142.53E, h0**km, **mb3.8**/6, **mb1 4.1**/6, **mb1mx3.8**/16, **mbtmp3.9**/6, **MS3.2**/3, **Ms1 3.2**/3, **ms1mx2.7**/22, **Error ellipse: s-maj=49.7km s-min=25.5km az=102.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	15.13	166	LR	LR	02 15 05.1	
	comp=Z,56nm,19.4s,baz=52,slow=37						
WRA	**Warramunga Arr**	16.59	208	Pn	Pn	02 09 33.4	-2.9
	0.2nm,0.3s,baz=28,slow=13,SNR=5.4						
WRA				Sn	Sn	02 12 27.4	-14
	0.1nm,0.3s,baz=28,slow=22,SNR=3.7						
ASAR	**Alice Springs**	20.05	204	P	P	02 10 16.6	-0.6
	4.5nm,0.9s,baz=34,slow=9.7,SNR=28						
ASAR				LR	LR	02 17 17.5	
	comp=Z,57nm,18.9s,baz=328,slow=35						
FITZ	**Fitzroy Crossi**	20.83	231	P	P	02 10 25.8	+0.2
	3.0nm,0.9s,baz=49,slow=9.3,SNR=3.0						
STKA	**Stephens Creek**	26.44	182	LR	LR	02 23 12.5	
	comp=Z,82nm,19.3s,baz=25,slow=40						
VNDA	**Vanda**	72.89	176	P	P	02 17 12.8	+0.1
	0.7nm,0.9s,baz=336,slow=7.0,SNR=3.1						
MKAR	**Makanchi Array**	74.17	322	P	P	02 17 20.4	-0.4
	0.6nm,0.6s,baz=120,slow=7.1,SNR=6.1						
BVAR	**Borovoye Array**	83.62	325	P	P	02 18 12.9	+0.4
	1.1nm,0.7s,baz=90,slow=5.9,SNR=7.4						
ILAR	**Eielson Array**	86.63	24	P	P	02 18 27.1	-0.2
	1.4nm,0.7s,baz=259,slow=4.9,SNR=15						
TORD	**Torodi Ar. Bea**	140.61	284	PKP	PKPdf	02 25 16.6	+1.7
	0.5nm,0.8s,baz=89,slow=1.7,SNR=3.0						

LDG ***25*** *02:08:23.9±0.1, 42.24N×13.49E, h2km, Ml3.2/5, Error ellipse: s-maj=5.1km s-min=3.4km az=49.0*
ROM ***25*** *02:08:23.5±0.1, 42.29N×13.46E, h9km, Ml3.2/32, Error ellipse: s-maj=0.9km s-min=0.8km az=45.0*
ISCJB ***25*** *02:08:23.5±0.2, 42.29N±0.02×13.45E±0.02, h11km±2km, mb3.1/3, Error ellipse: s-maj=2.8km s-min=2.3km az=34.2*
IDC ***25*** *02:08:24.6±1.3, 42.37N×13.51E, h0km, mb3.2/4, mb1 3.4/7, mb1mx3.3/28, mbtmp3.3/7, ML3.3/3, Error ellipse: s-maj=20.8km s-min=15.9km az=80.0*
CSEM ***25*** *02:08:24.0±0.1, 42.29N×13.45E, h2km, ML3.6/12, Error ellipse: s-maj=2.4km s-min=2.0km az=42.0*
PRU ***25*** *02:08:25.8, 42.37N×13.44E, h1km*
BEO ***25*** *02:08:25.1±1.0, 42.38N×13.39E, h0km, ML3.4/3*

ISC 25 02:08:24.3±0.7, **42.34N**±0.02×**13.44E**±0.02, **h12**km±4km,

n154, σ**1.970**/170, **mb3.2**/3, **7C-3D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	0.04	301	Pg	**Pg**	02 08 26.3	-0.3
AQU				Sg	**Sg**	02 08 27.8	-0.5
	17μm,0.4s						
AQU	**L'Aquila**	0.04	301	Pg	**Pg**	02 08 26.3	-0.3
AQU				Sg	**Sg**	02 08 27.8	-0.5
	17μm,0.4s						
CAMP	**Campotosto**	0.20	353	Pg	Pg	02 08 29.1	+0.4
CAMP				Sg	**Sg**	02 08 32.8	+0.9
	1μm,0.6s						
CAMP	**Campotosto**	0.20	353	Pg	Pg	02 08 29.1	+0.4
CAMP				Sg	**Sg**	02 08 32.8	+0.9
	1μm,0.6s						
FIAM	**Fiamignano**	0.25	255	⇑*i*Pg	**Pb**	02 08 29.7	-1.1
FIAM				Sg	**Sb**	02 08 34.0	-1.2
	7μm,0.7s						
FIAM	**Fiamignano**	0.25	255	⇑*i*Pg	**Pb**	02 08 29.7	-1.1
FIAM				Sg	**Sb**	02 08 34.0	-1.2
	7μm,0.7s						
VCEL	**Villa Celiera**	0.30	78	Pg	**Pb**	02 08 30.7	-0.9
VCEL				Sg	**Sb**	02 08 35.2	-1.4
	7μm,0.5s						
VCEL	**Villa Celiera**	0.30	78	Pg	**Pb**	02 08 30.7	-0.9
VCEL				Sg	**Sb**	02 08 35.2	-1.4
	7μm,0.5s						
TERO	**Teramo**	0.31	22	⇓*i*Pg	**Pb**	02 08 30.6	-1.2
TERO				Sg	**Sb**	02 08 36.6	-0.3
	4μm,0.5s						
TERO	**Teramo**	0.31	22	⇓*i*Pg	**Pb**	02 08 30.6	-1.2
TERO				Sg	**Sb**	02 08 36.6	-0.3
	4μm,0.5s						
PTQR	**Pietraquaria**	0.31	186	⇑*i*Pg	**Pg**	02 08 29.8	-0.9
PTQR	**Pietraquaria**	0.31	186	⇑*i*Pg	**Pg**	02 08 29.8	-0.9
LNSS	**Leonessa**	0.40	312	Pg	**Pb**	02 08 32.7	-0.7
LNSS				Sg	**Sb**	02 08 40.0	+0.5
	5μm,0.8s						
LNSS	**Leonessa**	0.40	312	Pg	**Pb**	02 08 32.7	-0.7
LNSS				Sg	**Sb**	02 08 40.0	+0.5
	5μm,0.8s						
INTR	**Introdacqua**	0.47	133	Pg	**Pg**	02 08 32.6	-1.0
INTR				Sg	**Sb**	02 08 39.8	-1.7
	3μm,0.2s						
INTR	**Introdacqua**	0.47	133	Pg	**Pg**	02 08 32.6	-1.0
INTR				Sg	**Sb**	02 08 39.8	-1.7
	3μm,0.2s						
VVLD	**Villa Vallelon**	0.48	164	Pg	**Pg**	02 08 32.5	-1.3
VVLD				Sg	**Sg**	02 08 39.1	-1.1
	2μm,0.7s						
VVLD	**Villa Vallelon**	0.48	164	Pg	**Pg**	02 08 32.5	-1.3
VVLD				Sg	**Sg**	02 08 39.1	-1.1
	2μm,0.7s						
CERT	**Cerreto**	0.52	222	⇑*i*Pg	**Pg**	02 08 33.6	-0.8
CERT				Sg	**Sg**	02 08 40.7	-0.6
	3μm,0.7s						
CERT	**Cerreto**	0.52	222	⇑*i*Pg	**Pg**	02 08 33.6	-0.8
CERT				Sg	**Sg**	02 08 40.7	-0.6
	3μm,0.7s						
GUAR	**Guarcino**	0.55	190	Pg	**Pg**	02 08 33.9	-1.1
	1μm,0.4s						
GUAR	**Guarcino**	0.55	190	Pg	**Pg**	02 08 33.9	-1.1
	1μm,0.4s						
NRCA	**Norcia**	0.56	334	Pg	**Pb**	02 08 35.1	-0.9
NRCA				Sg	**Sn**	02 08 44.3	-3.0
	770nm,0.3s						
NRCA	**Norcia**	0.56	334	Pg	**Pb**	02 08 35.1	-0.9
NRCA				Sg	**Sn**	02 08 44.3	-3.0
	770nm,0.3s						
MNS	**Montasola**	0.57	275	Pg	**Pb**	02 08 35.0	-1.2
	1μm,0.5s						
MNS	**Montasola**	0.57	275	Pg	**Pb**	02 08 35.0	-1.2
	1μm,0.5s						
TRTR	**Tortoreto Alta**	0.59	36	Pg	**Pn**	02 08 36.6	-1.8
	7μm,0.8s						
TRTR	**Tortoreto Alta**	0.59	36	Pg	**Pn**	02 08 36.6	-1.8
	7μm,0.8s						
MTCE	**Montecelio**	0.61	239	Pg	**Pb**	02 08 35.3	-1.5
	1μm,0.7s						
MTCE	**Montecelio**	0.61	239	Pg	**Pb**	02 08 35.3	-1.5
	1μm,0.7s						
LPEL	**Lama dei Pelig**	0.62	117	Pg	**Pb**	02 08 35.2	-1.9
LPEL				Sg	**Sb**	02 08 44.4	-1.3
	2μm,0.6s						
LPEL	**Lama dei Pelig**	0.62	117	Pg	**Pb**	02 08 35.2	-1.9
LPEL				Sg	**Sb**	02 08 44.4	-1.3
	2μm,0.6s						
OFFI	**Offida**	0.63	16	Pg	**Pn**	02 08 37.3	-1.7
	7μm,0.7s						
OFFI	**Offida**	0.63	16	Pg	**Pn**	02 08 37.3	-1.7
	7μm,0.7s						
POFI	**Posta Fibreno**	0.65	162	Pg	**Pg**	02 08 35.2	-1.7
	802nm,0.7s						
POFI	**Posta Fibreno**	0.65	162	Pg	**Pg**	02 08 35.2	-1.7
	802nm,0.7s						
CAFR	**Castel Frentan**	0.68	99	Pg	**Pb**	02 08 36.9	-1.1
	2μm,0.4s						
CAFR	**Castel Frentan**	0.68	99	Pg	**Pb**	02 08 36.9	-1.1
	2μm,0.4s						
SDI	**San Donato**	0.68	156	Pg	**Pg**	02 08 35.9	-1.6
SDI	**San Donato**	0.68	156	Pg	**Pg**	02 08 35.9	-1.6
CESX	**Cesi**	0.70	294	Pg	**Pn**	02 08 38.0	-1.9
	710nm,0.7s						
CESX	**Cesi**	0.70	294	Pg	**Pn**	02 08 38.0	-1.9
	710nm,0.7s						
FDMO	**Fiordimonte**	0.75	340	Pg	**Pn**	02 08 38.4	-2.3
	432nm,0.5s						
FDMO	**Fiordimonte**	0.75	340	Pg	**Pn**	02 08 38.4	-2.3
	432nm,0.5s						
RMP	**Rome, Mte Porz**	0.76	227	Pg	**Pg**	02 08 37.8	-1.2
	1μm,0.6s						
RMP	**Rome, Mte Porz**	0.76	227	Pg	**Pg**	02 08 37.8	-1.2
	1μm,0.6s						
CESI	**CESI - Serrava**	0.78	329	Pg	**Pn**	02 08 39.0	-2.1
	243nm,0.6s						
CESI	**CESI - Serrava**	0.78	329	Pg	**Pn**	02 08 39.0	-2.1
	243nm,0.6s						
GIUL	**Giuliano Di Ro**	0.79	190	Pg	**Pg**	02 08 37.6	-1.9
GIUL	**Giuliano Di Ro**

NVLJ					Sn	**Sb**	02 09 37.1	-1.4
MAIM	**Mastiano**	**2.68**	**307**		P	Pb	02 09 09.0	-3.1
STON	**Ston**	**3.19**	**79**	*e*	Pn	**Pn**	02 09 15.2	+1.0
STON					Sn	**Sn**	02 09 53.4	+1.3
STON	**Ston**	**3.19**	**79**	*e*	Pn	**Pn**	02 09 15.1	+1.0
STON					Sn	**Sn**	02 09 53.3	+1.3
SKDS	**Skadanscina**	**3.24**	**7**	*i*	Pn	**Pn**	02 09 16.3	+1.4
SKDS				*i*	Sn	**Sb**	02 09 56.3	-4.7
SKDS	**Skadanscina**	**3.24**	**7**	*i*	Pn	**Pn**	02 09 16.3	+1.4
SKDS				*i*	Sn	**Sb**	02 09 56.3	-4.7
PGF	**Pioggiola**	**3.30**	**275**	*e*	Pn	**Pn**	02 09 17.3	+1.5
PGF				*e*	Sn	**Sn**	02 09 57.5	+2.6
	34nm,0.9s							
PGF	**Pioggiola**	**3.30**	**275**	*e*	Pn	**Pn**	02 09 17.3	+1.5
PGF				*e*	Sn	**Sn**	02 09 57.5	+2.6
	17nm,0.9s							
VOY	**Vojsko**	**3.71**	**5**	*e*	Pn	**Pn**	02 09 22.9	+1.5
VOY				*e*			02 09 40.2	
VOY				*e*			02 10 45.2	
VOY	**Vojsko**	**3.71**	**5**	*e*	Pn	**Pn**	02 09 22.9	+1.5
PDKS	**Podkum**	**3.89**	**16**	*i*	Pn	**Pn**	02 09 25.3	+1.4
PDKS	**Podkum**	**3.89**	**16**	*i*	Pn	**Pn**	02 09 25.3	+1.4
PDG	**Podgorica**	**4.31**	**87**	*e*	Pn	Pn	02 09 32.0	+2.5
PDG				*e*	Sn	**Sn**	02 10 22.8	+3.2
PDG	**Podgorica**	**4.31**	**87**	*e*	Pn	Pn	02 09 32.0	+2.5
PDG				*e*	Sn	**Sn**	02 10 22.8	+3.2
ABTA	**Abfaltersbach**	**4.46**	**352**	⇑*i*	Pn	Pn	02 09 33.7	+1.9
	SNR=25							
ABTA	**Abfaltersbach**	**4.46**	**352**		Pn	Pn	02 09 33.7	+1.9
	SNR=25							
BBLS	**Lazići**	**4.62**	**69**	*e*	Pn		02 09 36.3	+2.3
BBLS				*e*	Sn	**Sn**	02 10 30.1	+2.5
BBLS	**Lazići**	**4.62**	**69**	*e*	Pn		02 09 36.3	+2.3
BBLS				*e*	Sn	**Sn**	02 10 30.1	+2.5
SBF	**Sospel**	**4.66**	**291**	*e*	Pn	**Pn**	02 09 35.7	+1.3
SBF				*e*	Sn	**Sn**	02 10 25.8	-2.6
	39nm,0.9s							
SBF	**Sospel**	**4.66**	**291**	*e*	Pn	**Pn**	02 09 35.7	+1.3
SBF				*e*	Sn	**Sn**	02 10 25.8	-2.6
	20nm,0.9s							
TIR	**Tirane**	**4.90**	**99**	*e*	Pn	Pn	02 09 40.0	+2.3
TIR	**Tirane**	**4.90**	**99**	*e*	Pn		02 09 40.0	+2.3
FETA	**Feichten**	**5.07**	**338**	⇓*i*	Pn	Pn	02 09 42.9	+2.7
	SNR=7.0							
FETA	**Feichten**	**5.07**	**338**		Pn	Pn	02 09 42.9	+2.7
	SNR=7.0							
IVAS	**Ivanjica**	**5.08**	**74**	*e*	Pn	**Pn**	02 09 42.2	+2.0
IVAS	**Ivanjica**	**5.08**	**74**	*e*	Pn	**Pn**	02 09 42.2	+2.0
DIVS	**Divibare**	**5.10**	**68**	*e*	Pn	**Pn**	02 09 42.4	+1.9
DIVS	**Divibare**	**5.10**	**68**	*e*	Pn	**Pn**	02 09 42.4	+1.9
DAVOX	**Davos/Dischmat**	**5.12**	**331**		Pn	Pn	02 09 44.4	+3.4
	1.2nm,0.3s,baz=157,slow=15,SNR=10							
DAVOX					Sn	**Sn**	02 10 44.0	+4.0
	0.4nm,0.3s,baz=126,slow=17,SNR=3.7							
FRF	**La Foret Royal**	**5.14**	**286**	*e*	Pn	**Pn**	02 09 42.0	+1.0
FRF	**La Foret Royal**	**5.14**	**286**	*e*	Pn	**Pn**	02 09 42.0	+1.0
LMR	**La Mourre**	**5.20**	**283**	*e*	Pn	**Pn**	02 09 42.6	+0.8
LMR	**La Mourre**	**5.20**	**283**	*e*	Pn	**Pn**	02 09 42.6	+0.8
MBDF	**Montbardon**	**5.41**	**298**	*e*	P	Pn	02 09 47.8	+3.0
MBDF	**Montbardon**	**5.41**	**298**	*e*	P	Pn	02 09 47.8	+3.0
GRUS	**Gruza**	**5.54**	**71**	*e*	Pn	**Pn**	02 09 48.5	+1.9
GRUS				*e*	Sn	**Sn**	02 10 50.5	+0.3
GRUS	**Gruza**	**5.54**	**71**	*e*	Pn	**Pn**	02 09 48.5	+1.9
GRUS				*e*	Sn	**Sn**	02 10 50.5	+0.3
SELS	**Selova**	**5.72**	**79**	*e*	Pn	**Pn**	02 09 50.8	+1.8
SELS	**Selova**	**5.72**	**79**	*e*	Pn	**Pn**	02 09 50.8	+1.8
LPG	**La Plagne**	**5.78**	**305**	*e*	P	Pn	02 09 53.7	+3.7
LPG	**La Plagne**	**5.78**	**305**	*e*	P	Pn	02 09 53.7	+3.7
LPL	**La Plagne**	**5.80**	**306**	*e*	P	Pn	02 09 53.8	+3.6
LPL	**La Plagne**	**5.80**	**306**	*e*	P	Pn	02 09 53.8	+3.6
SMRF	**Simiane la Rot**	**5.99**	**289**	*e*	P	Pn	02 09 55.1	+2.5
SMRF	**Simiane la Rot**	**5.99**	**289**	*e*	P	Pn	02 09 55.1	+2.5
ORIF	**Oris-en-Rattie**	**6.07**	**298**	*e*	P	Pn	02 09 58.4	+4.6
BARS	**Barje**	**6.20**	**83**	*e*	Pn	**Pn**	02 09 57.4	+1.8
BARS	**Barje**	**6.20**	**83**	*e*	Pn	**Pn**	02 09 57.4	+1.8
GERES	**GERESS Array B**	**6.51**	**2**		Pn	**Pn**	02 10 01.2	+1.3
	0.5nm,0.3s,baz=175,slow=13,SNR=18							
GERES					Sn	**Sn**	02 11 15.2	+1.1
	0.4nm,0.3s,baz=181,slow=25,SNR=3.7							
KHC	**Kasperske Hory**	**6.80**	**1**	*e*	PN	**Pn**	02 10 04.9	+1.1
KHC				ex		x	02 10 15.3	
KHC				*e*	SN	**Sn**	02 11 19.9	-1.2
KHC	**Kasperske Hory**	**6.80**	**1**		Pn	**Pn**	02 10 04.9	+1.1
ZAPS	**Zavoj**	**6.82**	**79**	*e*	Pn	**Pn**	02 10 05.9	+1.7
ZAPS				*e*	Sn	**Sn**	02 11 21.2	-0.6
VIVF	**Saint-Julien-l**	**6.85**	**295**	*e*	Pn	Pn	02 10 07.1	+2.6
VIVF	**Saint-Julien-l**	**6.85**	**295**	*e*	Pn	Pn	02 10 07.1	+2.6
HINF	**Hinteralfeld**	**7.20**	**322**	*e*	Pn	**Pn**	02 10 09.7	+0.4
HINF				*e*	Sn	**Sn**	02 11 26.2	-4.7
	4.8nm,0.6s							
HINF	**Hinteralfeld**	**7.20**	**322**	*e*	Pn	**Pn**	02 10 09.7	+0.4
VYHS	**Vyhne**	**7.23**	**30**	*e*	PN	**Pn**	02 10 08.6	-1.1
VYHS				*e*	SN	**Sn**	02 11 32.0	+0.3
KEST	**Kesra**	**7.32**	**207**		Pn	Pn	02 10 17.1	+6.0
	0.2nm,0.3s,baz=285,slow=7.1,SNR=16							
CDF	**Champ du Feu**	**7.47**	**327**	*e*	Pn	**Pn**	02 10 13.4	+0.4
CDF				*e*	Sn	**Sn**	02 11 33.2	-4.4
	1.1nm,0.3s							
CDF	**Champ du Feu**	**7.47**	**327**	*e*	Pn	**Pn**	02 10 13.4	+0.4
HAU	**Haudompre**	**7.57**	**321**	*e*	Pn	**Pn**	02 10 15.1	+0.8
HAU				*e*	Sn	Sn	02 11 33.8	-6.2
	7.0nm,0.5s							
HAU	**Haudompre**	**7.57**	**321**	*e*	Pn	**Pn**	02 10 15.1	+0.8
PRU	**Pruhonice**	**7.69**	**5**	*e*	SN	**Sn**	02 11 41.5	-1.5
SMF	**Signal de Mont**	**8.10**	**305**	*e*	Pn	**Pn**	02 10 22.8	+1.1
SMF	**Signal de Mont**	**8.10**	**305**	*e*	Pn	**Pn**	02 10 22.8	+1.1
PAGF	**Fort de Pagny**	**8.25**	**322**	*e*	Pn	**Pn**	02 10 24.7	+1.0
PAGF	**Fort de Pagny**	**8.25**	**322**	*e*	Pn	**Pn**	02 10 24.7	+1.0
SFTF	**Sexfontaines**	**8.34**	**318**	*e*	Pn	**Pn**	02 10 25.7	+0.8
SFTF	**Sexfontaines**	**8.34**	**318**	*e*	Pn	**Pn**	02 10 25.7	+0.8
AVF	**Avril sur Loir**	**8.47**	**305**	*e*	Pn	**Pn**	02 10 27.4	+0.7
AVF	**Avril sur Loir**	**8.47**	**305**	*e*	Pn	**Pn**	02 10 27.4	+0.7
MEZF	**Maizieres J'vi**	**8.53**	**319**	*e*	Pn	**Pn**	02 10 28.4	+0.9
MEZF	**Maizieres J'vi**	**8.53**	**319**	*e*	Pn	**Pn**	02 10 28.4	+0.9
CRVS	**Cervenica-Dubn**	**8.64**	**38**	*e*	PN	**Pn**	02 10 28.8	-0.2
BGF	**Bois d'Agland**	**8.68**	**303**	*e*	Pn	**Pn**	02 10 30.8	+1.3
BGF	**Bois d'Agland**	**8.68**	**303**	*e*	Pn	**Pn**	02 10 30.8	+1.3
MLR	**Muntele Rosu**	**9.56**	**66**		Pn	Pn	02 10 43.9	+2.2
	0.0nm,0.3s,baz=240,slow=8.1,SNR=7.4							
FINES	**FINESS Array B**	**20.59**	**17**		P	Pn	02 13 05.6	+0.5
	1.4nm,0.9s,baz=195,slow=9.9,SNR=3.3							
TORD	**Torodi Ar. Bea**	**30.82**	**203**		P	**P**	02 14 42.3	+2.3
	0.1nm,0.5s,baz=16,slow=9.2,SNR=5.0							
MKAR	**Makanchi Array**	**47.83**	**60**		P	**P**	02 17 02.8	+1.3
	0.2nm,0.5s,baz=286,slow=8.0,SNR=2.8							
YKA	**Yellowknife Ar**	**67.54**	**337**		P	P	02 19 22.5	+2.6
	0.1nm,0.5s,baz=40,slow=6.1,SNR=2.6							

*ISCJB **25** 02:09:11.9±0.6,38°.37N±0°.05×39°.25E±0°.04, h12km±5km, Error ellipse: s-maj=8.8km s-min=5.2km az=7.9*
*CSEM **25** 02:09:11.3±0.1,38°.38N×39°.25E, h15km, MD2.2, Error ellipse: s-maj=3.7km s-min=2.6km az=6.0*
*DDA **25** 02:09:11.2, 38°.29N×39°.22E, h3km, MD2.8*
*ISK **25** 02:09:11.5, 38°.38N×39°.24E, h12km, MD2.2*

ISC 25 02:09:11.4±1.0, 38°.37N±0°.04×39°.25E±0°.03, h13km±6km, n12, σ0°54/24, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVRC	**Sivrice-ELAZID**	**0.04**	**84**	*e*PG	**Pg**	**02 09 14.1**	**-0.1**
SVRC				*e*SG	**Sg**	**02 09 15.7**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.04**	**84**	*e*Pg	**Pg**	**02 09 14.1**	**-0.1**
SVRC				*e*Sg	**Sg**	**02 09 15.7**	**-0.3**
ELZG	**Elazig**	**0.24**	**301**	*i* P	**Pb**	**02 09 17.5**	**-0.3**
ELZG				*i* S	**Sg**	**02 09 21.8**	**+1.4**
ELZG	**Elazig**	**0.24**	**301**	*i* P	**Pb**	**02 09 17.5**	**-0.3**
ELZG				*i* S	**Sg**	**02 09 21.8**	**+1.4**
PTK	**Pertek**	**0.53**	**12**	*e*PG	**Pg**	**02 09 21.9**	**0.0**
PTK				*e*SG	**Sb**	**02 09 30.0**	**-0.3**
PTK	**Pertek**	**0.53**	**12**	*e*Pg	**Pg**	**02 09 21.9**	**0.0**
PTK				*e*Sg	**Sb**	**02 09 30.0**	**-0.3**
MALT	**Malatya**	**0.65**	**265**	*e*PG	**Pb**	**02 09 24.4**	**-0.2**
MALT				*e*SG	**Sb**	**02 09 33.7**	**0.0**
MALT	**Malatya**	**0.65**	**265**	*e*Pg	**Pb**	**02 09 24.4**	**-0.2**
MALT				*e*Sg	**Sb**	**02 09 33.7**	**0.0**
DIYA	**Diyarbakir**	**0.82**	**123**	*i* P	**Pb**	**02 09 27.5**	**0.0**
DIYA				*i* S	**Sb**	**02 09 38.9**	**+0.4**
DIYA	**Diyarbakir**	**0.82**	**123**	*i* P	**Pb**	**02 09 27.5**	**0.0**
DIYA				*i* S	**Sb**	**02 09 38.9**	**+0.4**
AKCD	**Akcadag**	**1.05**	**266**	*i* P	**Pb**	**02 09 30.9**	**-0.6**
AKCD				*i* S	**Sg**	**02 09 45.2**	**-0.1**
AKCD	**Akcadag**	**1.05**	**266**	*i* P	**Pb**	**02 09 30.9**	**-0.6**
AKCD				*i* S	**Sg**	**02 09 45.2**	**-0.1**

*FUNV **25** 02:12:08.7, 5°.03N×73°.78W, h124km, MW3.0*
*ISCJB **25** 02:12:09.6±0.9, 5°.3N±0°.1×73°.6W±0°.1, h150km, mb3.1/1, Error ellipse: s-maj=27.5km s-min=7.7km az=43.8*
*IDC **25** 02:12:11.7±3.4, 5°.59N×74°.74W, h134km±103km, mb2.8/1, mb1 3.2/1, mb1mx2.8/20, mbtmp2.8/1, Error ellipse: s-maj=542.1km s-min=47.8km az=88.0*

ISC 25 02:12:09.8±1.3, 5°.3N±0°.1×73°.6W±0°.1, h150km, n15, σ0°76/19, 1C, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**0.86**	**243**	P	**Pn**	**02 12 34.5**	**+0.6**
	12nm,0.3s,baz=96,slow=22,SNR=32						
ROSC				S	**Sn**	**02 12 51.8**	**-0.4**
	24nm,0.3s,baz=52,slow=21,SNR=40						
CAPV	**Capacho**	**2.88**	**26**	⇑*e*P	**Pn**	**02 12 57.0**	**+1.1**
CAPV				*e*S	**Sn**	**02 13 31.2**	**-0.3**
SOCV	**Socops**	**4.04**	**42**	*e*P	**Pn**	**02 13 11.5**	**+0.8**
SOCV				*e*S	**Sn**	**02 13 58.6**	**+0.7**
VIGV	**El Vigia**	**4.18**	**31**	*e*P	**Pn**	**02 13 13.0**	**+0.5**
VIGV				*e*S	**Sn**	**02 14 00.8**	**-0.5**
QARV	**Quebrada Arrib**	**5.77**	**31**	*e*P	**Pn**	**02 13 34.5**	**+0.9**
SANV	**Sanarito**	**5.81**	**43**	*e*P	**Pn**	**02 13 35.2**	**+1.0**
CURV	**Curarigua**	**5.93**	**37**	*e*P	**Pn**	**02 13 36.5**	**+0.8**
DABV	**Dabajuro**	**6.33**	**27**	*e*P	**Pn**	**02 13 41.1**	**0.0**
SIQV	**Siquisique**	**6.53**	**35**	*e*P	**Pn**	**02 13 43.8**	**+0.2**
BAUV	**El Baul**	**6.59**	**56**	*e*P	**Pn**	**02 13 43.8**	**-0.7**
MAPV	**Macapo**	**6.81**	**48**	*e*P	**Pn**	**02 13 47.4**	**+0.1**
MONV	**Montecano**	**7.55**	**28**	*e*P	**Pn**	**02 13 56.7**	**-0.6**
TURV	**Turiamo**	**7.67**	**47**	*e*P	**Pn**	**02 13 58.8**	**0.0**
YKA	**Yellowknife Ar**	**64.58**	**340**	P	**P**	**02 22 29.6**	**-1.1**
	0.2nm,0.6s,baz=131,slow=6.7,SNR=5.7						
WRA	**Warramunga Arr**	**149.18**	**239**	PKPbc	**PKPbc**	**02 31 42.6**	**+1.0**
	0.1nm,0.6s,baz=115,slow=3.6,SNR=2.7						

IDC 25 02:38:45.6±15.0, 18°.99S×177°.53W, h520km±132km, mb3.0/4, mb1 3.2/4, mb1mx2.9/20, mbtmp3.0/4, Error ellipse: s-maj=202.3km s-min=43.8km az=136.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPT2	**Papeete2**	**26.57**	**92**	*e*LR	LR	02 43 39.2	
	58nm,24.5s						
WRA	**Warramunga Arr**	**45.27**	**260**	P	P	02 46 16.4	-0.3
	0.9nm,0.3s,baz=98,slow=7.8,SNR=32						
WRA				PcP	PcP	02 47 44.8	-0.9
	0.1nm,0.4s,baz=95,slow=3.9,SNR=2.9						
ASAR	**Alice Springs**	**45.31**	**255**	P	P	02 46 17.1	0.0
	1.4nm,0.4s,baz=87,slow=8.1,SNR=23						
FITZ	**Fitzroy Crossi**	**53.68**	**261**	P	P	02 47 18.7	0.0
	0.9nm,0.4s,baz=97,slow=4.1,SNR=17						
ILAR	**Eielson Array**	**86.75**	**13**	P	P	02 50 33.6	-0.2
	0.2nm,0.8s,baz=204,slow=4.9,SNR=2.9						
BRTR	**Keskin Array B**	**146.13**	**314**	PKPbc	PKPdf	02 57 26.7	+0.9
	0.4nm,0.7s,baz=40,slow=2.5,SNR=3.1						
MMAI	**Mount Meron Ar**	**147.42**	**302**	PKPbc	PKPbc	02 57 31.5	+0.1
	0.9nm,0.5s,baz=72,slow=6.2,SNR=4.4						

NNC 25 02:43:21.1±1.7, 42°.39N×80°.39E, h0km, mb3.0, mpv3.9, 5C-2D, Error ellipse: s-maj=20.1km s-min=6.3km az=143.0, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TKM2	**Tokmak 2**	**3.57**	**280**	⇑Pn	Pn	02 44 18.3	+0.2
	758nm,0.1s						
TKM2				⇓Lg	Lg	02 45 14.3	
	7.8nm,0.4s						
MK31	**Makanchi Array**	**4.61**	**17**	⇑Pn	Pn	02 44 34.5	+2.5
	0.2nm,0.2s,baz=204,slow=14,SNR=16						
MK31				⇑Sn	Sb	02 45 32.7	-6.1
	0.8nm,0.5s,baz=193,slow=24,SNR=3.9						
MK31				⇓Lg	Lg	02 45 47.7	
	3.3nm,0.8s,baz=166,slow=38,SNR=3.6						
KK31	**Karatay Array**	**7.30**	**279**	⇑Pg	Pg	02 45 35.0	-6.1
	0.3nm,0.5s						
KK31				⇑Lg	Lg	02 47 08.1	
	0.7nm,0.6s,baz=87,slow=22,SNR=4.5						

*ISCJB **25** 02:53:56.0±0.5, 50°.28N±0°.04×18°.75E±0°.03, h0km, Error ellipse: s-maj=5.7km s-min=2.6km az=11.1*
*CSEM **25** 02:53:56.6±0.3, 50°.34N×18°.76E, h2km, ML2.7/4, Error ellipse: s-maj=7.4km s-min=2.9km az=6.0*
*IPEC **25** 02:53:57.4±0.2, 50°.27N×18°.82E, h1km±1km, ML1.6/3, Error ellipse: s-maj=2.4km s-min=1.1km az=168.0*
*WAR **25** 02:53:57.2, 50°.28N×18°.82E*
*PRU **25** 02:53:57.6, 50°.28N×18°.75E, h0km*

ISC 25 02:53:57.4±0.8, 50°.28N±0°.05×18°.80E±0°.02, h0km, n24, σ0°92/45, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.61**	**224**	*e*PG	**Pg**	**02 54 08.9**	**-0.1**
OKC				*e*SG	**Sg**	**02 54 14.7**	**-2.1**
	comp=Z,15nm,0.4s						
OKC	**Ostrava-Krasne**	**0.61**	**224**	Pg	**Pg**	**02 54 08.9**	**-0.1**
OJC	**Ojcow**	**0.65**	**95**	*e*Pg	**Pg**	**02 54 09.8**	**+0.1**
OJC				*e*Sg	**Sg**	**02 54 18.6**	**+0.5**
OJC	**Ojcow**	**0.65**	**95**	*e*Pg	**Pg**	**02 54 09.5**	**-0.2**
	baz=275						
OJC				*e*Sg	**Sg**	**02 54 18.6**	**+0.5**
MORC	**Moravsky Berou**	**0.95**	**239**	*e*Pg	**Pg**	**02 54 15.4**	**-0.2**
MORC				*e*Sg	**Sg**	**02 54 27.5**	**-0.4**
	10nm,0.2s,baz=59						
NIE	**Niedzica**	**1.31**	**131**	*e*Pg	**Pn**	**02 54 22.4**	**-0.5**
NIE				*e*Sg	**Sn**	**02 54 40.2**	**-0.9**
NIE	**Niedzica**	**1.31**	**131**	*e*Pg	**Pn**	**02 54 22.4**	**-0.5**
NIE				*e*Sg	**Sn**	**02 54 40.2**	**-0.9**
KRLC	**Kraliky**	**1.31**	**262**	*e*PG	**Pg**	**02 54 21.3**	**-1.2**
KRLC				*e*SG	**Sg**	**02 54 39.0**	**-0.4**
KRLC	**Kraliky**	**1.31**	**262**	Pg	**Pg**	**02 54 21.3**	**-1.2**
KRLC				Sg	**Sg**	**02 54 39.0**	**-0.4**
DPC	**Dobruska-Polom**	**1.59**	**274**	*e*PG	**Pn**	**02 54 26.2**	**-0.6**
DPC				*e*SG	**Sn**	**02 54 47.6**	**-0.4**
	comp=Z,4.4nm,0.4s						
DPC	**Dobruska-Polom**	**1.59**	**274**	Pg	**Pn**	**02 54 26.2**	**-0.6**
DPC	**Dobruska-Polom**	**1.59**	**274**	*e*Pn	**Pn**	**02 54 26.8**	**0.0**
	baz=92						
DPC				Sg	**Sn**	**02 54 47.6**	**-0.4**
	4.4nm,0.4s						
KSP	**Ksiaz**	**1.69**	**290**	*e*Pn	**Pn**	**02 54 27.5**	**-0.7**
KSP				*i* Pg	**Pb**	**02 54 29.3**	**-0.1**
KSP				*e*Sg	**Sb**	**02 54 51.5**	**+0.3**
VRAC	**Vranov**	**1.73**	**237**	*e*Pn	**Pn**	**02 54 28.6**	**0.0**
VRAC				*e*Sg	**Sn**	**02 54 51.6**	**+0.2**
	8.0nm,0.3s,baz=56						
VYHS	**Vyhne**	**1.79**	**179**	*e*PN	**Pn**	**02 54 28.8**	**-0.7**
VYHS				*e*SN	**Sn**	**02 54 51.9**	**-1.0**
UPC	**Upice**	**1.80**	**278**	*e*PG	**Pb**	**02 54 30.5**	**-0.6**
UPC	**Upice**	**1.80**	**278**	Pg	**Pb**	**02 54 30.5**	**-0.6**
KRUC	**Moravsky**	**1.98**	**233**	*e*Pn	**Pn**	**02 54 32.2**	**+0.1**
	baz=52						
KRUC				*e*Sn	**Sn**	**02 54 58.5**	**+0.9**
	2.9nm,0.2s,baz=52						
CRVS	**Cervenica-Dubn**	**2.22**	**127**	*e*PN	**Pn**	**02 54 34.9**	**-0.5**
CRVS				*e*SN	**Sn**	**02 55 03.0**	**-0.5**
KOLS	**Kolonicke sedl**	**2.63**	**119**	*e*PN	**Pn**	**02 54 41.0**	**-0.1**
KOLS				*e*SN	**Sn**	**02 55 13.1**	**-0.6**
PRU	**Pruhonice**	**2.75**	**266**	*e*PG	**Pb**	**02 54 47.6**	**+0.2**
PRU				*e*SG	**Sb**	**02 55 23.5**	**+1.8**
PRU	**Pruhonice**	**2.75**	**266**	Pg	**Pb**	**02 54 47.6**	**+0.2**
PRU				Sg	**Sb**	**02 55 23.5**	**+1.8**
BRG	**Berggiesshubel**	**3.15**	**283**	PG	**Pb**	**02 54 54.1**	**-0.1**
BRG				SG	**Sg**	**02 55 39.1**	**+0.6**
	1.4nm,0.6s						
KHC	**Kasperske Hory**	**3.58**	**253**	*e*PG	**Pb**	**02 55 02.3**	**+0.8**
KHC				*e*SG	**Sb**	**02 55 48.9**	**+3.5**
	comp=Z,3.1nm,0.5s						

MEX 25 03:04:01.2±0.4, 18°.03N×101°.89W, h16km±6km, MD3.5, Guerrero

*ISK **25** 03:11:31.4, 39°.15N×28°.94E, h17km, MD2.4*
*ISCJB **25** 03:11:32.6±0.6, 39°.16N±0°.04×28°.94E±0°.05, h26km±8km, Error ellipse: s-maj=7.9km s-min=5.6km az=136.7*
*CSEM **25** 03:11:32.4±0.2, 39°.17N×28°.93E, h20km, MD2.8, Error ellipse: s-maj=5.4km s-min=3.6km az=100.0*
*DDA **25** 03:11:34.8, 39°.03N×28°.99E, h7km, MD2.8*

ISC 25 03:11:32.6±1.0, 39°.16N±0°.04×28°.97E±0°.04, h24km±9km, n16, σ0°55/26, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEMI	**Demirci**	**0.23**	**240**	*i* P	**Pb**	**03 11 38.9**	**+0.3**
DEMI				*i* S	**Sb**	**03 11 42.4**	**-0.3**
DEMI	**Demirci**	**0.23**	**240**	*i* P	**Pb**	**03 11 38.9**	**+0.3**
DEMI				*i* S	**Sb**	**03 11 42.4**	**-0.3**
TVSB	**Tavsanli**	**0.48**	**53**	PG	**Pb**	**03 11 42.0**	**-0.4**
TVSB				*e*SG	**Sb**	**03 11 49.3**	**+0.1**
KULA	**Kula-Manisa**	**0.69**	**201**	*e*PG	**Pb**	**03 11 45.3**	**-0.7**
KULA				*e*SG	**Sb**	**03 11 54.3**	**-0.8**
KULA	**Kula-Manisa**	**0.69**	**201**	*e*Pg	**Pb**	**03 11 45.3**	**-0.7**
KULA				*e*Sg	**Sb**	**03 11 54.3**	**-0.8**
MANT	**Manisa**	**0.74**	**206**	*i* P	**Pb**	**03 11 47.4**	**+0.5**
MANT				*i* S	**Sb**	**03 11 56.4**	**-0.4**
MANT	**Manisa**	**0.74**	**206**	*i* P	**Pb**	**03 11 47.4**	**+0.5**
MANT				*i* S	**Sb**	**03 11 56.4**	**-0.4**
KHAL	**Karahalli**	**0.89**	**153**	*i* P	**Pn**	**03 11 50.1**	**+0.5**
KHAL				*i* S	**Sb**	**03 11 60.0**	**-0.8**
KHAL	**Karahalli**	**0.89**	**153**	*i* P	**Pn**	**03 11 50.1**	**+0.5**
KHAL				*i* S	**Sb**	**03 12 00.0**	**-0.8**
ALT	**Altintas**	**0.89**	**96**	*e*PG	**Pb**	**03 11 49.8**	**+0.3**
ALT				*e*SG	**Sn**	**03 12 02.8**	**+0.8**
GONE	**Gonen-Balikesi**	**1.33**	**312**	*e*PN	**Pn**	**03 11 55.8**	**+0.2**
GONE	**Gonen-Balikesi**	**1.33**	**312**	*e*PN	**Pn**	**03 11 55.8**	**+0.2**
ARMT	**Armutlu**	**1.41**	**357**	*e*PN	**Pn**	**03 11 56.9**	**+0.2**
ARMT	**Armutlu**	**1.41**	**357**	*e*PN	**Pn**	**03 11 56.9**	**+0.2**
YLV	**Yalova**	**1.44**	**12**	*e*PN	**Pn**	**03 11 56.8**	**-0.4**
YLV	**Yalova**	**1.44**	**12**	*e*PN	**Pn**	**03 11 56.8**	**-0.4**

*ISCJB **25** 03:15:56.6±0.5, 39°.10N±0°.04×27°.30E±0°.04, h11km±6km, Error ellipse: s-maj=6.7km s-min=4.7km az=27.0*
*DDA **25** 03:15:57.0, 39°.09N×27°.30E, h7km, MD2.9*
*ISK **25** 03:15:56.1, 39°.10N×27°.33E, h14km, MD2.9*
*CSEM **25** 03:15:57.0±0.2, 39°.10N×27°.33E, h15km, MD2.9, Error ellipse: s-maj=4.2km s-min=3.3km az=59.0*

ISC 25 03:15:56.8±1.0, 39°.10N±0°.03×27°.32E±0°.03, h13km±10km, n38, σ0°50/49, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKS	**Akhisar**	**0.44**	**120**	*e*PG	**Pg**	**03 16 05.7**	**+0.1**
AKS				*e*SG	**Sg**	**03 16 11.8**	**+0.4**
AKS	**Akhisar**	**0.44**	**120**	*e*Pg	**Pg**	**03 16 05.7**	**+0.1**
AKS				*e*Sg	**Sg**	**03 16 11.8**	**+0.4**
AKHS	**Akhisar**	**0.44**	**120**	*i* P	**Pb**	**03 16 06.3**	**-0.2**
AKHS				*i* S	**Sb**	**03 16 13.5**	**+0.5**
AKHS	**Akhisar**	**0.44**	**120**	*i* P	**Pb**

PKI	Pulchoki	15.21	122	*e*P	P	03 20 07.4	+0.9
	38nm,0.7s						
KURK	Kurchatov	15.24	19	⇑P	P	03 20 06.6	+0.3
	2.8nm,1.1s						
GUN	Gumba	15.32	120	*e*P	P	03 20 09.2	+1.4
	7.7nm,0.3s						
VOSK	Vostochnaya	16.19	0	⇓P	P	03 20 16.5	-0.3
	2.2nm,0.9s						
RAMN	Ramite	16.42	121	*e*P	P	03 20 19.5	-0.3
ZRNK	Zerenda	16.48	356	⇓P	Pn	03 20 21.6	+1.0
	2.6nm,0.5s						
BVA0	Borovoye Array	16.50	359	⇑P	Pn	03 20 21.6	+0.7
	0.2nm,0.6s,baz=190,slow=12,SNR=11						
BVAR	Borovoye Array	16.50	359	P	Pn	03 20 21.3	+0.4
	0.7nm,0.3s,baz=154,slow=10,SNR=13						
BRVK	Borovoye	16.54	359	⇑P	Pn	03 20 21.8	+0.4
	3.1nm,0.7s						
AKTO	Aktyubinsk	16.70	330	⇑P	Pn	03 20 23.9	+0.5
	1.0nm,0.6s						
AKTO				⇓S	S	03 23 25.9	-1.2
	0.3nm,0.8s						
AKTO	Aktyubinsk	16.70	330	P	Pn	03 20 23.6	+0.2
	baz=129,slow=14						
AKTO				S	S	03 23 27.2	+0.2
	baz=53,slow=20						
ODAN	Odare	17.02	120	*e*P	Pn	03 20 27.9	+0.3
ZALV	Zalesovo Beam	19.93	25	P	P	03 20 58.2	+0.8
	3.4nm,0.4s,baz=220,slow=12,SNR=16						
FINES	FINESS Array B	37.40	326	P	P	03 23 36.2	+1.5
	1.9nm,0.9s,baz=110,slow=10,SNR=5.1						
ARCES	ARCESS Array B	41.08	338	P	P	03 24 06.7	+1.7
	4.3nm,1.0s,baz=110,slow=7.8,SNR=5.9						
HFS	Hagfors	42.98	322	P	P	03 24 21.8	+1.3
	1.2nm,0.5s,baz=97,slow=12,SNR=10						
NB2	NORSAR Subarra	44.30	323	P	P	03 24 32.0	+1.0
	comp=Z,0.6nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.30	323	P	P	03 24 32.0	+1.0
	comp=Z,0.7nm,0.5s,baz=96,slow=7.7,SNR=4.8						
TORD	Torodi Ar. Bea	65.61	269	P	P	03 27 03.2	-1.1
	comp=Z,0.1nm,0.4s,baz=46,slow=5.8,SNR=4.1						
YKA	Yellowknife Ar	81.22	3	P	P	03 28 35.8	+1.1
	comp=Z,0.1nm,0.4s,baz=350,slow=5.5,SNR=7.3						
WRA	Warramunga Arr	82.09	122	P	P	03 28 39.1	-0.8
	comp=Z,0.6nm,0.5s,baz=325,slow=4.9,SNR=14						
ASAR	Alice Springs	84.36	125	P	P	03 28 50.2	-1.2
	comp=Z,0.7nm,0.6s,baz=302,slow=5.0,SNR=8.8						

NAO ***25*** *03:27:25.8±1.5, 70.95N×6.12W, ML3.6*
CSEM ***25*** *03:27:27.9±0.2, 70.94N×6.10W, h10km, ML3.6, Error ellipse: s-maj=5.7km s-min=3.5km az=174.0*
IDC ***25*** *03:27:28.8±0.6, 70.84N×6.88W, h0km, mb3.7/11, mb1 3.9/12, mb1mx3.7/29, mbtmp3.8/12, ML3.1/1, MS3.4/23, Ms1 3.4/23, ms1mx3.2/53, Error ellipse: s-maj=28.0km s-min=10.9km az=22.0*
REY ***25*** *03:27:31.1, 70.49N×6.09W, h10km, ML3.3, ML3.0*
BER ***25*** *03:27:31.4±3.0, 70.90N×6.51W, h10km, MD2.7, ML3.6, ML3.6(NAO)*

ISC 25 03:27:27.1±1.2, 70.85N±0.04×5.85W±0.03, h2km±9km, n84, σ1s81/75, mb3.7/12, MS3.4/18, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	0.81	281	*e*P		**Pg**		03 27 40.9	-1.8
JNE				*e*Pg		**Pb**		03 27 43.4	-0.6
JNE				*e*S		**Sg**		03 27 51.6	-1.6
JNE				AML		AML		03 27 53.0	
	comp=Z,4μm,0.2s								
JNE	**Jan Mayen East**	0.81	281	*e*P		**Pg**		03 27 40.9	-1.8
	SNR=99								
JNW	**Jan Mayen West**	0.86	283	*e*P		**Pg**		03 27 41.4	-2.3
JNW				*e*Pg		**Pb**		03 27 43.8	-1.0
JNW				AML		AML		03 27 53.8	
	comp=Z,7μm,0.4s								
JNW	**Jan Mayen West**	0.86	283	*e*P		**Pg**		03 27 41.3	-2.3
	SNR=70								
JMIC	**Jan Mayen**	0.88	280	Pg		**Pg**		03 27 41.7	-2.3
JMIC				Lg		Lg		03 27 51.1	
JMIC	**Jan Mayen**	0.88	280	*e*P		**Pg**		03 27 41.6	-2.3
JMIC				*e*Pg		**Pb**		03 27 44.2	-1.0
JMIC				*e*S		**Sg**		03 27 51.4	-4.4
JMIC				*e*Sg		**Sg**		03 27 53.4	-2.0
JMIC	**Jan Mayen**	0.88	280	Pn		**Pg**		03 27 41.8	-2.3
	comp=Z,212nm,0.3s,baz=101,slow=2.6,SNR=53								
JMIC				Sn		**Sg**		03 27 51.0	-4.4
	comp=Z,376nm,0.3s,baz=163,slow=19,SNR=67								
JMIC	**Jan Mayen**	0.88	280	*e*P		**Pg**		03 27 41.6	-2.4
	SNR=70								
JMIC	**Jan Mayen**	0.88	280	*e*Pg		**Pb**		03 27 44.2	-1.0
	SNR=98								
JMIC				Lg		Lg		03 27 51.1	
JMIC				*e*Sg		**Sg**		03 27 53.4	-2.0
	SNR=98								
JMI	**Jan Mayen**	0.95	276	*e*P		**Pg**		03 27 43.1	-2.2
JMI				*e*Pg		**Pb**		03 27 45.6	-0.7
JMI				*e*S		**Sg**		03 27 53.7	-3.9
JMI				AML		AML		03 27 59.4	
	comp=Z,2μm,0.5s								
JMI	**Jan Mayen**	0.95	276	*e*P		**Pg**		03 27 43.1	-2.2
	SNR=70								
ILEI	**Leirhofn**	5.91	226	P		**Pn**		03 28 56.2	+0.6
ILEI				S		**Sn**		03 30 03.3	-0.5
IGIL	**Gilhagi**	6.15	224	P		**Pn**		03 28 59.5	+0.6
IGIL				S		**Sn**		03 30 09.8	+0.1
IDIM	**Dimmadalsˆjs**	6.38	225	P		**Pn**		03 29 02.3	+0.3
IGRS	**Grimsstaoir**	6.47	221	P		**Pn**		03 29 03.2	-0.1
IGRS				S		**Sn**		03 30 17.6	0.0
IGRA	**Granastaoir**	6.57	227	S		**Sn**		03 30 19.0	-1.0
IREN	**Reynihlio**	6.64	223	P		**Pn**		03 29 06.0	+0.5
IGLU	**Glumsstadir**	6.84	215	P		**Pn**		03 29 08.3	0.0
IGLU				S		**Sn**		03 30 26.2	-0.4
IADA	**Aoalbol**	6.90	217	P		**Pn**		03 29 09.7	+0.6
IADA				S		**Sn**		03 30 29.0	+0.9
IHVA	**Hvannstoosfjol**	7.01	217	P		**Pn**		03 29 10.8	0.0
IMKO	**Mokollar**	7.09	219	P		**Pn**		03 29 12.6	+0.8
IVSH	**V-Sauoahnukur**	7.12	216	P		**Pn**		03 29 12.1	-0.1
IBRU	**Bruarjokull**	7.17	218	P		**Pn**		03 29 12.6	-0.3
IKRE	**Kreppuhraun**	7.27	218	P		**Pn**		03 29 15.1	+0.8
STEI	**Steigen**	7.97	101	*e*P		Pn		03 29 26.9	+3.0
KONS	**Konsvik**	8.15	113	*e*P		Pn		03 29 23.4	-2.9
KONS				*e*S		Sn		03 30 51.3	-7.5
STOK	**Stokkvaagen**	8.23	114	*e*P		**Pn**		03 29 29.1	+1.7
STOK				*e*S		Sn		03 30 57.4	-3.3
FLOS	**Flostrand**	8.33	114	*e*P		Pn		03 29 31.9	+3.2
TRO	**Tromso**	8.46	86	*e*P		**Pn**		03 29 31.3	+0.9
TRO				*e*S		Sn		03 31 01.2	-5.1
TRO	**Tromso**	8.46	86	*e*P		**Pn**		03 29 31.3	+0.9
	SNR=47								
MOR8	**Moi Rana**	8.77	112	*e*P		Pn		03 29 37.8	+3.0
MOR8				*e*S		**Sn**		03 31 11.6	-2.5
MOR8	**Moi Rana**	8.77	112	*e*P		Pn		03 29 37.8	+3.0
	SNR=47								
NSS	**Namsos**	9.24	125	*e*P		**Pn**		03 29 42.2	+1.0
NSS	**Namsos**	9.24	125	*e*P		**Pn**		03 29 42.2	+1.0
	SNR=47								
KBS	**Kingsbay**	9.28	21	Pn		**Pn**		03 29 40.8	-0.8
KBS	**Kingsbay**	9.28	21	*e*P		**Pn**		03 29 41.9	+0.2
KBS	**Kingsbay**	9.28	21	Pn		**Pn**		03 29 40.8	-0.8
KBS	**Kingsbay**	9.28	21	*e*P		**Pn**		03 29 41.9	+0.2
	SNR=47								
KTK1	**Kautokeino**	10.11	87	*e*P		Pn		03 29 55.3	+2.2
KTK1	**Kautokeino**	10.11	87	*e*P		Pn		03 29 55.3	+2.2
	SNR=47								
ARA0	**ARCESS Array S**	10.65	82	Pn		**Pn**		03 30 00.8	+0.3
	baz=290,slow=14								
ARA0				Sn		**Sn**		03 31 57.2	-2.9
	baz=275,slow=22								
ARA0	**ARCESS Array S**	10.65	82	P		**Pn**		03 30 00.8	+0.3
	baz=290,slow=14								
ARA0				S		**Sn**		03 31 57.2	-2.9
	baz=275,slow=22								
ARA0	**ARCESS Array S**	10.65	82	P		**Pn**		03 30 00.8	+0.3
	baz=290,slow=12,SNR=47								
ARCES	**ARCESS Array B**	10.65	82	Pn		**Pn**		03 30 00.7	+0.3
	comp=Z,0.2nm,0.3s,baz=297,slow=11,SNR=19								
ARCES				Sn		**Sn**		03 31 56.5	-3.7
	comp=Z,0.1nm,0.3s,baz=292,slow=20,SNR=3.0								
ARCES				LR		LR		03 33 27.1	
	comp=Z,226nm,20.5s,baz=218,slow=33								
KEV	**Kevo**	11.06	80	*e*p		**Pn**		03 30 06.5	+0.5
	comp=Z,0.4nm,0.3s								
NOA	**NORSAR Array B**	11.99	137	Pn		Pn		03 30 21.8	+2.9
	comp=Z,0.1nm,0.3s,baz=340,slow=13,SNR=3.2								
NOA				LR		LR		03 35 00.3	
	comp=Z,108nm,18.6s,baz=340,slow=37								
HFS	**Hagfors**	13.37	134	Pn		**Pn**		03 30 38.9	+1.2
	baz=331,slow=12								
HFS	**Hagfors**	13.37	134	Pn		**Pn**		03 30 38.9	+1.2
	baz=331,slow=12								
HFS	**Hagfors**	13.37	134	Pn		Pn		03 30 42.6	+4.9
	comp=Z,0.4nm,0.3s,baz=338,slow=11,SNR=22								
HFS				Sn		**Sn**		03 33 05.2	-1.6
	comp=Z,0.2nm,0.3s,baz=329,slow=25,SNR=3.4								
HFS				LR		LR		03 35 18.5	
	comp=Z,193nm,19.8s,baz=258,slow=34								
HFS	**Hagfors**	13.37	134	Pn		**Pn**		03 30 38.9	+1.2
	baz=331,slow=12,SNR=50								
KAF	**Kangasniemi**	15.32	109	*e*p		**Pn**		03 31 07.0	+3.0
	comp=Z,9.2nm,0.7s								
EKA	**Eskdalemuir Ar**	15.62	174	Pn		**P**		03 31 12.8	+0.3
	baz=358,slow=12,SNR=2.4								
FIA0	**FINESS Array S**	15.75	111	P		**Pn**		03 31 10.9	+1.2
	baz=330,slow=12								
FIA0	**FINESS Array S**	15.75	111	P		**Pn**		03 31 10.9	+1.2
	baz=330,slow=12								
FINES	**FINESS Array B**	15.75	111	Pn		**Pn**		03 31 12.4	+2.6
	comp=Z,0.2nm,0.3s,baz=327,slow=12,SNR=8.9								
FINES				LR		LR		03 36 43.2	
	comp=Z,189nm,20.5s,baz=348,slow=34								
SFJD	**Kangerlussuaq**	16.24	278	LR		LR		03 36 41.9	
	comp=Z,111nm,22.0s,baz=342,slow=35								
JOF	**Joensuu**	16.33	100	*e*p		**Pn**		03 31 18.9	+1.7
	comp=Z,3.5nm,0.7s								
JOF	**Joensuu**	16.33	100	*e*P		**Pn**		03 31 18.9	+1.7
	comp=Z,3.5nm,0.7s								
NACGM	**Naroch**	21.39	121	*e*		**P**		03 32 19.0	+3.3
GERES	**GERESS Array B**	23.92	147	P		P		03 32 48.5	+6.3
	comp=Z,0.7nm,0.8s,baz=352,slow=8.5,SNR=7.0								
GERES				LR		LR		03 41 05.5	
	comp=Z,42nm,19.5s,baz=94,slow=34								
VRAC	**Vranov**	24.03	142	LR		LR		03 41 30.3	
	comp=Z,54nm,18.2s,baz=170,slow=35								
FRB	**Frobisher Bay**	24.10	285	LR		LR		03 41 29.5	
	comp=Z,121nm,18.4s,baz=333,slow=35								
RES	**Resolute Bay**	24.29	320	LR		LR		03 41 47.2	
	comp=Z,83nm,19.6s,baz=353,slow=36								
DAVOX	**Davos/Dischmat**	25.31	154	LR		LR		03 42 32.2	
	comp=Z,33nm,19.1s,baz=66,slow=36								
AKASG	**Malin Array Be**	25.81	123	P		**P**		**03 33 02.4**	**+3.2**
	comp=Z,3.8nm,0.8s,baz=332,slow=9.3,SNR=5.8								
MLR	**Muntele Rosu**	29.74	132	LR		LR		03 46 28.3	
	comp=Z,51nm,18.6s,baz=286,slow=38								
SCHQ	**Schefferville**	30.39	270	LR		LR		03 45 15.1	
	comp=Z,120nm,18.8s,baz=20,slow=36								
AKTO	**Aktyubinsk**	35.05	91	P		P		03 34 25.6	+4.7
	comp=Z,0.9nm,0.3s,baz=288,slow=9.6								
KBZ	**Khabaz**	36.10	112	P		P		03 34 32.9	+3.0
	comp=Z,5.2nm,0.9s,baz=323,slow=5.3,SNR=15								
KBZ				LR		LR		03 49 29.1	
	comp=Z,62nm,19.9s,baz=282,slow=36								
BVAR	**Borovoye Array**	36.90	78	P		P		03 34 41.6	+4.9
	comp=Z,1.7nm,0.9s,baz=308,slow=7.4,SNR=7.7								
BRTR	**Keskin Array B**	37.13	126	P		P		03 34 44.0	+5.1
	comp=Z,1.5nm,0.7s,baz=342,slow=5.5,SNR=7.8								
YKA	**Yellowknife Ar**	38.11	315	P		**P**		**03 34 47.0**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=30,slow=8.6,SNR=14								
YKA				PcP		**PcP**		**03 37 04.2**	**+2.7**
	comp=Z,0.2nm,0.7s,baz,26,slow=2.8,SNR=8.0								
GNI	**Garni**	39.93	113	LR		LR		03 50 32.6	
	comp=Z,47nm,19.6s,baz=274,slow=34								
ZALV	**Zalesovo Beam**	40.61	65	LR		LR		03 55 02.5	
	comp=Z,20nm,18.2s,baz=72,slow=40								
KURBB	**Kurchatov Arra**	41.56	73	P		P		03 35 19.2	+3.6
	comp=Z,0.8nm,0.7s,baz=333,slow=7.1,SNR=6.4								
KURBB				LR		LR		03 52 58.6	
	comp=Z,39nm,20.4s,baz=280,slow=36								
ILAR	**Eielson Array**	42.02	336	P		**P**		**03 35 20.4**	**+1.2**
	comp=Z,0.4nm,0.9s,baz=9.2,slow=7.3,SNR=5.5								
ULM	**Lac du Bonnet**	43.64	292	LR		LR		03 53 40.9	
	comp=Z,43nm,21.4s,baz=289,slow=36								
MKAR	**Makanchi Array**	46.11	72	LR		LR		03 58 54.9	
	comp=Z,51nm,18.9s,baz=355,slow=41								
BBB	**Bella Bella**	50.55	318	LR		LR		03 57 57.6	
	comp=Z,50nm,19.1s,baz=111,slow=36								
NEW	**Newport**	51.51	307	LR		LR		04 00 00.3	
	comp=Z,45nm,18.5s,baz=193,slow=38								
PDAR	**Pinedale Array**	54.47	298	P		**P**		**03 36 56.8**	**+0.9**
	comp=Z,0.9nm,1.0s,baz=39,slow=5.7,SNR=6.0								
PDAR				LR		LR		03 58 41.5	
	comp=Z,54nm,20.5s,baz=215,slow=35								
TORD	**Torodi Ar. Bea**	57.86	171	P		P		03 37 23.6	+3.5
	comp=Z,0.6nm,1.0s,baz=346,slow=4.3,SNR=5.2								
YBH	**Yreka Blue Hor**	59.04	309	LR		LR		04 03 17.6	
	comp=Z,52nm,20.4s,baz=163,slow=37								
TXAR	**Lajitas Array**	65.11	288	P		**P**		**03 38 10.6**	**+1.5**
	comp=Z,0.4nm,0.8s,baz=59,slow=4.8,SNR=6.1								
TXAR				LR		LR		04 06 34.3	
	comp=Z,44nm,19.9s,baz=230,slow=36								

NEIC ***25*** *03:31:01.5±2.5, 2.39N×128.43E, h210km±24km, mb4.4/2, Error ellipse: s-maj=17.0km s-min=7.1km az=79.0*
ISCJB ***25*** *03:31:03.7±0.6, 2.39N±0.05×128.52E±0.05, h245km±6km, mb4.0/21, Error ellipse: s-maj=9.5km s-min=7.2km az=139.9*
IDC ***25*** *03:31:03.1±2.0, 2.38N×128.48E, h226km±18km, mb3.8/20, mb1 3.9/20, mb1mx3.8/28, mbtmp3.8/20, Error ellipse: s-maj=23.9km s-min=8.6km az=79.0*
DJA ***25*** *03:31:05.9±0.7, 3.1N±8.1×12.8E±., h205km±7km, M4.4/6, mB4.4/2, mb4.3/6, MLv4.4/5, Mw(mB)3.5/2*

ISC 25 03:31:04.6±0.9, 2.40N±0.06×128.46E±0.07, h239km±7km, n72, σ099/83, mb4.2/21, 1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	1.95	214	P		**Pn**		03 31 45.8	+0.1
TNTI				S		**S**		03 32 17.3	-0.7
LBMI	**Labuha**	3.16	198	P		**Pn**		03 31 58.9	+0.6
LBMI				S		**S**		03 32 41.6	+0.9
MNI	**Manado**	3.74	255	P		**Pn**		03 32 05.0	+0.1
MNI				S		**S**		03 32 51.5	-1.0
SWI	**Sorong**	4.28	139	P		**Pn**		03 32 11.6	+0.2
KMSI	**Cibinong**	4.83	248	P		**Pn**		03 32 18.2	+0.2
KMSI				S		**S**		03 33 15.7	-0.5
MSAI	**Masohi**	5.73	175	P		Pn		03 32 25.4	-3.8
NLAI	**Namlea**	5.76	194	P		**Pn**		03 32 30.4	+0.8
	47nm,0.8s,546nm								
CTBH	**Cotabato--PC H**	6.37	319	⇓*i*P		**Pn**		03 32 38.6	+1.4
FAKI	**Fak Fak**	6.50	144	P		**Pn**		03 32 39.2	+0.3
	98nm,0.9s,787nm								
MRSI	**Marisa**	6.79	254	P		**Pn**		03 32 43.5	+1.0
	54nm,0.6s								
TTSI	**Tana Toraja**	10.19	238	P		Pn		03 33 26.7	+0.9
	24nm,0.8s								
BKSI	**Bulukumba**	11.32	227	P		**P**		03 33 43.6	-0.8
	16nm,0.6s								
KAPI	**Kappang**	11.39	230	S		**S**		03 35 45.5	-2.3
	0.7nm,0.3s,baz=127,slow=20,SNR=2.3								
SBUM	**Sibu**	16.22	271	P		**Pn**		03 34 42.4	+2.4
FITZ	**Fitzroy Crossi**	20.56	188	P		**P**		03 35 24.3	-1.2
FITZ	**Fitzroy Crossi**	20.56	188	P		**P**		03 35 24.3	-1.2
	2.1nm,0.4s,baz=34,slow=5.4,SNR=19								
WRAB	**Tennant Creek**	22.93	166	*e*P		**P**		03 35 47.0	-1.2
	4.9nm,0.4s								
WRA	**Warramunga Arr**	22.94	166	P		**P**		03 35 46.8	-1.4
WRA				S		**S**		03 39 42.6	+2.4
WRA				ScP		**ScP**		03 42 45.6	-0.4
WRA	**Warramunga Arr**	22.94	166	P		**P**		03 35 46.8	-1.4
	20nm,1.0s,baz=344,slow=11,SNR=57								
WRA				S		**S**		03 39 42.7	+2.4
	0.7nm,0.9s,baz=336,slow=18,SNR=5.5								
WRA				ScP		**ScP**		03 42 45.6	-0.4
	0.4nm,0.6s,baz=339,slow=3.0,SNR=4.7								
AS31	**Alice Springs**	26.45	169	*e*P		**P**		03 36 19.5	-0.4
ASAR	**Alice Springs**	26.45	169	P		**P**		03 36 19.4	-0.5
ASAR				PcP		**PcP**		03 39 38.7	0.0
ASAR				ScP		**ScP**		03 42 55.2	-0.6
ASAR	**Alice Springs**	26.45	169	P		**P**		03 36 19.4	-0.5
	4.6nm,0.6s,baz=357,slow=8.3,SNR=92								
ASAR				PcP		**PcP**		03 39 38.7	0.0
	0.7nm,0.4s,baz=356,slow=2.1,SNR=5.1								
ASAR				ScP		**ScP**		03 42 55.2	-0.6
	0.5nm,0.8s,baz=346,slow=2.7,SNR=6.5								
KSAR	**Wonju Array Be**	34.88	359	P		**P**		03 37 32.6	-0.9
KSRS	**Korea Array**	34.89	359	P		**P**		03 37 32.6	-0.9
	2.7nm,0.6s,baz=172,slow=9.7,SNR=6.5								
MJAR	**Matsushiro Arr**	35.15	14	P		**P**		03 37 33.9	-1.9
MJAR	**Matsushiro Arr**	35.15	14	P		**P**		03 37 33.9	-1.9
	2.1nm,0.8s,baz=191,slow=10,SNR=6.7								
STKA	**Stephens Creek**	36.30	161	P		**P**		03 37 45.3	-0.4
	4.7nm,0.4s,baz=337,slow=9.4,SNR=16								
ODAN	**Odare**	46.24	306	*e*P		**P**		03 39 08.1	+1.4
	13nm,0.6s								
RAMN	**Ramite**	46.92	305	*e*P		**P**		03 39 13.7	+1.7
	20nm,0.6s								
GUN	**Gumba**	47.90	306	*e*P		**P**		03 39 21.0	+1.4
	16nm,0.7s								
SONM	**Songino Array**	49.11	340	P		**P**		03 39 28.0	-0.2
SONM	**Songino Array**	49.11	340	P		**P**		03 39 28.0	-0.2
	0.8nm,0.4s,baz=157,slow=7.8,SNR=3.4								
KOLN	**Koldanda**	49.69	305	*e*P		**P**		03 39 34.5	+1.4
DANN	**Dangsing**	49.79	306	*e*P		**P**		03 39 35.0	+1.1
	24nm,0.6s								
PYUN	**Piuthan**	50.32	305	*e*P		**P**		03 39 39.2	+1.4
	14nm,0.5s								
PETK	**Petropavlovsk-**	56.03	21	P		**P**		03 40 19.5	+0.9
PETK	**Petropavlovsk-**	56.03	21	P		**P**		03 40 19.5	+0.9
	4.4nm,0.7s,baz=182,slow=8.7,SNR=3.2								
MK31	**Makanchi Array**	59.63	325	*e*P		**P**		03 40 44.2	+0.5
MKAR	**Makanchi Array**	59.63	325	P		**P**		03 40 44.5	+0.8
MKAR	**Makanchi Array**	59.63	325	P		**P**		03 40 44.5	+0.8
	2.7nm,0.4s,baz=116,slow=8.3,SNR=64								
ZALV	**Zalesovo Beam**	62.55	333	P		**P**		03 41 02.7	-0.4
ZALV	**Zalesovo Beam**	62.55	333	P		**P**		03 41 02.7	-0.4
	0.9nm,0.4s,baz=120,slow=8.5,SNR=4.2								
KURBB	**Kurchatov Arra**	63.78	327	P		**P**		03 41 11.7	+0.4
	6.7nm,0.5s,baz=127,slow=6.0,SNR=84								
KURK	**Kurchatov**	63.78	327	P		**P**		03 41 11.7	+0.4
BVAR	**Borovoye Array**	69.37	327	P		**P**		03 41 46.5	0.0
BVAR	**Borovoye Array**	69.37	327	P		**P**		03 41 46.5	0.0
	1.1nm,0.4s,baz=109,slow=8.0,SNR=8.0								
BRVK	**Borovoye**	69.44	327	*e*P		**P**		03 41 47.0	+0.1
	6.0nm,1.0s								
AKTO	**Aktyubinsk**	75.77	322	P		**P**		03 42 24.0	-0.2
AKTO	**Aktyubinsk**	75.77	322	P		**P**		03 42 24.0	-0.2
	0.5nm,0.3s,baz=119,slow=10,SNR=5.0								
VNDA	**Vanda**	81.90	173	P		**P**		03 42 57.3	+0.4
VNDA	**Vanda**	81.90	173	P		**P**		03 42 57.3	+0.4
	0.5nm,0.6s,baz=359,slow=3.8,SNR=7.5								
KDAK	**Kodiak Island**	82.09	32	P		**P**		03 42 58.8	+0.6
KDAK	**Kodiak Island**	82.09	32	P		**P**		03 42 58.8	+0.6
	4.6nm,0.6s,baz=236,slow=5.9,SNR=8.5								
ILAR	**Eielson Array**	85.56	25	P		**P**		03 43 16.2	+0.5
ILAR	**Eielson Array**	85.56	25	P		**P**		03 43 16.2	+0.5
	0.3nm,0.4s,baz=252,slow=4.6,SNR=11								
BRTR	**Keskin Array B**	92.19	310	P		**P**		03 43 46.8	-1.0
BRTR	**Keskin Array B**	92.19	310	P		**P**		03 43 46.8	-1.0
	0.5nm,0.9s,baz=74,slow=6.4,SNR=3.3								
ARCES	**ARCESS Array B**	92.28	340	P		**P**		03 43 46.6	-0.7
ARCES	**ARCESS Array B**	92.28	340	P		**P**		03 43 46.6	-0.7
	2.6nm,1.0s,baz=83,slow=5.0,SNR=7.6								
FINES	**FINESS Array B**	93.81	332	P		**P**		03 43 53.6	-0.8
FINES	**FINESS Array B**	93.81	332	P		**P**		03 43 53.6	-0.8
	3.0nm,1.0s,baz=46,slow=6.0,SNR=4.2								
BUR08	**Bucovina Ar. S**	97.14	318	*e*P		**P**		03 44 09.5	-0.5
RES	**Resolute Bay**	98.

0.3nm,0.4s,baz=87,slow=10,SNR=7.4

KURBB	**Kurchatov Arra**	**44.21**	**314**	P	**P**	**04**	**16**	**20.4**	**-0.6**
	0.9nm,0.3s,baz=96,slow=9.3,SNR=9.9								
BVAR	**Borovoye Array**	**49.49**	**316**	P	**P**	**04**	**17**	**01.6**	**-0.7**
	1.1nm,0.5s,baz=98,slow=9.1,SNR=6.0								
FINES	**FINESS Array B**	**71.25**	**331**	P	**P**	**04**	**19**	**30.0**	**-1.0**
	1.2nm,0.8s,baz=72,slow=6.2,SNR=5.7								
YKA	**Yellowknife Ar**	**74.80**	**26**	P	**P**	**04**	**19**	**52.3**	**+0.4**
	0.1nm,0.7s,baz=303,slow=5.9,SNR=3.3								
BRTR	**Keskin Array B**	**76.86**	**308**	P	**P**	**04**	**20**	**04.2**	**-0.2**
	0.4nm,0.7s,baz=77,slow=6.2,SNR=3.5								
NOA	**NORSAR Array B**	**77.50**	**334**	P	**P**	**04**	**20**	**06.0**	**-1.4**
	0.8nm,0.8s,baz=51,slow=6.2,SNR=3.3								

WEL 25 04:10:54.4±0.3, 36.87S×177.47E, h165km±3km, ML3.7/7, 1C, Error ellipse: s-maj=4.7km s-min=4.1km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.97**	**136**	PN	Pn	04 11 20.5	+0.2
MXZ				SN	Sn	04 11 40.6	+0.3
PUZ	**Puketiti**	**1.36**	**153**	PN	Pn	04 11 23.4	-0.3
PUZ				SN	Sn	04 11 46.5	0.0
URZ	**Urewera**	**1.42**	**191**	PN	Pn	04 11 24.4	+0.1
URZ				SN	Sn	04 11 47.6	+0.1
MWZ	**Matawai**	**1.47**	**178** ⇑	PN	Pn	04 11 24.8	0.0
MWZ				SN	Sn	04 11 48.6	+0.2
RAHZ	**Arahi**	**2.07**	**188**	PN	Pn	04 11 31.5	+0.3
PRGZ	**Paritu Road**	**2.08**	**171**	PN	Pn	04 11 31.3	0.0
NMHZ	**Naumai**	**2.29**	**193**	PN	Pn	04 11 34.5	+0.7
MHGZ	**Mahia Peninsul**	**2.31**	**171**	PN	Pn	04 11 34.1	+0.1
BKZ	**Black Stump Fm**	**2.42**	**198**	PN	Pn	04 11 35.3	-0.1
BKZ				SN	Sn	04 12 06.7	-0.5
MCHZ	**McNeill Hill**	**2.64**	**193**	PN	Pn	04 11 38.3	+0.3
CKHZ	**Cape Kidnapper**	**2.81**	**186**	PN	Pn	04 11 39.8	-0.1
FWVZ	**Far West T-bar**	**2.82**	**212**	PN	Pn	04 11 41.2	+0.8
DVHZ	**Dannevirke**	**3.58**	**196**	PN	Pn	04 11 48.1	-1.5
POWZ	**Post Office Ro**	**3.76**	**200**	PN	Pn	04 11 50.6	-1.4
BFZ	**Birch Farm**	**3.93**	**194**	PN	Pn	04 11 52.2	-1.8
MRZ	**Mangatainoka R**	**4.07**	**201**	PN	Pn	04 11 54.1	-1.7
TIWZ	**Tintock**	**4.10**	**197**	PN	Pn	04 11 54.3	-1.9
HOWZ	**Holdsworth Sta**	**4.30**	**200**	PN	Pn	04 11 56.5	-2.4
TMWZ	**Te Maipa**	**4.41**	**196**	PN	Pn	04 11 58.3	-2.1
MTW	**Mount Morrison**	**4.55**	**199**	PN	Pn	04 11 59.3	-2.8
CAW	**Cannon Point**	**4.63**	**209**	PN	Pn	04 12 00.4	-2.8
TRWZ	**Traveller**	**4.73**	**196**	PN	Pn	04 12 01.6	-2.9
PAWZ	**Paruwai Farm**	**4.78**	**199**	PN	Pn	04 12 02.1	-3.0
MSWZ	**Moikau Station**	**4.86**	**200**	PN	Pn	04 12 03.3	-2.9

*NIED **25** 04:27:00,29.3ON×130.8OE,h8km,Mw4.1 Best double couple: M0 1.63000×10^15 NP1:φs316.00000°,δ83.00000°, λ-75.00000°. NP2:φs70.00000°,δ16.00000°, λ-155.00000°.*
*JMA **25** 04:27:41.2±0.4,29.2ON×130.7E,h13km±5km,M3.9*
*IDC **25** 04:27:45.7±3.0,29.4ON×130.5E,h57km±27km,mb3.2/10, mb1 3.4/13,mb1mx3.3/29,mbtmp3.2/13,ML3.4/2,MS3.0/3, Ms1 3.0/3,ms1mx2.6/13,Error ellipse: s-maj=28.8km s-min=17.8km az=75.0*
ISC 25 04:27:39.9±1.6, 29.31N±0.05×130.76E±0.0, h15km±9km, n22,σ1s57/23, mb3.6/10, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.93**	**305**	P	**Pg**	**04**	**27**	**58.7**	**+0.8**
JNN				*eS*	**Sg**	**04**	**28**	**11.1**	**+0.9**
JKC	**Kuchinoerabu**	**1.25**	**337**	P	**Pg**	**04**	**28**	**03.6**	**-0.3**
JKC				*eS*	**Sg**	**04**	**28**	**20.1**	**0.0**
JTN	**Tanegashima 3**	**1.35**	**8**	P	**Pg**	**04**	**28**	**05.6**	**-0.3**
JTN				*eS*	**Sg**	**04**	**28**	**23.3**	**-0.2**
JAM	**Amami Oshima**	**1.35**	**229**	P	**Pg**	**04**	**28**	**06.4**	**+0.5**
JAM				*eS*	**Sg**	**04**	**28**	**24.3**	**+0.7**
JAMN	**Amaminishikomi**	**1.75**	**233**	P	Pg	04	28	11.0	-2.5
JAMN				*eS*	**Sg**	**04**	**28**	**32.4**	**-3.9**
JTSR	**Tashiro 2**	**1.85**	**4**	P	Pg	04	28	13.2	-2.3
JTSR				*eS*	**Sg**	**04**	**28**	**36.5**	**-3.0**
JNAR	**Kushima--Naru**	**2.25**	**11**	P	**Pn**	**04**	**28**	**19.1**	**+2.5**
JNU	**Nakatsue**	**3.80**	**2**	P	**Pn**	**04**	**28**	**40.1**	**+2.2**
	4.9nm,0.3s,baz=225,slow=10.0,SNR=49								
JNU				S	**Sn**	**04**	**29**	**22.2**	**-0.2**
	1.5nm,0.3s,baz=252,slow=20,SNR=2.7								
KSRS	**Korea Array**	**8.46**	**344**	P	Pn	04	29	45.2	+3.4
	baz=158,slow=14,SNR=2.2								
MJAR	**Matsushiro Arr**	**9.54**	**39**	P	Pn	04	30	02.7	+5.9
	0.2nm,0.3s,baz=236,slow=13,SNR=2.7								
ASAJ	**Asahikawa**	**17.53**	**29**	LR	LR	04	38	51.1	
	comp=Z,18nm,19.9s,baz=2.3,slow=38								
SONM	**Songino Array**	**26.37**	**321**	LR	LR	04	44	39.5	
	comp=Z,70nm,18.2s,baz=74,slow=39								
ZALV	**Zalesovo Beam**	**41.25**	**320**	P	**P**	**04**	**35**	**22.5**	**-1.7**
	0.5nm,0.4s,baz=85,slow=7.4,SNR=3.2								
MKAR	**Makanchi Array**	**41.26**	**309**	P	**P**	**04**	**35**	**24.3**	**-0.1**
	0.3nm,0.4s,baz=90,slow=10,SNR=8.6								
MKAR				LR	LR	04	53	51.1	
	comp=Z,30nm,18.8s,baz=176,slow=38								
WRA	**Warramunga Arr**	**49.09**	**176**	P	**P**	**04**	**36**	**27.1**	**+0.3**
	0.4nm,0.8s,baz=359,slow=8.5,SNR=4.2								
BVAR	**Borovoye Array**	**49.53**	**316**	P	**P**	**04**	**36**	**29.3**	**-0.6**
	1.5nm,0.5s,baz=99,slow=8.5								
ASAR	**Alice Springs**	**52.76**	**176**	P	**P**	**04**	**36**	**56.0**	**+1.5**
	0.2nm,0.5s,baz=10,slow=13,SNR=5.7								
ILAR	**Eielson Array**	**60.67**	**29**	P	**P**	**04**	**37**	**50.5**	**+0.3**
	0.2nm,0.6s,baz=270,slow=5.5,SNR=5.2								
FINES	**FINESS Array B**	**71.29**	**331**	P	**P**	**04**	**38**	**57.2**	**-1.2**
	0.9nm,0.8s,baz=64,slow=6.3,SNR=5.8								
AKASG	**Malin Array Be**	**74.64**	**320**	P	**P**	**04**	**39**	**17.6**	**-0.9**
	0.2nm,0.3s,baz=56,slow=5.7,SNR=4.1								
YKA	**Yellowknife Ar**	**74.79**	**26**	P	**P**	**04**	**39**	**19.9**	**+0.7**
	0.1nm,0.7s,baz=303,slow=5.5,SNR=4.3								
BRTR	**Keskin Array B**	**76.90**	**308**	P	**P**	**04**	**39**	**31.4**	**-0.5**
	0.4nm,0.6s,baz=102,slow=6.1,SNR=3.1								

*NIED **25** 04:31:00,29.3ON×130.8OE,h47km,Mw3.9 Best double couple: M9.17000×10^14 NP1:φs223.00000°,δ84.00000°, λ-166.00000°. NP2:φs132.00000°,δ76.00000°, λ-6.00000°.*
JMA 25 04:31:38.1±0.2, 29.27N×130.80E, h18km, M3.6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.99**	**305**	P	Pb	04	31	56.3	-0.4
JNN				*eS*	Sb	04	32	09.7	+0.3
JKC	**Kuchinoerabu**	**1.30**	**336**	P	Pn	04	32	01.0	-0.3
JAM	**Amami Oshima**	**1.35**	**231**	P	Pn	04	32	02.4	+0.3
JAM				*eS*	Sn	04	32	19.6	0.0
JTN	**Tanegashima 3**	**1.39**	**6**	P	Pb	04	32	03.3	-0.3
JAMN	**Amaminishikomi**	**1.76**	**235**	P	Pn	04	32	08.4	+0.8
JAMN				*eS*	Sn	04	32	29.7	+0.2
JTSR	**Tashiro 1**	**1.89**	**3**	P	Pn	04	32	10.5	+0.9
JTSR				S	Sn	04	32	33.2	+0.2
JTK	**Tokunoshima**	**2.20**	**228**	P	Pn	04	32	14.3	+0.6
JTK				*eS*	Sn	04	32	41.4	+0.9
JSU	**Suzuyama**	**2.25**	**352**	P	Pn	04	32	14.2	-0.3
JNAR	**Kushima--Naru**	**2.29**	**10**	P	Pn	04	32	16.7	+1.8

IDC 25 04:39:35.2±2.5, 6.33S×154.48E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/18, mbtmp3.4/3, Error ellipse: s-maj=166.4km s-min=29.3km az=130.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.79**	**233**	P	P	04	44	49.7	-0.1
	0.6nm,0.7s,baz=58,slow=9.8,SNR=7.7								
ASAR	**Alice Springs**	**26.24**	**227**	P	P	04	45	11.5	-0.8
	0.6nm,0.7s,baz=60,slow=8.7,SNR=8.0								
ILAR	**Eielson Array**	**82.95**	**22**	P	P	04	52	00.7	-1.1
	0.2nm,0.8s,baz=238,slow=5.7,SNR=5.0								
TORD	**Torodi Ar. Bea**	**152.35**	**286**	PKPbc	PKPbc	04	59	36.0	+1.6
	0.2nm,0.6s,baz=62,slow=2.7,SNR=2.8								

IDC 25 04:46:37.2±6.2, 18.34S×68.97W, h141km±40km, mb3.4/3, mb1 3.7/5, mb1mx3.3/19, mbtmp3.4/5, Error ellipse: s-maj=92.9km s-min=28.6km az=22.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.19**	**22**	P	Pn	04	47	15.1	0.0
	5.0nm,0.3s,baz=204,slow=6.0,SNR=158								
SIV	**San Ignacio**	**7.90**	**74**	P	Pn	04	48	29.2	-0.3
	1.2nm,0.3s,baz=272,slow=11,SNR=23								
NVAR	**Mina Array Bea**	**72.99**	**321**	P	P	04	57	51.6	-0.2
	0.2nm,0.5s,baz=134,slow=5.2,SNR=2.5								
TORD	**Torodi Ar. Bea**	**76.37**	**71**	P	P	04	58	11.4	-0.1
	0.4nm,0.4s,baz=249,slow=5.0,SNR=8.8								
YKA	**Yellowknife Ar**	**88.21**	**341**	P	P	04	59	11.5	-0.3
	1.1nm,0.6s,baz=133,slow=4.9,SNR=39								
ASAR	**Alice Springs**	**132.65**	**209**	PKP	PKPdf	05	05	35.5	-0.5
	0.3nm,0.8s,baz=169,slow=1.9,SNR=4.1								
SONM	**Songino Array**	**150.34**	**6**	PKPbc	PKPbc	05	06	12.5	+0.5
	0.7nm,0.5s,baz=322,slow=1.1,SNR=6.3								

IDC 25 05:09:14.3±2.2, 6.13S×129.05E, h0km, mb3.5/1, mb1 3.7/4, mb1mx3.5/20, mbtmp3.5/4, ML3.3/3, Error ellipse: s-maj=98.7km s-min=28.0km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.36**	**195**	Pn	Pn	05	12	12.1	+0.5
	0.3nm,0.3s,baz=15,slow=13,SNR=18								
FITZ				Sn	Sn	05	14	16.1	-14
	0.3nm,0.3s,baz=22,slow=2.9,SNR=4.2								
WRA	**Warramunga Arr**	**14.66**	**160**	Pn	Pn	05	12	42.1	-1.0
	0.1nm,0.3s,baz=341,slow=14,SNR=3.3								
WRA				Sn	Sn	05	15	13.5	-13
	0.3nm,0.3s,baz=333,slow=22,SNR=8.5								
ASAR	**Alice Springs**	**18.05**	**166**	P	Pn	05	13	26.8	0.0
	0.2nm,0.3s,baz=340,slow=9.3,SNR=17								
MKAR	**Makanchi Array**	**66.99**	**327**	P	P	05	20	09.0	0.0
	0.3nm,0.5s,baz=124,slow=7.2,SNR=5.6								

*NIED **25** 05:12:00,29.3ON×130.8OE,h5km,Mw4.1 Best double couple: M0 1.37000×10^15 NP1:φs247.00000°,δ84.00000°, λ-112.00000°. NP2:φs142.00000°,δ23.00000°, λ-16.00000°.*
*JMA **25** 05:12:37.1±0.4,29.26N×130.82E,h18km±4km,M3.8*
*ISCJB **25** 05:12:39.7±0.8,29.33N±0.05×130.70E±0.0,h54km±8km, mb3.4/8,MS3.3/1,Error ellipse: s-maj=13.7km s-min=5.4km az=24.6*
*IDC **25** 05:12:41.6±3.3,29.42N×130.57E,h51km±31km,mb3.2/8, mb1 3.4/10,mb1mx3.3/27,mbtmp3.2/10,ML3.2/2,MS3.2/2, Ms1 3.2/2,ms1mx2.3/19,Error ellipse: s-maj=31.1km s-min=17.8km az=77.0*
ISC 25 05:12:41.0±1.4, 29.33N±0.06×130.66E±0.10, h48km±13km, n21,σ1s21/26, mb3.5/8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.85**	**307**	P	**Pn**	**05**	**12**	**55.7**	**-1.0**
JNN				*eS*	**Sn**	**05**	**13**	**09.1**	**+0.9**
JKC	**Kuchinoerabu**	**1.20**	**341**	P	**Pn**	**05**	**13**	**00.3**	**-1.1**
JKC				*eS*	**Sn**	**05**	**13**	**19.1**	**+2.5**
JAM	**Amami Oshima**	**1.29**	**226**	P	**Pn**	**05**	**13**	**01.5**	**-1.2**
JAM				*eS*	**Sn**	**05**	**13**	**19.3**	**+0.4**
JTN	**Tanegashima 3**	**1.35**	**12**	P	**Pn**	**05**	**13**	**02.4**	**-1.1**
JTN				*eS*	**Sn**	**05**	**13**	**19.7**	**-0.7**
JAMN	**Amaminishikomi**	**1.69**	**231**	P	**Pn**	**05**	**13**	**07.6**	**-0.4**
JAMN				*eS*	**Sn**	**05**	**13**	**29.2**	**+0.7**
JTSR	**Tashiro 2**	**1.85**	**7**	P	**Pn**	**05**	**13**	**09.6**	**-0.7**
JTK	**Tokunoshima**	**2.15**	**225**	P	**Pn**	**05**	**13**	**13.8**	**-0.5**
JSU	**Suzuyama**	**2.18**	**355**	P	**Pn**	**05**	**13**	**13.8**	**-1.0**
JNAR	**Kushima--Naru**	**2.26**	**13**	P	**Pn**	**05**	**13**	**15.4**	**-0.5**
JNU	**Nakatsue**	**3.79**	**3**	P	**Pn**	**05**	**13**	**37.0**	**0.0**
	3.8nm,0.3s,baz=169,slow=5.2,SNR=29								
JNU				S	**Sn**	**05**	**14**	**18.6**	**-1.6**
	1.7nm,0.3s,baz=242,slow=17,SNR=4.4								
KSRS	**Korea Array**	**8.42**	**345**	P	**Pn**	**05**	**14**	**42.1**	**+1.8**
	0.3nm,0.3s,baz=158,slow=13,SNR=2.8								
KSRS				LR	LR	05	18	13.2	
	comp=Z,98nm,20.1s,baz=166,slow=40								
MJAR	**Matsushiro Arr**	**9.59**	**39**	P	**Pn**	**05**	**14**	**58.6**	**+2.1**
	0.1nm,0.3s,baz=233,slow=14,SNR=2.6								
SONM	**Songino Array**	**26.30**	**321**	P	**P**	**05**	**18**	**10.5**	**-1.7**
	0.5nm,0.6s,baz=140,slow=9.8,SNR=6.0								
MKAR	**Makanchi Array**	**41.18**	**309**	P	**P**	**05**	**20**	**20.5**	**-0.2**
	0.5nm,0.5s,baz=90,slow=11,SNR=7.8								
KURBB	**Kurchatov Arra**	**44.18**	**314**	LR	LR	05	40	13.8	
	comp=Z,41nm,20.2s,baz=80,slow=38								
WRA	**Warramunga Arr**	**49.11**	**175**	P	**P**	**05**	**21**	**23.8**	**0.0**
	0.3nm,0.6s,baz=354,slow=8.5,SNR=5.9								
ASAR	**Alice Springs**	**52.78**	**176**	P	**P**	**05**	**21**	**52.7**	**+1.4**
	0.3nm,0.6s,baz=9.8,slow=15,SNR=6.6								
ILAR	**Eielson Array**	**60.70**	**29**	P	**P**	**05**	**22**	**47.0**	**-0.1**
	0.3nm,0.8s,baz=286,slow=6.5,SNR=3.8								
FINES	**FINESS Array B**	**71.23**	**331**	P	**P**	**05**	**23**	**54.0**	**-0.7**
	0.5nm,0.6s,baz=52,slow=5.4,SNR=4.7								
YKA	**Yellowknife Ar**	**74.82**	**26**	P	**P**	**05**	**24**	**16.1**	**+0.2**
	0.2nm,0.7s,baz=302,slow=5.9,SNR=5.5								
BRTR	**Keskin Array B**	**76.83**	**308**	P	**P**	**05**	**24**	**29.0**	**+1.0**
	0.6nm,0.7s,baz=119,slow=5.7,SNR=3.9								

*ISCJB **25** 05:27:32.3±0.5, 15.31N±0.06×120.4E±0.1,h150km, mb3.5/11,Error ellipse: s-maj=17.9km s-min=7.5km az=164.9*
*IDC **25** 05:27:34.1±1.2, 15.17N×120.46E,h154km±13km, mb3.4/11,mb1 3.5/11,mb1mx3.3/28,mbtmp3.4/11,MS3.3/1, Ms1 3.3/1,ms1mx2.5/21,Error ellipse: s-maj=52.6km s-min=14.9km az=63.0*
*MAN **25** 05:27:35,15.24N×120.38E,h101km,mb4.5,ML3.4, MS3.3*
ISC 25 05:27:33.4±0.7, 15.30N±0.06×120.3E±0.1, h150km, n20, σ1s69/22, mb3.5/11, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.62**	**320**	*e*P	**Pn**	**05**	**27**	**53.5**	**-1.8**
SCZP				*eS*	**Sn**	**05**	**28**	**08.4**	**-3.7**
BCPH	**Baguio City Da**	**1.10**	**13** ⇑	*i*P	**Pn**	**05**	**27**	**58.1**	**-1.1**
BCPH				*i*S	**Sn**	**05**	**28**	**15.6**	**-3.5**
BOLP	**Bolinao**	**1.14**	**340**	*e*P	**Pn**	**05**	**27**	**59.1**	**-0.3**
BOLP				*eS*	**Sn**	**05**	**28**	**17.8**	**-1.6**
BALP	**Baler**	**1.28**	**70**	*e*P	**Pn**	**05**	**28**	**00.2**	**-0.5**
TGY	**Tagaytay City**	**1.33**	**154**	P	**Pn**	**05**	**28**	**00.7**	**-0.7**
	101nm,0.3s,baz=317,slow=2.6,SNR=8.8								
LUBP	**Lubang**	**1.56**	**183**	*e*P	**Pn**	**05**	**28**	**02.4**	**-1.3**
SJMP	**San Jose**	**2.93**	**165**	*e*P	**Pn**	**05**	**28**	**19.9**	**0.0**
PSI	**Prapat**	**24.48**	**242**	LR	LR	05	41	02.3	
	comp=Z,60nm,18.6s,baz=31,slow=33								
WRA	**Warramunga Arr**	**37.64**	**158**	P	**P**	**05**	**34**	**32.3**	**-1.7**
	0.6nm,1.0s,baz=340,slow=9.2,SNR=10								
ASAR	**Alice Springs**	**40.94**	**161**	P	**P**	**05**	**35**	**00.8**	**-0.6**
	0.4nm,0.5s,baz=342,slow=6.8,SNR=4.8								
MKAR	**Makanchi Array**	**44.54**	**323**	P	**P**	**05**	**35**	**31.1**	**+1.0**
	0.5nm,0.5s,baz=128,slow=7.9,SNR=6.7								
ZALV	**Zalesovo Beam**	**47.48**	**332**	P	**P**	**05**	**35**	**54.1**	**+1.1**
	1.0nm,0.4s,baz=122,slow=5.6,SNR=5.4								
KURBB	**Kurchatov Arra**	**48.66**	**326**	P	**P**	**05**	**36**	**04.6**	**+2.4**
	1.9nm,0.5s,baz=120,slow=8.7,SNR=26								
BVAR	**Borovoye Array**	**54.25**	**325**	P	**P**	**05**	**36**	**45.1**	**+1.4**
	0.4nm,0.5s,baz=126,slow=7.3,SNR=2.4								
ARCES	**ARCESS Array B**	**77.47**	**339**	P	**P**	**05**	**39**	**12.9**	**+1.0**
	1.3nm,0.7s,baz=78,slow=7.9,SNR=9.4								
FINES	**FINESS Array B**	**78.72**	**331**	P	**P**	**05**	**39**	**20.3**	**+1.4**
	2.4nm,1.1s,baz=66,slow=5.7,SNR=5.8								
INK	**Inuvik**	**81.74**	**21**	P	**P**	**05**	**39**	**35.4**	**+0.4**
	0.8nm,0.7s,baz=324,slow=4.5,SNR=4.6								
NB2	**NORSAR Subarra**	**85.68**	**333**	P	**P**	**05**	**39**	**55.5**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=66,slow=4.8								
NOA	**NORSAR Array B**	**85.68**	**333**	P	**P**	**05**	**39**	**56.0**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=68,slow=4.8,SNR=7.2								
YKA	**Yellowknife Ar**	**91.44**	**22**	P	**P**	**05**	**40**	**23.3**	**+1.0**
	comp=Z,0.1nm,0.5s,baz=308,slow=5.3,SNR=5.1								

IDC 25 05:28:11.0±1.8, 12.83S×167.52E, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.7/20, mbtmp4.1/4, Error ellipse: s-maj=53.8km s-min=39.2km az=163.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**30.43**	**227**	P	P	05	34	25.7	+0.3
	2.0nm,0.4s,baz=54,slow=11,SNR=8.0								
WRA	**Warramunga Arr**	**32.57**	**253**	P	P	05	34	44.1	-0.3
	0.5nm,0.5s,baz=85,slow=8.9,SNR=7.3								
ASAR	**Alice Springs**	**33.62**	**246**	P	P	05	34	53.4	-0.1
	1.0nm,0.3s,baz=75,slow=9.2,SNR=29								
QSPA	**South Pole Qui**	**77.19**	**180**	P	P	05	40	06.7	0.0
	1.1nm,0.6s,baz=211,slow=6.8,SNR=7.2								
ARCES	**ARCESS Array B**	**118.48**	**346**	PKP	PKPdf	05	47	00.0	-0.2
	3.4nm,1.0s,baz=66,slow=2.4,SNR=18								

IDC 25 05:29:03.5±1.1, 52.36S×13.59E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.8/19, mbtmp3.9/6, MS3.4/5, Ms1 3.4/5, ms1mx3.2/22, Error ellipse: s-maj=48.3km s-min=23.1km az=77.0, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.71**	**195**	P	P	05	33	44.7	-0.3
	4.0nm,0.9s,baz=31,slow=10,SNR=16								
SNAA				LR	LR	05	40	09.2	
	comp=Z,37nm,19.0s,baz=26,slow=32								
BOSA	**Boshof**	**25.26**	**25**	LR	LR	05	42	34.8	
	comp=Z,116nm,18.2s,baz=62,slow=32								
LBTB	**Lobatse**	**28.78**	**23**	LR	LR	05	44	59.4	
	comp=Z,65nm,18.9s,baz=111,slow=33								
QSPA	**South Pole Qui**	**37.88**	**180**	P	P	05	36	21.5	-0.4
	1.9nm,0.8s,baz=246,slow=9.3,SNR=6.5								
VNDA	**Vanda**	**48.90**	**171**	P	P	05	37	49.9	-0.4
	0.8nm,0.9s,baz=194,slow=8.5,SNR=3.8								
VNDA				LR	LR	05	57	10.4	
	comp=Z,80nm,19.9s,baz=268,slow=34								
TORD	**Torodi Ar. Bea**	**66.04**	**347**	P	P	05	39	50.6	-1.2
	0.7nm,0.9s,baz=187,slow=7.4,SNR=3.2								
TORD				LR	LR	06	01	25.8	
	comp=Z,31nm,21.6s,baz=90,slow=29								
LPAZ	**La Paz**	**72.25**	**266**	P	P	05	40	31.4	0.0
	2.0nm,1.1s,baz=100,slow=6.1,SNR=4.2								
ASAR	**Alice Springs**	**88.20**	**128**	P	P	05	41	57.1	+0.6
	0.7nm,0.8s,baz=205,slow=5.5,SNR=5.5								
YKA	**Yellowknife Ar**	**151.12**	**311**	PKPbc	PKPbc	05	48	56.7	-0.3
	0.6nm,0.8s,baz=88,slow=2.7,SNR=11								
YKA				PKPab	PKPab	05	49	05.5	+0.6
	0.9nm,0.8s,baz=87,slow=2.4,SNR=13								

*IDC **25** 05:47:30.8±0.7, 3.56N×126.40E, h0km, mb4.1/14, mb1 4.2/14, mb1mx4.1/25, mbtmp4.1/14, MS3.6/4, Ms1 3.6/4, ms1mx2.9/30, Error ellipse: s-maj=36.3km s-min=13.2km az=77.0*
*ISCJB **25** 05:47:36.0±0.5, 3.56N±0.07×126.4E±0.2, h53km, mb4.2/17, MS3.8/3, Error ellipse: s-maj=24.7km s-min=8.6km az=167.0*
*NEIC **25** 05:47:36.2±0.3, 3.56N×126.38E, h35km, mb4.6/4, Error ellipse: s-maj=18.9km s-min=6.3km az=74.0*
ISC 25 05:47:38.0±0.6, 3.54N±0.09×126.4E±0.2, h53km, n38, σ0s65/35, mb4.2/17, MS3.8/3, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.59**	**347**	LR	LR	05	50	11.9	
	comp=Z,216nm,18.8s,baz=44,slow=45								
CTBH	**Cotabato--PC H**	**4.22**	**330** ⇑	*i*P	Pn	05	48	44.2	+4.4
FITZ	**Fitzroy Crossi**	**21.52**	**182**	P	**P**	**05**	**52**	**22.2**	**-0.6**
FITZ	**Fitzroy Crossi**	**21.52**	**182**	P	**P**	**05**	**52**	**22.2**	**-0.6**
	2.3nm,0.8s,baz=0.0,slow=12,SNR=5.1								
WRAB	**Tennant Creek**	**24.61**	**162**	*e*P	**P**	**05**	**52**	**53.3**	**-0.2**
	85nm,1.9s								
WRA	**Warramunga Arr**	**24.62**	**162**	P	**P**	**05**	**52**	**53.1**	**-0.5**
WRA	**Warramunga Arr**	**24.62**	**162**	P	**P**	**05**	**52**	**53.1**	**-0.5**
	4.0nm,0.5s,baz=339,slow=10,SNR=41								
ASAR	**Alice Springs**	**28.02**	**165**	P	**P**	**05**	**53**	**23.3**	**-1.0**
ASAR				PcP	**PcP**	**05**	**56**	**39.4**	**+1.1**
ASAR	**Alice Springs**	**28.02**	**165**	P	**P**	**05**	**53**	**23.3**	**-1.0**
	0.5nm,0.3s,baz=351,slow=15,SNR=8.8								
ASAR				PcP	**PcP**	**05**	**56**	**39.4**	**+1.1**
	0.4nm,0.4s,baz=346,slow=2.3,SNR=4.2								
CMAR	**Chiang Mai Arr**	**30.66**	**301**	P	**P**	**05**	**53**	**47.0**	**-0.8**
CMAR	**Chiang Mai Arr**	**30.66**	**301**	P	**P**	**05**	**53**	**47.0**	**-0.8**

ENEZ	**Enez**	**0.38**	**24**	*e*Pg		**Pg**	**06 33 16.9**	**-0.6**
ENEZ				*e*Sg		**Sb**	**06 33 23.7**	**-0.5**
GELI	**Tayfur-Gelibol**	**0.40**	**88**	*e*PG		**Pg**	**06 33 17.0**	**-0.8**
GELI				*e*SG		**Sg**	**06 33 23.8**	**+0.6**
GELI	**Tayfur-Gelibol**	**0.40**	**88**	*e*Pg		**Pg**	**06 33 17.0**	**-0.8**
GELI				*e*Sg		**Sg**	**06 33 23.8**	**+0.6**
ALN	**Alexandroupoli**	**0.51**	**8**	P		**Pg**	**06 33 19.9**	**0.0**
ALN				S		**Sg**	**06 33 27.0**	**+0.3**
ALN	**Alexandroupoli**	**0.51**	**8**	*e*PG		**Pg**	**06 33 19.9**	**0.0**
ALN				*e*SG		**Sg**	**06 33 27.1**	**+0.3**
ALN	**Alexandroupoli**	**0.51**	**8**	P		**Pg**	**06 33 19.9**	**0.0**
ALN				S		**Sg**	**06 33 27.0**	**+0.3**
BOZC	**Bozcaada**	**0.55**	**172**	*i* P		**Pg**	**06 33 20.5**	**-0.1**
BOZC				*i* S		**Sg**	**06 33 27.6**	**-0.3**
LPK	**Lapseki**	**0.62**	**91**	*e*PG		**Pg**	**06 33 21.7**	**-0.2**
LPK				*e*SG		**Sb**	**06 33 30.8**	**-0.3**
LPK	**Lapseki**	**0.62**	**91**	*e*Pg		**Pg**	**06 33 21.7**	**-0.2**
LPK				*e*Sg		**Sb**	**06 33 30.8**	**-0.3**
LIA	**Limnos Island**	**0.77**	**230**	P		**Pg**	**06 33 24.7**	**+0.1**
LIA				S		**Sb**	**06 33 36.0**	**+0.8**
LIA	**Limnos Island**	**0.77**	**230**	*e*PG		**Pg**	**06 33 24.5**	**-0.1**
LIA				*e*SG		**Sb**	**06 33 35.2**	**0.0**
LIA	**Limnos Island**	**0.77**	**230**	*e*Pg		**Pg**	**06 33 24.5**	**-0.1**
LIA				*e*Sg		**Sb**	**06 33 35.2**	**0.0**
LIA				S		**Sb**	**06 33 36.0**	**+0.8**
RKY	**Sarkoy-Tekirda**	**0.98**	**72**	*e*PG		**Pb**	**06 33 28.0**	**-0.7**
RKY				*e*SG		**Sn**	**06 33 42.7**	**-0.4**
RKY	**Sarkoy-Tekirda**	**0.98**	**72**	*e*Pg		**Pb**	**06 33 28.0**	**-0.7**
RKY				*e*Sg		**Sn**	**06 33 42.7**	**-0.4**
SART	**Tekirdag**	**0.98**	**72**	*e*P		**Pb**	**06 33 27.9**	**-0.8**
SART				*e*S		**Sb**	**06 33 41.7**	**+0.1**
SART	**Tekirdag**	**0.98**	**72**	*e*P		**Pb**	**06 33 27.9**	**-0.8**
SART				*e*S		**Sb**	**06 33 41.7**	**+0.1**
KRBG	**Karabiga-Canak**	**1.03**	**89**	*e*PG		**Pb**	**06 33 28.3**	**-1.1**
KRBG	**Karabiga-Canak**	**1.03**	**89**	*e*Pg		**Pb**	**06 33 28.3**	**-1.1**
MFT	**Murefte**	**1.09**	**68**	*e*PN		**Pb**	**06 33 30.1**	**-0.4**
MFT	**Murefte**	**1.09**	**68**	*e*Pn		**Pb**	**06 33 30.1**	**-0.4**
PRK	**Paraskevi**	**1.17**	**168**	P		**Pg**	**06 33 32.0**	**-0.3**
PRK	**Paraskevi**	**1.17**	**168**	*e*PB		**Pb**	**06 33 31.6**	**-0.2**
PRK				*e*SB		**Sb**	**06 33 46.8**	**0.0**
PRK	**Paraskevi**	**1.17**	**168**	*e*Pb		**Pb**	**06 33 31.6**	**-0.2**
PRK	**Paraskevi**	**1.17**	**168**	P		**Pg**	**06 33 32.0**	**-0.3**
PRK				*e*Sb		**Sb**	**06 33 46.8**	**0.0**
SIGR	**SIGRI**	**1.18**	**184**	P		**Pb**	**06 33 31.4**	**-0.6**
SIGR	**SIGRI**	**1.18**	**184**	P		**Pb**	**06 33 31.4**	**-0.6**
KAVA	**Kavala**	**1.25**	**300**	P		**Pn**	**06 33 32.8**	**-0.1**
KAVA				S		**Sb**	**06 33 49.3**	**+0.1**
KAVA	**Kavala**	**1.25**	**300**	P		**Pn**	**06 33 32.8**	**-0.1**
KAVA				S		**Sb**	**06 33 49.3**	**+0.1**
MRMT	**Marmara Adasi**	**1.27**	**80**	*e*PN		**Pn**	**06 33 32.8**	**-0.5**
MRMT				*e*SN		**Sn**	**06 33 50.6**	**+0.3**
MRMT	**Marmara Adasi**	**1.27**	**80**	*e*Pn		**Pn**	**06 33 32.8**	**-0.5**
MRMT				*e*Sn		**Sn**	**06 33 50.6**	**+0.3**
TKR	**Tekirdag**	**1.35**	**63**	*e*PN		**Pn**	**06 33 34.4**	**+0.2**
TKR	**Tekirdag**	**1.35**	**63**	*e*Pn		**Pn**	**06 33 34.4**	**+0.2**
GONE	**Gonen-Balikesi**	**1.37**	**104**	*e*PN		**Pn**	**06 33 34.5**	**-0.1**
GONE	**Gonen-Balikesi**	**1.37**	**104**	*e*Pn		**Pn**	**06 33 34.5**	**-0.1**
BALY	**Balya**	**1.44**	**116**	*e*P		**Pn**	**06 33 35.6**	**+0.1**
BALY				*e*S		**Sb**	**06 33 54.8**	**+0.2**
BALY	**Balya**	**1.44**	**116**	*e*P		**Pn**	**06 33 35.6**	**+0.1**
BALY				*e*S		**Sb**	**06 33 54.8**	**+0.2**
EDC	**Edincik**	**1.46**	**91**	*e*PN		**Pn**	**06 33 35.8**	**-0.1**
EDC	**Edincik**	**1.46**	**91**	*e*Pn		**Pn**	**06 33 35.8**	**-0.1**
EDRB	**Edirne**	**1.58**	**22**	*e*PN		**Pn**	**06 33 37.6**	**+0.2**
EDRB	**Edirne**	**1.58**	**22**	*e*Pn		**Pn**	**06 33 37.6**	**+0.2**
BALB	**Balikesir**	**1.66**	**116**	*e*PN		**Pn**	**06 33 38.5**	**0.0**
BALB	**Balikesir**	**1.66**	**116**	*e*Pn		**Pn**	**06 33 38.5**	**0.0**
SLVT	**Silivri**	**1.91**	**63**	*e*PN		**Pn**	**06 33 42.3**	**+0.3**
SLVT	**Silivri**	**1.91**	**63**	*e*Pn		**Pn**	**06 33 42.3**	**+0.3**
AOS	**Alonnisos**	**2.01**	**233**	*e*PG		**Pg**	**06 33 47.4**	**-0.9**
AOS	**Alonnisos**	**2.01**	**233**	*e*Pg		**Pg**	**06 33 47.4**	**-0.9**
CTYL	**Yal??k??y-??at**	**2.08**	**58**	*e*PN		**Pn**	**06 33 45.2**	**+0.9**
CTYL	**Yal??k??y-??at**	**2.08**	**58**	*e*Pn		**Pn**	**06 33 45.2**	**+0.9**
AKHS	**Akhisar**	**2.08**	**136**	*e*P		**Pb**	**06 33 48.3**	**+0.9**
AKHS				*e*S		**Sg**	**06 34 15.2**	**-1.6**
AKHS	**Akhisar**	**2.08**	**136**	*e*P		**Pb**	**06 33 48.3**	**+0.9**
AKHS				*e*S		**Sg**	**06 34 15.2**	**-1.6**
DURS	**Dursunbey**	**2.09**	**111**	*e*P		**Pg**	**06 33 53.0**	**+3.1**
DURS				*e*S		**Sb**	**06 34 13.6**	**+0.1**
CTKS	**Kestanelik-??a**	**2.12**	**66**	*e*PN		**Pn**	**06 33 45.8**	**+1.0**
CTKS	**Kestanelik-??a**	**2.12**	**66**	*e*Pn		**Pn**	**06 33 45.8**	**+1.0**
BUY	**Buyukada**	**2.46**	**78**	*e*Pn		**Pn**	**06 33 50.5**	**+1.0**
YLV	**Yalova**	**2.62**	**85**	*e*PN		**Pn**	**06 33 53.0**	**+1.2**
YLV	**Yalova**	**2.62**	**85**	*e*Pn		**Pn**	**06 33 53.0**	**+1.2**

DDA ***25*** *06:46:20.9, 37.87N×29.07E, h8km, MD3.0*
ISK ***25*** *06:46:20.9, 37.86N×29.08E, h4km, MD2.9*
ISCJB ***25*** *06:46:21.2±0.5, 37.87N±0.02×29.05E±0.04, h3km±5km, Error ellipse: s-maj=5.4km s-min=3.5km az=5.0*
CSEM ***25*** *06:46:21.2±0.1, 37.85N×29.09E, h2km, MD2.9, Error ellipse: s-maj=3.8km s-min=2.7km az=103.0*

ISC 25 06:46:21.3±0.9, 37.86N±0.02×29.08E±0.03, h10km±7km, n37, σ0s50/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DENT	**Denizli**	**0.11**	**201**	PG	**Pg**	**06 46 23.8**	**-0.2**
DENT	**Denizli**	**0.11**	**201**	*i* Pg	**Pg**	**06 46 23.8**	**-0.2**
DNZL	**Cakiroluk**	**0.17**	**190**	*i* Pg	**Pg**	**06 46 25.2**	**+0.1**
DNZL				*i* Sg	**Sg**	**06 46 27.9**	**+0.2**
KHL	**Karahalli**	**0.58**	**37**	*e*PG	**Pg**	**06 46 32.2**	**-0.3**
KHL				*e*SG	**Sb**	**06 46 41.2**	**-0.7**
KHL	**Karahalli**	**0.58**	**37**	*e*Pg	**Pg**	**06 46 32.2**	**-0.3**
KHL				*e*Sg	**Sb**	**06 46 41.3**	**-0.7**
KHAL	**Karahalli**	**0.60**	**32**	*i* P	**Pg**	**06 46 32.5**	**-0.5**
KHAL				*i* S	**Sg**	**06 46 41.0**	**0.0**
KHAL	**Karahalli**	**0.60**	**32**	*i* P	**Pg**	**06 46 32.5**	**-0.5**
KHAL				*i* S	**Sg**	**06 46 41.0**	**0.0**
GOLH	**Golhisar**	**0.73**	**148**	*e*P	**Pb**	**06 46 35.7**	**-0.4**
GOLH				*e*S	**Sn**	**06 46 48.9**	**-0.1**
GOLH	**Golhisar**	**0.73**	**148**	*e*P	**Pb**	**06 46 35.7**	**-0.4**
GOLH				*e*S	**Sn**	**06 46 48.9**	**-0.1**
KULA	**Kula-Manisa**	**0.73**	**333**	*e*PG	**Pb**	**06 46 35.9**	**-0.4**
KULA				*e*SG	**Sg**	**06 46 45.9**	**+0.8**
KULA	**Kula-Manisa**	**0.73**	**333**	*e*Pg	**Pb**	**06 46 35.9**	**-0.4**
KULA				*e*Sg	**Sg**	**06 46 45.9**	**+0.8**
MANT	**Manisa**	**0.76**	**327**	*e*P	**Pg**	**06 46 35.7**	**-0.2**
MANT				*e*S	**Sg**	**06 46 45.9**	**+0.1**
MANT	**Manisa**	**0.76**	**327**	*e*P	**Pg**	**06 46 35.7**	**-0.2**
MANT				*e*S	**Sg**	**06 46 45.9**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.77**	**155**	*e*PG	**Pg**	**06 46 36.4**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.77**	**155**	*e*Pg	**Pg**	**06 46 36.4**	**+0.2**
YER	**Yerkesik**	**0.96**	**222**	*e*PG	**Pg**	**06 46 39.0**	**-0.8**
YER	**Yerkesik**	**0.96**	**222**	*e*Pg	**Pg**	**06 46 39.0**	**-0.8**
AYDN	**Tasoluk**	**0.97**	**259**	*e*P	**Pg**	**06 46 40.0**	**0.0**
AYDN				*e*S	**Sg**	**06 46 51.6**	**-1.1**
AYDN	**Tasoluk**	**0.97**	**259**	*e*P	**Pg**	**06 46 40.0**	**0.0**
AYDN				*e*S	**Sg**	**06 46 51.6**	**-1.1**
DALY	**Dalyan (Mu¨la**	**1.09**	**198**	*e*PN	**Pg**	**06 46 41.8**	**-0.5**
DALY	**Dalyan (Mu¨la**	**1.09**	**198**	*e*Pn	**Pg**	**06 46 41.8**	**-0.5**
ISP	**Isparta**	**1.14**	**91**	*e*PN	**Pn**	**06 46 43.5**	**0.0**
ISP	**Isparta**	**1.14**	**91**	*e*Pn	**Pn**	**06 46 43.5**	**0.0**
DEMI	**Demirci**	**1.22**	**346**	*e*P	**Pg**	**06 46 44.1**	**-0.6**
DEMI				*e*S	**Sb**	**06 47 01.1**	**+0.8**
DEMI	**Demirci**	**1.22**	**346**	*e*P	**Pg**	**06 46 44.1**	**-0.6**
DEMI				*e*S	**Sb**	**06 47 01.1**	**+0.8**
FETY	**Fethiye**	**1.22**	**180**	*e*PN	**Pn**	**06 46 45.3**	**+0.8**
FETY	**Fethiye**	**1.22**	**180**	*e*Pn	**Pn**	**06 46 45.3**	**+0.8**
SHUT	**Suhut-Afyon**	**1.35**	**59**	*e*PN	**Pg**	**06 46 47.1**	**-0.1**
SHUT	**Suhut-Afyon**	**1.35**	**59**	*e*Pn	**Pg**	**06 46 47.1**	**-0.1**
ALT	**Altintas**	**1.44**	**34**	*e*PN	**Pg**	**06 46 49.0**	**0.0**
ALT	**Altintas**	**1.44**	**34**	*e*Pn	**Pg**	**06 46 49.0**	**0.0**
TVSB	**Tavsanli**	**1.62**	**10**	*e*PN	**Pb**	**06 46 51.5**	**+0.2**
TVSB	**Tavsanli**	**1.62**	**10**	*e*Pn	**Pb**	**06 46 51.5**	**+0.2**
BODT	**Bodrum**	**1.62**	**241**	*e*PN	**Pb**	**06 46 51.5**	**+0.2**
BODT	**Bodrum**	**1.62**	**241**	*e*Pn	**Pb**	**06 46 51.5**	**+0.2**
DAT	**Datca**	**1.65**	**227**	*e*PN	**Pb**	**06 46 52.1**	**+0.3**
DAT	**Datca**	**1.65**	**227**	*e*Pn	**Pb**	**06 46 52.1**	**+0.3**

IDC ***25*** *07:11:03.8±3.0, 10.01S×119.57E, h0km, mb3.4/1, mb1 3.7/3, mb1mx3.4/19, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=238.1km s-min=30.7km az=50.0*
AUST ***25*** *07:11:08.1, 10.49S×119.46E, h10km*
ISCJB ***25*** *07:11:10.7±0.7, 10.61S±0.05×119.56E±0.05, h33km, mb3.3/1, Error ellipse: s-maj=7.5km s-min=7.2km az=28.9*

ISC 25 07:11:10.9±0.9, 10.44S±0.07×119.64E±0.06, h35km, n15, σ$e67/14, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**1.00**	**40**	P	Pn	07 11 32.2	+3.8
	baz=1.2,SNR=5.3						
WSI				S	**Sn**	**07 11 45.5**	**+4.1**
	baz=1.2,SNR=6.7						
UGM	**Wanagama**	**9.35**	**285**	P	Pn	07 13 18.9	-4.4
	baz=9.2,SNR=4.8						
PCI	**Palu**	**9.47**	**1**	S	**Sn**	**07 15 11.0**	**+0.7**
	baz=9.6,SNR=9.9						
FITZ	**Fitzroy Crossi**	**9.58**	**143**	P	Pn	07 13 28.8	+2.4
	baz=9.7,SNR=7.5						
FITZ				S	**Sn**	**07 15 14.7**	**+1.8**
	baz=9.7,SNR=5.3						
MTN	**Manton Dam**	**11.51**	**103**	S	**Sn**	**07 15 59.6**	**-0.6**
	baz=12,SNR=6.6						
CISI	**Cisompet, Garu**	**12.03**	**283**	P	P	07 14 17.3	+4.9
	baz=12,SNR=3.1						
KDU	**Kakadu**	**12.77**	**101**	P	**Pn**	**07 14 12.5**	**+2.4**
	baz=13,SNR=4.6						
XMIS	**Christmas Isla**	**13.76**	**269**	S	**Sn**	**07 16 55.5**	**+0.2**
	baz=14,SNR=3.3						
FAKI	**Fak Fak**	**14.57**	**60**	S	**S**	**07 17 27.8**	**-5.9**
	baz=15,SNR=3.1						
MEEK	**Meekatharra**	**16.14**	**183**	P	**Pn**	**07 14 53.9**	**-1.3**
	baz=16,SNR=8.9						
MEEK				S	Sn	07 17 38.0	-15
	baz=16,SNR=12						
WRA	**Warramunga Arr**	**17.03**	**125**	P	**P**	**07 15 06.8**	**-1.3**
	0.2nm,0.3s,baz=297,slow=14,SNR=10						
WRA				S	Sn	07 18 06.6	-8.3
	0.1nm,0.3s,baz=296,slow=21,SNR=4.5						
MORW	**Morawa**	**18.84**	**190**	P	**Pn**	**07 15 29.7**	**+1.1**
	baz=19,SNR=5.3						
MORW				S	Sn	07 18 43.8	-15
	baz=19,SNR=4.7						
ASAR	**Alice Springs**	**18.92**	**136**	P	**Pn**	**07 15 31.1**	**+1.4**
	0.2nm,0.3s,baz=314,slow=12,SNR=9.6						
ASAR				S	**Sn**	**07 18 56.5**	**-4.2**
	0.0nm,0.3s,baz=308,slow=22,SNR=2.6						
GSI	**Gunungsitoli**	**24.86**	**297**	P	**P**	**07 16 34.3**	**+3.8**
	baz=25,SNR=5.4						
GSI				S	**S**	**07 20 44.5**	**-6.9**
	baz=25,SNR=4.0						
MKAR	**Makanchi Array**	**66.02**	**333**	P	P	07 21 49.4	-4.6
	0.2nm,0.6s,baz=157,slow=6.8,SNR=2.6						

IDC ***25*** *07:19:16.9±0.9, 13.08S×166.45E, h0km, mb4.1/6, mb1 4.2/8, mb1mx4.0/20, mbtmp4.1/8, ML4.6/2, MS3.7/8, Ms1 3.7/8, ms1mx3.4/27, Error ellipse: s-maj=32.4km s-min=23.2km az=118.0*
ISCJB ***25*** *07:19:21.6±0.8, 13.13S±0.07×166.3E±0.1, h44km, mb4.0/8, MS3.6/8, Error ellipse: s-maj=19.9km s-min=9.1km az=169.3*
NEIC ***25*** *07:19:22.7±2.1, 13.12S×166.37E, h38km±17km, mb4.5/1, Error ellipse: s-maj=25.5km s-min=15.2km az=67.0*

ISC 25 07:19:23.6±0.7, 13.09S±0.08×166.4E±0.1, h44km, n36, σ1s20/34, mb4.0/8, MS3.6/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.26**	**299**	*e*Pn	**Pn**	**07 21 06.3**	**-0.9**
	234nm,0.7s						
HNR	**Honiara**	**7.26**	**299**	Pn	**Pn**	**07 21 06.4**	**-0.8**
	58nm,0.3s,baz=145,slow=5.1,SNR=21						
HNR				LR	LR	07 22 42.1	
	comp=Z,39nm,19.1s,baz=135,slow=28						
DZM	**Mont Dzumac**	**8.93**	**179**	*e*Pn	**Pn**	**07 21 29.0**	**-1.2**
	14nm,0.3s						
DZM				*e*LR	LR	07 23 28.8	
	140nm,25.8s						
DZM	**Mont Dzumac**	**8.93**	**179**	*e*Pn	**Pn**	**07 21 29.6**	**-0.6**
	13nm,0.4s						
DZM				Sn	**Sn**	**07 23 11.2**	**+1.7**
DZM	**Mont Dzumac**	**8.93**	**179**	Pn	**Pn**	**07 21 28.0**	**-2.2**
	0.9nm,0.3s,baz=17,slow=19,SNR=16						
DZM				Sn	**Sn**	**07 23 11.2**	**+1.7**
	baz=336,slow=20,SNR=2.1						
CTA	**Charters Tower**	**20.47**	**247**	LR	LR	07 30 23.3	
	comp=Z,236nm,21.6s,baz=72,slow=32						
AFI	**Afiamalu**	**21.28**	**95**	LR	LR	07 30 57.4	
	comp=Z,73nm,18.1s,baz=124,slow=33						
URZ	**Urewera**	**26.83**	**161**	LR	LR	07 34 13.4	
	comp=Z,128nm,19.9s,baz=192,slow=33						
STKA	**Stephens Creek**	**29.42**	**226**	LR	LR	07 36 28.3	
	comp=Z,147nm,18.4s,baz=28,slow=35						
WRA	**Warramunga Arr**	**31.41**	**253**	P	**P**	**07 25 39.9**	**-0.9**
WRA	**Warramunga Arr**	**31.41**	**253**	P	**P**	**07 25 39.9**	**-0.9**
	0.5nm,0.7s,baz=86,slow=9.5,SNR=6.0						
WRA				LR	LR	07 37 01.2	
	comp=Z,152nm,20.6s,baz=80,slow=34						
ASAR	**Alice Springs**	**32.47**	**246**	P	**P**	**07 25 49.5**	**-0.7**
ASAR				PcP	**PcP**	**07 28 37.0**	**+0.3**
ASAR	**Alice Springs**	**32.47**	**246**	P	**P**	**07 25 49.5**	**-0.7**
	2.0nm,0.7s,baz=72,slow=9.7,SNR=34						
ASAR				PcP	**PcP**	**07 28 37.0**	**+0.3**
	0.6nm,0.7s,baz=76,slow=2.1,SNR=6.3						
FITZ	**Fitzroy Crossi**	**39.48**	**257**	LR	LR	07 42 06.6	
	comp=Z,76nm,19.2s,baz=275,slow=35						
PPT2	**Papeete2**	**42.66**	**102**	*e*LR	LR	07 39 15.5	
	76nm,25.5s						
PPT	**Papeete**	**42.66**	**102**	LR	LR	07 40 19.7	
	comp=Z,177nm,19.9s,baz=315,slow=30						
QSPA	**South Pole Qui**	**76.93**	**180**	*e*P	**P**	**07 31 10.5**	**-0.8**
	5.3nm,1.0s						
SONM	**Songino Array**	**80.66**	**324**	P	**P**	**07 31 34.9**	**+2.8**
SONM	**Songino Array**	**80.66**	**324**	P	**P**	**07 31 34.9**	**+2.8**
	0.4nm,0.4s,baz=130,slow=7.1,SNR=2.2						
ILAR	**Eielson Array**	**85.25**	**18**	P	**P**	**07 31 53.8**	**-1.5**
ILAR	**Eielson Array**	**85.25**	**18**	P	**P**	**07 31 53.8**	**-1.5**
	0.5nm,0.6s,baz=247,slow=4.9,SNR=13						
ILAR				LR	LR	08 06 21.1	
	comp=Z,49nm,18.1s,baz=271,slow=33						
MKAR	**Makanchi Array**	**95.41**	**317**	P	**P**	**07 32 44.1**	**+0.6**
MKAR	**Makanchi Array**	**95.41**	**317**	P	**P**	**07 32 44.1**	**+0.6**
	0.9nm,0.8s,baz=90,slow=6.1,SNR=5.8						
ZALV	**Zalesovo Beam**	**95.55**	**324**	P	**P**	**07 32 43.9**	**0.0**
ZALV	**Zalesovo Beam**	**95.55**	**324**	P	**P**	**07 32 43.9**	**0.0**
	1.2nm,0.6s,baz=108,slow=3.8,SNR=6.9						
YKA	**Yellowknife Ar**	**96.51**	**27**	P	**P**	**07 32 47.3**	**-0.7**
YKA	**Yellowknife Ar**	**96.51**	**27**	P	**P**	**07 32 47.3**	**-0.7**
	0.1nm,0.5s,baz=255,slow=4.5,SNR=3.5						
ARCES	**ARCESS Array B**	**118.45**	**345**	PKP	**PKPdf**	**07 38 05.6**	**-0.3**
ARCES	**ARCESS Array B**	**118.45**	**345**	PKP	**PKPdf**	**07 38 05.6**	**-0.3**
	9.6nm,1.3s,baz=45,slow=3.4,SNR=6.8						
BOSA	**Boshof**	**124.02**	**222**	PKP	**PKPdf**	**07 38 18.4**	**+0.4**
BOSA	**Boshof**	**124.02**	**222**	PKP	**PKPdf**	**07 38 18.4**	**+0.4**
	3.7nm,1.0s,baz=105,slow=3.6,SNR=4.4						
CEL	**Celeste**	**143.72**	**319**	*e*PKPdf	PKPbc	07 38 52.5	+0.7
ESDC	**Sonseca Array**	**152.18**	**344**	PKPab	**PKPab**	**07 39 25.8**	**+1.4**
ESDC	**Sonseca Array**	**152.18**	**344**	PKPab	**PKPab**	**07 39 25.8**	**+1.4**
	1.0nm,0.7s,baz=18,slow=4.0,SNR=4.7						
TORD	**Torodi Ar. Bea**	**165.06**	**272**	PKP	**PKPdf**	**07 39 24.0**	**0.0**
TORD				PKPab	**PKPab**	**07 40 21.6**	**+0.6**
TORD	**Torodi Ar. Bea**	**165.06**	**272**	PKP	**PKPdf**	**07 39 24.0**	**0.0**
	0.5nm,0.8s,baz=46,slow=2.1,SNR=3.4						
TORD				PKPab	**PKPab**	**07 40 21.6**	**+0.6**
	0.3nm,0.7s,baz=60,slow=2.4,SNR=2.7						

IDC ***25*** *07:43:40.6±1.1, 34.66N×141.50E, h0km, mb3.6/6, mb1 3.8/9, mb1mx3.7/27, mbtmp3.6/9, ML3.6/3, MS2.8/3, Ms1 2.8/3, ms1mx2.6/33, Error ellipse: s-maj=26.6km s-min=18.9km az=123.0*
ISCJB ***25*** *07:43:43.0±1.3, 34.68N±0.05×141.52E±0.08, h29km±7km, mb3.5/6, MS3.2/1, Error ellipse: s-maj=10.7km s-min=7.9km az=169.9*
JMA ***25*** *07:43:43.4±0.2, 34.66N×141.46E, h40km±1km, M3.1*

ISC 25 07:43:43.6±2.2, 34.72N±0.06×141.52E±0.10, h23km±15km, n20, σ0s85/21, mb3.5/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.45**	**262**	P	**Pb**	**07 43 52.7**	**+0.2**
BSO1				*e*S	**Sb**	**07 43 59.1**	**+0.5**
BSO3	**Boso 3**	**0.83**	**276**	P	**Pb**	**07 43 58.6**	**-0.6**
BSO4	**Boso 4**	**1.01**	**286**	P	**Pn**	**07 44 01.4**	**-0.8**
BSO4				*e*S	**Sb**	**07 44 15.3**	**+0.3**
CHOJ	**Chosi**	**1.12**	**331**	P	**Pn**	**07 44 03.5**	**-0.4**
CHOJ				*e*S	**Sn**	**07 44 18.4**	**-0.2**
JCN	**Nagara**	**1.28**	**303**	P	**Pn**	**07 44 06.6**	**+0.4**
JIM2	**Oshima 3**	**1.72**	**271**	P	**Pn**	**07 44 10.1**	**-2.1**
JYT	**Yasato**	**1.85**	**325**	P	**Pn**	**07 44 14.0**	**0.0**
JYT				*e*S	**Sn**	**07 44 36.4**	**-0.3**
JHJ	**Hachijo jima 2**	**2.15**	**223**	Pn	**Pn**	**07 44 17.5**	**-0.6**
	36nm,0.3s,baz=90,slow=20,SNR=5.2						
JHJ				Sn	**Sn**	**07 44 43.5**	**-0.5**
	51nm,0.3s,baz=66,slow=20,SNR=3.4						
MJAR	**Matsushiro Arr**	**3.25**	**305**	Pn	**Pn**	**07 44 34.1**	**+0.8**
	2.8nm,0.3s,baz=145,slow=13,SNR=20						
MAT	**Matsushiro**	**3.25**	**305**	P	Pn	07 44 34.7	+1.4
MAT				*e*S	**Sn**	**07 45 12.2**	**+0.9**
JNU	**Nakatsue**	**8.98**	**263**	LR	LR	07 48 21.3	
	comp=Z,40nm,21.8s,baz=337,slow=31						
ASAJ	**Asahikawa**	**9.42**	**5**	Pn	**Pn**	**07 45 56.2**	**-1.7**
	0.9nm,0.3s,baz=49,slow=20,SNR=4.6						
KSRS	**Korea Array**	**11.33**	**288**	LR	LR	07 50 52.1	
	comp=Z,40nm,20.3s,baz=100,slow=38						
SONM	**Songino Array**	**29.20**	**307**	P	P	07 49 44.5	+1.0
	0.4nm,0.6s,baz=118,slow=8.5,SNR=3.6						
ZALV	**Zalesovo Beam**	**43.56**	**314**	PcP	**PcP**	**07 53 33.0**	**+0.1**
	0.7nm,0.5s,baz=89,slow=2.7,SNR=4.2						
MKAR	**Makanchi Array**	**45.45**	**304**	P	**P**	**07 52 01.0**	**+0.2**
	0.5nm,0.5s,baz=88,slow=9.5,SNR=8.9						
MKAR				LR	LR	08 12 29.6	
	comp=Z,25nm,18.8s,baz=175,slow=38						
ILAR	**Eielson Array**	**51.41**	**31**	P	**P**	**07 52 46.9**	**+0.5**
	0.5nm,0.9s,baz=265,slow=7.2,SNR=4.5						
WRA	**Warramunga Arr**	**54.79**	**188**	P	**P**	**07 53 11.1**	**-0.6**
	2.0nm,0.6s,baz=3.5,slow=7.6,SNR=5.5						
YKA	**Yellowknife Ar**	**65.77**	**30**	P	**P**	**07 54 27.0**	**+0.6**
	0.1nm,0.5s,baz=296,slow=6.3,SNR=2.9						
NVAR	**Mina Array Bea**	**76.31**	**53**	P	P	07 55 33.6	+2.5
	0.2nm,0.3s,baz=305,slow=5.2,SNR=3.8						

IDC ***25*** *07:46:15.8±2.2, 6.26S×129.63E, h0km, mb3.8/1, mb1 3.9/4, mb1mx3.6/20, mbtmp3.8/4, ML3.8/3, Error ellipse: s-maj=97.2km s-min=27.4km az=76.0*
AUST ***25*** *07:47:06.7±99.0, 9.19S×130.62E, h22km±7km, Error ellipse: s-maj=8.1km s-min=1.3km az=277.0*

ISC 25 07:46:35.1±2.3, 7.4S±0.1×129.7E±0.2, h79km, n7, σ1s77/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLE	**Tual**	**3.49**	**60**	P	**Sn**	**07 48 08.1**	**+0.6**
	baz=4.1,SNR=4.6						
FAKI	**Fak Fak**	**5.14**	**30**	P	Sn	07 48 40.9	-6.9
	baz=6.5,SNR=4.1						
MTN	**Manton Dam**	**5.56**	**166**	P	Pn	07 48 02.1	+6.6
	baz=3.7,SNR=17						
KDU	**Kakadu**	**5.89**	**153**	P	Pn	07 48 06.0	+6.1
	baz=3.9,SNR=49					

TCHB				AML	AML	07 52 49.8	
	comp=N,78nm,0.5s						
TCHB	**Talchebab**	**0.96**	**178**	*e*P	**Pg**	**07 52 25.8**	**0.0**
	SNR=67						
TCHB				*e*S	**Sn**	**07 52 40.3**	**-0.4**
	comp=N,78nm,0.5s,SNR=59						
SALA	**Sala**	**1.14**	**144**	*e*P	**Pg**	**07 52 28.7**	**-0.4**
SALA				*e*S	**Sb**	**07 52 44.6**	**+0.5**
SALA				AML	AML	07 52 48.3	
	comp=N,58nm,0.3s						
SALA				AML	AML	07 52 51.7	
	comp=E,10nm,0.4s						
SALA	**Sala**	**1.14**	**144**	*e*P	**Pg**	**07 52 28.7**	**-0.4**
	SNR=57						
SALA				*e*S	**Sb**	**07 52 44.6**	**+0.5**
	comp=E,10nm,0.4s,SNR=49						
ZALF	**Zalf**	**1.37**	**121**	*i* P	**Pn**	**07 52 32.3**	**-0.2**
ZALF				*e*S	**Sn**	**07 52 51.1**	**+0.4**
ZALF	**Zalf**	**1.37**	**121**	*i* P	**Pn**	**07 52 32.3**	**-0.2**
	SNR=57						
ZALF				*e*S	**Sn**	**07 52 51.1**	**+0.4**
	SNR=49						

IDC 25 08:01:25.6±1.3**, 10°50N**×**138°96E, h0**km**, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.4**/24**, mbtmp3.4**/4**, MS2.9**/2**, Ms1 2.9**/2**, ms1mx2.3**/18**, Error ellipse: s-maj=54.8km s-min=31.3km az=96.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**25.94**	**359**	LR	LR	08 15 49.2	
	comp=Z,24nm,20.8s,baz=195,slow=33						
ASAR	**Alice Springs**	**34.31**	**188**	P	P	08 08 13.9	-0.1
	0.2nm,0.7s,baz=16,slow=14,SNR=4.4						
PETK	**Petropavlovsk-**	**45.09**	**16**	LR	LR	08 26 34.0	
	comp=Z,14nm,20.6s,baz=56,slow=33						
MKAR	**Makanchi Array**	**59.81**	**318**	P	P	08 11 32.7	-0.1
	0.7nm,0.7s,baz=125,slow=7.2,SNR=7.7						
ILAR	**Eielson Array**	**73.82**	**25**	P	P	08 13 01.3	-0.5
	0.3nm,0.7s,baz=243,slow=5.1,SNR=6.9						
YKA	**Yellowknife Ar**	**88.22**	**26**	P	P	08 14 19.2	+0.7
	0.1nm,0.5s,baz=287,slow=4.8,SNR=2.6						

*ISCJB **25** 08:07:40.9±0.6, 3°30N±0°09×122°8E±0°2, h545km, mb3.5/8, Error ellipse: s-maj=24.5km s-min=9.9km az=160.4*
*IDC **25** 08:07:42.3±2.5, 3°26N×122°88E, h546km±36km, mb2.9/8, mb1 3.1/9, mb1mx2.9/25, mbtmp2.9/9, Error ellipse: s-maj=42.0km s-min=13.1km az=69.0*
*AUST **25** 08:07:52.7±2.7, 1°71N×123°42E, h482km, Error ellipse: s-maj=3.8km s-min=1.5km az=327.0*

ISC 25 08:07:42.0±0.7**, 3°22N**±0°10×**122°9E**±0°2**, h545**km**, n20,** σ1**°58**/18**, mb3.6**/8**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**5.10**	**217**	S	S	08 09 54.1	-32
	baz=4.4,SNR=7.6						
KAPI	**Kappang**	**8.76**	**201**	P	**P**	**08 09 47.7**	**+0.4**
	0.4nm,0.3s,baz=32,slow=9.9,SNR=6.7						
SWI	**Sorong**	**9.31**	**116**	P	P	08 09 47.1	-5.9
	baz=8.3,SNR=3.3						
FAKI	**Fak Fak**	**11.18**	**123**	P	**P**	**08 10 12.6**	**+0.4**
	baz=10.0,SNR=4.2						
WSI	**Waingapu**	**13.06**	**191**	P	P	08 10 24.4	-7.2
	baz=12,SNR=10						
MTN	**Manton Dam**	**17.95**	**153**	P	**P**	**08 11 20.4**	**+0.7**
	baz=16,SNR=26						
KDU	**Kakadu**	**18.46**	**149**	P	**P**	**08 11 25.1**	**+0.7**
	baz=17,SNR=8.3						
MNAI	**Manna**	**21.28**	**249**	S	PcP	08 15 43.7	+12
	baz=21,SNR=8.4						
FITZ	**Fitzroy Crossi**	**21.36**	**173**	P	**P**	**08 11 51.2**	**+0.5**
	1.5nm,0.7s,baz=356,slow=9.0,SNR=7.8						
FITZ	**Fitzroy Crossi**	**21.36**	**173**	P	**P**	**08 11 51.4**	**+0.7**
	baz=20,SNR=4.4						
WRA	**Warramunga Arr**	**25.63**	**154**	P	**P**	**08 12 28.4**	**-0.3**
	1.8nm,0.3s,baz=338,slow=9.5,SNR=101						
WRA				S	**S**	**08 16 15.9**	**-2.9**
	0.3nm,0.8s,baz=320,slow=22,SNR=3.3						
QIS	**Mount Isa**	**28.77**	**146**	P	**P**	**08 12 57.3**	**+1.0**
	baz=27,SNR=5.6						
ASAR	**Alice Springs**	**28.80**	**159**	P	**P**	**08 12 57.2**	**+0.6**
	0.9nm,0.3s,baz=333,slow=8.0,SNR=49						
ASAR				S	**S**	**08 17 03.9**	**-4.6**
	0.9nm,0.8s,baz=349,slow=18,SNR=3.8						
PATS	**Pohnpei**	**35.48**	**83**	P	P	08 14 05.4	+12
	baz=35,SNR=3.2						
STKA	**Stephens Creek**	**39.18**	**154**	P	**P**	**08 14 24.9**	**+1.5**
	2.1nm,0.7s,baz=319,slow=11,SNR=3.2						
USRK	**Ussuriysk Arra**	**41.60**	**10**	P	**P**	**08 14 42.1**	**-0.3**
	0.9nm,0.7s,baz=213,slow=7.8,SNR=4.9						
SONM	**Songino Array**	**46.66**	**345**	P	**P**	**08 15 20.9**	**-0.8**
	0.4nm,0.6s,baz=142,slow=7.3,SNR=3.0						
MKAR	**Makanchi Array**	**55.84**	**327**	P	**P**	**08 16 28.1**	**+0.1**
	0.6nm,0.3s,baz=128,slow=8.2,SNR=15						
MKAR				PcP	**PcP**	**08 17 18.3**	**-0.6**
	0.5nm,0.6s,baz=106,slow=6.6,SNR=4.4						
ZALV	**Zalesovo Beam**	**59.35**	**335**	P	**P**	**08 16 52.2**	**+0.5**
	0.2nm,0.3s,baz=119,slow=5.1,SNR=2.1						
TORD	**Torodi Ar. Bea**	**119.40**	**287**	PKP	**PKPdf**	**08 25 30.0**	**-0.8**
	0.2nm,0.6s,baz=77,slow=3.1,SNR=2.6						

*NEIC **25** 08:43:29.8, 35°41S×178°26E, h233km, MG4.0(WEL), After WEL.*

WEL 25 08:43:37.8±0.6**, 35°98S**×**178°28E, h203**km**±10**km**, ML3.9**/9**, 1C, Error ellipse: s-maj=12.0km s-min=8.7km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**2.09**	**181**	PN	Pn	08 44 17.3	-0.2
PUZ				SN	S	08 44 47.4	-0.7
PUZ	**Puketiti**	**2.09**	**181**	Pn	Pn	08 44 17.3	-0.2
MWZ	**Matawai**	**2.43**	**194**	⇑PN	Pn	08 44 21.2	+0.1
MWZ				SN	S	08 44 53.9	-0.7
MWZ	**Matawai**	**2.43**	**194**	Pn	Pn	08 44 21.2	+0.1
URZ	**Urewera**	**2.46**	**202**	PN	Pn	08 44 21.5	0.0
URZ				SN	S	08 44 56.3	+1.2
URZ	**Urewera**	**2.46**	**202**	Pn	Pn	08 44 21.5	0.0
CNGZ	**Carnagh Statio**	**2.50**	**181**	PN	Pn	08 44 22.4	+0.6
CNGZ	**Carnagh Statio**	**2.50**	**181**	Pn	Pn	08 44 22.4	+0.6
PRGZ	**Paritu Road**	**2.96**	**186**	PN	Pn	08 44 27.2	+0.1
PRGZ	**Paritu Road**	**2.96**	**186**	Pn	Pn	08 44 27.2	+0.1
RAHZ	**Arahi**	**3.09**	**198**	PN	Pn	08 44 28.7	+0.1
RAHZ	**Arahi**	**3.09**	**198**	Pn	Pn	08 44 28.8	+0.1
MHGZ	**Mahia Peninsul**	**3.19**	**185**	PN	Pn	08 44 29.8	+0.1
MHGZ	**Mahia Peninsul**	**3.19**	**185**	Pn	Pn	08 44 29.8	+0.1
NMHZ	**Naumai**	**3.33**	**200**	PN	Pn	08 44 32.0	+0.4
NMHZ	**Naumai**	**3.33**	**200**	Pn	Pn	08 44 32.0	+0.4
BKZ	**Black Stump Fm**	**3.49**	**204**	PN	Pn	08 44 33.6	+0.1
BKZ	**Black Stump Fm**	**3.49**	**204**	Pn	Pn	08 44 33.6	+0.1
MCHZ	**McNeill Hill**	**3.68**	**200**	PN	Pn	08 44 35.9	+0.1
MCHZ	**McNeill Hill**	**3.68**	**200**	Pn	Pn	08 44 35.9	+0.1
KAHZ	**Kahuranaki**	**3.97**	**196**	PN	Pn	08 44 38.9	-0.4
KAHZ	**Kahuranaki**	**3.97**	**196**	Pn	Pn	08 44 38.9	-0.4
TSZ	**Takapari Road**	**4.47**	**204**	PN	Pn	08 44 44.7	-0.8
TSZ	**Takapari Road**	**4.47**	**204**	Pn	Pn	08 44 44.7	-0.8
PRHZ	**Porangahau**	**4.48**	**196**	PN	Pn	08 44 44.7	-0.9
PRHZ	**Porangahau**	**4.48**	**196**	Pn	Pn	08 44 44.7	-0.9
DVHZ	**Dannevirke**	**4.63**	**201**	PN	Pn	08 44 47.0	-0.6
DVHZ	**Dannevirke**	**4.63**	**201**	Pn	Pn	08 44 46.2	-1.3
POWZ	**Post Office Ro**	**4.83**	**203**	PN	Pn	08 44 49.5	-0.6
POWZ	**Post Office Ro**	**4.83**	**203**	Pn	Pn	08 44 49.5	-0.6
BFZ	**Birch Farm**	**4.96**	**198**	PN	Pn	08 44 50.3	-1.4
BFZ	**Birch Farm**	**4.96**	**198**	Pn	Pn	08 44 50.3	-1.4
MRZ	**Mangatainoka R**	**5.14**	**204**	PN	Pn	08 44 52.1	-1.9
MRZ	**Mangatainoka R**	**5.14**	**204**	Pn	Pn	08 44 52.1	-1.9
TIWZ	**Tintock**	**5.15**	**201**	PN	Pn	08 44 52.8	-1.4
TIWZ	**Tintock**	**5.15**	**201**	Pn	Pn	08 44 52.8	-1.4
HOWZ	**Holdsworth Sta**	**5.37**	**203**	Pn	Pn	08 44 55.4	-1.6
CAW	**Cannon Point**	**5.71**	**205**	Pn	Pn	08 44 59.0	-2.4
MSWZ	**Moikau Station**	**5.93**	**203**	Pn	Pn	08 45 01.8	-2.3
THZ	**Tophouse**	**7.14**	**214**	Pn	Pn	08 45 18.4	-1.5

IDC 25 09:22:14.6±1.6**, 11°08S**×**119°06E, h0**km**, mb3.7**/2**, mb1 4.0**/6**, mb1mx3.7**/21**, mbtmp3.8**/6**, ML4.0**/4**, Error ellipse: s-maj=53.5km s-min=16.8km az=53.0, South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.06**	**6**	Pn	Pn	09 23 45.2	-0.4
	1.7nm,0.3s,baz=186,slow=17,SNR=3.6						
KAPI				Sn	Sn	09 24 55.1	-0.7
	3.3nm,0.3s,baz=252,slow=22,SNR=9.7						
FITZ	**Fitzroy Crossi**	**9.45**	**138**	Pn	Pn	09 24 31.1	-1.0
	1.7nm,0.3s,baz=316,slow=8.3,SNR=42						
FITZ				Sn	Sn	09 26 19.3	+0.2
	0.6nm,0.3s,baz=175,slow=23,SNR=3.9						
WRA	**Warramunga Arr**	**17.14**	**123**	P	P	09 26 17.4	-0.2
	0.5nm,0.3s,baz=284,slow=14,SNR=24						
WRA				S	Sn	09 29 27.9	+0.7
	0.0nm,0.3s,baz=284,slow=21,SNR=2.7						
ASAR	**Alice Springs**	**18.88**	**133**	P	Pn	09 26 37.1	-0.1
	0.4nm,0.3s,baz=314,slow=13,SNR=32						
MKAR	**Makanchi Array**	**66.33**	**333**	P	P	09 33 05.0	-0.1
	0.2nm,0.4s,baz=150,slow=6.8,SNR=5.7						
ZALV	**Zalesovo Beam**	**71.00**	**339**	P	P	09 33 34.3	+0.3
	0.4nm,0.3s,baz=143,slow=3.6,SNR=3.6						

*PRU **25** 09:24:09.7, 51°43N×16°07E, h0km*
*CSEM **25** 09:24:10.8±0.5, 51°36N×16°08E, h2km, ML2.9/4, Error ellipse: s-maj=7.9km s-min=3.5km az=5.0*

WAR 25 09:24:07.9, 51°53N×16°10E, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**170**	*e*Pg	Pg	09 24 21.0	-0.4
KSP				*e*Sg	Sg	09 24 30.2	-0.3
UPC	**Upice**	**1.03**	**183**	*e*PG	Pg	09 24 27.1	-0.5
UPC	**Upice**	**1.03**	**183**	Pg	Pg	09 24 27.1	-0.5
DPC	**Dobruska-Polom**	**1.19**	**173**	*e*PG	Pg	09 24 30.0	-0.8
DPC				*e*SG	Sg	09 24 44.9	-1.5
	comp=Z,4.4nm,0.2s						
DPC	**Dobruska-Polom**	**1.19**	**173**	Pg	Pg	09 24 30.0	-0.8
DPC				Sg	Sg	09 24 44.9	-1.5
	4.4nm,0.2s						
PVCC	**Panska Ves**	**1.39**	**224**	*e*PG	Pb	09 24 35.2	+0.4
PVCC				*e*SG	Sg	09 24 52.1	-0.6
	comp=Z,29nm,0.2s						
PVCC	**Panska Ves**	**1.39**	**224**	Pg	Pb	09 24 35.2	+0.4
PVCC				Sg	Sg	09 24 52.1	-0.6
	29nm,0.2s						
BRG	**Berggiesshubel**	**1.51**	**245**	PG	Pn	09 24 36.1	-0.1
BRG				SG	Sg	09 24 56.0	-0.3
	8.2nm,0.4s						
PRU	**Pruhonice**	**1.83**	**213**	*e*SG	Sb	09 25 05.4	-0.4
	comp=Z,8.1nm,0.3s						
PRU	**Pruhonice**	**1.83**	**213**	Sg	Sb	09 25 05.4	-0.4
	8.1nm,0.3s						
CLL	**Collm**	**1.95**	**265**	*e*Pg	Pg	09 24 45.0	-0.3
CLL				*e*Sg	Sg	09 25 11.0	+0.4
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn	Pb	09 24 43.9	-1.1
MORC				*e*Sg	Sb	09 25 10.0	-0.3
OKC	**Ostrava-Krasne**	**2.14**	**142**	*e*SG	Sb	09 25 15.6	+1.0
OKC	**Ostrava-Krasne**	**2.14**	**142**	Sg	Sb	09 25 15.6	+1.0
NKC	**Novy Kostel**	**2.65**	**242**	*e*SG	Sg	09 25 33.6	+0.4
	comp=Z,7.1nm,0.3s						
NKC	**Novy Kostel**	**2.65**	**242**	Sg	Sg	09 25 33.6	+0.4
	7.1nm,0.3s						
KHC	**Kasperske Hory**	**2.90**	**215**	*e*PG	Pb	09 25 01.1	+0.6
KHC				*e*SG	Sg	09 25 38.8	-2.2

*JMA **25** 09:42:33.9±0.8, 46°79N×152°96E, h30km, M4.3*
*ISCJB **25** 09:42:35.0±0.7, 46°7N±0°1×152°8E±0°1, h52km, mb3.7/9, Error ellipse: s-maj=20.0km s-min=5.3km az=141.0*
*MOS **25** 09:42:39.4±1.3, 46°96N×152°66E, h91km, mb4.1/4, Error ellipse: s-maj=21.6km s-min=12.2km az=59.8*
*IDC **25** 09:42:40.1±2.8, 46°81N×152°73E, h81km±25km, mb3.4/10, mb1 3.5/13, mb1mx3.4/28, mbtmp3.4/13, MS2.5/1, Ms1 2.5/1, ms1mx2.2/29, Error ellipse: s-maj=25.6km s-min=15.2km az=126.0*

ISC 25 09:42:37.2±0.9**, 46°8N**±0°1×**152°6E**±0°1**, h52**km**, n35,** σ1**°62**/35**, mb3.5**/9**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.59**	**30**	*e*PN	**Pn**	**09 43 44.5**	**+0.6**
SKR				*e*		09 44 32.0	
NEM2	**Nemuro 2**	**5.89**	**237**	P	**Pn**	**09 44 01.7**	**-0.1**
NEM2				*e*S	**Sn**	**09 45 06.8**	**-1.2**
JRA	**Rausu**	**5.95**	**244**	P	**Pn**	**09 44 05.3**	**+2.8**
JNK	**Nakash**	**6.38**	**243**	P	**Pn**	**09 44 10.7**	**+2.2**
JNK				*e*S	**Sn**	**09 45 22.8**	**+2.9**
JTKR	**Abashiri--Toko**	**6.70**	**249**	P	Pn	09 44 16.2	+3.4
JAK	**Akkeshi**	**6.73**	**239**	P	**Pn**	**09 44 13.3**	**+0.1**
JAK				*e*S	**Sn**	**09 45 26.4**	**-2.0**
YSS	**Yuzh-Sakhalins**	**6.73**	**275**	*e*PN	Pn	09 44 18.0	+4.8
JMP	**Maruseppu**	**7.03**	**250**	P	Pn	09 44 21.4	+3.9
JAR	**Ashorobuto**	**7.12**	**244**	P	**Pn**	**09 44 21.0**	**+2.4**
JAR				*e*S	**Sn**	**09 45 40.4**	**+2.3**
PETK	**Petropavlovsk-**	**7.18**	**26**	PN	**Pn**	**09 44 20.0**	**+0.6**
PETK	**Petropavlovsk-**	**7.18**	**26**	P	**Pn**	**09 44 19.9**	**+0.6**
	0.1nm,0.3s,baz=192,slow=12,SNR=5.9						
JOB	**Onbets**	**7.29**	**241**	P	**Pn**	**09 44 22.7**	**+1.7**
JOB				*e*S	**Sn**	**09 45 42.1**	**-0.3**
ASAJ	**Asahikawa**	**7.48**	**253**	P	Pn	09 44 28.7	+5.1
ASAJ	**Asahikawa**	**7.48**	**253**	P	Pn	09 44 28.1	+4.5
	0.9nm,0.3s,baz=84,slow=14,SNR=8.5						
ASAJ				LR	LR	09 48 22.8	
	comp=Z,35nm,18.2s,baz=206,slow=45						
JKK2	**Kamakawa 2**	**7.49**	**251**	P	Pn	09 44 27.7	+4.0
JCH	**Churui**	**7.75**	**241**	P	**Pn**	**09 44 27.7**	**+0.5**
JCH				*e*S	**Sn**	**09 45 52.1**	**-1.4**
JEM	**Erimo**	**8.22**	**238**	*e*S	**Sn**	**09 46 03.0**	**-2.2**
JNBK	**Urakawa-nobuka**	**8.31**	**241**	*e*S	**Sn**	**09 46 04.6**	**-2.6**
JKB	**Kayabe**	**9.58**	**244**	*e*S	**Sn**	**09 46 34.3**	**-4.1**
JYM2	**Yakumo 2**	**9.87**	**246**	P	**Pn**	**09 44 57.2**	**+1.0**
USRK	**Ussuriysk Arra**	**14.64**	**267**	P	**P**	**09 46 05.0**	**-1.2**
	0.4nm,0.3s,baz=71,slow=12,SNR=7.5						
MJAR	**Matsushiro Arr**	**14.78**	**231**	P	**P**	**09 46 09.1**	**+1.3**
	0.3nm,0.3s,baz=36,slow=7.6,SNR=5.4						
KSRS	**Korea Array**	**20.43**	**252**	P	Pn	09 47 14.4	+1.9
	0.8nm,0.5s,baz=55,slow=11,SNR=4.9						
ILAR	**Eielson Array**	**36.79**	**39**	P	**P**	**09 49 38.8**	**-0.7**
	0.3nm,0.8s,baz=261,slow=7.2,SNR=4.3						
MKAR	**Makanchi Array**	**46.60**	**297**	P	**P**	**09 50 59.1**	**-0.7**
MKAR						09 52 33.2	
MKAR	**Makanchi Array**	**46.60**	**297**	P	**P**	**09 50 59.1**	**-0.7**
	0.4nm,0.6s,baz=67,slow=6.3,SNR=6.0						
MKAR				PcP	**PcP**	**09 52 33.2**	**+0.2**
	0.2nm,0.5s,baz=71,slow=3.0,SNR=3.0						
YKA	**Yellowknife Ar**	**51.15**	**37**	P	**P**	**09 51 34.1**	**-0.3**
	0.2nm,0.7s,baz=297,slow=6.9,SNR=2.9						
CMAR	**Chiang Mai Arr**	**52.00**	**256**	P	**P**	**09 51 42.9**	**+1.6**
	0.6nm,0.4s,baz=17,slow=8.2,SNR=4.5						
FINES	**FINESS Array B**	**63.88**	**335**	P	**P**	**09 53 03.4**	**-0.5**
	1.2nm,0.4s,baz=32,slow=8.0,SNR=18						
NB2	**NORSAR Subarra**	**68.11**	**341**	P	**P**	**09 53 30.4**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**68.11**	**341**	P	**P**	**09 53 30.8**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=27,slow=6.2,SNR=4.9						
WRA	**Warramunga Arr**	**68.39**	**198**	P	**P**	**09 53 32.2**	**-1.0**
	comp=Z,0.4nm,0.9s,baz=19,slow=6.9,SNR=3.6						
AKASG	**Malin Array Be**	**71.33**	**326**	P	**P**	**09 53 50.5**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**71.33**	**326**	P	**P**	**09 53 50.5**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=34,slow=5.8,SNR=5.2						
ASAR	**Alice Springs**	**72.09**	**198**	P	**P**	**09 53 56.6**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=14,slow=6.2,SNR=7.4						

*IDC **25** 09:50:29.8±3.5, 24°41N×109°02W, h0km, mb3.5/3, mb1 3.8/7, mb1mx3.7/26, mbtmp3.4/7, ML3.7/3, MS3.1/7, Ms1 3.1/7, ms1mx2.9/27, Error ellipse: s-maj=65.7km s-min=21.7km az=141.0*
*ISCJB **25** 09:50:31.2±1.3, 24°7N±0°1×109°0W±0°1, h10km, mb3.3/3, MS3.1/5, Error ellipse: s-maj=21.8km s-min=8.9km az=142.3*

ISC 25 09:50:32.2±1.4**, 24°6N**±0°1×**109°20W**±0°10**, h10**km**, n23,** σ1**°94**/22**, mb3.4**/3**, MS3.0**/5**, 5C-7D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.14**	**244**	Pn	**Pn**	**09 50 53.9**	**-0.2**
	6.6nm,0.3s,baz=100,slow=2.9,SNR=34						
LPIG				Sn	**Sb**	**09 51 07.3**	**-1.4**
	16nm,0.3s,baz=114,slow=20,SNR=19						
626A	**Big Bend Ranch**	**6.67**	**41**	⇑P	**Pn**	**09 52 09.6**	**-0.9**
	baz=6.2						
320A	**Kipp Ranch, An**	**6.72**	**5**	⇑P	**Pn**	**09 52 09.7**	**-1.4**
	baz=6.2						
319A	**Douglas**	**6.74**	**359**	⇑P	**Pn**	**09 52 09.5**	**-1.8**
	baz=6.2						
TXAR	**Lajitas Array**	**6.81**	**45**	Pn	**Pn**	**09 52 11.6**	**-0.8**
	0.4nm,0.3s,baz=229,slow=13,SNR=16						
TXAR				Pg	**Pb**	**09 52 32.2**	**+1.4**
	0.6nm,0.3s,baz=226,slow=15,SNR=8.9						
TXAR				Lg	Lg	09 54 03.0	
	1.9nm,0.3s,baz=227,slow=27,SNR=5.6						
425A	**Indio Mountain**	**7.19**	**30**	⇓P	**Pn**	**09 52 17.4**	**-0.1**
	baz=6.7,SNR=19						
220A	**Playas Peak, P**	**7.29**	**4**	⇓P	**Pn**	**09 52 17.3**	**-1.6**
	baz=6.8						
527A	**Woodward Ranch**	**7.42**	**41**	⇓P	**Pn**	**09 52 19.5**	**-1.2**
	baz=7.0						
527A				⇓S	**Sn**	**09 53 39.5**	**-5.4**
	baz=7.0						
221A	**Mesquite Ranch**	**7.47**	**9**	⇓P	**Pn**	**09 52 20.6**	**-0.8**
	baz=7.0,SNR=7.5						
324A	**Moseley Ranch,**	**7.55**	**25**	⇓P	**Pn**	**09 52 21.5**	**-1.0**
	baz=7.0						
426A	**McDonald Obser**	**7.57**	**36**	⇓P	**Pn**	**09 52 22.0**	**-0.9**
	baz=7.1						
426A				⇑S	**Sn**	**09 53 45.6**	**-3.3**
	baz=7.1						
325A	**Bean Ranch, Si**	**7.70**	**28**	⇑P	**Pn**	**09 52 24.0**	**-0.5**
	baz=7.2						
ANMO	**Albuquerque**	**10.57**	**12**	Pn	**Pn**	**09 53 06.6**	**+2.7**
	0.0nm,0.3s,baz=223,slow=12,SNR=7.6						
ANMO				LR	LR	09 57 44.6	
	comp=Z,108nm,18.9s,baz=157,slow=40						
PFO	**Pinyon Flat Ob**	**10.98**	**326**	LR	LR	09 57 18.3	
	comp=Z,46nm,21.4s,baz=299,slow=36						
NVAR	**Mina Array Bea**	**15.80**	**333**	Pn	**P**	**09 54 18.7**	**-0.1**
	0.1nm,0.3s,baz=79,slow=15,SNR=9.7						
PDAR	**Pinedale Array**	**18.11**	**359**	P	**Pn**	**09 54 44.5**	**+0.4**
	0.1nm,0.3s,baz=146,slow=9.8,SNR=2.9						
YBH	**Yreka Blue Hor**	**20.43**	**330**	LR	LR	10 02 58.1	
	comp=Z,39nm,20.3s,baz=160,slow=36						
NEW	**Newport**	**24.42**	**347**	P	**P**	**09 55 52.4**	**+1.4**
	2.4nm,0.8s,baz=131,slow=9.5,SNR=3.4						
NEW				LR	LR	10 06 10.3	
	comp=Z,49nm,18.7s,baz=6.4,slow=38						
TKL	**Tuckaleechee C**	**24.52**	**57**	LR	LR	10 06 23.1	
	comp=Z,44nm,18.6s,baz=18,slow=39						
ULM	**Lac du Bonnet**	**27.60**	**19**	LR	LR	10 07 14.6	
	comp=Z,52nm,18.9s,baz=131,slow=36						
YKA	**Yellowknife Ar**	**38.04**	**356**	P	**P**	**09 57 51.9**	**+1.4**
	0.3nm,0.9s,baz=170,slow=8.0,SNR=4.1						
ILAR	**Eielson Array**	**46.93**	**339**	P	**P**	**09 59 04.3**	**+1.5**
	0.2nm,0.5s,baz=150,slow=5.8,SNR=5.0						
NOA	**NORSAR Array B**	**82.09**	**25**	LR	LR	10 37 23.4	
	comp=Z,25nm,19.1s,baz=35,slow=34						

*ISCJB **25** 09:52:27.1±0.4, 23°63N±0°02×121°82E±0°02, h20km±4km, Error ellipse: s-maj=3.8km s-min=2.4km az=41.7*
*JMA **25** 09:52:28.6±0.4, 23°62N×121°82E, h50km, M3.1*
*TAP **25** 09:52:28.5, 23°68N×121°70E, h30km, ML3.6, B*

ISC 25 09:52:27.8±0.9**, 23°65N**±0°02×**121°77E**±0°03**, h30**km**±6**km**, n52,** σ0**°70**/90**, 4C-6D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.22**	**287**	P	**Pb**	**09 52 34.3**	**+0.1**
	baz=279						
TEGC				*e*S	**Sb**	**09 52 39.1**	**+0.6**
	baz=279						
ESF	**Shoufeng Towns**	**0.33**	**313**	P	**Pb**	**09 52 35.2**	**-0.5**
	baz=323						
ESF				*e*S	**Sb**	**09 52 40.6**	**-0.4**
	baz=323						
ESL	**Shilin**	**0.35**	**299**	⇑*i* P	**Pb**	**09 52 35.5**	**-0.4**
	baz=299						
ESL				*i* S	**Sb**	**09 52 40.6**	**-0.9**
	baz=299						
HWA	**Hwalien**	**0.36**	**336**	P	**Pb**	**09 52 36.1**	**0.0**
	baz=347						
HWA				*e*S	**Sb**	**09 52 42.1**	**+0.3**
	baz=347						
EHY	**Hungye**	**0.43**	**251**	⇑*i* P	**Pb**	**09 52 37.2**	**+0.1**
	baz=251						
EHY				S	**Sb**	**09 52 43.6**	**+0.1**
	baz=251						
TWD	**Chiawan**	**0.46**	**340**	⇓*i* P	**Pb**	**09 52 37.3**	**-0.3**
	baz=357						
TWD				S

CHN1	**Nanshi** baz=241	**1.23 248**	*e*P	**Pb**	**09 52 50.3**	**-0.1**
CHN1	baz=241		*e*S	**Sb**	**09 53 06.8**	**+0.9**
TWK	**Hsinying** baz=246	**1.23 252**	*e*P	**Pb**	**09 52 50.4**	**-0.2**
TWK	baz=246		*e*S	**Sb**	**09 53 06.0**	**-0.2**
CHY	**Chiayi** baz=259	**1.24 263**	*e*P	**Pb**	**09 52 50.6**	**0.0**
CHY	baz=259		*e*S	**Sb**	**09 53 07.0**	**+0.7**
ECL	**Taimali** baz=208	**1.28 216**	*e*P	**Pn**	**09 52 48.4**	**-1.3**
HSN	**Hsinchu** baz=335	**1.36 328**	*e*P	**Pn**	**09 52 51.4**	**+0.6**
HSN	baz=335		*e*S	**Sb**	**09 53 10.4**	**+0.7**
TWB1	**Santiao Chiao** baz=16	**1.37 8**	*e*P	**Pn**	**09 52 51.8**	**+0.8**
WTCT	**Ta-ch'eng** baz=277	**1.38 279**	*e*P	**Pb**	**09 52 52.6**	**-0.4**
YOJ	**Yonaguni jima** baz=60	**1.40 54**	*e*P	**Pb**	**09 52 52.9**	**-0.4**
YOJ	**Yonaguni jima**	**1.40 54**	P	**Pn**	**09 52 51.9**	**+0.6**
YOJ			*e*S	**Sn**	**09 53 09.1**	**+0.4**
NWF	**Wu-fen Shan** baz=354	**1.42 0**	*e*P	**Pb**	**09 52 52.9**	**-0.8**
NWF	baz=354		*e*S	**Sb**	**09 53 11.1**	**-0.3**
NCU	**National Centr** baz=345	**1.42 338**	*e*P	**Pb**	**09 52 53.0**	**-0.7**
NCU	baz=345		*e*S	**Sb**	**09 53 11.8**	**+0.3**
CHN8	**Yiju** baz=254	**1.46 259**	*e*P	**Pn**	**09 52 53.4**	**+1.3**
CHN8	baz=254		*e*S	**Sb**	**09 53 12.5**	**0.0**
TWM1	**Shoushan** baz=216	**1.48 237**	*e*P	**Pb**	**09 52 55.0**	**+0.3**
TWS1	**Kuangyinshan** baz=354	**1.48 348**	*e*P	**Pn**	**09 52 53.6**	**+1.1**
EAST	**Anshuo** baz=196	**1.52 214**	*e*P	**Pn**	**09 52 52.3**	**-0.6**
SCLT	**Jiali** baz=246	**1.52 252**	*e*P	**Pb**	**09 52 55.2**	**-0.1**
SCZT	**Fangliau** baz=198	**1.65 220**	*e*P	**Pn**	**09 52 56.2**	**+1.4**
SCZT	baz=198		*e*S	**Sb**	**09 53 17.2**	**-0.7**
HATJ	**Hateruma jima**	**1.91 77**	P	**Pn**	**09 52 58.8**	**+0.5**
HATJ			*e*S	**Sn**	**09 53 20.9**	**-0.4**
TWK1	**Hengchun** baz=192	**1.91 208**	*e*P	**Pn**	**09 52 59.3**	**+1.0**
IRIF	**Iriomote-Funau**	**1.92 69**	P	**Pn**	**09 52 59.4**	**+0.9**
IRIF			S	**Sn**	**09 53 22.3**	**+0.7**
PNG	**Penghu** baz=265	**2.03 268**	*e*P	**Pn**	**09 53 00.7**	**+0.7**
JKRS	**Kuro-shima**	**2.13 74**	P	**Pn**	**09 53 02.7**	**+1.3**
JKRS			S	**Sn**	**09 53 27.7**	**+0.8**
JIJ	**Ishigaki jima**	**2.29 71**	P	**Pn**	**09 53 03.9**	**+0.4**
JIJ			*e*S	**Sn**	**09 53 30.1**	**-0.6**
JTJ	**Tarama**	**2.86 69**	P	**Pn**	**09 53 12.2**	**+0.9**
JTJ			*e*S	**Sn**	**09 53 44.1**	**-0.6**
KNM	**Kinmen** baz=283	**3.14 285**	*e*P	**Pn**	**09 53 16.7**	**+1.4**

*ISK **25** 09:52:48.7, 34°.87N×33°.23E, h55km, MD2.8*
*ISCJB **25** 09:52:50.1±0.6, 34°.86N±0°.04×33°.26E±0°.04, h50km±7km, Error ellipse: s-maj=6.9km s-min=5.1km az=33.6*
*CSEM **25** 09:52:50.8±0.2, 34°.93N×33°.26E, h43km±3km, Mw2.9, Error ellipse: s-maj=4.6km s-min=3.7km az=31.0*
*NIC **25** 09:52:51.0±0.2, 35°.00N×33°.25E, h41km, ML3.3, MW2.9*
ISC 25 09:52:50.9±1.3, 34°92N±0°.04×33°26E±0°.03, h45km±6km, n46, σ0s77/69, 2C-2D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSS	**Prodhromos** 29nm,0.2s	**0.07**	**52**	P	**Pn**	**09 52 57.8**	**-0.4**
CSS				S	**Sn**	**09 53 03.4**	**+0.2**
CSS	**Prodhromos**	**0.07**	**52**	PG	**Pn**	**09 52 57.7**	**-0.4**
CSS				*e*SG	**Sn**	**09 53 04.4**	**+1.2**
CSS	**Prodhromos**	**0.07**	**52**	*i* Pg	**Sn**	**09 52 57.7**	**-0.4**
CSS				S	**Sn**	**09 53 03.4**	**+0.2**
CSS				*e*Sg		09 53 04.4	
AKIN	**Ak¨–nc¨–lar- K**	**0.20**	**60**	*e*PG	**Pn**	**09 52 57.6**	**-1.1**
AKIN				*e*SG	**Sn**	**09 53 05.1**	**+0.9**
AKIN	**Ak¨–nc¨–lar- K**	**0.20**	**60**	*e*Pg	**Pn**	**09 52 57.6**	**-1.1**
AKIN				*e*Sg	**Sn**	**09 53 05.1**	**+0.9**
MAMC	**Mammari**	**0.26**	**352**	P	**Pn**	**09 52 58.1**	**-1.1**
MAMC	**Mammari**	**0.26**	**352**	P	**Pn**	**09 52 58.1**	**-1.1**
SZAC	**Souni-Zanaja**	**0.35**	**243**	⇑P	**Pn**	**09 53 00.3**	**+0.1**
SZAC	**Souni-Zanaja**	**0.35**	**243**	⇑P	**Pn**	**09 53 00.3**	**+0.1**
LEF	**Lefka**	**0.36**	**304**	*e*PG	**Pn**	**09 52 59.7**	**-0.6**
LEF				*e*SG	**Sn**	**09 53 07.6**	**+0.7**
LEF	**Lefka**	**0.36**	**304**	*e*Pg	**Pn**	**09 52 59.7**	**-0.6**
LEF				*e*Sg	**Sn**	**09 53 07.6**	**+0.7**
LFK	**Lefkose**	**0.42**	**32**	*e*PG	**Pn**	**09 53 00.3**	**-0.8**
LFK				*e*SG	**Sn**	**09 53 09.3**	**+1.0**
LFK	**Lefkose**	**0.42**	**32**	*e*Pg	**Pn**	**09 53 00.3**	**-0.8**
LFK				*e*Sg	**Sn**	**09 53 09.3**	**+1.0**
ALFC	**Alevga** 39nm,0.2s	**0.59**	**294**	⇓P	**Pn**	**09 53 02.4**	**-0.7**
ALFC				S	**Sn**	**09 53 11.6**	**-0.3**
ALFC	**Alevga** 39nm,0.2s	**0.59**	**294**	⇓ *i* P	**Pn**	**09 53 02.4**	**-0.7**
ALFC				S	**Sn**	**09 53 11.6**	**-0.3**
PHNC	**Paralimni** 11nm,0.5s	**0.64**	**82**	P	**Pn**	**09 53 03.9**	**+0.2**
PHNC				S	**Sn**	**09 53 13.3**	**+0.4**
PHNC	**Paralimni** 11nm,0.5s	**0.64**	**82**	P	**Pn**	**09 53 03.9**	**+0.2**
PHNC				S	**Sn**	**09 53 13.3**	**+0.4**
PPCY	**Paphos**	**0.75**	**268**	P	**Pn**	**09 53 05.2**	**0.0**
PPCY	**Paphos**	**0.75**	**268**	P	**Pn**	**09 53 05.2**	**0.0**
AKMC	**Akamas**	**0.77**	**278**	P	**Pn**	**09 53 05.4**	**-0.1**
AKMC	**Akamas**	**0.77**	**278**	P	**Pn**	**09 53 05.4**	**-0.1**
EREN	**Erenkoy**	**0.96**	**50**	*e*PG	**Pn**	**09 53 08.2**	**+0.2**
EREN	**Erenkoy**	**0.96**	**50**	*e*Pg	**Pn**	**09 53 08.2**	**+0.2**
MERS	**Mersin**	**2.20**	**27**	*e*PN	**Pn**	**09 53 25.1**	**+0.1**
MERS	**Mersin**	**2.20**	**27**	*e*Pn	**Pn**	**09 53 25.1**	**+0.1**
BHL	**Bhannes**	**2.22**	**116**	*e*P	**Pn**	**09 53 27.4**	**+2.0**
BHL	**Bhannes**	**2.22**	**116**	*e*P	**Pn**	**09 53 27.4**	**+2.0**
HWQ	**Hawqa**	**2.31**	**105**	*e*P	**Pn**	**09 53 25.9**	**-0.6**
HWQ	**Hawqa**	**2.31**	**105**	*e*P	**Pn**	**09 53 25.9**	**-0.6**
HNTI	**Hanita**	**2.42**	**138**	Pn	**Pn**	**09 53 28.2**	**+0.1**
HNTI				Sn	**Sn**	**09 53 55.2**	**-1.3**
RCY	**Rachaya**	**2.56**	**123**	*e*P	**Pn**	**09 53 29.3**	**-0.8**
RCY	**Rachaya**	**2.56**	**123**	*e*P	**Pn**	**09 53 29.3**	**-0.8**
MMC7	**Mount Meron ar**	**2.59**	**136**	Pn	**Pn**	**09 53 30.1**	**-0.3**
MMA0	**Mount Meron ar**	**2.60**	**136**	Sn	**Sn**	**09 53 30.0**	**-0.6**
MMA0				Sn	**Sn**	**09 54 00.0**	**-1.0**
KSDI	**Kefar Szold**	**2.63**	**130**	Pn	**Pn**	**09 53 30.5**	**-0.4**
KSDI				Sn	**Sn**	**09 53 59.4**	**-2.2**
BLGI	**Bet Lehem HaGe**	**2.71**	**143**	Pn	**Pn**	**09 53 32.2**	**+0.3**
KSHT	**Keshet**	**2.87**	**132**	Pn	**Pn**	**09 53 34.2**	**0.0**
SLTI	**Sal'it**	**3.06**	**150**	Pn	**Pn**	**09 53 37.0**	**+0.3**
SLTI				Sn	**Sn**	**09 54 11.3**	**-0.7**
MMLI	**Mount Malkishu**	**3.06**	**143**	Pn	**Pn**	**09 53 37.2**	**+0.4**
MMLI				Sn	**Sn**	**09 54 11.3**	**-0.9**
HMDT	**Nahal Hemdat**	**3.26**	**144**	Pn	**Pn**	**09 53 40.1**	**+0.6**
HMDT				Sn	**Sn**	**09 54 16.2**	**-0.9**
DSI	**Dead Sea**	**3.78**	**151**	Pn	**Pn**	**09 53 46.7**	**0.0**
DSI				Sn	**Sn**	**09 54 29.4**	**-0.5**
RTMI	**Retamim**	**4.04**	**162**	Pn	**Pn**	**09 53 50.9**	**+0.7**
RTMI				Sn	**Sn**	**09 54 36.3**	**+0.1**
PRNI	**Paran**	**4.79**	**162**	Pn	**Pn**	**09 54 01.1**	**+0.6**
PRNI				Sn	**Sn**	**09 54 55.3**	**+0.6**
HRFI	**Mount Harif**	**5.09**	**162**	Sn	**Sn**	**09 55 01.7**	**-0.6**
MBRI	**Mt Berech**	**5.30**	**164**	Pn	**Pn**	**09 54 08.3**	**+0.7**
MBRI				Sn	**Sn**	**09 55 07.3**	**-0.1**
EIL	**Elat**	**5.42**	**164**	Sn	**Sn**	**09 55 10.6**	**+0.2**

KNET 25 10:00:49.8±0.3, 42°.60N×75°.13E, h16km±3km, ml1.2, 7C-6D, Error ellipse: s-maj=3.0km s-min=2.1km az=10.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBK	**Karagaybulak**	**0.15**	**294**	⇑P	Pg	10 00 54.2	+0.1
KBK	18nm,0.1s,SNR=14			⇓S	Sg	10 00 56.6	-0.4
AAK	**Ala-Archa** 3.7nm,0.2s,SNR=8.8	**0.47**	**275**	⇑P	Pg	10 00 59.6	0.0
AAK	467nm,0.2s			⇑S	Sg	10 01 05.9	-0.2
TKM2	**Tokmak 2** 4.9nm,0.1s,SNR=23	**0.47**	**46**	⇓P	Pb	10 00 60.0	-0.1
TKM2	73nm,0.1s			⇑S	Sg	10 01 06.6	+0.3
CHMS	**Chumysh** 16nm,0.1s,SNR=26	**0.49**	**325**	⇓P	Pb	10 01 00.2	+0.1
CHMS	29nm,0.1s			⇓S	Sb	10 01 07.1	0.0
KZA	**Kyzart** 6.2nm,0.1s,SNR=26	**0.53**	**170**	⇓P	Pg	10 01 00.7	-0.1
USP	**Ospenovka** 7.5nm,0.1s,SNR=19	**0.81**	**326**	⇓P	Pg	10 01 05.9	+0.1
USP	6.2nm,0.1s			⇑S	Sg	10 01 17.0	+0.3
ULHL	**Ulahol** 0.9nm,0.1s,SNR=8.5	**0.89**	**113**	⇑P	Pb	10 01 07.3	+0.1
ULHL	5.7nm,0.2s			⇑S	Sg	10 01 19.4	-0.1

*ISCJB **25** 10:02:12.0±0.5, 1°.80N±0°.05×127°.41E±0°.04, h121km±4km, mb4.2/8, Error ellipse: s-maj=8.0km s-min=6.6km az=25.4*
*DJA **25** 10:02:14.3±0.6, 2°.N±4°×12°.7E±°, h83km±6km, M4.7/11, mb5.0/10, mB5.4/7, MLv4.6/11, Mw(mB)4.8/7*
*IDC **25** 10:02:15.1±3.4, 1°.62N×127°.27E, h130km±29km, mb3.7/7, mb1 3.8/9, mb1mx3.6/24, mbtmp3.7/9, Error ellipse: s-maj=37.1km s-min=10.4km az=72.0*
*AUST **25** 10:02:25.7±2.7, 0°.70N×127°.34E, h166km, Error ellipse: s-maj=3.7km s-min=1.1km az=15.0*
ISC 25 10:02:13.1±0.8, 1°.73N±0°.06×127°.42E±0°.06, h112km±7km, n40, σ1s41/44, mb4.3/8, 1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.39**	**74**	P	**Pn**	**10 02 29.0**	**-0.6**
GAMI				S	**Sn**	**10 02 40.5**	**-1.4**
TNTI	**Ternate**	**0.95**	**183**	P	**Pn**	**10 02 35.1**	**+1.0**
TNTI				S	**Sn**	**10 02 51.9**	**+2.0**
LBMI	**Labuha**	**2.35**	**178**	P	**Pn**	**10 02 52.0**	**+1.2**
LBMI				S	**Sn**	**10 03 23.0**	**+3.3**
MNI	**Manado**	**2.59**	**264**	P	**Pn**	**10 02 54.0**	**+0.1**
MNI				S	**Sn**	**10 03 25.0**	**-0.2**
KMSI	**Cibinong**	**3.62**	**252**	P	**Pn**	**10 03 08.3**	**+0.8**
KMSI				S	**Sn**	**10 03 50.9**	**+1.4**
NLAI	**Namlea** 42nm,0.6s,2μm0.5nm	**4.95**	**184**	P	**Pn**	**10 03 26.2**	**+0.9**
NLAI	42nm,0.6s,2μm0.5nm			S	**Sn**	**10 04 18.6**	**-2.8**
MSAI	**Masohi** 11nm,0.7s,0.1nm	**5.26**	**163**	P	Pn	10 03 33.7	+4.1
LUWI	**Luwuk** 148nm,0.6s,8μm1.2nm	**5.40**	**239**	P	**Pn**	**10 03 33.3**	**+1.9**
LUWI	**Luwuk** baz=4.9,SNR=3.6	**5.40**	**239**	P	**Pn**	**10 03 34.2**	**+2.8**
AAI	**Ambon**	**5.44**	**172**	P	Pn	10 03 40.3	+8.4
AAI	**Ambon** baz=4.5,SNR=3.3	**5.44**	**172**	P	Pn	10 03 35.5	+3.6
MRSI	**Marisa** 165nm,0.9s,2μm0.7nm	**5.62**	**257**	P	**Pn**	**10 03 34.9**	**+0.6**
CTBH	**Cotabato--PC H**	**6.30**	**330**	⇓ *i* P	**Pn**	**10 03 42.4**	**-1.2**
FAKI	**Fak Fak** baz=6.1,SNR=6.7	**6.68**	**134**	P	**Pn**	**10 03 50.9**	**+2.1**
SKSI	**Soroako, Sulaw** 512nm,0.6s,5μm1.9nm	**7.41**	**235**	P	**Pn**	**10 03 58.9**	**+0.2**
PCI	**Palu** baz=7.7,SNR=8.6	**8.02**	**251**	P	Pn	10 04 17.8	+11
PCI	baz=7.7,SNR=4.2			S	**Sn**	**10 05 34.8**	**-1.2**
TTSI	**Tana Toraja** 122nm,0.7s,3μm	**8.96**	**238**	P	**Pn**	**10 04 19.5**	**-0.1**
SPSI	**Sidrap Palu** 204nm,0.6s,2μm	**9.51**	**233**	P	**Pn**	**10 04 27.7**	**+0.6**
BKSI	**Bulukumba** 41nm,0.5s,814nm	**10.11**	**226**	P	**Pn**	**10 04 36.5**	**+1.3**
KAPI	**Kappang**	**10.18**	**229**	P	**Pn**	**10 04 36.7**	**+0.6**
KAPI	**Kappang** 7.3nm,0.3s,baz=8.7,slow=5.1,SNR=26	**10.18**	**229**	P	**Pn**	**10 04 36.5**	**+0.3**
KAPI	2.8nm,0.3s,baz=82,slow=21,SNR=6.6			S	**Sn**	**10 06 24.2**	**-4.2**
MTN	**Manton Dam** baz=14,SNR=21	**14.94**	**166**	P	**Pn**	**10 05 37.8**	**-0.8**
FITZ	**Fitzroy Crossi** 0.4nm,0.3s,baz=25,slow=11,SNR=11	**19.79**	**185**	P	**P**	**10 06 34.3**	**-0.4**
FITZ	**Fitzroy Crossi** baz=19,SNR=8.4	**19.79**	**185**	P	**P**	**10 06 34.3**	**-0.4**
CISI	**Cisompet, Garu** baz=21,SNR=3.6	**21.62**	**245**	S	Sn	10 11 10.2	+5.8
WRA	**Warramunga Arr** 7.9nm,0.5s,baz=339,slow=11,SNR=103	**22.58**	**163**	P	**P**	**10 07 03.5**	**-0.9**
WRA	1.0nm,0.8s,baz=334,slow=20,SNR=3.8			S	**S**	**10 11 02.5**	**-1.4**
ASAR	**Alice Springs** 2.53s,baz=348,slow=12,SNR=42	**26.02**	**166**	P	**P**	**10 07 35.5**	**-0.4**
MEEK	**Meekatharra** baz=29,SNR=4.0	**29.45**	**196**	P	**P**	**10 08 06.3**	**-0.2**
GSI	**Gununguitoli** baz=30,SNR=4.5	**29.83**	**270**	S	S	10 13 24.4	+25
MORW	**Morawa** baz=32,SNR=3.3	**32.51**	**199**	P	**P**	**10 08 33.3**	**0.0**
KMBL	**Kambalda** baz=32,SNR=12	**33.33**	**189**	P	**P**	**10 08 40.0**	**-0.4**
KLBR	**Kellerberrin** baz=34,SNR=4.9	**34.39**	**195**	P	**P**	**10 08 49.4**	**-0.2**
STKA	**Stephens Creek** 7.6nm,0.7s,baz=337,slow=6.2,SNR=13	**36.03**	**159**	P	**P**	**10 09 03.7**	**+0.1**
STKA	**Stephens Creek** baz=35,SNR=6.5	**36.03**	**159**	P	**P**	**10 09 03.8**	**+0.1**
HHC	**Hu-ho-hao-te**	**41.50**	**342**	*e*P	**P**	**10 09 51.0**	**+1.7**
HHC				S	**S**	**10 15 57.8**	**+1.2**
HHC	comp=Z,47nm,0.6s			pmax	pmax		
HHC	comp=Z,160nm,6.1s			pmax	pmax		
SONM	**Songino Array** comp=Z,0.4nm,0.6s,baz=148,slow=6.1,SNR=3.1	**49.40**	**341**	P	**P**	**10 10 51.8**	**+0.2**
MKAR	**Makanchi Array** comp=Z,1.2nm,0.4s,baz=117,slow=7.9,SNR=24	**59.58**	**326**	P	**P**	**10 12 05.5**	**+0.4**
ZALV	**Zalesovo Beam** comp=Z,0.2nm,0.4s,baz=155,slow=35,SNR=2.3	**62.67**	**333**	P	**P**	**10 12 25.6**	**-0.2**
KURBB	**Kurchatov Arra** comp=Z,0.9nm,0.4s,baz=121,slow=7.2,SNR=7.3	**63.78**	**328**	P	**P**	**10 12 33.1**	**-0.1**
TORD	**Torodi Ar. Bea** comp=Z,0.4nm,0.8s,baz=64,slow=2.1,SNR=2.4	**124.17**	**287**	PKP	**PKPdf**	**10 20 59.7**	**+0.1**

*IDC **25** 10:02:08.8±3.1, 35°.74N×71°.89E, h0km, mb3.7/5, mb1 3.8/8, mb1mx3.5/29, mbtmp3.7/8, ML3.6/3, Error ellipse: s-maj=62.8km s-min=25.6km az=136.0*
*ISCJB **25** 10:02:23.4±0.5, 36°.47N±0°.03×71°.82E±0°.08, h114km, mb3.6/4, Error ellipse: s-maj=9.7km s-min=4.0km az=167.9*
*NNC **25** 10:02:28.9±5.2, 36°.90N×71°.28E, h133km±77km, mb3.0, mpv3.7, Error ellipse: s-maj=43.3km s-min=30.0km az=22.0*
ISC 25 10:02:23.8±0.8, 36°.47N±0°.06×71°.70E±0°.09, h114km, n28, σ1s73/30, mb3.7/4, 3C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.65**	**176**	P	**Pn**	**10 03 06.4**	**+0.9**
CEP				S	Sn	10 03 44.0	+6.5
CHCP	**Chirah Chowk**	**3.09**	**155**	P	**Pn**	**10 03 13.8**	**+2.6**
THW	**Thamme Wali**	**3.67**	**179**	P	**Pn**	**10 03 19.6**	**+0.7**
DHRM	**DHARAMSHALA**	**5.68**	**137**	*e*P	**Pn**	**10 03 47.5**	**+1.4**
DHRM				*e*S	**Sn**	**10 04 48.9**	**-1.3**
DHRM	comp=E,556nm,0.4s			AML	AML	10 04 52.5	
DHRM	comp=N,261nm,0.3s			AML	AML	10 04 52.7	
AML	**Almayashu** SNR=53	**5.86**	**15**	P	**Pn**	**10 03 49.4**	**+0.8**
EKS2	**Erkin-Say** SNR=5.6	**6.38**	**14**	P	**Pn**	**10 03 56.3**	**+0.9**
AAK	**Ala-Archa** SNR=17	**6.52**	**19**	P	**Pn**	**10 03 58.7**	**+1.3**
AAK	**Ala-Archa** comp=N,4.3nm,0.3s,baz=173,slow=6.0,SNR=30	**6.52**	**19**	Pn	**Pn**	**10 03 58.6**	**+1.3**
AAK				Sn	**Sn**	**10 05 10.9**	**+0.5**
SDNR	comp=N,1.2nm,0.3s,baz=322,slow=22,SNR=8.1 **Sundarnagar**	**6.62**	**137**	*ex*	x	10 04 07.0	
SDNR				*e*S	**Sn**	**10 05 12.0**	**-0.6**
KK31	**Karatay Array** comp=N,1.8nm,0.3s,baz=172,slow=11,SNR=34	**6.68**	**353**	P	**Pn**	**10 03 58.9**	**-0.5**
KK31	comp=N,5.5nm,0.4s,baz=169,slow=24,SNR=5.2			⇓S	**Sn**	**10 05 09.6**	**-4.5**
CHMS	**Chumysh** SNR=6.2	**6.93**	**19**	P	**Pn**	**10 04 04.1**	**+1.4**
SMLA	**Simla**	**7.01**	**138**	*i* P	**Pn**	**10 04 04.8**	**+0.9**
SMLA				*i* S	**Sn**	**10 05 19.6**	**-2.5**
SMLA				*i* S	**Sn**	**10 05 19.8**	**-2.3**
SMLA	comp=E,1μm,0.3s			⇓		10 05 23.0	
SMLA	comp=N,1μm,0.3s			⇓		10 05 23.5	
TKM2	**Tokmak 2** comp=N,3.2nm,0.6s	**7.11**	**24**	⇓P	**Pn**	**10 04 06.4**	**+1.1**
TKM2	comp=N,7.7nm,0.8s			⇑S	**Sn**	**10 05 24.5**	**0.0**
USP	**Ospenovka** SNR=6.0	**7.12**	**17**	P	**Pn**	**10 04 05.6**	**+0.3**
KHET	**Khetri**	**9.07**	**156**	*e*S	Sn	10 06 03.9	-8.3
KUDL	**Kundal**	**9.24**	**153**	*e*P	**Pn**	**10 04 33.2**	**-0.9**
KUDL				*e*S	Sn	10 06 05.8	-10
KUDL	comp=N,8.0nm,0.3s			AML	AML	10 06 14.2	
KUDL	comp=E,13nm,0.3s			AML	AML	10 06 14.2	
SONA	**Sohna**	**9.38**	**149**	*e*P	**Pn**	**10 04 36.0**	**0.0**
SONA				*e*S	Sn	10 06 12.6	-7.0
SONA	comp=N,19nm,0.5s			AML	AML	10 06 26.6	
SONA	comp=E,23nm,0.3s			AML	AML	10 06 32.7	
AGRA	**Agra**	**10.63**	**148**	*e*S	Sn	10 06 42.5	-7.5
AGRA	comp=E,54nm,0.2s			AML	AML	10 06 47.7	
AGRA	comp=N,42nm,0.4s			AML	AML	10 06 48.0	
MKAR	**Makanchi Array** comp=N,0.1nm,0.3s,baz=227,slow=14,SNR=2.6	**12.99**	**34**	Pn	**Pn**	**10 05 23.1**	**-0.9**
AB31	**Akbulak array** comp=N,1.0nm,0.4s,baz=145,slow=12,SNR=11	**15.38**	**330**	⇑P	**Pn**	**10 05 51.1**	**-3.5**
AB31	comp=N,1.3nm,0.6s,baz=150,slow=23,SNR=3.1			⇑S	Sn	10 08 32.3	-12
AKTO	**Aktyubinsk** comp=N,0.5nm,0.8s	**17.09**	**329**	P	**P**	**10 06 15.4**	**0.0**
AKTO	**Aktyubinsk** comp=N,0.2nm,0.3s,baz=139,slow=15,SNR=4.4	**17.09**	**329**	Pn	**Pn**	**10 06 15.5**	**0.0**
AKTO	comp=N,0.2nm,0.3s,baz=214,slow=11,SNR=2.7			Sn	Sn	10 09 13.3	-12
ZALV	**Zalesovo Beam** comp=N,1.0nm,0.4s,baz=221,slow=10,SNR=9.6	**19.71**	**23**	P	**Pn**	**10 06 46.3**	**-0.3**
FINES	**FINESS Array B** comp=N,2.5nm,1.0s,baz=100,slow=7.2,SNR=3.1	**37.82**	**326**	P	**P**	**10 09 31.7**	**+2.9**
ARCES	**ARCESS Array B** comp=N,1.3nm,0.8s,baz=332,slow=6.8,SNR=3.8	**41.38**	**337**	P	P	10 10 03.1	+4.8
NB2	**NORSAR Subarra** comp=Z,0.5nm,0.5s,baz=96,slow=7.9	**44.74**	**323**	P	**P**	**10 10 27.8**	**+2.4**
NOA	**NORSAR Array B** comp=Z,0.6nm,0.5s,baz=96,slow=7.9,SNR=3.6	**44.74**	**323**	P	P	10 10 29.6	+4.2
TORD	**Torodi Ar. Bea** comp=Z,0.2nm,0.5s,baz=40,slow=5.6,SNR=3.2	**66.28**	**269**	P	**P**	**10 12 59.9**	**-0.3**

*ISK **25** 10:06:18.0, 40°.16N×28°.73E, h5km, MD2.9*
*CSEM **25** 10:06:19.2±0.1, 40°.15N×28°.73E, h5km, MD2.9, Error ellipse: s-maj=2.5km s-min=2.3km az=126.0*
*DDA **25** 10:06:19.2, 40°.17N×28°.76E, h7km, MD3.1*
ISC 25 10:06:19.7±1.0, 40°.16N±0°.02×28°.75E±0°.02, h5km±9km, n71, σ0s75/94, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORLT	**Orhaneli**	**0.16**	**135**	*e*PG	**Pg**	**10 06 22.1**	**-0.9**
ORLT	**Orhaneli**	**0.16**	**135**	*e*Pg	**Pg**	**10 06 22.1**	**-0.9**
MDNY	**Mudanya-Bursa**	**0.23**	**27**	*e*PG	**Pg**	**10 06 23.6**	**-0.7**
MDNY				*e*SG	**Sg**	**10 06 28.5**	**+1.1**
MDNY	**Mudanya-Bursa**	**0.23**	**27**	*e*Pg	**Pg**	**10 06 23.6**	**-0.7**
MDNY				*e*Sg	**Sg**	**10 06 28.5**	**+1.1**
KCTX	**Karacabey (Bur**	**0.32**	**289**	*e*PG	**Pg**	**10 06 25.1**	**-0.8**
KCTX				*e*SG	**Sg**	**10 06 31.0**	**+0.9**
KCTX	**Karacabey (Bur**	**0.32**	**289**	*e*Pg	**Pg**	**10 06 25.1**	**-0.8**
KCTX				*e*Sg	**Sg**	**10 06 31.0**	**+0.9**
ARMT	**Armutlu**	**0.41**	**12**	*e*PG	**Pg**	**10 06 27.5**	**-0.3**
ARMT				*e*SG	**Sg**	**10 06 34.3**	**+1.1**
ARMT	**Armutlu**	**0.41**	**12**	*e*Pg	**Pg**	**10 06 27.5**	**-0.3**
ARMT				*e*Sg	**Sg**	**10 06 34.3**	**+1.1**
GEMT	**Gemlik**	**0.43**	**51**	*e*PG	**Pg**	**10 06 28.0**	**-0.2**
GEMT				*e*SG	**Sb**	**10 06 35.3**	**-1.4**
GEMT	**Gemlik**	**0.43**	**51**	*e*Pg	**Pg**	**10 06 28.0**	**-0.2**
GEMT				*e*Sg	**Sb**	**10 06 35.3**	**-1.4**
DST	**Dursunbey**	**0.56**	**190**	*e*PG	**Pg**	**10 06 29.9**	**-0.7**
DST	**Dursunbey**	**0.56**	**190**	*e*Pg	**Pg**	**10 06 29.9**	**-0.7**
DURS	**Dursunbey**	**0.60**	**201**	*i* P	**Pg**	**10 06 30.4**	**-0.8**
DURS				*i* S	**Sb**	**10 06 41.3**	**-0.2**
DURS	**Dursunbey**	**0.60**	**201**	*i* P	**Pg**	**10 06 30.4**	**-0.8**
DURS				*i* S	**Sb**	**10 06 41.3**	**-0.2**
YLV	**Yalova**	**0.63**	**49**	*e*PG	**Pg**	**10 06 31.1**	**-0.7**
YLV	**Yalova**	**0.63**	**49**	*e*Pg	**Pg**	**10 06 31.1**	**-0.7**
BNT	**Bandirma**	**0.66**	**287**	*e*PG	**Pg**	**10 06 32.2**	**-0.3**
BNT	**Bandirma**	**0.66**	**287**	*e*Pg	**Pg**	**10 06 32.2**	**-0.3**
EDC	**Edincik**	**0.70**	**286**	*e*PG	**Pg**	**10 06 33.0**	**-0.2**
EDC	**Edincik**	**0.70**	**286**	*e*Pg	**Pg**	**10 06 33.0**	**-0.2**
BUY	**Buyukada**	**0.75**	**22**	*e*Pg	**Pg**	**10 06 33.9**	**-0.2**
GONE	**Gonen-Balikesi**	**0.82**	**262**	*e*PG	**Pg**	**10 06 35.0**	**-0.5**
GONE	**Gonen-Balikesi**	**0.82**	**262**	*e*Pg	**Pg**	**10 06 35.0**	**-0.5**
TVSB	**Tavsanli**	**0.90**	**142**	*e*PG	**Pg**	**10 06 36.1**	**-0.9**
TVSB	**Tavsanli**	**0.90**	**142**	*e*Pg	**Pg**	**10 06 36.1**	**-0.9**
ISK	**Istanbul-Kandi**	**0.94**	**15**	*e*PG	**Pg**	**10 06 37.4**	**-0.3**

HENT				*i* S		**Sb**	10 07 14.8	-0.4
HENT	**Hendek**	**1.77**	**67**	*i* P		**Pn**	10 06 51.4	+0.4
HENT				*i* S		**Sb**	10 07 14.8	-0.4
AYVA	**Ayvalik**	**1.80**	**242**	*i* P		**Pg**	10 06 55.1	+0.9
AYVA				*i* S		**Sg**	10 07 18.9	+1.3
AYVA	**Ayvalik**	**1.80**	**242**	*i* P		**Pg**	10 06 55.1	+0.9
MDUB	**Mudurnu**	**1.90**	**80**	*e*Pn		**Pn**	10 06 53.5	+0.6
MDUB	**Mudurnu**	**1.90**	**80**	*e*Pn		**Pn**	10 06 53.5	+0.6

IDC 25 10:12:52.4±0.9, 60°13S×26°58W, h0km, mb4.0/6, mb1 4.2/7, mb1mx4.0/17, mbtmp4.1/7, ML4.3/1, MS3.2/2, Ms1 3.2/2, ms1mx3.0/21, Error ellipse: s-maj=36.8km s-min=21.6km az=16.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**14.94**	**150**	Pn	Pn	10 16 25.8	+1.2
	1.3nm,0.3s,baz=318,slow=14,SNR=29						
SNAA				Sn	Sn	10 18 59.4	-11
	0.1nm,0.3s,baz=0.3,slow=21,SNR=2.3						
SNAA				LR	LR	10 20 30.9	
	comp=Z,38nm,20.8s,baz=205,slow=31						
PLCA	**Paso Flores**	**33.23**	**286**	P	P	10 19 31.2	+0.2
	1.3nm,0.6s,baz=116,slow=9.4,SNR=7.9						
PLCA				LR	LR	10 30 52.0	
	comp=Z,84nm,19.8s,baz=0.0,slow=32						
CFAA	**Coronel Fontan**	**39.60**	**297**	P	P	10 20 25.2	-0.1
	0.2nm,0.3s,baz=166,slow=2.5,SNR=5.4						
BOSA	**Boshof**	**46.81**	**71**	P	P	10 21 23.9	+0.2
	3.6nm,1.1s,baz=146,slow=3.6,SNR=3.1						
LPAZ	**La Paz**	**53.06**	**307**	P	P	10 22 11.8	-0.1
	0.6nm,0.4s,baz=105,slow=5.5,SNR=4.8						
TORD	**Torodi Ar. Bea**	**76.48**	**28**	P	P	10 24 44.0	+0.2
	1.4nm,0.3s,baz=199,slow=6.3,SNR=30						
ASAR	**Alice Springs**	**94.99**	**162**	P	P	10 26 16.6	-0.2
	0.4nm,0.6s,baz=180,slow=3.8,SNR=9.6						
FINES	**FINESS Array B**	**127.83**	**29**	PKP	PKPdf	10 31 57.8	-0.5
	2.1nm,0.9s,baz=104,slow=8.0,SNR=4.3						
ARCES	**ARCESS Array B**	**134.61**	**23**	PKP	PKPdf	10 32 10.3	-0.6
	1.0nm,0.7s,baz=270,slow=1.2,SNR=7.0						
YKA	**Yellowknife Ar**	**139.35**	**315**	PKP	PKPdf	10 32 18.5	-1.3
	0.1nm,0.4s,baz=134,slow=2.2,SNR=7.4						
ZALV	**Zalesovo Beam**	**143.73**	**68**	PKhKP	PKPpre	10 32 24.1	
	0.5nm,0.4s,baz=219,slow=4.1,SNR=3.6						
SONM	**Songino Array**	**150.41**	**93**	PKPbc	PKPbc	10 32 43.9	-0.8
	1.0nm,0.5s,baz=216,slow=2.6,SNR=7.3						

*ISCJB **25** 10:15:35.6±0.8, 37°.63N±0°.05×16°.38E±0°.08, h49km±11km, Error ellipse: s-maj=12.3km s-min=4.1km az=35.1*
*CSEM **25** 10:15:36.1±0.3, 37°.64N×16°.41E, h40km, ML4.1/14, Error ellipse: s-maj=6.9km s-min=3.0km az=125.0*
*ROM **25** 10:15:36.2±0.1, 37°.65N×16°.35E, h38km, Ml3.1/28, Error ellipse: s-maj=12.2km s-min=2.2km az=63.0*
ISC 25 10:15:35.7±1.4, 37°.62N±0°.04×16°.42E±0°.06, h40km±20km, n63, σ0°75/90, 12C-10D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPAZ	**Palizzi**	**0.47**	**315**	⇓*i* Pg	**Pn**	**10 15 46.1**	**+0.1**
MPAZ				Sg	**Sn**	**10 15 53.2**	**-0.1**
	1μm,0.4s						
MPAZ	**Palizzi**	**0.47**	**315**	⇓*i* Pg	**Pn**	**10 15 46.1**	**+0.1**
MPAZ				Sg	**Sn**	**10 15 53.2**	**-0.1**
	1μm,0.4s						
SOI	**Samo**	**0.54**	**327**	⇓*i* Pg	**Pn**	**10 15 47.0**	**+0.1**
SOI				Sg	**Sn**	**10 15 55.1**	**+0.3**
	585nm,0.5s						
SOI	**Samo**	**0.54**	**327**	⇓*i* Pg	**Pn**	**10 15 47.0**	**+0.1**
SOI				Sg	**Sn**	**10 15 55.1**	**+0.3**
	585nm,0.5s						
MTTG	**Motta San Giov**	**0.69**	**304**	⇓*i* Pg	**Pn**	**10 15 49.2**	**+0.2**
MTTG				Sg	**Sn**	**10 15 58.2**	**-0.4**
	399nm,0.6s						
MTTG	**Motta San Giov**	**0.69**	**304**	⇓*i* Pg	**Pn**	**10 15 49.2**	**+0.2**
MTTG				Sg	**Sn**	**10 15 58.2**	**-0.4**
	399nm,0.6s						
CEL	**Celeste**	**0.76**	**327**	⇓*i* Pg	**Pn**	**10 15 50.3**	**+0.3**
CEL				Sg	**Sn**	**10 16 00.9**	**+0.6**
	343nm,0.5s						
CEL	**Celeste**	**0.76**	**327**	⇓*i* Pg	**Pn**	**10 15 50.3**	**+0.3**
CEL				Sg	**Sn**	**10 16 00.9**	**+0.6**
	343nm,0.5s						
PLAC	**Placanica**	**0.83**	**1**	⇑*i* Pg	**Pn**	**10 15 51.4**	**+0.5**
PLAC				Sg	**Sn**	**10 16 02.2**	**+0.2**
	198nm,0.4s						
PLAC	**Placanica**	**0.83**	**1**	⇑*i* Pg	**Pn**	**10 15 51.4**	**+0.5**
PLAC				Sg	**Sn**	**10 16 02.2**	**+0.2**
	198nm,0.4s						
MSRU	**Castanea**	**0.96**	**312**	Pg	**Pn**	**10 15 53.5**	**+0.8**
MSRU				Sg	**Sn**	**10 16 05.9**	**+0.6**
	347nm,0.4s						
MSRU	**Castanea**	**0.96**	**312**	Pg	**Pn**	**10 15 53.5**	**+0.8**
MSRU				Sg	**Sn**	**10 16 05.9**	**+0.6**
	347nm,0.4s						
MMME	**Mongiuffi-Meli**	**0.97**	**289**	⇓*i* Pg	**Pn**	**10 15 53.7**	**+0.7**
MMME				Sg	**Sn**	**10 16 05.2**	**-0.4**
	248nm,0.3s						
MMME	**Mongiuffi-Meli**	**0.97**	**289**	⇓*i* Pg	**Pn**	**10 15 53.7**	**+0.7**
MMME				Sg	**Sn**	**10 16 05.2**	**-0.4**
	248nm,0.3s						
AGST	**Augusta-Monte**	**1.02**	**249**	⇑*i* Pg	**Pn**	**10 15 53.4**	**0.0**
AGST				Sg	**Sn**	**10 16 05.4**	**-1.1**
	771nm,0.2s						
AGST	**Augusta-Monte**	**1.02**	**249**	⇑*i* Pg	**Pn**	**10 15 53.4**	**0.0**
AGST				Sg	**Sn**	**10 16 05.4**	**-1.1**
	771nm,0.2s						
HAGA	**Augusta**	**1.06**	**252**	⇑*i* Pg	**Pn**	**10 15 54.1**	**+0.1**
HAGA				Sg	**Sn**	**10 16 06.2**	**-1.4**
	1μm,0.3s						
HAGA	**Augusta**	**1.06**	**252**	⇑*i* Pg	**Pn**	**10 15 54.1**	**+0.1**
HAGA				Sg	**Sn**	**10 16 06.2**	**-1.4**
	1μm,0.3s						
JOPP	**Joppolo**	**1.07**	**337**	Pg	**Pn**	**10 15 54.9**	**+0.7**
JOPP				Sg	**Sn**	**10 16 08.0**	**+0.1**
	157nm,0.5s						
JOPP	**Joppolo**	**1.07**	**337**	Pg	**Pn**	**10 15 54.9**	**+0.7**
JOPP				Sg	**Sn**	**10 16 08.0**	**+0.1**
	157nm,0.5s						
MILZ	**Milazzo**	**1.14**	**305**	Pg	**Pn**	**10 15 55.7**	**+0.6**
	659nm,0.6s						
MILZ	**Milazzo**	**1.14**	**305**	Pg	**Pn**	**10 15 55.7**	**+0.6**
	659nm,0.6s						
HCRL	**Carlentini**	**1.16**	**253**	⇑*i* Pg	**Pn**	**10 15 55.5**	**+0.2**
HCRL				Sg	**Sn**	**10 16 09.1**	**-0.8**
	923nm,0.3s						
HCRL	**Carlentini**	**1.16**	**253**	⇑*i* Pg	**Pn**	**10 15 55.5**	**+0.2**
HCRL				Sg	**Sn**	**10 16 09.1**	**-0.8**
	923nm,0.3s						
HAVL	**Avola**	**1.23**	**238**	⇑*i* Pg	**Pn**	**10 15 56.7**	**+0.4**
HAVL				Sg	**Sn**	**10 16 11.1**	**-0.6**
	718nm,0.2s						
HAVL	**Avola**	**1.23**	**238**	⇑*i* Pg	**Pn**	**10 15 56.7**	**+0.4**
HAVL				Sg	**Sn**	**10 16 11.1**	**-0.6**
	718nm,0.2s						
VPL	**Vulcano Piano**	**1.36**	**304**	Pg	**Pn**	**10 15 58.6**	**+0.4**
	340nm,0.4s						
VPL	**Vulcano Piano**	**1.36**	**304**	Pg	**Pn**	**10 15 58.6**	**+0.4**
	340nm,0.4s						
LLI	**Lipari**	**1.42**	**306**	Pg	**Pn**	**10 15 59.7**	**+0.7**
	394nm,0.5s						
LLI	**Lipari**	**1.42**	**306**	Pg	**Pn**	**10 15 59.7**	**+0.7**
	394nm,0.5s						
HVZN	**Vizzini**	**1.43**	**252**	Pg	**Pn**	**10 15 59.6**	**+0.5**
HVZN				Sg	**Sn**	**10 16 16.5**	**-0.2**
	1μm,0.4s						
HVZN	**Vizzini**	**1.43**	**252**	Pg	**Pn**	**10 15 59.6**	**+0.5**
HVZN				Sg	**Sn**	**10 16 16.5**	**-0.2**
	1μm,0.4s						
SERS	**Sersale**	**1.43**	**8**	⇑*i* Pg	**Pn**	**10 15 59.8**	**+0.6**
	40nm,0.6s						
SERS	**Sersale**	**1.43**	**8**	⇑*i* Pg	**Pn**	**10 15 59.8**	**+0.6**
	40nm,0.6s						
HMDC	**Modica**	**1.47**	**244**	Pg	**Pn**	**10 16 00.1**	**+0.5**
HMDC				Sg	**Sn**	**10 16 17.2**	**-0.4**
	351nm,0.3s						
HMDC	**Modica**	**1.47**	**244**	Pg	**Pn**	**10 16 00.1**	**+0.5**
HMDC				Sg	**Sn**	**10 16 17.2**	**-0.4**
	351nm,0.3s						
GALF	**Gagliano Caste**	**1.47**	**274**	Pg	**Pn**	**10 16 01.1**	**+1.3**
	138nm,0.5s						
GALF	**Gagliano Caste**	**1.47**	**274**	Pg	**Pn**	**10 16 01.1**	**+1.3**
	138nm,0.5s						
TIP	**Timpagrande**	**1.58**	**10**	Pg	**Pn**	**10 16 02.0**	**+0.8**
TIP	**Timpagrande**	**1.58**	**10**	Pg	**Pn**	**10 16 02.0**	**+0.8**
RAFF	**Raffo Rosso**	**1.69**	**257**	Pg	**Pn**	**10 16 03.6**	**+1.0**
	148nm,0.2s						
RAFF	**Raffo Rosso**	**1.69**	**257**	Pg	**Pn**	**10 16 03.6**	**+1.0**
	148nm,0.2s						
IFIL	**Filicudi i Eol**	**1.74**	**303**	Pg	**Pn**	**10 16 03.5**	**+0.1**
	151nm,0.4s						
IFIL	**Filicudi i Eol**	**1.74**	**303**	Pg	**Pn**	**10 16 03.5**	**+0.1**
	151nm,0.4s						
IACL	**Alicudi**	**1.87**	**300**	Pg	**Pn**	**10 16 05.1**	**0.0**
	73nm,0.3s						
IACL	**Alicudi**	**1.87**	**300**	Pg	**Pn**	**10 16 05.1**	**0.0**
	73nm,0.3s						
PIPA	**Pietrapaola**	**1.89**	**9**	Pg	**Pn**	**10 16 06.6**	**+1.2**
	135nm,0.2s						
PIPA	**Pietrapaola**	**1.89**	**9**	Pg	**Pn**	**10 16 06.6**	**+1.2**
	135nm,0.2s						
WDD	**Wield Dalam**	**2.32**	**222**	Pg	**Pn**	**10 16 13.5**	**+2.2**
	91nm,0.3s						
WDD	**Wield Dalam**	**2.32**	**222**	Pg	**Pn**	**10 16 13.5**	**+2.2**
	91nm,0.3s						
CUC	**Castrocucco**	**2.42**	**349**	Pg	**Pn**	**10 16 13.7**	**+1.0**
CUC	**Castrocucco**	**2.42**	**349**	Pg	**Pn**	**10 16 13.7**	**+1.0**
MATE	**Matera**	**3.03**	**4**	Pg	**Pn**	**10 16 20.7**	**-0.4**
	39nm,0.3s						
MATE	**Matera**	**3.03**	**4**	Pg	**Pn**	**10 16 20.7**	**-0.4**
	39nm,0.3s						
NOCI	**Noci**	**3.20**	**9**	Pg	**Pn**	**10 16 22.4**	**-1.1**
	70nm,0.1s						
NOCI	**Noci**	**3.20**	**9**	Pg	**Pn**	**10 16 22.4**	**-1.1**
	70nm,0.1s						
AMUR	**Altamura**	**3.28**	**2**	Pg	**Pn**	**10 16 24.2**	**-0.4**
	69nm,0.6s						
AMUR	**Altamura**	**3.28**	**2**	Pg	**Pn**	**10 16 24.2**	**-0.4**
	69nm,0.6s						
MRVN	**Minervino Murg**	**3.44**	**357**	Pg	**Pn**	**10 16 26.8**	**0.0**
	18nm,0.3s						
MRVN	**Minervino Murg**	**3.44**	**357**	Pg	**Pn**	**10 16 26.8**	**0.0**
	18nm,0.3s						
STON	**Ston**	**5.33**	**10**	*e*Pn	**Pn**	**10 16 51.1**	**-1.7**
STON				Sn	Sn	10 17 44.9	-7.9
STON	**Ston**	**5.33**	**10**	*e*Pn	**Pn**	**10 16 51.0**	**-1.7**
NVLJ	**Novalja**	**7.03**	**351**	Sn	Sx	10 18 30.1	

*JMA **25** 10:19:46.5±0.1, 24°.57N×122°.91E, h66km±1km, M2.4*
*ISCJB **25** 10:19:47.4±0.6, 24°.33N±0°.05×122°.89E±0°.02, h57km±10km, Error ellipse: s-maj=9.1km s-min=3.7km az=179.4*
*TAP **25** 10:19:47.2, 24°.39N×122°.88E, h64km±1km, ML3.2, C*
ISC 25 10:19:47.7±1.4, 24°.35N±0°.07×122°.89E±0°.03, h57km±12km, n26, σ0°82/48, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.15**	**44**	P	**Pn**	**10 19 56.4**	**-0.1**
YOJ				*e*S	**Sn**	**10 20 03.7**	**+0.8**
IRIF	**Iriomote-Funau**	**0.76**	**91**	P	**Pn**	**10 20 02.2**	**-0.3**
IRIF				*e*S	**Sn**	**10 20 13.7**	**+0.3**
HATJ	**Hateruma jima**	**0.88**	**109**	P	**Pn**	**10 20 04.5**	**+0.4**
TWC	**Suao**	**0.99**	**285**	*i* P	**Pn**	**10 20 04.6**	**-0.8**
	baz=283						
TWC				*i* S	**Sn**	**10 20 17.5**	**-1.1**
	baz=283						
JKRS	**Kuro-shima**	**1.02**	**96**	P	**Pn**	**10 20 05.9**	**0.0**
JKRS				*e*S	**Sn**	**10 20 20.5**	**+1.1**
ENA	**Nanau**	**1.05**	**274**	P	**Pn**	**10 20 06.3**	**-0.1**
	baz=272						
JIJ	**Ishigaki jima**	**1.14**	**89**	P	**Pn**	**10 20 06.8**	**-0.7**
JIJ				*e*S	**Sn**	**10 20 21.7**	**-0.5**
TWE	**Neicheng**	**1.18**	**289**	P	**Pn**	**10 20 07.4**	**-0.6**
	baz=294						
TWE				S	**Sn**	**10 20 23.0**	**-0.1**
	baz=294						
ENTT	**Nioudou**	**1.24**	**284**	P	**Pn**	**10 20 09.2**	**+0.3**
	baz=290						
ENTT				*e*S	**Sn**	**10 20 25.1**	**+0.3**
	baz=290						
NNS	**Nan Shan**	**1.39**	**274**	P	**Pn**	**10 20 10.8**	**-0.1**
	baz=272						
NNS				S	**Sn**	**10 20 28.1**	**-0.3**
	baz=272						
NSK	**Sanguang**	**1.44**	**283**	P	**Pn**	**10 20 11.8**	**+0.2**
	baz=282						
NSK				*e*S	**Sn**	**10 20 29.4**	**0.0**
	baz=282						
ESL	**Shilin**	**1.44**	**249**	*e*P	**Pn**	**10 20 10.8**	**-0.8**
	baz=239						
ESL				*e*S	**Sn**	**10 20 28.3**	**-1.1**
	baz=239						
WHF	**Hehuan Shan**	**1.50**	**263**	*i* P	**Pn**	**10 20 12.2**	**-0.6**
	baz=261						
WHF				S	**Sn**	**10 20 30.9**	**-0.6**
	baz=261						
TWT	**Tachien**	**1.57**	**267**	P	**Pn**	**10 20 14.1**	**+0.6**
	baz=265						
TWT				*e*S	**Sn**	**10 20 33.1**	**+0.2**
	baz=265						
EHY	**Hungye**	**1.67**	**240**	*e*P	**Pn**	**10 20 14.9**	**+0.3**
	baz=234						
EHY				*e*S	**Sn**	**10 20 33.5**	**-1.4**
	baz=234						
JTJ	**Tarama**	**1.67**	**80**	P	**Pn**	**10 20 14.1**	**-0.6**
TWF1	**Yuli**	**1.77**	**236**	P	**Pn**	**10 20 15.8**	**-0.2**
	baz=235						
TWF1				*e*S	**Sn**	**10 20 36.6**	**-0.8**
	baz=235						
CHKT	**Chengkung**	**1.87**	**229**	*e*P	**Pn**	**10 20 17.6**	**+0.2**
	baz=220						
CHKT				*e*S	**Sn**	**10 20 38.2**	**-1.8**
	baz=220						
SMLT	**Sun Moon Lake**	**1.88**	**256**	*e*P	**Pn**	**10 20 17.9**	**+0.3**
	baz=255						
SMLT				*e*S	**Sn**	**10 20 40.5**	**+0.2**
	baz=255						
TYC	**Yuchr**	**1.91**	**257**	P	**Pn**	**10 20 18.4**	**+0.5**
	baz=249						
TYC				*e*S	**Sn**	**10 20 41.0**	**+0.1**
	baz=249						
ALS	**Alishan**	**2.09**	**247**	P	**Pn**	**10 20 21.3**	**+0.7**
	baz=246						
ALS				*e*S	**Sn**	**10 20 45.9**	**+0.3**
	baz=246						
CHN5	**Tsauling**	**2.16**	**250**	P	**Pn**	**10 20 22.5**	**+1.1**
	baz=249						
CHN5				*e*S	**Sn**	**10 20 48.5**	**+1.4**
	baz=249						
TWG	**Pinlang**	**2.26**	**228**	*e*P	**Pn**	**10 20 22.2**	**-0.5**
	baz=237						
TWG				*e*S	**Sn**	**10 20 47.7**	**-1.7**
	baz=237						
WTP	**Ta-pu**	**2.36**	**243**	*e*S	**Sn**	**10 20 52.1**	**+0.1**
	baz=247						
TWK	**Hsinying**	**2.45**	**244**	*e*P	**Pn**	**10 20 27.3**	**+1.9**
	baz=243						
TWK				*e*S	**Sn**	**10 20 55.4**	**+1.1**
	baz=243						
CHN1	**Nanshi**	**2.46**	**242**	*e*P	**Pn**	**10 20 27.0**	**+1.6**
	baz=250						
CHN1				*e*S	**Sn**	**10 20 54.9**	**+0.6**
	baz=250						

*ISCJB **25** 10:23:35.3±0.3, 7°.23S±0°.06×119°.56E±0°.05, h450km, mb3.9/8, Error ellipse: s-maj=8.9km s-min=5.5km az=40.6*
*AUST **25** 10:23:35.6±0.0, 7°.15S×119°.55E, h428km, Error ellipse: s-maj=1.5km s-min=0.9km az=229.0*
*IDC **25** 10:23:36.4±1.2, 7°.15S×119°.70E, h433km±9km, mb3.4/7, mb1 3.5/10, mb1mx3.2/25, mbtmp3.4/10, Error ellipse: s-maj=51.3km s-min=9.1km az=54.0*
*DJA **25** 10:23:38.1±2.6, 7°.S±7°×11°.9E±°, h400km±34km, M4.5/4, mb4.6/3, mB5.1/3, MLv4.5/4, Mw(mB)4.4/3*
ISC 25 10:23:36.7±0.6, 7°.20S±0°.07×119°.64E±0°.06, h450km, n45, σ1°56/41, mb3.8/8, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKSI	**Bulukumba**	**1.93**	**14**	P	**P**	**10 24 35.4**	**-1.5**
KAPI	**Kappang**	**2.18**	**3**	P	**P**	**10 24 36.5**	**-1.8**
KAPI	**Kappang**	**2.18**	**3**	P	**P**	**10 24 36.2**	**-2.1**
	13nm,0.3s,baz=207,slow=5.4,SNR=59						
KAPI				S	**S**	**10 25 24.8**	**-3.3**
	0.4nm,0.3s,baz=55,slow=22,SNR=21						
WSI	**Waingapu**	**2.54**	**165**	S	**S**	**10 25 28.4**	**-3.8**
	baz=2.6,SNR=3.2						
MMRI	**Maumere**	**2.94**	**119**	P	**P**	**10 24 41.0**	**-2.3**
SPSI	**Sidrap Palu**	**3.22**	**2**	P	**P**	**10 24 45.0**	**-0.4**
KHKI	**Kahang-Kahang**	**4.16**	**254**	P	P	10 24 49.7	-3.5
SRBI	**Singaraja**	**4.47**	**258**	P	**P**	**10 24 53.1**	**-3.0**
IGBI	**Denpasar**	**4.73**	**250**	P	P	10 24 54.2	-4.3
KMMI	**Kalianget**	**5.63**	**271**	P	**P**	**10 25 06.3**	**-1.0**
	210nm,0.9s,6μm0.7nm						
BLJI	**Banyuglugur**	**6.02**	**264**	P	**P**	**10 25 09.1**	**-2.1**
	132nm,0.7s,3μm0.5nm						
BBKI	**Banjar Baru**	**6.05**	**308**	P	**P**	**10 25 11.3**	**-0.3**
PCI	**Palu**	**6.26**	**2**	P	P	10 25 07.5	-6.2
	baz=6.3,SNR=8.5						
LUWI	**Luwuk**	**6.87**	**27**	S	S	10 27 04.0	+19
	baz=6.9,SNR=3.9						
FITZ	**Fitzroy Crossi**	**12.31**	**152**	P	**P**	**10 26 19.3**	**+0.5**
	0.9nm,0.3s,baz=343,slow=8.7,SNR=20						
FITZ	**Fitzroy Crossi**	**12.31**	**152**	P	**P**	**10 26 19.4**	**+0.5**
	baz=12,SNR=13						
MTN	**Manton Dam**	**12.63**	**117**	P	**P**	**10 26 23.4**	**+1.0**
	baz=13,SNR=10						
KSM	**Kuching**	**12.69**	**312**	P	**P**	**10 26 23.9**	**+0.8**
	baz=13,SNR=6.6						
FAKI	**Fak Fak**	**13.26**	**72**	P	**P**	**10 26 29.2**	**-0.1**
	baz=13,SNR=11						
FAKI				S	**S**	**10 28 48.1**	**-3.8**
	baz=13,SNR=4.3						
KKM	**Kota Kinabalu**	**13.60**	**345**	P	**P**	**10 26 33.2**	**+0.2**
	baz=14,SNR=5.3						
KDU	**Kakadu**	**13.76**	**114**	P	**P**	**10 26 35.2**	**+0.6**
	baz=14,SNR=4.9						
WRA	**Warramunga Arr**	**19.07**	**133**	P	**P**	**10 27 30.1**	**+0.4**
	0.4nm,0.3s,baz=308,slow=11,SNR=5.8						
WRA				S	**S**	**10 30 42.2**	**+2.3**
	0.1nm,0.3s,baz=301,slow=21,SNR=5.3						
MEEK	**Meekatharra**	**19.35**	**183**	P	**P**	**10 27 32.4**	**+0.2**
	baz=20,SNR=4.8						
PALU	**Palau**	**20.68**	**46**	S	S	10 31 23.1	+17
	baz=21,SNR=3.6						
ASAR	**Alice Springs**	**21.34**	**142**	P	**P**	**10 27 51.5**	**+1.0**
	0.7nm,0.3s,baz=319,slow=8.6,SNR=34						
QIS	**Mount Isa**	**23.45**	**126**	P	**P**	**10 28 10.9**	**+1.4**
	baz=24,SNR=7.8						
MTSU	**Mount Surprise**	**26.38**	**117**	P	**P**	**10 28 37.1**	**+1.6**
	baz=26,SNR=13						
CTA	**Charters Tower**	**28.80**	**119**	P	**P**	**10 28 58.1**	**+1.3**
	1.9nm,0.7s,baz=295,slow=9.7,SNR=4.3						
STKA	**Stephens Creek**	**31.96**	**143**	P	**P**	**10 29 24.4**	**+0.3**
	5.7nm,1.1s,baz=310,slow=12,SNR=6.6						
STKA	**Stephens Creek**	**31.96**	**143**	P	**P**	**10 29 25.6**	**+1.5**
	baz=32,SNR=4.8						
CMAR	**Chiang Mai Arr**	**32.67**	**322**	P	**P**	**10 29 31.5**	**+1.2**
	1.6nm,0.4s,baz=147,slow=7.3,SNR=14						
LHI	**Lord Howe Isla**	**44.00**	**129**	S	S	10 36 35.7	-25
	baz=44,SNR=6.8						
ODAN	**Odare**	**46.08**	**319**	*e*P	**P**	**10 31 19.4**	**+0.1**
TAPN	**Taplejung**	**46.20**	**319**	*e*P	**P**	**10 31 20.7**	**+0.4**
RAMN	**Ramite**	**46.66**	**318**	*e*P	**P**	**10 31 24.1**	**+0.4**
	20nm,0.7s						
GUN	**Gumba**	**47.78**	**318**	*e*P	**P**	**10 31 32.6**	**+0.3**
	26nm,0.6s						
PKIN	**Phulchoki**	**47.88**	**318**	*e*P	**P**	**10 31 32.6**	**-0.4**
	9.1nm,0.6s						
HMDM	**Hanimaadhoo**	**48.38**	**286**	P	**P**	**10 31 35.4**	**-1.2**
	baz=48,SNR=3.9						
HHC	**Hu-ho-hao-te**	**48.39**	**352**	*e*P	P	10 31 39.0	+2.6
HHC				S	S	10 38 09.5	+6.9
HHC				pmax	pmax		
	comp=Z,32nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,6.3s						
KOLN	**Koldanda**	**49.22**	**316**	*e*P	**P**	**10 31 42.7**	**-0.2**
	comp=Z,10nm,0.6s						
DANN	**Dangsing**	**49.48**	**317**	*e*P	**P**	**10 31 44.8**	**-0.1**
	comp=Z,34nm,0.6s						
PYUN	**Piuthan**	**49.84**	**316**	*e*P	**P**	**10 31 47.4**	**-0.1**
	comp=Z,19nm,0.7s						
SONM	**Songino Array**	**56.04**	**349**	P	**P**	**10 32 32.8**	**+1.2**
	comp=Z,1.9nm,0.9s,baz=170,slow=8.1,SNR=8.0						
MKAR	**Makanchi Array**	**63.16**	**332**	P	**P**	**10 33 20.3**	**+1.0**
	comp=Z,2.6nm,0.7s,baz=139,slow=7.9,SNR=30						
ZALV	**Zalesovo Beam**	**67.60**	**339**	P	**P**	**10 33 47.2**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=145,slow=5.2,SNR=10						

*CSEM **25** 10:46:55.9±0.2, 41°.42N×35°.14E, h2km, MD2.8, Error ellipse: s-maj=6.1km s-min=3.8km az=14.0*
*DDA **25** 10:46:55.6, 41°.42N×35°.17E, h6km, MD2.8*
*ISK **25** 10:46:55.3, 41°.42N×35°.15E, h7km, MD2.9*
ISC 25 10:46:56.2±1.0, 41°.41N±0°.03×35°.16E±0°.02, h5km±10km, n29, σ0°92/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOYT	**Boyabat**	**0.19**	**273**	*i* P	**Pg**	**10 47 00.5**	**+0.5**
BOYT				*i* S	**Sg**	**10 47 03.5**	**+1.0**
BOYT	**Boyabat**	**0.19**	**273**	*i* P	**Pg**	**10 47 00.5**	**+0.5**
BOYT				*i* S	**Sg**	**10 47 03.5**	**+1.0**
DIKM	**Dikmen**	**0.25**	**17**	*e*PG	**Pg**	**10 47 00.7**	**-0.3**
DIKM				*e*SG	**Sg**	**10 47 04.4**	**+0.1**
DIKM	**Dikmen**	**0.25**	**17**	*e*Pg	**Pg**	**10 47 00.7**	**-0.3**
DIKM				*e*Sg	**Sg**	**10 47 04.4**	**+0.1**
BYBT	**Boyabat**	**0.30**	**281**	*e*PG	**Pg**	**10 47 01.0**	**-1.0**
BYBT				*e*SG	**Sg**	**10 47 06.4**	**+0.5**
**BYB

*LDG **25** 11:13:07.3±1.1,42.°44N×13.°35E,h2km,Ml2.9/5,Error ellipse: s-maj=24.3km s-min=11.5km az=101.0*

ISC 25 11:13:04.4±0.4,42.°44N±0.°01×13.°36E±0.°01,h8km±3km, n118,σ1♀29/136,8C-3D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.09**	**162**	⇓*i*Pg	**Pg**	**11 13 07.6**	**+0.9**
AQU				Sg	**Sg**	**11 13 09.2**	**+0.8**
	17μm,0.5s						
AQU	**L'Aquila**	**0.09**	**162**	⇓*i*Pg	**Pg**	**11 13 07.6**	**+0.9**
AQU				Sg	**Sg**	**11 13 09.2**	**+0.8**
	17μm,0.5s						
CAMP	**Campotosto**	**0.10**	**20**	⇑*i*Pg	**Pg**	**11 13 08.5**	**+1.6**
CAMP				Sg	**Sg**	**11 13 10.8**	**+2.1**
	3μm,0.3s						
CAMP	**Campotosto**	**0.10**	**20**	⇑*i*Pg	**Pg**	**11 13 08.5**	**+1.6**
CAMP				Sg	**Sg**	**11 13 10.8**	**+2.1**
	3μm,0.3s						
FIAM	**Fiamignano**	**0.25**	**226**	⇑*i*Pg	**Pg**	**11 13 10.2**	**+0.7**
FIAM				Sg	**Sg**	**11 13 14.1**	**+1.2**
FIAM	**Fiamignano**	**0.25**	**226**	⇑*i*Pg	**Pg**	**11 13 10.2**	**+0.7**
FIAM				Sg	**Sg**	**11 13 14.1**	**+1.2**
TERO	**Teramo**	**0.25**	**45**	⇑*i*Pg	**Pg**	**11 13 10.6**	**+1.1**
TERO				Sg	**Sg**	**11 13 15.9**	**+3.0**
TERO	**Teramo**	**0.25**	**45**	⇑*i*Pg	**Pg**	**11 13 10.6**	**+1.1**
TERO				Sg	**Sg**	**11 13 15.9**	**+3.0**
LNSS	**Leonessa**	**0.29**	**304**	Pg	**Pg**	**11 13 11.4**	**+1.3**
LNSS				Sg	**Sg**	**11 13 16.3**	**+2.3**
	3μm,0.4s						
LNSS	**Leonessa**	**0.29**	**304**	Pg	**Pg**	**11 13 11.4**	**+1.3**
LNSS				Sg	**Sg**	**11 13 16.3**	**+2.3**
	3μm,0.4s						
VCEL	**Villa Celiera**	**0.36**	**98**	Pg	**Pb**	**11 13 12.4**	**-0.6**
VCEL				Sg	**Sb**	**11 13 19.4**	**+0.6**
VCEL	**Villa Celiera**	**0.36**	**98**	Pg	**Pb**	**11 13 12.4**	**-0.6**
VCEL				Sg	**Sb**	**11 13 19.4**	**+0.6**
PTQR	**Pietraquaria**	**0.42**	**176**	Pg	**Pg**	**11 13 12.7**	**+0.1**
PTQR				Sg	**Sg**	**11 13 19.0**	**+0.8**
PTQR	**Pietraquaria**	**0.42**	**176**	Pg	**Pg**	**11 13 12.7**	**+0.1**
PTQR				Sg	**Sg**	**11 13 19.0**	**+0.8**
GAVE	**Gavelli**	**0.43**	**306**	Pg	**Pb**	**11 13 14.2**	**0.0**
GAVE	**Gavelli**	**0.43**	**306**	Pg	**Pb**	**11 13 14.2**	**0.0**
NRCA	**Norcia**	**0.43**	**335**	Pg	**Pg**	**11 13 14.0**	**+1.2**
NRCA				Sg	**Sb**	**11 13 21.2**	**+0.3**
	2μm,0.1s						
NRCA	**Norcia**	**0.43**	**335**	Pg	**Pg**	**11 13 14.0**	**+1.2**
NRCA				Sg	**Sg**	**11 13 16.5**	**-2.0**
NRCA	**Norcia**	**0.43**	**335**	Pg	**Pg**	**11 13 14.0**	**+1.2**
NRCA				Sg	**Sb**	**11 13 21.2**	**+0.3**
	2μm,0.1s						
NRCA	**Norcia**	**0.43**	**335**	Pg	**Pg**	**11 13 14.0**	**+1.2**
NRCA				Sg	**Sg**	**11 13 16.5**	**-2.0**
MNS	**Montasola**	**0.51**	**264**	⇑*i*Pg	**Pg**	**11 13 14.7**	**+0.5**
MNS				Sg	**Sg**	**11 13 23.1**	**+2.2**
	620nm,0.6s						
MNS	**Montasola**	**0.51**	**264**	⇑*i*Pg	**Pg**	**11 13 14.7**	**+0.5**
MNS				Sg	**Sg**	**11 13 23.1**	**+2.2**
	620nm,0.6s						
OFFI	**Offida**	**0.55**	**26**	Pg	**Pb**	**11 13 16.7**	**+0.5**
	3μm,0.3s						
OFFI	**Offida**	**0.55**	**26**	Pg	**Pb**	**11 13 16.7**	**+0.5**
	3μm,0.3s						
TRTR	**Tortoreto Alta**	**0.55**	**48**	Pg	**Pb**	**11 13 16.8**	**+0.6**
	3μm,0.7s						
TRTR	**Tortoreto Alta**	**0.55**	**48**	Pg	**Pb**	**11 13 16.8**	**+0.6**
	3μm,0.7s						
CERT	**Cerreto**	**0.57**	**210**	Pg	**Pg**	**11 13 15.3**	**-0.1**
	3μm,0.4s						
CERT	**Cerreto**	**0.57**	**210**	Pg	**Pg**	**11 13 15.3**	**-0.1**
	3μm,0.4s						
INTR	**Introdacqua**	**0.59**	**137**	Pg	**Pg**	**11 13 16.1**	**+0.3**
INTR				Sg	**Sb**	**11 13 25.8**	**+0.3**
	1μm,0.5s						
INTR	**Introdacqua**	**0.59**	**137**	Pg	**Pg**	**11 13 16.1**	**+0.3**
INTR				Sg	**Sb**	**11 13 25.8**	**+0.3**
	1μm,0.5s						
CESX	**Cesi**	**0.60**	**286**	Pg	**Pg**	**11 13 16.5**	**+0.5**
	522nm,0.5s						
CESX	**Cesi**	**0.60**	**286**	Pg	**Pg**	**11 13 16.5**	**+0.5**
CESX	**Cesi**	**0.60**	**286**	Pg	**Pg**	**11 13 16.5**	**+0.5**
	522nm,0.5s						
CESX	**Cesi**	**0.60**	**286**	Pg	**Pg**	**11 13 16.5**	**+0.5**
VVLD	**Villa Vallelon**	**0.60**	**161**	Pg	**Pb**	**11 13 16.9**	**-0.3**
	857nm,0.5s						
VVLD	**Villa Vallelon**	**0.60**	**161**	Pg	**Pb**	**11 13 16.9**	**-0.3**
	857nm,0.5s						
MTCE	**Montecelio**	**0.62**	**228**	Pg	**Pg**	**11 13 16.4**	**0.0**
	828nm,0.6s						
MTCE	**Montecelio**	**0.62**	**228**	Pg	**Pg**	**11 13 16.4**	**0.0**
	828nm,0.6s						
FDMO	**Fiordimonte**	**0.63**	**341**	Pg	**Pg**	**11 13 15.9**	**-0.6**
FDMO				Sg	Sg	11 13 19.7	-5.0
FDMO	**Fiordimonte**	**0.63**	**341**	Pg	**Pg**	**11 13 15.9**	**-0.6**
FDMO				Sg	Sg	11 13 19.7	-5.0
GUAR	**Guarcino**	**0.65**	**183**	Pg	**Pb**	**11 13 17.9**	**-0.1**
	577nm,0.4s						
GUAR	**Guarcino**	**0.65**	**183**	Pg	**Pb**	**11 13 17.9**	**-0.1**
	577nm,0.4s						
CESI	**CESI - Serrava**	**0.66**	**329**	Pg	Pg	11 13 15.1	-1.9
CESI				Sg	Sg	11 13 18.1	-7.5
CESI	**CESI - Serrava**	**0.66**	**329**	Pg	Pg	11 13 15.1	-1.9
CESI				Sg	Sg	11 13 18.1	-7.5
LPEL	**Lama dei Pelig**	**0.73**	**123**	Pg	**Pg**	**11 13 18.1**	**-0.3**
LPEL				Sg	**Sb**	**11 13 29.5**	**+0.1**
	1μm,0.5s						
LPEL	**Lama dei Pelig**	**0.73**	**123**	Pg	**Pg**	**11 13 18.1**	**-0.3**
LPEL				Sg	**Sb**	**11 13 29.5**	**+0.1**
	1μm,0.5s						
GUMA	**Gualdo di Mace**	**0.75**	**34**	Pg	**Pg**	**11 13 17.5**	**-1.3**
GUMA				Sg	**Sg**	**11 13 27.9**	**-0.7**
	1μm,0.3s						
CAFR	**Castel Frentan**	**0.76**	**106**	Pg	**Pb**	**11 13 19.7**	**-0.1**
	795nm,0.3s						
CAFR	**Castel Frentan**	**0.76**	**106**	Pg	**Pb**	**11 13 19.7**	**-0.1**
	795nm,0.3s						
POFI	**Posta Fibreno**	**0.77**	**160**	Pg	**Pb**	**11 13 19.6**	**-0.5**
	247nm,0.5s						
POFI	**Posta Fibreno**	**0.77**	**160**	Pg	**Pb**	**11 13 19.6**	**-0.5**
	247nm,0.5s						
ASSB	**Assisi San Ben**	**0.79**	**319**	Pg	Pg	11 13 17.1	-2.5
ASSB				Sg	Sg	11 13 21.9	-8.0
ASSB	**Assisi San Ben**	**0.79**	**319**	Pg	Pg	11 13 17.1	-2.5
ASSB				Sg	Sg	11 13 21.9	-8.0
RMP	**Rome, Mte Porz**	**0.80**	**218**	Pg	**Pg**	**11 13 20.4**	**+0.6**
	735nm,0.7s						
RMP	**Rome, Mte Porz**	**0.80**	**218**	Pg	**Pg**	**11 13 20.4**	**+0.6**
	735nm,0.7s						
SDI	**San Donato**	**0.81**	**155**	Pg	**Pg**	**11 13 19.8**	**-0.1**
	156nm,0.2s						
SDI	**San Donato**	**0.81**	**155**	Pg	**Pg**	**11 13 19.8**	**-0.1**
	156nm,0.2s						
RDP	**Rocca di Papa**	**0.84**	**215**	Pg	**Pg**	**11 13 21.1**	**+0.6**
	1μm,0.4s						
RDP	**Rocca di Papa**	**0.84**	**215**	Pg	**Pg**	**11 13 21.1**	**+0.6**
	1μm,0.4s						
SNTG	**Esanatoglia**	**0.87**	**339**	Pg	**Pg**	**11 13 19.5**	**-1.6**
SNTG				Sg	Sg	11 13 25.0	-7.4
SNTG	**Esanatoglia**	**0.87**	**339**	Pg	**Pg**	**11 13 19.5**	**-1.6**
SNTG				Sg	Sg	11 13 25.0	-7.4
GIUL	**Giuliano Di Ro**	**0.89**	**185**	Pg	**Pg**	**11 13 21.6**	**+0.1**
GIUL	**Giuliano Di Ro**	**0.89**	**185**	Pg	**Pg**	**11 13 21.6**	**+0.1**
CING	**Cingoli**	**0.94**	**353**	Pg	**Pg**	**11 13 21.9**	**-0.5**
	293nm,0.6s						
CING	**Cingoli**	**0.94**	**353**	Pg	**Pg**	**11 13 21.9**	**-0.5**
CING	**Cingoli**	**0.94**	**353**	Pg	**Pg**	**11 13 21.9**	**-0.5**
	293nm,0.6s						
CING	**Cingoli**	**0.94**	**353**	Pg	**Pg**	**11 13 21.9**	**-0.5**
RNI2	**Rionero Sannit**	**0.95**	**141**	Pg	**Pb**	**11 13 23.3**	**+0.3**
	412nm,0.7s						
RNI2	**Rionero Sannit**	**0.95**	**141**	Pg	**Pb**	**11 13 23.3**	**+0.3**
	412nm,0.7s						
CERA	**Filignano**	**0.98**	**150**	Pg	**Pg**	**11 13 22.5**	**-0.6**
	325nm,0.6s						
CERA	**Filignano**	**0.98**	**150**	Pg	**Pg**	**11 13 22.5**	**-0.6**
	325nm,0.6s						
MURB	**Monte Urbino**	**1.02**	**323**	Pg	Pg	11 13 21.3	-2.8
MURB	**Monte Urbino**	**1.02**	**323**	Pg	Pg	11 13 21.3	-2.8
MGAB	**Montegabbione**	**1.03**	**297**	Pg	**Pg**	**11 13 23.0**	**-1.2**
	250nm,0.4s						
MGAB	**Montegabbione**	**1.03**	**297**	Pg	**Pg**	**11 13 23.0**	**-1.2**
	250nm,0.4s						
MIDA	**Miranda**	**1.04**	**140**	Pg	**Pg**	**11 13 23.5**	**-0.9**
	259nm,0.5s						
MIDA	**Miranda**	**1.04**	**140**	Pg	**Pg**	**11 13 23.5**	**-0.9**
TOLF	**Tolfa**	**1.08**	**250**	Pg	**Pg**	**11 13 25.8**	**+0.7**
	405nm,0.7s						
TOLF	**Tolfa**	**1.08**	**250**	Pg	**Pg**	**11 13 25.8**	**+0.7**
	405nm,0.7s						
ARVD	**Arcevia**	**1.10**	**344**	Pg	Pg	11 13 23.4	-2.1
ARVD	**Arcevia**	**1.10**	**344**	Pg	Pg	11 13 23.4	-2.1
TRIV	**Trivento**	**1.11**	**127**	Pg	**Pn**	**11 13 26.5**	**+0.2**
	117nm,0.7s						
TRIV	**Trivento**	**1.11**	**127**	Pg	**Pn**	**11 13 26.5**	**+0.2**
	117nm,0.7s						
AOI	**Ancona**	**1.12**	**9**	Pg	**Pb**	**11 13 26.4**	**+0.4**
	188nm,0.5s						
AOI	**Ancona**	**1.12**	**9**	Pg	**Pb**	**11 13 26.4**	**+0.4**
	188nm,0.5s						
LATE	**Laterza**	**1.17**	**279**	Pg	**Pg**	**11 13 27.2**	**+0.5**
	228nm,0.6s						
LATE	**Laterza**	**1.17**	**279**	Pg	**Pg**	**11 13 27.2**	**+0.5**
	228nm,0.6s						
FSSB	**Fossombrone**	**1.32**	**341**	Pg	Pg	11 13 27.2	-2.5
FSSB	**Fossombrone**	**1.32**	**341**	Pg	Pg	11 13 27.2	-2.5
NVLJ	**Novalja**	**2.39**	**27**	*i* Pn	**Pn**	**11 13 45.4**	**+1.6**
NVLJ				Sn	**Sn**	**11 14 14.2**	**+1.1**
NVLJ	**Novalja**	**2.39**	**27**	*i* Pn	**Pn**	**11 13 45.3**	**+1.6**
NVLJ				Sn	**Sn**	**11 14 14.2**	**+1.1**
MAIM	**Mastiano**	**2.56**	**306**	P	**Pn**	**11 13 46.9**	**+0.7**
PGF	**Pioggiola**	**3.23**	**273**	*e*Pn	**Pn**	**11 13 57.2**	**+1.8**
PGF				*e*Sn	**Sn**	**11 14 37.4**	**+3.3**
	3.0nm,0.4s						
PGF	**Pioggiola**	**3.23**	**273**	*e*Pn	**Pn**	**11 13 57.2**	**+1.8**
PGF				*e*Sn	**Sn**	**11 14 37.4**	**+3.3**
	1.5nm,0.4s						
STON	**Ston**	**3.23**	**81**	*i* Pn	**Pn**	**11 13 57.1**	**+1.8**
STON	**Ston**	**3.23**	**81**	*i* Pn	**Pn**	**11 13 57.0**	**+1.8**
VOJS	**Vojsko**	**3.61**	**6**	*i* Pn	**Pn**	**11 14 01.6**	**+1.0**
VOJS				*i* Sn	**Sn**	**11 14 42.1**	**-1.2**
VOJS	**Vojsko**	**3.61**	**6**	*i* Pn	**Pn**	**11 14 01.6**	**+1.0**
ABTA	**Abfaltersbach**	**4.35**	**352**	⇓*i*Pn	**Pn**	**11 14 12.6**	**+1.8**
ABTA	**Abfaltersbach**	**4.35**	**352**	Pn	**Pn**	**11 14 12.6**	**+1.8**
SBF	**Sospel**	**4.56**	**290**	*e*Pn	**Pn**	**11 14 15.7**	**+2.0**
SBF	**Sospel**	**4.56**	**290**	*e*Pn	**Pn**	**11 14 15.7**	**+2.0**
FRF	**La Foret Royal**	**5.05**	**285**	*e*Pn	**Pn**	**11 14 21.9**	**+1.6**
FRF	**La Foret Royal**	**5.05**	**285**	*e*Pn	**Pn**	**11 14 21.9**	**+1.6**
LMR	**La Mourre**	**5.11**	**282**	*e*Pn	**Pn**	**11 14 22.5**	**+1.3**
LMR	**La Mourre**	**5.11**	**282**	*e*Pn	**Pn**	**11 14 22.5**	**+1.3**
MBDF	**Montbardon**	**5.30**	**298**	*e*P	Pn	11 14 27.8	+3.8
MBDF	**Montbardon**	**5.30**	**298**	*e*P	Pn	11 14 27.8	+3.8
LPG	**La Plagne**	**5.66**	**305**	*e*P	Pn	11 14 33.7	+4.7
LPG				*e*Sn	**Sn**	**11 15 32.8**	**-1.6**
	1.1nm,0.2s						
LPL	**La Plagne**	**5.68**	**305**	*e*P	Pn	11 14 33.8	+4.5
SMRF	**Simiane la Rot**	**5.89**	**288**	*e*P	Pn	11 14 35.1	+3.1
SMRF	**Simiane la Rot**	**5.89**	**288**	*e*P	Pn	11 14 35.1	+3.1
HINF	**Hinteralfeld**	**7.07**	**322**	*e*Pn	**Pn**	**11 14 49.7**	**+1.6**
HINF				*e*Sn	**Sn**	**11 16 06.2**	**-2.5**
	3.6nm,0.5s						
HINF	**Hinteralfeld**	**7.07**	**322**	*e*Pn	**Pn**	**11 14 49.7**	**+1.6**
CDF	**Champ du Feu**	**7.34**	**326**	*e*Pn	**Pn**	**11 14 53.4**	**+1.5**
CDF				*e*Sn	**Sn**	**11 16 13.2**	**-2.2**
	2.4nm,0.4s						
CDF	**Champ du Feu**	**7.34**	**326**	*e*Pn	**Pn**	**11 14 53.4**	**+1.5**
HAU	**Haudompre**	**7.44**	**321**	*e*Pn	**Pn**	**11 14 55.1**	**+1.9**
HAU				*e*Sn	**Sn**	**11 16 13.8**	**-4.0**
	2.0nm,0.3s						
HAU	**Haudompre**	**7.44**	**321**	*e*Pn	**Pn**	**11 14 55.1**	**+1.9**

*ISCJB **25** 11:16:22.0±0.5,6.°83N±0.°07×72.°99W±0.°06,h166km, mb3.4/6,Error ellipse: s-maj=11.2km s-min=6.3km az=143.7*

*IDC **25** 11:16:22.6±2.1,6.°68N×72.°94W,h165km±19km,mb3.3/7, mb1 3.7/8,mb1mx3.4/23,mbtmp3.4/8,Error ellipse: s-maj=29.4km s-min=19.0km az=60.0*

*FUNV **25** 11:16:28.8,7.°06N×72.°76W,h150km,MW3.7*

ISC 25 11:16:23.8±0.9,7.°0N±0.°1×72.°87W±0.°08,h166km,n26, σ1♀51/30,mb3.3/6,9C,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.05**	**32**	⇑*i*P	**Pn**	**11 16 52.1**	**+1.3**
CAPV				*e*S	**Sn**	**11 17 10.2**	**-1.4**
VIGV	**El Vigia**	**2.39**	**39**	⇑*i*P	**Pn**	**11 17 06.5**	**+2.1**
VIGV				*e*S	**Sn**	**11 17 33.0**	**-3.0**
SOCV	**Socops**	**2.39**	**57**	⇑*e*P	**Pn**	**11 17 06.7**	**+2.2**
SOCV				*e*S	**Sn**	**11 17 33.8**	**-2.2**
ROSC	**El Rosal**	**2.55**	**215**	P	**Pn**	**11 17 04.1**	**-2.6**
	174nm,0.3s,baz=50,slow=2.8,SNR=157						
ROSC				S	Sn	11 17 33.1	-6.9
	242nm,0.3s,baz=107,slow=8.0,SNR=9.7						
ELOV	**Elorza**	**3.37**	**89**	*e*P	**Pn**	**11 17 18.1**	**+1.7**
CURV	**Curarigua**	**4.18**	**43**	⇑*e*P	**Pn**	**11 17 28.7**	**+1.8**
DABV	**Dabajuro**	**4.51**	**29**	⇑*e*P	**Pn**	**11 17 33.0**	**+1.9**
TEPV	**Terepaima**	**4.70**	**50**	⇑*i*P	**Pn**	**11 17 35.6**	**+1.9**
SIQV	**Siquisique**	**4.75**	**39**	⇑*i*P	**Pn**	**11 17 35.8**	**+1.5**
BAUV	**El Baul**	**5.17**	**67**	⇑*i*P	**Pn**	**11 17 40.3**	**+0.5**
MAPV	**Macapo**	**5.21**	**57**	⇑*i*P	**Pn**	**11 17 42.0**	**+1.6**
IMOV	**Isla Los Monje**	**5.70**	**20**	*e*P	**Pn**	**11 17 47.3**	**+0.6**
MONV	**Montecano**	**5.72**	**30**	*e*P	**Pn**	**11 17 47.9**	**+0.8**
TURV	**Turiamo**	**6.06**	**55**	*e*P	**Pn**	**11 17 52.3**	**+0.8**
BIRV	**Birongo**	**7.40**	**61**	*e*P	**Pn**	**11 18 09.8**	**+0.5**
CUPV	**Cœpira**	**7.65**	**66**	*e*P	**Pn**	**11 18 13.1**	**+0.5**
PCRV	**Puerto La Cruz**	**8.75**	**68**	*e*P	**Pn**	**11 18 27.7**	**+0.5**
TEIG	**Tepich**	**19.92**	**313**	P	**P**	**11 20 43.4**	**+0.6**
	6.3nm,0.4s,baz=51,slow=14,SNR=7.9						
TXAR	**Lajitas Array**	**36.55**	**311**	P	**P**	**11 23 13.7**	**-0.2**
	0.6nm,0.4s,baz=122,slow=8.6,SNR=5.7						
TXAR				PcP	**PcP**	**11 25 34.9**	**+1.1**
	0.1nm,0.6s,baz=155,slow=4.5,SNR=3.4						
PDAR	**Pinedale Array**	**48.11**	**324**	P	**P**	**11 24 47.0**	**-0.2**
	0.6nm,0.5s,baz=126,slow=9.2,SNR=7.0						
NVAR	**Mina Array Bea**	**51.56**	**314**	P	**P**	**11 25 13.4**	**+0.2**
	0.3nm,0.5s,baz=110,slow=7.5,SNR=3.8						
YKA	**Yellowknife Ar**	**63.21**	**340**	P	**P**	**11 26 34.2**	**+0.1**
	1.0nm,0.6s,baz=132,slow=6.8,SNR=32						
TORD	**Torodi Ar. Bea**	**73.47**	**78**	P	**P**	**11 27 38.2**	**-0.6**
	0.5nm,1.1s,baz=298,slow=3.1,SNR=3.1						
ILAR	**Eielson Array**	**76.94**	**335**	P	**P**	**11 27 57.6**	**0.0**
	0.2nm,0.7s,baz=138,slow=5.8,SNR=3.3						
ASAR	**Alice Springs**	**149.39**	**234**	PKPbc	**PKPdf**	**11 35 51.2**	**+1.7**
	0.6nm,0.5s,baz=118,slow=3.3,SNR=17						
WRA	**Warramunga Arr**	**150.62**	**241**	PKPbc	**PKPbc**	**11 35 55.4**	**-1.7**
	0.7nm,0.4s,baz=107,slow=2.7,SNR=34						

IDC 25 11:16:31.3±4.2,24.°24N×108.°92W,h0km,mb2.8/2, mb1 3.4/6,mb1mx3.4/25,mbtmp3.0/6,ML3.3/4,MS3.1/1, Ms1 3.1/1,ms1mx2.5/11,Error ellipse: s-maj=74.7km s-min=20.9km az=147.0,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.28**	**264**	Pn	Pb	11 16 56.2	0.0
	6.5nm,0.3s,baz=162,slow=0.3,SNR=30						
LPIG				Sn	Sg	11 17 09.7	-2.7
	10nm,0.3s,baz=272,slow=12,SNR=17						
TXAR	**Lajitas Array**	**6.91**	**42**	Pn	Pn	11 18 14.2	+0.2
	0.2nm,0.3s,baz=228,slow=13,SNR=13						
TXAR				Pg	Pb	11 18 28.4	-4.0
	0.2nm,0.3s,baz=234,slow=13,SNR=6.9						
TXAR				Sn	Sn	11 19 30.6	-2.9
	0.6nm,0.3s,baz=238,slow=23,SNR=6.7						
TXAR				Lg	Lg	11 20 05.0	
	0.8nm,0.3s,baz=238,slow=28,SNR=5.8						
ANMO	**Albuquerque**	**10.88**	**11**	Pn	Pn	11 19 08.6	-0.1
	0.1nm,0.3s,baz=77,slow=22,SNR=3.0						
NVAR	**Mina Array Bea**	**16.25**	**333**	Pn	Pn	11 20 22.6	+1.3
	0.1nm,0.3s,baz=161,slow=11,SNR=5.2						
PDAR	**Pinedale Array**	**18.49**	**359**	P	Pn	11 20 50.9	+1.7
	0.0nm,0.3s,baz=167,slow=12,SNR=2.5						
NEW	**Newport**	**24.85**	**347**	LR	LR	11 33 24.5	
	comp=Z,43nm,18.6s,baz=123,slow=41						
YKA	**Yellowknife Ar**	**38.44**	**356**	P	P	11 23 55.2	+0.8
	0.1nm,0.5s,baz=178,slow=8.0,SNR=2.9						
ILAR	**Eielson Array**	**47.37**	**339**	P	P	11 25 06.2	-0.6
	0.3nm,0.8s,baz=154,slow=6.3,SNR=3.6						

GUC 25 11:17:04.8±0.5,27.°95S×69.°34W,h116km±11km,MD3.5, ML3.4,3C,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**1.08**	**303**	⇑*i*P	Pn	11 17 27.7	+0.4
CPCH				*i* S	Sn	11 17 45.0	+0.6
CDCH	**Caldera**	**1.58**	**303**	*e*P	Pn	11 17 33.7	+0.7
CDCH				*i* S	Sn	11 17 55.2	+0.8
CDCH				AML	AML	11 17 56.4	
	comp=N,834nm,0.2s						
LCO	**Las Campanas**	**1.60**	**228**	⇑*i*P	Pn	11 17 34.5	+0.9
LCO				*i* S	Sn	11 17 57.0	+1.7
LCO				AML	AML	11 18 00.2	
	comp=E,326nm,0.6s						
TLL	**Tololo Astrono**	**2.56**	**210**	⇑*i*P	Pn	11 17 46.6	+1.1
TLL				*i* S	Sn	11 18 18.5	+1.7
TLL				AML	AML	11 19 01.7	
	comp=N,60nm,0.6s						
CEN1	**Los Morros**	**4.61**	**350**	AML	AML	11 19 32.7	
	comp=E,26nm,0.5s						

IDC 25 11:17:10.3±5.6,3.°53S×101.°42E,h0km,mb3.4/3, mb1 3.6/3,mb1mx3.3/23,mbtmp3.4/3,Error ellipse: s-maj=273.5km s-min=28.1km az=52.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.00**	**120**	P	P	11 24 13.3	-0.2
	0.1nm,0.3s,baz=307,slow=8.7,SNR=6.6						
ASAR	**Alice Springs**	**37.21**	**125**	P	P	11 24 23.6	-0.2
	0.2nm,0.5s,baz=300,slow=7.8,SNR=8.1						
MKAR	**Makanchi Array**	**52.88**	**344**	P	P	11 26 28.2	+0.2
	0.2nm,0.6s,baz=155,slow=8.2,SNR=4.4						
TXAR	**Lajitas Array**	**145.00**	**40**	PKPbc	PKPab	11 36 49.0	-0.8
	0.1nm,0.5s,baz=311,slow=0.8,SNR=3.4						

GUC 25 11:24:54.2±0.6,23.°36S×69.°28W,h96km±5km,MD3.5, ML3.7,1C-4D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.84**	**268**	⇓*i*P	Pn	11 25 14.6	+1.8
CEN1				*i* S	Sn	11 25 30.2	+3.4
CEN1				AML	AML	11 25 33.4	
	comp=E,1μm,0.1s						
ANCH	**Antofagasta**	**1.08**	**253**	⇑*i*P	Pn	11 25 15.6	+0.4
ANCH				*i* S	Sn	11 25 31.4	+0.4
ANCH				AML	AML	11 25 35.1	
	comp=E,3μm,0.1s						
SPCH	**San Pedro de A**	**1.09**	**66**	*e*P	Pn	11 25 16.5	+0.7
SPCH				*i* S	Sn	11 25 33.0	+1.0
SPCH				AML	AML	11 25 45.9	
	comp=E,2μm,0.4s						
PB04	**Plate Boundary**	**1.10**	**350**	⇓*i*P	Pn	11 25 18.3	+2.8
PB04				*i* S	Sn	11 25 37.0	+5.5
PB04				AML	AML	11 25 41.3	
	comp=E,1μm,0.1s						
PB09	**Plate Boundary**	**1.56**	**1**	*e*P	Pn	11 25 22.9	+1.7
PB09				*i* S	Sn	11 25 44.1	+2.5
PB09				AML	AML	11 25 46.4	
	comp=E,3μm,0.3s						
PB07	**Plate Boundary**	**1.72**	**341**	⇓*i*P	Pn	11 25 23.9	+0.6
PB07				*i* S	Sn	11 25 46.5	+1.2
PB07				AML	AML	11 25 52.8	
	comp=E,684nm,0.3s						
PB01	**Plate Boundary**	**2.31**	**355**	⇓*i*P	Pn	11 25 31.8	+0.9
PB01				*i* S	Sn	11 26 00.6	+1.6
PB01				AML	AML	11 26 07.7	
	comp=N,521nm,0.2s						
HMBC	**Humberston**	**3.12**	**350**	*e*P	Pn	11 25 41.4	-0.3
HMBC				*i* S	Sn	11 26 18.4	+0.3
HMBC				AML	AML	11 26 36.9	
	comp=N,263nm,0.5s						

JMA 25 11:33:04.4±0.3,44.°06N×148.°22E,h0km,M3.6,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.93**	**250**	P	Pn	11 33 39.0	+0.6
NEM2				*e*S	Sb	11 34 04.1	-0.8
JRA	**Rausu**	**2.24**	**268**	P	Pn	11 33 43.5	+0.8
JRA				*e*S	Sn	11 34 12.1	+1.1
JNK	**Nakash**	**2.58**	**261

comp=Z,87nm,18.9s,baz=282,slow=32
ASAR Alice Springs 31.38 40 P P 12 06 51.0 +0.1
1.5nm,0.8s,baz=204,slow=8.1,SNR=12
ASAR LR LR 12 18 55.7
comp=Z,110nm,19.7s,baz=277,slow=35
VNDA Vanda 32.92 162 P P 12 07 04.0 +0.2
5.1nm,0.8s,baz=295,slow=8.4,SNR=25
VNDA LR LR 12 19 22.5
comp=Z,130nm,18.7s,baz=316,slow=34
FITZ Fitzroy Crossi 33.79 23 P P 12 07 12.0 +0.1
7.3nm,0.8s,baz=181,slow=9.1,SNR=11
FITZ LR LR 12 20 05.7
comp=Z,113nm,18.4s,baz=212,slow=35
WRA Warramunga Arr 34.89 38 P P 12 07 21.5 0.0
4.0nm,0.8s,baz=205,slow=8.4,SNR=14
QSPA South Pole Qui 39.86 180 P P 12 08 03.1 -0.3
4.6nm,0.8s,baz=311,slow=4.3,SNR=23
SNAA Sanae 50.15 202 P P 12 09 25.0 +0.1
1.8nm,0.8s,baz=164,slow=9.6,SNR=12
CMAR Chiang Mai Arr 69.46 346 P P 12 11 38.4 +0.2
1.8nm,0.9s,baz=192,slow=5.9,SNR=9.0
TXAR Lajitas Array 145.74 114 PKPbc PKPdf 12 20 08.7 +0.1
0.7nm,0.8s,baz=193,slow=6.1,SNR=8.5
PDAR Pinedale Array 150.46 88 PKPbc PKPbc 12 20 20.5 -1.0
1.2nm,0.9s,baz=215,slow=2.7,SNR=8.6
YKA Yellowknife Ar 151.92 46 PKPbc PKPbc 12 20 23.3 -0.6
1.1nm,0.8s,baz=277,slow=1.9,SNR=23

IDC 25 12:02:16.1±1.8, 7.77S×119.05E, h0km, mb3.3/2, mb1 3.3/4, mb1mx3.2/23, mbtmp3.2/4, ML3.0/2, Error ellipse: s-maj=67.2km s-min=23.7km az=61.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**2.82**	**14**	Pn	Pn	12 03 02.6	+0.1
	1.1nm,0.3s,baz=211,slow=12,SNR=4.1						
KAPI				Sn	Sn	12 03 33.7	-3.5
	2.0nm,0.3s,baz=37,slow=20,SNR=4.6						
WRA	**Warramunga Arr**	**19.13**	**131**	P	P	12 06 40.5	-0.5
	0.1nm,0.3s,baz=307,slow=13,SNR=3.7						
ASAR	**Alice Springs**	**21.28**	**140**	P	P	12 07 04.8	+0.4
	0.8nm,0.5s,baz=315,slow=8.8,SNR=18						
MKAR	**Makanchi Array**	**63.39**	**333**	P	P	12 12 47.4	-0.1
	0.3nm,0.8s,baz=132,slow=8.6,SNR=3.4						

*IDC **25** 12:18:34.1±5.4, 36.43N×71.06E, h182km±45km, mb3.2/6, mb1 3.3/10, mb1mx3.0/29, mbtmp3.1/10, Error ellipse: s-maj=45.5km s-min=18.2km az=40.0*
*ISCJB **25** 12:18:35.6±0.6, 36.66N±0.04×70.8E±0.1, h188km, mb3.4/6, Error ellipse: s-maj=14.5km s-min=6.0km az=175.6*

ISC 25 12:18:36.0±0.8, 36.65N±0.06×70.9E±0.1, h188km, n16, σ1§63/19, mb3.3/6, 2C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.94**	**163**	P	**Pn**	**12 19 25.4**	**+0.9**
CEP				S	**Sn**	**12 20 02.0**	**-0.2**
CHCP	**Chirah Chowk**	**3.55**	**146**	P	**Pn**	**12 19 33.3**	**+1.4**
THW	**Thamme Wali**	**3.91**	**170**	P	**Pn**	**12 19 36.8**	**+0.5**
KK31	**Karatay Array**	**6.46**	**357**	Pn	**Pn**	**12 20 11.0**	**+2.0**
	0.7nm,0.3s,baz=177,slow=13,SNR=14						
KK31				⇑Sn	**Sn**	**12 21 18.5**	**-4.0**
	5.9nm,0.7s,baz=185,slow=22,SNR=6.0						
AAK	**Ala-Archa**	**6.59**	**24**	P	**Pn**	**12 20 12.1**	**+1.2**
	2.1nm,0.3s,baz=164,slow=4.8,SNR=11						
AAK				S	**Sn**	**12 21 25.6**	**-0.3**
	1.4nm,0.3s,baz=149,slow=22,SNR=14						
TKM2	**Tokmak 2**	**7.23**	**29**	⇓Pn	**Pn**	**12 20 20.1**	**+0.7**
	8.6nm,0.6s						
TKM2				⇑Sn	Sn	12 21 29.2	-12
	1.9nm,0.7s						
MKAR	**Makanchi Array**	**13.22**	**36**	P	**Pn**	**12 21 37.0**	**+0.5**
	0.1nm,0.3s,baz=231,slow=13,SNR=2.9						
BVAR	**Borovoye Array**	**16.38**	**359**	P	**Pn**	**12 22 16.2**	**+1.0**
	0.3nm,0.3s,baz=144,slow=11,SNR=4.4						
AKTO	**Aktyubinsk**	**16.61**	**330**	P	**Pn**	**12 22 18.9**	**+0.8**
	0.2nm,0.3s,baz=274,slow=17,SNR=4.8						
ZALV	**Zalesovo Beam**	**19.81**	**25**	P	**P**	**12 22 52.5**	**+0.6**
	0.2nm,0.3s,baz=220,slow=11,SNR=6.8						
FINES	**FINESS Array B**	**37.32**	**326**	P	**P**	**12 25 30.6**	**+0.8**
	1.2nm,0.8s,baz=128,slow=8.3,SNR=4.3						
ARCES	**ARCESS Array B**	**40.98**	**338**	P	**P**	**12 26 00.8**	**+0.9**
	2.7nm,0.9s,baz=111,slow=6.6,SNR=6.1						
NOA	**NORSAR Array B**	**44.22**	**323**	P	**P**	**12 26 25.9**	**-0.3**
	0.7nm,0.7s,baz=95,slow=7.6,SNR=3.1						
YKA	**Yellowknife Ar**	**81.10**	**3**	P	**P**	**12 30 29.7**	**-0.1**
	0.2nm,0.4s,baz=351,slow=5.4,SNR=11						
WRA	**Warramunga Arr**	**82.13**	**122**	P	**P**	**12 30 33.2**	**-2.7**
	0.2nm,0.4s,baz=324,slow=4.9,SNR=12						
ASAR	**Alice Springs**	**84.40**	**125**	P	**P**	**12 30 44.9**	**-2.6**
	0.4nm,0.7s,baz=312,slow=4.8,SNR=7.1						

IDC 25 12:45:30.9±4.7, 4.18S×151.45E, h75km±45km, mb3.5/5, mb1 3.7/6, mb1mx3.4/20, mbtmp3.5/6, ML3.0/1, Error ellipse: s-maj=98.3km s-min=22.1km az=133.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.72**	**219**	P	Pn	12 47 08.9	+2.0
	1.6nm,0.3s,baz=186,slow=11,SNR=7.6						
PMG				S	Sn	12 48 22.8	+0.8
	0.9nm,0.3s,baz=344,slow=23,SNR=2.5						
WRA	**Warramunga Arr**	**22.88**	**225**	P	P	12 50 27.9	-0.6
	1.3nm,0.4s,baz=51,slow=10,SNR=27						
ASAR	**Alice Springs**	**25.73**	**220**	P	P	12 50 54.2	-0.4
	0.6nm,0.4s,baz=53,slow=9.3,SNR=14						
FITZ	**Fitzroy Crossi**	**28.80**	**239**	P	P	12 51 22.8	+0.8
	1.2nm,0.4s,baz=70,slow=7.5,SNR=10						
ILAR	**Eielson Array**	**82.10**	**22**	P	P	12 57 41.7	-1.2
	0.5nm,0.8s,baz=257,slow=5.1,SNR=7.2						
YKA	**Yellowknife Ar**	**95.51**	**28**	P	P	12 58 47.3	+0.1
	0.1nm,0.6s,baz=270,slow=4.9,SNR=3.8						
TORD	**Torodi Ar. Bea**	**148.83**	**289**	PKPbc	PKPbc	13 05 11.4	+0.4
	0.1nm,0.3s,baz=98,slow=2.8,SNR=4.7						

IDC 25 12:49:26.5±3.2, 20.00S×169.73E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.5/18, mbtmp3.4/3, ML3.7/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/21, Error ellipse: s-maj=133.4km s-min=31.2km az=143.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.69**	**236**	Pn	Pn	12 50 25.5	+0.5
	6.3nm,0.3s,baz=121,slow=18,SNR=276						
DZM				LR	LR	12 51 06.5	
	comp=Z,213nm,19.2s,baz=32,slow=27						
DZM				Sn	Sn	12 51 11.2	+1.9
	7.6nm,0.3s,baz=313,slow=20,SNR=14						
NOUC	**Port Laguerre**	**3.82**	**236**	*e*P	Pn	12 50 28.8	+2.3
NOUC	**Port Laguerre**	**3.82**	**236**	*e*S	Sn	12 51 15.5	+3.3
RPZ	**Rata Peaks**	**23.67**	**178**	LR	LR	13 01 56.0	
	comp=Z,153nm,19.0s,baz=285,slow=32						
WRA	**Warramunga Arr**	**33.22**	**264**	P	P	12 56 05.8	+0.4
	0.3nm,0.9s,baz=95,slow=8.4,SNR=4.7						
ASAR	**Alice Springs**	**33.40**	**257**	P	P	12 56 05.9	-1.1
	0.5nm,0.7s,baz=78,slow=9.0,SNR=8.9						
ARCES	**ARCESS Array B**	**125.92**	**345**	PKP	PKPdf	13 08 28.2	-1.5
	2.0nm,0.8s,baz=354,slow=2.4,SNR=4.9						
GERES	**GERESS Array B**	**145.38**	**332**	PKPbc	PKPdf	13 09 07.4	+1.0
	0.6nm,0.6s,baz=38,slow=2.4,SNR=4.1						

*NEIC **25** 12:52:50.1±0.5, 32.83S×179.22W, h35km, mb4.9/5, Error ellipse: s-maj=13.3km s-min=9.4km az=98.0*
*ISCJB **25** 12:52:56.2±0.6, 33.34S±0.03×179.48W±0.09, h100km, mb4.7/16, Error ellipse: s-maj=11.2km s-min=3.9km az=5.6*
*AUST **25** 12:52:56.6, 33.58S×179.20W, h100km*
*IDC **25** 12:53:02.7±2.2, 32.95S×179.54W, h140km±19km, mb4.3/13, mb1 4.4/13, mb1mx4.2/23, mbtmp4.4/13, MS3.6/4, Ms1 3.6/4, ms1mx3.0/32, Error ellipse: s-maj=18.6km s-min=11.8km az=25.0*

ISC 25 12:52:57.1±0.7, 33.44S±0.07×179.45W±0.10, h100km, n103, σ1§64/78, mb4.7/16, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.38**	**18**	*e*Pn	Pn	12 53 44.6	-17
RAO				S	Sx	12 54 42.0	
RAO	**Raoul Island**	**4.38**	**18**	P	Pn	12 53 43.0	-18
	165nm,0.3s,baz=10.0,slow=21,SNR=3.1						
RAO				S	Sx	12 54 42.0	
	260nm,0.3s,baz=81,slow=22,SNR=3.6						
MXZ	**Matakaoa Point**	**4.50**	**203**	PN	Pn	12 54 05.6	+2.5
MXZ				SN	Sx	12 54 59.1	
PUZ	**Puketiti**	**4.99**	**201**	PN	Pn	12 54 11.6	+2.0
PUZ				SN	Sx	12 55 08.4	
CNGZ	**Carnagh Statio**	**5.38**	**200**	PN	Pn	12 54 16.9	+1.9
CNGZ				SN	Sx	12 55 19.7	
MWZ	**Matawai**	**5.47**	**206**	PN	**Pn**	**12 54 17.7**	**+1.5**
MWZ				SN	Sx	12 55 22.3	
OPRZ	**Ohinepanea**	**5.47**	**215**	PN	Pn	12 54 19.5	+3.3
URZ	**Urewera**	**5.56**	**209**	P	Pn	12 54 19.5	+2.1
URZ				*e*Sn	Sx	12 55 23.0	
URZ				S	**Sn**	**12 55 23.8**	**+3.8**
URZ	**Urewera**	**5.56**	**209**	PN	**Pn**	**12 54 19.2**	**+1.8**
URZ				SN	Sx	12 55 23.8	
URZ	**Urewera**	**5.56**	**209**	P	Pn	12 54 19.5	+2.1
	6.7nm,0.3s,baz=267,slow=2.3,SNR=152						
URZ				S	Sx	12 55 23.8	
	94nm,0.3s,baz=207,slow=23,SNR=20						
MKAZ	**Moumakai**	**5.73**	**229**	PN	Pn	12 54 25.7	+6.1
PRGZ	**Paritu Road**	**5.88**	**201**	PN	**Pn**	**12 54 22.9**	**+1.2**
PRRZ	**Plateau Road**	**6.07**	**213**	PN	Pn	12 54 26.4	+2.1
MHGZ	**Mahia Peninsul**	**6.09**	**200**	PN	Pn	12 54 25.9	+1.3
RAHZ	**Arahi**	**6.14**	**206**	PN	**Pn**	**12 54 26.8**	**+1.4**
RAHZ				SN	Sx	12 55 38.3	
NMHZ	**Naumai**	**6.41**	**207**	PN	**Pn**	**12 54 29.9**	**+1.0**
NMHZ				SN	Sx	12 55 46.2	
BKZ	**Black Stump Fm**	**6.59**	**209**	PN	**Pn**	**12 54 31.9**	**+0.5**
MCHZ	**McNeill Hill**	**6.75**	**206**	PN	**Pn**	**12 54 34.3**	**+0.8**
CKHZ	**Cape Kidnapper**	**6.81**	**203**	PN	**Pn**	**12 54 34.9**	**+0.6**
CKHZ				SN	Sx	12 55 52.7	
KAHZ	**Kahuranaki**	**7.00**	**204**	PN	**Pn**	**12 54 36.8**	**-0.1**
KAHZ				SN	Sx	12 55 59.8	
BHHZ	**Black Hill Sta**	**7.04**	**210**	PN	**Pn**	**12 54 38.2**	**+0.7**
PXZ	**Pawanui**	**7.21**	**203**	PN	**Pn**	**12 54 39.1**	**-0.8**
PNHZ	**Pukenui**	**7.35**	**207**	PN	**Pn**	**12 54 40.7**	**-1.0**
PNHZ				SN	Sx	12 56 05.8	
PRHZ	**Porangahau**	**7.50**	**204**	PN	**Pn**	**12 54 42.8**	**-0.9**
PRHZ				SN	Sx	12 56 10.0	
POWZ	**Post Office Ro**	**7.93**	**207**	PN	**Pn**	**12 54 48.8**	**-0.7**
TIWZ	**Tintock**	**8.22**	**206**	PN	**Pn**	**12 54 51.6**	**-1.9**
MRZ	**Mangatainoka R**	**8.23**	**207**	PN	**Pn**	**12 54 51.4**	**-2.3**
HOWZ	**Holdsworth Sta**	**8.46**	**207**	SN	**Sn**	**12 56 28.3**	**-2.2**
PAWZ	**Paruwai Farm**	**8.91**	**206**	SN	**Sn**	**12 56 39.3**	**-2.2**
THZ	**Tophouse**	**10.28**	**214**	PN	**Pn**	**12 55 18.8**	**-2.9**
KHZ	**Kahutara**	**10.53**	**210**	PN	**Pn**	**12 55 21.8**	**-3.1**
RPZ	**Rata Peaks**	**12.66**	**213**	Pn	**Pn**	**12 55 55.4**	**+2.0**
RPZ				*e*Sn	Sx	12 58 04.8	
RPZ				S	Sn	12 58 05.0	-7.5
RPZ	**Rata Peaks**	**12.66**	**213**	P	Pn	12 55 49.0	-4.4
	0.5nm,0.3s,baz=307,slow=22,SNR=2.4						
RPZ				S	Sx	12 58 05.0	
	5.3nm,0.3s,baz=179,slow=23,SNR=10						
MSVF	**Nonsavu**	**15.80**	**351**	*e*Pn	Pn	12 56 23.6	-10
	11nm,1.0s						
DZM	**Mont Dzumac**	**16.84**	**309**	*e*P	**P**	**12 56 49.0**	**+1.7**
	117nm,1.1s						
DZM				*e*LR	LR	13 00 41.2	
	471nm,34.4s						
DZM	**Mont Dzumac**	**16.84**	**309**	P	**Pn**	**12 56 48.7**	**+1.9**
	0.6nm,0.3s,baz=120,slow=17,SNR=18						
LHI	**Lord Howe Isla**	**18.23**	**270**	S	S	13 00 14.4	-11
	baz=18,SNR=3.5						
RAR	**Rarotonga**	**21.26**	**60**	LR	LR	13 03 18.4	
	comp=Z,197nm,19.0s,baz=261,slow=29						
ARMA	**Armidale**	**24.70**	**269**	P	**P**	**12 58 13.0**	**+4.0**
	baz=25,SNR=4.0						
EIDS	**Eidsvold**	**26.84**	**280**	P	**P**	**12 58 30.1**	**+1.8**
	baz=27,SNR=5.5						
TBI	**Tubuai**	**28.14**	**77**	*e*LR	LR	13 05 33.3	
	293nm,35.0s						
TBI				*e*T	T	13 27 40.6	
	16nm,0.3s						
RMQ	**Roma**	**28.33**	**276**	P	P	12 58 45.2	+3.6
	baz=28,SNR=5.7						
CMSA	**Cobar Meteorol**	**29.39**	**264**	P	**P**	**12 58 53.4**	**+2.5**
	baz=30,SNR=15						
HNR	**Honiara**	**30.51**	**317**	P	**P**	**12 58 59.0**	**-1.9**
HNR	**Honiara**	**30.51**	**317**	P	**P**	**12 58 59.0**	**-1.9**
	21nm,0.6s,baz=126,slow=5.5,SNR=3.7						
PAE	**Paea**	**31.05**	**67**	*e*T	T	13 31 00.9	
	7.9nm,0.2s						
PPT2	**Papeete2**	**31.09**	**67**	*e*LR	LR	13 06 50.9	
	381nm,34.2s						
PPT2				*e*T	T	13 31 04.8	
	8.8nm,0.3s						
PPT	**Papeete**	**31.11**	**67**	LR	LR	13 07 50.4	
	comp=Z,115nm,20.2s,baz=312,slow=29						
TIAR	**Tiarei**	**31.29**	**67**	*e*T	T	13 31 19.3	
	9.0nm,0.3s						
QLP	**Quilpie**	**32.06**	**273**	P	**P**	**12 59 16.5**	**+2.0**
	baz=32,SNR=7.7						
STKA	**Stephens Creek**	**32.71**	**262**	P	**P**	**12 59 21.6**	**+1.5**
STKA	**Stephens Creek**	**32.71**	**262**	P	**P**	**12 59 21.6**	**+1.5**
	4.2nm,0.9s,baz=101,slow=10,SNR=2.8						
STKA				LR	LR	13 09 52.9	
	comp=Z,145nm,21.1s,baz=25,slow=31						
CTA	**Charters Tower**	**33.22**	**285**	P	**P**	**12 59 25.6**	**+1.0**
CTA	**Charters Tower**	**33.22**	**285**	P	**P**	**12 59 25.6**	**+1.0**
	18nm,0.6s,baz=109,slow=10,SNR=48						
CTAO	**Charters Tower**	**33.22**	**285**	*e*P	**P**	**12 59 25.7**	**+1.0**
	16nm,0.6s						
PMOR	**Pomariorio Ree**	**33.94**	**65**	*e*T	T	13 34 34.2	
	2.7nm,0.3s						
MTSU	**Mount Surprise**	**35.80**	**286**	P	**P**	**12 59 48.0**	**+1.1**
	baz=36,SNR=19						
QIS	**Mount Isa**	**38.43**	**279**	P	**P**	**13 00 10.4**	**+1.2**
	baz=39,SNR=11						
PMG	**Port Moresby**	**38.93**	**300**	P	**P**	**13 00 13.4**	**+0.1**
PMG	**Port Moresby**	**38.93**	**300**	P	**P**	**13 00 13.4**	**+0.1**
	16nm,0.9s,baz=120,slow=12,SNR=4.5						
RKT	**Rikitea**	**40.23**	**87**	*e*T	T	13 43 04.2	
	2.4nm,0.3s						
AS31	**Alice Springs**	**41.82**	**271**	*e*P	**P**	**13 00 38.0**	**+0.8**
ASAR	**Alice Springs**	**41.82**	**271**	P	**P**	**13 00 38.1**	**+0.9**
ASAR				S	**S**	**13 06 46.0**	**-1.6**
ASAR	**Alice Springs**	**41.82**	**271**	P	**P**	**13 00 38.1**	**+0.9**
	14nm,0.8s,baz=108,slow=7.3,SNR=104						
ASAR				S	**S**	**13 06 46.0**	**-1.6**
	1.2nm,0.9s,baz=110,slow=15,SNR=6.4						
WRAB	**Tennant Creek**	**43.08**	**276**	*e*P	**P**	**13 00 47.4**	**0.0**
	30nm,0.8s						
WRA	**Warramunga Arr**	**43.09**	**276**	P	**P**	**13 00 47.1**	**-0.3**
WRA				ScP	**ScP**	**13 06 13.7**	**-4.0**
WRA				S	**S**	**13 07 03.0**	**-3.3**
WRA	**Warramunga Arr**	**43.09**	**276**	P	**P**	**13 00 47.1**	**-0.3**
	25nm,0.6s,baz=114,slow=8.1,SNR=274						
WRA				ScP	**ScP**	**13 06 13.7**	**-4.0**
	1.6nm,1.0s,baz=123,slow=3.8,SNR=5.0						
WRA				S	**S**	**13 07 03.0**	**-3.3**
	1.1nm,0.9s,baz=115,slow=14,SNR=3.9						
SBA	**Scott Base**	**44.92**	**184**	*e*P	P	13 01 07.5	+6.1
	13nm,1.1s						
KDU	**Kakadu**	**48.33**	**284**	P	**P**	**13 01 28.7**	**0.0**
	baz=49,SNR=4.4						
MTN	**Manton Dam**	**49.33**	**282**	P	**P**	**13 01 36.6**	**+0.2**
	baz=50,SNR=4.4						
FITZ	**Fitzroy Crossi**	**51.20**	**273**	P	**P**	**13 01 50.5**	**0.0**
FITZ	**Fitzroy Crossi**	**51.20**	**273**	P	**P**	**13 01 50.5**	**0.0**
	6.8nm,0.8s,baz=153,slow=7.8,SNR=28						
FITZ				LR	LR	13 21 21.8	
	comp=Z,51nm,19.9s,baz=284,slow=33						
FITZ	**Fitzroy Crossi**	**51.20**	**273**	P	**P**	**13 01 50.8**	**+0.3**
	baz=51,SNR=15						
KLBR	**Kellerberrin**	**52.26**	**254**	P	**P**	**13 01 58.5**	**+0.3**
	baz=52,SNR=8.4						
MEEK	**Meekatharra**	**53.37**	**260**	P	**P**	**13 02 06.1**	**-0.4**
	baz=54,SNR=6.9						
MORW	**Morawa**	**54.54**	**256**	P	**P**	**13 02 14.8**	**-0.1**
	baz=55,SNR=3.9						
QSPA	**South Pole Qui**	**56.68**	**180**	P	P	13 02 34.3	+4.4
QSPA	**South Pole Qui**	**56.68**	**180**	P	P	13 02 34.3	+4.4
	35nm,0.7s,baz=32,slow=1.4,SNR=57						
KAPI	**Kappang**	**63.00**	**283**	*e*P	**P**	**13 03 13.4**	**-0.3**
	4.5nm,0.6s						
MAW	**Mawson**	**69.04**	**201**	P	P	13 03 54.7	+3.2
MAW	**Mawson**	**69.04**	**201**	P	P	13 03 54.7	+3.2
	3.1nm,0.4s,baz=130,slow=6.7,SNR=10						
SNAA	**Sanae**	**75.16**	**179**	P	P	13 04 33.7	+5.7
SNAA	**Sanae**	**75.16**	**179**	P	P	13 04 33.7	+5.7
	3.6nm,0.5s,baz=208,slow=5.5,SNR=35						
PLCA	**Paso Flores**	**81.33**	**133**	P	P	13 05 05.2	+2.5
PLCA	**Paso Flores**	**81.33**	**133**	P	P	13 05 05.2	+2.5
	1.9nm,0.5s,baz=247,slow=4.9,SNR=5.0						
NVAR	**Mina Array Bea**	**91.29**	**43**	P	**P**	**13 05 52.1**	**+0.6**
NVAR	**Mina Array Bea**	**91.29**	**43**	P	**P**	**13 05 52.1**	**+0.6**
	0.3nm,0.4s,baz=216,slow=9.2,SNR=5.5						
TXAR	**Lajitas Array**	**95.05**	**58**	P	**P**	**13 06 08.8**	**-0.1**
TXAR	**Lajitas Array**	**95.05**	**58**	P	**P**	**13 06 08.8**	**-0.1**
	1.1nm,1.1s,baz=216,slow=6.2,SNR=5.3						
ARCES	**ARCESS Array B**	**141.27**	**346**	PKhKP	PKPpre	13 12 09.2	
	2.7nm,1.0s,baz=45,slow=3.6,SNR=3.6						
JOF	**Joensuu**	**144.74**	**336**	*e*pkp	PKPbc	13 12 18.1	-2.4
	1.5nm,0.5s						
KAF	**Kangasniemi**	**146.95**	**338**	*e*pkp	**PKPdf**	**13 12 24.3**	**-0.8**
FINES	**FINESS Array B**	**147.52**	**337**	PKPbc	**PKPdf**	**13 12 26.7**	**+0.7**
FINES	**FINESS Array B**	**147.52**	**337**	PKPbc	**PKPdf**	**13 12 26.7**	**+0.7**
	3.2nm,0.4s,baz=36,slow=4.7,SNR=54						
NB2	**NORSAR Subarra**	**151.53**	**349**	PKP	**PKPbc**	**13 12 37.5**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=20,slow=2.6						
NOA	**NORSAR Array B**	**151.53**	**349**	PKPbc	**PKPbc**	**13 12 37.1**	**-1.7**
NOA	**NORSAR Array B**	**151.53**	**349**	PKPbc	**PKPbc**	**13 12 37.1**	**-1.7**
	comp=Z,1.0nm,0.6s,baz=14,slow=4.1,SNR=5.6						
BRTR	**Keskin Array B**	**152.80**	**293**	PKPbc	**PKPbc**	**13 12 41.8**	**-0.7**
BRTR	**Keskin Array B**	**152.80**	**293**	PKPbc	**PKPbc**	**13 12 41.8**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=141,slow=3.2,SNR=4.1						
AKASG	**Malin Array Be**	**152.85**	**318**	PKPbc	**PKPbc**	**13 12 41.2**	**-0.8**
AKASG	**Malin Array Be**	**152.85**	**318**	PKPbc	**PKPbc**	**13 12 41.2**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=50,slow=3.2,SNR=4.1						
TORD	**Torodi Ar. Bea**	**159.77**	**183**	PKP	**PKPdf**	**13 12 45.7**	**+0.9**
TORD				PKPab	**PKPab**	**13 13 25.2**	**+1.3**
TORD	**Torodi Ar. Bea**	**159.77**	**183**	PKP	**PKPdf**	**13 12 45.7**	**+0.9**
	comp=Z,0.6nm,1.0s,baz=100,slow=0.8,SNR=3.5						
TORD				PKPab	**PKPab**	**13 13 25.2**	**+1.3**
	comp=Z,2.0nm,0.8s,baz=161,slow=3.7,SNR=8.4						

*NAO **25** 13:17:01.6±1.3, 70.98N×6.17W, ML4.1*
*BJI **25** 13:17:01.2, 71.01N×6.89W, h10km, mB5.0/12, mb4.6/19, Ms4.8/10, Ms7 4.6/11*
*ISCJB **25** 13:17:03.4±0.1, 70.87N±0.02×6.48W±0.05, h10km, mb4.5/101, MS4.0/60, Error ellipse: s-maj=2.8km s-min=1.9km az=30.6*
*CSEM **25** 13:17:03.8±0.1, 70.97N×6.42W, h10km, mb4.7/56, Ms3.7, Mw4.9, Error ellipse: s-maj=4.0km s-min=3.2km az=14.0*
*MOS **25** 13:17:03.3±1.2, 71.01N×6.27W, h10km, mb4.9/47, MS4.1/16, Error ellipse: s-maj=17.8km s-min=4.2km az=98.7*
*IDC **25** 13:17:03.8±0.5, 70.92N×6.37W, h0km, mb3.9/21, mb1 4.2/24, mb1mx4.1/33, mbtmp3.9/24, ML4.0/3, MS4.1/36, Ms1 4.1/36, ms1mx4.0/51, Error ellipse: s-maj=18.8km s-min=10.8km az=38.0*
*NEIC **25** 13:17:04.2±0.2, 71.03N×6.16W, h10km, mb4.8/43, Error ellipse: s-maj=7.1km s-min=4.0km az=223.0*
*BER **25** 13:17:05.4±3.1, 70.88N×6.49W, h10km, MD3.3, ML3.6, ML4.1(NAO)*
*GCMT **25** 13:17:05.0±0.3, 70.90N×6.12W, h12km, MW4.9, Moment Tensor Solution. s15,c16; s75,c103; Moment tensor: Scale 10¹⁶Nm; Mrr-2.17±.08; Mθθ0.51±.09; Mφφ1.67±.08; Mrθ-0.75±.49; Mrφ0.59±.08; Mθφ-0.99±.36; Best double couple: Mo2.40000×10¹⁶ NP1:φ197.00000°, δ30.00000°, λ-101.00000°. NP2:φ30.00000°, δ61.00000°, λ-84.00000°. Principal axes: T 2.2500, Plg15.0000°, Azm115.0000°; N 0.2900, Plg5.0000°, Azm207.0000°; P -2.5300, Plg74.0000°, Azm315.0000°; Data Used: II IU CN IC G.*
*REY **25** 13:17:06.5, 70.67N×7.10W, h10km, ML3.7, ML3.0*
*SZGRF **25** 13:17:14.6, 70.56N×4.05W, h33km, mb4.7, MS3.4, Jan Mayen Island region*

ISC 25 13:17:04.8±0.3, 70.95N±0.04×6.45W±0.03, h10km, h9km:pP-P, n681, σ1§44/688, mb4.7/103, MS4.1/60, 89C-92D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNE	**Jan Mayen East**	**0.61**	**275**	*e*P	**Pg**	**13 17 15.9**	**-0.6**
JNE				*e*S	**Sg**	**13 17 25.4**	**+0.9**
JNE	**Jan Mayen East**	**0.61**	**275**	*e*P	**Pg**	**13 17 15.9**	**-0.6**
	SNR=99						
JNE				*e*S	**Sg**	**13 17 25.4**	**+0.9**
	SNR=99						
JNW	**Jan Mayen West**	**0.65**	**278**	*e*P	**Pg**	**13 17 16.4**	**-0.9**
JNW				*e*S	**Sg**	**13 17 25.8**	**-0.2**
JNW				AML	AML	13 17 26.9	
	comp=Z,6μm,0.2s						
JNW	**Jan Mayen West**	**0.65**	**278**	*e*P	**Pg**	**13 17 16.5**	**-0.9**
	SNR=70						
JNW				*e*S	**Sg**	**13 17 25.8**	**-0.2**
	comp=Z,6μm,0.2s,SNR=70						
JMIC	**Jan Mayen**	**0.68**	**274**	Pg	**Pg**	**13

KTK1	**Kautokeino**	**10.30**	**87**	*e*P		**Pn**	**13 19 29.8**	**-2.5**
KTK1	**Kautokeino**	**10.30**	**87**	*e*P		**Pn**	**13 19 29.8**	**-2.5**
	SNR=47							
ARA0	**ARCESS Array S**	**10.83**	**82**	Pn		Pn	13 19 36.8	-2.8
	baz=288,slow=11							
ARA0				Sn		Sn	13 21 32.8	-7.8
	baz=304,slow=28							
ARA0	**ARCESS Array S**	**10.83**	**82**	Pn		Pn	13 19 36.8	-2.8
	baz=288,slow=11							
ARA0				Sn		Sn	13 21 32.8	-7.8
	baz=304,slow=28							
ARA0	**ARCESS Array S**	**10.83**	**82**	Pn		Pn	13 19 36.8	-2.8
	baz=288,slow=10,SNR=50							
ARCES	**ARCESS Array B**	**10.83**	**82**	Pn		**Pn**	**13 19 37.0**	**-2.6**
ARCES	**ARCESS Array B**	**10.83**	**82**	Pn		**Pn**	**13 19 37.0**	**-2.6**
	comp=Z,0.8nm,0.3s,baz=290,slow=12,SNR=35							
ARCES				LR		LR	13 23 01.1	
	comp=Z,1μm,21.9s,baz=282,slow=33							
ARCES	**ARCESS Array B**	**10.83**	**82**	P		**Pn**	**13 19 37.0**	**-2.6**
ARE0	**ARCESS Array S**	**10.83**	**82**	*e*Pn		Pn	13 19 35.7	-3.9
KEV	**Kevo**	**11.23**	**80**	*e*P		Pn	13 19 42.0	-3.1
KEV				pmax		pmax		
	comp=Z,2.0nm,0.3s							
KEV	**Kevo**	**11.23**	**80**	*e*Pn		Pn	13 19 41.8	-3.3
KEV	**Kevo**	**11.23**	**80**	*e*p		Pn	13 19 42.0	-3.1
	comp=Z,1.5nm,0.3s							
NB2	**NORSAR Subarra**	**12.20**	**136**	Pn		**Pn**	**13 19 56.6**	**-1.8**
	baz=328,slow=16							
NB2	**NORSAR Subarra**	**12.20**	**136**	Pn		**Pn**	**13 19 56.6**	**-1.8**
	baz=328,slow=16							
NB2	**NORSAR Subarra**	**12.20**	**136**	Pn		**Pn**	**13 19 56.6**	**-1.8**
	baz=328,slow=15,SNR=50							
NOA	**NORSAR Array B**	**12.20**	**136**	Pn		**Pn**	**13 19 56.2**	**-2.2**
NOA	**NORSAR Array B**	**12.20**	**136**	Pn		**Pn**	**13 19 56.2**	**-2.2**
	comp=Z,0.5nm,0.3s,baz=325,slow=13,SNR=5.5							
NOA				LR		LR	13 24 22.7	
	comp=Z,819nm,21.3s,baz=335,slow=36							
NOA	**NORSAR Array B**	**12.20**	**136**	Pn		**Pn**	**13 19 56.2**	**-2.2**
NAO01	**NORSAR Array S**	**12.30**	**137**	*e*Pn		**Pn**	**13 19 58.2**	**-1.5**
NAO01	**NORSAR Array S**	**12.30**	**137**	*e*Pn		**Pn**	**13 19 58.2**	**-1.5**
HFS	**Hagfors**	**13.58**	**133**	Pn		**Pn**	**13 20 15.3**	**-1.9**
	baz=328,slow=12							
HFS	**Hagfors**	**13.58**	**133**	Pn		**Pn**	**13 20 15.3**	**-1.9**
	baz=328,slow=12							
HFS	**Hagfors**	**13.58**	**133**	Pn		**Pn**	**13 20 15.2**	**-2.0**
HFS	**Hagfors**	**13.58**	**133**	Pn		**Pn**	**13 20 15.2**	**-2.0**
	comp=Z,1.1nm,0.3s,baz=338,slow=12,SNR=38							
HFS				LR		LR	13 25 05.5	
	comp=Z,2μm,21.4s,baz=327,slow=36							
HFS	**Hagfors**	**13.58**	**133**	P		**Pn**	**13 20 15.2**	**-2.0**
APA0	**Apatity Array**	**14.16**	**84**	Pn		Pn	13 20 21.7	-3.3
	baz=315,slow=14							
APA0	**Apatity Array**	**14.16**	**84**	Pn		Pn	13 20 21.7	-3.3
	baz=315,slow=14							
APA0	**Apatity Array**	**14.16**	**84**	Pn		Pn	13 20 21.7	-3.3
	baz=315,slow=14,SNR=50							
APA	**Apatity**	**14.31**	**84**⇑	*e*P		**P**	**13 20 36.0**	**+1.7**
APA				MLR		MLR		
	comp=Z,41μm,14.0s							
KAF	**Kangasniemi**	**15.53**	**108**	*e*P		**Pn**	**13 20 40.7**	**-2.8**
KAF				pmax		pmax		
	comp=Z,18nm,0.7s							
KAF	**Kangasniemi**	**15.53**	**108**	*e*p		**Pn**	**13 20 40.7**	**-2.8**
	comp=Z,18nm,0.7s							
EKA	**Eskdalemuir Ar**	**15.74**	**173**	Pn		**Pn**	**13 20 45.5**	**-0.7**
EKA				Sn		Sn	13 23 31.6	-8.9
EKA	**Eskdalemuir Ar**	**15.74**	**173**	Pn		**Pn**	**13 20 45.5**	**-0.7**
	baz=357,slow=12,SNR=13							
EKA				Sn		Sn	13 23 31.6	-8.9
	baz=352,slow=23,SNR=4.0							
EKA	**Eskdalemuir Ar**	**15.74**	**173**	Pn		**Pn**	**13 20 45.5**	**-0.7**
ESK	**Eskdalemuir**	**15.76**	**173**	*i* P		**P**	**13 20 50.2**	**-0.2**
ESK	**Eskdalemuir**	**15.76**	**173**	*i* P		**P**	**13 20 50.2**	**-0.2**
FIA0	**FINESS Array S**	**15.97**	**110**	P		**Pn**	**13 20 46.1**	**-3.0**
	baz=323,slow=14							
FIA0	**FINESS Array S**	**15.97**	**110**	Pn		**Pn**	**13 20 46.1**	**-3.0**
	baz=323,slow=14							
FIA0	**FINESS Array S**	**15.97**	**110**	Pn		**Pn**	**13 20 46.2**	**-3.0**
	baz=323,slow=14,SNR=50							
FIA1	**FINESS Array S**	**15.97**	**110**	*e*Pn		**Pn**	**13 20 46.7**	**-2.5**
FINES	**FINESS Array B**	**15.97**	**110**	Pn		**Pn**	**13 20 46.8**	**-2.4**
FINES	**FINESS Array B**	**15.97**	**110**	Pn		**Pn**	**13 20 46.8**	**-2.4**
	comp=Z,1.4nm,0.3s,baz=328,slow=12,SNR=37							
FINES				LR		LR	13 26 16.1	
	comp=Z,1μm,20.3s,baz=348,slow=35							
JOF	**Joensuu**	**16.54**	**100**	*e*P		Pn	13 20 51.3	-5.1
JOF				pmax		pmax		
	comp=Z,5.0nm,0.5s							
JOF	**Joensuu**	**16.54**	**100**	*e*p		Pn	13 20 51.3	-5.1
	comp=Z,5.2nm,0.5s							
TMCR	**Tamitsa**	**17.88**	**90**	*e*P		**Pn**	**13 21 09.1**	**-4.1**
TMCR				pmax		pmax		
	comp=Z,63nm,1.5s							
RGN	**Rugen**	**18.61**	**142**	*e*P		**Pn**	**13 21 22.1**	**0.0**
	comp=Z,106nm,1.0s							
BSEG	**Bad Segeberg**	**18.62**	**148**	*e*P		**Pn**	**13 21 22.6**	**+0.3**
BSEG				pmax		pmax		
	comp=Z,166nm,1.9s							
BSEG	**Bad Segeberg**	**18.62**	**148**	*e*P		**Pn**	**13 21 22.6**	**+0.3**
	comp=Z,166nm,1.9s							
BSEG	**Bad Segeberg**	**18.62**	**148**	*e*P		**Pn**	**13 21 22.6**	**+0.3**
	comp=Z,166nm,1.9s							
NRDL	**Niedersach Rie**	**19.97**	**149**	*e*P		Pn	13 21 38.8	+0.4
	comp=Z,20nm,1.5s							
CLZ	**Clausthal**	**20.64**	**149**	*e*P		Pn	13 21 46.1	-0.4
CLZ				pmax		pmax		
	comp=Z,55nm,1.9s							
CLZ	**Clausthal**	**20.64**	**149**	*e*P		Pn	13 21 46.1	-0.4
	comp=Z,55nm,1.9s							
CLZ	**Clausthal**	**20.64**	**149**	*e*P		Pn	13 21 46.1	-0.4
	comp=Z,55nm,1.9s							
IZAR	**Zarasai**	**20.72**	**120**	*e*P		**P**	**13 21 44.0**	**-0.9**
IZAR				AMB		AMB	13 22 04.8	
	comp=Z,23nm,1.6s							
IZAR	**Zarasai**	**20.72**	**120**	*e*P		**P**	**13 21 44.0**	**-0.9**
	comp=Z,23nm,1.6s,SNR=34							
ISAL	**Salakas**	**20.84**	**121**	*e*P		**P**	**13 21 45.2**	**-1.0**
ISAL				AMB		AMB	13 22 05.8	
	comp=Z,22nm,2.2s							
ISAL	**Salakas**	**20.84**	**121**	*e*P		**P**	**13 21 45.2**	**-1.0**
	comp=Z,22nm,2.2s,SNR=34							
HGN	**Heimansgroeve**	**21.04**	**158**	*e*P		**P**	**13 21 48.6**	**+0.2**
	comp=Z,530nm,2.0s							
HGN				*e*L		L	13 29 18.6	
	comp=Z,1μm,21.9s							
IIGN	**Ignalina**	**21.06**	**121**	*e*P		**P**	**13 21 47.6**	**-1.0**
IIGN				AMB		AMB	13 22 08.7	
	comp=Z,17nm,1.4s							
IIGN	**Ignalina**	**21.06**	**121**	*e*P		**P**	**13 21 47.6**	**-1.0**
	comp=Z,17nm,1.4s,SNR=34							
SUW	**Suwalki**	**21.41**	**127**	*e*P		**P**	**13 21 51.9**	**-0.5**
SUW				pmax		pmax		
	comp=Z,69nm,1.2s							
SUW	**Suwalki**	**21.41**	**127**	*e*P		**P**	**13 21 51.9**	**-0.5**
	comp=Z,69nm,1.2s							
SUW	**Suwalki**	**21.41**	**127**	*e*P		**P**	**13 21 51.8**	**-0.6**
SUW				*e*			13 21 59.8	
SUW	**Suwalki**	**21.41**	**127**	*e*P		**P**	**13 21 51.9**	**-0.5**
	comp=Z,69nm,1.2s							
BAIF	**Baives**	**21.54**	**161**	*e*P		**P**	**13 21 53.7**	**0.0**
	comp=Z,54nm,1.4s							
BAIF	**Baives**	**21.54**	**161**	*e*P		**P**	**13 21 53.7**	**0.0**
BAIF				pmax		pmax		
	comp=Z,54nm,1.4s							
BAIF	**Baives**	**21.54**	**161**	*e*P		**P**	**13 21 53.7**	**0.0**
	comp=Z,54nm,1.4s							
BAIF	**Baives**	**21.54**	**161**	*e*P		**P**	**13 21 53.7**	**0.0**
	comp=Z,27nm,1.4s							
GIVF	**Givet**	**21.56**	**160**	*e*P		**P**	**13 21 54.9**	**+0.9**
GIVF	**Givet**	**21.56**	**160**	*e*P		**P**	**13 21 54.9**	**+0.9**
GIVF	**Givet**	**21.56**	**160**	*e*P		**P**	**13 21 54.9**	**+0.9**
GIVF	**Givet**	**21.56**	**160**	*e*P		**P**	**13 21 54.9**	**+0.9**
NACGM	**Naroch**	**21.61**	**121**	*e*		**P**	**13 21 51.0**	**-3.5**
CLL	**Collm**	**21.62**	**145**	*e*P		**P**	**13 21 57.0**	**+2.4**
CLL				*i*			13 22 01.1	
CLL				*e*S		**S**	**13 25 55.0**	**+1.3**
CLL				pmax		pmax		
	comp=Z,24nm,1.8s							
CLL				MLR		MLR		
	comp=Z,200nm,21.2s							
CLL	**Collm**	**21.62**	**145**	*e*P		**P**	**13 21 56.2**	**+1.6**
	comp=Z,34nm,1.6s							
CLL	**Collm**	**21.62**	**145**	*e*(P)		**P**	**13 21 57.0**	**+2.4**
	comp=Z,24nm,1.8s							
CLL				*i* (sP)		**sP**	**13 22 01.1**	**+2.3**
CLL				*e*			13 22 10.0	
CLL				*e*S		**S**	**13 25 55.0**	**+1.3**
CLL				L		L	13 29 00.0	
	comp=Z,200nm,21.2s							
MOX	**Moxa**	**22.01**	**148**	*e*P		**P**	**13 21 59.9**	**+1.1**
MOX				pmax		pmax		
	comp=Z,98nm,2.1s							
MOX				MLR		MLR		
	comp=Z,200nm,21.1s							
MOX	**Moxa**	**22.01**	**148**	*e*P		**P**	**13 21 59.9**	**+1.1**
	comp=Z,98nm,2.1s							
MOX				*e*L		L	13 29 24.7	
	comp=Z,167nm,21.1s							
MOX	**Moxa**	**22.01**	**148**	*e*P		**P**	**13 21 59.9**	**+1.1**
	comp=Z,200nm,21.1s							
FBE	**Freiberg**	**22.05**	**145**	*e*P		**P**	**13 22 03.0**	**+3.7**
	comp=Z,69nm,2.0s							
BRG	**Berggiesshubel**	**22.21**	**144**	*e*P		**P**	**13 22 04.6**	**+3.6**
	comp=Z,29nm,1.9s							
BRG	**Berggiesshubel**	**22.21**	**144**	*e*P		**P**	**13 22 04.6**	**+3.6**
BRG				pmax		pmax		
	comp=Z,29nm,1.9s							
PLN	**Plauen**	**22.25**	**147**	*e*P		**P**	**13 22 02.7**	**+1.2**
	comp=Z,233nm,1.7s							
MNK	**Minsk**	**22.26**	**120**	*e*P		**P**	**13 22 00.0**	**-1.4**
MNK	**Minsk**	**22.26**	**120**	*e*P		**P**	**13 22 00.0**	**-1.4**
MICGM	**Minsk**	**22.27**	**120**	*e*P		**P**	**13 22 00.0**	**-1.6**
WERD	**Werda**	**22.32**	**147**	*e*P		**P**	**13 22 03.5**	**+1.3**
	comp=Z,37nm,1.6s							
TANN	**Tannenbergstha**	**22.38**	**147**	*e*P		**P**	**13 22 03.5**	**+0.7**
	comp=Z,66nm,1.7s							
GUNZ	**Gunzen**	**22.40**	**147**	*e*P		**P**	**13 22 03.1**	**0.0**
	comp=Z,52nm,1.9s							
FLN	**La Foliniere**	**22.43**	**170**	*e*P		**P**	**13 22 03.4**	**0.0**
FLN				*e*R				
	comp=Z,516nm,21.0s							
FLN	**La Foliniere**	**22.43**	**170**	*e*P		**P**	**13 22 03.4**	**0.0**
FLN	**La Foliniere**	**22.43**	**170**	*e*P		**P**	**13 22 03.4**	**0.0**
FLN	**La Foliniere**	**22.43**	**170**	*e*P		**P**	**13 22 03.4**	**0.0**
WERN	**Wernitzgruen**	**22.48**	**147**	*e*P		**P**	**13 22 07.5**	**+3.5**
	comp=Z,74nm,2.1s							
NKC	**Novy Kostel**	**22.55**	**147**	*e*P		**P**	**13 22 07.2**	**+2.6**
NKC				MLR		MLR		
	comp=Z,300nm,15.8s							
NKC	**Novy Kostel**	**22.55**	**147**	*e*P		**P**	**13 22 07.2**	**+2.6**
NKC				AMS		AMS	13 32 50.0	
	comp=Z,300nm,15.8s							
LDF	**La Druitiere**	**22.62**	**169**	*e*P		**P**	**13 22 05.5**	**+0.1**
	comp=Z,150nm,1.7s							
LDF	**La Druitiere**	**22.62**	**169**	*e*P		**P**	**13 22 05.5**	**+0.1**
LDF				pmax		pmax		
	comp=Z,150nm,1.7s							
LDF	**La Druitiere**	**22.62**	**169**	*e*P		**P**	**13 22 05.5**	**+0.1**
	comp=Z,150nm,1.7s							
LDF	**La Druitiere**	**22.62**	**169**	*e*P		**P**	**13 22 05.5**	**+0.1**
	comp=Z,150nm,1.7s							
KSP	**Ksiaz**	**22.71**	**141**	*e*P		**P**	**13 22 07.5**	**+1.2**
KSP	**Ksiaz**	**22.71**	**141**	*e*P		**P**	**13 22 06.0**	**-0.3**
KSP	**Ksiaz**	**22.71**	**141**	*e*P		**P**	**13 22 07.5**	**+1.2**
MANZ	**Manzenberg**	**22.73**	**148**	*e*P		**P**	**13 22 09.8**	**+3.3**
	comp=Z,36nm,1.7s							
GRF	**Grafenberg Arr**	**22.86**	**150**	*e*P		**P**	**13 22 10.8**	**+2.9**
GRF				pmax		pmax		
	comp=Z,27nm,1.2s							
GRF				MLR		MLR		
	comp=Z,100nm,20.9s							
GRF	**Grafenberg Arr**	**22.86**	**150**	*e*P		**P**	**13 22 10.8**	**+2.9**
	comp=Z,27nm,1.2s							
GRF				*e*L		L	13 30 12.5	
	comp=Z,144nm,20.9s							
ROTZ	**Rotzenmuhle**	**22.96**	**148**	*e*P		**P**	**13 22 10.4**	**+1.5**
	comp=Z,57nm,2.0s							
UPC	**Upice**	**22.97**	**141**	*e*P		**P**	**13 22 09.7**	**+0.6**
UPC	**Upice**	**22.97**	**141**	*e*P		**P**	**13 22 09.7**	**+0.6**
UPC				*ex*		x	13 22 20.4	
UPC	**Upice**	**22.97**	**141**	P		**P**	**13 22 09.7**	**+0.6**
MEZF	**Maizieres J'vi**	**23.17**	**160**	*e*P		**P**	**13 22 10.8**	**-0.2**
	comp=Z,20nm,0.9s							
MEZF	**Maizieres J'vi**	**23.17**	**160**	*e*P		**P**	**13 22 10.8**	**-0.2**
	comp=Z,20nm,0.9s							
MEZF	**Maizieres J'vi**	**23.17**	**160**	*e*P		**P**	**13 22 10.8**	**-0.2**
	comp=Z,20nm,0.9s							
PRU	**Pruhonice**	**23.17**	**144**	*e*P		**P**	**13 22 12.3**	**+1.2**
PRU				MLR		MLR		
	comp=Z,200nm,16.9s							
PRU	**Pruhonice**	**23.17**	**144**	*e*P		**P**	**13 22 12.3**	**+1.2**
PRU				AMS		AMS	13 30 00.0	
	comp=Z,200nm,16.9s							
PRU	**Pruhonice**	**23.17**	**144**	*e*P		**P**	**13 22 12.3**	**+1.2**
	comp=Z,200nm,16.9s							
DPC	**Dobruska-Polom**	**23.18**	**141**	*e*P		**P**	**13 22 11.0**	**-0.3**
DPC				MLR		MLR		
	comp=Z,300nm,11.7s							
DPC	**Dobruska-Polom**	**23.18**	**141**	*e*P		**P**	**13 22 11.9**	**+0.6**
	comp=Z,92nm,2.0s							
DPC	**Dobruska-Polom**	**23.18**	**141**	*e*P		**P**	**13 22 11.0**	**-0.3**
DPC				*ex*		x	13 22 24.0	
DPC				AMS		AMS	13 32 40.0	
	comp=Z,300nm,11.7s							
DPC	**Dobruska-Polom**	**23.18**	**141**	P		**P**	**13 22 11.0**	**-0.3**
STU	**Stuttgart**	**23.44**	**153**	*e*P		**P**	**13 22 14.6**	**+0.8**
CDF	**Champ du Feu**	**23.52**	**157**	*e*P		**P**	**13 22 15.3**	**+0.6**
CDF	**Champ du Feu**	**23.52**	**157**	*e*P		**P**	**13 22 15.3**	**+0.6**
CDF	**Champ du Feu**	**23.52**	**157**	*e*P		**P**	**13 22 15.3**	**+0.6**
CDF	**Champ du Feu**	**23.52**	**157**	*e*P		**P**	**13 22 15.3**	**+0.6**
WET	**Wettzell**	**23.67**	**147**	*e*P		**P**	**13 22 16.8**	**+0.6**
WET				pmax		pmax		
	comp=Z,37nm,2.0s							
WET	**Wettzell**	**23.67**	**147**	*e*P		**P**	**13 22 16.8**	**+0.6**
	comp=Z,37nm,2.0s							
WET	**Wettzell**	**23.67**	**147**	*e*P		**P**	**13 22 16.8**	**+0.6**
	comp=Z,37nm,2.0s							
BFO	**Black Forest**	**23.74**	**155**	*e*P		**P**	**13 22 16.7**	**-0.1**
BFO				pmax		pmax		
	comp=Z,66nm,1.8s							
BFO	**Black Forest**	**23.74**	**155**	*e*P		**P**	**13 22 17.4**	**+0.6**
	comp=Z,60nm,1.7s							
BFO	**Black Forest**	**23.74**	**155**	*e*P		**P**	**13 22 16.7**	**-0.1**
	comp=Z,66nm,1.8s							
BFO	**Black Forest**	**23.74**	**155**	*e*P		**P**	**13 22 16.7**	**-0.1**
	comp=Z,66nm,1.8s							
HAU	**Haudompre**	**23.80**	**158**	*e*P		**P**	**13 22 17.8**	**+0.4**
HAU				*e*R				
	comp=Z,508nm,23.0s							
HAU	**Haudompre**	**23.80**	**158**	*e*P		**P**	**13 22 17.8**	**+0.4**
HAU	**Haudompre**	**23.80**	**158**	*e*P		**P**	**13 22 17.8**	**+0.4**
HAU	**Haudompre**	**23.80**	**158**	*e*P		**P**	**13 22 17.8**	**+0.4**
KHC	**Kasperske Hory**	**23.81**	**146**	*e*P		**P**	**13 22 18.5**	**+1.0**
KHC	**Kasperske Hory**	**23.81**	**146**	*e*P		**P**	**13 22 18.5**	**+1.0**
KHC	**Kasperske Hory**	**23.81**	**146**	*e*P		**P**	**13 22 18.5**	**+1.0**
KHC				*ex*		x	13 22 25.0	
KHC				AMS		AMS	13 34 10.0	
	comp=Z,400nm,15.4s							
KHC	**Kasperske Hory**	**23.81**	**146**	P		**P**	**13 22 18.5**	**+1.0**
FRB	**Frobisher Bay**	**23.89**	**284**	LR		LR	13 31 20.7	
	comp=Z,924nm,18.2s,baz=157,slow=36							
MORC	**Moravsky Berou**	**23.98**	**140**	*e*P		**P**	**13 22 18.4**	**-0.7**
MORC				pmax		pmax		
	comp=Z,22nm,1.6s							
MORC	**Moravsky Berou**	**23.98**	**140**	*e*P		**P**	**13 22 18.4**	**-0.7**
	comp=Z,22nm,1.6s							
MORC	**Moravsky Berou**	**23.98**	**140**	*e*P		**P**	**13 22 18.4**	**-0.7**
	comp=Z,22nm,1.6s							
TREC	**Trest**	**24.02**	**143**	AMS		AMS	13 33 20.0	
	comp=Z,300nm,12.2s							
HINF	**Hinteralfeld**	**24.05**	**158**	*e*P		**P**	**13 22 18.5**	**-1.3**
HINF	**Hinteralfeld**	**24.05**	**158**	*e*P		**P**	**13 22 18.5**	**-1.3**
HINF	**Hinteralfeld**	**24.05**	**158**	*e*P		**P**	**13 22 18.5**	**-1.3**
HINF	**Hinteralfeld**	**24.05**	**158**	*e*P		**P**	**13 22 18.5**	**-1.3**
OKC	**Ostrava-Krasne**	**24.06**	**139**	AMS		AMS	13 33 40.0	
	comp=Z,600nm,14.6s							
OJC	**Ojcow**	**24.07**	**136**	*e*P		**P**	**13 22 20.2**	**+0.4**
OJC				pmax		pmax		
	comp=Z,18nm,1.1s							
OJC	**Ojcow**	**24.07**	**136**	*e*P		**P**	**13 22 20.2**	**+0.4**
	comp=Z,18nm,1.1s							
OJC	**Ojcow**	**24.07**	**136**	*e*P		**P**	**13 22 20.2**	**+0.4**
	comp=Z,18nm,1.1s							
RES	**Resolute Bay**	**24.09**	**319**	*e*P		**P**	**13 22 18.5**	**-1.3**
	comp=Z,107nm,2.4s							
RES	**Resolute Bay**	**24.09**	**319**	LR		LR	13 31 21.3	
	comp=Z,741nm,18.9s,baz=222,slow=36							
RES	**Resolute Bay**	**24.09**	**319**	*e*P		**P**	**13 22 18.5**	**-1.3**
	comp=Z,107nm,2.4s							
GEC2	**GERESS Array S**	**24.11**	**146**	*e*P		**P**	**13 22 20.5**	**+0.1**
GEC2				pmax		pmax		
	comp=Z,30nm,1.7s							
GEC2	**GERESS Array S**	**24.11**	**146**	*e*P		**P**	**13 22 20.5**	**+0.1**
	comp=Z,30nm,1.7s							
GERES	**GERESS Array B**	**24.11**	**146**	P		**P**	**13 22 21.0**	**+0.6**
GERES	**GERESS Array B**	**24.11**	**146**	P		**P**	**13 22 21.0**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=342,slow=7.6,SNR=7.6							
GERES				LR		LR	13 30 59.1	
	comp=Z,150nm,18.8s,baz=168,slow=35							
GERES	**GERESS Array B**	**24.11**	**146**	P		**P**	**13 22 21.0**	**+0.6**
MOS	**Moscow**	**24.16**	**106**	*e*P		**P**	**13 22 18.5**	**-2.1**
MOS				*e*			13 22 52.3	
MOS				pmax		pmax		
	comp=Z,50nm,2.0s							
MOS	**Moscow**	**24.16**	**106**	*e*P		**P**	**13 22 18.5**	**-2.1**
	comp=Z,50nm,2.0s							
VRAC	**Vranov**	**24.23**	**141**	LR		LR	13 31 38.6	
	comp=Z,184nm,18.9s,baz=330,slow=36							
LOR	**Lormes**	**24.26**	**163**	*e*P		**P**	**13 22 21.9**	**+0.2**
	comp=Z,69nm,1.5s							
LOR				*e*R				
	comp=Z,300nm,21.0s							
LOR	**Lormes**	**24.26**	**163**	*e*P		**P**	**13 22 21.9**	**+0.2**
	comp=Z,69nm,1.5s							
LOR	**Lormes**	**24.26**	**163**	*e*P		**P**	**13 22 21.9**	**+0.2**
	comp=Z,69nm,1.5s							
OBN	**Obninsk**	**24.35**	**108**⇑	*e*P		**P**	**13 22 21.6**	**-0.8**
OBN				*e*S		**S**	**13 26 38.2**	**-3.0**
OBN				pmax		pmax		
	comp=Z,102nm,2.5s							
OBN				MLR		MLR		
	comp=Z,500nm,15.0s							
OBN	**Obninsk**	**24.35**	**108**	*e*P		**P**	**13 22 21.6**	**-0.8**
	comp=Z,102nm,2.5s							
SSF	**Saint Saulge**	**24.43**	**163**	*e*P		**P**	**13 22 22.2**	**-1.0**
	comp=Z,30nm,1.3s							
SSF	**Saint Saulge**	**24.43**	**163**	*e*P		**P**	**13 22 22.2**	**-1.0**
SSF				pmax		pmax		
	comp=Z,31nm,1.3s							
SSF	**Saint Saulge**	**24.43**	**163**	*e*P		**P**	**13 22 22.2**	**-1.0**
	comp=Z,30nm,1.3s							
SSF	**Saint Saulge**	**24.43**	**163**	*e*P		**P**	**13 22 22.2**	**-1.0**
	comp=Z,30nm,1.3s							
AVF	**Avril sur Loir**	**24.69**	**164**	*e*P		**P**	**13 22 25.3**	**-0.2**
AVF	**Avril sur Loir**	**24.69**	**164**	*e*P		**P**	**13 22 25.3**	**-0.2**
AVF	**Avril sur Loir**	**24.69**	**164**	*e*P		**P**	**13 22 25.3**	**-0.2**
AVF	**Avril sur Loir**	**24.69**	**164**	*e*P		**P**	**13 22 25.3**	**-0.2**
BGF	**Bois d'Agland**	**24.87**	**165**	*e*P		**P**	**13 22 27.4**	**+0.2**
BGF	**Bois d'Agland**	**24.87**	**165**	*e*P		**P**	**13 22 27.4**	**+0.2**
BGF	**Bois d'Agland**	**24.87**	**165**	*e*P		**P**	**13 22 27.4**	**+0.2**
BGF	**Bois d'Agland**	**24.87**	**165**	*e*P		**P**	**13 22 27.4**	**+0.2**
SMF	**Signal de Mont**	**24.88**	**163**	*e*P		**P**	**13 22 27.3**	**0.0**
SMF	**Signal de Mont**	**24.88**	**163**	*e*P		**P**	**13 22 27.3**	**0.0**
SMF	**Signal de Mont**	**24.88**	**163**	*e*P		**P**	**13 22 27.3**	**0.0**
SMF	**Signal de Mont**	**24.88**	**163**	*e*P		**P**	**13 22 27.3**	**0.0**
TCF	**Toulx Ste Croi**	**25.09**	**166**	*e*P		**P**	**13 22 28.0**	**-1.2**
	comp=Z,29nm,1.1s							
TCF	**Toulx Ste Croi**	**25.09**	**166**	*e*P		**P**	**13 22 28.0**	**-1.2**
TCF				pmax		pmax		
	comp=Z,29nm,1.1s							
TCF	**Toulx Ste Croi**	**25.09**	**166**	*e*P		**P**	**13 22 28.0**	**-1.2**
	comp=Z,29nm,1.1s							
TCF	**Toulx Ste Croi**	**25.09**	**166**	*e*P		**P**	**13 22 28.0**	**-1.2**
	comp=Z,29nm,1.1s							
CABF	**La Chapelle**	**25.15**	**159**	*e*P		**P**	**13 22 30.2**	**+0.4**
	comp=Z,50nm,1.4s							
CABF	**La Chapelle**	**25.15**	**159**	*e*P		**P**	**13 22 30.2**	**+0.4**
CABF				pmax		pmax		
	comp=Z,50nm,1.4s							
CABF	**La Chapelle**	**25.15**	**159**	*e*P		**P**	**13 22 30.2**	**+0.4**
	comp=Z,50nm,1.4s							
CABF	**La Chapelle**	**25.15**	**159**	*e*P		**P**	**13 22 30.2**	**+0.4**
	comp=Z,50nm,1.4s							
LVV	**L'vov**	**25.45**	**130**	*e*P		**P**	**13 22 35.6**	**+3.2**
LVV				MLR		MLR		
	comp=N,800nm,18.0s							
LVV				MLR		MLR		
	comp=E,200nm,18.0s							
LVV				MLR		MLR		
	comp=Z,1μm,18.0s							
VYHS	**Vyhne**	**25.48**	**139**	*e*P		**P**	**13 22 32.6**	**-0.1**
VYHS	**Vyhne**	**25.48**	**139**	*e*P		**P**	**13 22 32.6**	**-0.1**
VYHS	**Vyhne**	**25.48**	**139**	*e*P		**P**	**13 22 32.6**	**-0.1**
DAVOX	**Davos/Dischmat**	**25.48**	**153**	LR		LR	13 33 36.8

ORIF Oris-en-Rattie 26.80 160 *e*P **P 13 22 45.0 +0.3**
ORIF pmax pmax
comp=Z,65nm,1.4s
ORIF Oris-en-Rattie 26.80 160 *e*P **P 13 22 45.0 +0.3**
comp=Z,65nm,1.4s
ORIF Oris-en-Rattie 26.80 160 *e*P **P 13 22 45.0 +0.3**
comp=Z,65nm,1.4s
MBDF Montbardon 27.09 159 *e*P **P 13 22 48.2 +0.8**
comp=Z,42nm,1.3s
MBDF Montbardon 27.09 159 *e*P **P 13 22 48.2 +0.8**
MBDF pmax pmax
comp=Z,42nm,1.3s
MBDF Montbardon 27.09 159 *e*P **P 13 22 48.2 +0.8**
comp=Z,42nm,1.3s
MBDF Montbardon 27.09 159 *e*P **P 13 22 48.2 +0.8**
comp=Z,42nm,1.3s
SOKR Solikamsk 27.34 82 *e*P **P 13 22 49.4 +0.1**
SOKR pmax pmax
comp=Z,30nm,1.3s
SOKR MLR MLR
comp=Z,560nm,19.0s
SOKR Solikamsk 27.34 82 *e*P **P 13 22 49.4 +0.1**
comp=Z,560nm,19.0s
BUR08 Bucovina Ar. S 27.76 130 *e*P **P 13 22 51.4 -2.0**
BUR08 Bucovina Ar. S 27.76 130 *e*P **P 13 22 51.4 -2.0**
EPF Esparros 28.20 169 *e*P **P 13 22 57.2 0.0**
comp=Z,21nm,1.0s
EPF Esparros 28.20 169 *e*P **P 13 22 57.2 0.0**
EPF pmax pmax
comp=Z,21nm,1.0s
EPF Esparros 28.20 169 *e*P **P 13 22 57.2 0.0**
comp=Z,21nm,1.0s
EPF Esparros 28.20 169 *e*P **P 13 22 57.2 0.0**
comp=Z,21nm,1.0s
VSR Storozhevoye 28.50 110 *e*P **P 13 22 59.1 -0.7**
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,6.0nm,0.4s
VSR pmax pmax
comp=Z,9.0nm,0.4s
VSR MLR MLR
comp=N,440nm,17.0s
VSR MLR MLR
comp=E,270nm,17.0s
VSR MLR MLR
comp=Z,840nm,17.0s
VSR Storozhevoye 28.50 110 *e*P **P 13 22 59.1 -0.7**
VORD Divnogorie 28.76 110 *e*P **P 13 22 59.0 -3.1**
VORD pmax pmax
comp=N,5.0nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
VORD pmax pmax
comp=Z,6.0nm,0.6s
VORD MLR MLR
comp=N,430nm,13.0s
VORD MLR MLR
comp=Z,490nm,13.0s
VORD MLR MLR
comp=E,80nm,7.0s
VORD Divnogorie 28.76 110 *e*P **P 13 22 59.0 -3.1**
KIS Kishinev 29.29 126 *e*P P 13 23 25.0 +18
KIS *e*S S 13 28 10.0 +10
KIS LRM MLR 13 34 00.0
comp=E,900nm,16.0s
VRHR Novokhopersk 29.37 107 *e*P **P 13 23 05.7 -1.8**
VRHR pmax pmax
comp=N,3.0nm,0.4s
VRHR pmax pmax
comp=E,8.0nm,0.4s
VRHR pmax pmax
comp=Z,5.0nm,0.4s
VRHR MLR MLR
comp=N,640nm,18.0s
VRHR MLR MLR
comp=E,1μm,18.0s
VRHR MLR MLR
comp=Z,930nm,18.0s
VRHR Novokhopersk 29.37 107 *e*P **P 13 23 05.7 -1.8**
MLR Muntele Rosu 29.96 131 P **P 13 23 11.7 -1.2**
MLR Muntele Rosu 29.96 131 P **P 13 23 11.7 -1.2**
comp=Z,0.3nm,0.4s,baz=212,slow=12,SNR=3.1
MLR LR LR 13 36 01.3
comp=Z,480nm,19.0s,baz=307,slow=38
MLR Muntele Rosu 29.96 131 P **P 13 23 11.7 -1.2**
SCHQ Schefferville 30.20 270 LR LR 13 34 30.6
comp=Z,820nm,18.8s,baz=230,slow=35
ARU Arti 30.41 84*d i*P **P 13 23 16.8 +0.2**
ARU 13 24 17.2
ARU S **S 13 28 16.2 -0.7**
ARU pmax pmax
comp=Z,27nm,2.5s
ARU MLR MLR
comp=Z,551nm,19.0s
ARU Arti 30.41 84 *i* P **P 13 23 16.8 +0.2**
comp=Z,27nm,2.5s
ARU S **S 13 28 16.2 -0.7**
comp=Z,551nm,19.0s
SVE Sverdlovsk 30.76 82 *e*P **P 13 23 19.9 +0.1**
SVE pmax pmax
comp=Z,14nm,1.3s
SVE Sverdlovsk 30.76 82 *e*P **P 13 23 19.9 +0.1**
comp=Z,14nm,1.3s
ESDC Sonseca Array 31.37 176 P **P 13 23 25.3 0.0**
ESDC Sonseca Array 31.37 176 P **P 13 23 25.3 0.0**
comp=Z,0.2nm,0.3s,baz=352,slow=8.6,SNR=5.1
ESDC LR LR 13 35 03.3
comp=Z,146nm,19.6s,baz=320,slow=34
ESDC Sonseca Array 31.37 176 P **P 13 23 25.3 0.0**
ANN Anapa 33.72 117 *e*P P 13 23 49.2 +3.5
ANN *e*S **S 13 29 13.3 +4.7**
ANN pmax pmax
comp=Z,99nm,1.2s
ANN MLR MLR
comp=Z,788nm,15.0s
TIXI Tiksi 34.72 23 *e*P **P 13 23 54.2 0.0**
TIXI pmax pmax
comp=Z,20nm,1.4s
TIXI Tiksi 34.72 23 *e*P **P 13 23 54.2 0.0**
comp=Z,20nm,1.4s
TIXI Tiksi 34.72 23 *e*P **P 13 23 54.2 0.0**
comp=Z,20nm,1.4s
KIV Kislovodsk 36.05 112*c i*P **P 13 24 06.4 +0.3**
KIV *i* S **S 13 29 50.0 +5.2**
KIV *e*SS **SnSn 13 32 08.6 -0.4**
KIV pmax pmax
comp=Z,24nm,1.2s
KIV MLR MLR
comp=Z,400nm,19.0s
KIV Kislovodsk 36.05 112 *i* P **P 13 24 06.4 +0.3**
comp=Z,24nm,1.2s
KEST Kesra 36.27 158 LR LR 13 38 08.7
comp=Z,102nm,21.9s,baz=358,slow=35
KBZ Khabaz 36.32 112 P **P 13 24 09.4 +1.2**
KBZ Khabaz 36.32 112 P **P 13 24 09.4 +1.2**
KBZ Khabaz 36.32 112 P **P 13 24 09.4 +1.2**
comp=Z,8.5nm,0.9s,baz=296,slow=6.3,SNR=19
KBZ LR LR 13 39 39.6
comp=Z,202nm,20.0s,baz=324,slow=37
KBZ Khabaz 36.32 112 P **P 13 24 09.4 +1.2**
ABKAR Akbulak array 36.90 90 *e*P **P 13 24 13.2 +0.1**
ABKAR Akbulak array 36.90 90 *e*P **P 13 24 13.2 +0.1**
BRVK Borovoye 37.01 77*c i*P **P 13 24 14.3 +0.3**
BRVK pmax pmax
comp=Z,22nm,2.5s
BRVK Borovoye 37.01 77 *e*P **P 13 24 11.9 -2.1**
comp=Z,111nm,2.7s
BRVK Borovoye 37.01 77 *e*P **P 13 24 11.9 -2.1**
comp=Z,111nm,2.7s
BVAR Borovoye Array 37.07 77 LR LR 13 41 26.5
comp=Z,120nm,19.1s,baz=155,slow=40
BR131 Keskin Array S 37.34 125 *e*P **P 13 24 14.8 -2.4**
comp=Z,2.3nm,0.8s
BR131 Keskin Array S 37.34 125 *e*P **P 13 24 14.8 -2.4**
comp=Z,2.3nm,0.8s
BRTR Keskin Array B 37.34 125 P **P 13 24 18.3 +1.1**
BRTR Keskin Array B 37.34 125 P **P 13 24 18.3 +1.1**
comp=Z,1.6nm,0.6s,baz=344,slow=6.8,SNR=8.8
BRTR LR LR 13 40 09.9
comp=Z,186nm,21.6s,baz=145,slow=37
BRTR Keskin Array B 37.34 125 P **P 13 24 18.3 +1.1**
ZEI Tsey 37.50 111 *e*P **P 13 24 18.7 +0.2**
ZEI pmax pmax
comp=Z,15nm,1.4s
ZEI Tsey 37.50 111 *e*P **P 13 24 18.7 +0.2**
comp=Z,15nm,1.4s
ONI Oni 37.52 112 P **P 13 24 19.6 +1.0**
YKW3 Yellowknife Ar 37.85 314 *e*P **P 13 24 20.3 -0.7**
comp=Z,0.6nm,1.9s
YKW3 Yellowknife Ar 37.85 314 *e*P **P 13 24 20.3 -0.7**
comp=Z,0.6nm,1.9s
YKA Yellowknife Ar 37.90 314 P **P 13 24 22.0 +0.5**
YKA Yellowknife Ar 37.90 314 P **P 13 24 22.0 +0.5**
comp=Z,2.9nm,1.1s,baz=28,slow=9.0,SNR=22
YKA Yellowknife Ar 37.90 314 P **P 13 24 22.0 +0.5**
GOR Gori 38.28 112 P **P 13 24 26.9 +2.1**
MAK Makhachkala 38.44 107 *e*P P 13 24 14.2 -12
MAK MLR MLR
comp=Z,420nm,16.0s
AKH Akhalkalaki 38.61 113 P **P 13 24 29.6 +1.7**
SEAG Tbilisi Sea 38.69 111 P **P 13 24 28.8 +0.4**
TBLG Delisi 38.70 111 *e*P **P 13 24 29.2 +0.8**
TBLG Delisi 38.70 111 P **P 13 24 29.2 +0.8**
TBLG Delisi 38.70 111 P **P 13 24 29.2 +0.8**
DGRG David-gareji 39.15 111 P **P 13 24 34.0 +1.8**
NVS Novosibirsk 39.51 65 *e*P P 13 24 39.6 +4.6
MALT Malatya 39.98 120 *e*P **P 13 24 36.6 -2.7**
MALT pmax pmax
comp=Z,20nm,1.4s
MALT Malatya 39.98 120 *e*P **P 13 24 36.6 -2.7**
comp=Z,20nm,1.4s
MALT Malatya 39.98 120 *e*P **P 13 24 36.6 -2.7**
comp=Z,20nm,1.4s
GNI Garni 40.15 112 *e*P **P 13 24 39.8 -0.9**
comp=Z,44nm,1.2s
GNI Garni 40.15 112 P **P 13 24 41.8 +1.1**
comp=Z,3.0nm,0.3s,baz=56,slow=3.6,SNR=2.4
GNI LR LR 13 41 47.2
comp=Z,324nm,18.1s,baz=306,slow=37
GNI Garni 40.15 112 *e*P **P 13 24 39.8 -0.9**
comp=Z,44nm,1.2s
ZALV Zalesovo Beam 40.75 65 P **P 13 24 45.2 -0.1**
ZALV Zalesovo Beam 40.75 65 P **P 13 24 45.2 -0.1**
ZALV Zalesovo Beam 40.75 65 P **P 13 24 45.2 -0.1**
comp=Z,0.2nm,0.3s,baz=339,slow=7.7,SNR=2.3
ZALV LR LR 13 45 11.5
comp=Z,122nm,18.2s,baz=259,slow=41
ZALV Zalesovo Beam 40.75 65 P **P 13 24 45.2 -0.1**
EGAK Eagle 41.02 332 *e*P P 13 24 42.9 -4.6
BILL Bilibino 41.18 4⇑*i*P **P 13 24 49.6 +0.9**
BILL pmax pmax
comp=Z,23nm,1.7s
BILL MLR MLR
comp=Z,100nm,18.0s
BILL Bilibino 41.18 4 *e*P **P 13 24 47.2 -1.5**
comp=Z,22nm,1.4s
BILL Bilibino 41.18 4 *e*P **P 13 24 47.2 -1.5**
comp=Z,22nm,1.4s
FFC Flin Flon 41.32 299 *i* P **P 13 24 51.8 +1.8**
FFC Flin Flon 41.32 299 *e*P **P 13 24 47.9 -2.1**
comp=Z,38nm,1.7s
FFC Flin Flon 41.32 299 *i* P **P 13 24 51.8 +1.8**
KURK Kurchatov 41.66 72*c i*P **P 13 24 53.7 +0.9**
KURK pmax pmax
comp=Z,3.0nm,0.8s
KURK Kurchatov 41.66 72 *e*P P 13 24 49.8 -3.1
KURK Kurchatov 41.66 72 *i* P **P 13 24 53.7 +0.9**
comp=Z,3.0nm,0.8s
KURBB Kurchatov Arra 41.72 72 LR LR 13 42 41.6
comp=Z,194nm,19.1s,baz=320,slow=37
ILAR Eielson Array 41.85 336 P **P 13 24 54.9 +0.7**
ILAR Eielson Array 41.85 336 P **P 13 24 54.9 +0.7**
comp=Z,3.5nm,1.2s,baz=12,slow=5.6,SNR=16
ILAR LR LR 13 43 27.6
comp=Z,216nm,19.5s,baz=113,slow=38
ILAR Eielson Array 41.85 336 P **P 13 24 54.9 +0.7**
ULM Lac du Bonnet 43.42 291 P **P 13 25 09.2 +2.1**
ULM Lac du Bonnet 43.42 291 P **P 13 25 09.2 +2.1**
comp=Z,3.7nm,0.9s,baz=29,slow=8.2,SNR=3.6
ULM LR LR 13 42 25.7
comp=Z,191nm,21.8s,baz=84,slow=35
ULM Lac du Bonnet 43.42 291 P **P 13 25 09.2 +2.1**
MMAI Mount Meron Ar 44.13 126 P **P 13 25 14.0 +0.9**
MMAI Mount Meron Ar 44.13 126 P **P 13 25 14.0 +0.9**
comp=Z,0.6nm,0.4s,baz=355,slow=14,SNR=2.5
MMAI LR LR 13 46 06.5
comp=Z,187nm,18.4s,baz=320,slow=40
MMAI Mount Meron Ar 44.13 126 P **P 13 25 14.0 +0.9**
AGMN Agassiz Nation 45.14 290 *e*P **P 13 25 21.8 +0.9**
comp=Z,3.5nm,0.9s
AGMN Agassiz Nation 45.14 290 *e*P **P 13 25 21.8 +0.9**
comp=Z,3.5nm,0.9s
ASF Jabal al Asfar 45.33 125 P **P 13 25 23.8 +1.1**
ASF Jabal al Asfar 45.33 125 P **P 13 25 23.8 +1.1**
comp=Z,3.0nm,0.9s,baz=127,slow=1.8,SNR=4.1
ASF LR LR 13 46 14.7
comp=Z,147nm,20.2s,baz=26,slow=39
SEY Seymchan 45.59 13*c i*P **P 13 25 24.6 +0.3**
SEY Seymchan 45.59 13 *i* P **P 13 25 24.6 +0.3**
MKAR Makanchi Array 46.27 72 P **P 13 25 30.5 +0.6**
MKAR Makanchi Array 46.27 72 P **P 13 25 30.5 +0.6**
MKAR Makanchi Array 46.27 72 P **P 13 25 30.5 +0.6**
comp=Z,0.3nm,0.5s,baz=336,slow=5.0,SNR=5.1
MKAR LR LR 13 48 19.2
comp=Z,201nm,18.9s,baz=353,slow=40
MKAR Makanchi Array 46.27 72 P **P 13 25 30.5 +0.6**
MDND Maddock 46.69 292 ⇑P **P 13 25 34.3 +1.2**
baz=46
A24A Westby 47.04 297 ⇑P **P 13 25 37.3 +1.3**
baz=47
EIL Elat 47.19 128 LR LR 13 47 21.6
comp=Z,135nm,19.8s,baz=270,slow=39
MOY Mondy 47.34 54 *e*P **P 13 25 39.1 +0.8**
MOY pmax pmax
comp=Z,25nm,2.6s
MOY Mondy 47.34 54 *e*P **P 13 25 39.1 +0.8**
comp=Z,25nm,2.6s
AAK Ala-Archa 47.50 81 *e*P **P 13 25 41.4 +1.6**
AAK pmax pmax
comp=Z,17nm,1.7s
AAK Ala-Archa 47.50 81 *e*P **P 13 25 37.1 -2.6**
comp=Z,7.4nm,2.3s
AAK Ala-Archa 47.50 81 *e*P **P 13 25 37.1 -2.6**
comp=Z,7.4nm,2.3s
A22A Carney Farms, 47.53 298 ⇓P **P 13 25 40.6 +0.8**
baz=47
IRK Irkutsk 47.67 51 *e*P **P 13 25 40.4 -0.3**
IRK pmax pmax
comp=Z,31nm,1.5s
IRK Irkutsk 47.67 51 *e*P **P 13 25 40.4 -0.3**
comp=Z,31nm,1.5s
B23A Brockton 47.74 297 ⇑P **P 13 25 43.2 +1.8**
baz=48
A21A Bergtoll Ranch 47.83 299 ⇓P **P 13 25 43.6 +1.5**
baz=48
TLY Talaya 48.02 52 *e*P **P 13 25 41.2 -2.3**
TLY *e* 13 32 40.4
TLY pmax pmax
comp=Z,2.0nm,0.6s
TLY MLR MLR
comp=Z,72nm,17.0s
TLY Talaya 48.02 52 *e*P **P 13 25 41.2 -2.3**
comp=Z,2.0nm,0.6s
TLY *e*S **S 13 32 40.4 -0.6**
comp=Z,72nm,17.0s
A20A Cobblestone Ra 48.21 300 ⇓P **P 13 25 46.1 +1.1**
baz=48
C23A Lambert 48.39 297 ⇑P **P 13 25 47.8 +1.4**
baz=48
A19A Klindworth Far 48.40 300 ⇑P **P 13 25 47.6 +1.1**
baz=48,SNR=9.9
C24A Savage 48.42 296 ⇓P **P 13 25 48.0 +1.4**
baz=48
B20A Solberg Farm, 48.64 300 ⇑P **P 13 25 48.6 +0.2**
baz=48
C22A Vida 48.65 298 ⇓P **P 13 25 48.9 +0.5**
baz=48
ZAK Zakamensk 49.11 53 *e*P **P 13 25 52.6 +0.6**
ZAK pmax pmax
comp=Z,3.0nm,1.6s
ZAK Zakamensk 49.11 53 *e*P **P 13 25 52.6 +0.6**
comp=Z,3.0nm,1.6s
B18A Beardsley Farm 49.18 301 ⇓P **P 13 25 53.6 +1.1**
baz=49
D22A Cohagen 49.27 297 ⇑P **P 13 25 54.8 +1.6**
baz=49,SNR=5.6
C20A Veseth Ranch, 49.29 299 ⇓P **P 13 25 54.4 +1.0**
baz=49,SNR=12
EGMT Eagleton 49.51 301 *e*P **P 13 25 54.0 -1.0**
comp=Z,59nm,1.4s
EGMT Eagleton 49.51 301 ⇓P **P 13 25 56.2 +1.2**
baz=49,SNR=17
EGMT Eagleton 49.51 301 *e*P **P 13 25 54.0 -1.0**
comp=Z,59nm,1.4s
B17A L&G Farms, Che 49.56 302 ⇓P **P 13 25 56.1 +0.7**
baz=49
A14A Double T Ranch 49.66 304 ⇑P **P 13 25 57.0 +0.8**
baz=50,SNR=6.7
D20A Manuel Ranch, 49.89 299 ⇑P **P 13 25 59.4 +1.5**
baz=50,SNR=7.7
F24A Ekalaka 49.95 295 ⇑P **P 13 25 59.3 +0.9**
baz=50
A13A Flathead Natio 49.96 305 ⇑P **P 13 25 58.9 +0.4**
baz=50
B15A Bradely Ranch, 50.03 303 ⇑P **P 13 25 59.6 +0.6**
baz=50,SNR=8.0
D19A Cripps Ranch, 50.04 300 ⇑P **P 13 26 00.3 +1.2**
baz=50,SNR=8.7
C17A Wharram Farm, 50.15 301 ⇑P **P 13 26 00.5 +0.6**
baz=50
B14A Marquette Ranc 50.18 304 ⇓P **P 13 26 00.7 +0.5**
baz=50
F23A Volborg 50.34 296 ⇑P **P 13 26 02.3 +0.9**
baz=50
C15A Salmond Ranch, 50.53 303 ⇓P **P 13 26 03.7 +0.8**
baz=50,SNR=7.3
D17A Six Diamond Ra 50.56 301 ⇓P **P 13 26 04.3 +1.2**
baz=50,SNR=9.0
WMQ Urumqi 50.61 69 P **P 13 26 05.0 +1.5**
WMQ sP **sP 13 26 12.0 +4.2**
WMQ PcP **PcP 13 27 24.0 +3.1**
WMQ PP **PP 13 28 01.0 +2.1**
WMQ ScP **ScP 13 31 17.0 +0.5**
WMQ S **S 13 33 17.0 -0.7**
WMQ sS **sS 13 33 26.0 +3.1**
WMQ ScS **ScS 13 35 52.0 -1.9**
WMQ SS **SS 13 36 47.0 -4.2**
WMQ pmax pmax
comp=Z,13nm,1.0s
WMQ pmax pmax
comp=Z,130nm,5.0s
WMQ LR LR
comp=N,160nm,17.0s
WMQ LR LR
comp=E,270nm,17.0s
WMQ LR LR
comp=Z,200nm,17.0s
E19A Rath Farm, Rou 50.65 299 ⇑P **P 13 26 05.1 +1.4**
baz=50
KSH Kashi 50.79 82 P **P 13 26 05.0 +0.1**
KSH pP **pP 13 26 10.5 +2.4**
KSH PcP **PcP 13 27 23.5 +1.8**
KSH PP **PP 13 28 01.8 +1.1**
KSH ScP **ScP 13 31 16.3 -1.1**
KSH PcS **PcS 13 31 20.0 +0.8**
KSH S **S 13 33 17.5 -2.9**
KSH ScS **ScS 13 35 52.5 -2.9**
KSH pmax pmax
comp=Z,1.0nm,0.1s
KSH pmax pmax
comp=Z,71nm,4.6s
KSH LR LR
comp=N,140nm,5.3s
KSH LR LR
comp=E,89nm,3.6s
KSH LR LR
comp=Z,180nm,6.7s
G23A Biddle 50.81 296 ⇓P **P 13 26 06.4 +1.5**
baz=51
C14A Swan Lake 50.85 304 ⇑P **P 13 26 05.1 -0.1**
baz=51
E18A Harlowton 50.88 300 ⇓P **P 13 26 06.6 +1.1**
baz=51,SNR=9.4
D16A Dana Ranch, Ca 50.92 302 ⇑P **P 13 26 06.2 +0.4**
baz=51
H24A Dirks Ranch, A 50.97 295 ⇑P **P 13 26 07.0 +0.8**
baz=51
JTMT Jette 51.01 304 *e*P P 13 26 03.4 -3.1
JTMT Jette 51.01 304 *e*P P 13 26 03.4 -3.1
BSMT Bassoo Peak 51.05 305 *e*P **P 13 26 06.0 -0.8**
BSMT epP pP 13 26 18.1 +8.0
BSMT Bassoo Peak 51.05 305 *e*P **P 13 26 06.1 -0.8**
C13A Hot Springs 51.15 304 ⇓P **P 13 26 08.5 +1.0**
baz=51,SNR=11
SWMT Swartz Lake 51.15 304 *e*P **P 13 26 05.2 -2.3**
SWMT Swartz Lake 51.15 304 *e*P **P 13 26 05.2 -2.3**
D15A Lincoln 51.18 302 ⇓P **P 13 26 08.3 +0.5**
baz=51,SNR=5.9
E17A Martinsdale 51.24 301 ⇓P **P 13 26 09.2 +0.9**
baz=51,SNR=6.9
F19A Roth Farm, Mol 51.25 299 ⇓P **P 13 26 09.4 +1.1**
baz=51
SLMT Seeley Lake 51.26 303 *e*P **P 13 26 05.9 -2.5**
SLMT Seeley Lake 51.26 303 *e*P **P 13 26 05.9 -2.5**
E16A East Helena 51.41 302 ⇓P **P 13 26 09.6 +0.2**
baz=51
D14A Greenough 51.41 303 ⇓P **P 13 26 10.3 +0.8**
baz=51,SNR=9.8
F18A Big Timber 51.43 300 ⇑P **P 13 26 11.1 +1.5**
baz=51,SNR=9.1
CHMT Chamberlain Mo 51.49 303 *e*P **P 13 26 09.5 -0.7**
CHMT Chamberlain Mo 51.49 303 *e*P **P 13 26 09.5 -0.7**
GCMT Greycliff 51.52 300 *e*P **P 13 26 08.0 -2.4**
comp=Z,9.1nm,1.3s
GCMT Greycliff 51.52 300 *e*P **P 13 26 07.9 -2.4**
comp=Z,9.1nm,1.3s
G20A Bridger 51.62 298 ⇑P **P 13 26 11.7 +0.6**
baz=51,SNR=7.3
D13A Huson 51.66 304 ⇑P **P 13 26 12.9 +1.7**
baz=52
F17A Fitzpatrick Pl 51.69 300 ⇓P **P 13 26 12.9 +1.2**
baz=52,SNR=7.9
MSO Missoula 51.76 304 *e*P **P 13 26 11.3 -0.8**
MSO Missoula 51.76 304 ⇑P **P 13 26 12.6 +0.6**
baz=52,SNR=9.4
MSO Missoula 51.76 304 *e*P **P 13 26 11.3 -0.8**
E15A Deer Lodge 51.77 302 ⇓P **P 13 26 13.4 +1.1**
baz=52
G18A Lazy EL Ranch, 51.92 299 ⇑P **P 13 26 15.1 +1.7**
baz=52
D12A Red Ives Fores 51.94 305 ⇑P **P 13 26 14.4 +1.0**
baz=52
I23A Meade Ranch, G 51.96 295 ⇑P **P 13 26 14.5 +0.8**
baz=52
RLMT Red Lodge 52.01 299 *e*P **P 13 26 16.3 +2.2**
E14A Clinton 52.02 303 ⇓P **P 13 26 14.6 +0.6**
baz=52
E13A Victor 52.19 304 ⇑P **P 13 26 15.9 +0.6**
baz=52,SNR=5.7
BOZ Bozeman (W) 52.20 301 *e*P **P 13 26 16.6 +1.1**
BOZ Bozeman (W) 52.20 301 *e*P **P 13 26 16.6 +1.1**
BOZ Bozeman (W) 52.20 301 ⇑P **P 13 26 16.2 +0.7**
baz=52
BOZ Bozeman (W) 52.20 301 *e*P **P 13 26 16.6 +1.1**
H20A Greybull 52.23 297 ⇓P **P 13 26 16.5 +1.0**
baz=52,SNR=7.5
G17A Pierce Place, 52.25 300 ⇑P **P 13 26 16.3 +0.5**
baz=52
SONM Songino Array 52.26 52 P **P 13 26 16.4 +0.6**
SONM Songino Array 52.26 52 P **P 13 26 16.4 +0.6**
comp=Z,1.1nm,1.0s,baz=343,slow=9.5,SNR=5.6
SONM LR LR 13 50 36.8
comp=Z,108nm,20.5s,baz=258,slow=38
SONM Songino Array 52.26 52 P **P 13 26 16.4 +0.6**
F15A Butte 52.27 302 ⇓P **P 13 26 16.7 +0.7**
baz=52,SNR=6.4
LRM Limekiln Ridge 52.27 302 *e*P **P 13 26 14.6 -1.5**
LRM Limekiln Ridge 52.27 302 *e*P **P 13 26 14.6 -1.5**
I22A 9 Mile Ranch, 52.32 296 ⇑P **P 13 26 17.5 +1.1**
baz=52
H18A Shoshone NF, C 52.53 299 ⇓P **P 13 26 18.7 +0.7**
baz=52
I21A Big Trails, Te 52.63 297 ⇑P **P 13 26 19.1 +0.4**
baz=52,SNR=8.9
I20A Worland 52.75 297 ⇑P **P 13 26 20.1 +0.6**
baz=53
J22A Midwest 52.76 296 ⇑P **P 13 26 20.1 +0.5**
baz=53,SNR=5.6
F13A Darby 52.83 303 ⇓P **P 13 26 20.6 +0.6**
baz=53
G15A Dillon 52.89 302 ⇓P **P 13 26 21.7 +1.1**
baz=53
I19A Meeteetse 52.93 298 ⇓P **P 13 26 22.0 +1.1**
baz=53,SNR=6.5
H16A Russell Place, 52.96 300 ⇓P **P 13 26 22.1 +0.9**
baz=53,SNR=5.0

H17A	**Grant Village**	**53.05**	**300**	⇑P		**P**	**13 26 22.9**	**+1.0**
	baz=53,SNR=7.5							
F12A	**Elk City**	**53.11**	**304**	⇓P		**P**	**13 26 23.0**	**+0.9**
	baz=53							
J21A	**Lysite**	**53.11**	**296**	⇓P		**P**	**13 26 23.2**	**+1.0**
	baz=53							
J20A	**Shoshoni**	**53.29**	**297**	⇑P		**P**	**13 26 24.8**	**+1.3**
	baz=53							
MCMT	**McKenzie Canyo**	**53.30**	**302**	*e*P		**P**	**13 26 21.8**	**-1.9**
	comp=Z,3.8nm,1.3s							
MCMT	**McKenzie Canyo**	**53.30**	**302**	*e*P		**P**	**13 26 21.8**	**-1.9**
	comp=Z,3.8nm,1.3s							
H15A	**Lima**	**53.43**	**301**	⇓P		**P**	**13 26 25.5**	**+0.9**
	baz=53,SNR=5.9							
G13A	**Cobalt**	**53.44**	**303**	⇑P		**P**	**13 26 25.2**	**+0.7**
	baz=53,SNR=12							
I18A	**Diamond G Ranc**	**53.47**	**299**	⇓P		**P**	**13 26 26.2**	**+1.3**
	baz=53							
IMW	**Indian Meadow**	**53.61**	**300**	*e*P		**P**	**13 26 24.9**	**-1.1**
	comp=Z,6.4nm,1.2s							
IMW	**Indian Meadow**	**53.61**	**300**	*e*P		**P**	**13 26 24.9**	**-1.1**
	comp=Z,6.4nm,1.2s							
H14A	**Leadore**	**53.64**	**302**	⇓P		**P**	**13 26 27.4**	**+1.3**
	baz=53							
J19A	**Crowheart**	**53.65**	**298**	⇓P		**P**	**13 26 27.3**	**+1.1**
	baz=54,SNR=6.8							
G12A	**Big Creek, Yel**	**53.70**	**304**	⇑P		**P**	**13 26 27.4**	**+0.8**
	baz=54							
H13A	**Challis**	**53.93**	**303**	⇑P		**P**	**13 26 29.1**	**+0.9**
	baz=54,SNR=8.9							
J18A	**Kendall Valley**	**53.98**	**299**	⇓P		**P**	**13 26 29.4**	**+0.7**
	baz=54							
K19A	**Absolon Red Bu**	**53.99**	**297**	⇓P		**P**	**13 26 29.1**	**+0.4**
	baz=54							
K20A	**Yellowstone Ra**	**54.00**	**297**	⇓P		**P**	**13 26 29.4**	**+0.7**
	baz=54							
H12A	**Diamond D Ranc**	**54.11**	**303**	⇓P		**P**	**13 26 30.2**	**+0.7**
	baz=54,SNR=8.4							
PDAR	**Pinedale Array**	**54.25**	**298**	P		**P**	**13 26 31.3**	**+0.6**
PDAR	**Pinedale Array**	**54.25**	**298**	P		**P**	**13 26 31.3**	**+0.6**
	comp=Z,2.2nm,1.1s,baz=46,slow=4.3,SNR=9.3							
PDAR				LR		LR	13 49 43.8	
	comp=Z,421nm,18.3s,baz=21,slow=36							
PDAR	**Pinedale Array**	**54.25**	**298**	P		**P**	**13 26 31.3**	**+0.6**
BW06	**Boulder Array**	**54.26**	**298**	⇓P		**P**	**13 26 31.0**	**+0.4**
	baz=54							
I14A	**Mackay**	**54.30**	**302**	⇓P		**P**	**13 26 31.7**	**+0.8**
	baz=54							
L21A	**Rawlins**	**54.35**	**296**	⇓P		**P**	**13 26 31.8**	**+0.4**
	baz=54							
I13A	**Wildhorse Cree**	**54.49**	**302**	⇓P		**P**	**13 26 33.3**	**+0.9**
	baz=54,SNR=5.2							
BMO	**Blue Mountains**	**54.50**	**305**	*e*P		**P**	**13 26 31.1**	**-1.1**
	comp=Z,5.7nm,1.2s							
BMO	**Blue Mountains**	**54.50**	**305**	*e*P		**P**	**13 26 31.1**	**-1.1**
	comp=Z,5.7nm,1.2s							
J15A	**Blackfoot**	**54.50**	**301**	⇓P		**P**	**13 26 33.3**	**+1.0**
	baz=54							
K18A	**Toltan Ranch,**	**54.51**	**298**	⇓P		**P**	**13 26 33.7**	**+1.1**
	baz=54							
L20A	**Wamsutter**	**54.60**	**297**	⇑P		**P**	**13 26 34.2**	**+1.0**
	baz=54							
M21A	**Separation Pea**	**54.68**	**296**	⇑P		**P**	**13 26 34.0**	**+0.2**
	baz=54							
L19A	**Farson**	**54.81**	**297**	⇑P		**P**	**13 26 35.4**	**+0.7**
	baz=55							
I12A	**Atlanta**	**54.88**	**303**	⇓P		**P**	**13 26 35.7**	**+0.6**
	baz=55							
HLID	**Hailey**	**54.90**	**302**	*e*P		**P**	**13 26 34.0**	**-1.3**
	comp=Z,10nm,1.4s							
HLID	**Hailey**	**54.90**	**302**	⇓P		**P**	**13 26 36.0**	**+0.7**
	baz=55,SNR=6.2							
HLID	**Hailey**	**54.90**	**302**	*e*P		**P**	**13 26 34.0**	**-1.3**
	comp=Z,10nm,1.4s							
N23A	**Red Feather La**	**54.91**	**294**	⇓P		**P**	**13 26 36.7**	**+1.3**
	baz=55,SNR=7.9							
J13A	**Cove Ranch, Pi**	**54.99**	**302**	⇑P		**P**	**13 26 37.0**	**+1.1**
	baz=55							
N22A	**Wattenberg Ran**	**55.14**	**294**	⇓P		**P**	**13 26 38.4**	**+1.2**
	baz=55							
MFID	**Camas Ranch**	**55.43**	**303**	⇓P		**P**	**13 26 39.6**	**+0.6**
	baz=55							
L16A	**Fish Haven**	**55.49**	**299**	⇓P		**P**	**13 26 39.9**	**+0.4**
	baz=55							
O23A	**Lake Granby, G**	**55.53**	**294**	⇑P		**P**	**13 26 40.6**	**+0.6**
	baz=55							
N20A	**Spence Gulch,**	**55.65**	**296**	⇓P		**P**	**13 26 41.4**	**+0.6**
	baz=56,SNR=7.0							
O22A	**Kremmling**	**55.76**	**294**	⇓P		**P**	**13 26 41.9**	**+0.2**
	baz=56,SNR=6.8							
M17A	**Scullys Gap (B**	**55.77**	**298**	⇑P		**P**	**13 26 42.4**	**+0.8**
	baz=56							
L15A	**Malad City**	**55.77**	**300**	⇓P		**P**	**13 26 42.6**	**+1.1**
	baz=56							
ISCO	**Idaho Springs**	**55.81**	**293**	*e*P		**P**	**13 26 43.9**	**+1.8**
ISCO				pmax		pmax		
	comp=Z,7.0nm,1.4s							
ISCO	**Idaho Springs**	**55.81**	**293**	*e*P		**P**	**13 26 43.9**	**+1.8**
	comp=Z,6.5nm,1.4s							
ISCO	**Idaho Springs**	**55.81**	**293**	⇑P		**P**	**13 26 42.9**	**+0.9**
	baz=56							
ISCO	**Idaho Springs**	**55.81**	**293**	*e*P		**P**	**13 26 43.9**	**+1.8**
	comp=Z,7.0nm,1.4s							
HWUT	**Hardware Ranch**	**55.90**	**299**	*e*P		**P**	**13 26 41.6**	**-0.9**
	comp=Z,6.4nm,1.3s							
HWUT	**Hardware Ranch**	**55.90**	**299**	*e*P		**P**	**13 26 41.6**	**-0.9**
	comp=Z,6.4nm,1.3s							
P23A	**Jefferson**	**56.27**	**293**	⇑P		**P**	**13 26 46.4**	**+1.0**
	baz=56							
O20A	**White River Ci**	**56.29**	**296**	⇑P		**P**	**13 26 46.6**	**+1.3**
	baz=56,SNR=6.8							
R27A	**Eads**	**56.34**	**290**	⇓P		**P**	**13 26 46.8**	**+1.1**
	baz=56							
P22A	**Eagle**	**56.34**	**294**	⇓P		**P**	**13 26 47.0**	**+1.3**
	baz=56							
O19A	**Miners Draw (B**	**56.40**	**296**	⇓P		**P**	**13 26 47.2**	**+1.2**
	baz=56							
R26A	**Arlington**	**56.53**	**291**	⇑P		**P**	**13 26 47.7**	**+0.7**
	baz=56							
SMCO	**Snowmass**	**56.79**	**294**	*e*P		**P**	**13 26 46.4**	**-2.8**
	comp=Z,6.1nm,0.3s							
SMCO	**Snowmass**	**56.79**	**294**	*e*P		**P**	**13 26 46.4**	**-2.8**
	comp=Z,6.1nm,0.3s							
P19A	**Cripple Cowboy**	**56.97**	**296**	⇑P		**P**	**13 26 51.0**	**+0.8**
	baz=57							
S26A	**Kim**	**57.16**	**290**	⇑P		**P**	**13 26 52.3**	**+0.9**
	baz=57							
P18A	**Preston Nutter**	**57.35**	**297**	⇓P		**P**	**13 26 53.7**	**+0.7**
	baz=57							
R23A	**Moffat**	**57.36**	**293**	⇑P		**P**	**13 26 53.7**	**+0.6**
	baz=57							
S25A	**Robets Cordova**	**57.42**	**291**	⇓P		**P**	**13 26 54.5**	**+1.1**
	baz=57,SNR=7.5							
T27A	**Campo**	**57.45**	**289**	⇓P		**P**	**13 26 55.1**	**+1.6**
	baz=57							
DUG	**Dugway**	**57.56**	**299**	*e*P		**P**	**13 26 53.7**	**-0.6**
DUG				pmax		pmax		
	comp=Z,9.0nm,1.1s							
DUG	**Dugway**	**57.56**	**299**	*e*P		**P**	**13 26 53.7**	**-0.6**
	comp=Z,9.0nm,1.1s							
DUG				*e*pP		pP	13 27 07.8	+10
DUG	**Dugway**	**57.56**	**299**	⇓P		**P**	**13 26 55.6**	**+1.3**
	baz=57							
DUG	**Dugway**	**57.56**	**299**	*e*P		**P**	**13 26 53.7**	**-0.6**
	comp=Z,9.0nm,1.1s							
R22A	**Saguache, Gunn**	**57.60**	**293**	⇑P		**P**	**13 26 56.7**	**+1.9**
	baz=57							
SDCO	**Great Sand Dun**	**57.67**	**292**	*e*P		**P**	**13 26 56.8**	**+1.6**
	comp=Z,46nm,3.0s							
S24A	**Houchin Ranch,**	**57.68**	**292**	⇑P		**P**	**13 26 56.4**	**+1.1**
	baz=58							
R21A	**Cimarron**	**57.71**	**294**	⇓P		**P**	**13 26 56.6**	**+1.1**
	baz=58,SNR=5.3							
SRU	**San Rafael**	**57.91**	**297**	*e*P		**P**	**13 26 55.0**	**-1.8**
SRU	**San Rafael**	**57.91**	**297**	*e*P		**P**	**13 26 55.0**	**-1.8**
SRU				*e*pP		pP	13 27 11.1	+11
SRU	**San Rafael**	**57.91**	**297**	⇓P		**P**	**13 26 58.1**	**+1.3**
	baz=58							
SRU	**San Rafael**	**57.91**	**297**	*e*P		**P**	**13 26 55.0**	**-1.8**
TOA0	**Torodi Ar. Sit**	**57.98**	**171**	*e*P		**P**	**13 26 56.6**	**-0.7**
TOA0	**Torodi Ar. Sit**	**57.98**	**171**	*e*P		**P**	**13 26 56.6**	**-0.7**
TORD	**Torodi Ar. Bea**	**57.98**	**171**	P		**P**	**13 26 57.2**	**0.0**
TORD	**Torodi Ar. Bea**	**57.98**	**171**	P		**P**	**13 26 57.2**	**0.0**
	comp=Z,2.7nm,0.8s,baz=348,slow=6.8,SNR=17							
TORD				LR		LR	13 52 12.9	
	comp=Z,188nm,19.4s,baz=340,slow=36							
TORD	**Torodi Ar. Bea**	**57.98**	**171**	P		**P**	**13 26 57.2**	**0.0**
S22A	**4UR Ranch, Cre**	**58.07**	**293**	⇓P		**P**	**13 26 59.0**	**+1.0**
	baz=58							
R20A	**Redvale**	**58.13**	**295**	⇓P		**P**	**13 27 00.2**	**+1.9**
	baz=58							
GTA	**Gaotai**	**58.26**	**61**	*e*P		**P**	**13 27 01.0**	**+1.8**
GTA				pP		**pP**	**13 27 05.3**	**+2.9**
GTA				sP		**sP**	**13 27 08.5**	**+4.9**
GTA				S		**S**	**13 35 01.3**	**+0.4**
GTA				sS		**sS**	**13 35 09.8**	**+3.6**
GTA				SS		**SS**	**13 38 55.5**	**+3.6**
GTA				pmax		pmax		
	comp=Z,5.0nm,1.4s							
GTA				pmax		pmax		
	comp=Z,91nm,6.4s							
GTA				LR		LR		
	comp=N,160nm,14.7s							
GTA				LR		LR		
	comp=E,140nm,15.4s							
GTA				LR		LR		
	comp=Z,140nm,17.3s							
WMOK	**Wichita Mounta**	**58.35**	**285**	*e*P		**P**	**13 26 57.4**	**-2.3**
WMOK				pmax		pmax		
	comp=Z,5.0nm,1.0s							
WMOK	**Wichita Mounta**	**58.35**	**285**	*e*P		**P**	**13 26 57.4**	**-2.3**
	comp=Z,4.6nm,1.0s							
WMOK	**Wichita Mounta**	**58.35**	**285**	*e*P		**P**	**13 26 57.4**	**-2.3**
	comp=Z,5.0nm,1.0s							
U26A	**Atchley Ranch,**	**58.38**	**290**	⇓P		**P**	**13 27 01.6**	**+1.5**
	baz=58							
S20A	**Disappointment**	**58.45**	**295**	⇓P		**P**	**13 27 01.7**	**+1.0**
	baz=58							
U25A	**Circle Dot Ran**	**58.58**	**291**	⇑P		**P**	**13 27 02.3**	**+0.8**
	baz=58							
T22A	**Edith**	**58.77**	**293**	⇓P		**P**	**13 27 03.4**	**+0.5**
	baz=59							
YBH	**Yreka Blue Hor**	**58.83**	**308**	LR		LR	13 52 42.4	
	comp=Z,307nm,19.6s,baz=3.4,slow=36							
MVCO	**Mesa Verde**	**59.07**	**294**	*e*P		**P**	**13 27 04.7**	**-0.2**
MVCO	**Mesa Verde**	**59.07**	**294**	⇓P		**P**	**13 27 06.1**	**+1.2**
	baz=59,SNR=8.6							
MVCO	**Mesa Verde**	**59.07**	**294**	*e*P		**P**	**13 27 04.7**	**-0.2**
S18A	**Hurst Farm, Bl**	**59.07**	**296**	⇓P		**P**	**13 27 05.6**	**+0.7**
	baz=59							
V25A	**Rancho No Teng**	**59.16**	**290**	⇑P		**P**	**13 27 06.2**	**+0.6**
	baz=59							
Y32A	**R-V Farms, Ver**	**59.23**	**285**	⇑P		**P**	**13 27 07.3**	**+1.5**
	baz=59							
W27A	**Bowe Ranch, En**	**59.39**	**289**	⇓P		**P**	**13 27 08.1**	**+1.0**
	baz=59							
U21A	**Nageezi**	**59.54**	**293**	⇓P		**P**	**13 27 08.6**	**+0.4**
	baz=59							
R11A	**Troy Canyon, C**	**60.07**	**301**	⇑P		**P**	**13 27 12.7**	**+1.0**
	baz=60,SNR=6.8							
HHC	**Hu-ho-hao-te**	**60.10**	**51**	*e*P		**P**	**13 27 10.3**	**-1.6**
HHC				PcP		**PcP**	**13 27 56.5**	**-1.1**
HHC				ScP		**ScP**	**13 31 55.8**	**-2.4**
HHC				PcS		**PcS**	**13 31 57.3**	**-2.6**
HHC				S		S	13 35 19.0	-5.7
HHC				ScS		SKKSac	13 36 56.5	-5.4
HHC				SS		**SS**	**13 39 16.0**	**-4.6**
HHC				pmax		pmax		
	comp=Z,34nm,0.7s							
HHC				pmax		pmax		
	comp=Z,320nm,6.7s							
HHC				LR		LR		
	comp=N,320nm,16.5s							
HHC				LR		LR		
	comp=E,360nm,16.2s							
HHC				LR		LR		
	comp=Z,370nm,16.8s							
CCUT	**Cedar City**	**60.18**	**299**	*e*P		**P**	**13 27 14.8**	**+2.2**
YSS	**Yuzh-Sakhalins**	**60.34**	**24**	*e*P		**P**	**13 27 14.4**	**+1.2**
YSS	**Yuzh-Sakhalins**	**60.34**	**24**	*e*P		**P**	**13 27 14.4**	**+1.2**
MDJ	**Mudanjiang**	**60.51**	**35**	P		P	13 27 11.8	-2.6
MDJ				pP		pP	13 27 14.8	-2.8
MDJ				S		**S**	**13 35 25.8**	**-3.7**
MDJ				pmax		pmax		
	comp=Z,13nm,3.4s							
MDJ				pmax		pmax		
	comp=Z,120nm,3.8s							
MDJ				LR		LR		
	comp=N,37nm,28.6s							
MDJ				LR		LR		
	comp=E,41nm,26.8s							
MDJ				LR		LR		
	comp=Z,53nm,22.1s							
ANMO	**Albuquerque**	**60.55**	**292**	LR		LR	13 52 34.9	
	comp=Z,175nm,21.4s,baz=156,slow=35							
NVAR	**Mina Array Bea**	**60.75**	**303**	P		**P**	**13 27 17.6**	**+1.1**
NVAR	**Mina Array Bea**	**60.75**	**303**	P		**P**	**13 27 17.6**	**+1.1**
	comp=Z,1.2nm,1.0s,baz=27,slow=1.7,SNR=6.2							
NVAR	**Mina Array Bea**	**60.75**	**303**	P		**P**	**13 27 17.6**	**+1.1**
OHCM	**Honcut**	**60.76**	**306**	*e*P		**P**	**13 27 17.2**	**+1.0**
OHCM	**Honcut**	**60.76**	**306**	*e*P		**P**	**13 27 17.2**	**+1.0**
Z28A	**Tucker Farm, M**	**60.82**	**287**	⇑P		**P**	**13 27 18.2**	**+1.3**
	baz=61							
U15A	**North Rim**	**60.91**	**297**	⇑P		**P**	**13 27 18.6**	**+0.9**
	baz=61							
Z27A	**Tatum**	**61.06**	**288**	⇑P		**P**	**13 27 19.7**	**+1.2**
	baz=61							
Y24A	**Capitan**	**61.18**	**290**	⇓P		**P**	**13 27 20.4**	**+1.0**
	baz=61,SNR=5.5							
232A	**Coleman**	**61.25**	**284**	⇑P		**P**	**13 27 21.0**	**+1.2**
	baz=61							
BNM	**Barren Site**	**61.34**	**292**	*e*P		**P**	**13 27 19.4**	**-1.1**
	comp=Z,0.8nm,0.6s							
BNM	**Barren Site**	**61.34**	**292**	*e*P		**P**	**13 27 19.4**	**-1.1**
	comp=Z,0.8nm,0.6s							
Y23A	**Lovelace Mesa,**	**61.36**	**291**	⇓P		**P**	**13 27 21.9**	**+1.3**
	baz=61							
X21A	**Alamocita Cree**	**61.41**	**293**	⇑P		**P**	**13 27 21.9**	**+0.8**
	baz=61							
X20A	**Quemado**	**61.54**	**293**	⇑P		**P**	**13 27 22.3**	**+0.4**
	baz=61							
Z25A	**Roswell**	**61.56**	**289**	⇑P		**P**	**13 27 22.8**	**+0.9**
	baz=61							
Y22A	**Socorro**	**61.64**	**292**	⇓P		**P**	**13 27 23.7**	**+1.2**
	baz=62							
332A	**Millersview**	**61.75**	**284**	⇑P		**P**	**13 27 24.2**	**+1.2**
	baz=62							
Y21A	**Point of Rocks**	**61.79**	**292**	⇑P		**P**	**13 27 24.3**	**+0.8**
	baz=62							
BJI	**Beijing**	**62.01**	**47**	P		**P**	**13 27 22.3**	**-2.3**
BJI				PP		**PP**	**13 29 37.8**	**-2.7**
BJI				S		S	13 35 43.3	-5.3
BJI				SS		**SS**	**13 39 49.5**	**-0.7**
BJI				pmax		pmax		
	comp=Z,19nm,0.4s							
BJI				LR		LR		
	comp=Z,90nm,27.7s							
331A	**San Angelo**	**62.04**	**285**	⇑P		**P**	**13 27 26.4**	**+1.4**
	baz=62							
Z23A	**Rita Site, Whi**	**62.04**	**291**	⇓P		**P**	**13 27 26.5**	**+1.4**
	baz=62							
Z22A	**Elephant Butte**	**62.27**	**291**	⇓P		**P**	**13 27 27.6**	**+0.8**
	baz=62,SNR=6.0							
124A	**Stringfield Ra**	**62.32**	**290**	⇑P		**P**	**13 27 29.1**	**+2.0**
	baz=62							
Z21A	**St. Cloud Mine**	**62.44**	**292**	⇑P		**P**	**13 27 28.6**	**+0.7**
	baz=62,SNR=5.5							
226B	**Tecolote Peak,**	**62.50**	**288**	⇓P		**P**	**13 27 29.2**	**+1.0**
	baz=62,SNR=6.1							
LZH	**Lanzhou**	**62.51**	**59**	*e*P		**P**	**13 27 30.0**	**+1.7**
LZH				pP		**pP**	**13 27 35.5**	**+4.0**
LZH				sP		sP	13 27 38.0	+5.3
LZH				pmax		pmax		
	comp=Z,16nm,1.4s							
X16A	**Lo Mia Camp, P**	**62.53**	**296**	⇓P		**P**	**13 27 29.5**	**+1.0**
	baz=62							
225A	**Deer Hill, Car**	**62.67**	**289**	⇓P		**P**	**13 27 30.8**	**+1.3**
	baz=62							
431A	**Sonora**	**62.67**	**285**	⇓P		**P**	**13 27 30.7**	**+1.4**
	baz=63							
MPMC	**Manual Prospec**	**62.74**	**302**	⇑P		**P**	**13 27 31.1**	**+1.2**
	baz=62							
430A	**Baggett Ranch,**	**62.78**	**285**	⇑P		**P**	**13 27 31.0**	**+1.0**
	baz=63							
Z20A	**Nine Sixteen R**	**62.90**	**293**	⇓P		**P**	**13 27 31.9**	**+1.0**
	baz=63							
531A	**Rocksprings**	**63.13**	**284**	⇓P		**P**	**13 27 33.5**	**+1.2**
	baz=63							
326A	**Caldwell Ranch**	**63.15**	**288**	⇓P		**P**	**13 27 33.9**	**+1.4**
	baz=63,SNR=5.2							
121A	**Cookes Peak, D**	**63.19**	**292**	⇑P		**P**	**13 27 33.7**	**+0.8**
	baz=63							
ISA	**Isabella**	**63.39**	**302**	⇑P		**P**	**13 27 35.2**	**+1.2**
	baz=63							
530A	**J-C Ranch, Com**	**63.40**	**285**	⇑P		**P**	**13 27 35.5**	**+1.4**
	baz=63							
427A	**Hayter Ranch,**	**63.40**	**287**	⇑P		**P**	**13 27 35.4**	**+1.2**
	baz=63							
GMRC	**Granite Mounta**	**63.42**	**300**	⇓P		**P**	**13 27 35.5**	**+1.1**
	baz=63							
529A	**Stev Forest Ra**	**63.70**	**286**	⇑P		**P**	**13 27 37.2**	**+1.1**
	baz=64							
426A	**McDonald Obser**	**63.76**	**288**	⇑P		**P**	**13 27 37.9**	**+1.2**
	baz=64,SNR=7.8							
425A	**Indio Mountain**	**63.95**	**289**	⇑P		**P**	**13 27 38.9**	**+1.0**
	baz=64							
220A	**Playas Peak, P**	**64.00**	**292**	⇓P		**P**	**13 27 39.5**	**+1.2**
	baz=64							
527A	**Woodward Ranch**	**64.12**	**287**	⇑P		**P**	**13 27 40.0**	**+1.0**
	baz=64							
BC3	**Big Chuckawall**	**64.42**	**299**	⇓P		**P**	**13 27 41.5**	**+0.7**
	baz=64							
628A	**Black Gap, Mar**	**64.50**	**286**	⇓P		**P**	**13 27 42.5**	**+1.1**
	baz=64							
320A	**Kipp Ranch, An**	**64.53**	**292**	⇑P		**P**	**13 27 43.6**	**+1.9**
	baz=64							
627A	**Terlingua Ranc**	**64.69**	**287**	⇑P		**P**	**13 27 43.7**	**+1.0**
	baz=65							
319A	**Douglas**	**64.72**	**293**	⇑P		**P**	**13 27 43.9**	**+1.0**
	baz=65							
PFO	**Pinyon Flat Ob**	**64.75**	**300**	LR		LR	13 58 10.8	
	comp=Z,165nm,18.5s,baz=129,slow=38							
626A	**Big Bend Ranch**	**64.83**	**287**	⇓P		**P**	**13 27 44.9**	**+1.3**
	baz=65							
TXAR	**Lajitas Array**	**64.89**	**287**	P		**P**	**13 27 44.5**	**+0.5**
TXAR	**Lajitas Array**	**64.89**	**287**	P		**P**	**13 27 44.5**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=24,slow=6.8,SNR=6.2							
TXAR				LR		LR	13 55 58.4	
	comp=Z,328nm,18.7s,baz=10.0,slow=36							
TXAR	**Lajitas Array**	**64.89**	**287**	P		**P**	**13 27 44.5**	**+0.5**
MJAR	**Matsushiro Arr**	**69.86**	**30**	P		**P**	**13 28 15.9**	**+0.6**
MJAR	**Matsushiro Arr**	**69.86**	**30**	P		**P**	**13 28 15.9**	**+0.6**
	comp=Z,2.3nm,1.1s,baz=321,slow=11,SNR=4.5							
MJAR	**Matsushiro Arr**	**69.86**	**30**	P		**P**	**13 28 15.9**	**+0.6**
NJ2	**Nanjing**	**70.26**	**47**	*e*P		**P**	**13 28 15.3**	**-2.4**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
LPIG	**La Paz**	**71.84**	**291**	LR		LR	13 59 41.6	
	comp=Z,12nm,21.8s,baz=29,slow=36							
GYA	**Guiyang**	**72.36**	**60**	P		**P**	**13 28 30.0**	**-0.7**
GYA				PP		**PP**	**13 31 12.5**	**+1.5**
GYA				S		**S**	**13 37 50.8**	**-3.1**
GYA				SKS		**SKSac**	**13 38 31.0**	**-4.2**
GYA				SS		**SS**	**13 42 29.5**	**-1.7**
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
GYA				LR		LR		
	comp=N,360nm,19.6s							
GYA				LR		LR		
	comp=E,210nm,20.2s							
GYA				LR		LR		
	comp=Z,440nm,19.9s							
CMAR	**Chiang Mai Arr**	**77.61**	**70**	P		**P**	**13 29 01.7**	**+0.8**
CMAR	**Chiang Mai Arr**	**77.61**	**70**	P		**P**	**13 29 01.7**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=311,slow=7.1,SNR=3.1							
CMAR	**Chiang Mai Arr**	**77.61**	**70**	P		**P**	**13 29 01.7**	**+0.8**
QIZ	**Qiongzhong**	**80.30**	**59**	P		**P**	**13 29 15.5**	**-0.2**
QIZ				S		**S**	**13 39 19.0**	**-1.9**
QIZ				pmax		pmax		
	comp=Z,33nm,2.4s							
BDFB	**Brasilia**	**90.94**	**220**	LR		LR	14 01 49.5	
	comp=Z,97nm,19.3s,baz=15,slow=30							
LPAZ	**La Paz**	**96.53**	**238**	LR		LR	14 11 46.6	
	comp=Z,44nm,19.8s,baz=294,slow=34							
ASAR	**Alice Springs**	**127.51**	**48**	PKP		**PKPdf**	**13 36 08.5**	**-0.8**
ASAR	**Alice Springs**	**127.51**	**48**	PKP		**PKPdf**	**13 36 08.5**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=5.7,slow=1.8,SNR=4.3							
ASAR	**Alice Springs**	**127.51**	**48**	PKIKP		**PKPdf**	**13 36 08.5**	**-0.8**

*NEIC **25** 13:17:06.0,36.52S×72.96W,h42km,MG3.5(GUC),After GUC.*
NEIC Felt [II] at Concepcion, San Pedro, Talcahuano and Tome.
GUC 25 13:17:06.5±0.9,36.52S×72.96W,h42km±4km,ML3.5, 5C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
COCH	**Cobquecura**	**0.41**	**20**	⇑	*i*P		Pn	13 17 15.7	-0.5
COCH					*i* S		Sn	13 17 23.7	+0.8
COCH	**Cobquecura**	**0.41**	**20**	⇑	*i*P		Pn	13 17 15.7	-0.5
COCH					*i* S		Sn	13 17 23.7	+0.8
COCH					AML		AML	13 17 24.6	
	comp=N,5μm,0.2s								
CCHI	**Chillan**	**0.72**	**97**	⇓	*i*P		Pn	13 17 20.7	+0.5
CCHI					*i* S		Sn	13 17 30.6	+0.5
CCHI	**Chillan**	**0.72**	**97**	⇓	*i*P		Pn	13 17 20.7	+0.5
CCHI					*i* S		Sn	13 17 30.6	+0.5
CCHI					AML		AML	13 17 46.5	
	comp=E,1μm,0.7s								
TALC	**Talca**

DVHZ	**Dannevirke**	**2.48**	**189**	PN	Pn	13 20 23.3 -1.7
POWZ	**Post Office Ro**	**2.63**	**195**	PN	Pn	13 20 25.2 -1.6
BFZ	**Birch Farm**	**2.84**	**186**	PN	Pn	13 20 27.7 -1.9
MRZ	**Mangatainoka R**	**2.93**	**196**	PN	Pn	13 20 28.5 -2.2
TIWZ	**Tintock**	**2.98**	**191**	PN	Pn	13 20 29.4 -2.0
HOWZ	**Holdsworth Sta**	**3.17**	**196**	PN	Pn	13 20 31.3 -2.5
MTW	**Mount Morrison**	**3.42**	**195**	PN	Pn	13 20 34.0 -2.9
CAW	**Cannon Point**	**3.48**	**200**	PN	Pn	13 20 34.9 -2.8
TCW	**Tory Channel**	**3.83**	**208**	PN	Pn	13 20 39.0 -3.2
TUWZ	**Tuamarina**	**4.14**	**210**	PN	Pn	13 20 42.9 -3.5
NNZ	**Nelson**	**4.21**	**216**	PN	Pn	13 20 44.3 -3.0
THZ	**Tophouse**	**4.86**	**215**	PN	Pn	13 20 52.5 -3.5

IDC 25 13:28:36.3±1.6, 2°55N×128°44E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/23, mbtmp3.7/5, Error ellipse: s-maj=137.4km s-min=19.0km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.09**	**166**	P	P	13 33 44.5	+0.6
	0.6nm,0.4s,baz=344,slow=10,SNR=23						
ASAR	**Alice Springs**	**26.60**	**169**	P	P	13 34 16.2	-0.4
	0.2nm,0.5s,baz=13,slow=12,SNR=3.5						
STKA	**Stephens Creek**	**36.45**	**161**	P	P	13 35 42.2	-0.8
	0.8nm,0.3s,baz=338,slow=11,SNR=3.8						
MKAR	**Makanchi Array**	**59.49**	**325**	P	P	13 38 42.0	+0.6
	0.4nm,0.4s,baz=116,slow=8.4,SNR=9.3						
KURBB	**Kurchatov Arra**	**63.65**	**327**	P	P	13 39 08.8	-0.4
	0.6nm,0.4s,baz=126,slow=5.8,SNR=8.1						

*IDC **25** 13:31:13.4±4.1, 37°.28N×72°.19E, h182km±35km, mb3.2/7, mb1 3.3/12, mb1mx3.1/31, mbtmp3.2/12, Error ellipse: s-maj=36.8km s-min=20.3km az=167.0*

ISC 25 13:31:10.3±1.4, 37°.3N±0°.1×72°.1E±0°.1, h142km, n20, σ1§81/22, mb3.6/7, 1C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.02**	**14**	P	**Pn**	**13 32 26.8**	**+2.6**
	SNR=96						
UCH	**Uchtor**	**5.31**	**20**	P	**Sn**	**13 33 27.4**	**-1.2**
	SNR=22						
KZA	**Kyzart**	**5.40**	**26**	P	**Pn**	**13 32 31.4**	**+2.1**
	SNR=6.5						
EKS2	**Erkin-Say**	**5.55**	**13**	P	**Pn**	**13 32 33.8**	**+2.8**
	SNR=8.1						
AAK	**Ala-Archa**	**5.68**	**19**	P	**Pn**	**13 32 35.6**	**+2.8**
	SNR=6.8						
AAK	**Ala-Archa**	**5.68**	**19**	P	**Pn**	**13 32 35.5**	**+2.7**
	3.1nm,0.3s,baz=176,slow=5.3,SNR=46						
AAK				S	**Sn**	**13 33 36.7**	**-0.4**
	3.4nm,0.3s,baz=317,slow=21,SNR=34						
KK31	**Karatay Array**	**5.95**	**349**	⇑Pn	**Pn**	**13 32 38.9**	**+2.7**
	5.8nm,0.4s,baz=170,slow=23,SNR=41						
KK31				⇓Sn	**Sn**	**13 33 40.8**	**-2.5**
	4.5nm,0.3s,baz=170,slow=23,SNR=12						
CHMS	**Chumysh**	**6.09**	**19**	P	**Pn**	**13 32 40.4**	**+2.3**
	SNR=5.0						
MKAR	**Makanchi Array**	**12.18**	**35**	P	**Pn**	**13 33 59.6**	**+0.6**
	0.1nm,0.3s,baz=214,slow=10,SNR=4.5						
KURBB	**Kurchatov Arra**	**14.14**	**17**	P	**P**	**13 34 26.7**	**-0.6**
	0.1nm,0.3s,baz=204,slow=11,SNR=26						
AB31	**Akbulak array**	**14.86**	**328**	Pn	**P**	**13 34 35.1**	**-0.1**
	0.7nm,0.4s,baz=260,slow=44,SNR=19						
AB31				⇓Sn	Sn	13 37 06.8	-11
	0.4nm,0.6s,baz=155,slow=23,SNR=5.9						
BVAR	**Borovoye Array**	**15.80**	**356**	P	**Pn**	**13 34 44.5**	**-0.3**
	0.2nm,0.3s,baz=167,slow=13,SNR=11						
ZALV	**Zalesovo Beam**	**18.87**	**24**	P	**P**	**13 35 18.6**	**-0.8**
	1.6nm,0.3s,baz=220,slow=10.0,SNR=48						
SONM	**Songino Array**	**27.21**	**56**	P	**P**	**13 36 39.7**	**-1.1**
	0.2nm,0.4s,baz=262,slow=9.9,SNR=2.7						
BRTR	**Keskin Array B**	**30.01**	**287**	P	**P**	**13 37 06.9**	**+1.2**
	0.4nm,0.5s,baz=96,slow=12,SNR=2.9						
FINES	**FINESS Array B**	**37.33**	**325**	P	**P**	**13 38 08.1**	**-0.3**
	1.7nm,1.1s,baz=131,slow=8.6,SNR=3.9						
ARCES	**ARCESS Array B**	**40.77**	**337**	P	**P**	**13 38 36.6**	**-0.3**
	1.4nm,0.9s,baz=108,slow=8.0,SNR=4.0						
HFS	**Hagfors**	**42.99**	**321**	P	**P**	**13 38 54.8**	**-0.3**
	1.4nm,0.6s,baz=96,slow=12,SNR=8.0						
NOA	**NORSAR Array B**	**44.28**	**323**	P	**P**	**13 39 04.3**	**-1.1**
	0.4nm,0.5s,baz=94,slow=7.8,SNR=2.8						
TORD	**Torodi Ar. Bea**	**66.58**	**269**	P	**P**	**13 41 44.6**	**-0.9**
	0.9nm,0.4s,baz=46,slow=5.7,SNR=34						

IDC 25 13:31:11.8±1.7, 30°.30S×177°.64W, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.8/19, mbtmp4.0/4, Error ellipse: s-maj=37.8km s-min=20.9km az=95.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.07**	**347**	Pn	Pn	13 31 35.1	+1.0
	104nm,0.3s,baz=105,slow=20,SNR=2.3						
RAO				Sn	Sn	13 31 49.1	-0.6
	426nm,0.3s,baz=81,slow=20,SNR=7.5						
URZ	**Urewera**	**9.04**	**207**	Pn	Pn	13 33 18.9	-4.7
	0.2nm,0.3s,baz=354,slow=19,SNR=4.0						
URZ				Sn	Sn	13 34 58.0	-8.1
	0.5nm,0.3s,baz=198,slow=19,SNR=5.6						
CTA	**Charters Tower**	**34.09**	**279**	P	P	13 37 59.7	+1.5
	1.6nm,0.5s,baz=73,slow=6.4,SNR=4.5						
STKA	**Stephens Creek**	**34.80**	**257**	P	P	13 38 05.2	+0.9
	2.1nm,0.7s,baz=107,slow=14,SNR=5.7						
ASAR	**Alice Springs**	**43.42**	**267**	P	P	13 39 15.7	-0.9
	0.6nm,0.5s,baz=102,slow=7.2,SNR=12						
WRA	**Warramunga Arr**	**44.40**	**272**	P	P	13 39 23.1	-1.3
	1.1nm,0.5s,baz=110,slow=8.1,SNR=25						
FINES	**FINESS Array B**	**145.16**	**340**	PKPbc	PKPbc	13 50 48.8	-1.3
	0.9nm,0.5s,baz=55,slow=3.0,SNR=14						
TORD	**Torodi Ar. Bea**	**162.92**	**178**	PKPab	PKPab	13 52 05.4	-0.2
	0.2nm,0.6s,baz=198,slow=5.0,SNR=2.6						

*NIED **25** 13:54:00, 40°.20N×142°.40E, h47km, Mw4.9 Best double couple: M○2.27000×10^16 NP1:φs27.00000°,δ81.00000°, λ99.00000°. NP2:φs163.00000°,δ13.00000°,λ46.00000°.*

*DJA **25** 13:54:23.1±1.4, 40°.9×14°.3E±2°.3, h10km, M5.1/6, mB5.3/1, mb5.1/6, Mw(mB)4.7/1*

*BJI **25** 13:54:27.2, 40°.15N×142°.46E, h50km, mB5.0/31, mb5.2/49, Ms4.3/49, Ms7 4.1/47*

*MOS **25** 13:54:28.1±0.8, 40°.31N×142°.27E, h33km, mb5.3/77, Error ellipse: s-maj=7.2km s-min=3.9km az=106.3*

*JMA **25** 13:54:29.7±0.1, 40°.16N×142°.38E, h37km±1km, M5.0 Broadband fault plane solution: P waves. NP1: φs=40.00000°,δ67.00000°,λ105.00000°. NP2: φs185.00000°,δ28.00000°,λ58.00000°. Principal axes: T Plg65.0000°, Azm336.0000°; N Plg14.0000°, Azm213.0000°; P Plg20.0000°, Azm118.0000°;*

JMA Felt III J1.

*ISCJB **25** 13:54:30.1±0.3, 40°.26N±0°.02×142°.23E±0°.02, h51km±2km, mb5.0/185, MS4.2/47 Error ellipse: s-maj=3.6km s-min=2.5km az=153.4*

*NEIC **25** 13:54:31.6±0.2, 40°.24N×142°.25E, mb5.0/82, MW4.8(NIED), Error ellipse: s-maj=6.8km s-min=4.0km az=159.0*

NEIC Felt [III] at Misawa. Also felt at Hachinohe. Recorded [3 JMA] in Aomori and Iwate and [2 JMA] in Akita and Miyagi. Also recorded [2 JMA] in southwestern and [1 JMA] in southern Hokkaido.

*IDC **25** 13:54:31.6±1.6, 40°.16N×142°.33E, h57km±13km, mb4.6/27, mb1 4.7/33, mb1mx4.7/37, mbtmp4.6/33, MS4.0/28, Ms1 4.1/28, ms1mx3.9/39, Error ellipse: s-maj=13.0km s-min=10.1km az=110.0*

*TEH **25** 13:54:32.0, 40°.30N×142°.18E, h51km, ML5.0*

*SZGRF **25** 13:54:34.8, 41°.15N×142°.99E, h45km, mb4.9, MS4.1, Hokkaido, Japan, region*

ISC 25 13:54:30.6±0.3, 40°.19N±0°.03×142°.35E±0°.03, h49km±2km, h49km:pP-P, n848, σ1§10/948, mb5.0/185, MS4.2/48, 209C-127D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**0.45**	**236**	⇓P	**Pn**	**13 54 39.7**	**-1.5**
JTH				S	**Sn**	**13 54 46.8**	**-2.0**
JANG	**Nango**	**0.66**	**286**	⇓P	**Pn**	**13 54 42.9**	**-1.0**
JANG				S	**Sn**	**13 54 52.1**	**-1.4**
MIYJ	**Miyakonagasawa**	**0.73**	**214**	⇑P	**Pn**	**13 54 43.2**	**-1.6**
MIYJ				S	**Sn**	**13 54 53.0**	**-2.1**
JKZ	**Kuzumaki**	**0.81**	**256**	⇓P	**Pn**	**13 54 45.1**	**-0.7**
JKZ				eS	**Sn**	**13 54 56.1**	**-0.8**
JOM	**Ohasama**	**1.08**	**229**	⇓P	**Pn**	**13 54 49.0**	**-0.5**
JOM				S	**Sn**	**13 55 02.9**	**-0.5**
JTM	**Tenmabayashi**	**1.14**	**302**	⇓P	**Pn**	**13 54 50.2**	**-0.1**
JTM				eS	**Sn**	**13 55 05.4**	**+0.6**
OFUJ	**Ofunato**	**1.23**	**206**	⇑P	**Pn**	**13 54 50.5**	**-0.9**
OFUJ				eS	**Sn**	**13 55 06.4**	**-0.4**
JAH	**Hinai**	**1.31**	**270**	⇓P	**Pn**	**13 54 52.7**	**+0.2**
JAH				eS	**Sn**	**13 55 09.7**	**+0.8**
JMK	**Ichinoseki**	**1.51**	**216**	⇓P	**Pn**	**13 54 55.0**	**-0.3**
JMK				S	**Sn**	**13 55 14.0**	**+0.2**
JRG	**Rokugo**	**1.54**	**240**	P	**Pn**	**13 54 55.9**	**+0.2**
JOT	**Ohata**	**1.55**	**321**	⇓P	**Pn**	**13 54 55.6**	**-0.2**
JSI2	**Shiura 2**	**1.71**	**301**	⇓P	**Pn**	**13 54 58.3**	**+0.3**
JYW	**Yuwa**	**1.77**	**249**	⇓P	**Pn**	**13 54 59.4**	**+0.6**
JIW	**Iwasaki**	**1.83**	**283**	⇓P	**Pn**	**13 55 00.4**	**+0.7**
ERM	**Erimo**	**1.92**	**18**	*c iP*	**Pn**	**13 55 00.9**	**0.0**
ERM				pmax	pmax		
	comp=Z,315nm,0.6s						
ERM	**Erimo**	**1.92**	**18**	*e*Pn	**Pn**	**13 55 00.8**	**0.0**
ERM	**Erimo**	**1.92**	**18**	Pn	**Pn**	**13 55 01.7**	**+0.8**
	comp=Z,5μm,0.4s						
JYK	**Kaneyama**	**2.00**	**231**	⇓P	**Pn**	**13 55 01.9**	**0.0**
JBT2	**Biratori 2**	**2.59**	**0**	P	**Pn**	**13 55 11.0**	**+1.0**
JYA	**Atsumi**	**2.59**	**233**	P	**Pn**	**13 55 10.3**	**+0.2**
JAR	**Ashorobuto**	**3.28**	**18**	P	**Pn**	**13 55 18.4**	**-1.1**
JMP	**Maruseppu**	**3.89**	**11**	⇑P	**Pn**	**13 55 27.3**	**-0.6**
ASAJ	**Asahikawa**	**3.93**	**3**	*e*Pn	**Pn**	**13 55 28.8**	**+0.4**
ASAJ				S	**Sn**	**13 56 14.9**	**+1.8**
ASAJ	**Asahikawa**	**3.93**	**3**	P	**Pn**	**13 55 28.8**	**+0.4**
	comp=Z,53nm,0.3s,baz=217,slow=11,SNR=170						
ASAJ				S	**Sn**	**13 56 14.9**	**+1.8**
	comp=Z,41nm,0.3s,baz=117,slow=30,SNR=5.6						
ASAJ				LR	LR	13 57 28.9	
	comp=Z,3μm,21.9s,baz=194,slow=45						
JTKR	**Abashiri--Toko**	**3.95**	**17**	⇑P	**Pn**	**13 55 27.8**	**-0.9**
NEM2	**Nemuro 2**	**4.06**	**38**	P	**Pn**	**13 55 28.1**	**-2.1**
JKT	**Katashina**	**4.19**	**216**	⇑P	**Pn**	**13 55 34.2**	**+2.0**
JAG	**Ashikaga**	**4.39**	**212**	⇑P	**Pn**	**13 55 35.8**	**+1.0**
YUK	**Yuzh-Kuril'sk**	**4.65**	**33**	*c iP*	**Pn**	**13 55 36.9**	**-1.3**
YUK				*i* S	**Sn**	**13 56 26.4**	**-4.4**
YUK				pmax	pmax		
	comp=N,154nm,0.4s						
YUK				pmax	pmax		
	comp=Z,345nm,0.4s						
YUK				pmax	pmax		
	comp=E,175nm,0.4s						
YUK				smax	smax		
	comp=E,1μm,0.6s						
YUK				smax	smax		
	comp=N,1μm,0.6s						
YUK				MLR	MLR		
	comp=Z,913nm,18.0s						
YUK				MLR	MLR		
	comp=N,436nm,18.0s						
YUK				MLR	MLR		
	comp=E,284nm,18.0s						
MAJO	**Matsushiro**	**4.88**	**223**	*e*P	**Pn**	**13 55 43.6**	**+2.1**
MAJO	**Matsushiro**	**4.88**	**223**	*e*Pn	**Pn**	**13 55 43.6**	**+2.1**
MAJ	**Matsushiro**	**4.88**	**223**	P	**Pn**	**13 55 43.5**	**+2.0**
MAT				eS	**Sn**	**13 56 39.3**	**+2.5**
MJAR	**Matsushiro Arr**	**4.88**	**223**	P	**Pn**	**13 55 43.6**	**+2.1**
MJAR	**Matsushiro Arr**	**4.88**	**223**	P	**Pn**	**13 55 43.6**	**+2.1**
	comp=E,43nm,0.3s,baz=31,slow=13,SNR=922						
MJAR				LR	LR	13 57 50.9	
	comp=E,2μm,20.9s,baz=10.0,slow=41						
JYZW	**Yoshizawa**	**6.35**	**217**	P	**Pn**	**13 56 02.0**	**+0.4**
YSS	**Yuzh-Sakhalins**	**6.77**	**2**	⇑*i*P	**Pn**	**13 56 08.0**	**+0.7**
YSS				eS	**Sn**	**13 57 22.0**	**-1.0**
YSS				pmax	pmax		
	comp=N,190nm,1.0s						
YSS				pmax	pmax		
	comp=E,90nm,1.0s						
YSS				pmax	pmax		
	comp=Z,170nm,1.0s						
YSS				MLR	MLR		
	comp=N,1μm,20.0s						
YSS				MLR	MLR		
	comp=Z,1μm,20.0s						
JHJ	**Hachijo jima 2**	**7.35**	**197**	P	**Pn**	**13 56 14.8**	**-0.6**
	comp=Z,70nm,0.3s,baz=85,slow=23,SNR=10						
JHJ				S	Sn	13 57 31.2	-6.2
	comp=Z,31nm,0.3s,baz=74,slow=23,SNR=2.3						
JKSM	**Kasumi**	**7.62**	**235**	P	**Pn**	**13 56 21.8**	**+2.8**
VLA	**Vladivostok**	**8.36**	**294**	*c iP*	**Pn**	**13 56 31.8**	**+2.7**
VLA				pmax	pmax		
	comp=Z,77nm,1.0s						
USRK	**Ussuriysk Arra**	**8.66**	**301**	P	**Pn**	**13 56 35.3**	**+2.1**
	comp=Z,6.2nm,0.3s,baz=106,slow=13,SNR=64						
USRK				LR	LR	13 59 51.9	
	comp=Z,1μm,18.3s,baz=108,slow=37						
UGL	**Uglegorsk**	**8.89**	**359**	*e*P	**Pn**	**13 56 35.5**	**-0.8**
UGL				pmax	pmax		
	comp=Z,57nm,0.9s						
UGL				MLR	MLR		
	comp=N,500nm,17.0s						
UGL				MLR	MLR		
	comp=E,1μm,17.0s						
MDJ	**Mudanjiang**	**10.42**	**299**	P	Pn	13 57 00.5	+3.2
MDJ				S	**Sn**	**13 58 56.0**	**+3.5**
MDJ				SS	**SnSn**	**13 59 05.3**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,54nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,280nm,4.8s						
MDJ				LR	LR		
	comp=N,740nm,18.5s						
MDJ				LR	LR		
	comp=E,920nm,19.3s						
MDJ				LR	LR		
	comp=Z,1μm,20.2s						
MDJ	**Mudanjiang**	**10.42**	**299**	*e*Pn	**Pn**	**13 56 55.5**	**-1.8**
	comp=Z,34nm,0.8s						
KSRS	**Korea Array**	**11.58**	**261**	P	**Pn**	**13 57 15.1**	**+1.9**
	comp=Z,0.5nm,0.3s,baz=62,slow=14,SNR=12						
KSRS				LR	LR	14 01 17.3	
	comp=Z,830nm,19.4s,baz=62,slow=35						
JNU	**Nakatsue**	**11.60**	**236**	P	**Pn**	**13 57 14.3**	**+0.9**
JNU	**Nakatsue**	**11.60**	**236**	P	**Pn**	**13 57 14.3**	**+0.9**
	comp=Z,1.7nm,0.3s,baz=96,slow=6.8,SNR=12						
JNU				LR	LR	14 02 07.7	
	comp=Z,547nm,18.1s,baz=45,slow=39						
KSAR	**Wonju Array Be**	**11.61**	**261**	P	**Pn**	**13 57 15.1**	**+1.4**
KLR	**Kul'dur**	**11.76**	**324**	*e*P	Pn	13 57 11.5	-4.1
KLR				MLR	MLR		
	comp=E,500nm,14.0s						
KLR				MLR	MLR		
	comp=Z,1μm,14.0s						
CN2	**Changchun**	**13.08**	**292**	*e*P	Pn	13 57 37.5	+3.9
CN2				*e*pP	**P**	**13 57 45.5**	**+3.0**
CN2				*e*sP		13 57 52.5	
CN2				eS	**Sn**	**13 59 55.8**	**-1.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,17.0s						
CN2				LR	LR		
	comp=E,900nm,17.0s						
CN2				LR	LR		
	comp=Z,800nm,19.0s						
OKH	**Okha**	**13.37**	**2**	*e*P	Pn	13 57 31.0	-6.5
OKH				eS	**Sn**	**14 00 04.0**	**-0.5**
OKH				MLR	MLR		
	comp=Z,800nm,15.0s						
SNY	**Shenyang**	**14.27**	**283**	⇑P	**Pn**	**13 57 51.5**	**+1.7**
SNY				pmax	pmax		
	comp=Z,23nm,0.9s						
SNY				pmax	pmax		
	comp=Z,390nm,4.2s						
SNY				LR	LR		
	comp=E,920nm,15.3s						
SNY				LR	LR		
	comp=Z,770nm,21.2s						
PETK	**Petropavlovsk-**	**16.63**	**34**	P	Pn	13 58 15.3	-4.8
PETKP	**Petropavlovsk-**	**16.63**	**34**	P	Pn	13 58 15.3	-4.8
PETK	**Petropavlovsk-**	**16.63**	**34**	P	Pn	13 58 15.3	-4.8
	comp=Z,0.3nm,0.3s,baz=230,slow=11,SNR=6.2						
PETK				LR	LR	14 05 46.6	
	comp=Z,79nm,18.4s,baz=220,slow=40						
PET	**Petropavlovsk**	**16.98**	**35**	*e*P	Pn	13 58 14.3	-10
HIA	**Hailar**	**18.39**	**307**	*e*P	**P**	**13 58 37.9**	**-3.5**
	comp=Z,22nm,0.6s						
BJI	**Beijing**	**20.00**	**278**	P	**P**	**13 58 57.5**	**-1.5**
BJI				S	**S**	**14 02 39.0**	**-2.1**
BJI				sS	**sS**	**14 02 58.3**	**-1.2**
BJI				pmax	pmax		
	comp=Z,51nm,0.9s						
BJI				LR	LR		
	comp=N,320nm,16.1s						
BJI				LR	LR		
	comp=E,450nm,17.2s						
BJI				LR	LR		
	comp=Z,330nm,22.8s						
CLNS	**Chul'man**	**20.18**	**331**	*e*P	**P**	**13 59 00.3**	**-0.5**
CLNS				*e*		13 59 17.9	
CLNS				eS	**S**	**14 02 42.7**	**-1.8**
CLNS				eSS	SnSn	14 03 17.6	+13
CLNS				pmax	pmax		
	comp=Z,44nm,1.0s						
CLNS				pmax	pmax		
	comp=N,25nm,1.2s						
CLNS				pmax	pmax		
	comp=E,35nm,1.1s						
CLNS				pmax	pmax		
	comp=E,42nm,1.0s						
CLNS				pmax	pmax		
	comp=N,53nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,60nm,1.1s						
CLNS				smax	smax		
	comp=N,63nm,11.5s						
CLNS				smax	smax		
	comp=E,129nm,12.8s						
CLNS				MLR	MLR		
	comp=E,447nm,16.0s						
CLNS				MLR	MLR		
	comp=Z,422nm,17.0s						
CLNS				MLR	MLR		
	comp=N,241nm,17.0s						
NJ2	**Nanjing**	**20.60**	**254**	*e*P	**P**	**13 59 05.5**	**-0.1**
NJ2				pP	**pP**	**13 59 16.5**	**-0.5**
NJ2				S	**S**	**14 02 52.0**	**-1.1**
NJ2				sS	**sS**	**14 03 12.0**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,120nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,110nm,10.2s						
NJ2				LR	LR		
	comp=N,240nm,12.2s						
NJ2				LR	LR		
	comp=E,430nm,17.6s						
NJ2				LR	LR		
	comp=Z,410nm,20.6s						
CIT	**Chita**	**23.04**	**310**	*e*P	**P**	**13 59 28.4**	**-3.1**
CIT				*e*		13 59 54.3	
CIT				pmax	pmax		
	comp=Z,159nm,1.2s						
YAK	**Yakutsk**	**23.19**	**345**	*e*P	**P**	**13 59 29.6**	**-3.1**
YAK				*e**PP	**pP**	**13 59 44.1**	**-0.4**
YAK				*e*		13 59 55.7	
YAK				eS	**S**	**14 03 33.7**	**-6.8**
YAK				*e**SS	Sn	14 03 50.3	-11
YAK				pmax	pmax		
	comp=Z,100nm,0.8s						
YAK				pmax	pmax		
	comp=E,9.0nm,0.7s						
YAK				pmax	pmax		
	comp=N,37nm,1.0s						
YAK				pmax	pmax		
	comp=Z,52nm,0.8s						
YAK				pmax	pmax		
	comp=E,17nm,0.9s						
YAK				pmax	pmax		
	comp=N,42nm,1.0s						
YAK				smax	smax		
	comp=N,238nm,2.2s						
YAK				smax	smax		
	comp=E,170nm,2.3s						
YAK				MLR	MLR		
	comp=Z,224nm,13.0s						
YAK				MLR	MLR		
	comp=N,159nm,14.0s						
YAK				MLR	MLR		
	comp=E,171nm,17.0s						
HHC	**Hu-ho-hao-te**	**23.36**	**282**	*e*P	**P**	**13 59 32.3**	**-2.5**
HHC				PP	**PnPn**	**14 00 04.0**	**+1.6**
HHC				PcP	**PcP**	**14 03 21.3**	**+1.1**
HHC				S	S	14 03 35.8	-8.2
HHC				SS	**SnSn**	**14 04 23.0**	**+0.7**
HHC				ScP	**ScP**	**14 06 54.8**	**+0.7**
HHC				pmax	pmax		
	comp=Z,49nm,0.5s						
HHC				pmax	pmax		
	comp=Z,270nm,4.4s						
HHC				LR	LR		
	comp=N,520nm,13.4s						
HHC				LR	LR		
	comp=E,1μm,13.4s						
HHC				LR	LR		
	comp=Z,1μm,13.1s						
SEY	**Seymchan**	**23.56**	**12**	*e*P	**P**	**13 59 36.5**	**+0.2**
WHN	**Wuhan**	**24.69**	**256**	⇓P	**P**	**13 59 46.5**	**-0.5**
WHN				LR	LR		
	comp=Z,1μm,19.8s						
ULN	**Ulaanbaatar**	**26.33**	**299**	*e*P	**P**	**14 00 01.4**	**-0.5**
	comp=Z,12nm,0.6s						
ULN	**Ulaanbaatar**	**26.33**	**299**	P	**P**	**14 00 02.0**	**+0.1**
	SNR=5.6						
ULN	**Ulaanbaatar**	**26.33**	**299**	P	**P**	**14 00 01.2**	**-0.7**
	comp=Z,18nm,0.7s						
SONM	**Songino Array**	**26.77**	**299**	P	**P**	**14 00 05.9**	**0.0**
SONM	**Songino Array**	**26.77**	**299**	P	**P**	**14 00 05.9**	**0.0**
	comp=Z,17nm,0.7s,baz=102,slow=8.7,SNR=123						
SONM				LR	LR	14 11 15.4	
	comp=Z,658nm,18.2s,baz=68,slow=38						
XAN	**Xi'an**	**27.25**	**268**	P	**P**	**14 00 08.5**	**-1.6**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
XAN				LR	LR		
	comp=E,100nm,17.8s						
XAN				LR	LR		
	comp=Z,86nm,17.4s						
IRK	**Irkutsk**	**28.63**	**308**	*e*P	**P**	**14 00 22.0**	**-0.3**
IRK				*e*		14 00 36.8	
IRK				pmax	pmax		
	comp=Z,28nm,1.4s						
TLY	**Talaya**	**28.93**	**306**	*e*P	**P**	**14 00 23.6**	**-1.3**
TLY				*e*		14 01 12.1	
TLY				pmax	pmax		
	comp=Z,15nm,0.9s						
TLY				MLR	MLR		
	comp=Z,320nm,18.0s						
TLY	**Talaya**	**28.93**	**306**	P	**P**	**14 00 25.0**	**+0.1**
	comp=Z,94nm,1.0s,SNR=5.7						
ZAK	**Zakamensk**	**29.01**	**304**	*e*P	**P**	**14 00 24.9**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH	**Lanzhou**	**30.40**	**275**	*e*P	**P**	**14 00 37.3**	**-1.0**
LZH				*e*PP	**PnPn**	**14 01 37.0**	**-1.1**
LZH				PcP	**PcP**	**14 03 37.3**	**+0.3**
LZH				eS	**S**	**14 05 32.0**	**-3.6**
LZH				pmax	pmax		
	comp=Z,36nm,1.2s						
LZH				pmax	pmax		
	comp=Z,97nm,5.1s						
LZH				LR	LR		
	comp=N,300nm,13.5s						
LZH				LR	LR		
	comp=E,220nm,13.0s						
LZH				LR	LR		
	comp=Z,350nm,16.0s						
MOY	**Mondy**	**30.57**	**306**	*e*

GTA	**Gaotai**	**32.46**	**283**	*e*P		**P**	**14 00 56.0**	**-0.3**
GTA				pP		**pP**	**14 01 07.3**	**-1.9**
GTA				PcP		**PcP**	**14 03 43.3**	**+0.8**
GTA				S		**S**	**14 06 05.0**	**-2.7**
GTA				SS		**SnSn**	**14 08 00.8**	**-3.4**
GTA				pmax	pmax			
	comp=Z,7.0nm,0.8s							
GTA				pmax	pmax			
	comp=Z,79nm,7.1s							
GTA				LR	LR			
	comp=N,260nm,18.5s							
GTA				LR	LR			
	comp=E,550nm,18.5s							
GTA				LR	LR			
	comp=Z,670nm,18.3s							
CD2	**Chengdu**	**32.52**	**266**	P		**P**	**14 00 58.0**	**+1.2**
CD2				pP		**pP**	**14 01 11.0**	**+1.3**
CD2				sP		**sP**	**14 01 17.3**	**+1.8**
CD2				PP		**PnPn**	**14 02 07.0**	**+1.6**
CD2				PcP		**PcP**	**14 03 45.0**	**+2.3**
CD2				S		**S**	**14 06 07.3**	**-1.3**
CD2				sS		**sS**	**14 06 29.5**	**-0.7**
CD2				PcS		**PcS**	**14 07 29.0**	**+1.1**
CD2				SS		**SnSn**	**14 08 04.5**	**-1.3**
CD2				pmax	pmax			
	comp=Z,40nm,0.5s							
CD2				pmax	pmax			
	comp=Z,310nm,8.8s							
CD2				LR	LR			
	comp=N,260nm,22.5s							
CD2				LR	LR			
	comp=Z,300nm,20.6s							
GYA	**Guiyang**	**32.58**	**256**	⇑*i*P		**P**	**14 00 56.5**	**-1.0**
GYA				pP		**pP**	**14 01 11.8**	**+1.5**
GYA				sP		**sP**	**14 01 18.3**	**+2.2**
GYA				PP		**PnPn**	**14 02 07.5**	**+1.2**
GYA				S		**S**	**14 06 08.3**	**-1.5**
GYA				sS		**sS**	**14 06 33.0**	**+1.7**
GYA				ScP		**ScP**	**14 07 23.5**	**+0.8**
GYA				SS		**SnSn**	**14 08 07.0**	**-0.4**
GYA				pmax	pmax			
	comp=Z,40nm,0.8s							
GYA				pmax	pmax			
	comp=Z,120nm,5.0s							
GYA				LR	LR			
	comp=N,660nm,17.6s							
GYA				LR	LR			
	comp=E,510nm,18.2s							
GYA				LR	LR			
	comp=Z,640nm,17.9s							
QIZ	**Qiongzhong**	**34.97**	**243**	P		**P**	**14 01 19.3**	**+1.2**
QIZ				S		**S**	**14 06 47.0**	**+0.5**
QIZ				pmax	pmax			
	comp=Z,24nm,2.5s							
QIZ				LR	LR			
	comp=Z,250nm,27.8s							
KMI	**Kunming**	**36.26**	**258**	P		**P**	**14 01 29.0**	**-0.4**
KMI				pP		**pP**	**14 01 42.3**	**0.0**
KMI				S		**S**	**14 07 05.0**	**-1.6**
KMI				pmax	pmax			
	comp=Z,270nm,0.9s							
KMI				LR	LR			
	comp=N,3μm,15.7s							
KMI				LR	LR			
	comp=E,3μm,15.9s							
TNA	**Tin City**	**37.76**	**31**	*e*P		**P**	**14 01 41.0**	**-0.5**
	comp=E,26nm,0.9s							
WMQ	**Urumqi**	**40.16**	**294**	P		**P**	**14 02 02.0**	**+0.2**
WMQ				pP		**pP**	**14 02 14.0**	**-0.9**
WMQ				PP		**PnPn**	**14 03 39.0**	**+0.4**
WMQ				PcP		**PcP**	**14 04 07.0**	**+1.7**
WMQ				ScP		**ScP**	**14 07 51.0**	**+0.7**
WMQ				S		**S**	**14 08 04.0**	**-0.9**
WMQ				SS		**SS**	**14 10 57.0**	**-6.9**
WMQ				ScS		**ScS**	**14 12 02.0**	**-1.9**
WMQ				pmax	pmax			
	comp=Z,45nm,1.0s							
WMQ				pmax	pmax			
	comp=Z,120nm,5.0s							
WMQ				LR	LR			
	comp=N,150nm,16.0s							
WMQ				LR	LR			
	comp=E,210nm,16.0s							
WMQ				LR	LR			
	comp=Z,180nm,16.0s							
ZAA0	**Zalesovo Array**	**40.40**	**310**	*e*P		**P**	**14 02 02.5**	**-1.1**
ZALV	**Zalesovo Beam**	**40.40**	**310**	P		**P**	**14 02 03.8**	**+0.2**
ZALV							14 04 06.0	
ZALV	**Zalesovo Beam**	**40.40**	**310**	P		**P**	**14 02 03.8**	**+0.2**
ZALV				PcP		**PcP**	**14 04 06.0**	**+0.2**
ZALV	**Zalesovo Beam**	**40.40**	**310**	P		**P**	**14 02 03.8**	**+0.2**
	comp=Z,12nm,0.4s,baz=92,slow=7.9,SNR=85							
ZALV				PcP		**PcP**	**14 04 06.0**	**+0.2**
	comp=Z,7.5nm,0.5s,baz=95,slow=3.2,SNR=8.1							
ZALV				LR	LR		14 19 39.4	
	comp=Z,455nm,18.1s,baz=70,slow=37							
UBPT	**Khong Chiam**	**40.56**	**243**	P		**P**	**14 02 05.1**	**-0.2**
MYLDM	**Lahad Datu**	**40.93**	**218**	P		**P**	**14 02 08.2**	**-0.2**
NVS	**Novosibirsk**	**41.25**	**311**	⇑*i*P		**P**	**14 02 10.5**	**-0.1**
NVS				pmax	pmax			
	comp=Z,21nm,1.1s							
NVS				pmax	pmax			
	comp=N,4.0nm,1.2s							
NVS				pmax	pmax			
	comp=E,15nm,1.1s							
SVW2	**Sparrevohn**	**42.60**	**39**	*e*P		**P**	**14 02 22.7**	**+1.1**
	comp=E,11nm,1.1s							
CMMT	**Chiang Mai**	**42.84**	**253**	P		**P**	**14 02 24.0**	**0.0**
CHTO	**Chiang Mai**	**42.84**	**253**	*e*P		**P**	**14 02 23.5**	**-0.5**
CHTO	**Chiang Mai**	**42.84**	**253**	*e*P		**P**	**14 02 23.5**	**-0.5**
CHTO	**Chiang Mai**	**42.84**	**253**	P		**P**	**14 02 25.0**	**+0.9**
	SNR=5.2							
CHTO	**Chiang Mai**	**42.84**	**253**	P		**P**	**14 02 23.9**	**-0.1**
	comp=E,25nm,1.0s,comp=E,322nm							
CM31	**Chiang Mai Arr**	**43.07**	**253**	*e*P		**P**	**14 02 25.3**	**-0.5**
	comp=E,4.8nm,0.6s							
CMAR	**Chiang Mai Arr**	**43.07**	**253**	LR		LR	14 19 42.2	
	comp=E,72nm,19.0s,baz=186,slow=35							
MK31	**Makanchi Array**	**43.13**	**299**	P		**P**	**14 02 25.9**	**-0.2**
MK31				pmax	pmax			
	comp=Z,32nm,0.6s							
MK31	**Makanchi Array**	**43.13**	**299**	*e*P		**P**	**14 02 26.0**	**-0.1**
MKAR	**Makanchi Array**	**43.13**	**299**	P		**P**	**14 02 26.1**	**0.0**
MKAR	**Makanchi Array**	**43.13**	**299**	P		**P**	**14 02 26.1**	**0.0**
MKAR	**Makanchi Array**	**43.13**	**299**	P		**P**	**14 02 26.1**	**0.0**
	comp=Z,15nm,0.5s,baz=84,slow=10,SNR=155							
MKAR				LR		LR	14 21 13.9	
	comp=Z,310nm,19.8s,baz=355,slow=37							
RSO	**Redoubt South**	**44.00**	**40**	*e*P		**P**	**14 02 33.6**	**+0.6**
PPLA	**Purkeypile**	**44.18**	**37**	*e*P		**P**	**14 02 36.6**	**+2.1**
	comp=Z,93nm,1.8s							
SPU	**Mount Spurr**	**44.30**	**39**	*e*P		**P**	**14 02 37.0**	**+1.7**
KURK	**Kurchatov**	**44.62**	**306**	*c i*P		**P**	**14 02 37.6**	**-0.3**
KURK				pmax	pmax			
	comp=Z,143nm,1.2s							
KURK	**Kurchatov**	**44.62**	**306**	*e*P		**P**	**14 02 37.5**	**-0.5**
	comp=Z,99nm,0.8s							
KURK	**Kurchatov**	**44.62**	**306**	P		**P**	**14 02 38.1**	**+0.2**
	SNR=30							
KURK	**Kurchatov**	**44.62**	**306**	P		**P**	**14 02 37.0**	**-0.9**
	comp=Z,839nm,0.6s,SNR=81							
KURBB	**Kurchatov Arra**	**44.70**	**306**	P		**P**	**14 02 38.4**	**-0.1**
	comp=Z,70nm,0.5s,baz=81,slow=8.6,SNR=311							
TRF	**Thorofare Moun**	**45.03**	**36**	*e*P		**P**	**14 02 41.7**	**+0.5**
	comp=Z,7.3nm,0.8s							
COLD	**Coldfoot**	**45.05**	**31**	*e*P		**P**	**14 02 42.6**	**+1.5**
	comp=Z,12nm,0.7s							
MCK	**McKinley**	**45.62**	**35**	*e*P		**P**	**14 02 46.7**	**+1.0**
MCK				pmax	pmax			
	comp=Z,11nm,0.8s							
MCK	**McKinley**	**45.62**	**35**	*e*P		**P**	**14 02 46.7**	**+1.0**
	comp=Z,11nm,0.8s							
PMR	**Palmer**	**45.68**	**38**	*e*P		**P**	**14 02 46.7**	**+0.5**
PMR				pmax	pmax			
	comp=Z,11nm,0.6s							
PMR	**Palmer**	**45.68**	**38**	*e*P		**P**	**14 02 46.6**	**+0.5**
	comp=Z,10nm,0.6s							
COLA	**College**	**46.04**	**34**	*e*P		**P**	**14 02 50.4**	**+1.5**
COLA				pmax	pmax			
	comp=Z,26nm,0.8s							
COLA	**College**	**46.04**	**34**	*e*P		**P**	**14 02 50.4**	**+1.5**
	comp=Z,26nm,0.8s							
SML	**Sawmill**	**46.04**	**38**	*e*P		**P**	**14 02 50.3**	**+1.2**
SML				pmax	pmax			
	comp=Z,5.0nm,0.9s							
SML	**Sawmill**	**46.04**	**38**	*e*P		**P**	**14 02 50.3**	**+1.2**
	comp=Z,4.7nm,0.9s							
ILAR	**Eielson Array**	**46.45**	**34**	P		**P**	**14 02 52.8**	**+0.6**
ILAR	**Eielson Array**	**46.45**	**34**	P		**P**	**14 02 52.8**	**+0.6**
	comp=Z,6.2nm,0.7s,baz=266,slow=6.0,SNR=94							
ILAR				LR		LR	14 24 41.8	
	comp=Z,77nm,18.2s,baz=256,slow=39							
TAPN	**Taplejung**	**46.52**	**272**	*e*P		**P**	**14 02 53.9**	**+0.3**
	comp=Z,40nm,0.4s							
ODAN	**Odare**	**47.02**	**271**	*e*P		**P**	**14 02 57.1**	**-0.3**
	comp=Z,50nm,0.6s							
RAMN	**Ramite**	**47.58**	**272**	*e*P		**P**	**14 03 01.8**	**0.0**
	comp=Z,71nm,0.4s							
GUN	**Gumba**	**47.64**	**273**	*e*P		**P**	**14 03 02.6**	**+0.2**
	comp=Z,146nm,0.5s							
DOT	**Dot Lake**	**47.79**	**35**	*e*P		**P**	**14 03 03.1**	**+0.4**
	comp=Z,21nm,0.6s							
BMRM	**Bremner River**	**47.93**	**39**	*e*P		**P**	**14 03 05.7**	**+1.9**
KKN	**Kakani**	**48.16**	**274**	*e*P		**P**	**14 03 06.6**	**+0.4**
	comp=Z,98nm,0.5s							
PKI	**Pulchoki**	**48.17**	**273**	*e*P		**P**	**14 03 06.3**	**-0.2**
	comp=Z,30nm,0.4s							
PKIN	**Phulchoki**	**48.18**	**273**	*e*P		**P**	**14 03 06.2**	**-0.2**
	comp=Z,35nm,0.5s							
DMN	**Daman**	**48.38**	**273**	*e*P		**P**	**14 03 08.2**	**+0.2**
	comp=Z,32nm,0.4s							
ULHL	**Ulahol**	**48.63**	**295**	P		**P**	**14 03 09.9**	**+0.2**
	SNR=9.1							
TKM2	**Tokmak 2**	**48.83**	**296**	*e*P		**P**	**14 03 12.0**	**+0.8**
TKM2	**Tokmak 2**	**48.83**	**296**	*e*P		**P**	**14 03 12.0**	**+0.8**
TKM2	**Tokmak 2**	**48.83**	**296**	P		**P**	**14 03 12.0**	**+0.8**
	SNR=11							
BVA0	**Borovoye Array**	**49.04**	**310**	*i* P		**P**	**14 03 12.1**	**-0.3**
BVA0				pmax	pmax			
	comp=Z,5.0nm,0.6s							
BVAR	**Borovoye Array**	**49.04**	**310**	P		**P**	**14 03 12.6**	**+0.2**
BVAR	**Borovoye Array**	**49.04**	**310**	P		**P**	**14 03 12.6**	**+0.2**
BVAR	**Borovoye Array**	**49.04**	**310**	P		**P**	**14 03 12.6**	**+0.2**
	comp=Z,27nm,0.5s,baz=70,slow=8.6,SNR=229							
DANN	**Dangsing**	**49.04**	**275**	*e*P		**P**	**14 03 13.7**	**+0.6**
	comp=Z,297nm,0.6s							
BRVK	**Borovoye**	**49.09**	**311**	*e*P		**P**	**14 03 12.9**	**+0.1**
BRVK				pmax	pmax			
	comp=Z,36nm,1.0s							
BRVK	**Borovoye**	**49.09**	**311**	*e*P		**P**	**14 03 12.8**	**+0.1**
	comp=Z,36nm,1.0s							
BRVK	**Borovoye**	**49.09**	**311**	P		**P**	**14 03 13.4**	**+0.6**
	SNR=10.0							
BRVK	**Borovoye**	**49.09**	**311**	P		**P**	**14 03 13.0**	**+0.1**
	comp=Z,277nm,0.5s,SNR=25							
KZA	**Kyzart**	**49.38**	**295**	P		**P**	**14 03 16.9**	**+1.2**
	SNR=12							
KOLN	**Koldanda**	**49.45**	**274**	*e*P		**P**	**14 03 16.4**	**+0.2**
	comp=Z,55nm,0.4s							
FRU	**Bishkek**	**49.54**	**297**	*e*P		**P**	**14 03 16.0**	**-0.4**
KAPI	**Kappang**	**49.55**	**210**	*e*P		**P**	**14 03 19.1**	**+2.4**
KAPI	**Kappang**	**49.55**	**210**	P		P	14 03 13.6	-3.1
	comp=Z,21nm,1.2s							
AAK	**Ala-Archa**	**49.69**	**296**	P		**P**	**14 03 17.8**	**0.0**
AAK				pmax	pmax			
	comp=Z,9.0nm,0.4s							
AAK	**Ala-Archa**	**49.69**	**296**	*e*P		**P**	**14 03 17.7**	**0.0**
	comp=Z,2.8nm,0.9s							
AAK	**Ala-Archa**	**49.69**	**296**	P		**P**	**14 03 18.4**	**+0.7**
	SNR=6.5							
AAK	**Ala-Archa**	**49.69**	**296**	P		**P**	**14 03 17.5**	**-0.3**
	SNR=10							
AAK	**Ala-Archa**	**49.69**	**296**	P		**P**	**14 03 17.0**	**-0.8**
	comp=Z,115nm,0.4s,SNR=13							
AAK	**Ala-Archa**	**49.69**	**296**	P		**P**	**14 03 17.8**	**0.0**
	comp=Z,8.6nm,0.4s,baz=103,slow=5.2,SNR=32							
PYUN	**Piuthan**	**49.75**	**275**	*e*P		**P**	**14 03 18.7**	**+0.3**
	comp=Z,202nm,0.8s							
KSH	**Kashi**	**49.85**	**292**	P		P	14 03 23.0	+4.1
KSH				pP		pP	14 03 35.0	+2.7
KSH				PcP		**PcP**	**14 04 41.5**	**+2.6**
KSH				PP		**PP**	**14 05 18.5**	**+4.7**
KSH				ScP		**ScP**	**14 08 33.0**	**+2.7**
KSH				PcS		**PcS**	**14 08 38.0**	**+2.1**
KSH				S		**S**	**14 10 28.8**	**+3.6**
KSH				ScS		**ScS**	**14 13 07.0**	**+0.9**
KSH				pmax	pmax			
	comp=Z,3.0nm,0.3s							
KSH				LR	LR			
	comp=N,140nm,6.3s							
KSH				LR	LR			
	comp=E,280nm,4.9s							
KSH				LR	LR			
	comp=Z,160nm,4.6s							
EKS2	**Erkin-Say**	**50.17**	**297**	*e*P		**P**	**14 03 21.5**	**+0.2**
EKS2	**Erkin-Say**	**50.17**	**297**	*e*P		**P**	**14 03 21.5**	**+0.2**
EKS2	**Erkin-Say**	**50.17**	**297**	P		**P**	**14 03 21.6**	**+0.2**
	SNR=14							
AML	**Almayashu**	**50.43**	**296**	P		**P**	**14 03 24.3**	**+0.7**
	SNR=24							
KULM	**Kulim**	**51.06**	**238**	P		**P**	**14 03 28.1**	**-0.1**
IPM	**Ipoh**	**51.43**	**237**	*e*P		**P**	**14 03 30.4**	**-0.6**
	comp=Z,20nm,0.8s							
KK31	**Karatay Array**	**52.23**	**298**	*i* P		**P**	**14 03 36.0**	**-0.6**
KK31				pmax	pmax			
	comp=Z,24nm,0.8s							
KKAR	**Karatay Array**	**52.23**	**298**	*e*P		**P**	**14 03 36.5**	**-0.1**
KKAR	**Karatay Array**	**52.23**	**298**	*e*P		**P**	**14 03 36.5**	**-0.1**
SMLA	**Simla**	**52.67**	**282**	*i* P		**P**	**14 03 39.9**	**-0.1**
SMLA				*i* x		x	14 03 39.9	
	baz=196,slow=18							
SVE	**Sverdlovsk**	**53.30**	**317**	*d i*P		**P**	**14 03 45.1**	**+0.9**
SVE				pmax	pmax			
	comp=Z,99nm,0.8s							
SVE				MLR	MLR			
	comp=Z,696nm,18.0s							
NDI	**New Delhi**	**53.84**	**279**	*ex*		**P**	**14 03 46.0**	**-2.7**
SOKR	**Solikamsk**	**54.30**	**321**	*c i*P		**P**	**14 03 51.7**	**+0.2**
SOKR				pmax	pmax			
	comp=Z,40nm,1.0s							
SOKR				MLR	MLR			
	comp=Z,110nm,14.0s							
ARU	**Arti**	**54.51**	**317**	*c i*P		**P**	**14 03 53.3**	**+0.2**
ARU							14 04 56.9	
ARU				*e*			14 05 50.5	
ARU				S		**S**	**14 11 31.4**	**+3.1**
ARU				SS		**SS**	**14 15 15.3**	**+4.6**
ARU				pmax	pmax			
	comp=Z,89nm,1.0s							
ARU				MLR	MLR			
	comp=Z,457nm,16.0s							
ARU	**Arti**	**54.51**	**317**	P		**P**	**14 03 53.8**	**+0.7**
	comp=Z,604nm,0.7s,SNR=19							
AB31	**Akbulak array**	**56.50**	**309**	*i* P		**P**	**14 04 07.2**	**-0.3**
AB31				pmax	pmax			
	comp=Z,29nm,0.6s							
ABKAR	**Akbulak array**	**56.50**	**309**	*e*P		**P**	**14 04 07.5**	**0.0**
ALE	**Alert**	**56.92**	**4**	P		**P**	**14 04 10.9**	**+0.9**
	comp=Z,100nm,0.9s,SNR=6.7							
KBL	**Kabul**	**57.01**	**289**	*e*P		**P**	**14 04 09.7**	**-1.9**
KBL				pmax	pmax			
	comp=Z,65nm,0.9s							
KBL	**Kabul**	**57.01**	**289**	*e*P		**P**	**14 04 09.7**	**-1.9**
	comp=Z,65nm,0.9s							
AKTO	**Aktyubinsk**	**57.14**	**311**	P		**P**	**14 04 11.9**	**-0.1**
AKTO	**Aktyubinsk**	**57.14**	**311**	P		**P**	**14 04 11.9**	**-0.1**
AKTO	**Aktyubinsk**	**57.14**	**311**	P		**P**	**14 04 11.9**	**-0.1**
	comp=Z,30nm,0.8s,baz=66,slow=12,SNR=68							
KBS	**Kingsbay**	**57.68**	**350**	*e*P		**P**	**14 04 16.7**	**+1.2**
KBS	**Kingsbay**	**57.68**	**350**	*e*P		**P**	**14 04 16.6**	**+1.2**
KBS				pmax	pmax			
	comp=Z,17nm,0.9s							
KBS	**Kingsbay**	**57.68**	**350**	*e*P		**P**	**14 04 16.6**	**+1.2**
	comp=Z,17nm,0.9s							
HYB	**Hyderabad**	**59.06**	**267**	*i* P		**P**	**14 04 24.5**	**-1.4**
RES	**Resolute Bay**	**59.37**	**15**	*e*P		**P**	**14 04 26.3**	**-0.8**
	comp=Z,19nm,0.8s							
APA	**Apatity**	**60.12**	**335**	⇑*i*P		**P**	**14 04 32.0**	**-0.5**
APA				MLR	MLR			
	comp=Z,700nm,19.0s							
WRAB	**Tennant Creek**	**60.27**	**189**	*e*P		**P**	**14 04 31.8**	**-2.2**
WRAB				pmax	pmax			
	comp=Z,11nm,0.8s							
WRAB	**Tennant Creek**	**60.27**	**189**	*e*P		**P**	**14 04 31.8**	**-2.2**
	comp=Z,11nm,0.8s							
WRAB	**Tennant Creek**	**60.27**	**189**	P		**P**	**14 04 32.2**	**-1.8**
	comp=Z,73nm,0.8s,SNR=11							
WRA	**Warramunga Arr**	**60.28**	**189**	P		**P**	**14 04 33.1**	**-1.0**
WRA	**Warramunga Arr**	**60.28**	**189**	P		**P**	**14 04 33.1**	**-1.0**
	comp=Z,6.4nm,0.4s,baz=7.2,slow=7.1,SNR=56							
TMCR	**Tamitsa**	**60.34**	**331**	*e*P		**P**	**14 04 33.4**	**-0.6**
TMCR				pmax	pmax			
	comp=Z,46nm,1.0s							
YKW3	**Yellowknife Ar**	**60.69**	**31**	*e*P		**P**	**14 04 34.2**	**-2.1**
	comp=Z,0.1nm,0.6s							
YKA	**Yellowknife Ar**	**60.72**	**31**	P		**P**	**14 04 36.9**	**+0.3**
YKA	**Yellowknife Ar**	**60.72**	**31**	P		**P**	**14 04 36.9**	**+0.3**
	comp=Z,3.3nm,0.8s,baz=301,slow=6.5,SNR=62							
KEV	**Kevo**	**60.76**	**339**	*e*P		**P**	**14 04 35.8**	**-1.0**
KEV				pmax	pmax			
	comp=Z,11nm,0.6s							
KEV	**Kevo**	**60.76**	**339**	*e*p		**P**	**14 04 35.8**	**-1.0**
	comp=Z,11nm,0.6s							
ARCES	**ARCESS Array B**	**61.31**	**339**	P		**P**	**14 04 40.5**	**0.0**
ARCES	**ARCESS Array B**	**61.31**	**339**	P		**P**	**14 04 40.5**	**0.0**
	comp=Z,5.4nm,0.5s,baz=59,slow=8.3,SNR=51							
ARCES				LR		LR	14 35 51.4	
	comp=Z,129nm,19.1s,baz=52,slow=40							
ARE0	**ARCESS Array S**	**61.31**	**339**	*e*P		**P**	**14 04 40.2**	**-0.3**
KTK1	**Kautokeino**	**62.27**	**339**	*e*P		**P**	**14 04 47.4**	**+0.4**
IMYA	**Miami**	**62.44**	**296**	*e*P		**P**	**14 04 49.0**	**+0.1**
DAG	**Danmarks Havn**	**62.70**	**355**	⇑*i*P		**P**	**14 04 49.7**	**0.0**
DAG				*i*			14 05 05.7	
DAG				pmax	pmax			
	comp=Z,12nm,0.9s							
DAG	**Danmarks Havn**	**62.70**	**355**	⇑*i*P		**P**	**14 04 49.7**	**0.0**
	comp=Z,15nm,0.9s							
DAG				*i*			14 05 05.7	
TRO	**Tromso**	**62.97**	**341**	*e*P		**P**	**14 04 51.7**	**0.0**
ABKT	**Ailbek**	**62.98**	**298**	P		**P**	**14 04 52.3**	**0.0**
	comp=Z,257nm,0.9s,SNR=17							
IPAY	**Payeh**	**63.15**	**296**	*e*P		**P**	**14 04 53.1**	**-0.5**
IAKL	**Akhelmad**	**63.23**	**296**	*e*P		**P**	**14 04 54.2**	**-0.1**
IKRD	**Kardeh**	**63.30**	**297**	*e*P		P	14 04 51.0	-3.7
ISHV	**Shirvan**	**63.46**	**298**	*e*P		**P**	**14 04 56.0**	**+0.3**
ISFR	**Sfrayin**	**63.51**	**297**	*e*P		**P**	**14 04 56.3**	**+0.2**
JOF	**Joensuu**	**63.53**	**331**	*e*P		**P**	**14 04 54.4**	**-1.1**
JOF				pmax	pmax			
	comp=Z,12nm,0.6s							
JOF	**Joensuu**	**63.53**	**331**	*e*p		**P**	**14 04 54.4**	**-1.1**
	comp=Z,12nm,0.6s							
ASAR	**Alice Springs**	**64.01**	**189**	P		**P**	**14 04 58.5**	**-0.5**
ASAR	**Alice Springs**	**64.01**	**189**	P		**P**	**14 04 58.5**	**-0.5**
	comp=Z,6.4nm,0.7s,baz=4.4,slow=5.0,SNR=86							
ASAR				LR		LR	14 31 42.5	
	comp=Z,173nm,20.1s,baz=278,slow=35							
IDAH	**Dahanechah**	**64.50**	**292**	*e*P		**P**	**14 05 02.9**	**+0.2**
MOS	**Moscow**	**65.17**	**323**	*e*P		**P**	**14 05 05.6**	**-0.6**
MOS				pmax	pmax			
	comp=Z,38nm,0.8s							
IKOO	**Kooshah**	**65.28**	**292**	*e*P		**P**	**14 05 07.9**	**+0.1**
TDL	**Tradedollar La**	**65.58**	**49**	P		**P**	**14 05 11.3**	**+2.0**
RCM	**Mount Rainier-**	**65.60**	**49**	P		**P**	**14 05 11.8**	**+2.1**
KAF	**Kangasniemi**	**65.85**	**332**	*e*P		**P**	**14 05 09.0**	**-1.5**
KAF				pmax	pmax			
	comp=Z,9.0nm,0.5s							
KAF	**Kangasniemi**	**65.85**	**332**	*e*p		**P**	**14 05 09.0**	**-1.5**
	comp=Z,8.6nm,0.5s							
VRHR	**Novokhopersk**	**65.86**	**317**	*e*P		**P**	**14 05 09.6**	**-1.2**
VRHR				*e**SP		**sP**	**14 05 27.3**	**-3.0**
VRHR				pmax	pmax			
	comp=Z,30nm,0.6s							
VRHR				pmax	pmax			
	comp=N,2.0nm,0.3s							
VRHR				pmax	pmax			
	comp=E,9.0nm,0.6s							
DZM	**Mont Dzumac**	**65.89**	**155**	*e*LR		LR	14 24 57.1	
	comp=E,248nm,23.2s							
ETW	**Entiat**	**65.97**	**47**	P		**P**	**14 05 13.0**	**+1.2**
OBN	**Obninsk**	**66.02**	**323**	⇑*e*P		**P**	**14 05 11.7**	**0.0**
OBN				*e**PP		**pP**	**14 05 29.8**	**+4.2**
OBN				*e*			14 07 33.7	
OBN				*e*S		**S**	**14 13 56.1**	**+0.5**
OBN				pmax	pmax			
	comp=Z,57nm,1.2s							
OBN				MLR	MLR			
	comp=Z,200nm,16.0s							
TBM	**Table Mountain**	**66.06**	**48**	P		**P**	**14 05 13.9**	**+1.6**
EBG	**Ellensburg**	**66.22**	**48**	P		**P**	**14 05 15.2**	**+1.8**
FIA1	**FINESS Array S**	**66.37**	**332**	*e*P		**P**	**14 05 12.6**	**-1.3**
FINES	**FINESS Array B**	**66.37**	**332**	P		**P**	**14 05 13.8**	**-0.1**
FINES	**FINESS Array B**	**66.37**	**332**	P		**P**	**14 05 13.8**	**-0.1**
	comp=Z,21nm,0.7s,baz=43,slow=8.0,SNR=88							
FINES				LR		LR	14 36 32.2	
	comp=Z,286nm,18.7s,baz=9.0,slow=38							
IGLO	**Ghaloghah**	**66.63**	**299**	*e*P		**P**	**14 05 16.2**	**-0.1**
MOR8	**Moi Rana**	**66.66**	**340**	⇑*i*P		**P**	**14 05 14.4**	**-1.4**
MOR8				AMB		AMB	14 05 17.7	
	comp=Z,40nm,1.9s							
IKIA	**Kiasar**	**66.89**	**298**	*e*P		**P**	**14 05 17.9**	**-0.1**
VSR	**Storozhevoye**	**67.05**	**318**	*e*P		**P**	**14 05 18.6**	**+0.2**
VSR				*e**SP		**sP**	**14 05 35.9**	**-2.0**
VSR				pmax	pmax			
	comp=N,3.0nm,0.5s							
VSR				pmax	pmax			
	comp=E,4.0nm,0.5s							
VSR				pmax	pmax			
	comp=Z,40nm,0.5s							
HAWA	**Hanford**	**67.10**	**48**	*e*pP		pP	14 05 34.2	+1.4
VORD	**Divnogorie**	**67.14**	**318**	*e*P		**P**	**14 05 18.7**	**-0.2**
VORD				pmax	pmax			
	comp=N,30nm,0.5s		

ZEI pmax pmax
comp=Z,26nm,0.9s
KIV Kislovodsk 69.41 310 ⇓*e*P **P 14 05 34.1 +0.7**
KIV *e**PP PcP 14 06 02.0 +5.4
KIV *e*S **S 14 14 32.7 -4.1**
KIV pmax pmax
comp=Z,126nm,1.2s
KIV MLR MLR
comp=Z,100nm,20.0s
KIV Kislovodsk 69.41 310 P **P 14 05 34.3 +0.9**
comp=Z,596nm,0.8s,SNR=12
KBZ Khabaz 69.42 310 P **P 14 05 34.1 +0.7**
KBZ Khabaz 69.42 310 P **P 14 05 34.0 +0.7**
KBZ Khabaz 69.42 310 P **P 14 05 34.0 +0.7**
comp=Z,25nm,0.7s,baz=70,slow=3.3,SNR=88
KBZ LR LR 14 38 33.1
comp=Z,161nm,20.9s,baz=141,slow=38
TBLG Delisi 69.49 308 *e*P **P 14 05 34.2 +0.3**
TBLG Delisi 69.49 308 P **P 14 05 34.2 +0.3**
C14A Swan Lake 69.49 44 ⇑P **P 14 05 34.4 +0.5**
baz=69
SWMT Swartz Lake 69.52 45 *e*P **P 14 05 35.3 +1.3**
D13A Huson 69.52 45 ⇓P **P 14 05 34.5 +0.4**
baz=69,SNR=12
IZEF Zefreh 69.68 296 *e*P **P 14 05 35.6 +0.1**
GOR Gori 69.72 308 P **P 14 05 36.6 +1.3**
ONI Oni 69.76 309 P **P 14 05 36.5 +0.9**
B15A Bradely Ranch, 69.79 43 ⇑P **P 14 05 35.9 +0.2**
baz=70,SNR=12
IRAZ Razeghan 69.86 300 *e*P **P 14 05 36.1 -0.4**
F12A Elk City 69.89 47 ⇓P **P 14 05 36.3 -0.2**
baz=70,SNR=6.8
KZR Kazreti 69.89 307 P P 14 05 32.8 -3.6
A16A West Butte Ran 69.90 42 ⇑P **P 14 05 36.3 -0.1**
baz=70
WVOR Wild Horse Val 69.92 51 *e*P **P 14 05 36.1 -0.6**
WVOR *e**PP **pP 14 05 51.3 +0.6**
WVOR pmax pmax
comp=Z,11nm,1.0s
WVOR Wild Horse Val 69.92 51 *e*P **P 14 05 36.0 -0.6**
comp=Z,11nm,1.0s
WVOR *e*pP **pP 14 05 51.3 +0.6**
SLMT Seeley Lake 69.95 45 *e*P **P 14 05 37.8 +1.0**
MSO Missoula 69.96 45 *e*P **P 14 05 36.3 -0.6**
comp=Z,7.1nm,0.8s
MSO *e*pP **pP 14 05 51.5 +0.7**
MSO Missoula 69.96 45 ⇓P **P 14 05 36.8 0.0**
baz=70
D14A Greenough 70.04 45 ⇓P **P 14 05 37.8 +0.5**
baz=70,SNR=14
IHRS Heris 70.05 304 *e*P **P 14 05 37.5 -0.2**
E13A Victor 70.06 46 ⇓P **P 14 05 37.7 +0.3**
baz=70
C15A Salmond Ranch, 70.10 44 ⇑P **P 14 05 38.7 +1.0**
baz=70
IZAR Zarasai 70.15 327 *e*P **P 14 05 38.1 +0.5**
IZAR AMB AMB 14 05 38.7
comp=Z,12nm,0.8s
B16A M & M Farms, S 70.17 43 ⇓P **P 14 05 38.7 +0.6**
baz=70,SNR=12
G12A Big Creek, Yel 70.23 47 ⇑P **P 14 05 38.9 +0.3**
baz=70
IDID Didziasalis 70.24 327 AMB AMB 14 05 41.2
comp=Z,16nm,0.9s
CHMT Chamberlain Mo 70.28 45 *e*P **P 14 05 39.6 +0.7**
ISAL Salakas 70.32 327 *e*P **P 14 05 39.2 +0.5**
ISAL AMB AMB 14 05 40.8
comp=Z,30nm,0.9s
A17A Triple J Farms 70.36 42 ⇑P **P 14 05 39.3 +0.1**
baz=70,SNR=9.2
F13A Darby 70.38 46 ⇓P **P 14 05 39.8 +0.4**
baz=70
GNI Garni 70.42 306 *e*P **P 14 05 38.0 -1.8**
comp=Z,22nm,0.9s
GNI *e*pP **pP 14 05 54.6 +0.8**
GNI Garni 70.42 306 P **P 14 05 40.9 +1.1**
comp=Z,6.5nm,0.5s,baz=34,slow=4.4,SNR=5.7
GNI LR LR 14 39 42.9
comp=Z,136nm,18.6s,baz=252,slow=38
IIGN Ignalina 70.43 327 *e*P **P 14 05 39.9 +0.6**
IIGN AMB AMB 14 05 41.4
comp=Z,20nm,0.8s
AKH Akhalkalaki 70.44 308 P **P 14 05 40.9 +1.0**
E14A Clinton 70.46 45 ⇓P **P 14 05 40.6 +0.7**
baz=70
NACGM Naroch 70.50 326 *e* **P 14 05 38.0 -1.8**
C16A Fuhringer Ranc 70.54 43 ⇑P **P 14 05 41.1 +0.8**
baz=70,SNR=14
D15A Lincoln 70.60 44 ⇑P **P 14 05 41.6 +0.9**
baz=70
FFC Flin Flon 70.67 34*c**e*P **P 14 05 41.4 +0.6**
FFC Flin Flon 70.67 34 *e*P **P 14 05 40.7 -0.2**
FFC Flin Flon 70.67 34 P **P 14 05 41.1 +0.3**
comp=Z,98nm,0.7s,SNR=10
IMRD Marand 70.67 305 *e*P **P 14 05 41.2 -0.2**
B17A L&G Farms, Che 70.72 43 ⇓P **P 14 05 42.3 +0.9**
baz=70
A18A Metzger Ranch, 70.82 42 ⇓P **P 14 05 42.6 +0.7**
baz=71,SNR=5.1
H12A Diamond D Ranc 70.85 48 ⇑P **P 14 05 42.9 +0.5**
baz=71,SNR=5.3
G13A Cobalt 70.86 47 ⇑P **P 14 05 42.8 +0.3**
baz=71
WBK Wadi Bani Khal 70.89 284 P **P 14 05 44.1 +1.3**
SNR=5.2
BANOM Banah 70.91 288 P **P 14 05 43.4 +0.6**
SNR=11
E15A Deer Lodge 70.92 45 ⇑P **P 14 05 43.3 +0.6**
baz=71,SNR=8.3
D16A Dana Ranch, Ca 71.12 44 ⇑P **P 14 05 44.4 +0.5**
baz=71,SNR=5.1
I12A Atlanta 71.15 48 ⇓P **P 14 05 45.3 +1.1**
baz=71,SNR=6.5
C17A Wharram Farm, 71.16 43 ⇓P **P 14 05 44.7 +0.6**
baz=71
HRY Holter Researc 71.17 44 *e*P **P 14 05 45.6 +1.4**
ISRV Sarvestan 71.17 293 *e*P **P 14 05 45.0 +0.2**
H13A Challis 71.18 47 ⇓P **P 14 05 45.2 +0.9**
baz=71,SNR=6.3
B18A Beardsley Farm 71.19 42 ⇑P **P 14 05 44.0 -0.2**
baz=71,SNR=5.3
F15A Butte 71.36 45 ⇑P **P 14 05 45.9 +0.5**
baz=71,SNR=18
E16A East Helena 71.37 44 ⇑P **P 14 05 46.2 +0.8**
baz=71,SNR=7.0
LRM Limekiln Ridge 71.40 45 *e*P **P 14 05 47.0 +1.2**
EGMT Eagleton 71.43 42 *e*P **P 14 05 46.5 +0.7**
EGMT Eagleton 71.43 42 ⇑P **P 14 05 46.3 +0.5**
baz=71,SNR=9.8
D17A Six Diamond Ra 71.50 44 ⇓P **P 14 05 46.7 +0.5**
baz=71
HOQ Hoqain 71.55 286 P **P 14 05 47.3 +0.6**
SNR=6.9
NB2 NORSAR Subarra 71.56 337 P **P 14 05 45.9 -0.3**
baz=39,slow=6.2
NB2 NORSAR Subarra 71.56 337 P **P 14 05 45.9 -0.3**
comp=Z,25nm,0.9s,baz=39,slow=6.2
NOA NORSAR Array B 71.56 337 P **P 14 05 46.1 -0.1**
NOA NORSAR Array B 71.56 337 P **P 14 05 46.1 -0.1**
comp=Z,15nm,0.8s,baz=38,slow=6.0,SNR=55
NOA LR LR 14 40 16.1
comp=Z,133nm,18.4s,baz=270,slow=38
B19A Brinkman Farms 71.57 42 ⇓P **P 14 05 47.5 +1.0**
baz=71,SNR=5.1
DLMT Dillon 71.60 46 *e*P **P 14 05 48.7 +1.9**
I13A Wildhorse Cree 71.66 48 ⇓P **P 14 05 48.0 +0.6**
baz=71,SNR=5.2
JMDO Jabal Madar 71.68 284 P **P 14 05 48.0 +0.5**
SNR=7.1
HATD Hatta, Dubai 71.68 287 P **P 14 05 47.9 +0.4**
SNR=12
LCCM Lewis and Clar 71.70 45 P **P 14 05 48.5 +1.0**
HLID Hailey 71.71 48 ⇑P **P 14 05 48.6 +1.1**
baz=72
NC602 NORSAR Array S 71.71 337 *e*P **P 14 05 47.4 +0.3**
STKA Stephens Creek 71.71 181 LR LR 14 33 51.0
comp=Z,182nm,19.5s,baz=24,slow=33
G15A Dillon 71.79 46 ⇑P **P 14 05 48.8 +0.8**
baz=72,SNR=7.4
MCMT McKenzie Canyo 71.80 46 *e*P **P 14 05 46.7 -1.5**
comp=Z,1.1nm,0.7s
MCMT *e*pP **pP 14 06 02.6 +0.4**
A20A Cobblestone Ra 71.81 41 ⇓P **P 14 05 48.9 +1.0**
baz=72
ASHO Ashiyiah 71.82 287 P **P 14 05 48.7 +0.4**
SNR=8.6

E17A Martinsdale 71.85 44 ⇓P **P 14 05 48.5 +0.1**
baz=72,SNR=9.8
F16A Kennard Place, 71.87 45 ⇑P **P 14 05 49.8 +1.4**
baz=72,SNR=5.3
J13A Cove Ranch, Pi 71.94 48 ⇑P **P 14 05 50.1 +1.1**
baz=72,SNR=5.0
BOZ Bozeman (W) 71.95 45 *e*P **P 14 05 49.0 0.0**
BOZ *e**PP **pP 14 06 03.9 +0.9**
BOZ pmax pmax
comp=Z,15nm,0.7s
BOZ Bozeman (W) 71.95 45 *e*P **P 14 05 49.0 0.0**
comp=Z,15nm,0.7s
BOZ *e*pP **pP 14 06 03.9 +0.9**
BOZ Bozeman (W) 71.95 45 ⇑P **P 14 05 49.9 +1.0**
baz=72,SNR=17
C19A Slack Wire Ran 71.98 42 ⇑P **P 14 05 50.0 +1.0**
baz=72,SNR=13
I14A Mackay 72.02 47 ⇓P **P 14 05 51.1 +1.6**
baz=72
G16A Moss Hill, Enn 72.12 46 ⇑P **P 14 05 50.9 +0.9**
baz=72
BSY Bisya 72.13 285 P **P 14 05 50.8 +0.6**
SNR=8.3
A21A Bergtoll Ranch 72.24 40 ⇓P **P 14 05 51.6 +1.1**
baz=72
AKASG Malin Array Be 72.25 322 P **P 14 05 50.4 -0.1**
AKASG Malin Array Be 72.25 322 P **P 14 05 50.4 -0.1**
AKASG Malin Array Be 72.25 322 P **P 14 05 50.4 -0.1**
comp=Z,15nm,0.6s,baz=44,slow=6.1,SNR=67
AKASG LR LR 14 40 39.8
comp=Z,138nm,18.1s,baz=45,slow=38
AK01 Malin Array Si 72.27 322 *e*P **P 14 05 49.9 -0.6**
KIEV Kiev 72.27 322 *e*P **P 14 05 50.3 -0.2**
KIEV Kiev 72.27 322 *e*P **P 14 05 50.3 -0.2**
ARQ Araqi 72.28 286 P **P 14 05 51.9 +0.8**
SNR=6.8
E18A Harlowton 72.29 44 ⇑P **P 14 05 51.7 +0.7**
baz=72,SNR=5.1
AK02 Malin Array Si 72.29 322 *e*P **P 14 05 50.1 -0.6**
F17A Fitzpatrick Pl 72.31 44 ⇑P **P 14 05 51.8 +0.7**
baz=72,SNR=5.8
J14A Carey 72.37 48 ⇓P **P 14 05 53.2 +1.7**
baz=72
ASUD Al Ashush, Dub 72.39 288 P **P 14 05 52.2 +0.5**
SNR=6.9
D19A Cripps Ranch, 72.44 43 ⇑P **P 14 05 52.3 +0.5**
baz=72
NVAR Mina Array Bea 72.53 54 P **P 14 05 54.3 +1.6**
NVAR Mina Array Bea 72.53 54 P **P 14 05 54.3 +1.6**
comp=Z,1.4nm,0.8s,baz=291,slow=6.7,SNR=8.5
C20A Veseth Ranch, 72.53 42 ⇓P **P 14 05 52.8 +0.5**
baz=72,SNR=9.8
QLMT Earthquake Lak 72.58 46 *e*pP pP 14 06 08.1 +1.2
IDHR Dehrash 72.62 301 *e*P **P 14 05 51.8 -1.4**
SUW Suwalki 72.63 327 *e*P **P 14 05 52.1 -0.5**
SUW *e**PP **pP 14 06 08.1 +1.4**
SUW pmax pmax
comp=Z,33nm,0.9s
SUW Suwalki 72.63 327 *e*P **P 14 05 52.1 -0.5**
comp=Z,33nm,0.9s
SUW *e*pP **pP 14 06 08.1 +1.4**
SUW Suwalki 72.63 327 *e*P **P 14 05 52.5 -0.1**
IGHG Ghaleghazi 72.72 300 *e*P **P 14 05 52.4 -1.5**
A22A Carney Farms, 72.73 40 ⇓P **P 14 05 54.0 +0.6**
baz=72,SNR=11
H16A Russell Place, 72.76 46 ⇑P **P 14 05 54.9 +1.0**
baz=72,SNR=5.4
F18A Big Timber 72.82 44 ⇑P **P 14 05 55.4 +1.3**
baz=73,SNR=16
D20A Manuel Ranch, 72.87 42 ⇓P **P 14 05 55.3 +1.0**
baz=73,SNR=5.9
GCMT Greycliff 72.92 44 *e*P **P 14 05 55.1 +0.4**
comp=Z,10nm,0.9s
GCMT *e*pP **pP 14 06 09.9 +1.1**
E19A Rath Farm, Rou 72.95 43 ⇑P **P 14 05 55.5 +0.7**
baz=73,SNR=8.1
ELK Elko 72.97 51 *e*P **P 14 05 54.3 -1.0**
ELK *e*pP **pP 14 06 09.5 +0.2**
KONO Kongsberg 73.16 337 *e*P **P 14 05 55.8 +0.1**
F19A Roth Farm, Mol 73.26 44 ⇑P **P 14 05 57.2 +0.5**
baz=73,SNR=6.1
LKWY Lake 73.31 45 *e*P **P 14 05 57.5 +0.3**
LKWY *e**PP **PcP 14 06 13.6 +0.2**
LKWY pmax pmax
comp=Z,1.0nm,0.5s
LKWY Lake 73.31 45 *e*P **P 14 05 57.5 +0.3**
comp=Z,1.4nm,0.5s
LKWY *e*pP **PcP 14 06 13.6 +0.2**
H17A Grant Village 73.33 46 ⇓P **P 14 05 57.9 +0.6**
baz=73,SNR=5.9
IMW Indian Meadow 73.45 46 *e*P **P 14 05 57.8 -0.2**
comp=Z,11nm,0.8s
IMW *e*pP **PcP 14 06 13.9 -0.1**
B23A Brockton 73.54 40 ⇑P **P 14 05 58.6 +0.4**
baz=73,SNR=5.8
RLMT Red Lodge 73.57 44 *e*P **P 14 05 58.5 -0.1**
comp=Z,8.4nm,0.8s
RLMT *e*pP **PcP 14 06 13.9 -0.5**
SIM Simferopol' 73.60 315 *e*P **P 14 05 57.4 -1.1**
SIM pmax pmax
comp=Z,26nm,0.9s
SIM MLR MLR
comp=Z,300nm,21.0s
I17A Pilgrim Ck. 73.63 46 ⇑P **P 14 05 59.9 +0.9**
baz=73,SNR=6.6
MOOW Moose Ponds 73.65 46 *e*P **P 14 06 01.1 +1.9**
TPAW Teton Pass 73.70 47 *e*P **P 14 05 57.3 -2.2**
comp=Z,6.9nm,0.9s
TPAW *e*PcP **PcP 14 06 14.7 -0.4**
ASK Askoy 73.72 339 *e*P **P 14 05 58.6 -0.3**
RUND Rundenannen 73.73 339 *e*P **P 14 05 58.8 -0.2**
RUND *e*P **P 14 05 58.8 -0.2**
RUND AMB AMB 14 06 03.5
comp=Z,123nm,2.1s
BER Bergen 73.77 339 *e*P **P 14 05 59.0 -0.2**
LOHW Long Hollow 73.82 46 *e*P **P 14 05 58.4 -1.8**
comp=Z,4.9nm,1.0s
LOHW *e*PcP **pP 14 06 14.8 +0.6**
D22A Cohagen 73.84 41 ⇓P **P 14 06 00.5 +0.5**
baz=74,SNR=5.8
C23A Lambert 73.89 40 ⇓P **P 14 06 01.0 +0.7**
baz=74,SNR=5.0
DGMT Dagmar 73.93 39 *e*pP pP 14 06 15.3 +0.7
DGMT Dagmar 73.93 39 ⇓P **P 14 06 00.9 +0.4**
baz=74
G20A Bridger 74.06 44 ⇓P **P 14 06 01.7 +0.2**
baz=74
DUG Dugway 74.75 50 *e*P **P 14 06 05.8 +0.2**
DUG *e* 14 06 20.0
DUG pmax pmax
comp=Z,5.0nm,0.9s
DUG Dugway 74.75 50 *e*P **P 14 06 05.8 +0.2**
comp=Z,4.9nm,0.9s
DUG *e*PcP **pP 14 06 19.9 +0.3**
DUG Dugway 74.75 50 ⇓P **P 14 06 07.0 +1.4**
baz=74
D24A Glendive 74.79 41 ⇓P **P 14 06 06.7 +1.2**
baz=74
J19A Crowheart 74.90 46 ⇓P **P 14 06 08.0 +1.6**
baz=75
EDW2 Edwards Air Fo 74.92 57 ⇑P **P 14 06 06.8 +0.4**
baz=75
MIB Mutribah 74.95 296 *e*P **P 14 06 05.9 -0.8**
MIB AMb AMB 14 06 06.9
comp=Z,84nm,1.1s
BW06 Boulder Array 74.95 46 ⇑P **P 14 06 06.8 +0.1**
baz=75
PDAR Pinedale Array 74.95 46 P **P 14 06 07.3 +0.6**
PDAR Pinedale Array 74.95 46 P **P 14 06 07.3 +0.6**
comp=Z,1.7nm,0.7s,baz=273,slow=1.8,SNR=19
I20A Worland 74.95 45 ⇓P **P 14 06 07.4 +0.8**
baz=75
H21A Big Horn, Sher 75.08 44 ⇓P **P 14 06 08.5 +1.1**
baz=75
M17A Scullys Gap (B 75.17 48 ⇓P **P 14 06 08.8 +0.8**
baz=75
E24A Baker 75.18 41 ⇓P **P 14 06 08.3 +0.5**
baz=75
QRN Al-Qurain 75.19 295 *e*P **P 14 06 07.6 -0.5**
QRN AMb AMB 14 06 08.2
comp=Z,123nm,0.5s
F23A Volborg 75.19 42 ⇓P **P 14 06 08.7 +0.8**
baz=75
BEL Belsk 75.20 327 *e*P **P 14 06 08.9 +1.2**
LVV L'vov 75.27 324 *e*P **P 14 06 08.4 +0.3**
RDF Al-Radifah 75.34 295 *e*P **P 14 06 08.8 -0.1**

RDF AMb AMB 14 06 09.9
comp=Z,100nm,0.6s
NAY Al-Naaiem 75.35 296 *e*P **P 14 06 08.2 -0.8**
NAY AMb AMB 14 06 08.9
comp=Z,44nm,0.7s
MALT Malatya 75.41 308 *e*P **P 14 06 09.6 +0.3**
MALT pmax pmax
comp=Z,35nm,1.2s
MALT Malatya 75.41 308 *e*P **P 14 06 09.6 +0.3**
comp=Z,35nm,1.2s
MALT Malatya 75.41 308 ⇑*i*P **P 14 06 10.6 +1.3**
H22A Clearmont 75.47 43 ⇓P **P 14 06 10.4 +0.9**
baz=75
I21A Big Trails, Te 75.49 45 ⇓P **P 14 06 11.1 +1.4**
baz=75,SNR=7.2
K20A Yellowstone Ra 75.69 46 ⇑P **P 14 06 11.5 +0.6**
baz=76
J21A Lysite 75.72 45 ⇑P **P 14 06 11.8 +0.6**
baz=76
I22A 9 Mile Ranch, 75.87 44 ⇓P **P 14 06 12.8 +1.0**
baz=76
KWP Kalwaria Pacla 75.99 324 ⇑P **P 14 06 13.3 +1.0**
KWP Kalwaria Pacla 75.99 324 *e*P **P 14 06 10.9 -1.4**
comp=Z,61nm,1.1s
KWP Kalwaria Pacla 75.99 324 ⇑*i*P **P 14 06 13.3 +1.0**
KWP Kalwaria Pacla 75.99 324 *e*P **P 14 06 13.3 +1.0**
J22A Midwest 76.20 44 ⇓P **P 14 06 14.4 +0.6**
baz=76,SNR=7.7
BUR08 Bucovina Ar. S 76.28 322 *e*P **P 14 06 13.0 -1.1**
BURAR Bucovina Array 76.29 322 ⇑P **P 14 06 14.7 +0.6**
BURAR Bucovina Array 76.29 322 ⇑*i*P **P 14 06 14.8 +0.6**
H24A Dirks Ranch, A 76.30 42 ⇓P **P 14 06 14.3 0.0**
baz=76
TESR 76.38 320 ⇑*i*P **P 14 06 14.9 +0.3**
ULM Lac du Bonnet 76.47 34 P **P 14 06 14.6 -0.4**
ULM Lac du Bonnet 76.47 34 P **P 14 06 14.6 -0.4**
comp=Z,2.5nm,0.7s,baz=309,slow=6.6,SNR=4.7
M20A Sweetwater, Wa 76.56 47 ⇓P **P 14 06 16.5 +0.5**
baz=76
CFR Carcaliu 76.57 318 ⇑P **P 14 06 15.9 +0.3**
CFR Carcaliu 76.57 318 ⇑*i*P **P 14 06 15.9 +0.3**
P18A Preston Nutter 76.62 49 ⇓P **P 14 06 17.9 +1.4**
baz=76
KOLS Kolonicke sedl 76.70 324 *e*P **P 14 06 16.8 +0.5**
KOLS pmax pmax
comp=Z,9.0nm,1.0s
KOLS Kolonicke sedl 76.70 324 *e*P **P 14 06 16.8 +0.5**
VRI Vrincioaia 76.80 320 ⇑P **P 14 06 17.9 +1.0**
VRI Vrincioaia 76.80 320 ⇑*i*P **P 14 06 17.9 +1.0**
SRU San Rafael 76.80 50 *e*P **P 14 06 17.4 +0.1**
SRU *e* 14 06 28.6
SRU *e**PP **pP 14 06 32.6 +1.1**
SRU pmax pmax
comp=Z,4.0nm,0.7s
SRU San Rafael 76.80 50 *e*P **P 14 06 17.4 +0.1**
comp=Z,3.6nm,0.7s
SRU *e*PcP **PcP 14 06 28.6 +0.2**
SRU *e*pP **pP 14 06 32.6 +1.1**
SRU San Rafael 76.80 50 ⇓P **P 14 06 17.8 +0.5**
baz=77
OJC Ojcow 76.83 326 ⇑*i*P **P 14 06 17.7 +0.7**
OJC *e* 14 06 28.7
OJC Ojcow 76.83 326 *i* P **P 14 06 17.7 +0.7**
OJC *e*PcP **PcP 14 06 28.7 +0.6**
PLOR Plostina 76.85 320 ⇓P **P 14 06 18.2 +0.9**
PLOR Plostina 76.85 320 ⇓*i*P **P 14 06 18.2 +0.9**
UZH Uzhgorod 76.91 324 *e*P **P 14 06 16.5 -1.0**
UZH *e* 14 06 27.9
UZH *e* 14 06 32.3
TIRR Tirgusor 76.93 318 ⇑P **P 14 06 18.0 +0.3**
TIRR Tirgusor 76.93 318 ⇑*i*P **P 14 06 18.0 +0.3**
M21A Separation Pea 76.94 46 ⇑P **P 14 06 18.7 +0.6**
baz=77
N20A Spence Gulch, 76.95 47 ⇓P **P 14 06 18.5 +0.3**
baz=77
CRVS Cervenica-Dubn 77.08 324 *e*P **P 14 06 18.6 +0.1**
CRVS pmax pmax
comp=Z,9.0nm,0.9s
CRVS Cervenica-Dubn 77.08 324 *e*P **P 14 06 18.6 +0.1**
TRPA Tarpa 77.17 323 ⇓*i*P **P 14 06 19.9 +1.0**
TRPA Tarpa 77.17 323 ⇑*e*P **P 14 06 20.1 +1.2**
BRTR Keskin Array B 77.31 312 P **P 14 06 20.4 +0.3**
BRTR PP **PP 14 09 15.7 +1.5**
BRTR Keskin Array B 77.31 312 P **P 14 06 20.4 +0.3**
comp=Z,5.6nm,0.7s,baz=72,slow=4.0,SNR=26
BRTR PP **PP 14 09 15.7 +1.5**
comp=Z,1.0nm,0.8s,baz=122,slow=1.6,SNR=3.6
BRTR LR LR 14 45 28.6
comp=Z,68nm,21.2s,baz=204,slow=40
P19A Cripple Cowboy 77.35 49 ⇓P **P 14 06 21.2 +0.8**
baz=77
W13A Hualapai Mount 77.38 55 ⇑P **P 14 06 21.2 +0.5**
baz=77
ISR Istrita 77.42 319 ⇑P **P 14 06 21.5 +1.0**
ISR Istrita 77.42 319 ⇑*i*P **P 14 06 21.5 +1.0**
N21A Black Mountain 77.42 47 ⇓P **P 14 06 21.0 +0.2**
baz=77
M22A Cedar Creek Ra 77.50 46 ⇑P **P 14 06 22.9 +1.6**
baz=77
L23A Garrett 77.50 45 ⇓P **P 14 06 21.7 +0.4**
baz=77,SNR=5.5
U15A North Rim 77.50 53 ⇓P **P 14 06 23.2 +1.8**
baz=77
BSEG Bad Segeberg 77.58 333 *e*P **P 14 06 21.4 +0.3**
BSEG pmax pmax
comp=Z,39nm,1.3s
BSEG Bad Segeberg 77.58 333 *e*P **P 14 06 21.4 +0.3**
comp=Z,39nm,1.3s
PSN Preselentsi 77.59 317 *i* P **P 14 06 22.1 +0.7**
Q19A Hogan Spring (77.64 49 ⇓P **P 14 06 23.1 +1.2**
baz=77
ANTO Ankara 77.70 312 *e*P **P 14 06 20.9 -1.3**
ANTO pmax pmax
comp=Z,29nm,0.9s
ANTO Ankara 77.70 312 *e*P **P 14 06 20.9 -1.3**
comp=Z,29nm,0.9s
ANTO Ankara 77.70 312 P **P 14 06 22.8 +0.7**
SNR=7.6
KSP Ksiaz 77.80 328 ⇑*e*P **P 14 06 23.1 +0.6**
KSP Ksiaz 77.80 328 *e*P **P 14 06 23.2 +0.7**
OKC Ostrava-Krasne 77.82 327 *e*P **P 14 06 23.2 +0.7**
OKC Ostrava-Krasne 77.82 327 ⇑*e*P **P 14 06 23.2 +0.7**
SULR 77.87 319 ⇑*i*P **P 14 06 20.5 -2.4**
VOIR 77.93 320 ⇓P **P 14 06 24.8 +1.4**
VOIR 77.93 320 ⇓*i*P **P 14 06 24.8 +1.4**
AGMN Agassiz Nation 77.94 35 *e*P **P 14 06 22.2 -1.0**
comp=Z,10nm,1.0s
N22A Wattenberg Ran 77.99 46 ⇓P **P 14 06 25.5 +1.5**
baz=78
S18A Hurst Farm, Bl 78.05 51 ⇑P **P 14 06 26.2 +1.8**
baz=78
DRGR 78.07 322 ⇑P **P 14 06 24.8 +0.7**
DRGR 78.07 322 ⇑*i*P **P 14 06 24.8 +0.7**
MORC Moravsky Berou 78.11 327 ⇑P **P 14 06 24.9 +0.6**
MORC Moravsky Berou 78.11 327 *e*P P 14 06 21.0 -3.2
comp=Z,15nm,0.9s
MORC *e*pP pP 14 06 39.9 +1.5
MORC Moravsky Berou 78.11 327 ⇑*i*P **P 14 06 24.9 +0.6**
DPC Dobruska-Polom 78.17 328 ⇑*i*P **P 14 06 25.6 +1.0**
DPC *e* 14 06 40.5
DPC Dobruska-Polom 78.17 328 ⇑*i*P **P 14 06 25.6 +1.0**
DPC *e*pP **pP 14 06 40.5 +1.7**
UPC Upice 78.18 328 *e*P **P 14 06 25.4 +0.9**
UPC *e* 14 06 43.3
UPC Upice 78.18 328 ⇑*e*P **P 14 06 25.4 +0.9**
UPC *e*pP **pP 14 06 43.3 +4.5**
N23A Red Feather La 78.20 46 ⇓P **P 14 06 26.8 +1.6**
baz=78
ABTO Aybut 78.31 283 P **P 14 06 25.4 -0.4**
SNR=8.2
O22A Kremmling 78.37 47 ⇓P **P 14 06 27.1 +0.9**
baz=78
PSZ Piszkesteto 78.51 325 ⇑P **P 14 06 27.5 +1.0**
PSZ Piszkesteto 78.51 325 *e*P **P 14 06 25.1 -1.5**
comp=Z,17nm,1.0s
PSZ Piszkesteto 78.51 325 ⇑*i*P **P 14 06 27.5 +1.0**
PSZ Piszkesteto 78.51 325 ⇑*e*P **P 14 06 27.6 +1.0**
VYHS Vyhne 78.54 326 *e*P **P 14 06 27.5 +0.9**
VYHS pmax pmax
comp=Z,6.0nm,1.0s
VYHS Vyhne 78.54 326 *e*P **P 14 06 27.5 +0.9**
P22A Eagle 78.64 47 ⇓P **P 14 06 29.4 +1.8**
baz=78
R20A Redvale 78.67 49 ⇓P **P 14 06 28.8 +1.1**

baz=78
Y14A Wickenburg 78.69 55 ⇓P P 14 06 29.2 +1.4
baz=78
BRG Berggiesshubel 78.71 330 eP P 14 06 27.6 +0.2
comp=Z,6.6nm,0.9s
BRG e 14 06 40.7
comp=Z,5.9nm,1.0s
BRG Berggiesshubel 78.71 330 eP P 14 06 27.6 +0.2
BRG e 14 06 40.7
BRG pmax pmax
comp=Z,7.0nm,0.9s
BRG pmax pmax
comp=Z,6.0nm,1.0s
BRG Berggiesshubel 78.71 330 eP P 14 06 27.8 +0.4
comp=Z,7.0nm,0.9s
BRG epP pP 14 06 40.6 -1.1
CLL Collm 78.72 330⇑iP P 14 06 27.6 +0.1
CLL i 14 06 33.9
CLL i *PP pP 14 06 40.8 -0.9
CLL pmax pmax
comp=Z,12nm,0.8s
CLL Collm 78.72 330 eP P 14 06 27.7 +0.2
comp=Z,12nm,0.8s
CLL Collm 78.72 330⇑iP P 14 06 27.6 +0.1
comp=Z,12nm,0.8s
CLL i (PcP) PcP 14 06 33.9 -2.3
CLL i pP pP 14 06 40.8 -0.9
CLL i 14 06 45.1
CLL ePP PP 14 09 25.0 -0.4
PVCC Panska Ves 78.74 329 eP P 14 06 28.4 +0.8
PVCC Panska Ves 78.74 329⇑eP P 14 06 28.4 +0.8
SMCO Snowmass 78.80 48 eP P 14 06 27.9 -0.9
comp=Z,17nm,1.4s
SMCO epP pP 14 06 43.9 +1.0
VRAC Vranov 78.87 327⇑iP P 14 06 29.4 +1.0
FBE Freiberg 78.90 330 eP P 14 06 29.0 +0.5
comp=Z,18nm,1.3s
S20A Disappointment 78.92 50 ⇓P P 14 06 30.1 +0.9
baz=79
R21A Cimarron 79.03 49 ⇑P P 14 06 31.0 +1.2
baz=79
SZH Strazhica 79.04 318 i P P 14 06 29.0 -0.4
Q22A Crested Butte, 79.06 48 ⇓P P 14 06 31.9 +1.9
baz=79
GZR Gura Zlata 79.06 321 ⇓P P 14 06 29.8 +0.2
GZR Gura Zlata 79.06 321⇓iP P 14 06 29.8 +0.2
SMOL Smolenice 79.13 326 eP P 14 06 31.6 +1.8
SMOL Smolenice 79.13 326 eP P 14 06 31.6 +1.8
ISCO Idaho Springs 79.14 47 eP P 14 06 29.3 -1.2
ISCO e*PP pP 14 06 45.7 +1.0
ISCO pmax pmax
comp=Z,4.0nm,0.8s
ISCO Idaho Springs 79.14 47 eP P 14 06 29.3 -1.2
comp=Z,4.4nm,0.8s
ISCO epP pP 14 06 45.7 +1.0
ISCO Idaho Springs 79.14 47 ⇑P P 14 06 32.6 +2.1
baz=79
PRU Pruhonice 79.17 329⇑iP P 14 06 30.8 +0.8
PRU e 14 06 43.8
PRU MLR MLR
comp=Z,300nm,23.4s
PRU Pruhonice 79.17 329⇑iP P 14 06 30.8 +0.8
PRU epP pP 14 06 43.8 -0.4
PRU AMS AMS 14 44 00.0
comp=Z,300nm,23.4s
MVCO Mesa Verde 79.26 50 eP P 14 06 30.8 -0.2
comp=Z,1.6nm,0.6s
MVCO epP pP 14 06 46.0 +0.8
MVCO Mesa Verde 79.26 50 ⇑P P 14 06 32.2 +1.2
baz=79
CLZ Clausthal 79.26 332 eP P 14 06 31.1 +0.6
CLZ pmax pmax
comp=Z,25nm,1.4s
CLZ Clausthal 79.26 332 eP P 14 06 31.1 +0.6
comp=Z,25nm,1.4s
NEUB Neuenburg 79.27 331 eP P 14 06 31.1 +0.6
comp=Z,14nm,0.7s
JMB Yambol 79.28 317 i P P 14 06 31.0 +0.3
P23A Jefferson 79.31 47 ⇑P P 14 06 32.6 +1.2
baz=79
TREC Trest 79.34 328 eP P 14 06 32.0 +1.0
TREC Trest 79.34 328⇑eP P 14 06 32.0 +1.0
X16A Lo Mia Camp, P 79.35 54 ⇓P P 14 06 32.3 +0.8
baz=79
BZS Buzias 79.45 322 ⇓P P 14 06 31.5 -0.1
BZS Buzias 79.45 322⇓iP P 14 06 31.5 -0.1
ZST Bratislava 79.52 326 eP P 14 06 32.9 +1.0
ZST Bratislava 79.52 326 eP P 14 06 32.9 +1.0
R22A Saguache, Gunn 79.58 48 ⇓P P 14 06 35.5 +2.6
baz=79
TANN Tannenbergstha 79.64 330 eP P 14 06 32.8 +0.1
comp=Z,12nm,1.8s
WERD Werda 79.68 330 eP P 14 06 33.0 +0.2
comp=Z,8.0nm,1.1s
PLN Plauen 79.70 330 eP P 14 06 33.4 +0.5
comp=Z,44nm,1.2s
GUNZ Gunzen 79.73 330 eP P 14 06 33.5 +0.4
comp=Z,6.0nm,0.8s
MOX Moxa 79.78 331 eP P 14 06 33.5 +0.2
MOX e*PP pP 14 06 46.7 -0.9
MOX pmax pmax
comp=Z,7.0nm,1.0s
MOX MLR MLR
comp=Z,100nm,21.1s
MOX Moxa 79.78 331 eP P 14 06 33.5 +0.2
comp=Z,7.0nm,1.0s
MOX epP pP 14 06 46.7 -0.9
MOX eL L 14 42 28.5
comp=Z,112nm,21.1s
WERN Wernitzgruen 79.78 330 eP P 14 06 33.7 +0.3
comp=Z,7.0nm,1.0s
WERN epP pP 14 06 46.9 -0.7
NKC Novy Kostel 79.80 330 eP P 14 06 32.8 -0.6
NKC Novy Kostel 79.80 330⇑eP P 14 06 32.8 -0.6
S22A 4UR Ranch, Cre 79.86 49 ⇑P P 14 06 36.4 +2.0
baz=80
MPEP Malo Peshtene 80.08 319 i P P 14 06 35.5 +0.4
N27A Anderson Farm, 80.12 44 ⇑P P 14 06 37.1 +1.6
baz=80
MANZ Manzenberg 80.12 330 eP P 14 06 35.7 +0.5
comp=Z,7.0nm,0.9s
MANZ epP pP 14 06 48.8 -0.7
R23A Moffat 80.13 48 ⇑P P 14 06 38.1 +2.3
baz=80
P25A Willow Gulch B 80.14 46 ⇓P P 14 06 37.5 +1.8
baz=80
SOP Sopron 80.14 326⇑eP P 14 06 36.6 +1.3
KHC Kasperske Hory 80.23 329⇑iP P 14 06 36.5 +0.7
KHC e 14 06 49.9
KHC MLR MLR
comp=Z,300nm,19.0s
KHC Kasperske Hory 80.23 329 eP P 14 06 35.1 -0.7
comp=Z,9.5nm,0.8s
KHC Kasperske Hory 80.23 329⇑iP P 14 06 36.5 +0.7
KHC epP pP 14 06 49.9 -0.2
KHC ex x 14 09 17.5
KHC AMS AMS 14 44 50.0
comp=Z,300nm,19.0s
CONA Conrad Observa 80.25 327⇑iP P 14 06 37.0 +1.0
SNR=13
CONA Conrad Observa 80.25 327⇑iP P 14 06 37.0 +1.0
ROTZ Rotzenmuhle 80.26 330 eP P 14 06 36.8 +0.9
comp=Z,10.0nm,1.1s
ROTZ epP pP 14 06 49.6 -0.6
T22A Edith 80.32 49 ⇑P P 14 06 38.2 +1.4
baz=80
ASF Jabal al Asfar 80.36 304 LR LR 14 46 51.3
comp=Z,37nm,19.2s,baz=258,slow=39
GEC2 GERESS Array S 80.41 328 eP P 14 06 37.0 +0.1
GEC2 pmax pmax
comp=Z,6.0nm,0.8s
GEC2 GERESS Array S 80.41 328 eP P 14 06 37.0 +0.1
comp=Z,6.0nm,0.8s
GERES GERESS Array B 80.41 328 P P 14 06 37.0 +0.1
GERES PP PP 14 09 29.8 -10
GERES GERESS Array B 80.41 328 P P 14 06 37.0 +0.1
comp=Z,5.0nm,0.8s,baz=33,slow=5.1,SNR=34
GERES PP PP 14 09 29.8 -10
comp=Z,1.8nm,0.9s,baz=49,slow=9.0,SNR=3.5
GERES LR LR 14 45 23.8
comp=Z,171nm,19.1s,baz=87,slow=38
PGB Panagyurishte 80.46 319 eP P 14 06 37.5 +0.3
WET Wettzell 80.50 329 eP P 14 06 38.1 +0.8
WET pmax pmax
comp=Z,16nm,1.1s
WET Wettzell 80.50 329 eP P 14 06 38.1 +0.8
comp=Z,16nm,1.1s
GRF Grafenberg Arr 80.70 330 eP P 14 06 39.1 +0.8
GRF e*PP pP 14 06 52.4 -0.2
GRF pmax pmax
comp=Z,22nm,0.9s
GRF MLR MLR
comp=Z,100nm,20.7s
GRF Grafenberg Arr 80.70 330 eP P 14 06 39.1 +0.8
comp=Z,22nm,0.9s
GRF epP pP 14 06 52.4 -0.2
GRF eL L 14 44 41.9
comp=Z,97nm,20.7s
MMAI Mount Meron Ar 80.73 305 P P 14 06 39.7 +0.8
MMAI Mount Meron Ar 80.73 305 P P 14 06 39.7 +0.8
comp=Z,9.2nm,0.8s,baz=51,slow=6.6,SNR=11
RZN Rozhen 80.81 318 i P P 14 06 39.5 +0.3
S24A Houchin Ranch, 80.86 48 ⇑P P 14 06 41.0 +1.2
baz=81
VTS Vitosha 80.91 319 ⇑P P 14 06 40.5 +0.8
VTS Vitosha 80.91 319⇑iP P 14 06 40.5 +0.8
VTS Vitosha 80.91 319 i P P 14 06 39.7 0.0
Q26A Hugo 80.92 46 ⇓P P 14 06 41.3 +1.5
baz=81
ECSD EROS Data Cent 81.00 39 eP P 14 06 38.3 -1.7
comp=Z,21nm,1.4s
ECSD epP pP 14 06 55.0 +0.7
R25A Fountain Ranch 81.03 47 ⇑P P 14 06 41.1 +0.6
baz=81
X20A Quemado 81.06 52 ⇑P P 14 06 42.8 +2.0
baz=81
V22A San Miguel Ran 81.08 50 ⇓P P 14 06 40.9 0.0
baz=81
S25A Robets Cordova 81.29 48 ⇑P P 14 06 42.5 +0.6
baz=81
MMB Musomiste 81.38 318 i P P 14 06 41.1 -1.0
R26A Arlington 81.39 47 ⇓P P 14 06 42.9 +0.6
baz=81,SNR=6.6
KKB Krupnik 81.51 319 i P P 14 06 42.8 +0.1
X21A Alamocita Cree 81.56 52 ⇑P P 14 06 45.0 +1.5
baz=81
Y20A Horse Springs, 81.57 53 ⇑P P 14 06 44.9 +1.4
baz=81
PERS Pernice 81.58 326 i P P 14 06 43.5 +0.4
SOKA Soboth 81.58 326⇑iP P 14 06 43.5 +0.4
SOKA Soboth 81.58 326⇑iP P 14 06 43.5 +0.4
RJOB Jochberg 81.66 328 eP P 14 06 44.3 +0.8
comp=Z,15nm,0.9s
T25A Trinidad 81.67 48 ⇑P P 14 06 45.0 +1.0
baz=81,SNR=6.1
R27A Eads 81.77 46 ⇓P P 14 06 44.8 +0.5
baz=82
S26A Kim 81.86 47 ⇑P P 14 06 44.9 +0.1
baz=82
FUR Furstenfeldbru 81.92 329 eP P 14 06 45.5 +0.7
FUR pmax pmax
comp=Z,33nm,1.0s
FUR Furstenfeldbru 81.92 329 eP P 14 06 45.5 +0.7
comp=Z,33nm,1.0s
KBA Koelnbreinsper 81.97 328⇓iP P 14 06 45.5 +0.2
KBA Koelnbreinsper 81.97 328⇓iP P 14 06 45.5 +0.2
SNR=11
KBA Koelnbreinsper 81.97 328⇓iP P 14 06 45.5 +0.2
Z20A Nine Sixteen R 81.98 53 ⇑P P 14 06 46.8 +1.2
baz=82
ANMO Albuquerque 82.01 51 eP P 14 06 46.3 +0.5
comp=Z,9.2nm,1.1s
SCHQ Schefferville 82.11 17 eP P 14 06 43.6 -2.0
comp=Z,3.6nm,0.7s
SCHQ epP pP 14 06 59.8 -0.2
SCHQ Schefferville 82.11 17 P P 14 06 45.8 +0.2
comp=Z,5.1nm,0.7s,baz=342,slow=5.6,SNR=12
SCHQ LR LR 14 45 18.1
comp=Z,68nm,18.9s,baz=40,slow=37
T26A Comanche Natio 82.11 47 ⇓P P 14 06 46.3 +0.1
baz=82,SNR=6.3
V24A Rampart Ranch, 82.16 49 ⇓P P 14 06 48.3 +1.7
baz=82
VAY Valandovo 82.17 319⇑iP P 14 06 46.2 +0.1
U25A Circle Dot Ran 82.19 48 ⇑P P 14 06 47.7 +1.0
baz=82
MYKA Terra Mystica 82.20 327⇑iP P 14 06 46.2 -0.1
MYKA Terra Mystica 82.20 327⇑iP P 14 06 46.2 -0.1
STU Stuttgart 82.22 331 eP P 14 06 46.8 +0.5
comp=Z,23nm,0.8s
SKO Skopje 82.25 320⇑eP P 14 06 48.1 +1.5
LJU Ljubljana 82.30 326 i P P 14 06 46.8 0.0
VISS Visnje 82.35 326 i P P 14 06 45.2 -1.9
Y22A Socorro 82.40 52 ⇑P P 14 06 49.2 +1.4
baz=82
Z21A St. Cloud Mine 82.41 53 ⇓P P 14 06 49.7 +1.8
baz=82
BOJS Bojanci 82.41 326 i P P 14 06 47.4 0.0
X23A Hourglass Bar 82.42 51 ⇑P P 14 06 48.2 +0.3
baz=82
W24A Lazy 6 Ranch, 82.44 50 ⇓P P 14 06 49.9 +1.9
baz=82,SNR=5.3
V25A Rancho No Teng 82.47 49 ⇓P P 14 06 48.9 +0.8
baz=82
CADS Cadrg 82.48 327 i P P 14 06 46.8 -1.0
JAVS Javornik 82.61 326 i P P 14 06 47.8 -0.7
MOTA Moosalm 82.66 329⇑iP P 14 06 49.0 +0.2
MOTA Moosalm 82.66 329⇑iP P 14 06 49.0 +0.2
SNR=7.4
MOTA Moosalm 82.66 329⇑iP P 14 06 49.0 +0.2
RETA Reutte 82.67 329 i P P 14 06 49.3 +0.5
SNR=12
RETA Reutte 82.67 329 i P P 14 06 49.3 +0.5
319A Douglas 82.73 55 ⇓P P 14 06 50.9 +1.4
baz=82
220A Playas Peak, P 82.84 54 ⇓P P 14 06 51.7 +1.6
baz=83
121A Cookes Peak, D 82.87 53 ⇑P P 14 06 51.9 +1.6
baz=83
Z22A Elephant Butte 82.87 52 ⇓P P 14 06 50.5 +0.3
baz=83
X24A Lazy VL Ranch, 82.88 50 ⇑P P 14 06 52.7 +2.4
baz=83
BFO Black Forest 82.91 331 eP P 14 06 50.2 +0.3
BFO pmax pmax
comp=Z,17nm,1.2s
BFO Black Forest 82.91 331 eP P 14 06 50.2 +0.3
comp=Z,17nm,1.2s
Y23A Lovelace Mesa, 82.95 51 ⇑P P 14 06 52.1 +1.4
baz=83
V26A Tequesquite Ra 82.97 49 ⇓P P 14 06 51.2 +0.6
baz=83
W25A X Bar L Ranch, 82.99 49 ⇑P P 14 06 51.6 +0.8
baz=83,SNR=6.1
FETA Feichten 83.07 329⇓iP P 14 06 50.8 -0.2
SNR=5.4
FETA Feichten 83.07 329⇓iP P 14 06 50.8 -0.2
DAVA Damuels 83.18 330⇑iP P 14 06 51.5 -0.1
DAVA Damuels 83.18 330⇑iP P 14 06 51.5 -0.1
CDF Champ du Feu 83.22 332⇑iP P 14 06 51.6 -0.1
comp=Z,19nm,0.9s
CDF Champ du Feu 83.22 332⇑iP P 14 06 51.6 -0.1
CDF pmax pmax
comp=Z,19nm,0.9s
CDF Champ du Feu 83.22 332⇑iP P 14 06 51.6 -0.1
comp=Z,19nm,0.9s
EIL Elat 83.27 303 P P 14 06 51.8 -0.3
EIL Elat 83.27 303 P P 14 06 51.8 -0.3
comp=Z,7.6nm,0.7s,baz=63,slow=3.0,SNR=6.9
Z23A Rita Site, Whi 83.31 52 ⇑P P 14 06 53.7 +1.2
baz=83
Y24A Capitan 83.32 51 ⇑P P 14 06 52.2 -0.4
baz=83
X25A Clemmons Ranch 83.36 50 ⇓P P 14 06 53.5 +0.8
baz=83,SNR=6.8
ECH Echery 83.43 332 eP P 14 06 50.2 -2.4
ECH pmax pmax
comp=Z,9.0nm,1.0s
ECH Echery 83.43 332 eP P 14 06 50.2 -2.4
comp=Z,8.8nm,1.0s
PAGF Fort de Pagny 83.66 333⇑iP P 14 06 54.1 +0.3
comp=Z,12nm,0.9s
PAGF Fort de Pagny 83.66 333⇑iP P 14 06 54.1 +0.3
comp=Z,12nm,0.9s
APE Apeiranthos 83.72 314 ⇑P P 14 06 52.9 -1.5
APE Apeiranthos 83.72 314⇑iP P 14 06 52.9 -1.5
X26A CR and CF Fran 83.84 49 ⇓P P 14 06 56.5 +1.4
baz=84,SNR=8.0
HINF Hinteralfeld 83.88 332 eP P 14 06 54.5 -0.5
comp=Z,9.3nm,0.7s
HINF Hinteralfeld 83.88 332 eP P 14 06 54.5 -0.5
HINF pmax pmax
comp=Z,9.0nm,0.7s
HINF Hinteralfeld 83.88 332 eP P 14 06 54.5 -0.5
comp=Z,9.3nm,0.7s
HAU Haudompre 83.90 332⇑iP P 14 06 54.8 -0.3
comp=Z,18nm,0.8s
HAU eR
comp=Z,131nm,22.8s
HAU Haudompre 83.90 332⇑iP P 14 06 54.8 -0.3
HAU pmax pmax
comp=Z,18nm,0.8s
HAU Haudompre 83.90 332⇑iP P 14 06 54.8 -0.3
comp=Z,18nm,0.8s
MEZF Maizieres J'vi 83.94 333 eP P 14 06 55.4 +0.2
comp=Z,19nm,0.7s
MEZF Maizieres J'vi 83.94 333 eP P 14 06 55.4 +0.2
comp=Z,19nm,0.7s
TUE Stuetta 84.06 329 eP P 14 06 54.0 -2.1
comp=Z,12nm,0.8s
124A Stringfield Ra 84.17 52 ⇓P P 14 06 58.0 +1.1
baz=84
SFTF Sexfontaines 84.20 333 eP P 14 06 56.6 +0.1
comp=Z,29nm,0.9s
SFTF Sexfontaines 84.20 333 eP P 14 06 56.6 +0.1
comp=Z,29nm,0.9s
Z25A Roswell 84.20 51 ⇓P P 14 06 57.9 +0.9
baz=84,SNR=5.4
T31A Randall Ranch, 84.33 45 ⇓P P 14 06 58.0 +0.5
baz=84
224A Cornudas Mount 84.56 52 ⇑P P 14 06 59.5 +0.6
baz=84
Z26A Caprock 84.65 50 ⇑P P 14 07 00.1 +0.8
baz=84,SNR=5.3
125A Gardner Draw, 84.68 51 ⇓P P 14 07 01.0 +1.5
baz=84
Y27A Causey 84.69 49 ⇑P P 14 07 00.2 +0.7
baz=84
PMOR Pomariorio Ree 84.79 114 eT T 15 40 15.9
comp=Z,33nm,0.2s
324A Moseley Ranch, 85.03 53 ⇑P P 14 07 02.0 +0.8
baz=85
Z27A Tatum 85.06 50 ⇑P P 14 07 02.1 +0.7
baz=85,SNR=6.9
CABF La Chapelle 85.18 331 eP P 14 07 00.8 -0.8
comp=Z,14nm,1.0s
CABF La Chapelle 85.18 331 eP P 14 07 00.8 -0.8
CABF pmax pmax
comp=Z,14nm,1.0s
CABF La Chapelle 85.18 331 eP P 14 07 00.8 -0.8
comp=Z,14nm,1.0s
IDI Anoyia 85.37 313 eP P 14 06 59.9 -2.8
comp=Z,12nm,0.6s
IDI epP pP 14 07 17.6 +0.5
226B Tecolote Peak, 85.38 51 ⇓P P 14 07 03.5 +0.6
baz=85
325A Bean Ranch, Si 85.39 52 ⇓P P 14 07 03.3 +0.3
baz=85
LOR Lormes 85.41 333⇑iP P 14 07 02.6 -0.1
comp=Z,41nm,0.9s
LOR eR
comp=Z,162nm,20.5s
LOR Lormes 85.41 333⇑iP P 14 07 02.6 -0.1
comp=Z,41nm,0.9s
PPT Papeete 85.41 117 LR LR 14 37 42.3
comp=Z,286nm,21.9s,baz=341,slow=30
PPT2 Papeete2 85.43 117 eLR LR 14 34 03.3
comp=Z,240nm,22.5s
PPT2 eT T 15 41 03.6
comp=Z,16nm,0.3s
FLN La Foliniere 85.52 336 eP P 14 07 02.9 -0.3
FLN eR
comp=Z,175nm,23.0s
FLN La Foliniere 85.52 336 eP P 14 07 02.9 -0.3
FLN La Foliniere 85.52 336 eP P 14 07 02.9 -0.3
TIAR Tiarei 85.56 117 eT T 15 41 13.0
comp=Z,18nm,0.3s
LDF La Druitiere 85.56 336 eP P 14 07 03.5 +0.1
comp=Z,14nm,0.6s
LDF La Druitiere 85.56 336 eP P 14 07 03.5 +0.1
LDF pmax pmax
comp=Z,14nm,0.6s
LDF La Druitiere 85.56 336 eP P 14 07 03.5 +0.1
comp=Z,14nm,0.6s
Z28A Tucker Farm, M 85.57 49 ⇑P P 14 07 04.6 +0.7
baz=85
SSF Saint Saulge 85.71 333⇑iP P 14 07 04.1 0.0
comp=Z,28nm,0.9s
SSF Saint Saulge 85.71 333⇑iP P 14 07 04.1 0.0
SSF pmax pmax
comp=Z,28nm,0.9s
SSF Saint Saulge 85.71 333⇑iP P 14 07 04.1 0.0
comp=Z,28nm,0.9s
425A Indio Mountain 85.80 53 ⇓P P 14 07 05.9 +0.8
baz=86
HYF Humbligny 85.83 334 eP P 14 07 05.1 +0.4
HYF Humbligny 85.83 334 eP P 14 07 05.1 +0.4
LPL La Plagne 85.86 330⇑iP P 14 07 05.3 +0.1
comp=Z,24nm,0.8s
LPL La Plagne 85.86 330⇑iP P 14 07 05.3 +0.1
LPL pmax pmax
comp=Z,24nm,0.8s
LPL La Plagne 85.86 330⇑iP P 14 07 05.3 +0.1
comp=Z,24nm,0.8s
LPG La Plagne 85.87 330⇑iP P 14 07 05.5 +0.2
comp=Z,34nm,0.8s
LPG La Plagne 85.87 330⇑iP P 14 07 05.5 +0.2
LPG pmax pmax
comp=Z,34nm,0.8s
LPG La Plagne 85.87 330⇑iP P 14 07 05.5 +0.2
comp=Z,34nm,0.8s
SMF Signal de Mont 85.95 333⇑iP P 14 07 05.4 0.0
comp=Z,60nm,1.2s
SMF Signal de Mont 85.95 333⇑iP P 14 07 05.4 0.0
SMF pmax pmax
comp=Z,60nm,1.2s
SMF Signal de Mont 85.95 333⇑iP P 14 07 05.4 0.0
comp=Z,60nm,1.2s
GRR Gorron 85.97 336 eP P 14 07 04.8 -0.6
GRR Gorron 85.97 336 eP P 14 07 04.8 -0.6
GRR Gorron 85.97 336 eP P 14 07 04.8 -0.6
Z29A Hungry Hill Ra 85.98 49 ⇓P P 14 07 07.0 +1.2
baz=86
AVF Avril sur Loir 86.00 333⇑iP P 14 07 05.7 +0.1
comp=Z,76nm,0.8s
AVF Avril sur Loir 86.00 333⇑iP P 14 07 05.7 +0.1
AVF pmax pmax
comp=Z,76nm,0.8s
AVF Avril sur Loir 86.00 333⇑iP P 14 07 05.7 +0.1
comp=Z,76nm,0.8s
326A Caldwell Ranch 86.03 52 ⇓P P 14 07 06.7 +0.6
baz=86
Z30A Sanderson Ranc 86.30 49 ⇑P P 14 07 08.4 +1.0
baz=86
BGF Bois d'Agland 86.37 333⇑iP P 14 07 07.4 0.0
comp=Z,23nm,0.9s
BGF Bois d'Agland 86.37 333⇑iP P 14 07 07.4 0.0
BGF pmax pmax
comp=Z,23nm,0.9s
BGF Bois d'Agland 86.37 333⇑iP P 14 07 07.4 0.0
comp=Z,23nm,0.9s
426A McDonald Obser 86.46 52 ⇑P P 14 07 08.4 0.0
baz=86
MBDF Montbardon 86.51 330 eP P 14 07 08.4 +0.1
comp=Z,10nm,0.7s
MBDF Montbardon 86.51 330 eP P 14 07 08.4 +0.1
MBDF pmax pmax
comp=Z,10.0nm,0.7s
MBDF Montbardon 86.51 330 eP P 14 07 08.4 +0.1
comp=Z,10nm,0.7s
WMOK Wichita Mounta 86.56 46 eP P 14 07 23.4 +15
WMOK pmax pmax
comp=Z,4.0nm,0.7s
WMOK Wichita Mounta 86.56 46 epP pP 14 07 23.4 +0.4
comp=Z,3.5nm,0.7s
SGMF Saint Gilles 86.60 337 eP P 14 07 08.8 +0.3
comp=Z,35nm,1.0s
SGMF Saint Gilles 86.60 337 eP P 14 07 08.8 +0.3
SGMF pmax pmax
comp=Z,35nm,1.0s
SGMF Saint Gilles 86.60 337 eP P 14 07 08.8 +0.3
comp=Z,35nm,1.0s
MEH Mehetia 86.66 117 eT T 15 42 35.2
comp=Z,261nm,0.3s
ORIF Oris-en-Rattie 86.69 331⇑iP P 14 07 09.2 +0.1
comp=Z,12nm,0.7s
ORIF eR
comp=Z,113nm,21.2s

ORIF	**Oris-en-Rattie**	**86.69**	**331**	⇑*iP*	**P**	**14 07 09.2**	**+0.1**
ORIF				pmax	pmax		
	comp=Z,12nm,0.7s						
ORIF	**Oris-en-Rattie**	**86.69**	**331**	⇑*iP*	**P**	**14 07 09.2**	**+0.1**
	comp=Z,12nm,0.7s						
427A	**Hayter Ranch,**	**86.71**	**52**	⇓P	**P**	**14 07 10.4**	**+0.9**
	baz=86						
ROSF	**Rostrenen**	**86.74**	**338**	*eP*	**P**	**14 07 09.6**	**+0.4**
	comp=Z,22nm,0.7s						
ROSF	**Rostrenen**	**86.74**	**338**	*eP*	**P**	**14 07 09.6**	**+0.4**
ROSF				pmax	pmax		
	comp=Z,22nm,0.7s						
ROSF	**Rostrenen**	**86.74**	**338**	*eP*	**P**	**14 07 09.6**	**+0.4**
	comp=Z,22nm,0.7s						
TCF	**Toulx Ste Croi**	**86.83**	**334**	⇑*iP*	**P**	**14 07 09.9**	**+0.2**
	comp=Z,12nm,0.7s						
TCF	**Toulx Ste Croi**	**86.83**	**334**	⇑*iP*	**P**	**14 07 09.9**	**+0.2**
TCF				pmax	pmax		
	comp=Z,12nm,0.7s						
TCF	**Toulx Ste Croi**	**86.83**	**334**	⇑*iP*	**P**	**14 07 09.9**	**+0.2**
	comp=Z,12nm,0.7s						
526A	**Mary Lane Ranc**	**86.85**	**53**	⇓P	**P**	**14 07 11.0**	**+0.8**
	baz=87						
SBF	**Sospel**	**86.98**	**329**	*eP*	**P**	**14 07 09.9**	**-0.6**
SBF	**Sospel**	**86.98**	**329**	*eP*	**P**	**14 07 09.9**	**-0.6**
SBF	**Sospel**	**86.98**	**329**	*eP*	**P**	**14 07 09.9**	**-0.6**
626A	**Big Bend Ranch**	**87.19**	**53**	⇑P	**P**	**14 07 12.0**	**+0.2**
	baz=87						
VIVF	**Saint-Julien-l**	**87.19**	**331**	⇑*iP*	**P**	**14 07 11.6**	**+0.1**
VIVF	**Saint-Julien-l**	**87.19**	**331**	⇑*iP*	**P**	**14 07 11.6**	**+0.1**
VIVF	**Saint-Julien-l**	**87.19**	**331**	⇑*iP*	**P**	**14 07 11.6**	**+0.1**
428A	**Kincaid Ranch,**	**87.23**	**51**	⇓P	**P**	**14 07 12.6**	**+0.6**
	baz=87						
MFF	**Saint Martin d**	**87.33**	**335**	⇑*iP*	**P**	**14 07 12.5**	**+0.4**
	comp=Z,31nm,0.8s						
MFF	**Saint Martin d**	**87.33**	**335**	⇑*iP*	**P**	**14 07 12.5**	**+0.4**
MFF				pmax	pmax		
	comp=Z,31nm,0.8s						
MFF	**Saint Martin d**	**87.33**	**335**	⇑*iP*	**P**	**14 07 12.5**	**+0.4**
	comp=Z,31nm,0.8s						
FRF	**La Foret Royal**	**87.55**	**329**	*eP*	**P**	**14 07 12.8**	**-0.4**
FRF	**La Foret Royal**	**87.55**	**329**	*eP*	**P**	**14 07 12.8**	**-0.4**
FRF	**La Foret Royal**	**87.55**	**329**	*eP*	**P**	**14 07 12.8**	**-0.4**
528A	**Cox Ranch, San**	**87.57**	**52**	⇑P	**P**	**14 07 13.7**	**0.0**
	baz=87						
TXAR	**Lajitas Array**	**87.63**	**53**	P	**P**	**14 07 14.6**	**+0.6**
TXAR	**Lajitas Array**	**87.63**	**53**	P	**P**	**14 07 14.6**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=297,slow=4.2,SNR=8.4						
627A	**Terlingua Ranc**	**87.71**	**53**	⇓P	**P**	**14 07 14.3**	**-0.1**
	baz=88						
LMR	**La Mourre**	**87.79**	**329**	*eP*	**P**	**14 07 13.5**	**-0.8**
LMR	**La Mourre**	**87.79**	**329**	*eP*	**P**	**14 07 13.5**	**-0.8**
LMR	**La Mourre**	**87.79**	**329**	*eP*	**P**	**14 07 13.5**	**-0.8**
RJF	**Les Rejaudoux**	**87.92**	**334**	*eP*	**P**	**14 07 15.3**	**+0.3**
	comp=Z,35nm,1.2s						
RJF				*eR*			
	comp=Z,149nm,22.5s						
RJF	**Les Rejaudoux**	**87.92**	**334**	*eP*	**P**	**14 07 15.3**	**+0.3**
RJF				pmax	pmax		
	comp=Z,35nm,1.2s						
RJF	**Les Rejaudoux**	**87.92**	**334**	*eP*	**P**	**14 07 15.3**	**+0.3**
	comp=Z,35nm,1.2s						
430A	**Baggett Ranch,**	**88.05**	**50**	⇑P	**P**	**14 07 16.1**	**+0.2**
	baz=88						
CAF	**Calviac**	**88.06**	**333**	⇑*iP*	**P**	**14 07 16.4**	**+0.7**
	comp=Z,18nm,0.9s						
CAF	**Calviac**	**88.06**	**333**	⇑*iP*	**P**	**14 07 16.4**	**+0.7**
CAF				pmax	pmax		
	comp=Z,18nm,0.9s						
CAF	**Calviac**	**88.06**	**333**	⇑*iP*	**P**	**14 07 16.4**	**+0.7**
	comp=Z,18nm,0.9s						
LASF	**Ste Croix**	**88.16**	**331**	*eP*	**P**	**14 07 16.4**	**+0.3**
LASF	**Ste Croix**	**88.16**	**331**	*eP*	**P**	**14 07 16.4**	**+0.3**
530A	**J-C Ranch, Com**	**88.45**	**51**	⇑P	**P**	**14 07 18.5**	**+0.7**
	baz=88						
332A	**Millersview**	**88.48**	**49**	⇑P	**P**	**14 07 18.7**	**+0.8**
	baz=88						
LFF	**La Frestale**	**88.50**	**334**	*eP*	**P**	**14 07 18.3**	**+0.6**
LFF	**La Frestale**	**88.50**	**334**	*eP*	**P**	**14 07 18.3**	**+0.6**
LFF	**La Frestale**	**88.50**	**334**	*eP*	**P**	**14 07 18.3**	**+0.6**
531A	**Rocksprings**	**88.91**	**50**	⇓P	**P**	**14 07 20.2**	**+0.2**
	baz=89						
JCT	**Junction City**	**89.11**	**50**	*eP*	**P**	**14 07 19.6**	**-1.3**
JCT				pmax	pmax		
	comp=Z,4.0nm,0.8s						
JCT	**Junction City**	**89.11**	**50**	*eP*	**P**	**14 07 19.6**	**-1.3**
	comp=Z,4.4nm,0.8s						
JCT	**Junction City**	**89.11**	**50**	⇓P	**P**	**14 07 21.2**	**+0.3**
	baz=89						
532A	**Rocksprings**	**89.31**	**50**	⇓P	**P**	**14 07 22.6**	**+0.8**
	baz=89						
MTLF	**Montolieu**	**89.39**	**332**	*eP*	**P**	**14 07 22.4**	**+0.5**
MTLF	**Montolieu**	**89.39**	**332**	*eP*	**P**	**14 07 22.4**	**+0.5**
MTLF	**Montolieu**	**89.39**	**332**	*eP*	**P**	**14 07 22.4**	**+0.5**
631A	**Perdido Creek**	**89.44**	**51**	⇓P	**P**	**14 07 22.8**	**+0.4**
	baz=89						
TBI	**Tubuai**	**89.53**	**121**	*eT*	T	15 46 09.5	
	comp=Z,50nm,0.3s						
ATD	**Arta Tunnel**	**89.79**	**285**	LR	LR	14 47 43.5	
	comp=Z,39nm,18.8s,baz=79,slow=36						
ACSO	**Alum Creek Sta**	**89.93**	**33**	*eP*	**P**	**14 07 23.3**	**-1.2**
	comp=Z,7.7nm,0.6s						
ACSO				*epP*	**pP**	**14 07 40.1**	**+1.1**
732A	**Laxson Ranch,**	**90.30**	**51**	⇓P	**P**	**14 07 27.9**	**+1.5**
	baz=90						
EPF	**Esparros**	**90.32**	**333**	*eP*	**P**	**14 07 26.3**	**0.0**
	comp=Z,11nm,1.0s						
EPF	**Esparros**	**90.32**	**333**	*eP*	**P**	**14 07 26.3**	**0.0**
EPF				pmax	pmax		
	comp=Z,11nm,1.0s						
EPF	**Esparros**	**90.32**	**333**	*eP*	**P**	**14 07 26.3**	**0.0**
	comp=Z,11nm,1.0s						
ETSF	**Etsaut**	**90.75**	**334**	*eP*	**P**	**14 07 28.3**	**0.0**
	comp=Z,7.3nm,0.7s						
ETSF	**Etsaut**	**90.75**	**334**	*eP*	**P**	**14 07 28.3**	**0.0**
ETSF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ETSF	**Etsaut**	**90.75**	**334**	*eP*	**P**	**14 07 28.3**	**0.0**
	comp=Z,7.3nm,0.7s						
SSPA	**Standing Stone**	**91.61**	**29**	*eP*	**P**	**14 07 31.5**	**-0.8**
	comp=Z,5.7nm,0.8s						
SSPA				*epP*	**pP**	**14 07 47.1**	**+0.4**
KEST	**Kesra**	**92.94**	**323**	LR	LR	14 55 55.2	
	comp=Z,46nm,18.2s,baz=335,slow=40						
ESDC	**Sonseca Array**	**94.77**	**335**	P	**P**	**14 07 47.0**	**0.0**
ESDC	**Sonseca Array**	**94.77**	**335**	P	**P**	**14 07 47.0**	**0.0**
	comp=Z,1.4nm,0.5s,baz=18,slow=4.3,SNR=8.3						
ESDC				LR	LR	14 55 33.3	
	comp=Z,86nm,19.5s,baz=30,slow=39						
TORD	**Torodi Ar. Bea**	**115.58**	**317**	PKP	**PKPdf**	**14 13 06.8**	**-0.8**
TORD				PP	PP	14 14 00.6	-8.9
TORD	**Torodi Ar. Bea**	**115.58**	**317**	PKP	**PKPdf**	**14 13 06.8**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=20,slow=1.7,SNR=21						
TORD				PP	PP	14 14 00.6	-8.9
	comp=Z,1.9nm,0.9s,baz=23,slow=6.2,SNR=7.3						
MAW	**Mawson**	**122.69**	**207**	PKP	**PKPdf**	**14 13 19.4**	**-0.3**
MAW	**Mawson**	**122.69**	**207**	PKP	**PKPdf**	**14 13 19.4**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=13,slow=1.8,SNR=6.4						
BOSA	**Boshof**	**127.81**	**262**	PKP	**PKPdf**	**14 13 30.6**	**-0.2**
BOSA	**Boshof**	**127.81**	**262**	PKP	**PKPdf**	**14 13 30.6**	**-0.2**
	comp=Z,2.1nm,0.8s,baz=15,slow=10,SNR=3.5						
LPAZ	**La Paz**	**144.41**	**57**	PKP	**PKPab**	**14 14 00.7**	**-0.1**
LPAZ	**La Paz**	**144.41**	**57**	PKP	**PKPab**	**14 14 00.7**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=350,slow=8.5,SNR=9.4						
CPUP	**Villa Florida**	**158.57**	**56**	PKPab	**PKPab**	**14 14 58.2**	**+0.2**
CPUP	**Villa Florida**	**158.57**	**56**	PKPab	**PKPab**	**14 14 58.2**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=86,slow=20,SNR=3.9						

*CSEM **25** 14:03:35.0, 42°.25N×13°.48E, h11km, MD2.1/6, After ROM*
ROM 25 14:03:35.0±0.1,**42°.25N**×**13°.48E**,**h11**km±1km,**Md2.1/6, Ml1.4/5,6C,Error ellipse: s-maj=1.2km s-min=1.1km az=146.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.12**	**329**	Pg	Pg	14 03 38.7	+0.6
AQU				Sg	Sg	14 03 40.7	+0.4
	117nm,0.4s						
AQU	**L'Aquila**	**0.12**	**329**	Pg	Pg	14 03 38.7	+0.6
AQU				Sg	Sg	14 03 40.7	+0.4
	117nm,0.4s						
PTQR	**Pietraquaria**	**0.24**	**195**	*i*Pg	Pg	14 03 40.5	+0.4
PTQR				Sg	Sg	14 03 44.4	+0.9
PTQR	**Pietraquaria**	**0.24**	**195**	⇑*i*Pg	Pg	14 03 40.5	+0.4
PTQR				Sg	Sg	14 03 44.4	+0.9
FIAM	**Fiamignano**	**0.27**	**274**	⇑*i*Pg	Pg	14 03 41.2	+0.5
FIAM				Sg	Sg	14 03 45.7	+1.1
	35nm,0.6s						
FIAM	**Fiamignano**	**0.27**	**274**	⇑*i*Pg	Pg	14 03 41.2	+0.5
FIAM				Sg	Sg	14 03 45.7	+1.1
	35nm,0.6s						
VCEL	**Villa Celiera**	**0.30**	**61**	⇑*i*Pg	Pb	14 03 42.0	-0.6
VCEL				Sg	Sg	14 03 46.5	+1.0
	61nm,0.4s						
VCEL	**Villa Celiera**	**0.30**	**61**	⇑*i*Pg	Pb	14 03 42.0	-0.6
VCEL				Sg	Sg	14 03 46.5	+1.0
	61nm,0.4s						
TERO	**Teramo**	**0.38**	**13**	Pg	Pg	14 03 42.8	+0.1
TERO				Sg	Sg	14 03 48.6	+0.7
	25nm,0.2s						
TERO	**Teramo**	**0.38**	**13**	Pg	Pg	14 03 42.8	+0.1
TERO				Sg	Sg	14 03 48.6	+0.7
	25nm,0.2s						
INTR	**Introdacqua**	**0.39**	**127**	Pg	Pg	14 03 42.8	-0.1
INTR				Sg	Sg	14 03 49.2	+0.9
	27nm,0.2s						
INTR	**Introdacqua**	**0.39**	**127**	Pg	Pg	14 03 42.8	-0.1
INTR				Sg	Sg	14 03 49.2	+0.9
	27nm,0.2s						

*JMA **25** 14:08:10.6±0.8, 45°.60N×151°.90E, h30km, M4.1*
*IDC **25** 14:08:17.3±4.9, 46°.10N×151°.36E, h57km±34km, mb3.3/2, mb1 3.4/4, mb1mx3.1/26, mbtmp3.4/4, ML3.1/2, Error ellipse: s-maj=104.3km s-min=31.0km az=149.0*
ISC 25 14:08:09.6±2.0,**45°.1N**±0°.3×**152°.1E**±0°.2,**h41**km,**n16,** σ2**23**/23,**East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.89**	**252**	P	**Pn**	**14 09 21.7**	**+1.2**
NEM2				*eS*	**Sn**	**14 10 14.5**	**-1.3**
JRA	**Rausu**	**5.13**	**260**	P	**Pn**	**14 09 26.8**	**+2.9**
JNK	**Nakash**	**5.52**	**257**	P	**Pn**	**14 09 31.5**	**+2.4**
JNK				*eS*	**Sn**	**14 10 31.5**	**+0.3**
JAK	**Akkeshi**	**5.74**	**251**	P	**Pn**	**14 09 33.5**	**+1.3**
JAK				*eS*	**Sn**	**14 10 35.6**	**-1.1**
JTKR	**Abashiri--Toko**	**5.98**	**262**	P	**Pn**	**14 09 38.0**	**+2.6**
JAR	**Ashorobuto**	**6.26**	**257**	P	**Pn**	**14 09 42.1**	**+2.7**
JAR				*eS*	**Sn**	**14 10 48.8**	**-0.8**
JMP	**Maruseppu**	**6.35**	**263**	P	**Pn**	**14 09 43.7**	**+3.1**
JOB	**Onbets**	**6.36**	**253**	P	**Pn**	**14 09 42.8**	**+2.1**
JOB				*eS*	**Sn**	**14 10 50.3**	**-1.7**
JCH	**Churui**	**6.79**	**252**	P	**Pn**	**14 09 48.7**	**+2.1**
JCH				*eS*	**Sn**	**14 11 00.6**	**-2.1**
ASAJ	**Asahikawa**	**6.87**	**265**	P	**Pn**	**14 09 50.2**	**+2.5**
	0.5nm,0.3s,baz=80,slow=23,SNR=6.0						
JNBK	**Urakawa-nobuka**	**7.34**	**251**	P	**Pn**	**14 09 55.5**	**+1.3**
JNBK				*eS*	**Sn**	**14 11 12.2**	**-4.0**
JBT2	**Biratori 2**	**7.41**	**255**	P	**Pn**	**14 09 56.7**	**+1.6**
JKB	**Kayabe**	**8.67**	**252**	P	**Pn**	**14 10 13.9**	**+1.6**
PETK	**Petropavlovsk-**	**8.84**	**22**	P	**Pn**	**14 10 12.7**	**-1.9**
	0.1nm,0.3s,baz=174,slow=13,SNR=5.4						
YKA	**Yellowknife Ar**	**52.69**	**36**	P	**P**	**14 17 21.3**	**+2.0**
	0.2nm,0.7s,baz=298,slow=7.1,SNR=4.4						
FINES	**FINESS Array B**	**65.27**	**335**	P	**P**	**14 18 45.0**	**-1.6**
	1.4nm,0.9s,baz=49,slow=5.8,SNR=5.0						

*IDC **25** 14:29:23.0±0.8, 26°.17N×91°.47E, h0km, mb4.0/18, mb1 4.2/19, mb1mx4.1/31, mbtmp4.0/19, ML3.9/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/35, Error ellipse: s-maj=25.9km s-min=14.4km az=49.0*
*ISCJB **25** 14:29:27.0±0.3, 26°.12N±0°.04×91°.46E±0°.03, h42km, mb4.1/21, MS3.0/1, Error ellipse: s-maj=6.6km s-min=3.4km az=16.6*
*DMN **25** 14:29:27.4±0.3, 25°.89N×91°.68E, h60km, Ml4.8/9, Error ellipse: s-maj=33.8km s-min=6.2km az=19.0*
*NEIC **25** 14:29:28.1±0.9, 26°.11N×91°.45E, h38km±9km, mb4.4/2, Error ellipse: s-maj=9.4km s-min=5.8km az=56.0*
NEIC Felt at Guwahati.
ISC 25 14:29:28.7±0.5,**26°.08N**±0°.06×**91°.45E**±0°.05,**h42**km,**n72,** σ1**9**/**10**/82,**mb4.1**/21,**1C,Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**0.64**	**142**	*i* SG	**Sn**	**14 29 51.7**	**+0.9**
AGT	**Agartala**	**2.19**	**185**	*ex*	Pn	14 30 09.0	+6.4
AGT				*ex*	x	14 30 55.0	
IMP	**Imphal**	**2.59**	**119**	*eP*	**Pn**	**14 30 09.0**	**+0.8**
IMP				*ex*	**Sn**	**14 30 42.0**	**+3.5**
SLGI	**Shiliguri**	**2.79**	**284**	*ex*	x	14 30 19.2	
TAPN	**Taplejung**	**3.58**	**292**	*ePn*	**Pn**	**14 30 24.2**	**+2.3**
TAPN				*eSn*	**Sn**	**14 31 05.5**	**+2.4**
	1µm,0.7s						
LSA	**Lhasa**	**3.62**	**356**	*ePn*	**Pn**	**14 30 22.9**	**+0.2**
ODAN	**Odare**	**3.72**	**283**	*ePn*	**Pn**	**14 30 25.8**	**+1.9**
ODAN				*eSn*	**Sn**	**14 31 08.5**	**+1.9**
RAMN	**Ramite**	**4.43**	**282**	*ePn*	**Pn**	**14 30 35.7**	**+2.1**
GUN	**Gumba**	**5.29**	**291**	*ePn*	**Pn**	**14 30 47.5**	**+1.9**
GUN				*eSn*	**Sn**	**14 31 46.8**	**+1.3**
	398nm,0.6s						
BOK	**Bokaro**	**5.54**	**247**	*eP*	**Pn**	**14 30 49.7**	**+1.1**
BOK				AMB	AMB	14 30 50.7	
	comp=Z,28nm,0.6s						
PKI	**Pulchoki**	**5.60**	**287**	*ePn*	**Pn**	**14 30 51.0**	**+1.3**
PKI				*eSn*	**Sn**	**14 31 53.6**	**+0.6**
	comp=Z,234nm,0.6s						
PKIN	**Phulchoki**	**5.61**	**287**	*ePn*	**Pn**	**14 30 51.2**	**+1.4**
PKIN				*eSn*	**Sn**	**14 31 53.3**	**+0.1**
	comp=Z,168nm,0.5s						
KKN	**Kakani**	**5.76**	**289**	*ePn*	**Pn**	**14 30 53.8**	**+1.9**
KKN				*eSn*	**Sn**	**14 31 58.5**	**+1.6**
	comp=Z,168nm,0.4s						
DMN	**Daman**	**5.87**	**286**	*ePn*	**Pn**	**14 30 54.6**	**+1.2**
DMN				*eSn*	**Sn**	**14 32 00.0**	**+0.5**
	comp=Z,325nm,0.7s						
KOLN	**Koldanda**	**7.21**	**285**	*ePn*	**Pn**	**14 31 12.7**	**+1.0**
KOLN				*eSn*	**Sn**	**14 32 31.7**	**-0.7**
	comp=Z,159nm,0.4s						
DANN	**Dangsing**	**7.21**	**290**	*ePn*	**Pn**	**14 31 12.6**	**+0.8**
DANN				*eSn*	**Sn**	**14 32 32.1**	**-0.5**
	comp=Z,92nm,0.4s						
PYUN	**Piuthan**	**7.80**	**287**	*ePn*	**Pn**	**14 31 20.2**	**+0.3**
PYUN				*eSn*	**Sn**	**14 32 46.6**	**-0.5**
	comp=Z,354nm,0.8s						
CMAR	**Chiang Mai Arr**	**10.28**	**136**	Pn	**Pn**	**14 31 52.9**	**-0.8**
CMAR	**Chiang Mai Arr**	**10.28**	**136**	Pn	**Pn**	**14 31 52.9**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=310,slow=13,SNR=8.7						
JBP	**Jabalpur**	**10.82**	**257**	⇑*i*P	**Pn**	**14 31 58.9**	**-2.2**
JBP				*ex*	**Sn**	**14 34 00.6**	**-0.3**
AYAN	**Aya Nagar**	**12.96**	**284**	*eP*	**Pn**	**14 32 28.9**	**-1.4**
AYAN				AMB	AMB	14 32 34.1	
	comp=Z,4.3nm,0.6s						
KUDL	**Kundal**	**13.48**	**282**	*eP*	**Pn**	**14 32 37.5**	**+0.1**
KUDL				AMB	AMB	14 32 39.4	
	comp=Z,2.8nm,1.2s						
KUDL				*ex*	x	14 34 52.5	
SMLA	**Simla**	**13.52**	**295**	*eP*	**Pn**	**14 32 36.1**	**-1.8**
SMLA				AMB	AMB	14 32 41.7	
	comp=Z,6.3nm,2.4s						
SMLA				*ex*	x	14 34 58.3	
KHET	**Khetri**	**14.08**	**282**	*eP*	**Pn**	**14 32 46.0**	**+0.4**
KHET				AMB	AMB	14 32 53.5	
	comp=Z,4.8nm,0.6s						
KHET				*ex*	x	14 35 10.2	
HYB	**Hyderabad**	**14.75**	**237**	P	**Pn**	**14 32 54.5**	**-0.1**
HYB	**Hyderabad**	**14.75**	**237**	*i* P	**Pn**	**14 32 54.5**	**-0.1**
HYB				*eS*	**Sn**	**14 35 37.0**	**+0.1**
POO	**Poona**	**17.92**	**249**	*ex*	x	14 37 27.0	
KBL	**Kabul**	**21.07**	**299**	*eP*	**P**	**14 34 09.0**	**-0.5**
	comp=Z,19nm,0.9s						
AAK	**Ala-Archa**	**21.58**	**324**	*eP*	**P**	**14 34 14.2**	**-0.7**
	comp=Z,14nm,1.0s						
AAK	**Ala-Archa**	**21.58**	**324**	P	**P**	**14 34 16.1**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=50,slow=4.0,SNR=5.2						
MK31	**Makanchi Array**	**21.92**	**343**	*eP*	**P**	**14 34 16.0**	**-2.3**
MKAR	**Makanchi Array**	**21.92**	**343**	P	**P**	**14 34 17.7**	**-0.6**
MKAR	**Makanchi Array**	**21.92**	**343**	P	**P**	**14 34 17.7**	**-0.6**
	comp=Z,5.1nm,0.8s,baz=150,slow=13,SNR=20						
SONM	**Songino Array**	**24.70**	**25**	P	**P**	**14 34 46.2**	**+0.3**
SONM	**Songino Array**	**24.70**	**25**	P	**P**	**14 34 46.2**	**+0.3**
	comp=Z,3.1nm,0.6s,baz=207,slow=9.4,SNR=26						
KURBB	**Kurchatov Arra**	**26.44**	**341**	P	**P**	**14 35 00.8**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=160,slow=9.0,SNR=14						
KURBB				LR	LR	14 46 59.2	
	comp=Z,39nm,18.2s,baz=60,slow=40						
KURK	**Kurchatov**	**26.50**	**342**	P	**P**	**14 35 00.8**	**-1.1**
ZALV	**Zalesovo Beam**	**28.27**	**352**	P	**P**	**14 35 17.3**	**-0.5**
ZALV	**Zalesovo Beam**	**28.27**	**352**	P	**P**	**14 35 17.3**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=184,slow=6.8,SNR=5.1						
AKTO	**Aktyubinsk**	**35.30**	**322**	P	**P**	**14 36 19.6**	**0.0**
AKTO	**Aktyubinsk**	**35.30**	**322**	P	**P**	**14 36 19.6**	**0.0**
	comp=Z,1.2nm,0.7s,baz=140,slow=7.9						
MJAR	**Matsushiro Arr**	**40.94**	**64**	P	**P**	**14 37 06.5**	**-0.8**
MJAR	**Matsushiro Arr**	**40.94**	**64**	P	**P**	**14 37 06.5**	**-0.8**
	comp=Z,3.3nm,0.9s,baz=266,slow=9.9,SNR=5.5						
AKASG	**Malin Array Be**	**52.85**	**315**	P	**P**	**14 38 38.5**	**-1.5**
AKASG	**Malin Array Be**	**52.85**	**315**	P	**P**	**14 38 38.5**	**-1.5**
	comp=Z,1.0nm,0.4s,baz=76,slow=7.9,SNR=4.1						
JOF	**Joensuu**	**53.58**	**330**	*ep*	**P**	**14 38 45.1**	**-0.1**
	comp=Z,2.2nm,0.6s						
FINES	**FINESS Array B**	**55.70**	**328**	P	**P**	**14 39 00.1**	**-0.5**
FINES	**FINESS Array B**	**55.70**	**328**	P	**P**	**14 39 00.1**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=123,slow=9.4,SNR=6.2						
ARCES	**ARCESS Array B**	**57.44**	**338**	P	**P**	**14 39 12.7**	**-0.2**
ARCES	**ARCESS Array B**	**57.44**	**338**	P	**P**	**14 39 12.7**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=106,slow=7.7,SNR=6.2						
WRA	**Warramunga Arr**	**61.86**	**133**	P	**P**	**14 39 44.4**	**+0.5**
WRA	**Warramunga Arr**	**61.86**	**133**	P	**P**	**14 39 44.4**	**+0.5**
	comp=Z,21nm,0.6s,baz=324,slow=7.1,SNR=8.9						
WRAB	**Tennant Creek**	**61.86**	**133**	*eP*	**P**	**14 39 43.5**	**-0.4**
NB2	**NORSAR Subarra**	**62.86**	**327**	P	**P**	**14 39 49.2**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=84,slow=6.5						
NOA	**NORSAR Array B**	**62.86**	**327**	P	**P**	**14 39 49.5**	**-0.6**
NOA	**NORSAR Array B**	**62.86**	**327**	P	**P**	**14 39 49.5**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=86,slow=6.4,SNR=6.0						
GERES	**GERESS Array B**	**62.98**	**314**	P	**P**	**14 39 51.6**	**+0.4**
GERES	**GERESS Array B**	**62.98**	**314**	P	**P**	**14 39 51.6**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=72,slow=6.2,SNR=12						
AS31	**Alice Springs**	**64.28**	**137**	*eP*	**P**	**14 39 59.8**	**-0.2**
ASAR	**Alice Springs**	**64.28**	**137**	P	**P**	**14 40 01.3**	**+1.3**
ASAR	**Alice Springs**	**64.28**	**137**	P	**P**	**14 40 01.3**	**+1.3**
	comp=Z,1.1nm,0.6s,baz=318,slow=6.6,SNR=29						
CTAO	**Charters Tower**	**70.25**	**125**	*eP*	**P**	**14 40 37.5**	**-0.4**
ILAR	**Eielson Array**	**78.89**	**22**	P	**P**	**14 41 26.9**	**-0.3**
ILAR	**Eielson Array**	**78.89**	**22**	P	**P**	**14 41 26.9**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=306,slow=4.8,SNR=15						
INK	**Inuvik**	**80.25**	**15**	P	**P**	**14 41 34.9**	**+0.4**
INK	**Inuvik**	**80.25**	**15**	P	**P**	**14 41 34.9**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=337,slow=6.2,SNR=19						
KDAK	**Kodiak Island**	**80.90**	**29**	P	**P**	**14 41 38.2**	**0.0**
KDAK	**Kodiak Island**	**80.90**	**29**	P	**P**	**14 41 38.2**	**0.0**
	comp=Z,2.3nm,0.5s,baz=119,slow=19,SNR=8.4						
TORD	**Torodi Ar. Bea**	**84.11**	**282**	P	**P**	**14 41 56.8**	**+1.0**
TORD	**Torodi Ar. Bea**	**84.11**	**282**	P	**P**	**14 41 56.8**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=70,slow=4.1,SNR=8.6						
YKA	**Yellowknife Ar**	**89.31**	**12**	P	**P**	**14 42 19.8**	**-0.5**
YKA	**Yellowknife Ar**	**89.31**	**12**	P	**P**	**14 42 19.7**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=331,slow=4.6,SNR=23						

*AUST **25** 14:48:30.5, 1°.00N×122°.50E, h60km*
*ISCJB **25** 14:48:42.9±0.5, 0°.62S±0°.05×123°.17E±0°.04, h10km, mb3.8/6, MS3.5/2, Error ellipse: s-maj=7.7km s-min=6.0km az=156.4*
*IDC **25** 14:48:42.0±1.0, 0°.53S×123°.43E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.7/23, mbtmp3.8/7, ML4.2/1, MS3.6/2, Ms1 3.6/2, ms1mx2.6/33, Error ellipse: s-maj=46.3km s-min=17.0km az=64.0*
*DJA **25** 14:48:45.7±0.9, 1°.S±4°×12°.3E±°, h7km±9km, M4.4/6, mb4.5/5, mB5.6/2, MLv4.4/6, Mw(mB)5.

SWI	**Sorong**	**7.11**	**22**	P		**Pn**	**14 59 42.5**	**-0.7**	
	36nm,0.6s,1μm								
SWI	**Sorong**	**7.11**	**22**	P		Pn	14 59 35.8	-7.4	
	baz=7.2,SNR=12								
SWI				S		**Sn**	**15 00 59.7**	**-3.3**	
	baz=7.2,SNR=4.0								
WSI	**Waingapu**	**8.45**	**255**	P		**Pn**	**15 00 01.0**	**-0.1**	
	baz=8.4,SNR=3.3								
WSI				S		**Sn**	**15 01 31.7**	**-3.4**	
	baz=8.4,SNR=6.5								
BKSI	**Bulukumba**	**8.66**	**284**	P		Pn	15 00 07.1	+3.3	
	15nm,1.1s,0.1nm								
KAPI	**Kappang**	**9.10**	**285**	P		**Pn**	**15 00 11.8**	**+2.1**	
	0.6nm,0.3s,baz=102,slow=18,SNR=3.5								
BAKI	**Biak**	**9.79**	**51**	P		**Pn**	**15 00 21.0**	**+2.2**	
PCI	**Palu**	**10.88**	**307**	P		Pn	15 00 25.3	-8.0	
	baz=11,SNR=7.8								
FITZ	**Fitzroy Crossi**	**10.92**	**195**	P		**Pn**	**15 00 31.2**	**-2.6**	
	3.9nm,0.3s,baz=28,slow=9.8,SNR=110								
FITZ				S		Sn	15 02 23.2	-11	
	4.3nm,0.3s,baz=72,slow=19,SNR=5.0								
FITZ				LR		LR	15 05 33.1		
	comp=Z,42nm,18.1s,baz=110,slow=41								
FITZ	**Fitzroy Crossi**	**10.92**	**195**	P		Pn	15 00 30.0	-3.8	
	baz=11,SNR=27								
FITZ				S		Sn	15 02 25.4	-9.3	
	baz=11,SNR=6.5								
JAY	**Jayapura**	**13.07**	**68**	S		Sn	15 03 12.8	-14	
	baz=13,SNR=4.1								
WRA	**Warramunga Arr**	**13.59**	**156**	P		**Pn**	**15 01 05.5**	**-2.9**	
	2.2nm,0.3s,baz=336,slow=12,SNR=98								
WRA				S		Sn	15 03 27.2	-12	
	5.7nm,0.3s,baz=326,slow=24,SNR=14								
PALU	**Palu**	**15.87**	**22**	P		**P**	**15 01 38.9**	**+1.4**	
	baz=16,SNR=4.2								
QIS	**Mount Isa**	**16.82**	**142**	P		**Pn**	**15 01 48.6**	**+0.2**	
	baz=17,SNR=6.0								
ASAR	**Alice Springs**	**16.88**	**163**	P		**P**	**15 01 48.4**	**-0.3**	
	4.9nm,0.3s,baz=337,slow=9.7,SNR=591								
ASAR				S		S	15 04 50.0	-6.9	
	1.8nm,0.3s,baz=342,slow=25,SNR=8.6								
PMG	**Port Moresby**	**18.50**	**97**	P		**P**	**15 02 06.4**	**+0.1**	
	0.5nm,0.3s,baz=284,slow=9.3,SNR=3.2								
MTSU	**Mount Surprise**	**18.64**	**126**	P		**Pn**	**15 02 09.9**	**0.0**	
	baz=19,SNR=9.1								
CTA	**Charters Tower**	**21.23**	**128**	P		**P**	**15 02 36.4**	**+0.5**	
	1.8nm,0.7s,baz=279,slow=4.9,SNR=3.8								
MEEK	**Meekatharra**	**21.26**	**205**	P		**P**	**15 02 36.6**	**+0.5**	
	baz=21,SNR=11								
MEEK				S		**S**	**15 06 30.5**	**+7.0**	
	baz=21,SNR=4.5								
QLP	**Quilpie**	**24.14**	**144**	P		**P**	**15 03 04.9**	**+1.2**	
	baz=24,SNR=17								
MORW	**Morawa**	**24.49**	**207**	P		**P**	**15 03 08.3**	**+1.4**	
	baz=25,SNR=28								
MORW				S		S	15 07 45.9	+30	
	baz=25,SNR=5.3								
KMBL	**Kambalda**	**24.56**	**194**	P		**P**	**15 03 08.5**	**+1.0**	
	baz=25,SNR=18								
BLDU	**Ballidu**	**25.55**	**204**	P		**P**	**15 03 17.0**	**+0.6**	
	baz=26,SNR=13								
KLBR	**Kellerberrin**	**26.01**	**201**	P		**P**	**15 03 21.6**	**+1.0**	
	baz=26,SNR=7.7								
BBOO	**Buckleboo**	**26.14**	**166**	P		**P**	**15 03 22.5**	**+0.7**	
	baz=26,SNR=15								
GUMO	**Guam**	**26.47**	**38**	LR		LR	15 13 42.4		
	comp=Z,22nm,19.6s,baz=63,slow=36								
STKA	**Stephens Creek**	**27.14**	**155**	P		**P**	**15 03 31.4**	**+0.7**	
	9.8nm,0.6s,baz=326,slow=9.3,SNR=9.5								
NWAO	**Narrogin (SRO)**	**27.41**	**201**	P		**P**	**15 03 33.6**	**+0.5**	
	11nm,0.6s,baz=11,slow=9.8,SNR=15								
CMSA	**Cobar Meteorol**	**28.78**	**148**	P		**P**	**15 03 46.5**	**+1.2**	
	baz=29,SNR=4.4								
ARPS	**Mount Arapiles**	**31.56**	**159**	P		**P**	**15 04 11.5**	**+1.8**	
	baz=32,SNR=14								
TOO	**Toolangi**	**33.66**	**155**	P		**P**	**15 04 30.8**	**+2.7**	
	baz=34,SNR=6.1								
CMAR	**Chiang Mai Arr**	**38.97**	**312**	P		**P**	**15 05 13.5**	**+0.2**	
	1.3nm,0.8s,baz=139,slow=6.6,SNR=10								
CMAR				ScP		**ScP**	**15 10 55.9**	**+0.7**	
	0.1nm,0.3s,baz=116,slow=3.3,SNR=4.5								
KSRS	**Korea Array**	**44.71**	**359**	P		**P**	**15 05 59.4**	**-0.3**	
	1.0nm,0.8s,baz=182,slow=9.1,SNR=5.7								
MJAR	**Matsushiro Arr**	**44.73**	**11**	P		**P**	**15 05 57.6**	**-2.3**	
	1.6nm,0.8s,baz=193,slow=9.7,SNR=3.7								
SONM	**Songino Array**	**58.47**	**343**	P		**P**	**15 07 42.1**	**+0.3**	
	0.9nm,0.5s,baz=151,slow=7.1,SNR=7.1								
PETK	**Petropavlovsk-**	**65.24**	**19**	P		**P**	**15 08 26.8**	**-0.1**	
	1.4nm,0.6s,baz=169,slow=2.7,SNR=6.1								
MKAR	**Makanchi Array**	**67.86**	**328**	P		**P**	**15 08 43.9**	**+0.2**	
	1.2nm,0.5s,baz=114,slow=8.4,SNR=24								
MKAR				PcP		**PcP**	**15 09 07.1**	**-2.0**	
	1.2nm,0.5s,baz=121,slow=7.9,SNR=7.8								
AAK	**Ala-Archa**	**70.00**	**321**	P		**P**	**15 08 57.1**	**0.0**	
	1.3nm,0.7s,baz=117,slow=4.6,SNR=5.4								
ZALV	**Zalesovo Beam**	**71.40**	**334**	P		**P**	**15 09 04.1**	**-1.0**	
	0.7nm,0.4s,baz=154,slow=5.7,SNR=6.2								
VNDA	**Vanda**	**72.14**	**173**	P		**P**	**15 09 09.6**	**+0.4**	
	0.9nm,0.5s,baz=315,slow=7.2,SNR=8.6								
ILAR	**Eielson Array**	**94.40**	**25**	P		**P**	**15 11 01.9**	**-2.1**	
	0.2nm,0.9s,baz=230,slow=5.6,SNR=2.6								
TORD	**Torodi Ar. Bea**	**127.50**	**281**	PKP		**PKPdf**	**15 16 49.9**	**+0.2**	
	1.2nm,1.0s,baz=346,slow=0.5,SNR=5.2								
CPUP	**Villa Florida**	**145.90**	**171**	PKPbc		**PKPbc**	**15 17 24.3**	**+0.2**	
	0.5nm,0.3s,baz=276,slow=20,SNR=5.5								
LPAZ	**La Paz**	**151.17**	**145**	PKPbc		**PKPbc**	**15 17 40.0**	**+1.2**	
	0.7nm,0.5s,baz=159,slow=4.3,SNR=4.5								
LPAZ				PKPab		**PKPab**	**15 17 48.0**	**+1.0**	
	2.2nm,0.6s,baz=189,slow=2.8,SNR=9.7								

IDC ***25*** *15:14:51.0±0.6,33.˚10N×48.˚85E,h0km,mb4.2/22, mb1 4.2/28,mb1mx4.2/34,mbtmp4.1/28,ML3.8/5,MS3.3/12, Ms1 3.3/12,ms1mx3.1/38,Error ellipse: s-maj=15.8km s-min=11.4km az=174.0*

BJI ***25*** *15:14:52.4,33.˚00N×48.˚80E,h20km,mB4.9/6,mb4.4/9, Ms4.1/1*

CSEM ***25*** *15:14:53.6±0.1,33.˚03N×48.˚77E,h16km,mb4.5/45,Ms3.8, Error ellipse: s-maj=4.5km s-min=3.0km az=17.0*

MOS ***25*** *15:14:53.6±1.0,32.˚97N×48.˚77E,h33km,mb4.7/30,Error ellipse: s-maj=7.0km s-min=4.3km az=120.8*

THR ***25*** *15:14:55.1±1.4,33.˚14N×48.˚97E,h15km±13km,ML4.4*

TEH ***25*** *15:14:56.5,33.˚08N×48.˚84E,h16km,ML4.4*

NEIC ***25*** *15:14:56.3,33.˚05N×48.˚83E,h16km,mb4.6/35, ML4.4(THR),MN4.4(TEH),After TEH.*

ISC 25 15:14:54.9±0.6,33.05N±0.˚04×48.82E±0.˚03,h24km±4km, n539,σ1.933/452,mb4.4/71,MS3.3/10,40C-40D,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**0.94**	**181**	*e*Pg		**Pb**	**15 15 14.2**	**+1.8**
SHGR				AML		AML	15 15 35.2	
	comp=N,16μm,0.9s							
SHGR	**Shooshtar-Gavs**	**0.94**	**181**	*e*Pg		**Pb**	**15 15 14.0**	**+1.5**
SHGR	**Shooshtar-Gavs**	**0.94**	**181**	*e*Pg		**Pb**	**15 15 14.0**	**+1.5**
KHMZ	**Khomeyn**	**1.17**	**54**	*e*Pg		Pn	15 15 13.6	-2.4
KHMZ				AML		AML	15 15 34.5	
	comp=N,5μm,1.6s							
KHMZ	**Khomeyn**	**1.17**	**54**	*e*Pg		Pn	15 15 13.6	-2.4
IKOM	**Komasi**	**1.57**	**316**	*e*Pn		**Pn**	**15 15 21.0**	**-0.4**
IKOM				*e*Sg		**Sb**	**15 15 45.9**	**+3.1**
IKOM	**Komasi**	**1.57**	**316**	*e*Pn		**Pn**	**15 15 21.0**	**-0.4**
IKOM				*e*Sg		**Sb**	**15 15 45.9**	**+3.1**
IKOM				*e*			15 15 57.5	
	comp=Z,76μm,0.3s							
IKOM	**Komasi**	**1.57**	**316**	*e*Pn		**Pn**	**15 15 21.0**	**-0.4**
IKOM				*e*Sg		**Sb**	**15 15 45.9**	**+3.1**
IPIR	**Pirpir**	**1.78**	**101**	Pn		**Pb**	**15 15 27.2**	**+0.2**
IPIR				Sg		**Sb**	**15 15 52.2**	**+3.3**
IPIR	**Pirpir**	**1.78**	**101**	*e*Pn		**Pb**	**15 15 26.8**	**-0.2**
IPIR				*e*Sg		**Sb**	**15 15 52.3**	**+3.3**
IPIR				*e*			15 16 06.3	
	comp=Z,32μm,0.3s							
IPIR	**Pirpir**	**1.78**	**101**	*e*Pn		**Pb**	**15 15 26.8**	**-0.2**
IPIR				Sg		**Sb**	**15 15 52.2**	**+3.3**
IVIS	**Veis**	**2.21**	**312**	*e*Sg		**Sb**	**15 16 05.2**	**+4.1**
IVIS	**Veis**	**2.21**	**312**	*e*Sg		**Sb**	**15 16 05.2**	**+4.1**
IGHG	**Ghaleghazi**	**2.27**	**305**	Pn		**Pn**	**15 15 33.1**	**+2.0**
IGHG	**Ghaleghazi**	**2.27**	**305**	*e*Pn		**Pn**	**15 15 33.1**	**+2.0**
IGHG				*e*			15 16 33.7	
	comp=Z,44μm,0.4s							
IGHG	**Ghaleghazi**	**2.27**	**305**	*e*Pn		**Pn**	**15 15 33.1**	**+2.0**
IKLH	**Kolahrood**	**2.33**	**83**↑	*e*Pn		**Pn**	**15 15 34.1**	**+2.2**
IKLH				*e*Sg		**Sb**	**15 16 08.2**	**+3.5**
IKLH				*e*			15 16 23.4	
	comp=Z,18μm,0.3s							
IKLH	**Kolahrood**	**2.33**	**83**↑	*e*Pn		**Pn**	**15 15 34.1**	**+2.2**
IKLH				*e*Sg		**Sb**	**15 16 08.2**	**+3.5**
IRAZ	**Razeghan**	**2.52**	**21**	Pn		**Pn**	**15 15 37.0**	**+2.4**
IRAZ	**Razeghan**	**2.52**	**21**	*e*Pn		**Pn**	**15 15 36.7**	**+2.1**
IRAZ				*e*			15 15 40.6	
	comp=Z,30μm,0.2s							
IRAZ	**Razeghan**	**2.52**	**21**	*e*Pn		**Pn**	**15 15 36.7**	**+2.1**
IR5	**Iran Long-Peri**	**2.60**	**34**↑	*e*Pn		**Pn**	**15 15 37.6**	**+2.0**
IR5	**Iran Long-Peri**	**2.60**	**34**↑	*e*Pn		**Pn**	**15 15 37.6**	**+2.0**
IDHR	**Dehrash**	**2.61**	**310**	Pn		**Pn**	**15 15 37.3**	**+1.5**
IDHR	**Dehrash**	**2.61**	**310**	*e*Pn		**Pn**	**15 15 37.3**	**+1.5**
IDHR				*e*		Sg	15 16 25.6	
	comp=Z,19μm,0.3s							
IDHR	**Dehrash**	**2.61**	**310**	*e*Pn		**Pn**	**15 15 37.3**	**+1.5**
IGAR	**Gharneh**	**2.79**	**102**	*e*Pn		**Pn**	**15 15 40.5**	**+2.3**
IGAR				*e*			15 15 54.8	
	comp=Z,7μm,0.2s							
IZEF	**Zefreh**	**2.95**	**92**↑	*e*Pn		**Pn**	**15 15 42.6**	**+2.1**
IZEF				*e*			15 15 52.5	
	comp=Z,6μm,0.3s							
IZEF	**Zefreh**	**2.95**	**92**↑	*e*Pn		**Pn**	**15 15 42.6**	**+2.1**
IR3	**Iran Long-Peri**	**3.03**	**36**	*e*Pn		**Pn**	**15 15 43.5**	**+2.1**
IR3	**Iran Long-Peri**	**3.03**	**36**	*e*Pn		**Pn**	**15 15 43.5**	**+2.1**
IMHD	**Mahdasht**	**3.04**	**30**	*e*Pn		**Pn**	**15 15 43.5**	**+1.9**
IMHD				*e*			15 15 52.4	
	comp=Z,11μm,0.3s							
IMHD	**Mahdasht**	**3.04**	**30**	*e*Pn		**Pn**	**15 15 43.5**	**+1.9**
IVRN	**Varamin**	**3.10**	**50**	Pn		**Pn**	**15 15 44.4**	**+2.1**
IVRN	**Varamin**	**3.10**	**50**	*e*Pn		**Pn**	**15 15 44.2**	**+1.9**
IVRN				*e*			15 15 57.3	
	comp=Z,14μm,0.3s							
IVRN	**Varamin**	**3.10**	**50**	*e*Pn		**Pn**	**15 15 44.2**	**+1.9**
THKV	**Tehran--Karaj**	**3.33**	**30**	*e*Pn		**Pn**	**15 15 47.5**	**+1.9**
THKV	**Tehran--Karaj**	**3.33**	**30**	*e*Pn		**Pn**	**15 15 47.0**	**+1.4**
THKV	**Tehran--Karaj**	**3.33**	**30**	*e*Pn		**Pn**	**15 15 47.0**	**+1.4**
NASN	**Na'in**	**3.36**	**93**	*e*Pn		**Pn**	**15 15 48.4**	**+2.2**
NASN	**Na'in**	**3.36**	**93**	*e*Pn		**Pn**	**15 15 48.0**	**+1.8**
NASN	**Na'in**	**3.36**	**93**	*e*Pn		**Pn**	**15 15 48.0**	**+1.8**
CHTH	**Charan**	**3.43**	**33**	*e*Pn		**Pn**	**15 15 48.6**	**+1.6**
CHTH	**Charan**	**3.43**	**33**	*e*Pn		**Pn**	**15 15 48.0**	**+1.0**
CHTH	**Charan**	**3.43**	**33**	*e*Pn		**Pn**	**15 15 48.0**	**+1.0**
MIB	**Mutribah**	**3.48**	**202**	*e*P		Pn	15 15 51.4	+3.9
MIB	**Mutribah**	**3.48**	**202**	*e*P		Pn	15 15 51.4	+3.9
IGZV	**Ghazvin**	**3.52**	**19**	Pn		**Pn**	**15 15 49.5**	**+1.2**
IGZV	**Ghazvin**	**3.52**	**19**	*e*Pn		**Pn**	**15 15 49.6**	**+1.2**
IGZV				*e*		Sg	15 16 56.5	
	comp=Z,8μm,0.3s							
IGZV	**Ghazvin**	**3.52**	**19**	Pn		**Pn**	**15 15 49.5**	**+1.2**
ZNJK	**Zanjan**	**3.61**	**358**	*e*Pn		**Pn**	**15 15 51.5**	**+1.9**
ZNJK	**Zanjan**	**3.61**	**358**	*e*Pn		**Pn**	**15 15 51.0**	**+1.4**
ZNJK	**Zanjan**	**3.61**	**358**	*e*Pn		**Pn**	**15 15 51.0**	**+1.4**
DAMV	**Damavand**	**3.66**	**44**	*e*Pn		**Pn**	**15 15 51.6**	**+1.4**
DAMV				AML		AML	15 16 55.5	
	comp=N,849nm,1.1s							
DAMV				AML		AML	15 16 56.2	
	comp=E,784nm,0.5s							
DAMV	**Damavand**	**3.66**	**44**	*e*Pn		**Pn**	**15 15 51.0**	**+0.7**
DAMV	**Damavand**	**3.66**	**44**	*e*Pn		**Pn**	**15 15 51.0**	**+0.7**
IDMV	**Damavand**	**3.66**	**46**	*e*Pn		**Pn**	**15 15 51.8**	**+1.5**
IDMV				*e*			15 16 07.9	
	comp=Z,9μm,0.3s							
IDMV	**Damavand**	**3.66**	**46**	*e*Pn		**Pn**	**15 15 51.8**	**+1.5**
BHD	**Baghdad**	**3.73**	**275**	*ex*		Pg	15 15 59.3	
BHD				*ex*		Sg	15 16 49.0	
BHD	**Baghdad**	**3.73**	**275**	P		**Pn**	**15 15 51.0**	**0.0**
BHD				S		**Sn**	**15 16 35.0**	**+0.8**
BHD	**Baghdad**	**3.73**	**275**	P		**Pn**	**15 15 51.0**	**0.0**
BHD				S		**Sn**	**15 16 35.0**	**+0.8**
KBD	**Kabd**	**3.98**	**194**	*e*P		Pn	15 15 58.2	+3.8
KBD				AML		AML	15 16 47.5	
	comp=Z,267nm,0.7s							
KBD	**Kabd**	**3.98**	**194**	*e*P		Pn	15 15 58.2	+3.8
NAY	**Al-Naaiem**	**4.02**	**200**	*e*P		Pn	15 15 59.1	+4.1
NAY				AML		AML	15 16 49.4	
	comp=Z,338nm,0.7s							
NAY	**Al-Naaiem**	**4.02**	**200**	*e*P		Pn	15 15 59.1	+4.1
ILAS	**Lasjerd**	**4.14**	**55**	*e*Pn		**Pn**	**15 15 58.4**	**+1.5**
ILAS				*e*			15 16 22.3	
	comp=Z,5μm,0.2s							
ILAS	**Lasjerd**	**4.14**	**55**	*e*Pn		**Pn**	**15 15 58.4**	**+1.5**
IFIR	**Firoozkooh**	**4.15**	**50**	*e*Pn		**Pn**	**15 15 58.8**	**+1.7**
IFIR				*e*		Sg	15 16 23.9	
	comp=Z,3μm,0.2s							
IFIR	**Firoozkooh**	**4.15**	**50**	*e*Pn		**Pn**	**15 15 58.8**	**+1.7**
IPRN	**Peran**	**4.30**	**41**	*e*Pn		**Pn**	**15 16 01.4**	**+2.4**
IPRN				*e*		Sg	15 17 15.5	
	comp=Z,8μm,0.3s							
QRN	**Al-Qurain**	**4.36**	**191**	*e*P		Pn	15 16 03.4	+3.7
QRN				AML		AML	15 16 52.5	
	comp=Z,234nm,0.4s							
IALA	**Alasht**	**4.47**	**46**	*e*Pn		**Pn**	**15 16 02.9**	**+1.5**
IALA				*e*			15 16 21.2	
	comp=Z,6μm,0.3s							
IALA	**Alasht**	**4.47**	**46**	*e*Pn		**Pn**	**15 16 02.9**	**+1.5**
ISHM	**Shahmirzad**	**4.61**	**52**	*e*Pn		**Pn**	**15 16 04.7**	**+1.4**
ISHM				*e*		Sg	15 17 27.0	
	comp=Z,7μm,0.3s							
ISHM	**Shahmirzad**	**4.61**	**52**	*e*Pn		**Pn**	**15 16 04.7**	**+1.4**
SHI	**Shiraz**	**4.64**	**136**	*e*Pn		Pn	15 16 07.0	+3.4
SHI	**Shiraz**	**4.64**	**136**	*e*Pn		Pn	15 16 07.0	+3.4
ICHK	**Chekchek**	**4.78**	**98**	*e*Pn		**Pn**	**15 16 06.6**	**+1.0**
ICHK				*e*		Sg	15 17 34.3	
	comp=Z,3μm,0.3s							
ICHK	**Chekchek**	**4.78**	**98**	*e*Pn		**Pn**	**15 16 06.6**	**+1.0**
IANJ	**Anjilo**	**4.86**	**59**	*e*		Pg	15 16 23.1	
	comp=Z,3μm,0.4s							
IANJ				*e*Pn		**Pn**	**15 16 08.2**	**+1.5**
ISRB	**Sarab**	**4.86**	**349**	*e*		Pg	15 16 26.9	
	comp=Z,2μm,0.4s							
ISRB				*e*Pn		**Pn**	**15 16 08.4**	**+1.7**
IBST	**Bostanabad**	**4.90**	**342**	*e*		Pg	15 16 38.4	
	comp=Z,812nm,0.4s							
IBST				*e*Pn		**Pn**	**15 16 08.5**	**+1.2**
IKIA	**Kiasar**	**5.10**	**50**	*e*Pn		**Pn**	**15 16 11.5**	**+1.5**
IKIA				*e*			15 16 34.0	
	comp=Z,2μm,0.3s							
IKIA	**Kiasar**	**5.10**	**50**	*e*Pn		**Pn**	**15 16 11.5**	**+1.5**
IAZR	**Azarshahr**	**5.17**	**334**	*e*Pn		**Pn**	**15 16 12.7**	**+1.7**
IAZR				*e*		Sg	15 17 52.6	
	comp=Z,4μm,0.4s							
IAZR	**Azarshahr**	**5.17**	**334**	*e*Pn		**Pn**	**15 16 12.7**	**+1.7**
IMEH	**Mehriz**	**5.18**	**107**	*e*Pn		**Pn**	**15 16 12.8**	**+1.7**
IMEH				*e*			15 18 03.4	
	comp=Z,1μm,0.4s							
IMEH	**Mehriz**	**5.18**	**107**	*e*Pn		**Pn**	**15 16 12.8**	**+1.7**
ISRV	**Sarvestan**	**5.18**	**134**	Pn		**Pn**	**15 16 12.3**	**+1.0**
ISRV	**Sarvestan**	**5.18**	**134**	*e*Pn		**Pn**	**15 16 12.4**	**+1.1**
ISRV				*e*			15 16 15.3	
	comp=Z,3μm,0.2s							
ISRV	**Sarvestan**	**5.18**	**134**	Pn		**Pn**	**15 16 12.3**	**+1.0**
IGLO	**Ghaloghah**	**5.37**	**49**	*e*Pn		**Pn**	**15 16 15.6**	**+1.9**
IHRS	**Heris**	**5.45**	**345**	*e*Pn		**Pn**	**15 16 16.3**	**+1.4**
IHRS				*e*			15 16 41.6	
	comp=Z,2μm,0.4s							
IHRS	**Heris**	**5.45**	**345**	*e*Pn		**Pn**	**15 16 16.3**	**+1.4**
MSL	**Mosul**	**5.77**	**307**	P		**Pn**	**15 16 18.0**	**-1.0**
MSL				S		**Sn**	**15 17 24.0**	**-0.6**
IBAF	**Bafgh**	**5.89**	**102**	*e*Pn		**Pn**	**15 16 22.4**	**+1.6**
IBAF				*e*Sg		Sb	15 17 59.5	+12
IBAF				*e*			15 18 19.6	
	comp=Z,1μm,0.5s							
IMRD	**Marand**	**6.19**	**337**	*e*Pn		**Pn**	**15 16 26.4**	**+1.4**
IMRD				*e*			15 17 10.2	
	comp=Z,1μm,0.4s							
TABS	**Tabas**	**6.97**	**83**	*e*Pn		**Pn**	**15 16 36.8**	**+1.3**
GNI	**Garni**	**7.81**	**336**	*e*Pn		**Pn**	**15 16 47.3**	**+0.2**
GNI				Lg		Lg	15 19 02.6	
GNI	**Garni**	**7.81**	**336**	Pn		Pn	15 16 52.3	+5.1
	comp=Z,0.2nm,0.3s,baz=39,slow=6.5,SNR=2.7							
GNI				Lg		Lg	15 19 02.6	
	comp=Z,0.6nm,0.3s,baz=54,slow=19,SNR=1.5							
GNI				LR		LR	15 20 10.7	
	comp=Z,271nm,21.6s,baz=313,slow=41							
GNI	**Garni**	**7.81**	**336**	*e*Pn		**Pn**	**15 16 47.3**	**+0.2**
GNI	**Garni**	**7.81**	**336**	*e*P		Pn	15 16 53.8	+6.7
	comp=Z,18nm,1.7s							
ISFR	**Sfrayin**	**8.52**	**59**	*e*Pn		**Pn**	**15 16 58.0**	**+1.0**
ISHV	**Shirvan**	**8.53**	**56**	*e*Pn		**Pn**	**15 16 58.1**	**+1.1**
ISHV				*e*			15 20 10.6	
	comp=Z,1μm,0.5s							
IKOO	**Kooshah**	**8.60**	**91**	*e*Pn		**Pn**	**15 16 59.0**	**+0.9**
IKOO				*e*			15 20 00.5	
	comp=Z,546nm,0.5s							
IKRD	**Kardeh**	**8.78**	**62**	*e*Pn		Pn	15 17 12.6	+12
DGRG	**David-gareji**	**8.82**	**343**	P		Pn	15 17 06.0	+5.1
DGRG	**David-gareji**	**8.82**	**343**	S		Sx	15 19 51.0	
IAKL	**Akhelmad**	**8.90**	**64**	*e*			15 17 26.1	
	comp=Z,255nm,0.3s							
IAKL				*e*Pn		**Pn**	**15 17 03.2**	**+0.9**
IPAY	**Payeh**	**9.03**	**65**	*e*Pn		**Pn**	**15 17 07.1**	**+3.1**
TBLG	**Delisi**	**9.25**	**341**	*e*P		Pn	15 17 11.0	+4.2
TBLG	**Delisi**	**9.25**	**341**	P		Pn	15 17 11.0	+4.2
TBLG	**Delisi**	**9.25**	**341**	*e*P		Pn	15 17 11.0	+4.2
TBLG	**Delisi**	**9.25**	**341**	S		Sx	15 19 54.9	
IDAH	**Dahanechah**	**9.29**	**89**	*e*Pn		**Pn**	**15 17 09.0**	**+1.4**
ISRO	**Mashad**	**9.35**	**67**	*e*Pn		**Pn**	**15 17 09.3**	**+1.0**
AKH	**Akhalkalaki**	**9.36**	**335**	P		**Pn**	**15 17 11.3**	**+2.9**
BANOM	**Banah**	**9.63**	**136**	P		**Pn**	**15 17 11.4**	**-0.7**
	SNR=115							
BANOM	**Banah**	**9.63**	**136**	P		**Pn**	**15 17 11.4**	**-0.7**
	SNR=115							
BANOM				S		Sn	15 18 48.9	-11
GOR	**Gori**	**9.67**	**339**	P		**Pn**	**15 17 15.5**	**+2.9**
IMYA	**Miami**	**9.85**	**67**	*e*Pn		**Pn**	**15 17 15.9**	**+0.8**
MALT	**Malatya**	**9.95**	**305**	*e*P		Pn	15 17 16.5	**0.0**
MALT	**Malatya**	**9.95**	**305**	*e*Pn		**Pn**	**15 17 16.5**	**0.0**
MALT	**Malatya**	**9.95**	**305**	*e*Pn		**Pn**	**15 17 16.5**	**0.0**
NAZ	**Nazwa, Dubai**	**10.01**	**142**	P		**Pn**	**15 17 17.9**	**+0.6**
	SNR=12							
NAZ	**Nazwa, Dubai**	**10.01**	**142**	P		**Pn**	**15 17 17.6**	**+0.3**
ASF	**Jabal al Asfar**	**10.10**	**268**	Pn		**Pn**	**15 17 18.4**	**-0.1**
ASF				Sn		**Sn**	**15 19 08.7**	**-2.4**
ASF				Lg		Lg	15 20 18.8	
ASF	**Jabal al Asfar**	**10.10**	**268**	Pn		**Pn**	**15 17 18.4**	**-0.1**
	comp=Z,2.2nm,0.3s,baz=314,slow=11,SNR=12							
ASF				Sn		**Sn**	**15 19 08.7**	**-2.4**
	comp=Z,0.9nm,0.3s,baz=169,slow=10,SNR=3.0							
ASF				Lg		Lg	15 20 18.8	
	comp=Z,0.4nm,0.3s,baz=71,slow=18,SNR=2.3							
ASF				LR		LR	15 22 02.6	
	comp=Z,172nm,21.1s,baz=316,slow=43							
ASUD	**Al Ashush, Dub**	**10.14**	**144**	P		**Pn**	**15 17 20.8**	**+1.7**
	SNR=48							
ASUD	**Al Ashush, Dub**	**10.14**	**144**	P		**Pn**	**15 17 20.3**	**+1.2**
	SNR=7.4							
ASUD	**Al Ashush, Dub**	**10.14**	**144**	P		**Pn**	**15 17 19.6**	**+0.5**
FAQ	**Al Faqa, Dubai**	**10.18**	**143**	P

KARN **Karanos** 20.71 283 *e*PN Pn 15 19 35.0 -1.0
KARN **Karanos** 20.71 283 *e*Pn Pn 15 19 35.0 -1.0
ISR **Istrita** 21.00 312 ⇓P **P** **15 19 36.6 0.0**
ISR **Istrita** 21.00 312 ⇓*i*P **P** **15 19 36.6 0.0**
ISR **Istrita** 21.00 312 ⇓*i*P **P** **15 19 36.6 0.0**
VRI **Vrincioaia** 21.24 313 ⇓P **P** **15 19 39.7 +0.6**
VRI **Vrincioaia** 21.24 313 ⇓*i*P **P** **15 19 39.7 +0.6**
VRI **Vrincioaia** 21.24 313 ⇓*i*P **P** **15 19 39.7 +0.6**
PLOR **Plostina** 21.28 313 ⇓P **P** **15 19 40.3 +0.7**
PLOR **Plostina** 21.28 313 ⇓*i*P **P** **15 19 40.3 +0.7**
PLOR **Plostina** 21.28 313 ⇓*i*P **P** **15 19 40.3 +0.7**
DID **Didima** 21.33 289 *e*PN **P** **15 19 39.9 -0.3**
DID **Didima** 21.33 289 *e*Pn **P** **15 19 39.9 -0.3**
MLR **Muntele Rosu** 21.55 312 P **P** **15 19 44.0 +1.5**
MLR **Muntele Rosu** 21.55 312 P **P** **15 19 44.0 +1.5**
comp=E,4.6nm,0.8s,baz=125,slow=4.5,SNR=14
MLR LR LR 15 30 16.6
comp=E,24nm,19.0s,baz=282,slow=43
MLR **Muntele Rosu** 21.55 312 P **P** **15 19 44.0 +1.5**
TESR 21.61 315 ⇓*i*P **P** **15 19 43.1 0.0**
TESR 21.61 315 ⇓*i*P **P** **15 19 43.1 0.0**
EKS2 **Erkin-Say** 21.85 57 *e*P **P** **15 19 44.4 -1.4**
EKS2 pmax pmax
comp=Z,7.0nm,1.1s
EKS2 **Erkin-Say** 21.85 57 *e*P **P** **15 19 44.4 -1.4**
comp=Z,7.2nm,1.1s
EKS2 **Erkin-Say** 21.85 57 *e*P **P** **15 19 44.4 -1.4**
comp=Z,7.2nm,1.1s
VLX **Vlachokerasia** 22.00 289 *e*PN **P** **15 19 47.2 -0.3**
VLX **Vlachokerasia** 22.00 289 *e*Pn **P** **15 19 47.2 -0.3**
DYR **Agios Nikonas** 22.01 287 *e*PN **P** **15 19 47.6 +0.1**
DYR **Agios Nikonas** 22.01 287 *e*Pn **P** **15 19 47.6 +0.1**
VOIR 22.09 311 ⇓P **P** **15 19 48.5 +0.2**
VOIR 22.09 311 ⇓*i*P **P** **15 19 48.5 +0.2**
VOIR 22.09 311 ⇓*i*P **P** **15 19 48.5 +0.2**
ATD **Arta Tunnel** 22.11 196 LR LR 15 29 10.1
comp=Z,148nm,21.0s,baz=73,slow=39
DOPR **Dopca** 22.11 313 ⇑*i*P **P** **15 19 48.2 -0.3**
DOPR **Dopca** 22.11 313 ⇑*i*P **P** **15 19 48.2 -0.3**
VTS **Vitosha** 22.29 303 ⇓P **P** **15 19 50.6 0.0**
VTS **Vitosha** 22.29 303 ⇓*i*P **P** **15 19 50.6 0.0**
VTS **Vitosha** 22.29 303 ⇓*i*P **P** **15 19 50.6 0.0**
AAK **Ala-Archa** 22.34 57 *ce*P **P** **15 19 52.7 +1.5**
AAK pmax pmax
comp=Z,5.0nm,1.2s
AAK **Ala-Archa** 22.34 57 *e*P **P** **15 19 50.8 -0.4**
comp=Z,5.0nm,1.0s
AAK **Ala-Archa** 22.34 57 P **P** **15 19 52.0 +0.9**
comp=Z,1.2nm,0.7s,baz=355,slow=5.7,SNR=5.2
AAK **Ala-Archa** 22.34 57 *e*P **P** **15 19 50.8 -0.4**
comp=Z,5.0nm,1.0s
AK02 **Malin Array Si** 22.75 326 *e*P **P** **15 19 54.1 -1.1**
AK02 **Malin Array Si** 22.75 326 *e*P **P** **15 19 54.1 -1.1**
AK01 **Malin Array Si** 22.77 327 *e*P **P** **15 19 53.0 -2.4**
AK01 **Malin Array Si** 22.77 327 *e*P **P** **15 19 53.0 -2.4**
AKASG **Malin Array Be** 22.77 327 P **P** **15 19 53.8 -1.6**
AKASG **Malin Array Be** 22.77 327 P **P** **15 19 53.8 -1.6**
AKASG **Malin Array Be** 22.77 327 P **P** **15 19 53.8 -1.6**
comp=Z,2.9nm,0.7s,baz=133,slow=9.2,SNR=10
AKASG **Malin Array Be** 22.77 327 P **P** **15 19 53.8 -1.6**
KIEV **Kiev** 22.77 327 *e*P P 15 19 51.8 -3.6
KIEV pmax pmax
comp=Z,10.0nm,1.0s
KIEV **Kiev** 22.77 327 *e*P P 15 19 51.8 -3.6
comp=Z,10nm,1.0s
KIEV **Kiev** 22.77 327 *e*P P 15 19 51.8 -3.6
comp=Z,10.0nm,1.0s
BURAR **Bucovina Array** 23.02 316 ⇓*i*P **P** **15 19 57.5 -0.6**
BURAR **Bucovina Array** 23.02 316 ⇓*i*P **P** **15 19 57.5 -0.6**
TKM2 **Tokmak 2** 23.20 57 *e*P **P** **15 19 58.2 -2.0**
TKM2 pmax pmax
comp=Z,8.0nm,0.9s
TKM2 **Tokmak 2** 23.20 57 *e*P **P** **15 19 58.2 -2.0**
comp=Z,8.3nm,0.9s
TKM2 **Tokmak 2** 23.20 57 *e*P **P** **15 19 58.2 -2.0**
comp=Z,8.3nm,0.9s
GZR **Gura Zlata** 23.53 309 ⇓P **P** **15 20 02.4 -0.8**
GZR **Gura Zlata** 23.53 309 ⇓*i*P **P** **15 20 02.3 -0.9**
GZR **Gura Zlata** 23.53 309 ⇓*i*P **P** **15 20 02.3 -0.9**
OBN **Obninsk** 23.68 342 ⇓*e*P **P** **15 20 04.5 +0.1**
OBN *e* 15 20 39.0
OBN *e*S S 15 24 12.6 -5.2
OBN pmax pmax
comp=Z,37nm,1.4s
OBN MLR MLR
comp=Z,100nm,18.0s
OBN **Obninsk** 23.68 342 *e*P **P** **15 20 04.5 +0.1**
comp=Z,37nm,1.4s
OBN *e*S S 15 24 12.6 -5.2
comp=Z,100nm,18.0s
SELS **Selova** 23.94 303 *e*P **P** **15 20 06.3 -0.8**
MOS **Moscow** 23.99 344 *e*P **P** **15 20 06.9 -0.5**
MOS pmax pmax
comp=Z,27nm,0.8s
MOS **Moscow** 23.99 344 *e*P **P** **15 20 06.9 -0.5**
comp=Z,27nm,0.8s
DRGR 24.14 312 ⇓P **P** **15 20 09.7 +0.7**
DRGR 24.14 312 ⇓*i*P **P** **15 20 09.7 +0.7**
DRGR 24.14 312 ⇓*i*P **P** **15 20 09.7 +0.7**
ARU **Arti** 24.33 13 *d*P **P** **15 20 11.8 +1.3**
ARU 15 20 52.4
ARU S **S** **15 24 25.9 -2.3**
ARU SS **SnSn** **15 25 21.5 +9.4**
ARU pmax pmax
comp=Z,10.0nm,1.7s
ARU **Arti** 24.33 13 *i* P **P** **15 20 11.8 +1.3**
comp=Z,10.0nm,1.7s
GRUS **Gruza** 24.41 304 *e*P **P** **15 20 12.1 +0.7**
IVAS **Ivanjica** 24.72 303 *e*P **P** **15 20 14.5 +0.2**
NDI **New Delhi** 24.72 93 *e*P **P** **15 20 13.0 -1.4**
TRPA **Tarpa** 24.84 315 ⇓*i*P **P** **15 20 15.9 +0.6**
TRPA **Tarpa** 24.84 315 ⇓*i*P **P** **15 20 15.9 +0.6**
DIVS **Divibare** 24.97 305 *e*P **P** **15 20 17.3 +0.7**
DDI **Dehra Dun** 24.99 88 *e*PN **P** **15 20 17.0 +0.1**
DDI *e*SN 15 21 04.0
SVE **Sverdlovsk** 25.13 15 *e*P **P** **15 20 17.6 -0.2**
SVE *e*S **S** **15 24 37.8 -3.3**
SVE pmax pmax
comp=Z,18nm,1.5s
SVE **Sverdlovsk** 25.13 15 *e*P **P** **15 20 17.6 -0.2**
comp=Z,18nm,1.5s
BRVK **Borovoye** 25.24 31 *ce*P **P** **15 20 19.2 +0.4**
BRVK pmax pmax
comp=Z,19nm,1.8s
BRVK **Borovoye** 25.24 31 *e*P **P** **15 20 18.7 -0.1**
comp=Z,8.9nm,0.9s
BRVK **Borovoye** 25.24 31 *e*P **P** **15 20 19.2 +0.4**
comp=Z,19nm,1.8s
BVAR **Borovoye Array** 25.26 31 P **P** **15 20 18.9 -0.1**
BVAR **Borovoye Array** 25.26 31 P **P** **15 20 18.9 -0.1**
BVAR **Borovoye Array** 25.26 31 P **P** **15 20 18.9 -0.1**
comp=Z,6.4nm,0.5s,baz=223,slow=8.4,SNR=73
BVAR **Borovoye Array** 25.26 31 P **P** **15 20 18.9 -0.1**
BBLS **Lazići** 25.32 304 *e*P **P** **15 20 19.7 0.0**
KOLS **Kolonicke sedl** 25.38 317 *e*P **P** **15 20 21.4 +1.2**
KOLS pmax pmax
comp=Z,15nm,1.1s
KOLS **Kolonicke sedl** 25.38 317 *e*P **P** **15 20 21.4 +1.2**
KOLS **Kolonicke sedl** 25.38 317 *e*P **P** **15 20 21.4 +1.2**
comp=Z,15nm,1.1s
CRVS **Cervenica-Dubn** 25.84 316 *e*P **P** **15 20 24.2 -0.1**
CRVS pmax pmax
comp=Z,12nm,1.4s
CRVS **Cervenica-Dubn** 25.84 316 *e*P **P** **15 20 24.2 -0.1**
CRVS **Cervenica-Dubn** 25.84 316 *e*P **P** **15 20 24.2 -0.1**
comp=Z,12nm,1.4s
PSZ **Piszkesteto** 26.35 313 ⇓P **P** **15 20 31.7 +2.6**
PSZ **Piszkesteto** 26.35 313 *e*P P 15 20 24.2 -4.8
comp=Z,12nm,0.8s
PSZ **Piszkesteto** 26.35 313 ⇓*i*P **P** **15 20 31.7 +2.6**
PSZ **Piszkesteto** 26.35 313 P **P** **15 20 31.7 +2.6**
TIP **Timpagrande** 26.53 292 *e*P **P** **15 20 31.1 +0.4**
comp=Z,12nm,0.7s
TIP **Timpagrande** 26.53 292 *e*P **P** **15 20 31.1 +0.4**
comp=Z,12nm,0.7s
VYHS **Vyhne** 27.23 313 *e*P **P** **15 20 37.8 +0.9**
VYHS **Vyhne** 27.23 313 *e*P **P** **15 20 37.8 +0.9**
VYHS **Vyhne** 27.23 313 *e*P **P** **15 20 37.8 +0.9**
OJC **Ojcow** 27.41 317 *e*P **P** **15 20 37.2 -1.2**
OJC pmax pmax
comp=Z,8.0nm,0.6s
OJC **Ojcow** 27.41 317 *e*P **P** **15 20 37.2 -1.2**
comp=Z,8.1nm,0.6s
OJC **Ojcow** 27.41 317 *e*P **P** **15 20 38.6 +0.1**
comp=Z,8.1nm,0.6s
KURBB **Kurchatov Arra** 27.98 42 P **P** **15 20 43.8 +0.2**
comp=Z,1.6nm,0.7s,baz=246,slow=9.5,SNR=12
KURBB LR LR 15 34 25.4
comp=Z,43nm,18.1s,baz=245,slow=42
KURK **Kurchatov** 28.08 42 *e*P **P** **15 20 44.7 +0.3**
KURK pmax pmax
comp=Z,4.0nm,1.3s
KURK **Kurchatov** 28.08 42 *e*P P 15 20 42.9 -1.5
comp=Z,2.9nm,0.9s
KURK **Kurchatov** 28.08 42 *e*P **P** **15 20 44.7 +0.3**
comp=Z,4.0nm,1.3s
MORC **Moravsky Berou** 28.52 315 *e*P **P** **15 20 47.6 -0.9**
MORC pmax pmax
comp=Z,4.0nm,0.9s
MORC **Moravsky Berou** 28.52 315 *e*P **P** **15 20 47.6 -0.9**
comp=Z,3.7nm,0.9s
MORC **Moravsky Berou** 28.52 315 *e*P **P** **15 20 47.6 -0.9**
comp=Z,3.7nm,0.9s
MK31 **Makanchi Array** 28.86 52 *e*P P 15 20 49.6 -1.9
MK31 **Makanchi Array** 28.86 52 *e*P P 15 20 49.6 -1.9
MK31 **Makanchi Array** 28.86 52 *e*P P 15 20 49.6 -1.9
MKAR **Makanchi Array** 28.86 52 *e*P **P** **15 20 50.9 -0.6**
MKAR 15 23 59.4
MKAR **Makanchi Array** 28.86 52 *e*P **P** **15 20 50.9 -0.6**
MKAR PcP **PcP** **15 23 59.4 -1.1**
MKAR **Makanchi Array** 28.86 52 P **P** **15 20 52.2 +0.6**
comp=Z,1.7nm,0.6s,baz=249,slow=8.3,SNR=17
MKAR PcP **PcP** **15 23 59.4 -1.1**
comp=Z,0.3nm,0.6s,baz=247,slow=4.6,SNR=2.3
MKAR **Makanchi Array** 28.86 52 *e*P **P** **15 20 50.9 -0.6**
MKAR **Makanchi Array** 28.86 52 PcP **PcP** **15 23 59.4 -1.1**
VRAC **Vranov** 28.91 314 P **P** **15 20 52.6 +0.7**
VRAC **Vranov** 28.91 314 P **P** **15 20 52.6 +0.7**
comp=Z,2.2nm,0.5s,baz=88,slow=11,SNR=4.2
VRAC **Vranov** 28.91 314 P **P** **15 20 52.6 +0.7**
DPC **Dobruska-Polom** 29.48 316 *e*P P 15 20 54.7 -2.2
DPC pmax pmax
comp=Z,7.0nm,1.0s
DPC **Dobruska-Polom** 29.48 316 *e*P P 15 20 54.6 -2.2
comp=Z,6.6nm,1.0s
DPC **Dobruska-Polom** 29.48 316 *e*P **P** **15 20 56.8 -0.1**
DPC **Dobruska-Polom** 29.48 316 *e*P P 15 20 54.7 -2.2
comp=Z,6.6nm,1.0s
PYUN **Piuthan** 29.75 90 *e*P **P** **15 21 00.2 +0.5**
comp=Z,25nm,0.9s
KBA **Koelnbreinsper** 30.27 308 ⇑*i*P **P** **15 21 04.3 +0.2**
KBA **Koelnbreinsper** 30.27 308 ⇑*i*P **P** **15 21 04.3 +0.2**
KBA **Koelnbreinsper** 30.27 308 ⇑*i*P **P** **15 21 04.3 +0.2**
KBA **Koelnbreinsper** 30.27 308 ⇑*i*P **P** **15 21 04.3 +0.2**
DANN **Dangsing** 30.32 89 *e*P **P** **15 21 05.8 +0.9**
comp=Z,34nm,0.9s
KOLN **Kolanda** 30.36 91 *e*P **P** **15 21 05.4 +0.2**
comp=Z,8.1nm,0.9s
GERES **GERESS Array B** 30.54 312 P **P** **15 21 06.0 -0.4**
GERES PcP **PcP** **15 24 04.8 0.0**
GERES **GERESS Array B** 30.54 312 P **P** **15 21 06.0 -0.4**
comp=Z,0.5nm,0.4s,baz=103,slow=9.7,SNR=8.3
GERES PcP **PcP** **15 24 04.8 0.0**
comp=Z,0.4nm,0.6s,baz=236,slow=1.4,SNR=4.3
GERES LR LR 15 34 26.6
comp=Z,60nm,18.6s,baz=78,slow=38
GERES **GERESS Array B** 30.54 312 P **P** **15 21 06.0 -0.4**
GERES **GERESS Array B** 30.54 312 PcP **PcP** **15 24 04.8 0.0**
KHC **Kasperske Hory** 30.70 312 *e*P **P** **15 21 07.6 -0.2**
KHC **Kasperske Hory** 30.70 312 *e*P **P** **15 21 07.6 -0.2**
KHC **Kasperske Hory** 30.70 312 P **P** **15 21 07.6 -0.2**
WTTA **Wattenberg** 31.44 308 ⇑*i*P **P** **15 21 14.1 -0.4**
WTTA **Wattenberg** 31.44 308 ⇑*i*P **P** **15 21 14.1 -0.4**
WTTA **Wattenberg** 31.44 308 ⇑*i*P **P** **15 21 14.1 -0.4**
WTTA **Wattenberg** 31.44 308 ⇑*i*P **P** **15 21 14.1 -0.4**
WATA **Walderalm** 31.50 308 ⇑*i*P **P** **15 21 14.2 -0.8**
WATA **Walderalm** 31.50 308 ⇑*i*P **P** **15 21 14.1 -0.8**
WATA **Walderalm** 31.50 308 ⇑*i*P **P** **15 21 14.2 -0.8**
WATA **Walderalm** 31.50 308 *i* P **P** **15 21 14.2 -0.8**
DMN **Daman** 31.68 90 *e*P **P** **15 21 17.1 +0.2**
KKN **Kakani** 31.77 90 *e*P **P** **15 21 18.3 +0.7**
comp=Z,15nm,0.6s
CLL **Collm** 31.79 316 *i* P **P** **15 21 17.3 +0.1**
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL **Collm** 31.79 316 *i* P **P** **15 21 17.3 +0.1**
comp=Z,6.0nm,1.0s
CLL **Collm** 31.79 316 *i* P **P** **15 21 17.3 +0.1**
comp=Z,6.0nm,1.0s
MOTA **Moosalm** 31.82 308 ⇓*i*P **P** **15 21 16.8 -1.0**
MOTA **Moosalm** 31.82 308 ⇓*i*P **P** **15 21 16.8 -1.0**
MOTA **Moosalm** 31.82 308 ⇓*i*P **P** **15 21 16.8 -1.0**
MOTA **Moosalm** 31.82 308 ⇓*i*P **P** **15 21 16.8 -1.0**
JOF **Joensuu** 31.88 345 *e*P P 15 21 16.5 -1.4
JOF pmax pmax
comp=Z,2.0nm,0.6s
JOF **Joensuu** 31.88 345 *ep* P 15 21 16.5 -1.4
comp=Z,2.4nm,0.6s
JOF **Joensuu** 31.88 345 *e*P P 15 21 16.5 -1.4
comp=Z,2.0nm,0.6s
PKIN **Phulchoki** 31.93 90 *e*P **P** **15 21 19.5 +0.4**
comp=Z,9.6nm,0.6s
PKI **Pulchoki** 31.95 90 *e*P **P** **15 21 19.9 +0.6**
FINES **FINESS Array B** 31.98 339 P **P** **15 21 17.9 -0.8**
FINES **FINESS Array B** 31.98 339 P **P** **15 21 17.9 -0.8**
comp=Z,2.1nm,0.6s,baz=144,slow=7.9,SNR=9.0
FINES **FINESS Array B** 31.98 339 P **P** **15 21 18.0 -0.8**
FETA **Feichten** 32.00 307 ⇑*i*P **P** **15 21 18.8 -0.5**
FETA **Feichten** 32.00 307 ⇑*i*P **P** **15 21 18.8 -0.5**
FETA **Feichten** 32.00 307 ⇑*i*P **P** **15 21 18.8 -0.5**
WMQ **Urumqi** 32.03 59 P pP 15 21 32.5 +5.8
WMQ pmax pmax
comp=Z,16nm,1.0s
GUN **Gumba** 32.23 89 *e*P **P** **15 21 22.5 +0.7**
comp=Z,21nm,0.8s
KAF **Kangasniemi** 32.45 340 *e*P **P** **15 21 22.1 -0.8**
KAF pmax pmax
comp=Z,2.0nm,0.5s
KAF **Kangasniemi** 32.45 340 *ep* P **P** **15 21 22.1 -0.8**
comp=Z,1.5nm,0.5s
KAF **Kangasniemi** 32.45 340 *e*P **P** **15 21 22.1 -0.8**
comp=Z,2.0nm,0.5s
NVS **Novosibirsk** 32.48 37 *e*P **P** **15 21 23.6 +0.3**
NVS **Novosibirsk** 32.48 37 *e*P **P** **15 21 23.6 +0.3**
DAVA **Damuels** 32.62 307 ⇑*i*P **P** **15 21 24.0 -0.8**
DAVA **Damuels** 32.62 307 ⇑*i*P **P** **15 21 23.9 -0.8**
DAVA **Damuels** 32.62 307 ⇑*i*P **P** **15 21 24.0 -0.8**
TUE **Stuetta** 32.82 306 *e*P P 15 21 24.6 -2.1
comp=Z,86nm,2.6s
TUE **Stuetta** 32.82 306 *e*P P 15 21 24.6 -2.1
comp=Z,86nm,2.6s
ZAA0 **Zalesovo Array** 32.92 40 *e*P P 15 21 25.1 -2.0
ZAA0 **Zalesovo Array** 32.92 40 *e*P P 15 21 25.1 -2.0
ZALV **Zalesovo Beam** 32.92 40 P **P** **15 21 26.7 -0.4**
ZALV 15 24 09.1
ZALV **Zalesovo Beam** 32.92 40 P **P** **15 21 26.6 -0.4**
ZALV PcP **PcP** **15 24 09.1 -1.9**
ZALV **Zalesovo Beam** 32.92 40 P **P** **15 21 26.6 -0.4**
comp=Z,2.8nm,0.5s,baz=254,slow=8.3,SNR=21
ZALV PcP **PcP** **15 24 09.1 -1.9**
comp=Z,0.7nm,0.5s,baz=240,slow=5.0,SNR=3.5
ZALV LR LR 15 36 56.9
comp=Z,44nm,21.8s,baz=160,slow=40
ZALV **Zalesovo Beam** 32.92 40 P **P** **15 21 26.7 -0.4**
RAMN **Ramite** 33.15 90 *e*P **P** **15 21 29.6 -0.2**
comp=Z,16nm,0.6s
ODAN **Odare** 33.84 90 *e*P **P** **15 21 35.8 0.0**
TAPN **Taplejung** 33.95 89 *e*P **P** **15 21 37.3 +0.5**
comp=Z,32nm,1.1s
MBDF **Montbardon** 34.39 302 *e*P **P** **15 21 39.6 -0.6**
comp=Z,16nm,0.7s
MBDF **Montbardon** 34.39 302 *e*P **P** **15 21 39.6 -0.6**
MBDF pmax pmax
comp=Z,17nm,0.7s
MBDF **Montbardon** 34.39 302 *e*P **P** **15 21 39.6 -0.6**
comp=Z,16nm,0.7s
MBDF **Montbardon** 34.39 302 *e*P **P** **15 21 39.6 -0.6**
comp=Z,17nm,0.7s
LPG **La Plagne** 34.48 304 *e*P **P** **15 21 40.4 -0.8**
comp=Z,14nm,0.8s
LPG **La Plagne** 34.48 304 *e*P **P** **15 21 40.4 -0.8**
LPG pmax pmax
comp=Z,14nm,0.8s
LPG **La Plagne** 34.48 304 *e*P **P** **15 21 40.4 -0.8**
comp=Z,14nm,0.8s
LPG **La Plagne** 34.48 304 *e*P **P** **15 21 40.4 -0.8**
comp=Z,14nm,0.8s
BNI **Bardonecchia** 34.48 303 *e*P P 15 21 39.3 -1.7
BNI pmax pmax
comp=Z,13nm,0.7s
BNI **Bardonecchia** 34.48 303 *e*P P 15 21 39.3 -1.7
comp=Z,13nm,0.7s
BNI **Bardonecchia** 34.48 303 *e*P P 15 21 39.3 -1.7
comp=Z,13nm,0.7s
LPL **La Plagne** 34.49 304 *e*P **P** **15 21 40.5 -0.7**
LPL **La Plagne** 34.49 304 *e*P **P** **15 21 40.5 -0.7**
LPL **La Plagne** 34.49 304 *e*P **P** **15 21 40.5 -0.7**
LPL **La Plagne** 34.49 304 *e*P **P** **15 21 40.5 -0.7**
CABF **La Chapelle** 35.07 305 ⇑*i*P **P** **15 21 45.5 -0.5**
comp=Z,29nm,0.9s
CABF **La Chapelle** 35.07 305 ⇑*i*P **P** **15 21 45.5 -0.5**
CABF pmax pmax
comp=Z,29nm,0.9s
CABF **La Chapelle** 35.07 305 ⇑*i*P **P** **15 21 45.5 -0.5**
comp=Z,29nm,0.9s
CABF **La Chapelle** 35.07 305 *i* P **P** **15 21 45.5 -0.5**
comp=Z,29nm,0.9s
PAGF **Fort de Pagny** 35.60 309 *e*P **P** **15 21 49.6 -0.8**
comp=Z,2.3nm,0.5s
PAGF **Fort de Pagny** 35.60 309 *e*P **P** **15 21 49.6 -0.8**
comp=Z,2.3nm,0.4s
PAGF **Fort de Pagny** 35.60 309 *e*P **P** **15 21 49.6 -0.8**
comp=Z,1.1nm,0.5s
KMBO **Kilima Mbogo** 35.70 200 LR LR 15 37 11.9
comp=Z,60nm,18.7s,baz=93,slow=38
MEZF **Maizieres J'vi** 36.03 309 *e*P **P** **15 21 53.5 -0.6**
MEZF **Maizieres J'vi** 36.03 309 *e*P **P** **15 21 53.5 -0.6**
MEZF **Maizieres J'vi** 36.03 309 *e*P **P** **15 21 53.5 -0.6**
SMF **Signal de Mont** 36.61 305 ⇑*i*P **P** **15 21 58.2 -0.9**
comp=Z,18nm,0.6s
SMF **Signal de Mont** 36.61 305 ⇑*i*P **P** **15 21 58.2 -0.9**
SMF pmax pmax
comp=Z,18nm,0.6s
SMF **Signal de Mont** 36.61 305 ⇑*i*P **P** **15 21 58.2 -0.9**
comp=Z,18nm,0.6s
SMF **Signal de Mont** 36.61 305 *i* P **P** **15 21 58.2 -0.9**
comp=Z,18nm,0.6s
LOR **Lormes** 36.66 306 *e*P P 15 21 57.7 -1.9
LOR *e*R
comp=Z,98nm,17.5s
LOR **Lormes** 36.66 306 *e*P P 15 21 57.7 -1.9
LOR **Lormes** 36.66 306 *e*P P 15 21 57.7 -1.9
SSF **Saint Saulge** 36.88 306 *e*P **P** **15 22 00.5 -0.9**
comp=Z,20nm,1.0s
SSF **Saint Saulge** 36.88 306 *e*P **P** **15 22 00.5 -0.9**
SSF pmax pmax
comp=Z,20nm,1.0s
SSF **Saint Saulge** 36.88 306 *e*P **P** **15 22 00.5 -0.9**
comp=Z,20nm,1.0s
SSF **Saint Saulge** 36.88 306 *e*P **P** **15 22 00.5 -0.9**
comp=Z,20nm,1.0s
AVF **Avril sur Loir** 36.96 305 *e*P P 15 22 00.8 -1.3
AVF **Avril sur Loir** 36.96 305 *e*P P 15 22 00.8 -1.3
AVF **Avril sur Loir** 36.96 305 *e*P P 15 22 00.8 -1.3
AVF **Avril sur Loir** 36.96 305 *e*P P 15 22 00.8 -1.3
KONO **Kongsberg** 37.06 328 *e*P P 15 22 01.4 -1.4
KONO **Kongsberg** 37.06 328 *e*P P 15 22 01.4 -1.4
KONO **Kongsberg** 37.06 328 *e*P P 15 22 01.4 -1.4
NB2 **NORSAR Subarra** 37.06 330 P P 15 22 01.5 -1.3
comp=Z,3.3nm,0.6s,baz=123,slow=8.6
NB2 **NORSAR Subarra** 37.06 330 P P 15 22 01.5 -1.3
comp=Z,3.3nm,0.6s,SNR=8.0
NOA **NORSAR Array B** 37.06 330 P **P** **15 22 01.8 -1.0**
NOA **NORSAR Array B** 37.06 330 P **P** **15 22 01.8 -1.0**
comp=Z,2.7nm,0.6s,baz=122,slow=8.4,SNR=19
NOA LR LR 15 38 56.0
comp=Z,44nm,18.6s,baz=275,slow=39
NOA **NORSAR Array B** 37.06 330 P **P** **15 22 01.8 -1.0**
KEV **Kevo** 38.72 348 *e*P P 15 22 15.4 -1.2
KEV pmax pmax
comp=Z,1.0nm,0.4s
KEV **Kevo** 38.72 348 *ep* P 15 22 15.4 -1.2
comp=Z,0.5nm,0.4s
KEV **Kevo** 38.72 348 *e*P P 15 22 15.4 -1.2
comp=Z,1.0nm,0.4s
ARCES **ARCESS Array B** 38.80 347 P P 15 22 16.0 -1.3
ARCES **ARCESS Array B** 38.80 347 P P 15 22 16.0 -1.3
comp=Z,1.1nm,0.6s,baz=167,slow=8.9,SNR=9.8
ARCES LR LR 15 39 31.4
comp=Z,84nm,19.9s,baz=3.7,slow=38
ARCES **ARCESS Array B** 38.80 347 P P 15 22 16.0 -1.3
MFF **Saint Martin d** 39.35 305 *e*P P 15 22 20.9 -1.3
comp=Z,6.6nm,0.6s
MFF **Saint Martin d** 39.35 305 *e*P P 15 22 20.9 -1.3
MFF pmax pmax
comp=Z,7.0nm,0.6s
MFF **Saint Martin d** 39.35 305 *e*P P 15 22 20.9 -1.3
comp=Z,6.6nm,0.6s
MFF **Saint Martin d** 39.35 305 *e*P P 15 22 20.9 -1.3
comp=Z,7.0nm,0.6s
TAM **Tamanrasset** 39.36 266 *e*P P 15 22 21.8 -1.0
TAM pmax pmax
comp=Z,14nm,1.1s
TAM **Tamanrasset** 39.36 266 *e*P P 15 22 21.8 -1.0
comp=Z,14nm,1.1s
TAM **Tamanrasset** 39.36 266 *e*P P 15 22 21.8 -1.0
comp=Z,14nm,1.1s
LDF **La Druitiere** 39.45 308 *e*P P 15 22 21.6 -1.5
LDF **La Druitiere** 39.45 308 *e*P P 15 22 21.6 -1.5
LDF **La Druitiere** 39.45 308 *e*P P 15 22 21.6 -1.5
LDF **La Druitiere** 39.45 308 *e*P P 15 22 21.6 -1.5
FLN **La Foliniere** 39.71 308 ⇑*i*P P 15 22 23.8 -1.3
comp=Z,13nm,0.5s
FLN *e*R
comp=Z,81nm,22.5s
FLN **La Foliniere** 39.71 308 ⇑*i*P P 15 22 23.8 -1.3
FLN pmax pmax
comp=Z,13nm,0.5s
FLN **La Foliniere** 39.71 308 ⇑*i*P P 15 22 23.8 -1.3
comp=Z,13nm,0.5s
FLN **La Foliniere** 39.71 308 *i* P P 15 22 23.8 -1.3
comp=Z,13nm,0.5s
GRR **Gorron** 39.93 308 *e*P P 15 22 25.8 -1.2
comp=Z,25nm,0.7s
GRR **Gorron** 39.93 308 *e*P P 15 22 25.8 -1.2
GRR pmax pmax
comp=Z,25nm,0.7s
GRR **Gorron** 39.93 308 *e*P P 15 22 25.8 -1.2
comp=Z,25nm,0.7s
GRR **Gorron** 39.93 308 *e*P P 15 22 25.8 -1.2
comp=Z,25nm,0.7s
SGMF **Saint Gilles** 41.05 307 *e*P P 15 22 35.1 -1.2
SGMF **Saint Gilles** 41.05 307 *e*P P 15 22 35.1 -1.2
SGMF **Saint Gilles** 41.05 307 *e*P P 15 22 35.1 -1.2
SGMF **Saint Gilles** 41.05 307 *e*P P 15 22 35.1 -1.2
GTA **Gaotai** 41.17 66 *e*P **P** **15 22 38.5 +0.9**
GTA pmax pmax
comp=Z,3.0nm,0.9s
QUIF **Quistinic** 41.45 307 *e*P P 15 22 38.1 -1.4
comp=Z,16nm,0.5s
QUIF **Quistinic** 41.45 307 *e*P P 15 22 38.1 -1.4
QUIF pmax pmax
comp=Z,16nm,0.5s
QUIF **Quistinic** 41.45 307 *e*P P 15 22 38.1 -1.4
comp=Z,16nm,0.5s
QUIF **Quistinic** 41.45 307 *e*P P 15 22 38.1 -1.4
comp=Z,16nm,0.5s
ROSF **Rostrenen** 41.53 307 *e*P P 15 22 39.0 -1.3
comp=Z,12nm,0.6s
ROSF **Rostrenen** 41.53 307 *e*P P 15 22 39.0 -1.3
ROSF pmax pmax
comp=Z,12nm,0.6s
ROSF **Rostrenen** 41.53 307 *e*P P 15 22 39.0 -1.3
comp=Z,12nm,0.6s
ROSF **Rostrenen** 41.53 307 *e*P P 15 22 39.0 -1.3
comp=Z,12nm,0.6s
ESDC **Sonseca Array** 42.51 295 P **P** **15 22 48.2 -0.2**
ESDC **Sonseca Array** 42.51 295 P **P** **15 22 48.2 -0.2**
comp=Z,0.8nm,0.6s,baz=78,slow=9.3,SNR=6.3
ESDC **Sonseca Array** 42.51 295 P **P** **15 22 48.2 -0.2**
ZAK **Zakamensk** 43.15 50 *e*P **P** **15 22 54.8 +1.2**
ZAK pmax pmax
comp=Z,2.0nm,1.5s
ZAK **Zakamensk** 43.15 50 *e*P **P** **15 22 54.8 +1.2**
comp=Z,2.0nm,1.5s
TLY **Talaya** 43.45 48 *e*P **P** **15 22 56.9 +1.1**
TLY pmax pmax
comp=Z,1.0nm,0.8s
TLY MLR MLR
comp=Z,60nm,18.0s
TLY **Talaya** 43.45 48 *e*P **P** **15 22 56.9 +1.1**
comp=Z,60nm,18.0s
SONM **Songino Array** 45.21 53 P **P** **15 23 10.7 +0.6**
SONM PcP **PcP** **15 24 48.7 -1.3**

SONM	**Songino Array**	**45.21**	**53**	P		**P**	**15 23 10.7**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=286,slow=7.6,SNR=6.8							
SONM				PcP		**PcP**	**15 24 48.7**	**-1.3**
	comp=Z,0.1nm,0.4s,baz=278,slow=5.8,SNR=3.5							
SONM	**Songino Array**	**45.21**	**53**	P		**P**	**15 23 10.7**	**+0.6**
SONM	**Songino Array**	**45.21**	**53**	PcP		**PcP**	**15 24 48.7**	**-1.3**
ULN	**Ulaanbaatar**	**45.65**	**53**	*e*P		**P**	**15 23 13.7**	**+0.1**
	comp=Z,5.0nm,0.9s							
ULN	**Ulaanbaatar**	**45.65**	**53**	*e*P		**P**	**15 23 13.7**	**+0.1**
	comp=Z,5.0nm,0.9s							
CHTO	**Chiang Mai**	**46.84**	**95**	*e*P		**P**	**15 23 22.5**	**-0.6**
CHTO				pmax	pmax			
	comp=Z,3.0nm,0.8s							
CHTO	**Chiang Mai**	**46.84**	**95**	*e*P		**P**	**15 23 22.5**	**-0.6**
	comp=Z,2.9nm,0.8s							
CHTO	**Chiang Mai**	**46.84**	**95**	*e*P		**P**	**15 23 22.5**	**-0.6**
	comp=Z,2.9nm,0.8s							
CMAR	**Chiang Mai Arr**	**47.00**	**95**	P		**P**	**15 23 24.0**	**-0.4**
CMAR				PcP		**PcP**	**15 24 56.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**47.00**	**95**	P		**P**	**15 23 24.0**	**-0.4**
	comp=Z,1.4nm,0.4s,baz=292,slow=8.1,SNR=11							
CMAR				PcP		**PcP**	**15 24 56.2**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=296,slow=4.6,SNR=5.2							
CMAR	**Chiang Mai Arr**	**47.00**	**95**	P		**P**	**15 23 24.0**	**-0.4**
TOA0	**Torodi Ar. Sit**	**47.21**	**257**	*e*P		**P**	**15 23 26.3**	**+0.2**
TOA0				*e*pP		**pP**	**15 23 31.1**	**-2.4**
TOA0				*e*sP		**sP**	**15 23 34.0**	**-2.3**
TOA0	**Torodi Ar. Sit**	**47.21**	**257**	*e*P		**P**	**15 23 26.3**	**+0.2**
TOA0				*e*pP		**pP**	**15 23 31.0**	**-2.4**
TORD	**Torodi Ar. Bea**	**47.21**	**257**	P		**P**	**15 23 26.6**	**+0.5**
TORD	**Torodi Ar. Bea**	**47.21**	**257**	P		**P**	**15 23 26.6**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=51,slow=8.3,SNR=81							
TORD	**Torodi Ar. Bea**	**47.21**	**257**	P		**P**	**15 23 26.6**	**+0.5**
HHC	**Hu-ho-hao-te**	**49.80**	**62**	*e*P		**P**	**15 23 48.5**	**+2.6**
HHC				S		**S**	**15 30 55.3**	**+1.2**
HHC				pmax	pmax			
	comp=Z,34nm,0.7s							
HHC				pmax	pmax			
	comp=Z,190nm,6.3s							
IPM	**Ipoh**	**56.27**	**109**	*e*P		P	15 24 32.2	-1.6
	comp=Z,11nm,0.7s							
IPM	**Ipoh**	**56.27**	**109**	*e*P		P	15 24 32.2	-1.6
	comp=Z,11nm,0.7s							
LIC	**Lamto**	**56.56**	**254**	⇑*i*P		**P**	**15 24 36.2**	**+0.4**
	comp=Z,18nm,0.7s							
LIC				*e*R				
	comp=Z,95nm,22.9s							
LIC	**Lamto**	**56.56**	**254**	⇑*i*P		**P**	**15 24 36.2**	**+0.4**
	comp=Z,18nm,0.7s							
LIC	**Lamto**	**56.56**	**254**	⇑*i*P		**P**	**15 24 36.2**	**+0.4**
	comp=Z,9.1nm,0.7s							
KSAR	**Wonju Array Be**	**62.91**	**61**	P		**P**	**15 25 18.4**	**-0.8**
KSAR	**Wonju Array Be**	**62.91**	**61**	P		**P**	**15 25 18.4**	**-0.8**
KSRS	**Korea Array**	**62.93**	**61**	P		**P**	**15 25 18.4**	**-1.0**
	comp=Z,2.0nm,0.7s,baz=278,slow=7.1,SNR=7.7							
KSRS	**Korea Array**	**62.93**	**61**	P		**P**	**15 25 18.4**	**-1.0**
	comp=Z,2.0nm,0.7s							
USRK	**Ussuriysk Arra**	**63.33**	**53**	P		**P**	**15 25 20.9**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=302,slow=5.1,SNR=4.8							
BOSA	**Boshof**	**65.28**	**203**	P		**P**	**15 25 35.9**	**+1.0**
BOSA	**Boshof**	**65.28**	**203**	P		**P**	**15 25 35.9**	**+1.0**
	comp=Z,9.8nm,0.6s,baz=25,slow=5.4,SNR=28							
BOSA	**Boshof**	**65.28**	**203**	P		**P**	**15 25 35.8**	**+1.0**
SEY	**Seymchan**	**66.88**	**29**	*d*/P		**P**	**15 25 44.2**	**-0.4**
SEY	**Seymchan**	**66.88**	**29**	*i* P		**P**	**15 25 44.2**	**-0.4**
BILL	**Bilibino**	**69.06**	**21**	⇓*e*P		**P**	**15 25 58.5**	**+0.2**
BILL				*e**PP		**PcP**	**15 26 22.0**	**-0.2**
BILL				*e*			15 28 33.0	
BILL				pmax	pmax			
	comp=Z,4.0nm,1.2s							
BILL	**Bilibino**	**69.06**	**21**	*e*P		**P**	**15 25 58.1**	**-0.2**
	comp=Z,2.7nm,0.8s							
BILL				*e*			15 26 09.5	
BILL	**Bilibino**	**69.06**	**21**	*e*P		**P**	**15 25 58.5**	**+0.2**
	comp=Z,4.0nm,1.2s							
BILL	**Bilibino**	**69.06**	**21**	*e*PcP		**PcP**	**15 26 22.0**	**-0.2**
YSS	**Yuzh-Sakhalins**	**69.15**	**47**	*e*P		**P**	**15 25 59.8**	**+0.7**
YSS				*e*			15 26 07.0	
YSS	**Yuzh-Sakhalins**	**69.15**	**47**	*e*P		**P**	**15 25 59.8**	**+0.7**
SCHQ	**Schefferville**	**76.56**	**328**	P		P	15 26 41.6	-1.4
SCHQ	**Schefferville**	**76.56**	**328**	P		P	15 26 41.6	-1.4
	comp=Z,2.7nm,0.9s,baz=16,slow=7.6,SNR=7.5							
SCHQ	**Schefferville**	**76.56**	**328**	*e*P		P	15 26 41.7	-1.4
COLA	**College**	**81.53**	**7**	*e*P		P	15 27 08.6	-1.4
COLA				pmax	pmax			
	comp=Z,5.0nm,0.8s							
COLA	**College**	**81.53**	**7**	*e*P		P	15 27 08.6	-1.4
	comp=Z,4.8nm,0.8s							
COLA	**College**	**81.53**	**7**	*e*P		P	15 27 08.6	-1.4
	comp=Z,4.8nm,0.8s							
ILAR	**Eielson Array**	**81.72**	**7**	P		**P**	**15 27 10.3**	**-0.8**
ILAR				PKKPbc		**PKKPbc**	**15 45 41.1**	**-2.0**
ILAR	**Eielson Array**	**81.72**	**7**	P		**P**	**15 27 10.3**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=324,slow=3.8,SNR=21							
ILAR				PKKPbc		**PKKPbc**	**15 45 41.1**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=191,slow=2.3,SNR=5.4							
ILAR	**Eielson Array**	**81.72**	**7**	P		**P**	**15 27 10.3**	**-0.8**
EGAK	**Eagle**	**82.18**	**4**	*e*P		**P**	**15 27 13.3**	**-0.1**
	comp=Z,4.1nm,0.8s							
MCK	**McKinley**	**82.52**	**8**	*e*P		**P**	**15 27 15.1**	**-0.2**
MCK				pmax	pmax			
	comp=Z,9.0nm,1.2s							
MCK	**McKinley**	**82.52**	**8**	*e*P		**P**	**15 27 15.1**	**-0.2**
	comp=Z,8.7nm,1.2s							
MCK	**McKinley**	**82.52**	**8**	*e*P		**P**	**15 27 15.1**	**-0.2**
	comp=Z,9.0nm,1.2s							
DOT	**Dot Lake**	**83.09**	**6**	*e*P		**P**	**15 27 18.8**	**+0.5**
YKA	**Yellowknife Ar**	**83.86**	**352**	P		P	15 27 21.1	-1.0
YKA	**Yellowknife Ar**	**83.86**	**352**	P		P	15 27 21.1	-1.0
	comp=Z,0.8nm,0.5s,baz=13,slow=5.3,SNR=21							
YKA	**Yellowknife Ar**	**83.86**	**352**	P		P	15 27 21.1	-1.0
SML	**Sawmill**	**84.46**	**8**	*e*P		**P**	**15 27 24.6**	**-0.7**
SML				pmax	pmax			
	comp=Z,2.0nm,0.7s							
SML	**Sawmill**	**84.46**	**8**	*e*P		**P**	**15 27 24.6**	**-0.7**
	comp=Z,1.6nm,0.7s							
SML	**Sawmill**	**84.46**	**8**	*e*P		**P**	**15 27 24.6**	**-0.7**
	comp=Z,2.0nm,0.7s							
MDV	**Middlebury**	**86.88**	**322**	*e*P		P	15 27 36.2	-1.4
KDAK	**Kodiak Island**	**87.74**	**11**	*i* P		**P**	**15 27 41.7**	**+0.3**
ASAR	**Alice Springs**	**98.66**	**112**	P		P	15 28 30.8	-1.6
ASAR	**Alice Springs**	**98.66**	**112**	P		P	15 28 30.8	-1.6
	comp=Z,0.4nm,0.8s,baz=311,slow=5.6,SNR=3.7							
ASAR	**Alice Springs**	**98.66**	**112**	P		P	15 28 30.8	-1.6

MAN 25 15:24:51,18.52N×120.65E,h25km,mb4.5,ML3.4,MS3.4, 1C-2D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.20**	**188**	⇓*i*P	Pn	15 24 59.0	+0.6
PIP				*e*S	Sb	15 25 04.7	+4.2
ABRA	**Dolores**	**0.87**	**176**	*e*P	Pb	15 25 06.1	-1.4
ABRA				*e*S	Sn	15 25 20.9	+1.3
CVP	**Callao Caves**	**1.38**	**126**	⇑*e*P	Pn	15 25 10.0	-4.7
CVP				*i* S	Sn	15 25 30.8	-1.5
CAUP	**Cauayan**	**1.93**	**144**	*e*P	Pn	15 25 23.7	+1.4
PALP	**Palanan**	**2.23**	**130**	⇓*e*P	Pn	15 25 27.1	+0.7
PALP				*e*S	Sn	15 25 55.4	+2.2
PALP	**Palanan**	**2.23**	**130**	*e*P	Pn	15 25 27.2	+0.8
BOLP	**Bolinao**	**2.24**	**198**	*e*P	Pn	15 25 27.2	+0.6
SCZP	**Santa Cruz**	**2.82**	**195**	*e*P	Pn	15 25 36.4	+1.9
BALP	**Baler**	**2.91**	**162**	*e*P	Pn	15 25 37.4	+1.7

*AUST **25** 15:51:29.6±3.6, 0.33N×122.72E, h0km, Error ellipse: s-maj=3.3km s-min=1.0km az=350.0*
*IDC **25** 15:51:39.8±0.9, 0.60S×123.41E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.8/23, mbtmp3.9/8, ML4.3/1, MS3.2/3, Ms1 3.3/3, ms1mx2.8/39, Error ellipse: s-maj=45.0km s-min=16.0km az=64.0*
*ISCJB **25** 15:51:40.5±0.4, 0.59S±0.04×123.25E±0.04, h10km, mb3.8/7, MS3.1/2, Error ellipse: s-maj=6.5km s-min=4.3km az=42.8*
*DJA **25** 15:51:43.0±0.2, 1.5±2.2×12.3E±*, h12km, M4.5/14, mb4.6/9, mB4.7/2, MLv4.4/14, Mw(mB)3.9/2, Mwp6.3/1*
ISC 25 15:51:40.8±0.7, 0.63S±0.06×123.37E±0.07, h10km, n33, σ1.9s25/28, mb3.8/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.73**	**235**	P	**Pb**	**15 51 54.7**	**-0.8**
LUWI				S	**Sg**	**15 52 03.1**	**-1.2**
LUWI	**Luwuk**	**0.73**	**235**	P	**Pb**	**15 51 54.5**	**-1.0**
	baz=1.4,SNR=27						
KMSI	**Cibinong**	**1.34**	**27**	P	**Pg**	**15 52 06.4**	**-0.1**
KMSI				S	**Sg**	**15 52 24.3**	**+0.3**
APSI	**Ampana**	**1.74**	**261**	P	**Pb**	**15 52 12.4**	**-0.5**
MRSI	**Marisa**	**1.80**	**307**	P	**Pn**	**15 52 09.7**	**-2.2**
MNI	**Manado**	**2.53**	**36**	P	**Pb**	**15 52 24.7**	**-1.6**
SKSI	**Soroako, Sulaw**	**2.77**	**227**	P	**Pn**	**15 52 25.8**	**+0.4**
KKSI	**Kolaka, Sulawe**	**3.92**	**206**	P	**Pn**	**15 52 42.9**	**+1.8**
LBMI	**Labuha**	**4.13**	**90**	P	Pb	15 52 46.8	-6.9
TNTI	**Ternate**	**4.23**	**71**	P	Pb	15 52 49.1	-6.3
TTSI	**Tana Toraja**	**4.28**	**236**	P	**Pn**	**15 52 46.7**	**+0.6**
SPSI	**Sidrap Palu**	**4.89**	**227**	P	**Pn**	**15 52 55.9**	**+1.5**
BBSI	**Bau Bau**	**4.89**	**189**	P	**Pn**	**15 52 56.0**	**+1.5**
KAPI	**Kappang**	**5.66**	**220**	P	**Pn**	**15 53 05.6**	**+0.6**
	43nm,0.6s,631nm0.2nm						
KAPI	**Kappang**	**5.66**	**220**	Pn	**Pn**	**15 53 05.6**	**+0.6**
	9.4nm,0.3s,baz=34,slow=2.4,SNR=21						
KAPI				LR	LR	15 55 39.7	
	comp=Z,252nm,18.4s,baz=49,slow=42						
BKSI	**Bulukumba**	**5.68**	**215**	P	**Pn**	**15 53 07.1**	**+1.8**
	36nm,0.7s,632nm0.2nm						
AAI	**Ambon**	**5.70**	**122**	P	Pb	15 53 11.2	-9.2
	67nm,1.1s,0.2nm						
AAI	**Ambon**	**5.70**	**122**	P	Pb	15 53 11.8	-8.7
	baz=6.8,SNR=3.8						
BSSI	**Bau Bau, Buton**	**6.19**	**208**	P	**Pn**	**15 53 14.3**	**+2.0**
	160nm,0.9s,281µm						
MYLDM	**Lahad Datu**	**7.54**	**320**	P	**Pn**	**15 53 31.2**	**+0.3**
	20nm,1.5s,0.4nm						
KBKI	**Kotabaru**	**7.67**	**250**	P	**Pn**	**15 53 32.7**	**+0.1**
	24nm,0.7s						
FAKI	**Fak Fak**	**9.16**	**105**	P	Pn	15 53 55.4	+2.2
	15nm,0.8s						
FAKI	**Fak Fak**	**9.16**	**105**	P	Pn	15 53 55.6	+2.4
	baz=10,SNR=5.7						
WSI	**Waingapu**	**9.49**	**199**	P	**Pn**	**15 53 54.6**	**-3.0**
	baz=10,SNR=3.7						
KKM	**Kota Kinabalu**	**9.74**	**313**	P	**Pn**	**15 54 01.7**	**+0.5**
	13nm,1.1s						
TLE	**Tual**	**10.60**	**118**	P	Pn	15 54 17.3	+4.5
WRA	**Warramunga Arr**	**22.00**	**151**	P	**P**	**15 56 35.9**	**+0.5**
	4.1nm,1.0s,baz=333,slow=11,SNR=19						
ASAR	**Alice Springs**	**25.08**	**157**	P	**P**	**15 57 05.7**	**-0.1**
	1.9nm,0.9s,baz=320,slow=6.6,SNR=14						
ASAR				PcP	**PcP**	**16 00 40.8**	**+0.3**
	0.4nm,0.9s,baz=354,slow=2.1,SNR=5.4						
CMAR	**Chiang Mai Arr**	**30.60**	**310**	P	**P**	**15 57 56.2**	**+1.0**
	1.9nm,0.7s,baz=136,slow=7.0,SNR=17						
CMAR				LR	LR	16 10 23.8	
	comp=Z,40nm,19.6s,baz=125,slow=37						
STKA	**Stephens Creek**	**35.54**	**153**	P	P	15 58 39.8	+1.6
	5.0nm,1.0s,baz=302,slow=9.4,SNR=3.1						
SONM	**Songino Array**	**50.48**	**345**	P	**P**	**16 00 38.9**	**-0.1**
	0.6nm,0.7s,baz=178,slow=8.4,SNR=3.1						
MKAR	**Makanchi Array**	**59.34**	**328**	P	**P**	**16 01 43.3**	**+0.2**
	0.2nm,0.4s,baz=124,slow=8.3,SNR=7.0						
ZALV	**Zalesovo Beam**	**63.03**	**336**	P	**P**	**16 02 09.1**	**+1.1**
	0.3nm,0.5s,baz=130,slow=4.5,SNR=2.6						
ZALV				LR	LR	16 30 49.8	
	comp=Z,16nm,19.4s,baz=65,slow=37						

*ATH **25** 16:04:20.5,39.35N×28.09E,h17km,MD3.5/8*
*DDA **25** 16:04:21.7,39.27N×27.95E,h21km,MD3.4*
*ISCJB **25** 16:04:22.2±0.4,39.27N±0.01×27.95E±0.02,h5km±3km, Error ellipse: s-maj=2.6km s-min=2.4km az=39.5*
*CSEM **25** 16:04:22.5±0.1,39.27N×27.95E,h5km,MD3.4, Error ellipse: s-maj=1.6km s-min=1.6km az=48.0*
*ISK **25** 16:04:22.0,39.27N×27.94E,h6km,MD3.3*
*THE **25** 16:04:23.4,39.26N×27.94E,h4km±10km,ML3.3/3, Error ellipse: s-maj=13.0km s-min=1.5km az=100.0*
ISC 25 16:04:22.5±1.0,39.26N±0.01×27.95E±0.01,h8km±8km, n149,σ0.973/198,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.39**	**196**	*i* P	**Pg**	**16 04 30.3**	**+0.1**
AKHS				*i* S	**Sb**	**16 04 36.7**	**-1.2**
AKHS	**Akhisar**	**0.39**	**196**	*i* P	**Pg**	**16 04 30.3**	**+0.1**
AKHS				*i* S	**Sb**	**16 04 36.7**	**-1.2**
AKS	**Akhisar**	**0.39**	**196**	PG	**Pg**	**16 04 30.4**	**+0.2**
AKS	**Akhisar**	**0.39**	**196**	*i* Pg	**Pg**	**16 04 30.4**	**+0.2**
DURS	**Dursunbey**	**0.53**	**49**	*i* P	**Pg**	**16 04 32.5**	**-0.2**
DURS				*i* S	**Sg**	**16 04 40.4**	**+0.7**
DURS	**Dursunbey**	**0.53**	**49**	*i* P	**Pg**	**16 04 32.5**	**-0.2**
DURS				*i* S	**Sg**	**16 04 40.4**	**+0.7**
BALY	**Balya**	**0.55**	**332**	*i* P	**Pg**	**16 04 32.9**	**-0.2**
BALY				*i* S	**Sg**	**16 04 40.3**	**0.0**
BALY	**Balya**	**0.55**	**332**	*i* P	**Pg**	**16 04 32.9**	**-0.2**
BALY				*i* S	**Sg**	**16 04 40.3**	**0.0**
DST	**Dursunbey**	**0.62**	**56**	PG	**Pg**	**16 04 34.7**	**+0.2**
DST				*e*SG	**Sg**	**16 04 43.3**	**+0.7**
DST	**Dursunbey**	**0.62**	**56**	*i* Pg	**Pg**	**16 04 34.7**	**+0.2**
DST				*e*Sg	**Sg**	**16 04 43.3**	**+0.7**
DEMI	**Demirci**	**0.63**	**110**	*i* P	**Pg**	**16 04 34.7**	**0.0**
DEMI				*i* S	**Sb**	**16 04 44.0**	**-0.8**
DEMI	**Demirci**	**0.63**	**110**	*i* P	**Pg**	**16 04 34.7**	**0.0**
DEMI				*i* S	**Sb**	**16 04 44.0**	**-0.8**
GONE	**Gonen-Balikesi**	**0.81**	**345**	PG	**Pg**	**16 04 37.8**	**-0.4**
GONE				*e*SG	**Sb**	**16 04 49.4**	**-0.6**
GONE	**Gonen-Balikesi**	**0.81**	**345**	*i* Pg	**Pg**	**16 04 37.8**	**-0.4**
GONE				*e*Sg	**Sb**	**16 04 49.4**	**-0.6**
MANT	**Manisa**	**0.90**	**148**	*i* P	**Pb**	**16 04 39.9**	**-0.6**
MANT				*i* S	**Sg**	**16 04 50.7**	**-0.8**
MANT	**Manisa**	**0.90**	**148**	*i* P	**Pb**	**16 04 39.9**	**-0.6**
MANT				*i* S	**Sg**	**16 04 50.7**	**-0.8**
KULA	**Kula-Manisa**	**0.92**	**143**	*e*PG	**Pg**	**16 04 40.1**	**-0.2**
KULA	**Kula-Manisa**	**0.92**	**143**	*e*Pg	**Pg**	**16 04 40.1**	**-0.2**
AYVA	**Ayvalik**	**0.98**	**273**	*i* P	**Pn**	**16 04 42.2**	**-0.3**
AYVA				*i* S	**Sb**	**16 04 55.4**	**+0.6**
AYVA	**Ayvalik**	**0.98**	**273**	*i* P	**Pn**	**16 04 42.2**	**-0.3**
AYVA				*i* S	**Sb**	**16 04 55.4**	**+0.6**
KCTX	**Karacabey (Bur**	**1.05**	**17**	*e*PG	**Pg**	**16 04 42.3**	**-0.4**
KCTX				*e*SG	**Sb**	**16 04 57.1**	**+0.2**
KCTX	**Karacabey (Bur**	**1.05**	**17**	*e*Pg	**Pg**	**16 04 42.3**	**-0.4**
KCTX				*e*Sg	**Sb**	**16 04 57.1**	**+0.2**
ORLT	**Orhaneli**	**1.07**	**42**	*e*PG	**Pb**	**16 04 43.0**	**-0.2**
ORLT	**Orhaneli**	**1.07**	**42**	*e*Pg	**Pb**	**16 04 43.1**	**-0.2**
EDC	**Edincik**	**1.09**	**356**	*e*PN	**Pg**	**16 04 43.3**	**-0.1**
EDC	**Edincik**	**1.09**	**356**	*e*Pn	**Pg**	**16 04 43.3**	**-0.1**
BNT	**Bandirma**	**1.10**	**359**	*e*PN	**Pg**	**16 04 43.0**	**-0.5**
BNT	**Bandirma**	**1.10**	**359**	*e*Pn	**Pg**	**16 04 43.1**	**-0.5**
BLCB	**Balcova**	**1.12**	**220**	*e*PN	**Pb**	**16 04 43.9**	**-0.2**
BLCB	**Balcova**	**1.12**	**220**	*e*Pn	**Pb**	**16 04 43.9**	**-0.2**
TVSB	**Tavsanli**	**1.18**	**80**	*e*PN	**Pn**	**16 04 45.3**	**-0.1**
TVSB	**Tavsanli**	**1.18**	**80**	*e*Pn	**Pn**	**16 04 45.3**	**-0.1**
GDZ	**Gediz**	**1.20**	**98**	*i* P	**Pb**	**16 04 45.3**	**-0.2**
GDZ				*i* S	**Sn**	**16 05 01.9**	**-0.2**
GDZ	**Gediz**	**1.20**	**98**	*i* P	**Pb**	**16 04 45.3**	**-0.2**
GDZ				*i* S	**Sn**	**16 05 01.9**	**-0.2**
KRBG	**Karabiga-Canak**	**1.24**	**336**	*e*PN	**Pg**	**16 04 45.7**	**-0.6**
KRBG	**Karabiga-Canak**	**1.24**	**336**	*e*Pn	**Pg**	**16 04 45.7**	**-0.6**
ULDT	**Uludag**	**1.27**	**46**	*i* P	**Pg**	**16 04 46.6**	**-0.3**
ULDT				*i* S	**Sg**	**16 05 02.7**	**-0.6**
ULDT	**Uludag**	**1.27**	**46**	*i* P	**Pg**	**16 04 46.6**	**-0.3**
ULDT				*i* S	**Sg**	**16 05 02.7**	**-0.6**
PRK	**Paraskevi**	**1.31**	**270**	P	**Pn**	**16 04 47.0**	**0.0**
PRK				S	**Sn**	**16 05 05.6**	**+1.0**
PRK	**Paraskevi**	**1.31**	**270**	*e*PN	**Pn**	**16 04 47.0**	**0.0**
PRK				*e*SN	**Sn**	**16 05 06.7**	**+2.1**
PRK	**Paraskevi**	**1.31**	**270**	P	**Pn**	**16 04 47.0**	**0.0**
PRK				S	**Sn**	**16 05 05.6**	**+1.0**
PRK				*e*Sn	**Sn**	**16 05 06.7**	**+2.1**
MDNY	**Mudanya-Bursa**	**1.32**	**33**	*e*PN	**Pn**	**16 04 47.1**	**-0.1**
MDNY	**Mudanya-Bursa**	**1.32**	**33**	*e*Pn	**Pn**	**16 04 47.1**	**-0.1**
MRMT	**Marmara Adasi**	**1.37**	**349**	*e*PN	**Pb**	**16 04 48.2**	**-0.2**
MRMT	**Marmara Adasi**	**1.37**	**349**	*e*Pn	**Pb**	**16 04 48.2**	**-0.2**
EZN	**Ezine**	**1.38**	**295**	*e*PN	**Pn**	**16 04 48.0**	**0.0**
EZN	**Ezine**	**1.38**	**295**	*e*Pn	**Pn**	**16 04 48.0**	**0.0**
URLA	**Izmir**	**1.39**	**230**	*i* P	**Pn**	**16 04 47.6**	**-0.6**
URLA				*i* S	**Sb**	**16 05 06.5**	**-0.1**
URLA	**Izmir**	**1.39**	**230**	*i* P	**Pn**	**16 04 47.6**	**-0.6**
URLA				*i* S	**Sb**	**16 05 06.5**	**-0.1**
LPK	**Lapseki**	**1.44**	**321**	*e*PN	**Pn**	**16 04 48.6**	**-0.3**
LPK	**Lapseki**	**1.44**	**321**	*e*Pn	**Pn**	**16 04 48.6**	**-0.3**
ARMT	**Armutlu**	**1.48**	**28**	*e*PN	**Pn**	**16 04 49.3**	**-0.1**
ARMT	**Armutlu**	**1.48**	**28**	*e*Pn	**Pn**	**16 04 49.3**	**-0.1**
KHAL	**Karahalli**	**1.49**	**126**	*i* P	**Pn**	**16 04 50.0**	**+0.3**
KHAL				*i* S	**Sn**	**16 05 09.5**	**+0.1**
KHAL	**Karahalli**	**1.49**	**126**	*i* P	**Pn**	**16 04 50.0**	**+0.3**
KHAL				*i* S	**Sn**	**16 05 09.5**	**+0.1**
GEMT	**Gemlik**	**1.51**	**39**	*e*PN	**Pn**	**16 04 49.8**	**-0.1**
GEMT	**Gemlik**	**1.51**	**39**	*e*Pn	**Pn**	**16 04 49.8**	**-0.1**
KHL	**Karahalli**	**1.54**	**127**	*e*PN	**Pb**	**16 04 51.0**	**-0.3**
KHL	**Karahalli**	**1.54**	**127**	*e*Pn	**Pb**	**16 04 51.0**	**-0.3**
SART	**Tekirdag**	**1.55**	**338**	*i* P	**Pn**	**16 04 50.1**	**-0.3**
SART				*i* S	**Sn**	**16 05 09.8**	**-0.9**
SART	**Tekirdag**	**1.55**	**338**	*i* P	**Pn**	**16 04 50.1**	**-0.3**
SART				*i* S	**Sn**	**16 05 09.8**	**-0.9**
BOZC	**Bozcaada**	**1.58**	**292**	*i* P	**Pn**	**16 04 50.6**	**-0.2**
BOZC				*i* S	**Sn**	**16 05 10.8**	**-0.6**
AYDN	**Tasoluk**	**1.59**	**182**	*e*P	**Pn**	**16 04 49.9**	**-1.1**
AYDN				*i* S	**Sn**	**16 05 09.9**	**-1.9**
AYDN	**Tasoluk**	**1.59**	**182**	*e*P	**Pn**	**16 04 49.9**	**-1.1**
GELI	**Tayfur-Gelibol**	**1.61**	**315**	*e*PN	**Pn**	**16 04 51.2**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.61**	**315**	*e*Pn	**Pn**	**16 04 51.3**	**+0.1**
MFT	**Murefte**	**1.61**	**342**	*e*PN	**Pn**	**16 04 51.5**	**+0.2**
MFT	**Murefte**	**1.61**	**342**	*e*Pn	**Pn**	**16 04 51.5**	**+0.2**
SIGR	**SIGRI**	**1.63**	**269**	P	**Pn**	**16 04 51.1**	**-0.3**
SIGR				S	**Sb**	**16 05 13.6**	**+0.1**
SIGR	**SIGRI**	**1.63**	**269**	P	**Pn**	**16 04 51.1**	**-0.3**
SIGR				S	**Sb**	**16 05 13.6**	**+0.1**
ALT	**Altintas**	**1.69**	**96**	*e*PN	**Pb**	**16 04 53.2**	**-0.6**
ALT	**Altintas**	**1.69**	**96**	*e*Pn	**Pb**	**16 04 53.2**	**-0.6**
YLV	**Yalova**	**1.70**	**39**	*e*PN	**Pb**	**16 04 53.5**	**-0.6**
YLV	**Yalova**	**1.70**	**39**	*e*Pn	**Pb**	**16 04 53.5**	**-0.6**
CHOS	**Chios island**	**1.72**	**240**	P	Pn	**16 04 52.6**	**-0.2**
CHOS	**Chios island**	**1.72**	**240**	*e*PN	**Pb**	**16 04 53.6**	**-0.7**
CHOS				*e*SN	**Sg**	**16 05 18.1**	**+0.3**
CHOS	**Chios island**	**1.72**	**240**	P	Pn	**16 04 52.6**	**-0.2**
CHOS	**Chios island**	**1.72**	**240**	*e*Pn	**Pb**	**16 04 53.6**	**-0.7**
CHOS				*e*Sn	**Sg**	**16 05 18.1**	**+0.3**
DENT	**Denizli**	**1.72**	**150**	*e*PN	**Pn**	**16 04 53.4**	**+0.6**
DENT	**Denizli**	**1.72**	**150**	*e*Pn	**Pn**	**16 04 53.4**	**+0.6**
TKR	**Tekirdag**	**1.76**	**350**	*e*PN	**Pb**	**16 04 54.2**	**-0.8**
TKR	**Tekirdag**	**1.76**	**350**	*e*Pn	**Pb**	**16 04 54.2**	**-0.8**
DNZL	**Cakiroluk**	**1.79**	**151**	*i* P	**Pn**	**16 04 53.5**	**-0.2**
DNZL				*i* S	**Sn**	**16 05 14.2**	**-2.5**
DNZL	**Cakiroluk**	**1.79**	**151**	*i* P	**Pn**	**16 04 53.5**	**-0.2**
CRLT	**Corlu**	**1.88**	**355**	*e*PN	**Pn**	**16 04 55.5**	**+0.7**
CRLT	**Corlu**	**1.88**	**355**	*e*Pn	**Pn**	**16 04 55.6**	**+0

0.7nm,0.3s,baz=351,slow=6.8,SNR=40
ASAR ScP **ScP** **16 23 08.3 -0.5**
0.3nm,0.8s,baz=328,slow=2.6,SNR=5.0
CMAR Chiang Mai Arr 31.62 298 P **P** **16 16 50.2 +0.8**
1.2nm,0.8s,baz=107,slow=7.3,SNR=13
STKA Stephens Creek 38.58 161 P **P** **16 17 48.0 -1.1**
2.2nm,0.9s,baz=160,slow=22,SNR=7.8
SONM Songino Array 46.84 340 P **P** **16 18 56.9 +1.0**
0.5nm,0.7s,baz=158,slow=9.1,SNR=3.5
MKAR Makanchi Array 57.56 324 P **P** **16 20 16.7 +1.2**
1.5nm,0.5s,baz=116,slow=8.1,SNR=31
ZALV Zalesovo Beam 60.36 332 P **P** **16 20 34.1 -0.5**
0.5nm,0.4s,baz=120,slow=8.5,SNR=3.5
AKTO Aktyubinsk 73.77 321 P **P** **16 22 00.2 +0.5**
0.7nm,0.6s,baz=62,slow=13,SNR=4.5

IDC ***25*** *16:28:32.7±0.5, 70°.95N×6°.36W, h0km, mb3.8/21, mb1 4.0/25, mb1mx3.9/33, mbtmp3.8/25, ML3.7/4, MS3.5/23, Ms1 3.5/23, ms1mx3.3/47, Error ellipse: s-maj=16.8km s-min=9.7km az=34.0*
MOS ***25*** *16:28:32.8±1.2, 71°.02N×6°.15W, h10km, mb4.9/36, Error ellipse: s-maj=17.8km s-min=4.6km az=98.6*
ISCJB ***25*** *16:28:32.4±0.1, 70°.83N±0°.02×6°.56W±0°.05, h9km, mb4.3/93, MS3.6/23, Error ellipse: s-maj=3.1km s-min=2.1km az=29.7*
BJI ***25*** *16:28:33.3, 71°.00N×6°.00W, h10km, mB5.0/7, mb4.6/13, Ms4.8/3, Ms7 4.4/3*
CSEM ***25*** *16:28:33.3±0.1, 70°.88N×6°.44W, h10km, mb4.5/37, Ms3.1, Error ellipse: s-maj=4.2km s-min=3.2km az=7.0*
NEIC ***25*** *16:28:34.3±0.2, 71°.00N×6°.05W, h10km, mb4.6/46, Error ellipse: s-maj=5.9km s-min=3.7km az=46.0*
BER ***25*** *16:28:34.7±2.5, 70°.88N×6°.54W, h11km±17km, MD2.7, ML3.4*
REY ***25*** *16:28:36.9, 70°.66N×7°.67W, h10km, ML3.5, ML3.1*
ISC 25 16:28:34.0±0.3, 70°.92N±0°.04×6°.67W±0°.03, h9km, n504, σ1§42/502, mb4.5/93, MS3.5/23, 53C-55D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
JNE	**Jan Mayen East**	**0.54**	**278**	*i*P		**Pg**	**16 28 45.4**	**+0.9**
JNE					*e*S	**Sb**	**16 28 53.1**	**-0.3**
JNE				AML		AML	16 28 56.1	
	comp=Z,8μm,0.4s							
JNE	**Jan Mayen East**	**0.54**	**278**	⇑*i*P		**Pg**	**16 28 45.3**	**+0.9**
	SNR=70							
JNE					*e*S	**Sb**	**16 28 53.1**	**-0.3**
	comp=Z,8μm,0.4s,SNR=70							
JNW	**Jan Mayen West**	**0.59**	**281**	⇑*i*P		**Pg**	**16 28 46.0**	**+0.7**
JNW					*e*S	**Sb**	**16 28 54.9**	**+0.1**
JNW				AML		AML	16 28 55.7	
	comp=Z,7μm,0.3s							
JNW	**Jan Mayen West**	**0.59**	**281**	⇑*i*P		**Pg**	**16 28 46.0**	**+0.7**
	SNR=70							
JNW					*e*S	**Sb**	**16 28 54.9**	**+0.1**
	comp=Z,7μm,0.3s,SNR=70							
JMIC	**Jan Mayen**	**0.61**	**277**	⇑*i*P		**Pg**	**16 28 46.2**	**+0.5**
JMIC					*e*S	**Sb**	**16 28 55.2**	**0.0**
JMIC	**Jan Mayen**	**0.61**	**277**	Pn		**Pg**	**16 28 46.1**	**+0.5**
JMIC				Sn		**Sb**	**16 28 55.4**	**0.0**
JMIC	**Jan Mayen**	**0.61**	**277**	Pn		**Pg**	**16 28 46.1**	**+0.5**
	comp=Z,279nm,0.3s,baz=50,slow=2.2,SNR=182							
JMIC				Sn		**Sb**	**16 28 55.4**	**0.0**
	comp=Z,1μm,0.3s,baz=151,slow=1,SNR=156							
JMIC	**Jan Mayen**	**0.61**	**277**	⇑*i*P		**Pg**	**16 28 46.2**	**+0.5**
	SNR=70							
JMIC				Sn		**Sb**	**16 28 55.3**	**0.0**
JMI	**Jan Mayen**	**0.68**	**271**	⇑*i*P		**Pg**	**16 28 47.7**	**+0.7**
JMI				AML		AML	16 29 01.8	
	comp=Z,3μm,0.5s							
JMI	**Jan Mayen**	**0.68**	**271**	⇑*i*P		**Pg**	**16 28 47.7**	**+0.7**
	SNR=70							
SCO	**Scoresbysund**	**5.09**	**272**	*i*P		**Pb**	**16 30 00.8**	**-2.2**
SCO	**Scoresbysund**	**5.09**	**272**	*i*P		**Pb**	**16 30 00.8**	**-2.2**
ILEI	**Leirhofn**	**5.78**	**223**	P		**Pn**	**16 29 57.8**	**-1.9**
ILEI				S		**Sn**	**16 31 03.2**	**-2.7**
IGIL	**Gilhagi**	**6.02**	**221**	P		**Pn**	**16 30 01.2**	**-1.9**
IGIL				S		**Sn**	**16 31 09.7**	**-2.3**
IHED	**Heoinshofoi**	**6.23**	**224**	P		**Pn**	**16 30 05.0**	**-0.9**
IHED				S		**Sn**	**16 31 14.3**	**-2.9**
IDIM	**Dimmadals¯¡s**	**6.25**	**222**	P		**Pn**	**16 30 04.7**	**-1.5**
IDIM				S		**Sn**	**16 31 15.3**	**-2.3**
IGRS	**Grimsstaoir**	**6.36**	**218**	P		**Pn**	**16 30 06.7**	**-1.0**
IGRS				S		**Sn**	**16 31 18.7**	**-1.6**
IGRA	**Granastaoir**	**6.43**	**224**	P		**Pn**	**16 30 07.9**	**-0.7**
IGRA				S		**Sn**	**16 31 19.4**	**-2.6**
IREN	**Reynihlio**	**6.51**	**221**	P		**Pn**	**16 30 08.5**	**-1.3**
IHLA	**Hella**	**6.60**	**226**	P		**Pn**	**16 30 10.5**	**-0.4**
IHLA				S		**Sn**	**16 31 23.3**	**-2.8**
DAG	**Danmarks Havn**	**6.74**	**336**	*i*P		**Pn**	**16 30 10.9**	**-2.0**
DAG	**Danmarks Havn**	**6.74**	**336**	*i*P		**Pn**	**16 30 10.9**	**-2.0**
IGLU	**Glumsstadir**	**6.75**	**212**	P		**Pn**	**16 30 12.6**	**-0.4**
IGLU				S		**Sn**	**16 31 28.5**	**-1.4**
IADA	**Aoalbol**	**6.80**	**214**	P		**Pn**	**16 30 13.0**	**-0.8**
IADA				S		**Sn**	**16 31 29.6**	**-1.7**
ISVA	**Svartarkot**	**6.85**	**220**	P		**Pn**	**16 30 14.1**	**-0.4**
IHVA	**Hvannstoosfjol**	**6.92**	**214**	P		**Pn**	**16 30 14.6**	**-0.8**
IASK	**Askja**	**6.98**	**217**	P		**Pn**	**16 30 15.4**	**-0.9**
IMKO	**Mokollar**	**6.98**	**216**	P		**Pn**	**16 30 15.5**	**-0.8**
IVSH	**V-Sauoahnukur**	**7.02**	**213**	P		**Pn**	**16 30 16.0**	**-0.9**
IBRU	**Bruarjokull**	**7.07**	**215**	P		**Pn**	**16 30 16.6**	**-0.9**
IKRE	**Kreppuhraun**	**7.17**	**215**	P		**Pn**	**16 30 17.9**	**-0.9**
LOF	**Lofoten**	**7.60**	**102**	*e*P		**Pg**	**16 31 01.5**	**+2.2**
STEI	**Steigen**	**8.25**	**101**	*e*P		Pn	16 30 29.4	-4.2
STEI				*e*S		Sn	16 31 54.0	-13
BORG	**Borgarnes**	**8.29**	**229**	*e*Pn		Pn	16 30 43.0	+8.9
BORG	**Borgarnes**	**8.29**	**229**	LR		LR	16 32 21.5	
	comp=Z,75nm,21.8s,baz=328,slow=27							
KONS	**Konsvik**	**8.43**	**112**	*e*P		Pn	16 30 26.7	-9.2
KONS				*e*S		Sn	16 31 52.8	-18
KONS				AML		AML	16 31 56.3	
	comp=Z,11nm,0.7s							
BJO	**Bjornoya**	**8.44**	**53**	*e*P		Pn	16 30 30.6	-5.5
STOK	**Stokkvaagen**	**8.51**	**113**	*e*P		Pn	16 30 33.5	-3.5
STOK				*e*S		Sn	16 32 00.6	-12
STOK				AML		AML	16 32 03.3	
	comp=Z,20nm,0.8s							
HSP	**Hornsund**	**8.59**	**35**	*e*P		**Pn**	**16 30 36.0**	**-2.2**
FLOS	**Flostrand**	**8.61**	**113**	*e*P		**Pn**	**16 30 35.4**	**-3.1**
FLOS				*e*S		Sn	16 32 03.0	-13
FLOS				AML		AML	16 32 06.9	
	comp=Z,23nm,0.6s							
TRO	**Tromso**	**8.72**	**86**	*e*P		Pn	16 30 34.5	-5.4
MOR8	**Moi Rana**	**9.04**	**111**	*e*P		Pn	16 30 41.1	-3.4
MOR8				*e*S		Sn	16 32 14.4	-12
MOR8				AML		AML	16 32 20.8	
	comp=Z,14nm,0.6s							
MOR8	**Moi Rana**	**9.04**	**111**	*e*P		Pn	16 30 41.1	-3.4
	SNR=47							
KBS	**Kingsbay**	**9.31**	**22**	*e*P		**Pn**	**16 30 46.2**	**-1.8**
KBS	**Kingsbay**	**9.31**	**22**	*d*iP		**Pn**	**16 30 46.2**	**-1.8**
KBS				pmax		pmax		
	comp=Z,32nm,0.6s							
KBS	**Kingsbay**	**9.31**	**22**	*e*Pn		**Pn**	**16 30 46.4**	**-1.7**
	comp=Z,39nm,0.6s							
KBS	**Kingsbay**	**9.31**	**22**	*e*Pn		**Pn**	**16 30 46.4**	**-1.7**
	comp=Z,39nm,0.6s							
NSS	**Namsos**	**9.51**	**123**	*e*P		Pn	16 30 45.4	-5.3
NSS				*e*S		Sn	16 32 23.2	-14
SUMG	**Summit**	**10.03**	**294**	*e*P		**Pn**	**16 31 00.5**	**+2.2**
SUMG				pmax		pmax		
	comp=Z,10.0nm,0.8s							
SUMG	**Summit**	**10.03**	**294**	*e*Pn		**Pn**	**16 31 00.5**	**+2.2**
	comp=Z,10nm,0.8s							
SUMG	**Summit**	**10.03**	**294**	*i*P		Pn	16 31 02.9	+4.6
SUMG	**Summit**	**10.03**	**294**	*e*P		**Pn**	**16 31 00.5**	**+2.2**
	comp=Z,10.0nm,0.8s							
KTK1	**Kautokeino**	**10.37**	**86**	*e*P		Pn	16 30 58.8	-3.8
KTK1	**Kautokeino**	**10.37**	**86**	*e*P		Pn	16 30 58.8	-3.8
	SNR=47							
ARCES	**ARCESS Array B**	**10.90**	**82**	Pn		Pn	16 31 06.0	-3.8
ARCES	**ARCESS Array B**	**10.90**	**82**	Pn		Pn	16 31 06.0	-3.8
	comp=Z,0.3nm,0.3s,baz=284,slow=12,SNR=28							
ARCES				LR		LR	16 34 30.0	
	comp=Z,262nm,21.8s,baz=289,slow=33							
ARCES	**ARCESS Array B**	**10.90**	**82**	P		Pn	16 31 06.1	-3.8
KEV	**Kevo**	**11.31**	**80**	P		Pn	16 31 11.2	-4.2
KEV	**Kevo**	**11.31**	**80**	Pn		Pn	16 31 11.2	-4.2
KEV	**Kevo**	**11.31**	**80**	*ep*		Pn	16 31 11.2	-4.2
	comp=Z,4.7nm,0.8s							
KEV	**Kevo**	**11.31**	**80**	Pn		Pn	16 31 11.2	-4.2
NOA	**NORSAR Array B**	**12.23**	**135**	Pn		**Pn**	**16 31 26.4**	**-1.7**
NOA	**NORSAR Array B**	**12.23**	**135**	Pn		**Pn**	**16 31 26.4**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=327,slow=14,SNR=4.4							
NOA				LR		LR	16 35 51.7	
	comp=Z,170nm,21.3s,baz=330,slow=36							
NOA	**NORSAR Array B**	**12.23**	**135**	P		**Pn**	**16 31 26.4**	**-1.7**
NAO01	**NORSAR Array S**	**12.33**	**136**	*e*Pn		**Pn**	**16 31 27.3**	**-2.1**
	comp=Z,2.8nm,0.6s							
NAO01	**NORSAR Array S**	**12.33**	**136**	*e*Pn		**Pn**	**16 31 27.3**	**-2.1**
	comp=Z,2.8nm,0.6s							
KONO	**Kongsberg**	**13.13**	**141**	P		**Pn**	**16 31 40.4**	**+0.1**
KONO				pmax		pmax		
	comp=Z,14nm,1.0s							
KONO	**Kongsberg**	**13.13**	**141**	Pn		**Pn**	**16 31 40.4**	**+0.1**
	comp=Z,14nm,1.0s							
KONO	**Kongsberg**	**13.13**	**141**	P		**Pn**	**16 31 40.4**	**+0.1**
	comp=Z,14nm,1.0s							
HFS	**Hagfors**	**13.62**	**132**	Pn		**Pn**	**16 31 45.1**	**-1.9**
HFS	**Hagfors**	**13.62**	**132**	Pn		**Pn**	**16 31 45.1**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=343,slow=9.5,SNR=13							
HFS				LR		LR	16 36 34.4	
	comp=Z,323nm,21.1s,baz=316,slow=36							
HFS	**Hagfors**	**13.62**	**132**	P		**Pn**	**16 31 45.1**	**-1.9**
KAF	**Kangasniemi**	**15.59**	**108**	*e*P		**Pn**	**16 32 08.8**	**-4.8**
KAF				pmax		pmax		
	comp=Z,14nm,0.7s							
KAF	**Kangasniemi**	**15.59**	**108**	*e*p		**Pn**	**16 32 08.8**	**-4.8**
	comp=Z,14nm,0.7s							
EKA	**Eskdalemuir Ar**	**15.73**	**173**	Pn		**Pn**	**16 32 13.4**	**-1.9**
EKA	**Eskdalemuir Ar**	**15.73**	**173**	Pn		**Pn**	**16 32 13.4**	**-1.9**
	baz=357,slow=12,SNR=4.7							
EKA	**Eskdalemuir Ar**	**15.73**	**173**	Pn		**Pn**	**16 32 13.4**	**-1.9**
ESK	**Eskdalemuir**	**15.74**	**173**	*e*P		**Pn**	**16 32 15.2**	**-0.4**
ESK				pmax		pmax		
	comp=Z,16nm,0.9s							
ESK	**Eskdalemuir**	**15.74**	**173**	*e*Pn		**Pn**	**16 32 15.2**	**-0.4**
	comp=Z,16nm,0.9s							
ESK				*e*			16 32 20.1	
ESK	**Eskdalemuir**	**15.74**	**173**	*e*Pn		**Pn**	**16 32 15.1**	**-0.4**
	comp=Z,16nm,0.9s							
SFJD	**Kangerlussuaq**	**15.96**	**277**	P		**P**	**16 32 23.2**	**+1.3**
SFJD	**Kangerlussuaq**	**15.96**	**277**	LR		LR	16 37 43.7	
	comp=Z,174nm,21.1s,baz=78,slow=34							
SFJD	**Kangerlussuaq**	**15.96**	**277**	P		**P**	**16 32 23.2**	**+1.3**
FIA1	**FINESS Array S**	**16.03**	**110**	*e*Pn		**Pn**	**16 32 15.5**	**-3.7**
FIA1				*e*			16 32 21.6	
FIA1				*e*			16 32 26.0	
FIA1	**FINESS Array S**	**16.03**	**110**	*e*Pn		**Pn**	**16 32 15.5**	**-3.7**
FINES	**FINESS Array B**	**16.03**	**110**	Pn		**Pn**	**16 32 15.6**	**-3.7**
FINES	**FINESS Array B**	**16.03**	**110**	Pn		**Pn**	**16 32 15.6**	**-3.7**
	comp=Z,0.4nm,0.3s,baz=326,slow=12,SNR=22							
FINES				LR		LR	16 37 34.1	
	comp=Z,263nm,21.5s,baz=113,slow=34							
FINES	**FINESS Array B**	**16.03**	**110**	*e*Pn		**Pn**	**16 32 15.6**	**-3.7**
JOF	**Joensuu**	**16.61**	**100**	*e*P		Pn	16 32 20.8	-5.8
JOF				pmax		pmax		
	comp=Z,6.0nm,0.7s							
JOF	**Joensuu**	**16.61**	**100**	*e*p		Pn	16 32 20.8	-5.8
	comp=Z,5.6nm,0.7s							
TMCR	**Tamitsa**	**17.95**	**90**	*e*P		**Pn**	**16 32 39.1**	**-4.2**
TMCR				pmax		pmax		
	comp=Z,10.0nm,0.8s							
RGN	**Rugen**	**18.63**	**141**	P		**P**	**16 32 51.4**	**0.0**
RGN	**Rugen**	**18.63**	**141**	P		**P**	**16 32 51.4**	**0.0**
CLZ	**Clausthal**	**20.66**	**149**	*e*P		Pn	16 33 17.0	+1.1
IZAR	**Zarasai**	**20.77**	**120**	*e*P		**P**	**16 33 13.5**	**-1.2**
IZAR				AMB		AMB	16 33 19.4	
	comp=Z,7.6nm,1.1s							
IZAR	**Zarasai**	**20.77**	**120**	*e*P		**P**	**16 33 13.5**	**-1.2**
	comp=Z,7.6nm,1.1s,SNR=34							
ISAL	**Salakas**	**20.89**	**120**	*e*P		**P**	**16 33 14.8**	**-1.2**
ISAL				AMB		AMB	16 33 20.7	
	comp=Z,12nm,1.6s							
ISAL	**Salakas**	**20.89**	**120**	*e*P		**P**	**16 33 14.9**	**-1.2**
	comp=Z,12nm,1.6s,SNR=34							
IIGN	**Ignalina**	**21.11**	**121**	*e*P		**P**	**16 33 17.2**	**-1.2**
IIGN				AMB		AMB	16 33 26.7	
	comp=Z,11nm,1.2s							
IIGN	**Ignalina**	**21.11**	**121**	*e*P		**P**	**16 33 17.2**	**-1.2**
	comp=Z,11nm,1.2s,SNR=34							
MEM	**Membach**	**21.21**	**157**	P		**P**	**16 33 20.9**	**+1.3**
	comp=Z,15nm,1.4s							
IDID	**Didziasalis**	**21.29**	**120**	*e*P		**P**	**16 33 19.0**	**-1.3**
IDID				AMB		AMB	16 33 29.5	
	comp=Z,11nm,1.0s							
IDID	**Didziasalis**	**21.29**	**120**	*e*P		**P**	**16 33 19.0**	**-1.3**
	comp=Z,11nm,1.0s,SNR=34							
BCLA	**Clavier**	**21.31**	**159**	P		**P**	**16 33 24.8**	**+4.2**
SUW	**Suwalki**	**21.46**	**127**	P		**P**	**16 33 20.9**	**-1.3**
SUW				*e*			16 33 26.1	
SUW				pmax		pmax		
	comp=Z,56nm,1.1s							
SUW	**Suwalki**	**21.46**	**127**	Pn		**P**	**16 33 20.9**	**-1.3**
	comp=Z,56nm,1.1s							
SUW				*e*			16 33 26.1	
SUW	**Suwalki**	**21.46**	**127**	*e*P		**P**	**16 33 26.1**	**+3.9**
SUW	**Suwalki**	**21.46**	**127**	Pn		**P**	**16 33 20.9**	**-1.3**
	comp=Z,56nm,1.1s							
BAIF	**Baives**	**21.54**	**161**	*e*P		**P**	**16 33 23.2**	**+0.2**
	comp=Z,52nm,1.5s							
BAIF	**Baives**	**21.54**	**161**	*e*P		**P**	**16 33 23.2**	**+0.2**
BAIF				pmax		pmax		
	comp=Z,52nm,1.5s							
BAIF	**Baives**	**21.54**	**161**	*e*P		**P**	**16 33 23.2**	**+0.2**
	comp=Z,52nm,1.5s							
GIVF	**Givet**	**21.56**	**160**	*e*P		**P**	**16 33 25.4**	**+2.1**
	comp=Z,26nm,0.9s							
GIVF	**Givet**	**21.56**	**160**	*e*P		**P**	**16 33 25.4**	**+2.1**
GIVF				pmax		pmax		
	comp=Z,26nm,0.9s							
GIVF	**Givet**	**21.56**	**160**	*e*P		**P**	**16 33 25.4**	**+2.1**
	comp=Z,26nm,0.9s							
CLL	**Collm**	**21.64**	**145**	*e*P		**P**	**16 33 27.0**	**+2.9**
CLL				*i*			16 33 30.0	
CLL				pmax		pmax		
	comp=Z,6.0nm,1.4s							
CLL	**Collm**	**21.64**	**145**	*e*(P)		**P**	**16 33 27.0**	**+2.9**
	comp=Z,6.0nm,1.4s							
CLL				*i*	sP	**sP**	**16 33 30.0**	**+2.1**
	comp=Z,13nm,1.3s							
CLL				*i*			16 33 32.3	
CLL				*e*	S	**S**	**16 37 24.0**	**+0.5**
TNS	**Taunus Mts**	**21.92**	**153**	*e*P		P	16 33 36.8	+10
MOX	**Moxa**	**22.02**	**148**	*e*P		**P**	**16 33 30.6**	**+2.3**
BRG	**Berggiesshubel**	**22.23**	**144**	*e*P		**P**	**16 33 32.6**	**+2.1**
	comp=Z,4.3nm,1.1s							
BRG				*e*			16 33 45.5	
	comp=Z,4.4nm,1.1s							
BRG	**Berggiesshubel**	**22.23**	**144**	*e*P		**P**	**16 33 32.6**	**+2.1**
BRG				pmax		pmax		
	comp=Z,4.0nm,1.1s							
BRG				pmax		pmax		
	comp=Z,4.0nm,1.1s							
FLN	**La Foliniere**	**22.42**	**169**	*e*P		**P**	**16 33 33.6**	**+1.0**
FLN				*e*R				
	comp=Z,116nm,20.5s							
FLN	**La Foliniere**	**22.42**	**169**	*e*P		**P**	**16 33 33.6**	**+1.0**
FLN	**La Foliniere**	**22.42**	**169**	*e*P		**P**	**16 33 33.6**	**+1.0**
NKC	**Novy Kostel**	**22.57**	**147**	*e*P		**P**	**16 33 37.5**	**+3.4**
NKC				*e*			16 33 44.6	
NKC	**Novy Kostel**	**22.57**	**147**	*e*P		**P**	**16 33 37.5**	**+3.4**
NKC				*ex*		x	16 33 44.6	
LDF	**La Druitiere**	**22.61**	**169**	*e*P		**P**	**16 33 34.2**	**-0.4**
	comp=Z,56nm,1.3s							
LDF	**La Druitiere**	**22.61**	**169**	*e*P		**P**	**16 33 34.2**	**-0.4**
LDF				pmax		pmax		
	comp=Z,56nm,1.3s							
LDF	**La Druitiere**	**22.61**	**169**	*e*P		**P**	**16 33 34.2**	**-0.4**
	comp=Z,56nm,1.3s							
KSP	**Ksiaz**	**22.74**	**140**	*e*P		**P**	**16 33 37.5**	**+1.6**
KSP	**Ksiaz**	**22.74**	**140**	*e*P		**P**	**16 33 38.3**	**+2.4**
GRF	**Grafenberg Arr**	**22.88**	**149**	*e*P		**P**	**16 33 41.1**	**+3.7**
MEZF	**Maizieres J'vi**	**23.17**	**160**	*e*P		**P**	**16 33 40.1**	**-0.3**
MEZF	**Maizieres J'vi**	**23.17**	**160**	*e*P		**P**	**16 33 40.1**	**-0.3**
PAGF	**Fort de Pagny**	**23.19**	**159**	*e*P		**P**	**16 33 40.3**	**-0.3**
	comp=Z,7.0nm,1.0s							
PAGF	**Fort de Pagny**	**23.19**	**159**	*e*P		**P**	**16 33 40.3**	**-0.3**
	comp=Z,7.0nm,1.0s							
PRU	**Pruhonice**	**23.20**	**144**	*e*P		**P**	**16 33 42.4**	**+1.8**
PRU				*e*			16 37 29.2	
PRU	**Pruhonice**	**23.20**	**144**	*e*P		**P**	**16 33 42.4**	**+1.8**
PRU				*ex*		x	16 33 52.6	
DPC	**Dobruska-Polom**	**23.21**	**141**	*e*P		**P**	**16 33 42.1**	**+1.2**
DPC				*e*			16 33 45.4	
DPC				*e*			16 37 28.5	
DPC	**Dobruska-Polom**	**23.21**	**141**	*e*P		**P**	**16 33 42.1**	**+1.2**
DPC				*ep*P		**pP**	**16 33 45.4**	**+1.9**
SFTF	**Sexfontaines**	**23.46**	**160**	*e*P		**P**	**16 33 43.2**	**-0.1**
	comp=Z,34nm,1.1s							
SFTF	**Sexfontaines**	**23.46**	**160**	*e*P		**P**	**16 33 43.2**	**-0.1**
	comp=Z,34nm,1.1s							
CDF	**Champ du Feu**	**23.53**	**156**	*e*P		**P**	**16 33 44.8**	**+0.7**
CDF	**Champ du Feu**	**23.53**	**156**	*e*P		**P**	**16 33 44.8**	**+0.7**
CDF	**Champ du Feu**	**23.53**	**156**	*e*P		**P**	**16 33 44.8**	**+0.7**
WET	**Wettzell**	**23.69**	**147**	*e*P		**P**	**16 33 43.5**	**-2.1**
BFO	**Black Forest**	**23.75**	**155**	*e*P		**P**	**16 33 45.7**	**-0.5**
BFO				pmax		pmax		
	comp=Z,8.0nm,1.0s							
BFO	**Black Forest**	**23.75**	**155**	*e*Pn		**P**	**16 33 45.7**	**-0.5**
	comp=Z,8.5nm,1.0s							
BFO	**Black Forest**	**23.75**	**155**	*e*Pn		**P**	**16 33 45.7**	**-0.5**
	comp=Z,8.4nm,1.0s							
FRB	**Frobisher Bay**	**23.82**	**284**	LR		LR	16 42 40.4	
	comp=Z,186nm,18.9s,baz=134,slow=35							
KHC	**Kasperske Hory**	**23.83**	**146**	*e*P		**P**	**16 33 49.6**	**+2.6**
KHC				*e*			16 37 31.0	
KHC	**Kasperske Hory**	**23.83**	**146**	*e*P		**P**	**16 33 49.6**	**+2.6**
MORC	**Moravsky Berou**	**24.01**	**139**	*e*P		**P**	**16 33 49.2**	**+0.5**
MORC				pmax		pmax		
	comp=Z,5.0nm,1.1s							
MORC	**Moravsky Berou**	**24.01**	**139**	*e*P		**P**	**16 33 49.2**	**+0.5**
	comp=Z,4.5nm,1.1s							
MORC	**Moravsky Berou**	**24.01**	**139**	*e*P		**P**	**16 33 49.2**	**+0.5**
	comp=Z,4.5nm,1.1s							
RES	**Resolute Bay**	**24.06**	**319**	P		**P**	**16 33 49.5**	**+0.7**
RES				*e*			16 33 58.9	
RES	**Resolute Bay**	**24.06**	**319**	P		**P**	**16 33 49.5**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=56,slow=15,SNR=2.6							
RES				LR		LR	16 42 50.3	
	comp=Z,135nm,19.2s,baz=247,slow=36							
RES	**Resolute Bay**	**24.06**	**319**	P		**P**	**16 33 49.5**	**+0.7**
GEC2	**GERESS Array S**	**24.13**	**146**	*e*P		**P**	**16 33 47.6**	**-2.3**
GERES	**GERESS Array B**	**24.13**	**146**	P		**P**	**16 33 51.1**	**+1.2**
GERES	**GERESS Array B**	**24.13**	**146**	P		**P**	**16 33 51.1**	**+1.2**
	comp=Z,1.5nm,0.9s,baz=352,slow=8.1,SNR=11							
GERES				LR		LR	16 41 53.6	
	comp=Z,57nm,21.1s,baz=266,slow=33							
GERES	**GERESS Array B**	**24.13**	**146**	P		**P**	**16 33 51.1**	**+1.2**
MOS	**Moscow**	**24.22**	**106**	*e*P		P	16 33 55.4	+4.9
MOS				*e*			16 34 27.7	
MOS				pmax		pmax		
	comp=Z,39nm,0.8s							
VRAC	**Vranov**	**24.25**	**141**	LR		LR	16 43 26.9	
	comp=Z,43nm,18.2s,baz=160,slow=37							
LOR	**Lormes**	**24.26**	**162**	*e*P		**P**	**16 33 50.7**	**-0.3**
	comp=Z,28nm,1.1s							
LOR				*e*R				
	comp=Z,66nm,19.0s							
LOR	**Lormes**	**24.26**	**162**	*e*P		**P**	**16 33 50.7**	**-0.3**
	comp=Z,28nm,1.1s							
OBN	**Obninsk**	**24.41**	**108**	*i*P		**P**	**16 33 51.6**	**-0.6**
OBN				*e*S		**S**	**16 38 13.9**	**+2.3**
OBN				*e*SS		**SnSn**	**16 38 58.2**	**+3.4**
OBN				pmax		pmax		
	comp=Z,39nm,1.7s							
OBN				MLR		MLR		
	comp=Z,100nm,16.0s							
SSF	**Saint Saulge**	**24.43**	**163**	*e*P		**P**	**16 33 52.0**	**-0.5**
	comp=Z,24nm,1.1s							
SSF	**Saint Saulge**	**24.43**	**163**	*e*P		**P**	**16 33 52.0**	**-0.5**
SSF				pmax		pmax		
	comp=Z,24nm,1.1s							
SSF	**Saint Saulge**	**24.43**	**163**	*e*P		**P**	**16 33 52.0**	**-0.5**
	comp=Z,24nm,1.1s							
AVF	**Avril sur Loir**	**24.68**	**163**	*e*P		**P**	**16 33 55.0**	**+0.2**
AVF	**Avril sur Loir**	**24.68**	**163**	*e*P		**P**	**16 33 55.0**	**+0.2**
AVF	**Avril sur Loir**	**24.68**	**163**	*e*P		**P**	**16 33 55.0**	**+0.2**
**BG

MBDF Montbardon 27.09 159 *e*P P 16 34 17.5 +0.8
comp=Z,20nm,1.0s
MBDF Montbardon 27.09 159 *e*P P 16 34 17.5 +0.8
MBDF pmax pmax
comp=Z,21nm,1.0s
MBDF Montbardon 27.09 159 *e*P P 16 34 17.5 +0.8
comp=Z,20nm,1.0s
MBDF Montbardon 27.09 159 *e*P P 16 34 17.5 +0.8
comp=Z,10nm,1.0s
SOKR Solikamsk 27.42 81 *e*P P 16 34 18.6 -0.7
SOKR pmax pmax
comp=Z,40nm,1.6s
SOKR Solikamsk 27.42 81 *e*P P 16 34 18.6 -0.7
comp=Z,40nm,1.6s
BUR08 Bucovina Ar. S 27.80 130 *e*P P 16 34 22.6 -0.4
BUR08 Bucovina Ar. S 27.80 130 *e*P P 16 34 22.6 -0.4
EPF Esparros 28.18 169 *e*P P 16 34 26.3 -0.1
comp=Z,19nm,0.8s
EPF Esparros 28.18 169 *e*P P 16 34 26.3 -0.1
EPF pmax pmax
comp=Z,19nm,0.8s
EPF Esparros 28.18 169 *e*P P 16 34 26.3 -0.1
comp=Z,19nm,0.8s
EPF Esparros 28.18 169 *e*P P 16 34 26.3 -0.1
comp=Z,9.6nm,0.8s
VSR Storozhevoye 28.56 109 *e*P P 16 34 28.0 -1.6
VSR pmax pmax
comp=N,30nm,1.0s
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR pmax pmax
comp=Z,20nm,1.0s
VSR Storozhevoye 28.56 109 *e*P P 16 34 28.0 -1.6
VORD Divnogorie 28.82 109 *e*P P 16 34 30.1 -1.8
VORD pmax pmax
comp=Z,9.0nm,0.6s
VORD pmax pmax
comp=N,2.0nm,0.3s
VORD pmax pmax
comp=E,8.0nm,0.6s
VORD Divnogorie 28.82 109 *e*P P 16 34 30.1 -1.8
comp=E,2.0nm,0.3s
VRHR Novokhopersk 29.43 107 *e*P P 16 34 34.0 -3.4
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,6.0nm,0.8s
VRHR Novokhopersk 29.43 107 *e*P P 16 34 34.0 -3.4
comp=E,10.0nm,0.9s
MLR Muntele Rosu 29.99 131 P P 16 34 43.8 +1.2
MLR Muntele Rosu 29.99 131 P P 16 34 43.8 +1.2
comp=E,0.3nm,0.6s,baz=123,slow=8.1,SNR=2.2
MLR LR LR 16 47 39.5
comp=E,94nm,18.2s,baz=318,slow=38
MLR Muntele Rosu 29.99 131 P P 16 34 43.8 +1.2
SCHQ Schefferville 30.13 270 *e*P P 16 34 44.2 +0.7
comp=E,7.5nm,1.1s
SCHQ Schefferville 30.13 270 P P 16 34 44.3 +0.7
comp=E,2.4nm,0.9s,baz=109,slow=9.7,SNR=3.8
SCHQ LR LR 16 45 50.2
comp=E,176nm,19.3s,baz=23,slow=34
SCHQ Schefferville 30.13 270 *e*P P 16 34 44.2 +0.7
comp=E,7.5nm,1.1s
ARU Arti 30.48 84*c i*P P 16 34 46.1 -0.5
ARU 16 35 42.7
ARU S S 16 39 45.5 -1.9
ARU SS SnSn 16 41 19.7 -3.1
ARU pmax pmax
comp=Z,6.0nm,0.8s
ARU MLR MLR
comp=Z,132nm,18.0s
SVE Sverdlovsk 30.84 82 *e*P P 16 34 54.1 +4.4
SVE pmax pmax
comp=Z,13nm,1.2s
ESDC Sonseca Array 31.35 176 P P 16 34 55.1 +0.6
ESDC Sonseca Array 31.35 176 P P 16 34 55.1 +0.6
comp=Z,0.3nm,0.4s,baz=356,slow=9.2,SNR=4.3
ESDC Sonseca Array 31.35 176 P P 16 34 55.1 +0.6
ESLA Sonseca Array 31.35 176 P P 16 34 57.4 +2.9
ANN Anapa 33.77 117 *e*P P 16 35 18.7 +3.2
ANN *e**PP pP 16 35 25.5 +7.2
ANN *e*S S 16 40 40.2 +1.4
ANN pmax pmax
comp=Z,67nm,1.2s
ANN MLR MLR
comp=Z,275nm,15.0s
AKTO Aktyubinsk 35.32 91 P P 16 35 27.7 -1.2
AKTO Aktyubinsk 35.32 91 P P 16 35 27.7 -1.2
AKTO Aktyubinsk 35.32 91 P P 16 35 27.7 -1.2
baz=243,slow=0.0
AKTO LR LR 16 49 22.4
comp=Z,96nm,19.8s,baz=128,slow=36
AKTO Aktyubinsk 35.32 91 P P 16 35 27.7 -1.2
KIV Kislovodsk 36.11 112⇑ *i*P P 16 35 36.0 +0.1
KIV *e*S S 16 41 18.3 +3.2
KIV *e*SS SS 16 43 56.2 +4.1
KIV pmax pmax
comp=Z,38nm,1.0s
KIV MLR MLR
comp=Z,100nm,17.0s
KBZ Khabaz 36.38 112 P P 16 35 39.1 +1.1
KBZ Khabaz 36.38 112 P P 16 35 39.1 +1.1
KBZ Khabaz 36.38 112 P P 16 35 39.1 +1.1
comp=Z,28nm,1.0s,baz=330,slow=5.6,SNR=43
KBZ LR LR 16 50 41.1
comp=Z,88nm,18.3s,baz=345,slow=37
KBZ Khabaz 36.38 112 P P 16 35 39.1 +1.1
INK Inuvik 36.55 330 P P 16 35 39.6 +0.4
INK Inuvik 36.55 330 P P 16 35 39.6 +0.4
comp=Z,1.7nm,0.9s,baz=40,slow=12,SNR=7.1
INK Inuvik 36.55 330 P P 16 35 39.6 +0.4
BRVK Borovoye 37.08 77 *e*P P 16 35 43.2 -0.7
BRVK *e* 16 35 48.2
BRVK pmax pmax
comp=Z,10.0nm,1.0s
BRVK Borovoye 37.08 77 *e*P P 16 35 43.2 -0.7
comp=Z,9.7nm,1.0s
BRVK *e* 16 35 48.2
BRVK Borovoye 37.08 77 *e*P P 16 35 43.2 -0.7
comp=Z,9.7nm,1.0s
BVAR Borovoye Array 37.14 77 P P 16 35 43.9 -0.6
BVAR Borovoye Array 37.14 77 P P 16 35 43.9 -0.6
BVAR Borovoye Array 37.14 77 P P 16 35 43.9 -0.6
comp=Z,3.0nm,0.8s,baz=313,slow=7.1,SNR=16
BVAR LR LR 16 50 16.3
comp=Z,36nm,18.1s,baz=325,slow=35
BVAR Borovoye Array 37.14 77 *e*P P 16 35 43.9 -0.6
BR131 Keskin Array S 37.39 125 *e*P P 16 35 46.8 -0.1
comp=Z,2.7nm,0.8s
BR131 *e* 16 35 51.8
BR131 Keskin Array S 37.39 125 *e*P P 16 35 46.8 -0.1
comp=Z,2.7nm,0.8s
BRTR Keskin Array B 37.39 125 P P 16 35 47.1 +0.3
BRTR Keskin Array B 37.39 125 P P 16 35 47.1 +0.3
comp=Z,3.2nm,0.9s,baz=336,slow=6.4,SNR=11
BRTR LR LR 16 49 57.2
comp=Z,39nm,21.6s,baz=306,slow=34
BRTR Keskin Array B 37.39 125 *e*P P 16 35 47.2 +0.3
ZEI Tsey 37.55 111 *e*P P 16 35 48.3 0.0
ZEI *e* 16 35 53.3
ZEI pmax pmax
comp=Z,6.0nm,1.0s
ONI Oni 37.58 112 P P 16 35 50.1 +1.7
YKW3 Yellowknife Ar 37.81 314 *e*P P 16 35 50.3 +0.3
comp=Z,0.2nm,1.4s
YKW3 *e* 16 35 56.2
YKW3 Yellowknife Ar 37.81 314 *e*P P 16 35 50.3 +0.3
comp=Z,0.2nm,1.4s
YKA Yellowknife Ar 37.87 314 P P 16 35 51.3 +0.8
YKA PcP PcP 16 38 06.5 +0.2
YKA Yellowknife Ar 37.87 314 P P 16 35 51.3 +0.8
comp=Z,1.5nm,0.7s,baz=30,slow=8.6,SNR=25
YKA PcP PcP 16 38 06.5 +0.2
comp=Z,0.4nm,0.8s,baz=22,slow=2.9,SNR=8.5
YKA Yellowknife Ar 37.87 314 *e*P P 16 35 51.3 +0.8
YKA Yellowknife Ar 37.87 314 PcP PcP 16 38 06.5 +0.2
TBLG Delisi 38.76 111 *e*P P 16 36 03.4 +5.2
TBLG Delisi 38.76 111 P P 16 36 03.4 +5.2
DGRG David-gareji 39.21 110 P P 16 36 02.9 +0.9
MALT Malatya 40.03 120 *e*P P 16 36 08.7 -0.3
MALT *e* 16 36 14.4
MALT pmax pmax
comp=Z,11nm,0.9s
MALT Malatya 40.03 120 *e*P P 16 36 08.7 -0.3
comp=Z,12nm,0.9s
MALT *e* 16 36 14.4
MALT Malatya 40.03 120 *e*P P 16 36 08.7 -0.3
comp=Z,12nm,0.9s
GNI Garni 40.20 112 *e*P P 16 36 11.5 +1.0
comp=Z,26nm,1.0s
GNI *e* 16 36 16.0
GNI Garni 40.20 112 *e*P P 16 36 11.5 +1.0
comp=Z,26nm,1.0s
ZALV Zalesovo Beam 40.83 65 P P 16 36 14.0 -1.2
ZALV Zalesovo Beam 40.83 65 P P 16 36 14.0 -1.2
ZALV Zalesovo Beam 40.83 65 P P 16 36 14.0 -1.2
comp=Z,0.5nm,0.6s,baz=325,slow=9.3,SNR=4.0
ZALV LR LR 16 54 13.7
comp=Z,38nm,21.6s,baz=76,slow=38
ZALV Zalesovo Beam 40.83 65 P P 16 36 14.0 -1.2
BILL Bilibino 41.21 4‖ *e*P P 16 36 18.6 +0.3
BILL *e*S S 16 42 34.4 +3.1
BILL pmax pmax
comp=Z,9.0nm,1.7s
FFC Flin Flon 41.27 299*c e*P P 16 36 20.7 +1.8
FFC Flin Flon 41.27 299 *e*P P 16 36 19.6 +0.7
comp=Z,7.9nm,1.0s
FFC *e* 16 36 25.6
FFC Flin Flon 41.27 299 *e*P P 16 36 19.6 +0.7
comp=Z,7.9nm,1.0s
KURK Kurchatov 41.74 72 *e*P P 16 36 22.1 -0.7
KURK pmax pmax
comp=Z,3.0nm,0.7s
KURK Kurchatov 41.74 72 *e*P P 16 36 21.4 -1.4
comp=Z,3.5nm,0.9s
KURK *e* 16 36 26.9
KURK Kurchatov 41.74 72 *e*P P 16 36 21.4 -1.4
comp=Z,3.5nm,0.9s
ILAR Eielson Array 41.84 336 P P 16 36 24.8 +1.3
ILAR Eielson Array 41.84 336 P P 16 36 24.8 +1.3
comp=Z,0.6nm,0.8s,baz=11,slow=6.5,SNR=7.8
ILAR LR LR 16 53 14.0
comp=Z,54nm,19.4s,baz=97,slow=35
ILAR Eielson Array 41.84 336 P P 16 36 24.8 +1.3
COLA College 41.87 336 P P 16 36 24.1 +0.4
COLA College 41.87 336 P P 16 36 24.1 +0.4
COLA College 41.87 336 P P 16 36 24.1 +0.4
MCK McKinley 43.11 337 *e*P P 16 36 34.3 +0.5
MCK pmax pmax
comp=Z,8.0nm,1.2s
MCK McKinley 43.11 337 *e*P P 16 36 34.3 +0.5
comp=Z,7.9nm,1.2s
MCK McKinley 43.11 337 *e*P P 16 36 34.3 +0.5
comp=Z,7.9nm,1.2s
ULM Lac du Bonnet 43.36 291 P P 16 36 35.4 -0.6
ULM Lac du Bonnet 43.36 291 P P 16 36 35.4 -0.6
comp=Z,4.0nm,0.8s,baz=24,slow=6.9,SNR=5.1
ULM LR LR 16 55 09.6
comp=Z,98nm,18.3s,baz=14,slow=37
ULM Lac du Bonnet 43.36 291 P P 16 36 35.4 -0.6
EYMN Ely 44.02 286 *e*P P 16 36 42.3 +0.9
EYMN *e* 16 36 47.6
EYMN Ely 44.02 286 *e*P P 16 36 42.3 +0.9
SML Sawmill 44.88 335 P P 16 36 47.6 -0.4
SML pmax pmax
comp=Z,4.0nm,1.3s
SML Sawmill 44.88 335 P P 16 36 47.6 -0.4
comp=Z,3.8nm,1.3s
SML Sawmill 44.88 335 P P 16 36 47.6 -0.4
comp=Z,3.8nm,1.3s
SEY Seymchan 45.63 13 *e*P P 16 36 52.8 -1.1
MKAR Makanchi Array 46.35 72 P P 16 36 58.9 -0.9
MKAR Makanchi Array 46.35 72 P P 16 36 58.9 -0.9
MKAR Makanchi Array 46.35 72 P P 16 36 58.9 -0.9
comp=Z,0.5nm,0.8s,baz=308,slow=9.9,SNR=3.5
MKAR Makanchi Array 46.35 72 P P 16 36 58.9 -0.9
MOY Mondy 47.41 54 *e*P P 16 37 10.1 +1.9
AAK Ala-Archa 47.58 81*d i*P P 16 37 10.5 +0.8
AAK pmax pmax
comp=Z,12nm,1.0s
AAK Ala-Archa 47.58 81 *e*P P 16 37 09.3 -0.3
comp=Z,5.4nm,0.9s
AAK *e* 16 37 14.9
AAK Ala-Archa 47.58 81 *e*P P 16 37 09.4 -0.3
comp=Z,5.4nm,0.9s
TLY Talaya 48.09 52 *e*P P 16 37 10.2 -3.1
TLY *e* 16 37 16.9
TLY pmax pmax
comp=Z,3.0nm,0.8s
B18A Beardsley Farm 49.13 301 ⇓P P 16 37 22.7 +1.3
baz=49
ZAK Zakamensk 49.18 53 *e*P P 16 37 21.5 -0.3
ZAK pmax pmax
comp=Z,2.0nm,1.7s
D22A Cohagen 49.22 297 ⇓P P 16 37 24.0 +1.8
baz=49
C20A Veseth Ranch, 49.24 299 ⇓P P 16 37 23.7 +1.4
baz=49
EGMT Eagleton 49.46 301 *e*P P 16 37 24.8 +0.8
comp=Z,33nm,1.3s
EGMT *e* 16 37 31.3
EGMT Eagleton 49.46 301 ⇑P P 16 37 25.5 +1.5
baz=49,SNR=7.1
EGMT Eagleton 49.46 301 *e*P P 16 37 24.8 +0.8
comp=Z,33nm,1.3s
B17A L&G Farms, Che 49.51 302 ⇓P P 16 37 24.9 +0.6
baz=49
C19A Slack Wire Ran 49.52 300 ⇑P P 16 37 25.7 +1.2
baz=49
A14A Double T Ranch 49.62 304 ⇓P P 16 37 26.1 +0.9
baz=50
B16A M & M Farms, S 49.65 302 ⇑P P 16 37 26.3 +0.9
baz=50
WALA Waterton Lakes 49.67 305 P P 16 37 26.2 +0.6
WALA Waterton Lakes 49.67 305 P P 16 37 26.2 +0.6
D20A Manuel Ranch, 49.84 299 ⇑P P 16 37 28.7 +1.8
baz=50
B15A Bradely Ranch, 49.98 303 ⇓P P 16 37 28.7 +0.7
baz=50
D19A Cripps Ranch, 49.99 299 ⇓P P 16 37 30.1 +2.1
baz=50
C17A Wharram Farm, 50.10 301 ⇓P P 16 37 29.6 +0.7
baz=50
B14A Marquette Ranc 50.13 304 ⇑P P 16 37 29.9 +0.8
baz=50
C16A Fuhringer Ranc 50.22 302 ⇓P P 16 37 30.9 +1.1
baz=50
E20A Meyer Farm, Mu 50.38 298 ⇑P P 16 37 32.0 +1.1
baz=50
C15A Salmond Ranch, 50.48 303 ⇓P P 16 37 33.1 +1.2
baz=50
D17A Six Diamond Ra 50.52 301 ⇑P P 16 37 33.7 +1.6
baz=50
MIB Mutribah 50.58 114 *e*P P 16 37 31.9 -0.7
MIB AMb AMB 16 37 38.7
comp=Z,81nm,1.0s
MIB Mutribah 50.58 114 *e*P P 16 37 31.9 -0.7
comp=Z,81nm,1.0s
WMQ Urumqi 50.69 69 *e*P P 16 37 33.5 +0.2
E18A Harlowton 50.83 300 ⇑P P 16 37 36.6 +2.1
baz=51
JTMT Jette 50.97 304 *e*P P 16 37 35.9 +0.4
comp=Z,1.3nm,0.9s
JTMT *e* 16 37 42.2
JTMT Jette 50.97 304 *e*P P 16 37 35.9 +0.4
comp=Z,1.3nm,0.9s
BSMT Bassoo Peak 51.01 305 *e*P P 16 37 36.9 +1.0
comp=Z,4.5nm,1.0s
BSMT *e* 16 37 42.4
BSMT Bassoo Peak 51.01 305 *e*P P 16 37 36.9 +1.0
comp=Z,4.5nm,1.0s
NAY Al-Naaiem 51.07 115 *e*P P 16 37 34.9 -1.4
NAY AMb AMB 16 37 41.7
comp=Z,17nm,0.9s
NAY Al-Naaiem 51.07 115 *e*P P 16 37 34.9 -1.4
comp=Z,17nm,0.9s
C13A Hot Springs 51.11 304 ⇓P P 16 37 37.4 +0.9
baz=51,SNR=7.9
SWMT Swartz Lake 51.11 304 *e*P P 16 37 37.2 +0.7
comp=Z,6.7nm,1.2s
SWMT *e* 16 37 43.5
SWMT Swartz Lake 51.11 304 *e*P P 16 37 37.2 +0.7
comp=Z,6.7nm,1.2s
D15A Lincoln 51.13 302 ⇑P P 16 37 37.3 +0.6
baz=51,SNR=5.6
E17A Martinsdale 51.19 301 ⇓P P 16 37 38.1 +0.8
baz=51
SLMT Seeley Lake 51.22 303 *e*P P 16 37 37.7 +0.3
comp=Z,14nm,1.1s
SLMT *e* 16 37 43.9
SLMT Seeley Lake 51.22 303 *e*P P 16 37 37.7 +0.3
comp=Z,14nm,1.1s
E16A East Helena 51.36 301 ⇓P P 16 37 38.1 -0.3
baz=51
D14A Greenough 51.37 303 ⇑P P 16 37 39.2 +0.8
baz=51,SNR=7.3
F18A Big Timber 51.38 299 P P 16 37 40.3 +1.8
baz=51,SNR=7.2
CHMT Chamberlain Mo 51.45 303 *e*P P 16 37 39.8 +0.6
comp=Z,5.5nm,1.1s
CHMT *e* 16 37 45.5
CHMT Chamberlain Mo 51.45 303 *e*P P 16 37 39.8 +0.6
comp=Z,5.4nm,1.1s
RDF Al-Radifah 51.47 115 *e*P P 16 37 36.5 -2.7
RDF AMb AMB 16 37 46.6
comp=Z,47nm,0.9s
RDF Al-Radifah 51.47 115 *e*P P 16 37 36.5 -2.7
comp=Z,47nm,0.9s
G20A Bridger 51.57 298 ⇑P P 16 37 40.6 +0.6
baz=52
D13A Huson 51.62 304 ⇑P P 16 37 40.1 -0.2
baz=52
F17A Fitzpatrick Pl 51.64 300 ⇓P P 16 37 42.1 +1.6
baz=52,SNR=6.1
MSO Missoula 51.72 303 *e*P P 16 37 41.8 +0.7
comp=Z,5.8nm,1.1s
MSO *e* 16 37 47.8
MSO Missoula 51.72 303 ⇑P P 16 37 42.1 +1.0
baz=52
MSO Missoula 51.72 303 *e*P P 16 37 41.8 +0.7
comp=Z,5.8nm,1.1s
E15A Deer Lodge 51.73 302 ⇑P P 16 37 40.8 -0.4
baz=52
I24A Kuemmerle Ranc 51.75 294 ⇓P P 16 37 42.0 +0.6
baz=52
G18A Lazy EL Ranch, 51.87 299 ⇓P P 16 37 42.6 +0.3
baz=52
D12A Red Ives Fores 51.90 305 ⇓P P 16 37 43.3 +0.9
baz=52
E14A Clinton 51.97 303 ⇓P P 16 37 43.2 +0.2
baz=52
E13A Victor 52.14 303 ⇑P P 16 37 45.4 +1.2
baz=52
BOZ Bozeman (W) 52.16 301 ⇑P P 16 37 45.3 +0.9
baz=52
H20A Greybull 52.17 297 ⇑P P 16 37 45.8 +1.3
baz=52
F15A Butte 52.22 302 ⇑P P 16 37 46.2 +1.3
baz=52
I22A 9 Mile Ranch, 52.27 296 ⇑P P 16 37 45.9 +0.6
baz=52
SONM Songino Array 52.33 52 P P 16 37 45.4 -0.3
SONM Songino Array 52.33 52 P P 16 37 45.3 -0.3
comp=Z,0.2nm,0.3s,baz=346,slow=5.2,SNR=2.9
SONM Songino Array 52.33 52 *e*P P 16 37 45.3 -0.3
ULN Ulaanbaatar 52.47 51 P P 16 37 47.5 +0.8
ULN *e* 16 37 51.5
ULN Ulaanbaatar 52.47 51 P P 16 37 47.5 +0.8
I21A Big Trails, Te 52.58 296 ⇑P P 16 37 47.8 +0.2
baz=52,SNR=6.4
J22A Midwest 52.71 295 ⇓P P 16 37 48.9 +0.4
baz=53
I19A Meeteetse 52.88 298 ⇓P P 16 37 51.3 +1.5
baz=53
H16A Russell Place, 52.91 300 ⇓P P 16 37 51.3 +1.2
baz=53
F12A Elk City 53.06 304 ⇓P P 16 37 51.2 +0.1
baz=53
J20A Shoshoni 53.23 297 ⇓P P 16 37 53.7 +1.3
baz=53
MCMT McKenzie Canyo 53.25 301 *e*P P 16 37 53.9 +1.3
comp=Z,2.0nm,1.1s
MCMT *e* 16 37 59.9
MCMT McKenzie Canyo 53.25 301 *e*P P 16 37 53.9 +1.3
comp=Z,2.0nm,1.1s
G13A Cobalt 53.39 303 ⇑P P 16 37 54.9 +1.3
baz=53,SNR=7.4
H14A Leadore 53.59 302 ⇓P P 16 37 56.6 +1.6
baz=54
J19A Crowheart 53.60 298 ⇑P P 16 37 57.0 +1.9
baz=54
G12A Big Creek, Yel 53.66 304 ⇓P P 16 37 56.6 +1.1
baz=54
L23A Garrett 53.66 294 ⇑P P 16 37 55.5 -0.1
baz=54
H13A Challis 53.88 302 ⇓P P 16 37 58.5 +1.4
baz=54
K19A Absolon Red Bu 53.94 297 ⇑P P 16 37 58.1 +0.4
baz=54
K20A Yellowstone Ra 53.95 297 ⇑P P 16 37 58.2 +0.5
baz=54
L22A Ellis Ranch, M 53.96 295 ⇓P P 16 37 59.0 +1.2
baz=54
H12A Diamond D Ranc 54.06 303 ⇓P P 16 37 59.6 +1.1
baz=54,SNR=6.8
BW06 Boulder Array 54.20 298 ⇑P P 16 38 00.1 +0.5
baz=54
PDAR Pinedale Array 54.20 298 P P 16 38 00.1 +0.5
PDAR Pinedale Array 54.20 298 P P 16 38 00.1 +0.5
comp=Z,1.2nm,0.9s,baz=40,slow=4.8,SNR=7.3
PDAR LR LR 17 01 12.8
comp=Z,96nm,18.2s,baz=66,slow=36
PDAR Pinedale Array 54.20 298 *e*P P 16 38 00.1 +0.5
L21A Rawlins 54.30 296 ⇓P P 16 38 00.9 +0.6
baz=54
I13A Wildhorse Cree 54.45 302 ⇓P P 16 38 02.7 +1.3
baz=54
J15A Blackfoot 54.45 300 ⇑P P 16 38 03.2 +2.0
baz=54
BMO Blue Mountains 54.45 305 *e*P P 16 38 00.7 -0.5
comp=Z,4.0nm,0.8s
BMO Blue Mountains 54.45 305 *e*P P 16 38 00.7 -0.5
comp=Z,4.0nm,0.8s
M22A Cedar Creek Ra 54.58 295 ⇑P P 16 38 03.8 +1.4
baz=54
M21A Separation Pea 54.62 295 ⇓P P 16 38 03.0 +0.3
baz=54
I12A Atlanta 54.84 303 ⇑P P 16 38 05.2 +1.1
baz=55
N23A Red Feather La 54.85 294 ⇑P P 16 38 05.9 +1.5
baz=55
HLID Hailey 54.85 302 *e*P P 16 38 05.0 +0.8
comp=Z,4.9nm,1.1s
HLID Hailey 54.85 302 ⇓P P 16 38 05.7 +1.4
baz=55
HLID Hailey 54.85 302 *e*P P 16 38 05.0 +0.8
comp=Z,4.9nm,1.1s
J13A Cove Ranch, Pi 54.94 302 ⇓P P 16 38 06.3 +1.5
baz=55
N22A Wattenberg Ran 55.09 294 ⇓P P 16 38 07.7 +1.6
baz=55
O23A Lake Granby, G 55.47 293 ⇑P P 16 38 11.2 +2.3
baz=55
N20A Spence Gulch, 55.60 296 ⇓P P 16 38 10.7 +1.0
baz=56,SNR=7.3
O22A Kremmling 55.70 294 ⇑P P 16 38 12.0 +1.4
baz=56
M17A Scullys Gap (B 55.72 298 ⇓P P 16 38 11.8 +1.3
baz=56
L15A Malad City 55.72 300 ⇑P P 16 38 12.1 +1.6
baz=56
ISCO Idaho Springs 55.76 293 ⇓P P 16 38 12.5 +1.5
baz=56
PETK Petropavlovsk- 55.77 11 LR LR 17 03 00.6
comp=Z,22nm,18.5s,baz=243,slow=37
P23A Jefferson 56.22 293 ⇑P P 16 38 16.1 +1.8
baz=56
O20A White River Ci 56.24 295 ⇑P P 16 38 15.8 +1.5
baz=56
R27A Eads 56.28 290 ⇑P P 16 38 15.6 +1.0
baz=56
Q24A Divide 56.38 292 ⇓P P 16 38 16.1 +0.6
baz=56
SMCO Snowmass 56.74 294 *e*P P 16 38 19.2 +1.1
comp=Z,5.8nm,1.1s
SMCO *e* 16 38 25.2
SMCO Snowmass 56.74 294 *e*P P 16 38 19.2 +1.1
comp=Z,5.8nm,1.1s
P19A Cripple Cowboy 56.92 296 ⇑P P 16 38 20.4 +1.2
baz=57
Q22A Crested Butte, 57.01 294 ⇑P P 16 38 21.0 +1.1
baz=57
P18A Preston Nutter 57.30 297 ⇓P P 16 38 21.7 -0.2
baz=57
S25A Robets Cordova 57.36 291 ⇓P P 16 38 23.2 +0.9
baz=57
DUG Dugway 57.52 299 *e*P P 16 38 24.8 +1.5

DUG					*e*			16 38 30.7	
DUG					pmax		pmax		
	comp=Z,10.0nm,1.6s								
DUG	**Dugway**	**57.52**	**299**	*e*P		**P**		**16 38 24.8**	**+1.5**
	comp=Z,9.9nm,1.6s								
DUG					*e*			16 38 30.7	
DUG	**Dugway**	**57.52**	**299**	⇓P		**P**		**16 38 24.8**	**+1.5**
	baz=57								
DUG	**Dugway**	**57.52**	**299**	*e*P		**P**		**16 38 24.8**	**+1.5**
	comp=Z,9.9nm,1.6s								
R22A	**Saguache, Gunn**	**57.55**	**293**	⇓P		**P**		**16 38 25.7**	**+2.0**
	baz=58								
TOA0	**Torodi Ar. Sit**	**57.97**	**170**	*e*P		**P**		**16 38 25.6**	**-0.9**
TOA0	**Torodi Ar. Sit**	**57.97**	**170**	*e*P		**P**		**16 38 25.6**	**-0.9**
TORD	**Torodi Ar. Bea**	**57.97**	**170**	P		**P**		**16 38 26.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**57.97**	**170**	P		**P**		**16 38 26.1**	**-0.4**
	comp=Z,3.2nm,1.1s,baz=350,slow=7.1,SNR=11								
TORD	**Torodi Ar. Bea**	**57.97**	**170**	P		**P**		**16 38 26.1**	**-0.4**
WMOK	**Wichita Mounta**	**58.28**	**285**	*e*P		**P**		**16 38 29.2**	**+0.6**
WMOK					*e*			16 38 35.4	
WMOK					pmax		pmax		
	comp=Z,3.0nm,1.0s								
WMOK	**Wichita Mounta**	**58.28**	**285**	*e*P		**P**		**16 38 29.2**	**+0.6**
	comp=Z,2.7nm,1.0s								
WMOK					*e*			16 38 35.4	
WMOK	**Wichita Mounta**	**58.28**	**285**	*e*P		**P**		**16 38 29.2**	**+0.6**
	comp=Z,2.7nm,1.0s								
GTA	**Gaotai**	**58.34**	**61**	*e*P		**P**		**16 38 30.0**	**+1.0**
GTA				pP		**pP**		**16 38 34.5**	**+2.6**
GTA				sP		**sP**		**16 38 37.5**	**+4.5**
GTA				pmax		pmax			
	comp=Z,3.0nm,1.5s								
MVCO	**Mesa Verde**	**59.01**	**294**	*e*P		**P**		**16 38 35.4**	**+1.5**
	comp=Z,18nm,1.2s								
MVCO					*e*			16 38 40.7	
MVCO	**Mesa Verde**	**59.01**	**294**	⇑P		**P**		**16 38 35.8**	**+1.9**
	baz=59								
MVCO	**Mesa Verde**	**59.01**	**294**	*e*P		**P**		**16 38 35.4**	**+1.5**
	comp=Z,18nm,1.2s								
S18A	**Hurst Farm, Bl**	**59.01**	**296**	⇓P		**P**		**16 38 36.4**	**+2.5**
	baz=59								
W27A	**Bowe Ranch, En**	**59.33**	**289**	⇓P		**P**		**16 38 37.6**	**+1.7**
	baz=59								
V24A	**Rampart Ranch,**	**59.41**	**291**	⇓P		**P**		**16 38 38.0**	**+1.4**
	baz=59								
R11A	**Troy Canyon, C**	**60.02**	**301**	⇑P		**P**		**16 38 42.3**	**+1.5**
	baz=60								
HHC	**Hu-ho-hao-te**	**60.17**	**50**	*e*P		**P**		**16 38 40.3**	**-1.4**
HHC				PcP		**PcP**		**16 39 26.5**	**-0.7**
HHC				PP		**PP**		**16 40 54.5**	**+0.7**
HHC				ScP		**ScP**		**16 43 25.5**	**-2.5**
HHC				PcS		**PcS**		**16 43 27.5**	**-2.1**
HHC				S		S		16 46 48.5	-6.5
HHC				ScS		SKKSac		16 48 26.5	-5.4
HHC				pmax		pmax			
	comp=Z,30nm,0.7s								
HHC				pmax		pmax			
	comp=Z,210nm,6.6s								
HHC				LR		LR			
	comp=N,220nm,16.8s								
HHC				LR		LR			
	comp=E,360nm,16.5s								
HHC				LR		LR			
	comp=Z,180nm,16.7s								
YSS	**Yuzh-Sakhalins**	**60.39**	**24**	*e*P		**P**		**16 38 42.5**	**-0.4**
MDJ	**Mudanjiang**	**60.57**	**35**	P		P		16 38 41.0	-3.2
MDJ				pmax		pmax			
	comp=Z,11nm,2.1s								
MDJ				pmax		pmax			
	comp=Z,180nm,5.0s								
NVAR	**Mina Array Bea**	**60.70**	**303**	P		**P**		**16 38 47.2**	**+1.7**
NVAR	**Mina Array Bea**	**60.70**	**303**	P		**P**		**16 38 47.2**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=13,slow=8.3,SNR=1.9								
NVAR	**Mina Array Bea**	**60.70**	**303**	*e*P		**P**		**16 38 47.2**	**+1.7**
X23A	**Hourglass Bar**	**60.74**	**291**	⇓P		**P**		**16 38 47.2**	**+1.4**
	baz=61								
Y24A	**Capitan**	**61.12**	**290**	⇑P		**P**		**16 38 50.5**	**+2.1**
	baz=61								
Y23A	**Lovelace Mesa,**	**61.31**	**291**	⇓P		**P**		**16 38 51.1**	**+1.6**
	baz=61								
LZH	**Lanzhou**	**62.58**	**59**	*e*P		**P**		**16 38 58.5**	**+0.4**
LZH				pP		**pP**		**16 39 01.8**	**+0.8**
LZH				*e*PP		**PP**		**16 41 17.3**	**+2.1**
LZH				pmax		pmax			
	comp=Z,17nm,1.4s								
LZH				pmax		pmax			
	comp=Z,52nm,7.5s								
LZH				LR		LR			
	comp=N,180nm,16.5s								
LZH				LR		LR			
	comp=E,200nm,15.9s								
LZH				LR		LR			
	comp=Z,230nm,18.5s								
SJG	**San Juan**	**63.22**	**247**	P		**P**		**16 39 04.8**	**+2.5**
SJG	**San Juan**	**63.22**	**247**	P		**P**		**16 39 04.8**	**+2.5**
426A	**McDonald Obser**	**63.70**	**288**	⇓P		**P**		**16 39 06.8**	**+1.1**
	baz=64								
425A	**Indio Mountain**	**63.89**	**289**	⇓P		**P**		**16 39 07.7**	**+0.8**
	baz=64								
527A	**Woodward Ranch**	**64.06**	**287**	⇓P		**P**		**16 39 08.7**	**+0.7**
	baz=64								
PFO	**Pinyon Flat Ob**	**64.70**	**300**	⇓P		**P**		**16 39 11.3**	**-0.8**
	baz=65								
626A	**Big Bend Ranch**	**64.77**	**287**	⇓P		**P**		**16 39 13.2**	**+0.7**
	baz=65								
TXAR	**Lajitas Array**	**64.83**	**287**	P		**P**		**16 39 13.6**	**+0.7**
TXAR	**Lajitas Array**	**64.83**	**287**	P		**P**		**16 39 13.6**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=46,slow=5.0,SNR=8.8								
TXAR					LR		LR	17 07 37.7	
	comp=Z,61nm,19.2s,baz=0.0,slow=36								
TXAR	**Lajitas Array**	**64.83**	**287**	P		**P**		**16 39 13.6**	**+0.7**
MJAR	**Matsushiro Arr**	**69.92**	**30**	P		**P**		**16 39 44.3**	**-0.7**
MJAR	**Matsushiro Arr**	**69.92**	**30**	P		**P**		**16 39 44.3**	**-0.7**
	comp=Z,1.8nm,0.9s,baz=330,slow=4.7,SNR=3.9								
MJAR	**Matsushiro Arr**	**69.92**	**30**	P		**P**		**16 39 44.3**	**-0.7**
GYA	**Guiyang**	**72.44**	**60**	*e*P		**P**		**16 39 59.0**	**-1.4**
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s								
CHTO	**Chiang Mai**	**77.35**	**69**	P		**P**		**16 40 28.3**	**-0.5**
CHTO				*e*				16 40 33.9	
CHTO				pmax		pmax			
	comp=Z,3.0nm,1.0s								
CHTO	**Chiang Mai**	**77.35**	**69**	P		**P**		**16 40 28.3**	**-0.5**
	comp=Z,3.5nm,1.0s								
CHTO				*e*				16 40 33.9	
CHTO	**Chiang Mai**	**77.35**	**69**	P		**P**		**16 40 28.3**	**-0.5**
	comp=Z,3.5nm,1.0s								
CMAR	**Chiang Mai Arr**	**77.69**	**69**	P		**P**		**16 40 30.1**	**-0.6**
CMAR	**Chiang Mai Arr**	**77.69**	**69**	P		**P**		**16 40 30.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=351,slow=2.7,SNR=3.2								
CMAR	**Chiang Mai Arr**	**77.69**	**69**	*e*P		**P**		**16 40 30.1**	**-0.6**
WRA	**Warramunga Arr**	**124.10**	**46**	PKP		**PKPdf**		**16 47 30.1**	**-2.2**
WRA	**Warramunga Arr**	**124.10**	**46**	PKP		**PKPdf**		**16 47 30.1**	**-2.2**
	comp=Z,0.7nm,0.8s,baz=348,slow=3.2,SNR=4.6								
WRA	**Warramunga Arr**	**124.10**	**46**	PKIKP		**PKPdf**		**16 47 30.0**	**-2.2**

IDC 25 16:29:57.6±2.1, 2°.03N×126°.65E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=165.5km s-min=25.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.10**	**161**	P	P	16 35 05.0	-0.3
	0.7nm,0.3s,baz=340,slow=11,SNR=21						
ASAR	**Alice Springs**	**26.50**	**165**	P	P	16 35 37.4	+0.4
	0.2nm,0.4s,baz=344,slow=7.3,SNR=8.5						
MKAR	**Makanchi Array**	**58.91**	**326**	P	P	16 39 58.4	-0.2
	0.2nm,0.4s,baz=121,slow=7.1,SNR=5.9						

*ISCJB **25** 16:30:37.4±0.4, 59°.91N±0°.03×153°.00W±0°.07, h118km±4km, mb3.9/1, Error ellipse: s-maj=6.6km s-min=4.5km az=26.3*
*IDC **25** 16:30:37.9±2.2, 59°.87N×153°.24W, h103km±34km, mb3.5/1, mb1 3.4/5, mb1mx3.1/29, mbtmp3.2/5, Error ellipse: s-maj=36.8km s-min=20.1km az=113.0*
*NEIC **25** 16:30:39.4, 59°.92N×159°.04W, h108km, MG2.8(AEIC), After AEIC.*

ISC 25 16:30:37.3±0.9, 59°.91N±0°.04×152°.92W±0°.05, h120km±6km, n62, σ1°.50/57, Southern Alaska

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

ILIM	**Iliamna**	**0.17**	**354**	P		**Pn**		**16 30 54.1**	**+0.2**
ILIM				S		**Sn**		**16 31 05.8**	**-0.6**
OPT	**Oil Point**	**0.30**	**212**	P		**Pn**		**16 30 54.5**	**+0.3**
OPT				S		**Sn**		**16 31 06.4**	**-0.5**
RSO	**Redoubt South**	**0.56**	**8**	*e*Pn		**Pn**		**16 30 56.2**	**+0.4**
RSO				*e*Sn		**Sn**		**16 31 08.8**	**-1.0**
AUNW	**Augustine NWes**	**0.60**	**208**	P		**Pn**		**16 30 56.3**	**+0.5**
AUP	**Augustine Pinn**	**0.60**	**205**	P		**Pn**		**16 30 56.5**	**+0.5**
HOM	**Homer**	**0.69**	**111**	P		**Pn**		**16 30 57.9**	**+1.5**
DFR	**Drift River**	**0.70**	**10**	P		**Pn**		**16 30 57.1**	**+0.5**
BRLK	**Bradley Lake**	**1.04**	**97**	P		**Pn**		**16 31 00.9**	**+1.3**
BRLK				S		**Sn**		**16 31 17.8**	**+1.2**
CKL	**Chakachamna La**	**1.32**	**12**	P		**Pn**		**16 31 03.9**	**+1.1**
SPU	**Mount Spurr**	**1.35**	**18**	P		**Pn**		**16 31 03.9**	**+1.0**
BGL	**Barrier Glacie**	**1.39**	**11**	P		**Pn**		**16 31 04.7**	**+1.3**
SLKM	**Skilak Lake**	**1.48**	**65**	P		**Pn**		**16 31 06.1**	**+1.7**
STLK	**Strandline Lak**	**1.68**	**18**	P		**Pn**		**16 31 08.3**	**+1.4**
SEW	**Seward**	**1.75**	**82**	P		**Pn**		**16 31 08.6**	**+1.0**
SVW2	**Sparrevohn**	**1.78**	**313**	P		Pn		16 31 07.8	-0.2
KAWH	**Katmai**	**1.81**	**213**	P		**Pn**		**16 31 09.1**	**+0.7**
KAKN	**Katmai Knife C**	**1.96**	**215**	P		**Pn**		**16 31 10.5**	**+0.3**
KABU	**Katmai Buttres**	**2.04**	**218**	P		**Pn**		**16 31 12.3**	**+1.0**
KABU				S		**Sn**		**16 31 37.2**	**-0.2**
KABR	**Katmai Barrier**	**2.07**	**212**	P		**Pn**		**16 31 12.4**	**+0.8**
KDAK	**Kodiak Island**	**2.14**	**175**	P		**Pn**		**16 31 12.7**	**+0.3**
KDAK				S		**Sn**		**16 31 38.6**	**-0.6**
KDAK	**Kodiak Island**	**2.14**	**175**	P		**Pn**		**16 31 12.7**	**+0.3**
	13nm,0.3s,baz=17,slow=7.8,SNR=154								
KDAK				S		**Sn**		**16 31 38.6**	**-0.6**
	18nm,0.3s,baz=260,slow=21,SNR=7.3								
SKT	**Skwentna**	**2.19**	**17**	P		**Pn**		**16 31 14.3**	**+1.3**
PMR	**Palmer**	**2.51**	**46**	P		**Pn**		**16 31 17.7**	**+0.6**
PMR				S		**Sn**		**16 31 47.2**	**-0.6**
OHAK	**Old Harbor**	**2.70**	**184**	*e*Pn		**Pn**		**16 31 18.9**	**-0.6**
CUT	**Chulitna**	**2.82**	**26**	P		**Pn**		**16 31 22.6**	**+1.5**
SML	**Sawmill**	**2.94**	**48**	P		**Pn**		**16 31 23.8**	**+1.1**
PPLA	**Purkeypile**	**3.02**	**6**	P		**Pn**		**16 31 25.6**	**+1.8**
TT01	**Tatalina**	**3.36**	**335**	P		**Pn**		**16 31 28.4**	**+0.3**
MID	**Middleton Isla**	**3.37**	**95**	P		Pn		16 31 29.9	+1.6
EYAK	**Cordova Ski Ar**	**3.63**	**77**	P		Pn		16 31 33.3	+1.5
DIV	**Divide**	**3.74**	**68**	P		**Pn**		**16 31 34.4**	**+1.1**
TRF	**Thorofare Moun**	**3.77**	**18**	P		**Pn**		**16 31 34.6**	**+0.8**
RND	**Reindeer**	**4.01**	**27**	P		**Pn**		**16 31 38.4**	**+1.5**
GOAT	**Goat Mountain**	**4.14**	**77**	P		Pn		16 31 40.6	+2.0
DHY	**Denali Highway**	**4.14**	**38**	P		**Pn**		**16 31 40.0**	**+1.3**
BMRM	**Bremner River**	**4.26**	**72**	P		Pn		16 31 42.1	+1.9
MCK	**McKinley**	**4.28**	**24**	P		**Pn**		**16 31 42.5**	**+2.0**
PAX	**Paxson**	**4.71**	**46**	P		**Pn**		**16 31 47.8**	**+1.5**
VRDI	**Verde Repeater**	**4.86**	**70**	P		Pn		16 31 49.8	+1.4
WRH	**Wood River Hil**	**5.11**	**24**	P		**Pn**		**16 31 52.6**	**+1.1**
DDM	**Donnelly Dome**	**5.13**	**38**	P		**Pn**		**16 31 54.1**	**+2.2**
KIAG	**Kiagna River**	**5.33**	**74**	P		Pn		16 31 56.8	+2.0
BALM	**Baldy**	**5.35**	**73**	P		Pn		16 31 56.9	+1.9
MENT	**Mentasta**	**5.36**	**52**	*e*Pn		Pn		16 31 57.0	+2.1
MESA	**MESA**	**5.51**	**82**	P		Pn		16 31 59.4	+2.3
MDM	**Murphy Dome**	**5.52**	**21**	P		**Pn**		**16 31 58.2**	**+1.1**
IL1	**Eielson Array**	**5.63**	**27**	P		**Pn**		**16 31 59.5**	**+0.9**
ILAR	**Eielson Array**	**5.63**	**27**	P		**Pn**		**16 31 59.5**	**+0.9**
ILAR				S		**Sn**		**16 32 57.9**	**-4.1**
ILAR	**Eielson Array**	**5.63**	**27**	P		**Pn**		**16 31 59.5**	**+0.9**
	0.9nm,0.3s,baz=214,slow=13,SNR=57								
ILAR				S		**Sn**		**16 32 57.9**	**-4.1**
	1.2nm,0.3s,baz=219,slow=16,SNR=9.9								
BARN	**Barnard Glacie**	**5.69**	**73**	P		Pn		16 32 02.1	+2.5
SAMH	**Samovar Hills**	**6.09**	**83**	P		Pn		16 32 07.8	+2.9
IM3	**Indian Mountai**	**6.11**	**357**	P		**Pn**		**16 32 06.4**	**+1.4**
PNL	**Peninsula**	**6.83**	**86**	P		Pn		16 32 16.8	+2.0
EGAK	**Eagle**	**7.33**	**43**	P		**Pn**		**16 32 22.3**	**+0.9**
HYT	**Haines Junctio**	**7.70**	**76**	P		Pn		16 32 29.0	+2.4
DLBC	**Dease Lake**	**11.82**	**87**	P		**P**		**16 33 26.9**	**-3.2**
DLBC	**Dease Lake**	**11.82**	**87**	P		**P**		**16 33 26.9**	**-3.2**
	0.6nm,0.3s,baz=220,slow=9.9,SNR=14								
YKA	**Yellowknife Ar**	**18.45**	**65**	P		**Pn**		**16 34 46.4**	**+1.6**
YKA	**Yellowknife Ar**	**18.45**	**65**	P		**Pn**		**16 34 46.3**	**+1.6**
	0.1nm,0.3s,baz=274,slow=9.7,SNR=9.0								
DCID1	**Drake Creek**	**29.92**	**104**	*e*P		P		16 36 36.1	+2.3
ZALV	**Zalesovo Beam**	**57.47**	**324**	P		**P**		**16 40 15.1**	**+1.9**
ZALV	**Zalesovo Beam**	**57.47**	**324**	P		**P**		**16 40 15.1**	**+1.9**
	0.5nm,0.4s,baz=28,slow=6.6,SNR=3.6								

CSEM 25 16:36:30.7±1.3, 48°.55N×16°.27E, h1km, Error ellipse: s-maj=20.7km s-min=9.8km az=173.0, Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRAC	**Vranov**	**0.79**	**15**	*e*Pg	Pb	16 36 47.0	-0.3
VRAC				*e*Sg	Sg	16 36 56.9	+0.6
MORC	**Moravsky Berou**	**1.49**	**34**	*e*Pg	Pn	16 36 58.7	0.0
MORC				*e*Sg	Sg	16 37 18.1	-0.6

IDC 25 16:41:12.1±2.9, 5°.82S×133°.78E, h0km, mb3.6/1, mb1 3.6/4, mb1mx3.4/18, mbtmp3.4/4, ML3.0/3, Error ellipse: s-maj=97.3km s-min=29.4km az=87.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDU	**Kakadu**	**6.95**	**191**	P	Pn	16 42 59.3	+4.1
	baz=46,SNR=4.0						
MTN	**Manton Dam**	**7.45**	**200**	P	Pn	16 43 07.8	+5.6
	baz=47,SNR=8.1						
JAY	**Jayapura**	**7.64**	**65**	P	Pn	16 43 06.5	+1.6
	baz=47,SNR=4.7						
WRA	**Warramunga Arr**	**14.05**	**178**	Pn	Pn	16 44 32.4	-0.2
	0.0nm,0.3s,baz=354,slow=13,SNR=3.7						
FITZ	**Fitzroy Crossi**	**14.57**	**212**	Pn	Pn	16 44 38.9	-0.8
	0.1nm,0.3s,baz=40,slow=14,SNR=4.4						
FITZ				Sn	Sn	16 47 23.8	+1.7
	0.1nm,0.3s,baz=0.0,slow=4.0,SNR=2.2						
PCI	**Palu**	**14.75**	**289**	P	P	16 44 59.0	+11
	baz=63,SNR=5.3						
ASAR	**Alice Springs**	**17.75**	**180**	P	Pn	16 45 21.2	+0.4
	0.1nm,0.3s,baz=5.6,slow=15,SNR=12						
MKAR	**Makanchi Array**	**69.36**	**325**	P	P	16 52 21.8	0.0
	0.4nm,0.6s,baz=115,slow=7.3,SNR=4.2						

IDC 25 16:42:38.9±3.0, 2°.72S×136°.90E, h0km, mb3.2/2, mb1 3.3/3, mb1mx3.2/18, mbtmp3.2/3, ML3.1/1, Error ellipse: s-maj=118.3km s-min=30.1km az=81.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.30**	**188**	P	Pn	16 46 42.2	+0.2
	0.1nm,0.3s,baz=9.8,slow=13,SNR=5.7						
ASAR	**Alice Springs**	**21.02**	**188**	P	P	16 47 24.1	-0.3
	0.2nm,0.6s,baz=14,slow=10.0,SNR=4.6						
MKAR	**Makanchi Array**	**68.70**	**323**	P	P	16 53 44.5	+0.1
	0.3nm,0.4s,baz=113,slow=8.1,SNR=6.1						

*CSEM **25** 16:48:42.6, 42°.50N×13°.38E, h8km, After ROM*
ROM 25 16:48:42.6±0.1, 42°.50N×13°.38E, h8km, Ml2.0/1, 8C-2D, Error ellipse: s-maj=1.2km s-min=0.9km az=66.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.04**	**32**	⇑*i*Pg	Pg	16 48 44.9	+0.4
CAMP				Sg	Sg	16 48 46.0	+0.2
	287nm,0.4s						
CAMP	**Campotosto**	**0.04**	**32**	⇑*i*Pg	Pg	16 48 44.9	+0.4
CAMP				Sg	Sg	16 48 46.0	+0.2
	287nm,0.4s						
AQU	**L'Aquila**	**0.15**	**174**	Pg	Pg	16 48 46.7	+0.8
AQU				Sg	Sg	16 48 49.2	+1.0
	779nm,0.3s						
AQU	**L'Aquila**	**0.15**	**174**	Pg	Pg	16 48 46.7	+0.8
AQU				Sg	Sg	16 48 49.2	+1.0
	779nm,0.3s						
TERO	**Teramo**	**0.20**	**54**	⇑*i*Pg	Pg	16 48 47.3	+0.4
TERO				Sg	Sg	16 48 50.4	+0.6
	449nm,0.3s						
TERO	**Teramo**	**0.20**	**54**	⇑*i*Pg	Pg	16 48 47.3	+0.4
TERO				Sg	Sg	16 48 50.4	+0.6
	449nm,0.3s						
LNSS	**Leonessa**	**0.27**	**292**	⇑*i*Pg	Pg	16 48 48.8	+0.6
LNSS				Sg	Sb	16 48 53.5	-1.2
	355nm,0.3s						
FIAM	**Fiamignano**	**0.31**	**220**	Pg	Pg	16 48 49.2	+0.4
FIAM				Sg	Sb	16 48 54.8	-0.9
	129nm,0.7s						
FIAM	**Fiamignano**	**0.31**	**220**	Pg	Pg	16 48 49.2	+0.4
FIAM				Sg	Sb	16 48 54.8	-0.9
	129nm,0.7s						
VCEL	**Villa Celiera**	**0.36**	**108**	Pg	Pg	16 48 49.9	+0.1
VCEL				Sg	Sb	16 48 56.9	-0.3
	180nm,0.5s						
VCEL	**Villa Celiera**	**0.36**	**108**	Pg	Pg	16 48 49.9	+0.1
VCEL				Sg	Sb	16 48 56.9	-0.3
	180nm,0.5s						
NRCA	**Norcia**	**0.39**	**329**	⇓*i*Pg	Pg	16 48 50.7	+0.4
NRCA				Sg	Sg	16 48 56.7	+1.2
	41nm,0.2s						
NRCA	**Norcia**	**0.39**	**329**	⇓*i*Pg	Pg	16 48 50.7	+0.4
NRCA				Sg	Sg	16 48 56.7	+1.2
	41nm,0.2s						
PTQR	**Pietraquaria**	**0.48**	**178**	Pg	Pb	16 48 52.8	-0.6
PTQR				Sg	Sg	16 48 59.3	+0.8
	9.0nm,0.3s						
PTQR	**Pietraquaria**	**0.48**	**178**	Pg	Pb	16 48 52.8	-0.6
PTQR				Sg	Sg	16 48 59.3	+0.8
	9.0nm,0.3s						
OFFI	**Offida**	**0.49**	**27**	Pg	Pb	16 48 53.5	+0.1
	391nm,0.5s						
OFFI	**Offida**	**0.49**	**27**	Pg	Pb	16 48 53.5	+0.1
	391nm,0.5s						
MNS	**Montasola**	**0.53**	**257**	Pg	Pg	16 48 53.3	+0.3
	52nm,0.5s						
MNS	**Montasola**	**0.53**	**257**	Pg	Pg	16 48 53.3	+0.3
	52nm,0.5s						
FDMO	**Fiordimonte**	**0.57**	**338**	Pg	Pg	16 48 53.9	+0.1
FDMO				Sg	Sb	16 49 03.0	-0.4
	48nm,0.2s						
FDMO	**Fiordimonte**	**0.57**	**338**	Pg	Pg	16 48 53.9	+0.1
FDMO				Sg	Sb	16 49 03.0	-0.4
	48nm,0.2s						
CESX	**Cesi**	**0.60**	**281**	Pg	Pb	16 48 54.9	-0.5
	48nm,0.3s						
CESX	**Cesi**	**0.60**	**281**	Pg	Pb	16 48 54.9	-0.5
	48nm,0.3s						
CESI	**CESI - Serrava**	**0.61**	**325**	⇑*i*Pg	Pg	16 48 54.8	+0.2
CESI				Sg	Sb	16 49 04.3	-0.2
	22nm,0.3s						
CESI	**CESI - Serrava**	**0.61**	**325**	⇑*i*Pg	Pg	16 48 54.8	+0.2
CESI				Sg	Sb	16 49 04.3	-0.2
	22nm,0.3s						
INTR	**Introdacqua**	**0.63**	**141**	Pg	Pg	16 48 54.6	-0.2
INTR				Sg	Sb	16 49 04.8	-0.1
	56nm,0.2s						
INTR	**Introdacqua**	**0.63**	**141**	Pg	Pg	16 48 54.6	-0.2
INTR				Sg	Sb	16 49 04.8	-0.1
	56nm,0.2s						
VVLD	**Villa Vallelon**	**0.66**	**164**	Pg	Pg	16 48 55.8	+0.4
VVLD	**Villa Vallelon**	**0.66**	**164**	Pg	Pg	16 48 55.8	+0.4
LPEL	**Lama dei Pelig**	**0.75**	**127**	Pg	Pg	16 48 56.9	-0.3
LPEL	**Lama dei Pelig**	**0.75**	**127**	Pg	Pg	16 48 56.9	-0.3
ASSB	**Assisi San Ben**	**0.76**	**316**	Pg	Pg	16 48 57.4	+0.1
ASSB	**Assisi San Ben**	**0.76**	**316**	Pg	Pg	16 48 57.4	+0.1
CING	**Cingoli**	**0.88**	**351**	Pg	Pg	16 48 59.4	-0.3
CING	**Cingoli**	**0.88**	**351**	Pg	Pg	16 48 59.4	-0.3

IDC 25 16:55:01.1±7.8, 23°.20N×143°.58E, h87km±70km, mb3.3/6, mb1 3.4/7, mb1mx3.2/26, mbtmp3.3/7, ML3.5/1, Error ellipse: s-maj=117.0km s-min=18.2km az=80.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**14.09**	**342**	P	Pn	16 58 16.4	-0.2
	0.2nm,0.3s,baz=157,slow=9.3,SNR=4.6						
WRA	**Warramunga Arr**	**43.81**	**193**	P	P	17 02 59.4	+0.8
	34nm,0.3s,baz=16,slow=9.3,SNR=6.8						
FITZ	**Fitzroy Crossi**	**44.63**	**205**	P	P	17 03 04.7	-0.4
	2.2nm,1.0s,baz=18,slow=6.4,SNR=3.1						
ASAR	**Alice Springs**	**47.52**	**192**	P	P	17 03 26.9	-0.9
	0.2nm,0.9s,baz=13,slow=6.3,SNR=4.0						
ZALV	**Zalesovo Beam**	**53.28**	**321**	P	P	17 04 10.4	-0.4
	0.4nm,0.4s,baz=104,slow=6.1,SNR=3.1						
MKAR	**Makanchi Array**	**53.97**	**312**	P	P	17 04 16.2	+0.1
	0.9nm,0.6s,baz=90,slow=8.8,SNR=10						
FINES	**FINESS Array B**	**81.99**	**335**	P	P	17 07 11.4	+0.1
	0.5n

	baz=277								
NSK				*e*S		**Sn**	**17 03 11.4**	**+0.9**
	baz=277								
TAP1	**Taipei**	**1.16**	**303**	*e*P		**Pn**	**17 02 55.6**	**+0.7**
	baz=304								
TAP1				*e*S		**Sn**	**17 03 10.3**	**-0.2**
	baz=304								
HATJ	**Hateruma jima**	**1.16**	**107**	P		**Pn**	**17 02 56.4**	**+1.4**
HATJ				*e*S		**Sn**	**17 03 12.4**	**+1.8**
TAP	**Taipei**	**1.17**	**303**	*e*P		**Pn**	**17 02 55.5**	**+0.4**
	baz=304								
TAP				*e*S		**Sn**	**17 03 10.9**	**+0.2**
	baz=304								
TEGC	**Jichi Village**	**1.18**	**234**	*e*P		**Pn**	**17 02 55.5**	**+0.2**
	baz=230								
TEGC				*e*S		**Sn**	**17 03 11.1**	**+0.1**
	baz=230								
ESL	**Shilin**	**1.21**	**241**	⇓*i*P		**Pn**	**17 02 55.8**	**+0.2**
	baz=249								
ESL				*e*S		**Sn**	**17 03 10.9**	**-0.8**
	baz=249								
WHF	**Hehuan Shan**	**1.24**	**258**	⇓*i*P		**Pn**	**17 02 57.1**	**+0.8**
	baz=251								
WHF				*e*S		**Sn**	**17 03 12.6**	**-0.3**
	baz=251								
TWY	**Chenhua**	**1.25**	**314**	*e*P		**Pn**	**17 02 57.6**	**+1.5**
	baz=315								
TWY				*e*S		**Sn**	**17 03 13.7**	**+1.1**
	baz=315								
TWS1	**Kuangyinshan**	**1.27**	**303**	⇑*i*P		**Pn**	**17 02 57.6**	**+1.3**
	baz=304								
TWS1				*e*S		**Sn**	**17 03 13.5**	**+0.4**
	baz=304								
TWT	**Tachien**	**1.30**	**264**	⇑P		**Pn**	**17 02 58.6**	**+1.7**
	baz=265								
TWT				*e*S		**Sn**	**17 03 14.7**	**+0.7**
	baz=265								
JKRS	**Kuro-shima**	**1.30**	**97**	P		**Pn**	**17 02 58.0**	**+1.2**
JKRS				*e*S		**Sn**	**17 03 15.5**	**+1.7**
NCU	**National Centr**	**1.40**	**294**	*e*P		**Pn**	**17 02 59.4**	**+1.4**
	baz=295								
NCU				*e*S		**Sn**	**17 03 17.4**	**+1.5**
	baz=295								
JIJ	**Ishigaki jima**	**1.42**	**91**	P		**Pn**	**17 02 59.0**	**+0.8**
JIJ				*e*S		**Sn**	**17 03 16.4**	**0.0**
EHY	**Hungye**	**1.47**	**233**	⇓P		**Pn**	**17 02 59.0**	**+0.1**
	baz=241								
NSTT	**Nanjuang**	**1.47**	**279**	P		**Pn**	**17 03 00.5**	**+1.6**
	baz=280								
NSTT				*e*S		**Sn**	**17 03 18.7**	**+1.2**
	baz=280								
HSN	**Hsinchu**	**1.53**	**285**	*e*P		**Pn**	**17 03 01.3**	**+1.6**
	baz=287								
TWF1	**Yuli**	**1.58**	**229**	⇓*i*P		**Pn**	**17 03 00.9**	**+0.4**
	baz=225								
SMLT	**Sun Moon Lake**	**1.63**	**252**	⇑P		**Pn**	**17 03 02.6**	**+1.5**
	baz=248								
SMLT				*e*S		**Sn**	**17 03 21.9**	**+0.3**
	baz=248								
TWQ1	**Liyutan**	**1.66**	**268**	*e*P		**Pn**	**17 03 03.1**	**+1.7**
	baz=280								
TWQ1				*e*S		**Sn**	**17 03 24.0**	**+1.9**
	baz=280								
TYC	**Yuchr**	**1.66**	**253**	⇑P		**Pn**	**17 03 02.9**	**+1.5**
	baz=249								
TYC				*e*S		**Sn**	**17 03 22.6**	**+0.5**
	baz=249								
NSY	**Sanyi**	**1.67**	**271**	*e*P		**Pn**	**17 03 03.5**	**+1.9**
	baz=271								
CHKT	**Chengkung**	**1.72**	**221**	⇓*i*P		**Pn**	**17 03 02.0**	**-0.2**
	baz=217								
CHKT				S		**Sn**	**17 03 21.2**	**-2.2**
	baz=217								
TCU	**Taichung**	**1.77**	**262**	⇓*e*P		**Pn**	**17 03 04.6**	**+1.8**
	baz=273								
WNT	**Mingjian**	**1.82**	**254**	*e*P		**Pn**	**17 03 05.8**	**+2.2**
	baz=254								
WNT				*e*S		**Sn**	**17 03 28.1**	**+2.3**
	baz=254								
ALS	**Alishan**	**1.86**	**242**	*e*P		**Pn**	**17 03 06.2**	**+1.8**
	baz=236								
ALS				*e*S		**Sn**	**17 03 27.8**	**+0.5**
	baz=236								
ELDTW	**Lidau**	**1.88**	**230**	⇓P		**Pn**	**17 03 04.8**	**+0.3**
	baz=224								
CHN5	**Tsauling**	**1.93**	**246**	⇑P		**Pn**	**17 03 07.0**	**+1.9**
	baz=239								
CHN5				*e*S		**Sn**	**17 03 30.7**	**+2.2**
	baz=239								
JTJ	**Tarama**	**1.94**	**83**	P		**Pn**	**17 03 06.3**	**+1.2**
JTJ				*e*S		**Sn**	**17 03 29.8**	**+1.1**
WGK	**Gukeng**	**1.99**	**249**	*e*P		**Pn**	**17 03 08.1**	**+2.3**
	baz=250								
WGK				*e*S		**Sn**	**17 03 32.2**	**+2.3**
	baz=250								
TWG	**Pinlang**	**2.10**	**222**	*e*P		**Pn**	**17 03 07.2**	**-0.2**
	baz=229								
TWG				*e*S		**Sn**	**17 03 31.1**	**-1.6**
	baz=229								
TTN	**Taitung**	**2.11**	**219**	*e*P		**Pn**	**17 03 04.9**	**-2.6**
	baz=214								
WTP	**Ta-pu**	**2.15**	**238**	⇑P		**Pn**	**17 03 09.9**	**+1.9**
	baz=238								
WTP				*e*S		**Sn**	**17 03 35.5**	**+1.7**
	baz=238								
WTCT	**Ta-ch'eng**	**2.18**	**256**	*e*P		**Pn**	**17 03 10.0**	**+1.7**
	baz=257								
WTCT				*e*S		**Sn**	**17 03 35.5**	**+1.0**
	baz=257								
CHY	**Chiayi**	**2.18**	**246**	*e*P		**Pn**	**17 03 10.5**	**+2.2**
	baz=236								
CHY				*e*S		**Sn**	**17 03 37.0**	**+2.5**
	baz=236								
TWK	**Hsinying**	**2.23**	**240**	*e*P		**Pn**	**17 03 11.1**	**+1.9**
	baz=240								
TWK				*e*S		**Sn**	**17 03 38.5**	**+2.6**
	baz=240								
CHN1	**Nanshi**	**2.25**	**238**	⇑P		**Pn**	**17 03 11.2**	**+2.0**
	baz=238								
CHN1				*e*S		**Sn**	**17 03 38.2**	**+2.1**
	baz=238								
WSF	**Szhu**	**2.30**	**251**	*e*P		**Pn**	**17 03 11.5**	**+1.6**
	baz=263								
WSF				*e*S		**Sn**	**17 03 39.1**	**+1.8**
	baz=263								
ECL	**Taimali**	**2.34**	**220**	*e*P		**Pn**	**17 03 10.4**	**-0.2**
	baz=221								
ECL				*e*S		**Sn**	**17 03 35.4**	**-3.0**
	baz=221								
CHN8	**Yiju**	**2.42**	**245**	*e*P		**Pn**	**17 03 13.0**	**+1.5**
	baz=235								
CHN8				*e*S		**Sn**	**17 03 42.0**	**+1.8**
	baz=235								
CHN3	**Shinhua**	**2.43**	**237**	*e*P		**Pn**	**17 03 13.9**	**+2.2**
	baz=248								
JMJ	**Miyako jima 2**	**2.49**	**80**	*e*P		**Pn**	**17 03 14.2**	**+1.6**
	baz=79								
JMJ				*e*S		**Sn**	**17 03 42.6**	**+0.5**
	baz=79								
JMJ	**Miyako jima 2**	**2.49**	**80**	P		**Pn**	**17 03 14.5**	**+1.9**
JMJ				*e*S		**Sn**	**17 03 43.0**	**+0.9**
SCLT	**Jiali**	**2.51**	**241**	*e*P		**Pn**	**17 03 14.7**	**+1.8**
	baz=241								
SCLT				*e*S		**Sn**	**17 03 45.1**	**+2.6**
	baz=241								
TWM1	**Shoushan**	**2.54**	**232**	*e*P		Pn	17 03 16.5	+3.3
	baz=232								
SGLT	**Jiouru**	**2.55**	**229**	*e*P		**Pn**	**17 03 16.1**	**+2.8**
	baz=229								
SGLT				*e*S		**Sn**	**17 03 48.8**	**+5.3**
	baz=229								
TAI1	**Yung-k'ang**	**2.56**	**238**	*e*P		**Pn**	**17 03 15.6**	**+2.2**
	baz=248								
TAI1				*e*S		**Sn**	**17 03 46.0**	**+2.4**
	baz=248								
TAW	**Tawu**	**2.56**	**218**	*e*P		**Pn**	**17 03 14.6**	**+1.0**
	baz=224								
TAW				*e*S		**Sn**	**17 03 42.2**	**-1.6**
	baz=224								
EAST	**Anshuo**	**2.57**	**219**	*e*P		**Pn**	**17 03 14.1**	**+0.4**
	baz=219								
JOGS	**Gusukube**	**2.59**	**82**	P		**Pn**	**17 03 15.7**	**+1.8**
JOGS				*e*S		**Sn**	**17 03 46.1**	**+1.7**
SCZT	**Fangliau**	**2.71**	**222**	*e*P		**Pn**	**17 03 17.9**	**+2.3**
	baz=221								
SCZT				*e*S		**Sn**	**17 03 49.3**	**+1.9**
	baz=221								
TWP	**Hsiaoliuchiu**	**2.90**	**225**	*e*P		Pn	17 03 21.9	+3.8
	baz=225								
PNG	**Penghu**	**2.90**	**254**	*e*P		**Pn**	**17 03 17.8**	**-0.3**
	baz=254								
PNG				*e*S		**Sn**	**17 03 51.0**	**-0.9**
	baz=254								
HEN	**Hengchun**	**2.93**	**216**	*e*P		**Pn**	**17 03 21.0**	**+2.5**
	baz=216								
TWK1	**Hengchun**	**2.95**	**214**	*e*P		**Pn**	**17 03 19.3**	**+0.5**
	baz=215								
TWK1				*e*S		**Sn**	**17 03 53.3**	**+0.1**
	baz=215								
QZH	**Quanzhou**	**3.68**	**279**	⇓*i*Pn		**Pn**	**17 03 30.3**	**+1.7**
QZH				Sn		**Sn**	**17 04 09.0**	**-1.8**
QZH				smax		smax		
	comp=N,530nm,0.5s							
QZH				smax		smax		
	comp=E,270nm,0.4s							
KNM	**Kinmen**	**3.79**	**271**	*e*P		**Pn**	**17 03 32.0**	**+1.8**
	baz=279								
JKE	**Kume jima 2**	**4.25**	**62**	P		**Pn**	**17 03 37.9**	**+1.4**
JKE				*e*S		**Sn**	**17 04 25.7**	**+0.8**
JJT2	**Tamagusuku 2**	**4.98**	**69**	P		**Pn**	**17 03 47.7**	**+1.3**
JOW	**Kunigami**	**5.67**	**64**	*e*P		**Pn**	**17 03 55.7**	**-0.2**
	baz=65								
KSRS	**Korea Array**	**13.79**	**18**	P		**P**	**17 05 50.1**	**-1.9**
	comp=E,0.8nm,0.3s,baz=197,slow=11,SNR=38								
USRK	**Ussuriysk Arra**	**21.19**	**19**	P		**P**	**17 07 13.2**	**-0.2**
	comp=E,3.5nm,0.7s,baz=193,slow=8.4,SNR=6.6								
CMAR	**Chiang Mai Arr**	**22.78**	**260**	P		**P**	**17 07 32.4**	**+1.8**
	comp=E,1.0nm,0.4s,baz=65,slow=7.6,SNR=8.4								
ASAJ	**Asahikawa**	**25.57**	**35**	P		**P**	**17 07 53.7**	**-2.3**
	comp=E,6.8nm,1.1s,baz=229,slow=9.3,SNR=5.5								
ASAJ				LR		LR	17 18 21.0		
	comp=E,23nm,18.0s,baz=20,slow=37								
SONM	**Songino Array**	**26.68**	**335**	P		**P**	**17 08 06.2**	**0.0**
	comp=E,1.2nm,0.5s,baz=147,slow=10,SNR=7.1								
MKAR	**Makanchi Array**	**39.08**	**315**	P		**P**	**17 09 54.1**	**+0.3**
	comp=E,0.5nm,0.5s,baz=100,slow=9.2,SNR=10								
MKAR				PcP		**PcP**	**17 12 01.3**	**-1.0**
	comp=E,0.5nm,0.6s,baz=116,slow=2.8,SNR=5.9								
ZALV	**Zalesovo Beam**	**40.77**	**326**	P		**P**	**17 10 06.2**	**-1.5**
	comp=E,0.7nm,0.4s,baz=115,slow=8.2,SNR=8.2								
ZALV				PcP		**PcP**	**17 12 05.8**	**-1.7**
	comp=E,0.7nm,0.5s,baz=104,slow=3.8,SNR=5.7								
KURBB	**Kurchatov Arra**	**42.77**	**319**	P		**P**	**17 10 23.4**	**-0.6**
	comp=E,0.2nm,0.3s,baz=114,slow=9.4,SNR=8.3								
KURBB				PcP		**PcP**	**17 12 13.2**	**-1.0**
	comp=E,0.5nm,0.5s,baz=116,slow=3.2,SNR=7.3								
WRA	**Warramunga Arr**	**45.54**	**164**	P		**P**	**17 10 47.2**	**+0.8**
	comp=E,2.6nm,0.5s,baz=347,slow=8.8,SNR=54								
ASAR	**Alice Springs**	**49.03**	**166**	P		**P**	**17 11 14.9**	**+1.4**
	comp=E,0.9nm,0.4s,baz=350,slow=7.5,SNR=60								
HNR	**Honiara**	**49.60**	**128**	LR		LR	17 29 41.9		
	comp=E,85nm,19.1s,baz=89,slow=33								
CTA	**Charters Tower**	**49.87**	**150**	P		**P**	**17 11 21.5**	**+1.5**
	comp=E,0.5nm,0.3s,baz=325,slow=9.8,SNR=4.0								
KDAK	**Kodiak Island**	**66.98**	**35**	P		**P**	**17 13 18.1**	**-0.5**
	comp=E,4.0nm,0.7s,baz=243,slow=2.3,SNR=4.3								
ILAR	**Eielson Array**	**68.43**	**27**	P		**P**	**17 13 27.9**	**+0.3**
	comp=E,0.3nm,0.6s,baz=304,slow=8.9,SNR=7.8								
JOF	**Joensuu**	**69.14**	**331**	*ep*		**P**	**17 13 31.6**	**-0.5**
	comp=E,0.7nm,0.4s								
ARCES	**ARCESS Array B**	**69.81**	**338**	P		**P**	**17 13 36.1**	**0.0**
	comp=E,1.6nm,0.7s,baz=33,slow=2.7,SNR=7.2								
KAF	**Kangasniemi**	**71.60**	**330**	*ep*		**P**	**17 13 46.4**	**-0.6**
	comp=E,0.3nm,0.4s								
FINES	**FINESS Array B**	**71.90**	**330**	P		**P**	**17 13 48.2**	**-0.7**
	comp=E,0.9nm,0.4s,baz=42,slow=5.7,SNR=16								
INK	**Inuvik**	**72.54**	**22**	P		**P**	**17 13 52.5**	**-0.1**
	comp=E,1.2nm,0.7s,baz=303,slow=5.7,SNR=5.7								
BRTR	**Keskin Array B**	**74.07**	**307**	P		**P**	**17 14 01.6**	**-0.7**
	comp=E,0.5nm,0.9s,baz=96,slow=4.3,SNR=3.2								
HFS	**Hagfors**	**78.00**	**331**	P		**P**	**17 14 23.1**	**-1.0**
	comp=E,2.0nm,0.9s,baz=99,slow=9.2,SNR=5.2								
NOA	**NORSAR Array B**	**78.63**	**332**	P		**P**	**17 14 26.4**	**-1.1**
	comp=E,0.5nm,0.7s,baz=59,slow=5.2,SNR=3.6								
YKA	**Yellowknife Ar**	**82.27**	**23**	P		**P**	**17 14 46.7**	**-0.2**
	comp=E,1.1nm,0.6s,baz=310,slow=5.1,SNR=36								

CSEM ***25*** *17:03:52.7, 42.27N × 13.45E, h10 km, MD1.7/5, After ROM*
ROM 25 17:03:52.7±0.2, 42.27N×13.45E, h10 km±1 km, Md1.7/5, Ml1.0/3, Error ellipse: s-maj=2.2km s-min=1.7km az=170.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AQU	**L'Aquila**	**0.09**	**339**	Pg		Pg	17 03 55.7	+0.4
AQU				Sg		Sg	17 03 57.7	+0.5
	61nm,0.3s							
AQU	**L'Aquila**	**0.09**	**339**	Pg		Pg	17 03 55.7	+0.4
AQU				Sg		Sg	17 03 57.7	+0.5
	61nm,0.3s							
FIAM	**Fiamignano**	**0.24**	**269**	Pg		Pg	17 03 58.4	+0.5
FIAM				Sg		Sg	17 04 02.7	+1.3
	13nm,0.4s							
FIAM	**Fiamignano**	**0.24**	**269**	Pg		Pg	17 03 58.4	+0.5
FIAM				Sg		Sg	17 04 02.7	+1.3
	13nm,0.4s							
VCEL	**Villa Celiera**	**0.32**	**67**	Pg		Pb	17 04 00.0	-0.6
VCEL				Sg		Sb	17 04 05.3	-0.7
	25nm,0.9s							
VCEL	**Villa Celiera**	**0.32**	**67**	Pg		Pb	17 04 00.0	-0.6
VCEL				Sg		Sb	17 04 05.3	-0.7
	25nm,0.9s							
TERO	**Teramo**	**0.37**	**18**	Pg		Pg	17 04 00.4	+0.2
TERO				Sg		Sg	17 04 05.8	+0.6
TERO	**Teramo**	**0.37**	**18**	Pg		Pg	17 04 00.4	+0.2
TERO				Sg		Sg	17 04 05.8	+0.6
INTR	**Introdacqua**	**0.43**	**127**	Pg		Pg	17 04 01.3	0.0
INTR				Sg		Sg	17 04 07.8	+0.7
	13nm,0.3s							
INTR	**Introdacqua**	**0.43**	**127**	Pg		Pg	17 04 01.3	0.0
INTR				Sg		Sg	17 04 07.8	+0.7
	13nm,0.3s							

IDC 25 17:07:01.1±1.5, 26.31N×98.28E, h0 km, mb3.5/3, mb1 3.7/4, mb1mx3.3/27, mbtmp3.4/4, Error ellipse: s-maj=96.0km s-min=25.8km az=63.0, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.84**	**175**	Pn		Pn	17 08 58.2	+1.8
	baz=328,slow=12,SNR=6.5							
MKAR	**Makanchi Array**	**24.05**	**332**	P		P	17 12 18.1	+0.2
	0.4nm,0.6s,baz=145,slow=9.6,SNR=5.8							
WRA	**Warramunga Arr**	**57.78**	**139**	P		P	17 16 54.9	+0.5
	0.7nm,0.5s,baz=324,slow=7.4,SNR=14							
ASAR	**Alice Springs**	**60.47**	**142**	P		P	17 17 11.9	-1.0
	0.3nm,0.5s,baz=321,slow=6.7,SNR=17							

IDC 25 17:12:52.0±1.6, 3.97N×126.91E, h0 km, mb3.5/5, mb1 3.7/5, mb1mx3.5/25, mbtmp3.5/5, 1D, Error ellipse: s-maj=103.2km s-min=19.3km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**4.18**	**321**	⇓*i*P		Pb	17 14 03.9	-2.5
FITZ	**Fitzroy Crossi**	**21.97**	**183**	P		P	17 17 47.3	-0.3
	1.1nm,0.6s,baz=19,slow=10,SNR=5.4							
WRA	**Warramunga Arr**	**24.86**	**163**	P		P	17 18 16.6	+0.2
	3.1nm,0.7s,baz=343,slow=10,SNR=26							
ASAR	**Alice Springs**	**28.30**	**166**	P		P	17 18 47.5	-0.1
	0.1nm,0.3s,baz=343,slow=11,SNR=5.6							
MKAR	**Makanchi Array**	**57.46**	**325**	P		P	17 22 42.8	0.0
	0.2nm,0.5s,baz=117,slow=7.8,SNR=3.9							
KURBB	**Kurchatov Arra**	**61.63**	**327**	P		P	17 23 11.4	-0.1
	0.3nm,0.6s,baz=128,slow=6.3,SNR=7.3							

CSEM ***25*** *17:18:31.2, 42.27N × 13.50E, h9 km, MD2.1/11, After ROM*
ROM 25 17:18:31.2±0.1, 42.27N×13.50E, h9 km±1 km, Md2.1/11, Ml1.7/11, 4C, Error ellipse: s-maj=1.3km s-min=0.9km az=71.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AQU	**L'Aquila**	**0.11**	**319**	Pg		Pg	17 18 34.6	+0.6
AQU				Sg		Sg	17 18 36.6	+0.6
	280nm,0.4s							
AQU	**L'Aquila**	**0.11**	**319**	Pg		Pg	17 18 34.6	+0.6
AQU				Sg		Sg	17 18 36.6	+0.6
	280nm,0.4s							
PTQR	**Pietraquaria**	**0.26**	**197**	⇑*i*Pg		Pg	17 18 37.1	+0.6
PTQR				Sg		Sb	17 18 41.8	-1.0
	21nm,0.2s							
PTQR	**Pietraquaria**	**0.26**	**197**	⇑*i*Pg		Pg	17 18 37.1	+0.6
PTQR				Sg		Sb	17 18 41.8	-1.0
	21nm,0.2s							
CAMP	**Campotosto**	**0.28**	**346**	Pg		Pg	17 18 37.5	+0.5
CAMP				Sg		Sg	17 18 41.8	+1.0
	11nm,0.4s							
CAMP	**Campotosto**	**0.28**	**346**	Pg		Pg	17 18 37.5	+0.5
CAMP				Sg		Sg	17 18 41.8	+1.0
	11nm,0.4s							
VCEL	**Villa Celiera**	**0.28**	**63**	Pg		Pb	17 18 38.3	-0.3
VCEL				Sg		Sb	17 18 42.8	-0.8
	143nm,0.4s							
VCEL	**Villa Celiera**	**0.28**	**63**	Pg		Pb	17 18 38.3	-0.3
VCEL				Sg		Sb	17 18 42.8	-0.8
	143nm,0.4s							
FIAM	**Fiamignano**	**0.28**	**270**	⇑*i*Pg		Pg	17 18 37.6	+0.5
FIAM				Sg		Sb	17 18 43.0	-0.6
	82nm,0.7s							
FIAM	**Fiamignano**	**0.28**	**270**	⇑*i*Pg		Pg	17 18 37.6	+0.5
FIAM				Sg		Sb	17 18 43.0	-0.6
	82nm,0.7s							
TERO	**Teramo**	**0.36**	**12**	Pg		Pg	17 18 38.9	+0.4
TERO				Sg		Sb	17 18 44.6	-1.2
	83nm,0.3s							
TERO	**Teramo**	**0.36**	**12**	Pg		Pg	17 18 38.9	+0.4
TERO				Sg		Sb	17 18 44.6	-1.2
	83nm,0.3s							
INTR	**Introdacqua**	**0.40**	**130**	Pg		Pb	17 18 39.8	-0.7
INTR				Sg		Sb	17 18 46.0	-0.7
	62nm,0.5s							
INTR	**Introdacqua**	**0.40**	**130**	Pg		Pb	17 18 39.8	-0.7
INTR				Sg		Sb	17 18 46.0	-0.7
	62nm,0.5s							
VVLD	**Villa Vallelon**	**0.41**	**167**	Pg		Pg	17 18 39.7	+0.4
VVLD				Sg		Sb	17 18 46.0	-1.1
	63nm,0.9s							
VVLD	**Villa Vallelon**	**0.41**	**167**	Pg		Pg	17 18 39.7	+0.4
VVLD				Sg		Sb	17 18 46.0	-1.1
	63nm,0.9s							
LNSS	**Leonessa**	**0.48**	**315**	Pg		Pb	17 18 41.5	-0.5
LNSS				Sg		Sb	17 18 48.9	-0.3
	31nm,0.3s							
LNSS	**Leonessa**	**0.48**	**315**	Pg		Pb	17 18 41.5	-0.5
LNSS				Sg		Sb	17 18 48.9	-0.3
	31nm,0.3s							
CERT	**Cerreto**	**0.50**	**231**	Pg		Pg	17 18 41.3	+0.3
	46nm,0.4s							
CERT	**Cerreto**	**0.50**	**231**	Pg		Pg	17 18 41.3	+0.3
	46nm,0.4s							
LPEL	**Lama dei Pelig**	**0.55**	**113**	Pg		Pg	17 18 42.3	+0.3
LPEL				Sg		Sb	17 18 51.1	-0.2
	36nm,0.1s							
LPEL	**Lama dei Pelig**	**0.55**	**113**	Pg		Pg	17 18 42.3	+0.3
LPEL				Sg		Sb	17 18 51.1	-0.2
	36nm,0.1s							
NRCA	**Norcia**	**0.63**	**333**	Pg		Pg	17 18 43.8	+0.2
	114nm,0.2s							
NRCA	**Norcia**	**0.63**	**333**	Pg		Pg	17 18 43.8	+0.2
	114nm,0.2s							

SFS ***25*** *17:18:19.0, 45.87N × 29.47E, h0 km*
PRU ***25*** *17:18:32.6, 45.54N × 28.13E, h0 km, MS.3*
BJI ***25*** *17:18:46.0, 45.70N × 26.40E, h96 km, mB5.3/35, mb5.6/61*
SZGRF ***25*** *17:18:46.8, 45.95N × 26.94E, h33 km, Romania*
ISCJB ***25*** *17:18:47.5±0.1, 45.648N±0.009 × 26.54E±0.01, h101 km±1 km, mb5.3/262, Error ellipse: s-maj=1.7km s-min=1.2km az=26.0*
MOS ***25*** *17:18:47.4±1.1, 45.72N × 26.58E, h100 km, mb5.5/69, Error ellipse: s-maj=3.6km s-min=2.6km az=37.0*
MOS Felt (V) at Kishinev.
BUC ***25*** *17:18:48.0±0.6, 45.68N × 26.62E, h110 km±7km, MD5.7/2, Error ellipse: s-maj=5.3km s-min=4.8km az=334.0*
IDC ***25*** *17:18:48.7±0.3, 45.73N × 26.45E, h100 km±2km, mb5.1/33, mb1 5.1/40, mb1mx5.1/40, mbtmp5.0/40, MS4.0/26, Ms1 4.0/26, ms1mx3.8/46, Error ellipse: s-maj=8.7km s-min=6.9km az=157.0*
TEH ***25*** *17:18:48.0, 45.69N × 26.55E, h96 km, ML5.3*
PDG ***25*** *17:18:48.6±0.5, 45.61N × 26.52E, h95 km±1 km, MD5.3/3, ML5.2/8, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
CSEM ***25*** *17:18:48.6±0.0, 45.69N × 26.56E, h103 km, mb5.3/99, Ms4.2, Mw5.2, Error ellipse: s-maj=1.6km s-min=1.4km az=40.0*
NEIC ***25*** *17:18:48.6, 45.65N × 26.61E, h101 km, mb5.3/208, MW5.2, Moment Tensor Solution. s24 Moment tensor: Scale 10^{16}Nm; M_{rr}7.65; $M_{\theta\theta}$-6.52; $M_{\phi\phi}$-1.13; $M_{r\theta}$2.02; $M_{\theta\phi}$-0.95; $M_{\phi r}$-1.67; Best double couple: $M_0$7.70000×10^{16} NP1: ϕ_s249.00000°, δ39.00000°, λ71.00000°. NP2:ϕ_s93.00000°, δ53.00000°, λ105.00000°. Principal axes: T 8.2700, Plg76.0000°, Azm52.0000°; N -1.3800, Plg11.0000°, Azm264.0000°; P -6.8900, Plg7.0000°, Azm172.0000°; After BUC.*
NEIC Felt [III] at Bucharest, Tulcea and Voluntari; [II] at Craiova, Slatina and Vaslui. Also felt at Adjud, Alexandria, Bucov, Caracal, Chiajna, Corbeanca, Gheorgheni, Giurgiu, Miercurea-Ciuc and Suceava. Felt [IV] at Shumen, Svishtov and Tutrakan; [III] at Belene, Isperikh, Levski, Lom, Pleven, Silistra, Varna, Veliko Turnovo and Vidin; [II] at Burgas, Sofia and Ruse, Bulgaria. Also felt at Dve Mogili, Gabrovo, Kozloduy, Razgrad, Sliven and Stara Zagora. Felt at Basarabeasca and Chisinau, Moldova; Bor, Serbia; Ismayil, Ukraine.
PDA ***25*** *17:18:48.5, 45.68N × 26.53E, h101 km, mb5.3*
DJA ***25*** *17:18:49.1±2.6, 46.1N ± 11.2 × 2.6E ± 1.5, h97 km ± 18 km, M5.2/25, mB5.6/15, mb5.2/25, Mw(mB)5.2/15*
GCMT ***25*** *17:18:50.8

PETR 0.49 88 P Pn 17 19 05.0 +0.2
PETR S Sn 17 19 16.5 -0.2
PETR 0.49 88⇑iP Pn 17 19 05.0 +0.2
PETR 0.49 88⇑iP Pn 17 19 05.0 +0.2
PETR iS Sn 17 19 16.5 -0.2
PETR 0.49 88⇑iP Pn 17 19 05.0 +0.2
PETR iS Sn 17 19 16.5 -0.2
ISR Istrita 0.58 180 P Pn 17 19 05.9 +0.2
ISR S Sn 17 19 18.4 +0.2
ISR Istrita 0.58 180 P Pn 17 19 05.8 +0.2
ISR S Sn 17 19 18.4 +0.2
ISR Istrita 0.58 180⇑iP Pn 17 19 05.8 +0.2
ISR Istrita 0.58 180⇑iP Pn 17 19 05.8 +0.2
ISR iS Sn 17 19 18.4 +0.2
ISR Istrita 0.58 180⇑iP Pn 17 19 05.8 +0.2
ISR iS Sn 17 19 18.4 +0.2
SECR 0.75 206 P Pn 17 19 07.7 +0.7
SECR S Sn 17 19 21.6 +1.1
SECR 0.75 206⇑iP Pn 17 19 07.7 +0.7
SECR 0.75 206⇑iP Pn 17 19 07.7 +0.7
SECR iS Sn 17 19 21.6 +1.1
SECR 0.75 206⇑iP Pn 17 19 07.7 +0.7
SECR iS Sn 17 19 21.6 +1.1
TESR 0.81 5 P Pn 17 19 07.4 -0.2
TESR S Sn 17 19 20.7 -0.9
TESR 0.81 5⇓iP Pn 17 19 07.4 -0.2
TESR 0.81 5⇓iP Pn 17 19 07.4 -0.2
TESR 0.81 5⇓iP Pn 17 19 07.4 -0.2
TESR S Sn 17 19 20.7 -0.9
DOPR Dopca 0.84 289⇑iP Pn 17 19 08.6 +0.7
DOPR Dopca 0.84 289⇑iP Pn 17 19 08.6 +0.7
DOPR iS Sn 17 19 22.6 +0.4
DOPR Dopca 0.84 289⇑iP Pn 17 19 08.6 +0.7
DOPR iS Sn 17 19 22.6 +0.4
PGOR Pogoanele 0.86 158⇑iP Pn 17 19 07.9 -0.1
PGOR Pogoanele 0.86 158⇑iP Pn 17 19 07.9 -0.1
PGOR iS Sn 17 19 22.9 +0.6
PGOR Pogoanele 0.86 158⇑iP Pn 17 19 07.9 -0.1
PGOR iS Sn 17 19 22.9 +0.6
PLAR PLOIESTI 0.87 205⇑iP Pn 17 19 09.0 +0.9
PLAR PLOIESTI 0.87 205⇑iP Pn 17 19 09.0 +0.9
PLAR iS Sn 17 19 24.2 +1.7
PLAR PLOIESTI 0.87 205⇑iP Pn 17 19 09.0 +0.9
PLAR iS Sn 17 19 24.2 +1.7
SULR 1.04 191 P Pn 17 19 07.1 -2.8
SULR S Sn 17 19 23.1 -2.7
SULR 1.04 191 P Pn 17 19 07.1 -2.8
SULR S Sn 17 19 23.1 -2.7
VOIR 1.08 256 eP Pn 17 19 10.8 +0.4
VOIR 1.08 256 P Pn 17 19 10.6 +0.2
VOIR S Sn 17 19 26.1 -0.5
VOIR 1.08 256⇑iP Pn 17 19 10.6 +0.2
VOIR 1.08 256⇑iP Pn 17 19 10.6 +0.2
VOIR 1.08 256⇑iP Pn 17 19 10.6 +0.2
VOIR S Sn 17 19 26.1 -0.5
CFR Carcaliu 1.24 114 P Pn 17 19 11.1 -1.0
CFR S Sn 17 19 27.0 -2.7
CFR Carcaliu 1.24 114 P Pn 17 19 11.1 -1.0
CFR S Sn 17 19 27.0 -2.7
CFR Carcaliu 1.24 114⇑iP Pn 17 19 11.1 -1.0
CFR Carcaliu 1.24 114⇑iP Pn 17 19 11.1 -1.0
CFR iS Sn 17 19 27.0 -2.7
CFR Carcaliu 1.24 114⇑iP Pn 17 19 11.1 -1.0
CFR iS Sn 17 19 27.0 -2.7
BUC Bucharest 1.33 194 P Pn 17 19 13.2 0.0
BUC Bucharest 1.33 194⇓iP Pn 17 19 13.2 0.0
BUC Bucharest 1.33 194⇓iP Pn 17 19 13.2 0.0
BUC iS Sn 17 19 31.5 0.0
CIOR Ciorogarla 1.34 201⇑iP Pn 17 19 13.4 +0.1
CIOR Ciorogarla 1.34 201⇑iP Pn 17 19 13.4 +0.1
CIOR iS Sn 17 19 31.7 0.0
CIOR Ciorogarla 1.34 201⇑iP Pn 17 19 13.4 +0.1
CIOR iS Sn 17 19 31.7 0.0
BUC1 Bucharest 1.40 195 P Pn 17 19 14.0 -0.1
BUC1 Bucharest 1.40 195 P Pn 17 19 14.0 -0.1
BUC1 iS Sn 17 19 31.5 -1.6
LEOM Leova 1.42 57 P Pn 17 19 14.1 -0.2
LEOM Leova 1.42 57⇓iP Pn 17 19 14.0 -0.2
LEOM Leova 1.42 57⇓iP Pn 17 19 14.0 -0.2
LEOM iS Sn 17 19 32.2 -1.2
LEOM Leova 1.42 57⇓iP Pn 17 19 14.0 -0.2
LEOM iS Sn 17 19 32.2 -1.2
MDB Medias 1.57 287 P Pn 17 19 17.2 +1.2
MDB Medias 1.57 287⇑iP Pn 17 19 17.2 +1.2
MDB Medias 1.57 287⇑iP Pn 17 19 17.3 +1.2
MDB Medias 1.57 287⇑iP Pn 17 19 17.3 +1.2
MDB Medias 1.57 287 P Pn 17 19 17.2 +1.2
HUMR Humele 1.61 224⇑iP Pn 17 19 16.7 +0.1
HUMR Humele 1.61 224⇑iP Pn 17 19 16.7 +0.1
HUMR iS Sn 17 19 37.3 -0.4
HUMR Humele 1.61 224⇑iP Pn 17 19 16.7 +0.1
HUMR iS Sn 17 19 37.3 -0.4
IAS Iasi 1.65 25 P Pn 17 19 17.0 -0.1
IAS Iasi 1.65 25 P Pn 17 19 17.0 -0.1
IAS Iasi 1.65 25⇓iP Pn 17 19 17.0 -0.1
IAS Iasi 1.65 25⇓iP Pn 17 19 17.0 -0.1
IAS Iasi 1.65 25⇓iP Pn 17 19 17.0 -0.1
TLCR 1.69 107 eP Pn 17 19 16.7 -0.8
TLCR 1.69 107 P Pn 17 19 16.7 -0.8
TLCR S Sn 17 19 37.3 -2.0
TLCR 1.69 107⇓iP Pn 17 19 16.7 -0.8
TLCR 1.69 107⇓iP Pn 17 19 16.7 -0.8
TLCR iS Sn 17 19 37.3 -2.0
TLCR 1.69 107⇓iP Pn 17 19 16.7 -0.8
TLCR iS Sn 17 19 37.3 -2.0
CVD Cernavoda 1.75 142 P Pn 17 19 17.4 -0.9
CVD Cernavoda 1.75 142⇓iP Pn 17 19 17.4 -0.9
CVD Cernavoda 1.75 142⇓iP Pn 17 19 17.4 -0.9
CVD Cernavoda 1.75 142⇓iP Pn 17 19 17.4 -0.9
TIRR Tirgusor 1.82 132 eP Pn 17 19 17.8 -1.4
TIRR e 17 19 39.5
TIRR Tirgusor 1.82 132 ePn Pn 17 19 17.8 -1.4
TIRR eSn Sn 17 19 39.5 -2.8
TIRR Tirgusor 1.82 132⇓iP Pn 17 19 18.5 -0.7
TIRR Tirgusor 1.82 132⇓iP Pn 17 19 18.5 -0.7
TIRR iS Sn 17 19 40.1 -2.2
TIRR Tirgusor 1.82 132 ePn Pn 17 19 17.8 -1.4
TIRR Tirgusor 1.82 132⇓iP Pn 17 19 18.5 -0.7
TIRR eSn Sn 17 19 39.5 -2.8
TIRR iS Sn 17 19 40.1 -2.2
LOT Lotru 1.96 263 P Pn 17 19 21.4 +0.3
LOT S Sn 17 19 46.8 +1.1
LOT Lotru 1.96 263⇑iP Pn 17 19 21.4 +0.3
LOT Lotru 1.96 263⇑iP Pn 17 19 21.4 +0.3
LOT Lotru 1.96 263⇑iP Pn 17 19 21.4 +0.3
LOT S Sn 17 19 46.8 +1.1
KIS Kishinev 2.04 50⇓iP Pn 17 19 20.5 -1.5
KIS iS Sn 17 19 43.0 -4.4
KIS pmax pmax
comp=N,16µm,0.5s
KIS pmax pmax
comp=E,19µm,0.5s
KIS pmax pmax
comp=Z,26µm,0.5s
KIS smax smax
comp=N,102µm,0.5s
KIS smax smax
comp=E,129µm,0.5s
KIS Kishinev 2.04 50⇓iP Pn 17 19 20.5 -1.5
comp=E,26µm,0.5s
KIS iS Sn 17 19 43.0 -4.4
comp=E,102µm,0.5s
KIS Kishinev 2.04 50⇓iP Pn 17 19 21.8 -0.2
KIS Kishinev 2.04 50⇓iP Pn 17 19 21.8 -0.2
KIS Kishinev 2.04 50⇓iP Pn 17 19 21.8 -0.2
KIS iS Sn 17 19 43.0 -4.4
comp=E,102µm,0.5s
BURAR Bucovina Array 2.12 335 P Pn 17 19 24.8 +1.7
BURAR Bucovina Array 2.12 335⇓iP Pn 17 19 24.5 +1.4
BURAR Bucovina Array 2.12 335⇓iP Pn 17 19 24.5 +1.4
BURAR Bucovina Array 2.12 335⇓iP Pn 17 19 24.5 +1.4
BUR08 Bucovina Ar. S 2.15 335⇓iPn Pn 17 19 24.7 +1.2
BUR08 Bucovina Ar. S 2.15 335⇓iPn Pn 17 19 24.7 +1.2
EFOR EFORIE 2.20 137⇓iP Pn 17 19 23.6 -0.5
EFOR EFORIE 2.20 137⇓iP Pn 17 19 23.6 -0.5
EFOR iS Sn 17 19 49.3 -1.8
EFOR EFORIE 2.20 137⇓iP Pn 17 19 23.6 -0.5
EFOR iS Sn 17 19 49.3 -1.8
ZIMR 2.21 203 P Pn 17 19 24.0 -0.2
ZIMR 2.21 203 P Pn 17 19 24.0 -0.2
ZIMR 2.21 203⇓iP Pn 17 19 24.0 -0.2
ZIMR 2.21 203⇓iP Pn 17 19 24.0 -0.2
CRAR CRAIOVA 2.38 236 P Pn 17 19 26.4 0.0
CRAR CRAIOVA 2.38 236⇑iP Pn 17 19 26.3 -0.1
CRAR CRAIOVA 2.38 236⇑iP Pn 17 19 26.3 -0.1
CRAR iS Sn 17 19 54.7 -0.5
CRAR CRAIOVA 2.38 236⇑iP Pn 17 19 26.3 -0.1
CRAR iS Sn 17 19 54.7 -0.5
DEV Deva 2.55 275 P Pn 17 19 29.8 +1.2
DEV Deva 2.55 275⇓iP Pn 17 19 29.9 +1.3
DEV Deva 2.55 275⇓iP Pn 17 19 29.9 +1.3
DEV Deva 2.55 275 P Pn 17 19 29.8 +1.2
GZR Gura Zlata 2.66 265 P Pn 17 19 31.0 +0.8
GZR Gura Zlata 2.66 265⇓iP Pn 17 19 31.0 +0.8
GZR Gura Zlata 2.66 265⇓iP Pn 17 19 31.0 +0.8
GZR Gura Zlata 2.66 265 ePn Pn 17 19 31.0 +0.8
GZR Gura Zlata 2.66 265⇓iP Pn 17 19 31.0 +0.8
DRGR 2.87 294 P Pn 17 19 33.2 +0.2
DRGR 2.87 294⇓iP Pn 17 19 33.1 +0.1
DRGR 2.87 294⇓iP Pn 17 19 33.1 +0.1
DRGR 2.87 294⇓iP Pn 17 19 33.1 +0.1
BMR Baia Mare 2.87 314 P Pn 17 19 33.9 +1.0
BMR Baia Mare 2.87 314⇓iP Pn 17 19 34.0 +1.0
BMR Baia Mare 2.87 314⇓iP Pn 17 19 34.0 +1.0
BMR Baia Mare 2.87 314 P Pn 17 19 33.9 +1.0
DJES Djerdap 3.02 251 ePn Pn 17 19 33.7 -1.3
DJES Djerdap 3.02 251 ePn Pn 17 19 33.7 -1.3
JMB Yambol 3.24 179 P Pn 17 19 37.6 -0.2
JMB Yambol 3.24 179 P Pn 17 19 37.6 -0.2
BZS Buzias 3.45 270 P Pn 17 19 41.1 +0.4
BZS Buzias 3.45 270⇓iP Pn 17 19 41.0 +0.4
BZS Buzias 3.45 270⇓iP Pn 17 19 41.0 +0.4
BZS Buzias 3.45 270 ePn Pn 17 19 41.1 +0.4
BZS Buzias 3.45 270⇓iP Pn 17 19 41.0 +0.4
TRPA Tarpa 3.66 313⇓iP Pn 17 19 43.2 -0.2
TRPA Tarpa 3.66 313⇓iP Pn 17 19 43.2 -0.2
TRPA Tarpa 3.66 313⇓ePn Pn 17 19 43.2 -0.2
TRPA Tarpa 3.66 313⇓iP Pn 17 19 43.2 -0.2
ZAPS Zavoj 3.70 230 ePn Pn 17 19 44.0 -0.1
ZAPS eSn Sn 17 20 23.5 -3.3
ZAPS Zavoj 3.70 230 ePn Pn 17 19 44.0 -0.1
ZAPS eSn Sn 17 20 23.5 -3.3
TIM Timisoara 3.72 272 P Pn 17 19 45.8 +1.5
TIM Timisoara 3.72 272⇓iP Pn 17 19 45.4 +1.1
TIM Timisoara 3.72 272⇓iP Pn 17 19 45.4 +1.1
TIM Timisoara 3.72 272⇓iP Pn 17 19 45.4 +1.1
BOLS Boljevac 3.76 242 ePn Pn 17 19 42.9 -2.0
BOLS eSn Sn 17 20 24.3 -3.9
BOLS Boljevac 3.76 242 ePn Pn 17 19 42.9 -2.0
BOLS eSn Sn 17 20 24.3 -3.9
PLD Plovdiv 3.83 201 P Pn 17 19 44.6 -1.2
PLD Plovdiv 3.83 201 P Pn 17 19 44.6 -1.2
EDRB Edirne 3.86 178 PN Pn 17 19 45.7 -0.4
VTS Vitosha 3.93 219 P Pn 17 19 46.7 -0.5
VTS Vitosha 3.93 219⇓iP Pn 17 19 46.7 -0.5
VTS Vitosha 3.93 219⇓iP Pn 17 19 46.7 -0.5
VTS Vitosha 3.93 219 P Pn 17 19 46.7 -0.5
SVIS Svilajnac 4.04 251 ePn Pn 17 19 47.7 -0.9
SVIS eSn Sn 17 20 31.7 -3.2
UZH Uzhgorod 4.12 317c iP Pn 17 19 49.0 -0.6
UZH eS Sn 17 20 35.0 -1.7
UZH Uzhgorod 4.12 317 iP Pn 17 19 49.0 -0.6
UZH eS Sn 17 20 35.0 -1.7
KOLS Kolonicke sedl 4.34 320 eP Pn 17 19 54.1 +1.5
KOLS Kolonicke sedl 4.34 320 eP Pn 17 19 54.1 +1.5
KOLS Kolonicke sedl 4.34 320 eP Pn 17 19 54.1 +1.5
BEO Beograd 4.38 260 ePn Pn 17 19 52.3 -0.8
BEO Beograd 4.38 260 ePn Pn 17 19 52.3 -0.8
CTYL Yal??k??y-??at 4.42 163 PN Pn 17 19 52.8 -0.8
LVV L'vov 4.45 339c iP Pn 17 19 55.0 +0.9
LVV iS Sn 17 20 46.0 +1.2
LVV L'vov 4.45 339 iP Pn 17 19 55.0 +0.9
BARS Barje 4.45 231 ePn Pn 17 19 54.0 -0.2
GRUS Gruza 4.52 248 ePn Pn 17 19 54.8 -0.3
GRUS Gruza 4.52 248 ePn Pn 17 19 54.8 -0.3
TRUS Trudelj 4.59 253 ePn Pn 17 19 54.9 -1.2
TRUS Trudelj 4.59 253 ePn Pn 17 19 54.9 -1.2
SELS Selova 4.61 239 ePn Pn 17 19 55.4 -0.9
SLVT Silivri 4.63 164 PN Pn 17 19 56.1 -0.6
CRLT Corlu 4.66 169 PN Pn 17 19 56.7 -0.3
CTKS Kestanelik-??a 4.69 162 PN Pn 17 19 56.1 -1.3
KWP Kalwaria Pacla 4.70 328⇓iP Pn 17 19 59.1 +1.6
KWP Kalwaria Pacla 4.70 328⇓iP Pn 17 19 59.1 +1.6
KWP Kalwaria Pacla 4.70 328 eP Pn 17 19 59.2 +1.7
KWP eS Sn 17 20 47.1 -3.8
KWP Kalwaria Pacla 4.70 328 iP Pn 17 19 59.1 +1.6
KWP eS Sn 17 20 47.2 -3.7
CRVS Cervenica-Dubn 4.71 315 eP Pn 17 19 57.2 -0.4
CRVS Cervenica-Dubn 4.71 315 eP Pn 17 19 57.2 -0.4
CRVS Cervenica-Dubn 4.71 315 eP Pn 17 19 57.2 -0.4
FGSL Fruska Gora 4.77 266 ePn Pn 17 19 57.8 -0.6
FRGS Fruska Gora 4.77 266 ePn Pn 17 19 57.8 -0.6
NVR Nevrokopi 4.77 205 P Pn 17 19 58.1 -0.4
NVR Nevrokopi 4.77 205 P Pn 17 19 58.1 -0.4
TKR Tekirdag 4.77 171 ePN Pn 17 19 57.7 -0.7
PKSN Nyarlorinc 4.77 287⇑ePn Pn 17 19 59.4 +0.9
PKSN Nyarlorinc 4.77 287⇑eP Pn 17 19 59.4 +0.9
BGKT Bogazkoy 4.80 159 ePN Pn 17 19 57.5 -1.4
ALN Alexandroupoli 4.82 184 P Pn 17 19 58.4 -0.7
ALN Alexandroupoli 4.82 184 P Pn 17 19 58.4 -0.7
DIVS Divibare 4.92 253 P Pn 17 20 00.1 -0.4
DIVS Divibare 4.92 253 ePn Pn 17 20 00.1 -0.4
DIVS eSn Sn 17 20 52.0 -4.3
DIVS Divibare 4.92 253 P Pn 17 20 00.1 -0.4
DIVS eSn Sn 17 20 52.0 -4.3
KAVA Kavala 4.93 198 P Pn 17 19 59.9 -0.7
KAVA Kavala 4.93 198 P Pn 17 19 59.9 -0.7
MFT Murefte 4.95 173 ePN Pn 17 19 59.8 -1.1
ENEZ Enez 4.97 183 ePN Pn 17 20 00.6 -0.6
ISK Istanbul-Kandi 4.99 157 ePN Pn 17 19 59.9 -1.5
IVAS Ivanjica 5.03 247 ePn Pn 17 20 01.4 -0.6
IVAS Ivanjica 5.03 247 ePn Pn 17 20 01.4 -0.6
SRS Serrai 5.06 206 P Pn 17 20 02.0 -0.4
SRS Serrai 5.06 206 P Pn 17 20 02.0 -0.4
PSZ Piszkesteto 5.07 298⇓eP Pn 17 20 01.7 -0.8
PSZ pmax pmax
comp=Z,722nm,0.8s
PSZ Piszkesteto 5.07 298⇓ePn Pn 17 20 01.7 -0.8
comp=Z,722nm,0.8s
PSZ Piszkesteto 5.07 298⇓iP Pn 17 20 01.8 -0.8
PSZ Piszkesteto 5.07 298⇓iP Pn 17 20 01.8 -0.8
PSZ Piszkesteto 5.07 298⇓ePn Pn 17 20 01.9 -0.6
PSZ Piszkesteto 5.07 298⇓iP Pn 17 20 01.8 -0.8
SILT Sile 5.08 152 ePN Pn 17 20 01.3 -1.3
TEKS Tekeris 5.09 259 ePn Pn 17 20 02.1 -0.7
TEKS Tekeris 5.09 259 ePn Pn 17 20 02.1 -0.7
PKS2 Kecel 5.16 281⇑eP Pn 17 20 04.9 +1.3
MRMT Marmara Adasi 5.16 171 ePN Pn 17 20 02.8 -1.0
SEV Sevastopol' 5.18 100⇓iP Pn 17 20 01.8 -2.1
SEV eS Sn 17 20 57.0 -5.4
SEV pmax pmax
comp=Z,421nm,0.4s
SEV smax smax
comp=N,2µm,0.4s
SEV smax smax
comp=E,33nm,0.4s
SEV Sevastopol' 5.18 100 iP Pn 17 20 01.8 -2.1
comp=E,421nm,0.4s
BUY Buyukada 5.20 158 iP Pn 17 20 03.3 -1.0
BUY iS Sn 17 20 59.0 -4.0
BUY Buyukada 5.20 158 iP Pn 17 20 03.3 -1.0
BUY iS Sn 17 20 59.0 -4.0
SKO Skopje 5.24 226 P Pn 17 20 05.0 +0.1
SKO Skopje 5.24 226⇓iPn Pn 17 20 05.3 +0.4
SKO Skopje 5.24 226⇓iP Pn 17 20 01.7 -3.2
SKO Skopje 5.24 226 P Pn 17 20 05.0 +0.1
VAY Valandovo 5.24 215 P Pn 17 20 04.3 -0.6
VAY Valandovo 5.24 215⇓iPn Pn 17 20 04.3 -0.6
VAY Valandovo 5.24 215⇓iP Pn 17 20 01.8 -3.1
VAY Valandovo 5.24 215 P Pn 17 20 04.3 -0.6
KNT Kendrikon 5.26 212 P Pn 17 20 05.0 -0.1
KNT Kendrikon 5.26 212 P Pn 17 20 05.0 -0.1
AK02 Malin Array Si 5.27 19⇓ePn Pn 17 20 03.6 -1.5
AK02 eSn Sn 17 20 59.5 -5.0
AK02 Malin Array Si 5.27 19⇓ePn Pn 17 20 03.6 -1.5
PKS7 Kunszentmiklos 5.28 287⇑ePn Pn 17 20 05.3 0.0
PKS7 Kunszentmiklos 5.28 287⇑eP Pn 17 20 05.3 0.0
SJES Sjenica 5.29 245 ePn Pn 17 20 04.5 -1.1
AK01 Malin Array Si 5.30 19 ePn Pn 17 20 04.0 -1.6
AK01 eSn Sn 17 21 00.1 -5.2
AK01 Malin Array Si 5.30 19 ePn Pn 17 20 04.0 -1.6
KIEV Kiev 5.30 19⇓iP Pn 17 20 04.1 -1.5
KIEV e 17 21 00.0
KIEV pmax pmax
comp=Z,903nm,0.6s
KIEV Kiev 5.30 19⇓iPn Pn 17 20 04.1 -1.5
comp=Z,903nm,0.6s
KIEV eSn Sn 17 20 60.0 -5.4
KIEV Kiev 5.30 19 iP Pn 17 20 04.1 -1.5
comp=Z,903nm,0.6s
GELI Tayfur-Gelibol 5.30 181 ePN Pn 17 20 04.7 -1.0
AKASG Malin Array Be 5.31 19 P Pn 17 20 04.4 -1.4
AKASG S Sn 17 21 00.2 -5.4
AKASG Malin Array Be 5.31 19 P Pn 17 20 04.3 -1.4
AKASG S Sn 17 21 00.2 -5.4
AKASG Malin Array Be 5.31 19 P Pn 17 20 04.3 -1.4
comp=Z,214nm,0.3s,baz=202,slow=13,SNR=259
AKASG S Sn 17 21 00.2 -5.4
comp=Z,864nm,0.3s,baz=202,slow=22,SNR=15
AKASG Malin Array Be 5.31 19 P Pn 17 20 04.4 -1.4
LPK Lapseki 5.33 178 ePN Pn 17 20 05.6 -0.5
KRBG Karabiga-Canak 5.34 174 ePN Pn 17 20 05.1 -1.0
HRT Hereke 5.39 154 ePN Pn 17 20 06.0 -0.9
BBLS Lazići 5.40 253 ePn Pn 17 20 06.8 -0.2
BBLS Lazići 5.40 253 ePn Pn 17 20 06.8 -0.2
SIM Simferopol' 5.40 95⇓iP Pn 17 20 05.2 -1.7
SIM iS Sn 17 21 03.2 -4.6
SIM pmax pmax
comp=Z,881nm,0.9s
SIM smax smax
comp=N,3µm,0.9s
SIM smax smax
comp=E,4µm,1.2s
SIM Simferopol' 5.40 95 iP Pn 17 20 05.2 -1.7
comp=E,881nm,0.9s
SOH Sokhos 5.40 207 P Pn 17 20 06.8 -0.3
SOH Sokhos 5.40 207 P Pn 17 20 06.8 -0.3
ARMT Armutlu 5.41 161 ePN Pn 17 20 05.8 -1.3
BNT Bandirma 5.44 169 ePN Pn 17 20 06.8 -0.8
EDC Edincik 5.44 169 ePN Pn 17 20 08.3 +0.8
BUD Budapest 5.47 292⇓esPn sPn 17 20 23.5 -9.2
YAL Yalta 5.53 100⇓iP Pn 17 20 06.8 -1.9
YAL eS Sn 17 21 05.6 -5.3
YAL pmax pmax
comp=Z,1µm,0.3s
YAL smax smax
comp=N,1µm,0.4s
YAL smax smax
comp=E,1µm,0.5s
YAL Yalta 5.53 100 iP Pn 17 20 06.8 -1.9
comp=E,1µm,0.3s
YLV Yalova 5.54 157 ePN Pn 17 20 07.7 -1.2
BEY Berane 5.54 242⇓iPn Pn 17 20 09.2 +0.2
BEY eSn Sn 17 21 10.1 -1.4
IVA Berane 5.54 242⇓iPn Pn 17 20 09.2 +0.2
IVA eSn Sn 17 21 10.1 -1.4
KCTX Karacabey (Bur 5.60 166 ePN Pn 17 20 08.4 -1.3
MDNY Mudanya-Bursa 5.60 161 ePN Pn 17 20 08.8 -1.0
GEMT Gemlik 5.61 159 ePN Pn 17 20 08.7 -1.2
NIE Niedzica 5.62 314 eP Pn 17 20 11.5 +1.6
NIE e 17 21 17.8
NIE Niedzica 5.62 314 ePn Pn 17 20 11.5 +1.6
NIE ePP 17 20 19.1
NIE eSn Sn 17 21 17.8 +4.7
NIE e 17 21 37.3
NIE Niedzica 5.62 314 eP Pn 17 20 11.5 +1.6
GRG Griva 5.62 214 P Pn 17 20 09.4 -0.6
GRG Griva 5.62 214 P Pn 17 20 09.4 -0.6
PLE Pljevlja 5.63 248⇓iPn Pn 17 20 10.4 +0.1
PLE eSn Sn 17 21 12.4 -1.3
PLE Pljevlja 5.63 248⇓iPn Pn 17 20 10.4 +0.1
PLE eSn Sn 17 21 12.4 -1.3
ALU Alushta 5.65 98 iP Pn 17 20 07.5 -2.9
ALU eS Sn 17 21 06.9 -7.0
ALU pmax pmax
comp=Z,544nm,0.3s
ALU smax smax
comp=N,2µm,0.3s
ALU smax smax
comp=E,382nm,0.3s
KDZE Karadeniz Ereo 5.66 139 ePN Pn 17 20 08.2 -2.3
PVY Plav 5.66 239⇓iPn Pn 17 20 11.0 +0.3
PVY eSn Sn 17 21 12.0 -2.4
OUR Ouranopolis 5.68 200 P Pn 17 20 09.2 -1.6
OUR Ouranopolis 5.68 200 P Pn 17 20 09.2 -1.6
HORT Hortiatis 5.69 207 P Pn 17 20 10.6 -0.4
HORT Hortiatis 5.69 207 P Pn 17 20 10.6 -0.4
THE Thessaloniki 5.70 209 P Pn 17 20 10.5 -0.6
THE Thessaloniki 5.70 209 P Pn 17 20 10.5 -0.6
GONE Gonen-Balikesi 5.72 171 ePN Pn 17 20 10.3 -1.0
SPNC Sapanca-Adapaz 5.72 150 ePN Pn 17 20 10.3 -1.1
BCI Bajram Curri 5.73 237 ePN Pn 17 20 11.3 -0.2
BCI Bajram Curri 5.73 237 ePn Pn 17 20 11.3 -0.2
PLG Polygyros 5.79 204 P Pn 17 20 11.6 -0.7
PLG Polygyros 5.79 204 P Pn 17 20 11.6 -0.7
PKS9 Tamasi 5.81 282⇑ePn Pn 17 20 13.5 +1.0
PKS9 Tamasi 5.81 282⇑eP Pn 17 20 13.5 +1.0
HENT Hendek 5.83 145 iP Pn 17 20 11.1 -1.7
HENT iS Sn 17 21 09.8 -8.5
HENT Hendek 5.83 145 iP Pn 17 20 11.1 -1.7
PKSG 5.87 290⇑ePn Pn 17 20 13.1 -0.2
PKSG 5.87 290⇑eP Pn 17 20 13.1 -0.2
BOZC Bozcaada 5.87 184 iP Pn 17 20 12.0 -1.4
BOZC iS Sn 17 21 09.7 -10
EZN Ezine 5.88 182 ePN Pn 17 20 12.5 -0.9
LIA Limnos Island 5.89 190 P Pn 17 20 12.2 -1.4
LIA Limnos Island 5.89 190 P Pn 17 20 12.2 -1.4
VYHS Vyhne 5.95 301 eP Pn 17 20 13.8 -0.6
VYHS Vyhne 5.95 301 eP Pn 17 20 13.8 -0.6
VYHS Vyhne 5.95 301 eP Pn 17 20 13.8 -0.6
PHP Peshkopia 5.97 230 ePN Pn 17 20 15.2 +0.3
PHP Peshkopia 5.97 230 P Pn 17 20 15.1 +0.3
PHP Peshkopia 5.97 230 P Pn 17 20 15.1 +0.3
UPM Unac-Piva 6.01 248⇓iPn Pn 17 20 15.7 +0.3
UPM eSn Sn 17 21 21.0 -1.9
UPM Unac-Piva 6.01 248⇓iPn Pn 17 20 15.7 +0.3
UPM eSn Sn 17 21 21.0 -1.9
GULT Gulveren 6.02 150 ePN Pn 17 20 14.9 -0.6
SUDU Sudak 6.03 95⇑iP Pn 17 20 12.9 -2.5
SUDU eS Sn 17 21 15.6 -7.4
SUDU pmax pmax
comp=Z,546nm,0.4s
SUDU smax smax
comp=N,3µm,0.6s
SUDU smax smax
comp=E,2µm,0.6s
BIA Bitola 6.03 221 P Pn 17 20 15.8 +0.2
BIA Bitola 6.03 221⇑iPn Pn 17 20 15.7 +0.2
BIA Bitola 6.03 221⇑iPn Pn 17 20 15.7 +0.2
PUK Puka 6.04 235 ePN Pn 17 20 16.1 +0.4
PUK Puka 6.04 235 ePn Pn 17 20 16.1 +0.4
PKST T''s 6.07 288⇑ePn Pn 17 20 16.2 +0.1
PKST T''s 6.07 288⇑eP Pn 17 20 16.2 +0.1
GPA Golpazari 6.08 152 ePN Pn 17 20 15.9 -0.3
NKY Niksic 6.14 245⇑iPn Pn 17 20 17.4 +0.3
NKY eSn Sn 17 21 24.2 -1.8
NKY Niksic 6.14 245⇑iPn Pn 17 20 17.4 +0.3
NKY eSn Sn 17 21 24.2 -1.8
BALB Balikesir 6.14 170 ePN Pn 17 20 15.9 -1.1
PAIG Paliouri 6.14 201 P Pn 17 20 15.5 -1.6
PAIG Paliouri 6.14 201 P Pn 17 20 15.5 -1.6
PDG Podgorica 6.18 241 ePn Pn 17 20 17.8 +0.2
PDG Podgorica 6.18 241 ePn Pn 17 20 17.8 +0.2
PDG eSn Sn 17 21 25.0 -1.8
TTG Podgorica 6.18 241⇓iPn Pn 17 20 17.8 +0.2
TTG eSn Sn 17 21 25.0 -1.8
FNA Florina 6.19 219 P Pn 17 20 18.0 +0.2
FNA Florina 6.19 219 P Pn 17 20 18.0 +0.2
MDUB Mudurnu 6.24 145 ePN Pn 17 20 17.8 -0.8
DURS Dursunbey 6.26 166 iP Pn 17 20 17.4 -1.4
DURS iS Sn 17 21 23.7 -5.3
DURS Dursunbey 6.26 166 iP Pn 17 20 17.4 -1.4
FEO Feodosiya 6.28 93⇑iP Pn 17 20 16.6 -2.2
FEO eS Sn 17 21 24.9 -4.2
FEO pmax pmax
comp=Z,117nm,0.2s
FEO smax smax
comp=N,852nm,0.5s
FEO smax smax
comp=E,7µm,0.4s
FEO Feodosiya 6.28 93 iP Pn 17 20 16.6 -2.2
comp=E,117nm,0.2s
DST Dursunbey 6.29 165 ePN Pn 17 20 18.2 -0.9

SAFT	Safranbolu	6.32	133	*e*PN		Pn	17 20 17.0	-2.5
LIT	Litokhoron	6.34	209	P		Pn	17 20 18.7	-1.1
LIT	Litokhoron	6.34	209	P		Pn	17 20 18.7	-1.1
BRY	Bratogost	6.38	247	⇑*i*	Pn	Pn	17 20 20.9	+0.4
BRY				*e*Sn		Sn	17 21 30.0	-2.0
BRY	Bratogost	6.38	247	⇑*i*	Pn	Pn	17 20 20.9	+0.4
BRY				*e*Sn		Sn	17 21 30.0	-2.0
AYVA	Ayvalik	6.39	179	*i*	P	Pn	17 20 19.3	-1.2
AYVA				*i*	S	Sn	17 21 23.6	-8.4
AYVA	Ayvalik	6.39	179	*i*	P	Pn	17 20 19.3	-1.2
OJC	Ojcow	6.39	317	*e*	P	Pn	17 20 20.6	+0.2
OJC				*e*	S	Sn	17 21 31.2	-0.7
OJC	Ojcow	6.39	317	*i*	Pnd		17 20 20.6	
OJC				*e*	PP	Pn	17 20 28.4	+8.0
OJC				*e*	Sn	Sn	17 21 31.2	-0.7
OJC	Ojcow	6.39	317	*e*	P	Pn	17 20 20.6	+0.2
OJC				*e*	S	Sn	17 21 31.2	-0.7
KZN	Kozani	6.42	215	P		Pn	17 20 20.9	-0.1
KZN	Kozani	6.42	215	P		Pn	17 20 20.9	-0.1
PRK	Paraskevi	6.46	182	P		Pn	17 20 20.2	-1.1
PRK	Paraskevi	6.46	182	P		Pn	17 20 20.2	-1.1
ULC	Ulcinj	6.46	237	⇓*i*	Pn	Pn	17 20 22.7	+1.3
ULC				*e*	Sn	Sn	17 21 31.5	-2.2
ULC	Ulcinj	6.46	237	⇓*i*	Pn	Pn	17 20 22.7	+1.3
ULC				*e*	Sn	Sn	17 21 31.5	-2.2
BUM	Brajici-Budva	6.48	241	⇓*i*	Pn	Pn	17 20 22.8	+1.1
BUM				*e*	Sn	Sn	17 21 31.8	-2.3
BUM	Brajici-Budva	6.48	241	⇓*i*	Pn	Pn	17 20 22.8	+1.1
BUM				*e*	Sn	Sn	17 21 31.8	-2.3
BALT	Daday	6.49	128	*i*	P	Pn	17 20 19.4	-2.5
BALT				*i*	S	Sn	17 21 21.7	-13
BALT	Daday	6.49	128	*i*	P	Pn	17 20 19.4	-2.5
SIGR	SIGRI	6.51	185	P		Pn	17 20 20.8	-1.2
SIGR	SIGRI	6.51	185	P		Pn	17 20 20.8	-1.2
TIR	Tirane	6.52	230	*e*PN		Pn	17 20 23.4	+1.3
TIR	Tirane	6.52	230	P		Pn	17 20 23.4	+1.3
TIR	Tirane	6.52	230	*e*P		Pn	17 20 23.2	+1.1
TIR				*e*			17 21 31.6	
TIR				pmax		pmax		
	comp=Z,701nm,1.0s							
TIR	Tirane	6.52	230	*e*Pn		Pn	17 20 23.2	+1.1
	comp=Z,701nm,1.0s							
TIR				*e*Sn		Sn	17 21 31.6	-3.3
TIR	Tirane	6.52	230	*e*Pn		Pn	17 20 22.4	+0.3
TIR	Tirane	6.52	230	*e*Pn		Pn	17 20 22.4	+0.3
TIR	Tirane	6.52	230	*e*P		Pn	17 20 23.2	+1.1
	comp=Z,701nm,1.0s							
BZK	Bozkurt	6.57	122	*e*PN		Pn	17 20 20.0	-2.8
KBN	Korca	6.59	222	*e*PN		Pn	17 20 23.8	+0.5
KBN	Korca	6.59	222	P		Pn	17 20 23.7	+0.5
KBN	Korca	6.59	222	P		Pn	17 20 23.7	+0.5
TVSB	Tavsanli	6.61	160	*e*PN		Pn	17 20 23.0	-0.6
NEST	Nestorio	6.64	219	P		Pn	17 20 24.4	+0.5
NEST	Nestorio	6.64	219	P		Pn	17 20 24.4	+0.5
HCY	Herceg Novi	6.64	244	⇓*i*	Pn	Pn	17 20 25.3	+1.4
HCY				*e*	Sn	Sn	17 21 36.2	-1.9
HCY	Herceg Novi	6.64	244	⇓*i*	Pn	Pn	17 20 25.3	+1.4
HCY				*e*	Sn	Sn	17 21 36.2	-1.9
BLY	Banja Luka	6.67	265	*e*Pn		Pn	17 20 24.7	+0.4
BLY	Banja Luka	6.67	265	*e*Pn		Pn	17 20 24.7	+0.4
XOR	Xorichti	6.80	202	P		Pn	17 20 24.4	-1.6
XOR	Xorichti	6.80	202	P		Pn	17 20 24.4	-1.6
AOS	Alonnisos	6.82	198	P		Pn	17 20 24.3	-2.0
AOS	Alonnisos	6.82	198	P		Pn	17 20 24.3	-2.0
SMOL	Smolenice	6.82	298	*e*P		Pn	17 20 26.4	+0.2
SMOL	Smolenice	6.82	298	*e*P		Pn	17 20 26.4	+0.2
SMOL	Smolenice	6.82	298	*e*P		Pn	17 20 26.4	+0.2
BEHE	Becsehely	6.83	280	⇓*e*Pn		Pn	17 20 28.5	+2.1
BEHE	Becsehely	6.83	280	⇓*e*P		Pn	17 20 28.5	+2.1
DEMI	Demirci	6.85	166	*i*	P	Pn	17 20 25.3	-1.5
DEMI				*i*	S	Sn	17 21 36.5	-6.8
DEMI	Demirci	6.85	166	*i*	P	Pn	17 20 25.3	-1.5
AKHS	Akhisar	6.89	172	*i*	P	Pn	17 20 25.6	-1.6
AKHS				*i*	S	Sn	17 21 37.4	-6.6
AKHS	Akhisar	6.89	172	*i*	P	Pn	17 20 25.6	-1.6
AKS	Akhisar	6.89	172	*e*PN		Pn	17 20 25.7	-1.5
SKIA	Skiathos	6.92	200	P		Pn	17 20 25.7	-1.9
SKIA	Skiathos	6.92	200	P		Pn	17 20 25.7	-1.9
ZST	Bratislava	6.92	294	*e*P		Pn	17 20 25.8	-1.8
ZST	Bratislava	6.92	294	*e*Pn		Pn	17 20 25.8	-1.8
ZST	Bratislava	6.92	294	*e*P		Pn	17 20 25.8	-1.8
STON	Ston	6.94	249	*e*Pn		Pn	17 20 29.8	+1.9
ESKT	Eskisehir	6.95	151	*e*PN		Pn	17 20 27.2	-1.0
GDZ	Gediz	6.96	161	*i*	P	Pn	17 20 27.5	-0.8
GDZ				*i*	S	Sn	17 21 41.1	-4.9
GDZ	Gediz	6.96	161	*i*	P	Pn	17 20 27.5	-0.8
THL	Klokotos Trika	6.98	210	P		Pn	17 20 28.0	-0.5
THL	Klokotos Trika	6.98	210	P		Pn	17 20 28.0	-0.5
KERU	Kerch	6.99	90	*e*P		Pn	17 20 28.1	-0.3
KERU				*e*			17 21 48.7	
KERU				pmax		pmax		
	comp=Z,123nm,0.8s							
KERU	Kerch	6.99	90	*e*P		Pn	17 20 28.1	-0.3
	comp=Z,123nm,0.8s							
OKC	Ostrava-Krasne	7.00	309	*e*P		Pn	17 20 28.3	-0.4
OKC	Ostrava-Krasne	7.00	309	*e*PN		Pn	17 20 28.3	-0.4
OKC	Ostrava-Krasne	7.00	309	Pn		Pn	17 20 28.3	-0.4
RAC	Raciborz	7.12	311	*e*P		Pn	17 20 30.2	0.0
RAC	Raciborz	7.12	311	*e*P		Pn	17 20 30.2	0.0
SOP	Sopron	7.14	290	⇓*e*Pn		Pn	17 20 30.3	-0.3
SOP	Sopron	7.14	290	⇓*e*P		Pn	17 20 30.3	-0.3
TOS	Tosya	7.18	128	*e*PN		Pn	17 20 29.1	-2.1
BEL	Belsk	7.21	330	*e*P		Pn	17 20 32.3	+0.8
BEL				*e*	S	Sn	17 21 49.1	-2.7
BEL	Belsk	7.21	330	⇓*e*P		Pn	17 20 32.3	+0.8
ELDT	Eldivan	7.25	134	*i*	P	Pn	17 20 30.4	-1.9
ELDT				*i*	S	Sn	17 21 45.7	-7.4
ELDT	Eldivan	7.25	134	*i*	P	Pn	17 20 30.4	-1.9
SMIA	Simia	7.25	201	P		Pn	17 20 30.9	-1.3
SMIA	Simia	7.25	201	P		Pn	17 20 30.9	-1.3
SVRH	Sivrihisar-ESK	7.25	148	*e*PN		Pn	17 20 31.0	-1.2
CANT	Cankiri	7.26	132	*e*PN		Pn	17 20 31.0	-1.4
MORC	Moravsky Berou	7.30	307	⇓*i*	P	Pn	17 20 32.0	-0.8
MORC				pmax		pmax		
	comp=Z,104nm,0.8s							
MORC	Moravsky Berou	7.30	307	⇓*i*	Pn	Pn	17 20 32.0	-0.8
	comp=Z,104nm,0.8s							
MORC	Moravsky Berou	7.30	307	*i*	P	Pn	17 20 32.0	-0.8
	comp=Z,104nm,0.8s							
BYBT	Boyabat	7.32	122	*e*PN		Pn	17 20 30.9	-2.1
CHOS	Chios island	7.32	183	P		Pn	17 20 31.5	-1.7
CHOS	Chios island	7.32	183	P		Pn	17 20 31.5	-1.7
BLCB	Balcova	7.32	177	*e*PN		Pn	17 20 31.6	-1.5
MRKA	Markates	7.33	198	P		Pn	17 20 31.6	-1.6
MRKA	Markates	7.33	198	P		Pn	17 20 31.6	-1.6
VLO	Vlora	7.34	227	*e*PN		Pn	17 20 35.3	+2.0
VLO	Vlora	7.34	227	*e*Pn		Pn	17 20 35.3	+2.0
KULA	Kula-Manisa	7.36	167	*e*PN		Pn	17 20 32.3	-1.3
AGG	Agios Georgios	7.37	206	P		Pn	17 20 33.0	-0.7
AGG	Agios Georgios	7.37	206	P		Pn	17 20 33.0	-0.7
LOD	Lodumlu	7.40	140	*e*PN		Pn	17 20 32.6	-1.6
ANTO	Ankara	7.43	140	*e*PN		Pn	17 20 32.6	-2.0
ANTO	Ankara	7.43	140	⇓*i*	P	Pn	17 20 32.6	-2.0
ANTO				pmax		pmax		
	comp=Z,305nm,0.8s							
ANTO	Ankara	7.43	140	⇓*i*	Pn	Pn	17 20 32.6	-2.0
	comp=Z,304nm,0.8s							
ANTO	Ankara	7.43	140	P		Pn	17 20 33.1	-1.5
	SNR=60							
ANTO	Ankara	7.43	140	Pn		Pn	17 20 33.1	-1.5
	SNR=60							
MAKR	Makrakomi, Fth	7.44	208	P		Pn	17 20 34.5	-0.2
MAKR	Makrakomi, Fth	7.44	208	P		Pn	17 20 34.5	-0.2
ATAL	Atalanti	7.48	202	P		Pn	17 20 33.6	-1.6
ATAL	Atalanti	7.48	202	P		Pn	17 20 33.6	-1.6
AXAR	Agios Charalam	7.50	204	P		Pn	17 20 34.5	-1.1
AXAR	Agios Charalam	7.50	204	P		Pn	17 20 34.5	-1.1
DIKM	Dikmen	7.51	120	*e*PN		Pn	17 20 32.9	-2.7
LKR	Lokris	7.52	202	P		Pn	17 20 34.2	-1.6
LKR	Lokris	7.52	202	P		Pn	17 20 34.2	-1.6
EVR	Evrytania	7.63	209	P		Pn	17 20 37.1	-0.3
EVR	Evrytania	7.63	209	P		Pn	17 20 37.1	-0.3
VRAC	Vranov	7.64	302	P		Pn	17 20 36.7	-0.6
VRAC	Vranov	7.64	302	P		Pn	17 20 36.7	-0.6
	comp=Z,3.9nm,0.3s,baz=110,slow=12,SNR=243							
VRAC	Vranov	7.64	302	*e*Pn		Pn	17 20 37.9	+0.6
VRAC	Vranov	7.64	302	P		Pn	17 20 38.3	+1.0
CONA	Conrad Observa	7.65	291	⇑*i*	Pn	Pn	17 20 37.5	-0.1
	SNR=70							
CONA	Conrad Observa	7.65	291	⇑*i*	Pn	Pn	17 20 37.5	-0.1
CONA	Conrad Observa	7.65	291	Pn		Pn	17 20 37.5	-0.1
	SNR=70							
KHL	Karahalli	7.70	162	*e*PN		Pn	17 20 37.8	-0.6
BOLV	Bolvadin	7.71	153	*i*	P	Pn	17 20 37.9	-0.6
BOLV				*i*	S	Sn	17 21 58.3	-6.0
BOLV	Bolvadin	7.71	153	*i*	P	Pn	17 20 37.9	-0.6
GROS	Grobnik	7.71	280	⇓*i*	Pn	Pn	17 20 39.7	+1.3
GROS	Grobnik	7.71	280	Pn		Pn	17 20 39.7	+1.3
SHUT	Suhut-Afyon	7.74	156	*e*PN		Pn	17 20 38.8	-0.2
ANN	Anapa	7.74	93	⇓*i*	P	Pn	17 20 34.4	-4.4
ANN				*i*	S	Sn	17 21 56.6	-8.2
ANN				pmax		pmax		
	comp=Z,315nm,1.0s							
ARSA	Arzberg	7.76	285	⇓*i*	Pn	Pn	17 20 39.7	+0.7
	SNR=39							
ARSA	Arzberg	7.76	285	⇓*i*	Pn	Pn	17 20 39.7	+0.7
ARSA	Arzberg	7.76	285	Pn		Pn	17 20 39.7	+0.7
	SNR=39							
MRMA	Marmari	7.81	193	P		Pn	17 20 38.2	-1.5
MRMA	Marmari	7.81	193	P		Pn	17 20 38.2	-1.5
DSF	Desfina	7.87	204	P		Pn	17 20 39.1	-1.5
DSF	Desfina	7.87	204	P		Pn	17 20 39.1	-1.5
KIZT	Kizilcar	7.88	148	*e*PN		Pn	17 20 39.6	-1.3
AFSR	Af˙ar-Bala (A	7.89	140	*e*PN		Pn	17 20 39.6	-1.4
PTL	Penteli	7.90	196	P		Pn	17 20 39.7	-1.3
PTL	Penteli	7.90	196	P		Pn	17 20 39.7	-1.3
BR131	Keskin Array S	7.94	136	⇓*i*	Pn	Pn	17 20 39.4	-2.2
	comp=Z,110nm,0.6s							
BR131				*e*Sn		Sn	17 22 02.9	-6.9
BR131				*e*PcP		PcP	17 27 09.6	+0.1
BR131				*e*ScP		ScP	17 30 31.1	-0.5
BR131	Keskin Array S	7.94	136	⇓*i*	Pn	Pn	17 20 39.4	-2.2
	comp=Z,110nm,0.6s							
BRTR	Keskin Array B	7.94	136	P		Pn	17 20 39.5	-2.1
BRTR				PcP		PcP	17 27 09.3	-0.1
BRTR				ScP		ScP	17 30 30.7	-1.0
BRTR				PKiKP		PKiKP	17 35 09.1	-1.0
BRTR	Keskin Array B	7.94	136	P		Pn	17 20 39.5	-2.1
	comp=Z,14nm,0.3s,baz=322,slow=10,SNR=686							
BRTR				PcP		PcP	17 27 09.3	-0.1
	comp=Z,1.0nm,0.3s,baz=214,slow=1.5,SNR=8.1							
BRTR				ScP		ScP	17 30 30.7	-1.0
	comp=Z,0.1nm,0.3s,baz=159,slow=0.3,SNR=4.4							
BRTR				PKiKP		PKiKP	17 35 09.1	-1.0
	comp=Z,0.1nm,0.3s,baz=179,slow=1.7,SNR=6.0							
BRTR	Keskin Array B	7.94	136	P		Pn	17 20 39.5	-2.1
BISS	Bistriski jare	7.98	281	⇓*e*Pn		Pn	17 20 42.8	+0.8
BISS	Bistriski jare	7.98	281	⇓*e*Pn		Pn	17 20 42.8	+0.8
ATH	Athens Observa	8.01	196	P		Pn	17 20 41.2	-1.2
ATH	Athens Observa	8.01	196	P		Pn	17 20 41.2	-1.2
SOKA	Soboth	8.04	281	⇑*i*	Pn	Pn	17 20 43.1	+0.1
SOKA	Soboth	8.04	281	⇑*i*	Pn	Pn	17 20 43.1	+0.1
SOKA	Soboth	8.04	281	Pn		Pn	17 20 43.1	+0.1
TRIZ	Trizonia	8.05	206	P		Pn	17 20 42.3	-0.7
TRIZ	Trizonia	8.05	206	P		Pn	17 20 42.3	-0.7
AYDN	Tasoluk	8.10	172	*i*	P	Pn	17 20 41.6	-2.1
AYDN				*i*	S	Sn	17 22 02.5	-11
AYDN	Tasoluk	8.10	172	*i*	P	Pn	17 20 41.6	-2.1
CORM	Corum	8.11	130	*e*PN		Pn	17 20 42.5	-1.4
LTK	Loutraki	8.12	200	P		Pn	17 20 42.7	-1.3
LTK	Loutraki	8.12	200	P		Pn	17 20 42.7	-1.3
HAVZ	Havza	8.13	121	*i*	P	Pn	17 20 41.7	-2.4
HAVZ				*i*	S	Sn	17 22 00.7	-14
HAVZ	Havza	8.13	121	*i*	P	Pn	17 20 41.7	-2.4
DENT	Denizli	8.16	166	*e*PN		Pn	17 20 43.4	-1.1
KAMT	Kaman	8.25	138	*e*PN		Pn	17 20 44.3	-1.5
DPC	Dobruska-Polom	8.27	308	*e*P		Pn	17 20 45.4	-0.6
DPC				MLR		MLR		
	comp=Z,1µm,14.2s							
DPC	Dobruska-Polom	8.27	308	*e*PN		Pn	17 20 45.4	-0.6
DPC				AMS		AMS	17 24 20.0	
	comp=Z,1µm,14.2s							
DPC	Dobruska-Polom	8.27	308	Pn		Pn	17 20 45.4	-0.6
TREC	Trest	8.30	300	*e*P		Pn	17 20 46.3	0.0
TREC				MLR		MLR		
	comp=Z,1µm,10.9s							
TREC	Trest	8.30	300	*e*PN		Pn	17 20 46.3	0.0
TREC				AMS		AMS	17 24 50.0	
	comp=Z,1µm,10.9s							
TREC	Trest	8.30	300	Pn		Pn	17 20 46.3	0.0
KVT	Kavak	8.32	120	*e*PN		Pn	17 20 44.4	-2.4
NVLJ	Novalja	8.33	266	*e*Pn		Pn	17 20 49.5	+2.8
GUR	Goura	8.37	203	P		Pn	17 20 46.2	-1.2
GUR	Goura	8.37	203	P		Pn	17 20 46.2	-1.2
OBKA	Obir	8.37	280	⇓*i*	Pn	Pn	17 20 48.4	+1.0
	SNR=25							
OBKA	Obir	8.37	280	⇓*i*	Pn	Pn	17 20 48.4	+1.0
OBKA	Obir	8.37	280	Pn		Pn	17 20 48.4	+1.0
	SNR=25							
ISP	Isparta	8.42	158	*e*PN		Pn	17 20 46.8	-1.4
ISP	Isparta	8.42	158	P		Pn	17 20 46.7	-1.4
ISP	Isparta	8.42	158	⇓*i*	P	Pn	17 20 46.7	-1.4
ISP				pmax		pmax		
	comp=Z,473nm,0.8s							
ISP	Isparta	8.42	158	⇓*i*	Pn	Pn	17 20 46.7	-1.4
	comp=Z,472nm,0.8s							
ISP	Isparta	8.42	158	*i*	P	Pn	17 20 46.7	-1.4
	comp=Z,473nm,0.8s							
MLSB	Milas	8.45	173	*e*PN		Pn	17 20 46.8	-1.7
RLS	Riolos of Patr	8.52	208	P		Pn	17 20 50.4	+1.0
RLS	Riolos of Patr	8.52	208	P		Pn	17 20 50.4	+1.0
UPC	Upice	8.52	308	*e*P		Pn	17 20 48.4	-0.9
UPC	Upice	8.52	308	*e*PN		Pn	17 20 48.4	-0.9
UPC	Upice	8.52	308	Pn		Pn	17 20 48.4	-0.9
KSP	Ksiaz	8.55	311	⇓*e*P		Pn	17 20 48.9	-0.7
KSP				*e*S		Sn	17 22 25.5	+1.2
KSP	Ksiaz	8.55	311	*e*P		Pn	17 20 49.0	-0.7
KSP	Ksiaz	8.55	311	*e*P		Pn	17 20 48.9	-0.7
KSP				*e*S		Sn	17 22 25.5	+1.2
DID	Didima	8.55	198	P		Pn	17 20 48.2	-1.7
DID	Didima	8.55	198	P		Pn	17 20 48.2	-1.7
SUW	Suwalki	8.59	347	⇓*i*	P	Pn	17 20 48.1	-2.1
SUW				pmax		pmax		
	comp=Z,3µm,0.9s							
SUW	Suwalki	8.59	347	⇓*i*	Pn	Pn	17 20 48.1	-2.1
	comp=Z,3µm,0.9s							
SUW	Suwalki	8.59	347	*e*P		Pn	17 20 48.4	-1.8
SUW	Suwalki	8.59	347	*i*	P	Pn	17 20 48.1	-2.1
	comp=Z,3µm,0.9s							
SUW	Suwalki	8.59	347	*e*Pg		Pn	17 20 48.5	-1.8
	SNR=134							
BODT	Bodrum	8.65	176	*e*PN		Pn	17 20 48.7	-2.5
APE	Apeiranthos	8.66	185	*e*PN		Pn	17 20 49.8	-1.5
APE	Apeiranthos	8.66	185	P		Pn	17 20 49.1	-2.2
APE	Apeiranthos	8.66	185	P		Pn	17 20 50.8	-0.5
APE	Apeiranthos	8.66	185	P		Pn	17 20 50.8	-0.5
YER	Yerkesik	8.66	171	*e*PN		Pn	17 20 49.5	-1.9
LADK	Ladik-KONYA	8.66	148	*e*PN		Pn	17 20 50.3	-1.1
MOA	Molln	8.69	289	⇑*i*	Pn	Pn	17 20 52.8	+1.2
	SNR=31							
MOA	Molln	8.69	289	⇑*i*	Pn	Pn	17 20 52.9	+1.2
MOA	Molln	8.69	289	Pn		Pn	17 20 52.8	+1.2
	SNR=31							
BCK	Bucak	8.78	158	*e*PN		Pn	17 20 52.7	-0.2
GLHS	Glhisar (BURDU	8.82	164	*e*PN		Pn	17 20 52.8	-0.8
VOY	Vojsko	8.83	277	*e*Pn		Pn	17 20 55.3	+1.7
VOY				*e*			17 21 03.7	
VOY				*e*			17 21 47.9	
VOY	Vojsko	8.83	277	*e*Pn		Pn	17 20 55.3	+1.7
MNK	Minsk	8.85	5	⇓*e*P		Pn	17 20 48.0	-5.7
MNK				pmax		pmax		
	comp=Z,600nm,1.0s							
MNK				pmax		pmax		
	comp=N,1µm,1.2s							
MICGM	Minsk	8.85	5	⇓*e*P		Pn	17 20 48.0	-5.7
YOZ	Yozgat	8.86	130	*e*PN		Pn	17 20 52.6	-1.6
KONT	Konya--Tatoy	8.88	149	*e*PN		Pn	17 20 53.5	-0.8
VLX	Vlachokerasia	8.89	202	P		Pn	17 20 53.7	-0.8
VLX	Vlachokerasia	8.89	202	P		Pn	17 20 53.7	-0.8
AMT	Artemida-Makis	8.93	206	P		Pn	17 20 56.3	+1.4
AMT	Artemida-Makis	8.93	206	P		Pn	17 20 56.3	+1.4
TRI	Trieste	8.94	275	⇓*i*	P	Pn	17 20 56.7	+1.7
TRI				pmax		pmax		
	comp=Z,525nm,0.9s							
TRI	Trieste	8.94	275	⇓*i*	Pn	Pn	17 20 56.7	+1.7
	comp=Z,525nm,0.9s							
TRI	Trieste	8.94	275	*i*	P	Pn	17 20 56.7	+1.7
	comp=Z,525nm,0.9s							
ERBA	Erbaa	8.99	120	*i*	P	Pn	17 20 53.4	-2.4
ERBA				*i*	S	Sn	17 22 26.3	-9.0
ERBA	Erbaa	8.99	120	*i*	P	Pn	17 20 53.4	-2.4
DAT	Datca	9.00	175	*e*PN		Pn	17 20 55.0	-1.0
DALY	Dalyan (Mu˙la	9.02	169	*e*PN		Pn	17 20 54.9	-1.3
SULT	Sultanhani-AKS	9.12	143	*e*PN		Pn	17 20 58.2	+0.5
PRU	Pruhonice	9.13	302	*e*P		Pn	17 20 57.2	-0.4
PRU				MLR		MLR		
	comp=Z,900nm,13.4s							
PRU	Pruhonice	9.13	302	*e*PN		Pn	17 20 57.2	-0.4
PRU				AMS		AMS	17 24 50.0	
	comp=Z,900nm,13.4s							
PRU	Pruhonice	9.13	302	Pn		Pn	17 20 57.2	-0.4
ITM	Ithomi	9.19	204	P		Pn	17 20 59.1	+0.6
ITM	Ithomi	9.19	204	P		Pn	17 20 59.1	+0.6
NACGM	Naroch	9.21	1	*e*P		Pn	17 20 52.0	-6.6
KBA	Koelnbreinsper	9.22	283	⇓*i*	P	Pn	17 21 00.5	+1.5
KBA	Koelnbreinsper	9.22	283	⇓*i*	Pn	Pn	17 21 00.5	+1.5
	SNR=126							
KBA	Koelnbreinsper	9.22	283	⇓*i*	Pn	Pn	17 21 00.5	+1.5
KBA	Koelnbreinsper	9.22	283	*i*	P	Pn	17 21 00.5	+1.5
FETY	Fethiye	9.26	167	*e*PN		Pn	17 20 58.4	-1.1
GEC2	GERESS Array S	9.27	294	*e*P		Pn	17 21 00.0	+0.4
GEC2	GERESS Array S	9.27	294	*e*Pn		Pn	17 21 00.0	+0.4
GEC2	GERESS Array S	9.27	294	*e*P		Pn	17 21 00.0	+0.4
GERES	GERESS Array B	9.27	294	P		Pn	17 20 59.8	+0.2
GERES	GERESS Array B	9.27	294	P		Pn	17 20 59.8	+0.2
	comp=Z,1.9nm,0.3s,baz=99,slow=14,SNR=80							
GERES	GERESS Array B	9.27	294	P		Pn	17 20 59.8	+0.2
ELL	Elmali	9.30	163	*e*PN		Pn	17 20 58.9	-1.2
PVCC	Panska Ves	9.34	305	*e*P		Pn	17 21 00.0	-0.5
PVCC				MLR		MLR		
	comp=Z,1µm,8.6s							
PVCC	Panska Ves	9.34	305	*e*PN		Pn	17 21 00.0	-0.5
PVCC				AMS		AMS	17 25 00.0	
	comp=Z,1µm,8.6s							
PVCC	Panska Ves	9.34	305	Pn		Pn	17 21 00.0	-0.5
VLI	Veliai	9.38	198	P		Pn	17 20 59.5	-1.5
VLI	Veliai	9.38	198	P		Pn	17 20 59.5	-1.5
KHC	Kasperske Hory	9.43	296	⇓*e*P		Pn	17 21 01.7	0.0
KHC				pmax		pmax		
	comp=Z,59nm,0.9s							
KHC	Kasperske Hory	9.43	296	⇓*e*Pn		Pn	17 21 01.7	0.0
	comp=Z,59nm,0.9s							
KHC	Kasperske Hory	9.43	296	*e*PN		Pn	17 21 01.8	0.0
KHC				*ex*		x	17 21 16.5	
KHC				*ex*		x	17 22 21.0	
KHC				*ex*		x	17 22 34.5	
KHC				*ex*		x	17 22 58.0	
KHC				AMS		AMS	17 25 10.0	
	comp=Z,1µm,7.1s							
KHC	Kasperske Hory	9.43	296	Pn		Pn	17 21 01.8	0.0
DYR	Agios Nikonas	9.48	201	P		Pn	17 21 02.2	-0.2
DYR	Agios Nikonas	9.48	201	P		Pn	17 21 02.2	-0.2
PYL	PYLOS	9.51	204	P		Pn	17 21 02.2	-0.6
PYL	PYLOS	9.51	204	P		Pn	17 21 02.2	-0.6

VOR	**Voronezh**	**10.31**	**50**	*e*P		**Pn**	**17 21 12.0**	**-1.5**
	comp=Z,250nm,1.0s							
VOR				*e*S		**Sn**	**17 23 06.0**	**-1.0**
SARI	**SarD1z-Kayseri**	**10.35**	**131**	*e*PN		**Pn**	**17 21 12.3**	**-2.0**
WTTA	**Wattenberg**	**10.40**	**284**	⇓*i*P		**Pn**	**17 21 14.6**	**-0.4**
WTTA	**Wattenberg**	**10.40**	**284**	⇓*i*Pn		**Pn**	**17 21 14.6**	**-0.4**
	SNR=67							
WTTA	**Wattenberg**	**10.40**	**284**	⇓*i*Pn		**Pn**	**17 21 14.6**	**-0.4**
WTTA	**Wattenberg**	**10.40**	**284**	*i* P		**Pn**	**17 21 14.6**	**-0.4**
VAM	**Vamos**	**10.44**	**191**	P		**Pn**	**17 21 14.3**	**-1.2**
VAM	**Vamos**	**10.44**	**191**	P		**Pn**	**17 21 14.3**	**-1.2**
WATA	**Walderalm**	**10.44**	**284**	⇓*i*P		**Pn**	**17 21 16.8**	**+1.2**
WATA	**Walderalm**	**10.44**	**284**	⇓*i*Pn		**Pn**	**17 21 16.8**	**+1.2**
	SNR=10							
WATA	**Walderalm**	**10.44**	**284**	⇓*i*Pn		**Pn**	**17 21 16.8**	**+1.2**
WATA	**Walderalm**	**10.44**	**284**	*i* P		**Pn**	**17 21 16.8**	**+1.2**
ROTZ	**Rotzenmuhle**	**10.47**	**298**	*e*Pn		**Pn**	**17 21 16.2**	**+0.4**
NKC	**Novy Kostel**	**10.47**	**301**	*e*P		**Pn**	**17 21 15.6**	**-0.3**
NKC	**Novy Kostel**	**10.47**	**301**	*e*PN		**Pn**	**17 21 15.6**	**-0.3**
NKC	**Novy Kostel**	**10.47**	**301**	Pn		**Pn**	**17 21 15.6**	**-0.3**
IDI	**Anoyia**	**10.48**	**187**	P		**Pn**	**17 21 14.6**	**-1.5**
IDI	**Anoyia**	**10.48**	**187**	⇓*i*Pn		**Pn**	**17 21 14.3**	**-1.7**
	comp=Z,88nm,0.8s							
IDI				*e*PcP		**PcP**	**17 27 12.0**	**+0.3**
IDI	**Anoyia**	**10.48**	**187**	P		**Pn**	**17 21 14.6**	**-1.5**
IDI	**Anoyia**	**10.48**	**187**	*e*PcP		**PcP**	**17 27 12.0**	**+0.3**
KARN	**Karanos**	**10.48**	**192**	P		**Pn**	**17 21 14.9**	**-1.2**
KARN	**Karanos**	**10.48**	**192**	P		**Pn**	**17 21 14.9**	**-1.2**
TANN	**Tannenbergstha**	**10.53**	**302**	*e*Pn		**Pn**	**17 21 16.3**	**-0.4**
WERN	**Wernitzgruen**	**10.54**	**301**	*e*Pn		**Pn**	**17 21 17.0**	**+0.3**
LAST	**Lasithi**	**10.56**	**185**	P		**Pn**	**17 21 15.6**	**-1.6**
LAST	**Lasithi**	**10.56**	**185**	P		**Pn**	**17 21 15.6**	**-1.6**
CLL	**Collm**	**10.58**	**307**	⇓*i*P		**Pn**	**17 21 16.2**	**-1.1**
CLL					pmax	pmax		
	comp=Z,82nm,1.0s							
CLL					MLR	MLR		
	comp=Z,900nm,21.0s							
CLL	**Collm**	**10.58**	**307**	*e*Pn		**Pn**	**17 21 16.4**	**-0.9**
CLL	**Collm**	**10.58**	**307**	⇓*i*P		**Pn**	**17 21 16.2**	**-1.1**
	comp=Z,82nm,1.0s							
CLL				*i*			17 21 24.4	
CLL				*i*			17 21 28.5	
CLL				*i*			17 21 35.0	
CLL				*e*			17 21 47.0	
CLL				*e*			17 22 31.0	
CLL				LmV			17 26 00.0	
	comp=Z,900nm,21.0s							
CLL	**Collm**	**10.58**	**307**	*i* P		**Pn**	**17 21 16.2**	**-1.1**
	comp=Z,900nm,21.0s							
ZKR	**Zakros**	**10.58**	**181**	P		**Pn**	**17 21 16.2**	**-1.2**
ZKR	**Zakros**	**10.58**	**181**	P		**Pn**	**17 21 16.2**	**-1.2**
GUNZ	**Gunzen**	**10.59**	**301**	*e*Pn		**Pn**	**17 21 17.7**	**+0.2**
MANZ	**Manzenberg**	**10.60**	**299**	*e*Pn		**Pn**	**17 21 17.7**	**+0.1**
WERD	**Werda**	**10.63**	**302**	*e*Pn		**Pn**	**17 21 17.8**	**-0.3**
FUR	**Furstenfeldbru**	**10.72**	**289**	*e*P		**Pn**	**17 21 20.1**	**+0.8**
FUR	**Furstenfeldbru**	**10.72**	**289**	*e*Pn		**Pn**	**17 21 20.1**	**+0.8**
FUR	**Furstenfeldbru**	**10.72**	**289**	*e*P		**Pn**	**17 21 20.1**	**+0.8**
PLN	**Plauen**	**10.74**	**302**	*e*Pn		**Pn**	**17 21 19.0**	**-0.4**
RUE	**Ruedersdorf**	**10.76**	**314**	*e*Pn		**Pn**	**17 21 17.9**	**-1.7**
RUE	**Ruedersdorf**	**10.76**	**314**	⇓*e*Pn		**Pn**	**17 21 17.4**	**-2.3**
	comp=Z,244nm,0.8s							
RUE	**Ruedersdorf**	**10.76**	**314**	⇓*e*Pn		**Pn**	**17 21 17.4**	**-2.3**
	comp=Z,244nm,0.8s							
KOZT	**Kozan**	**10.76**	**137**	*e*PN		**Pn**	**17 21 19.6**	**-0.2**
MOTA	**Moosalm**	**10.76**	**284**	⇓*i*P		**Pn**	**17 21 20.5**	**+0.6**
MOTA	**Moosalm**	**10.76**	**284**	⇓*i*Pn		**Pn**	**17 21 20.5**	**+0.6**
	SNR=24							
MOTA	**Moosalm**	**10.76**	**284**	⇓*i*Pn		**Pn**	**17 21 20.5**	**+0.6**
MOTA	**Moosalm**	**10.76**	**284**	*i* P		**Pn**	**17 21 20.5**	**+0.6**
DARE	**Darende-Malaty**	**10.80**	**127**	*e*PN		**Pn**	**17 21 19.3**	**-1.2**
GUMT	**Gumushane**	**10.82**	**114**	*e*PN		Pn	17 21 17.3	-3.4
ILIC	**ilic-Erzincan**	**10.84**	**121**	*e*PN		**Pn**	**17 21 18.9**	**-2.2**
CEL	**Celeste**	**10.86**	**231**	⇓*e*Pn		**Pn**	**17 21 19.9**	**-1.3**
	comp=Z,186nm,1.1s							
CEL	**Celeste**	**10.86**	**231**	⇓*e*Pn		**Pn**	**17 21 19.9**	**-1.3**
	comp=Z,186nm,1.1s							
RETA	**Reutte**	**11.00**	**285**	*i* Pn		**Pn**	**17 21 24.0**	**+0.9**
	SNR=20							
RETA	**Reutte**	**11.00**	**285**	*i* Pn		**Pn**	**17 21 24.0**	**+0.9**
RETA	**Reutte**	**11.00**	**285**	Pn		**Pn**	**17 21 24.0**	**+0.9**
	SNR=20							
FETA	**Feichten**	**11.01**	**283**	*i* Pn		**Pn**	**17 21 24.1**	**+0.9**
	SNR=63							
FETA	**Feichten**	**11.01**	**283**	*i* Pn		**Pn**	**17 21 24.1**	**+0.9**
FETA	**Feichten**	**11.01**	**283**	Pn		**Pn**	**17 21 24.1**	**+0.9**
	SNR=63							
GVD	**Gavdhos**	**11.01**	**191**	*e*Pn		**Pn**	**17 21 22.1**	**-1.1**
	comp=Z,833nm,1.0s							
GVD	**Gavdhos**	**11.01**	**191**	*e*Pn		**Pn**	**17 21 22.1**	**-1.1**
	comp=Z,833nm,1.0s							
GRA1	**Grafenberg Arr**	**11.06**	**297**	*e*P		**Pn**	**17 21 24.1**	**+0.3**
GRF	**Grafenberg Arr**	**11.06**	**297**	*e*P		**Pn**	**17 21 24.1**	**+0.3**
GRF	**Grafenberg Arr**	**11.06**	**297**	*e*Pn		**Pn**	**17 21 24.1**	**+0.3**
CEYT	**Ceyhan**	**11.10**	**138**	*e*PN		**Pn**	**17 21 23.2**	**-1.2**
MOX	**Moxa**	**11.12**	**302**	*e*P		**Pn**	**17 21 24.1**	**-0.5**
MOX	**Moxa**	**11.12**	**302**	*e*Pn		**Pn**	**17 21 24.1**	**-0.5**
MOX	**Moxa**	**11.12**	**302**	*e*P		**Pn**	**17 21 24.1**	**-0.5**
NEUB	**Neuenburg**	**11.24**	**305**	*e*Pn		**Pn**	**17 21 25.3**	**-0.8**
KMRS	**Kahramanmaras**	**11.27**	**133**	*e*PN		**Pn**	**17 21 25.8**	**-1.0**
OBN	**Obninsk**	**11.38**	**30**	⇓*e*P		Pn	17 21 23.9	-4.0
OBN				*i* S		Sn	17 23 23.2	-10
OBN					pmax	pmax		
	comp=Z,456nm,1.2s							
OBN					MLR	MLR		
	comp=Z,700nm,18.0s							
OBN	**Obninsk**	**11.38**	**30**	Pn		Pn	17 21 23.2	-4.7
	comp=Z,4μm,0.4s,SNR=59							
VRHR	**Novokhopersk**	**11.38**	**56**	*e*P		**Pn**	**17 21 26.0**	**-2.1**
VRHR				*e*S		Sn	17 23 25.4	-7.7
VRHR					pmax	pmax		
	comp=N,160nm,0.9s							
VRHR					pmax	pmax		
	comp=E,220nm,0.9s							
VRHR					pmax	pmax		
	comp=Z,300nm,0.9s							
VRHR					pmax	pmax		
	comp=N,130nm,0.6s							
VRHR					pmax	pmax		
	comp=E,190nm,0.6s							
VRHR					pmax	pmax		
	comp=Z,250nm,0.6s							
VRHR					smax	smax		
	comp=N,3μm,1.6s							
VRHR					smax	smax		
	comp=Z,700nm,1.6s							
VRHR					smax	smax		
	comp=E,1μm,0.8s							
VRHR	**Novokhopersk**	**11.38**	**56**	*e*P		**Pn**	**17 21 26.0**	**-2.1**
ALFC	**Alevga**	**11.50**	**154**	P		**Pn**	**17 21 29.5**	**-0.3**
	comp=E,2.2nm,0.7s							
ALFC	**Alevga**	**11.50**	**154**	P		**Pn**	**17 21 29.5**	**-0.3**
	comp=E,2.2nm,0.7s							
MALT	**Malatya**	**11.51**	**126**	*e*PN		**Pn**	**17 21 28.4**	**-1.6**
MALT	**Malatya**	**11.51**	**126**	⇓*e*P		**Pn**	**17 21 28.7**	**-1.4**
MALT					pmax	pmax		
	comp=Z,115nm,1.3s							
MALT	**Malatya**	**11.51**	**126**	⇓*e*Pn		**Pn**	**17 21 28.6**	**-1.4**
	comp=Z,115nm,1.3s							
MALT	**Malatya**	**11.51**	**126**	*e*P		**Pn**	**17 21 28.7**	**-1.4**
	comp=Z,115nm,1.3s							
AKMC	**Akamas**	**11.54**	**156**	P		**Pn**	**17 21 29.5**	**-0.8**
AKMC	**Akamas**	**11.54**	**156**	P		**Pn**	**17 21 29.5**	**-0.8**
VLC	**Villacollemand**	**11.55**	**268**	*e*Pn		**Pn**	**17 21 30.5**	**0.0**
VLC	**Villacollemand**	**11.55**	**268**	*e*Pn		**Pn**	**17 21 30.5**	**0.0**
DAVOX	**Davos/Dischmat**	**11.59**	**281**	P		**Pn**	**17 21 31.9**	**+0.8**
DAVOX	**Davos/Dischmat**	**11.59**	**281**	P		**Pn**	**17 21 31.9**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=98,slow=6.9,SNR=11							
DAVOX	**Davos/Dischmat**	**11.59**	**281**	P		**Pn**	**17 21 31.9**	**+0.8**
DAVA	**Damuels**	**11.59**	**284**	*i* Pn		**Pn**	**17 21 31.4**	**+0.3**
	SNR=25							
DAVA	**Damuels**	**11.59**	**284**	*i* Pn		**Pn**	**17 21 31.4**	**+0.3**
DAVA	**Damuels**	**11.59**	**284**	Pn		**Pn**	**17 21 31.4**	**+0.3**
	SNR=25							
KIV	**Kislovodsk**	**11.60**	**93**	⇑*e*P		Pn	17 21 26.9	-4.3
KIV					pmax	pmax		
	comp=Z,105nm,1.7s							
KIV					MLR	MLR		
	comp=Z,300nm,19.0s							
KIV	**Kislovodsk**	**11.60**	**93**	Pn		Pn	17 21 27.9	-3.3
	comp=Z,416nm,0.8s,SNR=8.4							
LEF	**Lefka**	**11.62**	**153**	*e*PN		**Pn**	**17 21 30.0**	**-1.4**
PPCY	**Paphos**	**11.68**	**156**	P		**Pn**	**17 21 30.9**	**-1.2**
PPCY	**Paphos**	**11.68**	**156**	P		**Pn**	**17 21 30.9**	**-1.2**
MAMC	**Mammari**	**11.68**	**152**	P		**Pn**	**17 21 31.7**	**-0.5**
MAMC	**Mammari**	**11.68**	**152**	P		**Pn**	**17 21 31.7**	**-0.5**
GAZ	**Gaziantep**	**11.69**	**133**	*e*PN		**Pn**	**17 21 30.9**	**-1.4**
LFK	**Lefkose**	**11.69**	**151**	*e*PN		**Pn**	**17 21 30.6**	**-1.8**
PTK	**Pertek**	**11.69**	**121**	*e*PN		**Pn**	**17 21 30.9**	**-1.7**
KBZ	**Khabaz**	**11.81**	**94**	P		**Pn**	**17 21 30.7**	**-3.1**
KBZ				S		**Sn**	**17 23 41.0**	**-2.5**
KBZ	**Khabaz**	**11.81**	**94**	P		**Pn**	**17 21 30.6**	**-3.1**
KBZ				S		**Sn**	**17 23 41.0**	**-2.5**
KBZ	**Khabaz**	**11.81**	**94**	P		**Pn**	**17 21 30.6**	**-3.1**
	comp=Z,1.1nm,0.3s,baz=311,slow=11,SNR=20							
KBZ				S		**Sn**	**17 23 41.0**	**-2.5**
	comp=Z,2.7nm,0.3s,baz=265,slow=15,SNR=2.4							
KBZ				LR		LR	17 27 13.0	
	comp=Z,446nm,18.6s,baz=285,slow=42							
CSS	**Prodhromos**	**11.91**	**152**	P		**Pn**	**17 21 34.4**	**-0.9**
	comp=Z,5.8nm,1.1s							
CSS	**Prodhromos**	**11.91**	**152**	*e*PN		**Pn**	**17 21 33.9**	**-1.4**
CSS	**Prodhromos**	**11.91**	**152**	P		**Pn**	**17 21 33.1**	**-2.2**
CSS	**Prodhromos**	**11.91**	**152**	⇓*e*Pn		**Pn**	**17 21 33.4**	**-1.9**
	comp=Z,488nm,1.0s							
CSS	**Prodhromos**	**11.91**	**152**	⇓*e*Pn		**Pn**	**17 21 33.4**	**-1.9**
	comp=Z,488nm,1.0s							
CSS	**Prodhromos**	**11.91**	**152**	P		**Pn**	**17 21 34.4**	**-0.9**
	comp=Z,5.8nm,1.1s							
TUE	**Stuetta**	**11.96**	**280**	⇓*e*Pn		**Pn**	**17 21 36.6**	**+0.5**
	comp=Z,239nm,0.8s							
TUE	**Stuetta**	**11.96**	**280**	⇓*e*Pn		**Pn**	**17 21 36.6**	**+0.5**
	comp=Z,239nm,0.8s							
BSD	**Bornholm Skovb**	**11.97**	**326**	⇓*i*P		Pn	17 21 32.0	-3.9
BSD					pmax	pmax		
	comp=Z,130nm,0.8s							
BSD					MLR	MLR		
	comp=Z,1μm,19.0s							
BSD	**Bornholm Skovb**	**11.97**	**326**	⇓*i*P		Pn	17 21 32.0	-3.9
	comp=Z,130nm,0.7s							
BSD				*i*			17 21 44.6	
BSD								
	comp=Z,1μm,19.0s							
SVRC	**Sivrice-ELAZID**	**11.98**	**123**	*e*PN		**Pn**	**17 21 33.8**	**-2.5**
PHNC	**Paralimni**	**12.11**	**149**	P		Pn	17 21 41.6	+3.7
	comp=Z,5.6nm,1.1s							
UBBA	**Unterbreizbach**	**12.14**	**301**	*e*Pn		**Pn**	**17 21 38.1**	**0.0**
STU	**Stuttgart**	**12.18**	**291**	⇓*e*P		**Pn**	**17 21 38.4**	**-0.3**
STU					pmax	pmax		
	comp=Z,66nm,0.8s							
STU	**Stuttgart**	**12.18**	**291**	*e*Pn		**Pn**	**17 21 38.5**	**-0.3**
STU	**Stuttgart**	**12.18**	**291**	⇓*e*Pn		**Pn**	**17 21 38.4**	**-0.3**
	comp=Z,66nm,0.8s							
STU	**Stuttgart**	**12.18**	**291**	*e*P		**Pn**	**17 21 38.4**	**-0.3**
	comp=Z,66nm,0.8s							
RGN	**Rugen**	**12.24**	**321**	*e*Pn		**Pn**	**17 21 37.4**	**-2.0**
RGN	**Rugen**	**12.24**	**321**	*e*Pn		Pn	17 21 35.1	-4.3
	comp=Z,524nm,0.9s							
MOS	**Moscow**	**12.24**	**31**	*d*iP		Pn	17 21 35.4	-4.0
MOS				*e*SS		**Sn**	**17 23 59.0**	**+5.2**
MOS					pmax	pmax		
	comp=Z,300nm,1.0s							
MOS					pmax	pmax		
	comp=Z,196nm,0.7s							
MOS					MLR	MLR		
	comp=Z,700nm,9.0s							
CLZ	**Clausthal**	**12.29**	**306**	*e*P		**Pn**	**17 21 40.3**	**+0.1**
CLZ	**Clausthal**	**12.29**	**306**	*e*Pn		**Pn**	**17 21 40.3**	**+0.1**
CLZ	**Clausthal**	**12.29**	**306**	*e*P		**Pn**	**17 21 40.3**	**+0.1**
URFA	**Urfa**	**12.35**	**128**	*e*P		**Pn**	**17 21 39.2**	**-1.9**
ONI	**Oni**	**12.54**	**98**	P		**Pn**	**17 21 42.8**	**-0.8**
ONI				S		Sn	17 24 10.5	+9.0
TOD	**Tromm**	**12.57**	**294**	*e*P		**Pn**	**17 21 44.7**	**+0.8**
TOD	**Tromm**	**12.57**	**294**	*e*P		**Pn**	**17 21 44.7**	**+0.8**
TOD	**Tromm**	**12.57**	**294**	*e*P		**Pn**	**17 21 44.7**	**+0.8**
BFO	**Black Forest**	**12.70**	**288**	⇓*i*P		**Pn**	**17 21 45.4**	**-0.2**
BFO					pmax	pmax		
	comp=Z,64nm,0.8s							
BFO	**Black Forest**	**12.70**	**288**	⇓*i*Pn		**Pn**	**17 21 45.4**	**-0.2**
	comp=Z,64nm,0.8s							
BFO	**Black Forest**	**12.70**	**288**	Pn		**Pn**	**17 21 46.7**	**+1.1**
	comp=Z,488nm,0.8s,SNR=14							
BFO	**Black Forest**	**12.70**	**288**	*i* P		**Pn**	**17 21 45.4**	**-0.2**
	comp=Z,64nm,0.8s							
NRDL	**Niedersach Rie**	**12.71**	**308**	*e*Pn		**Pn**	**17 21 44.1**	**-1.5**
ZEI	**Tsey**	**12.79**	**97**	*e*P		**Pn**	**17 21 44.6**	**-2.5**
ZEI					pmax	pmax		
	comp=Z,100nm,0.8s							
FELD	**Feldberg im Sc**	**12.89**	**286**	*e*P		**Pn**	**17 21 46.4**	**-1.8**
TNS	**Taunus Mts**	**12.93**	**297**	*e*P		**Pn**	**17 21 48.6**	**-0.1**
TNS	**Taunus Mts**	**12.93**	**297**	*e*Pn		**Pn**	**17 21 48.6**	**-0.1**
PGF	**Pioggiola**	**12.99**	**262**	*e*P		Pn	17 21 45.7	-3.8
	comp=Z,222nm,0.9s							
PGF	**Pioggiola**	**12.99**	**262**	*e*P		Pn	17 21 45.7	-3.8
PGF					pmax	pmax		
	comp=Z,222nm,0.9s							
PGF	**Pioggiola**	**12.99**	**262**	*e*P		Pn	17 21 45.7	-3.8
	comp=Z,222nm,0.9s							
AKH	**Akhalkalaki**	**13.02**	**103**	P		**Pn**	**17 21 47.6**	**-2.5**
AKH				S		Sn	17 24 06.7	-6.6
LANF	**Langenberg**	**13.12**	**291**	*e*P		**Pn**	**17 21 50.3**	**-0.8**
LANF	**Langenberg**	**13.12**	**291**	*e*P		**Pn**	**17 21 50.3**	**-0.8**
LANF	**Langenberg**	**13.12**	**291**	*e*P		**Pn**	**17 21 50.3**	**-0.8**
LIBD	**Limburg**	**13.17**	**288**	*e*P		**Pn**	**17 21 53.1**	**+1.4**
LIBD	**Limburg**	**13.17**	**288**	*e*P		**Pn**	**17 21 53.1**	**+1.4**
BBS	**Basel-Blauen**	**13.21**	**284**	*e*P		**Pn**	**17 21 50.8**	**-1.5**
BBS	**Basel-Blauen**	**13.21**	**284**	*e*P		**Pn**	**17 21 50.8**	**-1.5**
GOR	**Gori**	**13.22**	**100**	P		**Pn**	**17 21 52.4**	**0.0**
GOR				S		Sn	17 24 09.9	-7.8
LLD	**Lille Linde**	**13.24**	**322**	*i* P		**Pn**	**17 21 50.7**	**-1.8**
LLD					pmax	pmax		
	comp=Z,370nm,0.9s							
LLD	**Lille Linde**	**13.24**	**322**	*i* P		**Pn**	**17 21 50.7**	**-1.8**
	comp=Z,374nm,0.8s							
BSEG	**Bad Segeberg**	**13.30**	**314**	*e*P		**Pn**	**17 21 50.2**	**-3.1**
BSEG	**Bad Segeberg**	**13.30**	**314**	*e*Pn		**Pn**	**17 21 50.2**	**-3.1**
COP	**Copenhagen**	**13.38**	**323**	*i* P		Pn	17 21 50.6	-3.8
COP					pmax	pmax		
	comp=Z,180nm,0.8s							
COP					MLR	MLR		
	comp=Z,470nm,19.0s							
COP	**Copenhagen**	**13.38**	**323**	*i* P		Pn	17 21 50.6	-3.8
	comp=Z,182nm,0.8s							
COP								
	comp=Z,470nm,18.0s							
CDF	**Champ du Feu**	**13.41**	**289**	*e*P		**Pn**	**17 21 53.9**	**-1.0**
	comp=Z,70nm,0.9s							
CDF	**Champ du Feu**	**13.41**	**289**	*e*P		**Pn**	**17 21 53.9**	**-1.0**
CDF					pmax	pmax		
	comp=Z,70nm,0.9s							
CDF	**Champ du Feu**	**13.41**	**289**	*e*P		**Pn**	**17 21 53.9**	**-1.0**
	comp=Z,70nm,0.9s							
ECH	**Echery**	**13.47**	**288**	⇑*i*P		**Pn**	**17 21 56.5**	**+0.8**
ECH					pmax	pmax		
	comp=Z,37nm,0.9s							
ECH	**Echery**	**13.47**	**288**	⇑*i*Pn		**Pn**	**17 21 56.5**	**+0.8**
	comp=Z,37nm,0.9s							
ECH	**Echery**	**13.47**	**288**	*e*P		**Pn**	**17 21 56.6**	**+0.8**
ECH	**Echery**	**13.47**	**288**	⇑*i*Pn		**Pn**	**17 21 56.5**	**+0.8**
	comp=Z,37nm,0.9s							
MOF	**Molkenrain**	**13.47**	**286**	*e*P		**Pn**	**17 21 54.0**	**-1.8**
MOF	**Molkenrain**	**13.47**	**286**	*e*P		**Pn**	**17 21 54.0**	**-1.8**
MOF	**Molkenrain**	**13.47**	**286**	*e*P		**Pn**	**17 21 54.0**	**-1.8**
SAOF	**Saorge**	**13.58**	**270**	*e*P		**Pn**	**17 21 54.8**	**-2.3**
SAOF	**Saorge**	**13.58**	**270**	*e*P		**Pn**	**17 21 54.8**	**-2.3**
SAOF	**Saorge**	**13.58**	**270**	*e*P		**Pn**	**17 21 54.8**	**-2.3**
SARR	**Saratov**	**13.65**	**59**	*c*P		Pn	17 21 54.0	-3.9
SARR				*i* S		Sn	17 24 20.7	-7.2
SARR					pmax	pmax		
	comp=Z,229nm,0.9s							
HINF	**Hinteralfeld**	**13.66**	**286**	*e*P		**Pn**	**17 21 57.6**	**-0.6**
	comp=Z,97nm,1.1s							
HINF	**Hinteralfeld**	**13.66**	**286**	*e*P		**Pn**	**17 21 57.6**	**-0.6**
HINF					pmax	pmax		
	comp=Z,97nm,1.1s							
HINF	**Hinteralfeld**	**13.66**	**286**	*e*P		**Pn**	**17 21 57.6**	**-0.6**
	comp=Z,97nm,1.1s							
KZR	**Kazreti**	**13.67**	**102**	P		**Pn**	**17 22 00.0**	**+1.7**
AUTN	**L'Aution**	**13.67**	**270**	*e*P		**Pn**	**17 21 58.7**	**+0.2**
AUTN	**L'Aution**	**13.67**	**270**	*e*P		**Pn**	**17 21 58.7**	**+0.2**
AUTN	**L'Aution**	**13.67**	**270**	*e*P		**Pn**	**17 21 58.7**	**+0.2**
LOMF	**Lomont**	**13.67**	**284**	*e*P		Pn	17 21 55.1	-3.3
LOMF	**Lomont**	**13.67**	**284**	*e*P		Pn	17 21 55.1	-3.3
LOMF	**Lomont**	**13.67**	**284**	*e*P		Pn	17 21 55.1	-3.3
SBF	**Sospel**	**13.69**	**269**	*e*P		Pn	17 21 52.8	-5.9
	comp=Z,181nm,0.7s							
SBF	**Sospel**	**13.69**	**269**	*e*P		Pn	17 21 52.8	-5.9
SBF					pmax	pmax		
	comp=Z,181nm,0.7s							
SBF	**Sospel**	**13.69**	**269**	*e*P		Pn	17 21 52.8	-5.9
	comp=Z,181nm,0.7s							
RUP	**Ruppelstein**	**13.71**	**294**	*e*P		**Pn**	**17 21 58.8**	**0.0**
RUP	**Ruppelstein**	**13.71**	**294**	*e*P		**Pn**	**17 21 58.8**	**0.0**
TBLG	**Delisi**	**13.75**	**100**	*e*P		**Pn**	**17 21 59.9**	**+0.6**
TBLG				*e*S		**Sn**	**17 24 24.9**	**-5.7**
TBLG	**Delisi**	**13.75**	**100**	P		**Pn**	**17 21 59.9**	**+0.6**
TBLG				S		**Sn**	**17 24 24.9**	**-5.7**
SEAG	**Tbilisi Sea**	**13.78**	**100**	P		**Pn**	**17 22 00.8**	**+1.0**
SEAG				S		**Sn**	**17 24 28.5**	**-2.9**
TOUF	**Mont Tournerai**	**13.79**	**270**	*e*P		**Pn**	**17 21 59.2**	**-0.8**
TOUF	**Mont Tournerai**	**13.79**	**270**	*e*P		**Pn**	**17 21 59.2**	**-0.8**
TOUF	**Mont Tournerai**	**13.79**	**270**	*e*P		**Pn**	**17 21 59.2**	**-0.8**
LPG	**La Plagne**	**13.86**	**276**	*e*P		**Pn**	**17 22 02.4**	**+1.4**
	comp=Z,475nm,0.9s							
LPG	**La Plagne**	**13.86**	**276**	*e*P		**Pn**	**17 22 02.4**	**+1.4**
LPG					pmax	pmax		
	comp=Z,475nm,0.9s							
LPG	**La Plagne**	**13.86**	**276**	*e*P		**Pn**	**17 22 02.4**	**+1.4**
	comp=Z,475nm,0.9s							
LPL	**La Plagne**	**13.87**	**276**	*e*P		**Pn**	**17 22 02.4**	**+1.3**
	comp=Z,190nm,0.5s							
LPL	**La Plagne**	**13.87**	**276**	*e*P		**Pn**	**17 22 02.4**	**+1.3**
LPL					pmax	pmax		
	comp=Z,190nm,0.5s							
LPL	**La Plagne**	**13.87**	**276**	*e*P		**Pn**	**17 22 02.4**	**+1.3**
	comp=Z,190nm,0.5s							
MVIF	**Mont Vial**	**13.88**	**269**	*e*P		**Pn**	**17 21 59.7**	**-1.5**
MVIF	**Mont Vial**	**13.88**	**269**	*e*P		**Pn**	**17 21 59.7**	**-1.5**
MVIF	**Mont Vial**	**13.88**	**269**	*e*P		**Pn**	**17 21 59.7**	**-1.5**
MBDF	**Montbardon**	**13.97**	**273**	*e*P		**Pn**	**17 22 02.5**	**+0.2**
	comp=Z,421nm,0.8s							
MBDF	**Montbardon**	**13.97**	**273**	*e*P		**Pn**	**17 22 02.5**	**+0.2**
MBDF					pmax	pmax		
	comp=Z,421nm,0.8s							
MBDF	**Montbardon**	**13.97**	**273**	*e*P		**Pn**	**17 22 02.5**	**+0.2**
	comp=Z,421nm,0.8s							
BUG	**Bochum--Univer**	**13.97**	**301**	*e*P		**Pn**	**17 22 02.7**	**+0.6**
BUG	**Bochum--Univer**	**13.97**	**301**	*e*Pn		**Pn**	**17 22 02.7**	**+0.6**
BNI	**Bardonecchia**	**13.98**	**274**	*e*P		**Pn**	**17 22 04.0**	**+1.6**
BNI					pmax	pmax		
	comp=Z,63nm,0.7s							
BNI	**Bardonecchia**	**13.98**	**274**	*e*Pn		**Pn**	**17 22 04.0**	**+1.6**
	comp=Z,63nm,0.7s							
BNI	**Bardonecchia**	**13.98**	**274**	*e*Pn		**Pn**	**17 22 04.0**	**+1.6**
	comp=Z,63nm,0.7s							
HAU	**Haudompre**	**14.00**	**287**	*e

comp=Z,129nm,0.7s
SMRF Simiane la Rot 14.97 271 eP P 17 22 17.6 -0.4
comp=Z,64nm,0.7s
GIVF Givet 15.20 295 eP P 17 22 19.4 -1.0
comp=Z,290nm,1.1s
GIVF Givet 15.20 295 eP P 17 22 19.4 -1.0
GIVF pmax pmax
comp=Z,290nm,1.1s
GIVF Givet 15.20 295 eP P 17 22 19.4 -1.0
comp=Z,290nm,1.1s
GIVF Givet 15.20 295 eP P 17 22 19.4 -1.0
comp=Z,145nm,1.1s
MAK Makhachkala 15.25 93 eP Pn 17 22 18.9 +0.4
MAK eS Sn 17 25 09.9 +3.1
MAK pmax pmax
comp=Z,507nm,1.6s
MAK MLR MLR
comp=Z,410nm,13.0s
MAK Makhachkala 15.25 93 eP Pn 17 22 18.9 +0.4
comp=Z,410nm,13.0s
MUD Monsted U'grnd 15.28 321 i P Pn 17 22 18.7 0.0
MUD pmax pmax
comp=Z,92nm,0.8s
MUD Monsted U'grnd 15.28 321 i P Pn 17 22 18.7 0.0
comp=Z,92nm,0.7s
DOU Dourbes 15.34 295 P Pn 17 22 20.1 +0.6
DOU AP P 17 22 23.3 +1.3
comp=Z,54nm,1.4s
DOU Dourbes 15.34 295 P Pn 17 22 20.1 +0.6
comp=Z,54nm,1.4s
VIVF Saint-Julien-l 15.41 275 eP Pn 17 22 20.2 -0.4
comp=Z,65nm,0.8s
VIVF Saint-Julien-l 15.41 275 eP Pn 17 22 20.2 -0.4
VIVF pmax pmax
comp=Z,65nm,0.8s
VIVF Saint-Julien-l 15.41 275 eP Pn 17 22 20.2 -0.4
comp=Z,65nm,0.8s
SSB Saint Sauveur 15.43 276 eP Pn 17 22 21.0 +0.2
SSB pmax pmax
comp=Z,56nm,0.6s
SSB Saint Sauveur 15.43 276 ePn Pn 17 22 21.0 +0.2
comp=Z,56nm,0.6s
SSB Saint Sauveur 15.43 276 eP Pn 17 22 19.3 -1.5
SSB Saint Sauveur 15.43 276 eP Pn 17 22 21.0 +0.2
comp=Z,56nm,0.6s
BAIF Baives 15.58 294 eP P 17 22 25.4 +0.7
comp=Z,228nm,1.5s
BAIF Baives 15.58 294 eP P 17 22 25.4 +0.7
BAIF pmax pmax
comp=Z,228nm,1.5s
BAIF Baives 15.58 294 eP P 17 22 25.4 +0.7
comp=Z,228nm,1.5s
BAIF Baives 15.58 294 eP P 17 22 25.4 +0.7
comp=Z,114nm,1.5s
SNF Seneffe 15.60 296 P P 17 22 25.1 +0.2
comp=Z,50nm,1.5s
SNF Seneffe 15.60 296 P P 17 22 25.0 +0.2
comp=Z,50nm,1.5s
LOR Lormes 15.69 284 eP Pn 17 22 22.5 -1.5
comp=Z,128nm,0.8s
LOR eR
comp=Z,320nm,17.2s
LOR Lormes 15.69 284 eP Pn 17 22 22.5 -1.5
comp=Z,128nm,0.8s
ASF Jabal al Asfar 15.71 146 P Pn 17 22 25.3 +0.8
ASF S S 17 25 23.2 -3.1
ASF Jabal al Asfar 15.71 146 P Pn 17 22 25.3 +0.8
comp=Z,1.5nm,0.3s,baz=207,slow=3.0,SNR=35
ASF S S 17 25 23.2 -3.1
comp=Z,0.2nm,0.3s,baz=311,slow=11,SNR=1.8
SMF Signal de Mont 15.74 282 eP Pn 17 22 22.8 -1.9
comp=Z,175nm,0.7s
SMF Signal de Mont 15.74 282 eP Pn 17 22 22.8 -1.9
SMF pmax pmax
comp=Z,175nm,0.7s
SMF Signal de Mont 15.74 282 eP Pn 17 22 22.8 -1.9
comp=Z,175nm,0.7s
FIA1 FINESS Array S 15.77 359 ePn Pn 17 22 19.3 -5.6
FIA1 eSn Sn 17 25 07.5 -12
FINES FINESS Array B 15.77 359 P Pn 17 22 19.1 -5.7
FINES S Sn 17 25 02.7 -16
FINES FINESS Array B 15.77 359 P Pn 17 22 19.1 -5.7
comp=Z,8.4nm,0.3s,baz=168,slow=13,SNR=218
FINES S Sn 17 25 02.7 -16
comp=Z,5.7nm,0.3s,baz=159,slow=19,SNR=3.1
FINES LR LR 17 28 52.5
comp=Z,689nm,19.2s,baz=181,slow=38
IMRD Marand 15.81 109 eP P 17 22 27.1 -0.4
IMRD Marand 15.81 109 eP P 17 22 27.1 -0.4
SSF Saint Saulge 15.94 283 eP Pn 17 22 24.7 -2.4
comp=Z,165nm,1.0s
SSF Saint Saulge 15.94 283 eP Pn 17 22 24.7 -2.4
SSF pmax pmax
comp=Z,165nm,1.0s
SSF Saint Saulge 15.94 283 eP Pn 17 22 24.7 -2.4
comp=Z,165nm,1.0s
AVF Avril sur Loir 16.07 282 eP Pn 17 22 27.8 -0.9
comp=Z,110nm,0.8s
AVF Avril sur Loir 16.07 282 eP Pn 17 22 27.8 -0.9
AVF pmax pmax
comp=Z,110nm,0.8s
AVF Avril sur Loir 16.07 282 eP Pn 17 22 27.8 -0.9
comp=Z,110nm,0.8s
AVF Avril sur Loir 16.07 282 eP Pn 17 22 27.8 -0.9
comp=Z,55nm,0.8s
LASF Ste Croix 16.15 272 eP P 17 22 32.3 +1.3
comp=Z,210nm,1.0s
LASF Ste Croix 16.15 272 eP P 17 22 32.3 +1.3
comp=Z,210nm,1.0s
LASF Ste Croix 16.15 272 eP P 17 22 32.3 +1.3
comp=Z,105nm,1.0s
AGO Saint Agoulin 16.30 280 eP P 17 22 32.5 -0.1
AGO Saint Agoulin 16.30 280 eP P 17 22 32.5 -0.1
AGO Saint Agoulin 16.30 280 eP P 17 22 32.5 -0.1
LBL Lubilhac 16.34 277 eP P 17 22 33.9 +0.7
LBL Lubilhac 16.34 277 eP P 17 22 33.9 +0.7
LBL Lubilhac 16.34 277 eP P 17 22 33.9 +0.7
LBL Lubilhac 16.34 277 eP P 17 22 33.9 +0.7
HFS Hagfors 16.35 337 P Pn 17 22 28.6 -3.4
HFS S Sn 17 25 24.8 -8.3
HFS Hagfors 16.35 337 P Pn 17 22 28.6 -3.4
comp=Z,4.6nm,0.3s,baz=138,slow=12,SNR=70
HFS S Sn 17 25 24.8 -8.3
comp=Z,1.9nm,0.3s,baz=141,slow=17,SNR=3.7
HFS LR LR 17 30 11.2
comp=Z,570nm,18.2s,baz=147,slow=42
KEST Kesra 16.37 239 ePn P 17 22 34.1 +0.5
KEST epP pP 17 22 56.8 +4.3
KEST PcP PcP 17 27 19.1 0.0
KEST Kesra 16.37 239 P P 17 22 34.4 +0.8
comp=Z,1.0nm,0.3s,baz=294,slow=2.5,SNR=38
KEST PcP PcP 17 27 19.1 0.0
comp=Z,0.4nm,0.3s,baz=120,slow=3.3,SNR=6.0
KEST Kesra 16.37 239 ePn P 17 22 34.1 +0.5
PYM Petit Puy Mans 16.42 279 eP P 17 22 34.6 +0.5
PYM Petit Puy Mans 16.42 279 eP P 17 22 34.6 +0.5
PYM Petit Puy Mans 16.42 279 eP P 17 22 34.6 +0.5
PYM Petit Puy Mans 16.42 279 eP P 17 22 34.6 +0.5
BGF Bois d'Agland 16.43 281 eP Pn 17 22 32.6 -0.6
comp=Z,243nm,0.9s
BGF Bois d'Agland 16.43 281 eP Pn 17 22 32.6 -0.6
BGF pmax pmax
comp=Z,243nm,0.9s
BGF Bois d'Agland 16.43 281 eP Pn 17 22 32.6 -0.6
comp=Z,243nm,0.9s
BGF Bois d'Agland 16.43 281 eP Pn 17 22 32.6 -0.6
comp=Z,122nm,0.9s
KAF Kangasniemi 16.44 360 eP Pn 17 22 27.7 -5.4
KAF pmax pmax
comp=Z,275nm,0.7s
KAF Kangasniemi 16.44 360 ep Pn 17 22 27.7 -5.4
comp=Z,275nm,0.7s
LSRT Sirt 16.50 211 i P Pn 17 22 33.5 -0.7
comp=Z,347nm,1.6s,SNR=47
HYF Humbligny 16.52 284 eP P 17 22 36.8 +1.7
HYF Humbligny 16.52 284 eP P 17 22 36.8 +1.7
HYF Humbligny 16.52 284 eP P 17 22 36.8 +1.7
HOMB Homborsund 16.71 325 eP Pn 17 22 34.9 -1.5
HOMB Homborsund 16.71 325 eP Pn 17 22 34.9 -1.5
SNR=62
TCF Toulx Ste Croi 16.90 281 eP Pn 17 22 38.7 -0.3
comp=Z,205nm,0.9s
TCF Toulx Ste Croi 16.90 281 eP Pn 17 22 38.7 -0.3
TCF pmax pmax
comp=Z,205nm,0.9s
TCF Toulx Ste Croi 16.90 281 eP Pn 17 22 38.7 -0.3
comp=Z,205nm,0.9s
TCF Toulx Ste Croi 16.90 281 eP Pn 17 22 38.7 -0.3
comp=Z,103nm,0.9s
IHRS Heris 16.91 109 eP P 17 22 40.3 +0.6
IHRS Heris 16.91 109 eP P 17 22 40.3 +0.6
CMAH Djebel Manchou 16.98 244 P Pn 17 22 39.4 -0.6
CMAH Djebel Manchou 16.98 244 P Pn 17 22 39.4 -0.6
LUJL Ujela 17.06 196 i P Pn 17 22 39.0 -2.0
comp=Z,526nm,1.0s,SNR=47
GHAR Gharyan 17.10 222 i P P 17 22 42.3 +0.7
comp=Z,293nm,1.4s,SNR=47
IBST Bostanabad 17.14 111 eP P 17 22 42.7 +0.4
IBST Bostanabad 17.14 111 eP P 17 22 42.7 +0.4
ABSA Djebel Ababsia 17.16 243 P P 17 22 43.4 +1.0
ABSA Djebel Ababsia 17.16 243 P P 17 22 43.4 +1.0
CAF Calviac 17.22 276 eP Pn 17 22 44.9 +2.0
comp=Z,122nm,0.9s
CAF Calviac 17.22 276 eP Pn 17 22 44.9 +2.0
CAF pmax pmax
comp=Z,122nm,0.9s
CAF Calviac 17.22 276 eP Pn 17 22 44.9 +2.0
comp=Z,122nm,0.9s
CAF Calviac 17.22 276 eP Pn 17 22 44.9 +2.0
comp=Z,61nm,0.9s
ALAS Alassa 17.24 227 i P Pn 17 22 43.6 +0.5
comp=Z,192nm,1.3s,SNR=46
CAEH 'Ain El Ouahch 17.25 246 P Pn 17 22 44.0 +0.7
CAEH 'Ain El Ouahch 17.25 246 P Pn 17 22 44.0 +0.7
KONO Kongsberg 17.26 330 eP P 17 22 40.8 -2.3
KONO AMB AMB 17 22 48.9
comp=Z,156nm,1.8s
KONO Kongsberg 17.26 330 eP P 17 22 40.7 -2.4
KONO pmax pmax
comp=Z,3.0nm,0.6s
KONO Kongsberg 17.26 330 ePn P 17 22 40.7 -2.4
comp=Z,3.3nm,0.6s
KONO Kongsberg 17.26 330 eP P 17 22 40.8 -2.3
comp=Z,156nm,1.8s,SNR=53
SNART Snartemo 17.28 324 eP P 17 22 42.0 -1.3
SNART AMB AMB 17 22 45.4
comp=Z,79nm,0.8s
EIL Elat 17.32 155 P Pn 17 22 44.7 +0.5
EIL PcP PcP 17 27 20.6 0.0
EIL Elat 17.32 155 P Pn 17 22 44.7 +0.5
comp=Z,2.0nm,0.3s,baz=338,slow=7.4,SNR=45
EIL PcP PcP 17 27 20.6 0.0
comp=Z,0.6nm,0.3s,baz=335,slow=4.7,SNR=4.7
EIL Elat 17.32 155 P Pn 17 22 44.7 +0.5
JOF Joensuu 17.46 7 eP P 17 22 41.2 -4.1
JOF pmax pmax
comp=Z,124nm,0.6s
JOF Joensuu 17.46 7 ep P 17 22 41.2 -4.1
comp=Z,124nm,0.6s
MTLF Montolieu 17.49 271 eP Pn 17 22 48.6 +2.5
comp=Z,104nm,1.2s
MTLF Montolieu 17.49 271 eP Pn 17 22 48.6 +2.5
MTLF pmax pmax
comp=Z,104nm,1.2s
MTLF Montolieu 17.49 271 eP Pn 17 22 48.6 +2.5
comp=Z,104nm,1.2s
RJF Les Rejaudoux 17.53 278 eP Pn 17 22 48.5 +1.9
comp=Z,139nm,0.7s
RJF eR
comp=Z,573nm,18.2s
RJF Les Rejaudoux 17.53 278 eP Pn 17 22 48.5 +1.9
RJF pmax pmax
comp=Z,139nm,0.7s
RJF Les Rejaudoux 17.53 278 eP Pn 17 22 48.5 +1.9
comp=Z,139nm,0.7s
RJF Les Rejaudoux 17.53 278 eP Pn 17 22 48.5 +1.9
comp=Z,69nm,0.7s
CKFL Kef-Lekhel 17.56 245 P P 17 22 46.3 -0.5
CKFL Kef-Lekhel 17.56 245 P P 17 22 46.3 -0.5
ISRB Sarab 17.59 109 eP Pn 17 22 48.3 +0.7
ISRB Sarab 17.59 109 eP Pn 17 22 48.3 +0.7
NAO01 NORSAR Array S 17.74 334 ePn P 17 22 45.9 -2.6
comp=Z,125nm,0.7s
CASM Ain Smara 17.80 245 P P 17 22 49.2 -0.1
CASM Ain Smara 17.80 245 P P 17 22 49.2 -0.1
NB2 NORSAR Subarra 17.80 335 P P 17 22 45.9 -3.2
baz=142,slow=11
NB2 NORSAR Subarra 17.80 335 P P 17 22 45.9 -3.2
comp=Z,45nm,0.7s,baz=142,slow=11
NOA NORSAR Array B 17.80 335 P P 17 22 45.5 -3.6
NOA NORSAR Array B 17.80 335 P P 17 22 45.5 -3.6
comp=Z,4.9nm,0.3s,baz=145,slow=11,SNR=83
NOA LR LR 17 30 56.6
comp=Z,314nm,19.2s,baz=150,slow=41
CTEI Djebel Teioual 17.97 245 P P 17 22 50.8 -0.5
CTEI Djebel Teioual 17.97 245 P P 17 22 50.8 -0.5
LFF La Frestale 18.14 277 eP Pn 17 22 55.3 +1.4
comp=Z,447nm,0.7s
LFF La Frestale 18.14 277 eP Pn 17 22 55.3 +1.4
LFF pmax pmax
comp=Z,447nm,0.7s
LFF La Frestale 18.14 277 eP Pn 17 22 55.3 +1.4
comp=Z,447nm,0.7s
LFF La Frestale 18.14 277 eP Pn 17 22 55.3 +1.4
comp=Z,223nm,0.7s
BLS5 Blasjo 18.27 326 eP P 17 22 53.6 -0.6
BLS5 eS Sn 17 26 20.2 +1.0
BLS5 Blasjo 18.27 326 eP P 17 22 53.6 -0.6
SNR=52
BLS5 eS Sn 17 26 20.2 +1.0
SNR=54
LDF La Druitiere 18.33 289 eP P 17 22 55.0 +0.1
comp=Z,501nm,1.0s
LDF La Druitiere 18.33 289 eP P 17 22 55.0 +0.1
LDF pmax pmax
comp=Z,501nm,1.0s
LDF La Druitiere 18.33 289 eP P 17 22 55.0 +0.1
comp=Z,501nm,1.0s
LDF La Druitiere 18.33 289 eP P 17 22 55.0 +0.1
comp=Z,250nm,1.0s
MLS Moulis 18.39 271 eP Pn 17 22 56.5 -0.4
MLS Moulis 18.39 271 eP Pn 17 22 56.5 -0.4
MLS Moulis 18.39 271 eP Pn 17 22 56.5 -0.4
LSHF Shwairf 18.41 216 i P P 17 22 56.6 +0.6
comp=Z,201nm,1.6s,SNR=40
MFF Saint Martin d 18.48 282 eP Pn 17 22 57.5 -0.5
comp=Z,742nm,0.9s
MFF Saint Martin d 18.48 282 eP Pn 17 22 57.5 -0.5
MFF pmax pmax
comp=Z,742nm,0.9s
MFF Saint Martin d 18.48 282 eP Pn 17 22 57.5 -0.5
comp=Z,742nm,0.9s
MFF Saint Martin d 18.48 282 eP Pn 17 22 57.5 -0.5
comp=Z,371nm,0.9s
BHD Baghdad 18.49 126 ex P 17 22 55.2 -1.6
BHD ex x 17 26 16.6
BHD Baghdad 18.49 126 eP P 17 22 55.2 -1.6
ODD1 Odda 18.52 327 eP P 17 22 57.7 +0.7
ODD1 AMB AMB 17 22 59.2
comp=Z,139nm,1.1s
ODD1 Odda 18.52 327 eP P 17 22 57.7 +0.7
comp=Z,139nm,1.1s,SNR=52
SET Setif 18.53 247 P Pn 17 23 00.0 +1.3
LZLA Zalla 18.53 206 i P Pn 17 22 58.7 0.0
comp=Z,169nm,1.0s,SNR=40
FLN La Foliniere 18.56 289 eP P 17 22 57.7 +0.2
comp=Z,420nm,0.8s
FLN eR
comp=Z,338nm,18.2s
FLN La Foliniere 18.56 289 eP P 17 22 57.7 +0.2
FLN pmax pmax
comp=Z,420nm,0.8s
FLN La Foliniere 18.56 289 eP P 17 22 57.7 +0.2
comp=Z,420nm,0.8s
FLN La Foliniere 18.56 289 eP P 17 22 57.7 +0.2
comp=Z,210nm,0.8s
CKHR Kef el Ahmar 18.57 246 P P 17 22 57.5 -0.3
CKHR Kef el Ahmar 18.57 246 P P 17 22 57.5 -0.3
LJFR Jufra 18.60 211 i P P 17 22 58.5 +0.4
comp=Z,228nm,1.1s,SNR=40
MELF Melles 18.64 271 eP P 17 22 59.1 +0.5
MELF Melles 18.64 271 eP P 17 22 59.1 +0.5
MELF Melles 18.64 271 eP P 17 22 59.1 +0.5
GRR Gorron 18.82 288 eP P 17 23 00.2 -0.1
comp=Z,108nm,0.7s
GRR Gorron 18.82 288 eP P 17 23 00.2 -0.1
GRR pmax pmax
comp=Z,108nm,0.7s
GRR Gorron 18.82 288 eP P 17 23 00.2 -0.1
comp=Z,108nm,0.7s
GRR Gorron 18.82 288 eP P 17 23 00.2 -0.1
comp=Z,54nm,0.7s
EPF Esparros 18.89 271 eP P 17 23 01.9 +0.7
comp=Z,84nm,0.7s
EPF Esparros 18.89 271 eP P 17 23 01.9 +0.7
EPF pmax pmax
comp=Z,84nm,0.7s
EPF Esparros 18.89 271 eP P 17 23 01.9 +0.7
comp=Z,84nm,0.7s
EPF Esparros 18.89 271 eP P 17 23 01.9 +0.7
comp=Z,42nm,0.7s
RESF Ens 18.96 271 eP Pn 17 23 03.2 -0.6
RESF Ens 18.96 271 eP Pn 17 23 03.2 -0.6
RESF Ens 18.96 271 eP Pn 17 23 03.2 -0.6
LABF Labassere 19.07 271 eP P 17 23 03.0 -0.2
LABF Labassere 19.07 271 eP P 17 23 03.0 -0.2
LABF Labassere 19.07 271 eP P 17 23 03.0 -0.2
VIEF Viey 19.16 271 eP P 17 23 05.0 +0.8
VIEF Viey 19.16 271 eP P 17 23 05.0 +0.8
VIEF Viey 19.16 271 eP P 17 23 05.0 +0.8
EGD Espegrend 19.29 327 eP P 17 23 05.7 +0.4
BER Bergen 19.32 327 eP P 17 23 06.1 +0.5
BER Bergen 19.32 327 eP P 17 23 06.1 +0.5
SNR=52
RUND Rundenannen 19.33 327 eP P 17 23 06.3 +0.5
RUND AMB AMB 17 23 09.0
comp=Z,438nm,1.3s
ASK Askoy 19.44 327 eP P 17 23 07.2 +0.3
ETSF Etsaut 19.56 271 eP P 17 23 09.5 +1.0
comp=Z,160nm,0.8s
ETSF Etsaut 19.56 271 eP P 17 23 09.5 +1.0
ETSF pmax pmax
comp=Z,160nm,0.8s
ETSF Etsaut 19.56 271 eP P 17 23 09.5 +1.0
comp=Z,160nm,0.8s
ETSF Etsaut 19.56 271 eP P 17 23 09.5 +1.0
comp=Z,80nm,0.8s
TMCR Tamitsa 19.58 15 i P P 17 23 08.0 -0.4
TMCR i S S 17 26 45.1 +1.4
TMCR pmax pmax
comp=Z,418nm,1.1s
TMCR Tamitsa 19.58 15 i P P 17 23 08.0 -0.4
comp=Z,418nm,1.1s
TMCR i S S 17 26 45.1 +1.4
LARF Larrau 19.82 272 eP P 17 23 11.7 +0.4
LARF Larrau 19.82 272 eP P 17 23 11.7 +0.4
LARF Larrau 19.82 272 eP P 17 23 11.7 +0.4
SGMF Saint Gilles 19.96 288 eP P 17 23 11.8 -0.9
comp=Z,104nm,0.8s
SGMF Saint Gilles 19.96 288 eP P 17 23 11.8 -0.9
SGMF pmax pmax
comp=Z,104nm,0.8s
SGMF Saint Gilles 19.96 288 eP P 17 23 11.8 -0.9
comp=Z,104nm,0.8s
SGMF Saint Gilles 19.96 288 eP P 17 23 11.8 -0.9
comp=Z,52nm,0.8s
SJPF Ste Jean 19.96 273 eP P 17 23 14.1 +1.3
comp=Z,66nm,0.7s
SJPF Ste Jean 19.96 273 eP P 17 23 14.1 +1.3
SJPF pmax pmax
comp=Z,67nm,0.7s
SJPF Ste Jean 19.96 273 eP P 17 23 14.1 +1.3
comp=Z,66nm,0.7s
SJPF Ste Jean 19.96 273 eP P 17 23 14.1 +1.3
comp=Z,33nm,0.7s
SUE Sulen 19.97 328 eP pP 17 23 33.1 +1.2
IGZV Ghazvin 20.08 109 eP Pn 17 23 16.4 -0.7
IGZV Ghazvin 20.08 109 eP Pn 17 23 16.4 -0.7
MOL Molde 20.09 334 eP P 17 23 14.8 +0.9
MOL Molde 20.09 334 eP P 17 23 14.8 +0.9
SNR=51
EMHD Djebel Mahouad 20.12 250 P P 17 23 14.6 -0.1
EMHD Djebel Mahouad 20.12 250 P P 17 23 14.6 -0.1
QUIF Quistinic 20.39 287 eP P 17 23 16.3 -1.1
comp=Z,137nm,1.0s
QUIF Quistinic 20.39 287 eP P 17 23 16.3 -1.1
QUIF pmax pmax
comp=Z,137nm,1.0s
QUIF Quistinic 20.39 287 eP P 17 23 16.3 -1.1
comp=Z,137nm,1.0s
QUIF Quistinic 20.39 287 eP P 17 23 16.3 -1.1
comp=Z,68nm,1.0s
ROSF Rostrenen 20.43 288 eP P 17 23 17.0 -0.8
comp=Z,77nm,0.9s
ROSF Rostrenen 20.43 288 eP P 17 23 17.0 -0.8
ROSF pmax pmax
comp=Z,77nm,0.9s
ROSF Rostrenen 20.43 288 eP P 17 23 17.0 -0.8
comp=Z,77nm,0.9s
ROSF Rostrenen 20.43 288 eP P 17 23 17.0 -0.8
comp=Z,38nm,0.9s
IRAZ Razeghan 20.47 112 eP P 17 23 19.9 +1.4
IRAZ Razeghan 20.47 112 eP P 17 23 19.9 +1.4
NSS Namsos 20.52 342 eP P 17 23 15.3 -3.2
NSS eS S 17 27 03.4 +1.1
LGHD Ghdames 20.61 226 i P P 17 23 20.4 +0.6
comp=Z,315nm,1.1s,SNR=39
IMHD Mahdasht 20.78 110 eP P 17 23 22.9 +1.1
IMHD Mahdasht 20.78 110 eP P 17 23 22.9 +1.1
EBNR Beni Rached 21.02 252 P P 17 23 25.4 +1.2
EBNR Beni Rached 21.02 252 P P 17 23 25.4 +1.2
EKA Eskdalemuir Ar 21.05 308 P P 17 23 24.8 +0.5
EKA PcP PcP 17 27 26.2 -0.5
EKA ScP ScP 17 30 52.8 -1.2
EKA Eskdalemuir Ar 21.05 308 P P 17 23 24.8 +0.5
comp=Z,20nm,0.6s,baz=100,slow=10,SNR=57
EKA PcP PcP 17 27 26.2 -0.5
comp=Z,9.5nm,0.8s,baz=101,slow=3.5,SNR=7.4
EKA ScP ScP 17 30 52.8 -1.2
comp=Z,4.6nm,0.9s,baz=76,slow=3.5,SNR=5.9
EKA Eskdalemuir Ar 21.05 308 P P 17 23 24.8 +0.5
ESK Eskdalemuir 21.07 308 eP P 17 23 24.5 0.0
ESK pmax pmax
comp=Z,103nm,1.0s
ESK Eskdalemuir 21.07 308 eP P 17 23 24.5 0.0
comp=Z,103nm,1.0s
ESK epP pP 17 23 44.1 +0.1
ESK Eskdalemuir 21.07 308 P P 17 23 24.2 -0.3
comp=Z,521nm,1.1s,SNR=22
ESK Eskdalemuir 21.07 308 eP P 17 23 24.5 0.0
comp=Z,103nm,1.0s
IR3 Iran Long-Peri 21.14 110 eP P 17 23 27.2 +1.6
IR3 Iran Long-Peri 21.14 110 eP P 17 23 27.2 +1.6
ECHA Ech Chlef 21.20 252 P P 17 23 27.0 +0.9
ECHA Ech Chlef 21.20 252 P P 17 23 27.0 +0.9
EANR 'Ain N'Sour 21.49 252 P P 17 23 28.8 -0.5
EANR 'Ain N'Sour 21.49 252 P P 17 23 28.8 -0.5
MOR8 Moi Rana 21.53 347 eP P 17 23 30.4 +1.1
MOR8 Moi Rana 21.53 347 eP P 17 23 30.4 +1.1
SNR=50
IPRN Peran 21.57 107 eP P 17 23 30.7 +0.4
LKFR Kufra 21.66 188 i P P 17 23 32.2 +1.1
comp=Z,295nm,1.3s,SNR=39
ETRT Tiaret 21.68 251 P P 17 23 29.3 -2.1
ETRT Tiaret 21.68 251 P P 17 23 29.3 -2.1
LUMB Murzuk 21.69 210 i P P 17 23 32.4 +1.0
comp=Z,324nm,1.1s,SNR=39
IDMV Damavand 21.75 109 eP P 17 23 33.9 +1.6
IDMV Damavand 21.75 109 eP P 17 23 33.9 +1.6
FLOS Flostrand 21.86 346 eP P 17 23 34.0 +1.2
IVRN Varamin 21.89 110 eP P 17 23 35.3 +1.7
IVRN Varamin 21.89 110 eP P 17 23 35.3 +1.7
STOK Stokkvaagen 21.92 345 eP P 17 23 34.5 +1.1
STOK AMB AMB 17 23 40.8
comp=Z,281nm,1.1s
KONS Konsvik 22.05 346 eP P 17 23 30.4 -4.5
IFIR Firoozkooh 22.19 108 eP P 17 23 38.7 +1.8
IFIR Firoozkooh 22.19 108 eP P 17 23 38.7 +1.8
APA Apatity 22.22 7 i P P 17 23 37.2 +0.6
APA i 17 23 54.8
APA i S S 17 27 28.0 -6.1
APA pmax pmax
comp=Z,247nm,1.0s
APA MLR MLR
comp=Z,1μm,18.0s
APA Apatity 22.22 7 i P P 17 23 37.2 +0.6
comp=Z,247nm,1.0s
ISHM Shahmirzad 22.46 107 eP P 17 23 40.4 +0.7
ISHM Shahmirzad 22.46 107 eP P 17 23 40.4 +0.7
IKIA Kiasar 22.50 105 eP P 17 23 40.8 +0.7
IKIA Kiasar 22.50 105 eP P 17 23 40.8 +0.7
ARU Arti 22.60 50 c i P P 17 23 39.6 -1.0
ARU 17 24 04.3
ARU PPP PPP 17 24 12.8
ARU S S 17 27 41.1 +0.6
ARU SS SnSn 17 28 16.7 -4.0

ARU SSS SSS 17 28 27.7
ARU pmax pmax
comp=Z,191nm,0.6s
ARU Arti 22.60 50 P **P** **17 23 39.7 -0.9**
comp=Z,2µm,0.8s
DLF Lyons Farm 22.62 302 *e*P **PcP** **17 27 29.7 -0.2**
LVZ Lovozero 22.65 8*c* *i*P **P** **17 23 40.9 -0.2**
LVZ pmax pmax
comp=Z,175nm,0.9s
AB31 Akbulak array 22.75 69 P **P** **17 23 41.8 -0.4**
AB31 pmax pmax
comp=Z,30nm,0.4s
SOKR Solikamsk 22.75 42*c* *i*P **P** **17 23 41.8 -0.3**
SOKR S **S** **17 27 42.4 -0.5**
SOKR pmax pmax
comp=Z,410nm,1.4s
SOKR MLR MLR
comp=Z,310nm,14.0s
MIB Mutribah 22.76 127 *e*P **P** **17 23 42.5 +0.1**
MIB AMb AMB 17 23 45.4
comp=Z,809nm,1.0s
MIB Mutribah 22.76 127 *e*P **P** **17 23 42.5 +0.1**
comp=Z,809nm,1.0s
IPIR Pirpir 22.81 116 *e*P **P** **17 23 44.5 +1.1**
IPIR Pirpir 22.81 116 *e*P **P** **17 23 44.5 +1.1**
IKLH Kolahrood 22.83 114 *e*P **P** **17 23 45.0 +1.5**
IKLH Kolahrood 22.83 114 *e*P **P** **17 23 45.0 +1.5**
STEI Steigen 23.05 349 *e*P **P** **17 23 46.2 +1.3**
STEI AMB AMB 17 23 48.4
comp=Z,142nm,1.8s
IANJ Anjilo 23.07 107 *e*P **P** **17 23 45.9 +0.1**
IANJ Anjilo 23.07 107 *e*P **P** **17 23 45.9 +0.1**
IMND Minoodasht 23.12 101 *e*P **P** **17 23 48.9 +3.0**
ESDC Sonseca Array 23.13 266 P **P** **17 23 45.2 -0.8**
ESDC PcP **PcP** **17 27 31.0 -0.3**
ESDC ScP **ScP** **17 30 58.5 -1.2**
ESDC Sonseca Array 23.13 266 P **P** **17 23 45.2 -0.8**
comp=Z,24nm,0.5s,baz=62,slow=9.2,SNR=240
ESDC PcP **PcP** **17 27 31.0 -0.3**
comp=Z,4.2nm,0.8s,baz=20,slow=2.9,SNR=5.5
ESDC ScP **ScP** **17 30 58.5 -1.2**
comp=Z,2.7nm,0.9s,baz=23,slow=3.9,SNR=6.5
ESDC Sonseca Array 23.13 266 P **P** **17 23 45.2 -0.8**
ESDC Sonseca Array 23.13 266 PcP **PcP** **17 27 31.0 -0.3**
ESLA Sonseca Array 23.13 266⇑*i*P **P** **17 23 45.2 -0.9**
comp=Z,71nm,1.3s
ESLA pP pP 17 24 18.4 +12
ESLA Sonseca Array 23.13 266⇑*i*P **P** **17 23 45.2 -0.9**
comp=Z,71nm,1.3s
NAY Al-Naaiem 23.13 128 *e*P **P** **17 23 45.9 -0.2**
NAY AMb AMB 17 23 49.2
comp=Z,241nm,1.1s
NAY Al-Naaiem 23.13 128 *e*P **P** **17 23 45.9 -0.2**
comp=Z,241nm,1.1s
KTK1 Kautokeino 23.43 357⇑*i*P **P** **17 23 48.5 0.0**
KTK1 AMB AMB 17 23 50.7
comp=Z,857nm,1.8s
KTK1 Kautokeino 23.43 357⇑*i*P **P** **17 23 48.5 0.0**
comp=Z,857nm,1.8s,SNR=41
KBD Kabd 23.43 127 *e*P **P** **17 23 49.0 +0.1**
KBD AMb AMB 17 23 51.3
comp=Z,183nm,0.9s
KBD Kabd 23.43 127 *e*P **P** **17 23 49.0 +0.1**
comp=Z,183nm,0.9s
PAB San Pablo 23.45 266⇑*e*P **P** **17 23 47.9 -1.2**
PAB *e* 17 27 32.1
PAB pmax pmax
comp=Z,52nm,0.8s
PAB San Pablo 23.45 266⇑*e*P **P** **17 23 47.9 -1.2**
comp=Z,52nm,0.8s
PAB *e*PcP **PcP** **17 27 32.1 +0.1**
PAB San Pablo 23.45 266⇑*e*P **P** **17 23 47.9 -1.2**
comp=Z,52nm,0.8s
LOF Lofoten 23.47 348 *e*P sP 17 24 30.0 +7.5
IZEF Zefreh 23.59 114 *e*P **P** **17 23 51.5 +0.9**
IZEF Zefreh 23.59 114 *e*P **P** **17 23 51.5 +0.9**
SVE Sverdlovsk 23.81 50*d* *i*P **P** **17 23 52.4 +0.4**
SVE *e*S **S** **17 28 01.5 +1.6**
SVE pmax pmax
comp=Z,331nm,1.4s
SVE MLR MLR
comp=Z,501nm,17.0s
ARCES ARCESS Array B 23.90 359 P **P** **17 23 52.5 -0.2**
ARCES ARCESS Array B 23.90 359 P **P** **17 23 52.5 -0.2**
comp=Z,78nm,0.6s,baz=172,slow=10,SNR=593
ARCES LR LR 17 34 43.5
comp=Z,167nm,20.6s,baz=142,slow=40
ARCES ARCESS Array B 23.90 359 P **P** **17 23 52.5 -0.2**
ARE0 ARCESS Array S 23.90 359⇑*i*P **P** **17 23 52.7 -0.1**
ARE0 ARCESS Array S 23.90 359⇑*i*P **P** **17 23 52.7 -0.1**
KEV Kevo 24.12 0⇑*i*P **P** **17 23 55.1 +0.4**
KEV pmax pmax
comp=Z,381nm,1.0s
KEV Kevo 24.12 0⇑*i*P **P** **17 23 55.1 +0.4**
comp=Z,381nm,1.0s
KEV Kevo 24.12 0 *e*p **P** **17 23 55.0 +0.4**
comp=Z,155nm,0.6s
KEV Kevo 24.12 0 *e*P **P** **17 23 55.0 +0.4**
comp=Z,155nm,0.6s
PBRG Braganca 24.25 273 *e*P **P** **17 23 55.5 -0.7**
comp=Z,69nm,1.4s
PBRG *e*pP **pP** **17 24 20.0 +1.7**
PBRG Braganca 24.25 273 *e*PcP **PcP** **17 27 33.6 0.0**
PBRG Braganca 24.25 273 *e*P **P** **17 23 55.5 -0.7**
comp=Z,69nm,1.4s
PBRG Braganca 24.25 273 *e*PcP **PcP** **17 27 33.6 0.0**
TRO Tromso 24.30 354 *e*P **P** **17 23 56.6 +0.4**
TRO AMB AMB 17 23 58.5
comp=Z,293nm,0.9s
TRO *e*S **S** **17 28 08.3 +0.8**
TRO Tromso 24.30 354 *e*P **P** **17 23 56.6 +0.4**
comp=Z,293nm,0.9s,SNR=41
TRO *e*S **S** **17 28 08.3 +0.8**
SNR=40
ISHV Shirvan 24.57 98 *e*P **P** **17 24 00.0 +0.7**
ISHV Shirvan 24.57 98 *e*P **P** **17 24 00.0 +0.7**
ABKT Ailbek 24.67 97 P **P** **17 24 02.4 +2.4**
comp=Z,1µm,0.7s,SNR=55
MVO Moncorvo 24.68 271 *i* P **P** **17 23 59.6 -0.6**
comp=Z,125nm,1.3s
MVO *e*pP **pP** **17 24 23.1 +0.6**
MVO Moncorvo 24.68 271 *e*PcP **PcP** **17 27 34.8 +0.2**
MVO Moncorvo 24.68 271 *e*PcP **PcP** **17 27 34.8 +0.2**
VAL Valentia 24.81 298‖*i*P **P** **17 24 01.5 +0.4**
ISFR Sfrayin 25.01 99 *e*P **P** **17 24 05.2 +1.7**
ISFR Sfrayin 25.01 99 *e*P **P** **17 24 05.2 +1.7**
PVRL Vila Real 25.12 272 *e*P **P** **17 24 03.6 -0.5**
comp=Z,60nm,1.1s
PVRL Vila Real 25.12 272 *e*PcP **PcP** **17 27 36.4 +0.8**
PVRL Vila Real 25.12 272 *e*P **P** **17 24 03.6 -0.5**
comp=Z,60nm,1.1s
PVRL Vila Real 25.12 272 *e*PcP **PcP** **17 27 36.4 +0.8**
POLO Lamas de Olo 25.14 272 *e*P **P** **17 24 03.6 -0.8**
comp=Z,31nm,1.2s
POLO *e*pP **pP** **17 24 29.4 +2.5**
POLO Lamas de Olo 25.14 272 *e*PcP **PcP** **17 27 36.2 +0.5**
POLO Lamas de Olo 25.14 272 *e*P **P** **17 24 03.6 -0.8**
comp=Z,31nm,1.2s
POLO *e*pP **pP** **17 24 29.4 +2.5**
POLO Lamas de Olo 25.14 272 *e*PcP **PcP** **17 27 36.2 +0.5**
PCAB Cabril 25.18 273 *e*P **P** **17 24 04.3 -0.4**
comp=Z,99nm,1.2s
PCAB Cabril 25.18 273 *e*PcP **PcP** **17 27 35.9 +0.2**
PCAB Cabril 25.18 273 *e*P **P** **17 24 04.3 -0.4**
comp=Z,99nm,1.2s
PCAB Cabril 25.18 273 *e*PcP **PcP** **17 27 35.9 +0.2**
PGAV Gavieira, Arco 25.26 274 *e*P **P** **17 24 04.9 -0.6**
comp=Z,107nm,1.1s
PGAV *e*pP **pP** **17 24 30.5 +2.5**
PGAV Gavieira, Arco 25.26 274 *e*PcP **PcP** **17 27 36.2 +0.3**
PGAV Gavieira, Arco 25.26 274 *e*P **P** **17 24 04.9 -0.6**
comp=Z,107nm,1.1s
PGAV *e*pP **pP** **17 24 30.5 +2.5**
PGAV Gavieira, Arco 25.26 274 *e*PcP **PcP** **17 27 36.2 +0.3**
MTE Manteigas 25.34 270 *i* P **P** **17 24 05.5 -0.6**
comp=Z,133nm,0.8s
MTE Manteigas 25.34 270⇑*i*P **P** **17 24 05.2 -0.9**
comp=Z,89nm,0.8s
MTE *e*pP **pP** **17 24 29.5 +0.9**
MTE *e*PcP **PcP** **17 27 36.3 +0.2**
MTE Manteigas 25.34 270⇑*i*P **P** **17 24 05.2 -0.9**
comp=Z,89nm,0.8s
MTE *e*pP **pP** **17 24 29.5 +0.9**
ICHK Chekchek 25.35 112 *e*P **P** **17 24 07.9 +1.4**
ICHK Chekchek 25.35 112 *e*P **P** **17 24 07.9 +1.4**

LIJA Lijar 25.42 261 *i* P **P** **17 24 05.0 -1.9**
PVIS Viseu 25.46 271 *e*P **P** **17 24 06.5 -0.7**
comp=Z,109nm,1.3s
PVIS *e*pP **pP** **17 24 31.9 +2.2**
PVIS Viseu 25.46 271 *e*PcP **PcP** **17 27 36.8 +0.5**
PVIS Viseu 25.46 271 *e*P **P** **17 24 06.5 -0.7**
comp=Z,109nm,1.3s
PVIS *e*pP **pP** **17 24 31.9 +2.2**
PVIS Viseu 25.46 271 *e*PcP **PcP** **17 27 36.8 +0.5**
IKRD Kardeh 25.51 99 *e*P P 17 24 16.1 +8.2
PMRV Marv??o 25.63 268 *i* P **P** **17 24 07.8 -0.9**
comp=Z,101nm,1.1s
PMRV Marv??o 25.63 268 *e*PcP **PcP** **17 27 37.0 +0.3**
PMRV Marv??o 25.63 268 *e*PcP **PcP** **17 27 37.0 +0.3**
PTO Porto 25.79 272 *e*P **P** **17 24 10.2 +0.1**
comp=Z,83nm,1.1s
PTO Porto 25.79 272 *e*P **P** **17 24 10.2 +0.1**
comp=Z,83nm,1.1s
IPAY Payeh 26.01 99 *e*P **P** **17 24 14.9 +2.5**
PESTR Estremoz 26.01 267 *i* P **P** **17 24 11.2 -1.0**
comp=Z,125nm,0.9s
PESTR Estremoz 26.01 267 *e*PcP **PcP** **17 27 37.9 +0.3**
PESTR Estremoz 26.01 267 *e*PcP **PcP** **17 27 37.9 +0.3**
IMEH Mehriz 26.04 114 *e*P **P** **17 24 12.5 -0.2**
IMEH Mehriz 26.04 114 *e*P **P** **17 24 12.5 -0.2**
PTOM Tomar 26.26 269 *e*P **P** **17 24 13.8 -0.6**
comp=Z,67nm,1.9s
PTOM Tomar 26.26 269 *e*PcP **PcP** **17 27 38.9 +0.8**
PTOM Tomar 26.26 269 *e*P **P** **17 24 13.8 -0.6**
comp=Z,67nm,1.9s
PTOM Tomar 26.26 269 *e*PcP **PcP** **17 27 38.9 +0.8**
PMTG Montargil 26.37 268 *i* P **P** **17 24 14.3 -1.1**
comp=Z,91nm,1.1s
PMTG Montargil 26.37 268 *e*PcP **PcP** **17 27 38.5 +0.1**
PMTG Montargil 26.37 268 *e*PcP **PcP** **17 27 38.5 +0.1**
ISRO Mashad 26.41 99 *e*P **P** **17 24 16.4 +0.5**
ISRO Mashad 26.41 99 *e*P **P** **17 24 16.4 +0.5**
IMOG Moghan 26.42 100 *e*P **P** **17 24 18.4 +2.2**
IMOG Moghan 26.42 100 *e*P **P** **17 24 18.4 +2.2**
EVO Evora 26.46 267 *i* P **P** **17 24 15.0 -1.2**
comp=Z,49nm,1.0s
EVO Evora 26.46 267 *e*PcP **PcP** **17 27 39.1 +0.5**
EVO Evora 26.46 267⇑*i*P **P** **17 24 15.6 -0.6**
comp=Z,17nm,0.6s
EVO *e*R
comp=Z,283nm,18.8s
EVO Evora 26.46 267 *e*PcP **PcP** **17 27 39.1 +0.5**
ISRV Sarvestan 26.46 119 *e*P **P** **17 24 18.0 +1.3**
ISRV Sarvestan 26.46 119 *e*P **P** **17 24 18.0 +1.3**
IBAF Bafgh 26.52 112 *e*P **P** **17 24 18.4 +1.4**
IBAF Bafgh 26.52 112 *e*P **P** **17 24 18.4 +1.4**
EVOP Sao Brissos 26.54 267⇑*i*P **P** **17 24 15.6 -1.3**
EVOP pmax pmax
comp=Z,17nm,0.6s
EVOP Sao Brissos 26.54 267⇑*i*P **P** **17 24 15.6 -1.3**
comp=Z,17nm,0.6s
EVOP Sao Brissos 26.54 267⇑*i*P **P** **17 24 15.6 -1.3**
comp=Z,8.4nm,0.6s
PBEJ Beja 26.59 266 *e*P **P** **17 24 16.6 -0.7**
comp=Z,48nm,1.3s
PBEJ Beja 26.59 266 *e*PcP **PcP** **17 27 39.6 +0.7**
PBEJ Beja 26.59 266 *e*P **P** **17 24 16.6 -0.7**
comp=Z,48nm,1.3s
PBEJ Beja 26.59 266 *e*PcP **PcP** **17 27 39.6 +0.7**
PVAQ Vaqueiros 26.78 264 *i* P **P** **17 24 18.1 -1.0**
comp=Z,65nm,1.2s
PVAQ *e*pP **pP** **17 24 45.3 +3.7**
IMYA Miami 26.83 98 *e*P **P** **17 24 21.5 +1.8**
IMYA Miami 26.83 98 *e*P **P** **17 24 21.5 +1.8**
PCVE Castro Verde 26.89 265 *e*P **P** **17 24 19.5 -0.6**
PCVE Castro Verde 26.89 265 *e*PcP **PcP** **17 27 40.4 +0.7**
PCVE Castro Verde 26.89 265 *e*P **P** **17 24 19.5 -0.6**
PCVE Castro Verde 26.89 265 *e*PcP **PcP** **17 27 40.4 +0.7**
PBDV Barranco-do-Ve 27.01 264 *e*P **P** **17 24 20.6 -0.5**
comp=Z,90nm,1.5s
PBDV Barranco-do-Ve 27.01 264 *e*PcP **PcP** **17 27 41.3 +1.3**
PBDV Barranco-do-Ve 27.01 264 *e*P **P** **17 24 20.6 -0.5**
comp=Z,90nm,1.5s
PBDV Barranco-do-Ve 27.01 264 *e*PcP **PcP** **17 27 41.3 +1.3**
PNCL Nicolau / Gran 27.01 266 *i* P **P** **17 24 20.7 -0.4**
comp=Z,62nm,1.1s
PNCL *e*pP **pP** **17 24 45.6 +1.9**
PNCL Nicolau / Gran 27.01 266 *e*PcP **PcP** **17 27 40.6 +0.7**
PNCL Nicolau / Gran 27.01 266 *e*PcP **PcP** **17 27 40.6 +0.7**
MDT Midelt 27.15 253 P **P** **17 24 22.3 -0.3**
MDT PcP **PcP** **17 27 40.8 +0.3**
MDT Midelt 27.15 253 P **P** **17 24 22.3 -0.3**
comp=Z,31nm,0.8s,baz=72,slow=11,SNR=9.6
MDT PcP **PcP** **17 27 40.8 +0.3**
comp=Z,9.9nm,0.7s,baz=79,slow=3.4,SNR=4.5
MDT LR LR 17 36 40.8
comp=Z,142nm,18.1s,baz=339,slow=40
MDT Midelt 27.15 253 P **P** **17 24 22.3 -0.3**
MORF Marmelete 27.48 265 *e*PcP **PcP** **17 27 42.2 +1.1**
MORF Marmelete 27.48 265 *e*PcP **PcP** **17 27 42.2 +1.1**
PFVI Vila Bisbo 27.68 265 *e*PcP **PcP** **17 27 42.4 +0.8**
PFVI Vila Bisbo 27.68 265 *e*PcP **PcP** **17 27 42.4 +0.8**
TAM Tamanrasset 28.54 224⇑*i*P **P** **17 24 36.4 +1.3**
TAM *e**PP **pP** **17 24 59.3 +1.5**
TAM *e* 17 27 43.6
TAM pmax pmax
comp=Z,23nm,1.1s
TAM Tamanrasset 28.54 224⇑*i*P **P** **17 24 36.4 +1.3**
comp=Z,23nm,1.1s
TAM *e*pP **pP** **17 24 59.3 +1.5**
TAM *e*PcP **PcP** **17 27 43.6 -0.5**
TAM Tamanrasset 28.54 224⇑*i*P **P** **17 24 36.4 +1.3**
comp=Z,23nm,1.1s
TAM *e*pP **pP** **17 24 59.3 +1.5**
IDAH Dahanechah 28.67 105 *e*P **P** **17 24 38.0 +1.8**
IDAH Dahanechah 28.67 105 *e*P **P** **17 24 38.0 +1.8**
BRVK Borovoye 29.03 59*c* *i*P **P** **17 24 40.2 +1.2**
BRVK pmax pmax
comp=Z,53nm,0.5s
BRVK Borovoye 29.03 59⇑*i*P **P** **17 24 40.1 +1.1**
comp=Z,109nm,0.8s
BRVK *e*pP **pP** **17 24 59.9 -1.8**
BRVK *e*sP **sP** **17 25 09.3 -4.3**
BRVK Borovoye 29.03 59 P **P** **17 24 40.6 +1.6**
SNR=38
BRVK Borovoye 29.03 59 P **P** **17 24 40.0 +1.1**
comp=Z,711nm,0.7s,SNR=60
BRVK Borovoye 29.03 59⇑*i*P **P** **17 24 40.1 +1.1**
comp=Z,109nm,0.8s
BRVK *e*pP **pP** **17 24 59.9 -1.8**
BJO Bjornoya 29.08 356 *e*P **P** **17 24 35.9 -3.2**
BVA0 Borovoye Array 29.10 59 *i* P **P** **17 24 40.3 +0.7**
BVA0 pmax pmax
comp=Z,8.0nm,0.8s
BVAR Borovoye Array 29.10 59 P **P** **17 24 40.7 +1.2**
BVAR Borovoye Array 29.10 59 P **P** **17 24 40.7 +1.2**
BVAR PKiKP **PKiKP** **17 35 18.0 -0.2**
BVAR *e* 17 56 47.0
BVAR Borovoye Array 29.10 59 P **P** **17 24 40.7 +1.2**
comp=Z,40nm,0.8s,baz=274,slow=7.5,SNR=264
BVAR PKiKP **PKiKP** **17 35 18.0 -0.2**
comp=Z,0.4nm,0.4s,baz=245,slow=2.8,SNR=4.0
BVAR LR LR 17 37 19.8
comp=Z,172nm,21.3s,baz=269,slow=38
BVAR P3KPbc 17 56 47.0
comp=Z,2.8nm,0.7s,baz=97,slow=4.8,SNR=21
BVAR Borovoye Array 29.10 59 P **P** **17 24 40.7 +1.2**
VOSK Vostochnaya 29.48 60 P **P** **17 24 43.2 +0.3**
VOSK pmax pmax
comp=Z,45nm,1.0s
JMIC Jan Mayen 30.45 338 LR LR 17 37 02.4
comp=Z,222nm,21.3s,baz=75,slow=36
BANOM Banah 30.91 120 P **P** **17 24 56.6 +0.7**
SNR=26
BANOM Banah 30.91 120 P **P** **17 24 56.3 +0.5**
SNR=69
NAZ Nazwa, Dubai 31.22 122 P **P** **17 24 59.0 +0.5**
SNR=27
NAZ Nazwa, Dubai 31.22 122 P **P** **17 24 59.0 +0.5**
SNR=27
KK31 Karatay Array 31.23 79 *i* P **P** **17 24 59.4 +0.9**
KK31 pmax pmax
comp=Z,24nm,0.5s
ASUD Al Ashush, Dub 31.29 122 P **P** **17 25 00.5 +1.4**
SNR=26
ASUD Al Ashush, Dub 31.29 122 P **P** **17 25 00.2 +1.1**
FAQ Al Faqa, Dubai 31.36 122 P **P** **17 25 00.1 +0.4**
HATD Hatta, Dubai 31.62 121 P **P** **17 25 02.7 +0.6**
SNR=17

HATD Hatta, Dubai 31.62 121 P **P** **17 25 02.4 +0.3**
ASHO Ashiyiah 31.68 121 P **P** **17 25 03.1 +0.5**
SNR=18
ASHO Ashiyiah 31.68 121 P **P** **17 25 02.8 +0.2**
SNR=9.3
BORG Borgarnes 32.21 323 *e*P **P** **17 25 09.1 +2.3**
comp=Z,330nm,1.5s
BORG Borgarnes 32.21 323 P **P** **17 25 09.5 +2.7**
comp=Z,636nm,1.4s,SNR=6.4
BORG Borgarnes 32.21 323 P **P** **17 25 09.4 +2.7**
comp=Z,86nm,1.0s,baz=114,slow=6.3,SNR=13
BORG LR LR 17 38 27.3
comp=Z,400nm,18.7s,baz=51,slow=37
BORG Borgarnes 32.21 323 *e*P **P** **17 25 09.1 +2.3**
comp=Z,330nm,1.5s
ARQ Araqi 32.98 122 P **P** **17 25 14.6 +0.7**
SNR=18
ARQ Araqi 32.98 122 P **P** **17 25 14.6 +0.7**
SNR=18
HOQ Hoqain 33.26 121 P **P** **17 25 16.6 +0.2**
SNR=18
HOQ Hoqain 33.26 121 P **P** **17 25 16.6 +0.2**
SNR=18
EKS2 Erkin-Say 33.63 78 P **P** **17 25 21.6 +2.0**
SNR=116
AML Almayashu 33.77 79 *i* P **P** **17 25 22.6 +1.4**
AML Almayashu 33.77 79 P **P** **17 25 22.6 +1.4**
SNR=57
AML Almayashu 33.77 79 P **P** **17 25 22.6 +1.4**
SNR=57
KBS Kingsbay 33.79 355⇑*i*P **P** **17 25 21.6 +1.2**
KBS AMB AMB 17 25 22.9
comp=Z,214nm,0.8s
KBS *e*S **S** **17 30 39.9 +3.6**
KBS Kingsbay 33.79 355*ce*P **P** **17 25 21.6 +1.2**
KBS pmax pmax
comp=Z,349nm,1.7s
KBS Kingsbay 33.79 355⇑*i*P **P** **17 25 21.5 +1.2**
comp=Z,141nm,0.6s
KBS *e*PcP **PcP** **17 27 57.2 +0.2**
KBS *e*ScP **ScP** **17 31 31.5 -0.7**
KBS Kingsbay 33.79 355⇑*i*P **P** **17 25 21.5 +1.1**
comp=Z,141nm,0.6s
BSY Bisya 33.83 122 P **P** **17 25 21.6 +0.3**
SNR=21
BSYO Bisya 33.86 122 P **P** **17 25 21.6 0.0**
SNR=21
USP Ospenovka 33.90 77 *i* P **P** **17 25 22.7 +0.9**
USP Ospenovka 33.90 77 P **P** **17 25 22.7 +0.9**
SNR=30
KBL Kabul 33.99 94⇑*i*P **P** **17 25 24.8 +1.9**
KBL pmax pmax
comp=Z,68nm,1.2s
KBL Kabul 33.99 94⇑*i*P **P** **17 25 24.8 +1.9**
comp=Z,68nm,1.2s
KBL Kabul 33.99 94⇑*i*P **P** **17 25 24.8 +1.9**
comp=Z,68nm,1.2s
SMDO Samad 34.10 121 P **P** **17 25 24.1 +0.3**
SNR=40
SMDO Samad 34.10 121 P **P** **17 25 24.1 +0.3**
SNR=40
SCO Scoresbysund 34.11 333⇑*i*P **P** **17 25 25.1 +1.9**
SCO pmax pmax
comp=Z,34nm,0.9s
SCO Scoresbysund 34.11 333⇑*i*P **P** **17 25 25.1 +1.9**
comp=Z,34nm,0.9s
SCO Scoresbysund 34.11 333 *i* P **PcP** **17 27 58.4 +0.4**
comp=Z,16nm,0.9s
SCO Scoresbysund 34.11 333⇑*i*P **P** **17 25 25.1 +1.9**
comp=Z,34nm,0.9s
AAK Ala-Archa 34.13 78*c* *i*P **P** **17 25 25.9 +2.0**
AAK pmax pmax
comp=Z,291nm,1.0s
AAK Ala-Archa 34.13 78⇑*i*P **P** **17 25 25.4 +1.5**
comp=Z,148nm,1.0s
AAK *e*PP **PP** **17 26 43.8 +0.8**
AAK *e* 17 56 25.3
AAK Ala-Archa 34.13 78 P **P** **17 25 26.3 +2.3**
SNR=102
AAK Ala-Archa 34.13 78 P **P** **17 25 26.1 +2.1**
SNR=90
AAK Ala-Archa 34.13 78 P **P** **17 25 26.0 +2.0**
comp=Z,738nm,1.1s
AAK Ala-Archa 34.13 78 P **P** **17 25 26.0 +2.1**
comp=Z,124nm,1.0s,baz=246,slow=4.1,SNR=334
AAK LR LR 17 40 12.9
comp=Z,150nm,21.3s,baz=289,slow=38
AAK P3KPbc 17 56 25.3
comp=Z,0.5nm,0.4s,baz=131,slow=5.2,SNR=4.5
AAK Ala-Archa 34.13 78⇑*i*P **P** **17 25 25.5 +1.5**
comp=Z,148nm,1.0s
FRU Bishkek 34.14 77⇑*i*P **P** **17 25 25.0 +1.1**
FRU *e* 17 26 42.0
FRU *e*S **S** **17 30 45.5 +3.0**
FRU *e*SS **SnSn** **17 32 57.0 -4.1**
FRU pmax pmax
comp=Z,250nm,1.9s
CHMS Chumysh 34.17 77 *i* P **P** **17 25 26.8 +2.6**
CHMS Chumysh 34.17 77 P **P** **17 25 26.8 +2.6**
SNR=7.8
KURBB Kurchatov Arra 34.43 63 P **P** **17 25 26.9 +0.7**
comp=Z,28nm,0.6s,baz=287,slow=9.1,SNR=297
KURBB P3KPbc 17 56 23.5
comp=Z,1.3nm,0.7s,baz=102,slow=3.9,SNR=20
KBK Karagaybulak 34.43 77 *i* P **P** **17 25 28.4 +1.8**
KBK Karagaybulak 34.43 77 P **P** **17 25 28.4 +1.8**
SNR=21
KURK Kurchatov 34.47 62*c* *i*P **P** **17 25 27.1 +0.5**
KURK pmax pmax
comp=Z,31nm,0.7s
KURK Kurchatov 34.47 62 P **P** **17 25 26.9 +0.4**
KURK *e*PP **PnPn** **17 26 41.9 -3.0**
KURK *e* 17 56 23.5
KURK Kurchatov 34.47 62 P **P** **17 25 27.6 +1.0**
SNR=24
KURK Kurchatov 34.47 62 P **P** **17 25 27.6 +1.0**
comp=Z,306nm,0.6s,SNR=52
KURK Kurchatov 34.47 62 P **P** **17 25 26.9 +0.4**
JMDO Jabal Madar 34.65 122 P **P** **17 25 29.1 +0.6**
SNR=47
JMDO Jabal Madar 34.65 122 P **P** **17 25 29.1 +0.6**
SNR=47
TKM2 Tokmak 2 34.78 77 *i* P **P** **17 25 30.4 +0.8**
TKM2 Tokmak 2 34.78 77 P **P** **17 25 30.4 +0.8**
SNR=40
KZA Kyzart 34.86 78 *i* P **P** **17 25 32.9 +2.3**
KZA Kyzart 34.86 78 P **P** **17 25 32.9 +2.3**
SNR=79
WBK Wadi Bani Khal 34.99 120 P **P** **17 25 32.8 +1.4**
SNR=8.5
WBK Wadi Bani Khal 34.99 120 P **P** **17 25 32.8 +1.4**
SNR=8.5
ULHL Ulahol 35.48 77 *i* P **P** **17 25 37.3 +1.7**
ULHL Ulahol 35.48 77 P **P** **17 25 37.3 +1.7**
SNR=23
PMAR Madeira 35.64 264 *e*P **P** **17 25 37.7 +0.6**
PMAR Madeira 35.64 264 *e*P **P** **17 25 37.7 +0.6**
ABTO Aybut 35.99 133 P **P** **17 25 40.9 +0.9**
SNR=18
ABTO Aybut 35.99 133 P **P** **17 25 40.9 +0.9**
SNR=18
DAG Danmarks Havn 36.10 344⇑*i*P **P** **17 25 41.2 +0.9**
DAG pmax pmax
comp=Z,41nm,0.8s
DAG Danmarks Havn 36.10 344⇑*i*P **P** **17 25 41.2 +0.9**
comp=Z,54nm,0.8s
RBK Rabkut 36.34 132 P **P** **17 25 42.4 -0.6**
SNR=12
RBK Rabkut 36.34 132 P **P** **17 25 42.4 -0.6**
SNR=12
KSH Kashi 36.43 82⇑*i*P **P** **17 25 44.5 +0.9**
KSH pP **pP** **17 26 07.0 +0.1**
KSH sP **sP** **17 26 18.0 -0.6**
KSH PP **PnPn** **17 27 10.0 +0.8**
KSH PcP **PcP** **17 28 08.5 +2.9**
KSH S **S** **17 31 16.5 -1.2**
KSH ScP **ScP** **17 31 43.3 +0.7**
KSH sS **sS** **17 31 54.5 -3.4**
KSH SS SnSn 17 33 45.3 -11
KSH ScS **ScS** **17 35 49.0 -0.2**
KSH pmax pmax
comp=Z,40nm,1.3s
KSH LR LR
comp=N,210nm,5.1s
KSH LR LR
comp=E,210nm,7.7s

KSH LR LR
comp=Z,150nm,7.9s
NVS Novosibirsk 36.44 54⇑ *iP* **P 17 25 45.0 +1.6**
NVS *i* *PP **pP** **17 26 06.6 0.0**
NVS *i* 17 27 04.7
NVS *i* PPP PPP 17 27 27.4
NVS *eS* **S 17 31 19.7 +2.5**
NVS pmax pmax
comp=N,10.0nm,1.2s
NVS pmax pmax
comp=Z,202nm,1.2s
NVS pmax pmax
comp=E,84nm,1.0s
NVS pmax pmax
comp=E,51nm,1.5s
NVS pmax pmax
comp=Z,79nm,1.5s
NVS pmax pmax
comp=N,20nm,1.3s
NVS smax smax
comp=N,40nm,2.2s
NVS smax smax
comp=E,27nm,2.8s
ZAA0 Zalesovo Array 37.52 56⇑ *iP* **P 17 25 53.1 +0.6**
ZAA0 *epP* **pP 17 26 15.3 -0.5**
ZAA0 *ePP* **PP 17 27 16.7 -3.1**
ZAA0 Zalesovo Array 37.52 56⇑ *iP* **P 17 25 53.1 +0.6**
ZAA0 *epP* **pP 17 26 15.3 -0.5**
ZALV Zalesovo Beam 37.52 56 P **P 17 25 53.4 +0.9**
ZALV *PP **pP** **17 26 15.8 0.0**
ZALV Zalesovo Beam 37.52 56 P **P 17 25 53.4 +0.9**
ZALV pP **pP** **17 26 15.8 0.0**
ZALV *e* 17 56 09.4
ZALV Zalesovo Beam 37.52 56 P **P 17 25 53.4 +0.9**
comp=E,122nm,0.7s,baz=282,slow=9.2,SNR=701
ZALV pP **pP** **17 26 15.8 0.0**
comp=E,58nm,0.7s,baz=281,slow=9.4,SNR=9.1
ZALV LR LR 17 43 22.8
comp=E,213nm,18.4s,baz=118,slow=39
ZALV P3KPbc 17 56 09.4
comp=E,0.9nm,0.6s,baz=104,slow=5.0,SNR=5.7
ZALV Zalesovo Beam 37.52 56 P **P 17 25 53.3 +0.8**
ZALV pP **pP** **17 26 15.8 0.0**
MK31 Makanchi Array 37.88 68⇑ *iP* **P 17 25 56.5 +0.8**
MK31 Makanchi Array 37.88 68⇑ *iP* **P 17 25 56.5 +0.8**
MK31 Makanchi Array 37.88 68⇑ *iP* **P 17 25 56.5 +0.8**
MKAR Makanchi Array 37.88 68 P **P 17 25 56.8 +1.1**
MKAR 17 28 08.3
MKAR Makanchi Array 37.88 68 P **P 17 25 56.8 +1.1**
MKAR PcP **PcP** **17 28 08.3 -1.4**
MKAR *e* 17 56 10.2
MKAR Makanchi Array 37.88 68 P **P 17 25 56.8 +1.1**
comp=E,58nm,0.6s,baz=271,slow=8.4,SNR=745
MKAR PcP **PcP** **17 28 08.3 -1.4**
comp=E,5.5nm,0.6s,baz=285,slow=3.3,SNR=3.9
MKAR LR LR 17 42 43.1
comp=E,218nm,21.3s,baz=287,slow=38
MKAR P3KPbc 17 56 10.2
comp=E,1.0nm,0.6s,baz=103,slow=6.5,SNR=11
MKAR Makanchi Array 37.88 68 P **P 17 25 56.8 +1.1**
MKAR Makanchi Array 37.88 68 PcP **PcP 17 28 08.3 -1.4**
TOA0 Torodi Ar. Sit 38.67 221⇑ *iP* **P 17 26 02.5 -0.1**
TOA0 *epP* **pP 17 26 25.1 -0.9**
TOA0 *ePcP* **PcP 17 28 11.5 -1.1**
TOA0 *eScP* **ScP 17 31 48.4 -2.7**
TOA0 Torodi Ar. Sit 38.67 221⇑ *iP* **P 17 26 02.5 -0.1**
TOA0 *epP* **pP 17 26 25.1 -0.9**
TORD Torodi Ar. Bea 38.67 221 P **P 17 26 02.8 +0.2**
TORD pP **pP 17 26 26.1 +0.1**
TORD PcP **PcP 17 28 11.9 -0.7**
TORD S **S 17 31 49.0 -2.7**
TORD PKiKP **PKiKP 17 35 24.6 -1.6**
TORD Torodi Ar. Bea 38.67 221 P **P 17 26 02.8 +0.2**
comp=E,90nm,0.7s,baz=25,slow=8.7,SNR=678
TORD pP **pP 17 26 26.1 +0.1**
comp=E,58nm,0.7s,baz=29,slow=8.2,SNR=8.2
TORD PcP **PcP 17 28 11.9 -0.7**
comp=E,24nm,0.7s,baz=357,slow=2.1,SNR=9.4
TORD S **S 17 31 49.0 -2.7**
comp=E,11nm,1.1s,baz=20,slow=16,SNR=14
TORD PKiKP **PKiKP 17 35 24.6 -1.6**
comp=E,0.7nm,0.5s,baz=359,slow=1.9,SNR=5.8
TORD Torodi Ar. Bea 38.67 221 P **P 17 26 02.8 +0.2**
TORD pP **pP 17 26 26.1 +0.1**
BART Pico Bartolome 38.80 277 *eP* **P 17 26 04.8 +1.2**
comp=E,187nm,1.4s
BART Pico Bartolome 38.80 277 *eP* **P 17 26 04.8 +1.2**
comp=E,187nm,1.4s
CMLA Cha da Macela 39.06 277 *eP* P 17 26 01.6 -4.0
comp=E,307nm,1.5s
PSMN Pico do Norte, 39.11 276 *eP* **P 17 26 06.6 +0.5**
comp=E,175nm,1.5s
PSMN Pico do Norte, 39.11 276 *eP* **P 17 26 06.6 +0.5**
comp=E,175nm,1.5s
PSMA Santa Maria 39.16 276 *eP* **P 17 26 06.2 -0.2**
comp=E,166nm,1.1s
PSET Sete Cidades 39.17 277 *eP* P 17 26 02.7 -3.9
comp=E,396nm,1.2s
SUMG Summit 39.69 335⇑ *iP* **P 17 26 11.8 +0.9**
SUMG *e*PP **pP 17 26 33.9 -0.5**
SUMG *e* 17 28 15.7
SUMG pmax pmax
comp=Z,77nm,1.2s
SUMG Summit 39.69 335⇑ *iP* **P 17 26 11.8 +0.9**
comp=Z,77nm,1.2s
SUMG *epP* **pP 17 26 33.9 -0.5**
SUMG *ePcP* **PcP 17 28 15.7 +0.2**
SUMG *eScP* **ScP 17 31 52.5 -2.2**
SUMG Summit 39.69 335⇑ *iP* **P 17 26 12.1 +1.2**
comp=Z,37nm,0.9s
SUMG Summit 39.69 335⇑ *iP* **P 17 26 11.8 +0.9**
comp=Z,77nm,1.2s
SUMG *epP* **pP 17 26 33.9 -0.5**
ADH Angra Heroismo 39.82 280 *eP* P 17 26 03.7 -8.2
comp=Z,133nm,1.1s
PGRA Graciosa 40.16 280 *eP* P 17 26 06.4 -8.4
comp=Z,183nm,1.4s
PMAN Manadas 40.42 280 *eP* **P 17 26 18.2 +1.3**
comp=Z,190nm,0.8s
PMAN Manadas 40.42 280 *eP* **P 17 26 18.2 +1.3**
comp=Z,190nm,0.8s
ROSA Rosais 40.49 280 *eP* **P 17 26 18.5 +1.1**
comp=Z,137nm,0.9s
ROSA Rosais 40.49 280 *eP* **P 17 26 18.5 +1.1**
comp=Z,137nm,0.9s
PICO Pico 40.72 280 *eP* **P 17 26 20.6 +1.2**
PICO Pico 40.72 280 *eP* **P 17 26 20.6 +1.2**
PCAN Candelaria 40.77 280 *eP* **P 17 26 20.6 +0.8**
comp=Z,311nm,1.0s
PCAN Candelaria 40.77 280 *eP* **P 17 26 20.6 +0.8**
comp=Z,311nm,1.0s
PCED Cedros 40.85 280 *eP* **P 17 26 21.1 +0.7**
comp=Z,223nm,0.6s
PCED Cedros 40.85 280 *eP* **P 17 26 21.1 +0.7**
comp=Z,223nm,0.6s
CALA Caldeira 40.87 280 *eP* **P 17 26 22.3 +1.6**
CALA Caldeira 40.87 280 *eP* **P 17 26 22.3 +1.6**
WMQ Urumqi 42.53 70 P **P 17 26 36.0 +1.8**
WMQ pP **pP 17 26 59.0 +1.1**
WMQ sP **sP 17 27 11.0 +1.5**
WMQ PP **PP 17 28 19.0 +4.5**
WMQ PcP **PcP 17 28 29.0 +4.2**
WMQ ScP **ScP 17 32 08.0 +1.9**
WMQ S **S 17 32 50.0 +1.2**
WMQ sS **sS 17 33 30.0 +0.3**
WMQ SS **SS 17 35 56.0 -5.8**
WMQ ScS **ScS 17 36 26.0 +1.1**
WMQ pmax pmax
comp=Z,130nm,1.0s
WMQ pmax pmax
comp=Z,140nm,5.0s
WMQ LR LR
comp=N,460nm,16.0s
WMQ LR LR
comp=E,620nm,16.0s
WMQ LR LR
comp=Z,320nm,16.0s
DDI Dehra Dun 42.66 93 *eP* **P 17 26 34.5 -0.8**
NDI New Delhi 43.05 95 *eP* **P 17 26 38.0 -0.4**
SFJD Kangerlussuaq 44.18 327 *eP* **P 17 26 46.2 -0.7**
comp=Z,22nm,0.8s
SFJD Kangerlussuaq 44.18 327 *i* P **P 17 26 46.2 -0.7**
comp=Z,17nm,0.7s
SFJD Kangerlussuaq 44.18 327 P **P 17 26 46.5 -0.4**
comp=Z,15nm,0.7s,baz=70,slow=7.4,SNR=9.9
SFJD Kangerlussuaq 44.18 327 *eP* **P 17 26 46.2 -0.7**
comp=Z,22nm,0.8s
ALE Alert 44.85 349 P P 17 26 53.0 +0.9
comp=Z,858nm,1.0s
MBAR Mbarara 46.26 174 P P 17 27 00.1 -4.1
comp=Z,0.6nm,0.6s
MBAR Mbarara 46.26 174 P **P 17 27 03.7 -0.5**
comp=Z,72nm,0.9s,SNR=7.4
PYUN Piuthan 47.44 92⇑ *iP* **P 17 27 14.8 +1.4**
comp=Z,958nm,1.0s
MOY Mondy 47.54 54 *eP* **P 17 27 14.9 +1.2**
MOY pmax pmax
comp=Z,57nm,2.0s
BBTS Babate 47.55 244 P **P 17 27 14.8 +0.8**
BBTS Babate 47.55 244 P **P 17 27 14.8 +0.8**
comp=Z,216nm,0.8s,baz=63,slow=0.8,SNR=48
BBTS Babate 47.55 244 P **P 17 27 14.9 +0.8**
KMBO Kilima Mbogo 47.59 165⇑ *iP* **P 17 27 15.4 +0.8**
comp=Z,8.9nm,1.2s
KMBO *epP* **pP 17 27 38.9 +0.1**
KMBO *ePcP* **PcP 17 28 42.7 -0.2**
KMBO *ePP* **PP 17 29 10.5 +3.5**
KMBO *eScP* **ScP 17 32 25.5 -1.9**
KMBO Kilima Mbogo 47.59 165 P **P 17 27 15.7 +1.1**
comp=Z,4.3nm,1.0s,baz=341,slow=7.1,SNR=8.6
KMBO pP **pP 17 27 40.1 +1.3**
comp=Z,4.2nm,0.8s,baz=2.1,slow=10,SNR=5.2
KMBO PcP **PcP 17 28 43.8 +0.9**
comp=Z,12nm,1.0s,baz=6.1,slow=7.2,SNR=8.7
KMBO Kilima Mbogo 47.59 165⇑ *iP* **P 17 27 15.4 +0.8**
comp=Z,8.9nm,1.2s
KMBO *epP* **pP 17 27 38.9 +0.1**
KMBO *eScP* **ScP 17 32 25.5 -1.9**
DANN Dangsing 47.83 91⇑ *iP* **P 17 27 17.8 +1.3**
LIC Lamto 47.90 225⇑ *iP* **P 17 27 16.1 -0.6**
comp=Z,153nm,0.6s,baz=32
LIC *eR* 17 27 52.0
comp=Z,138nm,19.2s
LIC Lamto 47.90 225⇑ *iP* **P 17 27 16.1 -0.6**
comp=Z,153nm,0.6s
LIC Lamto 47.90 225⇑ *iP* **P 17 27 16.1 -0.6**
comp=Z,77nm,0.6s,baz=32
KOLN Koldanda 48.07 91⇑ *iP* **P 17 27 19.3 +1.1**
comp=Z,341nm,0.9s
TLY Talaya 49.03 53 *c iP* **P 17 27 27.0 +1.9**
TLY *e* 17 28 07.0
TLY *e* 17 28 48.3
TLY *e* 17 29 16.1
TLY *eS* **S 17 34 25.7 +4.0**
TLY pmax pmax
comp=Z,53nm,0.7s
TLY MLR MLR
comp=Z,241nm,19.0s
TLY Talaya 49.03 53 P **P 17 27 27.4 +2.3**
comp=Z,561nm,0.7s,SNR=18
IRK Irkutsk 49.15 53⇓ *iP* **P 17 27 25.5 -0.4**
IRK *e* 17 27 52.0
IRK pmax pmax
comp=Z,75nm,0.8s
DMN Daman 49.22 91⇑ *iP* **P 17 27 28.3 +1.2**
KKN Kakani 49.23 90 *eP* **P 17 27 28.0 +0.8**
comp=Z,383nm,0.7s
ZAK Zakamensk 49.39 55⇓ *iP* **P 17 27 29.4 +1.5**
ZAK pmax pmax
comp=Z,26nm,1.0s
PKIN Phulchoki 49.44 90⇑ *iP* **P 17 27 29.5 +0.7**
comp=Z,120nm,0.6s
PKI Pulchoki 49.46 90⇑ *iP* **P 17 27 29.7 +0.7**
comp=Z,167nm,0.8s
GUN Gumba 49.58 90⇑ *iP* **P 17 27 30.9 +0.9**
RAMN Ramite 50.67 90⇑ *iP* **P 17 27 38.8 +0.7**
TIXI Tiksi 51.00 23 *eP* **P 17 27 40.5 +0.9**
TIXI pmax pmax
comp=Z,38nm,0.9s
TIXI Tiksi 51.00 23 *eP* **P 17 27 40.5 +0.9**
comp=Z,38nm,0.9s
TIXI Tiksi 51.00 23 *eP* **P 17 27 40.5 +0.9**
comp=Z,38nm,0.9s
TAPN Taplejung 51.20 89⇑ *iP* **P 17 27 43.1 +1.0**
ODAN Odare 51.28 90⇑ *iP* **P 17 27 43.6 +1.0**
HYB Hyderabad 51.39 106⇑ *iP* **P 17 27 42.0 -1.3**
comp=Z,75nm,1.0s
HYB *ePcP* **PcP 17 28 55.0 -1.6**
SACV Santiago Islan 51.89 251 *eP* **P 17 27 46.1 -0.9**
comp=Z,73nm,0.6s
SACV Santiago Islan 51.89 251 P P 17 27 47.6 +0.6
comp=Z,758nm,0.6s,SNR=6.0
SACV Santiago Islan 51.89 251 *eP* **P 17 27 46.1 -0.9**
comp=Z,73nm,0.6s
LSA Lhasa 52.19 84 P **P 17 27 51.3 +1.6**
LSA pmax pmax
comp=Z,200nm,0.8s
LSA Lhasa 52.19 84 *eP* **P 17 27 51.2 +1.6**
LSA pmax pmax
comp=Z,143nm,0.8s
LSA Lhasa 52.19 84 *eP* **P 17 27 51.2 +1.6**
comp=Z,143nm,0.8s
LSA Lhasa 52.19 84 *eP* **P 17 27 51.2 +1.6**
comp=Z,143nm,0.8s
SONM Songino Array 52.39 57 P **P 17 27 51.6 +1.1**
SONM PcP **PcP 17 29 00.6 +0.6**
SONM Songino Array 52.39 57 P **P 17 27 51.6 +1.1**
comp=Z,66nm,0.8s,baz=293,slow=8.5,SNR=240
SONM PcP **PcP 17 29 00.6 +0.6**
comp=Z,7.7nm,0.8s,baz=260,slow=3.0,SNR=6.1
SONM Songino Array 52.39 57 P **P 17 27 51.6 +1.1**
GTA Gaotai 52.60 69⇑ P **P 17 27 53.3 +1.1**
GTA pP **pP 17 28 17.0 +0.2**
GTA sP **sP 17 28 27.8 -0.4**
GTA S **S 17 35 13.3 +1.7**
GTA sS **sS 17 35 53.8 +0.1**
GTA SS **SS 17 38 52.3 +1.6**
GTA pmax pmax
comp=Z,52nm,0.9s
GTA pmax pmax
comp=Z,180nm,8.1s
GTA LR LR
comp=N,190nm,15.4s
GTA LR LR
comp=E,170nm,14.3s
GTA LR LR
comp=Z,320nm,19.9s
ULN Ulaanbaatar 52.76 57⇑ *iP* **P 17 27 54.2 +1.0**
comp=Z,39nm,1.0s
ULN pP **pP 17 28 20.5 +2.7**
ULN Ulaanbaatar 52.76 57 P **P 17 27 54.7 +1.5**
SNR=18
ULN Ulaanbaatar 52.76 57 P P 17 27 53.9 +0.7
comp=Z,38nm,1.1s,comp=Z,543nm
ULN Ulaanbaatar 52.76 57⇑ *iP* **P 17 27 54.2 +1.0**
comp=Z,39nm,1.0s
RES Resolute Bay 53.80 344⇑ *iP* **P 17 28 00.8 +0.6**
comp=Z,37nm,0.8s
RES *ePP* PP 17 30 07.2 +5.4
RES Resolute Bay 53.80 344⇑ *iP* **P 17 28 00.8 +0.6**
comp=Z,37nm,0.8s
CIT Chita 54.31 49 *eP* P 17 27 57.0 -7.3
CIT *e* 17 28 30.6
SCHQ Schefferville 56.08 316⇑ *iP* **P 17 28 15.8 -1.2**
comp=Z,55nm,0.8s
SCHQ *epP* **pP 17 28 41.8 0.0**
SCHQ *ePcP* **PcP 17 29 13.3 -0.6**
SCHQ Schefferville 56.08 316 P **P 17 28 16.2 -0.8**
comp=Z,47nm,0.7s,baz=57,slow=6.3,SNR=101
SCHQ Schefferville 56.08 316⇑ *iP* **P 17 28 15.8 -1.2**
comp=Z,55nm,0.8s
SCHQ *epP* **pP 17 28 41.8 0.0**
YAK Yakutsk 56.36 33 *ceP* **P 17 28 18.5 -0.3**
YAK *e*PP **pP 17 28 44.6 +1.0**
YAK *e* 17 30 23.1
YAK *eS* **S 17 36 03.6 +2.7**
YAK pmax pmax
comp=Z,48nm,0.9s
YAK pmax pmax
comp=N,26nm,1.3s
YAK pmax pmax
comp=E,25nm,1.4s
YAK pmax pmax
comp=Z,52nm,2.4s
YAK pmax pmax
comp=E,34nm,2.0s
YAK pmax pmax
comp=N,49nm,2.5s
YAK smax smax
comp=N,170nm,6.4s
YAK smax smax
comp=E,90nm,4.0s
YAK MLR MLR
comp=Z,208nm,21.0s
YAK MLR MLR
comp=E,91nm,18.0s
YAK MLR MLR
comp=N,109nm,17.0s
MSEY Mahe Island 56.39 145⇑ *iP* **P 17 28 19.9 +0.2**
comp=N,74nm,1.0s
MSEY *epP* **pP 17 28 45.1 +0.6**
MSEY Mahe Island 56.39 145 P **P 17 28 21.0 +1.3**
SNR=5.2
MSEY Mahe Island 56.39 145 P **P 17 28 20.0 +0.3**
comp=N,288nm,0.9s,SNR=7.9
MSEY Mahe Island 56.39 145⇑ *iP* **P 17 28 19.9 +0.2**
comp=N,74nm,1.0s
MSEY *epP* **pP 17 28 45.1 +0.6**
LZH Lanzhou 57.11 70⇑ P **P 17 28 26.3 +1.6**
LZH pP **pP 17 28 50.0 +0.4**
LZH sP **sP 17 29 01.5 +0.5**
LZH PP **PP 17 30 34.0 +1.7**
LZH *eS* **S 17 36 11.5 -0.4**
LZH sS **sS 17 36 53.5 -1.1**
LZH pmax pmax
comp=Z,120nm,1.5s
LZH pmax pmax
comp=Z,230nm,7.9s
LZH LR LR
comp=N,250nm,12.5s
LZH LR LR
comp=E,260nm,14.0s
LZH LR LR
comp=Z,300nm,18.7s
CLNS Chul'man 57.31 40 *eP* **P 17 28 26.7 +1.0**
CLNS *e* 17 29 15.5
CLNS *e* 17 30 35.1
CLNS *eS* S 17 36 21.5 +7.7
CLNS pmax pmax
comp=Z,56nm,0.8s
CLNS pmax pmax
comp=E,23nm,1.0s
CLNS pmax pmax
comp=N,13nm,1.1s
CLNS pmax pmax
comp=Z,10.0nm,1.1s
CLNS pmax pmax
comp=N,5.0nm,1.1s
CLNS pmax pmax
comp=E,10.0nm,1.2s
CLNS smax smax
comp=N,228nm,18.3s
CLNS smax smax
comp=E,160nm,14.1s
CLNS MLR MLR
comp=E,264nm,18.0s
CLNS MLR MLR
comp=N,114nm,18.0s
CLNS MLR MLR
comp=Z,125nm,16.0s
BTO Baotou 58.46 63 *eP* **P 17 28 34.3 +0.2**
HIA Hailar 59.11 50 *eP* **P 17 28 38.5 +0.2**
comp=Z,84nm,1.4s
HIA Hailar 59.11 50 *eP* **P 17 28 38.5 +0.2**
comp=Z,84nm,1.4s
HHC Hu-ho-hao-te 59.28 62 *eP* **P 17 28 40.8 +1.1**
HHC sP **sP 17 29 16.3 +0.2**
HHC PcP **PcP 17 29 28.3 +1.5**
HHC PP **PP 17 30 53.0 +1.7**
HHC ScP **ScP 17 33 18.5 +0.6**
HHC PcS **PcS 17 33 28.8 -0.2**
HHC S **S 17 36 38.0 -1.9**
HHC sS **sS 17 37 19.8 -3.1**
HHC ScS **ScS 17 38 17.0 -3.0**
HHC SS **SS 17 40 35.5 +0.1**
HHC pmax pmax
comp=Z,130nm,1.1s
HHC pmax pmax
comp=Z,740nm,6.6s
HHC LR LR
comp=N,420nm,16.5s
HHC LR LR
comp=E,390nm,16.6s
HHC LR LR
comp=Z,590nm,16.6s
CD2 Chengdu 60.14 75 P **P 17 28 46.5 +0.8**
CD2 pP **pP 17 29 10.8 0.0**
CD2 sP **sP 17 29 21.8 -0.3**
CD2 PcP **PcP 17 29 31.5 +1.1**
CD2 PP **PP 17 31 02.0 +2.9**
CD2 PcS **PcS 17 33 32.3 -0.7**
CD2 S **S 17 36 49.5 -1.6**
CD2 sS **sS 17 37 31.5 -2.7**
CD2 SS **SS 17 40 48.8 -0.5**
CD2 pmax pmax
comp=Z,250nm,0.7s
CD2 pmax pmax
comp=Z,150nm,4.7s
LSZ Lusaka 60.71 178⇑ *iP* **P 17 28 50.2 +0.6**
comp=Z,74nm,1.1s
LSZ *epP* **pP 17 29 12.3 -2.4**
LSZ Lusaka 60.71 178 P **P 17 28 50.8 +1.2**
SNR=12
LSZ Lusaka 60.71 178 P **P 17 28 50.6 +1.0**
comp=Z,35nm,0.8s,baz=14,slow=8.5,SNR=55
LSZ Lusaka 60.71 178⇑ *iP* **P 17 28 50.2 +0.6**
comp=Z,74nm,1.1s
LSZ *epP* **pP 17 29 12.4 -2.4**
PQI Presque Isle 61.38 309 *eP* **P 17 28 53.2 -0.6**
PQI *epP* **pP 17 29 16.3 -2.7**
PQI Presque Isle 61.38 309 *eP* **P 17 28 53.2 -0.6**
XAN Xi'an 61.67 69 P **P 17 28 56.8 +0.8**
XAN pmax pmax
comp=Z,26nm,1.0s
XAN pmax pmax
comp=Z,48nm,6.0s
BJI Beijing 62.58 60 P **P 17 29 02.8 +0.9**
BJI pP **pP 17 29 28.3 +1.1**
BJI S **S 17 37 27.0 +5.4**
BJI pmax pmax
comp=Z,84nm,0.9s
BJI pmax pmax
comp=Z,300nm,5.9s
BJI LR LR
comp=N,280nm,18.9s
BJI LR LR
comp=E,250nm,16.6s
BJI LR LR
comp=Z,140nm,22.7s
BILL Bilibino 62.62 16⇑ *eP* **P 17 29 02.0 +0.2**
BILL *e* 17 31 18.1
BILL pmax pmax
comp=Z,54nm,1.2s
BILL Bilibino 62.62 16 *eP* **P 17 29 01.9 +0.2**
comp=Z,62nm,1.1s
BILL Bilibino 62.62 16 *eP* **P 17 29 01.9 +0.2**
comp=Z,62nm,1.1s
KMI Kunming 63.08 81 P **P 17 29 05.8 +0.1**
KMI pP **pP 17 29 31.3 +0.2**
KMI PP **PP 17 31 26.8 +1.4**
KMI pmax pmax
comp=Z,110nm,1.1s
KMI LR LR
comp=Z,200nm,34.8s
SEY Seymchan 63.47 24 *c iP* **P 17 29 08.5 +1.1**
CHTO Chiang Mai 64.58 89⇑ *iP* **P 17 29 15.4 +0.1**
CHTO *e*PP **pP 17 29 39.4 -1.3**
CHTO *e* 17 31 35.0
CHTO pmax pmax
comp=Z,113nm,0.8s
CHTO Chiang Mai 64.58 89⇑ *iP* **P 17 29 15.4 +0.1**
comp=Z,113nm,0.8s
CHTO *epP* **pP 17 29 39.4 -1.3**
CHTO *ePP* **PP 17 31 35.0 -3.3**
CHTO Chiang Mai 64.58 89 P **P 17 29 16.0 +0.6**
SNR=32
CHTO Chiang Mai 64.58 89 P **P 17 29 15.2 -0.1**
comp=Z,183nm,1.1s,comp=Z,2μm
CHTO Chiang Mai 64.58 89⇑ *iP* **P 17 29 15.4 +0.1**
comp=Z,113nm,0.8s
CHTO *epP* **pP 17 29 39.4 -1.3**
CMMT Chiang Mai 64.58 89 P **P 17 29 15.7 +0.3**
comp=Z,162nm,1.1s,comp=Z,2μm
CM31 Chiang Mai Arr 64.81 89 *eP* **P 17 29 17.1 +0.2**
comp=Z,47nm,0.6s
CM31 *epP* **pP 17 29 42.5 +0.2**

CM31 **Chiang Mai Arr** 64.81 89 *e*P P 17 29 17.1 +0.2
comp=Z,47nm,0.6s
CM31 *e*pP **pP** 17 29 42.5 +0.2
CMAR Chiang Mai Arr 64.81 89 P **P** 17 29 17.2 +0.4
CMAR pP **pP** 17 29 43.0 +0.7
CMAR ⇑*e* 17 58 06.2
CMAR Chiang Mai Arr 64.81 89 P **P** 17 29 17.2 +0.4
comp=Z,75nm,0.8s,baz=304,slow=7.6,SNR=469
CMAR pP **pP** 17 29 43.0 +0.7
comp=Z,21nm,0.8s,baz=304,slow=7.7,SNR=5.4
CMAR PKP2bc 17 58 06.2
comp=Z,1.1nm,0.9s,baz=179,slow=2.2,SNR=6.0
CMAR LR LR 17 59 09.6
comp=Z,75nm,18.7s,baz=307,slow=37
CMAR Chiang Mai Arr 64.81 89 P **P** 17 29 17.2 +0.4
CMAR pP **pP** 17 29 43.0 +0.7
GYA Guiyang 64.92 77⇑*i*P **P** 17 29 18.0 +0.4
GYA pP **pP** 17 29 44.3 +1.2
GYA PcP **PcP** 17 29 51.0 +1.0
GYA sP **sP** 17 29 56.5 +2.2
GYA PP **PP** 17 31 44.8 +3.4
GYA ScP 17 33 43.0
GYA PcS 17 33 55.0
GYA S **S** 17 37 49.8 -1.5
GYA sS **sS** 17 38 34.0 -0.9
GYA SKS **SKSac** 17 38 59.3 -3.7
GYA SS **SS** 17 42 05.0 +0.7
GYA pmax pmax
comp=Z,50nm,1.0s
GYA pmax pmax
comp=Z,140nm,5.0s
GYA LR LR
comp=N,860nm,19.6s
GYA LR LR
comp=E,710nm,20.2s
GYA LR LR
comp=Z,940nm,18.9s
TSUM Tsumeb 65.11 189⇑*i*P **P** 17 29 18.2 -0.5
comp=Z,29nm,1.3s
TSUM *e*pP **pP** 17 29 43.3 -0.9
TSUM Tsumeb 65.11 189⇑*i*P **P** 17 29 18.2 -0.5
comp=Z,29nm,1.3s
TSUM *e*pP **pP** 17 29 43.3 -0.9
KLR Kul'dur 65.28 44⇓*i*P P 17 29 15.0 -4.4
KLR pmax pmax
comp=E,47nm,1.2s
KLR pmax pmax
comp=Z,110nm,1.2s
FFD Franklin Falls 65.39 308 *e*P **P** 17 29 20.5 +0.3
comp=Z,15nm,0.3s
FFD Franklin Falls 65.39 308 *e*P **P** 17 29 20.5 +0.3
comp=Z,15nm,0.3s
FRNY Flat Rock 65.57 310⇑*i*P **P** 17 29 20.9 -0.4
comp=Z,11nm,0.8s
FRNY *e*pP **pP** 17 29 47.4 +0.5
FRNY Flat Rock 65.57 310⇑*i*P **P** 17 29 21.0 -0.4
comp=Z,11nm,0.8s
FRNY *e*pP **pP** 17 29 47.4 +0.5
CN2 Changchun 65.58 52 *e*P **P** 17 29 21.8 +0.4
CN2 *e*pP **pP** 17 29 46.5 -0.4
CN2 *es*P **sP** 17 29 57.0 -1.1
CN2 *e*S **S** 17 37 58.0 -0.5
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,3.0s
HNH Hanover 65.59 308 *e*P **P** 17 29 22.1 +0.6
comp=Z,61nm,1.1s
HNH *e*pP **pP** 17 29 48.0 +1.0
HNH Hanover 65.59 308 *e*P **P** 17 29 22.1 +0.6
comp=Z,61nm,1.1s
HNH *e*pP **pP** 17 29 48.0 +1.0
MDV Middlebury 65.89 309 *e*P **P** 17 29 23.6 +0.2
MDV *e*pP **pP** 17 29 49.8 +0.8
MDV Middlebury 65.89 309 *e*P **P** 17 29 23.6 +0.2
MDV *e*pP **pP** 17 29 49.8 +0.8
WES Weston 65.91 306 *e*P **P** 17 29 23.8 +0.2
WES *e**PP **pP** 17 29 49.1 0.0
WES pmax pmax
comp=Z,33nm,0.8s
WES Weston 65.91 306 *e*P **P** 17 29 23.8 +0.2
comp=Z,33nm,0.8s
WES *e*pP **pP** 17 29 49.1 0.0
WES Weston 65.91 306 *e*P **P** 17 29 23.8 +0.2
comp=Z,33nm,0.8s
WES *e*pP **pP** 17 29 49.1 0.0
MSNY Massena 66.14 310 *e*P **P** 17 29 24.5 -0.5
comp=Z,198nm,1.1s
MSNY *e*pP pP 17 29 44.4 -6.2
MSNY Massena 66.14 310 *e*P **P** 17 29 24.5 -0.5
comp=Z,198nm,1.1s
LONY Lake Ozonia 66.24 310⇑*i*P **P** 17 29 25.6 -0.1
comp=Z,31nm,1.1s
LONY *e*pP **pP** 17 29 51.4 +0.1
LONY Lake Ozonia 66.24 310⇑*i*P **P** 17 29 25.6 -0.1
comp=Z,31nm,1.1s
LONY *e*pP **pP** 17 29 51.4 +0.1
ACCN Adirondack Com 66.56 309 *e*P **P** 17 29 28.3 +0.5
comp=Z,46nm,1.1s
ACCN *e*pP **pP** 17 29 54.1 +0.8
ACCN Adirondack Com 66.56 309 *e*P **P** 17 29 28.3 +0.5
comp=Z,46nm,1.1s
ACCN *e*pP **pP** 17 29 54.1 +0.8
DGAR Diego Garcia 66.92 129 P **P** 17 29 29.5 -0.8
DGAR Diego Garcia 66.92 129 P **P** 17 29 29.5 -0.8
DGAR Diego Garcia 66.92 129 P **P** 17 29 29.5 -0.8
MDJ Mudanjiang 67.28 49 P **P** 17 29 33.3 +1.0
MDJ sP **sP** 17 30 12.3 +3.3
MDJ PP **PP** 17 32 02.5 +1.3
MDJ S **S** 17 38 23.5 +4.5
MDJ SS SS 17 42 47.5 +7.9
MDJ pmax pmax
comp=Z,22nm,2.0s
MDJ pmax pmax
comp=Z,390nm,4.5s
MDJ LR LR
comp=N,86nm,34.2s
MDJ LR LR
comp=E,150nm,31.5s
MDJ LR LR
comp=Z,130nm,32.8s
COLD Coldfoot 67.37 359⇑*e*P **P** 17 29 33.7 +1.2
comp=Z,72nm,1.1s
COLD *e*pP **pP** 17 29 56.9 -1.2
COLD *e*PP **PP** 17 32 00.3 -1.1
COLD Coldfoot 67.37 359⇑*e*P **P** 17 29 33.7 +1.2
comp=Z,72nm,1.1s
COLD *e*pP **pP** 17 29 56.9 -1.2
WHN Wuhan 67.43 69 ⇑P **P** 17 29 34.0 +0.6
YKW3 Yellowknife Ar 67.70 342⇑*i*P **P** 17 29 34.5 -0.1
comp=Z,0.9nm,0.8s
YKW3 *e*pP **pP** 17 30 00.0 -0.2
YKW3 Yellowknife Ar 67.70 342⇑*i*P **P** 17 29 34.5 -0.1
comp=Z,0.9nm,0.8s
YKW3 *e*pP **pP** 17 30 00.0 -0.2
YKA Yellowknife Ar 67.76 342 P **P** 17 29 35.2 +0.2
YKA pP **PcP** 17 30 01.4 +0.4
YKA P'P' 17 57 53.6
YKA Yellowknife Ar 67.76 342 P **P** 17 29 35.2 +0.2
comp=Z,23nm,0.7s,baz=26,slow=5.5,SNR=41
YKA pP **PcP** 17 30 01.3 +0.4
comp=Z,12nm,0.7s,baz=25,slow=5.7,SNR=8.0
YKA PKPPKP **P'P'df** 17 57 53.6 -4.4
comp=Z,1.6nm,1.0s,baz=199,slow=2.7,SNR=7.8
YKA Yellowknife Ar 67.76 342 P **P** 17 29 35.2 +0.2
YKA pP **PcP** 17 30 01.4 +0.4
TNA Tin City 68.51 6⇑*i*P **P** 17 29 41.3 +1.8
comp=Z,45nm,1.1s
TNA *e*pP **pP** 17 30 04.9 -0.3
TNA Tin City 68.51 6⇑*i*P **P** 17 29 41.3 +1.8
comp=Z,45nm,1.1s
TNA *e*pP **pP** 17 30 04.9 -0.3
BINY Binghamton 68.62 309 *e*P **P** 17 29 40.7 0.0
comp=Z,13nm,0.8s
BINY *e*pP **pP** 17 30 07.5 +1.0
BINY Binghamton 68.62 309 *e*P **P** 17 29 40.7 0.0
comp=Z,13nm,0.8s
BINY *e*pP **pP** 17 30 07.4 +1.0
USRK Ussuriysk Arra 68.82 48 P **P** 17 29 42.0 +0.1
comp=Z,18nm,0.6s,baz=301,slow=5.4,SNR=82
USRK LR LR 18 03 10.5
comp=Z,137nm,18.5s,baz=300,slow=39
NJ2 Nanjing 69.35 65 *e*P **P** 17 29 45.5 +0.1
NJ2 S **S** 17 38 43.0 -0.9
NJ2 pmax pmax
comp=Z,140nm,1.0s
NJ2 pmax pmax
comp=Z,320nm,4.1s
NJ2 LR LR
comp=N,280nm,16.8s
NJ2 LR LR
comp=E,200nm,12.4s
NJ2 LR LR
comp=Z,360nm,24.3s
EGAK Eagle 69.44 354 *e*P **P** 17 29 45.9 +0.5
comp=Z,25nm,0.8s
EGAK Eagle 69.44 354 *e*P **P** 17 29 45.9 +0.5
comp=Z,25nm,0.8s
VLA Vladivostok 69.51 49 *i*P **P** 17 29 45.3 -0.9
COLA College 69.67 357⇑*e*P **P** 17 29 47.9 +1.1
COLA pmax pmax
comp=Z,53nm,1.1s
COLA College 69.67 357⇑*e*P **P** 17 29 47.9 +1.1
comp=Z,53nm,1.1s
COLA College 69.67 357⇑*e*P **P** 17 29 47.9 +1.1
comp=Z,53nm,1.1s
ILAR Eielson Array 69.75 357 P **P** 17 29 47.8 +0.5
ILAR ⇑*e* 17 57 46.4
ILAR Eielson Array 69.75 357 P **P** 17 29 47.8 +0.5
comp=Z,7.9nm,0.7s,baz=358,slow=4.3,SNR=108
ILAR PKP2bc 17 57 46.4
comp=Z,3.0nm,1.0s,baz=207,slow=3.4,SNR=14
ILAR LR LR 17 58 50.0
comp=Z,106nm,21.8s,baz=335,slow=34
ILAR Eielson Array 69.75 357 P **P** 17 29 47.8 +0.5
LBTB Lobatse 70.38 181⇑*e*P **P** 17 29 52.2 +0.5
comp=Z,76nm,0.8s
LBTB *e*pP **pP** 17 30 17.0 -0.5
LBTB Lobatse 70.38 181⇑*e*P **P** 17 29 52.2 +0.5
comp=Z,76nm,0.8s
LBTB *e*pP **pP** 17 30 17.0 -0.5
INCN Inchon 70.45 56 *e*P **P** 17 29 52.0 -0.1
comp=Z,52nm,0.9s
INCN Inchon 70.45 56 *e*P **P** 17 29 52.0 -0.1
comp=Z,52nm,0.9s
SSPA Standing Stone 70.73 309⇑*e*P **P** 17 29 53.9 +0.2
comp=Z,76nm,1.3s
SSPA *e*pP **pP** 17 30 19.1 -0.4
SSPA Standing Stone 70.73 309⇑*e*P **P** 17 29 53.9 +0.2
comp=Z,76nm,1.3s
SSPA *e*pP **pP** 17 30 19.1 -0.4
DOT Dot Lake 70.74 356⇑*i*P **P** 17 29 54.8 +1.4
comp=Z,136nm,1.0s
DOT *e*pP **pP** 17 30 20.0 +0.8
DOT Dot Lake 70.74 356⇑*i*P **P** 17 29 54.8 +1.4
comp=Z,136nm,1.0s
DOT *e*pP **pP** 17 30 20.0 +0.8
ERPA Erie 70.83 311 *e*P **P** 17 29 54.4 0.0
comp=Z,84nm,1.1s
ERPA *e*pP **pP** 17 30 20.5 +0.4
ERPA Erie 70.83 311 *e*P **P** 17 29 54.3 0.0
comp=Z,84nm,1.1s
ERPA *e*pP **pP** 17 30 20.5 +0.4
MCK McKinley 70.85 358⇑*e*P **P** 17 29 54.6 +0.5
MCK pmax pmax
comp=Z,100nm,1.2s
MCK McKinley 70.85 358⇑*e*P **P** 17 29 54.5 +0.5
comp=Z,100nm,1.2s
MCK McKinley 70.85 358⇑*e*P **P** 17 29 54.5 +0.5
comp=Z,100nm,1.2s
FFC Flin Flon 70.86 331⇑*i*P **P** 17 29 54.0 -0.2
FFC pmax pmax
comp=Z,25nm,1.0s
FFC Flin Flon 70.86 331⇑*i*P **P** 17 29 54.0 -0.2
comp=Z,25nm,1.0s
FFC Flin Flon 70.86 331 P **P** 17 29 54.9 +0.7
comp=Z,138nm,1.1s,SNR=17
FFC Flin Flon 70.86 331⇑*i*P **P** 17 29 54.0 -0.2
comp=Z,25nm,1.0s
SDMD Soldier's Deli 71.00 307 *e*P **P** 17 29 55.6 +0.2
comp=Z,15nm,0.6s
SDMD *e*pP **pP** 17 30 21.5 +0.3
SDMD Soldier's Deli 71.00 307 *e*P **P** 17 29 55.6 +0.2
comp=Z,15nm,0.6s
SDMD *e*pP **pP** 17 30 21.5 +0.3
CHBT CHBT 71.08 91 P **P** 17 29 56.7 +0.6
comp=Z,72nm,1.4s,comp=Z,908nm
TRF Thorofare Moun 71.16 358 *e*P **P** 17 29 55.8 -0.4
comp=Z,15nm,0.8s
TRF Thorofare Moun 71.16 358 *e*P **P** 17 29 55.8 -0.4
comp=Z,15nm,0.8s
KSAR Wonju Array Be 71.21 56 P **P** 17 29 57.0 +0.4
KSAR Wonju Array Be 71.21 56 P **P** 17 29 57.0 +0.4
KSRS Korea Array 71.22 55 P **P** 17 29 57.0 +0.3
comp=Z,47nm,0.8s,baz=318,slow=5.4,SNR=103
KSRS LR LR 18 06 18.0
comp=Z,61nm,21.4s,baz=328,slow=40
MENT Mentasta 71.43 355 *e*P **P** 17 29 58.7 +1.1
MENT Mentasta 71.43 355 *e*P **P** 17 29 58.7 +1.1
SSE Sheshan 71.46 64 P **P** 17 29 58.0 -0.2
SSE S **S** 17 39 08.5 -0.1
SSE pmax pmax
comp=Z,45nm,1.0s
SSE pmax pmax
comp=Z,240nm,4.9s
SSE LR LR
comp=N,73nm,25.7s
SSE LR LR
comp=E,55nm,25.8s
SSE LR LR
comp=Z,83nm,38.2s
PAX Paxson 71.49 356 *e*P **P** 17 29 58.4 +0.4
PAX *e**PP **pP** 17 30 20.7 -3.1
PAX pmax pmax
comp=Z,57nm,1.1s
PAX Paxson 71.49 356 *e*P **P** 17 29 58.4 +0.4
comp=Z,57nm,1.1s
PAX *e*pP **pP** 17 30 20.7 -3.1
PAX Paxson 71.49 356 *e*P **P** 17 29 58.4 +0.4
comp=Z,57nm,1.1s
UBPT Khong Chiam 71.54 87 P **P** 17 29 58.9 0.0
comp=Z,50nm,1.4s
PPLA Purkeypile 71.74 359⇑*e*P **P** 17 29 59.6 0.0
comp=Z,42nm,0.6s
PPLA Purkeypile 71.74 359⇑*e*P **P** 17 29 59.6 0.0
comp=Z,42nm,0.6s
QIZ Qiongzhong 72.03 81 P **P** 17 30 01.8 0.0
QIZ S **S** 17 39 15.0 -0.4
QIZ pmax pmax
comp=Z,73nm,1.7s
YSS Yuzh-Sakhalins 72.08 40⇑*i*P **P** 17 30 03.3 +1.6
YSS *e* 17 30 29.0
YSS pmax pmax
comp=N,50nm,1.0s
YSS pmax pmax
comp=E,40nm,1.0s
YSS pmax pmax
comp=Z,220nm,1.0s
EYMN Ely 72.14 321 *e*P **P** 17 30 01.7 -0.4
comp=Z,46nm,0.8s
EYMN Ely 72.14 321 *e*P **P** 17 30 01.7 -0.4
comp=Z,46nm,0.8s
CBN Corbin 72.14 307 *e*P **P** 17 30 01.9 -0.3
comp=Z,36nm,0.5s
CBN *e*pP **pP** 17 30 27.3 -0.8
CBN Corbin 72.14 307 *e*P **P** 17 30 01.9 -0.3
comp=Z,36nm,0.5s
CBN *e*pP **pP** 17 30 27.3 -0.8
ULM Lac du Bonnet 72.19 325 P **P** 17 30 01.6 -0.7
ULM Lac du Bonnet 72.19 325 P **P** 17 30 01.6 -0.7
comp=Z,45nm,0.7s,baz=37,slow=6.4,SNR=53
ULM LR LR 18 00 54.4
comp=Z,179nm,20.8s,baz=52,slow=35
ULM Lac du Bonnet 72.19 325 P **P** 17 30 01.6 -0.7
SML Sawmill 72.76 357⇑*i*P **P** 17 30 06.1 +0.6
SML pmax pmax
comp=Z,8.0nm,0.7s
SML Sawmill 72.76 357⇑*i*P **P** 17 30 06.1 +0.6
comp=Z,7.7nm,0.7s
SML Sawmill 72.76 357⇑*i*P **P** 17 30 06.1 +0.6
comp=Z,7.7nm,0.7s
JSRW J. Sargeant Re 72.78 306 *e*P **P** 17 30 05.8 -0.2
JSRW *e*pP **pP** 17 30 32.0 +0.1
JSRW J. Sargeant Re 72.78 306 *e*P **P** 17 30 05.8 -0.2
JSRW *e*pP **pP** 17 30 32.0 +0.1
PMR Palmer 73.00 358⇑*i*P **P** 17 30 07.0 +0.1
PMR pmax pmax
comp=Z,29nm,0.9s
PMR Palmer 73.00 358⇑*i*P **P** 17 30 07.0 +0.1
comp=Z,29nm,0.9s
PMR Palmer 73.00 358⇑*i*P **P** 17 30 07.0 +0.1
comp=Z,29nm,0.9s
PETK Petropavlovsk- 73.08 28 P **P** 17 30 06.8 -0.7
PETK Petropavlovsk- 73.08 28 P **P** 17 30 06.8 -0.7
PETK Petropavlovsk- 73.08 28 P **P** 17 30 06.8 -0.7
comp=Z,8.5nm,0.8s,baz=106,slow=1.4,SNR=9.1
PETK LR LR 18 05 21.4
comp=Z,69nm,19.0s,baz=310,slow=38
PETK Petropavlovsk- 73.08 28 P **P** 17 30 06.8 -0.7
DIV Divide 73.34 356 *e*P **P** 17 30 09.3 +0.3
comp=Z,30nm,0.9s
DIV Divide 73.34 356 *e*P **P** 17 30 09.3 +0.3
comp=Z,30nm,0.9s
BMRM Bremner River 73.44 356 *e*P **P** 17 30 09.9 +0.3
comp=Z,121nm,1.2s
BMRM Bremner River 73.44 356 *e*P **P** 17 30 09.9 +0.3
comp=Z,121nm,1.2s
ACSO Alum Creek Sta 73.76 311 *e*P **P** 17 30 11.1 -0.6
comp=Z,46nm,1.1s
ACSO *e*pP **pP** 17 30 37.6 -0.1
ACSO Alum Creek Sta 73.76 311 *e*P **P** 17 30 11.1 -0.6
comp=Z,46nm,1.1s
ACSO *e*pP **pP** 17 30 37.6 -0.1
BOSA Boshof 73.97 181 *e*P **P** 17 30 13.0 0.0
comp=Z,85nm,1.2s
BOSA *e*pP **pP** 17 30 38.8 -0.3
BOSA Boshof 73.97 181 P **P** 17 30 13.2 +0.2
comp=Z,28nm,0.7s,baz=3.9,slow=5.7,SNR=59
BOSA pP **pP** 17 30 39.2 +0.2
comp=Z,13nm,0.6s,baz=19,slow=6.4,SNR=4.9
BOSA LR LR 18 07 50.9
comp=Z,105nm,18.3s,baz=342,slow=40
BOSA Boshof 73.97 181 *e*P **P** 17 30 13.0 0.0
comp=Z,85nm,1.2s
BOSA *e*pP **pP** 17 30 38.8 -0.3
SKAG Skagway 74.14 350⇑*i*P **P** 17 30 14.4 +0.8
comp=Z,144nm,1.1s
SKAG Skagway 74.14 350⇑*i*P **P** 17 30 14.4 +0.8
comp=Z,144nm,1.1s
ASAJ Asahikawa 74.15 42 P **P** 17 30 13.8 -0.1
ASAJ Asahikawa 74.15 42 P **P** 17 30 13.8 -0.1
comp=Z,28nm,0.8s,baz=308,slow=10,SNR=18
ASAJ LR LR 18 05 51.6
comp=Z,121nm,18.8s,baz=182,slow=38
ASAJ Asahikawa 74.15 42 P **P** 17 30 13.8 -0.1
RSO Redoubt South 74.19 360 *e*P **P** 17 30 14.1 0.0
comp=Z,85nm,0.8s
RSO Redoubt South 74.19 360 *e*P **P** 17 30 14.1 0.0
comp=Z,85nm,0.8s
PNL Peninsula 74.35 353⇑*i*P **P** 17 30 15.9 +1.0
comp=Z,126nm,1.0s
PNL Peninsula 74.35 353⇑*i*P **P** 17 30 15.9 +1.0
comp=Z,126nm,1.0s
DLBC Dease Lake 74.42 347⇑*e*P **P** 17 30 17.1 +1.7
DLBC Dease Lake 74.42 347⇑*e*P **P** 17 30 17.1 +1.7
SEW Seward 74.50 358⇑*i*P **P** 17 30 16.2 +0.6
comp=Z,77nm,0.9s
SEW Seward 74.50 358⇑*i*P **P** 17 30 16.2 +0.6
comp=Z,77nm,0.9s
KULM Kulim 75.15 98 P **P** 17 30 20.0 -0.1
KULM Kulim 75.15 98 P **P** 17 30 20.3 +0.2
RCBR Riachuelo 75.48 246⇑*e*P **P** 17 30 22.1 +0.1
comp=Z,99nm,0.8s
RCBR *e*pP **pP** 17 30 49.1 +1.0
RCBR Riachuelo 75.48 246⇑*e*P **P** 17 30 22.1 +0.1
comp=Z,99nm,0.8s
RCBR *e*pP **pP** 17 30 49.1 +1.0
MDND Maddock 75.59 326 ⇑P **P** 17 30 22.0 -0.2
baz=75
YUK Yuzh-Kuril'sk 75.72 40*d*/P **P** 17 30 20.7 -2.2
YUK *i* 17 30 35.1
YUK *i* PPP PPP 17 34 59.3
YUK *i* S **S** 17 39 59.6 +3.5
YUK *i* 17 40 33.9
YUK pmax pmax
comp=E,91nm,1.1s
YUK pmax pmax
comp=Z,129nm,1.1s
YUK pmax pmax
comp=N,90nm,1.0s
PSI Prapat 75.73 101 P **P** 17 30 23.3 -0.3
PSI pP **pP** 17 30 48.6 -1.1
PSI Prapat 75.73 101 P **P** 17 30 22.2 -1.4
comp=N,116nm,1.1s,comp=N,1μm
PSI Prapat 75.73 101 P **P** 17 30 23.3 -0.3
comp=N,83nm,1.0s,baz=306,slow=5.2,SNR=43
PSI pP **pP** 17 30 48.6 -1.1
comp=N,20nm,0.8s,baz=312,slow=5.8,SNR=3.6
PSI LR LR 18 06 06.6
comp=N,78nm,18.3s,baz=119,slow=37
SFIN Scholer Farm 75.77 314 ⇑P **P** 17 30 22.5 -0.8
baz=76
JNU Nakatsue 75.98 57 P **P** 17 30 23.9 -0.7
JNU Nakatsue 75.98 57 P **P** 17 30 23.9 -0.7
comp=N,42nm,0.9s,baz=332,slow=0.8,SNR=9.7
JNU Nakatsue 75.98 57 P **P** 17 30 24.0 -0.7
IPM Ipoh 75.98 98 P **P** 17 30 24.6 -0.3
IPM Ipoh 75.98 98 P **P** 17 30 25.2 +0.3
IPM Ipoh 75.98 98 P **P** 17 30 24.3 -0.6
comp=N,19nm,1.0s,comp=N,1μm
A24A Westby 76.36 329 ⇓P **P** 17 30 26.1 -0.5
baz=76,SNR=9.4
BLO Bloomington 76.38 313 *e*P **P** 17 30 25.2 -1.6
BLO *e**PP **pP** 17 30 52.3 -0.7
BLO pmax pmax
comp=Z,30nm,0.7s
BLO Bloomington 76.38 313 *e*P **P** 17 30 25.2 -1.6
comp=Z,30nm,0.7s
BLO *e*pP **pP** 17 30 52.3 -0.7
BLO Bloomington 76.38 313 *e*P **P** 17 30 25.2 -1.6
comp=Z,30nm,0.7s
BLO *e*pP **pP** 17 30 52.3 -0.7
WRAK Wrangell Islan 76.71 348 *e*P **P** 17 30 29.9 +1.6
comp=Z,26nm,0.6s
WRAK Wrangell Islan 76.71 348 *e*P **P** 17 30 29.9 +1.6
comp=Z,26nm,0.6s
HDIL Hopedale 76.74 315 *e*P **P** 17 30 27.9 -0.9
comp=Z,87nm,0.2s
HDIL Hopedale 76.74 315 *e*P **P** 17 30 27.9 -0.9
comp=Z,87nm,0.2s
DGMT Dagmar 76.81 329 *e*P **P** 17 30 28.9 -0.2
comp=Z,17nm,0.6s
DGMT Dagmar 76.81 329 ⇓P **P** 17 30 29.3 +0.2
baz=77
DGMT Dagmar 76.81 329 *e*P **P** 17 30 28.9 -0.2
comp=Z,17nm,0.6s
KTGM Kuala Trenggan 76.85 96 P **P** 17 30 30.4 +0.7
KDAK Kodiak Island 76.88 360 P **P** 17 30 30.0 +0.8
comp=Z,512nm,0.9s,SNR=21
WCI Wyandotte Cave 76.97 312 *e*P **P** 17 30 28.5 -1.7
WCI *e**PP **pP** 17 30 56.0 -0.3
WCI pmax pmax
comp=Z,13nm,0.8s
WCI Wyandotte Cave 76.97 312 *e*P **P** 17 30 28.5 -1.7
comp=Z,13nm,0.8s
WCI *e*pP **pP** 17 30 56.0 -0.3
WCI Wyandotte Cave 76.97 312 *e*P **P** 17 30 28.5 -1.7
comp=Z,13nm,0.8s
WCI *e*pP **pP** 17 30 56.0 -0.3
A22A Carney Farms, 76.98 330 ⇓P **P** 17 30 29.9 -0.2
baz=77,SNR=16
B23A Brockton 77.10 329 ⇓P **P** 17 30 30.6 -0.2
baz=77,SNR=8.8
FRIM Kepong 77.29 98 P **P** 17 30 32.1 -0.1
A21A Bergtoll Ranch 77.33 331 ⇑P **P** 17 30 31.8 -0.2
baz=77
OHAK Old Harbor 77.44 360 *e*P **P** 17 30 33.3 +0.9
comp=Z,117nm,1.3s
OHAK *e*pP **pP** 17 31 00.8 +2.2
OHAK Old Harbor 77.44 360 *e*P **P** 17 30 33.3 +0.9
comp=Z,117nm,1.3s
OHAK *e*pP **pP** 17 31 00.8 +2.2
OLIL Olney 77.52 313 *e*P **P** 17 30 31.8 -1.4
comp=Z,28nm,0.9s
OLIL *e*pP **pP** 17 30 59.2 -0.2
OLIL Olney 77.52 313 *e*P **P** 17 30 31.8 -1.4
comp=Z,28nm,0.9s
OLIL *e*pP **pP** 17 30 59.2 -0.2
TKL Tuckaleechee C 77.53 309 *e*P **P** 17 30 32.4 -0.9
TKL *e*pP **pP** 17 30 56.1 -3.4
TKL Tuckaleechee C 77.53 309 *e*P **P** 17 30 32.4 -0.9
SCIA State Center 77.58 318 *e*P **P** 17 30 32.4 -1.1
comp=Z,21nm,0.7s
SCIA State Center 77.58 318 *e*P **P** 17 30 32.4 -1.1
comp=Z,21nm,0.7s
B22A Reddig Ranch S 77.60 330 ⇑P **P** 17 30 34.0 +0.5
baz=77,SNR=12

MAJO	Matsushiro	77.61	50	eP		P		17 30 32.9	-0.9
MAJO					pmax	pmax			
	comp=Z,27nm,1.0s								
MAJO	Matsushiro	77.61	50	eP		P		17 30 32.9	-0.9
	comp=Z,27nm,1.0s								
MAJO	Matsushiro	77.61	50	eP		P		17 30 32.9	-0.9
	comp=Z,27nm,1.0s								
MAT	Matsushiro	77.61	50	P		P		17 30 33.5	-0.3
MJAR	Matsushiro Arr	77.61	50	P		P		17 30 33.6	-0.2
MJAR	Matsushiro Arr	77.61	50	P		P		17 30 33.6	-0.2
	comp=Z,19nm,0.8s,baz=315,slow=4.5,SNR=45								
MJAR				LR		LR		18 11 35.1	
	comp=Z,39nm,18.3s,baz=5.0,slow=41								
MJAR	Matsushiro Arr	77.61	50	P		P		17 30 33.6	-0.2
ECSD	EROS Data Cent	77.66	322	eP		P		17 30 33.5	-0.4
	comp=Z,64nm,0.6s								
ECSD				epP		pP		17 30 57.9	-2.2
ECSD	EROS Data Cent	77.66	322	eP		P		17 30 33.5	-0.4
	comp=Z,64nm,0.6s								
ECSD				epP		pP		17 30 57.9	-2.2
C24A	Savage	77.69	328	⇑P		P		17 30 33.7	-0.4
	baz=77								
FX1	Attu Island--F	77.71	20	eP		P		17 30 34.0	0.0
FX1	Attu Island--F	77.71	20	eP		P		17 30 34.0	0.0
C23A	Lambert	77.73	329	⇑P		P		17 30 34.4	+0.2
	baz=78,SNR=9.2								
CRAG	Craig	77.74	348	eP		P		17 30 35.6	+1.5
	comp=Z,30nm,0.8s								
CRAG	Craig	77.74	348	eP		P		17 30 35.6	+1.5
	comp=Z,30nm,0.8s								
A20A	Cobblestone Ra	77.77	331	⇓P		P		17 30 33.3	-1.2
	baz=78,SNR=17								
B21A	Ellsworth Farm	77.85	330	⇑P		P		17 30 34.1	-0.8
	baz=78,SNR=7.3								
USIN	University of	77.88	312	eP		P		17 30 33.1	-2.1
	comp=Z,24nm,0.8s								
USIN				epP		pP		17 31 00.6	-0.8
USIN	University of	77.88	312	eP		P		17 30 33.1	-2.1
	comp=Z,24nm,0.8s								
USIN				epP		pP		17 31 00.6	-0.8
SUR	Sutherland	77.89	185	eP		P		17 30 35.3	0.0
SUR				epP		pP		17 30 58.6	-2.9
SUR	Sutherland	77.89	185	P		P		17 30 35.0	-0.3
	comp=Z,241nm,1.1s,SNR=9.8								
SUR	Sutherland	77.89	185	eP		P		17 30 35.3	0.0
C22A	Vida	78.03	329	⇑P		P		17 30 35.8	-0.2
	baz=78,SNR=13								
BRSD	Miller	78.09	323	⇓P		P		17 30 36.4	+0.1
	baz=78								
CPCT	Cooper Cave	78.09	309	eP		P		17 30 36.0	-0.4
CPCT				epP		pP		17 31 02.4	-0.3
CPCT	Cooper Cave	78.09	309	eP		P		17 30 36.0	-0.4
CPCT				epP		pP		17 31 02.4	-0.3
B20A	Solberg Farm,	78.18	331	⇑P		P		17 30 37.6	+0.8
	baz=78,SNR=11								
D23A	Lindsay	78.27	329	⇓P		P		17 30 38.1	+0.8
	baz=78,SNR=6.5								
A18A	Metzger Ranch,	78.37	332	⇑P		P		17 30 37.9	+0.1
	baz=78								
C21A	Desert Coulee	78.39	330	⇑P		P		17 30 38.7	+0.8
	baz=78,SNR=12								
E24A	Baker	78.46	328	⇓P		P		17 30 38.8	+0.5
	baz=78,SNR=6.1								
B19A	Brinkman Farms	78.48	332	⇓P		P		17 30 38.5	+0.1
	baz=78,SNR=21								
A17A	Triple J Farms	78.63	333	⇓P		P		17 30 37.3	-1.9
	baz=78,SNR=8.1								
D22A	Cohagen	78.64	329	⇓P		P		17 30 39.8	+0.5
	baz=78,SNR=29								
C20A	Veseth Ranch,	78.80	331	⇑P		P		17 30 40.6	+0.5
	baz=78,SNR=69								
B18A	Beardsley Farm	78.81	332	⇑P		P		17 30 41.0	+0.8
	baz=78,SNR=40								
E23A	Ismay	78.88	328	⇑P		P		17 30 40.8	+0.1
	baz=79,SNR=5.6								
A16A	West Butte Ran	78.91	333	⇓P		P		17 30 40.2	-0.7
	baz=79,SNR=66								
D21A	La Casta Ranch	79.00	330	⇑P		P		17 30 42.1	+0.8
	baz=79,SNR=26								
SWET	Sewanee	79.03	310	P		P		17 30 39.2	-2.5
	comp=Z,22nm,1.2s								
SWET				epP		pP		17 31 07.4	-0.5
SWET	Sewanee	79.03	310	P		P		17 30 39.2	-2.5
	comp=Z,22nm,1.2s								
SWET				epP		pP		17 31 07.4	-0.5
F24A	Ekalaka	79.11	327	⇑P		P		17 30 42.1	+0.1
	baz=79,SNR=24								
EGMT	Eagleton	79.12	332	⇑iP		P		17 30 42.1	+0.1
	comp=Z,112nm,0.6s								
EGMT				epP		pP		17 31 07.1	-1.2
EGMT	Eagleton	79.12	332	⇓P		P		17 30 42.4	+0.4
	baz=79,SNR=118								
EGMT	Eagleton	79.12	332	⇑iP		P		17 30 42.1	+0.1
	comp=Z,112nm,0.6s								
EGMT				epP		pP		17 31 07.1	-1.2
C19A	Slack Wire Ran	79.14	331	⇓P		P		17 30 42.1	+0.1
	baz=79,SNR=23								
E22A	Miles City	79.17	329	⇓P		P		17 30 42.7	+0.5
	baz=79,SNR=5.7								
B17A	L&G Farms, Che	79.23	333	⇓P		P		17 30 42.6	+0.1
	baz=79,SNR=25								
A15A	Johnson Ranch,	79.23	334	⇓P		P		17 30 42.3	-0.3
	baz=79,SNR=49								
FVM	French Village	79.27	314	eP		P		17 30 41.6	-1.3
FVM				e*PP		pP		17 31 08.7	-0.5
FVM					pmax	pmax			
	comp=Z,16nm,0.6s								
FVM	French Village	79.27	314	eP		P		17 30 41.6	-1.3
	comp=Z,16nm,0.6s								
FVM				epP		pP		17 31 08.7	-0.5
FVM	French Village	79.27	314	eP		P		17 30 41.6	-1.3
	comp=Z,16nm,0.6s								
FVM				epP		pP		17 31 08.7	-0.5
KGM	Kluang	79.34	98	P		P		17 30 43.8	+0.3
KGM	Kluang	79.34	98	P		P		17 30 44.0	+0.5
WVT	Waverly	79.36	311	eP		P		17 30 41.4	-2.0
WVT				e*PP		pP		17 31 08.9	-0.7
WVT					pmax	pmax			
	comp=Z,12nm,0.7s								
WVT	Waverly	79.36	311	eP		P		17 30 41.4	-2.0
	comp=Z,12nm,0.7s								
WVT				epP		pP		17 31 08.9	-0.7
WVT	Waverly	79.36	311	eP		P		17 30 41.3	-2.0
	comp=Z,12nm,0.7s								
WVT				epP		pP		17 31 08.9	-0.7
D20A	Manuel Ranch,	79.38	330	⇓P		P		17 30 43.5	+0.1
	baz=79,SNR=36								
B16A	M & M Farms, S	79.41	333	⇓P		P		17 30 43.0	-0.6
	baz=79,SNR=16								
A14A	Double T Ranch	79.45	334	⇑P		P		17 30 43.5	-0.3
	baz=79,SNR=54								
E21A	Keefer Ranch,	79.48	329	⇑P		P		17 30 44.7	+0.8
	baz=79,SNR=7.1								
D19A	Cripps Ranch,	79.58	331	⇑P		P		17 30 44.2	-0.3
	baz=79,SNR=18								
F23A	Volborg	79.58	328	⇓P		P		17 30 44.6	+0.1
	baz=79,SNR=5.1								
B15A	Bradely Ranch,	79.77	334	⇓P		P		17 30 44.9	-0.6
	baz=80,SNR=32								
A13A	Flathead Natio	79.78	335	⇓P		P		17 30 44.6	-1.0
	baz=80								
C17A	Wharram Farm,	79.80	332	⇓P		P		17 30 45.4	-0.3
	baz=80,SNR=45								
CRPR	Cabo Rojo, PR	79.82	285	eP		P		17 30 44.7	-1.4
	comp=Z,27nm,0.6s								
CRPR	Cabo Rojo, PR	79.82	285	eP		P		17 30 44.7	-1.4
	comp=Z,27nm,0.6s								
F22A	Rosebud	79.84	329	⇓P		P		17 30 45.3	-0.6
	baz=80,SNR=12								
D18A	Linhart Farms,	79.86	331	⇑P		P		17 30 46.1	0.0
	baz=80,SNR=10								
MYKOM	Kota Tinggi	79.86	98	P		P		17 30 46.5	+0.2
MYKOM	Kota Tinggi	79.86	98	P		P		17 30 47.1	+0.7
MYKOM	Kota Tinggi	79.86	98	P		P		17 30 47.3	+0.9
	comp=Z,17nm,1.3s,comp=Z,447nm								
B14A	Marquette Ranc	79.95	334	⇑P		P		17 30 46.2	-0.4
	baz=80,SNR=9.9								
C16A	Fuhringer Ranc	79.97	333	⇑P		P		17 30 45.9	-0.6
	baz=80,SNR=37								
G23A	Biddle	80.01	328	⇑P		P		17 30 46.9	+0.1
	baz=80,SNR=18								
H24A	Dirks Ranch, A	80.08	327	⇑P		P		17 30 47.0	-0.3
	baz=80,SNR=18								
A12A	Yaak River Ran	80.14	336	⇓P		P		17 30 45.8	-1.6
	baz=80,SNR=6.4								
E19A	Rath Farm, Rou	80.15	330	⇑P		P		17 30 48.3	+0.7
	baz=80,SNR=26								
GRGR	Grenville	80.18	277	eP		P		17 30 48.0	-0.1
	comp=Z,228nm,0.8s								
GRGR	Grenville	80.18	277	eP		P		17 30 48.0	-0.1
	comp=Z,228nm,0.8s								
D17A	Six Diamond Ra	80.19	332	⇓P		P		17 30 48.2	+0.3
	baz=80,SNR=17								
BGNE	Belgrade	80.21	321	⇓P		P		17 30 47.4	-0.4
	baz=80,SNR=9.4								
C15A	Salmond Ranch,	80.26	333	⇑P		P		17 30 47.2	-1.0
	baz=80,SNR=27								
B13A	Whitefish	80.30	335	⇓P		P		17 30 49.0	+0.7
	baz=80,SNR=36								
G22A	Birney	80.33	328	⇑P		P		17 30 48.3	-0.3
	baz=80,SNR=6.6								
E18A	Harlowton	80.45	331	⇑P		P		17 30 49.9	+0.7
	baz=80,SNR=18								
F20A	Billings	80.50	330	⇓P		P		17 30 50.2	+0.7
	baz=80								
TIGA	Tifton	80.55	306	⇑P		P		17 30 49.0	-0.9
	baz=80								
D16A	Dana Ranch, Ca	80.58	332	⇓P		P		17 30 48.6	-1.3
	baz=80,SNR=20								
BLMT	Blacktail Moun	80.59	335	eP		P		17 30 50.1	0.0
	comp=Z,78nm,1.3s								
BLMT				epP		pP		17 31 15.3	-1.1
BLMT	Blacktail Moun	80.59	335	eP		P		17 30 50.1	0.0
	comp=Z,78nm,1.3s								
BLMT				epP		pP		17 31 15.3	-1.1
YBMT	Yellow Bay	80.62	334	eP		P		17 30 50.4	+0.3
	comp=Z,27nm,0.6s								
YBMT				ePP		PP		17 33 53.0	-1.1
YBMT	Yellow Bay	80.62	334	eP		P		17 30 50.4	+0.3
	comp=Z,27nm,0.6s								
C14A	Swan Lake	80.62	334	⇑P		P		17 30 50.1	0.0
	baz=80								
G21A	Lodge Grass	80.66	329	⇑P		P		17 30 50.4	+0.1
	baz=80,SNR=7.0								
F19A	Roth Farm, Mol	80.73	330	⇓P		P		17 30 51.4	+0.7
	baz=80,SNR=11								
E17A	Martinsdale	80.85	332	⇓P		P		17 30 52.1	+0.6
	baz=81,SNR=32								
I24A	Kuemmerle Ranc	80.86	327	⇓P		P		17 30 52.1	+0.7
	baz=81,SNR=9.4								
BSMT	Bassoo Peak	80.86	335	⇑iP		P		17 30 51.6	+0.1
	comp=Z,19nm,0.6s								
BSMT	Bassoo Peak	80.86	335	⇑iP		P		17 30 51.6	+0.1
	comp=Z,19nm,0.6s								
K27A	Flueckinger Fa	80.88	324	⇑P		P		17 30 51.6	+0.1
	baz=81,SNR=9.6								
PNT	Penticton	80.88	338	P		P		17 30 51.9	+0.6
PNT	Penticton	80.88	338	P		P		17 30 51.9	+0.6
PNT	Penticton	80.88	338	P		P		17 30 51.9	+0.6
D15A	Lincoln	80.88	333	⇓P		P		17 30 51.5	0.0
	baz=81,SNR=28								
H22A	Clearmont	80.89	328	⇑P		P		17 30 51.7	+0.2
	baz=81								
SWMT	Swartz Lake	80.93	334	eP		P		17 30 51.6	-0.2
	comp=Z,39nm,0.8s								
SWMT				epP		pP		17 31 17.4	-0.8
SWMT	Swartz Lake	80.93	334	eP		P		17 30 51.6	-0.2
	comp=Z,39nm,0.8s								
SWMT				epP		pP		17 31 17.4	-0.8
C13A	Hot Springs	80.95	335	⇓P		P		17 30 52.2	+0.4
	baz=81,SNR=29								
HRY	Holter Researc	80.95	332	eP		P		17 30 51.6	-0.2
	comp=Z,36nm,0.6s								
HRY	Holter Researc	80.95	332	eP		P		17 30 51.7	-0.2
	comp=Z,36nm,0.6s								
F18A	Big Timber	80.96	331	⇑P		P		17 30 52.6	+0.7
	baz=81,SNR=32								
SLMT	Seeley Lake	81.01	334	eP		P		17 30 51.9	-0.4
	comp=Z,18nm,0.5s								
SLMT	Seeley Lake	81.01	334	eP		P		17 30 51.9	-0.4
	comp=Z,18nm,0.5s								
G20A	Bridger	81.03	329	⇓P		P		17 30 52.7	+0.3
	baz=81,SNR=27								
GCMT	Greycliff	81.04	331	eP		P		17 30 52.6	+0.2
	comp=Z,28nm,0.6s								
GCMT				epP		pP		17 31 19.6	+0.8
GCMT	Greycliff	81.04	331	eP		P		17 30 52.6	+0.2
	comp=Z,28nm,0.6s								
GCMT				epP		pP		17 31 19.6	+0.8
E16A	East Helena	81.06	332	⇓P		P		17 30 52.5	0.0
	baz=81,SNR=20								
H21A	Big Horn, Sher	81.11	328	⇑P		P		17 30 53.1	+0.4
	baz=81,SNR=19								
D14A	Greenough	81.16	334	⇓P		P		17 30 52.3	-0.7
	baz=81,SNR=22								
NEW	Newport	81.17	336	eP		P		17 30 52.9	0.0
	comp=Z,19nm,0.7s								
NEW				epP		pP		17 31 20.2	+0.9
NEW	Newport	81.17	336	⇑P		P		17 30 53.6	+0.7
	baz=81,SNR=23								
NEW	Newport	81.17	336	eP		P		17 30 52.9	0.0
	comp=Z,19nm,0.7s								
NEW				epP		pP		17 31 20.2	+0.9
C12B	Naegeli Ranch,	81.19	335	⇑P		P		17 30 53.5	+0.4
	baz=81,SNR=17								
CHMT	Chamberlain Mo	81.23	333	eP		P		17 30 52.8	-0.7
	comp=Z,8.2nm,0.5s								
CHMT	Chamberlain Mo	81.23	333	eP		P		17 30 52.8	-0.7
	comp=Z,8.2nm,0.5s								
LRAL	Lakeview Retre	81.26	309	eP		P		17 30 52.4	-1.2
	comp=Z,40nm,0.8s								
LRAL				epP		pP		17 31 19.4	-0.6
LRAL	Lakeview Retre	81.26	309	eP		P		17 30 52.4	-1.2
	comp=Z,40nm,0.8s								
LRAL				epP		pP		17 31 19.4	-0.6
K26A	Motz Farm, Whi	81.26	325	⇓P		P		17 30 53.3	-0.2
	baz=81,SNR=8.5								
F17A	Fitzpatrick Pl	81.28	331	⇓P		P		17 30 54.3	+0.6
	baz=81,SNR=85								
C11A	Tepee Creek (N	81.30	336	⇓P		P		17 30 54.0	+0.3
	baz=81								
J24A	Dixon Ranch, L	81.32	326	⇓P		P		17 30 53.9	0.0
	baz=81,SNR=12								
KSU1	Kansas State U	81.38	319	eP		P		17 30 53.2	-0.9
	comp=Z,36nm,0.6s								
KSU1				epP		pP		17 31 20.0	-0.5
KSU1	Kansas State U	81.38	319	eP		P		17 30 53.2	-0.9
	comp=Z,36nm,0.6s								
KSU1				epP		pP		17 31 20.0	-0.5
G18A	Lazy EL Ranch,	81.42	330	⇓P		P		17 30 54.1	-0.4
	baz=81,SNR=9.6								
L27A	T5 Ranch, Ells	81.42	324	⇓P		P		17 30 54.5	+0.1
	baz=81								
D13A	Huson	81.44	334	⇓P		P		17 30 54.1	-0.3
	baz=81,SNR=51								
E15A	Deer Lodge	81.47	333	⇑P		P		17 30 55.3	+0.6
	baz=81,SNR=19								
RLMT	Red Lodge	81.48	330	⇑eP		P		17 30 55.0	+0.2
	comp=Z,75nm,0.6s								
RLMT	Red Lodge	81.48	330	⇑P		P		17 30 55.4	+0.6
	baz=81,SNR=40								
RLMT	Red Lodge	81.48	330	⇑eP		P		17 30 55.0	+0.2
	comp=Z,75nm,0.6s								
MSO	Missoula	81.52	334	eP		P		17 30 54.4	-0.5
	comp=Z,51nm,1.5s								
MSO				epP		pP		17 31 22.5	+1.2
MSO	Missoula	81.52	334	⇓P		P		17 30 55.2	+0.3
	baz=81,SNR=15								
MSO	Missoula	81.52	334	eP		P		17 30 54.3	-0.5
	comp=Z,51nm,1.5s								
MSO				epP		pP		17 31 22.5	+1.2
I22A	9 Mile Ranch,	81.53	328	⇓P		P		17 30 54.7	-0.3
	baz=81,SNR=30								
H20A	Greybull	81.58	329	⇓P		P		17 30 55.6	+0.4
	baz=81,SNR=19								
J23A	Dilts Ranch, B	81.60	327	⇓P		P		17 30 55.2	-0.2
	baz=81								
K25A	Mack Ranch, Ha	81.61	325	⇓P		P		17 30 55.5	0.0
	baz=81,SNR=22								
F16A	Kennard Place,	81.70	332	⇓P		P		17 30 56.2	+0.3
	baz=81,SNR=23								
E14A	Clinton	81.75	333	⇑P		P		17 30 56.1	-0.1
	baz=82,SNR=25								
D12A	Red Ives Fores	81.75	335	⇓P		P		17 30 55.9	-0.1
	baz=82								
H19A	Powell	81.78	330	⇓P		P		17 30 57.0	+0.7
	baz=82,SNR=56								
G17A	Pierce Place,	81.81	331	⇑P		P		17 30 57.8	+1.3
	baz=82,SNR=15								
BOZ	Bozeman (W)	81.83	332	eP		P		17 30 55.8	-0.8
BOZ				e*PP		pP		17 31 23.4	+0.4
BOZ					pmax	pmax			
	comp=Z,8.0nm,0.6s								
BOZ	Bozeman (W)	81.83	332	eP		P		17 30 55.8	-0.8
	comp=Z,8.2nm,0.6s								
BOZ				epP		pP		17 31 23.4	+0.4
BOZ	Bozeman (W)	81.83	332	⇑P		P		17 30 57.2	+0.6
	baz=82,SNR=29								
BOZ	Bozeman (W)	81.83	332	eP		P		17 30 55.8	-0.8
	comp=Z,8.2nm,0.6s								
BOZ				epP		pP		17 31 23.4	+0.4
I21A	Big Trails, Te	81.90	328	⇓P		P		17 30 57.3	+0.3
	baz=82,SNR=30								
C09A	Chrisman Ranch	81.91	337	P		P		17 30 57.4	+0.6
C09A	Chrisman Ranch	81.91	337	P		P		17 30 57.4	+0.6
M27A	Reverse DX Ran	81.92	324	⇓P		P		17 30 57.2	+0.1
	baz=82								
SDDR	Presa de Saban	81.93	289	eP		P		17 30 58.3	+0.9
	comp=Z,44nm,1.0s								
SDDR				epP		pP		17 31 24.0	+0.2
SDDR	Presa de Saban	81.93	289	eP		P		17 30 58.3	+0.9
	comp=Z,44nm,1.0s								
SDDR				epP		pP		17 31 24.0	+0.2
F15A	Butte	81.94	332	⇓P		P		17 30 57.4	+0.2
	baz=82,SNR=23								
E13A	Victor	81.94	334	⇑P		P		17 30 57.4	+0.3
	baz=82,SNR=14								
LRM	Limekiln Ridge	81.94	332	eP		P		17 30 57.1	-0.2
	comp=Z,119nm,0.7s								
LRM	Limekiln Ridge	81.94	332	eP		P		17 30 57.1	-0.2
	comp=Z,119nm,0.7s								
J22A	Midwest	81.94	327	⇓P		P		17 30 56.2	-1.0
	baz=82,SNR=22								
H18A	Shoshone NF, C	82.01	330	⇓P		P		17 30 57.8	+0.2
	baz=82,SNR=88								
I20A	Worland	82.09	329	⇓P		P		17 30 59.0	+1.0
	baz=82,SNR=64								
K23A	Bowen Ranch, D	82.18	327	⇓P		P		17 30 57.8	-0.7
	baz=82,SNR=7.9								
F14A	Wisdom	82.25	333	⇓P		P		17 30 59.4	+0.6
	baz=82,SNR=6.9								
G16A	Moss Hill, Enn	82.25	332	⇓P		P		17 30 59.4	+0.6
	baz=82,SNR=55								
I19A	Meeteetse	82.33	329	⇑P		P		17 31 00.2	+0.9
	baz=82,SNR=47								
LKWY	Lake	82.36	330	eP		P		17 31 01.2	+1.7
LKWY				e*PP		pP		17 31 25.8	-0.2
LKWY					pmax	pmax			
	comp=Z,18nm,0.7s								
LKWY	Lake	82.36	330	eP		P		17 31 01.2	+1.7
	comp=Z,18nm,0.7s								
LKWY				epP		pP		17 31 25.8	-0.2
LKWY	Lake	82.36	330	eP		P		17 31 01.2	+1.7
	comp=Z,18nm,0.7s								
LKWY				epP		pP		17 31 25.8	-0.2
DLMT	Dillon	82.40	332	eP		P		17 30 58.6	-1.0
	comp=Z,16nm,0.6s								
DLMT	Dillon	82.40	332	eP		P		17 30 58.6	-1.0
	comp=Z,16nm,0.6s								
OD2	Odessa Site #2	82.40	337	P		P		17 31 00.2	+0.8
OD2	Odessa Site #2	82.40	337	P		P		17 31 00.2	+0.8
PGC	Sidney	82.44	340	eP		P		17 30 59.7	+0.3
	comp=Z,1.4nm,0.7s								
PGC				epP		pP		17 31 23.2	-2.8
PGC	Sidney	82.44	340	eP		P		17 30 59.7	+0.3
	comp=Z,1.4nm,0.7s								
YMR	Madison River	82.46	331	eP		P		17 31 00.7	+0.7
	comp=Z,27nm,0.8s								
YMR	Madison River	82.46	331	eP		P		17 31 00.7	+0.7
	comp=Z,27nm,0.8s								
QLMT	Earthquake Lak	82.48	331	eP		P		17 31 00.6	+0.5
	comp=Z,2.0nm,0.8s								
QLMT	Earthquake Lak	82.48	331	eP		P		17 31 00.6	+0.5
	comp=Z,2.0nm,0.8s								
H16A	Russell Place,	82.53	331	⇑P		P		17 31 01.6	+1.2
	baz=82,SNR=34								
G15A	Dillon	82.53	332	⇑P		P		17 31 01.2	+0.9
	baz=82,SNR=18								
F13A	Darby	82.57	334	⇓P		P		17 31 01.1	+0.6
	baz=82,SNR=60								
H17A	Grant Village	82.57	331	⇓P		P		17 31 02.8	+2.2
	baz=82,SNR=29								
N27A	Anderson Farm,	82.58	324	⇑P		P		17 31 01.0	+0.4
	baz=82,SNR=6.7								
J20A	Shoshoni	82.59	328	⇓P		P		17 31 00.9	+0.3
	baz=82,SNR=26								
M25A	Palm-Egli Farm	82.68	325	⇑P		P		17 31 01.8	+0.7
	baz=82								
L23A	Garrett	82.75	326	⇓P		P		17 31 01.1	-0.4
	baz=82,SNR=21								
D08A	Wollman Farm,	82.77	337	P		P		17 31 01.9	+0.7
D08A	Wollman Farm,	82.77	337	P		P		17 31 01.9	+0.7
G14A	Jackson	82.78	333	⇓P		P		17 31 02.2	+0.5
	baz=82,SNR=12								
HTW	Haystack Looko	82.82	339	P		P		17 31 01.2	-0.4
HTW	Haystack Looko	82.82	339	P		P		17 31 01.2	-0.4
N26A	Koester Ranch,	82.85	324	⇓P		P		17 31 02.7	+0.7
	baz=83,SNR=14								
F12A	Elk City	82.88	334	⇑P		P		17 31 02.0	0.0
	baz=83,SNR=85								
K21A	Alcova	82.90	328	⇑P		P		17 31 01.9	-0.4
	baz=83,SNR=26								
I18A	Diamond G Ranc	82.91	330	⇑P		P		17 31 03.9	+1.5
	baz=83,SNR=12								
MCMT	McKenzie Canyo	82.95	332	P		P	

L21A **Rawlins** 83.52 327 ⇓P P 17 31 05.4 -0.1
baz=83,SNR=18
J17A **Brown Place, J** 83.52 330 ⇑P P 17 31 06.5 +1.1
baz=83,SNR=31
N24A **Carr** 83.52 325 ⇑P P 17 31 06.1 +0.6
baz=83
HAWA **Hanford** 83.54 337 eP P 17 31 05.8 +0.6
comp=Z,103nm,1.3s
HAWA epP pP 17 31 31.9 +0.1
HAWA esP sP 17 31 41.0 -1.7
HAWA **Hanford** 83.54 337 eP P 17 31 05.8 +0.6
comp=Z,103nm,1.3s
HAWA epP pP 17 31 31.9 +0.1
TUL1 **Tulsa** 83.55 316 ⇓P P 17 31 05.0 -0.5
baz=83
NAC **Naches** 83.57 338 P P 17 31 05.8 +0.3
NAC **Naches** 83.57 338 P P 17 31 05.8 +0.3
BW06 **Boulder Array** 83.64 329 ⇑P P 17 31 05.6 -0.5
baz=83,SNR=34
PDAR **Pinedale Array** 83.64 329 P P 17 31 05.7 -0.4
PDAR pP pP 17 31 34.8 +2.2
PDAR PP PP 17 34 18.0 -1.2
PDAR PKiKP PKiKP 17 36 20.3 -1.7
PDAR PKKP PKKPdf 17 49 10.3 -0.7
PDAR PKKPbc PKKPbc 17 49 21.4 +0.3
PDAR **Pinedale Array** 83.64 329 P P 17 31 05.7 -0.4
comp=Z,16nm,0.6s,baz=66,slow=5.2,SNR=163
PDAR pP pP 17 31 34.8 +2.2
comp=Z,16nm,1.1s,baz=50,slow=4.6,SNR=4.2
PDAR PP PP 17 34 18.0 -1.2
comp=Z,3.4nm,1.1s,baz=67,slow=7.3,SNR=3.6
PDAR PKiKP PKiKP 17 36 20.3 -1.7
comp=Z,0.8nm,0.8s,baz=97,slow=3.5,SNR=3.7
PDAR PKKP PKKPdf 17 49 10.3 -0.7
comp=Z,0.3nm,0.8s,baz=150,slow=3.3,SNR=3.6
PDAR PKKPbc PKKPbc 17 49 21.4 +0.3
comp=Z,1.2nm,0.6s,baz=155,slow=3.7,SNR=12
PDAR LR LR 18 08 53.8
comp=Z,125nm,19.4s,baz=48,slow=36
PDAR **Pinedale Array** 83.64 329 P P 17 31 05.7 -0.4
PDAR pP pP 17 31 34.8 +2.2
H13A **Challis** 83.64 333 ⇑P P 17 31 06.4 +0.4
baz=83,SNR=52
P27A **Ficken Ranch,** 83.64 323 ⇓P P 17 31 05.8 -0.3
baz=83,SNR=9.1
M22A **Cedar Creek Ra** 83.71 326 ⇓P P 17 31 07.4 +0.9
baz=84,SNR=28
RRI2 **Red Ridge** 83.75 330 eP P 17 31 07.7 +1.0
comp=Z,80nm,0.6s
RRI2 pP pP 17 31 35.5 +2.2
RRI2 **Red Ridge** 83.75 330 eP P 17 31 07.7 +1.0
comp=Z,80nm,0.6s
RRI2 pP pP 17 31 35.5 +2.2
WPW **White Pass** 83.79 339 P P 17 31 07.2 +0.5
WPW **White Pass** 83.79 339 P P 17 31 07.2 +0.5
LON **Longmire** 83.81 339 eP P 17 31 06.3 -0.4
LON pmax pmax
comp=Z,16nm,1.1s
LON **Longmire** 83.81 339 eP P 17 31 06.3 -0.4
comp=Z,16nm,1.1s
LON **Longmire** 83.81 339 eP P 17 31 06.3 -0.4
comp=Z,16nm,1.1s
O25A **Wiggins** 83.82 324 ⇓P P 17 31 07.0 0.0
baz=84,SNR=13
M21A **Separation Pea** 83.83 327 ⇓P P 17 31 07.0 -0.1
baz=84,SNR=17
H12A **Diamond D Ranc** 83.84 333 ⇑P P 17 31 06.6 -0.4
baz=84,SNR=19
L20A **Wamsutter** 83.85 328 ⇑P P 17 31 07.7 +0.6
baz=84,SNR=71
N23A **Red Feather La** 83.89 326 ⇓P P 17 31 08.3 +0.8
baz=84,SNR=52
S31A **Mullinville** 83.89 320 ⇑P P 17 31 06.1 -1.1
baz=84
TRW **Toppenish Ridg** 83.91 338 P P 17 31 07.9 +0.7
TRW **Toppenish Ridg** 83.91 338 P P 17 31 07.9 +0.7
J16A **Bone** 83.91 331 ⇓P P 17 31 09.0 +1.5
baz=84,SNR=31
K18A **Toltan Ranch,** 83.92 329 ⇓P P 17 31 08.1 +0.5
baz=84,SNR=36
I14A **Mackay** 83.95 332 ⇑P P 17 31 08.5 +0.9
baz=84,SNR=61
P26A **Davis Ranch, A** 83.96 323 ⇑P P 17 31 08.4 +0.7
baz=84
J15A **Blackfoot** 84.08 331 ⇑P P 17 31 09.7 +1.5
baz=84,SNR=53
KSCO **Kaye Shedlock'** 84.12 323 ⇓P P 17 31 09.5 +1.0
baz=84,SNR=13
L19A **Farson** 84.14 329 ⇑P P 17 31 08.6 -0.1
baz=84,SNR=24
N22A **Wattenberg Ran** 84.17 326 ⇓P P 17 31 09.4 +0.5
baz=84,SNR=21
I13A **Wildhorse Cree** 84.18 333 ⇑P P 17 31 10.0 +1.2
baz=84,SNR=218
AHID **Auburn Hatcher** 84.18 330 eP P 17 31 09.2 +0.3
comp=Z,32nm,0.6s
AHID **Auburn Hatcher** 84.18 330 eP P 17 31 09.2 +0.3
comp=Z,32nm,0.6s
O24A **Longmont** 84.20 325 ⇑P P 17 31 09.6 +0.7
baz=84,SNR=5.0
M20A **Sweetwater, Wa** 84.24 328 ⇑P P 17 31 10.1 +0.9
baz=84,SNR=43
K16A **Soda Springs** 84.30 330 ⇑P P 17 31 06.0 -3.4
baz=84,SNR=21
BMO **Blue Mountains** 84.32 335 eP P 17 31 08.6 -0.8
comp=Z,66nm,0.7s
BMO epP pP 17 31 36.5 +0.6
BMO ePP PP 17 34 17.5 -7.0
BMO **Blue Mountains** 84.32 335 eP P 17 31 08.6 -0.8
comp=Z,66nm,0.7s
BMO epP pP 17 31 36.5 +0.6
R28A **Tribune** 84.33 322 ⇓P P 17 31 09.5 0.0
baz=84
P25A **Willow Gulch B** 84.34 324 ⇑P P 17 31 10.3 +0.7
baz=84,SNR=14
T31A **Randall Ranch,** 84.41 320 ⇑P P 17 31 09.1 -0.8
baz=84
O23A **Lake Granby, G** 84.46 325 ⇓P P 17 31 10.7 +0.3
baz=84,SNR=12
J14A **Carey** 84.51 332 ⇑P P 17 31 11.5 +1.1
baz=84,SNR=17
L18A **Fontenelle, Gr** 84.54 329 ⇑P P 17 31 10.7 0.0
baz=84,SNR=23
Q26A **Hugo** 84.57 323 ⇓P P 17 31 10.6 -0.2
baz=84,SNR=6.8
M19A **Rock Springs** 84.59 328 ⇑P P 17 31 10.9 0.0
baz=84,SNR=21
HLID **Hailey** 84.59 333 eP P 17 31 10.6 -0.2
comp=Z,15nm,0.9s
HLID **Hailey** 84.59 333 ⇑P P 17 31 11.0 +0.2
baz=84,SNR=20
HLID **Hailey** 84.59 333 eP P 17 31 10.6 -0.2
comp=Z,15nm,0.9s
KSM **Kuching** 84.59 93 P P 17 31 12.3 +1.3
KSM **Kuching** 84.59 93 P P 17 31 12.3 +1.3
comp=Z,7.0nm,1.6s,comp=Z,634nm
I12A **Atlanta** 84.61 333 ⇑P P 17 31 11.0 0.0
baz=84,SNR=33
N21A **Black Mountain** 84.62 327 ⇑P P 17 31 11.6 +0.5
baz=84,SNR=12
S29A **Ulysses** 84.62 321 ⇓P P 17 31 10.8 -0.2
baz=84
J13A **Cove Ranch, Pi** 84.66 332 ⇓P P 17 31 11.9 +0.7
baz=84,SNR=19
L17A **Cokeville** 84.69 330 ⇑P P 17 31 11.0 -0.4
baz=84,SNR=20
ISCO **Idaho Springs** 84.69 325 eP P 17 31 11.1 -0.5
ISCO e*PP pP 17 31 37.6 -0.6
ISCO pmax pmax
comp=Z,19nm,1.1s
ISCO **Idaho Springs** 84.69 325 eP P 17 31 11.1 -0.5
comp=Z,19nm,1.1s
ISCO epP pP 17 31 37.6 -0.6
ISCO **Idaho Springs** 84.69 325 ⇑P P 17 31 11.8 +0.2
baz=84,SNR=18
ISCO **Idaho Springs** 84.69 325 eP P 17 31 11.1 -0.5
comp=Z,19nm,1.1s
ISCO epP pP 17 31 37.6 -0.6
K15A **Arbon** 84.75 331 ⇑P P 17 31 12.8 +1.2
baz=84,SNR=69
O22A **Kremmling** 84.75 326 ⇓P P 17 31 11.9 0.0
baz=84,SNR=28
R27A **Eads** 84.80 322 ⇑P P 17 31 11.7 -0.2
baz=85
N20A **Spence Gulch,** 84.84 327 ⇓P P 17 31 12.6 +0.4
baz=85,SNR=49
Q25A **Bedland, Calha** 84.88 324 ⇓P P 17 31 11.7 -0.7
baz=85,SNR=5.7
L16A **Fish Haven** 84.96 330 ⇑P P 17 31 12.6 -0.2
baz=85,SNR=23
M18A **Lyman** 84.99 329 ⇓P P 17 31 12.8 -0.2
baz=85,SNR=11
S28A **Manter** 84.99 321 ⇑P P 17 31 12.7 -0.2
baz=85,SNR=15
VFP **Flag Point** 85.05 338 P P 17 31 13.7 +0.6
VFP **Flag Point** 85.05 338 P P 17 31 13.7 +0.6
R26A **Arlington** 85.06 323 ⇑P P 17 31 13.0 -0.2
baz=85,SNR=14
T29A **Hugoton** 85.09 321 ⇓P P 17 31 13.1 -0.2
baz=85
K14A **Jones Ranch, D** 85.09 331 ⇑P P 17 31 13.8 +0.5
baz=85,SNR=14
P23A **Jefferson** 85.14 325 ⇓P P 17 31 14.3 +0.4
baz=85,SNR=15
M17A **Scullys Gap (B** 85.17 329 ⇓P P 17 31 13.4 -0.4
baz=85,SNR=13
MFID **Camas Ranch** 85.17 333 ⇑P P 17 31 13.9 +0.3
baz=85,SNR=69
Q24A **Divide** 85.21 324 ⇑P P 17 31 13.8 -0.4
baz=85,SNR=7.0
SBUM **Sibu** 85.24 91 P P 17 31 15.4 +1.1
SBUM **Sibu** 85.24 91 P P 17 31 15.6 +1.4
SBUM **Sibu** 85.24 91 P P 17 31 15.3 +1.0
comp=Z,9.7nm,0.9s,comp=Z,573nm
L15A **Malad City** 85.30 331 ⇓P P 17 31 14.6 +0.2
baz=85,SNR=13
KDM **Kudat** 85.31 85 P P 17 31 15.6 +1.0
BTM **Bintulu** 85.31 90 P P 17 31 16.4 +1.8
COCO **West Island** 85.34 113 *i* P 17 31 17.8 +3.2
S27A **Las Animas** 85.35 322 ⇓P P 17 31 14.9 +0.2
baz=85,SNR=5.8
HWUT **Hardware Ranch** 85.37 330 eP P 17 31 14.6 -0.2
comp=Z,35nm,0.6s
HWUT epP pP 17 31 42.7 +1.3
HWUT **Hardware Ranch** 85.37 330 eP P 17 31 14.6 -0.2
comp=Z,35nm,0.6s
HWUT epP pP 17 31 42.7 +1.3
O20A **White River Ci** 85.43 327 ⇑P P 17 31 14.7 -0.4
baz=85,SNR=8.4
T28A **Walsh** 85.48 321 ⇓P P 17 31 15.1 -0.2
baz=85
KKM **Kota Kinabalu** 85.50 86 P P 17 31 16.3 +0.6
KKM **Kota Kinabalu** 85.50 86 P P 17 31 15.9 +0.2
comp=Z,7.7nm,1.1s,comp=Z,732nm
L14A **Malta** 85.57 331 ⇑P P 17 31 16.1 +0.4
baz=85,SNR=18
O19A **Miners Draw (B** 85.63 328 ⇑P P 17 31 15.6 -0.4
baz=85,SNR=13
HVU **Hansel Valley** 85.64 331 eP P 17 31 16.3 +0.2
HVU e*PP pP 17 31 44.3 +1.6
HVU pmax pmax
comp=Z,53nm,1.0s
HVU **Hansel Valley** 85.64 331 eP P 17 31 16.3 +0.2
comp=Z,52nm,1.0s
HVU epP pP 17 31 44.3 +1.6
HVU **Hansel Valley** 85.64 331 eP P 17 31 16.3 +0.2
comp=Z,52nm,1.0s
HVU epP pP 17 31 44.3 +1.6
S26A **Kim** 85.65 322 ⇑P P 17 31 16.1 0.0
baz=85
P21A **Newcastle** 85.65 326 ⇑P P 17 31 16.3 0.0
baz=85
SMCO **Snowmass** 85.77 326 eP P 17 31 16.6 -0.4
comp=Z,3.4nm,0.7s
SMCO epP pP 17 31 45.2 +1.5
SMCO **Snowmass** 85.77 326 eP P 17 31 16.6 -0.4
comp=Z,3.4nm,0.7s
SMCO epP pP 17 31 45.2 +1.5
T27A **Campo** 85.79 322 ⇓P P 17 31 16.2 -0.7
baz=86
R24A **Sanders Place,** 85.82 324 ⇑P P 17 31 16.8 -0.3
baz=86,SNR=8.1
WMOK **Wichita Mounta** 85.93 318 eP P 17 31 16.4 -1.1
WMOK e*PP pP 17 31 43.2 -0.9
WMOK pmax pmax
comp=Z,10.0nm,0.7s
WMOK **Wichita Mounta** 85.93 318 eP P 17 31 16.4 -1.1
comp=Z,10nm,0.7s
WMOK epP pP 17 31 43.2 -0.9
WMOK **Wichita Mounta** 85.93 318 eP P 17 31 16.4 -1.1
comp=Z,10nm,0.7s
WMOK epP pP 17 31 43.2 -0.9
Q22A **Crested Butte,** 86.01 325 ⇑P P 17 31 18.0 -0.1
baz=86,SNR=14
S25A **Robets Cordova** 86.02 323 ⇓P P 17 31 17.8 -0.3
baz=86,SNR=18
U28A **Mallet** 86.14 321 ⇓P P 17 31 18.2 -0.4
baz=86,SNR=5.4
R23A **Moffat** 86.15 324 ⇓P P 17 31 18.5 -0.4
baz=86,SNR=6.9
JLU **Jordanelle** 86.21 329 eP P 17 31 19.0 -0.1
comp=Z,69nm,1.6s
JLU **Jordanelle** 86.21 329 eP P 17 31 19.0 -0.1
comp=Z,69nm,1.6s
S24A **Houchin Ranch,** 86.36 324 ⇓P P 17 31 19.3 -0.6
baz=86,SNR=8.4
U27A **Thompson Grove** 86.37 321 ⇓P P 17 31 19.1 -0.7
baz=86,SNR=12
T25A **Trinidad** 86.45 323 ⇑P P 17 31 19.3 -0.9
baz=86,SNR=11
SDKM **Sandakan** 86.47 86 P P 17 31 20.9 +0.5
SDKM **Sandakan** 86.47 86 P P 17 31 21.1 +0.7
Q20A **Ridgley Place,** 86.48 326 ⇓P P 17 31 19.4 -0.9
baz=86
P18A **Preston Nutter** 86.63 328 ⇓P P 17 31 20.9 -0.3
baz=86,SNR=7.6
V28A **Channing** 86.67 321 ⇑P P 17 31 20.5 -0.7
baz=86
R21A **Cimarron** 86.69 326 ⇓P P 17 31 21.4 -0.1
baz=86,SNR=7.4
T24A **Torres, Weston** 86.78 323 ⇑P P 17 31 21.9 -0.1
baz=86,SNR=13
MPU **Maple Canyon** 86.80 329 eP P 17 31 21.6 -0.2
comp=Z,13nm,0.6s
MPU **Maple Canyon** 86.80 329 eP P 17 31 21.6 -0.2
comp=Z,13nm,0.6s
U26A **Atchley Ranch,** 86.80 322 ⇑P P 17 31 21.2 -0.7
baz=87,SNR=35
WVOR **Wild Horse Val** 86.92 335 eP P 17 31 22.3 0.0
WVOR pmax pmax
comp=Z,48nm,1.6s
WVOR **Wild Horse Val** 86.92 335 eP P 17 31 22.3 0.0
comp=Z,48nm,1.6s
WVOR **Wild Horse Val** 86.92 335 eP P 17 31 22.3 0.0
comp=Z,48nm,1.6s
DUG **Dugway** 87.06 330 eP P 17 31 23.1 +0.1
DUG e*PP pP 17 31 50.4 +0.7
DUG pmax pmax
comp=Z,33nm,1.0s
DUG **Dugway** 87.06 330 eP P 17 31 23.1 +0.1
comp=Z,33nm,1.0s
DUG epP pP 17 31 50.4 +0.7
DUG **Dugway** 87.06 330 ⇑P P 17 31 23.4 +0.4
baz=87,SNR=22
DUG **Dugway** 87.06 330 eP P 17 31 23.1 +0.1
comp=Z,33nm,1.0s
DUG epP pP 17 31 50.4 +0.7
U25A **Circle Dot Ran** 87.08 322 ⇑P P 17 31 23.1 -0.1
baz=87,SNR=14
X30A **Coker Ranch, T** 87.14 319 ⇓P P 17 31 22.5 -1.0
baz=87,SNR=14
R20A **Redvale** 87.17 326 ⇑P P 17 31 23.3 -0.4
baz=87,SNR=6.1
SRU **San Rafael** 87.19 328 ⇓P P 17 31 23.3 -0.5
baz=87,SNR=7.5
T23A **Casias Ranch,** 87.22 324 ⇓P P 17 31 23.9 -0.1
baz=87,SNR=5.9
TMUT **Trail Mountain** 87.28 329 eP P 17 31 23.8 -0.5
comp=Z,14nm,0.7s
TMUT **Trail Mountain** 87.28 329 eP P 17 31 23.8 -0.5
comp=Z,14nm,0.7s
V26A **Tequesquite Ra** 87.32 322 ⇓P P 17 31 23.0 -1.3
baz=87,SNR=9.7
ELK **Elko** 87.39 332 eP P 17 31 25.1 +0.3
comp=Z,107nm,0.6s
ELK **Elko** 87.39 332 eP P 17 31 25.1 +0.3
comp=Z,107nm,0.6s
S21A **Coal Bank Pass** 87.40 325 ⇑P P 17 31 24.5 -0.4
baz=87,SNR=10
Z32A **Haskell** 87.43 317 ⇓P P 17 31 24.0 -0.8
baz=87,SNR=9.8
S20A **Disappointment** 87.47 326 ⇓P P 17 31 24.9 -0.3
baz=87,SNR=5.6
Q16A **Castle Valley** 87.60 328 ⇓P P 17 31 25.2 -0.5
baz=87,SNR=12
T22A **Edith** 87.60 324 ⇑P P 17 31 25.8 0.0
baz=87,SNR=14
W27A **Bowe Ranch, En** 87.62 321 ⇑P P 17 31 25.0 -0.8
baz=87,SNR=9.7
V25A **Rancho No Teng** 87.64 322 ⇑P P 17 31 24.8 -1.2
baz=87,SNR=5.3
MYLDM **Lahad Datu** 87.70 85 P P 17 31 28.7 +2.4
comp=Z,19nm,1.0s
U23A **El Rito** 87.89 324 ⇑P P 17 31 26.9 -0.3
baz=88,SNR=6.8
MOD **Modoc** 87.89 336 eP P 17 31 27.4 +0.4
comp=Z,39nm,1.1s
MOD **Modoc** 87.89 336 eP P 17 31 27.4 +0.4
comp=Z,39nm,1.1s
W26A **Owens Ranch, T** 87.91 321 ⇓P P 17 31 26.6 -0.6
baz=88
HUMO **Hull Mountain** 87.97 338 eP P 17 31 26.9 -0.2
comp=Z,18nm,1.2s
HUMO **Hull Mountain** 87.97 338 eP P 17 31 27.0 -0.2
comp=Z,18nm,1.2s
Y29A **Porterfield Fa** 88.00 319 ⇑P P 17 31 27.2 -0.4
baz=88
V24A **Rampart Ranch,** 88.02 323 ⇑P P 17 31 27.6 -0.2
baz=88,SNR=11
MVCO **Mesa Verde** 88.07 326 eP P 17 31 25.9 -2.1
MVCO **Mesa Verde** 88.07 326 ⇓P P 17 31 27.6 -0.5
baz=88,SNR=5.9
MVCO **Mesa Verde** 88.07 326 eP P 17 31 25.9 -2.1
ABTX **Abilene, Hawle** 88.07 317 ⇓P P 17 31 27.0 -0.9
baz=88
W25A **X Bar L Ranch,** 88.10 322 ⇑P P 17 31 27.5 -0.6
baz=88,SNR=10
U22A **Llaves** 88.12 324 ⇓P P 17 31 28.5 +0.2
baz=88,SNR=7.5
Y28A **McKinney Farm,** 88.22 320 ⇑P P 17 31 27.6 -1.0
baz=88,SNR=5.3
BMN **Battle Mountai** 88.31 333 eP P 17 31 29.2 +0.2
BMN pmax pmax
comp=Z,13nm,0.8s
BMN **Battle Mountai** 88.31 333 eP P 17 31 29.2 +0.2
comp=Z,13nm,0.8s
BMN **Battle Mountai** 88.31 333 eP P 17 31 29.2 +0.2
comp=Z,13nm,0.8s
MSU **Marysvale** 88.32 329 eP P 17 31 29.3 0.0
MSU pmax pmax
comp=Z,10.0nm,0.6s
MSU **Marysvale** 88.32 329 eP P 17 31 29.2 0.0
comp=Z,9.8nm,0.6s
MSU **Marysvale** 88.32 329 eP P 17 31 29.2 0.0
comp=Z,9.8nm,0.6s
X26A **CR and CF Fran** 88.38 321 ⇓P P 17 31 28.5 -0.9
baz=88,SNR=17
131A **Roby** 88.38 318 ⇓P P 17 31 28.5 -0.9
baz=88
MSTX **Muleshoe** 88.41 320 ⇑P P 17 31 28.9 -0.7
baz=88,SNR=8.1
U21A **Nageezi** 88.41 325 ⇑P P 17 31 29.4 -0.3
baz=88,SNR=5.1
W24A **Lazy 6 Ranch,** 88.51 322 ⇑P P 17 31 29.9 -0.2
baz=88,SNR=16
V22A **San Miguel Ran** 88.54 324 ⇓P P 17 31 30.0 -0.3
baz=88,SNR=7.2
Y27A **Causey** 88.65 320 ⇓P P 17 31 29.6 -1.1
baz=88,SNR=9.3
130A **Snyder** 88.72 318 ⇓P P 17 31 30.2 -0.8
baz=88,SNR=5.2
X25A **Clemmons Ranch** 88.77 322 ⇓P P 17 31 31.0 -0.3
baz=88
Z28A **Tucker Farm, M** 88.80 319 ⇑P P 17 31 30.6 -0.8
baz=89
Y26A **Elida** 88.92 321 ⇓P P 17 31 31.3 -0.7
baz=89,SNR=7.3
V21A **Milan** 88.94 324 ⇓P P 17 31 31.3 -0.8
baz=89
Z27A **Tatum** 89.15 320 ⇓P P 17 31 32.0 -1.0
baz=89,SNR=9.0
ANMO **Albuquerque** 89.19 323 eP P 17 31 32.7 -0.6
comp=Z,20nm,1.4s
ANMO epP pP 17 31 58.8 -1.3
ANMO **Albuquerque** 89.19 323 eP P 17 31 32.7 -0.6
comp=Z,20nm,1.4s
ANMO epP pP 17 31 58.8 -1.3
V20A **Brimhall** 89.28 325 ⇑P P 17 31 33.5 -0.2
baz=89
230A **Sterling City** 89.38 318 ⇓P P 17 31 33.1 -0.9
baz=89
128A **Castleberry Fa** 89.40 319 ⇑P P 17 31 33.3 -0.9
baz=89,SNR=8.3
Z26A **Caprock** 89.53 320 ⇑P P 17 31 34.3 -0.6
baz=89,SNR=60
CCUT **Cedar City** 89.60 329 eP P 17 31 35.3 +0.1
comp=Z,22nm,0.6s
CCUT **Cedar City** 89.60 329 eP P 17 31 35.3 +0.1
comp=Z,22nm,0.6s
Y24A **Capitan** 89.62 322 ⇑P P 17 31 34.8 -0.6
baz=89,SNR=22
R11A **Troy Canyon, C** 89.66 331 ⇑P P 17 31 35.7 +0.2
baz=89
127A **Arkansas Junct** 89.75 320 ⇑P P 17 31 34.9 -0.9
baz=90
X22A **Bernardo** 89.80 323 ⇑P P 17 31 35.6 -0.5
baz=90,SNR=8.1
LPM **Los Pinos Moun** 89.80 323 eP P 17 31 35.7 -0.5
comp=Z,18nm,1.4s
LPM epP pP 17 32 02.5 -0.5
LPM **Los Pinos Moun** 89.80 323 eP P 17 31 35.7 -0.5
comp=Z,18nm,1.4s
LPM epP pP 17 32 02.5 -0.5
330A **Mertzon** 89.80 317 ⇑P P 17 31 35.7 -0.4
baz=90,SNR=5.3
Z25A **Roswell** 89.85 321 ⇑P P 17 31 35.9 -0.4
baz=90,SNR=20
228A **UT Block 9, Go** 89.87 319 ⇓P P 17 31 35.6 -0.8
baz=90
W20A **Ramah** 89.88 325 ⇓P P 17 31 36.0 -0.6
baz=90
Y23A **Lovelace Mesa,** 89.88 322 ⇑P P 17 31 36.3 -0.3
baz=90,SNR=14
LAZ **Ladron** 89.94 323 eP P 17 31 36.4 -0.4
comp=Z,15nm,1.4s
LAZ epP pP 17 32 01.7 -2.0
LAZ **Ladron** 89.94 323 eP P 17 31 36.4 -0.4
comp=Z,15nm,1.4s
LAZ epP pP 17 32 01.7 -2.0
BNM **Barren Site** 89.94 323 eP P 17 31 36.3 -0.6
comp=Z,14nm,0.9s
BNM epP pP 17 32 03.5 -0.2
BNM **Barren Site** 89.94 323 eP P 17 31 36.3 -0.6
comp=Z,14nm,0.9s
BNM epP pP 17 32 03.5 -0.2
LENM **Lemitar** 90.07 323 eP P 17 31 36.9 -0.5
comp=Z,22nm,1.4s
LENM epP pP 17 32 03.6 -0.6
LENM **Lemitar** 90.07 323 eP P 17 31 36.9 -0.5
comp=Z,22nm,1.4s
LENM epP pP 17 32 03.7 -0.6
126A **Clayton Basin,** 90.08 320 ⇑P P 17 31 36.7 -0.7
baz=90,SNR=18
Z24A **Sheeppen Canyo** 90.10 321 ⇑P P 17 31 37.2 -0.3
baz=90,SNR=17
329A **Wagon Wheel Ra** 90.12 318 ⇓P P 17 31 36.7 -0.8
baz=90,SNR=14
431A **Sonora** 90.13 317 ⇑P P 17 31 36.7 -0.9
baz=90,SNR=6.2
X21A **Alamocita Cree** 90.17 324 ⇓P P 17 31 38.5 +0.5
baz=90,SNR=14
532A **Rocksprings** 90.25 316 ⇑P P 17 31 37.0 -1.1
baz=90,SNR=6.6
Y22A **Socorro** 90.27 323 ⇓P P 17 31 37.9 -0.5
baz=90,SNR=9.8
227A **Bennet, Jal** 90.28 319 ⇓P P 17 31 37.9 -0.4
baz=90
CLNB **Carlsbad** 90.34 320 eP P 17 31 37.6 -1.0
comp=Z,4.6nm,0.9s
CLNB epP pP 17 32 04.1 -1.3
CLNB **Carlsbad** 90.34 320 eP P 17 31 37.6 -1.0
comp=Z,4.6nm,0.9s
CLNB epP pP 17 32 04.1 -1.3
430A **Baggett Ranch,** 90.35 317 ⇑P P 17 31 37.6 -1.0
baz=90,SNR=12
125A **Gardner Draw,** 90.35 321 ⇓P P 17 31 37.6 -1.1
baz=90,SNR=26
NV11 **Mina Array Sit** 90.43 333 eP P 17 31 38.4 -0.6
NV11 epP pP 17 32 04.0 -1.8
NV11 **Mina Array Sit** 90.43 333 eP P 17 31 38.4 -0.6
NV11 epP pP 17 32 04.0 -1.8

NVAR	**Mina Array Bea**	**90.48**	**333**	P	**P**	**17 31 38.9**	**-0.4**
NVAR				pP	**pP**	**17 32 08.7**	**+2.6**
NVAR				PP	**PP**	**17 35 09.7**	**-4.5**
NVAR				PKKP	**PKKPbc**	**17 49 05.5**	**+0.8**
NVAR	**Mina Array Bea**	**90.48**	**333**	P	**P**	**17 31 38.9**	**-0.4**
	comp=Z,3.8nm,0.7s,baz=34,slow=3.9,SNR=15						
NVAR				pP	**pP**	**17 32 08.7**	**+2.6**
	comp=Z,2.5nm,0.8s,baz=34,slow=5.6,SNR=4.2						
NVAR				PP	**PP**	**17 35 09.7**	**-4.5**
	comp=Z,0.6nm,0.6s,baz=358,slow=5.4,SNR=2.8						
NVAR				PKKP	**PKKPbc**	**17 49 05.5**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=210,slow=5.2,SNR=5.3						
NVAR				LR	LR	18 13 42.0	
	comp=Z,191nm,18.9s,baz=11,slow=36						
NVAR	**Mina Array Bea**	**90.48**	**333**	P	**P**	**17 31 38.9**	**-0.4**
NVAR				pP	**pP**	**17 32 08.7**	**+2.6**
Y21A	**Point of Rocks**	**90.50**	**323**	⇓P	**P**	**17 31 38.8**	**-0.7**
	baz=90,SNR=6.2						
Z23A	**Rita Site, Whi**	**90.53**	**322**	⇓P	**P**	**17 31 39.1**	**-0.4**
	baz=90,SNR=15						
531A	**Rocksprings**	**90.53**	**316**	⇓P	**P**	**17 31 38.4**	**-1.1**
	baz=90,SNR=6.4						
328A	**Wristen Ranch,**	**90.59**	**319**	⇑P	**P**	**17 31 38.6**	**-1.1**
	baz=90,SNR=6.3						
GDL2	**Guadalupe Moun**	**90.61**	**320**	*e*P	**P**	**17 31 38.8**	**-1.1**
	comp=Z,11nm,1.0s						
GDL2				*e*pP	**pP**	**17 32 04.1**	**-2.6**
GDL2	**Guadalupe Moun**	**90.61**	**320**	*e*P	**P**	**17 31 38.8**	**-1.1**
	comp=Z,11nm,1.0s						
GDL2				*e*pP	**pP**	**17 32 04.1**	**-2.6**
226B	**Tecolote Peak,**	**90.62**	**320**	⇑P	**P**	**17 31 39.2**	**-0.7**
	baz=90,SNR=18						
BDFB	**Brasilia**	**90.65**	**248**	P	**P**	**17 31 40.8**	**+0.7**
BDFB				pP	**pP**	**17 32 08.1**	**+1.1**
BDFB	**Brasilia**	**90.65**	**248**	P	**P**	**17 31 40.8**	**+0.7**
	comp=Z,21nm,0.7s,baz=58,slow=4.2,SNR=29						
BDFB				pP	**pP**	**17 32 08.1**	**+1.1**
	comp=Z,16nm,0.9s,baz=26,slow=3.2,SNR=4.5						
BDFB				LR	LR	18 13 07.7	
	comp=Z,75nm,18.7s,baz=184,slow=36						
BDFB	**Brasilia**	**90.65**	**248**	P	**P**	**17 31 40.8**	**+0.7**
BDFB				pP	**pP**	**17 32 08.1**	**+1.1**
124A	**Stringfield Ra**	**90.67**	**321**	⇑P	**P**	**17 31 39.2**	**-1.1**
	baz=90,SNR=8.4						
632A	**Uvalde**	**90.70**	**315**	⇓P	**P**	**17 31 39.4**	**-0.8**
	baz=90						
429A	**Davenport Ranc**	**90.79**	**318**	⇓P	**P**	**17 31 39.8**	**-0.9**
	baz=91						
Z22A	**Elephant Butte**	**90.85**	**323**	⇑P	**P**	**17 31 40.7**	**-0.3**
	baz=91,SNR=5.9						
530A	**J-C Ranch, Com**	**90.92**	**317**	⇑P	**P**	**17 31 40.3**	**-1.0**
	baz=91,SNR=8.9						
428A	**Kincaid Ranch,**	**91.08**	**318**	⇓P	**P**	**17 31 41.0**	**-1.0**
	baz=91						
Z21A	**St. Cloud Mine**	**91.10**	**323**	⇑P	**P**	**17 31 42.0**	**-0.3**
	baz=91,SNR=11						
326A	**Caldwell Ranch**	**91.18**	**319**	⇑P	**P**	**17 31 41.9**	**-0.6**
	baz=91,SNR=7.7						
224A	**Cornudas Mount**	**91.23**	**321**	⇑P	**P**	**17 31 41.6**	**-1.2**
	baz=91,SNR=5.1						
427A	**Hayter Ranch,**	**91.31**	**319**	⇑P	**P**	**17 31 42.3**	**-0.8**
	baz=91,SNR=5.3						
529A	**Stev Forest Ra**	**91.37**	**317**	⇓P	**P**	**17 31 42.4**	**-0.9**
	baz=91						
CMB	**Columbia Colle**	**91.49**	**334**	*e*P	**P**	**17 31 42.9**	**-0.9**
CMB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMB	**Columbia Colle**	**91.49**	**334**	*e*P	**P**	**17 31 42.9**	**-0.9**
	comp=Z,3.7nm,0.9s						
CMB	**Columbia Colle**	**91.49**	**334**	*e*P	**P**	**17 31 42.9**	**-0.9**
	comp=Z,3.7nm,0.9s						
325A	**Bean Ranch, Si**	**91.59**	**320**	⇑P	**P**	**17 31 43.4**	**-1.1**
	baz=91,SNR=7.1						
528A	**Cox Ranch, San**	**91.60**	**318**	⇓P	**P**	**17 31 43.9**	**-0.6**
	baz=91,SNR=11						
Z20A	**Nine Sixteen R**	**91.66**	**324**	⇓P	**P**	**17 31 44.4**	**-0.4**
	baz=91						
426A	**McDonald Obser**	**91.75**	**319**	⇑P	**P**	**17 31 44.5**	**-0.9**
	baz=92,SNR=23						
324A	**Moseley Ranch,**	**91.75**	**321**	⇓P	**P**	**17 31 44.4**	**-0.8**
	baz=92						
121A	**Cookes Peak, D**	**91.82**	**323**	⇑P	**P**	**17 31 44.3**	**-1.3**
	baz=92,SNR=5.3						
425A	**Indio Mountain**	**92.09**	**320**	⇓P	**P**	**17 31 45.1**	**-1.6**
	baz=92						
120A	**U Bar Ranch, L**	**92.17**	**323**	⇑P	**P**	**17 31 47.1**	**-0.1**
	baz=92,SNR=6.6						
628A	**Black Gap, Mar**	**92.22**	**318**	⇓P	**P**	**17 31 46.7**	**-0.5**
	baz=92						
221A	**Mesquite Ranch**	**92.27**	**323**	⇓P	**P**	**17 31 47.5**	**0.0**
	baz=92						
526A	**Mary Lane Ranc**	**92.29**	**319**	⇓P	**P**	**17 31 47.0**	**-0.7**
	baz=92,SNR=14						
627A	**Terlingua Ranc**	**92.48**	**318**	⇓P	**P**	**17 31 47.6**	**-0.9**
	baz=92,SNR=14						
TXAR	**Lajitas Array**	**92.71**	**318**	P	**P**	**17 31 48.6**	**-0.9**
TXAR				pP	**pP**	**17 32 16.4**	**-0.1**
TXAR				PP	**PP**	**17 35 35.8**	**+3.8**
TXAR				PKKP	**PKKPbc**	**17 48 59.6**	**+0.8**
TXAR	**Lajitas Array**	**92.71**	**318**	P	**P**	**17 31 48.6**	**-0.9**
	comp=Z,2.2nm,0.5s,baz=57,slow=4.6,SNR=38						
TXAR				pP	**pP**	**17 32 16.4**	**-0.1**
	comp=Z,6.7nm,1.2s,baz=58,slow=4.9,SNR=3.3						
TXAR				PP	**PP**	**17 35 35.8**	**+3.8**
	comp=Z,2.0nm,1.0s,baz=39,slow=6.4,SNR=4.6						
TXAR				PKKP	**PKKPbc**	**17 48 59.6**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=207,slow=4.3,SNR=8.7						
TXAR	**Lajitas Array**	**92.71**	**318**	P	**P**	**17 31 48.7**	**-0.9**
TXAR				pP	**pP**	**17 32 16.4**	**-0.1**
626A	**Big Bend Ranch**	**92.74**	**319**	⇓P	**P**	**17 31 48.5**	**-1.2**
	baz=92,SNR=8.8						
320A	**Kipp Ranch, An**	**93.17**	**323**	⇑P	**P**	**17 31 51.8**	**0.0**
	baz=93						
TUC	**Tucson**	**93.25**	**325**	*e*P	**P**	**17 31 51.6**	**-0.4**
TUC				*e**PP	**pP**	**17 32 18.7**	**-0.2**
TUC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TUC	**Tucson**	**93.25**	**325**	*e*P	**P**	**17 31 51.6**	**-0.4**
	comp=Z,1.8nm,0.8s						
TUC				*e*pP	**pP**	**17 32 18.7**	**-0.2**
TUC	**Tucson**	**93.25**	**325**	*e*P	**P**	**17 31 51.6**	**-0.4**
	comp=Z,1.8nm,0.8s						
TUC				*e*pP	**pP**	**17 32 18.7**	**-0.2**
Y12C	**Blythe**	**93.42**	**328**	⇑P	**P**	**17 31 53.4**	**+0.7**
	baz=93						
319A	**Douglas**	**93.45**	**323**	⇓P	**P**	**17 31 53.2**	**+0.1**
	baz=93						
BC3	**Big Chuckawall**	**93.84**	**329**	⇓P	**P**	**17 31 55.4**	**+0.7**
	baz=94						
113A	**Mohawk Valley,**	**94.01**	**327**	⇓P	**P**	**17 31 55.6**	**+0.2**
	baz=94						
ROSC	**El Rosal**	**94.11**	**281**	P	**P**	**17 31 56.2**	**-0.4**
ROSC	**El Rosal**	**94.11**	**281**	P	**P**	**17 31 56.2**	**-0.4**
	comp=Z,5.3nm,0.5s,baz=70,slow=22,SNR=3.5						
ROSC	**El Rosal**	**94.11**	**281**	P	**P**	**17 31 56.2**	**-0.4**
GLA	**Glamis**	**94.16**	**328**	*e*P	**P**	**17 31 56.1**	**0.0**
GLA				pmax	pmax		
	comp=Z,15nm,0.9s						
GLA	**Glamis**	**94.16**	**328**	*e*P	**P**	**17 31 56.1**	**0.0**
	comp=Z,15nm,0.9s						
GLA	**Glamis**	**94.16**	**328**	⇑P	**P**	**17 31 56.8**	**+0.7**
	baz=94						
GLA	**Glamis**	**94.16**	**328**	*e*P	**P**	**17 31 56.1**	**0.0**
	comp=Z,15nm,0.9s						
PFO	**Pinyon Flat Ob**	**94.24**	**330**	⇓P	**P**	**17 31 57.4**	**+0.8**
	baz=94						
214A	**Organ Pipe Nat**	**94.37**	**326**	⇓P	**P**	**17 31 56.5**	**-0.6**
	baz=94						
KAPI	**Kappang**	**95.80**	**91**	P	**P**	**17 32 03.5**	**-0.3**
KAPI				pP	**pP**	**17 32 29.9**	**-0.8**
KAPI	**Kappang**	**95.80**	**91**	P	**P**	**17 32 03.7**	**-0.1**
	SNR=6.3						
KAPI	**Kappang**	**95.80**	**91**	P	**P**	**17 32 03.6**	**-0.2**
KAPI	**Kappang**	**95.80**	**91**	P	**P**	**17 32 03.5**	**-0.3**
	comp=Z,21nm,1.0s,baz=298,slow=8.2,SNR=13						
KAPI				pP	**pP**	**17 32 29.9**	**-0.8**
	comp=Z,15nm,1.1s,baz=207,slow=4.5,SNR=3.1						
KAPI	**Kappang**	**95.80**	**91**	P	**P**	**17 32 03.5**	**-0.3**
KAPI				pP	**pP**	**17 32 29.9**	**-0.8**
SAML	**Samuel**	**96.13**	**264**	*e*P	**P**	**17 32 03.7**	**-1.6**
	comp=Z,2.8nm,0.6s						
SAML	**Samuel**	**96.13**	**264**	*e*P	**P**	**17 32 03.7**	**-1.6**
	comp=Z,2.8nm,0.6s						
LPAZ	**La Paz**	**104.69**	**262**	PKKPbc	PKKPbc	17 48 27.7	+1.3
LPAZ	**La Paz**	**104.69**	**262**	PKKPbc	PKKPbc	17 48 27.7	+1.3
	comp=Z,1.5nm,0.8s,baz=222,slow=4.4,SNR=4.8						
FITZ	**Fitzroy Crossi**	**109.01**	**97**	PKiKP	**PKiKP**	**17 37 06.1**	**-0.4**

FITZ	**Fitzroy Crossi**	**109.01**	**97**	PKiKP	**PKiKP**	**17 37 06.1**	**-0.4**
	comp=Z,2.0nm,0.8s,baz=263,slow=12,SNR=5.6						
FITZ	**Fitzroy Crossi**	**109.01**	**97**	PKiKP	**PKiKP**	**17 37 06.1**	**-0.4**
NWAO	**Narrogin (SRO)**	**113.15**	**114**	PKiKP	**PKiKP**	**17 37 13.2**	**-0.8**
NWAO	**Narrogin (SRO)**	**113.15**	**114**	PKiKP	**PKiKP**	**17 37 13.2**	**-0.8**
	comp=Z,7.3nm,0.7s,baz=275,slow=4.7,SNR=7.2						
NWAO	**Narrogin (SRO)**	**113.15**	**114**	PKiKP	**PKiKP**	**17 37 13.1**	**-0.8**
SYO	**Syowa Base**	**114.80**	**175**	*e*X	PKPdf	17 37 14.4	-1.5
MAW	**Mawson**	**116.27**	**165**	PKP	**PKPdf**	**17 37 18.6**	**-0.2**
MAW	**Mawson**	**116.27**	**165**	PKP	**PKPdf**	**17 37 18.6**	**-0.2**
	comp=Z,16nm,0.7s,baz=320,slow=3.6,SNR=28						
MAW	**Mawson**	**116.27**	**165**	PKIKP	**PKPdf**	**17 37 18.6**	**-0.2**
WRA	**Warramunga Arr**	**116.32**	**92**	PKP	**PKPdf**	**17 37 19.3**	**-1.2**
WRA				pPKP	pPKPdf	17 37 47.4	-1.1
WRA				PKKPbc	**PKKPbc**	**17 47 47.9**	**0.0**
WRA				PKKP	**PKKPdf**	**17 48 14.7**	**+1.0**
WRA	**Warramunga Arr**	**116.32**	**92**	PKP	**PKPdf**	**17 37 19.3**	**-1.2**
	comp=Z,6.7nm,0.9s,baz=304,slow=2.1,SNR=24						
WRA				pPKP	pPKPdf	17 37 47.4	-1.1
	comp=Z,4.1nm,0.8s,baz=306,slow=2.3,SNR=7.6						
WRA				PKKPbc	**PKKPbc**	**17 47 47.9**	**0.0**
	comp=Z,1.9nm,0.7s,baz=139,slow=3.1,SNR=20						
WRA				PKKP	**PKKPdf**	**17 48 14.7**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=168,slow=1.3,SNR=5.2						
WRA	**Warramunga Arr**	**116.32**	**92**	PKIKP	**PKPdf**	**17 37 19.3**	**-1.2**
MAIT	**Maitri**	**116.66**	**185**	*e*	PKPdf	17 37 09.4	-10
AS31	**Alice Springs**	**118.46**	**96**	*e*PKPdf	**PKPdf**	**17 37 23.2**	**-1.3**
AS31	**Alice Springs**	**118.46**	**96**	*e*PKIKP	**PKPdf**	**17 37 23.2**	**-1.3**
ASAR	**Alice Springs**	**118.46**	**96**	PKP	**PKPdf**	**17 37 23.4**	**-1.1**
ASAR				pPKP	**pPKPdf**	**17 37 52.1**	**-0.4**
ASAR				PP	PP	17 38 37.6	-5.3
ASAR				PKKPbc	**PKKPbc**	**17 47 41.2**	**+0.8**
ASAR	**Alice Springs**	**118.46**	**96**	PKP	**PKPdf**	**17 37 23.4**	**-1.1**
	comp=Z,3.9nm,0.7s,baz=308,slow=1.7,SNR=35						
ASAR				pPKP	**pPKPdf**	**17 37 52.1**	**-0.4**
	comp=Z,3.4nm,0.8s,baz=337,slow=2.4,SNR=4.6						
ASAR				PP	PP	17 38 37.6	-5.3
	comp=Z,2.3nm,0.9s,baz=302,slow=5.0,SNR=4.2						
ASAR				PKKPbc	**PKKPbc**	**17 47 41.2**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=127,slow=3.6,SNR=23						
ASAR	**Alice Springs**	**118.46**	**96**	PKIKP	**PKPdf**	**17 37 23.4**	**-1.1**
SNAA	**Sanae**	**118.92**	**190**	*e*PKPdf	**PKPdf**	**17 37 23.1**	**-0.8**
SNAA				*ep*PKPdf	**pPKPdf**	**17 37 49.8**	**-2.1**
SNAA				*e*PP	**PP**	**17 38 44.5**	**-0.9**
SNAA	**Sanae**	**118.92**	**190**	*e*PKIKP	**PKPdf**	**17 37 23.1**	**-0.8**
PLCA	**Paso Flores**	**121.97**	**243**	*e*PKPdf	**PKPdf**	**17 37 30.3**	**-0.4**
PLCA				PKP	**PKPdf**	**17 37 30.9**	**+0.1**
PLCA				*ep*PKPdf	**pPKPdf**	**17 37 57.4**	**-1.4**
PLCA				pPKP		17 37 58.5	
PLCA	**Paso Flores**	**121.97**	**243**	PKP	**PKPdf**	**17 37 30.9**	**+0.1**
	comp=Z,6.7nm,0.4s,baz=45,slow=1.3,SNR=41						
PLCA				pPKP	**pPKPdf**	**17 37 58.5**	**-0.3**
	comp=Z,6.0nm,0.9s,baz=44,slow=4.2,SNR=4.1						
PLCA	**Paso Flores**	**121.97**	**243**	PKIKP	**PKPdf**	**17 37 30.9**	**+0.1**
MIR	**Mirnyy**	**122.81**	**154**	⇓*i*PKIKP	**PKPdf**	**17 37 31.5**	**+0.1**
MIR				pmax	pmax		
	comp=Z,42nm,1.0s						
CTA	**Charters Tower**	**124.76**	**83**	PKP	**PKPdf**	**17 37 36.8**	**+0.1**
CTA				pPKP	**pPKPdf**	**17 38 04.9**	**+0.2**
CTA	**Charters Tower**	**124.76**	**83**	PKP	**PKPdf**	**17 37 36.8**	**+0.1**
	comp=Z,17nm,0.8s,baz=303,slow=3.1,SNR=26						
CTA				pPKP	**pPKPdf**	**17 38 04.9**	**+0.2**
	comp=Z,19nm,0.8s,baz=285,slow=2.0,SNR=10						
CTA	**Charters Tower**	**124.76**	**83**	PKIKP	**PKPdf**	**17 37 36.8**	**+0.1**
CTAO	**Charters Tower**	**124.76**	**83**	*e*PKIKP	**PKPdf**	**17 37 36.2**	**-0.4**
CTAO				*e*		17 38 05.3	
CTAO	**Charters Tower**	**124.76**	**83**	*e*PKPdf	**PKPdf**	**17 37 36.2**	**-0.4**
CTAO				*ep*PKPdf	**pPKPdf**	**17 38 05.3**	**+0.6**
STKA	**Stephens Creek**	**128.86**	**98**	PKP	**PKPdf**	**17 37 43.8**	**-0.3**
STKA				pPKP	**pPKPdf**	**17 38 12.7**	**+0.5**
STKA	**Stephens Creek**	**128.86**	**98**	PKP	**PKPdf**	**17 37 43.8**	**-0.3**
	comp=Z,12nm,0.8s,baz=313,slow=3.3,SNR=13						
STKA				pPKP	**pPKPdf**	**17 38 12.7**	**+0.5**
	comp=Z,4.9nm,0.8s,baz=12,slow=4.7,SNR=2.2						
STKA	**Stephens Creek**	**128.86**	**98**	PKIKP	**PKPdf**	**17 37 43.8**	**-0.3**
VNDA	**Vanda**	**143.58**	**165**	PKPpre	PKPpre	17 38 06.0	
VNDA				*e*PKPdf	PKPab	17 38 06.2	-0.6
VNDA	**Vanda**	**143.58**	**165**	PKhKP	PKPpre	17 38 06.0	
	comp=Z,7.7nm,0.7s,baz=250,slow=4.1,SNR=15						
SBA	**Scott Base**	**144.22**	**167**	*e*PKIKP	**PKPab**	**17 38 09.1**	**-0.1**
SBA				*e*		17 38 37.6	
SBA	**Scott Base**	**144.22**	**167**	*e*PKPdf	**PKPab**	**17 38 09.1**	**-0.1**
SBA				*ep*PKPdf	**pPKPdf**	**17 38 37.6**	**-1.6**
PMOR	**Pomariorio Ree**	**149.04**	**349**	*e*PKPbc	**PKPbc**	**17 38 26.6**	**+1.5**
	comp=Z,272nm,1.2s						
TIAR	**Tiarei**	**151.73**	**352**	*e*PKPbc	**PKPbc**	**17 38 32.8**	**+1.2**
	comp=Z,35nm,0.9s						
PPT2	**Papeete2**	**151.78**	**352**	*e*LR	LR	18 29 17.4	
	comp=Z,189nm,32.8s						
PAE	**Paea**	**151.85**	**352**	*e*PKPbc	**PKPbc**	**17 38 32.6**	**+0.8**
	comp=Z,32nm,1.6s						
MEH	**Mehetia**	**151.89**	**349**	*e*PKPbc	**PKPbc**	**17 38 32.5**	**+0.6**
	comp=Z,118nm,1.1s						
TVO	**Taravao**	**151.94**	**351**	*e*PKPbc	**PKPbc**	**17 38 34.7**	**+2.6**
	comp=Z,145nm,1.2s						
RKT	**Rikitea**	**152.92**	**320**	*e*PKPbc	**PKPbc**	**17 38 35.3**	**+1.2**

IDC 25 17:24:49.5±4.1, 10°48S×163°34E, h140km±32km, mb3.5/8, mb1 3.7/10, mb1mx3.5/23, mbtmp3.6/10, MS3.4/3, Ms1 3.4/3, ms1mx3.0/24, Error ellipse: s-maj=38.3km s-min=21.8km az=116.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.50**	**287**	P	Pn	17 25 43.4	+0.5
	48nm,0.3s,baz=153,slow=5.5,SNR=32						
HNR				S	Sn	17 26 41.3	+17
	30nm,0.3s,baz=192,slow=21,SNR=4.7						
CTA	**Charters Tower**	**19.04**	**238**	P	Pn	17 29 02.1	-1.1
	baz=66,slow=10,SNR=9.3						
CTA				LR	LR	17 35 11.1	
	comp=Z,99nm,20.2s,baz=57,slow=33						
STKA	**Stephens Creek**	**29.29**	**220**	P	P	17 30 37.1	-1.7
	5.0nm,0.8s,baz=28,slow=11,SNR=5.7						
STKA				LR	LR	17 41 33.1	
	comp=Z,141nm,18.2s,baz=24,slow=34						
WRA	**Warramunga Arr**	**29.48**	**248**	P	P	17 30 40.2	-0.5
	0.4nm,0.6s,baz=85,slow=12,SNR=8.1						
GUMO	**Guam**	**30.13**	**322**	LR	LR	17 42 52.5	
	comp=Z,49nm,18.0s,baz=98,slow=36						
ASAR	**Alice Springs**	**30.96**	**241**	P	P	17 30 52.5	-1.2
	0.4nm,0.4s,baz=64,slow=10,SNR=23						
FITZ	**Fitzroy Crossi**	**37.26**	**254**	P	P	17 31 48.3	+0.3
	2.6nm,0.8s,baz=135,slow=7.6,SNR=5.9						
CMAR	**Chiang Mai Arr**	**69.73**	**294**	P	P	17 35 46.8	+1.9
	0.6nm,0.7s,baz=128,slow=5.1,SNR=4.3						
QSPA	**South Pole Qui**	**79.52**	**180**	P	P	17 36 42.5	+1.9
	1.5nm,0.9s,baz=63,slow=2.2,SNR=5.1						
ILAR	**Eielson Array**	**83.75**	**19**	P	P	17 37 01.4	-1.1
	0.4nm,0.7s,baz=228,slow=3.7,SNR=3.8						
MKAR	**Makanchi Array**	**91.50**	**317**	P	P	17 37 39.6	-0.7
	1.0nm,0.8s,baz=98,slow=8.7,SNR=4.5						

*IDC **25** 17:27:14.3±1.1, 30°65S×177°90W, h0km, mb4.3/5, mb1 4.4/6, mb1mx4.0/21, mbtmp4.3/6, ML3.1/1, MS3.7/2, Ms1 3.8/2, ms1mx3.0/29, Error ellipse: s-maj=31.7km s-min=20.7km az=122.0*

*ISCJB **25** 17:27:18.2±1.8, 30°64S±0°09×177°9W±0°3, h46km, mb4.3/5, MS4.3/1, Error ellipse: s-maj=40.6km s-min=7.7km az=15.0*

*NEIC **25** 17:27:19.4±0.8, 30°61S×177°89W, h35km, mb4.4/1, Error ellipse: s-maj=22.3km s-min=13.2km az=111.0*

ISC 25 17:27:20.4±0.9, 30°54S±0°08×177°9W±0°2, h46km, n37, σ1°24/35, mb4.3/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.28**	**360**	*e*Pn	**Pn**	**17 27 42.0**	**+0.1**
RAO				*e*Sn	**Sn**	**17 27 55.0**	**-2.9**
RAO				Sn	Sn	17 27 56.8	-1.1
RAO	**Raoul Island**	**1.28**	**360**	Pn	**Pn**	**17 27 43.0**	**+1.1**
	537nm,0.3s,baz=73,slow=21,SNR=10						
RAO				Sn	**Sn**	**17 27 56.8**	**-1.1**
	752nm,0.3s,baz=42,slow=24,SNR=20						
URZ	**Urewera**	**8.73**	**207**	Pn	**Pn**	**17 29 22.0**	**-1.9**
URZ				Sn	**Sn**	**17 31 00.6**	**-0.4**
URZ	**Urewera**	**8.73**	**207**	Pn	**Pn**	**17 29 22.0**	**-1.9**
	0.2nm,0.3s,baz=32,slow=8.9,SNR=2.2						
URZ				Sn	**Sn**	**17 31 00.6**	**-0.4**
	1.1nm,0.3s,baz=285,slow=20,SNR=11						
DZM	**Mont Dzumac**	**16.36**	**297**	LR	LR	17 35 49.9	
	comp=Z,106nm,18.7s,baz=210,slow=31						
CTA	**Charters Tower**	**33.90**	**279**	P	**P**	**17 34 00.2**	**+1.2**
CTA	**Charters Tower**	**33.90**	**279**	P	**P**	**17 34 00.2**	**+1.2**
	2.4nm,0.4s,baz=102,slow=12,SNR=10						
CTAO	**Charters Tower**	**33.90**	**279**	*e*P	**P**	**17 34 00.3**	**+1.2**
	2.9nm,0.5s						
STKA	**Stephens Creek**	**34.52**	**257**	P	**P**	**17 34 05.5**	**+1.2**
STKA	**Stephens Creek**	**34.52**	**257**	P	**P**	**17 34 05.5**	**+1.2**
	7.2nm,0.9s,baz=113,slow=14,SNR=9.3						
ASAR	**Alice Springs**	**43.18**	**267**	P	**P**	**17 35 16.6**	**-0.3**
ASAR	**Alice Springs**	**43.18**	**267**	P	**P**	**17 35 16.6**	**-0.3**
	0.9nm,0.4s,baz=105,slow=7.3,SNR=47						
WRA	**Warramunga Arr**	**44.18**	**272**	P	**P**	**17 35 24.4**	**-0.6**
WRA	**Warramunga Arr**	**44.18**	**272**	P	**P**	**17 35 24.4**	**-0.6**
	2.6nm,0.5s,baz=110,slow=8.1,SNR=73						
FITZ	**Fitzroy Crossi**	**52.44**	**270**	P	**P**	**17 36 28.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**52.44**	**270**	P	**P**	**17 36 28.0**	**-0.7**
	2.9nm,0.9s,baz=149,slow=7.3,SNR=4.1						
SNAA	**Sanae**	**78.01**	**178**	P	P	17 39 16.6	+3.0
CPUP	**Villa Florida**	**99.84**	**128**	LR	LR	18 16 56.9	
	comp=Z,84nm,19.1s,baz=228,slow=30						
BVAR	**Borovoye Array**	**126.56**	**316**	PKP	**PKPdf**	**17 46 20.8**	**+2.8**
BVAR	**Borovoye Array**	**126.56**	**316**	PKP	**PKPdf**	**17 46 20.8**	**+2.8**
	0.6nm,0.5s,baz=143,slow=2.9,SNR=4.8						
ARCES	**ARCESS Array B**	**138.74**	**348**	PKPpre	PKPpre	17 46 35.6	
ARCES	**ARCESS Array B**	**138.74**	**348**	PKhKP	PKPpre	17 46 35.6	
	1.2nm,0.9s,baz=29,slow=2.1,SNR=3.1						
JOF	**Joensuu**	**142.58**	**338**	*e*pkp	PKPdf	17 46 41.2	-6.3
KAF	**Kangasniemi**	**144.71**	**340**	*e*pkp	**PKPab**	**17 46 48.9**	**-1.2**
KBZ	**Khabaz**	**145.25**	**304**	PKPbc	**PKPdf**	**17 46 53.4**	**+0.6**
KBZ	**Khabaz**	**145.25**	**304**	PKPbc	**PKPdf**	**17 46 53.4**	**+0.6**
	0.9nm,0.6s,baz=116,slow=3.5,SNR=4.3						
FINES	**FINESS Array B**	**145.30**	**340**	PKPbc	**PKPdf**	**17 46 51.6**	**-0.7**
FINES	**FINESS Array B**	**145.30**	**340**	PKPbc	**PKPdf**	**17 46 51.6**	**-0.7**
	3.4nm,0.4s,baz=52,slow=4.4,SNR=52						
NB2	**NORSAR Subarra**	**148.90**	**351**	PKP	**PKPbc**	**17 47 02.3**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=16,slow=2.9						
NOA	**NORSAR Array B**	**148.90**	**351**	PKPbc	**PKPbc**	**17 47 02.4**	**0.0**
NOA	**NORSAR Array B**	**148.90**	**351**	PKPbc	**PKPbc**	**17 47 02.4**	**0.0**
	comp=Z,1.6nm,0.7s,baz=16,slow=4.3,SNR=6.5						
AKASG	**Malin Array Be**	**151.46**	**323**	PKPbc	**PKPbc**	**17 47 08.3**	**-0.5**
AKASG	**Malin Array Be**	**151.46**	**323**	PKPbc	**PKPbc**	**17 47 08.3**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=52,slow=3.0,SNR=5.1						
BRTR	**Keskin Array B**	**152.73**	**298**	PKPbc	**PKPbc**	**17 47 11.8**	**-0.5**
BRTR	**Keskin Array B**	**152.73**	**298**	PKPbc	**PKPbc**	**17 47 11.8**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=127,slow=0.6,SNR=4.5						
TORD	**Torodi Ar. Bea**	**162.69**	**179**	PKPab	**PKPab**	**17 48 07.4**	**+1.0**
**

I22A	9 Mile Ranch, baz=0.9,SNR=70	0.90	279	P	Pg	18 23 51.0 +0.5
I22A	baz=0.9			⇓S	Sb	18 24 04.6 +0.1
J22A	Midwest baz=0.9,SNR=273	0.95	249	⇓P	Pg	18 23 51.4 -0.2
J22A	baz=0.9			⇓S	Sb	18 24 05.8 -0.2
RSSD	Black Hills	0.96	67	*e*Pg	Pg	18 23 52.2 +0.5
K23A	Bowen Ranch, D baz=1.0	1.04	195	⇑P	Pg	18 23 53.5 +0.3
K23A	baz=1.0			⇑S	Sb	18 24 08.3 -0.1
K24A	Anderson Ranch baz=1.1,SNR=73	1.08	162	⇑P	Pg	18 23 54.5 +0.5
K24A	baz=1.1			⇑S	Sn	18 24 11.3 -0.4
H24A	Dirks Ranch, A baz=1.1	1.11	27	⇓P	Pg	18 23 55.2 +0.6
H24A	baz=1.1			⇑S	Sb	18 24 11.6 +0.9
H22A	Clearmont baz=1.2,SNR=186	1.15	317	P	Pg	18 23 56.0 +0.6
H22A	baz=1.2			⇑S	Sn	18 24 13.4 +0.1
K22A	Casper baz=1.4,SNR=13	1.44	220	⇑P	Pn	18 24 00.4 -0.5
K22A	baz=1.4			⇓S	Sn	18 24 21.3 +0.7
G23A	Biddle baz=1.5,SNR=117	1.45	356	⇓P	Pn	18 24 01.1 +0.2
G23A	baz=1.5			⇓S	Sn	18 24 21.3 +0.7
I21A	Big Trails, Te baz=1.5	1.47	273	⇑P	Pn	18 24 00.4 -0.9
I21A	baz=1.5			⇓S	Sn	18 24 22.1 +0.7
K25A	Mack Ranch, Ha baz=1.5,SNR=44	1.53	138	⇑Pb	Pg	18 24 03.2 +0.5
K25A	baz=1.5			⇑S	Sg	18 24 23.4 +0.9
H21A	Big Horn, Sher baz=1.6,SNR=69	1.55	305	⇓P	Pn	18 24 02.8 +0.5
H21A	baz=1.6			⇑S	Sg	18 24 24.8 +1.6
G22A	Birney baz=1.7,SNR=90	1.64	334	⇑P	Pn	18 24 04.3 +0.7
J21A	Lysite baz=1.6,SNR=130	1.64	256	⇑P	Pn	18 24 03.2 -0.5
J21A	baz=1.6			⇑S	Sb	18 24 26.4 +0.5
L23A	Garrett baz=1.7,SNR=394	1.67	191	⇓P	Pn	18 24 04.3 +0.2
G24A	Alzada baz=1.7,SNR=35	1.68	21	⇓Pb	Pb	18 24 05.5 +0.3
L24A	Wheatland baz=1.7,SNR=22	1.73	172	⇓P	Pn	18 24 04.9 +0.2
K21A	Alcova baz=1.8,SNR=266	1.84	233	⇓P	Pn	18 24 07.0 +0.6
K26A	Motz Farm, Whi baz=1.8,SNR=18	1.85	124	⇓Pb	Pb	18 24 08.2 +0.1
L25A	Engebretsen Ra baz=1.8,SNR=168	1.86	149	Pb	Pb	18 24 08.7 +0.4
L22A	Ellis Ranch, M baz=1.9,SNR=165	1.93	207	⇓P	Pn	18 24 08.2 +0.6
F23A	Volborg baz=2.0,SNR=145	1.97	357	⇓P	Pn	18 24 09.2 +1.2
G21A	Lodge Grass baz=2.0,SNR=72	2.02	317	⇓P	Pn	18 24 09.6 +0.7
I20A	Worland baz=2.1,SNR=250	2.08	276	⇑P	Pn	18 24 10.7 +1.0
J20A	Shoshoni baz=2.1	2.09	260	⇑Pb	Pb	18 24 12.1 -0.1
H20A	Greybull baz=2.1,SNR=106	2.10	291	P	Pn	18 24 10.5 +0.6
F22A	Rosebud baz=2.2,SNR=188	2.14	341	⇓P	Pn	18 24 10.9 +0.5
F24A	Ekalaka baz=2.2,SNR=52	2.17	15	⇓Pn	Pb	18 24 12.5 -1.0
M24A	Cheyenne baz=2.3	2.31	172	⇓Pn	Pb	18 24 14.8 -1.2
M23A	Laramie baz=2.3	2.31	189	⇑Pn	Pb	18 24 15.2 -0.9
L21A	Rawlins baz=2.4	2.37	222	⇑Pn	Pn	18 24 15.2 +1.5
K27A	Flueckinger Fa baz=2.4	2.45	114	⇑Pn	Pn	18 24 15.8 +1.2
F21A	Absaloka Mine, baz=2.5	2.46	328	⇑P	Pn	18 24 15.3 +0.6
PHWY	Pilot Hill	2.46	184	*e*Pn	Pn	18 24 16.3 +1.3
M25A	Paim-Egli Farm baz=2.5	2.48	159	⇑Pb	Pn	18 24 17.4 +2.2
K20A	Yellowstone Ra baz=2.5	2.51	245	⇑Pn	Pn	18 24 16.9 +1.4
G20A	Bridger baz=2.6,SNR=277	2.57	306	P	Pn	18 24 16.7 +0.3
M21A	Separation Pea baz=2.6	2.65	217	⇓Pn	Pn	18 24 19.6 +2.0
I19A	Meeteetse baz=2.7,SNR=49	2.71	277	⇓Pn	Pn	18 24 19.8 +1.4
E22A	Miles City baz=2.7,SNR=17	2.73	350	⇑P	Pn	18 24 19.1 +0.6
E23A	Ismay baz=2.8,SNR=13	2.74	359	⇑P	Pn	18 24 19.3 +0.7
H19A	Powell baz=2.8,SNR=39	2.83	290	⇓Pn	Pn	18 24 21.1 +1.2
E24A	Baker baz=2.9,SNR=46	2.88	13	Pn	Pn	18 24 22.5 +1.9
F20A	Billings baz=2.9	2.90	316	⇓P	Pn	18 24 21.1 +0.3
E21A	Keefer Ranch, baz=3.1	3.07	336	⇓P	Pn	18 24 23.4 +0.3
RLMT	Red Lodge	3.18	297	*e*Pn	Pn	18 24 25.4 +0.6
RLMT	Red Lodge baz=3.2,SNR=70	3.18	297	Pn	Pn	18 24 26.0 +1.2
PDAR	Pinedale Array	3.29	254	Pn	Pn	18 24 27.6 +1.2
PDAR				Lg	Lg	18 25 14.7
PDAR	Pinedale Array 2.3nm,0.3s,baz=70,slow=16,SNR=47 19nm,0.3s,baz=77,slow=33,SNR=17	3.29	254	Pn	Pn	18 24 27.6 +1.2
PDAR				Lg	Lg	18 25 14.7
BW06	Boulder Array	3.29	254	*e*Pn	Pn	18 24 27.5 +1.1
H18A	Shoshone NF, C baz=3.3,SNR=9.3	3.30	288	⇑P	Pn	18 24 27.0 +0.5
F19A	Roth Farm, Mol baz=3.4,SNR=108	3.36	310	Pn	Pn	18 24 28.2 +1.1
E20A	Meyer Farm, Mu baz=3.4,SNR=7.5	3.42	325	⇑P	Pn	18 24 28.4 +0.5
G18A	Lazy EL Ranch, baz=3.5,SNR=48	3.45	298	⇑P	Pn	18 24 29.3 +0.9
D22A	Cohagen baz=3.5,SNR=18	3.46	350	⇑P	Pn	18 24 29.5 +1.0
N20A	Spence Gulch, baz=3.7	3.67	218	⇓Pn	Pn	18 24 33.3 +1.7
E19A	Rath Farm, Rou baz=3.7,SNR=21	3.68	319	⇑P	Pn	18 24 31.9 +0.3
OGNE	Ogallala	3.69	139	*e*Pn	Pn	18 24 33.4 +1.7
GCMT	Greycliff	3.74	304	*e*Pn	Pn	18 24 33.5 +1.0
LKWY	Lake	3.79	284	*e*Pn	Pn	18 24 35.3 +2.1
F18A	Big Timber baz=3.8,SNR=55	3.83	306	⇑Pn	Pn	18 24 34.7 +1.1
LOHW	Long Hollow	3.88	270	*e*Pn	Pn	18 24 35.0 +0.5
D20A	Manuel Ranch, baz=3.9,SNR=18	3.90	330	⇓P	Pn	18 24 35.1 +0.5
ISCO	Idaho Springs	3.96	184	*e*Pn	Pn	18 24 37.2 +1.5
MOOW	Moose Ponds	3.98	272	Pn	Pn	18 24 38.5 +2.8
SNOW	Snow King Moun	4.00	268	*e*Pn	Pn	18 24 40.3 +4.1
C22A	Vida baz=4.0,SNR=44	4.01	354	⇓Pn	Pn	18 24 38.2 +2.1
C23A	Lambert baz=4.1,SNR=58	4.05	1	Pn	Pn	18 24 38.9 +2.3
IMW	Indian Meadow	4.11	274	*e*Pn	Pn	18 24 39.4 +1.7
TPAW	Teton Pass	4.14	268	*e*Pn	Pn	18 24 41.4 +3.3
YMR	Madison River	4.20	285	Pn	Pn	18 24 42.7 +3.8
O20A	White River Ci baz=4.2	4.25	213	⇑Pn	Pn	18 24 41.3 +1.8
DCID1	Drake Creek	4.30	270	*e*Pn	Pn	18 24 41.5 +1.3
P25A	Willow Gulch B baz=4.3	4.32	169	⇓Pn	Pn	18 24 41.9 +1.5
E18A	Harlowton baz=4.3,SNR=35	4.33	312	Pn	Pn	18 24 41.8 +1.3
AHID	Auburn Hatcher	4.38	259	Pn	Pb	18 24 46.9 -4.4
C20A	Veseth Ranch, baz=4.4	4.40	335	⇓P	Pn	18 24 42.1 +0.7
F17A	Fitzpatrick Pl baz=4.4,SNR=26	4.40	301	Pn	Pn	18 24 43.2 +1.7
RRI2	Red Ridge	4.42	267	*e*Pn	Pn	18 24 44.1 +2.1
P26A	Davis Ranch, A baz=4.4,SNR=16	4.43	160	⇑Pn	Pn	18 24 43.5 +1.6
O19A	Miners Draw (B baz=4.5	4.50	221	⇓Pn	Pn	18 24 44.2 +1.3
M17A	Scullys Gap (B baz=4.6	4.60	242	⇑Pn	Pn	18 24 46.2 +1.9
P27A	Ficken Ranch, baz=4.6	4.65	154	⇑P	Pn	18 24 45.2 +0.2
D18A	Linhart Farms, baz=4.7	4.70	319	⇑Pn	Pn	18 24 47.1 +1.6
SMCO	Snowmass	4.75	196	*e*Pn	Pn	18 24 48.9 +2.3
DGMT	Dagmar	4.77	9	*e*Pn	Pn	18 24 47.5 +1.0
DGMT	Dagmar baz=4.8,SNR=24	4.77	9	⇑Pn	Pn	18 24 48.6 +2.1
C19A	Slack Wire Ran baz=4.8,SNR=34	4.78	328	⇓Pn	Pn	18 24 48.3 +1.6
E17A	Martinsdale baz=4.8,SNR=19	4.80	306	⇑Pn	Pn	18 24 48.9 +1.9
G16A	Moss Hill, Enn baz=4.9	4.91	290	⇓P	Pn	18 24 49.4 +0.9
P19A	Cripple Cowboy baz=5.0	4.97	215	⇓P	Pn	18 24 49.6 +0.2
B20A	Solberg Farm, baz=5.1	5.06	339	⇓P	Pn	18 24 51.1 +0.6
D17A	Six Diamond Ra baz=5.1,SNR=60	5.11	314	⇑P	Pn	18 24 51.8 +0.6
HWUT	Hardware Ranch 12nm,0.6s	5.12	247	*e*Pn	Pn	18 24 52.1 +0.7
KSCO	Kaye Shedlock' baz=5.1	5.14	156	⇑P	Pn	18 24 51.9 +0.3
A24A	Westby baz=5.3,SNR=15	5.24	9	⇑Pn	Pn	18 24 54.9 +2.0
A22A	Carney Farms, baz=5.3	5.26	355	⇓P	Pn	18 24 53.9 +0.7
EGMT	Eagleton 23nm,0.4s	5.30	325	*e*Pn	Pn	18 24 53.6 -0.2
E16A	East Helena baz=5.3,SNR=7.7	5.32	304	⇑P	Pn	18 24 54.6 +0.5
C17A	Wharram Farm, baz=5.5,SNR=16	5.47	317	⇑P	Pn	18 24 56.6 +0.5
DLMT	Dillon 7.0nm,0.5s	5.48	290	Pn	Pn	18 24 56.8 +0.4
HRY	Holter Researc 23nm,0.5s	5.50	305	*e*Pn	Pn	18 24 57.4 +0.8
LRM	Limekiln Ridge 40nm,0.5s	5.52	294	*e*Pn	Pn	18 24 57.6 +0.6
MCMT	McKenzie Canyo 2.7nm,0.4s	5.55	284	*e*Pn	Pn	18 25 02.5 +5.1
R26A	Arlington baz=5.6,SNR=26	5.62	165	⇑P	Pn	18 24 58.5 +0.3
R25A	Fountain Ranch baz=5.6,SNR=8.3	5.65	172	⇑P	Pn	18 24 59.0 +0.3
R27A	Eads baz=5.8,SNR=9.4	5.77	160	⇑P	Pn	18 25 00.3 -0.1
E15A	Deer Lodge baz=5.9,SNR=15	5.87	300	⇑P	Pn	18 25 02.2 +0.5
R28A	Tribune baz=6.0	6.00	153	⇓P	Pn	18 25 03.5 0.0
MPU	Maple Canyon 15nm,0.8s	6.05	234	*e*Pn	Pn	18 25 04.0 -0.2
SRU	San Rafael baz=6.1	6.10	222	⇑P	Pn	18 25 05.1 +0.2
ECSD	EROS Data Cent 13nm,0.4s	6.26	87	*e*Pn	Pn	18 25 06.0 -0.9
S26A	Kim baz=6.3	6.28	167	⇓P	Pn	18 25 07.7 +0.4
CHMT	Chamberlain Mo 3.1nm,0.5s	6.46	302	*e*Pn	Pn	18 25 10.7 +0.9
Q16A	Castle Valley baz=6.6	6.57	225	⇓P	Pn	18 25 11.7 +0.3
HLID	Hailey 2.2nm,0.6s	6.64	271	Pn	Pn	18 25 15.2 +2.8
S28A	Manter baz=6.7	6.67	156	⇑P	Pn	18 25 13.2 +0.6
D14A	Greenough baz=6.7,SNR=20	6.69	303	P	Pn	18 25 13.3 +0.4
SLMT	Seeley Lake 3.1nm,0.4s	6.75	304	*e*Pn	Pn	18 25 14.4 +0.5
B15A	Bradely Ranch, baz=6.8	6.83	314	⇓P	Pn	18 25 15.2 +0.4
MSO	Missoula 2.6nm,0.6s	6.85	300	*e*Pn	Pn	18 25 15.5 +0.3
SWMT	Swartz Lake 2.6nm,0.3s	7.18	305	*e*Pn	Pn	18 25 20.2 +0.5
YBMT	Yellow Bay 3.9nm,0.4s	7.37	307	*e*Pn	Pn	18 25 23.9 +1.7
MVU	Marysvale 5.9nm,0.8s	7.42	227	*e*Pn	Pn	18 25 23.6 +0.6
JTMT	Jette 2.3nm,0.4s	7.47	305	*e*Pn	Pn	18 25 24.8 +1.2
BSMT	Bassoo Peak 1.6nm,0.5s	7.81	305	*e*Pn	Pn	18 25 29.2 +0.8
KSU1	Kansas State U	7.99	123	Pn	Pn	18 25 36.9 +6.2
ULM	Lac du Bonnet	9.12	41	Pn	Pn	18 25 46.3 +0.1
ULM				Pg		18 26 17.4
ULM				Lg	Lg	18 28 13.8
ULM	Lac du Bonnet 1.9nm,0.3s,baz=228,slow=12,SNR=9.6	9.12	41	Pn	Pn	18 25 46.3 +0.1
ULM				Pg		18 26 17.4
ULM	1.2nm,0.3s,baz=221,slow=18,SNR=3.1			Lg	Lg	18 28 13.8
ULM	1.1nm,0.3s,baz=144,slow=19,SNR=2.7			LR	LR	18 29 58.1
NEW	comp=Z,42nm,18.3s,baz=50,slow=42 Newport comp=Z,42nm,18.9s,baz=192,slow=35	9.40	303	LR	LR	18 29 00.3
FFC	Flin Flon 4.4nm,0.5s	11.19	10	*e*Pn	Pn	18 26 12.8 -1.5
YBH	Yreka Blue Hor comp=Z,49nm,19.1s,baz=126,slow=40	12.99	267	LR	LR	18 32 12.8
YKA	Yellowknife Ar	19.55	347	P	P	18 28 01.1 -1.1
YKA	Yellowknife Ar 0.1nm,0.3s,baz=164,slow=12,SNR=10	19.55	347	P	P	18 28 01.1 -1.1
ARCES	ARCESS Array B	61.40	18	P	P	18 33 49.6 -1.1
ARCES	ARCESS Array B 1.4nm,0.8s,baz=340,slow=5.0,SNR=7.2	61.40	18	P	P	18 33 49.6 -1.1
NOA	NORSAR Array B comp=Z,18nm,18.5s,baz=120,slow=39	63.59	29	LR	LR	19 04 30.5
ZALV	Zalesovo Beam	82.29	354	P	P	18 35 55.0 -1.4
ZALV	Zalesovo Beam 0.3nm,0.4s,baz=353,slow=5.8,SNR=3.1	82.29	354	P	P	18 35 55.0 -1.4

IDC ***25*** *18:41:05.4±2.4,2˚.59N×128˚.34E, h146km±22km, mb4.0/21, mb1 4.1/22, mb1mx4.1/27, mbtmp4.0/22, MS3.2/3, Ms1 3.2/3, ms1mx2.5/32, Error ellipse: s-maj=20.1km s-min=7.6km az=82.0*

ISCJB ***25*** *18:41:07.5±0.6,2˚.55N±0˚.04×128˚.17E±0˚.05, h184km±6km, mb4.3/35, Error ellipse: s-maj=8.1km s-min=5.6km az=158.5*

NEIC ***25*** *18:41:07.7±0.2,2˚.57N×128˚.33E, mb4.4/15, Error ellipse: s-maj=11.1km s-min=5.4km az=83.0*

AUST ***25*** *18:41:09.5±0.6,2˚.46N×128˚.04E, h193km, Error ellipse: s-maj=1.3km s-min=1.0km az=228.0*

DJA ***25*** *18:41:12.7±0.6,2˚.N±7˚×12˚.8E±˚, h125km±9km, M4.7/17, mB5.2/9, mb4.7/17, MLv4.7/4, Mw(mB)4.6/9*

ISC 25 18:41:08.6±0.5, 2˚.53N±0˚.04×128˚.14E±0˚.07, h175km±4km, h175km:pP-P, n117, σ1≥40/142, mb4.4/34, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.91	204	P	Pn	18 41 44.0	-0.4
LBMI	Labuha	3.21	192	P	Pn	18 41 59.3	-0.4
MNI	Manado	3.48	252	P	Pn	18 42 02.4	-0.6
KMSI	Cibinong	4.59	245	P	Pn	18 42 16.8	-0.5
CTBH	Cotabato--PC H	6.06	320	↑iP	Pn	18 42 33.3	-3.2
AAI	Ambon 21nm,0.8s	6.18	180	P	Pn	18 42 38.9	+0.9
AAI	Ambon baz=6.1,SNR=3.0	6.18	180	P	Pn	18 42 44.8	+6.8
LUWI	Luwuk 222nm,0.7s,4μm	6.44	237	P	Pn	18 42 42.0	+0.6
LUWI	Luwuk baz=6.3,SNR=44	6.44	237	P	Pn	18 42 40.0	-1.4
MRSI	Marisa 303nm,0.5s,3μm	6.53	252	P	Pn	18 42 43.2	+0.6
FAKI	Fak Fak 125nm,1.0s,912nm	6.79	143	P	Pn	18 42 46.3	+0.2
FAKI	Fak Fak baz=6.8,SNR=45	6.79	143	P	Pn	18 42 46.4	+0.2
RKPI	Ransiki, Papua 86nm,0.9s,923nm	7.25	124	P	Pn	18 42 53.6	+1.5
SKSI	Soroako, Sulaw 529nm,0.7s,5μm	8.46	234	P	Pn	18 43 07.1	-1.1
PCI	Palu baz=8.9,SNR=8.3	8.98	248	P	Pn	18 43 09.4	-5.6

SRPI	Serui, Papua 59nm,0.8s,1μm	9.20	118	P	Pn	18 43 23.1 +5.2
KKSI	Kolaka, Sulawe 18nm,0.9s	9.30	224	P	Pn	18 43 17.7 -1.4
TLE	Tual 67nm,2.0s	9.32	151	P	Pn	18 43 21.5 +2.0
BBSI	Bau Bau 17nm,1.0s	9.72	215	P	Pn	18 43 26.1 +1.4
MYLDM	Lahad Datu 36nm,1.0s	9.97	286	P	Pn	18 43 32.3 +4.3
TTSI	Tana Toraja 168nm,0.8s,1μm	10.00	236	P	Pn	18 43 27.6 -0.7
SPSI	Sidrap Palu 62nm,0.8s,1μm	10.57	232	P	Pn	18 43 36.7 +0.9
BKSI	Bulukumba 20nm,0.8s	11.18	226	P	Pn	18 43 46.8 +3.0
KAPI	Kappang	11.25	228	P	Pn	18 43 44.8 +0.2
KAPI				*e*Sn	Sn	18 45 46.5 -3.1
KAPI				S	Sn	18 45 46.9 -2.7
KAPI	Kappang 37nm,0.7s	11.25	228	P	Pn	18 43 45.9 +1.3
KAPI	Kappang 7.9nm,0.3s,baz=167,slow=18,SNR=17	11.25	228	P	Pn	18 43 44.8 +0.2
KAPI	1.7nm,0.3s,baz=162,slow=20,SNR=8.6			S	Sn	18 45 46.9 -2.7
KAPI	comp=Z,50nm,20.6s,baz=267,slow=35			LR	LR	18 47 50.1
SMKI	Samarinda 89nm,0.7s,3μm	11.33	255	P	Pn	18 43 47.0 +1.4
MTN	Manton Dam baz=16,SNR=46	15.56	169	P	Pn	18 44 37.8 -1.2
KDU	Kakadu baz=16,SNR=11	15.72	164	P	P	18 44 41.4 +0.1
SBUM	Sibu	15.91	270	P	P	18 44 47.2 +3.8
FITZ	Fitzroy Crossi	20.65	187	P	P	18 45 33.3 -1.5
FITZ	Fitzroy Crossi 3.7nm,0.8s,baz=19,slow=9.6,SNR=17	20.65	187	P	P	18 45 33.3 -1.5
FITZ	Fitzroy Crossi baz=21,SNR=12	20.65	187	P	P	18 45 33.7 -1.1
PMG	Port Moresby 14nm,1.0s	22.35	122	P	P	18 45 43.4 -9.1
WRAB	Tennant Creek 19nm,0.6s	23.14	165	*e*P	P	18 45 58.8 -0.9
WRAB				*e*S	S	18 49 59.5 +1.5
WRA	Warramunga Arr	23.15	165	P	P	18 45 58.5 -1.2
WRA				S	S	18 50 00.2 +2.1
WRA	Warramunga Arr 17nm,0.6s,baz=346,slow=10.0,SNR=199	23.15	165	P	P	18 45 58.5 -1.2
WRA	3.4nm,1.0s,baz=344,slow=18,SNR=7.2			S	S	18 50 00.2 +2.1
MBWA	Marble Bar	24.95	199	P	P	18 46 15.5 -0.5
QIS	Mount Isa baz=26,SNR=7.0	25.55	154	P	P	18 46 21.1 -0.5
MTSU	Mount Surprise baz=26,SNR=15	25.99	143	P	P	18 46 24.9 -0.6
AS31	Alice Springs	26.64	168	*e*P	P	18 46 30.3 -0.9
ASAR	Alice Springs	26.64	168	P	P	18 46 30.6 -0.6
ASAR				PcP	PcP	18 49 51.0 +0.2
ASAR	Alice Springs 2.3nm,0.6s,baz=351,slow=7.8,SNR=97	26.64	168	P	P	18 46 30.6 -0.6
ASAR	2.5nm,0.4s,baz=354,slow=2.1,SNR=24			PcP	PcP	18 49 51.0 +0.2
CTA	Charters Tower	28.66	142	P	P	18 46 48.9 -0.4
CTA	Charters Tower 1.3nm,0.5s,baz=333,slow=8.3,SNR=3.8	28.66	142	P	P	18 46 48.9 -0.4
CTAO	Charters Tower 4.1nm,0.9s	28.66	142	P	P	18 46 47.0 -2.3
MEEK	Meekatharra baz=30,SNR=8.7	30.43	197	P	P	18 47 04.1 -0.7
JNU	Nakatsue	30.54	5	P	P	18 47 03.4 -2.3
JNU	Nakatsue 5.0nm,0.6s,baz=215,slow=19,SNR=6.0	30.54	5	P	P	18 47 03.4 -2.3
GSI	Gunungsitoli baz=30,SNR=3.5	30.57	268	P	P	18 47 14.9 +8.7
GYA	Guiyang	31.48	321	*e*P	P	18 47 15.5 +1.3
GYA	comp=Z,10.0nm,0.8s			pmax	pmax	
CMAR	Chiang Mai Arr	32.69	301	P	P	18 47 26.9 +2.1
CMAR				PcP	PcP	18 50 08.3 +1.9
CMAR	Chiang Mai Arr comp=Z,0.6nm,0.7s,baz=125,slow=7.8,SNR=5.2	32.69	301	P	P	18 47 26.9 +2.1
CMAR	comp=Z,0.4nm,0.6s,baz=132,slow=2.3,SNR=5.1			PcP	PcP	18 50 08.3 +1.9
QLP	Quilpie baz=33,SNR=4.4	32.85	153	P	P	18 47 25.3 -0.8
MORW	Morawa baz=34,SNR=6.7	33.50	199	P	P	18 47 30.8 -0.8
BLDU	Ballidu baz=35,SNR=6.8	34.72	197	P	P	18 47 41.5 -0.6
KSAR	Wonju Array Be	34.74	360	P	P	18 47 41.8 -0.4
KSRS	Korea Array comp=Z,2.7nm,0.5s,baz=177,slow=9.6,SNR=12	34.75	360	P	P	18 47 41.8 -0.5
KSRS	comp=Z,33nm,18.6s,baz=219,slow=35			LR	LR	19 01 21.0
MAJO	Matsushiro comp=Z,11nm,0.7s	35.10	14	*e*P	P	18 47 41.5 -3.7
MAT	Matsushiro	35.10	14	P	P	18 47 43.0 -2.3
MJAR	Matsushiro Arr	35.10	14	P	P	18 47 43.1 -2.2
MJAR	Matsushiro Arr comp=Z,8.2nm,0.8s,baz=190,slow=9.8,SNR=34	35.10	14	P	P	18 47 43.1 -2.2
KLBR	Kellerberrin baz=35,SNR=6.3	35.34	195	P	P	18 47 47.1 -0.3
BBOO	Buckleboo baz=36,SNR=15	35.94	169	P	P	18 47 52.2 -0.2
STKA	Stephens Creek comp=Z,4.2nm,0.8s	36.53	161	*e*P	P	18 47 56.9 -0.5
STKA				PcP	PcP	18 50 17.6 +0.3
STKA	Stephens Creek comp=Z,14nm,0.5s,baz=334,slow=8.6,SNR=53	36.53	161	P	P	18 47 57.3 -0.1
STKA	comp=Z,1.8nm,0.4s,baz=4.9,slow=3.9,SNR=5.1			PcP	PcP	18 50 17.6 +0.3
STKA	Stephens Creek baz=37,SNR=42	36.53	161	P	P	18 47 57.4 -0.1
NWAO	Narrogin (SRO) comp=Z,25nm,1.3s	36.75	195	*e*P	P	18 47 59.0 -0.3
NWAO	Narrogin (SRO) comp=Z,4.9nm,0.6s,baz=240,slow=12,SNR=7.4	36.75	195	P	P	18 47 59.1 -0.2
ARMA	Armidale baz=40,SNR=9.7	39.70	147	P	P	18 48 24.3 +0.1
LZH	Lanzhou	40.25	329	*e*P	P	18 48 30.0 +1.3
LZH				pP	pP	18 49 07.8 +1.5
LZH				sP	sP	18 49 28.0 +1.9
LZH				PP	PnPn	18 50 09.5 -1.0
LZH	comp=Z,20nm,1.4s			pmax	pmax	
LZH	comp=Z,56nm,5.2s			pmax	pmax	
HHC	Hu-ho-hao-te	40.98	341	*e*P	P	18 48 35.8 +1.3
HHC				sP	sP	18 49 33.8 +1.7
HHC				PP	PnPn	18 50 16.0 -2.8
HHC				PcP	PcP	18 50 32.8 +1.5
HHC				PcS	PcS	18 54 22.0 -0.6
HHC				S	S	18 54 35.8 +2.3
HHC				sS	sS	18 55 42.3 +2.6
HHC				SS	SS	18 57 40.5 -2.4
HHC				ScS	ScS	18 58 18.3 -2.2
HHC	comp=Z,30nm,0.7s			pmax	pmax	
HHC	comp=Z,290nm,6.5s			pmax	pmax	
ARPS	Mount Arapiles baz=41,SNR=7.5	41.13	163	P	P	18 48 36.4 +0.7
USRK	Ussuriysk Arra comp=Z,3.1nm,0.5s,baz=181,slow=7.7,SNR=9.8	41.63	4	P	P	18 48 38.4 -1.2
MDJ	Mudanjiang comp=Z,11nm,1.0s	41.93	2	*e*P	P	18 48 40.9 -1.2
LSA	Lhasa comp=Z,3.1nm,0.5s	44.28	311	*e*P	P	18 49 03.7 +1.9
GTA	Gaotai	44.84	329	*e*P	P	18 49 06.5 +0.8
ULN	Ulaanbaatar comp=Z,8.0nm,1.1s	48.69	341	*e*P	P	18 49 35.5 +0.1
ULN				*e*pP	pP	18 50 12.1 -2.3
SONM	Songino Array	48.88	341	P	P	18 49 37.1 +0.3
SONM				PcP	PcP	18 50 59.0 +0.4
SONM	Songino Array comp=Z,2.8nm,0.6s,baz=151,slow=7.9,SNR=20	48.88	341	P	P	18 49 37.1 +0.3
SONM	comp=Z,0.6nm,0.6s,baz=160,slow=3.0,SNR=5.5			PcP	PcP	18 50 59.0 +0.4
WMQ	Urumqi comp=Z,13nm,1.0s	54.51	325	*e*P	P	18 50 19.5 +1.0
WMQ				pmax	pmax	
PETK	Petropavlovsk-	56.02	21	P	P	18 50 29.0 0.0
PETK	Petropavlovsk- comp=Z,4.6nm,0.7s,baz=193,slow=6.1,SNR=5.3	56.02	21	P	P	18 50 29.0 0.0
MK31	Makanchi Array	59.34	325	*e*P	P	18 50 52.4 0.0
MK31				*e*pP	pP	18 51 32.9 +0.1

MKAR	**Makanchi Array**	**59.34**	**325**	P	**P**	**18 50 52.8**	**+0.4**
MKAR				pP	**pP**	**18 51 29.6**	**-3.2**
MKAR	**Makanchi Array**	**59.34**	**325**	P	**P**	**18 50 52.8**	**+0.4**
	comp=Z,5.2nm,0.4s,baz=117,slow=8.3,SNR=121						
MKAR				pP	**pP**	**18 51 29.6**	**-3.2**
	comp=Z,1.3nm,0.6s,baz=123,slow=8.7,SNR=3.1						
AAK	**Ala-Archa**	**62.19**	**318**	LR	LR	19 19 45.3	
	comp=Z,34nm,18.6s,baz=173,slow=37						
ZAA0	**Zalesovo Array**	**62.29**	**333**	P	**P**	**18 51 10.8**	**-1.3**
ZALV	**Zalesovo Beam**	**62.29**	**333**	P	**P**	**18 51 11.1**	**-1.0**
ZALV				PcP	**PcP**	**18 51 48.0**	**-2.2**
ZALV	**Zalesovo Beam**	**62.29**	**333**	P	**P**	**18 51 11.1**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=121,slow=7.1,SNR=9.1						
ZALV				PcP	**PcP**	**18 51 48.0**	**-2.2**
	comp=Z,0.6nm,0.4s,baz=144,slow=2.1,SNR=4.4						
KBL	**Kabul**	**63.37**	**308**	P	**P**	**18 51 19.6**	**-0.3**
KURK	**Kurchatov**	**63.50**	**327**	*e*P	**P**	**18 51 19.8**	**-0.3**
	comp=Z,9.1nm,0.6s						
KURK				*e*PcP	**PcP**	**18 51 53.0**	**-2.2**
KURK				epP	**pP**	**18 52 00.3**	**-0.8**
BRVK	**Borovoye**	**69.16**	**327**	*e*P	**P**	**18 51 55.2**	**-0.9**
	comp=Z,7.6nm,0.9s						
BRVK				pP	**pP**	**18 52 37.4**	**-0.3**
CASY	**Casey**	**69.81**	**187**	*e*P	**P**	**18 51 60.0**	**+0.2**
	comp=Z,8.9nm,1.0s						
VNDA	**Vanda**	**82.07**	**173**	*e*P	**P**	**18 53 08.8**	**-0.1**
	comp=Z,4.8nm,0.8s						
VNDA	**Vanda**	**82.07**	**173**	P	**P**	**18 53 09.2**	**+0.2**
	comp=Z,3.2nm,0.4s,baz=316,slow=6.5,SNR=31						
MAW	**Mawson**	**83.13**	**201**	P	**P**	**18 53 15.5**	**+0.9**
MAW	**Mawson**	**83.13**	**201**	P	**P**	**18 53 15.5**	**+0.9**
	comp=Z,3.0nm,0.6s,baz=80,slow=1.8,SNR=9.0						
PMR	**Palmer**	**84.32**	**28**	*e*P	**P**	**18 53 19.8**	**-0.9**
	comp=Z,7.9nm,0.9s						
MCK	**McKinley**	**84.60**	**26**	*e*P	**P**	**18 53 21.4**	**-0.8**
	comp=Z,3.9nm,0.8s						
ILAR	**Eielson Array**	**85.57**	**25**	P	**P**	**18 53 25.6**	**-1.3**
ILAR	**Eielson Array**	**85.57**	**25**	P	**P**	**18 53 25.6**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=252,slow=4.7,SNR=7.9						
MALT	**Malatya**	**88.22**	**308**	P	P	18 53 36.3	-4.2
ARCES	**ARCESS Array B**	**92.05**	**340**	P	**P**	**18 53 56.5**	**-1.1**
ARCES	**ARCESS Array B**	**92.05**	**340**	P	**P**	**18 53 56.5**	**-1.1**
	comp=Z,4.0nm,0.9s,baz=80,slow=6.8,SNR=7.7						
FINES	**FINESS Array B**	**93.55**	**332**	P	**P**	**18 54 03.3**	**-1.2**
FINES	**FINESS Array B**	**93.55**	**332**	P	**P**	**18 54 03.3**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=54,slow=9.7,SNR=5.9						
YKA	**Yellowknife Ar**	**99.99**	**25**	P	**Pdif**	**18 54 33.2**	**-0.4**
YKA	**Yellowknife Ar**	**99.99**	**25**	P	**Pdif**	**18 54 33.2**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=298,slow=4.3,SNR=6.4						
SCHQ	**Schefferville**	**121.50**	**10**	PKP	**PKPdf**	**18 59 41.4**	**+0.1**
SCHQ	**Schefferville**	**121.50**	**10**	PKP	**PKPdf**	**18 59 41.4**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=23,slow=7.7,SNR=5.1						
TORD	**Torodi Ar. Bea**	**124.63**	**288**	PKP	**PKPdf**	**18 59 48.6**	**+0.2**
TORD	**Torodi Ar. Bea**	**124.63**	**288**	PKP	**PKPdf**	**18 59 48.6**	**+0.2**
	comp=Z,1.1nm,0.4s,baz=86,slow=1.6,SNR=26						
PLCA	**Paso Flores**	**138.39**	**158**	PKP	**PKPdf**	**19 00 14.5**	**+0.7**
PLCA	**Paso Flores**	**138.39**	**158**	PKP	**PKPdf**	**19 00 14.5**	**+0.7**
	comp=Z,2.4nm,0.9s,baz=297,slow=2.3,SNR=3.2						
CFAA	**Coronel Fontan**	**147.22**	**154**	PKPbc	**PKPbc**	**19 00 32.1**	**0.0**
CFAA	**Coronel Fontan**	**147.22**	**154**	PKPbc	**PKPbc**	**19 00 32.1**	**0.0**
	comp=Z,0.9nm,0.5s,baz=204,slow=3.6,SNR=14						

*CSEM **25** 18:49:55.7±0.1, 48.°10N×7.°99E, h15km, ML2.0/14, Error ellipse: s-maj=2.3km s-min=1.6km az=51.0*
*STR **25** 18:49:55.9±0.2, 48.°08N×8.°04E, h10km, Ml1.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **25** 18:49:56.4±0.1, 48.°10N×8.°02E, h10km, Md2.0/3, Ml1.9/12, Error ellipse: s-maj=1.4km s-min=1.1km az=166.0*
*ZUR **25** 18:49:56.4, 48.°08N×8.°06E, h10km, ML1.7/4*

ISC 25 18:49:55.4±1.0, 48.°10N±0.°03×8.°01E±0.°03, h15km±8km, n45, σ0.°52/80, 6D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
FELD	**Feldberg im Sc**	**0.22**	**180**	Pg		**Pb**	**18 50 00.8**	**-0.4**
FELD				Sg		**Sg**	**18 50 03.9**	**-0.1**
SLE	**Schleitheim**	**0.47**	**135**	*i* Pg		**Pb**	**18 50 05.0**	**-0.3**
	107nm,0.5s							
SLE				*i* Sg		**Sg**	**18 50 10.8**	**-0.3**
	107nm,0.5s							
SLE	**Schleitheim**	**0.47**	**135**	*i* Pg		**Pb**	**18 50 05.0**	**-0.3**
	107nm,0.5s							
SLE				*i* Sg		**Sg**	**18 50 10.8**	**-0.3**
	107nm,0.5s							
SULZ	**Cheisacher**	**0.58**	**173**	*i* Pg		**Pb**	**18 50 07.2**	**0.0**
	47nm,0.2s							
SULZ	**Cheisacher**	**0.58**	**173**	*i* Pg		**Pb**	**18 50 07.2**	**0.0**
	47nm,0.2s							
CDF	**Champ du Feu**	**0.58**	**303**	*e*Pg		**Pb**	**18 50 07.5**	**+0.2**
CDF				*e*Sg		**Sb**	**18 50 15.6**	**+0.2**
	11nm,0.2s							
CDF	**Champ du Feu**	**0.58**	**303**	*e*Pg		**Pb**	**18 50 07.5**	**+0.2**
CDF				*e*Sg		**Sb**	**18 50 15.6**	**+0.2**
	5.5nm,0.2s							
ECH	**Echery**	**0.58**	**282**	Pg		**Pb**	**18 50 07.1**	**-0.1**
ECH				Sg		**Sb**	**18 50 15.9**	**+0.6**
ECH	**Echery**	**0.58**	**282**	Pg		**Pb**	**18 50 07.1**	**-0.1**
ECH				Sg		**Sb**	**18 50 15.9**	**+0.6**
MOF	**Molkenrain**	**0.64**	**247**	Pg		**Pn**	**18 50 08.9**	**-1.0**
MOF				Sg		**Sb**	**18 50 17.9**	**+0.9**
MOF	**Molkenrain**	**0.64**	**247**	Pg		**Pn**	**18 50 08.9**	**-1.0**
MOF				Sg		**Sb**	**18 50 17.9**	**+0.9**
FLACH	**Flaach**	**0.65**	**144**	*i* Pg		**Pb**	**18 50 08.5**	**+0.1**
	42nm,0.3s							
FLACH				*i* Sg		**Sb**	**18 50 16.9**	**-0.3**
	42nm,0.3s							
BBS	**Basel-Blauen**	**0.72**	**208**	Pg		**Pn**	**18 50 10.1**	**-0.9**
BBS				Sg		**Sb**	**18 50 19.8**	**+0.5**
BALST	**Balsthal**	**0.79**	**195**	*i* Pg		**Pn**	**18 50 11.4**	**-0.7**
	49nm,0.2s							
HINF	**Hinteralfeld**	**0.82**	**250**	*e*Pg		**Pn**	**18 50 11.7**	**-0.8**
HINF				*e*Sg		**Sb**	**18 50 22.5**	**+0.2**
	3.3nm,0.2s							
HINF	**Hinteralfeld**	**0.82**	**250**	*e*Pg		**Pn**	**18 50 11.7**	**-0.8**
HINF				*e*Sg		**Sb**	**18 50 22.5**	**+0.2**
	1.6nm,0.2s							
LANF	**Langenberg**	**0.89**	**352**	Pg		**Pn**	**18 50 13.5**	**+0.1**
LANF	**Langenberg**	**0.89**	**352**	Pg		**Pn**	**18 50 13.5**	**+0.1**
LOMF	**Lomont**	**1.09**	**227**	Pg		**Pg**	**18 50 17.2**	**+0.7**
LOMF				Sg		**Sn**	**18 50 31.4**	**+0.3**
LOMF	**Lomont**	**1.09**	**227**	Pg		**Pg**	**18 50 17.2**	**+0.7**
LOMF				Sg		**Sn**	**18 50 31.4**	**+0.3**
HAU	**Haudompre**	**1.12**	**266**	*e*Pg		**Pg**	**18 50 17.0**	**+0.1**
HAU				*e*Sg		**Sn**	**18 50 31.5**	**-0.1**
	8.8nm,0.3s							
HAU	**Haudompre**	**1.12**	**266**	*e*Pg		**Pg**	**18 50 17.0**	**+0.1**
HAU				*e*Sg		**Sn**	**18 50 31.5**	**-0.1**
	4.4nm,0.3s							
PAGF	**Fort de Pagny**	**1.59**	**288**	*e*Pg		**Pg**	**18 50 25.9**	**0.0**
	baz=112							
PAGF				*e*Sg		**Sg**	**18 50 46.6**	**0.0**
	1.1nm,0.3s							
PAGF	**Fort de Pagny**	**1.59**	**288**	*e*Pg		**Pg**	**18 50 25.9**	**0.0**
	baz=112							
PAGF				*e*Sg		**Sg**	**18 50 46.6**	**0.0**
	0.6nm,0.3s							
RUP	**Ruppelstein**	**1.72**	**339**	Pn		**Pn**	**18 50 24.8**	**0.0**
CABF	**La Chapelle**	**1.98**	**222**	*e*Pg		**Pg**	**18 50 33.5**	**+0.1**
CABF				*e*Sg		**Sg**	**18 50 59.1**	**+0.1**
	1.7nm,0.2s							
CABF	**La Chapelle**	**1.98**	**222**	*e*Pg		**Pg**	**18 50 33.5**	**+0.1**
CABF				*e*Sg		**Sg**	**18 50 59.1**	**+0.1**
	0.9nm,0.2s							
SFTF	**Sexfontaines**	**1.99**	**274**	*e*Pg		**Pg**	**18 50 33.1**	**-0.5**
SFTF				*e*Sg		**Sg**	**18 50 59.3**	**-0.1**
	3.4nm,0.3s							
SFTF	**Sexfontaines**	**1.99**	**274**	*e*Pg		**Pg**	**18 50 33.1**	**-0.5**
SFTF				*e*Sg		**Sg**	**18 50 59.3**	**-0.1**
	1.7nm,0.3s							
MEZF	**Maizieres J'vi**	**2.01**	**283**	*e*Pg		**Pg**	**18 50 33.8**	**-0.2**
MEZF				*e*Sg		**Sg**	**18 50 59.9**	**-0.2**
	3.5nm,0.4s							
MEZF	**Maizieres J'vi**	**2.01**	**283**	*e*Pg		**Pg**	**18 50 33.8**	**-0.2**
MEZF				*e*Sg		**Sg**	**18 50 59.9**	**-0.2**
	1.8nm,0.4s							
LPL	**La Plagne**	**2.73**	**199**	*e*Pn		**Pn**	**18 50 39.9**	**+1.1**
LPL				*e*Sn		**Sn**	**18 51 11.4**	**-0.2**
	0.7nm,0.3s							
LPL	**La Plagne**	**2.73**	**199**	*e*Pn		**Pn**	**18 50 39.9**	**+1.1**
LPL				*e*Sn		**Sn**	**18 51 11.4**	**-0.2**
	0.3nm,0.3s							
LPG	**La Plagne**	**2.74**	**199**	*e*Pn		**Pn**	**18 50 40.1**	**+1.0**
LPG				*e*Sn		**Sn**	**18 51 11.6**	**-0.4**
	0.3nm,0.3s							
LPG	**La Plagne**	**2.74**	**199**	*e*Pn		**Pn**	**18 50 40.1**	**+1.0**
LPG				*e*Sn		**Sn**	**18 51 11.6**	**-0.4**
	0.2nm,0.3s							
GIVF	**Givet**	**2.90**	**315**	*e*Pn		**Pn**	**18 50 41.2**	**+0.3**
GIVF				*e*Sn		**Sn**	**18 51 15.1**	**-0.3**
	1.8nm,0.3s							
GIVF	**Givet**	**2.90**	**315**	*e*Pn		**Pn**	**18 50 41.2**	**+0.3**
GIVF				*e*Sn		**Sn**	**18 51 15.1**	**-0.3**
	0.9nm,0.3s							
LOR	**Lormes**	**2.92**	**255**	*e*Pn		**Pn**	**18 50 41.8**	**+0.5**
LOR	**Lormes**	**2.92**	**255**	*e*Pg		**Pg**	**18 50 51.1**	**-0.3**
	baz=74							
LOR				*e*Sg		**Sg**	**18 51 28.5**	**-0.7**
	1.6nm,0.3s							
LOR	**Lormes**	**2.92**	**255**	*e*Pn		**Pn**	**18 50 41.8**	**+0.5**
LOR	**Lormes**	**2.92**	**255**	*e*Pg		**Pg**	**18 50 51.1**	**-0.3**
	baz=74							
LOR				*e*Sg		**Sg**	**18 51 28.5**	**-0.7**
	0.8nm,0.3s							
SSF	**Saint Saulge**	**3.22**	**253**	*e*Pn		**Pn**	**18 50 46.0**	**+0.7**
SSF	**Saint Saulge**	**3.22**	**253**	*e*Pg		**Pg**	**18 50 56.6**	**-0.4**
SSF				*e*Sg		**Sg**	**18 51 37.7**	**-1.0**
	1.2nm,0.4s							
SSF	**Saint Saulge**	**3.22**	**253**	*e*Pn		**Pn**	**18 50 46.0**	**+0.7**
SSF	**Saint Saulge**	**3.22**	**253**	*e*Pg		**Pg**	**18 50 56.6**	**-0.4**
SSF				*e*Sg		**Sg**	**18 51 37.7**	**-1.0**
	0.6nm,0.4s							

*ISCJB **25** 18:51:53.5±0.5, 14.°66S±0.°08×73.°34W±0.°07, h87km, mb4.2/21, Error ellipse: s-maj=14.0km s-min=6.4km az=36.6*
*IDC **25** 18:51:54.0±2.2, 14.°72S×73.°35W, h79km±18km, mb3.9/8, mb1 4.1/10, mb1mx3.9/19, mbtmp4.0/10, MS2.3/1, Ms1 2.2/1, ms1mx2.1/24, Error ellipse: s-maj=34.5km s-min=13.5km az=33.0*
*NEIC **25** 18:51:54.6±0.9, 14.°72S×73.°35W, h86km±8km, mb4.3/13, Error ellipse: s-maj=12.6km s-min=7.6km az=220.0*

ISC 25 18:51:55.0±0.5, 14.°65S±0.°09×73.°34W±0.°09, h87km, n59, σ0.°92/57, mb4.2/21, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
NNA	**Nana**	**4.32**	**307**	*e*Pn		**Pn**	**18 52 57.5**	**-0.9**
NNA				S		**Sn**	**18 53 47.3**	**-0.3**
NNA	**Nana**	**4.32**	**307**	P		**Pn**	**18 52 58.6**	**+0.2**
	5.1nm,0.3s,baz=136,slow=11,SNR=8.6							
NNA				S		**Sn**	**18 53 47.3**	**-0.3**
	15nm,0.3s,baz=58,slow=20,SNR=9.1							
LPAZ	**La Paz**	**5.28**	**109**	*e*Pn		**Pn**	**18 53 14.1**	**+2.1**
LPAZ	**La Paz**	**5.28**	**109**	P		**Pn**	**18 53 14.6**	**+2.5**
	3.6nm,0.3s,baz=288,slow=11,SNR=94							
ATAH	**Atahualpa**	**8.97**	**326**	P		Pn	18 54 08.0	+5.9
ATAH	**Atahualpa**	**8.97**	**326**	P		Pn	18 54 08.0	+5.9
	0.6nm,0.3s,baz=294,slow=2.8,SNR=6.2							
SAML	**Samuel**	**11.45**	**61**	*e*Pn		**Pn**	**18 54 34.1**	**-1.4**
	20nm,0.6s							
SIV	**San Ignacio**	**11.91**	**98**	P		**Pn**	**18 54 40.0**	**-1.8**
SIV	**San Ignacio**	**11.91**	**98**	P		**Pn**	**18 54 40.0**	**-1.8**
	2.4nm,0.3s,baz=298,slow=10,SNR=32							
CFAA	**Coronel Fontan**	**17.51**	**165**	P		**P**	**18 55 53.1**	**-0.3**
CFAA	**Coronel Fontan**	**17.51**	**165**	P		**P**	**18 55 53.1**	**-0.3**
	0.1nm,0.3s,baz=35,slow=10.0,SNR=2.9							
CPUP	**Villa Florida**	**18.95**	**130**	P		**Pn**	**18 56 11.5**	**+0.6**
CPUP	**Villa Florida**	**18.95**	**130**	P		**Pn**	**18 56 11.5**	**+0.6**
	0.3nm,0.3s,baz=270,slow=20,SNR=5.5							
PAYG	**Puerto Ayora**	**21.76**	**308**	P		**P**	**18 56 40.8**	**+1.0**
	23nm,0.9s							
BDFB	**Brasilia**	**24.46**	**96**	P		**P**	**18 57 06.2**	**0.0**
BDFB	**Brasilia**	**24.46**	**96**	P		**P**	**18 57 06.2**	**0.0**
	2.1nm,0.4s,baz=262,slow=15,SNR=2.9							
BDFB				LR		LR	19 06 40.8	
	comp=Z,7.6nm,21.6s,baz=192,slow=36							
NHSC	**New Hope**	**47.94**	**352**	*e*P		**P**	**19 00 25.7**	**+0.9**
	36nm,1.0s							
SWET	**Sewanee**	**51.01**	**347**	*e*P		**P**	**19 00 48.3**	**+0.1**
	14nm,0.8s							
WVT	**Waverly**	**52.33**	**345**	P		**P**	**19 00 55.9**	**-2.0**
	11nm,1.0s							
TXAR	**Lajitas Array**	**52.63**	**326**	P		**P**	**19 01 01.2**	**+0.8**
TXAR	**Lajitas Array**	**52.63**	**326**	P		**P**	**19 01 01.2**	**+0.8**
	1.5nm,0.5s,baz=150,slow=8.8,SNR=20							
SMCO	**Snowmass**	**62.08**	**331**	*e*P		**P**	**19 02 07.9**	**+0.7**
	1.8nm,0.7s							
PDAR	**Pinedale Array**	**66.11**	**332**	P		**P**	**19 02 33.3**	**+0.1**
PDAR	**Pinedale Array**	**66.11**	**332**	P		**P**	**19 02 33.3**	**+0.1**
	0.2nm,0.4s,baz=110,slow=8.0,SNR=3.5							
HWUT	**Hardware Ranch**	**66.18**	**330**	P		**P**	**19 02 33.8**	**+0.2**
ULM	**Lac du Bonnet**	**67.59**	**345**	P		**P**	**19 02 42.2**	**0.0**
ULM	**Lac du Bonnet**	**67.59**	**345**	P		**P**	**19 02 42.2**	**0.0**
	3.6nm,0.6s,baz=176,slow=5.6,SNR=5.9							
HLID	**Hailey**	**69.04**	**329**	P		**P**	**19 02 52.8**	**+1.2**
	1.2nm,0.7s							
SCHQ	**Schefferville**	**69.43**	**4**	*e*P		**P**	**19 02 53.7**	**+0.1**
	7.8nm,1.2s							
SCHQ	**Schefferville**	**69.43**	**4**	P		**P**	**19 02 54.1**	**+0.6**
	3.0nm,0.9s,baz=196,slow=7.4,SNR=3.4							
SNAA	**Sanae**	**70.08**	**162**	*e*P		**P**	**19 02 56.0**	**-1.5**
	1.7nm,0.6s							
QSPA	**South Pole Qui**	**75.50**	**180**	*e*P		**P**	**19 03 28.4**	**-1.3**
	1.1nm,0.6s							
TOA0	**Torodi Ar. Sit**	**79.24**	**73**	*e*P		**P**	**19 03 50.7**	**-0.6**
TORD	**Torodi Ar. Bea**	**79.24**	**73**	P		**P**	**19 03 50.9**	**-0.5**
TORD	**Torodi Ar. Bea**	**79.24**	**73**	P		**P**	**19 03 50.9**	**-0.5**
	6.0nm,0.8s,baz=260,slow=5.3,SNR=34							
YKA	**Yellowknife Ar**	**83.39**	**342**	P		**P**	**19 04 12.2**	**0.0**
YKA	**Yellowknife Ar**	**83.39**	**342**	P		**P**	**19 04 12.2**	**0.0**
	2.2nm,0.8s,baz=136,slow=5.3,SNR=54							
YKW3	**Yellowknife Ar**	**83.44**	**342**	*e*P		**P**	**19 04 12.1**	**-0.4**
	0.1nm,0.9s							
ESLA	**Sonseca Array**	**84.07**	**47**	P		**P**	**19 04 17.3**	**+0.9**
	1.4nm,1.0s							
ESDC	**Sonseca Array**	**84.08**	**47**	P		**P**	**19 04 17.5**	**+1.1**
ESDC	**Sonseca Array**	**84.08**	**47**	P		**P**	**19 04 17.5**	**+1.1**
	2.1nm,0.7s,baz=258,slow=4.8,SNR=12							
TSUM	**Tsumeb**	**86.13**	**109**	P		**P**	**19 04 26.8**	**-0.5**
	2.8nm,0.9s							
SUMG	**Summit**	**90.03**	**10**	*e*P		**P**	**19 04 45.8**	**+0.9**
	3.8nm,0.8s							
RES	**Resolute Bay**	**90.18**	**354**	*e*P		**P**	**19 04 45.1**	**+0.1**
	0.8nm,0.7s							
ASAR	**Alice Springs**	**133.52**	**215**	PKP		**PKPdf**	**19 11 01.2**	**-1.0**
ASAR	**Alice Springs**	**133.52**	**215**	PKP		**PKPdf**	**19 11 01.2**	**-1.0**
	0.6nm,0.6s,baz=111,slow=2.0,SNR=11							
WRA	**Warramunga Arr**	**136.15**	**219**	PKP		**PKPdf**	**19 11 06.7**	**-0.5**
WRA	**Warramunga Arr**	**136.15**	**219**	PKP		**PKPdf**	**19 11 06.7**	**-0.5**
	2.4nm,1.1s,baz=145,slow=1.8,SNR=12							
ZALV	**Zalesovo Beam**	**137.21**	**19**	PKP		**PKPdf**	**19 11 08.6**	**+0.6**
ZALV	**Zalesovo Beam**	**137.21**	**19**	PKP		**PKPdf**	**19 11 08.6**	**+0.6**
	3.1nm,0.9s,baz=318,slow=2.0,SNR=12							
MKAR	**Makanchi Array**	**142.04**	**27**	PKPpre		PKPpre	19 11 13.7	
MKAR	**Makanchi Array**	**142.04**	**27**	PKhKP		PKPpre	19 11 13.7	
	0.1nm,0.3s,baz=358,slow=3.6,SNR=4.5							
MJAR	**Matsushiro Arr**	**144.42**	**314**	PKP		**PKPab**	**19 11 19.2**	**-0.7**
MJAR	**Matsushiro Arr**	**144.42**	**314**	PKP		**PKPab**	**19 11 19.2**	**-0.7**
	1.7nm,0.8s,baz=174,slow=2.1,SNR=4.5							
ULN	**Ulaanbaatar**	**146.88**	**360**	*e*PKPbc		**PKPbc**	**19 11 28.1**	**+0.5**
SONM	**Songino Array**	**146.92**	**0**	PKPbc		**PKPdf**	**19 11 25.8**	**+0.1**
SONM	**Songino Array**	**146.92**	**0**	PKPbc		**PKPdf**	**19 11 25.8**	**+0.1**
	3.6nm,0.8s,baz=350,slow=4.5,SNR=27							
KSRS	**Korea Array**	**150.46**	**324**	PKPbc		**PKPbc**	**19 11 37.4**	**+0.5**
	1.2nm,0.9s,baz=350,slow=3.2,SNR=4.1							
KSAR	**Wonju Array Be**	**150.49**	**324**	PKPbc		**PKPbc**	**19 11 37.4**	**+0.4**

*TIR **25** 19:01:31.6, 41.°25N×19.°96E, h1km, ML2.9*
*BEO **25** 19:01:32.8±0.8, 41.°21N×19.°96E, h0km, ML2.3/6*
*CSEM **25** 19:01:32.7±0.2, 41.°25N×19.°96E, h2km, ML2.9, Error ellipse: s-maj=5.9km s-min=3.0km az=50.0*
*THE **25** 19:01:32.8, 41.°25N×19.°99E, h0km±2km, ML2.7/2, Error ellipse: s-maj=2.3km s-min=0.5km az=234.0*
*ATH **25** 19:01:32.5, 41.°31N×20.°01E, h5km±2km, MD3.2/13*
*PDG **25** 19:01:32.9±0.4, 41.°26N×19.°93E, h11km, ML2.6/10, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*

ISC 25 19:01:32.6±0.9, 41.°24N±0.°02×19.°97E±0.°02, h7km±7km, n95, σ1.°27/154, 13C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
TIR	**Tirane**	**0.13**	**323**	*e*Pg		**Pg**	**19 01 35.2**	**-0.2**
TIR				*e*Sg		**Sg**	**19 01 37.8**	**+0.5**
TIR	**Tirane**	**0.13**	**323**	P		**Pg**	**19 01 35.4**	**0.0**
TIR				S		**Sg**	**19 01 37.9**	**+0.6**
TIR	**Tirane**	**0.13**	**323**	P		**Pg**	**19 01 35.3**	**-0.2**
TIR				*e*Sg		**Sg**	**19 01 38.0**	**+0.6**
TIR	**Tirane**	**0.13**	**323**	P		**Pg**	**19 01 35.4**	**0.0**
TIR				*e*Sg		**Sg**	**19 01 37.8**	**+0.5**
PHP	**Peshkopia**	**0.56**	**38**	*e*Pg		**Pg**	**19 01 43.0**	**-0.5**
PHP				*e*SG		**Sb**	**19 01 51.6**	**-1.6**
PHP	**Peshkopia**	**0.56**	**38**	P		**Pg**	**19 01 43.0**	**-0.5**
PHP				S		**Sb**	**19 01 51.9**	**-1.3**
PHP	**Peshkopia**	**0.56**	**38**	P		**Pg**	**19 01 43.0**	**-0.5**
PHP				S		**Sb**	**19 01 51.9**	**-1.3**
PUK	**Puka**	**0.80**	**356**	*e*PG		**Pg**	**19 01 47.5**	**-0.6**
PUK				*e*SG		**Sb**	**19 02 00.5**	**+0.4**
PUK	**Puka**	**0.80**	**356**	*e*Pg		**Pg**	**19 01 47.5**	**-0.6**
PUK				*e*Sg		**Sb**	**19 02 00.5**	**+0.4**
KBN	**Korca**	**0.88**	**135**	*e*PG		**Pg**	**19 01 49.2**	**-0.3**
KBN				*e*SG		**Sn**	**19 02 04.1**	**-0.4**
KBN	**Korca**	**0.88**	**135**	*e*Pg		**Pg**	**19 01 49.2**	**-0.3**
ULC	**Ulcinj**	**0.90**	**323**	*i*Pg		**Pg**	**19 01 48.9**	**-1.1**
ULC				*e*Sg		**Sb**	**19 02 03.0**	**+0.1**
ULC	**Ulcinj**	**0.90**	**323**	*i*Pg		**Pg**	**19 01 48.9**	**-1.1**
ULC				*e*Sg		**Sb**	**19 02 03.0**	**+0.1**
BIA	**Bitola**	**1.05**	**102**	P		**Pb**	**19 01 52.5**	**-0.6**
BIA				S		**Sb**	**19 02 07.1**	**0.0**
BIA	**Bitola**	**1.05**	**102**	*e*Pg		**Pb**	**19 01 52.6**	**-0.6**
BIA	**Bitola**	**1.05**	**102**	P		**Pb**	**19 01 52.5**	**-0.6**
BIA				S		**Sb**	**19 02 07.1**	**0.0**
BCI	**Bajram Curri**	**1.12**	**4**	*e*PG		**Pg**	**19 01 52.9**	**-1.3**
BCI				*e*SG		**Sn**	**19 02 10.4**	**-0.2**
BCI	**Bajram Curri**	**1.12**	**4**	*e*Pg		**Pg**	**19 01 52.9**	**-1.3**
BCI				*e*Sg		**Sn**	**19 02 10.4**	**-0.2**
FNA	**Florina**	**1.16**	**113**	P		**Pg**	**19 01 54.3**	**-0.5**
FNA				S		**Sn**	**19 02 11.1**	**-0.2**
FNA	**Florina**	**1.16**	**113**	*e*PB		**Pb**	**19 01 54.5**	**-0.5**
FNA				*e*SB		**Sb**	**19 02 11.0**	**+0.7**
FNA	**Florina**	**1.16**	**113**	*e*Pb		**Pb**	**19 01 54.5**	**-0.5**
FNA				*e*Sb		**Sb**	**19 02 11.0**	**+0.7**
FNA				S		**Sn**	**19 02 11.3**	**-0.2**
NEST	**Nestorio**	**1.16**	**135**	P		**Pb**	**19 01 54.8**	**-0.3**
NEST				S		**Sn**	**19 02 11.7**	**0.0**
NEST	**Nestorio**	**1.16**	**135**	P		**Pb**	**19 01 54.8**	**-0.3**
NEST				S		**Sn**	**19 02 11.7**	**0.0**
PDG	**Podgorica**	**1.30**	**336**	*e*Pg		**Pg**	**19 01 55.8**	**-1.8**
PDG				*e*Sg		**Sn**	**19 02 16.1**	**+1.2**
PDG	**Podgorica**	**1.30**	**336**	*e*Pg		**Pg**	**19 01 55.8**	**-1.8**
PDG				*e*Sg		**Sn**	**19 02 16.1**	**+1.2**
TTG	**Podgorica**	**1.30**	**336**	*i*Pg		**Pg**	**19 01 55.6**	**-2.0**
TTG				*e*Sg		**Sn**	**19 02 16.5**	**

*NNC **25** 19:14:07.1±5.9,39.°51N×73.°18E,h0km,mb3.6,mpv3.6, Error ellipse: s-maj=49.4km s-min=28.8km az=0.0*

ISC 25 19:14:06.6±1.3,39.°5N±0.°1×73.°18E±0.°10,h10km,n24, σ1§99/25,mb3.6/6,5C-2D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**2.69**	**8**	P	**Pn**	**19 14 51.1**	**+0.8**
	SNR=84						
UCH	**Uchtor**	**2.94**	**20**	P	**Pn**	**19 14 54.8**	**+1.1**
	SNR=11						
KZA	**Kyzart**	**3.05**	**30**	P	**Pn**	**19 14 55.0**	**-0.2**
	SNR=13						
EKS2	**Erkin-Say**	**3.23**	**8**	P	**Pn**	**19 14 58.8**	**+1.4**
	SNR=19						
AAK	**Ala-Archa**	**3.32**	**17**	P	**Pn**	**19 14 59.5**	**+0.8**
	SNR=15						
AAK	**Ala-Archa**	**3.32**	**17**	Pn	**Pn**	**19 14 59.5**	**+0.8**
	2.9nm,0.3s,baz=166,slow=8.1,SNR=36						
AAK				Lg	Lg	19 15 42.1	
	6.3nm,0.3s,baz=342,slow=21,SNR=11						
KBK	**Karagaybulak**	**3.46**	**22**	P	**Pn**	**19 15 02.3**	**+1.7**
	SNR=7.8						
ULHL	**Ulahol**	**3.62**	**39**	P	**Pn**	**19 15 03.0**	**+0.1**
	SNR=8.3						
CHMS	**Chumysh**	**3.72**	**18**	P	**Pn**	**19 15 04.6**	**+0.4**
	SNR=11						
TKM2	**Tokmak 2**	**3.90**	**27**	⇑Pn	**Pn**	**19 15 06.1**	**-0.6**
	14nm,0.9s						
TKM2				⇑Sn	**Sn**	**19 15 57.5**	**+4.7**
	18nm,0.6s						
KK31	**Karatay Array**	**4.16**	**332**	⇑Pn	Pn	19 15 14.3	+4.2
	12nm,0.8s,baz=134,slow=13,SNR=85						
KK31				⇑Sn	**Sb**	**19 16 05.7**	**-4.4**
	4.8nm,0.3s,baz=134,slow=24,SNR=6.2						
KK31				⇓Lg	Lg	19 16 18.3	
	13nm,0.4s						
KURBB	**Kurchatov Arra**	**11.78**	**17**	Pn	**Pn**	**19 16 54.8**	**+0.3**
	0.0nm,0.3s,baz=206,slow=11,SNR=5.1						
KURBB				Lg	Lg	19 20 04.5	
	0.0nm,0.3s,baz=208,slow=29,SNR=4.3						
AB31	**Akbulak array**	**13.60**	**320**	Pn	**Pn**	**19 17 21.5**	**+2.1**
	0.6nm,0.6s,baz=121,slow=14,SNR=15						
AB31				⇑Sn	**Sn**	**19 19 52.4**	**+1.9**
	0.8nm,0.6s,baz=125,slow=25,SNR=7.8						
BVA0	**Borovoye Array**	**13.70**	**353**	Pn	**Pn**	**19 17 19.1**	**-1.7**
	0.3nm,1.2s,baz=182,slow=11,SNR=8.6						
BVAR	**Borovoye Array**	**13.70**	**353**	Pn	**Pn**	**19 17 19.1**	**-1.6**
	0.1nm,0.3s,baz=163,slow=12,SNR=9.9						
AKTO	**Aktyubinsk**	**15.32**	**321**	⇓Pn	**P**	**19 17 46.5**	**-1.0**
	0.5nm,0.8s						
AKTO	**Aktyubinsk**	**15.32**	**321**	Pn	**P**	**19 17 45.8**	**-1.8**
	0.2nm,0.3s,baz=118,slow=17,SNR=6.4						
ZALV	**Zalesovo Beam**	**16.51**	**25**	Pn	**Pn**	**19 17 55.5**	**-2.5**
	0.1nm,0.3s,baz=224,slow=12,SNR=3.4						
FINES	**FINESS Array B**	**36.06**	**323**	P	**P**	**19 21 09.9**	**+2.0**
	0.9nm,0.6s,baz=119,slow=8.5,SNR=7.1						
ARCES	**ARCESS Array B**	**39.11**	**336**	P	**P**	**19 21 34.8**	**+1.2**
	0.8nm,0.4s,baz=108,slow=8.2,SNR=14						
TORD	**Torodi Ar. Bea**	**67.51**	**269**	P	**P**	**19 25 04.3**	**+1.2**
	0.3nm,0.5s,baz=52,slow=5.9,SNR=10						
ILAR	**Eielson Array**	**71.45**	**17**	P	**P**	**19 25 24.5**	**-2.2**
	0.1nm,0.6s,baz=320,slow=4.0,SNR=2.4						
YKA	**Yellowknife Ar**	**78.20**	**4**	P	**P**	**19 26 04.2**	**-1.5**
	0.1nm,0.4s,baz=352,slow=5.8,SNR=4.8						
ASAR	**Alice Springs**	**84.58**	**127**	P	P	19 26 36.4	-3.8
	0.2nm,0.8s,baz=306,slow=6.4,SNR=3.7						

WEL 25 19:17:09.8±0.1,37.°11S×177.°33E,h144km±1km,ML3.6/9, 3C,Error ellipse: s-maj=1.4km s-min=1.4km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.90**	**120**	PN	Pn	19 17 33.2	0.0
MXZ				SN	Sn	19 17 51.1	+0.2
URZ	**Urewera**	**1.16**	**188**	⇑PN	Pn	19 17 35.6	+0.2
URZ				SN	Sn	19 17 55.1	+0.1
PUZ	**Puketiti**	**1.21**	**143**	⇑PN	Pn	19 17 35.9	-0.1
PUZ				SN	Sn	19 17 55.3	-0.7
MWZ	**Matawai**	**1.23**	**173**	⇑PN	Pn	19 17 36.2	0.0
MWZ				SN	Sn	19 17 56.5	+0.1
RAHZ	**Arahi**	**1.81**	**186**	PN	Pn	19 17 42.4	0.0
PRGZ	**Paritu Road**	**1.86**	**166**	PN	Pn	19 17 42.5	-0.5
NMHZ	**Naumai**	**2.03**	**191**	PN	Pn	19 17 45.5	+0.5
MHGZ	**Mahia Peninsul**	**2.09**	**167**	PN	Pn	19 17 45.4	-0.2
BKZ	**Black Stump Fm**	**2.15**	**197**	PN	Pn	19 17 45.8	-0.7
MCHZ	**McNeill Hill**	**2.38**	**192**	PN	Pn	19 17 48.7	-0.4
BHHZ	**Black Hill Sta**	**2.57**	**202**	PN	Pn	19 17 50.6	-1.0
MOVZ	**Moawhango**	**2.61**	**208**	PN	Pn	19 17 50.9	-1.1
PNHZ	**Pukenui**	**2.94**	**197**	PN	Pn	19 17 54.5	-1.7
PXZ	**Pawanui**	**2.94**	**187**	PN	Pn	19 17 54.3	-1.8
TSZ	**Takapari Road**	**3.13**	**200**	PN	Pn	19 17 56.7	-2.0
PRHZ	**Porangahau**	**3.20**	**190**	PN	Pn	19 17 57.7	-1.8
DVHZ	**Dannevirke**	**3.31**	**196**	PN	Pn	19 17 58.4	-2.5
BFZ	**Birch Farm**	**3.66**	**193**	PN	Pn	19 18 02.7	-2.8
TIWZ	**Tintock**	**3.83**	**197**	PN	Pn	19 18 04.8	-2.9
HOWZ	**Holdsworth Sta**	**4.04**	**200**	PN	Pn	19 18 06.9	-3.4
OGWZ	**Otaki Gorge**	**4.07**	**204**	PN	Pn	19 18 07.6	-3.1
MTW	**Mount Morrison**	**4.28**	**199**	PN	Pn	19 18 09.9	-3.7
CAW	**Cannon Point**	**4.30**	**205**	PN	Pn	19 18 10.8	-3.8
NNZ	**Nelson**	**5.12**	**216**	PN	Pn	19 18 21.2	-3.4
THZ	**Tophouse**	**5.77**	**215**	PN	Pn	19 18 29.2	-4.2

*ISCJB **25** 19:42:36.4±0.6,8.°10N±0.°06×127.°51E±0.°06,h31km, mb4.1/14,Error ellipse: s-maj=9.6km s-min=7.6km az=141.2*

*IDC **25** 19:42:53.2±2.0,7.°55N×126.°42E,h148km±14km,mb3.5/12, mb1 3.6/12,mb1mx3.4/25,mbtmp3.5/12,Error ellipse: s-maj=50.8km s-min=12.4km az=68.0*

*MAN **25** 19:42:53,7.°49N×126.°50E,h136km,mb4.7,ML3.5,MS3.5*

ISC 25 19:42:38.1±0.8,8.°05N±0.°08×127.°49E±0.°08,h31km,n30, σ1§64/33,mb4.1/14,2C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.64**	**228**	*e*P	Pb	19 43 14.5	+6.7
MATI				*e*S	**Sn**	**19 43 25.2**	**+0.3**
DAV	**Davao City (W)**	**2.13**	**243**	P	**Pb**	**19 43 18.2**	**+2.2**
	91nm,0.3s,baz=312,slow=3.2,SNR=13						
DAV				S	**Sn**	**19 43 36.1**	**-0.8**
	109nm,0.3s,baz=277,slow=23,SNR=12						
BUKP	**Musuan**	**2.41**	**266**	*e*P	**Pb**	**19 43 22.4**	**+1.6**
KCP	**Kidapawan**	**2.59**	**247**	⇑*i*P	**Pb**	**19 43 22.4**	**-1.5**
KCP				*i* S	**Sn**	**19 43 44.2**	**-4.2**
CGP	**Cagayan de Oro**	**2.79**	**278**	⇑*i*P	**Pb**	**19 43 28.4**	**+1.1**
CGP				*i* S	**Sn**	**19 43 54.9**	**+1.6**
CTBH	**Cotabato--PC H**	**3.31**	**256**	⇓*i*P	**Pn**	**19 43 30.6**	**+2.7**
PAGZ	**Pagadian**	**4.07**	**267**	*e*P	Pn	19 43 42.2	+3.9
FITZ	**Fitzroy Crossi**	**26.05**	**184**	P	**P**	**19 48 08.3**	**-0.6**
	1.2nm,0.9s,baz=353,slow=9.1,SNR=3.5						
WRA	**Warramunga Arr**	**28.62**	**166**	P	**P**	**19 48 33.9**	**+1.9**
	204nm,0.5s,baz=348,slow=9.9,SNR=5.1						
CMAR	**Chiang Mai Arr**	**29.60**	**293**	P	**P**	**19 48 38.4**	**-2.3**
	0.3nm,0.6s,baz=97,slow=7.4,SNR=5.0						
ASAR	**Alice Springs**	**32.14**	**169**	P	**P**	**19 49 04.3**	**+1.3**
	0.4nm,0.4s,baz=345,slow=7.4,SNR=16						
ASAR				PcP	**PcP**	**19 51 52.0**	**+0.1**
	0.6nm,0.6s,baz=348,slow=2.4,SNR=8.8						
TAPN	**Taplejung**	**42.22**	**302**	*e*P	**P**	**19 50 28.0**	**-1.0**
	2.7nm,0.4s						
ODAN	**Odare**	**42.33**	**301**	*e*P	**P**	**19 50 28.6**	**-1.2**
	8.9nm,0.8s						
RAMN	**Ramite**	**43.03**	**301**	*e*P	**P**	**19 50 34.6**	**-0.9**
	3.1nm,0.6s						
SONM	**Songino Array**	**43.51**	**339**	P	P	19 50 42.9	+4.1
	0.6nm,0.6s,baz=149,slow=10.0,SNR=4.7						
GUN	**Gumba**	**43.94**	**302**	*e*P	**P**	**19 50 41.8**	**-1.1**
PKIN	**Phulchoki**	**44.24**	**301**	*e*P	**P**	**19 50 44.2**	**-1.1**
	1.5nm,0.4s						
KKN	**Kakani**	**44.41**	**302**	*e*P	**P**	**19 50 44.8**	**-1.7**
KOLN	**Koldanda**	**45.82**	**301**	*e*P	**P**	**19 50 56.2**	**-1.5**
	4.5nm,0.4s						
DANN	**Dangsing**	**45.85**	**302**	*e*P	**P**	**19 50 55.9**	**-2.2**
	6.3nm,0.6s						
MKAR	**Makanchi Array**	**54.51**	**323**	P	**P**	**19 52 04.8**	**+1.7**
	3.0nm,0.4s,baz=116,slow=7.1,SNR=73						
MKAR				PcP	**PcP**	**19 53 06.7**	**+0.5**
	1.0nm,0.7s,baz=104,slow=3.9,SNR=6.6						
ZALV	**Zalesovo Beam**	**57.14**	**332**	P	**P**	**19 52 23.5**	**+1.8**
	0.9nm,0.4s,baz=129,slow=5.4,SNR=5.8						
JOF	**Joensuu**	**85.70**	**333**	*e*p	**P**	**19 55 13.8**	**0.0**
	1.5nm,0.5s						
ARCES	**ARCESS Array B**	**86.68**	**340**	P	**P**	**19 55 19.6**	**+1.1**
	1.8nm,0.8s,baz=57,slow=9.0,SNR=4.2						
VNDA	**Vanda**	**87.59**	**173**	P	**P**	**19 55 22.5**	**-0.2**
	0.4nm,0.8s,baz=307,slow=5.1,SNR=3.1						
BRTR	**Keskin Array B**	**87.86**	**310**	P	**P**	**19 55 23.2**	**-1.9**
	0.8nm,0.7s,baz=118,slow=3.8,SNR=6.1						
KAF	**Kangasniemi**	**88.14**	**333**	*e*p	**P**	**19 55 25.8**	**+0.1**
	0.4nm,0.4s						
FINES	**FINESS Array B**	**88.40**	**332**	P	**P**	**19 55 27.5**	**+0.5**
	0.6nm,0.4s,baz=68,slow=4.1,SNR=18						
AKASG	**Malin Array Be**	**89.03**	**321**	P	**P**	**19 55 29.7**	**-0.4**
	0.1nm,0.2s,baz=73,slow=3.8,SNR=4.1						
TORD	**Torodi Ar. Bea**	**122.19**	**291**	PKP	**PKPdf**	**20 01 28.9**	**-2.0**
	0.4nm,0.4s,baz=36,slow=1.1,SNR=7.9						

IDC 25 19:47:08.5±2.3,4.°12N×127.°48E,h0km,mb3.4/3, mb1 3.6/3,mb1mx3.3/23,mbtmp3.4/3,Error ellipse: s-maj=177.3km s-min=26.7km az=66.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.85**	**164**	P	P	19 52 31.7	-1.2
	0.9nm,0.6s,baz=344,slow=10,SNR=6.6						
ASAR	**Alice Springs**	**28.32**	**168**	P	P	19 53 05.4	+1.1
	0.4nm,1.0s,baz=343,slow=10,SNR=3.4						
MKAR	**Makanchi Array**	**57.66**	**325**	P	P	19 57 00.7	-0.1
	0.3nm,0.5s,baz=121,slow=7.4,SNR=5.6						

JMA 25 19:53:46.2±0.1,43.°15N×146.°14E,h48km±1km,M2.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.36**	**307**	P	Pn	19 53 55.7	0.0
NEM2				*e*S	Sn	19 54 02.5	0.0
JAK	**Akkeshi**	**1.07**	**262**	P	Pn	19 54 04.9	+0.1
JAK				*e*S	Sn	19 54 18.9	+0.4
JRA	**Rausu**	**1.08**	**317**	P	Pn	19 54 05.3	+0.4
JRA				*e*S	Sn	19 54 19.4	+0.6
JNK	**Nakash**	**1.12**	**293**	P	Pn	19 54 05.4	-0.2
JNK				*e*S	Sn	19 54 19.6	-0.3
JOB	**Onbets**	**1.71**	**262**	P	Pn	19 54 14.1	+0.6
JOB				*e*S	Sn	19 54 34.8	+0.7
JAR	**Ashorobuto**	**1.74**	**276**	P	Pn	19 54 14.7	+0.8
JAR				*e*S	Sn	19 54 35.5	+0.6
JTKR	**Abashiri--Toko**	**1.82**	**298**	P	Pn	19 54 16.3	+1.3
JTKR				*e*S	Sn	19 54 38.5	+1.7

*IDC **25** 19:58:50.9±0.7,27.°93S×178.°30W,h209km±7km,mb3.9/15, mb1 4.1/15,mb1mx4.0/21,mbtmp3.9/15,Error ellipse: s-maj=15.1km s-min=13.6km az=126.0*

*NEIC **25** 19:58:51.7±0.8,28.°06S×178.°31W,h220km±6km,mb4.4/17, Error ellipse: s-maj=10.1km s-min=8.5km az=125.0*

*BGS **25** 19:58:57.6±2.6,28.°06S×178.°31W,h220km,mb4.4(NEIC)*

ISC 25 19:58:49.9±0.4,27.°96S±0.°07×178.°3W±0.°1,h200km,n150, σ1§22/137,mb4.3/29,3C-6D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.33**	**165**	*e*Pn	**Pn**	**19 59 24.4**	**+2.2**
RAO				P	**Pn**	**19 59 24.7**	**+2.5**
RAO				S	**Sn**	**19 59 50.1**	**+2.7**
RAO	**Raoul Island**	**1.33**	**165**	P	**Pn**	**19 59 24.7**	**+2.5**
	6μm,0.3s,baz=62,slow=1.9,SNR=79						
RAO				S	**Sn**	**19 59 50.1**	**+2.7**
	2μm,0.3s,baz=90,slow=20,SNR=4.5						
PUZ	**Puketiti**	**10.49**	**195**	*e*PN	Pn	20 01 06.6	-8.8
PUZ				SN	Sx	20 03 00.7	
MSVF	**Nonsavu**	**10.71**	**341**	*e*Pn	**Pn**	**20 01 21.7**	**+3.2**
	21nm,0.6s						
CNGZ	**Carnagh Statio**	**10.90**	**195**	PN	Pn	20 01 12.5	-8.1
MWZ	**Matawai**	**10.92**	**198**	PN	Pn	20 01 12.7	-8.3
MWZ				SN	Sx	20 03 11.3	
URZ	**Urewera**	**10.97**	**199**	P	Pn	20 01 15.6	-5.9
URZ				S	Sx	20 03 12.1	
URZ	**Urewera**	**10.97**	**199**	*e*PN	Pn	20 01 14.9	-6.6
URZ				SN	Sx	20 03 14.2	
URZ	**Urewera**	**10.97**	**199**	P	Pn	20 01 15.6	-5.9
	2.1nm,0.3s,baz=150,slow=15,SNR=15						
URZ				S	Sx	20 03 12.1	
	11nm,0.3s,baz=143,slow=22,SNR=14						
BKZ	**Black Stump Fm**	**11.99**	**200**	PN	Pn	20 01 26.8	-7.8
BKZ				SN	Sx	20 03 36.9	
MCHZ	**McNeill Hill**	**12.19**	**199**	PN	Pn	20 01 31.2	-5.8
MCHZ				SN	Sx	20 03 41.7	
BHHZ	**Black Hill Sta**	**12.41**	**201**	SN	Sx	20 03 46.1	
PXZ	**Pawanui**	**12.69**	**197**	SN	Sx	20 03 50.2	
BFZ	**Birch Farm**	**13.46**	**198**	PN	Pn	20 01 43.9	-9.2
CAW	**Cannon Point**	**14.20**	**201**	PN	Pn	20 01 54.0	-8.3
SNZO	**South Karori**	**14.50**	**201**	*e*Pn	Pn	20 02 00.2	-5.6
	6.6nm,0.4s						
SNZO				*e*S	S	20 04 31.0	-16
TUWZ	**Tuamarina**	**14.87**	**203**	PN	Pn	20 02 02.7	-7.6
AFI	**Afiamalu**	**15.24**	**25**	P	Pn	20 02 05.8	-10
AFI				S	S	20 04 46.1	-19
AFI				*e*S	Sn	20 04 46.3	-20
AFI	**Afiamalu**	**15.24**	**25**	P	Pn	20 02 05.8	-10
	2.1nm,0.3s,baz=9.5,slow=18,SNR=2.0						
AFI				S	S	20 04 46.1	-19
	4.2nm,0.3s,baz=207,slow=22,SNR=5.8						
THZ	**Tophouse**	**15.53**	**205**	PN	Pn	20 02 11.1	-7.4
TAU	**Tasmania Unive**	**31.48**	**233**	P	**P**	**20 04 50.9**	**-1.9**
CTA	**Charters Tower**	**33.21**	**276**	P	**P**	**20 05 09.1**	**+0.9**
CTA	**Charters Tower**	**33.21**	**276**	P	**P**	**20 05 09.1**	**+0.9**
	1.9nm,0.4s,baz=119,slow=11,SNR=7.0						
CTAO	**Charters Tower**	**33.21**	**276**	*e*P	**P**	**20 05 08.9**	**+0.8**
	2.7nm,0.6s						
STKA	**Stephens Creek**	**34.84**	**254**	*e*P	**P**	**20 05 23.2**	**+1.2**
STKA	**Stephens Creek**	**34.84**	**254**	P	**P**	**20 05 23.5**	**+1.5**
	2.2nm,0.8s,baz=92,slow=18,SNR=6.6						
ASAR	**Alice Springs**	**43.02**	**264**	P	**P**	**20 06 29.2**	**-0.7**
ASAR				ScP	**ScP**	**20 11 47.0**	**-1.6**
ASAR	**Alice Springs**	**43.02**	**264**	P	**P**	**20 06 29.2**	**-0.7**
	1.6nm,0.6s,baz=97,slow=7.0,SNR=23						
ASAR				ScP	**ScP**	**20 11 47.0**	**-1.6**
	2.2nm,1.0s,baz=102,slow=4.4,SNR=8.0						
WRAB	**Tennant Creek**	**43.78**	**270**	*e*P	**P**	**20 06 35.3**	**-0.8**
	9.6nm,1.1s						
SBA	**Scott Base**	**50.45**	**184**	*e*P	**P**	**20 07 28.8**	**+2.1**
	14nm,0.8s						
VNDA	**Vanda**	**50.49**	**185**	*e*P	**P**	**20 07 28.0**	**+1.0**
	2.1nm,0.7s						
VNDA	**Vanda**	**50.49**	**185**	P	**P**	**20 07 28.2**	**+1.2**
	1.7nm,0.6s,baz=5.5,slow=8.2,SNR=22						
FITZ	**Fitzroy Crossi**	**52.13**	**268**	P	**P**	**20 07 39.4**	**-0.6**
FITZ	**Fitzroy Crossi**	**52.13**	**268**	P	**P**	**20 07 39.4**	**-0.6**
	1.3nm,0.6s,baz=307,slow=10,SNR=8.3						
MBWA	**Marble Bar**	**56.25**	**262**	P	**P**	**20 08 10.8**	**+1.0**
	58nm,1.6s						
CASY	**Casey**	**57.17**	**207**	*e*P	**P**	**20 08 13.2**	**-2.3**
	8.7nm,1.2s						
QSPA	**South Pole Qui**	**62.14**	**180**	*e*P	**P**	**20 08 50.2**	**+0.6**
	29nm,1.2s						
MAW	**Mawson**	**74.49**	**200**	P	**P**	**20 10 05.7**	**-0.2**
MAW	**Mawson**	**74.49**	**200**	P	**P**	**20 10 05.7**	**-0.2**
	1.8nm,0.6s,baz=118,slow=8.7,SNR=8.4						
MJAR	**Matsushiro Arr**	**76.09**	**325**	P	**P**	**20 10 15.5**	**+0.1**
MJAR	**Matsushiro Arr**	**76.09**	**325**	P	**P**	**20 10 15.5**	**+0.1**
	3.6nm,0.5s,baz=156,slow=5.3,SNR=40						
MAJO	**Matsushiro**	**76.09**	**325**	*e*P	**P**	**20 10 14.8**	**-0.6**
	15nm,0.9s						
MAT	**Matsushiro**	**76.09**	**325**	P	**P**	**20 10 15.5**	**+0.1**
ASAJ	**Asahikawa**	**80.16**	**333**	P	**P**	**20 10 37.3**	**-0.3**
ASAJ	**Asahikawa**	**80.16**	**333**	P	**P**	**20 10 37.3**	**-0.3**
	2.1nm,0.4s,baz=178,slow=4.0,SNR=5.5						
SNAA	**Sanae**	**80.60**	**179**	*e*P	**P**	**20 10 39.0**	**-0.8**
	7.7nm,1.3s						
PETK	**Petropavlovsk-**	**83.39**	**346**	P	**P**	**20 10 54.6**	**+0.4**
PETK	**Petropavlovsk-**	**83.39**	**346**	P	**P**	**20 10 54.6**	**+0.4**
	4.3nm,0.5s,baz=141,slow=8.5,SNR=6.8						
PFO	**Pinyon Flat Ob**	**84.76**	**48**	P	**P**	**20 11 02.2**	**+0.4**
PFO	**Pinyon Flat Ob**	**84.76**	**48**	P	**P**	**20 11 02.2**	**+0.4**
	5.6nm,1.0s,baz=210,slow=3.5,SNR=4.1						
ISA	**Isabella**	**84.76**	**45**	*e*P	**P**	**20 11 01.9**	**+0.2**
	8.7nm,1.1s						
USRK	**Ussuriysk Arra**	**84.97**	**327**	P	**P**	**20 11 03.6**	**+1.2**
	3.7nm,0.6s,baz=148,slow=4.5,SNR=18						
CMB	**Columbia Colle**	**85.14**	**42**	*e*P	**P**	**20 11 03.8**	**+0.3**
	6.5nm,1.1s						
GSC	**Goldstone**	**85.59**	**46**	*e*P	**P**	**20 11 06.1**	**+0.3**
	6.0nm,1.2s						
MDJ	**Mudanjiang**	**86.46**	**326**	P	**P**	**20 11 09.7**	**-0.1**
	27nm,1.2s						
NVAR	**Mina Array Bea**	**86.64**	**43**	P	**P**	**20 11 11.4**	**+0.4**
NVAR	**Mina Array Bea**	**86.64**	**43**	P	**P**	**20 11 11.4**	**+0.4**
	1.6nm,0.6s,baz=221,slow=8.6,SNR=7.0						
TUC	**Tucson**	**87.81**	**52**	*e*P	**P**	**20 11 17.2**	**+0.6**
	2.7nm,1.6s						
TXAR	**Lajitas Array**	**91.30**	**57**	P	**P**	**20 11 33.4**	**+0.4**
TXAR	**Lajitas Array**	**91.30**	**57**	P	**P**	**20 11 33.4**	**+0.4**
	1.0nm,1.1s,baz=213,slow=6.0,SNR=6.0						
TNA	**Tin City**	**93.56**	**4**	*e*P	**P**	**20 11 43.1**	**+0.8**
	10nm,1.1s						
HHC	**Hu-ho-hao-te**	**94.34**	**314**	*e*P	P	20 11 50.3	+3.5
HHC				S	**S**	**20 22 45.0**	**+4.0**
HHC				pmax	pmax		
	comp=Z,28nm,0.7s						
HHC				pmax	pmax		
	comp=Z,270nm,6.9s						
PDAR	**Pinedale Array**	**94.56**	**44**	P	**P**	**20 11 46.8**	**-1.1**
PDAR	**Pinedale Array**	**94.56**	**44**	P	**P**	**20 11 46.8**	**-1.1**
	comp=Z,1.0nm,0.9s,baz=246,slow=7.4,SNR=4.0						
ILAR	**Eielson Array**	**95.61**	**13**	P	**P**	**20 11 51.0**	**-0.9**
ILAR	**Eielson Array**	**95.61**	**13**	P	**P**	**20 11 51.0**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=227,slow=5.7,SNR=14						
SONM	**Songino Array**	**101.15**	**318**	P	**Pdif**	**20 12 18.8**	**+1.6**
SONM	**Songino Array**	**101.15**	**318**	P	**Pdif**	**20 12 18.8**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=118,slow=3.5,SNR=3.0						
YKA	**Yellowknife Ar**	**103.36**	**25**	PKKPbc	PKKPbc	20 28 19.2	-2.9
YKA	**Yellowknife Ar**	**103.36**	**25**	PKKPbc	PKKPbc	20 28 19.2	-2.9
	comp=Z,0.6nm,0.9s,baz=45,slow=2.7,SNR=7.7						
MKAR	**Makanchi Array**	**115.98**	**311**	PKP	**PKPdf**	**20 17 07.5**	**-1.3**
MKAR	**Makanchi Array**	**115.98**	**311**	PKP	**PKPdf**	**20 17 07.5**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=141,slow=0.6,SNR=20						
ZALV	**Zalesovo Beam**	**116.02**	**319**	PKP	**PKPdf**	**20 17 07.0**	**-1.5**
ZALV	**Zalesovo Beam**	**116.02**	**319**	PKP	**PKPdf**	**20 17 07.0**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=143,slow=2.3,SNR=3.8						
BOSA	**Boshof**	**119.39**	**204**	PKP	**PKPdf**	**20 17 15.9**	**-0.2**
BOSA	**Boshof**	**119.39**	**204**	PKP	**PKPdf**	**20 17 15.9**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=202,slow=2.5,SNR=7.3						
KBL	**Kabul**	**122.98**	**295**	*e*PKPdf	**PKPdf**	**20 17 22.3**	**-0.5**
KEV	**Kevo**	**135.69**	**348**	*e*pkp	**PKPdf**	**20 17 44.7**	**-0.8**
ARCES	**ARCESS Array B**	**136.15**	**348**	PKPpre	PKPpre	20 17 38.3	
ARCES				PKP	**PKPdf**	**20 17 45.6**	**-0.9**
ARCES	**ARCESS Array B**	**136.15**	**348**	PKhKP	PKPpre	20 17 38.3	
	comp=Z,4.1nm,0.9s,baz=16,slow=3.0,SNR=9.3						
ARCES				PKP	**PKPdf**	**20 17 45.6**	**-0.9**
	comp=Z,1.6nm,0.4s,baz=59,slow=1.9,SNR=14						
JOF	**Joensuu**	**140.05**	**339**	*e*pkp	PKPdf	20 17 45.7	-8.0
KAF	**Kangasniemi**	**142.16**	**341**	*e*pkp	PKPdf	20 17 51.5	-6.1
FINES	**FINESS Array B**	**142.76**	**341**	PKPpre	PKPpre	20 17 53.8	
FINES	**FINESS Array B**	**142.76**	**341**	PKhKP	PKPpre	20 17 53.8	
	comp=Z,1.8nm,0.4s,baz=45,slow=3.4,SNR=29						
KBZ	**Khabaz**	**143.48**	**307**	PKP	PKPab	20 17 57.9	+0.6
KBZ	**Khabaz**	**143.48**	**307**	PKP	PKPab	20 17 57.9	+0.6
	comp=Z,1.4nm,0.5s,baz=32,slow=1.5,SNR=9.1						
NB2	**NORSAR Subarra**	**146.30**	**352**	PKP	**PKPdf**	**20 18 05.2**	**+0.3**
	comp=Z,18nm,1.0s,baz=12,slow=2.9						
NOA	**NORSAR Array B**	**146.30**	**352**	PKPbc	**PKPdf**	**20 18 05.5**	**+0.6**
NOA	**NORSAR Array B**	**146.30**	**352

CERAA	**Semis' Rag'd T**		**0.31**	**190**	P		**Pn**	**19 59 20.0**	**+0.2**
LSSE	**Little Sitkin**		**0.80**	**250**	P		**Pn**	**19 59 23.6**	**+1.5**
LSNW	**Little Sitkin**		**0.81**	**253**	P		**Pn**	**19 59 23.4**	**+1.2**
LSSA	**Little Sitkin**		**0.82**	**252**	P		**Pn**	**19 59 23.6**	**+1.2**
AMKA	**Amchitka**		**0.89**	**199**	P		**Pn**	**19 59 22.6**	**-0.2**
AMKA					S		**Sn**	**19 59 40.4**	**-1.3**
SMY	**Shemya**		**3.51**	**281**	P		**Pn**	**19 59 52.0**	**0.0**
SMY					S		**Sn**	**20 00 35.1**	**+1.0**
KOWE	**Korovin West**		**3.67**	**85**	P		**Pn**	**19 59 53.8**	**-0.5**
KOWE					S		**Sn**	**20 00 36.7**	**-1.3**
KOFP	**Korovin Flat P**		**3.77**	**87**	P		**Pn**	**19 59 55.3**	**-0.2**
FX1	**Attu Island--F**		**4.09**	**282**	P		**Pn**	**19 59 59.8**	**+0.2**
FX1					S		**Sn**	**20 00 46.9**	**-0.6**
FX1	**Attu Island--F**		**4.09**	**282**	P		**Pn**	**20 00 00.1**	**+0.4**
	16nm,0.3s,baz=51,slow=1.7,SNR=116								
FX1					S		**Sn**	**20 00 47.1**	**-0.4**
	81nm,0.3s,baz=94,slow=23,SNR=30								
OKRE	**Okmok R'deer P**		**7.42**	**75**	P		**Pn**	**20 00 44.0**	**+0.5**
OKTU	**Okmok Mt. Tuli**		**7.48**	**76**	P		**Pn**	**20 00 45.1**	**+0.7**
MSOM	**Makushin Julie**		**8.17**	**73**	P		**Pn**	**20 00 54.1**	**+0.6**
MREP	**Makushin Rep't**		**8.29**	**74**	P		**Pn**	**20 00 55.9**	**+0.7**
UNV	**Unalaska Valle**		**8.44**	**73**	P		**Pn**	**20 00 56.7**	**-0.3**
PETK	**Petropavlovsk-**		**13.42**	**283**	P		**Pn**	**20 02 02.1**	**0.0**
	0.2nm,0.3s,baz=109,slow=14,SNR=2.7								
PETK					S		**Sn**	**20 04 27.7**	**-3.0**
	0.3nm,0.3s,baz=128,slow=19,SNR=4.3								
KDAK	**Kodiak Island**		**16.74**	**60**	P		**P**	**20 02 42.2**	**-0.2**
	3.8nm,0.3s,baz=253,slow=5.6,SNR=38								
RSO	**Redoubt South**		**17.21**	**51**	P		**Pn**	**20 02 51.2**	**+2.4**
	36nm,0.7s								
SEW	**Seward**		**18.72**	**53**	*e*P		**P**	**20 03 03.1**	**-1.1**
RC01	**Rabbit Creek A**		**18.80**	**50**	*e*P		**P**	**20 03 05.9**	**+0.8**
MCK	**McKinley**		**19.96**	**43**	*e*P		**P**	**20 03 17.4**	**-0.2**
COLD	**Coldfoot**		**21.01**	**33**	P		P	20 03 35.1	+6.4
ILAR	**Eielson Array**		**21.17**	**41**	P		**P**	**20 03 28.6**	**-1.7**
	1.0nm,0.4s,baz=245,slow=9.7,SNR=30								
BMRM	**Bremner River**		**21.23**	**52**	*e*P		**P**	**20 03 30.4**	**-0.7**
	17nm,1.1s								
ASAJ	**Asahikawa**		**25.85**	**267**	P		**P**	**20 04 16.1**	**+1.6**
	6.4nm,1.0s,baz=66,slow=19,SNR=3.8								
INK	**Inuvik**		**27.29**	**36**	P		**P**	**20 04 26.4**	**-0.8**
	0.4nm,0.3s,baz=248,slow=7.4,SNR=3.9								
YKA	**Yellowknife Ar**		**35.30**	**47**	P		**P**	**20 05 37.7**	**+0.4**
	0.6nm,0.4s,baz=283,slow=7.2,SNR=20								
YKA					PcP		**PcP**	**20 08 03.3**	**-0.5**
	0.2nm,0.5s,baz=295,slow=3.4,SNR=4.5								
NVAR	**Mina Array Bea**		**44.32**	**83**	P		**P**	**20 06 52.7**	**+0.4**
	1.9nm,0.8s,baz=297,slow=7.6,SNR=6.7								
MKAR	**Makanchi Array**		**58.82**	**307**	P		**P**	**20 08 38.7**	**-0.7**
	0.2nm,0.4s,baz=54,slow=6.4,SNR=6.9								
TXAR	**Lajitas Array**		**59.40**	**81**	P		**P**	**20 08 43.2**	**-0.5**
	0.6nm,0.5s,baz=288,slow=5.0,SNR=3.9								
FINES	**FINESS Array B**		**64.77**	**346**	P		**P**	**20 09 18.3**	**-0.5**
	0.9nm,0.7s,baz=10,slow=12,SNR=2.9								
WRA	**Warramunga Ar**		**82.02**	**223**	P		**P**	**20 10 59.5**	**-0.6**
	1.7nm,0.5s,baz=32,slow=6.0,SNR=16								
FITZ	**Fitzroy Crossi**		**84.30**	**231**	P		**P**	**20 11 12.3**	**+0.5**
	1.9nm,0.8s,baz=45,slow=10.0,SNR=3.9								
ASAR	**Alice Springs**		**85.52**	**221**	P		**P**	**20 11 18.1**	**+0.2**
	0.7nm,0.6s,baz=24,slow=5.4,SNR=9.5								
MAW	**Mawson**		**146.60**	**218**	PKPbc		**PKPbc**	**20 18 19.2**	**0.0**
	1.8nm,0.5s,baz=180,slow=2.0,SNR=5.5								
BOSA	**Boshof**		**149.76**	**311**	PKPbc		**PKPdf**	**20 18 26.0**	**+2.0**
	0.9nm,0.5s,baz=77,slow=3.1,SNR=3.7								

*CSEM **25** 20:23:56.6±0.2, 43°.48N×18°.62E, h2km, ML2.2/8, Error ellipse: s-maj=4.2km s-min=3.6km az=113.0*
*BEO **25** 20:23:57.7±0.4, 43°.47N×18°.60E, h0km, ML2.5/8*
*PDG **25** 20:23:57.1±0.2, 43°.47N×18°.69E, h18km, ML2.2/8, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*

ISC 25 20:23:57.3±1.1, 43°.47N±0°.02×18°.63E±0°.02, h5km±9km, n51, σ0°93/94, 11C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPM	**Unac-Piva**	**0.34**	**143**	⇑*i*Pg	**Pg**	**20 24 03.6**	**-0.3**
UPM				*e*Sg	**Sg**	**20 24 09.1**	**+0.8**
UPM	**Unac-Piva**	**0.34**	**143**	⇑*i*Pg	**Pg**	**20 24 03.6**	**-0.3**
UPM				*e*Sg	**Sg**	**20 24 09.1**	**+0.8**
BRY	**Bratogost**	**0.57**	**186**	⇑*i*Pg	**Pg**	**20 24 07.8**	**-0.5**
BRY				*e*Sg	**Sb**	**20 24 17.8**	**-0.6**
BRY	**Bratogost**	**0.57**	**186**	⇑*i*Pg	**Pg**	**20 24 07.8**	**-0.5**
BRY				*e*Sg	**Sb**	**20 24 17.8**	**-0.6**
PLE	**Pljevlja**	**0.57**	**104**	*e*Pg	**Pg**	**20 24 07.0**	**-1.3**
PLE				*e*Sg	**Sg**	**20 24 15.7**	**-0.1**
PLE	**Pljevlja**	**0.57**	**104**	*e*Pg	**Pg**	**20 24 07.0**	**-1.3**
PLE				*e*Sg	**Sg**	**20 24 15.7**	**-0.1**
BBLS	**Lazići**	**0.69**	**55**	*e*Pg	**Pg**	**20 24 10.6**	**+0.1**
BBLS				*e*Sg	**Sg**	**20 24 19.8**	**+0.3**
BBLS	**Lazići**	**0.69**	**55**	*e*Pg	**Pg**	**20 24 10.6**	**+0.1**
BBLS				*e*Sg	**Sg**	**20 24 19.8**	**+0.3**
NKY	**Niksic**	**0.71**	**158**	⇓*i*Pg	**Pg**	**20 24 10.0**	**-0.9**
NKY				*e*Sg	**Sg**	**20 24 20.9**	**+0.7**
NKY	**Niksic**	**0.71**	**158**	⇓*i*Pg	**Pg**	**20 24 10.0**	**-0.9**
NKY				*e*Sg	**Sg**	**20 24 20.9**	**+0.7**
STON	**Ston**	**0.91**	**229**	*i*Pg	**Pg**	**20 24 14.1**	**-0.5**
STON				Sg	**Sb**	**20 24 27.9**	**+0.1**
STON	**Ston**	**0.91**	**229**	*i*Pg	**Pg**	**20 24 14.1**	**-0.5**
STON				Sg	**Sb**	**20 24 27.9**	**+0.1**
SJES	**Sjenica**	**1.00**	**102**	*e*Pg	**Pg**	**20 24 16.3**	**-0.2**
SJES				*e*Sg	**Sb**	**20 24 30.6**	**-0.2**
HCY	**Herceg Novi**	**1.03**	**185**	⇓*i*Pg	**Pg**	**20 24 16.3**	**-0.7**
HCY				*e*Sg	**Sn**	**20 24 33.1**	**0.0**
HCY	**Herceg Novi**	**1.03**	**185**	⇓*i*Pg	**Pg**	**20 24 16.3**	**-0.7**
BEY	**Berane**	**1.10**	**122**	⇑*i*Pg	**Pg**	**20 24 17.0**	**-1.4**
BEY				*e*Sg	**Sb**	**20 24 34.1**	**+0.5**
IVA	**Berane**	**1.10**	**122**	⇑*i*Pg	**Pg**	**20 24 17.0**	**-1.4**
IVA				*e*Sg	**Sb**	**20 24 34.1**	**+0.5**
IVAS	**Ivanjica**	**1.11**	**84**	*e*Pg	**Pg**	**20 24 17.2**	**-1.5**
IVAS				*e*Sg	**Sb**	**20 24 34.0**	**+0.1**
IVAS	**Ivanjica**	**1.11**	**84**	*e*Pg	**Pg**	**20 24 17.2**	**-1.5**
IVAS				*e*Sg	**Sb**	**20 24 34.0**	**+0.1**
PDG	**Podgorica**	**1.14**	**156**	*e*Pg	**Pg**	**20 24 17.3**	**-1.8**
PDG				*e*Sg	**Sb**	**20 24 34.6**	**+0.1**
PDG	**Podgorica**	**1.14**	**156**	⇑*i*Pg	**Pg**	**20 24 18.0**	**-1.1**
PDG				*e*Sg	**Sb**	**20 24 34.6**	**+0.1**
TTG	**Podgorica**	**1.14**	**156**	⇑*i*Pg	**Pg**	**20 24 18.0**	**-1.1**
TTG				*e*Sg	**Sn**	**20 24 35.4**	**-0.4**
DIVS	**Divibare**	**1.17**	**57**	*e*Pg	**Pg**	**20 24 18.4**	**-1.3**
DIVS				*e*Sg	**Sg**	**20 24 34.9**	**0.0**
DIVS	**Divibare**	**1.17**	**57**	*e*Pg	**Pg**	**20 24 18.4**	**-1.3**
DIVS				*e*Sg	**Sg**	**20 24 34.9**	**0.0**
BUM	**Brajici-Budva**	**1.19**	**170**	*e*Pg	**Pg**	**20 24 19.4**	**-0.6**
BUM				*e*Sg	**Sn**	**20 24 37.9**	**+0.8**
BUM	**Brajici-Budva**	**1.19**	**170**	*e*Pg	**Pg**	**20 24 19.4**	**-0.6**
TEKS	**Tekeris**	**1.26**	**31**	*e*Pg	**Pg**	**20 24 21.4**	**0.0**
TEKS				*e*Sg	**Sb**	**20 24 38.3**	**+0.3**
TEKS	**Tekeris**	**1.26**	**31**	*e*Pg	**Pg**	**20 24 21.4**	**0.0**
TEKS				*e*Sg	**Sb**	**20 24 38.3**	**+0.3**
PVY	**Plav**	**1.31**	**131**	⇑*i*Pg	**Pn**	**20 24 21.2**	**-1.2**
PVY				*e*Sg	**Sn**	**20 24 40.5**	**+0.2**
TRUS	**Trudelj**	**1.49**	**59**	*e*Pg	**Pn**	**20 24 24.2**	**-0.5**
TRUS				*e*Sg	**Sg**	**20 24 45.2**	**+0.3**
TRUS	**Trudelj**	**1.49**	**59**	*e*Pg	**Pn**	**20 24 24.2**	**-0.5**
TRUS				*e*Sg	**Sg**	**20 24 45.5**	**+0.3**
BCI	**Bajram Curri**	**1.53**	**136**	*e*PN	**Pn**	**20 24 25.0**	**-0.3**
BCI				*e*SN	**Sg**	**20 24 47.4**	**+0.9**
BCI	**Bajram Curri**	**1.53**	**136**	*e*Pn	**Pn**	**20 24 25.0**	**-0.3**
BCI				*e*Sn	**Sg**	**20 24 47.3**	**+0.9**
GRUS	**Gruza**	**1.57**	**74**	*e*Pg	**Pn**	**20 24 26.1**	**+0.3**
GRUS				*e*Sg	**Sg**	**20 24 47.6**	**-0.2**
GRUS	**Gruza**	**1.57**	**74**	*e*Pg	**Pn**	**20 24 26.1**	**+0.3**
GRUS				*e*Sg	**Sg**	**20 24 47.6**	**-0.2**
ULC	**Ulcinj**	**1.57**	**163**	⇑*i*Pg	**Pn**	**20 24 24.9**	**-1.0**
ULC				*e*Sg	**Sn**	**20 24 46.9**	**+0.2**
ULC	**Ulcinj**	**1.57**	**163**	⇑*i*Pg	**Pn**	**20 24 24.9**	**-1.0**
ULC				*e*Sg	**Sn**	**20 24 46.9**	**+0.2**
BLY	**Banja Luka**	**1.65**	**321**	*e*Pg	**Pn**	**20 24 27.0**	**+0.1**
BLY				*e*Sg	**Sg**	**20 24 51.0**	**+0.8**
BLY	**Banja Luka**	**1.65**	**321**	*e*Pg	**Pn**	**20 24 27.0**	**+0.1**
BLY				*e*Sg	**Sg**	**20 24 51.0**	**+0.8**
PUK	**Puka**	**1.71**	**146**	*e*PN	**Pb**	**20 24 28.6**	**-0.5**
PUK				*e*SN	**Sg**	**20 24 55.3**	**+3.2**
PUK	**Puka**	**1.71**	**146**	*e*Pn	**Pb**	**20 24 28.6**	**-0.5**
SELS	**Selova**	**1.84**	**97**	*e*Pg	**Pb**	**20 24 30.5**	**-0.8**
SELS				*e*Sg	**Sg**	**20 24 57.1**	**+0.9**
SELS	**Selova**	**1.84**	**97**	*e*Pg	**Pb**	**20 24 30.5**	**-0.8**
SELS				*e*Sg	**Sg**	**20 24 57.1**	**+0.9**
PHP	**Peshkopia**	**2.23**	**143**	*e*PN	**Pb**	**20 24 38.1**	**0.0**
PHP	**Peshkopia**	**2.23**	**143**	*e*Pn	**Pb**	**20 24 38.1**	**0.0**
NVLJ	**Novalja**	**2.92**	**293**	*e*Pn	**Pn**	**20 24 45.4**	**+1.1**
NVLJ				*e*Sn	**Sb**	**20 25 24.7**	**-1.1**
NVLJ	**Novalja**	**2.92**	**293**	*e*Pn	**Pn**	**20 24 45.4**	**+1.1**
ZAPS	**Zavoj**	**2.93**	**92**	*e*Pn	**Pn**	**20 24 46.5**	**+2.0**
ZAPS				*e*Sn	**Sn**	**20 25 22.3**	**+2.2**
BZS	**Buzias**	**3.03**	**44**	⇓*i*P	**Pb**	**20 24 51.9**	**+0.2**
VTS	**Vitosha**	**3.47**	**103**	⇓*i*P	**Pb**	**20 25 01.6**	**+2.3**
PERS	**Pernice**	**4.02**	**323**	*i* Pn	**Pn**	**20 24 59.5**	**-0.1**
PERS				*i* Sn	**Sn**	**20 25 44.4**	**-2.8**

IDC 25 20:33:10.2±4.4, 5°.65N×123°.77E, h609km±69km, mb2.8/7, mb1 2.9/7, mb1mx2.7/25, mbtmp2.8/7, Error ellipse: s-maj=59.1km s-min=13.5km az=60.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**23.67**	**176**	P	P	20 37 36.3	-0.1
	1.8nm,0.8s,baz=14,slow=7.4,SNR=7.3						
CMAR	**Chiang Mai Arr**	**27.36**	**300**	P	P	20 38 09.1	+0.2
	0.8nm,0.8s,baz=123,slow=7.5,SNR=6.8						
WRA	**Warramunga Arr**	**27.47**	**158**	P	P	20 38 08.8	-1.0
	1.2nm,0.4s,baz=341,slow=9.5,SNR=35						
ASAR	**Alice Springs**	**30.77**	**162**	P	P	20 38 38.5	+0.3
	1.4nm,0.5s,baz=343,slow=7.0,SNR=36						
STKA	**Stephens Creek**	**41.01**	**157**	P	P	20 40 02.9	+0.9
	18nm,1.4s,baz=342,slow=9.6,SNR=3.1						
SONM	**Songino Array**	**44.59**	**343**	P	P	20 40 30.0	+0.2
	0.2nm,0.5s,baz=159,slow=9.7,SNR=3.1						
MKAR	**Makanchi Array**	**54.31**	**326**	P	P	20 41 40.6	-0.3
	1.1nm,0.4s,baz=119,slow=7.9,SNR=39						
MKAR				PcP	PcP	20 42 34.8	-0.3
	0.2nm,0.4s,baz=132,slow=3.5,SNR=4.2						

WEL 25 21:13:59.3±0.2, 37°.01S×176°.32E, h252km±3km, ML3.6/3, 1C-1D, Error ellipse: s-maj=7.5km s-min=4.3km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**1.40**	**154**	⇓PN	Pn	21 14 37.3	+0.3
URZ				SN	S	21 15 06.3	-0.6
MWZ	**Matawai**	**1.64**	**144**	PN	Pn	21 14 39.0	+0.1
MWZ				SN	S	21 15 09.8	-0.4
BKZ	**Black Stump Fm**	**2.16**	**176**	⇑PN	Pn	21 14 43.6	+0.1
BKZ				SN	S	21 15 18.1	-0.4
MCHZ	**McNeill Hill**	**2.45**	**173**	PN	Pn	21 14 46.5	+0.3
BHHZ	**Black Hill Sta**	**2.49**	**185**	PN	Pn	21 14 46.7	+0.1

*ISK **25** 21:38:55.9, 38°.78N×26°.22E, h12km, MD2.8*
*DDA **25** 21:38:57.5, 38°.85N×26°.39E, h7km, MD3.0*
*ISCJB **25** 21:38:58.4±0.4, 38°.85N±0°.02×26°.40E±0°.04, h11km±4km, Error ellipse: s-maj=5.4km s-min=3.1km az=158.4*
*CSEM **25** 21:38:58.6±0.2, 38°.84N×26°.39E, h15km, ML2.2/3, Error ellipse: s-maj=4.3km s-min=2.9km az=67.0*
*THE **25** 21:38:58.0, 38°.86N×26°.51E, h6km±1km, ML2.2/3, Error ellipse: s-maj=2.0km s-min=0.4km az=272.0*

ISC 25 21:38:58.2±1.0, 38°.86N±0°.02×26°.38E±0°.03, h12km±9km, n44, σ0°91/66, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	**0.40**	**348**	P	**Pb**	**21 39 06.6**	**-0.6**
PRK				S	**Sb**	**21 39 13.0**	**-0.2**
PRK	**Paraskevi**	**0.40**	**348**	P	**Pb**	**21 39 06.6**	**-0.6**
PRK				S	**Sb**	**21 39 13.0**	**-0.2**
AYVA	**Ayvalik**	**0.51**	**28**	*i* P	**Pg**	**21 39 08.1**	**-0.2**
AYVA				*i* S	**Sg**	**21 39 14.8**	**-0.3**
AYVA	**Ayvalik**	**0.51**	**28**	*i* P	**Pg**	**21 39 08.0**	**-0.2**
AYVA				*i* S	**Sg**	**21 39 14.8**	**-0.3**
URLA	**Izmir**	**0.52**	**161**	*e*P	**Pg**	**21 39 08.2**	**-0.2**
URLA				*e*S	**Sg**	**21 39 15.6**	**+0.2**
URLA	**Izmir**	**0.52**	**161**	*e*P	**Pg**	**21 39 08.2**	**-0.2**
URLA				*e*S	**Sg**	**21 39 15.6**	**+0.2**
CHOS	**Chios island**	**0.53**	**209**	P	**Pb**	**21 39 09.3**	**-0.1**
CHOS				S	**Sb**	**21 39 18.2**	**+1.1**
CHOS	**Chios island**	**0.53**	**209**	P	**Pb**	**21 39 09.3**	**-0.1**
CHOS				S	**Sb**	**21 39 18.2**	**+1.1**
SIGR	**SIGRI**	**0.54**	**311**	P	**Pb**	**21 39 09.6**	**0.0**
SIGR				S	**Sb**	**21 39 19.2**	**+1.9**
SIGR	**SIGRI**	**0.54**	**311**	P	**Pb**	**21 39 09.6**	**0.0**
SIGR				S	**Sb**	**21 39 19.2**	**+1.9**
BLCB	**Balcova**	**0.70**	**132**	*e*PG	**Pg**	**21 39 11.3**	**-0.4**
BLCB				*e*SG	**Sb**	**21 39 21.7**	**-0.1**
BLCB	**Balcova**	**0.70**	**132**	*e*Pg	**Pg**	**21 39 11.3**	**-0.4**
BLCB				*e*Sg	**Sb**	**21 39 21.7**	**-0.1**
IZM	**Izmir**	**0.83**	**123**	*e*PG	**Pb**	**21 39 14.4**	**-0.1**
IZM				*e*SG	**Sn**	**21 39 26.6**	**-1.2**
IZM	**Izmir**	**0.83**	**123**	*e*Pg	**Pb**	**21 39 14.4**	**-0.1**
IZM				*e*Sg	**Sn**	**21 39 26.6**	**-1.2**
EZN	**Ezine**	**0.97**	**358**	*e*PG	**Pg**	**21 39 16.4**	**-0.5**
EZN				*e*SG	**Sn**	**21 39 31.3**	**0.0**
BOZC	**Bozcaada**	**1.02**	**346**	*e*P	**Pg**	**21 39 17.8**	**0.0**
BOZC				*e*S	**Sg**	**21 39 31.0**	**0.0**
AKS	**Akhisar**	**1.12**	**88**	*e*PN	**Pb**	**21 39 19.9**	**+0.3**
AKS	**Akhisar**	**1.12**	**88**	*e*Pn	**Pn**	**21 39 19.9**	**+0.3**
AKHS	**Akhisar**	**1.12**	**88**	*e*P	**Pb**	**21 39 19.2**	**-0.3**
AKHS				*e*S	**Sn**	**21 39 34.9**	**-0.1**
AKHS	**Akhisar**	**1.12**	**88**	*e*P	**Pb**	**21 39 19.2**	**-0.3**
AKHS				*e*S	**Sn**	**21 39 34.9**	**-0.1**
BALY	**Balya**	**1.31**	**47**	*e*P	**Pb**	**21 39 22.6**	**-0.1**
BALY				*e*S	**Sg**	**21 39 40.1**	**-0.2**
BALY	**Balya**	**1.31**	**47**	*e*P	**Pb**	**21 39 22.6**	**-0.1**
BALY				*e*S	**Sg**	**21 39 40.1**	**-0.2**
GCAM	**G?zelcaml?**	**1.33**	**149**	*e*P	**Pg**	**21 39 26.6**	**+2.8**
GCAM				*e*S	**Sb**	**21 39 39.7**	**-0.4**
GCAM	**G?zelcaml?**	**1.33**	**149**	*e*P	**Pg**	**21 39 26.6**	**+2.8**
GCAM				*e*S	**Sb**	**21 39 39.7**	**-0.4**
LIA	**Limnos Island**	**1.39**	**319**	P	**Pn**	**21 39 23.8**	**+0.4**
LIA	**Limnos Island**	**1.39**	**319**	P	**Pn**	**21 39 23.8**	**+0.4**
BALB	**Balikesir**	**1.41**	**56**	*e*PN	**Pb**	**21 39 24.1**	**-0.1**
BALB	**Balikesir**	**1.41**	**56**	*e*Pn	**Pb**	**21 39 24.2**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.54**	**3**	*e*PN	**Pn**	**21 39 25.0**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.54**	**3**	*e*Pn	**Pn**	**21 39 25.0**	**-0.4**
LPK	**Lapseki**	**1.54**	**11**	*e*PN	**Pn**	**21 39 25.0**	**-0.5**
LPK	**Lapseki**	**1.54**	**11**	*e*Pn	**Pn**	**21 39 25.0**	**-0.5**
GONE	**Gonen-Balikesi**	**1.56**	**40**	*e*PN	**Pb**	**21 39 26.3**	**-0.6**
KRBG	**Karabiga-Canak**	**1.69**	**25**	*e*PN	**Pn**	**21 39 27.9**	**+0.4**
KRBG	**Karabiga-Canak**	**1.69**	**25**	*e*Pn	**Pn**	**21 39 27.9**	**+0.4**
KULA	**Kula-Manisa**	**1.82**	**100**	*e*PN	**Pn**	**21 39 30.1**	**+0.8**
KULA	**Kula-Manisa**	**1.82**	**100**	*e*Pn	**Pn**	**21 39 30.1**	**+0.8**
EDC	**Edincik**	**1.88**	**37**	*e*PN	**Pn**	**21 39 30.4**	**+0.3**
APE	**Apeiranthos**	**1.91**	**201**	*e*PN	**Pn**	**21 39 27.4**	**-3.0**
MLSB	**Milas**	**1.91**	**144**	*e*PN	**Pn**	**21 39 29.3**	**-1.2**
MLSB	**Milas**	**1.91**	**144**	*e*Pn	**Pn**	**21 39 29.3**	**-1.2**
KCTX	**Karacabey (Bur**	**2.08**	**47**	*e*PN	**Pn**	**21 39 33.3**	**+0.5**
TVSB	**Tavsanli**	**2.47**	**75**	*e*PN	**Pn**	**21 39 39.8**	**+1.5**
TVSB	**Tavsanli**	**2.47**	**75**	*e*Pn	**Pn**	**21 39 39.8**	**+1.5**

*ISCJB **25** 21:40:01.7±0.5, 6°.51S±0°.05×147°.65E±0°.07, h63km, mb4.2/10, Error ellipse: s-maj=9.6km s-min=6.2km az=165.6*
*IDC **25** 21:40:03.2±2.4, 6°.54S×147°.66E, h64km±18km, mb3.8/8, mb1 4.1/10, mb1mx4.0/17, mbtmp3.9/10, MS3.3/8, Ms1 3.3/8, ms1mx3.1/25, Error ellipse: s-maj=33.6km s-min=14.3km az=86.0*
*DJA **25** 21:40:04.5±2.4, 7°.5S±14°.1×14°.8E±2°.1, h103km±13km, M5.6/7, mB5.8/2, mb5.0/7, MLv5.9/2, Mw(mB)5.3/2*
*AUST **25** 21:40:07.4, 6°.73S×147°.63E, h100km*

ISC 25 21:40:03.4±0.6, 6°.52S±0°.06×147°.61E±0°.09, h63km, n54, σ1s32/50, mb4.1/10, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.90**	**189**	P	**Pn**	**21 40 47.7**	**+0.4**
PMG	**Port Moresby**	**2.90**	**189**	P	**Pn**	**21 40 46.9**	**-0.3**
	135nm,0.3s,baz=11,slow=12,SNR=404						
PMG				S	**Sn**	**21 41 20.8**	**-0.2**
	108nm,0.3s,baz=210,slow=20,SNR=7.8						
PMG				LR	LR	21 41 47.2	
	comp=Z,479nm,18.8s,baz=226,slow=36						
MMPI	**Merauke**	**7.42**	**254**	P	Pn	21 41 58.4	+9.2
	1um,0.4s,46um10nm						
MTSU	**Mount Surprise**	**11.98**	**195**	P	**Pn**	**21 42 51.4**	**-0.1**
	baz=12,SNR=107						
HNR	**Honiara**	**12.55**	**104**	P	**Pn**	**21 43 00.8**	**+1.5**
	7.0nm,0.3s,baz=260,slow=16,SNR=4.0						
CTA	**Charters Tower**	**13.55**	**185**	P	**Pn**	**21 43 13.1**	**+0.3**
	1.0nm,0.3s,baz=2.6,slow=15,SNR=13						
CTA				LR	LR	21 47 51.0	
	comp=Z,145nm,19.6s,baz=136,slow=35						
FAKI	**Fak Fak**	**15.72**	**282**	P	**P**	**21 43 46.2**	**+2.2**
	51nm,1.0s						
FAKI	**Fak Fak**	**15.72**	**282**	P	**P**	**21 43 46.0**	**+2.0**
	baz=16,SNR=6.7						
QIS	**Mount Isa**	**15.97**	**208**	P	**Pn**	**21 43 44.1**	**-0.2**
	baz=16,SNR=16						
KDU	**Kakadu**	**16.13**	**247**	P	**Pn**	**21 43 45.9**	**-0.4**
	baz=16,SNR=20						
SWI	**Sorong**	**17.25**	**288**	P	**P**	**21 44 02.4**	**+1.4**
	50nm,0.8s						
MTN	**Manton Dam**	**17.41**	**248**	P	**Pn**	**21 44 02.3**	**+0.1**
	baz=17,SNR=6.8						
WRA	**Warramunga Arr**	**18.55**	**223**	P	**P**	**21 44 15.2**	**-0.1**
	2.8nm,0.3s,baz=49,slow=11,SNR=78						
WRA				S	Sn	21 47 30.7	-12
	0.4nm,0.3s,baz=43,slow=23,SNR=4.2						
EIDS	**Eidsvold**	**19.03**	**170**	P	**Pn**	**21 44 20.7**	**-1.1**
	baz=19,SNR=9.3						
RMQ	**Roma**	**19.88**	**177**	P	**Pn**	**21 44 30.6**	**-1.2**
	baz=20,SNR=18						
GUMO	**Guam**	**20.16**	**352**	LR	LR	21 51 17.7	
	comp=Z,28nm,18.5s,baz=240,slow=33						
QLP	**Quilpie**	**20.21**	**189**	P	**P**	**21 44 33.6**	**+0.4**
	baz=20,SNR=83						
LBMI	**Labuha**	**20.90**	**285**	P	Pn	21 44 45.8	+1.8
	68nm,1.0s,690nm						
ASAR	**Alice Springs**	**21.55**	**216**	P	**P**	**21 44 47.9**	**+0.2**
	4.7nm,0.4s,baz=49,slow=9.3,SNR=257						
ASAR				S	**S**	**21 48 41.0**	**-2.4**
	3.3nm,0.8s,baz=33,slow=21,SNR=7.2						
ASAR				ScP	**ScP**	**21 52 24.8**	**+4.7**
	1.5nm,0.9s,baz=64,slow=2.2,SNR=6.5						
ARMA	**Armidale**	**24.07**	**171**	P	**P**	**21 45 12.9**	**-0.3**
	baz=24,SNR=20						
MNI	**Manado**	**24.07**	**288**	P	**P**	**21 45 14.3**	**+1.1**
FITZ	**Fitzroy Crossi**	**24.32**	**240**	P	**P**	**21 45 15.6**	**+0.2**
	46nm,0.5s,baz=57,slow=9.6,SNR=231						
FITZ				LR	LR	21 55 09.1	
	comp=Z,53nm,20.1s,baz=181,slow=37						
FITZ	**Fitzroy Crossi**	**24.32**	**240**	P	**P**	**21 45 15.3**	**-0.1**
	baz=24,SNR=162						
KMSI	**Cibinong**	**24.62**	**

BBB	**Bella Bella**	**6.89**	**265**	Lg	Lg	21 43 57.5	
	1.1nm,0.3s,baz=165,slow=12,SNR=2.8						
EGMT	**Eagleton**	**6.98**	**136**	⇑P	**Pn**	**21 42 07.0**	**-0.6**
	baz=7.0						
E13A	**Victor**	**7.10**	**165**	⇑P	**Pn**	**21 42 08.5**	**-0.8**
	baz=7.1,SNR=41						
D16A	**Dana Ranch, Ca**	**7.17**	**149**	⇓P	**Pn**	**21 42 09.4**	**-0.8**
	baz=7.2						
A20A	**Cobblestone Ra**	**7.19**	**124**	⇑P	**Pn**	**21 42 10.6**	**+0.1**
	baz=7.2						
E14A	**Clinton**	**7.25**	**161**	⇑P	**Pn**	**21 42 10.7**	**-0.7**
	baz=7.2,SNR=33						
E15A	**Deer Lodge**	**7.42**	**156**	⇑P	**Pn**	**21 42 12.6**	**-1.2**
	baz=7.4,SNR=18						
B20A	**Solberg Farm,**	**7.44**	**127**	⇑P	**Pn**	**21 42 13.4**	**-0.6**
	baz=7.5						
C19A	**Slack Wire Ran**	**7.50**	**135**	⇑P	**Pn**	**21 42 14.1**	**-0.7**
	baz=7.5						
F13A	**Darby**	**7.71**	**166**	⇑P	**Pn**	**21 42 17.2**	**-0.6**
	baz=7.7,SNR=12						
F15A	**Butte**	**8.01**	**157**	⇓P	**Pn**	**21 42 20.6**	**-1.3**
	baz=8.0,SNR=14						
DLBC	**Dease Lake**	**8.98**	**310**	Lg	Lg	21 45 11.4	
	0.4nm,0.3s,baz=201,slow=19,SNR=4.8						
YKA	**Yellowknife Ar**	**9.29**	**7**	Pn	**Pn**	**21 42 38.8**	**-0.4**
	2.4nm,0.3s,baz=183,slow=13,SNR=104						
YKA				Sn	**Sn**	**21 44 20.9**	**-2.7**
	0.8nm,0.3s,baz=189,slow=23,SNR=3.3						
YKA				Lg	Lg	21 45 14.1	
	0.6nm,0.3s,baz=190,slow=30,SNR=5.8						
ULM	**Lac du Bonnet**	**13.37**	**95**	Pn	**Pn**	**21 43 32.5**	**-2.6**
	0.4nm,0.3s,baz=300,slow=12,SNR=3.9						
INK	**Inuvik**	**16.98**	**339**	Pn	**Pn**	**21 44 21.1**	**-1.6**
	0.5nm,0.3s,baz=142,slow=8.2,SNR=12						
ILAR	**Eielson Array**	**19.00**	**319**	P	**Pn**	**21 44 48.5**	**+1.0**
	0.0nm,0.3s,baz=111,slow=9.5,SNR=11						
RES	**Resolute Bay**	**23.22**	**15**	P	**P**	**21 45 35.1**	**+3.1**
	0.9nm,0.6s,baz=207,slow=10,SNR=2.5						
TXAR	**Lajitas Array**	**25.85**	**153**	P	**P**	**21 45 57.2**	**+0.2**
	0.5nm,0.8s,baz=345,slow=6.8,SNR=4.2						
FINES	**FINESS Array B**	**61.88**	**19**	P	**P**	**21 50 46.1**	**+1.8**
	0.9nm,0.7s,baz=345,slow=8.6,SNR=4.3						

TAP 25 21:45:16.1,23.03N×121.41E,h37km,ML2.9,5C,C,
Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.08**	**331**	*e*P		Pn	21 45 22.1	-0.3
	baz=335							
CHKT				S		Sn	21 45 27.1	+0.5
	baz=335							
TWF1	**Yuli**	**0.34**	**343**	⇑*i*P		Pn	21 45 24.4	-0.2
	baz=334							
TWG	**Pinlang**	**0.37**	**237**	⇑*i*P		Pn	21 45 24.7	-0.1
	baz=245							
TWG				S		Sn	21 45 30.6	-1.0
	baz=245							
ELDTW	**Lidau**	**0.39**	**294**	⇑*i*P		Pn	21 45 25.2	-0.1
	baz=298							
ELDTW				*e*S		Sn	21 45 31.0	-1.1
	baz=298							
ECL	**Taimali**	**0.60**	**224**	*e*P		Pn	21 45 27.2	-1.1
	baz=224							
ECL				*e*S		Sn	21 45 35.1	-1.7
	baz=224							
WTP	**Ta-pu**	**0.76**	**287**	⇑P		Pn	21 45 31.8	+1.4
	baz=291							
EAST	**Anshuo**	**0.82**	**219**	*e*P		Pn	21 45 30.6	-0.6
	baz=212							
CHN1	**Nanshi**	**0.82**	**281**	⇑*i*P		Pn	21 45 33.2	+1.9
	baz=280							
TWM1	**Shoushan**	**0.93**	**258**	*e*P		Pn	21 45 35.7	+3.0
	baz=257							
SCZT	**Fangliau**	**0.98**	**228**	*e*P		Pn	21 45 35.0	+1.7
	baz=227							

JMA ***25*** *21:45:16.9±0.4,24.14N×121.45E,h71km,M3.1*
ISCJB ***25*** *21:45:17.5±0.2,24.00N±0.01×121.59E±0.02,h17km±3km,*
Error ellipse: s-maj=3.0km s-min=2.0km az=31.9
TAP ***25*** *21:45:17.1,24.01N×121.52E,h19km,ML3.9,B*
ISC 25 21:45:17.2±0.9,24.01N±0.02×121.53E±0.02,h18km±3km,
n62,σ0961/99,11C-6D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.08**	**113**	⇓*i*P		**Pg**	**21 45 21.3**	**+0.7**
	baz=114							
HWA				S		**Sg**	**21 45 24.2**	**+1.2**
	baz=114							
TWD	**Chiawan**	**0.10**	**41**	⇓*i*P		**Pg**	**21 45 21.1**	**+0.3**
	baz=50							
TWD				*i* S		**Sg**	**21 45 23.6**	**+0.3**
	baz=50							
ESF	**Shoufeng Towns**	**0.14**	**188**	P		**Pg**	**21 45 21.3**	**0.0**
	baz=184							
ESF				S		**Sg**	**21 45 24.3**	**+0.3**
	baz=184							
ESL	**Shilin**	**0.21**	**204**	⇓*i*P		**Pg**	**21 45 22.1**	**-0.2**
	baz=205							
ESL				*e*S		**Sg**	**21 45 25.9**	**+0.1**
	baz=205							
WHF	**Hehuan Shan**	**0.28**	**300**	⇓*i*P		**Pg**	**21 45 23.5**	**-0.2**
	baz=294							
TEGC	**Jichi Village**	**0.30**	**178**	P		**Pb**	**21 45 24.2**	**+0.2**
	baz=183							
TEGC				*e*S		**Sb**	**21 45 30.2**	**+1.8**
	baz=183							
EHP	**Heping Village**	**0.36**	**33**	*e*P		**Pg**	**21 45 24.5**	**-0.2**
	baz=35							
EHP				*e*S		**Sb**	**21 45 30.1**	**-0.3**
	baz=35							
TWT	**Tachien**	**0.40**	**307**	⇑*i*P		**Pb**	**21 45 26.0**	**+0.1**
	baz=299							
TWT				S		**Sb**	**21 45 31.7**	**-0.2**
	baz=299							
NNS	**Nan Shan**	**0.45**	**342**	⇑*i*P		**Pb**	**21 45 26.5**	**-0.2**
	baz=343							
NNS				S		**Sg**	**21 45 32.4**	**-0.4**
	baz=343							
ENA	**Nanau**	**0.46**	**25**	⇓*i*P		**Pg**	**21 45 26.3**	**-0.3**
	baz=27							
ENA				*e*S		**Sg**	**21 45 32.6**	**-0.3**
	baz=27							
EHY	**Hungye**	**0.53**	**201**	*e*P		**Pg**	**21 45 26.5**	**-1.4**
	baz=343							
EHY	**Hungye**	**0.53**	**201**	*e*P		**Pg**	**21 45 27.5**	**-0.4**
	baz=191							
EHY				*e*S		**Sg**	**21 45 34.4**	**-0.7**
	baz=191							
SMLT	**Sun Moon Lake**	**0.59**	**258**	⇑P		**Pg**	**21 45 28.8**	**-0.1**
	baz=257							
SMLT				S		**Sb**	**21 45 36.4**	**-0.6**
	baz=257							
TYC	**Yuchr**	**0.62**	**261**	⇑*i*P		**Pg**	**21 45 29.2**	**-0.3**
	baz=259							
ENTT	**Nioudou**	**0.63**	**3**	⇓P		**Pb**	**21 45 29.3**	**-0.3**
	baz=4.0							
ENTT				*e*S		**Sb**	**21 45 37.8**	**-0.3**
	baz=4.0							
TWC	**Suao**	**0.67**	**26**	P		**Pb**	**21 45 29.7**	**-0.5**
	baz=28							
TWC				S		**Sb**	**21 45 39.0**	**-0.2**
	baz=28							
NSK	**Sanguang**	**0.68**	**347**	⇑P		**Pb**	**21 45 30.4**	**-0.2**
	baz=341							
NSK				S		**Sb**	**21 45 39.4**	**-0.3**
	baz=341							
TWF1	**Yuli**	**0.69**	**198**	*e*P		**Pb**	**21 45 30.4**	**-0.2**
	baz=196							
TWF1				*e*S		**Sb**	**21 45 39.2**	**-0.5**
	baz=196							
TWE	**Neicheng**	**0.72**	**10**	*e*P		**Pb**	**21 45 30.6**	**-0.6**
	baz=12							
TWE				*e*S		**Sg**	**21 45 40.9**	**-0.1**
	baz=12							
TWQ1	**Liyutan**	**0.77**	**296**	⇑P		**Pn**	**21 45 32.7**	**-0.4**
	baz=296							
WNT	**Mingjian**	**0.78**	**261**	⇑P		**Pn**	**21 45 33.2**	**-0.1**
	baz=260							
WNT				*e*S		**Sn**	**21 45 44.5**	**-0.1**
	baz=260							
NSTT	**Nanjuang**	**0.78**	**322**	⇑*i*P		**Pn**	**21 45 32.7**	**-0.7**
	baz=322							
TCU	**Taichung**	**0.79**	**280**	⇑*i*P		**Pn**	**21 45 33.5**	**+0.1**
	baz=280							
TCU				*i* S		**Sn**	**21 45 45.4**	**+0.6**
	baz=280							
NSY	**Sanyi**	**0.81**	**300**	⇑*i*P		**Pn**	**21 45 33.8**	**+0.1**
	baz=309							
NSY				*e*S		**Sn**	**21 45 45.1**	**-0.2**
	baz=309							
ALS	**Alishan**	**0.83**	**233**	*e*P		**Pb**	**21 45 31.3**	**-1.8**
	baz=311							
ALS	**Alishan**	**0.83**	**233**	*e*P		**Pg**	**21 45 33.4**	**0.0**
	baz=219							
CHN5	**Tsauling**	**0.88**	**242**	*e*P		**Pg**	**21 45 34.1**	**-0.2**
	baz=310							
CHN5	**Tsauling**	**0.88**	**242**	*e*P		**Pg**	**21 45 34.0**	**-0.3**
	baz=241							
CHN5				*e*S		**Sn**	**21 45 47.5**	**+0.4**
	baz=241							
CHKT	**Chengkung**	**0.92**	**189**	*e*P		**Pb**	**21 45 34.3**	**-0.3**
	baz=188							
CHKT				*e*S		**Sb**	**21 45 46.5**	**+0.1**
	baz=188							
ELDTW	**Lidau**	**0.94**	**210**	*e*P		**Pn**	**21 45 35.2**	**-0.4**
	baz=209							
ELDTW				*e*S		**Sb**	**21 45 47.1**	**-0.1**
	baz=209							
HSN	**Hsinchu**	**0.94**	**327**	*e*P		**Pg**	**21 45 36.4**	**+0.9**
	baz=336							
HSN				*e*S		**Sn**	**21 45 51.1**	**+2.7**
	baz=336							
NCU	**National Centr**	**1.01**	**342**	*e*P		**Pg**	**21 45 37.2**	**+0.4**
	baz=342							
NCU				*e*S		**Sn**	**21 45 51.9**	**+1.8**
	baz=342							
TAP	**Taipei**	**1.03**	**359**	*e*P		**Pg**	**21 45 36.9**	**-0.3**
	baz=359							
TAP				S		**Sn**	**21 45 50.0**	**-0.6**
	baz=359							
TAP1	**Taipei**	**1.03**	**360**	P		**Pg**	**21 45 36.9**	**-0.2**
	baz=359							
TAP1				*e*S		**Sb**	**21 45 49.1**	**-0.5**
	baz=359							
TWB1	**Santiao Chiao**	**1.08**	**23**	*e*P		**Pb**	**21 45 37.1**	**-0.2**
	baz=14							
NWF	**Wu-fen Shan**	**1.08**	**12**	*e*P		**Pb**	**21 45 37.0**	**-0.4**
	baz=12							
NWF				*e*S		**Sn**	**21 45 51.7**	**-0.4**
	baz=12							
TWS1	**Kuangyinshan**	**1.09**	**355**	*e*P		**Pg**	**21 45 37.9**	**-0.5**
	baz=7.0							
TWS1				*e*S		**Sg**	**21 45 54.3**	**+1.6**
	baz=7.0							
WTP	**Ta-pu**	**1.13**	**228**	*e*P		**Pg**	**21 45 39.2**	**+0.1**
	baz=211							
CHY	**Chiayi**	**1.13**	**244**	*e*P		**Pg**	**21 45 38.9**	**-0.2**
	baz=241							
WTCT	**Ta-ch'eng**	**1.15**	**263**	*e*P		**Pg**	**21 45 38.7**	**-0.7**
	baz=262							
WTCT				*e*S		**Sg**	**21 45 54.8**	**+0.3**
	baz=262							
TWK	**Hsinying**	**1.21**	**232**	⇑P		Pn	21 45 33.8	-5.4
	baz=285							
TWK	**Hsinying**	**1.21**	**232**	*e*P		**Pg**	**21 45 41.0**	**+0.5**
	baz=229							
CHN1	**Nanshi**	**1.23**	**228**	*e*P		**Pg**	**21 45 41.3**	**+0.4**
	baz=226							
WSF	**Szhu**	**1.25**	**253**	*e*P		**Pg**	**21 45 41.0**	**-0.3**
	baz=252							
WSF				*e*S		**Sg**	**21 45 57.9**	**+0.2**
	baz=252							
TWG	**Pinlang**	**1.25**	**200**	*e*P		**Pb**	**21 45 40.0**	**-0.3**
	baz=186							
TWY	**Chenhua**	**1.26**	**3**	*e*P		**Pg**	**21 45 41.8**	**+0.1**
	baz=3.0							
CHN8	**Yiju**	**1.38**	**242**	*e*P		**Pb**	**21 45 42.5**	**+0.2**
	baz=224							
CHN8				*e*S		**Sg**	**21 46 01.6**	**-0.1**
	baz=224							
YOJ	**Yonaguni jima**	**1.43**	**71**	*e*P		**Pn**	**21 45 41.6**	**-0.5**
	baz=72							
YOJ	**Yonaguni jima**	**1.43**	**71**	P		**Pn**	**21 45 41.7**	**-0.5**
YOJ				*e*S		**Sn**	**21 46 00.6**	**+0.1**
SCLT	**Jiali**	**1.48**	**236**	*e*P		**Pg**	**21 45 44.9**	**-0.8**
	baz=234							
SCLT				*e*S		**Sg**	**21 46 04.8**	**-0.1**
	baz=234							
ECL	**Taimali**	**1.50**	**201**	*e*P		**Pb**	**21 45 44.2**	**-0.3**
	baz=186							
TWM1	**Shoushan**	**1.56**	**221**	*e*P		**Pg**	**21 45 47.3**	**+0.1**
	baz=218							
SGLT	**Jiouru**	**1.59**	**217**	*e*P		**Pg**	**21 45 48.0**	**+0.1**
	baz=214							
EAST	**Anshuo**	**1.73**	**201**	*e*P		**Pb**	**21 45 48.6**	**+0.1**
	baz=188							
SCZT	**Fangliau**	**1.83**	**207**	*e*P		**Pb**	**21 45 50.2**	**+0.1**
	baz=197							
PNG	**Penghu**	**1.86**	**257**	*e*P		**Pn**	**21 45 48.5**	**+0.4**
	baz=252							
IRIF	**Iriomote-Funau**	**2.04**	**80**	P		**Pn**	**21 45 50.1**	**-0.5**
IRIF				S		**Sn**	**21 46 15.3**	**-0.2**
HATJ	**Hateruma jima**	**2.08**	**88**	P		**Pn**	**21 45 51.5**	**+0.3**
HATJ				*e*S		**Sn**	**21 46 16.1**	**-0.6**
JKRS	**Kuro-shima**	**2.28**	**84**	P		**Pn**	**21 45 54.3**	**+0.4**
JKRS				*e*S		**Sn**	**21 46 22.2**	**+0.7**
JIJ	**Ishigaki jima**	**2.42**	**81**	P		**Pn**	**21 45 55.4**	**-0.4**
JIJ				S		**Sn**	**21 46 24.7**	**-0.2**
KNM	**Kinmen**	**2.85**	**279**	*e*P		**Pn**	**21 46 02.5**	**+0.7**
	baz=276							
JTJ	**Tarama**	**2.96**	**77**	P		**Pn**	**21 46 03.6**	**+0.3**
JTJ				*e*S		**Sn**	**21 46 38.9**	**+0.5**

ISCJB ***25*** *21:52:33.6±0.2,51.56N±0.02×16.12E±0.02,h0km,*
mb3.0/1,Error ellipse: s-maj=2.3km s-min=2.1km az=17.5
CSEM ***25*** *21:52:35.5±0.1,51.54N×16.10E,h1km,ML3.9/6,Error*
ellipse: s-maj=2.8km s-min=2.6km az=50.0
IPEC ***25*** *21:52:35.7±0.3,51.55N×16.22E,h0km,ML2.9/3,Error*
ellipse: s-maj=2.0km s-min=1.5km az=34.0
WAR ***25*** *21:52:36.5,51.53N×16.08E*
PRU ***25*** *21:52:36.9,51.51N×16.16E,h0km,Felt In Harrachov*
IDC ***25*** *21:52:37.5±0.6,51.49N×15.96E,h0km,mb3.0/1,*
mb1 3.4/8,mb1mx3.3/28,mbtmp3.3/8,ML3.1/7,Error
ellipse: s-maj=10.1km s-min=6.1km az=106.0
VIE ***25*** *21:52:39.0±0.5,51.27N×16.04E,h0km,mb2.8/7,ML3.2/9,*
Error ellipse: s-maj=2.9km s-min=2.0km az=9.0 70 km
WNW of Wroclaw Suspected Mining induced.
BGR ***25*** *21:52:38.0±0.5,51.43N×16.09E,h1km,ML3.4/17,Error*
ellipse: s-maj=4.4km s-min=2.2km az=20.0
LDG ***25*** *21:52:39.3±0.1,51.31N×15.82E,h1km,Ml3.7/12,Error*
ellipse: s-maj=3.7km s-min=1.8km az=12.0,Suspected
Mining induced.
UPP ***25*** *21:52:40.7,51.80N×15.74E,h0km,ML2.3,Suspected*
Mining explosion.
ISC 25 21:52:34.9±0.6,51.53N±0.02×16.13E±0.02,h0km,n127,
σ1841/193,7C-4D,Poland

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**172**	*e*Pg		**Pb**	**21 52 49.9**	**+0.2**
KSP				*e*Sg		**Sb**	**21 52 59.3**	**-0.5**
KSP	**Ksiaz**	**0.69**	**172**	*e*Pg		**Pb**	**21 52 49.6**	**-0.2**
KSP				*e*Sg		**Sg**	**21 52 58.8**	**+1.8**
KSP	**Ksiaz**	**0.69**	**172**	*e*Pg		**Pb**	**21 52 49.6**	**-0.2**
	baz=356							
KSP				Sg		**Sb**	**21 52 59.3**	**-0.5**
UPC	**Upice**	**1.02**	**184**	*e*PG		**Pb**	**21 52 55.8**	**+0.4**
UPC				*e*SG		**Sg**	**21 53 09.3**	**+1.6**
UPC	**Upice**	**1.02**	**184**	Pg		**Pb**	**21 52 55.8**	**+0.4**
UPC				Sg		**Sg**	**21 53 09.3**	**+1.6**
DPC	**Dobruska-Polom**	**1.18**	**174**	*e*Pg		**Pb**	**21 52 58.8**	**+0.6**
DPC				*e*Sg		**Sb**	**21 53 15.0**	**+0.9**
DPC	**Dobruska-Polom**	**1.18**	**174**	*e*PG		**Pb**	**21 52 58.6**	**+0.4**
DPC				*e*SG		**Sg**	**21 53 14.1**	**+1.3**
	comp=Z,178nm,0.6s							
DPC	**Dobruska-Polom**	**1.18**	**174**	Pg		**Pb**	**21 52 58.8**	**+0.6**
DPC				Sg		**Sg**	**21 53 14.1**	**+1.3**
	178nm,0.6s							
PVCC	**Panska Ves**	**1.41**	**225**	*e*PG		**Pb**	**21 53 02.5**	**+0.6**
PVCC				*e*SG		**Sn**	**21 53 22.1**	**+1.2**
	comp=Z,512nm,0.4s							
PVCC	**Panska Ves**	**1.41**	**225**	Pg		**Pb**	**21 53 02.5**	**+0.6**
PVCC				*e*Sg		**Sn**	**21 53 21.6**	**+0.7**
	baz=45							
KRLC	**Kraliky**	**1.51**	**164**	*e*PG		**Pn**	**21 53 04.0**	**+0.8**
KRLC				*e*SG		**Sn**	**21 53 24.7**	**+1.1**
KRLC	**Kraliky**	**1.51**	**164**	Pg		**Pn**	**21 53 04.0**	**+0.8**
KRLC				Sg		**Sn**	**21 53 24.7**	**+1.1**
BRG	**Berggiesshubel**	**1.53**	**246**	PN		**Pn**	**21 53 03.7**	**+0.3**
BRG				PG		**Pg**	**21 53 05.2**	**+1.1**
BRG				SG		**Sn**	**21 53 25.5**	**+1.6**
	206nm,0.3s							
PRU	**Pruhonice**	**1.84**	**214**	*e*PN		**Pn**	**21 53 08.3**	**+0.6**
PRU				*e*PG		**Pg**	**21 53 10.4**	**+0.3**
PRU				*e*SG		**Sg**	**21 53 36.7**	**+2.7**
	comp=Z,134nm,0.3s							
PRU	**Pruhonice**	**1.84**	**214**	Pn		**Pn**	**21 53 08.3**	**+0.6**
FBE	**Freiberg**	**1.85**	**252**	*e*Pg		**Pg**	**21 53 10.9**	**+0.6**
FBE				*e*Sg		**Sg**	**21 53 35.9**	**+1.6**
FBE	**Freiberg**	**1.85**	**252**	Pg		**Pg**	**21 53 10.9**	**+0.6**
FBE				Sg		**Sg**	**21 53 35.9**	**+1.6**
GKP	**Gorka Klasztor**	**1.87**	**21**	*e*Pg		Pg	21 53 15.8	+5.0
GKP				*e*Sg		**Sg**	**21 53 38.9**	**+3.9**
GKP	**Gorka Klasztor**	**1.87**	**21**	*e*Pg		Pg	21 53 15.8	+5.0
GKP				*e*Sg		**Sg**	**21 53 39.0**	**+3.9**
RAC	**Raciborz**	**1.95**	**137**	*e*Pg		**Pg**	**21 53 13.7**	**+1.5**
RAC				*e*Sg		**Sg**	**21 53 39.8**	**+2.4**
MORC	**Moravsky Berou**	**1.97**	**152**	*e*Pn		**Pn**	**21 53 10.4**	**+0.9**
MORC				*e*Sg		**Sb**	**21 53 38.2**	**+1.6**
MORC	**Moravsky Berou**	**1.97**	**152**	Pn		**Pn**	**21 53 10.4**	**+0.9**
MORC				Sg		**Sb**	**21 53 38.2**	**+1.6**
CLL	**Collm**	**1.97**	**265**	*e*Sg		**Sg**	**21 53 40.2**	**+2.0**
CLL	**Collm**	**1.97**	**265**	*e*Pn		**Pn**	**21 53 10.0**	**+0.5**
CLL				*e*Pg		**Pg**	**21 53 14.0**	**+1.3**
CLL				*i*			21 53 16.0	
CLL				*e*Sg		**Sg**	**21 53 39.0**	**+0.8**
	comp=Z,134nm,0.7s							
CLL	**Collm**	**1.97**	**265**	Sg		**Sg**	**21 53 40.2**	**+2.0**
OKC	**Ostrava-Krasne**	**2.12**	**142**	*e*PN		**Pn**	**21 53 12.3**	**+0.8**
OKC				*e*PG		**Pg**	**21 53 16.3**	**+0.8**
OKC				*e*SG		**Sg**	**21 53 42.9**	**0.0**
	comp=Z,163nm,0.7s							
OKC	**Ostrava-Krasne**	**2.12**	**142**	Pn		**Pn**	**21 53 12.3**	**+0.8**
OKC	**Ostrava-Krasne**	**2.12**	**142**	Pg		**Pg**	**21 53 16.3**	**+0.8**
OKC				Sg		**Sg**	**21 53 43.8**	**+0.9**
VRAC	**Vranov**	**2.24**	**172**	Pn		**Pn**	**21 53 14.9**	**+1.7**
	comp=Z,2.4nm,0.3s,baz=343,slow=16,SNR=39							
VRAC				Lg		Lg	21 53 47.9	
	comp=Z,7.9nm,0.3s,baz=79,slow=23,SNR=10							
VRAC	**Vranov**	**2.24**	**172**	*e*Pn		**Pn**	**21 53 14.4**	**+1.2**
VRAC				*e*Sg		**Sg**	**21 53 46.7**	**0.0**
	comp=Z,82nm,0.4s,baz=354							
TREC	**Trest**	**2.27**	**191**	*e*PN		**Pn**	**21 53 15.2**	**+1.6**
TREC				*e*PG		**Pg**	**21 53 18.7**	**+0.3**
TREC	**Trest**	**2.27**	**191**	Pn		**Pn**	**21 53 15.2**	**+1.6**
TREC	**Trest**	**2.27**	**191**	Pg		**Pg**	**21 53 18.7**	**+0.3**
KRUC	**Moravsky**	**2.47**	**176**	*e*Pn		**Pn**	**21 53 17.8**	**+1.4**
	baz=358							
KRUC				*e*Sg		**Sg**	**21 53 53.7**	**-0.5**
	comp=Z,31nm,0.3s,baz=358							
TANN	**Tannenbergstha**	**2.57**	**246**	*e*Pn		**Pn**	**21 53 19.4**	**+1.5**
TANN				*e*Sg		**Sg**	**21 53 58.4**	**+0.9**
TANN	**Tannenbergstha**	**2.57**	**246**	Pn		**Pn**	**21 53 19.4**	**+1.5**
TANN				Sg		**Sg**	**21 53 58.4**	**+0.9**
WERD	**Werda**	**2.65**	**247**	*e*Pn		**Pn**	**21 53 19.8**	**+1.0**
WERD				*e*Pg		**Pg**	**21 53 25.9**	**+0.3**
WERD				*e*Sg		**Sg**	**21 53 60.0**	**+0.1**
WERD	**Werda**	**2.65**	**247**	Pn		**Pn**	**21 53 19.8**	**+1.0**
WERD	**Werda**	**2.65**	**247**	Pg		**Pg**	**21 53 25.9**	**+0.3**
WERD				Sg		**Sg**	**21 54 00.0**	**+0.1**
OJC	**Ojcow**	**2.66**	**118**	*e*Pn		**Pn**	**21 53 18.6**	**-0.4**
OJC				*e*Pg		**Pg**	**21 53 27.3**	**+1.4**
OJC				*e*Sn		**Sn**	**21 53 50.7**	**-1.3**
OJC				*e*Sg		**Sg**	**21 54 02.2**	**+1.8**
OJC	**Ojcow**	**2.66**	**118**	*e*Pn		**Pn**	**21 53 18.6**	**-0.4**
NKC	**Novy Kostel**	**2.67**	**242**	*e*PN		**Pn**	**21 53 20.5**	**+1.4**
NKC				*e*PG		**Pg**	**21 53 26.6**	**+0.6**
NKC				*e*SG		**Sg**	**21 54 02.5**	**+1.9**
	comp=Z,169nm,0.3s							
NKC	**Novy Kostel**	**2.67**	**242**	Pn		**Pn**	**21 53 20.5**	**+1.4**
KHC	**Kasperske Hory**	**2.90**	**215**	*e*PN		**Pn**	**21 53 23.2**	**+0.8**
KHC				*e*PG		**Pg**	**21 53 29.6**	**-0.9**
KHC				*e*SG		**Sg**	**21 54 10.6**	**+2.5**
	comp=Z,43nm,0.4s							
KHC	**Kasperske Hory**	**2.90**	**215**	Pn		**Pn**	**21 53 23.2**	**+0.8**
KHC	**Kasperske Hory**	**2.90**	**215**	Pg		**Pg**	**21 53 29.6**	**-0.9**
KHC				Sg		**Sg**	**21 54 10.6**	**+2.5**
	comp=Z,43nm,0.4s							
MOX	**Moxa**	**2.98**	**255**	*e*Pn		**Pn**	**21 53 24.5**	**+1.1**
MOX				*e*Pg		**Pg**	**21 53 32.8**	**+0.8**
MOX				*e*Sg		**Sg**	**21 54 12.3**	**+1.7**
MOX	**Moxa**	**2.98**	**255**	Pn		**Pn**	**21 53 24.5**	**+1.1**
MANZ	**Manzenberg**	**2.98**	**240**	*e*Pn		**Pn**	**21 53 24.9**	**+1.4**
MANZ				*e*Sg		**Sg**	**21 54 11.0**	**+0.3**
MANZ	**Manzenberg**	**2.98**	**240**	Pn		**Pn**	**21 53 24.9**	**+1.4**
MANZ				Sg		**Sg**	**21 54 11.0**	**+0.3**
ROTZ	**Rotzenmuhle**	**3.06**	**236**	*e*Pn		**Pn**	**21 53 25.8**	**+1.4**
ROTZ	**Rotzenmuhle**	**3.06**	**236**	Pn		**Pn**	**21 53 25.8**	**+1.4**
GEC2	**GERESS Array S**	**3.10**	**211**	*e*Pn		**Pn**	**21 53 26.2**	**+1.0**
GEC2	**GERESS Array S**	**3.10**	**211**	Pn		**Pn**	**21 53 26.2**	**+1.0**
GERES	**GERESS Array B**	**3.10**	**211**	Pn		**Pn**	**21 53 25.9**	**+0.7**
	comp=Z,2.0nm,0.3s,baz=32,slow=12,SNR=76							
GERES				Pg		**Pb**	**21 53 32.8**	**+1.8**
	comp=Z,4.9nm,0.3s,baz=25,slow=16,SNR=61							
GER

	SNR=12							
MOTA				Sg	Sg	21 55 27.3	+1.7	
VXJU	**Vaexsjoe**	**5.45**	**353**	P	Pn	21 53 57.8	+0.5	
FABU	**Falkenberg**	**5.84**	**341**	P	Pn	21 54 02.9	+0.3	
ASPU	**Aespoe**	**5.91**	**2**	P	Pn	21 54 04.7	+1.1	
GNOU	**Gnosjoe**	**5.94**	**347**	P	Pn	21 54 04.3	+0.3	
EKSU	**Eksjoe**	**6.08**	**356**	P	Pn	21 54 06.5	+0.6	
VSTU	**Vaestervik**	**6.15**	**2**	P	Pn	21 54 07.6	+0.7	
DAVOX	**Davos/Dischmat**	**6.27**	**223**	Pn	Pn	21 54 09.2	+0.4	
	comp=Z,0.5nm,0.3s,baz=22,slow=16,SNR=6.4							
DAVOX				Lg	Lg	21 55 56.5		
	comp=Z,0.7nm,0.3s,baz=27,slow=14,SNR=3.8							
MEM	**Membach**	**6.45**	**266**	P	Pn	21 54 12.5	+1.5	
MEM	**Membach**	**6.45**	**266**	P	Pn	21 54 12.5	+1.5	
CDF	**Champ du Feu**	**6.51**	**245**	*e*Pn	Pn	21 54 10.7	-1.2	
CDF				*e*Sg	Sb	21 55 54.7	+7.4	
	comp=Z,44nm,0.9s							
CDF	**Champ du Feu**	**6.51**	**245**	*e*Pn	Pn	21 54 10.7	-1.2	
LNKU	**Linkoeping**	**6.72**	**357**	P	Pn	21 54 14.7	0.0	
FKPU	**Falk**	**6.79**	**349**	P	Pn	21 54 16.6	+0.9	
VIKU	**Vikbolandet**	**7.00**	**2**	P	Pn	21 54 19.1	+0.6	
HINF	**Hinteralfeld**	**7.07**	**242**	*e*Pn	Pn	21 54 17.8	-1.8	
HINF				*e*Sg	Sb	21 56 12.3	+8.8	
	comp=Z,23nm,0.7s							
HINF	**Hinteralfeld**	**7.07**	**242**	*e*Pn	Pn	21 54 17.8	-1.8	
HAU	**Haudompre**	**7.25**	**245**	*e*Pn	Pn	21 54 20.5	-1.5	
HAU				*e*Sg	Sb	21 56 17.8	+9.3	
	comp=Z,50nm,1.1s							
HAU	**Haudompre**	**7.25**	**245**	*e*Pn	Pn	21 54 20.5	-1.5	
GIVF	**Givet**	**7.31**	**263**	*e*Pn	Pn	21 54 21.8	-1.0	
GIVF				*e*Sg	Sg	21 56 21.5	-7.9	
	comp=Z,12nm,0.6s							
GIVF	**Givet**	**7.31**	**263**	*e*Pn	Pn	21 54 21.8	-1.0	
PAGF	**Fort de Pagny**	**7.33**	**250**	*e*Pn	Pn	21 54 21.7	-1.4	
PAGF				*e*Sg	Sb	21 56 20.7	+10	
	comp=Z,21nm,1.3s							
PAGF	**Fort de Pagny**	**7.33**	**250**	*e*Pn	Pn	21 54 21.7	-1.4	
BAIF	**Baives**	**7.70**	**264**	*e*Pn	Pn	21 54 27.2	-1.0	
BAIF				*e*Sg	Sg	21 56 33.6	-8.4	
	comp=Z,28nm,1.0s							
BAIF	**Baives**	**7.70**	**264**	*e*Pn	Pn	21 54 27.2	-1.0	
MEZF	**Maizieres J'vi**	**7.75**	**251**	*e*Pn	Pn	21 54 27.5	-1.4	
MEZF				*e*Sg	Sg	21 56 33.9	-10	
	comp=Z,20nm,0.9s							
MEZF	**Maizieres J'vi**	**7.75**	**251**	*e*Pn	Pn	21 54 27.5	-1.4	
SFTF	**Sexfontaines**	**7.90**	**249**	*e*Pn	Pn	21 54 29.6	-1.3	
SFTF				*e*Sg	Sg	21 56 38.4	-10	
	comp=Z,70nm,1.2s							
SFTF	**Sexfontaines**	**7.90**	**249**	*e*Pn	Pn	21 54 29.6	-1.3	
AKASG	**Malin Array Be**	**8.28**	**91**	Pn	Pn	21 54 37.7	+1.6	
	comp=Z,1.9nm,0.3s,baz=279,slow=12,SNR=6.6							
AKASG				Sn	Sn	21 56 07.2	-3.1	
	comp=Z,1.6nm,0.3s,baz=274,slow=22,SNR=4.5							
AKASG				Lg	Lg	21 57 04.9		
	baz=279,slow=30,SNR=3.6							
HFS	**Hagfors**	**8.74**	**352**	Pn	Pn	21 54 42.8	+0.5	
	comp=Z,0.1nm,0.3s,baz=174,slow=14,SNR=8.8							
HFS				Sn	Sn	21 56 18.7	-2.7	
	comp=Z,0.3nm,0.3s,baz=172,slow=26,SNR=5.8							
HFS				Lg	Lg	21 57 16.5		
	comp=Z,0.3nm,0.3s,baz=170,slow=35,SNR=2.3							
LOR	**Lormes**	**9.07**	**247**	*e*Pn	Pn	21 54 45.1	-1.8	
LOR	**Lormes**	**9.07**	**247**	*e*Pn	Pn	21 54 45.1	-1.8	
SSF	**Saint Saulge**	**9.38**	**247**	*e*Pn	Pn	21 54 48.4	-2.8	
FINES	**FINESS Array B**	**11.34**	**25**	Pn	Pn	21 55 17.4	-0.6	
	comp=Z,0.2nm,0.3s,baz=211,slow=11,SNR=11							
FINES				Sn	Sn	21 57 18.5	-6.8	
	comp=Z,0.4nm,0.3s,baz=216,slow=21,SNR=5.6							
EKA	**Eskdalemuir Ar**	**12.11**	**296**	Pn	Pn	21 55 26.2	-2.3	
	baz=106,slow=14,SNR=5.9							
EKA				Sn	Sn	21 57 31.9	-12	
	baz=102,slow=23,SNR=5.7							
ARCES	**ARCESS Array B**	**18.61**	**10**	Pn	P	21 56 51.1	-2.3	
	comp=Z,0.3nm,0.3s,baz=206,slow=9.9,SNR=13							
YKA	**Yellowknife Ar**	**59.85**	**336**	P	P	22 02 43.5	+1.9	
	comp=Z,0.1nm,0.6s,baz=36,slow=6.4,SNR=2.9							

*CSEM **25** 21:57:41.5±0.2, 39.°86N×41.°57E, h2km, MD3.2, Error ellipse: s-maj=5.2km s-min=4.6km az=44.0*
*DDA **25** 21:57:41.4, 39.°85N×41.°57E, h7km, MD3.2*
*ISK **25** 21:57:41.3, 39.°82N×41.°56E, h7km, MD3.3*

ISC 25 21:57:42.1±1.2, **39.°85N**±0.°03×**41.°59E**±0.°02, **h5**km±11km, **n40**, σ1§**90**/51, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERZM	**Erzurum**	**0.18**	**288**	*i* P	**Pg**	**21 57 45.6**	**-0.1**
ERZM	**Erzurum**	**0.18**	**288**	*i* P	**Pg**	**21 57 45.6**	**-0.1**
EZM	**Erzurum**	**0.18**	**287**	PG	**Pg**	**21 57 45.7**	**-0.1**
HOMI	**Horasan**	**0.31**	**52**	*i* P	**Pg**	**21 57 47.9**	**-0.4**
VRTB	**Varto-Mus**	**0.70**	**188**	*e*PG	**Pg**	**21 57 54.4**	**-1.1**
VRTB				*e*SG	**Sg**	**21 58 05.0**	**+0.5**
VRTB	**Varto-Mus**	**0.70**	**188**	*e*Pg	**Pg**	**21 57 54.4**	**-1.1**
VRTB				*e*Sg	**Sg**	**21 58 05.0**	**+0.5**
KOPT	**Kop Dagi**	**0.85**	**282**	*i* P	**Pg**	**21 57 57.9**	**-0.6**
KOPT				*i* S	**Sn**	**21 58 13.7**	**-0.4**
KOPT	**Kop Dagi**	**0.85**	**282**	*i* P	**Pg**	**21 57 57.9**	**-0.6**
DDEM	**Demirkent**	**1.05**	**7**	*i* P	**Pg**	**21 58 01.5**	**-0.7**
DDEM				*i* S	**Sb**	**21 58 17.2**	**+0.4**
DDEM	**Demirkent**	**1.05**	**7**	*i* P	**Pg**	**21 58 01.5**	**-0.7**
TUTA	**Tutak**	**1.05**	**115**	*i* P	**Pg**	**21 58 00.4**	**-1.8**
TUTA				*i* S	**Sg**	**21 58 17.2**	**+1.4**
TUTA	**Tutak**	**1.05**	**115**	*i* P	**Pg**	**21 58 00.4**	**-1.8**
TUTA				*i* S	**Sg**	**21 58 17.2**	**+1.4**
BNGB	**Bing¯¶ł**	**1.11**	**220**	*e*PG	**Pg**	**21 58 01.8**	**-1.6**
BNGB				*e*SG	**Sg**	**21 58 16.8**	**-0.9**
BAYT	**Ayd¯–ntepe-Bay**	**1.23**	**296**	*e*PN	**Pg**	**21 58 04.8**	**-1.0**
BAYT				*e*SN	**Sb**	**21 58 23.3**	**+1.0**
BAYT	**Ayd¯–ntepe-Bay**	**1.23**	**296**	*e*Pn	**Pg**	**21 58 04.8**	**-1.0**
BAYT				*e*Sn	**Sb**	**21 58 23.3**	**+1.0**
DAGI	**Agillar**	**1.25**	**11**	*i* P	**Pg**	**21 58 05.0**	**-1.1**
DAGI				*i* S	**Sb**	**21 58 23.4**	**+0.7**
ARTV	**Artvin**	**1.36**	**11**	*i* P	**Pg**	**21 58 06.7**	**-1.4**
ARTV				*i* S	**Sb**	**21 58 26.2**	**+0.3**
ARTV	**Artvin**	**1.36**	**11**	*i* P	**Pg**	**21 58 06.7**	**-1.4**
ARTV				*i* S	**Sb**	**21 58 26.2**	**+0.3**
KARS	**Kars**	**1.38**	**55**	*e*PN	**Pn**	**21 58 07.7**	**-0.4**
KARS	**Kars**	**1.38**	**55**	*e*Pn	**Pn**	**21 58 07.7**	**-0.4**
PZAR	**Pazar-Rize**	**1.43**	**339**	*e*PN	**Pn**	**21 58 07.8**	**-0.8**
PZAR	**Pazar-Rize**	**1.43**	**339**	*e*Pn	**Pn**	**21 58 07.8**	**-0.8**
ERZN	**Erzincan**	**1.46**	**260**	*e*PN	**Pn**	**21 58 08.5**	**-0.8**
BCA	**Borcka**	**1.59**	**1**	*e*PN	**Pn**	**21 58 10.8**	**-0.1**
BCA	**Borcka**	**1.59**	**1**	*e*Pn	**Pn**	**21 58 10.8**	**-0.1**
BTMT	**Batman**	**1.66**	**183**	*e*PN	**Pn**	**21 58 12.5**	**+0.6**
BTMT	**Batman**	**1.66**	**183**	*e*Pn	**Pn**	**21 58 12.5**	**+0.6**
EZC	**Erzincan**	**1.72**	**267**	*e*Pn	Pn	21 58 08.5	-4.4
GUMT	**Gumushane**	**1.73**	**291**	*e*PN	**Pn**	**21 58 13.3**	**+0.4**
GUMT	**Gumushane**	**1.73**	**291**	*e*Pn	**Pn**	**21 58 13.3**	**+0.4**
KELT	**Kelkit**	**1.82**	**280**	*i* P	**Pn**	**21 58 14.8**	**+0.6**
KELT	**Kelkit**	**1.82**	**280**	*i* P	**Pn**	**21 58 14.8**	**+0.6**
PTK	**Pertek**	**1.95**	**241**	*e*PN	**Pn**	**21 58 15.9**	**-0.1**
PTK	**Pertek**	**1.95**	**241**	*e*Pn	**Pn**	**21 58 16.0**	**-0.1**
ESPY	**Espiye-Giresun**	**2.43**	**297**	*e*PN	**Pn**	**21 58 22.8**	**+0.3**
ESPY	**Espiye-Giresun**	**2.43**	**297**	*e*Pn	**Pn**	**21 58 22.8**	**+0.3**
GNI	**Garni**	**2.44**	**82**	*e*PN	**Pn**	**21 58 23.9**	**+1.1**
GNI	**Garni**	**2.44**	**82**	*e*Pn	**Pn**	**21 58 23.9**	**+1.1**
CUKT	**Cukurca**	**3.04**	**148**	*e*PN	**Pn**	**21 58 32.1**	**+1.1**
CUKT	**Cukurca**	**3.04**	**148**	*e*Pn	**Pn**	**21 58 32.1**	**+1.1**

*ISK **25** 22:04:53.1, 36.°55N×34.°40E, h13km, MD3.5*
*ISCJB **25** 22:04:54.8±0.9, 36.°52N±0.°03×34.°44E±0.°04, h27km±10km, Error ellipse: s-maj=5.4km s-min=4.4km az=144.3*
*CSEM **25** 22:04:54.0±0.1, 36.°52N×34.°43E, h15km, Mw3.3, Error ellipse: s-maj=3.2km s-min=2.5km az=139.0*
*DDA **25** 22:04:54.5, 36.°58N×34.°43E, h45km, MD3.3*
*NIC **25** 22:04:58.9±0.3, 36.°28N×34.°24E, h41km, ML3.5, MW3.3*

ISC 25 22:04:54.3±1.5, **36.°52N**±0.°03×**34.°43E**±0.°03, **h17**km±12km, **n62**, σ1§**14**/75, **2C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRTS	**Karatas**	**0.77**	**85**	*e*PG	**Pg**	**22 05 08.9**	**-0.3**
KRTS	**Karatas**	**0.77**	**85**	*e*Pg	**Pg**	**22 05 08.9**	**-0.3**
GULE	**Gulek**	**0.81**	**20**	*i* P	**Pb**	**22 05 09.9**	**-0.2**
GULE				*i* S	**Sb**	**22 05 21.8**	**+0.8**
GULE	**Gulek**	**0.81**	**20**	*i* P	**Pb**	**22 05 09.9**	**-0.2**
GULE				*i* S	**Sb**	**22 05 21.8**	**+0.8**
EREN	**Erenkoy**	**1.01**	**192**	*e*PG	**Pb**	**22 05 12.9**	**-0.4**
EREN				*e*SG	**Sb**	**22 05 27.7**	**+1.5**
EREN	**Erenkoy**	**1.01**	**192**	*e*Pg	**Pb**	**22 05 12.9**	**-0.4**
EREN				*e*Sg	**Sb**	**22 05 27.7**	**+1.5**
CEYT	**Ceyhan**	**1.17**	**65**	*e*PN	**Pn**	**22 05 15.0**	**-0.9**
CEYT	**Ceyhan**	**1.17**	**65**	*e*Pn	**Pn**	**22 05 15.0**	**-0.9**
ERMK	**Ermenek**	**1.23**	**276**	*i* P	**Pn**	**22 05 17.3**	**+0.4**
ERMK				*i* S	**Sb**	**22 05 33.9**	**+1.1**
ERMK	**Ermenek**	**1.23**	**276**	*i* P	**Pn**	**22 05 17.3**	**+0.4**
ERMK				*i* S	**Sb**	**22 05 33.9**	**+1.1**
LFK	**Lefkose**	**1.43**	**211**	*e*PN	**Pn**	**22 05 20.1**	**+0.6**
LFK				*e*SN	**Sn**	**22 05 39.1**	**+1.1**
LFK	**Lefkose**	**1.43**	**211**	*e*Pn	**Pn**	**22 05 20.2**	**+0.6**
LFK				*e*Sn	**Sn**	**22 05 39.1**	**+1.1**
HTY	**Hatay**	**1.44**	**105**	*e*PN	**Pn**	**22 05 20.4**	**+0.9**
HTY	**Hatay**	**1.44**	**105**	*e*Pn	**Pn**	**22 05 20.4**	**+0.9**
YAYL	**Yayladag**	**1.44**	**109**	*i* P	**Pn**	**22 05 21.2**	**+1.5**
YAYL				*i* S	**Sb**	**22 05 41.6**	**+2.8**
YAYL	**Yayladag**	**1.44**	**109**	*i* P	**Pn**	**22 05 21.2**	**+1.5**
KOZT	**Kozan**	**1.48**	**49**	*e*PN	**Pn**	**22 05 20.4**	**+0.3**
KOZT	**Kozan**	**1.48**	**49**	*e*Pn	**Pn**	**22 05 20.4**	**+0.3**
PHNC	**Paralimni**	**1.54**	**192**	ǁP	**Pn**	**22 05 20.6**	**-0.4**
PHNC				S	**Sn**	**22 05 37.3**	**-3.4**
PHNC	**Paralimni**	**1.54**	**192**	ǁP	**Pn**	**22 05 20.6**	**-0.4**
PHNC				S	**Sn**	**22 05 37.3**	**-3.4**
NIG	**Nigde**	**1.60**	**5**	*e*PN	**Pn**	**22 05 22.0**	**0.0**
NIG	**Nigde**	**1.60**	**5**	*e*Pn	**Pn**	**22 05 22.0**	**0.0**
MAMC	**Mammari**	**1.66**	**217**	P	**Pn**	**22 05 22.0**	**-0.7**
MAMC	**Mammari**	**1.66**	**217**	P	**Pn**	**22 05 22.0**	**-0.7**
AKDN	**Akdeniz- K¯–br**	**1.70**	**225**	*e*PN	**Pn**	**22 05 23.4**	**+0.3**
AKDN	**Akdeniz- K¯–br**	**1.70**	**225**	*e*Pn	**Pn**	**22 05 23.5**	**+0.3**
GAZI	**Gazipasa**	**1.73**	**261**	*i* P	**Pn**	**22 05 24.2**	**+0.6**
GAZI				*i* S	**Sn**	**22 05 46.6**	**+1.3**
GAZI	**Gazipasa**	**1.73**	**261**	*i* P	**Pn**	**22 05 24.2**	**+0.6**
GAZI				*i* S	**Sn**	**22 05 46.6**	**+1.3**
CSS	**Prodhromos**	**1.79**	**210**	P	**Pn**	**22 05 23.8**	**-0.6**
	2.1nm,0.2s						
CSS				S	Sn	22 05 42.7	-4.1
CSS	**Prodhromos**	**1.79**	**210**	P	**Pn**	**22 05 23.8**	**-0.6**
	2.1nm,0.2s						
CSS				S	Sn	22 05 42.7	-4.1
SULT	**Sultanhani-AKS**	**1.83**	**337**	*e*PN	**Pn**	**22 05 25.1**	**0.0**
SULT	**Sultanhani-AKS**	**1.83**	**337**	*e*Pn	**Pn**	**22 05 25.1**	**0.0**
ALFC	**Alevga**	**2.01**	**228**	P	Pn	22 05 26.2	-1.3
	13nm,0.2s						
ALFC				S	**Sn**	**22 05 49.0**	**-3.3**
ALFC	**Alevga**	**2.01**	**228**	P	Pn	22 05 26.2	-1.3
	13nm,0.2s						
ALFC				S	**Sn**	**22 05 49.0**	**-3.3**
KUZU	**Kuzuini**	**2.14**	**82**	*i* P	**Pn**	**22 05 29.3**	**0.0**
KUZU				*i* S	**Sn**	**22 05 55.1**	**-0.5**
KUZU	**Kuzuini**	**2.14**	**82**	*i* P	**Pn**	**22 05 29.3**	**0.0**
KUZU				*i* S	**Sn**	**22 05 55.1**	**-0.5**
KMRS	**Kahramanmaras**	**2.21**	**63**	*e*PN	**Pn**	**22 05 30.0**	**-0.3**
KMRS	**Kahramanmaras**	**2.21**	**63**	*e*Pn	**Pn**	**22 05 30.0**	**-0.3**
AKMC	**Akamas**	**2.26**	**230**	ǁP	**Pn**	**22 05 30.9**	**-0.1**
AKMC	**Akamas**	**2.26**	**230**	ǁP	**Pn**	**22 05 30.9**	**-0.1**
GAZ	**Gaziantep**	**2.33**	**73**	*e*PN	**Pn**	**22 05 31.7**	**-0.2**
GAZ	**Gaziantep**	**2.33**	**73**	*e*Pn	**Pn**	**22 05 31.7**	**-0.2**
PPCY	**Paphos**	**2.35**	**227**	P	**Pn**	**22 05 34.5**	**+2.4**
PPCY	**Paphos**	**2.35**	**227**	P	**Pn**	**22 05 34.5**	**+2.4**
LADK	**Ladik-KONYA**	**2.35**	**316**	*e*PN	**Pn**	**22 05 31.7**	**-0.6**
LADK	**Ladik-KONYA**	**2.35**	**316**	*e*Pn	**Pn**	**22 05 31.7**	**-0.6**
BNN	**Bunyan**	**2.59**	**25**	*e*PN	**Pn**	**22 05 36.1**	**+0.5**
BNN	**Bunyan**	**2.59**	**25**	*e*Pn	**Pn**	**22 05 36.1**	**+0.5**
SARI	**SarD1z-Kayseri**	**2.81**	**39**	*e*PN	Pn	22 05 34.1	-4.6
SARI	**SarD1z-Kayseri**	**2.81**	**39**	*e*Pn	Pn	22 05 34.1	-4.6
KAMT	**Kaman**	**2.90**	**349**	*e*PN	**Pn**	**22 05 39.9**	**0.0**
KAMT	**Kaman**	**2.90**	**349**	*e*Pn	**Pn**	**22 05 39.9**	**0.0**
AFSR	**Af¯ar-Bala (A**	**3.12**	**340**	*e*PN	**Pn**	**22 05 42.8**	**0.0**
AFSR	**Af¯ar-Bala (A**	**3.12**	**340**	*e*Pn	**Pn**	**22 05 42.8**	**0.0**
BCK	**Bucak**	**3.21**	**288**	*e*PN	**Pn**	**22 05 43.8**	**-0.3**
BCK	**Bucak**	**3.21**	**288**	*e*Pn	**Pn**	**22 05 43.8**	**-0.3**
ISP	**Isparta**	**3.38**	**294**	*e*PN	**Pn**	**22 05 46.3**	**-0.1**
ISP	**Isparta**	**3.38**	**294**	*e*Pn	**Pn**	**22 05 46.3**	**-0.1**
ELL	**Elmali**	**3.64**	**275**	*e*PN	**Pn**	**22 05 50.4**	**+0.4**
ELL	**Elmali**	**3.64**	**275**	*e*Pn	**Pn**	**22 05 50.4**	**+0.4**
SVRH	**Sivrihisar-ESK**	**3.72**	**323**	*e*PN	**Pn**	**22 05 51.0**	**0.0**
SVRH	**Sivrihisar-ESK**	**3.72**	**323**	*e*Pn	**Pn**	**22 05 51.1**	**0.0**

*ATH **25** 22:07:14.1, 34.°45N×26.°12E, h28km±2km, MD3.6/10*
*THE **25** 22:07:14.5, 34.°56N×26.°43E, h70km±3km, Error ellipse: s-maj=4.0km s-min=2.2km az=323.0*
*CSEM **25** 22:07:18.3±0.6, 34.°73N×26.°08E, h30km, MD3.6, Error ellipse: s-maj=16.2km s-min=6.6km az=166.0*

ISC 25 22:07:14.8±2.1, **34.°5N**±0.°1×**26.°19E**±0.°05, **h26**km±14km, **n38**, σ1§**28**/53, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.58**	**2**	P	**Pn**	**22 07 27.1**	**-0.3**
ZKR				S	**Sn**	**22 07 37.4**	**+1.3**
ZKR	**Zakros**	**0.58**	**2**	*e*PN	**Pn**	**22 07 27.3**	**-0.1**
ZKR				*e*SN	**Sn**	**22 07 37.6**	**+1.5**
ZKR	**Zakros**	**0.58**	**2**	*e*Pn	**Pn**	**22 07 27.3**	**-0.1**
ZKR				*e*Sn	**Sn**	**22 07 37.6**	**+1.5**
LAST	**Lasithi**	**0.86**	**317**	P	**Pn**	**22 07 31.4**	**+0.1**
LAST				S	**Sn**	**22 07 46.1**	**+3.1**
LAST	**Lasithi**	**0.86**	**317**	*e*PN	**Pn**	**22 07 31.4**	**+0.1**
LAST				*e*SN	**Sn**	**22 07 43.9**	**+0.9**
LAST	**Lasithi**	**0.86**	**317**	P	**Pn**	**22 07 31.4**	**+0.1**
LAST				*e*Sn	**Sn**	**22 07 43.9**	**+0.9**
NPS	**Neapolis**	**0.87**	**327**	P	**Pn**	**22 07 31.7**	**+0.4**
NPS				S	**Sn**	**22 07 45.5**	**+2.3**
NPS	**Neapolis**	**0.87**	**327**	*e*PN	**Pn**	**22 07 31.8**	**+0.4**
NPS				*e*SN	**Sb**	**22 07 43.3**	**+0.7**
NPS	**Neapolis**	**0.87**	**327**	*e*Pn	**Pn**	**22 07 31.8**	**+0.4**
NPS				*e*Sn	**Sb**	**22 07 43.3**	**+0.7**
SIVA	**Sivas**	**1.24**	**294**	P	**Pb**	**22 07 37.4**	**0.0**
SIVA	**Sivas**	**1.24**	**294**	*e*PN	**Pb**	**22 07 37.5**	**0.0**
SIVA				*e*SN	**Sb**	**22 07 53.8**	**+0.8**
SIVA	**Sivas**	**1.24**	**294**	*e*Pn	**Pb**	**22 07 37.5**	**0.0**
SIVA				*e*Sn	**Sb**	**22 07 53.8**	**+0.8**
KARP	**Karpathos**	**1.29**	**38**	*e*PN	**Pb**	**22 07 39.7**	**+1.3**
KARP	**Karpathos**	**1.29**	**38**	*e*Pn	**Pb**	**22 07 39.7**	**+1.3**
IDI	**Anoyia**	**1.31**	**306**	P	**Pb**	**22 07 38.5**	**-0.2**
IDI				S	**Sb**	**22 07 56.9**	**+1.7**
IDI	**Anoyia**	**1.31**	**306**	P	**Pb**	**22 07 38.5**	**-0.2**
VAM	**Vamos**	**1.85**	**299**	P	**Pn**	**22 07 44.6**	**-0.2**
VAM				S	**Sb**	**22 08 10.6**	**-0.1**
VAM	**Vamos**	**1.85**	**299**	*e*PN	**Pb**	**22 07 46.2**	**-1.8**
VAM	**Vamos**	**1.85**	**299**	P	**Pn**	**22 07 44.6**	**-0.2**
VAM	**Vamos**	**1.85**	**299**	*e*Pn	**Pb**	**22 07 46.2**	**-1.8**
THR3	**Thira Island,**	**1.98**	**341**	P	**Pn**	**22 07 46.3**	**-0.3**
THR3	**Thira Island,**	**1.98**	**341**	P	**Pn**	**22 07 46.3**	**-0.3**
KARN	**Karanos**	**2.06**	**296**	P	**Pb**	**22 07 49.1**	**-2.4**
KARN	**Karanos**	**2.06**	**296**	*e*PB	**Pb**	**22 07 49.2**	**-2.3**
KARN	**Karanos**	**2.06**	**296**	P	**Pb**	**22 07 49.1**	**-2.4**
ARG	**Arkhangelos**	**2.31**	**43**	*e*PN	**Pb**	**22 07 53.7**	**-2.0**
ARG	**Arkhangelos**	**2.31**	**43**	*e*Pn	**Pb**	**22 07 53.7**	**-2.0**
APE	**Apeiranthos**	**2.59**	**348**	P	Pn	**22 07 54.3**	**-0.7**
APE				S	**Sn**	**22 08 23.8**	**-1.9**
APE	**Apeiranthos**	**2.59**	**348**	*e*PN	**Pb**	**22 07 58.2**	**-2.3**
APE	**Apeiranthos**	**2.59**	**348**	P	**Pn**	**22 07 54.3**	**-0.7**
APE				S	**Sn**	**22 08 23.8**	**-1.9**
KYTH	**Kithira**	**3.11**	**305**	P	**Pn**	**22 08 01.6**	**-0.6**
KYTH	**Kithira**	**3.11**	**305**	*e*PN	**Pn**	**22 08 02.8**	**+0.6**
KYTH	**Kithira**	**3.11**	**305**	P	**Pn**	**22 08 01.6**	**-0.6**
KYTH	**Kithira**	**3.11**	**305**	*e*Pn	**Pn**	**22 08 02.8**	**+0.6**
VLI	**Veliai**	**3.43**	**310**	*e*PN	**Pn**	**22 08 07.2**	**+0.7**
VLI	**Veliai**	**3.43**	**310**	*e*Pn	**Pn**	**22 08 07.3**	**+0.7**
DID	**Didima**	**3.81**	**322**	P	**Pn**	**22 08 11.2**	**-0.6**
DID	**Didima**	**3.81**	**322**	P	**Pn**	**22 08 11.2**	**-0.6**

*IDC **25** 22:24:17.4±0.8, 23.°66N×143.°61E, h0km, mb4.0/10, mb1 4.2/11, mb1mx4.0/25, mbtmp3.9/11, ML4.0/1, Error ellipse: s-maj=32.0km s-min=19.9km az=87.0*
*ISCJB **25** 22:24:20.5±0.7, 23.°67N±0.°08×143.°7E±0.°2, h33km, mb3.9/12, Error ellipse: s-maj=28.0km s-min=7.9km az=162.9*
*JMA **25** 22:24:22.2±0.1, 23.°94N×144.°07E, h107km, M4.2*

ISC 25 22:24:22.3±0.8, **23.°7N**±0.°10×**143.°8E**±0.°2, **h35**km, **n20**, σ1§**53**/24, **mb3.9**/12, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**3.21**	**333**	P	**Pn**	**22 25 11.3**	**+1.1**
JHHJ				S	**Sn**	**22 25 49.1**	**+1.9**
CBIJ	**Chichi jima**	**3.62**	**336**	P	**Pn**	**22 25 16.6**	**+0.7**
CBIJ				*e*S	**Sn**	**22 25 58.3**	**+0.8**
JRY	**Ryogami san**	**12.92**	**342**	P	**Pn**	**22 27 23.5**	**+0.1**
JRY				*e*S	**Sn**	**22 29 43.2**	**-2.8**
JAG	**Ashikaga**	**13.16**	**344**	P	**Pn**	**22 27 24.4**	**-2.3**
JAG				*e*S	**Sn**	**22 29 48.4**	**-3.4**
MJAR	**Matsushiro Arr**	**13.62**	**340**	Pn	**Pn**	**22 27 32.2**	**-0.6**
	0.8nm,0.3s,baz=160,slow=11,SNR=17						
WRA	**Warramunga Arr**	**44.42**	**193**	P	**P**	**22 32 28.7**	**-1.2**
	1.1nm,0.7s,baz=12,slow=8.7,SNR=6.9						
ASAR	**Alice Springs**	**48.13**	**192**	P	**P**	**22 32 57.9**	**-1.1**
	0.4nm,0.7s,baz=12,slow=11,SNR=4.4						
ZALV	**Zalesovo Beam**	**52.97**	**321**	P	**P**	**22 33 35.4**	**+0.2**
	0.6nm,0.6s,baz=112,slow=9.0,SNR=4.3						
MKAR	**Makanchi Array**	**53.75**	**312**	P	**P**	**22 33 41.5**	**+0.4**
	0.5nm,0.6s,baz=81,slow=9.7,SNR=5.1						
ILAR	**Eielson Array**	**59.94**	**28**	P	**P**	**22 34 26.0**	**+1.4**
	1.0nm,0.7s,baz=255,slow=5.8,SNR=15						
YKA	**Yellowknife Ar**	**74.36**	**28**	P	**P**	**22 35 57.9**	**+1.8**
	0.7nm,0.6s,baz=291,slow=5.7,SNR=9.5						
ARCES	**ARCESS Array B**	**77.15**	**341**	P	**P**	**22 36 13.4**	**+1.5**
	6.7nm,1.1s,baz=81,slow=5.9,SNR=3.9						
JOF	**Joensuu**	**78.70**	**334**	*ep*	**P**	**22 36 20.8**	**+0.1**
	4.2nm,0.6s						
KAF	**Kangasniemi**	**81.10**	**335**	*ep*	**P**	**22 36 34.1**	**+0.5**
	0.4nm,0.4s						
KBZ	**Khabaz**	**81.36**	**314**	P	**P**	**22 36 36.0**	**+0.6**
	1.4nm,0.7s,baz=72,slow=6.4,SNR=7.6						
FINES	**FINESS Array B**	**81.57**	**335**	P	**P**	**22 36 36.7**	**+0.6**
	0.7nm,0.4s,baz=66,slow=4.8,SNR=22						
NB2	**NORSAR Subarra**	**87.23**	**339**	P	**P**	**22 37 05.0**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=46,slow=4.6						
NOA	**NORSAR Array B**	**87.23**	**339**	P	**P**	**22 37 05.0**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=47,slow=4

3.9nm,0.5s,baz=102,slow=9.1,SNR=14
STKA Stephens Creek 37.75 245 P **P** 23 26 49.2 +1.1
baz=42,SNR=11
ASAR Alice Springs 44.57 257 P **P** 23 27 42.4 -0.1
11nm,0.5s,baz=94,slow=7.9,SNR=181
ASAR PcP **pP** 23 29 15.7 +0.4
0.8nm,0.5s,baz=98,slow=3.6,SNR=4.1
WRA Warramunga Arr 44.68 262 P **P** 23 27 42.6 -0.9
3.4nm,0.3s,baz=97,slow=7.0,SNR=172
KDU Kakadu 48.09 272 P **P** 23 28 08.5 -0.8
baz=53,SNR=10
KDU Kakadu 48.09 272 P **P** 23 28 08.7 -0.7
baz=5.9,SNR=5.9
MTN Manton Dam 49.30 271 P **P** 23 28 17.3 -1.0
baz=54,SNR=9.2
MTN Manton Dam 49.30 271 P **P** 23 28 17.4 -1.0
baz=6.5,SNR=4.7
FITZ Fitzroy Crossi 53.11 263 P **P** 23 28 45.9 -0.1
1.7nm,0.4s,baz=87,slow=6.8,SNR=16
FITZ Fitzroy Crossi 53.11 263 P **P** 23 28 46.0 0.0
baz=58,SNR=9.2
PALU Palau 54.57 296 P **P** 23 28 57.2 +0.8
baz=59,SNR=3.5
PCI Palu 63.89 280 S SKSac 23 38 40.1 -23
baz=69,SNR=5.0
BVAR Borovoye Array 119.45 320 PKP **PKPdf** 23 38 07.5 +0.1
0.4nm,0.4s,baz=122,slow=2.2,SNR=4.5
AKASG Malin Array Be 143.40 331 PKP **PKPdf** 23 38 50.4 -1.9
1.6nm,0.4s,baz=42,slow=3.9,SNR=5.2
BRTR Keskin Array B 147.19 312 PKPbc **PKPbc** 23 39 02.1 -0.3
0.5nm,0.4s,baz=88,slow=2.0,SNR=6.8
MMAI Mount Meron Ar 148.11 299 PKPbc **PKPbc** 23 39 05.5 +0.6
1.3nm,0.4s,baz=57,slow=5.3,SNR=9.9

IDC 25 23:22:45.4±3.4, 23°.63S×179°.92W, h505km±33km, mb3.3/7, mb1 3.5/7, mb1mx3.3/20, mbtmp3.3/7, Error ellipse: s-maj=27.4km s-min=18.3km az=43.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**31.55**	**270**	P		P	23 28 26.8	+0.8
	8.6nm,0.3s,baz=94,slow=12,SNR=26						
MTSU	**Mount Surprise**	**33.80**	**272**	P		P	23 28 45.9	+0.7
	baz=8.7,SNR=6.8						
ASAR	**Alice Springs**	**42.15**	**260**	P		P	23 29 53.1	-0.3
	1.8nm,0.6s,baz=96,slow=7.7,SNR=8.3						
ASAR				ScP		ScP	23 34 38.6	+0.1
	0.5nm,0.8s,baz=83,slow=4.1,SNR=5.4						
WRA	**Warramunga Arr**	**42.50**	**266**	P		P	23 29 55.3	-0.9
	2.6nm,0.3s,baz=102,slow=8.3,SNR=28						
MTN	**Manton Dam**	**47.51**	**274**	S		PcS	23 35 44.4	-7.3
	baz=54,SNR=4.8						
FITZ	**Fitzroy Crossi**	**50.92**	**265**	P		P	23 30 59.7	-0.2
	1.0nm,0.5s,baz=111,slow=8.6,SNR=4.6						
VNDA	**Vanda**	**54.65**	**185**	P		P	23 31 26.1	+0.5
	0.5nm,0.7s,baz=22,slow=5.4,SNR=4.8						
PCI	**Palu**	**62.53**	**282**	S		ScP	23 35 52.8	-14
	baz=23,SNR=11						
QSPA	**South Pole Qui**	**66.45**	**180**	P		P	23 32 44.1	+0.1
	3.3nm,0.7s,baz=81,slow=0.6,SNR=18						
TXAR	**Lajitas Array**	**90.23**	**58**	P		P	23 34 52.5	+0.4
	0.1nm,0.4s,baz=216,slow=8.9,SNR=3.9						
BRTR	**Keskin Array B**	**147.48**	**308**	PKPbc		PKPbc	23 41 31.8	-1.0
	0.4nm,0.6s,baz=121,slow=2.5,SNR=3.6						
BRTR				PKPab		PKPab	23 41 36.6	+0.1
	0.6nm,0.6s,baz=79,slow=2.9,SNR=5.7						
MMAI	**Mount Meron Ar**	**147.66**	**295**	PKPbc		PKPbc	23 41 33.2	-0.1
	0.9nm,0.5s,baz=76,slow=7.9,SNR=6.9						
EKA	**Eskdalemuir Ar**	**148.25**	**4**	PKPbc		PKPbc	23 41 32.6	-1.3
	1.3nm,0.9s,baz=352,slow=3.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	**169.46**	**189**	PKPab		PKPab	23 43 09.9	-1.7
	0.2nm,0.6s,baz=155,slow=4.9,SNR=3.7						

*ISCJB **25** 23:26:21.7±0.3, 51°.55N±0°.02×16°.13E±0°.02, h0km, Error ellipse: s-maj=2.6km s-min=2.1km az=30.9*
*CSEM **25** 23:26:23.9±0.1, 51°.55N×16°.13E, h2km, ML3.5/7, Error ellipse: s-maj=2.6km s-min=2.1km az=47.0*
*IPEC **25** 23:26:23.5±0.3, 51°.59N×16°.18E, h0km, ML2.4/3, Error ellipse: s-maj=2.0km s-min=1.5km az=35.0*
*IDC **25** 23:26:24.4±0.8, 51°.54N×16°.06E, h0km, mb1 3.3/6, mb1mx3.1/27, mbtmp3.2/6, ML2.6/6, Error ellipse: s-maj=16.3km s-min=6.3km az=105.0*
*BGR **25** 23:26:25.9±0.5, 51°.47N×16°.08E, h1km, ML3.0/16, Error ellipse: s-maj=6.7km s-min=3.3km az=18.0*
*PRU **25** 23:26:25.1, 51°.52N×16°.12E, h0km, Felt In Harrachov*
*VIE **25** 23:26:26.4±0.5, 51°.35N×16°.11E, h0km, mb2.5/4, ML3.0/4, Error ellipse: s-maj=3.1km s-min=2.9km az=169.0 68 km WNW of Wroclaw Suspected Mining induced.*
*WAR **25** 23:26:26.1, 51°.48N×16°.09E*
*LDG **25** 23:26:29.5±0.3, 51°.12N×15°.85E, h1km, Ml3.0/10, Error ellipse: s-maj=7.9km s-min=2.8km az=12.0, Suspected Mining induced.*
*UPP **25** 23:26:31.0, 51°.99N×15°.41E, h0km, ML1.9, Suspected Mining explosion.*

ISC 25 23:26:25.3±0.8, 51°.48N±0°.03×16°.08E±0°.02, h0km, n116, σ0s.98/148, 4C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.65**	**168**	*e*Pg	**Pg**	**23 26 38.4**	**+0.6**
KSP	**Ksiaz**	**0.65**	**168**	*e*Pg	**Pg**	**23 26 38.3**	**+0.6**
KSP				*e*Sg	**Sg**	**23 26 47.6**	**+1.4**
KSP	**Ksiaz**	**0.65**	**168**	*e*Pg	**Pg**	**23 26 37.9**	**+0.1**
	baz=355						
KSP				*e*Sg	**Sg**	**23 26 47.8**	**+1.6**
UPC	**Upice**	**0.98**	**183**	*e*PG	**Pg**	**23 26 44.4**	**+0.4**
UPC	**Upice**	**0.98**	**183**	Pg	**Pg**	**23 26 44.4**	**+0.4**
DPC	**Dobruska-Polom**	**1.14**	**172**	*e*Pg	**Pg**	**23 26 47.2**	**0.0**
DPC				*e*Sg	**Sg**	**23 27 02.9**	**+1.0**
DPC	**Dobruska-Polom**	**1.14**	**172**	*e*PG	**Pg**	**23 26 47.1**	**0.0**
DPC				*e*SG	**Sg**	**23 27 02.3**	**+0.3**
	comp=Z,41nm,0.5s						
DPC	**Dobruska-Polom**	**1.14**	**172**	Pg	**Pg**	**23 26 47.2**	**0.0**
DPC				*e*Sg	**Sg**	**23 27 02.4**	**+0.4**
PVCC	**Panska Ves**	**1.35**	**226**	*e*PG	**Pg**	**23 26 50.9**	**-0.2**
PVCC				*e*SG	**Sb**	**23 27 10.5**	**+1.2**
PVCC	**Panska Ves**	**1.35**	**226**	*e*Pn	**Pg**	**23 26 50.9**	**-0.2**
PVCC				*e*Sg	**Sg**	**23 27 09.8**	**+1.1**
	baz=43						
KRLC	**Kraliky**	**1.48**	**162**	*e*PG	**Pn**	**23 26 53.6**	**+0.5**
KRLC				*e*SG	**Sg**	**23 27 13.6**	**+0.9**
KRLC	**Kraliky**	**1.48**	**162**	Pg	**Pn**	**23 26 53.6**	**+0.5**
KRLC				Sg	**Sg**	**23 27 13.6**	**+0.9**
BRG	**Berggiesshubel**	**1.48**	**246**	PN	**Pn**	**23 26 51.7**	**-1.4**
BRG				PG	**Pb**	**23 26 53.2**	**-0.4**
BRG				SG	**Sg**	**23 27 13.8**	**+1.1**
	213nm,0.4s						
BRG	**Berggiesshubel**	**1.48**	**246**	*e*Pn	**Pn**	**23 26 52.6**	**-0.5**
BRG				*e*Pg	**Pb**	**23 26 53.3**	**-0.3**
BRG				*e*Sg	**Sb**	**23 27 13.9**	**+1.0**
BRG	**Berggiesshubel**	**1.48**	**246**	Pn	**Pn**	**23 26 52.6**	**-0.5**
PRU	**Pruhonice**	**1.79**	**214**	*e*PN	**Pn**	**23 26 56.6**	**-0.8**
PRU				*e*PG	**Pb**	**23 26 58.6**	**-0.3**
PRU				*e*SG	**Sb**	**23 27 22.7**	**+0.9**
	comp=Z,77nm,0.6s						
PRU	**Pruhonice**	**1.79**	**214**	Pn	**Pn**	**23 26 56.6**	**-0.8**
FBE	**Freiberg**	**1.81**	**253**	*e*Pg	**Pb**	**23 26 59.5**	**+0.3**
FBE				*e*Sg	**Sb**	**23 27 23.5**	**+1.2**
FBE	**Freiberg**	**1.81**	**253**	Pg	**Pb**	**23 26 59.5**	**+0.3**
FBE				Sg	**Sb**	**23 27 23.5**	**+1.2**
GKP	**Gorka Klasztor**	**1.93**	**21**	*e*Pg	**Pg**	**23 27 04.1**	**+2.0**
GKP				*e*Sg	**Sg**	**23 27 27.4**	**+0.3**
CLL	**Collm**	**1.94**	**266**	*e*Pn	**Pn**	**23 26 57.9**	**-1.5**
CLL				*e*Pg	**Pb**	**23 27 01.2**	**-0.2**
CLL				*e*Sg	**Sb**	**23 27 27.2**	**+1.1**
CLL	**Collm**	**1.94**	**266**	*e*Pn	**Pn**	**23 26 58.0**	**-1.5**
CLL				*e*Pg	**Pb**	**23 27 01.0**	**-0.4**
CLL				*e*		23 27 05.0	
CLL				*e*Sg	**Sb**	**23 27 27.0**	**+0.9**
	comp=Z,50nm,0.6s						
CLL	**Collm**	**1.94**	**266**	Pn	**Pn**	**23 26 57.9**	**-1.5**
MORC	**Moravsky Berou**	**1.94**	**151**	*e*Pn	**Pn**	**23 26 58.9**	**-0.7**
MORC				*e*Pg	**Pb**	**23 27 02.1**	**+0.6**
MORC	**Moravsky Berou**	**1.94**	**151**	*i*P	**Pn**	**23 26 58.6**	**-1.0**
MORC	**Moravsky Berou**	**1.94**	**151**	*e*Pn	**Pn**	**23 26 58.7**	**-0.9**
MORC	**Moravsky Berou**	**1.94**	**151**	Pg	**Pb**	**23 27 02.1**	**+0.6**
MORC				S	**Sn**	**23 27 22.2**	**-2.5**
MORC				*e*Sg	**Sb**	**23 27 26.5**	**+0.1**
	comp=Z,29nm,0.3s,baz=335						
OKC	**Ostrava-Krasne**	**2.11**	**141**	*e*Pg	**Pb**	**23 27 04.7**	**+0.4**
OKC	**Ostrava-Krasne**	**2.11**	**141**	*e*PG	**Pb**	**23 27 04.0**	**-0.3**
OKC				*e*SG	**Sg**	**23 27 33.0**	**+0.1**
	comp=Z,29nm,0.5s						
OKC	**Ostrava-Krasne**	**2.11**	**141**	Pg	**Pb**	**23 27 04.7**	**+0.4**
OKC				Sg	**Sg**	**23 27 33.0**	**+0.1**
	comp=Z,29nm,0.5s						
VRAC	**Vranov**	**2.20**	**171**	*i*P	**Pn**	**23 27 03.2**	**+0.1**
VRAC	**Vranov**	**2.20**	**171**	Pn	**Pn**	**23 27 03.7**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=352,slow=12,SNR=15						
VRAC				Lg	Lg	23 27 34.5	
	comp=Z,5.0nm,0.3s,baz=82,slow=22,SNR=9.0						
VRAC	**Vranov**	**2.20**	**171**	*e*Pn	**Pn**	**23 27 02.7**	**-0.4**
VRAC				*e*Sg	**Sb**	**23 27 35.4**	**+1.7**
	comp=Z,14nm,0.3s,baz=354						
TREC	**Trest**	**2.22**	**190**	*e*PN	**Pn**	**23 27 04.3**	**+0.9**
TREC				*e*PG	**Pb**	**23 27 07.2**	**+0.9**
TREC	**Trest**	**2.22**	**190**	Pn	**Pn**	**23 27 04.3**	**+0.9**
TREC	**Trest**	**2.22**	**190**	Pg	**Pb**	**23 27 07.2**	**+0.9**
KRUC	**Moravsky**	**2.43**	**175**	*e*Pn	**Pn**	**23 27 06.2**	**0.0**
	baz=357						
KRUC				*e*Sg	**Sg**	**23 27 42.7**	**-0.6**
	comp=Z,14nm,0.3s,baz=357						
TANN	**Tannenbergstha**	**2.53**	**246**	*e*Sg	**Sg**	**23 27 47.2**	**+0.8**
TANN	**Tannenbergstha**	**2.53**	**246**	Sg	**Sg**	**23 27 47.2**	**+0.8**
WERD	**Werda**	**2.60**	**248**	*e*Pn	**Pn**	**23 27 08.1**	**-0.5**
WERD	**Werda**	**2.60**	**248**	Pn	**Pn**	**23 27 08.1**	**-0.5**
NKC	**Novy Kostel**	**2.62**	**243**	*e*PN	**Pn**	**23 27 08.5**	**-0.4**
NKC				*e*PG	**Pb**	**23 27 14.8**	**+1.7**
NKC				*e*SG	**Sg**	**23 27 50.5**	**+1.1**
	comp=Z,129nm,0.3s						
NKC	**Novy Kostel**	**2.62**	**243**	Pn	**Pn**	**23 27 08.5**	**-0.4**
NKC	**Novy Kostel**	**2.62**	**243**	Pg	**Pb**	**23 27 14.8**	**+1.7**
NKC				Sg	**Sg**	**23 27 50.5**	**+1.1**
	comp=Z,129nm,0.3s						
OJC	**Ojcow**	**2.67**	**117**	*e*Pn	**Pn**	23 27 06.8	-2.7
OJC				*e*Pg	**Pg**	**23 27 16.4**	**-0.1**
OJC				*e*Sn	**Sn**	**23 27 39.3**	**-3.3**
OJC				*e*Sg	**Sg**	**23 27 51.3**	**+0.2**
OJC	**Ojcow**	**2.67**	**117**	*e*Pn	Pn	23 27 06.8	-2.7
KHC	**Kasperske Hory**	**2.85**	**215**	*e*PN	**Pn**	**23 27 11.8**	**-0.2**
KHC				*e*PG	**Pb**	**23 27 17.9**	**+0.9**
KHC				*e*SN	**Sn**	**23 27 46.2**	**-0.8**
KHC				*e*SG	**Sg**	**23 27 56.9**	**+0.1**
	comp=Z,13nm,0.3s						
KHC	**Kasperske Hory**	**2.85**	**215**	Pn	**Pn**	**23 27 11.8**	**-0.2**
KHC	**Kasperske Hory**	**2.85**	**215**	Pg	**Pb**	**23 27 17.9**	**+0.9**
KHC				Sg	**Sg**	**23 27 56.9**	**+0.1**
	comp=Z,13nm,0.3s						
MANZ	**Manzenberg**	**2.94**	**241**	*e*Pn	**Pn**	**23 27 13.0**	**-0.2**
MANZ	**Manzenberg**	**2.94**	**241**	Pn	**Pn**	**23 27 13.0**	**-0.2**
MOX	**Moxa**	**2.94**	**255**	*e*Pn	**Pn**	**23 27 12.4**	**-0.8**
MOX				*e*Pg	**Pb**	**23 27 20.5**	**+1.9**
MOX				*e*Sg	**Sg**	**23 28 00.5**	**+0.8**
MOX	**Moxa**	**2.94**	**255**	Pn	**Pn**	**23 27 12.4**	**-0.8**
ROTZ	**Rotzenmuhle**	**3.01**	**237**	*e*Pn	**Pn**	**23 27 14.2**	**0.0**
ROTZ	**Rotzenmuhle**	**3.01**	**237**	Pn	**Pn**	**23 27 14.2**	**0.0**
GEC2	**GERESS Array S**	**3.05**	**211**	*e*Pn	**Pn**	**23 27 15.5**	**+0.7**
GEC2	**GERESS Array S**	**3.05**	**211**	Pn	**Pn**	**23 27 15.5**	**+0.7**
GERES	**GERESS Array B**	**3.05**	**211**	Pn	**Pn**	**23 27 14.4**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=29,slow=12,SNR=61						
GERES				Pg	**Pb**	**23 27 20.9**	**+0.4**
	comp=Z,2.3nm,0.3s,baz=30,slow=14,SNR=28						
GERES				Sn	**Sn**	**23 27 50.9**	**-1.2**
	comp=Z,3.0nm,0.3s,baz=23,slow=23,SNR=8.5						
GERES				Lg	Lg	23 28 02.4	
	comp=Z,2.6nm,0.3s,baz=26,slow=27,SNR=5.5						
SMOL	**Smolenice**	**3.10**	**163**	*e*	**Pg**	**23 27 24.5**	**-0.1**
SMOL	**Smolenice**	**3.10**	**163**	*e*SG	**Sg**	**23 28 03.9**	**-0.8**
WET	**Wettzell**	**3.11**	**223**	*e*Pn	**Pn**	**23 27 15.6**	**0.0**
WET	**Wettzell**	**3.11**	**223**	Pn	**Pn**	**23 27 15.6**	**0.0**
ZST	**Bratislava**	**3.35**	**168**	*e*	**Pg**	**23 27 27.9**	**+2.3**
ZST	**Bratislava**	**3.35**	**168**	*e*SG	**Sg**	**23 28 11.9**	**-1.1**
NIE	**Niedzica**	**3.40**	**126**	*e*P	**Pb**	**23 27 28.8**	**+2.4**
NIE				*e*S	**Sg**	**23 28 12.9**	**-1.6**
VYHS	**Vyhne**	**3.48**	**148**	*e*PN	**Pn**	**23 27 19.9**	**-0.7**
VYHS				*e*		23 27 31.9	
VYHS	**Vyhne**	**3.48**	**148**	*e*SG	**Sg**	**23 28 16.5**	**-0.5**
CONA	**Conrad Observa**	**3.56**	**182**	*i*Pn	**Pn**	**23 27 21.2**	**-0.6**
CONA				*i*Sg	**Sg**	**23 28 19.7**	**+0.1**
CONA	**Conrad Observa**	**3.56**	**182**	Pn	**Pn**	**23 27 21.2**	**-0.6**
CONA				Sg	**Sg**	**23 28 19.7**	**+0.1**
CLZ	**Clausthal**	**3.57**	**278**	*e*Pn	**Pn**	**23 27 21.5**	**-0.5**
CLZ	**Clausthal**	**3.57**	**278**	Pn	**Pn**	**23 27 21.5**	**-0.5**
GRA1	**Grafenberg Arr**	**3.58**	**242**	Pn	**Pn**	**23 27 22.0**	**0.0**
GRA1				Sg	**Sg**	**23 28 20.2**	**0.0**
GRF	**Grafenberg Arr**	**3.58**	**242**	*e*Pn	**Pn**	**23 27 22.0**	**0.0**
GRF				*e*Sg	**Sg**	**23 28 20.2**	**0.0**
BSD	**Bornholm Skovb**	**3.71**	**350**	*i* P	Pn	23 27 20.6	-3.1
BSD				*i* S	Sn	23 28 00.9	-7.1
BSD	**Bornholm Skovb**	**3.71**	**350**	*i* P	Pn	23 27 20.6	-3.1
BSD				*i* S	Sn	23 28 00.9	-7.1
MOA	**Molln**	**3.82**	**199**	*i*Pn	**Pn**	**23 27 25.6**	**+0.2**
MOA				*i*Sg	**Sg**	**23 28 28.8**	**+0.8**
MOA	**Molln**	**3.82**	**199**	Pn	**Pn**	**23 27 25.6**	**+0.2**
MOA				Sg	**Sg**	**23 28 28.8**	**+0.8**
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*PN	**Pn**	**23 27 31.2**	**-0.9**
CRVS				*e*		23 27 47.7	
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*SG	**Sg**	**23 28 44.0**	**+0.2**
LUND	**Lund**	**4.45**	**340**	P	Pn	23 27 30.7	-3.1
KWP	**Kalwaria Pacla**	**4.61**	**111**	S	Pg	23 27 50.7	-2.9
KWP	**Kalwaria Pacla**	**4.61**	**111**	*e*Pg	**Pb**	**23 27 49.4**	**+2.5**
KWP	**Kalwaria Pacla**	**4.61**	**111**	*e*Pg	**Pb**	**23 27 49.5**	**+2.5**
KOLS	**Kolonicke sedl**	**4.72**	**120**	*e*PN	**Pn**	**23 27 36.7**	**-1.0**
KOLS				*e*		23 27 54.1	
KOLS	**Kolonicke sedl**	**4.72**	**120**	*e*SG	**Sg**	**23 28 56.4**	**-0.5**
BJUU	**Bjuv**	**4.95**	**340**	P	Pn	23 27 37.5	-3.2
DEL	**Delary**	**5.17**	**346**	P	Pn	23 27 40.3	-3.4
VXJU	**Vaexsjoe**	**5.49**	**353**	P	Pn	23 27 45.5	-2.7
CRES	**Cresnjev**	**5.68**	**184**	*i* Pn	**Pn**	**23 27 51.4**	**+0.6**
CRES	**Cresnjev**	**5.68**	**184**	*i* Pn	**Pn**	**23 27 51.4**	**+0.6**
FABU	**Falkenberg**	**5.87**	**342**	P	Pn	23 27 50.1	-3.3
GNOU	**Gnosjoe**	**5.98**	**348**	P	Pn	23 27 51.9	-3.0
EKSU	**Eksjoe**	**6.12**	**356**	P	Pn	23 27 54.3	-2.6
DAVOX	**Davos/Dischmat**	**6.22**	**223**	Pn	**Pn**	**23 27 58.5**	**0.0**
	comp=Z,0.2nm,0.3s,baz=31,slow=18,SNR=2.6						
DAVOX				Lg	Lg	23 29 41.7	
	comp=Z,0.3nm,0.3s,baz=45,slow=20,SNR=3.2						
CDF	**Champ du Feu**	**6.46**	**245**	*e*Pn	**Pn**	**23 27 59.8**	**-1.9**
CDF				*e*Sg	Sb	23 29 43.0	+6.7
	comp=Z,7.9nm,0.6s						
HINF	**Hinteralfeld**	**7.03**	**242**	*e*Pn	**Pn**	**23 28 07.8**	**-1.6**
HINF				*e*Sg	Sb	23 30 00.2	+7.7
	comp=Z,6.3nm,0.7s						
HINF	**Hinteralfeld**	**7.03**	**242**	*e*Pn	**Pn**	**23 28 07.8**	**-1.6**
VIKU	**Vikbolandet**	**7.04**	**3**	P	Pn	23 28 07.0	-2.5
HAU	**Haudompre**	**7.20**	**245**	*e*Pn	**Pn**	**23 28 10.6**	**-1.2**
HAU				*e*Sg	Sb	23 30 06.2	+8.6
	comp=Z,8.8nm,0.7s						
HAU	**Haudompre**	**7.20**	**245**	*e*Pn	**Pn**	**23 28 10.6**	**-1.2**
GIVF	**Givet**	**7.27**	**263**	*e*Pn	**Pn**	**23 28 11.9**	**-0.8**
GIVF				*e*Sg	Sg	23 30 11.6	-7.0
	comp=Z,2.1nm,0.3s						
GIVF	**Givet**	**7.27**	**263**	*e*Pn	**Pn**	**23 28 11.9**	**-0.8**
PAGF	**Fort de Pagny**	**7.29**	**250**	*e*Pn	**Pn**	**23 28 11.8**	**-1.1**
PAGF				*e*Sg	Sb	23 30 09.6	+10
	comp=Z,0.8nm,0.6s						
BAIF	**Baives**	**7.67**	**264**	*e*Pn	**Pn**	**23 28 17.4**	**-0.7**
BAIF				*e*Sg	Sg	23 30 23.9	-7.3
	comp=Z,0.4nm,0.3s						
BAIF	**Baives**	**7.67**	**264**	*e*Pn	**Pn**	**23 28 17.4**	**-0.7**
MEZF	**Maizieres J'vi**	**7.71**	**252**	*e*Pn	**Pn**	**23 28 17.5**	**-1.2**
MEZF				*e*Sg	Sb	23 30 23.1	+11
	comp=Z,1.5nm,0.5s						
SFTF	**Sexfontaines**	**7.86**	**250**	*e*Pn	**Pn**	**23 28 19.8**	**-0.9**
SFTF				*e*Sg	Sb	23 30 27.5	+11
	comp=Z,1.6nm,0.3s						
SFTF	**Sexfontaines**	**7.86**	**250**	*e*Pn	**Pn**	**23 28 19.8**	**-0.9**
HFS	**Hagfors**	**8.78**	**352**	Pn	Pn	23 28 29.4	-3.9
	comp=Z,0.1nm,0.3s,baz=168,slow=16,SNR=7.6						
HFS				Sn	Sn	23 30 04.9	-7.9
	comp=Z,0.1nm,0.3s,baz=166,slow=25,SNR=2.7						
LOR	**Lormes**	**9.02**	**247**	*e*Pn	**Pn**	**23 28 35.1**	**-1.6**
LOR	**Lormes**	**9.02**	**247**	*e*Pn	**Pn**	**23 28 35.1**	**-1.6**
SSF	**Saint Saulge**	**9.33**	**247**	*e*Pn	Pn	23 28 38.3	-2.7
SSF	**Saint Saulge**	**9.33**	**247**	*e*Pn	Pn	23 28 38.3	-2.7
FINES	**FINESS Array B**	**11.39**	**25**	Pn	Pn	23 29 01.2	-7.8
	comp=Z,0.1nm,0.3s,baz=213,slow=9.9,SNR=2.6						
FINES				Sn	Sn	23 31 05.8	-11
	comp=Z,0.2nm,0.3s,baz=218,slow=22,SNR=5.3						
EKA	**Eskdalemuir Ar**	**12.10**	**296**	Pn	Pn	23 29 13.6	-5.2
	baz=100,slow=13,SNR=6.0						
ARCES	**ARCESS Array B**	**18.65**	**10**	Pn	P	23 30 38.5	-5.8
	comp=Z,0.1nm,0.3s,baz=196,slow=13,SNR=5.8						

*NEIC **25** 23:34:59.7, 19°.24N×66°.33W, h32km, MD3.6(RSPR), After RSPR.*

RSPR 25 23:34:59.7, 19°.24N×66°.33W, h32km±10km, MD3.6/9, 18C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AOPR	**Arecibo Observ**	**0.98**	**205**	*i*P	Pn	23 35 15.6	-1.7
AOPR	**Arecibo Observ**	**0.98**	**205**	*i*P	Pn	23 35 15.6	-1.7
AOPR				*e*S	Sn	23 35 28.2	-1.9
CBYP	**Canovanas**	**1.06**	**155**	*i*P	Pn	23 35 16.8	-1.7
CBYP	**Canovanas**	**1.06**	**155**	*e*Pg	Pn	23 35 16.8	-1.7
CBYP				*e*S	Sn	23 35 30.4	-1.8
LRS	**Lares**	**1.07**	**208**	*i*P	Pn	23 35 16.9	-1.6
LRS	**Lares**	**1.07**	**208**	*e*Pg	Pn	23 35 17.2	-1.3
LRS				*e*S	Sn	23 35 29.0	-3.2
AGPR	**Aguadilla, PR**	**1.07**	**224**	*e*Pg	Pn	23 35 15.9	-2.6
AGPR				*e*S	Sn	23 35 30.1	-2.2
SJG	**San Juan**	**1.14**	**172**	*i*P	Pn	23 35 17.8	-1.7
SJG	**San Juan**	**1.14**	**172**	*i*P	Pn	23 35 17.8	-1.6
SJG	**San Juan**	**1.14**	**172**	*e*Pg	Pn	23 35 19.0	-0.4
SJG				*e*S	Sn	23 35 30.9	-3.0
HUMP	**Col San Antoni**	**1.19**	**158**	*i*P	Pn	23 35 18.7	-1.4
HUMP	**Col San Antoni**	**1.19**	**158**	*i*P	Pn	23 35 18.7	-1.4
CELP	**Cerrillos**	**1.19**	**192**	*i*P	Pn	23 35 18.8	-1.3
CELP	**Cerrillos**	**1.19**	**192**	*i*P	Pn	23 35 18.8	-1.3
OBIP	**Obispado Ponce**	**1.22**	**193**	*i*P	Pn	23 35 19.2	-1.4
OBIP	**Obispado Ponce**	**1.22**	**193**	*i*P	Pn	23 35 19.2	-1.4
CPD	**Cerro la Pandu**	**1.26**	**162**	*i*P	Pn	23 35 19.9	-1.3
CPD	**Cerro la Pandu**	**1.26**	**162**	*i*P	Pn	23 35 19.9	-1.3
LSP	**Las Mesas**	**1.28**	**214**	*i*P	Pn	23 35 20.0	-1.5
LSP	**Las Mesas**	**1.28**	**214**	*e*Pn	Pn	23 35 20.1	-1.4
MTP	**Monte Pirata**	**1.35**	**147**	*e*Pn	Pn	23 35 21.1	-1.3
CRPR	**Cabo Rojo, PR**	**1.44**	**211**	*i*P	Pn	23 35 22.2	-1.4
CRPR	**Cabo Rojo, PR**	**1.44**	**211**	*e*Pn	Pn	23 35 22.7	-0.8
STVI	**Saint Thomas**	**1.57**	**124**	*i*P	Pn	23 35 24.0	-1.4
STVI	**Saint Thomas**	**1.57**	**124**	*i*P	Pn	23 35 24.0	-1.4
SDDR	**Presa de Saban**	**4.70**	**268**	*e*Pn	Pn	23 36 05.9	-2.6

IDC 25 23:54:43.4±1.0, 4°.66N×128°.44E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.5/25, mbtmp3.6/7, Error ellipse: s-maj=62.8km s-min=18.6km az=75.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.78**	**187**	P	P	23 59 47.5	-0.2
	1.0nm,0.6s,baz=13,slow=11,SNR=4.3						
WRA	**Warramunga Arr**	**25.12**	**167**	P	P	00 00 10.4	+0.1
	0.6nm,0.3s,baz=345,slow=10,SNR=9.1						
ASAR	**Alice Springs**	**28.65**	**170**	P	P	00 00 41.7	-0.4
	0.4nm,0.5s,baz=358,slow=8.3,SNR=8.8						
STKA	**Stephens Creek**	**38.43**	**162**	P	P	00 02 07.3	+0.3
	1.7nm,0.6s,baz=355,slow=12,SNR=6.4						
MKAR	**Makanchi Array**	**57.79**

KHZ **Kahutara** 13.76 206 *e*Pn Pn 00 09 56.3 -7.5
BAYA **Yate Dam** 15.36 298 *e*P **P** **00 10 28.3 +2.8**
DZM **Mont Dzumac** 15.75 297 *e*Pn **P** **00 10 33.8 +3.9**
1µm,0.9s
DZM *e*LR LR 00 14 10.4
41µm,28.4s
DZM **Mont Dzumac** 15.75 297 *e*Pn **P** **00 10 32.3 +2.4**
538nm,0.9s
DZM ScP **ScP** **00 18 41.7 +1.4**
DZM **Mont Dzumac** 15.75 297 P **P** **00 10 33.0 +3.1**
9.2nm,0.3s,baz=108,slow=16,SNR=96
DZM LR LR 00 15 12.4
comp=Z,12µm,19.9s,baz=135,slow=32
DZM ScP **ScP** **00 18 41.7 +1.4**
0.8nm,0.3s,baz=74,slow=12,SNR=5.8
RPZ **Rata Peaks** 15.83 209 *e*Pn Pn 00 10 24.6 -5.1
174nm,0.6s
RPZ S Sn 00 13 08.3 -18
RPZ **Rata Peaks** 15.83 209 P Pn 00 10 23.3 -6.4
5.2nm,0.3s,baz=56,slow=1.2,SNR=15
RPZ S Sn 00 13 08.3 -18
23nm,0.3s,baz=118,slow=21,SNR=14
NOUC **Port Laguerre** 15.84 297 *e*P P 00 10 35.9 +5.1
ODZ **Otahua Downs** 17.10 207 *e*P **P** **00 10 40.7 -3.8**
29nm,0.8s
AFI **Afiamalu** 17.37 22 *e*P P 00 10 41.8 -6.0
468nm,0.9s
AFI S S 00 13 38.0 -24
AFI **Afiamalu** 17.37 22 P P 00 10 41.5 -6.3
16nm,0.3s,baz=16,slow=4.7,SNR=21
AFI S S 00 13 38.0 -24
21nm,0.3s,baz=216,slow=19,SNR=4.0
WHZ **Wether Hill Ro** 18.90 210 *e*P **P** **00 11 01.9 -2.3**
100nm,0.8s
RAR **Rarotonga** 19.09 66 *e*P **P** **00 11 06.5 +0.1**
3µm,2.1s
RAR S S 00 14 23.6 -12
RAR **Rarotonga** 19.09 66 P **P** **00 11 06.4 -0.1**
3.7nm,0.3s,baz=270,slow=9.0,SNR=8.7
RAR S S 00 14 23.6 -12
15nm,0.3s,baz=90,slow=17,SNR=12
RAR LR LR 00 16 47.5
comp=Z,5µm,18.8s,baz=94,slow=31
LHI **Lord Howe Isla** 19.30 260 P **Pn** **00 11 13.2 +2.1**
baz=20,SNR=68
FUNA **Funafuti** 21.68 354 *e*P **P** **00 11 32.6 -1.7**
370nm,1.5s
ARMA **Armidale** 25.75 262 P **P** **00 12 15.6 +3.4**
baz=26,SNR=190
MGCD **Mangrove Creek** 25.98 255 P **P** **00 12 17.9 +3.8**
baz=26,SNR=147
TBI **Tubuai** 26.77 82 *e*P **P** **00 12 21.7 +0.4**
251nm,1.0s
TBI *e*LQ LQ 00 17 52.2
26µm,21.0s
TBI *e*LR LR 00 18 52.7
18µm,43.2s
EIDS **Eidsvold** 27.29 273 P **P** **00 12 27.5 +1.6**
baz=28,SNR=112
CNB **Canberra Magne** 27.42 251 P **P** **00 12 30.0 +2.8**
baz=28,SNR=30
MILA **Mila** 27.69 247 P **P** **00 12 32.8 +3.3**
baz=28,SNR=4.7
CAN **Canberra** 27.72 251 *e*P **P** **00 12 31.9 +2.1**
CAN pmax pmax
comp=Z,164nm,0.9s
CAN **Canberra** 27.72 251 *e*P **P** **00 12 31.9 +2.1**
comp=Z,164nm,0.9s
YNG **Young** 28.21 253 P **P** **00 12 37.0 +2.9**
baz=28,SNR=141
HNR **Honiara** 28.85 311 *e*P **P** **00 12 37.6 -2.2**
comp=Z,191nm,1.0s
HNR **Honiara** 28.85 311 P **P** **00 12 39.7 -0.1**
comp=Z,138nm,0.6s,baz=180,slow=3.9,SNR=14
HNR LR LR 00 22 09.2
comp=Z,4µm,18.0s,baz=352,slow=32
RMQ **Roma** 28.99 269 P **P** **00 12 43.9 +2.8**
baz=29,SNR=87
PAE **Paea** 29.15 71 *e*P **P** **00 12 42.1 -0.4**
comp=Z,32nm,0.9s
PAE *e*pP **pP** **00 13 14.0 +0.8**
comp=Z,31nm,1.1s
PPT2 **Papeete2** 29.19 71 *e*P **P** **00 12 42.6 -0.3**
comp=Z,182nm,0.9s
PPT2 *e*pP **pP** **00 13 14.8 +1.2**
comp=Z,183nm,1.2s
PPT2 *e*S **S** **00 17 19.7 -5.2**
comp=Z,3µm,16.5s
PPT2 *e*LQ LQ 00 18 54.5
comp=Z,19µm,18.0s
PPT2 *e*LR LR 00 19 58.1
comp=Z,7µm,18.8s
PPT **Papeete** 29.20 71 P **P** **00 12 42.7 -0.3**
PPT **Papeete** 29.20 71 P **P** **00 12 42.7 -0.3**
comp=Z,180nm,0.7s,baz=27,slow=3.1,SNR=18
PPT LR LR 00 21 19.0
comp=Z,4µm,19.9s,baz=244,slow=30
TVO **Taravao** 29.36 72 *e*P **P** **00 12 44.0 -0.4**
comp=Z,91nm,0.7s
TIAR **Tiarei** 29.39 71 *e*P **P** **00 12 44.4 -0.3**
comp=Z,664nm,0.8s
TIAR *e*pP **pP** **00 13 16.8 +1.4**
comp=Z,248nm,0.8s
MOO **Moorlands** 30.01 237 P **P** **00 12 51.5 +1.7**
baz=30,SNR=14
TAU **Tasmania Unive** 30.02 236 *e*P **P** **00 12 51.3 +1.3**
TAU pmax pmax
comp=Z,508nm,1.7s
TAU **Tasmania Unive** 30.02 236 *e*P **P** **00 12 51.2 +1.3**
comp=Z,508nm,1.7s
TAU **Tasmania Unive** 30.02 236 P **P** **00 12 52.0 +2.0**
comp=Z,542nm,0.7s,SNR=7.3
MEH **Mehetia** 30.29 73 *e*P **P** **00 12 52.4 -0.2**
comp=Z,141nm,1.0s
MEH *e*pP **pP** **00 13 24.6 +1.2**
comp=Z,102nm,1.1s
TOO **Toolangi** 30.64 246 P **P** **00 12 57.6 +2.1**
baz=31,SNR=35
CMSA **Cobar Meteorol** 30.68 258 P **P** **00 12 57.8 +1.9**
baz=31,SNR=176
PMOR **Pomariorio Ree** 31.93 69 *e*P **P** **00 13 06.6 -0.3**
comp=Z,149nm,1.3s
TARA **Tarawa** 32.44 344 *e*P **P** **00 13 11.3 -0.1**
comp=Z,147nm,0.9s
QLP **Quilpie** 32.88 267 P **P** **00 13 16.7 +1.4**
baz=33,SNR=282
CTAO **Charters Tower** 33.34 279 *e*P **P** **00 13 21.0 +1.7**
CTAO pmax pmax
comp=Z,532nm,0.8s
CTAO **Charters Tower** 33.34 279 *e*P **P** **00 13 21.0 +1.7**
comp=Z,532nm,0.8s
ARPS **Mount Arapiles** 33.53 248 P P 00 13 24.2 +3.5
baz=34,SNR=26
STKA **Stephens Creek** 34.09 257 *e*P **P** **00 13 27.2 +1.6**
comp=Z,45nm,0.8s
STKA ScP **ScP** **00 19 31.2 0.0**
STKA **Stephens Creek** 34.09 257 P **P** **00 13 27.2 +1.6**
comp=Z,209nm,0.6s,baz=96,slow=9.0,SNR=138
STKA ScP **ScP** **00 19 31.2 0.0**
comp=Z,15nm,0.8s,baz=63,slow=2.3,SNR=4.3
STKA LR LR 00 25 25.2
comp=Z,3µm,18.8s,baz=86,slow=32
STKA **Stephens Creek** 34.09 257 P **P** **00 13 27.3 +1.6**
baz=34,SNR=150
MTSU **Mount Surprise** 35.83 281 P **P** **00 13 42.6 +1.9**
baz=36,SNR=75
MTSU S S 00 19 40.2 +32
baz=36,SNR=4.3
XMAS **Kiritimati** 37.85 36 *e*P **P** **00 13 58.5 +0.7**
comp=Z,212nm,1.0s
PMG **Port Moresby** 38.13 296 *e*P **P** **00 14 00.7 +0.6**
comp=Z,52nm,1.1s
PMG PcP **PcP** **00 16 13.4 +1.3**
PMG ScP **ScP** **00 19 48.2 +1.9**
PMG **Port Moresby** 38.13 296 P **P** **00 14 00.2 +0.1**
comp=Z,55nm,1.7s,comp=Z,3µm
PMG **Port Moresby** 38.13 296 P **P** **00 14 01.0 +0.9**
comp=Z,29nm,0.8s,baz=127,slow=5.8,SNR=13
PMG PcP **PcP** **00 16 13.4 +1.3**
comp=Z,58nm,0.9s,baz=241,slow=1.5,SNR=4.4
PMG ScP **ScP** **00 19 48.3 +1.9**
comp=Z,55nm,0.9s,baz=104,slow=6.6,SNR=12
PMG LR LR 00 27 22.9
comp=Z,3µm,21.3s,baz=20,slow=32
BBOO **Buckleboo** 38.60 254 P **P** **00 14 04.0 +0.1**
baz=39,SNR=85
COEN **Coen** 38.80 286 P **P** **00 14 07.7 +2.0**
baz=39,SNR=5.9

QIS **Mount Isa** 38.86 274 P **P** **00 14 07.5 +1.2**
baz=39,SNR=13
RKT **Rikitea** 39.35 90 *e*P **P** **00 14 11.4 +1.1**
comp=Z,125nm,1.0s
RKT *e*S **S** **00 19 59.9 -1.0**
comp=Z,4µm,26.8s
RKT *e*LQ LQ 00 23 05.7
comp=Z,13µm,18.0s
RKT *e*LR LR 00 24 47.4
comp=Z,13µm,44.0s
AS31 **Alice Springs** 42.68 267 *e*P **P** **00 14 37.4 -0.1**
ASAR **Alice Springs** 42.68 267 P **P** **00 14 37.2 -0.4**
ASAR pP **pP** **00 15 10.9 +1.2**
ASAR PcP **PcP** **00 16 26.9 +0.1**
ASAR ScP **ScP** **00 20 04.1 -0.1**
ASAR S **S** **00 20 47.8 -2.5**
ASAR ScS **ScS** **00 24 19.6 -4.1**
ASAR **Alice Springs** 42.68 267 P **P** **00 14 37.2 -0.4**
comp=Z,108nm,0.6s,baz=106,slow=7.6,SNR=353
ASAR pP **pP** **00 15 10.9 +1.2**
comp=Z,29nm,0.7s,baz=108,slow=7.5,SNR=1.8
ASAR PcP **PcP** **00 16 26.9 +0.1**
comp=Z,29nm,0.7s,baz=116,slow=4.0,SNR=5.5
ASAR ScP **ScP** **00 20 04.1 -0.1**
comp=Z,28nm,0.8s,baz=120,slow=4.3,SNR=13
ASAR S **S** **00 20 47.8 -2.5**
comp=Z,2.9nm,0.8s,baz=103,slow=14,SNR=2.7
ASAR ScS **ScS** **00 24 19.6 -4.1**
comp=Z,3.1nm,0.8s,baz=116,slow=6.6,SNR=5.0
ASAR LR LR 00 31 07.2
comp=Z,3µm,18.2s,baz=116,slow=34
PATS **Pohnpei** 43.03 325 S **S** **00 20 54.1 -1.2**
baz=43,SNR=3.4
WRAB **Tennant Creek** 43.65 272 *e*P **P** **00 14 45.3 0.0**
WRAB pmax pmax
comp=Z,314nm,0.6s
WRAB **Tennant Creek** 43.65 272 *e*P **P** **00 14 45.3 0.0**
comp=Z,314nm,0.6s
WRAB **Tennant Creek** 43.65 272 P **P** **00 14 45.0 -0.3**
comp=Z,3µm,0.5s,SNR=85
WRA **Warramunga Arr** 43.65 272 P **P** **00 14 44.9 -0.5**
WRA ScP **ScP** **00 20 07.1 -1.1**
WRA S **S** **00 21 01.0 -3.4**
WRA PKiKP **PKiKP** **00 23 30.4 -1.5**
WRA **Warramunga Arr** 43.65 272 P **P** **00 14 44.9 -0.5**
comp=Z,181nm,0.6s,baz=110,slow=8.1,SNR=228
WRA ScP **ScP** **00 20 07.1 -1.1**
comp=Z,16nm,0.8s,baz=110,slow=4.0,SNR=7.3
WRA S **S** **00 21 01.0 -3.4**
comp=Z,16nm,0.9s,baz=110,slow=13,SNR=5.3
WRA PKiKP **PKiKP** **00 23 30.4 -1.5**
comp=Z,1.4nm,0.6s,baz=110,slow=0.4,SNR=5.5
WRA LR LR 00 30 46.8
comp=Z,4µm,20.5s,baz=95,slow=33
DRV **Dumont d'Urvil** 44.15 202 P P 00 14 39.0 -10
DRV S S 00 20 57.0 -13
DRV L L 00 24 00.0
DRV R 00 27 00.0
FORT **Forrest** 45.67 255 P **P** **00 15 00.8 -0.5**
baz=46,SNR=142
JAY **Jayapura** 47.42 298 P **P** **00 15 14.9 -0.2**
baz=48,SNR=15
SBA **Scott Base** 48.19 184 *e*P P 00 15 23.6 +3.5
SBA pmax pmax
comp=Z,165nm,0.9s
SBA **Scott Base** 48.19 184 *e*P P 00 15 23.6 +3.5
comp=Z,165nm,0.9s
VNDA **Vanda** 48.24 186 *e*P **P** **00 15 22.7 +2.2**
comp=Z,29nm,0.6s
VNDA ScP **ScP** **00 20 26.4 +0.2**
VNDA **Vanda** 48.24 186 P **P** **00 15 22.6 +2.2**
comp=Z,31nm,0.6s,baz=4.9,slow=8.0,SNR=104
VNDA ScP **ScP** **00 20 26.4 +0.2**
comp=Z,6.1nm,0.8s,baz=335,slow=5.9,SNR=3.0
KDU **Kakadu** 48.45 280 P **P** **00 15 22.4 -0.5**
baz=49,SNR=51
MTN **Manton Dam** 49.52 279 P **P** **00 15 30.8 -0.3**
baz=50,SNR=56
KMBL **Kambalda** 50.66 253 P **P** **00 15 38.7 -0.9**
baz=51,SNR=63
TLE **Tual** 51.92 288 P **P** **00 15 51.0 +2.0**
baz=52,SNR=11
FITZ **Fitzroy Crossi** 51.92 270 P **P** **00 15 48.6 -0.4**
FITZ **Fitzroy Crossi** 51.92 270 P **P** **00 15 48.6 -0.4**
comp=Z,157nm,0.7s,baz=156,slow=6.8,SNR=124
FITZ LR LR 00 35 56.6
comp=Z,3µm,20.4s,baz=115,slow=34
FITZ **Fitzroy Crossi** 51.92 270 P **P** **00 15 49.0 -0.1**
baz=52,SNR=174
FAKI **Fak Fak** 53.86 290 P **P** **00 16 02.5 -0.9**
baz=54,SNR=29
KLBR **Kellerberrin** 54.00 251 P **P** **00 16 03.0 -1.1**
baz=54,SNR=17
NWAO **Narrogin (SRO)** 54.05 249 *e*P **P** **00 16 03.9 -0.7**
comp=Z,219nm,2.1s
NWAO **Narrogin (SRO)** 54.05 249 LR LR 00 38 52.6
comp=Z,1µm,19.4s,baz=103,slow=35
POHA **Pohakuloa** 54.38 27 *e*P **P** **00 16 06.4 -0.7**
comp=Z,233nm,0.9s
MEEK **Meekatharra** 54.80 257 P **P** **00 16 09.5 -0.5**
baz=55,SNR=40
KIP **Kipapa** 54.99 23 *ce*P **P** **00 16 12.0 +0.8**
KIP pmax pmax
comp=Z,211nm,1.4s
KIP **Kipapa** 54.99 23 *e*P **P** **00 16 11.6 +0.4**
comp=Z,185nm,1.1s
CASY **Casey** 55.10 208 *e*P **P** **00 16 10.3 -1.2**
comp=Z,308nm,0.7s
BLDU **Ballidu** 55.14 252 P **P** **00 16 10.5 -1.9**
baz=55,SNR=15
MBWA **Marble Bar** 55.81 264 *e*P **P** **00 16 16.2 -1.1**
comp=Z,123nm,0.9s
MBWA **Marble Bar** 55.81 264 P **P** **00 16 17.3 +0.1**
SNR=6.1
SWI **Sorong** 55.87 292 P **P** **00 16 18.4 +0.7**
baz=56,SNR=10
GUMO **Guam** 56.04 316 *e*P **P** **00 16 18.2 -0.6**
GUMO **Guam** 56.04 316 P **P** **00 16 18.0 -0.9**
comp=Z,168nm,0.8s,baz=172,slow=8.5,SNR=12
GUMO LR LR 00 37 08.2
comp=Z,746nm,21.7s,baz=142,slow=32
MORW **Morawa** 56.16 253 P **P** **00 16 18.4 -1.3**
baz=56,SNR=99
PALU **Palau** 58.55 302 P **P** **00 16 38.2 +1.7**
baz=59,SNR=7.1
QSPA **South Pole Qui** 59.90 180 *e*P **P** **00 16 47.0 +1.7**
comp=Z,420nm,0.7s
QSPA S **S** **00 24 49.8 +4.3**
QSPA **South Pole Qui** 59.90 180 P **P** **00 16 46.9 +1.7**
comp=Z,418nm,0.8s,baz=32,slow=2.1,SNR=137
QSPA S **S** **00 24 49.8 +4.3**
comp=Z,14nm,1.1s,baz=288,slow=22,SNR=15
GIRL **Giralia** 59.95 260 P **P** **00 16 47.1 +1.0**
baz=60,SNR=27
MIR **Mirnyy** 62.09 207⇑ *i*P **P** **00 17 00.0 +0.2**
MIR pmax pmax
comp=Z,1µm,1.0s
comp=Z,294nm,1.0s
MIR pmax pmax
KAPI **Kappang** 63.14 280 *e*P **P** **00 17 06.7 -1.0**
comp=Z,542nm,2.5s
KAPI **Kappang** 63.14 280 P **P** **00 17 06.4 -1.2**
SNR=15
KAPI **Kappang** 63.14 280 P **P** **00 17 06.3 -1.4**
comp=Z,345nm,0.7s,SNR=10.0
KAPI **Kappang** 63.14 280 P **P** **00 17 07.6 -0.1**
comp=Z,55nm,1.7s,comp=Z,2µmcomp=Z,15µm
DAV **Davao City (W)** 65.15 295⇑ *i*P **P** **00 17 19.4 -1.3**
DAV **Davao City (W)** 65.15 295 P **P** **00 17 22.0 +1.3**
SNR=7.1
BUKP **Musuan** 66.05 295 *e*P **P** **00 17 26.3 -0.2**
PAGZ **Pagadian** 67.35 294 *e*P **P** **00 17 35.7 +1.0**
MSLP **Maasin** 67.59 297 *e*P **P** **00 17 36.4 +0.2**
UGM **Wanagama** 69.63 273 *e*P **P** **00 17 49.1 0.0**
comp=Z,162nm,0.8s
UGM **Wanagama** 69.63 273 P **P** **00 17 49.0 0.0**
baz=70,SNR=13
GUIM **Jordan** 69.65 296 *e*P **P** **00 17 47.8 -1.2**
MYLDM **Lahad Datu** 69.72 289 P **P** **00 17 51.5 +2.1**
MYLDM **Lahad Datu** 69.72 289 P **P** **00 17 52.2 +2.8**
MYLDM **Lahad Datu** 69.72 289 P **P** **00 17 51.2 +1.7**
comp=Z,17nm,1.0s,comp=Z,3µm
TSM **Tawau** 69.74 288 P **P** **00 17 50.4 +0.9**
TSM **Tawau** 69.74 288 P **P** **00 17 50.8 +1.2**
RCP **Roxas** 70.10 297⇓ *e*P **P** **00 17 51.1 -0.6**
SMRI **Semarang** 70.12 273 P **P** **00 17 54.3 +2.3**
baz=70,SNR=5.8

CUYO **Cuyo Island** 71.01 295 *e*P **P** **00 17 57.1 -0.2**
SDKM **Sandakan** 71.05 289 P **P** **00 17 56.9 -0.8**
SDKM **Sandakan** 71.05 289 P **P** **00 17 57.1 -0.5**
SJMP **San Jose** 71.90 297 *e*P **P** **00 18 02.5 -0.1**
KDM **Kudat** 72.07 289 P **P** **00 18 03.8 +0.2**
KKM **Kota Kinabalu** 72.08 288 *e*P **P** **00 18 03.2 -0.6**
comp=Z,128nm,0.6s
KKM **Kota Kinabalu** 72.08 288 P **P** **00 18 03.6 -0.2**
KKM **Kota Kinabalu** 72.08 288 P **P** **00 18 03.8 -0.1**
KKM **Kota Kinabalu** 72.08 288 P **P** **00 18 02.5 -1.3**
comp=Z,11nm,0.7s,comp=Z,3µm
KKM **Kota Kinabalu** 72.08 288 P **P** **00 18 02.9 -1.0**
baz=72,SNR=24
CISI **Cisompet, Garu** 72.15 272 P **P** **00 18 05.9 +1.6**
baz=72,SNR=6.2
MAW **Mawson** 72.33 201 P **P** **00 18 04.9 +0.6**
MAW **Mawson** 72.33 201 P **P** **00 18 04.9 +0.6**
comp=Z,16nm,0.5s,baz=133,slow=7.4,SNR=36
MAW LR LR 00 48 55.2
comp=Z,537nm,18.2s,baz=123,slow=35
MAW **Mawson** 72.33 201 P **P** **00 18 04.4 +0.1**
baz=72,SNR=30
XMI **Christmas Isla** 72.60 268 P **P** **00 18 07.2 +0.3**
baz=73,SNR=5.3
XMIS **Christmas Isla** 72.62 268 P **P** **00 18 06.5 -0.4**
baz=73,SNR=10
LEM **Lembang** 72.67 272 P **P** **00 18 07.9 +0.4**
baz=73,SNR=12
BTM **Bintulu** 73.13 284 P **P** **00 18 10.3 +0.4**
LUBP **Lubang** 73.35 297 *e*P **P** **00 18 08.9 -2.2**
SBUM **Sibu** 73.45 283 P **P** **00 18 12.0 +0.2**
SBUM **Sibu** 73.45 283 P **P** **00 18 12.6 +0.7**
SBUM **Sibu** 73.45 283 P **P** **00 18 10.9 -0.9**
comp=Z,14nm,0.8s,comp=Z,2µm
KSM **Kuching** 74.56 281 *e*P **P** **00 18 17.6 -0.7**
comp=Z,156nm,1.1s
KSM **Kuching** 74.56 281 P **P** **00 18 17.9 -0.3**
KSM **Kuching** 74.56 281 P **P** **00 18 18.1 -0.2**
KSM **Kuching** 74.56 281 P **P** **00 18 17.8 -0.5**
comp=Z,18nm,1.4s,comp=Z,2µm
KSM **Kuching** 74.56 281 P **P** **00 18 18.4 +0.2**
baz=75,SNR=9.7
SYO **Syowa Base** 77.20 193⇓ *i*P **P** **00 18 30.2 -2.1**
MJAR **Matsushiro Arr** 77.84 326 P **P** **00 18 35.7 -0.5**
MJAR **Matsushiro Arr** 77.84 326 P **P** **00 18 35.7 -0.5**
comp=Z,5.8nm,0.5s,baz=164,slow=5.0,SNR=24
MAJO **Matsushiro** 77.84 326 *e*P **P** **00 18 36.2 -0.1**
MAJO pmax pmax
comp=Z,316nm,2.6s
MAJO **Matsushiro** 77.84 326 *e*P **P** **00 18 36.2 -0.1**
comp=Z,316nm,2.6s
MAT **Matsushiro** 77.84 326 P **P** **00 18 35.8 -0.5**
MAT S **S** **00 28 18.6 +1.5**
MNAI **Manna** 77.92 272 P **P** **00 18 38.5 +1.2**
baz=78,SNR=6.7
SNAA **Sanae** 78.35 179 *e*P **P** **00 18 39.4 +0.7**
comp=Z,64nm,0.8s
NACB **Ninganchiao** 78.89 306 *e*P **P** **00 18 42.5 +0.2**
comp=Z,73nm,1.1s
TPUB **Ta-pu** 79.01 305 *e*P **P** **00 18 41.4 -1.7**
comp=Z,109nm,0.9s
MAIT **Maitri** 79.03 183 *e*P P 00 18 33.4 -9.0
SSLB **Suanglung** 79.09 306 *e*P **P** **00 18 41.8 -1.7**
comp=Z,65nm,0.8s
JNU **Nakatsue** 79.13 319 P **P** **00 18 43.4 -0.1**
JNU **Nakatsue** 79.13 319 P **P** **00 18 43.4 -0.1**
comp=Z,23nm,0.8s,baz=15,slow=4.0,SNR=14
COCO **West Island** 79.41 262 *i* P **P** **00 18 48.0 +2.6**
COCO **West Island** 79.41 262 *e*P **P** **00 18 44.9 -0.5**
comp=Z,318nm,1.5s
MYKOM **Kota Tinggi** 80.23 278 P **P** **00 18 49.8 -0.1**
MYKOM **Kota Tinggi** 80.23 278 P **P** **00 18 50.0 +0.1**
MYKOM **Kota Tinggi** 80.23 278 P **P** **00 18 48.7 -1.2**
comp=Z,23nm,1.1s,comp=Z,2µm
YUK **Yuzh-Kuril'sk** 80.76 335 *c* *i*P P 00 18 44.6 -7.2
YUK *i* *PP pP 00 19 21.3 -6.6
YUK *i* 00 22 03.0
YUK *e*PPP PPP 00 23 48.2
YUK *i* SS SS 00 34 11.1 +6.2
YUK *e*SSS SSS 00 37 30.5
YUK pmax pmax
comp=Z,354nm,6.4s
KGM **Kluang** 80.81 278 P **P** **00 18 52.2 -0.7**
KGM **Kluang** 80.81 278 P **P** **00 18 52.6 -0.3**
QZH **Quanzhou** 81.49 305⇑ *i*P **P** **00 18 57.5 +1.3**
QZH sP **sP** **00 19 50.5 +2.9**
QZH S **S** **00 28 53.3 -2.6**
QZH pmax pmax
comp=Z,2µm,4.4s
BKNI **Bangkinang** 81.91 275 P **P** **00 18 58.0 -0.8**
baz=82,SNR=5.5
PPI **Padang Panjang** 82.07 274 P **P** **00 18 59.5 -0.1**
baz=82,SNR=6.3
ASAJ **Asahikawa** 82.07 333 P **P** **00 19 00.0 +1.2**
ASAJ **Asahikawa** 82.07 333 P **P** **00 19 00.0 +1.2**
comp=Z,42nm,0.9s,baz=243,slow=18,SNR=7.8
KTGM **Kuala Trenggan** 82.66 280 P **P** **00 19 03.1 +0.5**
FRIM **Kepong** 82.88 278 P **P** **00 19 03.2 -0.6**
PLCA **Paso Flores** 82.95 133 *e*P **P** **00 19 04.0 +0.1**
comp=Z,35nm,1.1s
PLCA **Paso Flores** 82.95 133 P **P** **00 19 04.5 +0.6**
comp=Z,26nm,1.1s,baz=234,slow=4.2,SNR=22
PLCA LR LR 00 48 34.1
comp=Z,2µm,20.4s,baz=246,slow=30
FX1 **Attu Island--F** 83.06 355 P **P** **00 19 04.6 +0.9**
FX1 **Attu Island--F** 83.06 355 P **P** **00 19 04.6 +0.9**
comp=Z,31nm,0.9s,baz=266,slow=19,SNR=4.0
EFI **East Falkland** 83.19 147 *e*P **P** **00 19 04.4 -0.3**
EFI pmax pmax
comp=Z,27nm,0.5s
EFI **East Falkland** 83.19 147 *e*P **P** **00 19 04.4 -0.3**
comp=Z,27nm,0.5s
SKR **Severo-Kuril's** 83.61 344 *e*P P 00 18 56.0 -11
SSE **Sheshan** 83.66 311 P **P** **00 19 07.3 0.0**
SSE pP **pP** **00 19 42.8 -0.7**
SSE sP **sP** **00 19 58.0 -0.8**
SSE PP **PP** **00 22 19.5 -2.9**
SSE S **SKSac** **00 29 15.8 -0.6**
SSE sS **sS** **00 30 16.8 -3.6**
SSE pmax pmax
comp=Z,25nm,0.8s
SSE pmax pmax
comp=Z,780nm,9.4s
SSE LR LR
comp=N,320nm,22.9s
SSE LR LR
comp=E,430nm,22.9s
SSE LR LR
comp=Z,540nm,24.4s
KSRS **Korea Array** 83.92 320 P **P** **00 19 08.9 +0.5**
comp=Z,23nm,1.0s,baz=142,slow=6.1,SNR=18
KSRS LR LR 00 50 04.6
comp=Z,676nm,21.9s,baz=334,slow=31
KSAR **Wonju Array Be** 83.94 320 P **P** **00 19 08.9 +0.4**
IPM **Ipoh** 84.03 279 *e*P **P** **00 19 08.4 -1.3**
comp=Z,107nm,0.7s
IPM **Ipoh** 84.03 279 P **P** **00 19 09.1 -0.4**
IPM **Ipoh** 84.03 279 P **P** **00 19 09.2 -0.4**
IPM **Ipoh** 84.03 279 P **P** **00 19 08.9 -0.7**
comp=Z,18nm,1.8s,comp=Z,2µm
GZH **Guangzhou** 84.18 301 P **P** **00 19 11.3 +1.2**
GZH S **S** **00 29 21.3 -1.9**
GZH pmax pmax
comp=Z,1µm,7.5s
UNV **Unalaska Valle** 84.35 7 *e*P **P** **00 19 10.3 +0.1**
comp=Z,48nm,0.8s
YSS **Yuzh-Sakhalins** 84.39 334⇑ *i*P **P** **00 19 12.2 +1.6**
YSS *e**PP **pP** **00 19 47.0 +0.1**
YSS *e**SP **sP** **00 20 02.0 -0.1**
YSS *e* 00 22 28.0
YSS *e* 00 29 19.0
YSS *e*S **SKKSac** **00 29 27.0 +0.7**
YSS *i* 00 30 18.0
YSS pmax pmax
comp=E,40nm,1.0s
YSS pmax pmax
comp=Z,120nm,1.0s
YSS pmax pmax
comp=Z,1µm,5.0s
YSS smax smax
comp=N,3µm,9.0s
YSS smax smax
comp=E,900nm,9.0s
QIZ **Qiongzhong** 84.52 296 P **P** **00 19 11.5 -0.4**
QIZ pP **pP** **00 19 45.3 -3.0**

QIZ sP **sP** 00 20 05.3 +1.8
QIZ S **SKSac** 00 29 23.3 +0.7
QIZ pmax pmax
comp=Z,41nm,0.9s
BSC Santa Cruz Isl 84.66 46 ⇓P **P** 00 19 14.0 +1.7
baz=85
SCI San Clemente I 84.66 47 ⇑P **P** 00 19 14.0 +1.7
baz=85
AKUT Akutan 84.72 7 *e*P **P** 00 19 12.7 +0.7
comp=Z,28nm,0.5s
KULM Kulim 84.76 279 *e*P **P** 00 19 13.0 -0.3
comp=Z,77nm,0.7s
KULM Kulim 84.76 279 P **P** 00 19 13.1 -0.2
KULM Kulim 84.76 279 P **P** 00 19 13.2 -0.2
KULM Kulim 84.76 279 P **P** 00 19 11.3 -2.0
comp=Z,10.0nm,1.2s,comp=Z,2µm
PSI Prapat 84.98 276 P **P**
PSI PP **PP** 00 22 32.8 -0.7
PSI Prapat 84.98 276 P **P** 00 19 12.6 -2.0
comp=Z,100nm,1.2s,comp=Z,2µm
PSI Prapat 84.98 276 P **P** 00 19 12.9 -1.7
comp=Z,56nm,1.0s,baz=185,slow=8.2,SNR=30
PSI PP **PP** 00 22 32.8 -0.7
comp=Z,11nm,0.8s,baz=121,slow=9.4,SNR=4.4
PSI LR LR 00 59 43.1
comp=Z,2µm,18.4s,baz=121,slow=37
PSI Prapat 84.98 276 P **P** 00 19 12.9 -1.7
baz=85,SNR=22
CIS Catalina Islan 85.03 47 ⇓P **P** 00 19 15.1 +0.8
baz=85
BLG Laguna Peak 85.08 46 ⇑P **P** 00 19 16.1 +1.7
baz=85
PKM Peak Mountain 85.14 45 ⇓P **P** 00 19 16.4 +1.5
baz=86,SNR=5.9
PET Petropavlovsk 85.25 346 *e*P **P** 00 19 13.6 -1.1
PET *e**PP **pP** 00 19 50.8 -0.3
PET *e**SP **sP** 00 20 05.8 -0.5
PET *e*S **SKSac** 00 29 22.6 -2.9
PET *e**SS **sS** 00 30 35.5 +0.1
PET *e*SS **SS** 00 35 04.6 -6.3
PET pmax pmax
comp=Z,600nm,12.7s
SMMC Simmler 85.31 44 ⇑P **P** 00 19 17.2 +1.6
baz=86,SNR=6.6
PTRM Twissleman Ran 85.41 44 *e*P **P** 00 19 17.5 +1.4
SAO San Andreas Ge 85.43 43 *e*P **P** 00 19 17.3 +1.2
SAO pmax pmax
comp=Z,36nm,1.0s
SAO San Andreas Ge 85.43 43 *e*P **P** 00 19 17.3 +1.2
comp=Z,36nm,1.0s
109C Camp Elliot, M 85.52 48 ⇑P **P** 00 19 18.6 +2.0
baz=86
PEA0B Petropavlovsk- 85.52 346 *e*P **P** 00 19 16.2 +0.1
PETK Petropavlovsk- 85.52 346 P **P** 00 19 16.4 +0.3
PETK Petropavlovsk- 85.52 346 P **P** 00 19 16.4 +0.3
PETK Petropavlovsk- 85.52 346 P **P** 00 19 16.4 +0.3
comp=Z,22nm,0.7s,baz=135,slow=7.5,SNR=29
PETK LR LR 00 53 07.0
comp=Z,553nm,20.0s,baz=157,slow=32
OSI Osito Adit 85.63 46 ⇑P **P** 00 19 18.6 +1.4
baz=86,SNR=6.4
BAR Barrett 85.67 48 *e*P **P** 00 19 18.4 +1.0
comp=Z,88nm,1.8s
PASC Pasadena Art C 85.67 46 *e*P **P** 00 19 17.3 0.0
comp=Z,154nm,1.0s
MWC Mount Wilson 85.79 46 *e*P **P** 00 19 17.6 -0.6
MWC pmax pmax
comp=Z,52nm,1.2s
MWC Mount Wilson 85.79 46 *e*P **P** 00 19 17.6 -0.6
comp=Z,52nm,1.2s
NJ2 Nanjing 85.79 311 *e*P **P** 00 19 20.0 +2.1
NJ2 pP **pP** 00 19 55.0 +0.6
NJ2 sP **sP** 00 20 06.0 -3.6
NJ2 SKS **SKSac** 00 29 30.0 0.0
NJ2 S **ScS** 00 29 46.5 -0.9
NJ2 pmax pmax
comp=Z,40nm,1.0s
NJ2 pmax pmax
comp=Z,1µm,7.3s
NJ2 LR LR
comp=N,950nm,25.5s
NJ2 LR LR
comp=E,760nm,27.3s
NJ2 LR LR
comp=Z,840nm,25.0s
ARVC Arvin 85.90 45 ⇓P **P** 00 19 19.6 +1.2
baz=86,SNR=9.4
MURC Murrieta 85.92 47 ⇑P **P** 00 19 19.7 +1.1
baz=86,SNR=10
UBPT Khong Chiam 85.95 290 P **P** 00 19 19.4 +0.3
MONP Monument Peak 85.97 48 ⇑P **P** 00 19 20.2 +1.1
baz=86,SNR=10
DVTC Desert V Tower 86.02 49 ⇑P **P** 00 19 20.7 +1.5
baz=86
HOPS Hopland 86.05 40 *e*P **P** 00 19 20.1 +1.0
comp=Z,96nm,1.1s
BFSC Mount Baldy Ra 86.05 46 ⇓P **P** 00 19 20.1 +0.7
baz=86,SNR=15
VES Vestal, Richgr 86.22 45 ⇓P **P** 00 19 20.8 +0.8
baz=87,SNR=15
EDW2 Edwards Air Fo 86.26 46 ⇑P **P** 00 19 21.0 +0.7
baz=87,SNR=18
SWSC Sam W. Stewart 86.40 48 ⇓P **P** 00 19 21.8 +0.8
baz=87,SNR=9.4
PFO Pinyon Flat Ob 86.40 48 P **P** 00 19 22.5 +1.4
comp=Z,137nm,1.0s,SNR=9.3
PFO Pinyon Flat Ob 86.40 48 ⇓P **P** 00 19 22.3 +1.2
baz=87,SNR=11
ISA Isabella 86.47 45 *e*P **P** 00 19 21.7 +0.3
ISA pmax pmax
comp=Z,60nm,1.0s
ISA Isabella 86.47 45 *e*P **P** 00 19 21.7 +0.3
comp=Z,60nm,1.0s
ISA Isabella 86.47 45 ⇑P **P** 00 19 22.5 +1.2
baz=87,SNR=47
SDPT Sand Point 86.61 10 *e*P **P** 00 19 21.6 +0.3
USRK Ussuriysk Arra 86.76 327 P **P** 00 19 23.4 +1.1
comp=Z,30nm,0.9s,baz=142,slow=3.5,SNR=38
USRK LR LR 00 57 39.7
comp=Z,534nm,19.1s,baz=25,slow=35
LRMC Laurel Mountai 86.83 46 ⇑P **P** 00 19 24.3 +1.1
baz=87
CMB Columbia Colle 86.92 42 *e*P **P** 00 19 23.6 +0.2
CMB pmax pmax
comp=Z,36nm,0.9s
CMB Columbia Colle 86.92 42 *e*P **P** 00 19 23.6 +0.2
comp=Z,36nm,0.9s
BELC Belle Mtn. Jos 86.94 48 ⇑P **P** 00 19 24.7 +1.0
baz=87,SNR=20
KHMM Horse Mountain 87.01 38 *e*P **P** 00 19 24.5 +0.6
comp=Z,54nm,1.1s
BC3 Big Chuckawall 87.08 48 ⇑P **P** 00 19 26.0 +1.6
baz=87,SNR=22
GLA Glamis 87.10 49 *e*P **P** 00 19 25.4 +1.0
GLA pmax pmax
comp=Z,84nm,1.4s
GLA Glamis 87.10 49 *e*P **P** 00 19 25.4 +1.0
comp=Z,84nm,1.4s
GLA Glamis 87.10 49 ⇓P **P** 00 19 25.8 +1.3
baz=87,SNR=11
OHCM Honcut 87.17 41 *e*P **P** 00 19 24.8 +0.3
HEC Hector,Ludlow 87.27 47 ⇑P **P** 00 19 26.2 +1.0
baz=88,SNR=29
GSC Goldstone 87.27 46 *e*P **P** 00 19 25.9 +0.7
GSC pmax pmax
comp=Z,61nm,1.0s
GSC Goldstone 87.27 46 *e*P **P** 00 19 25.9 +0.7
comp=Z,61nm,1.0s
GSC Goldstone 87.27 46 ⇓P **P** 00 19 26.4 +1.2
baz=88,SNR=37
MPMC Manual Prospec 87.34 45 ⇑P **P** 00 19 26.7 +1.1
baz=88,SNR=40
KRMB Red Mountain 87.37 38 *e*P **P** 00 19 26.9 +1.3
comp=Z,364nm,2.8s
DAC Darwin (Calif) 87.42 45 *e*P **P** 00 19 26.7 +0.7
DAC pmax pmax
comp=Z,11nm,0.9s
DAC Darwin (Calif) 87.42 45 *e*P **P** 00 19 26.7 +0.7
comp=Z,11nm,0.9s
WDC Whiskeytown Da 87.44 39 *e*P **P** 00 19 26.2 +0.4
WDC pmax pmax
comp=Z,27nm,1.0s
WDC Whiskeytown Da 87.44 39 *e*P **P** 00 19 26.2 +0.4
comp=Z,27nm,1.0s
MTUM Tungsten Hills 87.53 44 *e*P **P** 00 19 27.2 +0.6
MLAC Mammoth Lakes 87.56 43 ⇓P **P** 00 19 27.5 +0.8
baz=88
IRM Iron Mountain 87.59 48 ⇓P **P** 00 19 27.9 +1.2
baz=88,SNR=40
113A Mohawk Valley, 87.62 50 ⇑P **P** 00 19 28.1 +1.3
baz=88,SNR=14
GMRC Granite Mounta 87.66 47 ⇑P **P** 00 19 27.9 +0.8
baz=88,SNR=17
Y12C Blythe 87.74 49 ⇑P **P** 00 19 28.6 +1.2
baz=88,SNR=7.3
214A Organ Pipe Nat 87.75 51 ⇑P **P** 00 19 28.8 +1.3
baz=88
WHN Wuhan 87.89 307 P **P** 00 19 28.5 +0.4
WHN pP **pP** 00 20 03.8 -0.9
WHN SKS **SKSac** 00 29 42.5 -0.4
WHN pmax pmax
comp=Z,2µm,7.8s
TUQ Turquoise Moun 87.91 46 ⇓P **P** 00 19 29.5 +1.2
baz=88,SNR=11
SHOC Shoshone 87.98 46 ⇑P **P** 00 19 29.3 +0.8
baz=88,SNR=21
FURC Furnace Creek, 87.99 45 ⇑P **P** 00 19 29.1 +0.7
baz=88,SNR=9.0
GRAC Grapevine Rang 88.02 45 ⇓P **P** 00 19 29.9 +1.2
baz=88
KEBM Edson Butte 88.10 37 *e*P **P** 00 19 30.4 +1.5
comp=Z,123nm,1.3s
PAYG Puerto Ayora 88.12 90 *e*P **P** 00 19 31.1 +1.3
comp=Z,41nm,1.0s
WCN Washoe City 88.13 42 *e*P **P** 00 19 29.7 +0.4
WCN pmax pmax
comp=Z,28nm,0.9s
WCN Washoe City 88.13 42 *e*P **P** 00 19 29.7 +0.4
comp=Z,28nm,0.9s
YBH Yreka Blue Hor 88.16 38 *e*P **P** 00 19 29.7 +0.4
comp=Z,16nm,0.8s
BEKR Beckworth 88.17 41 *e*P **P** 00 19 29.2 -0.3
comp=Z,8.2nm,0.9s
LDFC Landfair 88.19 47 *e*P **P** 00 19 31.4 +1.7
comp=Z,90nm,0.9s
MDJ Mudanjiang 88.22 326 P **P** 00 19 30.5 +1.1
MDJ pP **pP** 00 20 05.3 -0.7
MDJ sP **sP** 00 20 21.3 +0.1
MDJ PP **PP** 00 22 57.5 -1.6
MDJ pmax pmax
comp=Z,26nm,1.1s
MDJ pmax pmax
comp=Z,870nm,7.1s
MDJ Mudanjiang 88.22 326 *e*P **P** 00 19 29.3 -0.1
comp=Z,12nm,0.8s
LBCM Butte Creek Ri 88.28 40 P **P** 00 19 30.4 +0.5
NEE2 Needles Airpor 88.31 48 ⇓P **P** 00 19 31.2 +1.1
baz=89,SNR=5.8
PDMCI Parker Dam,Lak 88.33 48 ⇓P **P** 00 19 30.9 +0.8
baz=89,SNR=11
NVAR Mina Array Bea 88.40 43 P **P** 00 19 30.8 +0.1
NVAR pP **pP** 00 20 08.6 +1.3
NVAR PP **PP** 00 23 00.4 -0.5
NVAR Mina Array Bea 88.40 43 P **P** 00 19 30.7 +0.1
comp=Z,31nm,0.8s,baz=222,slow=7.2,SNR=63
NVAR pP **pP** 00 20 08.6 +1.3
comp=Z,7.5nm,0.7s,baz=222,slow=7.8,SNR=2.3
NVAR PP **PP** 00 23 00.4 -0.5
comp=Z,1.8nm,0.8s,baz=217,slow=7.3,SNR=2.6
NV11 Mina Array Sit 88.49 43 *e*P **P** 00 19 31.1 +0.1
DL2 Dalian 88.52 318 ⇑P **P** 00 19 31.8 +0.9
DL2 pP **pP** 00 20 06.8 -0.8
DL2 sP **sP** 00 20 23.0 +0.3
DL2 SKS **SKSac** 00 29 44.5 -1.8
DL2 S **S** 00 30 05.8 +1.2
DL2 pmax pmax
comp=Z,47nm,0.6s
DL2 pmax pmax
comp=Z,620nm,4.7s
Z14A Wintersburg 88.53 50 ⇑P **P** 00 19 32.5 +1.3
baz=89,SNR=23
HUMO Hull Mountain 88.64 38 *e*P **P** 00 19 32.2 +0.8
comp=Z,107nm,1.8s
Y14A Wickenburg 88.84 49 ⇓P **P** 00 19 33.6 +1.0
baz=89,SNR=27
W13A Hualapai Mount 88.99 48 ⇑P **P** 00 19 34.4 +0.9
baz=89,SNR=31
TUC Tucson 89.34 52 *e*P **P** 00 19 36.0 +0.9
TUC pmax pmax
comp=Z,20nm,1.5s
TUC Tucson 89.34 52 *e*P **P** 00 19 36.0 +0.9
comp=Z,20nm,1.5s
SNY Shenyang 89.37 321 ⇓P **P** 00 19 35.5 +0.7
SNY sP **sP** 00 20 29.3 +2.6
SNY pmax pmax
comp=Z,45nm,1.0s
SNY LR LR
comp=N,740nm,15.9s
SNY LR LR
comp=E,530nm,5.7s
LCO Las Campanas 89.44 123 *e*P **P** 00 19 35.5 -0.5
comp=E,350nm,2.4s
LCO Las Campanas 89.44 123 P **P** 00 19 36.3 +0.2
baz=89,SNR=5.8
MOD Modoc 89.58 39 *e*P **P** 00 19 36.2 +0.2
OHAK Old Harbor 89.66 13 *e*P **P** 00 19 36.8 +1.0
comp=E,92nm,1.0s
CN2 Changchun 89.73 323 *e*P **P** 00 19 37.3 +0.8
CN2 *e*pP **pP** 00 20 13.0 -0.2
CN2 *e*sP **sP** 00 20 28.0 -0.3
CN2 SKS **SKSac** 00 29 53.0 -0.2
CN2 *e*S **S** 00 30 15.5 -0.2
CN2 sS **sS** 00 31 18.3 -1.0
CN2 SS **SS** 00 36 21.0 +4.3
CN2 pmax pmax
comp=Z,50nm,1.0s
CN2 pmax pmax
comp=Z,1µm,8.0s
CN2 LR LR
comp=N,300nm,19.0s
CN2 LR LR
comp=E,400nm,19.0s
CN2 LR LR
comp=Z,500nm,21.0s
319A Douglas 89.81 53 ⇑P **P** 00 19 38.3 +0.9
baz=90
R11A Troy Canyon, C 89.97 44 ⇓P **P** 00 19 38.8 +0.8
baz=90
X16A Lo Mia Camp, P 90.16 50 ⇓P **P** 00 19 40.3 +1.3
baz=90
320A Kipp Ranch, An 90.31 54 ⇑P **P** 00 19 41.1 +1.4
baz=91
KDAK Kodiak Island 90.33 14 P **P** 00 19 38.7 -0.1
KDAK Kodiak Island 90.33 14 P **P** 00 19 38.7 -0.1
comp=Z,28nm,0.9s,baz=141,slow=1.7,SNR=7.2
BMN Battle Mountai 90.34 42 *e*P **P** 00 19 39.9 +0.2
BMN Battle Mountai 90.34 42 *e*P **P** 00 19 39.9 +0.2
220A Playas Peak, P 90.64 53 P **P** 00 19 42.8 +1.5
baz=91,SNR=36
KLR Kul'dur 90.65 330 *e*P P 00 19 36.5 -4.1
KLR *e* 00 23 14.0
KLR *e*S **S** 00 30 22.0 -1.9
KLR *e* 00 31 29.0
KLR pmax pmax
comp=Z,1µm,8.0s
U15A North Rim 90.83 48 P **P** 00 19 43.6 +1.5
baz=91,SNR=30
CCUT Cedar City 90.84 46 *e*P **P** 00 19 43.0 +0.9
comp=Z,25nm,1.1s
WUAZ Wupatki 90.87 49 ⇑P **P** 00 19 43.0 +0.8
baz=91,SNR=9.0
120A U Bar Ranch, L 90.94 52 ⇓P **P** 00 19 44.0 +1.4
baz=91,SNR=29
GYA Guiyang 91.08 300 ⇑*i*P **P** 00 19 44.3 +1.0
GYA pP **pP** 00 20 21.5 +1.4
GYA sP **sP** 00 20 37.8 +2.6
GYA PP **PP** 00 23 25.0 +2.7
GYA SKS **SKSac** 00 30 01.3 -0.8
GYA S **S** 00 30 28.0 -1.1
GYA SS **SS** 00 36 39.0 +2.0
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,160nm,5.3s
GYA LR LR
comp=N,4µm,19.8s
GYA LR LR
comp=E,2µm,20.6s
GYA LR LR
comp=Z,6µm,21.5s
VIPM Ingram Point 91.18 37 P **P** 00 19 43.7 +0.3
VIPM Ingram Point 91.18 37 P **P** 00 19 43.7 +0.3
BMW Boistfort Moun 91.21 35 P **P** 00 19 44.4 +1.0
BMW Boistfort Moun 91.21 35 P **P** 00 19 44.4 +1.0
X18A Snowflake 91.22 50 ⇑P **P** 00 19 44.8 +0.9
baz=92
221A Mesquite Ranch 91.22 53 ⇓P **P** 00 19 44.7 +0.8
baz=92
Z20A Nine Sixteen R 91.30 52 ⇓P **P** 00 19 45.9 +1.6
baz=92,SNR=25
FL2 Flat Top 2 91.45 35 P **P** 00 19 45.6 +1.1
121A Cookes Peak, D 91.52 53 ⇓P **P** 00 19 46.2 +0.9
baz=92,SNR=10
TDL Tradedollar La 91.62 35 P **P** 00 19 46.3 +0.9
ELK Elko 91.70 43 *e*P **P** 00 19 46.3 +0.3
W18A Petrified Fore 91.70 50 ⇑P **P** 00 19 47.5 +1.4
baz=92
Y20A Horse Springs, 91.91 51 ⇑P **P** 00 19 49.0 +1.8
baz=92,SNR=16
Z21A St. Cloud Mine 92.04 52 ⇑P **P** 00 19 48.8 +1.1
baz=92,SNR=9.9
HDW Hoodsport 92.12 34 P **P** 00 19 48.6 +1.0
MVU Marysvale 92.14 46 *e*P **P** 00 19 49.3 +1.2
comp=Z,19nm,1.1s
MSU Marysvale 92.17 46 *e*P **P** 00 19 49.3 +1.1
MSU Marysvale 92.17 46 *e*P **P** 00 19 49.3 +1.1
X20A Quemado 92.19 51 ⇑P **P** 00 19 49.3 +0.9
baz=92
626A Big Bend Ranch 92.44 57 ⇓P **P** 00 19 50.0 +0.5
baz=93,SNR=16
Y21A Point of Rocks 92.44 52 ⇑P **P** 00 19 50.8 +1.1
baz=93,SNR=6.9
BJI Beijing 92.48 316 P **P** 00 19 50.0 +0.7
BJI pP **pP** 00 20 26.5 +0.4
BJI sP **sP** 00 20 43.5 +2.3
BJI SKS **SKSac** 00 30 07.3 -1.7
BJI S **ScS** 00 30 43.5 +0.9
BJI sS **sS** 00 31 46.3 +1.6
BJI SS **SS** 00 36 59.5 +3.0
BJI pmax pmax
comp=Z,28nm,0.9s
BJI pmax pmax
comp=Z,830nm,9.5s
Z22A Elephant Butte 92.50 53 ⇓P **P** 00 19 50.2 +0.4
baz=93,SNR=5.1
425A Indio Mountain 92.50 56 ⇓P **P** 00 19 50.1 +0.3
baz=93,SNR=11
324A Moseley Ranch, 92.51 55 ⇓P **P** 00 19 50.3 +0.4
baz=93
W20A Ramah 92.53 50 ⇑P **P** 00 19 50.9 +0.9
baz=93,SNR=8.2
RMW Rattlesnake Mo 92.59 35 P **P** 00 19 50.1 +0.3
RMW Rattlesnake Mo 92.59 35 P **P** 00 19 50.0 +0.3
X21A Alamocita Cree 92.62 51 ⇓P **P** 00 19 51.2 +0.7
baz=93,SNR=5.5
TXAR Lajitas Array 92.66 58 P **P** 00 19 50.8 +0.2
TXAR pP **pP** 00 20 28.2 +0.9
TXAR PKKP **PKKPbc** 00 37 02.1 0.0
TXAR Lajitas Array 92.66 58 P **P** 00 19 50.8 +0.2
comp=Z,9.7nm,1.0s,baz=203,slow=6.7,SNR=46
TXAR pP **pP** 00 20 28.2 +0.9
comp=Z,5.8nm,0.9s,baz=205,slow=5.0,SNR=4.5
TXAR PKKP **PKKPbc** 00 37 02.1 0.0
comp=Z,0.4nm,0.6s,baz=97,slow=2.3,SNR=8.7
TXAR LR LR 00 57 36.1
comp=Z,431nm,18.6s,baz=260,slow=33
526A Mary Lane Ranc 92.75 57 ⇓P **P** 00 19 51.0 0.0
baz=93,SNR=19
DUG Dugway 92.80 44 *e*P **P** 00 19 50.6 -0.4
DUG pmax pmax
comp=Z,10.0nm,1.1s
DUG Dugway 92.80 44 *e*P **P** 00 19 50.6 -0.4
comp=Z,10.0nm,1.1s
DUG Dugway 92.80 44 ⇑P **P** 00 19 51.6 +0.6
baz=93
325A Bean Ranch, Si 92.84 55 ⇓P **P** 00 19 52.0 +0.5
baz=93,SNR=12
224A Cornudas Mount 92.84 54 ⇑P **P** 00 19 52.2 +0.8
baz=93,SNR=6.5
Y22A Socorro 92.89 52 ⇑P **P** 00 19 52.6 +1.0
baz=93,SNR=7.9
627A Terlingua Ranc 92.92 58 ⇓P **P** 00 19 52.1 +0.3
baz=93,SNR=34
CMAR Chiang Mai Arr 92.93 290 P **P** 00 19 53.2 +1.3
CMAR PP **PP** 00 23 36.9 +0.1
CMAR PKKP **PKKPbc** 00 37 01.4 +0.5
CMAR Chiang Mai Arr 92.93 290 P **P** 00 19 53.2 +1.3
comp=Z,20nm,0.9s,baz=138,slow=3.4,SNR=52
CMAR PP **PP** 00 23 36.9 +0.1
comp=Z,5.5nm,0.9s,baz=138,slow=5.8,SNR=5.5
CMAR PKKP **PKKPbc** 00 37 01.4 +0.5
comp=Z,1.4nm,0.5s,baz=277,slow=3.7,SNR=7.1
HAWA Hanford 93.01 36 *e*P **P** 00 19 51.9 +0.3
comp=Z,19nm,0.8s
LAZ Ladron 93.03 52 *e*P **P** 00 19 52.9 +0.7
comp=Z,5.4nm,1.0s
Q16A Castle Valley 93.04 46 ⇓P **P** 00 19 52.9 +0.7
baz=93
MFID Camas Ranch 93.06 40 ⇓P **P** 00 19 52.5 +0.4
baz=93,SNR=18
W21A San Fidel 93.10 51 ⇑P **P** 00 19 53.7 +1.1
baz=93
CMMT Chiang Mai 93.10 290 P **P** 00 19 53.2 +0.5
comp=Z,30nm,0.7s,comp=Z,630nm
CHTO Chiang Mai 93.11 290 *e*P **P** 00 19 53.2 +0.4
CHTO pmax pmax
comp=Z,18nm,0.7s
CHTO Chiang Mai 93.11 290 *e*P **P** 00 19 53.1 +0.4
comp=Z,18nm,0.7s
CHTO Chiang Mai 93.11 290 P **P** 00 19 53.9 +1.1
SNR=6.4
CHTO Chiang Mai 93.11 290 P **P** 00 19 53.5 +0.8
comp=Z,31nm,0.8s,comp=Z,661nm
426A McDonald Obser 93.12 56 ⇑P **P** 00 19 53.2 +0.4
baz=93,SNR=5.5
BBB Bella Bella 93.14 28 LR LR 00 57 40.2
comp=Z,279nm,19.3s,baz=250,slow=33
527A Woodward Ranch 93.14 57 ⇑P **P** 00 19 52.5 -0.3
baz=93
X22A Bernardo 93.18 52 ⇓P **P** 00 19 54.1 +1.2
baz=94
124A Stringfield Ra 93.23 54 ⇓P **P** 00 19 53.4 0.0
baz=94,SNR=6.4
TMUT Trail Mountain 93.24 46 *e*P **P** 00 19 54.1 +0.9
comp=Z,17nm,0.8s
628A Black Gap, Mar 93.31 58 ⇑P **P** 00 19 53.5 +0.1
baz=94
KMI Kunming 93.35 297 ⇑P **P** 00 19 54.8 +0.8
KMI pP **pP** 00 20 31.5 +0.7
KMI sP **sP** 00 20 45.0 -0.9
KMI PP **PP** 00 23 43.3 +3.1
KMI SKS **SKSac** 00 30 13.8 -1.2
KMI S **S** 00 30 48.0 -1.6
KMI sS **sS** 00 31 52.5 -1.1
KMI SS **SS** 00 37 09.3 -0.5
KMI pmax pmax
comp=Z,25nm,0.9s
KMI pmax pmax
comp=Z,470nm,6.0s
KMI LR LR
comp=N,640nm,26.0s
KMI LR LR
comp=E,570nm,21.2s
KMI LR LR
comp=Z,2µm,26.7s
225A Deer Hill, Car 93.35 55 ⇑P **P** 00 19 54.3 +0.5
baz=94,SNR=7.0
MPU Maple Canyon 93.41 45 *e*P **P** 00 19 54.5 +0.5
comp=Z,8.6nm,0.9s
TIY Taiyuan 93.42 312 ⇑P **P** 00 19 54.5 +0.7
TIY pP **pP** 00 20 32.5 +1.9
TIY sP **sP** 00 20 46.5 +0.8
TIY SKS **SKSac** 00 30 13.5 -1.0
TIY S **S** 00 30 49.3 0.0
TIY pmax pmax
comp=Z,540nm,4.6s
SRU San Rafael 93.56 46 *e*P **P** 00 19 54.6 +0.1
SRU pmax pmax
comp=Z,12nm,0.9s
SRU San Rafael 93.56 46 *e*P **P** 00 19 54.6 +0.1
comp=Z,12nm,0.9s
SRU San Rafael 93.56 46 ⇑P **P** 00 19 54.7 +0.1
baz=94
SPU Mount Spurr 93.58 12 *e*P **P** 00 19 53.4 -0.5
P17A Butcher Ranch, 93.64 46 ⇑P **P** 00 19 55.2 +0.2
baz=94
Z24A Sheeppen Canyo 93.65 53 ⇑P **P** 00 19 55.7 +0.5
baz=94,SNR=5.9
427A Hayter Ranch, 93.67 56 ⇑P **P** 00 19 55.7 +0.5

baz=94,SNR=21
WTV Waterville 93.67 35 P P 00 19 54.8 +0.1
I12A Atlanta 93.69 40 ⇑P P 00 19 55.8 +0.8
baz=94,SNR=19
GDL2 Guadalupe Moun 93.72 55 eP P 00 19 55.5 +0.1
528A Cox Ranch, San 93.75 57 ⇑P P 00 19 55.9 +0.3
baz=94,SNR=7.1
125A Gardner Draw, 93.77 54 ⇑P P 00 19 56.0 +0.4
baz=94,SNR=6.3
HVU Hansel Valley 93.80 43 eP P 00 19 55.7 +0.1
HVU pmax pmax
comp=Z,33nm,1.0s
HVU Hansel Valley 93.80 43 eP P 00 19 55.7 +0.1
comp=Z,33nm,1.0s
226B Tecolote Peak, 93.80 55 ⇑P P 00 19 55.9 +0.2
baz=94,SNR=6.9
ANMO Albuquerque 93.80 52 eP P 00 19 56.0 +0.1
comp=Z,40nm,1.8s
U21A Nageezi 93.84 50 ⇑P P 00 19 57.0 +1.0
baz=94
JLU Jordanelle 93.88 45 eP P 00 19 56.1 0.0
comp=Z,59nm,2.2s
DAU Daniels Canyon 93.88 45 eP P 00 19 56.8 +0.6
DAU Daniels Canyon 93.88 45 eP P 00 19 56.8 +0.6
Y24A Capitan 93.93 53 ⇑P P 00 19 57.1 +0.6
baz=94,SNR=12
HLID Hailey 93.95 41 eP P 00 19 56.5 +0.2
comp=Z,13nm,0.9s
HLID Hailey 93.95 41 ⇑P P 00 19 57.0 +0.7
baz=94,SNR=20
J13A Cove Ranch, Pi 93.98 41 ⇑P P 00 19 57.3 +0.9
baz=94,SNR=23
P18A Preston Nutter 94.04 46 ⇑P P 00 19 57.4 +0.5
baz=94,SNR=7.7
Z25A Roswell 94.07 54 ⇑P P 00 19 57.1 +0.1
baz=94,SNR=7.5
428A Kincaid Ranch, 94.13 57 ⇓P P 00 19 57.2 0.0
baz=94
529A Stev Forest Ra 94.14 58 ⇓P P 00 19 56.7 -0.6
baz=94,SNR=8.8
L15A Malad City 94.16 43 ⇑P P 00 19 57.5 +0.3
baz=94,SNR=20
126A Clayton Basin, 94.21 55 ⇓P P 00 19 58.0 +0.3
baz=94
T21A Navajo Lake 94.24 49 ⇓P P 00 19 58.9 +1.0
baz=95
Q19A Hogan Spring (94.26 47 ⇓P P 00 19 58.4 +0.7
baz=95
J14A Carey 94.31 42 ⇓P P 00 19 59.1 +1.2
baz=95
I13A Wildhorse Cree 94.34 41 ⇓P P 00 19 58.8 +0.8
baz=95,SNR=11
328A Wristen Ranch, 94.39 56 ⇑P P 00 19 58.4 0.0
baz=95
LPA La Plata 94.40 135 eP P 00 20 02.0 +3.5
LPA SKS SKSac 00 30 21.0 +0.8
HWUT Hardware Ranch 94.41 44 eP P 00 19 58.1 -0.3
comp=Z,14nm,1.3s
G12A Big Creek, Yel 94.42 39 ⇓P P 00 19 58.7 +0.3
baz=95,SNR=21
RAGM Ragged Mountai 94.44 16 eP P 00 19 59.2 +1.3
S21A Coal Bank Pass 94.46 49 ⇑P P 00 19 59.8 +0.9
baz=95
K15A Arbon 94.49 42 ⇑P P 00 20 00.1 +1.4
baz=95,SNR=9.0
PMR Palmer 94.53 14 eP P 00 19 57.1 -1.1
PMR pmax pmax
comp=Z,17nm,0.7s
PMR Palmer 94.53 14 eP P 00 19 57.1 -1.1
comp=Z,17nm,0.7s
Z26A Caprock 94.58 54 ⇓P P 00 19 59.1 -0.2
baz=95,SNR=7.4
429A Davenport Ranc 94.65 57 ⇑P P 00 19 59.5 -0.1
baz=95,SNR=31
W24A Lazy 6 Ranch, 94.66 52 ⇓P P 00 19 59.6 -0.2
baz=95
H13A Challis 94.66 40 ⇓P P 00 20 00.0 +0.6
baz=95,SNR=13
T22A Edith 94.67 50 ⇓P P 00 20 00.1 +0.3
baz=95
127A Arkansas Junct 94.70 55 ⇑P P 00 20 00.1 +0.3
baz=95
I14A Mackay 94.72 41 ⇓P P 00 20 01.5 +1.7
baz=95,SNR=13
L16A Fish Haven 94.74 44 ⇓P P 00 19 59.7 -0.2
baz=95,SNR=7.7
U23A El Rito 94.76 51 ⇓P P 00 20 02.7 +2.5
baz=95
X25A Clemmons Ranch 94.80 53 ⇓P P 00 20 00.4 +0.1
baz=95
530A J-C Ranch, Com 94.80 58 ⇑P P 00 20 00.3 0.0
baz=95,SNR=6.9
DIV Divide 94.84 15 eP P 00 20 00.3 +0.6
comp=Z,23nm,1.0s
F12A Elk City 94.86 39 ⇓P P 00 20 00.6 +0.3
baz=95,SNR=23
M17A Scullys Gap (B 94.87 44 ⇓P P 00 20 00.6 0.0
baz=95,SNR=8.1
Q20A Ridgley Place, 94.88 47 ⇓P P 00 20 00.6 0.0
baz=95
SML Sawmill 94.89 14 eP P 00 20 01.9 +2.0
SML Sawmill 94.89 14 eP P 00 20 01.9 +2.0
228A UT Block 9, Go 94.94 56 ⇑P P 00 20 00.7 -0.3
baz=95
BMRM Bremner River 94.97 16 eP P 00 19 59.4 -1.0
631A Perdido Creek 94.97 59 ⇓P P 00 20 01.1 0.0
baz=95,SNR=11
J15A Blackfoot 94.98 42 ⇑P P 00 20 01.5 +0.5
baz=95,SNR=14
G13A Cobalt 95.00 40 ⇑P P 00 20 01.4 +0.4
baz=95,SNR=15
R21A Cimarron 95.02 48 ⇓P P 00 20 01.5 +0.1
baz=95
329A Wagon Wheel Ra 95.04 57 ⇓P P 00 20 01.7 +0.3
baz=95,SNR=9.4
732A Laxson Ranch, 95.07 60 ⇓P P 00 20 01.5 0.0
baz=95
L17A Cokeville 95.12 44 ⇑P P 00 20 00.3 -1.4
baz=96
P20A De Beque 95.13 47 ⇓P P 00 20 02.3 +0.6
baz=96
O19A Miners Draw (B 95.13 46 ⇑P P 00 20 01.7 0.0
baz=96,SNR=7.3
S22A 4UR Ranch, Cre 95.13 49 ⇑P P 00 20 03.0 +1.0
baz=96
K16A Soda Springs 95.14 43 ⇑P P 00 20 02.1 +0.4
baz=96,SNR=13
Z27A Tatum 95.14 54 ⇓P P 00 20 01.6 -0.3
baz=95
H14A Leadore 95.19 41 ⇓P P 00 20 02.4 +0.5
baz=96,SNR=18
M18A Lyman 95.21 45 ⇓P P 00 20 01.8 -0.3
baz=96
430A Baggett Ranch, 95.21 57 ⇑P P 00 20 01.9 -0.3
baz=96
128A Castleberry Fa 95.29 55 ⇓P P 00 20 02.3 -0.3
baz=96,SNR=5.5
W25A X Bar L Ranch, 95.31 52 ⇓P P 00 20 02.5 -0.2
baz=96
F13A Darby 95.38 39 ⇓P P 00 20 03.3 +0.6
baz=96,SNR=12
J16A Bone 95.39 42 ⇓P P 00 20 03.3 +0.4
baz=96,SNR=13
531A Rocksprings 95.39 58 ⇓P P 00 20 03.0 0.0
baz=96,SNR=18
X26A CR and CF Fran 95.40 53 ⇓P P 00 20 03.7 +0.7
baz=96
229A Bryant Ranch, 95.42 56 ⇑P P 00 20 04.6 +1.5
baz=96
R22A Saguache, Gunn 95.45 49 ⇑P P 00 20 03.2 -0.3
baz=96
K17A Gardner Place, 95.48 43 ⇓P P 00 20 04.0 +0.7
baz=96,SNR=11
Y27A Causey 95.49 54 ⇑P P 00 20 02.9 -0.6
baz=96,SNR=7.9
L18A Fontenelle, Gr 95.52 44 ⇓P P 00 20 03.5 0.0
baz=96
G14A Jackson 95.53 40 ⇓P P 00 20 04.2 +0.7
baz=96
330A Mertzon 95.58 57 ⇓P P 00 20 03.3 -0.6
baz=96
O20A White River Ci 95.59 46 ⇓P P 00 20 03.5 -0.4
baz=96
H15A Lima 95.60 41 ⇑P P 00 20 04.0 +0.1
baz=96
632A Uvalde 95.61 59 ⇓P P 00 20 03.9 -0.1
baz=96,SNR=7.4
431A Sonora 95.62 58 ⇑P P 00 20 04.6 +0.6
baz=96
MCMT McKenzie Canyo 95.62 41 eP P 00 20 03.9 -0.1
comp=Z,5.7nm,1.1s
CD2 Chengdu 95.62 302 P P 00 20 05.0 +1.0
CD2 pP pP 00 20 41.5 +0.7
CD2 sP sP 00 20 56.5 +0.5
CD2 PP PP 00 24 00.8 +3.2
CD2 SKS SKSac 00 30 26.3 -0.3
CD2 S S 00 31 06.8 -1.9
CD2 sS sS 00 32 10.8 -2.1
CD2 SS SS 00 37 43.3 +1.7
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,660nm,6.8s
CD2 LR LR
comp=N,560nm,19.6s
CD2 LR LR
comp=E,790nm,22.5s
CD2 LR LR
comp=Z,600nm,19.6s
D12A Red Ives Fores 95.63 38 ⇑P P 00 20 03.8 +0.1
baz=96
C11A Tepee Creek (N 95.65 37 ⇓P P 00 20 03.9 +0.2
baz=96
SEY Seymchan 95.70 347 c iP P 00 20 04.1 +0.6
Q22A Crested Butte, 95.71 48 ⇓P P 00 20 05.6 +1.0
baz=96
Z28A Tucker Farm, M 95.71 55 ⇓P P 00 20 04.2 -0.3
baz=96,SNR=5.9
129A Stewart Farms, 95.73 56 ⇑P P 00 20 04.6 0.0
baz=96,SNR=5.8
HHC Hu-ho-hao-te 95.79 314 eP P 00 20 04.0 -0.6
HHC pP pP 00 20 40.8 -0.7
HHC sP sP 00 20 56.5 -0.1
HHC PP PP 00 24 00.0 +1.2
HHC SKS SKSac 00 30 26.0 -1.2
HHC S S 00 31 06.8 -3.1
HHC sS sS 00 32 10.3 -3.8
HHC SS SS 00 37 44.8 +1.0
HHC pmax pmax
comp=Z,36nm,0.7s
HHC pmax pmax
comp=Z,800nm,7.1s
MSTX Muleshoe 95.81 54 ⇑P P 00 20 04.9 0.0
baz=96,SNR=6.7
M19A Rock Springs 95.81 45 ⇓P P 00 20 05.1 +0.3
baz=96
TNA Tin City 95.81 4 eP P 00 20 05.3 +1.4
comp=Z,40nm,1.0s
I16A Newdale 95.82 42 ⇓P P 00 20 06.0 +1.2
baz=96
532A Rocksprings 95.84 59 ⇑P P 00 20 05.1 0.0
baz=96,SNR=14
SMCO Snowmass 95.85 48 eP P 00 20 05.5 +0.2
E13A Victor 95.87 39 ⇓P P 00 20 05.8 +0.9
baz=96
TPAW Teton Pass 95.90 43 eP P 00 20 05.4 +0.1
comp=Z,26nm,1.4s
K18A Toltan Ranch, 95.94 44 ⇑P P 00 20 06.3 +0.9
baz=96,SNR=17
J17A Brown Place, J 95.97 43 ⇓P P 00 20 07.1 +1.6
baz=96,SNR=12
N20A Spence Gulch, 95.97 46 ⇑P P 00 20 06.2 +0.5
baz=96,SNR=9.6
C12B Naegeli Ranch, 95.98 37 ⇑P P 00 20 05.7 +0.5
baz=96
U25A Circle Dot Ran 96.00 51 ⇑P P 00 20 06.6 +0.8
baz=96
TRF Thorofare Moun 96.00 12 eP P 00 20 03.9 -1.2
comp=Z,19nm,0.8s
SNOW Snow King Moun 96.00 43 eP P 00 20 05.8 +0.1
comp=Z,22nm,1.0s
G15A Dillon 96.02 41 ⇓P P 00 20 06.5 +0.8
baz=96,SNR=21
L19A Farson 96.03 44 ⇓P P 00 20 05.5 -0.3
baz=96,SNR=8.1
JCT Junction City 96.10 58 eP P 00 20 05.9 -0.3
JCT pmax pmax
comp=Z,16nm,1.4s
JCT Junction City 96.10 58 eP P 00 20 05.9 -0.3
comp=Z,16nm,1.4s
JCT Junction City 96.10 58 ⇑P P 00 20 05.9 -0.3
baz=96,SNR=5.5
S24A Houchin Ranch, 96.14 50 ⇓P P 00 20 06.8 +0.2
baz=96
Y28A McKinney Farm, 96.14 54 ⇓P P 00 20 06.4 0.0
baz=96
IMW Indian Meadow 96.15 42 eP P 00 20 06.9 +0.5
comp=Z,14nm,1.1s
MOOW Moose Ponds 96.17 42 eP P 00 20 05.8 -0.6
comp=Z,13nm,1.4s
LOHW Long Hollow 96.18 43 eP P 00 20 06.4 -0.1
comp=Z,10.0nm,1.1s
Z29A Hungry Hill Ra 96.18 55 ⇑P P 00 20 05.1 -1.5
baz=96,SNR=7.0
W27A Bowe Ranch, En 96.19 53 ⇑P P 00 20 06.4 -0.2
baz=96
MSO Missoula 96.24 39 eP P 00 20 06.7 +0.2
J18A Kendall Valley 96.28 43 ⇓P P 00 20 07.3 +0.3
baz=97,SNR=33
PDAR Pinedale Array 96.30 44 P P 00 20 06.3 -0.8
PDAR PP PP 00 24 00.5 -2.4
PDAR PKKP PKKPbc 00 36 52.6 -0.7
PDAR Pinedale Array 96.30 44 P P 00 20 06.3 -0.8
comp=Z,2.3nm,0.7s,baz=193,slow=3.7,SNR=19
PDAR PP PP 00 24 00.5 -2.4
comp=Z,2.5nm,1.1s,baz=221,slow=3.6,SNR=3.8
PDAR PKKP PKKPbc 00 36 52.6 -0.7
comp=Z,1.8nm,0.5s,baz=87,slow=4.1,SNR=11
PDAR LR LR 00 55 20.0
comp=Z,482nm,19.6s,baz=247,slow=30
432A Menard 96.31 58 ⇓P P 00 20 07.4 +0.2
baz=97
I17A Pilgrim Ck. 96.38 42 ⇑P P 00 20 08.6 +1.2
baz=97,SNR=9.4
N21A Black Mountain 96.40 46 ⇑P P 00 20 07.1 -0.4
baz=97,SNR=7.8
M20A Sweetwater, Wa 96.40 45 ⇑P P 00 20 07.2 -0.4
baz=97,SNR=5.9
T25A Trinidad 96.40 51 ⇓P P 00 20 07.1 -0.6
baz=97
BSMT Bassoo Peak 96.43 37 eP P 00 20 07.2 -0.2
C13A Hot Springs 96.43 38 ⇓P P 00 20 08.9 +1.6
baz=97
G16A Moss Hill, Enn 96.45 41 ⇑P P 00 20 08.1 +0.4
baz=97,SNR=7.8
H16A Russell Place, 96.45 41 ⇓P P 00 20 09.0 +1.3
baz=97,SNR=8.5
MCK McKinley 96.51 13 eP P 00 20 07.1 -0.1
MCK pmax pmax
comp=Z,18nm,0.9s
MCK McKinley 96.51 13 eP P 00 20 07.1 -0.1
comp=Z,18nm,0.9s
Y29A Porterfield Fa 96.52 55 ⇓P P 00 20 09.0 +0.9
baz=97
PAX Paxson 96.54 15 eP P 00 20 06.5 -1.0
PAX Paxson 96.54 15 eP P 00 20 06.5 -1.0
YMR Madison River 96.59 42 eP P 00 20 09.7 +1.3
comp=Z,26nm,1.3s
L20A Wamsutter 96.60 45 ⇑P P 00 20 08.7 +0.2
baz=97,SNR=14
Z30A Sanderson Ranc 96.61 55 ⇑P P 00 20 08.1 -0.4
baz=97
332A Millersview 96.61 58 ⇓P P 00 20 08.5 -0.1
baz=97
D14A Greenough 96.63 39 ⇑P P 00 20 08.0 -0.3
baz=97
H17A Grant Village 96.66 42 ⇑P P 00 20 10.5 +1.8
baz=97,SNR=5.8
S25A Robets Cordova 96.67 50 ⇑P P 00 20 08.6 -0.2
baz=97
CHMT Chamberlain Mo 96.67 39 eP P 00 20 08.1 -0.6
O22A Kremmling 96.67 47 ⇓P P 00 20 09.3 +0.3
baz=97
I18A Diamond G Ranc 96.69 43 ⇑P P 00 20 10.3 +1.5
baz=97,SNR=5.6
E15A Deer Lodge 96.70 39 ⇑P P 00 20 10.7 +2.0
baz=97
K19A Absolon Red Bu 96.76 44 ⇓P P 00 20 09.1 0.0
baz=97
BOZ Bozeman (W) 96.80 41 eP P 00 20 09.2 +0.1
BOZ pmax pmax
comp=Z,11nm,1.0s
BOZ Bozeman (W) 96.80 41 eP P 00 20 09.2 +0.1
comp=Z,11nm,1.0s
BOZ Bozeman (W) 96.80 41 ⇓P P 00 20 09.9 +0.8
baz=97,SNR=18
X29A Tulia 96.81 54 ⇓P P 00 20 09.1 -0.3
baz=97
131A Roby 96.81 56 ⇓P P 00 20 09.4 0.0
baz=97
J19A Crowheart 96.89 44 ⇑P P 00 20 10.0 +0.3
baz=97,SNR=5.4
Q24A Divide 96.91 49 ⇑P P 00 20 11.5 +1.4
baz=97
C14A Swan Lake 96.92 38 ⇑P P 00 20 09.0 -0.6
baz=97
M21A Separation Pea 96.97 46 ⇓P P 00 20 09.4 -0.7
baz=97,SNR=6.1
DLBC Dease Lake 97.12 23 eP Pdif 00 20 10.8 +0.6
DLBC Dease Lake 97.12 23 P Pdif 00 20 10.9 +0.6
comp=Z,4.7nm,1.0s,baz=242,slow=9.9,SNR=6.2
DLBC LR LR 00 56 00.9
comp=Z,419nm,19.4s,baz=322,slow=30
D15A Lincoln 97.14 39 ⇓P P 00 20 10.3 -0.4
baz=98
L21A Rawlins 97.17 45 ⇑P P 00 20 10.6 -0.4
baz=98
HRY Holter Researc 97.32 40 eP Pdif 00 20 13.0 +1.5
M22A Cedar Creek Ra 97.33 46 ⇑P Pdif 00 20 13.1 +1.2
baz=98
H18A Shoshone NF, C 97.35 42 ⇑P Pdif 00 20 13.2 +1.4
baz=98
I19A Meeteetse 97.37 43 ⇓P Pdif 00 20 12.1 +0.2
baz=98,SNR=9.1
DOT Dot Lake 97.44 15 eP Pdif 00 20 11.5 0.0
comp=Z,45nm,0.8s
F17A Fitzpatrick Pl 97.50 41 ⇓P Pdif 00 20 13.0 +0.7
baz=98
J20A Shoshoni 97.52 44 ⇑P Pdif 00 20 13.1 +0.6
baz=98,SNR=6.4
C15A Salmond Ranch, 97.54 38 ⇓P P 00 20 12.3 -0.1
baz=96
K21A Alcova 97.62 45 ⇑P P 00 20 12.9 -0.1
baz=98,SNR=9.8
WALA Waterton Lakes 97.63 37 eP P 00 20 12.4 -0.4
comp=Z,0.2nm,0.9s
D16A Dana Ranch, Ca 97.67 39 ⇓P P 00 20 12.0 -1.0
baz=98
COLA College 97.75 13 eP P 00 20 11.8 -0.9
COLA pmax pmax
comp=Z,24nm,0.8s
COLA College 97.75 13 eP P 00 20 11.8 -0.9
comp=Z,24nm,0.8s
G18A Lazy EL Ranch, 97.78 42 ⇓P Pdif 00 20 14.3 +0.6
baz=98
A14A Double T Ranch 97.83 37 ⇑P P 00 20 13.7 0.0
baz=98
I20A Worland 97.83 43 ⇑P Pdif 00 20 14.2 +0.3
baz=98
RLMT Red Lodge 97.84 42 eP Pdif 00 20 14.5 +0.5
comp=Z,45nm,2.4s
RLMT Red Lodge 97.84 42 ⇓P Pdif 00 20 14.5 +0.5
baz=98,SNR=6.2
ILAR Eielson Array 97.84 13 P P 00 20 12.8 -0.3
ILAR PKiKP PKiKP 00 24 46.5 +0.5
ILAR PKKPbc PKKPbc 00 36 44.4 -5.3
ILAR Eielson Array 97.84 13 P P 00 20 12.8 -0.3
comp=Z,12nm,1.1s,baz=221,slow=5.6,SNR=40
ILAR PKiKP PKiKP 00 24 46.5 +0.5
comp=Z,2.4nm,0.9s,baz=276,slow=2.5,SNR=6.7
ILAR PKKPbc PKKPbc 00 36 44.4 -5.3
comp=Z,1.8nm,0.8s,baz=329,slow=2.9,SNR=12
ILAR LR LR 01 04 25.4
comp=Z,429nm,18.1s,baz=97,slow=35
J21A Lysite 97.90 44 ⇑P Pdif 00 20 14.5 +0.2
baz=98,SNR=11
C16A Fuhringer Ranc 98.02 39 ⇑P P 00 20 14.5 -0.1
baz=98
F18A Big Timber 98.03 41 ⇓P Pdif 00 20 15.4 +0.7
baz=98
K22A Casper 98.07 45 ⇓P P 00 20 14.9 -0.1
baz=98
A15A Johnson Ranch, 98.20 37 ⇓P P 00 20 15.0 -0.3
baz=99
D17A Six Diamond Ra 98.21 40 ⇑P Pdif 00 20 15.6 +0.1
baz=99
H20A Greybull 98.22 43 ⇓P Pdif 00 20 15.9 +0.3
baz=99
I21A Big Trails, Te 98.26 44 ⇓P Pdif 00 20 16.0 +0.2
baz=99
LZH Lanzhou 98.26 307 eP Pdif 00 20 16.5 +0.5
LZH pP pP 00 20 50.3 -2.6
LZH sP sP 00 21 06.5 -1.5
LZH PP PP 00 24 15.0 -2.9
LZH SKS SKSac 00 30 38.3 -1.9
LZH S ScS 00 31 36.0 +4.6
LZH pmax pmax
comp=Z,22nm,1.2s
LZH pmax pmax
comp=Z,160nm,5.6s
LZH LR LR
comp=N,380nm,15.6s
LZH LR LR
comp=E,320nm,14.6s
LZH LR LR
comp=Z,620nm,17.7s
L23A Garrett 98.28 46 ⇑P P 00 20 15.8 -0.2
baz=99,SNR=5.3
B16A M & M Farms, S 98.40 38 ⇑P P 00 20 16.2 0.0
baz=99
C17A Wharram Farm, 98.45 39 ⇑P P 00 20 16.4 -0.1
baz=99
G20A Bridger 98.50 42 ⇓P Pdif 00 20 19.0 +2.1
baz=99
J22A Midwest 98.52 44 ⇑P P 00 20 16.6 -0.4
baz=99
BILL Bilibino 98.61 354 ⇓P eP Pdif 00 20 17.0 +0.5
BILL i 00 21 07.7
BILL i 00 24 23.6
BILL i S SKSac 00 30 39.7 -0.5
BILL i SS ScS 00 31 32.7 +0.2
BILL i 00 33 51.7
BILL i SS SS 00 38 19.7 -2.4
BILL pmax pmax
comp=Z,3.0nm,0.9s
BILL MLR MLR
comp=Z,100nm,17.0s
LPAZ La Paz 98.62 114 eP Pdif 00 20 19.3 +0.6
LPAZ PKKPbc PKKPbc 00 36 46.4 +0.4
LPAZ La Paz 98.62 114 P P 00 20 17.7 -1.0
comp=Z,2.5nm,0.6s,baz=209,slow=2.7,SNR=14
LPAZ PKKPbc PKKPbc 00 36 46.4 +0.4
comp=Z,1.2nm,0.7s,baz=335,slow=0.5,SNR=5.3
LPAZ LR LR 00 56 53.5
comp=Z,845nm,20.5s,baz=254,slow=30
A16A West Butte Ran 98.78 38 ⇓P Pdif 00 20 18.0 +0.1
baz=99
I22A 9 Mile Ranch, 98.79 44 ⇓P P 00 20 17.4 -0.7
baz=99
B17A L&G Farms, Che 98.82 39 ⇑P Pdif 00 20 18.4 +0.3
baz=99
A17A Triple J Farms 99.26 38 ⇑P Pdif 00 20 20.4 +0.4
baz=100
C19A Slack Wire Ran 99.46 40 ⇑P Pdif 00 20 21.8 +0.9
baz=100
J24A Dixon Ranch, L 99.59 45 ⇓P Pdif 00 20 22.3 +0.6
baz=100
D20A Manuel Ranch, 99.61 41 ⇑P Pdif 00 20 22.4 +0.8
baz=100
A18A Metzger Ranch, 99.70 39 ⇑P Pdif 00 20 22.2 +0.2
baz=100
H24A Dirks Ranch, A 100.41 44 ⇓P Pdif 00 20 25.7 +0.4
baz=101
CPUP Villa Florida 100.44 129 PKKPbc PKKPbc 00 36 39.4 -0.9
CPUP Villa Florida 100.44 129 PKKPbc PKKPbc 00 36 39.4 -0.9
comp=Z,2.5nm,0.6s,baz=70,slow=15,SNR=7.2
A20A Cobblestone Ra 100.72 39 ⇓P Pdif 00 20 27.4 +0.9
baz=101
YAK Yakutsk 100.91 338 eP Pdif 00 20 21.4 -5.5
YAK e*SS 00 31 42.0
YAK pmax pmax
comp=Z,70nm,9.0s
YAK pmax pmax
comp=Z,262nm,4.1s
YAK pmax pmax
comp=E,92nm,3.2s
YAK pmax pmax
comp=N,97nm,3.6s
YAK pmax pmax
comp=N,886nm,5.2s
YAK pmax pmax
comp=E,479nm,6.4s

ULN	Ulaanbaatar	102.35	318	P	Pdif	00 20 35.0	+1.1		
GTA	Gaotai	102.68	308	*e*P	Pdif	00 20 28.3	-7.2		
GTA				pP		00 20 57.5			
GTA				sP		00 21 09.8			
GTA				SKS	SKSac	00 30 58.5	-3.0		
GTA				S	SKKSac	00 32 00.5	+19		
GTA				sS	sS	00 32 48.0	-25		
GTA				SS	SS	00 39 05.5	-15		
GTA				pmax	pmax				
	comp=Z,4.0nm,0.6s								
GTA				pmax	pmax				
	comp=Z,100nm,6.7s								
GTA				LR	LR				
	comp=N,630nm,17.8s								
GTA				LR	LR				
	comp=E,400nm,20.0s								
GTA				LR	LR				
	comp=Z,890nm,20.0s								
SONM	Songino Array	102.71	318	Pdif	Pdif	00 20 37.9	+2.4		
SONM				PKKPbc	PKKPbc	00 36 35.1	0.0		
SONM	Songino Array	102.71	318	Pdiff	Pdif	00 20 37.9	+2.4		
	comp=Z,0.8nm,0.6s,baz=145,slow=4.4,SNR=8.1								
SONM				PKKPbc	PKKPbc	00 36 35.1	0.0		
	comp=Z,0.7nm,0.6s,baz=240,slow=1.9,SNR=5.8								
CAL	Calcutta	103.59	288	*ex*	Pdif	00 20 41.9	+2.1		
CAL				*ex*	x	00 23 28.1			
INK	Inuvik	103.72	16	Pdif	Pdif	00 20 39.5	+0.2		
INK				PKiKP	PKiKP	00 24 55.6	-0.8		
INK				PKKPbc	PKKPbc	00 36 32.4	-0.2		
INK	Inuvik	103.72	16	Pdiff	Pdif	00 20 39.5	+0.2		
	comp=Z,4.1nm,1.0s,baz=193,slow=6.6,SNR=14								
INK				PKiKP	PKiKP	00 24 55.6	-0.8		
	comp=Z,4.4nm,1.1s,baz=203,slow=3.8,SNR=6.0								
INK				PKKPbc	PKKPbc	00 36 32.4	-0.2		
	comp=Z,0.9nm,0.5s,baz=27,slow=5.5,SNR=6.6								
ROSC	El Rosal	104.67	93	PKKPbc	PKKPbc	00 36 31.6	+3.4		
ROSC	El Rosal	104.67	93	PKKPbc	PKKPbc	00 36 31.6	+3.4		
	comp=Z,5.7nm,0.5s,baz=96,slow=22,SNR=6.5								
YKA	Yellowknife Ar	105.46	26	Pdif	Pdif	00 20 47.0	-0.1		
YKA				PKiKP	PKiKP	00 24 58.9	-1.0		
YKA				PKKPbc	PKKPbc	00 36 23.0	-4.1		
YKA				SKKP		00 39 58.6			
YKA	Yellowknife Ar	105.46	26	Pdiff	Pdif	00 20 47.0	-0.1		
	comp=Z,0.8nm,0.9s,baz=234,slow=4.5,SNR=11								
YKA				PKiKP	PKiKP	00 24 58.8	-1.0		
	comp=Z,1.2nm,0.6s,baz=256,slow=1.5,SNR=24								
YKA				PKKPbc	PKKPbc	00 36 23.0	-4.1		
	comp=Z,3.3nm,0.8s,baz=43,slow=2.9,SNR=16								
YKA				SKKP		00 39 58.6			
	comp=Z,0.4nm,0.8s,baz=30,slow=2.5,SNR=3.5								
ZAK	Zakamensk	105.75	319	*e*P	Pdif	00 20 51.4	+2.5		
ZAK				pmax	pmax				
	comp=Z,1.0nm,1.7s								
TRD	Trivandrum	106.77	270↓	*e*P	Pdif	00 20 54.5	+0.4		
TRD				*e*S	PKiKP	00 25 09.5	+5.7		
ULM	Lac du Bonnet	108.22	42	PKiKP	PKiKP	00 25 07.2	+1.9		
ULM				PKKPbc	PKKPbc	00 36 16.3	-1.8		
ULM				PKKPab	PKKPab	00 36 29.6	+0.8		
ULM	Lac du Bonnet	108.22	42	PKiKP	PKiKP	00 25 07.2	+1.9		
	comp=Z,4.7nm,1.0s,baz=225,slow=4.6,SNR=4.5								
ULM				PKKPbc	PKKPbc	00 36 16.3	-1.8		
	comp=Z,3.1nm,0.7s,baz=74,slow=5.6,SNR=5.0								
ULM				PKKPab	PKKPab	00 36 29.6	+0.8		
	comp=Z,5.1nm,0.7s,baz=93,slow=6.6,SNR=7.3								
COWI	Conover	110.67	48	*e*PKPdf	PKiKP	00 25 09.2	-1.0		
WMQ	Urumqi	112.77	308	PKP	PKiKP	00 25 13.8	-0.5		
WMQ				PP	PP	00 26 08.0	+3.4		
WMQ				PKS	PKSdf	00 28 50.0	-0.9		
WMQ				SKS	SKSdf	00 32 15.0	+2.2		
WMQ				SS	SS	00 41 40.0	+4.0		
WMQ				LR	LR				
	comp=N,660nm,25.0s								
WMQ				LR	LR				
	comp=E,570nm,25.0s								
WMQ				LR	LR				
	comp=Z,790nm,25.0s								
BDFB	Brasilia	114.04	127	PKP	PKPdf	00 25 18.6	+0.9		
BDFB				PKKPbc	PKKPbc	00 35 59.6	+1.3		
BDFB	Brasilia	114.04	127	PKP	PKPdf	00 25 18.6	+0.9		
	comp=Z,1.2nm,0.7s,baz=223,slow=12,SNR=3.3								
BDFB				PKKPbc	PKKPbc	00 35 59.6	+1.3		
	comp=Z,2.2nm,0.5s,baz=145,slow=4.8,SNR=4.2								
OPO	Ambohidratompo	114.52	228	PKP	PKPdf	00 25 19.3	+0.7		
OPO	Ambohidratompo	114.52	228	PKP	PKPdf	00 25 19.3	+0.7		
	comp=Z,4.3nm,0.8s,baz=18,slow=4.1,SNR=8.3								
RES	Resolute Bay	117.20	17	*e*PKPdf	PKPdf	00 25 21.2	-0.5		
RES				PKP	PKPdf	00 25 21.6	-0.2		
RES				PKKPbc	PKKPbc	00 35 50.6	+2.1		
RES	Resolute Bay	117.20	17	PKP	PKPdf	00 25 21.6	-0.2		
	comp=Z,9.1nm,0.9s,baz=272,slow=4.3,SNR=17								
RES				PKKPbc	PKKPbc	00 35 50.6	+2.1		
	comp=Z,6.1nm,0.8s,baz=79,slow=6.1,SNR=12								
BOSA	Boshof	117.26	203	*e*PKPdf	PKPdf	00 25 23.9	+0.4		
BOSA				PKKPbc	PKKPbc	00 35 48.2	+0.6		
BOSA	Boshof	117.26	203	PKP	PKPdf	00 25 24.0	+0.4		
	comp=Z,14nm,0.8s,baz=143,slow=1.0,SNR=23								
BOSA				PKKPbc	PKKPbc	00 35 48.2	+0.6		
	comp=Z,2.5nm,0.5s,baz=310,slow=10,SNR=8.4								
MK31	Makanchi Array	117.32	310	*i* PKIKP	PKPdf	00 25 21.6	-1.3		
MK31				pmax	pmax				
	comp=Z,14nm,0.7s								
MK31	Makanchi Array	117.32	310	*e*PKPdf	PKPdf	00 25 21.8	-1.1		
MKAR	Makanchi Array	117.32	310	PKIKP	PKPdf	00 25 21.6	-1.3		
MKAR	Makanchi Array	117.32	310	PKP	PKPdf	00 25 21.6	-1.3		
MKAR				PKKPbc	PKKPbc	00 35 47.2	-0.3		
MKAR	Makanchi Array	117.32	310	PKP	PKPdf	00 25 21.6	-1.3		
	comp=Z,9.9nm,0.6s,baz=96,slow=1.4,SNR=38								
MKAR				PKKPbc	PKKPbc	00 35 47.2	-0.3		
	comp=Z,1.0nm,0.6s,baz=275,slow=3.1,SNR=12								
ZAA0	Zalesovo Array	117.60	319	*e*PKPdf	PKPdf	00 25 21.3	-1.8		
ZALV	Zalesovo Beam	117.60	319	PKIKP	PKPdf	00 25 21.7	-1.4		
ZALV	Zalesovo Beam	117.60	319	PKP	PKPdf	00 25 21.7	-1.4		
ZALV	Zalesovo Beam	117.60	319	PKP	PKPdf	00 25 21.7	-1.4		
	comp=Z,8.7nm,0.7s,baz=151,slow=2.0,SNR=39								
NVS	Novosibirsk	118.71	319⇑	*i* PKIKP	PKPdf	00 25 23.9	-1.3		
NVS				*e*		00 26 14.2			
NVS				*e*		00 26 45.2			
NVS				*i*		00 32 05.5			
NVS				pmax	pmax				
	comp=Z,42nm,1.1s								
NVS				pmax	pmax				
	comp=N,9.0nm,1.2s								
NVS				pmax	pmax				
	comp=E,12nm,1.2s								
KSH	Kashi	119.77	301	*e*PKP	PKPdf	00 25 28.3	+0.3		
KSH				*e*PP	PP	00 26 57.3	+3.6		
KSH				PKS	PKSdf	00 29 03.3	-1.4		
KSH				SKS	SKSdf	00 32 22.0	-4.6		
KSH				SKKS	SKKSac	00 33 29.8	-9.1		
KSH				SS	SKKSdf	00 43 09.0	-0.3		
KSH				AMB	AMB				
	comp=Z,130nm,4.2s								
KSH				LR	LR				
	comp=N,310nm,10.5s								
KSH				LR	LR				
	comp=E,290nm,6.9s								
KSH				LR	LR				
	comp=Z,840nm,20.8s								
NCB	Newcomb	120.04	54	*e*PKPdf	PKPdf	00 25 27.3	-0.9		
LBTB	Lobatse	120.42	205	*e*PKPdf	PKPdf	00 25 29.7	0.0		
LBTB				PKP	PKPdf	00 25 29.8	+0.1		
LBTB				PKKPbc	PKKPbc	00 35 35.3	-0.8		
LBTB	Lobatse	120.42	205	PKP	PKPdf	00 25 29.8	+0.1		
	comp=Z,7.4nm,0.6s,baz=176,slow=3.5,SNR=23								
LBTB				PKKPbc	PKKPbc	00 35 35.3	-0.8		
	comp=Z,4.4nm,1.0s,baz=344,slow=7.4,SNR=4.4								
KURK	Kurchatov	120.60	314	*c i* PKIKP	PKPdf	00 25 27.9	-1.1		
KURK	Kurchatov	120.60	314	*e*PKPdf	PKPdf	00 25 27.8	-1.1		
KURK	Kurchatov	120.60	314	P	PKPdf	00 25 28.2	-0.8		
	SNR=17								
KURBB	Kurchatov Arra	120.64	314	PKP	PKPdf	00 25 27.7	-1.3		
	comp=Z,35nm,0.7s,baz=113,slow=1.8,SNR=85								
TKM2	Tokmak 2	120.92	305	*e*PKIKP	PKPdf	00 25 29.2	-1.0		
TKM2	Tokmak 2	120.92	305	*e*PKPdf	PKPdf	00 25 29.2	-1.0		
TKM2	Tokmak 2	120.92	305	P	PKPdf	00 25 29.3	-0.8		
	SNR=40								
QUA2	Belchertown	120.95	56	*e*PKPdf	PKPdf	00 25 30.3	+0.4		
KZA	Kyzart	120.97	304	P	PKPdf	00 25 30.0	-0.5		
	SNR=44								
KBK	Karagaybulak	121.32	304	P	PKPdf	00 25 30.5	-0.4		
	SNR=30								
UCH	Uchtor	121.53	304	P	PKPdf	00 25 31.8	+0.1		
	SNR=10.0								
CHMS	Chumysh	121.55	304	P	PKPdf	00 25 30.5	-0.7		
	SNR=37								
FRU	Bishkek	121.60	304	*e*PKIKP	PKPdf	00 25 31.0	-0.3		
FRU				pmax	pmax				
	comp=Z,50nm,1.6s								
AAK	Ala-Archa	121.64	304	*c i* PKIKP	PKPdf	00 25 31.1	-0.4		
AAK	Ala-Archa	121.64	304	*e*PKPdf	PKPdf	00 25 30.9	-0.6		
AAK				PKKPbc	PKKPbc	00 35 31.3	-0.3		
AAK				*e*PKKPab	PKKPab	00 35 31.7	+1.0		
AAK	Ala-Archa	121.64	304	P	PKPdf	00 25 31.2	-0.4		
	SNR=9.5								
AAK	Ala-Archa	121.64	304	P	PKPdf	00 25 30.8	-0.8		
	SNR=20								
AAK	Ala-Archa	121.64	304	PKKPbc	PKKPbc	00 35 31.3	-0.3		
	comp=Z,1.8nm,0.5s,baz=293,slow=5.1,SNR=8.1								
LBNH	Lisbon	121.71	54	*e*PKIKP	PKPdf	00 25 31.0	-0.4		
LBNH	Lisbon	121.71	54	*e*PKPdf	PKPdf	00 25 30.9	-0.4		
USP	Ospenovka	121.79	305	P	PKPdf	00 25 30.8	-0.8		
	SNR=27								
AML	Almayashu	122.10	303	P	PKPdf	00 25 32.4	-0.3		
	SNR=74								
EKS2	Erkin-Say	122.17	304	*e*PKIKP	PKPdf	00 25 32.1	-0.4		
EKS2	Erkin-Say	122.17	304	*e*PKPdf	PKPdf	00 25 32.1	-0.4		
EKS2	Erkin-Say	122.17	304	P	PKPdf	00 25 32.1	-0.4		
	SNR=36								
KBL	Kabul	123.74	293	*e*PKIKP	PKPdf	00 25 35.6	-0.3		
KBL	Kabul	123.74	293	*e*PKPdf	PKPdf	00 25 35.6	-0.3		
KK31	Karatay Array	124.61	304	*i* PKIKP	PKPdf	00 25 36.0	-1.0		
KK31				pmax	pmax				
	comp=Z,36nm,0.6s								
KKAR	Karatay Array	124.61	304	*e*PKIKP	PKPdf	00 25 36.5	-0.5		
KKAR	Karatay Array	124.61	304	*e*PKPdf	PKPdf	00 25 36.5	-0.5		
VOSK	Vostochnaya	125.59	316	PKIKP	PKPdf	00 25 36.7	-1.8		
VOSK				pmax	pmax				
	comp=Z,75nm,0.8s								
BVA0	Borovoye Array	125.97	316	PKIKP	PKPdf	00 25 37.6	-1.6		
BVA0				pmax	pmax				
	comp=Z,16nm,1.0s								
BVAR	Borovoye Array	125.97	316	PKIKP	PKPdf	00 25 38.4	-0.9		
BVAR	Borovoye Array	125.97	316	PKP	PKPdf	00 25 38.4	-0.9		
BVAR	Borovoye Array	125.97	316	PKP	PKPdf	00 25 38.3	-0.9		
	comp=Z,38nm,0.6s,baz=100,slow=1.8,SNR=94								
BRVK	Borovoye	126.03	316	*d i* PKIKP	PKPdf	00 25 36.7	-2.6		
BRVK	Borovoye	126.03	316	*e*PKPdf	PKPdf	00 25 38.7	-0.6		
BRVK	Borovoye	126.03	316	P	PKPdf	00 25 38.9	-0.4		
	SNR=30								
SCHQ	Schefferville	126.39	42	*e*PKPdf	PKPdf	00 25 38.9	-1.1		
SCHQ	Schefferville	126.39	42	PKP	PKPdf	00 25 38.9	-1.1		
	comp=Z,20nm,0.9s,baz=13,slow=1.8,SNR=21								
LSZ	Lusaka	127.97	213	*e*PKPdf	PKPdf	00 25 45.1	+0.7		
LSZ				PKP	PKPdf	00 25 45.5	+1.1		
LSZ	Lusaka	127.97	213	P	PKPdf	00 25 47.2	+2.7		
	SNR=8.3								
LSZ	Lusaka	127.97	213	PKP	PKPdf	00 25 45.5	+1.1		
	comp=Z,19nm,0.9s,baz=49,slow=5.7,SNR=32								
TSUM	Tsumeb	128.49	200	*e*PKPdf	PKPdf	00 25 46.4	+1.0		
JMDO	Jabal Madar	129.08	275	P	PKPdf	00 25 47.1	+0.9		
	SNR=7.1								
SMDO	Samad	129.38	276	P	PKPdf	00 25 48.2	+1.4		
	SNR=7.2								
BSY	Bisya	130.00	275	P	PKPdf	00 25 46.8	-1.1		
	SNR=7.8								
RBK	Rabkut	130.55	268	P	SKPbc	00 28 58.7	-0.7		
	SNR=6.3								
ARQ	Araqi	130.79	276	P	SKPbc	00 28 58.5	-1.7		
	SNR=9.9								
KBS	Kingsbay	130.98	357	*e*SS	SS	00 45 28.0	+2.7		
KBS	Kingsbay	130.98	357	*c i* PKIKP	PKPdf	00 25 49.5	+1.4		
KBS				pmax	pmax				
	comp=Z,57nm,2.5s								
KBS	Kingsbay	130.98	357	*e*PKPdf	PKPdf	00 25 48.5	+0.4		
ABTO	Aybut	131.27	267	P	PKPdf	00 25 51.3	+0.9		
	SNR=6.0								
ABTO				P	SKPbc	00 29 01.9	-0.2		
	SNR=14								
SVE	Sverdlovsk	131.48	321	*e*PKIKP	PKPdf	00 25 50.1	+0.5		
SVE				pmax	pmax				
	comp=Z,34nm,0.9s								
HATD	Hatta, Dubai	131.63	278	P	PKPdf	00 25 51.0	+0.1		
	SNR=7.4								
HATD				P	SKPbc	00 29 01.5	-1.6		
	SNR=9.0								
ASHO	Ashiyiah	131.64	277	P	PKPdf	00 25 51.3	+0.3		
	SNR=7.4								
ASHO				P	SKPbc	00 29 01.6	-1.6		
	SNR=7.5								
BANOM	Banah	131.83	279	P	SKPbc	00 29 02.2	-1.7		
	SNR=7.6								
NAZ	Nazwa, Dubai	132.08	278	P	PKPdf	00 25 52.1	+0.3		
	SNR=9.5								
NAZ				P	SKPbc	00 29 03.6	-1.1		
	SNR=6.1								
ASUD	Al Ashush, Dub	132.25	277	P	PKPdf	00 25 52.4	+0.4		
	SNR=7.4								
ASUD				P	SKPbc	00 29 06.1	+0.8		
	SNR=5.7								
DAG	Danmarks Havn	132.41	6	*i* PKIKP	PKPdf	00 25 50.7	-0.1		
DAG				pmax	pmax				
	comp=Z,13nm,1.0s								
DAG	Danmarks Havn	132.41	6	*i* P	PKPdf	00 25 50.7	-0.1		
	comp=Z,13nm,1.0s								
DAG				*i*	SKPbc	00 29 03.7	-0.5		
DAG				*i*		00 45 25.9			
DAG				*i*		00 47 13.0			
AB31	Akbulak array	132.46	311	PKHKP	PKPpre	00 25 37.5			
AB31				pmax	pmax				
	comp=Z,10.0nm,0.7s								
SUMG	Summit	132.64	15	*i* PKIKP	PKPdf	00 25 53.0	+1.1		
SUMG				pmax	pmax				
	comp=Z,14nm,1.0s								
SUMG	Summit	132.64	15	*i* P	PKPdf	00 25 53.0	+1.1		
	comp=Z,14nm,1.0s								
SUMG				*i*		00 47 18.8			
ARU	Arti	132.67	321	*i* PKIKP	PKPdf	00 25 51.7	-0.1		
SOKR	Solikamsk	132.99	325	*d i* PKIKP	PKPdf	00 25 52.5	+0.2		
SOKR				pmax	pmax				
	comp=Z,60nm,0.8s								
AKTO	Aktyubinsk	133.65	313	PKHKP	PKPpre	00 25 39.9			
AKTO				pmax	pmax				
	comp=Z,4.0nm,0.7s								
KMBO	Kilima Mbogo	133.83	234	PKP	PKPdf	00 25 56.1	+0.4		
KMBO				*e*PKPdf	PKiKP	00 25 56.4	-0.7		
KMBO				SKPbc	SKPbc	00 29 11.9	+0.6		
KMBO	Kilima Mbogo	133.83	234	P	SKPab	00 29 12.3	-1.8		
	SNR=6.8								
KMBO	Kilima Mbogo	133.83	234	PKP	PKPdf	00 25 56.1	+0.4		
	comp=Z,7.2nm,0.9s,baz=49,slow=1.4,SNR=17								
KMBO				SKPbc	SKPbc	00 29 11.9	+0.6		
	comp=Z,30nm,0.9s,baz=76,slow=2.9,SNR=33								
ATD	Arta Tunnel	137.42	253	PKP	PKPdf	00 26 03.0	+1.0		
ATD				SKPbc	SKPbc	00 29 23.0	+0.9		
ATD	Arta Tunnel	137.42	253	PKP	PKPdf	00 26 03.0	+1.0		
	comp=Z,9.9nm,0.8s,baz=256,slow=4.7,SNR=4.2								
ATD				SKPbc	SKPbc	00 29 23.0	+0.9		
	comp=Z,21nm,1.0s,baz=270,slow=2.0,SNR=6.1								
LVZ	Lovozero	137.53	342	*i* PKIKP	PKPdf	00 26 02.0	+1.3		
LVZ				pmax	pmax				
	comp=Z,70nm,2.5s								
SCO	Scoresbysund	137.60	11	*i* PKIKP	PKPdf	00 26 03.2	+2.6		
SCO				pmax	pmax				
	comp=Z,8.0nm,0.9s								
SCO	Scoresbysund	137.60	11	*i* P	PKPdf	00 26 03.2	+2.6		
	comp=Z,8.2nm,0.9s								
KEV	Kevo	137.84	347	*e*PKHKP	PKPpre	00 25 51.7			
KEV	Kevo	137.84	347	*e*pkp	PKPdf	00 25 51.7	-9.4		
APA	Apatity	138.10	342↓	*i*PKHKP	PKPpre	00 25 55.6			
APA				MLR	MLR				
	comp=Z,1μm,23.0s								
ARCES	ARCESS Array B	138.31	348	PKPpre	PKPpre	00 25 50.7			
ARCES				PKP	PKPdf	00 26 01.3	-0.7		
ARCES				SKPbc	SKPbc	00 29 23.1	+0.1		
ARCES	ARCESS Array B	138.31	348	PKhKP	PKPpre	00 25 50.7			
	comp=Z,7.4nm,0.5s,baz=72,slow=2.9,SNR=59								
ARCES				PKP	PKPdf	00 26 01.3	-0.7		
	comp=Z,24nm,0.7s,baz=112,slow=1.3,SNR=16								
ARCES				SKPbc	SKPbc	00 29 23.1	+0.1		
	comp=Z,10nm,0.9s,baz=82,slow=1.9,SNR=4.7								
MBAR	Mbarara	138.59	228	PKP	PKPdf	00 26 04.7	+0.2		
MBAR				SKPbc	SKPbc	00 29 24.9	-0.9		
MBAR	Mbarara	138.59	228	PKP	PKPdf	00 26 04.7	+0.2		
	comp=Z,2.5nm,0.2s,baz=216,slow=14,SNR=3.8								
MBAR				SKPbc	SKPbc	00 29 24.9	-0.9		
	comp=Z,19nm,0.8s,baz=143,slow=9.2,SNR=11								
TMCR	Tamitsa	139.01	337	*e*PKIKP	PKPdf	00 26 01.6	-1.8		
TMCR				*e*		00 26 39.4			
TMCR				pmax	pmax				
	comp=Z,27nm,1.1s								
KTK1	Kautokeino	139.18	348	*e*P	PKPdf	00 25 55.3	-8.3		
RDF	Al-Radifah	140.13	280	*e*P	PKPdf	00 25 59.6	-7.0		
RDF				AMb	AMB	00 26 12.3			
	comp=Z,108nm,0.6s								
NAY	Al-Naaiem	140.47	280	*e*P	PKPdf	00 25 59.7	-7.4		
NAY				AMb	AMB	00 26 10.1			
	comp=Z,19nm,0.8s								
MIB	Mutribah	140.51	281	*e*P	PKPdf	00 25 60.0	-7.3		
MIB				AMb	AMB	00 26 12.9			
	comp=Z,84nm,0.8s								
MAK	Makhachkala	141.38	302	*e*PKHKP	PKPpre	00 26 00.2			
MAK				*e*		00 29 08.5			
MAK				*e*PPP	PPP	00 32 20.9			
MAK				*e*		00 33 06.4			
MAK				*e*SS	SS	00 47 27.6	-3.8		
MAK				*e*SSS	SSS	00 52 41.7			
MAK				pmax	pmax				
	comp=Z,125nm,1.5s								
JOF	Joensuu	142.08	338	*e*PKHKP	PKPdf	00 26 02.9	-6.1		
JOF	Joensuu	142.08	338	*e*pkp	PKPdf	00 26 02.9	-6.1		
DGRG	David-gareji	143.06	300	P	PKPbc	00 26 09.0	+0.2		
STOK	Stokkvaagen	143.18	352	*e*P	PKPbc	00 26 08.5	+0.3		
SEAG	Tbilisi Sea	143.46	300	P	PKPbc	00 26 10.6	+0.7		
TBLG	Delisi	143.51	300	PKIKP	PKPbc	00 26 09.9	-0.1		
TBLG	Delisi	143.51	300	P	PKPbc	00 26 10.0	0.0		
BHD	Baghdad	143.59	286	*i* x	PKPab	00 26 06.8	-2.7		
BHD				*i* x	x	00 26 54.6			
BHD				*i* x	x	00 29 25.3			
BHD				*i* x	x	00 33 03.8			
BHD				*i* x	x	00 33 11.3			
GNI	Garni	143.60	298	*e*PKPdf	PKPbc	00 26 10.3	-0.2		
GNI	Garni	143.60	298	P	PKPbc	00 26 10.8	+0.3		
	SNR=21								
VRHR	Novokhopersk	143.70	317	*e*PKIKP	PKPab	00 26 09.7	+0.4		
VRHR				pmax	pmax				
	comp=N,8.0nm,0.6s								
VRHR				pmax	pmax				
	comp=E,10.0nm,0.6s								
VRHR				pmax	pmax				
	comp=Z,30nm,0.6s								
KZR	Kazreti	143.78	300	P	PKPbc	00 26 11.1	+0.3		
MOS	Moscow	143.93	326	*e*PKHKP	PKPpre	00 26 07.4			
MOS				pmax	pmax				
	comp=Z,69nm,0.9s								
GOR	Gori	143.96	301	P	PKPbc	00 26 12.0	+0.6		
ZEI	Tsey	144.04	302	*i* PKIKP	PKPab	00 26 10.7	-0.6		
ZEI				*e*		00 29 28.8			
ZEI				pmax	pmax				
	comp=Z,122nm,1.0s								
KAF	Kangasniemi	144.22	340	*e*pkp	PKPab	00 26 09.2	-1.8		
ONI	Oni	144.39	302	P	PKPab	00 26 12.4	+0.1		
HAKT	HAKKARI	144.43	293	*i* P	PKPab	00 26 12.7	-0.2		
AKH	Akhalkalaki	144.47	300	P	PKPab	00 26 12.8	0.0		
KBZ	Khabaz	144.64	304	PKIKP	PKPab	00 26 12.7	-0.5		
KBZ	Khabaz	144.64	304	PKP	PKPab	00 26 12.7	-0.5		
KBZ	Khabaz	144.64	304	PKP	PKPab	00 26 12.7	-0.5		
	comp=Z,68nm,0.7s,baz=129,slow=1.6,SNR=106								
TVAN	Van	144.67	295	*i* P	PKPdf	00 26 14.5	-0.2		
KIV	Kislovodsk	144.76	304	*α i* PKIKP	PKPab	00 26 12.6	-1.2		
KIV				*i*		00 27 02.1			
KIV				*i* SS	SS	00 49 09.5	+59		
KIV				pmax	pmax				
	comp=Z,7.0nm,0.8s								
KIV				pmax	pmax				
	comp=Z,108nm,1.2s								
OBN	Obninsk	144.77	325	*αe*PKIKP	PKPab	00 26 12.3	-0.9		
OBN				*e*		00 42 10.4			
OBN				*i* SS	SS	00 48 11.5	+2.5		
OBN				*i*		00 49 07.5			
OBN				pmax	pmax				
	comp=Z,67μm,0.6s								
OBN				pmax	pmax				
	comp=Z,160μm,0.5s								
FIA1	FINESS Array S	144.82	340	*e*PKPdf	PKPbc	00 26 12.4

GZT Gaziantep 149.32 293 *i* P PKPbc 00 26 26.7 -0.2
NACGM Naroch 149.41 331 *e*PKP PKPbc 00 26 24.0 -2.3
ERBA Erbaa 149.62 300 *i* P PKPdf 00 26 24.3 +1.7
ASK Askoy 149.62 356 *e*P PKPbc 00 26 25.5 -1.1
ASK AMB AMB 00 26 27.2
comp=Z,194nm,1.0s
RUND Rundenannen 149.69 356 *e*P PKPbc 00 26 25.3 -1.5
RUND AMB AMB 00 26 27.4
comp=Z,235nm,1.2s
BER Bergen 149.72 356 *e*P PKPbc 00 26 25.7 -1.1
BER AMB AMB 00 26 27.2
comp=Z,133nm,1.1s
KUZU Kuzuini 149.74 292 *i* P PKPbc 00 26 26.5 -1.3
EGD Espegrend 149.84 356 *e*P PKPdf 00 26 24.1 +1.9
EGD AMB AMB 00 26 32.8
comp=Z,161nm,1.7s
TOKA Tokat 149.88 299 *i* P PKPdf 00 26 22.2 -0.8
AYKD Aykdinkavak 149.92 293 *i* P PKPbc 00 26 26.5 -1.7
LRW Lerwick 150.02 3 *e*P PKPbc 00 26 27.2 -0.3
LRW Lerwick 150.02 3 P PKPbc 00 26 27.2 -0.3
KONO Kongsberg 150.06 352 *e*P PKPbc 00 26 27.5 -0.2
KONO AMB AMB 00 26 35.9
comp=Z,83nm,1.0s
KONO Kongsberg 150.06 352 *e*PKHKP PKPdf 00 26 23.1 +0.5
KONO Kongsberg 150.06 352 *e*PKPdf PKPdf 00 26 23.1 +0.5
KONO *e*PKPbc PKPbc 00 26 27.1 -0.5
ODD1 Odda 150.10 355 *e*P PKPdf 00 26 24.4 +1.7
ODD1 AMB AMB 00 26 30.5
comp=Z,222nm,1.1s
PINB Pinarbasi 150.14 296 *i* P PKPdf 00 26 22.6 -1.1
HAVZ Havza 150.32 301 *i* P PKPdf 00 26 22.5 -1.2
SIM Simferopol' 150.49 309 *i* PKIKP PKPdf 00 26 24.0 +0.3
SIM *i* 00 26 37.0
SIM *e* 00 27 12.0
SIM *e* 00 30 13.0
SIM *e*SS SS 00 49 52.0 +38
SIM pmax pmax
comp=Z,111nm,0.8s
SIM pmax pmax
comp=Z,440nm,20.8s
BLS5 Blasjo 150.60 355 *e*P PKPbc 00 26 29.1 0.0
BLS5 AMB AMB 00 26 31.7
comp=Z,42nm,0.8s
HWQ Hawqa 150.66 287 *e*P PKPbc 00 26 30.3 +0.2
RCY Rachaya 150.72 285 *e*P PKPbc 00 26 30.5 +0.2
AKASG Malin Array Be 150.88 323 PKIKP PKPdf 00 26 24.0 -0.1
AKASG Malin Array Be 150.88 323 PKP PKPdf 00 26 24.0 -0.1
AKASG PKPbc PKPbc 00 26 29.2 -0.7
AKASG Malin Array Be 150.88 323 PKP PKPdf 00 26 24.0 -0.1
comp=Z,3.2nm,0.6s,baz=65,slow=2.1,SNR=16
AKASG PKPbc PKPbc 00 26 29.2 -0.7
comp=Z,121nm,0.6s,baz=50,slow=2.5,SNR=111
BHL Bhannes 150.90 286 *e*P PKPbc 00 26 30.2 -0.5
AK01 Malin Array Si 150.90 323 *e*PKPbc PKPbc 00 26 29.4 -0.6
KIEV Kiev 150.90 323 *e*PKIKP PKPbc 00 26 29.1 -0.9
KIEV Kiev 150.90 323 *e*PKPbc PKPbc 00 26 29.1 -0.9
AK02 Malin Array Si 150.92 322 *e*PKPbc PKPbc 00 26 29.3 -0.8
STAV Stavanger 151.14 355 *e*P PKPdf 00 26 26.2 +2.0
STAV AMB AMB 00 26 28.7
comp=Z,63nm,0.9s
AVNT Avonos 151.33 296 *i* P PKPbc 00 26 31.2 -0.5
SUW Suwalki 151.51 333 *e*PKIKP PKPdf 00 26 25.2 +0.2
SUW Suwalki 151.51 333 *e*PKPdf PKPdf 00 26 25.2 +0.2
SUW *e*PKPbc PKPbc 00 26 31.1 -0.2
SUW Suwalki 151.51 333 *e*PKPdf PKPdf 00 26 25.4 +0.4
SUW *e*PKPbc PKPbc 00 26 30.9 -0.4
SUW *e*PKPab PKPab 00 26 39.7 -0.5
GULE Gulek 151.54 293 *i* P PKPbc 00 26 31.9 -0.2
CDAG Cicekdag 151.58 298 *i* P PKPbc 00 26 30.7 -1.4
SNART Snartemo 151.60 354 *e*P PKPbc 00 26 29.2 -2.1
SNART AMB AMB 00 26 31.9
comp=Z,135nm,1.2s
BALT Daday 151.95 302 *i* P PKPbc 00 26 32.9 -0.1
MVH1 Achvaich 152.01 6 *e*P PKPbc 00 26 32.6 +0.3
MVH1 Achvaich 152.01 6 P PKPbc 00 26 32.6 +0.3
BR131 Keskin Array S 152.12 299 *e*PKPdf PKPdf 00 26 26.1 -0.5
BR131 *e*PKPbc PKPbc 00 26 33.0 -0.4
BRTR Keskin Array B 152.12 299 PKP PKPdf 00 26 25.8 -0.8
BRTR PKPbc PKPbc 00 26 32.7 -0.6
BRTR Keskin Array B 152.12 299 PKP PKPdf 00 26 25.8 -0.8
comp=Z,3.9nm,0.9s,baz=132,slow=1.8,SNR=23
BRTR PKPbc PKPbc 00 26 32.7 -0.6
comp=Z,25nm,0.6s,baz=136,slow=3.7,SNR=76
PHNC Paralimni 152.25 289 P PKPbc 00 26 31.0 -2.6
comp=Z,3.0nm,1.1s
KAC Achnashellach 152.31 8 *e*P PKPbc 00 26 33.2 +0.2
KAC Achnashellach 152.31 8 P PKPbc 00 26 33.2 +0.2
KPL Plockton 152.43 8 *e*P PKPbc 00 26 33.1 -0.1
KPL Plockton 152.43 8 P PKPbc 00 26 33.1 -0.1
MCD Coleburn Disti 152.44 6 *e*P PKPbc 00 26 32.5 -0.7
MCD Coleburn Disti 152.44 6 P PKPbc 00 26 32.5 -0.7
MDO Dochfour 152.47 7 *e*P PKPbc 00 26 32.7 -0.7
MDO Dochfour 152.47 7 P PKPbc 00 26 32.7 -0.7
BBAL Bala 152.55 298 *e*P PKPbc 00 26 33.1 -1.2
KSB Sheil Bridge 152.58 8 *e*P PKPbc 00 26 31.5 -2.0
KSB Sheil Bridge 152.58 8 P PKPbc 00 26 31.5 -2.0
MME1 Meikle Cairn 152.73 5 *e*P PKPbc 00 26 32.9 -1.1
MME1 Meikle Cairn 152.73 5 P PKPbc 00 26 32.9 -1.1
ANTO Ankara 152.74 299 *e*PKIKP PKPdf 00 26 27.5 +0.1
ANTO Ankara 152.74 299 *e*PKPdf PKPdf 00 26 27.5 +0.1
ANTO *e*PKPbc PKPbc 00 26 34.5 -0.1
ANTO Ankara 152.74 299 P PKPdf 00 26 28.0 +0.6
SNR=29
CSS Prodhromos 152.83 288 P PKPbc 00 26 32.3 -2.6
comp=Z,1.1nm,0.8s
CSS Prodhromos 152.83 288 *e*PKPbc PKPbc 00 26 34.5 -0.4
MAMC Mammari 152.91 289 P PKPbc 00 26 33.5 -1.6
KIS Kishinev 153.05 316 *i* PKIKP PKPbc 00 26 34.0 -0.9
KIS *e* 00 27 25.0
KIS *e* 00 30 20.0
KIS Kishinev 153.05 316 *e*PKIKP PKPbc 00 26 34.0 -0.9
KIS *ep*PKP pPKPdf 00 27 25.0 +19
KIS *e*SKKS 00 36 57.0
KIS *e*SKSP 00 40 25.0
DRUM Mains of Drumt 153.16 5 *e*P PKPbc 00 26 34.9 0.0
DRUM Mains of Drumt 153.16 5 P PKPbc 00 26 34.9 0.0
MUD Monsted U'grnd 153.21 351 *i* PKIKP PKPbc 00 26 35.6 +0.6
MUD pmax pmax
comp=Z,24nm,1.3s
MUD Monsted U'grnd 153.21 351 *i* P PKPbc 00 26 35.6 +0.6
comp=Z,24nm,1.2s
BSD Bornholm Skovb 153.32 343 *i* PKIKP PKPbc 00 26 34.9 -0.4
BSD pmax pmax
comp=Z,53nm,0.7s
BSD Bornholm Skovb 153.32 343 *i* P PKPbc 00 26 34.9 -0.4
comp=Z,53nm,0.7s
COP Copenhagen 153.38 346 *i* PKIKP PKPbc 00 26 36.8 +1.5
COP pmax pmax
comp=Z,39nm,0.8s
COP Copenhagen 153.38 346 *i* P PKPbc 00 26 36.8 +1.5
comp=Z,39nm,0.8s
ALFC Alevga 153.42 289 P PKPbc 00 26 36.0 -0.2
comp=Z,1.4nm,0.5s
ELO Logie Almond 153.50 6 *e*P PKPbc 00 26 35.4 -0.2
ELO Logie Almond 153.50 6 P PKPbc 00 26 35.4 -0.2
PPCY Paphos 153.64 288 P PKPbc 00 26 36.8 +0.2
AKMC Akamas 153.65 289 P PKPbc 00 26 36.9 +0.2
IAS Iasi 153.70 317 ⇑PKIKP PKPbc 00 26 37.9 +1.6
IAS Iasi 153.70 317 ⇑*i*P PKPbc 00 26 37.9 +1.6
EAB Aberfoyle 153.71 7 *e*P PKPbc 00 26 35.7 -0.4
EAB Aberfoyle 153.71 7 P PKPbc 00 26 35.7 -0.4
LLD Lille Linde 153.75 346 *i* PKIKP PKPbc 00 26 36.6 +0.4
LLD Lille Linde 153.75 346 *i* P PKPbc 00 26 36.6 +0.4
comp=Z,106nm,0.8s
LVV L'vov 154.07 325 *i* PKIKP PKPbc 00 26 37.2 +0.1
LVV *e* 00 26 51.8
EDI Edinburgh 154.09 6 *e*P PKPbc 00 26 34.9 -2.0
EDI Edinburgh 154.09 6 P PKPbc 00 26 34.9 -2.0
BEL Belsk 154.10 332 *e*PKPdf PKPdf 00 26 29.7 +0.9
BEL *e*PKPbc PKiKP 00 26 37.4 +0.3
EAU Auchinoon 154.14 6 *e*P PKPbc 00 26 37.3 +0.3
EAU Auchinoon 154.14 6 P PKPbc 00 26 37.3 +0.3
ESY Stoneypath 154.14 5 *e*P PKPbc 00 26 36.7 -0.3
ESY Stoneypath 154.14 5 P PKPbc 00 26 36.7 -0.3
RGN Rugen 154.23 344 *e* PKPbc 00 26 38.0 +0.8
RGN *e*PKPab PKPab 00 26 52.7 +1.1
EBL Broad Law 154.25 6 *e*P PKPbc 00 26 37.0 -0.3
EBL Broad Law 154.25 6 P PKPbc 00 26 37.0 -0.3
GKP Gorka Klasztor 154.25 338 *e*PKPdf PKPdf 00 26 29.4 +0.4
GKP *e*PKPbc PKiKP 00 26 37.8 +0.4
GKP *e*PKPab PKPab 00 26 51.9 +0.1
CFR Carcaliu 154.31 313 ⇓PKIKP PKPdf 00 26 29.4 +0.1
CFR Carcaliu 154.31 313 ⇓*i*P PKPdf 00 26 29.4 +0.1
BOLV Bolvadin 154.36 297 *i* P PKPab 00 26 53.1 +0.1
TIRR Tirgusor 154.45 311 ⇓PKIKP PKPbc 00 26 38.5 +0.5
TIRR Tirgusor 154.45 311 ⇓*i*P PKPbc 00 26 38.5 +0.5
TESR 154.59 317 ⇑*i*P PKPbc 00 26 38.1 -0.2
EKA Eskdalemuir Ar 154.67 6 PP PP 00 30 34.4 +5.1
EKA Eskdalemuir Ar 154.67 6 PP PP 00 30 34.4 +5.1
comp=Z,2.3nm,0.9s,baz=353,slow=5.5,SNR=3.5
BUR08 Bucovina Ar. S 154.80 320 *e*PKPdf PKPdf 00 26 31.4 +1.3
BUR08 *e*PKPbc PKiKP 00 26 39.0 +0.2
BURAR Bucovina Array 154.81 320 ⇑*i*P PKPdf 00 26 32.1 +2.0
ECK Cauldkaine Hil 154.83 6 *e*P PKPbc 00 26 38.8 +0.3
ECK Cauldkaine Hil 154.83 6 P PKPbc 00 26 38.8 +0.3
KWP Kalwaria Pacla 154.84 326 *e*PKIKP PKPdf 00 26 30.2 +0.2
KWP Kalwaria Pacla 154.84 326 *e*PKPdf PKPdf 00 26 30.2 +0.2
KWP *e*PKPbc PKiKP 00 26 39.3 +0.6
KWP Kalwaria Pacla 154.84 326 ⇑*i*P PKPbc 00 26 40.5 +1.8
KWP Kalwaria Pacla 154.84 326 *e*PKPbc PKPbc 00 26 38.9 +0.2
KWP *e*PKPab PKPab 00 26 54.9 +0.4
ISP Isparta 154.84 295 ⇑PKIKP PKPbc 00 26 40.2 +0.9
ISP Isparta 154.84 295 *e*PKPdf PKPdf 00 26 29.6 -0.9
ISP *e*PKPbc PKiKP 00 26 39.8 +0.5
ISP Isparta 154.84 295 ⇑*i*P PKPbc 00 26 40.2 +0.9
VRI Vrincioaia 154.87 315 ⇓PKIKP PKPdf 00 26 31.3 +1.2
VRI Vrincioaia 154.87 315 ⇓*i*P PKPdf 00 26 31.3 +1.2
PLOR Plostina 154.92 316 ⇑PKIKP PKPbc 00 26 39.0 -0.1
PLOR Plostina 154.92 316 ⇑*i*P PKPbc 00 26 39.0 -0.1
GRER 154.95 314 ⇑*i*P PKPab 00 26 47.3 -7.8
ISR Istrita 155.34 314 ⇑PKIKP PKPdf 00 26 38.4 +7.5
ISR Istrita 155.34 314 ⇑*i*P PKPdf 00 26 38.4 +7.5
LIC Lamto 155.36 164 *e*PKIKP PKPdf 00 26 33.0 +1.2
LIC *e*R
comp=Z,493nm,22.8s
LIC Lamto 155.36 164 *e*PKPdf PKPdf 00 26 33.0 +1.2
BSEG Bad Segeberg 155.44 347 *e*PKIKP PKPdf 00 26 30.6 0.0
BSEG Bad Segeberg 155.44 347 *e*PKPdf PKPdf 00 26 30.6 0.0
BSEG *e* 00 26 40.6
BSEG *e*PKPab PKPab 00 26 57.2 +0.4
KOLS Kolonicke sedl 155.52 326 *e*PKIKP PKPdf 00 26 31.4 +0.5
KOLS Kolonicke sedl 155.52 326 *e*PKP PKPdf 00 26 31.4 +0.5
KOLS *e* 00 26 41.6
KOLS *e* 00 26 58.7
MLR Muntele Rosu 155.53 315 ⇓*i*P PKPdf 00 26 31.9 +0.7
HLG Helgoland 155.60 351 *e* PKPdf 00 26 41.0 +10
DOPR Dopca 155.62 317 ⇑*i*P PKPdf 00 26 42.7 +12
UZH Uzhgorod 155.71 325 *e*PKIKP PKPdf 00 26 28.0 -3.1
UZH *e* 00 26 36.0
UZH *e* 00 26 55.3
UZH *i* 00 27 04.0
UZH *i* 00 43 34.0
SULR 155.73 313 ⇑*i*P PKPdf 00 26 39.4 +8.1
OJC Ojcow 155.73 331 *e*PKIKP PKPdf 00 26 30.3 -0.9
OJC *e* 00 30 31.3
OJC *e*SS SS 00 50 08.3 -2.1
OJC Ojcow 155.73 331 *e*PKPdf PKPdf 00 26 30.3 -0.9
OJC *e*PKPab PKPab 00 27 00.0 +1.7
OJC *e*PP PP 00 30 31.3 -4.3
OJC *e*SKKSac SKKSac 00 37 10.8 -0.4
OJC *e*SS SS 00 50 08.3 -2.1
OJC L L 01 35 23.6
comp=Z,400nm,24.0s
TRPA Tarpa 155.91 324 ⇓*i*P PKPdf 00 26 41.3 +10
TRPA Tarpa 155.91 324 ⇓*e* PKPdf 00 26 41.1 +10
TRPA *e* 00 26 59.2
CRVS Cervenica-Dubn 155.93 326 *e*PKIKP PKPdf 00 26 31.1 -0.4
CRVS *e* 00 26 59.4
CRVS Cervenica-Dubn 155.93 326 *e*PKP PKPdf 00 26 31.1 -0.4
CRVS *e* 00 26 41.3
CRVS *e* 00 26 59.4
RUE Ruedersdorf 155.98 341 *e*PKPdf PKPdf 00 26 31.2 -0.1
RUE *e* 00 26 41.7
RUE *e*PKPab PKPab 00 27 00.1 +0.9
NIE Niedzica 156.10 329 *e*PKIKP PKPdf 00 26 29.7 -2.0
NIE Niedzica 156.10 329 *e*PKPdf PKPdf 00 26 29.7 -2.0
DLF Lyons Farm 156.20 12 *e*P PKPab 00 26 59.2 -0.9
KSP Ksiaz 156.61 336 *e*PKIKP PKPdf 00 26 32.7 +0.4
KSP *e*PPS PPS 00 43 46.0
KSP Ksiaz 156.61 336 *e*PKPdf PKPdf 00 26 33.3 +1.0
KSP *e*PKPbc PKPab 00 26 43.1 -19
KSP *e*PKPab PKPab 00 27 02.7 +0.7
DRGR 156.67 321 ⇓PKIKP PKPdf 00 26 44.0 +11
DRGR 156.67 321 ⇓*i*P PKPdf 00 26 44.0 +11
OKC Ostrava-Krasne 156.71 332 *e*PKIKP PKPdf 00 26 33.1 +0.7
OKC *e* 00 30 39.6
OKC *e* 00 43 40.5
OKC Ostrava-Krasne 156.71 332 *e*PKPDF PKPdf 00 26 33.1 +0.7
OKC *ex* x 00 26 43.8
OKC *e*PKPAB PKPab 00 27 03.0 +0.5
OKC *e*PP PP 00 30 39.6 -1.3
OKC *e*SKKS 00 37 15.0
OKC *ex* x 00 43 40.5
OKC *ex* x 00 44 52.4
NRDL Niedersach Rie 156.85 347 *e*PKPdf PKPdf 00 26 31.5 -0.9
NRDL *e* 00 26 43.5
NRDL *e*PKPab PKPab 00 27 02.3 -0.6
UPC Upice 156.98 336 *e*PKIKP PKPdf 00 26 33.2 +0.4
UPC Upice 156.98 336 *e*PKPDF PKPdf 00 26 33.2 +0.4
UPC *ex* x 00 26 44.6
UPC *e*PKPAB PKPab 00 27 03.8 +0.1
DPC Dobruska-Polom 157.00 335 *e*PKIKP PKPdf 00 26 32.7 -0.2
DPC *ex* x 00 30 41.7
DPC *e* 00 43 52.1
DPC Dobruska-Polom 157.00 335 *e*PKPDF PKPdf 00 26 32.7 -0.2
DPC *ex* x 00 26 44.7
DPC *e*PKPAB PKPab 00 27 04.4 +0.6
DPC *e*PP PP 00 30 41.7 -0.8
DPC *ex* x 00 43 52.1
DPC *ex* x 00 44 40.6
MORC Moravsky Berou 157.00 333 ⇓PKIKP PKPdf 00 26 33.0 +0.1
MORC Moravsky Berou 157.00 333 *e*PKPdf PKPdf 00 26 33.1 +0.1
MORC Moravsky Berou 157.00 333 ⇓*i*P PKPdf 00 26 33.0 +0.1
CLL Collm 157.25 341 ⇓*e*PKIKP PKPdf 00 26 33.0 0.0
CLL pmax pmax
comp=Z,9.0nm,1.1s
CLL pmax pmax
comp=Z,21nm,0.9s
CLL pmax pmax
comp=Z,41nm,0.7s
CLL MLR MLR
comp=Z,400nm,21.4s
CLL Collm 157.25 341 *e*PKPdf PKPdf 00 26 32.4 -0.6
CLL *e* 00 26 44.4
CLL *e*PKPab PKPab 00 27 04.6 -0.1
CLL Collm 157.25 341 *e*PKPdf PKPdf 00 26 33.0 0.0
comp=Z,9.0nm,1.1s
CLL *i* PKPdiff PKPab 00 26 44.4 -20
comp=Z,21nm,0.9s
CLL *i* 00 26 48.2
CLL ⇓*i*PKPab PKPab 00 27 04.7 0.0
comp=Z,41nm,0.7s
CLL *e* 00 27 46.0
CLL *e*(sPKPab) 00 27 58.0
CLL *e*PP PP 00 30 39.0 -4.7
CLL *ep*PP 00 31 21.0
CLL *es*PPP 00 35 06.0
CLL *e*SKKSac SKKSac 00 37 24.0 +5.0
CLL *es*SKKSac 00 38 14.0
CLL *e*PPPrev 00 39 27.0
CLL *e*SKSP 00 40 55.0
CLL *ep*SKSP 00 41 45.0
CLL *e*SKKSdf SKKSdf 00 41 58.0 +1.0
CLL *e*PPS PPS 00 43 55.0
CLL *e*SKSPrev 00 44 48.0
CLL *e* 00 46 15.0
CLL *e*SS SS 00 50 27.0 +0.9
CLL *e*SPS SPS 00 51 19.0
CLL *e*SSS SSS 00 56 28.0
CLL *e*SSSS 01 01 12.0
CLL LmH 01 53 00.0
comp=Z,400nm,21.4s
BRG Berggiesshubel 157.36 339 *e*PKP PKPdf 00 26 33.7 +0.5
comp=Z,22nm,1.2s
BRG *i* 00 27 05.4
comp=Z,33nm,0.8s
BRG *e*PP PP 00 30 44.2 -0.1
comp=Z,21nm,1.7s
BRG *e* 00 37 16.0
BRG SS SS 00 50 21.0 -6.3
BRG Berggiesshubel 157.36 339 *e*PKIKP PKPdf 00 26 33.7 +0.5
BRG *e* 00 30 44.2
BRG SS SS 00 50 21.0 -6.3
BRG pmax pmax
comp=Z,22nm,1.2s
BRG pmax pmax
comp=Z,33nm,0.8s
BRG pmax pmax
comp=Z,21nm,1.7s
BRG Berggiesshubel 157.36 339 *e*PKPdf PKPdf 00 26 32.4 -0.8
BRG *e* 00 26 44.9
BRG *e*PKPab PKPab 00 27 05.6 +0.4
PSZ Piszkesteto 157.37 327 *e*PKIKP PKPdf 00 26 34.1 +0.7
PSZ Piszkesteto 157.37 327 *e*PKPdf PKPdf 00 26 34.1 +0.7
PSZ Piszkesteto 157.37 327 ⇓*e* PKPdf 00 26 32.4 -1.0
PSZ *e* 00 27 04.8
CLZ Clausthal 157.41 346 *e*PKIKP PKPdf 00 26 32.1 -1.2
CLZ Clausthal 157.41 346 *e*PKPdf PKPdf 00 26 32.1 -1.2
CLZ *e* 00 26 45.2
CLZ *e*PKPab PKPab 00 27 05.7 +0.2
VYHS Vyhne 157.44 329 *e*PKIKP PKPdf 00 26 32.1 -1.3
VYHS *e* 00 27 07.0
VYHS Vyhne 157.44 329 *e*PKP PKPdf 00 26 32.1 -1.3
VYHS *e* 00 27 07.0
IBBN Ibbenburen 157.44 350 *e*PKPdf PKPdf 00 26 32.8 -0.4
IBBN *e* 00 26 45.1
IBBN *e*PKPab PKPab 00 27 05.5 0.0
PVCC Panska Ves 157.46 338 *e*PKIKP PKPdf 00 26 34.1 +0.7
PVCC *e* 00 30 43.1
PVCC Panska Ves 157.46 338 *e*PKPDF PKPdf 00 26 34.1 +0.7
PVCC *ex* x 00 26 45.5
PVCC *ex* x 00 26 53.4
PVCC *e*PKPAB PKPab 00 27 06.7 +1.0
PVCC *e*PP PP 00 30 43.1 -1.8
GZR Gura Zlata 157.46 318 ⇑PKIKP PKPdf 00 26 35.4 +1.8
GZR Gura Zlata 157.46 318 ⇑*i*P PKPdf 00 26 35.3 +1.7
FBE Freiberg 157.49 340 *e*PKPdf PKPdf 00 26 33.4 0.0
FBE *e* 00 26 45.1
FBE *e*PKPab PKPab 00 27 06.5 +0.7
NEUB Neuenburg 157.67 343 *e*PKPdf PKPdf 00 26 33.7 +0.1
NEUB *e* 00 26 45.5
NEUB *e*PKPab PKPab 00 27 07.1 +0.6
PRA Prague 157.90 337 *ex* PKPdf 00 26 46.0 +12
PRA PKPAB PKPab 00 27 08.0 +0.4
WTSB Winterswijk 157.91 351 *e*PKP PKPdf 00 26 33.0 -0.9
comp=Z,40nm,1.2s
WTSB *eX* 00 27 08.1
comp=Z,23nm,0.7s
PRU Pruhonice 157.93 337 *e*PKIKP PKPdf 00 26 34.2 +0.2
PRU *e* 00 27 08.2
PRU *e* 00 30 46.6
PRU *e* 00 43 59.9
PRU Pruhonice 157.93 337 *e*PKPDF PKPdf 00 26 34.2 +0.2
PRU *ex* x 00 26 38.1
PRU *ex* x 00 26 46.1
PRU *e*PKPAB PKPab 00 27 08.2 +0.5
PRU *e*PP PP 00 30 46.6 -0.9
PRU *ex* x 00 43 59.9
PRU *ex* x 00 44 54.3
BZS Buzias 157.99 320 ⇑PKIKP PKPdf 00 26 33.9 -0.3
BZS Buzias 157.99 320 ⇑*i*P PKPdf 00 26 33.9 -0.4
SMOL Smolenice 158.04 331 *e*PKIKP PKPdf 00 26 35.6 +1.4
SMOL *e* 00 27 09.2
SMOL Smolenice 158.04 331 *e*PKP PKPdf 00 26 35.6 +1.4
SMOL *e* 00 26 46.7
SMOL *e* 00 27 09.2
PKSN Nyarlorinc 158.09 325 ⇓*e* PKPdf 00 26 35.3 +1.1
BUD Budapest 158.09 327 ⇑*e* PKPdf 00 26 34.5 +0.3
BUD *e* 00 27 08.8
TREC Trest 158.18 335 *e*PP PP 00 30 48.8 -0.2
TANN Tannenbergstha 158.20 341 *e*PKPdf PKPdf 00 26 33.7 -0.7
TANN *e* 00 26 46.6
TANN *e*PKPab PKPab 00 27 09.1 +0.1
WERD Werda 158.22 341 *e*PKPdf PKPdf 00 26 33.7 -0.6
WERD *e* 00 26 46.8
WERD *e*PKPab PKPab 00 27 09.2 +0.2
MOX Moxa 158.22 342 *e*PKP2 PKPab 00 27 08.8 -0.2
MOX *e* 00 30 46.1
MOX *e*PPP PPP 00 34 32.0
MOX *e*SS SS 00 50 36.1 -0.4
MOX Moxa 158.22 342 *e*PKPdf PKPdf 00 26 33.8 -0.5
MOX *e* 00 26 46.6
MOX *e*PKPab PKPab 00 27 08.8 -0.2
MOX *e*PP PP 00 30 46.1 -2.9
MOX *e*PPP PPP 00 34 32.0
MOX *e*SS SS 00 50 36.1 -0.4
MOX *e*SSS SSS 00 56 43.3
PLN Plauen 158.22 341 *e*PKPdf PKPdf 00 26 34.0 -0.3
PLN *e* 00 26 46.7
PLN *e*PKPab PKPab 00 27 09.3 +0.3
GUNZ Gunzen 158.28 341 *e* PKPdf 00 26 47.0 +13
GUNZ *e*PKPab PKPab 00 27 09.8 +0.5
PKS7 Kunszentmiklos 158.33 326 ⇑*e* PKPdf 00 26 34.8 +0.3
WERN Wernitzgruen 158.34 341 *e*PKPab PKPab 00 27 10.1 +0.5
BUG Bochum--Univer 158.36 350 *e*PKPab PKPab 00 27 09.0 -0.5
NKC Novy Kostel 158.37 341 *e*PKIKP PKPdf 00 26 39.1 +4.6
NKC *e* 00 27 10.1
NKC *e* 00 30 45.9
NKC *e* 00 43 58.4
NKC Novy Kostel 158.37 341 *e*PKPDF PKPdf 00 26 39.1 +4.6
NKC *e*PKPAB PKPab 00 27 10.1 +0.4
NKC *e*PP PP 00 30 45.9 -3.9
NKC *ex* x 00 43 58.4
NKC *ex* x 00 44 50.9
ZST Bratislava 158.42 331 *e*PKIKP PKPdf 00 26 33.9 -0.7
ZST *e* 00 27 10.3
ZST Bratislava 158.42 331 *e*PKP PKPdf 00 26 33.9 -0.7
ZST *e* 00 27 10.3
PKS6 Bocsa 158.44 324 *e*PKPdf PKPdf 00 26 35.5 +0.8
UBBA Unterbreizbach 158.45 345 *e*PKPdf PKPdf 00 26 34.3 -0.1
UBBA *e*PKPab PKPab 00 27 09.8 0.0
PKSG 158.45 327 ⇓*e*PKPdf PKPdf 00 26 35.1 +0.4
VTS Vitosha 158.67 311 ⇓PKIKP PKPdf 00 26 34.8 -0.5
VTS Vitosha 158.67 311 ⇓*i*P PKPdf 00 26 34.8 -0.5
MANZ Manzenberg 158.69 341 *e*PKPdf PKPdf 00 26 34.6 -0.3
MANZ *e* 00 26 47.6
MANZ *e*PKPab PKPab 00 27 11.8 +0.7
PKS2 Kecel 158.69 325 *e*PKPdf PKPdf 00 26 36.0 +1.0
PKST T"s 158.72 328 ⇑*e*PKPdf PKPdf 00 26 34.7 -0.3
ROTZ Rotzenmuhle 158.85 340 *e*PKPab PKPab 00 27 12.5 +0.7
KHC Kasperske Hory 158.99 337 *e*PKIKP PKPdf 00 26 35.4 +0.1
KHC *e* 00 27 12.9
KHC Kasperske Hory 158.99 337 *e*PKPdf PKPdf 00 26 35.4 +0.1
KHC *e*PKPab PKPab 00 27 12.9 +0.4
KHC Kasperske Hory 158.99 337 *e*PKPDF PKPdf 00 26 34.8 -0.5
KHC *ex* x 00 26 42.6
KHC *ex* x 00 26 47.9
KHC *e*PKPAB PKPab 00 27 12.7 +0.3
KHC *ex* x 00 27 19.0
KHC *es*PKP 00 27 57.0
KHC *e*PP PP 00 30 52.1 -1.0
KHC *e*SKKS 00 37 29.0
KHC *ex* x 00 44 04.5
KHC *ex* x 00 45 03.3
SOP Sopron 159.05 331 ⇓*e* PKPdf 00 26 34.6 -0.8
SOP *e* 00 27 12.6
PKS9 Tamasi 159.09 326 ⇑*e* PKPdf 00 26 35.3 -0.1
CONA Conrad Observa 159.15 332 *i* PKPdf PKPdf 00 26 35.6 0.0
SNR=6.9
CONA ⇑*i*PKPab PKPab 00 27 12.4 -0.8
CONA Conrad Observa 159.15 332 *i* P PKPdf 00 26 35.6 0.0
GEC2 GERESS Array S 159.19 337 *e*PKP2 PKPab 00 27 14.0 +0.6
GEC2 GERESS Array S 159.19 337 *e*PKPdf PKPdf 00 26 35.2 -0.4
GEC2 *e* 00 26 48.8
GEC2 *e*PKPab PKPab 00 27 14.0 +0.6
GERES GERESS Array B 159.19 337 PKP PKPdf 00 26 34.5 -1.1
GERES PKPab PKPab 00 27 13.2 -0.2
GERES PKKP 00 34 57.5
GERES GERESS Array B 159.19 337 PKP PKPdf 00 26 34.5 -1.1
comp=Z,3.5nm,0.9s,baz=90,slow=1.1,SNR=22
GERES PKPab PKPab 00 27 13.2 -0.2
comp=Z,6.0nm,0.6s,baz=31,slow=4.6,SNR=17
GERES PKKP 00 34 57.5
comp=Z,1.0nm,1.0s,baz=46,slow=5.8,SNR=3.4
GRF Grafenberg Arr 159.20 342 *e*PKP2 PKPab 00 27 14.1 +0.8
GRF *e* 00 30 49.2
GRF *e*PPP PPP 00 34 41.9
GRF *e*SS SS 00 50 49.9 +3.1
GRF Grafenberg Arr 159.20 342 *e*PKPdf PKPdf 00 26 35.0 -0.5
GRF *e* 00 26 48.4
GRF *e*PKPab PKPab 00 27 14.1 +0.8
GRF *e*PP PP 00 30 49.2 -5.1
GRF *e*PPP PPP 00 34 41.9

GRF				*e*SS	SS	00 50 49.9	+3.1
GRF				*e*SSS	SSS	00 56 53.0	
BEBN	**Eben Emael**	**159.20 353**	E		**PKPab**	**00 27 14.0**	**+0.9**
HGN	**Heimansgroeve**	**159.20 352**	*e*PKP		**PKPdf**	**00 26 31.9**	**-3.5**
	comp=Z,104nm,1.4s						
HGN			*e*X			00 27 12.8	
	comp=Z,206nm,1.2s						
WET	**Wettzell**	**159.20 339**	*e*PKIKP		**PKPdf**	**00 26 35.3**	**-0.3**
WET	**Wettzell**	**159.20 339**	*e*PKPdf		**PKPdf**	00 26 35.3	-0.3
WET			*e*			00 26 49.2	
WET			*e*PKPab		**PKPab**	**00 27 12.8**	**-0.5**
TNS	**Taunus Mts**	**159.34 347**	*e*PKIKP		**PKPdf**	**00 26 35.3**	**-0.4**
TNS	**Taunus Mts**	**159.34 347**	*e*PKPdf		**PKPdf**	**00 26 35.3**	**-0.4**
TNS			*e*			00 26 48.7	
TNS			*e*PKPab		**PKPab**	**00 27 13.7**	**-0.2**
MEM	**Membach**	**159.34 352**	PKPdf		**PKPdf**	**00 26 35.9**	**+0.3**
MEM			PKPab		**PKPab**	**00 27 13.5**	**-0.3**
BCLA	**Clavier**	**159.61 353**	PKPab		**PKPab**	**00 27 14.4**	**-0.6**
SNF	**Seneffe**	**159.62 355**	PKPdf		**PKPdf**	**00 26 36.5**	**+0.6**
SNF			PKPab		**PKPab**	**00 27 14.8**	**-0.1**
VAY	**Valandovo**	**159.67 309**	*i* PKP		**PKPdf**	**00 26 32.7**	**-3.6**
VAY			*i* PKP		**PKPab**	**00 27 15.0**	**-0.7**
BEHE	**Becsehely**	**159.88 328**⇑	*e*		**PKPdf**	**00 26 36.5**	**+0.1**
BEHE			*e*			00 27 13.1	
GIVF	**Givet**	**159.97 354**	*e*PKIKP		**PKPdf**	**00 26 36.1**	**-0.2**
GIVF	**Givet**	**159.97 354**	*e*PKIKP		**PKPdf**	**00 26 36.1**	**-0.2**
GIVF	**Givet**	**159.97 354**	*e*PKPdf		**PKPdf**	**00 26 36.1**	**-0.2**
DOU	**Dourbes**	**160.00 354**	PKPab		**PKPab**	**00 27 16.4**	**-0.3**
BAIF	**Baives**	**160.07 355**	*e*PKIKP		**PKPdf**	**00 26 36.1**	**-0.3**
	comp=Z,23nm,1.1s						
BAIF	**Baives**	**160.07 355**	*e*PKIKP		**PKPdf**	**00 26 36.1**	**-0.3**
BAIF	**Baives**	**160.07 355**	*e*PKPdf		**PKPdf**	**00 26 36.1**	**-0.3**
SKO	**Skopje**	**160.12 312**	*e*PKP		**PKPdf**	**00 26 37.7**	**+0.9**
SKO			*i* PKP		**PKPab**	**00 27 18.3**	**+0.7**
WLF	**Walferdange**	**160.25 351**	PKPdf		**PKPdf**	**00 26 36.6**	**-0.1**
WLF			PKPab		**PKPab**	**00 27 17.9**	**+0.1**
WLF	**Walferdange**	**160.25 351**	*e*PKPdf		**PKPdf**	**00 26 35.6**	**-1.1**
WLF			*e*PKPab		**PKPab**	**00 27 17.5**	**-0.3**
RJOB	**Jochberg**	**160.46 337**	*e*PKPab		**PKPab**	**00 27 19.6**	**+0.7**
PERS	**Pernice**	**160.48 331**	*e*PKPdf		**PKPdf**	**00 26 34.5**	**-2.6**
PERS			*i*			00 27 18.5	
SOKA	**Soboth**	**160.48 331**⇑	*i*PKPdf		**PKPdf**	**00 26 37.0**	**-0.1**
SOKA			⇑*i*PKPab		**PKPab**	**00 27 19.4**	**+0.3**
SOKA	**Soboth**	**160.48 331**⇑	*i*P		**PKPdf**	**00 26 37.0**	**-0.1**
STU	**Stuttgart**	**160.55 345**	*e*PKIKP		**PKPdf**	**00 26 37.4**	**+0.4**
STU	**Stuttgart**	**160.55 345**	*e*PKPdf		**PKPdf**	**00 26 36.8**	**-0.2**
STU			*e*			00 26 51.2	
STU			*e*PKPab		**PKPab**	**00 27 19.6**	**+0.4**
STU	**Stuttgart**	**160.55 345**	*e*PKPdf		**PKPdf**	**00 26 37.4**	**+0.4**
FUR	**Furstenfeldbru**	**160.56 340**	*e*PKP2		**PKPab**	**00 27 19.6**	**+0.3**
FUR	**Furstenfeldbru**	**160.56 340**	*e*PKPab		**PKPab**	**00 27 19.6**	**+0.3**
BIA	**Bitola**	**160.65 309**	*e*PKP		**PKPdf**	**00 26 36.5**	**-0.9**
GOLS	**Golise**	**160.75 329**	*i* PKPdf		**PKPdf**	**00 26 35.5**	**-1.8**
BFO	**Black Forest**	**161.16 346**	*e*PKP2		**PKPab**	**00 27 21.6**	**-0.3**
BFO	**Black Forest**	**161.16 346**	*e*PKPdf		**PKPdf**	**00 26 37.1**	**-0.7**
BFO			*e*			00 26 52.8	
BFO			*e*PKPab		**PKPab**	**00 27 21.6**	**-0.3**
LJU	**Ljubljana**	**161.20 331**	*e*PKPdf		**PKPdf**	**00 26 36.4**	**-1.5**
LJU			*i*			00 27 21.1	
LJU			*i*			00 27 36.8	
WATA	**Walderalm**	**161.21 338**⇓	*i*PKIKP		**PKPdf**	**00 26 37.9**	**-0.1**
WATA	**Walderalm**	**161.21 338**⇓	*i*PKPdf		**PKPdf**	**00 26 37.9**	**-0.1**
WATA			⇑*i*PKPab		**PKPab**	**00 27 20.7**	**-2.2**
WATA	**Walderalm**	**161.21 338**⇓	*i*P		**PKPdf**	**00 26 37.9**	**-0.1**
WTTA	**Wattenberg**	**161.25 338**⇑	*i*PKIKP		**PKPdf**	**00 26 37.9**	**-0.2**
WTTA	**Wattenberg**	**161.25 338**⇑	*i*PKPdf		**PKPdf**	**00 26 37.9**	**-0.2**
WTTA			⇑*i*PKPab		**PKPab**	**00 27 22.8**	**+0.2**
WTTA	**Wattenberg**	**161.25 338**⇑	*i*P		**PKPdf**	**00 26 37.9**	**-0.2**
CDF	**Champ du Feu**	**161.29 348**	*e*PKIKP		**PKPdf**	**00 26 38.2**	**+0.2**
	comp=Z,40nm,1.6s						
CDF	**Champ du Feu**	**161.29 348**	*e*PKIKP		**PKPdf**	**00 26 38.2**	**+0.2**
CDF	**Champ du Feu**	**161.29 348**	*e*PKPdf		**PKPdf**	**00 26 38.2**	**+0.2**
BOJS	**Bojanci**	**161.31 329**	*i* PKPdf		**PKPdf**	**00 26 36.8**	**-1.2**
BOJS			*i*			00 27 16.9	
BOJS			*e*			00 27 31.5	
BOJS			*e*			00 28 09.3	
MOTA	**Moosalm**	**161.35 339**⇓	*i*PKIKP		**PKPdf**	**00 26 37.0**	**-1.2**
MOTA	**Moosalm**	**161.35 339**⇓	*i*PKPdf		**PKPdf**	**00 26 37.0**	**-1.2**
MOTA			⇑*i*PKPab		**PKPab**	**00 27 20.9**	**-2.0**
	SNR=7.2						
MOTA	**Moosalm**	**161.35 339**⇓	*i*P		**PKPdf**	**00 26 37.0**	**-1.2**
PAGF	**Fort de Pagny**	**161.40 351**	*e*PKIKP		**PKPdf**	**00 26 37.7**	**-0.3**
	comp=Z,15nm,1.4s						
PAGF	**Fort de Pagny**	**161.40 351**	*e*PKPdf		**PKPdf**	**00 26 37.7**	**-0.3**
ABTA	**Abfaltersbach**	**161.41 336**⇑	*i*PKPdf		**PKPdf**	**00 26 37.6**	**-0.6**
ABTA			⇑*i*PKPab		**PKPab**	**00 27 22.9**	**-0.2**
ABTA	**Abfaltersbach**	**161.41 336**⇑	*i*P		**PKPdf**	**00 26 37.5**	**-0.6**
FLN	**La Foliniere**	**161.41 4**	*e*PKIKP		**PKPdf**	**00 26 37.7**	**-0.2**
	comp=Z,108nm,1.4s						
FLN			*e*R			00 27 23.2	
	comp=Z,375nm,19.8s						
FLN	**La Foliniere**	**161.41 4**	*e*PKIKP		**PKPdf**	**00 26 37.7**	**-0.2**
FLN	**La Foliniere**	**161.41 4**	*e*PKPdf		**PKPdf**	**00 26 37.7**	**-0.2**
ECH	**Echery**	**161.50 348**	*e*PKIKP		**PKPdf**	**00 26 37.6**	**-0.5**
ECH			*e*			00 27 23.2	
ECH	**Echery**	**161.50 348**	*e*PKPdf		**PKPdf**	**00 26 37.6**	**-0.5**
ECH			*e*PKPab		**PKPab**	**00 27 23.2**	**-0.1**
JAVS	**Javornik**	**161.51 331**	*e*PKPdf		**PKPdf**	**00 26 38.3**	**0.0**
JAVS			*e*			00 27 22.4	
MEZF	**Maizieres J'vi**	**161.53 353**	*e*PKIKP		**PKPdf**	**00 26 38.1**	**0.0**
	comp=Z,92nm,1.4s						
MEZF	**Maizieres J'vi**	**161.53 353**	*e*PKPdf		**PKPdf**	**00 26 38.1**	**0.0**
ROSF	**Rostrenen**	**161.53 10**	*e*PKIKP		**PKPdf**	**00 26 37.6**	**-0.5**
	comp=Z,215nm,1.6s						
ROSF	**Rostrenen**	**161.53 10**	*e*PKIKP		**PKPdf**	**00 26 37.6**	**-0.5**
ROSF	**Rostrenen**	**161.53 10**	*e*PKPdf		**PKPdf**	**00 26 37.6**	**-0.5**
LDF	**La Druitiere**	**161.60 3**	*e*PKIKP		**PKPdf**	**00 26 37.7**	**-0.4**
	comp=Z,145nm,1.7s						
LDF	**La Druitiere**	**161.60 3**	*e*PKIKP		**PKPdf**	**00 26 37.7**	**-0.4**
LDF	**La Druitiere**	**161.60 3**	*e*PKPdf		**PKPdf**	**00 26 37.7**	**-0.4**
SGMF	**Saint Gilles**	**161.72 9**	*e*PKIKP		**PKPdf**	**00 26 38.0**	**-0.3**
SGMF	**Saint Gilles**	**161.72 9**	*e*PKIKP		**PKPdf**	**00 26 38.0**	**-0.3**
SGMF	**Saint Gilles**	**161.72 9**	*e*PKPdf		**PKPdf**	**00 26 38.0**	**-0.3**
FETA	**Feichten**	**161.75 339**⇑	*i*PKPdf		**PKPdf**	**00 26 38.6**	**0.0**
FETA			⇓*i*sPKPdf		**sPKPdf**	**00 27 26.0**	**-5.9**
	SNR=5.6						
FETA	**Feichten**	**161.75 339**⇑	*i*P		**PKPdf**	**00 26 38.6**	**0.0**
GRR	**Gorron**	**161.76 5**	*e*PKIKP		**PKPdf**	**00 26 38.0**	**-0.3**
	comp=Z,66nm,1.3s						
GRR	**Gorron**	**161.76 5**	*e*PKIKP		**PKPdf**	**00 26 38.0**	**-0.3**
GRR	**Gorron**	**161.76 5**	*e*PKPdf		**PKPdf**	**00 26 38.0**	**-0.3**
DAVA	**Damuels**	**161.76 342**⇑	*i*PKPdf		**PKPdf**	**00 26 38.6**	**0.0**
DAVA			⇑*i*PKPab		**PKPab**	**00 27 24.8**	**+0.1**
DAVA	**Damuels**	**161.76 342**⇑	*i*P		**PKPdf**	**00 26 38.6**	**0.0**
TRI	**Trieste**	**161.79 332**	*e*PKIKP		**PKPdf**	**00 26 36.5**	**-1.9**
TRI			*e*			00 27 23.7	
TRI	**Trieste**	**161.79 332**	*e*PKPdf		**PKPdf**	**00 26 36.5**	**-1.9**
TRI			*e*PKPab		**PKPab**	**00 27 23.7**	**-1.0**
SFTF	**Sexfontaines**	**161.83 352**	*e*PKIKP		**PKPdf**	**00 26 38.2**	**-0.2**
	comp=Z,79nm,1.2s						
SFTF	**Sexfontaines**	**161.83 352**	*e*PKPdf		**PKPdf**	**00 26 38.2**	**-0.2**
HAU	**Haudompre**	**161.84 349**	*e*PKIKP		**PKPdf**	**00 26 38.0**	**-0.5**
	comp=Z,42nm,1.4s						
HAU			*e*R			00 27 23.4	
	comp=Z,592nm,18.8s						
HAU	**Haudompre**	**161.84 349**	*e*PKIKP		**PKPdf**	**00 26 38.0**	**-0.5**
HAU	**Haudompre**	**161.84 349**	*e*PKPdf		**PKPdf**	**00 26 38.0**	**-0.5**
HINF	**Hinteralfeld**	**161.94 348**	*e*PKIKP		**PKPdf**	**00 26 37.8**	**-0.8**
	comp=Z,56nm,1.5s						
HINF	**Hinteralfeld**	**161.94 348**	*e*PKIKP		**PKPdf**	**00 26 37.8**	**-0.8**
HINF	**Hinteralfeld**	**161.94 348**	*e*PKPdf		**PKPdf**	**00 26 37.8**	**-0.8**
QUIF	**Quistinic**	**161.96 10**	*e*PKIKP		**PKPdf**	**00 26 38.2**	**-0.3**
	comp=Z,270nm,1.8s						
QUIF	**Quistinic**	**161.96 10**	*e*PKIKP		**PKPdf**	**00 26 38.2**	**-0.3**
QUIF	**Quistinic**	**161.96 10**	*e*PKPdf		**PKPdf**	**00 26 38.2**	**-0.3**
TUE	**Stuetta**	**162.65 342**	*e*PKPdf		**PKPdf**	**00 26 38.6**	**-1.0**
TUE			*e*PKPab		**PKPab**	**00 27 29.1**	**+0.4**
LOR	**Lormes**	**162.87 355**	*e*PKIKP		**PKPdf**	**00 26 39.2**	**-0.3**
	comp=Z,80nm,1.3s						
LOR			*e*R			00 27 23.9	
	comp=Z,920nm,21.5s						
LOR	**Lormes**	**162.87 355**	*e*PKPdf		**PKPdf**	**00 26 39.2**	**-0.3**
HYF	**Humbligny**	**162.94 357**	*e*PKIKP		**PKPdf**	**00 26 39.6**	**0.0**
HYF	**Humbligny**	**162.94 357**	*e*PKPdf		**PKPdf**	**00 26 39.6**	**0.0**
TOA0	**Torodi Ar. Sit**	**163.02 181**	*e*PKPdf		**PKPdf**	**00 26 39.9**	**-0.7**
TOA0			*e*PKPab		**PKPab**	**00 27 31.2**	**+0.5**
TORD	**Torodi Ar. Bea**	**163.02 181**	PKP		**PKPdf**	**00 26 40.0**	**-0.5**
TORD			PKPab		**PKPab**	**00 27 31.1**	**+0.4**
TORD			PP		**PP**	**00 31 16.3**	**+1.8**
TORD	**Torodi Ar. Bea**	**163.02 181**	PKP		**PKPdf**	**00 26 40.0**	**-0.5**
	comp=Z,11nm,1.0s,baz=271,slow=0.9,SNR=39						
TORD			PKPab		**PKPab**	**00 27 31.0**	**+0.4**
	comp=Z,33nm,0.9s,baz=178,slow=3.1,SNR=8.7						
TORD			PP		**PP**	**00 31 16.3**	**+1.8**
	comp=Z,4.7nm,0.8s,baz=159,slow=3.1,SNR=3.8						
SSF	**Saint Saulge**	**163.10 355**	*e*PKIKP		**PKPdf**	**00 26 39.5**	**-0.2**
	comp=Z,35nm,1.1s						
SSF	**Saint Saulge**	**163.10 355**	*e*PKIKP		**PKPdf**	**00 26 39.5**	**-0.2**
SSF	**Saint Saulge**	**163.10 355**	*e*PKPdf		**PKPdf**	**00 26 39.5**	**-0.2**
CABF	**La Chapelle**	**163.24 349**	*e*PKIKP		**PKPdf**	**00 26 40.0**	**0.0**
	comp=Z,62nm,1.3s						
CABF	**La Chapelle**	**163.24 349**	*e*PKIKP		**PKPdf**	**00 26 40.0**	**0.0**
CABF	**La Chapelle**	**163.24 349**	*e*PKPdf		**PKPdf**	**00 26 40.0**	**0.0**
AVF	**Avril sur Loir**	**163.38 356**	*e*PKIKP		**PKPdf**	**00 26 39.4**	**-0.6**
	comp=Z,34nm,1.3s						
AVF	**Avril sur Loir**	**163.38 356**	*e*PKIKP		**PKPdf**	**00 26 39.4**	**-0.6**
AVF	**Avril sur Loir**	**163.38 356**	*e*PKPdf		**PKPdf**	**00 26 39.4**	**-0.6**
SMF	**Signal de Mont**	**163.49 354**	*e*PKIKP		**PKPdf**	**00 26 39.6**	**-0.5**
	comp=Z,51nm,1.4s						
SMF	**Signal de Mont**	**163.49 354**	*e*PKIKP		**PKPdf**	**00 26 39.6**	**-0.5**
SMF	**Signal de Mont**	**163.49 354**	*e*PKPdf		**PKPdf**	**00 26 39.6**	**-0.5**
MFF	**Saint Martin d**	**163.59 4**	*e*PKIKP		**PKPdf**	**00 26 40.2**	**0.0**
	comp=Z,103nm,1.5s						
MFF	**Saint Martin d**	**163.59 4**	*e*PKIKP		**PKPdf**	**00 26 40.2**	**0.0**
MFF	**Saint Martin d**	**163.59 4**	*e*PKPdf		**PKPdf**	**00 26 40.2**	**0.0**
BGF	**Bois d'Agland**	**163.65 357**	*e*PKIKP		**PKPdf**	**00 26 40.1**	**-0.1**
	comp=Z,51nm,1.2s						
BGF	**Bois d'Agland**	**163.65 357**	*e*PKIKP		**PKPdf**	**00 26 40.1**	**-0.1**
BGF	**Bois d'Agland**	**163.65 357**	*e*PKPdf		**PKPdf**	**00 26 40.1**	**-0.1**
TCF	**Toulx Ste Croi**	**163.94 358**	*e*PKIKP		**PKPdf**	**00 26 40.2**	**-0.4**
	comp=Z,42nm,1.3s						
TCF	**Toulx Ste Croi**	**163.94 358**	*e*PKIKP		**PKPdf**	**00 26 40.2**	**-0.4**
TCF	**Toulx Ste Croi**	**163.94 358**	*e*PKPdf		**PKPdf**	**00 26 40.2**	**-0.4**
LPL	**La Plagne**	**164.18 346**	*e*PKIKP		**PKPdf**	**00 26 40.9**	**-0.2**
	comp=Z,28nm,1.2s						
LPL	**La Plagne**	**164.18 346**	*e*PKIKP		**PKPdf**	**00 26 40.9**	**-0.2**
LPL	**La Plagne**	**164.18 346**	*e*PKPdf		**PKPdf**	**00 26 40.9**	**-0.2**
LPG	**La Plagne**	**164.19 346**	*e*PKIKP		**PKPdf**	**00 26 40.8**	**-0.4**
	comp=Z,17nm,1.1s						
LPG	**La Plagne**	**164.19 346**	*e*PKIKP		**PKPdf**	**00 26 40.8**	**-0.4**
LPG	**La Plagne**	**164.19 346**	*e*PKPdf		**PKPdf**	**00 26 40.8**	**-0.4**
TIP	**Timpagrande**	**164.60 310**	*e*PKPdf		**PKPdf**	**00 26 41.4**	**0.0**
TIP			*e*PKPab		**PKPab**	**00 27 38.4**	**+0.9**
ORIF	**Oris-en-Rattie**	**164.92 348**	*e*PKIKP		**PKPdf**	**00 26 41.3**	**-0.3**
	comp=Z,17nm,1.0s						
ORIF			*e*R			00 27 23.6	
	comp=Z,699nm,21.5s						
ORIF	**Oris-en-Rattie**	**164.92 348**	*e*PKIKP		**PKPdf**	**00 26 41.3**	**-0.3**
ORIF	**Oris-en-Rattie**	**164.92 348**	*e*PKPdf		**PKPdf**	**00 26 41.3**	**-0.3**
MBDF	**Montbardon**	**164.92 345**	*e*PKIKP		**PKPdf**	**00 26 41.4**	**-0.2**
	comp=Z,42nm,1.3s						
MBDF	**Montbardon**	**164.92 345**	*e*PKIKP		**PKPdf**	**00 26 41.4**	**-0.2**
MBDF	**Montbardon**	**164.92 345**	*e*PKPdf		**PKPdf**	**00 26 41.4**	**-0.2**
RJF	**Les Rejaudoux**	**164.93 360**	*e*PKIKP		**PKPdf**	**00 26 41.5**	**+0.1**
	comp=Z,29nm,1.1s						
RJF			*e*R			00 27 23.8	
	comp=Z,885nm,21.2s						
RJF	**Les Rejaudoux**	**164.93 360**	*e*PKIKP		**PKPdf**	**00 26 41.5**	**+0.1**
RJF	**Les Rejaudoux**	**164.93 360**	*e*PKPdf		**PKPdf**	**00 26 41.5**	**+0.1**
VIVF	**Saint-Julien-l**	**165.17 351**	*e*PKIKP		**PKPdf**	**00 26 41.6**	**-0.1**
	comp=Z,37nm,1.2s						
VIVF	**Saint-Julien-l**	**165.17 351**	*e*PKIKP		**PKPdf**	**00 26 41.6**	**-0.1**
VIVF	**Saint-Julien-l**	**165.17 351**	*e*PKPdf		**PKPdf**	**00 26 41.6**	**-0.1**
LFF	**La Frestale**	**165.28 2**	*e*PKIKP		**PKPdf**	**00 26 41.7**	**0.0**
	comp=Z,148nm,1.8s						
LFF	**La Frestale**	**165.28 2**	*e*PKIKP		**PKPdf**	**00 26 41.7**	**0.0**
LFF	**La Frestale**	**165.28 2**	*e*PKPdf		**PKPdf**	**00 26 41.7**	**0.0**
CAF	**Calviac**	**165.30 358**	*e*PKIKP		**PKPdf**	**00 26 41.8**	**0.0**
	comp=Z,46nm,1.3s						
CAF	**Calviac**	**165.30 358**	*e*PKIKP		**PKPdf**	**00 26 41.8**	**0.0**
CAF	**Calviac**	**165.30 358**	*e*PKPdf		**PKPdf**	**00 26 41.8**	**0.0**
PGAV	**Gavieira, Arco**	**165.88 31**	*e*PKIKP		**PKPdf**	**00 26 44.3**	**+1.9**
PGAV	**Gavieira, Arco**	**165.88 31**	*e*PKPab		**PKPab**	**00 27 43.2**	**+0.3**
SMRF	**Simiane la Rot**	**165.88 348**	*e*PKIKP		**PKPdf**	**00 26 42.3**	**0.0**
SMRF	**Simiane la Rot**	**165.88 348**	*e*PKPdf		**PKPdf**	**00 26 42.3**	**0.0**
LASF	**Ste Croix**	**166.03 353**	*e*PKIKP		**PKPdf**	**00 26 42.5**	**+0.1**
	comp=Z,81nm,1.4s						
LASF	**Ste Croix**	**166.03 353**	*e*PKPdf		**PKPdf**	**00 26 42.5**	**+0.1**
POLO	**Lamas de Olo**	**166.56 32**	*e*PKPdf		**PKPdf**	**00 26 44.6**	**+1.6**
POLO	**Lamas de Olo**	**166.56 32**	*e*PKPab		**PKPab**	**00 27 45.3**	**-0.7**
MVO	**Moncorvo**	**167.07 30**	*e*PKPdf		**PKPdf**	**00 26 44.1**	**+0.7**
MVO	**Moncorvo**	**167.07 30**	*e*PKPab		**PKPab**	**00 27 47.8**	**-0.4**
EPF	**Esparros**	**167.17 4**	*e*PKIKP		**PKPdf**	**00 26 43.6**	**+0.2**
	comp=Z,44nm,1.1s						
EPF	**Esparros**	**167.17 4**	*e*PKIKP		**PKPdf**	**00 26 43.6**	**+0.2**
EPF	**Esparros**	**167.17 4**	*e*PKPdf		**PKPdf**	**00 26 43.6**	**+0.2**
MTE	**Manteigas**	**167.45 34**	*e*PKPdf		**PKPdf**	**00 26 45.5**	**+1.8**
LIS	**Lisbon**	**167.80 43**	*e*PP		PP	00 31 41.1	+0.9
LIS			*e*SS		SS	00 52 19.2	+2.7
LIS			AMS		AMS	01 41 40.4	
	comp=E,1μm,26.2s						
LIS	**Lisbon**	**167.80 43**	*e*PP		PP	00 31 41.1	+0.9
LIS			*e*SS		SS	00 52 19.2	+2.7
PMRV	**Marv??o**	**168.27 36**	*e*PKPdf		**PKPdf**	**00 26 45.3**	**+1.1**
PMRV			*ep*PKPdf		**pPKPdf**	**00 27 24.5**	**+1.6**
PMRV	**Marv??o**	**168.27 36**	*e*PKPab		**PKPab**	**00 27 52.7**	**-0.8**
EVOP	**Sao Brissos**	**168.52 41**	*e*PKIKP		**PKPdf**	**00 26 44.6**	**+0.3**
EVOP	**Sao Brissos**	**168.52 41**	*e*PKPdf		**PKPdf**	**00 26 44.6**	**+0.3**
PNCL	**Nicolau / Gran**	**168.56 44**	*e*PKPdf		**PKPdf**	**00 26 46.8**	**+2.4**
PESTR	**Estremoz**	**168.58 38**	*e*PKPdf		**PKPdf**	**00 26 46.0**	**+1.6**
PESTR	**Estremoz**	**168.58 38**	*e*PKPab		**PKPab**	**00 27 54.8**	**-0.1**
EVO	**Evora**	**168.58 41**	*e*PKPdf		**PKPdf**	**00 26 46.6**	**+2.2**
EVO	**Evora**	**168.58 41**	*e*PKIKP		**PKPdf**	**00 26 44.6**	**+0.2**
	comp=E,66nm,1.2s						
EVO			*e*R			00 27 23.5	
	comp=E,798nm,21.0s						
MORF	**Marmelete**	**168.99 47**	*e*PKPdf		**PKPdf**	**00 26 46.8**	**+2.0**
MORF			*ep*PKPdf		**pPKPdf**	**00 27 25.4**	**+1.9**
PBDV	**Barranco-do-Ve**	**169.48 46**	*e*PKPdf		**PKPdf**	**00 26 47.8**	**+2.8**
PBDV			*ep*PKPdf		**pPKPdf**	**00 27 26.8**	**+3.0**
PVAQ	**Vaqueiros**	**169.51 44**	*e*PKPdf		**PKPdf**	**00 26 46.9**	**+1.9**
PAB	**San Pablo**	**169.53 26**	*e*PKIKP		**PKPdf**	**00 26 46.2**	**+1.1**
PAB	**San Pablo**	**169.53 26**	*e*PKPdf		**PKPdf**	**00 26 46.1**	**+1.1**
ESDC	**Sonseca Array**	**169.55 24**	PKP		**PKPdf**	**00 26 46.1**	**+1.0**
ESDC			PKPab		**PKPab**	**00 27 58.9**	**-0.2**
ESDC	**Sonseca Array**	**169.55 24**	PKP		**PKPdf**	**00 26 46.1**	**+1.0**
	comp=E,8.6nm,0.9s,baz=357,slow=2.9,SNR=35						
ESDC			PKPab		**PKPab**	**00 27 58.9**	**-0.2**
	comp=E,4.3nm,0.8s,baz=325,slow=4.0,SNR=9.3						
KEST	**Kesra**	**171.41 312**	*e*PKPdf		**PKPdf**	**00 26 47.2**	**+1.0**
KEST			PKP			00 26 47.5	
KEST			PKPab		**PKPab**	**00 28 08.6**	**+1.0**
KEST	**Kesra**	**171.41 312**	PKP		**PKPdf**	**00 26 47.5**	**+1.3**
	comp=E,5.3nm,1.0s,baz=247,slow=3.9,SNR=7.5						
KEST			PKPab		**PKPab**	**00 28 08.6**	**+1.0**
	comp=E,3.9nm,0.8s,baz=304,slow=2.9,SNR=14						
TAM	**Tamanrasset**	**171.78 207**	*e*PKIKP		**PKPdf**	**00 26 47.7**	**+0.8**
TAM	**Tamanrasset**	**171.78 207**	*e*PKPdf		**PKPdf**	**00 26 47.6**	**+0.8**

*IDC **26** 00:33:18.0±2.6,36°.68N×142°.01E, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.4/25, mbtmp3.6/3, MS3.1/1, Ms1 3.1/1, ms1mx2.9/39, Error ellipse: s-maj=56.1km s-min=30.6km az=44.0*

*JMA **26** 00:33:21.0±0.2,36°.72N×141°.88E, h43km, M3.7*

ISC 26 00:33:22.4±3.0, 36°.73N±0°.10×141°.9E×0°.1, h50km, n16, σ1§62/27, 1C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.97**	**293**	⇓P	**Pn**	**00 33 37.8**	**-1.9**
ONAJ				*e*S	**Sn**	**00 33 51.0**	**-1.5**
JFK	**Kawauchi**	**1.04**	**308**	P	**Pn**	**00 33 39.0**	**-1.8**
JFK				*e*S	**Sn**	**00 33 52.8**	**-1.5**
JHO	**Hitachi**	**1.09**	**264**	P	**Pn**	**00 33 39.3**	**-2.0**
JHO				*e*S	**Sn**	**00 33 53.0**	**-2.3**
JMM	**Marumori**	**1.44**	**322**	⇓P	**Pn**	**00 33 45.2**	**-0.9**
JMM				*e*S	**Sn**	**00 34 02.4**	**-1.5**
JFT	**Otama**	**1.48**	**302**	⇓P	**Pn**	**00 33 46.4**	**-0.3**
JFT				*e*S	**Sn**	**00 34 03.7**	**-1.3**
JIO	**Ouri**	**1.78**	**346**	P	**Pn**	**00 33 50.4**	**-0.3**
JIO				*e*S	**Sn**	**00 34 10.8**	**-1.3**
JFY	**Yanaizu**	**1.89**	**291**	P	**Pn**	**00 33 52.8**	**+0.5**
JFY				*e*S	**Sn**	**00 34 15.6**	**+0.7**
JOU	**Okura**	**1.91**	**329**	⇑P	**Pn**	**00 33 53.2**	**+0.7**
JOU				*e*S	**Sn**	**00 34 15.8**	**+0.4**
JAG	**Ashikaga**	**2.00**	**262**	P	**Pn**	**00 33 57.9**	**-0.9**
JYS	**Shirataka**	**2.09**	**316**	P	**Pn**	**00 33 56.2**	**+1.2**
JYS				*e*S	**Sn**	**00 34 22.2**	**+2.4**
JKT	**Katashina**	**2.14**	**272**	P	**Pn**	**00 33 55.7**	**-0.1**
JKT				*e*S	**Sn**	**00 34 22.4**	**+1.2**
JMK	**Ichinoseki**	**2.28**	**346**	P	**Pn**	**00 33 58.3**	**+0.7**
JMK				*e*S	**Sn**	**00 34 25.2**	**+0.7**
MJAR	**Matsushiro Arr**	**2.99**	**267**	Pn	**Pn**	**00 34 07.5**	**+0.2**
	7.6nm,0.3s,baz=90,slow=15,SNR=40						
MJAR				Sn	**Sn**	**00 34 45.6**	**+3.7**
	3.0nm,0.3s,baz=152,slow=23,SNR=5.2						
MJAR				LR	LR	00 35 35.2	
	comp=Z,281nm,18.5s,baz=25,slow=45						
MAT	**Matsushiro**	**2.99**	**267**	P	**Pn**	**00 34 08.0**	**+0.7**
MAT				S	**Sn**	**00 34 44.9**	**+3.0**
SONM	**Songino Array**	**28.29**	**304**	P	P	00 39 13.8	+2.7
	0.5nm,0.5s,baz=101,slow=9.0,SNR=6.1						
WRA	**Warramunga Arr**	**56.82**	**189**

PETK **Petropavlovsk-** 22.21 287 P P 00 43 20.3 -0.3
comp=Z,25nm,0.8s,baz=97,slow=14,SNR=16
BBB **Bella Bella** 22.66 75 P P 00 43 26.7 +1.3
BBB **Bella Bella** 22.66 75 P P 00 43 26.7 +1.3
comp=Z,30nm,1.0s,baz=270,slow=9.1,SNR=4.1
SEY **Seymchan** 24.49 312 eP P 00 43 43.7 +0.5
RPW **Rockport** 27.92 80 P P 00 44 15.6 +1.2
YKW3 **Yellowknife Ar** 28.41 49 eP P 00 44 18.8 +0.3
comp=Z,0.1nm,0.6s
YKA **Yellowknife Ar** 28.42 49 P P 00 44 18.8 +0.2
YKA PcP PcP 00 47 29.4 -0.8
YKA **Yellowknife Ar** 28.42 49 P P 00 44 18.8 +0.2
comp=Z,3.7nm,0.6s,baz=266,slow=7.8,SNR=94
YKA PcP PcP 00 47 29.4 -0.8
comp=Z,1.1nm,0.7s,baz=280,slow=2.5,SNR=5.8
NLW **Nelson Butte** 28.79 80 P P 00 44 23.6 +1.4
ETW **Entiat** 29.00 81 P P 00 44 25.4 +1.3
WTV **Waterville** 29.19 81 P P 00 44 26.7 +1.1
B08A **Colville Reser** 29.27 79 P P 00 44 27.6 +1.2
HUMO **Hull Mountain** 29.90 92 eP P 00 44 33.0 +1.0
comp=Z,7.5nm,0.8s
HAWA **Hanford** 30.04 83 eP P 00 44 33.8 +0.7
comp=Z,38nm,0.8s
OD2 **Odessa Site #2** 30.08 81 P P 00 44 34.4 +0.9
YBH **Yreka Blue Hor** 30.55 93 eP P 00 44 39.2 +1.5
comp=Z,12nm,1.0s
NEW **Newport** 30.64 78 eP P 00 44 39.5 +0.9
comp=Z,33nm,0.8s
NEW **Newport** 30.64 78 ⇓P P 00 44 39.4 +0.9
baz=30,SNR=25
WDC **Whiskeytown Da** 31.32 95 eP P 00 44 45.5 +1.0
WDC pmax pmax
comp=Z,6.0nm,0.8s
WDC **Whiskeytown Da** 31.32 95 eP P 00 44 45.5 +1.0
comp=Z,6.2nm,0.8s
C11A **Tepee Creek (N** 31.35 78 ⇑P P 00 44 45.2 +0.4
baz=31
B12A **Libby** 31.47 77 ⇓P P 00 44 46.5 +0.7
baz=31
C12B **Naegeli Ranch,** 31.88 78 ⇑P P 00 44 50.1 +0.7
baz=32,SNR=11
MOD **Modoc** 31.93 91 eP P 00 44 51.4 +1.4
comp=Z,32nm,0.9s
A13A **Flathead Natio** 31.97 75 ⇓P P 00 44 50.8 +0.5
baz=32,SNR=5.1
B13A **Whitefish** 32.18 76 ⇑P P 00 44 52.7 +0.6
baz=32,SNR=8.6
WALA **Waterton Lakes** 32.21 75 eP P 00 44 52.5 +0.1
comp=Z,0.4nm,1.0s
BSMT **Bassoo Peak** 32.23 77 eP P 00 44 53.4 +0.8
D12A **Red Ives Fores** 32.26 79 ⇑P P 00 44 53.0 +0.2
baz=32,SNR=22
BLMT **Blacktail Moun** 32.41 77 eP P 00 44 54.9 +0.7
C13A **Hot Springs** 32.44 78 ⇑P P 00 44 54.9 +0.5
baz=32,SNR=19
A14A **Double T Ranch** 32.54 75 ⇑P P 00 44 55.8 +0.5
baz=32,SNR=19
JTMT **Jette** 32.58 77 eP P 00 44 56.2 +0.6
WVOR **Wild Horse Val** 32.65 89 eP P 00 44 57.0 +0.7
WVOR pmax pmax
comp=Z,21nm,1.1s
WVOR **Wild Horse Val** 32.65 89 eP P 00 44 57.0 +0.7
comp=Z,21nm,1.1s
YBMT **Yellow Bay** 32.69 77 eP P 00 44 57.1 +0.5
comp=Z,12nm,0.9s
OHCM **Honcut** 32.72 96 eP P 00 44 57.5 +0.7
D13A **Huson** 32.78 78 ⇑P P 00 44 57.4 +0.1
baz=33,SNR=14
SWMT **Swartz Lake** 32.86 78 eP P 00 44 58.0 -0.1
C14A **Swan Lake** 32.89 77 ⇑P P 00 44 58.8 +0.5
baz=33
B14A **Marquette Ranc** 32.90 76 ⇑P P 00 44 58.9 +0.5
baz=33,SNR=18
A15A **Johnson Ranch,** 32.95 74 ⇑P P 00 44 58.6 -0.2
baz=33,SNR=9.7
F12A **Elk City** 32.95 81 ⇑P P 00 44 59.3 +0.4
baz=33,SNR=46
BEKR **Beckworth** 33.09 94 eP P 00 45 00.4 +0.2
comp=Z,2.7nm,0.9s
MSO **Missoula** 33.22 79 eP P 00 45 01.5 +0.3
comp=Z,9.9nm,0.7s
MSO **Missoula** 33.22 79 ⇓P P 00 45 01.4 +0.3
baz=33,SNR=17
G12A **Big Creek, Yel** 33.23 82 ⇓P P 00 45 01.7 +0.3
baz=33,SNR=13
E13A **Victor** 33.26 79 ⇑P P 00 45 01.8 +0.2
baz=33,SNR=19
SLMT **Seeley Lake** 33.29 78 eP P 00 45 02.0 +0.1
B15A **Bradely Ranch,** 33.35 75 ⇓P P 00 45 02.3 0.0
baz=33,SNR=7.2
D14A **Greenough** 33.36 78 ⇑P P 00 45 02.5 0.0
baz=33,SNR=35
YSS **Yuzh-Sakhalins** 33.39 282 eP P 00 45 14.3 +12
F13A **Darby** 33.49 80 ⇑P P 00 45 04.2 +0.6
baz=33,SNR=32
C15A **Salmond Ranch,** 33.57 76 ⇑P P 00 45 05.1 +0.8
baz=33,SNR=65
CHMT **Chamberlain Mo** 33.59 78 eP P 00 45 04.7 +0.1
A16A **West Butte Ran** 33.63 74 ⇓P P 00 45 04.5 -0.3
baz=34
E14A **Clinton** 33.69 79 ⇓P P 00 45 05.8 +0.4
baz=34,SNR=17
B16A **M & M Farms, S** 33.81 75 ⇑P P 00 45 06.0 -0.3
baz=34,SNR=11
H12A **Diamond D Ranc** 33.81 83 ⇑P P 00 45 06.9 +0.5
baz=34,SNR=25
MFID **Camas Ranch** 33.83 85 eP P 00 45 06.9 +0.4
comp=Z,24nm,0.9s
MFID **Camas Ranch** 33.83 85 ⇑P P 00 45 07.2 +0.7
baz=34,SNR=20
G13A **Cobalt** 33.91 82 ⇑P P 00 45 07.7 +0.4
baz=34,SNR=29
D15A **Lincoln** 33.97 77 ⇑P P 00 45 08.0 +0.2
baz=34,SNR=35
TIXI **Tiksi** 34.02 329 eP P 00 45 07.6 -0.1
TIXI pmax pmax
comp=Z,5.0nm,0.8s
TIXI **Tiksi** 34.02 329 eP P 00 45 07.6 -0.1
comp=Z,4.5nm,0.8s
I12A **Atlanta** 34.05 84 ⇓P P 00 45 09.3 +0.8
baz=34,SNR=40
F14A **Wisdom** 34.06 80 ⇓P P 00 45 09.5 +0.8
baz=34,SNR=8.8
C16A **Fuhringer Ranc** 34.07 76 ⇓P P 00 45 08.8 +0.2
baz=34,SNR=38
A17A **Triple J Farms** 34.16 73 ⇓P P 00 45 09.2 -0.1
baz=34,SNR=9.2
H13A **Challis** 34.17 82 ⇓P P 00 45 09.9 +0.3
baz=34,SNR=21
E15A **Deer Lodge** 34.20 78 ⇓P P 00 45 10.0 +0.3
baz=34,SNR=32
CMB **Columbia Colle** 34.21 97 eP P 00 45 10.9 +1.1
CMB pmax pmax
comp=Z,6.0nm,0.9s
CMB **Columbia Colle** 34.21 97 eP P 00 45 10.9 +1.1
comp=Z,6.1nm,0.9s
G14A **Jackson** 34.30 81 ⇓P P 00 45 11.3 +0.5
baz=34,SNR=16
B17A **L&G Farms, Che** 34.40 74 ⇑P P 00 45 11.2 -0.2
baz=34,SNR=12
HRY **Holter Researc** 34.54 78 eP P 00 45 12.9 +0.2
D16A **Dana Ranch, Ca** 34.55 77 ⇑P P 00 45 12.8 -0.1
baz=34,SNR=7.5
F15A **Butte** 34.58 79 ⇑P P 00 45 13.2 0.0
baz=34,SNR=8.6
I13A **Wildhorse Cree** 34.60 83 ⇑P P 00 45 14.0 +0.7
baz=34,SNR=30
HLID **Hailey** 34.61 84 eP P 00 45 14.4 +0.9
comp=Z,20nm,0.8s
HLID **Hailey** 34.61 84 ⇓P P 00 45 14.3 +0.9
baz=34,SNR=32
LRM **Limekiln Ridge** 34.61 79 eP P 00 45 13.5 0.0
BMN **Battle Mountai** 34.67 91 eP P 00 45 15.3 +1.4
BMN pmax pmax
comp=Z,12nm,0.9s
BMN **Battle Mountai** 34.67 91 eP P 00 45 15.3 +1.4
comp=Z,12nm,0.9s
H14A **Leadore** 34.68 82 ⇑P P 00 45 14.6 +0.5
baz=34,SNR=12
E16A **East Helena** 34.72 78 ⇓P P 00 45 14.6 +0.3
baz=35,SNR=27
C17A **Wharram Farm,** 34.73 75 ⇓P P 00 45 13.9 -0.4
baz=35,SNR=10.0
DLMT **Dillon** 34.76 80 eP P 00 45 15.4 +0.7
comp=Z,9.7nm,0.8s
J13A **Cove Ranch, Pi** 34.85 84 ⇓P P 00 45 16.5 +1.1
baz=35,SNR=26
MCMT **McKenzie Canyo** 34.89 81 eP P 00 45 16.4 +0.6
comp=Z,16nm,0.6s
G15A **Dillon** 34.93 80 ⇑P P 00 45 16.3 +0.1
baz=35,SNR=33
B18A **Beardsley Farm** 34.95 74 ⇓P P 00 45 16.2 0.0
baz=35,SNR=17
I14A **Mackay** 35.00 83 ⇓P P 00 45 17.7 +0.9
baz=35,SNR=24
D17A **Six Diamond Ra** 35.01 76 ⇓P P 00 45 17.7 +1.0
baz=35,SNR=8.6
YAK **Yakutsk** 35.01 312 eP P 00 45 15.7 -0.7
YAK e 00 45 26.6
YAK pmax pmax
comp=Z,20nm,0.9s
YAK pmax pmax
comp=E,10.0nm,1.4s
YAK MLR MLR
comp=Z,868nm,25.0s
YAK MLR MLR
comp=N,633nm,25.0s
YAK MLR MLR
comp=E,586nm,23.0s
H15A **Lima** 35.12 81 ⇓P P 00 45 18.4 +0.6
baz=35,SNR=14
F16A **Kennard Place,** 35.13 79 ⇓P P 00 45 18.1 +0.3
baz=35
EGMT **Eagleton** 35.14 74 eP P 00 45 18.0 +0.1
comp=E,45nm,0.8s
EGMT **Eagleton** 35.14 74 ⇑P P 00 45 17.9 +0.1
baz=35,SNR=30
BOZ **Bozeman (W)** 35.20 79 eP P 00 45 18.9 +0.4
BOZ pmax pmax
comp=Z,15nm,0.7s
BOZ **Bozeman (W)** 35.20 79 eP P 00 45 18.9 +0.4
comp=Z,15nm,0.7s
BOZ **Bozeman (W)** 35.20 79 ⇓P P 00 45 19.0 +0.6
baz=35,SNR=22
NVAR **Mina Array Bea** 35.23 94 P P 00 45 19.9 +1.0
NVAR **Mina Array Bea** 35.23 94 P P 00 45 19.9 +1.0
comp=Z,13nm,0.8s,baz=295,slow=8.9,SNR=47
E17A **Martinsdale** 35.25 77 ⇓P P 00 45 19.3 +0.4
baz=35,SNR=22
J14A **Carey** 35.29 84 ⇑P P 00 45 20.4 +1.2
baz=35
G16A **Moss Hill, Enn** 35.31 80 ⇓P P 00 45 19.7 +0.3
baz=35,SNR=12
NV11 **Mina Array Sit** 35.32 94 eP P 00 45 20.2 +0.7
RES **Resolute Bay** 35.34 26 eP P 00 45 19.5 +0.4
comp=Z,5.3nm,0.5s
B19A **Brinkman Farms** 35.42 73 ⇑P P 00 45 20.7 +0.6
baz=35,SNR=7.7
D18A **Linhart Farms,** 35.52 76 ⇓P P 00 45 21.7 +0.6
baz=35,SNR=6.7
I15A **Monteview** 35.55 82 ⇓P P 00 45 22.3 +0.9
baz=35
F17A **Fitzpatrick Pl** 35.65 78 ⇑P P 00 45 22.7 +0.4
baz=36,SNR=25
C19A **Slack Wire Ran** 35.70 74 ⇓P P 00 45 23.4 +0.8
baz=36,SNR=36
ELK **Elko** 35.70 89 eP P 00 45 23.9 +1.0
QLMT **Earthquake Lak** 35.74 80 eP P 00 45 23.5 +0.3
MTUM **Tungsten Hills** 35.75 96 eP P 00 45 24.6 +1.3
E18A **Harlowton** 35.76 77 ⇓P P 00 45 23.8 +0.5
baz=36,SNR=8.6
A20A **Cobblestone Ra** 35.81 72 ⇓P P 00 45 23.5 0.0
baz=36,SNR=16
G17A **Pierce Place,** 35.90 79 ⇓P P 00 45 25.3 +0.9
baz=36,SNR=6.6
J15A **Blackfoot** 35.91 83 ⇑P P 00 45 26.2 +1.7
baz=36,SNR=7.2
H16A **Russell Place,** 35.92 80 ⇑P P 00 45 25.1 +0.4
baz=36,SNR=15
B20A **Solberg Farm,** 35.97 73 ⇑P P 00 45 24.9 +0.1
baz=36
D19A **Cripps Ranch,** 36.08 75 ⇑P P 00 45 26.4 +0.5
baz=36,SNR=28
YMR **Madison River** 36.11 80 eP P 00 45 26.7 +0.3
comp=Z,26nm,0.9s
L14A **Malta** 36.18 85 ⇓P P 00 45 28.1 +1.3
baz=36,SNR=13
F18A **Big Timber** 36.22 77 ⇓P P 00 45 27.7 +0.6
baz=36,SNR=12
K15A **Arbon** 36.24 84 ⇓P P 00 45 28.9 +1.5
baz=36,SNR=5.8
GCMT **Greycliff** 36.30 78 eP P 00 45 28.3 +0.4
comp=Z,7.1nm,0.8s
C20A **Veseth Ranch,** 36.33 74 ⇓P P 00 45 28.5 +0.6
baz=36,SNR=50
VES **Vestal, Richgr** 36.42 98 ⇑P P 00 45 29.0 +0.2
baz=36
J16A **Bone** 36.48 82 ⇑P P 00 45 30.8 +1.4
baz=36,SNR=15
E19A **Rath Farm, Rou** 36.49 76 ⇑P P 00 45 30.1 +0.8
baz=36,SNR=26
H17A **Grant Village** 36.49 80 ⇑P P 00 45 31.5 +1.9
baz=36,SNR=15
LKWY **Lake** 36.51 80 eP P 00 45 31.5 +1.7
LKWY pmax pmax
comp=Z,29nm,0.6s
LKWY **Lake** 36.51 80 eP P 00 45 31.5 +1.7
comp=Z,29nm,0.6s
IMW **Indian Meadow** 36.54 81 eP P 00 45 31.2 +1.1
comp=Z,15nm,0.8s
D20A **Manuel Ranch,** 36.55 75 ⇑P P 00 45 30.7 +0.7
baz=36,SNR=20
B21A **Ellsworth Farm** 36.56 72 ⇓P P 00 45 30.1 +0.2
baz=36,SNR=9.7
HVU **Hansel Valley** 36.61 85 eP P 00 45 31.2 +0.7
HVU pmax pmax
comp=Z,22nm,0.8s
HVU **Hansel Valley** 36.61 85 eP P 00 45 31.2 +0.7
comp=Z,22nm,0.8s
RRI2 **Red Ridge** 36.61 82 eP P 00 45 31.9 +1.2
comp=Z,25nm,0.9s
G18A **Lazy EL Ranch,** 36.61 78 ⇓P P 00 45 30.4 -0.2
baz=36,SNR=9.2
FFC **Flin Flon** 36.63 60 ceP P 00 45 30.7 +0.3
FFC **Flin Flon** 36.63 60 eP P 00 45 30.6 +0.2
comp=Z,12nm,0.9s
F19A **Roth Farm, Mol** 36.70 77 ⇑P P 00 45 31.7 +0.4
baz=36,SNR=12
GRAC **Grapevine Rang** 36.71 95 ⇓P P 00 45 32.8 +1.5
baz=37,SNR=5.3
L15A **Malad City** 36.72 85 ⇑P P 00 45 32.2 +0.7
baz=37,SNR=7.6
K16A **Soda Springs** 36.74 83 ⇑P P 00 45 34.1 +2.5
baz=37,SNR=27
MOOW **Moose Ponds** 36.74 81 eP P 00 45 32.4 +0.6
comp=Z,20nm,1.8s
I17A **Pilgrim Ck.** 36.75 81 ⇑P P 00 45 33.1 +1.2
baz=37
TPAW **Ten Pass** 36.76 82 eP P 00 45 32.8 +0.8
comp=Z,26nm,1.4s
C21A **Desert Coulee** 36.80 73 ⇓P P 00 45 32.6 +0.6
baz=37,SNR=15
E20A **Meyer Farm, Mu** 36.85 76 ⇓P P 00 45 33.1 +0.6
baz=37,SNR=13
H18A **Shoshone NF, C** 36.89 79 ⇑P P 00 45 33.6 +0.5
baz=37,SNR=15
SNOW **Snow King Moun** 36.89 82 eP P 00 45 33.2 +0.2
comp=Z,12nm,0.7s
RLMT **Red Lodge** 36.89 78 eP P 00 45 33.8 +0.7
comp=Z,35nm,1.0s
RLMT **Red Lodge** 36.89 78 ⇓P P 00 45 33.6 +0.6
baz=37,SNR=39
LOHW **Long Hollow** 36.90 81 eP P 00 45 34.0 +0.9
comp=Z,7.2nm,0.7s
ISA **Isabella** 36.91 98 eP P 00 45 32.7 -0.4
ISA pmax pmax
comp=Z,10.0nm,0.9s
ISA **Isabella** 36.91 98 eP P 00 45 32.7 -0.4
comp=Z,10nm,0.9s
ISA **Isabella** 36.91 98 ⇑P P 00 45 33.2 +0.2
baz=37,SNR=5.4
A22A **Carney Farms,** 36.93 71 ⇓P P 00 45 33.3 +0.2
baz=37,SNR=13
R11A **Troy Canyon, C** 36.95 92 ⇑P P 00 45 33.9 +0.4
baz=37,SNR=31
J17A **Brown Place, J** 36.97 82 ⇓P P 00 45 34.8 +1.1
baz=37,SNR=6.0
DAC **Darwin (Calif)** 37.04 96 eP P 00 45 34.7 +0.4
DAC pmax pmax
comp=Z,8.0nm,0.8s
DAC **Darwin (Calif)** 37.04 96 eP P 00 45 34.7 +0.4
comp=Z,8.3nm,0.8s
ARVC **Arvin** 37.05 99 ⇓P P 00 45 34.3 +0.1
baz=37
K17A **Gardner Place,** 37.19 83 ⇑P P 00 45 36.2 +0.7
baz=37,SNR=5.2
F20A **Billings** 37.21 77 ⇓P P 00 45 36.2 +0.7
baz=37
MPMC **Manual Prospec** 37.25 97 ⇑P P 00 45 36.7 +0.6
baz=37,SNR=5.5
L16A **Fish Haven** 37.30 84 ⇑P P 00 45 37.2 +0.8
baz=37,SNR=10
H19A **Powell** 37.30 79 ⇑P P 00 45 37.3 +0.9
baz=37,SNR=11
I18A **Diamond G Ranc** 37.33 81 ⇓P P 00 45 37.4 +0.7
baz=37,SNR=8.4
FURC **Furnace Creek,** 37.37 96 ⇓P P 00 45 38.1 +1.3
baz=37,SNR=9.9
HWUT **Hardware Ranch** 37.45 85 eP P 00 45 38.0 +0.3
comp=Z,9.3nm,1.1s
E21A **Keefer Ranch,** 37.46 75 ⇓P P 00 45 38.7 +1.0
baz=37
OSI **Osito Adit** 37.47 99 ⇓P P 00 45 38.9 +1.1
baz=37
G20A **Bridger** 37.47 78 ⇓P P 00 45 37.8 0.0
baz=37,SNR=31
J18A **Kendall Valley** 37.48 81 ⇑P P 00 45 38.4 +0.4
baz=37,SNR=18
DUG **Dugway** 37.52 87 eP P 00 45 39.0 +0.7
DUG pmax pmax
comp=Z,38nm,1.2s
DUG **Dugway** 37.52 87 eP P 00 45 39.0 +0.7
comp=Z,38nm,1.2s
DUG **Dugway** 37.52 87 ⇑P P 00 45 38.9 +0.7
baz=37,SNR=28
C22A **Vida** 37.55 73 ⇑P P 00 45 38.4 0.0
baz=37,SNR=9.1
L17A **Cokeville** 37.59 84 ⇑P P 00 45 39.6 +0.7
baz=37,SNR=22
BLG **Laguna Peak** 37.60 100 ⇑P P 00 45 39.3 +0.4
baz=38
I19A **Meeteetse** 37.64 80 ⇑P P 00 45 39.8 +0.5
baz=38,SNR=9.4
D22A **Cohagen** 37.68 74 ⇓P P 00 45 40.2 +0.7
baz=38,SNR=45
B23A **Brockton** 37.72 71 ⇓P P 00 45 40.0 +0.2
baz=38,SNR=12
K18A **Toltan Ranch,** 37.79 82 ⇑P P 00 45 41.7 +1.0
baz=38,SNR=7.3
C23A **Lambert** 37.94 72 ⇑P P 00 45 42.2 +0.6
baz=38,SNR=44
H20A **Greybull** 38.00 78 ⇑P P 00 45 42.3 0.0
baz=38,SNR=5.9
PDAR **Pinedale Array** 38.01 82 P P 00 45 42.8 +0.3
PDAR **Pinedale Array** 38.01 82 P P 00 45 42.8 +0.3
comp=Z,17nm,0.5s,baz=300,slow=3.7,SNR=185
J19A **Crowheart** 38.03 81 ⇑P P 00 45 43.2 +0.6
baz=38,SNR=12
A24A **Westby** 38.07 70 ⇓P P 00 45 42.9 +0.2
baz=38,SNR=21
G21A **Lodge Grass** 38.07 77 ⇑P P 00 45 42.9 0.0
baz=38,SNR=8.1
M17A **Scullys Gap (B** 38.08 84 ⇓P P 00 45 43.0 0.0
baz=38,SNR=28
JLU **Jordanelle** 38.11 86 eP P 00 45 44.0 +0.6
comp=Z,15nm,0.9s
GSC **Goldstone** 38.17 97 eP P 00 45 44.5 +0.7
GSC pmax pmax
comp=Z,18nm,0.9s
GSC **Goldstone** 38.17 97 eP P 00 45 44.5 +0.7
comp=Z,18nm,0.9s
GSC **Goldstone** 38.17 97 ⇑P P 00 45 44.4 +0.7
baz=38,SNR=10
DGMT **Dagmar** 38.18 71 eP P 00 45 44.2 +0.6
comp=Z,33nm,1.3s
DGMT **Dagmar** 38.18 71 ⇑P P 00 45 43.8 +0.1
baz=38
E22A **Miles City** 38.18 74 ⇓P P 00 45 44.2 +0.5
baz=38
L18A **Fontenelle, Gr** 38.20 83 ⇑P P 00 45 44.4 +0.3
baz=38,SNR=12
I20A **Worland** 38.21 79 ⇓P P 00 45 44.6 +0.5
baz=38,SNR=17
D23A **Lindsay** 38.24 73 ⇑P P 00 45 44.8 +0.6
baz=38
DAU **Daniels Canyon** 38.34 86 eP P 00 45 46.4 +1.0
DAU **Daniels Canyon** 38.34 86 eP P 00 45 46.4 +1.0
F22A **Rosebud** 38.34 76 ⇑P P 00 45 45.3 +0.2
baz=38,SNR=9.4
MPU **Maple Canyon** 38.35 87 eP P 00 45 46.3 +0.9
comp=Z,13nm,0.8s
K19A **Absolon Red Bu** 38.41 81 ⇑P P 00 45 45.6 -0.2
baz=38,SNR=33
M18A **Lyman** 38.47 84 ⇑P P 00 45 46.4 0.0
baz=38,SNR=7.2
H21A **Big Horn, Sher** 38.49 78 ⇓P P 00 45 46.7 +0.2
baz=38,SNR=7.3
L19A **Farson** 38.51 82 ⇓P P 00 45 46.9 +0.2
baz=38,SNR=12
E23A **Ismay** 38.53 74 ⇑P P 00 45 47.4 +0.8
baz=38,SNR=6.4
J20A **Shoshoni** 38.57 80 ⇓P P 00 45 47.7 +0.6
baz=38,SNR=14
ARUT **Antelope Range** 38.61 91 eP P 00 45 48.3 +0.7
ARUT pmax pmax
comp=Z,26nm,0.9s
ARUT **Antelope Range** 38.61 91 eP P 00 45 48.3 +0.7
comp=Z,26nm,0.9s
TUQ **Turquoise Moun** 38.62 96 ⇑P P 00 45 48.2 +0.7
baz=38
G22A **Birney** 38.62 76 ⇓P P 00 45 47.6 +0.1
baz=38,SNR=12
HEC **Hector,Ludlow** 38.77 97 ⇓P P 00 45 49.1 +0.3
baz=39,SNR=5.5
D24A **Glendive** 38.79 73 ⇑P P 00 45 50.0 +1.2
baz=39,SNR=36
I21A **Big Trails, Te** 38.79 79 ⇑P P 00 45 48.7 -0.3
baz=39,SNR=14
K20A **Yellowstone Ra** 38.81 81 ⇓P P 00 45 48.8 -0.3
baz=39,SNR=13
CCUT **Cedar City** 38.81 91 eP P 00 45 50.1 +0.8
comp=Z,11nm,0.8s
F23A **Volborg** 38.88 75 ⇑P P 00 45 49.9 +0.3
baz=39,SNR=7.0
MVU **Marysvale** 38.92 89 eP P 00 45 50.8 +0.6
comp=Z,14nm,0.8s
H22A **Clearmont** 38.92 77 ⇑P P 00 45 50.2 +0.2
baz=39,SNR=5.7
MSU **Marysvale** 38.94 89 eP P 00 45 51.2 +0.9
MSU **Marysvale** 38.94 89 eP P 00 45 51.2 +0.9
J21A **Lysite** 38.96 80 ⇓P P 00 45 50.5 0.0
baz=39,SNR=16
M19A **Rock Springs** 38.98 83 ⇑P P 00 45 50.7 +0.1
baz=39
TMUT **Trail Mountain** 39.05 87 eP P 00 45 52.0 +0.6
comp=Z,27nm,0.8s
E24A **Baker** 39.09 73 ⇑P P 00 45 51.9 +0.6
baz=39,SNR=7.5
G23A **Biddle** 39.17 76 ⇑P P 00 45 51.9 -0.1
baz=39,SNR=12
L20A **Wamsutter** 39.18 82 ⇑P P 00 45 51.9 -0.4
baz=39
GMRC **Granite Mounta** 39.21 97 ⇓P P 00 45 52.7 +0.1
baz=39,SNR=6.2
P17A **Butcher Ranch,** 39.22 87 ⇓P P 00 45 53.3 +0.6
baz=39,SNR=14
I22A **9 Mile Ranch,** 39.23 78 ⇓P P 00 45 52.9 +0.2
baz=39,SNR=7.7
Q16A **Castle Valley** 39.30 88 ⇓P P 00 45 54.2 +0.9
baz=39,SNR=22
LDFC **Landfair** 39.35 96 eP P 00 45 53.8 +0.1
comp=Z,32nm,0.8s
F24A **Ekalaka** 39.38 74 ⇓P P 00 45 54.0 +0.2
baz=39,SNR=7.5
P18A **Preston Nutter** 39.43 86 ⇑P P 00 45 55.1 +0.5
baz=39,SNR=36
K21A **Alcova** 39.48 80 ⇓P P 00 45 54.4 -0.4
baz=39,SNR=21
J22A **Midwest** 39.51 79 ⇓P P 00 45 55.0 +0.1
baz=39,SNR=33
PFO **Pinyon Flat Ob** 39.52 99 eP P 00 45 54.5 -0.7
comp=Z,8.7nm,1.1s
PFO **Pinyon Flat Ob** 39.52 99 ⇑P P 00 45 55.4 +0.2
baz=39
M20A **Sweetwater, Wa** 39.58 82 ⇓P P 00 45 55.7 +0.1
baz=39
SRU **San Rafael** 39.58 87 eP P 00 45 56.4 +0.7
SRU pmax pmax
comp=Z,22nm,0.8s
SRU **San Rafael** 39.58 87 eP P 00 45 56.4 +0.7
comp=Z,22nm,0.8s
SRU **San Rafael** 39.58 87 ⇓P P 00 45 56.3 +0.7
baz=39,SNR=32

109C **Camp Elliot, M** 39.63 100 ⇓P P 00 45 56.6 +0.7
baz=40
G24A **Alzada** 39.68 75 ⇓P P 00 45 56.1 -0.2
baz=40
O19A **Miners Draw (B** 39.71 85 ⇑P P 00 45 57.1 +0.3
baz=40,SNR=32
L21A **Rawlins** 39.80 81 ⇑P P 00 45 57.3 -0.2
baz=40,SNR=13
K22A **Casper** 39.91 80 ⇓P P 00 45 58.4 0.0
baz=40,SNR=9.0
H24A **Dirks Ranch, A** 39.91 76 ⇓P P 00 45 57.5 -0.8
baz=40,SNR=11
N20A **Spence Gulch,** 39.92 83 ⇑P P 00 45 58.9 +0.4
baz=40,SNR=11
IRM **Iron Mountain** 39.94 97 ⇓P P 00 45 58.8 +0.3
baz=40,SNR=5.5
M21A **Separation Pea** 40.01 82 ⇑P P 00 45 58.9 -0.3
baz=40
MONP **Monument Peak** 40.04 99 ⇑P P 00 45 59.9 +0.3
baz=40
J23A **Dilts Ranch, B** 40.07 78 ⇑P P 00 46 00.0 +0.4
baz=40,SNR=5.7
W13A **Hualapai Mount** 40.09 95 ⇓P P 00 46 00.4 +0.4
baz=40,SNR=13
U15A **North Rim** 40.19 92 ⇑P P 00 46 01.7 +0.9
baz=40,SNR=21
P19A **Cripple Cowboy** 40.20 85 ⇓P P 00 46 01.0 +0.1
baz=40
L22A **Ellis Ranch, M** 40.32 81 ⇓P P 00 46 02.5 +0.6
baz=40,SNR=6.2
O20A **White River Ci** 40.35 84 ⇓P P 00 46 02.2 +0.1
baz=40,SNR=28
I24A **Kuemmerle Ranc** 40.37 77 ⇑P P 00 46 01.7 -0.4
baz=40,SNR=5.8
K23A **Bowen Ranch, D** 40.39 79 ⇓P P 00 46 02.3 -0.1
baz=40,SNR=7.0
N21A **Black Mountain** 40.41 83 ⇓P P 00 46 02.3 -0.3
baz=40,SNR=7.5
Q19A **Hogan Spring (** 40.45 86 ⇓P P 00 46 02.3 -0.5
baz=40,SNR=23
PDMCI **Parker Dam,Lak** 40.46 96 ⇑P P 00 46 02.9 +0.1
baz=40
RSSD **Black Hills** 40.57 76 *e*P P 00 46 03.7 -0.2
RSSD pmax pmax
comp=Z,24nm,1.3s
RSSD **Black Hills** 40.57 76 *e*P P 00 46 03.6 -0.2
comp=Z,24nm,1.3s
M22A **Cedar Creek Ra** 40.59 81 ⇑P P 00 46 03.8 -0.3
baz=40,SNR=13
Y12C **Blythe** 40.60 97 ⇓P P 00 46 04.3 +0.3
baz=40,SNR=8.8
J24A **Dixon Ranch, L** 40.64 78 ⇓P P 00 46 04.5 +0.2
baz=40
P20A **De Beque** 40.65 85 ⇓P P 00 46 04.5 +0.1
baz=40
L23A **Garrett** 40.72 80 ⇓P P 00 46 05.0 -0.1
baz=41,SNR=14
O21A **Pagoda** 40.77 84 ⇑P P 00 46 05.5 -0.1
baz=41
S18A **Hurst Farm, Bl** 40.79 88 ⇑P P 00 46 05.7 -0.1
baz=41,SNR=14
GLA **Glamis** 40.90 98 ⇑P P 00 46 06.3 -0.1
baz=41
PV04 **Paradox Valley** 41.02 87 *e*P P 00 46 07.6 0.0
N22A **Wattenberg Ran** 41.04 82 ⇑P P 00 46 07.6 -0.2
baz=41,SNR=6.3
Q20A **Ridgley Place,** 41.04 86 ⇓P P 00 46 07.2 -0.5
baz=41,SNR=6.5
M23A **Laramie** 41.09 81 ⇑P P 00 46 07.4 -0.8
baz=41,SNR=5.3
MDND **Maddock** 41.14 69 ⇓P P 00 46 08.5 +0.2
baz=41
N23A **Red Feather La** 41.29 82 ⇓P P 00 46 09.8 -0.1
baz=41,SNR=14
WUAZ **Wupatki** 41.35 92 ⇓P P 00 46 11.1 +0.8
baz=41,SNR=5.2
O22A **Kremmling** 41.37 83 ⇑P P 00 46 09.8 -0.8
baz=41,SNR=9.7
PV01 **Paradox Valley** 41.38 87 *e*P P 00 46 10.6 0.0
comp=Z,3µm,0.8s
Y14A **Wickenburg** 41.40 95 ⇓P P 00 46 10.9 +0.3
baz=41,SNR=6.2
R20A **Redvale** 41.47 87 ⇑P P 00 46 11.3 0.0
baz=41,SNR=10
Q21A **Lamborn Mesa,** 41.55 85 ⇑P P 00 46 12.7 +0.8
baz=41
P22A **Eagle** 41.58 84 ⇑P P 00 46 12.0 -0.3
baz=41
M24A **Cheyenne** 41.63 80 ⇓P P 00 46 12.3 -0.2
baz=42
S20A **Disappointment** 41.70 87 ⇑P P 00 46 12.7 -0.6
baz=42,SNR=13
SMCO **Snowmass** 41.71 84 *e*P P 00 46 13.2 -0.3
comp=Z,6.2nm,1.1s
O23A **Lake Granby, G** 41.72 82 ⇓P P 00 46 13.9 +0.4
baz=42,SNR=5.9
113A **Mohawk Valley,** 41.74 97 ⇓P P 00 46 12.6 -0.7
baz=42
L25A **Engebretsen Ra** 41.74 79 ⇑P P 00 46 13.5 +0.1
baz=42
Z14A **Wintersburg** 41.83 96 ⇑P P 00 46 13.9 -0.2
baz=42
R21A **Cimarron** 41.86 86 ⇑P P 00 46 14.5 -0.1
baz=42,SNR=7.8
K26A **Motz Farm, Whi** 41.89 78 ⇓P P 00 46 13.4 -1.2
baz=42
Q22A **Crested Butte,** 41.94 85 ⇑P P 00 46 15.7 +0.4
baz=42
N24A **Carr** 41.98 81 ⇑P P 00 46 16.1 +0.7
baz=42
ULM **Lac du Bonnet** 41.99 64 *e*P P 00 46 14.8 -0.5
comp=Z,30nm,0.8s
ULM **Lac du Bonnet** 41.99 64 P P 00 46 14.7 -0.5
comp=Z,32nm,0.7s,baz=303,slow=8.2,SNR=48
ULM LR LR 01 05 35.6
comp=Z,753nm,18.4s,baz=243,slow=39
MVCO **Mesa Verde** 42.01 88 ⇑P P 00 46 14.2 -1.6
baz=42
X16A **Lo Mia Camp, P** 42.04 93 ⇓P P 00 46 16.1 +0.1
baz=42
M25A **Palm-Egli Farm** 42.11 80 ⇑P P 00 46 14.6 -1.9
baz=42
ISCO **Idaho Springs** 42.16 83 *e*P P 00 46 18.3 +1.3
ISCO pmax pmax
comp=Z,5.0nm,1.1s
ISCO **Idaho Springs** 42.16 83 *e*P P 00 46 18.3 +1.3
comp=Z,5.0nm,1.1s
ISCO **Idaho Springs** 42.16 83 ⇓P P 00 46 16.1 -0.9
baz=42
P23A **Jefferson** 42.28 83 ⇑P P 00 46 18.9 +0.8
baz=42,SNR=7.9
S22A **4UR Ranch, Cre** 42.69 86 ⇓P P 00 46 23.2 +1.8
baz=43,SNR=5.7
214A **Organ Pipe Nat** 42.88 97 ⇑P P 00 46 22.9 +0.3
baz=43,SNR=5.4
V20A **Brimhall** 42.95 89 ⇑P P 00 46 23.7 +0.4
baz=43
U21A **Nageezi** 43.03 88 ⇑P P 00 46 24.6 +0.6
baz=43,SNR=8.3
M27A **Reverse DX Ran** 43.06 78 ⇓P P 00 46 24.2 +0.1
baz=43
P25A **Willow Gulch B** 43.21 82 ⇑P P 00 46 26.1 +0.7
baz=43,SNR=7.9
W20A **Ramah** 43.37 90 ⇑P P 00 46 27.4 +0.6
baz=43
BRSD **Miller** 43.39 73 ⇓P P 00 46 26.2 -0.5
baz=43
N27A **Anderson Farm,** 43.41 79 ⇑P P 00 46 27.3 +0.4
baz=43,SNR=7.7
R24A **Sanders Place,** 43.44 84 ⇑P P 00 46 27.7 +0.4
baz=43
V21A **Milan** 43.45 89 ⇑P P 00 46 27.6 +0.1
baz=43,SNR=6.2
SDCO **Great Sand Dun** 43.51 85 *e*P P 00 46 28.2 +0.3
comp=Z,9.9nm,1.3s
U22A **Llaves** 43.56 88 ⇓P P 00 46 28.8 +0.5
baz=43,SNR=7.0
OGNE **Ogallala** 43.63 79 ⇑P P 00 46 28.4 -0.2
baz=44,SNR=5.5
P26A **Davis Ranch, A** 43.68 81 ⇑P P 00 46 29.7 +0.5
baz=44,SNR=12
S24A **Houchin Ranch,** 43.75 85 ⇑P P 00 46 30.4 +0.5
baz=44,SNR=9.3
X20A **Quemado** 43.76 91 ⇑P P 00 46 31.1 +1.1
baz=44,SNR=5.3
TUC **Tucson** 43.87 95 *e*P P 00 46 31.1 +0.4
TUC **Tucson** 43.87 95 *e*P P 00 46 31.1 +0.4
U23A **El Rito** 43.99 87 ⇑P P 00 46 32.4 +0.6
baz=44,SNR=12
R25A **Fountain Ranch** 43.99 84 ⇓P P 00 46 31.9 +0.1
baz=44,SNR=5.8
S25A **Robets Cordova** 44.21 84 ⇓P P 00 46 33.6 0.0
baz=44,SNR=5.2
X21A **Alamocita Cree** 44.26 90 ⇑P P 00 46 34.8 +0.8
baz=44,SNR=11
W22A **Albuquerque** 44.41 89 ⇑P P 00 46 35.9 +0.8
baz=44
R26A **Arlington** 44.41 83 ⇑P P 00 46 35.2 +0.2
baz=44
KSCO **Kaye Shedlock'** 44.46 82 ⇑P P 00 46 36.0 +0.6
baz=44
T25A **Trinidad** 44.56 85 ⇓P P 00 46 36.5 +0.2
baz=44,SNR=12
Y21A **Point of Rocks** 44.62 91 ⇑P P 00 46 37.8 +0.9
baz=44,SNR=5.4
Z20A **Nine Sixteen R** 44.66 92 ⇑P P 00 46 37.6 +0.5
baz=45,SNR=13
LAZ **Ladron** 44.68 90 *e*P P 00 46 38.1 +0.8
comp=Z,8.0nm,1.1s
ANMO **Albuquerque** 44.74 89 *e*P P 00 46 37.6 -0.1
comp=Z,7.9nm,1.1s
ANMO *e* 00 48 19.5
R27A **Eads** 44.81 82 ⇑P P 00 46 38.1 -0.1
baz=45,SNR=6.3
S26A **Kim** 44.83 84 ⇑P P 00 46 38.1 -0.2
baz=45,SNR=9.9
V24A **Rampart Ranch,** 44.95 87 ⇑P P 00 46 40.0 +0.5
baz=45
120A **U Bar Ranch, L** 45.02 93 ⇓P P 00 46 40.7 +0.6
baz=45,SNR=6.1
U25A **Circle Dot Ran** 45.04 86 ⇑P P 00 46 40.4 +0.2
baz=45
Y22A **Socorro** 45.10 90 ⇑P P 00 46 41.4 +0.8
baz=45,SNR=9.8
BNM **Barren Site** 45.17 90 *e*P P 00 46 41.9 +0.6
comp=Z,28nm,1.2s
ECSD **EROS Data Cent** 45.18 72 *e*P P 00 46 39.6 -1.3
comp=Z,15nm,0.5s
W24A **Lazy 6 Ranch,** 45.21 88 ⇑P P 00 46 41.7 +0.1
baz=45,SNR=6.2
V25A **Rancho No Teng** 45.28 86 ⇓P P 00 46 42.1 +0.1
baz=45,SNR=5.2
CN2 **Changchun** 45.35 288 *e*P P 00 46 43.0 +0.7
CN2 *es*P **sP** 00 46 50.0 +0.2
CN2 *e*S **S** 00 53 21.8 -0.3
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,3.0s
R28A **Tribune** 45.38 82 ⇑P P 00 46 42.8 +0.1
baz=45
319A **Douglas** 45.44 95 ⇑P P 00 46 43.3 0.0
baz=45
U26A **Atchley Ranch,** 45.45 85 ⇑P P 00 46 43.5 +0.1
baz=45,SNR=5.8
220A **Playas Peak, P** 45.53 94 ⇑P P 00 46 44.3 +0.2
baz=45,SNR=17
121A **Cookes Peak, D** 45.55 92 ⇓P P 00 46 44.7 +0.5
baz=45,SNR=15
EYMN **Ely** 45.66 65 *e*P P 00 46 43.9 -0.8
comp=Z,34nm,0.9s
Y23A **Lovelace Mesa,** 45.66 90 ⇑P P 00 46 44.6 -0.5
baz=46,SNR=15
BGNE **Belgrade** 45.67 76 ⇑P P 00 46 44.0 -0.9
baz=46,SNR=6.4
R29A **Marienthal** 45.73 81 ⇑P P 00 46 45.8 +0.3
baz=46
W25A **X Bar L Ranch,** 45.78 87 ⇑P P 00 46 46.5 +0.5
baz=46,SNR=6.3
S28A **Manter** 45.80 83 ⇑P P 00 46 46.3 +0.3
baz=46
V26A **Tequesquite Ra** 45.82 86 ⇑P P 00 46 46.4 +0.1
baz=46,SNR=8.3
122A **Conniff Cattle** 45.92 92 ⇓P P 00 46 48.3 +1.2
baz=46
320A **Kipp Ranch, An** 45.93 94 ⇓P P 00 46 47.6 +0.5
baz=46
U27A **Thompson Grove** 45.99 84 ⇑P P 00 46 47.2 -0.5
baz=46,SNR=6.3
Y24A **Capitan** 46.05 89 ⇓P P 00 46 48.3 +0.2
baz=46,SNR=12
X25A **Clemmons Ranch** 46.12 88 ⇓P P 00 46 48.4 -0.3
baz=46
CBKS **Cedar Bluff** 46.33 80 *e*P P 00 46 50.5 +0.3
CBKS pmax pmax
comp=Z,34nm,0.9s
CBKS **Cedar Bluff** 46.33 80 *e*P P 00 46 50.5 +0.3
comp=Z,34nm,0.9s
R30A **Dighton** 46.34 81 ⇑P P 00 46 50.4 +0.1
baz=46
U28A **Mallet** 46.39 84 ⇓P P 00 46 50.1 -0.6
baz=46
Z24A **Sheeppen Canyo** 46.49 90 ⇓P P 00 46 51.9 +0.2
baz=46,SNR=6.7
124A **Stringfield Ra** 46.87 90 ⇑P P 00 46 54.5 -0.2
baz=47,SNR=8.6
Z25A **Roswell** 46.93 89 ⇓P P 00 46 54.8 -0.1
baz=47,SNR=6.0
224A **Cornudas Mount** 47.26 91 ⇑P P 00 46 57.9 +0.3
baz=47,SNR=16
Z26A **Caprock** 47.38 89 ⇑P P 00 46 58.8 +0.2
baz=47,SNR=6.1
FRB **Frobisher Bay** 47.57 37 P P 00 46 59.8 +0.4
FRB **Frobisher Bay** 47.57 37 P P 00 46 59.8 +0.4
comp=Z,38nm,0.7s,baz=306,slow=8.3,SNR=109
225A **Deer Hill, Car** 47.66 90 ⇑P P 00 47 01.2 +0.4
baz=48,SNR=11
324A **Moseley Ranch,** 47.72 92 ⇑P P 00 47 00.8 -0.4
baz=48
126A **Clayton Basin,** 47.79 89 ⇑P P 00 47 01.8 +0.1
baz=48,SNR=8.9
KSRS **Korea Array** 47.82 280 P P 00 47 02.4 +0.7
comp=Z,5.4nm,0.9s,baz=56,slow=7.9,SNR=8.0
Z27A **Tatum** 47.82 88 ⇑P P 00 47 01.5 -0.5
baz=48
KSAR **Wonju Array Be** 47.85 280 P P 00 47 02.4 +0.5
KSU1 **Kansas State U** 48.03 77 *e*P P 00 47 02.2 -1.1
comp=Z,18nm,0.8s
COWI **Conover** 48.05 65 *e*P P 00 47 01.9 -1.5
comp=Z,9.8nm,0.7s
325A **Bean Ranch, Si** 48.08 91 ⇑P P 00 47 04.0 0.0
baz=48,SNR=17
226B **Tecolote Peak,** 48.09 90 ⇓P P 00 47 03.9 -0.1
baz=48,SNR=12
Z28A **Tucker Farm, M** 48.35 87 ⇓P P 00 47 05.4 -0.6
baz=48
425A **Indio Mountain** 48.48 92 ⇓P P 00 47 07.3 +0.2
baz=48,SNR=15
326A **Caldwell Ranch** 48.73 90 ⇑P P 00 47 09.2 +0.2
baz=49
128A **Castleberry Fa** 48.74 88 ⇑P P 00 47 08.5 -0.5
baz=49,SNR=8.2
Z29A **Hungry Hill Ra** 48.79 87 ⇓P P 00 47 08.7 -0.7
baz=49,SNR=8.4
KBS **Kingsbay** 48.98 1 *ce*P P 00 47 12.1 +2.0
KBS pmax pmax
comp=Z,22nm,1.2s
KBS pmax pmax
comp=Z,16nm,0.7s
KBS **Kingsbay** 48.98 1 *e*P P 00 47 11.5 +1.4
comp=Z,15nm,0.8s
Z30A **Sanderson Ranc** 49.12 86 ⇑P P 00 47 10.9 -0.9
baz=49,SNR=5.6
427A **Hayter Ranch,** 49.41 90 ⇑P P 00 47 13.4 -0.7
baz=49
DAG **Danmarks Havn** 49.44 10 *i*P P 00 47 13.9 +0.3
DAG *i* 00 47 25.4
DAG pmax pmax
comp=Z,11nm,0.7s
DAG **Danmarks Havn** 49.44 10 *i*P P 00 47 13.9 +0.3
comp=Z,15nm,0.7s
DAG *i* 00 47 25.4
526A **Mary Lane Ranc** 49.54 92 ⇓P P 00 47 15.1 -0.1
baz=49,SNR=11
WMOK **Wichita Mounta** 49.58 83 *e*P P 00 47 14.6 -0.7
WMOK *e* 00 49 06.5
WMOK pmax pmax
comp=Z,10.0nm,0.9s
WMOK **Wichita Mounta** 49.58 83 *e*P P 00 47 14.6 -0.7
comp=Z,9.8nm,0.9s
WMOK *e*PP PP 00 49 06.5 -2.9
130A **Snyder** 49.69 87 ⇑P P 00 47 15.5 -0.7
baz=50
527A **Woodward Ranch** 49.77 91 ⇓P P 00 47 16.5 -0.5
baz=50
329A **Wagon Wheel Ra** 49.84 89 ⇑P P 00 47 16.7 -0.7
baz=50
626A **Big Bend Ranch** 49.87 92 ⇓P P 00 47 17.3 -0.4
baz=50,SNR=15
428A **Kincaid Ranch,** 49.93 90 ⇓P P 00 47 17.9 -0.3
baz=50
131A **Roby** 49.99 86 ⇑P P 00 47 17.9 -0.6
baz=50
SUMG **Summit** 50.07 18 *i*P P 00 47 20.2 +1.2
SUMG *i* 00 47 30.7
SUMG pmax pmax
comp=Z,14nm,0.9s
SUMG **Summit** 50.07 18 *e*P P 00 47 19.4 +0.5
comp=Z,32nm,1.0s
SUMG **Summit** 50.07 18 *i*P P 00 47 20.2 +1.2
comp=Z,14nm,0.9s
SUMG *i* 00 47 30.7
230A **Sterling City** 50.09 88 ⇑P P 00 47 18.5 -0.7
baz=50
Z32A **Haskell** 50.12 85 ⇓P P 00 47 18.8 -0.6
baz=50,SNR=5.8
528A **Cox Ranch, San** 50.27 91 ⇑P P 00 47 20.3 -0.4
baz=50,SNR=7.8
TXAR **Lajitas Array** 50.31 92 P P 00 47 20.8 -0.3
TXAR **Lajitas Array** 50.31 92 P P 00 47 20.8 -0.3
comp=Z,6.6nm,0.6s,baz=301,slow=5.8,SNR=151
330A **Mertzon** 50.39 88 ⇓P P 00 47 20.5 -1.0
baz=50,SNR=5.7
627A **Terlingua Ranc** 50.40 92 ⇑P P 00 47 21.3 -0.4
baz=50,SNR=11
ABTX **Abilene, Hawle** 50.48 86 ⇓P P 00 47 21.7 -0.5
baz=50
429A **Davenport Ranc** 50.49 89 ⇑P P 00 47 21.6 -0.7
baz=50,SNR=7.7
TUL1 **Tulsa** 50.60 80 ⇓P P 00 47 21.8 -1.2
baz=50
529A **Stev Forest Ra** 50.64 90 ⇓P P 00 47 22.8 -0.6
baz=50,SNR=5.9
628A **Black Gap, Mar** 50.68 91 ⇑P P 00 47 23.1 -0.7
baz=51
430A **Baggett Ranch,** 50.78 89 ⇑P P 00 47 23.4 -1.1
baz=51,SNR=8.0
331A **San Angelo** 50.91 88 ⇓P P 00 47 24.5 -1.0
baz=51,SNR=5.4
530A **J-C Ranch, Com** 51.17 89 ⇑P P 00 47 26.7 -0.7
baz=51,SNR=11
431A **Sonora** 51.24 88 ⇓P P 00 47 26.9 -1.1
baz=51,SNR=12
332A **Millersview** 51.28 87 ⇑P P 00 47 27.3 -0.9
baz=51
SFJD **Kangerlussuaq** 51.31 27 P P 00 47 28.9 +1.0
SFJD **Kangerlussuaq** 51.31 27 *i*P P 00 47 29.1 +1.2
comp=Z,9.0nm,0.9s
SFJD **Kangerlussuaq** 51.31 27 P P 00 47 28.9 +1.0
comp=Z,11nm,0.8s,baz=335,slow=8.8,SNR=4.3
HDIL **Hopedale** 51.41 71 *e*P P 00 47 27.6 -1.5
comp=Z,56nm,0.8s
432A **Menard** 51.60 88 ⇓P P 00 47 29.6 -1.0
baz=52
531A **Rocksprings** 51.64 89 ⇑P P 00 47 29.6 -1.3
baz=52,SNR=6.7
JCT **Junction City** 51.88 88 *e*P P 00 47 31.9 -0.8
JCT pmax pmax
comp=Z,15nm,0.9s
JCT **Junction City** 51.88 88 *e*P P 00 47 31.9 -0.8
comp=Z,15nm,0.9s
JCT **Junction City** 51.88 88 ⇑P P 00 47 31.5 -1.1
baz=52,SNR=5.9
532A **Rocksprings** 52.06 88 ⇑P P 00 47 32.9 -1.2
baz=52
631A **Perdido Creek** 52.15 90 ⇓P P 00 47 33.2 -1.5
baz=52,SNR=7.0
WHTX **Lake Whitney** 52.26 85 ⇓P P 00 47 35.2 -0.3
baz=52
TLY **Talaya** 52.30 308 *e*P P 00 47 34.8 -0.7
TLY *e* 00 47 46.4
TLY pmax pmax
comp=Z,13nm,0.7s
632A **Uvalde** 52.57 89 ⇑P P 00 47 36.7 -1.2
baz=52
SFIN **Scholer Farm** 52.80 70 ⇓P P 00 47 37.4 -1.9
baz=53
ULN **Ulaanbaatar** 53.02 303 *e*P P 00 47 41.8 +0.6
comp=Z,12nm,0.7s
ULN *e* 00 47 52.7
BJI **Beijing** 53.09 290 P P 00 47 40.5 -1.0
BJI pmax pmax
comp=Z,15nm,0.6s
BJI LR LR
comp=Z,310nm,25.5s
OLIL **Olney** 53.30 72 *e*P P 00 47 41.4 -1.7
comp=Z,33nm,0.8s
ZAK **Zakamensk** 53.30 307 ⇑*i*P P 00 47 43.2 +0.1
ZAK *e* 00 48 51.0
ZAK pmax pmax
comp=Z,5.0nm,1.3s
SONM **Songino Array** 53.38 303 P P 00 47 44.9 +1.2
SONM PcP **PcP** 00 48 51.1 +0.2
SONM **Songino Array** 53.38 303 P P 00 47 44.9 +1.2
comp=Z,3.6nm,0.8s,baz=55,slow=7.0,SNR=23
SONM PcP **PcP** 00 48 51.1 +0.2
comp=Z,3.1nm,0.9s,baz=72,slow=2.6,SNR=4.3
SCHQ **Schefferville** 53.76 45 *e*P P 00 47 45.4 -0.8
comp=Z,9.3nm,1.0s
SCHQ **Schefferville** 53.76 45 P P 00 47 45.6 -0.6
comp=Z,5.9nm,0.7s,baz=316,slow=7.4,SNR=17
SCHQ LR LR 01 13 22.6
comp=Z,582nm,19.6s,baz=51,slow=39
BLO **Bloomington** 53.93 71 *e*P P 00 47 46.1 -1.6
BLO pmax pmax
comp=Z,14nm,0.8s
BLO **Bloomington** 53.93 71 *e*P P 00 47 46.1 -1.6
comp=Z,14nm,0.8s
USIN **University of** 54.07 73 *e*P P 00 47 46.4 -2.3
comp=Z,33nm,0.7s
SCO **Scoresbysund** 54.68 14 *i*P P 00 47 53.5 +0.8
SCO *i* 00 48 04.3
SCO pmax pmax
comp=Z,3.0nm,0.8s
SCO **Scoresbysund** 54.68 14 *i*P P 00 47 53.5 +0.8
comp=Z,3.2nm,0.8s
SCO *i* 00 48 04.3
HHC **Hu-ho-hao-te** 55.18 293 *e*P P 00 47 56.5 -0.4
HHC PcP **PcP** 00 48 58.0 +0.2
HHC PP **PP** 00 50 00.8 +0.8
HHC ScP **ScP** 00 52 54.8 -0.7
HHC PcS **PcS** 00 52 56.5 -1.4
HHC S **S** 00 55 37.0 -2.3
HHC sS sS 00 55 43.8 -4.5
HHC ScS **ScS** 00 57 42.0 -3.2
HHC SS **SS** 00 59 20.5 -2.3
HHC pmax pmax
comp=Z,38nm,0.7s
HHC pmax pmax
comp=Z,570nm,6.2s
HHC LR LR
comp=N,410nm,15.9s
HHC LR LR
comp=E,440nm,15.8s
HHC LR LR
comp=Z,400nm,15.5s
WVT **Waverly** 55.22 74 *e*P P 00 47 55.4 -1.7
WVT pmax pmax
comp=Z,7.0nm,0.9s
WVT **Waverly** 55.22 74 *e*P P 00 47 55.4 -1.7
comp=Z,7.3nm,0.9s
OXF **Oxford** 55.39 77 *e*P P 00 47 56.7 -1.6
OXF pmax pmax
comp=Z,51nm,1.0s
OXF **Oxford** 55.39 77 *e*P P 00 47 56.7 -1.6
comp=Z,51nm,1.0s
ALLY **Allegheny Colle** 55.88 64 *e*P P 00 48 00.5 -1.4
comp=Z,44nm,0.8s
LONY **Lake Ozonia** 56.87 59 *e*P P 00 48 07.2 -1.6
comp=Z,10nm,0.7s
SWET **Sewanee** 56.96 74 *e*P P 00 48 07.0 -2.7
FRNY **Flat Rock** 57.24 58 *e*P P 00 48 09.1 -2.4
comp=Z,12nm,0.6s
NCB **Newcomb** 57.50 59 *e*P P 00 48 12.1 -1.2
comp=Z,16nm,0.8s
BINY **Binghamton** 57.78 61 *e*P P 00 48 14.3 -1.0
comp=Z,20nm,0.8s
SSPA **Standing Stone** 57.82 64 *e*P P 00 48 14.0 -1.5
comp=Z,22nm,0.8s
KEV **Kevo** 57.88 355 *e*P P 00 48 14.7 -0.8
KEV pmax pmax
comp=Z,5.0nm,0.7s
KEV **Kevo** 57.88 355 *ep* P 00 48 14.7 -0.8

comp=Z,4.8nm,0.7s
TKL Tuckaleechee C 57.92 72 *e*P **P 00 48 17.7 +1.4**
ARCES ARCESS Array B 58.17 356 P **P 00 48 17.5 -0.1**
ARCES ARCESS Array B 58.17 356 P **P 00 48 17.5 -0.1**
comp=Z,3.6nm,0.8s,baz=12,slow=4.6,SNR=17
ACCN Adirondack Com 58.20 59 *e*P **P 00 48 17.2 -0.9**
comp=Z,17nm,0.8s
BLA Blacksburg 58.77 68 *e*P **P 00 48 21.1 -1.3**
BLA pmax pmax
comp=Z,14nm,1.0s
BLA Blacksburg 58.77 68 *e*P **P 00 48 21.1 -1.3**
comp=Z,14nm,1.0s
NVS Novosibirsk 59.01 321 *e*P **P 00 48 23.9 +0.3**
NVS pmax pmax
comp=Z,39nm,2.8s
NVS pmax pmax
comp=E,23nm,3.2s
ZAA0 Zalesovo Array 59.06 320 *e*P **P 00 48 24.4 +0.5**
ZALV Zalesovo Beam 59.06 320 P **P 00 48 24.5 +0.6**
ZALV 00 49 12.7
ZALV Zalesovo Beam 59.06 320 P **P 00 48 24.5 +0.6**
ZALV PcP **PcP 00 49 12.7 +0.1**
ZALV Zalesovo Beam 59.06 320 P **P 00 48 24.5 +0.6**
comp=E,1.9nm,0.3s,baz=42,slow=6.3,SNR=14
ZALV PcP **PcP 00 49 12.7 +0.1**
comp=E,2.1nm,0.6s,baz=25,slow=3.8,SNR=4.2
MVL Millersville 59.11 64 *e*P **P 00 48 23.0 -1.5**
comp=E,14nm,0.9s
SDMD Soldier's Deli 59.25 64 *e*P **P 00 48 24.2 -1.4**
comp=E,16nm,0.9s
JSRW J. Sargeant Re 59.88 66 *e*P **P 00 48 28.6 -1.2**
WES Weston 60.13 58 *e*P **P 00 48 30.5 -1.0**
WES pmax pmax
comp=Z,44nm,1.1s
WES Weston 60.13 58 *e*P **P 00 48 30.5 -1.0**
comp=Z,44nm,1.1s
TMCR Tamitsa 62.41 349 *e*P **P 00 48 49.0 +2.4**
TMCR pmax pmax
comp=Z,20nm,1.2s
GTA Gaotai 62.63 300 *e*P **P 00 48 49.0 +0.3**
GTA pP **pP 00 48 53.5 -0.8**
GTA sP **sP 00 48 56.8 +0.5**
GTA pmax pmax
comp=Z,4.0nm,1.2s
LZH Lanzhou 62.84 294 *e*P **P 00 48 51.3 +1.2**
LZH pP **pP 00 48 55.5 -0.2**
LZH sP **sP 00 48 58.0 +0.2**
LZH PP **PP 00 51 07.3 -0.7**
LZH *e*S **S 00 57 16.0 -2.7**
LZH sS **sS 00 57 26.0 -1.9**
LZH pmax pmax
comp=Z,21nm,1.1s
LZH pmax pmax
comp=Z,160nm,5.0s
LZH LR LR
comp=N,280nm,13.0s
LZH LR LR
comp=E,220nm,12.2s
LZH LR LR
comp=Z,310nm,15.4s
KURK Kurchatov 63.98 321 *e*P **P 00 48 58.8 +1.6**
KURK pmax pmax
comp=Z,13nm,1.2s
JOF Joensuu 64.33 352 *e*P **P 00 48 59.0 -0.3**
JOF pmax pmax
comp=Z,3.0nm,0.5s
JOF Joensuu 64.33 352 *ep* **P 00 48 59.0 -0.3**
comp=Z,2.9nm,0.5s
SVE Sverdlovsk 64.82 334 *e*P **P 00 49 03.9 +1.3**
SVE pmax pmax
comp=Z,17nm,0.9s
BVA0 Borovoye Array 65.11 327 P **P 00 49 05.0 +0.4**
BVA0 pmax pmax
comp=Z,2.0nm,0.8s
BVAR Borovoye Array 65.11 327 P **P 00 49 05.6 +1.0**
BVAR Borovoye Array 65.11 327 P **P 00 49 05.6 +1.0**
BVAR Borovoye Array 65.11 327 P **P 00 49 05.6 +1.0**
comp=Z,6.9nm,0.8s,baz=55,slow=6.1,SNR=28
BRVK Borovoye 65.11 327 *c i*P **P 00 49 06.3 +1.7**
BRVK pmax pmax
comp=Z,18nm,1.2s
BRVK Borovoye 65.11 327 *e*P **P 00 49 04.9 +0.3**
comp=Z,13nm,1.0s
VOSK Vostochnaya 65.16 326 P **P 00 49 04.2 -0.7**
VOSK pmax pmax
comp=Z,8.0nm,1.0s
WMQ Urumqi 65.44 310 P **P 00 49 09.8 +2.8**
WMQ sP **sP 00 49 17.0 +2.4**
WMQ PP PP 00 51 36.0 +5.5
WMQ PcS 00 53 43.0
WMQ S **S 00 57 52.0 +1.5**
WMQ ScS **SKSac 00 59 01.0 -0.3**
WMQ pmax pmax
comp=Z,24nm,1.0s
WMQ pmax pmax
comp=Z,110nm,6.0s
WMQ LR LR
comp=N,460nm,18.0s
WMQ LR LR
comp=E,520nm,18.0s
WMQ LR LR
comp=Z,610nm,18.0s
KAF Kangasniemi 65.52 354 *e*P **P 00 49 06.4 -0.7**
KAF pmax pmax
comp=Z,5.0nm,0.5s
KAF Kangasniemi 65.52 354 *ep* **P 00 49 06.4 -0.7**
comp=Z,5.3nm,0.5s
MK31 Makanchi Array 65.56 316 *c e*P **P 00 49 07.6 -0.1**
MK31 pmax pmax
comp=Z,13nm,0.6s
MK31 Makanchi Array 65.56 316 *e*P **P 00 49 07.9 +0.3**
MKAR Makanchi Array 65.56 316 P **P 00 49 07.8 +0.1**
MKAR Makanchi Array 65.56 316 P **P 00 49 07.8 +0.1**
MKAR Makanchi Array 65.56 316 P **P 00 49 07.8 +0.1**
comp=Z,4.4nm,0.6s,baz=46,slow=6.4,SNR=27
ARU Arti 65.72 335 *d i*P **P 00 49 09.4 +1.0**
ARU 00 51 30.2
ARU S **S 00 57 55.6 +2.2**
ARU SS **SS 01 02 06.4 -0.2**
ARU pmax pmax
comp=Z,9.0nm,1.2s
ARU MLR MLR
comp=Z,754nm,21.0s
FINES FINESS Array B 66.20 354 P **P 00 49 11.4 0.0**
FINES FINESS Array B 66.20 354 P **P 00 49 11.4 0.0**
comp=Z,7.1nm,0.8s,baz=19,slow=9.1,SNR=32
CD2 Chengdu 66.68 291 P **P 00 49 16.0 +0.9**
CD2 pP **pP 00 49 20.8 +0.1**
CD2 sP **sP 00 49 23.0 +0.2**
CD2 PcP **PcP 00 49 45.5 +1.3**
CD2 PP **PP 00 51 44.5 +2.9**
CD2 PcS 00 53 48.8
CD2 S **S 00 58 04.8 -1.1**
CD2 sS sS 00 58 12.3 -2.8
CD2 SKS **SKSac 00 59 09.8 -1.3**
CD2 SS **SS 01 02 23.0 +0.1**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,100nm,5.2s
NB2 NORSAR Subarra 66.94 2 P **P 00 49 16.9 +0.6**
comp=Z,4.5nm,0.8s,baz=0.8,slow=6.2
NOA NORSAR Array B 66.94 2 P **P 00 49 15.8 -0.4**
NOA NORSAR Array B 66.94 2 P **P 00 49 15.8 -0.4**
comp=Z,3.6nm,0.9s,baz=360,slow=6.3,SNR=8.8
HFS Hagfors 67.88 0 P **P 00 49 22.1 0.0**
HFS Hagfors 67.88 0 P **P 00 49 22.1 0.0**
comp=Z,3.7nm,0.3s,baz=2.2,slow=3.2,SNR=34
GYA Guiyang 68.30 285 P **P 00 49 25.8 +0.3**
GYA ScP 00 53 55.0
GYA S **S 00 58 25.8 +0.2**
GYA SKS **SKiKP 00 59 21.8 +2.9**
GYA SS **SS 01 02 49.5 +1.2**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,90nm,5.0s
GYA LR LR
comp=N,590nm,18.8s
GYA LR LR
comp=E,480nm,19.6s
GYA LR LR
comp=Z,620nm,18.5s
AKTO Aktyubinsk 71.21 332 P **P 00 49 43.8 +0.9**
AKTO Aktyubinsk 71.21 332 P **P 00 49 43.8 +0.9**
AKTO Aktyubinsk 71.21 332 P **P 00 49 43.8 +0.9**
comp=Z,4.1nm,0.7s,baz=29,slow=5.2,SNR=19
OBN Obninsk 71.37 347 *e*P **P 00 49 44.1 +0.4**
OBN *e* 00 49 55.2
OBN *e* 00 49 58.1
OBN pmax pmax
comp=Z,18nm,1.7s
TKM2 Tokmak 2 71.50 317 *e*P **P 00 49 46.0 +0.9**
TKM2 pmax pmax
comp=Z,7.0nm,0.7s
TKM2 Tokmak 2 71.50 317 *e*P **P 00 49 46.0 +0.9**
comp=Z,7.1nm,0.7s
TKM2 Tokmak 2 71.50 317 P **P 00 49 46.2 +1.2**
SNR=7.1
KMI Kunming 71.62 287 P **P 00 49 47.0 +1.0**
KMI S **S 00 59 04.3 -0.5**
KMI pmax pmax
comp=Z,6.0nm,0.5s
KMI LR LR
comp=N,290nm,18.1s
KMI LR LR
comp=E,370nm,18.1s
KMI LR LR
comp=Z,470nm,14.9s
USP Ospenovka 71.67 318 P **P 00 49 47.1 +1.3**
SNR=9.2
EKA Eskdalemuir Ar 71.69 11 P **P 00 49 46.1 +0.5**
EKA Eskdalemuir Ar 71.69 11 P **P 00 49 46.1 +0.5**
comp=Z,2.6nm,0.7s,baz=345,slow=4.6,SNR=17
AB31 Akbulak array 71.70 331 *c e*P **P 00 49 46.4 +0.5**
AB31 pmax pmax
comp=Z,6.0nm,0.8s
ABKAR Akbulak array 71.70 331 *e*P **P 00 49 46.7 +0.8**
KBK Karagaybulak 71.99 318 P **P 00 49 49.3 +1.3**
SNR=5.5
QIZ Qiongzhong 72.00 278 P **P 00 49 49.0 +0.9**
QIZ S **S 00 59 09.8 +0.9**
QIZ pmax pmax
comp=Z,25nm,1.2s
AAK Ala-Archa 72.19 318 *e*P **P 00 49 50.3 +1.1**
AAK pmax pmax
comp=Z,13nm,0.8s
AAK Ala-Archa 72.19 318 *e*P **P 00 49 50.2 +1.1**
comp=Z,13nm,0.8s
AAK Ala-Archa 72.19 318 LR LR 01 21 04.7
comp=Z,481nm,21.8s,baz=245,slow=36
EKS2 Erkin-Say 72.47 318 *e*P **P 00 49 52.0 +1.2**
EKS2 pmax pmax
comp=Z,15nm,0.8s
EKS2 Erkin-Say 72.47 318 *e*P **P 00 49 52.0 +1.2**
comp=Z,15nm,0.8s
EKS2 Erkin-Say 72.47 318 P **P 00 49 52.2 +1.4**
SNR=7.9
AML Almayashu 72.94 318 P **P 00 49 55.4 +1.4**
SNR=9.4
KK31 Karatay Array 73.39 321 *c e*P **P 00 49 56.3 +0.2**
KK31 pmax pmax
comp=Z,12nm,0.6s
KKAR Karatay Array 73.39 321 *e*P **P 00 49 56.8 +0.7**
KKAR Karatay Array 73.39 321 *e*P **P 00 49 56.8 +0.7**
SUW Suwalki 73.78 355 *e*P **P 00 49 58.2 +0.1**
KSH Kashi 74.15 315 *j i*P P 00 50 04.8 +4.0
KSH pP pP 00 50 09.5 +3.1
KSH sP sP 00 50 12.0 +3.5
KSH PcP PcP 00 50 21.0 +5.2
KSH PP PP 00 52 53.3 +7.6
KSH S **S 00 59 37.0 +3.9**
KSH sS sS 00 59 45.5 +3.1
KSH SKS **SKSac 01 00 07.3 -0.2**
KSH ScS **ScS 01 00 12.5 +2.2**
KSH SS SS 01 04 24.3 +7.0
KSH pmax pmax
comp=Z,4.0nm,0.5s
KSH LR LR
comp=N,130nm,4.9s
KSH LR LR
comp=E,290nm,6.9s
KSH LR LR
comp=Z,680nm,9.8s
VRHR Novokhopersk 74.44 343 *e*P **P 00 50 01.4 -0.6**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,6.0nm,0.6s
VSR Storozhevoye 74.75 344 *e*P **P 00 50 02.8 -1.0**
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=Z,7.0nm,0.6s
VSR MLR MLR
comp=N,360nm,23.0s
VSR MLR MLR
comp=E,600nm,23.0s
VSR MLR MLR
comp=Z,710nm,23.0s
VORD Divnogorie 74.97 344 *e*P **P 00 50 04.8 -0.3**
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,20nm,0.9s
VORD pmax pmax
comp=Z,8.0nm,0.9s
AKASG Malin Array Be 76.59 350 P **P 00 50 13.9 -0.5**
AKASG Malin Array Be 76.59 350 P **P 00 50 13.9 -0.5**
AKASG Malin Array Be 76.59 350 P **P 00 50 13.9 -0.5**
comp=Z,2.9nm,0.5s,baz=12,slow=5.8,SNR=12
KIEV Kiev 76.60 351 *e*P **P 00 50 14.0 -0.4**
KIEV pmax pmax
comp=Z,7.0nm,0.6s
KIEV Kiev 76.60 351 *e*P **P 00 50 14.0 -0.4**
comp=Z,7.1nm,0.6s
AK01 Malin Array Si 76.60 351 *e*P **P 00 50 14.0 -0.4**
AK01 *e*PcP **PcP 00 50 25.3 -0.6**
AK02 Malin Array Si 76.64 351 *e*P **P 00 50 14.2 -0.5**
CLL Collm 76.72 1 *e*P **P 00 50 15.0 -0.1**
CLL Collm 76.72 1 *e*P **P 00 50 15.0 -0.1**
BRG Berggiesshubel 77.16 0 *e*P **P 00 50 18.3 +0.7**
comp=Z,3.9nm,1.0s
BRG Berggiesshubel 77.16 0 *e*P **P 00 50 18.3 +0.7**
BRG pmax pmax
comp=Z,4.0nm,1.0s
MOX Moxa 77.36 2 *e*P **P 00 50 19.4 +0.7**
MOX pmax pmax
comp=Z,3.0nm,0.6s
MOX Moxa 77.36 2 *e*P **P 00 50 19.4 +0.7**
comp=Z,3.0nm,0.6s
PVCC Panska Ves 77.51 0 AMS AMS 01 25 30.0
comp=Z,700nm,24.8s
UPC Upice 77.52 359 *e*P **P 00 50 21.1 +1.5**
UPC Upice 77.52 359 *e*P **P 00 50 21.1 +1.5**
BAIF Baives 77.60 7 *e*P **P 00 50 20.6 +0.6**
comp=Z,11nm,0.9s
BAIF Baives 77.60 7 *e*P **P 00 50 20.6 +0.6**
BAIF pmax pmax
comp=Z,11nm,0.9s
BAIF Baives 77.60 7 *e*P **P 00 50 20.6 +0.6**
comp=Z,11nm,0.9s
GIVF Givet 77.60 6 *e*P **P 00 50 20.4 +0.4**
GIVF Givet 77.60 6 *e*P **P 00 50 20.4 +0.4**
GIVF Givet 77.60 6 *e*P **P 00 50 20.4 +0.4**
DPC Dobruska-Polom 77.67 359 *e*P **P 00 50 21.6 +1.1**
DPC *e* 00 50 32.6
DPC Dobruska-Polom 77.67 359 *e*P **P 00 50 21.8 +1.2**
DPC Dobruska-Polom 77.67 359 *e*P **P 00 50 21.6 +1.1**
DPC *epP* **PcP 00 50 32.6 +2.0**
OJC Ojcow 77.72 357 *e*P **P 00 50 21.6 +0.9**
OJC Ojcow 77.72 357 *e*P **P 00 50 21.6 +0.9**
NKC Novy Kostel 77.79 1 *e*P **P 00 50 22.3 +1.2**
NKC *e* 00 50 33.4
NKC Novy Kostel 77.79 1 *e*P **P 00 50 22.3 +1.2**
NKC *epP* **PcP 00 50 33.4 +2.3**
PRU Pruhonice 78.05 0 *e*P **P 00 50 23.4 +0.8**
PRU *e* 00 50 34.7
PRU Pruhonice 78.05 0 *e*P **P 00 50 23.4 +0.8**
PRU *epP* **PcP 00 50 34.7 +2.5**
OKC Ostrava-Krasne 78.15 358 *e*P **P 00 50 24.0 +0.9**
OKC Ostrava-Krasne 78.15 358 *e*P **P 00 50 24.0 +0.9**
KWP Kalwaria Pacla 78.17 355 *j*P **P 00 50 24.3 +1.0**
KWP Kalwaria Pacla 78.17 355 *e*P **P 00 50 24.0 +0.7**
comp=Z,11nm,0.8s
KWP Kalwaria Pacla 78.17 355 *j i*P **P 00 50 24.3 +1.0**
KWP Kalwaria Pacla 78.17 355 *e*P **P 00 50 24.2 +1.0**
GRF Grafenberg Arr 78.30 2 *e*P **P 00 50 25.2 +1.2**
GRF *e* 00 50 36.6
GRF pmax pmax
comp=Z,31nm,1.6s
GRF Grafenberg Arr 78.30 2 *e*P **P 00 50 25.2 +1.2**
comp=Z,31nm,1.6s
GRF *e* 00 50 36.6
TAPN Taplejung 78.33 300 *e*P **P 00 50 24.6 -0.3**
comp=Z,13nm,0.6s
FLN La Foliniere 78.46 10 *e*P **P 00 50 25.5 +0.7**
FLN La Foliniere 78.46 10 *e*P **P 00 50 25.5 +0.7**
FLN La Foliniere 78.46 10 *e*P **P 00 50 25.5 +0.7**
LDF La Druitiere 78.66 10 *e*P **P 00 50 26.6 +0.6**
LDF La Druitiere 78.66 10 *e*P **P 00 50 26.6 +0.6**
LDF La Druitiere 78.66 10 *e*P **P 00 50 26.6 +0.6**
VRAC Vranov 78.71 359 P **P 00 50 27.3 +1.0**
VRAC Vranov 78.71 359 P **P 00 50 27.3 +1.0**
comp=Z,3.2nm,0.7s,baz=352,slow=4.6,SNR=7.1
TREC Trest 78.74 359 AMS AMS 01 35 50.0
comp=Z,700nm,26.8s
GUN Gumba 78.85 301 *e*P **P 00 50 28.1 +0.3**
comp=Z,38nm,1.0s
ODAN Odare 78.89 300 *e*P **P 00 50 27.4 -0.5**
KOLS Kolonicke sedl 78.89 355 *e*P **P 00 50 28.4 +1.1**
KOLS pmax pmax
comp=Z,36nm,2.4s
KOLS Kolonicke sedl 78.89 355 *e*P **P 00 50 28.4 +1.1**
KOLS *e* 00 52 38.0
KHC Kasperske Hory 78.90 1 *e*P **P 00 50 28.7 +1.4**
KHC *e* 00 50 39.9
KHC MLR MLR
comp=Z,500nm,22.8s
KHC Kasperske Hory 78.90 1 *e*P **P 00 50 28.2 +0.9**
comp=Z,5.4nm,1.1s
KHC Kasperske Hory 78.90 1 *e*P **P 00 50 28.7 +1.4**
KHC *epP* **PcP 00 50 39.9 +3.9**
KHC *ex* x 00 50 53.8
KHC AMS AMS 01 32 40.0
comp=Z,500nm,22.8s
CRVS Cervenica-Dubn 78.97 355 *e*P **P 00 50 27.9 +0.2**
CRVS pmax pmax
comp=Z,31nm,2.4s
CRVS Cervenica-Dubn 78.97 355 *e*P **P 00 50 27.9 +0.2**
CMAR Chiang Mai Arr 78.98 286 P **P 00 50 28.1 -0.1**
CMAR Chiang Mai Arr 78.98 286 P **P 00 50 28.1 -0.1**
comp=Z,4.6nm,1.0s,baz=20,slow=5.0,SNR=18
GERES GERESS Array B 79.19 1 P **P 00 50 29.8 +0.8**
GERES GERESS Array B 79.19 1 P **P 00 50 29.8 +0.8**
comp=Z,0.9nm,0.6s,baz=5.5,slow=4.2,SNR=12
PAGF Fort de Pagny 79.20 6 *e*P **P 00 50 29.7 +0.8**
comp=Z,3.1nm,0.6s
PAGF Fort de Pagny 79.20 6 *e*P **P 00 50 29.7 +0.8**
comp=Z,3.1nm,0.6s
RAMN Ramite 79.24 300 *e*P **P 00 50 29.8 0.0**
comp=Z,32nm,0.7s
KKN Kakani 79.26 302 *e*P **P 00 50 30.5 +0.6**
PKI Pulchoki 79.37 301 *e*P **P 00 50 30.5 -0.1**
PKIN Phulchoki 79.37 301 *e*P **P 00 50 30.0 -0.5**
CDF Champ du Feu 79.43 5 *e*P **P 00 50 30.7 +0.4**
CDF Champ du Feu 79.43 5 *e*P **P 00 50 30.7 +0.4**
CDF Champ du Feu 79.43 5 *e*P **P 00 50 30.7 +0.4**
VYHS Vyhne 79.48 357 *e*P **P 00 50 31.5 +1.0**
VYHS *e* 00 50 42.7
VYHS pmax pmax
comp=Z,14nm,2.0s
VYHS Vyhne 79.48 357 *e*P **P 00 50 31.5 +1.0**
VYHS *epP* **PcP 00 50 42.7 +4.2**
SMOL Smolenice 79.49 358 *e*P **P 00 50 32.3 +1.8**
SMOL *e* 00 50 43.6
SMOL Smolenice 79.49 358 *e*P **P 00 50 32.3 +1.8**
SMOL *epP* PcP 00 50 43.6 +5.1
SFTF Sexfontaines 79.50 6 *e*P **P 00 50 31.0 +0.4**
SFTF Sexfontaines 79.50 6 *e*P **P 00 50 31.0 +0.4**
DANN Dangsing 79.59 303 *e*P **P 00 50 32.1 +0.3**
comp=Z,44nm,0.6s
TRPA Tarpa 79.68 355 *j i*P **P 00 50 32.8 +1.3**
HAU Haudompre 79.78 6 *e*P **P 00 50 32.5 +0.3**
HAU Haudompre 79.78 6 *e*P **P 00 50 32.5 +0.3**
HAU Haudompre 79.78 6 *e*P **P 00 50 32.5 +0.3**
ZST Bratislava 79.82 358 *e*P **P 00 50 32.4 +0.1**
ZST *e* 00 50 43.8
ZST Bratislava 79.82 358 *e*P **P 00 50 32.4 +0.1**
ZST *epP* **PcP 00 50 43.8 +3.9**
BUR08 Bucovina Ar. S 79.98 353 *e*P **P 00 50 33.5 +0.1**
HINF Hinteralfeld 80.00 5 *e*P **P 00 50 33.6 +0.2**
HINF Hinteralfeld 80.00 5 *e*P **P 00 50 33.6 +0.2**
HINF Hinteralfeld 80.00 5 *e*P **P 00 50 33.6 +0.2**
BURAR Bucovina Array 80.01 353 *j i*P **P 00 50 34.3 +0.8**
CONA Conrad Observa 80.10 359 *j i*P **P 00 50 35.1 +1.1**
SNR=6.6
CONA Conrad Observa 80.10 359 *j i*P **P 00 50 35.1 +1.1**
KOLN Koldanda 80.14 303 *e*P **P 00 50 34.8 +0.1**
comp=Z,8.6nm,0.5s
PYUN Piuthan 80.19 304 *e*P **P 00 50 35.1 +0.2**
comp=Z,53nm,1.0s
LOR Lormes 80.34 7 *e*P **P 00 50 35.5 +0.3**
LOR Lormes 80.34 7 *e*P **P 00 50 35.5 +0.3**
SSF Saint Saulge 80.52 8 *e*P **P 00 50 36.5 +0.4**
comp=Z,8.5nm,0.7s
SSF Saint Saulge 80.52 8 *e*P **P 00 50 36.5 +0.4**
SSF pmax pmax
comp=Z,9.0nm,0.6s
SSF Saint Saulge 80.52 8 *e*P **P 00 50 36.5 +0.4**
comp=Z,8.5nm,0.6s
MFF Saint Martin d 80.63 10 *e*P **P 00 50 37.1 +0.4**
comp=Z,3.9nm,0.5s
MFF Saint Martin d 80.63 10 *e*P **P 00 50 37.1 +0.4**
MFF pmax pmax
comp=Z,4.0nm,0.5s
MFF Saint Martin d 80.63 10 *e*P **P 00 50 37.1 +0.4**
comp=Z,3.9nm,0.5s
AVF Avril sur Loir 80.78 8 *e*P **P 00 50 37.6 +0.1**
comp=Z,14nm,0.8s
AVF Avril sur Loir 80.78 8 *e*P **P 00 50 37.6 +0.1**
AVF pmax pmax
comp=Z,14nm,0.8s
AVF Avril sur Loir 80.78 8 *e*P **P 00 50 37.6 +0.1**
comp=Z,14nm,0.8s
KBA Koelnbreinsper 80.95 1 *j*P **P 00 50 40.2 +1.5**
KBA Koelnbreinsper 80.95 1 *j*PcP **P 00 50 40.2 +1.5**
KBA Koelnbreinsper 80.95 1 *j*P **P 00 50 40.2 +1.5**
FETA Feichten 80.96 3 *j i*P **P 00 50 39.3 +0.6**
SNR=8.3
FETA Feichten 80.96 3 *j i*P **P 00 50 39.3 +0.6**
SMF Signal de Mont 80.96 7 *e*P **P 00 50 38.7 +0.2**
comp=Z,12nm,0.9s
SMF Signal de Mont 80.96 7 *e*P **P 00 50 38.7 +0.2**
SMF pmax pmax
comp=Z,12nm,0.9s
SMF Signal de Mont 80.96 7 *e*P **P 00 50 38.7 +0.2**
comp=Z,12nm,0.9s
DRGR 81.00 354 *j*P **P 00 50 39.2 +0.4**
DRGR 81.00 354 *j i*P **P 00 50 39.2 +0.4**
KIV Kislovodsk 81.07 340 *j e*P **P 00 50 40.0 +0.8**
KIV pmax pmax
comp=Z,7.0nm,0.8s
KIV MLR MLR
comp=Z,400nm,22.0s
CABF La Chapelle 81.16 6 *e*P **P 00 50 40.5 +0.9**
CABF La Chapelle 81.16 6 *e*P **P 00 50 40.5 +0.9**
CABF La Chapelle 81.16 6 *e*P **P 00 50 40.5 +0.9**
DAVOX Davos/Dischmat 81.17 3 P **P 00 50 40.0 +0.1**
DAVOX Davos/Dischmat 81.17 3 P **P 00 50 40.0 +0.1**
comp=Z,2.4nm,0.5s,baz=11,slow=5.2,SNR=7.3
TCF Toulx Ste Croi 81.18 9 *e*P **P 00 50 39.6 -0.1**
TCF Toulx Ste Croi 81.18 9 *e*P **P 00 50 39.6 -0.1**
TCF Toulx Ste Croi 81.18 9 *e*P **P 00 50 39.6 -0.1**
KBZ Khabaz 81.24 340 P **P 00 50 41.3 +1.3**
KBZ Khabaz 81.24 340 P **P 00 50 41.3 +1.3**
KBZ Khabaz 81.24 340 P **P 00 50 41.3 +1.3**
comp=Z,7.5nm,0.9s,baz=6.1,slow=5.1,SNR=14
KBZ LR LR 01 33 31.5
comp=Z,244nm,21.8s,baz=247,slow=41
KBL Kabul 81.31 317 *e*P **P 00 50 40.5 -0.3**
KBL Kabul 81.31 317 *e*P **P 00 50 40.5 -0.3**
SOKA Soboth 81.36 360 *j i*P **P 00 50 41.6 +0.9**
SOKA Soboth 81.36 360 *j i*P **P 00 50 41.6 +0.9**
OBKA Obir 81.53 0 *j i*P **P 00 50 42.5 +0.8**
SNR=10
OBKA Obir 81.53 0 *j i*P **P 00 50 42.5 +0.8**
ZEI Tsey 81.94 339 *e*P **P 00 50 44.1 +0.1**
ZEI pmax pmax
comp=Z,10.0nm,1.0s
RJF Les Rejaudoux 82.08 9 *e*P **P 00 50 45.1 +0.6**
RJF Les Rejaudoux 82.08 9 *e*P **P 00 50 45.1 +0.6**

RJF	**Les Rejaudoux**	**82.08**	**9**	*e*P		**P**		**00 50 45.1**	**+0.6**
BZS	**Buzias**	**82.23**	**355**	ǁP		**P**		**00 50 45.4**	**+0.2**
BZS	**Buzias**	**82.23**	**355**	ǁ*i*P		**P**		**00 50 45.4**	**+0.2**
LFF	**La Frestale**	**82.37**	**10**	*e*P		**P**		**00 50 46.2**	**+0.3**
	comp=Z,8.6nm,0.6s								
LFF	**La Frestale**	**82.37**	**10**	*e*P		**P**		**00 50 46.2**	**+0.3**
LFF				pmax		pmax			
	comp=Z,9.0nm,0.6s								
LFF	**La Frestale**	**82.37**	**10**	*e*P		**P**		**00 50 46.2**	**+0.3**
	comp=Z,8.6nm,0.6s								
GZR	**Gura Zlata**	**82.39**	**354**	ǁP		**P**		**00 50 46.7**	**+0.6**
GZR	**Gura Zlata**	**82.39**	**354**	ǁ*i*P		**P**		**00 50 46.7**	**+0.6**
KNDS	**Knezji Dol**	**82.51**	**0**	ǁ*i*P		P		00 50 54.4	+7.6
VIVF	**Saint-Julien-I**	**82.81**	**7**	*e*P		**P**		**00 50 48.8**	**+0.5**
	comp=Z,54nm,1.5s								
VIVF	**Saint-Julien-I**	**82.81**	**7**	*e*P		**P**		**00 50 48.8**	**+0.5**
VIVF				pmax		pmax			
	comp=Z,54nm,1.5s								
VIVF	**Saint-Julien-I**	**82.81**	**7**	*e*P		**P**		**00 50 48.8**	**+0.5**
	comp=Z,54nm,1.5s								
ORIF	**Oris-en-Rattie**	**82.83**	**6**	*e*P		**P**		**00 50 48.6**	**+0.1**
ORIF	**Oris-en-Rattie**	**82.83**	**6**	*e*P		**P**		**00 50 48.6**	**+0.1**
ORIF	**Oris-en-Rattie**	**82.83**	**6**	*e*P		**P**		**00 50 48.6**	**+0.1**
MBDF	**Montbardon**	**83.08**	**6**	*e*P		**P**		**00 50 50.7**	**+0.9**
	comp=Z,29nm,1.0s								
MBDF	**Montbardon**	**83.08**	**6**	*e*P		**P**		**00 50 50.7**	**+0.9**
MBDF				pmax		pmax			
	comp=Z,29nm,1.0s								
MBDF	**Montbardon**	**83.08**	**6**	*e*P		**P**		**00 50 50.7**	**+0.9**
	comp=Z,29nm,1.0s								
EPF	**Esparros**	**84.21**	**10**	*e*P		**P**		**00 50 55.9**	**+0.4**
EPF	**Esparros**	**84.21**	**10**	*e*P		**P**		**00 50 55.9**	**+0.4**
EPF	**Esparros**	**84.21**	**10**	*e*P		**P**		**00 50 55.9**	**+0.4**
BR131	**Keskin Array S**	**86.83**	**345**	*e*P		**P**		**00 51 09.2**	**+0.5**
	comp=Z,4.8nm,0.8s								
BRTR	**Keskin Array B**	**86.83**	**345**	P		**P**		**00 51 09.3**	**+0.5**
BRTR	**Keskin Array B**	**86.83**	**345**	P		**P**		**00 51 09.3**	**+0.5**
	comp=Z,2.2nm,0.9s,baz=15,slow=3.0,SNR=12								
ESDC	**Sonseca Array**	**86.95**	**14**	P		**P**		**00 51 08.7**	**-0.5**
ESDC	**Sonseca Array**	**86.95**	**14**	P		**P**		**00 51 08.7**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=342,slow=4.7,SNR=4.6								
MALT	**Malatya**	**87.36**	**341**	ǁP		P		00 51 18.2	+6.9
MALT	**Malatya**	**87.36**	**341**	ǁ*i*P		P		00 51 18.1	+6.8
WRA	**Warramunga Arr**	**88.94**	**235**	P		**P**		**00 51 17.2**	**-1.6**
WRA	**Warramunga Arr**	**88.94**	**235**	P		**P**		**00 51 17.2**	**-1.6**
	comp=Z,3.4nm,1.0s,baz=37,slow=5.6,SNR=16								
HYB	**Hyderabad**	**91.28**	**301**	*i*P		**P**		**00 51 28.5**	**-1.4**
ASAR	**Alice Springs**	**92.28**	**233**	P		**P**		**00 51 33.0**	**-1.2**
ASAR	**Alice Springs**	**92.28**	**233**	P		**P**		**00 51 33.0**	**-1.2**
	comp=Z,3.7nm,0.9s,baz=29,slow=4.9,SNR=22								
TORD	**Torodi Ar. Bea**	**113.83**	**14**	PKiKP		**PKiKP**		**00 57 01.7**	**-1.5**
TORD	**Torodi Ar. Bea**	**113.83**	**14**	PKiKP		**PKiKP**		**00 57 01.7**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=337,slow=1.3,SNR=6.3								
QSPA	**South Pole Qui**	**142.11**	**180**	*e*PKPdf		PKPdf		00 57 49.0	-6.0
LBTB	**Lobatse**	**151.46**	**339**	*e*PKPbc		**PKPbc**		**00 58 18.1**	**0.0**
LBTB				*e*PKPab		**PKPab**		**00 58 27.4**	**+0.9**
MAW	**Mawson**	**152.36**	**218**	PKPbc		**PKPbc**		**00 58 17.8**	**-0.8**
MAW				PKPab		**PKPab**		**00 58 28.6**	**-0.3**
MAW	**Mawson**	**152.36**	**218**	PKPbc		**PKPbc**		**00 58 17.8**	**-0.8**
	comp=Z,3.7nm,0.6s,baz=54,slow=1.5,SNR=8.0								
MAW				PKPab		**PKPab**		**00 58 28.6**	**-0.3**
	comp=Z,11nm,0.9s,baz=107,slow=4.4,SNR=7.9								

DJA 26 00:41:31.2±0.6, 7°S±12°×10°8E±°, h10km, M4.0/4, MLv4.0/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.27**	**137**	P	Pg	00 41 36.1	-0.6
SKJI	**Sukabumi**	**1.12**	**288**	P	Pb	00 41 50.7	-2.0
DBJI	**Dramaga**	**1.19**	**312**	P	Pb	00 41 52.7	-1.1
SBJI	**Serang**	**1.93**	**309**	P	Pn	00 42 05.3	+1.2
CGJI	**Cibinong**	**2.06**	**291**	P	Pb	00 42 07.8	-0.9
CGJI				S	Sb	00 42 34.7	+0.3
KASI	**Kota Agung**	**3.61**	**300**	P	Pb	00 42 34.7	-0.4
SISI	**Saibi**	**10.41**	**305**	P	Pn	00 43 58.5	-2.2

*ISCJB **26** 00:51:44.9±0.3, 49.°88N±0.°02×18.°34E±0.°02, h0km, Error ellipse: s-maj=3.2km s-min=2.1km az=20.6*
*IPEC **26** 00:51:46.1±0.2, 49.°82N×18.°52E, h0km, ML2.4/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
*CSEM **26** 00:51:46.1±0.2, 49.°85N×18.°41E, h2km, ML3.1/10, Error ellipse: s-maj=4.6km s-min=3.3km az=18.0*
*IDC **26** 00:51:46.6±1.1, 49.°67N×18.°56E, h0km, mb1 3.1/4, mb1mx2.9/25, mbtmp2.9/4, ML2.6/4, Error ellipse: s-maj=28.3km s-min=9.6km az=160.0*
*PRU **26** 00:51:47.3, 49.°85N×18.°45E, h0km, Rockburst In Mine Karvina, Felt In Orlova Mining induced.*
*VIE **26** 00:51:47.1±0.4, 49.°66N×18.°41E, h0km, mb1.9/3, ML2.7/4, Error ellipse: s-maj=2.8km s-min=1.6km az=90.0 23 km SSE of Ostrava Suspected Mining induced.*
*BGR **26** 00:51:48.1±0.7, 49.°83N×18.°34E, h1km, ML3.1/11, Error ellipse: s-maj=7.8km s-min=5.6km az=12.0*

ISC 26 00:51:46.0±0.7, 49.°88N±0.°02×18.°44E±0.°02, h0km, n77, σ1s27/141, 6C-7D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.20**	**257**	*e*PG	**Pg**	**00 51 51.5**	**+1.8**
OKC				*e*SG	**Sg**	**00 51 54.0**	**+1.7**
	comp=Z,464nm,0.4s						
OKC	**Ostrava-Krasne**	**0.20**	**257**	*e*Pg	**Pg**	**00 51 50.9**	**+1.2**
	baz=95						
OKC				Sg	**Sg**	**00 51 54.0**	**+1.7**
	464nm,0.4s						
RAC	**Raciborz**	**0.26**	**321**	*e*Pg	**Pb**	**00 51 53.3**	**-0.2**
RAC				*e*Sg	**Sg**	**00 51 57.1**	**+2.8**
MORC	**Moravsky Berou**	**0.59**	**260**	*e*Pg	**Pg**	**00 51 58.1**	**+0.8**
MORC				*e*Sg	**Sg**	**00 52 06.1**	**+1.1**
	71nm,0.3s,baz=86						
OJC	**Ojcow**	**0.94**	**68**	*e*Pg	**Pg**	**00 52 04.1**	**+0.2**
OJC				*e*Sg	**Sg**	**00 52 16.6**	**+0.6**
OJC	**Ojcow**	**0.94**	**68**	*e*Pg	**Pg**	**00 52 03.8**	**-0.1**
	baz=244						
OJC				*e*Sg	**Sg**	**00 52 16.6**	**+0.6**
KRLC	**Kraliky**	**1.09**	**281**	*e*PG	**Pg**	**00 52 07.0**	**+0.1**
KRLC				*e*SG	**Sb**	**00 52 22.4**	**-0.1**
KRLC	**Kraliky**	**1.09**	**281**	Pg	**Pg**	**00 52 07.0**	**+0.1**
KRLC				Sg	**Sb**	**00 52 22.4**	**-0.1**
NIE	**Niedzica**	**1.30**	**110**	*e*Pg	**Pg**	**00 52 10.9**	**0.0**
NIE				*e*Sg	**Sb**	**00 52 29.0**	**+0.5**
NIE	**Niedzica**	**1.30**	**110**	*e*Pg	**Pg**	**00 52 10.9**	**0.0**
NIE				*e*Sg	**Sb**	**00 52 29.0**	**+0.5**
VRAC	**Vranov**	**1.33**	**245**	*e*Pg	**Pg**	**00 52 11.1**	**-0.4**
	baz=67						
VRAC				*e*Sg	**Sg**	**00 52 28.7**	**-0.1**
	48nm,0.4s,baz=67						
VYHS	**Vyhne**	**1.41**	**169**	*e*PN	**Pn**	**00 52 12.7**	**-0.3**
VYHS				*e*SN	**Sg**	**00 52 31.0**	**-0.3**
DPC	**Dobruska-Polom**	**1.44**	**290**	*e*PG	**Pn**	**00 52 13.7**	**+0.3**
DPC				*e*SG	**Sb**	**00 52 33.5**	**+0.8**
	comp=Z,24nm,0.2s						
DPC	**Dobruska-Polom**	**1.44**	**290**	Pg	**Pn**	**00 52 13.7**	**+0.3**
DPC				Sg	**Sb**	**00 52 33.5**	**+0.8**
	24nm,0.2s						
SMOL	**Smolenice**	**1.52**	**206**	*e*PN	**Pn**	**00 52 14.6**	**+0.1**
SMOL				*e*SN	**Sn**	**00 52 35.1**	**+0.1**
KRUC	**Moravsky**	**1.57**	**239**	*e*Pg	**Pn**	**00 52 14.9**	**-0.2**
	baz=61						
KRUC				*e*Sg	**Sn**	**00 52 35.7**	**-0.4**
	39nm,0.5s,baz=61						
KSP	**Ksiaz**	**1.68**	**306**	*e*Pn	**Pn**	**00 52 16.8**	**+0.2**
KSP				*e*Pg	**Pb**	**00 52 18.6**	**+0.8**
KSP				*e*Sn	**Sg**	**00 52 40.6**	**+0.6**
KSP				*e*Sg	**Sb**	**00 52 42.2**	**+2.8**
KSP	**Ksiaz**	**1.68**	**306**	*e*Pn	**Pn**	**00 52 16.8**	**+0.2**
KSP	**Ksiaz**	**1.68**	**306**	*i*Pg	**Pg**	**00 52 18.7**	**+0.5**
KSP				*e*Sg	**Sg**	**00 52 40.5**	**+0.6**
UPC	**Upice**	**1.68**	**293**	*e*PG	**Pn**	**00 52 17.5**	**+0.8**
UPC				*e*SG	**Sg**	**00 52 41.7**	**+1.7**
	comp=Z,6.7nm,0.3s						
UPC	**Upice**	**1.68**	**293**	Pg	**Pn**	**00 52 17.5**	**+0.8**
UPC				Sg	**Sg**	**00 52 41.7**	**+1.7**
	6.7nm,0.3s						
ZST	**Bratislava**	**1.91**	**208**	*e*PN	**Pn**	**00 52 18.8**	**-0.9**
ZST				*e*SN	**Sn**	**00 52 43.2**	**-1.2**
TREC	**Trest**	**2.01**	**254**	*e*SG	**Sg**	**00 52 51.2**	**+0.6**
	comp=Z,30nm,0.5s						
TREC	**Trest**	**2.01**	**254**	Sg	**Sg**	**00 52 51.2**	**+0.6**
	30nm,0.5s						

PSZ	**Piszkesteto**	**2.19**	**153**	ǁ*e*Pn		**Pg**		**00 52 27.7**	**-0.1**
PSZ				*e*Sn		**Sg**		**00 53 01.0**	**+4.8**
PSZ	**Piszkesteto**	**2.19**	**153**	ǁ*e*Pn		**Pg**		**00 52 27.7**	**-0.1**
CRVS	**Cervenica-Dubn**	**2.20**	**115**	*e*PN		**Pb**		**00 52 26.5**	**-0.2**
CRVS				*e*SN		**Sb**		**00 52 55.1**	**+0.6**
BUD	**Budapest**	**2.43**	**171**	*e*SKSac		**Pb**		**00 52 32.7**	**+2.2**
BUD				*e*				00 53 20.5	
PKSG		**2.49**	**181**	ǁ*e*Pn		**Pn**		**00 52 28.2**	**+0.4**
PKSG				*e*Sn		**Sn**		**00 52 58.0**	**-0.9**
PKSG		**2.49**	**181**	ǁ*e*Pn		**Pn**		**00 52 28.2**	**+0.4**
PKSG				*e*Sn		**Sn**		**00 52 58.0**	**-0.9**
PRU	**Pruhonice**	**2.52**	**274**	*e*PG		**Pb**		**00 52 32.5**	**+0.4**
PRU				*e*SG		**Sg**		**00 53 06.3**	**-0.7**
	comp=Z,6.8nm,0.3s								
SOP	**Sopron**	**2.53**	**210**	ǁ*e*Pn		**Pn**		**00 52 29.1**	**+0.8**
SOP				*e*Sn		**Sn**		**00 52 59.8**	**0.0**
SOP	**Sopron**	**2.53**	**210**	ǁ*e*Pn		**Pn**		**00 52 29.1**	**+0.8**
PVCC	**Panska Ves**	**2.57**	**286**	*e*PG		**Pb**		**00 52 33.9**	**+0.9**
PVCC				*e*SG		**Sg**		**00 53 09.7**	**+1.1**
	comp=Z,19nm,0.2s								
PVCC	**Panska Ves**	**2.57**	**286**	Pg		**Pb**		**00 52 33.9**	**+0.9**
PVCC				Sg		**Sg**		**00 53 09.7**	**+1.1**
	19nm,0.2s								
CONA	**Conrad Observa**	**2.59**	**222**	ǁ*i*Pn		**Pn**		**00 52 27.9**	**-1.3**
CONA				ǁ*i*Sn		**Sn**		**00 52 58.9**	**-2.6**
CONA	**Conrad Observa**	**2.59**	**222**	Pn		**Pn**		**00 52 27.9**	**-1.3**
PRA	**Prague**	**2.60**	**276**	PG		**Pg**		**00 52 36.0**	**+0.3**
PKST	**T``s**	**2.64**	**186**	ǁ*e*Pn		**Pn**		**00 52 30.3**	**+0.5**
PKST				*e*Sn		**Sn**		**00 53 00.8**	**-1.7**
PKST	**T``s**	**2.64**	**186**	ǁ*e*Pn		**Pn**		**00 52 30.3**	**+0.5**
PKST				*e*Sn		**Sn**		**00 53 00.8**	**-1.7**
KOLS	**Kolonicke sedl**	**2.67**	**109**	*e*SG		**Sg**		**00 53 12.5**	**+0.6**
BRG	**Berggiesshubel**	**3.05**	**291**	PG		**Pb**		**00 52 42.7**	**+1.6**
BRG				SG		**Sg**		**00 53 23.8**	**0.0**
	9.9nm,0.5s								
BRG	**Berggiesshubel**	**3.05**	**291**	*e*Pg		**Pb**		**00 52 42.7**	**+1.6**
BRG				*e*Sg		**Sg**		**00 53 24.7**	**+0.9**
BRG	**Berggiesshubel**	**3.05**	**291**	Pg		**Pb**		**00 52 42.7**	**+1.6**
BRG				Sg		**Sg**		**00 53 24.7**	**+0.9**
TRPA	**Tarpa**	**3.22**	**121**	ǁ*e*Pn		**Pn**		**00 52 40.2**	**+2.5**
TRPA				*e*Sn		**Sb**		**00 53 22.1**	**-1.5**
KHC	**Kasperske Hory**	**3.26**	**259**	*e*PN		**Pn**		**00 52 38.9**	**+0.5**
KHC				*e*PG		**Pb**		**00 52 45.8**	**+1.1**
KHC				*e*SN		**Sn**		**00 53 18.0**	**+0.1**
KHC				*e*SG		**Sg**		**00 53 30.0**	**-0.6**
	comp=Z,16nm,0.6s								
KHC	**Kasperske Hory**	**3.26**	**259**	Pn		**Pn**		**00 52 38.9**	**+0.5**
KHC				Sn		**Sn**		**00 53 18.0**	**+0.1**
KHC				Sg		**Sg**		**00 53 30.0**	**-0.6**
	16nm,0.6s								
GEC2	**GERESS Array S**	**3.27**	**253**	*e*Pg		**Pb**		**00 52 46.2**	**+1.3**
GEC2				*e*Sg		**Sg**		**00 53 31.2**	**+0.2**
GEC2	**GERESS Array S**	**3.27**	**253**	Pg		**Pb**		**00 52 46.2**	**+1.3**
GEC2				Sg		**Sg**		**00 53 31.2**	**+0.2**
GERES	**GERESS Array B**	**3.27**	**253**	Pn		**Pn**		**00 52 38.6**	**0.0**
	0.3nm,0.3s,baz=73,slow=14,SNR=7.2								
GERES				Pg		**Pb**		**00 52 46.2**	**+1.3**
	1.6nm,0.3s,baz=69,slow=17,SNR=29								
GERES				Lg		Lg		00 53 31.1	
	1.8nm,0.3s,baz=74,slow=25,SNR=5.9								
FBE	**Freiberg**	**3.42**	**290**	*e*Pg		**Pb**		**00 52 49.8**	**+2.5**
FBE				*e*Sg		**Sg**		**00 53 35.4**	**-0.3**
FBE	**Freiberg**	**3.42**	**290**	Pg		**Pb**		**00 52 49.8**	**+2.5**
FBE				Sg		**Sg**		**00 53 35.4**	**-0.3**
MOA	**Molln**	**3.43**	**235**	ǁ*i*Pn		**Pn**		**00 52 40.2**	**-0.5**
MOA				ǁ*i*Sg		**Sg**		**00 53 35.2**	**-0.8**
MOA	**Molln**	**3.43**	**235**	Pn		**Pn**		**00 52 40.2**	**-0.5**
MOA				Sg		**Sg**		**00 53 35.2**	**-0.8**
BEHE	**Becsehely**	**3.59**	**199**	*e*Pn		**Pn**		00 52 39.3	-3.6
BEHE				*e*Sn		**Sn**		**00 53 25.0**	**-1.0**
BEHE	**Becsehely**	**3.59**	**199**	*e*Pn		Pn		00 52 39.3	-3.6
BEHE				*e*Sn		**Sn**		**00 53 25.0**	**-1.0**
WET	**Wettzell**	**3.70**	**261**	*e*Pn		**Pn**		**00 52 44.2**	**-0.2**
WET				*e*Pg		**Pb**		**00 52 54.5**	**+2.3**
WET				*e*Sg		**Sg**		**00 53 43.9**	**-0.9**
WET	**Wettzell**	**3.70**	**261**	Pn		**Pn**		**00 52 44.2**	**-0.2**
CLL	**Collm**	**3.75**	**294**	*e*Pn		**Pn**		**00 52 45.5**	**+0.5**
CLL				*e*Pg		**Pg**		**00 52 56.7**	**-1.1**
CLL				*e*Sg		**Sg**		**00 53 46.8**	**+0.4**
CLL	**Collm**	**3.75**	**294**	*e*Pn		**Pn**		**00 52 45.0**	**0.0**
CLL				*e*Pg		**Pg**		**00 52 56.0**	**-1.8**
CLL				*e*Sg		**Sg**		**00 53 45.0**	**-1.3**
	comp=Z,12nm,0.6s								
CLL	**Collm**	**3.75**	**294**	Pn		**Pn**		**00 52 45.5**	**+0.5**
NKC	**Novy Kostel**	**3.88**	**277**	*e*PN		**Pn**		**00 52 48.5**	**+1.6**
NKC				*e*PG		**Pb**		**00 52 56.8**	**+1.5**
NKC				*e*SG		**Sg**		**00 53 50.9**	**+0.4**
	comp=Z,12nm,0.5s								
NKC	**Novy Kostel**	**3.88**	**277**	Pn		**Pn**		**00 52 48.5**	**+1.6**
NKC				Sg		**Sg**		**00 53 50.9**	**+0.4**
	comp=Z,12nm,0.5s								
TANN	**Tannenbergstha**	**3.88**	**280**	*e*Pg		**Pg**		**00 52 58.9**	**-1.5**
TANN				*e*Sg		**Sg**		**00 53 49.6**	**-1.1**
WERN	**Wernitzgruen**	**3.93**	**278**	*e*Pg		**Pg**		**00 52 59.5**	**-1.7**
WERN				*e*Sg		**Sg**		**00 53 51.5**	**-0.6**
GUNZ	**Gunzen**	**3.96**	**279**	*e*Pg		**Pb**		**00 52 59.5**	**+2.9**
WERD	**Werda**	**3.99**	**281**	*e*Pg		**Pb**		**00 53 00.2**	**+3.1**
ROTZ	**Rotzenmuhle**	**4.04**	**271**	*e*Sg		**Sg**		**00 53 53.3**	**-2.4**
ROTZ	**Rotzenmuhle**	**4.04**	**271**	Sg		**Sg**		**00 53 53.3**	**-2.4**
PLN	**Plauen**	**4.08**	**281**	*e*Pg		**Pg**		**00 53 02.2**	**-2.1**
PLN				*e*Sg		**Sg**		**00 53 55.7**	**-1.4**
MANZ	**Manzenberg**	**4.09**	**274**	*e*Pn		**Pn**		**00 52 49.9**	**+0.1**
MANZ				*e*Pg		**Pb**		**00 53 00.7**	**+1.8**
MANZ	**Manzenberg**	**4.09**	**274**	Pn		**Pn**		**00 52 49.9**	**+0.1**
MOX	**Moxa**	**4.45**	**282**	*e*Pn		**Pn**		**00 52 55.0**	**+0.3**
MOX				*e*Pg		**Pg**		**00 53 09.9**	**-1.3**
MOX				*e*Sg		**Sg**		**00 54 06.4**	**-2.3**
MOX	**Moxa**	**4.45**	**282**	Pn		**Pn**		**00 52 55.0**	**+0.3**
DAVOX	**Davos/Dischmat**	**6.50**	**245**	Pn		**Pn**		**00 53 25.0**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=21,slow=14,SNR=2.7								
AKASG	**Malin Array Be**	**6.96**	**79**	Pn		**Pn**		**00 53 26.5**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=262,slow=13,SNR=2.9								
FINES	**FINESS Array B**	**12.35**	**17**	Pn		Pn		00 54 40.1	-2.7
	comp=Z,0.1nm,0.3s,baz=196,slow=11,SNR=5.7								

IDC 26 01:15:29.8±2.2, 2.°98N×93.°63E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.5/27, mbtmp3.6/7, ML3.4/1, Error ellipse: s-maj=66.4km s-min=21.8km az=57.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.30**	**92**	Pn	Pn	01 16 50.8	+0.4
	1.1nm,0.3s,baz=294,slow=18,SNR=4.6						
CMAR	**Chiang Mai Arr**	**16.24**	**18**	Pn	Pn	01 19 20.6	+1.1
	baz=219,slow=13,SNR=5.3						
MKAR	**Makanchi Array**	**44.74**	**349**	P	P	01 23 45.4	+0.4
	1.1nm,0.6s,baz=167,slow=9.1,SNR=8.0						
WRA	**Warramunga Arr**	**46.01**	**121**	P	P	01 23 55.2	-0.2
	0.5nm,0.6s,baz=301,slow=8.7,SNR=5.1						
SONM	**Songino Array**	**46.02**	**12**	P	P	01 23 54.3	-1.0
	0.3nm,0.3s,baz=189,slow=8.3,SNR=4.2						
ASAR	**Alice Springs**	**47.32**	**126**	P	P	01 24 05.6	-0.1
	0.4nm,0.6s,baz=293,slow=7.4,SNR=4.2						
ZALV	**Zalesovo Beam**	**51.32**	**353**	P	P	01 24 35.5	-0.1
	0.4nm,0.4s,baz=180,slow=9.7,SNR=3.1						

*DDA **26** 02:08:01.9, 37.°85N×27.°54E, h5km, MD3.2*
*ISK **26** 02:08:01.8, 37.°84N×27.°51E, h5km, MD3.2*
*CSEM **26** 02:08:03.1±0.2, 37.°82N×27.°54E, h2km, MD3.2, Error ellipse: s-maj=5.5km s-min=3.7km az=75.0*

ISC 26 02:08:02.7±1.0, 37.°83N±0.°02×27.°53E±0.°02, h7km±9km, n69, σ1s24/94, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.27**	**241**	*i*P	**Pg**	**02 08 07.7**	**-0.3**
GCAM				*i*S	**Sg**	**02 08 13.0**	**+1.5**
GCAM	**G?zelcaml?**	**0.27**	**241**	*i*P	**Pg**	**02 08 07.7**	**-0.3**
GCAM				*i*S	**Sg**	**02 08 13.0**	**+1.5**
AYDN	**Tasoluk**	**0.33**	**122**	*i*P	**Pg**	**02 08 08.7**	**-0.4**
AYDN				*i*S	**Sg**	**02 08 13.2**	**-0.1**
AYDN	**Tasoluk**	**0.33**	**122**	*i*P	**Pg**	**02 08 08.7**	**-0.4**
AYDN				*i*S	**Sg**	**02 08 13.2**	**-0.1**
MLSB	**Milas**	**0.57**	**160**	PG	**Pg**	**02 08 13.7**	**0.0**
MLSB				*e*SG	**Sb**	**02 08 23.7**	**+0.4**
MLSB	**Milas**	**0.57**	**160**	*i*Pg	**Pg**	**02 08 13.7**	**0.0**
MLSB				*e*Sg	**Sb**	**02 08 23.7**	**+0.4**
IZM	**Izmir**	**0.60**	**340**	*e*PG	**Pb**	**02 08 15.1**	**-0.5**
IZM	**Izmir**	**0.60**	**340**	*e*Pg	**Pb**	**02 08 15.1**	**-0.5**

BLCB	**Balcova**	**0.67**	**325**	*e*PG		**Pg**		**02 08 15.3**	**-0.4**
BLCB				*e*SG		**Sb**		**02 08 25.6**	**-0.7**
BLCB	**Balcova**	**0.67**	**325**	*e*Pg		**Pg**		**02 08 15.3**	**-0.4**
BODT	**Bodrum**	**0.79**	**193**	*e*PG		**Pg**		**02 08 18.0**	**+0.2**
BODT	**Bodrum**	**0.79**	**193**	*e*Pg		**Pg**		**02 08 18.0**	**+0.2**
YER	**Yerkesik**	**0.92**	**139**	*e*PG		**Pg**		**02 08 20.6**	**+0.3**
YER				*e*SG		**Sn**		**02 08 34.5**	**-1.1**
YER	**Yerkesik**	**0.92**	**139**	*e*Pg		**Pg**		**02 08 20.6**	**+0.3**
YER				*e*Sg		**Sn**		**02 08 34.5**	**-1.1**
MANT	**Manisa**	**1.04**	**51**	*i*P		**Pg**		**02 08 21.5**	**-1.2**
MANT				*i*S		**Sg**		**02 08 36.0**	**-0.3**
MANT	**Manisa**	**1.04**	**51**	*i*P		**Pg**		**02 08 21.5**	**-1.2**
MANT				*i*S		**Sg**		**02 08 36.0**	**-0.3**
AKHS	**Akhisar**	**1.07**	**12**	*i*P		**Pg**		**02 08 22.5**	**-1.0**
AKHS				*i*S		**Sn**		**02 08 38.1**	**-1.2**
AKHS	**Akhisar**	**1.07**	**12**	*i*P		**Pb**		**02 08 22.5**	**-1.0**
AKHS				*i*S		**Sn**		**02 08 38.1**	**-1.2**
AKS	**Akhisar**	**1.07**	**12**	*e*PG		**Pb**		**02 08 22.7**	**-0.8**
AKS	**Akhisar**	**1.07**	**12**	*e*Pg		**Pb**		**02 08 22.7**	**-0.8**
DAT	**Datca**	**1.10**	**178**	*e*PN		**Pn**		**02 08 24.3**	**-0.3**
DAT	**Datca**	**1.10**	**178**	*e*Pn		**Pn**		**02 08 24.3**	**-0.3**
KULA	**Kula-Manisa**	**1.12**	**52**	*e*PN		**Pb**		**02 08 23.7**	**-0.8**
KULA	**Kula-Manisa**	**1.12**	**52**	*e*Pn		**Pb**		**02 08 23.7**	**-0.8**
DENT	**Denizli**	**1.19**	**93**	*e*PN		**Pg**		**02 08 26.1**	**+0.5**
DENT				*e*SN		**Sn**		**02 08 43.9**	**+1.6**
DENT	**Denizli**	**1.19**	**93**	*e*Pn		**Pg**		**02 08 26.1**	**+0.5**
DENT				*e*Sn		**Sn**		**02 08 43.9**	**+1.6**
DNZL	**Cakiroluk**	**1.21**	**96**	*i*P		**Pb**		**02 08 25.9**	**-0.1**
DNZL				*i*S		**Sn**		**02 08 45.2**	**+2.2**
DNZL	**Cakiroluk**	**1.21**	**96**	*i*P		**Pn**		**02 08 25.9**	**-0.1**
TURN	**Turunc**	**1.28**	**138**	*i*P		**Pn**		**02 08 24.4**	**-2.6**
TURN				*i*S		**Sg**		**02 08 44.9**	**+1.0**
DALY	**Dalyan (Mu˘la**	**1.35**	**138**	*e*PN		**Pg**		**02 08 28.8**	**+0.2**
DALY	**Dalyan (Mu˘la**	**1.35**	**138**	*e*Pn		**Pg**		**02 08 28.8**	**+0.2**
DEMI	**Demirci**	**1.53**	**37**	*i*P		**Pb**		**02 08 30.7**	**-0.7**
DEMI				*i*S		**Sg**		**02 08 53.5**	**+1.8**
DEMI	**Demirci**	**1.53**	**37**	*i*P	

LHI	**Lord Howe Isla**	**36.95**	**135**	S	**S**	**02 25 22.5**	**-0.1**
	baz=37,SNR=3.1							
CMAR	**Chiang Mai Arr**	**39.20**	**311**	P	**P**	**02 20 08.0**	**0.0**
	1.4nm,0.8s,baz=146,slow=6.6,SNR=6.1							
SONM	**Songino Array**	**58.35**	**342**	P	**P**	**02 22 34.7**	**+1.1**
	0.3nm,0.4s,baz=156,slow=5.3,SNR=3.0							
MKAR	**Makanchi Array**	**67.92**	**327**	P	**P**	**02 23 37.7**	**+1.1**
	0.6nm,0.6s,baz=116,slow=7.7,SNR=7.1							
ZALV	**Zalesovo Beam**	**71.37**	**334**	P	**P**	**02 23 57.8**	**+0.3**
	0.7nm,0.4s,baz=149,slow=5.8,SNR=4.3							

*IDC **26** 02:15:10.3±1.7,3°.56S×101°.44E,h0km,mb3.9/6, mb1 4.0/6,mb1mx3.7/23,mbtmp3.9/6,Error ellipse: s-maj=76.2km s-min=22.6km az=50.0*

ISC 26 02:15:15.7±1.5,3°.5S±0°.3×101°.4E±0°.2,h35km,n10, σ0°.82/9,mb3.9/6,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBSI	**MBSI**	**0.88**	**106**	P	**Pn**	**02 15 33.1**	**+1.5**
KSI	**Kapahiang**	**1.18**	**97**	P	**Pn**	**02 15 35.5**	**-0.2**
PPI	**Padang Panjang**	**3.21**	**341**	P	Pn	02 16 13.2	+10
WRA	**Warramunga Arr**	**36.01**	**120**	P	**P**	**02 22 13.3**	**-0.5**
	0.6nm,0.4s,baz=299,slow=10,SNR=2.3							
ASAR	**Alice Springs**	**37.22**	**126**	P	**P**	**02 22 23.0**	**-1.1**
	0.7nm,0.4s,baz=300,slow=7.7,SNR=3.5							
SONM	**Songino Array**	**51.32**	**4**	P	**P**	**02 24 16.5**	**-0.1**
	0.7nm,0.8s,baz=186,slow=11,SNR=4.8							
MKAR	**Makanchi Array**	**52.87**	**344**	P	**P**	**02 24 28.4**	**+0.4**
	1.3nm,0.4s,baz=156,slow=9.1,SNR=25							
ZALV	**Zalesovo Beam**	**58.92**	**349**	P	**P**	**02 25 10.9**	**-0.2**
	1.0nm,0.4s,baz=161,slow=5.8,SNR=7.8							
BRTR	**Keskin Array B**	**75.39**	**312**	P	**P**	**02 26 56.5**	**+0.3**
	0.2nm,0.6s,baz=128,slow=5.2,SNR=5.0							
TXAR	**Lajitas Array**	**144.99**	**40**	PKPbc	**PKPab**	**02 34 49.5**	**0.0**
	0.5nm,0.5s,baz=270,slow=0.9,SNR=8.1							

*IDC **26** 02:32:52.8±1.2,22°.71S×174°.94W,h0km,mb4.0/7, mb1 4.3/9,mb1mx4.1/21,mbtmp4.1/9,ML3.5/2,Error ellipse: s-maj=55.7km s-min=19.8km az=144.0*
*NEIC **26** 02:32:55.1±4.7,22°.69S×174°.94W,h14km±30km,mb4.4/3, Error ellipse: s-maj=19.2km s-min=8.9km az=134.0*
*ISCJB **26** 02:32:56.3±0.8,22°.6S±0°.1×175°.0W±0°.1,h33km,mb4.1/10, Error ellipse: s-maj=24.3km s-min=11.4km az=44.1*

ISC 26 02:32:57.7±0.9,22°.7S±0°.1×175°.0W±0°.2,h33km,n24, σ0°.77/20,mb4.2/9,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.23**	**20**	Pn	**Pn**	**02 35 07.9**	**-0.8**
AFI				Sn	Sn	02 36 45.4	-6.0
AFI	**Afiamalu**	**9.23**	**20**	Pn	**Pn**	**02 35 07.9**	**-0.8**
	3.3nm,0.3s,baz=173,slow=8.1,SNR=5.4							
AFI				Sn	Sn	02 36 45.4	-6.0
	5.4nm,0.3s,baz=270,slow=18,SNR=3.8							
URZ	**Urewera**	**16.95**	**202**	Pn	**Pn**	**02 36 52.0**	**-0.3**
URZ				Sn	Sn	02 39 42.1	-18
URZ	**Urewera**	**16.95**	**202**	Pn	**Pn**	**02 36 52.1**	**-0.3**
	1.5nm,0.3s,baz=331,slow=19,SNR=8.3							
URZ				Sn	Sn	02 39 42.1	-18
	1.3nm,0.3s,baz=114,slow=24,SNR=10							
DZM	**Mont Dzumac**	**17.21**	**268**	P	P	02 37 03.9	+6.8
DZM	**Mont Dzumac**	**17.21**	**268**	P	P	02 37 03.9	+6.8
	0.4nm,0.3s,baz=76,slow=19,SNR=5.7							
CTAO	**Charters Tower**	**36.14**	**267**	*e*P	**P**	**02 39 57.9**	**+0.8**
	3.0nm,0.6s							
PMG	**Port Moresby**	**38.59**	**284**	*e*P	**P**	**02 40 17.9**	**0.0**
	12nm,1.0s							
STKA	**Stephens Creek**	**39.47**	**247**	P	**P**	**02 40 23.8**	**-1.3**
STKA	**Stephens Creek**	**39.47**	**247**	P	**P**	**02 40 23.8**	**-1.3**
	0.8nm,0.2s,baz=90,slow=5.1,SNR=3.0							
AS31	**Alice Springs**	**46.81**	**258**	*e*P	**P**	**02 41 25.4**	**+0.8**
ASAR	**Alice Springs**	**46.81**	**258**	P	**P**	**02 41 25.1**	**+0.5**
ASAR	**Alice Springs**	**46.81**	**258**	P	**P**	**02 41 25.1**	**+0.5**
	1.8nm,0.6s,baz=98,slow=7.0,SNR=23							
WRAB	**Tennant Creek**	**47.12**	**263**	*e*P	**P**	**02 41 27.8**	**+0.8**
	2.5nm,0.8s							
WRA	**Warramunga Arr**	**47.13**	**263**	P	**P**	**02 41 27.2**	**+0.1**
WRA	**Warramunga Arr**	**47.13**	**263**	P	**P**	**02 41 27.2**	**+0.1**
	4.1nm,0.7s,baz=102,slow=7.9,SNR=32							
NVAR	**Mina Array Bea**	**80.71**	**42**	P	**P**	**02 45 09.1**	**+1.2**
NVAR	**Mina Array Bea**	**80.71**	**42**	P	**P**	**02 45 09.0**	**+1.2**
	0.5nm,0.4s,baz=230,slow=7.0,SNR=5.3							
TXAR	**Lajitas Array**	**85.88**	**56**	P	**P**	**02 45 34.3**	**-0.3**
TXAR	**Lajitas Array**	**85.88**	**56**	P	**P**	**02 45 34.3**	**-0.3**
	0.6nm,0.8s,baz=227,slow=6.1,SNR=6.8							
ILAR	**Eielson Array**	**89.83**	**12**	P	**P**	**02 45 52.8**	**+0.2**
ILAR	**Eielson Array**	**89.83**	**12**	P	**P**	**02 45 52.8**	**+0.2**
	0.6nm,0.8s,baz=210,slow=5.6							
YKA	**Yellowknife Ar**	**97.32**	**24**	P	Pdif	02 46 27.1	0.0
YKA	**Yellowknife Ar**	**97.32**	**24**	P	Pdif	02 46 27.1	0.0
	0.1nm,0.7s,baz=233,slow=4.5,SNR=3.5							

*ISK **26** 02:55:16.9,37°.85N×27°.54E,h6km,MD2.6*
*ISCJB **26** 02:55:17.1±0.5,37°.85N±0°.03×27°.54E±0°.04,h0km±7km, Error ellipse: s-maj=5.6km s-min=3.9km az=153.0*
*CSEM **26** 02:55:17.4±0.1,37°.84N×27°.55E,h5km,MD2.9,Error ellipse: s-maj=3.3km s-min=2.4km az=73.0*
*DDA **26** 02:55:17.3,37°.83N×27°.55E,h7km,MD2.9*

ISC 26 02:55:17.4±1.1,37°.85N±0°.02×27°.54E±0°.02,h4km±11km, n36,σ0°.39/51,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.29**	**239**	*i* P	**Pg**	**02 55 23.1**	**+0.1**
GCAM				*i* S	**Sg**	**02 55 26.6**	**-0.1**
GCAM	**G?zelcaml?**	**0.29**	**239**	*i* P	**Pg**	**02 55 23.1**	**+0.1**
GCAM				*i* S	**Sg**	**02 55 26.6**	**-0.1**
AYDN	**Tasoluk**	**0.33**	**125**	*i* P	**Pg**	**02 55 24.0**	**+0.3**
AYDN				*i* S	**Sg**	**02 55 28.3**	**+0.4**
AYDN	**Tasoluk**	**0.33**	**125**	*i* P	**Pg**	**02 55 24.0**	**+0.3**
AYDN				*i* S	**Sg**	**02 55 28.3**	**+0.4**
MLSB	**Milas**	**0.58**	**162**	PG	**Pg**	**02 55 28.7**	**+0.1**
MLSB	**Milas**	**0.58**	**162**	*i* Pg	**Pg**	**02 55 28.7**	**+0.1**
IZM	**Izmir**	**0.59**	**338**	PG	**Pg**	**02 55 29.0**	**+0.3**
IZM	**Izmir**	**0.59**	**338**	*i* Pg	**Pg**	**02 55 29.0**	**+0.3**
BLCB	**Balcova**	**0.66**	**324**	*e*PG	**Pg**	**02 55 30.2**	**+0.1**
BLCB				*e*SG	**Sg**	**02 55 39.1**	**+0.3**
BLCB	**Balcova**	**0.66**	**324**	*e*Pg	**Pg**	**02 55 30.2**	**+0.1**
BLCB				*e*Sg	**Sg**	**02 55 39.1**	**+0.3**
BODT	**Bodrum**	**0.81**	**193**	*e*PG	**Pg**	**02 55 32.9**	**0.0**
BODT	**Bodrum**	**0.81**	**193**	*e*Pg	**Pg**	**02 55 32.9**	**0.0**
URLA	**Izmir**	**0.91**	**304**	*i* P	**Pg**	**02 55 35.1**	**+0.4**
URLA				*i* S	**Sb**	**02 55 47.5**	**-0.6**
URLA	**Izmir**	**0.91**	**304**	*i* P	**Pg**	**02 55 35.1**	**+0.4**
URLA				*i* S	**Sb**	**02 55 47.5**	**-0.6**
YER	**Yerkesik**	**0.93**	**140**	*e*PG	**Pg**	**02 55 34.9**	**-0.2**
YER	**Yerkesik**	**0.93**	**140**	*e*Pg	**Pg**	**02 55 34.9**	**-0.2**
MANT	**Manisa**	**1.02**	**51**	*i* P	**Pg**	**02 55 36.8**	**-0.2**
MANT				*i* S	**Sg**	**02 55 49.8**	**-0.5**
MANT	**Manisa**	**1.02**	**51**	*i* P	**Pg**	**02 55 36.8**	**-0.2**
MANT				*i* S	**Sg**	**02 55 49.8**	**-0.5**
AKHS	**Akhisar**	**1.05**	**12**	*i* P	**Pg**	**02 55 37.6**	**+0.1**
AKHS				*i* S	**Sb**	**02 55 53.1**	**+0.9**
AKHS	**Akhisar**	**1.05**	**12**	*i* P	**Pg**	**02 55 37.6**	**+0.1**
AKHS				*i* S	**Sb**	**02 55 53.1**	**+0.9**
AKS	**Akhisar**	**1.05**	**12**	*e*PG	**Pg**	**02 55 37.7**	**+0.2**
AKS				*e*SG	**Sb**	**02 55 52.5**	**+0.3**
AKS	**Akhisar**	**1.05**	**12**	*e*Pg	**Pg**	**02 55 37.7**	**+0.2**
AKS				*e*Sg	**Sb**	**02 55 52.5**	**+0.3**
KULA	**Kula-Manisa**	**1.10**	**53**	*e*PN	**Pg**	**02 55 38.1**	**-0.4**
KULA	**Kula-Manisa**	**1.10**	**53**	*e*Pn	**Pg**	**02 55 38.1**	**-0.4**
DAT	**Datca**	**1.12**	**179**	*e*PN	**Pb**	**02 55 39.2**	**-0.2**
DAT	**Datca**	**1.12**	**179**	*e*Pn	**Pb**	**02 55 39.2**	**-0.2**
DNZL	**Cakiroluk**	**1.20**	**97**	*i* P	**Pb**	**02 55 40.7**	**-0.1**
DNZL				*i* S	**Sn**	**02 55 58.9**	**+0.9**
DNZL	**Cakiroluk**	**1.20**	**97**	*i* P	**Pb**	**02 55 40.7**	**-0.1**
DALY	**Dalyan (Mu˘la**	**1.36**	**139**	*e*PN	**Pg**	**02 55 43.3**	**-0.1**
DALY	**Dalyan (Mu˘la**	**1.36**	**139**	*e*Pn	**Pg**	**02 55 43.3**	**-0.1**
DEMI	**Demirci**	**1.50**	**37**	*i* P	**Pb**	**02 55 46.1**	**+0.1**
DEMI	**Demirci**	**1.50**	**37**	*i* P	**Pb**	**02 55 46.1**	**+0.1**
KHL	**Karahalli**	**1.63**	**73**	*e*PN	**Pn**	**02 55 46.8**	**-0.2**
KHL	**Karahalli**	**1.63**	**73**	*e*Pn	**Pn**	**02 55 46.8**	**-0.2**
BALB	**Balikesir**	**1.81**	**8**	*e*PN	**Pb**	**02 55 50.2**	**-0.8**
BALB	**Balikesir**	**1.81**	**8**	*e*Pn	**Pb**	**02 55 50.2**	**-0.8**

*TAP **26** 03:03:51.1,22°.26N×122°.57E,h58km±1km,ML4.0,D*
*JMA **26** 03:03:52.1±0.3,22°.37N×122°.77E,h90km,M3.2*

ISC 26 03:03:48.8±3.1,22°.28N±0°.05×122°.63E±0°.04,h17km±22km, n46,σ1°.11/85,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**1.42**	**305**	*e*P	**Pn**	**03 04 13.5**	**-0.5**
	baz=307						
CHKT				*e*S	**Sn**	**03 04 29.5**	**-2.8**
	baz=307						
TTN	**Taitung**	**1.45**	**289**	*e*P	**Pn**	**03 04 14.2**	**0.0**
	baz=291						
TTN				*e*S	**Sn**	**03 04 32.5**	**-0.4**
	baz=291						
TWG	**Pinlang**	**1.54**	**291**	P	**Pn**	**03 04 15.8**	**+0.3**
	baz=296						
TWG				S	**Sn**	**03 04 33.9**	**-1.2**
	baz=296						
ECL	**Taimali**	**1.58**	**282**	P	**Pn**	**03 04 16.3**	**+0.3**
	baz=283						
ECL				*e*S	**Sn**	**03 04 35.5**	**-0.6**
	baz=283						
TAW	**Tawu**	**1.60**	**273**	*e*P	**Pn**	**03 04 16.9**	**+0.5**
	baz=274						
TWF1	**Yuli**	**1.63**	**311**	P	**Pn**	**03 04 16.6**	**-0.2**
	baz=313						
TWF1				*e*S	**Sn**	**03 04 35.9**	**-1.5**
	baz=313						
TSEB	**Hengchuen, Pin**	**1.64**	**257**	*e*P	**Pn**	**03 04 17.8**	**+0.9**
	baz=257						
TSEB				*e*S	**Sn**	**03 04 38.9**	**+1.1**
	baz=257						
EAST	**Anshuo**	**1.65**	**274**	P	**Pn**	**03 04 17.4**	**+0.3**
	baz=275						
EAST				*e*S	**Sn**	**03 04 37.0**	**-1.0**
	baz=275						
EHY	**Hungye**	**1.72**	**316**	P	**Pn**	**03 04 18.2**	**+0.2**
	baz=313						
EHY				*e*S	**Sn**	**03 04 37.4**	**-2.2**
	baz=313						
TWK1	**Hengchun**	**1.72**	**259**	*e*P	**Pn**	**03 04 19.1**	**+1.1**
	baz=259						
TWK1				*e*S	**Sn**	**03 04 38.7**	**-1.0**
	baz=259						
ELDTW	**Lidau**	**1.74**	**302**	P	**Pn**	**03 04 18.2**	**-0.2**
	baz=310						
ELDTW				*e*S	**Sn**	**03 04 38.7**	**-1.6**
	baz=310						
HEN	**Hengchun**	**1.77**	**262**	*e*P	**Pn**	**03 04 19.7**	**+1.0**
	baz=262						
HEN				*e*S	**Sn**	**03 04 40.4**	**-0.4**
	baz=262						
SCZT	**Fangliau**	**1.86**	**273**	P	**Pn**	**03 04 20.9**	**+0.9**
	baz=274						
SCZT				*e*S	**Sn**	**03 04 43.7**	**+0.6**
	baz=274						
ESL	**Shilin**	**1.88**	**325**	*e*P	**Pn**	**03 04 20.6**	**+0.3**
	baz=334						
ESL				S	**Sn**	**03 04 41.8**	**-1.9**
	baz=334						
HWA	**Hwalien**	**1.94**	**331**	*e*P	**Pn**	**03 04 21.6**	**+0.6**
	baz=333						
HWA				*e*S	**Sn**	**03 04 44.7**	**-0.3**
	baz=333						
TWD	**Chiawan**	**2.03**	**332**	*e*P	**Pn**	**03 04 22.7**	**+0.4**
	baz=334						
TWD				*e*S	**Sn**	**03 04 45.9**	**-1.4**
	baz=334						
HATJ	**Hateruma jima**	**2.08**	**31**	P	**Pn**	**03 04 23.8**	**+0.8**
HATJ				*e*S	**Sn**	**03 04 48.0**	**-0.5**
ALS	**Alishan**	**2.08**	**307**	P	**Pn**	**03 04 24.7**	**+1.5**
	baz=308						
ALS				*e*S	**Sn**	**03 04 49.1**	**+0.2**
	baz=308						
WTP	**Ta-pu**	**2.09**	**298**	*e*P	**Pn**	**03 04 25.2**	**+2.0**
	baz=302						
WTP				*e*S	**Sn**	**03 04 50.6**	**+1.7**
	baz=302						
TWM1	**Shoushan**	**2.11**	**285**	*e*P	**Pb**	**03 04 27.0**	**+0.3**
	baz=286						
CHN1	**Nanshi**	**2.14**	**295**	P	**Pb**	**03 04 26.6**	**-0.5**
	baz=284						
CHN1				*e*S	**Sb**	**03 04 53.2**	**-0.2**
	baz=284						
TWK	**Hsinying**	**2.21**	**297**	*e*P	**Pb**	**03 04 27.5**	**-0.8**
	baz=308						
TWK				*e*S	**Sb**	**03 04 55.3**	**-0.1**
	baz=308						
YOJ	**Yonaguni jima**	**2.21**	**9**	P	**Pn**	**03 04 26.2**	**+1.5**
YOJ				*e*S	**Sn**	**03 04 51.4**	**-0.2**
CHN5	**Tsauling**	**2.23**	**307**	P	**Pb**	**03 04 27.7**	**-1.0**
	baz=312						
CHN5				*e*S	**Sb**	**03 04 56.0**	**0.0**
	baz=312						
WHF	**Hehuan Shan**	**2.24**	**326**	*e*P	**Pn**	**03 04 26.4**	**+0.8**
	baz=327						
WHF				*e*S	**Sn**	**03 04 52.9**	**-0.2**
	baz=327						
SMLT	**Sun Moon Lake**	**2.25**	**316**	*e*P	**Pn**	**03 04 27.1**	**+1.6**
	baz=322						
SMLT				*e*S	**Sn**	**03 04 53.6**	**+0.6**
	baz=322						
IRIF	**Iriomote-Funau**	**2.29**	**26**	P	**Pn**	**03 04 26.8**	**+1.0**
IRIF				*e*S	**Sn**	**03 04 53.1**	**-0.5**
ENA	**Nanau**	**2.29**	**339**	*e*P	**Pn**	**03 04 26.9**	**+1.0**
	baz=340						
ENA				*e*S	**Sn**	**03 04 53.8**	**+0.1**
	baz=340						
TYC	**Yuchr**	**2.30**	**315**	*e*P	**Pb**	**03 04 28.6**	**-1.2**
	baz=324						
TYC				*e*S	**Sn**	**03 04 55.2**	**+1.4**
	baz=324						
JKRS	**Kuro-shima**	**2.33**	**33**	P	**Pn**	**03 04 27.5**	**+1.1**
JKRS				*e*S	**Sn**	**03 04 54.2**	**-0.5**
WGK	**Gukeng**	**2.36**	**307**	*e*P	**Pb**	**03 04 29.7**	**-1.2**
	baz=308						
CHY	**Chiayi**	**2.37**	**301**	*e*P	**Pb**	**03 04 30.0**	**-1.0**
	baz=302						
TWT	**Tachien**	**2.38**	**326**	*e*P	**Pn**	**03 04 28.9**	**+1.7**
	baz=327						
TWT				*e*S	**Sn**	**03 04 56.3**	**+0.1**
	baz=327						
WNT	**Mingjian**	**2.40**	**312**	*e*P	**Pb**	**03 04 30.4**	**-1.1**
	baz=313						
TWC	**Suao**	**2.43**	**343**	P	**Pn**	**03 04 29.2**	**+1.4**
	baz=352						
TWC				*e*S	**Sn**	**03 04 57.5**	**+0.3**
	baz=352						
NNS	**Nan Shan**	**2.44**	**332**	*e*P	**Pn**	**03 04 28.8**	**+0.8**
	baz=333						
NNS				*e*S	**Sn**	**03 04 57.9**	**+0.2**
	baz=333						
JIJ	**Ishigaki jima**	**2.50**	**34**	P	**Pn**	**03 04 29.2**	**+0.4**
JIJ				*e*S	**Sn**	**03 04 57.6**	**-1.4**
ENTT	**Nioudou**	**2.55**	**338**	*e*P	**Pn**	**03 04 31.5**	**+2.1**
	baz=339						
ENTT				*e*S	**Sn**	**03 05 00.4**	**+0.3**
	baz=339						
TCU	**Taichung**	**2.59**	**316**	*e*P	**Pb**	**03 04 34.8**	**0.0**
	baz=317						
TWE	**Neicheng**	**2.59**	**340**	*e*P	**Pn**	**03 04 31.2**	**+1.2**
	baz=341						
TWE				*e*S	**Sn**	**03 05 01.5**	**+0.4**
	baz=341						
NSK	**Sanguang**	**2.66**	**334**	*e*P	**Pn**	**03 04 32.5**	**+1.5**
	baz=335						
NSK				*e*S	**Sn**	**03 05 02.9**	**0.0**
	baz=335						
NSTT	**Nanjuang**	**2.78**	**328**	*e*P	**Pn**	**03 04 34.7**	**+2.1**
	baz=336						
NSTT				*e*S	**Sn**	**03 05 07.3**	**+1.5**
	baz=336						
TWB1	**Santiao Chiao**	**2.78**	**348**	*e*P	**Pn**	**03 04 34.3**	**+1.7**
	baz=359						
TWB1				*e*S	**Sn**	**03 05 05.6**	**-0.3**
	baz=359						
NWF	**Wu-fen Shan**	**2.89**	**345**	*e*P	**Pn**	**03 04 37.1**	**+2.9**
	baz=345						
NWF				*e*S	**Sn**	**03 05 07.9**	**-0.7**
	baz=345						
JTJ	**Tarama**	**3.03**	**39**	P	**Pn**	**03 04 36.7**	**+0.7**
JTJ				*e*S	**Sn**	**03 05 10.7**	**-1.3**
JOGS	**Gusukube**	**3.55**	**45**	*e*S	**Sn**	**03 05 24.3**	**-0.6**

*ISCJB **26** 03:18:55.7±0.2,24°.02S±0°.04×66°.75W±0°.07,h181km, mb4.1/37,Error ellipse: s-maj=8.7km s-min=5.6km az=162.6*

*NEIC **26** 03:18:56.7±0.8,24°.05S×66°.64W,h184km±7km,mb4.3/26, Error ellipse: s-maj=14.8km s-min=6.7km az=78.0*
*IDC **26** 03:18:57.1±1.6,23°.99S×66°.76W,h186km±14km,mb3.7/9, mb1 3.8/14,mb1mx3.8/19,mbtmp3.6/14,Error ellipse: s-maj=17.5km s-min=13.3km az=62.0*

ISC 26 03:18:56.6±0.4,24°.03S±0°.06×66°.76W±0°.09,h181km, n273,σ0°.88/270,mb4.1/37,110C-91D,Salta Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.43**	**305**	*e*Pn	**Pn**	**03 19 40.7**	**+1.8**
LCO	**Las Campanas**	**6.09**	**215**	*e*Pn	**Pn**	**03 20 23.9**	**-1.2**
LCO				*e*Sn	Sn	03 21 22.6	-12
CFAA	**Coronel Fontan**	**7.66**	**189**	P	**Pn**	**03 20 45.6**	**+0.1**
	0.3nm,0.3s,baz=12,slow=13,SNR=61						
LPAZ	**La Paz**	**7.80**	**350**	*e*Pn	**Pn**	**03 20 49.1**	**+1.1**
LPAZ	**La Paz**	**7.80**	**350**	P	**Pn**	**03 20 48.8**	**+0.8**
	1.6nm,0.3s,baz=167,slow=9.1,SNR=35						
LPAZ				S	**Sn**	**03 22 14.6**	**-1.5**
	0.9nm,0.3s,baz=270,slow=20,SNR=3.9						
CPUP	**Villa Florida**	**8.85**	**107**	P	**Pn**	**03 21 01.9**	**+0.9**
	0.6nm,0.3s,baz=91,slow=20,SNR=11						
SIV	**San Ignacio**	**9.62**	**35**	P	**Pn**	**03 21 11.2**	**0.0**
	0.7nm,0.3s,baz=242,slow=13,SNR=11						
TRQA	**Tornquist**	**14.57**	**165**	*e*Pn	**Pn**	**03 22 15.3**	**+1.0**
SAML	**Samuel**	**15.38**	**13**	*e*P	**Pn**	**03 22 23.8**	**-0.6**
	8.6nm,0.8s						
PLCA	**Paso Flores**	**16.96**	**190**	*e*P	**P**	**03 22 42.5**	**+0.2**
	3.2nm,0.8s						
PLCA	**Paso Flores**	**16.96**	**190**	P	**Pn**	**03 22 44.4**	**+1.1**
	0.2nm,0.3s,baz=13,slow=17,SNR=5.6						
BDFB	**Brasilia**	**19.49**	**68**	P	**P**	**03 23 10.9**	**+0.8**
	1.5nm,0.3s,baz=244,slow=10,SNR=17						
OTAV	**Otavalo**	**26.65**	**333**	*e*P	**P**	**03 24 20.2**	**+0.9**
	3.1nm,0.9s						
JTS	**JuntasAbangare**	**38.46**	**330**	*e*P	**P**	**03 26 01.0**	**-0.3**
	7.1nm,0.6s						
NHSC	**New Hope**	**58.24**	**347**	*e*P	**P**	**03 28 32.7**	**+0.7**
	53nm,1.4s						
SNAA	**Sanae**	**59.25**	**161**	*e*P	**P**	**03 28 38.9**	**+0.3**
	2.5nm,0.8s						
LRAL	**Lakeview Retre**	**59.93**	**340**	*e*P	**P**	**03 28 42.9**	**-0.8**
	29nm,2.0s						
732A	**Laxson Ranch,**	**61.43**	**327**	⇑P	**P**	**03 28 53.9**	**+0.1**
	baz=62						
SWET	**Sewanee**	**61.66**	**342**	*e*P	**P**	**03 28 54.8**	**-0.6**
	8.9nm,0.9s						
632A	**Uvalde**	**61.97**	**327**	⇑P	**P**	**03 28 57.8**	**+0.2**
	baz=62						
631A	**Perdido Creek**	**62.29**	**327**	⇓P	**P**	**03 28 59.5**	**-0.1**
	baz=63						
532A	**Rocksprings**	**62.54**	**328**	⇑P	**P**	**03 29 01.4**	**+0.1**
	baz=63,SNR=5.1						
JCT	**Junction City**	**62.78**	**328**	*e*P	**P**	**03 29 03.0**	**+0.1**
	7.1nm,0.6s						
JCT	**Junction City**	**62.78**	**328**	⇑P	**P**	**03 29 03.1**	**+0.2**
	baz=63,SNR=5.4						
531A	**Rocksprings**	**62.89**	**327**	⇑P	**P**	**03 29 04.0**	**+0.4**
	baz=63						
WVT	**Waverly**	**63.06**	**341**	*e*P	**P**	**03 29 03.0**	**-1.5**
	9.6nm,0.6s						
432A	**Menard**	**63.10**	**328**	⇓P	**P**	**03 29 05.5**	**+0.5**
	baz=63						
530A	**J-C Ranch, Com**	**63.27**	**327**	⇓P	**P**	**03 29 06.5**	**+0.4**
	baz=64						
431A	**Sonora**	**63.34**	**328**	⇑P	**P**	**03 29 06.3**	**-0.3**
	baz=64						
332A	**Millersview**	**63.50**	**329**	⇓P	**P**	**03 29 07.3**	**-0.2**
	baz=64,SNR=6.5						
628A	**Black Gap, Mar**	**63.53**	**325**	⇑P	**P**	**03 29 08.6**	**+0.7**
	baz=64						
529A	**Stev Forest Ra**	**63.70**	**326**	⇓P	**P**	**03 29 09.5**	**+0.5**
	baz=64,SNR=8.1						
430A	**Baggett Ranch,**	**63.74**	**327**	⇑P	**P**	**03 29 09.6**	**+0.4**
	baz=64						
331A	**San Angelo**	**63.77**	**328**	⇓P	**P**	**03 29 09.2**	**-0.1**
	baz=64,SNR=7.2						
627A	**Terlingua Ranc**	**63.77**	**325**	⇑P	**P**	**03 29 09.9**	**+0.4**
	baz=64,SNR=5.2						
TXAR	**Lajitas Array**	**63.83**	**324**	P	**P**	**03 29 09.5**	**-0.4**
	1.1nm,0.7s,baz=148,slow=8.6,SNR=14						
232A	**Coleman**	**63.87**	**329**	⇓P	**P**	**03 29 10.2**	**+0.1**
	baz=64						
429A	**Davenport Ranc**	**63.94**	**326**	⇓P	**P**	**03 29 10.7**	**+0.2**
	baz=64						
528A	**Cox Ranch, San**	**64.02**	**325**	⇑P	**P**	**03 29 11.5**	**+0.4**
	baz=64						
PARMO	**Parma**	**64.14**	**340**	*e*P	**P**	**03 29 11.7**	**0.0**
231A	**Bronte**	**64.23**	**329**	⇑P	**P**	**03 29 12.0**	**-0.3**
	baz=65						
626A	**Big Bend Ranch**	**64.25**	**324**	⇓P	**P**	**03 29 13.8**	**+1.2**
	baz=65,SNR=17						
428A	**Kincaid Ranch,**	**64.42**	**326**	⇓P	**P**	**03 29 14.6**	**+0.9**
	baz=65						
527A	**Woodward Ranch**	**64.44**	**325**	⇓P	**P**	**03 29 14.8**	**+0.9**
	baz=65						
230A	**Sterling City**	**64.58**	**328**	⇑P	**P**	**03 29 15.4**	**+0.8**
	baz=65						
WCI	**Wyandotte Cave**	**64.58**	**343

319A	Douglas baz=69	68.49	322	⇓P	P	03 29 40.9 +1.3
121A	Cookes Peak, D baz=69	68.53	323	⇓P	P	03 29 40.9 +1.1
V27A	Dan Oppiter Fa baz=69	68.56	329	⇓P	P	03 29 40.9 +1.0
Z22A	Elephant Butte baz=69,SNR=6.6	68.64	324	⇓P	P	03 29 41.9 +1.4
Y23A	Lovelace Mesa, baz=69	68.69	326	⇑P	P	03 29 41.6 +0.8
U28A	Mallet baz=69	68.78	330	⇓P	P	03 29 41.7 +0.5
W25A	X Bar L Ranch, baz=69	68.90	328	⇓P	P	03 29 42.7 +0.7
120A	U Bar Ranch, L baz=69	69.00	323	⇑P	P	03 29 44.4 +1.7
V26A	Tequesquite Ra baz=69	69.04	328	⇑P	P	03 29 43.2 +0.4
Z21A	St. Cloud Mine baz=69	69.06	324	⇑P	P	03 29 44.4 +1.2
X23A	Hourglass Bar baz=70	69.27	326	⇑P	P	03 29 45.7 +1.3
W24A	Lazy 6 Ranch, baz=70	69.37	327	⇓P	P	03 29 45.4 +0.4
Z20A	Nine Sixteen R baz=70	69.41	323	⇑P	P	03 29 46.2 +1.0
V25A	Rancho No Teng baz=70	69.48	328	⇓P	P	03 29 45.8 +0.2
U26A	Atchley Ranch, baz=70,SNR=5.2	69.50	329	⇓P	P	03 29 46.0 +0.2
Y21A	Point of Rocks baz=70	69.60	325	⇑P	P	03 29 47.9 +1.5
ANMO	Albuquerque 3.9nm,1.0s	69.69	326	*e*P	P	03 29 47.6 +0.7
U25A	Circle Dot Ran baz=70	69.82	328	⇓P	P	03 29 48.5 +0.8
Y20A	Horse Springs, baz=70	69.90	324	⇓P	P	03 29 49.8 +1.5
X21A	Alamocita Cree baz=70	69.99	325	⇑P	P	03 29 50.7 +1.9
TUC	Tucson 1.2nm,1.4s	70.04	321	*e*P	P	03 29 49.6 +0.6
T26A	Comanche Natio baz=70	70.06	329	⇑P	P	03 29 50.3 +1.1
S26A	Kim baz=71,SNR=5.7	70.37	330	⇑P	P	03 29 51.9 +0.9
T25A	Trinidad baz=71,SNR=5.5	70.42	329	⇑P	P	03 29 52.3 +0.9
T24A	Torres, Weston baz=71	70.67	328	⇑P	P	03 29 54.2 +1.2
V22A	San Miguel Ran baz=71	70.67	326	⇓P	P	03 29 54.4 +1.5
S25A	Robets Cordova baz=71,SNR=7.8	70.85	329	⇑P	P	03 29 54.9 +0.9
R25A	Fountain Ranch baz=72	71.17	330	⇑P	P	03 29 56.6 +0.8
BGNE	Belgrade baz=72	71.31	336	⇑P	P	03 29 56.5 +0.1
SDCO	Great Sand Dun 1.9nm,0.6s	71.42	328	*e*P	P	03 29 58.6 +1.1
R24A	Sanders Place, baz=72	71.62	329	⇓P	P	03 29 59.8 +1.2
X16A	Lo Mia Camp, P baz=72	71.96	322	⇑P	P	03 30 02.0 +1.3
O27A	Beecher Island baz=72	72.03	332	⇑P	P	03 30 02.0 +1.2
113A	Mohawk Valley, baz=72	72.11	320	⇑P	P	03 30 02.4 +1.1
P25A	Willow Gulch B baz=73	72.22	330	⇑P	P	03 30 03.5 +1.4
Q24A	Divide baz=73	72.23	329	⇑P	P	03 30 03.7 +1.4
MVCO	Mesa Verde baz=73	72.49	326	⇑P	P	03 30 05.1 +1.3
Y14A	Wickenburg baz=73	72.50	321	⇑P	P	03 30 05.1 +1.4
WUAZ	Wupatki baz=73	72.73	323	⇑P	P	03 30 06.7 +1.5
ECSD	EROS Data Cent	72.79	338	*e*P	P	03 30 04.5 -0.6
S20A	Disappointment baz=73	72.89	327	⇑P	P	03 30 07.6 +1.4
R21A	Cimarron baz=73	72.91	328	⇓P	P	03 30 07.8 +1.6
ISCO	Idaho Springs baz=74	73.11	330	⇑P	P	03 30 08.5 +1.0
R20A	Redvale baz=74,SNR=5.1	73.18	327	⇓P	P	03 30 09.4 +1.6
SMCO	Snowmass 3.0nm,0.8s	73.26	328	*e*P	P	03 30 09.9 +1.4
O23A	Lake Granby, G baz=74	73.58	330	⇓P	P	03 30 11.6 +1.4
N24A	Carr baz=74	73.61	331	⇑P	P	03 30 11.8 +1.6
S18A	Hurst Farm, Bl baz=74	73.62	326	⇓P	P	03 30 11.6 +1.2
BC3	Big Chuckawall baz=74	73.73	319	⇓P	P	03 30 12.0 +1.0
W13A	Hualapai Mount baz=74	73.84	321	⇓P	P	03 30 12.9 +1.2
O22A	Kremmling baz=74	73.84	329	⇑P	P	03 30 12.5 +0.8
U15A	North Rim baz=74	73.91	323	⇑P	P	03 30 13.0 +0.8
IRM	Iron Mountain baz=74	73.91	320	⇓P	P	03 30 13.1 +1.2
M24A	Cheyenne baz=74	74.10	331	⇑P	P	03 30 14.3 +1.3
N23A	Red Feather La baz=74	74.14	330	⇑P	P	03 30 14.2 +0.8
N22A	Wattenberg Ran baz=75	74.30	330	⇑P	P	03 30 15.7 +1.3
P19A	Cripple Cowboy baz=75,SNR=5.9	74.59	327	⇑P	P	03 30 17.1 +1.1
O20A	White River Ci baz=75,SNR=5.4	74.62	328	⇓P	P	03 30 17.2 +1.1
GMRC	Granite Mounta baz=75	74.64	320	⇑P	P	03 30 17.8 +1.5
VNDA	Vanda 1.2nm,1.0s	74.71	190	*e*P	P	03 30 14.6 -1.3
SRU	San Rafael 3.5nm,0.8s	74.97	326	*e*P	P	03 30 19.1 +1.0
SRU	San Rafael baz=75,SNR=5.3	74.97	326	⇓P	P	03 30 18.8 +0.8
O19A	Miners Draw (B baz=76	75.17	328	⇓P	P	03 30 20.2 +1.0
P18A	Preston Nutter baz=76,SNR=5.3	75.22	327	⇑P	P	03 30 21.0 +1.3
CCUT	Cedar City 3.6nm,0.8s	75.31	323	*e*P	P	03 30 22.2 +2.1
MSU	Marysvale	75.38	325	*e*P	P	03 30 21.6 +1.1
K23A	Bowen Ranch, D baz=76	75.49	331	⇑P	P	03 30 22.4 +1.4
J24A	Dixon Ranch, L baz=76	75.54	332	⇑P	P	03 30 22.6 +1.4
L21A	Rawlins baz=76	75.64	330	⇓P	P	03 30 23.2 +1.3
RSSD	Black Hills 2.9nm,0.9s	75.93	333	*e*P	P	03 30 23.4 -0.1
K21A	Alcova baz=76	76.12	330	⇑P	P	03 30 25.6 +1.1
L20A	Wamsutter baz=76	76.12	329	⇓P	P	03 30 25.6 +0.9
TOA0	Torodi Ar. Sit	76.37	69	*e*P	P	03 30 25.7 -0.7
TORD	Torodi Ar. Bea 1.2nm,0.5s,baz=254,slow=5.6,SNR=37	76.37	69	P	P	03 30 25.8 -0.6
J22A	Midwest baz=77	76.39	331	⇑P	P	03 30 27.1 +1.1
MPMC	Manual Prospec baz=77	76.60	320	⇑P	P	03 30 28.5 +1.1
K20A	Yellowstone Ra baz=77	76.63	330	⇓P	P	03 30 27.9 +0.4
H24A	Dirks Ranch, A baz=77	76.65	333	⇓P	P	03 30 27.6 +0.2
L19A	Farson baz=77	76.67	329	⇓P	P	03 30 28.6 +0.8
I22A	9 Mile Ranch, baz=77	76.78	332	⇑P	P	03 30 29.0 +0.8
DUG	Dugway 2.9nm,1.0s	76.95	326	*e*P	P	03 30 29.7 +0.5
K19A	Absolon Red Bu baz=77	77.00	330	⇓P	P	03 30 30.0 +0.5
I21A	Big Trails, Te baz=77,SNR=5.9	77.07	331	⇓P	P	03 30 30.4 +0.6
R11A	Troy Canyon, C baz=77	77.11	323	⇓P	P	03 30 31.5 +1.3
BW06	Boulder Array 1.0nm,0.6s	77.28	329	*e*P	P	03 30 31.0 -0.1
PDAR	Pinedale Array	77.28	329	P	P	03 30 31.3 +0.1
	1.0nm,0.6s,baz=130,slow=8.2,SNR=12					
HWUT	Hardware Ranch 2.7nm,0.7s	77.37	327	*e*P	P	03 30 31.6 0.0
MDND	Maddock baz=78	77.40	338	⇑P	P	03 30 32.1 +0.8
K18A	Toltan Ranch, baz=78	77.41	329	⇑P	P	03 30 33.1 +1.2
J19A	Crowheart baz=78,SNR=5.5	77.43	330	⇓P	P	03 30 32.6 +0.7
TSUM	Tsumeb	77.44	106	*e*P	P	03 30 32.4 -0.1
F24A	Ekalaka baz=78	77.51	334	⇓P	P	03 30 32.8 +0.7
I20A	Worland baz=78	77.55	331	⇑P	P	03 30 33.5 +1.1
H21A	Big Horn, Sher baz=78	77.61	332	⇓P	P	03 30 33.2 +0.5
L16A	Fish Haven baz=78	77.61	328	⇑P	P	03 30 33.7 +0.7
F23A	Volborg baz=78	77.80	333	⇓P	P	03 30 34.4 +0.7
J18A	Kendall Valley baz=78,SNR=11	77.84	329	⇑P	P	03 30 35.1 +0.8
H20A	Greybull baz=78	77.91	331	⇓P	P	03 30 35.0 +0.6
K17A	Gardner Place, baz=78	77.92	328	⇑P	P	03 30 35.4 +0.8
I19A	Meeteetse baz=78	78.00	330	⇑P	P	03 30 36.2 +1.2
L15A	Malad City baz=78	78.07	327	⇑P	P	03 30 36.1 +0.6
I18A	Diamond G Ranc baz=78	78.12	330	⇓P	P	03 30 36.9 +1.1
F22A	Rosebud baz=78	78.19	333	⇓P	P	03 30 37.2 +1.3
J17A	Brown Place, J baz=79	78.28	329	⇑P	P	03 30 38.1 +1.5
K16A	Soda Springs baz=79	78.30	328	⇑P	P	03 30 38.0 +1.2
ULM	Lac du Bonnet 4.3nm,0.6s	78.32	341	*e*P	P	03 30 35.8 -0.6
ULM	Lac du Bonnet 5.2nm,0.5s,baz=160,slow=6.1,SNR=7.8	78.32	341	P	P	03 30 35.8 -0.6
LOHW	Long Hollow 2.5nm,0.6s	78.42	329	*e*P	P	03 30 38.0 +0.6
TPAW	Teton Pass 3.9nm,0.8s	78.49	329	*e*P	P	03 30 37.8 0.0
H19A	Powell baz=79	78.50	331	⇓P	P	03 30 38.3 +0.6
SCHQ	Schefferville 0.9nm,0.5s,baz=244,slow=17,SNR=6.0	78.53	360	P	P	03 30 37.0 -0.5
G20A	Bridger baz=79,SNR=6.0	78.58	331	⇓P	P	03 30 38.2 +0.1
MOOW	Moose Ponds 1.4nm,0.7s	78.59	329	*e*P	P	03 30 38.7 +0.4
ELK	Elko	78.62	325	*e*P	P	03 30 38.8 +0.2
I17A	Pilgrim Ck. baz=79	78.64	329	⇑P	P	03 30 39.5 +0.9
NVAR	Mina Array Bea 0.8nm,0.7s,baz=159,slow=6.3,SNR=5.9	78.69	321	P	P	03 30 39.6 +0.6
IMW	Indian Meadow 2.8nm,0.8s	78.80	329	*e*P	P	03 30 40.5 +1.0
H18A	Shoshone NF, C baz=79,SNR=6.0	78.81	330	⇑P	P	03 30 40.1 +0.6
RLMT	Red Lodge 2.9nm,0.6s	78.97	331	*e*P	P	03 30 41.0 +0.7
RLMT	Red Lodge baz=79,SNR=5.4	78.97	331	⇑P	P	03 30 41.1 +0.7
G18A	Lazy EL Ranch, baz=80	79.25	331	⇓P	P	03 30 42.4 +0.6
D22A	Cohagen baz=80	79.27	334	⇓P	P	03 30 42.4 +0.7
F19A	Roth Farm, Mol baz=80,SNR=5.9	79.40	331	⇓P	P	03 30 42.9 +0.3
D21A	La Casta Ranch baz=80,SNR=5.7	79.53	333	⇓P	P	03 30 44.1 +0.9
H16A	Russell Place, baz=80	79.55	329	⇑P	P	03 30 44.7 +1.2
E20A	Meyer Farm, Mu baz=80,SNR=6.9	79.56	332	⇑P	P	03 30 44.1 +0.8
DGMT	Dagmar 12nm,0.7s	79.57	336	*e*P	P	03 30 44.4 +1.1
DGMT	Dagmar baz=80	79.57	336	⇓P	P	03 30 44.2 +0.9
F18A	Big Timber baz=80,SNR=6.1	79.78	331	⇑P	P	03 30 45.0 +0.4
E19A	Rath Farm, Rou baz=80,SNR=7.9	79.81	332	⇓P	P	03 30 45.3 +0.6
B23A	Brockton baz=80	79.87	335	⇑P	P	03 30 46.0 +1.1
A24A	Westby baz=80	79.88	336	⇓P	P	03 30 46.1 +1.2
I14A	Mackay baz=80	80.02	328	⇑P	P	03 30 47.2 +1.2
D20A	Manuel Ranch, baz=80,SNR=5.2	80.03	333	⇓P	P	03 30 46.5 +0.6
F17A	Fitzpatrick Pl baz=80	80.20	331	⇑P	P	03 30 48.2 +1.3
HLID	Hailey 4.5nm,0.8s	80.23	327	*e*P	P	03 30 48.4 +1.3
HLID	Hailey baz=81,SNR=8.0	80.23	327	⇑P	P	03 30 48.4 +1.3
I13A	Wildhorse Cree baz=81	80.34	327	⇓P	P	03 30 49.0 +1.2
C20A	Veseth Ranch, baz=81,SNR=5.3	80.46	333	⇓P	P	03 30 48.2 +0.1
G15A	Dillon baz=81	80.48	329	⇑P	P	03 30 49.2 +0.8
H14A	Leadore baz=81	80.49	328	⇓P	P	03 30 49.6 +1.1
BOSA	Boshof 0.8nm,0.4s,baz=14,slow=22,SNR=3.8	80.53	117	P	P	03 30 48.6 -0.6
A22A	Carney Farms, baz=81	80.66	335	⇑P	P	03 30 49.7 +0.6
E17A	Martinsdale baz=81	80.71	331	⇑P	P	03 30 50.0 +0.4
I12A	Atlanta baz=81	80.76	327	⇑P	P	03 30 51.0 +1.1
D18A	Linhart Farms, baz=81	80.82	332	⇑P	P	03 30 50.9 +0.8
H13A	Challis baz=81,SNR=5.9	80.88	328	⇑P	P	03 30 51.5 +1.0
C19A	Slack Wire Ran baz=81,SNR=5.3	80.91	333	⇑P	P	03 30 51.1 +0.6
F15A	Butte baz=81	80.99	330	⇑P	P	03 30 52.4 +1.3
H12A	Diamond D Ranc baz=82	81.16	327	⇑P	P	03 30 52.7 +0.7
D17A	S Dc Diamond Ra baz=82,SNR=7.1	81.17	331	⇓P	P	03 30 52.5 +0.5
G13A	Cobalt baz=82,SNR=13	81.26	328	⇓P	P	03 30 54.0 +1.5
A20A	Cobblestone Ra baz=82,SNR=8.3	81.36	334	⇓P	P	03 30 53.1 +0.3
EGMT	Eagleton baz=82	81.44	332	⇓P	P	03 30 54.2 +0.9
D16A	Dana Ranch, Ca baz=82,SNR=11	81.45	331	⇓P	P	03 30 54.7 +1.2
C17A	Wharram Farm, baz=82,SNR=5.4	81.57	332	⇓P	P	03 30 54.3 +0.3
A19A	Klindworth Far baz=82	81.72	334	⇓P	P	03 30 54.7 -0.1
B18A	Beardsley Farm baz=82,SNR=6.5	81.73	333	⇓P	P	03 30 55.1 +0.2
F13A	Darby baz=82,SNR=11	81.81	329	⇓P	P	03 30 56.3 +0.9
E14A	Clinton baz=82	81.88	329	⇓P	P	03 30 56.8 +1.0
D15A	Lincoln baz=82	81.90	330	⇑P	P	03 30 56.8 +1.0
C16A	Fuhringer Ranc baz=82	82.13	331	⇓P	P	03 30 57.7 +0.7
E13A	Victor baz=83	82.22	329	⇓P	P	03 30 58.5 +1.1
F12A	Elk City baz=83	82.23	328	⇑P	P	03 30 58.3 +0.7
C15A	Salmond Ranch, baz=83,SNR=6.1	82.49	331	⇑P	P	03 30 59.2 +0.3
A17A	Triple J Farms baz=83	82.55	333	⇑P	P	03 30 59.7 +0.7
D13A	Huson baz=83	82.83	329	⇑P	P	03 31 01.4 +0.8
A16A	West Butte Ran baz=83,SNR=8.9	82.93	332	⇓P	P	03 31 01.6 +0.5
C14A	Swan Lake baz=83	83.00	330	⇑P	P	03 31 02.4 +1.0
D12A	Red Ives Fores baz=84	83.22	329	⇓P	P	03 31 03.5 +1.0
JTMT	Jette	83.22	330	*e*P	P	03 31 03.3 +0.7
C13A	Hot Springs baz=84	83.31	330	⇑P	P	03 31 03.9 +0.9
BSMT	Bassoo Peak 0.7nm,0.6s	83.53	330	*e*P	P	03 31 04.5 +0.2
A13A	Flathead Natio baz=84	84.16	331	⇓P	P	03 31 08.3 +1.0
C11A	Tepee Creek (N baz=84	84.21	329	⇑P	P	03 31 07.9 +0.3
B12A	Libby baz=85	84.35	330	⇓P	P	03 31 09.2 +1.0
ESDC	Sonseca Array 0.7nm,0.8s,baz=256,slow=5.1,SNR=3.9	86.27	43	P	P	03 31 18.6 +0.6
YKA	Yellowknife Ar 1.6nm,0.5s,baz=135,slow=4.6,SNR=84	94.22	340	P	P	03 31 54.1 -0.3
AS31	Alice Springs	128.52	204	*e*PKPdf	PKPdf	03 37 41.9 -0.8
ASAR	Alice Springs 0.8nm,0.5s,baz=150,slow=2.0,SNR=13	128.52	204	PKP	PKPdf	03 37 42.4 -0.4
ABKAR	Akbulak array	131.60	45	*e*PKPdf	PKPdf	03 37 47.9 +0.3
WRA	Warramunga Arr 0.6nm,0.3s,baz=154,slow=1.8,SNR=33	131.70	207	PKP	PKPdf	03 37 48.5 -0.3
WRAB	Tennant Creek	131.71	207	*e*PKPdf	PKPdf	03 37 48.7 -0.1
PMG	Port Moresby	133.07	229	*e*PKPdf	PKPdf	03 37 50.7 -0.7
KURK	Kurchatov	142.27	36	*e*PKPdf	PKPdf	03 38 06.4 -0.8
AAK	Ala-Archa	143.08	50	*e*PKPdf	PKPbc	03 38 06.7 +0.1
ZAA0	Zalesovo Array	143.31	28	*e*P	PKPab	03 38 06.5 +1.2
ZALV	Zalesovo Beam 3.0nm,0.6s,baz=324,slow=4.0,SNR=19	143.31	28	PKP	PKPbc	03 38 06.5 -0.1
TKM2	Tokmak 2	143.76	49	*e*PKPdf	PKPab	03 38 08.4 +0.6
MK31	Makanchi Array	146.41	40	*e*P	PKPbc	03 38 16.3 +0.1
MKAR	Makanchi Array 4.8nm,0.7s,baz=312,slow=2.9,SNR=33	146.41	40	PKPbc	PKPdf	03 38 15.3 +0.7
KAPI	Kappang	150.45	193	*e*PKPdf	PKPdf	03 38 22.4 +0.3
SONM	Songino Array 0.5nm,0.7s,baz=332,slow=4.5,SNR=5.8	155.62	11	PKPab	PKPab	03 38 55.3 -0.4

IDC 26 03:22:14.1±4.2, 59°29S×26°93W, h0km, mb3.7/2, mb1 3.8/2, mb1mx3.6/15, mbtmp3.7/2, Error ellipse: s-maj=138.5km s-min=51.9km az=179.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz 0.5nm,0.4s,baz=141,slow=5.6,SNR=5.0	52.41	307	P	P	03 31 28.6	-0.3
TORD	Torodi Ar. Bea 0.2nm,0.3s,baz=196,slow=5.9,SNR=8.5	75.83	29	P	P	03 34 01.9	+0.1
YKA	Yellowknife Ar 0.1nm,0.5s,baz=130,slow=2.8,SNR=3.6	138.63	315	PKP	PKPdf	03 41 41.4	+1.1
ZALV	Zalesovo Beam 0.3nm,0.3s,baz=229,slow=1.5,SNR=2.8	143.58	68	PKP	PKPbc	03 41 47.8	+1.0

*ISCJB **26** 03:28:44.7±0.4, 39°18N±0°02×28°44E±0°03, h3km±4km, Error ellipse: s-maj=3.8km s-min=2.9km az=152.6*
*DDA **26** 03:28:44.6, 39°18N×28°45E, h7km, MD2.9*
*ISK **26** 03:28:44.4, 39°18N×28°45E, h5km, MD3.0*
*CSEM **26** 03:28:45.0±0.1, 39°18N×28°44E, h5km, MD2.9, Error ellipse: s-maj=2.1km s-min=1.8km az=68.0*

ISC 26 03:28:45.1±0.9, 39°19N±0°02×28°46E±0°02, h11km±9km, n69, σ0°46/91, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEMI	Demirci	0.25	125	*i* P	Pg	03 28 50.4	+0.1
DEMI				*i* S	Sg	03 28 54.0	+0.3
DEMI	Demirci	0.25	125	*i* P	Pg	03 28 50.4	+0.1
DEMI				*i* S	Sg	03 28 54.0	+0.3
DURS	Dursunbey	0.41	2	*i* P	Pg	03 28 53.2	-0.1
DURS				*i* S	Sg	03 28 59.2	+0.4
DURS	Dursunbey	0.41	2	*i* P	Pg	03 28 53.2	-0.1
DURS				*i* S	Sg	03 28 59.2	+0.4
DST	Dursunbey	0.43	17	PG	Pg	03 28 53.1	-0.6
DST				*e*SG	Sg	03 28 59.4	-0.1
DST	Dursunbey	0.43	17	*i* Pg	Pg	03 28 53.1	-0.6
DST				*e*Sg	Sg	03 28 59.4	-0.1
AKHS	Akhisar	0.59	239	*i* P	Pg	03 28 56.2	-0.3
AKHS				*i* S	Sg	03 29 04.3	0.0
AKHS	Akhisar	0.59	239	*i* P	Pg	03 28 56.2	-0.3
AKHS				*i* S	Sg	03 29 04.3	0.0
AKS	Akhisar	0.59	239	*e*PG	Pg	03 28 55.9	-0.7
AKS	Akhisar	0.59	239	*e*Pg	Pg	03 28 55.9	-0.7
BALB	Balikesir	0.64	316	*e*PG	Pg	03 28 57.5	+0.1
BALB				*e*SG	Sb	03 29 06.9	-0.3
BALB	Balikesir	0.64	316	*e*Pg	Pg	03 28 57.5	+0.1
BALB				*e*Sg	Sb	03 29 06.9	-0.3
KULA	Kula-Manisa	0.69	167	*e*PG	Pg	03 28 58.1	-0.4
KULA				*e*SG	Sg	03 29 07.5	-0.1
KULA	Kula-Manisa	0.69	167	*e*Pg	Pg	03 28 58.1	-0.4
KULA				*e*Sg	Sg	03 29 07.5	-0.1
MANT	Manisa	0.70	174	*i* P	Pg	03 28 58.3	-0.4
MANT				*i* S	Sg	03 29 07.5	-0.5
MANT	Manisa	0.70	174	*i* P	Pg	03 28 58.3	-0.4
MANT				*i* S	Sg	03 29 07.4	-0.5
GDZ	Gediz	0.80	97	*i* P	Pg	03 29 00.7	+0.1
GDZ				*i* S	Sb	03 29 12.1	0.0
GDZ	Gediz	0.80	97	*i* P	Pg	03 29 00.7	+0.1
GDZ				*i* S	Sb	03 29 12.1	0.0
TVSB	Tavsanli	0.82	71	*e*PG	Pg	03 29 00.9	-0.1
TVSB	Tavsanli	0.82	71	*e*Pg	Pg	03 29 00.9	-0.1
BALY	Balya	0.85	311	*i* P	Pg	03 29 01.4	-0.2
BALY				*i* S	Sg	03 29 12.9	+0.2
BALY	Balya	0.85	311	*i* P	Pg	03 29 01.4	-0.2
BALY				*i* S	Sg	03 29 12.9	+0.2
GONE	Gonen-Balikesi	1.04	325	*e*PG	Pg	03 29 04.8	-0.4
GONE	Gonen-Balikesi	1.04	325	*e*Pg	Pg	03 29 04.8	-0.4
KCTX	Karacabey (Bur	1.08	356	*e*PN	Pg	03 29 05.8	-0.1
KCTX	Karacabey (Bur	1.08	356	*e*Pn	Pg	03 29 05.8	-0.1
ULDT	Uludag	1.09	29	*i* P	Pg	03 29 05.6	-0.5
ULDT				*i* S	Sg	03 29 19.6	-0.7
ULDT	Uludag	1.09	29	*i* P	Pg	03 29 05.6	-0.5
ULDT				*i* S	Sg	03 29 19.6	-0.7
KHAL	Karahalli	1.15	135	*i* P	Pn	03 29 07.7	+0.4
KHAL				*i* S	Sb	03 29 22.3	+0.3
KHAL	Karahalli	1.15	135	*i* P	Pn	03 29 07.7	+0.4
KHAL				*i* S	Sb	03 29 22.3	+0.3
KHL	Karahalli	1.20	136	*e*PN	Pb	03 29 08.0	+0.1
KHL	Karahalli	1.20	136	*e*Pn	Pb	03 29 08.0	+0.1
IZM	Izmir	1.22	230	*e*PN	Pb	03 29 07.7	-0.6
IZM	Izmir	1.22	230	*e*Pn	Pb	03 29 07.7	-0.6
MDNY	Mudanya-Bursa	1.23	15	*e*PN	Pb	03 29 08.5	+0.2
MDNY	Mudanya-Bursa	1.23	15	*e*Pn	Pb	03 29 08.5	+0.2
EDC	Edincik	1.25	339	*e*PN	Pg	03 29 09.4	+0.4
EDC	Edincik	1.25	339	*e*Pn	Pg	03 29 09.4	+0.4
ALT	Altintas	1.29	95	*e*PN	Pg	03 29 09.8	-0.1
ALT	Altintas	1.29	95	*e*Pn	Pg	03 29 09.8	-0.1
BLCB	Balcova	1.36	235	*e*PN	Pb	03 29 10.6	-0.1
BLCB	Balcova	1.36	235	*e*Pn	Pb	03 29 10.6	-0.1
GEMT	Gemlik	1.37	24	*e*PN	Pg	03 29 11.2	-0.2
GEMT	Gemlik	1.37	24	*e*Pn	Pg	03 29 11.2	-0.2
AYVA	Ayvalik	1.38	276	*i* P	Pb	03 29 11.1	+0.2
AYVA	Ayvalik	1.38	276	*i* P	Pb	03 29 11.1	+0.2
KRBG	Karabiga-Canak	1.50	324	*e*PN	Pb	03 29 12.8	-0.2
KRBG	Karabiga-Canak	1.50	324	*e*Pn	Pb	03 29 12.8	-0.2
MRMT	Marmara Adasi	1.56	335	*e*PN	Pn	03 29 13.0	+0.1
MRMT	Marmara Adasi	1.56	335	*e*Pn	Pn	03 29 13.0	+0.1
BUY	Buyukada	1.74	17	*e*Pn	Pb	03 29 17.0	-0.1
SHUT	Suhut-Afyon	1.75	111	*e*PN	Pb	03 29 17.0	-0.4
SHUT	Suhut-Afyon	1.75	111	*e*Pn	Pb	03 29 17.0	-0.4
EZN	Ezine	1.77	292	*e*PN	Pn	03 29 16.2	+0.5
EZN	Ezine	1.77	292	*e*Pn	Pn	03 29 16.2	+0.5
HRT	Hereke	1.88	29	*e*PN	Pb	03 29 18.6	-0.9
HRT	Hereke	1.88	29	*e*Pn	Pb	03 29 18.6	-0.9
ISK	Istanbul-Kandi	1.93	14	*e*PN	Pb	03 29 19.4	-1.0
ISK	Istanbul-Kandi	1.93	14	*e*Pn	Pb	03 29 19.4	-1.0
GELI	Tayfur-Gelibol	1.95	309	*e*PN	Pn	03 29 18.6	+0.4
GELI	Tayfur-Gelibol	1.95	309	*e*Pn	Pn	03 29 18.6	+0.4
BGKT	Bogazkoy	2.01	7	*e*PN	Pn	03 29 20.2	+1.2
BGKT	Bogazkoy	2.01	7	*e*Pn	Pn	03 29 20.2	+1.2
GULT	Gulveren	2.02	51	*e*PN	Pb	03 29 21.0	-0.8
GULT	Gulveren	2.02	51	*e*Pn	Pb	03 29 21.0	-0.8
CRLT	Corlu	2.02	344	*e*PN	Pn	03 29 19.9	+0.8
CRLT	Corlu	2.02	344	*e*Pn	Pn	03 29 19.9	+0.8
CTKS	Kestanelik-??a	2.05	1	*e*PN	Pn	03 29 20.1	+0.7
CTKS	Kestanelik-??a	2.05	1	*e*Pn	Pn	03 29 20.2	+0.7

*CSEM **26** 03:41:34.0±0.3, 39°76N×20°33E, h8km, MD3.0, Error ellipse: s-maj=9.2km s-min=4.2km az=41.0*
*ATH **26** 03:41:35.6, 39°75N×20°49E, h18km, MD3.0/8*

ISC 26 03:41:33.4±1.6, 39.74N±0.04 × 20.32E±0.06, h11km±11km, n21, σ0=66/34, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.41**	**267**	*e*PN		**Pn**		**03 41 46.2**	**+1.0**
JAN	**Janina**	**0.41**	**101**	*e*PB		**Pg**		**03 41 41.5**	**-0.1**
JAN				*e*SB		**Sg**		**03 41 46.5**	**-0.7**
JAN	**Janina**	**0.41**	**101**	*e*Pb		**Pg**		**03 41 41.5**	**-0.1**
JAN				*e*Sb		**Sg**		**03 41 46.5**	**-0.7**
KZN	**Kozani**	**1.25**	**62**	*e*PN		**Pg**		**03 41 57.7**	**+0.3**
KZN	**Kozani**	**1.25**	**62**	*e*Pn		**Pg**		**03 41 57.7**	**+0.3**
THL	**Klokotos Trika**	**1.32**	**97**	*e*PN		**Pg**		**03 41 58.1**	**-0.6**
THL				*e*SN		**Sb**		**03 42 14.4**	**-0.6**
THL	**Klokotos Trika**	**1.32**	**97**	*e*Pn		**Pg**		**03 41 58.1**	**-0.6**
THL				*e*Sn		**Sb**		**03 42 14.4**	**-0.6**
FNA	**Florina**	**1.32**	**37**	*e*PN		**Pg**		**03 41 58.9**	**+0.1**
FNA				*e*SN		**Sg**		**03 42 16.3**	**+0.4**
FNA	**Florina**	**1.32**	**37**	*e*Pn		**Pg**		**03 41 58.9**	**+0.1**
FNA				*e*Sn		**Sg**		**03 42 16.3**	**+0.4**
EVR	**Evrytania**	**1.41**	**125**	*e*PN		**Pg**		**03 42 00.6**	**0.0**
EVR				*e*SN		**Sg**		**03 42 18.8**	**-0.2**
EVR	**Evrytania**	**1.41**	**125**	*e*Pn		**Pg**		**03 42 00.6**	**0.0**
EVR				*e*Sn		**Sg**		**03 42 18.8**	**-0.2**
LIT	**Litokhoron**	**1.71**	**77**	*e*PN		**Pb**		**03 42 04.9**	**+0.1**
LIT	**Litokhoron**	**1.71**	**77**	*e*Pn		**Pb**		**03 42 04.9**	**+0.1**
AGG	**Agios Georgios**	**1.71**	**114**	*e*PN		**Pb**		**03 42 04.9**	**0.0**
AGG				*e*SN		**Sb**		**03 42 26.5**	**+0.1**
AGG	**Agios Georgios**	**1.71**	**114**	*e*Pn		**Pb**		**03 42 04.9**	**0.0**
AGG				*e*Sn		**Sb**		**03 42 26.5**	**+0.1**
KLV	**Kalavryta, Ach**	**2.21**	**139**	*e*PB		**Pn**		**03 42 11.4**	**+1.3**
KLV	**Kalavryta, Ach**	**2.21**	**139**	*e*Pn		**Pn**		**03 42 11.4**	**+1.3**
STON	**Ston**	**3.70**	**329**	*e*Pn		**Pn**		**03 42 31.2**	**+0.7**
STON					Sn	**Sn**		**03 43 13.4**	**-0.6**
STON	**Ston**	**3.70**	**329**	*e*Pn		**Pn**		**03 42 31.2**	**+0.7**
STON					Sn	**Sn**		**03 43 13.4**	**-0.6**
NVLJ	**Novalja**	**6.30**	**322**	*e*Pn		**Pn**		**03 43 06.6**	**+0.4**
NVLJ					Sn	**Sn**		**03 44 16.1**	**-1.9**
NVLJ	**Novalja**	**6.30**	**322**	*e*Pn		**Pn**		**03 43 06.5**	**+0.4**

*IDC **26** 03:56:37.3±0.4, 35.94N × 143.21E, h0km, mb4.5/25, mb1 4.6/30, mb1mx4.6/33, mbtmp4.5/30, ML4.3/4, MS3.6/15, Ms1 3.7/15, ms1mx3.4/35, Error ellipse: s-maj=13.6km s-min=12.0km az=137.0*

*ISCJB **26** 03:56:39.3±0.8, 36.10N±0.03 × 143.04E±0.02, h14km±5km, mb4.6/138, MS3.9/25, Error ellipse: s-maj=5.2km s-min=2.6km az=0.7*

*BJI **26** 03:56:39.1, 36.16N × 143.44E, h35km, mB4.9/23, mb4.7/40, Ms4.4/29, Ms7 4.0/28*

*MOS **26** 03:56:41.0±0.9, 35.94N × 143.10E, h33km, mb4.9/56, Error ellipse: s-maj=8.3km s-min=5.1km az=117.7*

*JMA **26** 03:56:41.3±0.2, 36.08N × 143.00E, h88km, M4.7*

JMA Felt I J1.

*NEIC **26** 03:56:42.7±0.2, 35.89N × 143.12E, mb4.6/55, MW4.4(NIED), Error ellipse: s-maj=5.1km s-min=3.3km az=172.0*

NEIC Recorded [1 JMA] in Tochigi.

*SZGRF **26** 03:56:48.0, 36.94N × 143.23E, h33km, mb4.8, Off east coast of Honshu, Japan*

*NIED **26** 03:57:00, 36.10N × 143.00E, h5km, Mw4.4 Best double couple: M0=5.10000×10^15 NP1:φs=163.00000°, δ=59.00000°, λ=-103.00000°. NP2:φs=8.00000°, δ=33.00000°, λ=-69.00000°.*

ISC 26 03:56:42.6±0.3, 36.01N±0.04 × 143.14E±0.03, h33km±1km, h33km:pP-P, n419, σ1=9.24/538, mb4.7/138, MS3.9/25, 48C-48D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.88**	**261**	P		**Pn**		**03 57 10.8**	**-1.6**
CHOJ				S		**Sn**		**03 57 34.0**	**-1.0**
JHO	**Hitachi**	**2.17**	**287**	P		**Pn**		**03 57 14.2**	**-2.2**
JHO				*e*S		**Sn**		**03 57 37.6**	**-4.4**
ONAJ	**Iwakimizuishiy**	**2.18**	**301**	P		**Pn**		**03 57 14.5**	**-2.1**
ONAJ				S		**Sn**		**03 57 39.2**	**-3.3**
BSO1	**Boso 1**	**2.23**	**233**	P		**Pn**		**03 57 15.0**	**-1.7**
JFK	**Kawauchi**	**2.27**	**307**	P		**Pn**		**03 57 15.5**	**-2.4**
JFK				*e*S		**Sn**		**03 57 41.5**	**-3.3**
JMM	**Marumori**	**2.64**	**315**	P		**Pn**		**03 57 20.5**	**-2.4**
JMM				S		**Sn**		**03 57 50.0**	**-3.8**
JFT	**Otama**	**2.71**	**305**	P		**Pn**		**03 57 21.9**	**-2.0**
JFT				S		**Sn**		**03 57 53.5**	**-2.1**
JAG	**Ashikaga**	**3.01**	**279**	P		**Pn**		**03 57 26.5**	**-1.5**
JAG				*e*S		**Sn**		**03 57 59.4**	**-3.6**
JMK	**Ichinoseki**	**3.31**	**333**	P		**Pn**		**03 57 29.7**	**-2.4**
JMK				S		**Sn**		**03 58 05.8**	**-4.6**
JD2	**Odawara 2**	**3.38**	**259**	P		**Pn**		**03 57 31.7**	**-1.4**
JOD2				S		**Sn**		**03 58 16.6**	**-1.6**
JRY	**Ryogami san**	**3.44**	**271**	P		**Pn**		**03 57 32.4**	**-1.5**
JRY				*e*S		**Sn**		**03 58 09.7**	**-3.8**
JNS	**Sasagawa**	**3.56**	**302**	P		**Pn**		**03 57 34.0**	**-1.5**
JNS				*e*S		**Sn**		**03 58 15.0**	**-1.4**
JYK	**Kaneyama**	**3.65**	**324**	P		**Pn**		**03 57 34.8**	**-2.0**
JYK				*e*S		**Sn**		**03 58 16.5**	**-2.3**
JOM	**Ohasama**	**3.76**	**338**	P		**Pn**		**03 57 35.7**	**-2.6**
JOM				S		**Sn**		**03 58 17.6**	**-3.8**
JYN	**Shimob**	**3.77**	**264**	P		**Pn**		**03 57 37.6**	**-1.0**
JYN				*e*S		**Sn**		**03 58 21.1**	**-0.8**
JAW	**Awa shima**	**3.96**	**309**	P		**Pn**		**03 57 40.7**	**-0.2**
JHJ	**Hachijo jima 2**	**4.00**	**225**	Pn		**Pn**		**03 57 38.7**	**-2.8**
	141nm,0.3s,baz=214,slow=18,SNR=19								
JHJ					Sn	**Sn**		**03 58 21.3**	**-5.9**
	388nm,0.3s,baz=52,slow=20,SNR=10								
MJAR	**Matsushiro Arr**	**4.02**	**279**	Pn		**Pn**		**03 57 41.0**	**-0.9**
MJAR	**Matsushiro Arr**	**4.02**	**279**	Pn		**Pn**		**03 57 41.0**	**-0.9**
	29nm,0.3s,baz=94,slow=15,SNR=135								
MJAR					LR	LR		03 59 28.0	
	comp=Z,1μm,21.9s,baz=130,slow=42								
MAJO	**Matsushiro**	**4.02**	**279**	*e*P		**Pn**		**03 57 41.3**	**-0.7**
MAJO	**Matsushiro**	**4.02**	**279**	*e*Pn		**Pn**		**03 57 41.2**	**-0.7**
MAT	**Matsushiro**	**4.02**	**279**	P		**Pn**		**03 57 41.1**	**-0.8**
MAT				*e*S		**Sn**		**03 58 29.5**	**+1.6**
MAT	**Matsushiro**	**4.02**	**279**	P		**Pn**		**03 57 41.3**	**-0.6**
MAT				*e*S		**Sn**		**03 58 28.7**	**+0.8**
JSD	**Sado**	**4.40**	**299**	P		**Pn**		**03 57 46.4**	**-0.7**
ERM	**Erimo**	**6.00**	**0**	*i* P		**Pn**		**03 58 08.6**	**-0.4**
ASAJ	**Asahikawa**	**8.11**	**357**	*e*Pn		Pn		03 58 34.7	-3.3
	7.2nm,0.4s								
ASAJ					Sn	Sn		04 00 00.7	-7.9
ASAJ	**Asahikawa**	**8.11**	**357**	Pn		Pn		03 58 34.8	-3.2
	8.9nm,0.3s,baz=224,slow=12,SNR=34								
ASAJ					Sn	Sn		04 00 00.7	-7.9
	4.2nm,0.3s,baz=348,slow=30,SNR=4.1								
YUK	**Yuzh-Kuril'sk**	**8.29**	**14**	*d* iP		**Pn**		**03 58 39.2**	**-1.2**
YUK					pmax	pmax			
	comp=E,26nm,0.1s								
YUK					pmax	pmax			
	comp=Z,52nm,0.3s								
YUK					pmax	pmax			
	comp=N,11nm,0.1s								
YUK					MLR	MLR			
	comp=E,58nm,12.0s								
YUK					MLR	MLR			
	comp=Z,190nm,12.0s								
YUK					MLR	MLR			
	comp=N,140nm,12.0s								
JNU	**Nakatsue**	**10.51**	**258**	*e*Pn		**Pn**		**03 59 10.4**	**-0.7**
	comp=N,7.9nm,0.6s								
JNU	**Nakatsue**	**10.51**	**258**	Pn		**Pn**		**03 59 10.6**	**-0.4**
	comp=N,1.5nm,0.3s,baz=62,slow=6.7,SNR=12								
YSS	**Yuzh-Sakhalins**	**10.94**	**359**	*e*P		**Pn**		**03 59 14.0**	**-2.8**
YSS				*e*S		**Sn**		**04 01 13.0**	**-4.9**
YSS					MLR	MLR			
	comp=Z,400nm,13.0s								
USRK	**Ussuriysk Arra**	**11.81**	**317**	Pn		**Pn**		**03 59 29.0**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=125,slow=12,SNR=20								
USRK					LR	LR		04 03 40.5	
	comp=Z,292nm,19.2s,baz=355,slow=36								
KSRS	**Korea Array**	**12.30**	**281**	Pn		**Pn**		**03 59 37.2**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=103,slow=13,SNR=8.4								
KSRS					LR	LR		04 03 49.5	
	comp=Z,362nm,19.1s,baz=74,slow=35								
KSAR	**Wonju Array Be**	**12.33**	**281**	Pn		**Pn**		**03 59 37.2**	**+1.4**
KLR	**Kul'dur**	**15.63**	**331**	*e*P		Pn		04 00 14.8	-5.5
KLR					MLR	MLR			
	comp=Z,2μm,13.0s								
CN2	**Changchun**	**15.63**	**305**	*e*P		**Pn**		**04 00 22.0**	**+1.6**
CN2				*es*P		**sP**		**04 00 34.3**	**-2.8**
CN2				*e*S		**Sn**		**04 03 13.8**	**+1.3**
CN2					pmax	pmax			
	comp=Z,10.0nm,0.6s								
CN2					pmax	pmax			
	comp=Z,200nm,3.0s								
CN2					LR	LR			
	comp=N,400nm,16.0s								
CN2					LR	LR			
	comp=E,400nm,16.0s								
CN2					LR	LR			
	comp=Z,400nm,13.0s								
PETK	**Petropavlovsk-**	**19.93**	**26**	LR		LR		04 07 47.8	
	comp=Z,56nm,19.2s,baz=225,slow=34								
NJ2	**Nanjing**	**20.50**	**266**	*e*P		**P**		**04 01 16.5**	**-1.3**
NJ2					pP	**pP**		**04 01 25.3**	**-1.3**
NJ2					sP	**sP**		**04 01 30.3**	**-0.5**
NJ2					S	**S**		**04 05 05.5**	**+0.1**
NJ2					sS	**sS**		**04 05 20.0**	**+0.6**
NJ2					PcP	**PcP**		**04 05 28.0**	**-0.6**
NJ2					pmax	pmax			
	comp=Z,20nm,0.6s								
NJ2					pmax	pmax			
	comp=Z,210nm,5.3s								
NJ2					LR	LR			
	comp=N,350nm,17.3s								
NJ2					LR	LR			
	comp=E,360nm,18.4s								
NJ2					LR	LR			
	comp=Z,370nm,15.4s								
BJI	**Beijing**	**21.59**	**289**	P		**P**		**04 01 29.8**	**+0.3**
BJI				S		**S**		**04 05 27.8**	**+0.9**
BJI					LR	LR			
	comp=N,250nm,11.6s								
BJI					LR	LR			
	comp=E,62nm,11.6s								
BJI					LR	LR			
	comp=Z,160nm,14.8s								
HIA	**Hailar**	**21.61**	**315**	*e*P		**P**		**04 01 32.2**	**+2.5**
	comp=Z,6.1nm,0.6s								
WHN	**Wuhan**	**24.63**	**266**	P		**P**		**04 02 01.0**	**+0.9**
WHN				S		**S**		**04 06 19.8**	**+0.5**
WHN					pmax	pmax			
	comp=Z,68nm,0.6s								
WHN					LR	LR			
	comp=Z,570nm,14.8s								
HHC	**Hu-ho-hao-te**	**25.13**	**291**	*e*P		**P**		**04 02 05.0**	**+0.4**
HHC				PP		**PnPn**		**04 02 43.0**	**+4.0**
HHC				PcP		**PcP**		**04 05 39.8**	**+1.7**
HHC				S		**S**		**04 06 24.3**	**-3.0**
HHC				sS		**sS**		**04 06 40.8**	**-2.2**
HHC				SS		**SnSn**		**04 07 25.3**	**+6.9**
HHC				ScP		**ScP**		**04 09 14.8**	**+0.1**
HHC				PcS		**PcS**		**04 09 18.8**	**+0.3**
HHC				ScS		**ScS**		**04 13 02.3**	**-1.0**
HHC				pmax	pmax				
	comp=Z,55nm,0.6s								
HHC					pmax	pmax			
	comp=Z,330nm,5.1s								
HHC					LR	LR			
	comp=N,380nm,12.8s								
HHC					LR	LR			
	comp=E,570nm,11.6s								
HHC					LR	LR			
	comp=Z,510nm,13.1s								
YAK	**Yakutsk**	**27.39**	**346**	*e*P		**P**		**04 02 24.2**	**-0.4**
YAK				*e**PP		**pP**		**04 02 32.6**	**-1.5**
YAK				*e*				04 03 09.8	
YAK				*e*				04 05 37.6	
YAK				*e*S		**S**		**04 07 04.5**	**+2.2**
YAK				*e*SS		SnSn		04 08 34.6	+22
YAK				*e*				04 13 10.6	
YAK					pmax	pmax			
	comp=Z,10.0nm,1.0s								
YAK					pmax	pmax			
	comp=E,4.0nm,1.3s								
YAK					pmax	pmax			
	comp=N,8.0nm,1.1s								
YAK					pmax	pmax			
	comp=Z,14nm,0.8s								
YAK					pmax	pmax			
	comp=N,17nm,1.1s								
YAK					pmax	pmax			
	comp=E,5.0nm,1.1s								
YAK					smax	smax			
	comp=N,39nm,2.7s								
YAK					smax	smax			
	comp=E,37nm,3.3s								
YAK					MLR	MLR			
	comp=Z,150nm,14.0s								
YAK					MLR	MLR			
	comp=E,71nm,13.0s								
YAK					MLR	MLR			
	comp=N,127nm,14.0s								
SEY	**Seymchan**	**27.56**	**9**	*e*P		**P**		**04 02 25.6**	**-0.5**
XAN	**Xi'an**	**28.01**	**276**	P		**P**		**04 02 27.5**	**-3.1**
XAN				pP		**pP**		**04 02 41.0**	**+0.8**
XAN				sP		**sP**		**04 02 44.8**	**+0.6**
XAN					pmax	pmax			
	comp=Z,6.0nm,1.1s								
XAN					pmax	pmax			
	comp=Z,28nm,8.7s								
XAN					LR	LR			
	comp=N,100nm,13.3s								
XAN					LR	LR			
	comp=E,73nm,12.1s								
ULN	**Ulaanbaatar**	**29.08**	**305**	*e*P		**P**		**04 02 41.6**	**+1.4**
	comp=E,5.7nm,0.8s								
SONM	**Songino Array**	**29.51**	**305**	P		**P**		**04 02 45.1**	**+1.2**
SONM				PcP		**PcP**		**04 05 48.8**	**+0.2**
SONM	**Songino Array**	**29.51**	**305**	P		**P**		**04 02 45.1**	**+1.2**
	comp=E,6.8nm,0.7s,baz=105,slow=8.5,SNR=38								
SONM					PcP	**PcP**		**04 05 48.8**	**+0.2**
	comp=E,1.0nm,0.6s,baz=99,slow=1.4,SNR=3.6								
SONM					LR	LR		04 14 50.6	
	comp=E,85nm,20.5s,baz=258,slow=37								
LZH	**Lanzhou**	**31.63**	**282**	*e*P		**P**		**04 03 03.0**	**+0.3**
LZH				pP		**pP**		**04 03 11.3**	**-1.0**
LZH				sP		**sP**		**04 03 14.3**	**-2.1**
LZH				PP		**PnPn**		**04 04 06.3**	**-0.6**
LZH				*e*S		**S**		**04 08 11.0**	**+1.2**
LZH				sS		**sS**		**04 08 24.8**	**-0.8**
LZH				pmax	pmax				
	comp=Z,19nm,1.0s								
LZH					pmax	pmax			
	comp=Z,94nm,4.4s								
LZH					LR	LR			
	comp=N,410nm,15.0s								
LZH					LR	LR			
	comp=E,400nm,14.5s								
LZH					LR	LR			
	comp=Z,540nm,15.7s								
ZAK	**Zakamensk**	**32.00**	**309**	*e*P		**P**		**04 03 05.8**	**0.0**
ZAK				*e*				04 05 49.2	
ZAK					pmax	pmax			
	comp=Z,5.0nm,1.0s								
GYA	**Guiyang**	**32.45**	**263**	*e*P		**P**		**04 03 11.0**	**+1.0**
GYA					pmax	pmax			
	comp=Z,10.0nm,0.8s								
CD2	**Chengdu**	**33.09**	**273**	P		**P**		**04 03 15.8**	**+0.3**
CD2				pP		**pP**		**04 03 25.5**	**+0.4**
CD2				sP		**sP**		**04 03 29.5**	**+0.4**
CD2				PP		**PnPn**		**04 04 26.5**	**+0.9**
CD2				PcP		**PcP**		**04 05 59.3**	**+1.0**
CD2				S		**S**		**04 08 30.5**	**-1.9**
CD2				sS		**sS**		**04 08 47.0**	**-1.3**
CD2				PcS		**PcS**		**04 09 43.5**	**-0.4**
CD2				SS		**SnSn**		**04 10 31.5**	**-1.0**
CD2				pmax	pmax				
	comp=Z,10.0nm,0.4s								
CD2					pmax	pmax			
	comp=Z,140nm,4.0s								
CD2					LR	LR			
	comp=N,230nm,13.2s								
CD2					LR	LR			
	comp=E,270nm,14.2s								
CD2					LR	LR			
	comp=Z,290nm,13.1s								
QIZ	**Qiongzhong**	**33.82**	**249**	P		**P**		**04 03 20.8**	**-1.0**
QIZ				S		**S**		**04 08 43.8**	**0.0**
QIZ					pmax	pmax			
	comp=Z,34nm,2.3s								
GTA	**Gaotai**	**34.21**	**289**	*e*P		**P**		**04 03 25.8**	**+0.6**
GTA				pP		**pP**		**04 03 34.8**	**0.0**
GTA				sP		**sP**		**04 03 38.8**	**0.0**
GTA				S		**S**		**04 08 49.5**	**-0.2**
GTA				sS		**sS**		**04 09 04.5**	**-1.1**
GTA				SS		**SnSn**		**04 10 59.5**	**0.0**
GTA					pmax	pmax			
	comp=Z,8.0nm,1.2s								
GTA					pmax	pmax			
	comp=Z,120nm,6.1s								
GTA					LR	LR			
	comp=N,180nm,15.7s								
GTA					LR	LR			
	comp=E,260nm,19.1s								
GTA					LR	LR			
	comp=Z,100nm,13.2s								
BILL	**Bilibino**	**34.64**	**15**	P		**P**		**04 03 28.0**	**-0.4**
BILL								04 04 45.0	
BILL				*i*				04 06 01.4	
BILL					pmax	pmax			
	comp=Z,3.0nm,1.7s								
BILL					MLR	MLR			
	comp=Z,300nm,27.0s								
KMI	**Kunming**	**36.21**	**264**	P		**P**		**04 03 43.5**	**+0.8**
KMI				pP		**pP**		**04 03 53.3**	**+0.9**
KMI				S		**S**		**04 09 20.5**	**-0.5**
KMI					pmax	pmax			
	comp=Z,7.0nm,0.5s								
KMI					LR	LR			
	comp=N,160nm,12.1s								
KMI					LR	LR			
	comp=E,190nm,21.1s								
KMI					LR	LR			
	comp=Z,98nm,16.5s								
CHTO	**Chiang Mai**	**42.42**	**258**	*e*P		**P**		**04 04 34.5**	**+0.2**
CHTO					pmax	pmax			
	comp=Z,3.0nm,0.6s								
CHTO	**Chiang Mai**	**42.42**	**258**	*e*P		**P**		**04 04 34.5**	**+0.2**
	comp=Z,3.3nm,0.6s								
WMQ	**Urumqi**	**42.55**	**298**	P		**P**		**04 04 35.0**	**-0.2**
WMQ				pP		**pP**		**04 04 45.0**	**0.0**
WMQ				sP		**sP**		**04 04 49.0**	**0.0**
WMQ				PP		**PP**		**04 06 17.0**	**+3.0**
WMQ				PcP		**PcP**		**04 06 28.0**	**+0.8**
WMQ				ScP		**ScP**		**04 10 15.0**	**-0.5**
WMQ				S		**S**		**04 10 55.0**	**-0.5**
WMQ				sS		**sS**		**04 11 12.0**	**+0.4**
WMQ				SS		**SS**		**04 14 00.0**	**-5.6**
WMQ				ScS		**ScS**		**04 14 32.0**	**-2.1**
WMQ				pmax	pmax				
	comp=Z,15nm,1.0s								
WMQ					pmax	pmax			
	comp=Z,98nm,5.0s								
WMQ					LR	LR			
	comp=N,280nm,14.0s								
WMQ					LR	LR			
	comp=E,310nm,14.0s								
WMQ					LR	LR			
	comp=Z,250nm,14.0s								
CMAR	**Chiang Mai Arr**	**42.61**	**258**	P		**P**		**04 04 36.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**42.61**	**258**	P		**P**		**04 04 36.1**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=49,slow=6.4,SNR=13								
CMAR					LR	LR		04 25 01.8	
	comp=Z,53nm,18.4s,baz=216,slow=40								
ZAA0	**Zalesovo Array**	**43.63**	**313**	*e*P		**P**		**04 04 44.0**	**+0.3**
ZAA0				*e*PcP		**PcP**		**04 06 30.1**	**-0.4**
ZALV	**Zalesovo Beam**	**43.63**	**313**	P		**P**		**04 04 44.3**	**+0.6**
ZALV								04 06 30.2	
ZALV	**Zalesovo Beam**	**43.63**	**313**	P		**P**		**04 04 44.2**	**+0.6**
ZALV				PcP		**PcP**		**04 06 30.2**	**-0.4**
ZALV	**Zalesovo Beam**	**43.63**	**313**	P		**P**		**04 04 44.2**	**+0.6**
	comp=Z,11nm,0.8s,baz=95,slow=7.1,SNR=42								
ZALV					PcP	**PcP**		**04 06 30.2**	**-0.4**
	comp=Z,3.7nm,0.6s,baz=87,slow=2.7,SNR=7.6								
ZALV					LR	LR		04 23 30.8	
	comp=Z,74nm,18.4s,baz=73,slow=37								
NVS	**Novosibirsk**	**44.55**	**314**	*i* P		**P**		**04 04 51.5**	**+0.5**
MK31	**Makanchi Array**	**45.84**	**303**	*ce*P		**P**		**04 05 01.5**	**0.0**
MK31					pmax	pmax			
	comp=Z,5.0nm,0.6s								
MK31	**Makanchi Array**	**45.84**	**303**	*e*P		**P**		**04 05 01.7**	**+0.2**
MKAR	**Makanchi Array**	**45.84**	**303**	P		**P**		**04 05 01.6**	**+0.1**
MKAR								04 06 38.0	
MKAR					pmax	pmax			
	comp=Z,5.0nm,0.8s								
MKAR					pmax	pmax			
	comp=Z,1.0nm,0.7s								
MKAR					MLR	MLR			
	comp=Z,69nm,20.2s								
MKAR	**Makanchi Array**	**45.84**	**303**	*e*P		**P**		**04 05 02.0**	**+0.6**
MKAR				PcP		**PcP**		**04 06 38.0**	**-0.3**
MKAR	**Makanchi Array**	**45.84**	**303**	P		**P**		**04 05 01.6**	**+0.1**
	comp=Z,4.9nm,0.8s,baz=89,slow=9.2,SNR=33								
MKAR					PcP	**PcP**		**04 06 38.0**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=101,slow=5.4,SNR=1.9								
MKAR					LR	LR		04 24 18.1	
	comp=Z,68nm,20.2s,baz=172,slow=36								
KDAK	**Kodiak Island**	**46.94**	**41**	P		**P**		**04 05 09.4**	**-0.4**
KDAK	**Kodiak Island**	**46.94**	**41**	P		**P**		**04 05 09.4**	**-0.4**
	comp=Z,8.1nm,0.7s,baz=240,slow=8.1,SNR=5.2								
TAPN	**Taplejung**	**47.42**	**276**	*e*P		**P**		**04 05 14.9**	**+0.5**
	comp=Z,9.1nm,0.4s								
KURK	**Kurchatov**	**47.66**	**309**	*e*P		**P**		**04 05 15.5**	**0.0**
KURK					pmax	pmax			
	comp=Z,36nm,0.8s								
KURK	**Kurchatov**	**47.66**	**309**	*e*P		**P**		**04 05 15.5**	**0.0**
	comp=Z,36nm,0.8s								
ODAN	**Odare**	**47.88**	**275**	*e*P		**P**		**04 05 18.4**	**+0.5**
	comp=Z,10nm,0.5s								
RAMN	**Ramite**	**48.48**	**276**	*e*P		**P**		**04 05 23.0**	**+0.5**
	comp=Z,20nm,0.7s								
GUN	**Gumba**	**48.66**	**277**	*e*P		**P**		**04 05 24.6**	**+0.6**
	comp=Z,15nm,0.5s								
MCK	**McKinley**	**48.72**	**33**	*e*P		**P**		**04 05 23.4**	**-0.2**
MCK					pmax	pmax			
	comp=Z,2.0nm,0.7s								
MCK	**McKinley**	**48.72**	**33**	*e*P		**P**		**04 05 23.4**	**-0.2**
	comp=Z,2.3nm,0.7s								
PKI	**Pulchoki**	**49.18**	**277**	*e*P		**P**		**04 05 27.9**	**-0.1**
KKN	**Kakani**	**49.19**	**278**	*e*P		**P**		**04 05 28.1**	**+0.2**
COLA	**College**	**49.21**	**32**	*e*P		**P**		**04 05 28.2**	**+0.9**
COLA					pmax	pmax			
	comp=Z,4.0nm,0.9s								
COLA	**College**	**49.21**	**32**	*e*P		**P**		**04 05 28.2**	**+0.9**
	comp=Z,3.5nm,0.9s								
DMN	**Daman**	**49.41**	**277**	*e*P		**P**		**04 05 29.5**	**-0.1**
ILAR	**Eielson Array**	**49.62**	**32**	P		**P**		**04 05 29.8**	**

BRVK Borovoye 52.35 313 *e*P P 04 05 51.5 +0.4
comp=Z,7.7nm,0.7s
BRVK *e*pP **pP** 04 06 01.9 +0.8
PSI Prapat 52.49 241 P P 04 05 52.9 +0.1
PSI Prapat 52.49 241 P P 04 05 52.9 +0.1
comp=Z,2.3nm,0.4s,baz=308,slow=11,SNR=3.5
ZRNK Zerenda 53.12 313 *i* P P 04 05 56.9 0.0
ZRNK pmax pmax
comp=Z,8.0nm,0.6s
KK31 Karatay Array 54.85 301 *ce*P P 04 06 09.6 0.0
KK31 pmax pmax
comp=Z,10.0nm,0.8s
KKAR Karatay Array 54.85 301 *e*P P 04 06 10.0 +0.4
KKAR pmax pmax
comp=Z,8.0nm,0.9s
KKAR Karatay Array 54.85 301 *e*P P 04 06 10.0 +0.4
comp=Z,8.3nm,0.9s
CTA Charters Tower 55.87 176 P P 04 06 16.1 -0.9
CTA Charters Tower 55.87 176 P P 04 06 16.1 -0.9
comp=Z,1.1nm,0.4s,baz=348,slow=14,SNR=3.5
WRAB Tennant Creek 56.25 190 *e*P P 04 06 18.0 -1.8
WRAB *e**PP **pP** 04 06 29.6 -0.2
WRAB pmax pmax
comp=Z,20nm,1.0s
WRAB Tennant Creek 56.25 190 *e*P P 04 06 18.0 -1.8
comp=Z,20nm,1.0s
WRAB *e*pP **pP** 04 06 29.6 -0.2
WRA Warramunga Arr 56.26 190 P P 04 06 18.6 -1.3
WRA PcP **PcP** 04 07 17.6 +0.4
WRA Warramunga Arr 56.26 190 P P 04 06 18.6 -1.3
comp=Z,7.5nm,0.7s,baz=8.1,slow=7.5,SNR=86
WRA PcP **PcP** 04 07 17.5 +0.4
comp=Z,3.2nm,0.7s,baz=4.3,slow=4.0,SNR=6.1
SVE Sverdlovsk 56.84 319⇑ *e*P P 04 06 24.3 +0.7
SVE pmax pmax
comp=Z,20nm,0.8s
SOKR Solikamsk 57.99 323 *e*P P 04 06 32.6 +1.0
SOKR pmax pmax
comp=Z,10.0nm,0.9s
ARU Arti 58.05 319 *d i*P P 04 06 32.4 +0.3
ARU 04 08 38.8
ARU S **S** 04 14 33.3 +2.9
ARU SS **SS** 04 18 15.7 -5.7
ARU pmax pmax
comp=Z,28nm,1.2s
AB31 Akbulak array 59.66 311 *ce*P P 04 06 43.2 -0.3
AB31 pmax pmax
comp=Z,10.0nm,0.4s
ABKAR Akbulak array 59.66 311 *e*P P 04 06 43.5 0.0
comp=Z,17nm,0.6s
ABKAR *e*pP **pP** 04 06 54.3 +0.7
AS31 Alice Springs 59.99 190 *e*P P 04 06 44.4 -1.5
ASAR Alice Springs 59.99 190 P P 04 06 44.9 -1.0
ASAR Alice Springs 59.99 190 P P 04 06 44.9 -1.0
comp=Z,5.3nm,0.8s,baz=4.7,slow=6.8,SNR=41
AKTO Aktyubinsk 60.40 313 *i* P P 04 06 48.1 -0.4
AKTO pmax pmax
comp=Z,1.0nm,0.7s
MBWA Marble Bar 61.02 205 *e*P P 04 06 52.0 -1.0
comp=Z,22nm,1.3s
RES Resolute Bay 63.24 15 *e*P P 04 07 07.1 -0.1
comp=Z,4.1nm,0.8s
RES *e*pP **pP** 04 07 18.0 +0.6
YKW3 Yellowknife Ar 63.96 30 *e*P P 04 07 11.7 -0.4
YKA Yellowknife Ar 63.99 30 P P 04 07 11.9 -0.4
YKA Yellowknife Ar 63.99 30 P P 04 07 11.9 -0.4
comp=Z,0.9nm,0.8s,baz=300,slow=6.6,SNR=19
KEV Kevo 64.89 340 *ep* sP 04 07 40.7 +8.5
comp=Z,4.6nm,0.7s
AFI Afiamalu 65.41 131 LR LR 04 29 04.4
comp=Z,89nm,21.4s,baz=135,slow=30
ARCES ARCESS Array B 65.44 340 P P 04 07 21.0 -0.8
ARCES ARCESS Array B 65.44 340 P P 04 07 21.0 -0.8
comp=Z,3.0nm,0.9s,baz=94,slow=11,SNR=5.7
JOF Joensuu 67.52 333 *e*P P 04 07 34.3 -0.8
JOF pmax pmax
comp=Z,3.0nm,0.4s
JOF Joensuu 67.52 333 *ep* P 04 07 34.3 -0.8
comp=Z,3.2nm,0.4s
STKA Stephens Creek 67.54 181 P P 04 07 35.1 -0.3
STKA Stephens Creek 67.54 181 P P 04 07 35.1 -0.3
comp=Z,4.8nm,0.8s,baz=342,slow=6.8,SNR=4.1
VRHR Novokhopersk 69.38 319 *e*P P 04 07 45.1 -1.8
VRHR pmax pmax
comp=Z,10.0nm,1.1s
VRHR pmax pmax
comp=N,7.0nm,0.6s
VRHR pmax pmax
comp=E,9.0nm,0.6s
OBN Obninsk 69.75 324⇑ *e*P P 04 07 49.5 +0.4
OBN *PP **pP** 04 07 59.0 -0.4
OBN pmax pmax
comp=Z,23nm,1.7s
OBN MLR MLR
comp=Z,100nm,15.0s
KAF Kangasniemi 69.85 333 *e*P P 04 07 48.9 -0.7
KAF pmax pmax
comp=Z,3.0nm,0.5s
KAF Kangasniemi 69.85 333 *ep* P 04 07 48.9 -0.7
comp=Z,2.8nm,0.5s
YBH Yreka Blue Hor 69.86 53 P P 04 07 51.0 +0.8
YBH Yreka Blue Hor 69.86 53 P P 04 07 51.0 +0.8
comp=Z,1.7nm,0.7s,baz=72,slow=6.4,SNR=3.2
NEW Newport 69.89 45 *e*P P 04 07 50.5 +0.3
comp=Z,3.8nm,0.9s
FINES FINESS Array B 70.37 333 P P 04 07 53.1 +0.3
FINES FINESS Array B 70.37 333 P P 04 07 53.1 +0.3
comp=Z,5.6nm,0.8s,baz=46,slow=6.4,SNR=18
FINES LR LR 04 41 47.1
comp=Z,60nm,18.7s,baz=79,slow=38
VSR Storozhevoye 70.62 320 *e*P P 04 07 54.3 -0.2
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,4.0nm,0.4s
VSR pmax pmax
comp=Z,8.0nm,0.4s
VORD Divnogorie 70.69 319 *e*P P 04 07 54.3 -0.6
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,20nm,0.9s
VORD pmax pmax
comp=Z,10.0nm,0.9s
B13A Whitefish 71.33 43 ⇑P P 04 07 59.3 +0.3
baz=71
C13A Hot Springs 71.65 44 ⇑P P 04 08 00.5 -0.4
baz=72
SUMG Summit 71.70 1 *e*P P 04 08 02.4 +1.2
SUMG pmax pmax
comp=Z,167nm,2.9s
SUMG Summit 71.70 1 *e*P P 04 08 02.4 +1.2
comp=Z,167nm,2.9s
B14A Marquette Ranc 72.00 43 ⇑P P 04 08 04.3 +1.2
baz=72
C14A Swan Lake 72.06 44 ⇓P P 04 08 03.9 +0.5
baz=72
SWMT Swartz Lake 72.07 44 *e*P P 04 08 04.1 +0.6
SWMT *e*pP **pP** 04 08 15.0 +1.2
BEKR Beckworth 72.36 53 *e*P P 04 08 05.7 +0.2
comp=Z,2.8nm,0.9s
BEKR *e*pP **pP** 04 08 16.4 +0.6
B15A Bradely Ranch, 72.41 43 ⇑P P 04 08 06.6 +1.0
baz=72,SNR=5.3
MSO Missoula 72.48 45 ⇑P P 04 08 05.4 -0.6
baz=72
SLMT Seeley Lake 72.50 44 *e*P P 04 08 06.5 +0.4
ZEI Tsey 72.54 310 *e*P P 04 08 05.2 -1.3
ZEI pmax pmax
comp=Z,5.0nm,0.9s
D14A Greenough 72.58 44 ⇓P P 04 08 06.3 -0.3
baz=72
KBZ Khabaz 72.63 312 P P 04 08 07.2 +0.5
KBZ Khabaz 72.63 312 P P 04 08 07.2 +0.5
KBZ Khabaz 72.63 312 P P 04 08 07.2 +0.5
comp=Z,11nm,0.8s,baz=61,slow=3.5,SNR=42
KBZ LR LR 04 45 20.9
comp=Z,69nm,18.2s,baz=289,slow=40
KIV Kislovodsk 72.63 312 *c i*P P 04 08 08.0 +1.1
KIV *e**PP **pP** 04 08 19.3 +2.1
KIV *e* 04 08 24.6
KIV pmax pmax
comp=Z,25nm,0.8s
C15A Salmond Ranch, 72.69 43 ⇓P P 04 08 08.5 +1.2
baz=72,SNR=7.7
F13A Darby 72.84 46 ⇑P P 04 08 06.8 -1.4
baz=73
C16A Fuhringer Ranc 73.16 43 ⇑P P 04 08 10.7 +0.7
baz=73
D15A Lincoln 73.16 44 ⇓P P 04 08 10.4 +0.4
baz=73
MFID Camas Ranch 73.27 48 *e*P P 04 08 12.1 +1.4
comp=Z,5.9nm,1.3s
CMB Columbia Colle 73.32 55 *e*P P 04 08 11.9 +0.9
CMB *e**PP **pP** 04 08 22.1 +0.7
CMB pmax pmax
comp=Z,5.0nm,0.7s
CMB Columbia Colle 73.32 55 *e*P P 04 08 11.9 +0.9
comp=Z,5.5nm,0.7s
CMB *e*pP **pP** 04 08 22.1 +0.7
GNI Garni 73.44 308 *e*P P 04 08 11.7 -0.1
comp=Z,10nm,1.0s
E15A Deer Lodge 73.45 44 ⇑P P 04 08 12.3 +0.6
baz=73
D16A Dana Ranch, Ca 73.71 43 ⇑P P 04 08 14.1 +0.8
baz=74
C17A Wharram Farm, 73.80 43 ⇑P P 04 08 16.5 +2.8
baz=74
FFC Flin Flon 73.81 33 *e*P P 04 08 13.6 +0.1
FFC pmax pmax
comp=Z,5.0nm,0.9s
FFC Flin Flon 73.81 33 *e*P P 04 08 13.6 +0.1
comp=Z,4.7nm,0.9s
F15A Butte 73.86 45 ⇓P P 04 08 15.0 +0.7
baz=74,SNR=5.6
LRM Limekiln Ridge 73.90 45 *e*P P 04 08 14.8 +0.3
LRM *e*pP **pP** 04 08 25.7 +0.8
HLID Hailey 74.04 48 *e*P P 04 08 15.2 -0.1
comp=Z,3.1nm,1.1s
EGMT Eagleton 74.11 42 *e*P P 04 08 16.1 +0.5
comp=Z,51nm,2.5s
EGMT *e*pP **pP** 04 08 26.1 +0.2
D17A Six Diamond Ra 74.12 43 ⇑P P 04 08 17.2 +1.5
baz=74
F16A Kennard Place, 74.39 45 ⇓P P 04 08 18.3 +1.0
baz=74
E17A Martinsdale 74.43 44 ⇑P P 04 08 18.7 +1.2
baz=74
BOZ Bozeman (W) 74.47 45 *e*P P 04 08 18.7 +1.0
BOZ *e**PP **pP** 04 08 29.0 +0.8
BOZ pmax pmax
comp=Z,4.0nm,0.8s
BOZ Bozeman (W) 74.47 45 *e*P P 04 08 18.7 +1.0
comp=Z,3.6nm,0.8s
BOZ *e*pP **pP** 04 08 29.0 +0.8
BOZ Bozeman (W) 74.47 45 ⇑P P 04 08 18.3 +0.6
baz=74,SNR=7.1
NVAR Mina Array Bea 74.48 54 P P 04 08 18.6 +0.6
NVAR Mina Array Bea 74.48 54 P P 04 08 18.6 +0.6
comp=Z,3.8nm,0.7s,baz=297,slow=6.0,SNR=31
NVAR LR LR 04 38 29.6
comp=Z,39nm,20.1s,baz=77,slow=34
NV11 Mina Array Sit 74.58 54 *e*P P 04 08 19.1 +0.6
NV11 *e*pP **pP** 04 08 29.7 +0.8
G16A Moss Hill, Enn 74.61 45 ⇓P P 04 08 19.8 +1.2
baz=74
C19A Slack Wire Ran 74.67 42 ⇑P P 04 08 20.2 +1.4
baz=74,SNR=5.1
J14A Carey 74.72 47 ⇓P P 04 08 20.6 +1.4
baz=75
F17A Fitzpatrick Pl 74.87 44 ⇑P P 04 08 20.9 +0.9
baz=75
ELK Elko 75.14 50 *e*P P 04 08 22.6 +0.8
G17A Pierce Place, 75.17 45 ⇓P P 04 08 22.7 +0.9
baz=75
H16A Russell Place, 75.24 45 ⇑P P 04 08 23.4 +1.0
baz=75
E19A Rath Farm, Rou 75.58 43 ⇓P P 04 08 25.1 +1.0
baz=75,SNR=7.4
NB2 NORSAR Subarra 75.67 338 P P 04 08 24.1 -0.1
comp=Z,4.7nm,0.7s,baz=38,slow=5.9
NOA NORSAR Array B 75.67 338 P P 04 08 24.4 +0.2
NOA NORSAR Array B 75.67 338 P P 04 08 24.4 +0.2
comp=Z,6.1nm,0.9s,baz=38,slow=5.8,SNR=20
NOA LR LR 04 45 19.3
comp=Z,30nm,18.8s,baz=265,slow=39
H17A Grant Village 75.81 45 ⇑P P 04 08 28.5 +2.9
baz=76
F19A Roth Farm, Mol 75.86 43 ⇑P P 04 08 26.7 +1.0
baz=76
IMW Indian Meadow 75.90 46 *e*P P 04 08 27.9 +1.7
comp=Z,3.3nm,0.7s
IMW *e*pP **PcP** 04 08 38.0 -0.6
NAO01 NORSAR Array S 75.92 338 *e*P P 04 08 25.8 +0.2
comp=Z,4.2nm,0.9s
AKASG Malin Array Be 75.96 323 P P 04 08 25.9 -0.1
AKASG Malin Array Be 75.96 323 P P 04 08 25.9 -0.1
AKASG Malin Array Be 75.96 323 P P 04 08 25.9 -0.1
comp=Z,4.8nm,0.5s,baz=46,slow=5.8,SNR=24
AK01 Malin Array Si 75.97 323 *e*P P 04 08 25.8 -0.3
KIEV Kiev 75.97 323 *e*P P 04 08 26.0 -0.1
KIEV pmax pmax
comp=Z,13nm,1.0s
KIEV Kiev 75.97 323 *e*P P 04 08 26.0 -0.1
comp=Z,13nm,1.0s
AK02 Malin Array Si 76.00 323 *e*P P 04 08 26.0 -0.2
I17A Pilgrim Ck. 76.10 46 ⇓P P 04 08 29.4 +2.2
baz=76
MOOW Moose Ponds 76.10 46 *e*P P 04 08 28.7 +1.5
comp=Z,11nm,1.9s
RLMT Red Lodge 76.12 44 *e*P P 04 08 28.4 +1.1
comp=Z,26nm,2.0s
RLMT Red Lodge 76.12 44 ⇓P P 04 08 28.6 +1.3
baz=76
H18A Shoshone NF, C 76.17 45 ⇓P P 04 08 29.1 +1.5
baz=76
SUW Suwalki 76.50 328 *e*P P 04 08 29.9 +0.9
J18A Kendall Valley 76.84 46 ⇓P P 04 08 32.7 +1.1
baz=77
HWUT Hardware Ranch 76.89 48 *e*P P 04 08 32.3 +0.6
comp=Z,9.4nm,1.3s
HWUT *e*pP **PcP** 04 08 43.1 +0.3
DUG Dugway 76.97 50 *e*P P 04 08 33.2 +1.1
DUG *e**PP **PcP** 04 08 43.4 +0.3
DUG pmax pmax
comp=Z,7.0nm,0.8s
DUG Dugway 76.97 50 *e*P P 04 08 33.2 +1.1
comp=Z,6.7nm,0.8s
DUG *e*pP **PcP** 04 08 43.4 +0.3
SIM Simferopol' 77.03 316 *e*P P 04 08 33.0 +0.8
SIM pmax pmax
comp=Z,12nm,0.9s
SIM MLR MLR
comp=Z,30nm,14.4s
K18A Toltan Ranch, 77.18 46 ⇑P P 04 08 34.8 +1.4
baz=77
J19A Crowheart 77.37 45 ⇓P P 04 08 35.4 +1.1
baz=77,SNR=8.4
BW06 Boulder Array 77.38 46 *e*P P 04 08 34.8 +0.2
comp=Z,2.2nm,0.6s
BW06 Boulder Array 77.38 46 ⇑P P 04 08 34.7 +0.2
baz=77
PDAR Pinedale Array 77.38 46 P P 04 08 34.8 +0.2
PDAR Pinedale Array 77.38 46 P P 04 08 34.8 +0.2
comp=Z,1.9nm,0.7s,baz=267,slow=1.7,SNR=21
I20A Worland 77.48 44 ⇓P P 04 08 36.3 +1.4
baz=77
JLU Jordanelle 77.56 49 *e*P P 04 08 36.0 +0.5
comp=Z,4.1nm,0.8s
JLU *e*pP **pP** 04 08 47.2 +1.2
J20A Shoshoni 77.88 45 ⇓P P 04 08 38.2 +1.1
baz=78,SNR=5.3
L19A Farson 77.91 47 ⇓P P 04 08 38.2 +0.7
baz=78
ARUT Antelope Range 77.99 52 *e*P P 04 08 38.8 +0.9
ARUT *e**PP **pP** 04 08 49.5 +1.1
ARUT pmax pmax
comp=Z,1.0nm,0.3s
ARUT Antelope Range 77.99 52 *e*P P 04 08 38.8 +0.9
comp=Z,1.0nm,0.3s
ARUT *e*pP **pP** 04 08 49.5 +1.1
K20A Yellowstone Ra 78.16 46 ⇓P P 04 08 38.9 +0.1
baz=78
CCUT Cedar City 78.18 52 *e*P P 04 08 40.1 +1.1
comp=Z,5.8nm,0.9s
CCUT *e*pP **pP** 04 08 50.3 +0.8
MVU Marysvale 78.34 51 *e*P P 04 08 41.3 +1.4
comp=Z,7.1nm,1.1s
MVU *e*pP **pP** 04 08 51.7 +1.3
MSU Marysvale 78.36 51 *e*P P 04 08 41.5 +1.5
MSU *e**PP **pP** 04 08 52.0 +1.5
MSU Marysvale 78.36 51 *e*P P 04 08 41.5 +1.5
MSU *e*pP **pP** 04 08 52.0 +1.5
MALT Malatya 78.50 309 *e*P P 04 08 42.0 +1.3
MALT pmax pmax
comp=Z,4.0nm,0.8s
MALT Malatya 78.50 309 *e*P P 04 08 42.0 +1.3
comp=Z,3.8nm,0.8s
MALT Malatya 78.50 309 ⇑ *i*P P 04 08 42.4 +1.7
L20A Wamsutter 78.56 46 ⇓P P 04 08 41.2 +0.2
baz=78
J22A Midwest 78.75 44 ⇑P P 04 08 42.7 +0.7
baz=79,SNR=7.7
K21A Alcova 78.80 45 ⇑P P 04 08 42.8 +0.4
baz=79
M20A Sweetwater, Wa 78.97 46 ⇓P P 04 08 44.6 +1.3
baz=79
SRU San Rafael 79.03 50 *e*P P 04 08 44.5 +0.9
SRU *e**PP **pP** 04 08 54.5 +0.4
SRU pmax pmax
comp=Z,11nm,0.8s
SRU San Rafael 79.03 50 *e*P P 04 08 44.5 +0.9
comp=Z,11nm,0.8s
SRU *e*pP **pP** 04 08 54.5 +0.4
BEL Belsk 79.06 328 *e*P P 04 08 44.1 +0.8
L21A Rawlins 79.15 46 ⇓P P 04 08 45.1 +0.8
baz=79
N20A Spence Gulch, 79.34 47 ⇑P P 04 08 46.3 +1.0
baz=79
M21A Separation Pea 79.38 46 ⇑P P 04 08 46.2 +0.6
baz=79
P19A Cripple Cowboy 79.65 48 ⇑P P 04 08 47.6 +0.5
baz=80,SNR=7.6
RSSD Black Hills 79.66 42 *e*P P 04 08 47.5 +0.5
RSSD Black Hills 79.66 42 *e*P P 04 08 47.5 +0.5
KWP Kalwaria Pacla 79.77 325 *e*P P 04 08 47.8 +0.5
KWP pmax pmax
comp=Z,21nm,1.0s
KWP Kalwaria Pacla 79.77 325 *e*P P 04 08 47.8 +0.5
comp=Z,20nm,1.0s
KWP Kalwaria Pacla 79.77 325 ⇓ *i*P P 04 08 48.1 +0.8
KWP Kalwaria Pacla 79.77 325 *e*P P 04 08 48.0 +0.8
O20A White River Ci 79.78 48 ⇑P P 04 08 47.8 0.0
baz=80
N21A Black Mountain 79.82 47 ⇑P P 04 08 49.1 +1.1
baz=80
BUR08 Bucovina Ar. S 79.96 323 *e*P P 04 08 49.0 +0.6
BURAR Bucovina Array 79.98 323 ⇓ *i*P P 04 08 49.1 +0.6
TESR 80.01 321 ⇓ *i*P P 04 08 48.9 +0.3
S18A Hurst Farm, Bl 80.23 50 ⇓P P 04 08 50.8 +0.5
baz=80
VRI Vrincioaia 80.41 321 ⇑ *i*P P 04 08 51.6 +0.8
KOLS Kolonicke sedl 80.47 325 *e*P P 04 08 50.7 -0.3
KOLS pmax pmax
comp=Z,4.0nm,0.9s
KOLS Kolonicke sedl 80.47 325 *e*P P 04 08 50.6 -0.4
PV04 Paradox Valley 80.47 49 *e*P P 04 08 52.6 +1.2
PV04 *e*pP **pP** 04 09 03.5 +1.6
Q20A Ridgley Place, 80.49 49 ⇑P P 04 08 51.9 +0.4
baz=80
BR131 Keskin Array S 80.57 313 *e*P P 04 08 52.1 +0.2
comp=Z,3.8nm,0.6s
BR131 *e*pP **pP** 04 09 03.8 +1.4
BRTR Keskin Array B 80.57 313 P P 04 08 52.2 +0.2
BRTR Keskin Array B 80.57 313 P P 04 08 52.2 +0.2
comp=Z,5.5nm,0.6s,baz=92,slow=3.8,SNR=45
BRTR LR LR 04 46 04.1
comp=Z,17nm,19.3s,baz=64,slow=37
P21A Newcastle 80.64 48 ⇓P P 04 08 53.6 +1.1
baz=80
OJC Ojcow 80.66 327 *e*P P 04 08 52.3 +0.3
OJC Ojcow 80.66 327 *e*P P 04 08 52.6 +0.5
comp=Z,12nm,1.2s
OJC Ojcow 80.66 327 *e*P P 04 08 52.3 +0.3
WUAZ Wupatki 80.68 53 *e*P P 04 08 53.1 +0.5
comp=Z,6.5nm,1.0s
WUAZ *e*pP **pP** 04 09 03.8 +0.7
O22A Kremmling 80.78 47 ⇓P P 04 08 54.3 +1.0
baz=81
CRVS Cervenica-Dubn 80.86 325 *e*P P 04 08 52.0 -1.2
CRVS pmax pmax
comp=Z,6.0nm,1.5s
CRVS Cervenica-Dubn 80.86 325 *e*P P 04 08 52.0 -1.2
TRPA Tarpa 80.91 324 ⇓ *i*P P 04 08 54.7 +1.3
R20A Redvale 80.92 49 ⇑P P 04 08 54.9 +1.0
baz=81
ANTO Ankara 80.98 313 *e*P P 04 08 54.8 +0.8
ANTO *e**PP **pP** 04 09 05.5 +1.0
ANTO pmax pmax
comp=Z,11nm,0.6s
ANTO Ankara 80.98 313 *e*P P 04 08 54.8 +0.8
comp=Z,11nm,0.6s
ANTO *e*pP **pP** 04 09 05.5 +1.0
P22A Eagle 81.01 47 ⇑P P 04 08 55.6 +1.2
baz=81,SNR=8.0
MLR Muntele Rosu 81.06 321 ⇑ *i*P P 04 08 54.4 0.0
S20A Disappointment 81.15 49 ⇓P P 04 08 55.6 +0.4
baz=81
R21A Cimarron 81.31 49 ⇑P P 04 08 57.6 +1.6
baz=81
Q22A Crested Butte, 81.39 48 ⇓P P 04 08 57.6 +1.0
baz=81
BSEG Bad Segeberg 81.60 334 *e*P P 04 08 57.4 +0.5
BSEG pmax pmax
comp=Z,18nm,1.4s
BSEG Bad Segeberg 81.60 334 *e*P P 04 08 57.4 +0.5
comp=Z,18nm,1.4s
S21A Coal Bank Pass 81.61 49 ⇑P P 04 08 59.2 +1.5
baz=82
OKC Ostrava-Krasne 81.67 328 *e*P P 04 08 57.3 -0.1
OKC Ostrava-Krasne 81.67 328 *e*P P 04 08 57.3 -0.1
KSP Ksiaz 81.70 329 *e*P P 04 08 57.6 +0.1
KSP Ksiaz 81.70 329 *e*P P 04 08 58.0 +0.5
R22A Saguache, Gunn 81.88 48 ⇓P P 04 09 00.8 +1.7
baz=82
MORC Moravsky Berou 81.97 328 *e*P P 04 08 59.1 0.0
MORC pmax pmax
comp=Z,5.0nm,1.2s
MORC Moravsky Berou 81.97 328 *e*P P 04 08 59.1 0.0
comp=Z,5.5nm,1.2s
MORC Moravsky Berou 81.97 328 ⇓ *i*P P 04 08 59.7 +0.6
DPC Dobruska-Polom 82.06 329 *e*P P 04 09 00.0 +0.5
DPC pmax pmax
comp=Z,57nm,2.6s
DPC Dobruska-Polom 82.06 329 *e*P P 04 09 00.0 +0.5
comp=Z,57nm,2.6s
DPC Dobruska-Polom 82.06 329 *e*P P 04 09 00.4 +0.9
UPC Upice 82.07 329 *e*P P 04 09 00.3 +0.8
UPC Upice 82.07 329 *e*P P 04 09 00.3 +0.8
S22A 4UR Ranch, Cre 82.15 49 ⇑P P 04 09 02.4 +1.8
baz=82
PSZ Piszkesteto 82.30 325 *e*P P 04 09 01.3 +0.5
PSZ pmax pmax
comp=Z,4.0nm,0.8s
PSZ Piszkesteto 82.30 325 *e*P P 04 09 01.3 +0.5
comp=Z,4.3nm,0.8s
PSZ Piszkesteto 82.30 325 ⇑ *i*P P 04 09 01.8 +1.0
VYHS Vyhne 82.36 326 *e*P P 04 09 00.9 -0.1
VYHS pmax pmax
comp=Z,2.0nm,1.0s
VYHS Vyhne 82.36 326 *e*P P 04 09 00.9 -0.1
U21A Nageezi 82.47 50 ⇓P P 04 09 01.3 -0.9
baz=82
T22A Edith 82.57 49 ⇑P P 04 09 04.2 +1.5
baz=82
BRG Berggiesshubel 82.64 330 *e*(P) P 04 09 02.2 -0.2
comp=Z,5.5nm,1.1s
BRG Berggiesshubel 82.64 330 *e*P P 04 09 02.2 -0.2
BRG pmax pmax
comp=Z,6.0nm,1.1s
BRG Berggiesshubel 82.64 330 *e*P P 04 09 02.3 -0.2
comp=Z,6.0nm,1.1s
PVCC Panska Ves 82.65 330 *e*P P 04 09 03.3 +0.8
PVCC Panska Ves 82.65 330 *e*P P 04 09 03.3 +0.8
CLL Collm 82.67 331 ⇓ *i*P P 04 09 02.5 -0.1
CLL pmax pmax
comp=Z,7.0nm,0.8s
CLL Collm 82.67 331 *e*P P 04 09 02.5 -0.1
comp=Z,7.0nm,0.8s
CLL Collm 82.67 331 ⇓ *i*P P 04 09 02.5 -0.1
comp=Z,7.0nm,0.8s
W20A Ramah 82.77 52 ⇓P P 04 09 03.5 -0.2
baz=83
FBE Freiberg 82.84 331 *e*P P 04 09 04.1 +0.6
comp=Z,6.0nm,0.7s
TUC Tucson 83.04 55 *e*P P 04 09 06.0 +1.0
TUC pmax pmax

	comp=Z,9.0nm,1.7s							
TUC	**Tucson**	**83.04**	**55**	*e*P		**P**	**04 09 06.0**	**+1.0**
	comp=Z,9.1nm,1.7s							
PRU	**Pruhonice**	**83.08**	**329**	*e*P		**P**	**04 09 05.4**	**+0.7**
PRU	**Pruhonice**	**83.08**	**329**	*e*P		**P**	**04 09 05.4**	**+0.7**
NEUB	**Neuenburg**	**83.23**	**332**	*e*P		**P**	**04 09 05.8**	**+0.3**
	comp=Z,10.0nm,0.9s							
CLZ	**Clausthal**	**83.26**	**333**	*e*P		**P**	**04 09 06.0**	**+0.3**
CLZ				pmax	pmax			
	comp=Z,7.0nm,1.1s							
CLZ	**Clausthal**	**83.26**	**333**	*e*P		**P**	**04 09 06.0**	**+0.3**
	comp=Z,7.0nm,1.1s							
U23A	**El Rito**	**83.44**	**50**	⇑P		**P**	**04 09 08.9**	**+1.7**
	baz=83							
Y20A	**Horse Springs,**	**83.61**	**53**	⇑P		**P**	**04 09 09.5**	**+1.3**
	baz=84							
X21A	**Alamocita Cree**	**83.65**	**52**	⇓P		**P**	**04 09 09.6**	**+1.3**
	baz=84							
PLN	**Plauen**	**83.65**	**331**	*e*P		**P**	**04 09 07.7**	**0.0**
WERN	**Wernitzgruen**	**83.72**	**331**	*e*P		**P**	**04 09 08.2**	**+0.1**
	comp=Z,4.0nm,0.9s							
NKC	**Novy Kostel**	**83.74**	**331**	*e*P		**P**	**04 09 08.8**	**+0.6**
NKC	**Novy Kostel**	**83.74**	**331**	*e*P		**P**	**04 09 08.8**	**+0.6**
MOX	**Moxa**	**83.74**	**331**	*e*P		**P**	**04 09 08.4**	**+0.3**
MOX				pmax	pmax			
	comp=Z,3.0nm,1.2s							
MOX	**Moxa**	**83.74**	**331**	*e*P		**P**	**04 09 08.4**	**+0.3**
	comp=Z,3.0nm,1.2s							
CSS	**Prodhromos**	**83.79**	**309**	*e*P		**P**	**04 09 08.8**	**+0.1**
	comp=Z,1.3nm,0.8s							
IBBN	**Ibbenburen**	**83.83**	**334**	*e*P		**P**	**04 09 08.8**	**+0.3**
	comp=Z,10.0nm,0.6s							
ECSD	**EROS Data Cent**	**83.85**	**39**	*e*P		**P**	**04 09 08.8**	**-0.1**
	comp=Z,36nm,2.5s							
ECSD				*e*pP		**pP**	**04 09 19.6**	**+0.2**
Z20A	**Nine Sixteen R**	**83.97**	**53**	⇓P		**P**	**04 09 10.4**	**+0.5**
	baz=84,SNR=10							
Y21A	**Point of Rocks**	**84.00**	**52**	⇓P		**P**	**04 09 10.9**	**+0.8**
	baz=84							
MANZ	**Manzenberg**	**84.06**	**331**	*e*P		**P**	**04 09 10.1**	**+0.2**
	comp=Z,3.0nm,0.9s							
LAZ	**Ladron**	**84.09**	**51**	*e*P		**P**	**04 09 11.0**	**+0.5**
	comp=Z,2.9nm,1.2s							
LAZ				*e*pP		**pP**	**04 09 21.6**	**+0.6**
KHC	**Kasperske Hory**	**84.14**	**329**	*e*P		**P**	**04 09 10.6**	**+0.3**
KHC				pmax	pmax			
	comp=Z,6.0nm,1.1s							
KHC	**Kasperske Hory**	**84.14**	**329**	*e*P		**P**	**04 09 10.6**	**+0.3**
	comp=Z,5.8nm,1.1s							
KHC	**Kasperske Hory**	**84.14**	**329**	*e*P		**P**	**04 09 10.6**	**+0.3**
ANMO	**Albuquerque**	**84.17**	**51**	*e*P		**P**	**04 09 11.8**	**+1.0**
	comp=Z,6.2nm,1.0s							
ANMO				*e*pP		**pP**	**04 09 22.8**	**+1.3**
120A	**U Bar Ranch, L**	**84.31**	**54**	⇓P		**P**	**04 09 13.0**	**+1.4**
	baz=84							
GEC2	**GERESS Array S**	**84.31**	**329**	*e*P		**P**	**04 09 11.2**	**0.0**
GEC2	**GERESS Array S**	**84.31**	**329**	*e*P		**P**	**04 09 11.2**	**0.0**
GEC2	**GERESS Array S**	**84.31**	**329**	*e*P		**P**	**04 09 11.4**	**+0.2**
GERES	**GERESS Array B**	**84.31**	**329**	P		**P**	**04 09 11.3**	**0.0**
GERES	**GERESS Array B**	**84.31**	**329**	P		**P**	**04 09 11.3**	**0.0**
	comp=Z,1.6nm,0.8s,baz=45,slow=4.0,SNR=11							
WET	**Wettzell**	**84.42**	**330**	*e*P		**P**	**04 09 12.2**	**+0.5**
WET				pmax	pmax			
	comp=Z,7.0nm,1.5s							
WET	**Wettzell**	**84.42**	**330**	*e*P		**P**	**04 09 12.2**	**+0.5**
	comp=Z,7.0nm,1.5s							
Z21A	**St. Cloud Mine**	**84.45**	**53**	⇓P		**P**	**04 09 13.8**	**+1.4**
	baz=84							
Y22A	**Socorro**	**84.50**	**52**	⇓P		**P**	**04 09 13.7**	**+1.1**
	baz=84							
VTS	**Vitosha**	**84.50**	**320**	⇑*i*P		**P**	**04 09 13.5**	**+1.1**
BNM	**Barren Site**	**84.58**	**51**	*e*P		**P**	**04 09 13.5**	**+0.4**
	comp=Z,1.2nm,0.7s							
BNM				*e*pP		**pP**	**04 09 24.3**	**+0.7**
319A	**Douglas**	**84.62**	**55**	⇓P		**P**	**04 09 12.9**	**-0.2**
	baz=84							
GRF	**Grafenberg Arr**	**84.65**	**331**	*e*P		**P**	**04 09 13.2**	**+0.4**
GRF				pmax	pmax			
	comp=Z,18nm,1.3s							
GRF	**Grafenberg Arr**	**84.65**	**331**	*e*P		**P**	**04 09 13.2**	**+0.4**
	comp=Z,18nm,1.3s							
220A	**Playas Peak, P**	**84.78**	**54**	⇓P		**P**	**04 09 14.7**	**+0.7**
	baz=85							
121A	**Cookes Peak, D**	**84.87**	**53**	⇓P		**P**	**04 09 15.4**	**+0.9**
	baz=85,SNR=6.2							
RJOB	**Jochberg**	**85.56**	**329**	*e*P		**P**	**04 09 18.1**	**+0.7**
	comp=Z,6.0nm,1.1s							
222A	**Williams Famil**	**85.59**	**53**	⇑P		**P**	**04 09 19.3**	**+1.3**
	baz=85							
FUR	**Furstenfeldbru**	**85.84**	**330**	*e*P		**P**	**04 09 19.2**	**+0.4**
FUR				pmax	pmax			
	comp=Z,9.0nm,0.7s							
FUR	**Furstenfeldbru**	**85.84**	**330**	*e*P		**P**	**04 09 19.2**	**+0.4**
	comp=Z,9.0nm,0.7s							
SCHQ	**Schefferville**	**85.93**	**17**	P		**P**	**04 09 18.4**	**-0.6**
SCHQ	**Schefferville**	**85.93**	**17**	P		**P**	**04 09 18.4**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=354,slow=8.4,SNR=4.2							
STU	**Stuttgart**	**86.18**	**331**	*e*P		**P**	**04 09 20.8**	**+0.4**
	comp=Z,12nm,1.1s							
WLF	**Walferdange**	**86.58**	**334**	*e*P		**P**	**04 09 22.7**	**+0.3**
	comp=Z,16nm,1.5s							
GIVF	**Givet**	**86.69**	**335**	*e*P		**P**	**04 09 22.1**	**-0.8**
GIVF	**Givet**	**86.69**	**335**	*e*P		**P**	**04 09 22.1**	**-0.8**
GIVF	**Givet**	**86.69**	**335**	*e*P		**P**	**04 09 22.1**	**-0.8**
BFO	**Black Forest**	**86.87**	**332**	*e*P		**P**	**04 09 23.9**	**0.0**
BFO				pmax	pmax			
	comp=Z,6.0nm,1.0s							
BFO	**Black Forest**	**86.87**	**332**	*e*P		**P**	**04 09 23.9**	**0.0**
	comp=Z,6.0nm,1.0s							
BAIF	**Baives**	**86.94**	**335**	*e*P		**P**	**04 09 23.1**	**-1.0**
	comp=Z,13nm,1.1s							
BAIF	**Baives**	**86.94**	**335**	*e*P		**P**	**04 09 23.1**	**-1.0**
BAIF				pmax	pmax			
	comp=Z,13nm,1.1s							
BAIF	**Baives**	**86.94**	**335**	*e*P		**P**	**04 09 23.1**	**-1.0**
	comp=Z,13nm,1.1s							
CDF	**Champ du Feu**	**87.21**	**332**	*e*P		**P**	**04 09 25.8**	**+0.2**
PAGF	**Fort de Pagny**	**87.66**	**333**	*e*P		**P**	**04 09 28.2**	**+0.5**
SFTF	**Sexfontaines**	**88.21**	**333**	*e*P		**P**	**04 09 30.7**	**+0.4**
TXAR	**Lajitas Array**	**89.63**	**53**	P		**P**	**04 09 37.5**	**+0.1**
TXAR	**Lajitas Array**	**89.63**	**53**	P		**P**	**04 09 37.5**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=305,slow=3.2,SNR=30							
SSF	**Saint Saulge**	**89.73**	**334**	*e*P		**P**	**04 09 37.6**	**+0.2**
	comp=Z,9.9nm,1.0s							
LPL	**La Plagne**	**89.81**	**331**	*e*P		**P**	**04 09 38.3**	**+0.2**
	comp=Z,9.5nm,0.9s							
LPL	**La Plagne**	**89.81**	**331**	*e*P		**P**	**04 09 38.3**	**+0.2**
LPL				pmax	pmax			
	comp=Z,10.0nm,0.9s							
LPL	**La Plagne**	**89.81**	**331**	*e*P		**P**	**04 09 38.3**	**+0.2**
	comp=Z,9.5nm,0.9s							
LPG	**La Plagne**	**89.82**	**331**	*e*P		**P**	**04 09 38.5**	**+0.2**
LPG	**La Plagne**	**89.82**	**331**	*e*P		**P**	**04 09 38.5**	**+0.2**
LPG	**La Plagne**	**89.82**	**331**	*e*P		**P**	**04 09 38.5**	**+0.2**
AVF	**Avril sur Loir**	**90.01**	**334**	*e*P		**P**	**04 09 39.1**	**+0.4**
	comp=Z,11nm,0.9s							
BGF	**Bois d'Agland**	**90.39**	**334**	*e*P		**P**	**04 09 41.0**	**+0.5**
TCF	**Toulx Ste Croi**	**90.85**	**334**	*e*P		**P**	**04 09 43.3**	**+0.6**
	comp=Z,10nm,1.1s							
TCF	**Toulx Ste Croi**	**90.85**	**334**	*e*P		**P**	**04 09 43.3**	**+0.6**
TCF				pmax	pmax			
	comp=Z,10.0nm,1.1s							
TCF	**Toulx Ste Croi**	**90.85**	**334**	*e*P		**P**	**04 09 43.3**	**+0.6**
	comp=Z,10nm,1.1s							
VIVF	**Saint-Julien-l**	**91.16**	**332**	*e*P		**P**	**04 09 45.1**	**+0.9**
VIVF	**Saint-Julien-l**	**91.16**	**332**	*e*P		**P**	**04 09 45.1**	**+0.9**
VIVF	**Saint-Julien-l**	**91.16**	**332**	*e*P		**P**	**04 09 45.1**	**+0.9**
FRF	**La Foret Royal**	**91.47**	**330**	*e*P		**P**	**04 09 46.5**	**+0.9**
	comp=Z,43nm,1.2s							
FRF	**La Foret Royal**	**91.47**	**330**	*e*P		**P**	**04 09 46.5**	**+0.9**
FRF				pmax	pmax			
	comp=Z,43nm,1.2s							
FRF	**La Foret Royal**	**91.47**	**330**	*e*P		**P**	**04 09 46.5**	**+0.9**
	comp=Z,43nm,1.2s							
LMR	**La Mourre**	**91.71**	**330**	*e*P		**P**	**04 09 47.9**	**+1.2**
	comp=Z,51nm,1.2s							
LMR	**La Mourre**	**91.71**	**330**	*e*P		**P**	**04 09 47.9**	**+1.2**
LMR				pmax	pmax			
	comp=Z,51nm,1.2s							
LMR	**La Mourre**	**91.71**	**330**	*e*P		**P**	**04 09 47.9**	**+1.2**
	comp=Z,51nm,1.2s							
CAF	**Calviac**	**92.08**	**333**	*e*P		**P**	**04 09 48.4**	**0.0**
	comp=Z,7.9nm,0.9s							
LFF	**La Frestale**	**92.54**	**334**	*e*P		**P**	**04 09 51.3**	**+0.8**
	comp=Z,32nm,1.0s							
ESDC	**Sonseca Array**	**98.82**	**335**	P		**P**	**04 10 19.1**	**-0.2**

ESDC	**Sonseca Array**	**98.82**	**335**	P		**P**	**04 10 19.1**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=135,slow=34,SNR=3.3							
ESDC				LR	LR		04 58 53.8	
	comp=Z,53nm,18.3s,baz=20,slow=38							
TOA0	**Torodi Ar. Sit**	**119.04**	**316**	*e*PKPdf		**PKPdf**	**04 15 27.9**	**-0.6**
TORD	**Torodi Ar. Bea**	**119.04**	**316**	PKP		**PKPdf**	**04 15 27.3**	**-1.2**
TORD	**Torodi Ar. Bea**	**119.04**	**316**	PKP		**PKPdf**	**04 15 27.3**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=133,slow=0.7,SNR=4.5							
SAML	**Samuel**	**143.94**	**48**	*e*PKPdf		**PKPdf**	**04 16 15.2**	**0.0**
LPAZ	**La Paz**	**145.96**	**63**	*e*PKPbc		**PKPdf**	**04 16 19.6**	**+0.3**
LPAZ	**La Paz**	**145.96**	**63**	PKPbc		**PKPdf**	**04 16 19.6**	**+0.3**
	comp=Z,6.4nm,0.9s,baz=4.5,slow=7.0,SNR=19							
SIV	**San Ignacio**	**150.63**	**54**	PKPbc		**PKPbc**	**04 16 31.6**	**-0.1**
SIV	**San Ignacio**	**150.63**	**54**	PKPbc		**PKPbc**	**04 16 31.6**	**-0.1**
	comp=Z,4.9nm,0.8s,baz=296,slow=2.4,SNR=18							

ATH ***26*** *03:57:56.7,38.07N×27.06E,h5km±3km,MD3.1/3*
ISK ***26*** *03:57:58.6,38.07N×26.86E,h6km,MD3.4*
ISCJB ***26*** *03:57:59.3±0.5,38.08N±0.02×26.88E±0.03,h4km±4km, Error ellipse: s-maj=4.1km s-min=3.3km az=150.7*
CSEM ***26*** *03:57:59.2±0.2,38.06N×26.83E,h5km,MD3.2,Error ellipse: s-maj=4.1km s-min=3.1km az=70.0*
DDA ***26*** *03:57:60.0,38.13N×26.91E,h10km,MD3.2*

ISC 26 03:57:59.6±1.0, 38.07N±0.02×26.90E±0.02, h10km±9km, n70, σ0.76/95, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BLCB	**Balcova**	**0.33**	**20**		PG	**Pg**	**03 58 05.8**	**-0.4**
BLCB					*e*SG	**Sg**	**03 58 10.4**	**-0.3**
BLCB	**Balcova**	**0.33**	**20**		*i* Pg	**Pg**	**03 58 05.8**	**-0.4**
BLCB					*i* Sg	**Sg**	**03 58 10.4**	**-0.3**
URLA	**Izmir**	**0.38**	**321**		*i* P	**Pg**	**03 58 06.7**	**-0.3**
URLA					*i* S	**Sg**	**03 58 12.1**	**+0.2**
URLA	**Izmir**	**0.38**	**321**		*i* P	**Pg**	**03 58 06.7**	**-0.3**
URLA					*i* S	**Sg**	**03 58 12.1**	**+0.2**
IZM	**Izmir**	**0.43**	**41**		PG	**Pg**	**03 58 08.2**	**+0.1**
IZM					*e*SG	**Sg**	**03 58 14.3**	**+0.4**
IZM	**Izmir**	**0.43**	**41**		*i* Pg	**Pg**	**03 58 08.2**	**+0.1**
IZM					*e*Sg	**Sg**	**03 58 14.3**	**+0.4**
GCAM	**G?zelcaml?**	**0.46**	**144**		*i* P	**Pb**	**03 58 10.0**	**+0.3**
GCAM					*i* S	**Sb**	**03 58 17.0**	**+0.5**
GCAM	**G?zelcaml?**	**0.46**	**144**		*i* P	**Pb**	**03 58 10.0**	**+0.3**
CHOS	**Chios island**	**0.73**	**296**		*e*PB	**Pg**	**03 58 13.0**	**-0.8**
CHOS					*e*SB	**Sb**	**03 58 25.1**	**+0.4**
CHOS	**Chios island**	**0.73**	**296**		*e*Pb	**Pg**	**03 58 13.0**	**-0.8**
CHOS					*e*Sb	**Sb**	**03 58 25.1**	**+0.4**
AYDN	**Tasoluk**	**0.88**	**117**		*i* P	**Pn**	**03 58 17.7**	**-0.4**
AYDN					*i* S	**Sn**	**03 58 30.1**	**-0.8**
AYDN	**Tasoluk**	**0.88**	**117**		*i* P	**Pn**	**03 58 17.7**	**-0.4**
AYDN					*i* S	**Sn**	**03 58 30.1**	**-0.8**
MLSB	**Milas**	**1.04**	**138**		*e*PG	**Pg**	**03 58 19.4**	**-0.2**
MLSB					*e*SG	**Sn**	**03 58 34.6**	**-0.3**
MLSB	**Milas**	**1.04**	**138**		*e*Pg	**Pg**	**03 58 19.4**	**-0.2**
MLSB					*e*Sg	**Sn**	**03 58 34.6**	**-0.3**
BODT	**Bodrum**	**1.06**	**162**		*e*PG	**Pg**	**03 58 19.3**	**-0.6**
BODT	**Bodrum**	**1.06**	**162**		*e*Pg	**Pg**	**03 58 19.3**	**-0.6**
AKS	**Akhisar**	**1.08**	**41**		*e*PN	**Pb**	**03 58 20.6**	**+0.2**
AKS	**Akhisar**	**1.08**	**41**		*e*Pn	**Pb**	**03 58 20.6**	**+0.2**
AKHS	**Akhisar**	**1.08**	**41**		*i* P	**Pg**	**03 58 20.2**	**-0.1**
AKHS					*i* S	**Sg**	**03 58 34.4**	**0.0**
AKHS	**Akhisar**	**1.08**	**41**		*i* P	**Pg**	**03 58 20.2**	**-0.1**
AKHS					*i* S	**Sg**	**03 58 34.4**	**0.0**
PRK	**Paraskevi**	**1.27**	**338**		*e*PB	**Pn**	**03 58 22.2**	**-1.2**
PRK					*e*SB	**Sg**	**03 58 40.4**	**-0.1**
PRK	**Paraskevi**	**1.27**	**338**		*e*Pb	**Pn**	**03 58 22.2**	**-1.2**
PRK					*e*Sb	**Sg**	**03 58 40.4**	**-0.1**
MANT	**Manisa**	**1.37**	**72**		*i* P	**Pb**	**03 58 25.8**	**+0.3**
MANT					*i* S	**Sb**	**03 58 41.9**	**-1.3**
MANT	**Manisa**	**1.37**	**72**		*i* P	**Pb**	**03 58 25.8**	**+0.3**
MANT					*i* S	**Sb**	**03 58 41.9**	**-1.3**
YER	**Yerkesik**	**1.44**	**130**		*e*PN	**Pn**	**03 58 25.8**	**0.0**
YER	**Yerkesik**	**1.44**	**130**		*e*Pn	**Pn**	**03 58 25.8**	**0.0**
DAT	**Datca**	**1.45**	**158**		*e*PN	**Pn**	**03 58 25.7**	**-0.2**
DAT	**Datca**	**1.45**	**158**		*e*Pn	**Pn**	**03 58 25.7**	**-0.2**
KULA	**Kula-Manisa**	**1.46**	**72**		*e*PN	**Pb**	**03 58 26.6**	**-0.2**
KULA	**Kula-Manisa**	**1.46**	**72**		*e*Pn	**Pb**	**03 58 26.6**	**-0.2**
APE	**Apeiranthos**	**1.48**	**228**		*e*PN	**Pn**	**03 58 25.2**	**-1.1**
APE	**Apeiranthos**	**1.48**	**228**		*e*PB	**Pn**	**03 58 26.4**	**+0.1**
APE					*e*SB	**Sg**	**03 58 48.6**	**+1.5**
APE	**Apeiranthos**	**1.48**	**228**		*e*Pn	**Pn**	**03 58 25.2**	**-1.1**
APE	**Apeiranthos**	**1.48**	**228**		*e*Pb	**Pn**	**03 58 26.4**	**+0.1**
APE					*e*Sb	**Sg**	**03 58 48.6**	**+1.5**
DENT	**Denizli**	**1.72**	**100**		*e*PN	**Pn**	**03 58 30.2**	**+0.6**
DENT	**Denizli**	**1.72**	**100**		*e*Pn	**Pn**	**03 58 30.2**	**+0.6**
DEMI	**Demirci**	**1.72**	**55**		*i* P	**Pg**	**03 58 32.5**	**-0.2**
DEMI					*i* S	**Sg**	**03 58 54.7**	**-0.3**
DEMI	**Demirci**	**1.72**	**55**		*i* P	**Pg**	**03 58 32.5**	**-0.2**
DEMI					*i* S	**Sg**	**03 58 54.7**	**-0.3**
BALB	**Balikesir**	**1.75**	**26**		*e*PN	**Pn**	**03 58 30.7**	**+0.8**
BALB	**Balikesir**	**1.75**	**26**		*e*Pn	**Pn**	**03 58 30.7**	**+0.8**
BALY	**Balya**	**1.76**	**18**		*i* P	**Pn**	**03 58 29.2**	**-1.0**
BALY					*i* S	**Sg**	**03 58 55.8**	**-0.4**
BALY	**Balya**	**1.76**	**18**		*i* P	**Pn**	**03 58 29.2**	**-1.0**
BALY					*i* S	**Sg**	**03 58 55.8**	**-0.4**
EZN	**Ezine**	**1.81**	**346**		*e*PN	**Pn**	**03 58 31.3**	**+0.5**
EZN	**Ezine**	**1.81**	**346**		*e*Pn	**Pn**	**03 58 31.3**	**+0.5**
DALY	**Dalyan (Mu˘la**	**1.88**	**131**		*e*PN	**Pn**	**03 58 32.1**	**+0.4**
DALY	**Dalyan (Mu˘la**	**1.88**	**131**		*e*Pn	**Pn**	**03 58 32.1**	**+0.4**
DST	**Dursunbey**	**2.04**	**41**		*e*PN	**Pn**	**03 58 34.7**	**+0.7**
DST	**Dursunbey**	**2.04**	**41**		*e*Pn	**Pn**	**03 58 34.7**	**+0.7**
GONE	**Gonen-Balikesi**	**2.07**	**17**		*e*PN	**Pn**	**03 58 35.5**	**+1.2**
GONE	**Gonen-Balikesi**	**2.07**	**17**		*e*Pn	**Pn**	**03 58 35.5**	**+1.2**
KHL	**Karahalli**	**2.08**	**82**		*e*PN	**Pn**	**03 58 35.3**	**+0.6**
KHL	**Karahalli**	**2.08**	**82**		*e*Pn	**Pn**	**03 58 35.3**	**+0.6**
FETY	**Fethiye**	**2.25**	**129**		*e*PN	**Pn**	**03 58 37.9**	**+0.9**
FETY	**Fethiye**	**2.25**	**129**		*e*Pn	**Pn**	**03 58 37.9**	**+0.9**
KRBG	**Karabiga-Canak**	**2.34**	**7**		*e*PN	**Pn**	**03 58 39.2**	**+1.1**
KRBG	**Karabiga-Canak**	**2.34**	**7**		*e*Pn	**Pn**	**03 58 39.2**	**+1.1**
GELI	**Tayfur-Gelibol**	**2.35**	**352**		*e*PN	**Pn**	**03 58 38.4**	**+0.2**
GELI	**Tayfur-Gelibol**	**2.35**	**352**		*e*Pn	**Pn**	**03 58 38.4**	**+0.2**
EDC	**Edincik**	**2.39**	**18**		*e*PN	**Pn**	**03 58 40.3**	**+1.4**
EDC	**Edincik**	**2.39**	**18**		*e*Pn	**Pn**	**03 58 40.3**	**+1.4**
TVSB	**Tavsanli**	**2.43**	**55**		*e*PN	**Pn**	**03 58 40.0**	**+0.5**
TVSB	**Tavsanli**	**2.43**	**55**		*e*Pn	**Pn**	**03 58 40.0**	**+0.5**
KCTX	**Karacabey (Bur**	**2.47**	**27**		*e*PN	**Pn**	**03 58 40.8**	**+0.9**
KCTX	**Karacabey (Bur**	**2.47**	**27**		*e*Pn	**Pn**	**03 58 40.8**	**+0.9**
SMTH	**Samothraki Isl**	**2.62**	**337**		*e*PN	**Pn**	**03 58 43.8**	**+1.8**
SMTH	**Samothraki Isl**	**2.62**	**337**		*e*Pn	**Pn**	**03 58 43.8**	**+1.8**
ALT	**Altintas**	**2.70**	**68**		*e*PN	**Pn**	**03 58 44.0**	**+0.8**
ALT	**Altintas**	**2.70**	**68**		*e*Pn	**Pn**	**03 58 44.0**	**+0.8**
GULT	**Gulveren**	**3.67**	**49**		*e*PN	**Pn**	**03 58 58.1**	**+1.6**
GULT	**Gulveren**	**3.67**	**49**		*e*Pn	**Pn**	**03 58 58.1**	**+1.6**

IDC 26 04:02:36.8±3.9, 5.92S×103.60W, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.6/15, mbtmp3.5/3, MS3.9/4, Ms1 3.8/4, ms1mx3.3/19, Error ellipse: s-maj=220.8km s-min=67.0km az=95.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LPIG	**La Paz**	**30.55**	**348**	LR		LR	04 17 41.2	
	comp=Z,13nm,21.6s,baz=193,slow=30							
TXAR	**Lajitas Array**	**35.05**	**360**	LR		LR	04 21 27.0	
	comp=Z,69nm,19.9s,baz=130,slow=32							
PLCA	**Paso Flores**	**45.55**	**145**	LR		LR	04 26 21.6	
	comp=Z,144nm,18.4s,baz=349,slow=31							
NVAR	**Mina Array Bea**	**46.19**	**344**	P		P	04 11 02.4	**-1.4**
	0.6nm,0.7s,baz=178,slow=12,SNR=3.5							
PDAR	**Pinedale Array**	**48.76**	**354**	P		P	04 11 24.8	**+1.0**
	0.2nm,0.7s,baz=154,slow=11,SNR=2.5							
ULM	**Lac du Bonnet**	**56.34**	**6**	LR		LR	04 35 42.7	
	comp=Z,65nm,18.1s,baz=332,slow=35							
PMSA	**Palmer Station**	**65.08**	**162**	LR		LR	04 36 26.0	
	comp=Z,253nm,18.4s,baz=167,slow=31							
YKA	**Yellowknife Ar**	**68.74**	**355**	P		P	04 13 42.3	**+0.1**
	0.6nm,0.8s,baz=164,slow=6.2,SNR=13							
CMAR	**Chiang Mai Arr**	**154.73**	**302**	PKPbc		PKPbc	04 22 40.9	**-0.1**
	0.8nm,0.6s,baz=254,slow=1.2,SNR=6.0							

IDC 26 04:04:24.2±2.6, 22.53S×68.77W, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.5/16, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=56.8km s-min=52.8km az=36.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LPAZ	**La Paz**	**6.24**	**6**			Pn	04 05 59.0	**+0.8**
	0.3nm,0.3s,baz=200,slow=6.5,SNR=16							
SIV	**San Ignacio**	**9.75**	**50**	Pn		Pn	04 06 44.8	**-1.0**
	0.7nm,0.3s,baz=253,slow=13,SNR=21							
TORD	**Torodi Ar. Bea**	**77.58**	**70**	P		P	04 16 23.1	**+0.4**
	0.1nm,0.5s,baz=249,slow=5.8,SNR=7.0							
YKA	**Yellowknife Ar**	**92.20**	**341**	P		P	04 17 34.9	**-0.5**
	0.1nm,0.6s,baz=130,slow=4.3,SNR=6.1							

DDA 26 04:07:00.5, 38.38N×41.90E, h7km, MD2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TATV	**Tatvan**	**0.31**	**66**	*i* P		Pg	04 07 07.7	**+0.7**
TATV				*i* S		Sg	04 07 12.9	**-1.3**
BEST	**Besiri**	**0.70**	**226**	*i* P		Pn	04 07 16.5	**-0.5**
BEST				*i* S		Sb	04 07 25.2	**+0.1**
MARD	**Mardin**	**1.39**	**220**	*i* P		Pn	04 07 26.6	**+0.1**
MARD				*i* S		Sg	04 07 46.0	**+0.4**

CSEM ***26*** *04:07:54.1,42.54N×13.29E,h10km,MD1.9/7,After ROM*
ROM 26 04:07:54.1±0.2, 42.54N×13.29E, h10km±1km, Md1.9/7, Ml1.2/4, 6C-2D, Error ellipse: s-maj=4.2km s-min=1.5km az=24.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CAMP	**Campotosto**	**0.09**	**93**	⇑*i* Pg		Pg	04 07 57.1	**+0.3**
CAMP						Sg	04 07 59.1	**+0.4**
	22nm,0.3s							
CAMP	**Campotosto**	**0.09**	**93**	⇑*i* Pg		Pg	04 07 57.1	**+0.3**
CAMP						Sg	04 07 59.1	**+0.4**
	22nm,0.3s							
LNSS	**Leonessa**	**0.19**	**289**	⇑*i* Pg		Pg	04 07 58.8	**+0.5**
LNSS						Sg	04 08 02.3	**+1.1**
	113nm,0.2s							
LNSS	**Leonessa**	**0.19**	**289**	⇑*i* Pg		Pg	04 07 58.8	**+0.5**
LNSS						Sg	04 08 02.3	**+1.1**
	113nm,0.2s							
TERO	**Teramo**	**0.25**	**70**	⇑*i* Pg		Pg	04 07 59.5	**+0.2**
TERO						Sg	04 08 03.5	**+0.7**
	19nm,0.2s							
TERO	**Teramo**	**0.25**	**70**	⇑*i* Pg		Pg	04 07 59.5	**+0.2**
TERO						Sg	04 08 03.5	**+0.7**
	19nm,0.2s							
NRCA	**Norcia**	**0.32**	**337**	⇓*i* Pg		Pg	04 08 00.9	**+0.2**
NRCA	

IDC 26 04:51:52.5±7.8, 6°90'S×106°12'W, h0km, mb3.6/5, mb1 4.0/5, mb1mx3.8/15, mbtmp3.6/5, MS3.6/10, Ms1 3.6/10, ms1mx3.4/18, Error ellipse: s-maj=228.4km s-min=114.9km az=119.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**31.08**	**353**	LR	LR	05 06 59.5	
	comp=Z,16nm,21.6s,baz=194,slow=29						
RKT	**Rikitea**	**32.09**	**237**	*e*LR	LR	05 06 50.9	
	339nm,29.5s						
RKT				*e*T	T	05 31 11.8	
	2.4nm,0.3s						
TXAR	**Lajitas Array**	**36.10**	**4**	P	P	04 58 56.8	+0.4
	0.4nm,0.9s,baz=186,slow=7.2,SNR=2.5						
TXAR				LR	LR	05 11 15.7	
	comp=Z,62nm,19.6s,baz=25,slow=32						
LPAZ	**La Paz**	**38.30**	**108**	LR	LR	05 11 50.3	
	comp=Z,62nm,21.6s,baz=268,slow=31						
PPT	**Papeete**	**43.67**	**252**	LR	LR	05 14 09.7	
	comp=Z,342nm,18.9s,baz=131,slow=31						
PPT2	**Papeete2**	**43.67**	**252**	*e*LR	LR	05 11 51.3	
	368nm,28.5s						
PLCA	**Paso Flores**	**46.27**	**142**	LR	LR	05 15 20.7	
	comp=Z,270nm,20.3s,baz=351,slow=30						
NVAR	**Mina Array Bea**	**46.50**	**347**	P	P	05 00 21.1	-0.8
	0.8nm,0.9s,baz=163,slow=10,SNR=4.9						
NVAR				LR	LR	05 16 34.7	
	comp=Z,102nm,18.2s,baz=359,slow=32						
PDAR	**Pinedale Array**	**49.53**	**357**	P	P	05 00 45.4	0.0
	0.4nm,0.9s,baz=177,slow=5.4,SNR=2.8						
PDAR				LR	LR	05 18 15.1	
	comp=Z,28nm,21.4s,baz=1.7,slow=32						
CPUP	**Villa Florida**	**50.23**	**119**	LR	LR	05 18 44.7	
	comp=Z,43nm,18.6s,baz=262,slow=32						
BDFB	**Brasilia**	**57.50**	**104**	LR	LR	05 25 56.4	
	comp=Z,45nm,19.2s,baz=343,slow=36						
ULM	**Lac du Bonnet**	**57.61**	**8**	LR	LR	05 25 01.4	
	comp=Z,53nm,18.6s,baz=132,slow=34						
YKA	**Yellowknife Ar**	**69.50**	**356**	P	P	05 03 02.3	-0.2
	1.7nm,1.0s,baz=164,slow=6.1,SNR=11						
ILAR	**Eielson Array**	**77.62**	**343**	P	P	05 03 50.6	+0.3
	0.6nm,1.0s,baz=161,slow=4.8,SNR=5.2						

*CSEM **26** 05:04:36.5±0.1, 49°.97N×0°.79E, h1km, ML2.2, Error ellipse: s-maj=4.6km s-min=2.1km az=4.0, Mining explosion.*
*BGS **26** 05:04:38.7±1.2, 50°.01N×0°.73E, h5km, ML2.2*
UCC 26 05:04:30.9±2.5, 49°.66N×1°.23E, h1km, ML1.9, 5C, Suspected Mining explosion., France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELSH	**Elham, Standar**	**1.49**	**358**	*e*P	Pg	05 04 59.7	+0.3
ELSH				AML	AML	05 05 20.6	
	comp=E,42nm,0.2s						
ELSH				AML	AML	05 05 25.0	
	comp=N,43nm,0.4s						
ELSH	**Elham, Standar**	**1.49**	**358**	P	Pg	05 04 59.7	+0.3
ELSH				AML	AML	05 05 20.6	
	comp=N,42nm,0.2s						
ELSH				AML	AML	05 05 25.0	
	comp=N,43nm,0.4s						
ELSH	**Elham, Standar**	**1.49**	**358**	*e*P	Pg	05 04 59.7	+0.3
ELSH				AML	AML	05 05 20.6	
	comp=E,42nm,0.2s						
ELSH				AML	AML	05 05 25.0	
	comp=N,43nm,0.4s						
ELSH	**Elham, Standar**	**1.49**	**358**	*e*P	Pg	05 04 59.7	+0.3
BZEV	**Zevekote**	**1.82**	**35**	P	Pg	05 05 09.0	+3.2
BBOU	**Bougnies**	**1.90**	**66**	P	Pg	05 05 12.5	+5.3
BSKQ	**Steenkerk**	**2.08**	**61**	P	Pg	05 05 14.0	+3.2
BSKQ				S	Sg	05 05 43.1	+5.4
	comp=N,6.7nm,0.2s						
BRQR	**Ronqui¨ere**	**2.15**	**63**	P	Pg	05 05 15.3	+3.3
JDG	**Jersey Dam (Ga**	**2.19**	**259**	*e*P	Pb	05 05 11.7	+0.5
JDG	**Jersey Dam (Ga**	**2.19**	**259**	P	Pb	05 05 11.7	+0.5
JDG	**Jersey Dam (Ga**	**2.19**	**259**	*e*P	Pb	05 05 11.7	+0.5
JDG	**Jersey Dam (Ga**	**2.19**	**259**	*e*P	Pb	05 05 11.7	+0.4
JDC	**Jersey Dam (Cr**	**2.19**	**259**	*e*P	Pb	05 05 11.9	+0.6
JDC	**Jersey Dam (Cr**	**2.19**	**259**	P	Pb	05 05 11.9	+0.6
JDC	**Jersey Dam (Cr**	**2.19**	**259**	*e*P	Pb	05 05 11.9	+0.6
JDC	**Jersey Dam (Cr**	**2.19**	**259**	*e*P	Pb	05 05 11.9	+0.6
DOU	**Dourbes**	**2.22**	**77**	⇑P	Pg	05 05 17.6	+4.1
DOU				S	Sg	05 05 49.0	+6.8
	comp=N,7.0nm,0.4s						
DOU	**Dourbes**	**2.22**	**77**	P	Pg	05 05 17.5	+4.1
DOU				S	Sg	05 05 49.0	+6.8
	comp=N,7.0nm,0.4s						
JSA	**Saint Aubin**	**2.27**	**259**	*e*P	Pb	05 05 13.0	+0.4
JSA				*e*S	Sn	05 05 38.1	0.0
JSA				AML	AML	05 05 46.0	
	comp=E,17nm,0.4s						
JSA				AML	AML	05 05 50.5	
	comp=N,20nm,0.8s						
JSA	**Saint Aubin**	**2.27**	**259**	P	Pb	05 05 13.0	+0.4
JSA				S	Sn	05 05 38.1	0.0
JSA				AML	AML	05 05 46.0	
	comp=N,17nm,0.4s						
JSA				AML	AML	05 05 50.5	
	comp=N,20nm,0.8s						
JSA	**Saint Aubin**	**2.27**	**259**	*e*P	Pb	05 05 13.0	+0.4
JSA				*e*S	Sn	05 05 38.1	0.0
JSA				AML	AML	05 05 46.0	
	comp=E,17nm,0.4s						
JSA				AML	AML	05 05 50.5	
	comp=N,20nm,0.8s						
JSA	**Saint Aubin**	**2.27**	**259**	*e*P	Pb	05 05 13.0	+0.4
JSA				*e*S	Sn	05 05 38.1	0.0
WOL	**Wolverton**	**2.27**	**317**	*e*P	Pn	05 05 10.0	+0.4
WOL				AML	AML	05 05 43.2	
	comp=N,25nm,0.4s						
WOL				AML	AML	05 05 48.0	
	comp=E,26nm,0.3s						
WOL	**Wolverton**	**2.27**	**317**	P	Pn	05 05 10.0	+0.4
WOL				AML	AML	05 05 43.2	
	comp=E,25nm,0.4s						
WOL				AML	AML	05 05 48.0	
	comp=E,26nm,0.3s						
WOL	**Wolverton**	**2.27**	**317**	*e*P	Pn	05 05 10.0	+0.4
WOL				AML	AML	05 05 43.2	
	comp=N,25nm,0.4s						
WOL				AML	AML	05 05 48.0	
	comp=E,26nm,0.3s						
WOL	**Wolverton**	**2.27**	**317**	*e*P	Pn	05 05 10.0	+0.4
UCC	**Uccle**	**2.31**	**59**	⇑P	Pg	05 05 16.9	+1.8
UCC	**Uccle**	**2.31**	**59**	P	Pg	05 05 16.8	+1.7
SKP1	**Kophill**	**2.43**	**329**	*e*P	Pn	05 05 12.4	+0.6
SKP1	**Kophill**	**2.43**	**329**	P	Pn	05 05 12.4	+0.6
SKP1	**Kophill**	**2.43**	**329**	*e*P	Pn	05 05 12.4	+0.6
SKP1	**Kophill**	**2.43**	**329**	*e*P	Pn	05 05 12.4	+0.6
BGES	**Gesves**	**2.59**	**72**	P	Pg	05 05 22.1	+1.5
BGES				S	Sg	05 05 57.1	+3.0
SWN1	**Swindon**	**2.67**	**315**	*e*P	Pn	05 05 15.5	+0.4
SWN1				AML	AML	05 05 58.4	
	comp=E,21nm,0.3s						
SWN1				AML	AML	05 06 03.2	
	comp=N,26nm,0.5s						
SWN1	**Swindon**	**2.67**	**315**	P	Pn	05 05 15.5	+0.4
SWN1				AML	AML	05 05 58.4	
	comp=N,21nm,0.3s						
SWN1				AML	AML	05 06 03.2	
	comp=N,26nm,0.5s						
SWN1	**Swindon**	**2.67**	**315**	*e*P	Pn	05 05 15.5	+0.4
SWN1				AML	AML	05 05 58.4	
	comp=E,21nm,0.3s						
SWN1				AML	AML	05 06 03.2	
	comp=N,26nm,0.5s						
SWN1	**Swindon**	**2.67**	**315**	*e*P	Pn	05 05 15.5	+0.4
BCLA	**Clavier**	**2.73**	**72**	⇑P	Pg	05 05 24.0	+0.7
BCLA	**Clavier**	**2.73**	**72**	P	Pg	05 05 24.0	+0.7
BMOL	**Mol**	**2.91**	**56**	P	Pb	05 05 24.9	+1.3
BSTI	**Sart Tilman**	**2.94**	**70**	P	Pg	05 05 26.7	-0.5
BLCH	**La Chartreuse**	**2.98**	**69**	P	Pg	05 05 26.9	-1.0
SSW	**Stow on the Wo**	**3.02**	**321**	*e*P	Pn	05 05 20.5	+0.7
SSW	**Stow on the Wo**	**3.02**	**321**	P	Pn	05 05 20.5	+0.7
SSW	**Stow on the Wo**	**3.02**	**321**	*e*P	Pn	05 05 20.5	+0.7
SSW	**Stow on the Wo**	**3.02**	**321**	*e*P	Pn	05 05 20.5	+0.6
BEBN	**Eben Emael**	**3.07**	**67**	⇑P	Pg	05 05 29.7	-0.1
BEBN	**Eben Emael**	**3.07**	**67**	P	Pg	05 05 29.6	-0.2
LKLB	**Kalborn**	**3.19**	**80**	P	Pg	05 05 31.2	-0.8
WLF	**Walferdange**	**3.20**	**88**	P	Pg	05 05 31.9	-0.4
WLF				S	Sg	05 06 15.2	+1.6
WLF	**Walferdange**	**3.20**	**88**	P	Pg	05 05 31.8	-0.4
WLF				S	Sg	05 06 15.2	+1.5
HGN	**Heimansgroeve**	**3.21**	**68**	*e*Pg	Pb	05 05 30.5	+1.7
	comp=N,7.8nm,0.1s						
HGN				*e*Sg	Pg	05 05 32.6	+0.1
HGN	**Heimansgroeve**	**3.21**	**68**	*e*Pg	Pb	05 05 30.5	+1.8
	comp=N,7.8nm,0.1s						
MEM	**Membach**	**3.22**	**71**	⇑P	Pb	05 05 30.6	+1.8
MEM	**Membach**	**3.22**	**71**	P	Pb	05 05 30.6	+1.8
LVIA	**Vianden**	**3.23**	**83**	P	Pg	05 05 32.2	-0.7
MCH1	**Michaelchurch**	**3.56**	**313**	*e*P	Pn	05 05 26.4	-0.7
MCH1				AML	AML	05 06 26.0	
	comp=N,6.1nm,0.4s						
MCH1				AML	AML	05 06 28.5	
	comp=E,6.2nm,0.4s						
MCH1	**Michaelchurch**	**3.56**	**313**	P	Pn	05 05 26.4	-0.7
MCH1				AML	AML	05 06 26.0	
	comp=E,6.1nm,0.4s						
MCH1				AML	AML	05 06 28.5	
	comp=E,6.2nm,0.4s						
MCH1	**Michaelchurch**	**3.56**	**313**	*e*P	Pn	05 05 26.4	-0.7
MCH1				AML	AML	05 06 26.0	
	comp=N,6.1nm,0.4s						
MCH1				AML	AML	05 06 28.5	
	comp=E,6.2nm,0.4s						
MCH1	**Michaelchurch**	**3.56**	**313**	*e*P	Pn	05 05 26.4	-0.8
HLM1	**Long Mynd**	**3.86**	**319**	*e*P	Pn	05 05 31.0	-0.3
HLM1				AML	AML	05 06 13.1	
	comp=E,5.3nm,0.2s						
HLM1				AML	AML	05 06 15.8	
	comp=N,3.2nm,0.2s						
HLM1	**Long Mynd**	**3.86**	**319**	P	Pn	05 05 31.0	-0.3
HLM1				AML	AML	05 06 13.1	
	comp=N,5.3nm,0.2s						
HLM1				AML	AML	05 06 15.8	
	comp=N,3.2nm,0.2s						
HLM1	**Long Mynd**	**3.86**	**319**	*e*P	Pn	05 05 31.0	-0.3
HLM1				AML	AML	05 06 13.1	
	comp=E,5.3nm,0.2s						
HLM1				AML	AML	05 06 15.8	
	comp=N,3.2nm,0.2s						
HLM1	**Long Mynd**	**3.86**	**319**	*e*P	Pn	05 05 31.0	-0.4
HTL	**Hartland**	**3.90**	**292**	*e*P	Pn	05 05 31.8	0.0
HTL	**Hartland**	**3.90**	**292**	P	Pn	05 05 31.8	0.0
HTL	**Hartland**	**3.90**	**292**	*e*P	Pn	05 05 31.8	0.0
HTL	**Hartland**	**3.90**	**292**	*e*P	Pn	05 05 31.8	0.0
	comp=N,16nm,3.2s						
WPM1	**Penmaenmawr**	**4.82**	**320**	*e*P	Pn	05 05 43.9	-0.7
WPM1	**Penmaenmawr**	**4.82**	**320**	P	Pn	05 05 43.9	-0.7
WPM1	**Penmaenmawr**	**4.82**	**320**	*e*P	Pn	05 05 43.9	-0.7
WPM1	**Penmaenmawr**	**4.82**	**320**	*e*P	Pn	05 05 43.9	-0.7
WLF1	**Llynfaes**	**5.05**	**318**	*e*P	Pn	05 05 47.1	-0.6
WLF1				AML	AML	05 06 06.1	
	comp=N,2.5nm,0.8s						
WLF1				AML	AML	05 06 08.0	
	comp=E,2.6nm,0.7s						
WLF1	**Llynfaes**	**5.05**	**318**	P	Pn	05 05 47.1	-0.6
WLF1				AML	AML	05 06 06.1	
	comp=E,2.5nm,0.8s						
WLF1				AML	AML	05 06 08.0	
	comp=E,2.6nm,0.7s						
WLF1	**Llynfaes**	**5.05**	**318**	*e*P	Pn	05 05 47.1	-0.6
WLF1				AML	AML	05 06 06.1	
	comp=N,2.5nm,0.8s						
WLF1				AML	AML	05 06 08.0	
	comp=E,2.6nm,0.7s						
WLF1	**Llynfaes**	**5.05**	**318**	*e*P	Pn	05 05 47.1	-0.6
	comp=E,7.9nm,2.6s						

*ISK **26** 05:07:10.2, 36°.25N×29°.60E, h14km, MD2.9*
*CSEM **26** 05:07:12.9±0.5, 36°.42N×29°.50E, h10km, MD2.7, Error ellipse: s-maj=11.5km s-min=9.0km az=159.0*
*DDA **26** 05:07:13.4, 36°.50N×29°.51E, h7km, MD2.7*
ISC 26 05:07:13.3±1.1, 36°.40N±0°.06×29°.55E±0°.05, h28km±11km, n18, σ0°93/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKAS	**Kas**	**0.17**	**164**	*i* P	**Pb**	**05 07 18.4**	**-0.8**
AKAS				*i* S	**Sb**	**05 07 24.3**	**+1.0**
AKAS	**Kas**	**0.17**	**164**	*i* P	**Pb**	**05 07 18.4**	**-0.8**
AKAS				*i* S	**Sb**	**05 07 24.3**	**+1.0**
FETY	**Fethiye**	**0.44**	**302**	*e*PG	**Pb**	**05 07 22.4**	**-0.3**
FETY				*e*SG	**Sn**	**05 07 30.2**	**-0.6**
FETY	**Fethiye**	**0.44**	**302**	*e*Pg	**Pb**	**05 07 22.4**	**-0.3**
FETY				*e*Sg	**Sn**	**05 07 30.2**	**-0.6**
ELL	**Elmali**	**0.45**	**40**	*e*PG	**Pb**	**05 07 21.7**	**-1.3**
ELL				*e*SG	**Sb**	**05 07 30.0**	**+0.4**
ELL	**Elmali**	**0.45**	**40**	*e*Pg	**Pb**	**05 07 21.7**	**-1.3**
ELL				*e*Sg	**Sb**	**05 07 30.0**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.75**	**357**	*e*PG	**Pb**	**05 07 27.6**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.75**	**357**	*e*Pg	**Pb**	**05 07 27.6**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.83**	**300**	*e*PG	**Pn**	**05 07 28.0**	**-1.0**
DALY	**Dalyan (Mu¨la**	**0.83**	**300**	*e*Pg	**Pn**	**05 07 28.0**	**-1.0**
GOLH	**Golhisar**	**0.83**	**1**	*i* P	**Pn**	**05 07 29.0**	**-0.2**
GOLH				*i* S	**Sn**	**05 07 42.8**	**+2.1**
GOLH	**Golhisar**	**0.83**	**1**	*i* P	**Pn**	**05 07 29.0**	**-0.2**
GOLH				*i* S	**Sn**	**05 07 42.7**	**+2.1**
YER	**Yerkesik**	**1.25**	**306**	*e*PN	**Pn**	**05 07 35.6**	**+0.7**
YER	**Yerkesik**	**1.25**	**306**	*e*Pn	**Pn**	**05 07 35.6**	**+0.7**
DNZL	**Cakiroluk**	**1.34**	**343**	*i* P	**Pn**	**05 07 36.1**	**-0.3**
DNZL				*i* S	**Sb**	**05 07 54.6**	**-0.3**
DNZL	**Cakiroluk**	**1.34**	**343**	*i* P	**Pn**	**05 07 36.1**	**-0.3**
DNZL				*i* S	**Sb**	**05 07 54.6**	**-0.3**
DAT	**Datca**	**1.62**	**282**	*e*PN	**Pn**	**05 07 40.2**	**+0.2**
DAT	**Datca**	**1.62**	**282**	*e*Pn	**Pn**	**05 07 40.2**	**+0.2**

*NEIC **26** 05:10:27.2, 34°.49N×116°.24W, h6km, ML3.1(PAS), After PAS.*
ISC 26 05:10:26.5±1.0, 34°.49N±0°.02×116°.21W±0°.02, h11km±9km, n33, σ0°93/55, 14C-13D, Southern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEC	**Hector,Ludlow**	**0.35**	**344**	⇑P	**Pg**	**05 10 33.8**	**+0.3**
	baz=0.3						
HEC				⇑S	**Sg**	**05 10 38.8**	**+0.5**
	baz=0.3						
BELC	**Belle Mtn. Jos**	**0.52**	**160**	⇑P	**Pg**	**05 10 37.0**	**+0.4**
	baz=0.5						
BELC				⇓S	**Sg**	**05 10 44.4**	**+0.8**
	baz=0.5						
GMRC	**Granite Mounta**	**0.54**	**58**	⇑P	**Pg**	**05 10 37.4**	**+0.3**
	baz=0.6						
GMRC				⇑S	**Sg**	**05 10 44.9**	**+0.7**
	baz=0.6						
RRX	**Edison Barstow**	**0.76**	**301**	⇓P	**Pg**	**05 10 40.9**	**-0.2**
	baz=0.7						
RRX				⇓S	**Sg**	**05 10 51.0**	**0.0**
	baz=0.7						
PFO	**Pinyon Flat Ob**	**0.90**	**193**	*e*Pg	**Pg**	**05 10 43.4**	**-0.5**
PFO				*e*Sg	**Sg**	**05 10 54.5**	**-1.1**
PFO				*e*Sg	**Sb**	**05 10 55.4**	**-0.9**
PFO	**Pinyon Flat Ob**	**0.90**	**193**	⇑P	**Pg**	**05 10 43.4**	**-0.5**
	baz=0.9						
IRM	**Iron Mountain**	**0.94**	**110**	⇓P	**Pg**	**05 10 44.5**	**-0.1**
	baz=1.0						
GSC	**Goldstone**	**0.94**	**329**	*e*Pg	**Pg**	**05 10 43.6**	**-1.1**
GSC				*e*Sg	**Sg**	**05 10 56.9**	**-0.2**
GSC	**Goldstone**	**0.94**	**329**	⇓P	**Pg**	**05 10 44.5**	**-0.2**
	baz=0.9						
GSC				⇓S	**Sg**	**05 10 56.7**	**-0.3**
	baz=0.9						
TUQ	**Turquoise Moun**	**0.97**	**14**	⇑P	**Pg**	**05 10 45.0**	**-0.2**
	baz=1.0						
TUQ				⇓S	**Sg**	**05 10 58.3**	**+0.4**
	baz=1.0						
BC3	**Big Chuckawall**	**1.05**	**143**	⇑P	**Pg**	**05 10 46.1**	**-0.5**
	baz=1.1						
LDFC	**Landfair**	**1.08**	**57**	*e*Pg	**Pg**	**05 10 46.9**	**-0.4**
LDFC				*e*Sg	**Sg**	**05 11 01.3**	**-0.1**
MURC	**Murrieta**	**1.21**	**223**	⇓Pb	**Pg**	**05 10 48.6**	**-1.1**
	baz=1.2						
MURC				⇓S	**Sg**	**05 11 04.2**	**-1.3**
	baz=1.2						
BFSC	**Mount Baldy Ra**	**1.22**	**258**	⇑Pb	**Pg**	**05 10 48.8**	**-1.2**
	baz=1.2						
BFSC				⇑S	**Sg**	**05 11 04.7**	**-1.2**
	baz=1.2						
EDW2	**Edwards Air Fo**	**1.52**	**285**	⇑Sb	**Sn**	**05 11 13.5**	**+0.1**
	baz=1.5						
MWC	**Mount Wilson**	**1.55**	**261**	*e*Pb	**Pn**	**05 10 54.0**	**-0.2**
MWC				*e*Sg	**Sn**	**05 11 15.5**	**+1.0**
Y12C	**Blythe**	**1.58**	**117**	⇑P	**Pn**	**05 10 53.2**	**-1.3**
	baz=1.6						
PASC	**Pasadena Art C**	**1.66**	**259**	*e*Pn	**Pn**	**05 10 55.0**	**-0.7**
PASC				*e*Sg	**Sn**	**05 11 18.1**	**+1.1**
CLC	**China Lake**	**1.74**	**320**	*e*P	**Pn**	**05 10 56.8**	**+0.1**
CLC				*e*Sn	**Sb**	**05 11 21.5**	**+1.0**
109C	**Camp Elliot, M**	**1.76**	**205**	⇓Pb	**Pn**	**05 10 58.1**	**+1.1**
	baz=1.8						
109C				⇑Sb	**Sn**	**05 11 20.5**	**+1.1**
	baz=1.8						
GLA	**Glamis**	**1.84**	**141**	*e*Pg	**Pb**	**05 11 01.4**	**+1.1**
GLA				*e*Sg	**Sg**	**05 11 26.3**	**+0.5**
BAR	**Barrett**	**1.85**	**192**	*e*Pn	**Pn**	**05 10 58.8**	**+0.6**
BAR				*e*Sg	**Sb**	**05 11 24.2**	**+0.7**
MPMC	**Manual Prospec**	**1.88**	**327**	⇓P	**Pn**	**05 10 58.0**	**-0.8**
	baz=1.9						
OSI	**Osito Adit**	**2.08**	**274**	*e*Pg	**Pb**	**05 11 04.4**	**+0.1**
OSI				*e*Sg	**Sg**	**05 11 32.0**	**-1.2**
OSI	**Osito Adit**	**2.08**	**274**	⇑Sb	**Sb**	**05 11 31.1**	**+1.1**
	baz=2.1						
DAC	**Darwin (Calif)**	**2.11**	**328**	*e*Pn	**Pn**	**05 11 01.2**	**-0.7**
DAC				*e*Sg	**Sb**	**05 11 32.5**	**+1.3**
CIS	**Catalina Islan**	**2.12**	**240**	⇓Sb	**Sb**	**05 11 32.1**	**+0.9**
	baz=2.1						
ISA	**Isabella**	**2.19**	**303**	*e*Pg	**Pb**	**05 11 07.2**	**+1.0**
ISA				*e*Sg	**Sg**	**05 11 36.1**	**-0.8**
Y14A	**Wickenburg**	**2.71**	**101**	⇓P	**Pn**	**05 11 09.3**	**-0.8**
	baz=2.7						
CCUT	**Cedar City**	**3.83**	**36**	*e*Pn	Pn	05 11 23.3	-2.3
CCUT				*e*Sg	**Sg**	**05 12 27.3**	**-2.1**
ARUT	**Antelope Range**	**3.98**	**34**	*e*Sn	**Sn**	**05 12 13.4**	**-1.1**
TUC	**Tucson**	**5.03**	**114**	*e*Pn	Pn	05 11 40.2	-1.8
TUC				*e*Sg	**Sg**	**05 13 06.0**	**-2.1**
MVU	**Marysvale**	**5.14**	**38**	*e*Pg	**Pg**	**05 12 04.0**	**-0.9**
MVU				*e*Sg	**Sg**	**05 13 10.2**	**-1.3**

IDC 26 05:42:18.9±5.5, 20°.51S×176°.57W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.4/18, mbtmp3.5/2, Error ellipse: s-maj=305.6km s-min=75.1km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**45.82**	**257**	P	P	05 50 42.0	-1.0
	0.4nm,0.6s,baz=86,slow=7.0,SNR=4.9						
WRA	**Warramunga Arr**	**45.93**	**262**	P	P	05 50 44.3	+0.5
	0.6nm,0.6s,baz=99,slow=7.3,SNR=14						
FINES	**FINESS Array B**	**136.15**	**345**	PKP	PKPdf	06 01 41.3	-0.4
	1.0nm,0.9s,baz=64,slow=3.2,SNR=5.9						

IDC 26 05:49:56.1±12.0, 14°.40S×65°.05E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/23, mbtmp3.6/5, MS3.7/2, Ms1 3.7/2, ms1mx3.0/24, Error ellipse: s-maj=412.8km s-min=31.8km az=61.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**30.48**	**293**	LR	LR	06 06 19.4	
	comp=Z,68nm,20.3s,baz=99,slow=32						
MKAR	**Makanchi Array**	**62.86**	**13**	P	P	06 00 23.5	-0.3
	0.5nm,0.8s,baz=200,slow=7.5,SNR=2.7						
ASAR	**Alice Springs**	**65.22**	**110**	P	P	06 00 40.0	0.0
	0.3nm,0.8s,baz=275,slow=6.3,SNR=5.0						
WRA	**Warramunga Arr**	**66.03**	**106**	P	P	06 00 45.2	-0.1
	0.9nm,0.8s,baz=273,slow=5.7,SNR=5.1						
ZALV	**Zalesovo Beam**	**70.15**	**12**	P	P	06 01 10.3	0.0
	0.3nm,0.3s,baz=210,slow=8.3,SNR=3.3						
STKA	**Stephens Creek**	**71.23**	**119**	LR	LR	06 28 47.2	
	comp=Z,99nm,19.2s,baz=204,slow=33						
SONM	**Songino Array**	**72.09**	**28**	P	P	06 01 23.1	+0.7
	0.3nm,0.4s,baz=215,slow=4.8,SNR=3.9						

*ATH **26** 06:44:50.2, 38°.14N×22°.58E, h22km±1km, MD2.9/12*
*THE **26** 06:44:50.7, 38°.19N×22°.60E, h17km±2km, ML1.5/3, Error ellipse: s-maj=2.4km s-min=0.5km az=339.0*
CSEM 26 06:44:49.9±0.2, 38°.16N×22°.61E, h20km, ML1.5/3, Error ellipse: s-maj=4.5km s-min=4.0km az=137.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DSF	**Desfina**	**0.26**	**345**	P	Pb	06 44 55.7	-0.4
DSF				S	Sb	06 44 59.7	-0.6
DSF	**Desfina**	**0.26**	**345**	P	Pb	06 44 55.7	-0.4
DSF				S	Sb	06 44 59.7	-0.6
GUR	**Goura**	**0.31**	**224**	P	Pb	06 44 57.2	+0.3
GUR	**Goura**	**0.31**	**224**	*e*PB	Pb	06 44 57.0	+0.1
GUR				*e*SB	Sb	06 45 01.5	-0.1
GUR	**Goura**	**0.31**	**224**	*e*Pb	Pb	06 44 57.0	+0.1
GUR				*e*Sb	Sb	06 45 01.5	-0.1
LTK	**Loutraki**	**0.31**	**116**	P	Pb	06 44 57.4	+0.6
LTK				S	Sb	06 45 03.2	+1.7
LTK	**Loutraki**	**0.31**	**116**	*e*PB	Pb	06 44 57.2	+0.4
LTK	**Loutraki**	**0.31**	**116**	P	Pb	06 44 57.4	+0.6
LTK				S	Sb	06 45 03.2	+1.7
KALE	**Kalithea**	**0.44**	**302**	P	Pb	06 44 59.1	0.0
KALE				S	Sb	06 45 05.3	0.0
KALE	**Kalithea**	**0.44**	**302**	*e*PB	Pb	06 44 59.0	-0.1
KALE				*e*SB	Sb	06

SART				*i* S		**Sb**	06 46 33.4	-0.2
MFT	**Murefte**	**0.45**	**348**	*e*PG		**Pb**	06 46 29.5	+0.4
MFT	**Murefte**	**0.45**	**348**	*e*Pg		**Pb**	06 46 29.5	+0.4
BALY	**Balya**	**0.63**	**165**	*i* P		**Pg**	06 46 31.8	0.0
BALY				*i* S		**Sg**	06 46 40.3	+0.2
BALY	**Balya**	**0.63**	**165**	*i* S		**Sg**	06 46 40.3	+0.1
BALY	**Balya**	**0.63**	**165**	*i* P		**Pg**	06 46 31.8	0.0
DURS				*i* S		**Sg**	06 46 55.6	+0.2
DURS	**Dursunbey**	**1.11**	**132**	*i* P		**Pb**	06 46 40.2	-0.1
DURS				*i* S		**Sg**	06 46 55.6	+0.2
DURS	**Dursunbey**	**1.11**	**132**	*i* P		**Pb**	06 46 40.2	-0.1

IDC 26 07:20:17.2±7.7, 8°58.5S×121°28.8E, h199km±71km, mb3.6/1, mb1 3.0/4, mb1mx2.9/21, mbtmp2.9/4, Error ellipse: s-maj=145.2km s-min=56.0km az=53.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.37**	**156**	P	Pn	07 22 41.4	+0.1
	0.1nm,0.3s,baz=331,slow=10,SNR=4.1						
FITZ				S	Sn	07 24 37.0	-0.2
	0.2nm,0.3s,baz=157,slow=12,SNR=3.2						
WRA	**Warramunga Arr**	**16.95**	**133**	P	P	07 24 01.2	-0.6
	0.1nm,0.3s,baz=310,slow=12,SNR=11						
WRA				S	S	07 27 09.3	+0.8
	0.1nm,0.3s,baz=281,slow=31,SNR=5.1						
ASAR	**Alice Springs**	**19.27**	**143**	P	P	07 24 27.7	+0.7
	0.1nm,0.3s,baz=320,slow=9.2,SNR=8.8						
STKA	**Stephens Creek**	**29.90**	**144**	P	P	07 26 06.2	-0.3
	3.2nm,1.0s,baz=315,slow=9.4,SNR=4.3						

*ISCJB **26** 07:24:07.9±0.5, 38°.84N±0°.05×75°.16E±0°.09, h10km, mb3.8/8, MS3.0/1, Error ellipse: s-maj=10.5km s-min=6.0km az=156.4*

*BJI **26** 07:24:11.1, 39°.04N×75°.25E, h7km, ML3.6/6*

*IDC **26** 07:24:13.9±4.5, 38°.90N×75°.39E, h47km±33km, mb3.6/8, mb1 3.6/13, mb1mx3.5/31, mbtmp3.5/13, ML3.2/5, MS3.0/1, Ms1 3.0/1, ms1mx2.1/35, Error ellipse: s-maj=35.9km s-min=24.0km az=159.0*

*NNC **26** 07:24:14.9±1.4, 39°.51N×75°.14E, h8km±3km, mb3.8, mpv3.5, Error ellipse: s-maj=13.3km s-min=5.6km az=9.0*

ISC 26 07:24:09.8±0.8, 38°.94N±0°.07×75°.23E±0°.09, h10km, n35, σ1℘81/35, mb3.9/8, 5C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.82**	**45**	Pg	Pg	07 24 15.8	-10
KSH				Sg	Sg	07 24 19.8	-17
KSH				smax	smax		
	comp=N,4μm,0.3s						
KSH				smax	smax		
	comp=E,8μm,0.4s						
KZA	**Kyzart**	**3.14**	**0**	P	**Pn**	**07 25 01.7**	**+2.0**
	SNR=26						
ULHL	**Ulahol**	**3.39**	**13**	P	**Pb**	**07 25 09.6**	**-0.5**
	SNR=10						
AML	**Almayashu**	**3.40**	**340**	P	**Pn**	**07 25 05.3**	**+2.1**
	SNR=8.5						
KBK	**Karagaybulak**	**3.72**	**357**	P	**Pn**	**07 25 10.4**	**+3.0**
	SNR=13						
AAK	**Ala-Archa**	**3.73**	**352**	P	**Pn**	**07 25 10.4**	**+2.7**
	SNR=11						
AAK	**Ala-Archa**	**3.73**	**352**	P	**Pn**	**07 25 10.3**	**+2.7**
	comp=E,2.7nm,0.3s,baz=150,slow=7.0,SNR=38						
AAK				S	**Sn**	**07 25 54.4**	**+2.7**
	comp=E,4.5nm,0.3s,baz=118,slow=18,SNR=3.4						
TKM2	**Tokmak 2**	**3.99**	**4**	P	**Pn**	**07 25 14.1**	**+2.9**
	SNR=45						
CHMS	**Chumysh**	**4.07**	**355**	P	**Pn**	**07 25 15.0**	**+2.8**
	SNR=7.2						
USP	**Ospenovka**	**4.36**	**353**	P	**Pn**	**07 25 19.0**	**+2.9**
	SNR=5.4						
KNDC	**Almaty**	**4.47**	**16**	⇑Pg	**Pb**	**07 25 26.8**	**-1.6**
	comp=E,23nm,0.6s						
KNDC				⇑Lg	Lg	07 26 20.8	
	comp=E,109nm,0.7s						
KK31	**Karatay Array**	**5.48**	**321**	Pn	**Pn**	**07 25 32.9**	**+1.4**
	comp=E,1.0nm,0.2s,baz=127,slow=12,SNR=34						
KK31				⇑Sn	**Sn**	**07 26 34.6**	**0.0**
	comp=E,3.0nm,0.3s,baz=124,slow=23,SNR=5.5						
KK31				⇓Lg	Lg	07 26 53.9	
	comp=E,8.0nm,0.5s						
MK31	**Makanchi Array**	**9.40**	**31**	⇑Pn	**Pn**	**07 26 27.3**	**+2.0**
	comp=E,1.1nm,0.8s,baz=206,slow=14,SNR=4.9						
MK31				⇓Lg	Lg	07 28 58.5	
	comp=E,2.7nm,0.8s						
MKAR	**Makanchi Array**	**9.40**	**31**	P	**Pn**	**07 26 26.4**	**+1.1**
	comp=E,0.1nm,0.3s,baz=206,slow=14,SNR=4.9						
KURBB	**Kurchatov Arra**	**11.92**	**10**	P	**Pn**	**07 27 01.4**	**+1.8**
	comp=E,0.0nm,0.3s,baz=189,slow=10,SNR=3.2						
KURK	**Kurchatov**	**12.02**	**10**	⇑Lg	Lg	07 30 20.3	
	comp=E,28nm,1.8s						
PYUN	**Piuthan**	**12.59**	**147**	*e*P	**Pn**	**07 27 10.8**	**+1.6**
DANN	**Dangsing**	**12.72**	**144**	*e*P	**Pn**	**07 27 10.9**	**-0.1**
	comp=E,8.1nm,0.3s						
KOLN	**Koldanda**	**13.14**	**145**	*e*P	**Pn**	**07 27 16.4**	**-0.3**
	comp=E,9.1nm,0.4s						
BVA0	**Borovoye Array**	**14.48**	**348**	⇓Pn	**Pn**	**07 27 31.5**	**-3.2**
	comp=E,0.4nm,0.7s,baz=161,slow=9.8,SNR=12						
BVAR	**Borovoye Array**	**14.48**	**348**	P	**P**	**07 27 41.1**	**-0.4**
	comp=E,0.5nm,0.3s,baz=159,slow=9.6,SNR=19						
BRVK	**Borovoye**	**14.53**	**348**	⇓Pn	**Pn**	**07 27 33.2**	**-2.1**
	comp=E,5.2nm,0.6s						
AB31	**Akbulak array**	**15.04**	**318**	⇓Pn	**Pn**	**07 27 40.2**	**-2.0**
	comp=E,3.7nm,0.9s						
ZALV	**Zalesovo Beam**	**16.38**	**20**	P	**Pn**	**07 27 58.7**	**-0.9**
	comp=E,0.1nm,0.3s,baz=202,slow=14,SNR=3.2						
AKTO	**Aktyubinsk**	**16.75**	**319**	Pn	**Pn**	**07 28 03.6**	**-0.7**
	comp=E,0.2nm,0.8s						
AKTO	**Aktyubinsk**	**16.75**	**319**	P	**Pn**	**07 28 04.4**	**+0.1**
	comp=E,0.3nm,0.3s,baz=109,slow=20,SNR=5.3						
BRTR	**Keskin Array B**	**31.98**	**285**	P	**P**	**07 30 37.4**	**+1.2**
	comp=E,1.1nm,0.6s,baz=84,slow=7.9,SNR=7.9						
FINES	**FINESS Array B**	**37.44**	**323**	P	**P**	**07 31 22.7**	**-0.1**
	comp=E,0.8nm,0.3s,baz=112,slow=9.6,SNR=16						
ARCES	**ARCESS Array B**	**40.25**	**335**	P	**P**	**07 31 45.6**	**-0.7**
	comp=E,2.4nm,0.8s,baz=104,slow=7.5,SNR=5.0						
GERES	**GERESS Array B**	**44.32**	**304**	P	**P**	**07 32 21.0**	**+1.1**
	comp=E,0.3nm,0.4s,baz=83,slow=10.0,SNR=3.4						
GERES				LR	LR	07 55 06.7	
	comp=E,16nm,18.9s,baz=290,slow=42						
NB2	**NORSAR Subarra**	**44.51**	**321**	P	**P**	**07 32 20.5**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=91,slow=8.6						
NOA	**NORSAR Array B**	**44.51**	**321**	P	**P**	**07 32 20.6**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=91,slow=8.0,SNR=7.3						
TORD	**Torodi Ar. Bea**	**69.10**	**270**	P	**P**	**07 35 15.7**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=44,slow=5.3,SNR=8.5						
ILAR	**Eielson Array**	**71.48**	**18**	P	**P**	**07 35 29.2**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=320,slow=4.6,SNR=8.4						
YKA	**Yellowknife Ar**	**78.61**	**5**	P	**P**	**07 36 10.8**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=348,slow=5.7,SNR=18						

*ISCJB **26** 08:03:03.9±0.5, 7°.37N±0°.04×126°.51E±0°.05, h10km, mb4.1/16, Error ellipse: s-maj=7.5km s-min=6.1km az=166.5*

*IDC **26** 08:03:04.0±0.6, 7°.36N×126°.40E, h0km, mb4.1/16, mb1 4.2/16, mb1mx4.0/30, mbtmp4.1/16, Error ellipse: s-maj=15.7km s-min=12.4km az=82.0*

*MAN **26** 08:03:06, 7°.19N×126°.41E, h29km, mb4.8, ML3.7, MS3.8*

ISC 26 08:03:05.5±0.6, 7°23N±0°.06×126°37E±0°.08, h10km, n27, σ0℘91/28, mb4.2/16, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.30**	**202**	*e*P	**Pn**	**08 03 14.8**	**-1.2**
MATI				*e*S	Sg	08 03 22.4	+6.7
DAV	**Davao City (W)**	**0.80**	**259**	Pg	**Pg**	**08 03 21.2**	**+0.1**
	334nm,0.3s,baz=44,slow=1.8,SNR=56						
DAV				Lg	Lg	08 03 37.1	
	664nm,0.3s,baz=323,slow=20,SNR=20						
BUKP	**Musuan**	**1.45**	**297**	*e*P	**Pn**	**08 03 31.8**	**-0.1**
BUTP	**Butuan**	**1.88**	**337**	*e*P	**Pn**	**08 03 38.5**	**+0.7**
CGP	**Cagayan de Oro**	**2.06**	**306**	⇓*e*P	**Pn**	**08 03 40.1**	**-0.2**
CGP				*i* S	**Sn**	**08 04 06.2**	**+0.1**
CTBH	**Cotabato--PC H**	**2.11**	**270**	⇑*i*P	**Pn**	**08 03 41.4**	**+0.5**
PAGZ	**Pagadian**	**3.03**	**282**	*e*P	**Pn**	**08 03 54.0**	**+0.4**
MSLP	**Maasin**	**3.25**	**333**	*e*P	Pb	08 04 01.6	-1.9
TBP	**Tagbilaran**	**3.49**	**315**	*e*P	**Pn**	**08 04 00.2**	**+0.3**
FITZ	**Fitzroy Crossi**	**25.18**	**182**	P	**P**	**08 08 33.4**	**+2.0**
	2.3nm,0.5s,baz=359,slow=11,SNR=6.1						
PMG	**Port Moresby**	**26.49**	**128**	P	**P**	**08 08 43.8**	**+0.5**
	3.5nm,0.6s,baz=314,slow=6.7,SNR=4.3						
WRA	**Warramunga Arr**	**28.11**	**164**	P	**P**	**08 08 59.1**	**+1.3**
	0.5nm,0.3s,baz=338,slow=11,SNR=18						
ASAR	**Alice Springs**	**31.57**	**167**	P	**P**	**08 09 29.2**	**+0.7**
	0.5nm,0.4s,baz=338,slow=7.1,SNR=12						
ASAR				PcP	**PcP**	**08 12 21.8**	**+0.6**
	0.4nm,0.6s,baz=342,slow=2.9,SNR=5.5						
ASAJ	**Asahikawa**	**39.39**	**18**	P	**P**	**08 10 35.5**	**+0.1**
	6.3nm,0.9s,baz=48,slow=26,SNR=4.6						
NWAO	**Narrogin (SRO)**	**40.87**	**192**	P	**P**	**08 10 48.7**	**+0.9**
	7.6nm,0.9s,baz=352,slow=3.8,SNR=5.9						
STKA	**Stephens Creek**	**41.51**	**160**	P	**P**	**08 10 52.9**	**-0.3**
	2.7nm,0.6s,baz=329,slow=5.9,SNR=2.8						
PETK	**Petropavlovsk-**	**52.36**	**23**	P	**P**	**08 12 17.8**	**+0.1**
	0.9nm,0.4s,baz=197,slow=4.8,SNR=6.5						
MKAR	**Makanchi Array**	**54.52**	**324**	P	**P**	**08 12 33.5**	**-0.2**
	1.9nm,0.6s,baz=114,slow=6.4,SNR=16						
MKAR				PcP	**PcP**	**08 13 36.9**	**-0.1**
	0.7nm,0.6s,baz=94,slow=5.3,SNR=3.8						
ZALV	**Zalesovo Beam**	**57.34**	**332**	P	**P**	**08 12 51.7**	**-2.0**
	0.4nm,0.3s,baz=134,slow=8.2,SNR=2.4						
KURBB	**Kurchatov Arra**	**58.63**	**326**	P	**P**	**08 13 02.1**	**-0.7**
	1.3nm,0.5s,baz=124,slow=6.8,SNR=14						
BVAR	**Borovoye Array**	**64.22**	**326**	P	**P**	**08 13 40.2**	**-0.5**
	1.0nm,0.7s,baz=148,slow=8.6,SNR=5.6						
AKTO	**Aktyubinsk**	**70.73**	**321**	P	**P**	**08 14 21.6**	**-0.3**
	0.8nm,0.6s,baz=121,slow=20						
ARCES	**ARCESS Array B**	**87.06**	**340**	P	**P**	**08 15 49.8**	**-1.4**
	4.8nm,1.1s,baz=57,slow=6.6,SNR=3.0						
FINES	**FINESS Array B**	**88.60**	**332**	P	**P**	**08 15 57.3**	**-1.3**
	1.6nm,0.7s,baz=76,slow=8.0,SNR=8.5						
YKA	**Yellowknife Ar**	**96.48**	**24**	P	**P**	**08 16 35.2**	**+0.3**
	0.2nm,0.7s,baz=301,slow=4.4,SNR=3.1						
TORD	**Torodi Ar. Bea**	**121.44**	**290**	PKP	**PKPdf**	**08 21 59.1**	**-1.2**
	0.7nm,0.8s,baz=67,slow=0.6,SNR=3.6						
PLCA	**Paso Flores**	**143.37**	**158**	PKP	PKPbc	08 22 39.0	+1.2
	1.8nm,1.0s,baz=307,slow=5.1,SNR=2.9						

*BJI **26** 08:03:34.8, 32°.80S×69°.30W, h107km, mB5.3/9*

*ISCJB **26** 08:03:34.8±0.3, 32°.76S±0°.03×69°.23W±0°.04, h109km±2km, mb5.0/112, Error ellipse: s-maj=5.3km s-min=4.1km az=139.9*

*MOS **26** 08:03:35.7±0.9, 32°.81S×69°.39W, h118km, mb5.0/23, Error ellipse: s-maj=17.0km s-min=7.2km az=101.2*

*GUC **26** 08:03:36.5±0.5, 32°.84S×69°.65W, h138km±5km, ML5.6*

*NEIC **26** 08:03:36.5±0.2, 32°.85S×69°.34W, h115km±2km, mb5.0/99, MD5.1(SJA), Error ellipse: s-maj=4.3km s-min=2.9km az=77.0*

NEIC Felt [IV] at Mendoza, [III] at San Martin and [II] at San Luis. Also felt at San Juan and San Rafael. Felt [IV] at Melipilla, Santiago and Talagante; [III] at Valparaiso and Vina del Mar, Chile. Also felt at Colina, Coquimbo, Limache, Rancagua and Salamanca.

*IDC **26** 08:03:38.2±0.5, 32°.85S×69°.31W, h130km±3km, mb4.6/17, mb1 4.8/19, mb1mx4.7/21, mbtmp4.7/19, MS3.9/6, Ms1 3.9/6, ms1mx3.7/21, Error ellipse: s-maj=11.5km s-min=8.2km az=109.0*

*GCMT **26** 08:03:40.5±0.2, 32°.89S×69°.49W, h141km±1km, MW5.3, Moment Tensor Solution. s72,c108; s90,c162; Moment tensor: Scale 10^17^Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{r\phi}$0.00; $M_{\theta\phi}$0.00; Best double couple: M_o1.30000×10^17^ NP1:ϕ145.00000°, δ49.00000°, λ169.00000°. NP2:ϕ242.00000°, δ82.00000°, λ42.00000°. Principal axes: T 1.3100, Plg34.0000°, Azm112.0000°; N -0.0400, Plg48.0000°, Azm251.0000°; P -1.2700, Plg22.0000°, Azm7.0000°; Data Used: ll lU lC G CN.*

*DJA **26** 08:04:00.2±9.6, 33°S±40°×6°9W±2°8, h298km±83km, M5.1/9, mB5.8/1, mb5.1/9, Mw(mB)5.4/1*

ISC 26 08:03:38.0±0.2, 32°.89S±0°.03×69°.40W±0°.04, h132km±2km, h131km:pP-P,n770,σ1℘11/973, mb5.0/112, 240C-213D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**1.02**	**281**	⇓*i*P	**Pn**	**08 03 59.1**	**-2.3**
JACH	**Jahuel**	**1.02**	**281**	⇓*i*P	**Pn**	**08 03 59.1**	**-2.3**
CLCH	**Cerro Calan**	**1.08**	**242**	⇑*i*P	**Pn**	**08 04 00.0**	**-1.9**
CLCH				*i* S	**Sn**	**08 04 17.8**	**-2.3**
CLCH				AML	AML	08 04 20.0	
	comp=E,154μm,0.5s						
SJCH	**San Jose de Ma**	**1.09**	**226**	⇓*i*P	**Pn**	**08 03 59.5**	**-2.5**
SJCH				*i* S	**Sn**	**08 04 18.0**	**-2.4**
SJCH	**San Jose de Ma**	**1.09**	**226**	⇓*i*P	**Pn**	**08 03 59.5**	**-2.5**
SJCH				*i* S	**Sn**	**08 04 18.0**	**-2.4**
SJCH				AML	AML	08 04 19.5	
	comp=E,67μm,0.5s						
PEL	**Peldehue**	**1.11**	**256**	⇑*i*P	**Pn**	**08 03 59.5**	**-2.7**
PEL				*i* S	**Sn**	**08 04 17.4**	**-3.1**
FSR	**Penalolen**	**1.11**	**238**	⇓*i*P	**Pn**	**08 04 00.5**	**-1.7**
FSR				*i* S	**Sn**	**08 04 18.4**	**-2.3**
FSR	**Penalolen**	**1.11**	**238**	⇓*i*P	**Pn**	**08 04 00.5**	**-1.7**
FSR				*i* S	**Sn**	**08 04 18.4**	**-2.3**
LMEL	**Las Melosas**	**1.17**	**215**	⇓*i*P	**Pn**	**08 04 01.5**	**-1.4**
LMEL	**Las Melosas**	**1.17**	**215**	⇓*i*P	**Pn**	**08 04 01.5**	**-1.4**
STL	**Santa Lucia**	**1.17**	**242**	⇑*i*P	**Pn**	**08 04 00.8**	**-2.0**
STL				*i* S	**Sn**	**08 04 18.9**	**-2.7**
PCH	**Pirque**	**1.18**	**232**	⇑*i*P	**Pn**	**08 04 01.4**	**-1.6**
PCH	**Pirque**	**1.18**	**232**	⇑*i*P	**Pn**	**08 04 01.4**	**-1.6**
SAN	**Santiago**	**1.20**	**242**	⇓*i*P	**Pn**	**08 04 01.1**	**-1.9**
SAN				*i* S	**Sn**	**08 04 19.4**	**-2.7**
SAN	**Santiago**	**1.20**	**242**	⇓*i*P	**Pn**	**08 04 01.1**	**-1.9**
SAN				*i* S	**Sn**	**08 04 19.4**	**-2.7**
SAN	**Santiago**	**1.20**	**242**	⇓*i*P	**Pn**	**08 04 01.1**	**-1.9**
SAN				*i* S	**Sn**	**08 04 19.4**	**-2.7**
ANTU	**Antumapu**	**1.23**	**236**	⇓*i*P	**Pn**	**08 04 01.4**	**-2.0**
ANTU				*i* S	**Sn**	**08 04 20.5**	**-2.3**
ANTU	**Antumapu**	**1.23**	**236**	⇓*i*P	**Pn**	**08 04 01.4**	**-2.0**
ANTU				*i* S	**Sn**	**08 04 20.5**	**-2.3**
ANTU				AML	AML	08 04 21.9	
	comp=E,94μm,0.4s						
ROCH	**El Roble**	**1.35**	**266**	⇑*i*P	**Pn**	**08 04 02.2**	**-2.7**
ROCH				*e*S	**Sn**	**08 04 21.7**	**-3.6**
ROCH				AML	AML	08 04 23.8	
	comp=N,303μm,0.4s						
TACH	**Talagante**	**1.50**	**239**	⇑*i*P	**Pn**	**08 04 03.8**	**-2.4**
TACH	**Talagante**	**1.50**	**239**	⇑*i*P	**Pn**	**08 04 03.8**	**-2.4**
CACH	**El Canelo**	**1.58**	**219**	⇓*i*P	**Pn**	**08 04 06.1**	**-1.2**
CACH	**El Canelo**	**1.58**	**219**	⇓*i*P	**Pn**	**08 04 06.1**	**-1.2**
CFAA	**Coronel Fontan**	**1.62**	**38**	P	**Pn**	**08 04 05.9**	**-1.7**
CFAA				S	**Sn**	**08 04 28.3**	**-1.9**
CFAA	**Coronel Fontan**	**1.62**	**38**	P	**Pn**	**08 04 05.9**	**-1.7**
	comp=N,407nm,0.3s,baz=215,slow=11						
CFAA				S	**Sn**	**08 04 28.3**	**-1.9**
	comp=N,401nm,0.3s,baz=282,slow=8.6,SNR=8.7						
PACH	**Papudo**	**1.75**	**281**	⇑*i*P	**Pn**	**08 04 06.0**	**-3.2**
PACH	**Papudo**	**1.75**	**281**	⇑*i*P	**Pn**	**08 04 06.0**	**-3.2**
LCCH	**Las Cruces**	**1.91**	**252**	*e*P	**Pn**	**08 04 08.1**	**-2.9**
LCCH	**Las Cruces**	**1.91**	**252**	*e*P	**Pn**	**08 04 08.1**	**-2.9**
CHNG	**Los Chungos**	**2.04**	**299**	⇑*i*P	**Pn**	**08 04 09.5**	**-3.0**
CHNG				*i* S	**Sn**	**08 04 34.3**	**-4.6**
CHNG	**Los Chungos**	**2.04**	**299**	⇑*i*P	**Pn**	**08 04 09.5**	**-3.0**
CHNG				*i* S	**Sn**	**08 04 34.3**	**-4.6**
CMCH	**Combarbala**	**2.18**	**321**	⇓*i*P	**Pn**	**08 04 11.7**	**-2.7**
CMCH				*i* S	**Sn**	**08 04 38.5**	**-3.8**
CMCH	**Combarbala**	**2.18**	**321**	⇓*i*P	**Pn**	**08 04 11.7**	**-2.7**
CMCH				*i* S	**Sn**	**08 04 38.5**	**-3.8**
LCO	**Las Campanas**	**4.02**	**344**	*e*Pn	**Pn**	**08 04 36.1**	**-2.3**
LCO				*e*Sn	Sn	08 05 18.9	-6.2
PLCA	**Paso Flores**	**7.88**	**186**	*e*Pn	**Pn**	**08 05 28.5**	**-1.4**
PLCA	**Paso Flores**	**7.88**	**186**	P	**Pn**	**08 05 27.2**	**-2.7**
	comp=N,11nm,0.3s,baz=359,slow=12,SNR=149						
TRQA	**Tornquist**	**7.95**	**133**	*e*Pn	**Pn**	**08 05 29.1**	**-1.7**
TRQA				*e*Sn	**Sn**	**08 06 56.6**	**-2.6**
LPA	**La Plata**	**9.75**	**105**	*e*P	**Pn**	**08 05 53.0**	**-1.9**
LPA				S	**Sn**	**08 07 38.0**	**-4.6**
LVC	**Limon Verde**	**10.24**	**3**	*e*Pn	Pn	08 05 57.4	-4.5
CPUP	**Villa Florida**	**12.37**	**61**	*e*Pn	Pn	08 06 24.2	-5.4
CPUP				S	**Sn**	**08 08 44.7**	**-1.3**
CPUP	**Villa Florida**	**12.37**	**61**	P	Pn	08 06 24.2	-5.4
	comp=N,6.5nm,0.3s,baz=220,slow=11,SNR=74						
CPUP				S	**Sn**	**08 08 44.7**	**-1.3**
	comp=N,11nm,0.3s,baz=190,slow=12,SNR=1.8						
CPUP				LR	LR	08 11 20.9	
	comp=N,149nm,18.7s,baz=226,slow=38						
LPAZ	**La Paz**	**16.57**	**4**	*e*P	**Pn**	**08 07 22.9**	**-0.4**
LPAZ	**La Paz**	**16.57**	**4**	P	**Pn**	**08 07 22.8**	**-0.5**
	comp=N,19nm,0.3s,baz=177,slow=8.6,SNR=347						
SIV	**San Ignacio**	**18.44**	**26**	P	**P**	**08 07 42.8**	**-0.7**
SIV	**San Ignacio**	**18.44**	**26**	P	**P**	**08 07 42.8**	**-0.7**
	comp=N,8.2nm,0.3s,baz=213,slow=9.6,SNR=238						
EFI	**East Falkland**	**20.52**	**160**	⇑*e*P	**P**	**08 08 02.4**	**-3.2**
EFI				pmax	pmax		
	comp=Z,187nm,2.1s						
EFI	**East Falkland**	**20.52**	**160**	*e*P	**P**	**08 08 03.6**	**-2.0**
	comp=Z,232nm,1.4s						
EFI	**East Falkland**	**20.52**	**160**	P	**P**	**08 08 04.2**	**-1.4**
	comp=Z,605nm,0.5s,SNR=17						
SPB	**Sao Paulo**	**21.42**	**70**	*e*P	**P**	**08 08 16.1**	**+0.5**
	comp=Z,93nm,1.1s						
NNA	**Nana**	**21.89**	**340**	*e*P	**P**	**08 08 20.3**	**-0.4**
	comp=Z,76nm,0.7s						
NNA	**Nana**	**21.89**	**340**	P	**P**	**08 08 20.2**	**-0.5**
	comp=Z,635nm,0.7s,SNR=8.3						
NNA	**Nana**	**21.89**	**340**	P	**P**	**08 08 20.3**	**-0.4**
	comp=Z,68nm,0.7s,baz=199,slow=9.9,SNR=32						
USHA	**Ushuaia**	**21.95**	**178**	P	**P**	**08 08 21.4**	**+0.5**
USHA	**Ushuaia**	**21.95**	**178**	P	**P**	**08 08 21.4**	**+0.5**
	comp=Z,64nm,0.5s,baz=344,slow=7.5,SNR=66						
SAML	**Samuel**	**24.51**	**15**	*e*P	**P**	**08 08 44.3**	**-1.0**
	comp=Z,77nm,0.8s						
BDFB	**Brasilia**	**25.89**	**54**	P	**P**	**08 08 57.1**	**-0.8**
BDFB	**Brasilia**	**25.89**	**54**	P	**P**	**08 08 57.1**	**-0.8**
	comp=Z,12nm,0.4s,baz=212,slow=7.3,SNR=54						
BDFB				LR	LR	08 21 07.0	
	comp=Z,506nm,19.4s,baz=228,slow=41						
CAM4	**Nova Friburgo**	**25.92**	**73**	⇓*i*P	**P**	**08 08 58.0**	**-0.3**
CAM4				*i*		08 08 59.8	
CAM4				*i*		08 09 03.0	
CAM4				*i*		08 09 07.6	
CAM4				*i*		08 09 43.7	
ATAH	**Atahualpa**	**26.95**	**340**	P	**P**	**08 09 09.2**	**+1.4**
ATAH	**Atahualpa**	**26.95**	**340**	P	**P**	**08 09 09.2**	**+1.4**
	comp=Z,6.3nm,0.6s,baz=164,slow=6.0,SNR=10						
PMSA	**Palmer Station**	**32.08**	**176**	P	**P**	**08 09 53.2**	**+1.1**
PMSA	**Palmer Station**	**32.08**	**176**	P	**P**	**08 09 53.2**	**+1.1**
	comp=Z,51nm,0.9s,baz=30,slow=8.1,SNR=3.0						
OTAV	**Otavalo**	**34.03**	**344**	*e*P	**P**	**08 10 11.1**	**+1.0**
	comp=Z,158nm,1.8s						
OTAV				*e*ScP	**ScP**	**08 16 18.9**	**+1.2**
PAYG	**Puerto Ayora**	**37.59**	**324**	*e*P	**P**	**08 10 41.7**	**+1.7**
PAYG				*e*pP	**pP**	**08 11 10.7**	**+1.7**
PAYG				*e*sP	**sP**	**08 11 27.1**	**+3.1**
ROSC	**El Rosal**	**37.83**	**352**	P	**P**	**08 10 43.6**	**+1.2**
ROSC	**El Rosal**	**37.83**	**352**	P	**P**	**08 10 43.6**	**+1.2**
	comp=Z,18nm,0.4s,baz=86,slow=1.3,SNR=20						
RCBR	**Riachuelo**	**41.19**	**57**	P	**P**	**08 11 10.2**	**+0.3**
RCBR	**Riachuelo**	**41.19**	**57**	P	**P**	**08 11 10.2**	**+0.3**
	comp=Z,6.1nm,0.6s,baz=215,slow=12,SNR=9.4						
BCIP	**Isla Barro Col**	**42.98**	**345**	*e*P	**P**	**08 11 24.8**	**+0.5**
	comp=Z,44nm,0.8s						
JTS	**JuntasAbangare**	**45.43**	**338**	*e*P	**P**	**08 11 43.9**	**0.0**
	comp=Z,180nm,2.0s						
JTS				*e*pP	**pP**	**08 12 15.2**	**+1.5**
TGUH	**Tegucigalpa,Un**	**49.71**	**337**	*e*P	**P**	**08 12 17.1**	**+0.3**
	comp=Z,359nm,1.8s						
TGUH				*e*pP	**pP**	**08 12 47.7**	**+0.5**
CRPR	**Cabo Rojo, PR**	**50.65**	**3**	*e*P	**P**	**08 12 23.2**	**-0.6**
	comp=Z,94nm,0.7s						
CRPR				*e*pP	**pP**	**08 12 54.7**	**+0.4**
OBIP	**Obispado Ponce**	**50.71**	**3**	*e*P	**P**	**08 12 23.4**	**-0.9**
	comp=Z,108nm,0.8s						
OBIP				*e*pP	**pP**	**08 12 55.4**	**+0.6**
CELP	**Cerrillos**	**50.75**	**3**	*e*P	**P

TXAR pP pP 08 15 07.8 +0.7
TXAR ⇑e 08 42 37.7
TXAR Lajitas Array 69.89 328 P P 08 14 35.1 +0.3
comp=Z,6.8nm,0.5s,baz=161,slow=8.5,SNR=131
TXAR pP pP 08 15 07.8 +0.7
comp=Z,5.4nm,0.6s,baz=151,slow=8.0,SNR=7.9
TXAR PKP2bc 08 42 37.7
comp=Z,0.3nm,0.8s,baz=302,slow=2.4,SNR=3.4
529A Stev Forest Ra 69.95 330 ⇓P P 08 14 35.6 +0.5
baz=70,SNR=31
332A Millersview 70.06 333 ⇓P P 08 14 35.8 +0.1
baz=70,SNR=22
430A Baggett Ranch, 70.13 331 ⇓P P 08 14 36.5 +0.4
baz=70,SNR=29
528A Cox Ranch, San 70.23 330 ⇑P P 08 14 36.9 +0.1
baz=70,SNR=26
429A Davenport Ranc 70.25 331 ⇑P P 08 14 37.4 +0.4
baz=70,SNR=29
331A San Angelo 70.26 332 ⇑P P 08 14 37.0 +0.1
baz=71,SNR=27
626A Big Bend Ranch 70.29 328 ⇓P P 08 14 38.1 +0.9
baz=71,SNR=30
TZTN Tazewell 70.33 348 *e*pP pP 08 15 09.5 -0.1
RFTA Plano 70.41 336 *e*P P 08 14 37.9 +0.2
RFTA *e*pP pP 08 15 11.2 +1.1
232A Coleman 70.47 333 ⇓P P 08 14 38.1 -0.1
baz=71,SNR=38
BLA Blacksburg 70.49 351 *e*P P 08 14 38.6 +0.4
BLA *e*PP pP 08 15 11.4 +0.8
BLA Blacksburg 70.49 351 *e*P P 08 14 38.6 +0.4
BLA *e*pP pP 08 15 11.4 +0.8
URVA University of 70.51 353 *e*P P 08 14 38.8 +0.6
URVA *es*P sP 08 15 11.6 -13
527A Woodward Ranch 70.57 329 ⇓P P 08 14 39.2 +0.3
baz=71,SNR=17
330A Mertzon 70.65 331 ⇓P P 08 14 39.2 -0.1
baz=71,SNR=19
JSRW J. Sargeant Re 70.66 353 *e*P P 08 14 39.6 +0.5
JSRW *e*pP pP 08 15 12.7 +1.2
428A Kincaid Ranch, 70.67 330 ⇑P P 08 14 39.7 +0.2
baz=71,SNR=11
526A Mary Lane Ranc 70.70 328 ⇓P P 08 14 40.2 +0.5
baz=71,SNR=38
231A Bronte 70.77 332 ⇓P P 08 14 40.1 +0.1
baz=71,SNR=32
WVT Waverly 70.79 344 *e*P P 08 14 39.5 -0.5
WVT Waverly 70.79 344 *e*P P 08 14 39.5 -0.5
HBAR Harrisburg 70.94 342 *e*P P 08 14 41.1 +0.2
HBAR *e*pP pP 08 15 13.5 +0.2
HALT Halls 70.94 343 *e*P P 08 14 40.5 -0.4
HALT *e*pP pP 08 15 13.5 +0.2
HALT *es*P sP 08 15 27.6 +0.2
329A Wagon Wheel Ra 71.04 331 ⇑P P 08 14 41.9 +0.2
baz=71,SNR=24
230A Sterling City 71.05 332 ⇓P P 08 14 41.1 -0.6
baz=71,SNR=6.2
427A Hayter Ranch, 71.08 329 ⇑P P 08 14 41.1 -0.9
baz=71,SNR=16
CBN Corbin 71.12 353 *e*P P 08 14 42.7 +0.8
ABTX Abilene, Hawle 71.13 333 ⇓P P 08 14 42.1 0.0
baz=71,SNR=8.7
GNAR Gosnell 71.16 342 *e*P P 08 14 42.5 +0.3
GNAR *e*pP pP 08 15 14.6 0.0
426A McDonald Obser 71.20 329 ⇓P P 08 14 43.3 +0.5
baz=72,SNR=36
UTMT University of 71.24 343 *e*P P 08 14 42.4 -0.2
comp=Z,65nm,0.3s
328A Wristen Ranch, 71.30 330 ⇑P P 08 14 43.6 +0.4
baz=72
229A Bryant Ranch, 71.39 331 ⇓P P 08 14 44.1 +0.3
baz=72
131A Roby 71.46 333 ⇑P P 08 14 44.4 +0.2
baz=72,SNR=13
PVMO Portageville 71.51 343 *e*P P 08 14 44.6 +0.3
comp=Z,69nm,0.4s
327A Balmorhea Ranc 71.57 330 ⇓P P 08 14 45.4 +0.5
baz=72
130A Snyder 71.61 332 ⇓P P 08 14 45.0 -0.1
baz=72,SNR=15
Z32A Haskell 71.68 334 ⇑P P 08 14 45.5 +0.1
baz=72,SNR=15
425A Indio Mountain 71.72 328 ⇑P P 08 14 45.7 -0.2
baz=72,SNR=8.5
326A Caldwell Ranch 71.73 329 ⇓P P 08 14 45.5 -0.4
baz=72,SNR=25
PARMO Parma 71.76 343 *e*P P 08 14 45.8 +0.1
PARMO *e*pP pP 08 15 18.4 +0.2
228A UT Block 9, Go 71.85 331 ⇑P P 08 14 46.6 0.0
baz=72,SNR=16
Z31A Sharp Cattle R 71.94 333 ⇑P P 08 14 47.2 +0.2
baz=72,SNR=18
129A Stewart Farms, 72.00 332 ⇓P P 08 14 47.5 0.0
baz=72,SNR=9.7
227A Bennet, Jal 72.04 330 ⇓P P 08 14 47.8 +0.1
baz=72,SNR=17
325A Bean Ranch, Si 72.21 328 ⇓P P 08 14 48.7 -0.2
baz=72,SNR=21
128A Castleberry Fa 72.24 331 ⇑P P 08 14 48.9 +0.1
baz=72,SNR=22
SDMD Soldier's Deli 72.26 354 *e*P P 08 14 49.0 +0.3
comp=Z,7.6nm,0.8s
SDMD *e*pP pP 08 15 23.4 +2.1
Y32A R-V Farms, Ver 72.28 334 ⇓P P 08 14 49.2 +0.2
baz=73,SNR=10
Z30A Sanderson Ranc 72.28 332 ⇑P P 08 14 49.0 -0.1
baz=73,SNR=14
226B Tecolote Peak, 72.47 329 ⇓P P 08 14 50.9 +0.6
baz=73,SNR=21
WCI Wyandotte Cave 72.48 346 *e*P P 08 14 49.0 -1.1
WCI *e*PP pP 08 15 21.7 -0.9
WCI *e*SP sP 08 15 35.7 -1.0
WCI pmax pmax
comp=Z,7.0nm,0.5s
WCI Wyandotte Cave 72.48 346 *e*P P 08 14 49.0 -1.1
comp=Z,7.4nm,0.5s
WCI *e*pP pP 08 15 21.7 -0.9
WCI *es*P sP 08 15 35.7 -1.0
Z29A Hungry Hill Ra 72.49 332 ⇑P P 08 14 50.1 -0.2
baz=73,SNR=24
324A Moseley Ranch, 72.50 328 ⇓P P 08 14 50.0 -0.5
baz=73,SNR=16
CLNB Carlsbad 72.51 330 *e*P P 08 14 51.2 +0.8
comp=Z,38nm,0.8s
CLNB *e*PcP PcP 08 15 07.8 +0.4
USIN University of 72.51 345 *e*P P 08 14 46.8 -3.4
comp=Z,33nm,0.9s
USIN *e*pP pP 08 15 22.0 -0.8
Y31A Rekieta Farm, 72.55 333 ⇓P P 08 14 50.9 +0.3
baz=73,SNR=12
PPT2 Papeete2 72.58 260 *e*S SKiKP 08 24 13.9 +1.2
comp=Z,608nm,27.2s
PPT2 *e*LR LR 08 37 24.6
comp=Z,102nm,27.0s
SIUC Southern Illin 72.63 344 *e*P P 08 14 50.7 -0.3
comp=Z,13nm,0.6s
SIUC *e*pP pP 08 15 22.9 -0.5
127A Arkansas Junct 72.65 330 ⇓P P 08 14 51.5 +0.2
baz=73,SNR=8.2
GDL2 Guadalupe Moun 72.66 329 *e*P P 08 14 51.9 +0.5
comp=Z,101nm,1.2s
GDL2 *e*PcP PcP 08 15 08.7 +0.6
GDL2 *e*pP pP 08 15 24.8 +0.9
WMOK Wichita Mounta 72.70 335 *e*P P 08 14 50.9 -0.6
WMOK *e*PP pP 08 15 24.3 +0.2
WMOK pmax pmax
comp=Z,33nm,1.5s
WMOK Wichita Mounta 72.70 335 *e*P P 08 14 50.9 -0.6
comp=Z,33nm,1.5s
WMOK *e*pP pP 08 15 24.3 +0.2
Y30A Stafford Cattl 72.72 333 ⇓P P 08 14 52.2 +0.5
baz=73
TUL1 Tulsa 72.76 338 ⇑P P 08 14 51.3 -0.5
baz=73,SNR=13
Z28A Tucker Farm, M 72.78 331 ⇑P P 08 14 51.8 -0.3
baz=73,SNR=15
MVL Millersville 72.81 354 *e*P P 08 14 52.9 +1.0
MVL *es*P pP 08 15 27.8 +3.3
126A Clayton Basin, 72.90 330 ⇑P P 08 14 53.2 +0.4
baz=73,SNR=22
Y29A Porterfield Fa 73.00 332 ⇓P P 08 14 53.5 +0.1
baz=73,SNR=21
X31A McDonald Ranch 73.04 334 ⇑P P 08 14 53.5 0.0
baz=73,SNR=14
224A Cornudas Mount 73.06 328 ⇑P P 08 14 53.5 -0.3
baz=73,SNR=24
Z27A Tatum 73.14 331 ⇑P P 08 14 54.0 -0.2
baz=73,SNR=18
FVM French Village 73.18 343 *e*P P 08 14 53.7 -0.5
FVM *e*PP pP 08 15 26.4 -0.3
FVM pmax pmax
comp=Z,25nm,0.8s
FVM French Village 73.18 343 *e*P P 08 14 53.7 -0.5
comp=Z,25nm,0.8s
FVM *e*pP pP 08 15 26.4 -0.3
125A Gardner Draw, 73.18 329 ⇑P P 08 14 54.2 -0.3
baz=74,SNR=27
X30A Coker Ranch, T 73.21 333 ⇑P P 08 14 54.5 0.0
baz=74,SNR=6.3
Y28A McKinney Farm, 73.27 332 ⇑P P 08 14 54.9 -0.1
baz=74,SNR=10
OLIL Olney 73.35 345 *e*P P 08 14 54.4 -0.7
comp=Z,7.2nm,0.4s
OLIL *e*pP pP 08 15 26.9 -0.8
223A Chaparral, Ant 73.40 328 ⇑P P 08 14 56.8 +0.8
baz=74
SUR Sutherland 73.42 118 *e*P P 08 14 56.8 +0.5
comp=Z,25nm,0.8s
SUR *e*PP PP 08 17 39.8 -1.5
SUR Sutherland 73.42 118 P P 08 14 57.6 +1.4
comp=Z,268nm,0.9s,SNR=18
Z26A Caprock 73.42 330 ⇓P P 08 14 56.1 +0.2
baz=74,SNR=60
BLO Bloomington 73.44 346 *e*P P 08 14 54.7 -0.9
BLO *e*PP pP 08 15 27.4 -0.9
BLO pmax pmax
comp=Z,28nm,0.8s
BLO Bloomington 73.44 346 *e*P P 08 14 54.7 -0.9
comp=Z,28nm,0.8s
BLO *e*pP pP 08 15 27.4 -0.9
W31A Holland Ranch, 73.53 334 ⇑P P 08 14 56.2 -0.1
baz=74
X29A Tulia 73.53 333 ⇓P P 08 14 56.6 +0.1
baz=74,SNR=16
MSTX Muleshoe 73.53 332 ⇓P P 08 14 56.5 0.0
baz=74,SNR=12
124A Stringfield Ra 73.56 329 ⇓P P 08 14 57.3 +0.5
baz=74,SNR=21
SSPA Standing Stone 73.58 353 *e*P P 08 14 56.5 0.0
comp=Z,6.3nm,0.7s
SSPA *e*pP pP 08 15 28.6 -0.4
Y27A Causey 73.62 331 ⇓P P 08 14 56.6 -0.4
baz=74,SNR=10
Z25A Roswell 73.74 330 ⇑P P 08 14 58.2 +0.5
baz=74,SNR=17
W30A Crocket Farms 73.76 334 ⇑P P 08 14 58.8 +1.1
baz=74
222A Williams Famil 73.79 327 ⇓P P 08 14 59.1 +1.0
baz=74,SNR=9.2
X28A Dimmitt 73.79 332 ⇓P P 08 14 58.0 0.0
baz=74,SNR=9.3
320A Kipp Ranch, An 73.81 326 ⇑P P 08 14 59.3 +1.1
baz=74,SNR=20
ACSO Alum Creek Sta 73.83 349 *e*P P 08 14 57.6 -0.4
comp=Z,27nm,0.7s
ACSO *e*pP pP 08 15 30.0 -0.6
123A Bell Site, Whi 73.86 328 ⇓P P 08 14 59.3 +0.8
baz=74
YLE Yale 73.91 357 *e*P P 08 14 59.4 +1.0
AMTX Amarillo 73.91 333 *e*P P 08 14 58.9 +0.2
comp=Z,16nm,0.9s
AMTX *e*pP pP 08 15 31.5 +0.2
AMTX Amarillo 73.91 333 ⇑P P 08 14 58.7 +0.1
baz=74,SNR=10
Y26A Elida 73.92 331 ⇑P P 08 14 58.9 +0.1
baz=74
V31A Spring Creek L 74.02 335 ⇓P P 08 14 59.9 +0.7
baz=74,SNR=5.9
221A Mesquite Ranch 74.02 327 ⇑P P 08 15 00.3 +0.9
baz=74,SNR=12
Z24A Sheeppen Canyo 74.06 329 ⇑P P 08 15 00.1 +0.4
baz=74,SNR=31
W29A Amraillo 74.11 333 ⇓P P 08 14 59.8 0.0
baz=74,SNR=15
319A Douglas 74.20 325 ⇑P P 08 15 01.7 +1.2
baz=74,SNR=18
122A Conniff Cattle 74.24 328 ⇑P P 08 15 02.1 +1.3
baz=74
X27A F and S Farms, 74.26 332 ⇓P P 08 15 00.8 +0.1
baz=75,SNR=5.8
220A Playas Peak, P 74.28 326 ⇑P P 08 15 01.9 +0.9
baz=75,SNR=42
V30A Spur Ranch, Mi 74.31 334 ⇑P P 08 15 02.0 +1.0
baz=75,SNR=8.1
Z23A Rita Site, Whi 74.38 329 ⇓P P 08 15 02.7 +1.3
baz=75,SNR=30
W28A Vega 74.44 333 ⇓P P 08 15 02.1 +0.3
baz=75
121A Cookes Peak, D 74.46 327 ⇑P P 08 15 03.1 +1.1
baz=75,SNR=26
X26A CR and CF Fran 74.46 331 ⇓P P 08 15 02.3 +0.4
baz=75,SNR=21
BRYW Bryant College 74.46 358 *e*P P 08 15 02.8 +1.2
BRYW *e*pP pP 08 15 35.6 +1.3
U31A Nine Bar Ranch 74.55 335 ⇑P P 08 15 02.8 +0.5
baz=75
Y24A Capitan 74.60 330 ⇓P P 08 15 03.3 +0.5
baz=75,SNR=12
W27A Bowe Ranch, En 74.61 332 ⇓P P 08 15 02.9 +0.2
baz=75,SNR=19
Z22A Elephant Butte 74.70 328 ⇑P P 08 15 04.2 +0.8
baz=75,SNR=6.3
V29A Stinnett 74.72 333 ⇑P P 08 15 03.5 +0.2
baz=75
X25A Clemmons Ranch 74.79 330 ⇑P P 08 15 03.9 0.0
baz=75,SNR=7.1
ALLY Alegheny Colle 74.83 352 *e*P P 08 15 03.8 +0.1
comp=Z,9.7nm,0.8s
ALLY *e*pP pP 08 15 36.5 +0.1
120A U Bar Ranch, L 74.86 326 ⇑P P 08 15 05.4 +1.1
baz=75,SNR=12
Y23A Lovelace Mesa, 74.87 329 ⇓P P 08 15 05.4 +1.0
baz=75,SNR=17
V28A Channing 74.88 333 ⇓P P 08 15 04.7 +0.5
baz=75,SNR=11
W26A Owens Ranch, T 74.91 331 ⇑P P 08 15 05.3 +0.8
baz=75,SNR=15
BINY Binghamton 74.96 355 *e*P P 08 15 04.9 +0.4
BINY *e*pP pP 08 15 38.9 +1.7
U30A WK&E Inc. Balk 74.98 334 ⇓P P 08 15 05.3 +0.5
baz=75
HRV Adam Dziewonsk 75.05 358 *e*P P 08 15 05.4 +0.5
HRV pmax pmax
comp=Z,13nm,0.8s
HRV Adam Dziewonsk 75.05 358 *e*P P 08 15 05.4 +0.5
comp=Z,13nm,0.8s
Z21A St. Cloud Mine 75.06 328 ⇑P P 08 15 06.6 +1.1
baz=75,SNR=19
V27A Dan Oppiter Fa 75.12 332 ⇑P P 08 15 06.4 +0.7
baz=75
U29A Oasis Ranch, S 75.14 334 ⇑P P 08 15 06.1 +0.3
baz=76
T31A Randall Ranch, 75.14 335 ⇑P P 08 15 06.0 +0.4
baz=76
X24A Lazy VL Ranch, 75.15 330 ⇑P P 08 15 06.4 +0.4
baz=75,SNR=11
ERPA Erie 75.27 352 *e*P P 08 15 06.2 0.0
comp=Z,16nm,0.4s
ERPA *e*pP pP 08 15 38.6 -0.3
Y22A Socorro 75.27 328 ⇓P P 08 15 07.4 +0.7
baz=76,SNR=9.1
W25A X Bar L Ranch, 75.30 331 ⇑P P 08 15 06.9 +0.1
baz=76,SNR=29
BNM Barren Site 75.31 329 *e*P P 08 15 07.9 +1.0
BNM *e*pP pP 08 15 41.3 +1.7
Z20A Nine Sixteen R 75.32 327 ⇓P P 08 15 08.0 +1.1
baz=76,SNR=18
HDIL Hopedale 75.36 344 *e*P P 08 15 06.1 -0.6
comp=Z,34nm,0.4s
HDIL *e*pP pP 08 15 38.8 -0.7
Y22D IRIS PASSCAL I 75.37 329 ⇓P P 08 15 09.3 +2.2
baz=76
T30A Plains 75.40 335 ⇓P P 08 15 07.6 +0.4
baz=76
U28A Mallet 75.44 333 ⇓P P 08 15 07.7 +0.2
baz=76,SNR=5.6
LPM Los Pinos Moun 75.44 329 *e*P P 08 15 08.6 +0.9
LPM *e*pP pP 08 15 42.0 +1.6
LPM *e*PP PP 08 17 52.6 -6.3
LENM Lemitar 75.47 329 *e*P P 08 15 09.2 +1.4
LENM *e*pP pP 08 15 42.5 +1.9
X23A Hourglass Bar 75.48 329 ⇑P P 08 15 08.8 +1.0
baz=76,SNR=11
V26A Tequesquite Ra 75.53 332 ⇓P P 08 15 08.1 +0.1
baz=76,SNR=10.0
Y21A Point of Rocks 75.65 328 ⇑P P 08 15 10.1 +1.2
baz=76,SNR=9.8
W24A Lazy 6 Ranch, 75.69 330 ⇑P P 08 15 10.3 +1.2
baz=76,SNR=23
TUC Tucson 75.69 325 *e*P P 08 15 09.5 +0.5
TUC *e*PP pP 08 15 43.1 +1.4
TUC Tucson 75.69 325 *e*P P 08 15 09.5 +0.5
TUC *e*pP pP 08 15 43.1 +1.4
U27A Thompson Grove 75.70 333 ⇓P P 08 15 09.5 +0.5
baz=76,SNR=11
LAZ Ladron 75.74 329 *e*P P 08 15 10.3 +0.9
LAZ *e*pP pP 08 15 44.0 +1.9
T29A Hugoton 75.77 334 ⇑P P 08 15 09.4 +0.1
baz=76,SNR=6.6
X22A Bernardo 75.77 329 ⇑P P 08 15 10.2 +0.7
baz=76,SNR=5.7
Y20A Horse Springs, 75.88 327 ⇑P P 08 15 11.3 +1.0
baz=76,SNR=20
V25A Rancho No Teng 75.90 331 ⇑P P 08 15 10.5 +0.3
baz=76,SNR=33
S30A Montezuma 75.91 335 ⇑P P 08 15 10.4 +0.4
baz=76
ANMO Albuquerque 75.91 329 *e*P P 08 15 10.8 +0.6
comp=Z,60nm,1.4s
ANMO *e*pP pP 08 15 43.8 +0.8
KSU1 Kansas State U 75.95 338 *e*P P 08 15 09.8 -0.3
comp=Z,14nm,0.6s
KSU1 *e*pP pP 08 15 42.6 -0.4
W23A Werner Place, 75.96 330 ⇓P P 08 15 11.7 +1.1
baz=76,SNR=21
ACCN Adirondack Com 76.00 357 *e*P P 08 15 11.4 +1.0
ACCN *e*pP pP 08 15 46.9 +3.8
U26A Atchley Ranch, 76.04 332 ⇓P P 08 15 11.3 +0.3
baz=76,SNR=12
T28A Walsh 76.05 334 ⇑P P 08 15 11.0 +0.1
baz=76,SNR=19
X21A Alamocita Cree 76.07 328 ⇑P P 08 15 12.4 +1.1
baz=76,SNR=28
V24A Rampart Ranch, 76.08 331 ⇓P P 08 15 11.8 +0.5
baz=76,SNR=13
S29A Ulysses 76.12 335 ⇑P P 08 15 12.1 +0.8
baz=76
W22A Albuquerque 76.19 329 ⇓P P 08 15 13.2 +1.3
baz=76,SNR=5.3
T27A Campo 76.22 333 ⇑P P 08 15 12.3 +0.4
baz=76,SNR=16
HNH Hanover 76.27 358 *e*P P 08 15 13.5 +1.6
HNH *e*pP pP 08 15 46.0 +1.4
U25A Circle Dot Ran 76.31 332 ⇑P P 08 15 12.9 +0.4
baz=77,SNR=26
S28A Manter 76.38 334 ⇑P P 08 15 13.1 +0.3
baz=77,SNR=25
214A Organ Pipe Nat 76.41 323 ⇓P P 08 15 14.1 +1.1
baz=77,SNR=13
R30A Dighton 76.42 335 ⇑P P 08 15 13.2 +0.3
baz=77
X20A Quemado 76.47 328 ⇑P P 08 15 14.6 +1.1
baz=77,SNR=22
V23A Ortiz Mt. (NFS 76.47 330 ⇑P P 08 15 14.7 +1.3
baz=77,SNR=9.3
W21A San Fidel 76.57 329 ⇑P P 08 15 15.4 +1.4
baz=77,SNR=9.5
MDV Middlebury 76.60 357 *e*P P 08 15 14.5 +0.8
NCB Newcomb 76.62 356 *e*P P 08 15 14.0 +0.2
comp=Z,4.4nm,0.7s
NCB *e*pP pP 08 15 46.0 -0.7
T26A Comanche Natio 76.66 333 ⇓P P 08 15 15.2 +0.7
baz=77,SNR=11
U24A Moreno Valley 76.67 331 ⇑P P 08 15 14.9 +0.3
baz=77
LBNH Lisbon 76.79 358 *e*P P 08 15 14.6 -0.2
LBNH pmax pmax
comp=Z,16nm,0.7s
LBNH Lisbon 76.79 358 *e*P P 08 15 14.6 -0.2
comp=Z,16nm,0.7s
S27A Las Animas 76.84 333 ⇓P P 08 15 15.7 +0.3
baz=77
R29A Marienthal 76.84 335 ⇓P P 08 15 15.8 +0.4
baz=77
V22A San Miguel Ran 76.92 330 ⇑P P 08 15 17.5 +1.5
baz=77,SNR=41
T25A Trinidad 76.95 332 ⇑P P 08 15 17.2 +1.1
baz=77,SNR=27
W20A Ramah 76.95 328 ⇓P P 08 15 17.2 +1.0
baz=77,SNR=18
U23A El Rito 76.97 330 ⇓P P 08 15 17.5 +1.2
baz=77,SNR=26
S26A Kim 77.00 333 ⇑P P 08 15 17.0 +0.7
baz=77,SNR=25
R28A Tribune 77.01 334 ⇑P P 08 15 16.7 +0.4
baz=77
X18A Snowflake 77.12 327 ⇑P P 08 15 18.0 +0.9
baz=77,SNR=9.3
V21A Milan 77.15 329 ⇑P P 08 15 18.3 +1.1
baz=77,SNR=6.9
T24A Torres, Weston 77.15 331 ⇑P P 08 15 18.6 +1.3
baz=78,SNR=12
EMMW East Machias 77.25 1 *e*P P 08 15 18.4 +1.2
LONY Lake Ozonia 77.28 356 *e*P P 08 15 17.7 +0.1
comp=Z,12nm,0.8s
LONY *e*pP pP 08 15 53.9 +3.4
LONY *es*P sP 08 16 08.0 +3.5
U22A Llaves 77.29 330 ⇓P P 08 15 19.7 +1.6
baz=78,SNR=18
R27A Eads 77.33 334 ⇓P P 08 15 18.2 +0.1
baz=78,SNR=16
TSUM Tsumeb 77.38 105 *e*P P 08 15 19.5 +0.5
comp=Z,48nm,1.4s
S25A Robets Cordova 77.41 332 ⇑P P 08 15 19.4 +0.7
baz=78,SNR=28
FRNY Flat Rock 77.45 357 *e*P P 08 15 19.0 +0.6
comp=Z,13nm,0.7s
FRNY *e*pP pP 08 15 51.3 0.0
V20A Brimhall 77.50 328 ⇓P P 08 15 19.9 +0.7
baz=78,SNR=13
W18A Petrified Fore 77.51 327 ⇓P P 08 15 20.2 +1.0
baz=78
T23A Casias Ranch, 77.52 331 ⇑P P 08 15 20.2 +0.9
baz=78,SNR=10
113A Mohawk Valley, 77.54 323 ⇓P P 08 15 19.9 +0.7
baz=78,SNR=7.1
R26A Arlington 77.58 333 ⇓P P 08 15 20.0 +0.5
baz=78,SNR=17
SCIA State Center 77.58 342 *e*P P 08 15 19.4 +0.1
comp=Z,14nm,0.3s
Z14A Wintersburg 77.61 324 ⇑P P 08 15 20.3 +0.7
baz=78
U21A Nageezi 77.68 329 ⇑P P 08 15 21.0 +0.8
baz=78,SNR=36
S24A Houchin Ranch, 77.70 332 ⇓P P 08 15 21.7 +1.3
baz=78,SNR=25
X16A Lo Mia Camp, P 77.73 325 ⇓P P 08 15 21.7 +1.2
baz=78,SNR=31
R25A Fountain Ranch 77.77 333 ⇓P P 08 15 21.0 +0.4
baz=78,SNR=8.6
T22A Edith 77.86 330 ⇓P P 08 15 22.6 +1.4
baz=78,SNR=27
KSCO Kaye Shedlock' 77.90 334 ⇓P P 08 15 22.1 +0.9
baz=78,SNR=12
U20A Newcomb 78.01 329 ⇑P P 08 15 22.7 +0.7
baz=78
S23A Nye Farm, Mont 78.07 331 ⇓P P 08 15 23.5 +1.1
baz=78
Y14A Wickenburg 78.10 324 ⇑P P 08 15 23.2 +0.9
baz=78,SNR=16
Q26A Hugo 78.16 333 ⇑P P 08 15 23.6 +0.9
baz=78,SNR=13
R24A Sanders Place, 78.17 332 ⇓P P 08 15 23.9 +1.1
baz=78,SNR=27
GLA Glamis 78.31 322 *e*P P 08 15 22.7 -0.8
GLA pmax pmax
comp=Z,8.0nm,0.7s
GLA Glamis 78.31 322 *e*P P 08 15 22.7 -0.8
comp=Z,7.9nm,0.7s
GLA *e*pP pP 08 15 57.9 +1.4
GLA Glamis 78.31 322 ⇓P P 08 15 24.6 +1.0
baz=79
P27A Ficken Ranch, 78.36 334 ⇑P P 08 15 24.5 +0.7
baz=79,SNR=6.7
R23A Moffat 78.42 331 ⇓P P 08 15 25.1 +0.7
baz=79,SNR=20
Q25A Bedland, Calha 78.42 333 ⇑P P 08 15 24.8 +0.5
baz=79,SNR=8.1
BGNE Belgrade 78.53 338 ⇑P P 08 15 24.8 +0.3
baz=79,SNR=16
WUAZ Wupatki 78.59 326 *e*P P 08 15 26.2 +1.1

comp=Z,40nm,1.4s
WUAZ ep P pP 08 15 59.1 +1.0
WUAZ Wupatki 78.59 326 ⇑P P 08 15 26.3 +1.1
baz=79,SNR=11
BOSA Boshof 78.62 117 eP P 08 15 25.8 +0.2
comp=Z,30nm,0.6s
BOSA ePcP PcP 08 15 35.1 +0.9
BOSA Boshof 78.62 117 P P 08 15 25.9 +0.2
comp=Z,33nm,0.7s,baz=240,slow=3.9,SNR=62
BOSA LR LR 08 49 39.8
comp=Z,88nm,18.1s,baz=61,slow=35
P26A Davis Ranch, A 78.65 334 ⇑P P 08 15 26.1 +0.7
baz=79,SNR=8.4
MVCO Mesa Verde 78.70 329 eP P 08 15 26.1 +0.2
comp=Z,31nm,1.1s
MVCO epP pP 08 16 00.3 +1.5
MVCO Mesa Verde 78.70 329 ⇑P P 08 15 26.5 +0.6
baz=79,SNR=17
Y12C Blythe 78.71 323 ⇑P P 08 15 26.8 +1.2
baz=79,SNR=5.9
SWSC Sam W. Stewart 78.72 322 ⇑P P 08 15 26.9 +1.1
baz=79
S21A Coal Bank Pass 78.78 330 ⇓P P 08 15 27.3 +1.0
baz=79,SNR=13
Q24A Divide 78.82 332 ⇑P P 08 15 27.5 +1.0
baz=79,SNR=23
R22A Saguache, Gunn 78.83 331 ⇓P P 08 15 27.5 +0.9
baz=79,SNR=12
O27A Beecher Island 78.89 335 ⇓P P 08 15 27.6 +1.0
baz=79,SNR=18
P25A Willow Gulch B 78.92 333 ⇑P P 08 15 28.1 +1.2
baz=79,SNR=19
BAR Barrett 78.98 321 eP P 08 15 28.5 +1.2
MONP Monument Peak 79.01 321 ⇑P P 08 15 28.3 +0.6
baz=79
Q23A Hartsel 79.04 332 ⇑P P 08 15 28.4 +0.6
baz=79
BC3 Big Chuckawall 79.11 322 ⇓P P 08 15 28.9 +1.0
baz=79,SNR=11
S20A Disappointment 79.16 330 ⇑P P 08 15 29.4 +1.0
baz=80,SNR=18
P24A Kohler Place, 79.20 333 ⇑P P 08 15 29.4 +1.0
baz=80
O26A Horse Wrangler 79.24 334 ⇑P P 08 15 29.5 +0.9
baz=80
R21A Cimarron 79.28 330 ⇓P P 08 15 30.2 +1.2
baz=80,SNR=11
IRM Iron Mountain 79.35 323 ⇑P P 08 15 30.2 +1.0
baz=80
109C Camp Elliot, M 79.38 321 ⇑P P 08 15 29.3 0.0
baz=80
OGNE Ogallala 79.40 335 ⇓P P 08 15 30.0 +0.7
baz=80
O25A Wiggins 79.42 334 ⇑P P 08 15 30.8 +1.2
baz=80,SNR=15
Q22A Crested Butte, 79.43 331 ⇑P P 08 15 30.8 +1.0
baz=80,SNR=16
P23A Jefferson 79.44 332 ⇑P P 08 15 30.8 +0.8
baz=80,SNR=5.6
N27A Anderson Farm, 79.45 335 ⇓P P 08 15 30.3 +0.6
baz=80,SNR=17
W13A Hualapai Mount 79.46 324 ⇑P P 08 15 31.1 +1.0
baz=80,SNR=15
R20A Redvale 79.47 330 ⇑P P 08 15 31.1 +1.1
baz=80,SNR=20
PV01 Paradox Valley 79.51 330 eP P 08 15 31.2 +1.0
PV01 epP pP 08 16 04.7 +1.4
PFO Pinyon Flat Ob 79.59 322 eP P 08 15 32.0 +1.4
comp=Z,37nm,1.3s
PFO ePcP PcP 08 15 38.2 +0.2
PFO epP pP 08 16 06.3 +2.6
PFO Pinyon Flat Ob 79.59 322 P P 08 15 32.5 +1.9
comp=Z,112nm,1.1s,SNR=5.5
PFO Pinyon Flat Ob 79.59 322 ⇓P P 08 15 32.0 +1.4
baz=80,SNR=8.5
BELC Belle Mtn. Jos 79.66 322 ⇓P P 08 15 32.3 +1.2
baz=80
Q21A Lamborn Mesa, 79.68 331 ⇓P P 08 15 32.1 +1.0
baz=80
N26A Koester Ranch, 79.72 335 ⇑P P 08 15 32.0 +0.9
baz=80
ISCO Idaho Springs 79.72 332 eP P 08 15 32.2 +0.8
ISCO e*PP pP 08 16 06.0 +1.5
ISCO e 08 18 35.3
ISCO pmax pmax
comp=Z,8.0nm,0.8s
ISCO Idaho Springs 79.72 332 eP P 08 15 32.2 +0.8
comp=Z,7.9nm,0.8s
ISCO epP pP 08 16 06.0 +1.5
ISCO ePP PP 08 18 35.3 +0.6
ISCO Idaho Springs 79.72 332 ⇓P P 08 15 32.1 +0.7
baz=80,SNR=19
SMCO Snowmass 79.73 331 eP P 08 15 32.5 +0.9
comp=Z,20nm,0.9s
SMCO epP pP 08 16 06.7 +2.1
S18A Hurst Farm, Bl 79.75 328 ⇓P P 08 15 32.5 +0.9
baz=80,SNR=35
U15A North Rim 79.77 326 ⇓P P 08 15 32.6 +0.9
baz=80,SNR=15
O24A Longmont 79.79 333 ⇑P P 08 15 32.3 +0.7
baz=80
PV04 Paradox Valley 79.87 329 eP P 08 15 32.6 +0.5
PV10 Paradox Valley 79.91 329 eP P 08 15 32.9 +0.5
PV10 epP pP 08 16 06.3 +0.8
MURC Murrieta 79.97 321 ⇓P P 08 15 33.9 +1.3
baz=80,SNR=7.0
P22A Eagle 80.00 332 ⇑P P 08 15 33.8 +1.0
baz=80,SNR=14
M27A Reverse DX Ran 80.04 335 ⇑P P 08 15 33.7 +0.9
baz=80
Q20A Ridgley Place, 80.08 330 ⇑P P 08 15 33.9 +0.6
baz=80
GMRC Granite Mounta 80.09 323 ⇑P P 08 15 34.4 +1.1
baz=80,SNR=14
O23A Lake Granby, G 80.19 332 ⇓P P 08 15 34.9 +1.0
baz=80,SNR=26
ECSD EROS Data Cent 80.20 340 eP P 08 15 33.4 -0.1
comp=Z,21nm,0.4s
ECSD epP pP 08 16 06.4 -0.2
M26A McRoberts Ranc 80.25 335 ⇓P P 08 15 35.3 +1.3
baz=81
N24A Carr 80.33 333 ⇑P P 08 15 35.6 +1.1
baz=81,SNR=7.0
BBRC Big Bear Solar 80.34 322 ⇓P P 08 15 35.6 +0.8
baz=81
O22A Kremmling 80.40 332 ⇑P P 08 15 35.6 +0.6
baz=81,SNR=18
HEC Hector,Ludlow 80.48 322 ⇑P P 08 15 35.7 +0.4
baz=81
Q19A Hogan Spring (80.49 330 ⇑P P 08 15 36.0 +0.7
baz=81,SNR=8.9
L27A T5 Ranch, Ells 80.50 336 ⇑P P 08 15 36.3 +1.0
baz=81
M25A Palm-Egli Farm 80.55 334 ⇓P P 08 15 36.2 +0.6
baz=81,SNR=5.7
P20A De Beque 80.58 330 ⇓P P 08 15 36.8 +0.9
baz=81,SNR=17
SPMN St. Paul 80.60 343 ⇑P P 08 15 35.6 0.0
baz=81
BFSC Mount Baldy Ra 80.71 321 ⇓P P 08 15 37.7 +1.1
baz=81,SNR=5.1
L26A Underwood Farm 80.73 335 ⇑P P 08 15 37.3 +0.8
baz=81
TUQ Turquoise Moun 80.74 323 ⇑P P 08 15 38.2 +1.5
baz=81,SNR=7.2
LBTB Lobatse 80.75 114 eP P 08 15 37.3 +0.1
comp=Z,46nm,0.4s
N23A Red Feather La 80.79 333 ⇑P P 08 15 37.9 +0.9
baz=81,SNR=11
O21A Pagoda 80.81 331 ⇑P P 08 15 38.4 +1.2
baz=81
RRX Edison Barstow 80.86 322 ⇓P P 08 15 38.7 +1.4
baz=81
M24A Cheyenne 80.86 334 ⇓P P 08 15 38.4 +1.1
baz=81,SNR=17
MWC Mount Wilson 80.91 321 eP P 08 15 38.9 +1.1
MWC e*PP pP 08 16 12.1 +1.2
MWC Mount Wilson 80.91 321 eP P 08 15 38.9 +1.1
MWC epP pP 08 16 12.1 +1.2
N22A Wattenberg Ran 80.91 332 ⇑P P 08 15 38.7 +1.0
baz=81,SNR=9.8
P19A Cripple Cowboy 80.94 330 ⇓P P 08 15 38.8 +0.9
baz=81,SNR=25
PHWY Pilot Hill 80.96 333 eP P 08 15 38.7 +0.7
comp=Z,11nm,0.4s
K27A Flueckinger Fa 81.03 336 ⇓P P 08 15 39.1 +1.1
baz=81,SNR=16
O20A White River Ci 81.06 331 ⇓P P 08 15 38.4 -0.1
baz=81,SNR=11
DECC Green Verdugo 81.07 321 ⇓P P 08 15 39.1 +0.6
baz=81
GSC Goldstone 81.09 322 eP P 08 15 39.6 +1.0
GSC e*PP pP 08 16 12.6 +0.9
GSC pmax pmax
comp=Z,9.0nm,0.9s
GSC Goldstone 81.09 322 eP P 08 15 39.6 +1.0
comp=Z,9.1nm,0.9s
GSC epP pP 08 16 12.6 +0.9
L25A Engebretsen Ra 81.15 335 ⇓P P 08 15 39.9 +1.1
baz=82
CASY Casey 81.15 180 eP P 08 15 39.2 +0.8
comp=Z,12nm,0.8s
CASY epP pP 08 16 11.8 +0.2
CASY esP sP 08 16 25.6 0.0
SRU San Rafael 81.16 329 eP P 08 15 39.3 +0.3
SRU e*PP pP 08 16 13.0 +0.8
SRU pmax pmax
comp=Z,62nm,1.3s
SRU San Rafael 81.16 329 eP P 08 15 39.3 +0.3
comp=Z,62nm,1.3s
SRU epP pP 08 16 13.0 +0.8
SRU San Rafael 81.16 329 ⇑P P 08 15 39.4 +0.4
baz=82,SNR=23
CCUT Cedar City 81.17 326 eP P 08 15 40.6 +1.4
comp=Z,76nm,1.4s
CCUT epP pP 08 16 14.5 +2.2
M23A Laramie 81.20 333 ⇓P P 08 15 39.7 +0.5
baz=82,SNR=16
Q16A Castle Valley 81.29 328 ⇑P P 08 15 40.4 +0.7
baz=82,SNR=14
N21A Black Mountain 81.29 332 ⇑P P 08 15 41.1 +1.4
baz=82,SNR=8.4
K26A Motz Farm, Whi 81.35 336 ⇓P P 08 15 40.1 +0.3
baz=82
BLG Laguna Peak 81.36 320 ⇑P P 08 15 40.2 +0.3
baz=82
EDW2 Edwards Air Fo 81.38 321 ⇓P P 08 15 41.6 +1.5
baz=82
ARUT Antelope Range 81.40 326 eP P 08 15 41.6 +1.3
ARUT e*PP pP 08 16 15.4 +2.0
ARUT Antelope Range 81.40 326 eP P 08 15 41.6 +1.3
ARUT epP pP 08 16 15.4 +2.0
L24A Wheatland 81.40 334 ⇑P P 08 15 40.9 +0.8
baz=82,SNR=7.2
MSU Marysvale 81.41 327 eP P 08 15 41.3 +0.9
MSU e*PP pP 08 16 14.5 +1.0
MSU Marysvale 81.41 327 eP P 08 15 41.3 +0.9
MSU epP pP 08 16 14.5 +1.0
MVU Marysvale 81.42 327 eP P 08 15 41.2 +0.8
comp=Z,45nm,1.5s
P18A Preston Nutter 81.47 329 ⇑P P 08 15 41.6 +0.8
baz=82,SNR=11
M22A Cedar Creek Ra 81.48 333 ⇓P P 08 15 41.7 +1.0
baz=82,SNR=5.8
K25A Mack Ranch, Ha 81.52 335 ⇑P P 08 15 41.3 +0.7
baz=82,SNR=7.2
BRSD Miller 81.54 339 ⇑P P 08 15 40.4 -0.2
baz=82
O19A Miners Draw (B 81.56 330 ⇑P P 08 15 42.0 +1.0
baz=82
P17A Butcher Ranch, 81.56 329 ⇓P P 08 15 41.0 0.0
baz=82,SNR=13
OSI Osito Adit 81.56 321 eP P 08 15 42.3 +1.3
OSI epP pP 08 16 16.1 +1.9
OSI Osito Adit 81.56 321 ⇑P P 08 15 42.3 +1.3
baz=82
TMUT Trail Mountain 81.62 328 eP P 08 15 42.1 +0.6
comp=Z,15nm,1.1s
N20A Spence Gulch, 81.65 331 ⇑P P 08 15 41.9 +0.3
baz=82,SNR=9.1
TOA0 Torodi Ar. Sit 81.76 69 eP P 08 15 42.3 -0.1
TORD Torodi Ar. Bea 81.76 69 P P 08 15 42.6 +0.2
TORD pP pP 08 16 15.2 -0.4
TORD Torodi Ar. Bea 81.76 69 P P 08 15 42.6 +0.2
comp=Z,19nm,0.7s,baz=261,slow=4.7,SNR=108
TORD pP pP 08 16 15.2 -0.4
comp=Z,5.7nm,0.6s,baz=285,slow=7.1,SNR=3.7
TORD LR LR 08 53 20.8
comp=Z,70nm,18.4s,baz=80,slow=36
K24A Anderson Ranch 81.95 334 ⇑P P 08 15 44.2 +1.2
baz=82,SNR=12
M21A Separation Pea 81.95 332 ⇑P P 08 15 43.6 +0.5
baz=82,SNR=5.7
L22A Ellis Ranch, M 81.95 333 ⇑P P 08 15 44.3 +1.2
baz=82,SNR=5.9
SBC Santa Barbara 81.96 320 ⇓P P 08 15 43.2 +0.1
baz=82
ARVC Arvin 82.01 321 ⇑P P 08 15 43.8 +0.5
baz=82
FURC Furnace Creek, 82.02 323 ⇓P P 08 15 44.3 +1.1
baz=82
MPMC Manual Prospec 82.03 322 ⇓P P 08 15 44.4 +0.8
baz=82,SNR=8.3
M20A Sweetwater, Wa 82.18 332 ⇑P P 08 15 44.7 +0.4
baz=82,SNR=7.9
ISA Isabella 82.23 322 eP P 08 15 45.8 +1.3
ISA pmax pmax
comp=Z,6.0nm,0.7s
ISA Isabella 82.23 322 eP P 08 15 45.8 +1.3
comp=Z,6.3nm,0.7s
ISA esP sP 08 16 37.3 +5.6
ISA Isabella 82.23 322 ⇓P P 08 15 45.4 +0.8
baz=82,SNR=11
DAC Darwin (Calif) 82.25 323 eP P 08 15 45.8 +1.0
DAC pmax pmax
comp=Z,19nm,1.0s
DAC Darwin (Calif) 82.25 323 eP P 08 15 45.8 +1.0
comp=Z,19nm,1.0s
L21A Rawlins 82.26 332 ⇑P P 08 15 44.8 +0.1
baz=83,SNR=22
K23A Bowen Ranch, D 82.28 334 ⇓P P 08 15 45.3 +0.6
baz=83
PKM Peak Mountain 82.36 320 ⇓P P 08 15 46.6 +1.2
baz=83
MPU Maple Canyon 82.39 329 eP P 08 15 45.9 +0.4
comp=Z,44nm,1.6s
J24A Dixon Ranch, L 82.42 335 ⇓P P 08 15 46.5 +1.1
baz=83,SNR=15
K22A Casper 82.52 333 ⇓P P 08 15 46.6 +0.6
baz=83,SNR=21
DAU Daniels Canyon 82.56 329 eP P 08 15 46.8 +0.4
DAU e*PP pP 08 16 20.1 +0.5
DAU Daniels Canyon 82.56 329 eP P 08 15 46.8 +0.4
DAU epP pP 08 16 20.1 +0.5
L20A Wamsutter 82.68 332 ⇓P P 08 15 47.2 +0.3
baz=83,SNR=6.1
VES Vestal, Richgr 82.69 321 ⇓P P 08 15 47.6 +0.8
baz=83,SNR=12
GRAC Grapevine Rang 82.69 323 ⇑P P 08 15 48.4 +1.5
baz=83,SNR=7.9
SMMC Simmler 82.77 320 ⇑P P 08 15 47.8 +0.5
baz=83
K21A Alcova 82.78 333 ⇑P P 08 15 47.9 +0.5
baz=83
JLU Jordanelle 82.80 329 eP P 08 15 48.0 +0.4
comp=Z,12nm,0.9s
J23A Dilts Ranch, B 82.81 334 ⇓P P 08 15 48.8 +1.4
baz=83
R11A Troy Canyon, C 82.87 325 ⇑P P 08 15 49.0 +1.0
baz=83,SNR=26
EYMN Ely 82.87 345 eP P 08 15 46.9 -0.6
comp=Z,8.2nm,0.5s
EYMN epP pP 08 16 20.2 -0.5
I24A Kuemmerle Ranc 82.87 335 ⇑P P 08 15 48.1 +0.4
baz=83,SNR=16
RSSD Black Hills 82.89 336 eP P 08 15 48.0 0.0
RSSD Black Hills 82.89 336 eP P 08 15 48.0 0.0
DUG Dugway 83.06 328 eP P 08 15 49.6 +0.8
DUG Dugway 83.06 328 eP P 08 15 49.5 +0.8
DUG Dugway 83.06 328 ⇑P P 08 15 49.3 +0.5
baz=83,SNR=13
J22A Midwest 83.16 334 ⇑P P 08 15 49.1 -0.2
baz=84,SNR=13
L19A Farson 83.16 331 ⇓P P 08 15 49.8 +0.4
baz=84,SNR=28
M17A Scullys Gap (B 83.18 330 ⇓P P 08 15 49.1 -0.3
baz=84,SNR=7.8
K20A Yellowstone Ra 83.23 332 ⇓P P 08 15 49.6 0.0
baz=84,SNR=12
J21A Lysite 83.47 333 ⇓P P 08 15 51.1 +0.2
baz=84,SNR=8.2
K19A Absolon Red Bu 83.57 332 ⇑P P 08 15 51.3 -0.2
baz=84,SNR=20
I22A 9 Mile Ranch, 83.57 334 ⇓P P 08 15 51.4 0.0
baz=84,SNR=17
H24A Dirks Ranch, A 83.62 336 ⇑P P 08 15 51.5 0.0
baz=84,SNR=30
HWUT Hardware Ranch 83.67 330 eP P 08 15 52.2 +0.2
comp=Z,18nm,0.7s
HWUT epP pP 08 16 26.1 +0.8
J20A Shoshoni 83.72 333 ⇓P P 08 15 52.5 +0.4
baz=84,SNR=30
H23A Clabaugh Cattl 83.76 335 ⇑P P 08 15 52.1 -0.1
baz=84
L17A Cokeville 83.79 330 ⇑P P 08 15 52.2 -0.4
baz=84,SNR=9.3
BW06 Boulder Array 83.80 331 ⇓P P 08 15 52.2 -0.5
baz=84,SNR=20
PDAR Pinedale Array 83.80 331 P P 08 15 52.4 -0.3
PDAR pP pP 08 16 25.9 -0.1
PDAR PKKPbc PKKPbc 08 34 07.8 -1.9
PDAR Pinedale Array 83.80 331 P P 08 15 52.4 -0.3
comp=Z,4.7nm,0.5s,baz=128,slow=7.5,SNR=49
PDAR pP pP 08 16 25.9 -0.1
comp=Z,8.1nm,1.0s,baz=145,slow=5.4,SNR=9.2
PDAR PKKPbc PKKPbc 08 34 07.8 -1.9
comp=Z,0.3nm,0.6s,baz=108,slow=0.5,SNR=4.5
PDAR LR LR 08 50 09.7
comp=Z,88nm,20.4s,baz=311,slow=33
I21A Big Trails, Te 83.81 333 ⇓P P 08 15 52.4 -0.2
baz=84,SNR=14
K18A Toltan Ranch, 83.89 331 ⇓P P 08 15 53.5 +0.5
baz=84,SNR=20
MLAC Mammoth Lakes 83.92 323 ⇓P P 08 15 53.2 -0.2
baz=84,SNR=11
L16A Fish Haven 83.95 330 ⇓P P 08 15 53.4 0.0
baz=84,SNR=22
J19A Crowheart 84.02 332 ⇑P P 08 15 53.4 -0.3
baz=84,SNR=20
G24A Alzada 84.08 336 ⇑P P 08 15 53.7 -0.2
baz=84,SNR=6.9
H22A Clearmont 84.13 334 ⇑P P 08 15 54.0 -0.1
baz=84
NV11 Mina Array Sit 84.19 324 eP P 08 15 55.3 +0.6
I20A Worland 84.24 333 ⇑P P 08 15 55.0 +0.3
baz=84,SNR=19
NVAR Mina Array Bea 84.27 324 P P 08 15 56.0 +0.9
NVAR pP pP 08 16 28.9 +0.4
NVAR PKKPbc PKKPbc 08 34 08.5 +0.1
NVAR Mina Array Bea 84.27 324 P P 08 15 56.0 +0.9
comp=Z,4.6nm,0.7s,baz=146,slow=5.4,SNR=40
NVAR pP pP 08 16 28.9 +0.4
comp=Z,9.6nm,1.0s,baz=143,slow=6.1,SNR=7.8
NVAR PKKPbc PKKPbc 08 34 08.5 +0.1
comp=Z,0.3nm,0.5s,baz=328,slow=2.1,SNR=4.1
G23A Biddle 84.31 335 ⇑P P 08 15 55.0 0.0
baz=85,SNR=18
HVU Hansel Valley 84.33 329 eP P 08 15 55.5 +0.2
HVU e*PP pP 08 16 29.5 +0.9
HVU pmax pmax
comp=Z,12nm,0.7s
HVU Hansel Valley 84.33 329 eP P 08 15 55.5 +0.2
comp=Z,12nm,0.7s
HVU epP pP 08 16 29.5 +0.9
K17A Gardner Place, 84.34 331 ⇑P P 08 15 55.2 -0.2
baz=85,SNR=8.0
L15A Malad City 84.35 329 ⇑P P 08 15 55.1 -0.3
baz=85,SNR=15
J18A Kendall Valley 84.36 331 ⇓P P 08 15 55.2 -0.3
baz=85,SNR=24
H21A Big Horn, Sher 84.41 334 ⇑P P 08 15 55.2 -0.4
baz=85,SNR=8.0
F24A Ekalaka 84.54 336 ⇑P P 08 15 56.1 -0.1
baz=85,SNR=16
ELK Elko 84.60 327 eP P 08 15 57.1 +0.4
comp=Z,3.7nm,0.8s
G22A Birney 84.64 335 ⇓P P 08 15 56.5 -0.2
baz=85
H20A Greybull 84.65 333 ⇑P P 08 15 56.6 -0.1
baz=85,SNR=16
I19A Meeteetse 84.65 333 ⇑P P 08 15 56.7 -0.1
baz=85,SNR=7.4
I18A Diamond G Ranc 84.69 332 ⇓P P 08 15 57.3 +0.2
baz=85,SNR=29
K16A Soda Springs 84.69 330 ⇓P P 08 15 57.6 +0.6
baz=85,SNR=20
F23A Volborg 84.77 336 ⇓P P 08 15 57.1 -0.1
baz=85,SNR=19
J17A Brown Place, J 84.77 331 ⇓P P 08 15 57.8 +0.3
baz=85,SNR=10
MDND Maddock 84.81 340 ⇑P P 08 15 57.5 +0.1
baz=85,SNR=7.7
SNOW Snow King Moun 84.87 331 eP P 08 15 58.4 +0.3
comp=Z,5.7nm,0.7s
SNOW epP pP 08 16 32.4 +0.9
LOHW Long Hollow 84.93 331 eP P 08 15 58.3 0.0
TPAW Teton Pass 84.97 331 eP P 08 15 58.8 +0.2
comp=Z,21nm,1.3s
G21A Lodge Grass 84.98 334 ⇓P P 08 15 58.4 0.0
baz=85,SNR=11
RRI2 Red Ridge 85.00 331 eP P 08 15 59.6 +0.8
comp=Z,5.1nm,0.6s
RRI2 epP pP 08 16 33.3 +1.1
CMB Columbia Colle 85.03 322 eP P 08 15 59.3 +0.6
CMB pmax pmax
comp=Z,5.0nm,0.8s
CMB Columbia Colle 85.03 322 eP P 08 15 59.3 +0.6
comp=Z,5.0nm,0.8s
J16A Bone 85.06 330 ⇑P P 08 15 59.1 +0.2
baz=85,SNR=8.4
MOOW Moose Ponds 85.10 331 eP P 08 15 59.2 0.0
comp=Z,3.2nm,0.9s
MOOW epP pP 08 16 32.1 -0.4
F22A Rosebud 85.12 335 ⇑P P 08 15 58.6 -0.4
baz=85,SNR=13
E24A Baker 85.12 337 ⇓P P 08 15 59.4 +0.4
baz=85,SNR=7.8
K14A Jones Ranch, D 85.13 329 ⇓P P 08 15 59.5 +0.3
baz=85
DCID1 Drake Creek 85.15 331 eP P 08 16 00.4 +1.0
comp=Z,33nm,1.1s
I17A Pilgrim Ck. 85.17 331 ⇓P P 08 16 00.2 +0.7
baz=86,SNR=15
H19A Powell 85.18 333 ⇑P P 08 15 59.6 +0.2
baz=86,SNR=10
IMW Indian Meadow 85.30 331 eP P 08 16 00.6 +0.4
comp=Z,8.5nm,0.7s
IMW epP pP 08 16 34.0 +0.4
G20A Bridger 85.35 334 ⇓P P 08 16 00.2 0.0
baz=86,SNR=26
E23A Ismay 85.41 336 ⇑P P 08 16 00.1 -0.2
baz=86,SNR=9.2
H18A Shoshone NF, C 85.44 332 ⇑P P 08 16 00.9 +0.1
baz=86,SNR=57
F21A Absaloka Mine, 85.46 335 ⇓P P 08 16 00.8 +0.1
baz=86
I16A Newdale 85.51 331 ⇓P P 08 16 01.4 +0.3
baz=86,SNR=18
J15A Blackfoot 85.51 330 ⇑P P 08 16 01.5 +0.4
baz=86,SNR=10.0
H17A Grant Village 85.57 332 ⇑P P 08 16 02.7 +1.2
baz=86,SNR=5.8
E22A Miles City 85.58 336 ⇓P P 08 16 01.0 -0.2
baz=86,SNR=8.3
D24A Glendive 85.62 337 ⇑P P 08 16 02.0 +0.6
baz=86,SNR=16
LKWY Lake 85.64 332 eP P 08 16 03.3 +1.4
LKWY e*PP pP 08 16 36.9 +1.5
LKWY pmax pmax
comp=Z,18nm,1.2s
LKWY Lake 85.64 332 eP P 08 16 03.3 +1.4
comp=Z,18nm,1.2s
LKWY epP pP 08 16 36.9 +1.5
RLMT Red Lodge 85.67 333 eP P 08 16 02.2 +0.3
comp=Z,16nm,0.6s
RLMT epP pP 08 16 35.4 +0.1
RLMT Red Lodge 85.67 333 ⇓P P 08 16 02.0 +0.1
baz=86,SNR=32
F20A Billings 85.82 334 ⇑P P 08 16 02.5 0.0
baz=86
J14A Carey 85.91 329 ⇑P P 08 16 03.8 +0.7
baz=86,SNR=7.1
G18A Lazy EL Ranch, 85.94 333 ⇓P P 08 16 03.3 +0.1
baz=86,SNR=32
YMR Madison River 85.95 332 eP P 08 16 04.4 +1.1
comp=Z,18nm,0.8s
YMR epP pP 08 16 38.1 +1.2
D23A Lindsay 85.96 336 ⇓P P 08 16 04.0 +0.8
baz=86
C24A Savage 86.01 337 ⇑P P 08 16 03.9 +0.6

baz=86,SNR=27
I15A Monteview 86.02 330 ⇓P P 08 16 04.7 +1.1
baz=86,SNR=10
ULM Lac du Bonnet 86.03 343 P P 08 16 02.9 -0.4
ULM pP pP 08 16 36.2 -0.6
ULM Lac du Bonnet 86.03 343 P P 08 16 02.9 -0.4
comp=Z,4.7nm,0.4s,baz=176,slow=4.4,SNR=9.4
ULM pP pP 08 16 36.2 -0.6
comp=Z,27nm,0.9s,baz=161,slow=3.6,SNR=12
E21A Keefer Ranch, 86.06 335 ⇓P P 08 16 03.7 +0.1
baz=86,SNR=6.2
H16A Russell Place, 86.09 332 ⇑P P 08 16 04.8 +0.7
baz=86,SNR=12
F19A Roth Farm, Mol 86.16 334 ⇑P P 08 16 04.1 0.0
baz=86,SNR=17
J13A Cove Ranch, Pi 86.25 329 ⇑P P 08 16 05.6 +0.8
baz=86,SNR=38
D22A Cohagen 86.27 336 ⇑P P 08 16 05.7 +1.1
baz=87,SNR=19
QLMT Earthquake Lak 86.27 331 *e*P P 08 16 06.3 +1.5
QLMT *e*pP pP 08 16 39.5 +1.1
I14A Mackay 86.37 330 ⇑P P 08 16 06.5 +1.1
baz=87,SNR=14
GCMT Greycliff 86.38 333 *e*P P 08 16 05.5 +0.2
BEKR Beckworth 86.39 323 *e*P P 08 16 06.3 +0.8
comp=Z,11nm,1.3s
G17A Pierce Place, 86.40 332 ⇑P P 08 16 05.5 +0.1
baz=87
E20A Meyer Farm, Mu 86.41 334 ⇑P P 08 16 05.8 +0.4
baz=87
D21A La Casta Ranch 86.48 335 ⇑P P 08 16 05.8 +0.2
baz=87,SNR=17
HLID Hailey 86.48 329 *e*P P 08 16 06.8 +0.8
HLID Hailey 86.48 329 ⇓P P 08 16 06.9 +0.9
baz=87,SNR=25
F18A Big Timber 86.49 333 ⇑P P 08 16 05.8 0.0
baz=87,SNR=38
C23A Lambert 86.50 337 ⇓P P 08 16 06.0 +0.3
baz=87,SNR=14
H15A Lima 86.59 331 ⇑P P 08 16 07.4 +1.0
baz=87,SNR=17
E19A Rath Farm, Rou 86.61 334 ⇓P P 08 16 06.5 +0.2
baz=87,SNR=76
I13A Wildhorse Cree 86.64 329 ⇑P P 08 16 07.1 +0.4
baz=87,SNR=30
C22A Vida 86.69 336 ⇑P P 08 16 06.7 0.0
baz=87,SNR=11
G16A Moss Hill, Enn 86.75 331 ⇑P P 08 16 07.2 0.0
baz=87
DGMT Dagmar 86.76 338 *e*P P 08 16 07.6 +0.6
comp=Z,29nm,0.6s
DGMT Dagmar 86.76 338 ⇓P P 08 16 07.5 +0.6
baz=87,SNR=14
MCMT McKenzie Canyo 86.85 331 *e*P P 08 16 08.5 +0.8
comp=Z,32nm,1.1s
MCMT *e*pP pP 08 16 42.3 +1.0
F17A Fitzpatrick Pl 86.86 333 ⇓P P 08 16 08.1 +0.4
baz=87,SNR=11
H14A Leadore 86.89 330 ⇑P P 08 16 08.5 +0.6
baz=87,SNR=8.8
D20A Manuel Ranch, 86.91 335 ⇑P P 08 16 07.8 0.0
baz=87,SNR=54
G15A Dillon 86.97 331 ⇑P P 08 16 08.9 +0.6
baz=87,SNR=20
I12A Atlanta 86.98 329 ⇓P P 08 16 08.5 +0.2
baz=87,SNR=17
MFID Camas Ranch 86.99 328 *e*P P 08 16 08.6 +0.3
comp=Z,59nm,1.7s
MFID *e*pP pP 08 16 42.5 +0.6
MFID Camas Ranch 86.99 328 ⇑P P 08 16 08.9 +0.6
baz=87,SNR=13
B23A Brockton 87.01 337 ⇑P P 08 16 08.4 +0.2
baz=87,SNR=6.0
BOZ Bozeman (W) 87.02 332 *e*P P 08 16 08.3 -0.2
BOZ *e**PP pP 08 16 41.8 -0.2
BOZ pmax pmax
comp=Z,17nm,1.6s
BOZ Bozeman (W) 87.02 332 *e*P P 08 16 08.3 -0.2
comp=Z,17nm,1.6s
BOZ *e*pP pP 08 16 41.8 -0.2
BOZ Bozeman (W) 87.02 332 ⇓P P 08 16 08.2 -0.3
baz=87
A24A Westby 87.10 338 ⇓P P 08 16 09.0 +0.5
baz=87,SNR=6.2
E18A Harlowton 87.12 333 ⇓P P 08 16 09.0 +0.1
baz=87,SNR=7.1
F16A Kennard Place, 87.14 332 ⇑P P 08 16 09.1 +0.2
baz=87
C21A Desert Coulee 87.17 336 ⇑P P 08 16 09.1 +0.1
baz=88,SNR=39
DLMT Dillon 87.18 331 *e*P P 08 16 09.5 +0.3
comp=Z,45nm,1.3s
DLMT *e*pP pP 08 16 43.7 +0.9
B22A Reddig Ranch S 87.20 337 ⇑P P 08 16 09.5 +0.4
baz=88,SNR=9.7
H13A Challis 87.22 330 ⇓P P 08 16 09.9 +0.5
baz=88,SNR=29
D19A Cripps Ranch, 87.24 334 ⇑P P 08 16 09.0 -0.4
baz=88,SNR=21
SCHQ Schefferville 87.39 1 *e*P P 08 16 09.7 -0.1
SCHQ Schefferville 87.39 1 P P 08 16 09.5 -0.3
comp=Z,3.5nm,0.5s,baz=197,slow=3.5,SNR=12
C20A Veseth Ranch, 87.39 335 ⇓P P 08 16 09.8 -0.2
baz=88,SNR=29
E17A Martinsdale 87.40 333 ⇓P P 08 16 11.1 +0.8
baz=88
H12A Diamond D Ranc 87.47 329 ⇓P P 08 16 11.8 +1.2
baz=88,SNR=11
LRM Limekiln Ridge 87.50 331 *e*P P 08 16 11.6 +0.7
F15A Butte 87.53 331 ⇑P P 08 16 11.4 +0.5
baz=88,SNR=16
D18A Linhart Farms, 87.61 334 ⇑P P 08 16 11.2 0.0
baz=88,SNR=21
B21A Ellsworth Farm 87.66 336 ⇓P P 08 16 11.4 +0.1
baz=88,SNR=44
A22A Carney Farms, 87.78 337 ⇓P P 08 16 12.0 +0.2
baz=88,SNR=24
C19A Slack Wire Ran 87.78 334 ⇑P P 08 16 11.7 -0.2
baz=88,SNR=19
F14A Wisdom 87.86 331 ⇓P P 08 16 13.3 +0.8
baz=88,SNR=6.0
D17A Six Diamond Ra 87.91 333 ⇑P P 08 16 13.0 +0.4
baz=88,SNR=32
MOD Modoc 87.91 325 *e*P P 08 16 13.6 +0.8
comp=Z,6.8nm,0.8s
MOD *e*pP pP 08 16 46.4 -0.1
HRY Holter Researc 87.98 332 *e*P P 08 16 13.4 +0.5
comp=Z,22nm,1.3s
B20A Solberg Farm, 88.02 335 ⇑P P 08 16 13.0 0.0
baz=88,SNR=28
LSZ Lusaka 88.04 107 *e*P P 08 16 15.1 +1.0
comp=Z,106nm,1.8s
E15A Deer Lodge 88.06 332 ⇓P P 08 16 13.7 +0.3
baz=88,SNR=6.7
A21A Bergtoll Ranch 88.11 336 ⇓P P 08 16 13.2 -0.2
baz=88,SNR=8.3
D16A Dana Ranch, Ca 88.14 333 ⇓P P 08 16 14.3 +0.6
baz=88,SNR=14
F13A Darby 88.24 330 ⇓P P 08 16 14.6 +0.4
baz=88,SNR=18
EGMT Eagleton 88.29 334 *e*P P 08 16 14.2 -0.1
comp=Z,19nm,1.1s
EGMT Eagleton 88.29 334 ⇓P P 08 16 14.2 -0.1
baz=89,SNR=8.4
C17A Wharram Farm, 88.33 333 ⇓P P 08 16 14.4 -0.2
baz=89,SNR=21
B19A Brinkman Farms 88.36 335 ⇑P P 08 16 14.5 0.0
baz=89,SNR=24
A20A Cobblestone Ra 88.36 336 ⇓P P 08 16 14.3 -0.3
baz=89,SNR=33
E14A Clinton 88.40 331 ⇓P P 08 16 15.5 +0.5
baz=89,SNR=12
D15A Lincoln 88.52 332 ⇓P P 08 16 15.5 0.0
baz=89,SNR=10
F12A Elk City 88.60 330 ⇓P P 08 16 15.8 -0.2
baz=89,SNR=12
B18A Beardsley Farm 88.61 334 ⇓P P 08 16 15.2 -0.6
baz=89,SNR=20
A19A Klindworth Far 88.69 335 ⇓P P 08 16 15.8 -0.3
baz=89,SNR=14
E13A Victor 88.70 331 ⇓P P 08 16 17.0 +0.6
baz=89,SNR=22
CHMT Chamberlain Mo 88.71 332 *e*P P 08 16 17.2 +0.7
BMO Blue Mountains 88.78 328 *e*P P 08 16 16.6 -0.1
BMO pmax pmax
comp=Z,4.0nm,0.7s
BMO Blue Mountains 88.78 328 *e*P P 08 16 16.6 -0.1
comp=Z,4.0nm,0.7s

C16A Fuhringer Ranc 88.85 333 ⇑P P 08 16 17.1 +0.1
baz=89,SNR=20
B17A L&G Farms, Che 88.89 334 ⇑P P 08 16 16.7 -0.4
baz=89,SNR=11
MSO Missoula 88.92 331 *e*P P 08 16 18.0 +0.7
comp=Z,5.6nm,1.3s
D14A Greenough 88.95 332 ⇑P P 08 16 17.9 +0.4
baz=89,SNR=9.7
YBH Yreka Blue Hor 88.97 323 P P 08 16 17.6 -0.2
YBH pP pP 08 16 50.7 -0.7
YBH Yreka Blue Hor 88.97 323 P P 08 16 17.6 -0.2
comp=Z,2.5nm,0.5s,baz=183,slow=18,SNR=8.4
YBH pP pP 08 16 50.7 -0.7
comp=Z,8.7nm,1.1s,baz=130,slow=5.9,SNR=6.0
A18A Metzger Ranch, 89.07 335 ⇓P P 08 16 17.7 -0.3
baz=89,SNR=10
SLMT Seeley Lake 89.07 332 *e*P P 08 16 18.1 -0.1
C15A Salmond Ranch, 89.16 332 ⇑P P 08 16 18.3 -0.2
baz=90,SNR=16
B16A M & M Farms, S 89.33 333 ⇓P P 08 16 19.5 +0.2
baz=90,SNR=8.7
D13A Huson 89.34 331 ⇑P P 08 16 20.3 +1.0
baz=90,SNR=13
A17A Triple J Farms 89.40 334 ⇑P P 08 16 19.4 -0.1
baz=90,SNR=14
SWMT Swartz Lake 89.49 332 *e*P P 08 16 20.1 +0.1
B15A Bradely Ranch, 89.58 333 ⇑P P 08 16 19.9 -0.5
baz=90,SNR=14
C14A Swan Lake 89.60 332 ⇑P P 08 16 20.8 +0.3
baz=90
D12A Red Ives Fores 89.67 331 ⇑P P 08 16 21.0 +0.1
baz=90,SNR=16
A16A West Butte Ran 89.74 334 ⇑P P 08 16 21.2 +0.1
baz=90
YBMT Yellow Bay 89.78 332 *e*P P 08 16 21.9 +0.5
comp=Z,10.0nm,1.2s
YBMT *e*pP pP 08 16 55.8 +0.6
JTMT Jette 89.79 332 *e*P P 08 16 21.3 -0.1
C13A Hot Springs 89.86 331 ⇓P P 08 16 21.7 +0.1
baz=90,SNR=8.3
B14A Marquette Ranc 89.89 332 ⇓P P 08 16 21.5 -0.4
baz=90
BSMT Bassoo Peak 90.08 331 *e*P P 08 16 23.5 +0.6
B13A Whitefish 90.37 332 ⇑P P 08 16 24.3 +0.2
baz=91,SNR=5.8
A14A Double T Ranch 90.45 333 ⇓P P 08 16 24.5 +0.1
baz=91,SNR=8.3
C11A Tepee Creek (N 90.67 331 ⇑P P 08 16 25.6 +0.2
baz=91
WALA Waterton Lakes 90.71 333 *e*P P 08 16 25.4 -0.2
comp=Z,0.1nm,0.5s
A13A Flathead Natio 90.80 332 ⇓P P 08 16 26.5 +0.4
baz=91
FFC Flin Flon 91.66 342 *ce*P P 08 16 29.7 0.0
FFC Flin Flon 91.66 342 *e*P P 08 16 28.9 -0.9
comp=Z,18nm,1.5s
ESDC Sonseca Array 94.23 45 LR LR 08 56 36.5
comp=Z,79nm,19.4s,baz=10.0,slow=34
YKA Yellowknife Ar 101.73 340 P Pdif 08 17 14.7 -0.4
YKA pP pP 08 17 47.9 -1.3
YKA PP PP 08 21 25.1 -2.8
YKA PKKPbc PKKPbc 08 33 20.1 -2.9
YKA Yellowknife Ar 101.73 340 P Pdif 08 17 14.7 -0.4
comp=Z,0.5nm,0.5s,baz=145,slow=4.8,SNR=29
YKA pP pP 08 17 47.9 -1.3
comp=Z,0.9nm,0.8s,baz=142,slow=4.6,SNR=5.6
YKA PP PP 08 21 25.1 -2.8
comp=Z,0.9nm,1.1s,baz=136,slow=8.1,SNR=5.2
YKA PKKPbc PKKPbc 08 33 20.0 -2.9
comp=Z,0.2nm,0.5s,baz=324,slow=3.4,SNR=7.2
ILAR Eielson Array 114.21 333 PKP PKPdf 08 22 00.9 0.0
ILAR PP PP 08 22 58.0 -0.7
ILAR PKKPbc PKKPbc 08 32 41.2 -2.0
ILAR Eielson Array 114.21 333 PKP PKPdf 08 22 00.9 0.0
comp=Z,0.2nm,0.4s,baz=170,slow=0.8,SNR=5.4
ILAR PP PP 08 22 58.0 -0.7
comp=Z,1.1nm,1.0s,baz=115,slow=4.8,SNR=8.6
ILAR PKKPbc PKKPbc 08 32 41.2 -2.0
comp=Z,0.4nm,0.8s,baz=265,slow=3.7,SNR=6.2
BRTR Keskin Array B 119.37 60 PKP PKPdf 08 22 10.9 -1.0
BRTR Keskin Array B 119.37 60 PKP PKPdf 08 22 10.9 -1.0
comp=Z,0.3nm,0.5s,baz=220,slow=5.6,SNR=2.6
ASAR Alice Springs 119.53 205 PKP PKPdf 08 22 11.3 -1.4
ASAR PKKPab PKKPab 08 32 29.6 +0.4
ASAR Alice Springs 119.53 205 PKP PKPdf 08 22 11.3 -1.4
comp=Z,0.4nm,0.6s,baz=174,slow=3.5,SNR=3.3
ASAR PKKPab PKKPab 08 32 29.6 +0.4
comp=Z,0.3nm,0.5s,baz=346,slow=3.4,SNR=4.9
AKASG Malin Array Be 119.82 46 PKIKP PKPdf 08 22 11.1 -1.0
AKASG Malin Array Be 119.82 46 PKP PKPdf 08 22 11.1 -1.0
AKASG Malin Array Be 119.82 46 PKP PKPdf 08 22 11.1 -1.0
comp=Z,6nm,0.4s,baz=258,slow=2.9,SNR=3.7
FINES FINESS Array B 120.83 34 PKP PKPdf 08 22 13.2 -0.6
FINES FINESS Array B 120.83 34 PKP PKPdf 08 22 13.2 -0.6
comp=Z,1.2nm,0.8s,baz=270,slow=4.0,SNR=3.4
ARCES ARCESS Array B 122.09 24 PKP PKPdf 08 22 15.7 -0.3
ARCES ARCESS Array B 122.09 24 PKP PKPdf 08 22 15.7 -0.3
comp=Z,5.0nm,1.1s,baz=249,slow=3.6,SNR=26
WRA Warramunga Arr 122.77 207 PKP PKPdf 08 22 17.9 -1.0
WRA PKKPbc PKKPbc 08 32 12.3 +0.8
WRA Warramunga Arr 122.77 207 PKP PKPdf 08 22 17.9 -1.0
comp=Z,1.4nm,0.7s,baz=159,slow=1.9,SNR=33
WRA PKKPbc PKKPbc 08 32 12.3 +0.8
comp=Z,0.4nm,0.8s,baz=345,slow=4.2,SNR=6.0
PMG Port Moresby 125.39 226 PKP PKPdf 08 22 23.9 -0.1
PMG Port Moresby 125.39 226 PKP PKPdf 08 22 23.9 -0.1
comp=Z,2.5nm,0.4s,baz=214,slow=3.6,SNR=3.4
MOS Moscow 125.81 42 *e*P Pdif 08 19 13.4 +11
MOS pmax pmax
comp=Z,38nm,0.8s
TMCR Tamitsa 126.60 31 *e*PKIKP PKPdf 08 22 28.0 +3.3
TMCR pmax pmax
comp=Z,21nm,1.0s
KIV Kislovodsk 127.04 57 *i* PKIKP PKPdf 08 22 25.0 -1.4
KIV SS SS 08 41 30.0 +5.2
KIV pmax pmax
comp=Z,5.0nm,0.8s
KBZ Khabaz 127.14 57 PKIKP PKPdf 08 22 26.9 +0.5
KBZ Khabaz 127.14 57 PKP PKPdf 08 22 26.9 +0.5
KBZ Khabaz 127.14 57 PKP PKPdf 08 22 26.9 +0.5
comp=Z,0.5nm,0.4s,baz=36,slow=4.9,SNR=3.8
FITZ Fitzroy Crossi 127.30 198 PKP PKPdf 08 22 27.3 -0.3
FITZ Fitzroy Crossi 127.30 198 PKP PKPdf 08 22 27.3 -0.3
comp=Z,1.3nm,0.6s,baz=236,slow=1.9,SNR=4.3
AKTO Aktyubinsk 137.94 49 PKIKP PKPdf 08 22 46.8 +0.2
AKTO Aktyubinsk 137.94 49 PKP PKPdf 08 22 46.8 +0.2
AKTO Aktyubinsk 137.94 49 PKP PKPdf 08 22 46.8 +0.2
comp=Z,0.8nm,0.4s,baz=198,slow=3.2,SNR=3.0
ABKAR Akbulak array 139.27 51 *e*PKPdf PKPdf 08 22 49.7 +0.7
SEY Seymchan 140.13 332 ⇑*i*PKIKP PKPdf 08 22 49.0 -1.2
PETK Petropavlovsk- 140.94 316 PKHKP PKPpre 08 22 45.5
PETK Petropavlovsk- 140.94 316 PKPpre PKPpre 08 22 45.5
PETK Petropavlovsk- 140.94 316 PKhKP PKPpre 08 22 45.5
comp=Z,3.3nm,1.1s,baz=345,slow=6.3,SNR=5.6
POO Poona 144.13 104 *e*P PKPab 08 22 55.0 -1.7
BRVK Borovoye 144.90 43 *d*PKIKP PKPbc 08 22 57.9 -0.5
BRVK Borovoye 144.90 43 *e*PKPdf PKPdf 08 22 59.5 +0.6
KBL Kabul 145.57 76 *e*PKP2 PKPdf 08 23 01.2 +0.2
KBL Kabul 145.57 76 *e*PKPdf PKPdf 08 23 01.2 +0.2
KKAR Karatay Array 147.08 60 *e*PKIKP PKPdf 08 23 03.4 +0.4
KKAR *e* 08 23 05.6
KKAR Karatay Array 147.08 60 *e*PKPdf PKPdf 08 23 03.4 +0.4
KKAR *e*PKPbc PKPbc 08 23 05.6 +0.2
HYB Hyderabad 147.32 110 ⇑*i*PKP PKPbc 08 23 06.0 -0.7
comp=Z,58nm,0.8s
PSI Prapat 148.13 157 PKPbc PKPbc 08 23 08.4 -0.7
PSI Prapat 148.13 157 PKPbc PKPbc 08 23 08.4 -0.7
comp=Z,19nm,0.7s,baz=132,slow=2.1,SNR=8.6
YAK Yakutsk 148.37 343 *e*PKP2 PKPbc 08 23 07.1 -1.0
YAK pmax pmax
comp=Z,14nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.5s
YAK pmax pmax
comp=N,3.0nm,1.1s
YAK pmax pmax
comp=Z,30nm,1.1s
EKS2 Erkin-Say 149.51 61 *e*PKHKP PKPdf 08 23 06.8 -0.3
EKS2 *e* 08 23 12.8
EKS2 Erkin-Say 149.51 61 *e*PKPdf PKPdf 08 23 06.8 -0.3
EKS2 *e*PKPbc PKiKP 08 23 12.8 0.0
AAK Ala-Archa 150.04 61 *c i*PKP2 PKPbc 08 23 13.8 +0.7
AAK Ala-Archa 150.04 61 PKPbc PKPbc 08 23 14.2 +1.1
AAK pPKPbc pPKPbc 08 23 48.5 +0.3
AAK Ala-Archa 150.04 61 PKPbc PKPbc 08 23 14.2 +1.1
comp=Z,10nm,0.7s,baz=182,slow=2.8,SNR=27
AAK pPKPbc pPKPbc 08 23 48.5 +0.3
comp=Z,7.3nm,0.7s,baz=276,slow=1.0,SNR=2.8
FRU Bishkek 150.11 60 *e*PKIKP PKPbc 08 23 15.0 +1.9
FRU *e* 08 23 47.0
FRU pmax pmax
comp=Z,60nm,2.0s
KURK Kurchatov 150.56 43 *c i*PKIKP PKPbc 08 23 14.3 +0.5
KURK Kurchatov 150.56 43 *e*PKPbc PKPbc 08 23 14.9 +1.0
TKM2 Tokmak 2 150.81 60 *e*PKIKP PKPdf 08 23 09.2 -0.1
TKM2 Tokmak 2 150.81 60 *e*PKPdf PKPdf 08 23 09.2 -0.1
TKM2 *e*PKPbc PKiKP 08 23 15.7 +0.1
NVS Novosibirsk 150.82 33 ⇑*i*PKIKP PKPbc 08 23 14.9 +0.6
NVS *i* 08 23 46.2
NVS pmax pmax
comp=N,3.0nm,1.3s
NVS pmax pmax
comp=Z,18nm,1.3s
NVS pmax pmax
comp=E,6.0nm,1.2s
KSH Kashi 151.41 67 *e*PKPbc PKPbc 08 23 16.8 +0.4
KSH pPKP pPKPdf 08 23 59.3 +14
KSH *es*PKP 08 24 16.0
KSH PKS PKSdf 08 26 50.3 +5.4
KSH PP PP 08 27 05.5 +8.4
KSH SKS **SKSdf** **08 30 07.0 +1.4**
KSH SKKS **SKKSac** **08 33 37.3 +2.5**
KSH SS **SS** **08 46 10.8 -0.4**
KSH AMB AMB
comp=Z,43nm,1.7s
KSH LR LR
comp=N,940nm,10.6s
KSH LR LR
comp=E,280nm,7.7s
KSH LR LR
comp=Z,270nm,5.7s
ZAA0 Zalesovo Array 152.10 33 *e*PKPbc PKPbc 08 23 17.0 -0.3
ZALV Zalesovo Beam 152.10 33 PKIKP PKPdf 08 23 10.7 +0.2
ZALV 08 23 51.6
ZALV Zalesovo Beam 152.10 33 PKP PKPdf 08 23 10.7 +0.2
ZALV PKPbc PKiKP 08 23 17.5 0.0
ZALV pPKPbc pPKPbc 08 23 51.6 -0.8
ZALV Zalesovo Beam 152.10 33 PKP PKPdf 08 23 10.7 +0.2
comp=Z,0.5nm,0.5s,baz=281,slow=2.3,SNR=3.8
ZALV PKPbc PKiKP 08 23 17.5 0.0
comp=Z,15nm,0.5s,baz=60,slow=3.6,SNR=14
ZALV pPKPbc pPKPbc 08 23 51.6 -0.8
comp=Z,13nm,0.6s,baz=304,slow=3.3,SNR=4.6
ASAJ Asahikawa 152.73 304 PKPbc PKPbc 08 23 19.6 +0.6
ASAJ Asahikawa 152.73 304 PKPbc PKPbc 08 23 19.6 +0.6
comp=Z,13nm,1.1s,baz=284,slow=8.3,SNR=3.7
MK31 Makanchi Array 154.37 49 *e*PKIKP PKPbc 08 23 22.8 +0.2
MK31 Makanchi Array 154.37 49 *e*PKPbc PKPbc 08 23 22.8 +0.2
MKAR Makanchi Array 154.37 49 PKIKP PKPdf 08 23 15.0 +0.8
MKAR Makanchi Array 154.37 49 PKP PKPdf 08 23 14.9 +0.8
MKAR PKPbc PKPbc 08 23 22.4 -0.2
MKAR PKPab PKPab 08 23 37.5 +0.2
MKAR Makanchi Array 154.37 49 PKP PKPdf 08 23 14.9 +0.8
comp=Z,0.8nm,0.8s,baz=27,slow=3.0,SNR=4.2
MKAR PKPbc PKPbc 08 23 22.4 -0.2
comp=Z,1.3nm,0.7s,baz=307,slow=1.5,SNR=8.5
MKAR PKPab PKPab 08 23 37.5 +0.2
comp=Z,1.4nm,0.7s,baz=287,slow=3.0,SNR=6.5
MJAR Matsushiro Arr 157.04 287 PKPab PKPab 08 23 49.7 +0.6
MJAR pPKPab pPKPab 08 24 22.1 -1.0
MJAR Matsushiro Arr 157.04 287 PKPab PKPab 08 23 49.7 +0.6
comp=Z,1.7nm,0.9s,baz=80,slow=2.4,SNR=3.0
MJAR pPKPab pPKPab 08 24 22.1 -1.0
comp=Z,2.8nm,0.9s,baz=110,slow=1.7,SNR=3.7
WMQ Urumqi 159.05 52 PKP PKPdf 08 23 19.5 -0.8
WMQ PP PP 08 27 40.0 +0.8
WMQ SKS **SKSdf** **08 30 14.0 +0.4**
WMQ SKKS **SKKSac** **08 34 17.0 +1.8**
WMQ SS **SS** **08 47 34.0 +1.1**
WMQ LR LR
comp=N,180nm,26.0s
WMQ LR LR
comp=E,220nm,26.0s
WMQ LR LR
comp=Z,97nm,26.0s
CMAR Chiang Mai Arr 162.22 141 PKP PKPdf 08 23 23.4 -1.0
CMAR PKPab PKPab 08 24 11.2 -0.8
CMAR Chiang Mai Arr 162.22 141 PKP PKPdf 08 23 23.4 -1.0
comp=Z,1.3nm,0.6s,baz=223,slow=2.4,SNR=5.3
CMAR PKPab PKPab 08 24 11.2 -0.8
comp=Z,3.2nm,0.8s,baz=232,slow=4.9,SNR=11
CN2 Changchun 164.07 317 *e*PKP PKPdf 08 23 22.8 -2.6
CN2 PP PP 08 28 07.0 +1.4
CN2 LR LR
comp=N,300nm,17.0s
CN2 LR LR
comp=E,300nm,17.0s
CN2 LR LR
comp=Z,300nm,18.0s
SONM Songino Array 164.73 11 PKP PKPdf 08 23 26.1 +0.1
SONM pPKP pPKPdf 08 24 01.8 +0.2
SONM PKPab PKPab 08 24 22.9 +0.6
SONM pPKPab pPKPab 08 24 55.3 -0.9
SONM Songino Array 164.73 11 PKP PKPdf 08 23 26.1 +0.1
comp=Z,0.2nm,0.5s,baz=332,slow=4.9,SNR=2.0
SONM pPKP pPKPdf 08 24 01.8 +0.2
comp=Z,0.6nm,0.6s,baz=351,slow=2.3,SNR=2.4
SONM PKPab PKPab 08 24 22.9 +0.6
comp=Z,0.8nm,0.5s,baz=330,slow=4.4,SNR=4.7
SONM pPKPab pPKPab 08 24 55.3 -0.9
comp=Z,0.9nm,0.8s,baz=347,slow=4.6,SNR=2.7
GTA Gaotai 169.13 50 *e*PKPbc PKPdf 08 23 36.0 +6.4
GTA pPKP pPKPdf 08 24 03.5 -1.6
GTA sPKP 08 24 13.0
KMI Kunming 169.65 136 PKP PKPdf 08 23 29.8 -0.7
KMI PKS PKSdf 08 27 01.0 -2.2
KMI PP PP 08 28 37.3 +2.8
KMI SS SS 08 49 20.0 -1.2
BJI Beijing 171.57 329 PKP PKPdf 08 23 31.0 +0.3
BJI PP PP 08 28 45.5 +2.2
BJI SS SS 08 49 41.3 +2.5
HHC Hu-ho-hao-te 172.01 355 *e*PKP PKPdf 08 23 23.8 -7.3
HHC pPKP pPKPdf 08 24 05.5 -1.1
HHC sPKP 08 24 22.3
HHC PKS PKSdf 08 26 54.8 -8.6
HHC PP PP 08 28 42.0 -3.2
HHC SKS SKSdf 08 30 09.0 -13
HHC SKKS SKKSac 08 35 11.0 -8.9
HHC SS SS 08 49 34.0 -8.6
HHC AMB AMB
comp=Z,200nm,9.7s
GYA Guiyang 172.74 151 PKP PKPdf 08 23 31.0 -0.8
GYA PKPab PKPab 08 25 01.5 +3.2
GYA PKS PKSdf 08 27 02.8 -1.5
GYA PP PP 08 28 52.0 +2.8
GYA SKKS 08 35 23.0
GYA SS **SS** **08 49 50.8 +0.4**
GYA AMB AMB
comp=Z,130nm,8.2s
GYA LR LR
comp=N,150nm,22.8s
GYA LR LR
comp=E,130nm,24.6s
GYA LR LR
comp=Z,160nm,23.5s
LZH Lanzhou 173.58 58 *e*PKP PKPdf 08 23 33.5 +1.6
LZH PP PP 08 28 59.3 +5.0
LZH SS SS 08 49 54.0 -6.4
LZH AMB AMB
comp=Z,160nm,3.6s
LZH LR LR
comp=N,320nm,14.6s
LZH LR LR
comp=E,290nm,14.4s
LZH LR LR
comp=Z,370nm,16.0s
CD2 Chengdu 173.86 107 PKP PKPdf 08 23 30.3 -1.8
CD2 pPKP pPKPdf 08 24 00.0 -7.6
CD2 sPKP 08 24 11.5
CD2 PKPab PKPab 08 25 03.0 -0.4
CD2 PKS PKSdf 08 27 01.0 -3.4
CD2 PP PP 08 28 55.8 -0.1
CD2 SKS SKSdf 08 30 20.8 -2.3
CD2 SS SS 08 50 00.8 -2.8
CD2 AMB AMB
comp=Z,230nm,5.8s

*ISCJB **26** 08:38:26.6±0.4,6.80S±0.04×128.62E±0.06,h250km, mb3.9/11,Error ellipse: s-maj=8.7km s-min=5.2km az=165.1*
*DJA **26** 08:38:27.6±0.4,7.5S×12.9E±,h226km±14km,M4.3/6, mB4.8/4,mb4.6/6,MLv4.3/3,Mw(mB)4.0/4*
*IDC **26** 08:38:27.5±2.9,6.70S×128.57E,h244km±31km,mb3.7/11, mb1 3.9/15,mb1mx3.8/21,mbtmp3.8/15,Error ellipse: s-maj=20.6km s-min=12.0km az=66.0*

ISC 26 08:38:27.2±0.6,6.88S±0.06×128.63E±0.08,h250km,n27, σ1°46/30,mb3.8/11,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**3.20**	**352**	P	**Pn**	**08 39 22.2**	**+0.3**
NLAI	**Namlea**	**3.92**	**337**	P	**Pn**	**08 39 31.6**	**+1.5**
TLE	**Tual**	**4.27**	**73**	P	**Pn**	**08 39 35.3**	**+1.0**
TLE				S		08 40 19.4	-8.1
FAKI	**Fak Fak** 178nm,0.6s,4µm1.0nm	**5.34**	**43**	P	**Pn**	**08 39 45.6**	**-1.6**
FAKI				S	S	08 40 43.0	-8.0
MMRI	**Maumere** 78nm,1.0s,1µm	**6.57**	**254**	P	**Pn**	**08 40 04.1**	**+1.6**
LUWI	**Luwuk** 89nm,1.0s,876nm	**8.22**	**315**	P	**Pn**	**08 40 23.9**	**+0.5**
BKSI	**Bulukumba** 14nm,0.9s,428nm	**8.59**	**280**	P	**Pn**	**08 40 27.8**	**-0.3**
MRSI	**Marisa** 67nm,1.0s	**9.89**	**317**	P	**Pn**	**08 40 46.0**	**+1.5**
FITZ	**Fitzroy Crossi** 2.7nm,0.3s,baz=30,slow=9.9,SNR=57	**11.53**	**194**	P	**Pn**	**08 41 05.4**	**+0.3**
FITZ	2.0nm,0.3s,baz=120,slow=23,SNR=4.2			S	**S**	08 43 10.5	-3.4
WRA	**Warramunga Arr** 3.7nm,0.3s,baz=340,slow=12,SNR=174	**14.12**	**157**	P	**Pn**	**08 41 37.6**	**+0.7**
WRA	0.7nm,0.3s,baz=330,slow=22,SNR=4.8			S	**S**	08 44 10.4	-3.0
ASAR	**Alice Springs** 6.5nm,0.3s,baz=345,slow=12,SNR=224	**17.45**	**164**	P	**Pn**	**08 42 17.2**	**+0.8**
ASAR	0.2nm,0.3s,baz=346,slow=21,SNR=13			S	**S**	08 45 22.1	-0.3
PMG	**Port Moresby** 0.5nm,0.3s,baz=222,slow=12,SNR=2.8	**18.52**	**99**	P	**Pn**	**08 42 28.2**	**-0.9**
CTA	**Charters Tower** 5.0nm,0.6s,baz=301,slow=11,SNR=12	**21.56**	**129**	P	**P**	**08 43 00.2**	**+2.8**
CTA	4.9nm,0.6s,baz=298,slow=11,SNR=4.3			pP	**pP**	**08 43 39.0**	**+0.7**
STKA	**Stephens Creek** 3.6nm,0.7s,baz=294,slow=10,SNR=11	**27.66**	**156**	P	**P**	**08 43 54.4**	**+2.1**
NWAO	**Narrogin (SRO)** 7.6nm,0.8s,baz=18,slow=14,SNR=3.3	**28.00**	**201**	pP	pP	08 44 44.9	+0.5
CMAR	**Chiang Mai Arr** 1.0nm,0.4s,baz=145,slow=8.2,SNR=5.8	**38.61**	**311**	P	**P**	**08 45 27.3**	**+0.5**
KSRS	**Korea Array** 3.4nm,0.7s,baz=178,slow=9.4,SNR=11	**44.10**	**359**	P	**P**	**08 46 10.8**	**-0.1**
MJAR	**Matsushiro Arr** 4.0nm,0.8s,baz=192,slow=9.9,SNR=6.3	**44.11**	**11**	P	**P**	**08 46 08.8**	**-2.3**
USRK	**Ussuriysk Arra** 3.1nm,0.8s,baz=168,slow=10,SNR=4.9	**50.93**	**3**	P	**P**	**08 47 02.5**	**-0.7**
SONM	**Songino Array** 2.1nm,0.6s,baz=158,slow=6.4,SNR=15	**57.90**	**342**	P	**P**	**08 47 53.5**	**+0.2**
PETK	**Petropavlovsk-** 5.0nm,0.6s,baz=175,slow=5.1,SNR=11	**64.64**	**19**	P	**P**	**08 48 38.3**	**+0.1**
MKAR	**Makanchi Array** 2.6nm,0.5s,baz=123,slow=7.7,SNR=30	**67.38**	**327**	P	**P**	**08 48 55.9**	**+0.2**
ZALV	**Zalesovo Beam** 1.0nm,0.5s,baz=115,slow=5.4,SNR=8.2	**70.87**	**334**	P	**P**	**08 49 15.8**	**-1.1**
ILAR	**Eielson Array** 0.6nm,0.7s,baz=243,slow=5.4,SNR=4.6	**93.82**	**25**	P	**P**	**08 51 14.2**	**-1.5**
PDAR	**Pinedale Array** 0.3nm,0.7s,baz=251,slow=2.8,SNR=3.0	**117.77**	**45**	PKP	**PKPdf**	**08 56 44.4**	**0.0**
TORD	**Torodi Ar. Bea** 0.3nm,0.7s,baz=50,slow=1.4,SNR=2.4	**127.45**	**281**	PKP	**PKPdf**	**08 57 04.2**	**+0.8**
CPUP	**Villa Florida** 0.4nm,0.3s,baz=217,slow=17,SNR=3.2	**146.49**	**170**	PKPbc	**PKPab**	**08 57 40.8**	**-0.4**

IDC 26 08:40:56.7±3.9,35.01S×111.24W,h0km,mb3.9/2, mb1 4.4/2,mb1mx3.8/16,mbtmp3.9/2,MS3.7/6,Ms1 3.7/6, ms1mx3.5/20,Error ellipse: s-maj=216.5km s-min=49.1km az=112.0,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RKT	**Rikitea** 260nm,24.8s	**23.83**	**293**	*e*LR	LR	08 51 52.1	
PLCA	**Paso Flores** comp=Z,74nm,19.7s,baz=11,slow=30	**32.41**	**112**	LR	LR	08 57 21.7	
PPT2	**Papeete2** 257nm,25.5s	**38.22**	**287**	*e*LR	LR	08 58 26.6	
LPAZ	**La Paz** comp=Z,108nm,20.6s,baz=252,slow=30	**42.72**	**75**	LR	LR	09 02 24.1	
CPUP	**Villa Florida** comp=Z,85nm,19.0s,baz=70,slow=33	**46.69**	**95**	LR	LR	09 06 25.7	
VNDA	**Vanda** comp=Z,29nm,20.0s,baz=49,slow=30	**55.45**	**195**	LR	LR	09 08 59.7	
URZ	**Urewera** comp=Z,126nm,18.6s,baz=84,slow=30	**56.24**	**244**	LR	LR	09 08 57.1	
BDFB	**Brasilia** comp=Z,82nm,19.7s,baz=276,slow=34	**59.38**	**88**	LR	LR	09 14 18.7	
NVAR	**Mina Array Bea** 1.0nm,0.9s,baz=185,slow=7.8,SNR=6.7	**73.37**	**354**	P	P	08 52 31.6	+1.1
PDAR	**Pinedale Array** 1.2nm,0.8s,baz=169,slow=5.3,SNR=11	**77.42**	**1**	P	P	08 52 53.0	-0.6
CMAR	**Chiang Mai Arr** 0.8nm,0.3s,baz=149,slow=1.8,SNR=12	**148.57**	**246**	PKPbc	PKPbc	09 00 45.9	-0.1
SONM	**Songino Array** 0.5nm,0.8s,baz=56,slow=3.6,SNR=3.1	**149.32**	**306**	PKPbc	PKPbc	09 00 46.1	-1.2
SONM	0.6nm,0.7s,baz=83,slow=3.6,SNR=3.8			PKPab	PKPab	09 00 51.1	-0.8

*ISCJB **26** 08:55:20.0±0.5,36.16N±0.06×137.14E±0.10, h271km±4km,mb3.2/4,Error ellipse: s-maj=14.2km s-min=7.9km az=34.7*
*JMA **26** 08:55:20.7±0.1,36.19N×137.13E,h267km±1km,M3.0*
*IDC **26** 08:55:20.1±1.1,36.08N×137.09E,h260km±7km,mb3.1/4, mb1 3.4/5,mb1mx2.9/27,mbtmp3.1/5,Error ellipse: s-maj=39.8km s-min=19.1km az=102.0*

ISC 26 08:55:20.7±0.9,36.16N±0.08×137.14E±0.08,h266km±6km, n19,σ0°47/27,mb3.3/4,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JGM	**Miyama**	**0.57**	**216**	P	**Pn**	**08 55 56.0**	**+0.2**
JGM				*e*S	**S**	**08 56 23.4**	**0.0**
JKG	**Kaga**	**0.66**	**280**	P	**Pn**	**08 55 56.3**	**+0.4**
MAT	**Matsushiro**	**0.95**	**66**	P	**Pn**	**08 55 57.4**	**+0.2**
MAT				S	**S**	**08 56 25.9**	**0.0**
MAT	**Matsushiro**	**0.95**	**66**	P	**Pn**	**08 55 57.4**	**+0.2**
MAT				*e*S	**S**	**08 56 26.0**	**0.0**
MJAR	**Matsushiro Arr** 3.9nm,0.3s,baz=252,slow=7.8,SNR=56	**0.95**	**66**	P	**Pn**	**08 55 57.7**	**+0.5**
MJAR	0.6nm,0.3s,baz=218,slow=13,SNR=6.0			S	**S**	**08 56 25.0**	**-1.0**
JYN	**Shimodo**	**1.32**	**120**	P	**Pn**	**08 55 59.7**	**+0.2**
JWT	**Wachi**	**1.66**	**239**	P	**Pn**	**08 56 01.9**	**+0.1**
JWT				*e*S	**S**	**08 56 33.8**	**-0.5**
JIE	**Ise**	**1.80**	**191**	P	**Pn**	**08 56 03.7**	**+0.8**
JIE				*e*S	**S**	**08 56 36.8**	**+0.5**
JOD2	**Odawara 2**	**1.82**	**119**	*e*S	**S**	**08 56 36.2**	**-0.5**
JAG	**Ashikaga**	**1.89**	**81**	P	**Pn**	**08 56 03.8**	**+0.2**
JSD	**Sado**	**2.08**	**25**	P	**Pn**	**08 56 05.4**	**+0.3**
JSD				*e*S	**S**	**08 56 40.0**	**-0.4**
JWY	**Kouya**	**2.31**	**214**	P	**Pn**	**08 56 08.1**	**+0.6**
JWY				*e*S	**S**	**08 56 44.4**	**-0.2**
JNS	**Sasagawa**	**2.41**	**46**	P	**Pn**	**08 56 08.3**	**+0.1**
JWZ	**Kozaga**	**2.87**	**204**	P	**Pn**	**08 56 12.5**	**-0.5**
USRK	**Ussuriysk Arra** 0.2nm,0.3s,baz=151,slow=14,SNR=7.7	**8.94**	**336**	P	**Pn**	**08 57 25.4**	**-0.2**
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=359,slow=7.6,SNR=21	**55.86**	**183**	P	**P**	**09 04 30.3**	**-0.7**
ASAR	**Alice Springs** 0.2nm,0.3s,baz=357,slow=5.4,SNR=7.6	**59.58**	**183**	P	**P**	**09 04 56.0**	**-0.7**
NVAR	**Mina Array Bea** 0.2nm,0.5s,baz=290,slow=7.3,SNR=2.7	**78.24**	**51**	P	**P**	**09 06 51.9**	**+0.4**
TXAR	**Lajitas Array** 0.3nm,0.6s,baz=305,slow=3.2,SNR=5.0	**93.35**	**50**	P	**P**	**09 08 06.5**	**+0.6**

*ISK **26** 08:56:21.6,37.28N×28.21E,h5km,MD2.6*
*CSEM **26** 08:56:22.9±0.2,37.27N×28.23E,h1km,MD2.6,Error ellipse: s-maj=5.1km s-min=3.6km az=38.0*
*DDA **26** 08:56:22.5,37.22N×28.17E,h7km,MD2.8*
*ISCJB **26** 08:56:23.1±0.5,37.25N±0.03×28.22E±0.03,h0km,Error ellipse: s-maj=4.8km s-min=3.3km az=35.2*

ISC 26 08:56:22.0±1.0,37.27N±0.03×28.20E±0.03,h0km,n20, σ0°72/33,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.15**	**155**	*e*PG	**Pg**	**08 56 25.2**	**+0.4**
YER				*e*SG	**Sg**	**08 56 28.3**	**+1.5**
YER	**Yerkesik**	**0.15**	**155**	*e*Pg	**Pg**	**08 56 25.3**	**+0.4**
YER				*e*Sg	**Sg**	**08 56 28.3**	**+1.5**
MLSB	**Milas**	**0.34**	**274**	*e*PG	**Pg**	**08 56 29.4**	**+0.8**
MLSB				*e*SG	**Sb**	**08 56 35.7**	**-1.3**
MLSB	**Milas**	**0.34**	**274**	*e*Pg	**Pg**	**08 56 29.4**	**+0.8**
MLSB				*e*Sg	**Sb**	**08 56 35.7**	**-1.3**
AYDN	**Tasoluk**	**0.47**	**327**	*i* P	**Pb**	**08 56 32.5**	**-0.7**
AYDN				*i* S	**Sb**	**08 56 39.8**	**-0.9**
AYDN	**Tasoluk**	**0.47**	**327**	*i* P	**Pb**	**08 56 32.5**	**-0.7**
AYDN				*i* S	**Sb**	**08 56 39.8**	**-0.9**
TURN	**Turunc**	**0.51**	**141**	*i* P	**Pg**	**08 56 31.3**	**-0.5**
TURN				*i* S	**Sg**	**08 56 38.4**	**0.0**
TURN	**Turunc**	**0.51**	**141**	*i* P	**Pg**	**08 56 31.3**	**-0.5**
TURN				*i* S	**Sg**	**08 56 38.4**	**0.0**
DALY	**Dalyan (Mu˘la**	**0.58**	**141**	*e*PG	**Pb**	**08 56 34.4**	**-0.6**
DALY				*e*SG	**Sb**	**08 56 43.2**	**-0.6**
DALY	**Dalyan (Mu˘la**	**0.58**	**141**	*e*Pg	**Pb**	**08 56 34.4**	**-0.6**
DALY				*e*Sg	**Sb**	**08 56 43.2**	**-0.6**
DAT	**Datca**	**0.74**	**223**	*e*PG	**Pb**	**08 56 37.7**	**-0.1**
DAT	**Datca**	**0.74**	**223**	*e*Pg	**Pb**	**08 56 37.7**	**-0.1**
BODT	**Bodrum**	**0.74**	**254**	*e*PG	**Pb**	**08 56 37.4**	**-0.5**
BODT				*e*SG	**Sb**	**08 56 48.8**	**+0.2**
BODT	**Bodrum**	**0.74**	**254**	*e*Pg	**Pb**	**08 56 37.4**	**-0.5**
BODT				*e*Sg	**Sb**	**08 56 48.8**	**+0.2**
DNZL	**Cakiroluk**	**0.79**	**58**	*i* P	**Pb**	**08 56 38.5**	**-0.3**
DNZL				*i* S	**Sb**	**08 56 51.2**	**+1.1**
DNZL	**Cakiroluk**	**0.79**	**58**	*i* P	**Pb**	**08 56 38.5**	**-0.3**
FETY	**Fethiye**	**0.95**	**132**	*e*PG	**Pb**	**08 56 41.3**	**-0.1**
FETY	**Fethiye**	**0.95**	**132**	*e*Pg	**Pb**	**08 56 41.3**	**-0.1**
KULA	**Kula-Manisa**	**1.29**	**16**	*e*PN	**Pb**	**08 56 47.3**	**0.0**
KULA	**Kula-Manisa**	**1.29**	**16**	*e*Pn	**Pb**	**08 56 47.3**	**0.0**

*DDA **26** 09:02:46.9,39.46N×28.11E,h7km,MD2.9*
*ISK **26** 09:02:46.1,39.44N×28.14E,h5km,MD2.7*
*ISCJB **26** 09:02:47.1±0.5,39.44N±0.03×28.16E±0.04,h0km,Error ellipse: s-maj=4.9km s-min=3.6km az=39.9*
*CSEM **26** 09:02:47.3±0.2,39.45N×28.16E,h1km,MD2.7,Error ellipse: s-maj=5.0km s-min=3.6km az=41.0*

ISC 26 09:02:47.2±0.9,39.45N±0.03×28.12E±0.03,h0km,n30, σ0°66/42,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALB	**Balikesir**	**0.26**	**316**	*e*PG	**Pg**	**09 02 52.9**	**+0.7**
BALB				*e*SG	**Sb**	**09 02 58.7**	**-1.1**
BALB	**Balikesir**	**0.26**	**316**	*e*Pg	**Pg**	**09 02 52.9**	**+0.7**
BALB				*e*Sg	**Sb**	**09 02 58.7**	**-1.1**
DURS	**Dursunbey**	**0.31**	**61**	*i* P	**Pg**	**09 02 53.2**	**+0.1**
DURS				*i* S	**Sg**	**09 02 58.8**	**+1.6**
DURS	**Dursunbey**	**0.31**	**61**	*i* P	**Pg**	**09 02 53.2**	**+0.1**
DURS				*i* S	**Sg**	**09 02 58.8**	**+1.6**
BALY	**Balya**	**0.48**	**307**	*i* P	**Pg**	**09 02 56.3**	**-0.1**
BALY				*i* S	**Sb**	**09 03 04.9**	**-1.3**
BALY	**Balya**	**0.48**	**307**	*i* P	**Pg**	**09 02 56.3**	**-0.1**
BALY				*i* S	**Sb**	**09 03 04.9**	**-1.3**
GONE	**Gonen-Balikesi**	**0.68**	**331**	*e*PG	**Pg**	**09 02 59.8**	**-0.4**
GONE				*e*SG	**Sb**	**09 03 11.2**	**-0.7**
GONE	**Gonen-Balikesi**	**0.68**	**331**	*e*Pg	**Pg**	**09 02 59.8**	**-0.4**
GONE				*e*Sg	**Sb**	**09 03 11.2**	**-0.7**
ORLT	**Orhaneli**	**0.84**	**45**	*e*PG	**Pg**	**09 03 03.1**	**-0.2**
ORLT	**Orhaneli**	**0.84**	**45**	*e*Pg	**Pg**	**09 03 03.1**	**-0.2**
EDC	**Edincik**	**0.92**	**348**	*e*PG	**Pb**	**09 03 05.5**	**-0.4**
EDC	**Edincik**	**0.92**	**348**	*e*Pg	**Pb**	**09 03 05.5**	**-0.4**
MANT	**Manisa**	**1.02**	**160**	*i* P	**Pg**	**09 03 06.7**	**0.0**
MANT				*i* S	**Sb**	**09 03 21.3**	**-0.5**
MANT	**Manisa**	**1.02**	**160**	*i* P	**Pg**	**09 03 06.7**	**0.0**
MANT				*i* S	**Sb**	**09 03 21.3**	**-0.5**
KULA	**Kula-Manisa**	**1.03**	**156**	*e*PG	**Pg**	**09 03 06.5**	**-0.4**
KULA	**Kula-Manisa**	**1.03**	**156**	*e*Pg	**Pg**	**09 03 06.5**	**-0.4**
TVSB	**Tavsanli**	**1.04**	**90**	*e*PG	**Pg**	**09 03 07.2**	**+0.1**
TVSB	**Tavsanli**	**1.04**	**90**	*e*Pg	**Pg**	**09 03 07.2**	**+0.1**
ULDT	**Uludag**	**1.04**	**48**	*i* P	**Pg**	**09 03 07.0**	**-0.2**
ULDT				*i* S	**Sg**	**09 03 21.4**	**+0.7**
ULDT	**Uludag**	**1.04**	**48**	*i* P	**Pg**	**09 03 07.0**	**-0.2**
ULDT				*i* S	**Sg**	**09 03 21.4**	**+0.7**
MDNY	**Mudanya-Bursa**	**1.09**	**32**	*e*PN	**Pg**	**09 03 08.1**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.09**	**32**	*e*Pn	**Pg**	**09 03 08.1**	**+0.1**
MRMT	**Marmara Adasi**	**1.22**	**341**	*e*PN	**Pn**	**09 03 11.8**	**+0.3**
MRMT	**Marmara Adasi**	**1.22**	**341**	*e*Pn	**Pn**	**09 03 11.8**	**+0.3**
ARMT	**Armutlu**	**1.25**	**27**	*e*PN	**Pg**	**09 03 11.0**	**-0.1**
ARMT	**Armutlu**	**1.25**	**27**	*e*Pn	**Pg**	**09 03 11.0**	**-0.1**
EZN	**Ezine**	**1.43**	**286**	*e*PN	**Pb**	**09 03 15.2**	**+0.5**
EZN	**Ezine**	**1.43**	**286**	*e*Pn	**Pb**	**09 03 15.2**	**+0.5**
ALT	**Altintas**	**1.60**	**104**	*e*PN	**Pb**	**09 03 17.1**	**-0.5**
ALT	**Altintas**	**1.60**	**104**	*e*Pn	**Pb**	**09 03 17.1**	**-0.5**

IDC 26 09:37:17.0±2.6,19.70S×176.99W,h299km±37km, mb3.4/5,mb1 3.6/7,mb1mx3.3/21,mbtmp3.4/7,Error ellipse: s-maj=35.9km s-min=19.0km az=121.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu** 3.8nm,0.3s,baz=75,slow=18,SNR=6.0	**7.61**	**42**	P	Pn	09 39 06.1	0.0
AFI	0.7nm,0.3s,baz=264,slow=19,SNR=2.4			S	S	09 40 27.1	-7.3
DZM	**Mont Dzumac** 1.0nm,0.3s,baz=94,slow=19,SNR=16	**15.67**	**258**	P	Pn	09 40 45.6	+2.1
URZ	**Urewera** 0.8nm,0.3s,baz=289,slow=3.8,SNR=5.4	**19.20**	**194**	P	P	09 41 19.3	-0.1
CTA	**Charters Tower** 1.2nm,0.4s,baz=102,slow=9.3,SNR=3.6	**34.53**	**263**	P	P	09 43 38.6	+0.6
STKA	**Stephens Creek** 2.6nm,0.6s,baz=90,slow=12,SNR=8.0	**39.00**	**243**	P	P	09 44 15.5	+0.2
ASAR	**Alice Springs** 3.5nm,0.7s,baz=92,slow=8.2,SNR=48	**45.63**	**256**	P	P	09 45 08.5	-0.2
WRA	**Warramunga Arr** 1.2nm,0.4s,baz=96,slow=7.2,SNR=50	**45.66**	**261**	P	P	09 45 08.3	-0.6
ILAR	**Eielson Array** 0.1nm,0.4s,baz=218,slow=5.0,SNR=7.2	**87.33**	**12**	P	P	09 49 29.9	0.0

IDC 26 09:41:16.9±1.3,8.61S×157.15E,h0km,mb3.8/5, mb1 3.9/6,mb1mx3.7/18,mbtmp3.8/6,ML3.6/1,MS3.4/3, Ms1 3.4/3,ms1mx2.7/26,Error ellipse: s-maj=33.8km s-min=29.7km az=169.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara** 9.5nm,0.3s,baz=265,slow=12,SNR=3.6	**2.88**	**107**	Pn	Pn	09 42 03.9	-0.2
HNR	23nm,0.3s,baz=271,slow=18,SNR=8.0			Sn	Sb	09 42 46.9	+1.7
CTA	**Charters Tower** comp=Z,82nm,18.1s,baz=232,slow=32	**15.53**	**222**	LR	LR	09 49 30.3	
WRA	**Warramunga Arr** 1.9nm,0.8s,baz=65,slow=9.5,SNR=11	**24.77**	**240**	P	P	09 46 40.6	0.0
ASAR	**Alice Springs** 0.3nm,0.6s,baz=66,slow=9.2,SNR=4.7	**26.82**	**233**	P	P	09 46 59.0	-0.2
ASAR	comp=Z,108nm,19.5s,baz=325,slow=32			LR	LR	09 55 38.9	
NWAO	**Narrogin (SRO)** comp=Z,50nm,21.6s,baz=194,slow=33	**44.08**	**231**	LR	LR	10 05 44.3	
CMAR	**Chiang Mai Arr** 0.9nm,0.3s,baz=138,slow=5.5,SNR=4.8	**63.40**	**296**	P	P	09 51 49.3	+0.5
SONM	**Songino Array** 0.4nm,0.5s,baz=111,slow=7.9,SNR=3.2	**71.84**	**327**	P	P	09 52 42.3	+0.5
MKAR	**Makanchi Array** 0.8nm,0.8s,baz=94,slow=5.8,SNR=5.1	**86.02**	**318**	P	P	09 53 58.4	-1.1

*ISCJB **26** 09:58:32.3±0.8,39.89N±0.03×27.74E±0.07,h11km±7km, Error ellipse: s-maj=9.7km s-min=4.9km az=171.0*
*CSEM **26** 09:58:32.2±0.2,39.88N×27.72E,h10km,MD2.6,Error ellipse: s-maj=4.4km s-min=2.3km az=67.0*
*DDA **26** 09:58:32.1,39.89N×27.75E,h7km,MD2.8*
*ISK **26** 09:58:32.0,39.89N×27.75E,h6km,MD2.6*

ISC 26 09:58:32.1±1.2,39.89N±0.03×27.72E±0.06,h14km±10km, n16,σ0°26/28,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GONE	**Gonen-Balikesi**	**0.16**	**350**	*e*PG	**Pg**	**09 58 35.8**	**-0.2**
GONE				*e*SG	**Sg**	**09 58 38.8**	**+0.1**
GONE	**Gonen-Balikesi**	**0.16**	**350**	*e*Pg	**Pg**	**09 58 35.8**	**-0.2**
GONE				*e*Sg	**Sg**	**09 58 38.8**	**+0.1**
BALY	**Balya**	**0.17**	**208**	*i* P	**Pg**	**09 58 36.3**	**+0.1**
BALY				*i* S	**Sg**	**09 58 39.1**	**+0.1**
BALY	**Balya**	**0.17**	**208**	*i* P	**Pg**	**09 58 36.3**	**+0.1**
BALY				*i* S	**Sg**	**09 58 39.1**	**+0.1**
BALB	**Balikesir**	**0.28**	**154**	*e*PG	**Pg**	**09 58 37.9**	**-0.1**
BALB				*e*SG	**Sg**	**09 58 42.1**	**+0.2**
BALB	**Balikesir**	**0.28**	**154**	*e*Pg	**Pg**	**09 58 37.9**	**-0.1**
BALB				*e*Sg	**Sg**	**09 58 42.1**	**+0.2**
EDC	**Edincik**	**0.47**	**13**	*e*PG	**Pg**	**09 58 41.6**	**+0.2**
EDC				*e*SG	**Sb**	**09 58 48.7**	**-0.2**
EDC	**Edincik**	**0.47**	**13**	*e*Pg	**Pg**	**09 58 41.6**	**+0.2**
EDC				*e*Sg	**Sb**	**09 58 48.7**	**-0.2**
DURS	**Dursunbey**	**0.65**	**116**	*i* P	**Pg**	**09 58 44.5**	**-0.3**
DURS				*i* S	**Sg**	**09 58 53.4**	**0.0**
DURS	**Dursunbey**	**0.65**	**116**	*i* P	**Pg**	**09 58 44.5**	**-0.3**
DURS				*i* S	**Sg**	**09 58 53.4**	**0.0**
DST	**Dursunbey**	**0.75**	**112**	*e*PG	**Pb**	**09 58 46.6**	**-0.3**
DST				*e*SG	**Sg**	**09 58 57.0**	**+0.5**
DST	**Dursunbey**	**0.75**	**112**	*e*Pg	**Pb**	**09 58 46.6**	**-0.3**
DST				*e*Sg	**Sg**	**09 58 57.0**	**+0.5**
ARMT	**Armutlu**	**1.10**	**52**	*e*PN	**Pg**	**09 58 53.3**	**-0.1**
ARMT	**Armutlu**	**1.10**	**52**	*e*Pn	**Pg**	**09 58 53.3**	**-0.1**
TVSB	**Tavsanli**	**1.41**	**108**	*e*PN	**Pb**	**09 58 58.7**	**+0.4**
TVSB	**Tavsanli**	**1.41**	**108**	*e*Pn	**Pb**	**09 58 58.7**	**+0.4**

*ISCJB **26** 10:42:18.0±0.5,40.93N±0.04×40.64E±0.03,h0km,Error ellipse: s-maj=5.6km s-min=2.8km az=157.4*
*ISK **26** 10:42:17.2,40.98N×40.52E,h13km,MD2.8*
*CSEM **26** 10:42:18.3±0.2,40.90N×40.65E,h1km,MD2.8,Error ellipse: s-maj=6.6km s-min=3.3km az=153.0*
*DDA **26** 10:42:18.4,40.96N×40.66E,h8km,MD2.9*

ISC 26 10:42:17.2±0.8,40.98N±0.04×40.63E±0.02,h0km,n21, σ0°53/37,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PZAR	**Pazar-Rize**	**0.28**	**46**	*e*PG	**Pb**	**10 42 25.1**	**+0.1**
PZAR				*e*SG	**Sb**	**10 42 30.1**	**-0.3**
PZAR	**Pazar-Rize**	**0.28**	**46**	*e*Pg	**Pb**	**10 42 25.2**	**+0.1**
PZAR				*e*Sg	**Sb**	**10 42 30.1**	**-0.3**
MACK	**Trabzon**	**0.66**	**267**	*i* P	**Pb**	**10 42 32.2**	**+0.7**
MACK				*i* S	**Sb**	**10 42 41.2**	**0.0**
MACK	**Trabzon**	**0.66**	**267**	*i* P	**Pb**	**10 42 32.2**	**+0.7**
MACK				*i* S	**Sb**	**10 42 41.2**	**0.0**
BAYT	**Ayd¨–ntepe-Bay**	**0.70**	**213**	*e*PG	**Pg**	**10 42 30.3**	**-0.2**
BAYT				*e*SG	**Sg**	**10 42 40.0**	**+0.5**
BAYT	**Ayd¨–ntepe-Bay**	**0.70**	**213**	*e*Pg	**Pg**	**10 42 30.3**	**-0.2**
BAYT				*e*Sg	**Sg**	**10 42 40.1**	**+0.5**
DBAD	**Bademkaya**	**0.81**	**87**	*i* P	**Pb**	**10 42 33.6**	**-0.5**
DBAD				*i* S	**Sg**	**10 42 44.2**	**+1.1**
DBAD	**Bademkaya**	**0.81**	**87**	*i* P	**Pb**	**10 42 33.6**	**-0.5**
DBAD				*i* S	**Sg**	**10 42 44.2**	**+1.1**
DDEM	**Demirkent**	**0.85**	**96**	*i* P	**Pb**	**10 42 34.5**	**-0.5**
DDEM				*i* S	**Sb**	**10 42 46.5**	**-0.5**
DDEM	**Demirkent**	**0.85**	**96**	*i* P	**Pb**	**10 42 34.5**	**-0.5**
DDEM				*i* S	**Sb**	**10 42 46.5**	**-0.5**
BCA	**Borcka**	**0.88**	**58**	*e*PG	**Pb**	**10 42 35.0**	**-0.3**
BCA	**Borcka**	**0.88**	**58**	*e*Pg	**Pb**	**10 42 35.0**	**-0.3**
KOPT	**Kop Dagi**	**0.97**	**186**	*i* P	**Pb**	**10 42 36.7**	**-0.3**
KOPT				*i* S	**Sb**	**10 42 50.8**	**+0.3**
KOPT	**Kop Dagi**	**0.97**	**186**	*i* P	**Pb**	**10 42 36.7**	**-0.3**
KOPT				*i* S	**Sb**	**10 42 50.8**	**+0.3**
DAGI	**Agillar**	**0.97**	**84**	*i* P	**Pb**	**10 42 36.8**	**-0.2**
DAGI				*i* S	**Sg**	**10 42 49.8**	**+1.3**
GUMT	**Gumushane**	**1.02**	**240**	*e*PG	**Pg**	**10 42 36.1**	**-0.6**
GUMT	**Gumushane**	**1.02**	**240**	*e*Pg	**Pg**	**10 42 36.1**	**-0.6**
EZM	**Erzurum**	**1.21**	**152**	*e*PN	**Pg**	**10 42 40.9**	**+0.5**
KELT	**Kelkit**	**1.34**	**232**	*i* P	**Pn**	**10 42 43.1**	**-0.3**
KELT				*i* S	**Sb**	**10 43 00.8**	**-0.3**
KELT	**Kelkit**	**1.34**	**232**	*i* P	**Pn**	**10 42 43.1**	**-0.3**
KELT				*i* S	**Sb**	**10 43 00.8**	**-0.3**
GRSN	**GIRESUNGRSN**	**1.79**	**269**	*i* P	**Pb**	**10 42 50.5**	**-0.4**
GRSN				*i* S	**Sn**	**10 43 12.9**	**0.0**

**SKHL 26

GRNR			*e*Sg	Sb	10 52 20.0	+15
GRNR			A	A	10 52 22.8	
	50nm,0.8s					
KLR	**Kul'dur**	**6.92 167**	*e*Pn	Pn	10 50 29.8	+0.1
KLR			*e*Sg	Sb	10 52 25.8	+15

IDC 26 10:54:54.7±4.0, 11°57'S×166°12'E, h51km±32km, mb3.7/7, mb1 3.9/9, mb1mx3.6/20, mbtmp3.8/9, ML4.2/2, MS3.6/3, Ms1 3.5/3, ms1mx2.8/32, Error ellipse: s-maj=32.2km s-min=20.3km az=56.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.43 289**		P	Pn	10 56 27.7	+0.9
	20nm,0.3s,baz=133,slow=5.8,SNR=10						
HNR				S	Sn	10 57 38.8	-0.1
	7.3nm,0.3s,baz=15,slow=20,SNR=3.6						
DZM	**Mont Dzumac**	**10.44 178**		P	Pn	10 57 21.9	0.0
	0.5nm,0.3s,baz=323,slow=7.6,SNR=5.2						
STKA	**Stephens Creek**	**30.31 224**		LR	LR	11 13 36.3	
	comp=Z,93nm,18.3s,baz=25,slow=37						
WRA	**Warramunga Arr**	**31.65 251**		P	P	11 01 13.6	+0.3
	0.7nm,0.9s,baz=83,slow=8.8,SNR=4.1						
ASAR	**Alice Springs**	**32.88 244**		P	P	11 01 23.4	-0.8
	0.8nm,0.7s,baz=69,slow=9.8,SNR=11						
ASAR				PcP	PcP	11 04 07.8	-0.1
	0.5nm,0.6s,baz=83,slow=2.1,SNR=8.8						
ASAR				LR	LR	11 13 43.5	
	comp=Z,122nm,18.3s,baz=71,slow=34						
MJAR	**Matsushiro Arr**	**54.60 332**		LR	LR	11 28 20.2	
	comp=Z,31nm,18.2s,baz=230,slow=37						
VNDA	**Vanda**	**65.97 181**		P	P	11 05 35.1	-0.1
	0.7nm,0.8s,baz=0.0,slow=6.1,SNR=5.0						
CMAR	**Chiang Mai Arr**	**72.66 294**		P	P	11 06 18.6	+1.0
	1.1nm,0.7s,baz=123,slow=4.6,SNR=6.3						
ILAR	**Eielson Array**	**83.90 18**		P	P	11 07 18.4	-0.3
	0.3nm,0.6s,baz=237,slow=5.9,SNR=5.5						
MKAR	**Makanchi Array**	**94.15 317**		P	P	11 08 07.9	-0.1
	1.1nm,0.5s,baz=92,slow=5.9,SNR=11						
ZALV	**Zalesovo Beam**	**94.19 324**		P	P	11 08 06.8	-1.1
	0.2nm,0.3s,baz=129,slow=4.0,SNR=3.9						

*DDA **26** 11:00:33.8, 36°.92N×29°.32E, h7km, MD3.0*
*ISK **26** 11:00:33.8, 36°.93N×29°.32E, h6km, MD2.8*
*ISCJB **26** 11:00:34.1±0.5, 36°.91N±0°.03×29°.35E±0°.04, h7km±5km, Error ellipse: s-maj=6.2km s-min=4.2km az=137.6*
*CSEM **26** 11:00:34.1±0.1, 36°.93N×29°.35E, h5km, MD2.8, Error ellipse: s-maj=3.4km s-min=2.9km az=150.0*

ISC 26 11:00:34.3±1.1, 36°.93N±0°.02×29°.34E±0°.02, h6km±9km, n38, σ82/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.26**	**30**	*e*PG	**Pg**	**11 00 39.4**	**-0.1**
GLHS				*e*SG	**Sg**	**11 00 44.4**	**+1.5**
GLHS	**Glhisar (BURDU**	**0.26**	**30**	*e*Pg	**Pg**	**11 00 39.4**	**-0.1**
GLHS				*e*Sg	**Sg**	**11 00 44.4**	**+1.5**
GOLH	**Golhisar**	**0.35**	**31**	*i* P	**Pg**	**11 00 41.0**	**-0.2**
GOLH				*i* S	**Sb**	**11 00 47.9**	**-1.1**
GOLH	**Golhisar**	**0.35**	**31**	*i* P	**Pg**	**11 00 41.0**	**-0.2**
GOLH				*i* S	**Sb**	**11 00 47.9**	**-1.1**
FETY	**Fethiye**	**0.36 214**		*e*PG	**Pg**	**11 00 41.0**	**-0.4**
FETY				*e*SG	**Sb**	**11 00 47.4**	**-1.7**
FETY	**Fethiye**	**0.36 214**		*e*Pg	**Pg**	**11 00 41.0**	**-0.4**
FETY				*e*Sg	**Sb**	**11 00 47.4**	**-1.7**
ELL	**Elmali**	**0.50 112**		*e*PG	**Pg**	**11 00 43.6**	**-0.3**
ELL	**Elmali**	**0.50 112**		*e*Pg	**Pg**	**11 00 43.6**	**-0.3**
DALY	**Dalyan (Mu˘la**	**0.56 258**		*e*PG	**Pg**	**11 00 44.5**	**-0.6**
DALY				*e*SG	**Sg**	**11 00 52.8**	**+0.4**
DALY	**Dalyan (Mu˘la**	**0.56 258**		*e*Pg	**Pg**	**11 00 44.5**	**-0.6**
DALY				*e*Sg	**Sg**	**11 00 52.8**	**+0.4**
TURN	**Turunc**	**0.59 264**		*i* P	**Pn**	**11 00 50.5**	**+1.3**
TURN				*i* S	Sn	11 01 05.7	+6.5
TURN	**Turunc**	**0.59 264**		*i* P	**Pn**	**11 00 50.5**	**+1.3**
AKAS	**Kas**	**0.73 163**		*i* P	**Pg**	**11 00 48.7**	**+0.3**
AKAS				*i* S	**Sn**	**11 01 04.2**	**+1.3**
AKAS	**Kas**	**0.73 163**		*i* P	**Pg**	**11 00 48.7**	**+0.3**
DNZL	**Cakiroluk**	**0.79 343**		*i* P	**Pg**	**11 00 48.7**	**-0.8**
DNZL				*i* S	**Sb**	**11 01 00.9**	**-0.7**
DNZL	**Cakiroluk**	**0.79 343**		*i* P	**Pg**	**11 00 48.7**	**-0.8**
DNZL				*i* S	**Sb**	**11 01 00.9**	**-0.7**
KORT	**Korkueli**	**0.82**	**85**	*i* P	**Pg**	**11 00 49.0**	**-1.0**
KORT				*i* S	**Sn**	**11 01 05.8**	**+0.9**
KORT	**Korkueli**	**0.82**	**85**	*i* P	**Pg**	**11 00 49.0**	**-1.0**
DENT	**Denizli**	**0.85 344**		*e*PG	**Pb**	**11 00 51.0**	**-0.6**
DENT	**Denizli**	**0.85 344**		*e*Pg	**Pb**	**11 00 51.0**	**-0.6**
YER	**Yerkesik**	**0.87 284**		*e*PG	**Pg**	**11 00 50.5**	**-0.5**
YER	**Yerkesik**	**0.87 284**		*e*Pg	**Pg**	**11 00 50.5**	**-0.5**
BCK	**Bucak**	**1.13**	**62**	*e*PN	**Pn**	**11 00 56.5**	**-0.3**
BCK	**Bucak**	**1.13**	**62**	*e*Pn	**Pn**	**11 00 56.5**	**-0.3**
ISP	**Isparta**	**1.30**	**46**	*e*PN	**Pg**	**11 00 59.6**	**+0.4**
ISP	**Isparta**	**1.30**	**46**	*e*Pn	**Pg**	**11 00 59.6**	**+0.4**
MLSB	**Milas**	**1.30 287**		*e*PN	**Pg**	**11 00 59.0**	**-0.2**
MLSB	**Milas**	**1.30 287**		*e*Pn	**Pg**	**11 00 59.1**	**-0.2**
AYDN	**Tasoluk**	**1.37 302**		*i* P	**Pb**	**11 00 59.9**	**-0.5**
AYDN				*i* S	**Sn**	**11 01 20.2**	**+1.7**
AYDN	**Tasoluk**	**1.37 302**		*i* P	**Pb**	**11 00 59.9**	**-0.5**
AYDN				*i* S	**Sn**	**11 01 20.2**	**+1.7**
KHL	**Karahalli**	**1.40**	**6**	*e*PN	**Pn**	**11 00 59.9**	**-0.5**
KHL	**Karahalli**	**1.40**	**6**	*e*Pn	**Pn**	**11 00 59.9**	**-0.5**
DAT	**Datca**	**1.43 262**		*e*PN	**Pg**	**11 01 01.3**	**-0.4**
DAT	**Datca**	**1.43 262**		*e*Pn	**Pg**	**11 01 01.3**	**-0.4**
BODT	**Bodrum**	**1.63 275**		*e*PN	**Pn**	**11 01 03.6**	**0.0**
BODT	**Bodrum**	**1.63 275**		*e*Pn	**Pn**	**11 01 03.6**	**0.0**
KULA	**Kula-Manisa**	**1.67 341**		*e*PN	**Pn**	**11 01 04.3**	**+0.1**
KULA	**Kula-Manisa**	**1.67 341**		*e*Pn	**Pn**	**11 01 04.3**	**+0.1**

PRE 26 11:01:32.9±3.2, 21°.17S×33°.36E, h10km, ML4.7, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.31 249**		*e*P	Pb	11 02 28.7	-3.2
MSNA				*e*S	Sn	11 03 06.7	+2.3
MSNA				AML	AML	11 03 20.8	
	comp=Z,378nm,0.7s						
BLWY	**Bulawayo**	**4.56 282**		*i* P	Pn	11 02 44.5	+2.3
BLWY				*i*		11 02 45.1	
	baz=298,slow=12						
BLWY				*i* S	Sn	11 03 34.5	-0.9
CNG	**Changalane**	**5.21 192**		*e*P	Pn	11 02 52.7	+1.8
CNG				*e*S	Sn	11 03 49.9	-1.2
POGA	**Pongola**	**6.37 194**		*e*P	Pn	11 03 08.5	+1.5
POGA				*e*S	Sn	11 04 17.1	-2.7
POGA				AML	AML	11 05 06.7	
	comp=Z,57nm,0.5s						
SLR	**Silverton**	**6.51 225**		*e*P	Pn	11 03 10.8	+1.9
SLR				*e*S	Sn	11 04 21.5	-1.9
SLR				AML	AML	11 05 01.6	
	comp=Z,101nm,0.7s						
ERPM	**east rand prop**	**6.96 221**		*e*P	Pn	11 03 16.4	+1.1
ERPM				*e*S	Sn	11 04 28.2	-6.5
ERPM				AML	AML	11 05 17.4	
	comp=Z,40nm,0.5s						
KLOF	**Kloof**	**7.37 224**		*e*P	Pn	11 03 22.1	+1.3
KLOF				*e*S	Sn	11 04 40.5	-4.2
KLOF				AML	AML	11 05 38.0	
	comp=Z,60nm,0.4s						
KSR	**Koster**	**7.54 231**		*e*P	Pn	11 03 25.5	+2.3
KSR				*e*S	Sn	11 04 45.8	-3.1
KSR				AML	AML	11 05 38.9	
	comp=Z,45nm,0.4s						
LSZ	**Lusaka**	**7.64 319**		*e*P	Pn	11 03 26.8	+2.2
LSZ				*e*S	Sn	11 04 46.7	-4.8
PRYS	**Parys**	**7.93 223**		*e*P	Pn	11 03 29.4	+0.9
PRYS				*e*S	Sn	11 04 54.0	-4.4
PRYS				AML	AML	11 05 51.4	
	comp=Z,35nm,0.6s						
LBTB	**Lobatse**	**8.10 240**		*e*P	Pn	11 03 31.9	+1.1
LBTB				*e*S	Sn	11 05 00.4	-2.2
LBTB				AML	AML	11 05 49.6	
	comp=Z,53nm,0.5s						
SEK	**Senekal**	**8.82 215**		*e*P	Pn	11 03 41.1	+0.3
SEK				*e*S	Sn	11 05 14.9	-5.5
SEK				AML	AML	11 06 09.4	
	comp=Z,31nm,0.7s						
SWZ	**Schweizer**	**9.46 229**		*e*P	Pn	11 03 49.2	-0.2
SWZ				*e*S	Sn	11 05 29.8	-6.3
SWZ				AML	AML	11 06 31.4	
	comp=Z,24nm,0.6s						

KSD	**Kokstad**	**9.98 200**		*e*P	Pn	11 03 58.8	+2.1
KSD				*e*S	Sn	11 05 42.0	-6.9
KSD				AML	AML	11 06 52.1	
	comp=Z,27nm,0.7s						
BOSA	**Boshof**	**10.44 223**		*e*P	Pn	11 04 02.9	0.0
BOSA				*e*S	Sn	11 05 55.0	-5.0
BOSA				AML	AML	11 07 25.9	
	comp=Z,18nm,0.6s						
UPI	**Upington**	**13.11 235**		*e*P	Pn	11 04 39.0	-0.4
UPI				*e*S	Sn	11 06 56.7	-8.8
TSUM	**Tsumeb**	**14.94 275**		*e*P	Pn	11 05 03.3	-1.1
TSUM				*e*S	Sn	11 07 43.3	-6.8
SUR	**Sutherland**	**15.80 222**		*e*P	Pn	11 05 16.3	+0.5
SUR				*e*S	Sn	11 08 02.9	-8.3
SUR				AML	AML	11 10 25.6	
	comp=Z,6.4nm,0.7s						
KOMG	**Komaggas**	**16.69 236**		*e*P	P	11 05 28.7	-0.7
KOMG				*e*S	Sn	11 08 24.1	-8.5
KOMG				AML	AML	11 10 31.9	
	comp=Z,9.1nm,0.6s						
CER	**Ceres**	**17.41 223**		*e*P	P	11 05 40.3	+3.1
CER				*e*S	Sn	11 08 41.4	-8.4
CER				AML	AML	11 10 40.6	
	comp=Z,3.7nm,0.7s						

IDC 26 11:27:51.0±2.9, 2°.63S×100°.08E, h44km±8km, mb3.3/6, mb1 3.5/6, mb1mx3.3/23, mbtmp3.3/6, Error ellipse: s-maj=121.0km s-min=15.3km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.98 357**		P	P	11 32 30.4	-0.4
	0.4nm,0.3s,baz=180,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	**37.61 120**		P	P	11 35 01.0	-0.9
	0.7nm,0.4s,baz=304,slow=8.9,SNR=10						
WRA				pP	pP	11 35 13.4	-0.4
	0.3nm,0.6s,baz=304,slow=8.4,SNR=2.7						
ASAR	**Alice Springs**	**38.82 125**		P	P	11 35 12.3	+0.2
	0.4nm,0.5s,baz=300,slow=8.2,SNR=11						
ASAR				pP	pP	11 35 24.9	+0.9
	0.3nm,0.7s,baz=301,slow=8.1,SNR=2.5						
SONM	**Songino Array**	**50.56**	**6**	P	P	11 36 45.8	+0.5
	0.3nm,0.5s,baz=191,slow=8.6,SNR=3.4						
MKAR	**Makanchi Array**	**51.65 344**		P	P	11 36 53.2	-0.3
	0.1nm,0.3s,baz=138,slow=9.3,SNR=4.6						
MKAR				pP	pP	11 37 05.8	+0.1
	0.4nm,0.5s,baz=150,slow=6.9,SNR=3.3						
ZALV	**Zalesovo Beam**	**57.80 349**		P	P	11 37 37.6	-0.1
	0.3nm,0.3s,baz=156,slow=7.3,SNR=2.4						
ZALV				pP	pP	11 37 49.6	-0.6
	0.4nm,0.3s,baz=136,slow=38,SNR=2.3						

IDC 26 11:27:57.2±1.4, 2°.08N×127°.52E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/22, mbtmp3.6/6, MS4.1/1, Ms1 4.1/1, ms1mx2.6/24, Error ellipse: s-maj=92.8km s-min=18.5km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.14 185**		P	P	11 32 33.7	+0.6
	0.7nm,0.6s,baz=18,slow=9.6,SNR=2.5						
WRA	**Warramunga Arr**	**22.88 163**		P	P	11 33 02.8	+0.1
	2.0nm,0.5s,baz=342,slow=11,SNR=25						
ASAR	**Alice Springs**	**26.33 167**		P	P	11 33 34.4	-0.7
	0.4nm,0.6s,baz=345,slow=10,SNR=9.6						
JHJ	**Hachijo jima 2**	**32.95 19**		LR	LR	11 47 50.3	
	comp=Z,331nm,19.6s,baz=347,slow=36						
STKA	**Stephens Creek**	**36.32 160**		P	P	11 35 02.8	0.0
	2.0nm,0.8s,baz=10,slow=11,SNR=3.7						
MKAR	**Makanchi Array**	**59.35 325**		P	P	11 38 02.5	+1.2
	0.5nm,0.6s,baz=128,slow=8.0,SNR=4.4						
KURBB	**Kurchatov Arra**	**63.55 328**		P	P	11 38 28.8	-0.8
	0.3nm,0.4s,baz=128,slow=6.3,SNR=3.8						

IDC 26 11:41:54.4±1.0, 13°.30S×167°.14E, h207km±8km, mb3.6/11, mb1 3.7/12, mb1mx3.6/21, mbtmp3.6/12, MS3.6/1, Ms1 3.6/1, ms1mx2.5/30, Error ellipse: s-maj=19.2km s-min=13.0km az=106.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.75 184**		P	Pn	11 43 58.7	+1.2
	0.9nm,0.3s,baz=71,slow=19,SNR=19						
DZM				S	S	11 45 38.3	+2.2
	0.4nm,0.3s,baz=108,slow=20,SNR=3.2						
URZ	**Urewera**	**26.40 162**		P	P	11 47 11.4	-0.4
	21nm,1.1s,baz=264,slow=4.6,SNR=5.2						
STKA	**Stephens Creek**	**29.84 227**		P	P	11 47 42.9	+0.4
	2.7nm,0.4s,baz=25,slow=9.9,SNR=13						
STKA				PcP	PcP	11 50 40.2	-0.2
	3.6nm,0.7s,baz=90,slow=5.1,SNR=4.7						
WRA	**Warramunga Arr**	**32.08 254**		P	P	11 48 01.2	-1.0
	1.1nm,0.6s,baz=84,slow=9.0,SNR=15						
ASAR	**Alice Springs**	**33.09 247**		P	P	11 48 10.2	-0.7
	1.7nm,0.5s,baz=76,slow=9.3,SNR=41						
ASAR				pP	pP	11 48 53.5	0.0
	0.4nm,0.6s,baz=74,slow=9.4,SNR=1.3						
ASAR				PcP	PcP	11 50 48.9	-0.6
	0.8nm,0.8s,baz=78,slow=2.3,SNR=6.6						
FITZ	**Fitzroy Crossi**	**40.17 258**		P	P	11 49 10.4	-0.4
	1.4nm,0.8s,baz=111,slow=8.6,SNR=4.8						
MJAR	**Matsushiro Arr**	**56.58 332**		LR	LR	12 13 25.6	
	comp=Z,46nm,18.9s,baz=5.0,slow=33						
PETK	**Petropavlovsk-**	**66.63 354**		P	P	11 52 23.3	+0.9
	2.4nm,0.9s,baz=159,slow=7.0,SNR=5.0						
CMAR	**Chiang Mai Arr**	**74.26 294**		P	P	11 53 10.6	+1.3
	1.9nm,0.8s,baz=123,slow=4.5,SNR=11						
SONM	**Songino Array**	**81.28 324**		P	P	11 53 47.8	+0.2
	0.3nm,0.5s,baz=129,slow=4.8,SNR=3.6						
ILAR	**Eielson Array**	**85.21 18**		P	P	11 54 06.2	-0.9
	0.4nm,0.6s,baz=239,slow=5.0,SNR=12						
ILAR				pP	pP	11 54 56.9	-0.9
	1.0nm,0.9s,baz=240,slow=5.5,SNR=5.8						
MKAR	**Makanchi Array**	**96.08 317**		P	P	11 54 58.5	+0.1
	0.6nm,0.5s,baz=89,slow=6.5,SNR=8.0						
MKAR				pP	pP	11 55 50.2	+0.6
	0.2nm,0.5s,baz=115,slow=8.2,SNR=1.9						
ZALV	**Zalesovo Beam**	**96.17 324**		P	P	11 54 58.1	-0.5
	0.4nm,0.5s,baz=123,slow=5.3,SNR=3.1						
ARCES	**ARCESS Array B**	**118.84 346**		PKP	PKPdf	12 00 16.8	-0.7
	5.3nm,1.1s,baz=48,slow=1.8,SNR=6.0						

*GRAL **26** 11:54:24.9±0.3, 34°.06N×36°.10E, h56km±4km, MD2.9*
*NSSC **26** 11:54:25.3±0.6, 34°.04N×36°.12E, h0km±4km, ML1.5*
*ISCJB **26** 11:54:27.8±0.7, 33°.98N±0°.04×36°.1E±0°.1, h18km±11km, Error ellipse: s-maj=14.6km s-min=6.7km az=176.2*
*CSEM **26** 11:54:27.1±0.3, 33°.97N×36°.11E, h12km, ML2.9, Error ellipse: s-maj=8.2km s-min=4.9km az=58.0*

ISC 26 11:54:26.6±1.3, 33°.99N±0°.04×36°.14E±0°.05, h12km±13km, n12, σ0°56/22, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWQ	**Hawqa**	**0.33 331**		*e*P	**Pb**	**11 54 34.0**	**-0.5**
HWQ				*e*S	**Sb**	**11 54 40.7**	**+0.8**
HWQ	**Hawqa**	**0.33 331**		*e*P	**Pb**	**11 54 34.0**	**-0.5**
HWQ				*e*S	**Sb**	**11 54 40.7**	**+0.8**
BHL	**Bhannes**	**0.41 259**		*e*P	**Pb**	**11 54 35.2**	**-0.7**
BHL	**Bhannes**	**0.41 259**		*e*P	**Pb**	**11 54 35.2**	**-0.7**
RCY	**Rachaya**	**0.55 208**		*e*P	**Pg**	**11 54 37.4**	**-0.1**
RCY				*e*S	**Sb**	**11 54 46.5**	**+0.3**
BRBR	**Barbar**	**0.60 196**		*e*P	**Pg**	**11 54 38.0**	**-0.3**
BRBR				*e*S	**Sg**	**11 54 47.2**	**+0.9**
BRBR				AML	AML	11 54 52.8	
	comp=N,23nm,0.6s						
BRBR				AML	AML	11 54 56.7	
	comp=E,28nm,0.4s						
TOTH	**TOTAH**	**0.67 159**		*e*P	**Pb**	**11 54 39.9**	**-0.3**
TOTH				*e*S	**Sb**	**11 54 49.6**	**+0.1**
TOTH				AML	AML	11 54 53.1	
	comp=E,27nm,0.4s						
TOTH				AML	AML	11 54 54.1	
	comp=N,43nm,0.5s						
TOTH	**TOTAH**	**0.67 159**		*e*P	**Pb**	**11 54 39.9**	**-0.3**
	SNR=75						
TOTH				*e*S	**Sb**	**11 54 49.6**	**+0.1**
	comp=N,43nm,0.5s,SNR=59						
SALA	**Sala**	**1.37 159**		*e*P	**Pn**	**11 54 51.7**	**+0.1**
SALA				*e*S	**Sg**	**11 55 11.3**	**+0.7**
SALA				AML	AML	11 55 17.2	
	comp=N,13nm,0.3s						
SALA	**Sala**	**1.37 159**		*e*P	**Pn**	**11 54 51.7**	**+0.1**
	SNR=57						
SALA				*e*S	**Sg**	**11 55 11.3**	**+0.7**
	comp=N,13nm,0.3s,SNR=49						
ZALF	**Zalf**	**1.46 136**		*e*P	**Pb**	**11 54 53.4**	**-0.3**
ZALF				*e*S	**Sg**	**11 55 13.2**	**-0.4**
ZALF				AML	AML	11 55 16.0	
	comp=E,15nm,0.6s						
ZALF				AML	AML	11 55 16.7	
	comp=N,18nm,0.5s						
ZALF	**Zalf**	**1.46 136**		*e*P	**Pb**	**11 54 53.4**	**-0.3**
	SNR=57						
ZALF				*e*S	**Sg**	**11 55 13.2**	**-0.4**
	comp=N,18nm,0.5s,SNR=49						

*CSEM **26** 11:56:01.8, 42°.33N×13°.52E, h9km, After ROM*

ROM 26 11:56:01.8±0.1, 42°.33N×13°.52E, h9km±1km, Ml1.4/4, Error ellipse: s-maj=1.8km s-min=1.5km az=107.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.09 283**		Pg	Pg	11 56 04.3	0.0
AQU				Sg	Sg	11 56 06.5	+0.5
	242nm,0.3s						
AQU	**L'Aquila**	**0.09 283**		Pg	Pg	11 56 04.3	0.0
AQU				Sg	Sg	11 56 06.5	+0.5
	242nm,0.3s						
CAMP	**Campotosto**	**0.22 338**		Pg	Pg	11 56 07.9	+1.4
CAMP				Sg	Sg	11 56 10.8	+1.1
	7.0nm,0.7s						
CAMP	**Campotosto**	**0.22 338**		Pg	Pg	11 56 07.9	+1.4
CAMP				Sg	Sg	11 56 10.8	+1.1
	7.0nm,0.7s						
VCEL	**Villa Celiera**	**0.24**	**76**	Pg	Pg	11 56 08.2	+1.2
VCEL				Sg	Sg	11 56 12.4	+2.0
	70nm,0.6s						
VCEL	**Villa Celiera**	**0.24**	**76**	Pg	Pg	11 56 08.2	+1.2
VCEL				Sg	Sg	11 56 12.4	+2.0
	70nm,0.6s						
TERO	**Teramo**	**0.29**	**12**	Pg	Pg	11 56 08.3	+0.5
TERO				Sg	Sg	11 56 12.8	+0.9
	43nm,0.5s						
TERO	**Teramo**	**0.29**	**12**	Pg	Pg	11 56 08.3	+0.5
TERO				Sg	Sg	11 56 12.8	+0.9
	43nm,0.5s						
FIAM	**Fiamignano**	**0.31 258**		Pg	Pg	11 56 08.8	+0.7
FIAM				Sg	Sb	11 56 14.2	-0.6
	69nm,0.9s						
FIAM	**Fiamignano**	**0.31 258**		Pg	Pg	11 56 08.8	+0.7
FIAM				Sg	Sb	11 56 14.2	-0.6
	69nm,0.9s						
PTQR	**Pietraquaria**	**0.32 196**		Pg	Pg	11 56 09.0	+0.6
PTQR				Sg	Sb	11 56 14.3	-1.0
	7.0nm,0.2s						
PTQR	**Pietraquaria**	**0.32 196**		Pg	Pg	11 56 09.0	+0.6
PTQR				Sg	Sb	11 56 14.3	-1.0
	7.0nm,0.2s						
INTR	**Introdacqua**	**0.43 138**		Pg	Pg	11 56 11.0	+0.6
INTR				Sg	Sb	11 56 17.5	-0.8
	34nm,0.6s						
INTR	**Introdacqua**	**0.43 138**		Pg	Pg	11 56 11.0	+0.6
INTR				Sg	Sb	11 56 17.5	-0.8
	34nm,0.6s						
LNSS	**Leonessa**	**0.45 307**		Pg	Pb	11 56 11.4	-0.6
LNSS	**Leonessa**	**0.45 307**		Pg	Pb	11 56 11.4	-0.6
LPEL	**Lama dei Pelig**	**0.57 120**		Pg	Pg	11 56 12.4	-0.6
LPEL	**Lama dei Pelig**	**0.57 120**		Pg	Pg	11 56 12.4	-0.6
NRCA	**Norcia**	**0.58 329**		Pg	Pg	11 56 13.2	0.0
NRCA				Sg	Sb	11 56 22.3	-0.5
	1.0nm,0.3s						
NRCA	**Norcia**	**0.58 329**		Pg	Pg	11 56 13.2	0.0
NRCA				Sg	Sb	11 56 22.3	-0.5
	1.0nm,0.3s						

*CSEM **26** 11:56:27.5, 42°.29N×13°.48E, h10km, After ROM*

ROM 26 11:56:27.5±0.2, 42°.29N×13°.48E, h10km±1km, Ml1.4/4, Error ellipse: s-maj=1.7km s-min=1.4km az=41.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.09 316**		Pg	Pg	11 56 30.1	0.0
AQU				Sg	Sg	11 56 32.6	+0.7
	242nm,0.3s						
AQU	**L'Aquila**	**0.09 316**		Pg	Pg	11 56 30.1	0.0
AQU				Sg	Sg	11 56 32.6	+0.7
	242nm,0.3s						
CAMP	**Campotosto**	**0.25 347**		Pg	Pg	11 56 33.4	+0.5
CAMP				Sg	Sg	11 56 36.9	+0.4
	7.0nm,0.7s						
CAMP	**Campotosto**	**0.25 347**		Pg	Pg	11 56 33.4	+0.5
CAMP				Sg	Sg	11 56 36.9	+0.4
	7.0nm,0.7s						
FIAM	**Fiamignano**	**0.27 265**		Pg	Pb	11 56 34.2	-0.5
FIAM				Sg	Sb	11 56 38.7	-0.8
	69nm,0.9s						
FIAM	**Fiamignano**	**0.27 265**		Pg	Pb	11 56 34.2	-0.5
FIAM				Sg	Sb	11 56 38.7	-0.8
	69nm,0.9s						
PTQR	**Pietraquaria**	**0.28 193**		Pg	Pg	11 56 33.7	+0.5
PTQR				Sg	Sg	11 56 37.7	+0.6
	7.0nm,0.2s						
PTQR	**Pietraquaria**	**0.28 193**		Pg	Pg	11 56 33.7	+0.5
PTQR				Sg	Sg	11 56 37.7	+0.6
	7.0nm,0.2s						
VCEL	**

comp=Z,21nm,21.1s,baz=21,slow=30
RKT Rikitea 31.50 235 *e*LR LR 12 11 48.9
571nm,28.5s
RKT *e*T T 12 36 20.5
2.6nm,0.3s
TXAR Lajitas Array 35.56 5 P **P 12 04 08.3 +1.0**
TXAR Lajitas Array 35.56 5 P **P 12 04 08.3 +1.0**
0.8nm,0.8s,baz=186,slow=10,SNR=8.9
TXAR LR LR 12 15 44.0
comp=Z,86nm,21.0s,baz=0.0,slow=31
LPAZ La Paz 39.59 108 *e*P **P 12 04 43.0 +0.8**
4.5nm,1.2s
LPAZ La Paz 39.59 108 P **P 12 04 42.8 +0.5**
2.1nm,0.9s,baz=293,slow=7.4,SNR=7.3
LAZ Ladron 40.45 0 *e*P **P 12 04 50.1 +1.5**
1.6nm,1.1s
PPT Papeete 42.79 251 LR LR 12 18 58.8
comp=Z,295nm,20.4s,baz=335,slow=31
PPT2 Papeete2 42.79 251 *e*LR LR 12 16 50.6
496nm,26.0s,baz=73
MVCO Mesa Verde 43.26 359 *e*P **P 12 05 13.6 +1.9**
6.9nm,1.0s
SAML Samuel 43.77 96 *e*P **P 12 05 15.0 -0.8**
14nm,1.0s
TBI Tubuai 43.97 243 *e*LR LR 12 17 34.2
440nm,27.2s
PV01 Paradox Valley 44.19 359 *e*P **P 12 05 21.4 +2.3**
680nm,1.4s
CFAA Coronel Fontan 44.33 130 P **P 12 05 20.7 +0.5**
CFAA Coronel Fontan 44.33 130 P **P 12 05 20.7 +0.5**
0.2nm,0.8s,baz=317,slow=12,SNR=2.2
NVAR Mina Array Bea 45.63 348 P **P 12 05 31.4 +0.8**
NVAR Mina Array Bea 45.63 348 P **P 12 05 31.4 +0.8**
1.4nm,0.8s,baz=174,slow=10.0,SNR=10.0
NVAR LR LR 12 20 13.4
comp=Z,148nm,19.4s,baz=37,slow=30
SWET Sewanee 45.90 25 *e*P **P 12 05 33.7 +1.2**
6.8nm,0.9s
SIV San Ignacio 46.26 106 P **P 12 05 34.7 -1.0**
SIV San Ignacio 46.26 106 P **P 12 05 34.7 -1.0**
1.9nm,0.8s,baz=296,slow=9.1,SNR=6.2
JSC Jenkinsville 47.23 30 *e*P **P 12 05 43.0 0.0**
PLCA Paso Flores 47.47 142 LR LR 12 21 27.3
comp=Z,191nm,18.5s,baz=353,slow=31
PDAR Pinedale Array 48.84 358 P **P 12 05 56.2 +0.6**
PDAR Pinedale Array 48.84 358 P **P 12 05 56.2 +0.6**
0.9nm,0.7s,baz=177,slow=5.9,SNR=8.8
PDAR LR LR 12 23 50.2
comp=Z,50nm,18.5s,baz=71,slow=33
YBH Yreka Blue Hor 49.81 345 LR LR 12 22 18.8
comp=Z,160nm,19.0s,baz=166,slow=30
HLID Hailey 50.01 353 *e*P **P 12 06 06.3 +1.8**
7.4nm,1.4s
IMW Indian Meadow 50.04 357 *e*P **P 12 06 06.1 +1.3**
3.2nm,0.9s
MFID Camas Ranch 50.05 352 *e*P **P 12 06 07.0 +2.4**
5.3nm,0.9s
CPUP Villa Florida 51.54 119 P **P 12 06 16.5 +0.4**
CPUP Villa Florida 51.54 119 P **P 12 06 16.5 +0.4**
2.2nm,0.8s,baz=257,slow=13,SNR=5.3
CPUP LR LR 12 24 46.1
comp=Z,95nm,18.2s,baz=260,slow=32
NEW Newport 54.98 352 LR LR 12 26 01.9
comp=Z,90nm,18.9s,baz=179,slow=32
ULM Lac du Bonnet 57.15 9 P **P 12 06 56.4 0.0**
ULM Lac du Bonnet 57.15 9 P **P 12 06 56.4 0.0**
2.4nm,0.7s,baz=222,slow=5.1,SNR=4.2
ULM LR LR 12 28 05.2
comp=Z,62nm,20.8s,baz=325,slow=32
BDFB Brasilia 58.76 104 P **P 12 07 08.2 -0.4**
BDFB Brasilia 58.76 104 P **P 12 07 08.2 -0.4**
3.3nm,0.9s,baz=281,slow=10,SNR=3.1
BBB Bella Bella 60.88 345 LR LR 12 27 57.1
comp=Z,46nm,21.2s,baz=188,slow=30
AFI Afiamalu 63.80 258 LR LR 12 31 16.2
comp=Z,19nm,18.3s,baz=52,slow=32
DLBC Dease Lake 67.04 347 *e*P **P 12 08 03.0 +0.1**
DLBC Dease Lake 67.04 347 LR LR 12 34 27.8
comp=Z,89nm,19.5s,baz=184,slow=33
YKA Yellowknife Ar 68.79 356 P **P 12 08 12.6 -1.0**
YKA Yellowknife Ar 68.79 356 P **P 12 08 12.6 -1.0**
1.3nm,0.8s,baz=167,slow=6.3,SNR=26
SCHQ Schefferville 69.55 24 P **P 12 08 17.3 -1.3**
SCHQ Schefferville 69.55 24 P **P 12 08 17.3 -1.3**
3.8nm,0.9s,baz=256,slow=4.2,SNR=3.7
URZ Urewera 74.86 232 LR LR 12 33 32.2
comp=Z,124nm,18.6s,baz=104,slow=29
EGAK Eagle 75.19 346 *e*P **P 12 08 53.1 +1.1**
6.8nm,1.2s
ILAR Eielson Array 76.69 344 P **P 12 08 59.2 -1.4**
ILAR Eielson Array 76.69 344 P **P 12 08 59.2 -1.4**
1.0nm,1.0s,baz=154,slow=3.9,SNR=6.8
ILAR LR LR 12 40 27.2
comp=Z,41nm,18.2s,baz=99,slow=34
QSPA South Pole Qui 83.80 180 *e*P **P 12 09 40.4 +1.2**
11nm,1.1s
PETK Petropavlovsk- 97.99 323 LR LR 12 45 57.3
comp=Z,34nm,20.7s,baz=245,slow=30
SONM Songino Array 129.61 331 PKP **PKPdf 12 16 18.8 -0.5**
SONM Songino Array 129.61 331 PKP **PKPdf 12 16 18.8 -0.5**
0.2nm,0.3s,baz=54,slow=2.5,SNR=3.3
KMBO Kilima Mbogo 143.83 101 *e*PKPdf **PKPdf 12 16 45.8 -0.9**
CMAR Chiang Mai Arr 151.72 298 PKPbc **PKPbc 12 17 04.5 -1.0**
CMAR Chiang Mai Arr 151.72 298 PKPbc **PKPbc 12 17 04.5 -1.0**
1.6nm,0.8s,baz=42,slow=1.0,SNR=7.6

IDC 26 12:16:58.8±1.9, 7°20S×120°24E, h407km±13km, mb3.0/3, mb1 2.8/6, mb1mx2.7/23, mbtmp2.8/6, Error ellipse: s-maj=124.2km s-min=13.9km az=58.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.22**	**347**	P	P	12 17 57.2	+0.3
	3.6nm,0.3s,baz=187,slow=5.1,SNR=24						
KAPI				S	S	12 18 44.1	+0.3
	baz=66,slow=23,SNR=6.9						
FITZ	**Fitzroy Crossi**	**12.05**	**155**	P	P	12 19 38.6	-0.2
	0.1nm,0.3s,baz=213,slow=0.9,SNR=3.2						
WRA	**Warramunga Arr**	**18.64**	**134**	P	P	12 20 49.3	-0.6
	0.1nm,0.3s,baz=312,slow=11,SNR=5.9						
ASAR	**Alice Springs**	**20.98**	**143**	P	P	12 21 12.1	+0.2
	0.2nm,0.4s,baz=318,slow=8.7,SNR=8.0						
MKAR	**Makanchi Array**	**63.44**	**332**	P	P	12 26 47.4	+0.5
	0.6nm,0.5s,baz=147,slow=7.3,SNR=12						
ZALV	**Zalesovo Beam**	**67.82**	**338**	P	P	12 27 13.9	-0.4
	1.3nm,0.4s,baz=137,slow=5.0,SNR=11						

IDC 26 12:24:42.2±8.0, 4°56S×152°59E, h131km±54km, mb3.5/3, mb1 3.6/4, mb1mx3.1/19, mbtmp3.4/4, Error ellipse: s-maj=100.8km s-min=52.1km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.22**	**228**	P	Pn	12 26 24.5	-0.7
	0.5nm,0.3s,baz=27,slow=11,SNR=3.0						
PMG				S	Sn	12 27 48.1	+2.3
	0.7nm,0.3s,baz=118,slow=21,SNR=4.2						
WRA	**Warramunga Arr**	**23.44**	**228**	P	P	12 29 39.6	-0.3
	3.3nm,0.6s,baz=53,slow=9.6,SNR=42						
ASAR	**Alice Springs**	**26.18**	**222**	P	P	12 30 04.8	+0.1
	0.4nm,0.4s,baz=54,slow=9.0,SNR=21						
FITZ	**Fitzroy Crossi**	**29.59**	**241**	P	P	12 30 34.5	-0.5
	0.6nm,0.3s,baz=55,slow=8.3,SNR=9.2						
TORD	**Torodi Ar. Bea**	**150.03**	**288**	PKPbc	PKPbc	12 44 18.4	0.0
	0.3nm,0.4s,baz=88,slow=2.1,SNR=9.7						

ROM ***26*** *12:26:37.7±0.2, 45°.78N×15°.11E, h9km±1km, Md2.7/6, Ml1.8/5, Error ellipse: s-maj=2.8km s-min=1.5km az=9.0*
ISCJB ***26*** *12:26:38.4±0.3, 45°.89N±0°.02×15°.00E±0°.02, h9km±4km, Error ellipse: s-maj=3.3km s-min=2.3km az=8.6*
CSEM ***26*** *12:26:38.7±0.1, 45°.89N×15°.01E, h10km, ML2.6/10, Error ellipse: s-maj=2.0km s-min=1.4km az=8.0*
LJU ***26*** *12:26:38.6, 45°.88N×14°.99E, h7km, ML1.7*
VIE ***26*** *12:26:38.7±0.2, 45°.91N×15°.00E, h8km±1km, mb1.4/4, ML1.9/5, Error ellipse: s-maj=1.4km s-min=1.0km az=168.0 38 km W of Krsko*

ISC 26 12:26:38.9±0.9, 45°.89N±0°.02×15°.00E±0°.02, h6km±7km, n56, σ0.9s3/106, 8C-13D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VISS	**Visnje**	**0.14**	**233**	⇓*i*Pg	**Pg**	**12 26 41.5**	**-0.3**
VISS				*i* Sg	**Sg**	**12 26 43.8**	**0.0**
	comp=Z,129nm,0.1s						
VISS	**Visnje**	**0.14**	**233**	Pg	**Pg**	**12 26 41.5**	**-0.3**
VISS				*i* Sg	**Sg**	**12 26 43.8**	**0.0**
	comp=Z,129nm,0.1s						
PDKS	**Podkum**	**0.17**	**359**	⇓*i*Pg	**Pg**	**12 26 42.5**	**+0.2**
PDKS				*i* Sg	**Sg**	**12 26 45.2**	**+0.5**
PDKS							
	comp=Z,375nm,0.2s						
PDKS	**Podkum**	**0.17**	**359**	⇓*i*Pg	**Pg**	**12 26 42.5**	**+0.2**
PDKS				*i* Sg	**Sg**	**12 26 45.2**	**+0.5**
	comp=Z,375nm,0.2s						
LEGS	**Legarje**	**0.23**	**75**	⇓*i*Pg	**Pg**	**12 26 43.6**	**+0.2**
LEGS				*i* Sg	**Sg**	**12 26 46.9**	**+0.5**
LEGS	**Legarje**	**0.23**	**75**	⇓*i*Pg	**Pg**	**12 26 43.6**	**+0.2**
LEGS				*i* Sg	**Sg**	**12 26 46.9**	**+0.5**
VNDS	**Vrh nad Dolski**	**0.30**	**315**	⇓*i*Pg	**Pg**	**12 26 44.9**	**+0.2**
VNDS							
	comp=Z,82nm,0.2s						
CRES	**Cresnjev**	**0.32**	**101**	*i* Pg	**Pg**	**12 26 45.0**	**-0.1**
CRES				*i* Sg	**Sg**	**12 26 50.1**	**+0.7**
CRES							
	comp=Z,30nm,0.2s						
CRES	**Cresnjev**	**0.32**	**101**	*i* Pg	**Pg**	**12 26 45.0**	**-0.1**
CRES				*i* Sg	**Sg**	**12 26 50.1**	**+0.7**
	comp=Z,30nm,0.2s						
LJU	**Ljubljana**	**0.37**	**295**	*i* Pg	**Pg**	**12 26 46.2**	**+0.2**
LJU				*i* Sg	**Sg**	**12 26 51.7**	**+0.8**
LJU	**Ljubljana**	**0.37**	**295**	*i* Pg	**Pg**	**12 26 46.2**	**+0.2**
LJU				*i* Sg	**Sg**	**12 26 51.7**	**+0.8**
DOBS	**Dobrina**	**0.42**	**51**	*i* Pg	**Pg**	**12 26 47.0**	**+0.1**
DOBS							
	comp=Z,49nm,0.2s						
DOBS	**Dobrina**	**0.42**	**51**	*i* Pg	**Pg**	**12 26 47.0**	**+0.1**
	comp=Z,49nm,0.2s						
BOJS	**Bojanci**	**0.42**	**156**	*i* Pg	**Pg**	**12 26 46.4**	**-0.6**
BOJS				*i* Sg	**Sg**	**12 26 53.0**	**+0.4**
BOJS							
	comp=Z,24nm,0.1s						
BOJS	**Bojanci**	**0.42**	**156**	*i* Pg	**Pg**	**12 26 46.4**	**-0.6**
BOJS				*i* Sg	**Sg**	**12 26 53.0**	**+0.4**
	comp=Z,24nm,0.1s						
GCIS	**Gornji Cirnik**	**0.44**	**93**	⇑*i*Pg	**Pg**	**12 26 47.4**	**+0.1**
GCIS				*i* Sg	**Sg**	**12 26 53.3**	**+0.3**
GCIS	**Gornji Cirnik**	**0.44**	**93**	⇑*i*Pg	**Pg**	**12 26 47.4**	**+0.1**
GCIS				*i* Sg	**Sg**	**12 26 53.3**	**+0.3**
GOLS	**Golise**	**0.45**	**74**	*i* Pg	**Pg**	**12 26 47.9**	**+0.3**
GOLS				*i* Sg	**Sg**	**12 26 53.9**	**+0.4**
GOLS							
	comp=Z,30nm,0.2s						
GOLS	**Golise**	**0.45**	**74**	*i* Pg	**Pg**	**12 26 47.9**	**+0.3**
GOLS				*i* Sg	**Sg**	**12 26 53.9**	**+0.4**
	comp=Z,30nm,0.2s						
CRNS	**Crni Vrh**	**0.55**	**291**	*i* Pg	**Pg**	**12 26 49.5**	**0.0**
CRNS				*i* Sg	**Sg**	**12 26 57.5**	**+0.8**
CRNS							
	comp=Z,16nm,0.1s						
MOZS	**Mozjanca**	**0.56**	**316**	⇓*i*Pg	**Pg**	**12 26 49.9**	**+0.2**
MOZS							
	comp=Z,11nm,0.1s						
MOZS	**Mozjanca**	**0.56**	**316**	⇓*i*Pg	**Pg**	**12 26 49.9**	**+0.2**
	comp=Z,11nm,0.1s						
OBKA	**Obir**	**0.70**	**333**	⇑*e*Pg	**Pg**	**12 26 52.3**	**0.0**
	SNR=17						
OBKA				⇑*i*Sg	**Sg**	**12 27 02.0**	**+0.7**
OBKA	**Obir**	**0.70**	**333**	Pg	**Pg**	**12 26 52.3**	**0.0**
	SNR=17						
OBKA				Sg	**Sg**	**12 27 02.0**	**+0.7**
BISS	**Bistriski jare**	**0.76**	**6**	*i* Pg	**Pg**	**12 26 53.5**	**-0.1**
BISS	**Bistriski jare**	**0.76**	**6**	*i* Pg	**Pg**	**12 26 53.5**	**-0.1**
SKDS	**Skadanscina**	**0.77**	**244**	*i* Pg	**Pg**	**12 26 52.8**	**-0.9**
SKDS				*i* Sg	**Sg**	**12 27 04.0**	**+0.2**
SKDS							
	comp=Z,18nm,0.2s						
SKDS	**Skadanscina**	**0.77**	**244**	*i* Pg	**Pg**	**12 26 52.8**	**-0.9**
SKDS				*i* Sg	**Sg**	**12 27 04.0**	**+0.2**
	comp=Z,18nm,0.2s						
VOY	**Vojsko**	**0.79**	**281**	*e*Pg	**Pg**	**12 26 54.4**	**+0.4**
VOY				*e*Sg	**Sb**	**12 27 05.8**	**-0.2**
VOY	**Vojsko**	**0.79**	**281**	*e*Pg	**Pg**	**12 26 54.4**	**+0.4**
VOY				*e*Sg	**Sb**	**12 27 05.8**	**-0.2**
SOKA	**Soboth**	**0.79**	**1**	⇓*i*Pg	**Pg**	**12 26 53.8**	**-0.3**
SOKA				⇓*i*Sg	**Sg**	**12 27 03.6**	**-0.7**
SOKA	**Soboth**	**0.79**	**1**	Pg	**Pg**	**12 26 53.8**	**-0.3**
SOKA				Sg	**Sg**	**12 27 03.6**	**-0.7**
TRI	**Trieste**	**0.89**	**259**	Pg	**Pg**	**12 26 55.3**	**-0.6**
TRI				Sg	**Sg**	**12 27 08.0**	**+0.6**
	comp=Z,13nm,0.4s						
TRI	**Trieste**	**0.89**	**259**	Pg	**Pg**	**12 26 55.3**	**-0.6**
TRI				Sg	**Sg**	**12 27 08.0**	**+0.6**
	comp=Z,13nm,0.4s						
CADS	**Cadrg**	**0.94**	**291**	*i* Pg	**Pg**	**12 26 56.7**	**-0.3**
CADS				*i* Sg	**Sb**	**12 27 10.8**	**+0.3**
CADS	**Cadrg**	**0.94**	**291**	*i* Pg	**Pg**	**12 26 56.7**	**-0.3**
CADS				*i* Sg	**Sb**	**12 27 10.8**	**+0.3**
SABO	**M.te Sabotino**	**0.98**	**276**	Pg	**Pg**	**12 26 57.4**	**-0.3**
SABO				Sg	**Sb**	**12 27 11.8**	**+0.2**
	comp=Z,45nm,0.4s						
SABO	**M.te Sabotino**	**0.98**	**276**	Pg	**Pg**	**12 26 57.4**	**-0.3**
SABO				Sg	**Sb**	**12 27 11.8**	**+0.2**
	comp=Z,45nm,0.4s						
ROBS	**Robic**	**1.10**	**289**	*i* Pg	**Pg**	**12 26 59.9**	**-0.1**
ROBS				*i* Sg	**Sn**	**12 27 15.8**	**-0.5**
ROBS	**Robic**	**1.10**	**289**	*i* Pg	**Pg**	**12 26 59.9**	**-0.1**
ROBS				*i* Sg	**Sn**	**12 27 15.8**	**-0.5**
MYKA	**Terra Mystica**	**1.20**	**309**	⇓*i*Pg	**Pb**	**12 27 01.6**	**-0.5**
MYKA				⇓*i*Sg	**Sb**	**12 27 17.5**	**-0.4**
MYKA	**Terra Mystica**	**1.20**	**309**	Pg	**Pb**	**12 27 01.6**	**-0.5**
MYKA				Sg	**Sb**	**12 27 17.5**	**-0.4**
ACOM	**Acomizza, Ital**	**1.23**	**303**	Pg	**Pg**	**12 27 02.6**	**+0.2**
ACOM				Sg	**Sn**	**12 27 20.3**	**+0.6**
	comp=Z,26nm,0.3s						
ACOM	**Acomizza, Ital**	**1.23**	**303**	Pg	**Pg**	**12 27 02.6**	**+0.2**
ACOM				Sg	**Sn**	**12 27 20.3**	**+0.6**
	comp=Z,26nm,0.3s						
VINO	**Villanova**	**1.25**	**288**	Pg	**Pn**	**12 27 02.7**	**-0.3**
VINO				Sg	**Sn**	**12 27 20.8**	**+0.6**
VINO	**Villanova**	**1.25**	**288**	Pg	**Pn**	**12 27 02.7**	**-0.3**
VINO				Sg	**Sn**	**12 27 20.8**	**+0.6**
PTCC	**Patocco-Chiusa**	**1.26**	**295**	Pg	**Pn**	**12 27 02.8**	**-0.3**
PTCC				Sg	**Sn**	**12 27 20.8**	**+0.5**
	comp=Z,11nm,0.4s						
PTCC	**Patocco-Chiusa**	**1.26**	**295**	Pg	**Pn**	**12 27 02.8**	**-0.3**
PTCC				Sg	**Sn**	**12 27 20.8**	**+0.5**
	comp=Z,11nm,0.4s						
NVLJ	**Novalja**	**1.33**	**184**	*i* Pg	**Pg**	**12 27 05.0**	**+0.6**
NVLJ				Sg	**Sg**	**12 27 23.4**	**+1.8**
NVLJ	**Novalja**	**1.33**	**184**	*i* Pg	**Pg**	**12 27 04.9**	**+0.6**
NVLJ				Sg	**Sg**	**12 27 23.3**	**+1.8**
GEPF	**Gemona**	**1.35**	**287**	Pg	**Pn**	**12 27 04.2**	**-0.1**
GEPF				Sg	**Sg**	**12 27 24.0**	**+1.6**
ARSA	**Arzberg**	**1.41**	**15**	⇓*e*Pn	**Pn**	**12 27 04.7**	**-0.4**
	SNR=13						
ARSA				⇑*i*Sn	**Sb**	**12 27 23.5**	**-0.3**
ARSA	**Arzberg**	**1.41**	**15**	Pg	**Pn**	**12 27 04.8**	**-0.4**
	comp=Z,3.0nm,0.4s						
ARSA	**Arzberg**	**1.41**	**15**	Pn	**Pn**	**12 27 04.7**	**-0.4**
	SNR=13						
ARSA				Sn	**Sb**	**12 27 23.5**	**-0.3**
KBA	**Koelnbreinsper**	**1.65**	**317**	⇓*i*Pn	**Pn**	**12 27 08.0**	**-0.6**
KBA				⇑*i*Sn	**Sn**	**12 27 30.2**	**0.0**
KBA				⇓*i*Sg	**Sg**	**12 27 33.0**	**+1.0**
KBA	**Koelnbreinsper**	**1.65**	**317**	Pn	**Pn**	**12 27 08.0**	**-0.6**
KBA				Sn	**Sn**	**12 27 30.2**	**0.0**
KBA				Sg	**Sg**	**12 27 33.0**	**+1.0**

VIE ***26*** *12:57:29.0±0.3, 44°.58N×10°.35E, h10km, mb2.5/6, ML2.8/8, Error ellipse: s-maj=6.1km s-min=1.9km az=90.0 79 km W of Bologna*
ISCJB ***26*** *12:57:28.5±0.2, 44°.52N±0°.02×10°.22E±0°.03, h28km±3km, Error ellipse: s-maj=4.0km s-min=3.0km az=36.0*
GEN ***26*** *12:57:28.1, 44°.56N×10°.43E, h25km, ML2.1*
LDG ***26*** *12:57:29.0±0.2, 44°.54N×10°.32E, h10km, Ml2.6/14, Error ellipse: s-maj=4.7km s-min=3.8km az=8.0*
CSEM ***26*** *12:57:29.0±0.1, 44°.54N×10°.33E, h20km, MD2.7, Error ellipse: s-maj=3.6km s-min=2.7km az=81.0*
ROM ***26*** *12:57:29.0±0.2, 44°.54N×10°.36E, h24km±3km, Ml2.2/4, Error ellipse: s-maj=3.8km s-min=1.9km az=78.0*

ISC 26 12:57:28.9±0.8, 44°.53N±0°.02×10°.28E±0°.02, h26km±5km, n87, σ1.9s51/142, 7C-6D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRAM	**Graiana**	**0.16**	**255**	P	**Pb**	**12 57 34.7**	**+0.4**
GRAM				S	**Sb**	**12 57 39.2**	**+1.4**
VALM	**Valbona**	**0.18**	**187**	P	**Pb**	**12 57 34.4**	**-0.1**
VALM				S	**Sb**	**12 57 38.7**	**+0.4**
PRMA	**PARMA**	**0.23**	**6**	Pg	**Pb**	**12 57 34.4**	**-0.7**
PRMA				Sg	**Sb**	**12 57 40.0**	**+0.7**
PRMA	**PARMA**	**0.23**	**6**	Pg	**Pb**	**12 57 34.4**	**-0.7**
PRMA				Sg	**Sb**	**12 57 40.0**	**+0.7**
GSCL	**Gusciola**	**0.29**	**129**	Pg	**Pb**	**12 57 35.2**	**-0.6**
GSCL				Sg	**Sb**	**12 57 39.8**	**-0.8**
GSCL	**Gusciola**	**0.29**	**129**	Pg	**Pb**	**12 57 35.2**	**-0.6**
GSCL				Sg	**Sb**	**12 57 39.8**	**-0.8**
VLC	**Villacollemand**	**0.38**	**168**	Pg	**Pb**	**12 57 36.9**	**-0.3**
VLC				Sg	**Sb**	**12 57 43.1**	**+0.2**
VLC	**Villacollemand**	**0.38**	**168**	Pg	**Pb**	**12 57 36.9**	**-0.3**
VLC				Sg	**Sb**	**12 57 43.1**	**+0.2**
NOVE	**Novellara**	**0.41**	**49**	Pg	**Pb**	**12 57 36.2**	**-1.5**
NOVE				Sg	**Sb**	**12 57 43.6**	**-0.1**
NOVE	**Novellara**	**0.41**	**49**	Pg	**Pb**	**12 57 36.2**	**-1.5**
NOVE				Sg	**Sb**	**12 57 43.6**	**-0.1**
BDI	**Bagni Di Lucca**	**0.52**	**154**	Pg	**Pb**	**12 57 38.8**	**-0.8**
BDI				Sg	**Sb**	**12 57 46.9**	**+0.1**
	156nm,0.4s						
BDI	**Bagni Di Lucca**	**0.52**	**154**	Pg	**Pb**	**12 57 38.8**	**-0.8**
BDI				Sg	**Sb**	**12 57 46.9**	**+0.1**
	156nm,0.4s						
CRDM	**Cardoso**	**0.53**	**164**	P	**Pb**	**12 57 38.4**	**-1.2**
CRDM				S	**Sb**	**12 57 45.7**	**-1.1**
ZCCA	**Zocca**	**0.53**	**110**	Pg	**Pb**	**12 57 40.0**	**+0.3**
	96nm,0.4s						
ZCCA	**Zocca**	**0.53**	**110**	Pg	**Pb**	**12 57 40.0**	**+0.3**
	96nm,0.4s						
PZZT	**Monte Pizzetto**	**0.58**	**133**	Pg	**Pb**	**12 57 39.8**	**-0.8**
PZZT				Sg	**Sb**	**12 57 48.8**	**+0.3**
	151nm,0.3s						
PZZT	**Monte Pizzetto**	**0.58**	**133**	Pg	**Pb**	**12 57 39.8**	**-0.8**
PZZT				Sg	**Sb**	**12 57 48.8**	**+0.3**
	151nm,0.3s						
MAIM	**Mastiano**	**0.64**	**166**	Pg	**Pb**	**12 57 41.9**	**+0.5**
MAIM				Sg	**Sb**	**12 57 51.0**	**+1.1**
MAIM	**Mastiano**	**0.64**	**166**	P	**Pb**	**12 57 40.8**	**-0.6**
MAIM	**Mastiano**	**0.64**	**166**	Pg	**Pb**	**12 57 41.9**	**+0.5**
MAIM				S	**Sb**	**12 57 49.4**	**-0.5**
MAIM				Sg	**Sb**	**12 57 51.0**	**+1.1**
BOB	**Bobbio (Coli)**	**0.64**	**292**	Pg	**Pn**	**12 57 43.6**	**+1.2**
BOB	**Bobbio (Coli)**	**0.64**	**292**	Pg	**Pn**	**12 57 43.6**	**+1.2**
FNVD	**Fontana Vidola**	**0.71**	**121**	Pg	**Pb**	**12 57 42.5**	**-0.2**
FNVD	**Fontana Vidola**	**0.71**	**121**	Pg	**Pb**	**12 57 42.5**	**-0.2**
PII	**Pisa**	**0.83**	**167**	Pg	**Pn**	**12 57 45.6**	**+0.7**
PII	**Pisa**	**0.83**	**167**	Pg	**Pn**	**12 57 45.6**	**+0.7**
SEI	**Scarperia**	**0.91**	**121**	Pg	**Pb**	**12 57 46.1**	**0.0**
SEI	**Scarperia**	**0.91**	**121**	Pg	**Pb**	**12 57 46.1**	**0.0**
SALO	**Salr**	**1.10**	**9**	Pg	**Pn**	**12 57 49.2**	**+0.5**
SALO	**Salr**	**1.10**	**9**	Pg	**Pn**	**12 57 49.2**	**+0.5**
MDI	**Monti di Nese**	**1.31**	**342**	Pg	**Pn**	**12 57 52.6**	**+1.0**
MDI	**Monti di Nese**	**1.31**	**342**	Pg	**Pn**	**12 57 52.6**	**+1.0**
RNI	**Roncone**	**1.47**	**10**	*e*Pg	**Pn**	**12 57 53.9**	**-0.1**
RNI				*e*Sg	**Sn**	**12 58 13.1**	**+0.6**
RNI	**Roncone**	**1.47**	**10**	*e*Pg	**Pn**	**12 57 53.9**	**-0.1**
RNI				*e*Sg	**Sn**	**12 58 13.1**	**+0.6**
PANI	**Panarotta**	**1.68**	**25**	*e*Pg	**Pn**	**12 57 56.6**	**-0.3**
PANI	**Panarotta**	**1.68**	**25**	*e*Pg	**Pn**	**12 57 56.6**	**-0.3**
CGRP	**Cima Grappa**	**1.73**	**38**	⇓*e*Pg	**Pn**	**12 57 57.2**	**-0.2**
CGRP	**Cima Grappa**	**1.73**	**38**	*e*Pg	**Pn**	**12 57 57.2**	**-0.2**
CTI	**Castel Tesino**	**1.80**	**32**	Pg	**Pn**	**12 57 57.9**	**-0.5**
	18nm,0.2s						
CTI	**Castel Tesino**	**1.80**	**32**	Pg	**Pn**	**12 57 57.9**	**-0.5**
	18nm,0.2s						
KOSI	**Kohlern**	**2.08**	**21**	*e*Pg	**Pn**	**12 58 02.8**	**+0.5**
MOSI	**Grossmontoni**	**2.09**	**5**	*e*Sg	**Sn**	**12 58 29.9**	**+2.0**
SBF	**Sospel**	**2.15**	**253**	*e*Pn	**Pn**	**12 58 05.2**	**+2.0**
	9.9nm,0.4s						
SBF				*e*Sn	**Sn**	**12 58 27.7**	**-1.3**
SBF	**Sospel**	**2.15**	**253**	*e*Pn	**Pn**	**12 58 05.2**	**+2.0**
	4.9nm,0.4s						
SBF				*e*Sn	**Sn**	**12 58 27.7**	**-1.3**
PGF	**Pioggiola**	**2.19**	**206**	*e*Pn	**Pn**	**12 58 06.3**	**+2.6**
PGF				*e*Sn	**Sn**	**12 58 31.5**	**+1.5**
	4.3nm,0.3s						
PGF	**Pioggiola**	**2.19**	**206**	*e*Pn	**Pn**	**12 58 06.3**	**+2.6**
PGF				*e*Sn	**Sn**	**12 58 31.5**	**+1.5**
	2.2nm,0.3s						
ABSI	**Aberstueckl**	**2.32**	**18**	*e*Pn	**Pn**	**12 58 06.4**	**+0.8**
CIMO	**Cimolais**	**2.34**	**40**	⇓*e*Pn	**Pn**	**12 58 05.2**	**-0.6**
CIMO	**Cimolais**	**2.34**	**40**	⇓*e*Pn	**Pn**	**12 58 05.2**	**-0.6**
MBDF	**Montbardon**	**2.51**	**276**	*e*Pn	**Pn**	**12 58 08.6**	**+0.4**
MBDF				*e*Sn	**Sn**	**12 58 36.5**	**-1.5**
	1.0nm,0.2s						
MBDF	**Montbardon**	**2.51**	**276**	*e*Pn	**Pn**	**12 58 08.6**	**+0.4**
MBDF				*e*Sn	**Sn**	**12 58 36.5**	**-1.5**
	0.5nm,0.2s						
LPG	**La Plagne**	**2.68**	**292**	*e*Pn	**Pn**	**12 58 10.5**	**-0.2**
LPG				*e*Sn	**Sn**	**12 58 41.1**	**-1.3**
	4.4nm,0.6s						
LPG	**La Plagne**	**2.68**	**292**	*e*Pn	**Pn**	**12 58 10.5**	**-0.2**
LPG				*e*Sn	**Sn**	**12 58 41.1**	**-1.3**
	2.2nm

CABF				*e*Sn		**Sn**	**12 59 02.7**	**-2.2**
	1.0nm,0.3s							
CABF	**La Chapelle**	**3.60**	**307**	*e*Pn		**Pn**	**12 58 22.9**	**-0.2**
CABF				*e*Sn		**Sn**	**12 59 02.7**	**-2.2**
	0.5nm,0.3s							
HINF	**Hinteralfeld**	**4.06**	**325**	*e*Pn		**Pn**	**12 58 29.0**	**-0.3**
HINF				*e*Sn		**Sn**	**12 59 13.7**	**-2.3**
	4.4nm,0.3s							
CDF	**Champ du Feu**	**4.40**	**333**	*e*Pn		**Pn**	**12 58 34.3**	**+0.2**
CDF				*e*Sn		**Sn**	**12 59 20.8**	**-3.7**
	7.6nm,0.3s							
CDF	**Champ du Feu**	**4.40**	**333**	*e*Pn		**Pn**	**12 58 34.3**	**+0.2**
CDF				*e*Sn		**Sn**	**12 59 20.8**	**-3.7**
	3.8nm,0.3s							
HAU	**Haudompre**	**4.42**	**323**	*e*Pn		**Pn**	**12 58 35.4**	**+1.2**
HAU				*e*Sn		**Sn**	**12 59 22.1**	**-2.7**
	5.3nm,0.3s							
LOR	**Lormes**	**5.25**	**304**	*e*Pn		**Pn**	**12 58 45.7**	**0.0**
LOR				*e*Sn		**Sn**	**12 59 42.0**	**-3.3**
	4.8nm,0.3s							
LOR	**Lormes**	**5.25**	**304**	*e*Pn		**Pn**	**12 58 45.7**	**0.0**
LOR				*e*Sn		**Sn**	**12 59 42.0**	**-3.3**
	2.4nm,0.3s							

*IDC **26** 13:01:57.0±2.2,0.˚36N×98.˚30E, h0km, mb3.1/3, mb1 3.3/4, mb1mx3.2/24, mbtmp3.1/4, ML2.6/1, Error ellipse: s-maj=62.9km s-min=22.3km az=71.0*
*ISCJB **26** 13:02:02.5±1.0,0.˚52N±0.˚10×98.˚45E±0.˚08, h43km, mb3.1/3, Error ellipse: s-maj=14.7km s-min=9.6km az=27.2*
*DJA **26** 13:02:04.9±0.6,1.˚N±9.˚×,9.˚8E±.˚, h25km, M4.0/4, MLv4.0/4*
ISC 26 13:02:04.9±1.3,0.˚64N±0.˚08×98.˚40E±0.˚08, h43km, n9, σ3°13/11, mb3.1/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**1.06**	**308**	P	**Pn**	**13 02 23.6**	**+0.3**
MNSI	**Mandailing Nat**	**1.19**	**83**	P	**Pn**	**13 02 22.9**	**-2.2**
MNSI				S	**Sn**	**13 02 37.1**	**-2.9**
PSI	**Prapat**	**2.21**	**14**	Pn	**Pn**	**13 02 38.0**	**-1.1**
	1.4nm,0.3s,baz=332,slow=15,SNR=4.0						
PSI				Sn	**Sn**	**13 03 09.6**	**+4.2**
	8.0nm,0.3s,baz=154,slow=7.5,SNR=5.9						
PPI	**Padang Panjang**	**2.27**	**119**	P	**Pn**	**13 02 38.6**	**-1.4**
PDSI	**Padang**	**2.57**	**127**	P	**Pn**	**13 02 45.9**	**+1.7**
BKNI	**Bangkinang**	**2.66**	**97**	P	**Pn**	**13 02 48.2**	**+2.9**
BKNI				S	**Sn**	**13 03 21.5**	**+5.3**
WRA	**Warramunga Arr**	**40.72**	**122**	P	P	13 09 38.9	-3.0
	0.3nm,0.9s,baz=305,slow=8.8,SNR=2.2						
ASAR	**Alice Springs**	**42.10**	**127**	P	**P**	**13 09 51.0**	**-2.2**
	0.1nm,0.3s,baz=297,slow=8.0,SNR=4.7						
MKAR	**Makanchi Array**	**48.08**	**345**	P	**P**	**13 10 40.0**	**-0.2**
	0.2nm,0.4s,baz=158,slow=6.1,SNR=3.0						

KRSC 26 13:12:23.8±2.3,53.˚02N×154.˚73E, h512km±58km, ML4.4, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GNL	**Ganaly**	**2.04**	**69**	P	P	13 13 31.0	+0.8
KOK	**Koryaka**	**2.37**	**82**	P	P	13 13 34.1	+2.2
PET	**Petropavlovsk**	**2.37**	**88**	P	P	13 13 33.4	+1.6
RUS	**Russkaya**	**2.37**	**103**	P	P	13 13 33.3	+1.5
RUS				*i* S	S	13 14 23.7	-3.6
AVH	**Avacha**	**2.43**	**83**	P	P	13 13 34.2	+2.0
SMAR	**Somma**	**2.46**	**83**	P	P	13 13 34.8	+2.2
UGLR	**Uglovaya**	**2.48**	**84**	P	P	13 13 34.7	+2.2
SDLR	**Sedlovina**	**2.52**	**82**	P	P	13 13 35.1	+2.3
SPN	**Mys Shipunski**	**3.19**	**86**	P	P	13 13 38.2	+1.3
SPN				*i* S	S	13 14 32.9	-3.7
MKZ	**Mys Kozlova**	**4.43**	**67**	P	P	13 13 48.2	+1.9
MKZ				*i* S	S	13 14 48.9	-4.9

IDC 26 13:17:10.4±2.0,5.˚50N×123.˚39E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/25, mbtmp3.6/4, Error ellipse: s-maj=150.6km s-min=25.6km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**23.55**	**175**	P	P	13 22 23.3	+0.6
	0.6nm,0.5s,baz=11,slow=5.2,SNR=6.5						
WRA	**Warramunga Arr**	**27.48**	**157**	P	P	13 22 58.6	+0.1
	0.6nm,0.4s,baz=332,slow=9.9,SNR=19						
ASAR	**Alice Springs**	**30.75**	**161**	P	P	13 23 27.1	-0.6
	0.5nm,0.3s,baz=338,slow=7.2,SNR=20						
MKAR	**Makanchi Array**	**54.23**	**326**	P	P	13 26 38.0	-0.1
	0.2nm,0.4s,baz=139,slow=8.0,SNR=4.3						

*ISCJB **26** 13:36:05.9±1.5,52.˚17N±0.˚09×168.˚6W±0.˚1, h39km±12km, mb3.6/8, MS3.4/1, Error ellipse: s-maj=15.6km s-min=11.0km az=162.3*
*NEIC **26** 13:36:05.4,52.˚15N×168.˚56W, h26km, ML3.1(AEIC), After AEIC.*
*IDC **26** 13:36:05.2±1.4,52.˚68N×168.˚75W, h0km, mb3.6/9, mb1 3.7/10, mb1mx3.6/30, mbtmp3.6/10, MS3.4/1, Ms1 3.4/1, ms1mx2.4/34, Error ellipse: s-maj=38.8km s-min=17.1km az=174.0*
ISC 26 13:36:08.1±1.7,52.˚30N±0.˚09×168.˚59W±0.˚08, h34km±4km, n21, σ0°92/26, mb3.5/8, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKO	**Nikolski**	**0.70**	**347**	P	**Pn**	**13 36 20.2**	**-1.3**
NIKO				S	**Sn**	**13 36 31.7**	**+0.5**
OKSP	**Okmok Steeple**	**0.98**	**10**	P	**Pn**	**13 36 25.3**	**-0.1**
OKSO	**Okmok South**	**1.09**	**13**	P	**Pn**	**13 36 26.5**	**-0.5**
OKSO				S	**Sb**	**13 36 42.8**	**+0.2**
OKCE	**Okmok Cone E**	**1.16**	**13**	P	**Pn**	**13 36 27.9**	**-0.1**
OKCE				S	**Sb**	**13 36 45.6**	**+1.1**
OKFG	**Magazine Ridge**	**1.19**	**20**	P	**Pn**	**13 36 28.0**	**-0.3**
OKFG				S	**Sb**	**13 36 45.1**	**-0.2**
MREP	**Makushin Rep't**	**1.88**	**35**	P	**Pn**	**13 36 37.9**	**0.0**
MSW	**Makushin Switc**	**1.95**	**33**	P	**Pn**	**13 36 38.5**	**-0.3**
MSW				S	**Sn**	**13 37 02.8**	**+0.7**
UNV	**Unalaska Valle**	**2.00**	**38**	P	**Pn**	**13 36 38.7**	**-0.7**
UNV				S	**Sn**	**13 37 04.0**	**+0.8**
MTBL	**Makushin Table**	**2.03**	**34**	P	**Pn**	**13 36 39.9**	**-0.1**
AKRB	**Akutan Reef Bi**	**2.38**	**38**	P	**Pn**	**13 36 45.3**	**+0.6**
KDAK	**Kodiak Island**	**10.69**	**53**	Pn	**Pn**	**13 38 37.2**	**-1.3**
	0.6nm,0.3s,baz=111,slow=14,SNR=4.3						
ILAR	**Eielson Array**	**16.75**	**33**	Pn	**Pn**	**13 39 57.6**	**-2.1**
	0.0nm,0.3s,baz=240,slow=10,SNR=4.4						
PETK	**Petropavlovsk-**	**20.34**	**286**	P	**P**	**13 40 41.3**	**+0.1**
	2.8nm,0.6s,baz=91,slow=13,SNR=22						
INK	**Inuvik**	**23.15**	**33**	P	**P**	**13 41 09.2**	**-1.8**
	1.3nm,1.0s,baz=234,slow=12,SNR=8.4						
YKA	**Yellowknife Ar**	**29.93**	**49**	P	**P**	**13 42 12.7**	**+0.3**
	0.9nm,1.1s,baz=269,slow=8.4,SNR=7.3						
PDAR	**Pinedale Array**	**39.94**	**80**	P	**P**	**13 43 39.8**	**+0.7**
	0.4nm,0.6s,baz=308,slow=4.4,SNR=3.2						
KSRS	**Korea Array**	**45.89**	**277**	P	**P**	**13 44 28.5**	**+1.5**
	1.3nm,0.8s,baz=39,slow=8.1,SNR=4.7						
SONM	**Songino Array**	**51.75**	**301**	P	**P**	**13 45 12.4**	**+0.4**
	0.6nm,0.8s,baz=55,slow=5.6,SNR=3.9						
SONM				LR	LR	14 08 18.5	
	comp=Z,32nm,18.7s,baz=13,slow=38						
TXAR	**Lajitas Array**	**52.27**	**89**	P	P	13 45 20.8	+4.7
	0.3nm,0.8s,baz=312,slow=6.1,SNR=4.0						
MKAR	**Makanchi Array**	**64.20**	**314**	P	**P**	**13 46 38.4**	**-0.8**
	0.7nm,0.7s,baz=52,slow=5.9,SNR=8.0						
FINES	**FINESS Array B**	**66.01**	**352**	P	**P**	**13 46 50.1**	**-0.5**
	0.8nm,0.4s,baz=22,slow=7.7,SNR=9.7						

*IDC **26** 13:50:48.6±0.8,61.˚09N×149.˚64W, h34km±5km, mb3.5/10, mb1 3.7/14, mb1mx3.6/29, mbtmp3.5/14, ML3.5/4, MS3.1/3, Ms1 3.1/3, ms1mx2.6/35, Error ellipse: s-maj=16.1km s-min=9.7km az=24.0*
*NEIC **26** 13:50:50.3,61.˚18N×149.˚15W, h23km, mb3.9/1, ML3.8(AEIC), After AEIC.*
NEIC Felt [III] at Anchorage, Elmendorf AFB and Girdwood; [II] at Chugiak, Eagle River, Fort Richardson, Palmer and Wasilla.
ISC 26 13:50:50.0±0.7,61.˚15N±0.˚02×149.˚16W±0.˚03, h30km±6km, n96, σ1°04/105, mb3.8/11, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RC01	**Rabbit Creek A**	**0.29**	**257**	P	**Pb**	**13 50 57.5**	**+0.2**
RC01				S	**Sn**	**13 51 03.5**	**+0.1**
PMR	**Palmer**	**0.44**	**2**	P	**Pb**	**13 50 58.1**	**-1.4**
PMR				S	**Sb**	**13 51 05.0**	**-1.0**
SML	**Sawmill**	**0.77**	**31**	P	**Pb**	**13 51 03.4**	**-1.5**
SML				S	**Sb**	**13 51 13.8**	**-1.2**
SLKM	**Skilak Lake**	**0.83**	**219**	P	**Pb**	**13 51 05.1**	**-0.8**
SEW	**Seward**	**1.06**	**188**	P	**Pn**	**13 51 08.4**	**-0.3**
SEW				S	**Sb**	**13 51 23.4**	**+0.1**
NKA	**Nikishka**	**1.09**	**249**	P	**Pb**	**13 51 10.5**	**+0.2**
TRAP	**Trapper Creek**	**1.29**	**337**	P	**Pn**	**13 51 10.8**	**-1.0**
STLK	**Strandline Lak**	**1.33**	**286**	P	**Pn**	**13 51 12.2**	**-0.4**
CUT	**Chulitna**	**1.36**	**338**	P	**Pn**	**13 51 12.0**	**-0.8**
VLZ	**Valdez**	**1.37**	**90**	P	**Pn**	**13 51 12.6**	**-0.4**
SPU	**Mount Spurr**	**1.40**	**272**	P	**Pn**	**13 51 12.8**	**-0.7**
SKT	**Skwentna**	**1.40**	**307**	P	**Pn**	**13 51 12.8**	**-0.7**
SKT				S	**Sn**	**13 51 31.2**	**+0.3**
CRP	**Crater Peak**	**1.45**	**276**	P	**Pn**	**13 51 14.2**	**0.0**
CKL	**Chakachamna La**	**1.54**	**273**	P	**Pn**	**13 51 15.0**	**-0.4**
BGL	**Barrier Glacie**	**1.57**	**275**	P	**Pn**	**13 51 15.8**	**0.0**
KLU	**Klutina**	**1.60**	**76**	P	**Pn**	**13 51 15.8**	**-0.4**
BRLK	**Bradley Lake**	**1.64**	**212**	P	**Pn**	**13 51 16.7**	**+0.1**
BRLK				S	**Sn**	**13 51 38.2**	**+1.6**
DIV	**Divide**	**1.65**	**89**	P	**Pn**	**13 51 16.6**	**-0.2**
DIV				S	**Sn**	**13 51 37.7**	**+0.8**
EYAK	**Cordova Ski Ar**	**1.78**	**108**	P	**Pn**	**13 51 18.2**	**-0.4**
DFR	**Drift River**	**1.81**	**253**	P	**Pn**	**13 51 19.1**	**-0.1**
RSO	**Redoubt South**	**1.89**	**250**	*e*Pn	**Pn**	**13 51 20.3**	**0.0**
DHY	**Denali Highway**	**2.10**	**23**	P	**Pn**	**13 51 23.1**	**-0.1**
ILIM	**Iliamna**	**2.16**	**242**	P	**Pn**	**13 51 24.2**	**+0.3**
BMRM	**Bremner River**	**2.23**	**93**	P	**Pn**	**13 51 23.9**	**-0.9**
MID	**Middleton Isla**	**2.23**	**140**	*e*Pn	**Pb**	**13 51 28.0**	**-1.6**
GOAT	**Goat Mountain**	**2.25**	**103**	P	**Pn**	**13 51 24.4**	**+0.6**
PPLA	**Purkeypile**	**2.26**	**322**	P	**Pn**	**13 51 24.6**	**-0.6**
RND	**Reindeer**	**2.27**	**4**	P	**Pn**	**13 51 25.1**	**-0.3**
HARP	**HAARP**	**2.28**	**55**	P	**Pn**	**13 51 25.4**	**-0.1**
TRF	**Thorofare Moun**	**2.37**	**348**	P	**Pn**	**13 51 25.9**	**-0.9**
OPT	**Oil Point**	**2.52**	**235**	P	**Pn**	**13 51 29.6**	**+0.8**
PAX	**Paxson**	**2.52**	**42**	P	**Pn**	**13 51 29.0**	**+0.1**
MCK	**McKinley**	**2.59**	**2**	P	**Pn**	**13 51 30.1**	**+0.3**
VRDI	**Verde Repeater**	**2.77**	**86**	P	**Pn**	**13 51 31.7**	**-0.7**
DDM	**Donnelly Dome**	**3.06**	**29**	P	**Pn**	**13 51 36.8**	**+0.7**
SVW2	**Sparrevohn**	**3.11**	**272**	P	**Pn**	**13 51 36.3**	**-0.6**
MENT	**Mentasta**	**3.13**	**53**	*e*Pn	**Pn**	**13 51 36.6**	**-0.5**
BALM	**Baldy**	**3.31**	**89**	P	**Pn**	**13 51 39.3**	**-0.5**
KIAG	**Kiagna River**	**3.32**	**91**	P	**Pn**	**13 51 39.2**	**-0.7**
WRH	**Wood River Hil**	**3.37**	**8**	P	**Pn**	**13 51 40.7**	**+0.3**
HDA	**Harding Lake**	**3.42**	**16**	P	**Pn**	**13 51 42.6**	**+1.5**
NEA	**Nenana**	**3.44**	**1**	P	**Pn**	**13 51 41.3**	**0.0**
DOT	**Dot Lake**	**3.45**	**41**	*e*Pn	**Pn**	**13 51 40.7**	**-0.9**
CCB	**Clear Creek Bu**	**3.56**	**9**	P	**Pn**	**13 51 43.6**	**+0.6**
BARN	**Barnard Glacie**	**3.64**	**88**	P	**Pn**	**13 51 43.8**	**-0.5**
TT01	**Tatalina**	**3.68**	**302**	P	**Pn**	**13 51 43.6**	**-1.0**
MESA	**MESA**	**3.68**	**102**	P	**Pn**	**13 51 44.8**	**-0.1**
IL1	**Eielson Array**	**3.78**	**15**	P	**Pn**	**13 51 46.1**	**+0.1**
ILAR	**Eielson Array**	**3.78**	**15**	Pn	**Pn**	**13 51 44.7**	**-1.3**
ILAR				S	**Sn**	**13 52 31.2**	**+1.9**
ILAR	**Eielson Array**	**3.78**	**15**	Pn	**Pn**	**13 51 44.7**	**-1.3**
	3.6nm,0.3s,baz=200,slow=14,SNR=85						
ILAR				Sn	**Sn**	**13 52 31.2**	**+1.9**
	16nm,0.3s,baz=206,slow=17,SNR=10						
COLA	**College**	**3.78**	**9**	P	**Pn**	**13 51 46.4**	**+0.3**
KDAK	**Kodiak Island**	**3.81**	**209**	Pn	**Pn**	**13 51 45.6**	**-0.8**
KDAK				Sn	**Sn**	**13 52 26.9**	**-3.1**
	17nm,0.3s,baz=311,slow=23,SNR=6.3						
KDAK				Lg	Lg	13 52 44.9	
	25nm,0.3s,baz=152,slow=19,SNR=9.6						
MDM	**Murphy Dome**	**3.84**	**6**	P	**Pn**	**13 51 47.2**	**+0.3**
MLY	**Manley**	**3.96**	**350**	P	**Pn**	**13 51 48.1**	**-0.4**
BCA3	**Beaver Creek A**	**3.96**	**58**	P	**Pn**	**13 51 48.5**	**-0.2**
KABR	**Katmai Barrier**	**4.23**	**227**	P	**Pn**	**13 51 52.1**	**-0.2**
SAMH	**Samovar Hills**	**4.25**	**100**	P	**Pn**	**13 51 53.0**	**+0.3**
OHAK	**Old Harbor**	**4.48**	**210**	*e*Pn	**Pn**	**13 51 54.1**	**-1.5**
PNL	**Peninsula**	**5.07**	**103**	P	**Pn**	**13 52 03.9**	**+0.2**
EGAK	**Eagle**	**5.15**	**42**	*e*Pn	**Pn**	**13 52 04.3**	**-0.6**
	31nm,0.5s						
IM3	**Indian Mountai**	**5.26**	**339**	P	**Pn**	**13 52 05.5**	**-0.8**
DAWY	**Dawson**	**5.37**	**53**	P	**Pn**	**13 52 07.7**	**-0.3**
HYT	**Haines Junctio**	**5.69**	**88**	P	**Pn**	**13 52 12.5**	**+0.2**
COLD	**Coldfoot**	**6.12**	**356**	*e*Pn	**Pn**	**13 52 18.0**	**-0.1**
BM3	**Burnt Mountain**	**6.59**	**15**	P	**Pn**	**13 52 24.3**	**-0.4**
WHY	**Whitehorse**	**6.98**	**88**	P	**Pn**	**13 52 29.4**	**-0.7**
SKAG	**Skagway**	**7.08**	**98**	P	**Pn**	**13 52 30.2**	**-1.1**
TNA	**Tin City**	**9.49**	**306**	*e*Pn	**Pn**	**13 53 06.1**	**+1.7**
	9.5nm,0.6s						
INK	**Inuvik**	**9.78**	**36**	Pn	**Pn**	**13 53 09.9**	**+1.7**
INK				Sn	**Sn**	**13 54 56.6**	**-0.1**
INK				Lg	Lg	13 55 54.0	
INK	**Inuvik**	**9.78**	**36**	Pn	**Pn**	**13 53 09.9**	**+1.7**
	0.3nm,0.3s,baz=254,slow=16,SNR=21						
INK				Sn	**Sn**	**13 54 56.6**	**-0.1**
	0.2nm,0.3s,baz=242,slow=22,SNR=2.5						
INK				Lg	Lg	13 55 54.0	
	0.2nm,0.3s,baz=180,slow=11,SNR=3.5						
INK				LR	LR	13 57 01.9	
	comp=Z,76nm,18.7s,baz=342,slow=38						
DLBC	**Dease Lake**	**10.01**	**97**	Pn	**Pn**	**13 53 12.3**	**+0.8**
DLBC				Sn	**Sn**	**13 55 05.1**	**+2.4**
DLBC				Lg	Lg	13 56 13.8	
DLBC	**Dease Lake**	**10.01**	**97**	Pn	**Pn**	**13 53 12.3**	**+0.8**
	0.2nm,0.3s,baz=285,slow=13,SNR=5.4						
DLBC				Sn	**Sn**	**13 55 05.1**	**+2.4**
	0.2nm,0.3s,baz=180,slow=17,SNR=3.3						
DLBC				Lg	Lg	13 56 13.8	
	0.1nm,0.3s,baz=122,slow=14,SNR=3.6						
DLBC				LR	LR	13 58 00.3	
	comp=Z,85nm,18.4s,baz=332,slow=42						
YKA	**Yellowknife Ar**	**16.26**	**70**	Pn	**Pn**	**13 54 36.2**	**+0.5**
YKA				PcP	**PcP**	**13 59 26.3**	**-1.8**
YKA	**Yellowknife Ar**	**16.26**	**70**	Pn	**Pn**	**13 54 36.2**	**+0.5**
	0.1nm,0.3s,baz=281,slow=10,SNR=19						
YKA				PcP	**PcP**	**13 59 26.3**	**-1.8**
	0.0nm,0.3s,baz=272,slow=1.0,SNR=6.6						
EGMT	**Eagleton**	**25.88**	**102**	*e*P	**P**	**13 56 18.1**	**-0.7**
	2.4nm,0.8s						
ELK	**Elko**	**29.03**	**119**	P	**P**	**13 56 47.9**	**+0.6**
ELK	**Elko**	**29.03**	**119**	P	**P**	**13 56 47.9**	**+0.6**
	0.5nm,0.4s,baz=290,slow=9.7,SNR=3.8						
PETK	**Petropavlovsk-**	**29.18**	**278**	P	P	13 56 45.2	-2.9
PETK	**Petropavlovsk-**	**29.18**	**278**	P	P	13 56 45.2	-2.9
	1.7nm,0.9s,baz=78,slow=14,SNR=8.5						
NVAR	**Mina Array Bea**	**29.74**	**126**	P	**P**	**13 56 54.9**	**+1.3**
NVAR	**Mina Array Bea**	**29.74**	**126**	P	**P**	**13 56 54.9**	**+1.3**
	0.9nm,0.8s,baz=294,slow=7.5,SNR=5.9						
TXAR	**Lajitas Array**	**43.69**	**116**	P	**P**	**13 58 52.1**	**+0.2**
TXAR				pP	**pP**	**13 59 01.6**	**+0.6**
TXAR	**Lajitas Array**	**43.69**	**116**	P	**P**	**13 58 52.1**	**+0.2**
	0.5nm,0.7s,baz=334,slow=6.3,SNR=8.0						
TXAR				pP	**pP**	**13 59 01.6**	**+0.6**
	0.2nm,0.6s,baz=260,slow=7.5,SNR=2.4						
TXAR				LR	LR	14 15 57.5	
	comp=Z,26nm,19.9s,baz=0.0,slow=34						
SONM	**Songino Array**	**55.61**	**308**	P	**P**	**14 00 20.6**	**-2.0**
SONM	**Songino Array**	**55.61**	**308**	P	**P**	**14 00 20.6**	**-2.0**
	0.8nm,0.8s,baz=37,slow=8.6,SNR=5.8						
ZALV	**Zalesovo Beam**	**57.53**	**325**	P	P	14 00 33.2	-2.7
ZALV	**Zalesovo Beam**	**57.53**	**325**	P	P	14 00 33.2	-2.7
	0.4nm,0.4s,baz=29,slow=7.5,SNR=3.4						
FINES	**FINESS Array B**	**57.67**	**3**	P	P	14 00 34.0	-2.7
FINES	**FINESS Array B**	**57.67**	**3**	P	P	14 00 34.0	-2.7
	0.5nm,0.4s,baz=358,slow=9.5,SNR=6.8						
MKAR	**Makanchi Array**	**64.67**	**324**	P	P	14 01 20.9	-3.6
MKAR				pP	pP	14 01 31.2	-2.6
MKAR	**Makanchi Array**	**64.67**	**324**	P	P	14 01 20.9	-3.6
	0.2nm,0.5s,baz=46,slow=7.3,SNR=3.9						
MKAR				pP	pP	14 01 31.2	-2.6
	0.4nm,0.5s,baz=35,slow=6.4,SNR=5.1						
AKASG	**Malin Array Be**	**68.49**	**1**	P	P	14 01 45.6	-3.0
AKASG				pP	pP	14 01 58.6	+0.4
AKASG	**Malin Array Be**	**68.49**	**1**	P	P	14 01 45.6	-3.0
	0.9nm,0.4s,baz=0.0,slow=6.7,SNR=5.6						
AKASG				pP	pP	14 01 58.6	+0.4
	1.1nm,0.5s,baz=355,slow=5.5,SNR=3.6						
BRTR	**Keskin Array B**	**79.45**	**358**	P	P	14 02 50.5	-2.6
BRTR				pP	**PcP**	**14 03 02.2**	**+1.1**
BRTR	**Keskin Array B**	**79.45**	**358**	P	P	14 02 50.5	-2.6
	0.5nm,0.8s,baz=357,slow=5.1,SNR=4.1						
BRTR				pP	**PcP**	**14 03 02.2**	**+1.1**
	0.7nm,0.7s,baz=5.0,slow=2.9,SNR=4.0						

*JMA **26** 13:51:13.5±0.2,35.˚49N×141.˚96E, h56km±3km, M2.8*
*IDC **26** 13:51:25.5±1.4,34.˚44N×138.˚23E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.2/26, mbtmp3.5/2, Error ellipse: s-maj=52.0km s-min=20.8km az=85.0*
ISC 26 13:51:13.8±2.5,35.˚47N±0.˚05×142.˚0E±0.˚1, h31km±15km, n13, σ0°95/17, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.92**	**285**	P	**Pb**	**13 51 30.8**	**-0.4**
CHOJ				*e*S	**Sn**	**13 51 42.2**	**-0.6**
BSO1	**Boso 1**	**1.14**	**225**	P	**Pn**	**13 51 33.4**	**+0.3**
BSO1				*e*S	**Sn**	**13 51 49.1**	**+1.7**
BSO2	**Boso 2**	**1.21**	**234**	*e*S	**Sb**	**13 51 51.6**	**+0.4**
BSO3	**Boso 3**	**1.35**	**241**	P	**Pn**	**13 51 36.9**	**+0.6**
KTR	**Katsuura**	**1.38**	**257**	P	**Pn**	**13 51 37.2**	**+0.4**
JAG	**Ashikaga**	**2.24**	**296**	P	**Pn**	**13 51 49.0**	**+0.2**
JOD2	**Odawara 2**	**2.35**	**266**	P	**Pn**	**13 51 50.3**	**0.0**
JOD2				*e*S	**Sn**	**13 52 17.6**	**-0.5**
JFT	**Otama**	**2.42**	**328**	P	**Pn**	**13 51 52.2**	**+0.9**
JFT				S	**Sn**	**13 52 20.0**	**+0.1**
JMM	**Marumori**	**2.57**	**339**	P	**Pn**	**13 51 53.0**	**-0.2**
JMM				*e*S	**Sn**	**13 52 22.8**	**-0.6**
JHJ	**Hachijo jima 2**	**2.95**	**218**	Pn	**Pn**	**13 51 58.7**	**+0.1**
	21nm,0.3s,baz=76,slow=22,SNR=10						
JHJ				Sn	**Sn**	**13 52 30.5**	**-2.5**
	48nm,0.3s,baz=80,slow=23,SNR=9.2						
MJAR	**Matsushiro Arr**	**3.22**	**291**	Pn	**Pn**	**13 52 02.5**	**+0.3**
	0.8nm,0.3s,baz=140,slow=11,SNR=9.6						
MJAR				Sn	Sn	13 52 27.6	-12
	0.8nm,0.3s,baz=360,slow=20,SNR=5.5						
WRA	**Warramunga Arr**	**55.58**	**189**	P	P	14 00 52.4	+5.9
	0.8nm,0.5s,baz=3.4,slow=7.7,SNR=20						
ASAR	**Alice Springs**	**59.30**	**189**	P	P	14 01 19.9	+7.2
	0.2nm,0.4s,baz=2.1,slow=6.2,SNR=7.4						

WEL 26 14:03:45.9±0.1,37.˚81S×176.˚67E, h2km, ML3.6/10, 10C-2D, Error ellipse: s-maj=0.8km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPRZ	**Ohinepanea**	**0.10**	**250**	⇑P*	Pg	14 03 48.4	+0.6
OPRZ				S*	Sg	14 03 49.7	+0.6
MARZ	**Manawahe**	**0.17**	**179**	⇑P*	Pg	14 03 49.9	+0.6
MARZ				S*	Sg	14 03 52.7	+1.0
LIRZ	**Lichensteins R**	**0.30**	**230**	PG	Pg	14 03 52.4	+0.8
EDRZ	**Edgecumbe**	**0.30**	**170**	⇑PG	Pg	14 03 52.2	+0.5
TGRZ	**Tauranga**	**0.34**	**284**	⇑PG	Pg	14 03 53.1	+0.8
TGRZ				SG	Sb	14 03 58.6	-1.8
MKRZ	**Makatiti**	**0.36**	**206**	PG	Pb	14 03 54.0	-1.1
MKRZ				SG	Sb	14 03 59.6	-1.7
OMRZ	**Omania**	**0.38**	**219**	⇑PG	Pg	14 03 53.8	+0.6
KARZ	**Kaharoa**	**0.40**	**238**	PG	Pg	14 03 54.2	+0.7
KARZ				SG	Sg	14 03 59.4	+0.6
TARZ	**Mount Tarawera**	**0.44**	**197**	⇑PG	Pg	14 03 55.4	+0.9
WIZ	**White Island**	**0.50**	**55**	PG	Pb	14 03 56.5	-0.8
UTU	**Utuhina**	**0.53**	**226**	PG	Pb	14 03 57.0	-0.9
RRRZ	**Republican Roa**	**0.54**	**193**	⇑PG	Pg	14 03 56.6	+0.3
URZ	**Urewera**	**0.56**	**142**	⇑PG	Pg	14 03 56.6	-0.1
MYRZ	**Mayor Island**	**0.63**	**327**	PG	Pb	14 03 59.0	-0.6
HRRZ	**Handcock Road**	**0.65**	**208**	P*	Pb	14 03 59.5	-0.6
PRRZ	**Plateau Road**

	0.5nm,0.5s,baz=56,slow=9.2,SNR=6.2							
FITZ	**Fitzroy Crossi**	**28.24**	**241**	P	P	14	52	57.1 -0.4
	1.2nm,0.8s,baz=93,slow=4.4,SNR=4.5							
TORD	**Torodi Ar. Bea**	**149.29**	**287**	PKPbc	PKPbc	15	06	51.5 -0.2
	0.5nm,0.4s,baz=76,slow=2.3,SNR=6.8							

IDC 26 15:00:48.0±10.0, 2°87.7N×74°83.8W, h0km, mb3.5/1, mb1 3.9/1, mb1mx3.2/21, mbtmp3.5/1, Error ellipse: s-maj=659.4km s-min=49.7km az=93.0, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
YKA	**Yellowknife Ar**	**66.39**	**341**	P	P	15	11	38.6	+0.1
	0.5nm,0.9s,baz=134,slow=7.0,SNR=7.1								
ASAR	**Alice Springs**	**145.38**	**231**	PKPbc	PKPbc	15	20	28.1	-0.7
	0.2nm,0.4s,baz=126,slow=3.7,SNR=6.4								
WRA	**Warramunga Arr**	**146.86**	**237**	PKPbc	PKPdf	15	20	32.2	+0.7
	0.9nm,0.6s,baz=111,slow=2.8,SNR=10								

*ISCJB **26** 15:40:53.8±0.4, 42°.35N±0°.03×13°.43E±0°.04, h21km±3km, Error ellipse: s-maj=4.7km s-min=4.4km az=166.9*
*ROM **26** 15:40:53.8±0.1, 42°.35N×13°.43E, h18km±1km, MI1.9/5, Error ellipse: s-maj=1.2km s-min=0.9km az=97.0*
*CSEM **26** 15:40:54.3±0.2, 42°.36N×13°.43E, h12km, ML2.1/7, Error ellipse: s-maj=3.9km s-min=3.7km az=41.0*
*LDG **26** 15:40:54.2±0.2, 42°.30N×13°.40E, h2km, MI2.7/5, Error ellipse: s-maj=8.1km s-min=5.3km az=60.0*

ISC 26 15:40:54.2±0.9, 42°.36N±0°.02×13°.42E±0°.02, h19km±2km, n51, σ1°50/77, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
AQU	**L'Aquila**	**0.01**	**236**	Pg	**Pg**	**15**	**40**	**57.1**	**-0.5**
AQU				Sg	**Sg**	**15**	**40**	**59.4**	**-0.5**
	65nm,0.3s								
AQU	**L'Aquila**	**0.01**	**236**	Pg	**Pg**	**15**	**40**	**57.1**	**-0.5**
AQU				Sg	**Sg**	**15**	**40**	**59.4**	**-0.5**
	65nm,0.3s								
CAMP	**Campotosto**	**0.17**	**358**	Pg	**Pg**	**15**	**40**	**58.8**	**-0.2**
CAMP				Sg	**Sg**	**15**	**41**	**02.4**	**+0.1**
	26nm,0.3s								
CAMP	**Campotosto**	**0.17**	**358**	Pg	**Pg**	**15**	**40**	**58.8**	**-0.2**
CAMP				Sg	**Sg**	**15**	**41**	**02.4**	**+0.1**
	26nm,0.3s								
FIAM	**Fiamignano**	**0.24**	**247**	Pg	**Pg**	**15**	**40**	**59.7**	**-0.2**
FIAM				Sg	**Sg**	**15**	**41**	**04.0**	**+0.1**
FIAM	**Fiamignano**	**0.24**	**247**	Pg	**Pg**	**15**	**40**	**59.7**	**-0.2**
FIAM				Sg	**Sg**	**15**	**41**	**04.0**	**+0.1**
TERO	**Teramo**	**0.29**	**28**	Pg	**Pg**	**15**	**41**	**00.2**	**-0.6**
TERO				Sg	**Sb**	**15**	**41**	**05.1**	**-0.2**
	73nm,0.2s								
TERO	**Teramo**	**0.29**	**28**	Pg	**Pg**	**15**	**41**	**00.2**	**-0.6**
TERO				Sg	**Sb**	**15**	**41**	**05.1**	**-0.2**
	73nm,0.2s								
VCEL	**Villa Celiera**	**0.32**	**84**	Pg	**Pg**	**15**	**41**	**00.7**	**-0.4**
VCEL				Sg	**Sb**	**15**	**41**	**06.2**	**+0.2**
	304nm,0.3s								
VCEL	**Villa Celiera**	**0.32**	**84**	Pg	**Pg**	**15**	**41**	**00.7**	**-0.4**
VCEL				Sg	**Sb**	**15**	**41**	**06.2**	**+0.2**
	304nm,0.3s								
PTQR	**Pietraquaria**	**0.34**	**182**	Pg	**Pg**	**15**	**41**	**01.0**	**-0.5**
PTQR				Sg	**Sb**	**15**	**41**	**06.4**	**-0.3**
PTQR	**Pietraquaria**	**0.34**	**182**	Pg	**Pg**	**15**	**41**	**01.0**	**-0.5**
PTQR				Sg	**Sb**	**15**	**41**	**06.4**	**-0.3**
LNSS	**Leonessa**	**0.37**	**311**	Pg	**Pg**	**15**	**41**	**01.8**	**-0.2**
LNSS				Sg	**Sb**	**15**	**41**	**08.0**	**+0.3**
	81nm,0.1s								
LNSS	**Leonessa**	**0.37**	**311**	Pg	**Pg**	**15**	**41**	**01.8**	**-0.2**
LNSS				Sg	**Sb**	**15**	**41**	**08.0**	**+0.3**
	81nm,0.1s								
NRCA	**Norcia**	**0.52**	**335**	Pg	**Pg**	**15**	**41**	**04.1**	**-0.7**
NRCA				Sg	**Sb**	**15**	**41**	**12.4**	**+0.5**
	68nm,0.1s								
NRCA	**Norcia**	**0.52**	**335**	Pg	**Pg**	**15**	**41**	**04.1**	**-0.7**
NRCA				Sg	**Sb**	**15**	**41**	**12.4**	**+0.5**
	68nm,0.1s								
MNS	**Montasola**	**0.55**	**273**	Pg	**Pg**	**15**	**41**	**05.2**	**0.0**
MNS	**Montasola**	**0.55**	**273**	Pg	**Pg**	**15**	**41**	**05.2**	**0.0**
POFI	**Posta Fibreno**	**0.68**	**161**	Pg	**Pb**	**15**	**41**	**06.4**	**-1.0**
POFI	**Posta Fibreno**	**0.68**	**161**	Pg	**Pb**	**15**	**41**	**06.4**	**-1.0**
FDMO	**Fiordimonte**	**0.72**	**340**	Pg	**Pb**	**15**	**41**	**07.6**	**-0.4**
FDMO				Sg	**Sg**	**15**	**41**	**18.6**	**+0.7**
FDMO	**Fiordimonte**	**0.72**	**340**	Pg	**Pb**	**15**	**41**	**07.6**	**-0.4**
FDMO				Sg	**Sg**	**15**	**41**	**18.6**	**+0.7**
CESI	**CESI - Serrava**	**0.75**	**330**	Pg	**Pb**	**15**	**41**	**08.1**	**-0.5**
CESI	**CESI - Serrava**	**0.75**	**330**	Pg	**Pb**	**15**	**41**	**08.1**	**-0.5**
NVLJ	**Novalja**	**2.44**	**25**	*i* Pn	**Pn**	**15**	**41**	**33.8**	**+0.9**
NVLJ				Sn	**Sn**	**15**	**42**	**03.9**	**+1.6**
NVLJ	**Novalja**	**2.44**	**25**	*i* Pn	**Pn**	**15**	**41**	**33.8**	**+0.9**
NVLJ				Sn	**Sn**	**15**	**42**	**03.8**	**+1.6**
STON	**Ston**	**3.20**	**79**	*e*Pn	**Pn**	**15**	**41**	**45.4**	**+1.9**
STON				Sn	**Sn**	**15**	**42**	**21.6**	**+0.6**
STON	**Ston**	**3.20**	**79**	*e*Pn	**Pn**	**15**	**41**	**45.3**	**+1.9**
STON				Sn	**Sn**	**15**	**42**	**21.5**	**+0.6**
PGF	**Pioggiola**	**3.27**	**275**	*e*Pn	**Pn**	**15**	**41**	**45.7**	**+1.2**
PGF				*e*Sn	**Sn**	**15**	**42**	**25.8**	**+2.8**
	3.4nm,0.4s								
PGF	**Pioggiola**	**3.27**	**275**	*e*Pn	**Pn**	**15**	**41**	**45.7**	**+1.2**
PGF				*e*Sn	**Sn**	**15**	**42**	**25.8**	**+2.8**
	1.7nm,0.4s								
SBF	**Sospel**	**4.63**	**291**	*e*Pn	**Pn**	**15**	**42**	**04.2**	**+1.1**
SBF	**Sospel**	**4.63**	**291**	*e*Pn	**Pn**	**15**	**42**	**04.2**	**+1.1**
FRF	**La Foret Royal**	**5.11**	**286**	*e*Pn	**Pn**	**15**	**42**	**10.4**	**+0.7**
FRF	**La Foret Royal**	**5.11**	**286**	*e*Pn	**Pn**	**15**	**42**	**10.4**	**+0.7**
LMR	**La Mourre**	**5.17**	**283**	*e*Pn	**Pn**	**15**	**42**	**11.0**	**+0.5**
LMR	**La Mourre**	**5.17**	**283**	*e*Pn	**Pn**	**15**	**42**	**11.0**	**+0.5**
MBDF	**Montbardon**	**5.38**	**298**	*e*P	**Pn**	**15**	**42**	**16.2**	**+2.7**
MBDF	**Montbardon**	**5.38**	**298**	*e*P	**Pn**	**15**	**42**	**16.2**	**+2.7**
LPG	**La Plagne**	**5.74**	**305**	*e*P	**Pn**	**15**	**42**	**21.5**	**+2.9**
LPG	**La Plagne**	**5.74**	**305**	*e*P	**Pn**	**15**	**42**	**21.5**	**+2.9**
LPL	**La Plagne**	**5.76**	**305**	*e*P	Pn	15	42	22.2	+3.4
LPL				*e*Sn	**Sn**	**15**	**43**	**20.4**	**-4.1**
	0.4nm,0.3s								
LPL	**La Plagne**	**5.76**	**305**	*e*P	Pn	15	42	22.2	+3.4
SMRF	**Simiane la Rot**	**5.96**	**288**	*e*P	**Pn**	**15**	**42**	**22.9**	**+1.6**
SMRF	**Simiane la Rot**	**5.96**	**288**	*e*P	**Pn**	**15**	**42**	**22.9**	**+1.6**
KHC	**Kasperske Hory**	**6.77**	**1**	*e*P	**Sn**	**15**	**43**	**47.5**	**-1.5**
HINF	**Hinteralfeld**	**7.16**	**322**	*e*Pn	**Pn**	**15**	**42**	**38.2**	**+0.3**
HINF				*e*Sn	**Sn**	**15**	**43**	**54.7**	**-4.0**
	3.2nm,0.6s								
HINF	**Hinteralfeld**	**7.16**	**322**	*e*Pn	**Pn**	**15**	**42**	**38.2**	**+0.3**
CDF	**Champ du Feu**	**7.43**	**327**	*e*Pn	**Pn**	**15**	**42**	**41.8**	**+0.2**
CDF				*e*Sn	**Sn**	**15**	**44**	**01.5**	**-3.9**
	1.5nm,0.6s								
CDF	**Champ du Feu**	**7.43**	**327**	*e*Pn	**Pn**	**15**	**42**	**41.8**	**+0.2**
HAU	**Haudompre**	**7.53**	**321**	*e*Pn	**Pn**	**15**	**42**	**43.5**	**+0.6**
HAU				*e*Sn	**Sn**	**15**	**44**	**02.3**	**-5.5**
	2.4nm,0.4s								
HAU	**Haudompre**	**7.53**	**321**	*e*Pn	**Pn**	**15**	**42**	**43.5**	**+0.6**

MEX 26 15:47:00.8±0.5, 17°.05N×96°.25W, h101km±5km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
VHO	**Vista Hermosa**	**0.47**	**273**	*i* P	Pn	15	47	15.1	-1.6
VHO				*i* S	Sn	15	47	27.0	-1.6
HUIG	**Huatulco**	**1.28**	**174**	*e*P	Pn	15	47	23.3	-1.2
HUIG				*i* S	Sn	15	47	40.6	-1.7
UTMO	**Huajuapan**	**1.68**	**298**	*i* P	Pn	15	47	28.8	-0.7
UTMO				*i* S	Sn	15	47	49.7	-1.8
PNIG	**Pinotepa**	**1.92**	**250**	*i* P	Pn	15	47	31.4	-1.0
PNIG				*i* S	Sn	15	47	54.6	-1.8
PCIG		**3.20**	**114**	*i* P		15	49	31.8	
PCIG				*i* S		15	50	08.2	
YAIG	**Yautepec**	**3.23**	**304**	*i* P	Pn	15	47	49.1	-0.8
YAIG				*i* S	Sn	15	48	25.7	-2.1

MAN 26 16:01:19, 15°.25N×121°.84E, h137km, mb4.6, ML3.5, MS3.4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
BALP	**Baler**	**0.55**	**333**	*e*P	Pn	16	01	40.8	+1.7
BALP				*e*S	Sn	16	01	50.8	-3.7
GQP	**Guinayangan**	**1.46**	**156**	*e*P	Pn	16	01	41.2	-6.0
GQP				*i* S	Sn	16	01	59.3	-9.4
CAUP	**Cauayan**	**1.68**	**360**	*e*P	Pn	16	01	49.2	-0.5
CAUP				*e*S	Sn	16	01	59.1	-14

*TIR **26** 16:05:05.3, 41°.44N×20°.03E, h1km, ML3.4*
*CSEM **26** 16:05:06.8±0.3, 41°.48N×20°.01E, h2km, ML3.4, Error ellipse: s-maj=6.2km s-min=5.2km az=11.0*
*SKO **26** 16:05:06.3, 41°.55N×19°.92E, h10km*
*PDG **26** 16:05:06.9±0.3, 41°.44N×19°.94E, h18km, ML2.3/9, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*
*BEO **26** 16:05:08.6±0.5, 41°.45N×20°.02E, h6km±4km, ML2.0/5*

ISC 26 16:05:07.3±0.9, 41°.46N±0°.02×19°.99E±0°.02, h16km±6km, n46, σ1°10/90, 6C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
TIR	**Tirane**	**0.14**	**219**	*e*PG	**Pg**	**16**	**05**	**11.3**	**0.0**
TIR				*e*SG	**Sb**	**16**	**05**	**14.9**	**+0.3**
TIR	**Tirane**	**0.14**	**219**	*e*Pg	**Pg**	**16**	**05**	**11.1**	**-0.2**
TIR				*e*Sg	**Sb**	**16**	**05**	**15.4**	**+0.8**
TIR	**Tirane**	**0.14**	**219**	*e*Pg	**Pg**	**16**	**05**	**11.1**	**-0.2**
TIR				*e*Sg	**Sb**	**16**	**05**	**14.9**	**+0.3**
PHP	**Peshkopia**	**0.41**	**57**	*e*PG	**Pg**	**16**	**05**	**14.4**	**-1.3**
PHP				*e*SG	**Sg**	**16**	**05**	**20.9**	**-0.4**
PHP	**Peshkopia**	**0.41**	**57**	*e*Pg	**Pg**	**16**	**05**	**14.4**	**-1.3**
PHP				*e*Sg	**Sg**	**16**	**05**	**20.9**	**-0.4**
PUK	**Puka**	**0.58**	**353**	*e*PG	**Pg**	**16**	**05**	**17.6**	**-1.3**
PUK				*e*SG	**Sg**	**16**	**05**	**27.3**	**+0.5**
PUK	**Puka**	**0.58**	**353**	*e*Pg	**Pg**	**16**	**05**	**17.6**	**-1.3**
PUK				*e*Sg	**Sg**	**16**	**05**	**27.3**	**+0.5**
ULC	**Ulcinj**	**0.75**	**312**	*i*Pg	**Pg**	**16**	**05**	**19.9**	**-2.1**
ULC				*e*Sg	**Sb**	**16**	**05**	**32.6**	**+0.6**
ULC	**Ulcinj**	**0.75**	**312**	*i*Pg	**Pg**	**16**	**05**	**19.9**	**-2.1**
ULC				*e*Sg	**Sb**	**16**	**05**	**32.6**	**+0.6**
BCI	**Bajram Curri**	**0.91**	**4**	*e*PG	**Pb**	**16**	**05**	**22.1**	**-2.6**
BCI				*e*SG	**Sb**	**16**	**05**	**36.7**	**+0.1**
BCI	**Bajram Curri**	**0.91**	**4**	*e*Pg	**Pb**	**16**	**05**	**22.1**	**-2.6**
BCI				*e*Sg	**Sb**	**16**	**05**	**36.7**	**+0.1**
BIA	**Bitola**	**1.10**	**113**	*e*Pg	**Pb**	**16**	**05**	**27.5**	**-0.6**
BIA				*e*Sg	**Sn**	**16**	**05**	**44.6**	**+1.6**
BIA	**Bitola**	**1.10**	**113**	*e*Pg	**Pb**	**16**	**05**	**27.4**	**-0.6**
PDG	**Podgorica**	**1.11**	**331**	*e*Pg	**Pn**	**16**	**05**	**28.5**	**+0.3**
PDG				*e*Sg	**Sn**	**16**	**05**	**45.0**	**+1.8**
PDG	**Podgorica**	**1.11**	**331**	*e*Pg	**Pn**	**16**	**05**	**28.5**	**+0.3**
PDG				*e*Sg	**Sn**	**16**	**05**	**45.2**	**+2.0**
TTG	**Podgorica**	**1.11**	**331**	*i*Pg	**Pb**	**16**	**05**	**26.9**	**-1.3**
TTG				*e*Sg	**Sn**	**16**	**05**	**45.2**	**+2.0**
PVY	**Plav**	**1.13**	**359**	*i*Pg	**Pb**	**16**	**05**	**28.5**	**-0.1**
PVY				*e*Sg	**Sg**	**16**	**05**	**46.5**	**+2.4**
PVY	**Plav**	**1.13**	**359**	*i*Pg	**Pb**	**16**	**05**	**28.5**	**-0.1**
PVY				*e*Sg	**Sg**	**16**	**05**	**46.5**	**+2.4**
BUM	**Brajici-Budva**	**1.17**	**316**	*i*Pg	**Pn**	**16**	**05**	**28.7**	**-0.4**
BUM				*e*Sg	**Sg**	**16**	**05**	**47.0**	**+1.8**
BUM	**Brajici-Budva**	**1.17**	**316**	*i*Pg	**Pn**	**16**	**05**	**28.7**	**-0.4**
BUM				*e*Sg	**Sg**	**16**	**05**	**47.0**	**+1.8**
SKO	**Skopje**	**1.20**	**64**	*e*Pg	**Pn**	**16**	**05**	**28.4**	**-1.1**
SKO				*e*Sg	**Sb**	**16**	**05**	**44.9**	**-0.2**
SKO	**Skopje**	**1.20**	**64**	*e*Pg	**Pg**	**16**	**05**	**30.2**	**-0.3**
SKO				*e*Sg	**Sg**	**16**	**05**	**46.0**	**-0.2**
SKO	**Skopje**	**1.20**	**64**	*e*Pg	**Pn**	**16**	**05**	**28.9**	**-0.6**
SKO				*e*Sg	**Sg**	**16**	**05**	**46.0**	**-0.2**
BEY	**Berane**	**1.41**	**357**	*e*Pg	**Pb**	**16**	**05**	**33.6**	**+0.3**
BEY				*e*Sg	**Sg**	**16**	**05**	**53.9**	**+1.0**
IVA	**Berane**	**1.41**	**357**	*e*Pg	**Pb**	**16**	**05**	**33.6**	**+0.3**
IVA				*e*Sg	**Sg**	**16**	**05**	**53.9**	**+1.0**
HCY	**Herceg Novi**	**1.49**	**312**	*e*Pg	**Pn**	**16**	**05**	**33.4**	**0.0**
HCY				*e*Sg	**Sg**	**16**	**05**	**54.9**	**-0.4**
HCY	**Herceg Novi**	**1.49**	**312**	*e*Pg	**Pn**	**16**	**05**	**33.4**	**0.0**
HCY				*e*Sg	**Sg**	**16**	**05**	**54.9**	**-0.4**
NKY	**Niksic**	**1.54**	**332**	*i*Pg	**Pn**	**16**	**05**	**34.4**	**+0.2**
NKY				*e*Sg	**Sb**	**16**	**05**	**55.8**	**+1.0**
NKY	**Niksic**	**1.54**	**332**	*i*Pg	**Pn**	**16**	**05**	**34.4**	**+0.2**
NKY				*e*Sg	**Sb**	**16**	**05**	**55.8**	**+1.0**
BRY	**Bratogost**	**1.80**	**324**	*i*PN	**Pn**	**16**	**05**	**38.2**	**+0.4**
BRY				*e*Sn	**Sb**	**16**	**06**	**02.9**	**+0.6**
BRY	**Bratogost**	**1.80**	**324**	*i*Pn	**Pn**	**16**	**05**	**38.2**	**+0.4**
BRY				*e*Sn	**Sb**	**16**	**06**	**02.9**	**+0.6**
UPM	**Unac-Piva**	**1.92**	**336**	*i*Pn	**Pn**	**16**	**05**	**40.6**	**+1.1**
UPM				*e*Sn	**Sb**	**16**	**06**	**05.7**	**-0.1**
UPM	**Unac-Piva**	**1.92**	**336**	*i*Pn	**Pn**	**16**	**05**	**40.6**	**+1.1**
UPM				*e*Sn	**Sb**	**16**	**06**	**05.7**	**-0.1**
PLE	**Pljevlja**	**1.92**	**347**	*i*Pn	**Pn**	**16**	**05**	**39.3**	**-0.2**
PLE				*e*Sn	**Sb**	**16**	**06**	**05.7**	**-0.1**
PLE	**Pljevlja**	**1.92**	**347**	*i*Pn	**Pn**	**16**	**05**	**39.3**	**-0.2**
PLE				*e*Sn	**Sb**	**16**	**06**	**05.7**	**-0.1**
BARS	**Barje**	**1.92**	**45**	*e*Pg	**Pb**	**16**	**05**	**42.8**	**+0.8**
BARS				*e*Sg	**Sg**	**16**	**06**	**08.8**	**-0.3**
BARS	**Barje**	**1.92**	**45**	*e*Pg	**Pb**	**16**	**05**	**42.8**	**+0.8**
BARS				*e*Sg	**Sg**	**16**	**06**	**08.8**	**-0.3**
SELS	**Selova**	**1.95**	**25**	*e*Pn	**Pb**	**16**	**05**	**42.4**	**-0.1**
IVAS	**Ivanjica**	**2.12**	**3**	*e*Pn	**Pb**	**16**	**05**	**44.8**	**-0.6**
IVAS				*e*Sn	**Sb**	**16**	**06**	**11.7**	**+0.3**
IVAS	**Ivanjica**	**2.12**	**3**	*e*Pn	**Pb**	**16**	**05**	**44.8**	**-0.6**
IVAS				*e*Sn	**Sb**	**16**	**06**	**11.7**	**+0.3**
STON	**Ston**	**2.21**	**310**	*e*Pn	**Pb**	**16**	**05**	**46.1**	**-0.8**
STON				Sn	**Sg**	**16**	**06**	**16.8**	**-1.5**
STON	**Ston**	**2.21**	**310**	*e*Pn	**Pb**	**16**	**05**	**46.0**	**-0.8**
STON				Sn	**Sg**	**16**	**06**	**16.8**	**-1.5**
BBLS	**Lazići**	**2.44**	**350**	*e*Pg	**Pb**	**16**	**05**	**52.1**	**+1.2**
BBLS				*e*Sn	**Sn**	**16**	**06**	**18.6**	**+2.5**
BBLS	**Lazići**	**2.44**	**350**	*e*Pg	**Pb**	**16**	**05**	**52.1**	**+1.2**
BBLS				*e*Sn	**Sn**	**16**	**06**	**18.6**	**+2.5**
NVLJ	**Novalja**	**4.87**	**311**	*e*Pn	**Pn**	**16**	**06**	**18.8**	**-1.0**
NVLJ				Sn	**Sn**	**16**	**07**	**14.7**	**-1.1**
NVLJ	**Novalja**	**4.87**	**311**	*e*Pn	**Pn**	**16**	**06**	**18.8**	**-1.0**
NVLJ				Sn	**Sn**	**16**	**07**	**14.6**	**-1.1**

*CSEM **26** 16:10:36.5, 42°.26N×13°.46E, h10km±1km, MD1.8/6, After ROM*

ROM 26 16:10:36.5±0.1, 42°.26N×13°.46E, h10km±1km, Md1.8/6, MI1.4/5, Error ellipse: s-maj=1.9km s-min=1.1km az=117.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
AQU	**L'Aquila**	**0.10**	**335**	Pg	Pg	16	10	39.9	+0.6
AQU				Sg	Sg	16	10	41.7	+0.3
	125nm,0.3s								
AQU	**L'Aquila**	**0.10**	**335**	Pg	Pg	16	10	39.9	+0.6
AQU				Sg	Sg	16	10	41.7	+0.3
	125nm,0.3s								
PTQR	**Pietraquaria**	**0.24**	**191**	Pg	Pg	16	10	42.1	+0.5
PTQR				Sg	Sg	16	10	46.3	+1.3
PTQR	**Pietraquaria**	**0.24**	**191**	Pg	Pg	16	10	42.1	+0.5
PTQR				Sg	Sg	16	10	46.3	+1.3
CAMP	**Campotosto**	**0.28**	**352**	Pg	Pb	16	10	43.3	-0.5
	8.0nm,1.1s								
CAMP	**Campotosto**	**0.28**	**352**	Pg	Pb	16	10	43.3	-0.5
	8.0nm,1.1s								
VCEL	**Villa Celiera**	**0.31**	**64**	Pg	Pb	16	10	43.8	-0.5
VCEL				Sg	Sg	16	10	48.2	+0.9
	45nm,0.3s								
VCEL	**Villa Celiera**	**0.31**	**64**	Pg	Pb	16	10	43.8	-0.5
VCEL				Sg	Sg	16	10	48.2	+0.9
	45nm,0.3s								
TERO	**Teramo**	**0.38**	**16**	Pg	Pg	16	10	44.5	+0.4
TERO				Sg	Sb	16	10	50.3	-1.1
	20nm,0.3s								
TERO	**Teramo**	**0.38**	**16**	Pg	Pg	16	10	44.5	+0.4
TERO				Sg	Sb	16	10	50.3	-1.1
	20nm,0.3s								
LPEL	**Lama dei Pelig**	**0.58**	**111**	Pg	Pg	16	10	47.8	0.0
LPEL				Sg	Sg	16	10	56.2	+0.7
	41nm,0.3s								
LPEL	**Lama dei Pelig**	**0.58**	**111**	Pg	Pg	16	10	47.8	0.0
LPEL				Sg	Sg	16	10	56.2	+0.7
	41nm,0.3s								

*CSEM **26** 16:11:13.5±0.1, 42°.37N×13°.42E, h10km, Error ellipse: s-maj=2.7km s-min=1.9km az=70.0*

ROM 26 16:11:13.2±0.1, 42°.36N×13°.43E, h7km, MI3.0/10, Error ellipse: s-maj=1.1km s-min=0.8km az=89.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
AQU	**L'Aquila**	**0.02**	**258**	Pg	Pg	16	11	15.0	+0.4
AQU				Sg	Sg	16	11	15.7	+0.1
AQU	**L'Aquila**	**0.02**	**258**	Pg	Pg	16	11	15.0	+0.4
AQU				Sg	Sg	16	11	15.7	+0.1
CAMP	**Campotosto**	**0.18**	**356**	Pg	Pg	16	11	17.8	+0.8
CAMP				Sg	Sg	16	11	20.9	+1.3
CAMP	**Campotosto**	**0.18**	**356**	Pg	Pg	16	11	17.8	+0.8
CAMP				Sg	Sg	16	11	20.9	+1.3
FIAM	**Fiamignano**	**0.25**	**249**	Pg	Pg	16	11	19.0	+0.8
FIAM				Sg	Sg	16	11	23.2	+1.5
FIAM	**Fiamignano**	**0.25**	**249**	Pg	Pg	16	11	19.0	+0.8
FIAM				Sg	Sg	16	11	23.2	+1.5
TERO	**Teramo**	**0.29**	**26**	Pg	Pg	16	11	19.6	+0.5
TERO				Sg	Sg	16	11	24.1	+1.0
TERO	**Teramo**	**0.29**	**26**	Pg	Pg	16	11	19.6	+0.5
TERO				Sg	Sg	16	11	24.1	+1.0
VCEL	**Villa Celiera**	**0.31**	**83**	Pg	Pg	16	11	20.2	+0.8
VCEL				Sg	Sg	16	11	24.6	+0.9
VCEL	**Villa Celiera**	**0.31**	**83**	Pg	Pg	16	11	20.2	+0.8
VCEL				Sg	Sg	16	11	24.6	+0.9
PTQR	**Pietraquaria**	**0.34**	**183**	Pg	Pg	16	11	20.6	+0.7
PTQR				Sg	Sb	16	11	26.1	-1.2
PTQR	**Pietraquaria**	**0.34**	**183**	Pg	Pg	16	11	20.6	+0.7
PTQR				Sg	Sb	16	11	26.1	-1.2
LNSS	**Leonessa**	**0.38**	**311**	Pg	Pg	16	11	21.2	+0.5
LNSS				Sg	Sb	16	11	27.8	-0.8
LNSS	**Leonessa**	**0.38**	**311**	Pg	Pg	16	11	21.2	+0.5
LNSS				Sg	Sb	16	11	27.8	-0.8
INTR	**Introdacqua**	**0.50**	**134**	Pg	Pg	16	11	23.5	+0.6
INTR				Sg	Sb	16	11	31.7	-0.2
INTR	**Introdacqua**	**0.50**	**134**	Pg	Pg	16	11	23.5	+0.6
INTR				Sg	Sb	16	11	31.7	-0.2
VVLD	**Villa Vallelon**	**0.51**	**163**	Pg	Pb	16	11	24.5	-0.1
VVLD	**Villa Vallelon**	**0.51**	**163**	Pg	Pb	16	11	24.5	-0.1
CERT	**Cerreto**	**0.53**	**219**	Pg	Pg	16	11	23.7	+0.2
CERT				Sg	Sb	16	11	31.8	-0.9
	3µm,1.0s								
CERT	**Cerreto**	**0.53**	**219**	Pg	Pg	16	11	23.7	+0.2
CERT				Sg	Sb	16	11	31.8	-0.9
	3µm,1.0s								
NRCA	**Norcia**	**0.53**	**334**	Pg	Pg	16	11	23.8	+0.2
NRCA				Sg	Sb	16	11	32.0	-0.9
	703nm,0.1s								
NRCA	**Norcia**	**0.53**	**334**	Pg	Pg	16	11	23.8	+0.2
NRCA				Sg	Sb	16	11	32.0	-0.9
	703nm,0.1s								
MNS	**Montasola**	**0.55**	**273**	Pg	Pg	16	11	24.4	+0.4
MNS	**Montasola**	**0.55**	**273**	Pg	Pg	16	11	24.4	+0.4
GUAR	**Guarcino**	**0.57**	**189**	Pg	Pg	16	11	24.5	+0.2
	470nm,0.6s								
GUAR	**Guarcino**	**0.57**	**189**	Pg

GCAM	**G?zelcaml?**	**1.11**	**27**	*i*	P	**Pn**	**16 18 35.7**	**-0.6**
GCAM				*i*	S	**Sg**	**16 18 52.9**	**+1.1**
KARP	**Karpathos**	**1.25**	**158**	*e*	PN	**Pn**	**16 18 37.6**	**-0.6**
KARP				*e*	SN	**Sn**	**16 18 54.7**	**+0.2**
KARP	**Karpathos**	**1.25**	**158**	*e*	Pn	**Pn**	**16 18 37.6**	**-0.6**
KARP				*e*	Sn	**Sn**	**16 18 54.7**	**+0.2**
ARG	**Arkhangelos**	**1.33**	**111**	*e*	PN	**Pn**	**16 18 39.0**	**-0.3**
ARG				*e*	SN	**Sn**	**16 18 56.5**	**0.0**
ARG	**Arkhangelos**	**1.33**	**111**	*e*	Pn	**Pn**	**16 18 39.0**	**-0.3**
ARG				*e*	Sn	**Sn**	**16 18 56.5**	**0.0**
AYDN	**Tasoluk**	**1.40**	**47**	*i*	P	**Pn**	**16 18 41.0**	**+0.7**
AYDN				*i*	S	**Sg**	**16 19 03.0**	**+2.1**
AYDN	**Tasoluk**	**1.40**	**47**	*i*	P	**Pn**	**16 18 41.0**	**+0.7**
YER	**Yerkesik**	**1.42**	**72**	*e*	PN	**Pn**	**16 18 41.1**	**+0.5**
YER	**Yerkesik**	**1.42**	**72**	*e*	Pn	**Pn**	**16 18 41.1**	**+0.5**
ZKR	**Zakros**	**1.62**	**191**		P	**Pn**	**16 18 42.5**	**-0.8**
ZKR	**Zakros**	**1.62**	**191**		P	**Pn**	**16 18 42.5**	**-0.8**
NPS	**Neapolis**	**1.65**	**209**		P	**Pn**	**16 18 43.9**	**+0.2**
NPS	**Neapolis**	**1.65**	**209**	*e*	PB	**Pn**	**16 18 43.9**	**+0.2**
NPS				*e*	SN	**Sn**	**16 19 04.6**	**+0.2**
NPS	**Neapolis**	**1.65**	**209**		P	**Pn**	**16 18 43.9**	**+0.2**
NPS				*e*	Sn	**Sn**	**16 19 04.6**	**+0.2**
URLA	**Izmir**	**1.65**	**0**	*i*	P	**Pn**	**16 18 43.2**	**-0.6**
URLA				*i*	S	**Sg**	**16 19 11.2**	**+2.3**
URLA	**Izmir**	**1.65**	**0**	*i*	P	**Pn**	**16 18 43.2**	**-0.6**
DALY	**Dalyan (Mu˙la**	**1.66**	**86**	*e*	PN	**Pn**	**16 18 44.9**	**+1.1**
DALY	**Dalyan (Mu˙la**	**1.66**	**86**	*e*	Pn	**Pn**	**16 18 44.9**	**+1.1**
BLCB	**Balcova**	**1.71**	**12**	*e*	PN	**Pn**	**16 18 45.6**	**+1.0**
BLCB	**Balcova**	**1.71**	**12**	*e*	Pn	**Pn**	**16 18 45.6**	**+1.0**
CHOS	**Chios island**	**1.73**	**346**		P	**Pn**	**16 18 43.7**	**-1.2**
CHOS					S	**Sn**	**16 19 04.6**	**-1.9**
CHOS	**Chios island**	**1.73**	**346**		P	**Pn**	**16 18 43.7**	**-1.2**
CHOS					S	**Sn**	**16 19 04.6**	**-1.9**
IZM	**Izmir**	**1.77**	**17**	*e*	PN	**Pb**	**16 18 47.2**	**-0.4**
IZM	**Izmir**	**1.77**	**17**	*e*	Pn	**Pb**	**16 18 47.2**	**-0.4**
LAST	**Lasithi**	**1.79**	**211**		P	**Pn**	**16 18 45.7**	**0.0**
LAST	**Lasithi**	**1.79**	**211**	*e*	PN	**Pn**	**16 18 45.9**	**+0.2**
LAST	**Lasithi**	**1.79**	**211**	*e*	Pn	**Pn**	**16 18 45.9**	**+0.2**
IDI	**Anoyia**	**1.98**	**225**		P	**Pn**	**16 18 48.5**	**+0.2**
IDI	**Anoyia**	**1.98**	**225**		P	**Pn**	**16 18 48.5**	**+0.2**
FETY	**Fethiye**	**2.00**	**91**	*e*	PN	**Pn**	**16 18 49.4**	**+0.8**
FETY	**Fethiye**	**2.00**	**91**	*e*	Pn	**Pn**	**16 18 49.4**	**+0.8**
KULA	**Kula-Manisa**	**2.44**	**42**	*e*	PN	**Pn**	**16 18 56.6**	**+2.0**
KULA	**Kula-Manisa**	**2.44**	**42**	*e*	Pn	**Pn**	**16 18 56.7**	**+2.0**
ELL	**Elmali**	**2.66**	**88**	*e*	PN	**Pn**	**16 18 58.6**	**+0.8**
ELL	**Elmali**	**2.66**	**88**	*e*	Pn	**Pn**	**16 18 58.6**	**+0.8**
BALY	**Balya**	**3.13**	**15**	*i*	P	**Pg**	**16 19 14.4**	**-1.3**
BALY				*i*	S	**Sg**	**16 19 56.8**	**+0.5**

IDC 26 16:36:11.2±4.9, 3˚72S×140˚45E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.2/15, mbtmp3.3/3, ML3.4/1, Error ellipse: s-maj=179.2km s-min=33.1km az=89.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.20**	**200**	Pn	Pn	16 40 11.2	-1.8
	0.1nm,0.3s,baz=20,slow=13,SNR=12						
WRA				Sn	Sn	16 43 09.4	-16
	0.1nm,0.3s,baz=25,slow=22,SNR=4.2			S			
ASAR	**Alice Springs**	**20.82**	**197**	P	P	16 40 55.3	+0.8
	0.6nm,0.7s,baz=29,slow=11,SNR=10.0						
ASAR				S	S	16 44 36.7	-11
	0.2nm,0.6s,baz=18,slow=27,SNR=3.3						
MKAR	**Makanchi Array**	**71.64**	**322**	P	P	16 47 34.8	0.0
	0.2nm,0.4s,baz=125,slow=7.2,SNR=4.1						

*ISCJB **26** 16:41:30.3±0.4, 6˚78N±0˚03×72˚88W±0˚03, h172km±3km, mb4.4/77, Error ellipse: s-maj=5.7km s-min=4.9km az=150.4*

*FUNV **26** 16:41:30.4, 6˚72N×73˚16W, h165km, MW4.2*

*BJI **26** 16:41:30.4, 6˚70N×73˚00W, h164km*

*IDC **26** 16:41:30.6±0.6, 6˚73N×72˚97W, h160km±6km, mb4.0/17, mb1 4.2/19, mb1mx4.1/25, mbtmp4.0/19, Error ellipse: s-maj=12.0km s-min=8.8km az=74.0*

*NEIC **26** 16:41:31.4±0.2, 6˚69N×72˚97W, mb4.6/64, Error ellipse: s-maj=5.5km s-min=4.1km az=62.0*

NEIC Felt at Bucaramanga and Piedecuesta.

ISC 26 16:41:30.6±0.4, 6˚74N±0˚04×72˚92W±0˚05, h163km±4km, n425, σ0˚96/468, mb4.5/77, 139C-133D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.27**	**28**	⇓*i* P	**Pn**	**16 42 00.3**	**+1.0**
CAPV				*e* S	**Sn**	**16 42 21.4**	**+0.1**
ROSC	**El Rosal**	**2.34**	**217**	*e* Pn	**Pn**	**16 42 12.0**	**+1.1**
ROSC				*e* Sn	**Sn**	**16 42 37.4**	**-4.7**
ROSC				S	**Sn**	**16 42 40.9**	**-1.2**
ROSC	**El Rosal**	**2.34**	**217**	P	**Pn**	**16 42 11.8**	**+0.8**
	377nm,0.3s,baz=356,slow=2.3,SNR=352						
ROSC				S	**Sn**	**16 42 40.9**	**-1.2**
	275nm,0.3s,baz=91,slow=18,SNR=7.9						
SOCV	**Socops**	**2.55**	**53**	⇑*i* P	**Pn**	**16 42 14.9**	**+1.8**
SOCV				*e* S	**Sn**	**16 42 47.2**	**+1.2**
VIGV	**El Vigia**	**2.59**	**36**	⇑*i* P	**Pn**	**16 42 14.7**	**+1.1**
VIGV				*e* S	**Sn**	**16 42 46.2**	**-0.6**
SDV	**Santo Domingo**	**3.11**	**47**	*e* Pn	**Pn**	**16 42 20.9**	**+0.9**
SDV				*e* Sn	**Sn**	**16 42 58.9**	**+0.4**
SANV	**Sanarito**	**4.33**	**50**	*e* P	**Pn**	**16 42 36.4**	**+0.8**
SANV				*e* S	**Sn**	**16 43 25.6**	**-0.8**
CURV	**Curarigua**	**4.37**	**42**	⇑*i* P	**Pn**	**16 42 36.9**	**+0.7**
CURV				*e* S	**Sn**	**16 43 25.4**	**-2.0**
DABV	**Dabajuro**	**4.73**	**28**	*e* P	**Pn**	**16 42 41.1**	**+0.4**
DABV				*e* S	**Sn**	**16 43 33.0**	**-2.5**
SIQV	**Siquisique**	**4.95**	**38**	⇑*i* P	**Pn**	**16 42 44.0**	**+0.2**
SIQV				*e* S	**Sn**	**16 43 38.2**	**-2.7**
BAUV	**El Baul**	**5.30**	**65**	⇑*i* P	**Pn**	**16 42 48.1**	**-0.1**
MAPV	**Macapo**	**5.38**	**55**	*e* P	**Pn**	**16 42 50.0**	**+0.7**
MAPV				*e* S	**Sn**	**16 43 49.0**	**-1.8**
PAVV	**Puerto Ayacuch**	**5.39**	**104**	⇑*i* P	**Pn**	**16 42 50.8**	**+1.3**
JACV	**Jacura**	**5.91**	**43**	*e* P	**Pn**	**16 42 57.2**	**+0.9**
JACV				*e* S	**Sn**	**16 44 00.6**	**-3.0**
IMOV	**Isla Los Monje**	**5.92**	**19**	*e* P	**Pn**	**16 42 55.5**	**-1.0**
MONV	**Montecano**	**5.94**	**29**	*e* P	**Pn**	**16 42 56.2**	**-0.5**
TURV	**Turiamo**	**6.23**	**53**	*e* P	**Pn**	**16 43 00.7**	**+0.2**
TURV				*e* S	**Sn**	**16 44 08.3**	**-2.7**
MERV	**Las Mercedes**	**7.01**	**69**	*e* P	**Pn**	**16 43 11.2**	**+0.2**
FUNV	**FUNVISIS**	**7.08**	**58**	*e* P	**Pn**	**16 43 12.1**	**+0.1**
FUNV				*e* S	**Sn**	**16 44 28.1**	**-3.6**
BCIP	**Isla Barro Col**	**7.26**	**290**	*e* Pn	Pn	16 43 10.0	-4.3
	92nm,0.8s						
BIRV	**Birongo**	**7.55**	**60**	⇑*i* P	**Pn**	**16 43 17.9**	**-0.1**
OTAV	**Otavalo**	**8.50**	**221**	*e* P	**Pn**	**16 43 29.3**	**-1.8**
	18nm,0.8s						
MTDJ	**Mount Denham**	**12.27**	**339**	*e* Pn	**Pn**	**16 44 20.9**	**+0.7**
	122nm,0.7s						
SDDR	**Presa de Saban**	**12.27**	**7**	*e* P	**P**	**16 44 23.2**	**-2.5**
	46nm,0.7s						
GRGR	**Grenville**	**12.33**	**63**	*e* P	**P**	**16 44 24.7**	**-1.7**
	240nm,1.0s						
JTS	**JuntasAbangare**	**12.41**	**287**	*e* P	**Pn**	**16 44 22.2**	**+0.2**
	39nm,0.8s						
CELP	**Cerrillos**	**12.85**	**28**	*e* Pn	**Pn**	**16 44 26.9**	**-0.6**
SJG	**San Juan**	**13.09**	**30**	P	**Pn**	**16 44 30.4**	**-0.2**
SJG	**San Juan**	**13.09**	**30**	P	**Pn**	**16 44 30.3**	**-0.2**
	5.2nm,0.3s,baz=31,slow=22,SNR=11						
RCC	**Rio Carpintero**	**13.45**	**349**	*e*	**P**	**16 44 37.2**	**-1.5**
SAML	**Samuel**	**18.36**	**148**	*e* P	**Pn**	**16 45 34.2**	**-0.8**
	44nm,0.3s						
TEIG	**Tepich**	**20.04**	**313**	*e* P	**P**	**16 45 51.5**	**+0.4**
	74nm,0.8s						
TEIG	**Tepich**	**20.04**	**313**	P	**P**	**16 45 51.2**	**+0.1**
	44nm,0.5s,baz=142,slow=7.4,SNR=30						
LPAZ	**La Paz**	**23.37**	**168**	*e* P	**P**	**16 46 25.8**	**+0.4**
	13nm,0.8s						
LPAZ				pP	**pP**	**16 46 59.1**	**+2.8**
LPAZ	**La Paz**	**23.37**	**168**	P	**P**	**16 46 26.1**	**+0.7**
	1.1nm,0.3s,baz=337,slow=7.7,SNR=14						
LPAZ				pP	**pP**	**16 46 59.1**	**+2.8**
	13nm,0.7s,baz=341,slow=14,SNR=16						
CMIG	**Matias Romero**	**23.80**	**298**	P	**P**	**16 46 25.1**	**-3.5**
CMIG	**Matias Romero**	**23.80**	**298**	P	**P**	**16 46 25.1**	**-3.5**
	1.4nm,0.5s,baz=70,slow=7.2,SNR=4.0						
SIV	**San Ignacio**	**25.45**	**153**	P	**P**	**16 46 42.4**	**-1.3**
SIV				pP	**pP**	**16 47 16.2**	**-1.1**
SIV	**San Ignacio**	**25.45**	**153**	P	**P**	**16 46 42.4**	**-1.3**
	2.5nm,0.9s,baz=326,slow=11,SNR=8.0						
SIV				pP	**pP**	**16 47 16.2**	**-1.1**
	5.4nm,0.6s,baz=338,slow=10,SNR=9.0						
TIGA	**Tifton**	**26.52**	**339**	⇑P	**P**	**16 46 54.9**	**+1.8**
	baz=27						
JSC	**Jenkinsville**	**28.47**	**345**	P	**P**	**16 47 11.0**	**+0.6**
LRAL	**Lakeview Retre**	**29.25**	**335**	*e* P	**P**	**16 47 18.5**	**+1.2**
	13nm,0.9s						
TKL	**Tuckaleechee C**	**30.46**	**342**	*e* P	**P**	**16 47 28.9**	**+0.9**
CPCT	**Cooper Cave**	**30.50**	**341**	*e* P	**P**	**16 47 29.8**	**+1.4**
SWET	**Sewanee**	**30.77**	**339**	*e* P	**P**	**16 47 31.6**	**+0.8**
	7.6nm,0.8s						
WVT	**Waverly**	**32.28**	**337**	*e* P	**P**	**16 47 44.1**	**+0.1**
	30nm,0.8s						
BDFB	**Brasilia**	**33.21**	**132**	P	**P**	**16 47 54.3**	**+1.9**
BDFB	**Brasilia**	**33.21**	**132**	P	**P**	**16 47 54.3**	**+1.9**
	8.7nm,0.6s,baz=314,slow=8.0,SNR=13						
WCI	**Wyandotte Cave**	**33.61**	**341**	*e* P	**P**	**16 47 56.1**	**+0.5**
	18nm,0.6s						
USIN	**University of**	**33.84**	**339**	*e* P	**P**	**16 47 58.3**	**+0.8**
	52nm,0.9s						
WHTX	**Lake Whitney**	**33.98**	**321**	⇑P	**P**	**16 47 59.1**	**+0.3**
	baz=34						
SIUC	**Southern Illin**	**34.21**	**337**	*e* P	**P**	**16 48 01.1**	**+0.5**
	38nm,0.6s						
532A	**Rocksprings**	**34.41**	**316**	⇓P	**P**	**16 48 02.6**	**0.0**
	baz=34,SNR=13						
631A	**Perdido Creek**	**34.46**	**314**	⇓P	**P**	**16 48 02.2**	**-0.8**
	baz=34,SNR=6.0						
BLO	**Bloomington**	**34.54**	**341**	*e* P	**P**	**16 48 04.5**	**+1.0**
	32nm,0.6s						
ACSO	**Alum Creek Sta**	**34.55**	**346**	*e* P	**P**	**16 48 05.1**	**+1.6**
	7.9nm,0.6s						
OLIL	**Olney**	**34.68**	**339**	*e* P	**P**	**16 48 05.2**	**+0.5**
	24nm,0.7s						
432A	**Menard**	**34.79**	**317**	⇑P	**P**	**16 48 05.6**	**-0.3**
	baz=35						
531A	**Rocksprings**	**34.88**	**315**	⇑P	**P**	**16 48 06.3**	**-0.3**
	baz=35,SNR=6.3						
FVM	**French Village**	**34.92**	**335**	*e* P	**P**	**16 48 07.0**	**+0.2**
	58nm,1.0s						
332A	**Millersview**	**35.07**	**318**	⇑P	**P**	**16 48 07.9**	**-0.3**
	baz=35,SNR=7.9						
431A	**Sonora**	**35.23**	**316**	⇓P	**P**	**16 48 09.4**	**-0.2**
	baz=35,SNR=5.2						
232A	**Coleman**	**35.33**	**319**	⇑P	**P**	**16 48 10.3**	**-0.1**
	baz=35						
BINY	**Binghamton**	**35.42**	**356**	*e* P	**P**	**16 48 12.6**	**+1.6**
	6.1nm,0.6s						
530A	**J-C Ranch, Com**	**35.43**	**315**	⇑P	**P**	**16 48 10.9**	**-0.4**
	baz=36,SNR=14						
331A	**San Angelo**	**35.48**	**317**	⇓P	**P**	**16 48 11.5**	**-0.3**
	baz=36,SNR=8.0						
430A	**Baggett Ranch,**	**35.73**	**316**	⇓P	**P**	**16 48 13.2**	**-0.7**
	baz=36						
ABTX	**Abilene, Hawle**	**35.79**	**320**	⇓P	**P**	**16 48 14.3**	**0.0**
	baz=36						
231A	**Bronte**	**35.80**	**318**	⇓P	**P**	**16 48 13.8**	**-0.7**
	baz=36,SNR=6.0						
TUL1	**Tulsa**	**35.81**	**327**	⇓P	**P**	**16 48 13.7**	**-0.7**
	baz=36,SNR=6.1						
SFIN	**Scholer Farm**	**35.82**	**341**	⇑P	**P**	**16 48 15.2**	**+0.8**
	baz=36,SNR=18						
529A	**Stev Forest Ra**	**36.04**	**314**	⇓P	**P**	**16 48 16.0**	**-0.5**
	baz=36						
330A	**Mertzon**	**36.05**	**317**	⇑P	**P**	**16 48 16.4**	**-0.2**
	baz=36						
429A	**Davenport Ranc**	**36.09**	**315**	⇑P	**P**	**16 48 16.4**	**-0.6**
	baz=36,SNR=5.5						
Z32A	**Haskell**	**36.13**	**321**	⇓P	**P**	**16 48 17.6**	**+0.4**
	baz=36,SNR=13						
628A	**Black Gap, Mar**	**36.17**	**312**	⇑P	**P**	**16 48 17.5**	**-0.2**
	baz=36,SNR=6.3						
CPUP	**Villa Florida**	**36.19**	**156**	P	**P**	**16 48 15.2**	**-2.5**
CPUP				pP	**pP**	**16 48 52.6**	**0.0**
CPUP	**Villa Florida**	**36.19**	**156**	P	**P**	**16 48 15.2**	**-2.5**
	0.3nm,0.4s,baz=92,slow=20,SNR=3.6						
CPUP				pP	**pP**	**16 48 52.6**	**0.0**
	0.5nm,0.5s,baz=91,slow=20,SNR=2.3						
230A	**Sterling City**	**36.30**	**317**	⇓P	**P**	**16 48 18.4**	**-0.3**
	baz=36,SNR=5.2						
131A	**Roby**	**36.31**	**319**	⇓P	**P**	**16 48 18.5**	**-0.2**
	baz=36						
528A	**Cox Ranch, San**	**36.47**	**313**	⇑P	**P**	**16 48 20.0**	**-0.2**
	baz=36,SNR=12						
627A	**Telingua Ranc**	**36.52**	**312**	⇓P	**P**	**16 48 20.9**	**+0.1**
	baz=37,SNR=20						
130A	**Snyder**	**36.64**	**318**	⇓P	**P**	**16 48 21.5**	**0.0**
	baz=37,SNR=6.9						
329A	**Wagon Wheel Ra**	**36.65**	**316**	⇑P	**P**	**16 48 21.7**	**-0.1**
	baz=37,SNR=14						
WMOK	**Wichita Mounta**	**36.66**	**323**	*e* P	**P**	**16 48 20.6**	**-1.2**
	8.3nm,0.6s						
TXAR	**Lajitas Array**	**36.67**	**312**	P	**P**	**16 48 21.6**	**-0.3**
TXAR				PcP	**PcP**	**16 50 42.4**	**+1.1**
TXAR	**Lajitas Array**	**36.67**	**312**	P	**P**	**16 48 21.6**	**-0.3**
	5.6nm,0.6s,baz=126,slow=9.4,SNR=85						
TXAR				PcP	**PcP**	**16 50 42.4**	**+1.1**
	1.4nm,0.7s,baz=134,slow=6.5,SNR=6.4						
428A	**Kincaid Ranch,**	**36.71**	**314**	⇑P	**P**	**16 48 22.5**	**+0.3**
	baz=37,SNR=12						
229A	**Bryant Ranch,**	**36.82**	**317**	⇓P	**P**	**16 48 23.5**	**+0.4**
	baz=37,SNR=12						
Y31A	**Rekieta Farm,**	**37.05**	**321**	⇑P	**P**	**16 48 25.9**	**+0.9**
	baz=37,SNR=11						
527A	**Woodward Ranch**	**37.06**	**313**	⇑P	**P**	**16 48 25.7**	**+0.4**
	baz=37,SNR=19						
NCB	**Newcomb**	**37.10**	**358**	*e* P	**P**	**16 48 26.0**	**+0.8**
	3.6nm,0.5s						
626A	**Big Bend Ranch**	**37.13**	**312**	⇑P	**P**	**16 48 25.5**	**-0.3**
	baz=37,SNR=8.7						
129A	**Stewart Farms,**	**37.26**	**318**	⇑P	**P**	**16 48 26.9**	**+0.1**
	baz=37,SNR=8.3						
427A	**Hayter Ranch,**	**37.29**	**314**	⇑P	**P**	**16 48 26.8**	**-0.3**
	baz=37,SNR=22						
526A	**Mary Lane Ranc**	**37.36**	**312**	⇑P	**P**	**16 48 27.7**	**-0.1**
	baz=37						
Z29A	**Hungry Hill Ra**	**37.54**	**319**	⇓P	**P**	**16 48 28.9**	**-0.3**
	baz=38,SNR=22						
426A	**McDonald Obser**	**37.64**	**313**	⇑P	**P**	**16 48 30.4**	**+0.1**
	baz=38,SNR=25						
128A	**Castleberry Fa**	**37.67**	**317**	⇓P	**P**	**16 48 30.5**	**+0.1**
	baz=38,SNR=33						
X30A	**Coker Ranch, T**	**37.75**	**321**	⇓P	**P**	**16 48 31.5**	**+0.6**
	baz=38,SNR=6.0						
Y29A	**Porterfield Fa**	**37.89**	**319**	⇑P	**P**	**16 48 32.6**	**+0.4**
	baz=38,SNR=21						
Z28A	**Tucker Farm, M**	**38.01**	**318**	⇓P	**P**	**16 48 32.9**	**-0.3**
	baz=38,SNR=7.7						
X29A	**Tulia**	**38.28**	**320**	⇑P	**P**	**16 48 35.6**	**+0.3**
	baz=38,SNR=13						
Y28A	**McKinney Farm,**	**38.29**	**319**	⇓P	**P**	**16 48 35.2**	**-0.3**
	baz=38,SNR=6.2						
425A	**Indio Mountain**	**38.40**	**313**	⇑P	**P**	**16 48 36.3**	**-0.2**
	baz=38,SNR=19						
226B	**Tecolote Peak,**	**38.51**	**315**	⇓P	**P**	**16 48 37.5**	**+0.1**
	baz=39,SNR=8.4						
AMTX	**Amarillo**	**38.54**	**321**	*e* P	**P**	**16 48 37.6**	**0.0**
	10nm,0.6s						
AMTX	**Amarillo**	**38.54**	**321**	⇑P	**P**	**16 48 37.9**	**+0.3**
	baz=39,SNR=7.9						
Z27A	**Tatum**	**38.57**	**317**	⇓P	**P**	**16 48 37.4**	**-0.5**
	baz=39,SNR=52						
X28A	**Dimmitt**	**38.64**	**320**	⇑P	**P**	**16 48 38.3**	**-0.1**
	baz=39,SNR=7.4						
KSU1	**Kansas State U**	**38.66**	**330**	*e* P	**P**	**16 48 37.4**	**-0.9**
	30nm,0.7s						
MSTX	**Muleshoe**	**38.67**	**319**	⇑P	**P**	**16 48 38.5**	**-0.3**
	baz=39,SNR=13						
325A	**Bean Ranch, Si**	**38.70**	**313**	⇑P	**P**	**16 48 39.2**	**+0.2**
	baz=39,SNR=8.2						
GDL2	**Guadalupe Moun**	**38.72**	**315**	*e* P	**P**	**16 48 39.8**	**+0.6**
	5.5nm,0.6s						
Y27A	**Causey**	**38.88**	**318**	⇑P	**P**	**16 48 40.0**	**-0.5**
	baz=39,SNR=16						
RCBR	**Riachuelo**	**38.99**	**108**	P	**P**	**16 48 42.9**	**+1.4**
RCBR	**Riachuelo**	**38.99**	**108**	P	**P**	**16 48 42.9**	**+1.4**
	4.8nm,1.1s,baz=271,slow=9.1,SNR=6.1						
Z26A	**Caprock**	**39.07**	**317**	⇑P	**P**	**16 48 41.9**	**-0.1**
	baz=39,SNR=33						
V29A	**Stinnett**	**39.08**	**322**	⇓P	**P**	**16 48 42.9**	**+0.9**
	baz=39,SNR=11						
324A	**Moseley Ranch,**	**39.11**	**313**	⇑P	**P**	**16 48 42.2**	**-0.2**
	baz=39,SNR=16						
125A	**Gardner Draw,**	**39.18**	**315**	⇑P	**P**	**16 48 43.3**	**+0.3**
	baz=39,SNR=19						
Y26A	**Elida**	**39.34**	**318**	⇑P	**P**	**16 48 44.1**	**-0.2**
	baz=39,SNR=18						
224A	**Cornudas Mount**	**39.48**	**314**	⇑P	**P**	**16 48 46.2**	**+0.8**
	baz=40,SNR=33						
W27A	**Bowe Ranch, En**	**39.54**	**320**	⇑P	**P**	**16 48 45.7**	**-0.1**
	baz=40,SNR=17						
Z25A	**Roswell**	**39.58**	**316**	⇓P	**P**	**16 48 46.5**	**+0.2**
	baz=40,SNR=24						
S30A	**Montezuma**	**39.65**	**325**	⇓P	**P**	**16 48 46.8**	**0.0**
	baz=40						
X26A	**CR and CF Fran**	**39.71**	**318**	⇑P	**P**	**16 48 47.6**	**+0.2**
	baz=40,SNR=9.0						
124A	**Stringfield Ra**	**39.77**	**315**	⇓P	**P**	**16 48 48.8**	**+0.9**
	baz=40						
U28A	**Mallet**	**39.84**	**322**	⇑P	**P**	**16 48 48.4**	**0.0**
	baz=40						
R30A	**Dighton**	**39.99**	**326**	⇑P	**P**	**16 48 49.7**	**+0.2**
	baz=40						
W26A	**Owens Ranch, T**	**40.01**	**319**	⇓P	**P**	**16 48 50.1**	**+0.4**
	baz=40,SNR=5.1						
S29A	**Ulysses**	**40.01**	**324**	⇑P	**P**	**16 48 50.2**	**+0.5**
	baz=40						
Z24A	**Sheeppen Canyo**	**40.05**	**316**	⇑P	**P**	**16 48 50.9**	**+0.7**
	baz=40,SNR=7.2						
U27A	**Thompson Grove**	**40.24**	**321**	⇑P	**P**	**16 48 52.1**	**+0.5**
	baz=40,SNR=7.2						
X25A	**Clemmons Ranch**	**40.26**	**318**	⇑P	**P**	**16 48 52.6**	**+0.7**
	baz=40,SNR=18						
Y24A	**Capitan**	**40.44**	**316**	⇓P	**P**	**16 48 53.7**	**+0.3**
	baz=40,SNR=26						
S28A	**Manter**	**40.45**	**324**	⇓P	**P**	**16 48 53.6**	**+0.3**
	baz=40,SNR=17						
W25A	**X Bar L Ranch,**	**40.54**	**319**	⇑P	**P**	**16 48 54.6**	**+0.4**
	baz=41,SNR=15						
T27A	**Campo**	**40.59**	**322**	⇑P	**P**	**16 48 54.5**	**0.0**
	baz=41,SNR=10						
Z23A	**Rita Site, Whi**	**40.62**	**315**	⇓P	**P**	**16 48 55.5**	**+0.7**
	baz=41,SNR=7.6						
222A	**Williams Famil**	**40.63**	**313**	⇓P	**P**	**16 48 55.5**	**+0.6**
	baz=41,SNR=11						
X24A	**Lazy VL Ranch,**	**40.80**	**317**	⇓P	**P**	**16 48 57.6**	**+1.2**
	baz=41,SNR=7.9						
122A	**Conniff Cattle**	**40.86**	**314**	⇓P	**P**	**16 48 58.1**	**+1.3**
	baz=41						
Y23A	**Lovelace Mesa,**	**40.87**	**316**	⇑P	**P**	**16 48 58.1**	**+1.2**
	baz=41,SNR=10						
R28A	**Tribune**	**40.90**	**325**	⇑P	**P**	**16 48 57.2**	**+0.2**
	baz=41						
V25A	**Rancho No Teng**	**41.01**	**319**	⇓P	**P**	**16 48 59.2**	**+1.1**
	baz=41						
221A	**Mesquite Ranch**	**41.08**	**312**	⇓P	**P**	**16 49 00.2**	**+1.6**
	baz=41,SNR=6.5						
Z22A	**Elephant Butte**	**41.13**	**315**	⇓P	**P**	**16 48 59.9**	**+0.9**
	baz=41						
W24A	**Lazy 6 Ranch,**	**41.16**	**318**	⇓P	**P**	**16 48 59.5**	**+0.2**
	baz=41						
BGNE	**Belgrade**	**41.18**	**331**	⇑P	**P**	**16 48 58.7**	**-0.4**
	baz=41,SNR=5.6						
T26A	**Comanche Natio**	**41.20**	**322**	⇓P	**P**	**16 49 00.6**	**+1.0**
	baz=41,SNR=9.7						
U25A	**Circle Dot Ran**	**41.22**	**320**	⇑P	**P**	**16 49 00.2**	**+0.4**
	baz=41,SNR=9.0						
320A	**Kipp Ranch, An**	**41.30**	**311**	⇑P	**P**	**16 49 01.5**	**+1.0**
	baz=41,SNR=7.6						
121A	**Cookes Peak, D**	**41.34**	**313**	⇑P	**P**	**16 49 01.9**	**+1.1**
	baz=41,SNR=9.5						
V24A	**Rampart Ranch,**	**41.37**	**319**	⇑P	**P**	**16 49 02.1**	**+1.0**
	baz=41,SNR=9.8						
S26A	**Kim**	**41.41**	**322**	⇑P	**P**	**16 49 02.0**	**+0.8**
	baz=42,SNR=10.0						
R27A	**Eads**	**41.44**	**324**	⇓P	**P**	**16 49 01.4**	**-0.1**
	baz=42,SNR=17						
Y22A	**

N23A	Red Feather La	44.98	324	⇑P		P	16 49 30.7	+0.7
	baz=45,SNR=15							
P21A	Newcastle	45.03	322	⇓P		P	16 49 31.7	+1.3
	baz=45,SNR=14							
Q20A	Ridgley Place,	45.22	321	⇓P		P	16 49 32.9	+1.1
	baz=45,SNR=19							
PV04	Paradox Valley	45.28	319	*e*P		P	16 49 33.1	+0.8
WUAZ	Wupatki	45.42	315	*e*P		P	16 49 34.2	+0.8
	27nm,0.9s							
WUAZ	Wupatki	45.42	315	⇓P		P	16 49 34.2	+0.8
	baz=46,SNR=20							
O21A	Pagoda	45.46	322	⇓P		P	16 49 35.2	+1.4
	baz=46,SNR=7.9							
Z14A	Wintersburg	45.55	311	⇓P		P	16 49 34.9	+0.6
	baz=46,SNR=6.6							
S18A	Hurst Farm, Bl	45.60	318	⇑P		P	16 49 35.4	+0.4
	baz=46,SNR=9.2							
L23A	Garrett	45.64	326	⇑P		P	16 49 35.4	+0.3
	baz=46,SNR=8.8							
N21A	Black Mountain	45.83	323	⇑P		P	16 49 37.8	+1.2
	baz=46,SNR=5.5							
Y14A	Wickenburg	45.85	312	⇓P		P	16 49 37.3	+0.6
	baz=46,SNR=14							
O20A	White River Ci	45.88	322	⇓P		P	16 49 37.9	+0.8
	baz=46							
113A	Mohawk Valley,	45.91	310	⇑P		P	16 49 37.7	+0.6
	baz=46							
P19A	Cripple Cowboy	46.05	321	⇑P		P	16 49 38.9	+0.6
	baz=46,SNR=6.2							
I24A	Kuemmerle Ranc	46.23	328	⇓P		P	16 49 40.1	+0.5
	baz=46							
M21A	Separation Pea	46.26	324	⇑P		P	16 49 40.1	+0.1
	baz=46							
N20A	Spence Gulch,	46.32	323	⇓P		P	16 49 41.9	+1.5
	baz=46,SNR=9.5							
J23A	Dilts Ranch, B	46.42	327	⇑P		P	16 49 42.0	+0.9
	baz=46							
L21A	Rawlins	46.49	324	⇓P		P	16 49 41.8	+0.1
	baz=47							
U15A	North Rim	46.52	315	⇓P		P	16 49 43.0	+0.9
	baz=47,SNR=17							
O19A	Miners Draw (B	46.52	321	⇑P		P	16 49 42.2	+0.2
	baz=47,SNR=11							
M20A	Sweetwater, Wa	46.67	323	⇓P		P	16 49 43.5	+0.3
	baz=47,SNR=6.3							
SRU	San Rafael	46.73	319	*e*P		P	16 49 43.8	+0.1
	16nm,1.0s							
SRU	San Rafael	46.73	319	⇓P		P	16 49 44.1	+0.4
	baz=47,SNR=12							
GLA	Glamis	46.84	310	⇑P		P	16 49 45.0	+0.6
	baz=47,SNR=6.3							
P18A	Preston Nutter	46.84	320	⇑P		P	16 49 45.3	+0.6
	baz=47,SNR=9.7							
K21A	Alcova	46.85	325	⇑P		P	16 49 44.9	+0.4
	baz=47,SNR=18							
MDND	Maddock	46.85	336	⇓P		P	16 49 44.1	-0.1
	baz=47,SNR=6.9							
J22A	Midwest	46.92	327	⇑P		P	16 49 45.0	0.0
	baz=47,SNR=19							
Q16A	Castle Valley	47.05	319	⇑P		P	16 49 46.4	+0.3
	baz=47,SNR=5.9							
P17A	Butcher Ranch,	47.07	320	⇓P		P	16 49 47.0	+0.8
	baz=47,SNR=6.8							
I22A	9 Mile Ranch,	47.24	327	⇓P		P	16 49 47.7	+0.3
	baz=47,SNR=7.2							
PLCA	Paso Flores	47.29	178	P		P	16 49 47.4	-0.3
PLCA	Paso Flores	47.29	178	P		P	16 49 47.4	-0.3
	1.5nm,0.9s,baz=353,slow=9.2,SNR=3.4							
ULM	Lac du Bonnet	47.43	340	P		P	16 49 48.0	-0.6
ULM	Lac du Bonnet	47.43	340	P		P	16 49 48.0	-0.6
	20nm,0.6s,baz=143,slow=8.6,SNR=23							
K20A	Yellowstone Ra	47.49	325	⇓P		P	16 49 50.0	+0.5
	baz=48,SNR=11							
MSU	Marysvale	47.50	318	*e*P		P	16 49 50.6	+0.9
	16nm,0.9s							
MVU	Marysvale	47.52	318	*e*P		P	16 49 50.8	+0.9
	18nm,0.9s							
IRM	Iron Mountain	47.55	311	⇓P		P	16 49 50.4	+0.5
	baz=48,SNR=5.0							
I21A	Big Trails, Te	47.63	326	⇑P		P	16 49 50.3	-0.2
	baz=48,SNR=18							
L19A	Farson	47.74	323	⇓P		P	16 49 51.6	+0.2
	baz=48,SNR=14							
M18A	Lyman	47.77	322	⇑P		P	16 49 51.5	-0.1
	baz=48,SNR=5.5							
CCUT	Cedar City	47.82	316	*e*P		P	16 49 52.4	+0.3
	3.5nm,1.0s							
DAU	Daniels Canyon	47.92	320	*e*P		P	16 49 53.7	+0.7
	15nm,0.9s							
F23A	Volborg	47.92	330	⇓P		P	16 49 52.2	-0.4
	baz=48,SNR=7.7							
MPU	Maple Canyon	47.95	320	*e*P		P	16 49 53.1	+0.1
	17nm,1.0s							
E24A	Baker	47.98	331	⇑P		P	16 49 53.5	+0.5
	baz=48							
G22A	Birney	48.03	328	⇑P		P	16 49 53.7	+0.3
	baz=48,SNR=8.3							
L18A	Fontenelle, Gr	48.04	323	⇑P		P	16 49 54.6	+0.8
	baz=48,SNR=18							
BELC	Belle Mtn. Jos	48.12	310	⇓P		P	16 49 54.5	+0.1
	baz=48							
JLU	Jordanelle	48.15	320	*e*P		P	16 49 55.2	+0.5
	5.8nm,0.9s							
M17A	Scullys Gap (B	48.16	322	⇓P		P	16 49 55.0	+0.4
	baz=48,SNR=6.8							
SCHQ	Schefferville	48.20	5	P		P	16 49 55.2	+0.8
SCHQ	Schefferville	48.20	5	P		P	16 49 55.2	+0.8
	9.0nm,0.9s,baz=198,slow=10.0,SNR=12							
BW06	Boulder Array	48.26	324	⇑P		P	16 49 55.0	-0.4
	baz=48,SNR=15							
PDAR	Pinedale Array	48.26	324	P		P	16 49 55.1	-0.3
PDAR	Pinedale Array	48.26	324	P		P	16 49 55.1	-0.3
	5.6nm,0.7s,baz=126,slow=9.1,SNR=46							
J19A	Crowheart	48.27	325	⇓P		P	16 49 55.6	+0.1
	baz=48							
D24A	Glendive	48.39	332	⇑P		P	16 49 56.5	+0.4
	baz=48,SNR=12							
F22A	Rosebud	48.40	329	⇑P		P	16 49 55.9	-0.3
	baz=48							
H20A	Greybull	48.46	327	⇓P		P	16 49 56.5	-0.3
	baz=49,SNR=13							
G21A	Lodge Grass	48.52	328	⇓P		P	16 49 57.0	-0.2
	baz=49,SNR=6.4							
L17A	Cokeville	48.65	322	⇑P		P	16 49 58.6	+0.2
	baz=49,SNR=8.9							
TUQ	Turquoise Moun	48.67	312	⇓P		P	16 49 58.9	+0.4
	baz=49							
E22A	Miles City	48.70	330	⇑P		P	16 49 58.0	-0.5
	baz=49							
HEC	Hector,Ludlow	48.72	311	⇓P		P	16 49 59.9	+1.1
	baz=49							
I19A	Meeteetse	48.72	326	⇓P		P	16 49 59.4	+0.5
	baz=49,SNR=9.7							
C24A	Savage	48.73	332	⇓P		P	16 49 59.4	+0.7
	baz=49							
HWUT	Hardware Ranch	48.79	321	*e*P		P	16 49 59.4	-0.1
	7.0nm,0.6s							
J18A	Kendall Valley	48.80	324	⇓P		P	16 49 59.8	+0.2
	baz=49,SNR=20							
DUG	Dugway	48.80	319	*e*P		P	16 50 00.1	+0.6
	5.8nm,0.6s							
DUG	Dugway	48.80	319	⇑P		P	16 49 59.6	0.0
	baz=49,SNR=9.7							
D23A	Lindsay	48.85	331	⇓P		P	16 49 59.9	+0.3
	baz=49,SNR=6.8							
L16A	Fish Haven	48.94	322	⇓P		P	16 50 00.4	-0.2
	baz=49,SNR=20							
I18A	Diamond G Ranc	48.98	325	⇑P		P	16 50 01.0	0.0
	baz=49,SNR=8.3							
G20A	Bridger	49.05	327	⇑P		P	16 50 01.0	-0.3
	baz=49,SNR=26							
K17A	Gardner Place,	49.06	323	⇓P		P	16 50 01.7	+0.2
	baz=49							
C23A	Lambert	49.29	332	⇓P		P	16 50 03.6	+0.6
	baz=49,SNR=11							
J17A	Brown Place, J	49.30	324	⇑P		P	16 50 03.8	+0.6
	baz=49							
D22A	Cohagen	49.30	330	⇓P		P	16 50 03.9	+0.8
	baz=49,SNR=32							
DGMT	Dagmar	49.31	333	*e*P		P	16 50 03.9	+0.8
	57nm,0.6s							
DGMT	Dagmar	49.31	333	⇓P		P	16 50 03.9	+0.8
	baz=49,SNR=14							
SNOW	Snow King Moun	49.38	324	*e*P		P	16 50 04.3	+0.4
	12nm,0.8s							
LOHW	Long Hollow	49.38	324	*e*P		P	16 50 04.1	+0.1
	8.2nm,0.6s							
TPAW	Teton Pass	49.51	324	*e*P		P	16 50 05.3	+0.3
	13nm,0.8s							
L15A	Malad City	49.52	321	⇓P		P	16 50 04.9	0.0
	baz=50,SNR=12							
MOOW	Moose Ponds	49.54	324	*e*P		P	16 50 05.1	-0.1
	7.0nm,0.8s							
I17A	Pilgrim Ck.	49.55	325	⇓P		P	16 50 06.0	+0.8
	baz=50							
RLMT	Red Lodge	49.56	327	*e*P		P	16 50 05.2	0.0
	3.7nm,0.4s							
RLMT	Red Lodge	49.56	327	⇑P		P	16 50 05.4	+0.1
	baz=50							
A24A	Westby	49.56	333	⇑P		P	16 50 06.2	+1.2
	baz=50,SNR=16							
C22A	Vida	49.58	331	⇑P		P	16 50 05.6	+0.5
	baz=50,SNR=11							
RRI2	Red Ridge	49.64	324	*e*P		P	16 50 06.0	0.0
	14nm,0.8s							
D21A	La Casta Ranch	49.65	330	⇑P		P	16 50 06.7	+1.0
	baz=50,SNR=8.7							
R11A	Troy Canyon, C	49.74	316	⇓P		P	16 50 07.2	+0.5
	baz=50,SNR=11							
IMW	Indian Meadow	49.75	324	*e*P		P	16 50 06.2	-0.6
	6.3nm,0.5s							
J16A	Bone	49.77	323	⇓P		P	16 50 07.1	+0.2
	baz=50,SNR=15							
LKWY	Lake	49.84	325	*e*P		P	16 50 04.0	-3.4
	3.1nm,0.8s							
G18A	Lazy EL Ranch,	49.84	327	⇓P		P	16 50 06.9	-0.5
	baz=50,SNR=7.5							
E20A	Meyer Farm, Mu	49.85	329	⇑P		P	16 50 07.8	+0.6
	baz=50,SNR=26							
F19A	Roth Farm, Mol	49.85	327	⇓P		P	16 50 07.6	+0.3
	baz=50							
B22A	Reddig Ranch S	50.02	332	⇑P		P	16 50 09.5	+1.0
	baz=50							
MPMC	Manual Prospec	50.09	312	⇓P		P	16 50 08.7	-0.7
	baz=50							
GCMT	Greycliff	50.20	327	*e*P		P	16 50 10.4	+0.4
	10nm,0.9s							
C21A	Desert Coulee	50.22	330	⇑P		P	16 50 10.6	+0.6
	baz=50,SNR=6.8							
D20A	Manuel Ranch,	50.24	329	⇓P		P	16 50 10.9	+0.7
	baz=50,SNR=17							
F18A	Big Timber	50.30	327	⇓P		P	16 50 11.1	+0.4
	baz=50,SNR=18							
J15A	Blackfoot	50.34	323	⇑P		P	16 50 11.2	+0.2
	baz=50,SNR=7.0							
H16A	Russell Place,	50.41	325	⇑P		P	16 50 12.5	+0.9
	baz=50,SNR=10							
A22A	Carney Farms,	50.48	332	⇓P		P	16 50 13.1	+1.2
	baz=51,SNR=16							
QLMT	Earthquake Lak	50.59	325	*e*P		P	16 50 14.4	+1.4
	0.8nm,0.6s							
C20A	Veseth Ranch,	50.59	330	⇓P		P	16 50 13.5	+0.8
	baz=51,SNR=9.6							
B21A	Ellsworth Farm	50.60	331	⇓P		P	16 50 14.1	+1.4
	baz=51							
D19A	Cripps Ranch,	50.67	329	⇓P		P	16 50 14.3	+0.9
	baz=51,SNR=21							
F17A	Fitzpatrick Pl	50.81	327	⇓P		P	16 50 15.6	+1.0
	baz=51,SNR=7.8							
E18A	Harlowton	50.83	328	⇓P		P	16 50 15.4	+0.8
	baz=51,SNR=11							
J14A	Carey	50.95	322	⇓P		P	16 50 16.2	+0.5
	baz=51,SNR=20							
A21A	Bergtoll Ranch	50.95	332	⇑P		P	16 50 16.8	+1.4
	baz=51							
B20A	Solberg Farm,	51.09	331	⇓P		P	16 50 17.3	+0.8
	baz=51,SNR=10							
C19A	Slack Wire Ran	51.13	329	⇓P		P	16 50 17.0	+0.2
	baz=51,SNR=13							
H15A	Lima	51.16	324	⇓P		P	16 50 18.7	+1.4
	baz=51,SNR=7.5							
BOZ	Bozeman (W)	51.19	326	⇓P		P	16 50 17.7	+0.3
	baz=51							
I14A	Mackay	51.24	323	⇑P		P	16 50 18.7	+0.8
	baz=51,SNR=5.4							
E17A	Martinsdale	51.27	327	⇑P		P	16 50 18.5	+0.5
	baz=51							
J13A	Cove Ranch, Pi	51.39	322	⇓P		P	16 50 19.4	+0.5
	baz=52,SNR=9.3							
G15A	Dillon	51.39	325	⇑P		P	16 50 19.3	+0.4
	baz=52							
MCMT	McKenzie Canyo	51.40	324	*e*P		P	16 50 20.1	+1.0
	4.1nm,0.6s							
NV11	Mina Array Sit	51.58	315	*e*P		P	16 50 20.7	+0.3
D17A	Six Diamond Ra	51.61	328	⇓P		P	16 50 20.5	0.0
	baz=52,SNR=10							
HLID	Hailey	51.62	322	*e*P		P	16 50 20.8	+0.1
	6.3nm,0.8s							
HLID	Hailey	51.62	322	⇑P		P	16 50 21.0	+0.3
	baz=52,SNR=14							
I13A	Wildhorse Cree	51.64	323	⇑P		P	16 50 20.5	-0.4
	baz=52,SNR=17							
NVAR	Mina Array Bea	51.68	315	P		P	16 50 21.8	+0.5
NVAR				PcP		PcP	16 51 33.2	+0.6
NVAR	Mina Array Bea	51.68	315	P		P	16 50 21.8	+0.5
	4.2nm,0.7s,baz=118,slow=7.3,SNR=26							
NVAR				PcP		PcP	16 51 33.2	+0.6
	0.8nm,0.5s,baz=149,slow=3.8,SNR=4.2							
E16A	East Helena	51.76	327	⇓P		P	16 50 21.9	+0.3
	baz=52							
LRM	Limekiln Ridge	51.76	325	*e*P		P	16 50 22.1	+0.3
	84nm,1.0s							
F15A	Butte	51.79	325	⇑P		P	16 50 21.7	-0.3
	baz=52,SNR=7.8							
B18A	Beardsley Farm	51.94	329	⇓P		P	16 50 23.4	+0.6
	baz=52,SNR=22							
C17A	Wharram Farm,	51.95	328	⇑P		P	16 50 23.3	+0.3
	baz=52,SNR=9.7							
D16A	Dana Ranch, Ca	51.99	327	⇓P		P	16 50 23.9	+0.6
	baz=52,SNR=7.1							
H13A	Challis	52.08	323	⇓P		P	16 50 24.4	+0.4
	baz=52,SNR=5.8							
I12A	Atlanta	52.19	322	⇓P		P	16 50 25.1	+0.3
	baz=52,SNR=17							
E15A	Deer Lodge	52.22	326	⇓P		P	16 50 25.4	+0.4
	baz=52,SNR=9.8							
G13A	Cobalt	52.36	324	⇑P		P	16 50 26.4	+0.3
	baz=52,SNR=12							
MFID	Camas Ranch	52.42	321	*e*P		P	16 50 26.9	+0.4
	11nm,0.7s							
MFID	Camas Ranch	52.42	321	⇓P		P	16 50 27.2	+0.7
	baz=52,SNR=12							
H12A	Diamond D Ranc	52.43	323	⇑P		P	16 50 27.0	+0.4
	baz=52,SNR=17							
D15A	Lincoln	52.52	327	⇓P		P	16 50 27.9	+0.6
	baz=53,SNR=8.1							
E14A	Clinton	52.69	326	⇓P		P	16 50 28.6	+0.1
	baz=53,SNR=7.4							
F13A	Darby	52.81	324	⇓P		P	16 50 29.5	+0.1
	baz=53,SNR=14							
B16A	M & M Farms, S	52.94	328	⇓P		P	16 50 30.4	+0.2
	baz=53							
C15A	Salmond Ranch,	53.02	327	⇓P		P	16 50 31.2	+0.4
	baz=53							
G12A	Big Creek, Yel	53.02	323	⇓P		P	16 50 31.5	+0.5
	baz=53							
D14A	Greenough	53.09	326	⇓P		P	16 50 31.3	-0.1
	baz=53,SNR=5.9							
SLMT	Seeley Lake	53.18	326	*e*P		P	16 50 32.4	+0.3
	4.7nm,0.6s							
MSO	Missoula	53.18	326	*e*P		P	16 50 32.1	0.0
	3.7nm,1.0s							
MSO	Missoula	53.18	326	⇓P		P	16 50 32.4	+0.4
	baz=53							
A16A	West Butte Ran	53.22	329	⇑P		P	16 50 33.7	+1.4
	baz=53							
FFC	Flin Flon	53.23	339	*e*P		P	16 50 31.7	-0.4
	5.5nm,1.0s							
B15A	Bradely Ranch,	53.32	328	⇑P		P	16 50 33.9	+0.9
	baz=53							
F12A	Elk City	53.33	324	⇑P		P	16 50 33.1	0.0
	baz=53,SNR=10							
D13A	Huson	53.63	326	⇑P		P	16 50 35.3	+0.1
	baz=54,SNR=9.5							
C14A	Swan Lake	53.63	327	⇑P		P	16 50 36.2	+1.0
	baz=54							
WVOR	Wild Horse Val	53.72	319	*e*P		P	16 50 36.2	+0.2
	11nm,0.9s							
A15A	Johnson Ranch,	53.82	328	⇑P		P	16 50 36.7	+0.1
	baz=54,SNR=10							
C13A	Hot Springs	54.03	326	⇓P		P	16 50 38.8	+0.6
	baz=54,SNR=6.4							
BSMT	Bassoo Peak	54.24	326	*e*P		P	16 50 40.6	+0.8
	12nm,1.2s							
C12B	Naegeli Ranch,	54.54	326	⇑P		P	16 50 42.8	+1.0
	baz=55,SNR=8.6							
A13A	Flathead Natio	54.67	328	⇑P		P	16 50 43.6	+0.8
	baz=55							
C11A	Tepee Creek (N	55.05	326	⇑P		P	16 50 45.7	+0.2
	baz=55,SNR=12							
A12A	Yaak River Ran	55.34	327	⇑P		P	16 50 48.5	+1.0
	baz=55,SNR=5.3							
HUMO	Hull Mountain	56.66	317	*e*P		P	16 50 55.8	-1.2
	1.2nm,0.5s							
TRW	Toppenish Ridg	56.76	322	P		P	16 50 58.5	+0.9
VFP	Flag Point	56.87	321	P		P	16 50 59.7	+1.1
EBG	Ellensburg	57.07	323	P		P	16 51 00.8	+0.9
KEBM	Edson Butte	57.70	317	*e*P		P	16 51 05.6	+1.3
OSD	Olympics--Snow	59.38	323	P		P	16 51 17.2	+1.2
YKA	Yellowknife Ar	63.41	340	P		P	16 51 42.2	-0.3
YKA				pP		pP	16 52 21.4	+0.4
YKA	Yellowknife Ar	63.41	340	P		P	16 51 42.2	-0.3
	13nm,0.6s,baz=133,slow=6.6,SNR=322							
YKA				pP		pP	16 52 21.4	+0.4
	1.3nm,0.5s,baz=134,slow=6.6,SNR=2.3							
YKW3	Yellowknife Ar	63.46	340	*e*P		P	16 51 42.2	-0.6
	0.3nm,0.7s							
SUMG	Summit	69.03	11	*e*P		P	16 52 19.5	+0.8
	6.3nm,0.6s							
TORD	Torodi Ar. Bea	73.56	78	P		P	16 52 45.8	-0.6
TORD	Torodi Ar. Bea	73.56	78	P		P	16 52 45.8	-0.6
	0.5nm,0.3s,baz=271,slow=5.4,SNR=14							
BMRM	Bremner River	75.28	331	*e*P		P	16 52 56.8	+1.2
	13nm,1.1s							
DOT	Dot Lake	75.66	334	*e*P		P	16 52 58.7	+1.1
	6.8nm,0.6s							
ILAR	Eielson Array	77.12	335	P		P	16 53 05.8	+0.1
ILAR				PP		PP	16 56 00.1	-1.4
ILAR	Eielson Array	77.12	335	P		P	16 53 05.8	+0.1
	1.8nm,0.7s,baz=108,slow=4.6,SNR=25							
ILAR				PP		PP	16 56 00.1	-1.4
	0.8nm,1.0s,baz=102,slow=5.9,SNR=5.7							
NB2	NORSAR Subarra	81.30	29	P		P	16 53 29.6	+1.0
	comp=Z,1.0nm,0.5s,baz=266,slow=5.3							
NOA	NORSAR Array B	81.30	29	P		P	16 53 29.9	+1.3
NOA	NORSAR Array B	81.30	29	P		P	16 53 29.9	+1.3
	comp=Z,1.2nm,0.6s,baz=267,slow=5.4,SNR=7.2							
ARCES	ARCESS Array B	86.67	20	P		P	16 53 55.9	+0.3
ARCES	ARCESS Array B	86.67	20	P		P	16 53 55.9	+0.3
	comp=Z,3.0nm,0.8s,baz=270,slow=3.6,SNR=16							
FINES	FINESS Array B	88.41	28	P		P	16 54 04.6	+0.7
FINES	FINESS Array B	88.41	28	P		P	16 54 04.6	+0.7
	comp=Z,0.4nm,0.3s,baz=336,slow=38,SNR=4.8							
VNA2	Neumayer--Watz	88.56	163	*e*P		P	16 54 04.7	+0.3
SNAA	Sanae	90.20	163	*e*P		P	16 54 12.2	0.0
ZALV	Zalesovo Beam	116.69	15	PKP		PKPdf	16 59 55.6	+0.2
ZALV	Zalesovo Beam	116.69	15	PKP		PKPdf	16 59 55.6	+0.2
	comp=Z,1.1nm,0.3s,baz=301,slow=2.0,SNR=10							
MKAR	Makanchi Array	122.33	20	PKP		PKPdf	17 00 06.6	0.0
MKAR	Makanchi Array	122.33	20	PKP		PKPdf	17 00 06.6	0.0
	comp=Z,0.4nm,0.3s,baz=315,slow=2.5,SNR=22							
SONM	Songino Array	125.66	1	PKP		PKPdf	17 00 14.1	+1.0
SONM	Songino Array	125.66	1	PKP		PKPdf	17 00 14.1	+1.0
	comp=Z,0.9nm,0.4s,baz=331,slow=1.0,SNR=16							
KSH	Kashi	125.72	29	*e*PKP		PKPdf	17 00 12.8	-0.6
KSH				*es*PKP			17 01 12.5	
KSH				*e*PP		PP	17 02 10.8	+4.2
KSH				PKS		PKSdf	17 03 49.3	-0.9
KSH				SKS		SKSdf	17 07 07.5	-2.8
KSH				SKKS		SKKSac	17 08 46.3	-3.3
KSH				SS		SS	17 18 54.3	+0.9
KSH				LR		LR		
	comp=N,80nm,4.0s							
KSH				LR		LR		
	comp=E,120nm,5.7s							
KSH				LR		LR		
	comp=Z,170nm,4.8s							
WMQ	Urumqi	126.70	17	PKP		PKPdf	17 00 15.5	+0.4
CN2	Changchun	127.02	343	*e*PKP		PKPdf	17 00 15.5	-0.1
HHC	Hu-ho-hao-te	132.47	355	*e*PKP		PKPdf	17 00 24.5	-1.7
HHC				PP		PP	17 02 53.0	+3.1
HHC				SS		SS	17 20 15.0	-0.3
GTA	Gaotai	133.59	8	*e*PKP		PKPdf	17 00 29.8	+1.4
GTA				sPKP			17 01 29.0	
LZH	Lanzhou	137.29	4	*e*PKP		PKPdf	17 00 35.3	-0.1
LZH				sPKP			17 01 34.0	
KMI	Kunming	148.05	7	PKPbc		PKPdf	17 00 52.0	-2.7
AS31	Alice Springs	149.23	234	*e*PKPdf		PKPdf	17 00 57.6	+1.2
ASAR	Alice Springs	149.23	234	PKP		PKPdf	17 00 56.6	+0.2
ASAR				PKPbc		PKPbc	17 01 00.7	-0.1
ASAR				pPKPbc		pPKPbc	17 01 42.6	-1.0
ASAR	Alice Springs	149.23	234	PKP		PKPdf	17 00 56.6	+0.2
	comp=Z,1.8nm,0.8s,baz=118,slow=3.0,SNR=28							
ASAR				PKPbc		PKPbc	17 01 00.7	-0.1
	comp=Z,1.7nm,0.7s,baz=118,slow=3.5,SNR=27							
ASAR				pPKPbc		pPKPbc	17 01 42.6	-1.0
	comp=Z,1.2nm,0.5s,baz=117,slow=3.6,SNR=3.3							
WRA	Warramunga Arr	150.48	241	PKP		PKPdf	17 00 58.9	+0.4
WRA				PKPbc		PKPbc	17 01 03.7	-0.2
WRA				pPKP		pPKPdf	17 01 41.2	-0.4
WRA	Warramunga Arr	150.48	241	PKP		PKPdf	17 00 58.9	+0.4
	comp=Z,1.7nm,0.4s,baz=107,slow=2.6,SNR=27							
WRA				PKPbc		PKPbc	17 01 03.7	-0.2
	comp=Z,1.7nm,0.4s,baz=105,slow=2.7,SNR=30							
WRA				pP

DNZL				*i* S		Sg	17 46 26.8	+0.4
BCK	**Bucak**	**1.47**	**38**	*e*PN		**Pb**	**17 46 07.1**	**-0.7**
BCK	**Bucak**	**1.47**	**38**	*e*Pn		**Pb**	**17 46 07.1**	**-0.7**
DAT	**Datca**	**1.58**	**286**	*e*PN		**Pb**	**17 46 09.2**	**-0.6**
DAT	**Datca**	**1.58**	**286**	*e*Pn		**Pb**	**17 46 09.2**	**-0.6**
MLSB	**Milas**	**1.68**	**307**	*e*PN		**Pn**	**17 46 09.8**	**-0.1**
MLSB	**Milas**	**1.68**	**307**	*e*Pn		**Pn**	**17 46 09.8**	**-0.1**
ISP	**Isparta**	**1.74**	**29**	*e*PN		**Pn**	**17 46 11.1**	**+0.4**
ISP	**Isparta**	**1.74**	**29**	*e*Pn		**Pn**	**17 46 11.1**	**+0.4**
BODT	**Bodrum**	**1.89**	**294**	*e*PN		**Pn**	**17 46 12.6**	**-0.1**
BODT	**Bodrum**	**1.89**	**294**	*e*Pn		**Pn**	**17 46 12.6**	**-0.1**
KHL	**Karahalli**	**2.02**	**1**	*e*PN		**Pn**	**17 46 14.8**	**+0.3**
KHL	**Karahalli**	**2.02**	**1**	*e*Pn		**Pn**	**17 46 14.8**	**+0.3**
KONT	**Konya--Tatoy**	**2.83**	**54**	*e*PN		**Pn**	**17 46 26.7**	**+1.0**
KONT	**Konya--Tatoy**	**2.83**	**54**	*e*Pn		**Pn**	**17 46 26.7**	**+1.0**

*ISCJB **26** 17:50:46.2±0.4, 12°.34S±0°.09×65°.29E±0°.08, h10km, mb4.2/24, MS4.0/16, Error ellipse: s-maj=14.1km s-min=9.3km az=140.8*

*IDC **26** 17:50:46.5±0.7, 12°.40S×65°.25E, h0km, mb4.0/17, mb1 4.1/18, mb1mx4.0/29, mbtmp4.0/18, ML3.8/1, MS3.9/17, Ms1 3.9/17, ms1mx3.6/54, Error ellipse: s-maj=22.2km s-min=16.6km az=8.0*

*NEIC **26** 17:50:48.3±0.3, 12°.36S×65°.26E, h10km, mb4.7/7, Error ellipse: s-maj=12.0km s-min=8.4km az=141.0*

ISC 26 17:50:48.2±0.5, 12°.4S±0°.1×65°.25E±0°.09, h10km, n105, σ0s87/91, mb4.3/24, MS3.8/16, 9C-16D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**18.45**	**248**	P	**P**	**17 55 03.9**	**-0.5**
OPO	**Ambohidratompo**	**18.45**	**248**	P	**P**	**17 55 03.9**	**-0.5**
	0.3nm,0.3s,baz=67,slow=12,SNR=2.9						
OPO				LR	LR	18 00 22.9	
	comp=Z,597nm,19.9s,baz=77,slow=31						
ABPO	**Ambohimpanom**	**18.55**	**247**	*e*P	**Pn**	**17 55 06.0**	**+0.3**
TRD	**Trivandrum**	**23.80**	**30**	*e*P	P	17 56 26.4	+25
KMBO	**Kilima Mbogo**	**29.93**	**290**	LR	LR	18 07 01.2	
	comp=Z,172nm,18.7s,baz=95,slow=33						
LSZ	**Lusaka**	**36.07**	**261**	*e*P	**P**	**17 57 50.6**	**0.0**
	18nm,1.4s						
LBTB	**Lobatse**	**39.45**	**246**	P	**P**	**17 58 19.3**	**+0.2**
LBTB	**Lobatse**	**39.45**	**246**	P	**P**	**17 58 19.3**	**+0.2**
	5.3nm,1.0s,baz=76,slow=12,SNR=3.5						
BOSA	**Boshof**	**40.57**	**240**	LR	LR	18 13 16.6	
	comp=Z,242nm,18.6s,baz=159,slow=33						
CMAR	**Chiang Mai Arr**	**45.21**	**48**	P	**P**	**17 59 06.9**	**+1.0**
CMAR	**Chiang Mai Arr**	**45.21**	**48**	P	**P**	**17 59 06.9**	**+1.0**
	0.6nm,0.6s,baz=240,slow=8.2,SNR=6.3						
CMAR				LR	LR	18 17 18.4	
	comp=Z,61nm,18.7s,baz=125,slow=35						
SHL	**Shillong**	**45.79**	**34**	*ex*	x	17 59 18.0	
LSA	**Lhasa**	**48.73**	**30**	P	**P**	**17 59 31.9**	**-1.9**
	8.0nm,1.1s						
EIL	**Elat**	**51.01**	**326**	LR	LR	18 18 36.1	
	comp=Z,42nm,18.5s,baz=86,slow=33						
ASF	**Jabal al Asfar**	**51.96**	**329**	LR		18 20 03.0	
	comp=Z,34nm,19.2s,baz=229,slow=34						
MMAI	**Mount Meron Ar**	**53.39**	**329**	LR	LR	18 22 31.1	
	comp=Z,42nm,18.3s,baz=135,slow=36						
KAPI	**Kappang**	**54.29**	**87**	P	**P**	**18 00 13.2**	**-2.0**
KAPI	**Kappang**	**54.29**	**87**	P	**P**	**18 00 13.2**	**-2.0**
	2.5nm,0.7s,baz=264,slow=13,SNR=5.8						
EKS2	**Erkin-Say**	**55.34**	**8**	P	**P**	**18 00 21.1**	**-1.3**
	9.9nm,1.4s						
AAK	**Ala-Archa**	**55.40**	**8**	P	**P**	**18 00 22.0**	**-0.9**
AAK	**Ala-Archa**	**55.40**	**8**	P	**P**	**18 00 22.0**	**-0.9**
	0.8nm,0.8s,baz=180,slow=6.1,SNR=3.0						
GNI	**Garni**	**55.63**	**341**	P	**P**	**18 00 24.9**	**+0.3**
GNI	**Garni**	**55.63**	**341**	P	**P**	**18 00 24.9**	**+0.3**
	0.9nm,0.3s,baz=4.9,slow=12,SNR=2.6						
GNI				LR	LR	18 22 20.9	
	comp=Z,54nm,21.1s,baz=206,slow=34						
KBZ	**Khabaz**	**59.45**	**341**	LR	LR	18 27 05.1	
	comp=Z,68nm,18.4s,baz=286,slow=37						
BRTR	**Keskin Array B**	**59.60**	**332**	P	**P**	**18 00 53.2**	**+0.7**
BRTR	**Keskin Array B**	**59.60**	**332**	P	**P**	**18 00 53.2**	**+0.7**
	0.1nm,0.7s,baz=155,slow=7.9,SNR=4.3						
MK31	**Makanchi Array**	**60.86**	**13**	*e*P	**P**	**18 01 00.3**	**-0.6**
MKAR	**Makanchi Array**	**60.86**	**13**	P	**P**	**18 01 00.2**	**-0.7**
MKAR	**Makanchi Array**	**60.86**	**13**	P	**P**	**18 01 00.2**	**-0.7**
	0.3nm,0.4s,baz=200,slow=7.6,SNR=4.6						
ABKAR	**Akbulak array**	**61.55**	**356**	*e*P	**P**	**18 01 05.7**	**+0.2**
	3.0nm,0.8s						
KURBB	**Kurchatov Arra**	**63.81**	**9**	LR	LR	18 27 16.5	
	comp=Z,72nm,21.5s,baz=135,slow=34						
KURK	**Kurchatov**	**63.91**	**9**	P	**P**	**18 01 21.6**	**+0.5**
	3.0nm,1.0s						
BVAR	**Borovoye Array**	**65.30**	**3**	LR	LR	18 28 20.8	
	comp=Z,66nm,21.1s,baz=11,slow=34						
ASAR	**Alice Springs**	**65.72**	**110**	P	**P**	**18 01 33.4**	**-0.4**
ASAR	**Alice Springs**	**65.72**	**110**	P	**P**	**18 01 33.4**	**-0.4**
	1.7nm,0.9s,baz=275,slow=6.2,SNR=11						
ASAR				LR	LR	18 24 44.7	
	comp=Z,425nm,20.0s,baz=127,slow=31						
WRA	**Warramunga Arr**	**66.40**	**106**	P	**P**	**18 01 37.9**	**-0.2**
WRA	**Warramunga Arr**	**66.40**	**106**	P	**P**	**18 01 37.9**	**-0.2**
	2.2nm,0.8s,baz=273,slow=5.7,SNR=11						
TORD	**Torodi Ar. Bea**	**67.93**	**290**	P	**P**	**18 01 46.6**	**-1.2**
TORD	**Torodi Ar. Bea**	**67.93**	**290**	P	**P**	**18 01 46.6**	**-1.2**
	3.0nm,1.2s,baz=103,slow=4.6,SNR=7.9						
TORD				LR	LR	18 29 30.8	
	comp=Z,63nm,18.0s,baz=115,slow=34						
ZAA0	**Zalesovo Array**	**68.15**	**12**	*e*P	**P**	**18 01 47.5**	**-0.9**
ZALV	**Zalesovo Beam**	**68.15**	**12**	P	**P**	**18 01 47.3**	**-1.1**
ZALV	**Zalesovo Beam**	**68.15**	**12**	P	**P**	**18 01 47.3**	**-1.1**
	1.5nm,0.8s,baz=219,slow=7.2,SNR=12						
SONM	**Songino Array**	**70.23**	**28**	P	**P**	**18 02 01.9**	**+0.2**
SONM	**Songino Array**	**70.23**	**28**	P	**P**	**18 02 01.9**	**+0.2**
	1.7nm,0.9s,baz=212,slow=7.2,SNR=13						
AKASG	**Malin Array Be**	**70.25**	**337**	P	**P**	**18 02 00.8**	**-0.6**
AKASG	**Malin Array Be**	**70.25**	**337**	P	**P**	**18 02 00.8**	**-0.6**
	0.2nm,0.3s,baz=142,slow=4.7,SNR=7.3						
SNAA	**Sanae**	**71.48**	**198**	*e*P	**P**	**18 02 08.9**	**+0.1**
STKA	**Stephens Creek**	**72.05**	**120**	LR	LR	18 29 04.3	
	comp=Z,420nm,18.2s,baz=14,slow=32						
JNU	**Nakatsue**	**77.15**	**52**	LR	LR	18 34 27.7	
	comp=Z,434nm,19.3s,baz=255,slow=34						
QSPA	**South Pole Qui**	**77.68**	**180**	*e*P	**P**	**18 02 44.8**	**-0.2**
	8.2nm,1.1s						
VNDA	**Vanda**	**79.42**	**167**	LR	LR	18 33 30.2	
	comp=Z,167nm,19.0s,baz=278,slow=32						
MDT	**Midelt**	**80.31**	**307**	LR	LR	18 38 04.7	
	comp=Z,80nm,20.0s,baz=335,slow=35						
ESDC	**Sonseca Array**	**82.41**	**313**	P	**P**	**18 03 10.3**	**-0.6**
ESDC	**Sonseca Array**	**82.41**	**313**	P	**P**	**18 03 10.3**	**-0.6**
	0.1nm,0.3s,baz=90,slow=3.8,SNR=4.5						
HFS	**Hagfors**	**83.14**	**337**	P	**P**	**18 03 13.8**	**-0.4**
HFS	**Hagfors**	**83.14**	**337**	P	**P**	**18 03 13.8**	**-0.4**
	3.1nm,1.0s,baz=116,slow=3.4,SNR=3.1						
MJAR	**Matsushiro Arr**	**84.02**	**51**	P	**P**	**18 03 21.3**	**+2.0**
MJAR	**Matsushiro Arr**	**84.02**	**51**	P	**P**	**18 03 21.3**	**+2.0**
	3.5nm,1.1s,baz=211,slow=2.2,SNR=4.6						
ARCES	**ARCESS Array B**	**86.29**	**347**	P	**P**	**18 03 30.8**	**+0.9**
ARCES	**ARCESS Array B**	**86.29**	**347**	P	**P**	**18 03 30.8**	**+0.9**
	1.1nm,0.5s,baz=120,slow=5.3,SNR=7.3						
TIXI	**Tiksi**	**93.71**	**17**	*e*P	**P**	**18 04 04.3**	**-0.4**
	11nm,1.4s						
ILAR	**Eielson Array**	**123.17**	**16**	PKP	**PKPdf**	**18 09 47.8**	**+2.9**
ILAR	**Eielson Array**	**123.17**	**16**	PKP	**PKPdf**	**18 09 47.8**	**+2.9**
	0.5nm,0.8s,baz=293,slow=3.1,SNR=5.3						
YKA	**Yellowknife Ar**	**129.97**	**360**	PKP	**PKPdf**	**18 09 58.0**	**+0.1**
YKA	**Yellowknife Ar**	**129.97**	**360**	PKP	**PKPdf**	**18 09 58.0**	**+0.1**
	0.2nm,0.5s,baz=350,slow=2.6,SNR=6.0						
D23A	**Lindsay**	**144.41**	**349**	⇓P	**PKPdf**	**18 10 25.0**	**-0.1**
	baz=144						
D22A	**Cohagen**	**144.61**	**350**	⇓P	**PKPdf**	**18 10 25.7**	**+0.3**
	baz=144,SNR=5.3						
C11A	**Tepee Creek (N**	**144.64**	**2**	⇓P	**PKPdf**	**18 10 25.7**	**+0.3**
	baz=144						
BSMT	**Bassoo Peak**	**144.65**	**0**	*e*PKP	PKPbc	18 10 24.9	+0.6
D20A	**Manuel Ranch,**	**144.96**	**352**	⇓P	**PKPdf**	**18 10 26.3**	**+0.3**
	baz=145						
SWMT	**Swartz Lake**	**144.99**	**359**	*e*PKP	PKPbc	18 10 25.8	+0.4
ECSD	**EROS Data Cent**	**145.07**	**337**	*e*PKP	**PKPbc**	**18 10 25.4**	**-0.2**
D17A	**Six Diamond Ra**	**145.18**	**355**	⇑P	**PKPdf**	**18 10 26.8**	**+0.3**
	baz=145,SNR=9.4						
SLMT	**Seeley Lake**	**145.24**	**358**	*e*PKPdf	**PKPbc**	**18 10 25.4**	**-0.8**
D16A	**Dana Ranch, Ca**	**145.36**	**356**	⇑P	**PKPdf**	**18 10 27.0**	**+0.2**
	baz=145						
D14A	**Greenough**	**145.40**	**359**	⇓P	**PKPbc**	**18 10 26.6**	**-0.1**
	baz=145,SNR=9.3						
D13A	**Huson**	**145.41**	**360**	⇓P	**PKPab**	**18 10 27.6**	**+0.8**
	baz=145,SNR=5.1						
D15A	**Lincoln**	**145.41**	**357**	⇑P	**PKPab**	**18 10 27.9**	**+0.9**
	baz=145						
D12A	**Red Ives Fores**	**145.44**	**1**	⇓P	**PKPab**	**18 10 27.1**	**+0.1**
	baz=145						
E20A	**Meyer Farm, Mu**	**145.54**	**352**	⇓P	**PKPab**	**18 10 28.3**	**+1.0**
	baz=145						
CHMT	**Chamberlain Mo**	**145.56**	**358**	*e*PKP	**PKPab**	**18 10 27.7**	**+0.1**
MSO	**Missoula**	**145.66**	**359**	*e*PKP	**PKPdf**	**18 10 27.3**	**0.0**
MSO	**Missoula**	**145.66**	**359**	⇓P	**PKPab**	**18 10 27.9**	**+0.1**
	baz=146						
E19A	**Rath Farm, Rou**	**145.67**	**353**	⇓P	**PKPab**	**18 10 28.2**	**+0.4**
	baz=146,SNR=6.9						
E18A	**Harlowton**	**145.69**	**354**	⇑P	**PKPab**	**18 10 28.5**	**+0.6**
	baz=146,SNR=9.9						
E16A	**East Helena**	**145.87**	**356**	⇓P	**PKPab**	**18 10 29.1**	**+0.5**
	baz=146						
E17A	**Martinsdale**	**145.88**	**355**	⇓P	**PKPab**	**18 10 29.3**	**+0.6**
	baz=146						
E15A	**Deer Lodge**	**146.03**	**357**	⇑P	**PKPab**	**18 10 29.5**	**+0.3**
	baz=146,SNR=5.3						
E13A	**Victor**	**146.06**	**359**	⇑P	**PKPab**	**18 10 29.2**	**-0.1**
	baz=146,SNR=6.4						
E14A	**Clinton**	**146.07**	**358**	⇓P	**PKPab**	**18 10 29.8**	**+0.4**
	baz=146,SNR=6.0						
F19A	**Roth Farm, Mol**	**146.28**	**353**	⇑P	**PKPab**	**18 10 30.3**	**+0.1**
	baz=146,SNR=8.9						
F18A	**Big Timber**	**146.32**	**354**	⇓P	**PKPab**	**18 10 30.6**	**+0.2**
	baz=146,SNR=6.0						
GCMT	**Greycliff**	**146.43**	**354**	*e*PKPbc	**PKPab**	**18 10 31.2**	**+0.4**
H24A	**Dirks Ranch, A**	**146.59**	**347**	⇓P	**PKPbc**	**18 10 30.8**	**+0.4**
	baz=146						
F15A	**Butte**	**146.60**	**357**	⇓P	**PKPab**	**18 10 31.1**	**-0.4**
	baz=146						
F13A	**Darby**	**146.71**	**359**	⇑P	**PKPab**	**18 10 31.4**	**-0.4**
	baz=147,SNR=21						
RSSD	**Black Hills**	**147.06**	**346**	*e*PKPbc	**PKPbc**	**18 10 32.5**	**+0.6**
BMO	**Blue Mountains**	**147.57**	**3**	*e*PKPbc	**PKPbc**	**18 10 33.1**	**-0.1**
PDAR	**Pinedale Array**	**149.40**	**352**	PKP	**PKPdf**	**18 10 34.1**	**+0.4**
PDAR				PKPbc	**PKPbc**	**18 10 38.2**	**0.0**
PDAR	**Pinedale Array**	**149.40**	**352**	PKP	**PKPdf**	**18 10 34.1**	**+0.4**
	1.5nm,0.9s,baz=29,slow=2.1,SNR=5.2						
PDAR				PKPbc	**PKPbc**	**18 10 38.2**	**0.0**
	1.6nm,0.9s,baz=10,slow=1.0,SNR=11						
HWUT	**Hardware Ranch**	**150.76**	**355**	*e*PKPbc	**PKPbc**	**18 10 42.4**	**+0.9**
NVAR	**Mina Array Bea**	**153.87**	**6**	PKPbc	**PKPbc**	**18 10 49.9**	**+1.3**
NVAR	**Mina Array Bea**	**153.87**	**6**	PKPbc	**PKPbc**	**18 10 49.9**	**+1.3**
	1.5nm,0.9s,baz=349,slow=0.9,SNR=9.0						
TXAR	**Lajitas Array**	**160.24**	**330**	PKPab	**PKPab**	**18 11 28.6**	**-0.4**
TXAR	**Lajitas Array**	**160.24**	**330**	PKPab	**PKPab**	**18 11 28.6**	**-0.4**
	1.3nm,1.1s,baz=54,slow=2.3,SNR=5.1						

*KRSC **26** 17:51:40.6±2.0, 52°.79N×170°.23E, h5km±5km, ML4.2*

MOS 26 17:51:40.6±1.2, 52°.79N×170°.23E, h5km, mb4.3/1, Error ellipse: s-maj=46.0km s-min=15.5km az=37.7, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**3.49**	**316**	P	Pn	17 52 36.2	+0.8
BKI				S	Sn	17 53 16.9	-0.1
BKI	**Bering**	**3.49**	**316**	P	Pn	17 52 36.2	+0.8
BKI				S	Sn	17 53 16.9	-0.1
MKZ	**Mys Kozlova**	**5.35**	**293**	P	Pn	17 53 04.2	+3.2
MKZ				S	Sn	17 54 04.1	+1.1
MKZ	**Mys Kozlova**	**5.35**	**293**	*e*P	Pn	17 53 04.2	+3.2
MKZ				*e*S	Sn	17 54 04.1	+1.1
SPN	**Mys Shipunski**	**6.18**	**277**	P	Pn	17 53 16.0	+3.6
SPN				S	Sn	17 54 24.3	+0.9
SPN	**Mys Shipunski**	**6.18**	**277**	P	Pn	17 53 16.0	+3.6
SPN				*e*S	Sn	17 54 24.3	+0.9
SMKR	**Semkarok**	**6.34**	**310**	*e*P	Pn	17 53 19.0	+4.2
TUMR	**Tumrok**	**6.44**	**297**	*e*P	Pn	17 53 20.4	+4.2
BZMR	**Bezymyannaya**	**6.50**	**303**	*e*P	Pn	17 53 20.8	+3.7
BZWR	**Bezymyannyi-We**	**6.51**	**303**	*e*P	Pn	17 53 21.5	+4.2
SRKR	**Sorokina**	**6.52**	**310**	*e*P	Pn	17 53 21.1	+3.9
KMNR	**Kamenistaya**	**6.56**	**301**	*e*P	Pn	17 53 21.6	+3.8
KMNR				S	Sn	17 54 34.4	+1.3
NLC	**Nalytchevo**	**6.59**	**278**	P	Pn	17 53 21.0	+3.0
NLC				S	Sn	17 54 34.6	+1.2
NLC	**Nalytchevo**	**6.59**	**278**	P	Pn	17 53 21.0	+3.0
NLC				*e*S	Sn	17 54 34.6	+1.2
KRSR	**Krestovskiy**	**6.59**	**305**	*e*P	Pn	17 53 20.8	+2.6
KLY	**Klyuchi**	**6.59**	**306**	P	Pn	17 53 20.5	+2.4
KLY	**Klyuchi**	**6.59**	**306**	*e*P	Pn	17 53 20.5	+2.4
KPT	**Kopyto**	**6.66**	**303**	*e*P	Pn	17 53 23.2	+4.1
SDLR	**Sedlovina**	**6.86**	**279**	*e*P	Pn	17 53 26.8	+4.8
SDLR				*e*S	Sn	17 54 43.5	+3.0
KOZR	**Kozyr**	**6.86**	**303**	P	Pn	17 53 26.4	+4.6
KOZ	**Kozyrevsk**	**6.87**	**303**	*e*P	Pn	17 53 26.4	+4.5
SMAR	**Somma**	**6.91**	**278**	*e*P	Pn	17 53 27.4	+4.6
KRER	**Koryakskii**	**6.94**	**279**	P	Pn	17 53 26.9	+3.7
KRER				*e*S	Sn	17 54 43.5	+0.8
SRDR	**Sredinnyy**	**7.06**	**304**	*e*P	Pn	17 53 28.2	+3.6
RUS	**Russkaya**	**7.15**	**272**	P	Pn	17 53 29.5	+3.8
RUS	**Russkaya**	**7.15**	**272**	P	Pn	17 53 29.5	+3.8
MTVR	**Mutnovka**	**7.34**	**272**	P	Pn	17 53 32.7	+4.2
MTVR				*e*S	Sn	17 54 54.0	+1.7
GNL	**Ganaly**	**7.43**	**282**	*e*P	Pn	17 53 34.0	+4.2
ESO	**Esso**	**7.43**	**300**	P	Pn	17 53 32.4	+2.8
ESO	**Esso**	**7.43**	**300**	*e*P	Pn	17 53 32.4	+2.8
SKR	**Severo-Kuril's**	**9.01**	**262**	*e*S	Sn	17 55 35.0	+2.1

IDC 26 18:01:45.9±3.0, 29°.99S×177°.25W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/17, mbtmp3.7/3, MS4.1/2, Ms1 4.1/2, ms1mx3.0/39, Error ellipse: s-maj=59.0km s-min=26.4km az=73.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.94**	**321**	Pn	Pn	18 02 07.0	+0.7
	127nm,0.3s,baz=93,slow=23,SNR=6.6						
RAO				Sn	Sn	18 02 20.4	-0.1
	617nm,0.3s,baz=37,slow=20,SNR=10						
HNR	**Honiara**	**29.54**	**309**	LR	LR	18 16 31.1	
	comp=Z,145nm,21.0s,baz=246,slow=30						
CTA	**Charters Tower**	**34.38**	**278**	LR		18 19 07.7	
	comp=Z,741nm,19.2s,baz=6.2,slow=30						
STKA	**Stephens Creek**	**35.20**	**256**	P	P	18 08 42.5	+0.6
	2.7nm,1.1s,baz=104,slow=12,SNR=2.9						
ASAR	**Alice Springs**	**43.78**	**266**	P	P	18 09 53.1	-0.5
	0.3nm,0.7s,baz=104,slow=7.3,SNR=7.4						
WRA	**Warramunga Arr**	**44.73**	**271**	P	P	18 10 00.9	-0.4
	0.6nm,0.3s,baz=110,slow=8.1,SNR=38						
FINES	**FINESS Array B**	**144.98**	**341**	PKP	PKPab	18 21 23.4	-0.2
	1.3nm,0.8s,baz=42,slow=2.1,SNR=7.9						

*BJI **26** 18:10:57.6, 5°.89S×148°.08E, h188km, mB5.0/35, mb5.0/53*

*ISCJB **26** 18:11:03.5±0.7, 5°.50S±0°.03×147°.49E±0°.03, h198km±6km, mb4.8/98, Error ellipse: s-maj=5.2km s-min=4.5km az=0.9*

*MOS **26** 18:11:03.5±0.8, 5°.50S×147°.50E, h199km, mb5.0/31, Error ellipse: s-maj=9.4km s-min=6.1km az=102.4*

*NEIC **26** 18:11:05.8±0.8, 5°.56S×147°.52E, h211km±7km, mb4.9/43, Error ellipse: s-maj=6.0km s-min=4.8km az=67.0*

NEIC Felt at Bulolo.

*AUST **26** 18:11:05.7±0.2, 5°.58S×147°.44E, h203km, Error ellipse: s-maj=0.7km s-min=0.6km az=228.0*

*DJA **26** 18:11:05.6±0.6, 6°.S±5°×14°.7E±°, h186km±11km, M5.3/8, mB5.3/6, mb5.2/8, MLv5.7/3, Mw(mB)4.8/6*

*GCMT **26** 18:11:07.5±0.2, 5°.61S×147°.47E, h192km±1km, MW5.3, Moment Tensor Solution. s55,c74; s95,c159; Moment tensor: Scale 10^17 Nm; Mrr 0.00; Mθθ 0.00; Mφφ 0.00; Mrθ 0.00; Mrφ 0.00; Mθφ 0.00; Best double couple: M0 1.10000×10^17 NP1 φs 231.00000°, δ 34.00000°, λ 25.00000°. NP2 φs 120.00000°, δ 76.00000°, λ 122.00000°. Principal axes: T 1.0800, Plg49.0000°, Azm64.0000°; N -0.0500, Plg31.0000°, Azm291.0000°; P -1.0300, Plg25.0000°, Azm185.0000°; Data Used: II IU IC G CN.*

*IDC **26** 18:11:07.2±1.8, 5°.57S×147°.47E, h218km±17km, mb4.6/32, mb1 4.8/35, mb1mx4.8/36, mbtmp4.7/35 Error ellipse: s-maj=8.9km s-min=6.1km az=97.0*

ISC 26 18:11:04.3±0.3, 5°.58S±0°.03×147°.51E±0°.04, h195km±2km, h195km: pP-P, n316, σ1s59/396, mb4.9/97, 14C, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.82**	**185**	*e*Pn	**Pn**	**18 12 03.5**	**-0.2**
PMG				*e*Sn	**Sn**	**18 12 47.8**	**-2.6**
PMG	**Port Moresby**	**3.82**	**185**	P	**Pn**	**18 12 03.3**	**-0.4**
PMG	**Port Moresby**	**3.82**	**185**	P	**Pn**	**18 12 03.5**	**-0.2**
	343nm,0.3s,baz=15,slow=4.8,SNR=2265						
PMG				S	**Sn**	**18 12 46.6**	**-3.8**
	429nm,0.3s,baz=253,slow=19,SNR=5.5						
JAY	**Jayapura**	**7.43**	**294**	P	**Pn**	**18 12 48.7**	**-1.5**
	172nm,1.1s,0.7nm						
JAY	**Jayapura**	**7.43**	**294**	P	**Pn**	**18 12 49.2**	**-1.1**
	baz=7.4,SNR=15						
MMPI	**Merauke**	**7.63**	**247**	P	**Pn**	**18 12 53.6**	**+0.9**
	895nm,1.0s,12μm3.1nm						
MMPI	**Merauke**	**7.63**	**247**	P	**Pn**	**18 12 54.4**	**+1.6**
	baz=7.6,SNR=9.7						
COEN	**Coen**	**9.36**	**207**	P	**Pn**	**18 13 17.4**	**+2.1**
	baz=9.4,SNR=109						
COEN				S	**Sn**	**18 14 59.4**	**-0.6**
	baz=9.4,SNR=9.7						
MTSU	**Mount Surprise**	**12.87**	**194**	P	**P**	**18 14 02.3**	**-1.6**
	baz=13,SNR=418						
HNR	**Honiara**	**12.91**	**108**	*e*Pn	**Pn**	**18 14 00.7**	**-0.2**
HNR	**Honiara**	**12.91**	**108**	P	**Pn**	**18 14 01.1**	**+0.1**
	9.9nm,0.3s,baz=229,slow=2.1,SNR=156						
CTA	**Charters Tower**	**14.48**	**185**	P	**P**	**18 14 22.6**	**+0.8**
CTA	**Charters Tower**	**14.48**	**185**	P	**P**	**18 14 22.6**	**+0.8**
	13nm,0.3s,baz=4.2,slow=14,SNR=142						
CTAO	**Charters Tower**	**14.48**	**185**	*e*P	**P**	**18 14 22.0**	**+0.2**
CTAO	**Charters Tower**	**14.48**	**185**	*e*Pn	**P**	**18 14 22.0**	**+0.2**
TLE	**Tual**	**14.70**	**269**	P	**P**	**18 14 27.3**	**+3.0**
	baz=15,SNR=6.3						
FAKI	**Fak Fak**	**15.44**	**279**	P	**Pn**	**18 14 29.1**	**-3.1**
	40nm,1.2s,599nm						
FAKI	**Fak Fak**	**15.44**	**279**	P	**Pn**	**18 14 29.8**	**-2.5**
	baz=15,SNR=4.2						
PATS	**Pohnpei**	**16.38**	**41**	P	**Pn**	**18 14 44.8**	**+1.2**
	baz=16,SNR=17						
KDU	**Kakadu**	**16.43**	**243**	P	**P**	**18 14 43.3**	**-0.1**
	baz=16,SNR=205						
KDU				S	**S**	**18 17 43.1**	**-2.3**
	baz=16,SNR=5.6						
QIS	**Mount Isa**	**16.75**	**207**	P	**Pn**	**18 14 48.9**	**+0.9**
	baz=17,SNR=208						
QIS				S	**S**	**18 17 52.1**	**+0.2**
	baz=17,SNR=6.5						
SWI	**Sorong**	**16.88**	**286**	P	**P**	**18 14 48.5**	**+0.1**
	baz=17,SNR=12						
MTN	**Manton Dam**	**17.69**	**245**	P	**P**	**18 14 57.9**	**+0.7**
	baz=18,SNR=140						
MTN				S	**S**	**18 18 09.5**	**-1.4**
	baz=18,SNR=10						
PALU	**Palau**	**18.27**	**314**	P	**Pn**	**18 15 05.7**	**-0.2**
	baz=18,SNR=8.8						
MSAI	**Masohi**	**18.65**	**276**	P	**P**	**18 15 07.2**	**-0.5**
	8.5nm,0.6s,448nm						
WRAB	**Tennant Creek**	**19.17**	**221**	*e*P	**P**	**18 15 14.2**	**+1.0**
WRAB				pmax	pmax		
	comp=Z,116nm,0.8s						
WRAB	**Tennant Creek**	**19.17**	**221**	*e*P	**P**	**18 15 14.2**	**+1.0**
	comp=Z,116nm,0.8s						
WRAB	**Tennant Creek**	**19.17**	**221**	P	**P**	**18 15 14.7**	**+1.5**
	comp=Z,3μm,0.5s						
WRA	**Warramunga Arr**	**19.18**	**221**	P	**P**	**18 15 14.3**	**+1.0**
WRA			

YHNB Yeheng 39.38 321 *e*P P **18 18 15.6 +0.4**
comp=Z,61nm,0.9s
CISI Cisompet, Garu 39.47 265 P P **18 18 14.9 -1.2**
baz=39,SNR=4.6
TATO Taipei 39.53 321 *e*P **P** **18 18 16.1 -0.3**
AFI Afiamalu 40.92 105 *e*P **P** **18 18 29.0 +0.9**
comp=Z,170nm,1.0s
AFI Afiamalu 40.92 105 P P **18 18 29.2 +1.1**
comp=Z,127nm,0.9s,baz=245,slow=1.5,SNR=14
QZH Quanzhou 41.37 318 P P **18 18 33.8 +2.4**
QZH pmax pmax
comp=Z,110nm,0.9s
JNU Nakatsue 41.59 339 *e*P **P** **18 18 33.4 +0.2**
comp=Z,23nm,0.9s
JNU Nakatsue 41.59 339 P P **18 18 33.9 +0.6**
comp=Z,46nm,0.8s,baz=128,slow=3.0,SNR=25
URZ Urewera 42.20 145 P P **18 18 38.8 +0.8**
URZ Urewera 42.20 145 P P **18 18 38.8 +0.8**
comp=Z,8.7nm,0.4s,baz=264,slow=5.3,SNR=13
MJAR Matsushiro Arr 42.79 349 P P **18 18 43.0 +0.2**
MJAR PcP **PcP** **18 20 30.5 0.0**
MJAR Matsushiro Arr 42.79 349 P P **18 18 43.0 +0.2**
comp=Z,49nm,1.0s,baz=166,slow=8.6,SNR=60
MJAR PcP **PcP** **18 20 30.5 0.0**
comp=Z,9.0nm,0.9s,baz=166,slow=3.1,SNR=6.0
MAJO Matsushiro 42.79 349 *e*P **P** **18 18 42.8 0.0**
MAJO Matsushiro 42.79 349 *e*P **P** **18 18 42.8 0.0**
MAT Matsushiro 42.79 349 P P **18 18 42.6 -0.2**
RPZ Rata Peaks 43.27 155 P P **18 18 47.7 +1.1**
RPZ Rata Peaks 43.27 155 P P **18 18 47.7 +1.1**
comp=Z,9.7nm,0.4s,baz=5,7,slow=10,SNR=4.2
NIUE Niue 43.56 112 P P **18 18 51.6 +2.4**
baz=44,SNR=4.4
SSE Sheshan 44.30 327 P P **18 18 55.8 +0.9**
SSE pmax pmax
comp=Z,46nm,0.7s
SSE pmax pmax
comp=Z,140nm,7.4s
NJ2 Nanjing 46.31 326 *e*P **P** **18 19 12.0 +1.3**
NJ2 pP **pP** **18 19 51.5 -1.7**
NJ2 sP **sP** **18 20 11.0 -4.0**
NJ2 PcP **PcP** **18 20 42.5 -0.2**
NJ2 S **S** **18 25 45.5 +2.6**
NJ2 pmax pmax
comp=Z,40nm,0.6s
NJ2 pmax pmax
comp=Z,240nm,5.6s
NJ2 LR LR
comp=N,340nm,25.4s
NJ2 LR LR
comp=E,1μm,22.1s
NJ2 LR LR
comp=Z,350nm,24.8s
KSRS Korea Array 46.54 338 P P **18 19 13.2 +0.8**
comp=Z,18nm,0.9s,baz=152,slow=8.6,SNR=43
KSRS PcP **PcP** **18 20 43.8 +0.5**
comp=Z,8.4nm,0.8s,baz=171,slow=3.2,SNR=14
KSAR Wonju Array Be 46.55 338 P P **18 19 13.2 +0.8**
KSAR PcP **PcP** **18 20 43.8 +0.4**
INCN Inchon 47.05 337 *e*P **P** **18 19 17.5 +1.1**
WHN Wuhan 47.93 321 ⇑P **P** **18 19 24.3 +1.1**
WHN pmax pmax
comp=Z,60nm,0.9s
WHN LR LR
comp=Z,530nm,14.0s
PSI Prapat 49.23 279 P P **18 19 33.7 +0.1**
PSI Prapat 49.23 279 P P **18 19 33.7 +0.1**
comp=Z,3.6nm,0.4s,baz=84,slow=10,SNR=4.3
GSI Gunungsitoli 50.33 276 P P **18 19 41.5 -0.3**
baz=50,SNR=3.6
GYA Guiyang 50.78 311 ⇑*i*P **P** **18 19 45.5 +0.4**
GYA pP **pP** **18 20 28.8 +0.4**
GYA sP **sP** **18 20 50.0 0.0**
GYA PcP **PcP** **18 21 01.3 +2.1**
GYA PP **PP** **18 21 46.5 +3.1**
GYA ScP **ScP** **18 24 38.0 +1.1**
GYA PcS **PcS** **18 24 57.8 +0.6**
GYA S **S** **18 26 47.3 +1.3**
GYA sS **sS** **18 28 01.5 -0.2**
GYA ScS **ScS** **18 29 15.0 -1.0**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,4.9s
USRK Ussuriysk Arra 51.48 346 P P **18 19 50.8 +1.1**
comp=Z,16nm,0.6s,baz=170,slow=6.5,SNR=48
USRK PcP **PcP** **18 21 00.5 -0.6**
comp=Z,3.6nm,0.5s,baz=174,slow=3.0,SNR=8.6
YSS Yuzh-Sakhalins 52.47 356 ⇑*i*P **P** **18 19 58.0 +1.0**
MDJ Mudanjiang 52.49 344 P P **18 19 57.3 +0.1**
MDJ pmax pmax
comp=Z,21nm,1.0s
MDJ pmax pmax
comp=Z,120nm,3.8s
CN2 Changchun 53.03 340 *e*P **sP** **18 21 06.5 +0.1**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 Changchun 53.03 340 *e*P P 18 20 04.5 +3.3
CN2 *e*pP pP 18 20 47.5 +2.6
CN2 *e*S **S** **18 27 19.0 +3.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
KMI Kunming 53.14 307 P P **18 20 04.5 +1.9**
KMI pP **pP** **18 20 48.0 +1.7**
KMI S **S** **18 27 22.3 +3.9**
KMI pmax pmax
comp=Z,19nm,0.7s
KMI LR LR
comp=Z,80nm,16.8s
RAR Rarotonga 53.33 112 P P **18 20 05.0 +1.2**
RAR Rarotonga 53.33 112 P P **18 20 05.0 +1.2**
comp=Z,38nm,0.9s,baz=270,slow=5.1,SNR=3.7
CMAR Chiang Mai Arr 53.50 298 P P **18 20 05.8 +0.8**
CMAR Chiang Mai Arr 53.50 298 P P **18 20 05.8 +0.8**
comp=Z,5.1nm,0.8s,baz=125,slow=5.9,SNR=40
CHTO Chiang Mai 53.63 298 *e*P **P** **18 20 06.6 +0.6**
CHTO pmax pmax
comp=Z,25nm,0.7s
CHTO Chiang Mai 53.63 298 *e*P **P** **18 20 06.5 +0.6**
comp=Z,25nm,0.7s
XAN Xi'an 53.68 320 P P **18 20 05.8 -0.4**
XAN pmax pmax
comp=Z,17nm,1.1s
XAN LR LR
comp=N,410nm,18.0s
XAN LR LR
comp=E,200nm,20.5s
XAN LR LR
comp=Z,220nm,19.3s
BJI Beijing 53.78 330 P P **18 20 06.8 +0.1**
BJI pP **pP** **18 20 49.5 -1.0**
BJI sP **sP** **18 21 09.5 -2.5**
BJI S **S** **18 27 21.5 -4.5**
BJI sS **sS** **18 28 42.5 0.0**
BJI SS **SS** **18 31 15.5 +5.5**
BJI pmax pmax
comp=Z,30nm,1.4s
BJI pmax pmax
comp=Z,250nm,5.5s
BJI LR LR
comp=N,340nm,19.8s
BJI LR LR
comp=E,480nm,19.8s
BJI LR LR
comp=Z,170nm,19.6s
CD2 Chengdu 55.34 314 P P **18 20 19.0 +0.8**
CD2 pP **pP** **18 21 04.3 +2.0**
CD2 PcP **PcP** **18 21 17.0 +0.7**
CD2 sP **sP** **18 21 26.3 +2.6**
CD2 PP **PP** **18 22 26.5 +2.3**
CD2 PcS **PcS** **18 25 15.8 -1.0**
CD2 S **S** **18 27 45.8 -1.5**
CD2 sS **sS** **18 29 04.8 +0.6**
CD2 SS **SS** **18 31 33.5 -1.6**
CD2 pmax pmax
comp=Z,20nm,0.4s
CD2 pmax pmax
comp=Z,140nm,4.7s
CD2 LR LR
comp=N,600nm,18.6s
CD2 LR LR
comp=E,790nm,18.6s
CD2 LR LR

comp=Z,770nm,19.6s
KLR Kul'dur 56.28 348 *e*P P 18 20 21.0 -3.4
KLR *e* 18 22 28.2
KLR pmax pmax
comp=N,34nm,1.6s
KLR pmax pmax
comp=Z,62nm,1.6s
HHC Hu-ho-hao-te 56.74 328 *e*P **P** **18 20 28.3 +0.3**
HHC PcP **PcP** **18 21 22.0 +0.4**
HHC sP **sP** **18 21 32.8 -0.8**
HHC PP **PP** **18 22 38.8 +2.3**
HHC ScP **ScP** **18 25 01.0 -1.6**
HHC PcS **PcS** **18 25 21.3 -1.4**
HHC S **S** **18 28 05.5 0.0**
HHC sS **sS** **18 29 21.0 -1.8**
HHC ScS **ScS** **18 29 55.0 -2.7**
HHC SS **SS** **18 31 57.5 +0.6**
HHC pmax pmax
comp=Z,48nm,0.7s
HHC pmax pmax
comp=Z,340nm,6.7s
BTO Baotou 57.40 327 *e*P **P** **18 20 32.5 -0.1**
LZH Lanzhou 58.22 319 *e*P **P** **18 20 39.5 +1.0**
LZH pP **pP** **18 21 24.3 +1.3**
LZH sP **sP** **18 21 42.5 -1.8**
LZH PP **PP** **18 22 52.5 +2.7**
LZH *e*S **S** **18 28 25.0 -0.1**
LZH sS **sS** **18 29 44.3 +1.6**
LZH pmax pmax
comp=Z,72nm,1.1s
LZH pmax pmax
comp=Z,180nm,4.0s
LZH LR LR
comp=N,350nm,13.5s
LZH LR LR
comp=E,490nm,15.1s
LZH LR LR
comp=Z,510nm,16.1s
PETK Petropavlovsk- 59.10 7 P **P** **18 20 44.8 +0.8**
PETK Petropavlovsk- 59.10 7 P **P** **18 20 44.8 +0.8**
PETK Petropavlovsk- 59.10 7 P **P** **18 20 44.8 +0.8**
comp=Z,20nm,0.8s,baz=175,slow=6.4,SNR=30
PET Petropavlovsk 59.14 8 *e*P **P** **18 20 43.2 -1.0**
PET *e**SP **sP** **18 21 51.7 +1.6**
PET *e* 18 22 56.2
PET *e*S **S** **18 28 34.7 -1.2**
PET pmax pmax
comp=Z,26nm,0.9s
PET pmax pmax
comp=Z,100nm,14.2s
PET MLR MLR
comp=Z,200nm,19.0s
HIA Hailar 59.73 339 *e*P **P** **18 20 47.6 -0.9**
comp=Z,13nm,0.6s
KIP Kipapa 59.75 61⇑*e*P **P** **18 20 50.1 +1.0**
KIP pmax pmax
comp=Z,68nm,1.7s
FX1 Attu Island--F 62.16 17 P **P** **18 21 05.8 +1.1**
FX1 Attu Island--F 62.16 17 P **P** **18 21 05.8 +1.1**
comp=Z,60nm,0.7s,baz=292,slow=5.4,SNR=15
GTA Gaotai 62.74 320 *e*P **P** **18 21 10.0 +1.0**
GTA pmax pmax
comp=Z,32nm,1.0s
GTA pmax pmax
comp=Z,130nm,7.6s
GTA LR LR
comp=N,460nm,20.2s
GTA LR LR
comp=E,610nm,16.6s
GTA LR LR
comp=Z,660nm,16.9s
TIAR Tiarei 62.75 107 *e*P **P** **18 21 11.0 +1.7**
comp=Z,33nm,0.7s
ULN Ulaanbaatar 63.98 331 *e*P **P** **18 21 17.0 0.0**
comp=Z,37nm,0.8s
PMOR Pomariorio Ree 64.06 104 *e*P **P** **18 21 19.4 +1.5**
comp=Z,69nm,0.8s
CIT Chita 64.26 337 *e*P **P** **18 21 19.6 +1.0**
CIT *e* 18 23 46.1
CIT pmax pmax
comp=Z,134nm,1.6s
SONM Songino Array 64.28 331 P **P** **18 21 19.9 +1.0**
SONM ⇑*e* 18 50 10.8
SONM Songino Array 64.28 331 P **P** **18 21 19.9 +1.0**
comp=Z,20nm,0.8s,baz=148,slow=7.2,SNR=161
SONM PKP2bc 18 50 10.8
comp=Z,3.6nm,1.0s,baz=289,slow=1.7,SNR=13
LSA Lhasa 64.39 307 *e*P **P** **18 21 19.4 -1.0**
LSA pmax pmax
comp=Z,17nm,0.8s
LSA Lhasa 64.39 307 *e*P **P** **18 21 19.4 -1.0**
comp=Z,17nm,0.8s
CLNS Chul'man 64.89 347 *e*P **P** **18 21 23.5 +1.0**
CLNS pmax pmax
comp=Z,28nm,0.9s
CLNS pmax pmax
comp=N,14nm,1.0s
CLNS pmax pmax
comp=E,8.0nm,0.8s
CASY Casey 65.80 195 *e*P **P** **18 21 27.4 -0.7**
comp=E,11nm,0.8s
TAPN Taplejung 66.34 303 *e*P **P** **18 21 33.0 +0.2**
comp=E,21nm,0.6s
ODAN Odare 66.44 302 *e*P **P** **18 21 33.5 +0.2**
comp=E,35nm,0.8s
RAMN Ramite 67.14 302 *e*P **P** **18 21 38.1 +0.4**
comp=E,16nm,0.6s
ZAK Zakamensk 67.51 331 *e*P **P** **18 21 39.6 +0.2**
ZAK *e* 18 22 27.5
ZAK pmax pmax
comp=Z,38nm,0.9s
GUN Gumba 68.06 303 *e*P **P** **18 21 44.0 +0.4**
comp=Z,54nm,0.5s
TLY Talaya 68.20 332 *e*P **P** **18 21 43.1 -0.5**
TLY pmax pmax
comp=Z,14nm,0.9s
IRK Irkutsk 68.30 333 *e*P **P** **18 21 43.5 -0.7**
IRK pmax pmax
comp=Z,33nm,1.5s
PKI Pulchoki 68.34 302 *e*P **P** **18 21 45.3 -0.1**
comp=Z,23nm,0.9s
PKIN Phulchoki 68.36 302 *e*P **P** **18 21 45.5 +0.1**
comp=Z,16nm,1.0s
SEY Seymchan 68.42 2⇑*e*P **P** **18 21 44.9 +0.3**
KKN Kakani 68.52 303 *e*P **P** **18 21 46.5 +0.2**
comp=Z,31nm,0.7s
DMN Daman 68.61 302 *e*P **P** **18 21 47.3 +0.4**
comp=Z,73nm,0.9s
YAK Yakutsk 68.80 351*c i*P **P** **18 21 47.3 +0.3**
YAK *e* 18 22 08.9
YAK *e**PP **pP** **18 22 35.6 +2.6**
YAK *e* 18 24 20.6
YAK *e*PPP PPP 18 26 10.1
YAK *e*S **S** **18 30 34.1 -0.4**
YAK *e* 18 31 27.8
YAK *e*SS SS 18 34 56.5 -7.3
YAK pmax pmax
comp=Z,41nm,1.2s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=N,17nm,1.1s
YAK pmax pmax
comp=Z,77nm,0.9s
YAK pmax pmax
comp=E,31nm,1.5s
YAK pmax pmax
comp=N,26nm,1.1s
YAK smax smax
comp=E,236nm,4.8s
YAK smax smax
comp=N,114nm,3.9s
MOY Mondy 69.45 331 *e*P **P** **18 21 52.1 +0.7**
MOY pmax pmax
comp=Z,49nm,2.1s
KOLN Koldanda 69.93 302 *e*P **P** **18 21 55.0 0.0**
comp=Z,42nm,0.7s
DANN Dangsing 69.97 303 *e*P **P** **18 21 55.2 -0.1**
comp=Z,37nm,0.7s
PYUN Piuthan 70.54 302 *e*P **P** **18 21 58.5 -0.2**
comp=Z,90nm,0.8s
VNDA Vanda 72.30 177 *e*P **P** **18 22 08.0 0.0**
comp=Z,17nm,0.7s
VNDA Vanda 72.30 177 P **P** **18 22 09.3 +1.3**
comp=Z,20nm,0.8s,baz=332,slow=6.4,SNR=93
WMQ Urumqi 72.80 319 P **P** **18 22 12.0 +0.3**

WMQ pP **pP** **18 22 58.0 -0.1**
WMQ sP **sP** **18 23 18.0 -0.9**
WMQ PP **PP** **18 24 59.0 +2.5**
WMQ S **S** **18 31 21.0 -0.6**
WMQ SKS **SKSac** **18 31 55.0 -3.5**
WMQ sS **sS** **18 32 40.0 -2.5**
WMQ SS **SS** **18 36 07.0 +1.0**
WMQ pmax pmax
comp=Z,29nm,1.0s
WMQ pmax pmax
comp=Z,140nm,6.0s
WMQ LR LR
comp=N,790nm,18.0s
WMQ LR LR
comp=E,540nm,18.0s
WMQ LR LR
comp=Z,590nm,18.0s
SBA Scott Base 72.94 176 *e*P **P** **18 22 10.4 -1.4**
SBA pmax pmax
comp=Z,4.0nm,0.8s
SBA Scott Base 72.94 176 *e*P **P** **18 22 10.4 -1.4**
comp=Z,4.4nm,0.8s
BILL Bilibino 74.63 7*α i*P **P** **18 22 22.4 +0.7**
BILL *i* 18 22 36.7
BILL *i* *PP **pP** **18 23 11.1 +2.8**
BILL *i* *SP **sP** **18 23 31.2 +2.1**
BILL *i* 18 25 17.3
BILL *e* 18 31 46.5
BILL *i* 18 32 45.4
BILL pmax pmax
comp=Z,17nm,1.2s
BILL Bilibino 74.63 7 *e*P **P** **18 22 20.2 -1.5**
comp=Z,19nm,1.2s
MK31 Makanchi Array 77.49 320 *e*P **P** **18 22 38.1 -0.3**
MK31 Makanchi Array 77.49 320 *e*P **P** **18 22 38.1 -0.3**
MKAR Makanchi Array 77.49 320 P P **18 22 38.7 +0.3**
MKAR Makanchi Array 77.49 320 P P **18 22 38.7 +0.3**
MKAR PKKPbc **PKKPbc** **18 41 40.4 -3.0**
MKAR Makanchi Array 77.49 320 P P **18 22 38.7 +0.3**
comp=Z,16nm,0.7s,baz=106,slow=6.6,SNR=117
MKAR PKKPbc **PKKPbc** **18 41 40.4 -3.0**
comp=Z,0.3nm,0.7s,baz=238,slow=2.7,SNR=3.8
TIXI Tiksi 78.04 354 *e*P **P** **18 22 39.5 -1.3**
TIXI pmax pmax
comp=Z,7.0nm,0.8s
TIXI Tiksi 78.04 354 *e*P **P** **18 22 39.5 -1.3**
comp=Z,7.1nm,0.8s
ZAA0 Zalesovo Array 78.92 328 *e*P **P** **18 22 44.9 -1.1**
ZALV Zalesovo Beam 78.92 328 P P **18 22 45.5 -0.5**
ZALV Zalesovo Beam 78.92 328 P P **18 22 45.5 -0.5**
ZALV PKKPbc **PKKPbc** **18 41 37.0 -3.6**
ZALV Zalesovo Beam 78.92 328 P P **18 22 45.5 -0.5**
comp=Z,16nm,0.6s,baz=111,slow=5.6,SNR=109
ZALV PKKPbc **PKKPbc** **18 41 37.0 -3.6**
comp=Z,0.5nm,0.5s,baz=329,slow=2.5,SNR=5.4
KSH Kashi 79.47 312⇑*i*P **P** **18 22 50.8 +1.3**
KSH pP **pP** **18 23 37.5 +0.8**
KSH sP **sP** **18 23 56.5 -0.8**
KSH PP **PP** **18 25 55.5 +2.8**
KSH S **S** **18 32 32.3 -2.4**
KSH SKS **SKSac** **18 32 43.3 -4.4**
KSH sS **sS** **18 33 57.0 0.0**
KSH SS **SS** **18 37 51.5 +4.5**
KSH pmax pmax
comp=Z,61nm,1.1s
KSH LR LR
comp=N,220nm,4.8s
KSH LR LR
comp=E,280nm,5.3s
KSH LR LR
comp=Z,310nm,4.5s
NVS Novosibirsk 80.14 328 *e*P **P** **18 22 51.8 -0.7**
NVS pmax pmax
comp=Z,14nm,1.0s
NVS pmax pmax
comp=N,3.0nm,0.7s
NVS pmax pmax
comp=E,6.0nm,0.7s
TKM2 Tokmak 2 80.70 315 *e*P **P** **18 22 55.7 -0.4**
TKM2 pmax pmax
comp=Z,12nm,0.7s
TKM2 Tokmak 2 80.70 315 *e*P **P** **18 22 55.6 -0.4**
comp=Z,12nm,0.7s
TKM2 Tokmak 2 80.70 315 P **P** **18 22 56.1 0.0**
SNR=17
KZA Kyzart 80.71 314 *i*P **P** **18 22 57.3 +0.9**
KZA Kyzart 80.71 314 P **P** **18 22 57.3 +0.9**
SNR=26
KBK Karagaybulak 81.09 315 *i*P **P** **18 22 58.1 0.0**
KBK Karagaybulak 81.09 315 P **P** **18 22 58.1 0.0**
SNR=12
KURK Kurchatov 81.17 323*c i*P **P** **18 22 57.5 -0.6**
KURK pmax pmax
comp=Z,16nm,0.9s
KURK Kurchatov 81.17 323 *e*P **P** **18 22 57.6 -0.5**
comp=Z,11nm,0.9s
KURK PKKPbc **PKKPbc** **18 41 31.6 -3.7**
KURK P'P' 18 49 36.6
KURK Kurchatov 81.17 323 P **P** **18 22 57.5 -0.6**
comp=Z,94nm,0.9s,SNR=13
KURBB Kurchatov Arra 81.20 323 P **P** **18 22 58.2 0.0**
comp=Z,7.0nm,0.8s,baz=118,slow=4.0,SNR=78
KURBB PKKPbc **PKKPbc** **18 41 31.6 -3.6**
comp=Z,0.4nm,0.7s,baz=291,slow=2.9,SNR=7.2
KURBB PKPPKP **P'P'df** **18 49 36.6 -0.4**
comp=Z,0.5nm,0.8s,baz=297,slow=1.0,SNR=4.5
CHMS Chumysh 81.32 315 *i*P **P** **18 22 59.2 0.0**
CHMS Chumysh 81.32 315 P **P** **18 22 59.1 0.0**
SNR=9.9
FRU Bishkek 81.37 315 *e*P **P** **18 22 59.0 -0.4**
FRU *e* 18 23 43.0
AAK Ala-Archa 81.40 314*c i*P **P** **18 22 59.7 0.0**
AAK pmax pmax
comp=Z,29nm,0.8s
AAK Ala-Archa 81.40 314 *e*P **P** **18 22 58.9 -0.8**
comp=Z,11nm,0.8s
AAK Ala-Archa 81.40 314 P **P** **18 22 59.3 -0.4**
comp=Z,106nm,0.7s,SNR=14
AAK Ala-Archa 81.40 314 P **P** **18 22 59.9 +0.2**
comp=Z,12nm,0.7s,baz=128,slow=6.1,SNR=62
USP Ospenovka 81.57 315 *i*P **P** **18 23 00.6 +0.2**
USP Ospenovka 81.57 315 P **P** **18 23 00.6 +0.2**
SNR=11
AML Almayashu 81.84 314 *i*P **P** **18 23 02.8 +0.5**
AML Almayashu 81.84 314 P **P** **18 23 02.8 +0.5**
SNR=34
EKS2 Erkin-Say 81.92 314 *e*P **P** **18 23 01.8 -0.6**
EKS2 pmax pmax
comp=Z,18nm,0.8s
EKS2 Erkin-Say 81.92 314 *e*P **P** **18 23 01.8 -0.6**
comp=Z,18nm,0.8s
EKS2 Erkin-Say 81.92 314 P **P** **18 23 02.7 +0.3**
SNR=31
PPLA Purkeypile 81.95 24 *e*P **P** **18 23 01.6 -0.5**
comp=Z,54nm,1.6s
TRF Thorofare Moun 82.97 24 *e*P **P** **18 23 05.2 -2.2**
comp=Z,12nm,1.1s
SML Sawmill 83.05 26 *e*P **P** **18 23 07.2 -0.5**
SML pmax pmax
comp=Z,19nm,1.1s
SML Sawmill 83.05 26 *e*P **P** **18 23 07.2 -0.5**
comp=Z,19nm,1.1s
MCK McKinley 83.64 24 *e*P **P** **18 23 09.9 -0.8**
MCK pmax pmax
comp=Z,66nm,1.1s
MCK McKinley 83.64 24 *e*P **P** **18 23 09.9 -0.8**
comp=Z,66nm,1.1s
KBL Kabul 83.69 306 *e*P **P** **18 23 10.5 -1.3**
KBL pmax pmax
comp=Z,3.0nm,0.4s
KBL Kabul 83.69 306 *e*P **P** **18 23 10.5 -1.3**
comp=Z,3.2nm,0.4s
DIV Divide 83.89 27 *e*P **P** **18 23 12.0 0.0**
comp=Z,50nm,1.1s
BMRM Bremner River 84.35 27 *e*P **P** **18 23 14.4 +0.1**
comp=Z,57nm,1.2s
KKAR Karatay Array 84.36 314 *e*P **P** **18 23 13.4 -1.3**
KKAR pmax pmax
comp=Z,12nm,0.8s
KKAR Karatay Array 84.36 314 *e*P **P** **18 23 13.4 -1.3**
comp=Z,12nm,0.8s
COLA College 84.56 23 *e*P **P** **18 23 13.2 -2.0**
COLA pmax pmax
comp=Z,25nm,1.0s
COLA College 84.56 23 *e*P **P** **18 23 13.2 -2.0**

	comp=Z,25nm,1.0s							
PAX	**Paxson**	**84.74**	**25**	*e*P		**P**	**18 23 16.0**	**-0.3**
PAX				pmax		pmax		
	comp=Z,4.0nm,0.8s							
PAX	**Paxson**	**84.74**	**25**	*e*P		**P**	**18 23 16.0**	**-0.3**
	comp=Z,4.3nm,0.8s							
COLD	**Coldfoot**	**84.76**	**20**	*e*P		**P**	**18 23 17.1**	**+0.9**
	comp=Z,12nm,1.0s							
ILAR	**Eielson Array**	**84.90**	**23**	P		**P**	**18 23 16.7**	**-0.2**
ILAR				PKKP		**PKKPdf**	**18 41 20.3**	**+1.4**
ILAR	**Eielson Array**	**84.90**	**23**	P		**P**	**18 23 16.7**	**-0.2**
	comp=Z,17nm,0.9s,baz=253,slow=5.0,SNR=92							
ILAR				PKKP		**PKKPdf**	**18 41 20.3**	**+1.4**
	comp=Z,0.3nm,0.9s,baz=316,slow=2.4,SNR=4.3							
DOT	**Dot Lake**	**85.59**	**25**	*e*P		**P**	**18 23 20.8**	**+0.4**
	comp=Z,41nm,1.1s							
PNL	**Peninsula**	**86.35**	**29**	*e*P		**P**	**18 23 24.9**	**+0.7**
	comp=Z,60nm,1.0s							
BVAR	**Borovoye Array**	**86.72**	**324**	P		**P**	**18 23 25.4**	**-0.7**
BVAR	**Borovoye Array**	**86.72**	**324**	P		**P**	**18 23 25.4**	**-0.7**
BVAR	**Borovoye Array**	**86.72**	**324**	P		**P**	**18 23 25.4**	**-0.7**
	comp=Z,11nm,0.8s,baz=107,slow=5.0,SNR=52							
BRVK	**Borovoye**	**86.80**	**324**	*c i*P		**P**	**18 23 25.0**	**-1.4**
BRVK				pmax		pmax		
	comp=Z,14nm,0.9s							
BRVK	**Borovoye**	**86.80**	**324**	*e*P		**P**	**18 23 25.2**	**-1.3**
	comp=Z,11nm,1.0s							
BRVK	**Borovoye**	**86.80**	**324**	P		**P**	**18 23 25.1**	**-1.4**
	comp=Z,81nm,1.0s,SNR=5.2							
EGAK	**Eagle**	**87.18**	**24**	*e*P		**P**	**18 23 27.8**	**-0.3**
	comp=Z,33nm,1.1s							
SKAG	**Skagway**	**88.28**	**30**	*e*P		**P**	**18 23 33.8**	**+0.5**
	comp=Z,38nm,1.4s							
DLBC	**Dease Lake**	**90.77**	**31**	P		**P**	**18 23 44.0**	**-1.2**
DLBC	**Dease Lake**	**90.77**	**31**	P		**P**	**18 23 44.0**	**-1.2**
	comp=Z,2.1nm,0.7s,baz=266,slow=2.3,SNR=7.2							
INK	**Inuvik**	**91.08**	**21**	P		**P**	**18 23 45.5**	**-0.7**
INK	**Inuvik**	**91.08**	**21**	P		**P**	**18 23 45.5**	**-0.7**
	comp=Z,6.6nm,1.0s,baz=254,slow=4.8,SNR=15							
ABKAR	**Akbulak array**	**92.59**	**319**	*e*P		**P**	**18 23 51.1**	**-2.5**
	comp=Z,6.7nm,0.8s							
SVE	**Sverdlovsk**	**92.91**	**327**	*e*P		**P**	**18 23 53.3**	**-1.6**
SVE				pmax		pmax		
	comp=Z,7.0nm,1.1s							
YBH	**Yreka Blue Hor**	**93.51**	**49**	P		**P**	**18 23 58.1**	**-0.1**
YBH	**Yreka Blue Hor**	**93.51**	**49**	P		**P**	**18 23 58.1**	**-0.1**
	comp=Z,7.4nm,1.0s,baz=241,slow=4.6,SNR=7.3							
ARU	**Arti**	**94.02**	**326**	*c i*P		**P**	**18 23 58.0**	**-2.0**
ARU							18 27 43.9	
ARU				S		S	18 34 14.3	-39
ARU				pmax		pmax		
	comp=Z,9.0nm,1.2s							
NVAR	**Mina Array Bea**	**96.71**	**52**	P		**P**	**18 24 13.6**	**+0.5**
NVAR				PP		**PP**	**18 28 09.3**	**-1.2**
NVAR	**Mina Array Bea**	**96.71**	**52**	P		**P**	**18 24 13.6**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=263,slow=7.2,SNR=7.0							
NVAR				PP		**PP**	**18 28 09.3**	**-1.2**
	comp=Z,4.9nm,1.3s,baz=249,slow=11,SNR=4.3							
NEW	**Newport**	**97.70**	**42**	*e*P		**P**	**18 24 16.3**	**-0.8**
	comp=Z,11nm,1.1s							
NEW	**Newport**	**97.70**	**42**	P		Pdif	18 24 17.5	+0.4
	comp=Z,8.5nm,0.9s,baz=259,slow=5.2,SNR=12							
YKA	**Yellowknife Ar**	**98.56**	**28**	P		**P**	**18 24 20.2**	**-0.3**
YKA				PKKPbc		**PKKPbc**	**18 40 47.6**	**-4.4**
YKA	**Yellowknife Ar**	**98.56**	**28**	P		**P**	**18 24 20.2**	**-0.3**
	comp=Z,2.2nm,0.9s,baz=272,slow=4.6,SNR=33							
YKA				PKKPbc		**PKKPbc**	**18 40 47.6**	**-4.4**
	comp=Z,0.4nm,0.7s,baz=88,slow=3.0,SNR=8.5							
ELK	**Elko**	**99.11**	**50**	P		**Pdif**	**18 24 23.9**	**+0.1**
ELK	**Elko**	**99.11**	**50**	P		**Pdif**	**18 24 23.9**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=252,slow=6.2,SNR=4.5							
SNAA	**Sanae**	**100.49**	**189**	*e*P		**PP**	**18 28 37.7**	**0.0**
VNA2	**Neumayer--Watz**	**101.84**	**188**	*e*P		**PKiKP**	**18 28 58.2**	**+1.3**
PDAR	**Pinedale Array**	**103.26**	**48**	Pdif		**Pdif**	**18 24 42.2**	**+0.1**
PDAR	**Pinedale Array**	**103.26**	**48**	Pdiff		**Pdif**	**18 24 42.2**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=260,slow=2.5,SNR=8.6							
ARCES	**ARCESS Array B**	**106.01**	**342**	Pdif		**Pdif**	**18 24 52.5**	**-1.0**
ARCES				PKKPbc		**PKKPbc**	**18 40 26.4**	**-4.0**
ARCES	**ARCESS Array B**	**106.01**	**342**	Pdiff		**Pdif**	**18 24 52.5**	**-1.0**
	comp=Z,3.8nm,0.9s,baz=69,slow=7.9,SNR=6.9							
ARCES				PKKPbc		**PKKPbc**	**18 40 26.4**	**-4.0**
	comp=Z,4.2nm,0.9s,baz=260,slow=2.6,SNR=9.7							
FINES	**FINESS Array B**	**109.51**	**334**	Pdif		**Pdif**	**18 25 07.8**	**-1.4**
FINES	**FINESS Array B**	**109.51**	**334**	Pdiff		**Pdif**	**18 25 07.8**	**-1.4**
	comp=Z,1.7nm,0.7s,baz=66,slow=3.4,SNR=6.4							
BRTR	**Keskin Array B**	**111.84**	**311**	PKKPbc		PKKPbc	18 40 09.6	-1.4
BRTR	**Keskin Array B**	**111.84**	**311**	PKKPbc		PKKPbc	18 40 09.6	-1.4
	comp=Z,0.7nm,0.8s,baz=243,slow=1.8,SNR=5.4							
ECSD	**EROS Data Cent**	**112.42**	**45**	*e*PKPdf		**PKiKP**	**18 29 16.5**	**-0.9**
NB2	**NORSAR Subarra**	**115.75**	**338**	PKKP		**PKKPbc**	**18 39 55.2**	**-3.2**
	comp=Z,1.3nm,0.9s,baz=230,slow=4.4							
NOA	**NORSAR Array B**	**115.75**	**338**	PKKPbc		PKKPbc	18 39 54.2	-4.1
NOA	**NORSAR Array B**	**115.75**	**338**	PKKPbc		PKKPbc	18 39 54.2	-4.1
	comp=Z,1.0nm,0.7s,baz=233,slow=3.7,SNR=5.1							
VYHS	**Vyhne**	**119.06**	**324**	*e*P		**Pdif**	**18 26 01.2**	**+9.2**
VYHS	**Vyhne**	**119.06**	**324**	PDIF		**Pdif**	**18 26 01.2**	**+9.2**
BSEG	**Bad Segeberg**	**120.64**	**332**	*e*PKIKP		**PKPdf**	**18 29 32.7**	**0.0**
CLL	**Collm**	**120.87**	**329**	*i* PKIKP		**PKPdf**	**18 29 32.4**	**-0.9**
CLL				pmax		pmax		
	comp=Z,6.0nm,1.0s							
CLL	**Collm**	**120.87**	**329**	*i* PKPdf		**PKPdf**	**18 29 32.4**	**-0.9**
	comp=Z,6.0nm,1.0s							
WCI	**Wyandotte Cave**	**121.50**	**48**	*e*PKIKP		**PKPdf**	**18 29 34.5**	**-0.5**
WCI	**Wyandotte Cave**	**121.50**	**48**	*e*PKPdf		**PKPdf**	**18 29 34.5**	**-0.5**
GEC2	**GERESS Array S**	**121.84**	**326**	*e*PKIKP		**PKPdf**	**18 29 34.6**	**-0.8**
GERES	**GERESS Array B**	**121.84**	**326**	PKP		**PKPdf**	**18 29 35.2**	**-0.2**
GERES				PKKPbc		PKKPab	18 39 29.6	-5.6
GERES	**GERESS Array B**	**121.84**	**326**	PKP		**PKPdf**	**18 29 35.2**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=104,slow=3.1,SNR=9.6							
GERES				PKKPbc		PKKPab	18 39 29.6	-5.6
	comp=Z,0.7nm,0.6s,baz=202,slow=2.1,SNR=5.4							
CLZ	**Clausthal**	**121.89**	**330**	*e*PKIKP		**PKPdf**	**18 29 34.3**	**-1.0**
MOX	**Moxa**	**121.97**	**329**	*e*PKIKP		**PKPdf**	**18 29 34.5**	**-1.0**
WET	**Wettzell**	**122.14**	**327**	*e*PKIKP		**PKPdf**	**18 29 35.3**	**-0.6**
PLCA	**Paso Flores**	**122.20**	**146**	PKP		**PKPdf**	**18 29 36.6**	**+0.2**
PLCA	**Paso Flores**	**122.20**	**146**	PKP		**PKPdf**	**18 29 36.6**	**+0.2**
	comp=Z,3.3nm,0.6s,baz=237,slow=2.8,SNR=16							
LRAL	**Lakeview Retre**	**122.54**	**54**	*e*PKPdf		**PKPdf**	**18 29 36.2**	**-0.8**
GRF	**Grafenberg Arr**	**122.72**	**328**	*e*PKIKP		**PKPdf**	**18 29 36.8**	**-0.2**
FUR	**Furstenfeldbru**	**122.56**	**326**	*e*PKIKP		**PKPdf**	**18 29 38.4**	**-0.2**
SCHQ	**Schefferville**	**123.66**	**23**	PKP		**PKPdf**	**18 29 37.8**	**-0.8**
SCHQ	**Schefferville**	**123.66**	**23**	PKP		**PKPdf**	**18 29 37.8**	**-0.8**
	comp=Z,3.6nm,1.0s,baz=230,slow=13,SNR=3.8							
TKL	**Tuckaleechee C**	**124.27**	**50**	PKP		**PKPdf**	**18 29 39.4**	**-1.0**
TKL	**Tuckaleechee C**	**124.27**	**50**	PKP		**PKPdf**	**18 29 39.4**	**-1.0**
	comp=Z,8.9nm,0.8s,baz=205,slow=1.8,SNR=12							
EKA	**Eskdalemuir Ar**	**125.10**	**340**	PKP		**PKPdf**	**18 29 40.6**	**-0.7**
EKA	**Eskdalemuir Ar**	**125.10**	**340**	PKP		**PKPdf**	**18 29 40.6**	**-0.7**
	comp=Z,4.0nm,0.8s,baz=15,slow=3.4,SNR=8.6							
SSF	**Saint Saulge**	**128.38**	**329**	*e*PKIKP		**PKPdf**	**18 29 47.3**	**-0.6**
	comp=Z,107nm,1.8s							
SSF	**Saint Saulge**	**128.38**	**329**	*e*PKIKP		**PKPdf**	**18 29 47.3**	**-0.6**
SSF	**Saint Saulge**	**128.38**	**329**	*e*PKPdf		**PKPdf**	**18 29 47.3**	**-0.6**
TCF	**Toulx Ste Croi**	**129.57**	**329**	*e*PKIKP		**PKPdf**	**18 29 49.7**	**-0.5**
	comp=Z,36nm,1.2s							
TCF	**Toulx Ste Croi**	**129.57**	**329**	*e*PKIKP		**PKPdf**	**18 29 49.7**	**-0.5**
TCF	**Toulx Ste Croi**	**129.57**	**329**	*e*PKPdf		**PKPdf**	**18 29 49.7**	**-0.5**
LPAZ	**La Paz**	**138.59**	**122**	PKPpre		PKPpre	18 29 59.6	
LPAZ	**La Paz**	**138.59**	**122**	PKhKP		PKPpre	18 29 59.6	
	comp=Z,3.6nm,0.7s,baz=194,slow=1.3,SNR=15							
CPUP	**Villa Florida**	**140.18**	**144**	PKPpre		PKPpre	18 30 01.4	
CPUP	**Villa Florida**	**140.18**	**144**	PKhKP		PKPpre	18 30 01.4	
	comp=Z,2.7nm,0.8s,baz=146,slow=1.5,SNR=5.6							
CRPR	**Cabo Rojo, PR**	**144.01**	**67**	*e*PKPdf		**PKPab**	**18 30 15.4**	**0.0**
OBIP	**Obispado Ponce**	**144.47**	**67**	*e*PKPdf		**PKPab**	**18 30 15.6**	**-1.5**
CELP	**Cerrillos**	**144.48**	**67**	*e*PKPdf		**PKPab**	**18 30 16.2**	**-1.0**
SIV	**San Ignacio**	**144.51**	**128**	PKP		**PKPab**	**18 30 16.5**	**-0.9**
SIV	**San Ignacio**	**144.51**	**128**	PKP		**PKPab**	**18 30 16.5**	**-0.9**
	comp=Z,43nm,0.8s,baz=248,slow=3.4,SNR=148							
SJG	**San Juan**	**144.86**	**66**	PKP		PKPbc	18 30 17.2	-1.4
SJG	**San Juan**	**144.86**	**66**	PKP		PKPbc	18 30 17.2	-1.4
	comp=Z,80nm,0.8s,baz=352,slow=3.1,SNR=19							
MTP	**Monte Pirata**	**145.41**	**66**	*e*PKPdf		**PKPdf**	**18 30 19.6**	**-0.4**
TOA0	**Torodi Ar. Sit**	**145.47**	**285**	*e*PKPdf		**PKPdf**	**18 30 19.9**	**-0.3**
TORD	**Torodi Ar. Bea**	**145.47**	**285**	PKPbc		**PKPdf**	**18 30 20.3**	**+0.1**
TORD	**Torodi Ar. Bea**	**145.47**	**285**	PKPbc		**PKPdf**	**18 30 20.3**	**+0.1**
	comp=Z,26nm,0.6s,baz=73,slow=3.3,SNR=168							
STVI	**Saint Thomas**	**145.88**	**65**	*e*PKPdf		**PKPdf**	**18 30 20.6**	**-0.1**
SAML	**Samuel**	**146.18**	**115**	*e*PKPdf		**PKPbc**	**18 30 22.1**	**-0.6**
SPB	**Sao Paulo**	**147.55**	**154**	*e*PKPbc		**PKPbc**	**18 30 26.3**	**0.0**
LIC	**Lamto**	**152.67**	**273**	*e*PKIKP		**PKPdf**	**18 30 30.2**	**-1.5**
	comp=Z,3.9nm,0.6s							
LIC	**Lamto**	**152.67**	**273**	*e*PKPdf		**PKPdf**	**18 30 30.2**	**-1.5**
BDFB	**Brasilia**	**153.91**	**144**	PKPbc		**PKPbc**	**18 30 41.8**	**+0.1**
BDFB	**Brasilia**	**153.91**	**144**	PKPbc		**PKPbc**	**18 30 41.8**	**+0.1**

comp=Z,13nm,0.9s,baz=249,slow=1.4,SNR=15

IDC ***26*** *18:14:15.0±0.3,4.˚04N×126.˚65E,h0km,mb4.9/40, mb1 5.0/40,mb1mx5.0/41,mbtmp4.9/40,MS4.2/17, Ms1 4.2/17,ms1mx3.9/40,Error ellipse: s-maj=16.0km s-min=8.9km az=73.0*

BJI ***26*** *18:14:16.7,3.˚81N×126.˚86E,h35km,mB5.2/32,mb5.0/41, Ms4.7/33,Ms7 4.4/35*

MOS ***26*** *18:14:18.9±1.1,4.˚06N×126.˚55E,h33km,mb5.3/38, MS4.3/13,Error ellipse: s-maj=11.8km s-min=5.6km az=116.7*

NEIC ***26*** *18:14:20.4±0.1,4.˚02N×126.˚57E,h35km,mb5.1/32,Error ellipse: s-maj=6.1km s-min=4.4km az=76.0*

ISCJB ***26*** *18:14:21.6±0.4,4.˚03N±0.˚02×126.˚85E±0.˚03,h62km±3km, mb5.0/122,Error ellipse: s-maj=4.6km s-min=3.3km az=173.3*

GCMT ***26*** *18:14:24.2±0.4,4.˚04N×126.˚78E,h29km,MW5.1,Moment Tensor Solution. s28,c34; s49,c66; Moment tensor: Scale 10^16^Nm; Mrr4.39±.31; Mθθ0.84±.19; Mϕϕ-5.23±.23; Mrθ0.97±.32; Mθϕ-1.04±.19; Mϕr-0.71±.32; Best double couple: M=5.10000×10^16^ NP1:ϕs25.00000°,δ44.00000°, λ113.00000°. NP2:ϕs174.00000°,δ50.00000°,λ69.00000°. Principal axes: T 4.7300, Plg74.0000°, Azm20.0000°; N 0.7100, Plg16.0000°, Azm188.0000°; P -5.4300, Plg3.0000°, Azm279.0000°; Data Used: ll IU IC G.*

DJA ***26*** *18:14:24.8±0.4,4.˚N±3.˚×12.˚7E±.˚,h78km±5km,M4.8/46, mB5.2/28,mb5.0/46,MLv5.4/9,Mw(mB)4.6/28*

ISC 26 18:14:21.0±0.2,4.˚05N±0.˚03×126.˚68E±0.˚05,h39km±2km, h39km;pP-P,n558,σ1s21/582,mb5.1/119,MS4.3/42, 82C-71D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.21**	**253**	P		Sn	18 15 50.2	+3.7
GAMI	**Galela, Maluku**	**2.46**	**153**	P		**Pn**	**18 14 58.3**	**-0.3**
MATI	**Mati**	**2.91**	**352**	*e*P		Pn	18 15 07.5	+2.7
DAV	**Davao City (W)**	**3.19**	**340**	*e*Pn		Pn	18 15 12.4	+3.6
DAV				*e*Sn		**Sn**	**18 15 42.0**	**-3.6**
DAV	**Davao City (W)**	**3.19**	**340**	P		Pn	18 15 13.7	+4.9
DAV	**Davao City (W)**	**3.19**	**340**	Pn		Pn	18 15 12.7	+4.0
	baz=251,slow=2.0,SNR=8.1							
DAV				Sn		**Sn**	**18 15 43.4**	**-2.2**
	62nm,0.3s,baz=73,slow=19,SNR=8.3							
TNTI	**Ternate**	**3.33**	**168**	P		**Pn**	**18 15 11.1**	**+0.5**
TNTI				S		**Sn**	**18 15 49.8**	**+0.9**
KCP	**Kidapawan**	**3.34**	**332**	*e*P		Pn	18 15 14.8	+4.0
KCP				*i* S		Sn	18 15 58.4	+9.1
CTBH	**Cotabato--PC H**	**3.98**	**323**	*e*P		Pn	18 15 21.4	+2.0
BUKP	**Musuan**	**4.13**	**337**	*e*P		Pn	18 15 26.7	+5.0
KMSI	**Cibinong**	**4.38**	**218**	P		Pn	18 15 28.5	+3.4
LBMI	**Labuha**	**4.73**	**170**	P		**Pn**	**18 15 31.0**	**+1.1**
CGP	**Cagayan de Oro**	**4.80**	**336**	*e*P		Pn	18 15 33.4	+2.5
CGP				*i* S		Sn	18 16 14.0	-11
BUTP	**Butuan**	**5.00**	**348**	*e*P		Pn	18 15 39.2	+5.7
PAGZ	**Pagadian**	**5.00**	**319**	*e*P		Pn	18 15 36.6	+3.0
ZMPH	**Zamboanga City**	**5.43**	**302**	*i*P		Pn	18 15 40.6	+1.2
ZMPH				*i* S		**Sn**	**18 16 41.1**	**+0.4**
IPIL	**Ipil**	**5.52**	**312**	*i*P		Pn	18 15 42.6	+1.9
IPIL				*e*S		**Sn**	**18 16 45.7**	**+2.6**
DCPH	**Dipolog City**	**5.59**	**324**	*e*P		Pn	18 15 45.8	+4.1
MRSI	**Marisa**	**5.92**	**233**	P		Pn	18 15 49.3	+3.1
	465nm,0.6s,5μm2.4nm							
TBP	**Tagbilaran**	**6.26**	**334**	*e*P		Pn	18 15 56.8	+5.9
MSLP	**Maasin**	**6.31**	**343**	*e*P		Pn	18 15 56.2	+4.7
LUWI	**Luwuk**	**6.39**	**218**	P		Pn	18 15 58.4	+5.7
	2μm,1.2s,14μm5.3nm							
LUWI	**Luwuk**	**6.39**	**218**	P		Pn	18 15 59.2	+6.5
	baz=25,SNR=47							
SWI	**Sorong**	**6.69**	**137**	P		**Pn**	**18 15 56.6**	**-0.2**
	253nm,0.9s,2μm0.9nm							
LLP	**Lapu-Lapu**	**6.78**	**337**	*e*P		Pn	18 16 00.5	+2.4
OCLP	**Ormoc**	**7.25**	**344**	*e*P		Pn	18 16 09.3	+4.8
PLP	**Palo**	**7.27**	**347**	*e*P		Pn	18 16 08.4	+3.7
MSAI	**Masohi**	**7.68**	**163**	P		Pn	18 16 14.3	+3.9
	33nm,1.2s,2μm0.1nm							
GUIM	**Jordan**	**7.69**	**328**	*e*P		Pn	18 16 14.9	+4.3
MYLDM	**Lahad Datu**	**8.23**	**278**	P		Pn	18 16 23.9	+5.9
MYLDM	**Lahad Datu**	**8.23**	**278**	P		Pn	18 16 23.7	+5.7
	39nm,1.4s,3μm							
TSM	**Tawau**	**8.79**	**272**	P		Pn	18 16 31.4	+5.8
FAKI	**Fak Fak**	**8.88**	**141**	P		**Pn**	**18 16 27.3**	**+0.4**
	110nm,1.2s,1μm							
RKPI	**Ransiki, Papua**	**9.31**	**126**	P		**Pn**	**18 16 32.6**	**-0.1**
	169nm,1.0s,1μm							
SDKM	**Sandakan**	**9.58**	**280**	P		Pn	18 16 42.3	+5.7
KKSI	**Kolaka, Sulawe**	**9.59**	**212**	P		**Pn**	**18 16 37.6**	**+1.0**
	70nm,1.0s,901nm							
TTSI	**Tana Toraja**	**9.83**	**224**	P		Pn	18 16 43.4	+3.4
	220nm,1.2s,2μm							
KDM	**Kudat**	**10.21**	**287**	P		Pn	18 16 51.4	+6.4
BBSI	**Bau Bau**	**10.33**	**203**	P		Pn	18 16 53.3	+6.6
	87nm,1.2s,1μm							
SMKI	**Samarinda**	**10.47**	**245**	P		Pn	18 16 53.4	+4.8
	98nm,1.2s,3μm							
SPSI	**Sidrap Palu**	**10.54**	**221**	P		Pn	18 16 55.0	+5.4
	73nm,0.9s,775nm							
KKM	**Kota Kinabalu**	**10.61**	**281**	*e*Pn		Pn	18 16 54.3	+3.6
KKM	**Kota Kinabalu**	**10.61**	**281**	P		Pn	18 16 57.0	+6.3
KKM	**Kota Kinabalu**	**10.61**	**281**	P		Pn	18 16 57.1	+6.4
	6.7nm,1.1s,1μm							
BAKI	**Biak**	**10.76**	**119**	P		**Pn**	**18 16 54.0**	**+1.3**
	260nm,1.1s							
KAPI	**Kappang**	**11.36**	**218**	Pn		Pn	18 17 04.4	+3.6
KAPI				Sn		Sn	18 19 12.5	+6.0
KAPI	**Kappang**	**11.36**	**218**	P		Pn	18 17 05.4	+4.6
	60nm,1.0s,670nm							
KAPI	**Kappang**	**11.36**	**218**	Pn		Pn	18 17 04.4	+3.6
	1.6nm,0.3s,baz=38,slow=8.1,SNR=13							
KAPI				Sn		Sn	18 19 12.5	+6.0
	baz=205,slow=19,SNR=1.8							
TLE	**Tual**	**11.37**	**148**	P		**Pn**	**18 17 01.0**	**+0.1**
	173nm,1.2s							
BKSI	**Bulukumba**	**11.38**	**215**	P		Pn	18 17 04.7	+3.5
	45nm,1.1s,452nm							
TGY	**Tagaytay City**	**11.38**	**331**	Pn		Pn	18 17 06.4	+3.8
TGY	**Tagaytay City**	**11.48**	**331**	Pn		Pn	18 17 06.4	+3.8
	11nm,0.3s,baz=288,slow=18,SNR=2.5							
MTKI	**Muara Teweh, K**	**12.78**	**247**	P		P	18 17 26.2	-4.4
	113nm,1.2s							
KBKI	**Kotabaru**	**12.79**	**235**	P		P	18 17 25.3	-5.5
	68nm,1.2s,757nm							
MMRI	**Maumere**	**13.36**	**199**	P		P	18 17 43.0	+5.9
BTM	**Bintulu**	**13.60**	**267**	P		**P**	**18 17 37.2**	**-2.5**
BBKI	**Banjar Baru**	**13.99**	**238**	P		**P**	**18 17 42.6**	**-1.5**
	184nm,1.4s,4μm							
SBUM	**Sibu**	**14.53**	**264**	P		**P**	**18 17 48.7**	**-1.3**
SBUM	**Sibu**	**14.53**	**264**	P		**P**	**18 17 48.9**	**-1.1**
	9.0nm,1.5s,1μm							
STKI	**Sintang**	**15.70**	**256**	P		P	18 18 06.1	+3.0
	43nm,1.0s							
PBKI	**Pangkalan Bun**	**16.43**	**246**	P		**P**	**18 18 13.1**	**+1.8**
	261nm,1.1s,2μm							
KSM	**Kuching**	**16.55**	**262**	*e*P		**P**	**18 18 13.9**	**+1.3**
	54nm,0.8s							
KSM	**Kuching**	**16.55**	**262**	P		**P**	**18 18 14.9**	**+2.3**
KSM	**Kuching**	**16.55**	**262**	P		P	18 18 15.6	+3.0
	39nm,1.9s,919nm							
KSM	**Kuching**	**16.55**	**262**	P		**P**	**18 18 15.0**	**+2.4**
	baz=38,SNR=11							
KHKI	**Kahang-Kahang**	**16.55**	**222**	P		**P**	**18 18 13.6**	**+1.0**
	54nm,0.9s							
KMMI	**Kalianget**	**16.81**	**229**	P		**P**	**18 18 17.4**	**+2.0**
	75nm,1.4s							
BYJI	**Banyuwangi**	**17.31**	**225**	P		**P**	**18 18 23.7**	**+2.8**
	266nm,1.0s,18μm							
GMJI	**Gumukmas**	**18.01**	**227**	P		**P**	**18 18 30.0**	**+1.4**
	66nm,0.9s							
SJI	**Sawahan**	**18.93**	**232**	P		**P**	**18 18 37.8**	**-1.2**
	65nm,0.9s							
PWJI	**Pagerwojo**	**19.08**	**231**	P		**P**	**18 18 39.3**	**-1.2**
	84nm,1.1s							
SMRI	**Semarang**	**19.61**	**236**	S		**PcP**	**18 23 03.2**	**-2.1**
	baz=37,SNR=4.5							
TPUB	**Ta-pu**	**20.01**	**344**	*e*P		**P**	**18 18 49.6**	**-1.0**
	76nm,0.8s							
TPI	**Tanjungpandan**	**20.18**	**251**	P		Pn	18 18 54.8	+0.2
	29nm,1.0s,388nm							
GUMO	**Guam**	**20.30**	**61**	LR		LR	18 25 03.2	
	comp=Z,555nm,21.0s,baz=235,slow=32							
BJII	**Banjamegara**	**20.37**	**236**	P		Pn	18 18 57.0	+0.2
	53nm,1.9s							

SSLB	**Suanglung**	**20.39**	**345**	*e*P		**P**	**18 18 54.1**	**-0.6**
	35nm,0.7s							
TGJI	**Tegal**	**20.61**	**238**	P		Pn	18 18 59.7	+0.1
	83nm,1.3s							
PPBI	**Pangkal Pinang**	**21.44**	**254**	P		P	18 19 10.6	+4.5
	42nm,0.9s,544nm							
LEM	**Lembang**	**21.88**	**240**	P		**P**	**18 19 13.7**	**+2.7**
	88nm,1.1s							
FITZ	**Fitzroy Crossi**	**22.04**	**183**	P		**P**	**18 19 10.9**	**-1.5**
FITZ	**Fitzroy Crossi**	**22.04**	**183**	P		**P**	**18 19 10.9**	**-1.5**
	24nm,0.5s,baz=11,slow=11,SNR=3.9							
CISI	**Cisompet, Garu**	**22.08**	**239**	P		P	18 19 16.0	+3.0
	98nm,1.4s							
QZH	**Quanzhou**	**22.18**	**340**	P		**P**	**18 19 16.0**	**+2.1**
QZH				S		**S**	**18 23 12.5**	**-3.6**
QZH				LR		LR		
	comp=Z,2μm,15.7s							
QIZ	**Qiongzhong**	**22.18**	**313**	P		**P**	**18 19 14.8**	**+0.7**
QIZ				S		**S**	**18 23 17.8**	**+1.5**
QIZ				pmax		pmax		
	comp=Z,36nm,1.5s							
QIZ				pmax		pmax		
	comp=Z,600nm,3.8s							
QIZ				LR		LR		
	comp=Z,630nm,23.2s							
CBJI	**Citeko**	**22.37**	**242**	P		**P**	**18 19 17.1**	**+1.1**
	comp=Z,247nm,1.1s							
DBJI	**Dramaga**	**22.52**	**242**	P		**P**	**18 19 17.8**	**+0.1**
	comp=Z,47nm,1.4s,comp=Z,10μm							
MYKOM	**Kota Tinggi**	**22.91**	**265**	P		**P**	**18 19 22.7**	**+0.9**
MYKOM	**Kota Tinggi**	**22.91**	**265**	P		**P**	**18 19 23.0**	**+1.2**
	comp=Z,7.8nm,1.2s,comp=Z,458nm							
BTDF	**Bukit Timah Da**	**23.04**	**264**	P		**P**	**18 19 24.2**	**+1.1**
	comp=Z,

CD2 pP **pP** **18 21 15.0 -0.3**
CD2 sP **sP** **18 21 19.0 -1.0**
CD2 PP **PP** **18 22 21.8 -1.0**
CD2 PcP **PcP** **18 23 40.0 +0.1**
CD2 S **S** **18 26 30.8 +1.1**
CD2 sS **sS** **18 26 46.8 -0.9**
CD2 PcS **PcS** **18 27 25.5 -0.8**
CD2 SS **SnSn** **18 28 43.0 +1.2**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,230nm,5.2s
CD2 LR LR
comp=N,600nm,18.6s
CD2 LR LR
comp=E,790nm,18.6s
CD2 LR LR
comp=Z,770nm,19.6s
DL2 Dalian 35.00 353 P **P** **18 21 10.0 +0.3**
DL2 pmax pmax
comp=Z,93nm,0.9s
HNR Honiara 35.75 112 LR LR 18 34 47.7
comp=Z,210nm,18.2s,baz=270,slow=34
BJI Beijing 37.07 347 P **P** **18 21 27.5 +0.1**
BJI PP **PnPn** **18 22 55.0 +2.0**
BJI S **S** **18 27 12.0 +1.3**
BJI pmax pmax
comp=Z,65nm,0.7s
BJI pmax pmax
comp=Z,290nm,4.7s
BJI LR LR
comp=N,270nm,17.6s
BJI LR LR
comp=E,480nm,17.6s
SNY Shenyang 37.72 356 ⇑P **P** **18 21 33.5 +0.6**
SNY pmax pmax
comp=Z,37nm,0.8s
SNY LR LR
comp=N,500nm,5.4s
SNY LR LR
comp=E,130nm,6.0s
SNY LR LR
comp=Z,260nm,16.8s
NWAO Narrogin (SRO) 37.85 193 *e*P **P** **18 21 33.7 -0.5**
NWAO Narrogin (SRO) 37.85 193 P **P** **18 21 33.9 -0.3**
comp=Z,35nm,0.8s,baz=21,slow=9.6,SNR=6.1
LZH Lanzhou 38.20 329 ⇑P **P** **18 21 37.3 -0.1**
LZH pP **pP** **18 21 46.8 -1.5**
LZH sP **sP** **18 21 51.0 -2.0**
LZH PP **PnPn** **18 23 12.0 +5.0**
LZH PcP **PcP** **18 23 50.5 -0.9**
LZH *e*S **S** **18 27 26.5 -2.0**
LZH sS **sS** **18 27 44.5 -2.3**
LZH pmax pmax
comp=Z,65nm,1.4s
LZH pmax pmax
comp=Z,200nm,4.0s
LZH LR LR
comp=N,850nm,16.8s
LZH LR LR
comp=E,720nm,16.6s
LZH LR LR
comp=Z,920nm,18.8s
STKA Stephens Creek 38.44 159 *e*P **P** **18 21 39.1 -0.1**
comp=Z,15nm,0.9s
STKA Stephens Creek 38.44 159 P **P** **18 21 39.1 -0.1**
comp=Z,55nm,0.7s,baz=346,slow=9.2,SNR=21
HHC Hu-ho-hao-te 39.08 342 *e*P **P** **18 21 44.5 -0.1**
HHC sP **sP** **18 21 58.0 -2.2**
HHC PP **PnPn** **18 23 19.3 +1.9**
HHC PcP **PcP** **18 23 54.5 +0.5**
HHC ScP **ScP** **18 27 39.0 -0.5**
HHC S **S** **18 27 42.5 +1.0**
HHC sS **sS** **18 27 58.5 -1.3**
HHC SS **SS** **18 30 27.5 -7.6**
HHC ScS **ScS** **18 31 49.3 -1.6**
HHC pmax pmax
comp=Z,49nm,0.8s
HHC pmax pmax
comp=Z,420nm,6.3s
HHC LR LR
comp=N,930nm,13.2s
HHC LR LR
comp=E,590nm,12.7s
HHC LR LR
comp=Z,800nm,12.8s
CN2 Changchun 39.60 359 *e*P **P** **18 21 49.0 +0.3**
CN2 *es*P **sP** **18 22 02.8 -1.6**
CN2 *e*S **S** **18 27 51.0 +2.0**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,18.0s
CN2 LR LR
comp=E,300nm,18.0s
CN2 LR LR
comp=Z,200nm,15.0s
SHL Shillong 39.65 306 *e*P **P** **18 21 50.0 +0.4**
comp=Z,8.0nm,1.0s
SHL *e*S **S** **18 27 46.0 -4.6**
USRK Ussuriysk Arra 40.26 6 P **P** **18 21 54.7 +0.5**
comp=Z,7.8nm,0.8s,baz=185,slow=8.6,SNR=6.2
MDJ Mudanjiang 40.48 3 P **P** **18 21 56.5 +0.5**
MDJ pP **pP** **18 22 07.5 +0.4**
MDJ sP **sP** **18 22 13.5 +1.8**
MDJ PcP **PcP** **18 23 58.8 +0.6**
MDJ pmax pmax
comp=Z,22nm,1.3s
MDJ pmax pmax
comp=Z,96nm,4.2s
ASAJ Asahikawa 42.30 17 P **P** **18 22 11.0 +0.1**
ASAJ Asahikawa 42.30 17 P **P** **18 22 11.0 +0.1**
comp=Z,9.6nm,0.7s,baz=215,slow=16,SNR=4.5
CAN Canberra 44.42 154 *e*P **P** **18 22 26.9 -1.3**
CAN pmax pmax
comp=Z,37nm,0.8s
CAN Canberra 44.42 154 *e*P **P** **18 22 26.9 -1.3**
comp=Z,37nm,0.8s
YSS Yuzh-Sakhalins 44.95 16 *e*P **P** **18 22 33.9 +1.7**
HIA Hailar 45.44 354 *e*P **P** **18 22 35.5 -0.6**
comp=Z,22nm,0.8s
DZM Mont Dzumac 46.76 125 P **P** **18 22 46.6 -0.4**
DZM Mont Dzumac 46.76 125 P **P** **18 22 46.6 -0.4**
comp=Z,9.0nm,1.0s,baz=304,slow=7.3,SNR=6.2
SONM Songino Array 46.98 341 P **P** **18 22 48.0 -0.4**
SONM PcP **PcP** **18 24 20.1 -0.3**
SONM Songino Array 46.98 341 P **P** **18 22 48.0 -0.4**
comp=Z,8.4nm,1.0s,baz=159,slow=8.5,SNR=7.0
SONM PcP **PcP** **18 24 20.1 -0.3**
comp=Z,5.4nm,1.0s,baz=156,slow=3.5,SNR=3.9
SONM LR LR 18 46 44.2
comp=Z,310nm,18.6s,baz=249,slow=42
HYB Hyderabad 48.96 290 *i* P P 18 22 58.5 -5.6
HYB *es*P sP 18 23 17.0 -2.9
TLY Talaya 51.21 342 *e*P **P** **18 23 20.7 +0.1**
TLY *e*S **sS** **18 30 56.2 +1.1**
TLY pmax pmax
comp=Z,13nm,0.8s
TLY MLR MLR
comp=Z,263nm,20.0s
IRK Irkutsk 51.51 343 *e*P **P** **18 23 23.3 +0.5**
IRK *e* 18 23 40.8
IRK pmax pmax
comp=Z,42nm,2.3s
WMQ Urumqi 52.44 325 P **P** **18 23 30.0 +0.1**
WMQ pP **pP** **18 23 40.0 -1.3**
WMQ sP **sP** **18 23 44.0 -1.8**
WMQ PcP **PcP** **18 24 40.0 -0.3**
WMQ PP **PP** **18 25 30.0 +1.0**
WMQ ScP **ScP** **18 28 34.0 -0.7**
WMQ S **S** **18 30 52.0 -1.5**
WMQ ScS **ScS** **18 33 14.0 -2.9**
WMQ SS **SS** **18 34 29.0 -2.9**
WMQ pmax pmax
comp=Z,21nm,1.0s
WMQ pmax pmax
comp=Z,190nm,5.0s
WMQ LR LR
comp=N,790nm,16.0s
WMQ LR LR
comp=E,540nm,16.0s
WMQ LR LR
comp=Z,590nm,16.0s

PETK Petropavlovsk- 55.15 22 P **P** **18 23 49.4 -0.1**
PETK Petropavlovsk- 55.15 22 P **P** **18 23 49.4 -0.1**
PETK Petropavlovsk- 55.15 22 P **P** **18 23 49.4 -0.1**
comp=Z,5.3nm,0.6s,baz=190,slow=7.2,SNR=7.6
PETK LR LR 18 48 09.7
comp=Z,131nm,19.2s,baz=202,slow=37
MKAR Makanchi Array 57.27 325 P **P** **18 24 04.1 -0.7**
MKAR 18 24 58.6
MKAR Makanchi Array 57.27 325 P **P** **18 24 04.1 -0.7**
MKAR PcP **PcP** **18 24 58.6 -0.2**
MKAR ScP **ScP** **18 28 57.4 +1.6**
MKAR Makanchi Array 57.27 325 P **P** **18 24 04.1 -0.7**
comp=Z,7.1nm,0.6s,baz=116,slow=7.2,SNR=10
MKAR PcP **PcP** **18 24 58.6 -0.2**
comp=Z,5.1nm,0.7s,baz=118,slow=3.5,SNR=3.9
MKAR ScP **ScP** **18 28 57.4 +1.6**
comp=Z,3.5nm,1.0s,baz=108,slow=4.7,SNR=5.5
MKAR LR LR 18 50 49.6
comp=Z,438nm,18.3s,baz=234,slow=38
KSH Kashi 57.78 315 P P 18 24 13.3 +4.6
KSH pP pP 18 24 23.3 +3.1
KSH sP sP 18 24 27.0 +2.3
KSH PcP **PcP** **18 25 03.8 +2.7**
KSH PP PP 18 26 23.0 +5.9
KSH ScP **ScP** **18 29 00.0 +1.7**
KSH PcS **PcS** **18 29 04.8 +2.3**
KSH S **S** **18 32 09.3 +3.9**
KSH sS sS 18 32 27.0 +2.6
KSH SS **SS** **18 36 02.3 +5.8**
KSH pmax pmax
comp=Z,64nm,1.6s
KSH LR LR
comp=N,190nm,5.5s
KSH LR LR
comp=E,120nm,4.5s
KSH LR LR
comp=Z,110nm,4.2s
YAK Yakutsk 57.89 2*c i*P **P** **18 24 08.8 0.0**
YAK *e* 18 25 00.6
YAK *e*S **S** **18 32 06.2 +0.5**
YAK *e* 18 33 51.1
YAK pmax pmax
comp=Z,82nm,0.9s
YAK pmax pmax
comp=N,31nm,1.0s
YAK pmax pmax
comp=E,16nm,1.3s
YAK pmax pmax
comp=Z,231nm,4.9s
YAK pmax pmax
comp=E,134nm,5.3s
YAK pmax pmax
comp=N,199nm,5.3s
YAK smax smax
comp=N,52nm,10.6s
YAK smax smax
comp=E,44nm,12.6s
TKM2 Tokmak 2 59.48 318 *e*P **P** **18 24 19.6 -0.9**
TKM2 pmax pmax
comp=Z,10.0nm,1.0s
TKM2 MLR MLR
comp=Z,382nm,22.0s
TKM2 Tokmak 2 59.48 318 *e*P **P** **18 24 19.6 -0.9**
comp=Z,10nm,1.0s
AAK Ala-Archa 60.09 318⇓ *e*P **P** **18 24 26.2 +1.5**
AAK pmax pmax
comp=Z,42nm,2.5s
AAK Ala-Archa 60.09 318 P **P** **18 24 24.2 -0.5**
AAK Ala-Archa 60.09 318 P **P** **18 24 24.2 -0.5**
comp=Z,3.6nm,0.8s,baz=108,slow=6.4,SNR=6.4
ZAA0 Zalesovo Array 60.28 333 *e*P **P** **18 24 24.0 -1.5**
ZALV Zalesovo Beam 60.28 333 P **P** **18 24 24.0 -1.6**
ZALV Zalesovo Beam 60.28 333 P **P** **18 24 23.9 -1.6**
ZALV Zalesovo Beam 60.28 333 P **P** **18 24 23.9 -1.6**
comp=Z,2.7nm,0.5s,baz=136,slow=6.4,SNR=5.2
ZALV LR LR 18 52 21.1
comp=Z,246nm,19.2s,baz=249,slow=38
KBL Kabul 61.29 307 *e*P **P** **18 24 31.8 -1.3**
KBL pmax pmax
comp=Z,13nm,0.8s
KBL Kabul 61.29 307 *e*P **P** **18 24 31.8 -1.3**
comp=Z,13nm,0.8s
KURBB Kurchatov Arra 61.45 327 P **P** **18 24 32.7 -0.8**
comp=Z,11nm,0.8s,baz=126,slow=6.0,SNR=21
KURBB LR LR 18 51 05.9
comp=Z,99nm,20.3s,baz=115,slow=36
KURK Kurchatov 61.45 327*c i*P **P** **18 24 32.6 -0.9**
KURK pmax pmax
comp=Z,38nm,1.2s
KURK Kurchatov 61.45 327 *e*P **P** **18 24 32.8 -0.7**
comp=Z,20nm,0.8s
KURK Kurchatov 61.45 327 P **P** **18 24 32.8 -0.7**
comp=Z,155nm,0.8s,SNR=10.0
SEY Seymchan 61.73 13⇑ *e*P **P** **18 24 36.0 +0.8**
URZ Urewera 62.81 137 LR LR 18 51 44.2
comp=Z,201nm,18.2s,baz=312,slow=36
AFI Afiamalu 63.59 108 LR LR 18 49 03.3
comp=Z,134nm,19.4s,baz=30,slow=33
BVAR Borovoye Array 67.03 327 P **P** **18 25 09.5 -0.6**
BVAR Borovoye Array 67.03 327 P **P** **18 25 09.5 -0.6**
BVAR Borovoye Array 67.03 327 P **P** **18 25 09.5 -0.6**
comp=Z,13nm,0.8s,baz=120,slow=8.5,SNR=19
BVAR LR LR 18 56 17.4
comp=Z,202nm,19.6s,baz=112,slow=38
BRVK Borovoye 67.10 327*d i*P **P** **18 25 10.5 -0.1**
BRVK pmax pmax
comp=Z,25nm,0.8s
BRVK Borovoye 67.10 327 *e*P **P** **18 25 09.8 -0.7**
comp=Z,22nm,0.8s
BRVK Borovoye 67.10 327 P **P** **18 25 10.4 -0.1**
comp=Z,179nm,0.8s,SNR=6.8
TIXI Tiksi 67.53 1 *e*P **P** **18 25 12.1 -0.7**
TIXI pmax pmax
comp=Z,20nm,0.9s
TIXI Tiksi 67.53 1 *e*P **P** **18 25 12.1 -0.7**
comp=Z,20nm,0.9s
BILL Bilibino 69.26 15⇓ *e*P **P** **18 25 23.5 -0.3**
BILL *e* 18 25 49.6
BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL MLR MLR
comp=Z,100nm,19.0s
ABKT Ailbek 70.66 309 P **P** **18 25 33.9 +0.9**
comp=Z,74nm,1.3s,SNR=8.1
CASY Casey 71.13 187 *e*P **P** **18 25 34.2 -0.9**
comp=Z,22nm,1.1s
ABKAR Akbulak array 71.87 321 *e*P **P** **18 25 38.5 -1.6**
comp=Z,11nm,0.9s
AKTO Aktyubinsk 73.38 322 P **P** **18 25 48.1 -0.9**
AKTO Aktyubinsk 73.38 322 P **P** **18 25 48.1 -0.9**
AKTO Aktyubinsk 73.38 322 P **P** **18 25 48.1 -0.9**
comp=Z,11nm,0.8s,baz=120,slow=8.9,SNR=9.4
SVE Sverdlovsk 73.66 328⇑ *e*P **P** **18 25 50.4 -0.1**
SVE pmax pmax
comp=Z,42nm,1.5s
ARU Arti 74.64 328*c i*P **P** **18 25 55.5 -0.8**
ARU 18 28 39.7
ARU S **S** **18 35 30.7 +1.4**
ARU SS **SS** **18 40 17.4 +0.5**
ARU pmax pmax
comp=Z,20nm,1.2s
ARU Arti 74.64 328 P **P** **18 25 55.4 -0.8**
comp=Z,120nm,0.8s,SNR=5.4
SOKR Solikamsk 76.41 331 *e*P **P** **18 26 06.2 -0.1**
SOKR pmax pmax
comp=Z,10.0nm,0.9s
KBD Kabd 78.42 299 *e*P **P** **18 26 17.1 -1.1**
KBD AMb AMb 18 26 19.0
comp=Z,16nm,0.7s
RDF Al-Radifah 78.54 299 *e*P **P** **18 26 18.0 -0.9**
RDF AMb AMb 18 26 19.7
comp=Z,42nm,1.4s
MIB Mutribah 78.75 299 *e*P **P** **18 26 18.4 -1.7**
MIB AMb AMb 18 26 20.3
comp=Z,42nm,0.8s
NAY Al-Naaiem 78.82 299 *e*P **P** **18 26 18.7 -1.7**
NAY AMb AMb 18 26 20.5
comp=Z,24nm,1.5s
RAYN Ar Rayn 80.31 293 P **P** **18 26 28.5 -0.2**
comp=Z,121nm,0.8s,SNR=8.2
SVW2 Sparrevohn 80.55 29 *e*P **P** **18 26 30.4 +1.3**
comp=Z,10nm,0.8s
DGRG David-gareji 80.82 311 P **P** **18 26 31.8 +0.7**
TBLG Delisi 81.31 311 *i* P **P** **18 26 34.1 +0.5**
TBLG Delisi 81.31 311 P **P** **18 26 34.1 +0.5**

ABPO Ambohimpanom 81.37 250 *e*P **P** **18 26 33.6 -1.0**
ABPO pmax pmax
comp=Z,12nm,0.7s
ABPO Ambohimpanom 81.37 250 *e*P **P** **18 26 33.6 -1.0**
comp=Z,12nm,0.7s
KDAK Kodiak Island 81.65 32 P **P** **18 26 35.3 +0.3**
KDAK Kodiak Island 81.65 32 P **P** **18 26 35.3 +0.3**
comp=Z,15nm,0.8s,baz=263,slow=7.8,SNR=6.2
GOR Geri 81.78 312 P P 18 26 44.6 +8.4
RSO Redoubt South 81.84 30 *e*P **P** **18 26 36.8 +0.5**
ZEI Tsey 81.97 312 *e*P **P** **18 26 37.3 -0.1**
ZEI pmax pmax
comp=Z,14nm,1.0s
AKH Akhalkalaki 82.23 311 P **P** **18 26 39.3 +0.6**
ONI Oni 82.29 312 P **P** **18 26 40.0 +1.2**
PPLA Purkeypile 82.37 27 *e*P **P** **18 26 39.9 +1.0**
comp=Z,68nm,1.8s
KBZ Khabaz 82.73 313 P **P** **18 26 40.7 -0.2**
KBZ Khabaz 82.73 313 P **P** **18 26 40.7 -0.2**
KBZ Khabaz 82.73 313 P **P** **18 26 40.7 -0.2**
comp=Z,2.2nm,0.8s,baz=59,slow=6.8,SNR=9.6
KBZ LR LR 19 09 34.5
comp=Z,132nm,18.6s,baz=299,slow=40
KIV Kislovodsk 82.88 314*ke*P **P** **18 26 42.7 +0.8**
KIV *e* 18 26 51.3
KIV pmax pmax
comp=Z,5.0nm,0.6s
ATD Arta Tunnel 83.17 281 LR LR 18 58 45.0
comp=Z,38nm,21.9s,baz=69,slow=32
TRF Thorofare Moun 83.28 27 *e*P **P** **18 26 43.5 -0.2**
COLD Coldfoot 83.62 23 *e*P **P** **18 26 46.6 +1.5**
PMR Palmer 83.69 29 *e*P **P** **18 26 45.5 -0.1**
PMR pmax pmax
comp=Z,41nm,1.0s
PMR Palmer 83.69 29 *e*P **P** **18 26 45.5 -0.1**
comp=Z,42nm,1.0s
VNDA Vanda 83.75 173 *e*P **P** **18 26 46.0 +0.5**
comp=Z,16nm,1.0s
VNDA Vanda 83.75 173 P **P** **18 26 45.6 +0.1**
comp=Z,13nm,0.9s,baz=313,slow=6.5,SNR=16
VRHR Novokhopersk 83.76 321 *e*P **P** **18 26 45.1 -1.1**
VRHR pmax pmax
comp=N,7.0nm,0.9s
VRHR pmax pmax
comp=Z,10.0nm,0.9s
VRHR pmax pmax
comp=E,2.0nm,0.5s
MCK McKinley 83.90 26 *e*P **P** **18 26 46.7 0.0**
MCK McKinley 83.90 26 *e*P **P** **18 26 46.7 0.0**
SML Sawmill 84.08 28 *e*P **P** **18 26 48.1 +0.4**
SML pmax pmax
comp=Z,23nm,1.1s
SML Sawmill 84.08 28 *e*P **P** **18 26 48.1 +0.4**
comp=Z,23nm,1.1s
COLA College 84.43 25 *e*P **P** **18 26 48.7 -0.5**
COLA pmax pmax
comp=Z,12nm,1.1s
COLA MLR MLR
comp=Z,73nm,19.0s
COLA College 84.43 25 *e*P **P** **18 26 48.7 -0.5**
comp=Z,3.2nm,1.1s
SBA Scott Base 84.66 172 *e*P **P** **18 26 52.0 +1.9**
SBA pmax pmax
comp=Z,208nm,2.7s
SBA Scott Base 84.66 172 *e*P **P** **18 26 50.0 -0.1**
comp=Z,208nm,2.7s
ILAR Eielson Array 84.84 25 P **P** **18 26 50.5 -0.8**
ILAR Eielson Array 84.84 25 P **P** **18 26 50.5 -0.8**
comp=Z,7.8nm,1.0s,baz=244,slow=5.8,SNR=15
SOC Sochi 85.03 313 *e*P **P** **18 26 52.0 -0.8**
VORD Divnogorie 85.23 321 *e*P **P** **18 26 52.9 -0.7**
VORD pmax pmax
comp=Z,10.0nm,0.5s
VORD pmax pmax
comp=N,6.0nm,0.3s
VORD pmax pmax
comp=E,10.0nm,0.5s
DIV Divide 85.29 29 *e*P **P** **18 26 55.0 +1.2**
VSR Storozhevoye 85.31 321 *e*P **P** **18 26 52.9 -1.1**
VSR pmax pmax
comp=Z,20nm,1.3s
VSR pmax pmax
comp=N,2.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,1.3s
TMCR Tamitsa 85.79 334 *e*P **P** **18 26 56.6 +0.5**
TMCR pmax pmax
comp=Z,48nm,0.9s
RAGM Ragged Mountai 85.83 30 *e*P **P** **18 26 58.0 +1.5**
comp=Z,40nm,1.2s
BMRM Bremner River 85.86 29 *e*P **P** **18 26 57.8 +1.1**
DOT Dot Lake 86.07 27 *e*P **P** **18 26 58.8 +1.2**
MALT Malatya 86.15 308 *e*P **P** **18 26 57.5 -1.1**
MALT pmax pmax
comp=Z,6.0nm,0.7s
MALT MLR MLR
comp=Z,132nm,20.0s
MALT Malatya 86.15 308 *e*P **P** **18 26 57.5 -1.1**
comp=Z,5.7nm,0.7s
MOS Moscow 86.15 325 *e*P **P** **18 26 56.7 -1.3**
MOS *e* 18 30 20.1
MOS pmax pmax
comp=Z,103nm,1.3s
MOS pmax pmax
comp=Z,100nm,1.4s
ANN Anapa 86.64 315 *e*P **P** **18 26 59.2 -1.5**
ANN pmax pmax
comp=Z,27nm,0.9s
OBN Obninsk 86.77 325*ae*P **P** **18 27 00.7 -0.4**
OBN pmax pmax
comp=Z,85nm,1.2s
OBN MLR MLR
comp=Z,200nm,19.0s
APA Apatity 87.54 337 *e*P **P** **18 27 06.5 +1.9**
APA *e*S **S** **18 37 48.0 +5.1**
APA pmax pmax
comp=Z,16nm,0.8s
APA MLR MLR
comp=Z,900nm,20.0s
ASF Jabal al Asfar 87.69 302 P **P** **18 27 06.5 +0.3**
ASF Jabal al Asfar 87.69 302 P **P** **18 27 06.5 +0.3**
comp=Z,6.1nm,0.6s,baz=333,slow=3.9,SNR=16
JOF Joensuu 88.87 333 *e*P **P** **18 27 10.2 -0.8**
JOF pmax pmax
comp=Z,17nm,0.8s
JOF Joensuu 88.87 333 *ep* P **18 27 10.2 -0.8**
comp=Z,16nm,0.8s
MMAI Mount Meron Ar 88.89 303 P **P** **18 27 12.7 +0.9**
MMAI Mount Meron Ar 88.89 303 P **P** **18 27 12.7 +0.9**
comp=Z,2.0nm,0.5s,baz=69,slow=7.9,SNR=7.0
SIM Simferopol' 88.99 315 *e*P **P** **18 27 12.0 +0.1**
SIM pmax pmax
comp=Z,11nm,0.7s
KMBO Kilima Mbogo 89.51 269 P **P** **18 27 15.3 -0.1**
KMBO Kilima Mbogo 89.51 269 P **P** **18 27 15.3 -0.1**
comp=Z,12nm,0.9s,baz=52,slow=7.2,SNR=27
EIL Elat 89.52 300 P **P** **18 27 14.6 -0.2**
EIL Elat 89.52 300 P **P** **18 27 14.6 -0.2**
comp=Z,11nm,1.0s,baz=16,slow=7.4,SNR=4.9
KEV Kevo 89.58 340 *e*P P 18 27 05.1 -9.0
KEV Kevo 89.58 340 *ep* P 18 27 05.1 -9.0
BR131 Keskin Array S 89.78 310 *e*P **P** **18 27 14.3 -1.7**
comp=Z,5.9nm,0.8s
BRTR Keskin Array B 89.78 310 P **P** **18 27 15.1 -0.9**
BRTR Keskin Array B 89.78 310 P **P** **18 27 15.1 -0.9**
comp=Z,7.0nm,0.9s,baz=122,slow=4.1,SNR=38
BRTR LR LR 19 13 57.7
comp=Z,50nm,20.2s,baz=201,slow=40
INK Inuvik 89.88 21 P **P** **18 27 14.6 -1.1**
INK Inuvik 89.88 21 P **P** **18 27 14.6 -1.1**
comp=Z,8.3nm,1.0s,baz=297,slow=5.8,SNR=11
ARCES ARCESS Array B 90.13 340 P **P** **18 27 15.8 -1.0**
ARCES PKiKP **PKiKP** **18 32 12.8 +0.4**
ARCES ARCESS Array B 90.13 340 P **P** **18 27 15.8 -1.0**
comp=Z,3.4nm,0.7s,baz=82,slow=6.5,SNR=7.8
ARCES PKiKP **PKiKP** **18 32 12.8 +0.4**
comp=Z,5.8nm,1.0s,baz=105,slow=2.1,SNR=3.6
ARCES LR LR 19 13 32.7
comp=Z,128nm,18.2s,baz=320,slow=40
KAF Kangasniemi 91.29 332 *e*P **P** **18 27 21.3 -1.0**
KAF pmax pmax
comp=Z,8.0nm,0.7s
KAF Kangasniemi 91.29 332 *ep* P **18 27 21.3 -1.0**
comp=Z,7.6nm,0.7s
FINES FINESS Array B 91.53 332 P **P** **18 27 23.1 -0.3**
FINES FINESS Array B 91.53 332 P **P** **18 27 23.1 -0.3**

comp=Z,8.5nm,0.8s,baz=87,slow=7.5,SNR=19
FINES LR LR 19 12 35.7

AKASG **Malin Array Be** 91.61 321 P **P** **18 27 22.9 -1.1**
AKASG **Malin Array Be** 91.61 321 P **P** **18 27 22.9 -1.1**
AKASG **Malin Array Be** 91.61 321 P **P** **18 27 22.9 -1.1**
comp=Z,8.9nm,0.7s,baz=69,slow=4.7,SNR=28
AK01 Malin Array Si 91.62 321 *e*P **P** **18 27 22.7 -1.4**
KIEV Kiev 91.63 321 *e*P **P** **18 27 23.2 -0.9**
KIEV pmax pmax
comp=Z,13nm,0.9s
KIEV Kiev 91.63 321 *e*P **P** **18 27 23.2 -0.9**
comp=Z,13nm,0.9s
AK02 Malin Array Si 91.63 321 *e*P P 18 27 20.5 -3.7
SYO Syowa Base 92.70 201⇑ *e*PP PP 18 31 15.0 +4.3
CFR Carcaliu 93.17 316⇑ *i*P **P** **18 27 31.3 0.0**
DLBC Dease Lake 93.49 31 P **P** **18 27 32.8 +0.1**
DLBC Dease Lake 93.49 31 P **P** **18 27 32.8 +0.1**
comp=Z,3.2nm,1.0s,baz=229,slow=2.2,SNR=4.5
TESR 93.97 317⇓ *i*P **P** **18 27 34.9 -0.2**
VRI Vrincioaia 94.03 316⇓ *i*P **P** **18 27 35.3 -0.1**
PLOR Plostina 94.09 316⇑ *i*P **P** **18 27 36.1 +0.4**
SUW Suwalki 94.64 325 *e*P **P** **18 27 36.4 -1.5**
SUW pmax pmax
comp=Z,49nm,1.2s
SUW Suwalki 94.64 325 *e*P **P** **18 27 36.4 -1.5**
comp=Z,49nm,1.2s
SUW Suwalki 94.64 325 *e*P **P** **18 27 37.0 -0.9**
MLR Muntele Rosu 94.64 316 P **P** **18 27 37.8 -0.5**
MLR Muntele Rosu 94.64 316⇓ *i*P **P** **18 27 37.9 -0.5**
MLR Muntele Rosu 94.64 316 P **P** **18 27 37.8 -0.5**
comp=Z,2.9nm,0.7s,baz=63,slow=2.3
BURAR **Bucovina Array** 94.73 318⇑ *i*P **P** **18 27 38.7 0.0**
BUR08 **Bucovina Ar. S** 94.74 318 *e*P **P** **18 27 36.7 -2.0**
KWP Kalwaria Pacla 95.93 321 *e*P **P** **18 27 43.8 -0.2**
KOLS Kolonicke sedl 96.37 320 *e*P **P** **18 27 45.9 -0.1**
KOLS pmax pmax
comp=Z,9.0nm,1.1s
KOLS Kolonicke sedl 96.37 320 *e*P **P** **18 27 45.9 -0.1**
UZH Uzhgorod 96.43 320 *e*P P 18 27 43.0 -3.2
UZH *e* 18 27 52.2
UZH *e* 18 27 59.4
CRVS Cervenica-Dubn 96.90 320 *e*P **P** **18 27 47.8 -0.6**
CRVS pmax pmax
comp=Z,20nm,1.0s
CRVS Cervenica-Dubn 96.90 320 *e*P **P** **18 27 47.8 -0.6**
DAG Danmarks Havn 96.93 352 *i*P **P** **18 27 46.7 -1.2**
DAG *i* 18 28 04.2
DAG pmax pmax
comp=Z,12nm,1.1s
DAG Danmarks Havn 96.93 352 *i*P **P** **18 27 46.7 -1.2**
comp=Z,9.6nm,1.1s
DAG *i* 18 28 04.2
RES Resolute Bay 97.51 10 *e*P P 18 27 47.3 -3.2
comp=Z,1.6nm,0.8s
RES Resolute Bay 97.51 10 P **P** **18 27 49.9 -0.7**
comp=Z,3.0nm,1.0s,baz=309,slow=8.5,SNR=5.7
OJC Ojcow 97.61 322 *e*P **P** **18 27 51.2 -0.3**
OJC Ojcow 97.61 322 *e*P **P** **18 27 51.2 -0.3**
HFS Hagfors 97.71 332 P **P** **18 27 51.3 -0.5**
HFS Hagfors 97.71 332 P **P** **18 27 51.3 -0.5**
comp=Z,5.2nm,1.0s,baz=57,slow=5.3,SNR=6.4
NB2 NORSAR Subarra 98.48 334 P **P** **18 27 54.2 -1.1**
baz=70,slow=4.6
NB2 NORSAR Subarra 98.48 334 P **P** **18 27 54.2 -1.1**
comp=Z,3.9nm,0.9s,baz=70,slow=4.6
NOA NORSAR Array B 98.48 334 P **P** **18 27 54.4 -0.8**
NOA NORSAR Array B 98.48 334 P **P** **18 27 54.4 -0.8**
comp=Z,2.0nm,0.8s,baz=67,slow=4.6,SNR=9.8
NOA LR LR 19 17 17.1
comp=Z,179nm,20.2s,baz=50,slow=38
VYHS Vyhne 98.68 320 *e*P **P** **18 27 55.8 -0.6**
VYHS pmax pmax
comp=Z,2.0nm,1.3s
VYHS Vyhne 98.68 320 PDIF **P** **18 27 55.8 -0.6**
OKC Ostrava-Krasne 98.73 322 *e*P **P** **18 27 56.5 -0.1**
OKC smax smax
comp=N,3.0nm,0.3s
OKC Ostrava-Krasne 98.73 322 *e*PDIFF **P** **18 27 56.5 -0.1**
BSD Bornholm Skovb 98.92 327 *i*P **P** **18 27 56.4 -0.9**
BSD pmax pmax
comp=Z,10.0nm,1.1s
BSD Bornholm Skovb 98.92 327 *i*P **P** **18 27 56.4 -0.9**
comp=Z,10nm,1.0s
YKA Yellowknife Ar 99.23 24 P **Pdif** **18 27 58.4 -0.1**
YKA PKiKP **PKiKP** **18 32 28.9 +0.7**
YKA Yellowknife Ar 99.23 24 P **Pdif** **18 27 58.4 -0.1**
comp=Z,1.3nm,0.8s,baz=299,slow=4.3,SNR=16
YKA PKiKP **PKiKP** **18 32 28.9 +0.7**
comp=Z,0.4nm,0.6s,baz=302,slow=1.8,SNR=8.5
LSZ Lusaka 99.24 255 *e*P **Pdif** **18 27 56.9 -2.8**
comp=Z,5.6nm,0.9s
KSP Ksiaz 99.56 323 *e*P **Pdif** **18 27 59.7 -0.6**
DPC Dobruska-Polom 99.70 322 *e*P **Pdif** **18 28 01.4 +0.5**
DPC *e* 18 28 17.7
DPC Dobruska-Polom 99.70 322 *e*PDIFF **Pdif** **18 28 01.4 +0.5**
DPC *es*P **sP** **18 28 17.7 +0.2**
UPC Upice 99.84 323 *e*P **Pdif** **18 28 02.1 +0.6**
UPC Upice 99.84 323 *e*PDIFF **Pdif** **18 28 02.1 +0.6**
VRAC Vranov 99.86 321 P **Pdif** **18 28 02.0 +0.3**
VRAC Vranov 99.86 321⇑ *i*P **Pdif** **18 28 02.2 +0.6**
VRAC Vranov 99.86 321 P **Pdif** **18 28 02.0 +0.3**
comp=Z,4.7nm,0.9s,baz=65,slow=6.0,SNR=5.6
ZST Bratislava 99.88 320 *e*P **Pdif** **18 28 04.4 +2.7**
ZST Bratislava 99.88 320 PDIF **Pdif** **18 28 04.4 +2.7**
RUE Ruedersdorf 100.48 325 *e*P **Pdif** **18 28 05.1 +0.8**
comp=Z,34nm,1.3s
PVCC Panska Ves 100.70 323 *e*P **Pdif** **18 28 06.1 +0.8**
PVCC Panska Ves 100.70 323 *e*PDIFF **Pdif** **18 28 06.1 +0.8**
PRU Pruhonice 100.90 322 *e*P **Pdif** **18 28 06.4 +0.2**
PRU MLR MLR
comp=Z,200nm,19.4s
PRU Pruhonice 100.90 322 *e*PDIFF **Pdif** **18 28 06.4 +0.2**
PRU AMS AMS 19 18 00.0
comp=Z,200nm,19.4s
BRG Berggiesshubel 100.95 323 *e*P **Pdif** **18 28 06.8 +0.4**
comp=Z,9.7nm,0.8s
BRG *e* 18 29 32.1
comp=Z,9.6nm,1.1s
BRG
comp=N,104nm,20.5s
BRG
comp=E,118nm,17.4s
BRG
comp=Z,210nm,20.4s
BRG Berggiesshubel 100.95 323 *e*P **Pdif** **18 28 06.8 +0.4**
BRG pmax pmax
comp=Z,10.0nm,0.8s
BRG pmax pmax
comp=Z,10.0nm,1.1s
BRG MLR MLR
comp=N,104nm,20.5s
BRG MLR MLR
comp=E,118nm,17.4s
BRG MLR MLR
comp=Z,210nm,20.4s
BRG Berggiesshubel 100.95 323 *e*P **Pdif** **18 28 06.8 +0.4**
comp=Z,10.0nm,0.8s
FBE Freiberg 101.29 324 *e*P **Pdif** **18 28 08.7 +0.8**
comp=Z,17nm,1.2s
CLL Collm 101.35 324 *i*P **Pdif** **18 28 08.1 -0.1**
CLL pmax pmax
comp=Z,11nm,1.3s
CLL Collm 101.35 324 *e*P **Pdif** **18 28 08.5 +0.3**
comp=Z,10.0nm,1.3s
CLL Collm 101.35 324 *i* Pdif **Pdif** **18 28 08.1 -0.1**
comp=Z,11nm,1.3s
KHC Kasperske Hory 101.78 322 *e*P **Pdif** **18 28 10.6 +0.4**
KHC Kasperske Hory 101.78 322 *e*PDIFF **Pdif** **18 28 10.6 +0.4**
GEC2 GERESS Array S 101.81 322 *e*P **Pdif** **18 28 10.8 +0.4**
GEC2 pmax pmax
comp=Z,4.0nm,1.0s
GEC2 GERESS Array S 101.81 322 *e*P **Pdif** **18 28 10.8 +0.4**
comp=Z,4.0nm,1.0s
GERES **GERESS Array B** 101.81 322 P **Pdif** **18 28 10.2 -0.2**
GERES **GERESS Array B** 101.81 322 P **Pdif** **18 28 10.2 -0.2**
comp=Z,2.7nm,0.9s,baz=61,slow=4.7,SNR=14
BSEG Bad Segeberg 101.85 327 *e*P **Pdif** **18 28 11.2 +0.9**
BSEG pmax pmax
comp=Z,14nm,1.0s
BSEG Bad Segeberg 101.85 327 *e*P **Pdif** **18 28 11.2 +0.9**
comp=Z,14nm,1.0s
TANN Tannenbergstha 102.00 323 *e*P **Pdif** **18 28 11.6 +0.4**
comp=Z,6.0nm,1.0s
NKC Novy Kostel 102.07 323 *e*P **Pdif** **18 28 11.7 +0.2**
NKC Novy Kostel 102.07 323 *e*PDIFF **Pdif** **18 28 11.7 +0.2**
WERD Werda 102.08 323 *e*P **Pdif** **18 28 11.8 +0.3**
comp=Z,7.0nm,1.0s
GUNZ Gunzen 102.09 323 *e*P **Pdif** **18 28 12.0 +0.4**
comp=Z,10.0nm,1.0s
WERN Wernitzgruen 102.10 323 *e*P **Pdif** **18 28 12.1 +0.5**
comp=Z,7.0nm,1.0s
NEUB Neuenburg 102.11 324 *e*P **Pdif** **18 28 12.1 +0.6**
comp=Z,11nm,1.0s
PLN Plauen 102.15 324 *e*P **Pdif** **18 28 12.3 +0.5**
comp=Z,73nm,1.7s
WET Wettzell 102.21 322 *e*P **Pdif** **18 28 12.7 +0.6**
WET pmax pmax
comp=Z,17nm,2.0s
WET Wettzell 102.21 322 *e*P **Pdif** **18 28 12.7 +0.6**
comp=Z,17nm,2.0s
ROTZ Rotzenmuhle 102.39 323 *e*P **Pdif** **18 28 13.4 +0.5**
comp=Z,9.0nm,1.2s
MOX Moxa 102.41 324 *e*P **Pdif** **18 28 13.5 +0.5**
MOX pmax pmax
comp=Z,10.0nm,1.3s
MOX Moxa 102.41 324 *e*P **Pdif** **18 28 13.5 +0.5**
comp=Z,10.0nm,1.3s
NRDL Niedersach Rie 102.55 326 *e*P **Pdif** **18 28 14.6 +1.2**
comp=Z,15nm,1.4s
CLZ Clausthal 102.67 325 *e*P **Pdif** **18 28 15.2 +1.1**
CLZ pmax pmax
comp=Z,11nm,1.1s
CLZ Clausthal 102.67 325 *e*P **Pdif** **18 28 15.2 +1.1**
comp=Z,11nm,1.1s
GRF Grafenberg Arr 103.01 323 *e*P **Pdif** **18 28 16.3 +0.6**
GRF pmax pmax
comp=Z,18nm,1.8s
GRF Grafenberg Arr 103.01 323 *e*P **Pdif** **18 28 16.3 +0.6**
comp=Z,18nm,1.8s
IBBN Ibbenburen 103.94 326 *e*P **Pdif** **18 28 20.6 +0.9**
TNS Taunus Mts 104.44 324 *e*P **Pdif** **18 28 23.1 +1.0**
TNS Taunus Mts 104.44 324 *e*P **Pdif** **18 28 23.1 +1.0**
D14A Greenough 106.72 38 ⇓P **PKiKP** **18 32 42.7 +0.1**
baz=107
NVAR Mina Array Bea 106.73 48 PKiKP **PKiKP** **18 32 44.1 +1.1**
NVAR PKKP **PKKPdf** **18 44 15.4 +0.5**
NVAR Mina Array Bea 106.73 48 PKiKP **PKiKP** **18 32 44.1 +1.1**
comp=Z,0.6nm,0.6s,baz=237,slow=4.1,SNR=3.5
NVAR PKKP **PKKPdf** **18 44 15.4 +0.5**
comp=Z,0.7nm,0.8s,baz=126,slow=4.6,SNR=3.5
B15A Bradely Ranch, 106.76 37 ⇓P **PKiKP** **18 32 42.7 +0.1**
baz=107
C15A Salmond Ranch, 106.97 37 ⇓P **PKiKP** **18 32 43.2 +0.1**
baz=107
H13A Challis 107.30 41 ⇑P **PKiKP** **18 32 44.8 +1.0**
baz=107
D15A Lincoln 107.34 38 ⇑P **PKiKP** **18 32 44.5 +0.7**
baz=107
I13A Wildhorse Cree 107.65 41 ⇑P **PKiKP** **18 32 46.3 +1.7**
baz=108
J13A Cove Ranch, Pi 107.82 42 ⇓P **PKiKP** **18 32 46.2 +1.5**
baz=108
D16A Dana Ranch, Ca 107.94 38 ⇑P **PKiKP** **18 32 46.0 +1.1**
baz=108
EDW2 Edwards Air Fo 108.11 51 ⇓P **PKiKP** **18 32 46.9 +1.4**
baz=108
ELK Elko 108.13 45 PKiKP **PKiKP** **18 32 46.2 +0.6**
ELK Elko 108.13 45 PKiKP **PKiKP** **18 32 46.2 +0.6**
comp=Z,1.8nm,0.8s,baz=275,slow=2.9,SNR=5.3
C17A Wharram Farm, 108.14 37 ⇓P **PKiKP** **18 32 45.2 0.0**
baz=108
EGMT Eagleton 108.56 36 ⇑P **PKiKP** **18 32 46.7 +0.7**
baz=108
J15A Blackfoot 108.98 41 ⇑P **PKiKP** **18 32 49.1 +2.2**
baz=109
F17A Fitzpatrick Pl 109.00 38 ⇓P **PKiKP** **18 32 48.2 +1.2**
baz=109
C19A Slack Wire Ran 109.11 36 ⇑P **PKiKP** **18 32 48.3 +1.4**
baz=109
F18A Big Timber 109.59 38 ⇑P **PKiKP** **18 32 49.4 +1.4**
baz=110
C20A Veseth Ranch, 109.73 36 ⇑P **PKiKP** **18 32 48.9 +0.8**
baz=110
G20A Bridger 110.84 38 ⇓P **PKiKP** **18 32 51.1 +0.7**
baz=111
C22A Vida 110.94 35 ⇑P **PKiKP** **18 32 51.6 +1.2**
baz=111
PDAR Pinedale Array 111.15 41 Pdif **Pdif** **18 28 54.0 +1.8**
PDAR PKiKP **PKiKP** **18 32 51.6 +0.4**
PDAR PKKPab **PKKPab** **18 43 55.4 -3.1**
PDAR Pinedale Array 111.15 41 Pdiff **Pdif** **18 28 54.0 +1.8**
comp=Z,0.6nm,0.9s,baz=332,slow=3.1,SNR=3.5
PDAR PKiKP **PKiKP** **18 32 51.6 +0.4**
comp=Z,0.7nm,0.8s,baz=242,slow=1.9,SNR=5.8
PDAR PKKPab **PKKPab** **18 43 55.4 -3.1**
comp=Z,1.7nm,0.9s,baz=120,slow=5.3,SNR=8.3
L18A Fontenelle, Gr 111.21 42 ⇑P **PKiKP** **18 32 52.3 +1.0**
baz=111
J19A Crowheart 111.24 40 ⇓P **PKiKP** **18 32 52.5 +1.2**
baz=111
H20A Greybull 111.33 39 ⇑P **PKiKP** **18 32 52.3 +1.0**
baz=111
FRB Frobisher Bay 111.42 7 PKiKP **PKiKP** **18 32 50.9 +0.2**
FRB Frobisher Bay 111.42 7 PKiKP **PKiKP** **18 32 50.9 +0.2**
comp=Z,3.0nm,0.8s,baz=40,slow=3.6,SNR=4.5
I20A Worland 111.51 39 ⇑P **PKiKP** **18 32 52.2 +0.6**
baz=112
K19A Absolon Red Bu 111.58 41 ⇑P **PKiKP** **18 32 52.9 +0.9**
baz=112
J20A Shoshoni 111.83 40 ⇑P **PKiKP** **18 32 52.8 +0.5**
baz=112
F23A Volborg 112.29 37 ⇓P **PKiKP** **18 32 53.5 +0.5**
baz=112
L20A Wamsutter 112.30 41 ⇓P **PKiKP** **18 32 54.2 +0.8**
baz=112
I22A 9 Mile Ranch, 112.57 39 ⇓P **PKiKP** **18 32 54.1 +0.3**
baz=112
K21A Alcova 112.71 40 ⇓P **PKiKP** **18 32 54.5 +0.4**
baz=113
J22A Midwest 112.82 39 ⇑P **PKiKP** **18 32 54.2 -0.1**
baz=113
N20A Spence Gulch, 112.89 42 ⇑P **PKiKP** **18 32 55.5 +1.0**
baz=113
L21A Rawlins 112.95 41 ⇓P **PKiKP** **18 32 55.4 +0.7**
baz=113
S18A Hurst Farm, BI 113.08 46 ⇓P **PKiKP** **18 32 55.6 +0.5**
baz=113
M21A Separation Pea 113.13 41 ⇑P **PKiKP** **18 32 55.5 +0.5**
baz=113
O20A White River Ci 113.23 43 ⇓P **PKiKP** **18 32 55.5 +0.3**
baz=113
H24A Dirks Ranch, A 113.32 37 ⇓P **PKiKP** **18 32 55.2 +0.1**
baz=113
N21A Black Mountain 113.43 42 ⇓P **PKiKP** **18 32 56.5 +0.9**
baz=113
PV01 Paradox Valley 113.90 45 *e*PKPdf **PKiKP** **18 32 56.2 -0.4**
RSSD Black Hills 113.97 38 *e*PKiKP **PKiKP** **18 32 56.1 -0.4**
RSSD Black Hills 113.97 38 *e*PKPdf **PKiKP** **18 32 56.0 -0.4**
N22A Wattenberg Ran 114.12 42 ⇑P PKPdf 18 32 58.5 +1.6
baz=114
S20A Disappointment 114.19 45 ⇑P PKPdf 18 32 58.4 +1.2
baz=114
MVCO Mesa Verde 114.36 46 *e*PKPdf PKPdf 18 32 58.1 +0.6
S21A Coal Bank Pass 114.67 45 ⇓P PKPdf 18 33 00.0 +1.9
baz=115
O23A Lake Granby, G 114.76 42 ⇑P PKPdf 18 32 59.7 +1.4
baz=115
ISCO Idaho Springs 115.17 42 *e*PKIKP **PKPdf** **18 32 58.1 -1.0**
ISCO Idaho Springs 115.17 42 *e*PKPdf **PKPdf** **18 32 58.1 -1.0**
ISCO Idaho Springs 115.17 42 ⇑P **PKPdf** **18 32 59.5 +0.5**
baz=115
P23A Jefferson 115.22 43 ⇑P **PKPdf** **18 32 59.4 +0.2**
baz=115
W20A Ramah 115.26 48 ⇓P **PKPdf** **18 33 00.1 +0.8**
baz=115
U21A Nageezi 115.31 46 ⇓P **PKPdf** **18 32 59.7 +0.4**
baz=115
Q23A Hartsel 115.45 43 ⇑P **PKPdf** **18 33 00.3 +0.7**
baz=115
Y20A Horse Springs, 115.86 49 ⇓P **PKPdf** **18 33 01.5 +1.1**
baz=116
Z20A Nine Sixteen R 116.03 50 ⇑P **PKPdf** **18 33 01.7 +1.0**
baz=116
X21A Alamocita Cree 116.08 48 ⇑P **PKPdf** **18 33 01.8 +0.9**
baz=116
V22A San Miguel Ran 116.08 47 ⇓P **PKPdf** **18 33 02.3 +1.5**
baz=116
120A U Bar Ranch, L 116.22 51 ⇓P **PKPdf** **18 33 02.2 +1.1**
baz=116
P25A Willow Gulch B 116.28 42 ⇓P **PKPdf** **18 33 01.9 +0.9**
baz=116
Y21A Point of Rocks 116.35 49 ⇑P **PKPdf** **18 33 02.8 +1.4**
baz=116
U23A El Rito 116.41 46 ⇑P **PKPdf** **18 33 03.1 +1.7**
baz=116
220A Playas Peak, P 116.56 51 ⇓P **PKPdf** **18 33 02.7 +1.0**
baz=117
Z21A St. Cloud Mine 116.65 50 ⇓P **PKPdf** **18 33 03.8 +1.8**
baz=117
320A Kipp Ranch, An 116.79 52 ⇓P **PKPdf** **18 33 03.6 +1.4**
baz=117
P26A Davis Ranch, A 116.80 42 ⇑P **PKPdf** **18 33 02.8 +0.8**
baz=117
ANMO **Albuquerque** 116.84 47 *e*PKPdf **PKPdf** **18 33 02.9 +0.7**
ANMO PKiKP **PKiKP** **18 33 03.3 +1.0**
ANMO **Albuquerque** 116.84 47 PKiKP **PKiKP** **18 33 03.3 +1.0**
comp=Z,1.9nm,0.8s,baz=252,slow=3.2,SNR=6.3
Y22A Socorro 116.91 49 ⇑P **PKPdf** **18 33 03.8 +1.4**
baz=117
Q26A Hugo 117.01 42 ⇓P **PKPdf** **18 33 03.5 +1.1**
baz=117
S25A Robets Cordova 117.02 44 ⇑P **PKPdf** **18 33 03.3 +0.8**
baz=117
Z22A Elephant Butte 117.20 49 ⇓P **PKPdf** **18 33 03.6 +0.6**
baz=117
T25A Trinidad 117.29 44 ⇑P **PKPdf** **18 33 03.8 +0.7**
baz=117
V24A Rampart Ranch, 117.35 46 ⇑P **PKPdf** **18 33 03.8 +0.5**
baz=117
R26A Arlington 117.38 43 ⇑P **PKPdf** **18 33 03.7 +0.6**
baz=117
W24A Lazy 6 Ranch, 117.49 47 ⇑P **PKPdf** **18 33 04.8 +1.3**
baz=118
Y23A Lovelace Mesa, 117.59 48 ⇑P **PKPdf** **18 33 04.7 +0.9**
baz=118
S26A Kim 117.70 44 ⇓P **PKPdf** **18 33 04.2 +0.4**
baz=118
T26A Comanche Natio 117.84 44 ⇑P **PKPdf** **18 33 05.1 +1.0**
baz=118
Y24A Capitan 118.06 48 ⇓P **PKPdf** **18 33 05.3 +0.6**
baz=118
W25A X Bar L Ranch, 118.17 46 ⇑P **PKPdf** **18 33 05.5 +0.7**
baz=118
R28A Tribune 118.46 42 ⇓P **PKPdf** **18 33 06.0 +0.8**
baz=118
ECSD EROS Data Cent 118.55 34 *e*PKPdf **PKPdf** **18 33 05.5 +0.4**
W26A Owens Ranch, T 118.74 46 ⇓P **PKPdf** **18 33 06.4 +0.5**
baz=119
U27A Thompson Grove 118.75 44 ⇑P **PKPdf** **18 33 06.4 +0.6**
baz=119
S28A Manter 118.79 43 ⇑P **PKPdf** **18 33 06.6 +0.8**
baz=119
Z25A Roswell 118.88 48 ⇓P **PKPdf** **18 33 06.7 +0.5**
baz=119
T28A Walsh 118.89 43 ⇓P **PKPdf** **18 33 06.2 +0.2**
baz=119
X26A CR and CF Fran 118.96 47 ⇓P **PKPdf** **18 33 06.8 +0.5**
baz=119
BGNE Belgrade 119.07 37 ⇑P **PKPdf** **18 33 06.1 0.0**
baz=119
324A Moseley Ranch, 119.11 51 ⇑P **PKPdf** **18 33 07.6 +0.9**
baz=119
125A Gardner Draw, 119.21 49 ⇓P **PKPdf** **18 33 07.5 +0.7**
baz=119
T29A Hugoton 119.43 43 ⇑P **PKPdf** **18 33 07.8 +0.7**
baz=119
325A Bean Ranch, Si 119.54 50 ⇓P **PKPdf** **18 33 07.8 +0.2**
baz=120
S30A Montezuma 119.73 42 ⇑P **PKPdf** **18 33 08.1 +0.6**
baz=120
Y27A Causey 119.75 47 ⇓P **PKPdf** **18 33 08.5 +0.7**
baz=120
425A Indio Mountain 119.78 51 ⇓P **PKPdf** **18 33 09.0 +1.1**
baz=120
226B Tecolote Peak, 119.84 49 ⇑P **PKPdf** **18 33 08.7 +0.7**
baz=120
Z27A Tatum 119.98 48 ⇑P **PKPdf** **18 33 08.8 +0.6**
baz=120
MSTX Muleshoe 119.99 47 ⇓P **PKPdf** **18 33 08.8 +0.5**
baz=120
SCHQ Schefferville 120.26 9 PKP **PKPdf** **18 33 08.6 +0.6**
SCHQ Schefferville 120.26 9 PKP **PKPdf** **18 33 08.6 +0.6**
comp=Z,6.0nm,0.6s,baz=319,slow=3.5,SNR=13
426A McDonald Obser 120.57 51 ⇑P **PKPdf** **18 33 09.7 +0.1**
baz=121
526A Mary Lane Ranc 120.79 51 ⇓P **PKPdf** **18 33 10.4 +0.5**
baz=121
Y29A Porterfield Fa 120.84 46 ⇑P **PKPdf** **18 33 11.0 +1.2**
baz=121
128A Castleberry Fa 120.85 48 ⇓P **PKPdf** **18 33 10.4 +0.5**
baz=121
427A Hayter Ranch, 120.98 50 ⇓P **PKPdf** **18 33 11.3 +1.1**
baz=121
626A Big Bend Ranch 120.98 52 ⇓P **PKPdf** **18 33 11.2 +1.0**
baz=121
Z29A Hungry Hill Ra 121.11 47 ⇑P **PKPdf** **18 33 10.9 +0.5**
baz=121
X30A Coker Ranch, T 121.12 45 ⇓P **PKPdf** **18 33 10.8 +0.5**
baz=121
527A Woodward Ranch 121.13 51 ⇑P **PKPdf** **18 33 11.6 +1.0**
baz=121
328A Wristen Ranch, 121.19 49 ⇑P **PKPdf** **18 33 11.6 +1.1**
baz=121
129A Stewart Farms, 121.30 48 ⇓P **PKPdf** **18 33 11.5 +0.7**
baz=121
KSU1 Kansas State U 121.39 39 *e*PKPdf **PKPdf** **18 33 10.6 0.0**
TXAR Lajitas Array 121.44 52 PKP **PKPdf** **18 33 11.7 +0.5**
TXAR Lajitas Array 121.44 52 PKP **PKPdf** **18 33 11.7 +0.5**
comp=Z,2.1nm,0.8s,baz=304,slow=0.7,SNR=12
Z30A Sanderson Ranc 121.52 47 ⇓P **PKPdf** **18 33 11.9 +0.7**
baz=122
428A Kincaid Ranch, 121.58 50 ⇑P **PKPdf** **18 33 12.7 +1.4**
baz=122
627A Terlingua Ranc 121.61 52 ⇓P **PKPdf** **18 33 12.4 +1.0**
baz=122
X31A McDonald Ranch 121.66 45 ⇑P **PKPdf** **18 33 12.2 +0.9**
baz=122
528A Cox Ranch, San 121.76 51 ⇑P **PKPdf** **18 33 12.6 +0.9**
baz=122
329A Wagon Wheel Ra 121.76 49 ⇓P **PKPdf** **18 33 12.4 +0.7**
baz=122
Y31A Rekieta Farm, 121.80 46 ⇓P **PKPdf** **18 33 12.9 +1.2**
baz=122
130A Snyder 121.98 47 ⇑P **PKPdf** **18 33 13.0 +1.0**
baz=122
628A Black Gap, Mar 121.98 51 ⇑P **PKPdf** **18 33 13.3 +1.2**
baz=122
529A Stev Forest Ra 122.21 51 ⇑P **PKPdf** **18 33 13.4 +0.8**
baz=122
230A Sterling City 122.22 48 ⇓P **PKPdf** **18 33 13.3 +0.8**
baz=122
429A Davenport Ranc 122.23 50 ⇑P **PKPdf** **18 33 13.3 +0.7**
baz=122
430A Baggett Ranch, 122.66 49 ⇓P **PKPdf** **18 33 14.2 +0.9**
baz=123
Z32A Haskell 122.70 46 ⇓P **PKPdf** **18 33 13.9 +0.6**
baz=123
TORD Torodi Ar. Bea 122.77 288 PKP **PKPdf** **18 33 13.5 -0.4**
TORD Torodi Ar. Bea 122.77 288 PKP **PKPdf** **18 33 13.5 -0.4**
comp=Z,5.0nm,0.7s,baz=73,slow=1.0,SNR=4.2
231A Bronte 122.79 48 ⇑P **PKPdf** **18 33 14.1 +0.5**
baz=123
530A J-C Ranch, Com 122.88 50 ⇑P **PKPdf** **18 33 15.0 +1.2**
baz=123
331A San Angelo 123.01 48 ⇓P **PKPdf** **18 33 14.6 +0.5**
baz=123
431A Sonora 123.18 49 ⇑P **PKPdf** **18 33 15.1 +0.7**
baz=123
531A Rocksprings 123.48 50 ⇑P **PKPdf** **18 33 15.7 +0.8**
baz=124
332A Millersview 123.48 48 ⇑P **PKPdf** **18 33 15.6 +0.7**
baz=124
432A Menard 123.70 49 ⇑P **PKPdf** **18 33 15.8 +0.4**
baz=124
JCT Junction City 123.89 49 *e*PKIKP **PKPdf** **18 33 16.2 +0.5**
JCT Junction City 123.89 49 *e*PKPdf **PKPdf** **18 33 16.2 +0.5**
JCT Junction City 123.89 49 ⇓P **PKPdf** **18 33 16.7 +0.9**
baz=124
532A Rocksprings 123.98 49 ⇓P **PKPdf** **18 33 16.7 +0.7**
baz=124
632A Uvalde 124.37 50 ⇓P **PKPdf** **18 33 17.8 +1.1**
baz=124
732A Laxson Ranch, 124.60 51 ⇑P **PKPdf** **18 33 17.9 +0.8**
baz=125
WHTX Lake Whitney 124.84 46 ⇑P **PKPdf** **18 33 18.6 +1.1**
baz=125
FVM French Village 125.85 36 *e*PKIKP **PKPdf** **18 33 18.5 -0.7**
FVM French Village 125.85 36 *e*PKPdf **PKPdf** **18 33 18.5 -0.7**
OLIL Olney 126.66 34 *e*PKPdf **PKPdf** **18 33 21.4 +0.7**

WCI	**Wyandotte Cave**	**128.01**	**33**	*e*PKIKP	**PKPdf**	**18 33 23.8**	**+0.4**
WCI	**Wyandotte Cave**	**128.01**	**33**	*e*PKPdf	**PKPdf**	**18 33 23.8**	**+0.4**
ACSO	**Alum Creek Sta**	**128.20**	**29**	*e*PKPdf	**PKPdf**	**18 33 24.2**	**+0.6**
WVT	**Waverly**	**128.63**	**36**	*e*PKIKP	**PKPdf**	**18 33 25.1**	**+0.5**
WVT	**Waverly**	**128.63**	**36**	*e*PKPdf	**PKPdf**	**18 33 25.1**	**+0.5**
HNH	**Hanover**	**129.48**	**18**	*e*PKPdf	**PKPdf**	**18 33 26.9**	**+0.9**
BINY	**Binghamton**	**129.57**	**22**	*e*PKPdf	**PKPdf**	**18 33 26.5**	**+0.3**
SWET	**Sewanee**	**130.37**	**35**	*e*PKPdf	**PKPdf**	**18 33 28.1**	**+0.1**
LRAL	**Lakeview Retre**	**131.24**	**38**	*e*PKPdf	**PKPdf**	**18 33 29.6**	**0.0**
TKL	**Tuckaleechee C**	**131.26**	**33**	*e*PKPdf	**PKPdf**	**18 33 29.8**	**+0.2**
TKL				PKP	**PKPdf**	**18 33 30.1**	**+0.5**
TKL	**Tuckaleechee C**	**131.26**	**33**	PKP	**PKPdf**	**18 33 30.1**	**+0.5**
	comp=Z,11nm,0.8s,baz=341,slow=1.5,SNR=13						
KMSC	**Kings Mountain**	**132.96**	**32**	⇓P	**PKPdf**	**18 33 33.4**	**+0.6**
	baz=133						
PLCA	**Paso Flores**	**140.32**	**159**	PKP	**PKPdf**	**18 33 47.2**	**+0.8**
PLCA	**Paso Flores**	**140.32**	**159**	PKP	**PKPdf**	**18 33 47.2**	**+0.8**
	comp=Z,4.2nm,1.0s,baz=220,slow=3.8,SNR=5.5						
TRQA	**Tornquist**	**145.24**	**168**	*e*PKPdf	**PKPab**	**18 33 54.8**	**-0.1**
JTS	**JuntasAbangare**	**145.42**	**65**	*e*PKPdf	**PKPab**	**18 33 56.2**	**0.0**
CFAA	**Coronel Fontan**	**149.21**	**155**	PKP	**PKPdf**	**18 34 02.0**	**+0.1**
CFAA				PKPbc	**PKPbc**	**18 34 06.6**	**+0.4**
CFAA	**Coronel Fontan**	**149.21**	**155**	PKP	**PKPdf**	**18 34 02.0**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=228,slow=3.2,SNR=4.0						
CFAA				PKPbc	**PKPbc**	**18 34 06.6**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=224,slow=4.2,SNR=4.0						
SDDR	**Presa de Saban**	**151.07**	**37**	*e*PKPbc	**PKPbc**	**18 34 11.9**	**+0.9**
OTAV	**Otavalo**	**154.53**	**81**	*e*PKPbc	**PKPbc**	**18 34 18.6**	**-0.8**
ATAH	**Atahualpa**	**154.86**	**98**	PKPbc	**PKPbc**	**18 34 20.6**	**+0.6**
ATAH	**Atahualpa**	**154.86**	**98**	PKPbc	**PKPbc**	**18 34 20.6**	**+0.6**
	comp=Z,11nm,0.9s,baz=117,slow=2.3,SNR=5.4						
CPUP	**Villa Florida**	**157.51**	**171**	PKPab	**PKPab**	**18 34 45.5**	**0.0**
CPUP	**Villa Florida**	**157.51**	**171**	PKPab	**PKPab**	**18 34 45.5**	**0.0**
	comp=Z,5.5nm,0.9s,baz=191,slow=5.2,SNR=6.1						
RCBR	**Riachuelo**	**162.56**	**263**	PKPab	**PKPab**	**18 35 07.6**	**-0.6**
RCBR	**Riachuelo**	**162.56**	**263**	PKPab	**PKPab**	**18 35 07.6**	**-0.6**
	comp=Z,12nm,0.9s,baz=88,slow=4.3,SNR=9.3						
SIV	**San Ignacio**	**165.90**	**148**	PKPab	**PKPab**	**18 35 22.2**	**-0.3**
SIV	**San Ignacio**	**165.90**	**148**	PKPab	**PKPab**	**18 35 22.2**	**-0.3**
	comp=Z,3.2nm,1.0s,baz=246,slow=7.8,SNR=3.6						

IDC ***26*** *18:24:43.9±3.9, 34°.77N×23°.05E, h0km, mb3.7/6, mb1 3.7/8, mb1mx3.5/29, mbtmp3.6/8, ML3.4/2, MS3.4/1, Ms1 3.4/1, ms1mx2.1/41, Error ellipse: s-maj=79.5km s-min=35.6km az=35.0*

CSEM ***26*** *18:24:49.9±0.3, 34°.89N×23°.23E, h5km, MD3.2, Error ellipse: s-maj=6.1km s-min=4.5km az=72.0*

ISCJB ***26*** *18:24:51.6±0.8, 34°.81N±0°.04×23°.31E±0°.08, h65km±6km, mb3.5/6, Error ellipse: s-maj=12.1km s-min=5.8km az=159.5*

THE ***26*** *18:24:53.7, 35°.02N×23°.39E, h8km±2km, ML3.1/1, Error ellipse: s-maj=2.5km s-min=1.0km az=70.0*

ATH ***26*** *18:24:54.2, 35°.08N×23°.46E, h36km±1km, MD3.2/10*

HLW ***26*** *18:24:55.2, 34°.84N×23°.75E, h33km±28km, Md4.0, Ml3.6*

ISC 26 18:24:52.8±1.1, 34°.89N±0°.04×23°.37E±0°.06, h48km±11km, n46, σ1s58/61, mb3.6/6, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.59**	**95**	P		**Pn**	**18 25 05.9**	**+0.9**
GVD				S		**Sn**	**18 25 15.2**	**+1.4**
GVD	**Gavdhos**	**0.59**	**95**	*e*PN		**Pn**	**18 25 06.1**	**+1.1**
GVD				*e*SN		**Sn**	**18 25 15.3**	**+1.4**
GVD	**Gavdhos**	**0.59**	**95**	*e*Pn		**Pn**	**18 25 06.1**	**+1.1**
GVD				*e*Sn		**Sn**	**18 25 15.3**	**+1.4**
KARN	**Karanos**	**0.68**	**41**	P		**Pn**	**18 25 05.0**	**-1.2**
KARN				S		**Sn**	**18 25 13.1**	**-2.8**
KARN	**Karanos**	**0.68**	**41**	*e*PB		**Pn**	**18 25 05.1**	**-1.2**
KARN	**Karanos**	**0.68**	**41**	*e*Pb		**Pn**	**18 25 05.1**	**-1.2**
KARN				S		**Sn**	**18 25 13.1**	**-2.8**
VAM	**Vamos**	**0.85**	**52**	P		**Pn**	**18 25 08.1**	**-0.4**
VAM				S		**Sn**	**18 25 19.6**	**-0.4**
VAM	**Vamos**	**0.85**	**52**	*e*PN		**Pn**	**18 25 08.1**	**-0.4**
VAM				*e*SN		**Sn**	**18 25 18.9**	**-1.1**
VAM	**Vamos**	**0.85**	**52**	P		**Pn**	**18 25 08.1**	**-0.4**
VAM				S		**Sn**	**18 25 19.6**	**-0.4**
SIVA	**Sivas**	**1.19**	**83**	P		**Pn**	**18 25 14.6**	**+1.5**
SIVA	**Sivas**	**1.19**	**83**	*e*PN		**Pn**	**18 25 14.5**	**+1.5**
SIVA	**Sivas**	**1.19**	**83**	P		**Pn**	**18 25 14.6**	**+1.5**
IDI	**Anoyia**	**1.31**	**72**	P		**Pn**	**18 25 15.7**	**+1.0**
IDI				S		**Sn**	**18 25 34.3**	**+3.2**
IDI	**Anoyia**	**1.31**	**72**	*e*PN		**Pn**	**18 25 15.8**	**+1.0**
IDI	**Anoyia**	**1.31**	**72**	*e*Pn		**Pn**	**18 25 15.8**	**+1.0**
IDI				S		**Sn**	**18 25 34.3**	**+3.2**
KYTH	**Kithira**	**1.42**	**349**	P		**Pn**	**18 25 16.8**	**+0.6**
KYTH	**Kithira**	**1.42**	**349**	*e*PN		**Pn**	**18 25 16.9**	**+0.7**
KYTH	**Kithira**	**1.42**	**349**	*e*Pn		**Pn**	**18 25 16.9**	**+0.7**
LAST	**Lasithi**	**1.75**	**80**	P		**Pn**	**18 25 22.6**	**+1.8**
LAST	**Lasithi**	**1.75**	**80**	*e*PN		**Pn**	**18 25 22.6**	**+1.8**
LAST	**Lasithi**	**1.75**	**80**	P		**Pn**	**18 25 22.6**	**+1.8**
VLI	**Veliai**	**1.86**	**349**	P		**Pn**	**18 25 23.1**	**+0.9**
VLI				S		**Sn**	**18 25 46.6**	**+2.1**
VLI	**Veliai**	**1.86**	**349**	*e*PB		**Pn**	**18 25 23.3**	**+1.1**
VLI	**Veliai**	**1.86**	**349**	*e*Pb		**Pn**	**18 25 23.3**	**+1.1**
VLI				S		**Sn**	**18 25 46.6**	**+2.1**
NPS	**Neapolis**	**1.87**	**78**	P		**Pn**	**18 25 24.4**	**+2.0**
NPS	**Neapolis**	**1.87**	**78**	*e*PB		**Pn**	**18 25 24.4**	**+2.0**
NPS	**Neapolis**	**1.87**	**78**	P		**Pn**	**18 25 24.4**	**+2.0**
ZKR	**Zakros**	**2.34**	**84**	*e*PN		**Pn**	**18 25 31.4**	**+2.5**
ZKR	**Zakros**	**2.34**	**84**	*e*Pn		**Pn**	**18 25 31.4**	**+2.5**
DID	**Didima**	**2.62**	**358**	P		**Pn**	**18 25 33.0**	**+0.4**
DID				S		**Sn**	**18 26 05.4**	**+2.3**
DID	**Didima**	**2.62**	**358**	P		**Pn**	**18 25 33.0**	**+0.4**
DID				S		**Sn**	**18 26 05.4**	**+2.3**
SWA2		**5.90**	**162**	P		**Pn**	**18 26 18.5**	**+0.9**
	baz=165							
SWA2				AMP			18 27 00.0	
	comp=E,80μm,0.4s,logA/T=5.3,baz=165							
SWA2				S		**Sn**	**18 27 22.8**	**-1.2**
	baz=165							
SWA2		**5.90**	**162**	P		**Pn**	**18 26 18.5**	**+0.9**
AWBH		**8.07**	**143**	P		**Pn**	**18 26 47.6**	**+0.2**
	baz=144							
AWBH		**8.07**	**143**	P		**Pn**	**18 26 47.6**	**+0.2**
HFRF	**Wahat Farafira**	**8.80**	**150**	P		**Pn**	**18 26 58.9**	**+1.5**
	baz=151							
HFRF				S		**Sn**	**18 28 32.0**	**-3.3**
	baz=151							
HFRF	**Wahat Farafira**	**8.80**	**150**	P		**Pn**	**18 26 58.9**	**+1.5**
BRTR	**Keskin Array B**	**9.49**	**56**	Pn		**Pn**	**18 27 07.5**	**+0.5**
	comp=E,0.1nm,0.3s,baz=240,slow=16,SNR=7.0							
MMAI	**Mount Meron Ar**	**10.17**	**97**	Pn		**Pn**	**18 27 16.4**	**+0.2**
	comp=E,0.9nm,0.3s,baz=278,slow=11,SNR=5.3							
MMAI				Sn		Sn	18 29 02.0	-6.8
	comp=E,1.1nm,0.3s,baz=303,slow=22,SNR=4.9							
HFS	**Hagfors**	**26.03**	**349**	P		**P**	**18 30 20.0**	**-1.3**
	comp=E,0.9nm,0.5s,baz=134,slow=10,SNR=4.9							
JMIC	**Jan Mayen**	**39.94**	**344**	LR		LR	18 48 45.1	
	comp=E,44nm,19.2s,baz=59,slow=36							
KURBB	**Kurchatov Arra**	**42.43**	**51**	P		**P**	**18 32 41.9**	**-0.8**
	comp=E,0.8nm,0.6s,baz=278,slow=8.5,SNR=12							
MKAR	**Makanchi Array**	**45.14**	**56**	P		**P**	**18 33 03.8**	**-0.8**
	comp=E,0.5nm,0.5s,baz=280,slow=6.8,SNR=6.3							
ZALV	**Zalesovo Beam**	**46.25**	**46**	P		**P**	**18 33 11.9**	**-1.2**
	comp=E,0.4nm,0.4s,baz=261,slow=8.6,SNR=2.6							
SONM	**Songino Array**	**60.79**	**50**	P		**P**	**18 34 59.5**	**-0.4**
	comp=E,0.4nm,0.6s,baz=281,slow=8.2,SNR=3.8							
CMAR	**Chiang Mai Arr**	**68.06**	**82**	P		**P**	**18 35 47.7**	**-0.1**
	comp=E,0.4nm,0.8s,baz=291,slow=5.7,SNR=4.5							

CSEM ***26*** *18:27:18.9±0.1, 45°.98N×6°.89E, h8km, ML2.7/30, Error ellipse: s-maj=1.3km s-min=1.0km az=83.0*

VIE ***26*** *18:27:19.8±0.3, 45°.92N×7°.06E, h10km, ML2.7/1, Error ellipse: s-maj=5.2km s-min=1.2km az=129.0 20 km S of Martigny*

LDG ***26*** *18:27:19.7±0.1, 45°.97N×6°.94E, h2km, Md2.8/3, Ml2.7/27, Error ellipse: s-maj=1.0km s-min=0.7km az=115.0*

ZUR ***26*** *18:27:20.0, 46°.00N×6°.96E, h8km±1km, ML2.2/14*

GEN ***26*** *18:27:20.1, 45°.97N×6°.99E, h8km, ML2.1*

STR ***26*** *18:27:20.7±0.4, 46°.05N×6°.87E, h5km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ROM ***26*** *18:27:20.4±0.3, 45°.95N×7°.03E, h10km±1km, Md2.2/11, Ml2.1/2, Error ellipse: s-maj=4.3km s-min=1.6km az=121.0*

ISC 26 18:27:19.9±0.8, 45°.98N±0°.01×6°.93E±0°.01, h12km±5km, n150, σ1s37/233, 11C-12D, France

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SALAN	**Lac Salanfe**	**0.16**	**11**	⇑*i*Pg		**Pg**	**18 27 23.2**	**-0.7**
	848nm,0.2s							
SALAN				*i* Sg		**Sg**	**18 27 25.4**	**-1.3**
	848nm,0.2s							
SALAN	**Lac Salanfe**	**0.16**	**11**	⇑*i*Pg		**Pg**	**18 27 23.2**	**-0.7**
	848nm,0.2s							
SALAN				*i* Sg		**Sg**	**18 27 25.4**	**-1.3**
	848nm,0.2s							
MRGE	**Morge**	**0.23**	**157**	Pg		**Pg**	**18 27 24.8**	**-0.2**
MRGE				Sg		**Sg**	**18 27 28.2**	**-0.2**
MRGE	**Morge**	**0.23**	**157**	Pg		**Pg**	**18 27 24.8**	**-0.2**
MRGE				Sg		**Sg**	**18 27 28.2**	**-0.2**
GRYON	**Gryon**	**0.30**	**25**	⇑*i*Pg		**Pg**	**18 27 25.6**	**-0.5**
	125nm,0.2s							
GRYON				*i* Sg		**Sg**	**18 27 29.4**	**-0.8**
	125nm,0.2s							
GRYON	**Gryon**	**0.30**	**25**	⇑*i*Pg		**Pg**	**18 27 25.6**	**-0.5**
	125nm,0.2s							
GRYON				*i* Sg		**Sg**	**18 27 29.4**	**-0.8**
	125nm,0.2s							
DIX	**Grande Dixence**	**0.35**	**74**	⇓*i*Pg		**Pg**	**18 27 26.7**	**-0.3**
	1μm,0.2s							
DIX	**Grande Dixence**	**0.35**	**74**	Pg		**Pg**	**18 27 26.7**	**-0.3**
DIX				Sg		**Sg**	**18 27 31.3**	**-0.5**
DIX	**Grande Dixence**	**0.35**	**74**	⇓*i*Pg		**Pg**	**18 27 26.7**	**-0.3**
	1μm,0.2s							
DIX				Sg		**Sg**	**18 27 31.3**	**-0.5**
AIGLE	**Aigle**	**0.36**		**3** ⇑*i*Pg		**Pg**	**18 27 26.7**	**-0.5**
	393nm,0.2s							
AIGLE	**Aigle**	**0.36**		**3** ⇑*i*Pg		**Pg**	**18 27 26.7**	**-0.5**
	393nm,0.2s							
SENIN	**Lac Senin/Sane**	**0.46**	**34**	⇑*i*Pg		**Pg**	**18 27 28.5**	**-0.6**
	299nm,0.2s							
SENIN	**Lac Senin/Sane**	**0.46**	**34**	⇑*i*Pg		**Pg**	**18 27 28.5**	**-0.6**
	299nm,0.2s							
LPL	**La Plagne**	**0.49**	**197**	*e*Pg		**Pg**	**18 27 29.3**	**-0.2**
LPL				*e*Sg		**Sg**	**18 27 35.6**	**-0.4**
	45nm,0.2s							
LPL	**La Plagne**	**0.49**	**197**	*e*Pg		**Pg**	**18 27 29.3**	**-0.2**
LPL				*e*Sg		**Sg**	**18 27 35.6**	**-0.4**
	22nm,0.2s							
LPG	**La Plagne**	**0.50**	**194**	*e*Pg		**Pg**	**18 27 29.5**	**-0.3**
LPG				*e*Sg		**Sg**	**18 27 36.0**	**-0.5**
	46nm,0.2s							
LPG	**La Plagne**	**0.50**	**194**	*e*Pg		**Pg**	**18 27 29.5**	**-0.3**
LPG				*e*Sg		**Sg**	**18 27 36.0**	**-0.5**
	23nm,0.2s							
LSD	**Lago del Serru**	**0.54**	**165**	Pg		**Pg**	**18 27 30.5**	**-0.1**
LSD				Sg		**Sg**	**18 27 37.2**	**-0.6**
LSD	**Lago del Serru**	**0.54**	**165**	Pg		**Pg**	**18 27 30.5**	**-0.1**
LSD				Sg		**Sg**	**18 27 37.2**	**-0.6**
LKBD	**Leukerbad**	**0.63**	**50**	⇓*i*Pg		**Pg**	**18 27 31.7**	**-0.6**
	71nm,0.4s							
LKBD	**Leukerbad**	**0.63**	**50**	⇓*i*Pg		**Pg**	**18 27 31.7**	**-0.6**
	71nm,0.4s							
LKBD2	**Leukerbad 2**	**0.63**	**51**	⇓*i*Pg		**Pg**	**18 27 31.7**	**-0.6**
	43nm,0.2s							
LKBD2	**Leukerbad 2**	**0.63**	**51**	⇓*i*Pg		**Pg**	**18 27 31.7**	**-0.6**
	43nm,0.2s							
GIMEL	**St. Georges /**	**0.72**	**320**	*i* Pg		**Pg**	**18 27 34.0**	**+0.1**
	165nm,0.1s							
GIMEL	**St. Georges /**	**0.72**	**320**	*i* Pg		**Pg**	**18 27 34.0**	**+0.1**
	165nm,0.1s							
MMK	**Mattmark**	**0.72**	**84**	*e*P1			18 27 32.9	
	98nm,0.2s							
MMK	**Mattmark**	**0.72**	**84**	Pg		**Pg**	**18 27 33.2**	**-0.8**
MMK				Sg		**Sg**	**18 27 42.1**	**-1.5**
MMK	**Mattmark**	**0.72**	**84**	*e*P		**Pg**	**18 27 32.9**	**-1.1**
	98nm,0.2s							
MMK	**Mattmark**	**0.72**	**84**	Pg		**Pg**	**18 27 33.2**	**-0.8**
MMK				Sg		**Sg**	**18 27 42.1**	**-1.5**
TRAV	**Traversella**	**0.74**	**129**	Pg		**Pg**	**18 27 33.8**	**-0.5**
TRAV				Sg		**Sg**	**18 27 43.0**	**-1.0**
	62nm,0.1s							
TRAV	**Traversella**	**0.74**	**129**	P		**Pg**	**18 27 33.4**	**-0.9**
TRAV	**Traversella**	**0.74**	**129**	Pg		**Pg**	**18 27 33.8**	**-0.5**
TRAV				S		**Sg**	**18 27 42.4**	**-1.6**
TRAV				Sg		**Sg**	**18 27 43.0**	**-1.0**
	62nm,0.1s							
TORNY	**Torny/Romont**	**0.79**	**1**	*i* P1			18 27 35.6	
	402nm,0.3s							
TORNY	**Torny/Romont**	**0.79**	**1**	*i* P		**Pb**	**18 27 35.6**	**-0.1**
	402nm,0.3s							
ORO	**Oropa**	**0.82**	**115**	Pg		**Pg**	**18 27 35.2**	**-0.5**
	23nm,0.2s							
ORO	**Oropa**	**0.82**	**115**	Pg		**Pg**	**18 27 35.2**	**-0.5**
	23nm,0.2s							
WIMIS	**Wimmis**	**0.83**	**35**	⇓*i*P1			18 27 35.6	
	107nm,0.3s							
WIMIS	**Wimmis**	**0.83**	**35**	⇓*i*P		**Pg**	**18 27 35.6**	**-0.5**
	107nm,0.3s							
CABF	**La Chapelle**	**0.86**	**317**	*e*Pg		**Pg**	**18 27 36.1**	**-0.4**
CABF	**La Chapelle**	**0.86**	**317**	*e*Pn		**Pb**	**18 27 37.2**	**+0.4**
CABF				*e*Sg		**Sg**	**18 27 47.3**	**-0.5**
	37nm,0.2s							
CABF	**La Chapelle**	**0.86**	**317**	*e*Pg		**Pg**	**18 27 36.1**	**-0.4**
CABF	**La Chapelle**	**0.86**	**317**	*e*Pn		**Pb**	**18 27 37.2**	**+0.4**
CABF				*e*Sg		**Sg**	**18 27 47.3**	**-0.5**
	18nm,0.2s							
RSP	**Reno Superiore**	**0.87**	**164**	Pg		**Pg**	**18 27 36.2**	**-0.5**
RSP				Sg		**Sg**	**18 27 47.1**	**-0.9**
	60nm,0.2s							
RSP	**Reno Superiore**	**0.87**	**164**	P		**Pg**	**18 27 35.9**	**-0.8**
RSP	**Reno Superiore**	**0.87**	**164**	Pg		**Pg**	**18 27 36.2**	**-0.5**
RSP				S		**Sg**	**18 27 46.5**	**-1.6**
RSP				Sg		**Sg**	**18 27 47.1**	**-0.9**
	60nm,0.2s							
BNI	**Bardonecchia**	**0.95**	**191**	Pg		**Pg**	**18 27 37.5**	**-0.7**
BNI				Sg		**Sg**	**18 27 50.5**	**-0.1**
BNI	**Bardonecchia**	**0.95**	**191**	Pg		**Pg**	**18 27 37.5**	**-0.7**
BNI				Sg		**Sg**	**18 27 50.5**	**-0.1**
MBDF	**Montbardon**	**1.26**	**185**	*e*Pg		**Pn**	**18 27 43.4**	**-0.1**
MBDF				*e*Sg		**Sb**	**18 27 59.7**	**-0.2**
	50nm,0.6s							
MBDF	**Montbardon**	**1.26**	**185**	*e*Pg		**Pn**	**18 27 43.4**	**-0.1**
MBDF				*e*Sg		**Sb**	**18 27 59.7**	**-0.2**
	25nm,0.6s							
FUSIO	**Fusio**	**1.29**	**68**	⇑*i*Pn		**Pn**	**18 27 44.1**	**+0.2**
	54nm,0.6s							
FUSIO	**Fusio**	**1.29**	**68**	Pg		**Pn**	**18 27 44.1**	**+0.2**
FUSIO	**Fusio**	**1.29**	**68**	Pg		**Pn**	**18 27 44.1**	**+0.2**
ORIF	**Oris-en-Rattie**	**1.30**	**215**	*e*Pg		**Pn**	**18 27 43.8**	**-0.1**
ORIF				*e*Sg		**Sb**	**18 28 00.6**	**-0.3**
	17nm,0.3s							
ORIF	**Oris-en-Rattie**	**1.30**	**215**	*e*Pg		**Pn**	**18 27 43.8**	**-0.1**
ORIF				*e*Sg		**Sb**	**18 28 00.6**	**-0.3**
	8.4nm,0.3s							
LOMF	**Lomont**	**1.37**	**357**	Pg		**Pb**	**18 27 45.7**	**+0.2**
LOMF				Sg		**Sn**	**18 28 03.5**	**+0.4**
LOMF	**Lomont**	**1.37**	**357**	Pg		**Pb**	**18 27 45.7**	**+0.2**
LOMF				Sg		**Sn**	**18 28 03.5**	**+0.4**
BOURR	**Bourrignon**	**1.43**		**8** ⇓*e*Pn		**Pn**	**18 27 45.9**	**+0.2**
	196nm,0.6s							
BOURR	**Bourrignon**	**1.43**		**8** ⇓*e*Pn		**Pn**	**18 27 45.9**	**+0.2**
	196nm,0.6s							
MUGIO	**Muggio**	**1.48**	**92**	⇓*i*P		**Pb**	**18 27 47.0**	**-0.3**
	71nm,0.6s							
MUGIO	**Muggio**	**1.48**	**92**	⇓*i*P		**Pb**	**18 27 47.0**	**-0.3**
	71nm,0.6s							
PZZ	**Stroppo**	**1.48**	**175**	Pg		**Pb**	**18 27 47.4**	**-0.1**
PZZ				Sg		**Sn**	**18 28 06.2**	**+0.3**
PZZ	**Stroppo**	**1.48**	**175**	P		**Pn**	**18 27 45.7**	**-0.8**
PZZ	**Stroppo**	**1.48**	**175**	Pg		**Pb**	**18 27 47.4**	**-0.1**
PZZ				Sg		**Sn**	**18 28 06.2**	**+0.3**
DOI	**San Damiano**	**1.50**	**171**	Pg		**Pn**	**18 27 46.8**	**+0.1**
DOI				Sg		**Sb**	**18 28 07.1**	**+0.5**
DOI	**San Damiano**	**1.50**	**171**	Pg		**Pn**	**18 27 46.8**	**+0.1**
DOI				Sg		**Sb**	**18 28 07.1**	**+0.5**
BBS	**Basel-Blauen**	**1.53**	**15**	Pg		**Pb**	**18 27 48.8**	**+0.5**
BBS				Sg		**Sg**	**18 28 09.5**	**+0.2**
HINF	**Hinteralfeld**	**1.83**	**358**	*e*Pn		**Pn**	**18 27 50.9**	**-0.4**
HINF	**Hinteralfeld**	**1.83**	**358**	*e*Pg		**Pb**	**18 27 54.2**	**+0.8**
HINF				*e*Sg		**Sg**	**18 28 17.9**	**-1.0**
	19nm,0.3s							
HINF	**Hinteralfeld**	**1.83**	**358**	*e*Pn		**Pn**	**18 27 50.9**	**-0.4**
HINF	**Hinteralfeld**	**1.83**	**358**	*e*Pg		**Pb**	**18 27 54.2**	**+0.8**
HINF				*e*Sg		**Sg**	**18 28 17.9**	**-1.0**
	9.6nm,0.3s							
PCP	**Piancastagn**	**1.84**	**141**	P		**Pn**	**18 27 50.5**	**-0.9**
MOF	**Molkenrain**	**1.87**	**4**	Pg		**Pb**	**18 27 55.0**	**+0.8**
MOF				Sg		**Sg**	**18 28 19.7**	**-0.5**
MOF	**Molkenrain**	**1.87**	**4**	Pg		**Pb**	**18 27 55.0**	**+0.8**
MOF				Sg		**Sg**	**18 28 19.7**	**-0.5**
VIVF	**Saint-Julien-l**	**1.95**	**235**	*e*Pn		**Pn**	**18 27 52.4**	**-0.4**
VIVF	**Saint-Julien-l**	**1.95**	**235**	*e*Pg		**Pb**	**18 27 56.2**	**+0.8**
VIVF				*e*Sg		**Sb**	**18 28 20.7**	**+1.1**
	45nm,0.2s							
VIVF	**Saint-Julien-l**	**1.95**	**235**	*e*Pn		**Pn**	**18 27 52.4**	**-0.4**
VIVF	**Saint-Julien-l**	**1.95**	**235**	*e*Pg		**Pb**	**18 27 56.2**	**+0.8**
VIVF				*e*Sg		**Sb**	**18 28 20.7**	**+1.1**
	23nm,0.2s							
WILA	**Wila**	**1.98**	**43**	*i* Pn		**Pn**	**18 27 53.7**	**+0.4**
WILA	**Wila**	**1.98**	**43**	*i* Pn		**Pn**	**18 27 53.7**	**+0.4**
FELD	**Feldberg im Sc**	**2.03**	**21**	Pg		**Pb**	**18 27 57.7**	**+0.8**
FELD				Sg		**Sg**	**18 28 26.0**	**+0.7**
HAU	**Haudompre**	**2.06**	**349**	*e*Pn		**Pn**	**18 27 53.9**	**-0.5**
HAU	**Haudompre**	**2.06**	**349**	*e*Pg		**Pb**	**18 27 58.5**	**+1.2**
HAU				*e*Sg		**Sg**	**18 28 25.0**	**-1.2**
	19nm,0.3s							
HAU	**Haudompre**	**2.06**	**349**	*e*Pn		**Pn**	**18 27 53.9**	**-0.5**
HAU	**Haudompre**	**2.06**	**349**	*e*Pg		**Pb**	**18 27 58.5**	**+1.2**
HAU				*e*Sg		**Sg**	**18 28 25.0**	**-1.2**
	9.4nm,0.3s							
SBF	**Sospel**	**2.15**	**170**	*e*Pn		**Pn**	**18 27 55.1**	**-0.5**
SBF				*e*Sg		**Sb**	**18 28 27.5**	**+2.0**
	16nm,0.4s							
SBF	**Sospel**	**2.15**	**170**	*e*Pn		**Pn**	**18 27 55.1**	**-0.5**
SBF				*e*Sg		**Sb**	**18 28 27.5**	**+2.0**
	7.9nm,0.4s							
SMRF	**Simiane la Rot**	**2.23**	**206**	*e*P		**Pn**	**18 27 57.8**	**+1.1**
SMRF	**Simiane la Rot**	**2.23**	**206**	*e*Pg		**Pb**	**18 28 01.4**	**+1.3**
SMRF				*e*Sn		**Sn**	**18 28 22.2**	**-1.9**
	2.3nm,0.3s							
SMRF	**Simiane la Rot**	**2.23**	**206**	*e*P		**Pn**	**18 27 57.8**	**+1.1**
SMRF	**Simiane la Rot**	**2.23**	**206**	*e*Pg		**Pb**	**18 28 01.4**	**+1.3**
SMRF				*e*Sn		**Sn**	**18 28 22.2**	**-1.9**
	1.1nm,0.3s							
ECH	**Echery**	**2.24**	**4**	Pg		**Pg**	**18 28 01.7**	**-1.2**
ECH	**Echery**	**2.24**	**4**	Pg		**Pg**	**18 28 01.7**	**-1.2**
SMF	**Signal de Mont**	**2.24**	**288**	*e*Pn		**Pn**	**18 27 56.0**	**-0.8**
SMF	**Signal de Mont**	**2.24**	**288**	*e*Pg		**Pb**	**18 28 01.5**	**+1.2**
SMF				*e*Sg		**Sb**	**18 28 29.8**	**+1.8**
	8.8nm,0.2s							
SMF	**Signal de Mont**	**2.24**	**288**	*e*Pn		**Pn**	**18 27 56.0**	**-0.8**
SMF	**Signal de Mont**	**2.24**	**288**	*e*Pg		**Pb**	**18 28 01.5**	**+1.2**
SMF				*e*Sg		**Sb**	**18 28 29.8**	**+1.8**
	4.4nm,0.2s							
DAVA	**Damuels**	**2.42**	**56**	⇑*i*Pg		**Pg**

mb1 3.9/18, mb1mx3.9/23, mbtmp3.8/18, ML3.8/2, MS3.4/3, Ms1 3.4/3, ms1mx2.8/26, Error ellipse: s-maj=18.3km s-min=15.1km az=148.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.42**	**233**	P	Pn	18 38 01.5	+0.9
	3.0nm,0.3s,baz=41,slow=9.3,SNR=25						
PMG				S	Sn	18 39 23.9	+0.5
	2.2nm,0.3s,baz=155,slow=19,SNR=4.0						
HNR	**Honiara**	**8.03**	**124**	P	Pn	18 38 09.6	+0.8
	7.2nm,0.3s,baz=221,slow=7.7,SNR=7.9						
HNR				S	Sn	18 39 38.2	-0.1
	baz=237,slow=17,SNR=2.0						
CTA	**Charters Tower**	**16.46**	**204**	LR	LR	18 44 54.1	
	comp=Z,189nm,18.5s,baz=55,slow=32						
GUMO	**Guam**	**20.21**	**336**	LR	LR	18 47 25.9	
	comp=Z,38nm,19.0s,baz=193,slow=33						
DZM	**Mont Dzumac**	**21.29**	**144**	P	P	18 40 56.0	-0.7
	2.7nm,0.5s,baz=309,slow=14,SNR=6.7						
WRA	**Warramunga Arr**	**23.62**	**229**	P	P	18 41 20.4	-0.3
	451nm,0.4s,baz=51,slow=10,SNR=19						
ASAR	**Alice Springs**	**26.28**	**223**	P	P	18 41 44.7	-0.1
	1.2nm,0.5s,baz=57,slow=9.4,SNR=21						
STKA	**Stephens Creek**	**28.88**	**201**	P	P	18 42 09.0	+1.1
	3.9nm,1.0s,baz=14,slow=12,SNR=4.1						
STKA				LR	LR	18 52 46.7	
	comp=Z,121nm,20.9s,baz=24,slow=34						
FITZ	**Fitzroy Crossi**	**29.91**	**242**	P	P	18 42 16.6	-0.6
	6.6nm,0.6s,baz=61,slow=9.3,SNR=34						
MJAR	**Matsushiro Arr**	**43.62**	**342**	P	P	18 44 13.1	-0.3
	0.7nm,0.7s,baz=118,slow=28,SNR=3.6						
KSRS	**Korea Array**	**48.33**	**333**	P	P	18 44 50.3	-0.1
	0.8nm,0.6s,baz=153,slow=8.1,SNR=4.7						
USRK	**Ussuriysk Arra**	**52.54**	**341**	P	P	18 45 21.4	-0.6
	1.8nm,0.7s,baz=151,slow=4.7,SNR=4.4						
PETK	**Petropavlovsk-**	**58.00**	**3**	P	P	18 46 00.8	-0.3
	1.3nm,0.6s,baz=148,slow=4.9,SNR=4.5						
CMAR	**Chiang Mai Arr**	**58.30**	**295**	P	P	18 46 04.2	+0.2
	0.7nm,0.8s,baz=105,slow=4.9,SNR=7.3						
SONM	**Songino Array**	**66.68**	**328**	P	P	18 47 00.3	+0.8
	1.4nm,0.6s,baz=119,slow=3.3,SNR=5.5						
MKAR	**Makanchi Array**	**80.72**	**319**	P	P	18 48 21.8	+0.1
	0.8nm,0.6s,baz=92,slow=7.9,SNR=15						
ZALV	**Zalesovo Beam**	**81.52**	**326**	P	P	18 48 25.0	-0.7
	0.6nm,0.4s,baz=102,slow=6.3,SNR=4.6						
ILAR	**Eielson Array**	**82.18**	**22**	P	P	18 48 29.6	+0.6
	0.5nm,0.8s,baz=245,slow=6.0,SNR=6.0						
KURBB	**Kurchatov Array**	**84.18**	**322**	P	P	18 48 39.0	-0.6
	0.4nm,0.7s,baz=99,slow=4.3,SNR=4.8						
BVAR	**Borovoye Array**	**89.62**	**323**	P	P	18 49 05.5	-0.4
	2.0nm,0.6s,baz=104,slow=6.1,SNR=9.0						
TORD	**Torodi Ar. Bea**	**150.73**	**288**	PKPbc	PKPbc	18 56 01.5	+0.2
	0.9nm,0.4s,baz=93,slow=1.6,SNR=28						

PRU 26 18:38:11.3, 49.91N×19.03E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.58**	**263**	*e*PG	Pg	18 38 22.1	-0.3
OKC				*e*SG	Sg	18 38 29.6	-0.2
	comp=Z,2.7nm,0.3s						
OKC	**Ostrava-Krasne**	**0.58**	**263**	*e*	Pn	18 38 29.6	+2.8

*ISCJB **26** 18:42:05.6±0.8, 38.30N±0.04×38.80E±0.04, h4km±7km, Error ellipse: s-maj=6.8km s-min=4.8km az=154.5*
*CSEM **26** 18:42:05.4, 38.31N×38.81E, h7km, MD3.1, After DDA*
*DDA **26** 18:42:05.4, 38.31N×38.81E, h7km, MD3.1*
*NSSC **26** 18:42:17.6±1.8, 36.90N×38.76E, h0km±10km, ML2.1*
ISC 26 18:42:05.7±1.0, 38.28N±0.04×38.81E±0.02, h12km±8km, n24, σ1°27/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.25**	**32**	*i* P	**Pg**	**18 42 10.6**	**-0.4**
ELZG				*i* S	**Sg**	**18 42 14.4**	**-0.3**
ELZG	**Elazig**	**0.25**	**32**	*i* P	**Pg**	**18 42 10.6**	**-0.4**
ELZG				*i* S	**Sg**	**18 42 14.4**	**-0.3**
AKCD	**Akcadag**	**0.70**	**271**	*i* P	**Pg**	**18 42 18.9**	**-0.4**
AKCD				*i* S	**Sg**	**18 42 29.0**	**+0.5**
AKCD	**Akcadag**	**0.70**	**271**	*i* P	**Pg**	**18 42 18.9**	**-0.4**
AKCD	**Akcadag**	**0.70**	**271**	*i* P	**Pg**	**18 42 18.9**	**-0.4**
AKCD				*i* S	**Sg**	**18 42 29.0**	**+0.5**
ATAB	**Bozova**	**0.91**	**207**	*i* P	**Pn**	**18 42 24.7**	**+0.4**
ATAB				*i* S	**Sn**	**18 42 37.6**	**+0.2**
ATAB	**Bozova**	**0.91**	**207**	*i* P	**Pn**	**18 42 24.7**	**+0.4**
ATAB	**Bozova**	**0.91**	**207**	*i* P	**Pn**	**18 42 24.7**	**+0.4**
ATAB				*i* S	**Sn**	**18 42 37.6**	**+0.2**
ATAB				*i* S	**Sn**	**18 42 37.6**	**+0.2**
KEMA	**Kemaliye**	**1.01**	**346**	*i* P	**Pg**	**18 42 24.1**	**-1.1**
KEMA				*i* S	**Sb**	**18 42 39.0**	**+0.4**
KEMA	**Kemaliye**	**1.01**	**346**	*i* P	**Pg**	**18 42 24.1**	**-1.1**
KEMA				*i* S	**Sb**	**18 42 39.0**	**+0.4**
DIYA	**Diyarbakir**	**1.09**	**109**	*i* P	**Pg**	**18 42 26.4**	**-0.3**
DIYA				*i* S	**Sn**	**18 42 42.8**	**+0.9**
DIYA	**Diyarbakir**	**1.09**	**109**	*i* P	**Pg**	**18 42 26.4**	**-0.3**
DIYA				*i* S	**Sn**	**18 42 42.8**	**+0.9**
AYKD	**Aykdinkavak**	**1.81**	**242**	*i* P	**Pn**	**18 42 37.6**	**+0.9**
AYKD				*i* S	**Sg**	**18 43 04.9**	**+1.0**
AYKD	**Aykdinkavak**	**1.81**	**242**	*i* P	**Pn**	**18 42 37.6**	**+0.9**
AYKD	**Aykdinkavak**	**1.81**	**242**	*i* P	**Pn**	**18 42 37.6**	**+0.9**
AYKD				*i* S	**Sg**	**18 43 04.9**	**+1.0**
BEST	**Besiri**	**1.98**	**101**	*i* P	**Pn**	**18 42 40.5**	**+1.4**
BEST				*i* S	**Sb**	**18 43 06.0**	**-0.2**
DRWC	**Darouich**	**2.38**	**226**	*e*P	**Pb**	**18 42 49.0**	**+0.5**
DRWC				*e*S	**Sn**	**18 43 11.9**	**-1.9**
DRWC				AML	AML	18 43 31.3	
	comp=N,36nm,0.4s						
DRWC				AML	AML	18 43 32.7	
	comp=E,20nm,0.4s						
DRWC	**Darouich**	**2.38**	**226**	*e*P	**Pb**	**18 42 49.0**	**+0.5**
	SNR=45						
DRWC				*e*S	**Sn**	**18 43 11.9**	**-1.9**
	comp=E,20nm,0.4s,SNR=40						
KSRV	**Kasrt alli**	**2.42**	**176**	*e*P	**Pn**	**18 42 46.9**	**+1.9**
KSRV				*e*S	**Sn**	**18 43 10.5**	**-4.1**
KSRV				AML	AML	18 43 25.4	
	comp=Z,19nm,0.3s						
KSRV	**Kasrt alli**	**2.42**	**176**	*e*P	**Pn**	**18 42 46.9**	**+1.9**
	SNR=57						
KSRV				*e*S	**Sn**	**18 43 10.5**	**-4.1**
	comp=Z,19nm,0.3s,SNR=49						
MZRK	**Al-Mazaregh**	**2.86**	**148**	*e*P	**Pn**	**18 42 50.8**	**-0.3**
MZRK				*e*S	Sn	18 43 15.7	-10
MZRK				AML	AML	18 43 37.5	
	comp=Z,31nm,0.5s						
MZRK	**Al-Mazaregh**	**2.86**	**148**	*e*P	**Pn**	**18 42 50.8**	**-0.3**
	SNR=45						
MZRK				*e*S	Sn	18 43 15.7	-10
	comp=Z,31nm,0.5s,SNR=40						
BTCH	**Batrach**	**2.93**	**221**	*e*P	**Pn**	**18 42 52.4**	**+0.3**
BTCH				*e*S	Sn	18 43 19.9	-7.3
BTCH				AML	AML	18 43 42.9	
	comp=N,66nm,0.4s						
BTCH				AML	AML	18 43 53.5	
	comp=E,57nm,0.4s						
BTCH	**Batrach**	**2.93**	**221**	*e*P	**Pn**	**18 42 52.4**	**+0.3**
	SNR=45						
BTCH				*e*S	Sn	18 43 19.9	-7.3
	comp=E,57nm,0.4s,SNR=40						

*IDC **26** 19:04:55.4±1.8, 5.88S×130.47E, h0km, mb3.7/4, mb1 3.9/7, mb1mx3.7/19, mbtmp3.7/7, ML3.8/3, Error ellipse: s-maj=77.3km s-min=24.9km az=78.0*
*AUST **26** 19:04:59.9, 5.98S×129.53E, h100km*
ISC 26 19:04:57.5±0.9, 6.05S±0.06×129.47E±0.10, h10km, n22, σ2°35/14, mb3.6/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**3.27**	**83**	P	**Pb**	**19 05 54.1**	**-1.6**
	5µm211nm,1.1s						
TLE	**Tual**	**3.27**	**83**	S	Sn	19 06 21.9	-6.1
	baz=3.2,SNR=7.2						
FAKI	**Fak Fak**	**4.17**	**42**	P	**Pb**	**19 06 09.6**	**-1.4**
	3µm55nm,0.6s						
FAKI	**Fak Fak**	**4.17**	**42**	P	**Pb**	**19 06 09.0**	**-1.9**
	baz=4.1,SNR=22						
FAKI				S	**Sn**	**19 06 51.7**	**+1.7**
	baz=4.1,SNR=31						
SWI	**Sorong**	**5.46**	**19**	P	**Pb**	**19 06 29.8**	**-3.1**
	6µm30nm,0.4s						
SWI	**Sorong**	**5.46**	**19**	P	**Pb**	**19 06 30.2**	**-2.7**
	baz=5.4,SNR=40						
SWI				S	Sn	19 07 28.4	+6.5
	baz=5.4,SNR=14						
MTN	**Manton Dam**	**6.94**	**166**	P	Pn	19 06 44.9	+5.5
	baz=7.0,SNR=41						
MTN				S	Sn	19 07 55.1	-3.4
	baz=7.0,SNR=8.8						
KDU	**Kakadu**	**7.22**	**156**	P	**Pn**	**19 06 46.4**	**+3.2**
	baz=7.3,SNR=65						
KDU				S	Sn	19 07 57.4	-8.1
	baz=7.3,SNR=14						
PCI	**Palu**	**10.89**	**298**	P	Pn	19 07 30.6	-3.0
	baz=11,SNR=7.1						
FITZ	**Fitzroy Crossi**	**12.55**	**197**	Pn	Pn	19 08 02.1	+5.9
	0.9nm,0.3s,baz=22,slow=10,SNR=21						
FITZ				Sn	**Sn**	**19 10 13.8**	**-2.3**
	1.0nm,0.3s,baz=135,slow=20,SNR=7.9						
FITZ	**Fitzroy Crossi**	**12.55**	**197**	P	Pn	19 08 02.9	+6.7
	baz=13,SNR=19						
FITZ				S	**Sn**	**19 10 13.9**	**-2.2**
	baz=13,SNR=4.2						
WRA	**Warramunga Arr**	**14.59**	**162**	Pn	Pn	19 08 22.0	-2.2
	0.4nm,0.3s,baz=342,slow=13,SNR=15						
WRA				Sn	Sn	19 10 49.2	-17
	60nm,0.3s,baz=341,slow=21,SNR=4.8						
COEN	**Coen**	**15.61**	**121**	P	**Pn**	**19 08 35.6**	**-2.1**
	baz=16,SNR=6.6						
ASAR	**Alice Springs**	**18.02**	**167**	Pn	**Pn**	**19 09 07.5**	**-0.8**
	0.2nm,0.3s,baz=349,slow=11,SNR=17						
ASAR				Sn	Sn	19 12 14.8	-15
	0.3nm,0.3s,baz=353,slow=27,SNR=7.0						
SMRI	**Semarang**	**18.93**	**266**	P	P	19 09 11.9	-7.0
	baz=19,SNR=5.4						
BKNI	**Bangkinang**	**29.08**	**282**	P	P	19 10 49.3	-9.3
	baz=29,SNR=3.4						
PPI	**Padang Panjang**	**29.54**	**280**	P	P	19 10 59.2	-3.4
	baz=30,SNR=4.5						
GSI	**Gunungsitoli**	**32.67**	**282**	P	P	19 11 19.6	-11
	baz=33,SNR=22						
CMAR	**Chiang Mai Arr**	**38.73**	**310**	P	P	19 12 27.5	+5.3
	0.6nm,0.6s,baz=132,slow=6.7,SNR=6.3						
SONM	**Songino Array**	**57.38**	**342**	P	**P**	**19 14 48.0**	**+1.8**
	0.1nm,0.4s,baz=156,slow=6.2,SNR=3.7						
MKAR	**Makanchi Array**	**67.15**	**327**	P	**P**	**19 15 53.5**	**+1.8**
	1.4nm,0.4s,baz=117,slow=8.2,SNR=36						
ZALV	**Zalesovo Beam**	**70.51**	**334**	P	**P**	**19 16 12.5**	**+0.2**
	0.4nm,0.5s,baz=134,slow=6.2,SNR=2.7						

IDC 26 19:29:36.4±2.0, 1.17N×127.98E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/21, mbtmp3.5/3, Error ellipse: s-maj=144.5km s-min=25.1km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.89**	**164**	P	P	19 34 29.4	-1.8
	1.1nm,0.7s,baz=344,slow=11,SNR=7.0						
ASAR	**Alice Springs**	**25.35**	**167**	P	P	19 35 06.6	+1.3
	0.5nm,0.7s,baz=343,slow=11,SNR=9.6						
MKAR	**Makanchi Array**	**60.36**	**326**	P	P	19 39 47.2	-0.2
	0.4nm,0.5s,baz=118,slow=8.6,SNR=7.8						

IDC 26 19:33:23.1±1.8, 1.30N×126.57E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=113.7km s-min=23.4km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.30**	**183**	P	P	19 37 49.9	+0.2
	0.1nm,0.3s,baz=17,slow=11,SNR=2.9						
WRA	**Warramunga Arr**	**22.44**	**161**	P	P	19 38 23.8	-0.1
	2.8nm,0.5s,baz=339,slow=11,SNR=46						
ASAR	**Alice Springs**	**25.82**	**164**	P	P	19 38 56.2	0.0
	0.6nm,0.4s,baz=346,slow=11,SNR=16						
MKAR	**Makanchi Array**	**59.46**	**326**	P	P	19 43 27.9	0.0
	0.4nm,0.6s,baz=118,slow=7.7,SNR=7.9						

*ISCJB **26** 19:37:50.9±0.4, 37.17N±0.06×135.22E±0.07, h361km, mb2.9/7, Error ellipse: s-maj=7.7km s-min=6.9km az=151.5*
*IDC **26** 19:37:51.5±1.0, 37.09N×135.24E, h364km±11km, mb2.7/7, mb1 2.9/12, mb1mx2.8/31, mbtmp2.8/12, Error ellipse: s-maj=17.1km s-min=13.3km az=98.0*
*JMA **26** 19:37:52.0±0.2, 37.09N×135.24E, h361km±2km, M2.9*
ISC 26 19:37:51.3±0.7, 37.10N±0.09×135.25E±0.07, h361km, n33, σ0°84/36, mb2.9/7, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKY	**Yasaka**	**1.47**	**185**	P	**Pn**	**19 38 41.3**	**+0.8**
JKY				*e*S	**S**	**19 39 19.7**	**-0.3**
JKSM	**Kasumi**	**1.58**	**198**	P	**Pn**	**19 38 41.5**	**+0.5**
JWT	**Wachi**	**1.82**	**176**	P	**Pn**	**19 38 43.4**	**+0.9**
JWT				*e*S	**S**	**19 39 22.7**	**-0.9**
JGM	**Miyama**	**1.83**	**139**	P	**Pn**	**19 38 43.3**	**+0.7**
JNG	**Nsakai**	**2.39**	**106**	P	**Pn**	**19 38 47.4**	**+0.9**
MAT	**Matsushiro**	**2.44**	**102**	P	**Pn**	**19 38 47.7**	**+0.9**
MAT				*e*S	**S**	**19 39 29.9**	**-1.6**
MAT	**Matsushiro**	**2.44**	**102**	P	**Pn**	**19 38 47.8**	**+0.9**
MJAR	**Matsushiro Arr**	**2.44**	**102**	P	**Pn**	**19 38 48.1**	**+1.3**
	1.8nm,0.3s,baz=277,slow=9.9,SNR=48						
JSD	**Sado**	**2.57**	**68**	P	**Pn**	**19 38 48.6**	**+0.9**
JHS	**Saijyo**	**2.72**	**220**	P	**Pn**	**19 38 49.7**	**+0.6**
JWY	**Kouya**	**2.89**	**174**	P	**Pn**	**19 38 51.4**	**+0.7**
JIE	**Ise**	**2.95**	**156**	P	**Pn**	**19 38 52.3**	**+1.2**
JHK	**Hiroka**	**3.01**	**86**	P	**Pn**	**19 38 52.2**	**+0.7**
JRY	**Ryogami san**	**3.13**	**109**	P	**Pn**	**19 38 54.3**	**+1.6**
JWZ	**Kozaga**	**3.58**	**174**	P	**Pn**	**19 38 57.4**	**+0.5**
JOD2	**Odawara 2**	**3.60**	**119**	P	**Pn**	**19 38 57.6**	**+0.5**
JFT	**Otama**	**4.08**	**83**	P	**Pn**	**19 39 02.7**	**+1.0**
JMM	**Marumori**	**4.47**	**78**	P	**Pn**	**19 39 06.3**	**+0.6**
JFK	**Kawauchi**	**4.50**	**85**	P	**Pn**	**19 39 06.0**	**0.0**
JTO	**Tosashimizu**	**4.68**	**206**	P	**Pn**	**19 39 08.9**	**+0.8**
JMK	**Ichinoseki**	**5.06**	**67**	P	**Pn**	**19 39 12.3**	**+0.3**
BSO1	**Boso 1**	**5.25**	**116**	P	**Pn**	**19 39 13.7**	**+0.1**
JNU	**Nakatsue**	**5.35**	**223**	P	**Pn**	**19 39 15.9**	**+0.6**
	0.7nm,0.3s,baz=324,slow=1.6,SNR=9.3						
KSRS	**Korea Array**	**5.86**	**276**	P	**Pn**	**19 39 21.7**	**+0.9**
	1.5nm,0.3s,baz=94,slow=12,SNR=43						
USRK	**Ussuriysk Arra**	**7.51**	**342**	P	**Pn**	**19 39 40.2**	**+0.5**
	0.7nm,0.3s,baz=149,slow=10,SNR=12						
ASAJ	**Asahikawa**	**8.96**	**36**	P	**Pn**	**19 39 55.4**	**-1.3**
	1.5nm,0.3s,baz=176,slow=12,SNR=21						
SONM	**Songino Array**	**23.70**	**306**	P	**P**	**19 42 31.7**	**-0.4**
	0.3nm,0.6s,baz=113,slow=8.4,SNR=4.3						
MKAR	**Makanchi Array**	**39.89**	**301**	P	**P**	**19 44 51.9**	**+0.6**
	0.2nm,0.5s,baz=92,slow=8.8,SNR=4.3						
ILAR	**Eielson Array**	**52.07**	**32**	P	**P**	**19 46 25.6**	**+0.6**
	0.4nm,0.5s,baz=274,slow=6.5,SNR=9.4						
WRA	**Warramunga Arr**	**56.74**	**181**	P	**P**	**19 46 58.4**	**-0.3**
	0.5nm,0.5s,baz=356,slow=7.6,SNR=9.1						
ASAR	**Alice Springs**	**60.45**	**181**	P	**P**	**19 47 23.7**	**-0.4**
	0.3nm,0.8s,baz=17,slow=13,SNR=3.6						
YKA	**Yellowknife Ar**	**66.17**	**28**	P	**P**	**19 48 00.8**	**+0.1**
	0.1nm,0.8s,baz=310,slow=6.8,SNR=3.9						
FINES	**FINESS Array B**	**66.39**	**330**	P	**P**	**19 48 01.3**	**-0.8**
	0.4nm,0.4s,baz=54,slow=7.1,SNR=5.4						

IDC 26 20:19:15.4±3.4, 17.46S×179.13W, h570km±41km, mb3.1/8, mb1 3.5/8, mb1mx3.2/18, mbtmp3.1/8, Error ellipse: s-maj=42.1km s-min=13.6km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.25**	**240**	P	P	20 25 48.0	+0.3
	10nm,0.4s,baz=89,slow=9.5,SNR=104						
WRA	**Warramunga Arr**	**44.04**	**259**	P	P	20 26 32.6	-1.2
	1.1nm,0.6s,baz=154,slow=14,SNR=52						
ASAR	**Alice Springs**	**44.26**	**254**	P	P	20 26 35.1	-0.3
	28nm,0.5s,baz=88,slow=8.1,SNR=609						
ASAR				PcP	PcP	20 28 07.7	+0.4
	0.8nm,0.6s,baz=104,slow=4.4,SNR=4.1						
ASAR				S	S	20 32 28.5	+0.1
	0.3nm,0.7s,baz=78,slow=18,SNR=4.4						
MJAR	**Matsushiro Arr**	**67.14**	**324**	P	P	20 29 14.0	+0.7
	1.6nm,0.5s,baz=161,slow=6.5,SNR=7.7						
NVAR	**Mina Array Bea**	**79.58**	**44**	P	P	20 30 24.0	-0.3
	0.2nm,0.3s,baz=236,slow=7.5,SNR=2.8						
ILAR	**Eielson Array**	**85.61**	**13**	P	P	20 30 52.7	-1.0
	0.5nm,0.5s,baz=226,slow=5.4,SNR=11						
TXAR	**Lajitas Array**	**86.34**	**58**	P	P	20 30 58.9	+0.8
	0.2nm,0.7s,baz=258,slow=3.3,SNR=3.2						
PDAR	**Pinedale Array**	**87.50**	**44**	P	P	20 31 02.6	-0.8
	0.4nm,0.6s,baz=200,slow=3.9,SNR=3.8						
YKA	**Yellowknife Ar**	**94.22**	**25**	P	P	20 31 33.5	-0.1
	0.3nm,0.7s,baz=248,slow=4.5,SNR=7.0						

*ISCJB **26** 20:19:28.7±1.0, 32.16N±0.03×115.69W±0.03, h13km±9km, n38, σ0°80/54, 23C-12D, California-Baja California border region*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDX	**Rancho Dawling**	**0.31**	**224**	⇑*i*P	**Pg**	**20 19 35.4**	**+0.2**
RDX				*i* S	**Sg**	**20 19 39.4**	**-0.2**
RDX	**Rancho Dawling**	**0.31**	**224**	⇑*i*P	**Pg**	**20 19 35.4**	**+0.2**
RDX				*i* S	**Sg**	**20 19 39.4**	**-0.2**
RDX				⇑*e*		20 19 40.1	
	comp=N,5µm,0.3s						
CPBX	**Cerro Prieto**	**0.42**	**51**	⇑*e*P	**Pb**	**20 19 38.4**	**+0.5**
SGL	**Mount Signal**	**0.49**	**356**	⇑*e*P	**Pg**	**20 19 38.5**	**0.0**
SGL	**Mount Signal**	**0.49**	**356**	⇑*e*P	**Pb**	**20 19 39.5**	**+0.2**
YUH	**Yuha Desert**	**0.53**	**338**	⇑*e*P	**Pb**	**20 19 39.8**	**-0.2**
YUH	**Yuha Desert**	**0.53**	**338**	⇑*e*P	**Pb**	**20 19 39.8**	**-0.2**
RMX	**La Rumorosa**	**0.56**	**323**	⇑*i*P	**Pg**	**20 19 40.1**	**+0.5**
RMX	**La Rumorosa**	**0.56**	**323**	⇑*i*P	**Pg**	**20 19 40.1**	**+0.5**
RMX				⇑*e*		20 19 51.9	
	comp=N,3µm,0.1s						
WESC	**Westside Schoo**	**0.60**	**356**	⇓*e*P	**Pb**	**20 19 42.0**	**+0.8**
DVTC	**Desert V Tower**	**0.61**	**325**	*e*P	**Pg**	**20 19 41.4**	**+0.6**
DVTC	**Desert V Tower**	**0.61**	**325**	⇓P	**Pg**	**20 19 41.3**	**+0.6**
	baz=0.6						
DVTC				⇓S	**Sg**	**20 19 49.1**	**+0.2**
	baz=0.6						
SWSC	**Sam W. Stewart**	**0.79**	**353**	⇓P	**Pb**	**20 19 44.7**	**+0.4**
	baz=0.9						
ZAX	**El Zacaton**	**0.81**	**218**	⇑*i*P	**Pg**	**20 19 44.4**	**-0.1**
ZAX				*i* S	**Sg**	**20 19 55.2**	**+0.1**
EMSC	**East Mesa**	**0.83**	**45**	⇓*e*P	**Pn**	**20 19 45.6**	**-0.6**
CBX	**Cerro Bola**	**0.84**	**281**	⇑*e*P	**Pg**	**20 19 45.2**	**+0.2**
CBX				*e*S	**Sg**	**20 19 56.4**	**+0.2**
ECNX	**Esteban Cantu**	**0.92**	**238**	⇑*i*P	**Pg**	**20 19 46.4**	**-0.1**
MONP	**Monument Peak**	**0.96**	**320**	⇓P	**Pg**	**20 19 47.5**	**+0.2**
	baz=1.0						
MONP				⇑S	**Sg**	**20 19 59.8**	**0.0**
	baz=1.0						
PBX	**Punta Banda**	**0.98**	**245**	⇑*i*P	**Pg**	**20 19 47.4**	**-0.1**
PBX	**Punta Banda**	**0.98**	**245**	⇑*i*P	**Pg**	**20 19 47.4**	**-0.1**
PBX				⇓*e*		20 20 03.2	
	comp=E,1µm,0.8s						
BAR	**Barrett**	**0.98**	**302**	*e*Pg	**Pg**	**20 19 47.4**	**-0.3**
BAR				*e*Sg	**Sg**	**20 19 59.1**	**-1.5**
BAR	**Barrett**	**0.98**	**302**	⇑*e*P	**Pg**	**20 19 47.5**	**-0.2**
GLA	**Glamis**	**1.15**	**39**	*e*Pn	**Pb**	**20 19 49.8**	**-0.8**
GLA				*e*Sn	**Sb**	**20 20 04.5**	**-0.9**
GLA	**Glamis**	**1.15**	**39**	⇓P	**Pb**	**20 19 49.9**	**-0.6**
	baz=1.3						
GLA				⇓S	**Sb**	**20 20 04.5**	**-0.9**
	baz=1.3						
109C	**Camp Elliot, M**	**1.41**	**302**	⇑P	**Pn**	**20 19 54.4**	**+0.3**
	baz=1.4						
109C				⇓S	**Sn**	**20 20 12.4**	**-0.1**
	baz=1.4						
BC3	**Big Chuckawall**	**1.51**	**7**	⇓P	**Pn**	**20 19 55.4**	**-0.2**
	baz=1.6						
PFO	**Pinyon Flat Ob**	**1.59**	**336**	*e*Pn	**Pn**	**20 19 56.5**	**-0.2**
PFO				*e*Sn	**Sb**	**20 20 19.5**	**+1.4**
PFO	**Pinyon Flat Ob**	**1.59**	**336**	⇑P	**Pn**	**20 19 56.4**	**-0.3**
	baz=1.6						
113A	**Mohawk Valley,**	**1.73**	**69**	⇑P	**Pn**	**20 19 58.4**	**-0.2**
	baz=1.8						
BELC	**Belle Mtn. Jos**	**1.86**	**352**	⇑P	**Pn**	**20 20 00.5**	**0.0**
	baz=1.9						
MURC	**Murrieta**	**1.92**	**319**	⇓Pb	**Pb**	**20 20 03.5**	**-0.2**
	baz=1.9						
MURC				⇑Sb	**Sb**	**20 20 28.7**	**+1.0**
	baz=1.9						
MWC	**Mount Wilson**	**2.87**	**317**	*e*Pn	**Pn**	**20 20 15.2**	**+0.8**
MWC				*e*S	**Sb**	**20 20 54.3**	**-0.7**
PASC	**Pasadena Art C**	**2.91**	**314**	*e*Pn	**Pn**	**20 20 14.0**	**-0.7**
PASC				*e*S	**Sb**	**20 20 54.9**	**-1.0**
GSC	**Goldstone**	**3.27**	**344**	*e*Pn	**Pn**	**20 20 21.2**	**+1.4**
OSI	**Osito Adit**	**3.53**	**315**	*e*Pn	**Pn**	**20 20 23.6**	**+0.2**
OSI				*e*S	**Sg**	**20 21 20.0**	**-2.2**
TUC	**

	comp=Z,10nm,0.5s							
VRAC	**Vranov**	**2.26**	**172**	*e*Pn		**Pn**	**20 34 13.9**	**+0.1**
	baz=354							
VRAC				*e*Sg		**Sg**	**20 34 46.2**	**-1.5**
	comp=Z,11nm,0.3s,baz=354							
TREC	**Trest**	**2.29**	**191**	*e*SG		**Sg**	**20 34 47.7**	**-1.0**
	comp=Z,15nm,0.2s							
TREC	**Trest**	**2.29**	**191**	Sg		**Sg**	**20 34 47.7**	**-1.0**
	comp=Z,15nm,0.2s							
KRUC	**Moravsky**	**2.49**	**176**	*e*Pn		**Pn**	**20 34 17.1**	**+0.1**
	baz=357							
KRUC				*e*Sg		**Sg**	**20 34 53.7**	**-1.5**
	comp=Z,10nm,0.5s,baz=357							
NKC	**Novy Kostel**	**2.68**	**242**	*e*PN		**Pn**	**20 34 20.4**	**+0.9**
NKC				*e*PG		**Pg**	**20 34 25.7**	**-0.7**
NKC				*e*SG		**Sg**	**20 35 00.9**	**-0.2**
	comp=Z,43nm,0.3s							
NKC	**Novy Kostel**	**2.68**	**242**	Pn		**Pn**	**20 34 20.4**	**+0.9**
OJC	**Ojcow**	**2.68**	**118**	*e*Pg		**Pg**	**20 34 26.2**	**-0.2**
OJC				*e*Sg		**Sg**	**20 35 01.6**	**+0.5**
OJC	**Ojcow**	**2.68**	**118**	*e*PG		**Pg**	**20 34 26.2**	**-0.2**
OJC				*e*SG		**Sg**	**20 35 01.6**	**+0.5**
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN		**Pn**	**20 34 23.3**	**+0.5**
KHC				*e*PG		**Pb**	**20 34 29.1**	**+1.0**
KHC				*e*SN		**Sn**	**20 34 58.1**	**-0.5**
KHC				*e*SG		**Sg**	**20 35 06.9**	**-2.0**
	comp=Z,7.1nm,0.3s							
KHC	**Kasperske Hory**	**2.92**	**215**	Pn		**Pn**	**20 34 23.3**	**+0.5**
VYHS	**Vyhne**	**3.52**	**149**	*e*PN		**Pn**	**20 34 30.8**	**-0.3**
VYHS				*e*			20 34 43.0	
VYHS	**Vyhne**	**3.52**	**149**	*e*SG		**Sg**	**20 35 26.8**	**-1.4**
CONA	**Conrad Observa**	**3.63**	**183**	⇑*i*Pn		**Pn**	**20 34 32.6**	**0.0**
CONA				⇓*i*Sg		**Sg**	**20 35 29.4**	**-2.2**
CONA	**Conrad Observa**	**3.63**	**183**	Pn		**Pn**	**20 34 32.6**	**0.0**
CONA				Sg		**Sg**	**20 35 29.4**	**-2.2**
BSD	**Bornholm Skovb**	**3.65**	**349**	*i* P		**Pn**	**20 34 32.8**	**0.0**
BSD				*i* S		**Sn**	**20 35 14.9**	**-1.5**
BSD	**Bornholm Skovb**	**3.65**	**349**	*i* P		**Pn**	**20 34 32.8**	**0.0**
BSD				*i* S		**Sn**	**20 35 14.9**	**-1.5**
MOA	**Molln**	**3.89**	**199**	⇑*i*Pn		**Pn**	**20 34 36.8**	**+0.6**
MOA				⇓*i*Sg		**Sg**	**20 35 39.4**	**-0.7**
MOA	**Molln**	**3.89**	**199**	Pn		**Pn**	**20 34 36.8**	**+0.6**
MOA				Sg		**Sg**	**20 35 39.4**	**-0.7**
CRVS	**Cervenica-Dubn**	**4.33**	**126**	*e*		**Pg**	**20 34 58.8**	**+0.8**
KOLS	**Kolonicke sedl**	**4.73**	**121**	*e*		**Pg**	**20 35 05.5**	**-0.3**

IDC 26 20:46:05.1±1.0, 3°56S×144°34E, h0km, mb3.6/7, mb1 3.7/9, mb1mx3.6/19, mbtmp3.6/9, ML2.9/2, Error ellipse: s-maj=33.2km s-min=19.0km az=93.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.45**	**154**	Pn	Pn	20 47 43.5	+2.1
	0.4nm,0.3s,baz=0.0,slow=4.0,SNR=2.8						
PMG				Sn	Sn	20 48 55.9	+0.1
	0.4nm,0.3s,baz=315,slow=20,SNR=2.1						
WRA	**Warramunga Arr**	**18.99**	**210**	P	P	20 50 28.0	-0.4
	0.1nm,0.3s,baz=31,slow=12,SNR=6.9						
ASAR	**Alice Springs**	**22.39**	**206**	P	P	20 51 04.7	-0.7
	0.5nm,0.7s,baz=29,slow=8.3,SNR=5.7						
FITZ	**Fitzroy Crossi**	**23.33**	**230**	P	P	20 51 14.4	-0.8
	0.9nm,0.4s,baz=97,slow=6.5,SNR=5.9						
KSRS	**Korea Array**	**43.57**	**341**	P	P	20 54 10.7	-0.2
	0.7nm,0.4s,baz=159,slow=8.1,SNR=3.5						
CMAR	**Chiang Mai Arr**	**49.77**	**298**	P	P	20 55 01.2	+1.2
	0.6nm,0.6s,baz=117,slow=6.4,SNR=5.6						
SONM	**Songino Array**	**61.01**	**332**	P	P	20 56 21.0	+0.4
	0.3nm,0.6s,baz=164,slow=5.6,SNR=3.3						
ZALV	**Zalesovo Beam**	**75.55**	**328**	P	P	20 57 51.2	-0.3
	0.2nm,0.3s,baz=67,slow=3.9,SNR=3.9						
ILAR	**Eielson Array**	**84.31**	**24**	P	P	20 58 37.6	-1.1
	0.4nm,0.6s,baz=250,slow=4.7,SNR=7.2						
SIV	**San Ignacio**	**148.23**	**128**	PKPbc	PKPbc	21 05 54.1	-0.2
	1.9nm,0.6s,baz=237,slow=6.7,SNR=5.8						

IDC 26 20:47:18.9±6.6, 11°21S×75°66W, h33km±63km, mb3.6/4, mb1 3.9/5, mb1mx3.6/20, mbtmp3.6/5, ML4.5/1, Error ellipse: s-maj=67.2km s-min=28.6km az=22.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**1.39**	**236**	Pg	Pb	20 47 44.5	+0.1
	77nm,0.3s,baz=56,slow=15,SNR=194						
NNA				Lg	Lg	20 48 04.6	
	98nm,0.3s,baz=151,slow=19,SNR=16						
ATAH	**Atahualpa**	**4.87**	**326**	Pn	Pn	20 48 33.8	+3.4
	8.4nm,0.3s,baz=159,slow=5.5,SNR=67						
ATAH				Sn	Sn	20 49 31.6	+5.6
	6.1nm,0.3s,baz=62,slow=13,SNR=4.1						
LPAZ	**La Paz**	**8.89**	**125**	Pn	Pn	20 49 30.2	+4.3
	0.1nm,0.3s,baz=306,slow=10,SNR=4.6						
LPAZ				Lg	Lg	20 51 58.6	
	0.8nm,0.3s,baz=220,slow=24,SNR=4.0						
SIV	**San Ignacio**	**14.96**	**110**	Pn	Pn	20 50 46.6	-1.5
	0.9nm,0.3s,baz=304,slow=10,SNR=9.1						
SIV				Lg	Lg	20 55 04.6	
	0.6nm,0.3s,baz=227,slow=19,SNR=3.8						
TXAR	**Lajitas Array**	**48.53**	**327**	P	P	20 55 59.3	+0.2
	0.4nm,0.6s,baz=148,slow=9.1,SNR=5.4						
YKA	**Yellowknife Ar**	**79.44**	**343**	P	P	20 59 20.9	-0.6
	0.6nm,0.8s,baz=143,slow=6.1,SNR=10						
TORD	**Torodi Ar. Bea**	**80.47**	**75**	P	P	20 59 28.0	-0.2
	1.0nm,0.8s,baz=256,slow=3.7,SNR=4.2						
ESDC	**Sonseca Array**	**83.40**	**48**	P	P	20 59 44.4	+1.2
	0.7nm,0.6s,baz=241,slow=4.7,SNR=3.0						
SONM	**Songino Array**	**143.46**	**358**	PKP	PKPbc	21 06 48.4	+0.8
	0.3nm,0.7s,baz=14,slow=3.0,SNR=2.8						

IDC 26 20:52:46.2±0.9, 4°03N×126°72E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.8/24, mbtmp3.8/9, 1C, Error ellipse: s-maj=50.5km s-min=16.1km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**4.01**	**322**	⇑*i*P	Pn	20 53 52.0	+3.0
FITZ	**Fitzroy Crossi**	**22.02**	**183**	P	P	20 57 42.6	+0.2
	2.8nm,0.8s,baz=340,slow=5.2,SNR=9.8						
WRA	**Warramunga Arr**	**24.97**	**163**	P	P	20 58 11.4	-0.4
	3.3nm,0.7s,baz=344,slow=10,SNR=18						
ASAR	**Alice Springs**	**28.41**	**166**	P	P	20 58 42.2	-0.5
	0.3nm,0.4s,baz=350,slow=8.8,SNR=3.7						
CMAR	**Chiang Mai Arr**	**30.71**	**300**	P	P	20 59 03.3	+0.1
	0.4nm,0.8s,baz=90,slow=5.2,SNR=4.5						
STKA	**Stephens Creek**	**38.41**	**159**	P	P	21 00 10.2	+0.5
	4.7nm,1.0s,baz=351,slow=5.8,SNR=9.8						
SONM	**Songino Array**	**47.01**	**341**	P	P	21 01 20.0	+0.5
	0.5nm,0.5s,baz=152,slow=8.5,SNR=6.8						
MKAR	**Makanchi Array**	**57.30**	**325**	P	P	21 02 35.1	-0.9
	0.4nm,0.5s,baz=117,slow=8.6,SNR=5.8						
ILAR	**Eielson Array**	**84.84**	**25**	P	P	21 05 22.3	-0.3
	1.0nm,1.1s,baz=263,slow=5.4,SNR=4.4						
FINES	**FINESS Array B**	**91.56**	**332**	P	P	21 05 55.1	+0.4
	0.9nm,0.8s,baz=358,slow=4.8,SNR=3.4						

IDC 26 20:54:41.2±3.4, 19°93N×143°64E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.7/26, mbtmp3.9/8, ML3.9/1, Error ellipse: s-maj=84.0km s-min=41.6km az=8.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**17.22**	**345**	Pn	Pn	20 58 43.3	+0.1
	0.4nm,0.3s,baz=154,slow=19,SNR=4.8						
KSRS	**Korea Array**	**22.19**	**325**	P	P	20 59 39.8	+0.7
	0.9nm,0.4s,baz=145,slow=7.8,SNR=5.5						
SONM	**Songino Array**	**40.97**	**322**	P	P	21 02 25.1	-0.8
	0.6nm,0.5s,baz=137,slow=7.3,SNR=12						
ZALV	**Zalesovo Beam**	**55.85**	**322**	P	P	21 04 20.0	-0.4
	0.9nm,0.4s,baz=106,slow=7.0,SNR=6.6						
MKAR	**Makanchi Array**	**56.21**	**313**	P	P	21 04 22.9	-0.2
	0.6nm,0.7s,baz=90,slow=8.1,SNR=4.4						
ILAR	**Eielson Array**	**63.41**	**27**	P	P	21 05 12.0	-0.3
	0.5nm,1.1s,baz=278,slow=6.3,SNR=3.0						
ARCES	**ARCESS Array B**	**80.72**	**342**	P	P	21 06 56.6	+0.6
	2.0nm,0.8s,baz=60,slow=7.3,SNR=4.0						
JOF	**Joensuu**	**82.08**	**335**	*ep*	P	21 07 03.1	-0.2
	1.1nm,0.5s						
FINES	**FINESS Array B**	**84.95**	**335**	P	P	21 07 18.5	+0.5
	1.5nm,0.4s,baz=60,slow=5.1,SNR=25						

*MOS **26** 21:53:11.9±0.6, 50°81N×158°24E, h33km, mb4.2/1, Error ellipse: s-maj=30.3km s-min=12.1km az=77.2*
*KRSC **26** 21:53:15.1±0.7, 51°08N×158°27E, h34km±33km, ML4.1*
*IDC **26** 21:53:17.6±7.2, 51°15N×158°35E, h51km±40km, mb3.1/2, mb1 3.6/4, mb1mx3.1/28, mbtmp3.4/4, ML3.6/1, Error ellipse: s-maj=91.1km s-min=26.4km az=52.0*

ISC 26 21:53:11.9±1.8, 50°98N±0°07×158°21E±0°06, h15km±13km, n28, σ1°22/47, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.36**	**258**	*e*PN	Pn	21 53 35.0	-1.4
SKR				*e*S	**Sn**	**21 53 51.9**	**-2.3**
SKR				pmax	pmax		
	comp=E,80nm,0.4s						
SKR				pmax	pmax		
	comp=Z,110nm,0.4s						
SKR				smax	smax		
	comp=N,860nm,0.4s						
SKR				smax	smax		
	comp=E,650nm,0.4s						
SKR	**Severo-Kuril's**	**1.36**	**258**	*e*P	**Pg**	**21 53 38.2**	**+0.1**
SKR				*i* S	**Sn**	**21 53 54.7**	**+0.5**
RUS	**Russkaya**	**1.47**	**7**	PN	**Pb**	**21 53 38.4**	**-0.5**
RUS				S	**Sn**	**21 53 54.7**	**-2.1**
RUS	**Russkaya**	**1.47**	**7**	P	**Pb**	**21 53 38.4**	**-0.5**
RUS				*i* S	**Sn**	**21 53 54.7**	**-2.1**
MTVR	**Mutnovka**	**1.50**	**359**	*e*P	**Pb**	**21 53 39.6**	**-0.1**
MTVR				*i* S	**Sn**	**21 53 57.4**	**-0.6**
GRL	**Gorelyy**	**1.57**	**357**	P	**Pb**	**21 53 41.0**	**+0.1**
GRL				*i* S	**Sn**	**21 53 59.5**	**-0.2**
MIPR	**Malaya Ipel'ka**	**1.58**	**326**	*e*P	**Pb**	**21 53 40.9**	**0.0**
MIPR				*i* S	**Sn**	**21 54 00.2**	**+0.5**
APC	**Apacha**	**2.05**	**342**	*e*P	**Pb**	**21 53 47.6**	**-1.3**
APC				*i* S	**Sn**	**21 54 10.9**	**-0.3**
PET	**Petropavlovsk**	**2.06**	**7**	⇓*i*PN	**Pn**	**21 53 47.2**	**+1.1**
PET				*e*S	**Sn**	**21 54 10.6**	**-0.9**
PET				pmax	pmax		
	comp=Z,37nm,0.3s						
PET				smax	smax		
	comp=E,226nm,0.4s						
PET				smax	smax		
	comp=N,317nm,0.4s						
PET	**Petropavlovsk**	**2.06**	**7**	*e*P	**Pb**	**21 53 47.6**	**-1.5**
PET				*i* S	**Sn**	**21 54 11.0**	**-0.5**
PETK	**Petropavlovsk-**	**2.15**	**352**	PN	**Pb**	**21 53 49.1**	**-1.6**
PETK				S	**Sn**	**21 54 13.5**	**-0.3**
PETK				pmax	pmax		
	comp=Z,13nm,0.3s						
PETK				smax	smax		
	comp=N,5.0nm,0.3s						
PETK	**Petropavlovsk-**	**2.15**	**352**	P	**Pb**	**21 53 49.1**	**-1.6**
	comp=N,12nm,0.3s,baz=152,slow=18,SNR=135						
PETK				S	**Sn**	**21 54 13.5**	**-0.3**
	comp=N,4.5nm,0.3s,baz=207,slow=18,SNR=5.2						
UGLR	**Uglovaya**	**2.26**	**9**	P	**Pb**	**21 53 50.8**	**-1.8**
UGLR				*i* S	**Sn**	**21 54 17.0**	**+0.4**
AVH	**Avacha**	**2.31**	**8**	P	**Pb**	**21 53 51.8**	**-1.6**
AVH				*i* S	**Sn**	**21 54 19.2**	**+1.5**
SMAR	**Somma**	**2.31**	**9**	*e*P	**Pn**	**21 53 51.3**	**+1.6**
SMAR				*i* S	**Sn**	**21 54 18.0**	**0.0**
KOK	**Koryaka**	**2.33**	**6**	P	**Pb**	**21 53 52.4**	**-1.3**
KOK				*i* S	**Sn**	**21 54 19.3**	**+1.1**
SDLR	**Sedlovina**	**2.34**	**10**	P	**Pn**	**21 53 51.3**	**+1.3**
SDLR				*i* S	**Sn**	**21 54 18.3**	**-0.2**
KRER	**Koryakskii**	**2.35**	**8**	P	**Pb**	**21 53 52.3**	**-1.8**
KRER				*i* S	**Sn**	**21 54 19.2**	**+0.3**
SPN	**Mys Shipunski**	**2.40**	**27**	PN	**Pn**	**21 53 52.5**	**+1.8**
SPN				S	**Sn**	**21 54 19.6**	**-0.2**
SPN	**Mys Shipunski**	**2.40**	**27**	*e*P	**Pn**	**21 53 52.5**	**+1.8**
SPN				*i* S	**Sn**	**21 54 19.6**	**-0.2**
GNL	**Ganaly**	**2.72**	**357**	P	Pn	21 53 57.3	+2.2
GNL				*i* S	**Sn**	**21 54 28.6**	**+0.6**
KII	**Karymskiy**	**3.15**	**13**	*e*P	Pn	21 54 04.0	+2.9
KII				*i* S	**Sn**	**21 54 39.9**	**+1.4**
MKZ	**Mys Kozlova**	**4.17**	**29**	PN	**Pn**	**21 54 16.2**	**+1.2**
MKZ	**Mys Kozlova**	**4.17**	**29**	*e*P	**Pn**	**21 54 16.2**	**+1.2**
MKZ				*i* S	**Sn**	**21 55 01.4**	**-2.0**
TUMR	**Tumrok**	**4.46**	**14**	P	Pn	21 54 23.3	+4.1
FX1	**Attu Island--F**	**9.43**	**73**	P	**Pn**	**21 55 28.9**	**+1.7**
	comp=N,2.2nm,0.3s,baz=180,slow=20,SNR=5.3						
FX1				S	Sn	21 57 01.2	-12
	comp=N,2.5nm,0.3s,baz=90,slow=20,SNR=5.4						
YKA	**Yellowknife Ar**	**45.52**	**41**	P	**P**	**22 01 29.9**	**-0.4**
	comp=N,0.1nm,0.6s,baz=298,slow=7.4,SNR=4.2						
TXAR	**Lajitas Array**	**72.56**	**65**	P	**P**	**22 04 38.4**	**-0.1**
	comp=N,0.2nm,0.4s,baz=294,slow=5.5,SNR=3.7						

*ISCJB **26** 22:04:33.2±0.3, 61°91N±0°02×146°75W±0°06, h62km±6km, mb4.0/3, Error ellipse: s-maj=4.4km s-min=4.0km az=168.0*
*NEIC **26** 22:04:34.6, 61°92N×146°79W, h24km, ML3.3(AEIC), After AEIC.*
*IDC **26** 22:04:34.5±2.7, 62°24N×146°91W, h39km±41km, mb3.8/3, mb1 3.6/6, mb1mx3.3/28, mbtmp3.6/6, ML2.6/3, MS2.6/2, Ms1 2.6/2, ms1mx2.3/39, Error ellipse: s-maj=53.7km s-min=18.1km az=142.0*

ISC 26 22:04:33.3±0.9, 61°88N±0°03×146°78W±0°03, h48km±11km, n62, σ1°22/69, mb4.1/3, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLU	**Klutina**	**0.56**	**133**	P	**Pn**	**22 04 45.8**	**+0.5**
SML	**Sawmill**	**0.74**	**265**	P	**Pn**	**22 04 47.7**	**+0.2**
SML				S	**Sn**	**22 04 58.3**	**+0.5**
VLZ	**Valdez**	**0.78**	**164**	P	**Pn**	**22 04 48.1**	**+0.2**
DIV	**Divide**	**0.89**	**147**	P	**Pn**	**22 04 49.8**	**+0.2**
DIV				S	**Sn**	**22 05 01.9**	**+0.4**
HARP	**HAARP**	**0.93**	**54**	P	**Pn**	**22 04 50.3**	**+0.3**
PMR	**Palmer**	**1.16**	**257**	P	**Pn**	**22 04 53.4**	**+0.3**
PMR				S	**Sn**	**22 05 09.9**	**+2.2**
DHY	**Denali Highway**	**1.23**	**347**	P	**Pn**	**22 04 54.0**	**-0.2**
DHY				S	**Sn**	**22 05 09.6**	**-0.2**
PAX	**Paxson**	**1.25**	**29**	P	**Pn**	**22 04 54.4**	**-0.1**
PAX				S	**Sn**	**22 05 10.2**	**-0.1**
BMRM	**Bremner River**	**1.39**	**130**	P	**Pn**	**22 04 57.0**	**+0.7**
EYAK	**Cordova Ski Ar**	**1.43**	**159**	P	**Pn**	**22 04 58.4**	**+1.7**
GLB	**Gilahina Butte**	**1.48**	**106**	P	**Pn**	**22 04 58.7**	**+1.1**
RC01	**Rabbit Creek A**	**1.62**	**242**	P	**Pn**	**22 05 01.3**	**+1.8**
GOAT	**Goat Mountain**	**1.64**	**142**	P	**Pn**	**22 05 01.6**	**+1.9**
TRAP	**Trapper Creek**	**1.69**	**287**	P	**Pn**	**22 05 01.7**	**+1.3**
RND	**Reindeer**	**1.81**	**329**	P	**Pn**	**22 05 02.9**	**+0.9**
DDM	**Donnelly Dome**	**1.96**	**12**	P	**Pn**	**22 05 05.7**	**+1.6**
MCK	**McKinley**	**2.11**	**333**	P	**Pn**	**22 05 07.5**	**+1.5**
SLKM	**Skilak Lake**	**2.16**	**232**	P	**Pn**	**22 05 09.2**	**+2.4**
DOT	**Dot Lake**	**2.17**	**34**	P	**Pn**	**22 05 08.1**	**+1.1**
SEW	**Seward**	**2.21**	**217**	P	**Pn**	**22 05 09.2**	**+1.9**
TRF	**Thorofare Moun**	**2.26**	**316**	P	**Pn**	**22 05 08.6**	**+0.3**
BALM	**Baldy**	**2.29**	**110**	P	**Pn**	**22 05 10.0**	**+1.3**
STLK	**Strandline Lak**	**2.44**	**263**	P	**Pn**	**22 05 12.4**	**+1.8**
MID	**Middleton Isla**	**2.47**	**175**	P	**Pn**	**22 05 13.1**	**+2.1**
HDA	**Harding Lake**	**2.54**	**358**	P	**Pn**	**22 05 13.2**	**+1.3**
BCA3	**Beaver Creek A**	**2.61**	**61**	P	**Pn**	**22 05 13.9**	**+1.0**
SPU	**Mount Spurr**	**2.62**	**257**	P	**Pn**	**22 05 14.9**	**+1.8**
WRH	**Wood River Hil**	**2.67**	**348**	P	**Pn**	**22 05 14.8**	**+1.0**
PPLA	**Purkeypile**	**2.72**	**294**	P	**Pn**	**22 05 15.8**	**+1.2**
CKL	**Chakachamna La**	**2.75**	**258**	P	**Pn**	**22 05 16.8**	**+1.9**
BGL	**Barrier Glacie**	**2.75**	**260**	P	**Pn**	**22 05 16.6**	**+1.6**
CCB	**Clear Creek Bu**	**2.82**	**351**	P	**Pn**	**22 05 16.4**	**+0.6**
NEA	**Nenana**	**2.90**	**340**	P	**Pn**	**22 05 17.7**	**+0.8**
IL1	**Eielson Array**	**2.90**	**359**	P	**Pn**	**22 05 17.1**	**+0.2**
ILAR	**Eielson Array**	**2.90**	**359**	Pn	**Pn**	**22 05 17.1**	**+0.1**
ILAR				Sn	**Sn**	**22 05 51.8**	**+1.2**
ILAR	**Eielson Array**	**2.90**	**359**	Pn	**Pn**	**22 05 17.1**	**+0.1**
	15nm,0.3s,baz=186,slow=12,SNR=666						
ILAR				Sn	**Sn**	**22 05 51.8**	**+1.2**
	15nm,0.3s,baz=182,slow=20,SNR=14						
MESA	**MESA**	**2.90**	**124**	P	**Pn**	**22 05 18.6**	**+1.5**
BRLK	**Bradley Lake**	**2.92**	**225**	P	**Pn**	**22 05 19.1**	**+1.9**
COLA	**College**	**3.04**	**351**	P	**Pn**	**22 05 19.4**	**+0.6**
MDM	**Murphy Dome**	**3.16**	**349**	P	**Pn**	**22 05 21.8**	**+1.3**
MLY	**Manley**	**3.63**	**332**	P	**Pn**	**22 05 27.8**	**+0.8**
DAWY	**Dawson**	**4.02**	**54**	P	**Pn**	**22 05 33.7**	**+1.4**
PNL	**Peninsula**	**4.24**	**118**	P	**Pn**	**22 05 36.7**	**+1.3**
TT01	**Tatalina**	**4.42**	**288**	P	**Pn**	**22 05 37.9**	**+0.2**
HYT	**Haines Junctio**	**4.59**	**99**	P	**Pn**	**22 05 41.3**	**+1.2**
KDAK	**Kodiak Island**	**5.04**	**218**	Pn	**Pn**	**22 05 46.9**	**+0.6**
KDAK				Sn	**Sn**	**22 06 41.1**	**-2.1**
KDAK	**Kodiak Island**	**5.04**	**218**	Pn	**Pn**	**22 05 46.9**	**+0.6**
	0.3nm,0.3s,baz=100,slow=11,SNR=4.5						
KDAK				Sn	**Sn**	**22 06 41.1**	**-2.1**
	1.0nm,0.3s,baz=292,slow=18,SNR=7.5						
IM3	**Indian Mountai**	**5.14**	**326**	P	**Pn**	**22 05 49.0**	**+1.4**
COLD	**Coldfoot**	**5.57**	**346**	P	**Pn**	**22 05 54.5**	**+1.0**
BM3	**Burnt Mountain**	**5.64**	**9**	P	**Pn**	**22 05 55.8**	**+1.3**
INK	**Inuvik**	**8.52**	**35**	Pn	**Pn**	**22 06 32.2**	**-1.6**
INK	**Inuvik**	**8.52**	**35**	Pn	**Pn**	**22 06 32.2**	**-1.6**
	0.2nm,0.3s,baz=242,slow=17,SNR=7.1						
DLBC	**Dease Lake**	**9.03**	**105**	LR	LR	22 10 37.8	
	comp=Z,39nm,21.7s,baz=158,slow=40						
BBB	**Bella Bella**	**14.00**	**125**	LR	LR	22 13 36.5	
	comp=Z,21nm,20.6s,baz=76,slow=38						
YKA	**Yellowknife Ar**	**14.95**	**73**	Pn	**Pn**	**22 08 00.5**	**-0.7**
YKA	**Yellowknife Ar**	**14.95**	**73**	Pn	**Pn**	**22 08 00.5**	**-0.7**
	0.0nm,0.3s,baz=277,slow=12,SNR=2.2						
SONM	**Songino Array**	**56.06**	**309**	P	**P**	**22 14 07.0**	**-0.1**
SONM	**Songino Array**	**56.06**	**309**	P	**P**	**22 14 07.0**	**-0.1**
	0.6nm,0.8s,baz=28,slow=6.7,SNR=5.1						
FINES	**FINESS Array B**	**56.88**	**4**	P	**P**	**22 14 12.0**	**-0.5**
FINES	**FINESS Array B**	**56.88**	**4**	P	**P**	**22 14 12.0**	**-0.5**
	2.0nm,0.9s,baz=12,slow=9.8,SNR=7.2						
AKASG	**Malin Array Be**	**67.72**	**3**	P	**P**	**22 15 25.0**	**-0.1**
AKASG	**Malin Array Be**	**67.72**	**3**	P	**P**	**22 15 25.0**	**-0.1**
	0.9nm,0.4s,baz=3.2,slow=6.3,SNR=5.2						

MAN 26 22:24:27.7°26N×124°75E, h4km, mb4.3, ML3.1, MS2.9, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**0.42**	**126**	⇑*i*P	Pb	22 24 36.6	-0.6
KCP				*i* S	Sb	22 24 42.9	-1.1
CTBH	**Cotabato--PC H**	**0.50**	**266**	⇓*i*P	Pg	22 24 37.2	+0.6
CTBH				*i* S	Sb	22 24 45.0	-0.9
BUKP	**Musuan**	**0.69**	**27**	*e*P	Pb	22 24 42.1	+0.4
BUKP				*e*S	Sn	22 24 53.7	-1.2
PAGZ	**Pagadian**	**1.47**	**293**	*e*P	Pn	22 24 54.5	+0.2
PAGZ				*e*S	Sg	22 25 15.4	+1.0

DDA 26 22:30:32.7, 37°18N×35°70E, h7km, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEYT	**Ceyhan**	**0.17**	**168**	*e*PG	Pg	22 30 37.6	+1.4
CEYT				*e*SG	Sg	22 30 42.7	+4.1
KOZT	**Kozan**	**0.32**	**18**	*e*PG	Pb	22 30 41.0	+0.2
KOZT				*e*SG	Sb	22 30 47.6	+1.4
GULE	**Gulek**	**0.75**	**278**	*i* P	Pg	22 30 45.6	-1.8
GULE				*i* S	Sg	22 30 53.9	-3.4
AYKD	**Aykdinkavak**	**0.91**	**75**	*i* P	Pg	22 30 50.5	+0.2
AYKD				*i* S	Sg	22 31 02.5	+0.3

*CSEM **26** 22:52:02.8, 42°35N×13°43E, h9km, MD1.9/9, After ROM*
ROM 26 22:52:02.8±0.1, 42°35N×13°43E, h9km±1km, Md1.9/9, Ml1.3/5, Error ellipse: s-maj=2.0km s-min=1.3km az=104.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.03**	**291**	Pg	Pg	22 52 04.7	+0.2
AQU				Sg	Sg	22 52 05.6	-0.1
AQU	**L'Aquila**	**0.03**	**291**	Pg	Pg	22 52 04.7	+0.2
AQU				Sg	Sg	22 52 05.6	-0.1
CAMP	**Campotosto**	**0.19**	**355**	Pg	Pg	22 52 07.6	+0.6
CAMP				Sg	Sg	22 52 11.2	+1.4
	10.0nm,0.7s						
CAMP	**Campotosto**	**0.19**	**355**	Pg	Pg	22 52 07.6	+0.6
CAMP				Sg	Sg	22 52 11.2	+1.4
	10.0nm,0.7s						
FIAM	**Fiamignano**	**0.25**	**252**	Pg	Pg	22 52 08.7	+0.8
FIAM				Sg

VCEL	**Villa Celiera**	**0.36**	**108**	*i* Pg	Pb	22 52 51.6	0.0
	137nm,1.3s						
NRCA	**Norcia**	**0.38**	**330**	Pg	Pg	22 52 51.1	+0.7
NRCA				Sg	Sb	22 52 56.9	-1.1
	14nm,0.1s						
NRCA	**Norcia**	**0.38**	**330**	Pg	Pg	22 52 51.1	+0.7
NRCA				Sg	Sb	22 52 56.9	-1.1
	14nm,0.1s						

IDC ***26*** *22:54:48.5±1.1,31°.87S×178°.51W,h0km,mb4.5/5, mb1 4.6/6,mb1mx4.1/22,mbtmp4.4/6,ML4.2/1,MS3.5/3, Ms1 3.5/3,ms1mx3.0/23,Error ellipse: s-maj=31.5km s-min=29.7km az=34.0*

ISC 26 22:54:54.0±1.1,32°.20S±0°.09×178°.6W±0°.2,h33km,n26, σ2.903/23,mb4.5/5,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGZ	**Carnagh Statio**	**6.78**	**201**	PN	**Pn**	**22 56 31.2**	**+0.1**
CNGZ				SN	**Sn**	**22 57 49.6**	**+2.4**
MWZ	**Matawai**	**6.88**	**206**	PN	**Pn**	**22 56 35.1**	**+2.6**
URZ	**Urewera**	**6.97**	**209**	PN	**Pn**	**22 56 35.7**	**+1.9**
URZ	**Urewera**	**6.97**	**209**	Pn	**Pn**	**22 56 36.0**	**+2.2**
	4.3nm,0.3s,baz=264,slow=3.5,SNR=8.7						
URZ				Sn	**Sn**	**22 57 52.7**	**+0.7**
	3.6nm,0.3s,baz=324,slow=22,SNR=7.0						
OUZ	**Omahuta**	**7.14**	**243**	PN	Pn	22 56 42.3	+6.2
BKZ	**Black Stump Fm**	**8.00**	**208**	PN	**Pn**	**22 56 48.5**	**+0.6**
BKZ				SN	**Sn**	**22 58 15.0**	**-2.2**
BFZ	**Birch Farm**	**9.41**	**205**	PN	**Pn**	**22 57 05.0**	**-2.3**
BFZ				SN	**Sn**	**22 58 46.6**	**-5.3**
THZ	**Tophouse**	**11.69**	**213**	PN	Pn	22 57 34.4	-4.0
DZM	**Mont Dzumac**	**16.66**	**304**	LR	LR	23 03 31.9	
	comp=Z,123nm,18.8s,baz=238,slow=32						
STKA	**Stephens Creek**	**33.58**	**260**	LR	LR	23 13 35.8	
	comp=Z,98nm,19.3s,baz=200,slow=33						
CTA	**Charters Tower**	**33.60**	**282**	P	**P**	**23 01 32.9**	**+1.5**
	3.5nm,0.3s,baz=111,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**42.50**	**269**	P	**P**	**23 02 46.3**	**-0.1**
	3.2nm,0.6s,baz=104,slow=7.0,SNR=29						
WRA	**Warramunga Arr**	**43.66**	**274**	P	**P**	**23 02 55.6**	**-0.2**
	6.8nm,0.4s,baz=115,slow=7.6,SNR=32						
FITZ	**Fitzroy Crossi**	**51.84**	**272**	P	**P**	**23 03 58.9**	**-0.3**
	1.2nm,0.5s,baz=65,slow=7.6,SNR=7.2						
QSPA	**South Pole Qui**	**57.91**	**180**	P	**P**	**23 04 45.2**	**+2.5**
	2.6nm,0.6s,baz=272,slow=1.4,SNR=7.3						
PDAR	**Pinedale Array**	**97.81**	**44**	LR	LR	23 42 48.0	
	comp=Z,24nm,21.0s,baz=265,slow=30						
KURBB	**Kurchatov Arra**	**121.92**	**313**	PKP	**PKPdf**	**23 13 42.2**	**-2.2**
	0.2nm,0.4s,baz=113,slow=1.8,SNR=5.4						
KEV	**Kevo**	**139.75**	**347**	*e*pkp	PKPdf	23 14 23.1	+5.7
ARCES	**ARCESS Array B**	**140.22**	**347**	PKP	**PKPdf**	**23 14 19.8**	**+1.4**
	3.1nm,0.9s,baz=66,slow=2.7,SNR=6.3						
JOF	**Joensuu**	**143.88**	**337**	*e*pkp	PKPab	23 14 21.2	-1.0
KBZ	**Khabaz**	**145.63**	**302**	PKPbc	**PKPdf**	**23 14 28.6**	**-0.1**
	0.5nm,0.8s,baz=104,slow=5.9,SNR=4.5						
KAF	**Kangasniemi**	**146.05**	**339**	*e*pkp	**PKPdf**	**23 14 27.1**	**-1.7**
FINES	**FINESS Array B**	**146.63**	**339**	PKPbc	**PKPdf**	**23 14 30.1**	**+0.3**
	4.4nm,0.8s,baz=47,slow=4.1,SNR=26						
NB2	**NORSAR Subarra**	**150.44**	**350**	PKP	**PKPbc**	**23 14 40.4**	**-1.0**
	comp=Z,2.7nm,0.7s,baz=15,slow=2.6						
NOA	**NORSAR Array B**	**150.44**	**350**	PKPbc	**PKPbc**	**23 14 40.6**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=15,slow=4.1,SNR=9.4						
BRTR	**Keskin Array B**	**152.92**	**295**	PKPbc	**PKPbc**	**23 14 46.4**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=142,slow=3.3,SNR=4.0						

MAN 26 22:57:10,9°.83N×125°.42E,h39km,mb4.3,ML3.2,MS3.0, 2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.63**	**299**	*e*P	Pn	22 57 22.1	-0.4
MSLP				*e*S	Sn	22 57 33.6	+2.2
BUTP	**Butuan**	**0.88**	**167**	*e*P	Pn	22 57 27.5	+1.7
PLP	**Palo**	**1.40**	**342⇑**	*e*P	Pn	22 57 32.9	-0.2
PLP				*i* S	Sn	22 57 53.2	+2.9
OCLP	**Ormoc**	**1.46**	**327**	*e*P	Pn	22 57 36.4	+2.5
LLP	**Lapu-Lapu**	**1.51**	**289**	*e*P	Pn	22 57 35.1	+0.5
LLP				*e*S	Sn	22 57 54.3	+1.3
CGP	**Cagayan de Oro**	**1.54**	**208⇑**	*e*P	Pn	22 57 35.7	+0.7
CGP				*i* S	Sn	22 57 54.2	+0.5
TBP	**Tagbilaran**	**1.54**	**265**	*e*P	Pn	22 57 36.2	+1.3
TBP				*e*S	Sn	22 57 55.5	+1.7
CNP	**Catarman**	**2.77**	**345**	*e*P	Pn	22 57 53.5	+1.6

ISCJB ***26*** *23:10:10.0±1.0,24°.6N±0°.1×95°.0E±0°.1,h112km,mb3.5/3, Error ellipse: s-maj=22.2km s-min=10.8km az=28.4*
IDC ***26*** *23:10:11.2±8.6,24°.65N×95°.08E,h106km±132km,mb3.3/3, mb1 3.2/4,mb1mx2.9/28,mbtmp3.1/4,ML3.6/1,Error ellipse: s-maj=165.4km s-min=70.3km az=82.0*

ISC 26 23:10:11.7±1.2,24°.6N±0°.2×95°.1E±0°.2,h112km,n6, σ1.933/6,mb3.5/3,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**1.05**	**279**	*e*P	Pn	23 10 39.0	+5.3
IMP				*e*S	Sn	23 10 47.0	-3.3
SHL	**Shillong**	**3.04**	**289**	*e*Pn	**Pn**	**23 11 00.0**	**+1.5**
SHL				*e*SN	**Sn**	**23 11 33.0**	**-1.6**
CMAR	**Chiang Mai Arr**	**7.11**	**149**	P	**Pn**	**23 11 53.0**	**-0.3**
	0.3nm,0.3s,baz=323,slow=14,SNR=2.8						
MKAR	**Makanchi Array**	**24.37**	**338**	P	**P**	**23 15 19.7**	**+0.4**
	1.0nm,0.5s,baz=152,slow=9.3,SNR=23						
KURBB	**Kurchatov Arra**	**28.94**	**338**	P	**P**	**23 15 59.6**	**-0.6**
	0.3nm,0.5s,baz=149,slow=9.3,SNR=3.3						
FINES	**FINESS Array B**	**58.66**	**328**	P	**P**	**23 19 57.0**	**-0.1**
	0.8nm,0.8s,baz=84,slow=7.9,SNR=5.0						

IDC 26 23:13:03.2±5.6,0°.89S×132°.65E,h0km,mb3.3/2, mb1 3.5/3,mb1mx3.3/21,mbtmp3.3/3,ML3.3/1,Error ellipse: s-maj=343.5km s-min=28.0km az=74.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.01**	**175**	P	Pn	23 17 27.2	-0.2
	0.1nm,0.3s,baz=353,slow=10,SNR=2.9						
ASAR	**Alice Springs**	**22.68**	**177**	P	P	23 18 06.0	-0.6
	0.6nm,0.6s,baz=4.8,slow=11,SNR=7.6						
MKAR	**Makanchi Array**	**64.72**	**324**	P	P	23 23 43.5	+0.1
	0.2nm,0.5s,baz=120,slow=9.0,SNR=4.1						

BEO ***26*** *23:19:13.1±3.8,45°.89N×27°.10E,h0km,ML2.9/5*
ISCJB ***26*** *23:19:15.6±0.5,45°.69N±0°.02×26°.63E±0°.03,h105km±4km, Error ellipse: s-maj=4.1km s-min=3.9km az=160.3*
BUC ***26*** *23:19:15.9±0.8,45°.69N×26°.64E,h104km±8km,MD4.0/2, Error ellipse: s-maj=5.9km s-min=5.1km az=26.0*
CSEM ***26*** *23:19:16.6±0.1,45°.69N×26°.63E,h100km,MD4.0/2,Error ellipse: s-maj=3.0km s-min=2.6km az=172.0*

ISC 26 23:19:14.9±1.2,45°.69N±0°.03×26°.60E±0°.02,h114km±5km, n93,σ1.929/149,60C-21D,Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLOR	**Plostina**	**0.16**	**11⇑**	*i*P	**Pn**	**23 19 30.7**	**-0.1**
PLOR	**Plostina**	**0.16**	**11⇑**	*i*P	**Pn**	**23 19 30.7**	**-0.1**
PLOR				*i* S	**Sn**	**23 19 41.2**	**-1.6**
PLOR	**Plostina**	**0.16**	**11⇑**	*i*P	**Pn**	**23 19 30.7**	**-0.1**
PLOR				*i* S	**Sn**	**23 19 41.2**	**-1.6**
VRI	**Vrincioaia**	**0.19**	**26⇑**	*i*P	**Pn**	**23 19 31.0**	**+0.2**
VRI	**Vrincioaia**	**0.19**	**26⇑**	*i*P	**Pn**	**23 19 31.0**	**+0.2**
VRI				*i* S	**Sn**	**23 19 40.6**	**-2.2**
VRI	**Vrincioaia**	**0.19**	**26⇑**	*i*P	**Pn**	**23 19 31.0**	**+0.2**
VRI				*i* S	**Sn**	**23 19 40.6**	**-2.2**
GRER		**0.41**	**140⇑**	*i*P	**Pn**	**23 19 32.9**	**+1.2**
GRER		**0.41**	**140⇑**	*i*P	**Pn**	**23 19 32.9**	**+1.2**
GRER		**0.41**	**140⇑**	*i*P	**Pn**	**23 19 32.9**	**+1.2**
PETR		**0.44**	**86⇑**	*i*P	**Pn**	**23 19 32.5**	**+0.7**
PETR		**0.44**	**86⇑**	*i*P	**Pn**	**23 19 32.5**	**+0.7**
PETR				*i* S	**Sn**	**23 19 44.2**	**-0.3**
PETR		**0.44**	**86⇑**	*i*P	**Pn**	**23 19 32.5**	**+0.7**
PETR				*i* S	**Sn**	**23 19 44.2**	**-0.3**
MLR	**Muntele Rosu**	**0.51**	**247⇑**	*i*P	**Pn**	**23 19 32.9**	**+0.5**
MLR	**Muntele Rosu**	**0.51**	**247⇑**	*i*P	**Pn**	**23 19 32.9**	**+0.5**
MLR				*i* S	**Sn**	**23 19 44.5**	**-1.1**
MLR	**Muntele Rosu**	**0.51**	**247⇑**	*i*P	**Pn**	**23 19 32.9**	**+0.5**
MLR				*i* S	**Sn**	**23 19 44.5**	**-1.1**
ISR	**Istrita**	**0.57**	**184⇑**	*i*P	**Pn**	**23 19 33.4**	**+0.6**
ISR				*i* S	**Sn**	**23 19 46.4**	**+0.2**
ISR	**Istrita**	**0.57**	**184⇑**	*i*P	**Pn**	**23 19 33.4**	**+0.6**
ISR				*i* S	**Sn**	**23 19 46.4**	**+0.2**
SECR		**0.76**	**210⇑**	*i*P	**Pn**	**23 19 35.3**	**+1.1**
SECR		**0.76**	**210⇑**	*i*P	**Pn**	**23 19 35.3**	**+1.1**
SECR				*i* S	**Sn**	**23 19 49.3**	**+0.6**
SECR		**0.76**	**210⇑**	*i*P	**Pn**	**23 19 35.3**	**+1.1**
SECR				*i* S	**Sn**	**23 19 49.3**	**+0.6**
TESR		**0.82**	**2⇓**	*i*P	**Pn**	**23 19 35.1**	**+0.4**
TESR		**0.82**	**2⇓**	*i*P	**Pn**	**23 19 35.1**	**+0.4**
TESR				*i* S	**Sn**	**23 19 48.2**	**-1.5**
TESR		**0.82**	**2⇓**	*i*P	**Pn**	**23 19 35.1**	**+0.4**
TESR				*i* S	**Sn**	**23 19 48.2**	**-1.5**
PGOR	**Pogoanele**	**0.83**	**161⇑**	*i*P	**Pn**	**23 19 35.5**	**+0.7**
PGOR	**Pogoanele**	**0.83**	**161⇑**	*i*P	**Pn**	**23 19 35.5**	**+0.7**
PGOR				*i* S	**Sn**	**23 19 49.9**	**+0.2**
PGOR	**Pogoanele**	**0.83**	**161⇑**	*i*P	**Pn**	**23 19 35.5**	**+0.7**
PGOR				*i* S	**Sn**	**23 19 49.9**	**+0.2**
PLAR	**PLOIESTI**	**0.88**	**208⇑**	*i*P	**Pn**	**23 19 36.7**	**+1.5**
PLAR	**PLOIESTI**	**0.88**	**208⇑**	*i*P	**Pn**	**23 19 36.7**	**+1.5**
PLAR				*i* S	**Sn**	**23 19 51.5**	**+1.0**
PLAR	**PLOIESTI**	**0.88**	**208⇑**	*i*P	**Pn**	**23 19 36.7**	**+1.5**
PLAR				*i* S	**Sn**	**23 19 51.5**	**+1.0**
DOPR	**Dopca**	**0.89**	**288⇓**	*i*P	**Pn**	**23 19 36.0**	**+0.6**
DOPR	**Dopca**	**0.89**	**288⇓**	*i*P	**Pn**	**23 19 36.0**	**+0.6**
DOPR				*i* S	**Sn**	**23 19 50.2**	**-0.7**
DOPR	**Dopca**	**0.89**	**288⇓**	*i*P	**Pn**	**23 19 36.0**	**+0.6**
DOPR				*i* S	**Sn**	**23 19 50.2**	**-0.7**
MTUR	**Matau**	**1.18**	**247⇑**	*i*P	**Pn**	**23 19 40.1**	**+1.7**
MTUR	**Matau**	**1.18**	**247⇑**	*i*P	**Pn**	**23 19 40.1**	**+1.7**
MTUR	**Matau**	**1.18**	**247⇑**	*i*P	**Pn**	**23 19 40.1**	**+1.7**
CFR	**Carcaliu**	**1.20**	**115⇑**	*i*P	**Pn**	**23 19 38.7**	**+0.3**
CFR	**Carcaliu**	**1.20**	**115⇑**	*i*P	**Pn**	**23 19 38.7**	**+0.3**
CFR				*i* S	**Sn**	**23 19 54.3**	**-2.0**
CFR	**Carcaliu**	**1.20**	**115⇑**	*i*P	**Pn**	**23 19 38.7**	**+0.3**
CFR				*i* S	**Sn**	**23 19 54.3**	**-2.0**
AMRR	**Amara**	**1.20**	**154⇓**	*i*P	**Pn**	**23 19 39.4**	**+0.9**
AMRR	**Amara**	**1.20**	**154⇓**	*i*P	**Pn**	**23 19 39.4**	**+0.9**
AMRR				*i* S	**Sn**	**23 19 56.6**	**+0.2**
AMRR	**Amara**	**1.20**	**154⇓**	*i*P	**Pn**	**23 19 39.4**	**+0.9**
AMRR				*i* S	**Sn**	**23 19 56.6**	**+0.2**
BUC	**Bucharest**	**1.33**	**196⇑**	*i*P	**Pn**	**23 19 40.8**	**+0.8**
BUC	**Bucharest**	**1.33**	**196⇑**	*i*P	**Pn**	**23 19 40.8**	**+0.8**
BUC				*i* S	**Sn**	**23 19 59.0**	**+0.1**
CIOR	**Ciorogarla**	**1.34**	**203⇑**	*i*P	**Pn**	**23 19 40.9**	**+0.7**
CIOR	**Ciorogarla**	**1.34**	**203⇑**	*i*P	**Pn**	**23 19 40.9**	**+0.7**
CIOR				*i* S	**Sn**	**23 19 59.2**	**-0.1**
CIOR	**Ciorogarla**	**1.34**	**203⇑**	*i*P	**Pn**	**23 19 40.9**	**+0.7**
CIOR				*i* S	**Sn**	**23 19 59.2**	**-0.1**
LEOM	**Leova**	**1.39**	**55⇑**	*i*P	**Pn**	**23 19 41.6**	**+1.0**
LEOM	**Leova**	**1.39**	**55⇑**	*i*P	**Pn**	**23 19 41.6**	**+1.0**
LEOM				*i* S	**Sn**	**23 19 59.3**	**-0.8**
LEOM	**Leova**	**1.39**	**55⇑**	*i*P	**Pn**	**23 19 41.6**	**+1.0**
LEOM				*i* S	**Sn**	**23 19 59.3**	**-0.8**
BUC1	**Bucharest**	**1.41**	**197⇑**	*i*P	**Pn**	**23 19 40.8**	**0.0**
BUC1				*i* S	**Sn**	**23 19 59.0**	**-1.5**
MDB	**Medias**	**1.62**	**287⇓**	*i*P	**Pn**	**23 19 45.1**	**+1.8**
MDB	**Medias**	**1.62**	**287⇓**	*i*P	**Pn**	**23 19 45.1**	**+1.8**
MDB				*i* S	**Sn**	**23 20 05.5**	**+0.5**
MDB	**Medias**	**1.62**	**287⇓**	*i*P	**Pn**	**23 19 45.1**	**+1.8**
MDB				*i* S	**Sn**	**23 20 05.5**	**+0.5**
HUMR	**Humele**	**1.64**	**225⇑**	*i*P	**Pn**	**23 19 44.2**	**+0.6**
HUMR	**Humele**	**1.64**	**225⇑**	*i*P	**Pn**	**23 19 44.2**	**+0.6**
HUMR				*i* S	**Sn**	**23 20 04.8**	**-0.6**
HUMR	**Humele**	**1.64**	**225⇑**	*i*P	**Pn**	**23 19 44.2**	**+0.6**
HUMR				*i* S	**Sn**	**23 20 04.8**	**-0.6**
TLCR		**1.64**	**107⇑**	*i*P	**Pn**	**23 19 44.2**	**+0.7**
TLCR		**1.64**	**107⇑**	*i*P	**Pn**	**23 19 44.2**	**+0.7**
TLCR				*i* S	**Sn**	**23 20 04.9**	**-0.5**
TLCR		**1.64**	**107⇑**	*i*P	**Pn**	**23 19 44.2**	**+0.7**
TLCR				*i* S	**Sn**	**23 20 04.9**	**-0.5**
IAS	**Iasi**	**1.64**	**23⇓**	*i*P	**Pn**	**23 19 44.6**	**+1.0**
IAS	**Iasi**	**1.64**	**23⇓**	*i*P	**Pn**	**23 19 44.6**	**+1.0**
IAS				*i* S	**Sn**	**23 20 04.8**	**-0.7**
IAS	**Iasi**	**1.64**	**23⇓**	*i*P	**Pn**	**23 19 44.6**	**+1.0**
IAS				*i* S	**Sn**	**23 20 04.8**	**-0.7**
PRAR	**RASCA**	**1.69**	**351⇓**	*i*P	**Pn**	**23 19 45.7**	**+1.5**
PRAR	**RASCA**	**1.69**	**351⇓**	*i*P	**Pn**	**23 19 45.7**	**+1.5**
PRAR	**RASCA**	**1.69**	**351⇓**	*i*P	**Pn**	**23 19 45.7**	**+1.5**
CVD	**Cernavoda**	**1.71**	**143⇑**	*i*P	**Pn**	**23 19 44.9**	**+0.4**
CVD	**Cernavoda**	**1.71**	**143⇑**	*i*P	**Pn**	**23 19 44.9**	**+0.4**
CVD				*i* S	**Sn**	**23 20 05.4**	**-1.6**
CVD	**Cernavoda**	**1.71**	**143⇑**	*i*P	**Pn**	**23 19 44.9**	**+0.4**
CVD				*i* S	**Sn**	**23 20 05.4**	**-1.6**
TIRR	**Tirgusor**	**1.78**	**133⇓**	*i*P	**Pn**	**23 19 46.0**	**+0.7**
TIRR	**Tirgusor**	**1.78**	**133⇓**	*i*P	**Pn**	**23 19 46.0**	**+0.7**
TIRR				*i* S	**Sn**	**23 20 07.3**	**-1.2**
TIRR	**Tirgusor**	**1.78**	**133⇓**	*i*P	**Pn**	**23 19 46.0**	**+0.7**
TIRR				*i* S	**Sn**	**23 20 07.3**	**-1.2**
KIS	**Kishinev**	**2.01**	**49**	*i* S	**Sn**	**23 20 11.8**	**-1.9**
	100nm,0.9s						
KIS	**Kishinev**	**2.01**	**49⇑**	*i*P	**Pn**	**23 19 49.6**	**+1.4**
KIS	**Kishinev**	**2.01**	**49⇑**	*i*P	**Pn**	**23 19 49.6**	**+1.4**
KIS				*i* S	**Sn**	**23 20 13.1**	**-0.6**
KIS	**Kishinev**	**2.01**	**49⇑**	*i*P	**Pn**	**23 19 49.6**	**+1.4**
KIS				*i* S	**Sn**	**23 20 13.1**	**-0.6**
EFOR	**EFORIE**	**2.16**	**137⇑**	*i*P	**Pn**	**23 19 51.2**	**+1.1**
EFOR	**EFORIE**	**2.16**	**137⇑**	*i*P	**Pn**	**23 19 51.2**	**+1.1**
EFOR				*i* S	**Sn**	**23 20 17.4**	**+0.4**
EFOR	**EFORIE**	**2.16**	**137⇑**	*i*P	**Pn**	**23 19 51.2**	**+1.1**
EFOR				*i* S	**Sn**	**23 20 17.4**	**+0.4**
DEV	**Deva**	**2.60**	**276⇑**	*i*P	**Pn**	**23 19 57.9**	**+2.2**
DEV	**Deva**	**2.60**	**276⇑**	*i*P	**Pn**	**23 19 57.9**	**+2.2**
DEV				*i* S	**Sn**	**23 20 27.9**	**+0.9**
DEV	**Deva**	**2.60**	**276⇑**	*i*P	**Pn**	**23 19 57.9**	**+2.2**
DEV				*i* S	**Sn**	**23 20 27.9**	**+0.9**
GZR	**Gura Zlata**	**2.71**	**265**	*e*Pn	**Pn**	**23 19 57.3**	**+0.1**
GZR	**Gura Zlata**	**2.71**	**265**	*e*Pn	**Pn**	**23 19 57.3**	**+0.1**
BZS	**Buzias**	**3.50**	**271**	*e*Pn	**Pn**	**23 20 08.8**	**+1.2**
BZS				*e*Sn	**Sn**	**23 20 44.6**	**-3.7**
BZS	**Buzias**	**3.50**	**271**	*e*Pn	**Pn**	**23 20 08.8**	**+1.2**
BZS				*e*Sn	**Sn**	**23 20 44.6**	**-3.7**
ZAPS	**Zavoj**	**3.73**	**231**	*e*Pn	**Pn**	**23 20 11.7**	**+0.9**
ZAPS				*e*Sn	**Sn**	**23 20 51.5**	**-2.5**
ZAPS	**Zavoj**	**3.73**	**231**	*e*Pn	**Pn**	**23 20 11.7**	**+0.9**
ZAPS				*e*Sn	**Sn**	**23 20 51.5**	**-2.5**
VTS	**Vitosha**	**3.95**	**219**	*e*Pn	**Pn**	**23 20 15.4**	**+1.6**
VTS				*e*Sn	**Sn**	**23 20 55.7**	**-3.6**
VTS	**Vitosha**	**3.95**	**219**	*e*Pn	**Pn**	**23 20 15.4**	**+1.6**
VTS				*e*Sn	**Sn**	**23 20 55.7**	**-3.6**
SVIS	**Svilajnac**	**4.08**	**251**	*e*Pn	**Pn**	**23 20 16.5**	**+1.1**
DIVS	**Divibare**	**4.96**	**254**	*e*Pn	**Pn**	**23 20 29.1**	**+1.8**
DIVS				*e*Sn	**Sn**	**23 21 20.6**	**-3.0**
DIVS	**Divibare**	**4.96**	**254**	*e*Pn	**Pn**	**23 20 29.1**	**+1.8**
DIVS				*e*Sn	**Sn**	**23 21 20.6**	**-3.0**

ISCJB ***26*** *23:42:18.7±0.3,42°.44N±0°.02×13°.44E±0°.03,h13km±3km, Error ellipse: s-maj=3.9km s-min=2.7km az=150.5*
ROM ***26*** *23:42:18.7±0.1,42°.44N×13°.45E,h9km,Ml2.4/20,Error ellipse: s-maj=1.2km s-min=0.9km az=67.0*
CSEM ***26*** *23:42:19.0±0.1,42°.44N×13°.45E,h10km,ML2.7/12,Error ellipse: s-maj=2.7km s-min=1.9km az=68.0*

ISC 26 23:42:19.3±0.8,42°.45N±0°.02×13°.45E±0°.02,h11km±5km, n62,σ0.884/92,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.09**	**342**	Pg	**Pg**	**23 42 21.9**	**-0.2**
CAMP				Sg	**Sg**	**23 42 23.9**	**-0.1**
	165nm,0.2s						
CAMP	**Campotosto**	**0.09**	**342**	Pg	**Pg**	**23 42 21.9**	**-0.2**
CAMP				Sg	**Sg**	**23 42 23.9**	**-0.1**
	165nm,0.2s						
AQU	**L'Aquila**	**0.10**	**200**	Pg	**Pg**	**23 42 21.9**	**-0.1**
AQU				Sg	**Sg**	**23 42 23.8**	**-0.2**
	4μm,0.3s						
AQU	**L'Aquila**	**0.10**	**200**	Pg	**Pg**	**23 42 21.9**	**-0.1**
AQU				Sg	**Sg**	**23 42 23.8**	**-0.2**
	4μm,0.3s						
TERO	**Teramo**	**0.21**	**33**	Pg	**Pg**	**23 42 23.6**	**-0.2**
TERO				Sg	**Sg**	**23 42 27.0**	**+0.2**
	871nm,0.4s						
TERO	**Teramo**	**0.21**	**33**	Pg	**Pg**	**23 42 23.6**	**-0.2**
TERO				Sg	**Sg**	**23 42 27.0**	**+0.2**
	871nm,0.4s						
VCEL	**Villa Celiera**	**0.29**	**100**	Pg	**Pg**	**23 42 25.2**	**-0.1**
VCEL				Sg	**Sb**	**23 42 30.9**	**-0.8**
VCEL	**Villa Celiera**	**0.29**	**100**	Pg	**Pg**	**23 42 25.2**	**-0.1**
VCEL				Sg	**Sb**	**23 42 30.9**	**-0.8**
FIAM	**Fiamignano**	**0.30**	**234**	Pg	**Pg**	**23 42 25.3**	**-0.2**
FIAM				Sg	**Sb**	**23 42 31.2**	**-0.7**
	409nm,0.5s						
FIAM	**Fiamignano**	**0.30**	**234**	Pg	**Pg**	**23 42 25.3**	**-0.2**
FIAM				Sg	**Sb**	**23 42 31.2**	**-0.7**
	409nm,0.5s						
LNSS	**Leonessa**	**0.34**	**297**	Pg	**Pg**	**23 42 26.1**	**-0.1**
LNSS				Sg	**Sb**	**23 42 31.8**	**-1.2**
	510nm,0.2s						
LNSS	**Leonessa**	**0.34**	**297**	Pg	**Pg**	**23 42 26.1**	**-0.1**
LNSS				Sg	**Sb**	**23 42 31.8**	**-1.2**
	510nm,0.2s						
PTQR	**Pietraquaria**	**0.43**	**185**	Pg	**Pg**	**23 42 27.2**	**-0.5**
PTQR				Sg	**Sg**	**23 42 33.3**	**-0.1**
	26nm,0.3s						
PTQR	**Pietraquaria**	**0.43**	**185**	Pg	**Pg**	**23 42 27.2**	**-0.5**
PTQR				Sg	**Sg**	**23 42 33.3**	**-0.1**
	26nm,0.3s						
NRCA	**Norcia**	**0.46**	**328**	Pg	**Pg**	**23 42 28.0**	**-0.3**
NRCA				Sg	**Sg**	**23 42 35.2**	**+0.8**
	48nm,0.2s						
NRCA	**Norcia**	**0.46**	**328**	Pg	**Pg**	**23 42 28.0**	**-0.3**
NRCA				Sg	**Sg**	**23 42 35.2**	**+0.8**
	48nm,0.2s						
TRTR	**Tortoreto Alta**	**0.50**	**43**	Pg	**Pg**	**23 42 30.0**	**-0.1**
TRTR	**Tortoreto Alta**	**0.50**	**43**	Pg	**Pg**	**23 42 30.0**	**-0.1**
OFFI	**Offida**	**0.52**	**20**	Pg	**Pg**	**23 42 30.2**	**-0.3**
	1μm,0.6s						
OFFI	**Offida**	**0.52**	**20**	Pg	**Pg**	**23 42 30.2**	**-0.3**
	1μm,0.6s						
INTR	**Introdacqua**	**0.55**	**142**	Pg	**Pg**	**23 42 29.6**	**-0.5**
INTR				Sg	**Sb**	**23 42 38.1**	**-0.9**
	352nm,0.9s						
INTR	**Introdacqua**	**0.55**	**142**	Pg	**Pg**	**23 42 29.6**	**-0.5**
INTR				Sg	**Sb**	**23 42 38.1**	**-0.9**
	352nm,0.9s						
VVLD	**Villa Vallelon**	**0.59**	**167**	Pg	**Pg**	**23 42 30.5**	**-0.3**
	145nm,0.6s						
VVLD	**Villa Vallelon**	**0.59**	**167**	Pg	**Pg**	**23 42 30.5**	**-0.3**
	145nm,0.6s						
CERT	**Cerreto**	**0.61**	**215**	Pg	**Pg**	**23 42 30.2**	**-0.9**
	332nm,0.5s						
CERT	**Cerreto**	**0.61**	**215**	Pg	**Pg**	**23 42 30.2**	**-0.9**
	332nm,0.5s						
FDMO	**Fiordimonte**	**0.65**	**336**	Pg	**Pg**	**23 42 31.2**	**-0.7**
FDMO				Sg	**Sb**	**23 42 41.1**	**-0.7**
	100nm,0.2s						
FDMO	**Fiordimonte**	**0.65**	**336**	Pg	**Pg**	**23 42 31.2**	**-0.7**
FDMO				Sg	**Sb**	**23 42 41.1**	**-0.7**
	100nm,0.2s						
CESX	**Cesi**	**0.66**	**285**	Pg	**Pg**	**23 42 32.1**	**-0.1**
CESX				Sg	**Sb**	**23 42 41.5**	**-0.7**
	101nm,0.5s						
CESX	**Cesi**	**0.66**	**285**	Pg	**Pg**	**23 42 32.1**	**-0.1**
CESX				Sg	**Sb**	**

0.2nm,0.3s,baz=159,slow=13,SNR=6.8
AKTO Aktyubinsk 14.09 317 Pn **Pn 23 56 08.6 -2.5**
baz=127,slow=14
ZALV Zalesovo Beam 15.29 28 Pn **Pn 23 56 27.8 +0.6**
0.3nm,0.3s,baz=216,slow=10,SNR=13
GNI Garni 21.40 277 P **P 23 57 40.2 +0.7**
3.0nm,0.6s,baz=220,slow=6.7,SNR=4.2
SONM Songino Array 24.76 63 P **P 23 58 13.1 -0.3**
0.6nm,0.6s,baz=258,slow=9.7,SNR=4.8
BRTR Keskin Array B 29.81 281 P **P 23 58 58.2 -0.5**
0.9nm,0.7s,baz=93,slow=9.1,SNR=10
BRTR pP **pP 23 59 05.9 +3.8**
0.9nm,0.7s,baz=98,slow=8.4,SNR=7.6
FINES FINESS Array B 34.79 322 P **P 23 59 40.2 -1.7**
0.7nm,0.5s,baz=120,slow=11,SNR=4.2
HFS Hagfors 40.63 319 P **P 00 00 30.1 -1.3**
0.5nm,0.3s,baz=102,slow=9.6,SNR=7.6
GERES GERESS Array B 41.75 302 P **P 00 00 40.2 -0.7**
0.3nm,0.4s,baz=65,slow=7.0,SNR=2.7
TORD Torodi Ar. Bea 67.36 268 P **P 00 03 44.7 -2.5**
0.4nm,0.8s,baz=49,slow=4.0,SNR=4.9
TORD pP **pP 00 03 53.3 +2.6**
0.5nm,0.6s,baz=44,slow=5.3,SNR=4.4
YKA Yellowknife Ar 76.75 4 P **P 00 04 40.9 -1.8**
0.1nm,0.5s,baz=347,slow=5.5,SNR=2.4
YKA pP **pP 00 04 49.2 +2.9**
0.2nm,0.6s,baz=350,slow=6.3,SNR=3.5

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*SZGRF **26** 23:54:03.3, 40˚.15N×74˚.52E, h29km, mb5.1, MS5.0, Kyrgyzstan-Xinjiang border region*
*PDG **26** 23:54:08.8, 41˚.00N×72˚.90E, h27km, mb5.2/10*
*LDG **26** 23:54:09.3±0.1, 40˚.66N×72˚.92E, h33km, Mb5.2/41, Ms4.3/10, Error ellipse: s-maj=8.4km s-min=5.2km az=21.0*
*ISCJB **26** 23:54:10.8±0.1, 40˚.90N±0˚.01×72˚.94E±0˚.02, h27km, mb5.1/233, MS4.6/59, Error ellipse: s-maj=2.1km s-min=1.8km az=19.7*
*BJI **26** 23:54:11.3, 41˚.07N×73˚.08E, h20km, mB5.1/28, mb5.1/42, ML5.2/6, Ms4.8/43, Ms7 4.7/40*
*MOS **26** 23:54:11.6±1.0, 40˚.99N×72˚.87E, h33km, mb5.4/94, MS4.7/27, Error ellipse: s-maj=5.8km s-min=3.7km az=125.2*
*IDC **26** 23:54:12.5±0.3, 40˚.94N×72˚.97E, h27km±2km, mb4.5/35, mb1 4.7/41, mb1mx4.7/41, mbtmp4.6/41, ML4.9/6, MS4.5/25, Ms1 4.5/25, ms1mx4.4/30, Error ellipse: s-maj=8.3km s-min=6.3km az=150.0*
*NEIC **26** 23:54:12.6±0.2, 40˚.93N×72˚.90E, mb5.3/109, Error ellipse: s-maj=4.2km s-min=3.3km az=2.0*
NEIC felt [V] at Jalal-Abad. Also felt at Bazar-Kurgan, Karakol and Khaydarkan. Felt [III] at Tashkent, Uzbekistan. Also felt at Andijon and Angren.
*TEH **26** 23:54:13.0, 41˚.02N×72˚.98E, h28km, ML5.3*
*NNC **26** 23:54:14.5±2.7, 41˚.28N×72˚.94E, h17km±14km, mb5.5, mpv5.5, Error ellipse: s-maj=24.9km s-min=9.1km az=177.0*
*GCMT **26** 23:54:15.8±0.3, 41˚.06N×72˚.62E, h36km±1km, MW4.9, Moment Tensor Solution. s34,c47; s55,c86; Moment tensor: Scale 10^16Nm; Mrr1.95±.14; Mθθ-0.01±.10; Mφφ-1.94±.10; Mrθ-1.32±.11; Mθφ-1.53±.07; Mφr-1.40±.10; Best double couple: Mo3.10000×10^16 NP1:φs11.00000°, δ28.00000°, λ63.00000°. NP2:φs221.00000°, δ65.00000°, λ103.00000°. Principal axes: T 2.7100, Plg67.0000°, Azm156.0000°; N 0.7300, Plg12.0000°, Azm35.0000°; P -3.4300, Plg19.0000°, Azm301.0000°; Data Used: II IU IC G CN.*
*DJA **26** 23:54:16.3±1.7, 41˚.4N×7˚.3E±˚, h28km±14km, M5.6/41, mB5.9/15, mb5.3/41, MLv5.9/2, Mw(mB)5.5/15*
ISC 26 23:54:12.4±0.2, **40˚.89N**±0˚.02×**72˚.90E**±0˚.02, **h26**km±1km, **h26**km:**pP-P, n834,** σ1§**45**/1026, **mb5.2**/232, **MS4.6**/61, **58C-69D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EKS2	**Erkin-Say**	**1.89**	**20**	*e*PN		**Pb**	**23 54 45.7**	**-0.6**
EKS2				*e*S		**Sn**	**23 55 06.3**	**+0.2**
EKS2	**Erkin-Say**	**1.89**	**20**	*e*Pn		**Pb**	**23 54 45.7**	**-0.6**
EKS2				*e*S		**Sn**	**23 55 06.3**	**+0.2**
AAK	**Ala-Archa**	**2.11**	**34**	⇓*e*PN		**Pb**	**23 54 49.1**	**-1.0**
AAK	**Ala-Archa**	**2.11**	**34**	*e*Pn		**Pb**	**23 54 48.8**	**-1.3**
AAK				*e*S		**Sn**	**23 55 13.3**	**+1.6**
AAK				Lg		Lg	23 55 16.8	
AAK	**Ala-Archa**	**2.11**	**34**	Pn		**Pb**	**23 54 49.2**	**-0.9**
	853nm,0.3s,baz=198,slow=9.4,SNR=52							
AAK				Lg		Lg	23 55 16.8	
	2μm,0.3s,baz=129,slow=23,SNR=16							
AAK				LR		LR	23 55 53.2	
	comp=Z,7μm,19.9s,baz=165,slow=49							
FRU	**Bishkek**	**2.33**	**33**	⇑*i*PN		**Pb**	**23 54 52.5**	**-1.2**
FRU				*e*S		**Sb**	**23 55 22.8**	**+0.7**
FRU				*i*			23 55 24.0	
FRU				pmax		pmax		
	comp=Z,5μm,0.8s							
FRU				pmax		pmax		
	comp=N,33μm,0.6s							
KSH	**Kashi**	**2.73**	**119**	Pn		**Pb**	**23 54 58.0**	**-2.5**
KSH				Sn		**Sb**	**23 55 30.8**	**-2.8**
KSH				smax		smax		
	comp=N,13μm,0.6s							
KSH				smax		smax		
	comp=E,11μm,0.6s							
KK31	**Karatay Array**	**2.84**	**322**	⇑Pn		**Pn**	**23 54 57.4**	**+1.4**
	comp=E,134nm,0.3s,baz=133,slow=14,SNR=95							
KK31				⇓Pg		**Pb**	**23 55 02.1**	**-0.3**
	comp=E,1μm,0.3s,baz=130,slow=15,SNR=5.9							
KK31				⇑Lg		Lg	23 55 38.6	
	comp=E,10μm,0.6s,baz=136,slow=30,SNR=8.3							
KK31	**Karatay Array**	**2.84**	**322**	*i* PN		**Pn**	**23 54 57.4**	**+1.4**
KK31				pmax		pmax		
	comp=Z,437nm,0.2s							
KKAR	**Karatay Array**	**2.84**	**322**	*e*PN		**Pn**	**23 54 57.7**	**+1.7**
KKAR				*e*S		**Sb**	**23 55 36.0**	**-0.7**
KKAR	**Karatay Array**	**2.84**	**322**	*e*Pn		**Pn**	**23 54 57.7**	**+1.7**
KKAR				*e*S		**Sb**	**23 55 36.0**	**-0.7**
TKM2	**Tokmak 2**	**2.86**	**44**	⇑Pg		Pn	23 54 59.6	+3.1
	comp=Z,2μm,0.5s							
TKM2				⇑Lg		Lg	23 55 35.5	
	comp=Z,12μm,0.7s							
TKM2	**Tokmak 2**	**2.86**	**44**	*e*PN		**Pn**	**23 54 59.3**	**+2.8**
TKM2				*e*			23 55 29.2	
TKM2	**Tokmak 2**	**2.86**	**44**	*e*Pn		**Pn**	**23 54 59.3**	**+2.8**
TKM2				*e*Sn		**Sn**	**23 55 29.2**	**-1.0**
KNDC	**Almaty**	**3.82**	**51**	⇑Pn		**Pn**	**23 55 12.1**	**+2.5**
	comp=Z,2μm,0.7s							
KNDC				⇑Pg		**Pb**	**23 55 21.2**	**+2.0**
	comp=Z,2μm,0.6s							
KNDC				⇑Lg		Lg	23 56 08.7	
	comp=Z,16μm,0.8s							
AAA	**Alma-Ata**	**3.84**	**50**	*i* PN		**Pb**	**23 55 20.1**	**+0.6**
AAA				*i* S		**Sb**	**23 56 09.7**	**+4.2**
KBL	**Kabul**	**7.03**	**207**	*e*PN		**Pn**	**23 55 56.8**	**+2.9**
KBL				pmax		pmax		
	comp=Z,2.0nm,1.0s							
KBL	**Kabul**	**7.03**	**207**	*e*Pn		**Pn**	**23 55 56.8**	**+2.9**
	comp=Z,1.8nm,1.0s							
KBL				*e*Sn		**Sn**	**23 57 14.3**	**+1.2**
CEP	**Cherat**	**7.10**	**187**	P		Pn	23 55 58.1	+3.4
CEP				S		**Sn**	**23 57 17.0**	**+2.5**
CHCP	**Chirah Chowk**	**7.22**	**178**	P		Pn	23 56 00.5	+4.2
THW	**Thamme Wali**	**8.13**	**187**	P		**Pn**	**23 56 10.8**	**+2.0**
THW				S		**Sn**	**23 57 41.0**	**+1.1**
JMU	**Jammu**	**8.31**	**168**	*ex*		**Pn**	**23 56 14.0**	**+2.8**
THN	**Thein Dam**	**8.74**	**164**	*e*P		**Pn**	**23 56 16.1**	**-0.9**
THN				ex		x	23 58 07.1	
SARP	**Sargodha**	**8.95**	**181**	P		**Pn**	**23 56 21.6**	**+1.6**
MK31	**Makanchi Array**	**8.99**	**46**	Pn		**Pn**	**23 56 21.3**	**+0.8**
	comp=Z,67nm,0.6s,baz=231,slow=14,SNR=83							
MK31	**Makanchi Array**	**8.99**	**46**	*e*P		**Pn**	**23 56 21.5**	**+1.0**
MK31							23 57 59.7	
MK31	**Makanchi Array**	**8.99**	**46**	*e*Pn		**Pn**	**23 56 21.5**	**+1.0**
MK31				Sn		**Sn**	**23 57 59.7**	**-1.1**
MKAR	**Makanchi Array**	**8.99**	**46**	P		**Pn**	**23 56 21.9**	**+1.4**
MKAR	**Makanchi Array**	**8.99**	**46**	Pn		**Pn**	**23 56 21.9**	**+1.4**
MKAR				Lg		Lg	23 58 53.4	
MKAR	**Makanchi Array**	**8.99**	**46**	Pn		**Pn**	**23 56 21.9**	**+1.4**
	comp=Z,8.4nm,0.3s,baz=232,slow=13,SNR=96							
MKAR				Lg		Lg	23 58 53.4	
	comp=Z,11nm,0.3s,baz=231,slow=28,SNR=3.6							
MKAR				LR		LR	00 00 17.4	
	comp=Z,996nm,20.8s,baz=237,slow=41							

DHRM	**DHARAMSHALA**	**9.05**	**161**	*e*P		**Pn**	**23 56 22.4**	**+0.9**
DHRM				AMB		AMB	23 56 31.3	
	comp=Z,342nm,1.7s							
BHK	**Bhakra**	**9.87**	**162**	*ex*		**Pn**	**23 56 35.7**	**+3.1**
BHK				*ex*		x	23 58 26.1	
SDNR	**Sundarnagar**	**9.93**	**159**	*e*P		**Pn**	**23 56 33.0**	**-0.4**
SDNR				*ex*		x	23 58 16.0	
SMLA	**Simla**	**10.33**	**159**	*i* P		**Pn**	**23 56 40.2**	**+1.3**
SMLA				AMB		AMB	23 56 43.5	
	comp=Z,102nm,0.2s							
SMLA				*i* S		**Sn**	**23 58 34.1**	**+0.3**
SMLA				⇓			23 58 37.6	
	comp=E,3μm,0.3s							
SMLA				⇓			23 58 38.0	
	comp=N,4μm,0.4s							
KURBB	**Kurchatov Arra**	**10.49**	**20**	Pn		**Pn**	**23 56 39.6**	**-1.4**
	comp=N,1.3nm,0.3s,baz=215,slow=13,SNR=73							
KURBB				Sn		**Sn**	**23 58 38.0**	**+0.4**
	comp=N,1.7nm,0.3s,baz=197,slow=16,SNR=5.3							
KURBB				Lg		Lg	23 59 40.9	
	comp=N,5.9nm,0.3s,baz=201,slow=31,SNR=9.6							
KURBB				LR		LR	00 01 01.0	
	comp=N,2μm,21.3s,baz=210,slow=39							
KURK	**Kurchatov**	**10.60**	**20**	⇓Pn		**Pn**	**23 56 41.7**	**-0.8**
	comp=N,43nm,1.0s							
KURK	**Kurchatov**	**10.60**	**20**	*de*P		**Pn**	**23 56 41.3**	**-1.2**
KURK				pmax		pmax		
	comp=Z,40nm,1.0s							
KURK	**Kurchatov**	**10.60**	**20**	*e*Pn		**Pn**	**23 56 41.4**	**-1.2**
KURK				*e*Sn		**Sn**	**23 58 35.4**	**-4.9**
KURK				Lg		Lg	23 59 40.9	
KURK	**Kurchatov**	**10.60**	**20**	Pn		**Pn**	**23 56 42.0**	**-0.5**
	SNR=19							
KURK	**Kurchatov**	**10.60**	**20**	Pn		**Pn**	**23 56 41.9**	**-0.6**
	comp=Z,260nm,0.6s,SNR=16							
IMYA	**Miami**	**10.99**	**250**	*e*P		**Pn**	**23 56 46.9**	**-1.1**
WMQ	**Urumqi**	**11.34**	**70**	P		**Pn**	**23 56 52.0**	**-0.6**
WMQ				sP			23 57 02.0	
WMQ				S		**Sn**	**23 58 58.0**	**-0.4**
WMQ				sS			23 59 07.0	
WMQ				SS		**SnSn**	**23 59 11.0**	**+0.9**
WMQ				PcP		**PcP**	**00 02 47.0**	**+1.3**
WMQ				pmax		pmax		
	comp=Z,26nm,0.8s							
WMQ				pmax		pmax		
	comp=Z,100nm,4.0s							
WMQ				LR		LR		
	comp=N,4μm,5.0s							
WMQ				LR		LR		
	comp=E,4μm,5.0s							
WMQ				LR		LR		
	comp=Z,3μm,5.0s							
DDI	**Dehra Dun**	**11.35**	**157**	*ex*		Pn	23 56 49.5	-3.3
DDI				*e*P		**Pn**	**23 56 52.4**	**-0.5**
DDI				AMB		AMB	23 56 55.3	
	comp=Z,763nm,1.7s							
DDI				*ex*		x	23 58 54.5	
ISRO	**Mashad**	**11.46**	**251**	*e*P		**Pn**	**23 56 52.9**	**-1.5**
MHI	**Mashad**	**11.46**	**251**	*e*P		Pn	23 57 00.8	+6.4
IMOG	**Moghan**	**11.64**	**250**	*e*P		**Pn**	**23 56 55.9**	**-1.2**
QUE	**Quetta**	**11.72**	**206**	*e*P		**Pn**	**23 56 58.0**	**-0.1**
QUE				*e*S		**Sn**	**23 59 06.0**	**-2.1**
QUE	**Quetta**	**11.72**	**206**	*e*P		**Pn**	**23 56 58.0**	**-0.1**
QUE				*e*S		**Sn**	**23 59 06.0**	**-2.1**
IPAY	**Payeh**	**11.73**	**252**	*e*P		**Pn**	**23 56 56.9**	**-1.4**
VOSK	**Vostochnaya**	**11.91**	**354**	⇑Pn		**Pn**	**23 56 57.5**	**-2.9**
	comp=Z,44nm,0.6s							
ISFR	**Sfrayin**	**12.21**	**257**	*e*P		**Pn**	**23 57 04.9**	**+0.1**
ISHV	**Shirvan**	**12.25**	**259**	*e*P		**Pn**	**23 57 03.2**	**-2.1**
BVA0	**Borovoye Array**	**12.26**	**353**	Pn		**Pn**	**23 57 02.8**	**-2.3**
	comp=Z,14nm,0.8s,baz=161,slow=11,SNR=37							
BVAR	**Borovoye Array**	**12.26**	**353**	P		**Pn**	**23 57 02.9**	**-2.3**
BVAR							23 59 23.1	
BVAR	**Borovoye Array**	**12.26**	**353**	Pn		**Pn**	**23 57 02.9**	**-2.3**
BVAR				Sn		**Sn**	**23 59 23.1**	**+2.3**
BVAR				Lg		Lg	00 00 30.8	
BVAR	**Borovoye Array**	**12.26**	**353**	Pn		**Pn**	**23 57 02.9**	**-2.3**
	comp=Z,4.2nm,0.3s,baz=162,slow=11,SNR=24							
BVAR				Sn		**Sn**	**23 59 23.1**	**+2.3**
	comp=Z,6.9nm,0.3s,baz=167,slow=22,SNR=3.1							
BVAR				Lg		Lg	00 00 30.8	
	comp=Z,12nm,0.3s,baz=169,slow=24,SNR=2.7							
BVAR				LR		LR	00 02 03.1	
	comp=Z,4μm,20.5s,baz=170,slow=38							
BRVK	**Borovoye**	**12.30**	**353**	⇑Pn		**Pn**	**23 57 03.7**	**-2.1**
	comp=Z,130nm,0.8s							
BRVK	**Borovoye**	**12.30**	**353**	*d i*P		**Pn**	**23 57 04.0**	**-1.7**
BRVK				pmax		pmax		
	comp=Z,20nm,0.6s							
BRVK	**Borovoye**	**12.30**	**353**	*e*Pn		**Pn**	**23 57 03.6**	**-2.1**
BRVK				*e*Sn		Sn	23 59 13.3	-8.5
BRVK	**Borovoye**	**12.30**	**353**	Pn		**Pn**	**23 57 04.0**	**-1.7**
	SNR=21							
BRVK	**Borovoye**	**12.30**	**353**	Pn		**Pn**	**23 57 04.3**	**-1.4**
	comp=Z,235nm,0.6s,SNR=8.2							
ZRNK	**Zerenda**	**12.35**	**349**	⇑Pn		**Pn**	**23 57 03.8**	**-2.6**
	comp=Z,91nm,0.8s							
ZRNK	**Zerenda**	**12.35**	**349**	*i* P		**Pn**	**23 57 03.8**	**-2.6**
ZRNK				pmax		pmax		
	comp=Z,43nm,0.4s							
AB31	**Akbulak array**	**12.39**	**317**	⇑Pn		**Pn**	**23 57 05.1**	**-1.8**
	comp=Z,63nm,0.6s,baz=129,slow=16,SNR=122							
AB31	**Akbulak array**	**12.39**	**317**	*i* P		**Pn**	**23 57 04.3**	**-2.6**
AB31				pmax		pmax		
	comp=Z,84nm,0.5s							
ABKAR	**Akbulak array**	**12.39**	**317**	*e*Pn		**Pn**	**23 57 04.8**	**-2.1**
ABKAR				*e*Sn		Sn	23 59 17.4	-6.6
NDI	**New Delhi**	**12.68**	**162**	*e*P		**Pn**	**23 57 10.0**	**-1.0**
PTH	**Pithoragarh**	**12.79**	**150**	*e*P		**Pn**	**23 57 13.7**	**+1.0**
PTH				*ex*		x	23 59 24.6	
LGTI	**Lohaghat**	**12.89**	**150**	*e*P		**Pn**	**23 57 14.2**	**+0.3**
LGTI				*ex*		x	23 59 29.4	
ITEG	**Tejag**	**13.84**	**239**	*e*P		P	23 57 31.9	-3.2
IKOO	**Kooshah**	**13.98**	**237**	*e*P		**P**	**23 57 38.9**	**+2.2**
IMND	**Minoodasht**	**14.06**	**261**	*e*P		**Pn**	**23 57 28.5**	**-1.3**
AKTO	**Aktyubinsk**	**14.10**	**318**	Pn		**Pn**	**23 57 28.5**	**-1.7**
	comp=Z,28nm,1.3s							
AKTO	**Aktyubinsk**	**14.10**	**318**	P		**Pn**	**23 57 28.3**	**-1.9**
AKTO	**Aktyubinsk**	**14.10**	**318**	Pn		**Pn**	**23 57 28.2**	**-1.9**
AKTO	**Aktyubinsk**	**14.10**	**318**	Pn		**Pn**	**23 57 28.2**	**-1.9**
	comp=Z,5.3nm,0.3s,baz=131,slow=13,SNR=68							
AJM	**Ajmer**	**14.45**	**174**	*e*P		**Pn**	**23 57 32.8**	**-2.4**
PYUN	**Piuthan**	**15.22**	**144**	*e*P		**Pn**	**23 57 42.4**	**-3.3**
	comp=Z,2μm,1.0s							
PYUN				*e*S		**Sn**	**00 00 26.8**	**-6.7**
ZAA0	**Zalesovo Array**	**15.32**	**28**	*e*Pn		**Pn**	**23 57 45.1**	**-1.6**
ZAA0				S		**Sn**	**00 00 50.3**	**-1.1**
ZALV	**Zalesovo Beam**	**15.32**	**28**	P		**Pn**	**23 57 45.1**	**-1.6**
ZALV							00 00 29.0	
ZALV	**Zalesovo Beam**	**15.32**	**28**	Pn		**Pn**	**23 57 45.1**	**-1.6**
ZALV				Sn		**Sn**	**00 00 29.0**	**-6.4**
ZALV				Lg		Lg	00 02 09.6	
ZALV	**Zalesovo Beam**	**15.32**	**28**	Pn		**Pn**	**23 57 45.1**	**-1.6**
	comp=Z,8.4nm,0.3s,baz=220,slow=13,SNR=47							
ZALV				Sn		**Sn**	**00 00 29.0**	**-6.4**
	comp=Z,1.1nm,0.3s,baz=227,slow=17,SNR=2.6							
ZALV				Lg		Lg	00 02 09.6	
	baz=227,slow=25,SNR=2.2							
ZALV				LR		LR	00 03 55.1	
	comp=Z,2μm,18.2s,baz=215,slow=38							
DANN	**Dangsing**	**15.36**	**141**	*e*P		**Pn**	**23 57 43.5**	**-4.1**
	comp=Z,409nm,0.5s							
IGLO	**Ghaloghah**	**15.51**	**260**	*e*P		**Pn**	**23 57 49.7**	**+0.2**
NVS	**Novosibirsk**	**15.56**	**23**	*e*P		**Pn**	**23 57 48.1**	**-1.7**
NVS				*e*S		**Sn**	**00 00 37.0**	**-4.2**
KOLN	**Koldanda**	**15.78**	**143**	*e*P		**Pn**	**23 57 49.5**	**-3.5**
	comp=Z,179nm,0.4s							
IANJ	**Anjilo**	**15.87**	**256**	*e*P		**Pn**	**23 57 52.6**	**-1.6**
ISHM	**Shahmirzad**	**16.19**	**258**	*e*P		**Pn**	**23 57 57.7**	**-0.6**
IALA	**Alasht**	**16.43**	**260**	*e*P		**Pn**	**23 57 57.2**	**-4.2**
KKN	**Kakani**	**16.57**	**138**	*e*P		**Pn**	**23 57 59.8**	**-3.3**
	comp=Z,320nm,0.6s							
ILAS	**Lasjerd**	**16.61**	**257**	*e*P		**Pn**	**23 58 02.4**	**-1.2**
DMN	**Daman**	**16.63**	**139**	*e*P		**Pn**	**23 58 00.8**	**-3.1**
	comp=Z,436nm,0.9s							
IFIR	**Firoozkooh**	**16.65**	**258**	*e*P		**Pn**	**23 58 02.9**	**-1.3**
IPRN	**Peran**	**16.73**	**261**	*e*P		**Pn**	**23 58 03.4**	**-1.6**
IBAF	**Bafgh**	**16.76**	**242**	*e*P		**Pn**	**23 58 05.8**	**+0.4**
GUN	**Gumba**	**16.78**	**136**	*e*P		**Pn**	**23 58 02.2**	**-3.7**
	comp=Z,538nm,0.5s							
PKIN	**Phulchoki**	**16.80**	**138**	*e*P		**Pn**	**23 58 02.8**	**-3.3**
	comp=Z,221nm,0.7s							
PKI	**Pulchoki**	**16.81**	**138**	*e*P		**Pn**	**23 58 02.9**	**-3.4**
	comp=Z,355nm,0.7s							

ICHK	**Chekchek**	**17.15**	**246**	*e*P		**P**	**23 58 13.6**	**+1.7**
IMEH	**Mehriz**	**17.52**	**243**	*e*P		**P**	**23 58 17.9**	**+1.9**
IVRN	**Varamin**	**17.69**	**257**	*e*P		**Pn**	**23 58 17.4**	**+0.5**
BHJ	**Bhuj**	**17.80**	**190**	*e*P		**Pn**	**23 58 16.7**	**-1.5**
BHJ				AMB		AMB	23 58 21.7	
	comp=Z,238nm,0.4s							
SVE	**Sverdlovsk**	**17.83**	**338**	*ce*P		**Pn**	**23 58 15.9**	**-2.5**
SVE				pmax		pmax		
	comp=Z,119nm,1.1s							
SVE				MLR		MLR		
	comp=Z,3μm,13.0s							
RAMN	**Ramite**	**17.93**	**137**	*e*P		**Pn**	**23 58 16.0**	**-4.1**
	comp=Z,420nm,0.7s							
BHPL	**Bhopal**	**18.01**	**166**	*ex*		**Pn**	**23 58 18.3**	**-2.5**
BHPL				AMB		AMB	23 58 22.9	
	comp=Z,136nm,0.5s							
IR3	**Iran Long-Peri**	**18.01**	**260**	*e*P		**Pn**	**23 58 18.8**	**-2.1**
ARU	**Arti**	**18.14**	**334**	*d i*P		**Pn**	**23 58 19.7**	**-2.6**
ARU				S		**Sn**	**00 01 41.8**	**-2.0**
ARU				pmax		pmax		
	comp=Z,81nm,1.7s							
ARU				MLR		MLR		
	comp=Z,3μm,18.0s							
ARU	**Arti**	**18.14**	**334**	Pn		**Pn**	**23 58 20.2**	**-2.1**
	comp=Z,265nm,0.5s,SNR=20							
TAPN	**Taplejung**	**18.21**	**133**	*e*P		**Pn**	**23 58 19.5**	**-4.1**
	comp=Z,334nm,0.7s							
ODAN	**Odare**	**18.42**	**135**	*e*P		**P**	**23 58 22.6**	**-3.3**
	comp=Z,548nm,0.7s							
LSA	**Lhasa**	**18.58**	**121**	*e*P		**Pn**	**23 58 29.8**	**+1.5**
LSA				pmax		pmax		
	comp=Z,99nm,1.0s							
LSA	**Lhasa**	**18.58**	**121**	*e*P		**Pn**	**23 58 29.8**	**+1.5**
	comp=Z,99nm,1.0s							
JBP	**Jabalpur**	**18.65**	**159**	*ex*		**Pn**	**23 58 25.9**	**-2.7**
JBP				*i* x		x	23 58 31.9	
	comp=Z,315nm,0.8s							
JBP				*ex*		x	00 01 42.4	
IRAZ	**Razeghan**	**18.86**	**261**	*e*P		**Pn**	**23 58 31.5**	**+0.2**
MAK	**Makhachkala**	**18.99**	**285**	*e*P		**P**	**23 58 30.5**	**-1.3**
MAK				*e*S		**Sn**	**00 02 02.0**	**-2.4**
MAK				pmax		pmax		
	comp=Z,68nm,0.9s							
MAK				MLR		MLR		
	comp=Z,4μm,14.0s							
ISRB	**Sarab**	**19.73**	**269**	*e*P		**P**	**23 58 40.8**	**+0.6**
IHRS	**Heris**	**20.07**	**271**	*e*P		**P**	**23 58 44.6**	**+0.7**
BOK	**Bokaro**	**20.23**	**143**	*e*P		**P**	**23 58 44.5**	**-1.0**
BOK				AMB		AMB	23 58 47.5	
	comp=Z,581nm,1.3s							
BANOM	**Banah**	**20.31**	**228**	P		**P**	**23 58 47.6**	**+1.2**
	SNR=21							
IBST	**Bostanabad**	**20.35**	**269**	*e*P		**P**	**23 58 47.8**	**+0.8**
NGP	**Nagpur**	**20.36**	**163**	*e*P		**P**	**23 58 46.0**	**-0.9**
NGP				*ex*		x	23 58 48.1	
	comp=Z,131nm,1.1s							
NGP				⇓*ex*		x	00 02 21.0	
GTA	**Gaotai**	**20.60**	**85**	P		Pn	23 58 51.0	-1.0
GTA				pP		pP	23 59 00.5	+3.7
GTA				sP		sP	23 59 04.5	+4.3
GTA				S		Sn	00 02 42.0	-1.7
GTA				pmax		pmax		
	comp=Z,99nm,0.9s							
GTA				pmax		pmax		
	comp=Z,470nm,4.8s							
GTA				LR		LR		
	comp=N,2μm,19.7s							
GTA				LR		LR		
	comp=E,2μm,15.2s							
GTA				LR		LR		
	comp=Z,2μm,17.3s							
DGRG	**David-gareji**	**20.70**	**281**	P		**P**	**23 58 51.2**	**+0.7**
DGRG				S		S	00 02 30.8	-10
ITBZ	**Tabriz**	**20.77**	**271**	*e*P		**P**	**23 58 52.4**	**+1.0**
IMRD	**Marand**	**20.98**	**273**	*e*P		**P**	**23 58 54.2**	**+0.5**
IAZR	**Azarshahr**	**21.05**	**270**	*e*P		**P**	**23 58 55.9**	**+1.3**
SEAG	**Tbilisi Sea**	**21.08**	**282**	P		**P**	**23 58 55.4**	**+0.8**
TBLG	**Delisi**	**21.14**	**282**	P		**P**	**23 58 55.5**	**+0.3**
TBLG	**Delisi**	**21.14**	**282**	P		**P**	**23 58 55.5**	**+0.3**
TBLG				S		S	00 02 31.5	-18
SOKR	**Solikamsk**	**21.24**	**337**	*e*P		**P**	**23 58 56.2**	**+0.1**
SOKR				S		**S**	**00 02 51.3**	**+0.7**
SOKR				pmax		pmax		
	comp=Z,30nm,1.3s							
SOKR				MLR		MLR		
	comp=Z,2μm,16.0s							
HATD	**Hatta, Dubai**	**21.27**	**226**	P		**P**	**23 58 57.8**	**+1.1**
	SNR=18							
GNI	**Garni**	**21.38**	**277**	*e*P		**P**	**23 58 59.3**	**+1.3**
GNI	**Garni**	**21.38**	**277**	P		**P**	**23 58 58.8**	**+0.9**
GNI	**Garni**	**21.38**

ARTV	**Artvin**	**23.30**	**281**	*i*	P		**P**	**23 59 20.8**	**+2.4**
DAGI	**Agillar**	**23.33**	**281**	*i*	P		**P**	**23 59 19.8**	**+1.2**
DBOC	**Borcka**	**23.47**	**281**	*i*	P		**P**	**23 59 21.8**	**+2.0**
DDEM	**Demirkent**	**23.49**	**280**	*i*	P		**P**	**23 59 21.3**	**+1.2**
BCA	**Borcka**	**23.49**	**282**	*e*	P		**P**	**23 59 20.6**	**+0.6**
DBAD	**Bademkaya**	**23.51**	**281**	*i*	P		**P**	**23 59 21.6**	**+1.3**
MIB	**Mutribah**	**23.52**	**250**	*e*	P		**P**	**23 59 20.3**	**0.0**
MIB					AMb	AMB		23 59 37.5	
	comp=Z,182nm,0.8s								
KAD	**Karad**	**23.53**	**177**	*ex*		pP		23 59 26.0	-2.0
KBD	**Kabd**	**23.63**	**248**	*e*	P		**P**	**23 59 21.6**	**+0.2**
KBD					AMb	AMB		23 59 32.4	
	comp=Z,127nm,1.5s								
TLY	**Talaya**	**23.66**	**52**	*e*	P		P	23 59 11.1	-10
TLY				*e*	S		S	00 03 24.7	-10
TLY				*e*	SS		**SnSn**	**00 04 15.9**	**+3.2**
TLY				*e*	SSS		SSS	00 04 29.9	
TLY					pmax	pmax			
	comp=Z,34nm,0.8s								
TLY					MLR	MLR			
	comp=Z,727nm,18.0s								
IMP	**Imphal**	**23.79**	**126**	*ex*		**pP**		**23 59 29.0**	**-1.7**
IMP				*ex*		x		23 59 50.0	
VRHR	**Novokhopersk**	**23.84**	**306**	*e*	P		**P**	**23 59 22.2**	**-0.9**
VRHR				*e*	PP		**pP**	**23 59 29.6**	**-1.2**
VRHR				*e*	S		**S**	**00 03 37.3**	**0.0**
VRHR					pmax	pmax			
	comp=N,20nm,0.9s								
VRHR					pmax	pmax			
	comp=E,30nm,0.9s								
VRHR					pmax	pmax			
	comp=Z,60nm,0.9s								
VRHR					smax	smax			
	comp=E,350nm,2.3s								
VRHR					smax	smax			
	comp=Z,20nm,1.8s								
VRHR					smax	smax			
	comp=N,280nm,2.3s								
VRHR					MLR	MLR			
	comp=N,300nm,17.0s								
VRHR					MLR	MLR			
	comp=E,780nm,17.0s								
VRHR					MLR	MLR			
	comp=Z,1µm,17.0s								
RDF	**Al-Radifah**	**23.88**	**248**	*e*	P		**P**	**23 59 23.8**	**+0.1**
RDF					AMb	AMB		23 59 35.3	
	comp=Z,94nm,1.4s								
HYB	**Hyderabad**	**23.90**	**167**	*i*	P		**P**	**23 59 23.5**	**-0.5**
	comp=Z,220nm,1.0s								
HYB					*e*S		**S**	**00 03 44.0**	**+5.2**
HYB					*e*			00 06 48.0	
HYB	**Hyderabad**	**23.90**	**167**	*e*	P		**P**	**23 59 24.9**	**+0.9**
HYB					AMB	AMB		23 59 27.3	
	comp=Z,123nm,2.2s								
NAY	**Al-Naaiem**	**23.91**	**249**	*e*	P		**P**	**23 59 24.7**	**+0.7**
NAY					AMb	AMB		23 59 34.8	
	comp=Z,130nm,1.2s								
BHD	**Baghdad**	**23.91**	**261**	*ex*		P		**23 59 19.5**	**-4.6**
BHD				*ex*		x		00 03 32.0	
ERZM	**Erzurum**	**23.97**	**278**	*i*	P		**P**	**23 59 28.0**	**+3.1**
EZM	**Erzurum**	**23.97**	**278**	*e*	P		**P**	**23 59 25.1**	**+0.2**
PZAR	**Pazar-Rize**	**24.07**	**281**	*e*	P		**P**	**23 59 28.9**	**+3.4**
VRTB	**Varto-Mus**	**24.08**	**276**	*e*	P		**P**	**23 59 27.4**	**+1.6**
IRK	**Irkutsk**	**24.18**	**51**	*e*	P		**P**	**23 59 26.8**	**+0.4**
IRK					pmax	pmax			
	comp=Z,86nm,1.8s								
BEST	**Besiri**	**24.56**	**273**	*i*	P		**P**	**23 59 32.8**	**+2.8**
KOPT	**Kop Dagi**	**24.60**	**279**	*i*	P		**P**	**23 59 33.4**	**+2.8**
LZH	**Lanzhou**	**24.62**	**91**	⇑	P		**P**	**23 59 31.8**	**+1.0**
LZH					pP		**pP**	**23 59 39.0**	**+0.5**
LZH					sP		**sP**	**23 59 42.0**	**+0.2**
LZH					PP		**PnPn**	**00 00 08.0**	**+5.5**
LZH					pmax	pmax			
	comp=Z,32nm,1.1s								
LZH					pmax	pmax			
	comp=Z,160nm,4.3s								
LZH					LR	LR			
	comp=N,1µm,12.2s								
LZH					LR	LR			
	comp=E,900nm,12.0s								
LZH					LR	LR			
	comp=Z,2µm,14.2s								
SOC	**Sochi**	**24.62**	**287**	*e*	P		**P**	**23 59 28.8**	**-1.7**
SOC				*e*	*PP		**pP**	**23 59 38.4**	**+0.2**
SOC				*e*	*SP		**sP**	**23 59 41.3**	**-0.2**
SOC				*e*				00 00 00.3	
SOC				*e*	S		**S**	**00 03 45.0**	**-5.1**
SOC				*e*	SS		**SnSn**	**00 04 38.3**	**+1.9**
SOC					pmax	pmax			
	comp=Z,28nm,0.9s								
SOC					MLR	MLR			
	comp=Z,1µm,18.0s								
BNGB	**Bing¯¶**	**24.70**	**276**	*e*	P		**P**	**23 59 31.1**	**-0.3**
VIS	**Vishakhapatnam**	**24.78**	**156**	*e*	P		**P**	**23 59 33.2**	**+1.1**
VIS				*e*	pP			23 59 33.6	-6.2
VIS					AMB	AMB		23 59 35.7	
	comp=Z,214nm,0.0s								
BAYT	**Ayd¯ntepe-Bay**	**24.79**	**280**	*e*	P		**P**	**23 59 32.6**	**+0.4**
SONM	**Songino Array**	**24.79**	**62**	P	P		**P**	**23 59 33.1**	**+0.9**
SONM	**Songino Array**	**24.79**	**62**	P	P		**P**	**23 59 33.1**	**+0.9**
	comp=Z,37nm,0.9s,baz=274,slow=10,SNR=162								
SONM					LR	LR		00 09 02.3	
	comp=Z,230nm,18.6s,baz=265,slow=36								
MARD	**Mardin**	**25.10**	**272**	*i*	P		**P**	**23 59 37.1**	**+2.0**
ULN	**Ulaanbaatar**	**25.24**	**62**	*e*	P		**P**	**23 59 37.2**	**+1.0**
	comp=Z,83nm,1.1s								
ULN	**Ulaanbaatar**	**25.24**	**62**		P		**P**	**23 59 37.5**	**+1.3**
	SNR=43								
ULN	**Ulaanbaatar**	**25.24**	**62**		P		**P**	**23 59 37.3**	**+1.1**
	comp=Z,83nm,1.3s,comp=Z,923nm								
VORD	**Divnogorie**	**25.25**	**305**	*e*	P		**P**	**23 59 35.7**	**-0.4**
VORD					pmax	pmax			
	comp=N,6.0nm,0.6s								
VORD					pmax	pmax			
	comp=E,10.0nm,0.6s								
VORD					pmax	pmax			
	comp=Z,20nm,0.6s								
VORD					MLR	MLR			
	comp=N,990nm,16.0s								
VORD					MLR	MLR			
	comp=E,690nm,16.0s								
VORD					MLR	MLR			
	comp=Z,1µm,16.0s								
GUMT	**Gumushane**	**25.27**	**280**	*e*	P		**P**	**23 59 39.3**	**+2.8**
DIY	**Diyarbakir**	**25.34**	**274**	*e*	P		**P**	**23 59 34.9**	**-2.3**
VSR	**Storozhevoye**	**25.37**	**305**	*e*	P		**P**	**23 59 36.3**	**-0.9**
VSR				*e*	*PP		**pP**	**23 59 45.4**	**+0.5**
VSR				*e*	*SP		**sP**	**23 59 49.6**	**+1.4**
VSR				*e*				00 00 10.6	
VSR				*e*	S		**S**	**00 03 58.4**	**-3.5**
VSR					pmax	pmax			
	comp=N,1.0nm,0.4s								
VSR					pmax	pmax			
	comp=E,8.0nm,0.4s								
VSR					pmax	pmax			
	comp=Z,20nm,0.4s								
VSR					pmax	pmax			
	comp=N,100nm,0.7s								
VSR					pmax	pmax			
	comp=E,60nm,0.7s								
VSR					pmax	pmax			
	comp=Z,100nm,0.7s								
VSR					smax	smax			
	comp=N,70nm,1.2s								
VSR					smax	smax			
	comp=E,90nm,1.2s								
VSR					smax	smax			
	comp=Z,20nm,1.2s								
VSR					MLR	MLR			
	comp=N,880nm,18.0s								
VSR					MLR	MLR			
	comp=E,1µm,18.0s								
VSR					MLR	MLR			
	comp=Z,2µm,18.0s								
DIYA	**Diyarbakir**	**25.42**	**274**	*i*	P		**P**	**23 59 41.9**	**+4.1**
VOR	**Voronezh**	**25.45**	**307**		P		**P**	**23 59 40.0**	**+2.1**
VOR					pmax	pmax			
	comp=Z,250nm,1.4s								
KELT	**Kelkit**	**25.50**	**279**	*i*	P		**P**	**23 59 40.7**	**+2.0**
EZC	**Erzincan**	**25.52**	**279**	*e*	P		**P**	**23 59 38.6**	**-0.2**
PTK	**Pertek**	**25.70**	**277**	*e*	P		**P**	**23 59 42.3**	**+1.8**
ESPY	**Espiye-Giresun**	**25.73**	**281**	*e*	P		**P**	**23 59 40.8**	**+0.2**
ANN	**Anapa**	**26.16**	**290**	*e*	P		**P**	**23 59 44.1**	**-0.3**
ANN				*e*				23 59 51.9	
ANN				*e*	PPP		PPP	00 00 29.1	
ANN				*e*	S		**S**	**00 04 15.9**	**+1.4**
ANN				*e*	SS		**SnSn**	**00 05 14.7**	**+0.7**
ANN					pmax	pmax			
	comp=Z,62nm,1.0s								
ANN					MLR	MLR			
	comp=N,855nm,15.0s								
ANN					MLR	MLR			
	comp=E,1µm,15.0s								
ANN					MLR	MLR			
	comp=Z,1µm,15.0s								
ILIC	**ilic-Erzincan**	**26.18**	**278**	*e*	P		**P**	**23 59 43.1**	**-1.7**
SUSE	**Susehri**	**26.27**	**280**	*i*	P		**P**	**23 59 47.4**	**+1.7**
URFA	**Urfa**	**26.55**	**274**	*e*	P		**P**	**23 59 47.9**	**-0.2**
MYA	**Malatya**	**26.58**	**276**	*e*	P		**P**	**23 59 51.3**	**+2.9**
MALT	**Malatya**	**26.58**	**276**	*e*	P		**P**	**23 59 49.8**	**+1.3**
CD2	**Chengdu**	**26.79**	**102**		P		**P**	**23 59 52.0**	**+1.7**
CD2					pP		**pP**	**23 59 59.5**	**+1.5**
CD2					sP		**sP**	**00 00 03.3**	**+2.0**
CD2					PP		**PnPn**	**00 00 36.5**	**+4.4**
CD2					PcP		**PcP**	**00 03 15.5**	**+2.7**
CD2					S		**S**	**00 04 23.8**	**-1.0**
CD2					sS		**sS**	**00 04 36.5**	**-1.1**
CD2					SS		**SnSn**	**00 05 36.0**	**+6.3**
CD2					pmax	pmax			
	comp=Z,60nm,0.6s								
CD2					pmax	pmax			
	comp=Z,220nm,5.7s								
CD2					LR	LR			
	comp=N,940nm,12.5s								
CD2					LR	LR			
	comp=E,840nm,11.6s								
CD2					LR	LR			
	comp=Z,1µm,15.1s								
RSDY	**Resadiye-TOKAT**	**26.88**	**281**	*e*	P		**P**	**23 59 53.5**	**+2.5**
MOS	**Moscow**	**27.40**	**315**	*e*	P		**P**	**23 59 54.6**	**-0.8**
MOS				*e*	PPP	PPP		00 00 47.5	
MOS				*e*	S		**S**	**00 04 32.9**	**-0.9**
MOS				*i*	SS		**SnSn**	**00 05 42.5**	**-1.4**
MOS					pmax	pmax			
	comp=Z,96nm,0.8s								
MOS					pmax	pmax			
	comp=Z,200nm,1.4s								
MOS					MLR	MLR			
	comp=E,2µm,15.0s								
MOS					MLR	MLR			
	comp=Z,3µm,15.0s								
MOS					MLR	MLR			
	comp=N,1µm,15.0s								
KVT	**Kavak**	**27.69**	**283**	*e*	P		**P**	**23 59 55.0**	**-3.2**
OBN	**Obninsk**	**27.79**	**313**	*ae*	P		**P**	**23 59 58.7**	**-0.2**
OBN				*e*	*SP		**sP**	**00 00 09.6**	**-0.3**
OBN					S		**S**	**00 04 40.0**	**0.0**
OBN				*e*	SS		**SnSn**	**00 05 53.2**	**-0.3**
OBN					pmax	pmax			
	comp=Z,28nm,1.2s								
OBN					MLR	MLR			
	comp=Z,2µm,15.0s								
GAZ	**Gaziantep**	**27.85**	**274**	*e*	P		**P**	**00 00 01.9**	**+2.1**
KMRS	**Kahramanmaras**	**27.98**	**275**	*e*	P		**P**	**00 00 02.4**	**+1.6**
SARI	**SarD1z-Kayseri**	**28.07**	**277**	*e*	P		P	00 00 08.5	+6.6
RBK	**Rabkut**	**28.33**	**220**		P		**P**	**00 00 05.3**	**+1.2**
	SNR=9.5								
BNN	**Bunyan**	**28.38**	**278**	*e*	P		P	23 59 58.6	-5.9
SIM	**Simferopol'**	**28.50**	**291**	*c*	*P		**P**	**00 00 06.0**	**+0.6**
SIM				*e*	S		**S**	**00 04 52.0**	**+0.6**
SIM					pmax	pmax			
	comp=Z,61nm,1.0s								
RAYN	**Ar Rayn**	**28.76**	**241**		P		**P**	**00 00 08.9**	**+0.9**
	comp=Z,323nm,0.8s,SNR=10								
KOZT	**Kozan**	**28.80**	**275**	*e*	P		**P**	**00 00 10.9**	**+2.8**
ABTO	**Aybut**	**28.91**	**222**		P		**P**	**00 00 10.3**	**+1.1**
	SNR=22								
HHC	**Hu-ho-hao-te**	**29.08**	**77**	*e*	P		**P**	**00 00 10.8**	**0.0**
HHC					PP		**PnPn**	**00 01 04.0**	**+0.7**
HHC					PcP		**PcP**	**00 03 20.5**	**+2.2**
HHC					S		**S**	**00 04 58.0**	**-2.9**
HHC					sS		**sS**	**00 05 10.0**	**-3.7**
HHC					SS		**SnSn**	**00 06 28.0**	**+2.5**
HHC					ScP		**ScP**	**00 06 58.0**	**0.0**
HHC					PcS		**PcS**	**00 07 01.8**	**+0.7**
HHC					ScS		**ScS**	**00 10 51.3**	**-0.7**
HHC					pmax	pmax			
	comp=Z,31nm,0.5s								
HHC					pmax	pmax			
	comp=Z,250nm,5.5s								
HHC					LR	LR			
	comp=N,1µm,14.8s								
HHC					LR	LR			
	comp=E,1µm,14.0s								
HHC					LR	LR			
	comp=Z,1µm,13.8s								
KMI	**Kunming**	**29.37**	**113**		P		**P**	**00 00 15.5**	**+1.9**
KMI					pP		**pP**	**00 00 23.5**	**+2.1**
KMI					sP		**sP**	**00 00 27.0**	**+2.4**
KMI					PP		**PnPn**	**00 01 09.8**	**+2.2**
KMI					S		**S**	**00 05 06.0**	**+0.1**
KMI					sS		**sS**	**00 05 19.8**	**+1.1**
KMI					SS		**SnSn**	**00 06 38.0**	**+4.9**
KMI					pmax	pmax			
	comp=Z,22nm,0.9s								
KMI					pmax	pmax			
	comp=Z,94nm,3.1s								
KMI					LR	LR			
	comp=N,670nm,12.4s								
KMI					LR	LR			
	comp=E,840nm,12.6s								
KMI					LR	LR			
	comp=Z,920nm,12.2s								
BRTR	**Keskin Array B**	**29.79**	**281**		P		**P**	**00 00 18.2**	**+1.1**
BRTR					pP		**pP**	**00 00 25.9**	**+1.0**
BRTR	**Keskin Array B**	**29.79**	**281**		P		**P**	**00 00 18.2**	**+1.1**
	comp=Z,16nm,0.7s,baz=94,slow=8.6,SNR=104								
BRTR					pP		**pP**	**00 00 25.9**	**+1.0**
	comp=Z,38nm,0.7s,baz=93,slow=7.3,SNR=40								
ASF	**Jabal al Asfar**	**30.04**	**265**		P		**P**	**00 00 20.8**	**+1.6**
ASF					pP		**pP**	**00 00 29.6**	**+2.5**
ASF	**Jabal al Asfar**	**30.04**	**265**		P		**P**	**00 00 20.8**	**+1.6**
	comp=Z,2.2nm,0.8s,baz=320,slow=8.4,SNR=5.6								
ASF					pP		**pP**	**00 00 29.6**	**+2.5**
	comp=Z,7.8nm,0.9s,baz=310,slow=0.6,SNR=12								
ASF					LR	LR		00 15 21.0	
	comp=Z,317nm,18.9s,baz=63,slow=42								
ANTO	**Ankara**	**30.38**	**281**	*e*	P		**P**	**00 00 24.1**	**+1.8**
ANTO					pmax	pmax			
	comp=Z,152nm,1.6s								
ANTO	**Ankara**	**30.38**	**281**	*e*	P		**P**	**00 00 24.1**	**+1.8**
	comp=Z,152nm,1.6s								
ANTO	**Ankara**	**30.38**	**281**		P		P	00 00 31.8	+10
	SNR=17								
MMAI	**Mount Meron Ar**	**30.79**	**267**		P		**P**	**00 00 27.6**	**+1.6**
MMAI					pP		**pP**	**00 00 36.2**	**+2.5**
MMAI					PcP		**PcP**	**00 03 23.2**	**+0.5**
MMAI					pPcP			00 03 32.1	
MMAI	**Mount Meron Ar**	**30.79**	**267**		P		**P**	**00 00 27.6**	**+1.6**
	comp=Z,2.3nm,0.8s,baz=67,slow=11,SNR=3.5								
MMAI					pP		**pP**	**00 00 36.2**	**+2.5**
	comp=Z,26nm,1.1s,baz=72,slow=12,SNR=15								
MMAI					PcP		**PcP**	**00 03 23.2**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=46,slow=4.2,SNR=4.8								
MMAI					pPcP			00 03 32.1	
	comp=Z,4.2nm,0.7s,baz=69,slow=4.6,SNR=4.3								
TMCR	**Tamitsa**	**30.82**	**331**	⇓	*P		P	00 00 33.1	+7.4
TMCR					pmax	pmax			
	comp=Z,70nm,1.2s								
CHTO	**Chiang Mai**	**31.33**	**127**	*e*	P		**P**	**00 00 30.2**	**-0.4**
CHTO					pmax	pmax			
	comp=Z,15nm,0.8s								
CHTO	**Chiang Mai**	**31.33**	**127**	*e*	P		**P**	**00 00 30.1**	**-0.4**
	comp=Z,15nm,0.8s								
CHTO	**Chiang Mai**	**31.33**	**127**		P		**P**	**00 00 30.8**	**+0.1**
	SNR=7.1								
CHTO	**Chiang Mai**	**31.33**	**127**		P		**P**	**00 00 30.3**	**-0.4**
	comp=Z,26nm,1.1s								
CMMT	**Chiang Mai**	**31.33**	**127**		P		**P**	**00 00 30.9**	**+0.2**
CSS	**Prodhromos**	**31.57**	**272**	*e*	P		**P**	**00 00 33.4**	**+0.8**
	comp=Z,16nm,0.9s								
AKASG	**Malin Array Be**	**31.57**	**303**		P		**P**	**00 00 32.1**	**-0.4**
AKASG								00 03 32.5	
AKASG	**Malin Array Be**	**31.57**	**303**		P		**P**	**00 00 32.1**	**-0.4**
AKASG					pPcP			00 03 32.5	
AKASG	**Malin Array Be**	**31.57**	**303**		P		**P**	**00 00 32.1**	**-0.4**
	comp=Z,6.3nm,0.5s,baz=80,slow=7.8,SNR=20								
AKASG					pPcP			00 03 32.5	
	comp=Z,11nm,0.8s,baz=77,slow=3.6,SNR=6.5								
AKASG					LR	LR		00 15 06.9	
	comp=Z,1µm,21.5s,baz=80,slow=40								
KIEV	**Kiev**	**31.58**	**303**	*e*	P		**P**	**00 00 32.0**	**-0.6**
KIEV					pmax	pmax			
	comp=Z,25nm,0.8s								
KIEV	**Kiev**	**31.58**	**303**	*e*	P		**P**	**00 00 32.0**	**-0.6**
	comp=Z,25nm,0.8s								
AK02	**Malin Array Si**	**31.59**	**303**	*e*	P		**P**	**00 00 32.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**31.60**	**127**		P		**P**	**00 00 33.0**	**-0.1**
CMAR					PcP		**PcP**	**00 03 25.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**31.60**	**127**		P		**P**	**00 00 33.0**	**-0.1**
	comp=Z,12nm,0.7s,baz=314,slow=8.7,SNR=85								
CMAR					PcP		**PcP**	**00 03 25.5**	**+0.5**
	comp=Z,3.9nm,0.7s,baz=299,slow=3.7,SNR=5.7								
CMAR					LR	LR		00 16 00.0	
	comp=Z,340nm,18.0s,baz=126,slow=41								
KIS	**Kishinev**	**31.98**	**296**	*e*	P		**P**	**00 00 35.0**	**-1.2**
KIS				*e*				00 00 44.0	
KIS				*e*				00 00 50.0	
KIS				*e*				00 01 46.0	
KIS				*e*	S		**S**	**00 05 42.0**	**-3.9**
KIS				*e*	SS		**SnSn**	**00 07 41.0**	**+5.2**
KIS					MLR	MLR			
	comp=E,1µm,16.0s								
KIS					MLR	MLR			
	comp=Z,2µm,16.0s								
KIS					MLR	MLR			
	comp=Z,1µm,16.0s								
KIS	**Kishinev**	**31.98**	**296**	*e*	P		**P**	**00 00 35.0**	**-1.2**
KIS	**Kishinev**	**31.98**	**296**	*e*	PP		PP	00 01 46.0	-2.5
KIS				*e*	S		**S**	**00 05 42.0**	**-3.9**
KIS				*e*	SS		**SnSn**	**00 07 41.0**	**+5.2**
KIS				*e*	Li			00 10 46.0	
KIS				*e*	Lg		Lg	00 11 12.0	
KIS				*e*	Lg2			00 12 30.0	
KIS				*e*	Rg		Rg	00 13 36.0	
KIS					LRM	MLR		00 15 40.0	
	comp=Z,1µm,16.0s								
TLCR		**32.20**	**293**	⇓	*P		**P**	**00 00 38.7**	**+0.6**
MICGM	**Minsk**	**32.62**	**310**	*e*			**P**	**00 00 40.0**	**-1.6**
MNK	**Minsk**	**32.65**	**310**	*e*	P		**P**	**00 00 40.0**	**-1.9**
CFR	**Carcaliu**	**32.68**	**293**	⇓	*P		**P**	**00 00 42.8**	**+0.6**
ISP	**Isparta**	**32.68**	**279**	*e*	P		**P**	**00 00 42.5**	**0.0**
ISP					pmax	pmax			
	comp=Z,106nm,1.6s								
ISP	**Isparta**	**32.68**	**279**	*e*	P		**P**	**00 00 42.5**	**0.0**
	comp=Z,106nm,1.6s								
ISP	**Isparta**	**32.68**	**279**	⇓	*P		**P**	**00 00 43.0**	**+0.5**
BJI	**Beijing**	**32.69**	**77**		P		**P**	**00 00 43.3**	**+0.9**
BJI					PP		**PP**	**00 01 55.5**	**-0.9**
BJI					S		**S**	**00 05 56.5**	**-0.6**
BJI					pmax	pmax			
	comp=Z,11nm,0.7s								
BJI					LR	LR			
	comp=N,540nm,14.4s								
BJI					LR	LR			
	comp=E,900nm,18.0s								
BJI					LR	LR			
	comp=Z,600nm,18.0s								
EIL	**Elat**	**32.70**	**262**		P		**P**	**00 00 44.8**	**+2.2**
EIL					pP		**pP**	**00 00 52.6**	**+2.1**
EIL	**Elat**	**32.70**	**262**		P		**P**	**00 00 44.8**	**+2.2**
	comp=Z,8.5nm,0.9s,baz=39,slow=2.6,SNR=11								
EIL					pP		**pP**	**00 00 52.6**	**+2.1**
	comp=Z,23nm,0.8s,baz=354,slow=3.1,SNR=14								
PSN	**Preselentsi**	**32.90**	**290**		P		**P**	**00 00 46.6**	**+2.4**
JOF	**Joensuu**	**32.93**	**326**	*e*	P		**P**	**00 00 44.4**	**+0.1**
JOF					pmax	pmax			
	comp=Z,15nm,0.7s								
JOF	**Joensuu**	**32.93**	**326**	*ep*			**P**	**00 00 44.4**	**+0.1**
	comp=Z,15nm,0.7s								
NACGM	**Naroch**	**33.29**	**311**	*e*			**P**	**00 00 45.0**	**-2.5**
TESR		**33.52**	**295**	⇓	*P		**P**	**00 00 50.2**	**+0.6**
MUKL	**Al Mukalla**	**33.53**	**225**	*e*	P		**P**	**00 00 51.6**	**+1.7**
VRI	**Vrincioaia**	**33.55**	**294**	⇓	*P		**P**	**00 00 51.3**	**+1.3**
PLOR	**Plostina**	**33.61**	**294**	⇓	*P		**P**	**00 00 51.8**	**+1.3**
IIGN	**Ignalina**	**33.66**	**311**	*e*	P		**P**	**00 00 51.4**	**+0.7**
IIGN					AMB	AMB		00 01 00.3	
	comp=Z,22nm,1.6s								
IZAR	**Zarasai**	**33.69**	**312**	*e*	P		**P**	**00 00 51.6**	**+0.7**
IZAR					AMB	AMB		00 01 00.5	
	comp=Z,43nm,0.8s								
ISAL	**Salakas**	**33.73**	**312**	*e*	P		**P**	**00 00 52.0**	**+0.7**
ISAL					AMB	AMB		00 01 00.9	
	comp=Z,23nm,0.9s								
ISR	**Istrita**	**33.80**	**293**	⇓	*P		**P**	**00 00 54.3**	**+2.2**
VSU	**Vasula**	**33.82**	**317**	⇓	*P		**P**	**00 00 50.3**	**-1.8**
VSU					pmax	pmax			
	comp=Z,48nm,0.9s								
PBA	**Port Blair**	**33.95**	**143**	*e*	P		P	00 00 55.5	+1.9
PBA					AMB	AMB		00 00 57.2	
	comp=Z,61nm,0.4s								
LVZ	**Lovozero**	**34.01**	**335**	⇓	*P		**P**	**00 00 54.8**	**+1.1**
LVZ					pmax	pmax			
	comp=Z,75nm,2.5s								
MLR	**Muntele Rosu**	**34.16**	**294**	⇓	*P		**P**	**00 00 56.9**	**+1.6**
APA	**Apatity**	**34.24**	**334**	⇓	*P		P	00 01 03.0	+7.4
APA				*i*				00 02 17.5	
APA				*i*				00 03 37.0	
APA					pmax	pmax			
	comp=Z,36nm,1.2s								
APA					MLR	MLR			
	comp=Z,3µm,17.0s								
JMB	**Yambol**	**34.30**	**288**		P		**P**	**00 00 59.0**	**+2.6**
DOPR	**Dopca**	**34.46**	**295**	⇓	*P		**P**	**00 00 59.4**	**+1.6**
SZH	**Strazhica**	**34.58**	**290**		P		**P**	**00 00 59.4**	**+0.5**
VOIR		**34.78**	**294**	⇓	*P		**P**	**00 01 01.9**	**+1.2**
FINES	**FINESS Array B**	**34.80**	**322**		P		**P**	**00 01 00.3**	**-0.1**
FINES					pP		**pP**	**00 01 08.4**	**+0.1**
FINES	**FINESS Array B**	**34.80**	**322**		P		**P**	**00 01 00.3**	**-0.1**
	comp=Z,4.9nm,0.5s,baz=110,slow=9.1,SNR=42								
FINES					pP		**pP**	**00 01 08.4**	**+0.1**
	comp=Z,24nm,0.6s,baz=105,slow=9.3,SNR=25								
FINES					LR	LR		00 15 40.8	
	comp=Z

UZH MLR MLR
comp=E,1µm,16.0s
comp=Z,600nm,16.0s
GZR Gura Zlata 36.37 294 ⇓ *i*P **P 00 01 15.5 +1.2**
MMB Musomiste 36.58 288 P **P 00 01 17.2 +1.1**
APE Apeiranthos 36.67 280 ⇑ *i*P **P 00 01 17.8 +0.9**
VTS Vitosha 36.69 290 P **P 00 01 18.8 +1.7**
VTS Vitosha 36.69 290 ⇓ *i*P **P 00 01 18.3 +1.2**
VTS Vitosha 36.69 290 P **P 00 01 18.4 +1.3**
CLNS Chul'man 36.74 46 *e*P **P 00 01 17.9 +0.6**
CLNS *e**PP **pP 00 01 26.9 +1.7**
CLNS *e* 00 02 42.8
CLNS *e*PPP PPP 00 02 59.7
CLNS *e* 00 03 36.5
CLNS *e*S **S 00 07 02.9 +3.6**
CLNS *e* 00 11 32.5
CLNS pmax pmax
comp=Z,10.0nm,1.0s
CLNS pmax pmax
comp=E,9.0nm,1.0s
CLNS pmax pmax
comp=N,4.0nm,0.8s
CLNS pmax pmax
comp=N,7.0nm,0.9s
CLNS pmax pmax
comp=E,4.0nm,0.9s
CLNS pmax pmax
comp=Z,6.0nm,0.9s
CLNS smax smax
comp=E,256nm,13.5s
CLNS smax smax
comp=N,55nm,14.6s
CLNS MLR MLR
comp=N,183nm,9.0s
CLNS MLR MLR
comp=Z,732nm,13.0s
CLNS MLR MLR
comp=E,453nm,13.0s
SRS Serrai 36.80 287 P **P 00 01 19.1 +1.1**
BEL Belsk 36.84 305 *e*P **P 00 01 19.2 +1.1**
BEL *e*pP **pP 00 01 26.4 +0.4**
BEL *e*S **S 00 07 00.3 -0.4**
BEL LMZ LR 00 17 32.1
KKB Krupnik 36.97 288 P **P 00 01 20.5 +1.1**
BZS Buzias 37.12 295 ⇓ *i*P **P 00 01 21.8 +1.2**
PLG Polygyros 37.13 286 P **P 00 01 21.8 +1.0**
KNT Kendrikon 37.30 287 P **P 00 01 23.2 +1.1**
KEV Kevo 37.34 336 *e*P **P 00 01 20.8 -1.4**
KEV pmax pmax
comp=Z,6.0nm,0.8s
KEV Kevo 37.34 336 *e*p **P 00 01 20.8 -1.4**
comp=Z,6.2nm,0.8s
NIE Niedzica 37.38 301 *e*P **P 00 01 23.9 +1.1**
NIE *i* *PP **pP 00 01 31.8 +1.2**
NIE Niedzica 37.38 301 *e*P **P 00 01 23.9 +1.1**
NIE *i* pP **pP 00 01 31.8 +1.2**
LAST Lasithi 37.42 277 P **P 00 01 24.0 +0.6**
VAY Valandovo 37.49 288 *e*P **P 00 01 24.1 +0.4**
OJC Ojcow 37.61 303 ⇓ *e*P **P 00 01 24.8 +0.1**
OJC Ojcow 37.61 303 *e*P **P 00 01 24.9 +0.1**
comp=Z,49nm,1.2s
XOR Xorichti 37.62 284 P **P 00 01 25.5 +0.5**
NJ2 Nanjing 37.63 89 *e*P **P 00 01 25.0 -0.1**
NJ2 pP **pP 00 01 31.0 -1.9**
NJ2 sP **sP 00 01 34.3 -1.8**
NJ2 PP **PP 00 02 51.0 -0.1**
NJ2 S **S 00 07 14.0 +0.8**
NJ2 sS **sS 00 07 24.0 -2.2**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
NJ2 pmax pmax
comp=Z,170nm,5.6s
NJ2 LR LR
comp=N,510nm,23.0s
NJ2 LR LR
comp=E,900nm,25.3s
NJ2 LR LR
comp=Z,1µm,26.6s
ARCES ARCESS Array B 37.73 335 P **P 00 01 25.1 -0.3**
ARCES ARCESS Array B 37.73 335 P **P 00 01 25.1 -0.3**
comp=Z,5.6nm,0.6s,baz=107,slow=8.8,SNR=24
ARCES LR LR 00 17 43.8
comp=Z,813nm,18.2s,baz=108,slow=37
IDI Anoyia 37.82 277 *e*P **P 00 01 26.4 -0.3**
comp=Z,21nm,0.7s
PSZ Piszkesteto 37.87 299 *e*P **P 00 01 28.0 +1.0**
PSZ pmax pmax
comp=Z,16nm,0.9s
PSZ Piszkesteto 37.87 299 *e*P **P 00 01 28.0 +1.0**
comp=Z,16nm,0.9s
PSZ Piszkesteto 37.87 299 ⇑ *e*P **P 00 01 28.2 +1.2**
PSZ *e*P **pP 00 01 34.9 0.0**
UBPT Khong Chiam 38.06 123 P **P 00 01 28.5 -0.3**
comp=Z,48nm,1.5s
PKSN Nyarlorinc 38.07 297 ⇓ *e*P P 00 01 38.0 +9.4
CHBT CHBT 38.07 129 P **P 00 01 29.7 +0.8**
VAM Vamos 38.29 278 P **P 00 01 30.4 -0.2**
QIZ Qiongzhong 38.32 114 P **P 00 01 32.3 +1.3**
QIZ S **S 00 07 25.8 +2.0**
QIZ LR LR
comp=N,470nm,10.6s
QIZ LR LR
comp=E,440nm,16.5s
QIZ LR LR
comp=Z,870nm,15.1s
KARN Karanos 38.50 278 P **P 00 01 32.8 +0.4**
FNA Florina 38.51 287 P **P 00 01 32.7 +0.3**
PKS7 Kunszentmiklos 38.51 298 *e*P P 00 01 35.7 +3.4
BUD Budapest 38.52 298 ⇓ *e*P **P 00 01 32.7 +0.3**
BUD *e*P **pP 00 01 41.0 +0.7**
OKC Ostrava-Krasne 38.72 302 *e*P **P 00 01 35.3 +1.3**
OKC *e**PP **pP 00 01 41.5 -0.4**
OKC *e* 00 03 09.3
OKC MLR MLR
comp=Z,900nm,20.1s
OKC Ostrava-Krasne 38.72 302 *e*P **P 00 01 35.3 +1.3**
OKC *ex* x 00 01 41.5
OKC *ex* x 00 03 09.3
OKC AMS AMS 00 19 50.0
comp=Z,900nm,20.1s
GUR Goura 38.73 283 P **P 00 01 33.6 -0.8**
EVR Evrytania 38.79 284 P **P 00 01 35.2 +0.3**
GKP Gorka Klasztor 38.90 308 *e*P **P 00 01 35.8 +0.3**
GKP *e*pP **pP 00 01 43.6 +0.2**
GKP *e*S **S 00 07 32.5 +0.6**
GKP LMZ LR 00 18 40.1
MEV Metsovon 38.93 286 P **P 00 01 36.4 +0.3**
PKSG 38.96 298 ⇓ *e*P **P 00 01 37.5 +1.4**
IVA Berane 38.97 291 ⇑ *i*P **P 00 01 38.6 +2.3**
PVY Plav 39.00 291 ⇑ *i*P **P 00 01 37.8 +1.2**
MORC Moravsky Berou 39.11 302 *e*P **P 00 01 37.9 +0.5**
MORC pmax pmax
comp=Z,23nm,1.1s
MORC Moravsky Berou 39.11 302 *e*P **P 00 01 37.9 +0.5**
comp=Z,23nm,1.1s
MORC Moravsky Berou 39.11 302 ⇓ *i*P **P 00 01 37.9 +0.5**
PKS9 Tamasi 39.20 297 ⇓ *e*P **P 00 01 38.8 +0.7**
PLE Pljevlja 39.21 292 ⇑ *i*P P 00 01 43.6 +5.3
PKST T^{-1}s 39.23 298 ⇓ *e*P **P 00 01 39.0 +0.7**
ITM Ithomi 39.31 282 P **P 00 01 37.8 -1.4**
AMT Artemida-Makis 39.34 282 P **P 00 01 38.6 -0.8**
ATD Arta Tunnel 39.41 231 P **P 00 01 41.2 +1.1**
ATD pP **pP 00 01 51.1 +3.1**
ATD Arta Tunnel 39.41 231 P **P 00 01 41.2 +1.1**
comp=Z,11nm,0.7s,baz=343,slow=5.1,SNR=6.5
ATD pP **pP 00 01 51.1 +3.1**
comp=Z,68nm,0.8s,baz=9.4,slow=8.9,SNR=18
TTG Podgorica 39.55 291 *e*P **P 00 01 41.5 +0.5**
PYL PYLOS 39.55 281 P **P 00 01 39.4 -1.8**
YAK Yakutsk 39.57 38 *e*P **P 00 01 40.1 -0.8**
YAK *e* 00 01 49.2
YAK pmax pmax
comp=Z,54nm,0.8s
UPM Unac-Piva 39.58 292 ⇑ *i*P **P 00 01 42.6 +1.1**
NKY Niksic 39.62 291 ⇑ *i*P **P 00 01 42.0 +0.2**
ULC Ulcinj 39.69 290 ⇑ *i*P **P 00 01 43.4 +1.1**
KSP Ksiaz 39.75 304 *e*P **P 00 01 42.9 +0.3**
KSP *e**PP **pP 00 01 50.5 0.0**
KSP *e* 00 03 16.5
KSP MLR MLR
comp=Z,3µm,19.7s
KSP Ksiaz 39.75 304 *e*P **P 00 01 42.9 +0.3**
KSP *e*pP **pP 00 01 49.3 -1.2**
KSP *e*S **S 00 07 45.9 +1.2**
KSP LMZ LR 00 19 34.8
VRAC Vranov 39.80 302 ⇓ *i*P **P 00 01 43.9 +0.8**
DPC Dobruska-Polom 39.80 303 *e*P **P 00 01 43.9 +0.8**
DPC *e**PP **pP 00 01 51.6 +0.6**
DPC *e* 00 03 20.6
DPC MLR MLR
comp=Z,1µm,15.2s
DPC Dobruska-Polom 39.80 303 *e*P **P 00 01 43.7 +0.5**
comp=Z,46nm,1.2s
DPC Dobruska-Polom 39.80 303 *e*P **P 00 01 43.9 +0.8**
DPC *ex* x 00 01 51.6
DPC *ex* x 00 03 20.6
DPC AMS AMS 00 19 20.0
comp=Z,1µm,15.2s
KFL Anninata 39.82 284 P **P 00 01 42.7 -0.6**
BUM Brajici-Budva 39.84 290 ⇑ *i*P **P 00 01 43.9 +0.3**
BRY Bratogost 39.92 291 ⇑ *i*P **P 00 01 44.2 -0.1**
VLS Valsamata 39.94 284 P **P 00 01 43.2 -1.2**
UPC Upice 39.98 304 *e*P **P 00 01 45.2 +0.7**
UPC *e**PP **pP 00 01 53.4 +1.0**
UPC Upice 39.98 304 *e*P **P 00 01 45.2 +0.7**
UPC *ex* x 00 01 53.4
KEK Kerkira 39.99 286 P **P 00 01 43.7 -1.1**
HCY Herceg Novi 40.08 291 ⇑ *i*P **P 00 01 46.1 +0.6**
BSD Bornholm Skovb 40.12 311 ⇓ *i*P P 00 01 52.4 +6.8
BSD pmax pmax
comp=Z,24nm,0.8s
BSD Bornholm Skovb 40.12 311 ⇓ *i*P P 00 01 52.4 +6.8
comp=Z,24nm,0.8s
SOP Sopron 40.12 299 ⇑ *e*P **P 00 01 46.9 +1.1**
SOP *e*P **pP 00 01 54.0 +0.3**
TREC Trest 40.51 302 AMS AMS 00 20 10.0
comp=Z,1µm,16.0s
CONA Conrad Observa 40.53 300 *i* P **P 00 01 49.9 +0.7**
SNR=9.5
CONA Conrad Observa 40.53 300 *i* P **P 00 01 49.9 +0.7**
BSI Banda Aceh 40.55 144 P P 00 01 45.4 -4.2
comp=Z,100nm,0.9s
HFS Hagfors 40.64 319 P **P 00 01 49.6 -0.3**
HFS pP **pP 00 01 57.7 0.0**
HFS Hagfors 40.64 319 P **P 00 01 49.6 -0.3**
comp=Z,9.2nm,0.3s,baz=104,slow=9.8,SNR=70
HFS pP **pP 00 01 57.7 0.0**
comp=Z,48nm,0.6s,baz=98,slow=11,SNR=33
HFS LR LR 00 19 23.0
comp=Z,2µm,19.8s,baz=91,slow=37
PVCC Panska Ves 40.88 304 *e*P **P 00 01 54.1 +2.1**
PVCC *e**PP **pP 00 02 00.6 +0.7**
PVCC MLR MLR
comp=Z,1µm,14.4s
PVCC Panska Ves 40.88 304 *e*P **P 00 01 54.1 +2.1**
PVCC *ex* x 00 02 00.6
PVCC AMS AMS 00 20 00.0
comp=Z,1µm,14.4s
PRU Pruhonice 40.99 303 *e*P **P 00 01 53.5 +0.6**
PRU *e**PP **pP 00 02 01.1 +0.3**
PRU *e* 00 03 31.0
PRU MLR MLR
comp=Z,1µm,16.3s
PRU Pruhonice 40.99 303 *e*P **P 00 01 53.5 +0.6**
PRU *ex* x 00 02 01.1
PRU *ex* x 00 03 31.0
PRU AMS AMS 00 20 10.0
comp=Z,1µm,16.3s
MDJ Mudanjiang 41.08 65 P **P 00 01 53.5 -0.2**
MDJ pP **pP 00 01 59.5 -2.2**
MDJ sP **sP 00 02 02.3 -2.6**
MDJ PP **PP 00 03 28.5 -0.1**
MDJ PcP **PcP 00 03 51.8 -1.2**
MDJ ScP **ScP 00 07 40.5 -0.4**
MDJ PcS **PcS 00 07 43.5 -0.4**
MDJ S **S 00 08 04.0 -0.8**
MDJ ScS **ScS 00 11 56.5 +0.2**
MDJ pmax pmax
comp=Z,13nm,1.2s
MDJ pmax pmax
comp=Z,110nm,3.9s
MDJ LR LR
comp=N,260nm,23.0s
MDJ LR LR
comp=E,420nm,21.4s
MDJ LR LR
comp=Z,550nm,19.1s
BRG Berggiesshubel 41.22 305 *e*P **P 00 01 55.3 +0.6**
comp=Z,8.6nm,0.9s
BRG *i* 00 02 03.3
comp=Z,24nm,1.0s
BRG *e* 00 07 41.8
comp=Z,14nm,1.6s
BRG
comp=N,754nm,20.7s
BRG
comp=E,1µm,15.3s
BRG
comp=Z,2µm,15.1s
BRG Berggiesshubel 41.22 305 *e*P **P 00 01 55.3 +0.6**
BRG *i* 00 02 03.3
BRG pmax pmax
comp=Z,9.0nm,0.9s
BRG pmax pmax
comp=Z,24nm,1.0s
BRG pmax pmax
comp=Z,14nm,1.6s
BRG MLR MLR
comp=N,754nm,20.7s
BRG MLR MLR
comp=E,1µm,15.3s
BRG MLR MLR
comp=Z,2µm,15.1s
BRG Berggiesshubel 41.22 305 *e*P **P 00 01 55.5 +0.8**
comp=Z,97nm,2.0s
BRG *e*pP **pP 00 02 03.0 +0.3**
comp=Z,97nm,2.0s
PERS Pernice 41.31 298 *i* P **P 00 01 56.5 +0.8**
SOKA Soboth 41.36 298 ⇑ *i*P **P 00 01 56.7 +0.6**
SOKA Soboth 41.36 298 ⇑ *i*P **P 00 01 56.7 +0.6**
KLR Kul'dur 41.45 58 *e*P P 00 01 52.8 -3.9
KLR pmax pmax
comp=E,38nm,1.4s
KLR pmax pmax
comp=Z,55nm,1.4s
KLR MLR MLR
comp=E,500nm,13.0s
KLR MLR MLR
comp=Z,2µm,13.0s
COP Copenhagen 41.49 312 ⇓ *i*P P 00 02 05.3 +8.5
COP pmax pmax
comp=Z,30nm,0.8s
COP Copenhagen 41.49 312 ⇓ *i*P P 00 02 05.3 +8.5
comp=Z,30nm,0.7s
FBE Freiberg 41.58 305 *e*P **P 00 01 58.7 +1.0**
comp=Z,41nm,1.0s
FBE *e*pP **pP 00 02 05.5 -0.1**
comp=Z,41nm,1.0s
LLD Lille Linde 41.65 311 *i* P P 00 02 06.0 +7.9
LLD pmax pmax
comp=Z,72nm,0.7s
LLD Lille Linde 41.65 311 *i* P P 00 02 06.0 +7.9
comp=Z,72nm,0.7s
CLL Collm 41.73 305 ⇓ *i*P **P 00 01 59.1 +0.2**
CLL *i* *PP **pP 00 02 06.3 -0.5**
CLL *e*S **S 00 08 14.0 -0.1**
CLL pmax pmax
comp=Z,6.0nm,0.6s
CLL Collm 41.73 305 *e*P **P 00 01 58.9 0.0**
comp=Z,33nm,1.2s
CLL *e*pP **pP 00 02 06.6 -0.2**
comp=Z,33nm,1.2s
CLL Collm 41.73 305 ⇓ *i*P **P 00 01 59.1 +0.2**
comp=Z,6.0nm,0.6s
CLL *i* 00 02 01.3
CLL *i* pP **pP 00 02 06.3 -0.5**
comp=Z,33nm,1.2s
CLL *e*(sP) **sP 00 02 12.0 +2.0**
CLL *e*PP **PP 00 03 34.0 -1.4**
CLL *e*(pPP) 00 03 39.0
CLL *e*PcP **PcP 00 03 54.0 -1.0**
CLL *e*PPP PPP 00 04 03.0
CLL *e* 00 07 19.0
CLL *e*S **S 00 08 14.0 -0.1**
CLL *e* 00 08 42.0
CLL *e*SS **SS 00 11 24.0 +4.1**
CLL Lm MLR 00 20 00.0
comp=N,700nm,18.2s
CLL Lm MLR 00 20 00.0
comp=E,1µm,18.3s
GEC2 GERESS Array S 41.75 302 *e*P **P 00 02 00.0 +0.7**
GEC2 *e**PP **pP 00 02 07.7 +0.5**
GEC2 pmax pmax
comp=Z,49nm,1.1s
GEC2 pmax pmax
comp=Z,49nm,1.1s
GEC2 GERESS Array S 41.75 302 *e*P **P 00 02 00.0 +0.7**
comp=Z,49nm,1.1s
GEC2 *e*pP **pP 00 02 07.7 +0.5**
comp=Z,49nm,1.1s
GEC2 GERESS Array S 41.75 302 *e*P **P 00 02 00.2 +0.9**
GERES GERESS Array B 41.75 302 P **P 00 02 00.0 +0.7**
GERES pP **pP 00 02 08.1 +0.8**
GERES GERESS Array B 41.75 302 P **P 00 02 00.0 +0.7**
comp=Z,4.5nm,0.4s,baz=64,slow=8.2,SNR=51
GERES pP **pP 00 02 08.1 +0.8**
comp=Z,12nm,0.6s,baz=66,slow=8.0,SNR=20
GERES LR LR 00 22 20.1
comp=Z,973nm,19.7s,baz=86,slow=40
KHC Kasperske Hory 41.77 302 *e*P **P 00 01 59.9 +0.5**
KHC *e**PP **pP 00 02 07.7 +0.4**
KHC *e* 00 03 40.5
KHC MLR MLR
comp=Z,900nm,14.8s
KHC Kasperske Hory 41.77 302 *e*P **P 00 02 00.2 +0.8**
comp=Z,22nm,1.0s
KHC Kasperske Hory 41.77 302 *e*P **P 00 01 59.9 +0.5**
KHC *ex* x 00 02 07.7
KHC *ex* x 00 02 26.0
KHC *ex* x 00 03 40.5
KHC AMS AMS 00 20 40.0
comp=Z,900nm,14.8s
LJU Ljubljana 41.85 297 *i* P **P 00 02 01.2 +1.1**
LJU *i* pP **pP 00 02 08.4 +0.4**
LJU *e* 00 04 04.6
NB2 NORSAR Subarra 41.87 320 P **P 00 01 59.3 -0.7**
baz=90,slow=8.6
NB2 NORSAR Subarra 41.87 320 P **P 00 01 59.3 -0.7**
comp=Z,47nm,0.8s,baz=90,slow=8.6
NOA NORSAR Array B 41.87 320 P **P 00 01 59.0 -0.9**
NOA pP **pP 00 02 07.6 -0.3**
NOA NORSAR Array B 41.87 320 P **P 00 01 59.0 -0.9**
comp=Z,2.5nm,0.4s,baz=92,slow=8.3,SNR=24
NOA pP **pP 00 02 07.6 -0.3**
comp=Z,26nm,0.7s,baz=91,slow=8.5,SNR=42
NOA LR LR 00 20 00.3
comp=Z,1µm,19.8s,baz=90,slow=37
NAO01 NORSAR Array S 42.03 320 *e*P **P 00 02 00.9 -0.4**
comp=Z,3.1nm,0.6s
NAO01 *e*PcP **PcP 00 03 59.7 +3.9**
KSAR Wonju Array Be 42.19 76 P **P 00 02 02.5 -0.4**
KSAR PcP **PcP 00 03 56.0 -0.7**
KSAR pPcP 00 04 04.8
KSRS Korea Array 42.21 76 P **P 00 02 02.5 -0.5**
comp=Z,3.2nm,0.5s,baz=283,slow=7.1,SNR=13
KSRS PcP **PcP 00 03 56.0 -0.7**
comp=Z,2.6nm,0.6s,baz=291,slow=3.6,SNR=4.3
KSRS pPcP 00 04 04.8
comp=Z,18nm,1.3s,baz=280,slow=3.2,SNR=6.5
KSRS LR LR 00 21 43.8
comp=Z,548nm,18.2s,baz=290,slow=39
WET Wettzell 42.22 302 *e*P **P 00 02 03.6 +0.6**
WET *e**PP **pP 00 02 11.4 +0.4**
WET pmax pmax
comp=Z,26nm,1.0s
WET pmax pmax
comp=Z,26nm,1.0s
WET Wettzell 42.22 302 *e*P **P 00 02 03.6 +0.6**
comp=Z,26nm,1.0s
WET *e*pP **pP 00 02 11.4 +0.4**
comp=Z,26nm,1.0s
TANN Tannenbergstha 42.23 304 *e*pP pP 00 02 11.3 +0.3
comp=Z,26nm,1.2s
NKC Novy Kostel 42.27 304 *e*P **P 00 02 04.5 +1.1**
NKC *e**PP **pP 00 02 12.1 +0.7**
NKC MLR MLR
comp=Z,2µm,14.6s
NKC Novy Kostel 42.27 304 *e*P **P 00 02 04.5 +1.1**
NKC *ex* x 00 02 12.1
NKC AMS AMS 00 20 50.0
comp=Z,2µm,14.6s
WERN Wernitzgruen 42.30 304 *e*pP pP 00 02 12.0 +0.3
comp=Z,22nm,1.4s
WERD Werda 42.32 304 *e*P **P 00 02 04.3 +0.5**
comp=Z,22nm,1.2s
WERD *e*pP **pP 00 02 12.0 +0.3**
comp=Z,22nm,1.2s
GUNZ Gunzen 42.32 304 *e*P **P 00 02 04.2 +0.4**
comp=Z,24nm,1.2s
GUNZ *e*pP **pP 00 02 12.3 +0.5**
comp=Z,24nm,1.2s
CADS Cadrg 42.34 298 *i* P **P 00 02 04.2 +0.2**
CADS *i* pP **pP 00 02 11.9 -0.1**
TIP Timpagrande 42.39 287 *e*P **P 00 02 04.2 -0.4**
comp=Z,108nm,1.3s
TRI Trieste 42.46 297 *e*P **P 00 02 05.2 +0.3**
TRI pmax pmax
comp=Z,58nm,0.8s
TRI Trieste 42.46 297 *e*P **P 00 02 05.2 +0.3**
comp=Z,58nm,0.8s
MANZ Manzenberg 42.53 304 *e*P **P 00 02 06.2 +0.6**
comp=Z,18nm,1.3s
RJOB Jochberg 42.59 300 *e*pP pP 00 02 13.6 -0.4
MOX Moxa 42.71 305 *e*pP **pP 00 02 15.1 +0.2**
comp=Z,27nm,1.2s
MOX *e*L L 00 21 29.5
comp=Z,2µm,18.0s
KONO Kongsberg 42.71 318 *e*P **P 00 02 07.0 +0.2**
KONO *e* 00 03 45.4
KONO pmax pmax
comp=Z,27nm,0.8s
KONO Kongsberg 42.71 318 *e*P **P 00 02 07.0 +0.2**
comp=Z,27nm,0.8s
KONO *e*PP **PP 00 03 45.4 -0.5**
CUC Castrocucco 42.78 288 *e*P **P 00 02 09.7 +2.0**
comp=Z,91nm,1.0s
USRK Ussuriysk Arra 42.86 65 P **P 00 02 07.5 -0.7**
comp=Z,4.6nm,0.7s,baz=272,slow=6.7,SNR=8.0
USRK LR LR 00 21 24.3
comp=Z,846nm,18.1s,baz=277,slow=38
GRF Grafenberg Arr 43.16 303 *e*P **P 00 02 11.8 +1.2**
GRF *e**PP **pP 00 02 19.7 +1.1**
GRF pmax pmax
comp=Z,52nm,1.1s
GRF pmax pmax
comp=Z,52nm,1.1s
GRF MLR MLR
comp=Z,2µm,18.3s
GRF Grafenberg Arr 43.16 303 *e*P **P 00 02 11.8 +1.2**
comp=Z,52nm,1.1s
GRF *e*pP **pP 00 02 19.7 +1.1**
comp=Z,52nm,1.1s
GRF *e*L L 00 21 46.5
comp=Z,2µm,18.3s
MUD Monsted U'grnd 43.22 313 *i* P P 00 02 19.0 +8.1
MUD pmax pmax
comp=Z,17nm,0.9s
MUD Monsted U'grnd 43.22 313 *i* P P 00 02 19.0 +8.1
comp=Z,17nm,0.8s
CLZ Clausthal 43.24 307 *e*pP pP 00 02 19.4 +0.1
comp=Z,18nm,1.1s
NRDL Niedersach Rie 43.28 308 *e*P **P 00 02 12.0 +0.6**
comp=Z,68nm,1.2s
KULM Kulim 43.30 137 *e*P **P 00 02 12.8 +0.8**
comp=Z,50nm,1.0s
KULM Kulim 43.30 137 P **P 00 02 13.0 +1.0**
KULM Kulim 43.30 137 P **P 00 02 12.5 +0.5**
comp=Z,586nmcomp=Z,9.9nm,1.2s
CEL Celeste 43.35 286 *e*P **P 00 02 14.7 +2.3**
comp=Z,138nm,1.0s
FUR Furstenfeldbru 43.48 301 *e*pP pP 00 02 22.0 +0.8
comp=Z,60nm,1.0s
AQU L'Aquila 43.70 292 *e*P **P 00 02 15.0 -0.1**
comp=Z,51nm,0.9s
IPM Ipoh 44.18 138 *e*P **P 00 02 19.4 +0.2**
comp=Z,134nm,1.5s
IPM Ipoh 44.18 138 P **P 00 02 19.2 +0.1**
IPM Ipoh 44.18 138 P **P 00 02 19.0 -0.1**
comp=Z,622nmcomp=Z,9.2nm,1.7s
FUORN Ofenpass-Fuorn 44.55 299 *e*P **P 00 02 22.4 +0.3**
comp=Z,16nm,0.9s
KTGM Kuala Trenggan 44.57 134 P **P 00 02 23.6 +1.3**
PSI Prapat 44.59 141 P **P 00 02 22.1 -0.5**
PSI Prapat 44.59 141 P **P 00 02 22.0 -0.5**

comp=Z,29nm,0.9s
PSI Prapat 44.59 141 P **P 00 02 22.1 -0.5**
comp=Z,8.8nm,0.4s,baz=234,slow=7.7,SNR=9.7
DAVA Damuels 44.62 300 *i* P **P 00 02 22.5 0.0**
SNR=15
DAVA Damuels 44.62 300 *i* P **P 00 02 22.5 0.0**
STU Stuttgart 44.67 302 *e*P **P 00 02 25.5 +2.8**
STU pmax pmax
comp=Z,25nm,0.9s
STU Stuttgart 44.67 302 *e*pP **pP 00 02 31.2 +0.5**
comp=Z,33nm,1.0s
STU *e*PP PP 00 04 13.2 +6.2
STU Stuttgart 44.67 302 *e*P **P 00 02 25.4 +2.8**
comp=Z,25nm,0.9s
KBS Kingsbay 44.69 346⇓ *e*P **P 00 02 22.8 +0.3**
KBS pmax pmax
comp=Z,12nm,0.8s
KBS Kingsbay 44.69 346 *e*P **P 00 02 22.9 +0.4**
comp=Z,46nm,0.9s
IBBN Ibbenburen 44.73 308 *e*pP pP 00 02 31.7 +0.6
comp=Z,59nm,1.3s
DAVOX Davos/Dischmat 44.76 300 P **P 00 02 23.3 -0.4**
DAVOX Davos/Dischmat 44.76 300 P **P 00 02 23.3 -0.4**
comp=Z,13nm,0.5s,baz=102,slow=6.8,SNR=30
TNS Taunus Mts 44.78 305 *e*PP PP 00 04 13.4 +5.1
TUE Stuetta 45.20 299 *e*P **P 00 02 26.8 -0.5**
comp=Z,12nm,0.8s
VLC Villacollemand 45.20 296 *e*P **P 00 02 28.2 +1.1**
comp=Z,51nm,1.0s
VLC *e*pP **pP 00 02 35.3 +0.2**
BUG Bochum--Univer 45.22 307 *e*PP PP 00 04 16.0 +3.2
GSI Gunungsitoli 45.30 144 P **P 00 02 29.1 +1.1**
comp=Z,103nm,1.3s
BFO Black Forest 45.34 302 *e*P **P 00 02 28.6 +0.5**
BFO pmax pmax
comp=Z,19nm,1.0s
BFO Black Forest 45.34 302 *e*P **P 00 02 28.4 +0.3**
comp=Z,24nm,1.1s
BFO *e*pP **pP 00 02 36.2 +0.1**
comp=Z,24nm,1.1s
BFO Black Forest 45.34 302 *e*P **P 00 02 28.6 +0.5**
comp=Z,19nm,1.0s
LANF Langenberg 45.50 303 *e*P **P 00 02 31.7 +2.4**
FRIM Kepong 45.55 138 P **P 00 02 31.4 +1.4**
CDF Champ du Feu 45.99 302 *e*P **P 00 02 32.4 -0.9**
comp=Z,37nm,1.0s
CDF Champ du Feu 45.99 302 *e*P **P 00 02 32.4 -0.9**
CDF pmax pmax
comp=Z,37nm,1.0s
CDF Champ du Feu 45.99 302 *e*P **P 00 02 32.4 -0.9**
comp=Z,37nm,1.0s
MEM Membach 46.20 306 P **P 00 02 37.7 +2.9**
comp=Z,10nm,1.2s
JNU Nakatsue 46.22 80 P **P 00 02 34.7 -0.5**
JNU Nakatsue 46.22 80 P **P 00 02 34.7 -0.5**
comp=Z,22nm,1.0s,baz=334,slow=9.4,SNR=4.2
MOF Molkenrain 46.24 302 *e*P **P 00 02 37.7 +2.4**
WLF Walferdange 46.36 304 P **P 00 02 36.6 +0.5**
comp=Z,19nm,1.3s
WLF Walferdange 46.36 304 *e*P **P 00 02 36.6 +0.5**
comp=Z,39nm,1.1s
WLF *e*pP **pP 00 02 44.6 +0.5**
comp=Z,39nm,1.1s
HINF Hinteralfeld 46.43 302 *e*P **P 00 02 35.8 -0.9**
comp=Z,47nm,1.1s
HINF Hinteralfeld 46.43 302 *e*P **P 00 02 35.8 -0.9**
HINF pmax pmax
comp=Z,47nm,1.1s
HINF Hinteralfeld 46.43 302 *e*P **P 00 02 35.8 -0.9**
comp=Z,47nm,1.1s
SENIN Lac Senin/Sane 46.58 300 *e*P **P 00 02 38.4 +0.2**
comp=Z,102nm,2.0s
LOMF Lomont 46.59 301 *e*P **P 00 02 39.5 +1.5**
MNSI Mandailing Nat 46.66 142 P **P 00 02 38.9 +0.1**
comp=Z,1µmcomp=Z,108nm,0.9s
PGF Pioggiola 46.70 294 *e*P **P 00 02 38.4 -0.6**
comp=Z,192nm,1.4s
PGF Pioggiola 46.70 294 *e*P **P 00 02 38.4 -0.6**
PGF pmax pmax
comp=Z,192nm,1.4s
PGF Pioggiola 46.70 294 *e*P **P 00 02 38.4 -0.6**
comp=Z,192nm,1.4s
HAU Haudompre 46.70 302 *e*P **P 00 02 38.0 -0.8**
comp=Z,55nm,1.0s
HAU *e*R
comp=Z,1µm,20.8s
HAU Haudompre 46.70 302 *e*P **P 00 02 38.0 -0.8**
HAU pmax pmax
comp=Z,55nm,1.0s
HAU Haudompre 46.70 302 *e*P **P 00 02 38.0 -0.8**
comp=Z,55nm,1.0s
THEF They Montfort 46.87 303 *e*P **P 00 02 40.4 +0.3**
PAGF Fort de Pagny 46.94 303 *e*P **P 00 02 40.3 -0.3**
comp=Z,14nm,1.1s
PAGF Fort de Pagny 46.94 303 *e*P **P 00 02 40.3 -0.3**
comp=Z,14nm,1.1s
GIVF Givet 47.06 305 *e*P **P 00 02 41.1 -0.5**
comp=Z,51nm,1.1s
GIVF Givet 47.06 305 *e*P **P 00 02 41.1 -0.5**
GIVF pmax pmax
comp=Z,51nm,1.1s
GIVF Givet 47.06 305 *e*P **P 00 02 41.1 -0.5**
comp=Z,51nm,1.1s
DOU Dourbes 47.21 305 P **P 00 02 43.0 +0.4**
comp=Z,8.7nm,1.4s
LPG La Plagne 47.22 299 *e*P **P 00 02 42.9 -0.3**
comp=Z,24nm,0.6s
LPG La Plagne 47.22 299 *e*P **P 00 02 42.9 -0.3**
LPG pmax pmax
comp=Z,25nm,0.6s
LPG La Plagne 47.22 299 *e*P **P 00 02 42.9 -0.3**
comp=Z,24nm,0.6s
LPL La Plagne 47.23 299 *e*P **P 00 02 42.7 -0.5**
comp=Z,25nm,0.5s
LPL La Plagne 47.23 299 *e*P **P 00 02 42.7 -0.5**
LPL pmax pmax
comp=Z,25nm,0.5s
LPL La Plagne 47.23 299 *e*P **P 00 02 42.7 -0.5**
comp=Z,25nm,0.5s
RSL Roselend 47.24 299 *e*P **P 00 02 44.2 +1.0**
SNF Seneffe 47.28 306 AP pP 00 02 50.8 -0.5
comp=Z,17nm,2.0s
CABF La Chapelle 47.30 300 *e*P **P 00 02 42.5 -1.1**
comp=Z,28nm,0.9s
CABF La Chapelle 47.30 300 *e*P **P 00 02 42.5 -1.1**
CABF pmax pmax
comp=Z,28nm,0.9s
CABF La Chapelle 47.30 300 *e*P **P 00 02 42.5 -1.1**
comp=Z,28nm,0.9s
SBF Sospel 47.31 296 *e*P **P 00 02 43.2 -0.5**
comp=Z,92nm,0.9s
SBF Sospel 47.31 296 *e*P **P 00 02 43.2 -0.5**
SBF pmax pmax
comp=Z,92nm,0.9s
SBF Sospel 47.31 296 *e*P **P 00 02 43.2 -0.5**
comp=Z,92nm,0.9s
MEZF Maizieres J'vi 47.38 303 *e*P **P 00 02 43.8 -0.3**
comp=Z,105nm,1.1s
MEZF Maizieres J'vi 47.38 303 *e*P **P 00 02 43.8 -0.3**
comp=Z,105nm,1.1s
BNI Bardonecchia 47.41 298 *e*P **P 00 02 44.6 0.0**
BNI pmax pmax
comp=Z,28nm,1.0s
BNI Bardonecchia 47.41 298 *e*P **P 00 02 44.6 0.0**
comp=Z,28nm,1.0s
BAIF Baives 47.45 305 *e*P **P 00 02 44.3 -0.3**
comp=Z,42nm,0.9s
BAIF Baives 47.45 305 *e*P **P 00 02 44.3 -0.3**
BAIF pmax pmax
comp=Z,42nm,0.9s
BAIF Baives 47.45 305 *e*P **P 00 02 44.3 -0.3**
comp=Z,42nm,0.9s
KGM Kluang 47.46 137 P **P 00 02 46.2 +1.2**
MBDF Montbardon 47.46 298 *e*P **P 00 02 44.2 -0.8**
comp=Z,47nm,0.8s
MBDF Montbardon 47.46 298 *e*P **P 00 02 44.2 -0.8**
MBDF pmax pmax
comp=Z,47nm,0.8s
MBDF Montbardon 47.46 298 *e*P **P 00 02 44.2 -0.8**
comp=Z,47nm,0.8s
SFTF Sexfontaines 47.48 303 *e*P **P 00 02 44.1 -0.8**
comp=Z,67nm,1.0s
SFTF Sexfontaines 47.48 303 *e*P **P 00 02 44.1 -0.8**
comp=Z,67nm,1.0s
BKNI Bangkinang 47.76 140 P **P 00 02 47.1 -0.3**
comp=Z,3µmcomp=Z,111nm,1.0s
MYKOM Kota Tinggi 47.93 136 P **P 00 02 49.7 +1.0**
comp=Z,9.7nm,0.8s
FRF La Foret Royal 47.95 296 *e*P **P 00 02 47.8 -0.8**
FRF La Foret Royal 47.95 296 *e*P **P 00 02 47.8 -0.8**
FRF La Foret Royal 47.95 296 *e*P **P 00 02 47.8 -0.8**
ORIF Oris-en-Rattie 47.99 298 *e*P **P 00 02 47.6 -1.4**
comp=Z,22nm,0.8s
ORIF *e*R
comp=Z,1µm,21.0s
ORIF Oris-en-Rattie 47.99 298 *e*P **P 00 02 47.6 -1.4**
ORIF pmax pmax
comp=Z,22nm,0.8s
ORIF Oris-en-Rattie 47.99 298 *e*P **P 00 02 47.6 -1.4**
comp=Z,22nm,0.8s
LMR La Mourre 48.13 296 *e*P **P 00 02 49.3 -0.6**
LMR La Mourre 48.13 296 *e*P **P 00 02 49.3 -0.6**
LMR La Mourre 48.13 296 *e*P **P 00 02 49.3 -0.6**
PPI Padang Panjang 48.14 142 P **P 00 02 50.3 0.0**
comp=Z,90nm,1.0s
SMRF Simiane la Rot 48.53 297 *e*P **P 00 02 52.6 -0.5**
comp=Z,56nm,1.1s
SMRF Simiane la Rot 48.53 297 *e*P **P 00 02 52.6 -0.5**
comp=Z,56nm,1.1s
LOR Lormes 48.53 302 *e*P **P 00 02 51.5 -1.5**
comp=Z,27nm,1.0s
LOR *e*R
comp=Z,941nm,20.2s
LOR Lormes 48.53 302 *e*P **P 00 02 51.5 -1.5**
comp=Z,27nm,1.0s
SMF Signal de Mont 48.75 301 *e*P **P 00 02 53.5 -1.2**
comp=Z,78nm,1.4s
SMF Signal de Mont 48.75 301 *e*P **P 00 02 53.5 -1.2**
SMF pmax pmax
comp=Z,78nm,1.4s
SMF Signal de Mont 48.75 301 *e*P **P 00 02 53.5 -1.2**
comp=Z,78nm,1.4s
VIVF Saint-Julien-l 48.82 299 *e*P **P 00 02 54.6 -0.7**
comp=Z,16nm,0.6s
VIVF Saint-Julien-l 48.82 299 *e*P **P 00 02 54.6 -0.7**
VIVF pmax pmax
comp=Z,16nm,0.6s
VIVF Saint-Julien-l 48.82 299 *e*P **P 00 02 54.6 -0.7**
comp=Z,16nm,0.6s
SSF Saint Saulge 48.83 302 *e*P **P 00 02 54.0 -1.3**
comp=Z,56nm,1.4s
SSF Saint Saulge 48.83 302 *e*P **P 00 02 54.0 -1.3**
SSF pmax pmax
comp=Z,56nm,1.4s
SSF Saint Saulge 48.83 302 *e*P **P 00 02 54.0 -1.3**
comp=Z,56nm,1.4s
AVF Avril sur Loir 49.02 301 *e*P **P 00 02 55.6 -1.1**
comp=Z,88nm,0.9s
AVF Avril sur Loir 49.02 301 *e*P **P 00 02 55.6 -1.1**
AVF pmax pmax
comp=Z,88nm,0.9s
AVF Avril sur Loir 49.02 301 *e*P **P 00 02 55.6 -1.1**
comp=Z,88nm,0.9s
YSS Yuzh-Sakhalins 49.16 58 *e*P **P 00 02 58.3 +0.5**
YSS *e* 00 03 07.7
YSS MLR MLR
comp=Z,800nm,16.0s
YSS MLR MLR
comp=E,700nm,14.0s
KEST Kesra 49.17 286 *e*P **P 00 02 58.1 -0.1**
KEST Kesra 49.17 286 P **P 00 02 58.3 +0.2**
comp=E,3.9nm,0.7s,baz=261,slow=4.0,SNR=5.0
KEST LR LR 00 28 37.4
comp=E,102nm,18.1s,baz=309,slow=42
HYF Humbligny 49.31 302 *e*P **P 00 02 58.3 -0.7**
HYF Humbligny 49.31 302 *e*P **P 00 02 58.3 -0.7**
AGO Saint Agoulin 49.41 301 *e*P **P 00 02 59.8 0.0**
BGF Bois d'Agland 49.42 301 *e*P **P 00 02 58.8 -1.1**
comp=E,22nm,1.0s
BGF Bois d'Agland 49.42 301 *e*P **P 00 02 58.8 -1.1**
BGF pmax pmax
comp=Z,22nm,1.0s
BGF Bois d'Agland 49.42 301 *e*P **P 00 02 58.8 -1.1**
comp=Z,22nm,1.0s
PYM Petit Puy Mans 49.60 300 *e*P **P 00 03 00.4 -0.9**
LBL Lubilhac 49.63 300 *e*P **P 00 03 01.5 0.0**
LASF Ste Croix 49.65 298 *e*P **P 00 03 01.2 -0.4**
comp=Z,40nm,1.0s
LASF Ste Croix 49.65 298 *e*P **P 00 03 01.2 -0.4**
comp=Z,40nm,1.0s
TCF Toulx Ste Croi 49.93 301 *e*P **P 00 03 03.1 -0.7**
comp=Z,57nm,1.1s
TCF Toulx Ste Croi 49.93 301 *e*P **P 00 03 03.1 -0.7**
TCF pmax pmax
comp=Z,57nm,1.1s
TCF Toulx Ste Croi 49.93 301 *e*P **P 00 03 03.1 -0.7**
comp=Z,57nm,1.1s
SEY Seymchan 49.97 36⇓ *e*P **P 00 03 03.7 -0.1**
MAJO Matsushiro 50.09 73 *e*P **P 00 03 04.6 -0.5**
MAJO pmax pmax
comp=Z,38nm,0.8s
MAJO Matsushiro 50.09 73 *e*P **P 00 03 04.6 -0.5**
comp=Z,38nm,0.8s
MAT Matsushiro 50.09 73 P **P 00 03 04.2 -0.9**
MAT S **S 00 10 17.6 +2.8**
MJAR Matsushiro Arr 50.09 73 P **P 00 03 05.0 -0.1**
MJAR pP **pP 00 03 13.5 +0.4**
MJAR Matsushiro Arr 50.09 73 P **P 00 03 05.0 -0.1**
comp=Z,26nm,0.8s,baz=288,slow=9.6,SNR=42
MJAR pP **pP 00 03 13.5 +0.4**
comp=Z,13nm,0.8s,baz=286,slow=10,SNR=7.7
CAF Calvac 50.52 300 *e*P **P 00 03 07.9 -0.4**
comp=Z,32nm,1.0s
CAF Calvac 50.52 300 *e*P **P 00 03 07.9 -0.4**
CAF pmax pmax
comp=Z,32nm,1.0s
CAF Calvac 50.52 300 *e*P **P 00 03 07.9 -0.4**
comp=Z,32nm,1.0s
LDF La Druitiere 50.61 305 *e*P **P 00 03 07.5 -1.3**
comp=Z,47nm,0.8s
LDF La Druitiere 50.61 305 *e*P **P 00 03 07.5 -1.3**
LDF pmax pmax
comp=Z,47nm,0.8s
LDF La Druitiere 50.61 305 *e*P **P 00 03 07.5 -1.3**
comp=Z,47nm,0.8s
RJF Les Rejaudoux 50.74 300 *e*P **P 00 03 09.6 -0.3**
comp=Z,46nm,1.0s
RJF *e*R
comp=Z,400nm,20.5s
RJF Les Rejaudoux 50.74 300 *e*P **P 00 03 09.6 -0.3**
RJF pmax pmax
comp=Z,46nm,1.0s
RJF Les Rejaudoux 50.74 300 *e*P **P 00 03 09.6 -0.3**
comp=Z,46nm,1.0s
FLN La Foliniere 50.77 305 *e*P **P 00 03 08.5 -1.5**
comp=Z,37nm,0.9s
FLN *e*R
comp=Z,565nm,17.5s
FLN La Foliniere 50.77 305 *e*P **P 00 03 08.5 -1.5**
FLN pmax pmax
comp=Z,37nm,0.9s
FLN La Foliniere 50.77 305 *e*P **P 00 03 08.5 -1.5**
comp=Z,37nm,0.9s
DAG Danmarks Havn 50.96 343⇑ *i*P **P 00 03 10.7 -0.4**
DAG *i* *PP **pP 00 03 19.0 -0.1**
DAG pmax pmax
comp=Z,11nm,0.7s
DAG Danmarks Havn 50.96 343⇑ *i*P **P 00 03 10.7 -0.4**
comp=Z,16nm,0.7s
DAG *i* pP **pP 00 03 19.0 -0.1**
MTLF Montolieu 51.03 298 *e*P **P 00 03 11.4 -0.6**
comp=Z,59nm,1.2s
MTLF Montolieu 51.03 298 *e*P **P 00 03 11.4 -0.6**
MTLF pmax pmax
comp=Z,59nm,1.2s
MTLF Montolieu 51.03 298 *e*P **P 00 03 11.4 -0.6**
comp=Z,59nm,1.2s
GRR Gorron 51.14 305 *e*P **P 00 03 11.4 -1.4**
comp=Z,47nm,0.9s
GRR Gorron 51.14 305 *e*P **P 00 03 11.4 -1.4**
GRR pmax pmax
comp=Z,47nm,0.9s
GRR Gorron 51.14 305 *e*P **P 00 03 11.4 -1.4**
comp=Z,47nm,0.9s
MFF Saint Martin d 51.34 302 *e*P **P 00 03 12.9 -1.4**
comp=Z,49nm,1.3s
MFF Saint Martin d 51.34 302 *e*P **P 00 03 12.9 -1.4**
MFF pmax pmax
comp=Z,49nm,1.3s
MFF Saint Martin d 51.34 302 *e*P **P 00 03 12.9 -1.4**
comp=Z,49nm,1.3s
LFF La Frestale 51.39 300 *e*P **P 00 03 14.3 -0.4**
comp=Z,51nm,0.9s
LFF La Frestale 51.39 300 *e*P **P 00 03 14.3 -0.4**
LFF pmax pmax
comp=Z,51nm,0.9s
LFF La Frestale 51.39 300 *e*P **P 00 03 14.3 -0.4**
comp=Z,51nm,0.9s
KDM Kudat 51.68 119 P **P 00 03 18.7 +1.4**
KSM Kuching 51.78 129 P **P 00 03 19.4 +1.4**
KSM Kuching 51.78 129 P **P 00 03 19.9 +1.9**
comp=Z,29nm,1.0s
KKM Kota Kinabalu 51.92 120 *e*P **P 00 03 20.4 +1.3**
comp=Z,56nm,0.9s
KKM Kota Kinabalu 51.92 120 P **P 00 03 21.0 +1.8**
KKM Kota Kinabalu 51.92 120 P **P 00 03 20.6 +1.5**
comp=Z,777nmcomp=Z,8.1nm,0.8s
KSI Kapahiang 51.98 141 P **P 00 03 18.7 -0.7**
comp=Z,127nm,0.9s
BTM Bintulu 52.09 125 P **P 00 03 22.8 +2.5**
SBUM Sibu 52.15 127 P **P 00 03 22.4 +1.7**
SBUM Sibu 52.15 127 P **P 00 03 22.0 +1.3**
comp=Z,6.4nm,1.4s
SGMF Saint Gilles 52.24 305 *e*P **P 00 03 19.8 -1.2**
comp=Z,58nm,0.9s
SGMF Saint Gilles 52.24 305 *e*P **P 00 03 19.8 -1.2**
SGMF pmax pmax
comp=Z,58nm,0.9s
SGMF Saint Gilles 52.24 305 *e*P **P 00 03 19.8 -1.2**
comp=Z,58nm,0.9s
YUK Yuzh-Kuril'sk 52.27 61 P **P 00 03 20.1 -1.2**
YUK S **S 00 10 45.4 +0.7**
YUK MLR MLR
comp=N,381nm,17.0s
YUK MLR MLR
comp=Z,491nm,17.0s
PPBI Pangkal Pinang 52.47 136 P **P 00 03 23.4 +0.4**
comp=Z,42nm,1.3s
ROSF Rostrenen 52.65 305 *e*P **P 00 03 22.8 -1.3**
comp=Z,50nm,0.9s
ROSF Rostrenen 52.65 305 *e*P **P 00 03 22.8 -1.3**
ROSF pmax pmax
comp=Z,50nm,0.9s
ROSF Rostrenen 52.65 305 *e*P **P 00 03 22.8 -1.3**
comp=Z,50nm,0.9s
QUIF Quistinic 52.75 305 *e*P **P 00 03 23.4 -1.4**
comp=Z,80nm,1.1s
QUIF Quistinic 52.75 305 *e*P **P 00 03 23.4 -1.4**
QUIF pmax pmax
comp=Z,80nm,1.0s
QUIF Quistinic 52.75 305 *e*P **P 00 03 23.4 -1.4**
comp=Z,80nm,1.0s
SDKM Sandakan 52.87 119 P **P 00 03 27.0 +0.9**
KMBO Kilima Mbogo 52.90 227 *e*P **P 00 03 27.2 +0.7**
KMBO pP **pP 00 03 36.0 +1.4**
KMBO Kilima Mbogo 52.90 227 P **P 00 03 26.9 +0.4**
comp=Z,3.7nm,1.0s,baz=36,slow=12,SNR=8.5
KMBO pP **pP 00 03 36.0 +1.4**
comp=Z,9.7nm,0.8s,baz=32,slow=11,SNR=18
KMBO LR LR 00 29 28.8
comp=Z,264nm,18.4s,baz=85,slow=40
ETSF Etsaut 53.06 298 *e*P **P 00 03 26.8 -0.5**
comp=Z,43nm,1.1s
ETSF Etsaut 53.06 298 *e*P **P 00 03 26.8 -0.5**
ETSF pmax pmax
comp=Z,43nm,1.1s
ETSF Etsaut 53.06 298 *e*P **P 00 03 26.8 -0.5**
comp=Z,43nm,1.1s
STKI Sintang 53.60 129 P **P 00 03 32.8 +1.4**
comp=Z,10µmcomp=Z,34nm,1.1s
SCO Scoresbysund 53.66 335 *i* P **P 00 03 31.3 +0.2**
SCO *i* 00 03 40.2
SCO Scoresbysund 53.66 335 *i* P **P 00 03 31.3 +0.2**
SCO *i* 00 03 40.2
MYLDM Lahad Datu 54.07 118 P **P 00 03 37.6 +2.7**
MYLDM Lahad Datu 54.07 118 P **P 00 03 37.3 +2.4**
comp=Z,20nm,1.3s
TSM Tawau 54.32 120 P **P 00 03 37.7 +1.0**
KASI Kota Agung 54.52 140 P **P 00 03 35.3 -2.8**
comp=Z,36nm,0.8s
ALE Alert 54.85 354 P P 00 03 48.3 +8.6
comp=Z,129nm,0.8s,SNR=5.2
PETK Petropavlovsk- 55.83 47 P **P 00 03 46.8 -0.4**
PETK Petropavlovsk- 55.83 47 P **P 00 03 46.8 -0.4**
PETK Petropavlovsk- 55.83 47 P **P 00 03 46.8 -0.4**
comp=Z,2.6nm,0.8s,baz=134,slow=4.3,SNR=4.7
CGJI Cibinong 56.05 140 P **P 00 03 46.2 -2.9**
comp=Z,34nm,0.9s
PET Petropavlovsk 56.39 46 *e*P **P 00 03 51.2 +0.1**
PET *e*S **S 00 11 37.4 -2.5**
PET MLR MLR
comp=Z,300nm,17.0s
ESDC Sonseca Array 56.79 296 P **P 00 03 54.0 -0.3**
ESDC pP **pP 00 04 02.3 -0.1**
ESDC Sonseca Array 56.79 296 P **P 00 03 54.0 -0.3**
comp=Z,2.0nm,0.5s,baz=59,slow=6.8,SNR=46
ESDC pP **pP 00 04 02.3 -0.1**
comp=Z,4.3nm,0.6s,baz=58,slow=7.0,SNR=13
ESDC LR LR 00 32 03.1
comp=Z,408nm,18.5s,baz=75,slow=40
PAB San Pablo 57.12 296 *e*P **P 00 03 56.4 -0.2**
PAB pmax pmax
comp=Z,26nm,1.3s
PAB San Pablo 57.12 296 *e*P **P 00 03 56.4 -0.2**
comp=Z,26nm,1.3s
SUMG Summit 57.41 341⇑ *i*P **P 00 03 58.9 +0.3**
SUMG *i* *PP **pP 00 04 07.0 +0.3**
SUMG pmax pmax
comp=Z,13nm,0.8s
SUMG Summit 57.41 341 *e*P **P 00 03 58.7 +0.2**
comp=Z,118nm,0.9s
SUMG Summit 57.41 341⇑ *i*P **P 00 03 58.9 +0.3**
comp=Z,13nm,0.8s
SUMG *i* pP **pP 00 04 07.0 +0.3**
BBKI Banjar Baru 58.41 128 P **P 00 04 06.9 +1.0**
comp=Z,46nm,1.3s
KBKI Kotabaru 59.08 127 P **P 00 04 11.2 +0.7**
comp=Z,2µmcomp=Z,48nm,0.9s
MRSI Marisa 59.85 119 P **P 00 04 16.8 +1.0**
comp=Z,1µmcomp=Z,143nm,1.0s
TTSI Tana Toraja 61.14 124 P **P 00 04 24.7 +0.1**
comp=Z,1µmcomp=Z,50nm,1.1s
SPSI Sidrap Palu 61.82 124 P **P 00 04 29.2 0.0**
comp=Z,14nm,1.5s
KAPI Kappang 62.62 125 *e*P **P 00 04 32.9 -1.6**
comp=Z,14nm,0.8s
KAPI Kappang 62.62 125 P **P 00 04 32.7 -1.9**
comp=Z,20nm,1.1s
BKSI Bulukumba 63.09 125 P **P 00 04 37.2 -0.5**
comp=Z,25nm,1.2s
TNTI Ternate 63.30 114 P **P 00 04 39.8 +0.7**
comp=Z,3µmcomp=Z,282nm,1.1s
TNA Tin City 63.95 24 *e*P **P 00 04 42.0 -0.6**
comp=Z,12nm,1.0s
TNA *e*pP **pP 00 04 51.4 +0.5**
FX1 Attu Island--F 64.10 42 *e*P **P 00 04 41.9 -2.0**
SFJD Kangerlussuaq 64.21 339 *i* P **P 00 04 44.1 -0.3**
SFJD *i* 00 04 52.2
RES Resolute Bay 64.42 356 *e*P **P 00 04 44.3 -1.4**
comp=Z,7.6nm,0.9s
SWI Sorong 67.18 113 P **P 00 05 04.4 +0.1**
comp=Z,2µmcomp=Z,95nm,1.1s
TOA0 Torodi Ar. Sit 67.33 268 *e*P **P 00 05 04.5 -0.8**
TOA0 *e*pP **pP 00 05 13.1 -0.5**
TORD Torodi Ar. Bea 67.33 268 P **P 00 05 04.3 -1.0**
TORD pP **pP 00 05 12.7 -0.9**
TORD Torodi Ar. Bea 67.33 268 P **P 00 05 04.3 -1.0**
comp=Z,9.9nm,0.6s,baz=47,slow=5.4,SNR=81
TORD pP **pP 00 05 12.7 -0.9**
comp=Z,29nm,0.8s,baz=49,slow=5.6,SNR=38
COLD Coldfoot 67.35 17 *e*P **P 00 05 04.3 -0.3**
comp=Z,23nm,0.8s
MSAI Masohi 67.35 116 P **P 00 05 05.4 0.0**
comp=Z,2µmcomp=Z,12nm,0.3s
FAKI Fak Fak 69.33 113 P **P 00 05 18.2 +0.4**
comp=Z,66nm,1.1s
LSZ Lusaka 69.56 226 *e*P **P 00 05 18.9 -0.3**
comp=Z,11nm,0.7s
COLA College 69.85 17 *e*P **P 00 05 19.9 -0.3**
COLA *e*PP **pP 00 05 28.8 +0.2**
COLA pmax pmax
comp=Z,25nm,0.8s
COLA College 69.85 17 *e*P **P 00 05 19.9 -0.3**
comp=Z,25nm,0.8s
COLA *e*pP **pP 00 05 28.8 +0.2**
ILAR Eielson Array 70.16 17 P **P 00 05 20.9 -1.3**
ILAR pP **pP 00 05 29.6 -0.9**
ILAR Eielson Array 70.16 17 P **P 00 05 20.9 -1.3**

comp=Z,4.0nm,0.7s,baz=324,slow=5.1,SNR=58
ILAR pP **pP** **00 05 29.6 -0.9**
comp=Z,8.8nm,0.7s,baz=333,slow=4.4,SNR=29
PPLA Purkeypile 70.46 20 *e*P **P** **00 05 23.8 -0.4**
comp=Z,56nm,1.6s
TRF Thorofare Moun 70.48 19 *e*P **P** **00 05 23.7 -0.7**
comp=Z,71nm,2.2s
MCK McKinley 70.57 18 *e*P **P** **00 05 24.5 -0.3**
MCK pmax pmax
comp=Z,83nm,2.3s
MCK McKinley 70.57 18 *e*P **P** **00 05 24.5 -0.3**
comp=Z,82nm,2.3s
EGAK Eagle 71.33 15 *e*P **P** **00 05 28.6 -0.7**
comp=Z,8.1nm,1.0s
EGAK *e*pP **pP** **00 05 37.2 -0.4**
DOT Dot Lake 71.75 16 *e*P **P** **00 05 31.1 -0.8**
comp=Z,4.8nm,0.6s
PAX Paxson 72.03 17 *e*P **P** **00 05 32.6 -1.1**
PAX pmax pmax
comp=Z,14nm,0.7s
PAX Paxson 72.03 17 *e*P **P** **00 05 32.6 -1.1**
comp=Z,14nm,0.7s
RSO Redoubt South 72.31 22 *e*P **P** **00 05 34.2 -1.3**
PMR Palmer 72.34 20 *e*P **P** **00 05 34.4 -0.9**
PMR pmax pmax
comp=Z,18nm,0.7s
PMR Palmer 72.34 20 *e*P **P** **00 05 34.4 -0.9**
comp=Z,18nm,0.7s
SML Sawmill 72.36 19 *e*P **P** **00 05 35.2 -0.4**
SML pmax pmax
comp=Z,8.0nm,0.7s
SML Sawmill 72.36 19 *e*P **P** **00 05 35.2 -0.4**
comp=Z,7.8nm,0.7s
RC01 Rabbit Creek A 72.61 20 *e*P **P** **00 05 35.7 -1.3**
comp=Z,20nm,0.7s
RC01 *e*pP **pP** **00 05 44.5 -0.9**
DIV Divide 73.57 18 *e*P **P** **00 05 42.2 -0.5**
DIV *e*pP **pP** **00 05 50.4 -0.8**
BMRM Bremner River 73.99 18 *e*P **P** **00 05 45.2 0.0**
comp=Z,16nm,0.9s
RAGM Ragged Mountai 74.48 18 *e*P **P** **00 05 48.3 +0.2**
comp=Z,9.3nm,0.7s
MBWA Marble Bar 75.52 135 *e*P **P** **00 05 54.3 -0.2**
comp=Z,22nm,0.8s
YKA Yellowknife Ar 76.79 4 P **P** **00 06 00.4 -0.8**
YKA pP **pP** **00 06 09.2 -0.3**
YKA PKKPbc **PKKPbc** **00 25 07.9 -2.1**
YKA Yellowknife Ar 76.79 4 P **P** **00 06 00.4 -0.8**
comp=Z,3.4nm,0.6s,baz=350,slow=5.9,SNR=61
YKA pP **pP** **00 06 09.2 -0.3**
comp=Z,18nm,0.9s,baz=349,slow=5.7,SNR=33
YKA PKKPbc **PKKPbc** **00 25 07.9 -2.1**
comp=Z,0.3nm,0.7s,baz=167,slow=2.7,SNR=8.7
LIC Lamto 76.83 267⇑*i*P **P** **00 06 01.4 -0.8**
comp=Z,40nm,0.7s
LIC *e*R
comp=Z,184nm,19.5s
LIC Lamto 76.83 267⇑*i*P **P** **00 06 01.4 -0.8**
comp=Z,40nm,0.7s
SCHQ Schefferville 78.63 338 P **P** **00 06 10.5 -1.1**
SCHQ pP **pP** **00 06 19.9 -0.1**
SCHQ Schefferville 78.63 338 P **P** **00 06 10.5 -1.1**
comp=Z,2.7nm,0.7s,baz=48,slow=7.7,SNR=6.8
SCHQ pP **pP** **00 06 19.9 -0.1**
comp=Z,14nm,0.9s,baz=49,slow=6.2,SNR=10.0
SCHQ LR LR 00 46 29.2
comp=Z,354nm,18.3s,baz=61,slow=40
TSUM Tsumeb 78.78 232 *e*P **P** **00 06 12.8 -0.1**
comp=Z,23nm,0.8s
LBTB Lobatse 78.92 223 *e*P **P** **00 06 14.3 +0.7**
comp=Z,22nm,0.8s
DLBC Dease Lake 79.20 12 *e*P **P** **00 06 13.6 -1.2**
DLBC *e*pP **PcP** **00 06 22.4 -0.6**
WRAK Wrangell Islan 80.73 14 *e*P **P** **00 06 23.5 +0.6**
comp=Z,15nm,0.9s
WRAK *e*pP **pP** **00 06 32.1 +0.7**
BOSA Boshof 82.04 221 *e*P **P** **00 06 29.9 -0.4**
BOSA *e*pP **pP** **00 06 38.8 +0.1**
BOSA pP **pwP** **00 06 39.2 +0.4**
BOSA Boshof 82.04 221 P **P** **00 06 29.8 -0.5**
comp=Z,9.3nm,0.8s,baz=28,slow=5.4,SNR=17
BOSA pP **pwP** **00 06 39.2 +0.4**
comp=Z,13nm,0.9s,baz=45,slow=8.3,SNR=8.6
WRA Warramunga Arr 83.12 124 P **P** **00 06 35.2 -0.7**
WRA Warramunga Ar 83.12 124 P **P** **00 06 35.2 -0.7**
comp=Z,12nm,0.8s,baz=326,slow=5.0,SNR=52
WRAB Tennant Creek 83.12 124 *e*P **P** **00 06 35.4 -0.6**
WRAB pmax pmax
comp=Z,14nm,0.8s
WRAB Tennant Creek 83.12 124 *e*P **P** **00 06 35.4 -0.6**
comp=Z,14nm,0.8s
WRAB Tennant Creek 83.12 124 P **P** **00 06 35.9 0.0**
comp=Z,137nm,0.8s,SNR=10
PMG Port Moresby 84.43 107 *e*P **P** **00 06 42.8 0.0**
comp=Z,19nm,0.7s
PMG Port Moresby 84.43 107 P **P** **00 06 43.0 +0.2**
comp=Z,33nm,1.0s
FFC Flin Flon 84.66 357 *e*P **P** **00 06 42.9 -0.5**
FFC pmax pmax
comp=Z,23nm,1.0s
FFC Flin Flon 84.66 357 *e*P **P** **00 06 42.9 -0.5**
comp=Z,23nm,1.0s
FFC Flin Flon 84.66 357 P **P** **00 06 42.9 -0.5**
comp=Z,131nm,1.1s,SNR=5.6
AS31 Alice Springs 85.60 126 *e*P **P** **00 06 48.0 -0.5**
ASAR Alice Springs 85.60 126 P **P** **00 06 48.0 -0.6**
ASAR Alice Springs 85.60 126 P **P** **00 06 48.0 -0.6**
comp=Z,16nm,0.8s,baz=321,slow=5.3,SNR=114
SUR Sutherland 87.33 222 *e*P **P** **00 06 58.2 +1.3**
comp=Z,44nm,1.3s
SUR *e*pP **pP** **00 07 07.0 +1.5**
SUR Sutherland 87.33 222 P **P** **00 06 57.3 +0.3**
comp=Z,127nm,0.7s,SNR=8.0
ULM Lac du Bonnet 88.71 353 P **P** **00 07 01.9 -1.3**
ULM pP **pP** **00 07 11.0 -0.8**
ULM Lac du Bonnet 88.71 353 P **P** **00 07 01.9 -1.3**
comp=Z,2.4nm,0.8s,baz=68,slow=5.4,SNR=2.3
ULM pP **pP** **00 07 11.0 -0.8**
comp=Z,6.5nm,0.9s,baz=359,slow=6.2,SNR=4.4
ULM LR LR 00 49 40.3
comp=Z,333nm,19.7s,baz=13,slow=38
LONY Lake Ozonia 90.00 337 *e*P **P** **00 07 10.3 +0.8**
comp=Z,31nm,1.3s
CMW Cultus Mountai 90.08 10 P **P** **00 07 09.9 0.0**
OBC Olympics--Boni 90.19 11 P **P** **00 07 23.2 +2.0**
WALA Waterton Lakes 90.23 4 *e*P **P** **00 07 10.1 -0.5**
comp=Z,0.4nm,0.9s
WALA *e*pP **pP** **00 07 18.4 -0.8**
JCW Jim Creek 90.33 10 P **P** **00 07 11.0 +0.1**
A15A Johnson Ranch, 90.38 4⇑P **P** **00 07 10.1 -1.2**
baz=90
A16A West Butte Ran 90.45 3⇑P **P** **00 07 10.9 -0.7**
baz=90
A18A Metzger Ranch, 90.54 2⇑P **P** **00 07 10.6 -1.3**
baz=90
NEW Newport 90.78 7 *e*P **P** **00 07 14.2 +1.1**
comp=Z,7.5nm,0.9s
ACCN Adirondack Com 90.86 336 *e*P **P** **00 07 13.9 +0.5**
comp=Z,13nm,1.0s
B13A Whitefish 90.88 5⇓P **P** **00 07 13.1 -0.4**
baz=90
B14A Marquette Ranc 90.96 4⇑P **P** **00 07 13.6 -0.5**
baz=90
B19A Brinkman Farms 91.02 1⇑P **P** **00 07 13.8 -0.3**
baz=91
B15A Bradely Ranch, 91.05 4⇓P **P** **00 07 13.4 -1.0**
baz=91
CTAO Charters Tower 91.06 116 *e*P **P** **00 07 14.9 +0.3**
CTAO pmax pmax
comp=Z,36nm,1.3s
CTAO Charters Tower 91.06 116 *e*P **P** **00 07 14.9 +0.3**
comp=Z,36nm,1.3s
B18A Beardsley Farm 91.07 2⇑P **P** **00 07 14.1 -0.3**
baz=91
C11A Tepee Creek (N 91.28 6⇑P **P** **00 07 15.3 -0.1**
baz=91
BSMT Bassoo Peak 91.38 5 *e*P **P** **00 07 16.6 +0.5**
EGMT Eagleton 91.44 2⇓P **P** **00 07 16.0 -0.1**
baz=91
JTMT Jette 91.52 5 *e*P **P** **00 07 17.5 +0.9**
JTMT *e*pP **pP** **00 07 25.6 +0.4**
C14A Swan Lake 91.53 4⇑P **P** **00 07 16.5 -0.1**
baz=91
C13A Hot Springs 91.56 5⇑P **P** **00 07 16.9 +0.2**
baz=91
C15A Salmond Ranch, 91.58 4⇓P **P** **00 07 16.9 0.0**
baz=91
LON Longmire 91.76 10 *e*P **P** **00 07 18.0 +0.3**
LON *e**PP **pP** **00 07 27.0 +0.8**
LON pmax pmax
comp=Z,8.0nm,1.1s
LON Longmire 91.76 10 *e*P **P** **00 07 18.0 +0.3**
comp=Z,7.7nm,1.1s
LON *e*pP **pP** **00 07 27.0 +0.8**
SWMT Swartz Lake 91.77 5 *e*P **P** **00 07 18.7 +1.0**
C17A Wharram Farm, 91.80 2⇑P **P** **00 07 17.2 -0.7**
baz=91
SLMT Seeley Lake 92.07 4 *e*P **P** **00 07 19.1 -0.1**
D12A Red Ives Fores 92.13 6⇑P **P** **00 07 19.1 -0.3**
baz=92
D14A Greenough 92.23 4⇓P **P** **00 07 19.3 -0.5**
baz=92
D17A Six Diamond Ra 92.28 2⇓P **P** **00 07 19.8 -0.3**
baz=92
D15A Lincoln 92.32 4⇓P **P** **00 07 19.0 -1.3**
baz=92
CHMT Chamberlain Mo 92.41 4 *e*P **P** **00 07 20.3 -0.5**
E14A Clinton 92.89 4⇓P **P** **00 07 21.5 -1.5**
baz=92
F12A Elk City 93.43 6⇓P **P** **00 07 24.5 -1.0**
baz=93
F13A Darby 93.46 5⇑P **P** **00 07 25.3 -0.3**
baz=93
F15A Butte 93.52 4⇓P **P** **00 07 25.4 -0.6**
baz=93
F17A Fitzpatrick Pl 93.53 2⇑P **P** **00 07 25.8 -0.2**
baz=93
LRM Limekiln Ridge 93.54 4 *e*P **P** **00 07 27.0 +0.9**
F18A Big Timber 93.56 2⇓P **P** **00 07 26.0 -0.1**
baz=93
F19A Roth Farm, Mol 93.62 1⇓P **P** **00 07 26.6 +0.2**
baz=93
GCMT Greycliff 93.67 2 *e*P **P** **00 07 26.7 +0.1**
comp=Z,5.5nm,0.9s
GCMT *e*pP **pP** **00 07 34.9 -0.3**
BOZ Bozeman (W) 93.75 3 *e*P **P** **00 07 27.4 +0.4**
BOZ pmax pmax
comp=Z,4.0nm,0.8s
BOZ Bozeman (W) 93.75 3 *e*P **P** **00 07 27.4 +0.4**
comp=Z,4.3nm,0.8s
DLMT Dillon 93.99 4 *e*P P 00 07 23.9 -4.1
comp=Z,12nm,0.4s
G12A Big Creek, Yel 94.05 6⇓P **P** **00 07 27.3 -1.1**
baz=94
G13A Cobalt 94.16 5⇑P **P** **00 07 28.2 -0.7**
baz=94
G15A Dillon 94.19 4⇓P **P** **00 07 28.5 -0.5**
baz=94
MCMT McKenzie Canyo 94.51 4 *e*P **P** **00 07 30.5 -0.1**
comp=Z,2.1nm,1.0s
MCMT *e*pP **pP** **00 07 38.8 -0.4**
H14A Leadore 94.69 4⇓P **P** **00 07 31.2 -0.1**
baz=94
H15A Lima 94.73 4⇓P **P** **00 07 31.5 -0.1**
baz=94
H21A Big Horn, Sher 94.86 360⇓P **P** **00 07 31.8 -0.3**
baz=94
LKWY Lake 94.88 2 *e*P **P** **00 07 34.2 +1.9**
LKWY pmax pmax
comp=Z,6.0nm,0.8s
LKWY Lake 94.88 2 *e*P **P** **00 07 34.2 +1.9**
comp=Z,6.0nm,0.8s
H20A Greybull 95.00 1⇑P **P** **00 07 32.0 -0.7**
baz=95
ECSD EROS Data Cent 95.23 352 *e*P **P** **00 07 33.5 -0.1**
comp=Z,8.6nm,0.9s
I14A Mackay 95.37 5⇓P **P** **00 07 33.8 -0.7**
baz=95
I12A Atlanta 95.39 6⇑P **P** **00 07 34.2 -0.3**
baz=95
IMW Indian Meadow 95.53 3 *e*P **P** **00 07 37.8 +2.5**
comp=Z,5.1nm,1.1s
I20A Worland 95.54 1⇑P **P** **00 07 34.5 -0.7**
baz=95
HLID Hailey 95.67 5⇓P **P** **00 07 34.9 -1.0**
baz=95
I21A Big Trails, Te 95.68 0⇓P **P** **00 07 35.2 -0.7**
baz=95
J19A Crowheart 96.21 1⇓P **P** **00 07 38.8 +0.5**
baz=96
STKA Stephens Creek 96.22 127 P **P** **00 07 36.8 -1.3**
STKA pP **pP** **00 07 45.1 -1.5**
STKA Stephens Creek 96.22 127 P **P** **00 07 36.8 -1.3**
comp=Z,1.5nm,0.6s,baz=271,slow=19,SNR=5.9
STKA pP **pP** **00 07 45.1 -1.5**
comp=Z,3.0nm,0.7s,baz=7.9,slow=6.6,SNR=2.8
STKA LR LR 00 57 05.7
comp=Z,146nm,18.5s,baz=26,slow=39
PDAR Pinedale Array 96.70 2 P **P** **00 07 39.5 -1.0**
PDAR pP **pP** **00 07 48.5 -0.7**
PDAR PKKPbc **PKKPdf** **00 24 21.4 -0.8**
PDAR Pinedale Array 96.70 2 P **P** **00 07 39.5 -1.0**
comp=Z,0.5nm,0.6s,baz=76,slow=1.8,SNR=5.3
PDAR pP **pP** **00 07 48.5 -0.7**
comp=Z,1.7nm,0.8s,baz=51,slow=3.4,SNR=10
PDAR PKKPbc **PKKPdf** **00 24 21.4 -0.8**
comp=Z,0.6nm,0.6s,baz=148,slow=3.3,SNR=5.3
PDAR LR LR 00 56 04.1
comp=Z,272nm,18.3s,baz=12,slow=38
HWUT Hardware Ranch 97.78 3 *e*P Pdif 00 07 46.5 +1.0
comp=Z,8.0nm,0.9s
NVAR Mina Array Bea 100.40 9 P **Pdif** **00 07 58.2 +1.0**
NVAR pP pP 00 08 06.1 +0.3
NVAR Mina Array Bea 100.40 9 P **Pdif** **00 07 58.2 +1.0**
comp=Z,0.5nm,0.7s,baz=310,slow=3.4,SNR=3.4
NVAR pP pP 00 08 06.1 +0.3
comp=Z,0.8nm,0.7s,baz=6.5,slow=4.1,SNR=3.2
DZM Mont Dzumac 106.69 105 *e*LR LR 00 43 39.9
comp=Z,269nm,25.1s
TXAR Lajitas Array 110.06 357 PP PP 00 13 22.1 +8.2
TXAR PKKPbc **PKKPbc** **00 23 43.0 +0.2**
TXAR PKKPab **PKKPdf** **00 23 54.2 -3.6**
TXAR Lajitas Array 110.06 357 PP PP 00 13 22.1 +8.2
comp=Z,0.9nm,0.8s,baz=5.7,slow=5.0,SNR=5.4
TXAR PKKPbc **PKKPbc** **00 23 43.0 +0.2**
comp=Z,0.6nm,0.6s,baz=189,slow=5.2,SNR=8.1
TXAR PKKPab **PKKPdf** **00 23 54.2 -3.6**
comp=Z,0.7nm,0.8s,baz=167,slow=4.3,SNR=5.5
MAIT Maitri 119.61 199 *e*P PKPdf 00 12 47.3 -11
ROSC El Rosal 125.48 319 PKP **PKPdf** **00 13 12.0 -0.1**
ROSC pPKP **pPKPdf** **00 13 21.9 +1.1**
ROSC El Rosal 125.48 319 PKP **PKPdf** **00 13 12.0 -0.1**
comp=Z,3.0nm,0.4s,baz=98,slow=11,SNR=4.6
ROSC pPKP **pPKPdf** **00 13 21.9 +1.1**
comp=Z,12nm,0.7s,baz=82,slow=7.0,SNR=3.7
VNDA Vanda 129.31 164 PKP **PKPdf** **00 13 16.4 -0.5**
VNDA Vanda 129.31 164 PKP **PKPdf** **00 13 16.4 -0.5**
comp=Z,1.1nm,0.7s,baz=295,slow=5.1,SNR=6.2
SAML Samuel 129.81 297 *e*PKPdf **PKPdf** **00 13 19.4 -0.3**
SAML *ep*PKPdf **pPKPdf** **00 13 28.7 +0.1**
QSPA South Pole Qui 130.68 180 PKP **PKPdf** **00 13 18.8 -1.1**
QSPA South Pole Qui 130.68 180 PKP **PKPdf** **00 13 18.8 -1.1**
comp=Z,7.0nm,0.7s,baz=314,slow=0.9,SNR=26
CPUP Villa Florida 136.64 274 PKP **PKPdf** **00 13 31.1 -1.1**
CPUP Villa Florida 136.64 274 PKP **PKPdf** **00 13 31.1 -1.1**
comp=Z,1.5nm,0.5s,baz=22,slow=2.4,SNR=11
PPT2 Papeete2 136.82 70 *e*LR LR 00 57 36.1
comp=Z,115nm,24.5s
LPAZ La Paz 138.40 295 PKP **PKPdf** **00 13 36.0 -0.5**
LPAZ pPKP **pPKPdf** **00 13 45.0 -0.3**
LPAZ La Paz 138.40 295 PKP **PKPdf** **00 13 36.0 -0.5**
comp=Z,0.9nm,0.6s,baz=1.2,slow=4.4,SNR=6.2
LPAZ pPKP **pPKPdf** **00 13 45.0 -0.3**
comp=Z,2.9nm,0.9s,baz=103,slow=2.0,SNR=6.8
TRQA Tornquist 145.34 260 *e*PKPdf **PKPbc** **00 13 46.5 -1.0**
TRQA *ep*PKPdf **pPKPdf** **00 13 55.7 -0.7**
LCO Las Campanas 148.11 280 *e*PKPdf **PKPdf** **00 13 52.8 -0.1**
LCO *e*PKPbc **PKPbc** **00 13 56.0 0.0**
PLCA Paso Flores 152.46 258 *e*PKPdf **PKPdf** **00 13 59.6 +0.6**
PLCA *e*PKPbc **PKPbc** **00 14 06.0 0.0**
PLCA pPKPbc **pPKPbc** **00 14 15.0 +0.3**
PLCA Paso Flores 152.46 258 PKPbc **PKPbc** **00 14 05.9 0.0**
comp=Z,5.4nm,0.8s,baz=118,slow=4.8,SNR=10
PLCA pPKPbc **pPKPbc** **00 14 15.0 +0.3**
comp=Z,8.7nm,1.0s,baz=152,slow=3.7,SNR=7.7

*LDG **27** 00:06:34.5±0.2,38.87N×75.25E,h10km,Mb4.5/19, Error ellipse: s-maj=14.7km s-min=4.4km az=52.0*
*ISCJB **27** 00:06:35.2±0.2,39.01N±0.03×75.37E±0.04,h10km, mb4.4/54, Error ellipse: s-maj=5.3km s-min=3.1km*
az=140.4
*IDC **27** 00:06:36.1±0.7,38.99N×75.28E,h0km,mb4.3/19, mb1 4.4/24,mb1mx4.3/33,mbtmp4.2/24,ML3.8/5,MS2.9/1, Ms1 2.9/1,ms1mx2.3/37, Error ellipse: s-maj=13.5km s-min=12.6km az=71.0*
*BJI **27** 00:06:37.1,39.01N×75.15E,h20km,mb4.4/6,ML4.3/7, Ms3.8/2,Ms7 3.5/1*
*MOS **27** 00:06:37.7±1.2,38.74N×75.30E,h33km,mb4.6/40, Error ellipse: s-maj=8.2km s-min=4.4km az=111.2*
*NNC **27** 00:06:41.9±2.6,39.19N×75.01E,h0km,mb4.5,mpv4.2, Error ellipse: s-maj=21.2km s-min=13.6km az=165.0*
*NEIC **27** 00:06:42.4±1.0,39.02N×75.34E,h53km±8km,mb4.7/24, Error ellipse: s-maj=10.4km s-min=6.9km az=165.0*

ISC 27 00:06:37.3±0.4,38.99N±0.03×75.33E±0.05,h10km,n271,
σ1s37/240,mb4.5/54,9C-10D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**0.73**	**43**	Pg	Pg	00 06 43.0	-8.4
KSH				Sg	Sg	00 06 47.0	-14
KSH				smax	smax		
	comp=N,20μm,0.6s						
KSH				smax	smax		
	comp=E,32μm,0.4s						
KZA	**Kyzart**	**3.09**	**359**	*i* PN	Pn	00 07 29.8	+3.3
KZA	**Kyzart**	**3.09**	**359**	P	Pn	00 07 29.8	+3.3
	SNR=9.1						
UCH	**Uchtor**	**3.30**	**349**	P	Pn	00 07 32.7	+3.3
	SNR=9.3						
ULHL	**Ulahol**	**3.33**	**12**	*i* PN	Pn	00 07 33.1	+3.4
ULHL	**Ulahol**	**3.33**	**12**	P	Pn	00 07 33.1	+3.4
	SNR=16						
AML	**Almayashu**	**3.38**	**339**	P	**Pn**	**00 07 33.2**	**+2.7**
	SNR=7.4						
KBK	**Karagaybulak**	**3.68**	**356**	*i* PN	Pb	00 07 38.6	-3.9
KBK	**Karagaybulak**	**3.68**	**356**	P	Pb	00 07 38.6	-3.9
	SNR=6.8						
AAK	**Ala-Archa**	**3.70**	**350***c*	*i* PN	Pn	00 07 37.8	+3.2
AAK				pmax	pmax		
	comp=Z,162nm,0.6s						
AAK	**Ala-Archa**	**3.70**	**350**	*e*Pn	Pn	00 07 37.9	+3.2
AAK				*e*Sn	**Sn**	**00 08 16.6**	**-1.8**
AAK				Lg	Lg	00 08 33.8	
AAK	**Ala-Archa**	**3.70**	**350**	Pn	Pn	00 07 38.0	+3.3
	comp=Z,10nm,0.3s,baz=156,slow=8.0,SNR=47						
AAK				Sn	**Sn**	**00 08 22.2**	**+3.8**
	comp=Z,16nm,0.3s,baz=337,slow=23,SNR=4.4						
AAK				Lg	Lg	00 08 33.8	
	comp=Z,22nm,0.3s,baz=172,slow=22,SNR=4.9						
AAK				LR	LR	00 09 23.8	
	comp=Z,162nm,19.0s,baz=323,slow=45						
EKS2	**Erkin-Say**	**3.85**	**343**	*e*PN	**Pn**	**00 07 38.9**	**+2.1**
EKS2				*e*		00 08 38.4	
EKS2	**Erkin-Say**	**3.85**	**343**	*e*Pn	**Pn**	**00 07 38.9**	**+2.1**
EKS2				*e*Sg	**Sg**	**00 08 38.4**	**-2.7**
FRU	**Bishkek**	**3.88**	**352**	*e*PN	Pb	00 07 42.5	-3.4
FRU				*e*S	**Sb**	**00 08 36.0**	**+3.1**
FRU				pmax	pmax		
	comp=Z,260nm,1.0s						
FRU				smax	smax		
	comp=E,450nm,1.5s						
TKM2	**Tokmak 2**	**3.94**	**3**⇑	Pn	Pn	00 07 41.4	+3.4
	comp=E,80nm,0.4s						
TKM2				⇑Sn	**Sn**	**00 08 28.1**	**+3.7**
	comp=E,418nm,0.9s						
TKM2	**Tokmak 2**	**3.94**	**3**	*e*PN	Pn	00 07 41.6	+3.6
TKM2	**Tokmak 2**	**3.94**	**3**	*e*Pn	Pn	00 07 41.6	+3.6
TKM2				*e*Sn	**Sn**	**00 08 27.6**	**+3.3**
TKM2	**Tokmak 2**	**3.94**	**3**	P	Pn	00 07 41.8	+3.8
	SNR=23						
CHMS	**Chumysh**	**4.03**	**354**	*i* PN	Pn	00 07 42.8	+3.6
CHMS	**Chumysh**	**4.03**	**354**	P	Pn	00 07 42.8	+3.6
	SNR=7.5						
USP	**Ospenovka**	**4.32**	**352**	*i* PN	Pn	00 07 46.8	+3.7
USP	**Ospenovka**	**4.32**	**352**	P	Pn	00 07 46.8	+3.7
	SNR=17						
KNDC	**Almaty**	**4.40**	**16**⇓	Pg	**Pg**	**00 07 59.0**	**-2.7**
KNDC				⇓Lg	Lg	00 08 56.0	
AAA	**Alma-Ata**	**4.45**	**15**	*e*PN	**Pg**	**00 08 00.1**	**-2.5**
AAA				pmax	pmax		
	comp=Z,177nm,0.7s						
KK31	**Karatay Array**	**5.49**	**320**⇑	Pn	**Pn**	**00 08 00.9**	**+1.7**
	comp=Z,5.7nm,0.3s,baz=128,slow=12,SNR=63						
KK31				⇑Pg	Pb	00 08 16.3	+3.0
	comp=Z,15nm,0.5s,baz=140,slow=16,SNR=4.3						
KK31				⇑Sn	**Sn**	**00 09 01.6**	**-0.8**
	comp=Z,18nm,0.5s,baz=129,slow=22,SNR=6.7						
KK31				⇓Lg	Lg	00 09 25.0	
	comp=Z,26nm,0.6s						
KKAR	**Karatay Array**	**5.49**	**320**	*e*PN	**Pn**	**00 08 00.7**	**+1.5**
KKAR				pmax	pmax		
	comp=Z,14nm,0.3s						
KKAR	**Karatay Array**	**5.49**	**320**	*e*Pn	**Pn**	**00 08 00.7**	**+1.5**
	comp=Z,14nm,0.3s						
KKAR				*e*Sn	**Sn**	**00 09 01.3**	**-1.1**
CHCP	**Chirah Chowk**	**5.57**	**198**	P	Pn	00 08 07.5	+7.2
CEP	**Cherat**	**5.84**	**209**	P	Pn	00 08 09.6	+5.4
CEP				S	Sn	00 09 18.0	+6.7
KBL	**Kabul**	**6.72**	**231**	*e*PN	Pn	00 08 20.0	+3.8
KBL				pmax	pmax		
	comp=Z,36nm,0.7s						
KBL	**Kabul**	**6.72**	**231**	*e*Pn	Pn	00 08 20.0	+3.8
	comp=Z,36nm,0.7s						
KBL				*e*Sn	Sn	00 09 26.8	-6.1
DHRM	**DHARAMSHALA**	**6.77**	**173**	*e*P	Pn	00 08 22.4	+5.5
DHRM				*e*S	**Sn**	**00 09 39.2**	**+5.0**
DHRM				AML	AML	00 09 46.2	
	comp=E,414nm,0.2s						
DHRM				AML	AML	00 09 46.4	
	comp=N,269nm,0.3s						
THW	**Thamme Wali**	**6.83**	**206**	P	Pn	00 08 22.6	+5.0
SARP	**Sargodha**	**7.38**	**198**	P	Pn	00 08 30.6	+5.5
SMLA	**Simla**	**7.98**	**169**	*e*P	Pn	00 08 37.9	+4.5
SMLA				*e*S	**Sn**	**00 10 04.4**	**+0.7**
SMLA				AML	AML	00 10 14.3	
	comp=N,178nm,0.4s						
SMLA				AML	AML	00 10 16.0	
	comp=E,128nm,0.4s						
DDI	**Dehra Dun**	**8.93**	**165**	*e*P	Pn	00 08 52.4	+5.9
DDI				*ex*	x	00 10 32.0	
MK31	**Makanchi Array**	**9.32**	**31**	Pn	Pn	00 08 55.1	+3.4
	comp=E,9.2nm,0.8s,baz=223,slow=17,SNR=16						
MK31				⇑Lg	Lg	00 11 30.9	
	comp=E,9.6nm,0.7s						
MK31	**Makanchi Array**	**9.32**	**31**	*e*P	**Pn**	**00 08 53.6**	**+1.9**
MK31				*e*		00 10 35.8	
MK31	**Makanchi Array**	**9.32**	**31**	*e*Pn	**Pn**	**00 08 53.6**	**+1.9**
MK31				*e*Sn	**Sn**	**00 10 35.8**	**-0.8**
MKAR	**Makanchi Array**	**9.32**	**31**	P	**Pn**	**00 08 52.8**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**9.32**	**31**	Pn	**Pn**	**00 08 52.8**	**+1.0**
MKAR				Lg	Lg	00 11 26.1	
MKAR	**Makanchi Array**	**9.32**	**31**	Pn	**Pn**	**00 08 52.8**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=205,slow=13,SNR=10						
MKAR				Lg	Lg	00 11 26.1	
	comp=Z,0.9nm,0.3s,baz=220,slow=24,SNR=4.3						
KURBB	**Kurchatov Arra**	**11.85**	**10**	Lg	Lg	00 12 47.1	
	comp=Z,0.1nm,0.3s,baz=185,slow=29,SNR=4.2						
KURK	**Kurchatov**	**11.96**	**10**	Lg	Lg	00 12 47.1	
PYUN	**Piuthan**	**12.59**	**147**	*e*P	**Pn**	**00 09 37.5**	**+0.8**
	comp=Z,65nm,0.4s						
PYUN				*e*S	**Sn**	**00 11 54.9**	**-2.2**
DANN	**Dangsing**	**12.71**	**144**	*e*P	**Pn**	**00 09 38.4**	**-0.1**
	comp=Z,25nm,0.3s						
KOLN	**Koldanda**	**13.14**	**146**	*e*P	**Pn**	**00 09 45.0**	**+0.8**
	comp=Z,25nm,0.3s						
KKN	**Kakani**	**13.91**	**140**	*e*P	**Pn**	**00 09 54.7**	**0.0**
	comp=Z,25nm,0.6s						
DMN	**Daman**	**13.97**	**141**	*e*P	**Pn**	**00 09 55.7**	**+0.1**
	comp=Z,18nm,0.3s						
VOSK	**Vostochnaya**	**14.06**	**349**⇓	P	**P**	**00 10 02.5**	**-1.9**
	comp=Z,8.2nm,0.9s						
GUN	**Gumba**	**14.12**	**138**	*e*P	**Pn**	**00 09 57.7**	**0.0**
	comp=Z,18nm,0.4s						
PKIN	**Phulchoki**	**14.14**	**141**	*e*P	**Pn**	**00 09 57.6**	**-0.4**
	comp=Z,19nm,0.6s						
PKI	**Pulchoki**	**14.15**	**141**	*e*P	**Pn**	**00 09 57.4**	**-0.8**
	comp=Z,23nm,0.5s						
BVA0	**Borovoye Array**	**14.45**	**348**	P	**P**	**00 10 07.4**	**-1.2**
	comp=Z,2.1nm,0.7s,baz=157,slow=9.2,SNR=35						
BVAR	**Borovoye Array**	**14.45**	**348**	P	**Pn**	**00 10 00.5**	**-1.3**
BVAR	**Borovoye Array**	**14.45**	**348**	Pn	**Pn**	**00 10 00.5**	**-1.3**
BVAR				Lg	Lg	00 14 11.3	

BVAR	**Borovoye Array**	**14.45**	**348**	Pn		**Pn**	00 10 00.5	-1.3	
	comp=Z,0.1nm,0.3s,baz=155,slow=15,SNR=4.3								
BVAR				Lg		Lg	00 14 11.3		
	comp=Z,0.2nm,0.3s,baz=137,slow=33,SNR=5.2								
BRVK	**Borovoye**	**14.50**	**348**	*d*	*i*P	**P**	00 10 07.8	-1.4	
BRVK	**Borovoye**	**14.50**	**348**	*e*	Pn	Pn	00 10 05.4	+3.0	
ZRNK	**Zerenda**	**14.63**	**345**	⇓	P	**P**	00 10 08.3	-2.4	
	comp=Z,9.0nm,0.9s								
AB31	**Akbulak array**	**15.05**	**318**	⇑	P	**Pn**	00 10 08.1	-1.8	
	comp=Z,12nm,0.8s,baz=127,slow=13,SNR=36								
ABKAR	**Akbulak array**	**15.05**	**318**	*e*	Pn	**Pn**	00 10 07.4	-2.6	
	comp=Z,10nm,0.7s								
RAMN	**Ramite**	**15.27**	**139**	*e*	P	**Pn**	00 10 11.1	-2.1	
	comp=Z,45nm,0.6s								
RAMN				*e*	S	Sn	00 12 56.1	-6.3	
TAPN	**Taplejung**	**15.54**	**135**	*e*	P	**Pn**	00 10 14.8	-2.0	
	comp=Z,18nm,0.6s								
ODAN	**Odare**	**15.75**	**137**	*e*	P	**Pn**	00 10 18.9	-0.6	
	comp=Z,31nm,0.6s								
BHPL	**Bhopal**	**15.80**	**173**	*ex*		**Sn**	00 13 11.7	-3.4	
BHPL				AML		AML	00 13 18.0		
	comp=N,12nm,0.3s								
BHPL				AML		AML	00 13 18.1		
	comp=E,10nm,0.4s								
LSA	**Lhasa**	**16.00**	**121**	*e*	P	**Pn**	00 10 19.8	-3.1	
LSA	**Lhasa**	**16.00**	**121**	*e*	Pn	**Pn**	00 10 19.8	-3.1	
ZALV	**Zalesovo Beam**	**16.31**	**20**	P		**Pn**	00 10 25.5	-0.7	
ZALV	**Zalesovo Beam**	**16.31**	**20**	Pn		**Pn**	00 10 25.6	-0.7	
ZALV	**Zalesovo Beam**	**16.31**	**20**	Pn		**Pn**	00 10 25.5	-0.7	
	comp=E,0.4nm,0.3s,baz=209,slow=12,SNR=7.8								
AKTO	**Aktyubinsk**	**16.76**	**319**	P		**P**	00 10 33.2	-1.1	
	comp=E,2.1nm,1.0s								
AKTO	**Aktyubinsk**	**16.76**	**319**	P		**Pn**	00 10 30.7	-1.4	
AKTO				pmax		pmax			
	comp=Z,1.0nm,0.3s								
AKTO	**Aktyubinsk**	**16.76**	**319**	Pn		**Pn**	00 10 30.6	-1.4	
AKTO	**Aktyubinsk**	**16.76**	**319**	Pn		**Pn**	00 10 30.6	-1.4	
	comp=Z,0.8nm,0.3s,baz=106,slow=14,SNR=13								
GTA	**Gaotai**	**18.97**	**81**	*e*	P	**Pn**	00 11 02.5	**+2.9**	
GTA				pP		pP	00 11 08.5	+6.7	
GTA				sP		sP	00 11 12.8	+10	
GTA				pmax		pmax			
	comp=Z,14nm,0.8s								
ARU	**Arti**	**20.68**	**333**	*c*	*i*P	Pn	00 11 20.5	+0.9	
ARU							00 11 39.0		
ARU				S		Sn	00 15 15.2	+2.4	
ARU				SS		**SnSn**	**00 15 36.8**	**+9.4**	
ARU				pmax		pmax			
	comp=Z,35nm,2.5s								
HYB	**Hyderabad**	**21.68**	**172**	*i*	P	**P**	**00 11 28.5**	**+0.2**	
GNI	**Garni**	**23.56**	**283**	*e*	P	**P**	**00 11 47.0**	**-1.0**	
	comp=Z,26nm,0.9s								
ZEI	**Tsey**	**23.99**	**289**	*e*	P	**P**	**00 11 53.1**	**+0.8**	
ZEI				pmax		pmax			
	comp=Z,3.0nm,1.0s								
SONM	**Songino Array**	**24.11**	**58**	P		**P**	**00 11 54.6**	**+1.5**	
SONM	**Songino Array**	**24.11**	**58**	P		**P**	**00 11 54.6**	**+1.5**	
	comp=Z,2.9nm,0.7s,baz=260,slow=9.6,SNR=14								
ULN	**Ulaanbaatar**	**24.55**	**58**	*e*	P	**P**	**00 11 55.3**	**-1.9**	
MIB	**Mutribah**	**24.77**	**257**	*e*	P	**P**	**00 12 00.6**	**+1.3**	
MIB				AMb		AMB	00 12 08.9		
	comp=Z,37nm,2.0s								
KIV	**Kislovodsk**	**24.86**	**292**	*e*	P	**P**	**00 12 00.3**	**+0.3**	
KIV				*e*			00 12 35.3		
KIV				pmax		pmax			
	comp=Z,9.0nm,1.6s								
RDF	**Al-Radifah**	**25.05**	**255**	*e*	P	**P**	**00 12 03.3**	**+1.6**	
RDF				AMb		AMB	00 12 05.9		
	comp=Z,101nm,1.7s								
NAY	**Al-Naaiem**	**25.11**	**256**	*e*	P	**P**	**00 12 03.5**	**+1.2**	
NAY				AMb		AMB	00 12 05.4		
	comp=Z,24nm,0.9s								
BHD	**Baghdad**	**25.57**	**267**	*ex*		**P**	**00 12 06.0**	**-0.4**	
BHD				*ex*		x	00 16 29.0		
VRHR	**Novokhopersk**	**26.47**	**308**	*e*	P	**P**	**00 12 13.4**	**-1.0**	
VRHR				pmax		pmax			
	comp=N,10.0nm,0.9s								
VRHR				pmax		pmax			
	comp=Z,10.0nm,0.9s								
VRHR				pmax		pmax			
	comp=E,4.0nm,0.4s								
HHC	**Hu-ho-hao-te**	**27.73**	**74**	*e*	P	**P**	**00 12 28.8**	**+2.8**	
HHC				S		**S**	**00 17 08.8**	**+0.3**	
VORD	**Divnogorie**	**27.88**	**307**	*e*	P	**P**	**00 12 27.0**	**-0.1**	
VORD				pmax		pmax			
	comp=N,10.0nm,1.1s								
VORD				pmax		pmax			
	comp=E,20nm,1.1s								
VORD				pmax		pmax			
	comp=Z,10.0nm,1.1s								
VSR	**Storozhevoye**	**28.01**	**308**	*e*	P	**P**	**00 12 28.0**	**-0.2**	
VSR				pmax		pmax			
	comp=N,6.0nm,1.0s								
VSR				pmax		pmax			
	comp=E,10.0nm,1.0s								
VSR				pmax		pmax			
	comp=Z,10.0nm,1.0s								
MALT	**Malatya**	**28.70**	**280**	*e*	P	P	00 12 31.1	-3.6	
MALT	**Malatya**	**28.70**	**280**	*e*	P	P	00 12 31.1	-3.6	
CMAR	**Chiang Mai Arr**	**28.96**	**128**	P		P	00 12 41.0	+4.0	
CMAR				PcP		**PcP**	**00 15 46.9**	**+1.1**	
CMAR	**Chiang Mai Arr**	**28.96**	**128**	P		P	00 12 41.0	+4.0	
	comp=Z,1.3nm,0.6s,baz=309,slow=10,SNR=7.2								
CMAR				PcP		**PcP**	**00 15 46.9**	**+1.1**	
	comp=Z,0.6nm,0.3s,baz=322,slow=4.6,SNR=4.4								
BR131	**Keskin Array S**	**32.04**	**285**	*e*	P	**P**	**00 13 04.3**	**+0.1**	
	comp=Z,4.3nm,0.6s								
BRTR	**Keskin Array B**	**32.04**	**285**	P		**P**	**00 13 04.8**	**+0.6**	
BRTR	**Keskin Array B**	**32.04**	**285**	P		**P**	**00 13 04.8**	**+0.6**	
	comp=Z,5.6nm,0.7s,baz=89,slow=8.0,SNR=49								
MMAI	**Mount Meron Ar**	**32.65**	**272**	P		**P**	**00 13 11.2**	**+1.6**	
MMAI	**Mount Meron Ar**	**32.65**	**272**	P		**P**	**00 13 11.2**	**+1.6**	
	comp=Z,0.4nm,0.4s,baz=64,slow=9.8,SNR=2.2								
AKASG	**Malin Array Be**	**34.19**	**305**	P		**P**	**00 13 21.3**	**-1.3**	
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.5s								
AKASG	**Malin Array Be**	**34.19**	**305**	P		**P**	**00 13 21.3**	**-1.3**	
AKASG	**Malin Array Be**	**34.19**	**305**	P		**P**	**00 13 21.3**	**-1.3**	
	comp=Z,1.2nm,0.5s,baz=84,slow=7.2,SNR=6.5								
ISP	**Isparta**	**34.87**	**283**	P		**P**	**00 13 27.8**	**-1.0**	
ISP	**Isparta**	**34.87**	**283**	P		**P**	**00 13 27.8**	**-1.0**	
JOF	**Joensuu**	**35.55**	**327**	*e*	P	**P**	**00 13 34.2**	**-0.1**	
JOF				pmax		pmax			
	comp=Z,4.0nm,0.6s								
JOF	**Joensuu**	**35.55**	**327**	*ep*		**P**	**00 13 34.2**	**-0.1**	
	comp=Z,3.5nm,0.6s								
QIZ	**Qiongzhong**	**35.85**	**114**	P		P	00 13 33.5	-3.8	
QIZ				S		S	00 19 06.5	-8.6	
QIZ				pmax		pmax			
	comp=Z,32nm,1.7s								
QIZ				pmax		pmax			
	comp=Z,170nm,5.2s								
MLR	**Muntele Rosu**	**36.66**	**297**	P		**P**	**00 13 45.3**	**+1.2**	
MLR	**Muntele Rosu**	**36.66**	**297**	P		**P**	**00 13 45.3**	**+1.2**	
	comp=Z,0.8nm,0.7s,baz=92,slow=6.9,SNR=11								
FINES	**FINESS Array B**	**37.44**	**323**	P		**P**	**00 13 50.3**	**-0.1**	
FINES	**FINESS Array B**	**37.44**	**323**	P		**P**	**00 13 50.3**	**-0.1**	
	comp=Z,3.4nm,0.4s,baz=113,slow=9.8,SNR=51								
KAF	**Kangasniemi**	**37.51**	**324**	*e*	P	**P**	**00 13 50.2**	**-0.8**	
KAF	**Kangasniemi**	**37.51**	**324**	*ep*		**P**	**00 13 50.2**	**-0.8**	
KWP	**Kalwaria Pacla**	**38.40**	**304**	*e*	P	**P**	**00 13 59.4**	**+0.7**	
KWP				pmax		pmax			
	comp=Z,2.0nm,0.4s								
KWP	**Kalwaria Pacla**	**38.40**	**304**	*e*	P	**P**	**00 13 59.4**	**+0.7**	
	comp=Z,2.3nm,0.4s								
KOLS	**Kolonicke sedl**	**38.74**	**303**	*e*	P	**P**	**00 14 02.1**	**+0.5**	
KOLS	**Kolonicke sedl**	**38.74**	**303**	*e*	P	**P**	**00 14 02.1**	**+0.5**	
CRVS	**Cervenica-Dubn**	**39.28**	**303**	*e*	P	P	00 14 12.6	+6.5	
CRVS	**Cervenica-Dubn**	**39.28**	**303**	*e*	P	P	00 14 12.6	+6.5	
KEV	**Kevo**	**39.84**	**336**	*e*	P	**P**	**00 14 09.5**	**-1.0**	
KEV	**Kevo**	**39.84**	**336**	*ep*		**P**	**00 14 09.5**	**-1.0**	
YAK	**Yakutsk**	**39.94**	**37**	*i*	P	**P**	**00 14 10.4**	**-1.0**	
ARCES	**ARCESS Array B**	**40.24**	**335**	P		**P**	**00 14 13.8**	**0.0**	
ARCES	**ARCESS Array B**	**40.24**	**335**	P		**P**	**00 14 13.8**	**0.0**	
	comp=Z,4.1nm,0.7s,baz=107,slow=8.9,SNR=16								
GVD	**Gavdhos**	**40.74**	**281**	*e*	P	**P**	**00 14 15.4**	**-3.0**	
	comp=Z,29nm,0.8s								
HFS	**Hagfors**	**43.30**	**320**	P		**P**	**00 14 38.8**	**-0.1**	
HFS	**Hagfors**	**43.30**	**320**	P		**P**	**00 14 38.8**	**-0.1**	
	comp=Z,8.5nm,0.5s,baz=98,slow=11,SNR=61								
BRG	**Berggiesshubel**	**43.84**	**307**	*e*	P	**P**	**00 14 43.5**	**+0.1**	
BRG				pmax		pmax			
	comp=Z,5.0nm,0.9s								
SOKA	**Soboth**	**43.92**	**300**	⇓	*i*P	**P**	**00 14 44.6**	**+0.4**	
SOKA	**Soboth**	**43.92**	**300**	⇓	*i*P	**P**	**00 14 44.6**	**+0.4**	
GERES	**GERESS Array B**	**44.35**	**304**	P		**P**	**00 14 48.4**	**+0.7**	
GERES	**GERESS Array B**	**44.35**	**304**	P		**P**	**00 14 48.4**	**+0.7**	
	comp=Z,2.2nm,0.8s,baz=60,slow=7.9,SNR=12								
CLL	**Collm**	**44.36**	**307**	*e*	P	P	00 14 43.0	-4.6	
CLL				*e*			00 14 48.0		
CLL	**Collm**	**44.36**	**307**	*e*	P	**P**	**00 14 48.0**	**+0.4**	
KHC	**Kasperske Hory**	**44.38**	**304**	*e*	P	**P**	**00 14 48.0**	**+0.2**	
KHC	**Kasperske Hory**	**44.38**	**304**	*e*	P	**P**	**00 14 48.0**	**+0.2**	
NB2	**NORSAR Subarra**	**44.52**	**321**	P		P	00 14 47.9	-0.9	
	comp=Z,5.7nm,0.5s,baz=90,slow=8.6								
NOA	**NORSAR Array B**	**44.52**	**321**	P		**P**	**00 14 48.5**	**-0.3**	
NOA	**NORSAR Array B**	**44.52**	**321**	P		**P**	**00 14 48.5**	**-0.3**	
	comp=Z,6.2nm,0.6s,baz=91,slow=8.0,SNR=25								
DAVA	**Damuels**	**47.20**	**302**	⇓	*i*P	**P**	**00 15 10.1**	**-0.2**	
DAVA	**Damuels**	**47.20**	**302**	⇓	*i*P	**P**	**00 15 10.2**	**-0.2**	
CDF	**Champ du Feu**	**48.60**	**305**	*e*	P	**P**	**00 15 20.8**	**-0.2**	
	comp=Z,6.4nm,0.9s								
CDF	**Champ du Feu**	**48.60**	**305**	*e*	P	**P**	**00 15 20.8**	**-0.2**	
CDF				pmax		pmax			
	comp=Z,6.0nm,0.9s								
CDF	**Champ du Feu**	**48.60**	**305**	*e*	P	**P**	**00 15 20.8**	**-0.2**	
	comp=Z,6.4nm,0.9s								
MJAR	**Matsushiro Arr**	**48.88**	**72**	P		**P**	**00 15 25.0**	**+1.7**	
MJAR	**Matsushiro Arr**	**48.88**	**72**	P		**P**	**00 15 25.0**	**+1.7**	
	comp=Z,0.7nm,0.3s,baz=284,slow=9.8,SNR=3.0								
WLF	**Walferdange**	**48.98**	**306**	*e*	P	P	00 15 20.3	-3.5	
WLF	**Walferdange**	**48.98**	**306**	*e*	P	P	00 15 20.3	-3.5	
HINF	**Hinteralfeld**	**49.03**	**304**	*e*	P	**P**	**00 15 24.1**	**-0.2**	
	comp=Z,6.6nm,0.8s								
HINF	**Hinteralfeld**	**49.03**	**304**	*e*	P	**P**	**00 15 24.1**	**-0.2**	
HINF				pmax		pmax			
	comp=Z,7.0nm,0.8s								
HINF	**Hinterlfeld**	**49.03**	**304**	*e*	P	**P**	**00 15 24.1**	**-0.2**	
	comp=Z,6.6nm,0.8s								
HAU	**Haudompre**	**49.31**	**304**	*e*	P	**P**	**00 15 26.2**	**-0.2**	
	comp=Z,4.2nm,0.5s								
HAU	**Haudompre**	**49.31**	**304**	*e*	P	**P**	**00 15 26.2**	**-0.2**	
HAU				pmax		pmax			
	comp=Z,4.0nm,0.5s								
HAU	**Haudompre**	**49.31**	**304**	*e*	P	**P**	**00 15 26.2**	**-0.2**	
	comp=Z,4.2nm,0.5s								
PAGF	**Fort de Pagny**	**49.55**	**305**	*e*	P	**P**	**00 15 27.8**	**-0.4**	
PAGF	**Fort de Pagny**	**49.55**	**305**	*e*	P	**P**	**00 15 27.8**	**-0.4**	
LPG	**La Plagne**	**49.79**	**301**	*e*	P	**P**	**00 15 30.7**	**+0.3**	
	comp=Z,17nm,1.1s								
LPG	**La Plagne**	**49.79**	**301**	*e*	P	**P**	**00 15 30.7**	**+0.3**	
LPG				pmax		pmax			
	comp=Z,17nm,1.1s								
LPG	**La Plagne**	**49.79**	**301**	*e*	P	**P**	**00 15 30.7**	**+0.3**	
	comp=Z,17nm,1.1s								
LPL	**La Plagne**	**49.80**	**301**	*e*	P	**P**	**00 15 30.7**	**+0.3**	
LPL	**La Plagne**	**49.80**	**301**	*e*	P	**P**	**00 15 30.7**	**+0.3**	
LPL	**La Plagne**	**49.80**	**301**	*e*	P	**P**	**00 15 30.7**	**+0.3**	
CABF	**La Chapelle**	**49.88**	**303**	*e*	P	**P**	**00 15 31.0**	**+0.1**	
	comp=Z,9.4nm,0.8s								
CABF	**La Chapelle**	**49.88**	**303**	*e*	P	**P**	**00 15 31.0**	**+0.1**	
CABF				pmax		pmax			
	comp=Z,9.0nm,0.8s								
CABF	**La Chapelle**	**49.88**	**303**	*e*	P	**P**	**00 15 31.0**	**+0.1**	
	comp=Z,9.4nm,0.8s								
MEZF	**Maizieres J'vi**	**50.00**	**305**	*e*	P	**P**	**00 15 31.9**	**+0.3**	
	comp=Z,6.5nm,0.6s								
MEZF	**Maizieres J'vi**	**50.00**	**305**	*e*	P	**P**	**00 15 31.9**	**+0.3**	
	comp=Z,6.5nm,0.6s								
BAIF	**Baives**	**50.09**	**307**	*e*	P	**P**	**00 15 31.9**	**-0.3**	
	comp=Z,4.7nm,0.5s								
BAIF	**Baives**	**50.09**	**307**	*e*	P	**P**	**00 15 31.9**	**-0.3**	
BAIF				pmax		pmax			
	comp=Z,5.0nm,0.5s								
BAIF	**Baives**	**50.09**	**307**	*e*	P	**P**	**00 15 31.9**	**-0.3**	
	comp=Z,4.7nm,0.5s								
SFTF	**Sexfontaines**	**50.09**	**305**	*e*	P	**P**	**00 15 32.1**	**-0.2**	
SFTF	**Sexfontaines**	**50.09**	**305**	*e*	P	**P**	**00 15 32.1**	**-0.2**	
FRF	**La Foret Royal**	**50.49**	**299**	*e*	P	**P**	**00 15 35.2**	**-0.2**	
FRF	**La Foret Royal**	**50.49**	**299**	*e*	P	**P**	**00 15 35.2**	**-0.2**	
FRF	**La Foret Royal**	**50.49**	**299**	*e*	P	**P**	**00 15 35.2**	**-0.2**	
ORIF	**Oris-en-Rattie**	**50.56**	**301**	*e*	P	**P**	**00 15 35.5**	**-0.5**	
ORIF	**Oris-en-Rattie**	**50.56**	**301**	*e*	P	**P**	**00 15 35.5**	**-0.5**	
ORIF	**Oris-en-Rattie**	**50.56**	**301**	*e*	P	**P**	**00 15 35.5**	**-0.5**	
SMRF	**Simiane la Rot**	**51.08**	**299**	*e*	P	**P**	**00 15 39.8**	**-0.1**	
SMRF	**Simiane la Rot**	**51.08**	**299**	*e*	P	**P**	**00 15 39.8**	**-0.1**	
LOR	**Lormes**	**51.13**	**304**	*e*	P	**P**	**00 15 39.4**	**-0.8**	
	comp=Z,4.0nm,0.7s								
LOR	**Lormes**	**51.13**	**304**	*e*	P	**P**	**00 15 39.4**	**-0.8**	
	comp=Z,4.0nm,0.6s								
SMF	**Signal de Mont**	**51.34**	**303**	*e*	P	**P**	**00 15 41.2**	**-0.6**	
	comp=Z,3.3nm,0.6s								
SMF	**Signal de Mont**	**51.34**	**303**	*e*	P	**P**	**00 15 41.2**	**-0.6**	
SMF				pmax		pmax			
	comp=Z,3.0nm,0.6s								
SMF	**Signal de Mont**	**51.34**	**303**	*e*	P	**P**	**00 15 41.2**	**-0.6**	
	comp=Z,3.3nm,0.6s								
VIVF	**Saint-Julien-l**	**51.39**	**301**	*e*	P	**P**	**00 15 42.1**	**-0.1**	
	comp=Z,5.4nm,0.6s								
VIVF	**Saint-Julien-l**	**51.39**	**301**	*e*	P	**P**	**00 15 42.1**	**-0.1**	
VIVF				pmax		pmax			
	comp=Z,5.0nm,0.6s								
VIVF	**Saint-Julien-l**	**51.39**	**301**	*e*	P	**P**	**00 15 42.1**	**-0.1**	
	comp=Z,5.4nm,0.6s								
SSF	**Saint Saulge**	**51.43**	**304**	*e*	P	**P**	**00 15 41.7**	**-0.7**	
	comp=Z,3.0nm,0.7s								
SSF	**Saint Saulge**	**51.43**	**304**	*e*	P	**P**	**00 15 41.7**	**-0.7**	
SSF				pmax		pmax			
	comp=Z,3.0nm,0.7s								
SSF	**Saint Saulge**	**51.43**	**304**	*e*	P	**P**	**00 15 41.7**	**-0.7**	
	comp=Z,3.0nm,0.7s								
AVF	**Avril sur Loir**	**51.62**	**304**	*e*	P	**P**	**00 15 43.4**	**-0.4**	
	comp=Z,9.7nm,0.6s								
AVF	**Avril sur Loir**	**51.62**	**304**	*e*	P	**P**	**00 15 43.4**	**-0.4**	
AVF				pmax		pmax			
	comp=Z,10.0nm,0.6s								
AVF	**Avril sur Loir**	**51.62**	**304**	*e*	P	**P**	**00 15 43.4**	**-0.4**	
	comp=Z,9.7nm,0.6s								
BGF	**Bois d'Agland**	**52.02**	**303**	*e*	P	**P**	**00 15 46.3**	**-0.6**	
BGF	**Bois d'Agland**	**52.02**	**303**	*e*	P	**P**	**00 15 46.3**	**-0.6**	
BGF	**Bois d'Agland**	**52.02**	**303**	*e*	P	**P**	**00 15 46.3**	**-0.6**	
TCF	**Toulx Ste Croi**	**52.53**	**303**	*e*	P	**P**	**00 15 50.5**	**-0.2**	
TCF	**Toulx Ste Croi**	**52.53**	**303**	*e*	P	**P**	**00 15 50.5**	**-0.2**	
TCF	**Toulx Ste Croi**	**52.53**	**303**	*e*	P	**P**	**00 15 50.5**	**-0.2**	
CAF	**Calviac**	**53.10**	**302**	*e*	P	**P**	**00 15 55.1**	**+0.2**	
CAF	**Calviac**	**53.10**	**302**	*e*	P	**P**	**00 15 55.1**	**+0.2**	
CAF	**Calviac**	**53.10**	**302**	*e*	P	**P**	**00 15 55.1**	**+0.2**	
LDF	**La Druitiere**	**53.23**	**307**	*e*	P	**P**	**00 15 55.2**	**-0.6**	
	comp=Z,8.7nm,0.5s								
LDF	**La Druitiere**	**53.23**	**307**	*e*	P	**P**	**00 15 55.2**	**-0.6**	
LDF				pmax		pmax			
	comp=Z,9.0nm,0.5s								
LDF	**La Druitiere**	**53.23**	**307**	*e*	P	**P**	**00 15 55.2**	**-0.6**	
	comp=Z,8.7nm,0.5s								
RJF	**Les Rejaudoux**	**53.33**	**302**	*e*	P	**P**	**00 15 56.3**	**-0.2**	
RJF	**Les Rejaudoux**	**53.33**	**302**	*e*	P	**P**	**00 15 56.3**	**-0.2**	
RJF	**Les Rejaudoux**	**53.33**	**302**	*e*	P	**P**	**00 15 56.3**	**-0.2**	
FLN	**La Foliniere**	**53.40**	**307**	*e*	P	**P**	**00 15 56.3**	**-0.7**	
FLN	**La Foliniere**	**53.40**	**307**	*e*	P	**P**	**00 15 56.3**	**-0.7**	
FLN	**La Foliniere**	**53.40**	**307**	*e*	P	**P**	**00 15 56.3**	**-0.7**	
MTLF	**Montolieu**	**53.58**	**300**	*e*	P	**P**	**00 15 58.5**	**+0.1**	
MTLF	**Montolieu**	**53.58**	**300**	*e*	P	**P**	**00 15 58.5**	**+0.1**	
MTLF	**Montolieu**	**53.58**	**300**	*e*	P	**P**	**00 15 58.5**	**+0.1**	
GRR	**Gorron**	**53.76**	**307**	*e*	P	**P**	**00 15 59.1**	**-0.6**	
	comp=Z,13nm,0.7s								
GRR	**Gorron**	**53.76**	**307**	*e*	P	**P**	**00 15 59.1**	**-0.6**	
GRR				pmax		pmax			
	comp=Z,13nm,0.7s								
GRR	**Gorron**	**53.76**	**307**	*e*	P	**P**	**00 15 59.1**	**-0.6**	
	comp=Z,13nm,0.7s								
MFF	**Saint Martin d**	**53.94**	**304**	*e*	P	**P**	**00 16 00.2**	**-0.8**	
MFF	**Saint Martin d**	**53.94**	**304**	*e*	P	**P**	**00 16 00.2**	**-0.8**	
MFF	**Saint Martin d**	**53.94**	**304**	*e*	P	**P**	**00 16 00.2**	**-0.8**	
LFF	**La Frestale**	**53.97**	**302**	*e*	P	**P**	**00 16 01.4**	**+0.2**	
LFF	**La Frestale**	**53.97**	**302**	*e*	P	**P**	**00 16 01.4**	**+0.2**	
LFF	**La Frestale**	**53.97**	**302**	*e*	P	**P**	**00 16 01.4**	**+0.2**	
BILL	**Bilibino**	**54.85**	**27**	*e*	P	**P**	**00 16 08.1**	**+0.8**	
BILL				*i*			00 17 09.9		
BILL				pmax		pmax			
	comp=Z,4.0nm,0.9s								
SGMF	**Saint Gilles**	**54.87**	**307**	*e*	P	**P**	**00 16 07.3**	**-0.4**	
	comp=Z,10nm,0.6s								
SGMF	**Saint Gilles**	**54.87**	**307**	*e*	P	**P**	**00 16 07.3**	**-0.4**	
SGMF				pmax		pmax			
	comp=Z,10.0nm,0.6s								
SGMF	**Saint Gilles**	**54.87**	**307**	*e*	P	**P**	**00 16 07.3**	**-0.4**	
	comp=Z,10nm,0.6s								
EPF	**Esparros**	**54.97**	**300**	*e*	P	**P**	**00 16 08.1**	**-0.5**	
EPF	**Esparros**	**54.97**	**300**	*e*	P	**P**	**00 16 08.1**	**-0.5**	
ROSF	**Rostrenen**	**55.29**	**307**	*e*	P	**P**	**00 16 10.2**	**-0.5**	
ROSF	**Rostrenen**	**55.29**	**307**	*e*	P	**P**	**00 16 10.2**	**-0.5**	
ROSF	**Rostrenen**	**55.29**	**307**	*e*	P	**P**	**00 16 10.2**	**-0.5**	
QUIF	**Quistinic**	**55.38**	**307**	*e*	P	**P**	**00 16 10.8**	**-0.6**	
QUIF	**Quistinic**	**55.38**	**307**	*e*	P	**P**	**00 16 10.8**	**-0.6**	
QUIF	**Quistinic**	**55.38**	**307**	*e*	P	**P**	**00 16 10.8**	**-0.6**	
ETSF	**Etsaut**	**55.62**	**300**	*e*	P	**P**	**00 16 13.0**	**-0.4**	
	comp=Z,6.5nm,0.7s								
ETSF	**Etsaut**	**55.62**	**300**	*e*	P	**P**	**00 16 13.0**	**-0.4**	
ETSF				pmax		pmax			
	comp=Z,7.0nm,0.7s								
ETSF	**Etsaut**	**55.62**	**300**	*e*	P	**P**	**00 16 13.0**	**-0.4**	
	comp=Z,6.5nm,0.7s								
PETK	**Petropavlovsk-**	**55.78**	**46**	P		**P**	**00 16 14.8**	**+0.5**	
PETK				pmax		pmax			
	comp=Z,3.0nm,0.9s								
PETK	**Petropavlovsk-**	**55.78**	**46**	P		**P**	**00 16 14.8**	**+0.5**	
PETK	**Petropavlovsk-**	**55.78**	**46**	P		**P**	**00 16 14.8**	**+0.5**	
	comp=Z,2.5nm,0.9s,baz=258,slow=7.1,SNR=3.1								
ESDC	**Sonseca Array**	**59.32**	**298**	P		**P**	**00 16 39.2**	**-0.3**	
ESDC	**Sonseca Array**	**59.32**	**298**	P		**P**	**00 16 39.2**	**-0.3**	
	comp=Z,1.4nm,0.5s,baz=55,slow=7.1,SNR=30								
TOA0	**Torodi Ar. Sit**	**69.17**	**270**	*e*	P	P	00 17 41.1	-3.2	
TORD	**Torodi Ar. Bea**	**69.17**	**270**	P		**P**	**00 17 43.3**	**-1.1**	
TORD	**Torodi Ar. Bea**	**69.17**	**270**	P		**P**	**00 17 43.3**	**-1.1**	
	comp=Z,3.6nm,0.6s,baz=47,slow=5.5,SNR=46								
COLA	**College**	**71.10**	**18**	*e*	P	**P**	**00 17 53.3**	**-2.0**	
COLA				pmax		pmax			
	comp=Z,7.0nm,0.9s								
COLA	**College**	**71.10**	**18**	*e*	P	**P**	**00 17 53.3**	**-2.0**	
	comp=Z,6.9nm,0.9s								
ILAR	**Eielson Array**	**71.41**	**18**	P		**P**	**00 17 56.9**	**-0.4**	
ILAR	**Eielson Array**	**71.41**	**18**	P		**P**	**00 17 56.9**	**-0.4**	
	comp=Z,3.0nm,0.8s,baz=319,slow=5.2,SNR=39								
PAX	**Paxson**	**73.27**	**18**	*e*	P	**P**	**00 18 06.7**	**-1.9**	
PAX				*e*			00 20 48.6		
PAX				pmax		pmax			
	comp=Z,4.0nm,0.8s								
PAX	**Paxson**	**73.27**	**18**	*e*	P	**P**	**00 18

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRMA	Marmari	0.65	246	P	Pn	01 49 49.8	-0.6
MRMA	Marmari	0.65	246	P	Pn	01 49 49.8	-0.6
CHOS	Chios island	0.73	85	P	Pb	01 49 49.4	-0.4
CHOS				S	Sg	01 49 58.8	+0.6
CHOS	Chios island	0.73	85	*e*PN	Pb	01 49 49.4	-0.4
CHOS				*e*SN	Sg	01 49 58.8	+0.6
CHOS	Chios island	0.73	85	P	Pb	01 49 49.4	-0.4
CHOS				S	Sg	01 49 58.8	+0.6
PTL	Penteli	1.04	255	P	Pb	01 49 55.0	-0.1
PTL				S	Sn	01 50 10.1	-0.4
PTL	Penteli	1.04	255	*e*PB	Pb	01 49 55.0	-0.1
PTL				*e*SN	Sn	01 50 09.6	-0.9
PTL	Penteli	1.04	255	P	Pb	01 49 55.0	-0.1
PTL				*e*Sn	Sn	01 50 09.6	-0.9
PTL				S	Sn	01 50 10.1	-0.4
SIGR	SIGRI	1.05	32	P	Pb	01 49 54.7	-0.6
SIGR				S	Sb	01 50 09.2	0.0
SIGR	SIGRI	1.05	32	P	Pb	01 49 54.7	-0.6
SIGR				S	Sb	01 50 09.2	0.0
URLA	Izmir	1.15	88	*e*P	Pg	01 49 56.7	-0.2
URLA				*e*S	Sg	01 50 11.0	-0.8
URLA	Izmir	1.15	88	*e*P	Pg	01 49 56.7	-0.2
URLA				*e*S	Sg	01 50 11.0	-0.8
ATH	Athens Observa	1.17	253	P	Pn	01 49 57.9	+0.4
ATH				S	Sn	01 50 13.7	0.0
ATH	Athens Observa	1.17	253	*e*PN	Pn	01 49 57.7	+0.2
ATH				*e*SN	Sn	01 50 13.8	0.0
ATH	Athens Observa	1.17	253	*e*Pn	Pn	01 49 57.7	+0.2
ATH				*e*Sn	Sn	01 50 13.8	0.0
MRKA	Markates	1.27	288	P	Pg	01 49 59.0	-0.2
MRKA	Markates	1.27	288	P	Pg	01 49 59.0	-0.2
PRK	Paraskevi	1.28	44	P	Pn	01 49 58.0	-1.1
PRK	Paraskevi	1.28	44	*e*PN	Pn	01 49 57.9	-1.1
PRK	Paraskevi	1.28	44	P	Pn	01 49 58.0	-1.1
APE	Apeiranthos	1.29	166	*e*PN	Pn	01 49 58.4	-0.9
APE				*e*SN	Sb	01 50 16.2	0.0
APE	Apeiranthos	1.29	166	P	Pn	01 49 58.1	-1.2
APE				S	Sb	01 50 16.2	0.0
APE	Apeiranthos	1.29	166	*e*PB	Pn	01 49 58.0	-1.2
APE				*e*SN	Sb	01 50 15.8	-0.4
APE	Apeiranthos	1.29	166	P	Pn	01 49 58.1	-1.2
APE	Apeiranthos	1.29	166	*e*Pn	Pn	01 49 58.4	-0.9
APE				S	Sb	01 50 16.2	0.0
AOS	Alonnisos	1.29	311	P	Pb	01 49 59.0	-0.4
AOS	Alonnisos	1.29	311	*e*PB	Pb	01 49 59.0	-0.4
AOS	Alonnisos	1.29	311	P	Pb	01 49 59.0	-0.4
NAIG	Nisos Aigina	1.42	247	*e*PB	Pg	01 50 01.9	0.0
NAIG	Nisos Aigina	1.42	247	*e*Pb	Pg	01 50 01.9	0.0
BLCB	Balcova	1.50	87	*e*PN	Pn	01 50 01.7	-0.4
BLCB				*e*SN	Sn	01 50 21.4	-0.5
BLCB	Balcova	1.50	87	*e*Pn	Pn	01 50 01.7	-0.4
SKIA	Skiathos	1.55	303	P	Pn	01 50 02.9	+0.1
SKIA	Skiathos	1.55	303	P	Pn	01 50 02.9	+0.1
AYVA	Ayvalik	1.56	51	*i* Pn	Pn	01 50 01.9	-1.1
AYVA				*i* Sn	Sg	01 50 26.1	+1.1
LIA	Limnos Island	1.57	1	P	Pn	01 50 02.2	-0.9
LIA	Limnos Island	1.57	1	*e*PN	Pn	01 50 02.0	-1.1
LIA	Limnos Island	1.57	1	P	Pn	01 50 02.2	-0.9
SMIA	Simia	1.61	291	P	Pb	01 50 03.9	-0.9
SMIA	Simia	1.61	291	P	Pb	01 50 03.9	-0.9
IZM	Izmir	1.67	87	*e*PN	Pn	01 50 04.4	-0.1
IZM	Izmir	1.67	87	*e*Pn	Pn	01 50 04.4	-0.1
ATAL	Atalanti	1.70	283	P	Pn	01 50 04.5	-0.3
ATAL	Atalanti	1.70	283	P	Pn	01 50 04.5	-0.3
LKR	Lokris	1.71	282	P	Pn	01 50 04.8	-0.1
LKR	Lokris	1.71	282	*e*PN	Pb	01 50 05.5	-1.0
LKR	Lokris	1.71	282	P	Pn	01 50 04.8	-0.1
LKR	Lokris	1.71	282	*e*Pn	Pb	01 50 05.5	-1.0
DID	Didima	1.71	242	P	Pn	01 50 04.7	-0.3
DID	Didima	1.71	242	*e*PN	Pn	01 50 04.7	-0.3
DID	Didima	1.71	242	P	Pn	01 50 04.7	-0.3
LTK	Loutraki	1.73	261	P	Pn	01 50 05.6	+0.3
LTK	Loutraki	1.73	261	*e*PN	Pn	01 50 05.6	+0.3
LTK	Loutraki	1.73	261	P	Pn	01 50 05.6	+0.3
EZN	Ezine	1.76	31	*e*PN	Pn	01 50 04.8	-0.9
EZN	Ezine	1.76	31	*e*Pn	Pn	01 50 04.8	-0.9
GCAM	G?zelcaml?	1.77	110	*e*P	Pn	01 50 05.8	0.0
GCAM				*e*S	Sb	01 50 30.2	+0.3
GCAM	G?zelcaml?	1.77	110	*e*P	Pn	01 50 05.8	0.0
GCAM				*e*S	Sb	01 50 30.2	+0.3
NEO	Neokhori	1.79	304	*e*PN	Pn	01 50 05.9	-0.2
NEO	Neokhori	1.79	304	*e*Pn	Pn	01 50 05.9	-0.2
XOR	Xorichti	1.84	305	P	Pn	01 50 06.8	0.0
XOR	Xorichti	1.84	305	P	Pn	01 50 06.8	0.0
PAIG	Paliouri	1.96	325	P	Pn	01 50 08.2	-0.2
PAIG	Paliouri	1.96	325	*e*PN	Pn	01 50 07.9	-0.5
PAIG	Paliouri	1.96	325	*e*Pn	Pn	01 50 07.9	-0.5
PAIG	Paliouri	1.96	325	P	Pn	01 50 08.2	-0.2
AXAR	Agios Charalam	1.99	284	P	Pn	01 50 09.4	+0.5
AXAR	Agios Charalam	1.99	284	P	Pn	01 50 09.4	+0.5
BODT	Bodrum	2.14	125	*e*PN	Pn	01 50 10.7	-0.2
BODT	Bodrum	2.14	125	*e*Pn	Pn	01 50 10.7	-0.2
SMTH	Samothraki Isl	2.17	8	*e*PN	Pn	01 50 09.9	-1.4
SMTH	Samothraki Isl	2.17	8	*e*Pn	Pn	01 50 09.9	-1.4
AKS	Akhisar	2.17	74	*e*PN	Pn	01 50 11.2	-0.1
AKS	Akhisar	2.17	74	*e*Pn	Pn	01 50 11.2	-0.1
AKHS	Akhisar	2.17	74	*e*P	Pg	01 50 16.0	-0.4
AKHS				*e*S	Sb	01 50 42.7	+1.2
AKHS	Akhisar	2.17	74	*e*P	Pg	01 50 16.0	-0.4
AKHS				*e*S	Sb	01 50 42.7	+1.2
GUR	Goura	2.24	261	P	Pn	01 50 12.6	+0.3
GUR	Goura	2.24	261	*e*PN	Pn	01 50 12.7	+0.4
GUR	Goura	2.24	261	P	Pn	01 50 12.6	+0.3
AGG	Agios Georgios	2.30	288	*e*PN	Pn	01 50 13.8	+0.6
AGG	Agios Georgios	2.30	288	*e*Pn	Pn	01 50 13.8	+0.6
GELI	Tayfur-Gelibol	2.32	26	*e*PN	Pn	01 50 12.8	-0.5
GELI	Tayfur-Gelibol	2.32	26	*e*Pn	Pn	01 50 12.8	-0.5
MLSB	Milas	2.33	115	*e*PN	Pn	01 50 13.3	-0.2
MLSB	Milas	2.33	115	*e*Pn	Pn	01 50 13.4	-0.2
KALE	Kalithea	2.35	273	*e*PN	Pn	01 50 14.7	+0.8
KALE	Kalithea	2.35	273	*e*Pn	Pn	01 50 14.7	+0.8
VLI	Veliai	2.37	228	*e*PN	Pn	01 50 13.5	-0.6
VLI	Veliai	2.37	228	*e*Pn	Pn	01 50 13.5	-0.6
VLX	Vlachokerasia	2.38	247	P	Pn	01 50 14.8	+0.5
VLX	Vlachokerasia	2.38	247	*e*PN	Pn	01 50 14.8	+0.5
VLX	Vlachokerasia	2.38	247	P	Pn	01 50 14.8	+0.5
BALY	Balya	2.40	53	*i* Pn	Pn	01 50 15.3	+0.8
BALY				*i* Sn	Sb	01 50 49.5	+1.4
LPK	Lapseki	2.40	31	*e*PN	Pn	01 50 14.4	-0.1
LPK	Lapseki	2.40	31	*e*Pn	Pn	01 50 14.4	-0.1
PLG	Polygyros	2.43	328	*e*PN	Pn	01 50 15.2	+0.3
PLG	Polygyros	2.43	328	*e*Pn	Pn	01 50 15.2	+0.3
LAKA	Lakka	2.48	269	*e*PN	Pn	01 50 17.3	+1.6
LAKA	Lakka	2.48	269	*e*Pn	Pn	01 50 17.3	+1.6
BALB	Balikesir	2.51	58	*e*PN	Pn	01 50 16.0	0.0
BALB	Balikesir	2.51	58	*e*Pn	Pn	01 50 16.0	0.0
DAT	Datca	2.51	129	*e*PN	Pn	01 50 16.0	-0.1
DAT	Datca	2.51	129	*e*Pn	Pn	01 50 16.0	-0.1
ENEZ	Enez	2.54	18	*e*PN	Pn	01 50 16.0	-0.3
ENEZ	Enez	2.54	18	*e*Pn	Pn	01 50 16.0	-0.3
EFP	Efpalio	2.54	273	*e*PN	Pn	01 50 16.2	-0.2
EFP	Efpalio	2.54	273	*e*Pn	Pn	01 50 16.2	-0.2
GONE	Gonen-Balikesi	2.62	48	*e*PN	Pn	01 50 17.6	+0.1
GONE	Gonen-Balikesi	2.62	48	*e*Pn	Pn	01 50 17.6	+0.1
KYTH	Kithira	2.64	220	*e*PN	Pn	01 50 17.5	-0.3
KYTH	Kithira	2.64	220	*e*Pn	Pn	01 50 17.5	-0.3
KRBG	Karabiga-Canak	2.66	38	*e*PN	Pn	01 50 17.9	-0.1
KRBG	Karabiga-Canak	2.66	38	*e*Pn	Pn	01 50 17.9	-0.1
ALN	Alexandroupoli	2.67	15	P	Pn	01 50 17.1	-1.0
ALN	Alexandroupoli	2.67	15	*e*PN	Pn	01 50 16.6	-1.5
ALN	Alexandroupoli	2.67	15	*e*Pn	Pn	01 50 16.6	-1.5
ALN	Alexandroupoli	2.67	15	P	Pn	01 50 17.1	-1.0
EVR	Evrytania	2.67	284	*e*PN	Pn	01 50 19.8	+1.5
EVR	Evrytania	2.67	284	*e*Pn	Pn	01 50 19.8	+1.5
THL	Klokotos Trika	2.73	298	*e*PN	Pn	01 50 20.0	+1.0
THL	Klokotos Trika	2.73	298	*e*Pn	Pn	01 50 20.0	+1.0
YER	Yerkesik	2.76	114	*e*PN	Pn	01 50 20.0	+0.5
YER	Yerkesik	2.76	114	*e*Pn	Pn	01 50 20.0	+0.5
KULA	Kula-Manisa	2.78	85	*e*PN	Pn	01 50 20.8	+1.1
KULA	Kula-Manisa	2.78	85	*e*Pn	Pn	01 50 20.8	+1.1
ITM	Ithomi	2.79	247	*e*PN	Pn	01 50 20.9	+1.1
ITM	Ithomi	2.79	247	*e*Pn	Pn	01 50 20.9	+1.1
AMT	Artemida-Makis	2.82	255	*e*PN	Pn	01 50 21.9	+1.6
AMT	Artemida-Makis	2.82	255	*e*Pn	Pn	01 50 21.9	+1.6
SOH	Sokhos	2.85	332	*e*PN	Pn	01 50 20.7	0.0
SOH	Sokhos	2.85	332	*e*Pn	Pn	01 50 20.7	0.0
EDC	Edincik	2.92	45	*e*PN	Pn	01 50 22.4	+0.7
EDC	Edincik	2.92	45	*e*Pn	Pn	01 50 22.4	+0.7
BNT	Bandirma	2.96	46	*e*PN	Pn	01 50 22.1	-0.1
BNT	Bandirma	2.96	46	*e*Pn	Pn	01 50 22.1	-0.1
MRMT	Marmara Adasi	2.97	39	*e*PN	Pn	01 50 22.9	+0.6
MRMT	Marmara Adasi	2.97	39	*e*Pn	Pn	01 50 22.9	+0.6
DST	Dursunbey	3.00	64	*e*PN	Pn	01 50 23.2	+0.4
DST	Dursunbey	3.00	64	*e*Pn	Pn	01 50 23.2	+0.4
PYL	PYLOS	3.05	243	*e*PN	Pn	01 50 25.0	+1.6
PYL	PYLOS	3.05	243	*e*Pn	Pn	01 50 25.0	+1.6
KARN	Karanos	3.08	199	*e*PN	Pn	01 50 24.1	+0.3
KARN	Karanos	3.08	199	*e*Pn	Pn	01 50 24.1	+0.3
NPS	Neapolis	3.08	173	*e*PN	Pn	01 50 23.1	-0.7
NPS	Neapolis	3.08	173	*e*Pn	Pn	01 50 23.1	-0.7
KCTX	Karacabey (Bur	3.16	51	*e*PN	Pn	01 50 25.0	0.0
KCTX	Karacabey (Bur	3.16	51	*e*Pn	Pn	01 50 25.0	0.0
LAST	Lasithi	3.17	175	*e*PN	Pn	01 50 24.7	-0.4
LAST	Lasithi	3.17	175	*e*Pn	Pn	01 50 24.7	-0.4
DALY	Dalyan (Mu˜la	3.17	117	*e*PN	Pn	01 50 25.8	+0.7
DALY	Dalyan (Mu˜la	3.17	117	*e*Pn	Pn	01 50 25.8	+0.7
NVR	Nevrokopi	3.18	342	*e*PN	Pn	01 50 25.0	-0.2
NVR	Nevrokopi	3.18	342	*e*Pn	Pn	01 50 25.0	-0.2
ARG	Arkhangelos	3.18	130	*e*PN	Pn	01 50 25.9	+0.7
ARG	Arkhangelos	3.18	130	*e*Pn	Pn	01 50 25.9	+0.7
KARP	Karpathos	3.21	149	*e*PN	Pn	01 50 25.8	+0.1
KARP	Karpathos	3.21	149	*e*Pn	Pn	01 50 25.8	+0.1
ORLT	Orhaneli	3.39	58	*e*PN	Pn	01 50 28.2	+0.1
ORLT	Orhaneli	3.39	58	*e*Pn	Pn	01 50 28.2	+0.1
CRLT	Corlu	3.44	35	*e*PN	Pn	01 50 29.0	+0.2
CRLT	Corlu	3.44	35	*e*Pn	Pn	01 50 29.0	+0.2
MDNY	Mudanya-Bursa	3.55	54	*e*PN	Pn	01 50 30.8	+0.5
MDNY	Mudanya-Bursa	3.55	54	*e*Pn	Pn	01 50 30.8	+0.5
TVSB	Tavsanli	3.56	70	*e*PN	Pn	01 50 31.1	+0.7
TVSB	Tavsanli	3.56	70	*e*Pn	Pn	01 50 31.2	+0.7
FETY	Fethiye	3.56	117	*e*PN	Pn	01 50 31.2	+0.7
FETY	Fethiye	3.56	117	*e*Pn	Pn	01 50 31.2	+0.7
EDRB	Edirne	3.73	19	*e*PN	Pn	01 50 32.7	0.0
EDRB	Edirne	3.73	19	*e*Pn	Pn	01 50 32.7	0.0
GEMT	Gemlik	3.78	55	*e*PN	Pn	01 50 34.1	+0.6
GEMT	Gemlik	3.78	55	*e*Pn	Pn	01 50 34.1	+0.6
CTKS	Kestanelik-??a	3.90	41	*e*PN	Pn	01 50 35.7	+0.6
CTKS	Kestanelik-??a	3.90	41	*e*Pn	Pn	01 50 35.7	+0.6
ALT	Altintas	3.96	78	*e*PN	Pn	01 50 36.5	+0.5
ALT	Altintas	3.96	78	*e*Pn	Pn	01 50 36.5	+0.5
BUY	Buyukada	3.98	49	*e*Pn	Pn	01 50 37.0	+0.8
BGKT	Bogazkoy	4.00	43	*e*PN	Pn	01 50 37.0	+0.6
BGKT	Bogazkoy	4.00	43	*e*Pn	Pn	01 50 37.0	+0.6
ISK	Istanbul-Kandi	4.08	47	*e*PN	Pn	01 50 38.3	+0.8
ISK	Istanbul-Kandi	4.08	47	*e*Pn	Pn	01 50 38.3	+0.8
SHUT	Suhut-Afyon	4.26	85	*e*PN	Pn	01 50 41.5	+1.4
SHUT	Suhut-Afyon	4.26	85	*e*Pn	Pn	01 50 41.5	+1.4
BCK	Bucak	4.40	100	*e*PN	Pn	01 50 42.8	+0.8
BCK	Bucak	4.40	100	*e*Pn	Pn	01 50 42.8	+0.8
GULT	Gulveren	4.67	62	*e*PN	Pn	01 50 47.1	+1.3
GULT	Gulveren	4.67	62	*e*Pn	Pn	01 50 47.1	+1.3

MEX 27 02:27:59.2±0.4**, 17°99N**×**101°95W, h8**km±5km**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.59	130	*e*P	Pg	02 28 09.9	-0.8
ZIIG				*i* S	Sg	02 28 18.1	-0.5
MMIG	Aquila	1.36	283	*e*P	Pn	02 28 20.6	-3.9
MMIG				*e*S	Sb	02 28 38.0	-4.6
ARIG	Puente Sto Nin	1.55	79	*e*P	Pn	02 28 23.2	-3.9
ARIG				*e*S	Sn	02 28 42.5	-4.9
CAIG	El Cayaco	1.85	120	*e*P	Pn	02 28 28.5	-2.8
CAIG				*e*S	Sn	02 28 50.1	-4.9
EZ5V		2.16	314	*e*P	Pn	02 28 33.1	-2.7
EZ5V				*i* S	Sn	02 28 58.6	-4.5
MEIG	Mezcala	2.21	91	*i* P	Pn	02 28 34.0	-2.4
MEIG				*e*S	Sn	02 28 59.2	-4.8
R15V		2.26	302	*e*P	Pn	02 28 34.8	-2.2
R15V				*e*S	Sn	02 29 00.5	-4.6

*CASC **27** 02:29:56.4±3.6, 12°67N×89°65W, h0km±11km, MD4.0*
*IDC **27** 02:30:02.5±14.0, 13°00N×89°36W, h59km±114km, mb3.6/6, mb1 3.9/6, mb1mx3.5/22, mbtmp3.6/6, MS3.0/2, Ms1 3.0/2, ms1mx2.5/27, Error ellipse: s-maj=87.6km s-min=37.4km az=4.0*
ISC 27 02:29:54.8±2.3**, 12°56N**±0°09×**89°64W**±0°07**, h15**km±11km**, n22,** σ1°**01**/28**, mb3.9**/6**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOQS	Boqueron	1.22	17	*e*P	Pg	02 30 18.6	+0.1
BOQS				*e*S	Sg	02 30 34.7	+0.2
SBLS	San Blas	1.27	1	*e*P	Pn	02 30 18.6	+0.3
SNJE	San Jose	1.30	2	*e*P	Pn	02 30 19.2	+0.5
SNVI	San Vicente	1.31	37	*e*P	Pg	02 30 20.3	+0.2
SNVI				*e*S	Sn	02 30 37.0	+0.9
RTR	El Retiro	1.33	360	*e*P	Pn	02 30 19.4	+0.3
RBDL	Robledal	1.55	358	*e*P	Pn	02 30 22.3	+0.3
RBDL				*e*S	Sn	02 30 43.0	+1.1
BLLM	Bellamira	1.63	57	*e*P	Pg	02 30 26.4	+0.2
IXG	Ixpaco	1.79	334	*e*P	Pn	02 30 24.8	-0.6
IXG				*e*S	Sg	02 30 54.4	+1.8
MTO2	Montecristo 2	1.85	8	*e*P	Pb	02 30 28.1	-0.4
CNCH	Conchagua	1.90	68	*e*P	Pb	02 30 29.5	+0.2
NBG	Las Nubes	2.13	341	*e*P	Pn	02 30 31.5	+1.4
NBG				*e*S	Sg	02 31 03.0	-0.5
FUG	Fuego 3	2.21	328	*e*P	Pn	02 30 30.9	-0.3
FUG				*e*S	Sb	02 31 02.9	+0.9
MRL	Marmol	2.49	359	*e*P	Pb	02 30 37.9	-1.6
MRL				*e*S	Sg	02 31 13.6	-1.5
CMIG	Matias Romero	6.78	312	LR	LR	02 34 29.0	
	comp=Z,101nm,20.3s,baz=21,slow=40						
TEIG	Tepich	7.74	10	P	Pn	02 31 51.4	+4.4
	1.2nm,0.3s,baz=222,slow=12,SNR=6.4						
TXAR	Lajitas Array	21.18	324	P	P	02 34 41.2	+1.3
	5.1nm,0.7s,baz=150,slow=11,SNR=65						
TKL	Tuckaleechee C	23.60	12	P	P	02 35 04.5	-0.8
	4.1nm,0.9s,baz=181,slow=7.7,SNR=4.8						
TKL				LR	LR	02 44 24.5	
	comp=Z,39nm,19.6s,baz=279,slow=37						
NVAR	Mina Array Bea	36.23	320	P	P	02 36 58.8	+1.2
	0.7nm,0.7s,baz=116,slow=9.2,SNR=4.9						
SCHQ	Schefferville	45.82	18	P	P	02 38 14.3	-1.7
	2.7nm,0.6s,baz=222,slow=10,SNR=7.4						
YKA	Yellowknife Ar	52.96	346	P	P	02 39 09.1	-1.4
	0.7nm,0.7s,baz=144,slow=7.5,SNR=18						
YKA				PcP	PcP	02 40 20.3	+1.1
	0.1nm,0.5s,baz=148,slow=3.9,SNR=4.0						
TORD	Torodi Ar. Bea	88.47	77	P	P	02 42 47.0	-0.5
	0.3nm,0.8s,baz=292,slow=5.0,SNR=6.2						
CMAR	Chiang Mai Arr	148.04	344	PKPbc	PKPbc	02 49 41.1	+0.3
	1.4nm,0.6s,baz=350,slow=2.1,SNR=5.2						

MEX 27 02:58:11.2±0.9**, 16°49N**×**93°81W, h147**km±15km**, MD3.6, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGIG		0.72	66	*e*P	Pn	02 58 32.6	-1.0
TGIG				*i* S	Sn	02 58 48.4	-2.3
CCIG	Comitan	1.62	97	*e*P	Pn	02 58 41.1	-1.0
CCIG				*e*S	Sn	02 59 03.6	-2.1
HUIG	Huatulco	2.32	252	*i* P	Pn	02 58 47.8	-2.2
HUIG				*e*S	Sn	02 59 18.5	-1.3
VHO	Vista Hermosa	2.86	282	*i* P	Pn	02 58 55.5	-1.5
VHO				*i* S	Sn	02 59 30.2	-2.0

*ISK **27** 03:10:46.7, 35°32N×26°17E, h39km, MD3.7*
*DDA **27** 03:10:48.1, 35°67N×26°44E, h7km, ML3.7*
*ATH **27** 03:10:49.6, 35°59N×26°45E, h30km±1km, MD3.6/7*
*ISCJB **27** 03:10:50.4±0.9, 35°54N±0°04×26°44E±0°03, h22km±9km, Error ellipse: s-maj=6.6km s-min=3.4km az=156.0*
*THE **27** 03:10:50.3, 35°59N×26°45E, h6km±2km, ML2.9/1, Error ellipse: s-maj=3.2km s-min=1.1km az=168.0*
*CSEM **27** 03:10:50.2±0.1, 35°61N×26°42E, h10km, MD3.6, Error ellipse: s-maj=3.6km s-min=2.0km az=152.0*
ISC 27 03:10:50.6±1.1**, 35°61N**±0°03×**26°42E**±0°02**, h12**km±9km**, n74,** σ1°**02**/98**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.52	198	P	Pg	03 10 59.8	-0.9
ZKR	Zakros	0.52	198	*e*PN	Pg	03 11 00.2	-0.5
ZKR				*e*SN	Sb	03 11 08.5	-0.5
ZKR	Zakros	0.52	198	P	Pg	03 10 59.8	-0.9
ZKR	Zakros	0.52	198	*e*Pn	Pg	03 11 00.2	-0.5
ZKR				*e*Sn	Sb	03 11 08.5	-0.5
KARP	Karpathos	0.61	95	*e*PN	Pg	03 11 01.5	-1.0
KARP				*e*SN	Sb	03 11 10.8	-0.9
KARP	Karpathos	0.61	95	*e*Pn	Pg	03 11 01.5	-1.0
KARP				*e*Sn	Sb	03 11 10.8	-0.9
NPS	Neapolis	0.74	243	P	Pg	03 11 04.9	0.0
NPS	Neapolis	0.74	243	*e*PN	Pg	03 11 04.9	0.0
NPS	Neapolis	0.74	243	P	Pg	03 11 04.9	0.0
LAST	Lasithi	0.89	240	P	Pg	03 11 07.3	-0.4
LAST				S	Sb	03 11 20.2	+0.5
LAST	Lasithi	0.89	240	*e*PN	Pg	03 11 07.5	-0.2
LAST				*e*SN	Sb	03 11 20.2	+0.5
LAST	Lasithi	0.89	240	P	Pg	03 11 07.3	-0.4
LAST				S	Sb	03 11 20.2	+0.5
THR2	Thira island,	1.16	317	P	Pg	03 11 12.2	-0.6
THR2	Thira island,	1.16	317	P	Pg	03 11 12.2	-0.6
IDI	Anoyia	1.28	256	P	Pn	03 11 13.1	-1.3
IDI	Anoyia	1.28	256	P	Pn	03 11 13.1	-1.3
SIVA	Sivas	1.44	246	P	Pn	03 11 16.8	+0.4
SIVA				S	Sn	03 11 36.0	+0.8
SIVA	Sivas	1.44	246	*e*PN	Pn	03 11 17.1	+0.7
SIVA	Sivas	1.44	246	P	Pn	03 11 16.8	+0.4
SIVA	Sivas	1.44	246	*e*Pn	Pn	03 11 17.1	+0.7
SIVA				S	Sn	03 11 36.0	+0.8
DAT	Datca	1.46	40	*e*PN	Pn	03 11 16.3	-0.6
DAT				*e*SN	Sg	03 11 38.5	+0.7
DAT	Datca	1.46	40	*e*Pn	Pn	03 11 16.3	-0.6
DAT				*e*Sn	Sg	03 11 38.5	+0.7
ARG	Arkhangelos	1.52	66	P	Pn	03 11 16.8	-0.7
ARG				S	Sn	03 11 35.9	-1.2
ARG	Arkhangelos	1.52	66	*e*PN	Pn	03 11 16.8	-0.7
ARG				*e*SN	Sn	03 11 35.8	-1.3
ARG	Arkhangelos	1.52	66	P	Pn	03 11 16.8	-0.7
ARG				S	Sn	03 11 35.9	-1.2
BODT	Bodrum	1.62	26	*e*PN	Pn	03 11 18.3	-0.7
BODT	Bodrum	1.62	26	*e*Pn	Pn	03 11 18.3	-0.7
APE	Apeiranthos	1.63	334	*e*PN	Pn	03 11 17.0	-2.1
APE				*e*SN	Sn	03 11 38.0	-2.0
APE	Apeiranthos	1.63	334	P	Pn	03 11 18.5	-0.5
APE				S	Sn	03 11 39.7	-0.2
APE	Apeiranthos	1.63	334	*e*PN	Pn	03 11 18.6	-0.5
APE	Apeiranthos	1.63	334	*e*Pn	Pn	03 11 18.6	-0.5
APE				*e*Sn	Sn	03 11 38.0	-2.0
APE				S	Sn	03 11 39.7	-0.2
VAM	Vamos	1.82	264	P	Pn	03 11 20.8	-0.9
VAM	Vamos	1.82	264	*e*PN	Pn	03 11 21.5	-0.2
VAM	Vamos	1.82	264	P	Pn	03 11 20.8	-0.9
VAM	Vamos	1.82	264	*e*Pn	Pn	03 11 21.5	-0.2
MLSB	Milas	2.01	33	*e*PN	Pn	03 11 24.2	-0.1
MLSB	Milas	2.01	33	*e*Pn	Pn	03 11 24.2	-0.1
KARN	Karanos	2.05	265	*e*PN	Pn	03 11 24.3	-0.5
KARN				*e*SN	Sn	03 11 49.7	-0.6
KARN	Karanos	2.05	265	*e*Pn	Pn	03 11 24.3	-0.5
KARN				*e*Sn	Sn	03 11 49.7	-0.6
GVD	Gavdhos	2.05	249	*e*PN	Pn	03 11 24.7	-0.2
GVD	Gavdhos	2.05	249	*e*Pn	Pn	03 11 24.7	-0.2
YER	Yerkesik	2.15	44	*e*PN	Pn	03 11 26.4	+0.2
YER	Yerkesik	2.15	44	*e*Pn	Pn	03 11 26.4	+0.2
TURN	Turunc	2.17	54	*i* P	Pn	03 11 21.2	-5.3
TURN				*e*S	Sn	03 11 41.7	-12
TURN	Turunc	2.17	54	*i* P	Pn	03 11 21.2	-5.3
DALY	Dalyan (Mu˜la	2.18	56	*e*PN	Pn	03 11 25.6	-1.0
DALY	Dalyan (Mu˜la	2.18	56	*e*Pn	Pn	03 11 25.6	-1.0
GCAM	G?zelcaml?	2.19	17	*e*P	Pg	03 11 35.8	+3.1
GCAM				*e*S	Sg	03 12 04.8	+3.8
AYDN	Tasoluk	2.37	29	*e*P	Pb	03 11 32.2	-0.9
AYDN	Tasoluk	2.37	29	*e*P	Pb	03 11 32.2	-0.9
FETY	Fethiye	2.39	64	*e*PN	Pn	03 11 29.4	-0.2
FETY	Fethiye	2.39	64	*e*Pn	Pn	03 11 29.4	-0.2
AKAS	Kas	2.66	75	*e*P	Pn	03 11 33.5	+0.1
AKAS				*e*S	Sn	03 12 07.8	+2.2
AKAS	Kas	2.66	75	*e*P	Pn	03 11 33.5	+0.1
AKAS				*e*S	Sn	03 12 07.8	+2.2
BLCB	Balcova	2.82	10	*e*PN	Pn	03 11 35.9	+0.5
BLCB	Balcova	2.82	10	*e*Pn	Pn	03 11 35.9	+0.5
KYTH	Kithira	2.82	285	*e*PN	Pn	03 11 35.9	+0.4
KYTH	Kithira	2.82	285	*e*Pn	Pn	03 11 35.9	+0.4
GLHS	Glhisar (BURDU	2.93	57	*e*PN	Pn	03 11 37.1	+0.1
GLHS	Glhisar (BURDU	2.93	57	*e*Pn	Pn	03 11 37.1	+0.1
DNZL	Cakiroluk	2.97	45	*e*P	Pn	03 11 38.7	+1.1
DNZL	Cakiroluk	2.97	45	*e*P	Pn	03 11 38.7	+1.1
GOLH	Golhisar	3.01	56	*i* P	Pn	03 11 38.8	+0.6
GOLH				*i* S	Sn	03 12 17.8	+3.5
GOLH	Golhisar	3.01	56	*i* P	Pn	03 11 38.8	+0.6
GOLH				*i* S	Sn	03 12 17.8	+3.5
VLI	Veliai	3.03	293	*e*PN	Pn	03 11 38.5	+0.2
VLI				*e*SN	Sn	03 12 14.4	0.0
VLI	Veliai	3.03	293	*e*Pn	Pn	03 11 38.5	+0.2
VLI				*e*Sn	Sn	03 12 14.4	0.0
ELL	Elmali	3.05	67	*e*PN	Pn	03 11 38.3	-0.4
ELL	Elmali	3.05	67	*e*Pn	Pn	03 11 38.3	-0.4
DID	Didima	3.19	307	*e*PN	Pn	03 11 40.8	+0.3
DID	Didima	3.19	307	*e*Pn	Pn	03 11 40.8	+0.3
KULA	Kula-Manisa	3.41	31	*e*PN	Pn	03 11 43.9	+0.2
KULA	Kula-Manisa	3.41	31	*e*Pn	Pn	03 11 43.9	+0.2
KHL	Karahalli	3.68	42	*e*PN	Pn	03 11 48.0	+0.7
KHL	Karahalli	3.68	42	*e*Pn	Pn	03 11 48.0	+0.7

IDC 27 03:14:50.6±0.9**, 4°58S**×**35°42E, h35**km±6km**, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.4**/25**, mbtmp3.9**/4**, ML4.9**/3**, MS3.1**/5**, Ms1 3.0**/5**, ms1mx2.7**/28**, Error ellipse: s-maj=33.6km s-min=13.4km az=112.0, Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	3.89	28	Pn	Pn	03 15 46.4	-1.9
	79nm,0.3s,baz=208,slow=16,SNR=511						
KMBO				Pg	Pb	03 16 04.6	+5.8
	29nm,0.3s,baz=213,slow=21,SNR=9.4						
KMBO				Sn	Sn	03 16 30.0	-3.0
	54nm,0.3s,baz=78,slow=22,SNR=6.7						
KMBO				Lg	Lg	03 16 54.1	
	30nm,0.3s,baz=242,slow=22,SNR=6.1						
KMBO				LR	LR	03 17 31.1	
	comp=Z,161nm,18.8s,baz=98,slow=41						
MBAR	Mbarara	6.12	310	Pn	Pn	03 16 18.6	-0.3
	21nm,0.3s,baz=313,slow=7.8,SNR=35						
MBAR				Sn	Sn	03 17 26.5	-1.5
	141nm,0.3s,baz=48,slow=11,SNR=12						
LSZ	Lusaka	12.79	213	Pn	Pn	03 17 48.4	-1.9
	1.7nm,0.3s,baz=23,slow=12,SNR=46						
LSZ				Sn	Sn	03 20 04.4	-7.3
	0.9nm,0.3s,baz=327,slow=20,SNR=4.2						
LSZ				Lg	Lg	03 21 28.7	
	1.3nm,0.3s,baz=283,slow=22,SNR=4.6						
LSZ				LR	LR	03 22 50.1	
	comp=Z,71nm,19.4s,baz=214,slow=38						
BLWY	Bulawayo	16.83	203	*i* S	Pn	03 18 41.5	-2.3
LBTB	Lobatse	22.40	204	P	P	03 19 45.8	-0.6
	4.3nm,1.0s,baz=35,slow=14,SNR=3.9						
LBTB				pP	pP	03 19 55.0	-0.7
	2.6nm,0.8s,baz=30,slow=14,SNR=2.2						
TSUM	Tsumeb	22.67	229	LR	LR	03 29 07.0	
	comp=Z,91nm,20.5s,baz=346,slow=38						
BOSA	Boshof	25.78	201	P	P	03 20 19.6	+1.0
	3.3nm,0.9s,baz=34,slow=7.6,SNR=5.2						
BOSA				sP	sP	03 20 33.0	+0.2
	3.6nm,0.8s,baz=40,slow=5.5,SNR=3.9						
BOSA				LR	LR	03 30 46.0	
	comp=Z,76nm,18.5s,baz=330,slow=37						
KBZ	Khabaz	48.56	7	LR	LR	03 45 31.1	
	comp=Z,8.7nm,20.0s,baz=304,slow=38						
MKAR	Makanchi Array	65.76	33	P	P	03 25 31.6	-0.5
	0.2nm,0.6s,baz=217,slow=6.5,SNR=2.7						
MKAR				pP	pP	03 25 43.0	+0.1
	0.4nm,0.6s,baz=233,slow=7.0,SNR=5.4						
FINES	FINESS Array B	66.23	355	P	P	03 25 35.4	+0.6
	0.6nm,0.6s,baz=180,slow=3.5,SNR=2.4						
FINES				pP	pP	03 25 46.5	+1.0
	0.8nm,0.8s,baz=163,slow=7.4,SNR=2.7						

IDC 27 03:24:17.3±2.3**, 6°30S**×**129°70E, h0**km**, mb3.4**/1**, mb1 3.9**/4**, mb1mx3.6**/20**, mbtmp3.7**/4**, ML3.8**/3**, Error ellipse: s-maj=101.5km s-min=28.3km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.38**	**198**	Pn	Pn	03 27 16.1	+1.1
	0.4nm,0.3s,baz=32,slow=14,SNR=20						
FITZ				Sn	Sn	03 29 19.1	-15
	0.5nm,0.3s,baz=18,slow=20,SNR=6.6						
WRA	**Warramunga Arr**	**14.29**	**162**	Pn	Pn	03 27 40.2	-1.0
	0.5nm,0.3s,baz=332,slow=14,SNR=9.7						
WRA				Sn	Sn	03 30 03.3	-17
	0.3nm,0.3s,baz=340,slow=21,SNR=3.1						
ASAR	**Alice Springs**	**17.74**	**167**	P	Pn	03 28 25.6	-0.3
	0.3nm,0.3s,baz=346,slow=11,SNR=14						
ASAR				S	Sn	03 31 26.6	-18
	0.1nm,0.3s,baz=358,slow=25,SNR=3.1						
MKAR	**Makanchi Array**	**67.48**	**327**	P	P	03 35 15.2	0.0
	0.2nm,0.3s,baz=112,slow=9.3,SNR=5.3						

CASC ***27*** *03:36:02.2±2.9, 12°.82N×88°.69W, h12km±13km, MD3.8, ML3.9*

IDC ***27*** *03:36:05.3±8.3, 12°.78N×88°.63W, h93km±46km, mb3.1/5, mb1 3.5/7, mb1mx3.3/24, mbtmp3.2/7, Error ellipse: s-maj=83.4km s-min=35.7km az=174.0*

ISC 27 03:36:01.5±2.0, 12°.80N±0°.09×88°.67W±0°.04, h15km±10km, n23, σ1§09/35, mb3.5/5, 1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.73**	**31**	*eP*	**Pg**	**03 36 16.5**	**+0.7**
VSM				*eS*	**Sb**	**03 36 27.0**	**+1.1**
BLLM	**Bellamira**	**0.76**	**33**	⇓*iP*	**Pg**	**03 36 16.8**	**+0.4**
BLLM				*eS*	**Sg**	**03 36 26.9**	**+0.5**
SNVI	**San Vicente**	**0.82**	**348**	*eP*	**Pb**	**03 36 18.0**	**+0.4**
SNVI				*eS*	**Sb**	**03 36 28.7**	**+0.2**
CNCH	**Conchagua**	**0.94**	**60**	*eP*	**Pg**	**03 36 19.4**	**-0.3**
CNCH				*eS*	**Sg**	**03 36 32.8**	**+0.8**
LBRS	**Las Brisas**	**1.00**	**338**	*eP*	**Pg**	**03 36 20.5**	**-0.4**
LBRS				*eS*	**Sg**	**03 36 32.8**	**-1.2**
LFU	**La Fuente**	**1.04**	**335**	*eP*	**Pb**	**03 36 20.5**	**-0.7**
LFU				*eS*	**Sb**	**03 36 35.0**	**+0.4**
SNET	**Serv Nac Est T**	**1.04**	**328**	*eP*	**Pb**	**03 36 20.7**	**-0.5**
SNET				AML	AML	03 36 36.6	
	comp=Z,3μm,0.2s						
CAHU	**Cacacuatique**	**1.06**	**25**	*eP*	**Pb**	**03 36 21.1**	**-0.6**
CAHU				*eS*	**Sb**	**03 36 35.2**	**-0.1**
BOQS	**Boqueron**	**1.10**	**327**	*eP*	**Pb**	**03 36 21.9**	**-0.6**
BOQS				*eS*	**Sb**	**03 36 37.0**	**+0.3**
RTR	**El Retiro**	**1.45**	**319**	*eP*	**Pn**	**03 36 27.2**	**-0.1**
RTR				*eS*	**Sn**	**03 36 45.9**	**-0.2**
RBDL	**Robledal**	**1.64**	**323**	*eP*	**Pn**	**03 36 29.5**	**-0.4**
MTO2	**Montecristo 2**	**1.73**	**337**	*eP*	**Pn**	**03 36 30.3**	**-0.9**
MTO2				*eS*	**Sn**	**03 36 53.0**	**-0.1**
IXG	**Ixpaco**	**2.21**	**308**	*eP*	**Pn**	**03 36 38.3**	**+0.5**
IXG				*eS*	**Sn**	**03 37 06.3**	**+1.4**
NBG	**Las Nubes**	**2.41**	**318**	*eP*	**Pn**	**03 36 41.8**	**+1.1**
NBG				*eS*	**Sb**	**03 37 14.2**	**-0.3**
MRL	**Marmol**	**2.46**	**336**	*eP*	**Pn**	**03 36 42.6**	**+1.4**
MRL				*eS*	**Sb**	**03 37 17.7**	**+2.0**
FUG	**Fuego 3**	**2.67**	**308**	*eP*	**Pn**	**03 36 44.9**	**+0.7**
FUG				*eS*	**Sn**	**03 37 18.0**	**+1.6**
CMIG	**Matias Romero**	**7.37**	**306**	P	**Pn**	**03 37 51.2**	**+2.7**
	comp=Z,0.3nm,0.3s,baz=125,slow=12,SNR=4.5						
CMIG				S	**Sn**	**03 39 13.2**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=180,slow=23,SNR=3.5						
TEIG	**Tepich**	**7.39**	**3**	P	**Pn**	**03 37 49.7**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=183,slow=19,SNR=4.9						
TXAR	**Lajitas Array**	**21.56**	**322**	P	**P**	**03 40 49.2**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=144,slow=11,SNR=9.7						
TKL	**Tuckaleechee C**	**23.18**	**10**	P	**P**	**03 41 05.1**	**-2.5**
	comp=Z,0.7nm,0.5s,baz=197,slow=10,SNR=4.2						
PDAR	**Pinedale Array**	**34.91**	**333**	P	P	03 42 48.8	-4.0
	comp=Z,0.3nm,0.7s,baz=134,slow=7.7,SNR=3.1						
YKA	**Yellowknife Ar**	**52.97**	**345**	P	P	03 45 11.8	-5.3
	comp=Z,0.4nm,0.5s,baz=152,slow=7.4,SNR=20						
YKA				PcP	PcP	03 46 19.5	-6.3
	comp=Z,0.2nm,0.7s,baz=148,slow=3.4,SNR=4.1						
ILAR	**Eielson Array**	**65.22**	**336**	P	P	03 46 36.1	-6.0
	comp=Z,0.3nm,0.7s,baz=167,slow=5.3,SNR=7.2						

IDC 27 03:36:34.1±10.0, 13°.91S×168°.88E, h0km, mb4.1/4, mb1 4.2/5, mb1mx3.7/21, mbtmp4.0/5, ML3.0/1, Error ellipse: s-maj=162.1km s-min=44.8km az=73.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.44**	**196**	Pn	Pn	03 38 37.2	-0.6
	0.2nm,0.3s,baz=287,slow=19,SNR=5.2						
DZM				Sn	Sn	03 40 13.4	-0.5
	0.6nm,0.3s,baz=154,slow=22,SNR=4.0						
CTA	**Charters Tower**	**22.48**	**251**	P	P	03 41 36.1	+0.8
	1.2nm,0.4s,baz=82,slow=12,SNR=4.1						
STKA	**Stephens Creek**	**30.71**	**230**	P	P	03 42 52.0	+1.0
	3.5nm,0.4s,baz=52,slow=8.9,SNR=14						
WRA	**Warramunga Arr**	**33.54**	**255**	P	P	03 43 15.1	-0.8
	0.8nm,0.7s,baz=85,slow=8.6,SNR=3.9						
ASAR	**Alice Springs**	**34.42**	**248**	P	P	03 43 22.9	-0.7
	1.7nm,0.4s,baz=79,slow=9.0,SNR=25						

IDC 27 03:38:56.4±4.8, 14°.64S×172°.45W, h0km, mb3.5/4, mb1 3.9/4, mb1mx3.6/21, mbtmp3.5/4, Error ellipse: s-maj=238.7km s-min=16.5km az=141.0, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**0.98**	**42**	Pn	Pb	03 39 16.7	+0.3
	48nm,0.3s,baz=284,slow=2.1,SNR=50						
AFI				Sn	Sn	03 39 31.2	-1.0
	260nm,0.3s,baz=30,slow=20,SNR=37						
WRA	**Warramunga Arr**	**50.91**	**256**	P	P	03 47 58.9	-0.9
	0.2nm,0.3s,baz=92,slow=6.6,SNR=5.9						
ASAR	**Alice Springs**	**51.22**	**251**	P	P	03 48 01.2	-1.0
	1.0nm,0.5s,baz=88,slow=7.7,SNR=16						
ILAR	**Eielson Array**	**81.53**	**11**	P	P	03 51 16.6	+1.1
	0.3nm,0.7s,baz=217,slow=5.7,SNR=4.9						
YKA	**Yellowknife Ar**	**89.04**	**23**	P	P	03 51 53.1	+0.2
	0.2nm,0.9s,baz=261,slow=4.5,SNR=3.7						
BRTR	**Keskin Array B**	**146.13**	**323**	PKPbc	PKPab	03 58 40.5	+0.9
	0.2nm,0.4s,baz=169,slow=2.9,SNR=3.6						

IDC ***27*** *03:57:57.3±5.5, 36°.00N×71°.07E, h73km±46km, mb3.5/7, mb1 3.7/10, mb1mx3.4/29, mbtmp3.6/10, ML4.0/3, MS2.9/1, Ms1 2.9/1, ms1mx2.0/35, Error ellipse: s-maj=37.5km s-min=29.2km az=14.0*

ISCJB ***27*** *03:58:00.7±0.5, 36°.32N±0°.03×71°.2E±0°.1, h119km, mb3.6/6, Error ellipse: s-maj=11.9km s-min=4.8km az=178.5*

NNC ***27*** *03:58:07.3±4.3, 36°.81N×71°.04E, h140km±55km, mb3.0, mpv4.2, Error ellipse: s-maj=36.2km s-min=25.6km az=21.0*

ISC 27 03:58:01.9±0.7, 36°.34N±0°.06×71°.2E±0°.1, h119km, n28, σ1§57/31, mb3.6/6, 3C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.58**	**167**	⇑P	**Pn**	**03 58 42.1**	**-0.8**
CEP				S	**Sn**	**03 59 13.0**	**-1.3**
CHCP	**Chirah Chowk**	**3.17**	**147**	P	**Pn**	**03 58 50.5**	**0.0**
THW	**Thamme Wali**	**3.57**	**172**	P	**Pn**	**03 58 54.8**	**-0.9**
SARP	**Sargodha**	**4.58**	**164**	P	**Pn**	**03 59 07.2**	**-2.0**
AML	**Almayashu**	**6.10**	**18**	P	**Pn**	**03 59 30.2**	**+0.2**
	SNR=54						
KZA	**Kyzart**	**6.54**	**28**	P	**Pn**	**03 59 36.3**	**+0.4**
	SNR=12						
EKS2	**Erkin-Say**	**6.62**	**17**	P	**Pn**	**03 59 37.2**	**+0.4**
	SNR=22						
KK31	**Karatay Array**	**6.77**	**356**	⇓P	**Pn**	**03 59 38.0**	**-0.7**
	14nm,0.3s,baz=176,slow=12,SNR=544						
KK31				S	**Sn**	**04 00 49.9**	**-4.5**
	5.3nm,0.4s,baz=187,slow=24,SNR=8.4						
AAK	**Ala-Archa**	**6.78**	**21**	P	**Pn**	**03 59 39.9**	**+0.9**
	8.3nm,0.3s,baz=230,slow=12,SNR=75						
AAK				S	**Sn**	**04 00 54.1**	**-0.7**
	0.6nm,0.3s,baz=300,slow=21,SNR=3.8						
KBK	**Karagaybulak**	**6.94**	**24**	P	**Pn**	**03 59 42.6**	**+1.5**
	SNR=6.7						
ULHL	**Ulahol**	**7.08**	**32**	P	**Pn**	**03 59 43.7**	**+0.7**
	SNR=7.8						
CHMS	**Chumysh**	**7.19**	**21**	P	**Pn**	**03 59 44.9**	**+0.5**
	SNR=9.1						
USP	**Ospenovka**	**7.37**	**19**	P	**Pn**	**03 59 47.2**	**+0.4**
	SNR=12						
TKM2	**Tokmak 2**	**7.40**	**26**	⇑P	**Pn**	**03 59 47.6**	**+0.3**
	3.1nm,0.4s						
TKM2				⇑S	**Sn**	**04 01 06.9**	**-2.9**
	2.7nm,0.9s						
TKM2	**Tokmak 2**	**7.40**	**26**	P	**Pn**	**03 59 47.8**	**+0.4**
	SNR=14						
AB31	**Akbulak array**	**15.29**	**331**	P	**Pn**	**04 01 29.6**	**-1.6**
	1.0nm,0.3s,baz=167,slow=11,SNR=67						
AB31				S	Sn	04 04 10.7	-10
	0.7nm,0.3s,baz=151,slow=24,SNR=6.9						
BVA0	**Borovoye Array**	**16.69**	**358**	P	**Pn**	**04 01 47.9**	**-0.5**
	0.4nm,0.9s,baz=156,slow=11,SNR=5.0						
BVAR	**Borovoye Array**	**16.69**	**358**	P	**P**	**04 01 48.8**	**0.0**
	0.3nm,0.3s,baz=163,slow=11,SNR=4.7						
AKTO	**Aktyubinsk**	**16.99**	**330**	P	**P**	**04 01 51.5**	**-0.6**
	1.0nm,1.4s						
AKTO	**Aktyubinsk**	**16.99**	**330**	P	**P**	**04 01 52.4**	**+0.3**
	0.4nm,0.3s,baz=138,slow=16,SNR=8.4						
ZALV	**Zalesovo Beam**	**20.00**	**24**	P	**Pn**	**04 02 26.8**	**-0.9**
	2.2nm,0.3s,baz=208,slow=9.7,SNR=9.2						
MMAI	**Mount Meron Ar**	**29.51**	**274**	LR	LR	04 17 09.0	
	comp=Z,20nm,18.4s,baz=325,slow=39						
FINES	**FINESS Array B**	**37.70**	**326**	P	**P**	**04 05 07.8**	**+2.4**
	0.5nm,0.3s,baz=130,slow=9.3,SNR=6.1						
ARCES	**ARCESS Array B**	**41.35**	**338**	P	**P**	**04 05 38.6**	**+3.0**
	3.6nm,0.9s,baz=114,slow=9.0,SNR=3.5						
NOA	**NORSAR Array B**	**44.60**	**323**	P	**P**	**04 06 03.8**	**+1.9**
	0.4nm,0.7s,baz=98,slow=8.5,SNR=2.4						
TORD	**Torodi Ar. Bea**	**65.86**	**269**	P	**P**	**04 08 34.4**	**-0.6**
	0.5nm,0.6s,baz=53,slow=5.9,SNR=8.2						
YKA	**Yellowknife Ar**	**81.39**	**3**	P	**P**	**04 10 07.1**	**+2.1**
	0.3nm,0.7s,baz=344,slow=5.0,SNR=9.9						
WRA	**Warramunga Arr**	**81.78**	**122**	P	**P**	**04 10 08.3**	**+0.6**
	1.4nm,1.2s,baz=330,slow=5.5,SNR=2.8						

IDC ***27*** *04:02:16.5±1.2, 34°.76N×73°.73E, h0km, mb3.5/6, mb1 3.6/11, mb1mx3.4/31, mbtmp3.4/11, ML3.1/2, Error ellipse: s-maj=28.7km s-min=23.5km az=85.0*

ISCJB ***27*** *04:02:19.0±0.6, 34°.95N±0°.04×73°.6E±0°.1, h21km, mb3.5/5, Error ellipse: s-maj=13.2km s-min=4.7km az=160.8*

NNC ***27*** *04:02:28.8±3.2, 35°.16N×73°.43E, h87km±54km, mb3.2, mpv3.7, Error ellipse: s-maj=33.5km s-min=25.5km az=101.0*

ISC 27 04:02:21.0±0.8, 34°.91N±0°.06×73°.6E±0°.1, h21km, n19, σ1§77/23, mb3.6/5, 2C-2D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**3.06**	**143**	*eP*	**Pn**	**04 03 10.9**	**+2.9**
THN				*eS*	**Sb**	**04 03 50.4**	**-1.1**
DHRM	**DHARAMSHALA**	**3.50**	**139**	*eP*	**Pn**	**04 03 12.8**	**-1.6**
DHRM				*eS*	**Sn**	**04 03 56.1**	**+0.8**
DHRM				AML	AML	04 04 09.5	
	comp=N,207nm,0.5s						
DHRM				AML	AML	04 04 10.6	
	comp=E,251nm,0.1s						
SDNR	**Sundarnagar**	**4.44**	**139**	*ex*	Pb	04 03 50.0	+12
SDNR				*e*SB	**Sb**	**04 04 35.0**	**+3.6**
SMLA	**Simla**	**4.84**	**140**	*i P*	**Pn**	**04 03 32.8**	**+0.2**
SMLA				*eS*	**Sn**	**04 04 26.1**	**-1.8**
SMLA				⇓		04 04 28.8	
	comp=E,586nm,0.2s						
SMLA				AML	AML	04 04 47.5	
	comp=E,152nm,0.0s						
SMLA				AML	AML	04 04 47.7	
	comp=N,137nm,0.2s						
KUDL	**Kundal**	**7.20**	**159**	*eP*	**Pn**	**04 04 06.7**	**+1.7**
KUDL				*eS*	Sn	04 05 34.1	+8.1
KUDL				AML	AML	04 06 04.8	
	comp=N,6.0nm,0.3s						
KUDL				AML	AML	04 06 04.9	
	comp=E,11nm,0.4s						
AAK	**Ala-Archa**	**7.74**	**5**	Pn	Pn	04 04 17.0	+4.4
	comp=E,0.4nm,0.3s,baz=189,slow=15,SNR=3.2						
AAK				Sn	**Sn**	**04 05 41.9**	**+2.3**
	comp=E,0.3nm,0.3s,baz=162,slow=20,SNR=2.1						
TKM2	**Tokmak 2**	**8.15**	**11**	⇓Pn	Pn	04 04 21.6	+3.4
	comp=E,2.0nm,0.8s						
TKM2				⇑Sn	**Sn**	**04 05 50.2**	**+0.5**
	comp=E,3.7nm,0.7s						
KK31	**Karatay Array**	**8.52**	**345**	Pn	**Pn**	**04 04 25.4**	**+2.4**
	comp=E,1.6nm,0.2s,baz=155,slow=9.5,SNR=37						
KK31				Sn	**Sn**	**04 05 57.9**	**-0.6**
	comp=E,3.5nm,0.4s,baz=137,slow=23,SNR=14						
MKAR	**Makanchi Array**	**13.57**	**26**	Pn	**Pn**	**04 05 32.8**	**+0.6**
	comp=E,0.1nm,0.3s,baz=196,slow=13,SNR=2.5						
KURBB	**Kurchatov Arra**	**16.11**	**11**	Pn	**Pn**	**04 06 04.5**	**-1.5**
	baz=196,slow=10,SNR=2.5						
AB31	**Akbulak array**	**17.50**	**329**	⇑P	**Pn**	**04 06 23.6**	**+0.1**
	comp=E,0.2nm,0.3s,baz=276,slow=41,SNR=11						
BVAR	**Borovoye Array**	**18.25**	**354**	Pn	**Pn**	**04 06 31.4**	**-1.3**
	baz=162,slow=9.3,SNR=2.6						
AKTO	**Aktyubinsk**	**19.21**	**329**	P	**Pn**	**04 06 43.8**	**-0.6**
	baz=198,slow=20						
ZALV	**Zalesovo Beam**	**20.61**	**19**	P	**P**	**04 06 57.5**	**-1.1**
	comp=E,1.2nm,0.3s,baz=208,slow=8.8,SNR=4.8						
SONM	**Songino Array**	**27.59**	**52**	P	**P**	**04 08 03.6**	**-3.2**
	comp=E,0.2nm,0.4s,baz=240,slow=12,SNR=2.6						
ARCES	**ARCESS Array B**	**43.40**	**338**	P	**P**	**04 10 22.5**	**+0.8**
	comp=E,1.9nm,0.8s,baz=106,slow=6.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**67.80**	**271**	P	**P**	**04 13 16.8**	**-0.8**
	comp=E,0.6nm,0.9s,baz=54,slow=5.6,SNR=4.6						
WRA	**Warramunga Arr**	**79.38**	**123**	P	**P**	**04 14 24.3**	**-1.3**
	comp=E,0.3nm,0.5s,baz=324,slow=4.8,SNR=2.4						
YKA	**Yellowknife Ar**	**82.71**	**4**	P	**P**	**04 14 42.4**	**-0.2**
	comp=E,0.1nm,0.5s,baz=349,slow=5.6,SNR=3.1						

IDC 27 04:22:54.6±5.6, 26°.68N×141°.97E, h30km±43km, mb3.3/3, mb1 3.5/3, mb1mx3.1/22, mbtmp3.3/3, Error ellipse: s-maj=71.3km s-min=15.3km az=108.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.46**	**25**	Pn	Pn	04 23 05.1	-0.1
	13nm,0.3s,baz=360,slow=24,SNR=41						
CBIJ				Sn	Sb	04 23 11.7	+0.5
	11nm,0.3s,baz=0.0,slow=20,SNR=88						
WRA	**Warramunga Arr**	**46.93**	**190**	P	P	04 31 22.4	-0.2
	7.4nm,0.7s,baz=11,slow=8.6,SNR=51						
ASAR	**Alice Springs**	**50.65**	**190**	P	P	04 31 50.6	-0.5
	0.5nm,0.4s,baz=20,slow=9.4,SNR=8.7						
YKA	**Yellowknife Ar**	**72.60**	**28**	P	P	04 34 19.7	+1.0
	0.1nm,0.6s,baz=293,slow=5.3,SNR=2.9						
FINES	**FINESS Array B**	**78.24**	**334**	P	P	04 34 50.9	-0.3
	0.5nm,0.4s,baz=81,slow=6.0,SNR=3.9						

JMA 27 04:29:32.8±0.4, 32°.68N×142°.22E, h1km, M3.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.07**	**283**	*eS*	Sn	04 30 36.1	+1.0
JHCJ	**Hachijojimakas**	**2.08**	**282**	P	Pn	04 30 09.3	+0.5
BSO1	**Boso 1**	**2.22**	**333**	*eS*	Sb	04 30 39.4	-1.3
BSO3	**Boso 3**	**2.55**	**327**	P	Pn	04 30 16.0	+1.0
BSO3				*eS*	Sb	04 30 49.2	-1.5
JYN	**Shimodate**	**4.15**	**314**	P	Pn	04 30 39.0	+1.6
JYN				*eS*	Sn	04 31 30.3	+3.7
JHO	**Hitachi**	**4.15**	**341**	P	Pn	04 30 35.9	-1.4
JRY	**Ryogami san**	**4.31**	**321**	P	Pn	04 30 40.7	+1.1
JRY				*eS*	Sn	04 31 31.1	+0.5
JAG	**Ashikaga**	**4.38**	**329**	P	Pn	04 30 41.6	+1.1
JAG				*eS*	Sn	04 31 34.2	+2.1

NEIC ***27*** *04:34:42.1±0.3, 56°.42S×26°.80W, h10km, mb4.7/10, Error ellipse: s-maj=10.6km s-min=8.7km az=224.0*

ISCJB ***27*** *04:34:53.2±0.4, 56°.56S±0°.06×27°.0W±0°.1, h112km, mb4.8/24, Error ellipse: s-maj=10.7km s-min=7.9km az=143.4*

IDC ***27*** *04:34:55.4±1.4, 56°.61S×27°.06W, h117km±11km, mb4.4/15, mb1 4.4/17, mb1mx4.4/21, mbtmp4.4/17, MS3.5/9, Ms1 3.5/9, ms1mx3.3/23, Error ellipse: s-maj=15.3km s-min=11.3km az=37.0*

ISC 27 04:34:54.9±0.3, 56°.61S±0°.07×27°.29W±0°.07, h112km, n122, σ1§47/158, mb4.8/24, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA2	**Neumayer--Watz**	**16.70**	**157**	*e*Pn	**Pn**	**04 38 41.4**	**-0.3**
VNA2	**Neumayer--Watz**	**16.70**	**157**	*es*Pn	**Pn**	**04 38 45.5**	**+3.8**
VNA2	**Neumayer--Watz**	**16.70**	**157**	*e*Pn	**ScP**	**04 46 48.4**	**+0.8**
SNAA	**Sanae**	**18.25**	**155**	*e*Pn	**P**	**04 38 58.1**	**-1.2**
SNAA	**Sanae**	**18.25**	**155**	*es*Pn	**Pn**	**04 39 04.1**	**+3.5**
SNAA	**Sanae**	**18.25**	**155**	*e*Pn	**ScP**	**04 46 51.4**	**+0.5**
SNAA	**Sanae**	**18.25**	**155**	*eP*	**P**	**04 38 58.0**	**-1.3**
	46nm,0.6s						
SNAA	**Sanae**	**18.25**	**155**	P	**P**	**04 38 58.1**	**-1.2**
	2.8nm,0.3s,baz=307,slow=10.0,SNR=378						
SNAA				LR	LR	04 43 37.0	
	comp=Z,21nm,19.6s,baz=107,slow=29						
SNAA				ScP	**ScP**	**04 46 50.4**	**-0.6**
	0.2nm,0.3s,baz=304,slow=1.6,SNR=24						
EFI	**East Falkland**	**18.59**	**272**	*eP*	**P**	**04 39 03.9**	**+0.8**
	24nm,0.6s						
EFI	**East Falkland**	**18.59**	**272**	P	**Pn**	**04 39 05.8**	**+1.2**
	465nm,0.9s,SNR=8.8						
PMSA	**Palmer Station**	**19.49**	**230**	*eP*	**Pn**	**04 39 15.3**	**+0.3**
PMSA	**Palmer Station**	**19.49**	**230**	P	**Pn**	**04 39 14.5**	**-0.6**
	0.9nm,0.3s,baz=64,slow=9.8,SNR=3.6						
PMSA				LR	LR	04 45 44.0	
	comp=Z,127nm,18.3s,baz=148,slow=33						
USHA	**Ushuaia**	**23.00**	**257**	P	**P**	**04 39 50.6**	**+0.9**
USHA	**Ushuaia**	**23.00**	**257**	P	**P**	**04 39 50.6**	**+0.9**
	9.9nm,0.7s,baz=78,slow=14,SNR=7.2						
TRQA	**Tornquist**	**29.50**	**294**	*eP*	**P**	**04 40 47.4**	**-0.9**
	1.9nm,0.6s						
PLCA	**Paso Flores**	**32.05**	**281**	*eP*	**P**	**04 41 10.5**	**-0.3**
PLCA				PcP	**PcP**	**04 43 57.4**	**-0.2**
PLCA	**Paso Flores**	**32.05**	**281**	P	**P**	**04 41 09.9**	**-0.9**
	1.9nm,0.6s,baz=143,slow=8.5,SNR=11						
PLCA				PcP	**PcP**	**04 43 57.4**	**-0.2**
	0.7nm,0.5s,baz=114,slow=9.2,SNR=3.4						
PLCA				ScP	**ScP**	**04 47 28.3**	**-2.1**
	3.7nm,0.7s,baz=119,slow=3.1,SNR=17						
PLCA				LR	LR	04 53 33.8	
	comp=Z,98nm,18.4s,baz=27,slow=35						
QSPA	**South Pole Qui**	**33.64**	**180**	*eP*	**P**	**04 41 24.9**	**+0.4**
	69nm,0.6s						
SPB	**Sao Paulo**	**36.12**	**328**	*eP*	**P**	**04 41 47.2**	**+1.3**
	12nm,1.0s						
CPUP	**Villa Florida**	**37.14**	**312**	P	**P**	**04 41 54.2**	**-0.3**
CPUP				PcP	**PcP**	**04 44 12.8**	**+0.4**
CPUP	**Villa Florida**	**37.14**	**312**	P	**P**	**04 41 54.2**	**-0.3**
	13nm,0.5s,baz=90,slow=20,SNR=97						
CPUP				PcP	**PcP**	**04 44 12.8**	**+0.4**
	6.9nm,0.5s,baz=181,slow=1.4,SNR=16						
CPUP				ScP	**ScP**	**04 47 45.9**	**-2.8**
	1.2nm,0.6s,baz=90,slow=20,SNR=4.4						
CPUP				LR	LR	04 55 26.9	
	comp=Z,60nm,18.4s,baz=163,slow=33						
MAW	**Mawson**	**39.73**	**143**	P	**P**	**04 42 13.9**	**-1.9**
MAW	**Mawson**	**39.73**	**143**	P	**P**	**04 42 13.9**	**-1.9**
	7.3nm,0.8s,baz=211,slow=9.2,SNR=10						
MAW				LR	LR	04 58 42.0	
	comp=Z,157nm,18.7s,baz=14,slow=36						
BDFB	**Brasilia**	**43.82**	**331**	P	**P**	**04 42 50.6**	**+0.9**
BDFB	**Brasilia**	**43.82**	**331**	P	**P**	**04 42 50.6**	**+0.9**
	9.4nm,0.6s,baz=149,slow=3.2,SNR=26						
BDFB				LR	LR	04 58 56.6	
	comp=Z,41nm,18.2s,baz=233,slow=33						
SBA	**Scott Base**	**45.52**	**184**	*eP*	**P**	**04 43 03.6**	**+1.2**
VNDA	**Vanda**	**46.01**	**183**	*eP*	**P**	**04 43 07.2**	**+0.9**
	13nm,0.7s						
VNDA	**Vanda**	**46.01**	**183**	P	**P**	**04 43 07.5**	**+1.2**
	13nm,0.6s,baz=185,slow=7.3,SNR=89						
VNDA				ScP	**ScP**	**04 48 22.4**	**-0.8**
	1.3nm,0.8s,baz=202,slow=2.4,SNR=4.9						
VNDA				LR	LR	04 59 26.0	
	comp=Z,92nm,20.6s,baz=150,slow=32						
BOSA	**Boshof**	**46.16**	**75**	*eP*	**P**	**04 43 05.6**	**-2.6**
	2.5nm,0.7s						
BOSA	**Boshof**	**46.16**	**75**	P	**P**	**04 43 07.2**	**-1.0**
	2.3nm,0.8s,baz=270,slow=6.1,SNR=6.3						
SIV	**San Ignacio**	**47.92**	**314**	ScP	**ScP**	**04 48 30.8**	**-1.4**
	2.1nm,0.6s,baz=164,slow=4.8,SNR=8.6						
LBTB	**Lobatse**	**49.23**	**73**	*eP*	P	04 43 28.9	-3.0
LBTB	**Lobatse**	**49.23**	**73**	P	**P**	**04 43 30.1**	**-1.8**
	4.9nm,0.7s,baz=216,slow=8.8,SNR=11						
LPAZ	**La Paz**	**50.66**	**306**	*eP*	**P**	**04 43 44.2**	**+0.8**
LPAZ				*e*PcP	**PcP**	**04 45 00.1**	**+0.9**
LPAZ	**La Paz**	**50.66**	**306**	P	**P**	**04 43 44.0**	**+0.7**
	61nm,0.5s,baz=110,slow=5.0,SNR=486						
LPAZ				PcP	**PcP**	**04 44 59.9**	**+0.7**
	10nm,0.6s,baz=100,slow=3.2,SNR=4.8						
LPAZ				ScP	**ScP

BMO	**Blue Mountains**	**125.86**	**299**	*e*PKPdf	**PKPdf**	**04 53 42.7**	**+0.1**		
JOF	**Joensuu**	**127.52**	**30**	*ep*	**PKPdf**	**04 53 44.0**	**-1.0**		
KSH	**Kashi**	**128.77**	**75**	*e*PKP	**PKPdf**	**04 53 52.3**	**+3.9**		
KSH				*e*PP	**PP**	**04 56 00.3**	**+3.4**		
KSH				PKS	**PKSdf**	**04 57 28.0**	**+3.0**		
KSH				SKS	SKSdf	05 01 01.3	+12		
KSH				SKKS	SKKSac	05 02 52.0	+10		
KSH				AMB	AMB				
	comp=Z,77nm,5.1s								
KSH				LR	LR				
	comp=Z,300nm,4.3s								
NLWA	**Neilton Lookou**	**130.87**	**297**	*e*PKPdf	**PKPdf**	**04 53 52.8**	**+0.8**		
ARCES	**ARCESS Array B**	**131.48**	**22**	PKP	**PKPdf**	**04 53 51.7**	**-0.7**		
ARCES				SKPbc	**SKPbc**	**04 57 06.5**	**-0.7**		
ARCES	**ARCESS Array B**	**131.48**	**22**	PKP	**PKPdf**	**04 53 51.7**	**-0.7**		
	comp=Z,4.9nm,0.8s,baz=195,slow=1.5,SNR=16								
ARCES				SKPbc	**SKPbc**	**04 57 06.5**	**-0.7**		
	comp=Z,1.6nm,0.6s,baz=222,slow=1.2,SNR=5.3								
KMI	**Kunming**	**132.39**	**110**	PKP	**PKPdf**	**04 53 56.8**	**+1.0**		
KMI				PP	**PP**	**04 56 23.0**	**+2.7**		
KMI				AMB	AMB				
	comp=Z,200nm,5.1s								
KMI				LR	LR				
	comp=Z,29nm,23.3s								
GYA	**Guiyang**	**135.50**	**113**	Pdif	**Pdif**	**04 51 04.0**	**-1.0**		
GYA				PKP	**PKPdf**	**04 54 01.8**	**+0.3**		
GYA				PP	**PP**	**04 56 42.3**	**+2.4**		
GYA				PKS	**PKSdf**	**04 57 36.5**	**-1.5**		
GYA				SKKS		05 03 31.3			
GYA				SS	SS	05 14 36.0	+8.4		
GYA				AMB	AMB				
	comp=Z,130nm,7.6s								
GYA				LR	LR				
	comp=N,150nm,20.8s								
GYA				LR	LR				
	comp=E,130nm,21.6s								
GYA				LR	LR				
	comp=Z,160nm,20.5s								
YKA	**Yellowknife Ar**	**136.55**	**318**	PKPpre	PKPpre	04 53 48.2			
YKA				PKP	**PKPdf**	**04 54 01.6**	**-0.4**		
YKA				PP	**PP**	**04 56 41.8**	**-4.4**		
YKA				SKPbc	**SKPbc**	**04 57 22.4**	**-1.5**		
YKA	**Yellowknife Ar**	**136.55**	**318**	PKhKP	PKPpre	04 53 48.2			
	comp=Z,0.4nm,0.5s,baz=127,slow=2.8,SNR=15								
YKA				PKP	**PKPdf**	**04 54 01.6**	**-0.4**		
	comp=Z,3.6nm,0.7s,baz=127,slow=2.2,SNR=39								
YKA				PP	**PP**	**04 56 41.7**	**-4.4**		
	comp=Z,0.8nm,0.9s,baz=118,slow=6.7,SNR=3.8								
YKA				SKPbc	**SKPbc**	**04 57 22.4**	**-1.5**		
	comp=Z,2.0nm,0.6s,baz=130,slow=3.1,SNR=24								
YKW3	**Yellowknife Ar**	**136.59**	**318**	*e*PKPdf	**PKPdf**	**04 54 01.9**	**-0.3**		
MKAR	**Makanchi Array**	**137.12**	**72**	SKPbc	**SKPbc**	**04 57 24.6**	**-1.7**		
	comp=Z,0.6nm,0.7s,baz=242,slow=2.6,SNR=7.2								
CD2	**Chengdu**	**137.56**	**106**	PKP	**PKPdf**	**04 54 06.3**	**+1.2**		
CD2				PP	**PP**	**04 56 56.0**	**+3.3**		
CD2				PKS	**PKSdf**	**04 57 41.0**	**-0.3**		
CD2				SKS	SKSdf	05 01 14.3	+9.0		
CD2				SKKS	SKKSac	05 03 45.3	+9.4		
CD2				SS	SS	05 15 01.3	+9.3		
CD2				AMB	AMB				
	comp=Z,230nm,5.4s								
WMQ	**Urumqi**	**138.07**	**79**	PKP	**PKPdf**	**04 54 07.0**	**+1.4**		
LZH	**Lanzhou**	**141.56**	**101**	*e*PKP	**PKPdf**	**04 54 12.0**	**-0.4**		
ZALV	**Zalesovo Beam**	**142.66**	**65**	PKPpre	PKPpre	04 54 06.8			
ZALV	**Zalesovo Beam**	**142.66**	**65**	PKhKP	PKPpre	04 54 06.8			
	comp=Z,0.5nm,0.3s,baz=250,slow=4.3,SNR=2.6								
SKAG	**Skagway**	**143.50**	**305**	*e*PKPdf	PKPbc	04 54 12.4	0.0		
PNL	**Peninsula**	**145.44**	**304**	*e*PKPdf	**PKPab**	**04 54 18.9**	**+0.1**		
NJ2	**Nanjing**	**146.10**	**122**	*e*PKPbc	**PKPbc**	**04 54 21.0**	**-0.3**		
EGAK	**Eagle**	**148.07**	**312**	*e*PKPdf	**PKPbc**	**04 54 25.2**	**-0.5**		
BMRM	**Bremner River**	**148.33**	**304**	*e*PKPbc	**PKPbc**	**04 54 27.0**	**+0.4**		
BMRM				*e*PKPab	**PKPab**	**04 54 30.7**	**+0.5**		
DOT	**Dot Lake**	**148.96**	**309**	*e*PKPbc	**PKPbc**	**04 54 28.6**	**+0.5**		
HHC	**Hu-ho-hao-te**	**149.18**	**103**	*e*PKPbc	**PKPdf**	**04 54 26.0**	**+0.9**		
HHC				PKS	**PKSdf**	**04 57 59.5**	**-0.6**		
HHC				PP	**PP**	**04 58 05.3**	**+2.7**		
HHC				SKS	SKSdf	05 01 33.0	+10		
HHC				SKKS	SKKSac	05 04 54.0	+12		
HHC				SS	SS	05 17 17.0	+11		
HHC				AMB	AMB				
	comp=Z,260nm,10.3s								
HHC				LR	LR				
	comp=N,320nm,19.8s								
HHC				LR	LR				
	comp=E,500nm,20.4s								
HHC				LR	LR				
	comp=Z,220nm,20.6s								
PAX	**Paxson**	**149.37**	**308**	*e*PKPbc	**PKPbc**	**04 54 29.3**	**0.0**		
PAX				*e*PKPab	**PKPab**	**04 54 34.5**	**+0.1**		
SEW	**Seward**	**150.29**	**301**	*e*PKPbc	**PKPbc**	**04 54 31.6**	**+0.3**		
SML	**Sawmill**	**150.31**	**305**	*e*PKPbc	**PKPbc**	**04 54 31.9**	**+0.5**		
SML				*e*PKPab	**PKPab**	**04 54 38.7**	**+0.4**		
ILAR	**Eielson Array**	**150.44**	**311**	PKP	**PKPdf**	**04 54 22.9**	**-3.3**		
ILAR				PKPbc	**PKPbc**	**04 54 31.5**	**-0.2**		
ILAR	**Eielson Array**	**150.44**	**311**	PKP	**PKPdf**	**04 54 22.9**	**-3.3**		
	comp=Z,1.0nm,0.8s,baz=199,slow=0.3,SNR=12								
ILAR				PKPbc	**PKPbc**	**04 54 31.5**	**-0.2**		
	comp=Z,25nm,0.9s,baz=106,slow=2.0,SNR=186								
PMR	**Palmer**	**150.61**	**304**	*e*PKPbc	**PKPbc**	**04 54 32.5**	**+0.4**		
SONM	**Songino Array**	**150.81**	**88**	PKPbc	**PKPbc**	**04 54 32.5**	**-0.7**		
SONM	**Songino Array**	**150.81**	**88**	PKPbc	**PKPbc**	**04 54 32.5**	**-0.7**		
	comp=Z,4.4nm,0.6s,baz=225,slow=3.2,SNR=31								
COLA	**College**	**150.87**	**311**	*e*PKPbc	**PKPbc**	**04 54 32.2**	**-0.4**		
COLA				*e*PKPab	**PKPab**	**04 54 40.9**	**+0.5**		
MCK	**McKinley**	**151.08**	**308**	*e*PKPbc	**PKPbc**	**04 54 33.5**	**+0.3**		
OHAK	**Old Harbor**	**151.16**	**294**	*e*PKPbc	**PKPbc**	**04 54 33.8**	**+0.3**		
TRF	**Thorofare Moun**	**151.60**	**308**	*e*PKPbc	**PKPbc**	**04 54 34.2**	**-0.5**		
TRF				*e*PKPab	**PKPab**	**04 54 42.8**	**-1.0**		
COLD	**Coldfoot**	**152.18**	**316**	*e*PKPbc	**PKPbc**	**04 54 36.1**	**+0.5**		
COLD				*e*PKPab	**PKPab**	**04 54 47.0**	**+1.1**		
PPLA	**Purkeypile**	**152.32**	**306**	*e*PKPbc	**PKPbc**	**04 54 36.3**	**+0.1**		
PPLA				*e*PKPab	**PKPab**	**04 54 47.2**	**+0.4**		
CN2	**Changchun**	**158.53**	**115**	*e*PKP	**PKPdf**	**04 54 39.5**	**+1.4**		
MDJ	**Mudanjiang**	**161.16**	**120**	PKP	**PKPdf**	**04 54 41.8**	**+0.8**		

BJI ***27*** *05:23:12.3,0.˚88S×123.˚17E,h190km,mB4.9/23,mb4.6/35*
MOS ***27*** *05:23:16.6±1.0,0.˚04N×122.˚95E,h181km,mb4.6/18,Error ellipse: s-maj=14.5km s-min=6.6km az=115.0*
ISCJB ***27*** *05:23:17.5±0.3,0.˚03S±0.˚02×123.˚11E±0.˚02,h183km±3km, mb4.6/67,Error ellipse: s-maj=4.1km s-min=3.2km az=144.7*
IDC ***27*** *05:23:17.1±0.8,0.˚02N×122.˚94E,h170km±6km,mb4.2/28, mb1 4.3/30,mb1mx4.3/34,mbtmp4.2/30,Error ellipse: s-maj=12.8km s-min=6.7km az=69.0*
NEIC ***27*** *05:23:18.7±0.7,0.˚03S×122.˚95E,h184km±6km,mb4.7/18, Error ellipse: s-maj=8.6km s-min=4.9km az=69.0*
DJA ***27*** *05:23:18.0±0.2,0˚S±2˚×12˚3E±˚,h150km±2km,M4.8/34, mB5.2/16,mb4.9/34,MLv5.1/16,Mw(mB)4.6/16*
AUST ***27*** *05:23:19.7±0.3,0.˚11S×123.˚02E,h191km,Error ellipse: s-maj=0.9km s-min=0.6km az=32.0*

ISC 27 05:23:17.8±0.3,0.˚01S±0.˚03×123.˚03E±0.˚04,h177km±2km, h177km:pP-P,n269,σ1s45/336,mb4.6/67,7C,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**1.06**	**194**	P	**Pn**	**05 23 43.8**	**-1.9**
LUWI				S	**Sn**	**05 24 03.6**	**-3.7**
KMSI	**Cibinong**	**1.11**	**58**	P	**Pn**	**05 23 45.5**	**-0.6**
MRSI	**Marisa**	**1.20**	**294**	P	**Pn**	**05 23 44.8**	**-2.0**
MRSI				S	**Sn**	**05 24 05.0**	**-4.1**
MNI	**Manado**	**2.31**	**51**	P	**Pn**	**05 23 58.3**	**+0.1**
SKSI	**Soroako, Sulaw**	**3.02**	**214**	S	**Sn**	**05 24 41.5**	**-3.3**
TNTI	**Ternate**	**4.40**	**80**	P	**Pn**	**05 24 22.6**	**-1.4**
TTSI	**Tana Toraja**	**4.40**	**227**	P	**Pn**	**05 24 24.5**	**+0.5**
LBMI	**Labuha**	**4.51**	**98**	P	**Pn**	**05 24 24.1**	**-1.3**
LBMI				S	**Sn**	**05 25 14.1**	**-4.3**
SPSI	**Sidrap Palu**	**5.10**	**220**	P	**Pn**	**05 24 33.3**	**+0.2**
	206nm,0.7s,2μm0.7nm						
NLAI	**Namlea**	**5.18**	**128**	P	**Pn**	**05 24 33.8**	**-0.3**
	538nm,0.5s,40μm12nm						
NLAI				S	**Sn**	**05 25 30.6**	**-3.3**
	538nm,0.5s,40μm12nm						
SGKI	**Sangatta, Kali**	**5.45**	**265**	S	**Sn**	**05 25 38.5**	**-1.9**
BBSI	**Bau Bau**	**5.46**	**185**	P	**Pn**	**05 24 37.7**	**-0.1**
	332nm,0.7s,3μm1.0nm						
KAPI	**Kappang**	**5.95**	**213**	*e*Pn	**Pn**	**05 24 43.3**	**-0.9**
KAPI				*e*Sn	**Sn**	**05 25 54.4**	**+2.1**
KAPI	**Kappang**	**5.95**	**213**	P	**Pn**	**05 24 43.4**	**-0.9**
	305nm,1.0s,3μm1.0nm						
KAPI	**Kappang**	**5.95**	**213**	P	**Pn**	**05 24 43.5**	**-0.7**
	8.3nm,0.3s,baz=27,slow=6.8,SNR=118						
BKSI	**Bulukumba**	**6.02**	**209**	P	**Pn**	**05 24 45.7**	**+0.6**
	278nm,1.0s,3μm0.9nm						
AAI	**Ambon**	**6.32**	**125**	P	**Pn**	**05 24 49.7**	**+0.7**
	348nm,0.5s,6μm1.7nm						
AAI	**Ambon**	**6.32**	**125**	P	**Pn**	**05 24 49.8**	**+0.7**
	baz=6.3,SNR=12						
TSM	**Tawau**	**6.70**	**310**	P	**Pn**	**05 24 53.7**	**-0.3**
MSAI	**Masohi**	**6.76**	**119**	P	**Pn**	**05 24 55.9**	**+1.1**
	72nm,0.7s,2μm0.5nm						
MSAI				S	**Sn**	**05 26 11.4**	**0.0**
	72nm,0.7s,2μm0.5nm						
MYLDM	**Lahad Datu**	**6.86**	**319**	P	**Pn**	**05 24 56.1**	**-0.1**
MYLDM	**Lahad Datu**	**6.86**	**319**	P	Pn	05 24 59.3	+3.1
	24nm,0.9s,1μm1.6nm						
CTBH	**Cotabato--PC H**	**7.29**	**10**	*i*	**Pn**	**05 25 03.4**	**+1.6**
DAV	**Davao City (W)**	**7.48**	**20**	P	Pn	05 25 07.0	+2.7
DAV	**Davao City (W)**	**7.48**	**20**	P	Pn	05 25 07.0	+2.7
	37nm,0.3s,baz=219,slow=14,SNR=7.8						
KBKI	**Kotabaru**	**7.60**	**244**	P	**Pn**	**05 25 06.8**	**+0.9**
	47nm,0.9s,0.2nm						
PAGZ	**Pagadian**	**7.81**	**3**	*e*P	Pn	05 25 11.1	+2.4
SDKM	**Sandakan**	**8.09**	**314**	P	**Pn**	**05 25 13.0**	**+0.5**
BUKP	**Musuan**	**8.10**	**14**	*e*P	Pn	05 25 15.0	+2.5
KKM	**Kota Kinabalu**	**9.08**	**312**	*e*Pn	Pn	05 25 26.9	+1.4
KKM	**Kota Kinabalu**	**9.08**	**312**	P	**Pn**	**05 25 26.1**	**+0.5**
KKM	**Kota Kinabalu**	**9.08**	**312**	P	Pn	05 25 27.0	+1.4
	7.3nm,0.5s,661nm						
KKM	**Kota Kinabalu**	**9.08**	**312**	P	**Pn**	**05 25 26.0**	**+0.5**
	baz=9.2,SNR=11						
KKM				S	Sn	05 27 13.2	+6.2
	baz=9.2,SNR=3.8						
KDM	**Kudat**	**9.25**	**318**	P	Pn	05 25 34.4	+6.7
FAKI	**Fak Fak**	**9.65**	**107**	S	Sn	05 27 15.8	-4.8
BTM	**Bintulu**	**10.44**	**288**	P	P	05 25 46.1	-5.4
GUIM	**Jordan**	**10.58**	**358**	*e*P	Pn	05 25 47.5	+2.5
SBUM	**Sibu**	**11.08**	**283**	P	**Pn**	**05 25 52.6**	**+1.0**
SBUM	**Sibu**	**11.08**	**283**	P	P	05 26 04.6	+5.8
KHKI	**Kahang-Kahang**	**11.12**	**222**	P	P	05 26 03.4	+4.3
TLE	**Tual**	**11.19**	**120**	P	**Pn**	**05 25 53.9**	**+1.0**
	637nm,0.8s						
TLE	**Tual**	**11.19**	**120**	P	**Pn**	**05 25 54.0**	**+1.1**
	baz=11,SNR=11						
IGBI	**Denpasar**	**11.76**	**222**	P	P	05 26 09.4	+3.1
BLJI	**Banyuglugur**	**12.15**	**231**	P	P	05 26 14.8	+4.2
SJMP	**San Jose**	**12.54**	**351**	*e*P	**P**	**05 26 13.4**	**-1.5**
GMJI	**Gumukmas**	**12.60**	**229**	P	P	05 26 19.5	+3.9
KSM	**Kuching**	**12.81**	**277**	*e*Pn	P	05 26 20.9	+2.9
KSM	**Kuching**	**12.81**	**277**	P	P	05 26 21.3	+3.4
KSM	**Kuching**	**12.81**	**277**	P	P	05 26 20.9	+2.9
PALU	**Palau**	**13.55**	**57**	P	**P**	**05 26 26.4**	**+0.2**
	baz=14,SNR=3.2						
SJI	**Sawahan**	**13.60**	**235**	P	**P**	**05 26 28.3**	**+1.4**
PWJI	**Pagerwojo**	**13.73**	**234**	P	**P**	**05 26 28.8**	**+0.6**
	56nm,0.8s						
TGY	**Tagaytay City**	**14.18**	**352**	P	**P**	**05 26 32.0**	**-1.2**
TGY	**Tagaytay City**	**14.18**	**352**	P	**P**	**05 26 32.0**	**-1.2**
	77nm,0.3s,baz=90,slow=1.0,SNR=2.6						
PCJI	**Pacitan**	**14.34**	**235**	P	**P**	**05 26 36.0**	**+1.0**
	75nm,0.7s						
UGM	**Wanagama**	**14.73**	**238**	P	P	05 26 45.3	+5.9
	baz=15,SNR=3.2						
MTN	**Manton Dam**	**15.07**	**148**	P	**Pn**	**05 26 42.2**	**+0.3**
	baz=15,SNR=52						
BJII	**Banjamegara**	**15.15**	**241**	P	**P**	**05 26 44.9**	**+0.9**
	100nm,1.5s,2μm						
TGJI	**Tegal**	**15.46**	**244**	P	**P**	**05 26 48.9**	**+1.5**
	44nm,0.9s						
TPI	**Tanjungpandan**	**15.61**	**260**	P	**P**	**05 26 51.8**	**+2.7**
	18nm,1.0s,707nm						
KDU	**Kakadu**	**15.69**	**144**	P	**Pn**	**05 26 49.5**	**-0.1**
	baz=16,SNR=11						
KDU				S	Sn	05 30 06.3	+21
	baz=16,SNR=5.2						
CLJI	**Cilicap**	**15.94**	**241**	P	**P**	**05 26 53.2**	**+0.6**
	62nm,1.2s						
LEM	**Lembang**	**16.80**	**246**	P	**Pn**	**05 27 03.3**	**+0.1**
	66nm,1.1s						
CISI	**Cisompet, Garu**	**16.92**	**243**	P	**Pn**	**05 27 03.2**	**-1.3**
	85nm,0.7s						
PPBI	**Pangkal Pinang**	**17.03**	**263**	P	**Pn**	**05 27 06.6**	**+0.9**
	28nm,0.7s						
FITZ	**Fitzroy Crossi**	**18.16**	**172**	P	**P**	**05 27 17.6**	**+0.6**
FITZ				S	**S**	**05 30 33.5**	**-2.3**
FITZ				ScP	**ScP**	**05 35 00.4**	**-0.9**
FITZ	**Fitzroy Crossi**	**18.16**	**172**	P	**P**	**05 27 17.6**	**+0.6**
	4.5nm,0.3s,baz=4.2,slow=8.1,SNR=147						
FITZ				S	**S**	**05 30 33.5**	**-2.3**
	0.2nm,0.3s,baz=336,slow=20,SNR=13						
FITZ				ScP	**ScP**	**05 35 00.4**	**-0.9**
	0.5nm,0.3s,baz=3.5,slow=1.9,SNR=12						
FITZ	**Fitzroy Crossi**	**18.16**	**172**	P	**P**	**05 27 17.6**	**+0.6**
	baz=18,SNR=95						
FITZ				S	**S**	**05 30 34.2**	**-1.6**
	baz=18,SNR=12						
CGJI	**Cibinong**	**18.50**	**249**	P	**Pn**	**05 27 23.0**	**-0.1**
	83nm,0.5s,4μm						
MYKOM	**Kota Tinggi**	**19.26**	**275**	P	**Pn**	**05 27 31.8**	**-0.3**
MYKOM	**Kota Tinggi**	**19.26**	**275**	P	**Pn**	**05 27 32.1**	**0.0**
	19nm,0.9s						
KASI	**Kota Agung**	**19.30**	**253**	P	**Pn**	**05 27 31.2**	**-1.3**
	71nm,0.8s,831nm						
KGM	**Kluang**	**19.81**	**276**	P	**Pn**	**05 27 39.5**	**+0.8**
XMIS	**Christmas Isla**	**20.17**	**238**	S	Sn	05 31 36.4	+4.6
	baz=20,SNR=3.9						
MNAI	**Manna**	**20.52**	**258**	P	**P**	**05 27 43.1**	**+0.6**
	baz=20,SNR=8.0						
KTGM	**Kuala Trenggan**	**20.57**	**285**	P	Pn	05 27 45.2	-2.6
MBWA	**Marble Bar**	**21.27**	**189**	*e*P	**P**	**05 27 49.5**	**-0.8**
	29nm,0.6s						
MBWA				*e*S	**S**	**05 31 34.7**	**-1.4**
FRIM	**Kepong**	**21.64**	**279**	P	P	05 27 58.0	+3.5
KRJI	**Kerinci**	**21.66**	**264**	P	**P**	**05 27 57.1**	**+2.3**
	371nm,0.7s,5μm						
IPM	**Ipoh**	**22.43**	**282**	*e*P	**P**	**05 28 03.7**	**+1.5**
	28nm,0.6s						
IPM	**Ipoh**	**22.43**	**282**	P	**P**	**05 28 04.3**	**+2.1**
IPM	**Ipoh**	**22.43**	**282**	P	**P**	**05 28 04.6**	**+2.4**
	20nm,1.2s						
PPI	**Padang Panjang**	**22.64**	**269**	P	**P**	**05 28 05.8**	**+1.7**
	95nm,0.9s						
PPI	**Padang Panjang**	**22.64**	**269**	P	**P**	**05 28 05.8**	**+1.7**
	baz=23,SNR=5.1						
WRAB	**Tennant Creek**	**22.69**	**151**	*e*P	**P**	**05 28 04.4**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,52nm,1.1s						
WRAB	**Tennant Creek**	**22.69**	**151**	*e*P	**P**	**05 28 04.4**	**-0.1**
	comp=Z,52nm,1.1s						
WRA	**Warramunga Arr**	**22.70**	**151**	P	**P**	**05 28 03.9**	**-0.7**
WRA				pP	**pP**	**05 28 34.3**	**-2.4**
WRA				sP	**sP**	**05 29 01.1**	**+2.4**
WRA				S	**S**	**05 31 56.8**	**-2.7**
WRA				ScP	**ScP**	**05 35 11.4**	**-0.7**
WRA	**Warramunga Arr**	**22.70**	**151**	P	**P**	**05 28 03.9**	**-0.7**
	comp=Z,21nm,0.7s,baz=326,slow=11,SNR=137						
WRA				pP	**pP**	**05 28 34.3**	**-2.4**
	comp=Z,11nm,0.7s,baz=325,slow=11,SNR=4.4						
WRA				sP	**sP**	**05 29 01.1**	**+2.4**
	comp=Z,28nm,0.9s,baz=333,slow=10.0,SNR=5.9						
WRA				S	**S**	**05 31 56.8**	**-2.7**
	comp=Z,4.0nm,0.9s,baz=335,slow=16,SNR=5.0						
WRA				ScP	**ScP**	**05 35 11.4**	**-0.7**
	comp=Z,3.0nm,0.5s,baz=327,slow=2.7,SNR=20						
QIZ	**Qiongzhong**	**22.93**	**326**	P	**P**	**05 28 06.3**	**-0.3**
QIZ				S	**S**	**05 32 06.0**	**+2.8**
QIZ				pmax	pmax		
	comp=Z,42nm,2.5s						
QIZ				pmax	pmax		
	comp=Z,210nm,3.5s						
KULM	**Kulim**	**22.96**	**284**	*e*P	**P**	**05 28 09.0**	**+1.9**
	comp=Z,15nm,0.8s						
KULM	**Kulim**	**22.96**	**284**	P	**P**	**05 28 10.0**	**+2.9**
TPUB	**Ta-pu**	**23.29**	**354**	*e*P	**P**	**05 28 12.1**	**+2.2**
	comp=Z,42nm,0.6s						
SISI	**Saibi**	**23.98**	**267**	P	P	05 28 30.2	+14
GIRL	**Giralia**	**24.07**	**200**	P	**P**	**05 28 18.0**	**+1.0**
	baz=24,SNR=7.2						
CHBT	**CHBT**	**24.13**	**302**	P	**P**	**05 28 20.6**	**+3.0**
	comp=Z,42nm,0.8s,comp=Z,3μm						
PSI	**Prapat**	**24.26**	**277**	P	**P**	**05 28 17.2**	**-1.8**
PSI	**Prapat**	**24.26**	**277**	P	**P**	**05 28 17.2**	**-1.8**
	comp=Z,3.8nm,0.4s,baz=77,slow=5.3,SNR=5.8						
PSI	**Prapat**	**24.26**	**277**	P	**P**	**05 28 20.3**	**+1.3**
	baz=24,SNR=3.2						
COEN	**Coen**	**24.28**	**126**	P	**P**	**05 28 20.3**	**+1.2**
	baz=24,SNR=13						
GSI	**Gunungsitoli**	**25.49**	**273**	S	S	05 32 58.2	+14
	baz=26,SNR=3.7						
PMG	**Port Moresby**	**25.77**	**112**	*e*P	**P**	**05 28 33.4**	**+0.9**
	comp=Z,4.7nm,0.4s						
PMG	**Port Moresby**	**25.77**	**112**	P	**P**	**05 28 32.8**	**+0.3**
	comp=Z,4.6nm,0.4s,baz=301,slow=6.0,SNR=4.9						
AS31	**Alice Springs**	**25.77**	**157**	*e*P	**P**	**05 28 32.5**	**+0.1**
AS31				*e*PcP	**PcP**	**05 31 58.1**	**+0.5**
ASAR	**Alice Springs**	**25.77**	**157**	P	**P**	**05 28 32.8**	**+0.3**
ASAR				pP	**pP**	**05 29 06.4**	**-2.3**
ASAR				PcP	**PcP**	**05 31 58.2**	**+0.6**
ASAR				S	**S**	**05 32 48.0**	**-0.6**
ASAR				ScP	**ScP**	**05 35 20.3**	**-0.3**
ASAR	**Alice Springs**	**25.77**	**157**	P	**P**	**05 28 32.8**	**+0.3**
	comp=Z,3.3nm,0.6s,baz=331,slow=7.9,SNR=28						
ASAR				pP	**pP**	**05 29 06.4**	**-2.3**
	comp=Z,4.2nm,0.6s,baz=341,slow=11,SNR=4.3						
ASAR				PcP	**PcP**	**05 31 58.2**	**+0.6**
	comp=Z,4.8nm,0.5s,baz=341,slow=2.1,SNR=11						
ASAR				S	**S**	**05 32 48.0**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=344,slow=20,SNR=4.9						
ASAR				ScP	**ScP**	**05 35 20.3**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=337,slow=2.8,SNR=6.7						
QIS	**Mount Isa**	**26.07**	**143**	P	**P**	**05 28 35.9**	**+0.7**
	baz=26,SNR=11						
MEEK	**Meekatharra**	**26.81**	**189**	P	**P**	**05 28 41.1**	**-0.6**
	baz=27,SNR=35						
MTSU	**Mount Surprise**	**27.61**	**132**	P	**P**	**05 28 49.8**	**+0.9**
	baz=28,SNR=6.8						
MORW	**Morawa**	**29.66**	**192**	P	**P**	**05 29 06.6**	**-0.3**
	baz=30,SNR=9.8						
CMAR	**Chiang Mai Arr**	**29.95**	**309**	P	**P**	**05 29 10.6**	**+0.9**
CMAR				PcP	**PcP**	**05 32 09.0**	**+1.1**
CMAR				ScP	**ScP**	**05 35 34.5**	**+0.9**
CMAR	**Chiang Mai Arr**	**29.95**	**309**	P	**P**	**05 29 10.6**	**+0.9**
	comp=Z,12nm,0.8s,baz=135,slow=7.2,SNR=48						
CMAR				PcP	**PcP**	**05 32 09.0**	**+1.1**
	comp=Z,2.8nm,0.7s,baz=173,slow=2.5,SNR=10.0						
CMAR				ScP	**ScP**	**05 35 34.5**	**+0.9**
	comp=Z,0.8nm,0.4s,baz=159,slow=3.0,SNR=4.3						
CMMT	**Chiang Mai**	**30.15**	**310**	P	P	05 29 15.6	+4.2
	comp=Z,28nm,0.9s						
CHTO	**Chiang Mai**	**30.15**	**310**	*e*P	**P**	**05 29 10.0**	**-1.4**
	comp=Z,22nm,0.9s						
CHTO				*e*PcP	**PcP**	**05 32 09.9**	**+1.4**
CHTO	**Chiang Mai**	**30.15**	**310**	P	P	05 29 15.5	+4.1
	comp=Z,32nm,0.9s						
CTA	**Charters Tower**	**30.25**	**133**	P	**P**	**05 29 12.8**	**+0.6**
CTA	**Charters Tower**	**30.25**	**133**	P	**P**	**05 29 12.8**	**+0.6**
	comp=Z,8.3nm,0.7s,baz=319,slow=9.4,SNR=8.7						
GYA	**Guiyang**	**30.68**	**330**	*e*P	P	05 29 19.0	+2.9
GYA				pP	pP	05 29 58.5	+5.6
GYA				sP	sP	05 30 20.0	+6.7
GYA				PcP	**PcP**	**05 32 11.5**	**+1.7**
GYA				S	**S**	**05 34 08.0**	**+2.2**
GYA				ScP	**ScP**	**05 35 34.3**	**-1.6**
GYA				PcS	**PcS**	**05 35 53.3**	**-0.8**
GYA				ScS	**ScS**	**05 39 31.0**	**-2.0**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.6s						
FORT	**Forrest**	**30.97**	**172**	P	**P**	**05 29 18.4**	**0.0**
	baz=31,SNR=19						
BLDU	**Ballidu**	**31.02**

CNB	**Canberra Magne**	**42.85**	**148**	P		**P**	**05 31 00.4**	**+1.7**
	baz=43,SNR=5.8							
ODAN	**Odare**	**43.46**	**311**	*e*P		**P**	**05 31 06.0**	**+2.1**
	comp=Z,41nm,0.8s							
TAPN	**Taplejung**	**43.48**	**312**	*e*P		**P**	**05 31 05.0**	**+0.9**
	comp=Z,23nm,0.5s							
CN2	**Changchun**	**43.67**	**3**	*e*P		P	05 31 09.0	+4.0
RAMN	**Ramite**	**44.10**	**310**	*e*P		**P**	**05 31 10.4**	**+1.4**
	comp=Z,102nm,0.7s							
GTA	**Gaotai**	**44.62**	**334**	*e*P		**P**	**05 31 14.0**	**+1.3**
GTA				pP		**pP**	**05 31 52.0**	**+0.4**
GTA				sP		**sP**	**05 32 12.8**	**+1.3**
GTA				pmax	pmax			
	comp=Z,9.0nm,0.6s							
USRK	**Ussuriysk Arra**	**44.74**	**9**	P		**P**	**05 31 13.0**	**-0.4**
	comp=Z,9.7nm,0.5s,baz=201,slow=6.2,SNR=24							
MDJ	**Mudanjiang**	**44.82**	**7**	P		P	05 31 17.0	+3.0
MDJ				pmax	pmax			
	comp=Z,7.0nm,1.2s							
MDJ				pmax	pmax			
	comp=Z,230nm,5.5s							
GUN	**Gumba**	**45.15**	**311**	*e*P		**P**	**05 31 18.8**	**+1.4**
	comp=Z,89nm,0.6s							
PKI	**Pulchoki**	**45.33**	**310**	*e*P		**P**	**05 31 19.8**	**+1.0**
	comp=Z,41nm,0.7s							
PKIN	**Phulchoki**	**45.34**	**310**	*e*P		**P**	**05 31 19.6**	**+0.8**
	comp=Z,32nm,0.7s							
KKN	**Kakani**	**45.54**	**311**	*e*P		**P**	**05 31 21.3**	**+1.0**
	comp=Z,68nm,0.9s							
DMN	**Daman**	**45.58**	**310**	*e*P		**P**	**05 31 22.5**	**+1.8**
	comp=Z,52nm,0.7s							
KOLN	**Koldanda**	**46.82**	**309**	*e*P		**P**	**05 31 32.1**	**+1.8**
	comp=Z,126nm,0.8s							
DANN	**Dangsing**	**46.98**	**310**	*e*P		**P**	**05 31 33.4**	**+1.7**
	comp=Z,171nm,0.6s							
PYUN	**Piuthan**	**47.45**	**310**	*e*P		**P**	**05 31 36.3**	**+1.1**
	comp=Z,315nm,0.9s							
DZM	**Mont Dzumac**	**47.63**	**120**	P		**P**	**05 31 38.0**	**+1.4**
DZM	**Mont Dzumac**	**47.63**	**120**	P		**P**	**05 31 38.0**	**+1.4**
	comp=Z,9.7nm,0.8s,baz=266,slow=9.3,SNR=7.0							
ULN	**Ulaanbaatar**	**49.67**	**346**	*e*P		**P**	**05 31 51.6**	**-0.1**
	comp=Z,11nm,0.8s							
ULN	**Ulaanbaatar**	**49.67**	**346**	P		**P**	**05 31 51.0**	**-0.7**
	comp=Z,14nm,0.8s							
SONM	**Songino Array**	**49.80**	**345**	P		**P**	**05 31 52.8**	**+0.1**
SONM				PcP		**PcP**	**05 33 10.4**	**-0.4**
SONM				ScP		**ScP**	**05 36 48.5**	**-1.2**
SONM	**Songino Array**	**49.80**	**345**	P		**P**	**05 31 52.8**	**+0.1**
	comp=Z,12nm,0.8s,baz=162,slow=9.2,SNR=57							
SONM				PcP		**PcP**	**05 33 10.4**	**-0.4**
	comp=Z,1.7nm,0.3s,baz=159,slow=3.5,SNR=10.0							
SONM				ScP		**ScP**	**05 36 48.5**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=156,slow=4.3,SNR=4.4							
YSS	**Yuzh-Sakhalins**	**49.86**	**18**	*e*P		**P**	**05 31 53.7**	**+0.8**
ZAK	**Zakamensk**	**52.96**	**344**	*e*P		**P**	**05 32 15.8**	**-0.2**
ZAK				*e*			05 32 55.3	
ZAK				*e*			05 33 22.1	
ZAK				pmax	pmax			
	comp=Z,1.0nm,1.0s							
WMQ	**Urumqi**	**53.82**	**329**	P		**P**	**05 32 24.0**	**+1.6**
WMQ				pmax	pmax			
	comp=Z,21nm,1.0s							
KSH	**Kashi**	**58.21**	**318**	P		**P**	**05 32 56.0**	**+2.3**
KSH				pP		**PcP**	**05 33 38.8**	**-4.3**
KSH				PcP		pP	05 33 43.5	+8.9
KSH				sP		sP	05 33 59.0	+5.0
KSH				PP		**PP**	**05 35 07.8**	**+3.1**
KSH				ScP		**ScP**	**05 37 24.3**	**-2.3**
KSH				PcS		**PcS**	**05 37 43.3**	**-1.6**
KSH				S		**S**	**05 40 40.5**	**-1.2**
KSH				sS		sS	05 41 57.0	+4.3
KSH				ScS		**ScS**	**05 42 21.5**	**-4.5**
KSH				pmax	pmax			
	comp=Z,24nm,1.3s							
KSH				LR		LR		
	comp=N,190nm,4.7s							
KSH				LR		LR		
	comp=E,230nm,5.6s							
KSH				LR		LR		
	comp=Z,190nm,5.0s							
MK31	**Makanchi Array**	**58.64**	**328**	*ce*P		**P**	**05 32 56.4**	**0.0**
MK31				pmax	pmax			
	comp=Z,4.0nm,0.3s							
MK31	**Makanchi Array**	**58.64**	**328**	*e*P		**P**	**05 32 56.5**	**0.0**
MKAR	**Makanchi Array**	**58.64**	**328**	P		**P**	**05 32 56.6**	**+0.1**
MKAR				*PP		**pP**	**05 33 35.2**	**-2.2**
MKAR							05 33 43.1	
MKAR	**Makanchi Array**	**58.64**	**328**	P		**P**	**05 32 56.5**	**+0.1**
MKAR				pP		**pP**	**05 33 35.2**	**-2.2**
MKAR				PcP		**PcP**	**05 33 43.1**	**-1.4**
MKAR				ScP		**ScP**	**05 37 26.0**	**-2.2**
MKAR	**Makanchi Array**	**58.64**	**328**	P		**P**	**05 32 56.5**	**+0.1**
	comp=Z,5.1nm,0.4s,baz=122,slow=8.5,SNR=149							
MKAR				pP		**pP**	**05 33 35.2**	**-2.2**
	comp=Z,1.7nm,0.6s,baz=127,slow=8.1,SNR=2.5							
MKAR				PcP		**PcP**	**05 33 43.1**	**-1.4**
	comp=Z,1.8nm,0.5s,baz=142,slow=3.7,SNR=7.0							
MKAR				ScP		**ScP**	**05 37 26.0**	**-2.2**
	comp=Z,0.5nm,0.5s,baz=116,slow=5.5,SNR=3.9							
TKM2	**Tokmak 2**	**60.22**	**321**	*e*P		**P**	**05 33 07.8**	**+0.3**
TKM2				pmax	pmax			
	comp=Z,3.0nm,0.6s							
TKM2	**Tokmak 2**	**60.22**	**321**	*e*P		**P**	**05 33 07.8**	**+0.3**
	comp=Z,2.7nm,0.6s							
PEA0B	**Petropavlovsk-**	**60.28**	**23**	*e*P		**P**	**05 33 08.2**	**+0.7**
PETK	**Petropavlovsk-**	**60.28**	**23**	P		**P**	**05 33 08.5**	**+1.0**
PETK	**Petropavlovsk-**	**60.28**	**23**	P		**P**	**05 33 08.5**	**+1.0**
PETK	**Petropavlovsk-**	**60.28**	**23**	P		**P**	**05 33 08.5**	**+1.0**
	comp=Z,6.8nm,0.7s,baz=208,slow=4.4,SNR=15							
AAK	**Ala-Archa**	**60.76**	**321**⇑	*e*P		**P**	**05 33 11.7**	**+0.5**
AAK				*i* *PP		**PcP**	**05 33 53.0**	**-0.3**
AAK				pmax	pmax			
	comp=Z,11nm,0.9s							
AAK	**Ala-Archa**	**60.76**	**321**	P		**P**	**05 33 11.1**	**-0.1**
AAK				PcP		**PcP**	**05 33 52.5**	**-0.8**
AAK	**Ala-Archa**	**60.76**	**321**	P		**P**	**05 33 11.1**	**-0.1**
	comp=Z,3.3nm,0.6s,baz=123,slow=5.7,SNR=12							
AAK				PcP		**PcP**	**05 33 52.5**	**-0.8**
	comp=Z,2.3nm,0.7s,baz=86,slow=3.6,SNR=4.2							
KBL	**Kabul**	**60.97**	**310**	*e*P		**P**	**05 33 13.6**	**+0.8**
KBL				pmax	pmax			
	comp=Z,38nm,0.4s							
KBL	**Kabul**	**60.97**	**310**	*e*P		**P**	**05 33 13.6**	**+0.8**
	comp=Z,38nm,0.4s							
KBL	**Kabul**	**60.97**	**310**	P		**P**	**05 33 13.6**	**+0.8**
	baz=61,SNR=12							
RPZ	**Rata Peaks**	**60.98**	**142**	*e*P		**P**	**05 33 13.9**	**+1.5**
RPZ	**Rata Peaks**	**60.98**	**142**	P		**P**	**05 33 13.6**	**+1.2**
	comp=Z,51nm,0.8s,baz=275,slow=0.7,SNR=8.0							
EKS2	**Erkin-Say**	**61.23**	**320**	*e*P		**P**	**05 33 15.0**	**+0.7**
EKS2				pmax	pmax			
	comp=Z,3.0nm,0.6s							
EKS2	**Erkin-Say**	**61.23**	**320**	*e*P		**P**	**05 33 15.0**	**+0.7**
	comp=Z,2.9nm,0.6s							
ZALV	**Zalesovo Beam**	**62.34**	**336**	P		**P**	**05 33 20.1**	**-1.2**
ZALV							05 33 58.5	
ZALV	**Zalesovo Beam**	**62.34**	**336**	P		**P**	**05 33 20.1**	**-1.2**
ZALV				PcP		**PcP**	**05 33 58.5**	**-0.7**
ZALV	**Zalesovo Beam**	**62.34**	**336**	P		**P**	**05 33 20.1**	**-1.2**
	comp=Z,2.4nm,0.6s,baz=126,slow=8.5,SNR=6.4							
ZALV				PcP		**PcP**	**05 33 58.5**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=124,slow=3.0,SNR=5.5							
KURK	**Kurchatov**	**63.00**	**330**	*e*P		**P**	**05 33 25.1**	**-0.6**
KURK				pmax	pmax			
	comp=Z,19nm,0.4s							
KURK	**Kurchatov**	**63.00**	**330**	*e*P		**P**	**05 33 25.1**	**-0.6**
	comp=Z,19nm,0.4s							
NVS	**Novosibirsk**	**63.62**	**336**	*i* P		**P**	**05 33 28.3**	**-1.4**
SEY	**Seymchan**	**66.51**	**14**⇑	*e*P		**P**	**05 33 49.1**	**+0.9**
BVAR	**Borovoye Array**	**68.51**	**329**	P		**P**	**05 34 00.1**	**-0.8**
BVAR	**Borovoye Array**	**68.51**	**329**	P		**P**	**05 34 00.1**	**-0.8**
BVAR	**Borovoye Array**	**68.51**	**329**	P		**P**	**05 34 00.1**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=134,slow=8.5,SNR=9.9							
BRVK	**Borovoye**	**68.58**	**329**	*ic* *i*P		**P**	**05 34 00.4**	**-1.0**
BRVK				pmax	pmax			
	comp=Z,1.0nm,0.4s							
ZRNK	**Zerenda**	**69.19**	**328**	*i* P		**P**	**05 34 04.1**	**-1.0**
ZRNK				pmax	pmax			
	comp=Z,5.0nm,0.5s							
TIXI	**Tiksi**	**71.64**	**2**	*e*P		**P**	**05 34 18.8**	**-0.8**
TIXI				pmax	pmax			
	comp=Z,8.0nm,0.4s							
TIXI	**Tiksi**	**71.64**	**2**	*e*P		**P**	**05 34 18.8**	**-0.8**
	comp=Z,7.9nm,0.4s							
AB31	**Akbulak array**	**72.76**	**322**	*i* P		**P**	**05 34 24.3**	**-2.4**
ABKAR	**Akbulak array**	**72.76**	**322**	*e*P		**P**	**05 34 26.1**	**-0.6**
	comp=Z,0.8nm,0.5s							
BILL	**Bilibino**	**74.11**	**16**	*e*P		**P**	**05 34 33.7**	**-0.5**
BILL				*i*			05 34 48.1	
BILL				*e**PP		**pP**	**05 35 15.3**	**-1.6**
BILL				pmax	pmax			
	comp=Z,14nm,0.9s							
AKTO	**Aktyubinsk**	**74.34**	**323**	P		**P**	**05 34 35.1**	**-0.8**
AKTO	**Aktyubinsk**	**74.34**	**323**	P		**P**	**05 34 35.1**	**-0.8**
AKTO	**Aktyubinsk**	**74.34**	**323**	P		**P**	**05 34 35.1**	**-0.8**
	baz=18,slow=20							
ARU	**Arti**	**76.16**	**329**	*ic* *i*P		**P**	**05 34 44.8**	**-1.3**
ARU							05 37 35.6	
ARU				S		**S**	**05 44 13.5**	**-1.8**
ARU				pmax	pmax			
	comp=Z,18nm,2.5s							
OPO	**Ambohidratompo**	**76.58**	**251**	P		**P**	**05 34 47.6**	**-1.9**
OPO	**Ambohidratompo**	**76.58**	**251**	P		**P**	**05 34 47.6**	**-1.9**
	comp=Z,2.1nm,0.7s,baz=61,slow=16,SNR=4.0							
MAW	**Mawson**	**79.00**	**200**	P		**P**	**05 35 02.2**	**+0.6**
MAW	**Mawson**	**79.00**	**200**	P		**P**	**05 35 02.2**	**+0.6**
	comp=Z,6.7nm,1.0s,baz=37,slow=8.2,SNR=5.8							
VNDA	**Vanda**	**80.23**	**172**	P		**P**	**05 35 08.8**	**+0.6**
VNDA	**Vanda**	**80.23**	**172**	P		**P**	**05 35 08.8**	**+0.6**
	comp=Z,7.0nm,0.7s,baz=317,slow=5.8,SNR=43							
ZEI	**Tsey**	**82.03**	**313**	*e*P		**P**	**05 35 17.9**	**-0.7**
ZEI				pmax	pmax			
	comp=Z,7.0nm,1.0s							
KBZ	**Khabaz**	**82.87**	**314**	P		**P**	**05 35 21.7**	**-0.9**
KBZ	**Khabaz**	**82.87**	**314**	P		**P**	**05 35 21.7**	**-0.9**
KBZ	**Khabaz**	**82.87**	**314**	P		**P**	**05 35 21.7**	**-0.9**
	comp=Z,2.2nm,0.8s,baz=178,slow=3.7,SNR=7.9							
KMBO	**Kilima Mbogo**	**85.78**	**269**	P		**P**	**05 35 36.1**	**-2.1**
	baz=86,SNR=3.4							
VSR	**Storozhevoye**	**86.16**	**321**	*e*P		**P**	**05 35 37.9**	**-1.1**
VSR				pmax	pmax			
	comp=Z,10.0nm,0.9s							
VSR				pmax	pmax			
	comp=N,2.0nm,0.3s							
VSR				pmax	pmax			
	comp=E,3.0nm,0.4s							
SYO	**Syowa Base**	**87.63**	**201**⇑	*e*P		**P**	**05 35 45.0**	**-0.7**
BRTR	**Keskin Array B**	**89.54**	**310**	P		**P**	**05 35 54.0**	**-1.6**
BRTR	**Keskin Array B**	**89.54**	**310**	P		**P**	**05 35 54.0**	**-1.6**
	comp=E,1.3nm,0.7s,baz=112,slow=5.5,SNR=7.1							
QSPA	**South Pole Qui**	**89.92**	**180**	*e*P		**P**	**05 35 57.2**	**+0.5**
	comp=E,6.2nm,1.0s							
QSPA	**South Pole Qui**	**89.92**	**180**	P		**P**	**05 35 56.5**	**-0.2**
	comp=E,4.9nm,0.9s,baz=330,slow=1.0,SNR=29							
ILAR	**Eielson Array**	**90.05**	**25**	P		**P**	**05 35 55.6**	**-1.5**
ILAR	**Eielson Array**	**90.05**	**25**	P		**P**	**05 35 55.6**	**-1.5**
	comp=E,0.3nm,0.6s,baz=237,slow=5.2,SNR=8.6							
ARCES	**ARCESS Array B**	**92.65**	**340**	P		**P**	**05 36 07.5**	**-1.6**
ARCES				PKKPbc		**PKKPdf**	**05 53 20.3**	**-0.5**
ARCES	**ARCESS Array B**	**92.65**	**340**	P		**P**	**05 36 07.5**	**-1.6**
	comp=E,2.2nm,0.7s,baz=85,slow=4.3,SNR=10							
ARCES				PKKPbc		**PKKPdf**	**05 53 20.3**	**-0.5**
	comp=E,5.6nm,0.9s,baz=260,slow=3.6,SNR=4.3							
FINES	**FINESS Array B**	**93.35**	**331**	P		**P**	**05 36 10.3**	**-2.2**
FINES	**FINESS Array B**	**93.35**	**331**	P		**P**	**05 36 10.3**	**-2.2**
	comp=E,0.8nm,0.4s,baz=94,slow=7.6,SNR=6.2							
LSZ	**Lusaka**	**94.67**	**255**	*e*P		**P**	**05 36 19.3**	**-0.4**
	comp=E,4.3nm,0.8s							
BUR08	**Bucovina Ar. S**	**95.30**	**318**	*e*P		**P**	**05 36 22.7**	**+0.8**
YKA	**Yellowknife Ar**	**104.40**	**24**	Pdif		**Pdif**	**05 37 02.8**	**+0.7**
YKA				PKiKP		**PKiKP**	**05 41 16.4**	**-1.0**
YKA				*e*			05 44 34.9	
YKA				PKKPbc		**PKKPbc**	**05 52 46.6**	**-4.1**
YKA	**Yellowknife Ar**	**104.40**	**24**	Pdiff		**Pdif**	**05 37 02.8**	**+0.7**
	comp=E,0.1nm,0.4s,baz=297,slow=4.8,SNR=3.2							
YKA				PKiKP		**PKiKP**	**05 41 16.4**	**-1.0**
	comp=E,0.1nm,0.4s,baz=309,slow=2.0,SNR=6.8							
YKA				SKiKP		**SKiKP**	**05 44 34.8**	**-1.2**
	comp=E,0.1nm,0.6s,baz=298,slow=2.0,SNR=3.9							
YKA				PKKPbc		**PKKPbc**	**05 52 46.6**	**-4.1**
	comp=E,0.5nm,0.8s,baz=110,slow=2.0,SNR=8.4							
NVAR	**Mina Array Bea**	**112.14**	**48**	PKiKP		**PKiKP**	**05 41 33.2**	**+0.3**
NVAR	**Mina Array Bea**	**112.14**	**48**	PKiKP		**PKiKP**	**05 41 33.2**	**+0.3**
	comp=E,0.5nm,0.6s,baz=267,slow=2.3,SNR=5.6							
PDAR	**Pinedale Array**	**116.58**	**41**	PKP		**PKPdf**	**05 41 41.4**	**0.0**
PDAR				PKKPbc		**PKKPbc**	**05 52 12.4**	**+1.6**
PDAR	**Pinedale Array**	**116.58**	**41**	PKP		**PKPdf**	**05 41 41.4**	**0.0**
	comp=E,0.4nm,0.6s,baz=154,slow=1.3,SNR=4.7							
PDAR				PKKPbc		**PKKPbc**	**05 52 12.4**	**+1.6**
	comp=E,0.3nm,0.4s,baz=101,slow=3.8,SNR=4.1							
PV01	**Paradox Valley**	**119.33**	**45**	*e*P		**PKPdf**	**05 41 48.1**	**+1.3**
RSSD	**Black Hills**	**119.39**	**37**	*e*PKiKP		PKPdf	05 41 52.7	+6.0
RSSD	**Black Hills**	**119.39**	**37**	*e*P		PKPdf	05 41 52.7	+6.0
TORD	**Torodi Ar. Bea**	**120.44**	**285**	PKP		**PKPdf**	**05 41 48.6**	**-0.6**
TORD				PKKPbc		**PKKPbc**	**05 51 56.5**	**+0.8**
TORD	**Torodi Ar. Bea**	**120.44**	**285**	PKP		**PKPdf**	**05 41 48.6**	**-0.6**
	comp=E,3.0nm,0.7s,baz=77,slow=1.2,SNR=20							
TORD				PKKPbc		**PKKPbc**	**05 51 56.5**	**+0.8**
	comp=E,0.7nm,0.8s,baz=285,slow=4.1,SNR=4.0							
SCHQ	**Schefferville**	**124.76**	**7**	PKP		**PKPdf**	**05 41 56.5**	**+0.1**
SCHQ	**Schefferville**	**124.76**	**7**	PKP		**PKPdf**	**05 41 56.5**	**+0.1**
	comp=E,1.3nm,0.4s,baz=43,slow=11,SNR=6.1							
TXAR	**Lajitas Array**	**126.79**	**53**	PKP		**PKPdf**	**05 42 02.1**	**+0.9**
TXAR				SKPab		SKiKP	05 45 02.0	-19
TXAR	**Lajitas Array**	**126.79**	**53**	PKP		**PKPdf**	**05 42 02.1**	**+0.9**
	comp=E,0.8nm,0.7s,baz=230,slow=1.3,SNR=10							
TXAR				SKPab		SKiKP	05 45 02.0	-19
	comp=E,0.3nm,0.8s,baz=205,slow=1.9,SNR=3.8							
PLCA	**Paso Flores**	**137.61**	**165**	SKPbc		**SKPbc**	**05 45 39.6**	**+1.2**
PLCA	**Paso Flores**	**137.61**	**165**	SKPbc		**SKPbc**	**05 45 39.6**	**+1.2**
	comp=E,2.3nm,0.9s,baz=107,slow=0.6,SNR=2.9							
CFAA	**Coronel Fontan**	**146.79**	**162**	PKP		**PKPdf**	**05 42 38.6**	**+0.8**
CFAA				PKPbc		**PKPbc**	**05 42 40.4**	**+0.6**
CFAA	**Coronel Fontan**	**146.79**	**162**	PKP		**PKPdf**	**05 42 38.6**	**+0.8**
	comp=E,1.7nm,0.5s,baz=195,slow=3.1,SNR=29							
CFAA				PKPbc		**PKPbc**	**05 42 40.4**	**+0.6**
	comp=E,1.7nm,0.5s,baz=213,slow=2.6,SNR=30							
LCO	**Las Campanas**	**148.29**	**157**	*e*PKPbc		**PKPbc**	**05 42 45.0**	**+0.9**
CPUP	**Villa Florida**	**153.81**	**179**	PKP		**PKPdf**	**05 42 49.1**	**+0.4**
CPUP				PKPbc		**PKiKP**	**05 42 57.6**	**+0.9**
CPUP				PKPab		**PKPab**	**05 43 09.4**	**-0.7**
CPUP	**Villa Florida**	**153.81**	**179**	PKP		**PKPdf**	**05 42 49.1**	**+0.4**
	comp=E,2.2nm,0.9s,baz=272,slow=20,SNR=4.6							
CPUP				PKPbc		**PKiKP**	**05 42 57.6**	**+0.9**
	comp=E,1.6nm,0.5s,baz=268,slow=20,SNR=4.8							
CPUP				PKPab		**PKPab**	**05 43 09.4**	**-0.7**
	comp=E,2.5nm,0.5s,baz=173,slow=4.2,SNR=9.0							
LPAZ	**La Paz**	**160.41**	**146**	PKP		**PKPdf**	**05 42 57.2**	**-0.9**
LPAZ				*e*PKPdf		**PKPdf**	**05 42 59.7**	**+1.7**
LPAZ				PKPab		**PKPab**	**05 43 41.3**	**+1.6**
LPAZ	**La Paz**	**160.41**	**146**	PKP		**PKPdf**	**05 42 57.2**	**-0.9**
	comp=E,1.5nm,0.9s,baz=247,slow=14,SNR=4.2							
LPAZ				PKPab		**PKPab**	**05 43 41.3**	**+1.6**
	comp=E,2.1nm,0.9s,baz=271,slow=4.2,SNR=4.3							
BDFB	**Brasilia**	**162.11**	**209**	PKPab		**PKPab**	**05 43 47.3**	**+0.8**
BDFB	**Brasilia**	**162.11**	**209**	PKPab		**PKPab**	**05 43 47.3**	**+0.8**
	comp=E,1.5nm,0.6s,baz=150,slow=9.1,SNR=3.3							
SIV	**San Ignacio**	**163.59**	**166**	PKP		**PKPdf**	**05 43 00.3**	**-0.2**
SIV				PKPab		**PKPab**	**05 43 52.5**	**-0.2**
SIV	**San Ignacio**	**163.59**	**166**	PKP		**PKPdf**	**05 43 00.3**	**-0.2**
	comp=E,1.4nm,0.8s,baz=228,slow=1.0,SNR=5.5							
SIV				PKPab		**PKPab**	**05 43 52.5**	**-0.2**
	comp=E,1.6nm,0.5s,baz=192,slow=4.5,SNR=7.3							

JMA ***27*** *05:25:27.4±0.3,24.˚13N×122.˚12E,h39km,M3.0*
ISCJB ***27*** *05:25:28.3±0.4,24.˚02N±0.˚02×122.˚28E±0.˚02,h17km±4km, Error ellipse: s-maj=3.6km s-min=2.4km az=155.5*
TAP ***27*** *05:25:28.9,24.˚08N×122.˚26E,h24km,ML3.5,C*
ISC 27 05:25:28.2±1.3**,24˚01N**±0.˚02×**122˚27E**±0.˚02**,h21**km±4km**, n45**,σ**0°74**/84**,2C-2D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.61**	**267**	*e*P		**Pn**	**05 25 41.3**	**-0.2**
	baz=245							
TWD	**Chiawan**	**0.62**	**277**	*e*P		**Pb**	**05 25 40.8**	**+0.4**
	baz=255							
TWD				*e*S		**Sb**	**05 25 49.5**	**+0.8**
	baz=255							
ENA	**Nanau**	**0.64**	**311**	P		**Pb**	**05 25 40.3**	**-0.3**
	baz=314							
ENA				*e*S		**Sb**	**05 25 49.1**	**-0.1**
	baz=314							
TWC	**Suao**	**0.71**	**327**⇓	*i*P		**Pb**	**05 25 41.0**	**-0.8**
	baz=331							
TWC				S		**Sb**	**05 25 49.7**	**-1.4**
	baz=331							
ESL	**Shilin**	**0.79**	**256**	P		**Pb**	**05 25 43.0**	**-0.2**
	baz=242							
ESL				*e*S		**Sb**	**05 25 53.8**	**+0.4**
	baz=242							
YOJ	**Yonaguni jima**	**0.81**	**56**	P		**Pb**	**05 25 43.5**	**-0.1**
YOJ				*e*S		**Sn**	**05 25 55.2**	**-0.6**
ILA	**Ilan**	**0.89**	**328**	*e*P		**Pn**	**05 25 45.0**	**-0.4**
	baz=325							
ILA				*e*S		**Sb**	**05 25 56.4**	**0.0**
	baz=325							
TWE	**Neicheng**	**0.90**	**322**	P		**Pb**	**05 25 44.7**	**-0.3**
	baz=327							
TWE				S		**Sb**	**05 25 55.9**	**-0.6**
	baz=327							
ENTT	**Nioudou**	**0.90**	**314**	*e*P		**Pn**	**05 25 45.1**	**-0.4**
	baz=322							
ENTT				*e*S		**Sb**	**05 25 56.3**	**-0.2**
	baz=322							
NNS	**Nan Shan**	**0.92**	**298**	*e*P		**Pn**	**05 25 45.8**	**-0.2**
	baz=294							
NNS				*e*S		**Sn**	**05 25 58.1**	**-0.6**
	baz=294							
WHF	**Hehuan Shan**	**0.93**	**278**⇑	*i*P		**Pb**	**05 25 45.9**	**+0.1**
	baz=262							
WHF				*e*S		**Sb**	**05 25 58.5**	**+0.7**
	baz=262							
EHY	**Hungye**	**1.00**	**240**	*e*P		**Pn**	**05 25 46.9**	**-0.1**
	baz=228							
EHY				*e*S		**Sn**	**05 26 00.1**	**-0.3**
	baz=228							
TWB1	**Santiao Chiao**	**1.02**	**346**	P		**Pb**	**05 25 47.1**	**-0.2**
	baz=332							
TWB1				S		**Sb**	**05 25 59.3**	**-0.9**
	baz=332							
NSK	**Sanguang**	**1.06**	**309**	⇓P		**Pb**	**05 25 47.8**	**-0.1**
	baz=305							
NSK				*e*S		**Sn**	**05 26 01.8**	**-0.2**
	baz=305							
TWF1	**Yuli**	**1.11**	**234**⇑	*i*P		**Pb**	**05 25 48.5**	**-0.1**
	baz=220							
TWF1				*e*S		**Sn**	**05 26 03.3**	**+0.2**
	baz=220							
NWF	**Wu-fen Shan**	**1.15**	**337**	*e*P		**Pn**	**05 25 48.9**	**-0.1**
	baz=334							
NWF				*e*S		**Sb**	**05 26 03.3**	**-0.5**
	baz=334							
TAP1	**Taipei**	**1.23**	**327**	*e*P		**Pn**	**05 25 49.3**	**-0.8**
	baz=323							
TAP1				*e*S		**Sn**	**05 26 05.7**	**-0.3**
	baz=323							
CHKT	**Chengkung**	**1.23**	**223**	*e*P		**Pn**	**05 25 49.5**	**-0.6**
	baz=210							
CHKT				*e*S		**Sn**	**05 26 04.8**	**-1.2**
	baz=210							
TAP	**Taipei**	**1.24**	**326**	*e*P		**Pb**	**05 25 50.8**	**0.0**
	baz=323							
TAP				*e*S		**Sb**	**05 26 06.2**	**-0.2**
	baz=323							
SMLT	**Sun Moon Lake**	**1.26**	**264**	P		**Pb**	**05 25 51.3**	**0.0**
	baz=261							
SMLT				S		**Sb**	**05 26 07.1**	**0.0**
	baz=261							
TYC	**Yuchr**	**1.29**	**266**	P		**Pb**	**05 25 51.7**	**-0.2**
	baz=263							
TYC				*e*S		**Sb**	**05 26 08.1**	**+0.1**
	baz=263							
NSTT	**Nanjuang**	**1.31**	**298**	*e*P		**Pb**	**05 25 51.8**	**-0.3**
	baz=295							
NSTT				*e*S		**Sb**	**05 26 08.6**	**+0.1**
	baz=295							
TWS1	**Kuangyinshan**	**

KASI			S		Sn	05 29 53.6	-0.9
CGJI	Cibinong	3.53 125	S		Sn	05 30 31.9	-1.3
CMAR	Chiang Mai Arr	23.22 351	P		P	05 34 01.8	-0.5
	0.7nm,0.3s,baz=186,slow=8.0,SNR=4.1						
WRA	Warramunga Arr	34.31 119	P		P	05 35 41.0	-0.1
	0.9nm,0.6s,baz=300,slow=9.7,SNR=5.4						
ASAR	Alice Springs	35.50 125	P		P	05 35 51.7	+0.3
	0.5nm,0.3s,baz=296,slow=7.9,SNR=5.8						
STKA	Stephens Creek	45.37 131	P		P	05 37 13.7	+0.9
	3.3nm,0.7s,baz=289,slow=12,SNR=4.1						
SONM	Songino Array	52.31 3	P		P	05 38 06.1	+0.4
	2.6nm,0.6s,baz=184,slow=9.1,SNR=22						
MKAR	Makanchi Array	54.29 343	P		P	05 38 18.7	-1.5
	1.1nm,0.4s,baz=154,slow=8.8,SNR=18						
ZALV	Zalesovo Beam	60.24 348	P		P	05 39 00.9	-1.1
	2.6nm,0.4s,baz=163,slow=6.2,SNR=9.4						
TXAR	Lajitas Array	144.90 43	PKPbc		PKPbc	05 48 30.6	+0.1
	0.7nm,0.6s,baz=191,slow=0.9,SNR=15						

ISCJB ***27*** *05:30:03.1±0.6,55°.96S±0'.09×27°.6W±0'.2,h10km, mb4.1/13, Error ellipse: s-maj=16.9km s-min=9.6km az=145.5*

IDC ***27*** *05:30:03.0±0.7,56°.01S×27°.53W,h0km,mb4.4/6, mb1 4.5/7,mb1mx4.1/17,mbtmp4.4/7,ML4.6/1,Error ellipse: s-maj=31.6km s-min=17.5km az=66.0*

NEIC ***27*** *05:30:04.5±0.5,55°.94S×27°.49W,h10km,mb4.3/7,Error ellipse: s-maj=16.4km s-min=10.9km az=55.0*

ISC 27 05:30:04.2±0.5,55°.97S±0'.10×27°.5W±0'.1,h10km,n43, σ1ᵍ49/47,mb4.1/12,1C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA2	Neumayer--Watz	17.33	158	eP	P	05 34 09.7	+2.5
EFI	East Falkland	18.47	271	ePn	Pn	05 34 20.6	+0.6
SNAA	Sanae	18.88	156	eP	Pn	05 34 25.9	+1.0
SNAA	Sanae	18.88	156	P	Pn	05 34 26.0	+1.0
SNAA	Sanae	18.88	156	P	Pn	05 34 26.0	+1.0
	1.7nm,0.3s,baz=304,slow=10,SNR=200						
PMSA	Palmer Station	19.83	229	P	P	05 34 34.2	-0.4
TRQA	Tornquist	29.14	293	eP	P	05 36 07.2	+2.1
	0.5nm,0.6s						
SYO	Syowa Base	31.75	141⇑	eX	P	05 36 27.5	-0.4
PLCA	Paso Flores	31.82	280	eP	P	05 36 28.0	-0.9
	1.1nm,0.7s						
QSPA	South Pole Qui	34.28	180	P	P	05 36 50.1	-0.1
QSPA				PcP	PcP	05 39 25.1	-1.0
QSPA	South Pole Qui	34.28	180	P	P	05 36 50.1	-0.1
	4.2nm,0.3s,baz=353,slow=1.8,SNR=32						
QSPA				PcP	PcP	05 39 25.1	-1.0
	1.6nm,0.6s,baz=172,slow=2.0,SNR=4.9						
CFAA	Coronel Fontan	37.37	293	P	P	05 37 17.3	+0.3
CFAA	Coronel Fontan	37.37	293	P	P	05 37 17.3	+0.3
	0.1nm,0.4s,baz=117,slow=6.8,SNR=3.2						
MAW	Mawson	40.31	144	P	P	05 37 41.9	+0.9
MAW	Mawson	40.31	144	P	P	05 37 41.9	+0.9
	1.7nm,0.3s,baz=206,slow=8.1,SNR=9.5						
SBA	Scott Base	46.15	184	eP	P	05 38 30.2	+2.1
	7.5nm,1.1s						
VNDA	Vanda	46.65	183	eP	P	05 38 33.0	+1.0
	3.0nm,0.7s						
VNDA	Vanda	46.65	183	P	P	05 38 32.6	+0.6
	2.9nm,0.6s,baz=184,slow=8.0,SNR=11						
LPAZ	La Paz	50.19	305	eP	P	05 39 03.0	+2.2
LPAZ	La Paz	50.19	305	P	P	05 39 02.1	+1.3
	1.4nm,0.5s,baz=70,slow=7.1,SNR=14						
RCBR	Riachuelo	50.45	349	eP	P	05 39 01.7	-0.3
	7.5nm,1.1s						
SAML	Samuel	54.63	315	eP	P	05 39 32.8	-0.1
	0.8nm,0.8s						
OTAV	Otavalo	69.47	304	eP	P	05 41 11.1	-2.1
	0.5nm,0.4s						
TORD	Torodi Ar. Bea	73.07	30	P	P	05 41 35.9	+1.5
TORD	Torodi Ar. Bea	73.07	30	P	P	05 41 35.9	+1.5
	1.2nm,0.8s,baz=200,slow=6.4,SNR=13						
SDV	Santo Domingo	73.83	315	eP	P	05 41 40.2	+1.1
ASAR	Alice Springs	99.12	163	P	Pdif	05 43 44.1	-1.5
ASAR				PP	PP	05 47 43.4	-3.6
ASAR	Alice Springs	99.12	163	P	Pdif	05 43 44.1	-1.5
	0.4nm,0.4s,baz=190,slow=4.1,SNR=5.5						
ASAR				PP	PP	05 47 43.4	-3.6
	0.4nm,0.5s,baz=180,slow=9.4,SNR=4.6						
WRA	Warramunga Arr	102.83	162	P	Pdif	05 44 01.3	-0.9
WRA	Warramunga Arr	102.83	162	P	Pdif	05 44 01.3	-0.9
	0.4nm,0.7s,baz=195,slow=4.3,SNR=3.3						
WRAB	Tennant Creek	102.84	162	ePdif	Pdif	05 44 01.8	-0.4
CTAO	Charters Tower	104.06	174	ePdif	Pdif	05 44 03.6	-4.0
RSSD	Black Hills	118.66	307	ePKPdf	PKPdf	05 48 52.5	+0.7
YKA	Yellowknife Ar	136.00	318	PKP	PKPdf	05 49 22.3	-1.6
YKA	Yellowknife Ar	136.00	318	PKP	PKPdf	05 49 22.3	-1.6
	0.5nm,0.5s,baz=130,slow=2.1,SNR=18						
MKAR	Makanchi Array	137.02	72	PKP	PKPdf	05 49 26.6	+0.3
MKAR	Makanchi Array	137.02	72	PKP	PKPdf	05 49 26.6	+0.3
	0.3nm,0.6s,baz=256,slow=3.0,SNR=2.9						
INK	Inuvik	145.63	321	PKPbc	PKPab	05 49 41.3	-0.4
INK	Inuvik	145.63	321	PKPbc	PKPab	05 49 41.3	-0.4
	2.3nm,0.5s,baz=87,slow=2.8,SNR=22						
ILAR	Eielson Array	149.94	312	PKPbc	PKPbc	05 49 52.6	-0.6
ILAR	Eielson Array	149.94	312	PKPbc	PKPbc	05 49 52.6	-0.6
	2.6nm,0.7s,baz=132,slow=2.0,SNR=28						
SONM	Songino Array	150.89	87	PKPbc	PKPbc	05 49 55.4	-0.7
SONM	Songino Array	150.89	87	PKPbc	PKPbc	05 49 55.4	-0.7
	0.8nm,0.6s,baz=214,slow=2.9,SNR=12						

CASC 27 06:48:28.9±2.1,13°.59N×91°.44W,h24km±11km,MD3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	Jato	0.75	345	eP	Pb	06 48 43.3	0.0
JAT				eS	Sn	06 48 54.1	-0.5
FUG	Fuego 3	1.03	34	eP	Pn	06 48 47.5	-0.6
PCG	Pacaya	1.13	45	eP	Pn	06 48 49.8	+0.2
PCG				eS	Sb	06 49 05.4	+0.7
NBG	Las Nubes	1.45	47	eP	Pb	06 48 54.9	-0.7
NBG				eS	Sb	06 49 14.8	+1.0
RTR	El Retiro	1.77	80	eP	Pn	06 48 58.4	+0.2
RBDL	Robledal	1.78	73	eP	Pn	06 48 58.5	+0.2
RBDL				eS	Sn	06 49 21.1	+0.8
SBLS	San Blas	1.78	82	eP	Pn	06 48 58.5	0.0
SBLS				eS	Sn	06 49 21.5	+0.9
SNJE	San Jose	1.80	81	eP	Pn	06 48 58.3	-0.4
SNJE				eS	Sn	06 49 21.1	+0.1
BOQS	Boqueron	2.10	86	eP	Pn	06 49 03.5	+0.7
BOQS				eS	Sn	06 49 29.5	+1.1
MTO2	Montecristo 2	2.17	68	eP	Pn	06 49 03.6	-0.2
MTO2				eS	Sn	06 49 31.6	+1.5
LBRS	Las Brisas	2.33	86	eP	Pn	06 49 06.6	+0.7
SNVI	San Vicente	2.52	89	eP	Pn	06 49 09.6	+1.0
SNVI				eS	Sn	06 49 39.0	+0.2

ISCJB ***27*** *07:00:30.0±0.2,6°.14S±0'.03×128°.52E±0'.04,h322km, mb4.1/23,Error ellipse: s-maj=6.1km s-min=3.7km az=156.2*

BJI ***27*** *07:00:32.5,6°.01S×128°.75E,h355km,mB4.7/4,mb4.2/7*

AUST ***27*** *07:00:32.2±0.0,6°.19S×128°.48E,h330km,Error ellipse: s-maj=1.0km s-min=0.8km az=274.0*

DJA ***27*** *07:00:34.5±0.3,6°.S±7'×12'.9E±', h330km±7km,M4.4/10, mB4.9/4,mb4.4/10,MLv4.5/6,Mw(mB)4.2/4*

NEIC ***27*** *07:00:34.5±1.1,6°.18S×128°.53E,h359km±12km,mb4.4/11, Error ellipse: s-maj=12.4km s-min=5.7km az=50.0*

IDC ***27*** *07:00:34.5±2.0,6°.16S×128°.53E,h358km±23km,mb3.8/16, mb1 4.0/21,mb1mx3.9/27,mbtmp3.9/21,Error ellipse: s-maj=15.8km s-min=8.0km az=57.0*

ISC 27 07:00:31.4±0.3,6°.17S±0'.05×128°.61E±0'.05,h322km,n104, σ1ᵍ57/108,mb4.2/23,1C,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	2.50	350	P	Pn	07 01 28.6	+4.4
AAI	Ambon	2.50	350	P	Pn	07 01 29.2	+5.1
	baz=2.5,SNR=3.7						
MSAI	Masohi	2.82	7	P	Pn	07 01 30.1	+3.0
NLAI	Namlea	3.27	333	P	Pn	07 01 36.3	+4.9
TLE	Tual	4.14	83	P	Pn	07 01 45.0	+4.7
TLE	Tual	4.14	83	P	Pn	07 01 45.4	+5.0
	baz=4.3,SNR=20						
TLE				S	S	07 02 33.5	-2.3
	baz=4.3,SNR=10						
FAKI	Fak Fak	4.86	49	P	Pn	07 01 50.3	+2.1
FAKI	Fak Fak	4.86	49	P	Pn	07 01 51.5	+3.3
	baz=5.0,SNR=4.3						
FAKI				S	S	07 02 50.2	+0.1
	baz=5.0,SNR=14						
LBMI	Labuha	5.60	349	P	Pn	07 01 59.7	+2.9
	184nm,0.6s,2µm0.8nm						
SWI	Sorong	5.90	27	P	Pn	07 02 02.9	+2.7
	baz=6.0,SNR=4.2						
SWI				S	S	07 03 10.6	-1.3
	baz=6.0,SNR=16						
MTN	Manton Dam	7.08	160	P	Pn	07 02 16.7	+2.5
	baz=7.1,SNR=52						
KDU	Kakadu	7.51	150	P	Pn	07 02 21.9	+2.5
	baz=7.6,SNR=192						
BKSI	Bulukumba	8.48	275	P	P	07 02 34.3	-0.8
	65nm,0.9s,583nm						
KAPI	Kappang	8.89	277	ePn	P	07 02 38.8	-0.9
	13nm,0.8s						
KAPI	Kappang	8.89	277	P	Pn	07 02 34.4	-1.6
KAPI	Kappang	8.89	277	P	Pn	07 02 37.9	+1.9
	2.2nm,0.3s,baz=117,slow=5.3,SNR=10						
SPSI	Sidrap Palu	9.07	284	P	P	07 02 41.3	-0.5
	35nm,0.9s						
TTSI	Tana Toraja	9.29	289	P	P	07 02 44.9	+0.7
	19nm,0.8s,606nm						
MRSI	Marisa	9.37	315	P	P	07 02 45.2	+0.1
	26nm,0.7s						
PCI	Palu	10.19	301	S	S	07 04 46.6	-0.3
	baz=10,SNR=8.8						
WAMI	Wamena	10.32	78	P	Pn	07 02 52.7	-0.6
FITZ	Fitzroy Crossi	12.21	193	P	P	07 03 16.8	+0.2
FITZ				S	S	07 05 38.9	+7.0
FITZ	Fitzroy Crossi	12.21	193	P	P	07 03 16.8	+0.2
	1.5nm,0.3s,baz=17,slow=12,SNR=35						
FITZ				S	S	07 05 38.9	+7.0
	1.1nm,0.3s,baz=20,slow=10,SNR=2.8						
FITZ	Fitzroy Crossi	12.21	193	P	P	07 03 16.9	+0.3
	baz=12,SNR=32						
JAY	Jayapura	12.59	74	P	P	07 03 24.9	+3.9
	baz=13,SNR=6.9						
BBKI	Banjar Baru	13.98	280	P	Pn	07 03 40.3	+3.1
	104nm,0.9s,8µm						
PALU	Palau	14.64	24	P	Pn	07 03 45.7	+0.7
	baz=15,SNR=4.2						
WRAB	Tennant Creek	14.78	158	eP	Pn	07 03 46.2	-0.3
	22nm,0.4s						
WRAB				eS	S	07 06 22.5	-3.1
WRA	Warramunga Arr	14.78	158	P	Pn	07 03 46.1	-0.5
WRA				S	S	07 06 21.7	-4.0
WRA	Warramunga Arr	14.78	158	P	Pn	07 03 46.1	-0.5
	8.7nm,0.3s,baz=340,slow=11,SNR=444						
WRA				S	S	07 06 21.7	-4.0
	2.0nm,0.3s,baz=338,slow=20,SNR=12						
COEN	Coen	16.29	119	P	Pn	07 04 03.2	-1.0
	baz=16,SNR=104						
KKM	Kota Kinabalu	17.33	314	P	Pn	07 04 14.9	-1.4
	8.4nm,1.0s						
QIS	Mount Isa	17.84	144	P	P	07 04 19.5	+1.2
	baz=18,SNR=24						
AS31	Alice Springs	18.13	164	eP	P	07 04 22.5	+1.2
AS31				eS	S	07 07 29.8	-2.3
ASAR	Alice Springs	18.13	164	P	P	07 04 22.4	+1.2
ASAR				S	S	07 07 29.7	-2.4
ASAR	Alice Springs	18.13	164	P	P	07 04 22.4	+1.2
	18nm,0.3s,baz=344,slow=11,SNR=1136						
ASAR				S	S	07 07 29.7	-2.4
	2.1nm,0.3s,baz=344,slow=21,SNR=52						
SBUM	Sibu	18.47	297	P	P	07 04 29.4	+4.5
	7.2nm,1.2s						
PMG	Port Moresby	18.66	101	eP	P	07 04 29.3	+2.4
	28nm,0.7s						
PMG	Port Moresby	18.66	101	P	P	07 04 30.2	+3.2
PMG	Port Moresby	18.66	101	P	P	07 04 29.5	+2.5
	3.3nm,0.3s,baz=297,slow=3.2,SNR=21						
MTSU	Mount Surprise	19.40	129	P	P	07 04 35.9	+1.0
	baz=20,SNR=17						
CTA	Charters Tower	22.03	131	P	P	07 05 02.0	+1.9
CTA	Charters Tower	22.03	131	P	P	07 05 02.0	+1.9
	27nm,0.8s,baz=309,slow=11,SNR=24						
CTAO	Charters Tower	22.03	131	eP	P	07 05 02.1	+1.9
	34nm,0.9s						
BBOO	Buckleboo	27.40	166	P	P	07 05 48.5	+0.3
	baz=28,SNR=9.6						
STKA	Stephens Creek	28.31	156	eP	P	07 05 56.8	+0.6
	1.4nm,0.6s						
STKA	Stephens Creek	28.31	156	P	P	07 05 56.5	+0.3
	9.8nm,0.7s,baz=335,slow=12,SNR=14						
STKA	Stephens Creek	28.31	156	P	P	07 05 56.9	+0.6
	baz=28,SNR=11						
CMSA	Cobar Meteorol	29.88	150	P	P	07 06 10.9	+0.9
	baz=30,SNR=32						
PSI	Prapat	30.95	286	P	P	07 06 19.9	+0.1
PSI	Prapat	30.95	286	P	P	07 06 19.9	+0.1
	2.9nm,0.4s,baz=144,slow=8.0,SNR=6.2						
ARPS	Mount Arapiles	32.77	160	P	P	07 06 36.4	+1.3
	baz=33,SNR=10						
YNG	Young	33.45	149	P	P	07 06 42.5	+1.5
	baz=34,SNR=12						
CMAR	Chiang Mai Arr	38.14	310	P	P	07 07 20.9	+0.1
CMAR	Chiang Mai Arr	38.14	310	P	P	07 07 20.9	+0.1
	6.1nm,0.7s,baz=140,slow=7.3,SNR=31						
CHTO	Chiang Mai	38.36	311	eP	P	07 07 22.4	-0.1
	10nm,0.8s						
DZM	Mont Dzumac	39.80	117	P	P	07 07 35.0	+0.4
DZM	Mont Dzumac	39.80	117	P	P	07 07 35.0	+0.4
	7.0nm,0.9s,baz=288,slow=9.0,SNR=8.9						
KSAR	Wonju Array Be	43.39	359	P	P	07 08 03.1	+0.1
KSRS	Korea Array	43.40	359	P	P	07 08 03.1	+0.1
	4.6nm,0.5s,baz=176,slow=9.6,SNR=20						
MJAR	Matsushiro Arr	43.43	11	P	P	07 08 01.6	-1.7
MJAR	Matsushiro Arr	43.43	11	P	P	07 08 01.6	-1.7
	3.8nm,0.6s,baz=188,slow=9.0,SNR=8.8						
HHC	Hu-ho-hao-te	49.34	343	eP	P	07 08 48.5	-0.5
HHC				S	S	07 15 27.5	-2.9
HHC				pmax	pmax		
	comp=Z,50nm,0.6s						
HHC				pmax	pmax		
	comp=Z,200nm,6.5s						
USRK	Ussuriysk Arra	50.23	3	P	P	07 08 55.3	-0.1
	comp=Z,4.3nm,0.5s,baz=178,slow=6.8,SNR=11						
ODAN	Odare	51.67	311	eP	P	07 09 06.0	-0.7
	comp=Z,19nm,0.5s						
TAPN	Taplejung	51.70	312	eP	P	07 09 06.3	-0.7
	comp=Z,25nm,0.4s						
RAMN	Ramite	52.31	311	eP	P	07 09 11.1	-0.3
	comp=Z,42nm,0.6s						
GTA	Gaotai	52.59	332	⇑P	P	07 09 13.0	-0.1
GTA				pmax	pmax		
	comp=Z,12nm,0.7s						
RPZ	Rata Peaks	52.73	142	eP	P	07 09 15.0	+1.0
	comp=Z,15nm,0.6s						
RPZ	Rata Peaks	52.73	142	P	P	07 09 14.9	+1.0
	comp=Z,11nm,0.5s,baz=245,slow=3.1,SNR=2.9						
GUN	Gumba	53.37	312	eP	P	07 09 18.6	-0.6
	comp=Z,38nm,0.7s						
PKI	Pulchoki	53.54	311	eP	P	07 09 19.5	-0.9
	comp=Z,7.3nm,0.4s						
PKIN	Phulchoki	53.55	311	eP	P	07 09 19.4	-1.0
	comp=Z,11nm,0.6s						
KKN	Kakani	53.75	311	eP	P	07 09 21.0	-0.8
	comp=Z,9.3nm,0.5s						
DMN	Daman	53.79	311	eP	P	07 09 21.4	-0.7
URZ	Urewera	54.24	133	P	P	07 09 24.8	-0.1
URZ	Urewera	54.24	133	P	P	07 09 24.8	-0.1
	comp=Z,7.1nm,0.6s,baz=255,slow=7.1,SNR=5.3						
KOLN	Koldanda	55.01	310	eP	P	07 09 30.1	-0.7
	comp=Z,18nm,0.6s						
DANN	Dangsing	55.19	311	eP	P	07 09 31.3	-0.8
PYUN	Piuthan	55.64	310	eP	P	07 09 34.6	-0.7
	comp=Z,63nm,0.9s						
SONM	Songino Array	57.23	342	P	P	07 09 46.1	+0.2
SONM	Songino Array	57.23	342	P	P	07 09 46.1	+0.2
	comp=Z,2.3nm,0.6s,baz=160,slow=6.2,SNR=17						
PETK	Petropavlovsk-	63.98	19	P	P	07 10 31.2	+0.3
PETK	Petropavlovsk-	63.98	19	P	P	07 10 31.2	+0.3
	comp=Z,3.7nm,0.6s,baz=167,slow=5.6,SNR=7.8						
MK31	Makanchi Array	66.78	327	eP	P	07 10 48.5	-0.3
MK31				ePcP	PcP	07 11 14.3	-0.8
MKAR	Makanchi Array	66.78	327	P	P	07 10 48.5	-0.4
MKAR	Makanchi Array	66.78	327	P	P	07 10 48.5	-0.4
	comp=Z,5.1nm,0.6s,baz=128,slow=7.6,SNR=82						
AAK	Ala-Archa	69.02	320	eP	P	07 11 03.0	0.0
	comp=Z,5.3nm,1.1s						
ZAA0	Zalesovo Array	70.23	334	eP	P	07 11 08.2	-1.7
ZALV	Zalesovo Beam	70.23	334	P	P	07 11 08.4	-1.5
ZALV	Zalesovo Beam	70.23	334	P	P	07 11 08.4	-1.5
	comp=Z,3.3nm,0.5s,baz=129,slow=5.2,SNR=16						
KURK	Kurchatov	71.09	329	eP	P	07 11 14.6	-0.5
	comp=Z,11nm,1.1s						
KKAR	Karatay Array	71.81	319	eP	P	07 11 19.2	-0.4
	comp=Z,1.1nm,0.4s						
VNDA	Vanda	73.44	173	P	P	07 11 27.1	-1.3
VNDA	Vanda	73.44	173	P	P	07 11 27.1	-1.3
	comp=Z,0.5nm,0.5s,baz=327,slow=5.9,SNR=4.0						
ABKAR	Akbulak array	81.00	322	eP	P	07 12 09.6	-1.1
	comp=Z,2.1nm,0.5s						
ILAR	Eielson Array	93.19	25	P	P	07 13 07.0	-2.2
ILAR	Eielson Array	93.19	25	P	P	07 13 07.0	-2.2
	comp=Z,0.3nm,0.6s,baz=255,slow=4.9,SNR=5.5						
ARCES	ARCESS Array B	100.32	340	P	Pdif	07 13 43.1	+1.9
ARCES	ARCESS Array B	100.32	340	P	Pdif	07 13 43.1	+1.9
	comp=Z,1.9nm,0.7s,baz=81,slow=7.6,SNR=5.6						
TORD	Torodi Ar. Bea	127.29	282	PKP	PKPdf	07 18 56.9	-2.0
TORD	Torodi Ar. Bea	127.29	282	PKP	PKPdf	07 18 56.9	-2.0
	comp=Z,0.4nm,0.8s,baz=80,slow=2.4,SNR=2.9						
LPAZ	La Paz	152.21	144	PKPab	PKPab	07 20 02.6	+0.8
LPAZ	La Paz	152.21	144	PKPab	PKPab	07 20 02.6	+0.8
	comp=Z,1.2nm,0.6s,baz=208,slow=6.5,SNR=6.8						

JSN ***27*** *07:03:16.8±0.4,14°.90N×80°.22W,h15km±999km*

IDC 27 07:03:12.3±3.1,18°.39N×81°.39W,h0km,mb3.3/3, mb1 3.7/3,mb1mx3.4/23,mbtmp3.3/3,Error ellipse: s-maj=77.7km s-min=62.1km az=83.0,North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STH	Stony Hill	4.37	93	iP	Pn	07 04 23.9	+4.0
STH				iS	Sn	07 05 14.3	+2.8
HOJ	Hope	4.43	94	iP	Pn	07 04 23.9	+3.1
GWJ	Greenwich	4.44	93	iP	Pn	07 04 25.0	+3.9
TXAR	Lajitas Array	23.06	302	P	P	07 08 20.4	+0.9
	0.5nm,0.8s,baz=118,slow=12,SNR=4.9						
YKA	Yellowknife Ar	49.72	341	P	P	07 12 05.3	-0.7
	0.3nm,0.8s,baz=132,slow=8.1,SNR=6.0						
ILAR	Eielson Array	63.12	334	P	P	07 13 41.6	+0.1
	0.4nm,0.6s,baz=115,slow=4.1,SNR=9.3						
WRA	Warramunga Arr	146.25	261	PKPbc	PKPdf	07 22 54.5	0.0
	0.9nm,0.9s,baz=81,slow=4.0,SNR=4.6						

IDC 27 07:03:30.6±7.7,15°.48S×178°.84W,h466km,s88km, mb3.1/9,mb1 3.4/9,mb1mx3.2/20,mbtmp3.1/9,Error ellipse: s-maj=61.1km s-min=23.4km az=152.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.71	257	P	P	07 11 01.6	+0.1
	0.3nm,0.3s,baz=98,slow=8.3,SNR=3.1						
ASAR	Alice Springs	45.10	252	P	P	07 11 03.9	-0.5
	1.1nm,0.3s,baz=84,slow=8.6,SNR=8.6						
PETK	Petropavlovsk-	71.23	345	P	P	07 14 01.8	+0.2
	1.3nm,0.6s,baz=131,slow=6.6,SNR=3.2						
YBH	Yreka Blue Hor	76.92	40	P	P	07 14 34.9	+0.6
	1.5nm,0.8s,baz=248,slow=5.4,SNR=4.7						
NVAR	Mina Array Bea	77.98	44	P	P	07 14 39.9	-0.4
	0.6nm,0.6s,baz=225,slow=8.9,SNR=8.6						
ILAR	Eielson Array	83.63	13	P	P	07 15 08.4	-0.4
	0.7nm,0.3s,baz=231,slow=5.4,SNR=24						
TXAR	Lajitas Array	85.06	58	P	P	07 15 17.6	+0.8
	0.4nm,0.6s,baz=218,slow=8.7,SNR=5.9						
PDAR	Pinedale Array	85.89	44	P	P	07 15 20.2	-0.4
	0.5nm,0.5s,baz=210,slow=4.1,SNR=6.6						
YKA	Yellowknife Ar	92.31	25	P	P	07 15 48.2	-1.6
	0.2nm,0.6s,baz=238,slow=4.2,SNR=6.0						
ARCES	ARCESS Array B	123.86	350	PKP	PKPdf	07 21 34.1	-0.2
	3.0nm,0.9s,baz=5.5,slow=3.8,SNR=3.7						
BRTR	Keskin Array B	142.76	317	PKP	PKPdf	07 22 08.9	-1.7
	1.1nm,0.8s,baz=350,slow=4.4,SNR=5.2						
GERES	GERESS Array B	145.17	345	PKPbc	PKPab	07 22 15.7	-0.3
	0.5nm,0.5s,baz=48,slow=1.5,SNR=3.6						

ISCJB ***27*** *07:11:24.8±0.6,38°.56N±0'.04×27°.73E±0'.04,h10km±5km, Error ellipse: s-maj=6.6km s-min=5.3km az=153.0*

CSEM ***27*** *07:11:24.9±0.1,38°.57N×27°.72E,h12km,MD2.7,Error ellipse: s-maj=3.6km s-min=2.1km az=157.0*

DDA ***27*** *07:11:24.9,38°.57N×27°.76E,h4km,MD2.7*

ISK ***27*** *07:11:24.3,38°.56N×27°.74E,h14km,MD2.6*

ISC 27 07:11:25.0±1.0,38°.57N±0'.04×27°.73E±0'.03,h13km±8km, n16,σ0ᵍ45/28,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.32	12	iP	Pg	07 11 31.1	-0.5
AKHS				iS	Sg	07 11 36.4	+0.4
AKHS	Akhisar	0.32	12	iP	Pg	07 11 31.1	-0.5
AKHS				iS	Sg	07 11 36.4	+0.4
AKS	Akhisar	0.32	12	ePG	Pg	07 11 31.0	-0.6
AKS				eSG	Sg	07 11 36.6	+0.6
IZM	Izmir	0.40	246	ePG	Pg	07 11 32.7	-0.5
IZM				eSG	Sg	07 11 39.3	+0.7
IZM	Izmir	0.40	246	ePg	Pg	07 11 32.7	-0.5
IZM				eSg	Sg	07 11 39.3	+0.7

FALS	**False Pass**	**1.40**	**359**	P		**Pn**	**07 28 13.5**	**+0.3**
FALS				S		**Sg**	**07 28 33.6**	**-0.1**
AKUT	**Akutan**	**1.57**	**296**	P		**Pn**	**07 28 15.6**	**+0.1**
AHB	**Akutan Harbor**	**1.58**	**295**	P		**Pn**	**07 28 16.0**	**+0.2**
DRIA	**Deer Island**	**1.64**	**23**	P		**Pn**	**07 28 16.9**	**+0.2**
ZRO	**Akutan Zero**	**1.66**	**293**	P		**Pn**	**07 28 17.0**	**+0.1**
AKLV	**Akutan Long Va**	**1.68**	**296**	P		**Pn**	**07 28 17.1**	**0.0**
AKLV				S		**Sn**	**07 28 38.0**	**-0.3**
AKGG	**Akutan Green G**	**1.71**	**297**	P		**Pn**	**07 28 17.8**	**+0.2**
AKRB	**Akutan Reef Bi**	**1.73**	**294**	P		**Pn**	**07 28 18.0**	**+0.2**
DT1	**Dutton Round H**	**1.77**	**21**	P		**Pn**	**07 28 19.0**	**+0.6**
DTNA	**Dutton South F**	**1.81**	**21**	P		**Pn**	**07 28 19.5**	**+0.4**
UNV	**Unalaska Valle**	**1.89**	**283**	P		**Pn**	**07 28 19.7**	**-0.4**
UNV				S		**Sn**	**07 28 43.8**	**+0.3**
MTBL	**Makushin Table**	**2.02**	**286**	P		**Pn**	**07 28 22.2**	**+0.2**
MREP	**Makushin Rep't**	**2.03**	**281**	P		**Pn**	**07 28 22.7**	**+0.6**
MSW	**Makushin Switc**	**2.07**	**284**	P		**Pn**	**07 28 23.1**	**+0.6**
MSW				S		**Sn**	**07 28 47.7**	**-0.2**
PS4A	**Pavlof South-4**	**2.09**	**25**	P		**Pn**	**07 28 24.1**	**+1.3**
MCIR	**Makushin Cirqu**	**2.14**	**285**	P		**Pn**	**07 28 24.0**	**+0.5**
SDPT	**Sand Point**	**2.54**	**41**	P		**Pn**	**07 28 30.1**	**+1.1**
OKSO	**Okmok South**	**2.86**	**270**	P		**Pn**	**07 28 33.8**	**+0.4**
OKSP	**Okmok Steeple**	**2.95**	**268**	P		**Pn**	**07 28 34.8**	**+0.2**
NIKO	**Nikolski**	**3.32**	**264**	P		**Pn**	**07 28 39.4**	**-0.3**
KDAK	**Kodiak Island**	**7.49**	**50**	Pn		**Pn**	**07 29 34.8**	**-2.1**
	0.2nm,0.3s,baz=236,slow=3.6,SNR=2.9							
KDAK				Sn		Sn	07 30 54.3	-7.0
	0.2nm,0.3s,baz=180,slow=5.1,SNR=2.6							
FX1	**Attu Island--F**	**14.06**	**277**	Pn		**Pn**	**07 31 08.0**	**+1.2**
	0.8nm,0.3s,baz=14,slow=17,SNR=6.8							
ILAR	**Eielson Array**	**14.09**	**30**	Pn		**Pn**	**07 31 04.7**	**-2.5**
	0.0nm,0.3s,baz=227,slow=12,SNR=2.7							
INK	**Inuvik**	**20.47**	**32**	P		**P**	**07 32 23.9**	**-1.0**
	0.6nm,0.5s,baz=264,slow=10,SNR=7.1							
PETK	**Petropavlovsk-**	**23.07**	**285**	P		**P**	**07 32 53.1**	**+0.1**
	1.7nm,0.5s,baz=85,slow=13,SNR=4.6							
YKA	**Yellowknife Ar**	**26.77**	**51**	P		**P**	**07 33 29.5**	**+2.5**
	0.3nm,0.5s,baz=274,slow=9.2,SNR=7.8							
TXAR	**Lajitas Array**	**49.16**	**95**	P		**P**	**07 36 35.6**	**0.0**
	0.2nm,0.6s,baz=306,slow=7.7,SNR=2.9							
SONM	**Songino Array**	**53.79**	**303**	P		**P**	**07 37 09.1**	**-0.9**
	0.7nm,0.8s,baz=50,slow=7.9,SNR=5.1							
BVAR	**Borovoye Array**	**64.83**	**327**	P		**P**	**07 38 26.4**	**+0.4**
	0.7nm,0.6s,baz=38,slow=7.3,SNR=4.6							
FINES	**FINESS Array B**	**65.19**	**355**	P		**P**	**07 38 28.1**	**-0.1**
	1.4nm,0.9s,baz=38,slow=7.0,SNR=2.7							

IDC 27 07:32:45.4±1.4, 30°47'N×67°61'E, h0km, mb3.5/6, mb1 3.7/8, mb1mx3.5/32, mbtmp3.6/8, ML3.6/2, Error ellipse: s-maj=36.3km s-min=26.3km az=102.0, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**13.34**	**23**	Pn	Pn	07 35 57.0	+0.8
	0.3nm,0.3s,baz=201,slow=11,SNR=4.3						
MKAR	**Makanchi Array**	**19.88**	**31**	P	P	07 37 17.8	-0.4
	0.2nm,0.3s,baz=211,slow=10,SNR=13						
AKTO	**Aktyubinsk**	**21.21**	**343**	P	P	07 37 33.1	+0.6
	1.4nm,0.5s,baz=149,slow=10,SNR=4.8						
KURBB	**Kurchatov Arra**	**21.73**	**19**	P	P	07 37 38.1	0.0
	1.3nm,0.7s,baz=210,slow=10,SNR=8.5						
BVAR	**Borovoye Array**	**22.63**	**4**	P	P	07 37 47.8	0.0
	0.9nm,0.7s,baz=169,slow=10.0,SNR=5.6						
TORD	**Torodi Ar. Bea**	**62.79**	**270**	P	P	07 43 12.3	-0.8
	0.5nm,1.0s,baz=54,slow=5.2,SNR=2.5						
ASAR	**Alice Springs**	**83.28**	**122**	P	P	07 45 14.5	+0.2
	0.3nm,0.7s,baz=311,slow=4.8,SNR=3.3						
YKA	**Yellowknife Ar**	**87.35**	**1**	P	P	07 45 34.4	+0.5
	0.4nm,0.8s,baz=349,slow=5.1,SNR=8.9						

IDC 27 07:54:12.1±2.7, 0°20N×100°23E, h118km±23km, mb3.5/8, mb1 3.6/9, mb1mx3.4/26, mbtmp3.5/9, Error ellipse: s-maj=44.0km s-min=14.3km az=54.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.90**	**333**	P	Pn	07 54 56.1	-1.1
	13nm,0.3s,baz=172,slow=5.8,SNR=34						
WRA	**Warramunga Arr**	**38.94**	**123**	P	P	08 01 26.7	-0.2
	0.4nm,0.4s,baz=305,slow=9.1,SNR=9.4						
WRA				PcP	PcP	08 03 35.2	-0.2
	0.3nm,0.3s,baz=315,slow=2.6,SNR=14						
ASAR	**Alice Springs**	**40.39**	**128**	P	P	08 01 38.4	-0.5
	0.4nm,0.4s,baz=298,slow=7.6,SNR=15						
ASAR				PcP	PcP	08 03 39.9	-0.1
	0.3nm,0.5s,baz=302,slow=2.4,SNR=5.0						
SONM	**Songino Array**	**47.75**	**6**	P	P	08 02 38.6	+1.3
	0.6nm,0.6s,baz=189,slow=10,SNR=4.1						
MKAR	**Makanchi Array**	**48.99**	**344**	P	P	08 02 46.8	0.0
	1.3nm,0.4s,baz=157,slow=8.2,SNR=20						
ZALV	**Zalesovo Beam**	**55.07**	**349**	P	P	08 03 31.7	+0.1
	1.3nm,0.4s,baz=182,slow=5.5,SNR=5.6						
AKTO	**Aktyubinsk**	**61.56**	**331**	P	P	08 04 16.2	-0.6
	0.4nm,0.3s,baz=124,slow=3.6,SNR=2.8						
FINES	**FINESS Array B**	**82.29**	**332**	P	P	08 06 19.7	-0.6
	1.3nm,0.8s,baz=114,slow=3.5,SNR=7.0						
ARCES	**ARCESS Array B**	**84.50**	**340**	P	P	08 06 30.8	-0.8
	3.4nm,0.9s,baz=90,slow=5.4,SNR=7.4						
BDFB	**Brasilia**	**145.10**	**242**	PKPbc	PKPbc	08 13 36.5	-0.1
	1.0nm,0.5s,baz=184,slow=13,SNR=3.6						
CPUP	**Villa Florida**	**146.20**	**218**	PKPbc	PKPbc	08 13 39.6	+0.1
	1.0nm,0.6s,baz=41,slow=16,SNR=4.6						

*IDC **27** 08:02:58.5±1.2, 34°38N×25°13E, h0km, mb3.6/7, mb1 3.8/11, mb1mx3.7/29, mbtmp3.7/11, ML4.1/4, Error ellipse: s-maj=26.5km s-min=22.8km az=145.0*
*CSEM **27** 08:03:01.4±0.3, 34°30N×25°16E, h15km, MD3.3, Error ellipse: s-maj=6.1km s-min=4.8km az=151.0*
*ATH **27** 08:03:01.1, 34°31N×25°11E, h29km±1km, MD3.3/12*
*THE **27** 08:03:01.0, 34°27N×25°17E, h6km±2km, ML2.6/1, Error ellipse: s-maj=3.5km s-min=1.5km az=183.0*

ISC 27 08:03:01.8±1.2, 34°27N±0°04×25°16E±0°03, h28km±9km, n62, σ1°15/76, mb3.5/7, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XRY	**Khrisi**	**0.75**	**36**	*e*PN	**Pn**	**08 03 15.7**	**-0.9**
XRY	**Khrisi**	**0.75**	**36**	*e*Pn	**Pn**	**08 03 15.7**	**-0.9**
SIVA	**Sivas**	**0.80**	**339**	P	**Pn**	**08 03 16.1**	**-1.2**
SIVA	**Sivas**	**0.80**	**339**	*e*PN	**Pn**	**08 03 16.2**	**-1.1**
SIVA				*e*SN	**Sn**	**08 03 27.5**	**-0.8**
SIVA	**Sivas**	**0.80**	**339**	P	**Pb**	**08 03 16.1**	**-1.2**
SIVA				*e*Sn	**Sn**	**08 03 27.5**	**-0.8**
LAST	**Lasithi**	**0.93**	**16**	P	**Pb**	**08 03 18.2**	**-1.2**
LAST	**Lasithi**	**0.93**	**16**	*e*PN	**Pb**	**08 03 18.4**	**-1.0**
LAST				*e*SN	**Sn**	**08 03 32.1**	**+0.5**
LAST	**Lasithi**	**0.93**	**16**	P	**Pb**	**08 03 18.2**	**-1.2**
LAST				*e*Sn	**Sn**	**08 03 32.1**	**+0.5**
IDI	**Anoyia**	**1.04**	**348**	P	**Pb**	**08 03 19.9**	**-1.4**
IDI				S	**Sb**	**08 03 35.5**	**+0.9**
IDI	**Anoyia**	**1.04**	**348**	*e*PN	**Pb**	**08 03 20.0**	**-1.4**
IDI				*e*SN	**Sb**	**08 03 33.9**	**-0.7**
IDI	**Anoyia**	**1.04**	**348**	P	**Pb**	**08 03 19.9**	**-1.4**
IDI				*e*Sn	**Sb**	**08 03 33.9**	**-0.7**
IDI				S	**Sb**	**08 03 35.5**	**+0.9**
GVD	**Gavdhos**	**1.05**	**303**	P	**Pb**	**08 03 20.7**	**-0.8**
GVD				S	**Sb**	**08 03 36.8**	**+1.9**
GVD	**Gavdhos**	**1.05**	**303**	*e*PN	**Pb**	**08 03 20.7**	**-0.8**
GVD	**Gavdhos**	**1.05**	**303**	P	**Pb**	**08 03 20.7**	**-0.8**
GVD				S	**Sb**	**08 03 36.8**	**+1.9**
NPS	**Neapolis**	**1.06**	**20**	P	**Pb**	**08 03 20.6**	**-1.0**
NPS				S	**Sb**	**08 03 36.9**	**+1.8**
NPS	**Neapolis**	**1.06**	**20**	*e*PN	**Pb**	**08 03 20.4**	**-1.2**
NPS	**Neapolis**	**1.06**	**20**	P	**Pb**	**08 03 20.6**	**-1.0**
NPS				S	**Sb**	**08 03 36.9**	**+1.8**
ZKR	**Zakros**	**1.21**	**45**	P	**Pb**	**08 03 23.0**	**-1.2**
ZKR				S	**Sb**	**08 03 40.2**	**+0.8**
ZKR	**Zakros**	**1.21**	**45**	*e*PN	**Pb**	**08 03 23.9**	**-0.3**
ZKR				*e*SN	**Sb**	**08 03 40.8**	**+1.4**
ZKR	**Zakros**	**1.21**	**45**	P	**Pb**	**08 03 23.0**	**-1.2**
ZKR	**Zakros**	**1.21**	**45**	*e*Pn	**Pb**	**08 03 23.9**	**-0.3**
ZKR				S	**Sb**	**08 03 40.2**	**+0.8**
ZKR				*e*Sn	**Sb**	**08 03 40.8**	**+1.4**
VAM	**Vamos**	**1.39**	**325**	P	**Pb**	**08 03 25.9**	**-1.2**
VAM	**Vamos**	**1.39**	**325**	*e*PN	**Pb**	**08 03 25.9**	**-1.2**
VAM	**Vamos**	**1.39**	**325**	P	**Pb**	**08 03 25.9**	**-1.2**
KARN	**Karanos**	**1.53**	**318**	P	**Pb**	**08 03 28.0**	**-1.5**
KARN	**Karanos**	**1.53**	**318**	*e*PN	**Pb**	**08 03 28.2**	**-1.3**
KARN	**Karanos**	**1.53**	**318**	P	**Pb**	**08 03 28.0**	**-1.5**
KARP	**Karpathos**	**2.08**	**52**	*e*PB	**Pb**	**08 03 38.2**	**-0.7**
KARP	**Karpathos**	**2.08**	**52**	*e*Pb	**Pb**	**08 03 38.2**	**-0.7**
LTBQ	**Tobruq**	**2.44**	**206**	*i* P	**Pb**	**08 03 42.3**	**-2.7**
	SNR=24						
LTBQ				*e*S	**Sn**	**08 04 10.9**	**+2.2**
	95nm,0.5s,SNR=24						
KYTH	**Kithira**	**2.66**	**320**	*e*PN	Pb	08 03 44.1	-4.6
KYTH	**Kithira**	**2.66**	**320**	*e*Pn	Pb	08 03 44.1	-4.6
APE	**Apeiranthos**	**2.81**	**6**	*e*PN	**Pn**	**08 03 45.4**	**+0.4**
APE	**Apeiranthos**	**2.81**	**6**	*e*Pn	**Pn**	**08 03 45.4**	**+0.4**
VLI	**Veliai**	**3.05**	**324**	*e*PN	**Pn**	**08 03 48.4**	**+0.2**
VLI	**Veliai**	**3.05**	**324**	*e*Pn	**Pn**	**08 03 48.4**	**+0.2**
ARG	**Arkhangelos**	**3.11**	**50**	*e*PN	**Pn**	**08 03 51.3**	**+2.3**
ARG	**Arkhangelos**	**3.11**	**50**	*e*Pn	**Pn**	**08 03 51.3**	**+2.3**
DYR	**Agios Nikonas**	**3.39**	**318**	*e*PN	Pn	08 03 54.5	+1.5
DYR	**Agios Nikonas**	**3.39**	**318**	*e*Pn	Pn	08 03 54.5	+1.5
DID	**Didima**	**3.59**	**335**	P	**Pn**	**08 03 55.9**	**+0.2**
DID				S	**Sn**	**08 04 38.3**	**+1.1**
DID	**Didima**	**3.59**	**335**	*e*PN	**Pn**	**08 03 55.9**	**+0.2**
DID	**Didima**	**3.59**	**335**	P	**Pn**	**08 03 55.9**	**+0.2**
DID				S	**Sn**	**08 04 38.3**	**+1.1**
VLX	**Vlachokerasia**	**3.83**	**325**	*e*PN	**Pn**	**08 03 59.7**	**+0.6**
VLX	**Vlachokerasia**	**3.83**	**325**	*e*Pn	**Pn**	**08 03 59.7**	**+0.6**
LTK	**Loutraki**	**4.15**	**335**	*e*PN	**Pn**	**08 04 03.6**	**+0.3**
LTK	**Loutraki**	**4.15**	**335**	*e*Pn	**Pn**	**08 04 03.6**	**+0.3**
GUR	**Goura**	**4.32**	**329**	*e*PN	**Pn**	**08 04 06.7**	**+1.0**
GUR	**Goura**	**4.32**	**329**	*e*Pn	**Pn**	**08 04 06.7**	**+1.0**
MMAI	**Mount Meron Ar**	**8.63**	**95**	Sn	**Sn**	**08 06 40.1**	**-1.2**
	3.0nm,0.3s,baz=136,slow=56,SNR=3.3						
BRTR	**Keskin Array B**	**8.70**	**49**	Pn	Pn	08 05 08.5	+2.7
	0.1nm,0.3s,baz=226,slow=12,SNR=2.4						
EIL	**Elat**	**9.49**	**116**	Pn	**Pn**	**08 05 17.2**	**+0.5**
	1.0nm,0.3s,baz=278,slow=19,SNR=6.5						
KBZ	**Khabaz**	**16.68**	**50**	Pn	**P**	**08 06 55.3**	**-0.3**
	0.2nm,0.3s,baz=230,slow=12,SNR=3.1						
AKASG	**Malin Array Be**	**16.69**	**9**	Pn	**Pn**	**08 06 53.0**	**-0.6**
	0.3nm,0.3s,baz=200,slow=4.9,SNR=7.9						
GERES	**GERESS Array B**	**16.87**	**333**	Pn	**P**	**08 06 57.1**	**-0.8**
	0.3nm,0.3s,baz=148,slow=11,SNR=7.6						
HFS	**Hagfors**	**26.95**	**347**	P	**P**	**08 08 40.3**	**-0.3**
	0.5nm,0.5s,baz=161,slow=9.2,SNR=3.2						
FINES	**FINESS Array B**	**27.20**	**1**	P	**P**	**08 08 41.3**	**-1.5**
	0.6nm,0.4s,baz=169,slow=9.5,SNR=2.9						
TORD	**Torodi Ar. Bea**	**29.92**	**231**	P	**P**	**08 09 09.0**	**+1.5**
	0.9nm,0.5s,baz=30,slow=8.4,SNR=7.8						
KURBB	**Kurchatov Arra**	**41.69**	**50**	P	**P**	**08 10 48.6**	**+0.7**
	0.3nm,0.3s,baz=278,slow=8.4,SNR=6.1						
MKAR	**Makanchi Array**	**44.27**	**56**	P	**P**	**08 11 09.7**	**+0.8**
	0.5nm,0.5s,baz=276,slow=6.6,SNR=6.7						
SONM	**Songino Array**	**60.05**	**50**	P	**P**	**08 13 07.0**	**+0.7**
	0.3nm,0.5s,baz=271,slow=5.8,SNR=3.2						
YKA	**Yellowknife Ar**	**78.30**	**342**	P	**P**	**08 14 58.7**	**-0.2**
	0.1nm,0.4s,baz=30,slow=5.1,SNR=3.5						

IDC 27 08:25:04.8±2.6, 0°42S×132°87E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.5/22, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=103.0km s-min=28.0km az=77.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.95**	**202**	P	Pn	08 29 28.0	-0.3
	0.1nm,0.3s,baz=32,slow=11,SNR=3.8						
WRA	**Warramunga Arr**	**19.45**	**176**	P	P	08 29 32.8	-0.4
	0.2nm,0.3s,baz=354,slow=11,SNR=11						
WRA				S	Sn	08 33 00.5	-13
	0.1nm,0.3s,baz=358,slow=24,SNR=5.1						
ASAR	**Alice Springs**	**23.13**	**178**	P	P	08 30 13.0	+0.2
	1.8nm,0.6s,baz=5.2,slow=11,SNR=18						
MKAR	**Makanchi Array**	**64.47**	**324**	P	P	08 35 43.2	-0.1
	0.1nm,0.6s,baz=111,slow=7.9,SNR=2.9						

IDC 27 08:41:25.7±47.0, 23°61S×179°49E, h666km±423km, mb2.6/3, mb1 2.8/3, mb1mx2.6/18, mbtmp2.6/3, Error ellipse: s-maj=451.7km s-min=159.9km az=110.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.00**	**270**	P	P	08 46 53.1	+0.2
	2.4nm,0.4s,baz=91,slow=13,SNR=4.4						
ASAR	**Alice Springs**	**41.62**	**260**	P	P	08 48 19.3	+0.1
	0.1nm,0.4s,baz=94,slow=7.4,SNR=5.2						
WRA	**Warramunga Arr**	**41.95**	**266**	P	P	08 48 21.8	-0.1
	0.5nm,0.3s,baz=103,slow=8.3,SNR=34						
BRTR	**Keskin Array B**	**147.03**	**307**	PKPbc	PKPbc	08 59 55.7	-0.5
	0.3nm,0.6s,baz=116,slow=3.4,SNR=2.5						

*IDC **27** 08:44:21.6±0.8, 6°04S×154°00E, h0km, mb4.3/13, mb1 4.4/15, mb1mx4.3/21, mbtmp4.3/15, ML3.6/2, MS3.8/10, Ms1 3.8/10, ms1mx3.5/34, Error ellipse: s-maj=27.5km s-min=16.4km az=111.0*
*ISCJB **27** 08:44:26.0±0.4, 5°99S×0°06×153°69E±0°06, h32km, mb4.3/21, MS3.8/10, Error ellipse: s-maj=10.0km s-min=7.6km az=39.9*
*NEIC **27** 08:44:30.2±1.5, 6°07S×153°71E, h57km±14km, mb4.7/8, Error ellipse: s-maj=12.0km s-min=10.4km az=153.0*

ISC 27 08:44:28.0±0.5, 5°99S±0°08×153°70E±0°07, h32km, n59, σ1°04/61, mb4.4/21, MS3.9/10, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.07**	**119**	Pn	**Pn**	**08 46 11.0**	**+1.7**
PMG	**Port Moresby**	**7.32**	**242**	Pn	**Pn**	**08 46 13.1**	**+0.4**
PMG				Sn	**Sn**	**08 47 35.9**	**+1.2**
PMG				*e*Sn	**Sn**	**08 47 36.4**	**+1.7**
PMG	**Port Moresby**	**7.32**	**242**	Pn	**Pn**	**08 46 13.1**	**+0.4**
	2.8nm,0.3s,baz=48,slow=8.9,SNR=23						
PMG				Sn	**Sn**	**08 47 35.9**	**+1.2**
	5.0nm,0.3s,baz=352,slow=23,SNR=11						
CTA	**Charters Tower**	**15.77**	**207**	Pn	**Pn**	**08 48 08.3**	**+0.5**
CTA	**Charters Tower**	**15.77**	**207**	Pn	**Pn**	**08 48 08.3**	**+0.5**
	0.3nm,0.3s,baz=32,slow=12,SNR=9.5						
CTAO	**Charters Tower**	**15.77**	**207**	*e*Pn	**Pn**	**08 48 08.4**	**+0.5**
	7.4nm,0.7s						
DZM	**Mont Dzumac**	**20.18**	**144**	P	**P**	**08 48 59.5**	**-0.6**
DZM	**Mont Dzumac**	**20.18**	**144**	P	**P**	**08 48 59.5**	**-0.6**
	0.8nm,0.3s,baz=332,slow=12,SNR=8.8						
WRAB	**Tennant Creek**	**23.36**	**232**	*e*P	**P**	**08 49 34.0**	**0.0**
	1.3nm,0.4s						
WRA	**Warramunga Arr**	**23.37**	**232**	P	**P**	**08 49 33.7**	**-0.3**
WRA				PcP	**PcP**	**08 53 20.2**	**-0.2**
WRA	**Warramunga Arr**	**23.37**	**232**	P	**P**	**08 49 33.7**	**-0.3**
	2.9nm,0.9s,baz=57,slow=10,SNR=12						
WRA				PcP	**PcP**	**08 53 20.2**	**-0.2**
	0.5nm,0.4s,baz=52,slow=2.8,SNR=5.6						
AS31	**Alice Springs**	**25.91**	**225**	*e*P	**P**	**08 49 56.9**	**-0.6**
ASAR	**Alice Springs**	**25.91**	**225**	P	**P**	**08 49 56.2**	**-1.3**
ASAR				PcP	**PcP**	**08 53 26.7**	**+0.7**
ASAR	**Alice Springs**	**25.91**	**225**	P	**P**	**08 49 56.2**	**-1.3**
	5.2nm,0.8s,baz=61,slow=8.6,SNR=33						
ASAR				PcP	**PcP**	**08 53 26.7**	**+0.7**
	1.3nm,0.8s,baz=76,slow=2.7,SNR=6.6						
ASAR				LR	LR	09 00 29.4	
	comp=Z,179nm,18.8s,baz=348,slow=37						
STKA	**Stephens Creek**	**28.13**	**202**	LR	LR	09 01 48.5	
	comp=Z,164nm,18.7s,baz=26,slow=37						
FITZ	**Fitzroy Crossi**	**29.91**	**244**	P	**P**	**08 50 32.2**	**-1.0**
FITZ	**Fitzroy Crossi**	**29.91**	**244**	P	**P**	**08 50 32.2**	**-1.0**
	4.4nm,0.7s,baz=132,slow=5.7,SNR=8.2						
FITZ				LR	LR	09 03 12.3	
	comp=Z,116nm,18.0s,baz=263,slow=38						
AFI	**Afiamalu**	**34.87**	**106**	LR	LR	09 02 18.5	
	comp=Z,369nm,18.6s,baz=172,slow=31						
NWAO	**Narrogin (SRO)**	**43.21**	**227**	*e*P	**P**	**08 52 24.4**	**-1.9**
	11nm,1.1s						
NWAO	**Narrogin (SRO)**	**43.21**	**227**	LR	LR	09 11 09.5	
	comp=Z,189nm,18.2s,baz=10,slow=37						
JNU	**Nakatsue**	**44.52**	**332**	P	**P**	**08 52 36.1**	**-0.7**
JNU	**Nakatsue**	**44.52**	**332**	P	**P**	**08 52 36.1**	**-0.7**
	16nm,0.9s,baz=66,slow=4.4,SNR=7.6						
MJAR	**Matsushiro Arr**	**44.73**	**342**	LR	LR	09 09 28.8	
	comp=Z,38nm,18.5s,baz=190,slow=34						
KSRS	**Korea Array**	**49.46**	**333**	P	**P**	**08 53 14.5**	**-0.7**
	4.1nm,0.9s,baz=150,slow=9.0,SNR=12						
KSAR	**Wonju Array Be**	**49.47**	**333**	P	**P**	**08 53 14.5**	**-0.8**
USRK	**Ussuriysk Arra**	**53.66**	**341**	P	**P**	**08 53 46.2**	**-0.3**
	1.9nm,0.7s,baz=169,slow=8.6,SNR=5.5						
CMAR	**Chiang Mai Arr**	**59.19**	**296**	P	**P**	**08 54 28.6**	**+2.2**
CMAR	**Chiang Mai Arr**	**59.19**	**296**	P	**P**	**08 54 28.6**	**+2.2**

	1.0nm,0.3s,baz=111,slow=5.5,SNR=6.6								
FX1	**Attu Island--F**	**60.93**	**13**	LR	LR	09 17 24.4			
	comp=Z,52nm,20.6s,baz=226,slow=33								
SONM	**Songino Array**	**67.80**	**328**	P	**P**	**08 55 23.3**	**+0.3**		
SONM	**Songino Array**	**67.80**	**328**	P	**P**	**08 55 23.3**	**+0.3**		
	2.1nm,0.7s,baz=128,slow=6.2,SNR=12								
MK31	**Makanchi Array**	**81.81**	**319**	*e*P	**P**	**08 56 43.5**	**-0.4**		
MKAR	**Makanchi Array**	**81.81**	**319**	P	**P**	**08 56 44.3**	**+0.4**		
MKAR	**Makanchi Array**	**81.81**	**319**	P	**P**	**08 56 44.3**	**+0.4**		
	4.2nm,0.7s,baz=104,slow=5.4,SNR=46								
ZAA0	**Zalesovo Array**	**82.63**	**326**	*e*P	**P**	**08 56 47.4**	**-0.7**		
ZALV	**Zalesovo Beam**	**82.63**	**326**	P	**P**	**08 56 47.1**	**-1.0**		
ZALV	**Zalesovo Beam**	**82.63**	**326**	P	**P**	**08 56 47.1**	**-1.0**		
	4.2nm,0.7s,baz=104,slow=5.3,SNR=16								
ILAR	**Eielson Array**	**82.92**	**22**	P	P	08 56 46.0	-3.4		
ILAR	**Eielson Array**	**82.92**	**22**	P	P	08 56 46.0	-3.4		
	0.5nm,0.8s,baz=241,slow=5.4,SNR=12								
ILAR				LR	LR	09 34 20.4			
	comp=Z,72nm,18.1s,baz=223,slow=36								
QSPA	**South Pole Qui**	**83.98**	**180**	*e*P	**P**	**08 56 53.9**	**-1.0**		
	11nm,1.3s								
MAW	**Mawson**	**84.82**	**203**	P	**P**	**08 56 58.8**	**-0.3**		
MAW	**Mawson**	**84.82**	**203**	P	**P**	**08 56 58.7**	**-0.3**		
	2.3nm,0.9s,baz=76,slow=4.2,SNR=4.3								
KURK	**Kurchatov**	**85.25**	**322**	*e*P	**P**	**08 57 01.2**	**-0.3**		
	15nm,1.2s								
TKM2	**Tokmak 2**	**85.39**	**314**	*e*P	**P**	**08 57 03.0**	**+0.3**		
	6.6nm,1.0s								
AAK	**Ala-Archa**	**86.13**	**313**	*e*P	**P**	**08 57 06.6**	**+0.3**		
	2.9nm,0.9s								
YBH	**Yreka Blue Hor**	**89.18**	**48**	LR	LR	09 30 48.0			
	comp=Z,86nm,19.1s,baz=270,slow=31								
BRVK	**Borovoye**	**90.79**	**323**	*e*P	**P**	**08 57 27.1**	**-0.9**		
	3.4nm,0.8s								
NVAR	**Mina Array Bea**	**92.11**	**52**	P	**P**	**08 57 33.8**	**-1.0**		
NVAR	**Mina Array Bea**	**92.11**	**52**	P	**P**	**08 57 33.8**	**-1.0**		
	0.1nm,0.3s,baz=280,slow=5.2,SNR=2.9								
YKA	**Yellowknife Ar**	**96.06**	**28**	P	**P**	**08 57 54.2**	**+2.2**		
YKA	**Yellowknife Ar**	**96.06**	**28**	P	**P**	**08 57 54.2**	**+2.2**		
	0.1nm,0.7s,baz=271,slow=4.8,SNR=2.6								
PDAR	**Pinedale Array**	**98.98**	**48**	LR	LR	09 37 15.6			
	comp=Z,49nm,18.2s,baz=260,slow=32								
GERES	**GERESS Array B**	**125.53**	**329**	PKP	**PKPdf**	**09 03 25.9**	**-0.3**		
GERES	**GERESS Array B**	**125.53**	**329**	PKP	**PKPdf**	**09 03 25.9**	**-0.3**		
	0.4nm,0.5s,baz=84,slow=4.2,SNR=4.1								
BDFB	**Brasilia**	**149.60**	**135**	PKPbc	**PKPdf**	**09 04 12.5**	**+1.6**		
BDFB	**Brasilia**	**149.60**	**135**	PKPbc	**PKPdf**	**09 04 12.5**	**+1.6**		
	4.0nm,0.7s,baz=269,slow=2.6,SNR=7.1		

PVF				*e*S	**Sb**	**09 09 25.1**	**0.0**	
PVF				*e*RG	Rg	09 09 29.4		
PVF	**Pernaja**	**1.33**	**338**	*e*Pg	**Pb**	**09 09 07.5**	**0.0**	
	comp=Z,5.9nm,0.4s,SNR=90							
PVF				*e*S	**Sb**	**09 09 25.1**	**0.0**	
	SNR=47							
MEF	**Metsahovi**	**1.54**	**307**	*e*PG	**Pg**	**09 09 12.0**	**+0.7**	
MEF				*e*S	**Sg**	**09 09 33.0**	**+1.7**	
MEF				MSG		09 09 33.0		
	comp=Z,17nm,0.4s							
MEF	**Metsahovi**	**1.54**	**307**	*e*PG	**Pg**	**09 09 12.0**	**+0.7**	
MEF				MSG	**Sg**	**09 09 33.0**	**+1.7**	
	comp=Z,17nm,0.4s							
MEF				*e*S	**Sg**	**09 09 33.0**	**+1.7**	
MEF	**Metsahovi**	**1.54**	**307**	*e*P	**Pg**	**09 09 11.9**	**+0.6**	
	SNR=50							
MEF				*e*S	**Sg**	**09 09 33.0**	**+1.7**	
	comp=Z,17nm,0.4s,SNR=47							
MTSE	**Matsula**	**1.70**	**250**	*e*PN	**Pg**	**09 09 14.4**	**+0.1**	
MTSE				*e*S	**Sg**	**09 09 36.9**	**+0.6**	
MTSE	**Matsula**	**1.70**	**250**	*e*PN	**Pg**	**09 09 14.4**	**+0.1**	
MTSE				*e*S	**Sg**	**09 09 36.9**	**+0.6**	
MTSE	**Matsula**	**1.70**	**250**	*e*Pn	**Pg**	**09 09 14.4**	**+0.1**	
	SNR=33							
MTSE				*e*S	**Sg**	**09 09 36.9**	**+0.6**	
	SNR=47							
FIA0	**FINESS Array S**	**2.16**	**350**	Pn	**Pn**	**09 09 19.6**	**+0.6**	
	baz=161,slow=16							
FIA0				Lg	Lg	09 09 49.8		
	baz=164,slow=28							
FIA0				Rg	Rg	09 10 01.6		
	baz=162,slow=37							
FIA0	**FINESS Array S**	**2.16**	**350**	Pn	**Pn**	**09 09 19.6**	**+0.6**	
	baz=161,slow=16							
FIA0				Lg	Lg	09 09 49.8		
	baz=164,slow=28							
FIA0				Rg	Rg	09 10 01.6		
	baz=162,slow=37							
FIA0	**FINESS Array S**	**2.16**	**350**	*e*P	**Pn**	**09 09 19.4**	**+0.4**	
FIA0				MSG	**Sb**	**09 09 48.7**	**-0.4**	
	comp=Z,5.6nm,0.5s							
FIA0				*e*SB	**Sb**	**09 09 48.7**	**-0.4**	
FIA0				*e*RG	Rg	09 10 01.3		
FIA0	**FINESS Array S**	**2.16**	**350**	*e*P	**Pn**	**09 09 19.4**	**+0.4**	
FIA0				MSG	**Sb**	**09 09 48.7**	**-0.4**	
	comp=Z,5.6nm,0.5s							
FIA0				*e*SB	**Sb**	**09 09 48.7**	**-0.4**	
FIA0				*e*RG	Rg	09 10 01.3		
FIA0	**FINESS Array S**	**2.16**	**350**	Pn	**Pn**	**09 09 19.6**	**+0.6**	
	baz=161,slow=15,SNR=50							
FIA0				Sb	**Sb**	**09 09 48.7**	**-0.4**	
FIA0				Lg	Lg	09 09 49.8		
	baz=164,slow=27,SNR=4.0							
FINES	**FINESS Array B**	**2.16**	**350**	Pn	**Pn**	**09 09 19.6**	**+0.6**	
	comp=Z,1.6nm,0.3s,baz=165,slow=16,SNR=38							
FINES				Pg	**Pb**	**09 09 21.1**	**-0.7**	
	comp=Z,1.6nm,0.3s,baz=167,slow=16,SNR=42							
FINES				Lg	Lg	09 09 49.5		
	comp=Z,4.9nm,0.3s,baz=166,slow=28,SNR=22							
FINES				Rg	Rg	09 10 03.0		
	comp=Z,58nm,1.0s,baz=164,slow=29,SNR=14							
KAF	**Kangasniemi**	**2.81**	**355**	*e*P	**Pn**	**09 09 29.3**	**+1.3**	
KAF				MSG	**Sn**	**09 10 03.8**	**+1.3**	
	comp=Z,6.5nm,0.4s							
KAF				*e*S	**Sn**	**09 10 03.8**	**+1.3**	
KAF	**Kangasniemi**	**2.81**	**355**	*e*P	**Pn**	**09 09 29.3**	**+1.3**	
KAF				MSG	**Sn**	**09 10 03.8**	**+1.3**	
	comp=Z,6.5nm,0.4s							
KAF				*e*S	**Sn**	**09 10 03.8**	**+1.3**	
KAF	**Kangasniemi**	**2.81**	**355**	*e*P	**Pn**	**09 09 29.3**	**+1.3**	
	comp=Z,6.5nm,0.4s,SNR=33							
KAF				*e*S	**Sn**	**09 10 03.8**	**+1.3**	
	SNR=33							
SLIT	**Slitere, Latvi**	**2.95**	**237**	*e*P	**Pb**	**09 09 34.2**	**-0.9**	
	SNR=50							
KEF	**Keuruu**	**3.02**	**342**	MSG		09 10 11.6		
	comp=Z,2.1nm,0.4s							
KEF	**Keuruu**	**3.02**	**342**	*e*S	**Sb**	**09 10 11.6**	**-2.1**	
KEF				MSG		09 10 11.6		
	comp=Z,2.1nm,0.4s							
KEF	**Keuruu**	**3.02**	**342**	S	**Sb**	**09 10 11.6**	**-2.1**	
RAF	**Rauma**	**3.07**	**306**	*e*SG	**Sg**	**09 10 20.5**	**+0.2**	
RAF				MSG		09 10 20.5		
	comp=Z,4.7nm,0.4s							
RAF	**Rauma**	**3.07**	**306**	*e*P	**Pb**	**09 09 34.6**	**-2.6**	
RAF				MSG	**Sg**	**09 10 20.5**	**+0.2**	
	comp=Z,4.7nm,0.4s							
RAF				*e*SG	**Sg**	**09 10 20.5**	**+0.2**	
RAF	**Rauma**	**3.07**	**306**	*e*P	**Pn**	**09 09 34.2**	**+2.7**	
	SNR=50							
RAF				*e*S	**Sb**	**09 10 12.7**	**-2.5**	
	comp=Z,12nm,0.4s,SNR=50							
RAF				*e*Sg	**Sg**	**09 10 20.5**	**+0.2**	
	comp=Z,4.7nm,0.4s,SNR=90							
SUF	**Sumiainen**	**3.42**	**354**	*e*SG	**Sb**	**09 10 27.3**	**+1.9**	
SUF				MSG		09 10 27.3		
	comp=Z,6.7nm,0.4s							
SUF	**Sumiainen**	**3.42**	**354**	*e*P	**Pn**	**09 09 37.9**	**+1.5**	
SUF				*e*SG	**Sb**	**09 10 27.3**	**+1.9**	
SUF				MSG		09 10 27.3		
	comp=Z,6.7nm,0.4s							
SUF	**Sumiainen**	**3.42**	**354**	P	**Pn**	**09 09 37.8**	**+1.5**	
SUF				Sg	**Sb**	**09 10 27.3**	**+1.9**	
AAL	**Aland**	**3.59**	**287**	*e*SG	**Sg**	**09 10 36.9**	**0.0**	
AAL	**Aland**	**3.59**	**287**	*e*SG	**Sg**	**09 10 36.9**	**0.0**	
AAL	**Aland**	**3.59**	**287**	*e*Sg	**Sg**	**09 10 36.9**	**0.0**	
	SNR=90							
IZAR	**Zarasai**	**3.60**	**186**	*e*S	**Sn**	**09 10 16.0**	**-5.9**	
ISAL	**Salakas**	**3.79**	**186**	*e*P	**Pn**	**09 09 42.6**	**+1.3**	
ISAL				*e*S	Sn	09 10 19.4	-7.2	
ISAL				AML	AML	09 10 42.8		
	comp=Z,5.5nm,0.2s							
ISAL	**Salakas**	**3.79**	**186**	*e*P	**Pn**	**09 09 42.6**	**+1.3**	
	SNR=31							
IIGN	**Ignalina**	**4.00**	**185**	*e*P	**Pn**	**09 09 45.5**	**+1.2**	
IIGN				*e*S	Sn	09 10 24.7	-7.1	
IIGN				AML	AML	09 10 49.3		
	comp=Z,10nm,0.2s							
IIGN	**Ignalina**	**4.00**	**185**	*e*P	**Pn**	**09 09 45.5**	**+1.2**	
	SNR=31							
JOF	**Joensuu**	**4.20**	**29**	*e*P	**Pn**	**09 09 47.1**	**+0.1**	
JOF				*e*SG	**Sb**	**09 10 50.6**	**+3.0**	
JOF				MSG		09 10 50.6		
	comp=Z,4.5nm,0.4s							
JOF	**Joensuu**	**4.20**	**29**	*e*P	**Pn**	**09 09 47.1**	**+0.1**	
JOF				*e*SG	**Sb**	**09 10 50.6**	**+3.0**	
JOF				MSG		09 10 50.6		
	comp=Z,4.5nm,0.4s							
JOF	**Joensuu**	**4.20**	**29**	*e*P	**Pn**	**09 09 47.1**	**+0.1**	
	SNR=31							
UMAU	**Umeaa**	**5.45**	**330**	P	**Pn**	**09 10 05.8**	**+1.7**	
UMAU	**Umeaa**	**5.45**	**330**	P	**Pn**	**09 10 05.8**	**+1.7**	
BURU	**Burvik**	**5.88**	**336**	P	**Pn**	**09 10 10.7**	**+0.7**	
BURU				S	**Sn**	**09 11 17.6**	**-0.4**	
BURU	**Burvik**	**5.88**	**336**	P	**Pn**	**09 10 10.7**	**+0.7**	
BURU				S	**Sn**	**09 11 17.6**	**-0.4**	
BREU	**Bredtraesk**	**6.05**	**323**	P	**Pn**	**09 10 13.7**	**+1.2**	
BREU	**Bredtraesk**	**6.05**	**323**	P	**Pn**	**09 10 13.6**	**+1.2**	
SJUU	**Sjulsmark**	**6.67**	**341**	P	**Pn**	**09 10 22.2**	**+1.3**	
SJUU	**Sjulsmark**	**6.67**	**341**	P	**Pn**	**09 10 22.1**	**+1.3**	
HFS	**Hagfors**	**6.71**	**283**	Sn	**Sn**	**09 11 36.7**	**-1.9**	
	baz=98,slow=28							
HFS				Lg	Lg	09 12 09.1		
	baz=83,slow=37							
HFS	**Hagfors**	**6.71**	**283**	Sn	**Sn**	**09 11 36.7**	**-1.9**	
	baz=98,slow=28							
HFS				Lg	Lg	09 12 09.1		
	baz=83,slow=37							
HFS	**Hagfors**	**6.71**	**283**	Pn	**Pn**	**09 10 21.6**	**+0.1**	
	baz=118,slow=22,SNR=2.2							
HFS				Sn	**Sn**	**09 11 36.8**	**-1.8**	
	comp=Z,0.5nm,0.3s,baz=109,slow=27,SNR=5.8							
HFS				Lg	Lg	09 12 12.8		
	comp=Z,1.3nm,0.3s,baz=92,slow=31,SNR=11							
HFS	**Hagfors**	**6.71**	**283**	Lg	Lg	09 12 09.1		
	baz=83,slow=34,SNR=55							
KALU	**Kalix**	**6.76**	**348**	P	**Pn**	**09 10 22.8**	**+0.7**	
KALU	**Kalix**	**6.76**	**348**	P	**Pn**	**09 10 22.8**	**+0.7**	
LILU	**Lilltraesk**	**6.82**	**334**	P	**Pn**	**09 10 23.9**	**+0.9**	
LILU				S	**Sn**	**09 11 39.6**	**-1.4**	
LILU	**Lilltraesk**	**6.82**	**334**	P	**Pn**	**09 10 23.8**	**+0.9**	
LILU				S	**Sn**	**09 11 39.6**	**-1.4**	
NOA	**NORSAR Array B**	**7.99**	**289**	Pn	**Pn**	**09 10 40.1**	**+1.0**	
	comp=Z,0.2nm,0.3s,baz=121,slow=10,SNR=2.5							
NOA				Sn	**Sn**	**09 12 06.5**	**-3.6**	
	comp=Z,0.2nm,0.3s,baz=326,slow=20,SNR=2.6							
NOA				Lg	Lg	09 12 51.6		
	comp=Z,0.5nm,0.3s,baz=206,slow=8.0,SNR=3.9							
SALU	**Saltoluokta**	**8.91**	**339**	P	**Pn**	**09 10 52.6**	**+1.0**	
SALU	**Saltoluokta**	**8.91**	**339**	P	**Pn**	**09 10 52.6**	**+1.0**	
ARA0	**ARCESS Array S**	**10.27**	**357**	Pn	**Pn**	**09 11 08.3**	**-1.9**	
	baz=172,slow=16							
ARA0				Sn	Sn	09 12 58.1	-7.7	
	baz=175,slow=28							
ARA0	**ARCESS Array S**	**10.27**	**357**	Pn	**Pn**	**09 11 08.3**	**-1.9**	
	baz=172,slow=16							
ARA0				Sn	Sn	09 12 58.1	-7.7	
	baz=175,slow=28							
ARCES	**ARCESS Array B**	**10.27**	**357**	Pn	**Pn**	**09 11 08.4**	**-1.8**	
	comp=Z,0.1nm,0.3s,baz=173,slow=14,SNR=7.5							
ARCES				Sn	Sn	09 12 58.2	-7.7	
	comp=Z,0.1nm,0.3s,baz=177,slow=23,SNR=3.1							
ARCES				Lg	Lg	09 13 58.7		
	comp=Z,0.3nm,0.3s,baz=170,slow=28,SNR=4.9							

IDC 27 09:26:15.4±0.8, 16°22S×172°99W, h0km, mb4.0/9, mb1 4.2/9, mb1mx4.1/22, mbtmp4.0/9, MS3.8/7, Ms1 3.8/7, ms1mx3.2/40, Error ellipse: s-maj=34.7km s-min=18.2km az=133.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.58**	**27**	Pn	Pn	09 26 55.1	-3.4
	20nm,0.3s,baz=30,slow=5.2,SNR=30						
AFI				Sn	Sn	09 27 23.4	-7.2
	43nm,0.3s,baz=339,slow=24,SNR=7.1						
RAR	**Rarotonga**	**13.46**	**114**	LR	LR	09 33 38.9	
	comp=Z,465nm,19.9s,baz=90,slow=33						
DZM	**Mont Dzumac**	**20.28**	**250**	*e*LR	LR	09 35 38.1	
	320nm,22.8s						
DZM	**Mont Dzumac**	**20.28**	**250**	LR	LR	09 37 03.2	
	comp=Z,232nm,19.6s,baz=26,slow=32						
PPT	**Papeete**	**22.44**	**97**	LR	LR	09 39 05.8	
	comp=Z,244nm,18.1s,baz=200,slow=34						
PPT2	**Papeete2**	**22.44**	**97**	*e*LR	LR	09 36 21.7	
	223nm,25.5s						
TBI	**Tubuai**	**23.22**	**112**	*e*LR	LR	09 36 31.4	
	308nm,30.8s						
URZ	**Urewera**	**23.62**	**200**	P	P	09 31 28.7	+0.5
	12nm,0.8s,baz=307,slow=23,SNR=5.9						
STKA	**Stephens Creek**	**43.38**	**241**	P	P	09 34 24.8	+0.1
	4.2nm,0.8s,baz=68,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**50.05**	**257**	P	P	09 35 12.2	-0.1
	0.7nm,0.8s,baz=93,slow=7.0,SNR=8.1						
WRA				LR	LR	09 54 48.2	
	comp=Z,51nm,18.5s,baz=125,slow=34						
ASAR	**Alice Springs**	**50.24**	**253**	P	P	09 35 13.3	-0.5
	3.7nm,0.6s,baz=88,slow=8.3,SNR=96						
FITZ	**Fitzroy Crossi**	**58.44**	**258**	LR	LR	10 00 33.0	
	comp=Z,114nm,18.4s,baz=359,slow=35						
VNDA	**Vanda**	**62.61**	**186**	P	P	09 36 40.4	-0.6
	0.7nm,0.7s,baz=342,slow=4.4,SNR=3.2						
YBH	**Yreka Blue Hor**	**74.01**	**37**	LR	LR	10 04 14.6	
	comp=Z,45nm,20.0s,baz=220,slow=31						
NVAR	**Mina Array Bea**	**74.67**	**42**	P	P	09 37 56.2	-1.0
	0.6nm,0.7s,baz=225,slow=10,SNR=6.9						
PDAR	**Pinedale Array**	**82.61**	**42**	P	P	09 38 40.6	-0.3
	0.8nm,0.8s,baz=202,slow=2.3,SNR=7.5						
ILAR	**Eielson Array**	**83.17**	**11**	P	P	09 38 43.7	+0.7
	0.7nm,0.9s,baz=227,slow=5.2,SNR=8.7						
YKA	**Yellowknife Ar**	**90.69**	**23**	P	P	09 39 20.2	+0.6
	0.1nm,0.3s,baz=236,slow=3.8,SNR=5.4						
CMAR	**Chiang Mai Arr**	**93.25**	**288**	LR	LR	10 20 17.8	
	comp=Z,28nm,20.2s,baz=264,slow=35						
TORD	**Torodi Ar. Bea**	**174.01**	**120**	PKPab	PKPab	09 47 59.6	+0.7
	1.2nm,1.1s,baz=229,slow=6.5,SNR=4.2						

IDC 27 09:28:29.5±2.5, 35°40N×68°55E, h0km, mb3.6/3, mb1 3.5/7, mb1mx3.4/30, mbtmp3.5/7, ML3.4/3, Error ellipse: s-maj=70.0km s-min=25.5km az=141.0
ISCJB 27 09:28:33.9±0.9, 35°63N±0°05×68°6E±0°1, h33km, mb3.6/3, Error ellipse: s-maj=12.4km s-min=6.3km az=157.3
NNC 27 09:28:38.9±4.3, 35°99N×69°02E, h8km±33km, mb3.6, mpv3.6, Error ellipse: s-maj=35.8km s-min=32.8km az=155.0

ISC 27 09:28:34.8±1.1, 35°63N±0°08×68°5E±0°1, h35km, n17, σ2s04/21, mb3.4/3, 5C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.31**	**122**	P	**Pn**	**09 29 23.2**	**-1.2**
CEP				S	**Sn**	**09 30 03.0**	**+0.4**
THW	**Thamme Wali**	**3.88**	**136**	P	**Pn**	**09 29 32.0**	**-0.1**
CHCP	**Chirah Chowk**	**4.37**	**115**	P	**Pn**	**09 29 38.1**	**-0.7**
KK31	**Karatay Array**	**7.62**	**11**	⇑Pn	**Pn**	**09 30 24.9**	**+1.5**
	0.8nm,0.3s,baz=198,slow=14,SNR=22						
KK31				⇑Sn	**Sn**	**09 31 48.3**	**-0.2**
	1.4nm,0.5s,baz=232,slow=47,SNR=3.2						
KK31				⇑Lg	Lg	09 32 27.0	
	4.7nm,0.8s,baz=98,slow=3.6,SNR=3.8						
AAK	**Ala-Archa**	**8.39**	**32**	Pn	**Pn**	**09 30 35.8**	**+1.8**
	1.0nm,0.3s,baz=183,slow=7.9,SNR=8.3						
AAK				Sn	**Sn**	**09 32 09.6**	**+2.0**
	0.6nm,0.3s,baz=66,slow=10,SNR=1.9						
TKM2	**Tokmak 2**	**9.11**	**35**	⇓Pn	**Pn**	**09 30 43.0**	**-1.0**
	3.0nm,0.5s						
TKM2				⇑Sn	**Sn**	**09 32 21.0**	**-4.4**
	1.8nm,0.7s						
AB31	**Akbulak array**	**15.01**	**338**	⇓P	**P**	**09 32 06.9**	**-2.3**
	0.2nm,0.3s,baz=159,slow=14,SNR=11						
MK31	**Makanchi Array**	**15.20**	**39**	P	**Pn**	**09 32 08.5**	**+1.7**
	1.2nm,0.7s,baz=220,slow=13,SNR=11						
MKAR	**Makanchi Array**	**15.20**	**39**	Pn	**Pn**	**09 32 08.2**	**+1.4**
	0.1nm,0.3s,baz=228,slow=12,SNR=9.3						
KURBB	**Kurchatov Arra**	**16.65**	**23**	Pn	**Pn**	**09 32 22.4**	**-2.9**
	baz=211,slow=12,SNR=2.9						
VOSK	**Vostochnaya**	**17.18**	**5**	⇑P	**P**	**09 32 35.0**	**+1.7**
	1.4nm,1.0s						
ZRNK	**Zerenda**	**17.32**	**1**	⇓P	**P**	**09 32 34.5**	**-0.4**
	0.8nm,0.5s						
BVA0	**Borovoye Array**	**17.45**	**4**	⇓P	**P**	**09 32 40.0**	**+3.8**
	0.5nm,1.1s,baz=241,slow=39,SNR=4.0						
BVAR	**Borovoye Array**	**17.45**	**4**	P	**P**	**09 32 38.7**	**+2.5**
	0.2nm,0.3s,baz=169,slow=11,SNR=4.6						
ZALV	**Zalesovo Beam**	**21.57**	**27**	P	**P**	**09 33 21.1**	**0.0**
	5.0nm,0.4s,baz=226,slow=10,SNR=16						
SONM	**Songino Array**	**30.48**	**55**	P	**P**	**09 34 45.4**	**+1.0**
	0.3nm,0.6s,baz=262,slow=10.0,SNR=3.7						
TORD	**Torodi Ar. Bea**	**63.69**	**268**	P	**P**	**09 39 03.2**	**+0.1**
	0.3nm,0.9s,baz=53,slow=5.8,SNR=2.8						

IDC 27 09:29:26.8±3.7, 6°83N×90°06E, h0km, mb3.5/6, mb1 3.6/6, mb1mx3.4/26, mbtmp3.5/6, Error ellipse: s-maj=144.9km s-min=23.7km az=61.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**40.38**	**352**	P	P	09 37 06.6	+0.1
	0.4nm,0.6s,baz=165,slow=9.9,SNR=5.6						
SONM	**Songino Array**	**43.17**	**16**	P	P	09 37 29.5	0.0
	0.5nm,0.7s,baz=190,slow=7.2,SNR=3.6						
KURBB	**Kurchatov Arra**	**44.70**	**350**	P	P	09 37 40.6	-0.9
	0.2nm,0.2s,baz=169,slow=7.9,SNR=3.3						
ZALV	**Zalesovo Beam**	**47.17**	**356**	P	P	09 38 01.1	+0.1
	1.0nm,0.5s,baz=167,slow=9.5,SNR=5.5						
WRA	**Warramunga Arr**	**51.04**	**122**	P	P	09 38 30.8	-0.4
	0.3nm,0.7s,baz=299,slow=9.3,SNR=2.8						
ASAR	**Alice Springs**	**52.44**	**127**	P	P	09 38 41.9	+0.2
	0.2nm,0.6s,baz=301,slow=8.3,SNR=4.1						

IDC 27 09:33:34.4±0.4, 5°13S×103°41E, h0km, mb4.8/34, mb1 4.8/35, mb1mx4.8/38, mbtmp4.8/35, ML4.4/1, MS3.7/22, Ms1 3.7/22, ms1mx3.6/34, Error ellipse: s-maj=14.7km s-min=10.2km az=52.0
MOS 27 09:33:37.7±1.0, 5°10S×103°40E, h33km, mb5.3/29, Error ellipse: s-maj=11.2km s-min=5.6km az=112.8
ISCJB 27 09:33:37.6±0.2, 5°34S±0°03×103°13E±0°02, h34km, mb4.9/88, MS3.9/32, Error ellipse: s-maj=5.0km s-min=2.7km az=28.6
BJI 27 09:33:38.9, 5°10S×103°40E, h35km, mB5.1/24, mb5.0/43, Ms4.7/23, Ms7.4/24
NEIC 27 09:33:39.5±0.2, 5°13S×103°45E, h35km, mb4.9/21, Error ellipse: s-maj=6.5km s-min=4.4km az=51.0
NEIC Felt [III] at Liwa.

AUST 27 09:33:40.6, 5°36S×103°43E, h35km
DJA 27 09:33:41.8±0.5, 5°S±3°×10°3E±°, h23km±5.5km, M4.7/22, mb4.8/20, mB5.2/10, MLv5.0/22, Mw(mB)4.5/10, Mwp5.9/1

ISC 27 09:33:40.1±0.3, 5°28S±0°03×103°31E±0°03, h41km±2km, n352, σ1§49/359, mb4.9/88, MS3.8/32, 5C-3D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**0.79**	**71**	P	**Pn**	**09 33 56.8**	**+2.0**
LWLI				S	**Sn**	**09 34 08.0**	**+2.6**
MNAI	**Manna**	**0.98**	**339**	P	**Pn**	**09 33 59.6**	**+2.3**
MNAI				S	**Sn**	**09 34 15.0**	**+5.0**
MNAI	**Manna**	**0.98**	**339**	P	**Pn**	**09 34 00.0**	**+2.7**
	baz=1.1,SNR=303						
KASI	**Kota Agung**	**1.20**	**102**	P	**Pn**	**09 34 02.0**	**+1.6**
KASI				S	**Sn**	**09 34 16.6**	**+1.1**
KSI	**Kapahiang**	**1.77**	**336**	P	Pn	09 34 11.3	+3.1
KSI				S	**Sn**	**09 34 35.2**	**+5.7**
MBSI	**MBSI**	**1.83**	**325**	P	Pn	09 34 12.4	+3.4
MBSI				S	**Sn**	**09 34 36.5**	**+5.5**
BLSI	**Bandar Lampung**	**1.93**	**93**	P	Pn	09 34 13.5	+3.2
BLSI				S	**Sn**	**09 34 37.3**	**+3.9**
MASI	**Maura Aman, Be**	**2.38**	**333**	P	Sn	09 34 50.4	+5.9
CGJI	**Cibinong**	**2.71**	**119**	P	**Pn**	**09 34 23.0**	**+1.8**
CGJI				S	**Sn**	**09 34 53.3**	**+0.5**
PMBI	**Palembang**	**2.75**	**32**	P	Pn	09 34 24.5	+2.8
SBJI	**Serang**	**2.92**	**107**	P	Pn	09 34 27.5	+3.4
SBJI				S	**Sn**	**09 35 01.5**	**+3.5**
DBJI	**Dramaga**	**3.65**	**111**	P	Pn	09 34 37.4	+3.4
SKJI	**Sukabumi**	**3.65**	**118**	P	Pn	09 34 36.3	+2.2
KRJI	**Kerinci**	**3.66**	**330**	P	Pn	09 34 38.6	+4.2
CBJI	**Citeko**	**3.70**	**108**	P	Pn	09 34 41.8	+7.1
PPBI	**Pangkal Pinang**	**4.18**	**42**	P	Pn	09 34 44.2	+2.8
LEM	**Lembang**	**4.55**	**110**	P	Pn	09 34 54.4	+7.9
LEM	**Lembang**	**4.55**	**110**	P	Pn	09 34 54.5	+7.9
	baz=4.4,SNR=3.7						
TPI	**Tanjungpandan**	**5.00**	**60**	P	Pn	09 34 54.8	+2.2
	28nm,0.6s,790nm0.3nm						
CISI	**Cisompet, Garu**	**5.01**	**117**	P	Pn	09 34 55.0	+2.1
CISI	**Cisompet, Garu**	**5.01**	**117**	P	Pn	09 34 55.5	+2.7
	baz=4.9,SNR=9.8						
CISI				S	**Sn**	**09 35 46.8**	**-2.9**
	baz=4.9,SNR=4.1						
PPI	**Padang Panjang**	**5.60**	**329**	P	Pn	09 35 04.6	+3.7
	105nm,1.0s,3μm1.0nm						
PPI	**Padang Panjang**	**5.60**	**329**	P	Pn	09 35 04.6	+3.7
	baz=5.8,SNR=5.3						
XMI	**Christmas Isla**	**5.65**	**156**	P	Pn	09 34 58.0	-3.6
	baz=5.6,SNR=26						
XMI				S	Sn	09 35 59.0	-6.3
	baz=5.6,SNR=7.0						
XMIS	**Christmas Isla**	**5.67**	**156**	P	Pn	09 34 57.6	-4.2
	baz=5.6,SNR=75						
XMIS				S	Sn	09 35 55.7	-10
	baz=5.6,SNR=7.8						
BKNI	**Bangkinang**	**6.01**	**338**	P	Pn	09 35 10.3	+3.8
	24.5nm,1.0s,2μm1.6nm						
CLJI	**Cilicap**	**6.16**	**113**	P	Pn	09 35 15.0	+6.4
	64nm,0.8s,0.2nm						
BTDF	**Bukit Timah Da**	**6.61**	**4**	P	Pn	09 35 19.3	+4.6
	79nm,1.1s,646nm0.3nm						
MYKOM	**Kota Tinggi**	**7.04**	**4**	P	Pn	09 35 25.5	+4.8
MYKOM	**Kota Tinggi**	**7.04**	**4**	P	Pn	09 35 24.3	+3.7
	17nm,0.3s,0.3nm						
MNSI	**Mandailing Nat**	**7.09**	**328**	P	**Pn**	**09 35 24.1**	**+2.7**
	52nm,0.8s,13μm0.6nm						
KGM	**Kluang**	**7.24**	**0**	P	Pn	09 35 28.1	+4.6
UGM	**Wanagama**	**7.62**	**110**	*e*Pn	Pn	09 35 31.9	+3.2
UGM	**Wanagama**	**7.62**	**110**	P	Pn	09 35 32.2	+3.5
	89nm,0.8s,0.5nm						
UGM	**Wanagama**	**7.62**	**110**	P	Pn	09 35 32.2	+3.5
	baz=7.5,SNR=17						
PCJI	**Pacitan**	**8.33**	**111**	P	Pn	09 35 40.7	+2.4
	68nm,1.1s						
FRIM	**Kepong**	**8.62**	**349**	P	Pn	09 35 48.7	+6.3
SJI	**Sawahan**	**8.75**	**107**	P	Pn	09 35 52.8	+8.6
PWJI	**Pagerwojo**	**8.86**	**108**	P	Pn	09 35 48.9	+3.2
	66nm,0.8s						
PSI	**Prapat**	**9.14**	**331**	Pn	**Pn**	**09 35 49.2**	**-0.4**
PSI	**Prapat**	**9.14**	**331**	Pn	**Pn**	**09 35 49.2**	**-0.4**
	0.6nm,0.3s,baz=129,slow=14,SNR=3.7						
PSI				LR	LR	09 40 04.8	
	comp=Z,283nm,19.7s,baz=348,slow=44						
COCO	**West Island**	**9.39**	**223**	*e*P	**Pn**	**09 35 54.0**	**+1.1**
COCO	**West Island**	**9.39**	**223**	*e*Pn	**Pn**	**09 35 54.0**	**+1.1**
COCO	**West Island**	**9

DAV Davao City (W) 25.38 61 LR LR 09 49 39.9
comp=Z,111nm,20.3s,baz=325,slow=38
MTN Manton Dam 28.46 107 P **P** **09 39 31.4 -0.1**
baz=28,SNR=5.6
KMI Kunming 30.22 359 P P 09 39 50.5 +3.3
KMI S **S** **09 44 46.8 +2.6**
KMI pmax pmax
comp=Z,9.0nm,0.6s
KMI LR LR
comp=N,270nm,17.4s
KMI LR LR
comp=E,220nm,15.0s
KMI LR LR
comp=Z,300nm,22.7s
NWAO Narrogin (SRO) 30.42 156 LR LR 09 49 37.0
comp=Z,216nm,21.3s,baz=328,slow=32
GYA Guiyang 31.71 6 P **P** **09 40 01.3 +1.1**
GYA pP **pP** **09 40 11.5 0.0**
GYA sP **sP** **09 40 17.8 +1.4**
GYA PP **PnPn** **09 41 07.5 +2.2**
GYA PcP **PcP** **09 42 53.0 +1.6**
GYA S **S** **09 45 08.8 +1.4**
GYA sS **sS** **09 45 25.3 -0.8**
GYA ScP **ScP** **09 46 33.0 +1.4**
GYA ScS **ScS** **09 50 29.5 -0.5**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,450nm,17.8s
GYA LR LR
comp=E,330nm,18.6s
GYA LR LR
comp=Z,460nm,17.5s
SHL Shillong 32.61 341 *eP* **P** **09 40 07.0 -1.2**
HYB Hyderabad 33.27 313 *i* P **P** **09 40 14.0 +0.1**
WRA Warramunga Arr 33.51 119 P **P** **09 40 15.6 -0.4**
WRA Warramunga Arr 33.51 119 P **P** **09 40 15.6 -0.4**
comp=Z,9.5nm,0.8s,baz=304,slow=9.1,SNR=60
WRAB Tennant Creek 33.52 119 *eP* **P** **09 40 15.7 -0.3**
WRAB pmax pmax
comp=Z,19nm,0.9s
WRAB Tennant Creek 33.52 119 *eP* **P** **09 40 15.7 -0.3**
comp=Z,19nm,0.9s
PALU Palau 33.52 68 S sS 09 45 57.3 +2.8
baz=34,SNR=3.9
ASAR Alice Springs 34.67 125 P **P** **09 40 26.3 +0.2**
ASAR PcP **PcP** **09 43 00.2 +0.5**
ASAR S **S** **09 45 49.6 -3.7**
ASAR Alice Springs 34.67 125 P **P** **09 40 26.3 +0.2**
comp=Z,9.9nm,0.8s,baz=300,slow=7.9,SNR=57
ASAR PcP **PcP** **09 43 00.2 +0.5**
comp=Z,1.9nm,0.8s,baz=296,slow=2.5,SNR=7.0
ASAR S **S** **09 45 49.6 -3.7**
comp=Z,1.9nm,1.0s,baz=293,slow=15,SNR=6.4
AS31 Alice Springs 34.67 125 *eP* **P** **09 40 26.4 +0.3**
ODAN Odare 35.47 335 *eP* **P** **09 40 32.7 -0.4**
comp=Z,49nm,0.7s
TAPN Taplejung 35.77 336 *eP* **P** **09 40 35.7 0.0**
comp=Z,80nm,0.8s
RAMN Ramite 35.89 334 *eP* **P** **09 40 36.9 +0.2**
comp=Z,18nm,0.4s
CD2 Chengdu 35.98 1 P **P** **09 40 38.0 +0.8**
CD2 pP **pP** **09 40 47.8 -0.7**
CD2 sP **sP** **09 40 51.5 -1.9**
CD2 PP **PP** **09 42 00.8 +1.2**
CD2 PcP **PcP** **09 43 03.8 +0.5**
CD2 S **S** **09 46 14.5 +1.3**
CD2 sS **sS** **09 46 30.5 -1.6**
CD2 PcS **PcS** **09 46 50.3 -0.6**
CD2 SS **SnSn** **09 48 38.8 -1.4**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,180nm,5.4s
CD2 LR LR
comp=N,270nm,15.6s
CD2 LR LR
comp=E,390nm,9.8s
CD2 LR LR
comp=Z,250nm,14.2s
LSA Lhasa 36.69 342 *eP* **P** **09 40 43.0 -0.7**
LSA pmax pmax
comp=Z,7.0nm,0.5s
LSA Lhasa 36.69 342 *eP* **P** **09 40 43.0 -0.7**
comp=Z,7.0nm,0.5s
PKI Pulchoki 36.95 333 *eP* **P** **09 40 45.5 -0.4**
comp=Z,15nm,0.6s
PKIN Phulchoki 36.96 333 *eP* **P** **09 40 45.3 -0.6**
comp=Z,10.0nm,0.6s
GUN Gumba 37.04 334 *eP* **P** **09 40 46.4 -0.2**
comp=Z,69nm,0.7s
DMN Daman 37.12 333 *eP* **P** **09 40 47.1 -0.1**
comp=Z,8.8nm,0.2s
KKN Kakani 37.20 333 *eP* **P** **09 40 47.5 -0.3**
comp=Z,30nm,0.7s
JAY Jayapura 37.40 87 P P 09 40 52.9 +3.4
baz=37,SNR=3.1
POO Poona 37.46 310 *ex* **P** **09 40 49.0 -1.0**
KOLN Koldanda 37.97 331 *eP* **P** **09 40 54.4 +0.1**
comp=Z,21nm,0.7s
BHPL Bhopal 37.98 319 *eP* **P** **09 40 55.2 +0.9**
BHPL AMb AMB 09 40 56.1
comp=Z,26nm,0.7s
QIS Mount Isa 38.37 117 P **P** **09 40 57.8 +0.2**
baz=38,SNR=5.6
DANN Dangsing 38.38 332 *eP* **P** **09 40 57.7 -0.2**
comp=Z,49nm,0.8s
PYUN Piuthan 38.54 330 *eP* **P** **09 40 59.2 +0.1**
comp=Z,70nm,1.0s
NJ2 Nanjing 39.96 21 *eP* **P** **09 41 12.0 +1.3**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
COEN Coen 40.18 105 P **P** **09 41 12.8 0.0**
baz=40,SNR=5.0
LZH Lanzhou 41.15 1 *eP* **P** **09 41 21.0 +0.4**
LZH pP **pP** **09 41 30.8 -1.3**
LZH sP **sP** **09 41 34.5 -2.4**
LZH *eS* **S** **09 47 30.5 -0.7**
LZH sS sS 09 47 44.0 -6.3
LZH pmax pmax
comp=Z,23nm,1.0s
LZH pmax pmax
comp=Z,110nm,5.1s
LZH LR LR
comp=N,430nm,15.4s
LZH LR LR
comp=E,350nm,16.2s
LZH LR LR
comp=Z,490nm,17.4s
MTSU Mount Surprise 42.02 111 P **P** **09 41 28.1 +0.2**
baz=42,SNR=49
AJM Ajmer 42.05 320 *eP* **P** **09 41 25.9 -2.1**
AJM AMb AMB 09 41 29.4
comp=Z,19nm,0.5s
NDI New Delhi 42.09 325 *eP* **P** **09 41 26.5 -1.7**
PMG Port Moresby 43.66 98 P **P** **09 41 40.1 -1.1**
comp=Z,1.0nm,0.8s
PMG Port Moresby 43.66 98 P **P** **09 41 40.1 -1.1**
comp=Z,10nm,0.6s,baz=241,slow=6.7,SNR=12
CTA Charters Tower 44.24 113 LR LR 09 59 46.7
comp=Z,83nm,18.3s,baz=283,slow=36
CTAO Charters Tower 44.24 113 *eP* **P** **09 41 46.2 +0.4**
CTAO pmax pmax
comp=Z,43nm,1.2s
CTAO Charters Tower 44.24 113 *eP* **P** **09 41 46.2 +0.4**
comp=Z,43nm,1.2s
QLP Quilpie 44.40 123 P **P** **09 41 48.3 +1.3**
baz=44,SNR=33
STKA Stephens Creek 44.52 131 *eP* **P** **09 41 48.6 +0.7**
comp=Z,4.7nm,0.7s
STKA Stephens Creek 44.52 131 P **P** **09 41 48.9 +1.0**
comp=Z,16nm,0.6s,baz=302,slow=7.5,SNR=56
STKA LR LR 09 59 29.9
comp=Z,90nm,20.8s,baz=208,slow=35
STKA Stephens Creek 44.52 131 P **P** **09 41 48.9 +1.0**
baz=44,SNR=28
GTA Gaotai 44.58 356 *eP* **P** **09 41 48.5 +0.2**
GTA pP **pP** **09 41 58.8 -1.1**
GTA sP **sP** **09 42 03.0 -1.7**
GTA PcP **PcP** **09 43 31.3 +0.4**
GTA S **S** **09 48 23.5 +2.0**
GTA sS **sS** **09 48 38.5 -2.2**
GTA pmax pmax
comp=Z,9.0nm,0.7s
GTA pmax pmax
comp=Z,120nm,5.2s
GTA LR LR
comp=N,180nm,21.4s
GTA LR LR
comp=E,190nm,20.4s
GTA LR LR
comp=Z,220nm,27.1s
JNU Nakatsue 46.28 33 P **P** **09 42 01.3 -0.5**
JNU Nakatsue 46.28 33 P **P** **09 42 01.3 -0.5**
comp=Z,10.0nm,0.8s,baz=95,slow=6.0,SNR=7.1
HHC Hu-ho-hao-te 46.52 9 ⇑P **P** **09 42 03.8 +0.2**
HHC pP **pP** **09 42 13.5 -1.8**
HHC sP **sP** **09 42 17.5 -2.6**
HHC PP **PP** **09 43 53.0 -0.6**
HHC S **S** **09 48 48.8 -0.6**
HHC sS **sS** **09 49 06.0 -2.7**
HHC SS SS 09 52 08.5 -7.4
HHC pmax pmax
comp=Z,82nm,0.8s
HHC pmax pmax
comp=Z,240nm,5.4s
HHC LR LR
comp=N,360nm,16.6s
HHC LR LR
comp=E,350nm,15.0s
HHC LR LR
comp=Z,380nm,15.2s
BJI Beijing 46.62 14 P **P** **09 42 03.5 -0.8**
BJI pmax pmax
comp=Z,21nm,0.7s
BJI LR LR
comp=Z,120nm,28.0s
CMSA Cobar Meteorol 47.49 129 P **P** **09 42 12.5 +1.2**
baz=47,SNR=12
RMQ Roma 48.19 121 P P 09 42 18.4 +1.6
baz=48,SNR=5.4
KSAR Wonju Array Be 48.28 26 P **P** **09 42 17.4 +0.2**
KSRS Korea Array 48.30 26 P **P** **09 42 17.4 +0.1**
comp=Z,8.5nm,0.6s,baz=227,slow=7.5,SNR=40
KSRS LR LR 10 03 10.5
comp=Z,46nm,20.4s,baz=205,slow=37
EIDS Eidsvold 49.88 119 P **P** **09 42 30.7 +0.9**
baz=50,SNR=3.7
WMQ Urumqi 50.87 345 P **P** **09 42 37.0 +0.1**
WMQ pP **pP** **09 42 47.0 -1.7**
WMQ sP **sP** **09 42 51.0 -2.4**
WMQ PP **PP** **09 44 34.0 +0.4**
WMQ ScP **ScP** **09 47 47.0 +0.7**
WMQ S **S** **09 49 49.0 -1.4**
WMQ sS **sS** **09 50 06.0 -3.9**
WMQ ScS **ScS** **09 52 22.0 -2.4**
WMQ SS **SS** **09 53 20.0 -5.8**
WMQ pmax pmax
comp=Z,32nm,1.0s
WMQ pmax pmax
comp=Z,130nm,5.0s
WMQ LR LR
comp=N,60nm,18.0s
WMQ LR LR
comp=E,79nm,18.0s
WMQ LR LR
comp=Z,56nm,18.0s
KBL Kabul 51.12 323 *eP* **P** **09 42 39.0 -0.1**
KBL pmax pmax
comp=Z,7.0nm,0.8s
KBL Kabul 51.12 323 *eP* **P** **09 42 39.0 -0.1**
comp=Z,7.2nm,0.8s
KSH Kashi 51.22 333 P **P** **09 42 38.5 -1.2**
KSH pP **pP** **09 42 47.5 -4.0**
KSH sP **sP** **09 42 53.0 -3.3**
KSH PcP **PcP** **09 43 54.8 +0.2**
KSH PP **PP** **09 44 33.5 -3.5**
KSH ScP **ScP** **09 47 42.0 -6.0**
KSH PcS **PcS** **09 47 47.8 -4.6**
KSH S S 09 49 49.3 -6.3
KSH sS sS 09 50 09.5 -5.6
KSH ScS **ScS** **09 52 23.3 -3.9**
KSH SS **SS** **09 53 25.8 -5.8**
KSH pmax pmax
comp=Z,19nm,0.4s
KSH LR LR
comp=N,720nm,13.6s
KSH LR LR
comp=E,460nm,11.6s
KSH LR LR
comp=Z,250nm,4.9s
ARMA Armidale 51.82 125 P P 09 42 46.7 +2.3
baz=52,SNR=4.6
CN2 Changchun 52.78 20 *eP* **P** **09 42 49.5 -1.6**
CN2 *epP* **pP** **09 43 05.0 +2.1**
CN2 *eS* **S** **09 50 14.0 -2.6**
CN2 pmax pmax
comp=Z,20nm,0.8s
MAJO Matsushiro 52.87 35 *eP* **P** **09 42 50.4 -1.5**
MAJO pmax pmax
comp=Z,57nm,1.8s
MAJO Matsushiro 52.87 35 *eP* **P** **09 42 50.4 -1.5**
comp=Z,57nm,1.8s
MAT Matsushiro 52.87 35 P **P** **09 42 49.7 -2.2**
MJAR Matsushiro Arr 52.87 35 P **P** **09 42 49.9 -2.1**
MJAR Matsushiro Arr 52.87 35 P **P** **09 42 49.9 -2.1**
comp=Z,10.0nm,0.8s,baz=219,slow=8.4,SNR=23
SONM Songino Array 52.95 3 P **P** **09 42 52.3 -0.2**
SONM PcP **PcP** **09 44 00.8 -0.2**
SONM Songino Array 52.95 3 P **P** **09 42 52.3 -0.2**
comp=Z,28nm,0.9s,baz=180,slow=8.6,SNR=136
SONM PcP **PcP** **09 44 00.8 -0.2**
comp=Z,7.2nm,0.4s,baz=193,slow=4.4,SNR=16
SONM LR LR 10 08 44.2
comp=Z,101nm,18.0s,baz=254,slow=40
ULN Ulaanbaatar 53.02 3 *eP* **P** **09 42 52.5 -0.4**
ULHL Ulahol 53.33 335 *i* P **P** **09 42 55.4 -0.1**
ULHL Ulahol 53.33 335 P **P** **09 42 55.4 -0.1**
SNR=6.0
KZA Kyzart 53.62 334 *i* P **P** **09 42 58.0 +0.2**
KZA Kyzart 53.62 334 P **P** **09 42 58.0 +0.2**
SNR=19
TKM2 Tokmak 2 54.16 335 P **P** **09 43 00.1 -1.4**
TKM2 pmax pmax
comp=Z,22nm,0.5s
TKM2 Tokmak 2 54.16 335 *eP* **P** **09 43 01.0 -0.5**
comp=Z,32nm,0.6s
TKM2 Tokmak 2 54.16 335 P **P** **09 43 01.0 -0.5**
SNR=48
KBK Karagaybulak 54.22 334 *i* P **P** **09 43 02.3 +0.4**
KBK Karagaybulak 54.22 334 P **P** **09 43 02.3 +0.4**
SNR=18
AML Almayashu 54.35 333 *i* P **P** **09 43 02.8 -0.3**
AML Almayashu 54.35 333 P **P** **09 43 02.8 -0.3**
SNR=23
AAK Ala-Archa 54.39 334⇓ *eP* **P** **09 43 02.3 -0.9**
AAK pmax pmax
comp=Z,18nm,1.0s
AAK MLR MLR
comp=Z,187nm,21.0s
AAK Ala-Archa 54.39 334 *eP* **P** **09 43 02.4 -0.9**
AAK PcP **PcP** **09 44 07.3 +0.7**
AAK Ala-Archa 54.39 334 P **P** **09 43 02.9 -0.3**
comp=Z,5.3nm,0.5s,baz=134,slow=6.3,SNR=18
AAK PcP **PcP** **09 44 07.3 +0.7**
comp=Z,3.9nm,0.7s,baz=114,slow=3.9,SNR=3.8
EKS2 Erkin-Say 54.73 334 *eP* **P** **09 43 05.5 -0.1**
EKS2 pmax pmax
comp=Z,24nm,0.6s
EKS2 Erkin-Say 54.73 334 *eP* **P** **09 43 05.5 -0.1**
comp=Z,24nm,0.6s
EKS2 Erkin-Say 54.73 334 P **P** **09 43 05.3 -0.3**
SNR=30
USP Ospenovka 54.90 335 *i* P **P** **09 43 06.1 -0.6**
USP Ospenovka 54.90 335 P **P** **09 43 06.1 -0.6**
SNR=7.8
MDJ Mudanjiang 54.99 23 P **P** **09 43 08.5 +1.3**
MDJ pmax pmax
comp=Z,7.0nm,0.7s
MDJ pmax pmax
comp=Z,140nm,4.4s
MK31 Makanchi Array 55.09 343 *i* P **P** **09 43 07.2 -0.8**
MK31 pmax pmax
comp=Z,11nm,0.5s
MK31 Makanchi Array 55.09 343 *eP* **P** **09 43 07.3 -0.7**
MKAR Makanchi Array 55.09 343 P **P** **09 43 07.4 -0.6**
MKAR Makanchi Array 55.09 343 P **P** **09 43 07.4 -0.6**
MKAR Makanchi Array 55.09 343 P **P** **09 43 07.4 -0.6**
comp=Z,19nm,0.6s,baz=145,slow=7.9,SNR=249
MKAR LR LR 10 12 25.3
comp=Z,28nm,20.6s,baz=356,slow=42
ZAK Zakamensk 55.43 360 *eP* **P** **09 43 09.2 -1.3**
ZAK *e* 09 44 07.2
ZAK pmax pmax
comp=Z,5.0nm,1.0s
USRK Ussuriysk Arra 55.61 25 P **P** **09 43 11.1 -0.6**
comp=Z,23nm,0.7s,baz=218,slow=6.0,SNR=64
KK31 Karatay Array 56.58 332 *i* P **P** **09 43 17.3 -1.4**
KK31 pmax pmax
comp=Z,2.0nm,0.5s
KKAR Karatay Array 56.58 332 *eP* **P** **09 43 17.6 -1.1**
KKAR pmax pmax
comp=Z,5.0nm,0.7s
KKAR Karatay Array 56.58 332 *eP* **P** **09 43 17.6 -1.1**
comp=Z,4.7nm,0.7s
TLY Talaya 56.73 0 *eP* **P** **09 43 19.3 -0.3**
TLY *eS* **S** **09 51 07.4 -2.1**
TLY pmax pmax
comp=Z,9.0nm,0.9s
TLY MLR MLR
comp=Z,75nm,21.0s
KURBB Kurchatov Arra 59.64 342 P **P** **09 43 38.7 -1.2**
comp=Z,13nm,0.9s,baz=159,slow=6.5,SNR=72
KURBB PcP **PcP** **09 44 26.8 +0.1**
comp=Z,2.3nm,0.6s,baz=156,slow=3.3,SNR=6.1
KLR Kul'dur 59.66 21 *eP* P 09 43 34.3 -5.8
KURK Kurchatov 59.69 342 *c i*P **P** **09 43 38.8 -1.5**
KURK pmax pmax
comp=Z,27nm,1.0s
KURK Kurchatov 59.69 342 *eP* **P** **09 43 39.0 -1.3**
KURK PcP **PcP** **09 44 26.8 -0.1**
ZAA0 Zalesovo Array 61.02 348 *eP* **P** **09 43 47.9 -1.4**
ZALV Zalesovo Beam 61.02 348 P **P** **09 43 48.0 -1.3**
ZALV Zalesovo Beam 61.02 348 P **P** **09 43 48.0 -1.3**
ZALV Zalesovo Beam 61.02 348 P **P** **09 43 48.0 -1.3**
comp=Z,12nm,0.3s,baz=160,slow=4.7,SNR=58
ZALV LR LR 10 13 13.3
comp=Z,120nm,19.5s,baz=116,slow=39
NVS Novosibirsk 62.19 347 *eP* **P** **09 43 55.3 -1.9**
KBD Kabd 63.42 306 *eP* **P** **09 44 06.7 +0.8**
KBD AMb AMB 09 44 18.6
comp=Z,59nm,1.6s
RDF Al-Radifah 63.44 306 *eP* **P** **09 44 07.2 +1.2**
RDF AMb AMB 09 44 15.6
comp=Z,82nm,1.8s
NAY Al-Naaiem 63.81 306 *eP* **P** **09 44 08.9 +0.4**
NAY AMb AMB 09 44 13.9
comp=Z,40nm,1.8s
BVA0 Borovoye Array 64.40 339 *i* P **P** **09 44 10.7 -1.2**
BVA0 pmax pmax
comp=Z,3.0nm,0.7s
BVAR Borovoye Array 64.40 339 P **P** **09 44 10.7 -1.2**
BVAR Borovoye Array 64.40 339 P **P** **09 44 10.7 -1.2**
BVAR Borovoye Array 64.40 339 P **P** **09 44 10.7 -1.2**
comp=Z,24nm,0.6s,baz=144,slow=8.8,SNR=129
BRVK Borovoye 64.46 339 *eP* **P** **09 44 11.0 -1.3**
BRVK pmax pmax
comp=Z,21nm,0.5s
BRVK Borovoye 64.46 339 *eP* **P** **09 44 11.0 -1.3**
comp=Z,21nm,0.5s
KMBO Kilima Mbogo 66.06 271 LR LR 10 12 09.4
comp=Z,40nm,18.2s,baz=99,slow=35
AB31 Akbulak array 66.09 331 P **P** **09 44 21.5 -1.4**
AB31 pmax pmax
comp=Z,48nm,0.7s
ABKAR Akbulak array 66.09 331 *eP* **P** **09 44 22.1 -0.8**
comp=Z,39nm,0.6s
AKTO Aktyubinsk 67.81 331 P **P** **09 44 33.1 -0.7**
AKTO Aktyubinsk 67.81 331 P **P** **09 44 33.1 -0.7**
AKTO Aktyubinsk 67.81 331 P **P** **09 44 33.1 -0.7**
comp=Z,12nm,0.9s,baz=135,slow=6.6,SNR=35
MAW Mawson 67.99 196 LR LR 10 08 21.4
comp=Z,271nm,18.4s,baz=323,slow=31
YAK Yakutsk 70.12 13 *eP* **P** **09 44 45.6 -2.3**
YAK pmax pmax
comp=Z,12nm,0.9s
GNI Garni 70.17 316 LR LR 10 15 34.9
comp=Z,30nm,19.1s,baz=263,slow=36
DGRG David-gareji 70.30 317 P **P** **09 44 51.1 +1.6**
SVE Sverdlovsk 70.96 337⇑ *i*P **P** **09 44 53.0 -0.2**
SVE pmax pmax
comp=Z,34nm,0.9s
ARU Arti 71.52 336 *c i*P **P** **09 44 55.6 -0.9**
ARU 09 45 14.3
ARU 09 47 32.9
ARU S **S** **09 54 14.1 +1.7**
ARU SS **SS** **09 58 45.4 -2.8**
ARU pmax pmax
comp=Z,28nm,1.0s
ZEI Tsey 71.86 318 *eP* **P** **09 44 59.9 +0.7**
ZEI pmax pmax
comp=Z,9.0nm,0.8s
KBZ Khabaz 72.93 319 P **P** **09 45 05.4 +0.2**
KBZ Khabaz 72.93 319 P **P** **09 45 05.4 +0.2**
KBZ Khabaz 72.93 319 P **P** **09 45 05.4 +0.2**
comp=Z,9.9nm,0.7s,baz=124,slow=5.3,SNR=34
KIV Kislovodsk 73.17 319⇓ *i*P **P** **09 45 06.7 -0.1**
KIV *i* 09 45 29.0
KIV pmax pmax
comp=Z,7.0nm,1.0s
ASF Jabal al Asfar 73.17 306 P **P** **09 45 08.6 +1.6**
ASF Jabal al Asfar 73.17 306 P **P** **09 45 08.6 +1.6**
comp=Z,7.5nm,0.6s,baz=343,slow=5.0,SNR=8.7
ASF LR LR 10 17 15.4
comp=Z,25nm,18.9s,baz=164,slow=36
PETK Petropavlovsk- 73.93 31 P **P** **09 45 09.6 -1.4**
PETK Petropavlovsk- 73.93 31 P **P** **09 45 09.6 -1.4**
PETK Petropavlovsk- 73.93 31 P **P** **09 45 09.6 -1.4**
comp=Z,4.4nm,0.9s,baz=216,slow=3.6,SNR=4.2
PETK LR LR 10 16 35.9
comp=Z,24nm,21.6s,baz=242,slow=35
MALT Malatya 73.97 312 *eP* **P** **09 45 12.3 +0.6**
MALT pmax pmax
comp=Z,2.0nm,0.8s
MALT Malatya 73.97 312 *eP* **P** **09 45 12.3 +0.6**
comp=Z,2.3nm,0.8s
EIL Elat 74.06 303 P **P** **09 45 13.8 +1.6**
EIL Elat 74.06 303 P **P** **09 45 13.8 +1.6**
comp=Z,12nm,0.7s,baz=16,slow=1.5,SNR=8.5
LSZ Lusaka 74.30 256 P **P** **09 45 15.4 +1.4**
LSZ Lusaka 74.30 256 P **P** **09 45 15.4 +1.4**
comp=Z,1.9nm,0.7s,baz=80,slow=7.4,SNR=4.7
SOKR Solikamsk 74.33 337 *d i*P **P** **09 45 13.4 +0.4**
SOKR pmax pmax
comp=Z,20nm,0.8s
MMAI Mount Meron Ar 74.63 306 P **P** **09 45 17.4 +1.9**
MMAI Mount Meron Ar 74.63 306 P **P** **09 45 17.4 +1.9**
comp=Z,9.3nm,0.7s,baz=84,slow=7.6,SNR=13
MMAI LR LR 10 21 06.7
comp=Z,45nm,19.4s,baz=175,slow=38
CSS Prodhromos 76.83 308 *eP* **P** **09 45 29.3 +1.3**
VRHR Novokhopersk 76.89 325 *eP* **P** **09 45 27.5 -0.4**
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=E,20nm,0.8s
VRHR pmax pmax
comp=Z,40nm,0.8s
BOSA Boshof 77.02 242 P **P** **09 45 30.3 +0.9**
BOSA Boshof 77.02 242 P **P** **09 45 30.3 +0.9**
comp=Z,2.7nm,0.8s,baz=68,slow=4.2,SNR=5.6
BOSA LR LR 10 11 30.7
comp=Z,69nm,19.1s,baz=277,slow=30
SEY Seymchan 77.45 21 *i* P **P** **09 45 30.2 -0.6**
BR131 Keskin Array S 77.96 312 *eP* **P** **09 45 34.2 -0.2**
comp=Z,4.5nm,0.7s
BRTR Keskin Array B 77.96 312 P **P** **09 45 34.2 -0.2**
BRTR Keskin Array B 77.96 312 P **P** **09 45 34.2 -0.2**
comp=Z,6.8nm,0.7s,baz=136,slow=7.2,SNR=42
VORD Divnogorie 78.17 324 *eP* **P** **09 45 34.4 -0.7**
VORD pmax pmax
comp=N,7.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,9.0nm,0.6s
VNDA Vanda 78.33 169 *eP* **P** **09 45 36.7 +1.1**
comp=Z,5.3nm,1.1s
VNDA Vanda 78.33 169 P **P** **09 45 36.7 +1.1**
comp=Z,4.0nm,1.0s,baz=304,slow=5.0,SNR=14
VNDA LR LR 10 15 10.7
comp=Z,132nm,18.0s,baz=322,slow=32
VSR Storozhevoye 78.34 325 *eP* **P** **09 45 35.6 -0.4**
VSR pmax pmax

comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,20nm,0.6s
SBA Scott Base 79.42 169 *e*P P 09 45 43.7 +2.2
SBA pmax pmax
comp=Z,132nm,2.9s
SBA Scott Base 79.42 169 *e*P P 09 45 43.7 +2.2
comp=Z,132nm,2.9s
MOS Moscow 81.00 329 *e*P **P 09 45 49.5 -0.8**
OBN Obninsk 81.31 328*c i*P **P 09 45 51.9 -0.1**
OBN *i* 09 46 06.5
OBN pmax pmax
comp=Z,53nm,1.6s
AKASG Malin Array Be 84.08 322 P **P 09 46 06.1 -0.4**
AKASG Malin Array Be 84.08 322 P **P 09 46 06.1 -0.4**
AKASG Malin Array Be 84.08 322 P **P 09 46 06.1 -0.4**
comp=Z,6.0nm,0.6s,baz=86,slow=4.9,SNR=17
AK01 Malin Array Si 84.09 322 *e*P **P 09 46 06.0 -0.6**
KIEV Kiev 84.09 322 *e*P **P 09 46 05.8 -0.8**
KIEV pmax pmax
comp=Z,9.0nm,0.8s
KIEV Kiev 84.09 322 *e*P **P 09 46 05.8 -0.8**
comp=Z,9.1nm,0.8s
TSUM Tsumeb 84.27 251 P **P 09 46 09.6 +1.2**
TSUM Tsumeb 84.27 251 P **P 09 46 09.6 +1.2**
comp=Z,1.9nm,0.8s,baz=56,slow=23,SNR=5.3
QSPA South Pole Qui 84.70 180 P **P 09 46 10.5 +0.9**
QSPA South Pole Qui 84.70 180 P **P 09 46 10.5 +0.9**
comp=Z,5.2nm,1.0s,baz=290,slow=3.9,SNR=11
BILL Bilibino 85.09 20 *i*P **P 09 46 10.8 -0.5**
BILL pmax pmax
comp=Z,14nm,1.2s
BUR08 Bucovina Ar. S 85.91 318 *e*P **P 09 46 16.9 +1.0**
JOF Joensuu 86.58 334 *e*P **P 09 46 16.4 -2.3**
JOF pmax pmax
comp=Z,6.0nm,0.6s
JOF Joensuu 86.58 334 *ep* **P 09 46 16.4 -2.3**
comp=Z,5.6nm,0.6s
KOLS Kolonicke sedl 88.08 319 *e*P **P 09 46 27.8 +1.5**
KOLS pmax pmax
comp=Z,20nm,0.9s
KOLS Kolonicke sedl 88.08 319 *e*P **P 09 46 27.8 +1.5**
KOLS *ep*P pP 09 46 45.2 +6.4
FINES FINESS Array B 88.53 332 P **P 09 46 28.4 +0.2**
FINES FINESS Array B 88.53 332 P **P 09 46 28.4 +0.2**
comp=Z,6.9nm,0.6s,baz=101,slow=6.0,SNR=25
KAF Kangasniemi 88.59 333 *e*P **P 09 46 27.6 -0.8**
KAF pmax pmax
comp=Z,10.0nm,0.6s
KAF Kangasniemi 88.59 333 *ep* **P 09 46 27.6 -0.8**
comp=Z,10nm,0.6s
CRVS Cervenica-Dubn 88.60 319 *e*P **P 09 46 29.4 +0.6**
CRVS Cervenica-Dubn 88.60 319 *e*P **P 09 46 29.4 +0.6**
SNAA Sanae 90.06 198 *e*P **P 09 46 36.8 +1.5**
comp=Z,9.3nm,1.3s
SNAA Sanae 90.06 198 P P 09 46 37.3 +2.1
comp=Z,0.8nm,0.9s,baz=341,slow=4.3,SNR=4.1
VYHS Vyhne 90.26 319 *e*P **P 09 46 37.7 +1.1**
VYHS Vyhne 90.26 319 *e*P **P 09 46 37.6 +1.0**
ARCES ARCESS Array B 90.66 340 P **P 09 46 36.9 -1.1**
ARCES ARCESS Array B 90.66 340 P **P 09 46 36.9 -1.1**
comp=Z,3.2nm,0.6s,baz=87,slow=6.0,SNR=14
ARCES LR LR 10 33 15.6
comp=Z,32nm,19.8s,baz=52,slow=40
GERES GERESS Array B 93.68 319 P **P 09 46 53.1 +0.6**
GERES GERESS Array B 93.68 319 P **P 09 46 53.1 +0.6**
comp=Z,1.7nm,0.8s,baz=72,slow=4.3,SNR=6.6
NOA NORSAR Array B 95.60 331 P **P 09 47 00.5 -0.4**
NOA PP **PP 09 50 52.0 -0.4**
NOA NORSAR Array B 95.60 331 P **P 09 47 00.5 -0.4**
comp=Z,0.5nm,0.6s,baz=94,slow=4.5,SNR=3.9
NOA PP **PP 09 50 52.0 -0.4**
comp=Z,0.4nm,0.7s,baz=96,slow=7.6,SNR=3.7
NOA LR LR 10 34 53.0
comp=Z,15nm,18.2s,baz=90,slow=38
YKA Yellowknife Ar 116.47 19 PKP **PKPdf 09 52 18.3 -0.8**
YKA Yellowknife Ar 116.47 19 PKP **PKPdf 09 52 18.3 -0.8**
comp=Z,0.9nm,0.6s,baz=348,slow=2.3,SNR=24
NEW Newport 125.06 32 PKP **PKPdf 09 52 36.0 -0.2**
NEW Newport 125.06 32 PKP **PKPdf 09 52 36.0 -0.2**
comp=Z,0.8nm,0.5s,baz=68,slow=3.1,SNR=4.1
BSMT Bassoo Peak 126.53 31 *e*PKPdf **PKPdf 09 52 38.4 -0.8**
WVOR Wild Horse Val 127.57 39 *e*PKIKP **PKPdf 09 52 40.7 -0.6**
WVOR Wild Horse Val 127.57 39 *e*PKPdf **PKPdf 09 52 40.7 -0.6**
MSO Missoula 127.64 32 *e*PKPdf **PKPdf 09 52 40.4 -0.9**
CHMT Chamberlain Mo 127.94 31 *e*PKPdf **PKPdf 09 52 40.5 -1.4**
MFID Camas Ranch 128.71 36 *e*PKPdf **PKPdf 09 52 43.9 +0.5**
EGMT Eagleton 128.90 28 *e*PKPdf **PKPdf 09 52 43.5 0.0**
DLMT Dillon 129.30 32 *e*PKPdf **PKPdf 09 52 44.6 +0.1**
MCMT McKenzie Canyo 129.51 33 *e*PKPdf **PKPdf 09 52 45.3 +0.3**
BOZ Bozeman (W) 129.62 31 *e*PKIKP **PKPdf 09 52 45.0 -0.2**
BOZ Bozeman (W) 129.62 31 *e*PKPdf **PKPdf 09 52 45.0 -0.2**
NVAR Mina Array Bea 129.88 43 PKP **PKPdf 09 52 47.2 +1.2**
NVAR SKP 09 56 25.9
NVAR Mina Array Bea 129.88 43 PKP **PKPdf 09 52 47.2 +1.2**
comp=Z,1.5nm,0.7s,baz=317,slow=1.8,SNR=14
NVAR SKP 09 56 25.9
comp=Z,0.6nm,0.8s,baz=235,slow=5.2,SNR=4.0
SCHQ Schefferville 129.95 353 PKP **PKPdf 09 52 45.5 +0.2**
SCHQ Schefferville 129.95 353 PKP **PKPdf 09 52 45.5 +0.2**
comp=Z,1.9nm,0.5s,baz=355,slow=18,SNR=10.0
YMR Madison River 130.63 32 *e*PKPdf **PKPdf 09 52 48.3 +1.1**
SNOW Snow King Moun 131.55 33 *e*PKPdf **PKPdf 09 52 48.3 -0.7**
ULM Lac du Bonnet 132.36 17 PKP **PKPdf 09 52 49.5 -0.5**
ULM Lac du Bonnet 132.36 17 PKP **PKPdf 09 52 49.5 -0.5**
comp=Z,7.6nm,0.7s,baz=5.1,slow=3.2,SNR=8.0
DUG Dugway 132.44 38 *e*PKIKP **PKPdf 09 52 50.8 +0.2**
DUG Dugway 132.44 38 *e*PKPdf **PKPdf 09 52 50.8 +0.2**
PDAR Pinedale Array 132.66 33 PKP **PKPdf 09 52 50.6 -0.4**
PDAR SKP 09 56 42.1
PDAR Pinedale Array 132.66 33 PKP **PKPdf 09 52 50.6 -0.4**
comp=Z,0.8nm,0.5s,baz=147,slow=1.7,SNR=11
PDAR SKP 09 56 42.1
comp=Z,2.5nm,1.0s,baz=343,slow=1.5,SNR=10.0
SRU San Rafael 134.50 37 *e*PKIKP **PKPdf 09 52 55.7 +1.1**
SRU San Rafael 134.50 37 *e*PKPdf **PKPdf 09 52 55.7 +1.1**
WUAZ Wupatki 136.12 42 *e*PKPdf **PKPdf 09 52 57.9 +0.2**
PV01 Paradox Valley 136.30 37 *e*PKPdf **PKPdf 09 52 59.0 +1.0**
SMCO Snowmass 136.54 35 *e*PKPdf **PKPdf 09 52 58.8 +0.1**
ECSD EROS Data Cent 137.86 22 *e*PKPdf **PKPdf 09 52 59.8 -0.7**
ANMO Albuquerque 139.66 39 *e*PKPdf **PKPdf 09 53 03.6 -0.7**
CFAA Coronel Fontan 142.45 192 PKPpre PKPpre 09 53 04.0
CFAA Coronel Fontan 142.45 192 PKhKP PKPpre 09 53 04.0
comp=Z,0.3nm,0.8s,baz=121,slow=1.1,SNR=4.5
CPUP Villa Florida 143.40 210 PKPpre PKPpre 09 53 07.5
CPUP Villa Florida 143.40 210 PKhKP PKPpre 09 53 07.5
comp=Z,1.5nm,0.7s,baz=268,slow=20,SNR=5.4
SSPA Standing Stone 144.78 2 *e*PKPdf **PKPab 09 53 10.6 -1.2**
BDFB Brasilia 144.81 233 PKP **PKPdf 09 53 13.9 +0.1**
BDFB Brasilia 144.81 233 PKP **PKPdf 09 53 13.9 +0.1**
comp=Z,6.3nm,0.6s,baz=227,slow=1.2,SNR=9.3
TXAR Lajitas Array 145.03 44 PKP **PKPbc 09 53 13.0 -0.2**
TXAR Lajitas Array 145.03 44 PKP **PKPbc 09 53 13.0 -0.2**
comp=Z,3.2nm,0.6s,baz=265,slow=0.9,SNR=30
BLO Bloomington 145.10 13 *e*PKIKP **PKPbc 09 53 12.1 -0.9**
BLO Bloomington 145.10 13 *e*PKPbc **PKPbc 09 53 12.1 -0.9**
FVM French Village 145.12 19 *e*PKIKP **PKPbc 09 53 11.6 -1.5**
FVM French Village 145.12 19 *e*PKPbc **PKPbc 09 53 11.6 -1.5**
OLIL Olney 145.12 16 *e*PKPbc **PKPbc 09 53 12.5 -0.6**
USIN University of 145.96 16 *e*PKPdf **PKPdf 09 53 15.2 +0.1**
SDMD Soldier's Deli 146.02 0 *e*PKPdf **PKPdf 09 53 14.9 -0.1**
WCI Wyandotte Cave 146.05 14 *e*PKP2 **PKPdf 09 53 15.3 0.0**
WCI Wyandotte Cave 146.05 14 *e*PKPdf **PKPdf 09 53 15.2 0.0**
WVT Waverly 147.63 17 *e*PKP2 **PKPbc 09 53 19.5 -1.1**
WVT Waverly 147.63 17 *e*PKPbc **PKPbc 09 53 19.5 -1.1**
JSRW J. Sargeant Re 147.72 2 *e*PKPbc **PKPbc 09 53 19.5 -1.3**
TZTN Tazewell 148.25 11 *e*PKPbc **PKPbc 09 53 21.3 -1.0**
OXF Oxford 148.61 20 *e*PKP2 **PKPbc 09 53 22.0 -1.3**
OXF Oxford 148.61 20 *e*PKPbc **PKPbc 09 53 21.9 -1.3**
SWET Sewanee 149.01 15 *e*PKPbc **PKPbc 09 53 22.4 -1.9**
TKL Tuckaleechee C 149.07 11 *e*PKPbc **PKPbc 09 53 23.5 -0.9**
TKL Tuckaleechee C 149.07 11 PKPbc **PKPbc 09 53 23.9 -0.5**
comp=Z,17nm,0.6s,baz=126,slow=3.4,SNR=49
CPCT Cooper Cave 149.12 13 *e*PKPbc **PKPbc 09 53 23.7 -0.9**
LRAL Lakeview Retre 150.76 18 *e*PKPbc **PKPbc 09 53 27.8 -0.8**
SIV San Ignacio 153.82 216 PKPbc **PKPbc 09 53 36.6 +0.6**
SIV San Ignacio 153.82 216 PKPbc **PKPbc 09 53 36.6 +0.6**
comp=Z,1.4nm,0.7s,baz=86,slow=4.1,SNR=4.7
CMIG Matias Romero 158.66 55 PKPab **PKPab 09 54 08.5 -1.2**
CMIG Matias Romero 158.66 55 PKPab **PKPab 09 54 08.5 -1.2**
comp=Z,0.9nm,0.4s,baz=264,slow=10,SNR=3.8

IDC 27 09:33:42.2±7.1, 5.73S×76.92W, h61km±75km, mb3.3/4, mb1 3.6/5, mb1mx3.4/21, mbtmp3.3/5, ML3.5/1, Error ellipse: s-maj=56.4km s-min=35.8km az=32.0, Northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**2.02**	**226**	P	Pn	09 34 14.5	0.0
	16nm,0.3s,baz=26,slow=14,SNR=47						
ATAH				S	Sn	09 34 39.2	+0.1
	13nm,0.3s,baz=85,slow=4.5,SNR=5.2						
TXAR	**Lajitas Array**	**43.32**	**325**	P	P	09 41 39.4	+0.9
	0.3nm,0.7s,baz=144,slow=11,SNR=2.7						
YKA	**Yellowknife Ar**	**73.87**	**343**	P	P	09 45 10.0	-0.2
	0.3nm,0.4s,baz=140,slow=6.3,SNR=8.9						
TORD	**Torodi Ar. Bea**	**80.28**	**76**	P	P	09 45 46.7	-0.5
	0.2nm,0.3s,baz=274,slow=5.8,SNR=6.3						
INK	**Inuvik**	**83.59**	**342**	P	P	09 46 03.9	+0.4
	0.3nm,0.4s,baz=94,slow=4.2,SNR=4.7						

IDC 27 09:43:03.6±0.9, 48.29S×75.74W, h0km, mb4.1/9, mb1 4.1/12, mb1mx4.0/21, mbtmp4.0/12, ML3.4/3, MS3.5/6, Ms1 3.5/6, ms1mx3.3/23, Error ellipse: s-maj=35.1km s-min=15.6km az=97.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
USHA	**Ushuaia**	**7.98**	**148**	Pn	Pn	09 45 00.5	-0.2
	0.6nm,0.3s,baz=41,slow=4.9,SNR=11						
USHA				Lg	Lg	09 47 25.0	
	0.4nm,0.3s,baz=21,slow=5.0,SNR=2.7						
PLCA	**Paso Flores**	**8.41**	**28**	Pn	Pn	09 45 07.0	+0.2
	0.2nm,0.3s,baz=204,slow=9.7,SNR=5.2						
PLCA				Lg	Lg	09 47 30.0	
	0.0nm,0.3s,baz=284,slow=17,SNR=4						
PLCA				LR	LR	09 48 23.0	
	comp=Z,346nm,18.4s,baz=357,slow=38						
CFAA	**Coronel Fontan**	**17.61**	**22**	Pn	P	09 47 12.1	+0.5
	0.0nm,0.3s,baz=208,slow=9.1,SNR=6.3						
CFAA				LR	LR	09 54 06.4	
	comp=Z,26nm,19.8s,baz=89,slow=38						
CPUP	**Villa Florida**	**26.23**	**40**	P	P	09 48 40.0	-0.1
	1.9nm,0.7s,baz=268,slow=20,SNR=8.6						
CPUP				LR	LR	10 00 15.0	
	comp=Z,146nm,20.5s,baz=1.4,slow=39						
LPAZ	**La Paz**	**32.52**	**14**	P	P	09 49 38.2	+1.3
	2.3nm,0.9s,baz=146,slow=8.5,SNR=5.7						
SIV	**San Ignacio**	**34.39**	**26**	P	P	09 49 52.6	+0.1
	2.7nm,0.9s,baz=235,slow=8.8,SNR=5.4						
SIV				LR	LR	10 05 41.0	
	comp=Z,90nm,20.5s,slow=40						
BDFB	**Brasilia**	**39.73**	**45**	P	P	09 50 38.3	+0.2
	1.6nm,0.5s,baz=264,slow=7.6,SNR=3.8						
BDFB				LR	LR	10 08 09.5	
	comp=Z,190nm,20.4s,baz=308,slow=38						
SNAA	**Sanae**	**39.81**	**152**	P	P	09 50 38.9	+0.8
	1.2nm,0.8s,baz=276,slow=6.1,SNR=11						
QSPA	**South Pole Qui**	**41.96**	**180**	P	P	09 50 56.6	+0.6
	0.9nm,0.7s,baz=53,slow=5.1,SNR=2.6						
RCBR	**Riachuelo**	**54.18**	**52**	LR	LR	10 15 12.6	
	comp=Z,60nm,18.3s,baz=199,slow=36						
BOSA	**Boshof**	**75.96**	**117**	P	P	09 54 52.7	+0.1
	2.8nm,0.8s,baz=182,slow=7.6,SNR=5.0						
LBTB	**Lobatse**	**78.82**	**115**	P	P	09 55 08.1	-0.5
	1.2nm,0.4s,baz=247,slow=6.9,SNR=3.6						
TORD	**Torodi Ar. Bea**	**91.53**	**72**	P	P	09 56 11.4	-0.8
	0.7nm,0.8s,baz=221,slow=3.6,SNR=3.6						
GERES	**GERESS Array B**	**123.67**	**53**	PKP	PKPdf	10 02 01.8	-0.7
	1.1nm,0.7s,baz=270,slow=2.5,SNR=6.3						
ILAR	**Eielson Array**	**125.45**	**330**	PKP	PKPdf	10 02 03.9	-1.3
	0.6nm,0.8s,baz=171,slow=2.6,SNR=8.6						
PETK	**Petropavlovsk-**	**146.47**	**299**	PKPbc	PKPdf	10 02 44.8	+0.5
	2.4nm,0.8s,baz=150,slow=13,SNR=3.4						
CMAR	**Chiang Mai Arr**	**149.93**	**170**	PKPbc	PKPbc	10 02 56.0	+0.1
	1.0nm,0.6s,baz=235,slow=4.2,SNR=4.3						
AKTO	**Aktyubinsk**	**150.18**	**68**	PKPbc	PKPbc	10 02 54.9	-0.6
	2.9nm,0.8s,baz=217,slow=1.8,SNR=11						
MKAR	**Makanchi Array**	**165.09**	**88**	PKPab	PKPab	10 04 04.5	-1.7
	0.1nm,0.6s,baz=227,slow=5.5,SNR=3.6						

*IDC **27** 09:44:52.0±2.7, 0.63S×132.99E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.4/23, mbtmp3.4/5, ML3.4/2, Error ellipse: s-maj=131.3km s-min=22.5km az=79.0*
*AUST **27** 09:44:54.2, 0.49S×133.50E, h25km*
ISC 27 09:44:57.6±1.4, 0.74S±0.08×133.2E±0.1, h32km, n13, σ1s97/16, mb3.5/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**1.89**	**266**	P	**Pn**	**09 45 27.3**	**-0.4**
	baz=2.3,SNR=9.0						
FAKI	**Fak Fak**	**2.34**	**203**	P	**Pn**	**09 45 34.7**	**+0.7**
	baz=2.7,SNR=47						
FAKI				S	**Sb**	**09 46 05.8**	**-2.0**
	baz=2.7,SNR=4.8						
TLE	**Tual**	**4.88**	**185**	P	**Pn**	**09 46 11.6**	**+2.7**
	baz=5.2,SNR=4.2						
KDU	**Kakadu**	**11.89**	**183**	P	**Pn**	**09 47 44.7**	**-0.3**
	baz=12,SNR=7.6						
MTN	**Manton Dam**	**12.19**	**189**	P	**Pn**	**09 47 48.0**	**-1.2**
	baz=13,SNR=8.1						
MTN				S	**Sn**	**09 50 02.4**	**-1.6**
	baz=13,SNR=6.1						
PCI	**Palu**	**13.31**	**269**	P	**Pn**	**09 48 05.4**	**+0.9**
	baz=14,SNR=5.7						
PCI				S	S	09 50 43.5	-12
	baz=14,SNR=16						
WSI	**Waingapu**	**15.56**	**235**	P	**P**	**09 48 42.2**	**+3.5**
	baz=16,SNR=3.4						
WSI				S	**S**	**09 51 38.9**	**-2.2**
	baz=16,SNR=3.8						
FITZ	**Fitzroy Crossi**	**18.76**	**203**	P	**P**	**09 49 13.2**	**-1.0**
	0.1nm,0.3s,baz=37,slow=11,SNR=3.7						
FITZ				S	Sn	09 52 31.0	-13
	0.1nm,0.3s,baz=121,slow=14,SNR=1.9						
FITZ	**Fitzroy Crossi**	**18.76**	**203**	P	**Pn**	**09 49 17.9**	**+3.1**
	baz=19,SNR=3.4						
WRA	**Warramunga Arr**	**19.12**	**177**	P	**P**	**09 49 17.8**	**-0.3**
	0.1nm,0.3s,baz=355,slow=13,SNR=8.8						
ASAR	**Alice Springs**	**22.80**	**178**	P	**P**	**09 49 58.0**	**+0.1**
	0.5nm,0.3s,baz=357,slow=11,SNR=19						
MKAR	**Makanchi Array**	**64.89**	**324**	P	**P**	**09 55 32.5**	**-1.5**
	0.2nm,0.5s,baz=113,slow=8.1,SNR=2.4						
KURBB	**Kurchatov Arra**	**68.97**	**326**	P	**P**	**09 55 57.7**	**-2.0**
	0.1nm,0.3s,baz=122,slow=5.3,SNR=5.2						

*ISCJB **27** 09:50:25.7±0.4, 39.14N±0.02×29.06E±0.02, h1km±4km, Error ellipse: s-maj=3.2km s-min=3.1km az=8.0*
*DDA **27** 09:50:25.6, 39.10N×29.05E, h9km, MD3.5, ML3.7*
*ISK **27** 09:50:25.6, 39.14N×29.08E, h5km, MD3.3*
*CSEM **27** 09:50:26.0±0.1, 39.13N×29.08E, h2km, ML3.7, Error ellipse: s-maj=1.9km s-min=1.8km az=79.0*
ISC 27 09:50:26.1±1.0, 39.13N±0.02×29.08E±0.02, h5km±10km, n96, σ0s55/118, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEMI	**Demirci**	**0.30**	**253**	*i* P	**Pg**	**09 50 31.9**	**0.0**
DEMI				*i* S	**Sg**	**09 50 35.8**	**-0.1**
DEMI	**Demirci**	**0.30**	**253**	*i* P	**Pg**	**09 50 31.9**	**0.0**
DEMI				*i* S	**Sg**	**09 50 35.8**	**-0.1**
TVSB	**Tavsanli**	**0.43**	**43**	*e*PG	**Pg**	**09 50 34.2**	**-0.2**
TVSB				*e*SG	**Sg**	**09 50 40.5**	**+0.4**
TVSB	**Tavsanli**	**0.43**	**43**	*e*Pg	**Pg**	**09 50 34.2**	**-0.2**
TVSB				*e*Sg	**Sg**	**09 50 40.5**	**+0.4**
DST	**Dursunbey**	**0.59**	**323**	*e*PG	**Pg**	**09 50 37.3**	**-0.2**
DST	**Dursunbey**	**0.59**	**323**	*e*Pg	**Pg**	**09 50 37.3**	**-0.2**
DURS	**Dursunbey**	**0.67**	**315**	*i* P	**Pg**	**09 50 38.4**	**-0.5**
DURS				*i* S	**Sg**	**09 50 48.0**	**+0.5**
DURS	**Dursunbey**	**0.67**	**315**	*i* P	**Pg**	**09 50 38.4**	**-0.5**
DURS				*i* S	**Sg**	**09 50 48.0**	**+0.5**
KULA	**Kula-Manisa**	**0.70**	**208**	*e*PG	**Pg**	**09 50 39.1**	**-0.4**
KULA	**Kula-Manisa**	**0.70**	**208**	*e*Pg	**Pg**	**09 50 39.1**	**-0.4**
MANT	**Manisa**	**0.76**	**213**	*i* P	**Pg**	**09 50 40.1**	**-0.6**
MANT				*i* S	**Sg**	**09 50 49.5**	**-1.0**
MANT	**Manisa**	**0.76**	**213**	*i* P	**Pg**	**09 50 40.1**	**-0.6**
MANT				*i* S	**Sg**	**09 50 49.5**	**-1.0**
ALT	**Altintas**	**0.80**	**95**	*e*PG	**Pb**	**09 50 42.3**	**-0.3**
ALT				*e*SG	**Sb**	**09 50 53.7**	**0.0**
ALT	**Altintas**	**0.80**	**95**	*e*Pg	**Pb**	**09 50 42.3**	**-0.3**
ALT				*e*Sg	**Sb**	**09 50 53.7**	**0.0**
KHL	**Karahalli**	**0.88**	**157**	*e*PG	**Pg**	**09 50 42.9**	**0.0**
KHL				*e*SG	**Sb**	**09 50 55.5**	**-0.3**
KHL	**Karahalli**	**0.88**	**157**	*e*Pg	**Pg**	**09 50 42.9**	**0.0**
KHL				*e*Sg	**Sb**	**09 50 55.5**	**-0.3**
ORLT	**Orhaneli**	**0.93**	**351**	*e*PG	**Pg**	**09 50 43.6**	**-0.2**
ORLT	**Orhaneli**	**0.93**	**351**	*e*Pg	**Pg**	**09 50 43.6**	**-0.2**
AKHS	**Akhisar**	**1.02**	**256**	*i* P	**Pg**	**09 50 45.0**	**-0.6**
AKHS				*i* S	**Sg**	**09 50 58.5**	**-0.4**
AKHS	**Akhisar**	**1.02**	**256**	*i* P	**Pg**	**09 50 45.0**	**-0.6**
AKHS				*i* S	**Sg**	**09 50 58.5**	**-0.4**
AKS	**Akhisar**	**1.02**	**256**	*e*PG	**Pg**	**09 50 45.4**	**-0.3**
AKS	**Akhisar**	**1.02**	**256**	*e*Pg	**Pg**	**09 50 45.4**	**-0.3**
BALB	**Balikesir**	**1.06**	**299**	*e*PG	**Pb**	**09 50 47.1**	**+0.2**
BALB				*e*SG	**Sb**	**09 51 01.0**	**-0.1**
BALB	**Balikesir**	**1.06**	**299**	*e*Pg	**Pb**	**09 50 47.1**	**+0.2**
BALB				*e*Sg	**Sb**	**09 51 01.0**	**-0.1**
MDNY	**Mudanya-Bursa**	**1.25**	**353**	*e*PN	**Pg**	**09 50 49.7**	**-0.2**
MDNY	**Mudanya-Bursa**	**1.25**	**353**	*e*Pn	**Pg**	**09 50 49.7**	**-0.2**
KCTX	**Karacabey (Bur**	**1.26**	**334**	*e*PN	**Pg**	**09 50 49.8**	**-0.5**
KCTX				*e*SN	**Sn**	**09 51 07.5**	**-0.3**
KCTX	**Karacabey (Bur**	**1.26**	**334**	*e*Pn	**Pg**	**09 50 49.8**	**-0.5**
KCTX				*e*Sn	**Sn**	**09 51 07.5**	**-0.3**
SHUT	**Suhut-Afyon**	**1.28**	**116**	*e*PN	**Pn**	**09 50 50.6**	**-0.1**
SHUT	**Suhut-Afyon**	**1.28**	**116**	*e*Pn	**Pn**	**09 50 50.6**	**-0.1**
BORA	**Eskisehir**	**1.30**	**54**	*i* P	**Pn**	**09 50 50.1**	**-0.8**
BORA				*i* S	**Sg**	**09 51 08.1**	**+0.3**
BORA	**Eskisehir**	**1.30**	**54**	*i* P	**Pn**	**09 50 50.1**	**-0.8**
BORA				*i* S	**Sg**	**09 51 08.1**	**+0.3**
GEMT	**Gemlik**	**1.30**	**4**	*e*PN	**Pn**	**09 50 50.3**	**-0.7**
GEMT	**Gemlik**	**1.30**	**4**	*e*Pn	**Pn**	**09 50 50.3**	**-0.7**
DENT	**Denizli**	**1.38**	**182**	*e*PN	**Pn**	**09 50 51.9**	**-0.1**
DENT	**Denizli**	**1.38**	**182**	*e*Pn	**Pn**	**09 50 51.9**	**-0.1**
GONE	**Gonen-Balikesi**	**1.42**	**311**	*e*PN	**Pn**	**09 50 52.6**	**+0.1**
GONE	**Gonen-Balikesi**	**1.42**	**311**	*e*Pn	**Pn**	**09 50 52.6**	**+0.1**
ESKT	**Eskisehir**	**1.42**	**74**	*e*PN	**Pb**	**09 50 53.3**	**+0.1**
ESKT	**Eskisehir**	**1.42**	**74**	*e*Pn	**Pb**	**09 50 53.3**	**+0.1**
DNZL	**Cakiroluk**	**1.44**	**181**	*i* P	**Pn**	**09 50 52.2**	**-0.7**
DNZL				*i* S	**Sg**	**09 51 14.1**	**+1.8**
DNZL	**Cakiroluk**	**1.44**	**181**	*i* P	**Pn**	**09 50 52.2**	**-0.7**
DNZL				*i* S	**Sg**	**09 51 14.1**	**+1.8**
ARMT	**Armutlu**	**1.44**	**353**	*e*PN	**Pn**	**09 50 52.6**	**-0.3**
ARMT	**Armutlu**	**1.44**	**353**	*e*Pn	**Pn**	**09 50 52.6**	**-0.3**
GPA	**Golpazari**	**1.49**	**39**	*e*PN	**Pg**	**09 50 54.6**	**-0.1**
GPA	**Golpazari**	**1.49**	**39**	*e*Pn	**Pg**	**09 50 54.6**	**-0.1**
BNT	**Bandirma**	**1.52**	**324**	*e*PN	**Pn**	**09 50 53.5**	**-0.4**
BNT	**Bandirma**	**1.52**	**324**	*e*Pn	**Pn**	**09 50 53.5**	**-0.4**
EDC	**Edincik**	**1.54**	**323**	*e*PN	**Pb**	**09 50 54.9**	**-0.1**
EDC	**Edincik**	**1.54**	**323**	*e*Pn	**Pb**	**09 50 54.9**	**-0.1**
IZM	**Izmir**	**1.60**	**243**	*e*PN	**Pn**	**09 50 55.5**	**+0.5**
IZM	**Izmir**	**1.60**	**243**	*e*Pn	**Pn**	**09 50 55.5**	**+0.5**
ISP	**Isparta**	**1.73**	**139**	*e*PN	**Pb**	**09 50 57.9**	**-0.4**
ISP	**Isparta**	**1.73**	**139**	*e*Pn	**Pb**	**09 50 57.9**	**-0.4**
BLCB	**Balcova**	**1.76**	**246**	*e*PN	**Pn**	**09 50 57.9**	**+0.7**
BLCB	**Balcova**	**1.76**	**246**	*e*Pn	**Pn**	**09 50 57.9**	**+0.7**
SPNC	**Sapanca-Adapaz**	**1.82**	**31**	*e*PN	**Pn**	**09 50 58.7**	**+0.7**
SPNC	**Sapanca-Adapaz**	**1.82**	**31**	*e*Pn	**Pn**	**09 50 58.7**	**+0.7**
MRMT	**Marmara Adasi**	**1.86**	**323**	*e*PN	**Pn**	**09 50 58.2**	**-0.5**
MRMT	**Marmara Adasi**	**1.86**	**323**	*e*Pn	**Pn**	**09 50 58.2**	**-0.5**
KRBG	**Karabiga-Canak**	**1.87**	**313**	*e*PN	**Pn**	**09 50 59.1**	**+0.4**
KRBG	**Karabiga-Canak**	**1.87**	**313**	*e*Pn	**Pn**	**09 50 59.1**	**+0.4**
SVRH	**Sivrihisar-ESK**	**1.92**	**80**	*e*PN	**Pn**	**09 50 59.4**	**-0.1**
SVRH	**Sivrihisar-ESK**	**1.92**	**80**	*e*Pn	**Pn**	**09 50 59.4**	**-0.1**
ISK	**Istanbul-Kandi**	**1.93**	**359**	*e*PN	**Pn**	**09 50 60.0**	**+0.4**
ISK	**Istanbul-Kandi**	**1.93**	**359**	*e*Pn	**Pn**	**09 51 00.0**	**+0.4**
BGKT	**Bogazkoy**	**2.06**	**353**	*e*PN	**Pn**	**09 51 01.8**	**+0.4**
BGKT	**Bogazkoy**	**2.06**	**353**	*e*Pn	**Pn**	**09 51 01.8**	**+0.4**
SILT	**Sile**	**2.06**	**12**	*e*PN	**Pn**	**09 51 01.4**	**0.0**
SILT	**Sile**	**2.06**	**12**	*e*Pn	**Pn**	**09 51 01.4**	**0.0**
YER	**Yerkesik**	**2.09**	**198**	*e*PN	**Pn**	**09 51 02.4**	**+0.6**
YER	**Yerkesik**	**2.09**	**198**	*e*Pn	**Pn**	**09 51 02.4**	**+0.6**
MLSB	**Milas**	**2.10**	**210**	*e*PN	**Pn**	**09 51 02.7**	**+0.8**
MLSB	**Milas**	**2.10**	**210**	*e*Pn	**Pn**	**09 51 02.7**	**

*IDC **27** 10:04:45.1±5.9, 6°.94S×129°.99E, h76km±60km, mb3.4/2, mb1 3.9/5, mb1mx3.5/20, mbtmp3.7/5, ML4.3/3, Error ellipse: s-maj=76.7km s-min=39.2km az=73.0*
*ISCJB **27** 10:04:47.3±0.6, 7°.04S±0°.03×130°.0E±0°.1, h104km, mb3.6/2, Error ellipse: s-maj=15.9km s-min=4.9km az=2.4*
*AUST **27** 10:04:48.4±0.0, 7°.03S×129°.91E, h77km, Error ellipse: s-maj=1.0km s-min=0.8km az=281.0*

ISC 27 10:04:48.5±0.8, 7°.04S±0°.06×129°.8E±0°.1, h104km, n17, σ1§57/18, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**4.74**	**30**	P	**Pn**	**10 05 58.0**	**+0.2**
	baz=4.7,SNR=24						
FAKI				S	**Sn**	**10 06 49.0**	**-2.6**
	baz=4.7,SNR=11						
MTN	**Manton Dam**	**5.91**	**168**	P	**Pn**	**10 06 15.6**	**+2.0**
	baz=5.9,SNR=110						
MTN				S	**Sn**	**10 07 20.4**	**+0.5**
	baz=5.9,SNR=16						
KDU	**Kakadu**	**6.18**	**155**	P	**Pn**	**10 06 19.2**	**+1.9**
	baz=6.2,SNR=80						
KDU				S	**Sn**	**10 07 24.8**	**-1.9**
	baz=6.2,SNR=13						
SWI	**Sorong**	**6.29**	**13**	P	**Pn**	**10 06 19.6**	**+0.8**
	baz=6.3,SNR=4.3						
SWI				S	**Sn**	**10 07 31.1**	**+1.8**
	baz=6.3,SNR=4.3						
PCI	**Palu**	**11.69**	**301**	S	S	10 10 00.1	-15
	baz=12,SNR=6.5						
JAY	**Jayapura**	**11.72**	**68**	P	Pn	10 07 22.4	-10
	baz=12,SNR=4.0						
FITZ	**Fitzroy Crossi**	**11.74**	**200**	P	**Pn**	**10 07 31.3**	**-1.4**
	1.3nm,0.3s,baz=30,slow=13,SNR=34						
FITZ				S	Sn	10 09 33.3	-8.4
	1.1nm,0.3s,baz=86,slow=22,SNR=3.1						
FITZ	**Fitzroy Crossi**	**11.74**	**200**	P	**Pn**	**10 07 31.2**	**-1.4**
	baz=12,SNR=31						
WRA	**Warramunga Arr**	**13.55**	**162**	P	**Pn**	**10 07 54.2**	**-2.3**
	1.6nm,0.3s,baz=347,slow=13,SNR=45						
WRA				S	Sn	10 10 16.8	-9.0
	2.0nm,0.3s,baz=330,slow=23,SNR=11						
COEN	**Coen**	**14.80**	**119**	P	**P**	**10 08 15.3**	**-0.5**
	baz=15,SNR=8.0						
ASAR	**Alice Springs**	**16.99**	**167**	P	**P**	**10 08 40.0**	**-0.1**
	1.0nm,0.3s,baz=340,slow=9.9,SNR=105						
ASAR				S	Sn	10 11 38.0	-11
	0.8nm,0.3s,baz=0.3,slow=26,SNR=9.0						
MEEK	**Meekatharra**	**22.23**	**207**	P	**P**	**10 09 38.8**	**+2.0**
	baz=22,SNR=4.0						
YNG	**Young**	**32.08**	**150**	P	**P**	**10 11 06.5**	**+0.8**
	baz=32,SNR=5.3						
GSI	**Gunungsitoli**	**33.25**	**283**	S	S	10 16 53.0	+24
	baz=33,SNR=3.7						
SONM	**Songino Array**	**58.43**	**342**	P	**P**	**10 14 33.2**	**-0.3**
	0.2nm,0.5s,baz=163,slow=5.8,SNR=4.2						
MKAR	**Makanchi Array**	**68.17**	**327**	P	**P**	**10 15 37.1**	**-0.5**
	0.9nm,0.6s,baz=125,slow=7.8,SNR=13						
TORD	**Torodi Ar. Bea**	**128.66**	**281**	PKP	**PKPdf**	**10 23 44.4**	**-0.2**
	0.2nm,0.6s,baz=74,slow=3.3,SNR=2.5						

IDC 27 10:12:43.2±12.0, 10°.70N×91°.65E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/25, mbtmp3.4/3, Error ellipse: s-maj=657.2km s-min=28.6km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**36.84**	**349**	P	P	10 19 53.1	-0.1
	0.6nm,0.7s,baz=162,slow=9.0,SNR=6.0						
WRA	**Warramunga Arr**	**51.89**	**126**	P	P	10 21 53.7	-0.3
	0.3nm,0.7s,baz=307,slow=7.7,SNR=5.8						
ASAR	**Alice Springs**	**53.60**	**130**	P	P	10 22 06.7	+0.1
	0.2nm,0.5s,baz=300,slow=6.7,SNR=7.3						

IDC 27 10:19:40.0±1.7, 3°.94N×126°.93E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.7/24, mbtmp3.9/5, MS3.0/1, Ms1 3.0/1, ms1mx2.2/41, Error ellipse: s-maj=101.9km s-min=22.4km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**20.13**	**60**	LR	LR	10 30 47.9	
	comp=Z,40nm,18.4s,baz=89,slow=33						
FITZ	**Fitzroy Crossi**	**21.94**	**183**	P	P	10 24 35.3	0.0
	1.5nm,0.6s,baz=14,slow=12,SNR=6.7						
WRA	**Warramunga Arr**	**24.83**	**163**	P	P	10 25 03.5	-0.7
	9.6nm,1.1s,baz=344,slow=9.9,SNR=26						
ASAR	**Alice Springs**	**28.27**	**166**	P	P	10 25 35.1	-0.2
	0.5nm,0.6s,baz=345,slow=7.0,SNR=12						
STKA	**Stephens Creek**	**38.26**	**160**	P	P	10 27 02.8	+0.7
	3.5nm,0.7s,baz=333,slow=12,SNR=7.4						
MKAR	**Makanchi Array**	**57.50**	**325**	P	P	10 29 31.0	-0.1
	0.4nm,0.5s,baz=120,slow=7.1,SNR=9.6						

*ISCJB **27** 10:21:31.7±0.8, 45°.69N±0°.04×10°.94E±0°.04, h7km±4km, Error ellipse: s-maj=6.9km s-min=3.9km az=23.9*
*CSEM **27** 10:21:32.0±0.3, 45°.68N×10°.95E, h10km, MD2.2, Error ellipse: s-maj=5.4km s-min=2.6km az=22.0*
*ROM **27** 10:21:32.3±0.4, 45°.70N×11°.00E, h5km, Md2.4/8, Ml2.0/6, Error ellipse: s-maj=4.3km s-min=2.2km az=13.0*
*VIE **27** 10:21:32.5±0.4, 45°.72N×10°.96E, h13km±1km, mb1.9/7, ML2.5/8, Error ellipse: s-maj=2.4km s-min=1.4km az=17.0 41 km SSW of Trento*

ISC 27 10:21:33.8±1.3, 45°.76N±0°.05×10°.97E±0°.03, h7km±8km, n45, σ0§64/75, 9C-13D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDS	**Dosso del Somm**	**0.20**	**51**	⇑*e*P	**Pg**	**10 21 37.5**	**-0.3**
DDS				*e*Sg	**Sg**	**10 21 40.9**	**+0.3**
DDS	**Dosso del Somm**	**0.20**	**51**	⇑*e*P	**Pg**	**10 21 37.5**	**-0.3**
DDS				*e*Sg	**Sg**	**10 21 40.9**	**+0.3**
RNI	**Roncone**	**0.32**	**315**	⇓*e*P	**Pg**	**10 21 39.8**	**-0.3**
RNI				*e*Sg	**Sg**	**10 21 45.0**	**+0.6**
RNI	**Roncone**	**0.32**	**315**	⇓*e*P	**Pg**	**10 21 39.8**	**-0.3**
RNI				*e*Sg	**Sg**	**10 21 45.0**	**+0.6**
CTI	**Castel Tesino**	**0.56**	**58**	Pg	**Pg**	**10 21 44.1**	**-0.5**
CTI				Sg	**Sg**	**10 21 52.6**	**+0.7**
	61nm,0.2s						
CTI	**Castel Tesino**	**0.56**	**58**	*e*Pg	**Pg**	**10 21 44.1**	**-0.5**
CTI				*e*Sg	**Sg**	**10 21 52.6**	**+0.7**
CGRP	**Cima Grappa**	**0.59**	**78**	⇓*e*Pg	**Pg**	**10 21 45.2**	**-0.1**
CGRP	**Cima Grappa**	**0.59**	**78**	Pg	**Pg**	**10 21 44.8**	**-0.5**
CGRP				Sg	**Sg**	**10 21 53.3**	**+0.2**
CGRP	**Cima Grappa**	**0.59**	**78**	Pg	**Pg**	**10 21 44.8**	**-0.5**
CGRP				Sg	**Sg**	**10 21 53.3**	**+0.2**
APPI	**Appiano**	**0.74**	**14**	Pg	**Pg**	**10 21 48.1**	**0.0**
APPI				Sg	**Sb**	**10 21 59.6**	**+0.1**
	52nm,0.4s						
APPI	**Appiano**	**0.74**	**14**	*e*Pg	**Pg**	**10 21 48.1**	**0.0**
APPI				*e*Sg	**Sb**	**10 21 59.6**	**+0.1**
KOSI	**Kohlern**	**0.76**	**22**	Pg	**Pg**	**10 21 48.7**	**+0.2**
KOSI				Sg	**Sb**	**10 22 00.4**	**+0.3**
KOSI	**Kohlern**	**0.76**	**22**	*e*Pg	**Pg**	**10 21 48.7**	**+0.2**
KOSI				*e*Sg	**Sb**	**10 22 00.1**	**0.0**
MTLO	**Montello**	**0.79**	**86**	*e*Pg	**Pg**	**10 21 48.8**	**-0.2**
MTLO	**Montello**	**0.79**	**86**	*e*Pg	**Pg**	**10 21 48.8**	**-0.2**
VARN	**Col Varnada, M**	**0.83**	**73**	⇑*e*Pg	**Pg**	**10 21 49.3**	**-0.4**
VARN	**Col Varnada, M**	**0.83**	**73**	⇑*e*Pg	**Pg**	**10 21 49.3**	**-0.4**
BRMO	**Bormio**	**0.83**	**330**	Pg	**Pg**	**10 21 49.6**	**-0.2**
BRMO				Sg	**Sg**	**10 22 01.3**	**+0.7**
	11nm,0.4s						
BRMO	**Bormio**	**0.83**	**330**	*e*Pg	**Pg**	**10 21 49.6**	**-0.2**
BRMO				*e*Sg	**Sg**	**10 22 01.3**	**+0.7**
MOSI	**Grossmontoni**	**0.91**	**341**	Pg	**Pg**	**10 21 51.1**	**-0.1**
MOSI				Sg	**Sb**	**10 22 04.9**	**+0.6**
	81nm,0.9s						
MOSI	**Grossmontoni**	**0.91**	**341**	⇓*e*Pg	**Pg**	**10 21 51.2**	**0.0**
MOSI				*e*Sg	**Sb**	**10 22 04.8**	**+0.5**
FUORN	**Ofenpass-Fuorn**	**0.99**	**331**	Pg	**Pg**	**10 21 52.4**	**-0.5**
FUORN	**Ofenpass-Fuorn**	**0.99**	**331**	Pg	**Pg**	**10 21 52.4**	**-0.5**
CAE	**Caneva**	**1.06**	**76**	⇓*e*Pg	**Pg**	**10 21 53.9**	**-0.2**
CAE				*e*Sg	**Sn**	**10 22 10.5**	**+0.5**
CAE	**Caneva**	**1.06**	**76**	⇓*e*Pg	**Pg**	**10 21 53.8**	**-0.2**
CAE				*e*Sg	**Sn**	**10 22 10.5**	**+0.5**
ROSI	**Rosskopf**	**1.21**	**15**	⇓*e*Pg	**Pn**	**10 21 56.6**	**-0.7**
FETA	**Feichten**	**1.27**	**353**	⇑*i*Pn	**Pn**	**10 21 56.7**	**-1.4**
FETA				⇓*i*Pg	**Pb**	**10 21 58.1**	**-0.1**
FETA				⇓*i*Sn	**Sb**	**10 22 14.7**	**-0.2**
FETA	**Feichten**	**1.27**	**353**	Pn	**Pn**	**10 21 56.7**	**-1.4**
TUE	**Stuetta**	**1.33**	**303**	Pg	**Pn**	**10 21 58.7**	**-0.3**
	9.0nm,0.3s						
TUE	**Stuetta**	**1.33**	**303**	Pg	**Pn**	**10 21 58.7**	**-0.3**
	9.0nm,0.3s						
RISI	**Rein**	**1.42**	**32**	Pg	**Pb**	**10 22 00.5**	**-0.1**
RISI				Sg	**Sg**	**10 22 20.7**	**+1.3**
	53nm,0.3s						
RISI	**Rein**	**1.42**	**32**	*e*Pg	**Pb**	**10 22 00.5**	**-0.1**
RISI				*e*Sg	**Sg**	**10 22 20.7**	**+1.3**
ABTA	**Abfaltersbach**	**1.46**	**47**	⇓*i*Pg	**Pb**	**10 21 59.1**	**-1.5**
ABTA				⇑*i*Pg	**Pb**	**10 22 00.9**	**-0.4**
ABTA				⇑*i*Sn	**Sn**	**10 22 19.6**	**-0.4**
ABTA	**Abfaltersbach**	**1.46**	**47**	⇓*i*Pn	**Pn**	**10 21 59.1**	**-1.5**
WTTA	**Wattenberg**	**1.58**	**17**	⇓*i*Pn	**Pn**	**10 22 01.0**	**-1.3**
WTTA				⇑*i*Pg	**Pb**	**10 22 03.1**	**-0.2**
WTTA				⇑*i*Sg	**Sg**	**10 22 26.4**	**+1.9**
WTTA	**Wattenberg**	**1.58**	**17**	⇓*i*Pn	**Pn**	**10 22 01.0**	**-1.3**
ZOU	**Zoufplan**	**1.61**	**59**	*e*Pg	**Pg**	**10 22 04.2**	**-0.4**
SABO	**M.te Sabotino**	**1.85**	**82**	*e*Pg	**Pn**	**10 22 06.2**	**+0.3**
SABO				*e*Sg	**Sb**	**10 22 31.3**	**0.0**
SABO	**M.te Sabotino**	**1.85**	**82**	*e*Pg	**Pn**	**10 22 06.2**	**+0.3**
SABO				*e*Sg	**Sb**	**10 22 31.3**	**0.0**
ACOM	**Acomizza, Ital**	**1.94**	**65**	*e*Pg	**Pb**	**10 22 09.8**	**+0.3**
ACOM	**Acomizza, Ital**	**1.94**	**65**	*e*Pg	**Pb**	**10 22 09.8**	**+0.3**
SKDS	**Skadanscina**	**2.15**	**95**	*i* Pn	**Pn**	**10 22 09.0**	**-1.0**
SKDS				*i* Sn	**Sn**	**10 22 37.3**	**+0.5**
SKDS	**Skadanscina**	**2.15**	**95**	Pn	**Pn**	**10 22 09.0**	**-1.0**
SKDS				*i* Sn	**Sn**	**10 22 37.3**	**+0.5**
VISS	**Visnje**	**2.71**	**88**	*i* Pn	**Pn**	**10 22 17.8**	**+0.1**
VISS	**Visnje**	**2.71**	**88**	*i* Pn	**Pn**	**10 22 17.8**	**+0.1**

IDC 27 10:29:35.7±5.4, 22°.76N×94°.52E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/25, mbtmp3.2/3, Error ellipse: s-maj=449.5km s-min=27.9km az=60.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**25.94**	**341**	P	P	10 35 09.7	0.0
	0.4nm,0.4s,baz=149,slow=10,SNR=7.5						
WRA	**Warramunga Arr**	**57.55**	**134**	P	P	10 39 27.2	-0.2
	0.3nm,0.8s,baz=320,slow=7.7,SNR=4.9						
ASAR	**Alice Springs**	**59.96**	**138**	P	P	10 39 44.3	+0.1
	0.1nm,0.5s,baz=320,slow=7.0,SNR=3.8						

IDC 27 10:38:16.4±1.8, 14°.08S×171°.26E, h610km±21km, mb3.3/10, mb1 3.5/11, mb1mx3.2/22, mbtmp3.3/11, Error ellipse: s-maj=51.7km s-min=15.7km az=147.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.17**	**209**	*e*P	P	10 40 27.0	-0.4
DZM	**Mont Dzumac**	**9.17**	**209**	P	P	10 40 27.8	+0.5
	2.9nm,0.3s,baz=88,slow=23,SNR=20						
RMQ	**Roma**	**24.40**	**236**	P	P	10 42 49.7	+0.8
	baz=33,SNR=6.2						
CTA	**Charters Tower**	**24.62**	**252**	P	P	10 42 51.9	+1.0
	2.5nm,0.7s,baz=91,slow=11,SNR=3.8						
MTSU	**Mount Surprise**	**26.19**	**258**	P	P	10 43 07.3	+2.6
	baz=35,SNR=5.0						
QLP	**Quilpie**	**28.16**	**240**	P	P	10 43 22.0	+0.2
	baz=37,SNR=6.7						
CMSA	**Cobar Meteorol**	**29.16**	**229**	P	P	10 43 29.8	-0.6
	baz=37,SNR=7.9						
STKA	**Stephens Creek**	**32.39**	**232**	P	P	10 43 57.2	-0.7
	2.7nm,0.4s,baz=32,slow=9.1,SNR=4.0						
STKA	**Stephens Creek**	**32.39**	**232**	P	P	10 43 58.2	+0.3
	baz=41,SNR=3.7						
WRA	**Warramunga Arr**	**35.73**	**255**	P	P	10 44 25.9	-0.1
	2.5nm,0.5s,baz=81,slow=6.2,SNR=63						
WRA				ScP	ScP	10 49 26.1	+0.5
	0.5nm,0.6s,baz=85,slow=3.9,SNR=6.5						
ASAR	**Alice Springs**	**36.52**	**249**	P	P	10 44 32.4	0.0
	6.7nm,0.5s,baz=77,slow=9.6,SNR=240						
ASAR				ScP	ScP	10 49 28.0	-0.5
	0.5nm,0.6s,baz=97,slow=3.8,SNR=10						
BBOO	**Buckleboo**	**37.05**	**234**	P	P	10 44 36.2	-0.3
	baz=46,SNR=22						
KDU	**Kakadu**	**37.73**	**267**	P	P	10 44 43.8	+1.5
	baz=46,SNR=5.1						
MTN	**Manton Dam**	**39.01**	**267**	P	P	10 44 54.1	+1.5
	baz=48,SNR=5.3						
FITZ	**Fitzroy Crossi**	**43.93**	**258**	P	P	10 45 32.3	+1.1
	baz=53,SNR=7.9						
MEEK	**Meekatharra**	**50.60**	**247**	P	P	10 46 20.8	-0.2
	baz=59,SNR=6.2						
NWAO	**Narrogin (SRO)**	**52.40**	**239**	P	P	10 46 32.7	-1.0
	12nm,1.0s,baz=50,slow=3.5,SNR=3.7						
KKM	**Kota Kinabalu**	**58.16**	**286**	S	ScS	10 55 46.4	-16
	baz=66,SNR=4.1						
NVAR	**Mina Array Bea**	**83.94**	**48**	P	P	10 49 43.6	-0.4
	0.9nm,0.7s,baz=225,slow=8.9,SNR=7.3						
ILAR	**Eielson Array**	**84.76**	**17**	P	P	10 49 46.6	-0.5
	0.9nm,0.6s,baz=239,slow=5.0,SNR=19						
PDAR	**Pinedale Array**	**91.69**	**46**	P	P	10 50 20.5	+0.2
	0.2nm,0.6s,baz=197,slow=2.8,SNR=2.9						
TXAR	**Lajitas Array**	**92.58**	**61**	P	P	10 50 25.3	+0.8
	0.2nm,0.6s,baz=224,slow=3.8,SNR=3.3						
YKA	**Yellowknife Ar**	**95.22**	**27**	P	P	10 50 35.7	+0.1
	0.5nm,0.6s,baz=256,slow=4.7,SNR=13						
ARCES	**ARCESS Array B**	**120.56**	**347**	PKP	PKPdf	10 55 58.9	-0.4
	2.7nm,0.8s,baz=62,slow=2.7,SNR=7.6						

DJA 27 10:45:57.6±1.4, 5°.5S±6°.6×107°.3E±°, h61km±19km, M3.5/4, MLv3.5/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LWLI	**Liwa**	**0.68**	**71**	P	Pn	10 46 12.8	+0.9
MNAI	**Manna**	**0.98**	**333**	P	Pn	10 46 15.4	-0.1
MNAI				S	Sn	10 46 29.8	+1.0
KASI	**Kota Agung**	**1.12**	**105**	P	Pn	10 46 17.9	+0.7
KASI				S	Sn	10 46 32.6	+0.8
EGSI	**Enggano, Bengk**	**1.13**	**264**	P	Pn	10 46 17.8	+0.4
KSI	**Kapahiang**	**1.78**	**333**	P	Pn	10 46 26.0	-0.2
KSI				S	Sn	10 46 49.0	+1.2

NNC 27 10:47:30.5±4.0, 50°.28N×73°.03E, h0km, mb2.8, mpv2.5, 6C-6D, Error ellipse: s-maj=50.6km s-min=10.7km az=25.0, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VOSK	**Vostochnaya**	**2.76**	**333**	⇓Pn	Pn	10 48 16.3	+0.2
	2.1nm,0.7s						
VOSK				⇓Sn	Sn	10 48 48.7	-1.4
	3.1nm,0.6s						
BVA0	**Borovoye Array**	**3.20**	**330**	⇓Pn	Pn	10 48 24.7	+2.6
	0.4nm,0.8s,baz=134,slow=18,SNR=6.8						
BVA0				⇑Sn	Sb	10 49 04.5	-3.3
	0.6nm,0.6s,baz=121,slow=28,SNR=6.6						
BRVK	**Borovoye**	**3.27**	**329**	⇓Pn	Pn	10 48 22.9	-0.1
	5.1nm,1.0s						
BRVK				⇓Sn	Sn	10 49 05.6	+3.1
	8.9nm,0.7s						
KUR18	**Kurchatov Arra**	**3.47**	**82**	⇑Pn	Pn	10 48 23.4	-2.4
	0.3nm,0.9s						
KUR18				⇑Sn	Sn	10 49 10.2	+2.6
	0.7nm,0.6s						
KURK	**Kurchatov**	**3.60**	**81**	⇑Pn	Pn	10 48 24.8	-2.7
	1.9nm,0.8s						
KURK				⇓Sn	Sn	10 49 12.6	+2.0
	8.1nm,0.8s						
ZRNK	**Zerenda**	**3.67**	**318**	⇑Pn	Pn	10 48 28.3	-0.1
	2.6nm,1.2s						
ZRNK				⇑Sn	Sn	10 49 14.2	+1.8
	1.7nm,0.6s						

*ISCJB **27** 10:48:13.2±0.5, 36°.83N±0°.03×71°.59E±0°.08, h106km, mb3.6/9, Error ellipse: s-maj=8.7km s-min=3.7km az=166.8*
*IDC **27** 10:48:15.2±1.1, 36°.83N×71°.52E, h115km±7km, mb3.4/9, mb1 3.5/15, mb1mx3.4/31, mbtmp3.4/15, Error ellipse: s-maj=17.5km s-min=16.4km az=108.0*
*NNC **27** 10:48:17.7±3.4, 37°.14N×71°.37E, h135km±38km, mb3.2, mpv4.4, Error ellipse: s-maj=28.5km s-min=21.1km az=7.0*

ISC 27 10:48:14.6±0.6, 36°.86N±0°.05×71°.62E±0°.08, h106km, n50, σ1§80/57, mb3.6/9, 5C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.04**	**175**	⇓P	**Pn**	**10 49 02.6**	**+1.5**
CEP				S	**Sn**	**10 49 40.0**	**+3.1**
CHCP	**Chirah Chowk**	**3.46**	**157**	P	**Pn**	**10 49 09.5**	**+2.8**
THW	**Thamme Wali**	**4.05**	**179**	P	**Pn**	**10 49 15.5**	**+0.8**
SARP	**Sargodha**	**5.00**	**170**	P	**Pn**	**10 49 27.5**	**+0.1**
AML	**Almayashu**	**5.50**	**16**	P	**Pn**	**10 49 35.4**	**+0.9**
	SNR=434						
UCH	**Uchtor**	**5.81**	**22**	P	**Pn**	**10 49 40.7**	**+2.0**
	SNR=6.7						
KZA	**Kyzart**	**5.92**	**27**	P	**Pn**	**10 49 41.5**	**+1.4**
	SNR=22						
DHRM	**DHARAMSHALA**	**6.00**	**139**	*e*P	**Pn**	**10 49 43.6**	**+2.4**
DHRM				*e*S	**Sn**	**10 50 46.7**	**-1.9**
DHRM				AML	AML	10 50 51.9	
	comp=N,565nm,0.3s						
DHRM				AML	AML	10 50 52.1	
	comp=E,777nm,0.4s						
EKS2	**Erkin-Say**	**6.03**	**15**	P	**Pn**	**10 49 42.4**	**+1.0**
	SNR=20						
AAK	**Ala-Archa**	**6.18**	**20**	P	**Pn**	**10 49 45.0**	**+1.5**
	SNR=38						
AAK	**Ala-Archa**	**6.18**	**20**	P	**Pn**	**10 49 44.9**	**+1.5**
	comp=E,9.7nm,0.3s,baz=159,slow=6.0,SNR=77						
AAK				S	**Sn**	**10 50 52.7**	**0.0**
	comp=E,3.9nm,0.3s,baz=319,slow=21,SNR=12						
KK31	**Karatay Array**	**6.30**	**353**	⇑P	**Pn**	**10 49 44.2**	**-0.7**
	comp=E,27nm,0.4s,baz=185,slow=14,SNR=148						
KK31				⇑S	**Sn**	**10 50 52.2**	**-3.2**
	comp=E,9.6nm,0.3s,baz=176,slow=23,SNR=5.8						
ULHL	**Ulahol**	**6.46**	**32**	P	**Pn**	**10 49 49.7**	**+2.5**
	SNR=12						
CHMS	**Chumysh**	**6.59**	**20**	P	**Pn**	**10 49 50.7**	**+1.8**
	SNR=19						
USP	**Ospenovka**	**6.77**	**18**	P	**Pn**	**10 49 52.1**	**+0.8**
	SNR=20						
TKM2	**Tokmak 2**	**6.78**	**26**	⇓P	**Pn**	**10 49 52.7**	**+1.1**
	comp=E,17nm,0.9s						
TKM2				⇑S	**Sn**	**10 51 07.2**	**-0.2**
	comp=E,14nm,0.8s						
TKM2	**Tokmak 2**	**6.78**	**26**	P	**Pn**	**10 49 53.9**	**+2.2**
	SNR=6.0						
SDNR	**Sundarnagar**	**6.94**	**139**	*e*P	**Pn**	**10 49 56.0**	**+2.3**
SDNR				*e*S	**Sn**	**10 51 08.0**	**-3.2**
SMLA	**Simla**	**7.34**	**140**	*i* P	**Pn**	**10 49 59.9**	**+0.8**
SMLA				*i* S	**Sn**	**10 51 17.1**	**-3.7**
SMLA				⇓		10 51 21.1	
	comp=N,3μm,0.2s						
SMLA				⇓		10 51 21.9	
	comp=E,3μm,0.2s						
DDI	**Dehra Dun**	**8.44**	**139**	*e*S	Sn	10 51 41.5	-6.2
DDI				AML	AML	10 51 50.0	
	comp=E,446nm,0.3s						
DDI				AML	AML	10 51 50.3	
	comp=N,490nm,0.4s						
MK31	**Makanchi Array**	**12.71**	**35**	⇑Lg	Lg	10 51 11.0	
	comp=N,2.3nm,0.8s,baz=301,slow=29,SNR=6.0						
MKAR	**Makanchi Array**	**12.71**	**35**	P	**Pn**	**10 51 12.5**	**+1.1**
	comp=N,0.1nm,0.3s,baz=211,slow=14,SNR=7.8						
PYUN	**Piuthan**	**12.97**	**129**	*e*P	**Pn**	**10 51 13.3**	**-1.7**
	comp=N,21nm,0.4s						
DANN	**Dangsing**	**13.28**	**126**	*e*P	**Pn**	**10 51 18.2**	**-1.0**
	comp=N,8.4nm,0.2s						
DANN				*e*S	Sn	10 53 36.5	-9.1
KOLN	**Koldanda**	**13.58**	**128**	*e*P	**Pn**	**10 51 22.4**	**-0.6**
	comp=N,9.5nm,0.3s						
KOLN				*e*S	Sn	10 53 43.7	-9.0
BHPL	**Bhopal**	**14.47**	**158**	*e*S	Sn	10 54 00.1	-14
KURBB	**Kurchatov Arra**	**14.63**	**18**	P	**Pn**	**10 51 36.1**	**0.0**
	comp=N,0.1nm,0.3s,baz=1.4,slow=10,SNR=4.0						
KKN	**Kakani**	**14.65**	**124**	*e*P	**Pn**	**10 51 35.6**	**-1.2**
DMN	**Daman**	**14.66**	**125**	*e*P	**Pn**	**10 51 36.8**	**-0.2**
	comp=N,8.2nm,0.3s						
PKIN	**Phulchoki**	**14.87**	**125**	*e*P	**Pn**	**10 51 38.2**	**-1.5**
	comp=N,5.7nm,0.3s						
PKIN				*e*S	Sn	10 54 14.4	-10
PKI	**Pulchoki**	**14.88**	**125**	*e*P	**Pn**	**10 51 38.8**	**-1.1**
PKI				*e*S	Sn	10 54 13.8	-11
GUN	**Gumba**	**14.98**	**122**	*e*P	**Pn**	**10 51 40.5**	**-0.6**
AB31	**Akbulak array**	**15.02**	**329**	P	**Pn**	**10 51 36.9**	**-4.3**
	comp=N,1.2nm,0.3s,baz=141,slow=13,SNR=54						
VOSK	**Vostochnaya**	**15.87**	**359**	⇓P	**Pn**	**10 51 48.6**	**-3.1**
	comp=N,4.2nm,1.0s						
BVA0	**Borovoye Array**	**16.19**	**357**	P	**Pn**	**10 51 55.9**	**+0.2**
	comp=N,0.4nm,0.7s,baz=163,slow=13,SNR=5.8						
BVAR	**Borovoye Array**	**16.19**	**357**	P	**Pn**	**10 51 54.6**	**-1.1**
	comp=N,0.4nm,0.3s,baz=157,slow=12,SNR=5.1						
ZRNK	**Zerenda**	**16.20**	**354**	⇓P	**Pn**	**10 51 53.7**	**-2.0**

CSEM 27 11:39:42.9,41°52N×2°60E,h0km,ML1.9,Mining explosion. After MDD,Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFON	**Fontmartina**	**0.28**	**333**	Pg	Pg	11 39 47.8	-0.6
	9.4nm,0.2s,SNR=24						
EMIR	**Miracle**	**0.90**	**297**	Pg	Pg	11 39 59.0	-1.3
	5.4nm,0.7s,SNR=6.2						
EMIR				Lg	Lg	11 40 12.1	
	SNR=7.9						
CLLI	**Llivia**	**1.07**	**334**	Pg	Pg	11 40 03.8	+0.1
	5.1nm,1.0s,SNR=10						
CLLI				Lg	Lg	11 40 18.5	
	65nm,1.5s						
EPOB	**Poblet**	**1.16**	**262**	Pg	Pb	11 40 05.6	-0.3
	4.2nm,0.7s,SNR=6.1						
EPOB				Lg	Lg	11 40 20.1	
	SNR=7.9						
CSOR	**Sort**	**1.39**	**309**	Pg	Pn	11 40 08.6	-1.2
	3.2nm,0.4s,SNR=7.6						
CSOR				Lg	Lg	11 40 26.1	
	54nm,1.5s						
ERTA	**Horta de San J**	**1.80**	**253**	Pg	Pn	11 40 15.0	-0.3
	SNR=7.9						
ERTA				Lg	Lg	11 40 39.2	
	SNR=7.9						

CSEM 27 11:40:09.0,42°95N×6°85W,h0km,ML0.6,Mining explosion. After MDD,Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EPON	**Pontenova**	**0.44**	**330**	Pg	Pg	11 40 16.8	-0.6
	SNR=7.9						
EPON				Lg	Lg	11 40 23.0	
	0.8nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**1.01**	**175**	Pg	Pg	11 40 26.8	-1.7
	SNR=7.9						
ECAL				Lg	Lg	11 40 41.3	
	1.2nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**1.25**	**73**	Pg	Pg	11 40 32.3	-0.8
	SNR=7.9						
EARI				Lg	Lg	11 40 48.7	
	0.2nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**1.41**	**220**	Pg	Pn	11 40 35.5	-0.5
	SNR=7.9						
ELOB				Lg	Lg	11 40 53.8	
	0.4nm,0.3s,SNR=7.9						

WEL 27 11:41:03.6±0.4,38°09S×176°33E,h138km±3km,ML3.5/11,7C,Error ellipse: s-maj=5.2km s-min=3.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.64**	**106**	⇑PN	Pn	11 41 24.2	-0.1
URZ				SN	Sn	11 41 40.3	+0.2
MWZ	**Matawai**	**0.97**	**105**	PN	Pn	11 41 27.1	+0.1
MWZ				SN	Sn	11 41 44.6	-0.3
RAHZ	**Arahi**	**1.02**	**145**	PN	Pn	11 41 28.0	+0.6
RAHZ				SN	Sn	11 41 46.5	+0.8
BKZ	**Black Stump Fm**	**1.09**	**173**	⇑PN	Pn	11 41 28.0	-0.1
BKZ				SN	Sn	11 41 46.8	-0.1
WNVZ	**Wahianoa**	**1.37**	**205**	⇑PN	Pn	11 41 31.0	-0.1
MCHZ	**McNeill Hill**	**1.39**	**168**	PN	Pn	11 41 31.4	+0.4
BHHZ	**Black Hill Sta**	**1.42**	**189**	⇑PN	Pn	11 41 31.0	-0.4
PUZ	**Puketiti**	**1.52**	**90**	PN	Pn	11 41 31.6	-0.8
PUZ				SN	Sn	11 41 53.2	-1.3
CNGZ	**Carnagh Statio**	**1.53**	**106**	PN	Pn	11 41 32.7	+0.2
CKHZ	**Cape Kidnapper**	**1.68**	**160**	PN	Pn	11 41 34.1	-0.1
CKHZ				SN	Sn	11 41 57.0	-0.6
KAHZ	**Kahuranaki**	**1.76**	**166**	PN	Pn	11 41 34.9	-0.3
KAHZ				SN	Sn	11 41 58.8	-0.7
PNHZ	**Pukenui**	**1.83**	**183**	PN	Pn	11 41 35.1	-1.0
WPHZ	**Waipukurau**	**1.98**	**178**	PN	Pn	11 41 36.7	-1.0
PXZ	**Pawanui**	**1.99**	**168**	⇑PN	Pn	11 41 36.9	-0.9
TSZ	**Takapari Road**	**1.99**	**188**	PN	Pn	11 41 36.9	-1.0
PRHZ	**Porangahau**	**2.19**	**174**	PN	Pn	11 41 39.1	-1.2
DVHZ	**Dannevirke**	**2.21**	**183**	⇑PN	Pn	11 41 39.0	-1.7
POWZ	**Post Office Ro**	**2.35**	**191**	PN	Pn	11 41 40.4	-1.7
BFZ	**Birch Farm**	**2.59**	**181**	PN	Pn	11 41 43.3	-2.0
MRZ	**Mangatainoka R**	**2.64**	**193**	⇑PN	Pn	11 41 43.6	-2.3
MRZ				SN	Sn	11 42 14.9	-3.6
OGWZ	**Otaki Gorge**	**2.87**	**198**	PN	Pn	11 41 46.3	-2.5
HOWZ	**Holdsworth Sta**	**2.88**	**192**	PN	Pn	11 41 46.2	-2.7
KIW	**Kapiti Island**	**2.98**	**201**	PN	Pn	11 41 47.4	-2.9
MTW	**Mount Morrison**	**3.14**	**192**	PN	Pn	11 41 49.0	-3.2
CAW	**Cannon Point**	**3.17**	**198**	ePN	Pn	11 41 49.6	-3.1
MSWZ	**Moikau Station**	**3.43**	**194**	PN	Pn	11 41 52.5	-3.5
TCW	**Tory Channel**	**3.50**	**206**	PN	Pn	11 41 53.7	-3.3
PLWZ	**Palliser**	**3.58**	**193**	PN	Pn	11 41 54.2	-3.8
TUWZ	**Tuamarina**	**3.81**	**208**	PN	Pn	11 41 57.2	-3.8
THZ	**Tophouse**	**4.52**	**215**	ePN	Pn	11 42 06.6	-3.9
KHZ	**Kahutara**	**4.83**	**205**	PN	Pn	11 42 09.5	-4.9
LTZ	**Lake Taylor**	**5.62**	**212**	PN	Pn	11 42 20.2	-4.9

MEX 27 11:44:55.1±0.7,17°10N×94°89W,h116km±24km,MD3.5,Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.72**	**100**	*e*P	Pn	11 45 24.3	-0.7
TGIG				*e*S	Sn	11 45 45.9	-2.0
VHO	**Vista Hermosa**	**1.76**	**269**	*e*P	Pn	11 45 25.1	-0.6
VHO				*e*S	Sn	11 45 47.5	-1.5
HUIG	**Huatulco**	**1.76**	**222**	*e*P	Pn	11 45 23.3	-2.1
HUIG				*i* S	Sn	11 45 47.1	-1.5
CCIG	**Comitan**	**2.76**	**107**	*i* P	Pn	11 45 37.9	-0.5
CCIG				*i* S	Sn	11 46 10.2	-1.4
UTMO	**Huajuapan**	**2.87**	**285**	*e*P	Pn	11 45 39.2	-0.7
UTMO				*i* S	Sn	11 46 11.8	-2.6

IDC ***27*** *11:52:11.3±0.9,36°29N×21°80E,h0km,mb3.7/14, mb1 3.9/18,mb1mx3.8/32,mbtmp3.7/18,ML4.2/4,Error ellipse: s-maj=20.2km s-min=18.4km az=28.0*
ATH ***27*** *11:52:12.9,36°10N×21°56E,h30km, MD4.0/46,ML4.1*
CSEM ***27*** *11:52:13.3±0.2,36°10N×21°53E,h15km,ML4.2,Error ellipse: s-maj=4.3km s-min=3.1km az=42.0*
NEIC ***27*** *11:52:14.9,36°13N×21°60E,h10km,mb4.2/3, ML4.1(ATH),After ATH.*
THE ***27*** *11:52:15.3,36°13N×21°59E,h20km±1km,ML4.2/16,Error ellipse: s-maj=1.3km s-min=0.6km az=219.0*
PDG ***27*** *11:52:16.0±0.4,36°49N×21°47E,h11km±4km,ML4.5/9, Error ellipse: s-maj=4.5km s-min=1.8km az=90.0*
BEO ***27*** *11:52:17.2±1.0,36°52N×20°96E,h0km,ML4.3/5*

ISC 27 11:52:13.7±0.5,36°11N±0°03×21°50E±0°03,h21km±3km, n346,σ1°48/426,mb3.9/18,7C-16D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.81**	**14**	P	**Pb**	**11 52 29.5**	**+0.4**
PYL				S	**Sn**	**11 52 41.0**	**-0.3**
PYL	**PYLOS**	**0.81**	**14**	*e*PN	**Pb**	**11 52 29.1**	**0.0**
PYL				*e*SN	**Sb**	**11 52 40.5**	**+0.8**
PYL	**PYLOS**	**0.81**	**14**	*e*Pn	**Pb**	**11 52 29.1**	**0.0**
PYL	**PYLOS**	**0.81**	**14**	P	**Pb**	**11 52 29.5**	**+0.4**
PYL				*e*Sn	**Sb**	**11 52 40.5**	**+0.8**
PYL				S	**Sn**	**11 52 41.0**	**-0.3**
DYR	**Agios Nikonas**	**0.94**	**46**	P	**Pb**	**11 52 30.9**	**-0.4**
DYR				S	**Sb**	**11 52 43.6**	**+0.2**
DYR	**Agios Nikonas**	**0.94**	**46**	*e*PN	**Pb**	**11 52 30.4**	**-0.9**
DYR				*e*SN	**Sb**	**11 52 43.8**	**+0.4**
DYR	**Agios Nikonas**	**0.94**	**46**	*e*Pn	**Pb**	**11 52 30.4**	**-0.9**
DYR	**Agios Nikonas**	**0.94**	**46**	P	**Pb**	**11 52 30.9**	**-0.4**
DYR				S	**Sb**	**11 52 43.6**	**+0.2**
ITM	**Ithomi**	**1.13**	**18**	P	**Pn**	**11 52 34.1**	**-0.1**
ITM				S	**Sn**	**11 52 49.9**	**+0.8**
ITM	**Ithomi**	**1.13**	**18**	*e*PN	**Pn**	**11 52 34.2**	**0.0**
ITM				*e*SN	**Sn**	**11 52 49.9**	**+0.8**
ITM	**Ithomi**	**1.13**	**18**	P	**Pn**	**11 52 34.2**	**0.0**
ITM				S	**Sn**	**11 52 49.9**	**+0.8**
KYTH	**Kithira**	**1.26**	**82**	*e*PN	**Pn**	**11 52 35.5**	**-0.5**
KYTH	**Kithira**	**1.26**	**82**	*e*Pn	**Pn**	**11 52 35.5**	**-0.5**
KYTH	**Kithira**	**1.26**	**82**	P	**Pb**	**11 52 37.0**	**+0.3**
VLI	**Veliai**	**1.31**	**62**	P	**Pn**	**11 52 37.0**	**+0.2**
VLI				S	**Sn**	**11 52 53.2**	**-0.4**
VLI	**Veliai**	**1.31**	**62**	*e*PN	**Pn**	**11 52 36.2**	**-0.6**
VLI				*e*SN	**Sb**	**11 52 54.1**	**+0.1**
VLI	**Veliai**	**1.31**	**62**	*e*Pn	**Pn**	**11 52 36.2**	**-0.6**
VLI	**Veliai**	**1.31**	**62**	P	**Pn**	**11 52 37.0**	**+0.2**
VLI				S	**Sn**	**11 52 53.2**	**-0.4**
VLI				*e*Sn	**Sb**	**11 52 54.1**	**+0.1**
AMT	**Artemida-Makis**	**1.43**	**7**	P	**Pb**	**11 52 39.4**	**-0.3**
AMT				S	**Sb**	**11 52 57.9**	**+0.4**
AMT	**Artemida-Makis**	**1.43**	**7**	*e*PN	**Pn**	**11 52 39.2**	**+0.7**
AMT				*e*SN	**Sb**	**11 52 58.0**	**+0.4**
AMT	**Artemida-Makis**	**1.43**	**7**	*e*Pn	**Pn**	**11 52 39.2**	**+0.7**
AMT				*e*Sn	**Sb**	**11 52 58.0**	**+0.4**
VLX	**Vlachokerasia**	**1.45**	**29**	P	**Pn**	**11 52 39.2**	**+0.5**
VLX				S	**Sn**	**11 52 57.2**	**+0.1**
VLX	**Vlachokerasia**	**1.45**	**29**	*e*PN	**Pn**	**11 52 38.8**	**+0.1**
VLX				*e*SN	**Sn**	**11 52 57.5**	**+0.4**
VLX	**Vlachokerasia**	**1.45**	**29**	*e*Pn	**Pn**	**11 52 38.8**	**+0.1**
VLX	**Vlachokerasia**	**1.45**	**29**	P	**Pn**	**11 52 39.2**	**+0.5**
VLX				S	**Sn**	**11 52 57.2**	**+0.1**
VLX				*e*Sn	**Sn**	**11 52 57.5**	**+0.4**
GUR	**Goura**	**1.95**	**20**	P	**Pn**	**11 52 47.0**	**+1.4**
GUR				S	**Sn**	**11 53 09.9**	**+0.4**
GUR	**Goura**	**1.95**	**20**	*e*PB	**Pn**	**11 52 46.2**	**+0.6**
GUR				*e*SN	**Sn**	**11 53 09.7**	**+0.2**
GUR	**Goura**	**1.95**	**20**	*e*Pb	**Pn**	**11 52 46.2**	**+0.6**
GUR	**Goura**	**1.95**	**20**	P	**Pn**	**11 52 47.0**	**+1.4**
GUR				S	**Sn**	**11 53 09.9**	**+0.4**
RLS	**Riolos of Patr**	**1.95**	**359**	P	**Pn**	**11 52 47.0**	**+1.5**
RLS				S	**Sn**	**11 53 10.7**	**+1.4**
RLS	**Riolos of Patr**	**1.95**	**359**	*e*PB	**Pn**	**11 52 46.5**	**+1.0**
RLS				*e*SN	**Sn**	**11 53 10.2**	**+0.9**
RLS	**Riolos of Patr**	**1.95**	**359**	*e*Pb	**Pn**	**11 52 46.5**	**+1.0**
RLS	**Riolos of Patr**	**1.95**	**359**	P	**Pn**	**11 52 47.0**	**+1.5**
RLS				*e*Sn	**Sn**	**11 53 10.2**	**+0.9**
RLS				S	**Sn**	**11 53 10.7**	**+1.4**
DID	**Didima**	**1.98**	**44**	P	**Pn**	**11 52 46.1**	**+0.2**
DID				S	**Sn**	**11 53 10.4**	**+0.3**
DID	**Didima**	**1.98**	**44**	*e*PN	**Pn**	**11 52 45.7**	**-0.2**
DID				*e*SN	**Sn**	**11 53 10.1**	**0.0**
DID	**Didima**	**1.98**	**44**	*e*Pn	**Pn**	**11 52 45.7**	**-0.2**
DID	**Didima**	**1.98**	**44**	P	**Pn**	**11 52 46.1**	**+0.2**
DID				*e*Sn	**Sn**	**11 53 10.1**	**0.0**
DID				S	**Sn**	**11 53 10.4**	**+0.3**
KLV	**Kalavryta, Ach**	**2.00**	**15**	*e*PN	**Pn**	**11 52 46.6**	**+0.3**
KLV				*e*SN	**Sn**	**11 53 11.0**	**+0.2**
KLV	**Kalavryta, Ach**	**2.00**	**15**	*e*Pn	**Pn**	**11 52 46.6**	**+0.3**
KLV				*e*Sn	**Sn**	**11 53 11.0**	**+0.2**
KFL	**Anninata**	**2.08**	**344**	P	**Pn**	**11 52 48.2**	**+0.9**
KFL				S	**Sb**	**11 53 14.7**	**-1.4**
KFL	**Anninata**	**2.08**	**344**	P	**Pn**	**11 52 48.2**	**+0.9**
KFL				S	**Sb**	**11 53 14.7**	**-1.4**
KARN	**Karanos**	**2.09**	**109**	P	**Pn**	**11 52 48.0**	**+0.5**
KARN				S	**Sn**	**11 53 13.1**	**+0.2**
KARN	**Karanos**	**2.09**	**109**	*e*PN	**Pn**	**11 52 47.4**	**-0.1**
KARN				*e*SN	**Sn**	**11 53 12.1**	**-0.8**
KARN	**Karanos**	**2.09**	**109**	*e*Pn	**Pn**	**11 52 47.4**	**-0.1**
KARN	**Karanos**	**2.09**	**109**	P	**Pn**	**11 52 48.0**	**+0.5**
KARN				*e*Sn	**Sn**	**11 53 12.1**	**-0.8**
KARN				S	**Sn**	**11 53 13.1**	**+0.2**
LAKA	**Lakka**	**2.17**	**10**	P	**Pn**	**11 52 49.5**	**+1.0**
LAKA				S	**Sn**	**11 53 15.8**	**+1.1**
LAKA	**Lakka**	**2.17**	**10**	*e*PN	**Pn**	**11 52 49.1**	**+0.6**
LAKA				*e*SN	**Sn**	**11 53 15.2**	**+0.5**
LAKA	**Lakka**	**2.17**	**10**	*e*Pn	**Pn**	**11 52 49.1**	**+0.6**
LAKA	**Lakka**	**2.17**	**10**	P	**Pn**	**11 52 49.5**	**+1.0**
LAKA				*e*Sn	**Sn**	**11 53 15.2**	**+0.5**
LAKA				S	**Sn**	**11 53 15.8**	**+1.1**
UPR	**University Cam**	**2.19**	**6**	*e*PN	**Pn**	**11 52 49.3**	**+0.5**
UPR				*e*SN	**Sn**	**11 53 16.2**	**+1.0**
UPR	**University Cam**	**2.19**	**6**	*e*Pn	**Pn**	**11 52 49.3**	**+0.5**
UPR				*e*Sn	**Sn**	**11 53 16.2**	**+1.0**
VLS	**Valsamata**	**2.19**	**341**	P	**Pn**	**11 52 49.7**	**+0.8**
VLS	**Valsamata**	**2.19**	**341**	*e*PN	**Pn**	**11 52 50.0**	**+1.1**
VLS	**Valsamata**	**2.19**	**341**	P	**Pn**	**11 52 49.7**	**+0.8**
VLS	**Valsamata**	**2.19**	**341**	*e*Pn	**Pn**	**11 52 50.0**	**+1.1**
PSA1	**Psathopyrgos**	**2.24**	**8**	*e*PN	**Pn**	**11 52 50.1**	**+0.6**
PSA1				*e*SN	**Sn**	**11 53 17.2**	**+0.8**
LTK	**Loutraki**	**2.25**	**31**	P	**Pn**	**11 52 49.6**	**0.0**
LTK				S	**Sn**	**11 53 17.5**	**+0.8**
LTK	**Loutraki**	**2.25**	**31**	*e*PN	**Pn**	**11 52 49.6**	**0.0**
LTK				*e*SN	**Sn**	**11 53 16.6**	**-0.1**
LTK	**Loutraki**	**2.25**	**31**	*e*Pn	**Pn**	**11 52 49.6**	**0.0**
LTK	**Loutraki**	**2.25**	**31**	P	**Pn**	**11 52 50.1**	**+0.5**
LTK				*e*Sn	**Sn**	**11 53 16.6**	**-0.1**
LTK				S	**Sn**	**11 53 17.5**	**+0.8**
NAIG	**Nisos Aigina**	**2.29**	**43**	*e*PN	**Pn**	**11 52 50.3**	**0.0**
NAIG	**Nisos Aigina**	**2.29**	**43**	*e*Pn	**Pn**	**11 52 50.3**	**0.0**
TRIZ	**Trizonia**	**2.30**	**11**	*e*PN	**Pn**	**11 52 51.1**	**+0.7**
TRIZ				*e*SN	**Sn**	**11 53 18.6**	**+0.6**
TRIZ	**Trizonia**	**2.30**	**11**	*e*Pn	**Pn**	**11 52 51.1**	**+0.7**
TRIZ				*e*Sn	**Sn**	**11 53 18.6**	**+0.6**
VAM	**Vamos**	**2.31**	**107**	P	**Pn**	**11 52 51.3**	**+0.9**
VAM	**Vamos**	**2.31**	**107**	*e*PN	**Pn**	**11 52 50.9**	**+0.5**
VAM				*e*SN	**Sn**	**11 53 18.3**	**+0.2**
VAM	**Vamos**	**2.31**	**107**	*e*Pn	**Pn**	**11 52 50.9**	**+0.5**
VAM	**Vamos**	**2.31**	**107**	P	**Pn**	**11 52 51.3**	**+0.9**
VAM				*e*Sn	**Sn**	**11 53 18.3**	**+0.2**
KALE	**Kalithea**	**2.34**	**12**	P	**Pn**	**11 52 52.2**	**+1.3**
KALE				S	**Sn**	**11 53 20.2**	**+1.1**
KALE	**Kalithea**	**2.34**	**12**	*e*PN	**Pn**	**11 52 51.3**	**+0.4**
KALE				*e*SN	**Sn**	**11 53 19.9**	**+0.8**
KALE	**Kalithea**	**2.34**	**12**	*e*Pn	**Pn**	**11 52 51.3**	**+0.4**
KALE	**Kalithea**	**2.34**	**12**	P	**Pn**	**11 52 52.2**	**+1.3**
KALE				*e*Sn	**Sn**	**11 53 19.9**	**+0.8**
KALE				S	**Sn**	**11 53 20.2**	**+1.1**
EFP	**Efpalio**	**2.34**	**8**	P	**Pn**	**11 52 51.8**	**+0.9**
EFP				S	**Sn**	**11 53 19.9**	**+0.9**
EFP	**Efpalio**	**2.34**	**8**	*e*PN	**Pn**	**11 52 51.9**	**+1.0**
EFP				*e*SN	**Sn**	**11 53 19.8**	**+0.8**
EFP	**Efpalio**	**2.34**	**8**	P	**Pn**	**11 52 51.8**	**+0.9**
EFP				S	**Sn**	**11 53 19.9**	**+0.9**
DSF	**Desfina**	**2.44**	**19**	P	**Pn**	**11 52 52.2**	**-0.2**
GVD	**Gavdhos**	**2.46**	**120**	*e*Pn	**Pn**	**11 52 54.6**	**+2.1**
GVD	**Gavdhos**	**2.46**	**120**	*e*PN	**Pn**	**11 52 52.2**	**-0.4**
GVD	**Gavdhos**	**2.46**	**120**	*e*Pn	**Pn**	**11 52 52.2**	**-0.4**
ATH	**Athens Observa**	**2.57**	**43**	*e*PN	**Pn**	**11 52 54.1**	**0.0**
ATH	**Athens Observa**	**2.57**	**43**	*e*Pn	**Pn**	**11 52 54.1**	**0.0**
PTL	**Penteli**	**2.71**	**44**	P	**Pn**	**11 52 55.9**	**-0.1**
PTL	**Penteli**	**2.71**	**44**	*e*PN	**Pn**	**11 52 55.9**	**-0.1**
PTL	**Penteli**	**2.71**	**44**	P	**Pn**	**11 52 55.9**	**-0.1**
LKR	**Lokris**	**2.81**	**25**	P	**Pn**	**11 52 57.5**	**+0.2**
LKR				S	**Sn**	**11 53 31.5**	**+1.0**
LKR	**Lokris**	**2.81**	**25**	*e*PN	**Pn**	**11 52 57.5**	**+0.2**
LKR	**Lokris**	**2.81**	**25**	P	**Pn**	**11 52 57.5**	**+0.2**
LKR				S	**Sn**	**11 53 31.5**	**+1.0**
AXAR	**Agios Charalam**	**2.81**	**19**	P	**Pn**	**11 52 58.4**	**+1.0**
AXAR				S	**Sn**	**11 53 31.8**	**+1.1**
AXAR	**Agios Charalam**	**2.81**	**19**	P	**Pn**	**11 52 58.4**	**+1.0**
AXAR				S	**Sn**	**11 53 31.8**	**+1.1**
EVR	**Evrytania**	**2.82**	**5**	*e*PN	**Pn**	**11 52 58.4**	**+0.8**
EVR	**Evrytania**	**2.82**	**5**	*e*Pn	**Pn**	**11 52 58.4**	**+0.8**
IDI	**Anoyia**	**2.88**	**105**	P	**Pn**	**11 52 58.6**	**+0.2**
IDI	**Anoyia**	**2.88**	**105**	*e*Pn	**Pn**	**11 52 58.8**	**+0.5**
IDI	**Anoyia**	**2.88**	**105**	*e*PN	**Pn**	**11 52 58.6**	**+0.2**
IDI	**Anoyia**	**2.88**	**105**	P	**Pn**	**11 52 58.6**	**+0.2**
SIVA	**Sivas**	**2.91**	**111**	*e*PN	**Pn**	**11 52 58.7**	**0.0**
SIVA	**Sivas**	**2.91**	**111**	*e*Pn	**Pn**	**11 52 58.7**	**0.0**
MAKR	**Makrakomi, Fth**	**2.95**	**10**	P	**Pn**	**11 53 01.0**	**+1.7**
MAKR	**Makrakomi, Fth**	**2.95**	**10**	P	**Pn**	**11 53 01.0**	**+1.7**
AGG	**Agios Georgios**	**2.99**	**13**	P	**Pn**	**11 53 00.6**	**+0.8**
AGG				S	**Sn**	**11 53 35.8**	**+0.8**
AGG	**Agios Georgios**	**2.99**	**13**	*e*PN	**Pn**	**11 53 00.6**	**+0.8**
AGG	**Agios Georgios**	**2.99**	**13**	P	**Pn**	**11 53 00.6**	**+0.8**
AGG				S	**Sn**	**11 53 35.8**	**+0.8**
SMIA	**Simia**	**3.08**	**26**	P	**Pn**	**11 53 01.3**	**+0.1**
SMIA				S	**Sn**	**11 53 38.9**	**+1.5**
SMIA	**Simia**	**3.08**	**26**	P	**Pn**	**11 53 01.3**	**+0.1**
SMIA				S	**Sn**	**11 53 38.9**	**+1.5**
APE	**Apeiranthos**	**3.39**	**72**	*e*PN	**Pn**	**11 53 04.9**	**-0.4**
APE	**Apeiranthos**	**3.39**	**72**	*e*Pn	**Pn**	**11 53 04.9**	**-0.4**
SKIA	**Skiathos**	**3.43**	**26**	P	**Pn**	**11 53 05.4**	**-0.5**
SKIA				S	**Sn**	**11 53 47.2**	**+1.3**
SKIA	**Skiathos**	**3.43**	**26**	P	**Pn**	**11 53 05.4**	**-0.5**
SKIA				S	**Sn**	**11 53 47.2**	**+1.3**
NPS	**Neapolis**	**3.45**	**103**	*e*PN	**Pn**	**11 53 06.0**	**-0.2**
NPS	**Neapolis**	**3.45**	**103**	*e*Pn	**Pn**	**11 53 06.0**	**-0.2**
NEO	**Neokhori**	**3.48**	**23**	*e*PN	**Pn**	**11 53 07.6**	**+1.1**
NEO	**Neokhori**	**3.48**	**23**	*e*Pn	**Pn**	**11 53 07.6**	**+1.1**
THL	**Klokotos Trika**	**3.48**	**7**	P	**Pn**	**11 53 07.9**	**+1.4**
THL				S	**Sn**	**11 53 48.4**	**+1.4**
THL	**Klokotos Trika**	**3.48**	**7**	*e*PN	**Pn**	**11 53 07.6**	**+1.1**
THL	**Klokotos Trika**	**3.48**	**7**	*e*Pn	**Pn**	**11 53 07.6**	**+1.1**
THL	**Klokotos Trika**	**3.48**	**7**	P	**Pn**	**11 53 07.9**	**+1.4**
THL				S	**Sn**	**11 53 48.4**	**+1.4**
XOR	**Xorichti**	**3.52**	**22**	P	**Pn**	**11 53 07.8**	**+0.6**
XOR				S	**Sn**	**11 53 49.6**	**+1.4**
XOR	**Xorichti**	**3.52**	**22**	P	**Pn**	**11 53 07.8**	**+0.6**
XOR				S	**Sn**	**11 53 49.6**	**+1.4**
JAN	**Janina**	**3.58**	**352**	*e*PN	**Pn**	**11 53 09.7**	**+1.7**
JAN	**Janina**	**3.58**	**352**	*e*Pn	**Pn**	**11 53 09.7**	**+1.7**
AOS	**Alonnisos**	**3.60**	**31**	P	**Pn**	**11 53 09.4**	**+1.2**
AOS				S	**Sn**	**11 53 50.9**	**+0.9**
AOS	**Alonnisos**	**3.60**	**31**	P	**Pn**	**11 53 09.4**	**+1.2**
AOS				S	**Sn**	**11 53 50.9**	**+0.9**
XRY	**Khrisi**	**3.64**	**108**	*e*PN	**Pn**	**11 53 09.3**	**+0.6**
XRY	**Khrisi**	**3.64**	**108**	*e*Pn	**Pn**	**11 53 09.3**	**+0.6**
KEK	**Kerkira**	**3.84**	**340**	P	**Pn**	**11 53 13.1**	**+1.5**
KEK				S	**Sn**	**11 53 58.7**	**+2.6**
KEK	**Kerkira**	**3.84**	**340**	*e*PN	**Pn**	**11 53 12.4**	**+0.8**
KEK	**Kerkira**	**3.84**	**340**	*e*Pn	**Pn**	**11 53 12.4**	**+0.8**
KEK	**Kerkira**	**3.84**	**340**	P	**Pn**	**11 53 13.1**	**+1.5**
KEK				S	**Sn**	**11 53 58.7**	**+2.6**
ZKR	**Zakros**	**3.97**	**103**	*e*PN	**Pn**	**11 53 13.7**	**+0.4**
ZKR	**Zakros**	**3.97**	**103**	*e*Pn	**Pn**	**11 53 13.7**	**+0.4**
LIT	**Litokhoron**	**4.07**	**11**	P	**Pn**	**11 53 15.7**	**+1.1**
LIT				S	**Sn**	**11 54 03.4**	**+1.8**
LIT	**Litokhoron**	**4.07**	**11**	*e*PN	**Pn**	**11 53 16.0**	**+1.4**
LIT	**Litokhoron**	**4.07**	**11**	P	**Pn**	**11 53 15.7**	**+1.1**
LIT	**Litokhoron**	**4.07**	**11**	*e*Pn	**Pn**	**11 53 16.0**	**+1.4**
LIT				S	**Sn**	**11 54 03.4**	**+1.8**
PAIG	**Paliouri**	**4.19**	**24**	P	**Pn**	**11 53 16.3**	**0.0**
PAIG	**Paliouri**	**4.19**	**24**	*e*PN	**Pn**	**11 53 16.4**	**+0.1**
PAIG	**Paliouri**	**4.19**	**24**	*e*Pn	**Pn**	**11 53 16.4**	**+0.1**
KZN	**Kozani**	**4.20**	**3**	P	**Pn**	**11 53 18.2**	**+1.7**
KZN	**Kozani**	**4.20**	**3**	*e*PN	**Pn**	**11 53 18.3**	**+1.7**
KZN	**Kozani**	**4.20**	**3**	P	**Pn**	**11 53 18.2**	**+1.7**
NEST	**Nestorio**	**4.32**	**355**	P	**Pn**	**11 53 20.1**	**+1.9**
NEST				S	**Sn**	**11 54 10.0**	**+2.1**
NEST	**Nestorio**	**4.32**	**355**	P	**Pn**	**11 53 20.1**	**+1.9**
NEST				S	**Sn**	**11 54 10.0**	**+2.1**
LTBQ	**Tobruq**	**4.51**	**153**	*i* P	**Pn**	**11 53 23.6**	**+2.8**
	SNR=24						
PLG	**Polygyros**	**4.53**	**19**	*e*PN	**Pn**	**11 53 21.6**	**+0.6**
PLG	**Polygyros**	**4.53**	**19**	*e*Pn	**Pn**	**11 53 21.6**	**+0.6**
FNA	**Florina**	**4.67**	**359**	*e*PN	**Pn**	**11 53 24.0**	**+1.0**
FNA	**Florina**	**4.67**	**359**	*e*Pn	**Pn**	**11 53 24.0**	**+1.0**
LIA	**Limnos Island**	**4.78**	**36**	*e*PN	**Pn**	**11 53 25.5**	**+1.2**
LIA	**Limnos Island**	**4.78**	**36**	*e*Pn	**Pn**	**11 53 25.5**	**+1.2**
TIP	**Timpagrande**	**4.85**	**311**	*e*PN	**Pn**	**11 53 26.6**	**+1.1**
TIP	**Timpagrande**	**4.85**	**311**	*e*Pn	**Pn**	**11 53 26.6**	**+1.1**
GRG	**Griva**	**4.90**	**8**	*e*PN	**Pn**	**11 53 27.0**	**+1.0**
GRG	**Griva**	**4.90**	**8**	*e*Pn

PDKS	**Podkum**	**11.08**	**336**	*i* Pn		**Pn**	**11 54 50.7**	**-0.2**
PDKS				*i* Sn		Sn	11 56 44.1	-10
PDKS	**Podkum**	**11.08**	**336**	Pn		**Pn**	**11 54 50.7**	**-0.2**
PDKS				*i* Sn		Sn	11 56 44.1	-10
VOY	**Vojsko**	**11.45**	**332**	*e*Pn		**Pn**	**11 54 55.9**	**-0.1**
VOY				*e*Sn		Sn	11 56 51.6	-12
VOY				*e*			11 56 54.4	
VOY	**Vojsko**	**11.45**	**332**	*e*Pn		**Pn**	**11 54 55.9**	**-0.1**
VOY				*e*Sn		Sn	11 56 51.6	-12
MMAI	**Mount Meron Ar**	**11.87**	**101**	Sn		Sn	11 56 58.2	-16
MMAI	**Mount Meron Ar**	**11.87**	**101**	Sn		Sn	11 56 58.2	-16
	1.9nm,0.3s,baz=185,slow=18,SNR=1.5							
ARSA	**Arzberg**	**11.99**	**340**	*i*Pn		**Pn**	**11 55 02.0**	**-1.3**
ARSA	**Arzberg**	**11.99**	**340**	*i*Pn		**Pn**	**11 55 02.0**	**-1.3**
ARSA	**Arzberg**	**11.99**	**340**	*i*Pn		**Pn**	**11 55 02.0**	**-1.3**
VYHS	**Vyhne**	**12.54**	**352**	*e*PN		Pn	11 55 05.1	-5.6
VYHS				*e*			11 55 23.7	
VYHS	**Vyhne**	**12.54**	**352**	*e*SN		Sn	11 57 21.2	-8.4
CRVS	**Cervenica-Dubn**	**12.79**	**360**	*e*		P	11 55 28.5	+3.5
KOLS	**Kolonicke sedl**	**12.83**	**2**	*e*		P	11 55 29.4	+3.9
EIL	**Elat**	**12.99**	**116**	Pn		**Pn**	**11 55 15.3**	**-1.7**
EIL				Sn		Sn	11 57 28.7	-12
EIL	**Elat**	**12.99**	**116**	Pn		**Pn**	**11 55 15.3**	**-1.7**
	0.6nm,0.3s,baz=246,slow=12,SNR=4.4							
EIL				Sn		Sn	11 57 28.7	-12
	0.8nm,0.3s,baz=234,slow=10,SNR=2.4							
EIL	**Elat**	**12.99**	**116**	Pn		**Pn**	**11 55 15.3**	**-1.7**
SBF	**Sospel**	**13.27**	**310**	*e*P		**P**	**11 55 27.7**	**-2.7**
	32nm,0.8s							
SBF	**Sospel**	**13.27**	**310**	*e*P		**P**	**11 55 27.7**	**-2.7**
	32nm,0.8s							
ASF	**Jabal al Asfar**	**13.35**	**103**	Sn		Sn	11 57 40.7	-9.0
ASF	**Jabal al Asfar**	**13.35**	**103**	Sn		Sn	11 57 40.7	-9.0
	0.4nm,0.3s,baz=251,slow=8.3,SNR=1.8							
FETA	**Feichten**	**13.55**	**327**	*i*Pn		**Pn**	**11 55 23.7**	**-1.0**
FETA				*i*Sn		Sn	11 57 46.1	-8.4
FETA	**Feichten**	**13.55**	**327**	*i*Pn		**Pn**	**11 55 23.7**	**-1.0**
FETA				*i* Sn		Sn	11 57 43.7	-11
FETA	**Feichten**	**13.55**	**327**	*i*Pn		**Pn**	**11 55 23.7**	**-1.0**
DAVOX	**Davos/Dischmat**	**13.76**	**324**	Sn		Sn	11 57 48.8	-11
DAVOX	**Davos/Dischmat**	**13.76**	**324**	Sn		Sn	11 57 48.8	-11
	0.5nm,0.3s,baz=317,slow=14,SNR=4.2							
GERES	**GERESS Array B**	**13.96**	**338**	Pn		**Pn**	**11 55 29.2**	**-1.0**
GERES				Sn		Sn	11 57 52.8	-12
GERES	**GERESS Array B**	**13.96**	**338**	Pn		**Pn**	**11 55 29.3**	**-1.0**
	0.5nm,0.3s,baz=159,slow=15,SNR=3.9							
GERES				Sn		Sn	11 57 52.8	-12
	0.9nm,0.3s,baz=144,slow=23,SNR=6.8							
GERES	**GERESS Array B**	**13.96**	**338**	Pn		**Pn**	**11 55 29.2**	**-1.0**
MBDF	**Montbardon**	**14.12**	**312**	*e*P		**P**	**11 55 39.2**	**-0.9**
MBDF	**Montbardon**	**14.12**	**312**	*e*P		**P**	**11 55 39.2**	**-0.9**
MBDF	**Montbardon**	**14.12**	**312**	*e*P		**P**	**11 55 39.2**	**-0.9**
LPG	**La Plagne**	**14.56**	**315**	*e*P		**P**	**11 55 44.5**	**-0.6**
	13nm,0.9s							
LPG	**La Plagne**	**14.56**	**315**	*e*P		**P**	**11 55 44.5**	**-0.6**
	13nm,0.9s							
LPG	**La Plagne**	**14.56**	**315**	*e*P		**P**	**11 55 44.5**	**-0.6**
	13nm,0.9s							
AK02	**Malin Array Si**	**15.57**	**19**	*e*Pn		**Pn**	**11 55 53.9**	**+2.0**
AK02	**Malin Array Si**	**15.57**	**19**	*e*Pn		**Pn**	**11 55 53.8**	**+2.0**
AK01	**Malin Array Si**	**15.61**	**19**	Pn		P	**11 55 54.4**	**-1.9**
AK01	**Malin Array Si**	**15.61**	**19**	Pn		P	11 55 54.4	-1.9
AKASG	**Malin Array Be**	**15.62**	**19**	Pn		**Pn**	**11 55 47.8**	**-4.5**
AKASG				Sn		**Sn**	**11 58 48.9**	**+4.2**
AKASG	**Malin Array Be**	**15.62**	**19**	Pn		**Pn**	**11 55 47.8**	**-4.5**
	1.5nm,0.3s,baz=210,slow=13,SNR=4.1							
AKASG				Sn		**Sn**	**11 58 48.9**	**+4.2**
	0.1nm,0.3s,baz=327,slow=12,SNR=1.6							
HINF	**Hinteralfeld**	**15.95**	**322**	*e*P		**P**	**11 56 03.2**	**+3.0**
HINF	**Hinteralfeld**	**15.95**	**322**	*e*P		**P**	**11 56 03.2**	**+3.0**
HINF	**Hinteralfeld**	**15.95**	**322**	*e*P		**P**	**11 56 03.2**	**+3.0**
CDF	**Champ du Feu**	**16.15**	**324**	*e*P		**P**	**11 56 04.7**	**+2.2**
CDF	**Champ du Feu**	**16.15**	**324**	*e*P		**P**	**11 56 04.7**	**+2.2**
CDF	**Champ du Feu**	**16.15**	**324**	*e*P		**P**	**11 56 04.7**	**+2.2**
HAU	**Haudompre**	**16.33**	**321**	*e*P		**P**	**11 56 07.3**	**+2.9**
HAU	**Haudompre**	**16.33**	**321**	*e*P		**P**	**11 56 07.3**	**+2.9**
HAU	**Haudompre**	**16.33**	**321**	*e*P		**P**	**11 56 07.3**	**+2.9**
LOR	**Lormes**	**17.22**	**316**	*e*P		P	11 56 19.8	+5.6
LOR	**Lormes**	**17.22**	**316**	*e*P		P	11 56 19.8	+5.6
KBZ	**Khabaz**	**18.07**	**59**	Pn		**Pn**	**11 56 23.3**	**+0.1**
KBZ	**Khabaz**	**18.07**	**59**	Pn		**Pn**	**11 56 23.3**	**+0.1**
	0.2nm,0.3s,baz=273,slow=5.7,SNR=8.6							
KBZ	**Khabaz**	**18.07**	**59**	Pn		**Pn**	**11 56 23.3**	**+0.1**
MFF	**Saint Martin d**	**19.28**	**310**	*e*P		Pn	11 56 45.8	+7.9
MFF	**Saint Martin d**	**19.28**	**310**	*e*P		Pn	11 56 45.8	+7.9
ESDC	**Sonseca Array**	**20.39**	**288**	P		Pn	11 56 51.9	+0.6
ESDC	**Sonseca Array**	**20.39**	**288**	P		Pn	11 56 51.9	+0.6
	1.0nm,0.5s,baz=87,slow=11,SNR=4.7							
ESDC	**Sonseca Array**	**20.39**	**288**	P		Pn	11 56 51.9	+0.7
HFS	**Hagfors**	**24.57**	**351**	P		**P**	**11 57 29.9**	**-1.9**
HFS	**Hagfors**	**24.57**	**351**	P		**P**	**11 57 29.9**	**-1.9**
	1.4nm,0.4s,baz=156,slow=12,SNR=12							
FINES	**FINESS Array B**	**25.52**	**5**	P		**P**	**11 57 39.2**	**-1.2**
FINES	**FINESS Array B**	**25.52**	**5**	P		**P**	**11 57 39.2**	**-1.2**
	1.6nm,0.4s,baz=160,slow=11,SNR=9.7							
FINES	**FINESS Array B**	**25.52**	**5**	P		**P**	**11 57 39.2**	**-1.2**
EKA	**Eskdalemuir Ar**	**25.58**	**326**	P		**P**	**11 57 43.2**	**+2.3**
EKA	**Eskdalemuir Ar**	**25.58**	**326**	P		**P**	**11 57 43.3**	**+2.3**
	1.1nm,0.5s,baz=128,slow=11,SNR=4.1							
EKA	**Eskdalemuir Ar**	**25.58**	**326**	P		**P**	**11 57 43.2**	**+2.3**
NB2	**NORSAR Subarra**	**25.80**	**348**	P		**P**	**11 57 43.1**	**+0.1**
	comp=Z,1.3nm,0.5s,SNR=9.3							
NB2	**NORSAR Subarra**	**25.80**	**348**	P		**P**	**11 57 43.1**	**+0.1**
	comp=Z,1.3nm,0.5s,SNR=8.1							
NOA	**NORSAR Array B**	**25.80**	**348**	P		**P**	**11 57 42.7**	**-0.3**
NOA	**NORSAR Array B**	**25.80**	**348**	P		**P**	**11 57 42.7**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=157,slow=9.1,SNR=4.8							
NOA	**NORSAR Array B**	**25.80**	**348**	P		**P**	**11 57 42.7**	**-0.3**
KAF	**Kangasniemi**	**26.21**	**5**	*e*p		**P**	**11 57 50.4**	**+3.8**
	comp=Z,2.6nm,0.6s							
JOF	**Joensuu**	**27.52**	**10**	*e*p		**P**	**11 57 54.6**	**-3.8**
	comp=Z,1.1nm,0.5s							
TORD	**Torodi Ar. Bea**	**28.98**	**223**	P		**P**	**11 58 14.4**	**+2.5**
TORD	**Torodi Ar. Bea**	**28.98**	**223**	P		**P**	**11 58 14.4**	**+2.5**
	comp=Z,0.7nm,0.7s,baz=33,slow=8.7,SNR=5.8							
TORD	**Torodi Ar. Bea**	**28.98**	**223**	P		**P**	**11 58 14.4**	**+2.5**
ARCES	**ARCESS Array B**	**33.56**	**3**	P		**P**	**11 58 50.7**	**-1.0**
ARCES	**ARCESS Array B**	**33.56**	**3**	P		**P**	**11 58 50.7**	**-1.0**
	comp=Z,1.6nm,0.6s,baz=194,slow=9.9,SNR=12							
ARCES	**ARCESS Array B**	**33.56**	**3**	P		**P**	**11 58 50.7**	**-1.0**
KKAR	**Karatay Array**	**37.96**	**64**	*e*P		**P**	**11 59 29.9**	**+0.2**
	comp=Z,1.5nm,0.4s							
KKAR	**Karatay Array**	**37.96**	**64**	*e*P		**P**	**11 59 30.0**	**+0.2**
	comp=Z,1.5nm,0.4s							
EKS2	**Erkin-Say**	**40.40**	**64**	*e*P		**P**	**11 59 51.7**	**+1.4**
	comp=Z,3.2nm,0.7s							
EKS2	**Erkin-Say**	**40.40**	**64**	*e*P		**P**	**11 59 51.7**	**+1.4**
	comp=Z,3.2nm,0.7s							
AAK	**Ala-Archa**	**40.92**	**64**	*e*P		P	11 59 59.4	+4.7
	comp=Z,2.5nm,0.9s							
MK31	**Makanchi Array**	**45.75**	**57**	*e*P		**P**	**12 00 32.2**	**-1.2**
MK31	**Makanchi Array**	**45.75**	**57**	*e*P		**P**	**12 00 32.2**	**-1.2**
MKAR	**Makanchi Array**	**45.75**	**57**	P		**P**	**12 00 31.3**	**-2.1**
MKAR	**Makanchi Array**	**45.75**	**57**	P		**P**	**12 00 31.3**	**-2.1**
	comp=Z,0.9nm,0.4s,baz=274,slow=8.3,SNR=13							
MKAR	**Makanchi Array**	**45.75**	**57**	P		**P**	**12 00 31.3**	**-2.1**
ZALV	**Zalesovo Beam**	**46.52**	**47**	P		**P**	**12 00 36.9**	**-2.3**
ZALV	**Zalesovo Beam**	**46.52**	**47**	P		**P**	**12 00 36.9**	**-2.3**
	comp=Z,1.5nm,0.3s,baz=264,slow=8.2,SNR=4.2							
SONM	**Songino Array**	**61.18**	**50**	P		**P**	**12 02 25.6**	**-1.2**
SONM	**Songino Array**	**61.18**	**50**	P		**P**	**12 02 25.6**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=289,slow=9.0,SNR=3.1							
SONM	**Songino Array**	**61.18**	**50**	P		**P**	**12 02 25.6**	**-1.2**
CMAR	**Chiang Mai Arr**	**69.41**	**82**	P		**P**	**12 03 20.4**	**0.0**
CMAR	**Chiang Mai Arr**	**69.41**	**82**	P		**P**	**12 03 20.4**	**0.0**
	comp=Z,1.3nm,0.3s,baz=310,slow=7.0,SNR=2.3							
CMAR	**Chiang Mai Arr**	**69.41**	**82**	P		**P**	**12 03 20.4**	**0.0**
YKA	**Yellowknife Ar**	**75.60**	**341**	P		**P**	**12 03 57.5**	**+1.0**
YKA	**Yellowknife Ar**	**75.60**	**341**	P		**P**	**12 03 57.4**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=35,slow=5.3,SNR=4.6							
YKA	**Yellowknife Ar**	**75.60**	**341**	P		**P**	**12 03 57.5**	**+1.0**
ILAR	**Eielson Array**	**79.04**	**355**	P		**P**	**12 04 17.3**	**+1.5**
ILAR	**Eielson Array**	**79.04**	**355**	P		**P**	**12 04 17.3**	**+1.5**
	comp=Z,0.1nm,0.5s,baz=342,slow=4.7,SNR=3.4							
ILAR	**Eielson Array**	**79.04**	**355**	P		**P**	**12 04 17.3**	**+1.5**
KSAR	**Wonju Array Be**	**80.02**	**51**	P		**P**	**12 04 20.6**	**-0.9**
KSAR	**Wonju Array Be**	**80.02**	**51**	P		**P**	**12 04 20.6**	**-0.9**
KSRS	**Korea Array**	**80.04**	**51**	P		**P**	**12 04 20.7**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=314,slow=5.2,SNR=4.6							
WRA	**Warramunga Arr**	**119.65**	**94**	PKP		**PKPdf**	**12 11 04.8**	**+2.5**
WRA	**Warramunga Arr**	**119.65**	**94**	PKP		**PKPdf**	**12 11 04.8**	**+2.5**
	comp=Z,0.7nm,1.0s,baz=319,slow=2.1,SNR=3.3							
WRA	**Warramunga Arr**	**119.65**	**94**	PKIKP		**PKPdf**	**12 11 04.8**	**+2.5**
ASAR	**Alice Springs**	**121.14**	**98**	PKP		**PKPdf**	**12 11 04.8**	**-0.3**
ASAR	**Alice Springs**	**121.14**	**98**	PKP		**PKPdf**	**12 11 04.8**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=328,slow=1.9,SNR=2.8							
ASAR	**Alice Springs**	**121.14**	**98**	PKIKP		**PKPdf**	**12 11 04.8**	**-0.3**

CSEM ***27*** *12:05:02.6, 46.06N×15.01E, h0km, ML0.7, After LJU*

LJU 27 12:05:02.6, 46.06N×15.01E, h12km, ML0.7, 4C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PDKS	**Podkum**	**0.01**	**310**	*i*	Pg		Pg	12 05 05.0	+0.2
PDKS				*i*	Sg		Sg	12 05 06.4	+0.1
PDKS	**Podkum**	**0.01**	**310**	*i*	Pg		Pg	12 05 05.0	+0.2
PDKS				*i*	Sg		Sg	12 05 06.4	+0.1
	10.0nm,0.1s								
VNDS	**Vrh nad Dolski**	**0.22**	**282**	*i*	Pg		Pg	12 05 07.6	+0.3
VNDS				*i*	Sg		Sg	12 05 11.0	+0.5
VNDS									
	comp=Z,5.0nm,0.1s								
LEGS	**Legarje**	**0.24**	**116**	*i*	Pg		Pg	12 05 08.0	+0.2
LEGS				*i*	Sg		Sg	12 05 11.4	+0.2
LEGS	**Legarje**	**0.24**	**116**	*i*	Pg		Pg	12 05 08.0	+0.2
LEGS				*i*	Sg		Sg	12 05 11.4	+0.2
VISS	**Visnje**	**0.28**	**205**	*i*	Pg		Pg	12 05 08.8	+0.4
VISS				*i*	Sg		Sg	12 05 12.7	+0.5
VISS									
	comp=Z,2.0nm,0.1s								
VISS	**Visnje**	**0.28**	**205**	*i*	Pg		Pg	12 05 08.8	+0.4
VISS				*i*	Sg		Sg	12 05 12.7	+0.4
	comp=Z,2.0nm,0.1s								
DOBS	**Dobrina**	**0.34**	**74**	*i*	Pg		Pg	12 05 09.2	-0.2
DOBS				*i*	Sg		Sg	12 05 14.4	+0.4
DOBS									
	comp=Z,2.0nm,0.1s								
DOBS	**Dobrina**	**0.34**	**74**	*i*	Pg		Pg	12 05 09.2	-0.2
DOBS				*i*	Sg		Sg	12 05 14.4	+0.4
	comp=Z,2.0nm,0.1s								
CRES	**Cresnjev**	**0.39**	**126**	*i*	Pg		Pb	12 05 11.2	-0.3
CRES				*i*	Sg		Sg	12 05 15.9	+0.2
CRES	**Cresnjev**	**0.39**	**126**	*i*	Pg		Pb	12 05 11.2	-0.3
CRES				*i*	Sg		Sg	12 05 15.9	+0.2
GOLS	**Golise**	**0.43**	**96**	*i*	Pg		Pg	12 05 11.3	0.0
GOLS				*i*	Sg		Sg	12 05 17.6	+0.5
GOLS	**Golise**	**0.43**	**96**	*i*	Pg		Pg	12 05 11.3	0.0
GOLS				*i*	Sg		Sg	12 05 17.6	+0.5
GCIS	**Gornji Cirnik**	**0.47**	**113**	*i*	Sg		Sb	12 05 19.3	-0.5
GCIS	**Gornji Cirnik**	**0.47**	**113**	*i*	Sg		Sb	12 05 19.3	-0.6
CRNS	**Crni Vrh**	**0.52**	**273**	*i*	Pg		Pg	12 05 12.9	+0.1
CRNS				*i*	Sg		Sb	12 05 20.7	-0.6
GBRS	**Gornja Briga**	**0.54**	**195**	*i*	Pg		Pg	12 05 13.6	+0.3
GBRS				*i*	Sg		Sg	12 05 20.8	+0.2
GORS	**Gorjuse**	**0.75**	**291**	*i*	Sg		Sb	12 05 27.6	-0.4
GORS	**Gorjuse**	**0.75**	**291**	*i*	Sg		Sg	12 05 27.6	+0.4

GUC 27 12:10:59.2±0.7, 30.62S×72.04W, h27km±4km, ML3.6, 3C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.05**	**122**	*i*	P		Pn	12 11 17.9	-0.4
CMCH				*i*	S		Sn	12 11 32.0	-0.1
CMCH					AML		AML	12 11 38.6	
	comp=E,4μm,0.6s								
CHNG	**Los Chungos**	**1.34**	**160**	*i*	P		Pn	12 11 22.5	+0.4
CHNG				*i*	S		Sn	12 11 39.6	+0.6
CHNG					AML		AML	12 11 46.0	
	comp=E,442nm,0.3s								
ROCH	**El Roble**	**2.50**	**160**	*i*	P		Pn	12 11 39.6	+1.2
ROCH				*e*	S		Sn	12 12 10.9	+2.6
ROCH					AML		AML	12 12 29.5	
	comp=N,387nm,0.4s								
PEL	**Peldehue**	**2.77**	**156**	*e*	P		Pn	12 11 43.2	+1.3
PEL				*e*	S		Sn	12 12 16.8	+2.3
PEL					AML		AML	12 12 33.8	
	comp=N,440nm,0.6s								
CLCH	**Cerro Calan**	**3.05**	**156**	*e*	P		Pn	12 11 47.0	+1.3
CLCH				*e*	S		Sn	12 12 23.5	+2.1
CLCH					AML		AML	12 12 38.8	
	comp=E,393nm,0.8s								
LMEL	**Las Melosas**	**3.57**	**155**	*i*	P		Pn	12 11 55.6	+2.5
LMEL				*i*	S		Sn	12 12 37.2	+2.6
LMEL					AML		AML	12 12 56.1	
	comp=N,85nm,0.3s								

IDC 27 12:16:38.5±1.6, 24.24S×67.23W, h144km±18km, mb3.8/1, mb1 3.6/7, mb1mx3.4/20, mbtmp3.5/7, Error ellipse: s-maj=30.1km s-min=14.0km az=96.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**7.39**	**187**	P			Pn	12 18 24.7	+0.9
	0.2nm,0.3s,baz=1.5,slow=12,SNR=9.0								
CFAA				S			Sn	12 19 44.5	-1.9
	0.1nm,0.3s,baz=250,slow=20,SNR=5.6								
LPAZ	**La Paz**	**7.96**	**354**	P			Pn	12 18 33.1	+0.9
	3.9nm,0.3s,baz=160,slow=6.0,SNR=111								
LPAZ				S			Sn	12 20 00.0	-1.4
	baz=37,slow=20,SNR=2.1								
CPUP	**Villa Florida**	**9.20**	**105**	P			Pn	12 18 49.1	+1.2
	0.3nm,0.3s,baz=259,slow=17,SNR=2.8								
SIV	**San Ignacio**	**10.04**	**36**	P			Pn	12 18 58.5	-0.8
	3.4nm,0.3s,baz=232,slow=12,SNR=39								
PLCA	**Paso Flores**	**16.68**	**189**	P			Pn	12 20 24.6	+0.8
	0.1nm,0.3s,baz=2.5,slow=11,SNR=3.2								
BDFB	**Brasilia**	**19.97**	**68**	P			P	12 21 00.1	+0.2
	1.3nm,0.3s,baz=236,slow=11,SNR=18								
TORD	**Torodi Ar. Bea**	**76.85**	**69**	P			P	12 28 14.5	-0.5
	1.2nm,0.5s,baz=259,slow=5.8,SNR=33								
MKAR	**Makanchi Array**	**146.84**	**40**	PKPbc			PKPbc	12 36 03.8	+0.1
	0.7nm,0.6s,baz=308,slow=3.1,SNR=6.9								

IDC 27 12:24:38.1±2.1, 19.40S×70.61W, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.6/18, mbtmp3.6/4, ML3.5/2, Error ellipse: s-maj=71.8km s-min=39.7km az=171.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.89**	**38**	Pn			Pn	12 25 40.1	+0.2
	1.0nm,0.3s,baz=224,slow=8.9,SNR=33								
SIV	**San Ignacio**	**9.70**	**71**	Pn			Pn	12 26 58.4	-0.7
	0.8nm,0.3s,baz=255,slow=16,SNR=9.7								
TORD	**Torodi Ar. Bea**	**78.17**	**71**	P			P	12 36 40.1	+0.1
	0.4nm,0.9s,baz=246,slow=5.7,SNR=3.0								
YKA	**Yellowknife Ar**	**88.69**	**341**	P			P	12 37 32.7	-0.2
	0.3nm,0.5s,baz=134,slow=4.8,SNR=7.4								
SONM	**Songino Array**	**151.53**	**4**	PKPbc			PKPbc	12 44 34.3	-0.1
	0.3nm,0.5s,baz=345,slow=4.5,SNR=4.0								

NIED ***27*** *12:30:00, 45.20N×142.80E, h280km, Mw4.0 Best double couple: M0 1.02000×10^15 NP1:φs163.00000°, δ75.00000°, λ31.00000°. NP2:φs64.00000°, δ60.00000°, λ163.00000°.*

ISCJB ***27*** *12:30:24.0±0.4, 45.08N±0.06×142.77E±0.07, h280km±3km, mb3.5/10, Error ellipse: s-maj=9.4km s-min=7.8km az=14.7*

JMA ***27*** *12:30:24.1±0.2, 45.18N×142.76E, h279km±2km, M3.5*

IDC ***27*** *12:30:24.9±0.5, 45.25N×142.70E, h273km±11km, mb3.3/10, mb1 3.5/14, mb1mx3.3/31, mbtmp3.3/14, Error ellipse: s-maj=30.2km s-min=10.8km az=171.0*

ISC 27 12:30:24.8±0.6, 45.07N±0.07×142.79E±0.06, h278km±6km, n35, σ1§03/47, mb3.5/10, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**0.18**	**234**	P			**Pn**	**12 30 59.7**	**-0.5**
JWK2	**Keihoku**	**0.68**	**292**	P			**Pn**	**12 31 00.9**	**-0.4**
JWK2				*e*S			**S**	**12 31 28.6**	**-1.6**
JSS	**Shosan**	**0.94**	**225**	P			**Pn**	**12 31 02.6**	**+0.1**
ASAJ	**Asahikawa**	**0.96**	**188**	P			**Pn**	**12 31 02.9**	**+0.2**
ASAJ	**Asahikawa**	**0.96**	**188**	P			**Pn**	**12 31 02.8**	**+0.2**
	15nm,0.3s,baz=336,slow=5.8,SNR=185								
ASAJ				S			**S**	**12 31 33.5**	**+0.9**
	2.3nm,0.3s,baz=101,slow=30,SNR=7.6								
JRR	**Rishiri**	**1.05**	**274**	P			**Pn**	**12 31 02.4**	**-0.5**
JRR				*e*S			**S**	**12 31 32.4**	**-0.8**
JMP	**Maruseppu**	**1.13**	**159**	P			**Pn**	**12 31 03.8**	**+0.2**
JMP				*e*S			**S**	**12 31 34.4**	**+0.2**
JYG	**Yagishiri**	**1.16**	**237**	P			Pn	**12 31 03.4**	**-0.2**
JYG				*e*S			**S**	**12 31 34.2**	**-0.2**
JKK2	**Kamakawa 2**	**1.19**	**182**	P			Pn	**12 31 04.3**	**+0.4**
JKK2				*e*S			**S**	**12 31 35.8**	**+1.0**
JTKR	**Abashiri--Toko**	**1.35**	**144**	P			Pn	**12 31 05.3**	**+0.5**
JTKR				*e*S			**S**	**12 31 37.1**	**+0.6**
JHR	**Hokuryu**	**1.53**	**210**	P			Pn	**12 31 06.3**	**+0.3**
JAR	**Ashorobuto**	**1.90**	**158**	P			Pn	**12 31 09.6**	**+0.8**
JFR	**Furan**	**1.91**	**184**	P			Pn	**12 31 09.2**	**+0.3**
JRA	**Rausu**	**2.01**	**123**	P			Pn	**12 31 10.8**	**+1.1**
JSK	**Shakotan**	**2.39**	**225**	P			Pn	**12 31 13.5**	**+0.5**
JEW	**Eniwo**	**2.43**	**204**	P			Pn	**12 31 14.2**	**+0.8**
JAK	**Akkeshi**	**2.48**	**146**	P			Pn	**12 31 14.4**	**+0.5**
JAK				*e*S			**S**	**12 31 51.4**	**-1.6**
JCH	**Churui**	**2.48**	**170**	P			Pn	**12 31 13.2**	**-0.8**
JCH				*e*S			**S**	**12 31 50.1**	**-3.0**
NEM2	**Nemuro 2**	**2.72**	**128**	P			Pn	**12 31 15.5**	**-0.7**
NEM2				*e*S			**S**	**12 31 54.8**	**-2.2**
JNBK	**Urakawa-nobuka**	**2.79**	**181**	P			Pn	**12 31 16.8**	**-0.1**
JNBK				*e*S			**S**	**12 31 57.3**	**-1.0**
JKB	**Kayabe**	**3.42**	**203**	P			Pn	**12 31 23.1**	**-0.4**
JKB				*e*S			**S**	**12 32 08.0**	**-2.3**
USRK	**Ussuriysk Arra**	**7.75**	**267**	P			Pn	**12 32 15.2**	**+0.2**
	0.3nm,0.3s,baz=78,slow=12,SNR=22								
MJAR	**Matsushiro Arr**	**9.20**	**204**	P			**Pn**	**12 32 34.4**	**+1.3**
	0.7nm,0.3s,baz=5.4,slow=12,SNR=12								
PETK	**Petropavlovsk-**	**12.64**	**45**	P			Pn	**12 33 16.0**	**+0.7**
	0.5nm,0.3s,baz=221,slow=9.1,SNR=20								
KSRS	**Korea Array**	**13.51**	**241**	P			**P**	**12 33 28.4**	**+1.9**
	0.1nm,0.3s,baz=56,slow=10.0,SNR=5.4								
FX1	**Attu Island--F**	**21.29**	**58**	P			**P**	**12 34 50.8**	**+1.0**
	8.9nm,0.6s,baz=333,slow=2.3,SNR=8.7								
SONM	**Songino Array**	**25.08**	**289**	P			P	**12 35 24.1**	**-0.3**
	1.8nm,0.6s,baz=86,slow=9.0,SNR=14								
MKAR	**Makanchi Array**	**41.20**	**295**	P			**P**	**12 37 41.9**	**-0.7**
	1.3nm,0.7s,baz=82,slow=8.6,SNR=13								
KURBB	**Kurchatov Arra**	**42.27**	**301**	P			**P**	**12 37 50.0**	**-1.1**
	1.2nm,0.6s,baz=69,slow=8.6,SNR=9.8								
ILAR	**Eielson Array**	**42.29**	**37**	P			**P**	**12 37 50.1**	**-1.0**
	0.8nm,0.5s,baz=265,slow=7.4,SN

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIES	**Las Flores**	**0.28**	**37**↓	*i*P	**Pn**	**13 16 34.1**	**-1.7**
AIES				*e*S	**Sn**	**13 16 42.6**	**-1.5**
AIES				AML	AML	13 16 45.3	
	comp=N,34μm,0.4s						
SNET	**Serv Nac Est T**	**0.46**	**360**↑	*e*P	**Pn**	**13 16 36.0**	**-1.2**
SNET				AML	AML	13 16 49.4	
	comp=Z,21μm,0.3s						
BOQS	**Boqueron**	**0.51**	**354**↑	*i*P	**Pn**	**13 16 36.7**	**-1.1**
LFU	**La Fuente**	**0.53**	**12**↓	*e*P	**Pn**	**13 16 37.1**	**-0.8**
LFU				*e*S	**Sn**	**13 16 47.9**	**+0.2**
LBRS	**Las Brisas**	**0.54**	**20**↓	*i*P	**Pn**	**13 16 37.2**	**-0.7**
SNVI	**San Vicente**	**0.54**	**45**↓	*i*P	**Pn**	**13 16 37.0**	**-1.0**
SONS	**Sonsonate**	**0.69**	**317**	*e*P	**Pn**	**13 16 38.1**	**-1.4**
SONS				*e*S	**Sn**	**13 16 48.6**	**-2.0**
SONS				AML	AML	13 16 51.6	
	comp=Z,8μm,0.3s						
SBLS	**San Blas**	**0.72**	**328**↓	*i*P	**Pn**	**13 16 39.0**	**-1.0**
SNJE	**San Jose**	**0.73**	**330**↓	*i*P	**Pn**	**13 16 39.1**	**-1.1**
RTR	**El Retiro**	**0.78**	**329**↓	*e*P	**Pn**	**13 16 39.8**	**-0.8**
VSM	**San Miguel**	**0.95**	**78**↓	*i*P	**Pn**	**13 16 42.3**	**-0.4**
RBDL	**Robledal**	**0.98**	**333**↓	*i*P	**Pn**	**13 16 42.2**	**-0.8**
BLLM	**Bellamira**	**0.99**	**77**	*e*P	**Pn**	**13 16 42.6**	**-0.4**
CAHU	**Cacacuatique**	**1.13**	**61**↓	*e*P	**Pn**	**13 16 44.4**	**-0.5**
CAHU				*e*S	**Sn**	**13 16 52.9**	**+0.1**
MTO2	**Montecristo 2**	**1.17**	**354**↓	*i*P	**Pn**	**13 16 44.9**	**-0.6**
CNCH	**Conchagua**	**1.36**	**88**↓	*i*P	**Pn**	**13 16 47.5**	**-0.3**
NBG	**Las Nubes**	**1.73**	**321**	*e*P	**Pn**	**13 16 53.7**	**+0.8**
NBG				*e*S	**Sn**	**13 17 16.4**	**+2.1**
PCG	**Pacaya**	**1.77**	**311**	*e*P	**Pn**	**13 16 54.1**	**+0.8**
PCG				*e*S	**Sn**	**13 17 19.1**	**+3.8**
MRL	**Marmol**	**1.88**	**346**	*e*P	**Pn**	**13 16 55.9**	**+1.2**
MRL				*e*S	**Sn**	**13 17 15.7**	**-2.1**
FUG	**Fuego 3**	**1.98**	**308**	*e*P	**Pn**	**13 16 56.6**	**+0.5**
TGUH	**Tegucigalpa,Un**	**2.07**	**66**	*e*P	**Pn**	**13 16 56.9**	**-0.2**
JAT	**Jato**	**2.58**	**295**	*e*P	**Pn**	**13 17 04.4**	**+0.5**
FORC	**Fortuna**	**5.24**	**121**	*e*P	Pn	13 17 43.5	+3.2
CGA2	**Cerro Gallo 2**	**5.65**	**124**	*e*P	**Pn**	**13 17 48.8**	**+2.7**
LAJ	**Bijagual**	**6.02**	**123**	*e*P	**Pn**	**13 17 48.7**	**-2.5**
QCR	**Quepos**	**6.24**	**127**	*e*P	**Pn**	**13 17 55.7**	**+1.7**
BUS	**Buena Vista**	**6.49**	**124**	*e*P	**Pn**	**13 17 59.7**	**+1.9**
CMIG	**Matias Romero**	**6.67**	**306**	P	**Pn**	**13 18 01.2**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=106,slow=8.9,SNR=13						
CMIG				S	**Sn**	**13 19 16.2**	**+1.6**
	comp=Z,3.2nm,0.3s,baz=141,slow=13,SNR=7.3						
TEIG	**Tepich**	**7.02**	**7**	P	**Pn**	**13 18 05.8**	**+1.2**
	comp=Z,7.5nm,0.3s,baz=25,slow=6.2,SNR=30						
ACR	**Cerro Adams**	**7.49**	**127**	*e*P	**Pn**	**13 18 13.1**	**+2.0**
TXAR	**Lajitas Array**	**20.89**	**322**	P	**P**	**13 21 01.6**	**+0.5**
	comp=Z,1.8nm,0.5s,baz=143,slow=11,SNR=14						
TXAR				pP	**pP**	**13 21 16.9**	**+0.9**
	comp=Z,1.1nm,0.8s,baz=153,slow=11,SNR=3.2						
TXAR				LR	LR	13 31 14.3	
	comp=Z,14nm,21.4s,baz=185,slow=42						
TKL	**Tuckaleechee C**	**22.87**	**11**	P	**P**	**13 21 22.8**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=197,slow=9.7,SNR=3.5						
TKL				pP	**pP**	**13 21 39.1**	**+2.0**
	comp=Z,3.1nm,0.7s,baz=150,slow=7.4,SNR=2.8						
TKL				LR	LR	13 30 19.9	
	comp=Z,45nm,19.7s,baz=294,slow=36						
PDAR	**Pinedale Array**	**34.28**	**333**	P	**P**	**13 23 03.5**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=130,slow=11,SNR=8.6						
NVAR	**Mina Array Bea**	**35.98**	**319**	P	**P**	**13 23 19.3**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=125,slow=7.8,SNR=3.7						
NVAR				PcP	**PcP**	**13 25 44.2**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=152,slow=2.5,SNR=4.5						
ULM	**Lac du Bonnet**	**37.32**	**353**	LR	LR	13 40 19.9	
	comp=Z,42nm,19.6s,baz=316,slow=38						
SIV	**San Ignacio**	**40.23**	**135**	P	**P**	**13 23 53.8**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=341,slow=7.2,SNR=4.5						
SIV				pP	**pP**	**13 24 12.3**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=308,slow=11,SNR=3.5						
YKA	**Yellowknife Ar**	**52.42**	**345**	P	**P**	**13 25 27.4**	**-1.9**
	comp=Z,1.6nm,0.7s,baz=142,slow=7.8,SNR=44						
YKA				pP	**pP**	**13 25 49.3**	**+1.7**
	comp=Z,0.8nm,0.7s,baz=130,slow=8.6,SNR=5.3						
ILAR	**Eielson Array**	**64.61**	**336**	P	**P**	**13 26 52.8**	**-1.4**
	comp=Z,0.8nm,1.0s,baz=158,slow=3.9,SNR=5.1						
ARCES	**ARCESS Array B**	**86.01**	**19**	P	**P**	**13 28 55.7**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=297,slow=6.0,SNR=2.8						
CMAR	**Chiang Mai Arr**	**147.50**	**345**	PKPbc	**PKPdf**	**13 35 58.8**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=343,slow=2.8,SNR=7.3						

*ISCJB **27** 13:26:23.0±0.5,6.17S±0.07×154.37E±0.07, h61km, mb4.0/17, Error ellipse: s-maj=11.5km s-min=8.2km az=139.2*

*IDC **27** 13:26:23.1±1.1,6.09S×154.36E, h47km±9km, mb3.9/16, mb1 4.1/18, mb1mx4.0/23, mbtmp3.9/18, ML4.0/2, MS3.7/13, Ms1 3.7/13, ms1mx3.5/32, Error ellipse: s-maj=16.9km s-min=14.4km az=101.0*

ISC 27 13:26:24.4±0.5, 6.13S±0.09×154.38E±0.09, h61km, n37, σ1§22/42, mb4.0/17, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.86**	**245**	P	**Pn**	**13 28 16.5**	**+0.5**
	7.7nm,0.3s,baz=49,slow=8.7,SNR=44						
PMG				S	**Sn**	**13 29 44.2**	**+0.6**
	1.4nm,0.3s,baz=353,slow=22,SNR=11						
CTA	**Charters Tower**	**15.96**	**209**	P	**P**	**13 30 08.4**	**+0.7**
	0.1nm,0.3s,baz=36,slow=10,SNR=7.7						
CTA				LR	LR	13 35 26.1	
	comp=Z,186nm,20.9s,baz=39,slow=34						
DZM	**Mont Dzumac**	**19.68**	**145**	P	**P**	**13 30 48.9**	**+0.2**
	0.9nm,0.3s,baz=308,slow=17,SNR=9.4						
DZM				LR	LR	13 36 20.7	
	comp=Z,168nm,20.4s,baz=209,slow=30						
WRA	**Warramunga Arr**	**23.82**	**233**	P	**P**	**13 31 31.5**	**-0.5**
	3.3nm,0.9s,baz=59,slow=9.4,SNR=12						
WRA				pP	**pP**	**13 31 44.5**	**-2.1**
	13nm,1.1s,baz=56,slow=9.6,SNR=15						
WRA				PcP	**PcP**	**13 35 14.2**	**+0.1**
	3.4nm,0.8s,baz=56,slow=2.2,SNR=13						
ASAR	**Alice Springs**	**26.30**	**226**	P	**P**	**13 31 53.9**	**-0.7**
	0.6nm,0.6s,baz=57,slow=9.2,SNR=14						
ASAR				PcP	**PcP**	**13 35 20.3**	**+0.7**
	2.0nm,0.8s,baz=45,slow=2.5,SNR=11						
ASAR				ScP	**ScP**	**13 38 57.9**	**+3.5**
	0.5nm,0.7s,baz=48,slow=2.4,SNR=5.6						
STKA	**Stephens Creek**	**28.26**	**203**	P	**P**	**13 32 11.8**	**-0.1**
	3.9nm,1.1s,baz=4.4,slow=13,SNR=2.8						
STKA				pP	**pP**	**13 32 24.4**	**-2.5**
	2.7nm,0.8s,baz=14,slow=11,SNR=3.0						
STKA				PcP	**PcP**	**13 35 24.5**	**+0.4**
	2.1nm,0.8s,baz=315,slow=2.9,SNR=2.9						
STKA				LR	LR	13 43 12.8	
	comp=Z,157nm,18.2s,baz=26,slow=36						
FITZ	**Fitzroy Crossi**	**30.45**	**244**	P	**P**	**13 32 31.2**	**-0.4**
	1.4nm,0.8s,baz=89,slow=7.8,SNR=3.6						
FITZ				pP	**pP**	**13 32 43.8**	**-2.8**
	5.2nm,0.9s,baz=74,slow=3.5,SNR=5.0						
FITZ				LR	LR	13 45 19.2	
	comp=Z,156nm,19.1s,baz=53,slow=37						
URZ	**Urewera**	**38.06**	**150**	P	**P**	**13 33 38.6**	**+1.6**
	12nm,1.0s,baz=291,slow=8.6,SNR=3.7						
JNU	**Nakatsue**	**44.96**	**332**	P	**P**	**13 34 33.0**	**-0.6**
	7.5nm,0.8s,baz=272,slow=13,SNR=4.5						
MJAR	**Matsushiro Arr**	**45.07**	**342**	LR	LR	13 50 18.1	
	comp=Z,61nm,19.1s,baz=185,slow=32						
KSRS	**Korea Array**	**49.89**	**332**	P	**P**	**13 35 11.7**	**-0.1**
	1.8nm,0.9s,baz=147,slow=9.3,SNR=7.0						
KSRS				LR	LR	13 55 19.6	
	comp=Z,26nm,19.5s,baz=184,slow=35						
PETK	**Petropavlovsk-**	**59.08**	**2**	P	**P**	**13 36 18.8**	**+0.6**
	2.1nm,0.9s,baz=162,slow=7.6,SNR=2.7						
PETK				LR	LR	13 58 00.6	
	comp=Z,49nm,18.9s,baz=332,slow=32						
CMAR	**Chiang Mai Arr**	**59.86**	**295**	P	**P**	**13 36 25.6**	**+1.3**
	2.7nm,0.8s,baz=114,slow=4.8,SNR=14						
CMAR				LR	LR	14 02 14.9	
	comp=Z,19nm,20.3s,baz=175,slow=36						
SONM	**Songino Array**	**68.28**	**327**	P	**P**	**13 37 19.5**	**+0.4**
	1.4nm,0.9s,baz=130,slow=5.7,SNR=7.4						
SHL	**Shillong**	**68.33**	**300**	*e*P	**P**	**13 37 22.0**	**+2.1**
TAPN	**Taplejung**	**72.43**	**301**	*e*P	**P**	**13 37 45.9**	**+0.8**
	26nm,0.9s						
ODAN	**Odare**	**72.56**	**300**	*e*P	**P**	**13 37 46.7**	**+0.9**
	52nm,0.8s						
RAMN	**Ramite**	**73.27**	**300**	*e*P	**P**	**13 37 50.7**	**+0.7**
	12nm,0.7s						
GUN	**Gumba**	**74.15**	**301**	*e*P	**P**	**13 37 56.4**	**+1.2**
PKIN	**Phulchoki**	**74.47**	**301**	*e*P	**P**	**13 37 57.6**	**+0.6**
	26nm,1.0s						
KKN	**Kakani**	**74.62**	**301**	*e*P	**P**	**13 37 58.9**	**+1.1**
	26nm,0.8s						
DMN	**Daman**	**74.72**	**301**	*e*P	**P**	**13 38 00.1**	**+1.6**
KOLN	**Koldanda**	**76.06**	**300**	*e*P	**P**	**13 38 06.4**	**+0.4**
	42nm,0.8s						
DANN	**Dangsing**	**76.07**	**301**	*e*P	**P**	**13 38 06.6**	**+0.4**
	41nm,0.8s						
PYUN	**Piuthan**	**76.66**	**301**	*e*P	**P**	**13 38 09.3**	**-0.2**
	136nm,0.9s						
MKAR	**Makanchi Array**	**82.35**	**319**	P	**P**	**13 38 39.6**	**-0.2**
	0.7nm,0.8s,baz=101,slow=6.3,SNR=6.9						
ILAR	**Eielson Array**	**82.80**	**22**	P	**P**	**13 38 39.5**	**-2.2**
	1.0nm,0.8s,baz=254,slow=5.4,SNR=10						
ILAR				LR	LR	14 11 18.3	
	comp=Z,82nm,18.6s,baz=275,slow=33						
ZALV	**Zalesovo Beam**	**83.12**	**326**	P	**P**	**13 38 42.9**	**-0.7**
	0.4nm,0.3s,baz=104,slow=6.1,SNR=3.3						
KURBB	**Kurchatov Arra**	**85.81**	**322**	LR	LR	14 15 48.7	
	comp=Z,24nm,19.1s,baz=30,slow=35						
BBB	**Bella Bella**	**87.20**	**37**	LR	LR	14 14 58.8	
	comp=Z,47nm,18.4s,baz=62,slow=33						
INK	**Inuvik**	**89.14**	**21**	P	**P**	**13 39 12.4**	**-0.4**
	1.0nm,0.9s,baz=211,slow=6.1,SNR=4.4						
NVAR	**Mina Array Bea**	**91.67**	**52**	P	**P**	**13 39 26.2**	**+0.6**
	2.7nm,0.9s,baz=249,slow=6.6,SNR=15						
NEW	**Newport**	**93.53**	**42**	LR	LR	14 14 21.5	
	comp=Z,107nm,20.6s,baz=265,slow=31						
YKA	**Yellowknife Ar**	**95.86**	**28**	P	**P**	**13 39 43.7**	**-0.3**
	0.3nm,0.8s,baz=266,slow=4.7,SNR=6.6						
PDAR	**Pinedale Array**	**98.58**	**48**	P	**P**	**13 39 56.1**	**-1.0**
	0.7nm,0.8s,baz=204,slow=2.0,SNR=5.5						
PDAR				LR	LR	14 15 50.0	
	comp=Z,50nm,21.1s,baz=158,slow=30						
BOSA	**Boshof**	**120.07**	**232**	PKP	**PKPdf**	**13 45 09.1**	**-0.1**
	1.8nm,0.7s,baz=91,slow=4.3,SNR=4.5						
TORD	**Torodi Ar. Bea**	**152.20**	**287**	PKPbc	**PKPbc**	**13 46 13.1**	**-1.1**
	3.2nm,0.8s,baz=65,slow=2.2,SNR=18						
TORD				PKPab	**PKPab**	**13 46 24.0**	**-0.1**
	3.9nm,0.8s,baz=72,slow=4.3,SNR=16						

*CSEM **27** 13:56:26.1±0.7,51.47N×16.04E, h1km, ML3.1/5, Error ellipse: s-maj=11.5km s-min=5.3km az=173.0*

*PRU **27** 13:56:27.8, 51.42N×16.07E, h0km*

WAR 27 13:56:25.9, 51.51N×16.12E, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.68**	**171**	*e*Pg	Pg	13 56 38.5	-0.5
KSP				*e*Sg	Sg	13 56 47.6	-0.2
KSP	**Ksiaz**	**0.68**	**171**	*e*Pg	Pg	13 56 39.2	+0.2
KSP				*e*Sg	Sg	13 56 47.7	-0.1
UPC	**Upice**	**1.01**	**184**	*e*PG	Pg	13 56 45.1	-0.2
UPC	**Upice**	**1.01**	**184**	Pg	Pg	13 56 45.1	-0.2
DPC	**Dobruska-Polom**	**1.17**	**174**	*e*PG	Pg	13 56 47.3	-1.2
DPC				*e*SG	Sg	13 57 02.5	-1.2
	comp=Z,12nm,0.3s						
DPC	**Dobruska-Polom**	**1.17**	**174**	Pg	Pg	13 56 47.3	-1.2
DPC				Sg	Sg	13 57 02.5	-1.2
	12nm,0.3s						
PVCC	**Panska Ves**	**1.39**	**225**	*e*SG	Sg	13 57 10.5	-0.1
	comp=Z,74nm,0.4s						
PVCC	**Panska Ves**	**1.39**	**225**	Sg	Sg	13 57 10.5	-0.1
	74nm,0.4s						
PRU	**Pruhonice**	**1.83**	**214**	*e*PG	Pb	13 56 59.9	-0.3
PRU				*e*SG	Sb	13 57 23.3	-0.3
	comp=Z,13nm,0.2s						
PRU	**Pruhonice**	**1.83**	**214**	Pg	Pb	13 56 59.9	-0.3
PRU				Sg	Sb	13 57 23.3	-0.3
	13nm,0.2s						
MORC	**Moravsky Berou**	**1.96**	**152**	*e*Pn	Pn	13 57 00.1	-0.4
MORC				*e*Sg	Sn	13 57 26.7	+0.8
NKC	**Novy Kostel**	**2.66**	**243**	*e*SG	Sg	13 57 50.8	-0.5
	comp=Z,18nm,0.5s						
NKC	**Novy Kostel**	**2.66**	**243**	Sg	Sg	13 57 50.8	-0.5
	18nm,0.5s						
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	Pg	13 57 18.4	+1.3
OJC				*e*Sg	Sg	13 57 53.3	+1.6
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	Pg	13 57 18.4	+1.3
OJC				*e*Sg	Sg	13 57 53.3	+1.6
KHC	**Kasperske Hory**	**2.89**	**215**	*e*PN	Pn	13 57 12.2	-1.0
KHC				*e*PG	Pb	13 57 18.8	+0.5
KHC				*e*SN	Sn	13 57 47.0	-1.7
KHC				*e*SG	Sg	13 57 57.4	-1.4
	comp=Z,5.5nm,0.4s						
KHC	**Kasperske Hory**	**2.89**	**215**	Pn	Pn	13 57 12.2	-1.0

BGS 27 14:02:07.6±1.1, 50.04N×0.91E, h5km, ML2.3, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELSH	**Elham, Standar**	**1.12**	**7**	*e*P	Pg	14 02 27.4	-1.6
ELSH				AML	AML	14 02 27.7	
	comp=N,70nm,0.6s						
ELSH				AML	AML	14 02 28.4	
	comp=E,73nm,0.7s						
ELSH	**Elham, Standar**	**1.12**	**7**	P	Pg	14 02 27.4	-1.6
ELSH				AML	AML	14 02 27.7	
	comp=E,70nm,0.6s						
ELSH				AML	AML	14 02 28.4	
	comp=E,73nm,0.7s						
ELSH	**Elham, Standar**	**1.12**	**7**	*e*P	Pg	14 02 27.4	-1.6
ELSH				AML	AML	14 02 27.7	
	comp=N,70nm,0.6s						
ELSH				AML	AML	14 02 28.4	
	comp=E,73nm,0.7s						
WOL	**Wolverton**	**1.86**	**314**	*e*P	Pn	14 02 39.9	-0.2
WOL				AML	AML	14 03 20.6	
	comp=N,28nm,0.4s						
WOL				AML	AML	14 03 22.2	
	comp=E,24nm,0.5s						
WOL	**Wolverton**	**1.86**	**314**	P	Pn	14 02 39.9	-0.2
WOL				AML	AML	14 03 20.6	
	comp=E,28nm,0.4s						
WOL				AML	AML	14 03 22.2	
	comp=E,24nm,0.5s						
WOL	**Wolverton**	**1.86**	**314**	*e*P	Pn	14 02 39.9	-0.2
WOL				AML	AML	14 03 20.6	
	comp=N,28nm,0.4s						
WOL				AML	AML	14 03 22.2	
	comp=E,24nm,0.5s						
WOL	**Wolverton**	**1.86**	**314**	AML	AML	14 03 08.4	
	comp=E,33nm,0.3s						
WOL				AML	AML	14 03 08.4	
	comp=E,35nm,0.5s						
JDG	**Jersey Dam (Ga**	**2.10**	**247**	*e*P	Pn	14 02 42.5	-0.9
JDG	**Jersey Dam (Ga**	**2.10**	**247**	P	Pn	14 02 42.5	-0.9
JDG	**Jersey Dam (Ga**	**2.10**	**247**	*e*P	Pn	14 02 42.5	-0.9
JDC	**Jersey Dam (Cr**	**2.10**	**247**	*e*P	Pn	14 02 42.6	-0.8
JDC	**Jersey Dam (Cr**	**2.10**	**247**	P	Pn	14 02 42.6	-0.8
JDC	**Jersey Dam (Cr**	**2.10**	**247**	*e*P	Pn	14 02 42.6	-0.8
JSA	**Saint Aubin**	**2.18**	**248**	*e*P	Pn	14 02 43.6	-0.8
JSA				*e*S	Sn	14 03 09.0	-2.6
JSA				AML	AML	14 03 24.4	
	comp=N,16nm,0.2s						
JSA				AML	AML	14 03 28.0	
	comp=E,13nm,0.6s						
JSA	**Saint Aubin**	**2.18**	**248**	P	Pn	14 02 43.6	-0.8
JSA				S	Sn	14 03 09.0	-2.6
JSA				AML	AML	14 03 24.4	
	comp=E,16nm,0.2s						
JSA				AML	AML	14 03 28.0	
	comp=E,13nm,0.6s						
JSA	**Saint Aubin**	**2.18**	**248**	*e*P	Pn	14 02 43.6	-0.8
JSA				*e*S	Sn	14 03 09.0	-2.6
JSA				AML	AML	14 03 24.4	
	comp=N,16nm,0.2s						
JSA				AML	AML	14 03 28.0	
	comp=E,13nm,0.6s						
SWN1	**Swindon**	**2.27**	**312**	*e*P	Pn	14 02 45.4	-0.3
SWN1				AML	AML	14 03 12.8	
	comp=N,56nm,0.5s						
SWN1				AML	AML	14 03 27.1	
	comp=E,37nm,0.5s						
SWN1	**Swindon**	**2.27**	**312**	P	Pn	14 02 45.4	-0.3
SWN1				AML	AML	14 03 12.8	
	comp=E,56nm,0.5s						
SWN1				AML	AML	14 03 27.1	
	comp=E,37nm,0.5s						
SWN1	**Swindon**	**2.27**	**312**	*e*P	Pn	14 02 45.4	-0.3
SWN1				AML	AML	14 03 12.8	
	comp=N,56nm,0.5s						
SWN1				AML	AML	14 03 27.1	
	comp=E,37nm,0.5s						
DYA	**Yadsworthy**	**3.13**	**279**	*e*P	Pn	14 02 56.7	-0.9
DYA				AML	AML	14 03 26.9	
	comp=E,6.9nm,0.7s						
DYA				AML	AML	14 03 35.8	
	comp=N,8.3nm,1.0s						
DYA	**Yadsworthy**	**3.13**	**279**	P	Pn	14 02 56.7	-0.9
DYA				AML	AML	14 03 26.9	
	comp=N,6.9nm,0.7s						
DYA				AML	AML	14 03 35.8	
	comp=N,8.3nm,1.0s						
DYA	**Yadsworthy**	**3.13**	**279**	*e*P	Pn	14 02 56.7	-0.9
DYA				AML	AML	14 03 26.9	
	comp=E,6.9nm,0.7s						
DYA				AML	AML	14 03 35.8	
	comp=N,8.3nm,1.0s						
MCH1	**Michaelchurch**	**3.15**	**310**	*e*P	Pn	14 02 56.7	-1.1
MCH1				AML	AML	14 03 46.4	
	comp=E,5.8nm,0.5s						
MCH1				AML	AML	14 03 48.0	
	comp=N,4.5nm,0.6s						
MCH1	**Michaelchurch**	**3.15**	**310**	P	Pn	14 02 56.7	-1.1
MCH1				AML	AML	14 03 46.4	
	comp=N,5.8nm,0.5s						
MCH1				AML	AML	14 03 48.0	
	comp=N,4.5nm,0.6s						
MCH1	**Michaelchurch**	**3.15**	**310**	*e*P	Pn	14 02 56.7	-1.1
MCH1				AML	AML	14 03 46.4	
	comp=E,5.8nm,0.5s						
MCH1				AML	AML	14 03 48.0	
	comp=N,4.5nm,0.6s						
HLM1	**Long Mynd**	**3.44**	**318**	*e*P	Pn	14 03 00.5	-1.3
HLM1				AML	AML	14 03 02.8	
	comp=N,3.5nm,0.6s						
HLM1				AML	AML	14 03 42.4	
	comp=E,4.5nm,0.4s						
HLM1	**Long Mynd**	**3.44**	**318**	P	Pn	14 03 00.5	-1.3
HLM1				AML	AML	14 03 02.8	
	comp=E,3.5nm,0.6s						
HLM1				AML	AML	14 03 42.4	
	comp=E,4.5nm,0.4s						
HLM1	**Long Mynd**	**3.44**	**318**	*e*P	Pn	14 03 00.5	-1.3
HLM1				AML	AML	14 03 02.8	
	comp=N,3.5nm,0.6s						
HLM1				AML	AML	14 03 42.4	
	comp=E,4.5nm,0.4s						

IDC 27 14:03:59.5±8.6, 10.50N×94.20E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.3/25, mbtmp3.5/3, Error ellipse: s-maj=504.8km s-min=24.0km az=59.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**37.56**	**347**	P	P	14 11 14.6	-1.0
	0.5nm,0.8s,baz=157,slow=7.8,SNR=5.2						
KURBB	**Kurchatov Arra**	**42.03**	**345**	P	P	14 11 53.4	+0.7
	0.6nm,0.8s,baz=165,slow=8.0,SNR=6.8						
WRA	**Warramunga Arr**	**49.77**	**127**	P	P	14 12 53.9	-0.4
	0.7nm,0.9s,baz=306,slow=8.4,SNR=3.3						
ASAR	**Alice Springs**	**51.58**	**132**	P	P	14 13 08.0	+0.1
	0.5nm,1.1s,baz=311,slow=6.0,SNR=5.2						

IDC 27 14:05:40.3±1.6, 43.07N×133.97E, h446km±20km, mb2.8/2, mb1 2.6/5, mb1mx2.4/28, mbtmp2.6/5, Error ellipse: s-maj=43.6km s-min=29.1km az=167.0, Primorye

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USRK	**Ussuriysk Arra**	**1.82**	**309**	P	P	14 06 39.5	+0.1
	0.5nm,0.3s,baz=148,slow=2.8,SNR=6.7						
ASAJ	**Asahikawa**	**6.36**	**78**	P	P	14 07 18.1	0.0
	0.9nm,0.3s,baz=282,slow=18,SNR=10						
KSRS	**Korea Array**	**7.26**	**222**	P	P	14 07 28.2	+0.4
	0.2nm,0.3s,baz=41,slow=11,SNR=5.6						
SONM	**Songino Array**	**19.87**	**293**	P	P	14 09 40.4	-0.4
	0.2nm,0.3s,baz=76,slow=6.1,SNR=2.6						
MKAR	**Makanchi Array**	**36.23**	**294**	P	P	14 12 04.3	+0.5
	0.2nm,0.5s,baz=81,slow=10,SNR=4.0						
KURBB	**Kurchatov Arra**	**37.88**	**301**	P	P	14 12 17.0	-0.3
	1.1nm,0.4s,baz=81,slow=9.0,SNR=15						

*CSEM **27** 14:39:42.2±0.7,37.02N×13.14W, h10km, mb4.0/3, Error ellipse: s-maj=19.2km s-min=10.9km az=150.0*

MDD 27 14:39:39.6±3.7, 36.79N×13.34W, h0km, mb4.0/3, Error ellipse: s-maj=41.8km s-min=26.7km az=145.0, PRXIMO, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.63**	**83**	*e*Pn	Pn	14 40 36.1	-0.9
PFVI				*e*Sn	Sn	14 41 17.3	-3.3
PFVI	**Vila Bisbo**	**3.63**	**83**	P	Pn	14 40 35.6	-1.4
	50nm,1.4s,SNR=6.9						
PFVI				S	Sn	14 41 16.7	-3.9
	2.5nm,0.6s,SNR=7.6						
PFVI	**Vila Bisbo**	**3.63**	**83**	P	Pn	14 40 35.6	-1.4
	50nm,1.4s,SNR=6.9						
PFVI	**Vila B

TGY	**Tagaytay City**	**1.31**	**330**	Pg	Pg	14 42 58.4	-0.4
	183nm,0.3s,baz=150,slow=13,SNR=30						
CMAR	**Chiang Mai Arr**	**22.48**	**287**	P	P	14 47 34.9	+0.2
	0.3nm,0.3s,baz=96,slow=9.2,SNR=4.4						
WRA	**Warramunga Arr**	**35.01**	**159**	P	P	14 49 27.6	-0.5
	0.2nm,0.6s,baz=336,slow=10.0,SNR=3.1						
ASAR	**Alice Springs**	**38.33**	**162**	P	P	14 49 56.6	+0.3
	0.2nm,0.6s,baz=340,slow=7.5,SNR=4.3						

MAN 27 14:46:14,12°.93N×121°.15E,h4km,mb3.9,ML2.7,MS2.4, Mindoro

MAN 27 14:47:50,12°.58N×121°.30E,h62km,mb3.6,ML2.4,MS1.9, Mindoro

CSEM ***27*** *14:49:38.9,42°.32N×13°.49E,h9km,MD1.9/5,After ROM*
ROM 27 14:49:38.9±0.1,42°.32N×13°.49E,h9km,Md1.9/5,Ml1.4/2, Error ellipse: s-maj=1.8km s-min=1.3km az=150.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**299**	Pg	Pg	14 49 41.5	+0.3
AQU				Sg	Sg	14 49 43.1	+0.3
AQU	**L'Aquila**	**0.07**	**299**	Pg	Pg	14 49 41.5	+0.3
AQU				Sg	Sg	14 49 43.1	+0.3
CAMP	**Campotosto**	**0.23**	**345**	Pg	Pg	14 49 44.2	+0.5
CAMP	78nm,1.7s			Sg	Sg	14 49 48.4	+1.4
CAMP	**Campotosto**	**0.23**	**345**	Pg	Pg	14 49 44.2	+0.5
CAMP	78nm,1.7s			Sg	Sg	14 49 48.4	+1.4
VCEL	**Villa Celiera**	**0.27**	**73**	Pg	Pg	14 49 45.1	+0.6
VCEL	233nm,0.7s			Sg	Sb	14 49 50.4	-0.6
VCEL	**Villa Celiera**	**0.27**	**73**	Pg	Pg	14 49 45.1	+0.6
VCEL	233nm,0.7s			Sg	Sb	14 49 50.4	-0.6
FIAM	**Fiamignano**	**0.28**	**260**	Pg	Pg	14 49 45.4	+0.7
FIAM				Sg	Sb	14 49 50.1	-1.1
FIAM	**Fiamignano**	**0.28**	**260**	Pg	Pg	14 49 45.4	+0.7
FIAM				Sg	Sb	14 49 50.1	-1.1
TERO	**Teramo**	**0.32**	**15**	Pg	Pg	14 49 45.8	+0.5
TERO				Sg	Sb	14 49 50.9	-1.2
TERO	**Teramo**	**0.32**	**15**	Pg	Pg	14 49 45.8	+0.5
TERO				Sg	Sb	14 49 50.9	-1.2
NRCA	**Norcia**	**0.58**	**332**	Pg	Pg	14 49 50.5	+0.1
NRCA				Sg	Sb	14 49 59.6	-0.4
NRCA	**Norcia**	**0.58**	**332**	Pg	Pg	14 49 50.5	+0.1
NRCA				Sg	Sb	14 49 59.6	-0.4

IDC ***27*** *14:50:46.1±5.0,5°.07S×129°.92E,h144km±43km,mb3.1/1, mb1 3.1/4,mb1mx3.0/20,mbtmp2.9/4,Error ellipse: s-maj=101.5km s-min=15.7km az=73.0*
ISCJB ***27*** *14:50:49.5±0.9,5°.47S±0°.04×129°.67E±0°.08,h150km, mb3.5/1,Error ellipse: s-maj=12.2km s-min=5.3km az=16.8*
AUST ***27*** *14:50:51.7±6.0,5°.10S×131°.00E,h336km,Error ellipse: s-maj=3.7km s-min=1.1km az=252.0*
ISC 27 14:50:46.8±1.6,5°.4S±0°.1×129°.5E±0°.2,h150km,n10, c2s14/9,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**3.27**	**94**	P	Pn	14 51 43.4	+5.8
	baz=1.8,SNR=18						
TLE				S	Sn	14 52 15.3	-1.6
	baz=1.8,SNR=7.4						
FAKI	**Fak Fak**	**3.73**	**48**	P	Pn	14 51 47.3	+3.7
	baz=2.5,SNR=19						
FAKI				S	Sn	14 52 27.8	+0.1
	baz=2.5,SNR=20						
SWI	**Sorong**	**4.87**	**22**	P	Pn	14 52 02.0	+3.4
	baz=4.2,SNR=19						
SWI				S	Sn	14 52 54.4	-0.1
	baz=4.2,SNR=9.6						
MTN	**Manton Dam**	**7.56**	**168**	P	Pn	14 52 40.5	+6.1
	baz=7.7,SNR=5.9						
MTN				S	**Sn**	**14 54 01.3**	**+2.5**
	baz=7.7,SNR=7.5						
KDU	**Kakadu**	**7.81**	**158**	P	Pn	14 52 42.4	+4.7
	baz=7.7,SNR=8.4						
KDU				S	**Sn**	**14 54 04.8**	**0.0**
	baz=7.7,SNR=11						
LUWI	**Luwuk**	**7.97**	**303**	S	Sn	14 54 46.0	+37
	baz=9.2,SNR=5.5						
FITZ	**Fitzroy Crossi**	**13.14**	**196**	P	**P**	**14 53 52.2**	**-0.3**
	0.1nm,0.3s,baz=29,slow=12,SNR=8.5						
FITZ				S	**Sn**	**14 56 13.5**	**+0.1**
	0.3nm,0.3s,baz=77,slow=19,SNR=5.4						
WRA	**Warramunga Arr**	**15.19**	**162**	P	**P**	**14 54 16.3**	**+1.1**
	0.1nm,0.3s,baz=349,slow=10,SNR=12						
WRA				S	**Sn**	**14 56 58.8**	**-4.0**
	0.3nm,0.3s,baz=340,slow=20,SNR=7.8						
ASAR	**Alice Springs**	**18.64**	**167**	P	**Pn**	**14 54 56.0**	**+0.8**
	0.1nm,0.3s,baz=347,slow=11,SNR=18						
ASAR				S	**Sn**	**14 58 23.3**	**-1.8**
	0.1nm,0.3s,baz=353,slow=22,SNR=4.7						
MKAR	**Makanchi Array**	**66.62**	**327**	P	**P**	**15 01 20.9**	**-0.3**
	0.4nm,0.6s,baz=114,slow=8.1,SNR=7.1						

KRSC 27 14:51:00.4±1.1,54°.06N×163°.26E,h78km±92km,ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**1.02**	**300**	P	Pn	14 51 21.4	+1.8
MKZ				*i* S	Sn	14 51 36.3	+2.4
SPN	**Mys Shipunski**	**2.16**	**245**	P	Pn	14 51 36.5	+2.2
SPN				*i* S	Sn	14 52 02.5	+2.3
TUMR	**Tumrok**	**2.19**	**305**	P	Pn	14 51 37.0	+2.2
TUMR				*i* S	Sn	14 52 03.9	+2.8
NLC	**Nalytchevo**	**2.50**	**251**	P	Pn	14 51 41.3	+2.5
NLC				*i* S	Sn	14 52 11.5	+3.2
SDLR	**Sedlovina**	**2.72**	**255**	P	Pn	14 51 44.8	+2.8
SDLR				*i* S	Sn	14 52 17.2	+3.2
SMKR	**Semkarok**	**2.73**	**339**	P	Pn	14 51 43.9	+1.8
SMKR				*i* S	Sn	14 52 15.5	+1.4
SMAR	**Somma**	**2.77**	**255**	P	Pn	14 51 45.7	+2.9
SMAR				*i* S	Sn	14 52 18.7	+3.2
UGLR	**Uglovaya**	**2.77**	**254**	P	Pn	14 51 45.6	+2.8
UGLR				*i* S	Sn	14 52 18.7	+3.3
PET	**Petropavlovsk**	**2.94**	**251**	P	Pn	14 51 47.8	+3.0
PET				*i* S	Sn	14 52 22.2	+3.2
RUS	**Russkaya**	**3.29**	**242**	P	Pn	14 51 52.2	+2.7
RUS				*i* S	Sn	14 52 29.9	+2.5
MTVR	**Mutnovka**	**3.43**	**245**	P	Pn	14 51 54.8	+3.1
MTVR				*i* S	Sn	14 52 34.8	+3.4

MAN 27 15:01:02,12°.80N×121°.26E,h22km,mb4.0,ML2.8,MS2.5, Mindoro

NIED ***27*** *15:09:00,37°.60N×143°.00E,h14km,Mw4.5 Best double couple: M₀7.45000×10¹⁵ NP1:φs10.00000°,δ69.00000°, λ79.00000°. NP2:φs218.00000°,δ23.00000°,λ116.00000°.*
ISCJB ***27*** *15:09:23.5±0.9,37°.57N±0°.03×142°.93E±0°.04,h18km±6km, mb4.4/52,MS4.2/32,Error ellipse: s-maj=5.3km s-min=4.1km az=38.3*
JMA ***27*** *15:09:24.3±0.2,37°.56N×142°.96E,h38km,M4.7*
MOS ***27*** *15:09:25.8±1.0,37°.63N×142°.90E,h33km,mb4.7/31, MS4.0/12,Error ellipse: s-maj=9.5km s-min=6.3km az=112.4*
BJI ***27*** *15:09:25.0,37°.66N×142°.80E,h22km,mB4.9/30,mb4.5/41, Ms4.5/34,Ms7 4.3/34*
NEIC ***27*** *15:09:26.9±0.4,37°.57N×142°.93E,mb4.8/9,MW4.5(NIED), Error ellipse: s-maj=9.1km s-min=5.9km az=149.0*
IDC ***27*** *15:09:27.9±2.8,37°.48N×142°.88E,h37km±24km,mb3.8/17, mb1 4.0/23,mb1mx3.9/31,mbtmp3.9/23,ML3.4/6,MS3.8/16, Ms1 3.8/16,ms1mx3.5/45,Error ellipse: s-maj=17.5km s-min=15.0km az=119.0*
ISC 27 15:09:27.4±0.5,37°.58N±0°.04×142°.92E±0°.04,h31km±2km, h31km:pP-P,n152,σ1§65/221,mb4.5/52,MS4.2/32,8C-3D,

Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.52**	**306**	⇑P	**Pn**	**15 09 50.6**	**-1.8**
JIO				*e*S	**Sn**	**15 10 09.6**	**-1.5**
JFK	**Kawauchi**	**1.64**	**263**	P	**Pn**	**15 09 51.8**	**-2.3**
JFK				*e*S	**Sn**	**15 10 11.9**	**-2.3**
JMM	**Marumori**	**1.71**	**280**	P	**Pn**	**15 09 52.9**	**-2.1**
JMM				*e*S	**Sn**	**15 10 14.1**	**-1.7**
JMK	**Ichinoseki**	**1.91**	**316**	P	**Pn**	**15 09 56.0**	**-1.9**
JFT	**Otama**	**2.05**	**269**	P	**Pn**	**15 09 58.5**	**-1.3**
JFT				*e*S	**Sn**	**15 10 23.9**	**-0.4**
JOM	**Ohasama**	**2.28**	**327**	P	**Pn**	**15 10 01.2**	**-1.7**
JOM				*e*S	**Sn**	**15 10 28.7**	**-1.3**
JYK	**Kaneyama**	**2.42**	**304**	P	**Pn**	**15 10 03.6**	**-1.2**
JYK				*e*S	**Sn**	**15 10 33.1**	**-0.2**
JANG	**Nango**	**3.00**	**339**	P	**Pn**	**15 10 10.6**	**-2.2**
JANG				*e*S	**Sn**	**15 10 45.8**	**-1.8**
JAG	**Ashikaga**	**3.00**	**248**	P	**Pn**	**15 10 11.6**	**-1.2**
JAW	**Awa shima**	**3.03**	**288**	P	**Pn**	**15 10 12.8**	**-0.4**
BSO1	**Boso 1**	**3.31**	**209**	P	**Pn**	**15 10 14.4**	**-2.2**
BSO1				*e*S	**Sn**	**15 10 52.7**	**-2.0**
JRY	**Ryogami san**	**3.58**	**245**	P	**Pn**	**15 10 19.3**	**-1.5**
JRY				*e*S	**Sn**	**15 10 59.9**	**-2.2**
JOD2	**Odawara 2**	**3.86**	**234**	P	**Pn**	**15 10 22.8**	**-1.8**
JOD2				*e*S	**Sn**	**15 11 06.2**	**-2.7**
MJAR	**Matsushiro Arr**	**3.90**	**256**	Pn	**Pn**	**15 10 25.6**	**+0.3**
MJAR	**Matsushiro Arr**	**3.90**	**256**	Pn	**Pn**	**15 10 25.6**	**+0.3**
	2.8nm,0.3s,baz=76,slow=10,SNR=49						
MAJO	**Matsushiro**	**3.91**	**256**	*e*P	**Pn**	**15 10 25.8**	**+0.5**
MAJO	**Matsushiro**	**3.91**	**256**	*e*P	**Pn**	**15 10 25.8**	**+0.5**
MAT	**Matsushiro**	**3.91**	**256**	P	**Pn**	**15 10 25.0**	**-0.3**
MAT				S	**Sn**	**15 11 07.8**	**-2.3**
ERM	**Erimo**	**4.43**	**2**	*c*eP	**Pn**	**15 10 29.8**	**-2.7**
ERM				pmax	pmax		
	comp=Z,58nm,1.7s						
ERM	**Erimo**	**4.43**	**2**	*e*P	**Pn**	**15 10 30.1**	**-2.4**
JHJ	**Hachijo jima 2**	**5.13**	**211**	Pn	**Pn**	**15 10 40.2**	**-1.9**
	comp=Z,11nm,0.3s,baz=278,slow=19,SNR=8.3						
JHJ				Sn	**Sn**	**15 11 35.0**	**-5.4**
	comp=Z,34nm,0.3s,baz=75,slow=21,SNR=6.4						
ASAJ	**Asahikawa**	**6.54**	**358**	*e*P	**Pn**	**15 11 00.9**	**-0.5**
ASAJ				Sn	**Sn**	**15 12 14.3**	**-0.6**
ASAJ	**Asahikawa**	**6.54**	**358**	Pn	**Pn**	**15 11 00.8**	**-0.5**
	comp=Z,3.0nm,0.3s,baz=214,slow=13,SNR=26						
ASAJ				Sn	**Sn**	**15 12 14.3**	**-0.6**
	comp=Z,2.8nm,0.3s,baz=39,slow=31,SNR=5.8						
ASAJ				LR	LR	15 14 25.7	
	comp=Z,1μm,18.1s,baz=183,slow=45						
YUK	**Yuzh-Kuril'sk**	**6.83**	**18**	*c i*P	**Pn**	**15 11 08.2**	**+2.9**
YUK				*i* S	**Sn**	**15 12 16.2**	**-5.7**
YUK				pmax	pmax		
	comp=N,36nm,0.3s						
YUK				pmax	pmax		
	comp=E,25nm,0.3s						
YUK				pmax	pmax		
	comp=Z,70nm,0.3s						
YUK				smax	smax		
	comp=N,244nm,0.6s						
YUK				smax	smax		
	comp=E,150nm,0.6s						
YUK				MLR	MLR		
	comp=Z,629nm,13.0s						
KUR	**Kuril'sk**	**8.50**	**24**	P	Pn	15 11 37.5	+9.2
KUR				S	Sn	15 12 55.0	-8.1
KUR				pmax	pmax		
	comp=Z,160nm,0.9s						
KUR				smax	smax		
	comp=N,220nm,0.8s						
KUR				smax	smax		
	comp=E,190nm,1.0s						
YSS	**Yuzh-Sakhalins**	**9.37**	**359**	*e*P	**Pn**	**15 11 40.4**	**+0.2**
YSS				*e*S	Sn	15 13 16.0	-8.4
YSS				MLR	MLR		
	comp=N,1μm,16.0s						
YSS				MLR	MLR		
	comp=E,800nm,16.0s						
YSS				MLR	MLR		
	comp=Z,1μm,16.0s						
USRK	**Ussuriysk Arra**	**10.58**	**312**	Pn	**Pn**	**15 11 59.7**	**+2.9**
	comp=Z,0.3nm,0.3s,baz=110,slow=13,SNR=14						
USRK				LR	LR	15 16 03.9	
	comp=Z,971nm,18.0s,baz=277,slow=37						
JNU	**Nakatsue**	**10.79**	**249**	*e*P	**Pn**	**15 11 58.9**	**-0.9**
JNU	**Nakatsue**	**10.79**	**249**	Pn	**Pn**	**15 11 59.5**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=74,slow=7.2,SNR=4.0						
KSRS	**Korea Array**	**11.91**	**274**	Pn	**Pn**	**15 12 16.1**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=90,slow=13,SNR=7.2						
KSRS				LR	LR	15 16 35.0	
	comp=Z,676nm,19.0s,baz=155,slow=36						
KSAR	**Wonju Array Be**	**11.94**	**274**	Pn	**Pn**	**15 12 16.1**	**+0.6**
MDJ	**Mudanjiang**	**12.26**	**309**	P	**Pn**	**15 12 20.8**	**+1.1**
MDJ				S	**Sn**	**15 14 37.3**	**+2.1**
MDJ				PcP	**PcP**	**15 18 02.0**	**+1.0**
MDJ				ScP	**ScP**	**15 21 33.5**	**+1.9**
MDJ				PcS	**PcS**	**15 21 37.3**	**+2.3**
MDJ				ScS	**ScS**	**15 25 10.5**	**+3.0**
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,130nm,10.6s						
MDJ				LR	LR		
	comp=N,440nm,16.7s						
MDJ				LR	LR		
	comp=E,410nm,18.4s						
MDJ				LR	LR		
	comp=Z,820nm,16.7s						
KLR	**Kul'dur**	**14.18**	**329**	*e*P	Pn	15 12 38.2	-7.7
KLR				MLR	MLR		
	comp=Z,4μm,12.0s						
CN2	**Changchun**	**14.63**	**301**	*e*P	**P**	**15 12 58.8**	**+0.7**
CN2				*es*P		15 13 09.0	
CN2				*e*S	Sn	15 15 40.8	+7.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=N,600nm,15.0s						
CN2				LR	LR		
	comp=E,700nm,15.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
SNY	**Shenyang**	**15.47**	**292**	⇓P	**pP**	**15 13 17.5**	**+1.9**
SNY				S	sS	15 16 35.0	+13
SNY				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SNY				LR	LR		
	comp=N,620nm,11.0s						
SNY				LR	LR		
	comp=E,1μm,14.1s						
SNY				LR	LR		
	comp=Z,1μm,14.7s						
PETK	**Petropavlovsk-**	**18.62**	**29**	LR	LR	15 19 33.5	
	comp=Z,39nm,20.8s,baz=216,slow=32						
SSE	**Sheshan**	**19.05**	**257**	P	**P**	**15 13 47.3**	**+0.2**
SSE				pP	**pP**	**15 13 55.5**	**+0.2**
SSE				S	**S**	**15 17 21.5**	**0.0**
SSE				pmax	pmax		
	comp=Z,15nm,0.8s						
SSE				pmax	pmax		
	comp=Z,160nm,6.8s						
SSE				LR	LR		
	comp=N,490nm,17.1s						
SSE				LR	LR		
	comp=E,270nm,17.1s						
SSE				LR	LR		
	comp=Z,460nm,14.1s						
NJ2	**Nanjing**	**20.49**	**262**	*e*P	Pn	15 14 04.0	-1.0
NJ2				pP	pP	15 14 09.5	-1.5
NJ2				sP	sP	15 14 12.0	-2.9
NJ2				S	Sn	15 17 55.5	+0.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,200nm,4.2s						
NJ2				LR	LR		
	comp=N,490nm,13.9s						
NJ2				LR	LR		
	comp=E,410nm,14.7s						
NJ2				LR	LR		
	comp=Z,420nm,14.2s						
BJI	**Beijing**	**20.96**	**285**	P	**P**	**15 14 05.3**	**-2.4**
BJI				pmax	pmax		
	comp=Z,14nm,0.7s						
BJI				LR	LR		
	comp=N,300nm,13.1s						
BJI				LR	LR		
	comp=E,250nm,14.1s						
BJI				LR	LR		
	comp=Z,140nm,19.1s						
CLNS	**Chul'man**	**22.70**	**334**	*e*P	**P**	**15 14 24.8**	**-1.5**
CLNS				*e**PP	**pP**	**15 14 32.5**	**-2.1**
CLNS				*e*		15 14 40.7	
CLNS				*e*		15 18 23.7	
CLNS				*e*S	**S**	**15 18 31.4**	**-1.1**
CLNS				*e*SS	**SnSn**	**15 19 07.4**	**+3.8**
CLNS				pmax	pmax		
	comp=Z,17nm,1.0s						
CLNS				pmax	pmax		
	comp=N,16nm,1.1s						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.9s						
CLNS				pmax	pmax		
	comp=N,15nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,14nm,1.0s						
CLNS				pmax	pmax		
	comp=E,16nm,0.9s						
CLNS				smax	smax		
	comp=E,154nm,13.3s						
CLNS				smax	smax		
	comp=N,114nm,11.4s						
CLNS				MLR	MLR		
	comp=E,517nm,15.0s						
CLNS				MLR	MLR		
	comp=Z,469nm,14.0s						
CLNS				MLR	MLR		
	comp=N,463nm,13.0s						
GUMO	**Guam**	**23.95**	**175**	LR	LR	15 22 29.0	
	comp=N,85nm,21.5s,baz=112,slow=33						
HHC	**Hu-ho-hao-te**	**24.44**	**287**	*e*P	**P**	**15 14 41.0**	**-2.5**
HHC				pP	**pP**	**15 14 50.5**	**-1.9**
HHC				sP	**sP**	**15 14 54.5**	**-1.7**
HHC				PP	**PnPn**	**15 15 16.8**	**+2.2**
HHC				S	**S**	**15 18 56.0**	**-5.5**
HHC				sS	**sS**	**15 19 11.8**	**-4.4**
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,280nm,5.6s						
HHC				LR	LR		
	comp=N,410nm,13.5s						
HHC				LR	LR		
	comp=E,890nm,12.8s						
HHC				LR	LR		
	comp=Z,980nm,13.3s						
WHN	**Wuhan**	**24.62**	**262**	P	**P**	**15 14 45.0**	**0.0**
WHN				pP	**pP**	**15 14 53.0**	**-1.0**
WHN				S	**S**	**15 19 02.8**	**-1.5**
WHN				LR	LR		
	comp=N,2μm,14.6s						
WHN				LR	LR		
	comp=E,770nm,11.8s						
WHN				LR	LR		
	comp=Z,1μm,14.0s						
CIT	**Chita**	**25.13**	**314**	*e*P	**P**	**15 14 49.1**	**-0.4**
CIT				*e*		15 15 02.1	
CIT				*e*		15 15 20.0	
CIT				pmax	pmax		
	comp=Z,164nm,2.1s						
YAK	**Yakutsk**	**25.82**	**346**	*e*P	**P**	**15 14 54.1**	**-1.4**
YAK				*e**PP	**pP**	**15 15 03.7**	**-0.8**
YAK				*e*PPP	PPP	15 15 37.2	
YAK				*e*		15 18 30.3	
YAK				*e*S	**S**	**15 19 17.9**	**-4.9**
YAK				*e*SSS	SSS	15 20 28.3	
YAK				*e*		15 25 52.6	
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,37nm,1.6s						
YAK				pmax	pmax		
	comp=N,29nm,1.4s						
YAK				pmax	pmax		
	comp=E,34nm,1.8s						
YAK				smax	smax		
	comp=N,93nm,3.8s						
YAK				smax	smax		
	comp=E,84nm,4.9s						
YAK				MLR	MLR		
	comp=Z,291nm,14.0s						
YAK				MLR	MLR		
	comp=N,319nm,17.0s						
YAK				MLR	MLR		
	comp=E,76nm,13.0s						
FX1	**Attu Island--F**	**25.98**	**44**	LR	LR	15 24 56.9	
	comp=E,58nm,20.1s,baz=84,slow=36						
SEY	**Seymchan**	**26.04**	**10**	*c*eP	**P**	**15 14 58.8**	**+1.3**
ULN	**Ulaanbaatar**	**28.05**	**303**	*e*P	**P**	**15 15 16.4**	**+0.4**
	comp=E,17nm,1.2s						
ULN				*e*		15 15 24.7	
SONM	**Songino Array**	**28.49**	**303**	P	**P**	**15 15 20.1**	**+0.2**
SONM	**Songino Array**	**28.49**	**303**	P	**P**	**15 15 20.1**	**+0.2**
	comp=E,5.8nm,0.9s,baz=104,slow=9.4,SNR=23						
SONM				LR	LR	15 27 08.2	
	comp=E,330nm,18.4s,baz=250,slow=37						
ZAK	**Zakamensk**	**30.88**	**307**	*e*P	**P**	**15 15 39.8**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.6s						
TLY	**Talaya**	**30.89**	**310**	*e*P	**P**	**15 15 40.7**	**-0.3**
TLY				*e*S	**S**	**15 20 43.5**	**+0.6**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TLY				MLR	MLR		
	comp=Z,358nm,16.0s						
LZH	**Lanzhou**	**31.16**	**279**	*e*P	**P**	**15 15 43.0**	**-0.7**
LZH				pP	**pP**	**15 15 52.0**	**-0.7**
LZH				sP	**sP**	**15 15 56.3**	**-0.1**
LZH				*e*S	**S**	**15 20 42.3**	**-5.4**
LZH				sS	sS	15 20 55.3	-7.3
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				pmax	pmax		
	comp=Z,90nm,4.0s						
LZH				LR	LR		
	comp=N,470nm,15.7s						
LZH				LR	LR		
	comp=E,530nm,13.9s						
LZH				LR	LR		
	comp=Z,850nm,17.7s						
GYA	**Guiyang**	**32.49**	**261**	P	**P**	**15 15 56.8**	**+1.4**
GYA				pP	**pP**	**15 16 05.3**	**+0.9**
GYA				sP	**sP**	**15 16 10.5**	**+2.3**
GYA				PP	**PnPn**	**15 17 05.0**	**+1.9**
GYA				PcP	**PcP**	**15 18 42.3**	**+0.4**
GYA				S	**S**	**15 21 09.0**	**+0.4**
GYA				sS	**sS**	**15 21 23.0**	**-0.4**
GYA				ScP	**ScP**	**15 22 23.5**	**+0.1**
GYA				ScS	**ScS**	**15 26 22.0**	**-1.1**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.7s						
GYA				LR	LR		
	comp=N,490nm,17.6s						
GYA				LR	LR		
	comp=E,380nm,18.0s						
GYA				LR	LR		
	comp=Z,480nm,17.8s						
CD2	**Chengdu**	**32.87**	**270**	P	**P**	**15 15 59.5**	**+0.9**
CD2				pP	**pP**	**15 16 08.0**	**+0.4**
CD2				sP	**sP**	**15 16 11.5**	**+0.1**
CD2				PP	**PnPn**	**15 17 09.5**	**+1.7**
CD2				PcP	**PcP**	**15 18 43.8**	**+1.0**
CD2				S	**S**	**15 21 14.0**	**-0.2**
CD2				sS	**sS**	**15 21 28.3**	**-0.8**
CD2				PcS	**PcS**	**15 22 28.0**	**-0.3**
CD2				SS	**SnSn**	**15 23 13.5**	**+1.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
CD2				LR	LR		
	comp=N,650nm,15.1s						
CD2				LR	LR		
	comp=E,380nm,14.9s						
CD2				LR	LR		
	comp=Z,390nm,14.5s						
BILL	**Bilibino**	**33.17**	**16**	*e*P	**P**	**15 15 58.8**	**-1.9**

*ISCJB **27** 15:12:01.6±0.5,24°.71N±0°.03×121°.79E±0°.02, h81km±4km,*
Error ellipse: s-maj=4.7km s-min=3.1km az=151.2
*TAP **27** 15:12:01.9,24°.71N×121°.76E, h78km, ML3.4, B*
*JMA **27** 15:12:02.2±0.2,24°.87N×121°.91E, h84km, M2.4*
ISC 27 15:12:01.8±1.4,**24.72N**±0°.04×**121.79E**±0°.03,**h82**km±7km,
n48, σ=**0.60**/95,**9D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ILA	**Ilan**	**0.06**	**323**	P		**Pn**	**15 12 13.9**	**+0.5**
ILA	baz=341			*e*S		**Sn**	**15 12 22.9**	**+1.0**
TWE	**Neicheng**	**0.11**	**271**	*i*P		**Pn**	**15 12 13.7**	**+0.2**
TWE	baz=275			S		**Sn**	**15 12 22.3**	**+0.2**
TWC	**Suao**	**0.12**	**153**	*i* P		**Pn**	**15 12 14.0**	**+0.5**
TWC	baz=138			*i* S		**Sn**	**15 12 23.1**	**+1.0**
ENTT	**Nioudou**	**0.22**	**249**	⇓*i*P		**Pn**	**15 12 13.9**	**+0.1**
ENTT	baz=259			*e*S		**Sn**	**15 12 22.2**	**-0.5**
ENA	**Nanau**	**0.29**	**188**	*e*P		**Pn**	**15 12 14.3**	**+0.1**
ENA	baz=189			*e*S		**Sn**	**15 12 24.3**	**+1.0**
TWB1	**Santiao Chiao**	**0.34**	**32**	⇓*i*P		**Pn**	**15 12 14.7**	**+0.2**
TWB1	baz=44			*i* S		**Sn**	**15 12 23.8**	**-0.1**
NWF	**Wu-fen Shan**	**0.35**	**359**	*i* P		**Pn**	**15 12 14.8**	**+0.2**
NWF	baz=355			S		**Sn**	**15 12 24.1**	**-0.1**
NSK	**Sanguang**	**0.39**	**264**	⇓*i*P		**Pn**	**15 12 14.5**	**-0.4**
NSK	baz=264			*e*S		**Sn**	**15 12 23.1**	**-1.5**
TAP1	**Taipei**	**0.40**	**323**	P		**Pn**	**15 12 14.9**	**0.0**
TAP1	baz=317			*e*S		**Sn**	**15 12 24.0**	**-0.5**
TAP	**Taipei**	**0.41**	**321**	*e*P		**Pn**	**15 12 14.9**	**-0.1**
TAP	baz=317			*e*S		**Sn**	**15 12 24.4**	**-0.3**
EHP	**Heping Village**	**0.41**	**186**	*e*P		**Pn**	**15 12 16.1**	**+1.1**
NNS	baz=190 **Nan Shan**	**0.47**	**234**	⇓*i*P		**Pn**	**15 12 15.6**	**0.0**
NNS	baz=236			S		**Sn**	**15 12 25.3**	**-0.5**
TWS1	**Kuangyinshan**	**0.51**	**319**	⇓*i*P		**Pn**	**15 12 15.9**	**+0.2**
TWS1	baz=310			*e*S		**Sn**	**15 12 25.9**	**-0.1**
TWY	**Chenhua**	**0.58**	**343**	⇓*i*P		**Pn**	**15 12 16.6**	**+0.3**
TWY	baz=337			*e*S		**Sn**	**15 12 27.2**	**+0.1**
NCU	**National Centr**	**0.60**	**295**	⇓*i*P		**Pn**	**15 12 16.6**	**+0.1**
NCU	baz=289			*e*S		**Sn**	**15 12 27.0**	**-0.6**
TWD	**Chiawan**	**0.66**	**195**	*e*P		**Pn**	**15 12 16.4**	**-0.8**
TWD	baz=199			*e*S		**Sn**	**15 12 27.1**	**-1.4**
NSTT	**Nanjuang**	**0.72**	**263**	⇓*i*P		**Pn**	**15 12 17.6**	**-0.2**
NSTT	baz=264			S		**Sn**	**15 12 28.8**	**-0.9**
TWT	**Tachien**	**0.72**	**230**	P		**Pn**	**15 12 18.6**	**+0.5**
TWT	baz=227			S		**Sn**	**15 12 30.3**	**+0.2**
WHF	**Hehuan Shan**	**0.74**	**220**	*e*P		**Pn**	**15 12 18.7**	**+0.2**
WHF	baz=214			*e*S		**Sn**	**15 12 30.4**	**-0.4**
HSN	**Hsinchu**	**0.75**	**277**	*e*P		**Pn**	**15 12 17.6**	**-0.5**
HSN	baz=279			*e*S		**Sn**	**15 12 28.9**	**-1.3**
HWA	**Hwalien**	**0.76**	**193**	*e*P		**Pn**	**15 12 17.7**	**-0.4**
HWA	baz=197			*e*S		**Sn**	**15 12 30.2**	**-0.1**
ESL	**Shilin**	**0.96**	**200**	*e*P		**Pn**	**15 12 18.9**	**-1.6**
ESL	baz=191			*e*S		**Sn**	**15 12 33.5**	**-0.8**
NSY	**Sanyi**	**0.98**	**252**	P		**Pn**	**15 12 21.2**	**+0.5**
NSY	baz=253			*e*S		**Sn**	**15 12 34.8**	**0.0**
YOJ	**Yonaguni jima**	**1.14**	**103**	P		**Pn**	**15 12 22.7**	**+0.1**
YOJ				*e*S		**Sn**	**15 12 37.9**	**-0.4**
SMLT	**Sun Moon Lake**	**1.16**	**224**	*e*P		**Pn**	**15 12 23.6**	**+0.6**
SMLT	baz=233			*e*S		**Sn**	**15 12 39.0**	**+0.1**
TCU	**Taichung**	**1.16**	**241**	*e*P		**Pn**	**15 12 23.3**	**+0.4**
TCU	baz=242			*e*S		**Sn**	**15 12 37.9**	**-0.8**
TYC	**Yuchr**	**1.17**	**226**	*e*P		**Pn**	**15 12 23.3**	**+0.3**
TYC	baz=229			*e*S		**Sn**	**15 12 39.3**	**+0.3**
EHY	**Hungye**	**1.28**	**199**	*e*P		**Pn**	**15 12 24.2**	**-0.1**
EHY	baz=191			*e*S		**Sn**	**15 12 40.8**	**-0.5**
WNT	**Mingjian**	**1.31**	**230**	*e*P		**Pn**	**15 12 25.2**	**+0.5**
WNT	baz=241			*e*S		**Sn**	**15 12 42.1**	**+0.1**
TWF1	**Yuli**	**1.43**	**198**	*e*P		**Pn**	**15 12 25.3**	**-1.0**
TWF1	baz=196			*e*S		**Sn**	**15 12 44.4**	**-0.5**
ALS	**Alishan**	**1.50**	**217**	*e*P		**Pn**	**15 12 28.2**	**+0.8**
ALS	baz=229			*e*S		**Sn**	**15 12 47.7**	**+0.9**
CHN5	**Tsauling**	**1.51**	**222**	*e*P		**Pn**	**15 12 27.8**	**+0.5**
CHN5	baz=226			*e*S		**Sn**	**15 12 47.4**	**+0.7**
WGK	**Gukeng**	**1.52**	**228**	*e*P		**Pn**	**15 12 27.8**	**+0.4**
WGK	baz=240			*e*S		**Sn**	**15 12 47.1**	**+0.3**
WTCT	**Ta-ch'eng**	**1.62**	**239**	*e*P		**Pn**	**15 12 28.8**	**+0.1**
WTCT	baz=241			*e*S		**Sn**	**15 12 48.6**	**-0.4**
CHKT	**Chengkung**	**1.66**	**194**	*e*P		**Pn**	**15 12 30.3**	**+1.0**
CHKT	baz=196			*e*S		**Sn**	**15 12 50.0**	**0.0**
ELDTW	**Lidau**	**1.68**	**205**	*e*P		**Pn**	**15 12 29.8**	**+0.2**
ELDTW	baz=198			*e*S		**Sn**	**15 12 50.5**	**-0.2**
CHY	**Chiayi**	**1.74**	**226**	*e*P		**Pn**	**15 12 30.5**	**+0.2**
CHY	baz=238			*e*S		**Sn**	**15 12 52.1**	**+0.1**
WSF	**Szhu**	**1.79**	**233**	*e*P		**Pn**	**15 12 31.2**	**+0.3**
WSF	baz=236			*e*S		**Sn**	**15 12 53.0**	**0.0**
IRIF	**Iriomote-Funau**	**1.81**	**102**	P		**Pn**	**15 12 31.1**	**-0.1**
IRIF				*e*S		**Sn**	**15 12 52.9**	**-0.7**
WTP	**Ta-pu**	**1.82**	**216**	*e*P		**Pn**	**15 12 31.8**	**+0.4**
WTP	baz=218			*e*S		**Sn**	**15 12 54.1**	**+0.3**
TWK	**Hsinying**	**1.87**	**220**	*e*P		**Pn**	**15 12 33.2**	**+1.1**
TWK	baz=224			*e*S		**Sn**	**15 12 55.3**	**+0.2**

BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA	**Gaotai**	**33.55**	**287**	*e*P	**P**	**15 16 05.3**	**+0.7**
GTA				pP	**pP**	**15 16 14.8**	**+1.2**
GTA				sP	**sP**	**15 16 19.0**	**+1.6**
GTA				PP	**PP**	**15 17 19.5**	**-1.1**
GTA				S	**S**	**15 21 26.5**	**+1.7**
GTA				sS	**sS**	**15 21 41.8**	**+2.1**
GTA				SS	**SnSn**	**15 23 32.3**	**+3.6**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,97nm,5.2s						
GTA				LR	LR		
	comp=N,180nm,19.0s						
GTA				LR	LR		
	comp=E,380nm,17.6s						
GTA				LR	LR		
	comp=Z,470nm,15.2s						
QIZ	**Qiongzhong**	**34.24**	**247**	P	**P**	**15 16 11.3**	**+0.7**
QIZ				S	**S**	**15 21 38.8**	**+3.2**
QIZ				pmax	pmax		
	comp=Z,23nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,200nm,5.7s						
KMI	**Kunming**	**36.23**	**262**	P	**P**	**15 16 29.5**	**+1.6**
KMI				pP	**pP**	**15 16 37.8**	**+0.8**
KMI				S	**S**	**15 22 07.0**	**+0.6**
KMI				SS	**SnSn**	**15 24 31.0**	**-2.9**
KMI				pmax	pmax		
	comp=Z,5.0nm,1.5s						
KMI				pmax	pmax		
	comp=Z,98nm,3.9s						
KMI				LR	LR		
	comp=N,250nm,10.3s						
KMI				LR	LR		
	comp=E,390nm,13.8s						
KMI				LR	LR		
	comp=Z,310nm,10.1s						
WMQ	**Urumqi**	**41.67**	**297**	P	**P**	**15 17 13.0**	**0.0**
WMQ				pP	**pP**	**15 17 23.0**	**+0.8**
WMQ				sP	**sP**	**15 17 27.0**	**+1.0**
WMQ				PP	**PnPn**	**15 18 53.0**	**-1.5**
WMQ				S	**S**	**15 23 28.0**	**+0.3**
WMQ				sS	**sS**	**15 23 44.0**	**+1.2**
WMQ				SS	**SS**	**15 26 28.0**	**-5.3**
WMQ				ScS	**ScS**	**15 27 13.0**	**-0.9**
WMQ				pmax	pmax		
	comp=Z,16nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.0s						
WMQ				LR	LR		
	comp=N,130nm,15.0s						
WMQ				LR	LR		
	comp=E,130nm,15.0s						
WMQ				LR	LR		
	comp=Z,120nm,15.0s						
ZAA0	**Zalesovo Array**	**42.44**	**312**	*e*P	**P**	**15 17 18.9**	**-0.2**
ZAA0				*e*		15 17 27.7	
ZALV	**Zalesovo Beam**	**42.44**	**312**	P	**P**	**15 17 19.1**	**0.0**
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ZALV				MLR	MLR		
	comp=Z,257nm,18.9s						
ZALV	**Zalesovo Beam**	**42.44**	**312**	P	**P**	**15 17 19.1**	**0.0**
ZALV	**Zalesovo Beam**	**42.44**	**312**	P	**P**	**15 17 19.1**	**0.0**
	comp=Z,8.6nm,0.9s,baz=88,slow=7.6,SNR=23						
ZALV				LR	LR	15 35 46.3	
	comp=Z,257nm,18.9s,baz=248,slow=37						
CMAR	**Chiang Mai Arr**	**42.79**	**256**	P	**P**	**15 17 22.1**	**-0.3**
CMAR	**Chiang Mai Arr**	**42.79**	**256**	P	**P**	**15 17 22.1**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=44,slow=6.0,SNR=7.6						
CMAR				LR	LR	15 36 11.2	
	comp=Z,90nm,18.5s,baz=231,slow=38						
NVS	**Novosibirsk**	**43.34**	**313**	*e*P	**P**	**15 17 25.6**	**-0.7**
NVS				pmax	pmax		
	comp=N,2.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,16nm,1.0s						
NVS				pmax	pmax		
	comp=E,11nm,1.3s						
MK31	**Makanchi Array**	**44.85**	**302**	*e*P	**P**	**15 17 38.4**	**-0.2**
MK31				*e*		15 17 46.9	
MK31	**Makanchi Array**	**44.85**	**302**	*e*P	**P**	**15 17 38.4**	**-0.2**
MK31				*e*		15 17 46.9	
MKAR	**Makanchi Array**	**44.85**	**302**	P	**P**	**15 17 38.1**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,87nm,19.2s						
MKAR	**Makanchi Array**	**44.85**	**302**	P	**P**	**15 17 38.1**	**-0.5**
MKAR	**Makanchi Array**	**44.85**	**302**	P	**P**	**15 17 38.1**	**-0.5**
	comp=Z,2.4nm,0.7s,baz=87,slow=9.4,SNR=32						
MKAR				LR	LR	15 37 48.7	
	comp=Z,87nm,19.2s,baz=276,slow=38						
KURK	**Kurchatov**	**46.54**	**308**	⇓*i*P	**P**	**15 17 50.8**	**-1.1**
KURK				pmax	pmax		
	comp=Z,22nm,0.9s						
KURK	**Kurchatov**	**46.54**	**308**	*e*P	**P**	**15 17 50.6**	**-1.3**
	comp=Z,20nm,0.8s						
KURK				*e*		15 18 00.7	
TAPN	**Taplejung**	**47.10**	**274**	*e*P	**P**	**15 17 55.4**	**-1.5**
	comp=Z,26nm,1.4s						
ODAN	**Odare**	**47.57**	**274**	*e*P	**P**	**15 18 00.0**	**-0.6**
	comp=Z,9.7nm,0.8s						
RAMN	**Ramite**	**48.16**	**274**	*e*P	**P**	**15 18 05.1**	**0.0**
	comp=Z,29nm,1.0s						
GUN	**Gumba**	**48.29**	**276**	*e*P	**P**	**15 18 06.3**	**0.0**
	comp=Z,23nm,1.0s						
ILAR	**Eielson Array**	**48.39**	**33**	P	**P**	**15 18 05.8**	**-0.4**
ILAR	**Eielson Array**	**48.39**	**33**	P	**P**	**15 18 05.8**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=264,slow=6.3,SNR=12						
KKN	**Kakani**	**48.82**	**276**	*e*P	**P**	**15 18 10.2**	**0.0**
	comp=Z,14nm,0.8s						
PKIN	**Phulchoki**	**48.82**	**276**	*e*P	**P**	**15 18 10.1**	**-0.2**
DANN	**Dangsing**	**49.77**	**278**	*e*P	**P**	**15 18 17.9**	**+0.4**
	comp=Z,46nm,0.8s						
KOLN	**Koldanda**	**50.16**	**277**	*e*P	**P**	**15 18 20.2**	**-0.1**
	comp=Z,5.1nm,0.7s						
TKM2	**Tokmak 2**	**50.42**	**298**	*e*P	**P**	**15 18 22.1**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,12nm,0.8s						
TKM2	**Tokmak 2**	**50.42**	**298**	*e*P	**P**	**15 18 22.1**	**-0.1**
	comp=Z,12nm,0.8s						
PYUN	**Piuthan**	**50.49**	**278**	*e*P	**P**	**15 18 22.1**	**-0.7**
	comp=Z,53nm,1.1s						
BRVK	**Borovoye**	**51.15**	**312**	⇑*i*P	**P**	**15 18 27.2**	**0.0**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRVK	**Borovoye**	**51.15**	**312**	*e*P	**P**	**15 18 27.2**	**0.0**
	comp=Z,7.3nm,0.8s						
BRVK				*e*		15 18 36.5	
KSH	**Kashi**	**51.28**	**294**	*e*P	P	15 18 32.5	+3.9
KSH				pP	pP	15 18 42.3	+4.4
KSH				sP	sP	15 18 46.0	+4.4
KSH				PcP	**PcP**	**15 19 46.5**	**+3.2**
KSH				PP	**PP**	**15 20 30.0**	**+4.6**
KSH				ScP	**ScP**	**15 23 38.8**	**+1.3**
KSH				PcS	**PcS**	**15 23 42.0**	**+0.8**
KSH				S	**S**	**15 25 49.3**	**+3.8**
KSH				sS	sS	15 26 06.0	+5.1
KSH				ScS	**ScS**	**15 28 17.5**	**+0.7**
KSH				SS	**SS**	**15 29 24.8**	**+3.9**
KSH				pmax	pmax		
	comp=Z,61nm,1.1s						
KSH				LR	LR		
	comp=N,200nm,4.4s						
KSH				LR	LR		
	comp=E,280nm,5.4s						
KSH				LR	LR		
	comp=Z,250nm,4.2s						
AAK	**Ala-Archa**	**51.29**	**298**	⇑*i*P	**P**	**15 18 28.7**	**+0.1**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	**Ala-Archa**	**51.29**	**298**	*e*P	**P**	**15 18 28.5**	**-0.2**
	comp=Z,3.6nm,0.8s						
INK	**Inuvik**	**53.35**	**27**	P	**P**	**15 18 43.2**	**-0.1**
INK	**Inuvik**	**53.35**	**27**	P	**P**	**15 18 43.2**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=342,slow=8.0,SNR=3.4						
KKAR	**Karatay Array**	**53.89**	**300**	*e*P	**P**	**15 18 47.9**	**+0.2**
KKAR				*e*		15 18 57.2	
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KKAR	**Karatay Array**	**53.89**	**300**	*e*P	**P**	**15 18 47.9**	**+0.2**
	comp=Z,5.7nm,0.9s						
KKAR				*e*		15 18 57.2	
SVE	**Sverdlovsk**	**55.53**	**319**	⇑*i*P	**P**	**15 19 00.0**	**+0.7**
SVE				*e*		15 21 06.2	
SVE				pmax	pmax		
	comp=Z,18nm,1.1s						
SVE				MLR	MLR		
	comp=Z,489nm,16.0s						
ARU	**Arti**	**56.74**	**319**	*c i*P	**P**	**15 19 07.7**	**-0.3**
ARU						15 20 05.3	
ARU						15 21 10.1	
ARU				S	**S**	**15 26 56.4**	**-2.1**
ARU				pmax	pmax		
	comp=Z,17nm,1.7s						
ARU				MLR	MLR		
	comp=Z,464nm,18.0s						
WRA	**Warramunga Arr**	**57.78**	**190**	P	**P**	**15 19 13.4**	**-2.3**
WRA	**Warramunga Arr**	**57.78**	**190**	P	**P**	**15 19 13.4**	**-2.3**
	comp=Z,2.0nm,1.0s,baz=9.0,slow=7.3,SNR=9.9						
KBL	**Kabul**	**58.34**	**291**	*e*P	**P**	**15 19 19.4**	**-0.4**
KBL				*e*		15 19 27.5	
KBL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KBL	**Kabul**	**58.34**	**291**	*e*P	**P**	**15 19 19.4**	**-0.4**
	comp=Z,2.7nm,0.4s						
KBL				*e*		15 19 27.5	
ABKAR	**Akbulak array**	**58.50**	**310**	*e*P	**P**	**15 19 19.9**	**-0.6**
	comp=Z,4.9nm,0.6s						
ABKAR				*e*		15 19 28.3	
ASAR	**Alice Springs**	**61.51**	**189**	P	**P**	**15 19 39.9**	**-1.4**
ASAR	**Alice Springs**	**61.51**	**189**	P	**P**	**15 19 39.9**	**-1.4**
	comp=Z,0.7nm,0.9s,baz=6.7,slow=7.4,SNR=6.4						
YKA	**Yellowknife Ar**	**62.73**	**31**	P	**P**	**15 19 48.8**	**-0.3**
YKA	**Yellowknife Ar**	**62.73**	**31**	P	**P**	**15 19 48.8**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=303,slow=6.6,SNR=8.4						
ARCES	**ARCESS Array B**	**63.91**	**340**	LR	LR	15 53 25.7	
	comp=Z,98nm,18.5s,baz=156,slow=41						
JOF	**Joensuu**	**66.04**	**332**	*e*P	**P**	**15 20 09.2**	**-1.5**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.9s						
JOF	**Joensuu**	**66.04**	**332**	*e*p	**P**	**15 20 09.2**	**-1.5**
	comp=Z,1.9nm,0.9s						
VRHR	**Novokhopersk**	**68.08**	**318**	*e*P	**P**	**15 20 22.3**	**-1.6**
VRHR				pmax	pmax		
	comp=N,6.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,9.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRHR				MLR	MLR		
	comp=N,210nm,20.0s						
VRHR				MLR	MLR		
	comp=E,320nm,20.0s						
VRHR				MLR	MLR		
	comp=Z,670nm,20.0s						
KAF	**Kangasniemi**	**68.37**	**333**	*e*P	**P**	**15 20 24.9**	**-0.6**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KAF	**Kangasniemi**	**68.37**	**333**	*e*p	**P**	**15 20 24.9**	**-0.6**
	comp=Z,2.2nm,0.5s						
OBN	**Obninsk**	**68.37**	**324**	*e*P	**P**	**15 20 25.4**	**-0.2**
OBN				*i*		15 20 34.5	
OBN				*e*		15 20 52.5	
OBN				pmax	pmax		
	comp=Z,14nm,1.5s						
OBN				MLR	MLR		
	comp=Z,200nm,15.0s						
FINES	**FINESS Array B**	**68.89**	**333**	P	**P**	**15 20 28.2**	**-0.5**
FINES	**FINESS Array B**	**68.89**	**333**	P	**P**	**15 20 28.2**	**-0.5**
	comp=Z,4.3nm,0.7s,baz=51,slow=10.0,SNR=12						
FINES				LR	LR	15 51 10.8	
	comp=Z,100nm,19.9s,baz=28,slow=36						
VSR	**Storozhevoye**	**69.31**	**319**	*e*P	**P**	**15 20 31.4**	**-0.1**
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
VSR				pmax	pmax		
	comp=N,2.0nm,0.3s						
VSR				pmax	pmax		
	comp=E,1.0nm,0.3s						
VSR				MLR	MLR		
	comp=N,180nm,17.0s						
VSR				MLR	MLR		
	comp=E,260nm,17.0s						
VSR				MLR	MLR		
	comp=Z,670nm,17.0s						
VORD	**Divnogorie**	**69.38**	**319**	*e*P	**P**	**15 20 31.0**	**-1.0**
VORD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VORD				pmax	pmax		
	comp=N,3.0nm,0.5s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.9s						
VORD				MLR	MLR		
	comp=N,400nm,17.0s						
VORD				MLR	MLR		
	comp=E,420nm,17.0s						
VORD				MLR	MLR		
	comp=Z,550nm,17.0s						
ZEI	**Tsey**	**71.39**	**310**	*e*P	**P**	**15 20 43.0**	**-1.7**
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.7s						
KIV	**Kislovodsk**	**71.45**	**311**	⇓*i*P	**P**	**15 20 45.9**	**+1.0**
KIV				*i*		15 20 55.1	
KIV				*i*		15 21 01.5	
KIV				pmax	pmax		
	comp=Z,33nm,1.8s						
KIV				MLR	MLR		
	comp=Z,200nm,17.0s						
KBZ	**Khabaz**	**71.45**	**311**	P	**P**	**15 20 45.0**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	**Khabaz**	**71.45**	**311**	P	**P**	**15 20 45.0**	**+0.3**
KBZ	**Khabaz**	**71.45**	**311**	P	**P**	**15 20 45.0**	**+0.3**
	comp=Z,4.8nm,0.9s,baz=57,slow=3.1,SNR=11						
NVAR	**Mina Array Bea**	**73.70**	**54**	P	**P**	**15 20 59.7**	**+1.2**
NVAR	**Mina Array Bea**	**73.70**	**54**	P	**P**	**15 20 59.7**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=273,slow=8.6,SNR=4.6						
NB2	**NORSAR Subarra**	**74.14**	**338**	P	**P**	**15 21 00.4**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**74.14**	**338**	P	**P**	**15 21 00.4**	**-0.1**
NOA	**NORSAR Array B**	**74.14**	**338**	P	**P**	**15 21 00.4**	**-0.1**
	comp=Z,2.6nm,0.8s,baz=39,slow=5.8,SNR=8.1						
NOA				LR	LR	15 56 53.7	
	comp=Z,143nm,18.2s,baz=15,slow=38						
AKASG	**Malin Array Be**	**74.59**	**323**	P	**P**	**15 21 03.1**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**74.59**	**323**	P	**P**	**15 21 03.0**	**-0.1**
AKASG	**Malin Array Be**	**74.59**	**323**	P	**P**	**15 21 03.0**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=44,slow=5.5,SNR=7.6						
KIEV	**Kiev**	**74.61**	**323**	*e*P	**P**	**15 21 02.7**	**-0.6**
KIEV				*e*		15 21 12.0	
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KIEV	**Kiev**	**74.61**	**323**	*e*P	**P**	**15 21 02.7**	**-0.6**
	comp=Z,2.4nm,0.8s						
KIEV				*e*		15 21 12.0	
AK02	**Malin Array Si**	**74.63**	**323**	*e*P	**P**	**15 21 03.3**	**-0.2**
AK02				*e*		15 21 12.2	
PDAR	**Pinedale Array**	**76.43**	**46**	P	**P**	**15 21 14.8**	**+0.6**
PDAR	**Pinedale Array**	**76.43**	**46**	P	**P**	**15 21 14.8**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=292,slow=2.4,SNR=3.1						
GSC	**Goldstone**	**76.50**	**56**	*e*P	**P**	**15 21 13.7**	**-0.9**
GSC	**Goldstone**	**76.50**	**56**	*e*P	**P**	**15 21 13.7**	**-0.9**
KOLS	**Kolonicke sedl**	**79.08**	**325**	*e*P	**P**	**15 21 29.3**	**+0.7**
KOLS	**Kolonicke sedl**	**79.08**	**325**	*e*P	**P**	**15 21 29.3**	**+0.7**
BRTR	**Keskin Array B**	**79.38**	**312**	P	**P**	**15 21 30.4**	**-0.1**
BRTR	**Keskin Array B**	**79.38**	**312**	P	**P**	**15 21 30.4**	**-0.1**
	comp=Z,1.9nm,1.1s,baz=102,slow=5.2,SNR=6.8						
BRTR				LR	LR	16 05 54.3	
	comp=Z,51nm,18.3s,baz=233,slow=43						
CRVS	**Cervenica-Dubn**	**79.47**	**325**	*e*P	**P**	**15 21 30.9**	**+0.2**
CRVS	**Cervenica-Dubn**	**79.47**	**325**	*e*P	**P**	**15 21 30.8**	**+0.1**
VYHS	**Vyhne**	**80.95**	**326**	*e*P	**P**	**15 21 39.9**	**+1.2**
VYHS	**Vyhne**	**80.95**	**326**	*e*P	**P**	**15 21 39.9**	**+1.2**
EIL	**Élat**	**85.08**	**304**	LR	LR	16 00 24.1	
	comp=Z,26nm,19.5s,slow=36						
TXAR	**Lajitas Array**	**88.84**	**53**	P	**P**	**15 22 19.7**	**+0.9**
TXAR	**Lajitas Array**	**88.84**	**53**	P	**P**	**15 22 19.7**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=328,slow=6.6,SNR=3.0						
ESDC	**Sonseca Array**	**97.32**	**335**	LR	LR	16 11 05.9	
	comp=Z,64nm,18.2s,baz=145,slow=38						
LPAZ	**La Paz**	**145.38**	**61**	PKPbc	**PKPab**	**15 29 04.4**	**+0.9**
LPAZ	**La Paz**	**145.38**	**61**	PKPbc	**PKPab**	**15 29 04.4**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=333,slow=2.3,SNR=2.8						

CHN1	**Nanshi**	**1.91**	**217**	*e*P	**Pn**	**15 12 33.1**	**+0.5**
	baz=222						
CHN1				*e*S	**Sn**	**15 12 56.4**	**+0.3**
	baz=222						
HATJ	**Hateruma jima**	**1.96**	**109**	P	**Pn**	**15 12 33.3**	**+0.2**
HATJ				*e*S	**Sn**	**15 12 57.6**	**+0.6**
TWG	**Pinlang**	**2.00**	**199**	*e*P	**Pn**	**15 12 33.3**	**-0.5**
	baz=191						
TWG				*e*S	**Sn**	**15 12 57.1**	**-1.0**
	baz=191						
JKRS	**Kuro-shima**	**2.08**	**103**	P	**Pn**	**15 12 35.2**	**+0.4**
JKRS				*e*S	**Sn**	**15 13 00.0**	**0.0**
JJ	**Ishigaki jima**	**2.17**	**99**	P	**Pn**	**15 12 36.0**	**0.0**
JJ				*e*S	**Sn**	**15 13 01.1**	**-1.1**
ECL	**Taimali**	**2.25**	**200**	*e*P	**Pn**	**15 12 37.1**	**+0.1**
	baz=190						
ECL				*e*S	**Sn**	**15 13 02.9**	**-1.1**
	baz=190						
EAST	**Anshuo**	**2.48**	**201**	*e*P	**Pn**	**15 12 41.4**	**+1.1**
	baz=191						
EAST				*e*S	**Sn**	**15 13 09.1**	**-0.6**
	baz=191						

*ISCJB **27** 15:12:36.3±0.6, 40.86N±0.04×21.84E±0.04, h9km±6km, Error ellipse: s-maj=6.4km s-min=4.5km az=174.6*
*CSEM **27** 15:12:36.8±0.3, 40.83N×21.83E, h10km, MD2.8, Error ellipse: s-maj=8.8km s-min=5.9km az=171.0*
*THE **27** 15:12:36.2, 40.87N×21.84E, h12km±5km, ML1.9/4, Error ellipse: s-maj=5.7km s-min=0.4km az=284.0*
*ATH **27** 15:12:37.4, 40.73N×21.73E, h22km±6km, MD2.8/4*
*SKO **27** 15:12:37.4, 40.79N×21.74E, h15km*
ISC 27 15:12:36.3±0.9, **40.86N**±0.03×**21.84E**±0.02, **h14**km±8km, **n22**, σ0**957**/35, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FNA	**Florina**	**0.36**	**258**	P		**Pg**	**15 12 43.2**	**-0.4**
FNA				S		**Sg**	**15 12 48.9**	**+0.5**
FNA	**Florina**	**0.36**	**258**	*e*PB		**Pg**	**15 12 43.4**	**-0.2**
FNA				*e*SB		**Sg**	**15 12 49.0**	**+0.5**
FNA	**Florina**	**0.36**	**258**	*e*Pb		**Pg**	**15 12 43.4**	**-0.2**
FNA				*e*Sb		**Sg**	**15 12 49.0**	**+0.5**
BIA	**Bitola**	**0.42**	**293**	*e*Pg		**Pb**	**15 12 45.5**	**0.0**
BIA				*e*Sg		**Sb**	**15 12 51.5**	**-0.2**
BIA				*e*Lg		Lg	15 12 52.8	
	comp=N,26nm,0.3s							
BIA				*e*Lg		Lg	15 12 53.0	
	comp=E,22nm,0.2s							
BIA	**Bitola**	**0.42**	**293**	*e*Pg		**Pb**	**15 12 45.5**	**0.0**
BIA				*e*Sg		**Sb**	**15 12 51.5**	**-0.2**
BIA				*e*Lg		Lg	15 12 53.0	
	comp=E,22nm,0.2s							
GRG	**Griva**	**0.44**	**77**	P		**Pg**	**15 12 44.6**	**-0.5**
GRG	**Griva**	**0.44**	**77**	*e*PN		**Pn**	**15 12 48.5**	**+0.3**
GRG	**Griva**	**0.44**	**77**	P		**Pg**	**15 12 44.6**	**-0.5**
GRG	**Griva**	**0.44**	**77**	*e*Pn		**Pn**	**15 12 48.5**	**+0.3**
KZN	**Kozani**	**0.55**	**185**	P		**Pg**	**15 12 46.5**	**-0.7**
KZN				S		**Sg**	**15 12 55.2**	**+0.6**
KZN	**Kozani**	**0.55**	**185**	*e*PB		**Pg**	**15 12 46.3**	**-0.9**
KZN	**Kozani**	**0.55**	**185**	P		**Pg**	**15 12 46.5**	**-0.7**
KZN				S		**Sg**	**15 12 55.2**	**+0.6**
NEST	**Nestorio**	**0.75**	**234**	P		**Pg**	**15 12 50.6**	**-0.2**
NEST				S		**Sb**	**15 13 01.9**	**+0.8**
NEST	**Nestorio**	**0.75**	**234**	P		**Pg**	**15 12 50.6**	**-0.2**
NEST				S		**Sb**	**15 13 01.9**	**+0.8**
KNT	**Kendrikon**	**0.86**	**69**	P		**Pb**	**15 12 52.1**	**-0.9**
KNT				S		**Sg**	**15 13 04.7**	**+0.5**
KNT	**Kendrikon**	**0.86**	**69**	P		**Pb**	**15 12 52.1**	**-0.9**
KNT				S		**Sg**	**15 13 04.7**	**+0.5**
LIT	**Litokhoron**	**0.91**	**146**	P		**Pb**	**15 12 53.5**	**-0.3**
LIT				S		**Sn**	**15 13 07.0**	**-0.5**
LIT	**Litokhoron**	**0.91**	**146**	*e*PN		**Pn**	**15 12 54.6**	**0.0**
LIT	**Litokhoron**	**0.91**	**146**	P		**Pb**	**15 12 53.5**	**-0.3**
LIT	**Litokhoron**	**0.91**	**146**	*e*Pn		**Pn**	**15 12 54.6**	**0.0**
LIT				S		**Sn**	**15 13 07.0**	**-0.5**
PLG	**Polygyros**	**1.32**	**111**	*e*PN		**Pg**	**15 13 02.7**	**+1.1**
PLG	**Polygyros**	**1.32**	**111**	*e*Pn		**Pg**	**15 13 02.7**	**+1.1**

*NIED **27** 15:20:00, 37.60N×143.00E, h20km, Mw4.0 Best double couple: M0 1.14000×10^15 NP1:φs10.00000°, δ69.00000°, λ77.00000°. NP2:φs223.00000°, δ24.00000°, λ120.00000°.*
*IDC **27** 15:20:08.1±0.9, 37.44N×143.06E, h0km, mb3.7/11, mb1 3.8/17, mb1mx3.8/30, mbtmp3.8/17, ML3.4/5, MS3.3/2, Ms1 3.3/2, ms1mx2.6/40, Error ellipse: s-maj=22.7km s-min=17.4km az=101.0*
*ISCJB **27** 15:20:10.1±0.5, 37.51N±0.03×142.97E±0.05, h24km, mb3.6/11, MS3.1/1, Error ellipse: s-maj=5.6km s-min=4.2km az=17.3*
*JMA **27** 15:20:11.5±0.2, 37.55N×142.96E, h40km, M4.1*
ISC 27 15:20:12.0±0.8, **37.52N**±0.05×**142.96E**±0.08, **h24**km, **n32**, σ1°**25**/46, **mb3.8**/11, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIO	**Ouri**	**1.57**	**307**	P		**Pn**	**15 20 37.8**	**-0.6**
JIO				S		**Sn**	**15 20 57.0**	**-1.0**
JFK	**Kawauchi**	**1.66**	**265**	P		**Pn**	**15 20 38.9**	**-0.8**
JFK				*e*S		**Sn**	**15 20 59.1**	**-1.2**
JMM	**Marumori**	**1.75**	**282**	P		**Pn**	**15 20 40.0**	**-0.8**
JMM				*e*S		**Sn**	**15 21 01.1**	**-1.2**
ONAJ	**Iwakimizuishiy**	**1.77**	**257**	P		**Pn**	**15 20 40.7**	**-0.5**
JMK	**Ichinoseki**	**1.98**	**317**	P		**Pn**	**15 20 43.2**	**-0.7**
JMK				*e*S		**Sn**	**15 21 06.7**	**-1.2**
JFT	**Otama**	**2.08**	**271**	P		**Pn**	**15 20 45.8**	**+0.4**
JFT				*e*S		**Sn**	**15 21 10.7**	**+0.1**
JOM	**Ohasama**	**2.34**	**327**	P		**Pn**	**15 20 48.3**	**-0.7**
JOM				*e*S		**Sn**	**15 21 15.4**	**-1.7**
JYK	**Kaneyama**	**2.47**	**305**	P		**Pn**	**15 20 50.8**	**0.0**
JYK				*e*S		**Sn**	**15 21 20.0**	**-0.3**
JAG	**Ashikaga**	**3.01**	**250**	P		**Pn**	**15 20 58.4**	**+0.2**
JAG				*e*S		**Sn**	**15 21 33.5**	**0.0**
JANG	**Nango**	**3.06**	**339**	P		**Pn**	**15 20 58.6**	**-0.3**
JANG				*e*S		**Sn**	**15 21 33.1**	**-1.6**
BSO1	**Boso 1**	**3.28**	**210**	P		**Pn**	**15 21 01.4**	**0.0**
BSO1				*e*S		**Sn**	**15 21 39.0**	**-0.4**
JRY	**Ryogami san**	**3.58**	**246**	P		**Pn**	**15 21 06.5**	**+0.4**
JRY				*e*S		**Sn**	**15 21 46.7**	**-1.0**
JOD2	**Odawara 2**	**3.85**	**235**	P		**Pn**	**15 21 09.9**	**+0.2**
JOD2				S		**Sn**	**15 21 53.1**	**-1.1**
MJAR	**Matsushiro Arr**	**3.92**	**257**	Pn		**Pn**	**15 21 11.8**	**+1.1**
	5.0nm,0.3s,baz=86,slow=14,SNR=50							
MAT	**Matsushiro**	**3.92**	**257**	P		**Pn**	**15 21 12.1**	**+1.3**
MAT				S		**Sn**	**15 21 54.9**	**-1.1**
JHJ	**Hachijo jima 2**	**5.10**	**211**	Pn		**Pn**	**15 21 26.1**	**-0.8**
	8.7nm,0.3s,baz=129,slow=22,SNR=6.6							
JHJ						**Sn**	**15 22 20.5**	**-4.6**
	29nm,0.3s,baz=48,slow=24,SNR=6.7							
ASAJ	**Asahikawa**	**6.59**	**358**	Pn		**Pn**	**15 21 47.4**	**0.0**
	1.0nm,0.3s,baz=201,slow=13,SNR=13							
ASAJ						Sn		
	0.4nm,0.3s,baz=145,slow=14,SNR=3.2					**Sn**	**15 22 57.9**	**-3.9**
USRK	**Ussuriysk Arra**	**10.64**	**312**	Pn		**Pn**	**15 22 44.4**	**+1.6**
	0.2nm,0.3s,baz=117,slow=12,SNR=6.6							
USRK						LR		
	comp=Z,175nm,18.9s,baz=352,slow=37					LR	15 26 42.1	
JNU	**Nakatsue**	**10.80**	**250**	Pn		**Pn**	**15 22 44.0**	**-1.1**
	0.2nm,0.3s,baz=34,slow=3.6,SNR=2.2							
KSRS	**Korea Array**	**11.95**	**274**	Pn		**Pn**	**15 23 01.7**	**+1.0**
	0.1nm,0.3s,baz=90,slow=14,SNR=4.5							
SONM	**Songino Array**	**28.54**	**303**	P		**P**	**15 26 06.1**	**+0.2**
	1.6nm,0.9s,baz=101,slow=10,SNR=7.4							
SONM						LR	15 38 11.6	
	comp=Z,47nm,19.0s,baz=80,slow=38							
ZALV	**Zalesovo Beam**	**42.50**	**312**	P		**P**	**15 28 05.6**	**+0.5**
	0.7nm,0.3s,baz=86,slow=6.1,SNR=5.5							
MKAR	**Makanchi Array**	**44.90**	**302**	P		**P**	**15 28 24.9**	**+0.3**
	0.9nm,0.7s,baz=85,slow=10.0,SNR=11							
ILAR	**Eielson Array**	**48.42**	**33**	P		**P**	**15 28 52.1**	**+0.3**
	0.2nm,0.7s,baz=274,slow=5.9,SNR=5.2							
WRA	**Warramunga Arr**	**57.73**	**190**	P		**P**	**15 29 59.5**	**-1.3**
	0.5nm,0.6s,baz=8.7,slow=7.3,SNR=7.3							
ASAR	**Alice Springs**	**61.45**	**189**	P		**P**	**15 30 26.2**	**-0.3**
	0.4nm,0.9s,baz=2.7,slow=7.0,SNR=5.1							
YKA	**Yellowknife Ar**	**62.77**	**31**	P		**P**	**15 30 35.4**	**+0.5**
	0.1nm,0.5s,baz=302,slow=6.3,SNR=3.4							
FINES	**FINESS Array B**	**68.95**	**333**	P		**P**	**15 31 14.9**	**+0.2**
	1.2nm,0.7s,baz=36,slow=7.1,SNR=4.8							
KBZ	**Khabaz**	**71.51**	**311**	P		**P**	**15 31 31.8**	**+1.1**
	1.5nm,0.9s,baz=34,slow=3.6,SNR=3.8							

NB2	**NORSAR Subarra**	**74.20**	**338**	P		P	15 31 56.5	+10
	comp=Z,0.1nm,0.5s,baz=45,slow=6.2							
NOA	**NORSAR Array B**	**74.20**	**338**	P		**P**	**15 31 47.1**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=39,slow=5.7,SNR=2.8							
AKASG	**Malin Array Be**	**74.66**	**323**	P		**P**	**15 31 48.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=49,slow=10.0,SNR=3.2							

*ATH **27** 15:39:14.9, 38.05N±0.21E, h29km±2km, MD3.1/9*
*ISCJB **27** 15:39:15.8±0.7, 38.04N±0.06×21.57E±0.03, h26km±6km, Error ellipse: s-maj=9.5km s-min=4.0km az=169.5*
*CSEM **27** 15:39:15.6±0.2, 38.02N×21.58E, h20km, MD3.1, Error ellipse: s-maj=6.5km s-min=2.9km az=170.0*
*THE **27** 15:39:16.4, 38.07N×21.57E, h20km, ML2.7/4, Error ellipse: s-maj=0.8km s-min=0.3km az=176.0*
ISC 27 15:39:15.6±1.0, **38.02N**±0.05×**21.58E**±0.02, **h24**km±5km, **n30**, σ0**945**/55, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RLS	**Riolos of Patr**	**0.10**	**294**	P		**Pb**	**15 39 20.3**	**+0.2**
RLS				S		**Sb**	**15 39 22.9**	**-0.3**
RLS	**Riolos of Patr**	**0.10**	**294**	*e*PB		**Pb**	**15 39 20.3**	**+0.2**
RLS	**Riolos of Patr**	**0.10**	**294**	P		**Pb**	**15 39 20.3**	**+0.2**
RLS				S		**Sb**	**15 39 22.9**	**-0.3**
UPR	**University Cam**	**0.31**	**31**	P		**Pb**	**15 39 22.7**	**0.0**
UPR				S		**Sb**	**15 39 27.6**	**0.0**
UPR	**University Cam**	**0.31**	**31**	*e*PB		**Pb**	**15 39 22.6**	**-0.1**
UPR				*e*SB		**Sb**	**15 39 27.6**	**0.0**
UPR	**University Cam**	**0.31**	**31**	*e*Pb		**Pb**	**15 39 22.6**	**-0.1**
UPR				S		**Sb**	**15 39 27.6**	**0.0**
LAKA	**Lakka**	**0.38**	**55**	P		**Pb**	**15 39 24.1**	**+0.2**
LAKA				S		**Sb**	**15 39 29.8**	**+0.3**
LAKA	**Lakka**	**0.38**	**55**	*e*PB		**Pb**	**15 39 24.2**	**+0.3**
LAKA				*e*SB		**Sb**	**15 39 30.1**	**+0.6**
LAKA	**Lakka**	**0.38**	**55**	P		**Pb**	**15 39 24.1**	**+0.2**
LAKA				S		**Sb**	**15 39 29.8**	**+0.3**
LAKA				*e*Sb		**Sb**	**15 39 30.1**	**+0.6**
PSA1	**Psathopyrgos**	**0.39**	**38**	*e*PB		**Pb**	**15 39 23.7**	**-0.2**
PSA1				*e*SB		**Sb**	**15 39 29.7**	**+0.1**
KLV	**Kalavryta, Ach**	**0.45**	**87**	*e*PB		**Pb**	**15 39 23.4**	**-1.6**
KLV				*e*SB		**Sb**	**15 39 31.5**	**+0.1**
KLV	**Kalavryta, Ach**	**0.45**	**87**	*e*Pb		**Pb**	**15 39 23.4**	**-1.6**
KLV				*e*Sb		**Sb**	**15 39 31.5**	**+0.1**
EFP	**Efpalio**	**0.48**	**32**	P		**Pb**	**15 39 25.1**	**-0.4**
EFP				S		**Sb**	**15 39 32.2**	**0.0**
EFP	**Efpalio**	**0.48**	**32**	*e*PB		**Pb**	**15 39 25.2**	**-0.3**
EFP				*e*SB		**Sb**	**15 39 32.0**	**-0.2**
EFP	**Efpalio**	**0.48**	**32**	*e*Pb		**Pb**	**15 39 25.2**	**-0.3**
EFP				*e*Sb		**Sb**	**15 39 32.0**	**-0.2**
TRIZ	**Trizonia**	**0.52**	**48**	P		**Pb**	**15 39 26.1**	**0.0**
TRIZ				S		**Sb**	**15 39 33.9**	**+0.7**
TRIZ	**Trizonia**	**0.52**	**48**	*e*PN		**Pb**	**15 39 26.1**	**0.0**
TRIZ	**Trizonia**	**0.52**	**48**	P		**Pb**	**15 39 26.1**	**0.0**
TRIZ				S		**Sb**	**15 39 33.9**	**+0.7**
KALE	**Kalithea**	**0.58**	**50**	P		**Pb**	**15 39 27.0**	**-0.1**
KALE				S		**Sb**	**15 39 35.6**	**+0.6**
KALE	**Kalithea**	**0.58**	**50**	*e*PN		**Pb**	**15 39 27.0**	**-0.1**
KALE	**Kalithea**	**0.58**	**50**	P		**Pb**	**15 39 27.0**	**-0.1**
KALE				S		**Sb**	**15 39 35.6**	**+0.6**
GUR	**Goura**	**0.61**	**98**	P		**Pb**	**15 39 28.5**	**+0.8**
GUR				S		**Sn**	**15 39 37.6**	**-0.3**
GUR	**Goura**	**0.61**	**98**	P		**Pb**	**15 39 28.5**	**+0.8**
GUR				S		**Sn**	**15 39 37.6**	**-0.3**
KFL	**Anninata**	**0.63**	**279**	P		**Pb**	**15 39 28.2**	**+0.2**
KFL				S		**Sb**	**15 39 36.7**	**+0.2**
KFL	**Anninata**	**0.63**	**279**	P		**Pb**	**15 39 28.2**	**+0.2**
KFL				S		**Sb**	**15 39 36.7**	**+0.2**
VLS	**Valsamata**	**0.80**	**282**	P		**Pb**	**15 39 30.6**	**-0.2**
VLS				S		**Sn**	**15 39 42.4**	**-0.1**
VLS	**Valsamata**	**0.80**	**282**	*e*PN		**Pb**	**15 39 30.4**	**-0.4**
VLS	**Valsamata**	**0.80**	**282**	P		**Pb**	**15 39 30.6**	**-0.2**
VLS				S		**Sn**	**15 39 42.4**	**-0.1**
AGG	**Agios Georgios**	**1.16**	**30**	P		**Pn**	**15 39 36.4**	**0.0**
AGG	**Agios Georgios**	**1.16**	**30**	P		**Pn**	**15 39 36.4**	**0.0**

*NOU **27** 15:39:40.9±0.8, 20.34S×171.28E, h30km, MD3.2, ML3.7, MS4.0*
*IDC **27** 15:39:41.7±8.2, 22.43S×171.52E, h36km±61km, mb4.1/11, mb1 4.3/12, mb1mx4.1/20, mbtmp4.2/12, ML4.9/1, MS3.5/10, Ms1 3.5/10, ms1mx3.3/31, Error ellipse: s-maj=43.0km s-min=26.2km az=132.0*
*BJI **27** 15:39:45.3, 22.95S×171.34E, h84km, mB4.9/4, mb4.7/16, Ms4.9/1, Ms7 4.5/1*
*NEIC **27** 15:39:47.4±1.4, 22.38S×171.28E, h81km±11km, mb4.5/6, Error ellipse: s-maj=20.9km s-min=10.1km az=158.0*
*ISCJB **27** 15:39:48.4±0.6, 22.45S±0.1×171.16E±0.07, h98km, mb4.4/22, Error ellipse: s-maj=15.7km s-min=8.0km az=161.4*
*AUST **27** 15:39:54.3, 22.48S×172.16E, h200km*
ISC 27 15:39:49.9±0.6, **22.5S**±0.1×**171.17E**±0.06, **h98**km, **n81**, σ1°**83**/76, **mb4.3**/22, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BAYA	**Yate Dam**	**3.98**	**273**	*e*P		Pn	15 40 45.8	-3.0
BAYA				AMP			15 41 38.9	
	comp=Z,45nm,5.6s							
PLUM	**Mont Dore**	**4.20**	**272**	*e*P		Pn	15 40 48.8	-2.9
NORM	**Noumea**	**4.35**	**272**	*e*P		Pn	15 40 50.5	-3.2
DZM	**Mont Dzumac**	**4.40**	**274**	*e*Pn		Pn	15 40 50.5	-4.0
	comp=Z,131nm,0.2s							
DZM				*e*Sn		**Sn**	**15 41 42.0**	**-2.7**
	comp=Z,310nm,0.2s							
DZM	**Mont Dzumac**	**4.40**	**274**	*e*P		Pn	15 40 51.1	-3.4
DZM				*e*S		**Sn**	**15 41 42.0**	**-2.7**
DZM				AMP			15 41 47.1	
	comp=Z,4μm,10.7s							
DZM	**Mont Dzumac**	**4.40**	**274**	Pn		**Pn**	**15 40 51.7**	**-2.8**
DZM				Sn		**Sn**	**15 41 43.6**	**-1.1**
DZM	**Mont Dzumac**	**4.40**	**274**	Pn		**Pn**	**15 40 51.7**	**-2.8**
	comp=Z,53nm,0.3s,baz=133,slow=17,SNR=1901							
DZM				Sn		**Sn**	**15 41 43.6**	**-1.1**
	comp=Z,91nm,0.3s,baz=114,slow=18,SNR=13							
NOUC	**Port Laguerre**	**4.52**	**273**	*e*P		Pn	15 40 53.0	-3.1
NOUC				AMP			15 41 52.2	
	comp=Z,224nm,0.6s							
MSVF	**Nonsavu**	**7.99**	**55**	*e*P		**Pn**	**15 41 40.4**	**-2.9**
	comp=Z,221nm,1.4s							
RAO	**Raoul Island**	**11.93**	**127**	LR		LR	15 45 04.7	
	comp=Z,135nm,22.0s,baz=99,slow=28							
URZ	**Urewera**	**16.56**	**163**	LR		LR	15 48 29.0	
	comp=Z,213nm,18.2s,baz=352,slow=32							
NIUE	**Niue**	**17.99**	**83**	S		Sn	15 46 51.2	-23
	baz=17,SNR=12							
AFI	**Afiamalu**	**18.28**	**65**	LR		LR	15 49 22.4	
	comp=Z,218nm,20.6s,baz=224,slow=32							
EIDS	**Eidsvold**	**18.60**	**257**	P		**Pn**	**15 44 05.5**	**+4.6**
	baz=20,SNR=3.8							
ARMA	**Armidale**	**19.20**	**241**	P		Pn	15 44 16.6	+8.5
	baz=20,SNR=4.4							
RMQ	**Roma**	**20.79**	**254**	P		Pn	15 44 27.0	+0.4
	baz=22,SNR=5.7							
RPZ	**Rata Peaks**	**21.21**	**180**	LR		LR	15 51 28.6	
	comp=Z,144nm,18.8s,baz=32,slow=33							
CTA	**Charters Tower**	**23.34**	**271**	P		**P**	**15 44 50.4**	**+0.7**
CTA	**Charters Tower**	**23.34**	**271**	P		**P**	**15 44 50.4**	**+0.7**
	comp=Z,4.4nm,0.5s,baz=101,slow=9.2,SNR=10							
CTA				LR		LR	15 52 21.5	
	comp=Z,112nm,18.1s,baz=247,slow=32							
CTAO	**Charters Tower**	**23.34**	**271**	*e*P		**P**	**15 44 50.2**	**+0.5**
	comp=Z,18nm,0.9s							
CMSA	**Cobar Meteorol**	**24.40**	**243**	P		**P**	**15 45 01.0**	**+1.8**
	baz=25,SNR=5.6							
QLP	**Quilpie**	**24.83**	**255**	P		**P**	**15 45 04.6**	**+1.4**
	baz=26,SNR=10							
MTSU	**Mount Surprise**	**25.54**	**275**	P		**P**	**15 45 11.2**	**+1.6**
	baz=26,SNR=88							
PMG	**Port Moresby**	**26.43**	**296**	*e*P		**P**	**15 45 17.6**	**0.0**
PMG	**Port Moresby**	**26.43**	**296**	P		**P**	**15 45 17.4**	**-0.3**
	comp=Z,12nm,0.7s,baz=109,slow=5.1,SNR=12							
COEN	**Coen**	**27.87**	**283**	P		**P**	**15 45 32.1**	**+1.6**
	baz=29,SNR=7.4							
STKA	**Stephens Creek**	**27.87**	**244**	P		**P**	**15 45 31.7**	**+1.3**
STKA	**Stephens Creek**	**27.87**	**244**	P		**P**	**15 45 31.3**	**+0.8**
	comp=Z,2.5nm,1.0s,baz=142,slow=18,SNR=6.1							
STKA				LR		LR	15 55 26.5	
	comp=Z,81nm,18.7s,baz=224,slow=34							
AS31	**Alice Springs**	**34.25**	**261**	*e*P		**P**	**15 46 26.5**	**-0.2**
ASAR	**Alice Springs**	**34.25**	**261**	P		**P**	**15 46 26.8**	**+0.1**

ASAR	**Alice Springs**	**34.25**	**261**	P		**P**	**15 46 26.8**	**+0.1**
	comp=Z,12nm,0.8s,baz=98,slow=9.2,SNR=126							
ASAR				LR		LR	15 59 36.7	
	comp=Z,79nm,19.8s,baz=102,slow=35							
WRAB	**Tennant Creek**	**34.37**	**267**	*e*P		**P**	**15 46 26.9**	**-0.9**
	comp=Z,3.4nm,0.3s							
WRA	**Warramunga Arr**	**34.38**	**267**	P		**P**	**15 46 27.1**	**-0.7**
WRA	**Warramunga Arr**	**34.38**	**267**	P		**P**	**15 46 27.1**	**-0.7**
	comp=Z,3.4nm,0.4s,baz=96,slow=8.4,SNR=150							
PPT2	**Papeete2**	**37.12**	**90**	*e*LR		LR	15 56 45.4	
	comp=Z,198nm,26.8s							
PPT2	**Papeete2**	**37.12**	**90**	*e*LR		LR	15 46 18.7	
	comp=Z,87nm,25.0s							
KDU	**Kakadu**	**38.05**	**278**	P		**P**	**15 46 59.1**	**0.0**
	baz=39,SNR=3.1							
MTN	**Manton Dam**	**39.23**	**277**	P		**P**	**15 47 08.6**	**-0.4**
	baz=40,SNR=10							
FAKI	**Fak Fak**	**42.44**	**292**	P		**P**	**15 47 35.1**	**-0.3**
	baz=43,SNR=4.6							
FITZ	**Fitzroy Crossi**	**42.81**	**267**	P		**P**	**15 47 39.2**	**+0.9**
	baz=44,SNR=16							
MEEK	**Meekatharra**	**47.72**	**254**	P		**P**	**15 48 17.1**	**0.0**
	baz=48,SNR=15							
KLBR	**Kellerberrin**	**48.05**	**247**	P		**P**	**15 48 19.6**	**+0.1**
	baz=49,SNR=8.4							
BLDU	**Balliuu**	**49.01**	**248**	P		**P**	**15 48 26.7**	**-0.2**
	baz=50,SNR=10							
MORW	**Morawa**	**49.72**	**250**	P		**P**	**15 48 32.5**	**+0.1**
	baz=50,SNR=4.3							
LUWI	**Luwuk**	**51.62**	**287**	P		**P**	**15 48 43.7**	**-3.1**
	baz=52,SNR=3.1							
VNDA	**Vanda**	**55.31**	**182**	LR		LR	16 10 45.5	
	comp=Z,55nm,19.3s,baz=194,slow=34							
SBA	**Scott Base**	**55.50**	**181**	*e*P		**P**	**15 49 13.9**	**-0.2**
	comp=Z,4.5nm,1.0s							
KKM	**Kota Kinabalu**	**60.76**	**291**	*e*P		**P**	**15 49 52.7**	**+0.8**
	comp=Z,12nm,0.6s							
KKM	**Kota Kinabalu**	**60.76**	**291**	P		**P**	**15 49 52.8**	**+0.9**
	baz=62,SNR=12							
KSM	**Kuching**	**63.86**	**283**	P		**P**	**15 50 13.4**	**+0.9**
	baz=65,SNR=22							
MJAR	**Matsushiro Arr**	**66.42**	**331**	P		**P**	**15 50 28.0**	**-0.6**
MJAR	**Matsushiro Arr**	**66.42**	**331**	P		**P**	**15 50 28.0**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=160,slow=7.5,SNR=3.7							
KSRS	**Korea Array**	**72.16**	**325**	LR		LR	16 22 13.7	
	comp=Z,15nm,18.4s,baz=104,slow=35							
QIZ	**Qiongzhong**	**72.73**	**300**	P		**P**	**15 51 06.3**	**-1.5**
QIZ				S		**S**	**16 00 28.5**	**+2.7**
NJ2	**Nanjing**	**73.76**	**316**	*e*P		**P**	**15 51 15.0**	**+1.5**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
PETK	**Petropavlovsk-**	**76.15**	**352**	P		**P**	**15 51 25.7**	**-1.1**
PETK	**Petropavlovsk-**	**76.15**	**352**	P		**P**	**15 51 25.7**	**-1.1**
	comp=Z,5.1nm,1.0s,baz=160,slow=6.9,SNR=6.0							
PETK				LR		LR	16 23 03.9	
	comp=Z,19nm,18.2s,baz=73,slow=34							
MDJ	**Mudanjiang**	**76.80**	**331**	P		**P**	**15 51 32.5**	**+1.9**
MDJ				pmax		pmax		
	comp=Z,3.0nm,1.5s							
MDJ				pmax		pmax		
	comp=Z,83nm,5.5s							
CN2	**Changchun**	**78.13**	**328**	*e*P		P	15 51 42.0	+3.9
GYA	**Guiyang**	**79.13**	**305**	*e*P		**P**	**15 51 46.0**	**+1.9**
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
CMAR	**Chiang Mai Arr**	**81.46**	**294**	P		**P**	**15 51 58.7**	**+2.0**
CMAR	**Chiang Mai Arr**	**81.46**	**294**	P		**P**	**15 51 58.7**	**+2.0**
	comp=Z,3.9nm,0.9s,baz=137,slow=3.9,SNR=27							
KMI	**Kunming**	**81.49**	**302**	P		**P**	**15 51 59.3**	**+2.3**
KMI				pmax		pmax		
	comp=Z,8.0nm,1.5s							
CHTO	**Chiang Mai**	**81.62**	**294**	*e*P

mb3.9/16, Error ellipse: s-maj=15.6km s-min=7.5km az=137.1

IDC ***27*** *19:58:41.3±1.6, 19°.56S×177°.67W, h349km±16km, mb3.7/16, mb1 3.9/19, mb1mx3.8/24, mbtmp3.7/19, Error ellipse: s-maj=14.3km s-min=8.8km az=120.0*

ISC 27 15:58:41.3±0.5, 19°.5S±0°.1×177°.7W±0°.1, h350km, n79, σ0§80/80, mb4.0/16, 16C-8D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.97**	**46**	P	**Pn**	**16 00 36.6**	**+1.3**
	4.5nm,0.3s,baz=239,slow=19,SNR=6.6						
AFI				S	**S**	**16 02 06.3**	**-1.9**
	16nm,0.3s,baz=109,slow=20,SNR=9.7						
DZM	**Mont Dzumac**	**15.04**	**258**	P	**Pn**	**16 01 58.5**	**-0.3**
	0.3nm,0.3s,baz=75,slow=19,SNR=6.7						
URZ	**Urewera**	**19.19**	**193**	P	**P**	**16 02 39.1**	**-1.6**
	3.0nm,0.3s,baz=7.1,slow=8.1,SNR=19						
URZ				S	**S**	**16 05 58.4**	**-0.4**
	1.0nm,0.3s,baz=86,slow=19,SNR=4.9						
STKA	**Stephens Creek**	**38.47**	**243**	P	**P**	**16 05 31.6**	**+0.7**
	2.2nm,0.5s,baz=73,slow=14,SNR=18						
ASAR	**Alice Springs**	**45.02**	**256**	P	**P**	**16 06 23.7**	**0.0**
	9.2nm,0.6s,baz=90,slow=8.4,SNR=195						
WRA	**Warramunga Arr**	**45.02**	**261**	P	**P**	**16 06 23.4**	**-0.2**
	3.3nm,0.5s,baz=98,slow=5.9,SNR=72						
VNDA	**Vanda**	**58.89**	**185**	P	**P**	**16 08 05.1**	**+1.2**
	1.8nm,0.6s,baz=352,slow=8.2,SNR=12						
MJAR	**Matsushiro Arr**	**69.61**	**323**	P	**P**	**16 09 13.0**	**-0.6**
	7.1nm,0.5s,baz=151,slow=6.1,SNR=28						
MAT	**Matsushiro**	**69.61**	**323**	P	**P**	**16 09 13.1**	**-0.5**
PETK	**Petropavlovsk-**	**75.42**	**345**	P	**P**	**16 09 47.1**	**0.0**
	3.5nm,0.5s,baz=127,slow=8.3,SNR=12						
KSRS	**Korea Array**	**76.36**	**318**	P	**P**	**16 09 54.6**	**+1.9**
	0.4nm,0.4s,baz=124,slow=6.2,SNR=5.8						
USRK	**Ussuriysk Arra**	**78.33**	**326**	P	**P**	**16 10 05.1**	**+1.7**
	1.0nm,0.7s,baz=146,slow=8.7,SNR=5.3						
PFO	**Pinyon Flat Ob**	**78.73**	**48**	P	**P**	**16 10 06.5**	**+0.5**
	3.5nm,0.8s,baz=259,slow=5.2,SNR=3.7						
YBH	**Yreka Blue Hor**	**79.37**	**39**	P	**P**	**16 10 10.2**	**+0.9**
	2.2nm,0.7s,baz=198,slow=3.2,SNR=4.1						
NVAR	**Mina Array Bea**	**80.14**	**43**	P	**P**	**16 10 14.3**	**+0.8**
	1.9nm,0.7s,baz=227,slow=8.7,SNR=9.5						
TXAR	**Lajitas Array**	**86.30**	**57**	P	**P**	**16 10 46.0**	**+1.2**
	1.8nm,0.7s,baz=218,slow=6.2,SNR=16						
ILAR	**Eielson Array**	**87.32**	**13**	P	**P**	**16 10 47.4**	**-1.4**
	1.5nm,0.4s,baz=220,slow=4.9,SNR=55						
PDAR	**Pinedale Array**	**88.07**	**43**	P	**P**	**16 10 52.5**	**-0.6**
	1.0nm,0.7s,baz=217,slow=3.3,SNR=9.3						
CMAR	**Chiang Mai Arr**	**90.06**	**289**	P	**P**	**16 11 03.5**	**+0.9**
	0.9nm,0.9s,baz=134,slow=3.2,SNR=7.9						
YKA	**Yellowknife Ar**	**95.53**	**25**	P	**P**	**16 11 25.6**	**-1.0**
	0.5nm,0.7s,baz=244,slow=4.4,SNR=12						
ZALV	**Zalesovo Beam**	**109.92**	**321**	PKiKP	**PKiKP**	**16 16 29.1**	**-1.9**
	0.4nm,0.3s,baz=146,slow=0.5,SNR=2.4						
MKAR	**Makanchi Array**	**110.75**	**314**	PKiKP	**PKiKP**	**16 16 31.0**	**-1.9**
	0.7nm,0.5s,baz=64,slow=3.4,SNR=19						
ARCES	**ARCESS Array B**	**128.03**		PKP	**PKPdf**	**16 17 04.5**	**-0.8**
	3.5nm,0.6s,baz=48,slow=1.3,SNR=24						
FINES	**FINESS Array B**	**134.93**	**344**	PKP	**PKPdf**	**16 17 18.1**	**-0.4**
	2.0nm,0.8s,baz=45,slow=0.8,SNR=6.1						
NB2	**NORSAR Subarra**	**138.06**	**354**	PKP	**PKPdf**	**16 17 26.0**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**138.06**	**354**	PKP	**PKPdf**	**16 17 23.3**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=16,slow=4.5,SNR=4.4						
AKASG	**Malin Array Be**	**142.31**	**332**	PKiKP	PKPpre	16 17 27.0	
	comp=Z,1.9nm,0.4s,baz=42,slow=4.0,SNR=12						
BSEG	**Bad Segeberg**	**145.12**	**352**	*e*PKPbc	**PKPbc**	**16 17 37.5**	**0.0**
TLCR		**146.29**	**325**	⇑*i*P	**PKPbc**	**16 17 41.4**	**+0.2**
BURAR	**Bucovina Array**	**146.36**	**332**	⇓*i*P	**PKPbc**	**16 17 40.9**	**-0.6**
BRTR	**Keskin Array B**	**146.40**	**314**	PKPbc	**PKPbc**	**16 17 41.1**	**-0.8**
	comp=Z,4.2nm,0.5s,baz=137,slow=4.7,SNR=26						
TESR		**146.50**	**329**	⇑*i*P	**PKPbc**	**16 17 41.6**	**-0.2**
CFR	**Carcaliu**	**146.66**	**326**	⇑*i*P	**PKPbc**	**16 17 42.2**	**-0.1**
VRI	**Vrincioaia**	**146.91**	**328**	⇓*i*P	**PKPbc**	**16 17 43.3**	**+0.3**
TIRR	**Tirgusor**	**146.98**	**325**	⇓*i*P	**PKPbc**	**16 17 43.2**	**0.0**
TRPA	**Tarpa**	**147.10**	**335**	⇑*i*P	**PKPbc**	**16 17 43.0**	**-0.4**
TRPA	**Tarpa**	**147.10**	**335**	⇑*e*	**PKPbc**	**16 17 43.3**	**-0.1**
CLL	**Collm**	**147.19**	**348**	*e*PKPbc	**PKPbc**	**16 17 43.2**	**-0.3**
UPC	**Upice**	**147.24**	**344**	*e*PKP	**PKPbc**	**16 17 43.6**	**-0.1**
UPC				*ex*	x	16 17 46.8	
DPC	**Dobruska-Polom**	**147.30**	**343**	*e*PKP	**PKPbc**	**16 17 43.8**	**-0.1**
DPC				*ex*	x	16 17 47.1	
BRG	**Berggiesshubel**	**147.40**	**346**	*e*P	**PKPbc**	**16 17 43.9**	**-0.2**
	comp=Z,8.1nm,1.0s						
BRG	**Berggiesshubel**	**147.40**	**346**	*e*PKPbc	**PKPbc**	**16 17 44.0**	**-0.2**
DOPR	**Dopca**	**147.50**	**329**	⇓*i*P	**PKPbc**	**16 17 44.9**	**+0.3**
ISR	**Istrita**	**147.53**	**327**	⇓*i*P	**PKPbc**	**16 17 45.0**	**+0.3**
MLR	**Muntele Rosu**	**147.57**	**328**	⇑*i*P	**PKPbc**	**16 17 44.5**	**-0.4**
PVCC	**Panska Ves**	**147.58**	**345**	*e*PKP	**PKPbc**	**16 17 45.3**	**+0.7**
PVCC				*ex*	x	16 17 48.2	
PRU	**Pruhonice**	**148.09**	**345**	*e*PKP	**PKPbc**	**16 17 45.9**	**0.0**
PRU				*ex*	x	16 17 49.9	
MOX	**Moxa**	**148.09**	**349**	*e*PKPbc	**PKPbc**	**16 17 45.8**	**-0.2**
WERD	**Werda**	**148.15**	**348**	*e*PKPbc	**PKPbc**	**16 17 45.9**	**-0.2**
TANN	**Tannenbergstha**	**148.16**	**348**	*e*PKPbc	**PKPbc**	**16 17 45.9**	**-0.3**
GUNZ	**Gunzen**	**148.22**	**348**	*e*PKPbc	**PKPbc**	**16 17 46.2**	**-0.1**
WERN	**Wernitzgruen**	**148.29**	**348**	*e*PKPbc	**PKPbc**	**16 17 46.3**	**-0.2**
PSZ	**Piszkesteto**	**148.29**	**337**	⇓*i*P	**PKPbc**	**16 17 46.8**	**+0.2**
PSZ	**Piszkesteto**	**148.29**	**337**	⇑*e*	**PKPbc**	**16 17 46.6**	**0.0**
MANZ	**Manzenberg**	**148.63**	**348**	*e*PKPbc	**PKPbc**	**16 17 47.3**	**-0.1**
ROTZ	**Rotzenmuhle**	**148.82**	**348**	*e*PKPbc	**PKPbc**	**16 17 47.7**	**-0.1**
TNS	**Taunus Mts**	**149.00**	**352**	*e*PKPbc	**PKPbc**	**16 17 48.1**	**-0.2**
GRF	**Grafenberg Arr**	**149.08**	**349**	*e*PKPbc	**PKPbc**	**16 17 48.3**	**-0.2**
KHC	**Kasperske Hory**	**149.12**	**346**	*e*PKP	**PKPbc**	**16 17 48.5**	**-0.1**
GZR	**Gura Zlata**	**149.15**	**331**	⇑*i*P	**PKPbc**	**16 17 47.9**	**-0.9**
GEC2	**GERESS Array S**	**149.35**	**345**	*e*PKPbc	**PKPbc**	**16 17 48.8**	**-0.5**
GERES	**GERESS Array B**	**149.35**	**345**	PKPbc	**PKPbc**	**16 17 49.0**	**-0.3**
	comp=Z,7.1nm,0.9s,baz=17,slow=1.8,SNR=22						
BZS	**Buzias**	**149.49**	**333**	⇑*i*P	**PKPbc**	**16 17 48.6**	**-1.0**
CONA	**Conrad Observa**	**149.62**	**342**	⇓*i*PKPbc	**PKPbc**	**16 17 49.8**	**-0.1**
SOP	**Sopron**	**149.62**	**341**	⇑*e*	**PKPbc**	**16 17 49.9**	**+0.1**
MOA	**Molln**	**150.13**	**344**	⇑*i*PKPbc	**PKPbc**	**16 17 50.6**	**-0.4**
FUR	**Furstenfeldbru**	**150.53**	**348**	*e*PKPbc	**PKPbc**	**16 17 51.9**	**-0.1**
BFO	**Black Forest**	**150.87**	**352**	*e*PKPbc	**PKPbc**	**16 17 52.4**	**-0.4**
PERS	**Pernice**	**151.00**	**342**	*i* PKPbc	**PKPbc**	**16 17 52.4**	**-0.8**
VTS	**Vitosha**	**151.02**	**327**	⇑*i*P	**PKPbc**	**16 17 53.4**	**-0.1**
KBA	**Koelnbreinsper**	**151.09**	**344**	⇑*i*PKPbc	**PKPbc**	**16 17 52.4**	**-1.1**
WTTA	**Wattenberg**	**151.31**	**347**	⇑*i*PKPbc	**PKPbc**	**16 17 53.0**	**-1.0**
GCIS	**Gornji Cirnik**	**151.53**	**340**	*i* PKPbc	**PKPbc**	**16 17 54.0**	**-0.3**
ABTA	**Abfaltersbach**	**151.60**	**345**	⇓*i*PKPbc	**PKPbc**	**16 17 53.4**	**-1.1**
DAVA	**Damuels**	**151.64**	**349**	⇑*i*PKPbc	**PKPbc**	**16 17 54.4**	**-0.4**
LJU	**Ljubljana**	**151.71**	**342**	*i* PKPbc	**PKPbc**	**16 17 54.3**	**-0.5**
FETA	**Feichten**	**151.74**	**348**	⇑*i*PKPbc	**PKPbc**	**16 17 53.9**	**-1.1**
VOJS	**Vojsko**	**151.91**	**343**	*i* PKPbc	**PKPbc**	**16 17 54.2**	**-1.1**
TORD	**Torodi Ar. Bea**	**173.62**	**175**	PKPab	**PKPab**	**16 19 41.5**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=179,slow=5.8,SNR=2.1						

ISCJB ***27*** *16:01:34.9±0.4, 40°.58N±0°.03×30°.33E±0°.04, h7km±5km, Error ellipse: s-maj=6.7km s-min=4.0km az=38.9*

DDA ***27*** *16:01:34.4, 40°.63N×30°.33E, h7km, MD2.8*

ISK ***27*** *16:01:34.4, 40°.56N×30°.32E, h4km, MD2.8*

CSEM ***27*** *16:01:35.0±0.2, 40°.58N×30°.34E, h8km, MD2.8, Error ellipse: s-maj=4.7km s-min=3.1km az=33.0*

ISC 27 16:01:34.9±0.8, 40°.58N±0°.02×30°.31E±0°.02, h9km±6km, n43, σ1§07/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPNC	**Sapanca-Adapaz**	**0.11**	**358**	*e*PG	**Pg**	**16 01 36.9**	**-0.6**
SPNC				*e*SG	**Sg**	**16 01 40.2**	**+0.9**
SPNC	**Sapanca-Adapaz**	**0.11**	**358**	*e*Pg	**Pg**	**16 01 36.9**	**-0.6**
SPNC				*e*Sg	**Sg**	**16 01 40.2**	**+0.9**
GULT	**Gulveren**	**0.21**	**133**	*e*PG	**Pg**	**16 01 38.9**	**-0.3**
GULT				*e*SG	**Sg**	**16 01 43.2**	**+1.0**
GULT	**Gulveren**	**0.21**	**133**	*e*Pg	**Pg**	**16 01 38.9**	**-0.3**
GULT				*e*Sg	**Sg**	**16 01 43.2**	**+1.0**
GPA	**Golpazari**	**0.29**	**181**	*e*PG	**Pg**	**16 01 40.6**	**-0.1**
GPA	**Golpazari**	**0.29**	**181**	*e*Pg	**Pg**	**16 01 40.6**	**-0.1**
HENT	**Hendek**	**0.51**	**61**	*i* P	**Pg**	**16 01 44.1**	**-0.7**
HENT				*i* S	**Sg**	**16 01 50.9**	**-0.6**
HENT	**Hendek**	**0.51**	**61**	*i* P	**Pg**	**16 01 44.1**	**-0.7**
HENT				*i* S	**Sg**	**16 01 50.9**	**-0.6**
MDUB	**Mudurnu**	**0.68**	**99**	*e*PG	**Pg**	**16 01 47.8**	**-0.3**
MDUB				*e*SG	**Sb**	**16 01 58.0**	**-0.6**
MDUB	**Mudurnu**	**0.68**	**99**	*e*Pg	**Pg**	**16 01 47.8**	**-0.3**
MDUB				*e*Sg	**Sb**	**16 01 58.0**	**-0.6**
BORA	**Eskisehir**	**0.70**	**171**	*i* P	**Pb**	**16 01 49.1**	**-0.3**
BORA				*i* S	**Sg**	**16 01 52.0**	**-5.7**
BORA	**Eskisehir**	**0.70**	**171**	*i* P	**Pb**	**16 01 49.1**	**-0.3**
YLV	**Yalova**	**0.72**	**269**	*e*PG	**Pg**	**16 01 48.8**	**+0.1**
YLV	**Yalova**	**0.72**	**269**	*e*Pg	**Pg**	**16 01 48.8**	**+0.1**
SILT	**Sile**	**0.77**	**319**	*e*PG	**Pb**	**16 01 50.1**	**-0.3**
SILT	**Sile**	**0.77**	**319**	*e*Pg	**Pb**	**16 01 50.1**	**-0.3**
BUY	**Buyukada**	**0.95**	**287**	*i* P	**Pg**	**16 01 52.7**	**-0.4**
BUY				*i* S	**Sb**	**16 02 05.9**	**-0.2**
BUY	**Buyukada**	**0.95**	**287**	*i* P	**Pg**	**16 01 52.7**	**-0.4**
BUY	**Buyukada**	**0.95**	**287**	*e*Pg	**Pb**	**16 01 53.7**	**+0.2**
BUY				*i* S	**Sb**	**16 02 05.9**	**-0.2**
ISK	**Istanbul-Kandi**	**1.07**	**298**	*e*PN	**Pn**	**16 01 56.1**	**+0.1**
ISK	**Istanbul-Kandi**	**1.07**	**298**	*e*Pn	**Pn**	**16 01 56.1**	**+0.1**
ARMT	**Armutlu**	**1.10**	**270**	*e*PN	**Pg**	**16 01 55.9**	**-0.2**
ARMT				*e*SN	**Sn**	**16 02 11.4**	**-0.5**
ARMT	**Armutlu**	**1.10**	**270**	*e*Pn	**Pg**	**16 01 55.9**	**-0.2**
ARMT				*e*Sn	**Sn**	**16 02 11.4**	**-0.5**
MDNY	**Mudanya-Bursa**	**1.11**	**260**	*e*PN	**Pn**	**16 01 56.6**	**0.0**
MDNY	**Mudanya-Bursa**	**1.11**	**260**	*e*Pn	**Pn**	**16 01 56.6**	**0.0**
ESKT	**Eskisehir**	**1.13**	**159**	*e*PN	**Pb**	**16 01 56.2**	**-0.5**
ESKT	**Eskisehir**	**1.13**	**159**	*e*Pn	**Pb**	**16 01 56.2**	**-0.5**
SEYT	**Eskypehyr**	**1.13**	**159**	*i* P	**Pb**	**16 01 56.4**	**-0.3**
SEYT				*i* S	**Sn**	**16 02 16.1**	**+3.3**
SEYT	**Eskypehyr**	**1.13**	**159**	*i* P	**Pb**	**16 01 56.4**	**-0.3**
SEYT				*i* S	**Sn**	**16 02 16.1**	**+3.3**
TVSB	**Tavsanli**	**1.30**	**210**	*e*PN	**Pg**	**16 01 60.0**	**+0.1**
TVSB	**Tavsanli**	**1.30**	**210**	*e*Pn	**Pg**	**16 02 00.0**	**+0.1**
SVRH	**Sivrihisar-ESK**	**1.46**	**140**	*e*PN	**Pb**	**16 02 02.0**	**-0.3**
SVRH	**Sivrihisar-ESK**	**1.46**	**140**	*e*Pn	**Pb**	**16 02 02.0**	**-0.3**
CTKS	**Kestanelik-??a**	**1.52**	**296**	*e*PN	**Pg**	**16 02 04.0**	**0.0**
CTKS	**Kestanelik-??a**	**1.52**	**296**	*e*Pn	**Pg**	**16 02 04.0**	**0.0**
ALT	**Altintas**	**1.53**	**186**	*e*PN	**Pn**	**16 02 03.0**	**+0.5**
ALT	**Altintas**	**1.53**	**186**	*e*Pn	**Pn**	**16 02 03.0**	**+0.5**
ELBA	**Catalca**	**1.54**	**292**	*i* P	**Pb**	**16 02 03.7**	**+0.2**
ELBA				*i* S	**Sg**	**16 02 24.1**	**-0.2**
ELBA	**Catalca**	**1.54**	**292**	*i* P	**Pb**	**16 02 03.7**	**+0.2**
ELBA				*i* S	**Sg**	**16 02 24.1**	**-0.2**
DURS	**Dursunbey**	**1.71**	**236**	*i* P	**Pg**	**16 02 07.5**	**-0.2**
DURS	**Dursunbey**	**1.71**	**236**	*i* P	**Pg**	**16 02 07.5**	**-0.2**
SLVT	**Silivri**	**1.72**	**293**	*e*PN	**Pb**	**16 02 06.3**	**-0.3**
SLVT	**Silivri**	**1.72**	**293**	*e*Pn	**Pb**	**16 02 06.3**	**-0.3**

WEL 27 16:13:27.1±0.8, 36°.18S×177°.99E, h33km, ML3.6/6, Error ellipse: s-maj=10.9km s-min=5.5km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.40**	**170**	*e*P*	Pn	16 13 49.8	-0.6
MXZ				*e*S*	Sn	16 14 08.5	+0.8
PUZ	**Puketiti**	**1.90**	**174**	*e*PN	Pn	16 13 57.4	+0.1
PUZ				SN	Sn	16 14 18.1	-1.9
MWZ	**Matawai**	**2.18**	**190**	*e*P*	Pn	16 14 01.0	-0.2
MWZ				*S*	Sn	16 14 27.4	+0.3
URZ	**Urewera**	**2.19**	**199**	*e*P*	Pn	16 14 00.3	-0.9
URZ				*e*S*	Sn	16 14 25.2	-2.0
CNGZ	**Carnagh Statio**	**2.31**	**176**	*e*PN	Pn	16 14 02.7	-0.1
BKZ	**Black Stump Fm**	**3.21**	**201**	P*	Pn	16 14 13.7	-1.6
PXZ	**Pawanui**	**3.95**	**193**	PN	Pn	16 14 20.9	-4.4
PXZ				SN	Sn	16 15 01.8	-8.7
PRHZ	**Porangahau**	**4.22**	**194**	*e*PN	Pn	16 14 24.6	-4.5
MRZ	**Mangatainoka R**	**4.86**	**202**	*e*PN	Pn	16 14 31.7	-6.2
MRZ				*e*SN	Sn	16 15 21.8	-11

IDC 27 16:17:25.7±7.0, 6°.71N×75°.80W, h129km±82km, mb3.0/1, mb1 3.4/2, mb1mx3.0/21, mbtmp3.2/2, Error ellipse: s-maj=173.5km s-min=39.4km az=80.0, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.35**	**142**	P	Pn	16 18 04.8	+0.3
	20nm,0.3s,baz=91,slow=21,SNR=20						
ROSC				S	Sn	16 18 34.9	+0.6
	14nm,0.3s,baz=270,slow=20,SNR=4.7						
YKA	**Yellowknife Ar**	**62.47**	**341**	P	P	16 27 35.0	0.0
	0.3nm,0.6s,baz=133,slow=6.8,SNR=8.9						
WRA	**Warramunga Arr**	**147.94**	**243**	PKPbc	PKPbc	16 36 56.2	-0.7
	0.3nm,0.8s,baz=102,slow=3.4,SNR=3.7						

IDC 27 16:17:45.9±7.7, 19°.84S×68°.08W, h181km±49km, mb3.5/1, mb1 3.1/3, mb1mx3.0/18, mbtmp3.1/3, Error ellipse: s-maj=92.1km s-min=39.8km az=35.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.54**	**359**	P	Pn	16 18 42.1	+0.2
	0.6nm,0.3s,baz=188,slow=3.5,SNR=9.4						
LPAZ				S	Sn	16 19 25.9	+0.4
	0.2nm,0.3s,baz=297,slow=4.5,SNR=2.5						
SIV	**San Ignacio**	**7.69**	**61**	P	Pn	16 19 34.9	-0.4
	0.7nm,0.3s,baz=259,slow=12,SNR=11						
TORD	**Torodi Ar. Bea**	**76.07**	**70**	P	P	16 29 14.3	+0.2
	0.5nm,0.4s,baz=259,slow=4.6,SNR=11						
MKAR	**Makanchi Array**	**143.84**	**35**	PKP	PKPbc	16 36 58.1	+0.2
	0.2nm,0.6s,baz=312,slow=4.5,SNR=2.9						

IDC ***27*** *19:19:46.6±1.2, 43°.13N×83°.52E, h0km, mb3.8/2, mb1 3.7/5, mb1mx3.3/29, mbtmp3.5/5, ML3.1/2, Error ellipse: s-maj=34.5km s-min=16.5km az=75.0*

NNC ***27*** *19:19:54.3±1.4, 43°.67N×84°.03E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=12.5km s-min=4.4km az=132.0*

ISC 27 16:19:55.0±2.0, 43°.7N±0°.1×84°.2E±0°.1, h10km, n8, σ1§17/8, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**3.34**	**337**	⇓Pn	**Pn**	**16 20 48.1**	**+0.7**
	1.5nm,0.6s,baz=162,slow=14,SNR=20						
MK31				⇓Pg	**Pb**	**16 20 55.3**	**+0.9**
	2.9nm,0.3s,baz=154,slow=15,SNR=11						
MK31				⇑Lg	Lg	16 21 41.3	
	5.0nm,0.2s,baz=159,slow=28,SNR=6.2						
MKAR	**Makanchi Array**	**3.34**	**337**	Pn	**Pn**	**16 20 48.0**	**+0.6**
	0.8nm,0.3s,baz=157,slow=12,SNR=36						
MKAR				Pg	**Pb**	**16 20 55.2**	**+0.8**
	3.1nm,0.3s,baz=156,slow=17,SNR=39						
MKAR				Sn	**Sb**	**16 21 33.5**	**-1.7**
	5.6nm,0.3s,baz=173,slow=23,SNR=13						
MKAR				Lg	Lg	16 21 42.5	
	12nm,0.3s,baz=159,slow=30,SNR=11						
KNDC	**Almaty**	**5.28**	**267**	⇑Sn	**Sn**	**16 22 14.1**	**-0.9**
TKM2	**Tokmak 2**	**6.32**	**266**	⇑Pn	Pb	16 21 27.4	-18
	1.7nm,0.6s						
TKM2				⇑Sn	**Sn**	**16 22 40.9**	**+0.1**
	19nm,0.8s						
ZALV	**Zalesovo Beam**	**10.24**	**2**	Pn	Pn	16 22 25.4	+3.5
	baz=186,slow=12,SNR=3.0						
SONM	**Songino Array**	**16.01**	**67**	Pn	**P**	**16 23 42.9**	**-0.9**
	0.1nm,0.3s,baz=264,slow=11,SNR=3.0						
TORD	**Torodi Ar. Bea**	**75.65**	**275**	P	P	16 31 31.7	-8.9
	0.6nm,0.5s,baz=41,slow=5.3,SNR=14						
WRA	**Warramunga Arr**	**78.26**	**132**	P	P	16 31 47.8	-7.3
	0.6nm,0.8s,baz=333,slow=5.5,SNR=3.7						

CSEM ***27*** *16:27:46.8, 45°.46N×14°.40E, h0km, ML0.6, After LJU*

LJU 27 16:27:46.8, 45°.46N×14°.40E, h9km, ML0.6, 2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDS	**Knezji Dol**	**0.07**	**351**	⇓*i*Pg	Pg	16 27 49.0	0.0
KNDS				*i* Sg	Sg	16 27 50.5	0.0
KNDS							
	comp=Z,13nm,0.1s						
KNDS	**Knezji Dol**	**0.07**	**351**	⇓*i*Pg	Pg	16 27 49.0	0.0
KNDS				*i* Sg	Sg	16 27 50.5	0.0
	comp=Z,13nm,0.1s						
CEY	**Cerknica**	**0.28**	**4**	*i* Pg	Pg	16 27 52.1	-0.3
CEY				*i* Sg	Sg	16 27 56.6	+0.3
	comp=Z,1.0nm,0.1s						
CEY	**Cerknica**	**0.28**	**4**	*i* Pg	Pg	16 27 52.1	-0.3
CEY				*i* Sg	Sg	16 27 56.6	+0.4
	comp=Z,1.0nm,0.1s						
SKDS	**Skadanscina**	**0.28**	**288**	*i* Pg	Pg	16 27 52.3	-0.2
SKDS				*i* Sg	Sg	16 27 56.9	+0.6
SKDS	**Skadanscina**	**0.28**	**288**	*i* Pg	Pg	16 27 52.3	-0.2
SKDS				*i* Sg	Sg	16 27 56.9	+0.6
GBRS	**Gornja Briga**	**0.30**	**77**	*i* Pg	Pg	16 27 53.0	+0.2
GBRS				*i* Sg	Sg	16 27 57.4	+0.5
	comp=Z,3.0nm,0.1s						
JAVS	**Javornik**	**0.49**	**332**	*i* Sg	Sg	16 28 04.0	+1.0
JAVS	**Javornik**	**0.49**	**332**	*i* Sg	Sg	16 28 04.0	+0.9

IDC 27 16:27:59.7±1.5, 28°.41N×104°.03E, h0km, mb3.1/3, mb1 3.3/4, mb1mx3.1/26, mbtmp3.1/4, ML3.2/1, Error ellipse: s-maj=61.8km s-min=27.3km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.95**	**206**	Pn	Pn	16 30 38.6	+0.9
	0.1nm,0.3s,baz=146,slow=13,SNR=4.9						
MKAR	**Makanchi Array**	**25.03**	**323**	P	P	16 33 25.4	-0.1
	0.2nm,0.5s,baz=142,slow=10,SNR=4.9						
WRA	**Warramunga Arr**	**56.29**	**145**	P	P	16 37 43.3	+1.0
	0.2nm,0.8s,baz=327,slow=9.0,SNR=3.6						
ASAR	**Alice Springs**	**59.24**	**148**	P	P	16 38 01.9	-1.2
	0.1nm,0.7s,baz=326,slow=6.7,SNR=4.0						

BJI ***27*** *16:46:25.3, 16°.40N×98°.60W, h35km, mB5.9/33, mb5.4/2, Ms5.9/33, Ms7 5.7/37*

MEX ***27*** *16:46:27.4±0.7, 16°.88N×99°.62W, h6km±5km, MD5.7*

MOS ***27*** *16:46:27.4±0.8, 17°.14N×99°.40W, h33km, mb5.9/99, Error ellipse: s-maj=6.0km s-min=3.7km az=88.8*

IDC ***27*** *16:46:27.9±0.5, 17°.00N×99°.38W, h31km±3km, mb5.2/34, mb1 5.3/39, mb1mx5.3/39, mbtmp5.2/39, ML4.7/5, MS5.4/31, Ms1 5.4/31, ms1mx5.4/35, Error ellipse: s-maj=10.3km s-min=6.9km az=58.0*

ISCJB ***27*** *16:46:28.5±0.3, 17°.12N±0°.02×99°.43W±0°.02, h44km±2km, mb5.6/329, MS5.5/210, Error ellipse: s-maj=4.0km s-min=1.9km az=34.9*

NEIC ***27*** *16:46:28.6±0.1, 17°.03N×99°.45W, h35km, mb5.7/237, ME5.3, MS5.4/138, MW5.8, MW5.6, MD5.7(MEX), Error ellipse: s-maj=3.4km s-min=2.2km az=34.0 Broadband fault plane solution: P waves. NP1:φ0=280.00000°, δ70.00000°, λ90.00000°. NP2:φ0=100.00000°, δ20.00000°, λ90.00000°. Principal axes: T Plg65.0000°, Azm190.0000°; N Plg0.0000°, Azm0.0000°; P Plg25.0000°, Azm10.0000°; Moment Tensor Solution. s58 Moment tensor: Scale 10¹⁷ Nm; Mrr1.95; Mθθ-0.89; Mφφ-1.06; Mrθ-2.48; Mrφ0.24; Mθφ0.48; Best double couple: M=3.00000×10¹⁷ NP1:φ0=286.00000°, δ75.00000°, λ84.00000°. NP2:φ0=126.00000°, δ16.00000°, λ110.00000°. Principal axes: T 3.4100, Plg59.0000°, Azm187.0000°; N -0.9400, Plg5.0000°, Azm287.0000°; P -2.4700, Plg29.0000°, Azm20.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

*NEIC Felt [V] at Acapulco; [IV]

ANIG	Ahuacatlan	6.21	312	*e*P		Pn	16 47 58.1	+1.0	
ANIG				*i* S		Sn	16 49 07.9	+0.8	
ZAIG	Zacatecas	6.43	335	*e*P		Pn	16 48 02.0	+1.6	
ZAIG	Zacatecas	6.43	335	*e*P		Pn	16 48 02.0	+1.6	
CCIG	Comitan	7.16	94	*e*P		Pn	16 48 11.7	+1.4	
CCIG	Comitan	7.16	94	*e*P		Pn	16 48 11.7	+1.4	
THIG		7.32	105	*e*P		Pn	16 48 13.6	+1.4	
THIG		7.32	105	*e*P		Pn	16 48 13.6	+1.4	
LNIG	Linares	7.90	1	*e*P		Pn	16 48 24.7	+4.4	
LNIG	Linares	7.90	1	*e*P		Pn	16 48 24.7	+4.4	
JAT	Jato	8.08	108	*e*P		Pn	16 48 26.8	+4.0	
FUG	Fuego 3	8.77	105	*e*P		Pn	16 48 36.8	+4.5	
MAIG	Mazatlaan	8.94	315	*e*P		Pn	16 48 36.3	+1.8	
MAIG	Mazatlaan	8.94	315	*e*P		Pn	16 48 36.3	+1.8	
IXG	Ixpaco	9.21	106	*e*P		Pn	16 48 43.7	+5.3	
MRL	Marmol	9.69	100	*e*P		Pn	16 48 47.1	+2.2	
RBDL	Robledal	9.94	105	*e*P		Pn	16 48 52.2	+3.8	
RTR	El Retiro	10.04	106	*e*P		Pn	16 48 53.3	+3.5	
SNJE	San Jose	10.09	106	*e*P		Pn	16 48 54.7	+4.2	
MTO2	Montecristo 2	10.16	103	*e*P		Pn	16 48 54.5	+3.0	
BOQS	Boqueron	10.43	106	*e*P		Pn	16 48 58.0	+2.8	
SNVI	San Vicente	10.88	106	*e*P		Pn	16 49 03.4	+2.2	
TEIG	Tepich	11.19	71	*e*P		Pn	16 49 04.1	-1.3	
TEIG					Sn	Sn	16 51 03.6	-5.8	
TEIG	Tepich	11.19	71	Pn		Pn	16 49 04.0	-1.4	
	9.7nm,0.3s,baz=4.5,slow=0.6,SNR=32								
TEIG					Sn	Sn	16 51 03.6	-5.8	
	8.9nm,0.3s,baz=300,slow=20,SNR=3.3								
HPIG		11.42	331	*e*P		Pn	16 49 12.2	+3.5	
HPIG		11.42	331	*e*P		Pn	16 49 12.2	+3.5	
732A	Laxson Ranch,	11.72	358	⇑P		Pn	16 49 14.0	+1.4	
	baz=12,SNR=69								
TGUH	Tegucigalpa,Un	12.20	102	*e*P		Pn	16 49 21.6	+2.4	
LPIG	La Paz	12.31	307	*i* P		Pn	16 49 22.1	+1.4	
LPIG					Sn	Sn	16 51 47.7	+11	
LPIG	La Paz	12.31	307	*i* P		Pn	16 49 22.1	+1.4	
LPIG	La Paz	12.31	307	Pn		Pn	16 49 23.6	+2.9	
	1.7nm,0.3s,baz=218,slow=1.0,SNR=28								
LPIG					Sn	Sn	16 51 47.7	+11	
	0.7nm,0.3s,baz=0.0,slow=7.1,SNR=1.5								
LPIG					LR	LR	16 54 51.5		
	comp=Z,497nm,20.2s,baz=130,slow=40								
631A	Perdido Creek	12.43	356	P		Pn	16 49 23.3	+0.9	
	baz=12,SNR=105								
632A	Uvalde	12.49	359	P		Pn	16 49 24.2	+1.0	
	baz=12,SNR=44								
628A	Black Gap, Mar	12.84	347	P		Pn	16 49 30.4	+2.4	
	baz=13,SNR=275								
TXAR	Lajitas Array	12.88	344	Pn		Pn	16 49 29.6	+1.1	
TXAR					Lg	Lg	16 53 13.7		
TXAR					PKiKP	PKiKP	17 02 58.6	-1.1	
TXAR	Lajitas Array	12.88	344	Pn		Pn	16 49 29.6	+1.1	
	1.1nm,0.3s,baz=162,slow=13,SNR=274								
TXAR					Lg	Lg	16 53 13.7		
	0.2nm,0.3s,baz=174,slow=20,SNR=2.8								
TXAR					LR	LR	16 55 38.3		
	comp=Z,6μm,18.5s,baz=355,slow=43								
TXAR					PKiKP	PKiKP	17 02 58.6	-1.1	
	baz=22,slow=1.3,SNR=3.5								
627A	Terlingua Ranc	12.92	345	P		Pn	16 49 31.5	+2.4	
	baz=13,SNR=281								
532A	Rocksprings	13.12	359	⇑P		Pn	16 49 32.5	+0.8	
	baz=13,SNR=23								
531A	Rocksprings	13.18	356	P		Pn	16 49 33.4	+0.8	
	baz=13,SNR=58								
626A	Big Bend Ranch	13.22	342	P		Pn	16 49 35.5	+2.3	
	baz=13,SNR=100								
530A	J-C Ranch, Com	13.23	353	⇑P		Pn	16 49 35.0	+1.7	
	baz=13,SNR=107								
529A	Stev Forest Ra	13.33	350	P		Pn	16 49 37.3	+2.6	
	baz=13,SNR=490								
HKT	Hockley	13.38	14	*e*P		Pn	16 49 33.1	-2.1	
HKT	Hockley	13.38	14	*e*P		Pn	16 49 33.1	-2.1	
528A	Cox Ranch, San	13.47	348	P		Pn	16 49 39.0	+2.4	
	baz=14,SNR=546								
527A	Woodward Ranch	13.64	345	⇑P		Pn	16 49 41.1	+2.1	
	baz=14,SNR=72								
526A	Mary Lane Ranc	13.69	343	P		Pn	16 49 41.9	+2.3	
	baz=14,SNR=151								
431A	Sonora	13.70	356	⇑P		Pn	16 49 40.3	+0.6	
	baz=14,SNR=68								
429A	Davenport Ranc	13.77	352	P		Pn	16 49 42.5	+1.8	
	baz=14,SNR=91								
430A	Baggett Ranch,	13.85	354	P		Pn	16 49 43.6	+1.8	
	baz=14,SNR=116								
432A	Menard	13.86	359	⇓P		Pn	16 49 41.7	-0.1	
	baz=14,SNR=45								
428A	Kincaid Ranch,	14.00	349	P		Pn	16 49 46.6	+2.7	
	baz=14,SNR=344								
426A	McDonald Obser	14.24	344	P		Pn	16 49 49.4	+2.1	
	baz=14,SNR=113								
427A	Hayter Ranch,	14.27	347	⇑P		Pn	16 49 49.7	+2.3	
	baz=14,SNR=250								
331A	San Angelo	14.31	357	⇑P		Pn	16 49 48.2	+0.2	
	baz=14,SNR=49								
332A	Millersview	14.36	359	⇑P		Pn	16 49 48.1	-0.6	
	baz=14,SNR=90								
330A	Mertzon	14.46	355	⇑P		Pn	16 49 50.5	+0.5	
	baz=14,SNR=61								
425A	Indio Mountain	14.63	341	P		Pn	16 49 54.0	+1.6	
	baz=15,SNR=241								
329A	Wagon Wheel Ra	14.63	352	⇓P		Pn	16 49 53.0	+0.6	
	baz=15,SNR=42								
328A	Wristen Ranch,	14.66	349	P		Pn	16 49 54.0	+1.2	
	baz=15,SNR=179								
327A	Balmorhea Ranc	14.79	347	⇓P		Pn	16 49 56.2	+1.7	
	baz=15,SNR=8.5								
326A	Caldwell Ranch	14.85	345	P		Pn	16 49 57.0	+1.6	
	baz=15,SNR=108								
232A	Coleman	14.87	360	P		Pn	16 49 54.9	-0.7	
	baz=15,SNR=170								
231A	Bronte	14.93	358	⇑P		Pn	16 49 55.7	-0.7	
	baz=15,SNR=39								
230A	Sterling City	14.93	355	⇑P		Pn	16 49 56.2	-0.2	
	baz=15,SNR=96								
230A				⇑S		S	16 52 55.1	-3.0	
	baz=15								
230A				⇑S		S	16 52 55.1	-3.0	
	baz=15								
230A				⇑S		S	16 52 55.1	-3.0	
	baz=15								
229A	Bryant Ranch,	15.08	353	⇓P		Pn	16 49 58.4	0.0	
	baz=15,SNR=152								
WHTX	Lake Whitney	15.09	7	⇓P		Pn	16 49 57.2	-1.3	
	baz=15,SNR=26								
325A	Bean Ranch, Si	15.17	342	P		Pn	16 50 00.9	+1.2	
	baz=15,SNR=328								
228A	UT Block 9, Go	15.34	350	⇓P		Pn	16 50 01.8	-0.1	
	baz=15,SNR=70								
227A	Bennet, Jal	15.37	348	⇑P		Pn	16 50 02.9	+0.7	
	baz=15,SNR=70								
324A	Moseley Ranch,	15.39	341	P		Pn	16 50 03.3	+0.7	
	baz=15,SNR=289								
CGIG		15.40	332	*e*P		Pn	16 50 03.7	+0.9	
CGIG		15.40	332	*e*P		Pn	16 50 03.7	+0.9	
ABTX	Abilene, Hawle	15.60	360	P		Pn	16 50 04.2	-0.9	
	baz=16,SNR=88								
SRIG	Santa Rosalia	15.61	314	*i* P		Pn	16 50 04.2	-1.1	
SRIG	Santa Rosalia	15.61	314	*i* P		Pn	16 50 04.2	-1.1	
226B	Tecolote Peak,	15.62	345	P		Pn	16 50 06.8	+1.3	
	baz=16,SNR=410								
130A	Snyder	15.62	356	P		Pn	16 50 04.8	-0.8	
	baz=16,SNR=134								
131A	Roby	15.67	357	⇓P		Pn	16 50 05.1	-1.0	
	baz=16,SNR=297								
JTS	JuntasAbangare	15.67	113	*e*P		Pn	16 50 08.0	+1.8	
	826nm,1.4s								
CLNB	Carlsbad	15.73	346	*e*P		Pn	16 50 07.9	+0.9	
	310nm,1.5s								
129A	Stewart Farms,	15.74	353	⇓P		Pn	16 50 06.3	-0.8	
	baz=16,SNR=124								
GDL2	Guadalupe Moun	15.79	345	*e*P		Pn	16 50 08.6	+0.9	
	789nm,1.4s								
128A	Castleberry Fa	15.82	351	P		Pn	16 50 07.7	-0.3	
	baz=16,SNR=604								
225A	Deer Hill, Car	15.82	343	⇑P		Pn	16 50 08.9	+0.7	
	baz=16,SNR=265								
HSIG		15.92	321	*e*P		Pn	16 50 10.9	+1.6	
HSIG		15.92	321	*e*P		Pn	16 50 10.9	+1.6	
224A	Cornudas Mount	15.99	341	⇑P		Pn	16 50 11.4	+1.1	
	baz=16,SNR=498								
127A	Arkansas Junct	16.02	348	⇓P		Pn	16 50 10.5	-0.2	
	baz=16,SNR=55								
126A	Clayton Basin,	16.13	346	P		Pn	16 50 12.2	+0.1	
	baz=16,SNR=89								
RFTA	Plano	16.20	9	*e*P		Pn	16 50 11.8	-1.0	
223A	Chaparral, Ant	16.22	339	⇓P		Pn	16 50 14.7	+1.4	
	baz=16								
Z32A	Haskell	16.28	0	P		Pn	16 50 12.6	-1.3	
	baz=16,SNR=203								
125A	Gardner Draw,	16.30	345	⇑P		Pn	16 50 14.5	+0.3	
	baz=16,SNR=488								
Z31A	Sharp Cattle R	16.30	358	⇓P		Pn	16 50 12.8	-1.4	
	baz=16,SNR=398								
Z30A	Sanderson Ranc	16.32	355	P		Pn	16 50 12.8	-1.6	
	baz=16,SNR=393								
Z29A	Hungry Hill Ra	16.35	354	⇓P		Pn	16 50 13.3	-1.5	
	baz=16,SNR=573								
Z28A	Tucker Farm, M	16.46	352	⇑P		Pn	16 50 15.4	-0.8	
	baz=16,SNR=200								
CPRX	Cap Rock	16.47	347	*e*P		P	16 50 18.8	0.0	
	2μm,1.3s								
320A	Kipp Ranch, An	16.47	332	P		Pn	16 50 18.3	+1.9	
	baz=16,SNR=164								
124A	Stringfield Ra	16.55	342	P		Pn	16 50 18.6	+1.1	
	baz=17,SNR=159								
222A	Williams Famil	16.55	337	P		Pn	16 50 18.8	+1.3	
	baz=17,SNR=159								
Z27A	Tatum	16.62	349	P		Pn	16 50 17.2	-1.1	
	baz=17,SNR=236								
SOR	Soroa	16.62	67	*e*P		Pn	16 50 16.0	-2.3	
	baz=255								
SOR					*e*S	S	16 53 31.4	-1.2	
Z26A	Caprock	16.73	347	P		Pn	16 50 18.9	-0.8	
	baz=17,SNR=165								
221A	Mesquite Ranch	16.73	335	⇑P		Pn	16 50 21.1	+1.4	
	baz=17,SNR=46								
123A	Bell Site, Whi	16.74	340	⇓P		Pn	16 50 20.9	+1.0	
	baz=17,SNR=31								
319A	Douglas	16.85	330	P		Pn	16 50 22.8	+1.5	
	baz=17,SNR=165								
Y30A	Stafford Cattl	16.89	356	⇑P		Pn	16 50 19.8	-1.9	
	baz=17,SNR=22								
Z25A	Roswell	16.90	345	⇓P		Pn	16 50 21.2	-0.6	
	baz=17,SNR=110								
Y29A	Porterfield Fa	16.94	354	⇑P		Pn	16 50 20.9	-1.3	
	baz=17,SNR=42								
Y31A	Rekieta Farm,	16.95	358	⇓P		Pn	16 50 20.5	-1.8	
	baz=17,SNR=228								
220A	Playas Peak, P	16.96	333	P		Pn	16 50 23.9	+1.3	
	baz=17,SNR=346								
Y32A	R-V Farms, Ver	16.98	0	⇓P		Pn	16 50 20.7	-1.9	
	baz=17,SNR=82								
Y28A	McKinney Farm,	17.05	352	⇓P		Pn	16 50 22.3	-1.4	
	baz=17,SNR=31								
122A	Conniff Cattle	17.05	338	⇑P		Pn	16 50 25.0	+1.3	
	baz=17,SNR=42								
Z24A	Sheeppen Canyo	17.12	343	P		Pn	16 50 25.3	+0.7	
	baz=17,SNR=159								
Y27A	Causey	17.16	350	P		Pn	16 50 23.9	-1.2	
	baz=17,SNR=78								
MSTX	Muleshoe	17.18	351	⇓P		Pn	16 50 24.0	-1.4	
	baz=17,SNR=174								
121A	Cookes Peak, D	17.20	336	P		P	16 50 27.1	+0.1	
	baz=17,SNR=102								
VBMS	Vicksburg	17.27	27	*e*P		Pn	16 50 23.6	-2.6	
	540nm,1.0s								
Z23A	Rita Site, Whi	17.31	341	⇓P		Pn	16 50 27.9	+1.0	
	baz=17,SNR=83								
Y26A	Elida	17.32	348	P		Pn	16 50 26.3	-0.8	
	baz=17,SNR=159								
X30A	Coker Ranch, T	17.46	356	P		Pn	16 50 27.4	-1.2	
	baz=18,SNR=149								
X29A	Tulia	17.52	354	⇑P		Pn	16 50 28.4	-1.1	
	baz=18,SNR=86								
Z22A	Elephant Butte	17.55	339	P		P	16 50 31.1	+0.4	
	baz=18,SNR=171								
120A	U Bar Ranch, L	17.55	334	P		P	16 50 31.7	+0.8	
	baz=18,SNR=194								
X31A	McDonald Ranch	17.61	359	P		Pn	16 50 29.0	-1.5	
	baz=18,SNR=100								
X28A	Dimmitt	17.65	353	⇓P		Pn	16 50 29.9	-1.2	
	baz=18,SNR=8.0								
Y24A	Capitan	17.70	344	P		Pn	16 50 32.5	+0.6	
	baz=18,SNR=100								
WMOK	Wichita Mounta	17.72	2	*e*P		Pn	16 50 29.5	-2.4	
WMOK					pmax	pmax			
	comp=Z,45nm,0.5s								
WMOK	Wichita Mounta	17.72	2	*e*P		Pn	16 50 29.5	-2.4	
	comp=Z,45nm,0.5s								
Z21A	St. Cloud Mine	17.84	337	P		P	16 50 35.6	+1.5	
	baz=18,SNR=332								
Y23A	Lovelace Mesa,	17.88	342	P		Pn	16 50 34.9	+0.8	
	baz=18,SNR=178								
X27A	F and S Farms,	17.90	351	⇑P		Pn	16 50 32.7	-1.6	
	baz=18,SNR=32								
X26A	CR and CF Fran	17.93	349	P		Pn	16 50 33.8	-0.9	
	baz=18,SNR=233								
AMTX	Amarillo	17.95	354	*e*P		Pn	16 50 34.0	-0.9	
	comp=Z,6μm,2.9s								
AMTX	Amarillo	17.95	354	⇓P		Pn	16 50 33.6	-1.3	
	baz=18,SNR=137								
Z20A	Nine Sixteen R	18.03	335	P		P	16 50 37.6	+1.5	
	baz=18,SNR=176								
X25A	Clemmons Ranch	18.08	346	⇓P		Pn	16 50 36.1	-0.4	
	baz=18,SNR=26								
W31A	Holland Ranch,	18.16	359	P		Pn	16 50 35.8	-1.5	
	baz=18,SNR=72								
Y22A	Socorro	18.17	340	P		P	16 50 38.6	+0.9	
	baz=18,SNR=88								
W30A	Crocket Farms	18.17	357	⇓P		Pn	16 50 36.3	-1.2	
	baz=18,SNR=18								
W29A	Amraillo	18.19	355	⇑P		Pn	16 50 36.4	-1.3	
	baz=18,SNR=51								
BNM	Barren Site	18.26	341	*e*P		Pn	16 50 39.4	+0.7	
	comp=Z,11nm,0.8s								
Y22D	IRIS PASSCAL I	18.28	340	⇑P		Pn	16 50 40.3	+1.4	
	baz=18								
W27A	Bowe Ranch, En	18.30	351	⇓P		P	16 50 37.7	-1.4	
	baz=18,SNR=288								
X24A	Lazy VL Ranch,	18.31	344	P		P	16 50 39.6	+0.4	
	baz=18,SNR=104								
TUC	Tucson	18.35	328	*e*P		Pn	16 50 40.9	+1.2	
TUC					pmax	pmax			
	comp=Z,44nm,1.0s								
TUC	Tucson	18.35	328	*e*P		Pn	16 50 40.9	+1.2	
	comp=Z,44nm,1.0s								
W28A	Vega	18.38	353	⇓P		P	16 50 38.7	-1.2	
	baz=18,SNR=28								
LENM	Lemitar	18.38	340	*e*P		P	16 50 40.5	+0.5	
	comp=Z,219nm,1.2s								
LPM	Los Pinos Moun	18.41	341	*e*P		P	16 50 40.7	+0.4	
	comp=Z,510nm,0.9s								
W26A	Owens Ranch, T	18.44	349	⇑P		P	16 50 39.8	-0.8	
	baz=18,SNR=29								
Y21A	Point of Rocks	18.48	338	⇑P		Pn	16 50 42.8	+1.4	
	baz=18,SNR=378								
X23A	Hourglass Bar	18.53	343	⇑P		Pn	16 50 42.7	+0.7	
	baz=19,SNR=7.8								
Y20A	Horse Springs,	18.64	337	P		Pn	16 50 44.7	+1.3	
	baz=19,SNR=202								
LAZ	Ladron	18.65	340	*e*P		Pn	16 50 44.1	+0.6	
	comp=Z,1μm,2.7s								
W25A	X L Ranch,	18.70	347	P		P	16 50 43.0	-0.5	
	baz=19,SNR=90								
X22A	Bernardo	18.70	341	P		Pn	16 50 45.5	+1.4	
	baz=19,SNR=70								
V31A	Spring Creek L	18.74	359	P		P	16 50 43.8	-0.1	
	baz=19,SNR=104								
V30A	Spur Ranch, Mi	18.76	357	⇓P		P	16 50 43.4	-0.6	
	baz=19,SNR=65								
V28A	Channing	18.87	353	⇓P		P	16 50 44.5	-0.7	
	baz=19,SNR=13								
X21A	Alamocita Cree	18.91	339	P		Pn	16 50 47.4	+0.7	
	baz=19,SNR=368								
W24A	Lazy 6 Ranch,	18.91	345	P		P	16 50 46.1	+0.3	
	baz=19,SNR=325								
V29A	Stinnett	18.92	355	⇓P		P	16 50 45.1	-0.7	
	baz=19,SNR=26								
ANMO	Albuquerque	18.94	342	*e*P		P	16 50 47.0	+0.9	
	comp=Z,0.7nm,0.5s								
ANMO					S	S	16 54 20.8	+1.1	
ANMO					Lg	Lg	16 56 28.1		
ANMO	Albuquerque	18.94	342	P		P	16 50 47.1	+0.9	
	comp=Z,3.8nm,0.3s,baz=152,slow=12,SNR=215								
ANMO					S	S	16 54 20.8	+1.1	
	comp=Z,0.1nm,0.3s,baz=215,slow=19,SNR=2.1								
ANMO					Lg	Lg	16 56 28.1		
	comp=Z,0.1nm,0.3s,baz=72,slow=20,SNR=2.4								
ANMO					LR	LR	16 59 07.6		
	comp=Z,43μm,18.4s,baz=163,slow=40								
V27A	Dan Oppiter Fa	18.95	352	⇓P		P	16 50 45.9	-0.3	
	baz=19,SNR=14								
W23A	Werner Place,	19.06	343	⇓P		P	16 50 48.3	+0.8	
	baz=19,SNR=23								
V26A	Tequesquite Ra	19.14	350	P		P	16 50 47.9	-0.3	
	baz=19,SNR=664								
MGV	Manicaragua	19.16	71	*e*P		Pn	16 50 50.1	+0.6	
214A	Organ Pipe Nat	19.16	324	P		Pn	16 50 50.4	+0.9	
	baz=19,SNR=60								
TUL1	Tulsa	19.18	9	P		P	16 50 47.6	-0.9	
	baz=19,SNR=199								
W22A	Albuquerque	19.18	342	⇑P		Pn	16 50 50.3	+0.4	
	baz=19,SNR=8.7								
X20A	Quemado	19.25	337	⇑P		Pn	16 50 51.3	+0.6	
	baz=19								
V25A	Rancho No Teng	19.34	348	P		P	16 50 50.2	-0.3	
	baz=19,SNR=149								
U31A	Nine Bar Ranch	19.34	359	⇓P		P	16 50 50.2	-0.2	
	baz=19,SNR=34								
V24A	Rampart Ranch,	19.37	346	⇓P		P	16 50 51.0	+0.1	
	baz=19,SNR=187								
W21A	San Fidel	19.47	340	⇑P		P	16 50 53.2	+1.2	
	baz=20,SNR=31								
U29A	Oasis Ranch, S	19.48	356	⇓P		P	16 50 51.3	-0.7	
	baz=20								
U28A	Mallet	19.49	354	⇓P		P	16 50 51.4	-0.7	
	baz=20,SNR=25								
U30A	WK&E Inc. Balk	19.52	357	⇑P		P	16 50 52.1	-0.2	
	baz=20,SNR=41								
U27A	Thompson Grove	19.60	352	⇓P		P	16 50 52.9	-0.4	
	baz=20,SNR=135								
V23A	Ortiz Mt. (NFS	19.62	344	⇓P		P	16 50 54.4	+0.8	
	baz=20,SNR=54								
LRAL	Lakeview Retre	19.62	33	*e*P		P	16 50 52.3	-1.1	
	comp=Z,545nm,1.2s								
OXF	Oxford	19.71	26	*e*P		P	16 50 52.4	-2.0	
OXF					pmax	pmax			
	comp=Z,321nm,1.0s								
OXF	Oxford	19.71	26	*e*P		P	16 50 52.4	-2.0	
	comp=Z,321nm,1.0s								
U26A	Atchley Ranch,	19.71	350	P		P	16 50 54.5	-0.2	
	baz=20,SNR=258								
PAYG	Puerto Ayora	19.77	152	*e*P		Pn	16 50 57.4	+0.6	
	comp=Z,1μm,2.1s								
W20A	Ramah	19.77	338	P		Pn	16 50 56.9	-0.1	
	baz=20,SNR=363								
X18A	Snowflake	19.82	334	⇑P		Pn	16 50 57.5	+0.1	
	baz=20,SNR=170								
U25A	Circle Dot Ran	19.84	348	P		P	16 50 55.9	-0.1	
	baz=20,SNR=115								
V22A	San Miguel Ran	19.98	342	P		P	16 50 58.2	+0.7	
	baz=20,SNR=100								
U24A	Moreno Valley	20.03	346	⇓P		P	16 50 58.4	+0.3	
	baz=20,SNR=12								
T30A	Plains	20.04	358	⇑P		P	16 50 57.8	-0.2	
	baz=20,SNR=27								
T31A	Randall Ranch,	20.06	360	P		P	16 50 57.7	-0.5	
	baz=20,SNR=167								
V21A	Milan	20.10	341	⇑P		P	16 50 59.8	+1.0	
	baz=20,SNR=10								
HBAR	Harrisburg	20.16	22	*e*P		P	16 50 58.2	-0.9	
U23A	El Rito	20.17	344	⇓P		P	16 51 00.3	+0.7	
	baz=20,SNR=38								
T29A	Hugoton	20.18	356	⇑P		P	16 50 59.0	-0.6	
	baz=20,SNR=23								
T28A	Walsh	20.21	354	P		P	16 50 59.3	-0.6	
	baz=20,SNR=279								
T27A	Campo	20.22	353	P		P	16 50 59.5	-0.5	
	baz=20,SNR=94								
W18A	Petrified Fore	20.24	335	⇑P		P	16 51 01.5	+1.2	
	baz=20,SNR=32								
Z14A	Wintersburg	20.30	326	⇓P		P	16 51 02.4	+1.6	
	baz=20,SNR=61								
113A	Mohawk Valley,	20.30	323	⇓P		P	16 51 02.5	+1.7	
	baz=20,SNR=85								
V20A	Brimhall	20.37	339	⇓P		P	16 51 03.3	+1.5	
	baz=20,SNR=169								
X16A	Lo Mia Camp, P	20.39	331	⇑P		P	16 51 03.4	+1.5	
	baz=20,SNR=398								
U22A	Llaves	20.40	343	P		P	16 51 02.7	+0.7	
	baz=20,SNR=106								
T26A	Comanche Natio	20.45	351	P		P	16 51 02.3	-0.3	
	baz=20,SNR=178								
TIGA	Tifton	20.47	42	⇓P		P	16 51 01.6	-1.0	
	baz=20,SNR=11								
T25A	Trinidad	20.55	349	P		P	16 51 04.2	+0.4	
	baz=21,SNR=136								
T24A	Torres, Weston	20.62	347	⇑P		P	16 51 04.8	+0.3	
	baz=21,SNR=86								
S28A	Manter	20.66	355	⇓P		P	16 51 04.0	-0.7	
	baz=21,SNR=168								
U21A	Nageezi	20.68	341	P		P	16 51 06.3	+1.2	
	baz=21,SNR=220								

baz=22,SNR=618
R24A **Sanders Place,** 21.75 348 ⇑P P 16 51 16.5 -0.1
baz=22,SNR=51
WVT **Waverly** 21.76 26 eP P 16 51 14.1 -2.4
WVT pmax pmax
comp=Z,300nm,1.0s
WVT **Waverly** 21.76 26 eP P 16 51 14.1 -2.4
comp=Z,300nm,1.0s
R23A **Moffat** 21.86 347 ⇑P P 16 51 18.0 +0.1
baz=22,SNR=112
S21A **Coal Bank Pass** 21.86 342 P P 16 51 18.4 +0.5
baz=22,SNR=278
SWET **Sewanee** 21.88 31 eP P 16 51 15.6 -2.3
comp=Z,47nm,0.9s
BC3 **Big Chuckawall** 21.92 322 P P 16 51 19.9 +1.5
baz=22,SNR=92
MONP **Monument Peak** 21.98 319 ⇑P P 16 51 20.7 +1.6
baz=22,SNR=61
BAR **Barrett** 22.00 319 eP P 16 51 20.5 +1.3
comp=Z,257nm,1.2s
IRM **Iron Mountain** 22.11 324 P P 16 51 22.0 +1.6
baz=22,SNR=104
R22A **Saguache, Gunn** 22.11 345 P P 16 51 21.3 +0.7
baz=22,SNR=341
W13A **Hualapai Mount** 22.13 327 P P 16 51 22.4 +1.6
baz=22,SNR=141
KSCO **Kaye Shedlock'** 22.14 354 ⇓P P 16 51 20.2 -0.5
baz=22,SNR=51
Q26A **Hugo** 22.16 352 ⇑P P 16 51 20.8 -0.1
baz=22,SNR=23
S20A **Disappointment** 22.19 341 ⇓P P 16 51 21.8 +0.4
baz=22,SNR=335
KSU1 **Kansas State U** 22.21 6 eP P 16 51 19.6 -1.8
comp=Z,514nm,0.9s
KSU1 LR LR
comp=Z,15μm,22.0s
Q25A **Bedland, Calha** 22.26 350 P P 16 51 21.8 -0.3
baz=22,SNR=71
NEE2 **Needles Airpor** 22.27 326 ⇑P P 16 51 23.3 +1.3
baz=22
109C **Camp Elliot, M** 22.41 318 ⇑P P 16 51 25.0 +1.5
baz=22,SNR=7.0
U15A **North Rim** 22.44 332 P P 16 51 25.4 +1.3
baz=22,SNR=277
FVM **French Village** 22.44 19 eP P 16 51 20.7 -3.1
FVM pmax pmax
comp=Z,345nm,1.1s
FVM **French Village** 22.44 19 eP P 16 51 20.7 -3.1
comp=Z,345nm,1.1s
R21A **Cimarron** 22.45 343 ⇑P P 16 51 24.6 +0.4
baz=22,SNR=34
Q24A **Divide** 22.46 349 ⇑P P 16 51 23.7 -0.7
baz=22
BELC **Belle Mtn. Jos** 22.48 322 P P 16 51 25.9 +1.5
baz=22,SNR=97
PFO **Pinyon Flat Ob** 22.48 321 eP P 16 51 25.6 +1.2
comp=Z,369nm,1.4s
PFO S S 16 55 34.2 +4.7
PFO Lg Lg 16 58 31.5
PFO **Pinyon Flat Ob** 22.48 321 P P 16 51 26.0 +1.5
comp=Z,697nm,1.1s,SNR=39
PFO **Pinyon Flat Ob** 22.48 321 P P 16 51 26.0 +1.5
baz=22,SNR=62
PFO **Pinyon Flat Ob** 22.48 321 P P 16 51 26.0 +1.5
comp=Z,108nm,1.0s,baz=122,slow=7.8,SNR=40
PFO S S 16 55 34.2 +4.7
comp=Z,4.8nm,1.1s,baz=131,slow=18,SNR=1.9
PFO Lg Lg 16 58 31.5
comp=Z,1.2nm,0.5s,baz=58,slow=19,SNR=3.1
PFO LR LR 17 00 01.7
comp=Z,12μm,20.0s,baz=136,slow=36
R20A **Redvale** 22.52 342 ⇓P P 16 51 25.6 +0.6
baz=23,SNR=142
PV01 **Paradox Valley** 22.53 341 eP P 16 51 25.2 +0.1
comp=Z,19μm,1.1s
Q23A **Hartsel** 22.54 347 ⇑P P 16 51 24.8 -0.4
baz=23,SNR=20
SIUC **Southern Illin** 22.60 22 eP P 16 51 23.2 -2.3
comp=Z,546nm,1.0s
S18A **Hurst Farm, Bl** 22.60 338 P P 16 51 26.0 +0.1
baz=23,SNR=182
P27A **Ficken Ranch,** 22.67 354 ⇑P P 16 51 25.9 -0.5
baz=23,SNR=21
Q22A **Crested Butte,** 22.75 345 ⇑P P 16 51 27.0 -0.4
baz=23
P26A **Davis Ranch, A** 22.76 352 P P 16 51 27.1 -0.2
baz=23,SNR=37
LDFC **Landfair** 22.76 325 eP P 16 51 29.6 +2.2
comp=Z,338nm,0.9s
CPCT **Cooper Cave** 22.79 33 eP P 16 51 25.1 -2.4
P25A **Willow Gulch B** 22.83 351 ⇓P P 16 51 27.0 -1.1
baz=23,SNR=13
RCC **Rio Carpintero** 22.84 79 eP P 16 51 31.0 +2.8
baz=262
RCC eS S 16 55 37.6 +1.9
comp=N,5.0nm,0.7s
RCC e
comp=E,5.0nm,0.8s
GMRC **Granite Mounta** 22.85 324 P P 16 51 29.6 +1.3
baz=23,SNR=126
PV04 **Paradox Valley** 22.87 341 eP P 16 51 28.7 +0.1
Q21A **Lamborn Mesa,** 22.89 344 P P 16 51 29.1 +0.3
baz=23,SNR=55
MURC **Murrieta** 22.94 320 P P 16 51 30.7 +1.6
baz=23,SNR=36
P24A **Kohler Place,** 22.95 349 ⇓P P 16 51 28.9 -0.5
baz=23,SNR=17
P23A **Jefferson** 23.00 347 P P 16 51 30.0 0.0
baz=23,SNR=90
SMCO **Snowmass** 23.07 345 eP P 16 51 30.7 0.0
comp=E,531nm,1.4s
SLM **Saint Louis** 23.10 19 eP P 16 51 27.7 -2.9
SLM pmax pmax
comp=Z,265nm,1.0s
SLM **Saint Louis** 23.10 19 eP P 16 51 27.7 -2.9
comp=Z,265nm,1.0s
Q20A **Ridgley Place,** 23.21 343 P P 16 51 32.5 +0.6
baz=23,SNR=75
BBRC **Big Bear Solar** 23.21 321 ⇑P P 16 51 33.6 +1.4
baz=23
HEC **Hector,Ludlow** 23.27 323 ⇑P P 16 51 33.9 +1.4
baz=23,SNR=92
O27A **Beecher Island** 23.29 354 ⇓P P 16 51 32.0 -0.7
baz=23,SNR=39
TKL **Tuckaleechee C** 23.34 34 eP P 16 51 31.1 -1.9
TKL S S 16 55 43.9 +0.1
TKL **Tuckaleechee C** 23.34 34 P P 16 51 31.2 -1.9
comp=Z,319nm,1.1s,baz=213,slow=10.0,SNR=76
TKL S S 16 55 43.9 +0.1
comp=Z,9.2nm,0.9s,baz=66,slow=20,SNR=2.7
TKL LR LR 17 03 43.5
comp=Z,2μm,19.8s,baz=226,slow=45
ISCO **Idaho Springs** 23.36 348 eP P 16 51 33.2 -0.4
ISCO pmax pmax
comp=Z,36nm,0.5s
ISCO MLR MLR
comp=Z,41μm,22.0s
ISCO **Idaho Springs** 23.36 348 eP P 16 51 33.2 -0.4
comp=Z,36nm,0.5s
ISCO LR LR
comp=Z,41μm,22.0s
ISCO **Idaho Springs** 23.36 348 P P 16 51 33.2 -0.4
baz=23,SNR=99
GTBY **Guantanamo Bay** 23.39 79 eP P 16 51 34.9 +1.2
comp=Z,522nm,1.4s
GTBY LR LR
comp=Z,6μm,20.0s
SCI **San Clemente I** 23.40 317 ⇓P P 16 51 35.2 +1.5
baz=24,SNR=5.3
USIN **University of** 23.40 24 eP P 16 51 31.5 -2.2
comp=Z,383nm,0.9s
O25A **Wiggins** 23.41 351 ⇑P P 16 51 33.1 -0.8
baz=23,SNR=21
P22A **Eagle** 23.41 346 P P 16 51 33.9 -0.2
baz=23,SNR=82
O26A **Horse Wrangler** 23.43 353 ⇓P P 16 51 33.7 -0.5
baz=24,SNR=59
TUQ **Turquoise Moun** 23.48 325 ⇓P P 16 51 36.0 +1.4
baz=24,SNR=60
P21A **Newcastle** 23.51 345 P P 16 51 35.5 +0.5
baz=24,SNR=45
CIS **Catalina Islan** 23.57 318 ⇑P P 16 51 36.6 +1.2
baz=24,SNR=9.6
O24A **Longmont** 23.57 349 ⇓P P 16 51 35.0 -0.5
baz=24,SNR=23
BFSC **Mount Baldy Ra** 23.65 320 ⇓P P 16 51 37.5 +1.3
baz=24,SNR=29
RRX **Edison Barstow** 23.69 322 ⇑P P 16 51 38.1 +1.6
baz=24,SNR=6.8
FMP **Fort Macarthur** 23.70 318 ⇓P P 16 51 37.7 +1.1
baz=24
P20A **De Beque** 23.74 343 P P 16 51 37.6 +0.4
baz=24,SNR=57
NHSC **New Hope** 23.75 44 eP P 16 51 36.5 -0.6
comp=Z,1μm,1.4s
NHSC LR LR
comp=Z,7μm,22.0s
JSC **Jenkinsville** 23.81 40 eP P 16 51 36.1 -1.6
JSC **Jenkinsville** 23.81 40 eP P 16 51 36.1 -1.6
O23A **Lake Granby, G** 23.82 348 P P 16 51 37.9 -0.1
baz=24,SNR=177
CCUT **Cedar City** 23.84 332 eP P 16 51 39.7 +1.5
comp=Z,75nm,0.9s
GSC **Goldstone** 23.88 323 eP P 16 51 40.1 +1.7
GSC pmax pmax
comp=Z,306nm,1.5s
GSC **Goldstone** 23.88 323 eP P 16 51 40.0 +1.7
comp=Z,306nm,1.5s
GSC **Goldstone** 23.88 323 ⇓P P 16 51 39.9 +1.6
baz=24,SNR=66
MWC **Mount Wilson** 23.88 320 eP P 16 51 39.7 +1.1
MWC pmax pmax
comp=Z,642nm,1.6s
MWC **Mount Wilson** 23.88 320 eP P 16 51 39.7 +1.1
comp=Z,642nm,1.6s
O22A **Kremmling** 23.90 347 P P 16 51 38.7 -0.1
baz=24,SNR=204
N27A **Anderson Farm,** 23.91 354 ⇓P P 16 51 38.3 -0.3
baz=24,SNR=62
OLIL **Olney** 23.91 23 eP P 16 51 36.0 -2.5
comp=Z,275nm,1.0s
PASC **Pasadena Art C** 23.93 319 eP P 16 51 40.2 +1.5
comp=Z,656nm,1.8s
N26A **Koester Ranch,** 24.00 353 ⇓P P 16 51 39.3 -0.2
baz=24,SNR=27
OGNE **Ogallala** 24.00 355 eP P 16 51 38.3 -1.2
comp=Z,990nm,1.4s
OGNE LR LR
comp=Z,20μm,19.0s
OGNE **Ogallala** 24.00 355 ⇓P P 16 51 39.2 -0.2
baz=24,SNR=31
SHOC **Shoshone** 24.01 325 ⇓P P 16 51 41.0 +1.4
baz=24
P19A **Cripple Cowboy** 24.04 342 ⇑P P 16 51 40.1 +0.1
baz=24,SNR=321
SRU **San Rafael** 24.06 339 eP P 16 51 40.3 +0.2
SRU pmax pmax
comp=Z,271nm,0.8s
SRU **San Rafael** 24.06 339 eP P 16 51 40.3 +0.2
comp=Z,271nm,0.8s
SRU **San Rafael** 24.06 339 P P 16 51 40.5 +0.3
baz=24,SNR=262
DECC **Green Verdugo** 24.07 319 ⇓P P 16 51 42.2 +2.1
baz=24
ARUT **Antelope Range** 24.07 332 eP P 16 51 41.9 +1.6
ARUT pmax pmax
comp=Z,321nm,1.2s
ARUT **Antelope Range** 24.07 332 eP P 16 51 41.9 +1.6
comp=Z,322nm,1.2s
N25A **Grover** 24.09 352 ⇑P P 16 51 40.4 -0.1
baz=24,SNR=14
Q16A **Castle Valley** 24.12 337 P P 16 51 41.6 +0.9
baz=24,SNR=98
TZTN **Tacwell** 24.13 33 eP P 16 51 39.5 -1.1
comp=Z,444nm,1.1s
MSU **Marysvale** 24.15 335 eP P 16 51 41.8 +0.7
MSU pmax pmax
comp=Z,131nm,1.0s
MSU **Marysvale** 24.15 335 eP P 16 51 41.8 +0.7
comp=Z,131nm,1.0s
MVU **Marysvale** 24.16 335 eP P 16 51 42.0 +0.8
comp=Z,154nm,1.1s
MVU LR LR
comp=Z,45μm,20.0s
O21A **Pagoda** 24.17 345 ⇑P P 16 51 41.9 +0.7
baz=24,SNR=70
WCI **Wyandotte Cave** 24.19 26 eP P 16 51 39.1 -2.1
WCI pmax pmax
comp=Z,581nm,1.5s
WCI **Wyandotte Cave** 24.19 26 eP P 16 51 39.1 -2.1
comp=Z,581nm,1.5s
EDW2 **Edwards Air Fo** 24.28 321 P P 16 51 43.7 +1.6
baz=24,SNR=38
O20A **White River Ci** 24.29 344 ⇓P P 16 51 42.9 +0.6
baz=24,SNR=145
KMSC **Kings Mountain** 24.35 38 P P 16 51 42.0 -0.7
baz=24,SNR=93
BGNE **Belgrade** 24.40 3 ⇑P P 16 51 42.5 -0.6
baz=24,SNR=10.0
BLG **Laguna Peak** 24.44 318 ⇓P P 16 51 45.7 +2.2
baz=24,SNR=17
P17A **Butcher Ranch,** 24.46 339 ⇓P P 16 51 43.9 +0.2
baz=24,SNR=51
TMUT **Trail Mountain** 24.46 338 eP P 16 51 44.7 +0.6
comp=Z,116nm,0.7s
N23A **Red Feather La** 24.48 348 P P 16 51 44.5 +0.3
baz=24,SNR=177
N22A **Wattenberg Ran** 24.50 347 P P 16 51 44.8 +0.6
baz=24,SNR=77
LRMC **Laurel Mountai** 24.51 322 ⇑P P 16 51 45.9 +1.6
baz=25,SNR=18
OSI **Osito Adit** 24.55 319 eP P 16 51 47.3 +2.7
comp=Z,369nm,1.4s
OSI **Osito Adit** 24.55 319 ⇑P P 16 51 46.4 +1.9
baz=25
M27A **Reverse DX Ran** 24.61 355 ⇓P P 16 51 45.1 0.0
baz=25,SNR=33
M26A **McRoberts Ranc** 24.62 354 ⇓P P 16 51 45.3 +0.1
baz=25,SNR=7.3
O19A **Miners Draw (B** 24.69 342 P P 16 51 46.5 +0.6
baz=25,SNR=174
N21A **Black Mountain** 24.70 345 P P 16 51 46.9 +0.9
baz=25,SNR=392
M25A **Palm-Egli Farm** 24.70 352 ⇓P P 16 51 46.3 +0.3
baz=25,SNR=22
BSC **Santa Cruz Isl** 24.74 317 ⇑P P 16 51 47.7 +1.5
baz=25,SNR=6.7
FURC **Furnace Creek,** 24.75 325 ⇑P P 16 51 48.0 +1.8
baz=25,SNR=11
PHWY **Pilot Hill** 24.79 349 eP P 16 51 46.8 -0.1
comp=Z,147nm,1.1s
MPMC **Manual Prospec** 24.80 324 P P 16 51 48.6 +1.6
baz=25,SNR=175
M24A **Cheyenne** 24.84 351 P P 16 51 47.6 +0.4
baz=25,SNR=59
BLO **Bloomington** 24.89 25 eP P 16 51 46.8 -0.7
BLO pmax pmax
comp=Z,111nm,0.8s
BLO **Bloomington** 24.89 25 eP P 16 51 46.8 -0.7
comp=Z,111nm,0.8s
N20A **Spence Gulch,** 24.95 344 P P 16 51 48.8 +0.4
baz=25,SNR=173
ARVC **Arvin** 24.96 320 ⇑P P 16 51 50.3 +2.1
baz=25,SNR=20
M23A **Laramie** 25.00 349 P P 16 51 49.0 +0.3
baz=25,SNR=48
DAC **Darwin (Calif)** 25.02 324 eP P 16 51 50.6 +1.6
DAC pmax pmax
comp=Z,124nm,1.0s
DAC MLR MLR
comp=Z,17μm,20.0s
DAC **Darwin (Calif)** 25.02 324 eP P 16 51 50.6 +1.6
comp=Z,124nm,1.0s
DAC LR LR
comp=Z,17μm,20.0s
SBC **Santa Barbara** 25.07 318 ⇓P P 16 51 51.1 +1.9
baz=25
ISA **Isabella** 25.10 322 eP P 16 51 51.1 +1.5
ISA pmax pmax
comp=Z,145nm,1.0s
ISA **Isabella** 25.10 322 eP P 16 51 51.0 +1.5
comp=Z,145nm,1.0s
ISA **Isabella** 25.10 322 P P 16 51 51.8 +2.2
baz=25,SNR=120
M22A **Cedar Creek Ra** 25.10 347 ⇓P P 16 51 50.4 +0.7
baz=25,SNR=68
HDIL **Hopedale** 25.14 19 eP P 16 51 48.8 -0.9
comp=Z,597nm,1.0s
HDIL LR LR
comp=Z,14μm,21.0s
L27A **T5 Ranch, Ells** 25.15 355 ⇓P P 16 51 50.3 +0.3
baz=25,SNR=9.8
MPU **Maple Canyon** 25.25 338 eP P 16 51 51.5 +0.5
comp=Z,208nm,1.1s
L25A **Engebretsen Ra** 25.40 352 ⇓P P 16 51 52.5 +0.3
baz=25,SNR=6.0
CWC **Cottonwood Cre** 25.41 323 ⇓P P 16 51 53.9 +1.5
baz=26
GRAC **Grapevine Rang** 25.41 325 ⇑P P 16 51 54.5 +2.2
baz=26,SNR=21
L24A **Wheatland** 25.42 351 ⇑P P 16 51 52.3 -0.2
baz=25,SNR=9.4
PKM **Peak Mountain** 25.42 318 ⇓P P 16 51 54.3 +1.7
baz=26
SCIA **State Center** 25.46 11 eP P 16 51 51.4 -1.2
comp=Z,478nm,1.1s
SCIA LR LR
comp=Z,11μm,21.0s
M21A **Separation Pea** 25.46 346 ⇑P P 16 51 53.2 +0.2
baz=26,SNR=149
DAU **Daniels Canyon** 25.47 339 eP P 16 51 53.6 +0.4
DAU pmax pmax
comp=Z,202nm,1.0s
DAU **Daniels Canyon** 25.47 339 eP P 16 51 53.6 +0.4
comp=Z,202nm,1.0s
R11A **Troy Canyon, C** 25.52 330 P P 16 51 55.0 +1.5
baz=26,SNR=144
M20A **Sweetwater, Wa** 25.55 345 P P 16 51 54.0 +0.2
baz=26,SNR=175
VES **Vestal, Richgr** 25.59 321 ⇓P P 16 51 56.1 +2.2
baz=26,SNR=30
L23A **Garrett** 25.62 349 ⇓P P 16 51 54.0 -0.4
baz=26
L22A **Ellis Ranch, M** 25.68 348 ⇑P P 16 51 55.6 +0.8
baz=26,SNR=64
JLU **Jordanelle** 25.71 339 eP P 16 51 55.7 +0.5
comp=Z,44nm,0.9s
SFIN **Scholer Farm** 25.72 22 ⇑P P 16 51 53.9 -1.1
baz=26,SNR=15
K27A **Flueckinger Fa** 25.76 355 ⇓P P 16 51 55.6 +0.1
baz=26,SNR=55
SMMC **Simmler** 25.80 319 ⇓P P 16 51 58.2 +2.3
baz=26,SNR=40
L21A **Rawlins** 25.81 347 ⇑P P 16 51 55.8 -0.2
baz=26,SNR=60
M19A **Rock Springs** 25.82 343 ⇑P P 16 51 56.0 -0.2
baz=26,SNR=35
K25A **Mack Ranch, Ha** 25.83 353 ⇑P P 16 51 56.3 +0.1
baz=26,SNR=64
K26A **Motz Farm, Whi** 25.84 354 ⇓P P 16 51 56.2 0.0
baz=26,SNR=22
DUG **Dugway** 25.85 336 eP P 16 51 57.4 +1.0
DUG e 16 55 25.5
DUG pmax pmax
comp=Z,162nm,1.2s
DUG MLR MLR
comp=Z,10μm,20.0s
DUG **Dugway** 25.85 336 eP P 16 51 57.4 +1.0
comp=Z,162nm,1.2s
DUG ePcP PcP 16 55 25.5 +0.3
DUG LR LR
comp=Z,10μm,20.0s
DUG **Dugway** 25.85 336 ⇓P P 16 51 57.6 +1.2
baz=26
CTU **Camp Tracy** 25.89 338 eP P 16 51 57.8 +1.0
comp=Z,109nm,1.0s
TIN **Tinemaha** 25.93 324 ⇓P P 16 51 59.0 +1.9
baz=26,SNR=18
RCTC **Rector, Farmer** 26.00 322 ⇓P P 16 51 59.6 +2.0
baz=26
M18A **Lyman** 26.01 342 ⇓P P 16 51 57.5 -0.4
baz=26,SNR=14
K24A **Anderson Ranch** 26.07 351 ⇑P P 16 51 58.7 +0.3
baz=26,SNR=8.6
L20A **Wamsutter** 26.08 345 P P 16 51 58.5 +0.1
baz=26,SNR=286
TPH **Tonopah** 26.13 327 PFAKE 16 52 10.0 +11
TPH LR LR
comp=Z,17μm,20.0s
K23A **Bowen Ranch, D** 26.23 350 ⇓P P 16 51 59.8 +0.1
baz=26,SNR=47
M17A **Scullys Gap (B** 26.23 341 P P 16 52 00.2 +0.3
baz=26,SNR=55
K22A **Casper** 26.29 348 P P 16 52 00.5 +0.1
baz=26,SNR=53
BLA **Blacksburg** 26.32 36 eP P 16 52 00.2 -0.4
BLA pmax pmax
comp=Z,954nm,1.1s
BLA MLR MLR
comp=Z,4μm,19.0s
BLA **Blacksburg** 26.32 36 eP P 16 52 00.2 -0.4
comp=Z,954nm,1.1s
BLA LR LR
comp=Z,4μm,19.0s
K21A **Alcova** 26.42 347 P P 16 52 01.5 -0.1
baz=26,SNR=105
L19A **Farson** 26.43 343 P P 16 52 02.2 +0.5
baz=26,SNR=112
L18A **Fontenelle, Gr** 26.46 342 ⇑P P 16 52 01.5 -0.5
baz=26,SNR=20
CNNC **Cliffs of the** 26.56 43 P P 16 52 02.0 -0.7
comp=Z,148nm,0.3s
CNNC LR LR
comp=Z,3μm,20.0s
VWCC **Virginia Weste** 26.59 37 eP P 16 52 02.7 -0.3
OTAV **Otavalo** 26.62 126 eP P 16 52 05.0 +1.1
comp=Z,270nm,1.6s
OTAV LR LR
comp=Z,5μm,20.0s
HWUT **Hardware Ranch** 26.64 340 eP P 16 52 04.1 +0.5
comp=Z,184nm,0.9s
HWUT LR LR
comp=Z,9μm,22.0s
J24A **Dixon Ranch, L** 26.64 352 ⇑P P 16 52 03.9 +0.4
baz=27,SNR=51
MLAC **Mammoth Lakes** 26.68 324 ⇓P P 16 52 05.7 +1.6
baz=27
K20A **Yellowstone Ra** 26.69 345 ⇑P P 16 52 03.6 -0.4
baz=27
ECSD **EROS Data Cent** 26.81 5 eP P 16 52 03.7 -1.2
comp=Z,240nm,1.1s
ECSD LR LR
comp=Z,4μm,22.0s
J23A **Dilts Ranch, B** 26.85 350 ⇓P P 16 52 05.5 +0.1
baz=27,SNR=7.8
L17A **Cokeville** 26.87 341 ⇑P P 16 52 05.2 -0.4
baz=27,SNR=16
NV11 **Mina Array Sit** 26.89 326 eP P 16 52 07.8 +2.0
NV11 ePcP PcP 16 55 28.3 +0.6
NVAR **Mina Array Bea** 26.96 326 P P 16 52 08.7 +2.2
NVAR PcP PcP 16 55 28.8 +0.9
NVAR Lg Lg 17 00 48.1
NVAR PKiKP PKiKP 17 03 06.3 +0.5
NVAR e 17 24 45.2
NVAR P'P'ab P'P'ab 17 28 42.4 -1.7
NVAR **Mina Array Bea** 26.96 326 P P 16 52 08.7 +2.2
comp=Z,70nm,0.7s,baz=150,slow=9.5,SNR=286
NVAR PcP PcP 16 55 28.8 +0.9
comp=Z,2.7nm,0.5s,baz=116,slow=1.7,SNR=6.4
NVAR Lg Lg 17 00 48.1
comp=Z,0.1nm,0.2s,baz=137,slow=15,SNR=2.3
NVAR PKiKP PKiKP 17 03 06.3 +0.5
comp=Z,1.5nm,0.7s,baz=177,slow=2.8,SNR=8.2
NVAR LR LR 17 03 36.6
comp=Z,7μm,18.7s,baz=58,slow=38
NVAR P3KPbc 17 24 45.2
comp=Z,1.6nm,0.9s,baz=315,slow=2.6,SNR=7.0
NVAR PKP2ab 17 28 42.4
comp=Z,0.4nm,0.3s,baz=269,slow=10,SNR=3.9
L16A **Fish Haven** 26.97 340 ⇑P P 16 52 06.6 +0.1
baz=27,SNR=24
SDDR **Presa de Saban** 26.97 81 eP P 16 52 07.0 +0.4
comp=Z,163nm,1.2s
SDDR LR LR
comp=Z,6μm,20.0s
K19A **Absolon Red Bu** 26.97 345 P P 16 52 06.2 -0.3
baz=27,SNR=81
J22A **Midwest** 27.02 349 ⇑P P 16 52 06.7 -0.2
baz=27,SNR=100
BW06 **Boulder Array** 27.10 344 eP P 16 52 07.9 +0.1
comp=Z,2μm,1.7s
BW06 LR LR
comp=Z,61μm,22.0s
BW06 **Boulder Array** 27.10 344 ⇑P P 16 52 07.9 +0.1
baz=27
PDAR **Pinedale Array** 27.10 344 P P 16 52 07.8 0.0
PDAR PcP PcP 16 55 27.9 -0.2
PDAR Lg Lg 17 00 52.0
PDAR PKiKP PKiKP 17 03 04.3 -1.5
PDAR SKKP 17 21 35.8
PDAR **Pinedale Array** 27.10 344 P P 16 52 07.8 0.0
comp=Z,129nm,1.0s,baz=147,slow=8.9,SNR=328
PDAR PcP PcP 16 55 27.9 -0.2

comp=Z,15nm,1.0s,baz=134,slow=4.3,SNR=3.9
PDAR Lg Lg 17 00 52.0
comp=Z,0.5nm,0.9s,baz=132,slow=28,SNR=2.9
PDAR PKiKP **PKiKP** **17 03 04.3 -1.5**
comp=Z,3.0nm,0.9s,baz=118,slow=2.4,SNR=7.1
PDAR LR LR 17 04 05.9
comp=Z,61µm,18.4s,baz=169,slow=39
PDAR SKKP 17 21 35.8
comp=Z,0.3nm,0.5s,baz=296,slow=2.9,SNR=3.8
K18A Toltan Ranch, 27.11 343 ⇑P **P 16 52 08.3 +0.5**
baz=27,SNR=36
J21A Lysite 27.14 347 P **P 16 52 08.6 +0.5**
baz=27,SNR=117
I24A Kuemmerle Ranc 27.16 352 ⇑P **P 16 52 08.2 +0.1**
baz=27,SNR=18
GRTK Grand Turk 27.21 76 PFAKE 16 52 20.0 +11
GRTK LR LR
comp=Z,6µm,22.0s
HVU Hansel Valley 27.21 338 *e*P **P 16 52 09.2 +0.5**
HVU pmax pmax
comp=Z,101nm,0.9s
HVU Hansel Valley 27.21 338 *e*P **P 16 52 09.2 +0.5**
comp=Z,101nm,0.9s
L15A Malad City 27.28 339 P **P 16 52 09.8 +0.6**
baz=27,SNR=155
J20A Shoshoni 27.29 346 P **P 16 52 10.0 +0.6**
baz=27,SNR=127
ACSO Alum Creek Sta 27.29 28 *e*P **P 16 52 07.7 -1.5**
comp=Z,305nm,1.1s
ACSO LR LR
comp=Z,7µm,19.0s
ELK Elko 27.30 333 *e*P **P 16 52 10.6 +1.0**
comp=Z,49nm,1.1s
ELK *e*PcP **PcP** 16 55 29.2 +0.5
ELK PcP PcP 16 55 29.4 +0.8
ELK Lg Lg 17 00 58.4
ELK Elko 27.30 333 P **P 16 52 10.8 +1.2**
comp=Z,28nm,0.9s,baz=148,slow=6.5,SNR=58
ELK PcP **PcP** **16 55 29.4 +0.7**
comp=Z,13nm,0.9s,baz=211,slow=2.3,SNR=5.6
ELK Lg Lg 17 00 58.4
comp=Z,1.1nm,0.9s,baz=238,slow=14,SNR=8.6
ELK LR LR 17 04 15.2
comp=Z,32µm,19.4s,baz=154,slow=39
I23A Meade Ranch, G 27.38 351 ⇑P **P 16 52 09.6 -0.5**
baz=27
BRSD Miller 27.41 1 ⇑P **P 16 52 09.2 -1.0**
baz=27
J19A Crowheart 27.44 345 ⇑P **P 16 52 10.3 -0.4**
baz=28,SNR=88
K17A Gardner Place, 27.48 342 ⇓P **P 16 52 11.2 +0.2**
baz=28
I22A 9 Mile Ranch, 27.48 349 P **P 16 52 11.3 +0.3**
baz=28,SNR=47
ROSC El Rosal 27.50 113 P **P 16 52 14.5 +2.7**
ROSC S **S 16 56 55.2 +4.0**
ROSC El Rosal 27.50 113 P **P 16 52 14.7 +2.9**
comp=Z,5.8nm,0.3s,baz=96,slow=22,SNR=12
ROSC S **S 16 56 55.2 +4.0**
comp=Z,4.8nm,0.4s,baz=86,slow=19,SNR=1.3
AHID Auburn Hatcher 27.54 341 *e*P **P 16 52 12.1 +0.4**
comp=Z,65nm,1.0s
AHID LR LR
comp=Z,22µm,19.0s
I21A Big Trails, Te 27.56 348 ⇓P **P 16 52 12.0 +0.2**
baz=28
L14A Malta 27.61 338 ⇓P **P 16 52 12.9 +0.7**
baz=28
SAO San Andreas Ge 27.63 320 *e*P **P 16 52 14.4 +2.1**
SAO pmax pmax
comp=Z,254nm,1.5s
SAO San Andreas Ge 27.63 320 *e*P **P 16 52 14.4 +2.1**
comp=Z,254nm,1.5s
J18A Kendall Valley 27.64 343 ⇓P **P 16 52 12.7 +0.1**
baz=28
K16A Soda Springs 27.75 341 ⇓P **P 16 52 14.0 +0.4**
baz=28,SNR=25
CMB Columbia Colle 27.84 323 *e*P **P 16 52 15.6 +1.4**
CMB pmax pmax
comp=Z,103nm,1.2s
CMB Columbia Colle 27.84 323 *e*P **P 16 52 15.6 +1.4**
comp=Z,103nm,1.2s
I20A Worland 27.87 347 ⇓P **P 16 52 15.1 +0.7**
baz=28
K15A Arbon 27.93 339 ⇑P **P 16 52 15.9 +0.8**
baz=28
BMN Battle Mountai 27.94 330 *e*P **P 16 52 16.6 +1.3**
BMN pmax pmax
comp=Z,22nm,0.8s
BMN MLR MLR
comp=Z,23µm,19.0s
BMN Battle Mountai 27.94 330 *e*P **P 16 52 16.6 +1.3**
comp=Z,22nm,0.8s
BMN LR LR
comp=Z,23µm,19.0s
H23A Clabaugh Cattl 27.96 351 ⇓P **P 16 52 14.7 -0.6**
baz=28
J17A Brown Place, J 27.97 343 ⇑P **P 16 52 16.1 +0.5**
baz=28
REDW Red Top Meadow 28.01 342 *e*P **P 16 52 16.4 +0.5**
comp=Z,2.8nm,1.3s
H24A Dirks Ranch, A 28.02 352 ⇑P **P 16 52 15.6 -0.2**
baz=28
K14A Jones Ranch, D 28.03 338 ⇓P **P 16 52 16.6 +0.7**
baz=28
I18A Diamond G Ranc 28.04 344 ⇑P **P 16 52 16.4 +0.3**
baz=28
SNOW Snow King Moun 28.08 343 *e*P **P 16 52 17.3 +0.7**
comp=Z,165nm,1.0s
JSRW J. Sargeant Re 28.12 38 *e*P **P 16 52 16.4 -0.2**
RRI2 Red Ridge 28.14 342 *e*P **P 16 52 17.4 +0.3**
comp=Z,88nm,0.9s
H22A Clearmont 28.14 350 ⇑P **P 16 52 17.1 +0.3**
baz=28
I19A Meeteetse 28.15 346 ⇑P **P 16 52 17.7 +0.6**
baz=28
TPAW Teton Pass 28.16 342 *e*P **P 16 52 17.8 +0.5**
comp=Z,295nm,1.0s
J16A Bone 28.16 341 ⇓P **P 16 52 17.7 +0.5**
baz=28
LOHW Long Hollow 28.17 343 *e*P **P 16 52 17.5 +0.2**
comp=Z,141nm,1.1s
H21A Big Horn, Sher 28.30 349 ⇓P **P 16 52 18.4 +0.1**
baz=28
DCID1 Drake Creek 28.32 342 *e*P **P 16 52 19.3 +0.7**
comp=Z,286nm,1.1s
MOOW Moose Ponds 28.34 343 *e*P **P 16 52 18.9 +0.2**
comp=Z,70nm,0.9s
H20A Greybull 28.35 347 ⇑P **P 16 52 18.8 0.0**
baz=28
WCN Washoe City 28.38 326 *e*P **P 16 52 21.1 +2.0**
WCN pmax pmax
comp=Z,180nm,1.5s
WCN Washoe City 28.38 326 *e*P **P 16 52 21.1 +2.0**
comp=Z,180nm,1.5s
I17A Pilgrim Ck. 28.45 343 ⇑P **P 16 52 20.4 +0.6**
baz=28
IMW Indian Meadow 28.53 343 *e*P **P 16 52 20.6 0.0**
comp=Z,53nm,0.7s
IMW *e*PcP **PcP** **16 55 32.7 +1.0**
J15A Blackfoot 28.54 340 ⇑P **P 16 52 21.2 +0.7**
baz=29
G24A Alzada 28.58 353 ⇓P **P 16 52 20.6 -0.2**
baz=29
G23A Biddle 28.58 351 ⇑P **P 16 52 20.4 -0.4**
baz=29
I16A Newdale 28.67 342 ⇓P **P 16 52 22.2 +0.5**
baz=29
G22A Birney 28.74 350 ⇑P **P 16 52 21.8 -0.4**
baz=29
H19A Powell 28.75 346 ⇓P **P 16 52 22.9 +0.6**
baz=29
SPMN St. Paul 28.75 10 ⇓P **P 16 52 20.3 -1.9**
baz=29
CBN Corbin 28.76 38 *e*P **P 16 52 22.6 +0.3**
comp=Z,348nm,1.1s
CBN LR LR
comp=Z,4µm,19.0s
J14A Carey 28.83 339 ⇓P **P 16 52 24.0 +0.8**
baz=29
H17A Grant Village 28.89 344 ⇓P **P 16 52 24.6 +0.9**
baz=29
G21A Lodge Grass 28.90 349 ⇑P **P 16 52 23.5 -0.2**
baz=29
H18A Shoshone NF, C 28.91 345 ⇓P **P 16 52 23.9 0.0**
baz=29
LKWY Lake 29.00 344 *e*P **P 16 52 25.9 +1.2**
LKWY pmax pmax
comp=Z,105nm,1.1s
LKWY MLR MLR
comp=Z,66µm,19.0s
LKWY Lake 29.00 344 *e*P **P 16 52 25.9 +1.2**
comp=Z,105nm,1.1s
LKWY LR LR
comp=Z,66µm,19.0s
I15A Monteview 29.09 341 ⇑P **P 16 52 26.3 +0.9**
baz=29
F24A Ekalaka 29.09 353 ⇓P **P 16 52 25.0 -0.3**
baz=29
F23A Volborg 29.09 352 ⇑P **P 16 52 24.8 -0.4**
baz=29
G20A Bridger 29.10 347 ⇑P **P 16 52 24.9 -0.5**
baz=29
BEKR Beckworth 29.11 326 *e*P **P 16 52 27.5 +1.9**
comp=Z,97nm,1.4s
BEKR *e*PcP **PcP** **16 55 33.5 +0.4**
J13A Cove Ranch, Pi 29.13 338 ⇑P **P 16 52 26.5 +0.7**
baz=29
RLMT Red Lodge 29.24 346 *e*P **P 16 52 26.8 +0.1**
comp=Z,233nm,1.1s
RLMT LR LR
comp=Z,20µm,19.0s
RLMT Red Lodge 29.24 346 ⇑P **P 16 52 26.9 +0.1**
baz=29
YMR Madison River 29.25 343 *e*P **P 16 52 28.3 +1.4**
comp=Z,93nm,1.0s
F22A Rosebud 29.28 350 ⇑P **P 16 52 26.0 -0.9**
baz=29
SDV Santo Domingo 29.29 102 *e*P **P 16 52 29.3 +1.8**
I14A Mackay 29.34 339 ⇑P **P 16 52 28.9 +1.2**
baz=29
H16A Russell Place, 29.36 343 ⇑P **P 16 52 28.7 +0.8**
baz=29
HLID Hailey 29.36 338 *e*P **P 16 52 28.6 +0.8**
comp=Z,60nm,0.9s
HLID LR LR
comp=Z,12µm,20.0s
HLID Hailey 29.36 338 ⇑P **P 16 52 28.6 +0.8**
baz=29
F21A Absaloka Mine, 29.46 349 ⇑P **P 16 52 28.1 -0.5**
baz=30
G18A Lazy EL Ranch, 29.49 346 ⇑P **P 16 52 29.2 +0.2**
baz=30
QLMT Earthquake Lak 29.53 343 *e*P **P 16 52 30.9 +1.6**
comp=Z,3.7nm,0.8s
I13A Wildhorse Cree 29.56 338 ⇓P **P 16 52 30.5 +0.8**
baz=30
F20A Billings 29.64 348 ⇑P **P 16 52 30.2 0.0**
baz=30
H15A Lima 29.69 341 ⇑P **P 16 52 32.1 +1.3**
baz=30
MFID Camas Ranch 29.77 336 *e*P **P 16 52 32.3 +0.8**
comp=Z,181nm,1.4s
MFID Camas Ranch 29.77 336 ⇑P **P 16 52 32.2 +0.8**
baz=30
E24A Baker 29.78 353 ⇑P **P 16 52 31.2 -0.2**
baz=30
G17A Pierce Place, 29.79 344 ⇓P **P 16 52 33.2 +1.6**
baz=30
I12A Atlanta 29.82 337 ⇓P **P 16 52 33.0 +1.0**
baz=30
E23A Isray 29.84 352 ⇑P **P 16 52 31.4 -0.5**
baz=30
F19A Roth Farm, Mol 29.86 347 ⇓P **P 16 52 32.1 0.0**
baz=30
E22A Miles City 29.87 351 ⇓P **P 16 52 31.5 -0.7**
baz=30
SDMD Soldier's Deli 29.87 37 *e*P **P 16 52 32.0 -0.2**
comp=Z,190nm,1.0s
H14A Leadore 29.92 340 ⇑P **P 16 52 34.1 +1.2**
baz=30
MCMT McKenzie Canyo 29.95 341 *e*P **P 16 52 34.5 +1.4**
comp=Z,20nm,0.8s
MCMT *e*pP **pP** **16 52 43.3 +1.0**
GCMT Greycliff 29.96 346 *e*P **P 16 52 33.4 +0.3**
comp=Z,109nm,1.2s
G16A Moss Hill, Enn 30.00 343 ⇑P **P 16 52 34.7 +1.3**
baz=30
F18A Big Timber 30.08 346 ⇑P **P 16 52 34.4 +0.3**
baz=30
SSPA Standing Stone 30.14 34 *e*P **P 16 52 34.1 -0.4**
comp=Z,4µm,2.3s
SSPA *e*pP **pP** **16 52 44.2 +0.5**
G15A Dillon 30.14 342 ⇓P **P 16 52 36.0 +1.2**
baz=30
E21A Keefer Ranch, 30.15 350 ⇓P **P 16 52 34.6 -0.1**
baz=30
ERPA Erie 30.17 30 *e*P **P 16 52 33.4 -1.4**
comp=Z,110nm,1.2s
ERPA LR LR
comp=Z,7µm,19.0s
WVOR Wild Horse Val 30.17 331 *e*P **P 16 52 35.9 +0.9**
WVOR *e**PP **pP** **16 52 45.5 +1.3**
WVOR pmax pmax
comp=Z,162nm,1.4s
WVOR MLR MLR
comp=Z,21µm,20.0s
WVOR Wild Horse Val 30.17 331 *e*P **P 16 52 35.9 +0.9**
comp=Z,162nm,1.4s
WVOR *e*pP **pP** **16 52 45.5 +1.3**
WVOR LR LR
comp=Z,21µm,20.0s
H13A Challis 30.18 339 ⇑P **P 16 52 36.1 +1.1**
baz=30
E20A Meyer Farm, Mu 30.31 348 ⇓P **P 16 52 36.3 +0.2**
baz=30
F17A Fitzpatrick Pl 30.31 345 ⇑P **P 16 52 37.2 +1.0**
baz=30
LBCM Butte Creek Ri 30.33 326 P **P 16 52 38.6 +2.2**
BOZ Bozeman (W) 30.33 343 *e*P **P 16 52 36.5 +0.1**
BOZ pmax pmax
comp=Z,70nm,0.9s
BOZ MLR MLR
comp=Z,51µm,19.0s
BOZ Bozeman (W) 30.33 343 *e*P **P 16 52 36.5 +0.1**
comp=Z,70nm,0.9s
BOZ LR LR
comp=Z,51µm,19.0s
BOZ Bozeman (W) 30.33 343 ⇑P **P 16 52 36.8 +0.4**
baz=30
D24A Glendive 30.33 354 ⇓P **P 16 52 36.7 +0.5**
baz=30
COWI Conover 30.33 14 *e*P **P 16 52 34.8 -1.5**
comp=Z,106nm,1.0s
COWI LR LR
comp=Z,12µm,21.0s
DLMT Dillon 30.35 342 *e*P **P 16 52 37.9 +1.3**
comp=Z,229nm,1.1s
H12A Diamond D Ranc 30.37 338 ⇑P **P 16 52 37.8 +1.0**
baz=30
E19A Rath Farm, Rou 30.40 347 ⇓P **P 16 52 37.1 +0.2**
baz=30
F16A Kennard Place, 30.46 343 ⇑P **P 16 52 38.5 +1.0**
baz=30
D23A Lindsay 30.49 352 ⇑P **P 16 52 37.6 -0.1**
baz=30
GLMI Grayling 30.50 21 *e*P **P 16 52 37.3 -0.3**
comp=Z,199nm,0.9s
GLMI LR LR
comp=Z,8µm,19.0s
G14A Jackson 30.51 340 ⇓P **P 16 52 39.0 +1.0**
baz=31
MOD Modoc 30.56 329 *e*P **P 16 52 39.5 +1.1**
comp=Z,144nm,0.9s
MOD *e*PcP **PcP** **16 55 37.4 +0.6**
D22A Cohagen 30.60 351 ⇑P **P 16 52 39.0 +0.4**
baz=31
G13A Cobalt 30.63 339 ⇑P **P 16 52 40.0 +0.9**
baz=31
D21A La Casta Ranch 30.65 350 ⇓P **P 16 52 39.5 +0.4**
baz=31
LRM Limekiln Ridge 30.73 342 *e*P **P 16 52 40.5 +0.5**
comp=Z,1µm,0.9s
E18A Harlowton 30.75 346 ⇑P **P 16 52 40.4 +0.4**
baz=31
C24A Savage 30.75 354 ⇓P **P 16 52 40.4 +0.5**
baz=31
F15A Butte 30.75 342 ⇑P **P 16 52 41.0 +0.9**
baz=31
KCPM Cahto Peak 30.80 322 P **P 16 52 43.2 +2.7**
comp=Z,140nm,1.4s
WDC Whiskeytown Da 30.80 325 *e*P **P 16 52 40.0 -0.4**
WDC pmax pmax
comp=Z,47nm,1.4s
WDC Whiskeytown Da 30.80 325 *e*P **P 16 52 40.0 -0.4**
comp=Z,47nm,1.4s
MDND Maddock 30.81 360 ⇓P **P 16 52 40.0 -0.4**
baz=31
KIPM Iron Peak 30.82 322 *e*P **P 16 52 43.6 +2.8**
comp=Z,434nm,1.6s
J08A Circle Bar Ran 30.83 333 P **P 16 52 42.1 +1.4**
D20A Manuel Ranch, 30.88 349 ⇓P **P 16 52 41.0 0.0**
baz=31
E17A Martinsdale 30.88 345 ⇓P **P 16 52 41.6 +0.4**
baz=31
F14A Wisdom 30.99 341 ⇑P **P 16 52 42.8 +0.6**
baz=31
D19A Cripps Ranch, 31.09 348 ⇓P **P 16 52 43.4 +0.4**
baz=31
C23A Lambert 31.11 353 ⇓P **P 16 52 43.4 +0.3**
baz=31
C22A Vida 31.14 352 ⇓P **P 16 52 43.5 +0.2**
baz=31
E16A East Helena 31.16 344 ⇓P **P 16 52 44.2 +0.6**
baz=31
F13A Darby 31.28 340 ⇓P **P 16 52 45.5 +0.8**
baz=31
D18A Linhart Farms, 31.32 347 ⇑P **P 16 52 45.5 +0.5**
baz=31
E15A Deer Lodge 31.33 342 ⇑P **P 16 52 45.6 +0.5**
baz=31
HRY Holter Researc 31.36 344 *e*P **P 16 52 46.1 +0.7**
comp=Z,226nm,1.1s
C21A Desert Coulee 31.40 350 ⇓P **P 16 52 45.8 +0.1**
baz=31
C20A Veseth Ranch, 31.45 349 ⇑P **P 16 52 46.3 +0.2**
baz=32
D17A Six Diamond Ra 31.48 345 ⇓P **P 16 52 47.1 +0.6**
baz=32
BMO Blue Mountains 31.55 336 *e*P **P 16 52 46.5 -0.6**
comp=Z,54nm,1.1s
BMO *e*PcP **PcP** **16 55 39.1 -0.2**
BMO LR LR
comp=Z,20µm,20.0s
F12A Elk City 31.56 339 ⇓P **P 16 52 48.1 +0.9**
baz=32
E14A Clinton 31.57 341 ⇑P **P 16 52 47.8 +0.5**
baz=32
D16A Dana Ranch, Ca 31.59 344 ⇓P **P 16 52 47.8 +0.4**
baz=32
EYMN Ely 31.61 10 *e*P **P 16 52 45.5 -1.9**
comp=Z,54nm,1.0s
EYMN LR LR
comp=Z,17µm,21.0s
DGMT Dagmar 31.66 354 *e*P **P 16 52 47.9 +0.1**
comp=Z,501nm,1.0s
DGMT LR LR
comp=Z,19µm,19.0s
DGMT Dagmar 31.66 354 ⇑P **P 16 52 48.1 +0.2**
baz=32
KHMM Horse Mountain 31.66 324 *e*P **P 16 52 50.6 +2.4**
comp=Z,261nm,1.5s
C19A Slack Wire Ran 31.67 348 ⇑P **P 16 52 48.5 +0.5**
baz=32
YBH Yreka Blue Hor 31.69 326 *e*P **P 16 52 48.5 +0.1**
comp=Z,11nm,0.8s
YBH *e*PcP **PcP** **16 55 39.4 -0.3**
YBH Lg Lg 17 03 24.0
YBH Yreka Blue Hor 31.69 326 P **P 16 52 48.6 +0.3**
comp=Z,15nm,0.8s,baz=123,slow=4.4,SNR=25
YBH PcP **PcP** **16 55 39.4 -0.3**
comp=Z,7.0nm,0.9s,baz=102,slow=4.5,SNR=4.3
YBH Lg Lg 17 03 24.0
comp=Z,0.7nm,0.3s,baz=204,slow=20,SNR=2.9
YBH LR LR 17 06 37.1
comp=Z,7µm,20.6s,baz=143,slow=38
B22A Reddig Ranch S 31.70 352 ⇓P **P 16 52 48.2 -0.1**
baz=32
B23A Brockton 31.74 353 ⇓P **P 16 52 49.1 +0.5**
baz=32
ATAH Atahualpa 31.80 137 P **P 16 52 52.9 +3.0**
ATAH Atahualpa 31.80 137 P **P 16 52 52.9 +3.0**
comp=Z,52nm,0.8s,baz=6.9,slow=2.2,SNR=28
ATAH LR LR 17 03 03.9
comp=Z,8µm,20.4s,baz=127,slow=31
E13A Victor 31.81 341 ⇓P **P 16 52 49.9 +0.5**
baz=32
D15A Lincoln 31.86 343 ⇑P **P 16 52 50.0 +0.2**
baz=32
SJG San Juan 31.87 83 *e*P **P 16 52 49.1 -0.9**
comp=Z,137nm,1.3s
SJG LR LR
comp=Z,2µm,20.0s
SJG San Juan 31.87 83 P **P 16 52 48.8 -1.2**
comp=Z,12nm,0.3s,baz=288,slow=12,SNR=5.6
CHMT Chamberlain Mo 31.95 342 *e*P **P 16 52 50.7 0.0**
comp=Z,78nm,0.8s
C17A Wharram Farm, 31.95 346 ⇓P **P 16 52 51.0 +0.5**
baz=32
B21A Ellsworth Farm 31.97 351 ⇓P **P 16 52 50.8 +0.1**
baz=32
BRNJ Basking Ridge 32.02 37 *e*P **P 16 52 51.4 +0.2**
comp=Z,77µm,1.0s
BRNJ *e*pP **pP** **16 53 01.0 +0.7**
MSO Missoula 32.08 341 *e*P **P 16 52 52.1 +0.4**
comp=Z,65nm,1.0s
MSO LR LR
comp=Z,5µm,21.0s
MSO Missoula 32.08 341 ⇑P **P 16 52 52.1 +0.4**
baz=32
A24A Westby 32.09 354 ⇑P **P 16 52 52.0 +0.4**
baz=32
EGMT Eagleton 32.09 347 *e*P **P 16 52 51.9 +0.1**
comp=Z,313nm,1.3s
EGMT *e*pP **pP** **16 53 01.6 +0.6**
EGMT LR LR
comp=Z,8µm,20.0s
EGMT Eagleton 32.09 347 ⇑P **P 16 52 52.2 +0.4**
baz=32
CBYP Canovanas 32.14 83 *e*P **P 16 52 51.5 -1.0**
comp=Z,100nm,1.2s
B20A Solberg Farm, 32.15 349 ⇑P **P 16 52 52.2 0.0**
baz=32
D14A Greenough 32.18 342 ⇓P **P 16 52 52.7 +0.1**
baz=32
KRMB Red Mountain 32.20 324 *e*P **P 16 52 54.4 +1.5**
comp=Z,316nm,1.6s
A23A Redstone 32.21 353 ⇑P **P 16 52 53.3 +0.6**
baz=32
BINY Binghamton 32.25 34 *e*P **P 16 52 52.7 -0.4**
comp=Z,375nm,1.1s
BINY LR LR
comp=Z,6µm,20.0s
SLMT Seeley Lake 32.32 342 *e*P **P 16 52 54.0 +0.2**
comp=Z,94nm,1.0s
B19A Brinkman Farms 32.34 348 ⇓P **P 16 52 54.5 +0.6**
baz=32
C16A Fuhringer Ranc 32.35 345 ⇑P **P 16 52 54.4 +0.4**
baz=32
A22A Carney Farms, 32.37 352 ⇑P **P 16 52 54.5 +0.4**
baz=32
HUMO Hull Mountain 32.43 327 *e*P **P 16 52 56.6 +1.8**
comp=Z,24nm,1.3s
MTP Monte Pirata 32.44 83 *e*P **P 16 52 54.4 -0.6**
comp=Z,254nm,1.3s
CPNY Central Park 32.45 38 *e*P **P 16 52 53.6 -1.2**
comp=Z,133nm,1.0s
B18A Beardsley Farm 32.45 347 ⇓P **P 16 52 55.2 +0.3**
baz=32
F10A Beach Ranch, E 32.46 337 P **P 16 52 55.3 +0.2**
D13A Huson 32.48 341 ⇑P **P 16 52 55.4 +0.3**
baz=32
C15A Salmond Ranch, 32.55 344 ⇑P **P 16 52 56.1 +0.2**
baz=33
A20A Cobblestone Ra 32.56 350 ⇑P **P 16 52 55.9 +0.1**
baz=33
B17A L&G Farms, Che 32.58 346 ⇑P **P 16 52 56.2 +0.2**
baz=33
SADO Sadowa 32.62 27 P **P 16 52 54.5 -1.8**
SADO Sadowa 32.62 27 P **P 16 52 54.5 -1.8**
comp=Z,61nm,0.8s,baz=245,slow=9.2,SNR=42
VIPM Ingram Point 32.69 332 P **P 16 52 58.2 +1.0**
VIPM Ingram Point 32.69 332 P **P 16 52 58.2 +1.0**
SWMT Swartz Lake 32.71 342 *e*P **P 16 52 57.3 +0.1**
comp=Z,175nm,1.0s
SWMT *e*PcP **PcP** **16 55 42.6 +0.2**
D12A Red Ives Fores 32.73 340 ⇑P **P 16 52 57.0 -0.4**
baz=33
A19A Klindworth Far 32.75 349 ⇑P **P 16 52 57.6 +0.1**
baz=33
GMO Grizzlie Mount 32.79 331 P **P 16 52 59.1 +1.0**
KBO Bosley Butte 32.84 325 *e*P **P 16 53 00.7 +2.3**
comp=Z,728nm,1.4s
B16A M & M Farms, S 32.91 345 ⇓P **P 16 52 58.7 -0.2**

baz=33
A18A Metzger Ranch, 32.96 348 ⇓P P 16 52 59.1 -0.2
baz=33
JTMT Jette 33.01 342 eP P 16 52 60.0 +0.2
comp=Z,91nm,0.9s
JTMT eP cP **cP** 16 55 43.6 +0.4
YBMT Yellow Bay 33.03 342 eP P 16 53 00.6 +0.5
comp=Z,126nm,0.9s
B15A Bradely Ranch, 33.03 344 ⇑P P 16 53 00.0 0.0
baz=33
C13A Hot Springs 33.03 341 ⇓P P 16 52 59.9 -0.1
baz=33
A17A Triple J Farms 33.17 347 ⇓P P 16 53 01.5 +0.3
baz=33
BSMT Bassoo Peak 33.25 341 eP P 16 53 02.1 0.0
comp=Z,27nm,0.9s
BLMT Blacktail Moun 33.27 342 eP P 16 53 02.7 +0.5
comp=Z,104nm,1.0s
B14A Marquette Ranc 33.27 343 ⇓P P 16 53 02.2 +0.1
baz=33
C12B Naegeli Ranch, 33.34 340 ⇑P P 16 53 02.6 -0.1
baz=33
KEBM Edson Butte 33.34 326 eP P 16 53 05.0 +2.2
comp=Z,790nm,1.4s
ULM Lac du Bonnet 33.34 4 P P 16 53 01.2 -1.4
ULM cP **cP** 16 55 43.5 -0.4
ULM Lac du Bonnet 33.34 4 P P 16 53 01.2 -1.4
comp=Z,49nm,0.8s,baz=188,slow=8.7,SNR=29
ULM cP **cP** 16 55 43.5 -0.4
comp=Z,38nm,1.0s,baz=216,slow=2.4,SNR=3.7
ULM LR LR 17 08 30.2
comp=Z,3μm,19.2s,baz=186,slow=40
YLE Yale 33.38 38 eP P 16 53 03.2 +0.2
comp=Z,184nm,0.8s
A16A West Butte Ran 33.38 346 ⇑P P 16 53 03.3 +0.2
baz=33
B13A Whitefish 33.62 342 ⇑P P 16 53 05.7 +0.6
baz=34
A15A Johnson Ranch, 33.69 344 ⇑P P 16 53 05.5 -0.2
baz=34
HAWA Hanford 33.71 335 eP P 16 53 05.5 -0.3
comp=Z,17nm,1.0s
HAWA LR LR
comp=Z,30μm,22.0s
C11A Tepee Creek (N 33.71 340 ⇓P P 16 53 05.7 -0.2
baz=34
RNO Roman Nose 33.76 328 P P 16 53 08.7 +2.3
SSOR Sweet Springs 33.81 330 P P 16 53 07.9 +1.0
SSOR Sweet Springs 33.81 330 P P 16 53 07.9 +1.0
A14A Double T Ranch 33.87 344 ⇓P P 16 53 07.8 +0.5
baz=34
TRY Troy 33.87 35 eP P 16 53 07.3 0.0
comp=Z,207nm,1.2s
COR Corvallis 34.02 329 P P 16 53 09.8 +1.2
COR pmax pmax
comp=Z,211nm,1.5s
COR Corvallis 34.02 329 P P 16 53 09.8 +1.2
comp=Z,210nm,1.5s
B12A Libby 34.05 341 ⇓P P 16 53 09.1 +0.3
baz=34
WALA Waterton Lakes 34.08 343 eP P 16 53 09.8 +0.7
comp=Z,6.4nm,1.1s
ACCN Adirondack Com 34.31 34 eP P 16 53 10.2 -0.9
comp=Z,177nm,1.1s
QUA2 Belchertown 34.32 37 eP P 16 53 09.8 -1.4
comp=Z,330nm,1.3s
NEW Newport 34.37 339 eP P 16 53 11.7 0.0
comp=Z,59nm,1.0s
NEW pcP **cP** 16 55 46.2 -0.7
NEW LR LR
comp=Z,22μm,19.0s
NEW Newport 34.37 339 ⇑P P 16 53 11.4 -0.2
baz=34
NEW Newport 34.37 339 P P 16 53 11.4 -0.2
comp=Z,51nm,0.9s,baz=139,slow=8.1,SNR=33
NEW pcP **cP** 16 55 46.2 -0.7
comp=Z,31nm,0.9s,baz=170,slow=2.7,SNR=5.3
NCB Newcomb 34.41 33 eP P 16 53 11.2 -0.8
comp=Z,88nm,1.0s
NCB LR LR
comp=Z,3μm,19.0s
A12A Yaak River Ran 34.48 341 ⇓P P 16 53 13.1 +0.6
baz=34
BRYW Bryant College 34.57 38 eP P 16 53 13.3 -0.1
comp=Z,59nm,0.8s
LONY Lake Ozonia 34.67 32 eP P 16 53 13.0 -1.2
comp=Z,91nm,1.2s
LONY LR LR
comp=Z,5μm,20.0s
MSNY Massena 34.80 31 eP P 16 53 14.5 -0.8
comp=Z,260nm,0.7s
TDL Tradedollar La 34.83 332 P P 16 53 16.9 +1.3
HRV Adam Dziewonsk 34.92 37 eP P 16 53 16.2 -0.2
HRV pmax pmax
comp=Z,163nm,1.1s
HRV Adam Dziewonsk 34.92 37 eP P 16 53 16.2 -0.2
comp=Z,163nm,1.1s
LON Longmire 34.95 333 eP P 16 53 17.6 +0.9
LON e 16 55 48.9
LON pmax pmax
comp=Z,36nm,0.8s
LON Longmire 34.95 333 eP P 16 53 17.6 +0.9
comp=Z,36nm,0.8s
LON epcP **cP** 16 55 48.9 +0.2
MDV Middlebury 34.98 34 eP P 16 53 16.1 -0.8
WES Weston 34.99 38 eP P 16 53 16.6 -0.3
WES pmax pmax
comp=Z,209nm,1.1s
WES Weston 34.99 38 eP P 16 53 16.6 -0.3
comp=Z,209nm,1.1s
ETW Entiat 35.01 335 P P 16 53 18.3 +1.0
BBSR BB Station 35.03 57 eP P 16 53 18.1 +0.7
comp=Z,124nm,1.0s
BBSR LR LR
comp=Z,6μm,22.0s
HNH Hanover 35.27 35 eP P 16 53 19.5 +0.2
comp=Z,192nm,1.0s
FRNY Flat Rock 35.33 33 eP P 16 53 18.7 -1.1
comp=Z,105nm,1.2s
LBNH Lisbon 35.82 35 eP P 16 53 23.9 -0.2
LBNH pmax pmax
comp=Z,129nm,1.1s
LBNH MLR MLR
comp=Z,5μm,22.0s
LBNH Lisbon 35.82 35 eP P 16 53 23.9 -0.2
comp=Z,130nm,1.1s
LBNH LR LR
comp=Z,5μm,22.0s
ANWB Willy Bob 36.04 83 PFAKE 16 53 40.0 +14
ANWB LR LR
comp=Z,2μm,20.0s
NLWA Neilton Lookou 36.36 332 eP P 16 53 30.2 +1.6
comp=Z,210nm,1.5s
NLWA LR LR
comp=Z,23μm,19.0s
NNA Nana 36.49 141 eP P 16 53 30.9 +0.7
comp=Z,96nm,1.5s
NNA LR LR
comp=Z,7μm,20.0s
GRGR Grenville 36.97 92 PFAKE 16 53 50.0 +16
GRGR LR LR
comp=Z,3μm,21.0s
FDF Fort de France 36.99 88 PFAKE 16 53 50.0 +16
FDF LR LR
comp=Z,3μm,22.0s
PGC Sidney 37.13 334 P P 16 53 35.0 -0.2
comp=Z,2.6nm,0.9s
WVL Waterville 37.28 36 eP P 16 53 36.9 +0.4
comp=Z,246nm,1.2s
FFC Flin Flon 37.74 358 eP P 16 53 39.8 -0.5
FFC pmax pmax
comp=Z,239nm,0.8s
FFC MLR MLR
comp=Z,2μm,19.0s
FFC Flin Flon 37.74 358 eP P 16 53 39.8 -0.5
comp=Z,238nm,0.8s
FFC LR LR
comp=Z,2μm,19.0s
FFC Flin Flon 37.74 358 P P 16 53 39.3 -1.0
comp=Z,2μm,0.7s
EMMW East Machias 38.63 37 eP P 16 53 47.9 +0.1
comp=Z,111nm,1.0s
EMMW epP **pP** 16 53 58.0 +0.8
BBGH Gun Hill 38.78 90 PFAKE 16 54 00.0 +10
BBGH LR LR
comp=Z,6μm,21.0s
PQI Presque Isle 39.49 35 eP P 16 53 55.3 +0.3
comp=Z,132nm,1.0s
BBB Bella Bella 41.75 334 PcP **PcP** 16 56 10.3 +0.8
BBB Bella Bella 41.75 334 PcP **PcP** 16 56 10.3 +0.8
baz=111,slow=3.0
BBB LR LR 17 12 54.6
comp=Z,8μm,18.7s,baz=138,slow=38
SAML Samuel 44.24 123 eP P 16 54 32.5 -1.8
comp=Z,55nm,1.0s
SAML ePP **PP** 16 56 18.3 +0.4
SAML LR LR
comp=Z,2μm,20.0s
RPN Rapa Nui 44.83 192 P P 16 54 40.7 +1.9
RPN LR LR
comp=Z,9μm,21.0s
RPN Rapa Nui 44.83 192 P P 16 54 40.7 +1.9
comp=Z,163nm,0.9s,baz=332,slow=5.8,SNR=7.5
LPAZ La Paz 45.30 135 eP P 16 54 43.2 -0.2
comp=Z,68nm,1.0s
LPAZ PcP **PcP** 16 56 23.1 +0.1
LPAZ La Paz 45.30 135 P P 16 54 43.7 +0.3
comp=Z,36nm,0.8s,baz=333,slow=7.6,SNR=93
LPAZ PcP **PcP** 16 56 23.1 +0.1
comp=Z,14nm,0.9s,baz=4.0,slow=1.8,SNR=3.7
LPAZ LR LR 17 12 16.1
comp=Z,5μm,18.9s,baz=303,slow=34
SCHQ Schefferville 45.40 26 eP P 16 54 42.2 -0.7
comp=Z,139nm,0.9s
SCHQ Schefferville 45.40 26 P P 16 54 42.4 -0.7
comp=Z,134nm,1.0s,baz=234,slow=6.5,SNR=139
SCHQ LR LR 17 16 21.8
comp=Z,3μm,18.4s,baz=235,slow=40
CRAG Craig 46.17 334 eP P 16 54 51.2 +2.1
comp=Z,530nm,1.3s
CRAG epP pP 16 55 00.5 +1.9
WRAK Wrangell Islan 46.52 336 eP P 16 54 50.9 -0.9
comp=Z,175nm,1.6s
WRAK LR LR
comp=Z,7μm,22.0s
YKA Yellowknife Ar 46.70 350 P P 16 54 53.0 0.0
YKA pP **pP** 16 55 02.1 -0.4
YKA PcP **PcP** 16 56 26.3 0.0
YKA PKiKP **PKiKP** 17 03 19.0 -1.6
YKA PKKKP 17 25 28.6
YKA Yellowknife Ar 46.70 350 P P 16 54 53.0 0.0
comp=Z,109nm,0.9s,baz=160,slow=7.3,SNR=996
YKA pP **pP** 16 55 02.1 -0.4
comp=Z,70nm,0.9s,baz=157,slow=7.3,SNR=11
YKA PcP **PcP** 16 56 26.3 0.0
comp=Z,14nm,0.9s,baz=155,slow=3.9,SNR=5.1
YKA PKiKP **PKiKP** 17 03 19.0 -1.6
comp=Z,0.7nm,0.8s,baz=151,slow=1.4,SNR=5.5
YKA P3KP 17 25 28.6
comp=Z,0.1nm,0.4s,baz=319,slow=2.5,SNR=4.6
YKW3 Yellowknife Ar 46.76 350 eP P 16 54 52.8 -0.8
comp=Z,2.6nm,0.9s
YKW3 epP **pP** 16 55 02.6 -0.5
DLBC Dease Lake 47.12 339 eP P 16 54 58.8 +2.2
DLBC epP pP 16 55 08.2 +2.1
DLBC PcP **PcP** 16 56 29.2 +1.2
DLBC Dease Lake 47.12 339 PcP **PcP** 16 56 29.2 +1.2
comp=Z,34nm,1.0s,baz=176,slow=5.7,SNR=3.4
DLBC LR LR 17 16 39.8
comp=Z,27μm,18.8s,baz=139,slow=38
SKAG Skagway 49.77 337 P P 16 55 17.2 +0.3
comp=Z,326nm,1.7s
SKAG epP **pP** 16 55 28.1 +1.7
SIV San Ignacio 50.13 129 P P 16 55 19.7 -0.5
SIV San Ignacio 50.13 129 P P 16 55 19.7 -0.5
comp=Z,62nm,1.0s,baz=314,slow=8.1,SNR=91
PNL Peninsula 51.48 335 eP P 16 55 30.7 +0.9
comp=Z,345nm,1.4s
PNL epP **pP** 16 55 41.1 +1.7
STCH Steam Cracks 52.65 282 P P 16 55 40.5 +1.2
LCO Las Campanas 53.54 148 eP P 16 55 46.4 +0.7
comp=Z,117nm,1.2s
LCO LR LR
comp=Z,7μm,22.0s
BMRM Bremner River 54.34 335 eP P 16 55 52.7 +1.7
comp=Z,391nm,1.4s
BMRM epP pP 16 56 02.9 +2.3
DIV Divide 54.91 335 eP P 16 55 56.1 +1.0
comp=Z,343nm,1.5s
DIV epP **pP** 16 56 06.3 +1.5
HON Honolulu 55.11 284 eP P 16 55 59.0 +1.9
HON Honolulu 55.11 284 eP P 16 55 59.0 +1.9
KIP Kipapa 55.11 285 eP P 16 55 58.9 +1.8
KIP e*PP **pP** 16 56 08.4 +1.6
KIP pmax pmax
comp=Z,627nm,1.4s
KIP Kipapa 55.11 285 eP P 16 55 58.9 +1.8
comp=Z,627nm,1.4s
KIP epP **pP** 16 56 08.4 +1.6
EGAK Eagle 55.35 340 eP P 16 55 58.6 +0.5
comp=Z,209nm,1.3s
EGAK epP **pP** 16 56 09.0 +1.2
EGAK LR LR
comp=Z,5μm,19.0s
INK Inuvik 55.65 345 P P 16 56 00.4 +0.2
INK pP **pP** 16 56 09.9 +0.1
INK P'P' 17 26 04.8
INK Inuvik 55.65 345 P P 16 56 00.4 +0.2
comp=Z,91nm,1.0s,baz=124,slow=5.5,SNR=3.4
INK pP **pP** 16 56 09.9 +0.1
comp=Z,160nm,0.9s,baz=127,slow=9.0,SNR=6.8
INK LR LR 17 22 01.8
comp=Z,14μm,18.4s,baz=148,slow=38
INK PKPPKP **P'P'df** 17 26 04.8 -1.3
comp=Z,2.7nm,1.1s,baz=348,slow=4.6,SNR=4.1
DOT Dot Lake 55.66 338 eP P 16 56 01.5 +1.1
comp=Z,329nm,1.4s
DOT epP **pP** 16 56 11.7 +1.6
PAX Paxson 55.80 337 eP P 16 56 02.3 +0.8
PAX e*PP **pP** 16 56 11.4 +0.2
PAX pmax pmax
comp=Z,313nm,1.6s
PAX Paxson 55.80 337 eP P 16 56 02.3 +0.8
comp=Z,313nm,1.6s
PAX epP **pP** 16 56 11.4 +0.2
SEW Seward 55.96 332 eP P 16 56 03.3 +0.8
comp=Z,167nm,1.3s
SML Sawmill 56.31 335 eP P 16 56 06.0 +0.9
SML pmax pmax
comp=Z,64nm,1.4s
SML Sawmill 56.31 335 eP P 16 56 06.0 +0.9
comp=Z,64nm,1.4s
KDAK Kodiak Island 56.41 329 P P 16 56 07.1 +1.3
KDAK Kodiak Island 56.41 329 P P 16 56 07.1 +1.3
comp=Z,14nm,0.7s,baz=132,slow=4.9,SNR=9.0
PMR Palmer 56.53 334 eP P 16 56 06.9 +0.3
PMR e*PP **pP** 16 56 17.0 +0.7
PMR pmax pmax
comp=Z,201nm,1.3s
PMR Palmer 56.53 334 eP P 16 56 06.9 +0.3
comp=Z,201nm,1.3s
PMR epP **pP** 16 56 17.0 +0.7
OHAK Old Harbor 56.54 328 eP P 16 56 08.0 +1.2
comp=Z,385nm,1.3s
OHAK epP **pP** 16 56 17.4 +0.9
FCH Farellones 57.29 151⇑ iP P 16 56 13.3 +0.6
PMOR Pomariorio Ree 57.29 239 eP P 16 56 14.4 +1.8
comp=Z,167nm,1.0s
ILAR Eielson Array 57.32 338 P P 16 56 12.8 +0.6
ILAR pP **pP** 16 56 22.9 +1.1
ILAR PcP **PcP** 16 57 06.5 +0.5
ILAR P'P' 17 26 01.7
ILAR Eielson Array 57.32 338 P P 16 56 12.8 +0.6
comp=Z,26nm,1.0s,baz=142,slow=4.7,SNR=113
ILAR pP **pP** 16 56 22.9 +1.1
comp=Z,86nm,1.1s,baz=141,slow=2.2,SNR=28
ILAR PcP **PcP** 16 57 06.5 +0.5
comp=Z,18nm,0.7s,baz=154,slow=2.7,SNR=16
ILAR LR LR 17 23 45.4
comp=Z,8μm,18.5s,baz=138,slow=39
ILAR PKPPKP **P'P'df** 17 26 01.7 -2.1
comp=Z,2.1nm,1.1s,baz=331,slow=4.1,SNR=5.9
MCK McKinley 57.53 336 eP P 16 56 14.5 +0.8
MCK pmax pmax
comp=Z,209nm,1.3s
MCK McKinley 57.53 336 eP P 16 56 14.5 +0.8
comp=Z,209nm,1.3s
RSO Redoubt South 57.59 332 eP P 16 56 14.7 +0.3
comp=Z,307nm,0.8s
COLA College 57.72 338 eP P 16 56 15.3 +0.4
COLA pmax pmax
comp=Z,58nm,0.8s
COLA MLR MLR
comp=Z,8μm,19.0s
COLA College 57.72 338 eP P 16 56 15.3 +0.4
comp=Z,58nm,0.8s
COLA LR LR
comp=Z,8μm,19.0s
LMEL Las Melosas 57.76 151⇑ iP P 16 56 16.9 +1.1
RES Resolute Bay 57.80 1 eP P 16 56 14.4 -0.9
comp=Z,132nm,1.4s
TRF Thorofare Moun 57.91 336 eP P 16 56 16.7 +0.2
comp=Z,655nm,1.5s
PPLA Purkeypile 58.41 335 eP P 16 56 20.1 0.0
comp=Z,453nm,1.5s
PPLA epP **pP** 16 56 30.6 +0.9
XMAS Kiritimati 58.74 262 PFAKE 16 56 40.0 +17
XMAS LR LR
comp=Z,3μm,20.0s
MEH Mehetia 58.96 236 eP P 16 56 25.6 +1.2
comp=Z,169nm,1.1s
SFJD Kangerlussuaq 59.10 20 eP P 16 56 24.5 0.0
comp=Z,237nm,1.4s
SFJD epP **pP** 16 56 34.4 +0.2
SFJD LR LR
comp=Z,4μm,19.0s
SFJD Kangerlussuaq 59.10 20 iP P 16 56 24.6 0.0
comp=Z,22nm,1.1s
SFJD
comp=Z,3μm,27.0s
SFJD Kangerlussuaq 59.10 20 P P 16 56 23.2 -1.3
comp=Z,32nm,0.9s,baz=231,slow=7.7,SNR=8.3
CPUP Villa Florida 59.47 136 P P 16 56 26.9 -0.8
CPUP Villa Florida 59.47 136 P P 16 56 26.9 -0.8
comp=Z,46nm,0.9s,baz=308,slow=7.3,SNR=66
CPUP LR LR 17 21 56.3
comp=Z,2μm,19.6s,baz=310,slow=36
SDPT Sand Point 59.75 325 eP P 16 56 29.0 -0.2
comp=Z,442nm,1.5s
COLD Coldfoot 59.78 340 eP P 16 56 30.4 +1.2
comp=Z,108nm,1.4s
COLD epP **pP** 16 56 40.4 +1.4
TIAR Tiarei 59.82 237 eP P 16 56 31.7 +1.4
comp=Z,177nm,0.9s
TVO Taravao 59.86 237 eP P 16 56 32.0 +1.4
comp=Z,212nm,1.1s
PPT Papeete 60.01 238 P P 16 56 33.9 +2.3
PPT Papeete 60.01 238 P P 16 56 33.9 +2.3
comp=Z,50nm,0.9s,baz=184,slow=3.8,SNR=3.7
PPT LR LR 17 15 06.4
comp=Z,2μm,19.7s,baz=34,slow=28
PPT2 Papeete2 60.02 238 eP P 16 56 33.1 +1.4
comp=Z,47nm,1.0s
PPT2 eS **S** 17 04 43.1 +0.4
comp=Z,2μm,31.0s
PPT2 eSS **SS** 17 08 41.8 +1.8
comp=Z,2μm,29.5s
PPT2 eLQ LQ 17 11 37.4
comp=Z,4μm,27.2s
PPT2 eLR LR 17 14 02.7
comp=Z,7μm,25.8s,baz=57
BDFB Brasilia 60.29 120 P P 16 56 33.9 +0.3
BDFB Brasilia 60.29 120 P P 16 56 33.9 +0.3
comp=Z,68nm,0.9s,baz=292,slow=8.8,SNR=53
BDFB LR LR 17 22 42.2
comp=Z,2μm,18.3s,baz=104,slow=36
FALS False Pass 61.29 324 eP P 16 56 39.7 0.0
comp=Z,203nm,1.1s
UNV Unalaska Valle 62.89 322 eP P 16 56 50.9 +0.4
comp=Z,483nm,1.4s
UNV epP **pP** 16 56 59.3 -0.9
TBI Tubuai 63.10 232 eS S 17 05 22.0 +0.6
comp=Z,1μm,26.5s
TBI eSS **SS** 17 09 30.2 +2.2
comp=Z,871nm,31.2s
TBI eLQ LQ 17 12 52.3
comp=Z,2μm,33.2s
TBI eLR LR 17 15 31.8
comp=Z,6μm,26.5s,baz=55
PLCA Paso Flores 63.41 156 eP P 16 56 54.6 +0.5
comp=Z,79nm,1.1s
PLCA epP **pP** 16 57 04.7 +0.7
PLCA Paso Flores 63.41 156 P P 16 56 54.7 +0.5
comp=Z,62nm,1.1s,baz=328,slow=7.8,SNR=49
PLCA LR LR 17 18 55.5
comp=Z,3μm,18.5s,baz=0.3,slow=31
NIKO Nikolski 64.18 321 eP P 16 56 58.0 -1.0
comp=Z,447nm,1.3s
NIKO epP **pP** 16 57 07.5 -1.3
SPB Sao Paulo 64.94 127 eP P 16 57 04.0 -0.4
comp=Z,80nm,1.1s
SPB epP **pP** 16 57 14.8 +0.6
SPB LR LR
comp=Z,2μm,20.0s
TRQA Tornquist 65.12 148 PFAKE 16 57 20.0 +15
TRQA LR LR
comp=Z,6μm,21.0s
SUMG Summit 65.44 17 iP P 16 57 07.8 +0.4
SUMG pmax pmax
comp=Z,100nm,1.0s
SUMG MLR MLR
comp=Z,3μm,16.0s
SUMG Summit 65.44 17 eP P 16 57 07.4 0.0
comp=Z,125nm,1.0s
SUMG Summit 65.44 17 iP P 16 57 07.8 +0.4
comp=Z,100nm,1.0s
SUMG
comp=Z,3μm,15.0s
TNA Tin City 65.77 335 eP P 16 57 10.8 +1.6
comp=Z,126nm,1.2s
TNA epP **pP** 16 57 20.4 +1.5
RCBR Riachuelo 66.85 104 eP P 16 57 17.8 +0.8
comp=Z,70nm,1.1s
RCBR LR LR
comp=Z,3μm,21.0s
PSET Sete Cidades 67.18 56 eP P 16 57 29.1 +10
comp=Z,152nm,0.7s
PSET eLR LR 17 18 05.3
comp=Z,1μm,21.9s
ALE Alert 67.21 5 P P 16 57 17.0 -1.1
comp=Z,162nm,1.6s,SNR=11
CMLA Cha da Macela 67.34 56 PFAKE 16 57 30.0 +10
CMLA LR LR
comp=Z,2μm,22.0s
BART Pico Bartolome 67.62 56 eP P 16 57 31.8 +10
comp=Z,269nm,1.2s
PSMN Pico do Norte, 67.77 56 eP P 16 57 30.8 +8.4
comp=Z,60nm,1.1s
PSMN eLQ LQ 17 15 13.7
PSMN eLR LR 17 18 31.1
comp=Z,1μm,22.3s
BORG Borgarnes 69.79 27 PFAKE 16 57 50.0 +16
BORG LR LR
comp=Z,3μm,20.0s
SCO Scoresbysund 70.00 20 iP P 16 57 35.8 +0.1
SCO pmax pmax
comp=Z,10.0nm,1.0s
SCO MLR MLR
comp=Z,2μm,24.0s
SCO Scoresbysund 70.00 20 iP P 16 57 35.8 +0.1
comp=Z,9.7nm,1.0s
SCO
comp=Z,2μm,23.0s
DAG Danmarks Havn 71.53 14⇑ iP P 16 57 44.3 -0.6
DAG MLR MLR
comp=Z,6μm,24.0s
DAG Danmarks Havn 71.53 14⇑ iP P 16 57 44.3 -0.6
DAG
comp=Z,5μm,24.0s
SACV Santiago Islan 72.62 79 PFAKE 16 58 00.0 +7.5
SACV LR LR
comp=Z,2μm,21.0s
JMIC Jan Mayen 74.45 20 e P 16 58 09.0 +6.7
FX1 Attu Island--F 75.03 321 eP P 16 58 05.6 -0.4
FX1 pP **pP** 16 58 15.8 -0.1
FX1 Attu Island--F 75.03 321 P P 16 58 06.0 +0.1
comp=Z,52nm,0.8s,baz=178,slow=2.9,SNR=9.7
FX1 pP **pP** 16 58 15.8 -0.1
comp=Z,26nm,0.8s,baz=189,slow=17,SNR=2.5
PMPST Porto Santo, M 75.40 59 eS S 17 07 46.3 -0.3
PMPST eLR LR 17 21 35.5
comp=Z,2μm,22.0s
BILL Bilibino 75.97 337c iP P 16 58 11.8 +0.7
BILL i 16 58 21.0
BILL i 17 01 04.9
BILL iS **S** 17 07 48.4 -3.2
BILL pmax pmax
comp=Z,137nm,1.5s
EFI East Falkland 77.32 155 PFAKE 16 58 30.0 +11
EFI LR LR

comp=Z,4µm,21.0s
KBS Kingsbay 77.50 11 *e*P **P 16 58 20.1 +0.5**
KBS *e*P pP 16 58 20.7 -8.8
KBS AMS AMS 17 34 11.3
comp=Z,2µm,18.4s
KBS Kingsbay 77.50 11*c i*P **P 16 58 21.0 +1.5**
KBS pmax pmax
comp=Z,46nm,1.5s
KBS MLR MLR
comp=Z,3µm,23.0s
KBS Kingsbay 77.50 11 *e*P **P 16 58 20.3 +0.8**
comp=Z,41nm,1.0s
KBS LR LR
comp=Z,3µm,19.0s
AFI Afiamalu 77.60 251 *e*P **P 16 58 21.6 +0.3**
comp=Z,62nm,0.9s
AFI Afiamalu 77.60 251 P **P 16 58 21.7 +0.5**
comp=Z,80nm,1.1s,baz=219,slow=13,SNR=6.3
AFI LR LR 17 25 46.6
comp=Z,890nm,20.6s,baz=330,slow=30
ESK Eskdalemuir 79.80 35 *e*P **P 16 58 31.9 -0.7**
ESK *e**PP **pP 16 58 42.5 -0.1**
ESK pmax pmax
comp=Z,31nm,1.1s
ESK MLR MLR
comp=Z,2µm,20.0s
ESK Eskdalemuir 79.80 35 *e*P **P 16 58 31.9 -0.7**
comp=Z,31nm,1.1s
ESK *e*pP **pP 16 58 42.5 -0.1**
ESK LR LR
comp=Z,2µm,20.0s
PGAV Gavieira, Arco 79.81 49 *e*P **P 16 58 34.0 +0.9**
comp=Z,101nm,2.0s
PGAV *e*S S 17 08 28.6 -5.7
PGAV *e*SS SS 17 13 53.7 +10
PGAV *e*LR LR 17 24 09.8
comp=Z,2µm,18.0s
LIS Lisbon 79.92 53 *e*P **P 16 58 33.0 -0.6**
LIS AMS AMS 17 30 00.1
comp=E,2µm,21.0s
LIS Lisbon 79.92 53 *e*P **P 16 58 33.0 -0.6**
PTOM Tomar 80.26 52 *e*P **P 16 58 35.8 +0.4**
comp=E,107nm,1.5s
PTOM *e*pP **pP 16 58 46.3 +0.8**
POLO Lamas de Olo 80.30 50 *e*P **P 16 58 35.5 -0.2**
comp=E,31nm,1.7s
POLO *e*pP **pP 16 58 46.1 +0.3**
PVIS Viseu 80.38 50 *e*P **P 16 58 36.3 +0.1**
comp=E,85nm,1.6s
PVIS *e*pP **pP 16 58 46.6 +0.4**
PTEO Sao Teotonio 80.52 54 *e*P **P 16 58 37.3 +0.4**
comp=E,124nm,1.6s
PTEO *e*pP **pP 16 58 47.2 +0.3**
PMTG Montargil 80.54 52 *e*P **P 16 58 36.7 -0.2**
comp=E,84nm,1.3s
PMTG *e*pP **pP 16 58 46.7 -0.3**
PNCL Nicolau / Gran 80.54 53 *e*P **P 16 58 37.4 +0.5**
comp=E,39nm,1.4s
PFVI Vila Bisbo 80.55 54 *e*P **P 16 58 37.6 +0.6**
comp=E,40nm,1.7s
PFVI *e*pP **pP 16 58 48.0 +0.9**
MORF Marmelete 80.64 54 *e*P **P 16 58 37.8 +0.2**
comp=E,78nm,1.6s
MORF *e*pP **pP 16 58 47.8 +0.2**
MORF Marmelete 80.64 54 *e*P **P 16 58 37.0 -0.6**
MORF *e*S **S 17 08 40.9 -2.1**
MTE Manteigas 80.72 51 *e*P **P 16 58 37.6 -0.4**
comp=E,70nm,1.6s
MTE *e*pP **pP 16 58 47.8 -0.2**
MTE *e*S **S 17 08 46.8 +3.0**
MTE *e*LQ LQ 17 20 25.0
MTE *e*LR LR 17 24 35.6
comp=E,2µm,16.0s
MTE Manteigas 80.72 51 *e*P **P 16 58 37.4 -0.6**
comp=E,35nm,1.1s
MTE *e*pP **pP 16 58 47.4 -0.7**
MTE LR LR
comp=Z,2µm,19.0s
EVOP Sao Brissos 80.75 53⇑*i*P **P 16 58 38.2 +0.2**
EVOP pmax pmax
comp=Z,129nm,1.1s
EVOP Sao Brissos 80.75 53⇑*i*P **P 16 58 38.2 +0.2**
comp=Z,129nm,1.1s
EVO Evora 80.83 53 *e*P **P 16 58 38.3 -0.3**
comp=Z,72nm,1.6s
EVO *e*pP **pP 16 58 49.3 +0.7**
EVO Evora 80.83 53⇑*i*P **P 16 58 38.2 -0.3**
comp=Z,129nm,1.1s
EVO *e*R
comp=Z,3µm,22.0s
PCBR Castelo Branco 80.91 51 *e*P **P 16 58 38.5 -0.4**
comp=Z,89nm,1.5s
PCBR *e*pP **pP 16 58 49.6 +0.7**
MVO Moncorvo 80.91 50 *e*P **P 16 58 39.5 +0.5**
comp=Z,97nm,1.7s
MVO *e*pP **pP 16 58 49.0 0.0**
MVO *e*S **S 17 08 44.8 -0.9**
MVO *e*SS **SS 17 14 02.1 +2.4**
MVO *e*LQ LQ 17 20 28.4
MVO *e*LR LR 17 24 28.2
comp=Z,2µm,18.0s
PBRG Braganca 80.96 49 *e*P **P 16 58 39.6 +0.4**
comp=Z,68nm,2.1s
PCVE Castro Verde 81.03 53 *e*P **P 16 58 39.5 -0.1**
comp=Z,59nm,1.6s
PCVE *e*pP **pP 16 58 50.2 +0.5**
BJO Bjornoya 81.06 14 AMS AMS 17 35 25.4
comp=Z,5µm,27.4s
PBEJ Beja 81.06 53 *e*P **P 16 58 40.3 +0.5**
comp=Z,58nm,1.8s
PESTR Estremoz 81.06 52 *e*P **P 16 58 39.7 -0.1**
comp=Z,70nm,1.8s
PESTR *e*pP **pP 16 58 50.0 +0.1**
PMRV Marv??o 81.08 52 *e*P **P 16 58 39.6 -0.2**
comp=Z,95nm,1.6s
PMRV *e*pP **pP 16 58 49.5 -0.4**
PMRV *e*S **S 17 08 48.7 +1.3**
PMRV *e*SS SS 17 13 54.3 -7.8
PMRV *e*LR LR 17 24 33.1
comp=Z,2µm,18.0s
PBDV Barranco-do-Ve 81.21 54 *e*P **P 16 58 41.0 +0.4**
comp=Z,110nm,1.6s
PVAQ Vaqueiros 81.33 54 *e*P **P 16 58 41.4 +0.2**
comp=Z,90nm,1.6s
PVAQ *e*pP **pP 16 58 50.7 -0.6**
PVAQ *e*S **S 17 08 49.2 -0.9**
PVAQ *e*SS **SS 17 14 12.0 +6.0**
PVAQ *e*LR LR 17 24 54.0
comp=Z,1µm,18.0s
ROSF Rostrenen 81.61 42 *e*P **P 16 58 42.1 -0.4**
comp=Z,215nm,1.6s
ROSF Rostrenen 81.61 42 *e*P **P 16 58 42.1 -0.4**
ROSF pmax pmax
comp=Z,215nm,1.6s
ROSF Rostrenen 81.61 42 *e*P **P 16 58 42.1 -0.4**
comp=Z,215nm,1.6s
QUIF Quistinic 81.80 42 *e*P **P 16 58 43.1 -0.3**
comp=Z,205nm,1.5s
QUIF Quistinic 81.80 42 *e*P **P 16 58 43.1 -0.3**
QUIF pmax pmax
comp=Z,205nm,1.5s
QUIF Quistinic 81.80 42 *e*P **P 16 58 43.1 -0.3**
comp=Z,205nm,1.5s
SGMF Saint Gilles 82.10 42 *e*P **P 16 58 44.6 -0.4**
comp=Z,197nm,1.5s
SGMF Saint Gilles 82.10 42 *e*P **P 16 58 44.6 -0.4**
SGMF pmax pmax
comp=Z,197nm,1.5s
SGMF Saint Gilles 82.10 42 *e*P **P 16 58 44.6 -0.4**
comp=Z,197nm,1.5s
BER Bergen 82.57 29 *e*P **P 16 58 47.2 0.0**
BER *e*P PcP 16 58 47.5 -4.7
BER *e*pP **pP 16 58 57.4 +0.1**
BER AMS AMS 17 30 15.8
comp=Z,1µm,25.3s
BER AMS AMS 17 30 20.0
comp=Z,1µm,24.0s
LOF Lofoten 82.65 20 *e*P **P 16 58 46.5 -1.0**
RTC Rabat Centre 82.90 57 PFAKE 16 59 00.0 +11
RTC LR LR
comp=Z,2µm,22.0s
SEY Seymchan 82.99 334⇑*e*P **P 16 58 50.4 +1.1**
GRR Gorron 83.14 42 *e*P **P 16 58 50.6 +0.2**
comp=Z,48nm,0.8s
GRR Gorron 83.14 42 *e*P **P 16 58 50.6 +0.2**
GRR pmax pmax
comp=Z,49nm,0.8s
GRR Gorron 83.14 42 *e*P **P 16 58 50.6 +0.2**
comp=Z,48nm,0.8s
FLN La Foliniere 83.27 41 *e*P **P 16 58 51.3 +0.2**
comp=Z,86nm,1.0s
FLN *e*R
comp=Z,2µm,20.0s
FLN La Foliniere 83.27 41 *e*P **P 16 58 51.3 +0.2**
FLN pmax pmax
comp=Z,87nm,1.0s
FLN La Foliniere 83.27 41 *e*P **P 16 58 51.3 +0.2**
comp=Z,86nm,1.0s
STOK Stokkvaagen 83.29 22 *e*P **P 16 58 52.6 +1.8**
STEI Steigen 83.31 20 *e*P **P 16 58 51.0 +0.1**
STEI *e*P **PcP 16 58 52.0 -3.3**
PAB San Pablo 83.31 51 *e*P **P 16 58 51.2 -0.5**
PAB pmax pmax
comp=Z,61nm,1.1s
PAB MLR MLR
comp=Z,1µm,21.0s
PAB San Pablo 83.31 51 *e*P **P 16 58 51.2 -0.5**
comp=Z,60nm,1.1s
PAB LR LR
comp=Z,1µm,21.0s
ODD1 Odda 83.35 29 *e*P **P 16 58 52.9 +1.5**
ODD1 *e*P **P 16 58 52.9 +1.5**
ODD1 *e* 16 59 02.8
FLOS Flostrand 83.42 22 *e*P **P 16 58 52.6 +1.1**
PET Petropavlovsk 83.51 323 *e*P **P 16 58 52.2 0.0**
PET *e* 17 02 11.6
PET *e*S **S 17 09 11.0 -0.8**
PET *e*SS **SS 17 14 44.3 +6.9**
PET pmax pmax
comp=Z,96nm,1.3s
PET pmax pmax
comp=Z,700nm,11.2s
PET pmax pmax
comp=Z,200nm,14.8s
LDF La Druitiere 83.54 41 *e*P **P 16 58 53.4 +0.9**
comp=Z,82nm,0.9s
LDF La Druitiere 83.54 41 *e*P **P 16 58 53.4 +0.9**
LDF pmax pmax
comp=Z,82nm,0.9s
LDF La Druitiere 83.54 41 *e*P **P 16 58 53.4 +0.9**
comp=Z,82nm,0.9s
ESDC Sonseca Array 83.56 51 P **P 16 58 52.4 -0.5**
ESDC pP **pP 16 59 03.0 0.0**
ESDC PKKPbc **PKKPbc 17 17 11.3 0.0**
ESDC Sonseca Array 83.56 51 P **P 16 58 52.4 -0.5**
comp=Z,15nm,0.9s,baz=299,slow=5.0,SNR=45
ESDC pP **pP 16 59 03.0 0.0**
comp=Z,8.9nm,0.9s,baz=300,slow=4.7,SNR=5.6
ESDC PKKPbc **PKKPbc 17 17 11.3 0.0**
comp=Z,0.3nm,0.3s,baz=86,slow=2.8,SNR=6.0
ESDC LR LR 17 39 01.6
comp=Z,1µm,18.0s,baz=280,slow=38
ESLA Sonseca Array 83.56 51 *e*P **P 16 58 52.9 0.0**
comp=Z,22nm,1.5s
TRO Tromso 83.59 18 *e*P **P 16 58 53.3 +1.0**
TRO *e*P **PcP 16 58 53.4 -3.1**
NSS Namsos 83.72 24 *e*P **P 16 58 50.5 -2.6**
NSS *e*P PcP 16 58 51.1 -6.1
NSS AMS AMS 17 33 24.1
comp=Z,1µm,24.0s
PEA0B Petropavlovsk- 84.02 324 *e*P **P 16 58 55.6 +0.7**
PETK Petropavlovsk- 84.02 324 P **P 16 58 55.7 +0.8**
PETK *PP **pP 16 59 06.3 +1.3**
PETK Petropavlovsk- 84.02 324 P **P 16 58 55.7 +0.8**
PETK pP **pP 16 59 06.3 +1.3**
PETK Petropavlovsk- 84.02 324 P **P 16 58 55.7 +0.8**
comp=Z,61nm,0.9s,baz=91,slow=9.2,SNR=41
PETK pP **pP 16 59 06.3 +1.3**
comp=Z,55nm,1.1s,baz=134,slow=27,SNR=10
MFF Saint Martin d 84.15 43 *e*P **P 16 58 55.8 +0.1**
comp=Z,234nm,1.6s
MFF Saint Martin d 84.15 43 *e*P **P 16 58 55.8 +0.1**
MFF pmax pmax
comp=Z,234nm,1.6s
MFF Saint Martin d 84.15 43 *e*P **P 16 58 55.8 +0.1**
comp=Z,234nm,1.6s
FUNA Funafuti 84.17 259 PFAKE 16 59 10.0 +14
FUNA LR LR
comp=Z,3µm,19.0s
SJPF Ste Jean 84.51 47 *e*P **P 16 58 58.0 +0.4**
SJPF Ste Jean 84.51 47 *e*P **P 16 58 58.0 +0.4**
SJPF Ste Jean 84.51 47 *e*P **P 16 58 58.0 +0.4**
LARF Larrau 84.70 47 *e*P **P 16 58 59.2 +0.6**
LARF Larrau 84.70 47 *e*P **P 16 58 59.2 +0.6**
KONO Kongsberg 84.83 29 *e*P **P 16 58 59.0 +0.1**
KONO *e*P **PcP 16 59 00.1 -2.0**
KONO *e*pP **pP 16 59 09.1 +0.2**
KONO Kongsberg 84.83 29 *e*P **P 16 58 59.6 +0.8**
KONO pmax pmax
comp=Z,280nm,1.6s
KONO MLR MLR
comp=Z,1µm,22.0s
KONO Kongsberg 84.83 29 *e*P **P 16 58 59.5 +0.8**
comp=Z,280nm,1.6s
KONO LR LR
comp=Z,1µm,22.0s
NAO01 NORSAR Array S 84.90 27 P **P 16 58 59.4 +0.2**
comp=Z,153nm,1.6s
NB2 NORSAR Subarra 84.96 27 P **P 16 58 59.8 +0.3**
baz=296,slow=5.1
NB2 NORSAR Subarra 84.96 27 P **P 16 58 59.8 +0.3**
comp=Z,164nm,1.7s,baz=296,slow=5.1
NOA NORSAR Array B 84.96 27 P **P 16 58 59.0 -0.5**
NOA PKKPbc **PKKPdf 17 17 04.9 +4.9**
NOA NORSAR Array B 84.96 27 P **P 16 58 59.0 -0.5**
comp=Z,2.4nm,0.6s,baz=295,slow=4.9,SNR=14
NOA PKKPbc **PKKPdf 17 17 04.9 +4.9**
comp=Z,1.1nm,0.8s,baz=108,slow=2.7,SNR=3.5
NOA LR LR 17 37 52.3
comp=Z,1µm,20.8s,baz=290,slow=36
ETSF Etsaut 85.04 47 *e*P **P 16 59 00.7 +0.3**
comp=Z,160nm,1.6s
ETSF Etsaut 85.04 47 *e*P **P 16 59 00.7 +0.3**
ETSF pmax pmax
comp=Z,160nm,1.6s
ETSF Etsaut 85.04 47 *e*P **P 16 59 00.7 +0.3**
comp=Z,160nm,1.6s
REYF Montagne du Re 85.10 47 *e*P **P 16 59 00.8 +0.1**
REYF Montagne du Re 85.10 47 *e*P **P 16 59 00.8 +0.1**
KTK1 Kautokeino 85.21 18 *e*P **P 16 58 58.5 -2.0**
KTK1 *e*P **PcP 16 58 59.3 -4.3**
KTK1 *e*pP **pP 16 59 11.2 +0.6**
NC602 NORSAR Array S 85.24 27 *e*P **P 16 59 00.2 -0.7**
NC602 *e*pP **pP 16 59 10.8 -0.2**
LFF La Frestale 85.28 45 *e*P **P 16 59 01.6 +0.2**
comp=Z,355nm,1.4s
LFF La Frestale 85.28 45 *e*P **P 16 59 01.6 +0.2**
LFF pmax pmax
comp=Z,355nm,1.4s
LFF La Frestale 85.28 45 *e*P **P 16 59 01.6 +0.2**
comp=Z,355nm,1.4s
VIEF Viey 85.45 47 *e*P **P 16 59 02.7 +0.3**
VIEF Viey 85.45 47 *e*P **P 16 59 02.7 +0.3**
ARCES ARCESS Array B 85.53 17 P **P 16 59 02.2 +0.1**
ARCES PKKPbc **PKKPbc 17 17 04.6 -3.0**
ARCES ARCESS Array B 85.53 17 P **P 16 59 02.2 +0.1**
comp=Z,14nm,0.8s,baz=316,slow=6.8,SNR=20
ARCES PKKPbc **PKKPbc 17 17 04.6 -3.0**
comp=Z,2.1nm,0.8s,baz=134,slow=3.5,SNR=5.8
ARCES LR LR 17 37 59.7
comp=Z,917nm,21.7s,baz=315,slow=36
ARE0 ARCESS Array S 85.53 17 *e*P **P 16 59 00.7 -1.5**
ARE0 ARCESS Array S 85.53 17 *e*P **P 16 59 01.6 -0.6**
SNF Seneffe 85.60 38 P **P 16 59 02.3 -0.5**
comp=Z,80nm,2.1s
SNF AP **pP 16 59 13.8 +0.9**
SNF XP sP 16 59 18.3 +1.7
EPF Esparros 85.62 46 *e*P **P 16 59 03.4 +0.2**
comp=Z,266nm,1.4s
EPF Esparros 85.62 46 *e*P **P 16 59 03.4 +0.2**
EPF pmax pmax
comp=Z,266nm,1.4s
EPF Esparros 85.62 46 *e*P **P 16 59 03.4 +0.2**
comp=Z,266nm,1.4s
RJF Les Rejaudoux 85.67 44 *e*P **P 16 59 03.4 0.0**
comp=Z,305nm,1.2s
RJF *e*R
comp=Z,3µm,21.8s
RJF Les Rejaudoux 85.67 44 *e*P **P 16 59 03.4 0.0**
RJF pmax pmax
comp=Z,305nm,1.2s
RJF Les Rejaudoux 85.67 44 *e*P **P 16 59 03.4 0.0**
comp=Z,305nm,1.2s
RESF Ens 85.70 47 *e*P **P 16 59 04.3 +0.6**
RESF Ens 85.70 47 *e*P **P 16 59 04.3 +0.6**
BAIF Baives 85.72 39 *e*P **P 16 59 03.7 +0.3**
comp=Z,145nm,1.4s
BAIF Baives 85.72 39 *e*P **P 16 59 03.7 +0.3**
BAIF pmax pmax
comp=Z,145nm,1.4s
BAIF Baives 85.72 39 *e*P **P 16 59 03.7 +0.3**
comp=Z,145nm,1.4s
HYF Humbligny 85.73 42 *e*P **P 16 59 03.7 +0.1**
HYF Humbligny 85.73 42 *e*P **P 16 59 03.7 +0.1**
TCF Toulx Ste Croi 85.80 43⇑*i*P **P 16 59 03.8 -0.2**
comp=Z,286nm,1.2s
TCF Toulx Ste Croi 85.80 43⇑*i*P **P 16 59 03.8 -0.2**
TCF pmax pmax
comp=Z,286nm,1.2s
TCF Toulx Ste Croi 85.80 43⇑*i*P **P 16 59 03.8 -0.2**
comp=Z,286nm,1.2s
KEV Kevo 85.80 16 *e*P **P 16 59 02.6 -0.9**
KEV pmax pmax
comp=Z,10.0nm,0.8s
KEV Kevo 85.80 16 PFAKE 16 59 10.0 +6.5
KEV LR LR
comp=Z,2µm,21.0s
KEV Kevo 85.80 16 *e*p **P 16 59 02.6 -0.9**
comp=Z,9.5nm,0.8s
DOU Dourbes 85.94 39 P **P 16 59 04.9 +0.4**
comp=Z,53nm,2.5s
DOU AP **pP 16 59 15.3 +0.7**
MUD Monsted U'grnd 85.97 32 *i* P P 16 59 13.0 +8.5
MUD MLR MLR
comp=Z,2µm,24.0s
MUD Monsted U'grnd 85.97 32 *i* P P 16 59 13.0 +8.5
MUD *i* 16 59 13.7
MUD
comp=Z,2µm,24.0s
GIVF Givet 86.07 39 *e*P **P 16 59 05.6 +0.4**
comp=Z,53nm,0.9s
GIVF Givet 86.07 39 *e*P **P 16 59 05.6 +0.4**
GIVF pmax pmax
comp=Z,53nm,0.9s
GIVF Givet 86.07 39 *e*P **P 16 59 05.6 +0.4**
comp=Z,53nm,0.9s
BGF Bois d'Agland 86.11 42⇑*i*P **P 16 59 05.2 -0.3**
comp=Z,198nm,1.3s
BGF Bois d'Agland 86.11 42⇑*i*P **P 16 59 05.2 -0.3**
BGF pmax pmax
comp=Z,198nm,1.3s
BGF Bois d'Agland 86.11 42⇑*i*P **P 16 59 05.2 -0.3**
comp=Z,198nm,1.3s
VERF Verneugheol 86.16 43 *e*P **P 16 59 05.4 -0.4**
VERF Verneugheol 86.16 43 *e*P **P 16 59 05.4 -0.4**
CAF Calviac 86.17 44 *e*P **P 16 59 05.7 -0.2**
CAF Calviac 86.17 44 *e*P **P 16 59 05.7 -0.2**
CAF Calviac 86.17 44 *e*P **P 16 59 05.7 -0.2**
MLS Moulis 86.17 46 *e*P **P 16 59 05.8 -0.1**
MLS Moulis 86.17 46 *e*P **P 16 59 05.8 -0.1**
BCLA Clavier 86.24 38 P **P 16 59 06.2 +0.2**
comp=Z,47nm,2.1s
BCLA AP **pP 16 59 16.9 +0.7**
AVF Avril sur Loir 86.36 42⇑*i*P **P 16 59 06.0 -0.7**
comp=Z,66nm,1.3s
AVF Avril sur Loir 86.36 42⇑*i*P **P 16 59 06.0 -0.7**
AVF pmax pmax
comp=Z,66nm,1.3s
AVF Avril sur Loir 86.36 42⇑*i*P **P 16 59 06.0 -0.7**
comp=Z,66nm,1.3s
SSF Saint Saulge 86.36 42⇑*i*P **P 16 59 06.2 -0.5**
comp=Z,177nm,1.4s
SSF Saint Saulge 86.36 42⇑*i*P **P 16 59 06.2 -0.5**
SSF pmax pmax
comp=Z,177nm,1.4s
SSF Saint Saulge 86.36 42⇑*i*P **P 16 59 06.2 -0.5**
comp=Z,177nm,1.4s
PYM Petit Puy Mans 86.50 43 *e*P **P 16 59 07.4 -0.2**
PYM Petit Puy Mans 86.50 43 *e*P **P 16 59 07.4 -0.2**
PYM Petit Puy Mans 86.50 43 *e*P **P 16 59 07.4 -0.2**
LOR Lormes 86.51 42⇑*i*P **P 16 59 07.2 -0.3**
comp=Z,287nm,1.4s
LOR *e*R
comp=Z,2µm,20.5s
LOR Lormes 86.51 42⇑*i*P **P 16 59 07.2 -0.3**
comp=Z,287nm,1.4s
MEM Membach 86.58 38 P **P 16 59 07.6 -0.1**
comp=Z,19nm,1.2s
SMF Signal de Mont 86.72 42 *e*P **P 16 59 07.7 -0.8**
comp=Z,55nm,1.2s
SMF Signal de Mont 86.72 42 *e*P **P 16 59 07.7 -0.8**
SMF pmax pmax
comp=Z,55nm,1.2s
SMF Signal de Mont 86.72 42 *e*P **P 16 59 07.7 -0.8**
comp=Z,55nm,1.2s
MEZF Maizieres J'vi 86.81 40 *e*P **P 16 59 08.6 -0.2**
comp=Z,29nm,0.8s
MEZF Maizieres J'vi 86.81 40 *e*P **P 16 59 08.6 -0.2**
comp=Z,29nm,0.8s
MTLF Montolieu 86.81 46 *e*P **P 16 59 09.0 0.0**
comp=Z,150nm,1.2s
MTLF Montolieu 86.81 46 *e*P **P 16 59 09.0 0.0**
MTLF pmax pmax
comp=Z,150nm,1.2s
MTLF Montolieu 86.81 46 *e*P **P 16 59 09.0 0.0**
comp=Z,150nm,1.2s
LBL Lubilhac 86.84 44 *e*P **P 16 59 09.8 +0.6**
LBL Lubilhac 86.84 44 *e*P **P 16 59 09.8 +0.6**
LBL Lubilhac 86.84 44 *e*P **P 16 59 09.8 +0.6**
SFTF Sexfontaines 86.91 40 *e*P **P 16 59 08.8 -0.6**
comp=Z,26nm,0.8s
SFTF Sexfontaines 86.91 40 *e*P **P 16 59 08.8 -0.6**
comp=Z,26nm,0.8s
IBBN Ibbenburen 86.92 36 *e*P **P 16 59 09.5 +0.2**
comp=Z,44nm,1.2s
WLF Walferdange 87.03 39 P **P 16 59 09.7 -0.2**
comp=Z,28nm,1.6s
WLF Walferdange 87.03 39 *e*P **P 16 59 09.2 -0.7**
WLF pmax pmax
comp=Z,29nm,1.0s
WLF MLR MLR
comp=Z,3µm,21.0s
WLF Walferdange 87.03 39 *e*P **P 16 59 09.9 0.0**
comp=Z,32nm,1.2s
WLF Walferdange 87.03 39 *e*P **P 16 59 09.2 -0.7**
comp=Z,29nm,1.0s
WLF LR LR
comp=Z,3µm,21.0s
PAGF Fort de Pagny 87.20 40 *e*P **P 16 59 10.6 -0.2**
comp=Z,8.4nm,0.9s
PAGF Fort de Pagny 87.20 40 *e*P **P 16 59 10.6 -0.2**
comp=Z,8.4nm,0.9s
TARA Tarawa 87.22 271 PFAKE 16 59 20.0 +8.5
TARA LR LR
comp=Z,1µm,19.0s
THEF They Montfort 87.49 40 *e*P **P 16 59 12.0 -0.2**
THEF They Montfort 87.49 40 *e*P **P 16 59 12.0 -0.2**
THEF They Montfort 87.49 40 *e*P **P 16 59 12.0 -0.2**
RUP Ruppelstein 87.56 39 *e*P **P 16 59 12.6 0.0**
RUP Ruppelstein 87.56 39 *e*P **P 16 59 12.6 0.0**
BSEG Bad Segeberg 87.64 34 *e*P **P 16 59 12.9 +0.2**
BSEG *e**PP **pP 16 59 23.9 +1.0**
BSEG *e* 17 02 36.8
BSEG pmax pmax
comp=Z,91nm,1.2s
BSEG Bad Segeberg 87.64 34 *e*P **P 16 59 12.9 +0.2**
comp=Z,91nm,1.2s
BSEG *e*pP **pP 16 59 23.9 +1.0**
BSEG *e*PP **PP 17 02 36.8 -0.9**
LASF Ste Croix 87.67 45 *e*P **P 16 59 13.3 +0.1**
comp=Z,75nm,1.1s
LASF Ste Croix 87.67 45 *e*P **P 16 59 13.3 +0.1**
comp=Z,75nm,1.1s
SSB Saint Sauveur 87.68 43 *e*P **P 16 59 13.2 0.0**
SSB pmax pmax
comp=Z,20nm,1.1s
SSB MLR MLR
comp=Z,2µm,22.0s
SSB Saint Sauveur 87.68 43 *e*P **P 16 59 13.2 0.0**
comp=Z,20nm,1.1s
SSB LR LR
comp=Z,2µm,22.0s
HAU Haudompre 87.80 40 *e*P **P 16 59 13.1 -0.6**
comp=Z,50nm,0.9s
HAU *e*R
comp=Z,2µm,19.0s
HAU Haudompre 87.80 40 *e*P **P 16 59 13.1 -0.6**

HAU					pmax	pmax			
	comp=Z,50nm,0.9s								
HAU	**Haudompre**	**87.80**	**40**	*e*P	**P**	**16 59 13.1**	**-0.6**		
	comp=Z,50nm,0.9s								
VIVF	**Saint-Julien-l**	**87.92**	**44**	*e*P	**P**	**16 59 14.2**	**-0.2**		
VIVF	**Saint-Julien-l**	**87.92**	**44**	*e*P	**P**	**16 59 14.2**	**-0.2**		
VIVF	**Saint-Julien-l**	**87.92**	**44**	*e*P	**P**	**16 59 14.2**	**-0.2**		
COP	**Copenhagen**	**87.95**	**32**	*i* P	P	16 59 25.1	+11		
COP					MLR	MLR			
	comp=Z,890nm,26.0s								
COP	**Copenhagen**	**87.95**	**32**	*i* P	P	16 59 25.1	+11		
COP									
	comp=Z,890nm,26.0s								
WAKE	**Wake Island**	**87.96**	**289**		PFAKE		16 59 30.0	+15	
WAKE					LR	LR			
	comp=Z,2µm,20.0s								
MSVF	**Nonsavu**	**88.09**	**251**	*e*P	**P**	**16 59 18.4**	**+2.7**		
MSVF					pmax	pmax			
	comp=Z,185nm,0.9s								
MSVF					MLR	MLR			
	comp=Z,2µm,21.0s								
MSVF	**Nonsavu**	**88.09**	**251**	*e*P	**P**	**16 59 18.4**	**+2.7**		
	comp=Z,185nm,0.9s								
MSVF					LR	LR			
	comp=Z,2µm,21.0s								
MSVF	**Nonsavu**	**88.09**	**251**	P	**P**	**16 59 18.0**	**+2.3**		
	comp=Z,1µm,1.0s,SNR=32								
NRDL	**Niedersach Rie**	**88.15**	**35**	*e*P	**P**	**16 59 15.2**	**+0.1**		
	comp=Z,38nm,1.2s								
NRDL				*e*pP	**pP**	**16 59 26.1**	**+0.8**		
TNS	**Taunus Mts**	**88.17**	**38**	*e*P	**P**	**16 59 15.2**	**-0.3**		
TNS				*e**PP	**pP**	**16 59 26.5**	**+0.9**		
TNS					pmax	pmax			
	comp=Z,52nm,1.1s								
TNS	**Taunus Mts**	**88.17**	**38**	*e*P	**P**	**16 59 15.2**	**-0.3**		
	comp=Z,52nm,1.1s								
TNS				*e*pP	**pP**	**16 59 26.5**	**+0.9**		
CABF	**La Chapelle**	**88.17**	**42**⇑	*i*P	**P**	**16 59 15.1**	**-0.5**		
	comp=Z,33nm,0.9s								
CABF	**La Chapelle**	**88.17**	**42**⇑	*i*P	**P**	**16 59 15.1**	**-0.5**		
CABF					pmax	pmax			
	comp=Z,33nm,0.9s								
CABF	**La Chapelle**	**88.17**	**42**⇑	*i*P	**P**	**16 59 15.1**	**-0.5**		
	comp=Z,33nm,0.9s								
HINF	**Hinteralfeld**	**88.18**	**40**⇑	*i*P	**P**	**16 59 14.7**	**-0.9**		
	comp=Z,35nm,1.0s								
HINF	**Hinteralfeld**	**88.18**	**40**⇑	*i*P	**P**	**16 59 14.7**	**-0.9**		
HINF					pmax	pmax			
	comp=Z,35nm,1.0s								
HINF	**Hinteralfeld**	**88.18**	**40**⇑	*i*P	**P**	**16 59 14.7**	**-0.9**		
	comp=Z,35nm,1.0s								
CDF	**Champ du Feu**	**88.20**	**40**	*e*P	**P**	**16 59 15.0**	**-0.7**		
	comp=Z,51nm,1.1s								
CDF	**Champ du Feu**	**88.20**	**40**	*e*P	**P**	**16 59 15.0**	**-0.7**		
CDF					pmax	pmax			
	comp=Z,51nm,1.1s								
CDF	**Champ du Feu**	**88.20**	**40**	*e*P	**P**	**16 59 15.0**	**-0.7**		
	comp=Z,51nm,1.1s								
ECH	**Echery**	**88.21**	**40**	*e*P	**P**	**16 59 14.1**	**-1.6**		
ECH					pmax	pmax			
	comp=Z,20nm,1.0s								
ECH					MLR	MLR			
	comp=Z,20nm,19.0s								
ECH	**Echery**	**88.21**	**40**	*e*P	**P**	**16 59 14.1**	**-1.6**		
	comp=Z,20nm,1.0s								
ECH					LR	LR			
	comp=Z,2µm,19.0s								
ECH	**Echery**	**88.21**	**40**	*e*P	**P**	**16 59 14.8**	**-0.9**		
LANF	**Langenberg**	**88.30**	**39**	*e*P	**P**	**16 59 15.4**	**-0.6**		
LANF	**Langenberg**	**88.30**	**39**	*e*P	**P**	**16 59 15.4**	**-0.6**		
LANF	**Langenberg**	**88.30**	**39**	*e*P	**P**	**16 59 15.4**	**-0.6**		
MOF	**Molkenrain**	**88.34**	**40**	*e*P	**P**	**16 59 15.4**	**-1.0**		
MOF	**Molkenrain**	**88.34**	**40**	*e*P	**P**	**16 59 15.4**	**-1.0**		
MOF	**Molkenrain**	**88.34**	**40**	*e*P	**P**	**16 59 15.4**	**-1.0**		
LOMF	**Lomont**	**88.35**	**41**	*e*P	**P**	**16 59 15.8**	**-0.6**		
LOMF	**Lomont**	**88.35**	**41**	*e*P	**P**	**16 59 15.8**	**-0.6**		
LOMF	**Lomont**	**88.35**	**41**	*e*P	**P**	**16 59 15.8**	**-0.6**		
CLZ	**Clausthal**	**88.58**	**36**	*e*P	**P**	**16 59 17.5**	**+0.2**		
CLZ				*e**PP	**pP**	**16 59 28.3**	**+0.8**		
CLZ					pmax	pmax			
	comp=Z,51nm,1.2s								
CLZ	**Clausthal**	**88.58**	**36**	*e*P	**P**	**16 59 17.5**	**+0.2**		
	comp=Z,51nm,1.2s								
CLZ				*e*pP	**pP**	**16 59 28.3**	**+0.8**		
OG01	**Vacheresse**	**88.66**	**42**	*e*P	**P**	**16 59 17.5**	**-0.4**		
OG01	**Vacheresse**	**88.66**	**42**	*e*P	**P**	**16 59 17.5**	**-0.4**		
ORIF	**Oris-en-Rattie**	**88.69**	**43**	*e*P	**P**	**16 59 17.9**	**-0.2**		
	comp=Z,43nm,1.2s								
ORIF				*e*R					
	comp=Z,2µm,20.2s								
ORIF	**Oris-en-Rattie**	**88.69**	**43**	*e*P	**P**	**16 59 17.9**	**-0.2**		
ORIF					pmax	pmax			
	comp=Z,43nm,1.2s								
ORIF	**Oris-en-Rattie**	**88.69**	**43**	*e*P	**P**	**16 59 17.9**	**-0.2**		
	comp=Z,43nm,1.2s								
UBBA	**Unterbreizbach**	**88.81**	**37**	*e*P	**P**	**16 59 18.4**	**+0.1**		
	comp=Z,44nm,1.6s								
FELD	**Feldberg im Sc**	**88.87**	**40**	*e*P	**P**	**16 59 18.2**	**-0.7**		
RSL	**Roselend**	**88.88**	**42**	*e*P	**P**	**16 59 19.6**	**+0.6**		
RSL	**Roselend**	**88.88**	**42**	*e*P	**P**	**16 59 19.6**	**+0.6**		
RSL	**Roselend**	**88.88**	**42**	*e*P	**P**	**16 59 19.6**	**+0.6**		
BFO	**Black Forest**	**88.88**	**39**	*e*P	**P**	**16 59 17.9**	**-0.9**		
BFO				*e**PP	**pP**	**16 59 29.1**	**+0.1**		
BFO				*e*		17 02 46.1			
BFO					pmax	pmax			
	comp=Z,29nm,1.2s								
BFO	**Black Forest**	**88.88**	**39**	*e*P	**P**	**16 59 17.9**	**-0.9**		
	comp=Z,29nm,1.2s								
BFO				*e*pP	**pP**	**16 59 29.1**	**+0.1**		
BFO				*e*PP	**PP**	**17 02 46.1**	**-1.8**		
BFO	**Black Forest**	**88.88**	**39**	*e*P	**P**	**16 59 17.6**	**-1.2**		
	comp=Z,22nm,1.1s								
BFO					LR	LR			
	comp=Z,2µm,19.0s								
BFO	**Black Forest**	**88.88**	**39**	P	**P**	**16 59 18.9**	**+0.1**		
	comp=Z,101nm,1.1s,SNR=5.9								
RGN	**Rugen**	**88.93**	**32**	*e*PP	PP	17 02 47.4	-0.6		
APA	**Apatity**	**89.01**	**16**⇓	*e*P	**P**	**16 59 20.0**	**+1.0**		
APA					MLR	MLR			
	comp=Z,2µm,26.0s								
LPL	**La Plagne**	**89.02**	**42**	*e*P	**P**	**16 59 19.8**	**0.0**		
	comp=Z,13nm,0.9s								
LPL	**La Plagne**	**89.02**	**42**	*e*P	**P**	**16 59 19.8**	**0.0**		
LPL					pmax	pmax			
	comp=Z,13nm,0.9s								
LPL	**La Plagne**	**89.02**	**42**	*e*P	**P**	**16 59 19.8**	**0.0**		
	comp=Z,13nm,0.9s								
LPG	**La Plagne**	**89.03**	**42**	*e*P	**P**	**16 59 20.0**	**+0.1**		
	comp=Z,79nm,1.4s								
LPG	**La Plagne**	**89.03**	**42**	*e*P	**P**	**16 59 20.0**	**+0.1**		
LPG					pmax	pmax			
	comp=Z,79nm,1.4s								
LPG	**La Plagne**	**89.03**	**42**	*e*P	**P**	**16 59 20.0**	**+0.1**		
	comp=Z,79nm,1.4s								
LVZ	**Lovozero**	**89.10**	**16**⇑	*e*P	**P**	**16 59 18.4**	**-1.1**		
LVZ					pmax	pmax			
	comp=Z,92nm,2.5s								
LVZ					MLR	MLR			
	comp=Z,1µm,21.0s								
BNI	**Bardonecchia**	**89.16**	**43**		PFAKE		16 59 30.0	+10	
BNI					LR	LR			
	comp=Z,3µm,22.0s								
STU	**Stuttgart**	**89.22**	**39**	*e*P	**P**	**16 59 20.2**	**-0.2**		
	comp=Z,41nm,1.3s								
STU				*e*pP	**pP**	**16 59 31.8**	**+1.3**		
STU				*e*PP	**PP**	**17 02 49.3**	**-1.3**		
SPAK	**Spaichingen-Ko**	**89.25**	**40**	*e*P	**P**	**16 59 19.5**	**-1.1**		
MBDF	**Montbardon**	**89.35**	**43**	*e*P	**P**	**16 59 20.9**	**-0.4**		
	comp=Z,55nm,1.1s								
MBDF	**Montbardon**	**89.35**	**43**	*e*P	**P**	**16 59 20.9**	**-0.4**		
MBDF					pmax	pmax			
	comp=Z,55nm,1.1s								
MBDF	**Montbardon**	**89.35**	**43**	*e*P	**P**	**16 59 20.9**	**-0.4**		
	comp=Z,55nm,1.1s								
BSD	**Bornholm Skovb**	**89.47**	**32**	*i* P	P	16 59 31.6	+10		
BSD					MLR	MLR			
	comp=Z,2µm,26.0s								
BSD	**Bornholm Skovb**	**89.47**	**32**	*i* P	P	16 59 31.6	+10		
BSD									
	comp=Z,2µm,26.0s								
NEUB	**Neuenburg**	**89.65**	**36**	*e*P	**P**	**16 59 22.3**	**0.0**		
	comp=Z,38nm,1.1s								
LMR	**La Mourre**	**89.73**	**45**	*e*P	**P**	**16 59 22.4**	**-0.4**		
	comp=Z,245nm,1.8s								
LMR	**La Mourre**	**89.73**	**45**	*e*P	**P**	**16 59 22.4**	**-0.4**		
LMR					pmax	pmax			
	comp=Z,245nm,1.8s								
LMR	**La Mourre**	**89.73**	**45**	*e*P	**P**	**16 59 22.4**	**-0.4**		
FRF	**La Foret Royal**	**89.73**	**44**	*e*P	**P**	**16 59 21.9**	**-1.0**		
	comp=Z,196nm,1.8s								
FRF	**La Foret Royal**	**89.73**	**44**	*e*P	**P**	**16 59 21.9**	**-1.0**		
FRF					pmax	pmax			
	comp=Z,196nm,1.8s								
FRF	**La Foret Royal**	**89.73**	**44**	*e*P	**P**	**16 59 21.9**	**-1.0**		
	comp=Z,196nm,1.8s								
MOX	**Moxa**	**89.81**	**36**	*e*P	**P**	**16 59 23.0**	**-0.1**		
MOX				*e**PP	**pP**	**16 59 33.8**	**+0.5**		
MOX				*e*		17 02 54.1			
MOX					pmax	pmax			
	comp=Z,27nm,1.5s								
MOX					MLR	MLR			
	comp=Z,2µm,19.9s								
MOX	**Moxa**	**89.81**	**36**	*e*P	**P**	**16 59 23.0**	**-0.1**		
	comp=Z,27nm,1.5s								
MOX				*e*pP	**pP**	**16 59 33.8**	**+0.5**		
MOX				*e*PP	**PP**	**17 02 54.1**	**-1.1**		
MOX				*e*SS	SS	17 15 55.0	-15		
MOX				*e*L	L	17 42 14.9			
	comp=Z,2µm,19.9s								
GRF	**Grafenberg Arr**	**90.01**	**37**	*e*P	**P**	**16 59 24.5**	**+0.4**		
GRF				*e*		17 02 56.6			
GRF				*e*SS	SS	17 16 04.5	-8.2		
GRF					pmax	pmax			
	comp=Z,57nm,1.4s								
GRF					MLR	MLR			
	comp=Z,2µm,19.1s								
GRF	**Grafenberg Arr**	**90.01**	**37**	*e*P	**P**	**16 59 24.5**	**+0.4**		
	comp=Z,57nm,1.4s								
GRF				*e*PP	**PP**	**17 02 56.6**	**-0.3**		
GRF				*e*SS	SS	17 16 04.5	-8.2		
GRF				*e*L	L	17 42 20.0			
	comp=Z,2µm,19.1s								
RUE	**Ruedersdorf**	**90.16**	**34**	*e*P	**P**	**16 59 24.5**	**-0.1**		
RUE				*e*pP	**pP**	**16 59 34.9**	**+0.1**		
PLN	**Plauen**	**90.19**	**36**	*e*P	**P**	**16 59 24.6**	**-0.3**		
	comp=Z,281nm,1.6s								
DAVA	**Damuels**	**90.27**	**40**⇑	*i*P	**P**	**16 59 25.3**	**-0.2**		
	SNR=9.6								
DAVA	**Damuels**	**90.27**	**40**⇑	*i*P	**P**	**16 59 25.3**	**-0.2**		
CLL	**Collm**	**90.29**	**35**⇓	*i*P	**P**	**16 59 25.1**	**-0.2**		
CLL				*i* *SP	**sP**	**16 59 35.3**	**-3.8**		
CLL				*e*		17 09 53.0			
CLL					pmax	pmax			
	comp=Z,22nm,1.1s								
CLL	**Collm**	**90.29**	**35**	*e*P	**P**	**16 59 24.8**	**-0.5**		
	comp=Z,22nm,1.1s								
CLL				*e*pP	**pP**	**16 59 35.7**	**+0.3**		
CLL				*e*PP	**PP**	**17 02 57.5**	**-1.4**		
CLL	**Collm**	**90.29**	**35**⇓	*i*P	**P**	**16 59 25.1**	**-0.2**		
	comp=Z,22nm,1.1s								
CLL				*i*		16 59 31.2			
CLL				*i* pP	**sP**	**16 59 35.3**	**-3.8**		
	comp=Z,44nm,1.4s								
CLL				*e*PP	**PP**	**17 02 57.0**	**-1.9**		
CLL				*i* pPP		17 03 07.7			
CLL				*e*SKSac	**SKSac**	**17 09 53.0**	**-1.2**		
CLL				*e*pS	**pS**	**17 10 30.0**	**-0.3**		
CLL				*e*PS	**PS**	**17 11 30.0**	**+2.5**		
CLL				*e*SS	**SS**	**17 16 20.0**	**+3.5**		
CLL				*e*		17 17 24.0			
CLL				*e*SSS	SSS	17 20 06.0			
CLL				*e*		17 23 36.0			
TUE	**Stuetta**	**90.29**	**41**	*e*P	**P**	**16 59 25.3**	**-0.4**		
	comp=Z,17nm,1.1s								
TUE				*e*pP	**pP**	**16 59 35.4**	**-0.5**		
TUE					LR	LR			
	comp=Z,1µm,20.0s								
WERD	**Werda**	**90.29**	**36**	*e*P	**P**	**16 59 25.2**	**-0.2**		
	comp=Z,41nm,1.5s								
WERD				*e*pP	**pP**	**16 59 36.2**	**+0.6**		
GUNZ	**Gunzen**	**90.35**	**36**	*e*P	**P**	**16 59 25.5**	**-0.2**		
	comp=Z,58nm,1.6s								
GUNZ				*e*pP	**pP**	**16 59 36.5**	**+0.7**		
MANZ	**Manzenberg**	**90.39**	**37**	*e*P	**P**	**16 59 26.0**	**+0.1**		
	comp=Z,24nm,1.4s								
MANZ				*e*pP	**pP**	**16 59 36.7**	**+0.7**		
TANN	**Tannenbergstha**	**90.40**	**36**	*e*P	**P**	**16 59 25.6**	**-0.3**		
	comp=Z,41nm,1.5s								
TANN				*e*pP	**pP**	**16 59 36.7**	**+0.6**		
WERN	**Wernitzgruen**	**90.41**	**37**	*e*P	**P**	**16 59 26.0**	**+0.1**		
	comp=Z,48nm,1.5s								
WERN				*e*pP	**pP**	**16 59 36.9**	**+0.8**		
KAF	**Kangasniemi**	**90.45**	**22**	*e*P	P	16 59 22.6	-3.2		
KAF					pmax	pmax			
	comp=Z,5.0nm,0.8s								
KAF	**Kangasniemi**	**90.45**	**22**	*e*p	P	16 59 22.6	-3.2		
	comp=Z,4.8nm,0.8s								
NKC	**Novy Kostel**	**90.47**	**37**	*i* P	**P**	**16 59 26.5**	**+0.3**		
NKC				*e**PP	**pP**	**16 59 36.9**	**+0.5**		
NKC				*e*		17 02 59.5			
NKC					MLR	MLR			
	comp=Z,2µm,21.3s								
NKC	**Novy Kostel**	**90.47**	**37**	*i* P	**P**	**16 59 26.5**	**+0.3**		
NKC				*e*pP	**pP**	**16 59 36.9**	**+0.5**		
NKC				*e*PP	**PP**	**17 02 59.5**	**-1.0**		
NKC				*ex*	x	17 03 09.8			
NKC					AMS	AMS	17 42 30.0		
	comp=Z,2µm,21.3s								
ROTZ	**Rotzenmuhle**	**90.55**	**37**	*e*P	**P**	**16 59 26.6**	**0.0**		
	comp=Z,35nm,1.5s								
ROTZ				*e*pP	**pP**	**16 59 37.8**	**+1.1**		
FBE	**Freiberg**	**90.66**	**36**	*e*P	**P**	**16 59 27.1**	**+0.1**		
	comp=Z,47nm,1.4s								
FBE				*e*pP	**pP**	**16 59 38.0**	**+0.8**		
RETA	**Reutte**	**90.72**	**39**⇑	*i*PcP	**P**	**16 59 27.4**	**-0.1**		
	SNR=5.4								
RETA	**Reutte**	**90.72**	**39**⇑	*i*P	**P**	**16 59 27.4**	**-0.1**		
FUR	**Furstenfeldbru**	**90.73**	**39**	*e*P	**P**	**16 59 26.8**	**-0.7**		
FUR				*e**PP	**pP**	**16 59 38.0**	**+0.4**		
FUR					pmax	pmax			
	comp=Z,61nm,1.4s								
FUR	**Furstenfeldbru**	**90.73**	**39**	*e*P	**P**	**16 59 26.8**	**-0.7**		
	comp=Z,61nm,1.4s								
FUR				*e*pP	**pP**	**16 59 38.0**	**+0.4**		
FIA1	**FINESS Array S**	**90.79**	**23**	*e*P	**P**	**16 59 25.5**	**-1.9**		
FINES	**FINESS Array B**	**90.79**	**23**	P	**P**	**16 59 26.4**	**-1.0**		
FINES				PP	PP	17 02 57.2	-5.4		
FINES				PKKPbc	**PKKPbc**	**17 16 52.9**	**-1.7**		
FINES	**FINESS Array B**	**90.79**	**23**	P	**P**	**16 59 26.4**	**-1.0**		
	comp=Z,10nm,0.9s,baz=349,slow=3.9,SNR=15								
FINES				PP	PP	17 02 57.2	-5.4		
	comp=Z,3.2nm,0.9s,baz=331,slow=5.4,SNR=4.8								
FINES				PKKPbc	**PKKPbc**	**17 16 52.9**	**-1.7**		
	comp=Z,1.8nm,0.9s,baz=142,slow=6.5,SNR=7.9								
FINES				LR	LR	17 41 06.9			
	comp=Z,4µm,21.8s,baz=301,slow=36								
FETA	**Feichten**	**90.91**	**40**⇓	*i*PcP	**P**	**16 59 28.4**	**-0.1**		
	SNR=8.9								
FETA	**Feichten**	**90.91**	**40**⇓	*i*P	**P**	**16 59 28.4**	**-0.1**		
MOTA	**Moosalm**	**90.99**	**40**⇓	*i*P	**P**	**16 59 28.6**	**-0.3**		
MOTA	**Moosalm**	**90.99**	**40**⇓	*i*PcP	**P**	**16 59 28.6**	**-0.3**		
MOTA	**Moosalm**	**90.99**	**40**⇓	*i*P	**P**	**16 59 28.6**	**-0.3**		
BRG	**Berggiesshubel**	**91.01**	**36**	*e*P	**P**	**16 59 28.6**	**-0.1**		
	comp=Z,32nm,1.2s								
BRG				*e*pP	**pP**	**16 59 39.5**	**+0.7**		
	comp=Z,35nm,1.2s								
BRG				*e*PP	**PP**	**17 03 03.5**	**-1.3**		
	comp=Z,14nm,1.3s								
BRG				SKS	**SKSac**	**17 10 00.0**	**+1.5**		
BRG				S	ScS	17 10 37.0	+10		
BRG				SS	**SS**	**17 16 30.0**	**+3.0**		
BRG									
	comp=N,971nm,16.1s								
BRG									
	comp=E,907nm,17.3s								
BRG									
	comp=Z,2µm,18.4s								
BRG	**Berggiesshubel**	**91.01**	**36**	*e*P	**P**	**16 59 28.6**	**-0.1**		
BRG				*e**PP	**pP**	**16 59 39.5**	**+0.7**		
BRG				*e*		17 03 03.5			
BRG						17 10 00.0			
BRG				SS	SS	17 16 30.0	+3.0		
BRG					pmax	pmax			
	comp=Z,32nm,1.3s								
BRG					pmax	pmax			
	comp=Z,35nm,1.2s								
BRG					pmax	pmax			
	comp=Z,14nm,1.3s								
BRG					MLR	MLR			
	comp=N,971nm,16.1s								
BRG					MLR	MLR			
	comp=E,907nm,17.3s								
BRG					MLR	MLR			
	comp=Z,2µm,18.4s								
BRG	**Berggiesshubel**	**91.01**	**36**	*e*P	**P**	**16 59 28.5**	**-0.2**		
	comp=Z,31nm,1.2s								
BRG				*e*pP	**pP**	**16 59 39.5**	**+0.7**		
BRG				*e*PP	**PP**	**17 03 04.2**	**-0.5**		
WET	**Wettzell**	**91.23**	**37**	*e*P	**P**	**16 59 29.9**	**+0.1**		
WET				*e**PP	**pP**	**16 59 40.7**	**+0.8**		
WET				*e*		17 03 06.3			
WET					pmax	pmax			
	comp=Z,51nm,1.5s								
WET	**Wettzell**	**91.23**	**37**	*e*P	**P**	**16 59 29.9**	**+0.1**		
	comp=Z,51nm,1.5s								
WET				*e*pP	**pP**	**16 59 40.7**	**+0.8**		
WET				*e*PP	**PP**	**17 03 06.3**	**-0.2**		
PVCC	**Panska Ves**	**91.53**	**36**	*i* P	**P**	**16 59 31.3**	**+0.2**		
PVCC				*e**PP	**pP**	**16 59 42.3**	**+1.0**		
PVCC					MLR	MLR			
	comp=Z,2µm,17.7s								
PVCC	**Panska Ves**	**91.53**	**36**	*i* P	**P**	**16 59 31.3**	**+0.2**		
PVCC				*e*pP	**pP**	**16 59 42.3**	**+1.0**		
PVCC					AMS	AMS	17 43 00.0		
	comp=Z,2µm,17.7s								
KHC	**Kasperske Hory**	**91.64**	**37**	*i* P	**P**	**16 59 31.4**	**-0.3**		
KHC				*e**PP	**pP**	**16 59 42.3**	**+0.4**		
KHC				*e*		17 03 09.3			
KHC				*e*		17 10 03.5			
KHC				*e*		17 11 40.4			
KHC					MLR	MLR			
	comp=Z,1µm,20.4s								
KHC	**Kasperske Hory**	**91.64**	**37**	P	**P**	**16 59 31.3**	**-0.4**		
	comp=Z,36nm,1.5s								
KHC				*e*pP	**pP**	**16 59 42.1**	**+0.2**		
KHC	**Kasperske Hory**	**91.64**	**37**	*i* P	**P**	**16 59 31.4**	**-0.3**		
KHC				*e*pP	**pP**	**16 59 42.3**	**+0.4**		
KHC				*e*PP	**PP**	**17 03 09.3**	**-0.5**		
KHC				*ex*	x	17 03 17.7			
KHC				*e*SKS	**SKSac**	**17 10 03.5**	**+1.3**		
KHC				*e*SP	**SPn**	**17 11 40.4**	**+1.4**		
KHC					AMS	AMS	17 41 50.0		
	comp=Z,1µm,20.4s								
JOF	**Joensuu**	**91.66**	**20**	*e*P	**P**	**16 59 29.8**	**-1.6**		
JOF					pmax	pmax			
	comp=Z,2.0nm,0.8s								
JOF	**Joensuu**	**91.66**	**20**	*e*p	**P**	**16 59 29.8**	**-1.6**		
	comp=Z,2.2nm,0.8s								
PRA	**Prague**	**91.68**	**36**	P	**P**	**16 59 32.0**	**+0.2**		
PRA				pP	**pP**	**16 59 43.0**	**+1.1**		
PRA				PP	PP	17 03 19.0	+9.0		
PRU	**Pruhonice**	**91.78**	**36**	*i* P	**P**	**16 59 32.0**	**-0.2**		
PRU				*e**PP	**pP**	**16 59 43.3**	**+0.9**		
PRU				*e*		17 03 15.4			
PRU				*e*		17 09 59.7			
PRU				*e*		17 11 41.4			
PRU					MLR	MLR			
	comp=Z,1µm,18.8s								
PRU	**Pruhonice**	**91.78**	**36**	*i* P	**P**	**16 59 32.0**	**-0.2**		
PRU				*e*pP	**pP**	**16 59 43.3**	**+0.9**		
PRU				*e*PP	**PP**	**17 03 15.4**	**+4.6**		
PRU				*ex*	x	17 03 20.2			
PRU				*e*SKS	**SKSac**	**17 09 59.7**	**-3.1**		
PRU				*e*SP	**SPn**	**17 11 41.4**	**+0.9**		
PRU					AMS	AMS	17 45 50.0		
	comp=Z,1µm,18.8s								
RJOB	**Jochberg**	**91.83**	**39**	*e*P	**P**	**16 59 32.1**	**-0.5**		
	comp=Z,42nm,1.7s								
RJOB				*e*pP	**pP**	**16 59 43.2**	**+0.4**		
GEC2	**GERESS Array S**	**91.85**	**37**	*e*P	**P**	**16 59 32.1**	**-0.6**		
GEC2				*e**PP	**pP**	**16 59 43.4**	**+0.5**		
GEC2					pmax	pmax			
	comp=Z,34nm,1.5s								
GEC2	**GERESS Array S**	**91.85**	**37**	*e*P	**P**	**16 59 32.1**	**-0.6**		
	comp=Z,34nm,1.5s								
GEC2				*e*pP	**pP**	**16 59 43.4**	**+0.5**		
GERES	**GERESS Array B**	**91.85**	**37**	P	**P**	**16 59 32.6**	**-0.1**		
GERES				pP	**pP**	**16 59 42.7**	**-0.2**		
GERES				PP	**PP**	**17 03 10.1**	**-1.4**		
GERES				PKKPbc	**PKKPdf**	**17 16 50.5**	**+2.3**		
GERES	**GERESS Array B**	**91.85**	**37**	P	**P**	**16 59 32.6**	**-0.1**		
	comp=Z,3.9nm,0.8s,baz=338,slow=3.2,SNR=22								
GERES				pP	**pP**	**16 59 42.7**	**-0.2**		
	comp=Z,3.7nm,0.8s,baz=343,slow=4.2,SNR=8.2								
GERES				PP	**PP**	**17 03 10.1**	**-1.4**		
	comp=Z,2.1nm,1.0s,baz=302,slow=7.7,SNR=5.1								
GERES				PKKPbc	**PKKPdf**	**17 16 50.5**	**+2.3**		
	comp=Z,2.6nm,0.9s,baz=132,slow=2.0,SNR=10								
GERES				LR	LR	17 44 32.6			
	comp=Z,1µm,18.6s,baz=296,slow=38								
VLC	**Villacollemand**	**91.94**	**43**		PFAKE		16 59 40.0	+6.8	
VLC					LR	LR			
	comp=Z,1µm,21.0s								
ABTA	**Abfaltersbach**	**92.12**	**40**⇑	*i*PcP	**P**	**16 59 33.5**	**-0.5**		
ABTA	**Abfaltersbach**	**92.12**	**40**⇑	*i*P	**P**	**16 59 33.5**	**-0.5**		
YAK	**Yakutsk**	**92.23**	**339**

DPC					AMS	AMS	17 44 00.0				
	comp=Z,2µm,17.6s										
MOA	**Molln**	**92.65**	**38**	⇑	*i*PcP	**P**	**16 59 35.6**	**-0.8**			
MOA	**Molln**	**92.65**	**38**	⇑	*i*P	**P**	**16 59 35.6**	**-0.8**			
TREC	**Trest**	**92.65**	**36**		*i* P	**P**	**16 59 35.4**	**-0.9**			
TREC					MLR	MLR					
	comp=Z,2µm,19.2s										
TREC	**Trest**	**92.65**	**36**		*i* P	**P**	**16 59 35.4**	**-0.9**			
TREC					AMS	AMS	17 43 00.0				
	comp=Z,2µm,19.2s										
CADS	**Cadrg**	**93.11**	**40**		*e*P	**P**	**16 59 38.3**	**-0.3**			
CADS					*i* pP	**pP**	**16 59 48.9**	**+0.1**			
VSL	**Villasalto**	**93.26**	**47**		PFAKE		16 59 50.0	+11			
VSL					LR	LR					
	comp=Z,2µm,20.0s										
OBKA	**Obir**	**93.47**	**39**	⇑	*i*PcP	**P**	**16 59 39.5**	**-0.8**			
OBKA	**Obir**	**93.47**	**39**	⇑	*i*P	**P**	**16 59 39.5**	**-0.8**			
CONA	**Conrad Observa**	**93.55**	**37**	⇑	*i*PcP	**P**	**16 59 40.3**	**-0.3**			
CONA	**Conrad Observa**	**93.55**	**37**	⇑	*i*P	**P**	**16 59 40.3**	**-0.3**			
MORC	**Moravsky Berou**	**93.56**	**35**		*e*P	**P**	**16 59 40.2**	**-0.4**			
MORC					pmax	pmax					
	comp=Z,46nm,1.5s										
MORC	**Moravsky Berou**	**93.56**	**35**		*e*P	**P**	**16 59 40.1**	**-0.4**			
	comp=Z,46nm,1.5s										
SOKA	**Soboth**	**93.68**	**39**	⇑	*i*P	**P**	**16 59 40.0**	**-1.2**			
SOKA	**Soboth**	**93.68**	**39**	⇑	*i*P	**P**	**16 59 40.0**	**-1.2**			
PERS	**Pernice**	**93.75**	**39**		*e*P	**P**	**16 59 41.1**	**-0.4**			
CEY	**Cerknica**	**93.77**	**40**		*e*P	**P**	**16 59 42.0**	**+0.4**			
CEY					*e*pP	**pP**	**16 59 52.1**	**+0.4**			
OKC	**Ostrava-Krasne**	**93.86**	**35**		*i* P	**P**	**16 59 42.1**	**+0.2**			
OKC					*e**PP	**pP**	**16 59 52.7**	**+0.7**			
OKC					*e*		17 03 25.3				
OKC					*e*		17 10 16.0				
OKC					MLR	MLR					
	comp=Z,1µm,18.9s										
OKC	**Ostrava-Krasne**	**93.86**	**35**		*i* P	**P**	**16 59 42.1**	**+0.2**			
OKC					*e*pP	**pP**	**16 59 52.7**	**+0.7**			
OKC					*e*PP	**PP**	**17 03 25.3**	**-1.8**			
OKC					*ex*	x	17 03 35.8				
OKC					*e*SKS	**SKSac**	**17 10 16.0**	**+1.6**			
OKC					AMS	AMS	17 44 00.0				
	comp=Z,1µm,18.9s										
VISS	**Visnje**	**93.99**	**40**		*i* P	**P**	**16 59 42.1**	**-0.4**			
SOP	**Sopron**	**94.08**	**37**	‖	*e*P	**P**	**16 59 43.3**	**+0.4**			
ZST	**Bratislava**	**94.13**	**37**		*e*P	**P**	**16 59 42.5**	**-0.6**			
ZST					pmax	pmax					
	comp=Z,33nm,1.3s										
ZST	**Bratislava**	**94.13**	**37**		*e*P	**P**	**16 59 42.5**	**-0.6**			
ZST					*e*pP	**pP**	**16 59 53.6**	**+0.3**			
ZST					*e*PP	**PP**	**17 03 28.5**	**-0.8**			
IZAR	**Zarasai**	**94.45**	**27**		*e*P	**P**	**16 59 43.2**	**-1.2**			
IZAR					AMB	AMB	16 59 45.1				
	comp=Z,9.5nm,1.1s										
ISAL	**Salakas**	**94.51**	**28**		*e*P	**P**	**16 59 43.5**	**-1.1**			
ISAL					AMB	AMB	16 59 44.3				
	comp=Z,6.1nm,1.2s										
OJC	**Ojcow**	**94.55**	**34**		*e*P	**P**	**16 59 44.3**	**-0.7**			
OJC					*e**PP	**pP**	**16 59 54.6**	**-0.6**			
OJC					*e*		17 03 32.0				
OJC					*e*		17 10 16.6				
OJC					MLR	MLR					
	comp=Z,2µm,21.0s										
OJC	**Ojcow**	**94.55**	**34**		*e*P	**P**	**16 59 44.3**	**-0.7**			
OJC					*e*pP	**pP**	**16 59 54.6**	**-0.6**			
OJC					*e*PP	**PP**	**17 03 32.0**	**-0.5**			
OJC					*e*SKSac	**SKSac**	**17 10 16.6**	**-1.6**			
OJC					L	L	17 43 48.4				
	comp=Z,2µm,21.0s										
IIGN	**Ignalina**	**94.69**	**28**		*e*P	**P**	**16 59 44.2**	**-1.3**			
IIGN					AMB	AMB	16 59 44.9				
	comp=Z,10.0nm,1.3s										
AQU	**L'Aquila**	**94.72**	**43**		PFAKE		17 00 00.0	+14			
AQU					LR	LR					
	comp=Z,3µm,19.0s										
KEST	**Kesra**	**94.81**	**51**		P	**P**	**16 59 47.2**	**+0.5**			
KEST	**Kesra**	**94.81**	**51**		P	**P**	**16 59 47.2**	**+0.5**			
	comp=Z,7.7nm,1.0s,baz=257,slow=7.2,SNR=7.1										
KEST					LR	LR	17 46 01.5				
	comp=Z,420nm,18.0s,baz=355,slow=38										
IDID	**Didziasalis**	**94.94**	**28**		*e*P	**P**	**16 59 45.1**	**-1.6**			
YUK	**Yuzh-Kuril'sk**	**94.95**	**319**		*e*P	**P**	**16 59 49.1**	**+2.2**			
YUK					*e*PPP	PPP	17 05 44.9				
YUK					*i* S	**SKSac**	**17 10 21.6**	**+1.2**			
YUK					*e*SSS	SSS	17 21 05.2				
YUK					pmax	pmax					
	comp=E,558nm,1.4s										
YUK					pmax	pmax					
	comp=Z,593nm,1.4s										
YUK					pmax	pmax					
	comp=N,437nm,1.4s										
YUK					pmax	pmax					
	comp=Z,626nm,1.3s										
YUK					MLR	MLR					
	comp=N,573nm,19.0s										
YUK					MLR	MLR					
	comp=Z,1µm,22.0s										
YUK					MLR	MLR					
	comp=E,332nm,19.0s										
VYHS	**Vyhne**	**94.96**	**36**		*e*P	**P**	**16 59 47.0**	**0.0**			
VYHS					*e*		17 03 44.9				
VYHS					pmax	pmax					
	comp=Z,10.0nm,1.2s										
VYHS	**Vyhne**	**94.96**	**36**		*e*P	**P**	**16 59 47.0**	**0.0**			
VYHS					*e*pP	**pP**	**16 59 57.9**	**+0.8**			
VYHS					*e*PP	**PP**	**17 03 33.0**	**-2.7**			
VYHS					*e*		17 03 44.9				
NIE	**Niedzica**	**95.27**	**35**		*e*P	**P**	**16 59 48.8**	**+0.4**			
NIE	**Niedzica**	**95.27**	**35**		*e*P	**P**	**16 59 48.8**	**+0.4**			
YSS	**Yuzh-Sakhalins**	**95.36**	**322**		*e*P	**P**	**16 59 48.0**	**-0.7**			
YSS					*e*		17 10 52.0				
BUD	**Budapest**	**95.61**	**37**	‖	*e*P	**P**	**16 59 50.6**	**+0.7**			
PSZ	**Piszkesteto**	**95.87**	**36**		*e*P	**P**	**16 59 51.8**	**+0.6**			
PSZ					*e**PP	**pP**	**17 00 02.6**	**+1.2**			
PSZ					pmax	pmax					
	comp=Z,34nm,1.8s										
PSZ					MLR	MLR					
	comp=Z,2µm,20.0s										
PSZ	**Piszkesteto**	**95.87**	**36**		*e*P	**P**	**16 59 51.8**	**+0.6**			
	comp=Z,34nm,1.8s										
PSZ					*e*pP	**pP**	**17 00 02.6**	**+1.2**			
PSZ					LR	LR					
	comp=Z,2µm,20.0s										
PSZ	**Piszkesteto**	**95.87**	**36**	‖	*e*P	**P**	**16 59 52.2**	**+1.0**			
MNK	**Minsk**	**95.95**	**28**		*e*P	P	16 59 48.0	-3.3			
MICGM	**Minsk**	**95.97**	**28**		*e*P	P	16 59 48.0	-3.4			
CRVS	**Cervenica-Dubn**	**96.19**	**35**		*e*P	**P**	**16 59 51.9**	**-0.6**			
CRVS					pmax	pmax					
	comp=Z,17nm,1.4s										
CRVS	**Cervenica-Dubn**	**96.19**	**35**		*e*P	**P**	**16 59 51.9**	**-0.6**			
CRVS					*e*pP	**pP**	**17 00 02.7**	**0.0**			
KWP	**Kalwaria Pacla**	**96.44**	**34**		PFAKE		17 00 00.0	+6.3			
KWP					LR	LR					
	comp=Z,1µm,22.0s										
KWP	**Kalwaria Pacla**	**96.44**	**34**		*e*P	**P**	**16 59 53.7**	**0.0**			
KWP					LMZ	LR	17 37 15.4				
KOLS	**Kolonicke sedl**	**96.61**	**34**		*e*P	**P**	**16 59 54.8**	**+0.3**			
KOLS					pmax	pmax					
	comp=Z,20nm,1.4s										
KOLS	**Kolonicke sedl**	**96.61**	**34**		*e*P	**P**	**16 59 54.8**	**+0.3**			
KOLS					*e*pP	**pP**	**17 00 06.0**	**+1.4**			
KOLS					*e*PP	**PP**	**17 03 49.5**	**+1.0**			
TORD	**Torodi Ar. Bea**	**96.70**	**74**		P	**P**	**16 59 53.5**	**-2.0**			
TORD					pP	**pP**	**17 00 04.6**	**-1.1**			
TORD					PP	PP	17 03 44.4	-6.0			
TORD					PKKP	**PKKPbc**	**17 16 39.0**	**+1.1**			
TORD					P'P'		17 24 49.6				
TORD	**Torodi Ar. Bea**	**96.70**	**74**		P	**P**	**16 59 53.5**	**-2.0**			
	comp=Z,4.5nm,1.0s,baz=274,slow=4.7,SNR=16										
TORD					pP	**pP**	**17 00 04.6**	**-1.1**			
	comp=Z,2.6nm,1.0s,baz=292,slow=5.9,SNR=5.9										
TORD					PP	PP	17 03 44.4	-6.0			
	comp=Z,1.9nm,1.0s,baz=304,slow=8.4,SNR=3.5										
TORD					PKKP	**PKKPbc**	**17 16 39.0**	**+1.1**			
	comp=Z,5.5nm,0.9s,baz=96,slow=2.6,SNR=20										
TORD					PKPPKP	P'P'df	17 24 49.6	-5.0			
	comp=Z,2.3nm,1.1s,baz=66,slow=2.9,SNR=4.6										
TORD					LR	LR	17 43 36.2				
	comp=Z,2µm,20.8s,baz=270,slow=36										
UZH	**Uzhgorod**	**96.79**	**35**	⇑	*i*P	**P**	**16 59 55.8**	**+0.5**			
UZH					*i*		17 00 07.0				
LVV	**L'vov**	**97.02**	**33**		*e*P	**P**	**16 59 55.9**	**-0.4**			
LVV					*e*		17 10 30.9				
LVV					*e*PS	**PS**	**17 12 39.1**	**-2.6**			
LVV					*e*SS	SS	17 17 44.5	-8.1			
TRPA	**Tarpa**	**97.22**	**35**	‖	*e*P	**P**	**16 59 57.5**	**+0.3**			
CUC	**Castrocucco**	**97.45**	**44**		PFAKE		17 00 10.0	+11			
CUC					LR	LR					
	comp=Z,1µm,20.0s										
ERM	**Erimo**	**97.67**	**318**		PFAKE		17 00 10.0	+11			
ERM					LR	LR					
	comp=Z,1µm,19.0s										
SNZO	**South Karori**	**97.86**	**229**		PFAKE		17 00 10.0	+10			
SNZO					LR	LR					
	comp=Z,2µm,20.0s										
CEL	**Celeste**	**98.35**	**46**		PFAKE		17 00 10.0	+7.4			
CEL					LR	LR					
	comp=Z,1µm,21.0s										
TIP	**Timpagrande**	**98.49**	**45**		PFAKE		17 00 10.0	+6.8			
TIP					LR	LR					
	comp=Z,3µm,22.0s										
WDD	**Wield Dalam**	**98.53**	**49**		PFAKE		17 00 10.0	+6.6			
WDD					LR	LR					
	comp=Z,2µm,19.0s										
KIEV	**Kiev**	**99.07**	**30**		PFAKE		17 00 20.0	+15			
KIEV					LR	LR					
	comp=Z,996nm,20.0s										
AKASG	**Malin Array Be**	**99.07**	**30**		P	**Pdif**	**17 00 03.2**	**-2.3**			
AKASG							17 04 05.6				
AKASG	**Malin Array Be**	**99.07**	**30**		P	**Pdif**	**17 00 03.2**	**-2.3**			
AKASG					PP	**PP**	**17 04 05.5**	**-1.6**			
AKASG					PKKPbc	**PKKPbc**	**17 16 30.6**	**-1.8**			
AKASG	**Malin Array Be**	**99.07**	**30**		P	**Pdif**	**17 00 03.2**	**-2.3**			
	comp=Z,1.9nm,0.8s,baz=302,slow=3.3,SNR=6.4										
AKASG					PP	**PP**	**17 04 05.5**	**-1.6**			
	comp=Z,5.6nm,0.9s,baz=306,slow=7.2,SNR=7.2										
AKASG					PKKPbc	**PKKPbc**	**17 16 30.6**	**-1.8**			
	comp=Z,3.0nm,0.8s,baz=103,slow=2.1,SNR=10										
AKASG					LR	LR	17 52 05.9				
	comp=Z,934nm,18.1s,baz=310,slow=40										
MOS	**Moscow**	**99.10**	**23**		*e*P	**Pdif**	**17 00 03.0**	**-2.4**			
MOS					*e*		17 04 09.2				
MOS					pmax	pmax					
	comp=Z,31nm,1.1s										
MOS					MLR	MLR					
	comp=Z,2µm,21.0s										
MOS					MLR	MLR					
	comp=Z,3µm,22.0s										
OBN	**Obninsk**	**99.16**	**24**		*e*P	**Pdif**	**17 00 05.0**	**-0.7**			
OBN					*i*		17 00 15.3				
OBN					*i*		17 04 04.8				
OBN					*i* S	**SKSac**	**17 10 38.4**	**-3.3**			
OBN					*i* PS	**PS**	**17 13 00.7**	**-3.8**			
OBN					*i* SS	SS	17 18 14.7	-7.4			
OBN					pmax	pmax					
	comp=Z,33nm,1.6s										
OBN					MLR	MLR					
	comp=Z,2µm,20.0s										
TIR	**Tirane**	**99.40**	**42**		PFAKE		17 00 20.0	+13			
TIR					LR	LR					
	comp=Z,1µm,21.0s										
DZM	**Mont Dzumac**	**99.79**	**250**		*e*P	**Pdif**	**17 00 11.0**	**+1.7**			
	comp=Z,207nm,26.0s										
DZM	**Mont Dzumac**	**99.79**	**250**		*e*PP	PP	17 04 09.1	-5.2			
	comp=Z,275nm,25.4s										
DZM					*e*S	**S**	**17 11 40.3**	**-1.2**			
	comp=Z,741nm,32.0s										
DZM	**Mont Dzumac**	**99.79**	**250**		*e*PS	PS	17 13 14.3	+1.0			
	comp=Z,438nm,25.6s										
DZM					*e*SS	SS	17 18 33.4	-0.9			
	comp=Z,1µm,28.5s										
DZM					*e*LR	LR	17 32 21.9				
	comp=Z,3µm,22.5s										
DZM	**Mont Dzumac**	**99.79**	**250**		LR	LR	17 35 52.8				
	comp=Z,2µm,21.1s,baz=35,slow=30										
KLR	**Kul'dur**	**99.97**	**329**		*e*P	Pdif	17 00 24.7	+15			
KIS	**Kishinev**	**101.27**	**33**		*e*P	**Pdif**	**17 00 16.0**	**+0.7**			
KIS					*e*		17 04 24.0				
KIS					*e*PS	**PS**	**17 13 22.0**	**-5.5**			
KIS					*e*PPS	PPS	17 14 13.0				
KIS					*e*SS	SS	17 18 50.0	-2.1			
KIS					MLR	MLR					
	comp=N,700nm,20.0s										
KIS					MLR	MLR					
	comp=E,800nm,20.0s										
KIS					MLR	MLR					
	comp=Z,1µm,20.0s										
KIS					MLR	MLR					
	comp=Z,1µm,20.0s										
KIS	**Kishinev**	**101.27**	**33**		*e*P	**Pdif**	**17 00 16.0**	**+0.7**			
KIS	**Kishinev**	**101.27**	**33**		*e*PP	PP	17 04 24.0	0.0			
HNR	**Honiara**	**102.65**	**264**		PFAKE		17 00 30.0	+7.9			
HNR					LR	LR					
	comp=Z,890nm,22.0s										
USRK	**Ussuriysk Arra**	**103.09**	**325**		Pdiff	**Pdif**	**17 00 24.3**	**+0.9**			
	comp=Z,1.3nm,0.7s,baz=149,slow=42,SNR=4.1										
USRK					PP	**PP**	**17 04 38.1**	**+0.5**			
	comp=Z,0.9nm,0.6s,baz=98,slow=14,SNR=4.2										
VSR	**Storozhevoye**	**103.13**	**25**		*e*P	**Pdif**	**17 00 22.6**	**-0.9**			
VSR					*i*		17 04 42.9				
VSR					pmax	pmax					
	comp=Z,10.0nm,1.2s										
VSR					pmax	pmax					
	comp=N,2.0nm,0.4s										
VSR					pmax	pmax					
	comp=E,9.0nm,1.2s										
VSR					pmax	pmax					
	comp=N,10.0nm,1.6s										
VSR					pmax	pmax					
	comp=Z,10.0nm,1.6s										
VSR					pmax	pmax					
	comp=E,10.0nm,0.8s										
VORD	**Divnogorie**	**103.37**	**25**		*e*P	**Pdif**	**17 00 22.9**	**-1.7**			
VORD					pmax	pmax					
	comp=N,7.0nm,0.8s										
VORD					pmax	pmax					
	comp=E,6.0nm,0.8s										
VORD					pmax	pmax					
	comp=Z,6.0nm,0.8s										
VORD					pmax	pmax					
	comp=Z,10.0nm,2.1s										
VORD					pmax	pmax					
	comp=N,10.0nm,0.7s										
VORD					pmax	pmax					
	comp=E,10.0nm,0.7s										
MJAR	**Matsushiro Arr**	**103.83**	**315**		Pdif	**Pdif**	**17 00 29.1**	**+2.1**			
MJAR					PP	PKiKP	17 04 51.9	+7.1			
MJAR	**Matsushiro Arr**	**103.83**	**315**		Pdiff	**Pdif**	**17 00 29.1**	**+2.1**			
	comp=E,1.8nm,0.8s,baz=50,slow=2.7,SNR=5.0										
MJAR					PP	PKiKP	17 04 51.9	+7.1			
	comp=E,5.6nm,1.2s,baz=44,slow=7.7,SNR=5.3										
MAJO	**Matsushiro**	**103.83**	**315**		PFAKE		17 00 40.0	+13			
MAJO					LR	LR					
	comp=Z,903nm,21.0s										
MDJ	**Mudanjiang**	**104.13**	**326**		PFAKE		17 00 40.0	+12			
MDJ					LR	LR					
	comp=Z,1µm,20.0s										
VRHR	**Novokhopersk**	**104.20**	**24**		*e*P	**Pdif**	**17 00 27.6**	**-0.7**			
VRHR					pmax	pmax					
	comp=N,10.0nm,0.4s										
VRHR					pmax	pmax					
	comp=E,10.0nm,0.4s										
VRHR					pmax	pmax					
	comp=Z,10.0nm,0.4s										
ARU	**Arti**	**104.62**	**12**		P	**Pdif**	**17 00 29.3**	**-0.7**			
ARU					S	**SKSac**	**17 11 06.3**	**-1.5**			
ARU					SP	**SP**	**17 13 58.1**	**+0.4**			
ARU					PS	**PS**	**17 14 08.7**	**+6.4**			
ARU					MLR	MLR					
	comp=Z,1µm,26.0s										
HIA	**Hailar**	**105.43**	**334**		PFAKE		17 05 00.0				
HIA					LR	LR					
	comp=Z,3µm,20.0s										
VNA2	**Neumayer--Watz**	**106.60**	**160**		*e*P	**PP**	**17 05 04.2**	**+0.4**			
CN2	**Changchun**	**106.85**	**328**		*e*Pdif	**Pdif**	**17 00 41.3**	**+1.1**			
CN2					*e*S	**Sdif**	**17 12 40.5**	**+0.9**			
CN2					AMB	AMB					
	comp=Z,400nm,4.0s										
CN2					LR	LR					
	comp=N,1µm,20.0s										
CN2					LR	LR					
	comp=E,1µm,20.0s										
CN2					LR	LR					
	comp=Z,2µm,20.0s										
QSPA	**South Pole Qui**	**106.88**	**180**		PKKPbc	PKKPbc	17 16 05.3	-5.4			
QSPA	**South Pole Qui**	**106.88**	**180**		PKKPbc	PKKPbc	17 16 05.3	-5.4			
	comp=Z,2.3nm,1.1s,baz=16,slow=4.1,SNR=6.6										
ANN	**Anapa**	**107.15**	**31**		*e*P	**Pdif**	**17 00 45.1**	**+3.6**			
ANN					*e*		17 11 14.1				
ANN					*e*PS	**PS**	**17 14 22.5**	**-6.4**			
ANN					*e*SS	SS	17 20 06.9	-5.6			
ANN					pmax	pmax					
	comp=Z,26nm,1.2s										
SBA	**Scott Base**	**107.23**	**193**		PFAKE		17 05 00.0				
SBA					LR	LR					
	comp=Z,2µm,20.0s										
SNAA	**Sanae**	**108.09**	**161**		*e*P	**PP**	**17 05 15.0**	**+0.2**			
ISP	**Isparta**	**108.13**	**40**		PFAKE		17 05 00.0				
ISP					LR	LR					
	comp=Z,790nm,21.0s										
ANTO	**Ankara**	**108.14**	**37**		PFAKE		17 05 00.0				
ANTO					LR	LR					
	comp=Z,718nm,20.0s										
VNDA	**Vanda**	**108.30**	**193**		PKiKP	**PKiKP**	**17 04 53.0**	**+1.2**			
VNDA					PKKPbc	**PKKPbc**	**17 16 02.0**	**-3.7**			
VNDA	**Vanda**	**108.30**	**193**		PKiKP	**PKiKP**	**17 04 53.0**	**+1.2**			
	comp=Z,0.5nm,0.7s,baz=321,slow=2.3,SNR=7.8										
VNDA					PKKPbc	**PKKPbc**	**17 16 02.0**	**-3.7**			
	comp=Z,0.6nm,0.7s,baz=303,slow=5.7,SNR=3.7										
BR131	**Keskin Array S**	**108.72**	**36**		*e*PKiKP	**PKiKP**	**17 04 53.5**	**-0.4**			
BRTR	**Keskin Array B**	**108.72**	**36**		PKiKP	**PKiKP**	**17 04 53.6**	**-0.4**			
BRTR					PKKPbc	**PKKPbc**	**17 16 02.0**	**-1.5**			
BRTR					PKKPab	**PKKPdf**	**17 16 15.9**	**-1.6**			
BRTR	**Keskin Array B**	**108.72**	**36**		PKiKP	**PKiKP**	**17 04 53.6**	**-0.4**			
	comp=Z,3.6nm,0.9s,baz=202,slow=1.1,SNR=16										
BRTR					PKKPbc	**PKKPbc**	**17 16 02.0**	**-1.5**			
	comp=Z,5.1nm,1.0s,baz=152,slow=4.1,SNR=16										
BRTR					PKKPab	**PKKPdf**	**17 16 15.9**	**-1.6**			
	comp=Z,1.3nm,0.8s,baz=144,slow=6.2,SNR=4.4										
ZALV	**Zalesovo Beam**	**109.29**	**357**		PKiKP	**PKiKP**	**17 04 53.6**	**-0.7**			
ZALV					PP	PP	17 05 14.0	-8.6			
ZALV					PKKPbc	**PKKPbc**	**17 15 58.5**	**-3.5**			
ZALV	**Zalesovo Beam**	**109.29**	**357**		PKiKP	**PKiKP**	**17 04 53.6**	**-0.7**			
	comp=Z,0.7nm,0.3s,baz=348,slow=2.4,SNR=3.7										
ZALV					PP	PP	17 05 14.0	-8.6			
	comp=Z,4.0nm,0.9s,baz=358,slow=4.6,SNR=5.8										
ZALV					PKKPbc	**PKKPbc**	**17 15 58.5**	**-3.5**			
	comp=Z,0.6nm,0.3s,baz=180,slow=3.0,SNR=4.5										
GUMO	**Guam**	**109.50**	**291**		PFAKE		17 05 10.0				
GUMO					LR	LR					
	comp=Z,588nm,22.0s										
BRVK	**Borovoye**	**109.73**	**6**		PFAKE		17 05 10.0				
BRVK					LR	LR					
	comp=Z,4µm,21.0s										
KSRS	**Korea Array**	**109.82**	**321**		PKiKP	**PKiKP**	**17 04 56.0**	**+0.1**			
	comp=Z,3.8nm,0.9s,baz=12,slow=1.3,SNR=12										
KSRS					PP	**PP**	**17 05 24.9**	**-2.4**			
	comp=Z,1.5nm,0.9s,baz=22,slow=2.2,SNR=2.9										
KSRS					PKKPab	**PKKPab**	**17 16 09.9**	**-2.5**			
	comp=Z,2.0nm,0.9s,baz=234,slow=4.8,SNR=6.7										
KSAR	**Wonju Array Be**	**109.85**	**321**		PKiKP	**PKiKP**	**17 04 56.0**	**0.0**			
KSAR					PP	PP	**17 05 24.9**	**-2.6**			
KSAR					PKKPab	**PKKPab**	**17 16 09.9**	**-2.4**			
ZAK	**Zakamensk**	**110.00**	**345**		*e*P	**Pdif**	**17 00 44.4**	**-10**			
ZAK					*e*		17 05 30.5				
ZAK					pmax	pmax					
	comp=Z,2.0nm,1.7s										
KIV	**Kislovodsk**	**110.25**	**28**		*e*P	Pdif	17 01 11.1	+16			
KIV					*i*		17 05 26.1				
KIV					*i* PS	PS	17 14 50.0	-11			
KIV					MLR	MLR					
	comp=Z,600nm,20.0s										
ULN	**Ulaanbaatar**	**111.21**	**341**		PFAKE		17 05 10.0				
ULN					LR	LR					
	comp=Z,2µm,21.0s										
SONM	**Songino Array**	**111.44**	**342**		PKiKP	**PKiKP**	**17 04 58.5**	**-0.3**			
SONM					PP	**PP**	**17 05 38.4**	**-0.3**			
SONM					PKKPbc	**PKKPbc**	**17 15 53.1**	**-1.9**			
SONM					PKKPab	**PKKPab**	**17 16 02.9**	**-2.8**			
SONM	**Songino Array**	**111.44**	**342**		PKiKP	**PKiKP**	**17 04 58.5**	**-0.3**			
	comp=Z,2.5nm,0.8s,baz=29,slow=1.1,SNR=10										
SONM					PP	**PP**	**17 05 38.4**	**-0.3**			
	comp=Z,1.0nm,0.7s,baz=9.1,slow=2.8,SNR=4.0										
SONM					PKKPbc	**PKKPbc**	**17 15 53.1**	**-1.9**			
	comp=Z,1.6nm,0.9s,baz=205,slow=4.7,S

SSE				LR	LR			
	comp=E,680nm,20.0s							
SSE				LR	LR			
	comp=Z,900nm,15.9s							
WMQ	**Urumqi**	**119.16**	**354**	PKP	**PKPdf**	**17 05 13.0**	**-0.7**	
WMQ				PP	PP	17 06 38.0	+5.4	
WMQ				PKS	**PKSdf**	**17 08 48.0**	**-2.4**	
WMQ				SKS	**SKSdf**	**17 12 20.0**	**-3.7**	
WMQ				SKKS	SKKSac	17 13 26.0	-6.0	
WMQ				AMB	AMB			
	comp=Z,100nm,11.0s							
WMQ				LR	LR			
	comp=N,2μm,22.0s							
WMQ				LR	LR			
	comp=E,1μm,22.0s							
WMQ				LR	LR			
	comp=Z,2μm,22.0s							
BHD	**Baghdad**	**119.34**	**34**	*ex*	PP	17 06 21.5	-13	
KK31	**Karatay Array**	**119.55**	**8**	*i* PKIKP	**PKPdf**	**17 05 13.5**	**-0.9**	
KK31				pmax	pmax			
	comp=Z,1.0nm,0.5s							
USP	**Ospenovka** SNR=19	**119.83**	**5**	P	**PKPdf**	**17 05 15.2**	**+0.3**	
CHMS	**Chumysh** SNR=7.5	**120.12**	**5**	P	**PKPdf**	**17 05 15.8**	**+0.3**	
TKM2	**Tokmak 2**	**120.26**	**4**	*e*PKIKP	**PKPdf**	**17 05 15.3**	**-0.7**	
TKM2				*e*		17 05 25.8		
TKM2				MLR	MLR			
	comp=Z,2μm,19.0s							
TKM2	**Tokmak 2**	**120.26**	**4**	*e*PKPdf	**PKPdf**	**17 05 15.3**	**-0.7**	
TKM2				*ep*PKPdf	**pPKPdf**	**17 05 25.8**	**-0.7**	
TKM2				LR	LR			
	comp=Z,2μm,19.0s							
TKM2	**Tokmak 2** SNR=6.7	**120.26**	**4**	P	**PKPdf**	**17 05 16.1**	**+0.1**	
FRU	**Bishkek**	**120.27**	**5**	*e*PKIKP	**PKPdf**	**17 05 15.6**	**-0.2**	
FRU				*i*		17 06 48.0		
FRU				pmax	pmax			
	comp=Z,30nm,1.8s							
FRU				MLR	MLR			
	comp=Z,2μm,18.0s							
EKS2	**Erkin-Say**	**120.37**	**6**	*e*PKIKP	**PKPdf**	**17 05 16.4**	**+0.3**	
EKS2				MLR	MLR			
	comp=Z,2μm,19.0s							
EKS2	**Erkin-Say**	**120.37**	**6**	*e*PKPdf	**PKPdf**	**17 05 16.4**	**+0.3**	
EKS2				LR	LR			
	comp=Z,2μm,19.0s							
EKS2	**Erkin-Say** SNR=30	**120.37**	**6**	P	**PKPdf**	**17 05 16.6**	**+0.5**	
AAK	**Ala-Archa**	**120.46**	**5***c*	*i*PKIKP	**PKPdf**	**17 05 16.3**	**-0.1**	
AAK				pmax	pmax			
	comp=Z,36nm,1.2s							
AAK				MLR	MLR			
	comp=Z,5μm,24.0s							
AAK	**Ala-Archa**	**120.46**	**5**	*e*PKPdf	**PKPdf**	**17 05 16.2**	**-0.1**	
AAK				PKKPbc	**PKKPbc**	**17 15 22.8**	**-0.8**	
AAK				LR	LR			
	comp=Z,2μm,20.0s							
AAK	**Ala-Archa** SNR=7.6	**120.46**	**5**	PKPdf	**PKPdf**	**17 05 16.6**	**+0.3**	
AAK	**Ala-Archa** SNR=12	**120.46**	**5**	P	**PKPdf**	**17 05 16.2**	**-0.1**	
AAK	**Ala-Archa** comp=Z,2.1nm,0.6s,baz=183,slow=4.3,SNR=11	**120.46**	**5**	PKKPbc	PKKPbc	17 15 22.8	-0.8	
KBK	**Karagaybulak** SNR=8.8	**120.47**	**5**	P	**PKPdf**	**17 05 16.8**	**+0.4**	
TSUM	**Tsumeb**	**120.50**	**103**	*e*PKPdf	**PKPdf**	**17 05 16.7**	**-0.2**	
TSUM				PKKPbc	**PKKPbc**	**17 15 22.7**	**+0.3**	
TSUM				LR	LR			
	comp=Z,797nm,22.0s							
TSUM	**Tsumeb** comp=Z,5.0nm,0.9s,baz=76,slow=5.4,SNR=13	**120.50**	**103**	PKKPbc	PKKPbc	17 15 22.7	+0.3	
AML	**Almayashu** SNR=24	**120.88**	**6**	P	**PKPdf**	**17 05 18.2**	**+0.7**	
ULHL	**Ulahol** SNR=8.3	**120.97**	**4**	P	**PKPdf**	**17 05 18.2**	**+0.8**	
KZA	**Kyzart** SNR=9.2	**121.07**	**4**	P	**PKPdf**	**17 05 18.4**	**+0.6**	
GTA	**Gaotai**	**121.07**	**343**	*e*PKP	**PKPdf**	**17 05 17.8**	**+0.2**	
GTA				sPKP		17 05 34.3		
GTA				PP	**PP**	**17 06 50.5**	**+4.5**	
GTA				PKS	**PKSdf**	**17 08 52.8**	**-1.6**	
GTA				SKS	**SKSac**	**17 12 19.8**	**+5.7**	
GTA				SKKS	**SKKSac**	**17 13 40.5**	**-4.4**	
GTA				AMB	AMB			
	comp=Z,200nm,7.6s							
GTA				LR	LR			
	comp=N,2μm,19.5s							
GTA				LR	LR			
	comp=E,1μm,20.4s							
GTA				LR	LR			
	comp=Z,2μm,19.5s							
SYO	**Syowa Base**	**122.09**	**164**↑	*e*PKiKP	**PKiKP**	**17 05 22.6**	**+4.1**	
TATO	**Taipei**	**122.22**	**315**	PFAKE		17 05 30.0	+10	
TATO				LR	LR			
	comp=Z,925nm,20.0s							
XAN	**Xi'an**	**122.48**	**332**	PKP	**PKPdf**	**17 05 19.5**	**-0.8**	
XAN				AMB	AMB			
	comp=Z,92nm,8.3s							
XAN				LR	LR			
	comp=N,890nm,19.0s							
XAN				LR	LR			
	comp=E,340nm,20.4s							
XAN				LR	LR			
	comp=Z,600nm,19.0s							
YHNB	**Yeheng**	**122.50**	**315**	PFAKE		17 05 30.0	+9.4	
YHNB				LR	LR			
	comp=Z,954nm,19.0s							
WHN	**Wuhan**	**122.59**	**325**	PKP	**PKPdf**	**17 05 19.8**	**-0.7**	
WHN				PP	PP	17 07 05.5	+8.8	
WHN				LR	LR			
	comp=Z,3μm,18.2s							
IKRD	**Kardeh**	**122.69**	**21**	*e*P	**PKPdf**	**17 05 22.6**	**+1.7**	
LZH	**Lanzhou**	**122.78**	**337**	⇑PKP	**PKPdf**	**17 05 21.0**	**0.0**	
LZH				sPKP		17 05 32.5		
LZH				PP	**PP**	**17 07 03.0**	**+5.2**	
LZH				AMB	AMB			
	comp=Z,480nm,11.3s							
LZH				LR	LR			
	comp=N,640nm,15.4s							
LZH				LR	LR			
	comp=E,930nm,14.4s							
LZH				LR	LR			
	comp=Z,990nm,16.7s							
STKA	**Stephens Creek**	**123.03**	**243**	*e*PKPdf	**PKPdf**	**17 05 21.1**	**-0.2**	
STKA				PKP	**PKPdf**	**17 05 21.7**	**+0.4**	
STKA	**Stephens Creek** comp=Z,57nm,0.9s,baz=72,slow=1.9,SNR=70	**123.03**	**243**	PKP	**PKPdf**	**17 05 21.7**	**+0.4**	
SSLB	**Suanglung**	**123.38**	**315**	*e*PKPdf	**PKPdf**	**17 05 21.3**	**-0.9**	
ISRO	**Mashad**	**123.44**	**20**	*e*P	**PKPdf**	**17 05 21.3**	**-0.9**	
IMYA	**Miami**	**123.61**	**20**	*e*P	**PKPdf**	**17 05 22.5**	**-0.1**	
KSH	**Kashi**	**123.67**	**4**	*e*PKP	**PKPdf**	**17 05 24.0**	**+1.4**	
KSH				sPKP		17 05 38.0		
KSH				PP	**PP**	**17 07 08.0**	**+4.5**	
KSH				PKS	**PKSdf**	**17 08 59.3**	**0.0**	
KSH				SKS	**SKSdf**	**17 12 31.0**	**-1.5**	
KSH				SKKS	**SKKSac**	**17 13 57.0**	**-4.6**	
KSH				AMB	AMB			
	comp=Z,660nm,5.3s							
KSH				LR	LR			
	comp=Z,2μm,21.7s							
NAY	**Al-Naaiem**	**123.99**	**35**	*e*P	**PKPdf**	**17 05 22.9**	**-0.3**	
NAY				AMb	AMB	17 05 24.0		
	comp=Z,42nm,1.0s							
SUR	**Sutherland**	**124.34**	**118**	PFAKE		17 05 40.0	+16	
SUR				LR	LR			
	comp=Z,1μm,21.0s							
RDF	**Al-Radifah**	**124.41**	**35**	*e*P	**PKPdf**	**17 05 24.5**	**+0.4**	
RDF				AMb	AMB	17 05 24.9		
	comp=Z,65nm,1.0s							
QRN	**Al-Qurain**	**124.75**	**35**	*e*P	**PKPdf**	**17 05 24.8**	**+0.1**	
QRN				AMb	AMB	17 05 25.7		
	comp=Z,106nm,1.2s							
IPAR	**Pars**	**126.50**	**30**	*e*P	**PKPdf**	**17 05 29.4**	**+0.9**	
IDAH	**Dahanechah**	**126.81**	**22**	*e*P	**PKPdf**	**17 05 25.6**	**-3.3**	
CASY	**Casey**	**126.87**	**195**	PFAKE		17 05 40.0	+12	
CASY				LR	LR			
	comp=Z,1μm,21.0s							
ISRV	**Sarvestan**	**126.92**	**30**	*e*P	**PKPdf**	**17 05 29.9**	**+0.6**	
CD2	**Chengdu**	**127.39**	**335**	PKP	**PKPdf**	**17 05 29.0**	**-0.8**	
CD2				sPKP		17 05 44.0		
CD2				PP	**PP**	**17 07 31.5**	**+3.0**	
CD2				PKS	**PKSdf**	**17 09 04.0**	**-2.6**	
CD2				SKS	**SKSdf**	**17 12 35.5**	**-4.1**	
CD2				SKKS	SKKSac	17 14 19.5	-5.9	
CD2				AMB	AMB			
	comp=Z,160nm,5.6s							
CD2				LR	LR			
	comp=N,760nm,21.5s							
CD2				LR	LR			
	comp=E,790nm,20.6s							
CD2				LR	LR			
	comp=Z,610nm,25.5s							
KBL	**Kabul**	**127.66**	**12**	*e*PKIKP	**PKPdf**	**17 05 30.0**	**-0.4**	
KBL	**Kabul**	**127.66**	**12**	*e*PKPdf	**PKPdf**	**17 05 30.0**	**-0.4**	
MAW	**Mawson**	**128.12**	**172**	PKP	**PKPdf**	**17 05 30.2**	**+0.3**	
MAW	**Mawson** comp=Z,44nm,0.9s,baz=220,slow=2.6,SNR=37	**128.12**	**172**	PKP	**PKPdf**	**17 05 30.2**	**+0.3**	
BOSA	**Boshof**	**128.22**	**113**	*e*PKPdf	**PKPdf**	**17 05 30.9**	**-0.6**	
BOSA				PKP	**PKPdf**	**17 05 31.5**	**+0.1**	
BOSA	**Boshof** comp=Z,36nm,1.0s,baz=286,slow=2.1,SNR=28	**128.22**	**113**	PKP	**PKPdf**	**17 05 31.5**	**+0.1**	
LBTB	**Lobatse**	**128.47**	**109**	*e*PKPdf	**PKPdf**	**17 05 31.4**	**-0.6**	
MBAR	**Mbarara**	**128.47**	**77**	PFAKE		17 05 40.0	+7.6	
MBAR				LR	LR			
	comp=Z,976nm,22.0s							
WRAB	**Tennant Creek**	**128.94**	**258**	*e*PKIKP	**PKPdf**	**17 05 32.9**	**0.0**	
WRAB				MLR	MLR			
	comp=Z,849nm,20.0s							
WRAB	**Tennant Creek**	**128.94**	**258**	*e*PKPdf	**PKPdf**	**17 05 32.9**	**0.0**	
WRAB				LR	LR			
	comp=Z,849nm,20.0s							
WRA	**Warramunga Arr**	**128.95**	**258**	PKPpre	PKPpre	17 05 16.0		
WRA				PKP	**PKPdf**	**17 05 32.1**	**-0.9**	
WRA				pPKP	pPKPdf	17 05 43.6	+0.2	
WRA				SKKPbc	SKKPbc	17 18 43.4	+3.3	
WRA	**Warramunga Arr** comp=Z,2.3nm,1.0s,baz=83,slow=4.0,SNR=6.7	**128.95**	**258**	PKHKP	PKPpre	17 05 16.0		
WRA				PKP	**PKPdf**	**17 05 32.1**	**-0.9**	
	comp=Z,65nm,0.9s,baz=83,slow=1.7,SNR=75							
WRA				pPKP	pPKPdf	17 05 43.6	+0.2	
	comp=Z,7.2nm,0.7s,baz=78,slow=1.9,SNR=3.0							
WRA				SKKPbc	SKKPbc	17 18 43.4	+3.3	
	comp=Z,2.1nm,1.0s,baz=273,slow=3.2,SNR=5.0							
DAV	**Davao City (W)**	**129.38**	**294**	PFAKE		17 05 50.0	+16	
DAV				LR	LR			
	comp=Z,565nm,19.0s							
AS31	**Alice Springs**	**129.64**	**253**	*e*PKPdf	**PKPdf**	**17 05 33.6**	**-0.6**	
ASAR	**Alice Springs**	**129.64**	**253**	PKPpre	PKPpre	17 05 18.4		
ASAR				PKP	**PKPdf**	**17 05 34.1**	**0.0**	
ASAR				SKKPbc	SKKPbc	17 18 36.7	-1.2	
ASAR	**Alice Springs** comp=Z,0.8nm,0.8s,baz=93,slow=3.2,SNR=9.3	**129.64**	**253**	PKHKP	PKPpre	17 05 18.4		
ASAR				PKP	**PKPdf**	**17 05 34.1**	**0.0**	
	comp=Z,36nm,0.9s,baz=93,slow=1.4,SNR=39							
ASAR				SKKPbc	SKKPbc	17 18 36.7	-1.2	
	comp=Z,2.3nm,1.1s,baz=260,slow=2.8,SNR=5.9							
GYA	**Guiyang**	**129.88**	**329**	Pdif	**Pdif**	**17 02 22.0**	**-1.2**	
GYA				PKP	**PKPdf**	**17 05 34.3**	**-0.5**	
GYA				sPKP		17 05 51.8		
GYA				PP	**PP**	**17 07 49.5**	**+4.3**	
GYA				PKS	**PKSdf**	**17 09 09.3**	**-2.3**	
GYA				SKKS		17 14 36.5		
GYA				AMB	AMB			
	comp=Z,820nm,7.9s							
GYA				LR	LR			
	comp=Z,4μm,20.8s							
LSZ	**Lusaka**	**129.91**	**96**	*e*PKPdf	**PKPdf**	**17 05 35.0**	**+0.1**	
LSZ				LR	LR			
	comp=Z,652nm,19.0s							
LSZ	**Lusaka** SNR=7.1	**129.91**	**96**	PKPdf	**PKPdf**	**17 05 35.9**	**+0.9**	
NAZ	**Nazwa, Dubai** SNR=11	**131.83**	**31**	PKPdf	**PKPdf**	**17 05 38.6**	**+0.3**	
ASUD	**Al Ashush, Dub** SNR=8.2	**131.97**	**31**	PKPdf	**PKPdf**	**17 05 39.5**	**+0.9**	
HATD	**Hatta, Dubai** SNR=11	**132.19**	**30**	PKPdf	**PKPdf**	**17 05 39.1**	**+0.1**	
ASHO	**Ashiyiah** SNR=9.8	**132.28**	**30**	PKPdf	**PKPdf**	**17 05 39.2**	**0.0**	
LSA	**Lhasa**	**132.48**	**347**	*e*PKIKP	**PKPdf**	**17 05 39.5**	**-0.5**	
LSA				MLR	MLR			
	comp=Z,2μm,22.0s							
LSA	**Lhasa**	**132.48**	**347**	*e*PKPdf	**PKPdf**	**17 05 39.5**	**-0.5**	
LSA				LR	LR			
	comp=Z,2μm,22.0s							
KMI	**Kunming**	**132.86**	**332**	PKP	**PKPdf**	**17 05 40.3**	**-0.3**	
KMI				sPKP		17 05 55.8		
KMI				PP	**PP**	**17 08 07.0**	**+2.5**	
KMI				PKS	**PKSdf**	**17 09 14.5**	**-2.9**	
KMI				SKKS		17 14 56.0		
KMI				AMB	AMB			
	comp=Z,470nm,7.5s							
KMI				LR	LR			
	comp=N,1μm,18.3s							
KMI				LR	LR			
	comp=E,1μm,19.5s							
KMI				LR	LR			
	comp=Z,2μm,14.7s							
DDI	**Dehra Dun**	**132.94**	**3**	*ex*	**PKPdf**	**17 05 40.0**	**-0.4**	
KKR	**Kurukshetra**	**133.23**	**4**	*eP*	**PKPdf**	**17 05 40.5**	**-0.3**	
QIZ	**Qiongzhong**	**134.01**	**320**	PKP	**PKPdf**	**17 05 42.3**	**-0.3**	
QIZ				PP	**PP**	**17 08 14.8**	**+2.8**	
QIZ				LR	LR			
	comp=N,790nm,18.9s							
QIZ				LR	LR			
	comp=E,420nm,21.0s							
QIZ				LR	LR			
	comp=Z,1μm,19.8s							
BSY	**Bisya** SNR=12	**134.47**	**31**	PKPdf	**PKPdf**	**17 05 42.4**	**-1.0**	
NDI	**New Delhi**	**134.52**	**4**	*ex*	**PKPdf**	**17 05 41.0**	**-2.3**	
SMDO	**Samad** SNR=8.3	**134.61**	**30**	PKPdf	**PKPdf**	**17 05 43.5**	**-0.3**	
KMBO	**Kilima Mbogo**	**134.71**	**74**	*e*PKPdf	**PKPdf**	**17 05 45.6**	**+1.3**	
KMBO				PKP	**PKPdf**	**17 05 45.8**	**+1.5**	
KMBO				LR	LR			
	comp=Z,2μm,22.0s							
KMBO	**Kilima Mbogo** SNR=12	**134.71**	**74**	PKPdf	**PKPdf**	**17 05 46.8**	**+2.4**	
KMBO	**Kilima Mbogo** comp=Z,14nm,1.2s,baz=350,slow=3.5,SNR=23	**134.71**	**74**	PKP	**PKPdf**	**17 05 45.8**	**+1.5**	
AYAN	**Aya Nagar**	**134.72**	**4**	*eP*	**PKPdf**	**17 05 43.5**	**-0.2**	
AYAN				AMB	AMB	17 05 44.1		
	comp=Z,16nm,0.8s							
AYAN				*i* x	x	17 05 55.5		
DANN	**Dangsing** comp=Z,102nm,0.9s	**134.85**	**356**	*eP*	**PKPdf**	**17 05 43.7**	**-0.6**	
KUDL	**Kundal**	**135.00**	**5**	*eP*	**PKPdf**	**17 05 43.8**	**-0.4**	
KUDL				*i* x	x	17 08 26.7		
KHET	**Khetri**	**135.01**	**6**	*eP*	**PKPdf**	**17 05 43.9**	**-0.3**	
GUN	**Gumba** comp=Z,138nm,1.3s	**135.09**	**353**	*eP*	**PKPdf**	**17 05 44.6**	**-0.2**	
PYUN	**Piuthan** comp=Z,156nm,1.2s	**135.14**	**357**	*eP*	**PKPdf**	**17 05 43.0**	**-1.8**	
JMDO	**Jabal Madar** SNR=7.9	**135.22**	**30**	PKPdf	**PKPdf**	**17 05 44.1**	**-0.6**	
KKN	**Kakani** comp=Z,36nm,0.9s	**135.27**	**354**	*eP*	**PKPdf**	**17 05 43.4**	**-1.6**	
TAPN	**Taplejung** comp=Z,108nm,1.2s	**135.40**	**351**	*eP*	**PKPdf**	**17 05 43.7**	**-1.7**	
KOLN	**Koldanda** comp=Z,48nm,1.3s	**135.43**	**356**	*eP*	**PKPdf**	**17 05 43.6**	**-1.7**	
PKIN	**Phulchoki** comp=Z,47nm,1.2s	**135.47**	**354**	*eP*	**PKPdf**	**17 05 44.4**	**-1.1**	
PKI	**Pulchoki** comp=Z,51nm,1.1s	**135.47**	**354**	*eP*	**PKPdf**	**17 05 44.4**	**-1.2**	
ODAN	**Odare** comp=Z,46nm,0.9s	**135.93**	**351**	*eP*	**PKPdf**	**17 05 44.5**	**-1.8**	
RAMN	**Ramite** comp=Z,52nm,1.0s	**135.95**	**352**	*eP*	**PKPdf**	**17 05 43.3**	**-3.0**	
AJM	**Ajmer** comp=Z,95nm,0.6s	**136.46**	**8**	*eP*	**PKPdf**	**17 05 46.0**	**-1.1**	
AJM				AMB	AMB	17 05 47.9		
ABTO	**Aybut** SNR=7.1	**136.68**	**39**	PKPdf	**PKPdf**	**17 05 47.9**	**+0.3**	
FITZ	**Fitzroy Crossi**	**136.96**	**261**	PKPpre	PKPpre	17 05 38.1		
FITZ				PKP	**PKPdf**	**17 05 48.6**	**+0.6**	
FITZ	**Fitzroy Crossi** comp=Z,6.9nm,0.7s,baz=121,slow=4.4,SNR=14	**136.96**	**261**	PKHKP	PKPpre	17 05 38.1		
FITZ				PKP	**PKPdf**	**17 05 48.6**	**+0.6**	
	comp=Z,36nm,0.9s,baz=34,slow=1.3,SNR=25							
KAPI	**Kappang**	**139.71**	**283**	*e*PKPpre	PKPpre	17 05 43.2		
KAPI				PKPpre	PKPpre	17 05 43.5		
KAPI				LR	LR			
	comp=Z,305nm,20.0s							
KAPI	**Kappang** SNR=5.6	**139.71**	**283**	PKPdf	**PKPdf**	**17 05 52.9**	**-0.3**	
KAPI	**Kappang** comp=Z,6.1nm,0.7s,baz=70,slow=11,SNR=3.8	**139.71**	**283**	PKHKP	PKPpre	17 05 43.5		
CHTO	**Chiang Mai**	**140.06**	**332**	*e*PKIKP	**PKPdf**	**17 05 53.3**	**-0.5**	
CHTO				MLR	MLR			
	comp=Z,1μm,19.0s							
CHTO	**Chiang Mai**	**140.06**	**332**	*e*PKPdf	**PKPdf**	**17 05 53.3**	**-0.5**	
CHTO				LR	LR			
	comp=Z,1μm,19.0s							
CHTO	**Chiang Mai** SNR=7.4	**140.06**	**332**	PKPdf	**PKPdf**	**17 05 54.0**	**+0.2**	
CM31	**Chiang Mai Arr**	**140.37**	**332**	*e*PKPdf	**PKPdf**	**17 05 55.0**	**+0.6**	
CMAR	**Chiang Mai Arr**	**140.37**	**332**	PKPpre	PKPpre	17 05 45.9		
CMAR				PKP	**PKPdf**	**17 05 54.4**	**0.0**	
CMAR	**Chiang Mai Arr** comp=Z,3.3nm,0.7s,baz=348,slow=3.6,SNR=17	**140.37**	**332**	PKhKP	PKPpre	17 05 45.9		
CMAR				PKP	**PKPdf**	**17 05 54.4**	**0.0**	
	comp=Z,23nm,1.0s,baz=339,slow=2.1,SNR=35							
MBWA	**Marble Bar**	**142.68**	**257**	*e*PKPpre	PKPpre	17 05 53.5		
MBWA				LR	LR			
	comp=Z,1μm,20.0s							
MBWA	**Marble Bar** SNR=5.9	**142.68**	**257**	PKPdf	PKPdf	17 05 54.0	-4.4	
SBUM	**Sibu**	**143.17**	**299**	P	PKPab	17 05 55.3	+0.3	
NWAO	**Narrogin (SRO)**	**143.25**	**237**	*e*PKPpre	PKPpre	17 05 55.3		
NWAO				PKPpre	PKPpre	17 05 55.4		
NWAO				LR	LR			
	comp=Z,637nm,22.0s							
NWAO	**Narrogin (SRO)** comp=Z,29nm,1.0s,baz=139,slow=3.4,SNR=11	**143.25**	**237**	PKhKP	PKPpre	17 05 55.4		
POO	**Poona**	**144.15**	**11**	*e*P	**PKPab**	**17 05 58.4**	**-0.3**	
KSM	**Kuching**	**145.30**	**299**	*e*PKP	**PKPbc**	**17 06 02.2**	**-0.7**	
KSM	**Kuching**	**145.30**	**299**	P	**PKPbc**	**17 06 02.6**	**-0.3**	
VIS	**Vishakhapatnam**	**145.42**	**355**	*e*P	**PKPbc**	**17 06 02.4**	**-0.7**	
HYB	**Hyderabad** comp=Z,120nm,1.0s	**145.79**	**3**	*i* PKP	**PKPdf**	**17 06 02.5**	**-1.5**	
OPO	**Ambohidratompo**	**148.33**	**98**	PKP	**PKPdf**	**17 06 08.2**	**0.0**	
OPO				PKPbc	**PKPbc**	**17 06 12.8**	**+1.1**	
OPO	**Ambohidratompo** comp=Z,63nm,1.0s,baz=280,slow=2.8,SNR=10	**148.33**	**98**	PKP	**PKPdf**	**17 06 08.2**	**0.0**	
OPO				PKPbc	**PKPbc**	**17 06 12.8**	**+1.1**	
	comp=Z,60nm,1.0s,baz=256,slow=2.3,SNR=38							
ABPO	**Ambohimpanom**	**148.38**	**99**	*e*PKIKP	**PKPdf**	**17 06 08.9**	**+0.5**	
ABPO				*e*		17 06 12.2		
ABPO				MLR	MLR			
	comp=Z,1μm,21.0s							
ABPO	**Ambohimpanom**	**148.38**	**99**	*e*PKPdf	**PKPdf**	**17 06 08.9**	**+0.5**	
ABPO				*e*PKPbc	**PKPbc**	**17 06 12.2**	**+0.4**	
ABPO				LR	LR			
	comp=Z,1μm,21.0s							
KULM	**Kulim**	**150.20**	**316**	*e*PKPdf	**PKPdf**	**17 06 11.3**	**+0.1**	
KULM				*e*PKPbc	**PKPbc**	**17 06 16.4**	**0.0**	
KULM	**Kulim**	**150.20**	**316**	P	**PKPdf**	**17 06 11.8**	**+0.6**	
KULM	**Kulim**	**150.20**	**316**	P	**PKPbc**	**17 06 16.7**	**+0.3**	
MYKOM	**Kota Tinggi**	**150.32**	**307**	P	**PKPbc**	**17 06 17.3**	**+0.7**	
IPM	**Ipoh**	**150.54**	**315**	*e*PKPdf	**PKPdf**	**17 06 11.6**	**-0.2**	
IPM				*e*PKPbc	**PKPbc**	**17 06 17.1**	**-0.1**	
IPM				*e*		17 06 24.1		
IPM	**Ipoh**	**150.54**	**315**	P	**PKPdf**	**17 06 12.3**	**+0.5**	
KGM	**Kluang**	**150.58**	**308**	P	**PKPdf**	**17 06 12.5**	**+0.7**	
FRIM	**Kepong**	**151.00**	**312**	P	**PKPbc**	**17 06 18.7**	**+0.4**	
MSEY	**Mahe Island**	**152.67**	**66**	*e*PKPdf	**PKPdf**	**17 06 15.5**	**+0.4**	
MSEY				*e*PKPbc	**PKPbc**	**17 06 22.2**	**0.0**	
MSEY				LR	LR			
	comp=Z,1μm,19.0s							
MSEY	**Mahe Island** SNR=6.9	**152.67**	**66**	PKPdf	**PKPbc**	**17 06 22.9**	**+0.8**	
PSI	**Prapat**	**153.19**	**315**	PKP	**PKPdf**	**17 06 15.2**	**-0.7**	
PSI				PKPbc	**PKPbc**	**17 06 22.4**	**-1.0**	
PSI	**Prapat** comp=Z,37nm,1.0s,baz=236,slow=3.4,SNR=38	**153.19**	**315**	PKP	**PKPdf**	**17 06 15.2**	**-0.7**	
PSI				PKPbc	**PKPbc**	**17 06 22.4**	**-1.0**	
	comp=Z,91nm,0.9s,baz=328,slow=2.3,SNR=34							
COCO	**West Island**	**163.43**	**284**	PFAKE		17 06 40.0	+12	
COCO				LR	LR			
	comp=Z,781nm,19.0s							
DGAR	**Diego Garcia**	**167.73**	**40**	PFAKE		17 06 40.0	+8.4	
DGAR				LR	LR			
	comp=Z,2μm,21.0s							

IDC 27 17:12:33.4±2.0, 52.93N×172.08E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/29, mbtmp3.5/4, ML2.9/1, Error ellipse: s-maj=63.5km s-min=10.1km az=10.0, Near Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FX1	**Attu Island--F**	**0.66**	**94**	Pg	Pb	17 12 47.0	-0.7
	94nm,0.3s,baz=281,slow=3.9,SNR=664						
FX1				Lg	Lg	17 12 55.1	
	380nm,0.3s,baz=60,slow=20,SNR=50						
PETK	**Petropavlovsk-**	**8.68**	**277**	Pn	Pn	17 14 41.4	+1.3
	0.1nm,0.3s,baz=98,slow=20,SNR=9.6						
PETK				Sn	Sn	17 16 13.8	-4.8
	0.2nm,0.3s,baz=88,slow=25,SNR=3.8						
KDAK	**Kodiak Island**	**20.50**	**62**	P	P	17 17 13.0	+0.4
	4.9nm,0.9s,baz=270,slow=11,SNR=3.6						
YKA	**Yellowknife Ar**	**38.22**	**46**	P	P	17 19 54.5	+0.1
	0.2nm,0.3s,baz=288,slow=7.9,SNR=4.2						
MKAR	**Makanchi Array**	**54.56**	**303**	P	P	17 22 02.2	-0.8
	0.2nm,0.6s,baz=54,slow=7.3,SNR=2.5						

IDC 27 17:20:54.6±2.5, 4.37S×130.08E, h0km, mb3.2/1, mb1 3.4/4, mb1mx3.2/20, mbtmp3.3/4, ML2.9/2, Error ellipse: s-maj=130.4km s-min=27.2km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**14.33**	**197**	Pn	Pn	17 24 17.5	-1.4
	0.1nm,0.3s,baz=18,slow=13,SNR=2.4						
WRA	**Warramunga Arr**	**16.03**	**165**	Pn	Pn	17 24 40.3	-1.3
	0.0nm,0.3s,baz=351,sl

baz=24,SNR=4.0

MAN 27 17:33:28.12̇77N×123̇02E,h14km,mb4.5,ML3.3,MS3.2, 1C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.65**	**328**	*e*P		Pb	17 33 41.4	+0.3
OTRP	**Odiongan**	**1.06**	**248**	*e*P		Pb	17 33 47.9	-0.3
RCP	**Roxas**	**1.23**	**193**⇑*e*P			Pn	17 33 49.9	-1.0
GQP	**Guinayangan**	**1.26**	**334**⇓*e*P			Pn	17 33 51.1	-0.1
GQP				*e*S		Sg	17 34 09.2	+0.5
BOAC	**Boac**	**1.34**	**301**	*e*P		Pn	17 33 51.8	-0.5
CNP	**Catarman**	**1.62**	**99**	*e*P		Pn	17 33 56.1	0.0
SJMP	**San Jose**	**1.89**	**261**	*e*P		Pn	17 34 00.2	+0.4
GUIM	**Jordan**	**2.17**	**191**	*e*P		Pb	17 34 05.8	-1.4

*IDC **27** 17:37:40.7±4.0,4̇40S×103̇36E,h0km,mb3.4/5, mb1 3.5/5,mb1mx3.3/24,mbtmp3.4/5,Error ellipse: s-maj=231.9km s-min=21.5km az=52.0*
*DJA **27** 17:37:47.0±0.9,5̇5S±15̇×10̇3E±1̇4,h31km±5km,M3.8/4, MLv3.8/4*
ISC 27 17:37:46.2±1.1,4̇38S±0̇10×103̇41E±0̇08,h10km,n12, σ0s98/9,mb3.3/5,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.45**	**272**	P		**Pb**	**17 37 55.8**	**-0.5**
MNAI				S		**Sb**	**17 38 03.9**	**+0.8**
MNAI	**Manna**	**0.45**	**272**	P		**Pb**	**17 37 55.7**	**-0.5**
	baz=26,SNR=59							
LWLI	**Liwa**	**0.91**	**135**	P		**Pg**	**17 38 04.4**	**+0.6**
LWLI				S		**Sg**	**17 38 17.0**	**+1.4**
KSI	**Kapahiang**	**1.08**	**311**	P		**Pb**	**17 38 06.9**	**-0.2**
KSI				S		**Sb**	**17 38 21.3**	**-0.1**
KASI	**Kota Agung**	**1.57**	**136**	P		**Pn**	**17 38 12.7**	**-1.5**
MASI	**Maura Aman, Be**	**1.69**	**316**	P		**Pn**	**17 38 15.7**	**-0.2**
SMRI	**Semarang**	**7.49**	**111**	S		Pg	17 40 04.4	-5.2
	baz=18,SNR=3.3							
WRA	**Warramunga Arr**	**33.87**	**120**	P		P	17 44 25.4	-4.0
	0.3nm,0.7s,baz=292,slow=8.4,SNR=4.1							
ASAR	**Alice Springs**	**35.11**	**126**	P		P	17 44 36.4	-3.8
	0.3nm,0.8s,baz=296,slow=7.9,SNR=7.0							
STKA	**Stephens Creek**	**45.04**	**132**	P		P	17 45 58.7	-3.7
	1.4nm,0.9s,baz=315,slow=11,SNR=3.0							
MKAR	**Makanchi Array**	**54.27**	**342**	P		P	17 47 08.6	-3.9
	0.2nm,0.4s,baz=156,slow=9.0,SNR=5.4							
KURBB	**Kurchatov Arra**	**58.82**	**342**	P		P	17 47 40.7	-4.0
	0.1nm,0.7s,baz=160,slow=6.9,SNR=4.3							

*ISCJB **27** 17:45:39.9±0.4,13̇83N±0̇05×120̇43E±0̇08, h102km±6km,mb3.6/8,Error ellipse: s-maj=13.5km s-min=7.9km az=168.2*
*MAN **27** 17:45:39,13̇85N×120̇34E,h89km,mb4.9,ML3.8,MS3.9*
*IDC **27** 17:45:40.4±0.9,13̇85N×120̇73E,h102km±10km,mb3.3/8, mb1 3.4/8,mb1mx3.2/27,mbtmp3.3/8,Error ellipse: s-maj=42.6km s-min=14.2km az=63.0*
ISC 27 17:45:40.9±0.8,13̇84N±0̇05×120̇37E±0̇07,h93km±7km, n31,σ0s91/33,mb3.7/8,2D,Mindoro

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.16**	**229**	*e*P		**Pn**	**17 45 54.1**	**0.0**
TGY	**Tagaytay City**	**0.61**	**65**⇓*e*P			**Pn**	**17 45 56.3**	**-0.6**
TGY				*e*S		**Sn**	**17 46 10.6**	**+1.6**
TGY	**Tagaytay City**	**0.61**	**65**	P		**Pn**	**17 45 56.4**	**-0.6**
	2μm,0.3s,baz=262,slow=1.5,SNR=107							
TGY				S		**Sn**	**17 46 08.6**	**-0.4**
	2μm,0.3s,baz=353,slow=23,SNR=16							
SJMP	**San Jose**	**1.55**	**152**	*e*P		**Pn**	**17 46 07.2**	**-0.3**
SCZP	**Santa Cruz**	**1.98**	**347**	*e*P		**Pn**	**17 46 11.3**	**-1.6**
GQP	**Guinayangan**	**2.02**	**88**⇓*e*P			**Pn**	**17 46 13.0**	**-0.4**
OTRP	**Odiongan**	**2.18**	**132**	*e*P		**Pn**	**17 46 16.5**	**+0.9**
BALP	**Baler**	**2.22**	**32**	*e*P		**Pn**	**17 46 16.2**	**+0.1**
BOLP	**Bolinao**	**2.57**	**350**	*e*P		**Pn**	**17 46 20.3**	**-0.3**
ENPP	**El Nido**	**2.77**	**199**	*e*P		**Pn**	**17 46 23.4**	**0.0**
CUYO	**Cuyo Island**	**3.04**	**168**	*e*P		**Pn**	**17 46 25.8**	**-1.2**
CAUP	**Cauayan**	**3.39**	**24**	*e*P		**Pn**	**17 46 32.1**	**+0.4**
GUIM	**Jordan**	**3.86**	**146**	*e*P		**Pn**	**17 46 38.3**	**+0.2**
CMAR	**Chiang Mai Arr**	**21.08**	**285**	P		**P**	**17 50 20.4**	**+2.6**
	1.0nm,0.7s,baz=93,slow=7.9,SNR=12							
TAPN	**Taplejung**	**33.28**	**299**	*e*P		**P**	**17 52 10.7**	**+0.7**
	3.2nm,0.5s							
ODAN	**Odare**	**33.41**	**298**	*e*P		**P**	**17 52 12.0**	**+0.9**
	7.1nm,0.5s							
RAMN	**Ramite**	**34.11**	**298**	*e*P		**P**	**17 52 18.2**	**+1.0**
	7.0nm,0.6s							
GUN	**Gumba**	**34.99**	**299**	*e*P		**P**	**17 52 25.6**	**+0.7**
	10.0nm,0.4s							
PKI	**Pulchoki**	**35.30**	**298**	*e*P		**P**	**17 52 27.7**	**+0.2**
PKIN	**Phulchoki**	**35.31**	**298**	*e*P		**P**	**17 52 27.7**	**+0.2**
	4.7nm,0.4s							
KKN	**Kakani**	**35.47**	**299**	*e*P		**P**	**17 52 29.0**	**+0.2**
	3.7nm,0.5s							
SONM	**Songino Array**	**35.84**	**344**	P		**P**	**17 52 31.6**	**0.0**
	2.1nm,0.6s,baz=165,slow=7.5,SNR=3.1							
WRA	**Warramunga Arr**	**36.27**	**157**	P		P	17 52 32.1	-3.3
	0.4nm,0.6s,baz=340,slow=8.6,SNR=8.9							
KOLN	**Koldanda**	**36.90**	**298**	*e*P		**P**	**17 52 41.0**	**0.0**
DANN	**Dangsing**	**36.91**	**299**	*e*P		**P**	**17 52 41.2**	**0.0**
	5.9nm,0.6s							
PYUN	**Piuthan**	**37.51**	**298**	*e*P		**P**	**17 52 46.5**	**+0.4**
	13nm,0.9s							
ASAR	**Alice Springs**	**39.56**	**160**	P		**P**	**17 53 01.4**	**-1.6**
	0.3nm,0.4s,baz=338,slow=7.7,SNR=26							
ASAR				pP		**pP**	**17 53 24.2**	**-0.6**
	0.5nm,0.7s,baz=335,slow=6.8,SNR=6.0							
MKAR	**Makanchi Array**	**45.73**	**324**	P		**P**	**17 53 52.8**	**0.0**
	0.2nm,0.4s,baz=126,slow=7.3,SNR=4.0							
ZALV	**Zalesovo Beam**	**48.79**	**333**	P		**P**	**17 54 15.3**	**-1.0**
	0.6nm,0.4s,baz=119,slow=6.4,SNR=4.4							
KURBB	**Kurchatov Arra**	**49.90**	**326**	P		**P**	**17 54 25.2**	**+0.4**
	0.3nm,0.3s,baz=133,slow=4.0,SNR=10.0							
BVAR	**Borovoye Array**	**55.48**	**326**	P		**P**	**17 55 05.0**	**-0.9**
	0.4nm,0.4s,baz=102,slow=8.4,SNR=5.6							

*MOS **27** 17:47:40.5±1.0,53̇29N×108̇59E,h18km,mb4.3/1,Error ellipse: s-maj=20.4km s-min=11.1km az=58.3*
*BYKL **27** 17:47:41.0±0.2,53̇29N×108̇53E,h10km±3km*
ISC 27 17:47:40.8±0.9,53̇28N±0̇02×108̇55E±0̇02,h11km±7km, n40,σ1s69/77,9C-6D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.12**	**100**⇑*i*Pg			**Pg**	**17 47 44.2**	**+0.4**
MXMB					eSg	**Sg**	**17 47 45.9**	**0.0**
OGRR	**Ongureny**	**0.67**	**303**⇑*i*PG			**Pg**	**17 47 53.4**	**-0.3**
OGRR				*e*			17 48 02.2	
OGRR					pmax	pmax		
	comp=Z,503nm,0.3s							
OGRR					smax	smax		
	comp=E,1μm,0.1s							
OGRR	**Ongureny**	**0.67**	**303**⇑*i*Pg			**Pg**	**17 47 53.5**	**-0.3**
	comp=E,394nm,0.4s							
OGRR				⇓*i*Pg		**Pg**	**17 47 53.5**	**-0.3**
	comp=E,461nm,0.4s							
OGRR				⇑*i*Pg		**Pg**	**17 47 53.5**	**-0.3**
	comp=E,627nm,0.4s							
OGRR				*e*Sg		**Sg**	**17 48 02.3**	**-0.4**
OGRR					Pmax			
	comp=E,508nm,0.2s							
OGRR					Smax			
	comp=E,1μm,0.1s							
SYVR	**Suvo**	**0.95**	**66**	*e*PG		**Pg**	**17 47 58.7**	**-0.3**
SYVR				*e*			17 48 11.5	
SYVR					pmax	pmax		
	comp=Z,83nm,0.2s							
SYVR					smax	smax		
	comp=N,552nm,0.2s							
SYVR	**Suvo**	**0.95**	**66**⇓*i*Pg			**Pg**	**17 47 58.4**	**-0.6**
SYVR					eSg	**Sb**	**17 48 11.5**	**-0.3**
SYVR					eSb	**Sn**	**17 48 15.7**	**+2.1**
SYVR					Pmax			
	comp=N,82nm,0.2s							
SYVR					max			
	comp=N,549nm,0.2s							
TRG	**Tyrgan**	**1.43**	**249**⇑*i*PN			**Pn**	**17 48 06.1**	**-0.6**
TRG				*e*			17 48 25.0	
TRG					pmax	pmax		
	comp=Z,102nm,0.2s							
TRG					smax	smax		
	comp=E,691nm,0.2s							
TRG	**Tyrgan**	**1.43**	**249**⇑*i*Pg			**Pn**	**17 48 06.1**	**-0.6**
TRG				*e*Pb		**Pb**	**17 48 07.3**	**-0.2**
TRG				*e*Sg		**Sb**	**17 48 25.2**	**-0.5**
TRG					max			
	comp=E,101nm,0.2s							
TRG					Smax			
	comp=E,692nm,0.2s							
UUDB	**Ulan-Yde**	**1.52**	**201**⇓*i*Pg			**Pn**	**17 48 08.5**	**+0.6**
UUDB				*e*Sg		**Sb**	**17 48 28.7**	**+0.5**
UUDB					Pmax			
	comp=E,32nm,0.1s							
UUDB					Smax			
	comp=E,429nm,0.4s							
FFNB	**Fofonovo**	**1.65**	**222**	*e*Pg		**Pn**	**17 48 10.7**	**+1.0**
FFNB				*e*Sg		**Sb**	**17 48 32.4**	**+0.4**
FFNB					Pmax			
	comp=E,58nm,0.2s							
FFNB					Smax			
	comp=E,493nm,0.2s							
KAB	**Kabansk**	**1.69**	**224**	*e*PN		**Pb**	**17 48 11.8**	**-0.1**
KAB	**Kabansk**	**1.69**	**224**⇑*i*Pg			**Pb**	**17 48 12.0**	**+0.1**
KAB				*e*Sg		**Sg**	**17 48 34.7**	**-0.4**
KAB					Pmax			
	comp=E,103nm,0.3s							
KAB					Smax			
	comp=E,651nm,0.6s							
YLYR	**Ulyunkhan**	**2.22**	**43**	*e*PN		**Pn**	**17 48 18.3**	**+0.7**
YLYR				*e*			17 48 20.3	
YLYR				*e*S		**Sn**	**17 48 46.3**	**+1.3**
YLYR				*e*			17 48 50.0	
YLYR					pmax	pmax		
	comp=Z,62nm,0.3s							
YLYR					smax	smax		
	comp=N,160nm,0.4s							
YLYR	**Ulyunkhan**	**2.22**	**43**⇓*i*Pn			**Pn**	**17 48 18.4**	**+0.8**
YLYR				⇓*i*Pg		**Pb**	**17 48 20.3**	**-0.6**
YLYR				*e*Sg		**Sb**	**17 48 50.1**	**+1.7**
YLYR					Pmax			
	comp=N,62nm,0.4s							
YLYR					Smax			
	comp=N,160nm,0.4s							
NIZ	**Nizh Angarsk**	**2.56**	**13**	*e*PN		**Pn**	**17 48 23.4**	**+1.1**
NIZ				*e*			17 48 26.9	
NIZ				*e*S		**Sn**	**17 48 54.3**	**+0.8**
NIZ				*e*			17 49 00.6	
NIZ					pmax	pmax		
	comp=Z,38nm,0.4s							
NIZ					smax	smax		
	comp=N,227nm,0.4s							
NIZ	**Nizh Angarsk**	**2.56**	**13**⇑*i*Pn			**Pn**	**17 48 23.5**	**+1.1**
NIZ				*e*Pg		**Pb**	**17 48 26.3**	**-0.5**
NIZ				*e*Sn		**Sn**	**17 48 53.7**	**+0.2**
NIZ				*e*Sg		**Sb**	**17 48 59.7**	**+1.4**
NIZ					Pmax			
	comp=N,38nm,0.4s							
NIZ					Smax			
	comp=N,228nm,0.3s							
LSTR	**Listvyanka**	**2.67**	**239**	*e*Pn		**Pn**	**17 48 24.0**	**+0.2**
LSTR				*e*Pg		**Pb**	**17 48 27.8**	**-0.9**
LSTR				*e*Sn		**Sn**	**17 48 56.5**	**+0.3**
LSTR				*e*Sg		**Sb**	**17 49 02.6**	**+1.1**
LSTR					Pmax			
	comp=N,17nm,0.3s							
LSTR					Smax			
	comp=N,123nm,1.0s							
IRK	**Irkutsk**	**2.80**	**250**	*e*PN		**Pb**	**17 48 32.3**	**+1.5**
IRK				*e*			17 49 07.0	
IRK					pmax	pmax		
	comp=Z,34nm,0.2s							
IRK					smax	smax		
	comp=N,462nm,0.4s							
IRK	**Irkutsk**	**2.80**	**250**	*e*Sg		**Sb**	**17 49 07.1**	**+2.0**
IRK					Smax			
	comp=N,461nm,0.3s							
KMO	**Kumora**	**3.03**	**30**	*e*PN		**Pn**	**17 48 28.8**	**+0.1**
KMO				*e*			17 48 34.6	
KMO				*e*S		**Sn**	**17 49 04.5**	**-0.5**
KMO				*e*			17 49 12.8	
KMO					pmax	pmax		
	comp=Z,80nm,0.4s							
KMO					smax	smax		
	comp=N,167nm,1.2s							
KMO	**Kumora**	**3.03**	**30**⇓*i*Pn			**Pn**	**17 48 29.7**	**+1.0**
KMO				*e*Pg		**Pb**	**17 48 34.8**	**0.0**
KMO				*e*Sg		**Sb**	**17 49 14.3**	**+2.5**
KMO					Pmax			
	comp=N,80nm,0.4s							
KMO					Smax			
	comp=N,152nm,1.1s							
CIT	**Chita**	**3.30**	**111**	*e*PN		**Pn**	**17 48 31.7**	**-0.8**
CIT				*e*			17 48 40.3	
CIT				*e*			17 49 22.1	
CIT					pmax	pmax		
	comp=Z,53nm,0.8s							
CIT					smax	smax		
	comp=E,122nm,0.8s							
CIT	**Chita**	**3.30**	**111**	*e*Pn		**Pn**	**17 48 33.0**	**+0.5**
CIT				*e*Pg		**Pb**	**17 48 39.2**	**-0.2**
CIT				*e*PgPg		**PbPb**	**17 48 42.5**	**0.0**
CIT				*e*Sg		**Sg**	**17 49 23.3**	**-3.4**
CIT					max			
	comp=E,87nm,0.3s							
CIT					Smax			
	comp=E,181nm,0.2s							
YOA	**Uoyan**	**3.40**	**32**	*e*PN		**Pg**	**17 48 44.0**	**-1.8**
YOA				*i*			17 49 28.6	
YOA					pmax	pmax		
	comp=Z,117nm,0.4s							
YOA					smax	smax		
	comp=E,392nm,0.6s							
TLY	**Talaya**	**3.40**	**244**	*e*PN		**Pn**	**17 48 34.1**	**+0.3**
TLY				*e*			17 48 41.0	
TLY				*e*			17 49 24.3	
TLY					pmax	pmax		
	comp=Z,9.0nm,0.4s							
TLY					smax	smax		
	comp=N,82nm,0.6s							
TLY	**Talaya**	**3.40**	**244**	*e*Pg		**Pb**	**17 48 41.7**	**+0.6**
TLY				*e*Sg		**Sb**	**17 49 25.3**	**+2.9**
TLY					Pmax			
	comp=N,9.0nm,0.3s							
TLY					Smax			
	comp=N,67nm,0.2s							
UKT	**Uakit**	**3.70**	**51**	*e*PN		**Pb**	**17 48 46.0**	**-0.2**
UKT				*e*S		**Sn**	**17 49 21.5**	**-0.2**
UKT				*e*			17 49 36.2	
UKT					pmax	pmax		
	comp=Z,18nm,0.8s							
UKT					smax	smax		
	comp=N,81nm,0.7s							
UKT	**Uakit**	**3.70**	**51**	*e*Pn		**Pn**	**17 48 39.0**	**+1.0**
UKT				*e*Pg		**Pb**	**17 48 47.3**	**+1.1**
UKT				*e*Sg		**Sg**	**17 49 35.7**	**-3.9**
UKT					Pmax			
	comp=N,18nm,0.8s							
UKT					Smax			
	comp=N,64nm,0.5s							
ARS	**Arshan**	**3.98**	**252**	*e*PN		**Pb**	**17 48 50.2**	**-0.7**
ARS				*e*			17 49 40.9	
ARS					pmax	pmax		
	comp=Z,19nm,0.2s							
ARS					smax	smax		
	comp=E,292nm,0.4s							
KPC	**Khapcheranga**	**4.31**	**145**⇑*i*Pn			**Pn**	**17 48 46.0**	**-0.4**
KPC				*e*Pg		**Pb**	**17 48 59.0**	**+2.4**
KPC				*e*			17 49 03.9	
KPC				*e*Sn		**Sn**	**17 49 35.7**	**-1.0**
KPC				*e*Sg		**Sb**	**17 49 53.7**	**+5.1**
KPC					max			
	comp=E,18nm,0.4s							
KPC					Smax			
	comp=E,70nm,1.0s							
ZAK	**Zakamensk**	**4.37**	**230**	*e*Pg		**Pb**	**17 48 59.4**	**+1.8**
ZAK				*e*Sg		**Sg**	**17 49 56.5**	**-4.5**
ZAK					Pmax			
	comp=E,7.0nm,0.6s							
ZAK					Smax			
	comp=E,23nm,0.5s							
MOY	**Mondy**	**4.89**	**254**	*e*PN		**Pb**	**17 49 06.6**	**+0.1**
MOY	**Mondy**	**4.89**	**254**	*e*Pn		**Pn**	**17 48 55.7**	**+1.3**
MOY				*e*Sg		**Sb**	**17 50 10.7**	**+5.3**
MOY					Smax			
	comp=E,114nm,1.2s							
NLYR	**Nelyaty**	**5.23**	**49**	*e*PN		**Pn**	**17 48 59.3**	**+0.3**
NLYR				*e*			17 49 14.5	
NLYR				*e*			17 50 24.3	
NLYR					pmax	pmax		
	comp=Z,18nm,0.8s							
NLYR					smax	smax		
	comp=N,118nm,1.2s							
ORL	**Orlik**	**5.34**	**265**	*e*PN		Pb	17 49 17.9	+3.8
ORL				*e*			17 50 24.7	
ORL					pmax	pmax		
	comp=Z,13nm,0.7s							
ORL					smax	smax		
	comp=N,96nm,0.9s							
ORL	**Orlik**	**5.34**	**265**	*e*Pn		**Pn**	**17 49 02.6**	**+2.1**
ORL				*e*			17 50 04.3	
ORL				*e*Sg		Sb	17 50 24.7	+6.4
ORL					Smax			
	comp=N,96nm,0.8s							
BOD	**Bodaibo**	**5.50**	**32**	*e*Pn		**Pn**	**17 49 03.1**	**+0.5**
BOD				*e*Pg		**Pb**	**17 49 19.4**	**+2.6**
BOD				*e*Sn		**Sn**	**17 50 03.2**	**-2.6**
BOD				*e*Sg		Sg	17 50 30.6	-6.6
BOD					Pmax			
	comp=N,2.0nm,0.3s							
BOD					Smax			
	comp=N,29nm,1.1s							
ULN	**Ulaanbaatar**	**5.51**	**191**	*e*Sg		**Sg**	**17 50 32.8**	**-4.7**
CRS	**Chara**	**6.65**	**53**	*e*PG		Pb	17 49 41.6	+5.2
CRS				*e*			17 51 08.2	
CRS					pmax	pmax		
	comp=Z,25nm,1.4s							
CRS					smax	smax		
	comp=E,64nm,1.3s							
TUP	**Tupik**	**6.85**	**76**	*e*PN		**Pn**	**17 49 21.4**	**+0.3**
TUP				*e*			17 49 43.0	
TUP				*e*S		**Sn**	**17 50 37.1**	**-1.9**
TUP				*e*			17 51 10.7	
TUP					pmax	pmax		
	comp=Z,3.0nm,0.6s							
TUP					smax	smax		
	comp=N,92nm,1.0s							
TUP	**Tupik**	**6.85**	**76**	*e*Pn		**Pn**	**17 49 22.0**	**+0.9**
TUP				*e*Pg		Pb	17 49 44.0	+4.3
TUP				*e*Sg		Sg	17 51 12.4	-7.9
TUP					Pmax			
	comp=N,2.0nm,0.2s							
TUP					Smax			
	comp=N,155nm,1.4s							

*ISCJB **27** 18:03:02.3±0.5,67̇06N±0̇03×20̇7E±0̇2,h0km,Error ellipse: s-maj=8.9km s-min=4.7km az=177.6*
*UPP **27** 18:03:03.2,67̇08N×20̇94E,h0km,ML1.8,Mining explosion.*
*CSEM **27** 18:03:03.7±0.3,67̇09N×20̇74E,h2km,ML1.8,Error ellipse: s-maj=9.7km s-min=4.8km az=79.0,Mining explosion.*
*HEL **27** 18:03:03.5±0.2,67̇10N×20̇72E,h0km,ML2.5, ML1.8(UPP),Explosion*
*IDC **27** 18:03:03.7±1.1,67̇14N×21̇42E,h0km,mb1 2.7/3, mb1mx2.6/27,mbtmp2.6/3,ML2.2/3,Error ellipse: s-maj=19.7km s-min=8.0km az=108.0*
ISC 27 18:03:02.9±0.9,67̇07N±0̇03×20̇84E±0̇06,h0km,n46, σ1s12/47,Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.91**	**348**	*e*P		**Pg**	**18 03 20.3**	**+0.1**
KUA	**Kurravaara**	**0.91**	**348**	P		**Pg**	**18 03 20.3**	**+0.1**
HARU	**Harads**	**0.92**	**177**	*e*P		**Pg**	**18 03 20.4**	**+0.1**
HARU	**Harads**	**0.92**	**177**	P		**Pg**	**18 03 20.5**	**+0.1**
NIKU	**Nikkaluokta**	**1.06**	**320**	*e*P		**Pb**	**18 03 23.2**	**-0.8**
NIKU	**Nikkaluokta**	**1.06**	**320**	P		**Pb**	**18 03 23.2**	**-0.8**
LANU	**Lannavaara**	**1.07**	**24**	*e*P		**Pg**	**18 03 22.5**	**-1.0**
LANU	**Lannavaara**	**1.07**	**24**	P		**Pg**	**18 03 22.8**	**-0.6**
KALU	**Kalix**	**1.58**	**139**	*e*P		**Pn**	**18 03 32.1**	**0.0**
KALU	**Kalix**	**1.58**	**139**	P		**Pn**	**18 03 32.1**	**0.0**
SJUU	**Sjulsmark**	**1.60**	**169**	*e*P		**Pn**	**18 03 32.2**	**-0.1**
SJUU	**Sjulsmark**	**1.60**	**169**	P		**Pn**	**18 03 32.2**	**-0.1**
HEF	**Hetta**	**1.72**	**37**	*e*P		**Pn**	**18 03 33.9**	**-0.1**
HEF					MSG		18 04 09.2	
	comp=Z,28nm,0.1s							
HEF	**Hetta**	**1.72**	**37**	P		**Pn**	**18 03 33.9**	**-0.1**
KIF	**Kilpisjarvi**	**1.94**	**360**	*e*P		**Pb**	**18 03 39.2**	**+0.2**
KIF					MSG		18 04 19.0	
	comp=Z,50nm,0.2s							
KIF	**Kilpisjarvi**	**1.94**	**360**	P		**Pb**	**18 03 39.2**	**+0.2**
RNF	**Rovaniemi**	**2.10**	**100**	*e*P		**Pn**	**18 03 40.3**	**+1.1**
RNF	**Rovaniemi**	**2.10**	**100**	P		**Pn**	**18 03 40.3**	**+1.1**
SGF	**Sodankyl**	**2.24**	**78**	*e*P		**Pn**	**18 03 42.6**	**+1.4**
SGF	**Sodankyl**	**2.24**	**78**	P		**Pn**	**18 03 42.5**	**+1.4**
OUL	**Oulu**	**2.87**	**132**	*e*P		**Pb**	**18 03 53.3**	**-1.6**
OUL	**Oulu**	**2.87**	**132**	P		**Pb**	**18 03 53.2**	**-1.6**
ARA0	**ARCESS Array S**	**3.02**	**33**	*e*P		**Pn**	**18 03 52.6**	**+0.7**
ARA0	**ARCESS Array S**	**3.02**	**33**	P		**Pn**	**18 03 52.6**	**+0.7**
ARCES	**ARCESS Array B**	**3.02**	**33**	Pn		**Pn**	**18 03 51.5**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=212,slow=14,SNR=36							
ARCES					Lg	Lg	18 04 31.8	
	comp=Z,1.1nm,0.3s,baz=213,slow=30,SNR=7.5							
VRF	**Varrio**	**3.45**	**75**	*e*P		**Pn**	**18 03 59.7**	**+1.9**
VRF					MSG		18 05 00.1	
	comp=Z,10nm,0.2s							
VRF	**Varrio**	**3.45**	**75**	P		**Pn**	**18 03 59.6**	**+1.9**
KEV	**Kevo**	**3.53**	**37**	*e*P		**Pn**	**18 04 00.0**	**+1.2**
KEV	**Kevo**	**3.53**	**37**	P		**Pn**	**18 04 00.0**	**+1.2**
VAF	**Ylistaro**	**4.12**	**168**	*e*P		**Pn**	**18 04 07.8**	**+0.9**
VAF	**Ylistaro**	**4.12**	**168**	P		**Pn**	**18 04 07.8**	**+0.9**
KJN	**Kajaani**	**4.14**	**133**	*e*P		**Pn**	**18 04 08.6**	**+1.4**
KJN	**Kajaani**	**4.14**	**133**	P		**Pn**	**18 04 08.6**	**+1.4**
SUF	**Sumiainen**	**4.92**	**150**	*e*P		**Pn**	**18 04 19.4**	**+1.4**
SUF	**Sumiainen**	**4.92**	**150**	P		**Pn**	**18 04 19.3**	**+1.4**
KEF	**Keuruu**	**5.22**	**159**	*e*P		**Pn**	**18 04 23.9**	**+1.8**
KEF	**Keuruu**	**5.22**	**159**	P		**Pn**	**18 04 23.8**	**+1.8**
KAF	**Kangasniemi**	**5.51**	**152**	*e*P		**Pn**	**18 04 27.6**	**+1.6**
KAF	**Kangasniemi**	**5.51**	**152**	P		**Pn**	**18 04 27.5**	**+1.6**
JOF	**Joensuu**	**6.09**	**128**	*e*P		**Pn**	**18 04 35.0**	**+1.1**
JOF	**Joensuu**	**6.09**	**128**	P		**Pn**	**18 04 35.0**	**+1.1**
RAF	**Rauma**	**6.09**	**176**	*e*P		**Pn**	**18 04 35.0**	**+1.0**
RAF	**Rauma**	**6.09**	**176**	P		**Pn**	**18 04 34.9**	**+1.0**
FIA0	**FINESS Array S**	**6.09**	**156**	*e*P		**Pn**	**18 04 35.0**	**+1.0**
FINES	**FINESS Array B**	**6.09**	**156**	Pn		**Pn**	**18 04 35.1**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=350,slow=14,SNR=12							
FINES					Sn	**Sn**

SARI	**SarD1z-Kayseri**	**0.84**	**182**	*e*PN	**Pn**	**18 09 30.2**	**+2.2**
SARI	**SarD1z-Kayseri**	**0.84**	**182**	*e*Pn	**Pn**	**18 09 30.2**	**+2.2**
BNN	**Bunyan**	**0.96**	**226**	*e*PG	**Pg**	**18 09 26.7**	**-0.5**
BNN				*e*SG	**Sb**	**18 09 41.0**	**-0.6**
BNN	**Bunyan**	**0.96**	**226**	*e*Pg	**Pg**	**18 09 26.7**	**-0.5**
BNN				*e*Sg	**Sb**	**18 09 41.0**	**-0.6**
RSDY	**Resadiye-TOKAT**	**0.99**	**27**	*e*PG	**Pg**	**18 09 27.8**	**+0.1**
RSDY	**Resadiye-TOKAT**	**0.99**	**27**	*e*Pg	**Pg**	**18 09 27.8**	**+0.1**
DARE	**Darende-Malaty**	**1.01**	**124**	*e*PN	**Pn**	**18 09 30.2**	**0.0**
DARE				*e*SN	**Sn**	**18 09 45.1**	**0.0**
DARE	**Darende-Malaty**	**1.01**	**124**	*e*Pn	**Pn**	**18 09 30.2**	**0.0**
DARE				*e*Sn	**Sn**	**18 09 45.1**	**0.0**
YOZ	**Yozgat**	**1.10**	**277**	*e*PN	**Pg**	**18 09 29.5**	**-0.3**
YOZ				*e*SN	**Sb**	**18 09 45.2**	**-0.4**
YOZ	**Yozgat**	**1.10**	**277**	*e*Pn	**Pg**	**18 09 29.5**	**-0.3**
YOZ				*e*Sn	**Sb**	**18 09 45.2**	**-0.4**
ERBA	**Erbaa**	**1.16**	**1**	*i* P	**Pn**	**18 09 31.9**	**-0.4**
ERBA				*i* S	**Sn**	**18 09 50.9**	**+2.1**
ERBA	**Erbaa**	**1.16**	**1**	*i* P	**Pn**	**18 09 31.9**	**-0.4**
ERBA				*i* S	**Sn**	**18 09 50.9**	**+2.1**
SUSE	**Susehri**	**1.32**	**58**	*i* P	**Pg**	**18 09 33.8**	**-0.4**
SUSE				*i* S	**Sn**	**18 09 53.7**	**+0.7**
SUSE	**Susehri**	**1.32**	**58**	*i* P	**Pg**	**18 09 33.8**	**-0.4**
SUSE				*i* S	**Sn**	**18 09 53.7**	**+0.7**
KEMA	**Kemaliye**	**1.39**	**100**	*i* P	**Pn**	**18 09 33.7**	**-1.7**
KEMA				*i* S	**Sb**	**18 09 53.9**	**0.0**
KEMA	**Kemaliye**	**1.39**	**100**	*i* P	**Pn**	**18 09 33.7**	**-1.7**
KEMA				*i* S	**Sb**	**18 09 53.9**	**0.0**
ILIC	**ilic-Erzincan**	**1.42**	**92**	*e*PN	**Pn**	**18 09 36.0**	**+0.1**
ILIC	**ilic-Erzincan**	**1.42**	**92**	*e*Pn	**Pn**	**18 09 36.0**	**+0.1**
AKCD	**Akcadag**	**1.54**	**142**	*i* P	**Pn**	**18 09 36.9**	**-0.6**
AKCD				*i* S	**Sn**	**18 09 57.7**	**-0.5**
AKCD	**Akcadag**	**1.54**	**142**	*i* P	**Pn**	**18 09 36.9**	**-0.6**
AKCD				*i* S	**Sn**	**18 09 57.7**	**-0.5**
AVNT	**Avonos**	**1.64**	**244**	*i* P	**Pb**	**18 09 39.8**	**-0.1**
AVNT				*i* S	**Sg**	**18 10 02.5**	**+1.1**
AVNT	**Avonos**	**1.64**	**244**	*i* P	**Pb**	**18 09 39.8**	**-0.1**
AVNT				*i* S	**Sg**	**18 10 02.5**	**+1.1**
CORM	**Corum**	**1.75**	**293**	*e*PN	**Pn**	**18 09 39.9**	**-0.5**
CORM	**Corum**	**1.75**	**293**	*e*Pn	**Pn**	**18 09 39.9**	**-0.5**
MALT	**Malatya**	**1.79**	**132**	*e*PN	**Pn**	**18 09 40.7**	**-0.3**
MALT	**Malatya**	**1.79**	**132**	*e*Pn	**Pn**	**18 09 40.7**	**-0.3**
EZC	**Erzincan**	**2.04**	**83**	*e*PN	**Pn**	**18 09 44.9**	**+0.5**
EZC	**Erzincan**	**2.04**	**83**	*e*Pn	**Pn**	**18 09 44.9**	**+0.5**
KELT	**Kelkit**	**2.04**	**71**	*i* P	**Pb**	**18 09 46.3**	**-0.5**
KELT				*i* S	**Sn**	**18 10 11.3**	**+0.5**
KELT	**Kelkit**	**2.04**	**71**	*i* P	**Pb**	**18 09 46.3**	**-0.5**
KELT				*i* S	**Sn**	**18 10 11.3**	**+0.5**
ESPY	**Espiye-Giresun**	**2.07**	**47**	*e*PN	**Pn**	**18 09 45.2**	**+0.5**
ESPY	**Espiye-Giresun**	**2.07**	**47**	*e*Pn	**Pn**	**18 09 45.2**	**+0.5**
PTK	**Pertek**	**2.16**	**106**	*e*PN	**Pn**	**18 09 46.5**	**+0.4**
PTK	**Pertek**	**2.16**	**106**	*e*Pn	**Pn**	**18 09 46.5**	**+0.4**
AFSR	**Af˘ar-Bala (A**	**2.83**	**270**	*e*PN	**Pn**	**18 09 55.2**	**-0.1**
AFSR	**Af˘ar-Bala (A**	**2.83**	**270**	*e*Pn	**Pn**	**18 09 55.2**	**-0.1**

IDC 27 18:20:13.1±5.4, 20.63S×178.15W, h519km±58km, mb2.9/6, mb1 3.3/7, mb1mx3.1/19, mbtmp3.0/7, Error ellipse: s-maj=29.1km s-min=23.3km az=13.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**18.04**	**192**	P	P	18 23 51.9	-0.8
	1.1nm,0.3s,baz=240,slow=12,SNR=6.7						
ASAR	**Alice Springs**	**44.35**	**257**	P	P	18 27 37.5	+0.2
	0.5nm,0.8s,baz=88,slow=8.9,SNR=18						
ASAR				PcP	PcP	18 29 10.3	+0.2
	0.4nm,0.7s,baz=101,slow=4.2,SNR=5.7						
WRA	**Warramunga Arr**	**44.44**	**262**	P	P	18 27 37.6	-0.4
	0.3nm,0.3s,baz=96,slow=7.2,SNR=16						
VNDA	**Vanda**	**57.76**	**185**	P	P	18 29 13.9	+0.2
	0.2nm,0.5s,baz=2.4,slow=7.5,SNR=2.5						
TXAR	**Lajitas Array**	**87.25**	**57**	P	P	18 32 06.0	+1.3
	0.6nm,0.7s,baz=238,slow=7.2,SNR=4.5						
ILAR	**Eielson Array**	**88.48**	**13**	P	P	18 32 09.1	-0.4
	0.6nm,0.5s,baz=216,slow=5.3,SNR=10						
PDAR	**Pinedale Array**	**89.16**	**43**	P	P	18 32 13.3	-0.1
	0.5nm,0.6s,baz=195,slow=2.4,SNR=4.0						
KURBB	**Kurchatov Arra**	**114.05**	**317**	PKP	PKPdf	18 37 51.6	-1.3
	0.1nm,0.7s,baz=110,slow=2.1,SNR=4.3						
BVAR	**Borovoye Array**	**119.09**	**320**	PKP	PKPdf	18 38 02.0	-0.6
	0.5nm,0.4s,baz=165,slow=2.6,SNR=4.6						
AKASG	**Malin Array Be**	**143.06**	**331**	PKP	PKPab	18 38 44.5	-0.5
	2.4nm,0.5s,baz=43,slow=4.0,SNR=15						
BRTR	**Keskin Array B**	**146.82**	**312**	PKPbc	PKPbc	18 38 56.5	-0.8
	0.7nm,0.6s,baz=137,slow=4.7,SNR=4.8						
MMAI	**Mount Meron Ar**	**147.76**	**299**	PKPbc	PKPbc	18 39 00.7	+0.8
	2.1nm,0.7s,baz=60,slow=5.1,SNR=5.6						
GERES	**GERESS Array B**	**150.29**	**344**	PKPbc	PKPbc	18 39 05.3	-0.3
	0.3nm,0.3s,baz=55,slow=3.7,SNR=3.6						

IDC 27 18:45:28.0±3.6, 2.10S×134.99E, h0km, mb3.2/2, mb1 3.4/3, mb1mx3.2/18, mbtmp3.2/3, ML2.9/1, Error ellipse: s-maj=171.1km s-min=28.9km az=79.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.74**	**182**	P	Pn	18 49 35.5	-1.1
	0.1nm,0.3s,baz=0.9,slow=12,SNR=5.0						
ASAR	**Alice Springs**	**21.46**	**183**	P	P	18 50 18.6	+0.4
	0.4nm,0.6s,baz=4.0,slow=10,SNR=8.6						
MKAR	**Makanchi Array**	**67.07**	**324**	P	P	18 56 23.3	+0.1
	0.3nm,0.7s,baz=121,slow=8.8,SNR=4.8						

MAN 27 18:47:17, 10.02N×126.36E, h30km, mb4.3, ML3.1, MS2.9, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.28**	**215**	*e*P	Pn	18 47 38.8	0.0
MSLP	**Maasin**	**1.48**	**274**	*e*P	Pn	18 47 41.5	-0.1
BESP	**Borongan**	**1.81**	**330**	*e*P	Pn	18 47 46.2	+0.1
OCLP	**Ormoc**	**2.00**	**301**	*e*P	Pn	18 47 50.2	+1.4
LLP	**Lapu-Lapu**	**2.37**	**277**	⇓*e*P	Pn	18 47 54.0	+0.1
LLP				*e*S	Sn	18 48 23.8	+1.7
TBP	**Tagbilaran**	**2.48**	**263**	*e*P	Pn	18 47 56.7	+1.3
TBP				*e*S	Sn	18 48 25.2	+0.6
BUKP	**Musuan**	**2.49**	**211**	*e*P	Pb	18 47 58.5	-2.6
GUIM	**Jordan**	**3.76**	**279**	*e*P	Pn	18 48 14.1	+1.1

*ISK **27** 19:01:03.8, 34.94N×32.43E, h15km, MD2.9*
*NIC **27** 19:01:04.6±0.3, 35.08N×32.38E, h16km, ML3.2, MW3.0*
*ISCJB **27** 19:01:05.2±0.9, 35.02N±0.06×32.44E±0.06, h12km±6km, Error ellipse: s-maj=11.9km s-min=6.8km az=150.6*
*CSEM **27** 19:01:06.0±0.3, 35.04N×32.47E, h2km, Mw3.0, Error ellipse: s-maj=10.1km s-min=5.0km az=10.0*

ISC 27 19:01:05.3±1.2, 35.05N±0.06×32.42E±0.05, h13km±8km, n24, σ1§12/35, 2C-4D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMC	**Akamas**	**0.07**	**253**	⇓P	**Pg**	**19 01 07.7**	**-0.4**
AKMC	**Akamas**	**0.07**	**253**	⇓*i*P	**Pg**	**19 01 07.7**	**-0.4**
PPCY	**Paphos**	**0.17**	**200**	⇓P	**Pg**	**19 01 09.2**	**-0.1**
PPCY	**Paphos**	**0.17**	**200**	⇓*i*P	**Pg**	**19 01 09.2**	**-0.1**
ALFC	**Alevga**	**0.18**	**54**	⇑P	**Pg**	**19 01 09.6**	**0.0**
	60nm,0.1s						
ALFC				S	**Sg**	**19 01 13.2**	**+0.7**
ALFC	**Alevga**	**0.18**	**54**	⇑*i*P	**Pg**	**19 01 09.6**	**0.0**
	60nm,0.1s						
ALFC				S	**Sg**	**19 01 13.2**	**+0.7**
LEF	**Lefka**	**0.40**	**80**	*e*PG	**Pg**	**19 01 11.6**	**-1.6**
LEF				*e*SG	**Sg**	**19 01 17.7**	**-0.8**
LEF	**Lefka**	**0.40**	**80**	*e*Pg	**Pg**	**19 01 11.6**	**-1.6**
LEF				*e*Sg	**Sg**	**19 01 17.7**	**-0.8**
SZAC	**Souni-Zanaja**	**0.48**	**127**	P	**Pb**	**19 01 15.6**	**0.0**
SZAC	**Souni-Zanaja**	**0.48**	**127**	P	**Pb**	**19 01 15.6**	**0.0**
AKDN	**Akdeniz- K˘–br**	**0.52**	**61**	*e*PG	**Pg**	**19 01 15.4**	**0.0**
AKDN				*e*SG	**Sb**	**19 01 24.2**	**+0.7**
AKDN	**Akdeniz- K˘–br**	**0.52**	**61**	*e*Pg	**Pg**	**19 01 15.4**	**0.0**
AKDN				*e*Sg	**Sg**	**19 01 24.2**	**+0.7**
MAMC	**Mammari**	**0.67**	**79**	P	**Pg**	**19 01 17.4**	**-0.9**
MAMC	**Mammari**	**0.67**	**79**	P	**Pg**	**19 01 17.4**	**-0.9**
CSS	**Prodhromos**	**0.76**	**96**	P	**Pg**	**19 01 19.8**	**-0.1**
	3.0nm,0.2s						
CSS				S	**Sg**	**19 01 29.5**	**-0.4**
CSS	**Prodhromos**	**0.76**	**96**	*e*PG	**Pg**	**19 01 19.4**	**-0.5**
CSS				*e*SG	**Sg**	**19 01 29.3**	**-0.6**
CSS	**Prodhromos**	**0.76**	**96**	*e*Pg	**Pg**	**19 01 19.4**	**-0.5**
CSS	**Prodhromos**	**0.76**	**96**	P	**Pg**	**19 01 19.8**	**-0.1**
	3.0nm,0.2s						
CSS				*e*Sg	**Sg**	**19 01 29.3**	**-0.6**
CSS				S	**Sg**	**19 01 29.5**	**-0.4**
LFK	**Lefkose**	**0.94**	**76**	*e*PG	**Pg**	**19 01 22.7**	**-0.8**
LFK	**Lefkose**	**0.94**	**76**	*e*Pg	**Pg**	**19 01 22.7**	**-0.8**
PHNC	**Paralimni**	**1.33**	**91**	P	**Pg**	**19 01 32.0**	**+1.2**
	2.5nm,0.6s						
PHNC				S	**Sg**	**19 01 52.7**	**+4.6**
PHNC	**Paralimni**	**1.33**	**91**	P	**Pg**	**19 01 32.0**	**+1.2**
	2.5nm,0.6s						
EREN	**Erenkoy**	**1.51**	**71**	*e*PN	**Pn**	**19 01 31.4**	**-0.6**
EREN	**Erenkoy**	**1.51**	**71**	*e*Pn	**Pn**	**19 01 31.4**	**-0.6**

NIC 27 19:01:34.0±0.2, 35.07N×32.38E, h16km, ML2.0, MW3.1, 1C, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMC	**Akamas**	**0.06**	**227**	P	Pg	19 01 37.2	+0.2
AKMC				S	Sg	19 01 39.3	+0.3
PPCY	**Paphos**	**0.18**	**189**	P	Pg	19 01 38.6	+0.2
ALFC	**Alevga**	**0.20**	**63**	⇑P	Pb	19 01 39.1	-0.3
	43nm,0.2s						
ALFC				S	Sb	19 01 42.6	-0.4

*BEO **27** 19:02:39.7±1.0, 39.49N×29.70E, h0km, ML4.7/7*
*SOF **27** 19:03:04.6, 40.74N×27.56E, h1km, MD3.6*
*IDC **27** 19:03:05.5±1.0, 40.51N×27.59E, h0km, mb3.6/9, mb1 3.7/12, mb1mx3.6/28, mbtmp3.6/12, ML3.5/3, MS3.1/1, Ms1 3.1/1, ms1mx2.3/35, Error ellipse: s-maj=16.5km s-min=13.9km az=72.0*
*DDA **27** 19:03:06.6, 40.74N×27.52E, h29km, MD4.2*
*CSEM **27** 19:03:07.5±0.1, 40.73N×27.51E, h12km, MD4.2, Error ellipse: s-maj=1.7km s-min=1.4km az=14.0*
*ATH **27** 19:03:07.9, 40.69N×27.49E, h36km±16km, MD3.8/11*
*ISK **27** 19:03:07.0, 40.73N×27.53E, h18km, ML3.9*
*ISCJB **27** 19:03:07.7±0.2, 40.72N±0.01×27.49E±0.01, h26km±2km, mb3.6/8, Error ellipse: s-maj=2.1km s-min=1.7km az=173.4*
*THE **27** 19:03:10.3, 40.66N×27.45E, h11km±3km, ML4.0/20, Error ellipse: s-maj=3.6km s-min=0.6km az=341.0*

ISC 27 19:03:08.0±0.7, 40.72N±0.01×27.52E±0.01, h16km±4km, n329, σ1§00/429, mb3.6/8, 10C-14D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRMT	**Marmara Adasi**	**0.13**	**154**	P*g*	**Pg**	**19 03 11.2**	**-0.7**
MRMT				*e*SG	**Sg**	**19 03 11.6**	**-0.8**
MRMT	**Marmara Adasi**	**0.13**	**154**	*i* Pg	**Pg**	**19 03 11.2**	**-0.7**
MRMT				*e*Sg	**Sg**	**19 03 13.6**	**-0.8**
SART	**Tekirdag**	**0.26**	**263**	*i* P	**Pg**	**19 03 13.7**	**-0.1**
SART				*i* S	**Sg**	**19 03 18.1**	**+0.4**
SART	**Tekirdag**	**0.26**	**263**	*i* P	**Pg**	**19 03 13.7**	**-0.1**
SART				*i* S	**Sg**	**19 03 18.1**	**+0.4**
TKR	**Tekirdag**	**0.27**	**3**	*e*PG	**Pg**	**19 03 13.5**	**-0.3**
TKR				*e*SG	**Sg**	**19 03 17.9**	**+0.1**
TKR	**Tekirdag**	**0.27**	**3**	*e*Pg	**Pg**	**19 03 13.5**	**-0.3**
TKR				*e*Sg	**Sg**	**19 03 17.9**	**+0.1**
KRBG	**Karabiga-Canak**	**0.37**	**207**	*e*PG	**Pb**	**19 03 15.8**	**-0.4**
KRBG				*e*SG	**Sb**	**19 03 21.3**	**-0.4**
KRBG	**Karabiga-Canak**	**0.37**	**207**	*e*Pg	**Pb**	**19 03 15.8**	**-0.4**
KRBG				*e*Sg	**Sb**	**19 03 21.3**	**-0.4**
CRLT	**Corlu**	**0.44**	**22**	*e*PG	**Pg**	**19 03 16.8**	**0.0**
CRLT				*e*SG	**Sb**	**19 03 23.6**	**-0.1**
CRLT	**Corlu**	**0.44**	**22**	*e*Pg	**Pg**	**19 03 16.8**	**0.0**
CRLT				*e*Sg	**Sb**	**19 03 23.6**	**-0.1**
BNT	**Bandirma**	**0.48**	**140**	*e*PG	**Pg**	**19 03 17.2**	**-0.3**
BNT	**Bandirma**	**0.48**	**140**	*e*Pg	**Pg**	**19 03 17.2**	**-0.3**
LPK	**Lapseki**	**0.68**	**239**	*e*PG	**Pg**	**19 03 20.9**	**-0.4**
LPK				*e*SG	**Sb**	**19 03 31.3**	**+0.8**
LPK	**Lapseki**	**0.68**	**239**	*e*Pg	**Pg**	**19 03 20.9**	**-0.4**
LPK				*e*Sg	**Sb**	**19 03 31.3**	**+0.8**
GONE	**Gonen-Balikesi**	**0.69**	**169**	*e*PG	**Pg**	**19 03 21.4**	**-0.1**
GONE	**Gonen-Balikesi**	**0.69**	**169**	*e*Pg	**Pg**	**19 03 21.4**	**-0.1**
SLVT	**Silivri**	**0.73**	**46**	*e*PG	**Pg**	**19 03 21.4**	**-0.8**
SLVT				*e*SG	**Sg**	**19 03 31.9**	**0.0**
SLVT	**Silivri**	**0.73**	**46**	*e*Pg	**Pg**	**19 03 21.4**	**-0.8**
SLVT				*e*Sg	**Sg**	**19 03 31.9**	**0.0**
ERIK	**Erikli-Kesan**	**0.77**	**266**	*e*PG	**Pb**	**19 03 22.5**	**-0.4**
ERIK				*e*SG	**Sb**	**19 03 33.1**	**+0.1**
ERIK	**Erikli-Kesan**	**0.77**	**266**	*e*Pg	**Pb**	**19 03 22.5**	**-0.4**
ERIK				*e*Sg	**Sb**	**19 03 33.2**	**+0.1**
ELBA	**Catalca**	**0.81**	**58**	*i* P	**Pb**	**19 03 22.8**	**-0.9**
ELBA				*i* S	**Sb**	**19 03 33.0**	**-1.4**
ELBA	**Catalca**	**0.81**	**58**	*i* P	**Pb**	**19 03 22.8**	**-0.9**
ELBA				*i* S	**Sb**	**19 03 33.0**	**-1.4**
GELI	**Tayfur-Gelibol**	**0.86**	**248**	*e*PG	**Pb**	**19 03 23.8**	**-0.7**
GELI				*e*SG	**Sn**	**19 03 37.2**	**-0.4**
GELI	**Tayfur-Gelibol**	**0.86**	**248**	*e*Pg	**Pb**	**19 03 23.8**	**-0.7**
GELI				*e*Sg	**Sn**	**19 03 37.2**	**-0.4**
CTKS	**Kestanelik-??a**	**0.91**	**55**	*e*PG	**Pb**	**19 03 24.3**	**-1.0**
CTKS	**Kestanelik-??a**	**0.91**	**55**	*e*Pg	**Pb**	**19 03 24.3**	**-1.0**
CTYL	**Yal??k??y-??at**	**0.95**	**37**	*e*PG	**Pb**	**19 03 25.4**	**-0.7**
CTYL	**Yal??k??y-??at**	**0.95**	**37**	*e*Pg	**Pb**	**19 03 25.4**	**-0.7**
BALY	**Balya**	**0.98**	**176**	*i* P	**Pb**	**19 03 26.4**	**-0.3**
BALY				*i* S	**Sg**	**19 03 40.2**	**+0.2**
BALY	**Balya**	**0.98**	**176**	*i* P	**Pb**	**19 03 26.4**	**-0.3**
BALY				*i* S	**Sg**	**19 03 40.2**	**+0.2**
ARMT	**Armutlu**	**1.03**	**98**	*e*PG	**Pb**	**19 03 26.5**	**-1.0**
ARMT				*e*SG	**Sg**	**19 03 41.6**	**+0.1**
ARMT	**Armutlu**	**1.03**	**98**	*e*Pg	**Pb**	**19 03 26.5**	**-1.0**
ARMT				*e*Sg	**Sg**	**19 03 41.6**	**+0.1**
ENEZ	**Enez**	**1.04**	**271**	*e*PG	**Pb**	**19 03 26.7**	**-0.9**
ENEZ	**Enez**	**1.04**	**271**	*e*Pg	**Pb**	**19 03 26.7**	**-0.9**
BGKT	**Bogazkoy**	**1.05**	**64**	*e*PG	**Pb**	**19 03 26.8**	**-1.0**
BGKT	**Bogazkoy**	**1.05**	**64**	*e*Pg	**Pb**	**19 03 26.8**	**-1.0**
MDNY	**Mudanya-Bursa**	**1.10**	**108**	*e*PN	**Pb**	**19 03 27.9**	**-0.7**
MDNY	**Mudanya-Bursa**	**1.10**	**108**	*e*Pn	**Pb**	**19 03 27.9**	**-0.7**
BALB	**Balikesir**	**1.12**	**166**	*e*PN	**Pb**	**19 03 28.4**	**-0.5**
BALB	**Balikesir**	**1.12**	**166**	*e*Pn	**Pb**	**19 03 28.4**	**-0.5**
ALN	**Alexandroupoli**	**1.13**	**279**	P	**Pn**	**19 03 28.8**	**-0.4**
ALN				S	**Sn**	**19 03 44.1**	**-0.3**
ALN	**Alexandroupoli**	**1.13**	**279**	*e*PN	**Pn**	**19 03 28.8**	**-0.4**
ALN				*e*SN	**Sn**	**19 03 44.2**	**-0.2**
ALN	**Alexandroupoli**	**1.13**	**279**	P	**Pn**	**19 03 28.8**	**-0.4**
ALN				*e*Sn	**Sn**	**19 03 44.2**	**-0.2**
ISK	**Istanbul-Kandi**	**1.22**	**73**	*e*PN	**Pn**	**19 03 29.3**	**-1.0**
ISK	**Istanbul-Kandi**	**1.22**	**73**	*e*Pn	**Pn**	**19 03 29.3**	**-1.0**
BUY	**Buyukada**	**1.22**	**83**	*i* P	**Pn**	**19 03 29.0**	**-1.4**
BUY				*i* S	**Sb**	**19 03 45.0**	**-1.2**
BUY	**Buyukada**	**1.22**	**83**	*i* P	**Pn**	**19 03 29.0**	**-1.4**
BUY				*i* S	**Sb**	**19 03 45.0**	**-1.2**
ORLT	**Orhaneli**	**1.25**	**122**	*e*PN	**Pn**	**19 03 30.0**	**-0.8**
ORLT	**Orhaneli**	**1.25**	**122**	*e*Pn	**Pn**	**19 03 30.0**	**-0.8**
EDRB	**Edirne**	**1.27**	**333**	*e*PN	**Pn**	**19 03 30.6**	**-0.4**
EDRB	**Edirne**	**1.27**	**333**	*e*Pn	**Pn**	**19 03 30.6**	**-0.4**
EZN	**Ezine**	**1.28**	**226**	*e*PN	**Pn**	**19 03 31.2**	**0.0**
EZN	**Ezine**	**1.28**	**226**	*e*Pn	**Pn**	**19 03 31.2**	**0.0**
GEMT	**Gemlik**	**1.30**	**102**	*e*PN	**Pn**	**19 03 30.4**	**-1.1**
GEMT	**Gemlik**	**1.30**	**102**	*e*Pn	**Pn**	**19 03 30.4**	**-1.1**
DURS	**Dursunbey**	**1.34**	**147**	*i* P	**Pn**	**19 03 32.0**	**-0.1**
DURS				*i* S	**Sn**	**19 03 49.1**	**-0.5**
DURS	**Dursunbey**	**1.34**	**147**	*i* P	**Pn**	**19 03 32.0**	**-0.1**
DURS				*i* S	**Sn**	**19 03 49.1**	**-0.5**
DST	**Dursunbey**	**1.40**	**143**	*e*PN	**Pn**	**19 03 33.1**	**+0.2**
DST	**Dursunbey**	**1.40**	**143**	*e*Pn	**Pn**	**19 03 33.1**	**+0.2**
BOZC	**Bozcaada**	**1.43**	**232**	*i* P	**Pn**	**19 03 33.1**	**-0.1**
BOZC				*i* S	**Sn**	**19 03 51.7**	**+0.1**
AYVA	**Ayvalik**	**1.55**	**205**	*i* P	**Pn**	**19 03 34.9**	**0.0**
AYVA				*i* S	**Sb**	**19 03 55.7**	**0.0**
AYVA	**Ayvalik**	**1.55**	**205**	*i* P	**Pn**	**19 03 34.9**	**0.0**
AYVA				*i* S	**Sb**	**19 03 55.7**	**0.0**
SILT	**Sile**	**1.67**	**74**	*e*PN	**Pn**	**19 03 35.8**	**-0.7**
SILT	**Sile**	**1.67**	**74**	*e*Pn	**Pn**	**19 03 35.8**	**-0.7**
PRK	**Paraskevi**	**1.76**	**213**	P	**Pn**	**19 03 37.7**	**-0.1**
PRK				S	**Sn**	**19 03 58.4**	**-1.4**
PRK	**Paraskevi**	**1.76**	**213**	*e*PB	**Pn**	**19 03 37.9**	**+0.1**
PRK				*e*SN	**Sn**	**19 03 58.7**	**-1.1**
PRK	**Paraskevi**	**1.76**	**213**	S	**Sn**	**19 03 58.4**	**-1.4**
PRK				*e*Sn	**Sn**	**19 03 58.7**	**-1.1**
PRK	**Paraskevi**	**1.76**	**213**	P	**Pn**	**19 03 37.7**	**-0.1**
KDZ	**Kurdzhali**	**1.84**	**301**	*i* P	**Pn**	**19 03 39.2**	**+0.3**
KDZ				*i* Pg	**Pg**	**19 03 42.8**	**-0.5**
KDZ	**Kurdzhali**	**1.84**	**301**	*i* P	**Pn**	**19 03 39.2**	**+0.3**
AKHS	**Akhisar**	**1.86**	**173**	*i* P	**Pb**	**19 03 40.5**	**-1.0**
AKHS				*i* S	**Sn**	**19 04 02.4**	**+0.2**
AKHS	**Akhisar**	**1.86**	**173**	*i* P	**Pb**	**19 03 40.5**	**-1.0**
AKHS				*i* S	**Sn**	**19 04 02.4**	**+0.2**
AKS	**Akhisar**	**1.86**	**173**	*e*PN	**Pn**	**19 03 39.5**	**+0.4**
AKS	**Akhisar**	**1.86**	**173**	*e*Pn	**Pn**	**19 03 39.5**	**+0.4**
JMB	**Yambol**	**1.88**	**338**	P	**Pb**	**19 03 40.7**	**-1.2**
JMB				S	**Sn**	**19 04 03.9**	**+1.1**
JMB	**Yambol**	**1.88**	**338**	*i* P	**Pb**	**19 03 42.0**	**+0.1**
JMB				*i* Pg	**Pg**	**19 03 43.9**	**-0.2**
JMB	**Yambol**	**1.88**	**338**	P	**Pb**	**19 03 40.7**	**-1.2**
DEMI	**Demirci**	**1.91**	**151**	*i* P	**Pn**	**19 03 40.3**	**+0.3**
DEMI				*e*S	**Sn**	**19 04 02.1**	**-1.7**
DEMI	**Demirci**	**1.91**	**151**	*i* P	**Pn**	**19 03 40.3**	**+0.3**
DEMI				*e*S	**Sn**	**19 04 02.1**	**-1.7**
TVSB	**Tavsanli**	**1.96**	**130**	*e*PN	**Pn**	**19 03 40.8**	**+0.1**
TVSB	**Tavsanli**	**1.96**	**130**	*e*Pn	**Pn**	**19 03 40.8**	**+0.1**
LIA	**Limnos Island**	**1.97**	**246**	P	**Pn**	**19 03 40.3**	**-0.3**
LIA				S	**Sn**	**19 04 03.1**	**-1.9**
LIA	**Limnos Island**	**1.97**	**246**	*e*PN	**Pn**	**19 03 40.5**	**-0.1**
LIA	**Limnos Island**	**1.97**	**246**	P	**Pn**	**19 03 40.3**	**-0.3**
LIA				S	**Sn**	**19 04 03.1**	**-1.9**
SIGR	**SIGRI**	**1.98**	**221**	P	**Pn**	**19 03 40.6**	**-0.2**
SIGR				S	**Sn**	**19 04 03.6**	**-1.6**
SIGR	**SIGRI**	**1.98**	**221**	S	**Sn**	**19 04 03.6**	**-1.6**
SIGR	**SIGRI**	**1.98**	**221**	P	**Pn**	**19 03 40.6**	**-0.2**
DIM	**Dimitrovgrad**	**2.00**	**312**	*i* P	**Pn**	**19 03 41.1**	**0.0**
DIM				*i* Pg	**Pb**	**19 03 44.7**	**+0.8**
DIM	**Dimitrovgrad**	**2.00**	**312**	*i* P	**Pn**	**19 03 41.1**	**0.0**
SPNC	**Sapanca-Adapaz**	**2.12**	**90**	*e*PN	**Pn**	**19 03 42.6**	**-0.1**
SPNC	**Sapanca-Adapaz**	**2.12**	**90**	*e*Pn	**Pn**	**19 03 42.6**	**-0.1**
GPA	**Golpazari**	**2.17**	**101**	*e*PN	**Pn**	**19 03 43.4**	**-0.1**
GPA	**Golpazari**	**2.17**	**101**	*e*Pn	**Pn**	**19 03 43.4**	**-0.1**
GDZ	**Gediz**	**2.22**	**137**	*i* P	**Pn**	**19 03 44.7**	**+0.4**
GDZ				*i* S	**Sb**	**19 04 17.2**	**+2.1**
GDZ	**Gediz**	**2.22**	**137**	*i* P	**Pn**	**19 03 44.7**	**+0.4**
KAVA	**Kavala**	**2.30**	**278**	P	**Pn**	**19 03 44.9**	**-0.3**
KAVA				S	**Sn**	**19 04 12.2**	**-0.9**
KAVA	**Kavala**	**2.30**	**278**	P	**Pn**	**19 03 44.9**	**-0.3**
KAVA				S	**Sn**	**19 04 12.2**	**-0.9**

NEO	**Neokhori**	**3.59**	**248**	*e*Pn	**Pn**	19 04 04.3	+1.3
CVD	**Cernavoda**	**3.61**	**6**	*i*P	**Pn**	19 04 04.9	+1.7
CVD	**Cernavoda**	**3.61**	**6**	*i*P	**Pn**	19 04 04.9	+1.7
YER	**Yerkesik**	**3.63**	**170**	*e*PN	**Pn**	19 04 04.1	+0.5
YER	**Yerkesik**	**3.63**	**170**	*e*Pn	**Pn**	19 04 04.1	+0.5
MRKA	**Markates**	**3.64**	**238**	P	**Pn**	19 04 02.9	-0.8
MRKA				S	**Sn**	19 04 45.2	-1.1
MRKA	**Markates**	**3.64**	**238**	P	**Pn**	19 04 02.9	-0.8
MRKA				S	**Sn**	19 04 45.2	-1.1
BODT	**Bodrum**	**3.66**	**183**	*e*PN	**Pn**	19 04 04.4	+0.5
BODT	**Bodrum**	**3.66**	**183**	*e*Pn	**Pn**	19 04 04.4	+0.5
ISP	**Isparta**	**3.72**	**140**	*e*PN	**Pn**	19 04 06.1	+1.3
ISP	**Isparta**	**3.72**	**140**	P	**Pn**	19 04 05.1	+0.3
ISP	**Isparta**	**3.72**	**140**	*i*P	**Pg**	19 04 18.4	-0.8
ISP	**Isparta**	**3.72**	**140**	P	**Pn**	19 04 05.1	+0.3
ISP	**Isparta**	**3.72**	**140**	*e*Pn	**Pn**	19 04 06.1	+1.3
VTS	**Vitosha**	**3.73**	**301**	P	**Pn**	19 04 05.4	+0.4
VTS				S	**Sn**	19 04 48.4	-0.3
VTS	**Vitosha**	**3.73**	**301**	*i*P	**Pn**	19 04 06.2	+1.2
VTS	**Vitosha**	**3.73**	**301**	*e*Pn	**Pn**	19 04 07.2	+2.2
VTS				*e*Sn	**Sg**	19 05 11.3	+3.5
VTS	**Vitosha**	**3.73**	**301**	*i*P	**Pn**	19 04 06.7	+1.7
VTS				*i*Pg	**Pg**	19 04 17.3	-2.2
VTS	**Vitosha**	**3.73**	**301**	*i*P	**Pn**	19 04 06.7	+1.7
VTS	**Vitosha**	**3.73**	**301**	*e*Pn	**Pn**	19 04 07.2	+2.2
VTS	**Vitosha**	**3.73**	**301**	*i*Pg	**Pg**	19 04 17.3	-2.2
VTS				S	**Sn**	19 04 48.4	-0.3
TIRR	**Tirgusor**	**3.79**	**10**	*i*P	**Pn**	19 04 05.5	-0.2
TIRR	**Tirgusor**	**3.79**	**10**	*i*P	**Pn**	19 04 05.5	-0.2
VAY	**Valandovo**	**3.79**	**281**	*e*Pn	**Pn**	19 04 06.0	+0.3
VAY				*e*Sg	**Sg**	19 05 05.0	-4.7
VAY	**Valandovo**	**3.79**	**281**	*e*Pn	Pn	19 04 01.5	-4.2
SMIA	**Simia**	**3.80**	**242**	P	**Pn**	19 04 05.3	-0.5
SMIA	**Simia**	**3.80**	**242**	P	Pn	19 04 05.3	-0.5
KIZT	**Kizilcal**	**3.83**	**117**	*e*PN	**Pn**	19 04 06.7	+0.3
KIZT	**Kizilcal**	**3.83**	**117**	*e*Pn	**Pn**	19 04 06.7	+0.3
MPEP	**Malo Peshtene**	**3.85**	**314**	*i*P	**Pn**	19 04 07.3	+0.7
GLHS	**Glhisar (BURDU**	**3.88**	**156**	*e*PN	**Pn**	19 04 07.7	+0.6
GLHS	**Glhisar (BURDU**	**3.88**	**156**	*e*Pn	**Pn**	19 04 07.7	+0.6
GRG	**Griva**	**3.89**	**275**	P	**Pn**	19 04 07.5	+0.4
GRG	**Griva**	**3.89**	**275**	P	**Pn**	19 04 07.5	+0.4
LIT	**Litokhoron**	**3.89**	**262**	P	**Pn**	19 04 06.5	-0.6
LIT				S	**Sn**	19 04 51.0	-1.5
LIT	**Litokhoron**	**3.89**	**262**	*e*PN	**Pn**	19 04 06.6	-0.6
LIT	**Litokhoron**	**3.89**	**262**	*e*Pn	**Pn**	19 04 06.6	-0.6
LIT				S	**Sn**	19 04 51.0	-1.5
PTL	**Penteli**	**3.89**	**228**	*e*PN	**Pn**	19 04 07.1	-0.1
PTL	**Penteli**	**3.89**	**228**	*e*Pn	**Pn**	19 04 07.1	-0.1
SAFT	**Safranbolu**	**3.94**	**81**	*e*PN	**Pn**	19 04 08.3	+0.4
SAFT	**Safranbolu**	**3.94**	**81**	*e*Pn	**Pn**	19 04 08.3	+0.4
APE	**Apeiranthos**	**3.96**	**204**	*e*PN	**Pn**	19 04 07.6	-0.6
APE	**Apeiranthos**	**3.96**	**204**	*e*Pn	**Pn**	19 04 07.6	-0.6
DAT	**Datca**	**3.99**	**179**	*e*PN	**Pn**	19 04 09.0	+0.5
DAT	**Datca**	**3.99**	**179**	*e*Pn	**Pn**	19 04 09.0	+0.5
DALY	**Dalyan (Mu˘la**	**4.00**	**167**	*e*PN	**Pn**	19 04 09.2	+0.6
DALY	**Dalyan (Mu˘la**	**4.00**	**167**	*e*Pn	**Pn**	19 04 09.2	+0.6
BCK	**Bucak**	**4.04**	**143**	*e*PN	**Pn**	19 04 10.1	+0.9
BCK	**Bucak**	**4.04**	**143**	*e*Pn	**Pn**	19 04 10.1	+0.9
LKR	**Lokris**	**4.05**	**241**	*e*PN	**Pn**	19 04 08.7	-0.7
LKR	**Lokris**	**4.05**	**241**	*e*Pn	**Pn**	19 04 08.7	-0.7
SULR		**4.06**	**347**	*i*P	**Pn**	19 04 08.1	-1.3
SULR		**4.06**	**347**	*i*P	**Pn**	19 04 08.1	-1.3
LOD	**Lodumlu**	**4.09**	**100**	*e*PN	**Pn**	19 04 10.3	+0.3
LOD	**Lodumlu**	**4.09**	**100**	*e*Pn	**Pn**	19 04 10.3	+0.3
ANTO	**Ankara**	**4.12**	**100**	*e*PN	**Pn**	19 04 11.6	+1.2
ANTO	**Ankara**	**4.12**	**100**	*e*Pn	**Pn**	19 04 11.6	+1.2
AXAR	**Agios Charalam**	**4.23**	**244**	P	**Pn**	19 04 11.0	-0.7
AXAR	**Agios Charalam**	**4.23**	**244**	P	**Pn**	19 04 11.0	-0.7
HUMR	**Humele**	**4.24**	**335**	*i*P	**Pn**	19 04 11.9	0.0
HUMR	**Humele**	**4.24**	**335**	*i*P	**Pn**	19 04 11.9	0.0
FETY	**Fethiye**	**4.26**	**163**	*e*PN	**Pn**	19 04 13.2	+1.0
FETY	**Fethiye**	**4.26**	**163**	*e*Pn	**Pn**	19 04 13.2	+1.0
NAIG	**Nisos Aigina**	**4.31**	**228**	*e*PN	**Pn**	19 04 13.1	+0.3
NAIG	**Nisos Aigina**	**4.31**	**228**	*e*Pn	**Pn**	19 04 13.1	+0.3
AGG	**Agios Georgios**	**4.34**	**249**	P	**Pn**	19 04 12.6	-0.7
AGG				S	**Sn**	19 05 01.4	-2.2
AGG	**Agios Georgios**	**4.34**	**249**	*e*PN	**Pn**	19 04 12.7	-0.6
AGG	**Agios Georgios**	**4.34**	**249**	S	**Sn**	19 05 01.4	-2.2
AGG	**Agios Georgios**	**4.34**	**249**	*e*Pn	**Pn**	19 04 12.7	-0.6
THL	**Klokotos Trika**	**4.38**	**256**	*e*PN	**Pn**	19 04 13.3	-0.4
THL	**Klokotos Trika**	**4.38**	**256**	*e*Pn	**Pn**	19 04 13.3	-0.4
ELL	**Elmali**	**4.39**	**154**	*e*PN	**Pn**	19 04 15.0	+0.9
ELL	**Elmali**	**4.39**	**154**	*e*Pn	**Pn**	19 04 15.0	+0.9
KZN	**Kozani**	**4.40**	**266**	*e*PN	**Pn**	19 04 14.6	+0.4
KZN	**Kozani**	**4.40**	**266**	*e*Pn	**Pn**	19 04 14.6	+0.4
LTK	**Loutraki**	**4.44**	**234**	P	**Pn**	19 04 14.4	-0.3
LTK				S	**Sn**	19 05 04.8	-1.2
LTK	**Loutraki**	**4.44**	**234**	P	**Pn**	19 04 14.4	-0.3
LTK				S	**Sn**	19 05 04.8	-1.2
ZAPS	**Zavoj**	**4.44**	**307**	*e*Pn	**Pn**	19 04 16.3	+1.6
ZAPS				*e*Sn	**Sg**	19 05 28.3	-2.3
AFSR	**Af˘ar-Bala (A**	**4.45**	**105**	*e*PN	**Pn**	19 04 14.9	+0.1
AFSR	**Af˘ar-Bala (A**	**4.45**	**105**	*e*Pn	**Pn**	19 04 14.9	+0.1
ISR	**Istrita**	**4.45**	**351**	*i*P	**Pn**	19 04 13.9	-1.0
ISR	**Istrita**	**4.45**	**351**	*i*P	**Pn**	19 04 13.9	-1.0
CFR	**Carcaliu**	**4.47**	**6**	*i*P	**Pn**	19 04 15.3	+0.2
CFR	**Carcaliu**	**4.47**	**6**	*i*P	**Pn**	19 04 15.3	+0.2
DSF	**Desfina**	**4.50**	**241**	P	**Pn**	19 04 14.8	-0.7
DSF				S	**Sn**	19 05 06.0	-1.5
DSF	**Desfina**	**4.50**	**241**	P	**Pn**	19 04 14.8	-0.7
DSF				S	**Sn**	19 05 06.0	-1.5
BALT	**Daday**	**4.50**	**78**	*i*P	**Pn**	19 04 16.4	+0.7
BALT	**Daday**	**4.50**	**78**	*i*P	**Pn**	19 04 16.4	+0.7
LADK	**Ladik-KONYA**	**4.52**	**122**	*e*PN	**Pn**	19 04 17.0	+1.2
LADK	**Ladik-KONYA**	**4.52**	**122**	*e*Pn	**Pn**	19 04 17.0	+1.2
TLCR		**4.56**	**12**	*i*P	**Pn**	19 04 17.0	+0.7
TLCR		**4.56**	**12**	*i*P	**Pn**	19 04 17.0	+0.7
DID	**Didima**	**4.63**	**227**	P	**Pn**	19 04 16.8	-0.5
DID				S	**Sn**	19 05 08.3	-2.4
DID	**Didima**	**4.63**	**227**	*e*PN	**Pn**	19 04 16.9	-0.4
DID	**Didima**	**4.63**	**227**	*e*Pn	**Pn**	19 04 16.9	-0.4
DID				S	**Sn**	19 05 08.3	-2.4
FNA	**Florina**	**4.67**	**273**	P	**Pn**	19 04 18.0	+0.2
FNA				S	**Sn**	19 05 10.4	-1.3
FNA	**Florina**	**4.67**	**273**	P	**Pn**	19 04 18.0	+0.2
FNA				S	**Sn**	19 05 10.4	-1.3
GRER		**4.67**	**355**	*i*P	**Pn**	19 04 17.0	-0.8
GRER		**4.67**	**355**	*i*P	**Pn**	19 04 17.0	-0.8
BARS	**Barje**	**4.75**	**298**	*e*Pn	**Pn**	19 04 20.2	+1.3
BARS				*e*Sn	**Sg**	19 05 35.8	-4.7
BARS	**Barje**	**4.75**	**298**	*e*Pn	**Pn**	19 04 20.2	+1.3
EVR	**Evrytania**	**4.75**	**250**	*e*PN	**Pn**	19 04 19.3	+0.2
EVR	**Evrytania**	**4.75**	**250**	*e*Pn	**Pn**	19 04 19.3	+0.2
BRTR	**Keskin Array B**	**4.79**	**100**	Pn	**Pn**	19 04 19.1	-0.5
	1.2nm,0.3s,baz=343,slow=22,SNR=28						
BRTR				Sn	**Sn**	19 05 12.8	-2.1
	3.7nm,0.3s,baz=133,slow=21,SNR=9.9						
TRIZ	**Trizonia**	**4.82**	**243**	P	**Pn**	19 04 19.7	-0.2
TRIZ	**Trizonia**	**4.82**	**243**	P	**Pn**	19 04 19.7	-0.2
GUR	**Goura**	**4.88**	**237**	P	**Pn**	19 04 20.5	-0.4
GUR	**Goura**	**4.88**	**237**	P	**Pn**	19 04 20.5	-0.4
MLR	**Muntele Rosu**	**4.90**	**347**	Pn	**Pn**	19 04 23.1	+2.0
	1.2nm,0.3s,baz=130,slow=3.0,SNR=44						
MLR				Lg	Lg	19 05 43.0	
	0.5nm,0.3s,baz=248,slow=23,SNR=3.2						
BOLS	**Boljevac**	**5.17**	**309**	*e*Pn	**Pn**	19 04 25.2	+0.6
BOLS				*e*Sn	Sb	19 05 46.4	+6.7
BOLS	**Boljevac**	**5.17**	**309**	*e*Pn	**Pn**	19 04 25.2	+0.6
PLOR	**Plostina**	**5.17**	**353**	*i*P	**Pn**	19 04 25.9	+1.3
PLOR	**Plostina**	**5.17**	**353**	*i*P	**Pn**	19 04 25.9	+1.3
VRI	**Vrincioaia**	**5.17**	**354**	*i*P	**Pn**	19 04 25.9	+1.2
VRI	**Vrincioaia**	**5.17**	**354**	*i*P	**Pn**	19 04 25.9	+1.2
KYTH	**Kithira**	**5.66**	**220**	P	**Pn**	19 04 32.2	+0.8
KYTH	**Kithira**	**5.66**	**220**	P	**Pn**	19 04 32.2	+0.8
TESR		**5.82**	**354**	*i*P	**Pn**	19 04 34.1	+0.5
TESR		**5.82**	**354**	*i*P	**Pn**	19 04 34.1	+0.5
GRUS	**Gruza**	**5.95**	**304**	*e*Pn	**Pn**	19 04 35.5	+0.1
GRUS	**Gruza**	**5.95**	**304**	*e*Pn	**Pn**	19 04 35.5	+0.1
DIVS	**Divibare**	**6.51**	**304**	*e*Pn	**Pn**	19 04 44.3	+1.1
DIVS				*e*Sn	**Sb**	19 06 17.2	-1.3
DIVS	**Divibare**	**6.51**	**304**	*e*Pn	**Pn**	19 04 44.3	+1.1
BBLS	**Lazići**	**6.79**	**300**	*e*Pn	**Pn**	19 04 47.4	+0.5
BBLS				*e*Sn	**Sb**	19 06 24.0	-2.4
BBLS	**Lazići**	**6.79**	**300**	*e*Pn	**Pn**	19 04 47.4	+0.5
AYKD	**Aykdinkavak**	**7.94**	**112**	*i*P	Pb	19 05 18.7	-6.6
KOLS	**Kolonicke sedl**	**9.01**	**337**	*e*PN	**Pn**	19 05 16.6	-0.8
KOLS				*e*		19 08 01.8	
CRVS	**Cervenica-Dubn**	**9.24**	**334**	*e*PN	**Pn**	19 05 18.0	-2.5
CRVS				*e*		19 08 10.6	
VYHS	**Vyhne**	**9.93**	**324**	*e*PN	**Pn**	19 05 27.8	-2.1
MMAI	**Mount Meron Ar**	**9.95**	**138**	Pn	**Pn**	19 05 31.3	+1.0
	0.5nm,0.3s,baz=328,slow=15,SNR=4.9						
AKASG	**Malin Array Be**	**10.05**	**6**	Pn	**Pn**	19 05 34.4	+2.8
	1.0nm,0.3s,baz=185,slow=12,SNR=3.8						
AKASG				Sn	**Sn**	19 07 27.3	+3.5
	1.5nm,0.3s,baz=194,slow=25,SNR=6.2						
GERES	**GERESS Array B**	**12.72**	**314**	LR	LR	19 10 51.4	
	comp=Z,77nm,19.1s,baz=99,slow=36						
FINES	**FINESS Array B**	**20.77**	**358**	P	**P**	19 07 48.6	+0.7
	1.0nm,0.7s,baz=171,slow=9.8,SNR=3.1						
NOA	**NORSAR Array B**	**22.67**	**339**	P	**P**	19 08 09.7	+1.3
	1.1nm,0.8s,baz=145,slow=11,SNR=4.3						
AKTO	**Aktyubinsk**	**23.30**	**55**	P	**P**	19 08 15.0	0.0
	0.8nm,0.7s,baz=254,slow=15,SNR=2.7						
ESDC	**Sonseca Array**	**24.01**	**278**	P	**P**	19 08 22.6	+0.6
	0.6nm,0.6s,baz=79,slow=10.0,SNR=3.9						
TORD	**Torodi Ar. Bea**	**35.58**	**227**	P	**P**	19 10 05.1	+0.4
	0.9nm,0.6s,baz=36,slow=8.1,SNR=7.4						
MKAR	**Makanchi Array**	**39.34**	**62**	P	**P**	19 10 36.9	+0.6
	1.2nm,0.6s,baz=283,slow=7.4,SNR=20						
ZALV	**Zalesovo Beam**	**39.92**	**51**	P	**P**	19 10 41.2	+0.2
	2.7nm,0.5s,baz=268,slow=9.2,SNR=17						
SONM	**Songino Array**	**54.62**	**54**	P	**P**	19 12 36.5	+0.8
	0.3nm,0.4s,baz=298,slow=7.5,SNR=2.9						
CMAR	**Chiang Mai Arr**	**64.26**	**87**	P	**P**	19 13 41.7	-0.9
	0.3nm,0.6s,baz=304,slow=7.4,SNR=4.1						

MAN 27 19:08:35,12˚.80N×123˚.10E,h11km,mb4.4,ML3.2,MS3.0, 1C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.67**	**321**	*e*P	Pg	19 08 48.1	+0.1
OTRP	**Odiongan**	**1.14**	**248**	*e*P	Pb	19 08 54.9	-1.9
GQP	**Guinayangan**	**1.27**	**330**	*i*P	Pn	19 08 57.7	-1.0
GQP				*i*S	Sg	19 09 16.3	+0.2
RCP	**Roxas**	**1.28**	**196**	*e*P	Pn	19 08 57.0	-1.8
CNP	**Catarman**	**1.55**	**100**	*e*P	Pn	19 09 02.0	-0.5
SJMP	**San Jose**	**1.97**	**260**	*e*P	Pn	19 09 09.5	+1.3
GUIM	**Jordan**	**2.21**	**193**	*e*P	Pn	19 09 13.1	+1.4
CUYO	**Cuyo Island**	**2.81**	**227**	*e*P	Pn	19 09 18.8	-1.1

IDC ***27*** *19:27:25.5±0.8,4˚.27N×126˚.98E,h0km,mb3.9/9, mb1 4.0/9,mb1mx3.8/24,mbtmp3.9/9,Error ellipse: s-maj=48.2km s-min=15.4km az=70.0*
ISCJB ***27*** *19:27:28.8±0.6,4˚.33N±0˚.08×127˚.0E±0˚.1,h36km,mb3.8/9, Error ellipse: s-maj=18.5km s-min=7.9km az=152.5*
AUST ***27*** *19:27:34.6,4˚.00N×127˚.51E,h60km*
ISC 27 19:27:31.1±0.7,4˚.2N±0˚.1×126˚.9E±0˚.2,h36km,n27, σ1s26/25,mb3.8/9,1D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**3.99**	**319**	*i*P	**Pn**	**19 28 32.2**	**+2.5**
LUWI	**Luwuk**	**6.63**	**218**	P	Pn	19 29 10.9	+4.9
	baz=6.9,SNR=10						
SWI	**Sorong**	**6.67**	**139**	P	**Pn**	**19 29 08.2**	**+1.6**
	baz=6.1,SNR=6.5						
PCI	**Palu**	**8.67**	**234**	S	Sn	19 31 43.5	+33
	baz=9.1,SNR=13						
MTN	**Manton Dam**	**17.45**	**166**	P	**Pn**	**19 31 29.7**	**-2.1**
	baz=17,SNR=9.2						
MMPI	**Merauke**	**18.43**	**133**	P	P	19 31 35.2	-8.4
	baz=18,SNR=4.7						
FITZ	**Fitzroy Crossi**	**22.19**	**183**	P	**P**	**19 32 22.6**	**-1.8**
	1.2nm,0.3s,baz=342,slow=5.6,SNR=18						
FITZ	**Fitzroy Crossi**	**22.19**	**183**	P	**P**	**19 32 26.4**	**+2.0**
	baz=22,SNR=11						
ASAR	**Alice Springs**	**28.53**	**166**	P	**P**	**19 33 23.5**	**0.0**
	0.4nm,0.5s,baz=355,slow=9.5,SNR=9.3						
CMAR	**Chiang Mai Arr**	**30.77**	**300**	P	**P**	**19 33 43.4**	**0.0**
	1.0nm,0.7s,baz=112,slow=7.2,SNR=7.8						
MEEK	**Meekatharra**	**31.68**	**194**	P	**P**	**19 33 50.6**	**-0.8**
	baz=32,SNR=3.8						
BBOO	**Buckleboo**	**37.82**	**167**	P	**P**	**19 34 44.6**	**+0.3**
	baz=38,SNR=5.7						
STKA	**Stephens Creek**	**38.51**	**160**	P	**P**	**19 34 50.4**	**+0.3**
	3.1nm,0.7s,baz=347,slow=8.3,SNR=12						
STKA	**Stephens Creek**	**38.51**	**160**	P	**P**	**19 34 51.0**	**+0.9**
	baz=38,SNR=9.1						
TAPN	**Taplejung**	**43.86**	**306**	*e*P	**P**	**19 35 34.5**	**-0.1**
	3.4nm,0.5s						
ODAN	**Odare**	**43.92**	**305**	*e*P	**P**	**19 35 34.6**	**-0.4**
	7.8nm,0.7s						
RAMN	**Ramite**	**44.60**	**305**	*e*P	**P**	**19 35 39.3**	**-1.2**
GUN	**Gumba**	**45.57**	**306**	*e*P	**P**	**19 35 47.6**	**-0.7**
	3.6nm,0.4s						
SONM	**Songino Array**	**46.91**	**341**	P	**P**	**19 35 56.2**	**-2.0**
	0.5nm,0.7s,baz=151,slow=3.3,SNR=2.4						
KOLN	**Koldanda**	**47.38**	**304**	*e*P	**P**	**19 36 01.7**	**-0.6**
	8.1nm,0.5s						
DANN	**Dangsing**	**47.47**	**305**	*e*P	**P**	**19 36 02.4**	**-0.7**
	9.6nm,0.5s						
PYUN	**Piuthan**	**48.01**	**305**	*e*P	**P**	**19 36 06.5**	**-0.7**
	92nm,1.6s						
MKAR	**Makanchi Array**	**57.26**	**325**	P	**P**	**19 37 15.3**	**+0.2**
	1.8nm,0.5s,baz=117,slow=7.8,SNR=49						
MKAR				PcP	**PcP**	**19 38 10.9**	**+1.8**
	0.6nm,0.6s,baz=108,slow=5.1,SNR=2.6						
ZALV	**Zalesovo Beam**	**60.24**	**333**	P	**P**	**19 37 35.4**	**-0.3**
	1.0nm,0.5s,baz=124,slow=6.0,SNR=6.5						
VNDA	**Vanda**	**83.87**	**173**	P	**P**	**19 39 57.5**	**+0.9**
	0.5nm,0.6s,baz=352,slow=7.1,SNR=3.8						
ILAR	**Eielson Array**	**84.62**	**25**	P	**P**	**19 39 59.5**	**-1.1**
	0.4nm,0.8s,baz=232,slow=5.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**122.91**	**288**	PKP	**PKPdf**	**19 46 24.0**	**-0.6**
	0.6nm,1.0s,baz=63,slow=2.1,SNR=3.6						

IDC ***27*** *19:44:24.2±1.6,34˚.28N×24˚.92E,h0km,mb3.5/2, mb1 3.6/3,mb1mx3.3/24,mbtmp3.6/3,ML4.6/1,MS2.9/1, Ms1 3.0/1,ms1mx2.2/32,Error ellipse: s-maj=79.2km s-min=26.2km az=133.0*
ISCJB ***27*** *19:44:27.1±0.9,34˚.30N±0˚.03×24˚.75E±0˚.05,h31km±8km, mb3.3/2,MS2.7/1,Error ellipse: s-maj=6.7km s-min=4.3km az=158.7*
CSEM ***27*** *19:44:27.4±0.2,34˚.34N×24˚.74E,h15km,ML3.0/1,Error ellipse: s-maj=7.0km s-min=4.4km az=58.0*
ATH ***27*** *19:44:29.9,34˚.51N×24˚.74E,h34km±3km,MD3.4/12*
HLW ***27*** *19:44:30.1,34˚.35N×25˚.04E,h33km±25km,Md3.5,Ml3.1*
THE ***27*** *19:44:32.7,34˚.66N×24˚.69E,h21km±1km,ML3.0/1,Error ellipse: s-maj=1.7km s-min=0.8km az=181.0*
ISC 27 19:44:28.2±1.1,34˚.39N±0˚.04×24˚.74E±0˚.03,h29km±10km, n57,σ1s17/81,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.63**	**5**	P	**Pb**	**19 44 40.9**	**+0.2**
SIVA				S	**Sb**	**19 44 46.2**	**-3.0**
SIVA	**Sivas**	**0.63**	**5**	*e*PN	**Pn**	**19 44 41.2**	**0.0**
SIVA				*e*SN	**Sb**	**19 44 49.1**	**-0.1**
SIVA	**Sivas**	**0.63**	**5**	P	**Pb**	**19 44 40.9**	**+0.2**
SIVA	**Sivas**	**0.63**	**5**	*e*Pn	**Pn**	**19 44 41.2**	**0.0**
SIVA				*e*Sn	**Sb**	**19 44 49.1**	**-0.1**
GVD	**Gavdhos**	**0.70**	**310**	P	**Pn**	**19 44 42.6**	**+0.4**
GVD				S	**Sb**	**19 44 51.3**	**0.0**
GVD	**Gavdhos**	**0.70**	**310**	*e*PN	**Pn**	**19 44 42.7**	**+0.5**
GVD				*e*SN	**Sn**	**19 44 53.1**	**+1.0**
GVD	**Gavdhos**	**0.70**	**310**	*e*Pn	**Pn**	**19 44 42.7**	**+0.5**
GVD				S	**Sb**	**19 44 51.3**	**0.0**
GVD				*e*Sn	**Sn**	**19 44 53.1**	**+1.0**
IDI	**Anoyia**	**0.90**	**8**	P	**Pn**	**19 44 45.3**	**+0.3**
IDI				S	**Sb**	**19 44 54.3**	**-2.8**
IDI	**Anoyia**	**0.90**	**8**	*e*PN	**Pn**	**19 44 45.3**	**+0.3**
IDI				*e*SN	**Sb**	**19 44 56.7**	**-0.4**
IDI	**Anoyia**	**0.90**	**8**	P	**Pn**	**19 44 45.3**	**+0.3**
IDI				*e*Sn	**Sb**	**19 44 56.7**	**-0.4**
LAST	**Lasithi**	**0.98**	**38**	P	**Pb**	**19 44 47.4**	**+0.8**
LAST				S	**Sb**	**19 44 59.2**	**0.0**
LAST	**Lasithi**	**0.98**	**38**	*e*PN	**Pb**	**19 44 47.4**	**+0.8**
LAST	**Lasithi**	**0.98**	**38**	P	**Pb**	**19 44 47.4**	**+0.8**
LAST				S	**Sb**	**19 44 59.2**	**0.0**
VAM	**Vamos**	**1.11**	**336**	P	**Pb**	**19 44 48.6**	**-0.2**
VAM				S	**Sn**	**19 44 59.7**	**-2.4**
VAM	**Vamos**	**1.11**	**336**	*e*PN	**Pb**	**19 44 48.8**	**0.0**
VAM				*e*SN	**Sb**	**19 45 03.6**	**+0.8**
VAM	**Vamos**	**1.11**	**336**	P	**Pb**	**19 44 48.6**	**-0.2**
VAM				*e*Sn	**Sb**	**19 45 03.6**	**+0.8**
NPS	**Neapolis**	**1.12**	**39**	P	**Pb**	**19 44 50.1**	**+1.0**
NPS				S	**Sb**	**19 45 03.4**	**+0.1**
NPS	**Neapolis**	**1.12**	**39**	*e*PN	**Pb**	**19 44 50.1**	**+1.0**
NPS				S	**Sb**	**19 45 03.4**	**+0.1**
KARN	**Karanos**	**1.22**	**326**	P	**Pb**	**19 44 50.4**	**-0.2**
KARN				S	**Sn**	**19 45 03.3**	**-1.5**
KARN	**Karanos**	**1.22**	**326**	*e*PB	**Pb**	**19 44 50.4**	**-0.2**
KARN				*e*SN	**Sb**	**19 45 06.4**	**+0.5**
KARN	**Karanos**	**1.22**	**326**	P	**Pb**	**19 44 50.4**	**-0.2**
KARN				*e*Sn	**Sb**	**19 45 06.4**	**+0.5**
ZKR	**Zakros**	**1.41**	**59**	*e*PN	**Pb**	**19 44 54.8**	**+0.9**
ZKR	**Zakros**	**1.41**	**59**	*e*Pn	**Pb**	**19 44 54.8**	**+0.9**
KARP	**Karpathos**	**2.29**	**59**	*e*PN	**Pb**	**19 45 07.2**	**-1.8**
KARP	**Karpathos**	**2.29**	**59**	*e*Pn	**Pb**	**19 45 07.2**	**-1.8**
KYTH	**Kithira**	**2.35**	**324**	*e*PN	**Pn**	**19 45 07.1**	**+2.3**
KYTH	**Kithira**	**2.35**	**324**	*e*Pn	**Pn**	**19 45 07.1**	**+2.3**
APE	**Apeiranthos**	**2.75**	**13**	*e*PN	**Pn**	**19 45 10.2**	**-0.2**
APE	**Apeiranthos**	**2.75**	**13**	*e*Pn	**Pn**	**19 45 10.2**	**-0.2**
VLI	**Veliai**	**2.75**	**328**	P	**Pn**	**19 45 11.1**	**+0.7**
VLI				S	**Sn**	**19 45 40.5**	**-2.1**
VLI	**Veliai**	**2.75**	**328**	*e*PN	**Pn**	**19 45 12.3**	**+1.9**
VLI	**Veliai**	**2.75**	**328**	P	**Pn**	**19 45 11.1**	**+0.7**
VLI	**Veliai**	**2.75**	**328**	*e*Pn	**Pn**	**19 45 12.3**	**+1.9**
ARG	**Arkhangelos**	**3.31**	**56**	P	**Pn**	**19 45 20.3**	**+2.2**
ARG				S	**Sn**	**19 45 58.9**	**+2.4**
ARG	**Arkhangelos**	**3.31**	**56**	*e*PN	**Pn**	**19 45 20.1**	**+2.0**
ARG	**Arkhangelos**	**3.31**	**56**	*e*Pn	**Pn**	**19 45 20.1**	**+2.0**
ARG				S	**Sn**	**19 45 58.9**	**+2.4**
DID	**Didima**	**3.34**	**339**	P	**Pn**	**19 45 18.6**	**+0.1**
DID				S	**Sn**	**19 45 55.8**	**-1.4**
DID	**Didima**	**3.34**	**339**	P	**Pn**	**19 45 18.6**	**+0.1**
HMAT	**Matruh**	**3.84**	**148**	AMP		19 46 00.0	
	comp=E,10μm,0.4s,logA

VAM					*e*SN		**Sn**	19 57 53.3	+4.3
VAM	**Vamos**	**0.97**	**336**		P		**Pn**	19 57 37.3	+1.0
VAM					S		**Sn**	19 57 49.1	+0.1
VAM					*e*Sn		Sn	19 57 53.3	+4.3
NPS	**Neapolis**	**1.07**	**46**		P		**Pn**	19 57 38.7	+1.0
NPS					S		**Sn**	19 57 51.3	-0.2
NPS	**Neapolis**	**1.07**	**46**		*e*PN		**Pn**	19 57 39.0	+1.3
NPS	**Neapolis**	**1.07**	**46**		P		**Pn**	19 57 38.7	+1.0
NPS	**Neapolis**	**1.07**	**46**		*e*Pn		**Pn**	19 57 39.0	+1.3
NPS					S		**Sn**	19 57 51.3	-0.2
KARN	**Karanos**	**1.08**	**325**		P		**Pn**	19 57 38.8	+1.0
KARN					S		**Sn**	19 57 52.4	+0.7
KARN	**Karanos**	**1.08**	**325**		*e*PN		**Pn**	19 57 39.2	+1.4
KARN	**Karanos**	**1.08**	**325**		P		**Pn**	19 57 38.8	+1.0
KARN	**Karanos**	**1.08**	**325**		*e*Pn		**Pn**	19 57 39.2	+1.4
KARN					S		**Sn**	19 57 52.4	+0.7
ZKR	**Zakros**	**1.40**	**64**		P		**Pn**	19 57 43.0	+0.8
ZKR					S		**Sn**	19 58 00.4	+0.8
ZKR	**Zakros**	**1.40**	**64**		*e*PN		**Pn**	19 57 43.3	+1.1
ZKR					*e*SN		**Sn**	19 58 01.5	+1.9
ZKR	**Zakros**	**1.40**	**64**		P		**Pn**	19 57 43.0	+0.8
ZKR	**Zakros**	**1.40**	**64**		*e*Pn		**Pn**	19 57 43.3	+1.1
ZKR					S		**Sn**	19 58 00.4	+0.8
ZKR					*e*Sn		Sn	19 58 01.5	+1.9
KYTH	**Kithira**	**2.21**	**323**		*e*PN		**Pn**	19 57 55.4	+2.1
KYTH	**Kithira**	**2.21**	**323**		*e*Pn		**Pn**	19 57 55.4	+2.1
KARP	**Karpathos**	**2.29**	**63**		*e*PN		**Pn**	19 57 56.2	+1.9
KARP	**Karpathos**	**2.29**	**63**		*e*Pn		**Pn**	19 57 56.2	+1.9
LTBQ	**Tobruq**	**2.54**	**195**		*i* P		**Pn**	19 57 58.0	+0.3
	SNR=44								
VLI	**Veliai**	**2.61**	**328**		P		**Pn**	19 57 59.5	+0.7
VLI					S		**Sn**	19 58 29.4	+0.1
VLI	**Veliai**	**2.61**	**328**		*e*PN		**Pn**	19 58 00.5	+1.7
VLI	**Veliai**	**2.61**	**328**		P		**Pn**	19 57 59.5	+0.7
VLI	**Veliai**	**2.61**	**328**		*e*Pn		**Pn**	19 58 00.5	+1.7
VLI					S		**Sn**	19 58 29.4	+0.1
DYR	**Agios Nikonas**	**2.94**	**320**		P		**Pn**	19 58 03.6	+0.3
DYR					S		**Sn**	19 58 37.5	+0.1
DYR	**Agios Nikonas**	**2.94**	**320**		P		**Pn**	19 58 03.6	+0.3
DYR					S		**Sn**	19 58 37.5	+0.1
DID	**Didima**	**3.20**	**339**		P		**Pn**	19 58 06.7	-0.2
DID					S		**Sn**	19 58 43.5	-0.3
DID	**Didima**	**3.20**	**339**		P		**Pn**	19 58 06.7	-0.2
DID					S		**Sn**	19 58 43.5	-0.3
ARG	**Arkhangelos**	**3.29**	**58**		P		**Pn**	19 58 09.1	+1.0
ARG					S		**Sn**	19 58 46.2	+0.2
ARG	**Arkhangelos**	**3.29**	**58**		*e*PN		**Pn**	19 58 09.2	+1.1
ARG	**Arkhangelos**	**3.29**	**58**		P		**Pn**	19 58 09.1	+1.0
ARG					S		**Sn**	19 58 46.2	+0.2
ITM	**Ithomi**	**3.47**	**321**		*e*PN		**Pn**	19 58 13.6	+3.1
ITM	**Ithomi**	**3.47**	**321**		*e*Pn		**Pn**	19 58 13.6	+3.1
LTK	**Loutraki**	**3.76**	**339**		P		**Pn**	19 58 15.0	+0.5
LTK	**Loutraki**	**3.76**	**339**		P		**Pn**	19 58 15.0	+0.5
AMT	**Artemida-Makis**	**3.85**	**322**		P		**Pn**	19 58 15.8	0.0
AMT					S		**Sn**	19 58 59.0	-0.8
AMT	**Artemida-Makis**	**3.85**	**322**		P		**Pn**	19 58 15.8	0.0
AMT					S		**Sn**	19 58 59.0	-0.8
HMAT	**Matruh**	**3.98**	**148**		P		Pn	19 58 14.1	-3.4
LAKA	**Lakka**	**4.30**	**330**		*e*PN		Pn	19 58 25.5	+3.5
LAKA	**Lakka**	**4.30**	**330**		*e*Pn		Pn	19 58 25.5	+3.5
KALE	**Kalithea**	**4.37**	**333**		*e*PN		**Pn**	19 58 24.6	+1.6
KALE	**Kalithea**	**4.37**	**333**		*e*Pn		**Pn**	19 58 24.6	+1.6
AGG	**Agios Georgios**	**4.87**	**338**		*e*PN		**Pn**	19 58 32.7	+2.9
AGG	**Agios Georgios**	**4.87**	**338**		*e*Pn		**Pn**	19 58 32.7	+2.9
SWA2		**5.30**	**173**		P		Pn	19 58 34.0	-1.7
	baz=179								
SWA2					AMP			19 59 00.0	
	comp=E,160µm,0.4s,logA/T=5.6,baz=179								
SWA2					S		Sn	19 59 29.5	-6.0
	baz=179								
SWA2		**5.30**	**173**		P		Pn	19 58 34.0	-1.7
SWA2					S		Sn	19 59 29.5	-6.0
GLL	**Jalalah**	**7.74**	**128**		P		Pn	19 59 04.9	-4.3
	baz=128								
HFRF	**Wahat Farafira**	**7.98**	**156**		P		Pn	19 59 10.1	-2.4
	baz=159								
HFRF					AMP			20 00 00.0	
	comp=N,30µm,0.7s,logA/T=4.6,baz=159								
HFRF	**Wahat Farafira**	**7.98**	**156**		P		Pn	19 59 10.1	-2.4
AMAG	**Maghara**	**8.17**	**116**		P		Pn	19 59 10.5	-4.7
	baz=115								
BRTR	**Keskin Array B**	**8.85**	**51**		Pn		**Pn**	**19 59 23.1**	**-1.2**
	comp=N,0.1nm,0.3s,baz=224,slow=13,SNR=4.1								
MMAI	**Mount Meron Ar**	**9.06**	**97**		Pn		Pn	19 59 23.6	-3.7
	comp=N,0.8nm,0.3s,baz=256,slow=16,SNR=6.1								
MMAI					Sn		Sn	20 01 00.1	-7.8
	comp=N,2.8nm,0.3s,baz=287,slow=24,SNR=8.3								
HNKL	**Nakhl**	**9.11**	**118**		P		Pn	19 59 23.8	-4.2
	baz=117								
HNKL					S		Sn	20 00 55.1	-14
	baz=117								
HNKL					AMP			20 01 00.0	
	comp=E,10µm,0.6s,logA/T=4.2,baz=117								
HKAT	**Jabal Katrina**	**9.95**	**124**		P		Pn	19 59 35.1	-4.5
	baz=125								
EIL	**Elat**	**9.97**	**116**		Pn		Pn	19 59 36.4	-3.3
	comp=E,0.5nm,0.3s,baz=332,slow=11,SNR=9.4								
EIL					Sn		Sn	20 01 21.6	-8.6
	comp=E,0.6nm,0.3s,baz=71,slow=18,SNR=5.1								
AKRG	**Al Kharijah**	**10.30**	**149**		P		Pn	19 59 41.2	-3.0
	baz=151								
ASF	**Jabal al Asfar**	**10.49**	**99**		Sn		Sn	20 01 33.9	-9.2
	comp=E,0.3nm,0.3s,baz=34,slow=18,SNR=2.5								
HDK2	**Wahat Dakhilah**	**10.82**	**159**		P		Pn	19 59 49.4	-2.0
	baz=161								
HDK2	**Wahat Dakhilah**	**10.82**	**159**		P		Pn	19 59 49.4	-2.0
CRVS	**Cervenica-Dubn**	**14.57**	**352**		*e*PN		**P**	**20 00 48.1**	**+0.4**
CRVS					*e*			20 12 01.9	
VYHS	**Vyhne**	**14.62**	**344**		*e*PN		**P**	**20 00 48.7**	**+0.4**
GERES	**GERESS Array B**	**16.47**	**334**		Pn		**Pn**	**20 01 06.6**	**-0.1**
	comp=E,0.2nm,0.3s,baz=154,slow=10,SNR=4.6								
AKASG	**Malin Array Be**	**16.51**	**10**		Pn		**P**	**20 01 08.0**	**-1.2**
	comp=E,4.7nm,0.3s,baz=201,slow=10,SNR=20								
KBZ	**Khabaz**	**16.84**	**51**		Pn		**P**	**20 01 12.5**	**-0.4**
	comp=E,0.0nm,0.3s,baz=248,slow=7.6,SNR=3.8								
HFS	**Hagfors**	**26.61**	**348**		P		**P**	**20 02 50.3**	**-2.5**
	comp=E,1.0nm,0.7s,baz=159,slow=13,SNR=4.2								
FINES	**FINESS Array B**	**26.96**	**1**		P		**P**	**20 02 54.6**	**-1.2**
	comp=E,0.8nm,0.7s,baz=157,slow=10,SNR=3.8								
NB2	**NORSAR Subarra**	**27.92**	**346**		P		**P**	**20 03 03.9**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=159,slow=9.3								
NB2	**NORSAR Subarra**	**27.92**	**346**		P		**P**	**20 03 03.9**	**-0.6**
	comp=Z,0.3nm,0.4s,SNR=4.1								
NOA	**NORSAR Array B**	**27.92**	**346**		P		**P**	**20 03 03.9**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=152,slow=8.7,SNR=4.3								
EKA	**Eskdalemuir Ar**	**28.34**	**326**		P		P	20 03 11.6	+3.4
	comp=Z,0.3nm,0.4s,baz=122,slow=8.9,SNR=4.0								
TORD	**Torodi Ar. Bea**	**29.77**	**230**		P		**P**	**20 03 22.1**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=33,slow=8.7,SNR=34								
ARCES	**ARCESS Array B**	**35.07**	**1**		P		**P**	**20 04 06.1**	**-1.0**
	comp=Z,1.2nm,0.9s,baz=178,slow=10,SNR=3.5								
KURBB	**Kurchatov Arra**	**41.84**	**50**		P		**P**	**20 05 03.9**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=275,slow=8.5,SNR=5.3								
MKAR	**Makanchi Array**	**44.46**	**56**		P		**P**	**20 05 25.8**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=266,slow=7.9,SNR=9.3								
ZALV	**Zalesovo Beam**	**45.74**	**46**		P		**P**	**20 05 35.3**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=269,slow=9.5,SNR=6.2								

MAN 27 20:03:55.1 11.22N×124.61E, h9km, mb4.7, ML3.6, MS3.6, 5C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OCLP	**Ormoc**	**0.17**	**181**		*e*P	Pg	20 03 59.8	+1.2
PLP	**Palo**	**0.36**	**99**	⇓	*i* P	Pg	20 04 02.7	+0.5
PLP					*i* S	Sb	20 04 09.2	-0.4
BESP	**Borongan**	**0.90**	**65**		*e*P	Pg	20 04 11.8	-0.5
LLP	**Lapu-Lapu**	**1.10**	**215**	⇑	*e*P	Pg	20 04 14.9	-1.3
LLP					*e*S	Sn	20 04 31.4	-0.5
MSLP	**Maasin**	**1.11**	**167**		*e*P	Pb	20 04 16.4	0.0
CNP	**Catarman**	**1.28**	**2**		*e*P	Pn	20 04 18.1	-1.1
MMPH	**Masbate**	**1.49**	**320**	⇑	*i* P	Pn	20 04 21.5	-0.4
MMPH					*i* S	Sb	20 04 42.0	+0.2
RCP	**Roxas**	**1.86**	**281**	⇑	*e*P	Pn	20 04 27.7	+0.6
GUIM	**Jordan**	**2.07**	**254**		*e*P	Pn	20 04 31.1	+1.1
SNPH	**Sibulan**	**2.30**	**216**	⇑	*e*P	Pn	20 04 20.6	-13
SNPH					*e*S	Sn	20 04 50.7	-11
BUTP	**Butuan**	**2.45**	**156**		*e*P	Pg	20 04 40.9	-1.1
OTRP	**Odiongan**	**2.78**	**294**		*e*P	Pb	20 04 42.8	-2.1
DCPH	**Dipolog City**	**2.90**	**205**	⇑	*e*P	Pn	20 04 41.6	+0.2
BUKP	**Musuan**	**3.35**	**172**		*e*P	Pn	20 04 51.0	+3.4
PAGZ	**Pagadian**	**3.56**	**200**		*e*P	Pn	20 04 52.6	+2.0
SJMP	**San Jose**	**3.63**	**290**		*e*P	Pn	20 04 54.3	+2.9
CTBH	**Cotabato--PC H**	**3.99**	**185**	⇓	*i* P	Pn	20 04 59.0	+2.7
ENPP	**El Nido**	**5.09**	**270**		*e*P	Pn	20 05 12.4	+0.9

SZGRF ***27*** *20:04:08.8,41.69N×72.43E,h33km, mb5.2, MS4.4, Kyrgyzstan*

BJI ***27*** *20:04:10.8,43.06N×72.42E,h6km, mB5.1/34, mb5.0/55, ML5.2/4, Ms4.9/57, Ms7 4.7/52*

LDG ***27*** *20:04:10.2±0.1,42.78N×72.45E,h10km, Mb5.2/47, Ms4.2/10, Error ellipse: s-maj=6.8km s-min=4.0km az=8.0*

ISCJB ***27*** *20:04:11.3±0.7,42.88N±0.02×72.47E±0.02,h6km±4km, mb5.1/242, MS4.5/151, Error ellipse: s-maj=3.1km s-min=2.1km az=18.5*

IDC ***27*** *20:04:13.6±1.5,42.90N×72.52E,h13km±10km, mb4.7/44, mb1 4.9/47, mb1mx4.9/47, mbtmp4.7/47, ML5.3/3, MS4.2/28, Ms1 4.2/28, ms1mx4.1/43, Error ellipse: s-maj=8.0km s-min=7.2km az=179.0*

NNC ***27*** *20:04:13.9±0.7,43.14N×72.32E, h4km±5km, mb5.3, mpv5.0, Error ellipse: s-maj=3.9km s-min=1.9km az=2.0*

KNET ***27*** *20:04:13.4±0.7,42.89N×72.47E, h19km±11km, ml5.3, Error ellipse: s-maj=7.4km s-min=5.5km az=90.0*

MOS ***27*** *20:04:14.8±0.9,42.89N×72.37E, h29km, mb5.4/112, MS4.3/62, Error ellipse: s-maj=6.2km s-min=3.6km az=37.3*

MOS Felt (IV) at Lugovoy,(III) at Talas.

NEIC ***27*** *20:04:14.6±1.2,42.84N×72.44E, h18km±7km, mb5.3/114, MS4.5/82, MW4.7(USGS), Error ellipse: s-maj=5.0km s-min=3.1km az=193.0*

NEIC Felt at Shu and Taraz. Also felt at Talas, Kyrgyzstan and at Tashkent, Uzbekistan.

GCMT ***27*** *20:04:15.7±0.3,42.90N×72.35E, h20km±1km, MW5.0, Moment Tensor Solution. s26,c30; s78,c133; Moment tensor: Scale 10^16 Nm; Mrr3.90±.26; Mθθ-4.41±.18; Mφφ0.50±.13; Mrθ0.52±.25; Mθφ-1.02±.09; Mφr-1.30±.28; Best double couple: M04.50000×10^16 NP1:φ239.00000°, δ47.00000°,λ62.00000°. NP2:φ98.00000°,δ50.00000°, λ117.00000°. Principal axes: T 4.4200, Plg70.0000°, Azm74.0000°; N 0.2000, Plg20.0000°, Azm260.0000°; P -4.6200, Plg2.0000°, Azm169.0000°; Data Used: IU II IC G CN.*

DJA ***27*** *20:04:19.4±1.8,43.19N×7.3E±, h38km±15km, M5.3/7, mB5.3/4, mb5.0/7, MLv5.7/1, Mw(mB)4.8/4*

ISC 27 20:04:13.8±0.3, 42.92N±0.03×72.41E±0.02, h12km±1km, h12km:pP-P,n815,σ1s37/832,mb5.2/241,MS4.5/153, 65C-58D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EKS2	**Erkin-Say**	**1.04**	**104**		*e*PG	**Pb**	**20 04 32.1**	**-1.7**
EKS2	**Erkin-Say**	**1.04**	**104**		*e*Pg	**Pb**	**20 04 32.1**	**-1.7**
EKS2	**Erkin-Say**	**1.04**	**104**		P	**Pb**	**20 04 32.2**	**-1.7**
	3µm,0.2s							
EKS2				⇑	S	**Sb**	**20 04 46.5**	**-0.9**
	12µm,0.3s							
AML	**Almayashu**	**1.23**	**129**		P	**Pn**	**20 04 34.9**	**-2.3**
	3µm,0.4s,SNR=5397							
KK31	**Karatay Array**	**1.41**	**278**	⇓	P	**Pn**	**20 04 38.7**	**-0.6**
	994nm,0.4s,baz=105,slow=17							
KK31				⇓	S	**Sn**	**20 04 56.6**	**-1.1**
	9µm,0.6s,baz=102,slow=29,SNR=27							
AAK	**Ala-Archa**	**1.56**	**100**		PN	**Pn**	**20 04 41.6**	**+0.1**
AAK					pmax	pmax		
	comp=N,3.0nm,0.3s							
AAK	**Ala-Archa**	**1.56**	**100**		*e*Pn	**Pn**	**20 04 41.0**	**-0.5**
AAK					Pg	**Pn**	**20 04 41.6**	**+0.1**
AAK					Lg	Lg	20 05 03.0	
AAK	**Ala-Archa**	**1.56**	**100**		Pn	**Pn**	**20 04 41.7**	**+0.1**
	SNR=4861							
AAK	**Ala-Archa**	**1.56**	**100**		P	**Pn**	**20 04 41.6**	**+0.1**
	comp=N,5µm,0.2s							
AAK				⇑	S	**Sb**	**20 05 03.2**	**+0.7**
	comp=N,25µm,0.5s							
AAK	**Ala-Archa**	**1.56**	**100**		Pg	**Pn**	**20 04 41.6**	**+0.1**
	comp=N,3µm,0.3s,baz=258,slow=6.5							
AAK					Lg	Lg	20 05 03.0	
	comp=N,3µm,0.3s,baz=358,slow=22,SNR=37							
USP	**Ospenovka**	**1.57**	**76**		*i* PN	**Pn**	**20 04 41.7**	**+0.1**
USP	**Ospenovka**	**1.57**	**76**		*i* P	**Pn**	**20 04 41.7**	**+0.1**
USP	**Ospenovka**	**1.57**	**76**		P	**Pn**	**20 04 41.7**	**+0.1**
	comp=N,7µm,0.2s							
USP				⇑	S	**Sn**	**20 05 02.1**	**+0.3**
	comp=N,63µm,0.4s							
FRU	**Bishkek**	**1.62**	**92**	⇑	*i* PN	**Pn**	**20 04 42.2**	**-0.1**
FRU					*e*S	**Sb**	**20 05 03.8**	**-0.4**
FRU					*i*		20 05 06.0	
FRU					pmax	pmax		
	comp=Z,8µm,1.8s							
FRU					pmax	pmax		
	comp=E,35µm,1.8s							
UCH	**Uchtor**	**1.70**	**113**		*i* PN	**Pn**	**20 04 44.0**	**+0.3**
UCH	**Uchtor**	**1.70**	**113**		*i* P	**Pn**	**20 04 44.0**	**+0.3**
UCH	**Uchtor**	**1.70**	**113**	⇓	P	**Pn**	**20 04 43.9**	**+0.3**
	comp=E,440nm,0.2s,SNR=200							
CHMS	**Chumysh**	**1.72**	**86**		*i* PN	**Pn**	**20 04 44.1**	**+0.5**
CHMS	**Chumysh**	**1.72**	**86**		P	**Pn**	**20 04 44.0**	**+0.5**
	comp=E,11µm,0.3s,SNR=6562							
CHMS				⇓	S	**Sb**	**20 05 06.9**	**-0.1**
	comp=E,20µm,0.3s							
KBK	**Karagaybulak**	**1.89**	**97**		*i* PN	**Pn**	**20 04 47.2**	**+1.2**
KBK	**Karagaybulak**	**1.89**	**97**		*i* P	**Pn**	**20 04 47.2**	**+1.2**
KBK	**Karagaybulak**	**1.89**	**97**		P	**Pn**	**20 04 47.2**	**+1.2**
	comp=E,11µm,0.4s,SNR=5988							
KBK				⇑	S	**Sb**	**20 05 12.7**	**+0.9**
	comp=E,42µm,0.4s							
KZA	**Kyzart**	**2.26**	**111**		*i* PN	**Pb**	**20 04 54.1**	**-0.7**
KZA	**Kyzart**	**2.26**	**111**		*i* P	**Pb**	**20 04 54.1**	**-0.7**
TKM2	**Tokmak 2**	**2.34**	**89**	⇑	Pn	**Pn**	**20 04 53.4**	**+1.1**
	comp=E,2µm,0.3s							
TKM2				⇑	Sn	**Sb**	**20 05 25.8**	**+0.8**
	comp=E,16µm,0.6s							
TKM2	**Tokmak 2**	**2.34**	**89**		*i* PN	**Pn**	**20 04 53.5**	**+1.2**
TKM2	**Tokmak 2**	**2.34**	**89**		P	**Pn**	**20 04 53.5**	**+1.2**
	comp=E,4µm,0.3s							
ULHL	**Ulahol**	**2.91**	**102**		*i* PN	**Pn**	**20 05 02.3**	**+2.2**
AAA	**Alma-Ata**	**3.34**	**82**		*e*PN	**Pb**	**20 05 14.5**	**+1.5**
AAA					pmax	pmax		
	comp=Z,5µm,0.5s							
KNDC	**Almaty**	**3.35**	**83**	⇑	Pn	**Pn**	**20 05 07.8**	**+1.7**
KNDC				⇑	Lg	Lg	20 06 01.0	
KSH	**Kashi**	**4.33**	**140**	⇑	*i* Pn	Pn	20 05 23.8	+4.2
KSH					Sn	**Sn**	**20 06 13.5**	**+3.5**
KSH					smax	smax		
	comp=N,2µm,1.0s							
KSH					smax	smax		
	comp=E,2µm,1.2s							
MK31	**Makanchi Array**	**8.02**	**58**	⇑	Pn	**Pn**	**20 06 10.3**	**+0.3**
	comp=E,54nm,0.3s,baz=239,slow=15,SNR=3027							
MK31				⇓	Sn	**Sn**	**20 07 42.2**	**+1.6**
	comp=E,94nm,0.5s,baz=235,slow=19,SNR=3.5							
MK31				⇑	Lg	Lg	20 08 28.6	
	comp=E,372nm,0.6s,baz=254,slow=26,SNR=3.6							
MKAR	**Makanchi Array**	**8.02**	**58**		P	**Pn**	**20 06 10.5**	**+0.4**
MKAR							20 07 41.6	
MKAR					pmax	pmax		
	comp=Z,113nm,0.3s							
MKAR					smax	smax		
	comp=N,32nm,0.3s							
MKAR	**Makanchi Array**	**8.02**	**58**		Pn	**Pn**	**20 06 10.5**	**+0.4**
MKAR					Sn	**Sn**	**20 07 41.5**	**+0.9**
MKAR					Lg	Lg	20 08 23.7	
MKAR	**Makanchi Array**	**8.02**	**58**		Pn	**Pn**	**20 06 10.5**	**+0.4**
	comp=N,113nm,0.3s,baz=238,slow=15,SNR=2332							
MKAR					Sn	**Sn**	**20 07 41.5**	**+0.9**
	comp=N,32nm,0.3s,baz=239,slow=24,SNR=5.0							
MKAR					Lg	Lg	20 08 23.7	
	comp=N,58nm,0.3s,baz=246,slow=26,SNR=5.2							
KUR18	**Kurchatov Arra**	**8.76**	**26**	⇑	Pn	**Pn**	**20 06 18.7**	**-1.4**
	comp=N,2.2nm,0.4s							
KUR18				⇓	Sn	**Sn**	**20 07 56.5**	**-2.2**
	comp=N,69nm,1.4s							
KUR18				⇓	Lg	Lg	20 08 48.4	
	comp=N,348nm,1.1s							
KBL	**Kabul**	**8.76**	**199**		*e*P	**Pn**	**20 06 21.9**	**+1.4**
KBL	**Kabul**	**8.76**	**199**		*e*Pn	**Pn**	**20 06 21.9**	**+1.4**
KURBB	**Kurchatov Arra**	**8.78**	**26**		Pn	**Pn**	**20 06 19.1**	**-1.4**
	comp=N,4.8nm,0.3s,baz=218,slow=12,SNR=352							
KURBB					Sn	**Sn**	**20 07 55.9**	**-3.3**
	comp=N,16nm,0.3s,baz=221,slow=23,SNR=9.5							
KURK	**Kurchatov**	**8.89**	**26**	⇓	Pn	**Pn**	**20 06 20.1**	**-1.9**
	comp=N,36nm,0.6s							
KURK				⇓	Sn	**Sn**	**20 08 00.6**	**-1.3**
	comp=N,439nm,1.2s							
KURK				⇓	Lg	Lg	20 08 52.3	
	comp=N,5µm,1.4s							
KURK	**Kurchatov**	**8.89**	**26**	*ce*	P	**Pn**	**20 06 20.7**	**-1.2**
KURK					pmax	pmax		
	comp=Z,67nm,1.7s							
KURK	**Kurchatov**	**8.89**	**26**		*e*Pn	**Pn**	**20 06 20.4**	**-1.5**
KURK					Sn	**Sn**	**20 07 55.9**	**-5.9**
KURK	**Kurchatov**	**8.89**	**26**		Pn	**Pn**	**20 06 20.9**	**-1.0**
	SNR=18							
KURK	**Kurchatov**	**8.89**	**26**		Pn	**Pn**	**20 06 20.3**	**-1.6**
	comp=Z,383nm,0.3s,SNR=51							
CEP	**Cherat**	**9.09**	**183**	⇑	P	**Pn**	**20 06 25.7**	**+0.8**
CEP					S	**Sn**	**20 08 06.0**	**-1.1**
CHCP	**Chirah Chowk**	**9.27**	**176**		P	**Pn**	**20 06 29.1**	**+1.9**
VOSK	**Vostochnaya**	**9.86**	**355**	⇓	Pn	**Pn**	**20 06 33.6**	**-1.7**
	comp=Z,62nm,0.8s							
VOSK				⇓	Sn	**Sn**	**20 08 22.1**	**-3.7**
	comp=Z,821nm,1.1s							
VOSK				⇑	Lg	Lg	20 09 22.1	
	comp=Z,2µm,1.4s							
BVA0	**Borovoye Array**	**10.21**	**353**		Pn	**Pn**	**20 06 38.6**	**-1.4**
	comp=Z,14nm,0.7s,baz=164,slow=16,SNR=546							
BVA0				⇓	Sn	**Sn**	**20 08 31.4**	**-2.9**
	comp=Z,118nm,1.1s,baz=161,slow=25,SNR=5.3							
BVA0				⇑	Lg	Lg	20 09 32.1	
	comp=Z,414nm,1.5s,baz=162,slow=26,SNR=4.4							
BVAR	**Borovoye Array**	**10.21**	**353**		P	**Pn**	**20 06 38.6**	**-1.4**
BVAR							20 08 28.6	
BVAR					pmax	pmax		
	comp=Z,14nm,0.3s							
BVAR					smax	smax		
	comp=N,28nm,0.3s							
BVAR	**Borovoye Array**	**10.21**	**353**		Pn	**Pn**	**20 06 38.6**	**-1.4**
BVAR					Sn	**Sn**	**20 08 28.6**	**-5.7**
BVAR					Lg	Lg	20 09 38.5	
BVAR	**Borovoye Array**	**10.21**	**353**		Pn	**Pn**	**20 06 38.6**	**-1.4**
	comp=N,14nm,0.3s,baz=158,slow=9.7,SNR=205							
BVAR					Sn	**Sn**	**20 08 28.6**	**-5.7**
	comp=N,28nm,0.3s,baz=172,slow=25,SNR=5.7							
BVAR					Lg	Lg	20 09 38.5	
	comp=N,17nm,0.3s,baz=173,slow=27,SNR=2.9							
BRVK	**Borovoye**	**10.25**	**353**	⇓	Pn	**Pn**	**20 06 38.3**	**-2.3**
	comp=N,278nm,1.3s							
BRVK				⇑	Sn	**Sn**	**20 08 31.7**	**-3.6**
	comp=N,586nm,0.9s							
BRVK				⇓	Lg	Lg	20 09 34.2	
	comp=N,2µm,1.0s							
BRVK	**Borovoye**	**10.25**	**353**	*d*	*i* P	**Pn**	**20 06 39.5**	**-1.1**
BRVK					pmax	pmax		
	comp=Z,80nm,0.9s							
BRVK	**Borovoye**	**10.25**	**353**		*e*Pn	**Pn**	**20 06 39.3**	**-1.3**
BRVK	**Borovoye**	**10.25**	**353**		Pn	**Pn**	**20 06 39.7**	**-0.9**
	SNR=47							
BRVK	**Borovoye**	**10.25**	**353**		Pn	**Pn**	**20 06 39.7**	**-0.9**
	comp=Z,734nm,0.7s,SNR=59							
ZRNK	**Zerenda**	**10.30**	**348**	⇑	Pn	**Pn**	**20 06 39.9**	**-1.4**
	comp=Z,75nm,0.5s							
ZRNK				⇑	Sn	**Sn**	**20 08 33.7**	**-2.9**
	comp=Z,348nm,0.8s							
ZRNK				⇑	Lg	Lg	20 09 36.0	
	comp=Z,2µm,1.0s							
JMU	**Jammu**	**10.37**	**168**		*ex*	Sn	20 08 27.5	-11
AB31	**Akb

KHET				*ex*	x	20 10 16.2			
KHET				AMb	AMB	20 10 19.4			
	comp=N,90nm,1.3s								
KUDL	**Kundal**	**15.10**	**166**	*eP*	**Pn**	**20 07 42.7**	**-4.2**		
KUDL				AMb	AMB	20 07 46.3			
	comp=Z,106nm,0.9s								
KUDL				*ex*	x	20 10 15.9			
SVE	**Sverdlovsk**	**15.82**	**336**	*deP*	**Pn**	**20 07 52.1**	**-4.1**		
SVE				pmax	pmax				
	comp=Z,102nm,0.9s								
SVE				MLR	MLR				
	comp=Z,2µm,8.0s								
ARU	**Arti**	**16.18**	**332**	*d iP*	**Pn**	**20 07 56.8**	**-4.0**		
ARU				S	Sn	20 10 52.1	-7.9		
ARU				pmax	pmax				
	comp=Z,38nm,0.7s								
ARU	**Arti**	**16.18**	**332**	Pn	**Pn**	**20 07 57.7**	**-3.1**		
	comp=Z,437nm,0.4s,SNR=36								
AJM	**Ajmer**	**16.50**	**173**	*eP*	**Pn**	**20 08 01.8**	**-3.2**		
AJM				AMb	AMB	20 08 08.9			
	comp=Z,108nm,0.9s								
AJM				*ex*	x	20 10 48.7			
AJM				*ex*	x	20 10 53.8			
PYUN	**Piuthan**	**17.09**	**146**	*eP*	**Pn**	**20 08 08.7**	**-4.0**		
	comp=Z,1µm,0.9s								
DANN	**Dangsing**	**17.19**	**144**	*eP*	**Pn**	**20 08 09.7**	**-4.3**		
	comp=Z,1µm,1.1s								
KOLN	**Koldanda**	**17.63**	**145**	*eP*	**Pn**	**20 08 15.7**	**-3.7**		
	comp=Z,170nm,0.8s								
MAK	**Makhachkala**	**18.22**	**279**	*eP*	**P**	**20 08 26.9**	**+0.3**		
MAK				*eS*	**Sn**	**20 11 50.6**	**+1.0**		
MAK				pmax	pmax				
	comp=Z,136nm,1.0s								
MAK				MLR	MLR				
	comp=Z,2µm,11.0s								
KKN	**Kakani**	**18.35**	**141**	*eP*	**Pn**	**20 08 25.1**	**-3.2**		
	comp=Z,167nm,1.0s								
DMN	**Daman**	**18.42**	**142**	*eP*	**P**	**20 08 26.2**	**-3.0**		
	comp=Z,267nm,1.2s								
DMN				*eS*	Sn	20 11 43.9	-11		
GUN	**Gumba**	**18.53**	**140**	*eP*	**P**	**20 08 27.8**	**-2.7**		
	comp=Z,165nm,0.8s								
PKIN	**Phulchoki**	**18.58**	**141**	*eP*	**P**	**20 08 27.9**	**-3.1**		
	comp=Z,99nm,0.8s								
PKI	**Pulchoki**	**18.59**	**141**	*eP*	**P**	**20 08 28.1**	**-3.1**		
	comp=Z,149nm,1.0s								
RAMN	**Ramite**	**19.68**	**139**	*eP*	**P**	**20 08 41.4**	**-1.6**		
	comp=Z,250nm,0.9s								
BHJ	**Bhuj**	**19.74**	**188**	*eP*	**P**	**20 08 43.4**	**0.0**		
BHJ				AMB	AMB	20 08 51.6			
	comp=Z,158nm,0.9s								
TAPN	**Taplejung**	**19.89**	**136**	*eP*	**P**	**20 08 44.0**	**-1.4**		
	comp=Z,233nm,1.0s								
LSA	**Lhasa**	**19.99**	**125**	*eP*	**Pn**	**20 08 48.2**	**-0.2**		
LSA				pmax	pmax				
	comp=Z,120nm,1.5s								
LSA	**Lhasa**	**19.99**	**125**	*eP*	**Pn**	**20 08 48.2**	**-0.2**		
	comp=Z,120nm,1.5s								
BHPL	**Bhopal**	**20.06**	**166**	*eP*	**P**	**20 08 46.8**	**-0.1**		
BHPL				AMB	AMB	20 08 49.4			
	comp=Z,87nm,1.0s								
DGRG	**David-gareji**	**20.06**	**275**	P	Pn	20 08 50.5	+1.8		
ODAN	**Odare**	**20.14**	**138**	*eP*	**P**	**20 08 47.3**	**-0.7**		
	comp=Z,382nm,1.1s								
SARR	**Saratov**	**20.21**	**304**	*deP*	Pn	20 08 49.7	-0.5		
SARR				*i* S	S	20 12 24.3	-10		
SARR				pmax	pmax				
	comp=Z,331nm,0.9s								
SEAG	**Tbilisi Sea**	**20.41**	**276**	P	Pn	20 09 06.3	+14		
TBLG	**Delisi**	**20.46**	**276**	P	Pn	20 08 53.6	+0.2		
TBLG	**Delisi**	**20.46**	**276**	P	Pn	20 08 53.6	+0.3		
GUDG	**Gudauri**	**20.50**	**278**	P	Pn	20 08 56.4	+2.3		
JBP	**Jabalpur**	**20.67**	**160**	⇑*eP*	**P**	**20 08 53.3**	**-0.2**		
JBP				*i* x	x	20 09 00.4			
	comp=Z,318nm,1.4s								
JBP				*ex*	x	20 12 30.1			
KZR	**Kazreti**	**20.78**	**275**	P	Pn	20 09 00.6	+3.5		
GNI	**Garni**	**20.86**	**272**	P	Pn	20 08 57.6	-0.6		
GNI	**Garni**	**20.86**	**272**	P	Pn	20 09 01.1	+2.8		
	SNR=58								
GNI	**Garni**	**20.86**	**272**	P	Pn	20 08 57.6	-0.6		
	comp=Z,133nm,0.8s,baz=13,slow=4.5,SNR=20								
GNI				LR	LR	20 18 05.6			
	comp=Z,499nm,19.4s,baz=67,slow=40								
GOR	**Gori**	**20.87**	**277**	P	Pn	20 09 03.7	+5.6		
ZEI	**Tsey**	**20.87**	**279**	*eP*	**P**	**20 08 55.9**	**+0.1**		
ZEI				*eS*	**S**	**20 12 51.4**	**+3.0**		
ZEI				pmax	pmax				
	comp=Z,34nm,0.7s								
ZEI				MLR	MLR				
	comp=Z,1µm,11.0s								
GTA	**Gaotai**	**20.89**	**90**	⇑P	**P**	**20 08 56.8**	**+0.8**		
GTA				pP	**pP**	**20 09 00.0**	**+0.5**		
GTA				sP	**sP**	**20 09 03.5**	**+2.5**		
GTA				PP	**PnPn**	**20 09 19.8**	**+5.5**		
GTA				S	**S**	**20 12 49.5**	**+0.8**		
GTA				sS	Sn	20 12 54.3	0.0		
GTA				PcP	**PcP**	**20 13 02.0**	**-1.8**		
GTA				pmax	pmax				
	comp=Z,53nm,1.0s								
GTA				pmax	pmax				
	comp=Z,470nm,6.2s								
GTA				LR	LR				
	comp=N,1µm,9.0s								
GTA				LR	LR				
	comp=E,1µm,11.4s								
GTA				LR	LR				
	comp=Z,2µm,10.9s								
ONI	**Oni**	**21.23**	**279**	P	P	20 09 05.2	+5.7		
KBZ	**Khabaz**	**21.44**	**282**	P	**P**	**20 09 04.2**	**+2.5**		
KBZ						20 09 19.2			
KBZ				pmax	pmax				
	comp=Z,50nm,0.9s								
KBZ				pmax	pmax				
	comp=Z,55nm,0.9s								
KBZ				MLR	MLR				
	comp=Z,730nm,19.2s								
KBZ	**Khabaz**	**21.44**	**282**	P	**P**	**20 09 04.2**	**+2.5**		
KBZ				PP	**PnPn**	**20 09 19.2**	**-2.5**		
KBZ	**Khabaz**	**21.44**	**282**	P	**P**	**20 09 04.2**	**+2.5**		
	comp=Z,50nm,0.9s,baz=114,slow=9.6,SNR=28								
KBZ				PP	**PnPn**	**20 09 19.2**	**-2.5**		
	comp=Z,55nm,0.9s,baz=74,slow=9.3,SNR=9.2								
KBZ				LR	LR	20 18 17.6			
	comp=Z,730nm,19.2s,baz=192,slow=39								
AKH	**Akhalkalaki**	**21.45**	**276**	P	P	20 08 55.7	-6.3		
BANOM	**Banah**	**21.48**	**223**	P	**P**	**20 09 06.0**	**+3.8**		
	SNR=24								
KIV	**Kislovodsk**	**21.56**	**283**	⇓*iP*	**P**	**20 09 03.6**	**+0.5**		
KIV				*i*		20 09 14.1			
KIV				*i*		20 09 21.7			
KIV				*i* S	**S**	**20 13 04.2**	**+2.4**		
KIV				pmax	pmax				
	comp=Z,198nm,1.0s								
KIV				MLR	MLR				
	comp=Z,600nm,17.0s								
KIV	**Kislovodsk**	**21.56**	**283**	P	**P**	**20 09 04.4**	**+1.3**		
	comp=Z,1µm,0.8s,SNR=21								
BOK	**Bokaro**	**22.09**	**145**	*eP*	**P**	**20 09 08.1**	**-0.7**		
BOK				AMB	AMB	20 09 13.8			
	comp=Z,222nm,1.5s								
ZAK	**Zakamensk**	**22.35**	**60**	⇓*iP*	**P**	**20 09 11.8**	**+0.3**		
ZAK				pmax	pmax				
	comp=Z,56nm,1.3s								
TVAN	**Van**	**22.36**	**269**	*i* P	P	20 09 17.7	+5.8		
VRHR	**Novokhopersk**	**22.40**	**302**	*eP*	**P**	**20 09 11.6**	**-0.3**		
VRHR				*eS*	S	20 13 09.0	-8.6		
VRHR				pmax	pmax				
	comp=N,20nm,0.8s								
VRHR				pmax	pmax				
	comp=E,280nm,0.8s								
VRHR				pmax	pmax				
	comp=Z,270nm,0.8s								
VRHR				smax	smax				
	comp=N,110nm,1.1s								
VRHR				smax	smax				
	comp=E,20nm,1.1s								
VRHR				smax	smax				
	comp=Z,20nm,1.1s								
VRHR				MLR	MLR				
	comp=N,320nm,14.0s								
VRHR				MLR	MLR				
	comp=E,590nm,14.0s								
VRHR				MLR	MLR				
	comp=Z,710nm,14.0s								
NGP	**Nagpur**	**22.40**	**164**	*eP*	**P**	**20 09 09.9**	**-2.3**		
HATD	**Hatta, Dubai**	**22.47**	**222**	P	**P**	**20 09 15.3**	**+2.4**		
	SNR=24								
HAKT	**HAKKARI**	**22.50**	**266**	*i* P	**P**	**20 09 15.6**	**+2.3**		
TUTA	**Tutak**	**22.50**	**271**	*i* P	**P**	**20 09 17.4**	**+4.0**		
NAZ	**Nazwa, Dubai**	**22.57**	**223**	P	**P**	**20 09 14.3**	**+0.4**		
	SNR=42								
ASHO	**Ashiyiah**	**22.63**	**222**	P	**P**	**20 09 14.2**	**-0.4**		
	SNR=56								
TLY	**Talaya**	**22.78**	**56**	*eP*	**P**	**20 09 16.5**	**+0.5**		
TLY				pmax	pmax				
	comp=Z,29nm,1.2s								
TLY				MLR	MLR				
	comp=Z,3µm,12.0s								
TLY	**Talaya**	**22.78**	**56**	P	**P**	**20 09 17.4**	**+1.4**		
	comp=Z,128nm,1.3s,SNR=5.6								
DDEM	**Demirkent**	**22.85**	**275**	*i* P	**P**	**20 09 19.8**	**+2.9**		
HOMI	**Horasan**	**22.97**	**273**	*i* P	P	20 09 23.2	+4.8		
ASUD	**Al Ashush, Dub**	**23.04**	**223**	P	**P**	**20 09 21.3**	**+2.5**		
	SNR=23								
SMDO	**Samad**	**23.11**	**216**	P	**P**	**20 09 19.4**	**-0.3**		
	SNR=13								
WBK	**Wadi Bani Khal**	**23.13**	**213**	P	**P**	**20 09 20.3**	**+0.5**		
	SNR=15								
IRK	**Irkutsk**	**23.26**	**55**	*eP*	**P**	**20 09 20.8**	**-0.2**		
IRK				pmax	pmax				
	comp=Z,104nm,1.3s								
SHL	**Shillong**	**23.54**	**131**	*eP*	**P**	**20 09 25.0**	**+0.9**		
SHL				*ex*	x	20 13 44.0			
ARQ	**Araqi**	**23.55**	**219**	P	**P**	**20 09 24.2**	**+0.2**		
	SNR=13								
JMDO	**Jalal Madar**	**23.70**	**215**	P	**P**	**20 09 25.6**	**+0.1**		
	SNR=14								
SOC	**Sochi**	**23.74**	**283**	*eP*	**P**	**20 09 28.4**	**+2.6**		
SOC				*e*		20 09 52.2			
SOC				pmax	pmax				
	comp=Z,40nm,0.9s								
SOC				MLR	MLR				
	comp=Z,662nm,14.0s								
SOC				MLR	MLR				
	comp=N,406nm,13.0s								
SOC				MLR	MLR				
	comp=E,232nm,14.0s								
BSY	**Bisya**	**23.76**	**217**	P	**P**	**20 09 26.7**	**+0.6**		
	SNR=26								
VORD	**Divnogorie**	**23.84**	**301**	*eP*	**P**	**20 09 26.5**	**-0.1**		
VORD				pmax	pmax				
	comp=Z,90nm,0.6s								
VORD				pmax	pmax				
	comp=N,4.0nm,0.3s								
VORD				pmax	pmax				
	comp=E,20nm,0.6s								
VSR	**Storozhevoye**	**23.95**	**302**	*eP*	**P**	**20 09 25.9**	**-1.8**		
VSR				*e**SP	**sP**	**20 09 30.2**	**-2.7**		
VSR				*eS*	**S**	**20 13 42.8**	**-1.0**		
VSR				pmax	pmax				
	comp=N,4.0nm,0.6s								
VSR				pmax	pmax				
	comp=E,9.0nm,0.6s								
VSR				pmax	pmax				
	comp=Z,10.0nm,0.6s								
VSR				smax	smax				
	comp=E,130nm,2.3s								
VSR				smax	smax				
	comp=Z,80nm,2.3s								
VSR				smax	smax				
	comp=N,90nm,2.2s								
VSR				MLR	MLR				
	comp=N,630nm,13.0s								
VSR				MLR	MLR				
	comp=E,830nm,13.0s								
VSR				MLR	MLR				
	comp=Z,1µm,13.0s								
VOR	**Voronezh**	**24.00**	**303**	*eP*	**P**	**20 09 27.0**	**-1.1**		
VOR				pmax	pmax				
	comp=Z,260nm,2.0s								
KOPT	**Kop Dagi**	**24.01**	**274**	*i* P	**P**	**20 09 32.9**	**+4.2**		
KBD	**Kabd**	**24.13**	**243**	*eP*	**P**	**20 09 30.7**	**+1.3**		
KBD				AMb	AMB	20 09 36.6			
	comp=Z,265nm,1.3s								
SONM	**Songino Array**	**24.25**	**66**	P	**P**	**20 09 31.0**	**+0.3**		
SONM				Lg	Lg	20 16 51.7			
SONM	**Songino Array**	**24.25**	**66**	P	**P**	**20 09 31.0**	**+0.3**		
	comp=Z,9.3nm,1.0s,baz=276,slow=11,SNR=38								
SONM				Lg	Lg	20 16 51.7			
	comp=Z,5.3nm,1.2s,baz=285,slow=16,SNR=3.7								
CAL	**Calcutta**	**24.26**	**142**	*ex*	**pS**	**20 13 53.1**	**-0.8**		
CAL				*ex*	x	20 13 56.2			
CAL				*ex*	x	20 17 16.1			
QRN	**Al-Qurain**	**24.27**	**242**	*eP*	**P**	**20 09 32.1**	**+1.3**		
QRN				AMb	AMB	20 09 37.9			
	comp=Z,419nm,1.2s								
NAY	**Al-Naaiem**	**24.38**	**244**	*eP*	**P**	**20 09 32.6**	**+0.9**		
NAY				AMb	AMB	20 09 38.7			
	comp=Z,223nm,1.2s								
RDF	**Al-Radifah**	**24.39**	**243**	*eP*	**P**	**20 09 32.4**	**+0.5**		
RDF				AMb	AMB	20 09 39.6			
	comp=Z,250nm,1.3s								
LATR	**Latur**	**24.67**	**171**	*eP*	**P**	**20 09 35.0**	**+0.5**		
ULN	**Ulaanbaatar**	**24.69**	**66**	*eP*	**P**	**20 09 35.4**	**+0.7**		
	comp=Z,73nm,1.2s								
ULN				LR	LR				
	comp=Z,751nm,19.0s								
ULN	**Ulaanbaatar**	**24.69**	**66**	P	**P**	**20 09 35.6**	**+0.9**		
	SNR=27								
ULN	**Ulaanbaatar**	**24.69**	**66**	P	**P**	**20 09 35.1**	**+0.4**		
	comp=Z,50nm,1.1s,comp=Z,744nm								
MARD	**Mardin**	**24.74**	**268**	*i* P	**P**	**20 09 37.6**	**+2.4**		
LZH	**Lanzhou**	**25.10**	**95**	⇑P	**P**	**20 09 39.5**	**+1.0**		
LZH				pP	**pP**	**20 09 44.5**	**+2.3**		
LZH				sP	**sP**	**20 09 46.5**	**+2.8**		
LZH				S	**S**	**20 14 03.0**	**+0.1**		
LZH				sS	**sS**	**20 14 11.5**	**+2.5**		
LZH				pmax	pmax				
	comp=Z,48nm,1.0s								
LZH				pmax	pmax				
	comp=Z,240nm,4.0s								
LZH				LR	LR				
	comp=N,1µm,11.8s								
LZH				LR	LR				
	comp=E,2µm,11.5s								
LZH				LR	LR				
	comp=Z,2µm,13.2s								
ANN	**Anapa**	**25.18**	**286**	*eP*	**P**	**20 09 40.2**	**+1.3**		
ANN				*eS*	**S**	**20 14 09.7**	**+6.1**		
ANN				pmax	pmax				
	comp=Z,92nm,1.1s								
ANN				MLR	MLR				
	comp=N,1µm,18.0s								
ANN				MLR	MLR				
	comp=E,2µm,18.0s								
ANN				MLR	MLR				
	comp=Z,1µm,18.0s								
IMP	**Imphal**	**25.31**	**129**	*eP*	**P**	**20 09 41.0**	**+0.7**		
KAD	**Karad**	**25.57**	**176**	*eP*	**P**	**20 09 41.4**	**-1.3**		
SUSE	**Susehri**	**25.64**	**276**	*i* P	**P**	**20 09 45.7**	**+2.4**		
KEMA	**Kemaliye**	**25.72**	**273**	*i* P	**P**	**20 09 46.6**	**+2.7**		
MOS	**Moscow**	**25.74**	**312**	*eP*	**P**	**20 09 43.0**	**-0.9**		
MOS				*e*		20 10 26.0			
MOS				*eS*	**S**	**20 14 13.0**	**+0.6**		
MOS				*eSS*	**SnSn**	**20 15 12.0**	**+4.8**		
MOS				pmax	pmax				
	comp=Z,212nm,1.7s								
MOS				pmax	pmax				
	comp=Z,400nm,2.1s								
MOS				MLR	MLR				
	comp=Z,2µm,12.0s								
MOS				MLR	MLR				
	comp=E,2µm,12.0s								
HYB	**Hyderabad**	**25.95**	**166**	*i* P	**P**	**20 09 45.0**	**-1.1**		
	comp=E,170nm,1.0s								
HYB				*eS*	**S**	**20 14 16.0**	**-0.3**		
MALT	**Malatya**	**26.09**	**271**	*eP*	**P**	**20 09 49.4**	**+2.0**		
MALT				pmax	pmax				
	comp=Z,63nm,1.1s								
MALT				MLR	MLR				
	comp=Z,410nm,20.0s								
MALT	**Malatya**	**26.09**	**271**	*eP*	**P**	**20 09 49.4**	**+2.0**		
	comp=Z,63nm,1.1s								
MALT				LR	LR				
	comp=Z,410nm,20.0s								
OBN	**Obninsk**	**26.17**	**310**	*d iP*	**P**	**20 09 47.8**	**0.0**		
OBN				*i*		20 10 24.5			
OBN				pmax	pmax				
	comp=Z,156nm,1.9s								
OBN				MLR	MLR				
	comp=Z,900nm,15.0s								
AKCD	**Akcadag**	**26.47**	**272**	*i* P	**P**	**20 09 53.2**	**+2.3**		
ERBA	**Erbaa**	**26.55**	**277**	*i* P	**P**	**20 09 52.9**	**+1.4**		
VIS	**Vishakhapatnam**	**26.77**	**156**	*eP*	**P**	**20 09 54.0**	**+0.5**		
VIS				*ex*	x	20 09 56.6			
VIS				AMB	AMB	20 10 02.3			
	comp=Z,30nm,2.0s								
GZT	**Gaziantep**	**27.08**	**270**	*i* P	**P**	**20 09 59.6**	**+3.2**		
SIM	**Simferopol'**	**27.48**	**288**	*deP*	**P**	**20 10 02.9**	**+3.1**		
SIM				*eS*	**S**	**20 14 46.0**	**+5.8**		
SIM				pmax	pmax				
	comp=Z,23nm,0.7s								
SIM				MLR	MLR				
	comp=Z,533nm,15.3s								
CD2	**Chengdu**	**27.62**	**105**	P	**P**	**20 10 02.5**	**+1.3**		
CD2				pP	**pP**	**20 10 06.8**	**+1.9**		
CD2				sP	**sP**	**20 10 09.5**	**+3.1**		
CD2				PP	**PnPn**	**20 10 50.3**	**+3.9**		
CD2				PcP	**PcP**	**20 13 21.0**	**+2.6**		
CD2				S	**S**	**20 14 41.5**	**-1.1**		
CD2				sS	**sS**	**20 14 48.3**	**-0.5**		
CD2				SS	**SnSn**	**20 15 59.0**	**+5.3**		
CD2				pmax	pmax				
	comp=Z,50nm,0.7s								
CD2				pmax	pmax				
	comp=Z,170nm,6.0s								
CD2				LR	LR				
	comp=N,1µm,12.2s								
CD2				LR	LR				
	comp=E,1µm,12.7s								
CD2				LR	LR				
	comp=Z,1µm,14.2s								
BTO	**Baotou**	**28.00**	**82**	*eP*	**P**	**20 10 05.0**	**+0.5**		
TMCR	**Tamitsa**	**28.89**	**329**	*eP*	**P**	**20 10 12.9**	**+0.8**		
TMCR				pmax	pmax				
	comp=Z,36nm,0.4s								
CIT	**Chita**	**28.92**	**57**	*eP*	**P**	**20 10 13.0**	**+0.4**		
CIT				*e*		20 10 23.6			
CIT				*e*		20 11 12.2			
CIT				*e*		20 11 19.3			
CIT				pmax	pmax				
	comp=Z,96nm,1.4s								
HHC	**Hu-ho-hao-te**	**29.05**	**81**	*eP*	**P**	**20 10 11.5**	**-2.4**		
HHC				pP	**pP**	**20 10 15.8**	**-1.8**		
HHC				sP	**sP**	**20 10 18.5**	**-0.7**		
HHC				PP	**PnPn**	**20 11 05.3**	**-0.5**		
HHC				S	**S**	**20 15 01.0**	**-4.1**		
HHC				sS	**sS**	**20 15 08.5**	**-2.7**		
HHC				SS	**SnSn**	**20 16 28.5**	**+0.1**		
HHC				pmax	pmax				
	comp=Z,32nm,0.9s								
HHC				pmax	pmax				
	comp=Z,350nm,5.5s								
HHC				LR	LR				
	comp=N,2µm,12.8s								
HHC				LR	LR				
	comp=E,1µm,12.3s								
HHC				LR	LR				
	comp=Z,2µm,11.6s								
BR131	**Keskin Array S**	**29.12**	**277**	*eP*	**P**	**20 10 14.7**	**+0.1**		
	comp=Z,16nm,0.8s								
BRTR	**Keskin Array B**	**29.12**	**277**	P	**P**	**20 10 14.6**	**0.0**		
BRTR	**Keskin Array B**	**29.12**	**277**	P	**P**	**20 10 14.6**	**0.0**		
	comp=Z,20nm,0.8s,baz=91,slow=7.7,SNR=28								
GULE	**Gulek**	**29.16**	**272**	*i* P	**P**	**20 10 17.0**	**+2.0**		
RAYN	**Ar Rayn**	**29.48**	**238**	P	**P**	**20 10 18.5**	**+0.8**		
	comp=Z,200nm,1.4s,SNR=15								
ANTO	**Ankara**	**29.69**	**278**	*eP*	P	20 10 23.9	+4.4		
ANTO				pmax	pmax				
	comp=Z,9.0nm,0.8s								
ANTO				MLR	MLR				
	comp=Z,309nm,19.0s								
ANTO	**Ankara**	**29.69**	**278**	*eP*	P	20 10 23.9	+4.4		
	comp=Z,9.1nm,0.8s								
ANTO				LR	LR				
	comp=Z,309nm,19.0s								
XAN	**Xi'an**	**29.73**	**95**	P	**P**	**20 10 19.8**	**-0.1**		
XAN				pP	pP	20 10 30.5	+6.8		
XAN				sP	sP	20 10 34.0	+8.8		
XAN				pmax	pmax				
	comp=Z,8.0nm,1.0s								
XAN				LR	LR				
	comp=N,960nm,15.4s								
XAN				LR	LR				
	comp=E,430nm,17.8s								
XAN				LR	LR				
	comp=Z,510nm,17.0s								
ASF	**Jabal al Asfar**	**29.93**	**261**	P	**P**	**20 10 22.6**	**+0.9**		
ASF	**Jabal al Asfar**	**29.93**	**261**	P	**P**	**20 10 22.6**	**+0.9**		
	comp=Z,12nm,1.1s,baz=124,slow=3.6,SNR=4.2								
AKASG	**Malin Array Be**	**30.20**	**300**	P	**P**	**20 10 23.4**	**-0.5**		
AKASG				pmax	pmax				
	comp=Z,25nm,0.8s								
AKASG				MLR	MLR				
	comp=Z,591nm,19.6s								
AKASG	**Malin Array Be**	**30.20**	**300**	P	**P**	**20 10 23.4**	**-0.5**		
AKASG	**Malin Array Be**	**30.20**	**300**	P	**P**	**20 10 23.4**	**-0.5**		
	comp=Z,24nm,0.8s,baz=77,slow=8.4,SNR=17								
AKASG				LR	LR	20 24 41.3			
	comp=Z,591nm,19.6s,baz=70,slow=40								
AK01	**Malin Array Si**	**30.21**	**300**	*eP*	**P**	**20 10 23.8**	**-0.2**		
KIEV	**Kiev**	**30.21**	**300**	*eP*	**P**	**20 10 23.9**	**0.0**		
KIEV				pmax	pmax				
	comp=Z,42nm,0.9s								
KIEV				MLR	MLR				
	comp=Z,1µm,19.0s								
KIEV	**Kiev**	**30.21**	**300**	*eP*	**P**	**20 10 23.9**	**0.0**		
	comp=Z,42nm,0.9s								
KIEV				LR	LR				
	comp=Z,1µm,19.0s								
AK02	**Malin Array Si**	**30.22**	**300**	*eP*	**P**	**20 10 23.9**	**-0.1**		
ABTO	**Aybut**	**30.22**	**218**	P	**P**	**20 10 24.7**	**+0.3**		
	SNR=10								
KMI	**Kunming**	**30.54**	**116**	⇑P	**P**	**20 10 27.8**	**+0.5**		
KMI				pP	**pP**	**20 10 30.0**	**-1.1**		
KMI				sP	**sP**	**20 10 32.0**	**-0.6**		
KMI				PP	**PnPn**	**20 11 27.3**	**+1.0**		
KMI				S	**S**	**20 15 28.5**	**-0.4**		
KMI				SS	**ScP**	**20 17 07.8**	**-0.5**		
KMI				pmax	pmax				
	comp=Z,20nm,0.9s								
KMI				pmax	pmax				
	comp=Z,150nm,3.1s								
KMI				LR	LR				
	comp=N,520nm,18.8s								
KMI				LR	LR				
	comp=E,590nm,10.2s								
KMI				LR	LR				
	comp=Z,590nm,13.5s								
MMAI	**Mount Meron Ar**	**30.59**	**264**	P	**P**	**20 10 28.4**	**+0.9**		
MMAI	**Mount Meron Ar**	**30.59**	**264**	P	**P**	**20 10 28.4**	**+0.9**		
	comp=Z,29nm,1.1s,baz=72,slow=12,SNR=12								
MMAI				LR	LR	20 25 12.0			
	comp=Z,199nm,18.3s,baz=70,slow=41								
KIS	**Kishinev**	**30.82**	**293**	*eP*	**P**	**20 10 32.0**	**+2.7**		
KIS				*e*		20 11 35.0			
KIS				*e*		20 11 40.0			
KIS				MLR	MLR				
	comp=E,700nm,14.0s								
KIS				MLR	MLR				

	comp=Z,292nm,19.0s							
ISP	**Isparta**	**32.07**	**275**	⇑	*i*	P	P	20 10 45.2 +4.6
IZAR	**Zarasai**	**32.08**	**310**		*e*	P	**P**	**20 10 40.5 +0.2**
IZAR						AMB	AMB	20 10 45.5
	comp=Z,46nm,0.9s							
ISAL	**Salakas**	**32.14**	**309**		*e*	P	**P**	**20 10 41.0 +0.2**
ISAL						AMB	AMB	20 10 46.0
	comp=Z,32nm,0.9s							
APA	**Apatity**	**32.27**	**333**	⇓	*i*	P	P	20 10 48.8 +7.0
APA						MLR	MLR	
	comp=Z,1μm,14.0s							
GYA	**Guiyang**	**32.33**	**109**			P	**P**	**20 10 44.0 +1.0**
GYA						PP	**PnPn**	**20 11 51.8 +2.4**
GYA						PcP	**PcP**	**20 13 32.3 +1.5**
GYA						S	**S**	**20 15 55.5 -1.1**
GYA						ScP	**ScP**	**20 17 15.0 +0.9**
GYA						pmax	pmax	
	comp=Z,20nm,0.8s							
GYA						pmax	pmax	
	comp=Z,130nm,4.9s							
GYA						LR	LR	
	comp=N,590nm,17.6s							
GYA						LR	LR	
	comp=E,480nm,18.0s							
GYA						LR	LR	
	comp=Z,580nm,17.8s							
TESR		**32.37**	**292**	⇓	*i*	P	**P**	**20 10 43.4 +0.4**
VRI	**Vrincioaia**	**32.44**	**291**	⇓	*i*	P	**P**	**20 10 44.6 +1.0**
PLOR	**Plostina**	**32.49**	**291**	⇑	*i*	P	P	20 10 48.7 +4.6
BJI	**Beijing**	**32.64**	**80**			P	**P**	**20 10 46.3 +0.9**
BJI						PP	**PP**	**20 11 57.0 -2.1**
BJI						S	**S**	**20 16 00.5 -0.5**
BJI						pmax	pmax	
	comp=Z,31nm,1.0s							
BJI						pmax	pmax	
	comp=Z,160nm,5.6s							
BJI						LR	LR	
	comp=N,1μm,21.7s							
BJI						LR	LR	
	comp=E,790nm,17.1s							
BJI						LR	LR	
	comp=Z,450nm,18.6s							
EIL	**Elat**	**32.68**	**259**			P	**P**	**20 10 46.7 +0.8**
EIL	**Elat**	**32.68**	**259**			P	**P**	**20 10 46.7 +0.8**
	comp=Z,8.4nm,0.8s,baz=31,slow=8.0,SNR=6.0							
EIL						LR	LR	20 26 07.6
	comp=Z,171nm,18.7s,baz=90,slow=40							
ISR	**Istrita**	**32.72**	**290**	⇑	*i*	P	P	20 10 50.7 +4.5
CHTO	**Chiang Mai**	**32.85**	**129**		*e*	P	**P**	**20 10 45.9 -1.6**
CHTO						pmax	pmax	
	comp=Z,7.0nm,1.0s							
CHTO						MLR	MLR	
	comp=Z,239nm,19.0s							
CHTO	**Chiang Mai**	**32.85**	**129**		*e*	P	**P**	**20 10 45.9 -1.6**
	comp=Z,6.7nm,1.0s							
CHTO						LR	LR	
	comp=Z,239nm,19.0s							
CHTO	**Chiang Mai**	**32.85**	**129**			P	**P**	**20 10 46.3 -1.2**
	comp=Z,9.9nm,1.0s							
CMMT	**Chiang Mai**	**32.86**	**129**			P	**P**	**20 10 47.0 -0.5**
	comp=Z,8.6nm,1.0s							
HIA	**Hailar**	**32.99**	**62**			PFAKE		20 11 00.0 +12
HIA						LR	LR	
	comp=Z,448nm,21.0s							
FIA1	**FINESS Array S**	**32.99**	**320**		*e*	P	**P**	**20 10 48.3 +0.1**
FINES	**FINESS Array B**	**32.99**	**320**			P	**P**	**20 10 48.8 +0.5**
FINES	**FINESS Array B**	**32.99**	**320**			P	**P**	**20 10 48.8 +0.5**
	comp=Z,5.5nm,0.6s,baz=107,slow=10,SNR=45							
FINES						LR	LR	20 25 11.5
	comp=Z,770nm,19.3s,baz=203,slow=38							
KAF	**Kangasniemi**	**33.04**	**322**		*e*	P	**P**	**20 10 49.0 +0.3**
KAF						pmax	pmax	
	comp=Z,2.0nm,0.7s							
KAF	**Kangasniemi**	**33.04**	**322**		*e*p	P	**P**	**20 10 49.0 +0.3**
	comp=Z,2.4nm,0.7s							
MLR	**Muntele Rosu**	**33.05**	**291**			P	**P**	**20 10 50.6 +1.4**
MLR	**Muntele Rosu**	**33.05**	**291**			P	**P**	**20 10 50.6 +1.4**
	comp=Z,2.5nm,0.8s,baz=84,slow=2.6,SNR=26							
CMAR	**Chiang Mai Arr**	**33.14**	**129**			P	**P**	**20 10 48.9 -1.1**
CMAR						PcP	**PcP**	**20 13 32.7 -0.2**
CMAR	**Chiang Mai Arr**	**33.14**	**129**			P	**P**	**20 10 48.9 -1.1**
	comp=Z,2.8nm,0.8s,baz=316,slow=9.1,SNR=26							
CMAR						PcP	**PcP**	**20 13 32.7 -0.2**
	comp=Z,6.3nm,0.9s,baz=310,slow=4.6,SNR=13							
CMAR						LR	LR	20 26 46.7
	comp=Z,164nm,19.9s,baz=305,slow=41							
BUR08	**Bucovina Ar. S**	**33.15**	**295**		*e*	P	**P**	**20 10 49.3 -0.6**
DOPR	**Dopca**	**33.33**	**292**	⇑	*i*	P	P	20 10 55.2 +3.7
LVV	**L'vov**	**33.60**	**299**		*e*	P	P	20 10 57.7 +4.0
LVV						MLR	MLR	
	comp=N,500nm,16.0s							
LVV						MLR	MLR	
	comp=E,500nm,16.0s							
LVV						MLR	MLR	
	comp=Z,400nm,15.0s							
SUW	**Suwalki**	**33.81**	**307**		*e*	P	**P**	**20 10 55.9 +0.4**
SUW						pmax	pmax	
	comp=Z,117nm,1.0s							
SUW	**Suwalki**	**33.81**	**307**		*e*	P	**P**	**20 10 55.9 +0.4**
	comp=Z,118nm,1.0s							
SUW	**Suwalki**	**33.81**	**307**		*e*	P	**P**	**20 10 55.9 +0.4**
SUW					*e*pP		**pP**	**20 10 59.0 -0.3**
SUW						LMZ	LR	20 25 19.3
KWP	**Kalwaria Pacla**	**34.47**	**299**		*e*	P	**P**	**20 11 01.8 +0.5**
KWP						pmax	pmax	
	comp=Z,129nm,1.4s							
KWP						MLR	MLR	
	comp=Z,1μm,20.0s							
KWP	**Kalwaria Pacla**	**34.47**	**299**		*e*	P	**P**	**20 11 01.8 +0.5**
	comp=Z,129nm,1.4s							
KWP						LR	LR	
	comp=Z,1μm,20.0s							
KWP	**Kalwaria Pacla**	**34.47**	**299**	⇑	*i*	P	**P**	**20 11 01.4 +0.1**
KWP	**Kalwaria Pacla**	**34.47**	**299**		*e*	P	**P**	**20 11 02.3 +1.0**
KWP					*e*pP		**pP**	**20 11 05.2 +0.1**
KWP						LMZ	LR	20 27 02.0
DGPR	**DIGLIPUR**	**34.53**	**143**		*e*	P	**P**	**20 11 03.1 +1.1**
DGPR						AMB	AMB	20 11 03.6
	comp=Z,58nm,1.0s							
TRPA	**Tarpa**	**34.83**	**296**	⇓	*i*	P	**P**	**20 11 05.0 +0.7**
TRPA	**Tarpa**	**34.83**	**296**	⇑	*e*	P	**P**	**20 11 05.0 +0.7**
KOLS	**Kolonicke sedl**	**34.86**	**298**		*e*	P	**P**	**20 11 05.7 +1.0**
KOLS						pmax	pmax	
	comp=Z,11nm,1.4s							
KOLS	**Kolonicke sedl**	**34.86**	**298**		*e*	P	**P**	**20 11 05.7 +1.0**
KOLS					*e*PP		**PnPn**	**20 12 21.8 +0.8**
KEV	**Kevo**	**35.36**	**335**		*e*	P	**P**	**20 11 08.9 +0.3**
KEV						pmax	pmax	
	comp=Z,4.0nm,0.7s							
KEV	**Kevo**	**35.36**	**335**		*e*p	P	**P**	**20 11 08.9 +0.3**
	comp=Z,4.3nm,0.7s							
CRVS	**Cervenica-Dubn**	**35.39**	**298**		*e*	P	P	20 11 16.8 +7.5
CRVS	**Cervenica-Dubn**	**35.39**	**298**		*e*pP		P	20 11 16.8 +7.5
BEL	**Belsk**	**35.40**	**303**		*e*	P	**P**	**20 11 10.4 +1.1**
BEL					*e*pP		**pP**	**20 11 13.3 +0.3**
BEL						LMZ	LR	20 26 34.2
WHN	**Wuhan**	**35.46**	**96**			P	**P**	**20 11 09.0 -1.0**
WHN						S	**S**	**20 16 48.3 +3.5**
WHN						pmax	pmax	
	comp=Z,71nm,0.8s							
WHN						LR	LR	
	comp=N,2μm,10.6s							
WHN						LR	LR	
	comp=E,980nm,8.1s							
WHN						LR	LR	
	comp=Z,2μm,16.8s							
VTS	**Vitosha**	**35.71**	**287**	⇑	*i*	P	**P**	**20 11 13.3 +1.1**
ARCES	**ARCESS Array B**	**35.74**	**334**			P	**P**	**20 11 13.2 +1.2**
ARCES	**ARCESS Array B**	**35.74**	**334**			P	**P**	**20 11 13.2 +1.2**
	comp=Z,8.9nm,0.6s,baz=113,slow=9.4,SNR=50							
ARCES						LR	LR	20 26 39.7
	comp=Z,277nm,19.8s,baz=115,slow=38							
PBA	**Port Blair**	**35.80**	**144**		*e*	P	P	20 11 11.8 -1.2
BZS	**Buzias**	**35.98**	**292**	⇓	*i*	P	**P**	**20 11 12.7 -1.6**
APE	**Apeiranthos**	**36.02**	**277**	⇓	*i*	P	**P**	**20 11 16.5 +1.7**
APE	**Apeiranthos**	**36.02**	**277**	⇓	*i*	P	**P**	**20 11 16.5 +1.7**
NIE	**Niedzica**	**36.05**	**299**		*e*	P	**P**	**20 11 16.8 +1.9**
NIE	**Niedzica**	**36.05**	**299**		*e*	P	**P**	**20 11 16.8 +1.9**
OJC	**Ojcow**	**36.24**	**300**	⇑	*e*	P	**P**	**20 11 16.6 +0.1**
OJC	**Ojcow**	**36.24**	**300**		*e*	P	**P**	**20 11 16.3 -0.2**
	comp=Z,56nm,1.0s							
OJC	**Ojcow**	**36.24**	**300**		*e*	P	**P**	**20 11 16.6 +0.1**
OJC					*e*pP		**pP**	**20 11 19.7 -0.6**
VAY	**Valandovo**	**36.57**	**285**		*e*	P	**P**	**20 11 19.6 +0.2**
VAY	**Valandovo**	**36.57**	**285**		*e*	P	**P**	**20 11 20.0 +0.6**
PSZ	**Piszkesteto**	**36.61**	**296**		*e*	P	P	20 11 24.1 +4.4
PSZ						pmax	pmax	
	comp=Z,103nm,2.3s							
PSZ						MLR	MLR	
	comp=Z,406nm,20.0s							
PSZ	**Piszkesteto**	**36.61**	**296**		*e*	P	P	20 11 24.1 +4.4
	comp=Z,103nm,2.3s							
PSZ						LR	LR	
	comp=Z,406nm,20.0s							
PSZ	**Piszkesteto**	**36.61**	**296**	⇑	*i*	P	**P**	**20 11 17.6 -2.1**
PSZ	**Piszkesteto**	**36.61**	**296**	⇑	*e*	P	**P**	**20 11 22.0 +2.3**
VYHS	**Vyhne**	**37.18**	**298**		*e*	P	**P**	**20 11 25.6 +1.0**
VYHS						pmax	pmax	
	comp=Z,13nm,1.4s							
VYHS	**Vyhne**	**37.18**	**298**		*e*	P	**P**	**20 11 25.5 +1.0**
BUD	**Budapest**	**37.28**	**296**	⇓	*e*	P	**P**	**20 11 26.5 +1.2**
SNY	**Shenyang**	**37.34**	**74**	⇓	*i*	P	**P**	**20 11 26.5 +0.6**
SNY						S	**S**	**20 17 14.3 +1.0**
SNY						pmax	pmax	
	comp=Z,23nm,1.3s							
SNY						LR	LR	
	comp=N,470nm,6.1s							
SNY						LR	LR	
	comp=E,770nm,14.7s							
SNY						LR	LR	
	comp=Z,730nm,16.3s							
OKC	**Ostrava-Krasne**	**37.36**	**300**		*e*	P	**P**	**20 11 26.6 +0.6**
OKC						MLR	MLR	
	comp=Z,600nm,11.6s							
OKC	**Ostrava-Krasne**	**37.36**	**300**		*e*	P	**P**	**20 11 26.6 +0.6**
OKC					*e*pP		**pP**	**20 11 30.0 +0.2**
OKC						AMS	AMS	20 28 00.0
	comp=Z,600nm,11.6s							
GKP	**Gorka Klasztor**	**37.40**	**306**		*e*	P	**P**	**20 11 27.0 +0.7**
GKP					*e*pP		**pP**	**20 11 30.5 +0.5**
GKP						LMZ	LR	20 27 41.6
MORC	**Moravsky Berou**	**37.75**	**300**		*e*	P	**P**	**20 11 30.0 +0.6**
MORC						pmax	pmax	
	comp=Z,25nm,1.0s							
MORC	**Moravsky Berou**	**37.75**	**300**		*e*	P	**P**	**20 11 30.0 +0.6**
	comp=Z,25nm,1.0s							
NJ2	**Nanjing**	**37.98**	**91**		*e*	P	**P**	**20 11 30.3 -1.2**
NJ2						pP	**pP**	**20 11 33.0 -2.3**
NJ2						sP	**sP**	**20 11 35.0 -1.8**
NJ2						PP	**PP**	**20 12 57.5 -0.7**
NJ2						S	**S**	**20 17 20.5 -2.8**
NJ2						sS	**sS**	**20 17 31.0 +1.5**
NJ2						pmax	pmax	
	comp=Z,20nm,0.7s							
NJ2						pmax	pmax	
	comp=Z,200nm,5.2s							
NJ2						LR	LR	
	comp=N,410nm,24.6s							
NJ2						LR	LR	
	comp=E,780nm,23.4s							
NJ2						LR	LR	
	comp=Z,780nm,24.6s							
CN2	**Changchun**	**38.02**	**70**		*e*	P	**P**	**20 11 32.0 +0.3**
CN2					*e*pP		**pP**	**20 11 36.0 +0.5**
CN2					*e*S		**S**	**20 17 22.8 -0.8**
CN2						pmax	pmax	
	comp=Z,10.0nm,1.0s							
CN2						LR	LR	
	comp=N,600nm,17.0s							
CN2						LR	LR	
	comp=E,1μm,17.0s							
CN2						LR	LR	
	comp=Z,1μm,17.0s							
YAK	**Yakutsk**	**38.23**	**40**	*c*	*i*	P	**P**	**20 11 33.2 +0.1**
YAK					*e**PP		pP	20 11 44.0 +7.1
YAK					*e*			20 13 01.7
YAK					*e*PPP		PPP	20 13 20.3
YAK					*e*			20 13 42.9
YAK					*e*S		**S**	**20 17 25.7 -0.6**
YAK					*e*SSS		SSS	20 20 32.6
YAK					*e*			20 21 41.4
YAK						pmax	pmax	
	comp=Z,135nm,0.9s							
YAK						pmax	pmax	
	comp=E,55nm,1.2s							
YAK						pmax	pmax	
	comp=Z,135nm,4.1s							
YAK						pmax	pmax	
	comp=N,113nm,3.9s							
YAK						pmax	pmax	
	comp=E,115nm,3.3s							
YAK						smax	smax	
	comp=N,66nm,1.9s							
YAK						smax	smax	
	comp=E,59nm,2.0s							
YAK						MLR	MLR	
	comp=Z,1μm,10.0s							
YAK						MLR	MLR	
	comp=N,266nm,11.0s							
YAK						MLR	MLR	
	comp=E,753nm,11.0s							
KSP	**Ksiaz**	**38.34**	**302**	⇑	*e*	P	**P**	**20 11 34.8 +0.5**
KSP					*e*			20 13 03.2
KSP	**Ksiaz**	**38.34**	**302**		*e*	P	**P**	**20 11 35.0 +0.7**
KSP					*e*pP		**pP**	**20 11 38.1 0.0**
KSP						LMZ	LR	20 28 37.0
ZST	**Bratislava**	**38.37**	**298**		*e*	P	**P**	**20 11 36.8 +2.2**
ZST						pmax	pmax	
	comp=Z,41nm,2.0s							
ZST	**Bratislava**	**38.37**	**298**		*e*	P	**P**	**20 11 36.8 +2.2**
ZST					*e*PP		**PP**	**20 13 03.0 +0.8**
DPC	**Dobruska-Polom**	**38.41**	**301**		*e*	P	**P**	**20 11 35.9 +0.9**
DPC						MLR	MLR	
	comp=Z,900nm,17.6s							
DPC	**Dobruska-Polom**	**38.41**	**301**		*e*	P	**P**	**20 11 36.4 +1.4**
	comp=Z,50nm,1.0s							
DPC	**Dobruska-Polom**	**38.41**	**301**		*e*	P	**P**	**20 11 35.9 +0.9**
DPC					*e*pP		**pP**	**20 11 39.6 +0.8**
DPC						AMS	AMS	20 28 30.0
	comp=Z,900nm,17.6s							
VRAC	**Vranov**	**38.45**	**299**			P	**P**	**20 11 36.4 +1.1**
VRAC	**Vranov**	**38.45**	**299**			P	**P**	**20 11 36.4 +1.1**
	comp=Z,7.3nm,0.7s,baz=82,slow=7.5,SNR=11							
VRAC						LR	LR	20 30 30.8
	comp=Z,499nm,18.4s,baz=246,slow=41							
BSD	**Bornholm Skovb**	**38.55**	**309**		*i*	P	**P**	**20 11 35.3 -0.6**
BSD						pmax	pmax	
	comp=Z,13nm,0.8s							
BSD						MLR	MLR	
	comp=Z,800nm,12.0s							
BSD	**Bornholm Skovb**	**38.55**	**309**		*i*	P	**P**	**20 11 35.3 -0.6**
	comp=Z,13nm,0.8s							
BSD						LR	LR	
	comp=Z,800nm,12.0s							
UPC	**Upice**	**38.58**	**301**		*e*	P	**P**	**20 11 37.4 +1.1**
UPC	**Upice**	**38.58**	**301**		*e*	P	**P**	**20 11 37.4 +1.1**
UPC					*e*pP		**pP**	**20 11 40.8 +0.7**
SOP	**Sopron**	**38.85**	**297**	⇓	*e*	P	**P**	**20 11 40.0 +1.4**
HFS	**Hagfors**	**38.90**	**317**			P	**P**	**20 11 39.5 +0.7**
HFS	**Hagfors**	**38.90**	**317**			P	**P**	**20 11 39.5 +0.7**
	comp=Z,31nm,0.7s,baz=106,slow=9.8,SNR=84							
HFS						LR	LR	20 30 29.7
	comp=Z,123nm,18.4s,baz=90,slow=40							
TREC	**Trest**	**39.16**	**300**			AMS	AMS	20 29 20.0
	comp=Z,900nm,9.2s							
CONA	**Conrad Observa**	**39.24**	**298**	⇓	*i*	P	**P**	**20 11 42.8 +0.8**
CONA	**Conrad Observa**	**39.24**	**298**	⇓	*i*	P	**P**	**20 11 42.8 +0.8**
TIXI	**Tiksi**	**39.46**	**25**			PFAKE		20 12 00.0 +17
TIXI						LR	LR	
	comp=Z,405nm,20.0s							
PVCC	**Panska Ves**	**39.48**	**302**		*e*	P	**P**	**20 11 45.0 +1.2**
PVCC						MLR	MLR	
	comp=Z,1μm,12.1s							
PVCC	**Panska Ves**	**39.48**	**302**		*e*	P	**P**	**20 11 45.0 +1.2**
PVCC					*e*pP		**pP**	**20 11 48.4 +0.8**
PVCC						AMS	AMS	20 29 10.0
	comp=Z,1μm,12.1s							
QIZ	**Qiongzhong**	**39.49**	**115**			P	**P**	**20 11 43.5 -0.7**
QIZ						S	**S**	**20 17 46.0 -0.2**
QIZ						pmax	pmax	
	comp=Z,31nm,1.9s							
QIZ						pmax	pmax	
	comp=Z,280nm,5.3s							
QIZ						LR	LR	
	comp=N,550nm,22.2s							
QIZ						LR	LR	
	comp=E,270nm,22.7s							
QIZ						LR	LR	
	comp=Z,570nm,20.7s							
RGN	**Rugen**	**39.53**	**308**		*e*	P	**P**	**20 11 45.6 +1.4**
	comp=Z,274nm,1.0s							
RGN	**Rugen**	**39.53**	**308**		*e*	P	**P**	**20 11 45.4 +1.3**
	comp=Z,287nm,1.0s							
PRU	**Pruhonice**	**39.61**	**301**		*e*	P	**P**	**20 11 45.5 +0.6**
PRU						MLR	MLR	
	comp=Z,900nm,12.7s							
PRU	**Pruhonice**	**39.61**	**301**		*e*	P	**P**	**20 11 45.5 +0.6**
PRU					*e*pP		**pP**	**20 11 49.1 +0.4**
PRU						AMS	AMS	20 29 20.0
	comp=Z,900nm,12.7s							
BRG	**Berggiesshubel**	**39.80**	**302**		*e*	P	**P**	**20 11 47.0 +0.6**
	comp=Z,8.4nm,0.9s							
BRG					*i*			20 11 50.6
	comp=Z,29nm,1.0s							
BRG						PP	**PnPn**	**20 13 20.0 -0.9**
BRG								
	comp=N,709nm,13.0s							
BRG								
	comp=E,1μm,15.1s							
BRG								
	comp=Z,2μm,14.0s							
BRG	**Berggiesshubel**	**39.80**	**302**		*e*	P	**P**	**20 11 47.0 +0.6**
BRG								20 13 20.0
BRG						pmax	pmax	
	comp=Z,8.0nm,1.0s							
BRG						pmax	pmax	
	comp=Z,29nm,1.0s							
BRG						MLR	MLR	
	comp=N,709nm,13.0s							
BRG						MLR	MLR	
	comp=E,1μm,15.1s							
BRG						MLR	MLR	
	comp=Z,2μm,14.0s							
BRG	**Berggiesshubel**	**39.80**	**302**		*e*	P	**P**	**20 11 47.0 +0.6**
COP	**Copenhagen**	**39.88**	**310**		*i*	P	P	20 11 51.2 +4.1
COP						pmax	pmax	
	comp=Z,24nm,0.8s							
COP						MLR	MLR	
	comp=Z,350nm,12.0s							
COP	**Copenhagen**	**39.88**	**310**		*i*	P	P	20 11 51.2 +4.1
	comp=Z,24nm,0.8s							
COP								
	comp=Z,350nm,12.0s							
LLD	**Lille Linde**	**40.05**	**310**		*i*	P	P	20 11 52.9 +4.4
LLD						pmax	pmax	
	comp=Z,76nm,0.9s							
LLD	**Lille Linde**	**40.05**	**310**		*i*	P	P	20 11 52.9 +4.4
	comp=Z,76nm,0.8s							
NB2	**NORSAR Subarra**	**40.10**	**319**			P	**P**	**20 11 49.1 +0.2**
	baz=89,slow=8.6							
NB2	**NORSAR Subarra**	**40.10**	**319**			P	**P**	**20 11 49.1 +0.2**
	comp=Z,30nm,0.9s,baz=89,slow=8.6							
NOA	**NORSAR Array B**	**40.10**	**319**			P	**P**	**20 11 48.9 0.0**
NOA						PP	**PP**	**20 13 21.8 +0.9**
NOA	**NORSAR Array B**	**40.10**	**319**			P	**P**	**20 11 48.9 0.0**
	comp=Z,14nm,0.7s,baz=90,slow=8.4,SNR=27							
NOA						PP	**PP**	**20 13 21.8 +0.9**
	comp=Z,3.7nm,0.8s,baz=92,slow=11,SNR=3.5							
NOA						LR	LR	20 28 33.0
	comp=Z,494nm,19.2s,baz=95,slow=36							
FBE	**Freiberg**	**40.15**	**303**		*e*	P	**P**	**20 11 50.5 +1.1**
	comp=Z,59nm,1.0s							
SSE	**Sheshan**	**40.18**	**91**			P	**P**	**20 11 49.3 -0.6**
SSE						pmax	pmax	
	comp=Z,40nm,1.0s							
SSE						pmax	pmax	
	comp=Z,100nm,6.5s							
SSE						LR	LR	
	comp=N,350nm,14.7s							
SSE						LR	LR	
	comp=E,370nm,14.7s							
SSE						LR	LR	
	comp=Z,460nm,13.9s							
NAO01	**NORSAR Array S**	**40.26**	**318**		*e*	P	**P**	**20 11 49.9 -0.4**
	comp=Z,22nm,0.8s							
CLL	**Collm**	**40.28**	**303**	⇑	*i*	P	**P**	**20 11 50.8 +0.3**
CLL						pmax	pmax	
	comp=Z,19nm,1.2s							
CLL	**Collm**	**40.28**	**303**		*e*	P	**P**	**20 11 51.2 +0.7**
	comp=Z,45nm,1.0s							
CLL	**Collm**	**40.28**	**303**	⇑	*i*	P	**P**	**20 11 50.8 +0.3**
	comp=Z,19nm,1.2s							
CLL					*i*	pP	**pP**	**20 11 54.6 +0.3**
	comp=Z,45nm,1.0s							
CLL					*i*	sP	**sP**	**20 11 56.9 +1.1**
CLL					*e*PP		**PP**	**20 13 19.0 -4.0**
CLL					*e*PPk			20 13 26.0
CLL					*e*PPP		PPP	20 13 48.0
CLL					*e*S		S	20 18 06.0 +8.5
CLL					*e*			20 18 54.0
CLL					*e*SS		**SnSn**	**20 21 06.0 +5.9**
GEC2	**GERESS Array S**	**40.41**	**299**		*e*	P	**P**	**20 11 52.4 +0.7**
GEC2						pmax	pmax	
	comp=Z,78nm,1.5s							
GEC2	**GERESS Array S**	**40.41**	**299**		*e*	P	**P**	**20 11 52.4 +0.7**
	comp=Z,78nm,1.5s							
GEC2	**GERESS Array S**	**40.41**	**299**		*e*	P	**P**	**20 11 53.0 +1.3**
GERES	**GERESS Array B**	**40.41**	**299**			P	**P**	**20 11 52.6 +0.9**
GERES						PP	**PP**	**20 13 25.4 +0.9**
GERES	**GERESS Array B**	**40.41**	**299**			P	**P**	**20 11 52.6 +0.9**
	comp=Z,7.5nm,0.7s,baz=72,slow=8.6,SNR=16							
GERES						PP	**PP**	**20 13 25.4 +0.9**
	comp=Z,2.6nm,0.7s,baz=62,slow=9.1,SNR=3.1							
GERES						LR	LR	20 30 08.9
	comp=Z,583nm,19.0s,baz=254,slow=38							
KHC	**Kasperske Hory**	**40.42**	**300**		*e*	P	**P**	**20 11 51.8 +0.1**
KHC					*e**PP		**pP**	**20 11 55.7 +0.2**
KHC					*e*			20 12 03.5
KHC					*e*			20 13 24.0
KHC						MLR	MLR	
	comp=Z,700nm,10.4s							
KHC	**Kasperske Hory**	**40.42**	**300**		*e*	P	**P**	**20 11 51.7 +0.1**
	comp=Z,41nm,1.6s							
KHC	**Kasperske Hory**	**40.42**	**300**		*e*	P	**P**	**20 11 51.8 +0.1**
KHC					*e*pP		**pP**	**20 11 55.7 +0.2**
KHC					*ex*		x	20 12 03.5
KHC					*e*PP		**PP**	**20 13 24.0 -0.6**
KHC					*ex*		x	20 13 36.5
KHC						AMS	AMS	20 30 00.0
	comp=Z,700nm,10.4s							
CMBY	**CAMPBELL BAY**	**40.48**	**146**		*e*	P	**P**	**20 11 51.3 -1.1**
KLR	**Kul'dur**	**40.72**	**60**	⇓	*i*	P	P	20 11 50.8 -3.3
KLR						pmax	pmax	
	comp=E,43nm,1.2s							
KLR						pmax	pmax	
	comp=Z,64nm,1.2s							
KLR						MLR	MLR	
	comp=E,1μm,13.0s							
KLR						MLR	MLR	
	comp=Z,5μm,13.0s							
TANN	**Tannenbergstha**	**40.82**	**302**		*e*	P	**P**	**20 11 56.1 +1.1**
	comp=Z,45nm,1.2s							
WET	**Wettzell**	**40.86**	**300**		*e*	P	**P**	**20 11 56.4 +1.0**
WET						pmax	pmax	
	comp=Z,35nm,1.4s							
WET	**Wettzell**	**40.86**	**300**		*e*	P	**P**	**20 11 56.4 +1.0**
	comp=Z,35nm,1.4s							
NKC	**Nov

MANZ Manzenberg 41.14 302 *e*P P 20 11 58.6 +1.0
comp=Z,23nm,1.2s
TRI Trieste 41.24 295 *e*P P 20 11 58.8 +0.3
TRI pmax pmax
comp=Z,54nm,0.9s
TRI Trieste 41.24 295 *e*P P 20 11 58.8 +0.3
comp=Z,54nm,0.9s
MOX Moxa 41.29 303 *e*P P 20 11 59.7 +0.9
MOX pmax pmax
comp=Z,48nm,1.3s
MOX MLR MLR
comp=Z,800nm,18.5s
MOX Moxa 41.29 303 *e*P P 20 11 59.7 +0.9
comp=Z,48nm,1.3s
MOX *e*L L 20 30 20.5
comp=Z,813nm,18.5s
RJOB Jochberg 41.29 298 *e*P P 20 11 59.0 +0.1
BSEG Bad Segeberg 41.37 308 *e*P P 20 12 00.6 +1.2
BSEG pmax pmax
comp=Z,124nm,0.9s
BSEG Bad Segeberg 41.37 308 *e*P P 20 12 00.6 +1.2
comp=Z,124nm,0.9s
MUD Monsted U'grnd 41.59 312 *i* P P 20 12 05.9 +4.8
MUD pmax pmax
comp=Z,21nm,0.8s
MUD Monsted U'grnd 41.59 312 *i* P P 20 12 05.9 +4.8
comp=Z,21nm,0.8s
GRF Grafenberg Arr 41.77 301 *e*P P 20 12 03.7 +0.9
GRF pmax pmax
comp=Z,102nm,1.3s
GRF MLR MLR
comp=Z,400nm,19.1s
GRF Grafenberg Arr 41.77 301 *e*P P 20 12 03.7 +0.9
comp=Z,102nm,1.3s
GRF *e*L L 20 30 00.3
comp=Z,406nm,19.1s
GRFO Grafenberg 41.77 301 *e*P P 20 12 04.0 +1.2
GRFO Grafenberg 41.77 301 *e*P P 20 12 04.0 +1.2
CLZ Clausthal 41.77 305 *e*P P 20 12 03.9 +1.1
CLZ pmax pmax
comp=Z,32nm,1.1s
CLZ Clausthal 41.77 305 *e*P P 20 12 03.9 +1.1
comp=Z,32nm,1.1s
NRDL Niedersach Rie 41.79 306 *e*P P 20 12 03.9 +1.2
comp=Z,81nm,1.0s
KSAR Wonju Array Be 42.09 78 P P 20 12 05.0 -0.4
KSAR PcP **PcP** 20 13 59.6 -0.5
KSRS Korea Array 42.11 78 P P 20 12 05.0 -0.6
comp=Z,19nm,1.1s,baz=286,slow=7.1,SNR=43
KSRS PcP **PcP** 20 13 59.6 -0.5
comp=Z,3.9nm,0.9s,baz=304,slow=3.6,SNR=6.0
KSRS LR LR 20 31 17.4
comp=Z,179nm,18.8s,baz=294,slow=39
FUR Furstenfeldbru 42.15 299 *e*P P 20 12 07.3 +1.4
FUR pmax pmax
comp=Z,135nm,1.6s
FUR Furstenfeldbru 42.15 299 *e*P P 20 12 07.3 +1.4
comp=Z,135nm,1.6s
USRK Ussuriysk Arra 42.37 67 P P 20 12 07.3 -0.3
comp=Z,8.4nm,0.8s,baz=316,slow=11,SNR=24
USRK LR LR 20 31 37.9
comp=Z,487nm,18.1s,baz=26,slow=39
CEL Celeste 42.49 284 *e*P P 20 12 10.1 +1.3
comp=Z,130nm,1.0s
AQU L'Aquila 42.62 290 PFAKE 20 12 20.0 +10
AQU LR LR
comp=Z,353nm,21.0s
KBS Kingsbay 42.64 346⇓ *i*P P 20 12 10.2 +0.7
KBS pmax pmax
comp=Z,36nm,1.3s
KBS MLR MLR
comp=Z,441nm,21.0s
KBS Kingsbay 42.64 346 *e*P P 20 12 11.0 +1.5
comp=Z,20nm,0.9s
KBS LR LR
comp=Z,492nm,20.0s
RETA Reutte 42.68 298⇑ *i*P P 20 12 10.4 +0.1
RETA Reutte 42.68 298⇑ *i*P P 20 12 10.4 +0.1
IBBN Ibbenburen 43.23 306 *e*P P 20 12 15.7 +1.1
comp=Z,50nm,0.8s
FUORN Ofenpass-Fuorn 43.27 297 *e*P P 20 12 18.6 +3.3
comp=Z,38nm,1.6s
STU Stuttgart 43.30 301 *e*P P 20 12 19.3 +4.1
STU pmax pmax
comp=Z,71nm,1.3s
STU Stuttgart 43.30 301 *e*P P 20 12 16.0 +0.8
comp=Z,99nm,1.5s
STU Stuttgart 43.30 301 *e*P P 20 12 19.3 +4.1
comp=Z,71nm,1.3s
DAVA Damuels 43.31 298⇑ *i*P P 20 12 15.4 -0.1
DAVA Damuels 43.31 298⇑ *i*P P 20 12 15.4 -0.1
TNS Taunus Mts 43.35 303 *e*P P 20 12 16.7 +1.0
TNS pmax pmax
comp=Z,25nm,1.3s
TNS Taunus Mts 43.35 303 *e*P P 20 12 16.7 +1.0
comp=Z,25nm,1.3s
DAVOX Davos/Dischmat 43.47 298 P P 20 12 17.1 +0.3
DAVOX Davos/Dischmat 43.47 298 P P 20 12 17.1 +0.3
comp=Z,5.3nm,0.5s,baz=99,slow=6.0
DAVOX LR LR 20 32 24.2
comp=Z,822nm,18.4s,baz=62,slow=39
BUG Bochum--Univer 43.74 305 *e*P P 20 12 19.9 +1.2
comp=Z,55nm,1.2s
SPAK Spaichingen-Ko 43.76 300 *e*P P 20 12 19.0 0.0
TUE Stuetta 43.92 297 *e*P P 20 12 24.3 +3.8
comp=Z,71nm,2.0s
TUE LR LR
comp=Z,848nm,21.0s
BFO Black Forest 43.98 300 *e*P P 20 12 22.1 +1.4
BFO pmax pmax
comp=Z,34nm,1.1s
BFO Black Forest 43.98 300 *e*P P 20 12 22.1 +1.4
comp=Z,34nm,1.1s
BFO Black Forest 43.98 300 *e*P P 20 12 22.2 +1.4
comp=Z,34nm,1.2s
BFO LR LR
comp=Z,444nm,19.0s
BFO Black Forest 43.98 300 P P 20 12 22.8 +2.1
comp=Z,131nm,1.1s,SNR=6.9
VLC Villacollemand 44.02 294 PFAKE 20 12 30.0 +8.9
VLC LR LR
comp=Z,466nm,22.0s
LANF Langenberg 44.11 301 *e*P P 20 12 21.4 -0.4
LANF Langenberg 44.11 301 *e*P P 20 12 21.4 -0.4
LANF Langenberg 44.11 301 *e*P P 20 12 21.4 -0.4
SSLB Suanglung 44.14 100 *e*P P 20 12 22.8 +0.5
comp=Z,29nm,0.8s
FELD Feldberg im Sc 44.33 300 *e*P P 20 12 27.3 +3.6
RUP Ruppelstein 44.36 302 *e*P P 20 12 27.0 +3.2
RUP Ruppelstein 44.36 302 *e*P P 20 12 27.0 +3.2
CDF Champ du Feu 44.62 301 *e*P P 20 12 25.6 -0.3
comp=Z,84nm,1.4s
CDF Champ du Feu 44.62 301 *e*P P 20 12 25.6 -0.3
CDF pmax pmax
comp=Z,84nm,1.4s
CDF Champ du Feu 44.62 301 *e*P P 20 12 25.6 -0.3
comp=Z,84nm,1.4s
MEM Membach 44.74 304 P P 20 12 27.4 +0.6
comp=Z,18nm,1.4s
MEM AP **pP** 20 12 30.8 +0.2
ECH Echery 44.76 300 *e*P P 20 12 26.6 -0.4
ECH MLR MLR
comp=Z,328nm,22.0s
ECH Echery 44.76 300 *e*P P 20 12 26.6 -0.4
ECH LR LR
comp=Z,328nm,22.0s
ECH Echery 44.76 300 *e*P P 20 12 26.6 -0.4
MOF Molkenrain 44.89 300 *e*P P 20 12 31.9 +3.8
MOF Molkenrain 44.89 300 *e*P P 20 12 31.9 +3.8
MOF Molkenrain 44.89 300 *e*P P 20 12 31.9 +3.8
FURI Furi 44.93 231 *e*P P 20 12 27.5 -1.5
comp=Z,22nm,0.4s
WLF Walferdange 44.94 303 P P 20 12 29.4 +1.1
comp=Z,28nm,1.5s
WLF AP **pP** 20 12 32.9 +0.7
WLF Walferdange 44.94 303 *e*P P 20 12 29.2 +0.9
WLF pmax pmax
comp=Z,46nm,1.1s
WLF MLR MLR
comp=Z,563nm,21.0s
WLF Walferdange 44.94 303 *e*P P 20 12 29.4 +1.1
comp=Z,43nm,1.1s
WLF Walferdange 44.94 303 *e*P P 20 12 29.2 +0.9
comp=Z,46nm,1.1s
WLF LR LR
comp=Z,563nm,21.0s

KULM Kulim 45.04 138 *e*P P 20 12 28.9 -0.6
comp=Z,49nm,1.1s
KULM Kulim 45.04 138 P P 20 12 29.0 -0.4
HINF Hinteralfeld 45.08 300 *e*P P 20 12 29.4 -0.2
comp=Z,147nm,1.5s
HINF Hinteralfeld 45.08 300 *e*P P 20 12 29.4 -0.2
HINF pmax pmax
comp=Z,147nm,1.5s
HINF Hinteralfeld 45.08 300 *e*P P 20 12 29.4 -0.2
comp=Z,147nm,1.5s
BCLA Clavier 45.23 304 P P 20 12 31.1 +0.5
comp=Z,21nm,2.0s
BCLA AP **pP** 20 12 34.7 +0.3
SENIN Lac Senin/Sane 45.29 298 *e*P P 20 12 32.4 +0.9
comp=Z,31nm,1.3s
HAU Haudompre 45.34 300 *e*P P 20 12 31.4 -0.2
comp=Z,76nm,1.1s
HAU *e*R
comp=Z,363nm,20.6s
HAU Haudompre 45.34 300 *e*P P 20 12 31.4 -0.2
HAU pmax pmax
comp=Z,76nm,1.0s
HAU Haudompre 45.34 300 *e*P P 20 12 31.4 -0.2
comp=Z,76nm,1.0s
THEF They Montfort 45.50 301 *e*P P 20 12 33.1 +0.3
THEF They Montfort 45.50 301 *e*P P 20 12 33.1 +0.3
THEF They Montfort 45.50 301 *e*P P 20 12 33.1 +0.3
PAGF Fort de Pagny 45.55 301 *e*P P 20 12 33.4 +0.2
comp=Z,14nm,1.2s
PAGF Fort de Pagny 45.55 301 *e*P P 20 12 33.4 +0.2
comp=Z,14nm,1.2s
PGF Pioggiola 45.57 292 *e*P P 20 12 32.8 -0.7
comp=Z,87nm,1.1s
PGF Pioggiola 45.57 292 *e*P P 20 12 32.8 -0.7
PGF pmax pmax
comp=Z,87nm,1.1s
PGF Pioggiola 45.57 292 *e*P P 20 12 32.8 -0.7
comp=Z,87nm,1.1s
GIVF Givet 45.62 304 *e*P P 20 12 33.8 +0.1
comp=Z,77nm,1.1s
GIVF Givet 45.62 304 *e*P P 20 12 33.8 +0.1
GIVF pmax pmax
comp=Z,77nm,1.1s
GIVF Givet 45.62 304 *e*P P 20 12 33.8 +0.1
comp=Z,77nm,1.1s
DOU Dourbes 45.76 304 P P 20 12 35.7 +0.9
comp=Z,10nm,1.1s
DOU AP **pP** 20 12 38.6 0.0
SNF Seneffe 45.82 304 P P 20 12 36.0 +0.7
comp=Z,19nm,1.8s
SNF AP **pP** 20 12 39.5 +0.3
IPM Ipoh 45.92 138 *e*P P 20 12 34.9 -1.6
comp=Z,47nm,0.9s
IPM Ipoh 45.92 138 P P 20 12 36.1 -0.4
IPM Ipoh 45.92 138 P P 20 12 36.2 -0.3
LPG La Plagne 45.95 297 *e*P P 20 12 36.9 +0.1
comp=Z,22nm,0.8s
LPG La Plagne 45.95 297 *e*P P 20 12 36.9 +0.1
LPG pmax pmax
comp=Z,22nm,0.8s
LPG La Plagne 45.95 297 *e*P P 20 12 36.9 +0.1
comp=Z,22nm,0.8s
LPL La Plagne 45.96 297 *e*P P 20 12 36.9 +0.2
comp=Z,40nm,1.0s
LPL La Plagne 45.96 297 *e*P P 20 12 36.9 +0.2
LPL pmax pmax
comp=Z,40nm,1.0s
LPL La Plagne 45.96 297 *e*P P 20 12 36.9 +0.2
comp=Z,40nm,1.0s
RSL Roselend 45.97 297 *e*P P 20 12 38.0 +1.3
RSL Roselend 45.97 297 *e*P P 20 12 38.0 +1.3
RSL Roselend 45.97 297 *e*P P 20 12 38.0 +1.3
CABF La Chapelle 45.98 299 *e*P P 20 12 36.2 -0.6
comp=Z,48nm,1.3s
CABF La Chapelle 45.98 299 *e*P P 20 12 36.2 -0.6
CABF pmax pmax
comp=Z,48nm,1.3s
CABF La Chapelle 45.98 299 *e*P P 20 12 36.2 -0.6
comp=Z,48nm,1.3s
MEZF Maizieres J'vi 45.99 301 *e*P P 20 12 36.9 +0.2
comp=Z,203nm,1.3s
MEZF Maizieres J'vi 45.99 301 *e*P P 20 12 36.9 +0.2
comp=Z,203nm,1.3s
BAIF Baives 46.01 304 *e*P P 20 12 37.0 +0.2
comp=Z,98nm,1.2s
BAIF Baives 46.01 304 *e*P P 20 12 37.0 +0.2
BAIF pmax pmax
comp=Z,98nm,1.2s
BAIF Baives 46.01 304 *e*P P 20 12 37.0 +0.2
comp=Z,98nm,1.2s
SFTF Sexfontaines 46.10 301 *e*P P 20 12 37.4 -0.2
comp=Z,143nm,1.3s
SFTF Sexfontaines 46.10 301 *e*P P 20 12 37.4 -0.2
comp=Z,143nm,1.3s
SBF Sospel 46.11 295 *e*P P 20 12 37.4 -0.4
comp=Z,48nm,0.9s
SBF Sospel 46.11 295 *e*P P 20 12 37.4 -0.4
SBF pmax pmax
comp=Z,48nm,0.9s
SBF Sospel 46.11 295 *e*P P 20 12 37.4 -0.4
comp=Z,48nm,0.9s
BNI Bardonecchia 46.16 296 *e*P P 20 12 39.7 +1.4
BNI pmax pmax
comp=Z,23nm,1.0s
BNI MLR MLR
comp=Z,639nm,21.0s
BNI Bardonecchia 46.16 296 *e*P P 20 12 39.7 +1.4
comp=Z,23nm,1.0s
BNI LR LR
comp=Z,639nm,21.0s
MBDF Montbardon 46.22 296 *e*P P 20 12 38.8 0.0
comp=Z,47nm,0.9s
MBDF Montbardon 46.22 296 *e*P P 20 12 38.8 0.0
MBDF pmax pmax
comp=Z,47nm,0.9s
MBDF Montbardon 46.22 296 *e*P P 20 12 38.8 0.0
comp=Z,47nm,0.9s
KTGM Kuala Trenggan 46.26 135 P P 20 12 39.0 -0.1
JNU Nakatsue 46.26 82 *e*P P 20 12 39.4 +0.3
comp=Z,32nm,1.3s
JNU Nakatsue 46.26 82 P P 20 12 39.2 +0.2
comp=Z,35nm,1.1s,baz=336,slow=4.5,SNR=7.5
PSI Prapat 46.41 142 P P 20 12 38.7 -1.7
PSI PcP **PcP** 20 14 14.7 -0.5
PSI Prapat 46.41 142 P P 20 12 38.7 -1.7
comp=Z,13nm,0.8s,baz=315,slow=7.3,SNR=12
PSI PcP **PcP** 20 14 14.7 -0.5
comp=Z,16nm,1.0s,baz=284,slow=7.2,SNR=5.9
ORIF Oris-en-Rattie 46.74 297 *e*P P 20 12 42.1 -0.6
comp=Z,40nm,1.2s
ORIF *e*R
comp=Z,806nm,21.2s
ORIF Oris-en-Rattie 46.74 297 *e*P P 20 12 42.1 -0.6
ORIF pmax pmax
comp=Z,40nm,1.2s
ORIF Oris-en-Rattie 46.74 297 *e*P P 20 12 42.1 -0.6
comp=Z,40nm,1.2s
FRF La Foret Royal 46.76 294 *e*P P 20 12 42.0 -0.8
comp=Z,110nm,1.5s
FRF La Foret Royal 46.76 294 *e*P P 20 12 42.0 -0.8
FRF pmax pmax
comp=Z,110nm,1.5s
FRF La Foret Royal 46.76 294 *e*P P 20 12 42.0 -0.8
comp=Z,110nm,1.5s
LMR La Mourre 46.94 294 *e*P P 20 12 43.5 -0.7
comp=Z,75nm,1.3s
LMR La Mourre 46.94 294 *e*P P 20 12 43.5 -0.7
LMR pmax pmax
comp=Z,75nm,1.3s
LMR La Mourre 46.94 294 *e*P P 20 12 43.5 -0.7
comp=Z,75nm,1.3s
LOR Lormes 47.17 300 *e*P P 20 12 45.0 -1.0
comp=Z,28nm,1.1s
LOR *e*R
comp=Z,433nm,22.5s
LOR Lormes 47.17 300 *e*P P 20 12 45.0 -1.0
comp=Z,28nm,1.1s
FRIM Kepong 47.29 138 P P 20 12 47.1 -0.1
SMRF Simiane la Rot 47.30 295 *e*P P 20 12 46.5 -0.6
comp=Z,40nm,0.9s
SMRF Simiane la Rot 47.30 295 *e*P P 20 12 46.5 -0.6
comp=Z,40nm,0.9s
SMF Signal de Mont 47.41 299 *e*P P 20 12 47.2 -0.7
comp=Z,72nm,1.4s
SMF Signal de Mont 47.41 299 *e*P P 20 12 47.2 -0.7
SMF pmax pmax
comp=Z,73nm,1.4s

SMF Signal de Mont 47.41 299 *e*P P 20 12 47.2 -0.7
comp=Z,72nm,1.4s
SSF Saint Saulge 47.48 300 *e*P P 20 12 47.6 -0.7
comp=Z,56nm,1.5s
SSF Saint Saulge 47.48 300 *e*P P 20 12 47.6 -0.7
SSF pmax pmax
comp=Z,56nm,1.5s
SSF Saint Saulge 47.48 300 *e*P P 20 12 47.6 -0.7
comp=Z,56nm,1.5s
VIVF Saint-Julien-l 47.56 297 *e*P P 20 12 48.9 -0.1
comp=Z,63nm,1.0s
VIVF Saint-Julien-l 47.56 297 *e*P P 20 12 48.9 -0.1
VIVF pmax pmax
comp=Z,63nm,1.0s
VIVF Saint-Julien-l 47.56 297 *e*P P 20 12 48.9 -0.1
comp=Z,63nm,1.0s
AVF Avril sur Loir 47.67 300 *e*P P 20 12 49.1 -0.8
comp=Z,147nm,1.4s
AVF Avril sur Loir 47.67 300 *e*P P 20 12 49.1 -0.8
AVF pmax pmax
comp=Z,147nm,1.4s
AVF Avril sur Loir 47.67 300 *e*P P 20 12 49.1 -0.8
comp=Z,147nm,1.4s
BGF Bois d'Agland 48.08 300 *e*P P 20 12 52.5 -0.6
comp=Z,75nm,1.4s
BGF Bois d'Agland 48.08 300 *e*P P 20 12 52.5 -0.6
BGF pmax pmax
comp=Z,75nm,1.4s
BGF Bois d'Agland 48.08 300 *e*P P 20 12 52.5 -0.6
comp=Z,75nm,1.4s
KEST Kesra 48.30 284 *e*P P 20 12 56.5 +1.5
KEST Kesra 48.30 284 P P 20 12 56.0 +1.0
comp=Z,7.2nm,1.0s,baz=298,slow=5.0,SNR=9.4
KEST LR LR 20 37 13.0
comp=Z,44nm,19.1s,baz=269,slow=41
LASF Ste Croix 48.40 296 *e*P P 20 12 55.7 +0.1
comp=Z,62nm,1.0s
LASF Ste Croix 48.40 296 *e*P P 20 12 55.7 +0.1
comp=Z,62nm,1.0s
YSS Yuzh-Sakhalins 48.43 60⇑ *i*P P 20 12 57.0 +1.3
YSS pmax pmax
comp=Z,40nm,1.1s
YSS MLR MLR
comp=E,2μm,14.0s
YSS MLR MLR
comp=Z,1μm,14.0s
SEY Seymchan 48.56 37⇑ *i*P P 20 12 56.2 -0.3
EKA Eskdalemuir Ar 48.59 312 P P 20 12 56.7 -0.1
EKA PcP **PcP** 20 14 23.2 +0.9
EKA PP **PP** 20 14 50.3 +0.9
EKA Eskdalemuir Ar 48.59 312 P P 20 12 56.7 -0.1
comp=Z,4.9nm,0.6s,baz=83,slow=8.2,SNR=15
EKA PcP **PcP** 20 14 23.2 +0.9
comp=Z,3.4nm,0.7s,baz=64,slow=5.7,SNR=3.5
EKA PP **PP** 20 14 50.3 +0.9
comp=Z,6.4nm,0.8s,baz=72,slow=9.1,SNR=3.7
TCF Toulx Ste Croi 48.59 300 *e*P P 20 12 56.8 -0.2
comp=Z,90nm,1.4s
TCF Toulx Ste Croi 48.59 300 *e*P P 20 12 56.8 -0.2
TCF pmax pmax
comp=Z,90nm,1.4s
TCF Toulx Ste Croi 48.59 300 *e*P P 20 12 56.8 -0.2
comp=Z,90nm,1.4s
DAG Danmarks Havn 48.92 342⇑ *i*P P 20 12 59.7 +0.6
DAG pmax pmax
comp=Z,13nm,0.8s
DAG Danmarks Havn 48.92 342⇑ *i*P P 20 12 59.7 +0.6
comp=Z,17nm,0.8s
LDF La Druitiere 49.17 303 *e*P P 20 13 00.6 -0.8
comp=Z,101nm,1.1s
LDF La Druitiere 49.17 303 *e*P P 20 13 00.6 -0.8
LDF pmax pmax
comp=Z,101nm,1.1s
LDF La Druitiere 49.17 303 *e*P P 20 13 00.6 -0.8
comp=Z,101nm,1.1s
KGM Kluang 49.18 137 P P 20 13 01.8 0.0
KGM Kluang 49.18 137 P P 20 13 02.1 +0.3
CAF Calviac 49.23 298 *e*P P 20 13 02.0 +0.1
comp=Z,60nm,1.3s
CAF Calviac 49.23 298 *e*P P 20 13 02.0 +0.1
CAF pmax pmax
comp=Z,60nm,1.3s
CAF Calviac 49.23 298 *e*P P 20 13 02.0 +0.1
comp=Z,60nm,1.3s
FLN La Foliniere 49.33 304 *e*P P 20 13 01.8 -0.8
comp=Z,129nm,1.5s
FLN *e*R
comp=Z,515nm,21.2s
FLN La Foliniere 49.33 304 *e*P P 20 13 01.8 -0.8
FLN pmax pmax
comp=Z,129nm,1.5s
FLN La Foliniere 49.33 304 *e*P P 20 13 01.8 -0.8
comp=Z,129nm,1.5s
RJF Les Rejaudoux 49.43 299 *e*P P 20 13 03.7 +0.3
comp=Z,39nm,0.9s
RJF *e*R
comp=Z,484nm,22.2s
RJF Les Rejaudoux 49.43 299 *e*P P 20 13 03.7 +0.3
RJF pmax pmax
comp=Z,39nm,0.9s
RJF Les Rejaudoux 49.43 299 *e*P P 20 13 03.7 +0.3
comp=Z,39nm,0.9s
ASAJ Asahikawa 49.46 63 LR LR 20 35 45.5
comp=Z,259nm,18.7s,baz=304,slow=38
MYKOM Kota Tinggi 49.64 137 P P 20 13 05.4 +0.1
GRR Gorron 49.70 303 *e*P P 20 13 04.4 -1.1
comp=Z,129nm,1.4s
GRR Gorron 49.70 303 *e*P P 20 13 04.4 -1.1
GRR pmax pmax
comp=Z,129nm,1.4s
GRR Gorron 49.70 303 *e*P P 20 13 04.4 -1.1
comp=Z,129nm,1.4s
MTLF Montolieu 49.79 296 *e*P P 20 13 05.9 -0.3
comp=Z,34nm,1.1s
MTLF Montolieu 49.79 296 *e*P P 20 13 05.9 -0.3
MTLF pmax pmax
comp=Z,34nm,1.1s
MTLF Montolieu 49.79 296 *e*P P 20 13 05.9 -0.3
comp=Z,34nm,1.1s
MAJO Matsushiro 49.85 74 *e*P P 20 13 06.4 -0.4
MAJO pmax pmax
comp=Z,48nm,1.1s
MAJO MLR MLR
comp=Z,487nm,21.0s
MAJO Matsushiro 49.85 74 *e*P P 20 13 06.4 -0.4
comp=Z,48nm,1.1s
MAJO LR LR
comp=Z,487nm,21.0s
MAT Matsushiro 49.85 74 P P 20 13 05.7 -1.1
MJAR Matsushiro Arr 49.85 74 P P 20 13 06.3 -0.5
MJAR Matsushiro Arr 49.85 74 P P 20 13 06.3 -0.5
comp=Z,27nm,1.0s,baz=288,slow=9.5,SNR=47
MJAR LR LR 20 35 08.9
comp=Z,411nm,19.6s,baz=270,slow=37
MFF Saint Martin d 49.97 301 *e*P P 20 13 06.3 -1.2
comp=Z,35nm,0.8s
MFF Saint Martin d 49.97 301 *e*P P 20 13 06.3 -1.2
MFF pmax pmax
comp=Z,35nm,0.8s
MFF Saint Martin d 49.97 301 *e*P P 20 13 06.3 -1.2
comp=Z,35nm,0.8s
LFF La Frestale 50.08 298 *e*P P 20 13 08.4 0.0
comp=Z,67nm,1.0s
LFF La Frestale 50.08 298 *e*P P 20 13 08.4 0.0
LFF pmax pmax
comp=Z,67nm,1.0s
LFF La Frestale 50.08 298 *e*P P 20 13 08.4 0.0
comp=Z,67nm,1.0s
ERM Erimo 50.73 65 PFAKE 20 13 30.0 +17
ERM LR LR
comp=Z,403nm,19.0s
SGMF Saint Gilles 50.80 304 *e*P P 20 13 12.8 -0.9
comp=Z,75nm,0.9s
SGMF Saint Gilles 50.80 304 *e*P P 20 13 12.8 -0.9
SGMF pmax pmax
comp=Z,75nm,0.9s
SGMF Saint Gilles 50.80 304 *e*P P 20 13 12.8 -0.9
comp=Z,75nm,0.9s
EPF Esparros 51.16 296 *e*P P 20 13 15.0 -1.6
comp=Z,26nm,1.0s
EPF Esparros 51.16 296 *e*P P 20 13 15.0 -1.6
EPF pmax pmax
comp=Z,26nm,1.0s
EPF Esparros 51.16 296 *e*P P 20 13 15.0 -1.6
comp=Z,26nm,1.0s
ROSF Rostrenen 51.20 304 *e*P P 20 13 15.8 -1.0
comp=Z,154nm,1.5s

ROSF **Rostrenen** 51.20 304 *e*P P 20 13 15.8 -1.0
ROSF pmax pmax
comp=Z,154nm,1.5s
ROSF Rostrenen 51.20 304 *e*P P 20 13 15.8 -1.0
comp=Z,154nm,1.5s
QUIF Quistinic 51.31 303 *e*P P 20 13 16.5 -1.1
comp=Z,247nm,1.6s
QUIF Quistinic 51.31 303 *e*P P 20 13 16.5 -1.1
QUIF pmax pmax
comp=Z,247nm,1.6s
QUIF Quistinic 51.31 303 *e*P P 20 13 16.5 -1.1
comp=Z,247nm,1.6s
SCO Scoresbysund 51.67 335 *i* P P 20 13 21.5 +1.6
SCO pmax pmax
comp=Z,5.0nm,1.1s
SCO Scoresbysund 51.67 335 *i* P P 20 13 21.5 +1.6
comp=Z,4.7nm,1.1s
ETSF Etsaut 51.81 297 *e*P P 20 13 21.5 0.0
comp=Z,17nm,0.7s
ETSF Etsaut 51.81 297 *e*P P 20 13 21.5 0.0
ETSF pmax pmax
comp=Z,17nm,0.7s
ETSF Etsaut 51.81 297 *e*P P 20 13 21.5 0.0
comp=Z,17nm,0.7s
SJPF Ste Jean 52.15 297 *e*P P 20 13 23.9 -0.1
comp=Z,31nm,0.9s
SJPF Ste Jean 52.15 297 *e*P P 20 13 23.9 -0.1
SJPF pmax pmax
comp=Z,31nm,0.9s
SJPF Ste Jean 52.15 297 *e*P P 20 13 23.9 -0.1
comp=Z,31nm,0.9s
BILL Bilibino 52.41 28⇑ *i*P P 20 13 26.2 +0.7
BILL *i* 20 14 36.1
BILL pmax pmax
comp=Z,25nm,1.2s
BILL MLR MLR
comp=Z,500nm,15.0s
BILL Bilibino 52.41 28 *e*P P 20 13 26.3 +0.7
comp=Z,26nm,1.3s
JHJ Hachijo jima 2 52.69 77 LR LR 20 37 28.1
comp=Z,221nm,18.1s,baz=334,slow=38
KKM Kota Kinabalu 53.26 121 *e*P P 20 13 32.8 +0.2
comp=Z,38nm,1.4s
KKM Kota Kinabalu 53.26 121 P P 20 13 33.3 +0.8
KSM Kuching 53.36 130 *e*P P 20 13 31.9 -1.2
comp=Z,27nm,1.0s
KSM Kuching 53.36 130 P P 20 13 33.8 +0.7
KSM Kuching 53.36 130 P P 20 13 33.9 +0.8
SBUM Sibu 53.66 127 P P 20 13 36.2 +0.8
SBUM Sibu 53.66 127 P P 20 13 36.3 +1.0
KMBO Kilima Mbogo 54.04 225 *e*P P 20 13 38.6 +0.3
comp=Z,16nm,1.1s
KMBO Kilima Mbogo 54.04 225 P P 20 13 39.1 +0.7
SNR=6.1
KMBO Kilima Mbogo 54.04 225 P P 20 13 38.7 +0.3
comp=Z,9.0nm,0.9s,baz=25,slow=11,SNR=12
KMBO LR LR 20 39 50.2
comp=Z,235nm,19.9s,baz=293,slow=40
PETK Petropavlovsk- 54.71 47 PcP PcP 20 14 44.9 -0.3
PETK Petropavlovsk- 54.71 47 PcP PcP 20 14 44.9 -0.3
comp=Z,7.8nm,1.0s,baz=261,slow=5.7,SNR=3.8
PET Petropavlovsk 55.27 47 *e*P P 20 13 41.5 -5.1
PET *e*S S 20 21 20.1 -10
PET MLR MLR
comp=Z,400nm,15.0s
MYLDM **Lahad Datu** 55.37 119 P P 20 13 48.9 +1.1
SUMG Summit 55.38 340 *e*P P 20 13 48.4 +0.7
SUMG pmax pmax
comp=Z,33nm,0.9s
SUMG Summit 55.38 340 *e*P P 20 13 48.4 +0.7
comp=Z,33nm,0.9s
SUMG Summit 55.38 340 *i* P P 20 13 48.8 +1.2
comp=Z,30nm,0.9s
ESDC Sonseca Array 55.60 295 P P 20 13 49.0 -0.2
ESDC Sonseca Array 55.60 295 P P 20 13 49.0 -0.2
comp=Z,6.2nm,0.7s,baz=57,slow=7.4,SNR=15
ESDC LR LR 20 42 19.4
comp=Z,183nm,18.9s,baz=40,slow=41
TSM Tawau 55.65 121 P P 20 13 50.3 +0.5
PAB San Pablo 55.92 295 PFAKE 20 14 00.0 +8.4
PAB LR LR
comp=Z,300nm,19.0s
MVO Moncorvo 56.87 298 *e*P P 20 14 58.8 +0.4
MVO *e*pP pP 20 14 01.9 -0.4
MVO A A 20 40 28.3
comp=Z,153nm,18.0s
POLO Lamas de Olo 57.26 298 *e*pP pP 20 14 04.7 -0.4
PVRL Vila Real 57.26 298 *e*pP pP 20 14 04.6 -0.4
PGAV Gavieira, Arco 57.27 299 *e*pP pP 20 14 05.1 0.0
PGAV *e*LQ LQ 20 30 54.7
PGAV A A 20 41 36.9
comp=Z,169nm,18.0s
MTE Manteigas 57.60 297 *e*P P 20 14 04.4 +0.9
comp=Z,49nm,1.9s
MTE A A 20 42 38.3
comp=Z,180nm,18.0s
PVIS Viseu 57.66 298 *e*P P 20 14 04.1 +0.1
PVIS *e*pP pP 20 14 07.5 -0.4
PCBR Castelo Branco 57.84 296 *e*P P 20 14 06.7 +1.6
comp=Z,28nm,1.4s
PMRV Marv??o 58.00 296 *e*P P 20 14 06.9 +0.6
comp=Z,29nm,0.8s
PMRV *e*pP pP 20 14 09.9 -0.3
PMRV A A 20 41 56.4
comp=Z,170nm,18.0s
PESTR Estremoz 58.43 296 *e*P P 20 14 10.6 +1.3
PESTR *e*pP pP 20 14 12.8 -0.4
PTOM Tomar 58.57 297 *e*P P 20 14 11.8 +1.5
PMTG Montargil 58.74 296 *e*P P 20 14 11.8 +0.4
comp=Z,30nm,1.5s
PMTG *e*pP pP 20 14 15.3 -0.1
EVO Evora 58.88 295 *e*P P 20 14 13.5 +1.1
EVO *e*pP pP 20 14 16.7 +0.3
EVO Evora 58.88 295 *e*P P 20 14 13.6 +1.1
comp=Z,21nm,1.1s
EVO *e*R
comp=Z,246nm,19.2s
EVOP Sao Brissos 58.96 295 *e*P P 20 14 13.6 +0.6
EVOP pmax pmax
comp=Z,21nm,1.1s
EVOP Sao Brissos 58.96 295 *e*P P 20 14 13.6 +0.6
comp=Z,21nm,1.1s
PBEJ Beja 59.06 295 *e*P P 20 14 14.2 +0.5
PBEJ *e*pP pP 20 14 17.5 -0.1
PVAQ Vaqueiros 59.29 294 *e*P P 20 14 15.5 +0.2
PVAQ *e*pP pP 20 14 18.6 -0.6
PVAQ A A 20 43 31.0
comp=Z,174nm,20.0s
PCVE Castro Verde 59.38 295 *e*P P 20 14 19.0 +3.1
PBDV Barranco-do-Ve 59.52 294 *e*P P 20 14 17.6 +0.7
comp=Z,58nm,1.3s
PBDV *e*pP pP 20 14 20.8 -0.1
MDT Midelt 59.68 288 P P 20 14 18.2 0.0
MDT Midelt 59.68 288 P P 20 14 18.2 0.0
comp=Z,11nm,1.1s,baz=60,slow=7.7,SNR=6.2
SFJD Kangerlussuaq 62.20 338 P P 20 14 34.6 0.0
SFJD Kangerlussuaq 62.20 338 *i* P P 20 14 34.4 -0.2
comp=Z,27nm,0.7s
SFJD Kangerlussuaq 62.20 338 P P 20 14 34.6 0.0
comp=Z,32nm,0.7s,baz=53,slow=6.3,SNR=12
TNA Tin City 62.25 24 *e*P P 20 14 36.3 +1.4
comp=Z,14nm,1.1s
RES Resolute Bay 62.38 356 P P 20 14 35.2 -0.5
RES Resolute Bay 62.38 356 P P 20 14 35.2 -0.5
comp=Z,3.2nm,0.8s,baz=6.5,slow=9.4,SNR=3.8
KAPI Kappang 64.09 125 *e*P P 20 14 45.2 -2.6
comp=Z,22nm,1.3s
KAPI LR LR
comp=Z,114nm,22.0s
COLD Coldfoot 65.52 17 *e*P P 20 14 57.4 +0.9
comp=Z,12nm,0.9s
TOA0 Torodi Ar. Sit 67.06 267 *e*P P 20 15 06.1 -1.1
TORD Torodi Ar. Bea 67.06 267 P P 20 15 06.2 -0.9
TORD Torodi Ar. Bea 67.06 267 P P 20 15 06.2 -0.9
comp=Z,25nm,0.9s,baz=45,slow=5.6,SNR=69
INK Inuvik 67.41 10 P P 20 15 09.1 +0.6
INK Inuvik 67.41 10 P P 20 15 09.1 +0.6
comp=Z,16nm,0.8s,baz=4.8,slow=8.1,SNR=46
COLA College 68.03 17 *e*P P 20 15 13.4 +0.9
COLA pmax pmax
comp=Z,19nm,1.0s
COLA MLR MLR
comp=Z,209nm,20.0s
COLA College 68.03 17 *e*P P 20 15 13.4 +0.9
comp=Z,19nm,1.0s
COLA LR LR
comp=Z,209nm,20.0s
ILAR Eielson Array 68.33 17 P P 20 15 14.1 -0.3
ILAR P'P' 20 43 28.6
ILAR Eielson Array 68.33 17 P P 20 15 14.1 -0.3
comp=Z,5.9nm,0.8s,baz=323,slow=4.9,SNR=71
ILAR PKPPKP P'P'df 20 43 28.6 -11
comp=Z,0.7nm,1.0s,baz=179,slow=1.4,SNR=4.6
ILAR LR LR 20 46 43.5
comp=Z,138nm,20.7s,baz=126,slow=37
PPLA Purkeypile 68.68 20 *e*P P 20 15 17.3 +0.5
comp=Z,48nm,1.9s
TRF Thorofare Moun 68.69 19 *e*P P 20 15 17.2 +0.4
comp=Z,38nm,2.0s
FRB Frobisher Bay 69.27 343 P P 20 15 19.9 -0.4
FRB Frobisher Bay 69.27 343 P P 20 15 19.9 -0.4
comp=Z,9.5nm,0.8s,baz=24,slow=6.3,SNR=6.1
EGAK Eagle 69.47 15 *e*P P 20 15 20.9 -0.5
comp=Z,6.1nm,0.9s
EGAK LR LR
comp=Z,223nm,20.0s
DOT Dot Lake 69.91 16 *e*P P 20 15 24.4 +0.1
comp=Z,13nm,0.9s
SPU Mount Spurr 70.16 21 *e*P P 20 15 29.1 +3.2
PAX Paxson 70.21 17 *e*P P 20 15 25.9 -0.3
PAX pmax pmax
comp=Z,12nm,1.1s
PAX Paxson 70.21 17 *e*P P 20 15 25.9 -0.3
comp=Z,12nm,1.1s
CMLA Cha da Macela 70.53 304 *e*P P 20 15 21.7 -6.7
comp=Z,121nm,1.5s
PMR Palmer 70.56 20 *e*P P 20 15 27.9 -0.3
PMR pmax pmax
comp=Z,12nm,1.0s
PMR Palmer 70.56 20 *e*P P 20 15 27.9 -0.3
comp=Z,12nm,1.0s
SML Sawmill 70.56 19 *e*P P 20 15 28.8 +0.5
SML pmax pmax
comp=Z,3.0nm,0.8s
SML Sawmill 70.56 19 *e*P P 20 15 28.8 +0.5
comp=Z,3.3nm,0.8s
RSO Redoubt South 70.57 22 *e*P P 20 15 30.8 +2.2
PSET Sete Cidades 70.61 304 *e*P P 20 15 22.9 -6.1
comp=Z,242nm,1.6s
LSZ Lusaka 70.70 225 *e*P P 20 15 28.6 -1.2
comp=Z,20nm,1.3s
LSZ LR LR
comp=Z,230nm,19.0s
BMRM Bremner River 72.17 18 *e*P P 20 15 39.0 +0.9
comp=Z,12nm,1.0s
YKW3 Yellowknife Ar 74.72 3 *e*P P 20 15 52.7 -0.2
comp=Z,0.3nm,0.8s
YKA Yellowknife Ar 74.79 3 P P 20 15 53.4 0.0
YKA Yellowknife Ar 74.79 3 P P 20 15 53.3 0.0
comp=Z,9.5nm,0.7s,baz=351,slow=6.1,SNR=104
LIC Lamto 76.59 266 *e*P P 20 16 03.6 -0.8
comp=Z,55nm,0.9s
LIC *e*R
comp=Z,278nm,18.2s
LIC Lamto 76.59 266 *e*P P 20 16 03.6 -0.8
comp=Z,55nm,0.9s
SCHQ Schefferville 76.62 337 *e*P P 20 16 04.1 +0.1
comp=Z,12nm,0.9s
SCHQ Schefferville 76.62 337 P P 20 16 03.5 -0.5
comp=Z,9.2nm,0.9s,baz=59,slow=6.6,SNR=5.1
SCHQ LR LR 20 52 34.9
comp=Z,103nm,18.9s,baz=15,slow=38
MBWA Marble Bar 77.21 135 *e*P P 20 16 07.1 -0.5
comp=Z,52nm,0.9s
DLBC Dease Lake 77.30 12 P P 20 16 07.4 -0.4
DLBC Dease Lake 77.30 12 P P 20 16 07.4 -0.4
comp=Z,3.0nm,0.9s,baz=275,slow=13,SNR=5.2
TSUM Tsumeb 79.74 232 *e*P P 20 16 21.1 -0.6
TSUM LR LR
comp=Z,299nm,19.0s
LBTB Lobatse 80.16 222 *e*P P 20 16 23.9 0.0
comp=Z,38nm,1.4s
FFC Flin Flon 82.62 357 *e*P P 20 16 36.9 +0.3
FFC MLR MLR
comp=Z,140nm,21.0s
FFC Flin Flon 82.62 357 *e*P P 20 16 36.9 +0.3
FFC LR LR
comp=Z,140nm,21.0s
FFC Flin Flon 82.62 357 P P 20 16 36.9 +0.3
comp=Z,49nm,1.5s,SNR=5.6
BOSA Boshof 83.34 220 P P 20 16 40.0 -0.6
BOSA Boshof 83.34 220 P P 20 16 40.0 -0.6
comp=Z,9.3nm,0.9s,baz=39,slow=8.0,SNR=10
BOSA LR LR 20 57 38.3
comp=Z,87nm,18.7s,baz=199,slow=38
SACV Santiago Islan 84.28 285 PFAKE 20 17 00.0 +14
SACV LR LR
comp=Z,623nm,20.0s
WRA Warramunga Arr 84.54 124 P P 20 16 45.4 -1.4
WRA Warramunga Arr 84.54 124 P P 20 16 45.4 -1.4
comp=Z,16nm,1.0s,baz=326,slow=4.5,SNR=50
WRAB Tennant Creek 84.54 123 *e*P P 20 16 45.5 -1.3
WRAB pmax pmax
comp=Z,29nm,1.2s
WRAB Tennant Creek 84.54 123 *e*P P 20 16 45.5 -1.3
comp=Z,29nm,1.2s
WRAB Tennant Creek 84.54 123 P P 20 16 46.0 -0.8
comp=Z,113nm,1.0s,SNR=7.1
PMG Port Moresby 85.38 107 *e*P P 20 16 50.7 -0.5
comp=Z,17nm,1.0s
ULM Lac du Bonnet 86.65 352 P P 20 16 56.1 -0.9
ULM Lac du Bonnet 86.65 352 P P 20 16 56.1 -0.9
comp=Z,1.5nm,0.4s,baz=18,slow=3.2,SNR=3.4
ULM LR LR 21 00 13.2
comp=Z,160nm,18.6s,baz=295,slow=39
AS31 Alice Springs 87.10 126 *e*P P 20 16 57.7 -1.8
ASAR Alice Springs 87.10 126 P P 20 16 58.2 -1.3
ASAR Alice Springs 87.10 126 P P 20 16 58.2 -1.3
comp=Z,20nm,0.9s,baz=327,slow=5.3,SNR=114
A14A Double T Ranch 88.35 4 ⇓P P 20 17 05.1 -0.3
baz=88
EYMN Ely 88.41 349 PFAKE 20 17 20.0 +14
EYMN LR LR
comp=Z,212nm,20.0s
A16A West Butte Ran 88.45 3 ⇓P P 20 17 04.7 -1.2
baz=88
A17A Triple J Farms 88.48 2 ⇓P P 20 17 05.7 -0.3
baz=88
NCB Newcomb 88.49 337 PFAKE 20 17 20.0 +14
NCB LR LR
comp=Z,115nm,20.0s
A18A Metzger Ranch, 88.53 1 ⇑P P 20 17 05.6 -0.5
baz=88
AGMN Agassiz Nation 88.58 352 *e*P P 20 17 06.3 0.0
comp=Z,16nm,1.3s
AGMN LR LR
comp=Z,211nm,19.0s
NEW Newport 88.82 6 *e*P P 20 17 08.3 +0.9
comp=Z,9.4nm,1.2s
NEW LR LR
comp=Z,125nm,19.0s
NEW Newport 88.82 6 ⇓P P 20 17 07.5 0.0
baz=88
NEW Newport 88.82 6 P P 20 17 05.5 -1.9
comp=Z,3.7nm,0.8s,baz=40,slow=7.9,SNR=5.1
B13A Whitefish 88.89 5 ⇓P P 20 17 07.8 -0.1
baz=89
DGMT Dagmar 88.95 358 PFAKE 20 17 20.0 +12
DGMT LR LR
comp=Z,139nm,19.0s
B14A Marquette Ranc 88.97 4 ⇓P P 20 17 08.2 -0.2
baz=89
B15A Bradely Ranch, 89.05 3 ⇓P P 20 17 08.3 -0.3
baz=89
B17A L&G Farms, Che 89.13 2 ⇑P P 20 17 08.5 -0.5
baz=89
C11A Tepee Creek (N 89.31 6 ⇑P P 20 17 10.0 +0.2
baz=89
BSMT Bassoo Peak 89.39 5 *e*P P 20 17 11.5 +1.0
EGMT Eagleton 89.42 1 *e*P P 20 17 11.1 +0.7
comp=Z,16nm,1.3s
EGMT LR LR
comp=Z,186nm,21.0s
EGMT Eagleton 89.42 1 ⇓P P 20 17 10.2 -0.2
baz=89
C12B Naegeli Ranch, 89.49 5 ⇑P P 20 17 11.0 +0.3
baz=89
C13A Hot Springs 89.58 5 ⇓P P 20 17 11.3 +0.2
baz=89
C15A Salmond Ranch, 89.58 3 ⇑P P 20 17 11.3 +0.1
baz=89
C16A Fuhringer Ranc 89.59 3 ⇑P P 20 17 11.3 +0.1
baz=89
C20A Veseth Ranch, 89.75 0 ⇓P P 20 17 10.6 -1.3
baz=89
C17A Wharram Farm, 89.79 2 ⇓P P 20 17 11.3 -0.8
baz=90
LON Longmire 89.83 10 *e*P P 20 17 13.3 +1.0
LON pmax pmax
comp=Z,5.0nm,0.8s
LON Longmire 89.83 10 *e*P P 20 17 13.2 +1.0
comp=Z,5.2nm,0.8s
COWI Conover 89.86 347 PFAKE 20 17 20.0 +7.6
COWI LR LR
comp=Z,264nm,19.0s
SLMT Seeley Lake 90.08 4 *e*P P 20 17 14.0 +0.4
D12A Red Ives Fores 90.15 5 ⇑P P 20 17 13.7 -0.1
baz=90
D13A Huson 90.17 5 ⇓P P 20 17 13.4 -0.5
baz=90
D14A Greenough 90.23 4 ⇓P P 20 17 14.0 -0.3
baz=90
CHMT Chamberlain Mo 90.41 4 *e*P P 20 17 15.6 +0.3
MSO Missoula 90.46 4 PFAKE 20 17 30.0 +15
MSO LR LR
comp=Z,133nm,21.0s
BINY Binghamton 90.62 337 PFAKE 20 17 30.0 +14
BINY LR LR
comp=Z,149nm,19.0s
E16A East Helena 90.86 3 ⇑P P 20 17 15.9 -1.3
baz=91
E15A Deer Lodge 90.93 3 ⇑P P 20 17 16.6 -0.9
baz=91
F12A Elk City 91.45 5 ⇓P P 20 17 19.2 -0.7
baz=91
F13A Darby 91.48 5 ⇑P P 20 17 19.4 -0.7
baz=91
F15A Butte 91.52 3 ⇓P P 20 17 19.7 -0.7
baz=91
LRM Limekiln Ridge 91.54 3 *e*P P 20 17 21.3 +0.8
BOZ Bozeman (W) 91.75 3 *e*P P 20 17 22.5 +1.2
BOZ pmax pmax
comp=Z,55nm,2.5s
BOZ MLR MLR
comp=Z,134nm,22.0s
BOZ Bozeman (W) 91.75 3 *e*P P 20 17 22.5 +1.2
comp=Z,55nm,2.5s
BOZ LR LR
comp=Z,134nm,22.0s
ERPA Erie 91.78 340 PFAKE 20 17 30.0 +8.6
ERPA LR LR
comp=Z,191nm,19.0s
DLMT Dillon 91.99 4 *e*P P 20 17 24.3 +1.8
comp=Z,24nm,1.6s
G13A Cobalt 92.18 5 ⇓P P 20 17 22.5 -0.8
baz=92
CTAO Charters Tower 92.27 115 *e*P P 20 17 23.4 -0.4
CTAO pmax pmax
comp=Z,12nm,1.0s
CTAO Charters Tower 92.27 115 *e*P P 20 17 23.4 -0.4
comp=Z,12nm,1.0s
RLMT Red Lodge 92.33 1 PFAKE 20 17 40.0 +16
RLMT LR LR
comp=Z,292nm,22.0s
MCMT McKenzie Canyo 92.52 4 *e*P P 20 17 26.4 +1.3
comp=Z,1.4nm,0.9s
H14A Leadore 92.70 4 ⇑P P 20 17 25.7 -0.1
baz=92
LKWY Lake 92.87 2 PFAKE 20 17 40.0 +13
LKWY LR LR
comp=Z,371nm,19.0s
ECSD EROS Data Cent 93.18 352 *e*P P 20 17 28.7 +0.9
comp=Z,8.9nm,1.0s
ECSD LR LR
comp=Z,115nm,20.0s
I12A Atlanta 93.41 5 ⇑P P 20 17 29.0 -0.1
baz=93
HLID Hailey 93.69 5 PFAKE 20 17 40.0 +10
HLID LR LR
comp=Z,139nm,19.0s
HLID Hailey 93.69 5 ⇑P P 20 17 29.0 -1.4
baz=93
MFID Camas Ranch 93.74 6 *e*P P 20 17 31.8 +1.3
comp=Z,8.8nm,1.2s
J24A Dixon Ranch, L 94.10 358 ⇑P P 20 17 28.3 -3.9
baz=94
ACSO Alum Creek Sta 94.29 341 PFAKE 20 17 40.0 +7.0
ACSO LR LR
comp=Z,360nm,19.0s
WVOR Wild Horse Val 94.45 8 PFAKE 20 17 50.0 +16
WVOR LR LR
comp=Z,150nm,22.0s
HNR Honiara 94.55 99 PFAKE 20 17 50.0 +16
HNR LR LR
comp=Z,207nm,20.0s
SCIA State Center 94.57 349 PFAKE 20 17 50.0 +16
SCIA LR LR
comp=Z,206nm,22.0s
AHID Auburn Hatcher 94.64 3 PFAKE 20 17 50.0 +15
AHID LR LR
comp=Z,171nm,20.0s
BW06 Boulder Array 94.68 1 PFAKE 20 17 50.0 +15
BW06 LR LR
comp=Z,147nm,20.0s
PDAR Pinedale Array 94.68 1 P P 20 17 35.4 +0.4
PDAR PKKP **PKKPbc** 20 34 30.6 -0.9
PDAR Pinedale Array 94.68 1 P P 20 17 35.4 +0.4
comp=Z,1.1nm,0.3s,baz=212,slow=1.4,SNR=4.0
PDAR PKKP **PKKPbc** 20 34 30.6 -0.9
comp=Z,0.8nm,0.8s,baz=174,slow=4.5,SNR=5.8
PDAR LR LR 21 06 42.1
comp=Z,80nm,18.4s,baz=208,slow=40
CBN Corbin 94.72 337 PFAKE 20 17 50.0 +15
CBN LR LR
comp=Z,489nm,19.0s
MOD Modoc 94.79 9 *e*P P 20 17 36.4 +1.0
comp=Z,13nm,1.2s
HDIL Hopedale 95.28 346 PFAKE 20 17 50.0 +13
HDIL LR LR
comp=Z,214nm,19.0s
HVU Hansel Valley 95.56 4 *e*P P 20 17 40.3 +1.4
HVU pmax pmax
comp=Z,8.0nm,1.0s
HVU Hansel Valley 95.56 4 *e*P P 20 17 40.3 +1.4
comp=Z,8.4nm,1.0s
OGNE Ogallala 96.37 356 PFAKE 20 17 50.0 +7.4
OGNE LR LR
comp=Z,228nm,21.0s
BLA Blacksburg 96.50 338 PFAKE 20 17 50.0 +6.8
BLA LR LR
comp=Z,163nm,19.0s
BMN Battle Mountai 96.58 7 PFAKE 20 18 00.0 +16
BMN LR LR
comp=Z,145nm,19.0s
BEKR Beckworth 96.79 10 *e*P P 20 17 44.8 +0.2
comp=Z,2.0nm,1.0s
DUG Dugway 97.14 4 *e*P Pdif 20 17 48.2 +2.0
DUG pmax pmax
comp=Z,7.0nm,1.2s
DUG MLR MLR
comp=Z,133nm,21.0s
DUG Dugway 97.14 4 *e*P Pdif 20 17 48.2 +1.9
comp=Z,7.4nm,1.2s
DUG LR LR
comp=Z,133nm,21.0s
CNNC Cliffs of the 97.62 336 PFAKE 20 18 00.0 +12
CNNC LR LR
comp=Z,546nm,20.0s
ISCO Idaho Springs 97.65 358 PFAKE 20 18 00.0 +11
ISCO LR LR
comp=Z,187nm,20.0s
STKA Stephens Creek 97.73 127 P P 20 17 46.8 -1.7
STKA Stephens Creek 97.73 127 P P 20 17 46.8 -1.7
comp=Z,8.6nm,1.2s,baz=285,slow=16,SNR=4.6
STKA LR LR 21 06 59.2
comp=Z,90nm,18.6s,baz=23,slow=39
KSU1 Kansas State U 97.76 351 PFAKE 20 18 00.0 +11
KSU1 LR LR
comp=Z,143nm,20.0s
JOHN Johnston Islan 97.87 59 PFAKE 20 18 00.0 +10
JOHN LR LR
comp=Z,58nm,19.0s
NVAR Mina Array Bea 98.45 8 P P 20 17 51.4 -0.8
NVAR Mina Array Bea 98.45 8 P P 20 17 51.4 -0.8
comp=Z,2.0nm,0.9s,baz=359,slow=5.5,SNR=7.0
MVU Marysvale 98.85 4 PFAKE 20 18 10.0 +16
MVU LR LR
comp=Z,184nm,20.0s
TPH Tonopah 98.91 8 PFAKE 20 18 10.0 +16

TPH				LR	LR				
	comp=Z,156nm,20.0s								
SDCO	**Great Sand Dun**	**99.69**	**358**	*e*Pdif		**Pdif**	**20**	**18**	**01.1 +3.3**
	comp=Z,5.6nm,1.4s								
MVCO	**Mesa Verde**	**100.25**	**1**	PFAKE			20	18	10.0 +10
MVCO				LR	LR				
	comp=Z,197nm,19.0s								
PLAL	**Pickwick Lake**	**100.45**	**344**	PFAKE			20	18	10.0 +9.2
PLAL				LR	LR				
	comp=Z,193nm,20.0s								
DAC	**Darwin (Calif)**	**100.66**	**8**	PFAKE			20	18	10.0 +8.0
DAC				LR	LR				
	comp=Z,227nm,20.0s								
OXF	**Oxford**	**101.17**	**345**	PFAKE			20	18	20.0 +16
OXF				LR	LR				
	comp=Z,556nm,21.0s								
WUAZ	**Wupatki**	**101.86**	**3**	PFAKE			20	18	20.0 +13
WUAZ				LR	LR				
	comp=Z,177nm,20.0s								
LRAL	**Lakeview Retre**	**102.10**	**342**	PFAKE			20	18	20.0 +12
LRAL				LR	LR				
	comp=Z,139nm,20.0s								
W24A	**Lazy 6 Ranch,**	**102.22**	**358**	⇓P		**Pdif**	**20**	**18**	**07.1 -1.9**
	baz=102								
AMTX	**Amarillo**	**102.39**	**355**	PFAKE			20	18	20.0 +10
AMTX				LR	LR				
	comp=Z,200nm,20.0s								
ANMO	**Albuquerque**	**102.50**	**359**	PFAKE			20	18	20.0 +10
ANMO				LR	LR				
	comp=Z,148nm,19.0s								
PFO	**Pinyon Flat Ob**	**103.41**	**8**	PFAKE			20	18	30.0 +16
PFO				LR	LR				
	comp=Z,117nm,21.0s								
Y22A	**Socorro**	**103.52**	**359**	⇓P		**Pdif**	**20**	**18**	**12.9 -1.9**
	baz=103								
VBMS	**Vicksburg**	**103.61**	**345**	PFAKE			20	18	30.0 +15
VBMS				LR	LR				
	comp=Z,245nm,20.0s								
TUC	**Tucson**	**105.08**	**3**	PFAKE			20	22	50.0
TUC				LR	LR				
	comp=Z,116nm,22.0s								
CASY	**Casey**	**112.75**	**164**	PFAKE			20	23	00.0
CASY				LR	LR				
	comp=Z,689nm,20.0s								
TEIG	**Tepich**	**114.70**	**340**	PFAKE			20	23	10.0 +16
TEIG				LR	LR				
	comp=Z,123nm,20.0s								
TGUH	**Tegucigalpa,Un**	**120.32**	**337**	PFAKE			20	23	20.0 +15
TGUH				LR	LR				
	comp=Z,117nm,19.0s								
BCIP	**Isla Barro Col**	**122.31**	**327**	PFAKE			20	23	20.0 +11
BCIP				LR	LR				
	comp=Z,286nm,20.0s								
JTS	**JuntasAbangare**	**123.15**	**333**	PFAKE			20	23	20.0 +9.2
JTS				LR	LR				
	comp=Z,192nm,21.0s								
SNAA	**Sanae**	**125.76**	**202**	*e*PKP		**PKPdf**	**20**	**23**	**13.8 -0.2**
VNA2	**Neumayer--Watz**	**126.72**	**204**	*e*PKP		**PKPdf**	**20**	**23**	**16.3 +0.5**
VNA2	**Neumayer--Watz**	**126.72**	**204**	*e*PP		PP	20	25	10.8 -2.8
SAML	**Samuel**	**128.56**	**298**	*e*PKPdf		**PKPdf**	**20**	**23**	**20.8 -0.3**
SAML				LR	LR				
	comp=Z,145nm,21.0s								
VNDA	**Vanda**	**131.35**	**163**	PKP		**PKPdf**	**20**	**23**	**23.7 -0.8**
VNDA	**Vanda**	**131.35**	**163**	PKP		**PKPdf**	**20**	**23**	**23.7 -0.8**
	comp=Z,1.1nm,0.8s,baz=291,slow=6.9,SNR=4.9								
SBA	**Scott Base**	**132.44**	**163**	PFAKE			20	23	40.0 +13
SBA				LR	LR				
	comp=Z,172nm,19.0s								
LPAZ	**La Paz**	**137.21**	**296**	PKP		**PKPdf**	**20**	**23**	**38.6 +0.6**
LPAZ	**La Paz**	**137.21**	**296**	PKP		**PKPdf**	**20**	**23**	**38.6 +0.6**
	comp=Z,1.8nm,0.9s,baz=19,slow=5.0,SNR=5.1								
LVC	**Limon Verde**	**142.12**	**290**	PFAKE			20	24	00.0 +14
LVC				LR	LR				
	comp=Z,547nm,19.0s								
TRQA	**Tornquist**	**145.30**	**262**	*e*PKPdf		**PKPbc**	**20**	**23**	**49.8 -1.2**
PMSA	**Palmer Station**	**147.27**	**213**	PFAKE			20	24	00.0 +2.3
PMSA				LR	LR				
	comp=Z,6μm,21.0s								
LCO	**Las Campanas**	**147.35**	**283**	*e*PKPdf		**PKPdf**	**20**	**23**	**55.2 -0.1**
PLCA	**Paso Flores**	**152.45**	**262**	PKPbc		**PKPbc**	**20**	**24**	**07.7 -1.9**
PLCA	**Paso Flores**	**152.45**	**262**	PKPbc		**PKPbc**	**20**	**24**	**07.7 -1.9**
	comp=Z,8.7nm,1.0s,baz=9.6,slow=1.4,SNR=5.2								

*IDC **27** 20:04:31.4±2.0, 43.96N×105.57W, h0km, mb1 3.9/3, mb1mx3.5/28, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=57.2km s-min=9.1km az=147.0*

*NEIC **27** 20:04:31.2±0.4, 43.81N×105.22W, h0km, ML3.2, Error ellipse: s-maj=5.1km s-min=4.4km az=135.0, Suspected Mining explosion.*

NEIC 60 km [35 miles] SSE of Gillette.

ISC 27 20:04:31.2±1.1, 43.78N±0.02×105.27W±0.02, h4km±9km, n159, σ1^{s}17/182, 62C-58D, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I23A	**Meade Ranch, G**	**0.22**	**323**	⇓P			**Pg**	**20 04 37.2**	**+1.6**
	baz=0.2,SNR=222								
I23A				⇑S			**Sg**	**20 04 39.7**	**+1.1**
	baz=0.2								
J23A	**Dilts Ranch, B**	**0.43**	**208**	P			**Pg**	**20 04 39.5**	**+0.1**
	baz=0.5,SNR=115								
J23A				⇓S			**Sg**	**20 04 43.2**	**-1.9**
	baz=0.5								
I24A	**Kuemmerle Ranc**	**0.47**	**80**	P			**Pb**	**20 04 41.4**	**-0.8**
	baz=0.4,SNR=704								
I24A				⇓S			**Sb**	**20 04 48.4**	**-1.2**
	baz=0.4								
J24A	**Dixon Ranch, L**	**0.64**	**135**	P			**Pg**	**20 04 43.5**	**+0.2**
	baz=0.6,SNR=249								
J24A				⇑S			**Sg**	**20 04 52.3**	**+0.7**
	baz=0.6								
H23A	**Clabaugh Cattl**	**0.79**	**353**	⇓P			**Pb**	**20 04 47.1**	**-0.3**
	baz=0.8,SNR=27								
I22A	**9 Mile Ranch,**	**0.88**	**278**	P			**Pg**	**20 04 48.4**	**+0.2**
	baz=0.9,SNR=1000								
I22A				⇑S			**Sg**	**20 05 00.1**	**+0.5**
	baz=0.9								
J22A	**Midwest**	**0.95**	**248**	P			**Pg**	**20 04 48.8**	**-0.7**
	baz=1.0,SNR=146								
J22A				⇑Sb			**Sb**	**20 05 04.1**	**+0.9**
	baz=1.0								
RSSD	**Black Hills**	**0.96**	**69**	*e*P			**Pg**	**20 04 49.7**	**+0.2**
K23A	**Bowen Ranch, D**	**1.06**	**194**	⇑P			**Pg**	**20 04 50.8**	**-0.7**
	baz=1.1,SNR=9.9								
H24A	**Dirks Ranch, A**	**1.09**	**28**	⇑P			**Pb**	**20 04 52.4**	**-0.3**
	baz=1.1								
H24A				⇓S			**Sn**	**20 05 08.5**	**-0.5**
	baz=1.1								
K24A	**Anderson Ranch**	**1.11**	**162**	⇑P			**Pg**	**20 04 52.2**	**-0.3**
	baz=1.1,SNR=60								
H22A	**Clearmont**	**1.12**	**317**	P			**Pb**	**20 04 53.3**	**+0.1**
	baz=1.1,SNR=97								
G23A	**Biddle**	**1.42**	**357**	P			**Pb**	**20 04 58.5**	**+0.1**
	baz=1.4,SNR=260								
K22A	**Casper**	**1.45**	**219**	⇑P			**Pn**	**20 04 57.6**	**-0.8**
	baz=1.5,SNR=77								
I21A	**Big Trails, Te**	**1.46**	**272**	⇓P			**Pn**	**20 04 57.6**	**-0.9**
	baz=1.5,SNR=159								
I21A				⇑S			**Sg**	**20 05 18.3**	**+0.2**
	baz=1.5								
H21A	**Big Horn, Sher**	**1.53**	**304**	⇑P			**Pb**	**20 05 00.2**	**0.0**
	baz=1.5,SNR=113								
H21A				⇓S			**Sg**	**20 05 21.1**	**+0.9**
	baz=1.5								
K25A	**Mack Ranch, Ha**	**1.56**	**138**	P			**Pn**	**20 05 00.6**	**+0.8**
	baz=1.5,SNR=126								
G22A	**Birney**	**1.61**	**333**	⇑P			**Pg**	**20 05 02.0**	**-0.1**
	baz=1.6,SNR=59								
J21A	**Lysite**	**1.64**	**255**	P			**Pn**	**20 05 00.6**	**-0.3**
	baz=1.7,SNR=75								
J21A				⇑S			**Sb**	**20 05 23.5**	**+0.4**
	baz=1.7								
G24A	**Alzada**	**1.66**	**21**	⇑P			**Pg**	**20 05 02.8**	**-0.3**
	baz=1.6,SNR=62								
L23A	**Garrett**	**1.70**	**191**	P			**Pn**	**20 05 01.4**	**-0.3**
	baz=1.7,SNR=496								
L23A				⇓S			**Sn**	**20 05 24.5**	**+0.5**
	baz=1.7								
L24A	**Wheatland**	**1.76**	**172**	⇑P			**Pn**	**20 05 02.8**	**+0.3**
	baz=1.8,SNR=15								
L24A				⇓S			**Sn**	**20 05 26.4**	**+1.0**
	baz=1.8								
K21A	**Alcova**	**1.85**	**232**	⇓P			**Pn**	**20 05 04.5**	**+0.7**
	baz=1.9,SNR=87								
K21A				⇑S			**Sn**	**20 05 28.5**	**+0.8**
	baz=1.9								
K26A	**Motz Farm, Whi**	**1.87**	**124**	P			**Pn**	**20 05 05.2**	**+1.2**
	baz=1.9,SNR=94								
K26A				⇓S			**Sn**	**20 05 29.9**	**+1.7**
	baz=1.9								
L25A	**Engebretsen Ra**	**1.89**	**149**	P			**Pn**	**20 05 06.0**	**+1.6**
	baz=1.9,SNR=92								
F23A	**Volborg**	**1.94**	**357**	P			**Pb**	**20 05 06.5**	**-0.6**
	baz=1.9,SNR=156								
F23A				⇑S			**Sg**	**20 05 32.5**	**-1.0**
	baz=1.9								
L22A	**Ellis Ranch, M**	**1.95**	**206**	⇓P			**Pn**	**20 05 06.1**	**+0.9**
	baz=2.0,SNR=23								
G21A	**Lodge Grass**	**2.00**	**317**	⇓P			**Pb**	**20 05 07.1**	**-1.0**
	baz=2.0,SNR=136								
I20A	**Worland**	**2.07**	**276**	⇑P			**Pn**	**20 05 08.1**	**+1.3**
	baz=2.1,SNR=201								
I20A				⇓Sb			**Sg**	**20 05 36.9**	**-0.8**
	baz=2.1								
H20A	**Greybull**	**2.08**	**291**	⇑P			**Pn**	**20 05 08.0**	**+1.0**
	baz=2.1,SNR=12								
J20A	**Shoshoni**	**2.09**	**259**	⇑Pb			**Pb**	**20 05 09.5**	**-0.1**
	baz=2.1								
J20A				⇑Sb			**Sg**	**20 05 37.9**	**-0.3**
	baz=2.1								
F22A	**Rosebud**	**2.12**	**341**	⇓P			**Pn**	**20 05 08.4**	**+1.0**
	baz=2.1,SNR=264								
F22A				⇑Sb			**Sg**	**20 05 39.4**	**+0.3**
	baz=2.1								
F24A	**Ekalaka**	**2.15**	**16**	⇓P			**Pb**	**20 05 09.7**	**-1.0**
	baz=2.1,SNR=38								
M23A	**Laramie**	**2.34**	**188**	⇓P			**Pn**	**20 05 11.4**	**+0.8**
	baz=2.4								
M24A	**Cheyenne**	**2.34**	**172**	⇓P			**Pn**	**20 05 11.7**	**+1.1**
	baz=2.4								
M24A				⇓Sb			**Sb**	**20 05 45.0**	**+1.8**
	baz=2.4								
L21A	**Rawlins**	**2.38**	**221**	⇓P			**Pn**	**20 05 12.3**	**+1.1**
	baz=2.4								
F21A	**Absaloka Mine,**	**2.43**	**328**	⇓P			**Pn**	**20 05 12.9**	**+1.2**
	baz=2.4								
K27A	**Flueckinger Fa**	**2.47**	**115**	P			**Pn**	**20 05 13.6**	**+1.3**
	baz=2.4,SNR=100								
K27A				⇓Sb			**Sb**	**20 05 49.1**	**+2.2**
	baz=2.4								
PHWY	**Pilot Hill**	**2.48**	**183**	*e*P			**Pn**	**20 05 13.2**	**+0.5**
K20A	**Yellowstone Ra**	**2.51**	**244**	⇓P			**Pn**	**20 05 14.0**	**+1.2**
	baz=2.5								
K20A				⇓Sb			**Sb**	**20 05 48.8**	**+0.7**
	baz=2.5								
M25A	**Palm-Egli Farm**	**2.51**	**159**	⇓P			**Pn**	**20 05 14.4**	**+1.5**
	baz=2.5								
M25A				⇓Sb			**Sb**	**20 05 50.9**	**+2.6**
	baz=2.5								
G20A	**Bridger**	**2.55**	**305**	P			**Pn**	**20 05 14.1**	**+0.7**
	baz=2.6,SNR=339								
G20A				⇑Sb			**Sg**	**20 05 51.9**	**-1.1**
	baz=2.6								
M22A	**Cedar Creek Ra**	**2.57**	**203**	⇑P			**Pn**	**20 05 15.6**	**+1.8**
	baz=2.6								
M21A	**Separation Pea**	**2.67**	**216**	⇑P			**Pn**	**20 05 17.0**	**+1.9**
	baz=2.7								
E22A	**Miles City**	**2.70**	**350**	⇓P			**Pn**	**20 05 16.3**	**+0.9**
	baz=2.7,SNR=22								
I19A	**Meeteetse**	**2.70**	**277**	⇓P			**Pn**	**20 05 17.3**	**+1.7**
	baz=2.7,SNR=53								
E23A	**Ismay**	**2.71**	**360**	⇓P			**Pn**	**20 05 17.0**	**+1.4**
	baz=2.7,SNR=9.0								
K19A	**Absolon Red Bu**	**2.78**	**251**	⇑P			**Pn**	**20 05 17.7**	**+1.1**
	baz=2.8								
J19A	**Crowheart**	**2.80**	**261**	⇑P			**Pn**	**20 05 18.9**	**+2.0**
	baz=2.8								
M26A	**McRoberts Ranc**	**2.80**	**145**	⇓P			**Pn**	**20 05 18.5**	**+1.7**
	baz=2.8								
H19A	**Powell**	**2.81**	**290**	⇑P			**Pn**	**20 05 18.4**	**+1.3**
	baz=2.8,SNR=46								
E24A	**Baker**	**2.86**	**13**	⇓P			**Pn**	**20 05 19.7**	**+2.1**
	baz=2.8,SNR=40								
F20A	**Billings**	**2.87**	**316**	P			**Pn**	**20 05 18.6**	**+0.7**
	baz=2.9,SNR=105								
N23A	**Red Feather La**	**2.93**	**190**	⇓P			**Pn**	**20 05 20.0**	**+1.3**
	baz=3.0								
N25A	**Grover**	**3.10**	**163**	⇑P			**Pn**	**20 05 22.1**	**+1.1**
	baz=3.1								
RLMT	**Red Lodge**	**3.16**	**296**	*e*P			**Pn**	**20 05 22.9**	**+1.0**
RLMT	**Red Lodge**	**3.16**	**296**	⇑P			**Pn**	**20 05 23.2**	**+1.3**
	baz=3.2,SNR=34								
BW06	**Boulder Array**	**3.29**	**253**	*e*P			**Pn**	**20 05 25.0**	**+1.4**
BW06	**Boulder Array**	**3.29**	**253**	⇓P			**Pn**	**20 05 25.0**	**+1.4**
	baz=3.3								
PDAR	**Pinedale Array**	**3.29**	**253**		Pn		**Pn**	**20 05 25.3**	**+1.6**
PDAR					Lg		Lg	20 06 09.7	
PDAR	**Pinedale Array**	**3.29**	**253**		Pn		**Pn**	**20 05 25.3**	**+1.6**
	3.8nm,0.3s,baz=72,slow=14,SNR=58								
PDAR					Lg		Lg	20 06 09.7	
	9.7nm,0.3s,baz=97,slow=11,SNR=4.5								
N26A	**Koester Ranch,**	**3.32**	**152**	⇑P			**Pn**	**20 05 25.4**	**+1.4**
	baz=3.3,SNR=8.4								
D23A	**Lindsay**	**3.39**	**1**	⇑P			**Pn**	**20 05 26.8**	**+1.9**
	baz=3.4,SNR=20								
D24A	**Glendive**	**3.40**	**11**	⇓P			**Pn**	**20 05 27.3**	**+2.3**
	baz=3.4,SNR=28								
G18A	**Lazy EL Ranch,**	**3.43**	**298**	⇑P			**Pn**	**20 05 26.6**	**+1.1**
	baz=3.4,SNR=64								
L19A	**Farson**	**3.44**	**242**	⇑P			**Pn**	**20 05 27.4**	**+1.7**
	baz=3.5								
N21A	**Black Mountain**	**3.45**	**210**	⇓P			**Pn**	**20 05 27.6**	**+1.7**
	baz=3.5								
D21A	**La Casta Ranch**	**3.50**	**340**	⇑P			**Pn**	**20 05 27.5**	**+1.1**
	baz=3.5								
N27A	**Anderson Farm,**	**3.60**	**145**	⇓P			**Pn**	**20 05 28.8**	**+1.0**
	baz=3.6,SNR=46								
E19A	**Rath Farm, Rou**	**3.65**	**318**	⇓P			**Pn**	**20 05 29.2**	**+0.6**
	baz=3.7,SNR=38								
N20A	**Spence Gulch,**	**3.69**	**218**	⇓P			**Pn**	**20 05 30.2**	**+1.1**
	baz=3.7								
OGNE	**Ogallala**	**3.72**	**139**	*e*P			**Pn**	**20 05 30.3**	**+0.9**
OGNE	**Ogallala**	**3.72**	**139**	⇑P			**Pn**	**20 05 30.4**	**+1.0**
	baz=3.7,SNR=14								
GCMT	**Greycliff**	**3.72**	**304**	*e*P			**Pn**	**20 05 30.8**	**+1.3**
O22A	**Kremmling**	**3.74**	**195**	⇑P			**Pn**	**20 05 30.2**	**+0.3**
	baz=3.8								
O25A	**Wiggins**	**3.77**	**166**	⇓P			**Pn**	**20 05 30.9**	**+0.7**
	baz=3.8								
LKWY	**Lake**	**3.77**	**284**	*e*P			**Pn**	**20 05 30.3**	**0.0**
C24A	**Savage**	**3.79**	**9**	⇓P			**Pn**	**20 05 32.0**	**+1.6**
	baz=3.8,SNR=9.9								
O26A	**Horse Wrangler**	**3.83**	**157**	⇑P			**Pn**	**20 05 31.5**	**+0.5**
	baz=3.8								
LOHW	**Long Hollow**	**3.87**	**269**	*e*P			**Pn**	**20 05 33.0**	**+1.4**
D20A	**Manuel Ranch,**	**3.87**	**330**	⇓P			**Pn**	**20 05 32.0**	**+0.5**
	baz=3.9,SNR=25								
MOOW	**Moose Ponds**	**3.96**	**271**	*e*P			**Pn**	**20 05 35.3**	**+2.3**
C22A	**Vida**	**3.99**	**354**	⇑P			**Pn**	**20 05 35.3**	**+2.2**
	baz=4.0,SNR=44								
ISCO	**Idaho Springs**	**3.99**	**184**	*e*P			**Pn**	**20 05 33.6**	**+0.3**
ISCO	**Idaho Springs**	**3.99**	**184**	⇑P			**Pn**	**20 05 33.5**	**+0.1**
	baz=4.0								
SNOW	**Snow King Moun**	**3.99**	**267**	*e*Pn			**Pn**	**20 05 35.3**	**+1.9**
C23A	**Lambert**	**4.02**	**1**	⇑P			**Pn**	**20 05 35.9**	**+2.3**
	baz=4.0,SNR=41								
IMW	**Indian Meadow**	**4.10**	**274**	*e*P			**Pn**	**20 05 36.6**	**+1.8**
TPAW	**Teton Pass**	**4.13**	**268**	*e*Pn			**Pn**	**20 05 37.2**	**+1.9**
O27A	**Beecher Island**	**4.15**	**149**	⇑P			**Pn**	**20 05 36.4**	**+1.0**
	baz=4.2,SNR=20								
YMR	**Madison River**	**4.18**	**284**	*e*Pn			**Pn**	**20 05 36.4**	**+0.4**
D19A	**Cripps Ranch,**	**4.23**	**324**	⇓P			**Pn**	**20 05 37.2**	**+0.8**
	baz=4.2,SNR=19								
C21A	**Desert Coulee**	**4.24**	**343**	⇑P			**Pn**	**20 05 38.0**	**+1.4**
	baz=4.2,SNR=13								
DCID1	**Drake Creek**	**4.29**	**270**	*e*Pn			**Pn**	**20 05 38.4**	**+1.0**
E18A	**Harlowton**	**4.30**	**312**	⇓P			**Pn**	**20 05 39.0**	**+1.5**
	baz=4.3,SNR=14								
P22A	**Eagle**	**4.33**	**195**	⇑P			**Pn**	**20 05 39.2**	**+1.2**
	baz=4.4								
P25A	**Willow Gulch B**	**4.35**	**169**	⇑P			**Pn**	**20 05 39.1**	**+1.0**
	baz=4.4								
C20A	**Veseth Ranch,**	**4.37**	**335**	⇑P			**Pn**	**20 05 39.4**	**+1.0**
	baz=4.4,SNR=8.7								
F17A	**Fitzpatrick Pl**	**4.38**	**301**	⇓P			**Pn**	**20 05 40.0**	**+1.4**
	baz=4.4								
RRI2	**Red Ridge**	**4.42**	**266**	*e*P			**Pn**	**20 05 40.4**	**+1.2**
P26A	**Davis Ranch, A**	**4.46**	**160**	⇓P			**Pn**	**20 05 40.3**	**+0.6**
	baz=4.5,SNR=33								
QLMT	**Earthquake Lak**	**4.54**	**285**	*e*Pg			**Pb**	**20 05 52.5**	**+1.0**
P27A	**Ficken Ranch,**	**4.68**	**154**	⇓P			**Pn**	**20 05 43.4**	**+0.8**
	baz=4.7,SNR=15								
B23A	**Brockton**	**4.69**	**2**	⇓P			**Pn**	**20 05 44.9**	**+2.2**
	baz=4.7,SNR=16								
DGMT	**Dagmar**	**4.75**	**9**	*e*Pn			**Pn**	**20 05 45.8**	**+2.3**
DGMT	**Dagmar**	**4.75**	**9**	⇓P			**Pn**	**20 05 45.7**	**+2.3**
	baz=4.7,SNR=6.3								
C19A	**Slack Wire Ran**	**4.75**	**328**	⇓P			**Pn**	**20 05 44.6**	**+1.0**
	baz=4.7,SNR=31								
E17A	**Martinsdale**	**4.77**	**306**	⇑P			**Pn**	**20 05 45.4**	**+1.4**
	baz=4.8,SNR=20								
SMCO	**Snowmass**	**4.78**	**196**	*e*Pn			**Pn**	**20 05 45.3**	**+1.0**
BOZ	**Bozeman (W)**	**4.90**	**295**	*e*Pn			**Pn**	**20 05 45.4**	**-0.3**
BOZ	**Bozeman (W)**	**4.90**	**295**	⇑P			**Pn**	**20 05 46.3**	**+0.6**
	baz=4.9								
Q25A	**Bedland, Calha**	**4.92**	**171**	⇓P			**Pn**	**20 05 46.9**	**+0.7**
	baz=4.9								
Q26A	**Hugo**	**5.03**	**164**	⇓P			**Pn**	**20 05 47.9**	**+0.4**
	baz=5.0,SNR=6.6								
D17A	**Six Diamond Ra**	**5.08**	**313**	⇑P			**Pn**	**20 05 49.1**	**+0.9**
	baz=5.1,SNR=33								
HWUT	**Hardware Ranch**	**5.12**	**247**	*e*Pn			**Pn**	**20 05 49.6**	**+0.8**
	9.0nm,0.4s								
KSCO	**Kaye Shedlock'**	**5.17**	**156**	⇓P			**Pn**	**20 05 50.1**	**+0.7**
	baz=5.2								
EGMT	**Eagleton**	**5.27**	**325**	*e*Pn			**Pn**	**20 05 51.6**	**+0.9**
	21nm,0.4s								
EGMT	**Eagleton**	**5.27**	**325**	⇑P			**Pn**	**20 05 51.8**	**+1.0**
	baz=5.3,SNR=11								
C17A	**Wharram Farm,**	**5.44**	**317**	⇓P			**Pn**	**20 05 54.1**	**+1.0**
	baz=5.4,SNR=12								
D16A	**Dana Ranch, Ca**	**5.48**	**309**	⇑P			**Pn**	**20 05 54.5**	**+0.8**
	baz=5.5,SNR=10.0								
LRM	**Limekiln Ridge**	**5.50**	**294**	*e*Pn			**Pn**	**20 05 54.6**	**+0.6**
	25nm,0.3s								
R24A	**Sanders Place,**	**5.55**	**179**	⇑P			**Pn**	**20 05 55.8**	**+1.1**
	baz=5.6								
B18A	**Beardsley Farm**	**5.58**	**327**	⇑P			**Pn**	**20 05 56.0**	**+1.1**
	baz=5.6								
DAU	**Daniels Canyon**	**5.58**	**235**	*e*Pn			**Pn**	**20 05 55.6**	**+0.4**
	8.3nm,0.3s								
R26A	**Arlington**	**5.65**	**165**	⇑P			**Pn**	**20 05 56.5**	**+0.5**
	baz=5.7,SNR=9.4								
MDND	**Maddock**	**5.68**	**42**	⇑P			**Pn**	**20 05 57.1**	**+0.9**
	baz=5.6								
R25A	**Fountain Ranch**	**5.68**	**172**	⇑P			**Pn**	**20 05 56.9**	**+0.4**
	baz=5.7								
R27A	**Eads**	**5.80**	**160**	⇑P			**Pn**	**20 05 58.8**	**+0.7**
	baz=5.8								
E15A	**Deer Lodge**	**5.84**	**299**	⇓P			**Pn**	**20 05 59.3**	**+0.7**
	baz=5.9,SNR=17								
PV04	**Paradox Valley**	**6.04**	**208**	*e*Pn			**Pn**	**20 06 02.7**	**+1.3**
D15A	**Lincoln**	**6.05**	**305**	⇓P			**Pn**	**20 06 02.5**	**+0.9**
	baz=6.1,SNR=7.3								
MPU	**Maple Canyon**	**6.05**	**234**	*e*Pn			**Pn**	**20 06 00.8**	**-0.9**
	5.8nm,0.4s								
SRU	**San Rafael**	**6.11**	**222**	*e*Pn			**Pn**	**20 06 02.6**	**+0.2**
	13nm,0.4s								
SRU	**San Rafael**	**6.11**	**222**	⇑P			**Pn**	**20 06 02.5**	**+0.2**
	baz=6.2,SNR=14								
PV01	**Paradox Valley**	**6.17**	**205**	*e*Pn			**Pn**	**20 06 05.3**	**+2.1**
	271nm,0.5s								
ECSD	**EROS Data Cent**	**6.27**	**87**	*e*Pn			**Pn**	**20 06 05.4**	**+0.9**
	11nm,0.3s								
S26A	**Kim**	**6.30**	**167**	⇑P			**Pn**	**20 06 05.3**	**+0.3**
	baz=6.3,SNR=11								
TMUT	**Trail Mountain**	**6.32**	**227**	*e*Pn			**Pn**	**20 06 06.4**	**+1.1**
	10.0nm,0.4s								
CHMT	**Chamberlain Mo**	**6.43**	**302**	*e*Pn			**Pn**	**20 06 07.8**	**+1.0**
	2.1nm,0.4s								
B16A	**M & M Farms, S**	**6.44**	**318**	⇓P			**Pn**	**20 06 07.3**	**+0.6**
	baz=6.4,SNR=6.4								
DUG	**Dugway**	**6.66**	**240**	*e*Pn			**Pn**	**20 06 11.0**	**+1.0

KFL				S		Sg	20 10 46.4	+0.1
KFL	**Anninata**	**0.60**	**270**	P		Pg	20 10 37.3	-1.0
KFL				S		Sg	20 10 46.4	+0.1
GUR	**Goura**	**0.65**	**105**	P		Pg	20 10 38.2	-1.0
GUR				S		Sb	20 10 48.5	+0.8
GUR	**Goura**	**0.65**	**105**	*e*PB		Pg	20 10 38.1	-1.1
GUR				*e*SB		Sb	20 10 48.4	+0.8
GUR	**Goura**	**0.65**	**105**	P		Pg	20 10 38.2	-1.0
GUR				*e*Sb		Sb	20 10 48.4	+0.8
VLS	**Valsamata**	**0.76**	**276**	P		Pg	20 10 39.8	-1.4
VLS	**Valsamata**	**0.76**	**276**	*e*PB		Pn	20 10 42.8	+0.8
VLS	**Valsamata**	**0.76**	**276**	P		Pg	20 10 39.8	-1.4
VLS	**Valsamata**	**0.76**	**276**	*e*Pb		Pn	20 10 42.8	+0.8
DSF	**Desfina**	**0.83**	**68**	P		Pg	20 10 40.9	-1.6
DSF				S		Sb	20 10 53.7	+0.8
DSF	**Desfina**	**0.83**	**68**	P		Pg	20 10 40.9	-1.6
DSF				S		Sb	20 10 53.7	+0.8
EVR	**Evrytania**	**0.83**	**14**	*e*PB		Pg	20 10 42.1	-0.5
EVR	**Evrytania**	**0.83**	**14**	*e*Pb		Pg	20 10 42.1	-0.5
AGG	**Agios Georgios**	**1.10**	**34**	*e*PB		Pg	20 10 47.6	0.0
AGG	**Agios Georgios**	**1.10**	**34**	*e*Pb		Pg	20 10 47.6	0.0

IDC 27 20:17:11.6±1.4, 1°98N×124°66E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/24, mbtmp3.6/5, Error ellipse: s-maj=194.3km s-min=19.0km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.77**	**157**	P		P	20 22 26.2	+0.2
	1.3nm,0.5s,baz=335,slow=10,SNR=28						
ASAR	**Alice Springs**	**27.03**	**161**	P		P	20 22 55.8	0.0
	0.3nm,0.5s,baz=338,slow=8.0,SNR=8.8						
STKA	**Stephens Creek**	**37.31**	**156**	P		P	20 24 25.4	-0.3
	1.1nm,0.9s,baz=339,slow=14,SNR=3.7						
MKAR	**Makanchi Array**	**57.84**	**327**	P		P	20 27 05.6	+0.5
	0.4nm,0.5s,baz=118,slow=8.5,SNR=8.5						
KURBB	**Kurchatov Arra**	**62.12**	**329**	P		P	20 27 33.8	-0.6
	0.2nm,0.6s,baz=117,slow=8.4,SNR=8.1						

*IDC **27** 20:20:19.8±0.8, 55°.24N×162°.10E, h0km, mb3.5/8, mb1 3.7/9, mb1mx3.5/29, mbtmp3.5/9, ML3.9/1, Error ellipse: s-maj=23.7km s-min=13.7km az=6.0*
*MOS **27** 20:20:24.3±1.1, 55°.06N×162°.53E, h29km, mb4.0/4, Error ellipse: s-maj=17.1km s-min=8.8km az=68.4*
*KRSC **27** 20:20:25.6±0.2, 55°.13N×162°.28E, h33km±22km, ML4.2*
ISC 27 20:20:24.7±1.1, 55°.13N±0°.03×162°.36E±0°.03, h32km±8km, n61, σ1°55/94, mb3.6/8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.68**	**213**	PN		**Pn**	**20 20 37.6**	**-0.5**
MKZ				S		**Sb**	**20 20 46.7**	**-0.5**
MKZ	**Mys Kozlova**	**0.68**	**213**	*e*P		**Pn**	**20 20 37.6**	**-0.5**
MKZ				*i* S		**Sb**	**20 20 46.7**	**-0.5**
KBTR	**Krutoberegovo**	**1.11**	**13**	PN		**Pn**	**20 20 44.9**	**+0.8**
KBTR				S		**Sb**	**20 21 00.1**	**+0.5**
KBTR	**Krutoberegovo**	**1.11**	**13**	*e*P		**Pn**	**20 20 44.9**	**+0.8**
KBTR				*i* S		**Sb**	**20 21 00.1**	**+0.5**
KBG	**Krutoberegovo**	**1.15**	**10**	PN		**Pb**	**20 20 46.6**	**+0.6**
KBG				S		**Sb**	**20 21 01.4**	**+0.9**
KBG	**Krutoberegovo**	**1.15**	**10**	*e*P		**Pb**	**20 20 46.6**	**+0.6**
KBG				*i* S		**Sb**	**20 21 01.4**	**+0.9**
BZGR	**Bezymyannyi-Gr**	**1.25**	**311**	*e*P		**Pb**	**20 20 47.3**	**-0.4**
BZGR				*i* S		**Sb**	**20 21 03.8**	**+0.3**
ZLN	**Zelenaya**	**1.25**	**316**	*e*P		**Pb**	**20 20 47.4**	**-0.4**
ZLN				*i* S		**Sb**	**20 21 03.0**	**-0.7**
TUMR	**Tumrok**	**1.28**	**278**	*e*P		**Pb**	**20 20 47.7**	**-0.5**
TUMR				*i* S		**Sb**	**20 21 05.1**	**+0.8**
BZMR	**Bezymyannaya**	**1.33**	**308**	*e*P		**Pb**	**20 20 48.3**	**-0.9**
BZMR				*i* S		**Sb**	**20 21 05.5**	**-0.5**
LGNR	**Loginova**	**1.34**	**316**	*e*P		**Pb**	**20 20 49.1**	**-0.4**
CIRR	**Tsirk**	**1.35**	**318**	*e*P		**Pb**	**20 20 49.3**	**-0.1**
CIRR				*i* S		**Sb**	**20 21 05.6**	**-0.7**
BZWR	**Bezymyannyi-We**	**1.35**	**309**	*e*P		**Pb**	**20 20 48.7**	**-0.8**
BZWR				*i* S		**Sb**	**20 21 06.0**	**-0.4**
KMNR	**Kamenistaya**	**1.36**	**298**	*e*P		**Pb**	**20 20 48.8**	**-0.8**
KMNR				*i* S		**Sb**	**20 21 06.5**	**-0.2**
KIRR	**Kirishev**	**1.41**	**307**	*e*P		**Pn**	**20 20 48.1**	**-0.3**
KPT	**Kopyto**	**1.48**	**306**	*e*P		**Pb**	**20 20 50.5**	**-1.1**
KRSR	**Krestovskiy**	**1.49**	**318**	*e*P		**Pn**	**20 20 50.4**	**+1.0**
KRSR				*i* S		**Sn**	**20 21 07.8**	**0.0**
KLY	**Klyuchi**	**1.53**	**322**	*e*P		**Pn**	**20 20 50.0**	**+0.2**
KLY				*i* S		**Sn**	**20 21 08.8**	**+0.2**
SMKR	**Semkarok**	**1.54**	**341**	*e*P		**Pb**	**20 20 51.7**	**-1.0**
SMKR				*i* S		**Sb**	**20 21 10.5**	**-1.3**
BDR	**Baidarnaya**	**1.58**	**336**	*e*P		**Pb**	**20 20 52.6**	**-0.8**
BDR				*i* S		**Sb**	**20 21 12.0**	**-1.0**
SRKR	**Sorokina**	**1.67**	**337**	*e*P		**Pb**	**20 20 53.4**	**-1.4**
SRKR				*i* S		**Sn**	**20 21 13.4**	**+1.2**
KOZR	**Kozyr**	**1.68**	**305**	PN		**Pb**	**20 20 53.8**	**-1.2**
KOZ	**Kozyrevsk**	**1.69**	**305**	*e*P		**Pb**	**20 20 53.8**	**-1.3**
SRDR	**Sredinnyy**	**1.91**	**310**	*e*P		**Pn**	**20 20 56.6**	**+1.5**
SRDR				*i* S		**Sn**	**20 21 19.2**	**+1.1**
KII	**Karymskiy**	**2.02**	**238**	*e*P		**Pn**	**20 20 58.2**	**+1.6**
KII				*i* S		**Sn**	**20 21 21.3**	**+0.6**
BKI	**Bering**	**2.08**	**86**	PN		**Sn**	**20 20 58.2**	**+0.9**
BKI				S		**Sn**	**20 21 21.7**	**-0.3**
BKI	**Bering**	**2.08**	**86**	*e*P		**Pn**	**20 20 58.2**	**+0.9**
BKI				*i* S		**Sn**	**20 21 21.7**	**-0.3**
ESO	**Esso**	**2.23**	**293**	PN		**Pn**	**20 21 00.4**	**+1.0**
ESO	**Esso**	**2.23**	**293**	*e*P		**Pn**	**20 21 00.4**	**+1.0**
ESO				*i* S		**Sn**	**20 21 26.3**	**+0.5**
SPN	**Mys Shipunski**	**2.45**	**215**	PN		**Pn**	**20 21 02.2**	**-0.3**
SPN				S		**Sn**	**20 21 29.9**	**-1.5**
SPN	**Mys Shipunski**	**2.45**	**215**	*e*P		**Pn**	**20 21 02.2**	**-0.3**
SPN				*i* S		**Sn**	**20 21 29.9**	**-1.5**
SDLR	**Sedlovina**	**2.75**	**229**	*e*P		**Pn**	**20 21 08.4**	**+1.6**
SDLR				*i* S		**Sn**	**20 21 40.7**	**+1.7**
KRER	**Koryakskii**	**2.80**	**231**	*e*P		**Pn**	**20 21 09.7**	**+2.3**
KRER				*i* S		**Sn**	**20 21 43.0**	**+2.8**
SMAR	**Somma**	**2.80**	**230**	*e*P		**Pn**	**20 21 09.3**	**+1.8**
SMAR				*i* S		**Sn**	**20 21 41.9**	**+1.6**
AVH	**Avacha**	**2.83**	**230**	*e*P		**Pn**	**20 21 09.8**	**+2.1**
AVH				*i* S		**Sn**	**20 21 43.0**	**+2.2**
UGLR	**Uglovaya**	**2.83**	**229**	*e*P		**Pn**	**20 21 09.5**	**+1.7**
UGLR				*i* S		**Sn**	**20 21 41.8**	**+1.0**
KOK	**Koryaka**	**2.85**	**231**	*e*P		**Pn**	**20 21 10.5**	**+2.4**
KOK				*i* S		**Sn**	**20 21 44.5**	**+3.0**
GNL	**Ganaly**	**2.95**	**243**	*e*P		**Pn**	**20 21 11.4**	**+1.9**
PET	**Petropavlovsk**	**3.03**	**227**	*e*PN		Pn	20 21 13.4	+2.9
PET				*e*S		**Sn**	**20 21 48.2**	**+2.5**
PET				pmax	pmax			
	comp=Z,82nm,0.5s							
PET				smax	smax			
	comp=E,229nm,0.5s							
PET				smax	smax			
	comp=N,248nm,0.5s							
PET				MLR	MLR			
	comp=Z,200nm,16.0s							
PET	**Petropavlovsk**	**3.03**	**227**	*e*P		**Pn**	**20 21 13.0**	**+2.5**
PET				*i* S		**Sn**	**20 21 47.7**	**+2.0**
PETK	**Petropavlovsk-**	**3.41**	**235**	PN		**Pn**	**20 21 18.4**	**+2.8**
PETK							20 22 01.3	
PETK				pmax	pmax			
	comp=Z,6.0nm,0.3s							
PETK				smax	smax			
	comp=N,5.0nm,0.3s							
PETK	**Petropavlovsk-**	**3.41**	**235**	Pn		**Pn**	**20 21 18.4**	**+2.8**
	comp=N,6.0nm,0.3s,baz=77,slow=18,SNR=53							
PETK				Sn		**Sb**	**20 22 01.3**	**-3.9**
	comp=N,4.6nm,0.3s,baz=106,slow=15,SNR=6.6							
RUS	**Russkaya**	**3.53**	**222**	PN		**Pn**	**20 21 18.9**	**+1.6**
RUS	**Russkaya**	**3.53**	**222**	*e*P		**Pn**	**20 21 18.9**	**+1.6**
RUS				*i* S		**Sn**	**20 21 58.8**	**+0.8**
GRL	**Gorelyy**	**3.62**	**226**	*e*P		Pn	20 21 21.8	+3.2
GRL				*i* S		**Sn**	**20 22 03.3**	**+3.0**
MTVR	**Mutnovka**	**3.62**	**225**	*e*P		**Pn**	**20 21 21.2**	**+2.4**
MTVR				*i* S		**Sn**	**20 22 02.0**	**+1.5**
APC	**Apacha**	**3.78**	**236**	*e*P		Pn	20 21 24.5	+3.8
APC				*i* S		**Sn**	**20 22 07.7**	**+3.7**
PAU	**Pauzhetka**	**4.95**	**224**	PN		Pn	20 21 41.5	+4.7
PAU	**Pauzhetka**	**4.95**	**224**	P		Pn	20 21 41.5	+4.7
FX1	**Attu Island--F**	**6.76**	**105**	Pn		**Pn**	**20 22 01.6**	**0.0**
	comp=N,7.3nm,0.3s,baz=91,slow=22,SNR=16							
FX1				Sn		Sn	20 23 12.4	-5.0
	comp=N,5.0nm,0.3s,baz=109,slow=20,SNR=5.9							
ERM	**Erimo**	**18.18**	**232**	*i* P		**P**	**20 24 37.2**	**+2.7**
MJAR	**Matsushiro Arr**	**24.86**	**232**	P		**P**	**20 25 44.4**	**+0.2**
	comp=N,1.0nm,0.7s,baz=31,slow=6.8,SNR=3.6							
ILAR	**Eielson Array**	**26.45**	**48**	P		**P**	**20 25 58.4**	**0.0**
	comp=N,0.2nm,0.7s,baz=274,slow=8.0,SNR=4.3							
YKA	**Yellowknife Ar**	**40.77**	**45**	P		**P**	**20 28 03.8**	**+1.5**
	comp=N,0.6nm,0.6s,baz=299,slow=7.7,SNR=8.8							
KURK	**Kurchatov**	**47.80**	**301**	P		**P**	**20 28 56.4**	**-2.3**
KURBB	**Kurchatov Arra**	**47.90**	**301**	P		**P**	**20 28 56.4**	**-3.1**
	comp=N,0.3nm,0.4s,baz=55,slow=8.0,SNR=7.3							
MKAR	**Makanchi Array**	**48.48**	**295**	P		**P**	**20 29 01.9**	**-2.1**
MKAR	**Makanchi Array**	**48.48**	**295**	P		**P**	**20 29 01.9**	**-2.1**
	comp=N,0.1nm,0.5s,baz=56,slow=5.9,SNR=3.2							
FINES	**FINESS Array B**	**58.77**	**337**	P		**P**	**20 30 18.0**	**-1.1**
	comp=N,1.2nm,1.0s,baz=298,slow=4.1,SNR=5.5							
CMAR	**Chiang Mai Arr**	**59.89**	**259**	P		**P**	**20 30 26.4**	**-1.1**
	comp=N,0.3nm,0.6s,baz=27,slow=8.1,SNR=3.0							
ASAR	**Alice Springs**	**82.17**	**206**	P		**P**	**20 32 43.1**	**+1.0**
	comp=N,0.4nm,0.5s,baz=18,slow=5.0,SNR=6.5							

*IDC **27** 20:36:27.9±0.8, 34°.54N×24°.70E, h0km, mb3.8/12, mb1 3.9/18, mb1mx3.8/33, mbtmp3.8/18, ML4.0/5, Error ellipse: s-maj=18.1km s-min=15.8km az=10.0*
*HLW **27** 20:36:30.2, 34°.62N×24°.88E, h33km±46km, Md3.9, Ml3.7*
*ISCJB **27** 20:36:31.6±0.3, 34°.37N±0°.02×24°.78E±0°.02, h53km±4km, mb3.9/14, Error ellipse: s-maj=3.8km s-min=2.7km az=142.3*
*NEIC **27** 20:36:32.7±0.8, 34°.47N×24°.80E, h37km±8km, mb4.7/4, Error ellipse: s-maj=9.5km s-min=6.8km az=216.0*
*CSEM **27** 20:36:33.3±0.1, 34°.41N×24°.79E, h49km±2km, ML3.7/6, Error ellipse: s-maj=4.4km s-min=2.8km az=53.0*
*ATH **27** 20:36:35.0, 34°.60N×24°.71E, h46km±5km, MD3.7/25*
*THE **27** 20:36:36.3, 34°.62N×24°.67E, h25km±1km, ML3.7/6, Error ellipse: s-maj=1.7km s-min=0.7km az=185.0*
ISC 27 20:36:33.7±0.9, 34°.47N±0°.04×24°.70E±0°.03, h41km±9km, n266, σ1°20/265, mb3.8/14, Crete

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIVA	**Sivas**	**0.55**	**9**	P		**Pn**	**20 36 44.9**	**-0.2**
SIVA				S		**Sn**	**20 36 52.3**	**-0.9**
SIVA	**Sivas**	**0.55**	**9**	*e*P		**Pn**	**20 36 45.0**	**-0.2**
SIVA				*e*S		**Sn**	**20 36 53.6**	**+0.4**
SIVA	**Sivas**	**0.55**	**9**	*e*P		**Pn**	**20 36 45.0**	**-0.2**
SIVA				*e*S		**Sn**	**20 36 53.6**	**+0.4**
GVD	**Gavdhos**	**0.62**	**306**	P		**Pn**	**20 36 46.2**	**+0.1**
GVD				S		**Sn**	**20 36 55.3**	**+0.3**
GVD	**Gavdhos**	**0.62**	**306**	*e*P		**Pn**	**20 36 45.9**	**-0.2**
GVD	**Gavdhos**	**0.62**	**306**	*e*P		**Pn**	**20 36 46.7**	**+0.6**
GVD				*e*S		**Sn**	**20 36 56.7**	**+1.7**
GVD	**Gavdhos**	**0.62**	**306**	*e*P		**Pn**	**20 36 46.7**	**+0.6**
GVD				*e*S		**Sn**	**20 36 56.7**	**+1.7**
IDI	**Anoyia**	**0.83**	**11**	P		**Pn**	**20 36 49.0**	**+0.1**
IDI				S		**Sn**	**20 36 58.6**	**-1.4**
IDI	**Anoyia**	**0.83**	**11**	*e*P		**Pn**	**20 36 48.7**	**-0.3**
IDI	**Anoyia**	**0.83**	**11**	*e*P		**Pn**	**20 36 49.1**	**+0.1**
IDI				*e*S		**Sn**	**20 37 00.3**	**+0.3**
IDI	**Anoyia**	**0.83**	**11**	*e*P		**Pn**	**20 36 49.1**	**+0.1**
IDI				*e*S		**Sn**	**20 37 00.3**	**+0.3**
LAST	**Lasithi**	**0.94**	**43**	P		**Pn**	**20 36 51.3**	**+0.8**
LAST				S		**Sn**	**20 37 03.2**	**+0.5**
LAST	**Lasithi**	**0.94**	**43**	*e*P		**Pn**	**20 36 51.5**	**+1.0**
LAST				*e*S		**Sn**	**20 37 03.5**	**+0.8**
LAST	**Lasithi**	**0.94**	**43**	*e*P		**Pn**	**20 36 51.3**	**+0.8**
LAST				S		**Sn**	**20 37 03.2**	**+0.5**
VAM	**Vamos**	**1.02**	**336**	P		**Pn**	**20 36 52.5**	**+1.0**
VAM				S		**Sn**	**20 37 04.4**	**-0.2**
VAM	**Vamos**	**1.02**	**336**	*e*P		**Pn**	**20 36 52.6**	**+1.0**
VAM				*e*S		**Sn**	**20 37 05.6**	**+1.0**
VAM	**Vamos**	**1.02**	**336**	P		**Pn**	**20 36 52.5**	**+1.0**
VAM				*e*S		**Sn**	**20 37 05.6**	**+1.0**
NPS	**Neapolis**	**1.09**	**43**	P		**Pn**	**20 36 53.9**	**+1.5**
NPS				S		**Sn**	**20 37 07.3**	**+1.0**
NPS	**Neapolis**	**1.09**	**43**	*e*P		**Pn**	**20 36 54.0**	**+1.5**
NPS				*e*S		**Sn**	**20 37 05.9**	**-0.4**
NPS	**Neapolis**	**1.09**	**43**	P		**Pn**	**20 36 53.9**	**+1.5**
NPS				*e*S		**Sn**	**20 37 05.9**	**-0.4**
KARN	**Karanos**	**1.13**	**325**	P		**Pn**	**20 36 54.2**	**+1.2**
KARN				S		**Sn**	**20 37 06.6**	**-0.7**
KARN	**Karanos**	**1.13**	**325**	*e*P		**Pn**	**20 36 54.2**	**+1.2**
KARN				*e*S		**Sn**	**20 37 07.9**	**+0.6**
KARN	**Karanos**	**1.13**	**325**	P		**Pn**	**20 36 54.2**	**+1.2**
KARN				*e*S		**Sn**	**20 37 07.9**	**+0.6**
ZKR	**Zakros**	**1.40**	**62**	P		**Pn**	**20 36 58.8**	**+2.1**
ZKR				S		**Sn**	**20 37 16.8**	**+2.8**
ZKR	**Zakros**	**1.40**	**62**	*e*P		**Pn**	**20 36 59.2**	**+2.5**
ZKR				*e*S		**Sn**	**20 37 15.5**	**+1.5**
ZKR	**Zakros**	**1.40**	**62**	*e*P		**Pn**	**20 36 59.2**	**+2.5**
ZKR				*e*S		**Sn**	**20 37 15.5**	**+1.5**
THR1	**Thera Island**	**1.99**	**18**	P		**Pn**	**20 37 05.3**	**+0.4**
THR1	**Thera Island**	**1.99**	**18**	P		**Pn**	**20 37 05.3**	**+0.4**
THR3	**Thira Island,**	**2.01**	**16**	P		**Pn**	**20 37 06.0**	**+0.9**
THR3	**Thira Island,**	**2.01**	**16**	P		**Pn**	**20 37 06.0**	**+0.9**
THR2	**Thira island,**	**2.06**	**17**	P		**Pn**	**20 37 06.2**	**+0.5**
THR2	**Thira island,**	**2.06**	**17**	P		**Pn**	**20 37 06.2**	**+0.5**
KYTH	**Kithira**	**2.26**	**323**	*e*P		**Pn**	**20 37 10.5**	**+2.0**
KYTH	**Kithira**	**2.26**	**323**	*e*P		**Pn**	**20 37 10.5**	**+2.0**
KARP	**Karpathos**	**2.28**	**61**	*e*P		**Pn**	**20 37 11.4**	**+2.5**
KARP				*e*S		**Sn**	**20 37 36.5**	**+0.7**
LTBQ	**Tobruq**	**2.50**	**195**	*i* P		**Pn**	**20 37 12.8**	**+1.0**
	SNR=24							
LTBQ				*e*S		**Sn**	**20 37 40.6**	**-0.5**
	155nm,0.4s,SNR=24							
VLI	**Veliai**	**2.66**	**328**	P		**Pn**	**20 37 14.9**	**+0.9**
VLI				S		**Sn**	**20 37 44.4**	**-0.7**
VLI	**Veliai**	**2.66**	**328**	*e*P		**Pn**	**20 37 15.2**	**+1.2**
VLI	**Veliai**	**2.66**	**328**	P		**Pn**	**20 37 14.9**	**+0.9**
APE	**Apeiranthos**	**2.67**	**14**	*e*PN		**Pn**	**20 37 14.3**	**0.0**
APE				*e*SN		**Sn**	**20 37 44.5**	**-1.0**
APE	**Apeiranthos**	**2.67**	**14**	P		**Pn**	**20 37 14.1**	**-0.2**
APE				S		**Sn**	**20 37 45.6**	**+0.1**
APE	**Apeiranthos**	**2.67**	**14**	*e*P		**Pn**	**20 37 14.1**	**-0.2**
APE	**Apeiranthos**	**2.67**	**14**	P		**Pn**	**20 37 14.1**	**-0.2**
APE				S		**Sn**	**20 37 45.6**	**+0.1**
NIS1	**Nisyros Isl.**	**2.93**	**43**	*e*P		**Pn**	**20 37 19.9**	**+2.2**
NIS1	**Nisyros Isl.**	**2.93**	**43**	*e*P		**Pn**	**20 37 19.9**	**+2.2**
DYR	**Agios Nikonas**	**2.99**	**320**	P		**Pn**	**20 37 19.9**	**+1.3**
DYR				S		**Sn**	**20 37 53.2**	**0.0**
DYR	**Agios Nikonas**	**2.99**	**320**	*e*P		**Pn**	**20 37 21.1**	**+2.5**
DYR	**Agios Nikonas**	**2.99**	**320**	P		**Pn**	**20 37 19.9**	**+1.3**
DYR				S		**Sn**	**20 37 53.2**	**0.0**
DAT	**Datca**	**3.25**	**45**	*e*PN		**Pn**	**20 37 22.1**	**-0.1**
DAT				*e*SN		**Sn**	**20 37 56.7**	**-3.0**
DID	**Didima**	**3.25**	**339**	P		**Pn**	**20 37 22.2**	**0.0**
DID				S		**Sn**	**20 37 59.3**	**-0.3**
DID	**Didima**	**3.25**	**339**	*e*P		**Pn**	**20 37 22.0**	**-0.2**
DID	**Didima**	**3.25**	**339**	P		**Pn**	**20 37 22.2**	**0.0**
DID				S		**Sn**	**20 37 59.3**	**-0.3**
ARG	**Arkhangelos**	**3.29**	**57**	P		**Pn**	**20 37 24.3**	**+1.6**
ARG	**Arkhangelos**	**3.29**	**57**	*e*P		**Pn**	**20 37 24.1**	**+1.4**
ARG	**Arkhangelos**	**3.29**	**57**	*e*P		**Pn**	**20 37 24.1**	**+1.4**
BODT	**Bodrum**	**3.34**	**39**	*e*PN		**Pn**	**20 37 23.4**	**0.0**
PYL	**PYLOS**	**3.41**	**316**	*e*P		**Pn**	**20 37 26.6**	**+2.2**
PYL	**PYLOS**	**3.41**	**316**	*e*P		**Pn**	**20 37 26.6**	**+2.2**
NAIG	**Nisos Aigina**	**3.42**	**344**	*e*P		**Pn**	**20 37 24.7**	**+0.2**
NAIG	**Nisos Aigina**	**3.42**	**344**	*e*P		**Pn**	**20 37 24.7**	**+0.2**
ITM	**Ithomi**	**3.52**	**321**	*e*P		**Pn**	**20 37 28.7**	**+2.9**
ITM	**Ithomi**	**3.52**	**321**	*e*P		**Pn**	**20 37 28.7**	**+2.9**
PTL	**Penteli**	**3.63**	**349**	*e*P		**Pn**	**20 37 27.9**	**+0.5**
PTL	**Penteli**	**3.63**	**349**	*e*P		**Pn**	**20 37 27.9**	**+0.5**
MLSB	**Milas**	**3.76**	**41**	*e*PN		**Pn**	**20 37 29.8**	**+0.7**
LTK	**Loutraki**	**3.81**	**339**	P		**Pn**	**20 37 30.5**	**+0.6**
LTK				S		**Sn**	**20 38 13.4**	**0.0**
LTK	**Loutraki**	**3.81**	**339**	*e*P		**Pn**	**20 37 30.4**	**+0.6**
LTK	**Loutraki**	**3.81**	**339**	P		**Pn**	**20 37 30.5**	**+0.6**
LTK				S		**Sn**	**20 38 13.4**	**0.0**
AMT	**Artemida-Makis**	**3.90**	**322**	P		**Pn**	**20 37 32.3**	**+1.2**
AMT				S		**Sn**	**20 38 16.2**	**+0.6**
AMT	**Artemida-Makis**	**3.90**	**322**	*e*P		**Pn**	**20 37 33.2**	**+2.1**
AMT	**Artemida-Makis**	**3.90**	**322**	P		**Pn**	**20 37 32.3**	**+1.2**
AMT				S		**Sn**	**20 38 16.2**	**+0.6**
HMAT	**Matruh**	**3.93**	**148**	P		Pn	20 37 29.4	-2.0
	baz=151							
HMAT				S		Sn	20 38 13.6	-2.7
	baz=151							
HMAT	**Matruh**	**3.93**	**148**	P		Pn	20 37 29.4	-2.0
HMAT				S		Sn	20 38 13.6	-2.7
YER	**Yerkesik**	**3.94**	**47**	*e*PN		**Pn**	**20 37 31.6**	**-0.1**
GUR	**Goura**	**3.95**	**332**	P		**Pn**	**20 37 32.5**	**+0.7**
GUR				S		**Sn**	**20 38 16.8**	**-0.1**
TURN	**Turunc**	**3.98**	**52**	*i* P		Pn	20 37 28.6	-3.5
TURN	**Turunc**	**3.98**	**52**	*i* P		Pn	20 37 28.6	-3.5
DALY	**Dalyan (Mu˘la**	**3.98**	**53**	*e*PN		**Pn**	**20 37 32.0**	**0.0**
CHOS	**Chios island**	**4.05**	**15**	*e*P		**Pn**	**20 37 34.1**	**+0.9**
CHOS	**Chios island**	**4.05**	**15**	*e*P		**Pn**	**20 37 34.1**	**+0.9**
AYDN	**Tasoluk**	**4.09**	**38**	*i* P		**Pn**	**20 37 35.7**	**+2.0**
AYDN	**Tasoluk**	**4.09**	**38**	*i* P		**Pn**	**20 37 35.7**	**+2.0**
FETY	**Fethiye**	**4.17**	**58**	*e*PN		**Pn**	**20 37 34.8**	**-0.1**
DSF	**Desfina**	**4.30**	**337**	P		**Pn**	**20 37 37.5**	**+0.9**
DSF				S		**Sn**	**20 38 26.1**	**+0.5**
DSF	**Desfina**	**4.30**	**337**	P		**Pn**	**20 37 37.5**	**+0.9**
DSF				S		**Sn**	**20 38 26.1**	**+0.5**
KSL	**Kastellorizon**	**4.33**	**66**	*e*P		**Pn**	**20 37 39.0**	**+2.1**
BLCB	**Balcova**	**4.33**	**25**	*e*PN		**Pn**	**20 37 37.5**	**+0.5**
LAKA	**Lakka**	**4.35**	**330**	*e*P		Pn	20 37 40.8	+3.5
LAKA	**Lakka**	**4.35**	**330**	*e*P		Pn	20 37 40.8	+3.5
AKAS	**Kas**	**4.38**	**65**	*i* P		**Pn**	**20 37 38.0**	**+0.3**
AKAS	**Kas**	**4.38**	**65**	*i* P		**Pn**	**20 37 38.0**	**+0.3**
LKR	**Lokris**	**4.39**	**342**	*e*P		**Pn**	**20 37 38.9**	**+1.2**
LKR	**Lokris**	**4.39**	**342**	*e*P		**Pn**	**20 37 38.9**	**+1.2**
IZM	**Izmir**	**4.43**	**27**	*e*PN		**Pn**	**20 37 39.0**	**+0.7**
RLS	**Riolos of Patr**	**4.43**	**325**	*e*P		Pn	20 37 41.6	+3.3
RLS	**Riolos of Patr**	**4.43**	**325**	*e*P		Pn	20 37 41.6	+3.3
EFP	**Efpalio**	**4.54**	**331**	*e*P		Pn	20 37 43.6	+3.7
EFP	**Efpalio**	**4.54**	**331**	*e*P		Pn	20 37 43.6	+3.7
GLHS	**Glhisar (BURDU**	**4.73**	**54**	*e*PN		**Pn**	**20 37 42.8**	**+0.3**
AOS	**Alonnisos**	**4.73**	**352**	*e*P		**Pn**	**20 37 42.4**	**-0.1**
AOS	**Alonnisos**	**4.73**	**352**	*e*P		**Pn**	**20 37 42.4**	**-0.1**
DNZL	**Cakiroluk**	**4.76**	**46**	*i* P		**Pn**	**20 37 44.0**	**+0.9**
DNZL	**Cakiroluk**	**4.76**	**46**	*i* P		**Pn**	**20 37 44.0**	**+0.9**
DENT	**Denizli**	**4.80**	**46**	*e*PN		**Pn**	**20 37 44.2**	**+0.8**
ELL	**Elmali**	**4.81**	**60**	*e*PN		**Pn**	**20 37 44.7**	**+1.1**
GOLH	**Golhisar**	**4.81**	**54**	*i* P		**Pn**	**20 37 44.6**	**+0.9**
GOLH	**Golhisar**	**4.81**	**54**	*i* P		**Pn**	**20 37 44.6**	**+0.9**
AGG	**Agios Georgios**	**4.92**	**338**	*e*P		Pn	20 37 48.4	+3.3
AGG	**Agios Geor

ASF					Sn	Sn	20 40 51.3	-5.7
	comp=N,0.9nm,0.3s,baz=17,slow=18,SNR=3.9							
HDK2	**Wahat Dakhilah**	**10.78**	**159**		P	Pn	20 39 03.6	-1.8
	baz=159							
HDK2	**Wahat Dakhilah**	**10.78**	**159**		P	Pn	20 39 03.6	-1.8
MLR	**Muntele Rosu**	**11.04**	**5**		Pn	**Pn**	**20 39 11.1**	**+2.0**
MLR	**Muntele Rosu**	**11.04**	**5**		Pn	**Pn**	**20 39 11.1**	**+2.0**
	comp=N,0.0nm,0.3s,baz=165,slow=19,SNR=3.1							
MLR	**Muntele Rosu**	**11.04**	**5**		Pn	**Pn**	**20 39 11.1**	**+2.0**
KOLS	**Kolonicke sedl**	**14.56**	**354**	*eP*		**P**	**20 40 02.1**	**-0.5**
VYHS	**Vyhne**	**14.67**	**344**	*eP*		**P**	**20 40 04.9**	**+1.0**
AK02	**Malin Array Si**	**16.50**	**10**	*eP*		**Pn**	**20 40 22.2**	**+0.2**
AK02	**Malin Array Si**	**16.50**	**10**	*eP*		**Pn**	**20 40 22.2**	**+0.2**
GERES	**GERESS Array B**	**16.52**	**334**		Pn	**Pn**	**20 40 22.8**	**+0.5**
GERES	**GERESS Array B**	**16.52**	**334**		Pn	**Pn**	**20 40 22.8**	**+0.5**
	comp=N,0.3nm,0.3s,baz=142,slow=13,SNR=6.8							
GERES	**GERESS Array B**	**16.52**	**334**		Pn	**Pn**	**20 40 22.8**	**+0.5**
AK01	**Malin Array Si**	**16.54**	**10**	*eP*		**Pn**	**20 40 22.6**	**+0.2**
AK01	**Malin Array Si**	**16.54**	**10**	*eP*		**Pn**	**20 40 22.6**	**+0.2**
KIEV	**Kiev**	**16.54**	**10**	*eP*		**Pn**	**20 40 22.6**	**+0.2**
	comp=N,20nm,0.6s							
KIEV	**Kiev**	**16.54**	**10**	*eP*		**Pn**	**20 40 22.6**	**+0.2**
	comp=N,20nm,0.6s							
AKASG	**Malin Array Be**	**16.55**	**10**		Pn	**Pn**	**20 40 22.9**	**+0.4**
AKASG	**Malin Array Be**	**16.55**	**10**		Pn	**Pn**	**20 40 22.9**	**+0.4**
	comp=N,12nm,0.3s,baz=200,slow=10,SNR=38							
AKASG	**Malin Array Be**	**16.55**	**10**		Pn	**Pn**	**20 40 22.9**	**+0.4**
KHC	**Kasperske Hory**	**16.80**	**334**	*eP*		**P**	**20 40 27.5**	**0.0**
KHC				*ex*		x	20 40 45.5	
KHC	**Kasperske Hory**	**16.80**	**334**		P	**P**	**20 40 27.5**	**0.0**
KBZ	**Khabaz**	**16.85**	**51**		Pn	**P**	**20 40 30.8**	**+2.8**
KBZ	**Khabaz**	**16.85**	**51**		Pn	**P**	**20 40 30.8**	**+2.8**
	comp=N,0.2nm,0.3s,baz=243,slow=7.2,SNR=12							
GNI	**Garni**	**16.91**	**65**		Pn	**P**	**20 40 30.5**	**+1.6**
GNI	**Garni**	**16.91**	**65**		Pn	**P**	**20 40 30.5**	**+1.6**
	comp=N,0.3nm,0.3s,baz=338,slow=5.4,SNR=3.9							
SUW	**Suwalki**	**19.56**	**357**	*eP*		**P**	**20 40 54.7**	**-3.0**
	comp=N,33nm,1.0s							
ESDC	**Sonseca Array**	**23.40**	**291**		P	**P**	**20 41 39.4**	**+0.5**
ESDC	**Sonseca Array**	**23.40**	**291**		P	**P**	**20 41 39.4**	**+0.5**
	comp=N,0.6nm,0.6s,baz=83,slow=9.8,SNR=3.7							
ESDC	**Sonseca Array**	**23.40**	**291**		P	**P**	**20 41 39.4**	**+0.5**
HFS	**Hagfors**	**26.66**	**348**		P	**P**	**20 42 07.0**	**-1.4**
HFS	**Hagfors**	**26.66**	**348**		P	**P**	**20 42 07.0**	**-1.4**
	comp=N,1.1nm,0.5s,baz=163,slow=11,SNR=8.1							
HFS	**Hagfors**	**26.66**	**348**		P	**P**	**20 42 07.0**	**-1.4**
FINES	**FINESS Array B**	**27.00**	**1**		P	**P**	**20 42 09.1**	**-2.2**
FINES	**FINESS Array B**	**27.00**	**1**		P	**P**	**20 42 09.1**	**-2.2**
	comp=N,0.5nm,0.4s,baz=164,slow=11,SNR=7.5							
FINES	**FINESS Array B**	**27.00**	**1**		P	**P**	**20 42 09.1**	**-2.2**
NAO01	**NORSAR Array S**	**27.86**	**346**	*eP*		**P**	**20 42 17.7**	**-1.4**
NAO01	**NORSAR Array S**	**27.86**	**346**	*eP*		**P**	**20 42 17.7**	**-1.4**
NB2	**NORSAR Subarra**	**27.97**	**346**		P	**P**	**20 42 19.1**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=156,slow=9.3							
NB2	**NORSAR Subarra**	**27.97**	**346**		P	**P**	**20 42 19.1**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=156,slow=9.0,SNR=5.5							
NOA	**NORSAR Array B**	**27.97**	**346**		P	**P**	**20 42 19.0**	**-1.1**
NOA	**NORSAR Array B**	**27.97**	**346**		P	**P**	**20 42 19.0**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=152,slow=8.6,SNR=6.1							
NOA	**NORSAR Array B**	**27.97**	**346**		P	**P**	**20 42 19.0**	**-1.1**
EKA	**Eskdalemuir Ar**	**28.39**	**326**		P	**P**	**20 42 23.7**	**-0.1**
EKA	**Eskdalemuir Ar**	**28.39**	**326**		P	**P**	**20 42 23.7**	**-0.1**
	comp=Z,1.7nm,0.9s,baz=121,slow=9.8,SNR=4.6							
EKA	**Eskdalemuir Ar**	**28.39**	**326**		P	**P**	**20 42 23.7**	**-0.1**
TORD	**Torodi Ar. Bea**	**29.76**	**230**		P	**P**	**20 42 37.0**	**+0.6**
TORD	**Torodi Ar. Bea**	**29.76**	**230**		P	**P**	**20 42 37.0**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=33,slow=8.5,SNR=50							
TORD	**Torodi Ar. Bea**	**29.76**	**230**		P	**P**	**20 42 37.0**	**+0.6**
ARCES	**ARCESS Array B**	**35.12**	**0**		P	**P**	**20 43 21.2**	**-1.5**
ARCES	**ARCESS Array B**	**35.12**	**0**		P	**P**	**20 43 21.2**	**-1.5**
	comp=Z,1.0nm,0.7s,baz=180,slow=9.2,SNR=5.8							
ARCES	**ARCESS Array B**	**35.12**	**0**		P	**P**	**20 43 21.2**	**-1.5**
KURK	**Kurchatov**	**41.91**	**50**	*eP*		**P**	**20 44 19.3**	**-0.6**
KURK	**Kurchatov**	**41.91**	**50**	*eP*		**P**	**20 44 19.3**	**-0.6**
MK31	**Makanchi Array**	**44.47**	**56**	*eP*		**P**	**20 44 39.5**	**-1.2**
MK31	**Makanchi Array**	**44.47**	**56**	*eP*		**P**	**20 44 39.5**	**-1.2**
MKAR	**Makanchi Array**	**44.47**	**56**		P	**P**	**20 44 41.0**	**+0.3**
MKAR	**Makanchi Array**	**44.47**	**56**		P	**P**	**20 44 41.0**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=267,slow=7.8,SNR=20							
MKAR	**Makanchi Array**	**44.47**	**56**		P	**P**	**20 44 41.0**	**+0.3**
ZAA0	**Zalesovo Array**	**45.75**	**46**	*eP*		**P**	**20 44 49.6**	**-1.1**
ZAA0	**Zalesovo Array**	**45.75**	**46**	*eP*		**P**	**20 44 49.6**	**-1.1**
ZALV	**Zalesovo Beam**	**45.75**	**46**		P	**P**	**20 44 50.0**	**-0.7**
ZALV	**Zalesovo Beam**	**45.75**	**46**		P	**P**	**20 44 50.0**	**-0.7**
	comp=Z,1.3nm,0.4s,baz=270,slow=8.7,SNR=10							
ZALV	**Zalesovo Beam**	**45.75**	**46**		P	**P**	**20 44 50.0**	**-0.7**
SONM	**Songino Array**	**60.21**	**50**		P	**P**	**20 46 38.7**	**+1.2**
SONM	**Songino Array**	**60.21**	**50**		P	**P**	**20 46 38.7**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=293,slow=7.4,SNR=3.5							
SONM	**Songino Array**	**60.21**	**50**		P	**P**	**20 46 38.7**	**+1.2**
BOSA	**Boshof**	**62.75**	**179**		P	**P**	**20 46 54.5**	**-0.2**
BOSA	**Boshof**	**62.75**	**179**		P	**P**	**20 46 54.5**	**-0.2**
	comp=Z,1.9nm,1.0s,baz=309,slow=14,SNR=3.1							
BOSA	**Boshof**	**62.75**	**179**		P	**P**	**20 46 54.5**	**-0.2**
YKA	**Yellowknife Ar**	**77.98**	**342**		P	**P**	**20 48 27.3**	**+0.1**
YKA	**Yellowknife Ar**	**77.98**	**342**		P	**P**	**20 48 27.3**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=34,slow=5.4,SNR=3.5							
YKA	**Yellowknife Ar**	**77.98**	**342**		P	**P**	**20 48 27.3**	**+0.1**
WCI	**Wyandotte Cave**	**83.45**	**312**	*eP*		**P**	**20 48 56.6**	**-0.4**
	comp=Z,17nm,0.6s							
WCI	**Wyandotte Cave**	**83.45**	**312**	*eP*		**P**	**20 48 56.6**	**-0.4**
	comp=Z,17nm,0.6s							
ECSD	**EROS Data Cent**	**85.59**	**322**	*eP*		P	20 49 02.9	-4.8
	comp=Z,8.4nm,1.0s							

CSEM ***27*** *20:48:40.8, 42.˚55N×13.˚27E, h13km, After ROM*
ROM 27 20:48:40.8±0.1, 42.˚55N×13.˚27E, h13km±1km, MI1.7/2, Error ellipse: s-maj=0.9km s-min=0.7km az=52.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.10**	**95**	Pg	Pb	20 48 44.6	-0.3
CAMP				Sg	Sg	20 48 46.5	+0.2
	172nm,0.6s						
CAMP	**Campotosto**	**0.10**	**95**	Pg	Pb	20 48 44.6	-0.3
CAMP				Sg	Sg	20 48 46.5	+0.2
	172nm,0.6s						
LNSS	**Leonessa**	**0.18**	**289**	Pg	Pg	20 48 45.5	+0.4
LNSS				Sg	Sg	20 48 48.7	+0.7
LNSS	**Leonessa**	**0.18**	**289**	Pg	Pg	20 48 45.5	+0.4
LNSS				Sg	Sg	20 48 48.7	+0.7
AQU	**L'Aquila**	**0.21**	**153**	Pg	Pg	20 48 45.9	+0.3
AQU				Sg	Sg	20 48 49.7	+0.8
AQU	**L'Aquila**	**0.21**	**153**	Pg	Pg	20 48 45.9	+0.3
AQU				Sg	Sg	20 48 49.7	+0.8
TERO	**Teramo**	**0.26**	**72**	Pg	Pg	20 48 46.6	+0.2
TERO	**Teramo**	**0.26**	**72**	Pg	Pg	20 48 46.6	+0.2
FIAM	**Fiamignano**	**0.30**	**202**	Pg	Pg	20 48 47.4	+0.3
FIAM				Sg	Sg	20 48 52.1	+0.7
FIAM	**Fiamignano**	**0.30**	**202**	Pg	Pg	20 48 47.4	+0.3
FIAM				Sg	Sg	20 48 52.1	+0.7
NRCA	**Norcia**	**0.31**	**338**	Pg	Pg	20 48 47.6	+0.3
NRCA				Sg	Sg	20 48 52.4	+0.7
	150nm,0.8s						
NRCA	**Norcia**	**0.31**	**338**	Pg	Pg	20 48 47.6	+0.3
NRCA				Sg	Sg	20 48 52.4	+0.7
	150nm,0.8s						

CSEM ***27*** *20:49:26.7, 42.˚33N×13.˚50E, h9km, After ROM*
ROM 27 20:49:26.7±0.1, 42.˚33N×13.˚50E, h9km, MlI2.5/10, Error ellipse: s-maj=1.3km s-min=0.9km az=49.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.08**	**290**	Pg	Pg	20 49 29.5	+0.5
AQU				Sg	Sg	20 49 31.3	+0.6
	8µm,0.9s						
AQU	**L'Aquila**	**0.08**	**290**	Pg	Pg	20 49 29.5	+0.5
AQU				Sg	Sg	20 49 31.3	+0.6
	8µm,0.9s						
FAGN	**Fagnano**	**0.09**	**135**	Pg	Pg	20 49 29.5	+0.4
FAGN				Sg	Sg	20 49 31.5	+0.7
	10µm,0.7s						
FAGN	**Fagnano**	**0.09**	**135**	Pg	Pg	20 49 29.5	+0.4
FAGN				Sg	Sg	20 49 31.5	+0.7
	10µm,0.7s						
CAMP	**Campotosto**	**0.22**	**342**	Pg	Pg	20 49 32.0	+0.6
CAMP				Sg	Sg	20 49 35.6	+1.0
	172nm,0.6s						
CAMP	**Campotosto**	**0.22**	**342**	Pg	Pg	20 49 32.0	+0.6
CAMP				Sg	Sg	20 49 35.6	+1.0
	172nm,0.6s						
VCEL	**Villa Celiera**	**0.26**	**75**	Pg	Pg	20 49 32.9	+0.8
VCEL				Sg	Sb	20 49 37.9	-0.5
	1µm,0.6s						
VCEL	**Villa Celiera**	**0.26**	**75**	Pg	Pg	20 49 32.9	+0.8
VCEL				Sg	Sb	20 49 37.9	-0.5
	1µm,0.6s						
FIAM	**Fiamignano**	**0.29**	**258**	Pg	Pg	20 49 33.3	+0.6
FIAM				Sg	Sb	20 49 38.4	-0.9
	2µm,0.8s						
FIAM	**Fiamignano**	**0.29**	**258**	Pg	Pg	20 49 33.3	+0.6
FIAM				Sg	Sb	20 49 38.4	-0.9
	2µm,0.8s						
TERO	**Teramo**	**0.30**	**14**	Pg	Pg	20 49 33.2	+0.3
TERO				Sg	Sg	20 49 38.3	+1.2
	570nm,0.7s						
TERO	**Teramo**	**0.30**	**14**	Pg	Pg	20 49 33.2	+0.3
TERO				Sg	Sg	20 49 38.3	+1.2
	570nm,0.7s						
PTQR	**Pietraquaria**	**0.31**	**194**	Pg	Pg	20 49 33.6	+0.5
PTQR				Sg	Sb	20 49 39.2	-0.7
	210nm,0.8s						
PTQR	**Pietraquaria**	**0.31**	**194**	Pg	Pg	20 49 33.6	+0.5
PTQR				Sg	Sb	20 49 39.2	-0.7
	210nm,0.8s						
INTR	**Introdacqua**	**0.43**	**136**	Pg	Pg	20 49 35.7	+0.4
INTR				Sg	Sb	20 49 43.1	-0.3
	1µm,0.9s						
INTR	**Introdacqua**	**0.43**	**136**	Pg	Pg	20 49 35.7	+0.4
INTR				Sg	Sb	20 49 43.1	-0.3
	1µm,0.9s						
LNSS	**Leonessa**	**0.44**	**309**	Pg	Pg	20 49 35.7	+0.2
LNSS				Sg	Sb	20 49 44.1	+0.5
	890nm,1.1s						
LNSS	**Leonessa**	**0.44**	**309**	Pg	Pg	20 49 35.7	+0.2
LNSS				Sg	Sb	20 49 44.1	+0.5
	890nm,1.1s						
VVLD	**Villa Vallelon**	**0.46**	**169**	Pg	Pg	20 49 36.2	+0.3
VVLD				Sg	Sb	20 49 44.1	-0.2
	435nm,0.7s						
VVLD	**Villa Vallelon**	**0.46**	**169**	Pg	Pg	20 49 36.2	+0.3
VVLD				Sg	Sb	20 49 44.1	-0.2
	435nm,0.7s						
CERT	**Cerreto**	**0.54**	**226**	Pg	Pg	20 49 37.3	0.0
CERT				Sg	Sb	20 49 45.8	-0.6
	361nm,0.5s						
CERT	**Cerreto**	**0.54**	**226**	Pg	Pg	20 49 37.3	0.0
CERT				Sg	Sb	20 49 45.8	-0.6
	361nm,0.5s						
LPEL	**Lama dei Pelig**	**0.58**	**119**	Pg	Pg	20 49 38.3	+0.3
LPEL				Sg	Sb	20 49 47.4	-0.1
	315nm,0.7s						
LPEL	**Lama dei Pelig**	**0.58**	**119**	Pg	Pg	20 49 38.3	+0.3
LPEL				Sg	Sb	20 49 47.4	-0.1
	315nm,0.7s						
NRCA	**Norcia**	**0.58**	**331**	Pg	Pg	20 49 38.1	0.0
NRCA				Sg	Sb	20 49 47.3	-0.4
	150nm,0.8s						
NRCA	**Norcia**	**0.58**	**331**	Pg	Pg	20 49 38.1	0.0
NRCA				Sg	Sb	20 49 47.3	-0.4
	150nm,0.8s						
POFI	**Posta Fibreno**	**0.63**	**166**	Pg	Pg	20 49 38.8	-0.2
POFI	**Posta Fibreno**	**0.63**	**166**	Pg	Pg	20 49 38.8	-0.2
SDI	**San Donato**	**0.66**	**160**	Pg	Pg	20 49 39.6	+0.1
SDI				Sg	Sb	20 49 49.9	+0.1
	69nm,0.3s						
SDI	**San Donato**	**0.66**	**160**	Pg	Pg	20 49 39.6	+0.1
SDI				Sg	Sb	20 49 49.9	+0.1
	69nm,0.3s						
FDMO	**Fiordimonte**	**0.77**	**337**	Pg	Pg	20 49 41.3	-0.4
FDMO	**Fiordimonte**	**0.77**	**337**	Pg	Pg	20 49 41.3	-0.4
GUMA	**Gualdo di Mace**	**0.80**	**23**	Pg	Pg	20 49 41.5	-0.7
GUMA	**Gualdo di Mace**	**0.80**	**23**	Pg	Pg	20 49 41.5	-0.7
CESI	**CESI - Serrava**	**0.81**	**327**	Pg	Pg	20 49 42.1	-0.3
CESI	**CESI - Serrava**	**0.81**	**327**	Pg	Pg	20 49 42.1	-0.3
CERA	**Filignano**	**0.82**	**152**	Pg	Pg	20 49 42.0	-0.7
CERA	**Filignano**	**0.82**	**152**	Pg	Pg	20 49 42.0	-0.7
MIDA	**Miranda**	**0.88**	**140**	Pg	Pg	20 49 43.3	-0.6
MIDA	**Miranda**	**0.88**	**140**	Pg	Pg	20 49 43.3	-0.6
ASSB	**Assisi San Ben**	**0.95**	**319**	Pg	Pb	20 49 45.6	+0.2
ASSB	**Assisi San Ben**	**0.95**	**319**	Pg	Pb	20 49 45.6	+0.2
SNTG	**Esanatoglia**	**1.02**	**336**	Pg	Pg	20 49 46.3	0.0
	45nm,0.6s						
SNTG	**Esanatoglia**	**1.02**	**336**	Pg	Pg	20 49 46.3	0.0
	45nm,0.6s						

IDC 27 20:59:05.0±0.9, 10.˚50S×28.˚66E, h0km, mb3.8/6, mb1 4.0/11, mb1mx3.8/27, mbtmp3.9/11, ML3.6/5, MS3.2/4, Ms1 3.1/4, ms1mx2.8/29, Error ellipse: s-maj=34.4km s-min=13.9km az=98.0, Zaire

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**4.77**	**186**	Pn	Pn	21 00 20.2	+1.7
	1.0nm,0.3s,baz=358,slow=12,SNR=37						
LSZ				Sn	Sn	21 01 14.4	-0.2
	20nm,0.3s,baz=349,slow=16,SNR=7.5						
LSZ				Lg	Lg	21 01 35.4	
	24nm,0.3s,baz=8.0,slow=12,SNR=6.0						
BLWY	**Bulawayo**	**9.59**	**180**	*i* P	Pn	21 01 25.1	+0.6
BLWY				*i*		21 01 25.4	
	baz=124,slow=9.3						
BLWY				*i* S	Sn	21 03 05.3	-7.9
MBAR	**Mbarara**	**10.05**	**12**	LR	LR	21 05 23.7	
	comp=Z,122nm,18.3s,baz=348,slow=38						
KMBO	**Kilima Mbogo**	**12.63**	**43**	Pn	Pn	21 02 04.5	-1.9
	0.8nm,0.3s,baz=214,slow=16,SNR=16						
KMBO				Sn	Sn	21 04 18.0	-10
	0.7nm,0.3s,baz=231,slow=24,SNR=3.2						
KMBO				Lg	Lg	21 05 40.6	
	1.3nm,0.3s,baz=166,slow=18,SNR=7.2						
TSUM	**Tsumeb**	**13.76**	**230**	Pn	Pn	21 02 20.3	-1.4
	1.9nm,0.3s,baz=38,slow=13,SNR=65						
TSUM				Sn	Sn	21 04 43.5	-12
	1.7nm,0.3s,baz=286,slow=16,SNR=3.5						
LBTB	**Lobatse**	**14.73**	**191**	Pn	Pn	21 02 33.6	-1.3
	0.8nm,0.3s,baz=29,slow=13,SNR=13						
LBTB				LR	LR	21 08 07.7	
	comp=Z,70nm,21.3s,baz=177,slow=37						
BOSA	**Boshof**	**18.30**	**190**	P	Pn	21 03 18.7	-2.0
	0.3nm,0.3s,baz=29,slow=13,SNR=10						
BOSA				LR	LR	21 10 11.7	
	comp=Z,53nm,19.8s,baz=170,slow=36						
OPO	**Ambohidratompo**	**19.63**	**116**	LR	LR	21 11 32.7	
	comp=Z,110nm,21.6s,baz=250,slow=38						
SUR	**Sutherland**	**22.95**	**197**	P	P	21 04 12.8	+1.5
	3.2nm,0.8s,baz=14,slow=4.2,SNR=4.0						
TORD	**Torodi Ar. Bea**	**35.62**	**311**	P	P	21 06 04.8	0.0
	0.7nm,0.4s,baz=124,slow=8.4,SNR=21						
BRTR	**Keskin Array B**	**50.18**	**5**	P	P	21 08 03.1	+0.5
	0.4nm,0.7s,baz=179,slow=6.5,SNR=3.1						
ESDC	**Sonseca Array**	**58.39**	**331**	P	P	21 09 01.9	-0.5
	0.1nm,0.3s,baz=145,slow=7.8,SNR=4.1						
MKAR	**Makanchi Array**	**74.38**	**35**	P	P	21 10 45.1	+0.4
	0.4nm,0.8s,baz=225,slow=1.5,SNR=5.0						
ARCES	**ARCESS Array B**	**79.87**	**359**	P	P	21 11 14.8	-0.4
	0.8nm,0.5s,baz=168,slow=6.2,SNR=8.1						

IDC ***27*** *21:26:38.4±1.2, 2.˚77S×139.˚15E, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.7/18, mbtmp3.8/6, ML3.8/1, MS3.2/5, Ms1 3.2/5, ms1mx3.1/29, Error ellipse: s-maj=54.6km s-min=23.3km az=96.0*
ISCJB ***27*** *21:26:43.1±0.8, 2.˚87S±0.˚09×139.˚05E±0.˚08, h46km, mb3.7/4, MS3.2/3, Error ellipse: s-maj=13.9km s-min=10.3km az=138.4*
AUST ***27*** *21:26:45.1, 2.˚94S×139.˚02E, h35km*
ISC 27 21:26:44.6±0.9, 2.˚9S±0.˚1×139.˚17E±0.˚07, h46km, n17, σ1s60/14, mb3.7/4, MS3.2/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.59**	**75**	P	**Pn**	**21 27 10.0**	**-0.3**
	baz=1.7,SNR=7.3						
FAKI	**Fak Fak**	**6.91**	**270**	P	**Pn**	**21 28 24.3**	**+0.8**
	baz=6.8,SNR=6.4						
COEN	**Coen**	**11.65**	**160**	P	Pn	21 29 32.7	+4.4
	baz=12,SNR=4.8						
KDU	**Kakadu**	**11.74**	**214**	P	**Pn**	**21 29 29.2**	**-0.4**
	baz=12,SNR=6.9						
MTN	**Manton Dam**	**12.66**	**218**	P	**Pn**	**21 29 41.6**	**-0.6**
	baz=13,SNR=8.1						

GUMO	**Guam**	**17.36**	**19**		LR	LR	21 36 14.3		
	comp=Z,44nm,20.0s,baz=119,slow=34								
QIS	**Mount Isa**	**17.53**	**179**		P	**P**	**21 30 47.8**	**+1.5**
	baz=18,SNR=4.6								
WRA	**Warramunga Arr**	**17.56**	**195**		P	**Pn**	**21 30 44.7**	**-1.4**
	0.3nm,0.3s,baz=13,slow=13,SNR=21								
CTA	**Charters Tower**	**18.40**	**158**		LR	LR	21 37 34.2		
	comp=Z,50nm,21.2s,baz=50,slow=35								
PCI	**Palu**	**19.43**	**276**		S	**Sn**	**21 34 45.4**	**-0.7**	
	baz=19,SNR=7.8								
FITZ	**Fitzroy Crossi**	**20.08**	**220**		P	**P**	**21 31 14.3**	**-0.1**	
	1.8nm,0.7s,baz=54,slow=16,SNR=5.8								
FITZ					S	**S**	**21 34 54.0**	**-3.8**	
	1.8nm,0.7s,baz=180,slow=12,SNR=2.4								
FITZ					LR	LR	21 39 37.7		
	comp=Z,58nm,20.6s,baz=352,slow=39								
FITZ	**Fitzroy Crossi**	**20.08**	**220**		P	**P**	**21 31 14.5**	**+0.1**	
	baz=20,SNR=8.5								
ASAR	**Alice Springs**	**21.24**	**193**		P	**P**	**21 31 27.8**	**+0.9**	
	3.6nm,0.7s,baz=15,slow=11,SNR=15								
ASAR					LR	LR	21 40 22.5		
	comp=Z,89nm,18.7s,baz=65,slow=38								
STKA	**Stephens Creek**	**28.89**	**176**		LR	LR	21 45 21.1		
	comp=Z,96nm,18.0s,baz=205,slow=39								
MKAR	**Makanchi Array**	**70.24**	**322**		P	**P**	**21 37 53.1**	**+0.1**	
	0.5nm,0.6s,baz=111,slow=7.9,SNR=8.2								
VNDA	**Vanda**	**75.52**	**175**		P	**P**	**21 38 26.1**	**+2.4**	
	1.2nm,0.8s,baz=313,slow=7.0,SNR=7.5								
ILAR	**Eielson Array**	**85.84**	**24**		P	**P**	**21 39 17.9**	**-1.2**	
	0.3nm,0.7s,baz=263,slow=4.5,SNR=4.7								

NIED ***27*** *21:37:00, 36.˚40N×141.˚20E, h38km, Mw5.1 Best double couple: M0 5.80000×10^16 NP1: φs 250.00000°, δ 69.00000°, λ 90.00000°. NP2: φs 204.00000°, δ 21.00000°, λ 89.00000°.*
BJI ***27*** *21:37:33.0, 36.˚46N×141.˚06E, h42km, mB5.0/41, mb5.0/61, Ms4.8/62, Ms7 4.6/59*
MOS ***27*** *21:37:34.8±0.7, 36.˚73N×140.˚95E, h33km, mb5.3/108, MS4.6/29, Error ellipse: s-maj=6.9km s-min=4.0km az=109.6*
JMA ***27*** *21:37:34.5±0.1, 36.˚41N×141.˚13E, h48km±2km, M5.0 Broadband fault plane solution: P waves. NP1: φs 357.00000°, δ 76.00000°, λ 83.00000°. NP2: φs 206.00000°, δ 15.00000°, λ 118.00000°. Principal axes: T Plg58.0000°, Azm257.0000°; N Plg7.0000°, Azm359.0000°; P Plg31.0000°, Azm93.0000°;*
JMA Felt III J1.
ISCJB ***27*** *21:37:35.5±0.3, 36.˚44N±0.˚02×141.˚01E±0.˚02, h50km±2km, mb5.1/218, MS4.5/66 Error ellipse: s-maj=3.8km s-min=2.4km az=152.8*
NEIC ***27*** *21:37:36.9±0.4, 36.˚36N×140.˚95E, h53km±3km, mb5.1/98, MW5.1(NIED), Error ellipse: s-maj=4.0km s-min=2.6km az=154.0*
NEIC Felt at Fujioka, Ichikawa, Tsukuba, Utsunomiya and Yokohama. Recorded [3 JMA] in Fukushima, Ibaraki and Tochigi; [2 JMA] in Chiba, Gumma, Iwate, Kanagawa, Miyagi, Nagano, Saitama and Tokyo.
SZGRF ***27*** *21:37:36.7, 36.˚98N×142.˚35E, h45km, mb5.2, MS4.8, Off east coast of Honshu, Japan*
IDC ***27*** *21:37:37.3±1.6, 36.˚36N×141.˚13E, h59km±14km, mb4.5/25, mb1 4.7/30, mb1mx4.7/32, mbtmp4.6/30, MS4.4/35, Ms1 4.4/35, ms1mx4.3/46, Error ellipse: s-maj=12.5km s-min=8.4km az=78.0*
GCMT ***27*** *21:37:38.9±0.2, 36.˚35N×141.˚35E, h44km, MW5.2, Moment Tensor Solution. s59,c90; s80,c149; Moment tensor: Scale 10^16 Nm; Mrr 6.11±.21; Mθθ -0.25±.14; Mφφ -5.86±.14; Mrθ 1.17±.13; Mrφ -2.27±.10; Mθφ 3.91±.12; Best double couple: M0 7.60000×10^16 NP1: φs 201.00000°, δ 29.00000°, λ 93.00000°. NP2: φs 18.00000°, δ 61.00000°, λ 88.00000°. Principal axes: T 7.3100, Plg74.0000°, Azm284.0000°; N 0.5500, Plg1.0000°, Azm19.0000°; P -7.8500, Plg16.0000°, Azm109.0000°; Data Used: II IU IC G CN.*
DJA ***27*** *21:37:41.0±4.8,

JFI	**Itaya**	**9.28**	**254**	P	Pn	21 39 51.3	+4.4
JTZ	**Takazaki**	**9.44**	**244**	P	Pn	21 39 52.3	+3.3
VLA	**Vladivostok**	**9.71**	**316**	*c i*P	Pn	21 39 57.5	+4.9
VLA				pmax	pmax		
	comp=Z,146nm,1.1s						
JUR	**Ureshino**	**9.75**	**253**	P	Pn	21 39 57.8	+4.6
KUR	**Kuril'sk**	**10.17**	**28**	⇓*i*P	**Pn**	**21 39 59.5**	**+0.7**
KUR				*e*S	Sn	21 41 43.5	-7.9
KUR				smax	smax		
	comp=N,360nm,0.9s						
KUR				smax	smax		
	comp=E,230nm,0.5s						
USRK	**Ussuriysk Arra**	**10.39**	**321**	P	Pn	21 40 05.1	+3.2
	comp=E,1.3nm,0.3s,baz=132,slow=12,SNR=57						
USRK				LR	LR	21 44 00.3	
	comp=E,3μm,18.2s,baz=128,slow=36						
YSS	**Yuzh-Sakhalins**	**10.57**	**6**	*e*P	**Pn**	**21 40 03.0**	**-1.4**
YSS				*e*S	**Sn**	**21 41 56.0**	**-5.3**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,2μm,15.0s						
YSS				MLR	MLR		
	comp=N,2μm,16.0s						
YSS				MLR	MLR		
	comp=E,1μm,17.0s						
KSRS	**Korea Array**	**10.58**	**279**	P	Pn	21 40 09.0	+4.5
	comp=E,2.9nm,0.3s,baz=94,slow=14,SNR=63						
KSRS				LR	LR	21 44 00.9	
	comp=E,4μm,20.3s,baz=95,slow=36						
KSAR	**Wonju Array Be**	**10.61**	**279**	P	Pn	21 40 09.0	+4.0
MDJ	**Mudanjiang**	**11.95**	**317**	P	**Pn**	**21 40 22.0**	**-1.2**
MDJ				S	**Sn**	**21 42 32.5**	**-2.5**
MDJ				PcP	**PcP**	**21 46 05.5**	**-1.7**
MDJ				ScP	**ScP**	**21 49 35.0**	**-1.6**
MDJ				PcS	**PcS**	**21 49 39.8**	**-1.4**
MDJ				ScS	**ScS**	**21 53 10.5**	**-1.8**
MDJ				pmax	pmax		
	comp=Z,5.0nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,110nm,5.2s						
MDJ				LR	LR		
	comp=N,1μm,29.6s						
MDJ				LR	LR		
	comp=E,1μm,23.7s						
MDJ				LR	LR		
	comp=Z,2μm,34.3s						
MDJ	**Mudanjiang**	**11.95**	**317**	*e*Pn	**Pn**	**21 40 24.9**	**+1.6**
	comp=Z,80nm,1.2s						
CN2	**Changchun**	**14.02**	**306**	*e*P	**Pn**	**21 40 53.0**	**+1.5**
CN2				*e*pP	**P**	**21 41 00.0**	**+1.5**
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
CN2				pmax	pmax		
	comp=Z,500nm,10.0s						
CN2				LR	LR		
	comp=N,2μm,15.0s						
CN2				LR	LR		
	comp=E,1μm,15.0s						
CN2				LR	LR		
	comp=Z,2μm,16.0s						
KLR	**Kul'dur**	**14.48**	**335**	*e*P	Pn	21 40 51.8	-5.8
JOW	**Kunigami**	**14.51**	**232**	*e*Pn	**Pn**	**21 40 58.6**	**+0.4**
SNY	**Shenyang**	**14.60**	**297**	⇓P	**Pn**	**21 41 01.0**	**+1.7**
SNY				pmax	pmax		
	comp=Z,37nm,1.1s						
SNY				pmax	pmax		
	comp=Z,560nm,11.6s						
SNY				LR	LR		
	comp=N,2μm,15.3s						
SNY				LR	LR		
	comp=E,3μm,18.0s						
SNY				LR	LR		
	comp=Z,3μm,19.2s						
DL2	**Dalian**	**15.60**	**285**	P	**Pn**	**21 41 13.8**	**+1.4**
DL2				S	**Sn**	**21 44 08.3**	**+4.3**
DL2				pmax	pmax		
	comp=Z,64nm,0.8s						
DL2				pmax	pmax		
	comp=Z,490nm,7.6s						
DL2				LR	LR		
	comp=N,400nm,12.0s						
DL2				LR	LR		
	comp=E,2μm,18.2s						
DL2				LR	LR		
	comp=Z,2μm,18.4s						
SSE	**Sheshan**	**17.37**	**258**	P	**Pn**	**21 41 33.0**	**-1.8**
SSE				S	**Sn**	**21 44 46.5**	**-0.6**
SSE				pmax	pmax		
	comp=Z,17nm,1.0s						
SSE				pmax	pmax		
	comp=Z,240nm,9.7s						
SSE				LR	LR		
	comp=N,1μm,20.4s						
SSE				LR	LR		
	comp=E,1μm,20.4s						
SSE				LR	LR		
	comp=Z,2μm,17.8s						
NJ2	**Nanjing**	**18.88**	**263**	*e*P	**P**	**21 41 51.3**	**-1.0**
NJ2				pP	**pP**	**21 42 01.0**	**-1.6**
NJ2				sP	**sP**	**21 42 06.0**	**-2.0**
NJ2				S	**Sn**	**21 45 20.0**	**-3.6**
NJ2				sS	**sS**	**21 45 38.0**	**-3.1**
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,250nm,8.2s						
NJ2				LR	LR		
	comp=N,1μm,22.5s						
NJ2				LR	LR		
	comp=E,2μm,18.1s						
NJ2				LR	LR		
	comp=Z,2μm,19.1s						
TIA	**Tai'an**	**19.30**	**276**	P	**P**	**21 41 56.0**	**-0.9**
BJI	**Beijing**	**19.87**	**288**	P	**P**	**21 42 01.5**	**-1.5**
BJI				S	**S**	**21 45 43.3**	**-1.1**
BJI				pmax	pmax		
	comp=Z,34nm,1.0s						
BJI				LR	LR		
	comp=N,780nm,19.6s						
BJI				LR	LR		
	comp=E,1μm,21.3s						
BJI				LR	LR		
	comp=Z,910nm,20.4s						
HIA	**Hailar**	**20.13**	**316**	*e*P	**P**	**21 42 05.9**	**0.0**
	comp=Z,40nm,1.0s						
PETK	**Petropavlovsk-**	**20.33**	**30**	P	Pn	21 42 10.0	-0.3
PETK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PETK				MLR	MLR		
	comp=Z,451nm,21.3s						
PETK	**Petropavlovsk-**	**20.33**	**30**	P	Pn	21 42 10.0	-0.3
PETK	**Petropavlovsk-**	**20.33**	**30**	P	Pn	21 42 10.0	-0.3
	comp=Z,4.8nm,0.6s,baz=209,slow=10,SNR=7.3						
PETK				LR	LR	21 49 32.0	
	comp=Z,451nm,21.3s,baz=89,slow=35						
PET	**Petropavlovsk**	**20.66**	**31**	*e*P	**P**	**21 42 12.3**	**+0.9**
PET				*e*S	**S**	**21 45 57.0**	**-2.7**
PET				pmax	pmax		
	comp=Z,41nm,1.1s						
PET				MLR	MLR		
	comp=Z,1μm,19.0s						
NACB	**Ninganchiao**	**20.75**	**239**	*e*P	**P**	**21 42 11.2**	**-1.6**
	comp=Z,21nm,0.9s						
TPUB	**Ta-pu**	**21.99**	**239**	*e*P	**P**	**21 42 23.1**	**-3.0**
	comp=Z,94nm,1.2s						
TWG	**Pinlang**	**22.01**	**237**	*e*P	**P**	**21 42 24.7**	**-1.5**
	comp=Z,97nm,0.6s						
QZH	**Quanzhou**	**22.43**	**246**	P	P	21 42 38.5	+7.8
QZH				S	Sn	21 46 44.0	-4.8
QZH				LR	LR		
	comp=Z,2μm,20.3s						
GUMO	**Guam**	**23.02**	**171**	LR	LR	21 50 00.3	
	comp=Z,418nm,21.4s,baz=21,slow=32						
WHN	**Wuhan**	**23.02**	**263**	⇑*i*P	**P**	**21 42 35.0**	**-1.9**
WHN				S	**S**	**21 46 42.0**	**-2.4**
WHN				LR	LR		
	comp=N,980nm,12.2s						
WHN				LR	LR		
	comp=E,4μm,18.9s						
WHN				LR	LR		
	comp=Z,4μm,18.8s						
CLNS	**Chul'man**	**23.11**	**337**	*e*P	**P**	**21 42 35.8**	**-1.8**
CLNS				*e*		21 43 02.2	
CLNS				*e*		21 46 25.9	
CLNS				*e*S	**S**	**21 46 40.1**	**-5.6**
CLNS				*e*		21 53 52.4	
CLNS				pmax	pmax		
	comp=N,79nm,1.5s						
CLNS				pmax	pmax		
	comp=Z,104nm,1.1s						
CLNS				pmax	pmax		
	comp=E,32nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,23nm,0.9s						
CLNS				pmax	pmax		
	comp=E,24nm,0.8s						
CLNS				pmax	pmax		
	comp=N,13nm,1.0s						
CLNS				smax	smax		
	comp=E,338nm,13.8s						
CLNS				smax	smax		
	comp=N,258nm,12.6s						
CLNS				MLR	MLR		
	comp=Z,894nm,18.0s						
CLNS				MLR	MLR		
	comp=N,636nm,16.0s						
CLNS				MLR	MLR		
	comp=E,346nm,13.0s						
HHC	**Hu-ho-hao-te**	**23.41**	**290**	*e*P	**P**	**21 42 37.8**	**-3.0**
HHC				pP	**pP**	**21 42 49.0**	**-2.7**
HHC				sP	**sP**	**21 42 54.8**	**-2.2**
HHC				PP	**PnPn**	**21 43 09.5**	**+1.3**
HHC				S	S	21 46 42.5	-8.5
HHC				sS	sS	21 47 01.5	-8.5
HHC				SS	**SnSn**	**21 47 30.0**	**+1.2**
HHC				pmax	pmax		
	comp=Z,29nm,0.5s						
HHC				pmax	pmax		
	comp=Z,510nm,6.4s						
HHC				LR	LR		
	comp=N,1μm,13.5s						
HHC				LR	LR		
	comp=E,2μm,15.5s						
HHC				LR	LR		
	comp=Z,3μm,14.7s						
BTO	**Baotou**	**24.58**	**289**	*e*P	**P**	**21 42 49.0**	**-2.7**
XAN	**Xi'an**	**26.31**	**274**	P	**P**	**21 43 06.3**	**-1.0**
XAN				pP	**pP**	**21 43 15.0**	**-3.7**
XAN				sP	**sP**	**21 43 19.8**	**-4.1**
XAN				S	**S**	**21 47 35.0**	**-2.3**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,57nm,8.9s						
XAN				LR	LR		
	comp=N,360nm,16.7s						
XAN				LR	LR		
	comp=E,300nm,18.2s						
YAK	**Yakutsk**	**26.58**	**348**	*e*P	**P**	**21 43 09.0**	**-0.4**
YAK				*e*		21 43 55.5	
YAK				*e*		21 46 30.6	
YAK				*e*S	**S**	**21 47 36.9**	**-4.0**
YAK				*e*		21 53 56.9	
YAK				pmax	pmax		
	comp=Z,196nm,1.1s						
YAK				pmax	pmax		
	comp=N,90nm,1.1s						
YAK				pmax	pmax		
	comp=E,30nm,1.3s						
YAK				pmax	pmax		
	comp=Z,74nm,1.3s						
YAK				pmax	pmax		
	comp=N,35nm,1.3s						
YAK				pmax	pmax		
	comp=E,102nm,2.7s						
YAK				smax	smax		
	comp=E,56nm,2.8s						
YAK				smax	smax		
	comp=N,209nm,4.3s						
SEY	**Seymchan**	**27.42**	**11**	⇓*e*P	**P**	**21 43 18.0**	**+1.1**
ULN	**Ulaanbaatar**	**27.47**	**305**	*e*P	**P**	**21 43 17.5**	**-0.2**
	comp=N,18nm,0.9s						
ULN				*e*PcP	**PcP**	**21 46 35.1**	**-0.2**
ULN	**Ulaanbaatar**	**27.47**	**305**	P	**P**	**21 43 18.1**	**+0.4**
	SNR=15						
FX1	**Attu Island--F**	**27.81**	**44**	LR	LR	21 52 12.0	
	comp=N,350nm,19.8s,baz=263,slow=31						
SONM	**Songino Array**	**27.89**	**305**	P	**P**	**21 43 21.7**	**+0.2**
SONM				PcP	**PcP**	**21 46 36.6**	**+0.3**
SONM	**Songino Array**	**27.89**	**305**	P	**P**	**21 43 21.7**	**+0.2**
	comp=N,18nm,0.6s,baz=105,slow=8.7,SNR=122						
SONM				PcP	**PcP**	**21 46 36.6**	**+0.3**
	comp=N,2.7nm,0.9s,baz=72,slow=0.5,SNR=4.6						
SONM				LR	LR	21 54 37.4	
	comp=N,1μm,20.7s,baz=103,slow=36						
LZH	**Lanzhou**	**29.91**	**281**	⇑P	**P**	**21 43 40.0**	**+0.5**
LZH				pP	**pP**	**21 43 51.8**	**+0.8**
LZH				sP	**sP**	**21 43 56.3**	**+0.2**
LZH				PP	**PnPn**	**21 44 41.3**	**+4.5**
LZH				S	**S**	**21 48 32.0**	**-2.1**
LZH				sS	**sS**	**21 48 53.5**	**+0.2**
LZH				SS	**SnSn**	**21 50 12.0**	**+4.4**
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				pmax	pmax		
	comp=Z,130nm,4.1s						
LZH				LR	LR		
	comp=N,1μm,14.3s						
LZH				LR	LR		
	comp=E,2μm,16.3s						
LZH				LR	LR		
	comp=Z,3μm,17.0s						
IRK	**Irkutsk**	**30.30**	**313**	*e*P	**P**	**21 43 41.3**	**-1.3**
IRK				pmax	pmax		
	comp=Z,35nm,1.3s						
ZAK	**Zakamensk**	**30.43**	**309**	⇓*i*P	**P**	**21 43 43.6**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,21nm,1.2s						
TLY	**Talaya**	**30.52**	**312**	*e*P	**P**	**21 43 43.9**	**-0.7**
TLY				*e*		21 44 37.4	
TLY				e*SS*	**PcS**	**21 50 26.5**	**+0.3**
TLY				e*SSS*	SSS	21 50 34.7	
TLY				pmax	pmax		
	comp=Z,42nm,1.3s						
TLY				MLR	MLR		
	comp=Z,810nm,16.0s						
TLY	**Talaya**	**30.52**	**312**	P	**P**	**21 43 45.0**	**+0.4**
	comp=Z,171nm,1.4s,SNR=8.6						
GYA	**Guiyang**	**30.86**	**261**	P	**P**	**21 43 48.8**	**+0.8**
GYA				pP	**pP**	**21 44 01.8**	**+2.3**
GYA				PP	**PnPn**	**21 44 51.3**	**+1.8**
GYA				PcP	**PcP**	**21 46 45.5**	**+1.3**
GYA				S	**S**	**21 48 47.3**	**-1.8**
GYA				sS	**sS**	**21 49 10.0**	**+1.6**
GYA				ScP	**ScP**	**21 50 22.3**	**-1.1**
GYA				ScS	**ScS**	**21 54 18.0**	**-2.4**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.7s						
GYA				LR	LR		
	comp=N,590nm,17.3s						
GYA				LR	LR		
	comp=E,480nm,17.8s						
GYA				LR	LR		
	comp=Z,480nm,17.0s						
CD2	**Chengdu**	**31.41**	**271**	P	**P**	**21 43 52.8**	**+0.1**
CD2				pP	**pP**	**21 44 03.8**	**-0.4**
CD2				sP	**sP**	**21 44 08.8**	**-0.5**
CD2				PP	**PnPn**	**21 44 56.5**	**0.0**
CD2				PcP	**PcP**	**21 46 46.5**	**+1.0**
CD2				S	**S**	**21 48 55.0**	**-2.5**
CD2				sS	**sS**	**21 49 14.0**	**-2.7**
CD2				PcS	**PcS**	**21 50 29.5**	**-0.5**
CD2				SS	**SnSn**	**21 50 42.8**	**-1.3**
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
CD2				pmax	pmax		
	comp=Z,250nm,4.7s						
CD2				LR	LR		
	comp=N,1μm,16.1s						
CD2				LR	LR		
	comp=E,1μm,18.1s						
CD2				LR	LR		
	comp=Z,2μm,18.6s						
MOY	**Mondy**	**32.12**	**311**	*e*P	**P**	**21 43 59.1**	**+0.3**
MOY				pmax	pmax		
	comp=Z,16nm,1.2s						
QIZ	**Qiongzhong**	**32.45**	**246**	P	**P**	**21 44 01.3**	**-0.5**
QIZ				S	**S**	**21 49 13.5**	**-0.2**
QIZ				pmax	pmax		
	comp=Z,24nm,1.8s						
QIZ				LR	LR		
	comp=N,710nm,20.8s						
QIZ				LR	LR		
	comp=E,250nm,19.4s						
QIZ				LR	LR		
	comp=Z,750nm,22.3s						
GTA	**Gaotai**	**32.48**	**288**	*e*P	**P**	**21 44 02.0**	**-0.2**
GTA				pP	**pP**	**21 44 13.5**	**-0.2**
GTA				sP	**sP**	**21 44 18.8**	**0.0**
GTA				PP	**PnPn**	**21 45 11.5**	**+1.3**
GTA				PcP	**PcP**	**21 46 50.0**	**+1.6**
GTA				S	**S**	**21 49 14.0**	**-0.2**
GTA				sS	**sS**	**21 49 33.0**	**-0.5**
GTA				ScP	**ScP**	**21 50 31.0**	**+2.3**
GTA				PcS	**PcS**	**21 50 34.5**	**+1.0**
GTA				pmax	pmax		
	comp=Z,27nm,1.0s						
GTA				pmax	pmax		
	comp=Z,160nm,4.3s						
GTA				LR	LR		
	comp=N,560nm,16.6s						
GTA				LR	LR		
	comp=E,990nm,18.1s						
GTA				LR	LR		
	comp=Z,1μm,18.1s						
KMI	**Kunming**	**34.61**	**262**	P	**P**	**21 44 20.0**	**-0.9**
KMI				pP	**pP**	**21 44 32.5**	**0.0**
KMI				sP	**sP**	**21 44 36.3**	**-1.3**
KMI				PP	**PnPn**	**21 45 37.0**	**-0.3**
KMI				S	**S**	**21 49 44.0**	**-3.6**
KMI				sS	**sS**	**21 50 04.5**	**-2.5**
KMI				SS	**SnSn**	**21 51 58.3**	**-3.8**
KMI				ScS	**ScS**	**21 54 38.5**	**-1.4**
KMI				pmax	pmax		
	comp=Z,28nm,1.0s						
KMI				pmax	pmax		
	comp=Z,160nm,5.3s						
KMI				LR	LR		
	comp=N,700nm,14.8s						
KMI				LR	LR		
	comp=E,1μm,16.1s						
KMI				LR	LR		
	comp=Z,1μm,16.1s						
BILL	**Bilibino**	**34.66**	**16**	*e*P	**P**	**21 44 20.5**	**-0.1**
BILL				*i*		21 44 31.5	
BILL				*i*		21 45 44.5	
BILL				*e*		21 46 54.7	
BILL				pmax	pmax		
	comp=Z,25nm,1.3s						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s						
MYLDM	**Lahad Datu**	**37.39**	**219**	P	**P**	**21 44 45.7**	**+1.3**
SDKM	**Sandakan**	**37.68**	**221**	P	P	21 44 50.3	+3.3
TNTI	**Ternate**	**37.71**	**203**	P	**P**	**21 44 48.2**	**+1.1**
	comp=Z,92nm,1.4s						
UBPT	**Khong Chiam**	**38.04**	**246**	P	pP	21 45 03.7	+2.0
SWI	**Sorong**	**38.23**	**196**	P	**P**	**21 44 51.7**	**+0.2**
	comp=Z,38nm,1.1s						
KMSI	**Cibinong**	**39.06**	**208**	P	**P**	**21 44 59.7**	**+1.2**
	comp=Z,154nm,0.8s,comp=Z,2μm						
WMQ	**Urumqi**	**40.87**	**297**	P	**P**	**21 45 14.0**	**+0.6**
WMQ				pP	**pP**	**21 45 26.0**	**+0.9**
WMQ				sP	**sP**	**21 45 32.0**	**+1.8**
WMQ				PP	**PnPn**	**21 46 52.0**	**-0.4**
WMQ				ScP	**ScP**	**21 50 59.0**	**-0.6**
WMQ				S	**S**	**21 51 22.0**	**+0.2**
WMQ				sS	**sS**	**21 51 42.0**	**+0.6**
WMQ				SS	**SS**	**21 54 19.0**	**-5.0**
WMQ				ScS	**ScS**	**21 55 14.0**	**-0.6**
WMQ				pmax	pmax		
	comp=Z,18nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,99nm,5.0s						
WMQ				LR	LR		
	comp=N,480nm,15.0s						
WMQ				LR	LR		
	comp=E,670nm,15.0s						
WMQ				LR	LR		
	comp=Z,820nm,15.0s						
CHTO	**Chiang Mai**	**40.89**	**256**	*e*P	**P**	**21 45 13.3**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,16nm,1.2s						
CHTO	**Chiang Mai**	**40.89**	**256**	*e*P	**P**	**21 45 13.3**	**-0.4**
	comp=Z,16nm,1.2s						
CHTO	**Chiang Mai**	**40.89**	**256**	P	**P**	**21 45 14.6**	**+0.8**
	SNR=5.7						
CM31	**Chiang Mai Arr**	**41.09**	**256**	*e*P	**P**	**21 45 15.5**	**+0.2**
	comp=Z,5.1nm,0.6s						
CM31				*e*PcP	**PcP**	**21 47 14.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**41.09**	**256**	P	**P**	**21 45 15.9**	**+0.5**
CMAR				PcP	**PcP**	**21 47 15.8**	**+1.3**
CMAR	**Chiang Mai Arr**	**41.09**	**256**	P	**P**	**21 45 15.9**	**+0.5**
	comp=Z,5.4nm,0.8s,baz=51,slow=7.4,SNR=23						
CMAR				PcP	**PcP**	**21 47 15.8**	**+1.3**
	comp=Z,4.8nm,1.1s,baz=17,slow=2.6,SNR=6.0						
CMAR				LR	LR	22 04 11.6	
	comp=Z,524nm,18.6s,baz=56,slow=39						
TNA	**Tin City**	**41.49**	**29**	*e*P	**P**	**21 45 19.0**	**+0.9**
	comp=Z,14nm,1.1s						
TNA				*e*pP	**pP**	**21 45 33.0**	**+3.1**
CHBT	**CHBT**	**41.99**	**246**	P	**P**	**21 45 23.3**	**+0.6**
	comp=Z,37nm,1.2s						
LSA	**Lhasa**	**42.00**	**276**	*e*P	**P**	**21 45 22.7**	**-0.6**
LSA				pmax	pmax		
	comp=Z,35nm,1.1s						
LSA	**Lhasa**	**42.00**	**276**	*e*P	**P**	**21 45 22.7**	**-0.6**
	comp=Z,35nm,1.1s						
ZAA0	**Zalesovo Array**	**42.11**	**313**	*e*P	**P**	**21 45 23.6**	**+0.3**
ZAA0				*e*PcP	**PcP**	**21 47 16.7**	**-0.5**
ZALV	**Zalesovo Beam**	**42.11**	**313**	P	**P**	**21 45 23.5**	**+0.2**
ZALV						21 47 16.9	
ZALV				pmax	pmax		
	comp=Z,34nm,0.5s						
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ZALV				MLR	MLR		
	comp=Z,665nm,18.7s						
ZALV	**Zalesovo Beam**	**42.11**	**313**	P	**P**	**21 45 23.5**	**+0.2**
ZALV				PcP	**PcP**	**21 47 16.9**	**-0.3**
ZALV	**Zalesovo Beam**	**42.11**	**313**	P	**P**	**21 45 23.5**	**+0.2**
	comp=Z,34nm,0.5s,baz=93,slow=7.1,SNR=191						
ZALV				PcP	**PcP**	**21 47 16.9**	**-0.3**
	comp=Z,4.5nm,0.5s,baz=130,slow=2.3,SNR=4.5						
ZALV				LR	LR	22 03 48.4	
	comp=Z,665nm,18.7s,baz=74,slow=37						
NVS	**Novosibirsk**	**43.05**	**314**	⇑*i*P	**P**	**21 45 31.2**	**+0.3**
NVS				*e*		21 47 20.3	
NVS				pmax	pmax		
	comp=Z,71nm,1.3s						
NVS				pmax	pmax		
	comp=N,8.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,48nm,1.3s						
SBUM	**Sibu**	**43.06**	**225**	P	**P**	**21 45 32.5**	**+1.0**
SHL	**Shillong**	**43.13**	**270**	*e*P	**P**	**21 45 33.0**	**+0.8**
MK31	**Makanchi Array**	**44.20**	**303**	*i* P	**P**	**21 45 40.4**	**0.0**
MK31				pmax	pmax		
	comp=Z,17nm,0.6s						
MK31	**Makanchi Array**	**44.20**	**303**	*e*P	**P**	**21 45 40.9**	**+0.5**
MKAR	**Makanchi Array**	**44.20**	**303**	P	**P**	**21 45 40.9**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,13nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,802nm,19.5s						
MKAR	**Makanchi Array**	**44.20**	**303**	*e*P	**P**	**21 45 41.0**	**+0.5**
MKAR	**Makanchi Array**	**44.20**	**303**	P	**P**	**21 45 40.9**	**+0.5**
	comp=Z,13nm,0.8s,baz=87,slow=9.8,SNR=122						
MKAR				LR	LR	22 04 54.2	
	comp=Z,802nm,19.4s,baz=81,slow=37						
KSM	**Kuching**	**44.95**	**226**	*e*P	**P**	**21 45 46.2**	**-0.4**
	comp=Z,35nm,1.5s						
KSM	**Kuching**	**44.95**	**226**	P	**P**	**21 45 48.0**	**+1.4**
BBSI	**Bau Bau**	**45.17**	**206**	P	**P**	**21 45 49.9**	**+1.6**
	comp=Z,50nm,1.1s,comp=Z,654nm						
TAPN	**Taplejung**	**45.72**	**274**	*e*P	**P**	**21 45 53.5**	**+0.5**
	comp=Z,42nm,0.5s						
KAPI	**Kappang**	**45.82**	**210**	*e*P	**P**	**21 45 52.3**	**-1.1**
	comp=Z,78nm,1.0s						
KAPI	**Kappang**	**45.82**	**210**	P	**P**	**21 45 53.3**	**-0.2**
	SNR=15						
KAPI	**Kappang**	**45.82**	**210**	P	**P**	**21 45 52.3**	**-1.1**
	comp=Z,427nm,1.2s,SNR=15						
KAPI	**Kappang**	**45.82**	**210**	P	**P**	**21 45 52.5**	**-0.9**

comp=Z,79nm,1.3s,comp=Z,841nm
KAPI Kappang 45.82 210 P **P** **21 45 52.3 -1.1**
comp=Z,62nm,1.0s,baz=27,slow=6.5,SNR=26
BKSI Bulukumba 45.95 210 P **P** **21 45 54.1 -0.4**
comp=Z,41nm,1.1s,comp=Z,409nm
KURK Kurchatov 46.08 309*c iP* **P** **21 45 55.2 0.0**
KURK pmax pmax
comp=Z,116nm,1.0s
KURK Kurchatov 46.08 309 *e*P **P** **21 45 55.5 +0.3**
comp=Z,86nm,0.8s
KURK *e*PP **PP** **21 47 44.2 +0.6**
KURK Kurchatov 46.08 309 P **P** **21 45 55.7 +0.6**
SNR=34
KURK Kurchatov 46.08 309 P **P** **21 45 55.1 -0.1**
comp=Z,699nm,0.8s
ODAN Odare 46.18 274 *e*P **P** **21 45 57.0 +0.4**
comp=Z,66nm,0.8s
KTGM Kuala Trenggan 46.55 237 P **P** **21 46 00.7 +1.4**
RAMN Ramite 46.78 274 *e*P **P** **21 46 01.8 +0.5**
comp=Z,430nm,1.1s
GUN Gumba 46.95 276 *e*P **P** **21 46 03.5 +0.8**
comp=Z,203nm,0.9s
PKI Pulchoki 47.47 276 *e*P **P** **21 46 07.1 +0.4**
comp=Z,131nm,1.1s
PKIN Phulchoki 47.48 276 *e*P **P** **21 46 07.0 +0.3**
comp=Z,105nm,1.1s
KKN Kakani 47.48 276 *e*P **P** **21 46 07.3 +0.6**
comp=Z,178nm,1.0s
RSO Redoubt South 47.53 38 *e*P **P** **21 46 07.5 +1.0**
RSO *e*pP **pP** **21 46 20.3 +1.8**
DMN Daman 47.70 276 *e*P **P** **21 46 08.8 +0.4**
comp=Z,110nm,1.2s
PPLA Purkeypile 47.80 35 *e*P **P** **21 46 10.0 +1.4**
comp=Z,12nm,0.8s
PPLA *e*pP **pP** **21 46 23.1 +2.5**
SPU Mount Spurr 47.86 37 *e*P **P** **21 46 10.5 +1.6**
KULM Kulim 48.29 240 *e*P **P** **21 46 12.9 +0.2**
comp=Z,41nm,1.1s
KULM Kulim 48.29 240 P **P** **21 46 13.6 +0.8**
KULM Kulim 48.29 240 P **P** **21 46 13.6 +0.8**
comp=Z,30nm,1.2s,comp=Z,651nm
DANN Dangsing 48.46 278 *e*P **P** **21 46 15.4 +1.1**
comp=Z,165nm,0.6s
IPM Ipoh 48.61 239 *e*P **P** **21 46 14.4 -0.8**
comp=Z,57nm,1.0s
IPM *e*pP **pP** **21 46 28.1 +0.8**
IPM Ipoh 48.61 239 P **P** **21 46 15.3 +0.1**
IPM Ipoh 48.61 239 P **P** **21 46 14.7 -0.5**
comp=Z,56nm,1.0s,comp=Z,608nm
TRF Thorofare Moun 48.67 34 *e*P **P** **21 46 15.6 +0.3**
comp=Z,9.9nm,1.0s
TRF *e*PcP **PcP** **21 47 39.6 -0.5**
MYKOM Kota Tinggi 48.70 234 P **P** **21 46 15.8 -0.1**
COLD Coldfoot 48.79 29 *e*P **P** **21 46 17.6 +1.6**
comp=Z,5.6nm,1.0s
COLD *e*PcP **PcP** **21 47 37.6 -2.6**
KOLN Koldanda 48.83 277 *e*P **P** **21 46 17.8 +0.7**
comp=Z,41nm,0.6s
KGM Kluang 48.87 234 P **P** **21 46 18.1 +0.9**
RC01 Rabbit Creek A 48.99 37 *e*P **P** **21 46 18.0 +0.4**
comp=Z,16nm,0.9s
FRIM Kepong 49.10 237 P **P** **21 46 19.2 +0.2**
PYUN Piuthan 49.18 278 *e*P **P** **21 46 20.6 +0.8**
comp=Z,892nm,1.2s
SEW Seward 49.19 38 *e*P **P** **21 46 19.6 +0.5**
comp=Z,18nm,0.9s
PMR Palmer 49.25 36 *e*P **P** **21 46 20.3 +0.7**
PMR *e**PP **pP** **21 46 30.1 -1.5**
PMR pmax pmax
comp=Z,15nm,1.0s
PMR Palmer 49.25 36 *e*P **P** **21 46 20.3 +0.7**
comp=Z,15nm,1.0s
PMR *e*pP **pP** **21 46 30.1 -1.5**
MCK McKinley 49.27 33 *e*P **P** **21 46 20.7 +1.0**
MCK pmax pmax
comp=Z,10.0nm,0.9s
MCK McKinley 49.27 33 *e*P **P** **21 46 20.7 +1.0**
comp=Z,9.6nm,0.9s
ULHL Ulahol 49.40 298 *i* P **P** **21 46 22.4 +1.1**
ULHL Ulahol 49.40 298 P **P** **21 46 22.4 +1.1**
SNR=5.2
SML Sawmill 49.62 36 *e*P **P** **21 46 23.9 +1.4**
SML pmax pmax
comp=Z,6.0nm,1.0s
SML Sawmill 49.62 36 *e*P **P** **21 46 23.9 +1.4**
comp=Z,5.6nm,1.0s
TKM2 Tokmak 2 49.67 299 *e*P **P** **21 46 24.4 +1.0**
TKM2 pmax pmax
comp=Z,39nm,0.7s
TKM2 Tokmak 2 49.67 299 *e*P **P** **21 46 24.4 +1.0**
comp=Z,38nm,0.7s
TKM2 Tokmak 2 49.67 299 P **P** **21 46 24.6 +1.2**
SNR=67
COLA College 49.72 32 *e*P **P** **21 46 24.6 +1.6**
COLA pmax pmax
comp=Z,16nm,0.7s
COLA College 49.72 32 *e*P **P** **21 46 24.6 +1.6**
comp=Z,16nm,0.7s
ILAR Eielson Array 50.13 32 P **P** **21 46 26.5 +0.3**
ILAR Eielson Array 50.13 32 P **P** **21 46 26.5 +0.3**
comp=Z,17nm,0.8s,baz=270,slow=6.1,SNR=162
ILAR LR LR 22 07 06.3
comp=Z,134nm,20.1s,baz=147,slow=35
KZA Kyzart 50.16 298 *i* P **P** **21 46 29.3 +2.0**
KZA Kyzart 50.16 298 P **P** **21 46 29.3 +2.0**
SNR=20
KMMI Kalianget 50.19 216 P **P** **21 46 28.6 +1.4**
comp=Z,94nm,1.1s
KBK Karagaybulak 50.21 299 *i* P **P** **21 46 28.7 +1.3**
KBK Karagaybulak 50.21 299 P **P** **21 46 28.7 +1.3**
SNR=52
CHMS Chumysh 50.25 299 *i* P **P** **21 46 28.4 +0.9**
CHMS Chumysh 50.25 299 P **P** **21 46 28.4 +0.9**
SNR=13
USP Ospenovka 50.35 299 *i* P **P** **21 46 29.2 +0.9**
USP Ospenovka 50.35 299 P **P** **21 46 29.2 +0.9**
SNR=21
FRU Bishkek 50.39 299 *e*P **P** **21 46 29.0 +0.4**
FRU pmax pmax
comp=Z,60nm,1.8s
KSH Kashi 50.40 294 P P 21 46 33.3 +4.5
KSH pP pP 21 46 46.5 +5.6
KSH sP sP 21 46 50.5 +4.7
KSH PcP **PcP** **21 47 51.0 +4.2**
KSH PP PP 21 48 30.0 +5.5
KSH ScP **ScP** **21 51 41.8 +2.6**
KSH PcS **PcS** **21 51 47.0 +2.9**
KSH S **S** **21 53 43.3 +4.1**
KSH sS sS 21 54 04.0 +4.7
KSH ScS **ScS** **21 56 17.0 +0.6**
KSH SS **SS** **21 57 15.8 +2.8**
KSH pmax pmax
comp=Z,14nm,0.9s
KSH LR LR
comp=N,2µm,16.1s
KSH LR LR
comp=E,390nm,8.1s
KSH LR LR
comp=Z,2µm,19.2s
AAK Ala-Archa 50.53 299*c iP* **P** **21 46 30.6 +0.7**
AAK pmax pmax
comp=Z,49nm,1.2s
AAK Ala-Archa 50.53 299 *e*P **P** **21 46 30.5 +0.7**
comp=Z,4.9nm,1.1s
AAK Ala-Archa 50.53 299 P **P** **21 46 31.0 +1.1**
SNR=12
AAK Ala-Archa 50.53 299 P **P** **21 46 30.3 +0.5**
SNR=22
AAK Ala-Archa 50.53 299 P **P** **21 46 30.0 +0.2**
comp=Z,109nm,0.8s,SNR=25
KHKI Kahang-Kahang 50.59 213 P **P** **21 46 30.4 +0.2**
comp=Z,210nm,1.1s,comp=Z,2µm
BRVK Borovoye 50.83 313*c iP* **P** **21 46 32.0 +0.4**
BRVK pmax pmax
comp=Z,48nm,1.2s
BRVK Borovoye 50.83 313 *e*P **P** **21 46 31.7 +0.1**
comp=Z,32nm,0.9s
BRVK *e*PcP **PcP** **21 47 48.1 +0.3**
BRVK Borovoye 50.83 313 P **P** **21 46 32.3 +0.6**
SNR=15
BRVK Borovoye 50.83 313 P **P** **21 46 32.4 +0.8**
comp=Z,226nm,0.9s,SNR=22
PAX Paxson 50.87 34 *e*P **P** **21 46 33.8 +1.9**
PAX pmax pmax
comp=Z,4.0nm,0.8s
PAX Paxson 50.87 34 *e*P **P** **21 46 33.8 +1.9**
comp=Z,4.4nm,0.8s
EKS2 Erkin-Say 51.03 299 *e*P **P** **21 46 33.7 +0.2**
EKS2 pmax pmax
comp=Z,13nm,0.7s
EKS2 Erkin-Say 51.03 299 *e*P **P** **21 46 33.7 +0.2**
comp=Z,13nm,0.7s
EKS2 Erkin-Say 51.03 299 P **P** **21 46 34.4 +0.9**
SNR=32
AML Almayashu 51.25 298 *i* P **P** **21 46 37.1 +1.6**
AML Almayashu 51.25 298 P **P** **21 46 37.1 +1.6**
SNR=132
PSI Prapat 51.26 239 P **P** **21 46 35.4 -0.1**
comp=Z,44nm,0.9s
DOT Dot Lake 51.44 33 *e*P **P** **21 46 36.6 +0.5**
comp=Z,32nm,0.7s
BMRM Bremner River 51.49 37 *e*P **P** **21 46 38.2 +1.6**
comp=Z,16nm,0.8s
BKNI Bangkinang 51.64 235 P **P** **21 46 38.9 +0.7**
comp=Z,212nm,1.1s,comp=Z,1µm
SJI Sawahan 51.85 218 P **P** **21 46 39.1 -0.7**
comp=Z,59nm,1.1s,comp=Z,2µm
SMRI Semarang 51.94 220 P **P** **21 46 41.5 +1.1**
comp=Z,73nm,1.1s
DDI Dehra Dun 52.16 283 *ex* **P** **21 46 42.0 -0.1**
TGJI Tegal 52.48 221 P **P** **21 46 45.4 +1.0**
comp=Z,64nm,1.0s
SDNR Sundarnagar 52.53 284 *e*P **P** **21 46 46.0 +1.3**
EGAK Eagle 52.58 32 *e*P **P** **21 46 45.0 +0.5**
comp=Z,8.0nm,0.7s
UGM Wanagama 52.63 219 *e*P **P** **21 46 45.0 -0.5**
comp=Z,232nm,1.1s
UGM Wanagama 52.63 219 P **P** **21 46 45.9 +0.4**
comp=Z,200nm,1.1s
BHK Bhakra 53.00 285 *e*P **P** **21 46 50.2 +2.0**
KK31 Karatay Array 53.19 300 *i* P **P** **21 46 49.7 +0.3**
KK31 pmax pmax
comp=Z,103nm,1.2s
KKAR Karatay Array 53.19 300 *e*P **P** **21 46 50.0 +0.6**
KKAR Karatay Array 53.19 300 *e*P **P** **21 46 50.0 +0.6**
LEM Lembang 53.27 223 P **P** **21 46 50.5 +0.1**
NDI New Delhi 53.52 281 *e*P **P** **21 46 52.0 0.0**
VIS Vishakhapatnam 53.91 266 *e*P **P** **21 46 54.1 -0.9**
INK Inuvik 55.03 27 LR LR 22 13 35.4
comp=Z,180nm,19.1s,baz=135,slow=39
SVE Sverdlovsk 55.41 319*de*P **P** **21 47 06.0 +0.7**
SVE *e* 21 48 05.2
SVE *e*PPP PPP 21 50 29.6
SVE pmax pmax
comp=Z,58nm,1.0s
SVE MLR MLR
comp=Z,761nm,17.0s
FITZ Fitzroy Crossi 56.18 198 P **P** **21 47 10.8 -0.4**
FITZ Fitzroy Crossi 56.18 198 P **P** **21 47 10.8 -0.4**
comp=Z,6.5nm,0.6s,baz=9.6,slow=5.1,SNR=18
SKAG Skagway 56.32 38 *e*P **P** **21 47 13.7 +2.0**
comp=Z,8.6nm,0.9s
WRAB Tennant Creek 56.44 188 *e*P **P** **21 47 11.9 -1.1**
WRAB pmax pmax
comp=Z,18nm,0.8s
WRAB Tennant Creek 56.44 188 *e*P **P** **21 47 11.9 -1.1**
comp=Z,18nm,0.8s
WRAB Tennant Creek 56.44 188 P **P** **21 47 11.9 -1.1**
comp=Z,105nm,0.7s,SNR=9.8
WRA Warramunga Arr 56.45 188 P **P** **21 47 12.0 -1.0**
WRA Warramunga Arr 56.45 188 P **P** **21 47 12.0 -1.0**
comp=Z,14nm,0.9s,baz=5.4,slow=7.4,SNR=68
ARU Arti 56.62 319*c iP* **P** **21 47 14.1 +0.1**
ARU 21 48 09.6
ARU 21 49 21.0
ARU S **S** **21 55 05.2 +2.4**
ARU SS **SS** **21 58 48.0 -2.2**
ARU pmax pmax
comp=Z,68nm,1.2s
ARU MLR MLR
comp=Z,547nm,18.0s
ARU Arti 56.62 319 P **P** **21 47 14.7 +0.8**
comp=Z,294nm,0.5s,SNR=28
SOKR Solikamsk 56.63 323 *e*P **P** **21 47 14.5 +0.6**
SOKR pmax pmax
comp=Z,30nm,1.4s
SOKR MLR MLR
comp=Z,630nm,26.0s
KBL Kabul 57.38 291 *e*P **P** **21 47 20.0 +0.1**
KBL pmax pmax
comp=Z,44nm,1.2s
KBL Kabul 57.38 291 *e*P **P** **21 47 19.9 +0.1**
comp=Z,44nm,1.2s
HYB Hyderabad 57.92 269 *i* P **P** **21 47 23.0 -0.7**
comp=Z,50nm,1.0s
AB31 Akbulak array 58.11 310 *i* P **P** **21 47 24.7 +0.1**
AB31 pmax pmax
comp=Z,18nm,0.6s
ABKAR Akbulak array 58.11 310 *e*P **P** **21 47 24.6 0.0**
DLBC Dease Lake 59.25 38 *e*P **P** **21 47 34.2 +1.7**
DLBC *e*pP **pP** **21 47 47.4 +2.6**
DLBC Dease Lake 59.25 38 LR LR 22 12 38.5
comp=Z,120nm,18.6s,baz=124,slow=35
AS31 Alice Springs 60.17 188 *e*P **P** **21 47 38.6 -0.5**
ASAR Alice Springs 60.17 188 P **P** **21 47 38.5 -0.6**
ASAR Alice Springs 60.17 188 P **P** **21 47 38.5 -0.6**
comp=Z,8.1nm,0.9s,baz=9.1,slow=5.5,SNR=38
ASAR LR LR 22 12 06.8
comp=Z,237nm,21.0s,baz=344,slow=34
ALE Alert 60.71 3 P **P** **21 47 42.0 0.0**
comp=Z,63nm,1.4s,SNR=7.1
MBWA Marble Bar 60.75 203 *e*P **P** **21 47 42.9 -0.1**
comp=Z,33nm,1.1s
POO Poona 61.12 272 *i*P **P** **21 47 45.0 -0.8**
comp=Z,40nm,1.0s
KBS Kingsbay 61.19 350 *e*P **P** **21 47 46.1 +0.8**
KBS pmax pmax
comp=Z,29nm,1.1s
KBS Kingsbay 61.19 350 *e*P **P** **21 47 46.0 +0.8**
comp=Z,29nm,1.1s
KAD Karad 61.50 271 *e*P **P** **21 47 48.5 +0.1**
BBB Bella Bella 62.67 44 LR LR 22 11 56.6
comp=Z,152nm,19.6s,baz=121,slow=33
DZM Mont Dzumac 62.95 154 *e*S **S** **21 56 23.2 -1.7**
comp=Z,575nm,32.8s
DZM *e*LR LR 22 06 31.1
comp=Z,794nm,21.8s
TMCR Tamitsa 63.13 331 *e*P **P** **21 47 58.5 0.0**
TMCR *e* 21 48 09.2
TMCR pmax pmax
comp=Z,41nm,1.2s
RES Resolute Bay 63.23 14 *e*P **P** **21 47 59.2 +0.1**
comp=Z,23nm,1.0s
RES *e*PcP **PcP** **21 48 34.8 -1.2**
ABKT Ailbek 63.88 299 P **P** **21 48 04.8 +0.8**
comp=Z,107nm,1.1s,SNR=9.9
KEV Kevo 63.89 339 *e*P **P** **21 48 01.9 -1.5**
KEV pmax pmax
comp=Z,7.0nm,0.7s
KEV Kevo 63.89 339 *ep* **P** **21 48 01.9 -1.5**
comp=Z,7.0nm,0.7s
YKW3 Yellowknife Ar 64.41 30 *e*P **P** **21 48 07.5 +0.5**
comp=Z,0.1nm,0.9s
YKW3 *e*pP **pP** **21 48 22.4 +3.0**
YKW3 *e*PcP **PcP** **21 48 41.6 +0.6**
YKW3 *e*PP **PP** **21 50 25.6 -2.9**
YKA Yellowknife Ar 64.45 30 P **P** **21 48 07.5 +0.3**
YKA P'P' 22 16 55.9
YKA Yellowknife Ar 64.45 30 P **P** **21 48 07.5 +0.3**
comp=Z,5.6nm,0.8s,baz=300,slow=6.7,SNR=83
YKA PKPPKP **P'P'df** **22 16 55.9 -4.9**
comp=Z,0.2nm,0.6s,baz=110,slow=2.9,SNR=4.8
ARCES ARCESS Array B 64.45 339 P **P** **21 48 07.2 +0.1**
ARCES ARCESS Array B 64.45 339 P **P** **21 48 07.2 +0.1**
comp=Z,9.4nm,0.9s,baz=60,slow=8.2,SNR=27
ARCES LR LR 22 20 38.1
comp=Z,404nm,18.4s,baz=52,slow=40
DAG Danmarks Havn 66.33 355 *i* P **P** **21 48 19.0 -0.2**
DAG pmax pmax
comp=Z,23nm,1.1s
DAG Danmarks Havn 66.33 355 *i* P **P** **21 48 19.0 -0.2**
comp=Z,18nm,1.1s
JOF Joensuu 66.35 332 *e*P **P** **21 48 17.7 -1.8**
JOF pmax pmax
comp=Z,11nm,0.6s
JOF Joensuu 66.35 332 *ep* **P** **21 48 17.7 -1.8**
comp=Z,11nm,0.6s
MOS Moscow 67.56 323 *e*P **P** **21 48 27.2 -0.1**
MOS *e* 21 48 34.9
MOS *e* 21 48 43.5
MOS pmax pmax
comp=Z,35nm,1.0s
VRHR Novokhopersk 67.94 318 *e*P **P** **21 48 28.5 -1.3**
VRHR pmax pmax
comp=N,10.0nm,1.0s
VRHR pmax pmax
comp=E,6.0nm,1.0s
VRHR pmax pmax
comp=Z,20nm,1.0s
STKA Stephens Creek 67.97 180 *e*P **P** **21 48 30.0 0.0**
comp=Z,2.3nm,0.9s
STKA Stephens Creek 67.97 180 P **P** **21 48 30.0 0.0**
comp=Z,11nm,0.9s,baz=345,slow=8.8,SNR=14
OBN Obninsk 68.40 323*c iP* **P** **21 48 32.4 -0.2**
OBN *i* 21 48 42.7
OBN *i* 21 48 57.8
OBN *i* 21 51 01.8
OBN pmax pmax
comp=Z,40nm,1.6s
OBN MLR MLR
comp=Z,400nm,17.0s
MAK Makhachkala 68.61 308 *e*P **P** **21 48 33.8 -0.3**
MAK MLR MLR
comp=Z,935nm,19.0s
KAF Kangasniemi 68.70 333 *e*P **P** **21 48 32.6 -1.8**
KAF pmax pmax
comp=Z,13nm,0.6s
KAF Kangasniemi 68.70 333 *ep* **P** **21 48 32.6 -1.8**
comp=Z,13nm,0.6s
VSR Storozhevoye 69.19 319 *e*P **P** **21 48 37.3 -0.3**
VSR pmax pmax
comp=N,8.0nm,0.7s
VSR pmax pmax
comp=E,7.0nm,0.7s
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR MLR MLR
comp=N,170nm,17.0s
VSR MLR MLR
comp=E,560nm,17.0s
VSR MLR MLR
comp=Z,930nm,17.0s
FIA1 FINESS Array S 69.20 332 *e*P **P** **21 48 37.6 +0.2**
FINES FINESS Array B 69.21 332 P **P** **21 48 37.6 +0.1**
FINES FINESS Array B 69.21 332 P **P** **21 48 37.6 +0.1**
comp=Z,26nm,0.9s,baz=55,slow=7.2,SNR=50
FINES LR LR 22 21 23.5
comp=Z,490nm,18.3s,baz=276,slow=38
VORD Divnogorie 69.26 319 *e*P **P** **21 48 37.8 -0.2**
VORD pmax pmax
comp=N,40nm,0.9s
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD pmax pmax
comp=E,80nm,0.6s
VORD MLR MLR
comp=N,300nm,19.0s
VORD MLR MLR
comp=E,450nm,19.0s
VORD MLR MLR
comp=Z,730nm,19.0s
NEW Newport 70.73 44 *e*P **P** **21 48 48.6 +1.4**
comp=Z,100nm,3.0s
NEW *ep*P **PcP** **21 49 05.4 -2.5**
NEW Newport 70.73 44 ⇓P **P** **21 48 47.8 +0.6**
baz=71
NEW Newport 70.73 44 LR LR 22 18 43.2
comp=Z,110nm,20.1s,baz=112,slow=35
WBK Wadi Bani Khal 70.83 284 P **P** **21 48 49.6 +1.5**
SNR=14
YBH Yreka Blue Hor 70.91 52 LR LR 22 15 10.8
comp=Z,164nm,19.6s,baz=332,slow=32
ZEI Tsey 70.97 309 *e*P **P** **21 48 48.3 -0.7**
ZEI pmax pmax
comp=Z,9.0nm,1.1s
KBZ Khabaz 71.08 311 P **P** **21 48 49.8 +0.6**
KBZ pmax pmax
comp=Z,15nm,0.9s
KBZ MLR MLR
comp=Z,447nm,18.4s
KBZ Khabaz 71.08 311 P **P** **21 48 49.8 +0.6**
KBZ Khabaz 71.08 311 P **P** **21 48 49.8 +0.6**
comp=Z,15nm,0.9s,baz=79,slow=4.1,SNR=37
KBZ LR LR 22 24 47.1
comp=Z,447nm,18.4s,baz=51,slow=40
KIV Kislovodsk 71.09 311*c iP* **P** **21 48 49.7 +0.2**
KIV *i* 21 49 01.8
KIV *i* 21 49 10.4
KIV *e* 21 51 26.8
KIV pmax pmax
comp=Z,47nm,1.0s
KIV MLR MLR
comp=Z,300nm,17.0s
KIV Kislovodsk 71.09 311 P **P** **21 48 50.5 +1.0**
comp=Z,246nm,0.9s,SNR=11
BANOM Banah 71.14 289 P **P** **21 48 51.0 +1.0**
SNR=7.2
SUMG Summit 71.27 360 *i* P **P** **21 48 51.1 +0.7**
SUMG pmax pmax
comp=Z,25nm,0.9s
SUMG Summit 71.27 360 *e*P **P** **21 48 51.6 +1.1**
comp=Z,27nm,0.9s
SUMG Summit 71.27 360 *i* P **P** **21 48 51.1 +0.7**
comp=Z,25nm,0.9s
SMDO Samad 71.31 285 P **P** **21 48 52.2 +1.1**
SNR=11
HOQ Hoqain 71.60 286 P **P** **21 48 53.8 +1.0**
SNR=9.1
JMDO Jabal Madar 71.63 285 P **P** **21 48 53.9 +0.9**
SNR=12
GNI Garni 71.84 307 *e*P **P** **21 48 54.7 +0.5**
comp=Z,39nm,1.3s
HATD Hatta, Dubai 71.85 288 P **P** **21 48 55.6 +1.3**
SNR=10
ASHO Ashiyiah 71.98 288 P **P** **21 48 55.9 +0.8**
SNR=9.8
NAZ Nazwa, Dubai 72.12 288 P **P** **21 48 55.7 -0.2**
SNR=6.5
BSY Bisya 72.14 285 P **P** **21 48 56.8 +0.8**
SNR=13
B13A Whitefish 72.14 43 ⇑P **P** **21 48 56.7 +1.0**
baz=72
ARQ Araqi 72.34 286 P **P** **21 48 58.4 +1.2**
SNR=11
A14A Double T Ranch 72.36 42 ⇑P **P** **21 48 58.0 +0.9**
baz=72
C13A Hot Springs 72.48 43 ⇓P **P** **21 48 58.8 +1.0**
baz=72
BMO Blue Mountains 72.52 47 *e*P **P** **21 48 59.2 +1.1**
BMO pmax pmax
comp=Z,7.0nm,0.9s
BMO Blue Mountains 72.52 47 *e*P **P** **21 48 59.2 +1.1**
comp=Z,6.7nm,0.9s
SCO Scoresbysund 72.67 354 *i* P **P** **21 48 59.5 +1.2**
SCO pmax pmax
comp=Z,5.0nm,0.9s
SCO Scoresbysund 72.67 354 *i* P **P** **21 48 59.5 +1.2**
comp=Z,5.4nm,0.9s
A15A Johnson Ranch, 72.73 41 ⇑P **P** **21 48 59.9 +0.7**
baz=73
B14A Marquette Ranc 72.80 42 ⇓P **P** **21 48 59.9 +0.1**
baz=73,SNR=5.9
MICGM Minsk 72.83 326 *e*P **P** **21 49 00.0 +0.4**
MNK Minsk 72.85 326 *e*P **P** **21 49 00.0 +0.3**
MNK pmax pmax
comp=Z,170nm,1.0s
D13A Huson 72.88 44 ⇓P **P** **21 49 00.3 +0.1**
baz=73,SNR=5.5
C14A Swan Lake 72.89 43 ⇓P **P** **21 49 01.0 +0.8**
baz=73
SWMT Swartz Lake 72.90 43 *e*P **P** **21 49 01.5 +1.2**
SWMT *ep*P **PcP** **21 49 16.6 -0.5**
NACGM Naroch 73.07 327 *e* **P** **21 49 00.0 -1.0**
SOC Sochi 73.09 312 *e*P **P** **21 49 00.6 -0.7**
SOC *e*PPP PPP 21 53 28.3
SOC *e*S **S** **21 58 24.8 -0.8**
SOC pmax pmax
comp=Z,19nm,0.9s
F12A Elk City 73.20 45 ⇑P **P** **21 49 03.0 +0.8**
baz=73,SNR=10
B15A Bradely Ranch, 73.21 42 ⇑P **P** **21 49 02.4 +0.3**
baz=73,SNR=11
MSO Missoula 73.33 44 ⇓P **P** **21 49 03.6 +0.8**
baz=73
SLMT Seeley Lake 73.33 43 *e*P **P** **21 49 03.7 +0.8**
D14A Greenough 73.42 43 ⇑P **P** **21 49 04.0 +0.6**
baz=73,SNR=7.5
BEKR Beckworth 73.42 53 *e*P **P** **21 49 04.3 +0.7**
comp=Z,4.2nm,0.9s

C15A Salmond Ranch, 73.50 42 ⇓P P 21 49 04.8 +0.9
baz=73
G12A Big Creek, Yel 73.52 46 ⇑P P 21 49 04.5 +0.4
baz=73
B16A M & M Farms, S 73.61 42 ⇓P P 21 49 05.3 +0.8
baz=74
CHMT Chamberlain Mo 73.66 43 *e*P P 21 49 04.9 0.0
comp=Z,0.9nm,0.7s
CHMT *e*pP PcP 21 49 19.9 -0.7
F13A Darby 73.71 45 ⇑P P 21 49 05.6 +0.4
baz=74
ANN Anapa 73.74 314 *e*P P 21 49 11.0 +5.9
ANN pmax pmax
comp=N,380nm,16.0s
ANN pmax pmax
comp=E,328nm,16.0s
E14A Clinton 73.82 44 ⇓P P 21 49 06.3 +0.5
baz=74
A17A Triple J Farms 73.83 41 ⇑P P 21 49 06.5 +0.8
baz=74,SNR=5.6
C16A Fuhringer Ranc 73.96 42 ⇓P P 21 49 07.2 +0.7
baz=74,SNR=5.6
D15A Lincoln 73.99 43 ⇓P P 21 49 06.6 -0.1
baz=74
H12A Diamond D Ranc 74.13 46 ⇓P P 21 49 08.6 +0.9
baz=74,SNR=6.3
B17A L&G Farms, Che 74.17 41 ⇑P P 21 49 08.4 +0.8
baz=74,SNR=9.3
G13A Cobalt 74.17 45 ⇑P P 21 49 08.3 +0.4
baz=74
MFID Camas Ranch 74.22 48 ⇑P P 21 49 08.2 +0.1
baz=74
E15A Deer Lodge 74.29 44 ⇓P P 21 49 08.8 +0.3
baz=74,SNR=9.9
FFC Flin Flon 74.34 32 *e*P P 21 49 08.7 +0.3
FFC Flin Flon 74.34 32 *e*P P 21 49 08.7 +0.3
FFC Flin Flon 74.34 32 P P 21 49 08.1 -0.4
comp=E,111nm,0.9s,SNR=12
I12A Atlanta 74.41 47 ⇑P P 21 49 09.9 +0.6
baz=74,SNR=7.7
H13A Challis 74.47 46 ⇓P P 21 49 09.9 +0.3
baz=74
D16A Dana Ranch, Ca 74.53 43 ⇓P P 21 49 10.3 +0.4
baz=74,SNR=7.9
HRY Holter Researc 74.56 43 *e*P P 21 49 11.3 +1.3
C17A Wharram Farm, 74.59 42 ⇑P P 21 49 09.8 -0.3
baz=74,SNR=5.7
AKASG Malin Array Be 74.60 322 P P 21 49 09.9 -0.1
AKASG pmax pmax
comp=Z,9.0nm,0.6s
AKASG MLR MLR
comp=Z,679nm,18.2s
AKASG Malin Array Be 74.60 322 P P 21 49 09.9 -0.1
AKASG Malin Array Be 74.60 322 P P 21 49 09.9 -0.1
comp=Z,8.9nm,0.6s,baz=46,slow=5.8,SNR=38
AKASG LR LR 22 25 00.9
comp=Z,679nm,18.2s,baz=30,slow=38
AK01 Malin Array Si 74.61 322 *e*P P 21 49 09.6 -0.4
KIEV Kiev 74.61 322 *e*P P 21 49 10.0 -0.1
KIEV pmax pmax
comp=Z,23nm,1.0s
KIEV Kiev 74.61 322 *e*P P 21 49 10.0 -0.1
comp=Z,23nm,1.0s
NB2 NORSAR Subarra 74.62 337 P P 21 49 10.0 0.0
baz=41,slow=5.9
NB2 NORSAR Subarra 74.62 337 P P 21 49 10.0 0.0
comp=Z,17nm,0.8s,baz=41,slow=5.9
NOA NORSAR Array B 74.62 337 P P 21 49 10.3 +0.2
NOA NORSAR Array B 74.62 337 P P 21 49 10.3 +0.2
comp=Z,20nm,0.9s,baz=39,slow=5.8,SNR=51
NOA LR LR 22 25 10.3
comp=Z,653nm,19.0s,baz=35,slow=38
AK02 Malin Array Si 74.63 322 *e*P P 21 49 10.3 +0.1
B18A Beardsley Farm 74.65 41 ⇑P P 21 49 11.0 +0.6
baz=74,SNR=6.4
F15A Butte 74.72 44 ⇓P P 21 49 11.7 +0.6
baz=75,SNR=23
LRM Limekiln Ridge 74.75 44 *e*P P 21 49 12.2 +0.9
A19A Klindworth Far 74.86 40 ⇓P P 21 49 12.1 +0.4
baz=75,SNR=9.2
NAO01 NORSAR Array S 74.88 337 *e*P P 21 49 11.5 +0.1
comp=Z,16nm,1.0s
EGMT Eagleton 74.89 41 *e*P P 21 49 12.8 +0.9
comp=Z,11nm,0.9s
EGMT Eagleton 74.89 41 ⇓P P 21 49 12.4 +0.6
baz=75,SNR=10
D17A Six Diamond Ra 74.92 42 ⇓P P 21 49 12.5 +0.4
baz=75,SNR=5.3
I13A Wildhorse Cree 74.93 46 ⇓P P 21 49 13.2 +0.9
baz=75
DLMT Dillon 74.95 44 *e*P P 21 49 13.7 +1.3
comp=Z,13nm,1.0s
H14A Leadore 74.95 45 ⇑P P 21 49 12.6 +0.1
baz=75
HLID Hailey 74.97 47 *e*P P 21 49 13.9 +1.4
comp=Z,4.0nm,1.0s
HLID Hailey 74.97 47 ⇓P P 21 49 13.4 +0.9
baz=75
B19A Brinkman Farms 75.05 40 ⇑P P 21 49 13.2 +0.5
baz=75,SNR=5.5
G15A Dillon 75.12 45 ⇓P P 21 49 14.2 +0.7
baz=75
J13A Cove Ranch, Pi 75.20 47 ⇓P P 21 49 15.2 +1.3
baz=75
F16A Kennard Place, 75.24 44 ⇑P P 21 49 14.7 +0.7
baz=75,SNR=8.4
SUW Suwalki 75.24 327 *e*P P 21 49 13.9 +0.3
SUW pmax pmax
comp=Z,66nm,1.1s
SUW Suwalki 75.24 327 *e*P P 21 49 13.9 +0.3
comp=Z,66nm,1.1s
SUW Suwalki 75.24 327 *e*P P 21 49 13.4 -0.2
E17A Martinsdale 75.25 43 ⇑P P 21 49 15.0 +0.8
baz=75,SNR=10
A20A Cobblestone Ra 75.31 40 ⇓P P 21 49 14.8 +0.6
baz=75
I14A Mackay 75.31 46 ⇑P P 21 49 15.5 +1.0
baz=75,SNR=12
BOZ Bozeman (W) 75.32 44 *e*P P 21 49 15.8 +1.3
BOZ pmax pmax
comp=Z,7.0nm,0.9s
BOZ Bozeman (W) 75.32 44 *e*P P 21 49 15.8 +1.3
comp=Z,7.3nm,0.9s
BOZ Bozeman (W) 75.32 44 ⇑P P 21 49 15.4 +0.9
baz=75
KELT Kelkit 75.33 309 *i* P P 21 49 15.9 +1.2
H15A Lima 75.36 45 ⇓P P 21 49 15.6 +0.7
baz=75
D18A Linhart Farms, 75.37 42 ⇓P P 21 49 15.8 +1.1
baz=75
C19A Slack Wire Ran 75.44 41 ⇑P P 21 49 15.9 +0.8
baz=75,SNR=19
G16A Moss Hill, Enn 75.47 44 ⇓P P 21 49 15.5 +0.1
baz=75
B20A Solberg Farm, 75.54 40 ⇓P P 21 49 16.1 +0.6
baz=75
NVAR Mina Array Bea 75.55 53 P P 21 49 16.9 +0.8
NVAR Mina Array Bea 75.55 53 P P 21 49 16.9 +0.8
comp=Z,4.3nm,0.8s,baz=284,slow=6.1,SNR=18
SIM Simferopol' 75.56 315 *c i*P P 21 49 15.7 +0.1
SIM *e* 21 49 30.0
SIM *e*SSS SSS 22 06 58.0
SIM pmax pmax
comp=Z,17nm,1.0s
SIM MLR MLR
comp=Z,352nm,16.7s
J14A Carey 75.63 47 ⇓P P 21 49 17.7 +1.3
baz=76,SNR=5.5
F17A Fitzpatrick Pl 75.70 43 ⇓P P 21 49 17.5 +0.9
baz=76,SNR=6.7
E18A Harlowton 75.70 42 ⇑P P 21 49 17.4 +0.8
baz=76,SNR=6.5
A21A Bergtoll Ranch 75.75 39 ⇑P P 21 49 17.5 +0.7
baz=76
KBD Kabd 75.81 296 *e*P P 21 49 17.7 +0.3
QRN Al-Qurain 75.88 295 *e*P P 21 49 17.7 -0.1
QRN AMb AMB 21 49 19.5
comp=Z,84nm,0.8s
D19A Cripps Ranch, 75.88 41 ⇑P P 21 49 18.7 +1.1
baz=76,SNR=11
PTRM Twissleman Ran 75.89 56 *e*P P 21 49 24.5 +6.7
C20A Veseth Ranch, 76.00 41 ⇓P P 21 49 18.8 +0.6
baz=76
G17A Pierce Place, 76.01 44 ⇑P P 21 49 19.4 +0.9
baz=76
RDF Al-Radifah 76.05 296 *e*P P 21 49 19.1 +0.4
RDF AMb AMB 21 49 21.1
comp=Z,119nm,1.1s
B21A Ellsworth Farm 76.06 40 ⇑P P 21 49 19.5 +1.0
baz=76
NAY Al-Naaiem 76.09 296 *e*P P 21 49 18.5 -0.4
NAY AMb AMB 21 49 20.5
comp=Z,46nm,1.1s
H16A Russell Place, 76.11 44 ⇑P P 21 49 19.7 +0.6
baz=76
ELK Elko 76.13 49 *e*P P 21 49 20.9 +1.5
ELK Elko 76.13 49 LR LR 22 18 20.2
comp=Z,97nm,21.1s,baz=223,slow=32
J15A Blackfoot 76.22 46 ⇓P P 21 49 20.9 +1.2
baz=76
A22A Carney Farms, 76.26 39 ⇑P P 21 49 20.0 +0.3
baz=76,SNR=6.0
K14A Jones Ranch, D 76.30 47 ⇑P P 21 49 20.8 +0.7
baz=76
D20A Manuel Ranch, 76.33 41 ⇓P P 21 49 21.2 +1.1
baz=76
E19A Rath Farm, Rou 76.38 42 ⇓P P 21 49 21.0 +0.6
baz=76,SNR=15
C21A Desert Coulee 76.41 40 ⇓P P 21 49 20.9 +0.4
baz=76
I16A Newdale 76.48 45 ⇑P P 21 49 22.7 +1.5
baz=76
L14A Malta 76.57 48 ⇓P P 21 49 23.3 +1.6
baz=76
PKM Peak Mountain 76.58 57 ⇑P P 21 49 23.8 +1.9
baz=76
LKWY Lake 76.67 44 *e*P P 21 49 25.7 +3.4
LKWY Lake 76.67 44 *e*P P 21 49 25.7 +3.4
H17A Grant Village 76.67 44 ⇓P P 21 49 24.6 +2.3
baz=77,SNR=12
E20A Meyer Farm, Mu 76.70 42 ⇑P P 21 49 22.9 +0.7
baz=77,SNR=7.5
J16A Bone 76.77 46 ⇓P P 21 49 24.2 +1.4
baz=77
MALT Malatya 76.92 308 *e*P P 21 49 23.5 -0.2
MALT *e**PP pP 21 49 38.1 +1.8
MALT pmax pmax
comp=Z,26nm,1.3s
MALT Malatya 76.92 308 *e*P P 21 49 23.5 -0.2
comp=Z,26nm,1.3s
MALT *e*pP pP 21 49 38.1 +1.8
MALT Malatya 76.92 308 ⇓*i*P P 21 49 25.1 +1.4
I17A Pilgrim Ck. 76.97 45 ⇓P P 21 49 25.9 +1.9
baz=77,SNR=6.5
MOOW Moose Ponds 76.98 45 *e*P P 21 49 25.8 +1.7
comp=Z,16nm,1.5s
HVU Hansel Valley 77.00 48 *e*P P 21 49 26.1 +1.9
HVU pmax pmax
comp=Z,7.0nm,0.9s
HVU Hansel Valley 77.00 48 *e*P P 21 49 26.1 +1.9
comp=Z,6.5nm,0.9s
H18A Shoshone NF, C 77.01 44 ⇑P P 21 49 25.4 +1.2
baz=77
K16A Soda Springs 77.06 46 ⇑P P 21 49 25.6 +1.1
baz=77
B23A Brockton 77.07 39 ⇑P P 21 49 24.4 +0.2
baz=77,SNR=9.4
L15A Malad City 77.09 47 ⇓P P 21 49 25.6 +0.9
baz=77
F20A Billings 77.14 42 ⇓P P 21 49 25.5 +0.8
baz=77
LOHW Long Hollow 77.14 45 *e*P P 21 49 26.0 +1.0
LOHW *e*pP pP 21 49 39.8 +2.2
AKCD Akcadag 77.25 308 *i* P P 21 49 25.7 +0.1
D22A Cohagen 77.32 40 ⇑P P 21 49 26.1 +0.5
baz=77,SNR=7.1
R11A Troy Canyon, C 77.33 52 ⇓P P 21 49 26.7 +0.6
baz=77
C23A Lambert 77.40 39 ⇑P P 21 49 27.1 +1.0
baz=77
MPMC Manual Prospec 77.46 54 ⇑P P 21 49 27.6 +0.8
baz=77
G20A Bridger 77.47 43 ⇑P P 21 49 27.2 +0.5
baz=77
I18A Diamond G Ranc 77.53 45 ⇑P P 21 49 28.1 +0.9
baz=77
FURC Furnace Creek, 77.63 54 ⇑P P 21 49 29.0 +1.6
baz=78
L16A Fish Haven 77.65 47 ⇓P P 21 49 29.1 +1.2
baz=78
LVV L'vov 77.69 324 *e*P P 21 49 27.4 -0.2
LVV MLR MLR
comp=E,300nm,15.0s
LVV MLR MLR
comp=N,300nm,16.0s
LVV MLR MLR
comp=Z,400nm,16.0s
J18A Kendall Valley 77.72 45 ⇑P P 21 49 29.4 +1.1
baz=78
BEL Belsk 77.79 327 *e*P P 21 49 29.1 +1.0
I19A Meeteetse 77.79 44 ⇑P P 21 49 29.4 +0.8
baz=78
D23A Lindsay 77.80 40 ⇑P P 21 49 29.2 +0.8
baz=78
EDW2 Edwards Air Fo 77.82 56 ⇑P P 21 49 29.6 +0.9
baz=78
HWUT Hardware Ranch 77.82 47 *e*P P 21 49 30.2 +1.4
BSD Bornholm Skovb 77.83 332 ⇑*i*P P 21 49 28.3 0.0
BSD pmax pmax
comp=Z,14nm,1.1s
BSD Bornholm Skovb 77.83 332 ⇑*i*P P 21 49 28.3 0.0
comp=Z,14nm,1.1s
DUG Dugway 77.94 49 *e*P P 21 49 30.8 +1.4
DUG pmax pmax
comp=Z,36nm,1.8s
DUG Dugway 77.94 49 *e*P P 21 49 30.8 +1.4
comp=Z,36nm,1.8s
DUG Dugway 77.94 49 ⇑P P 21 49 30.7 +1.4
baz=78
G21A Lodge Grass 78.01 42 ⇓P P 21 49 30.7 +1.0
baz=78
GZT Gaziantep 78.04 308 *i* P P 21 49 31.2 +1.3
K18A Toltan Ranch, 78.07 46 ⇓P P 21 49 31.1 +0.9
baz=78
ABTO Aybut 78.16 283 P P 21 49 31.1 +0.2
SNR=6.0
F22A Rosebud 78.16 41 ⇑P P 21 49 31.1 +0.7
baz=78
E23A Ismay 78.20 40 ⇓P P 21 49 31.3 +0.7
baz=78
J19A Crowheart 78.24 45 ⇓P P 21 49 31.6 +0.6
baz=78,SNR=12
BW06 Boulder Array 78.27 45 *e*P P 21 49 25.1 -6.2
comp=Z,4.8nm,1.0s
BW06 *e*pP PcP 21 49 40.9 +0.3
BW06 Boulder Array 78.27 45 ⇑P P 21 49 31.8 +0.5
baz=78
PDAR Pinedale Array 78.27 45 P P 21 49 31.5 +0.2
PDAR Pinedale Array 78.27 45 P P 21 49 31.5 +0.2
comp=Z,2.4nm,0.7s,baz=268,slow=2.3,SNR=22
GKP Gorka Klasztor 78.28 329 *e*P P 21 49 31.2 +0.5
D24A Glendive 78.29 39 ⇓P P 21 49 31.5 +0.4
baz=78,SNR=6.1
COP Copenhagen 78.33 333 *i* P P 21 49 31.5 +0.5
COP pmax pmax
comp=Z,13nm,0.9s
COP Copenhagen 78.33 333 *i* P P 21 49 31.5 +0.5
comp=Z,13nm,0.8s
GSC Goldstone 78.35 55 ⇑P P 21 49 32.8 +1.1
baz=78
M17A Scullys Gap (B 78.44 47 ⇑P P 21 49 32.9 +0.7
baz=78
KWP Kalwaria Pacla 78.45 324 *e*P P 21 49 31.7 -0.1
KWP pmax pmax
comp=Z,63nm,1.0s
KWP Kalwaria Pacla 78.45 324 *e*P P 21 49 31.7 -0.1
comp=Z,63nm,1.0s
KWP Kalwaria Pacla 78.45 324 ⇓*i*P P 21 49 32.7 +0.9
KWP Kalwaria Pacla 78.45 324 *e*P P 21 49 32.8 +0.9
H21A Big Horn, Sher 78.49 43 ⇑P P 21 49 33.1 +0.8
baz=78
G22A Birney 78.51 42 ⇑P P 21 49 33.2 +0.8
baz=78
L18A Fontenelle, Gr 78.52 46 ⇓P P 21 49 33.2 +0.6
baz=78
BUR08 Bucovina Ar. S 78.59 322 *e*P P 21 49 33.2 +0.5
TESR 78.61 320 ⇑*i*P P 21 49 33.0 +0.2
K19A Absolon Red Bu 78.64 45 ⇓P P 21 49 33.5 +0.2
baz=78
E24A Baker 78.67 40 ⇑P P 21 49 33.6 +0.4
baz=78
LLD Lille Linde 78.68 333 *i* P P 21 49 33.0 +0.1
LLD pmax pmax
comp=Z,20nm,0.8s
LLD Lille Linde 78.68 333 *i* P P 21 49 33.0 +0.1
comp=Z,20nm,0.7s
CFR Carcaliu 78.71 318 ⇑*i*P P 21 49 33.4 +0.1
J20A Shoshoni 78.73 44 ⇓P P 21 49 34.3 +0.6
baz=79
L19A Farson 78.80 46 ⇑P P 21 49 34.8 +0.6
baz=79
M18A Lyman 78.81 47 ⇑P P 21 49 34.3 0.0
baz=79
MUD Monsted U'grnd 78.87 335 *i* P P 21 49 34.9 +0.9
MUD pmax pmax
comp=Z,8.0nm,0.9s
MUD Monsted U'grnd 78.87 335 *i* P P 21 49 34.9 +0.9
comp=Z,8.3nm,0.9s
I21A Big Trails, Te 78.88 43 ⇓P P 21 49 35.2 +0.7
baz=79,SNR=6.7
AVNT Avonos 78.88 310 *i* P P 21 49 35.3 +0.7
H22A Clearmont 78.88 42 ⇑P P 21 49 34.6 +0.1
baz=79
BBRC Big Bear Solar 78.89 56 ⇓P P 21 49 35.2 +0.4
baz=79
HEC Hector,Ludlow 78.95 55 ⇓P P 21 49 35.6 +0.6
baz=79
VRI Vrincioaia 79.00 320 ⇑*i*P P 21 49 36.1 +1.2
G23A Biddle 79.00 41 ⇓P P 21 49 35.9 +0.8
baz=79
TIRR Tirgusor 79.03 318 ⇓*i*P P 21 49 35.6 +0.5
K20A Yellowstone Ra 79.03 45 ⇓P P 21 49 35.7 +0.3
baz=79
BR131 Keskin Array S 79.04 311 *e*P P 21 49 35.3 -0.1
comp=Z,13nm,1.1s
BRTR Keskin Array B 79.04 311 P P 21 49 35.6 +0.2
BRTR Keskin Array B 79.04 311 P P 21 49 35.6 +0.2
comp=Z,19nm,1.1s,baz=96,slow=3.7,SNR=39
BRTR LR LR 22 29 16.4
comp=Z,151nm,18.4s,baz=201,slow=39
PLOR Plostina 79.05 320 ⇓*i*P P 21 49 36.2 +1.0
F24A Ekalaka 79.08 40 ⇓P P 21 49 35.9 +0.4
baz=79
KOLS Kolonicke sedl 79.14 324 *e*P P 21 49 36.0 +0.4
KOLS pmax pmax
comp=Z,11nm,1.2s
KOLS Kolonicke sedl 79.14 324 *e*P P 21 49 36.0 +0.4
CCUT Cedar City 79.22 51 *e*P P 21 49 37.8 +1.2
comp=Z,8.1nm,1.2s
I22A 9 Mile Ranch, 79.27 43 ⇓P P 21 49 37.1 +0.5
baz=79
UZH Uzhgorod 79.34 324 *e*P P 21 49 31.8 -4.9
UZH *i* 21 49 39.4
MVU Marysvale 79.35 50 *e*P P 21 49 39.0 +1.7
MVU *e*pP PcP 21 49 45.1 -0.2
OJC Ojcow 79.38 326 *e*P P 21 49 37.5 +0.6
OJC Ojcow 79.38 326 *e*P P 21 49 37.5 +0.6
OJC Ojcow 79.38 326 *e*P P 21 49 37.6 +0.6
OJC *e*pP pP 21 49 50.9 +1.3
GMRC Granite Mounta 79.42 55 ⇑P P 21 49 37.9 +0.3
baz=79
L20A Wamsutter 79.45 45 ⇑P P 21 49 37.9 +0.2
baz=79
ANTO Ankara 79.46 312 *e*P P 21 49 38.5 +0.9
ANTO pmax pmax
comp=Z,12nm,0.9s
ANTO Ankara 79.46 312 *e*P P 21 49 38.5 +0.9
comp=Z,12nm,0.9s
BBAL Bala 79.46 312 *i* P P 21 49 38.5 +0.7
CRVS Cervenica-Dubn 79.54 324 *e*P P 21 49 37.9 +0.1
CRVS pmax pmax
comp=Z,10.0nm,1.2s
CRVS Cervenica-Dubn 79.54 324 *e*P P 21 49 37.9 +0.1
TRPA Tarpa 79.57 323 ⇓*i*P P 21 49 39.2 +1.3
TRPA Tarpa 79.57 323 ⇓*e*P P 21 49 39.4 +1.5
J22A Midwest 79.58 43 ⇑P P 21 49 38.6 +0.2
baz=80,SNR=12
ISR Istrita 79.59 319 ⇓*i*P P 21 49 40.0 +1.8
PFO Pinyon Flat Ob 79.59 56 LR LR 22 18 06.9
comp=Z,376nm,20.8s,baz=302,slow=30
P17A Butcher Ranch, 79.64 48 ⇓P P 21 49 39.6 +0.8
baz=80
K21A Alcova 79.66 44 ⇓P P 21 49 39.5 +0.7
baz=80
BELC Belle Mtn. Jos 79.66 55 ⇑P P 21 49 39.4 +0.5
baz=80
NIE Niedzica 79.71 325 *e*P P 21 49 39.7 +0.9
NIE Niedzica 79.71 325 *e*P P 21 49 39.7 +0.9
Q16A Castle Valley 79.73 49 ⇑P P 21 49 39.9 +0.6
baz=80
H24A Dirks Ranch, A 79.75 41 ⇓P P 21 49 38.8 -0.4
baz=80,SNR=5.7
YAYL Yayladag 79.77 307 *i* P P 21 49 39.9 +0.5
GULE Gulek 79.85 309 *i* P P 21 49 40.7 +0.8
SRU San Rafael 80.00 49 *e*P P 21 49 41.9 +1.2
SRU pmax pmax
comp=Z,9.0nm,0.7s
SRU San Rafael 80.00 49 *e*P P 21 49 41.9 +1.2
comp=Z,8.7nm,0.7s
SRU San Rafael 80.00 49 ⇓P P 21 49 40.9 +0.1
baz=80
L21A Rawlins 80.03 45 ⇓P P 21 49 41.0 +0.2
baz=80
MONP Monument Peak 80.05 57 ⇑P P 21 49 41.8 +0.6
baz=80
K22A Casper 80.06 44 ⇑P P 21 49 41.2 +0.2
baz=80
IRM Iron Mountain 80.13 55 ⇑P P 21 49 41.4 +0.1
baz=80
ULM Lac du Bonnet 80.14 33 *e*P P 21 49 41.1 +0.1
ULM Lac du Bonnet 80.14 33 P P 21 49 40.7 -0.3
comp=Z,3.4nm,0.6s,baz=295,slow=5.7,SNR=4.8
ULM LR LR 22 23 14.8
comp=Z,175nm,20.2s,baz=286,slow=34
VOIR 80.16 320 ⇑*i*P P 21 49 42.9 +1.6
N20A Spence Gulch, 80.24 46 ⇑P P 21 49 42.4 +0.3
baz=80
RUE Ruedersdorf 80.26 330 *e*P P 21 49 42.6 +1.0
comp=Z,43nm,1.3s
M21A Separation Pea 80.26 45 ⇓P P 21 49 41.9 -0.3
baz=80,SNR=5.0
I24A Kuemmerle Ranc 80.30 42 ⇑P P 21 49 42.3 +0.1
baz=80
W13A Hualapai Mount 80.38 53 ⇓P P 21 49 43.3 +0.4
baz=80
OKC Ostrava-Krasne 80.39 327 *e*P P 21 49 42.9 +0.5
OKC *e**PP pP 21 49 56.1 +1.0
OKC MLR MLR
comp=Z,300nm,17.0s
OKC Ostrava-Krasne 80.39 327 ⇑*e*P P 21 49 42.9 +0.5
OKC *e*pP pP 21 49 56.1 +1.0
OKC AMS AMS 22 27 40.0
comp=Z,300nm,17.0s
DVTC Desert V Tower 80.40 57 ⇑P P 21 49 43.2 +0.3
baz=80
SWSC Sam W. Stewart 80.44 56 ⇓P P 21 49 44.2 +1.3
baz=80
KSP Ksiaz 80.46 328 ⇑*e*P P 21 49 43.5 +0.8
KSP *e**PP pP 21 49 55.5 0.0
KSP Ksiaz 80.46 328 *e*P P 21 49 43.5 +0.8
BSEG Bad Segeberg 80.46 333 *e*P P 21 49 43.2 +0.6
BSEG pmax pmax
comp=Z,50nm,1.1s
BSEG Bad Segeberg 80.46 333 *e*P P 21 49 43.2 +0.6
comp=Z,50nm,1.1s
U15A North Rim 80.58 52 ⇓P P 21 49 44.9 +0.8
baz=80
P19A Cripple Cowboy 80.59 47 ⇑P P 21 49 44.3 +0.3
baz=80,SNR=9.3
RAYN Ar Rayn 80.63 292 P P 21 49 44.0 -0.2
comp=Z,138nm,0.9s,SNR=14
MORC Moravsky Berou 80.70 327 *e*P P 21 49 44.9 +0.8
MORC Moravsky Berou 80.70 327 *e*P P 21 49 44.9 +0.8
MORC Moravsky Berou 80.70 327 ⇑*i*P P 21 49 44.8 +0.7
PDMCI Parker Dam,Lak 80.70 54 ⇓P P 21 49 45.6 +1.2
baz=81
O20A White River Ci 80.71 47 ⇓P P 21 49 45.2 +0.7
baz=81
KDHN Kadinhani 80.72 311 *i* P P 21 49 43.4 -1.1
N21A Black Mountain 80.72 46 ⇓P P 21 49 45.3 +0.6
baz=81
DPC Dobruska-Polom 80.81 328 *e*P P 21 49 45.8 +1.1
DPC pmax pmax
comp=Z,40nm,1.3s
DPC Dobruska-Polom 80.81 328 *e*P P 21 49 45.8 +1.1
comp=Z,40nm,1.3s
DPC Dobruska-Polom 80.81 328 *e*P P 21 49 45.7 +1.1
DPC *e*pP pP 21 49 58.3 +0.9
DPC AMS AMS 22 28 20.0
comp=Z,400nm,16.6s

UPC	**Upice**	**80.83**	**328**	⇑	*i*P	**P**	**21 49 45.5 +0.8**
UPC					*e**PP	**pP**	**21 49 58.0 +0.5**
UPC	**Upice**	**80.83**	**328**	⇑	*i*P	**P**	**21 49 45.5 +0.8**
UPC					*e*pP	**pP**	**21 49 58.0 +0.5**
M22A	**Cedar Creek Ra**	**80.83**	**45**	⇓	P	**P**	**21 49 45.9 +0.6**
	baz=81						
PSZ	**Piszkesteto**	**80.98**	**324**		*e*P	**P**	**21 49 46.7 +1.1**
PSZ					pmax	pmax	
	comp=Z,27nm,1.0s						
PSZ	**Piszkesteto**	**80.98**	**324**		*e*P	**P**	**21 49 46.7 +1.1**
	comp=Z,28nm,1.0s						
PSZ	**Piszkesteto**	**80.98**	**324**	⇑	*i*P	**P**	**21 49 46.7 +1.1**
PSZ	**Piszkesteto**	**80.98**	**324**	⇓	*e*P	**P**	**21 49 47.0 +1.3**
GLA	**Glamis**	**81.01**	**56**		*e*P	**P**	**21 49 46.9 +0.8**
GLA					*e**PP	**pP**	**21 49 58.9 +0.1**
GLA					pmax	pmax	
	comp=Z,6.0nm,0.8s						
GLA	**Glamis**	**81.01**	**56**		*e*P	**P**	**21 49 46.9 +0.8**
	comp=Z,5.7nm,0.8s						
GLA					*e*pP	**pP**	**21 49 58.9 +0.1**
GLA	**Glamis**	**81.01**	**56**	⇑	P	**P**	**21 49 46.4 +0.3**
	baz=81						
VYHS	**Vyhne**	**81.05**	**325**		*e*P	**P**	**21 49 46.8 +0.8**
VYHS					pmax	pmax	
	comp=Z,11nm,1.2s						
VYHS	**Vyhne**	**81.05**	**325**		*e*P	**P**	**21 49 46.8 +0.8**
SZH	**Strazhica**	**81.16**	**318**		*i* P	**P**	**21 49 46.8 +0.2**
S18A	**Hurst Farm, Bl**	**81.22**	**49**	⇓	P	**P**	**21 49 47.8 +0.4**
	baz=81						
BRG	**Berggiesshubel**	**81.42**	**329**		*e*P	**P**	**21 49 48.4 +0.5**
	comp=Z,12nm,0.8s						
BRG					*e*		21 50 00.3
	comp=Z,17nm,1.3s						
BRG	**Berggiesshubel**	**81.42**	**329**		*e*P	**P**	**21 49 48.4 +0.5**
BRG					*e*		21 50 00.3
BRG					pmax	pmax	
	comp=Z,12nm,0.8s						
BRG					pmax	pmax	
	comp=Z,17nm,1.3s						
BRG	**Berggiesshubel**	**81.42**	**329**		*e*P	**P**	**21 49 48.2 +0.4**
	comp=Z,13nm,0.9s						
PVCC	**Panska Ves**	**81.42**	**329**	⇑	*i*P	**P**	**21 49 48.7 +0.8**
PVCC					MLR	MLR	
	comp=Z,500nm,20.3s						
PVCC	**Panska Ves**	**81.42**	**329**	⇑	*i*P	**P**	**21 49 48.7 +0.8**
PVCC					AMS	AMS	22 28 40.0
	comp=Z,500nm,20.3s						
PV04	**Paradox Valley**	**81.43**	**48**		*e*P	**P**	**21 49 49.9 +1.5**
Q20A	**Ridgley Place,**	**81.44**	**48**	⇓	P	**P**	**21 49 48.7 +0.2**
	baz=81						
VRAC	**Vranov**	**81.47**	**327**	⇓	*i*P	**P**	**21 49 48.9 +0.8**
CLL	**Collm**	**81.47**	**330**	⇑	*i*P	**P**	**21 49 48.2 +0.1**
CLL					*i* *PP	**pP**	**21 50 00.9 +0.1**
CLL					pmax	pmax	
	comp=Z,32nm,1.0s						
CLL					MLR	MLR	
	comp=Z,400nm,18.5s						
CLL	**Collm**	**81.47**	**330**		*e*P	**P**	**21 49 48.2 +0.1**
	comp=Z,32nm,1.0s						
CLL					*e*pP	**pP**	**21 50 00.9 +0.1**
CLL	**Collm**	**81.47**	**330**	⇑	*i*P	**P**	**21 49 48.2 +0.1**
	comp=Z,32nm,1.0s						
CLL					*i* PcP	**PcP**	**21 49 52.9 -1.1**
CLL					*i* pP	**pP**	**21 50 00.9 +0.1**
CLL					*e*		22 06 24.0
CLL					Lm	MLR	22 29 00.0
	comp=N,300nm,21.8s						
CLL					Lm	MLR	22 29 00.0
	comp=E,200nm,18.4s						
CLL					Lm	MLR	22 29 00.0
	comp=Z,400nm,18.5s						
N23A	**Red Feather La**	**81.54**	**45**	⇑	P	**P**	**21 49 50.0 +1.0**
	baz=81,SNR=6.1						
K25A	**Mack Ranch, Ha**	**81.55**	**43**	⇓	P	**P**	**21 49 48.8 0.0**
	baz=81						
P21A	**Newcastle**	**81.57**	**47**	⇑	P	**P**	**21 49 49.7 +0.5**
	baz=81						
FBE	**Freiberg**	**81.62**	**330**		*e*P	**P**	**21 49 49.6 +0.7**
	comp=Z,33nm,1.1s						
Y14A	**Wickenburg**	**81.67**	**54**	⇓	P	**P**	**21 49 50.5 +0.9**
	baz=82						
NRDL	**Niedersach Rie**	**81.67**	**332**		*e*P	**P**	**21 49 49.3 +0.3**
	comp=Z,11nm,1.1s						
O22A	**Kremmling**	**81.67**	**46**	⇓	P	**P**	**21 49 50.5 +0.7**
	baz=82,SNR=7.9						
SMOL	**Smolenice**	**81.68**	**326**		*e*P	**P**	**21 49 51.1 +1.8**
SMOL	**Smolenice**	**81.68**	**326**		*e*P	**P**	**21 49 51.1 +1.8**
WUAZ	**Wupatki**	**81.73**	**52**		*e*P	**P**	**21 49 50.8 +0.8**
	comp=Z,6.1nm,0.9s						
WUAZ	**Wupatki**	**81.73**	**52**	⇓	P	**P**	**21 49 50.9 +0.8**
	baz=82						
BZS	**Buzias**	**81.78**	**322**	⇑	*i*P	**P**	**21 49 50.1 +0.3**
M24A	**Cheyenne**	**81.79**	**44**	⇑	P	**P**	**21 49 51.0 +0.8**
	baz=82						
PV01	**Paradox Valley**	**81.80**	**48**		*e*P	**P**	**21 49 50.6 +0.2**
	comp=Z,892nm,1.0s						
PRU	**Pruhonice**	**81.84**	**328**	⇑	*i*P	**P**	**21 49 50.7 +0.6**
PRU					*e**PP	**pP**	**21 50 03.4 +0.5**
PRU					MLR	MLR	
	comp=Z,400nm,16.2s						
PRU	**Pruhonice**	**81.84**	**328**	⇑	*i*P	**P**	**21 49 50.7 +0.6**
PRU					*e*pP	**pP**	**21 50 03.4 +0.5**
PRU					AMS	AMS	22 29 50.0
	comp=Z,400nm,16.2s						
K26A	**Motz Farm, Whi**	**81.86**	**42**	⇑	P	**P**	**21 49 51.1 +0.6**
	baz=82						
R20A	**Redvale**	**81.88**	**48**	⇓	P	**P**	**21 49 51.5 +0.7**
	baz=82						
113A	**Mohawk Valley,**	**81.89**	**55**	⇑	P	**P**	**21 49 51.4 +0.8**
	baz=82						
P22A	**Eagle**	**81.92**	**46**	⇑	P	**P**	**21 49 52.2 +1.2**
	baz=82						
TREC	**Trest**	**81.96**	**327**	⇑	AMS	AMS	22 28 10.0
	comp=Z,400nm,23.0s						
O23A	**Lake Granby, G**	**82.00**	**45**	⇑	P	**P**	**21 49 52.5 +0.9**
	baz=82,SNR=10						
NEUB	**Neuenburg**	**82.04**	**331**		*e*P	**P**	**21 49 51.4 +0.3**
	comp=Z,32nm,1.0s						
ZST	**Bratislava**	**82.06**	**326**		*e*P	**P**	**21 49 51.3 0.0**
ZST					pmax	pmax	
	comp=Z,9.0nm,1.3s						
ZST	**Bratislava**	**82.06**	**326**		*e*P	**P**	**21 49 51.3 0.0**
SMCO	**Snowmass**	**82.07**	**47**		*e*P	**P**	**21 49 53.2 +1.2**
	comp=Z,6.7nm,0.9s						
CLZ	**Clausthal**	**82.09**	**332**		*e*P	**P**	**21 49 52.0 +0.6**
CLZ					*e**PP	**pP**	**21 50 04.6 +0.4**
CLZ					pmax	pmax	
	comp=Z,25nm,1.1s						
CLZ	**Clausthal**	**82.09**	**332**		*e*P	**P**	**21 49 52.0 +0.6**
	comp=Z,25nm,1.1s						
CLZ					*e*pP	**pP**	**21 50 04.6 +0.4**
S20A	**Disappointment**	**82.12**	**48**	⇑	P	**P**	**21 49 52.6 +0.4**
	baz=82						
DURS	**Dursunbey**	**82.18**	**314**		*i* P	**P**	**21 49 52.3 +0.1**
CSS	**Prodhromos**	**82.21**	**308**		*e*P	**P**	**21 49 50.2 -2.1**
	comp=Z,30nm,1.2s						
R21A	**Cimarron**	**82.26**	**48**	⇑	P	**P**	**21 49 54.1 +1.3**
	baz=82,SNR=6.0						
MPEP	**Malo Peshtene**	**82.27**	**319**		*i* P	**P**	**21 49 52.0 -0.5**
Q22A	**Crested Butte,**	**82.31**	**47**	⇓	P	**P**	**21 49 54.3 +1.1**
	baz=82						
TANN	**Tannenbergstha**	**82.38**	**330**		*e*P	**P**	**21 49 53.1 +0.1**
	comp=Z,8.0nm,1.3s						
X16A	**Lo Mia Camp, P**	**82.38**	**53**	⇑	P	**P**	**21 49 54.4 +0.9**
	baz=82						
WERD	**Werda**	**82.41**	**330**		*e*P	**P**	**21 49 53.5 +0.4**
	comp=Z,9.0nm,1.1s						
MVCO	**Mesa Verde**	**82.44**	**49**		*e*P	**P**	**21 49 55.0 +1.2**
	comp=Z,8.6nm,1.0s						
MVCO	**Mesa Verde**	**82.44**	**49**	⇑	P	**P**	**21 49 54.6 +0.8**
	baz=82						
PLN	**Plauen**	**82.44**	**330**		*e*P	**P**	**21 49 53.6 +0.3**
	comp=Z,80nm,1.3s						
ISCO	**Idaho Springs**	**82.45**	**46**		*e*P	**P**	**21 49 55.2 +1.3**
ISCO					pmax	pmax	
	comp=Z,3.0nm,0.8s						
ISCO	**Idaho Springs**	**82.45**	**46**		*e*P	**P**	**21 49 55.1 +1.3**
	comp=Z,3.4nm,0.8s						
ISCO	**Idaho Springs**	**82.45**	**46**	⇓	P	**P**	**21 49 54.4 +0.5**
	baz=82						
GUNZ	**Gunzen**	**82.47**	**330**		*e*P	**P**	**21 49 53.9 +0.5**
	comp=Z,19nm,1.2s						
WERN	**Wernitzgruen**	**82.51**	**330**		*e*P	**P**	**21 49 54.2 +0.6**
	comp=Z,20nm,1.1s						
NKC	**Novy Kostel**	**82.52**	**330**		*e*P	**P**	**21 49 54.0 +0.3**
NKC					*e**PP	**pP**	**21 50 06.7 +0.2**
NKC					MLR	MLR	
	comp=Z,500nm,17.6s						
NKC	**Novy Kostel**	**82.52**	**330**	⇑	*e*P	**P**	**21 49 54.0 +0.3**
NKC					*e*pP	**pP**	**21 50 06.7 +0.2**
NKC					AMS	AMS	22 29 30.0
	comp=Z,500nm,17.6s						
MOX	**Moxa**	**82.54**	**330**		*e*P	**P**	**21 49 54.1 +0.3**
MOX					*e**PP	**pP**	**21 50 07.5 +1.0**
MOX					pmax	pmax	
	comp=Z,16nm,1.3s						
MOX					MLR	MLR	
	comp=Z,400nm,19.2s						
MOX	**Moxa**	**82.54**	**330**		*e*P	**P**	**21 49 54.1 +0.3**
	comp=Z,16nm,1.3s						
MOX					*e*pP	**pP**	**21 50 07.5 +1.0**
MOX					*e*L	L	22 30 48.1
	comp=Z,382nm,19.2s						
S21A	**Coal Bank Pass**	**82.57**	**48**	⇑	P	**P**	**21 49 55.7 +1.1**
	baz=82						
P23A	**Jefferson**	**82.60**	**46**	⇑	P	**P**	**21 49 55.9 +1.1**
	baz=82						
SOP	**Sopron**	**82.69**	**326**	⇓	*e*P	**P**	**21 49 56.0 +1.4**
IBBN	**Ibbenburen**	**82.69**	**333**		*e*P	**P**	**21 49 54.7 +0.2**
	comp=Z,47nm,1.4s						
IBBN					*e*pP	**pP**	**21 50 08.1 +0.9**
CONA	**Conrad Observa**	**82.82**	**326**	⇑	*i*PcP	**P**	**21 49 56.5 +1.1**
CONA	**Conrad Observa**	**82.82**	**326**	⇑	*i*P	**P**	**21 49 56.5 +1.1**
R22A	**Saguache, Gunn**	**82.82**	**47**	⇑	P	**P**	**21 49 56.7 +0.8**
	baz=83						
MANZ	**Manzenberg**	**82.85**	**330**		*e*P	**P**	**21 49 55.8 +0.4**
	comp=Z,13nm,0.8s						
KHC	**Kasperske Hory**	**82.90**	**328**	⇑	*i*P	**P**	**21 49 56.2 +0.5**
KHC					*e**PP	**pP**	**21 50 08.5 0.0**
KHC					*e*		21 53 03.0
KHC					MLR	MLR	
	comp=Z,500nm,17.0s						
KHC	**Kasperske Hory**	**82.90**	**328**		*e*P	**P**	**21 49 56.3 +0.6**
	comp=Z,15nm,0.9s						
KHC	**Kasperske Hory**	**82.90**	**328**	⇑	*i*P	**P**	**21 49 56.2 +0.5**
KHC					*e*pP	**pP**	**21 50 08.5 0.0**
KHC					*e*PP	**PP**	**21 53 03.0 -2.7**
KHC					AMS	AMS	22 29 50.0
	comp=Z,500nm,17.0s						
Q23A	**Hartsel**	**82.92**	**46**	⇑	P	**P**	**21 49 57.4 +1.0**
	baz=83						
ROTZ	**Rotzenmuhle**	**82.98**	**329**		*e*P	**P**	**21 49 57.0 +0.9**
	comp=Z,19nm,1.0s						
UBBA	**Unterbreizbach**	**83.04**	**331**		*e*P	**P**	**21 49 56.3 +0.1**
	comp=Z,15nm,1.6s						
GEC2	**GERESS Array S**	**83.07**	**328**		*e*P	**P**	**21 49 56.8 +0.2**
GEC2					pmax	pmax	
	comp=Z,13nm,1.2s						
GEC2	**GERESS Array S**	**83.07**	**328**		*e*P	**P**	**21 49 56.8 +0.2**
	comp=Z,13nm,1.2s						
GERES	**GERESS Array B**	**83.07**	**328**		P	**P**	**21 49 56.6 0.0**
GERES	**GERESS Array B**	**83.07**	**328**		P	**P**	**21 49 56.6 0.0**
	comp=Z,5.5nm,0.7s,baz=32,slow=5.2,SNR=28						
GERES					LR	LR	22 33 36.9
	comp=Z,271nm,18.8s,baz=271,slow=40						
VTS	**Vitosha**	**83.08**	**319**	⇑	*i*P	**P**	**21 49 57.6 +0.7**
O25A	**Wiggins**	**83.09**	**45**	⇑	P	**P**	**21 49 57.7 +0.7**
	baz=83						
S22A	**4UR Ranch, Cre**	**83.10**	**48**	⇓	P	**P**	**21 49 58.2 +1.0**
	baz=83						
N26A	**Koester Ranch,**	**83.11**	**44**	⇓	P	**P**	**21 49 58.1 +1.0**
	baz=83						
T21A	**Navajo Lake**	**83.17**	**49**	⇓	P	**P**	**21 49 58.5 +1.0**
	baz=83						
WET	**Wettzell**	**83.19**	**329**		*e*P	**P**	**21 49 57.8 +0.6**
WET					pmax	pmax	
	comp=Z,13nm,1.1s						
WET	**Wettzell**	**83.19**	**329**		*e*P	**P**	**21 49 57.8 +0.6**
	comp=Z,13nm,1.1s						
Q24A	**Divide**	**83.28**	**46**	⇑	P	**P**	**21 49 59.0 +0.8**
	baz=83						
V20A	**Brimhall**	**83.37**	**50**	⇑	P	**P**	**21 49 59.5 +0.9**
	baz=83						
R23A	**Moffat**	**83.40**	**47**	⇓	P	**P**	**21 49 59.9 +1.1**
	baz=83,SNR=15						
GRF	**Grafenberg Arr**	**83.44**	**330**		*e*P	**P**	**21 49 59.3 +0.8**
GRF					pmax	pmax	
	comp=Z,38nm,1.0s						
GRF					MLR	MLR	
	comp=Z,400nm,19.6s						
GRF	**Grafenberg Arr**	**83.44**	**330**		*e*P	**P**	**21 49 59.3 +0.8**
	comp=Z,38nm,1.0s						
GRF					*e*L	L	22 30 53.3
	comp=Z,418nm,19.6s						
U21A	**Nageezi**	**83.46**	**49**	⇓	P	**P**	**21 50 00.0 +0.9**
	baz=83						
O26A	**Horse Wrangler**	**83.46**	**44**	⇑	P	**P**	**21 49 59.9 +1.0**
	baz=83						
P25A	**Willow Gulch B**	**83.47**	**45**	⇓	P	**P**	**21 49 60.0 +0.9**
	baz=83						
MMB	**Musomiste**	**83.50**	**318**		*i* P	**P**	**21 49 59.1 +0.2**
N27A	**Anderson Farm,**	**83.51**	**43**	⇑	P	**P**	**21 50 00.1 +1.0**
	baz=83						
T22A	**Edith**	**83.53**	**48**	⇓	P	**P**	**21 49 60.0 +0.5**
	baz=83						
BUG	**Bochum--Univer**	**83.57**	**333**		*e*P	**P**	**21 49 58.9 -0.1**
	comp=Z,15nm,0.7s						
MOA	**Molln**	**83.58**	**327**	⇑	*i*P	**P**	**21 49 59.7 +0.5**
MOA	**Molln**	**83.58**	**327**	⇑	*i*P	**P**	**21 49 59.7 +0.5**
KKB	**Krupnik**	**83.65**	**318**		*i* P	**P**	**21 49 59.9 +0.2**
W20A	**Ramah**	**83.79**	**51**	⇑	P	**P**	**21 50 01.8 +1.0**
	baz=84						
R24A	**Sanders Place,**	**83.79**	**46**	⇓	P	**P**	**21 50 01.8 +1.0**
	baz=84						
Q25A	**Bedland, Calha**	**83.83**	**45**	⇓	P	**P**	**21 50 01.4 +0.5**
	baz=84						
SDCO	**Great Sand Dun**	**83.88**	**47**		*e*P	**P**	**21 50 02.2 +0.9**
	comp=Z,4.8nm,1.0s						
TURN	**Turunc**	**83.90**	**312**		*i* P	P	21 49 52.7 -8.3
P26A	**Davis Ranch, A**	**83.91**	**45**	⇑	P	**P**	**21 50 01.8 +0.6**
	baz=84						
U22A	**Llaves**	**83.98**	**49**	⇑	P	**P**	**21 50 02.6 +0.8**
	baz=84						
GROS	**Grobnik**	**84.08**	**326**		*e*P	**P**	**21 50 01.9 0.0**
TNS	**Taunus Mts**	**84.11**	**332**		*e*P	**P**	**21 50 02.3 +0.4**
TNS					*e**PP	**pP**	**21 50 15.6 +0.9**
TNS					pmax	pmax	
	comp=Z,12nm,0.9s						
TNS	**Taunus Mts**	**84.11**	**332**		*e*P	**P**	**21 50 02.3 +0.4**
	comp=Z,12nm,0.9s						
TNS					*e*pP	**pP**	**21 50 15.6 +0.9**
PERS	**Pernice**	**84.12**	**326**		*e*P	**P**	**21 50 02.2 +0.1**
S24A	**Houchin Ranch,**	**84.12**	**47**	⇑	P	**P**	**21 50 03.1 +0.5**
	baz=84						
SOKA	**Soboth**	**84.13**	**326**	⇑	*i*P	**P**	**21 50 02.4 +0.3**
SOKA	**Soboth**	**84.13**	**326**	⇑	*i*P	**P**	**21 50 02.4 +0.3**
X20A	**Quemado**	**84.17**	**51**	⇓	P	**P**	**21 50 03.8 +1.1**
	baz=84						
V22A	**San Miguel Ran**	**84.25**	**49**	⇓	P	**P**	**21 50 03.8 +0.7**
	baz=84						
RJOB	**Jochberg**	**84.31**	**328**		*e*P	**P**	**21 50 03.6 +0.6**
	comp=Z,16nm,0.9s						
VAY	**Valandovo**	**84.31**	**318**		*i* P	**P**	**21 50 03.1 +0.1**
R25A	**Fountain Ranch**	**84.33**	**46**	⇓	P	**P**	**21 50 04.1 +0.7**
	baz=84						
U23A	**El Rito**	**84.41**	**48**	⇑	P	**P**	**21 50 05.4 +1.4**
	baz=84						
SKO	**Skopje**	**84.45**	**319**		*i* P	**P**	**21 50 05.2 +1.5**
TOD	**Tromm**	**84.47**	**331**		*e*P	**P**	**21 50 03.9 +0.2**
TOD	**Tromm**	**84.47**	**331**		*e*P	**P**	**21 50 03.9 +0.2**
ECSD	**ERDS Data Cent**	**84.54**	**38**		*e*P	**P**	**21 50 04.3 +0.1**
	comp=Z,11nm,0.9s						
S25A	**Robets Cordova**	**84.57**	**47**	⇓	P	**P**	**21 50 05.2 +0.6**
	baz=84						
T24A	**Torres, Weston**	**84.60**	**47**	⇑	P	**P**	**21 50 06.0 +1.1**
	baz=84						
PPT	**Papeete**	**84.61**	**116**		LR	LR	22 21 34.1
	comp=Z,468nm,19.1s,baz=359,slow=31						
FUR	**Furstenfeldbru**	**84.61**	**329**		*e*P	**P**	**21 50 04.9 +0.4**
FUR					pmax	pmax	
	comp=Z,30nm,0.9s						
FUR	**Furstenfeldbru**	**84.61**	**329**		*e*P	**P**	**21 50 04.9 +0.4**
	comp=Z,30nm,0.9s						
PPT2	**Papeete2**	**84.63**	**116**		*e*S	**S**	**22 00 28.4 -0.8**
	comp=Z,65nm,23.5s						
PPT2					*e*SS	SS	22 06 18.9 +17
	comp=Z,95nm,24.2s						
PPT2					*e*LR	LR	22 16 40.1
	comp=Z,952nm,28.0s,baz=311						
X21A	**Alamocita Cree**	**84.68**	**51**	⇑	P	**P**	**21 50 06.1 +0.8**
	baz=85						
BEBN	**Eben Emael**	**84.68**	**333**		P	**P**	**21 50 05.1 +0.5**
R26A	**Arlington**	**84.71**	**46**	⇓	P	**P**	**21 50 05.4 +0.1**
	baz=85						
MEM	**Membach**	**84.71**	**333**		P	**P**	**21 50 05.6 +0.8**
T25A	**Trinidad**	**84.93**	**47**	⇑	P	**P**	**21 50 07.2 +0.6**
	baz=85						
STU	**Stuttgart**	**84.98**	**330**		*e*P	**P**	**21 50 06.5 +0.3**
STU					*e**PP	**pP**	**21 50 19.4 +0.3**
STU					pmax	pmax	
	comp=Z,22nm,0.7s						
STU	**Stuttgart**	**84.98**	**330**		*e*P	**P**	**21 50 06.6 +0.3**
	comp=Z,36nm,0.9s						
STU					*e*pP	**pP**	**21 50 19.0 -0.1**
STU	**Stuttgart**	**84.98**	**330**		*e*P	**P**	**21 50 06.5 +0.3**
	comp=Z,22nm,0.7s						
STU					*e*pP	**pP**	**21 50 19.4 +0.3**
Y21A	**Point of Rocks**	**85.03**	**51**	⇓	P	**P**	**21 50 07.8 +0.7**
	baz=85						
Z20A	**Nine Sixteen R**	**85.04**	**52**	⇓	P	**P**	**21 50 07.9 +0.8**
	baz=85						
RUP	**Ruppelstein**	**85.06**	**332**		*e*P	**P**	**21 50 06.4 -0.3**
RUP	**Ruppelstein**	**85.06**	**332**		*e*P	**P**	**21 50 06.4 -0.3**
R27A	**Eads**	**85.09**	**45**	⇓	P	**P**	**21 50 07.3 +0.1**
	baz=85						
BCLA	**Clavier**	**85.12**	**333**		P	**P**	**21 50 06.9 -0.1**
S26A	**Kim**	**85.16**	**46**	⇑	P	**P**	**21 50 07.5 0.0**
	baz=85						
ANMO	**Albuquerque**	**85.17**	**50**		*e*P	**P**	**21 50 09.5 +1.7**
ANMO	**Albuquerque**	**85.17**	**50**		LR	LR	22 27 15.1
	comp=Z,89nm,18.6s,baz=337,slow=35						
W23A	**Werner Place,**	**85.22**	**49**	⇑	P	**P**	**21 50 08.7 +0.7**
	baz=85						
MOTA	**Moosalm**	**85.33**	**328**	⇑	*i*P	**P**	**21 50 08.1 -0.1**
MOTA	**Moosalm**	**85.33**	**328**	⇑	*i*P	**P**	**21 50 08.1 -0.1**
MOTA	**Moosalm**	**85.33**	**328**	⇑	*i*P	**P**	**21 50 08.1 -0.1**
LANF	**Langenberg**	**85.36**	**331**		*e*P	**P**	**21 50 08.3 +0.1**
LANF	**Langenberg**	**85.36**	**331**		*e*P	**P**	**21 50 08.3 +0.1**
LANF	**Langenberg**	**85.36**	**331**		*e*P	**P**	**21 50 08.3 +0.1**
RETA	**Reutte**	**85.36**	**329**	⇑	*i*P	**P**	**21 50 08.3 0.0**
RETA	**Reutte**	**85.36**	**329**	⇑	*i*P	**P**	**21 50 08.3 0.0**
V24A	**Rampart Ranch,**	**85.37**	**48**	⇑	P	**P**	**21 50 09.6 +0.8**
	baz=85						
T26A	**Comanche Natio**	**85.39**	**46**	⇓	P	**P**	**21 50 09.1 +0.3**
	baz=85						
SNF	**Seneffe**	**85.41**	**334**		P	**P**	**21 50 08.2 -0.1**
	comp=Z,14nm,1.4s						
WLF	**Walferdange**	**85.43**	**333**		P	**P**	**21 50 09.9 +1.4**
	comp=Z,18nm,2.4s						
WLF	**Walferdange**	**85.43**	**333**		*e*P	**P**	**21 50 09.2 +0.7**
	comp=Z,43nm,1.6s						
U25A	**Circle Dot Ran**	**85.44**	**47**	⇓	P	**P**	**21 50 09.8 +0.8**
	baz=85						
Z21A	**St. Cloud Mine**	**85.49**	**52**	⇑	P	**P**	**21 50 10.4 +1.0**
	baz=85						
Y22A	**Socorro**	**85.52**	**51**	⇑	P	**P**	**21 50 10.6 +1.1**
	baz=85						
GIVF	**Givet**	**85.56**	**333**		*e*P	**P**	**21 50 08.9 -0.2**
GIVF	**Givet**	**85.56**	**333**		*e*P	**P**	**21 50 08.9 -0.2**
GIVF	**Givet**	**85.56**	**333**		*e*P	**P**	**21 50 08.9 -0.2**
W24A	**Lazy 6 Ranch,**	**85.63**	**49**	⇓	P	**P**	**21 50 11.3 +1.2**
	baz=86						
DOU	**Dourbes**	**85.65**	**334**		P	**P**	**21 50 09.7 +0.1**
BFO	**Black Forest**	**85.68**	**331**		*e*P	**P**	**21 50 10.0 +0.2**
BFO					*e**PP	**pP**	**21 50 22.6 0.0**
BFO					pmax	pmax	
	comp=Z,29nm,1.1s						
BFO	**Black Forest**	**85.68**	**331**		*e*P	**P**	**21 50 10.0 +0.2**
	comp=Z,29nm,1.1s						
BFO					*e*pP	**pP**	**21 50 22.6 0.0**
BFO	**Black Forest**	**85.68**	**331**		*e*P	**P**	**21 50 10.0 +0.2**
BFO	**Black Forest**	**85.68**	**331**		P	**P**	**21 50 09.4 -0.4**
	comp=Z,130nm,1.0s,SNR=7.9						
SPAK	**Spaichingen-Ko**	**85.68**	**330**		*e*P	**P**	**21 50 10.6 +0.7**
V25A	**Rancho No Teng**	**85.69**	**48**	⇓	P	**P**	**21 50 11.1 +0.8**
	baz=86						
FETA	**Feichten**	**85.74**	**328**	⇓	*i*PcP	**P**	**21 50 10.6 +0.2**
FETA	**Feichten**	**85.74**	**328**	⇓	*i*P	**P**	**21 50 10.6 +0.2**
BAIF	**Baives**	**85.81**	**334**	⇑	*i*P	**P**	**21 50 10.4 0.0**
	comp=Z,16nm,0.9s						
BAIF	**Baives**	**85.81**	**334**	⇑	*i*P	**P**	**21 50 10.4 0.0**
BAIF					pmax	pmax	
	comp=Z,16nm,0.9s						
BAIF	**Baives**	**85.81**	**334**	⇑	*i*P	**P**	**21 50 10.4 0.0**
	comp=Z,16nm,0.9s						
U26A	**Atchley Ranch,**	**85.83**	**47**	⇑	P	**P**	**21 50 12.1 +1.0**
	baz=86						
DAVA	**Damuels**	**85.89**	**329**	⇑	*i*PcP	**P**	**21 50 11.1 +0.1**
DAVA	**Damuels**	**85.89**	**329**	⇑	*i*P	**P**	**21 50 11.1 +0.1**
121A	**Cookes Peak, D**	**85.93**	**52**	⇓	P	**P**	**21 50 12.8 +1.3**
	baz=86						
SCHQ	**Schefferville**	**85.97**	**16**		*e*P	**P**	**21 50 11.8 +0.7**
SCHQ	**Schefferville**	**85.97**	**16**		P	**P**	**21 50 11.4 +0.4**
	comp=Z,9.9nm,1.0s,baz=353,slow=6.7,SNR=9.7						

Z24A	**Sheeppen Canyo**	**86.92**	**50**	⇓P		**P**	**21 50 17.0**	**+0.6**
	baz=87							
X26A	**CR and CF Fran**	**87.05**	**48**	⇓P		**P**	**21 50 17.1**	**+0.1**
	baz=87							
SFTF	**Sexfontaines**	**87.05**	**332**		*eP*	**P**	**21 50 16.6**	**+0.1**
	comp=Z,79nm,1.1s							
SFTF					*epP*	**pP**	**21 50 28.8**	**-0.6**
SFTF	**Sexfontaines**	**87.05**	**332**		*eP*	**P**	**21 50 16.6**	**+0.1**
	comp=Z,79nm,1.1s							
SFTF					*epP*	**pP**	**21 50 28.8**	**-0.6**
W27A	**Bowe Ranch, En**	**87.14**	**48**	⇑P		**P**	**21 50 18.3**	**+0.9**
	baz=87							
U29A	**Oasis Ranch, S**	**87.23**	**46**	⇑P		**P**	**21 50 18.9**	**+1.2**
	baz=87							
124A	**Stringfield Ra**	**87.29**	**51**	⇑P		**P**	**21 50 18.8**	**+0.6**
	baz=87							
Z25A	**Roswell**	**87.36**	**50**	⇓P		**P**	**21 50 19.1**	**+0.7**
	baz=87							
Y26A	**Elida**	**87.47**	**49**	⇑P		**P**	**21 50 19.5**	**+0.5**
	baz=87							
U30A	**WK&E Inc. Balk**	**87.54**	**45**	⇓P		**P**	**21 50 19.7**	**+0.5**
	baz=87							
224A	**Cornudas Mount**	**87.66**	**51**	⇑P		**P**	**21 50 19.9**	**-0.1**
	baz=88							
T31A	**Randall Ranch,**	**87.69**	**44**	⇑P		**P**	**21 50 20.2**	**+0.3**
	baz=88							
125A	**Gardner Draw,**	**87.81**	**50**	⇑P		**P**	**21 50 21.1**	**+0.4**
	baz=88							
Z26A	**Caprock**	**87.81**	**49**	⇑P		**P**	**21 50 20.5**	**-0.1**
	baz=88							
Y27A	**Causey**	**87.89**	**49**	⇓P		**P**	**21 50 21.9**	**+0.9**
	baz=88							
KSU1	**Kansas State U**	**87.92**	**41**		*eP*	**P**	**21 50 20.6**	**-0.3**
	comp=Z,18nm,0.8s							
KSU1					*epP*	**pP**	**21 50 33.4**	**-0.4**
CABF	**La Chapelle**	**87.97**	**331**		*eP*	**P**	**21 50 20.7**	**-0.3**
CABF	**La Chapelle**	**87.97**	**331**		*eP*	**P**	**21 50 20.7**	**-0.3**
CABF	**La Chapelle**	**87.97**	**331**		*eP*	**P**	**21 50 20.7**	**-0.3**
AMTX	**Amarillo**	**88.09**	**47**		*eP*	**P**	**21 50 23.3**	**+1.4**
AMTX					*epP*	**pP**	**21 50 36.2**	**+1.4**
AMTX	**Amarillo**	**88.09**	**47**	⇓P		**P**	**21 50 22.8**	**+0.9**
	baz=88							
AQU	**L'Aquila**	**88.18**	**324**		*eP*	**P**	**21 50 22.2**	**+0.1**
AQU					*epP*	**PcP**	**21 50 29.0**	**+5.2**
Z27A	**Tatum**	**88.25**	**49**	⇑P		**P**	**21 50 23.0**	**+0.3**
	baz=88							
LOR	**Lormes**	**88.28**	**332**		*eP*	**P**	**21 50 22.4**	**0.0**
LOR					*epP*	**pP**	**21 50 34.6**	**-0.7**
LOR					*eR*			
	comp=Z,312nm,17.8s							
LOR	**Lormes**	**88.28**	**332**		*eP*	**P**	**21 50 22.4**	**0.0**
LOR					*epP*	**pP**	**21 50 34.6**	**-0.7**
TBI	**Tubuai**	**88.46**	**121**		*eLR*	LR	22 18 16.1	
	comp=Z,836nm,27.0s,baz=314							
FLN	**La Foliniere**	**88.53**	**336**		*eP*	**P**	**21 50 23.3**	**-0.2**
FLN					*eR*			
	comp=Z,481nm,19.8s							
FLN	**La Foliniere**	**88.53**	**336**		*eP*	**P**	**21 50 23.3**	**-0.2**
FLN	**La Foliniere**	**88.53**	**336**		*eP*	**P**	**21 50 23.3**	**-0.2**
LDF	**La Druitiere**	**88.56**	**335**		*eP*	**P**	**21 50 23.5**	**-0.2**
LDF	**La Druitiere**	**88.56**	**335**		*eP*	**P**	**21 50 23.5**	**-0.2**
LDF	**La Druitiere**	**88.56**	**335**		*eP*	**P**	**21 50 23.5**	**-0.2**
SSF	**Saint Saulge**	**88.58**	**333**		*eP*	**P**	**21 50 23.9**	**+0.1**
	comp=Z,31nm,1.3s							
SSF					*epP*	**pP**	**21 50 36.2**	**-0.5**
SSF	**Saint Saulge**	**88.58**	**333**		*eP*	**P**	**21 50 23.9**	**+0.1**
SSF					*e**PP	**pP**	**21 50 36.2**	**-0.5**
SSF					pmax	pmax		
	comp=Z,31nm,1.3s							
SSF	**Saint Saulge**	**88.58**	**333**		*eP*	**P**	**21 50 23.9**	**+0.1**
	comp=Z,31nm,1.3s							
SSF					*epP*	**pP**	**21 50 36.2**	**-0.5**
LPL	**La Plagne**	**88.61**	**330**		*eP*	**P**	**21 50 24.1**	**-0.2**
	comp=Z,8.4nm,0.6s							
LPL	**La Plagne**	**88.61**	**330**		*eP*	**P**	**21 50 24.1**	**-0.2**
LPL					pmax	pmax		
	comp=Z,8.0nm,0.6s							
LPL	**La Plagne**	**88.61**	**330**		*eP*	**P**	**21 50 24.1**	**-0.2**
	comp=Z,8.4nm,0.6s							
LPG	**La Plagne**	**88.61**	**330**	⇑	*iP*	**P**	**21 50 24.3**	**-0.1**
	comp=Z,11nm,0.6s							
LPG	**La Plagne**	**88.61**	**330**	⇑	*iP*	**P**	**21 50 24.3**	**-0.1**
LPG					pmax	pmax		
	comp=Z,11nm,0.6s							
LPG	**La Plagne**	**88.61**	**330**	⇑	*iP*	**P**	**21 50 24.3**	**-0.1**
	comp=Z,11nm,0.6s							
SMF	**Signal de Mont**	**88.80**	**332**		*eP*	**P**	**21 50 26.0**	**+1.1**
	comp=Z,37nm,1.2s							
SMF	**Signal de Mont**	**88.80**	**332**		*eP*	**P**	**21 50 26.0**	**+1.1**
SMF					pmax	pmax		
	comp=Z,37nm,1.2s							
SMF	**Signal de Mont**	**88.80**	**332**		*eP*	**P**	**21 50 26.0**	**+1.1**
	comp=Z,37nm,1.2s							
AVF	**Avril sur Loir**	**88.86**	**332**		*eP*	**P**	**21 50 25.0**	**-0.1**
	comp=Z,44nm,1.0s							
AVF	**Avril sur Loir**	**88.86**	**332**		*eP*	**P**	**21 50 25.0**	**-0.1**
AVF					pmax	pmax		
	comp=Z,44nm,1.0s							
AVF	**Avril sur Loir**	**88.86**	**332**		*eP*	**P**	**21 50 25.0**	**-0.1**
	comp=Z,44nm,1.0s							
425A	**Indio Mountain**	**88.87**	**52**	⇑P		**P**	**21 50 25.8**	**+0.2**
	baz=89							
W31A	**Holland Ranch,**	**88.89**	**46**	⇑P		**P**	**21 50 26.1**	**+0.6**
	baz=89							
GRR	**Gorron**	**88.98**	**336**		*eP*	**P**	**21 50 26.0**	**+0.3**
GRR	**Gorron**	**88.98**	**336**		*eP*	**P**	**21 50 26.0**	**+0.3**
GRR	**Gorron**	**88.98**	**336**		*eP*	**P**	**21 50 26.0**	**+0.3**
MBDF	**Montbardon**	**89.23**	**329**		*eP*	**P**	**21 50 26.3**	**-0.8**
	comp=Z,8.4nm,0.6s							
MBDF	**Montbardon**	**89.23**	**329**		*eP*	**P**	**21 50 26.3**	**-0.8**
MBDF					pmax	pmax		
	comp=Z,8.0nm,0.6s							
MBDF	**Montbardon**	**89.23**	**329**		*eP*	**P**	**21 50 26.3**	**-0.8**
	comp=Z,8.4nm,0.6s							
BGF	**Bois d'Agland**	**89.25**	**333**		*eP*	**P**	**21 50 27.0**	**0.0**
	comp=Z,40nm,1.3s							
BGF	**Bois d'Agland**	**89.25**	**333**		*eP*	**P**	**21 50 27.0**	**0.0**
BGF					pmax	pmax		
	comp=Z,41nm,1.3s							
BGF	**Bois d'Agland**	**89.25**	**333**		*eP*	**P**	**21 50 27.0**	**0.0**
	comp=Z,40nm,1.3s							
Z30A	**Sanderson Ranc**	**89.53**	**48**	⇓P		**P**	**21 50 28.9**	**+0.3**
	baz=89							
426A	**McDonald Obser**	**89.55**	**51**	⇓P		**P**	**21 50 29.0**	**+0.1**
	baz=90							
SGMF	**Saint Gilles**	**89.65**	**337**		*eP*	**P**	**21 50 29.0**	**+0.2**
SGMF	**Saint Gilles**	**89.65**	**337**		*eP*	**P**	**21 50 29.0**	**+0.2**
SGMF	**Saint Gilles**	**89.65**	**337**		*eP*	**P**	**21 50 29.0**	**+0.2**
SBF	**Sospel**	**89.66**	**328**		*eP*	**P**	**21 50 28.2**	**-0.8**
SBF	**Sospel**	**89.66**	**328**		*eP*	**P**	**21 50 28.2**	**-0.8**
SBF	**Sospel**	**89.66**	**328**		*eP*	**P**	**21 50 28.2**	**-0.8**
LPIG	**La Paz**	**89.71**	**60**		LR	LR	22 24 36.9	
	comp=Z,11nm,19.2s,baz=242,slow=31							
TCF	**Toulx Ste Croi**	**89.71**	**333**		*eP*	**P**	**21 50 29.4**	**+0.2**
	comp=Z,26nm,1.2s							
TCF	**Toulx Ste Croi**	**89.71**	**333**		*eP*	**P**	**21 50 29.4**	**+0.2**
TCF					pmax	pmax		
	comp=Z,26nm,1.2s							
TCF	**Toulx Ste Croi**	**89.71**	**333**		*eP*	**P**	**21 50 29.4**	**+0.2**
	comp=Z,26nm,1.2s							
ROSF	**Rostrenen**	**89.81**	**337**		*eP*	**P**	**21 50 29.3**	**-0.2**
ROSF	**Rostrenen**	**89.81**	**337**		*eP*	**P**	**21 50 29.3**	**-0.2**
ROSF	**Rostrenen**	**89.81**	**337**		*eP*	**P**	**21 50 29.3**	**-0.2**
427A	**Hayter Ranch,**	**89.82**	**51**	⇑P		**P**	**21 50 30.2**	**+0.1**
	baz=90							
526A	**Mary Lane Ranc**	**89.93**	**52**	⇓P		**P**	**21 50 30.6**	**-0.1**
	baz=90							
VIVF	**Saint-Julien-l**	**89.97**	**331**		*eP*	**P**	**21 50 31.3**	**+0.9**
	comp=Z,34nm,1.2s							
VIVF	**Saint-Julien-l**	**89.97**	**331**		*eP*	**P**	**21 50 31.3**	**+0.9**
VIVF					pmax	pmax		
	comp=Z,34nm,1.2s							
VIVF	**Saint-Julien-l**	**89.97**	**331**		*eP*	**P**	**21 50 31.3**	**+0.9**
	comp=Z,34nm,1.2s							
PGF	**Pioggiola**	**90.05**	**327**		*eP*	**P**	**21 50 31.1**	**+0.2**
PGF	**Pioggiola**	**90.05**	**327**		*eP*	**P**	**21 50 31.1**	**+0.2**
PGF	**Pioggiola**	**90.05**	**327**		*eP*	**P**	**21 50 31.1**	**+0.2**
Z31A	**Sharp Cattle R**	**90.09**	**47**	⇓P		**P**	**21 50 31.7**	**+0.5**
	baz=90							
QUIF	**Quistinic**	**90.14**	**337**		*eP*	**P**	**21 50 31.1**	**0.0**
QUIF	**Quistinic**	**90.14**	**337**		*eP*	**P**	**21 50 31.1**	**0.0**
QUIF	**Quistinic**	**90.14**	**337**		*eP*	**P**	**21 50 31.1**	**0.0**
527A	**Woodward Ranch**	**90.17**	**52**	⇑P		**P**	**21 50 32.2**	**+0.4**
	baz=90							
FRF	**La Foret Royal**	**90.24**	**329**		*eP*	**P**	**21 50 29.6**	**-2.1**
FRF	**La Foret Royal**	**90.24**	**329**		*eP*	**P**	**21 50 29.6**	**-2.1**
626A	**Big Bend Ranch**	**90.24**	**52**	⇓P		**P**	**21 50 32.8**	**+0.7**
	baz=90							
329A	**Wagon Wheel Ra**	**90.27**	**50**	⇑P		**P**	**21 50 32.4**	**+0.3**
	baz=90							
MFF	**Saint Martin d**	**90.29**	**334**	⇑	*iP*	**P**	**21 50 32.2**	**+0.4**
MFF	**Saint Martin d**	**90.29**	**334**	⇑	*iP*	**P**	**21 50 32.2**	**+0.4**
MFF	**Saint Martin d**	**90.29**	**334**	⇑	*iP*	**P**	**21 50 32.2**	**+0.4**
SMRF	**Simiane la Rot**	**90.34**	**330**		*eP*	**P**	**21 50 33.4**	**+1.2**
SMRF	**Simiane la Rot**	**90.34**	**330**		*eP*	**P**	**21 50 33.4**	**+1.2**
LMR	**La Mourre**	**90.48**	**329**		*eP*	**P**	**21 50 32.2**	**-0.6**
	comp=Z,103nm,1.4s							
LMR	**La Mourre**	**90.48**	**329**		*eP*	**P**	**21 50 32.2**	**-0.6**
LMR					pmax	pmax		
	comp=Z,103nm,1.4s							
LMR	**La Mourre**	**90.48**	**329**		*eP*	**P**	**21 50 32.2**	**-0.6**
	comp=Z,103nm,1.4s							
Z32A	**Haskell**	**90.49**	**47**	⇑P		**P**	**21 50 33.7**	**+0.6**
	baz=90							
230A	**Sterling City**	**90.52**	**49**	⇑P		**P**	**21 50 33.1**	**-0.2**
	baz=90							
528A	**Cox Ranch, San**	**90.68**	**51**	⇓P		**P**	**21 50 34.7**	**+0.5**
	baz=91							
TXAR	**Lajitas Array**	**90.69**	**52**	P		**P**	**21 50 34.4**	**+0.3**
TXAR	**Lajitas Array**	**90.69**	**52**	P		**P**	**21 50 34.4**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=293,slow=3.5,SNR=29							
TXAR					LR	LR	22 27 06.5	
	comp=Z,176nm,19.3s,baz=260,slow=33							
TUL1	**Tulsa**	**90.70**	**43**	⇑P		**P**	**21 50 34.5**	**+0.6**
	baz=91							
627A	**Terlingua Ranc**	**90.79**	**52**	⇑P		**P**	**21 50 35.3**	**+0.7**
	baz=91							
RJF	**Les Rejaudoux**	**90.80**	**333**		*eP*	**P**	**21 50 34.7**	**+0.4**
	comp=Z,22nm,0.9s							
RJF					*eR*			
	comp=Z,432nm,18.8s							
RJF	**Les Rejaudoux**	**90.80**	**333**		*eP*	**P**	**21 50 34.7**	**+0.4**
RJF					pmax	pmax		
	comp=Z,22nm,0.9s							
RJF	**Les Rejaudoux**	**90.80**	**333**		*eP*	**P**	**21 50 34.7**	**+0.4**
	comp=Z,22nm,0.9s							
330A	**Mertzon**	**90.81**	**49**	⇑P		**P**	**21 50 35.4**	**+0.7**
	baz=91							
CAF	**Calviac**	**90.92**	**332**		*eP*	**P**	**21 50 35.5**	**+0.6**
	comp=Z,20nm,0.9s							
CAF	**Calviac**	**90.92**	**332**		*eP*	**P**	**21 50 35.5**	**+0.6**
CAF					pmax	pmax		
	comp=Z,20nm,0.9s							
CAF	**Calviac**	**90.92**	**332**		*eP*	**P**	**21 50 35.5**	**+0.6**
	comp=Z,20nm,0.9s							
LASF	**Ste Croix**	**90.95**	**331**		*eP*	**P**	**21 50 35.3**	**+0.3**
	comp=Z,29nm,1.2s							
LASF	**Ste Croix**	**90.95**	**331**		*eP*	**P**	**21 50 35.3**	**+0.3**
	comp=Z,29nm,1.2s							
529A	**Stev Forest Ra**	**91.06**	**51**	⇑P		**P**	**21 50 36.3**	**+0.5**
	baz=91							
628A	**Black Gap, Mar**	**91.08**	**52**	⇓P		**P**	**21 50 36.4**	**+0.5**
	baz=91							
SADO	**Sadowa**	**91.34**	**27**		LR	LR	22 38 41.9	
	comp=Z,109nm,18.2s,baz=327,slow=40							
232A	**Coleman**	**91.40**	**48**	⇑P		**P**	**21 50 37.8**	**+0.4**
	baz=91							
LFF	**La Frestale**	**91.40**	**333**		*eP*	**P**	**21 50 37.6**	**+0.6**
	comp=Z,53nm,1.0s							
LFF	**La Frestale**	**91.40**	**333**		*eP*	**P**	**21 50 37.6**	**+0.6**
LFF					pmax	pmax		
	comp=Z,53nm,1.0s							
LFF	**La Frestale**	**91.40**	**333**		*eP*	**P**	**21 50 37.6**	**+0.6**
	comp=Z,53nm,1.0s							
530A	**J-C Ranch, Com**	**91.59**	**50**	⇓P		**P**	**21 50 38.7**	**+0.5**
	baz=92							
431A	**Sonora**	**91.67**	**49**	⇑P		**P**	**21 50 38.8**	**+0.2**
	baz=92							
332A	**Millersview**	**91.70**	**48**	⇓P		**P**	**21 50 38.6**	**-0.2**
	baz=92							
432A	**Menard**	**92.03**	**49**	⇓P		**P**	**21 50 40.5**	**+0.2**
	baz=90							
531A	**Rocksprings**	**92.07**	**50**	⇑P		**P**	**21 50 40.9**	**+0.5**
	baz=92							
MTLF	**Montolieu**	**92.21**	**331**		*eP*	**P**	**21 50 41.2**	**+0.4**
	comp=Z,7.7nm,0.7s							
MTLF	**Montolieu**	**92.21**	**331**		*eP*	**P**	**21 50 41.2**	**+0.4**
MTLF					pmax	pmax		
	comp=Z,8.0nm,0.7s							
MTLF	**Montolieu**	**92.21**	**331**		*eP*	**P**	**21 50 41.2**	**+0.4**
	comp=Z,7.7nm,0.7s							
532A	**Rocksprings**	**92.49**	**49**	⇑P		**P**	**21 50 42.6**	**+0.2**
	baz=92							
632A	**Uvalde**	**93.00**	**50**	⇑P		**P**	**21 50 45.6**	**+0.9**
	baz=93							
EPF	**Esparros**	**93.19**	**332**		*eP*	**P**	**21 50 45.1**	**-0.3**
EPF	**Esparros**	**93.19**	**332**		*eP*	**P**	**21 50 45.1**	**-0.3**
EPF	**Esparros**	**93.19**	**332**		*eP*	**P**	**21 50 45.1**	**-0.3**
ETSF	**Etsaut**	**93.64**	**333**		*eP*	**P**	**21 50 48.1**	**+0.6**
	comp=Z,45nm,1.2s							
ETSF	**Etsaut**	**93.64**	**333**		*eP*	**P**	**21 50 48.1**	**+0.6**
ETSF					pmax	pmax		
	comp=Z,45nm,1.2s							
ETSF	**Etsaut**	**93.64**	**333**		*eP*	**P**	**21 50 48.1**	**+0.6**
	comp=Z,45nm,1.2s							
FURI	**Furi**	**94.60**	**284**		*eP*	**P**	**21 50 51.3**	**-1.4**
KEST	**Kesra**	**95.32**	**322**		LR	LR	22 40 10.3	
	comp=Z,154nm,20.4s,baz=346,slow=39							
TZTN	**Tazewell**	**96.40**	**35**		*epP*	pP	21 51 15.5	+2.4
ESDC	**Sonseca Array**	**97.69**	**333**		P	**P**	**21 51 05.8**	**-0.2**
ESDC	**Sonseca Array**	**97.69**	**333**		P	**P**	**21 51 05.8**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=14,slow=6.2,SNR=4.4							
ESDC					LR	LR	22 39 14.5	
	comp=Z,286nm,21.5s,baz=5.0,slow=38							
VNDA	**Vanda**	**114.42**	**175**		PKP	PKPdf	21 56 09.9	+0.5
VNDA	**Vanda**	**114.42**	**175**		PKP	PKPdf	21 56 09.9	+0.5
	comp=Z,1.2nm,1.1s,baz=217,slow=3.5,SNR=3.5							
TORD	**Torodi Ar. Bea**	**117.55**	**314**		PKP	**PKPdf**	**21 56 16.4**	**-1.0**
TORD					PP	PP	21 57 16.7	-12
TORD	**Torodi Ar. Bea**	**117.55**	**314**		PKP	**PKPdf**	**21 56 16.4**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=48,slow=2.9,SNR=11							
TORD					PP	PP	21 57 16.7	-12
	comp=Z,0.8nm,0.9s,baz=37,slow=8.7,SNR=4.1							
BOSA	**Boshof**	**126.20**	**259**		PKP	**PKPdf**	**21 56 33.0**	**-0.6**
BOSA	**Boshof**	**126.20**	**259**		PKP	**PKPdf**	**21 56 33.0**	**-0.6**
	comp=Z,4.3nm,0.9s,baz=66,slow=4.8,SNR=6.2							
TSUM	**Tsumeb**	**127.87**	**273**		*e*PKPdf	**PKPdf**	**21 56 35.9**	**-1.3**
SNAA	**Sanae**	**140.11**	**197**		*e*PKP	PKPdf	21 56 52.4	-6.0
VNA2	**Neumayer--Watz**	**141.68**	**196**		*e*PKP	PKPdf	21 56 45.0	-16
LPAZ	**La Paz**	**147.22**	**60**		*e*PKPdf	**PKPdf**	**21 57 13.4**	**+0.3**
LPAZ					PKPbc	**PKPdf**	**21 57 14.3**	**+1.2**
LPAZ	**La Paz**	**147.22**	**60**		PKPbc	**PKPdf**	**21 57 14.3**	**+1.2**
	comp=Z,8.5nm,0.8s,baz=315,slow=2.1,SNR=32							

*ISK **27** 21:44:41.2, 37.80N×43.55E, h2km, MD2.5*
*CSEM **27** 21:44:42.1±0.2, 37.81N×43.70E, h2km, MD3.0, Error ellipse: s-maj=11.9km s-min=3.0km az=82.0*
*DDA **27** 21:44:42.4, 37.78N×43.63E, h7km, MD3.0*
ISC 27 21:44:42.0±1.0, **37.80N**±0.03×**43.6E**±0.1, **h11**km±13km, **n12**, σ0**s30**/18, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAKT	**HAKKARI**	**0.25**	**161**	*i* P	**Pg**	**21 44 47.2**	**-0.1**
HAKT				*i* S	**Sg**	**21 44 51.0**	**+0.1**
HAKT	**HAKKARI**	**0.25**	**161**	*i* P	**Pg**	**21 44 47.2**	**-0.1**
HAKT				*i* S	**Sg**	**21 44 51.0**	**+0.1**
CUKT	**Cukurca**	**0.55**	**180**	*e*PG	**Pg**	**21 44 52.9**	**+0.2**
CUKT				*e*SG	**Sb**	**21 45 01.1**	**-0.5**
CUKT	**Cukurca**	**0.55**	**180**	*e*Pg	**Pg**	**21 44 52.9**	**+0.2**
CUKT				*e*Sg	**Sb**	**21 45 01.1**	**-0.5**
GEVA	**Gevas**	**0.67**	**320**	*i* P	**Pb**	**21 44 56.0**	**+0.1**
GEVA				*i* S	Sg	21 44 57.1	-6.9
GEVA	**Gevas**	**0.67**	**320**	*i* P	**Pb**	**21 44 56.0**	**+0.1**
TVAN	**Van**	**0.75**	**348**	*i* P	**Pb**	**21 44 57.3**	**+0.1**
TVAN				*i* S	Sg	21 44 58.7	-7.7
TVAN	**Van**	**0.75**	**348**	*i* P	**Pb**	**21 44 57.3**	**+0.1**
VANB	**Van**	**0.82**	**348**	*e*PG	**Pg**	**21 44 57.4**	**-0.4**
VANB				*e*SG	**Sb**	**21 45 09.7**	**+0.3**
VANB	**Van**	**0.82**	**348**	*e*Pg	**Pg**	**21 44 57.4**	**-0.4**
VANB				*e*Sg	**Sb**	**21 45 09.7**	**+0.3**
CLDR	**Caldiran**	**1.37**	**10**	*e*PN	**Pg**	**21 45 08.3**	**-0.1**
CLDR	**Caldiran**	**1.37**	**10**	*e*Pn	**Pg**	**21 45 08.3**	**-0.1**

*CSEM **27** 21:45:56.9±0.6, 35.15N×32.31E, h15km, Mw2.7, Error ellipse: s-maj=19.4km s-min=7.2km az=160.0*

*NIC **27** 21:45:58.3±0.1, 35.08N×32.36E, h15km, ML2.4, MW2.7*
*ISK **27** 21:45:59.4, 35.34N×32.59E, h5km, MD2.3*
ISC 27 21:45:56.9±2.6, **35.2N**±0.1×**32.31E**±0.1, **h16**km±10km, **n12**, σ0**s48**/20, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMC	**Akamas**	**0.16**	**174**	P	**Pg**	**21 46 01.4**	**+0.4**
AKMC				S	**Sg**	**21 46 03.6**	**-0.2**
AKMC	**Akamas**	**0.16**	**174**	P	**Pg**	**21 46 01.4**	**+0.4**
AKMC				S	**Sg**	**21 46 03.6**	**-0.2**
ALFC	**Alevga**	**0.24**	**98**	P	**Pb**	**21 46 03.4**	**+0.5**
	26nm,0.1s						
ALFC				S	**Sb**	**21 46 07.4**	**+0.5**
ALFC	**Alevga**	**0.24**	**98**	P	**Pb**	**21 46 03.4**	**+0.5**
	26nm,0.1s						
ALFC				S	**Sb**	**21 46 07.4**	**+0.5**
PPCY	**Paphos**	**0.30**	**174**	P	**Pg**	**21 46 02.9**	**-0.4**
PPCY	**Paphos**	**0.30**	**174**	P	**Pg**	**21 46 02.9**	**-0.4**
LEF	**Lefka**	**0.48**	**98**	*e*PG	**Pg**	**21 46 06.6**	**+0.2**
LEF				*e*SG	**Sg**	**21 46 12.0**	**-0.9**
LEF	**Lefka**	**0.48**	**98**	*e*Pg	**Pg**	**21 46 06.6**	**+0.2**
LEF				*e*Sg	**Sg**	**21 46 12.0**	**-0.9**
CSS	**Prodhromos**	**0.87**	**105**	*e*PG	**Pn**	**21 46 14.4**	**-0.1**
CSS				*e*SG	**Sg**	**21 46 25.2**	**0.0**
CSS	**Prodhromos**	**0.87**	**105**	*e*Pg	**Pn**	**21 46 14.4**	**-0.1**
CSS				*e*Sg	**Sg**	**21 46 25.2**	**0.0**
LFK	**Lefkose**	**1.01**	**85**	*e*PG	**Pb**	**21 46 15.6**	**-0.4**
LFK	**Lefkose**	**1.01**	**85**	*e*Pg	**Pb**	**21 46 15.6**	**-0.4**

PLV 27 22:18:06.6±11.0, **23.53N**×**102.36E**, **h7**km±999km, **MD3.1, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**1.63**	**12**	Pn	Pg	22 18 40.5	+2.4
KMI				Pg	Pb	22 18 43.3	+6.2
KMI				Sg	Sg	22 19 09.0	+10
KMI				smax	smax		
	comp=N,110nm,1.1s						
KMI				smax	smax		
	comp=E,94nm,0.9s						
KMI				LR	LR		
	comp=N,240nm,3.9s						
KMI				LR	LR		
	comp=E,280nm,5.0s						
TGV	**Tuan Giao**	**2.16**	**153**	*e*Pg	Pg	22 18 48.3	+0.2
TGV				*e*Sg	Sg	22 19 15.7	-0.4
DBV	**Dienbien**	**2.21**	**164**	*e*Pg	Pg	22 18 49.1	-0.1
	baz=292,slow=9.3						
DBV				*e*Sg	Sg	22 19 18.1	+0.4

MEX 27 22:20:00.8±0.5, **16.84N**×**99.67W**, **h15**km, **MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.18**	**279**	*e*P	Pb	22 20 05.7	-0.3
ACX				*i* S	Sb	22 20 09.6	+0.2
CAIG	**El Cayaco**	**0.61**	**290**	*e*P	Pg	22 20 10.8	-2.6
CAIG				*e*S	Sg	22 20 18.3	-2.6
PNIG	**Pinotepa**	**1.54**	**107**	*i* P	Pn	22 20 24.2	-3.6
PNIG				*i* S	Sn	22 20 43.1	-4.5
ARIG	**Puente Sto Nin**	**1.57**	**336**	*e*P	Pn	22 20 24.4	-3.8
ARIG				*i* S	Sn	22 20 44.0	-4.3
ZIIG	**Zihuatanejo**	**1.88**	**294**	*i* P	Pn	22 20 28.7	-3.7
ZIIG				*i* S	Sn	22 20 50.4	-5.4

JMA 27 22:31:28.4±0.6, **31.94N**×**142.74E**, **h13**km, **M3.9, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.73**	**295**	P	Pn	22 32 13.0	+1.1
BSO1	**Boso 1**	**3.08**	**332**	P	Pn	22 32 18.4	+2.3
BSO3	**Boso 3**	**3.41**	**327**	P	Pn	22 32 22.8	+1.9
BSO4	**Boso 4**	**3.65**	**327**	P	Pn	22 32 26.9	+2.5
JOD2	**Odawara 2**	**4.50**	**318**	P	Pn	22 32 37.7	+1.4
JOD2				*e*S	Sn	22 33 31.2	+2.6
JHU	**Hanno**	**4.85**

comp=Z,14nm,0.9s
SFJD Kangerlussuaq 18.26 244 P Pn 22 36 04.6 -4.3
comp=Z,0.9nm,0.3s,baz=22,slow=10,SNR=4.6
JOF Joensuu 20.97 131 *ep* **P 22 36 38.9 +0.3**
comp=Z,1.7nm,0.7s
JOF Joensuu 20.97 131 *eP* **P 22 36 38.9 +0.3**
comp=Z,1.7nm,0.7s
NB2 NORSAR Subarra 21.14 158 P P 22 36 42.2 +1.8
NB2 NORSAR Subarra 21.14 158 P P 22 36 42.2 +1.8
NB2 NORSAR Subarra 21.14 158 P P 22 36 42.3 +1.8
comp=Z,14nm,1.2s,baz=355,slow=11
NB2 NORSAR Subarra 21.14 158 P P 22 36 42.2 +1.8
NB2 NORSAR Subarra 21.14 158 P P 22 36 42.3 +1.8
comp=Z,14nm,1.2s,SNR=5.0
NOA NORSAR Array B 21.14 158 P P 22 36 42.8 +2.3
NOA NORSAR Array B 21.14 158 P P 22 36 42.8 +2.3
comp=Z,2.2nm,0.9s,baz=351,slow=9.5,SNR=4.7
NOA LR LR 22 43 22.6
comp=Z,49nm,20.5s,baz=110,slow=32
NOA NORSAR Array B 21.14 158 P P 22 36 42.8 +2.3
KAF Kangasniemi 21.24 138 *ep* **P 22 36 46.1 +4.7**
comp=Z,2.0nm,0.8s
FIA0 FINESS Array S 21.87 139 P P 22 36 49.5 +1.2
baz=323,slow=12
FIA0 FINESS Array S 21.87 139 P P 22 36 49.5 +1.2
baz=323,slow=12
FIA0 FINESS Array S 21.87 139 P P 22 36 49.5 +1.2
baz=323,slow=12,SNR=4.6
FINES FINESS Array B 21.87 139 P P 22 36 49.5 +1.2
FINES FINESS Array B 21.87 139 P P 22 36 49.5 +1.2
comp=Z,2.0nm,0.8s,baz=353,slow=12,SNR=5.4
FINES LR LR 22 44 47.6
comp=Z,217nm,19.7s,baz=348,slow=35
FINES FINESS Array B 21.87 139 P P 22 36 49.5 +1.2
HFS Hagfors 22.19 155 P P 22 36 52.2 +0.5
baz=347,slow=16
HFS Hagfors 22.19 155 P P 22 36 52.2 +0.5
baz=347,slow=16
HFS Hagfors 22.19 155 P P 22 36 53.5 +1.9
HFS Hagfors 22.19 155 P P 22 36 53.5 +1.9
comp=Z,5.4nm,1.1s,baz=2.3,slow=7.4,SNR=5.9
HFS Hagfors 22.19 155 P P 22 36 52.2 +0.5
baz=347,slow=14,SNR=5.3
FRB Frobisher Bay 23.84 261 P P 22 37 08.9 +0.4
FRB Frobisher Bay 23.84 261 P P 22 37 08.9 +0.4
comp=Z,17nm,0.9s,baz=17,slow=10,SNR=12
FRB LR LR 22 47 02.4
comp=Z,232nm,18.0s,baz=34,slow=38
FRB Frobisher Bay 23.84 261 P P 22 37 08.9 +0.4
INK Inuvik 27.85 322 P P 22 37 42.3 -2.5
INK Inuvik 27.85 322 P P 22 37 42.3 -2.5
comp=Z,2.2nm,1.1s,baz=352,slow=10.0,SNR=4.8
INK Inuvik 27.85 322 P P 22 37 42.3 -2.5
COLD Coldfoot 30.21 334 *eP* **P 22 38 07.5 +1.7**
comp=Z,7.0nm,1.2s
COLD Coldfoot 30.21 334 *eP* **P 22 38 07.5 +1.7**
comp=Z,7.0nm,1.2s
YKA Yellowknife Ar 31.46 303 P P 22 38 15.8 -1.1
YKA PcP **PcP 22 41 08.6 -0.9**
YKA Yellowknife Ar 31.46 303 P P 22 38 15.8 -1.1
comp=Z,1.0nm,0.9s,baz=10,slow=8.8,SNR=18
YKA PcP **PcP 22 41 08.5 -0.9**
comp=Z,1.3nm,0.9s,baz=8.3,slow=2.6,SNR=14
YKA Yellowknife Ar 31.46 303 P P 22 38 15.8 -1.1
YKA Yellowknife Ar 31.46 303 PcP PcP 22 41 08.6 -0.9
EGAK Eagle 31.97 326 *eP* **P 22 38 22.8 +1.5**
comp=Z,5.5nm,0.9s
EGAK Eagle 31.97 326 *eP* **P 22 38 22.8 +1.5**
comp=Z,5.5nm,0.9s
SCHQ Schefferville 32.18 254 *eP* **P 22 38 21.5 -1.8**
SCHQ Schefferville 32.18 254 LR LR 22 51 28.2
comp=Z,233nm,20.3s,baz=141,slow=36
SCHQ Schefferville 32.18 254 *eP* **P 22 38 21.5 -1.8**
ILAR Eielson Array 32.42 331 P P 22 38 23.8 -1.4
ILAR PcP **PcP 22 41 10.7 -1.3**
ILAR Eielson Array 32.42 331 P P 22 38 23.8 -1.4
comp=Z,1.9nm,0.9s,baz=3.4,slow=7.8,SNR=18
ILAR PcP **PcP 22 41 10.7 -1.3**
comp=Z,0.5nm,0.7s,baz=341,slow=1.5,SNR=4.1
ILAR LR LR 22 51 09.2
comp=Z,64nm,18.6s,baz=327,slow=36
ILAR Eielson Array 32.42 331 P P 22 38 23.8 -1.4
ILAR Eielson Array 32.42 331 PcP PcP 22 41 10.7 -1.3
AKASG Malin Array Be 32.78 139 P P 22 38 30.2 +1.7
AKASG Malin Array Be 32.78 139 P P 22 38 30.2 +1.7
comp=Z,0.4nm,0.4s,baz=339,slow=5.0,SNR=4.3
AKASG Malin Array Be 32.78 139 P P 22 38 30.2 +1.7
GERES GERESS Array B 33.44 158 P P 22 38 36.9 +2.4
GERES GERESS Array B 33.44 158 P P 22 38 36.9 +2.4
comp=Z,0.3nm,0.6s,baz=27,slow=9.2,SNR=7.1
GERES GERESS Array B 33.44 158 P P 22 38 36.9 +2.4
KOLS Kolonicke sedl 33.93 148 *eP* **P 22 38 40.7 +2.1**
KOLS *e* 22 38 49.7
KOLS *e* 22 56 16.6
VYHS Vyhne 34.11 152 *eP* **P 22 38 42.0 +1.8**
VYHS *e* 22 38 50.4
SML Sawmill 35.46 331 *eP* P 22 38 53.9 +2.2
comp=Z,4.1nm,1.3s
AKTO Aktyubinsk 36.54 107 P P 22 39 00.4 -0.6
AKTO Aktyubinsk 36.54 107 P P 22 39 00.4 -0.6
comp=Z,1.4nm,0.8s,baz=340,slow=7.5,SNR=4.3
AKTO Aktyubinsk 36.54 107 P P 22 39 00.4 -0.6
ZALV Zalesovo Beam 36.99 79 P P 22 39 04.9 +0.1
ZALV Zalesovo Beam 36.99 79 P P 22 39 04.9 +0.1
comp=Z,0.3nm,0.3s,baz=342,slow=7.6,SNR=3.4
ZALV LR LR 22 56 60.0
comp=Z,124nm,18.3s,baz=338,slow=41
ZALV Zalesovo Beam 36.99 79 P P 22 39 04.9 +0.1
ABKAR Akbulak array 37.96 106 *eP* **P 22 39 12.0 -1.1**
comp=Z,6.5nm,1.4s
ABKAR Akbulak array 37.96 106 P P 22 39 12.0 -1.1
comp=Z,6.5nm,1.4s
KURK Kurchatov 39.24 86 *eP* **P 22 39 23.4 -0.4**
comp=Z,5.9nm,1.1s
KURK Kurchatov 39.24 86 *eP* **P 22 39 23.4 -0.4**
comp=Z,5.9nm,1.1s
KURBB Kurchatov Arra 39.32 87 P P 22 39 23.9 -0.5
comp=Z,1.4nm,0.9s,baz=346,slow=7.8,SNR=16
ULM Lac du Bonnet 40.84 281 *eP* **P 22 39 37.9 +0.7**
comp=Z,30nm,1.6s
ULM Lac du Bonnet 40.84 281 LR LR 22 56 27.6
comp=Z,251nm,19.4s,baz=46,slow=36
ULM Lac du Bonnet 40.84 281 *eP* **P 22 39 37.8 +0.7**
comp=Z,30nm,1.6s
ESDC Sonseca Array 42.10 179 P P 22 39 49.2 +2.3
ESDC Sonseca Array 42.10 179 P P 22 39 49.9 +2.3
comp=Z,0.3nm,0.3s,baz=1.4,slow=7.3,SNR=5.4
ESDC Sonseca Array 42.10 179 P P 22 39 49.9 +2.3
MK31 Makanchi Array 43.61 84 *eP* **P 22 39 59.0 -0.7**
MK31 Makanchi Array 43.61 84 *eP* **P 22 39 59.0 -0.7**
MKAR Makanchi Array 43.61 84 *eP* **P 22 39 59.2 -0.5**
MKAR Makanchi Array 43.61 84 P P 22 39 58.7 -1.0
comp=Z,0.7nm,0.8s,baz=353,slow=6.6,SNR=7.9
MKAR LR LR 23 01 57.5
comp=Z,135nm,18.7s,baz=352,slow=41
MKAR Makanchi Array 43.61 84 *eP* **P 22 39 59.2 -0.5**
BRTR Keskin Array B 44.09 137 P P 22 40 06.0 +2.3
BRTR Keskin Array B 44.09 137 P P 22 40 06.0 +2.3
comp=Z,0.9nm,1.0s,baz=357,slow=6.7,SNR=4.3
BRTR LR LR 22 59 40.2
comp=Z,40nm,18.2s,baz=232,slow=38
BRTR Keskin Array B 44.09 137 P P 22 40 06.1 +2.3
PETK Petropavlovsk- 45.16 15 LR LR 22 58 45.9
comp=Z,42nm,19.9s,baz=216,slow=36
NEW Newport 45.68 300 *eP* **P 22 40 16.7 +0.4**
comp=Z,8.5nm,1.0s
NEW Newport 45.68 300 *eP* **P 22 40 16.7 +0.4**
comp=Z,8.5nm,1.0s
BSMT Bassoo Peak 45.79 298 *eP* **P 22 40 17.8 +0.5**
BSMT Bassoo Peak 45.79 298 *eP* **P 22 40 17.8 +0.5**
SONM Songino Array 45.93 61 P P 22 40 17.1 -1.2
SONM Songino Array 45.93 61 P P 22 40 17.1 -1.2
comp=Z,0.9nm,0.8s,baz=348,slow=6.7,SNR=6.7
SONM LR LR 23 00 05.0
comp=Z,177nm,21.8s,baz=250,slow=37
SONM Songino Array 45.93 61 P P 22 40 17.1 -1.2
ULN Ulaanbaatar 45.98 60 *eP* **P 22 40 17.8 -1.0**
comp=Z,29nm,1.9s
SWMT Swartz Lake 46.02 297 *eP* **P 22 40 21.2 +2.2**
SWMT Swartz Lake 46.02 297 *eP* **P 22 40 21.2 +2.2**
SLMT Seeley Lake 46.22 297 *eP* **P 22 40 20.6 0.0**
SLMT Seeley Lake 46.22 297 *eP* **P 22 40 20.6 0.0**
TKM2 Tokmak 2 46.42 92 *eP* **P 22 40 22.6 +0.3**
comp=Z,5.2nm,1.3s
TKM2 Tokmak 2 46.42 92 *eP* **P 22 40 22.6 +0.3**
comp=Z,5.2nm,1.3s
CHMT Chamberlain Mo 46.51 296 *eP* **P 22 40 22.9 -0.1**
CHMT Chamberlain Mo 46.51 296 *eP* **P 22 40 22.9 -0.1**
AAK Ala-Archa 46.54 93 *eP* **P 22 40 24.2 +1.0**
comp=Z,9.3nm,1.3s
AAK Ala-Archa 46.54 93 *eP* **P 22 40 24.2 +1.0**
comp=Z,9.3nm,1.3s
MSO Missoula 46.69 297 *eP* **P 22 40 24.6 +0.4**
comp=Z,17nm,1.1s
MSO Missoula 46.69 297 *eP* **P 22 40 24.6 +0.4**
comp=Z,17nm,1.1s
WMQ Urumqi 47.30 80 P P 22 40 31.0 +2.0
WMQ sP sP 22 40 38.0 +5.0
WMQ PP **PP 22 42 22.0 +2.3**
WMQ ScP **ScP 22 45 54.0 +0.7**
WMQ S **S 22 47 24.0 +1.9**
WMQ sS sS 22 47 31.0 +4.2
WMQ ScS **ScS 22 50 22.0 -0.6**
WMQ SS **SS 22 50 45.0 -3.8**
WMQ pmax pmax
comp=Z,18nm,1.0s
WMQ pmax pmax
comp=Z,90nm,5.0s
WMQ LR LR
comp=N,120nm,16.0s
WMQ LR LR
comp=E,180nm,16.0s
WMQ LR LR
comp=Z,100nm,16.0s
ECSD EROS Data Cent 47.32 280 *eP* **P 22 40 29.5 +0.4**
ECSD EROS Data Cent 47.32 280 *eP* **P 22 40 29.5 +0.4**
LRM Limekiln Ridge 47.48 295 *eP* **P 22 40 30.5 -0.1**
LRM Limekiln Ridge 47.48 295 *eP* **P 22 40 30.5 -0.1**
LON Longmire 47.75 304 *eP* **P 22 40 32.6 +0.1**
comp=Z,17nm,1.6s
LON Longmire 47.75 304 *eP* **P 22 40 32.6 +0.1**
comp=Z,17nm,1.6s
MCMT McKenzie Canyo 48.51 296 *eP* **P 22 40 37.5 -1.1**
comp=Z,5.1nm,1.3s
MCMT McKenzie Canyo 48.51 296 *eP* **P 22 40 37.5 -1.1**
comp=Z,5.1nm,1.3s
BMO Blue Mountains 49.06 300 *eP* P 22 40 45.9 +3.2
IMW Indian Meadow 49.17 293 *eP* **P 22 40 44.0 +0.3**
comp=Z,11nm,1.2s
IMW Indian Meadow 49.17 293 *eP* **P 22 40 44.0 +0.3**
comp=Z,11nm,1.2s
MOOW Moose Ponds 49.29 293 *eP* P 22 40 48.0 +3.5
comp=Z,8.5nm,1.3s
LOHW Long Hollow 49.40 293 *eP* **P 22 40 46.3 +0.9**
comp=Z,14nm,1.5s
LOHW Long Hollow 49.40 293 *eP* **P 22 40 46.3 +0.9**
comp=Z,14nm,1.5s
KSH Kashi 49.81 92 *eP* **P 22 40 50.8 +2.4**
KSH pP pP 22 40 55.0 +3.7
KSH sP sP 22 40 58.3 +5.9
KSH PcP **PcP 22 42 11.0 +2.0**
KSH PP PP 22 42 47.5 +4.8
KSH ScP **ScP 22 46 05.3 +1.2**
KSH S **S 22 48 00.3 +2.6**
KSH sS sS 22 48 08.3 +5.9
KSH ScS **ScS 22 50 39.0 -0.6**
KSH SS **SS 22 51 29.0 -0.6**
KSH pmax pmax
comp=Z,1.0nm,0.3s
KSH LR LR
comp=N,320nm,12.0s
KSH LR LR
comp=E,310nm,10.0s
KSH LR LR
comp=Z,210nm,5.1s
HLID Hailey 49.96 297 *eP* P 22 40 52.5 +3.0
comp=Z,9.5nm,1.4s
BW06 Boulder Array 50.09 292 *eP* P 22 40 53.5 +2.8
PDAR Pinedale Array 50.09 292 P P 22 40 49.7 -1.0
PDAR Pinedale Array 50.09 292 P P 22 40 49.7 -1.0
comp=Z,1.1nm,1.1s,baz=15,slow=6.2,SNR=4.7
PDAR LR LR 23 02 23.0
comp=Z,217nm,18.3s,baz=134,slow=37
PDAR Pinedale Array 50.09 292 P P 22 40 49.7 -1.0
MFID Camas Ranch 50.29 298 *eP* **P 22 40 52.7 +0.7**
comp=Z,10nm,1.4s
MFID Camas Ranch 50.29 298 *eP* **P 22 40 52.7 +0.7**
comp=Z,10nm,1.4s
PHWY Pilot Hill 50.97 288 *eP* **P 22 40 57.7 +0.3**
comp=Z,5.8nm,0.6s
PHWY Pilot Hill 50.97 288 *eP* **P 22 40 57.7 +0.3**
comp=Z,5.8nm,0.6s
HWUT Hardware Ranch 51.50 294 *eP* **P 22 41 01.1 -0.2**
comp=Z,8.8nm,1.3s
HWUT Hardware Ranch 51.50 294 *eP* **P 22 41 01.1 -0.2**
comp=Z,8.8nm,1.3s
SMCO Snowmass 53.26 289 *eP* **P 22 41 14.8 +0.2**
comp=Z,11nm,1.3s
SMCO Snowmass 53.26 289 *eP* **P 22 41 14.8 +0.2**
comp=Z,11nm,1.3s
GTA Gaotai 53.33 69 *eP* **P 22 41 14.3 -0.5**
GTA pP **pP 22 41 18.3 +0.6**
GTA sP sP 22 41 21.8 +3.0
GTA pmax pmax
comp=Z,2.0nm,1.1s
TKL Tuckaleechee C 53.37 265 LR LR 23 04 26.0
comp=Z,118nm,19.0s,baz=24,slow=37
HHC Hu-ho-hao-te 53.45 58 *eP* **P 22 41 15.3 -0.3**
HHC sP sP 22 41 22.3 +2.7
HHC PP **PP 22 43 17.5 +1.8**
HHC S **S 22 48 46.5 -1.3**
HHC sS sS 22 48 55.0 +2.4
HHC SS **SS 22 52 26.8 -0.4**
HHC pmax pmax
comp=Z,33nm,1.0s
HHC pmax pmax
comp=Z,160nm,5.6s
HHC LR LR
comp=N,240nm,15.3s
HHC LR LR
comp=E,280nm,14.1s
HHC LR LR
comp=Z,220nm,16.0s
KBL Kabul 53.69 100 *eP* **P 22 41 17.8 +0.3**
comp=Z,20nm,2.0s
KBL Kabul 53.69 100 *eP* **P 22 41 17.8 +0.3**
comp=Z,20nm,2.0s
SDCO Great Sand Dun 54.47 287 *eP* **P 22 41 21.2 -2.0**
comp=Z,9.2nm,1.7s
ARUT Antelope Range 55.51 294 *eP* P 22 41 26.2 -4.5
NVAR Mina Array Bea 55.51 299 P P 22 41 29.2 -1.5
NVAR Mina Array Bea 55.51 299 P P 22 41 29.2 -1.5
comp=Z,1.4nm,0.8s,baz=33,slow=9.0,SNR=6.1
NVAR LR LR 23 04 58.2
comp=Z,138nm,19.7s,baz=141,slow=36
NVAR Mina Array Bea 55.51 299 P P 22 41 29.2 -1.5
LZH Lanzhou 57.15 66 *eP* **P 22 41 43.3 +0.9**
LZH pP pP 22 41 49.0 +3.7
LZH sP sP 22 41 51.0 +4.6
LZH pmax pmax
comp=Z,14nm,1.0s
GSC Goldstone 58.40 297 *eP* **P 22 41 52.0 +0.9**
comp=Z,10nm,1.3s
GSC Goldstone 58.40 297 *eP* **P 22 41 52.0 +0.9**
comp=Z,10nm,1.3s
KSRS Korea Array 58.66 43 LR LR 23 07 13.5
comp=Z,38nm,20.7s,baz=353,slow=36
TXAR Lajitas Array 62.47 283 P P 22 42 18.1 -0.9
TXAR Lajitas Array 62.47 283 P P 22 42 18.1 -0.9
comp=Z,1.1nm,0.9s,baz=57,slow=4.8,SNR=5.5
TXAR LR LR 23 09 46.3
comp=Z,118nm,18.5s,baz=5.0,slow=36
TXAR Lajitas Array 62.47 283 P P 22 42 18.1 -0.9
NJ2 Nanjing 63.01 53 *eP* **P 22 42 23.0 +0.6**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
GYA Guiyang 67.01 65 *eP* P 22 42 51.0 +2.4
GYA pmax pmax
comp=Z,10.0nm,0.8s
KMI Kunming 67.79 69 P P 22 42 54.0 +0.3
KMI pmax pmax
comp=Z,5.0nm,0.7s
TORD Torodi Ar. Bea 68.57 173 P P 22 42 59.0 +0.6
TORD Torodi Ar. Bea 68.57 173 P P 22 42 59.0 +0.6
comp=Z,3.9nm,0.9s,baz=356,slow=6.3,SNR=19
TORD Torodi Ar. Bea 68.57 173 P P 22 42 59.0 +0.6
CMAR Chiang Mai Arr 73.82 74 P P 22 43 35.6 +5.5
CMAR Chiang Mai Arr 73.82 74 P P 22 43 35.6 +5.5
comp=Z,0.5nm,0.3s,baz=343,slow=6.2,SNR=5.5
CMAR LR LR 23 19 04.6
comp=Z,45nm,20.6s,baz=142,slow=38
QIZ Qiongzhong 74.74 63 P P 22 43 35.3 -0.2
QIZ S **S 22 53 12.8 +1.1**
QIZ pmax pmax
comp=Z,16nm,1.4s
PSI Prapat 89.22 76 LR LR 23 28 23.5
comp=Z,73nm,20.0s,baz=16,slow=38
KAPI Kappang 99.69 56 LR LR 23 30 41.7
comp=Z,47nm,18.6s,baz=284,slow=35

IDC 27 22:33:54.6±1.0, 13°96N×145°04E, h151km±4km, mb3.2/4, mb1 3.5/4, mb1mx3.2/25, mbtmp3.2/4, Error ellipse: s-maj=50.4km s-min=19.6km az=97.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
GUMO	**Guam**	**0.40**	**204**	P	P		Pn	22 34 17.5	+1.8
	185nm,0.3s,baz=156,slow=2.9,SNR=62								
GUMO				S			Sn	22 34 33.0	+1.2
	464nm,0.3s,baz=307,slow=22,SNR=82								
WRA	**Warramunga Arr**	**35.29**	**198**	P	P		P	22 40 34.9	-0.4
	2.8nm,0.6s,baz=20,slow=9.3,SNR=18								
ASAR	**Alice Springs**	**38.95**	**196**	P	P		P	22 41 06.1	0.0
	0.7nm,0.4s,baz=17,slow=13,SNR=8.9								
MKAR	**Makanchi Array**	**61.34**	**316**	P	P		P	22 43 54.5	0.0
	0.2nm,0.4s,baz=92,slow=8.7,SNR=6.8								
ILAR	**Eielson Array**	**68.17**	**25**	P	P		P	22 44 37.4	-0.9
	0.1nm,0.5s,baz=241,slow=6.0,SNR=4.2								

IDC 27 22:47:54.6±1.2, 8°22N×37°95W, h0km, mb3.9/7, mb1 4.2/7, mb1mx3.8/25, mbtmp3.9/7, MS3.9/11, Ms1 3.9/11, ms1mx3.7/27, Error ellipse: s-maj=36.7km s-min=26.9km az=170.0

ISCJB 27 22:47:55.1±0.8, 8°3N±0°2×37°9W±0°1, h16km, mb3.9/9, MS4.0/10, Error ellipse: s-maj=25.6km s-min=14.1km az=158.2

NEIC 27 22:47:55.8±0.7, 8°24N×37°84W, h10km, mb4.3/3, Error ellipse: s-maj=23.6km s-min=12.9km az=159.0

ISC 27 22:47:56.7±0.9, 8°2N±0°2×37°9W±0°1, h16km, n24, σ0s95/18, mb4.1/9, MS3.9/10, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
RCBR	**Riachuelo**	**14.07**	**172**	LR	LR		LR	22 55 15.3	
	comp=Z,154nm,20.4s,baz=356,slow=31								
SACV	**Santiago Islan**	**15.48**	**63**	Pn	**Pn**		**Pn**	**22 51 33.0**	**-1.6**
BBTS	**Babate**	**21.85**	**71**	LR	LR			22 59 35.5	
	comp=Z,414nm,18.4s,baz=265,slow=32								
SJG	**San Juan**	**29.22**	**293**	LR	LR			23 03 26.1	
	comp=Z,385nm,20.4s,baz=94,slow=32								
SAML	**Samuel**	**30.45**	**237**	*eP*	**P**		**P**	**22 54 09.3**	**+0.3**
	5.3nm,1.1s								
ROSC	**El Rosal**	**36.38**	**267**	LR	LR			23 09 26.9	
	comp=Z,258nm,20.9s,baz=81,slow=36								
LPAZ	**La Paz**	**38.60**	**231**	*eP*	**P**		**P**	**22 55 19.7**	**-0.4**
	1.7nm,0.8s								
LPAZ				*ePP*			**PP**	**22 56 47.5**	**-1.1**
LPAZ	**La Paz**	**38.60**	**231**	P	**P**		**P**	**22 55 19.8**	**-0.4**
	1.8nm,0.8s,baz=33,slow=3.3,SNR=8.2								
LPAZ				LR	LR			23 10 16.5	
	comp=Z,126nm,19.8s,baz=212,slow=35								
TORD	**Torodi Ar. Bea**	**39.14**	**79**	P	**P**		**P**	**22 55 25.4**	**+1.4**
TORD	**Torodi Ar. Bea**	**39.14**	**79**	P	**P**		**P**	**22 55 25.4**	**+1.4**
	1.3nm,0.9s,baz=274,slow=9.7,SNR=10								
TORD				LR				23 10 04.9	
	comp=Z,420nm,19.3s,baz=260,slow=34								
ESDC	**Sonseca Array**	**43.59**	**39**	LR	LR			23 10 13.0	
	comp=Z,100nm,21.0s,baz=245,slow=31								
ULM	**Lac du Bonnet**	**63.57**	**323**	P	**P**		**P**	**22 58 27.3**	**+0.7**
ULM	**Lac du Bonnet**	**63.57**	**323**	P	**P**		**P**	**22 58 27.3**	**+0.7**
	1.4nm,0.5s,baz=117,slow=3.5,SNR=3.6								
TXAR	**Lajitas Array**	**64.97**	**298**	P	**P**		**P**	**22 58 36.3**	**0.0**
TXAR	**Lajitas Array**	**64.97**	**298**	P	**P**		**P**	**22 58 36.3**	**0.0**
	0.2nm,0.6s,baz=81,slow=7.9,SNR=3.5								
TXAR				LR	LR			23 24 50.1	
	comp=Z,58nm,21.0s,baz=250,slow=34								
FFC	**Flin Flon**	**68.53**	**326**	*eP*	**P**		**P**	**22 58 57.7**	**-0.7**
	7.2nm,1.1s								
FINES	**FINESS Array B**	**70.53**	**27**	LR	LR			23 25 11.5	
	comp=Z,38nm,18.1s,baz=117,slow=32								
BOSA	**Boshof**	**70.96**	**124**	LR	LR			23 24 09.2	
	comp=Z,139nm,19.6s,baz=324,slow=31								
PDAR	**Pinedale Array**	**71.06**	**312**	P	**P**		**P**	**22 59 15.6**	**+1.0**
PDAR	**Pinedale Array**	**71.06**	**312**	P	**P**		**P**	**22 59 15.6**	**+1.0**
	0.4nm,0.8s,baz=119,slow=5.4,SNR=4.5								
PDAR				LR	LR			23 26 16.1	
	comp=Z,179nm,21.7s,baz=74,slow=32								
YKA	**Yellowknife Ar**	**76.66**	**332**	P	**P**		**P**	**22 59 46.6**	**0.0**
YKA	**Yellowknife Ar**	**76.66**	**332**	P	**P**		**P**	**22 59 46.6**	**0.0**
	2.1nm,1.1s,baz=98,slow=6.0,SNR=10								
INK	**Inuvik**	**84.54**	**338**	P	**P**		**P**	**23 00 27.8**	**-1.0**
INK	**Inuvik**	**84.54**	**338**	P	**P**		**P**	**23 00 27.8**	**-1.0**
	2.0nm,1.1s,baz=57,slow=2.0,SNR=6.3								

IDC 27 23:12:14.6±1.6, 4°14N×127°06E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/23, mbtmp3.7/4, Error ellipse: s-maj=142.9km s-min=21.7km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
WRA	**Warramunga Arr**	**24.98**	**164**	P	P		P	23 17 40.0	-0.1
	4.1nm,0.7s,baz=344,slow=11,SNR=21								
ASAR	**Alice Springs**	**28.43**	**167**	P	P		P	23 18 10.9	-0.4
	0.2nm,0.4s,baz=338,slow=7.0,SNR=3.7								
STKA	**Stephens Creek**	**38.40**	**160**	P	P		P	23 19 38.0	+0.1
	2.0nm,0.8s,baz=343,slow=11,SNR=3.8								
MKAR	**Makanchi Array**	**57.41**	**325**	P	P		P	23 22 04.6	-0.5
	0.2nm,0.4s,baz=122,slow=8.2,SNR=9.8								
MKAR				PcP	PcP			23 22 59.7	+0.7
	0.3nm,0.7s,baz=120,slow=3.4,SNR=4.0								

AUST 27 23:18:33.0, 7°99N×127°53E, h15km

ISCJB 27 23:18:40.0±0.4, 7°56N±0°05×127°17E±0°06, h52km, mb4.0/15, MS2.9/1, Error ellipse: s-maj=9.1km s-min=6.2km az=136.7

MAN 27 23:18:40, 7°64N×127°06E, h13km, mb4.8, ML3.7, MS3.8

IDC 27 23:18:46.1±2.2, 7°50N×126°74E, h92km±20km, mb3.7/14, mb1 3.8/14, mb1mx3.7/25, mbtmp3.7/14, MS3.0/1, Ms1 3.2/1, ms1mx2.3/28, Error ellipse: s-maj=34.8km s-min=12.6km az=79.0

ISC 27 23:18:41.7±0.6, 7°57N±0°06×127°13E±0°09, h52km, n34, σ1s09/32, mb4.0/15, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
MATI	**Mati**	**1.06**	**234**	*eP*	**Pn**		**Pn**	**23 18 58.3**	**-2.1**
DAV	**Davao City (W)**	**1.61**	**252**	P	**Pn**		**Pn**	**23 19 08.6**	**+0.7**
	41nm,0.3s,baz=34,slow=2.9,SNR=23								
BUTP	**Butuan**	**2.04**	**313**	*eP*	**Pn**		**Pn**	**23 19 12.3**	**-1.3**
BUKP	**Musuan**	**2.07**	**279**	*eP*	**Pn**		**Pn**	**23 19 14.4**	**+0.3**
CGP	**Cagayan de Oro**	**2.56**	**290**	*eP*	**Pn**		**Pn**	**23 19 20.5**	**-0.3**
CGP				*i*	S		**Sn**	**23 19 51.0**	**+0.2**
CTBH	**Cotabato--PC H**	**2.88**	**263**	*iP*	**Pn**		**Pn**	**23 19 25.4**	**+0.3**
MSLP	**Maasin**	**3.39**	**319**	*eP*	**Pn**		**Pn**	**23 19 31.5**	**-0.7**
PAGZ	**Pagadian**	**3.72**	**274**	*eP*	**Pn**		**Pn**	**23 19 37.5**	**+0.8**
DCPH	**Dipolog City**	**3.87**	**285**	*eP*	**Pn**		**Pn**	**23 19 39.8**	**+1.1**
PALU	**Palau**	**7.29**	**91**	S	Sn			23 21 30.6	-17
	baz=6.9,SNR=5.2								
LUWI	**Luwuk**	**9.60**	**207**	P	Pn			23 21 02.6	+5.3
	baz=10,SNR=5.2								
MTN	**Manton Dam**	**20.67**	**169**	P	**P**		**P**	**23 23 17.2**	**-0.2**
	baz=21,SNR=9.3								
KDU	**Kakadu**	**20.82**	**165**	P	**P**		**P**	**23 23 18.4**	**-0.6**
	baz=21,SNR=12								
FITZ	**Fitzroy Crossi**	**25.55**	**183**	P	**P**		**P**	**23 24 04.9**	**-1.0**
	1.6nm,0.5s,baz=5.2,slow=9.3,SNR=7.8								
WRA	**Warramunga Arr**	**28.25**	**166**	P	**P**		**P**	**23 24 30.2**	**0.0**
	2.5nm,0.6s,baz=346,slow=10,SNR=14								
CMAR	**Chiang Mai Arr**	**29.46**	**294**	LR	LR			23 36 01.6	
	comp=Z,30nm,19.5s,baz=105,slow=36								
KSRS	**Korea Array**	**29.75**	**1**	P	**P**		**P**	**23 24 44.6**	**+1.4**
	0.5nm,0.3s,baz=186,slow=11,SNR=3.6								
ASAR	**Alice Springs**	**31.75**	**168**	P	**P**		**P**	**23 25 02.1**	**+1.1**
	0.7nm,0.5s,baz=341,slow=7.4,SNR=6.9								
MEEK	**Meekatharra**	**35.00**	**193**	P	**P**		**P**	**23 25 29.4**	**0.0**
	baz=36,SNR=9.5								
USRK	**Ussuriysk Arra**	**36.73**	**6**	P	**P**		**P**	**23 25 45.1**	**+1.2**
	1.5nm,0.6s,baz=180,slow=5.4,SNR=3.8								
MORW	**Morawa**	**37.96**	**196**	P	**P**		**P**	**23 25 54.8**	**+0.3**
	baz=39,SNR=4.5								
BLDU	**Ballidu**	**39.26**	**194**	P	**P**		**P**	**23 26 05.7**	**+0.3**
	baz=40,SNR=8.0								

BBOO	**Buckleboo**	**41.05**	**169**	P	**P**	**23 26 20.0**	**-0.2**
	baz=42,SNR=5.3						
SONM	**Songino Array**	**43.83**	**340**	P	**P**	**23 26 44.0**	**+1.2**
	0.3nm,0.4s,baz=133,slow=8.1,SNR=2.8						
MKAR	**Makanchi Array**	**54.68**	**324**	P	**P**	**23 28 04.4**	**-1.2**
	3.5nm,0.8s,baz=122,slow=8.1,SNR=44						
ZALV	**Zalesovo Beam**	**57.38**	**332**	P	**P**	**23 28 22.5**	**-2.2**
	0.7nm,0.4s,baz=120,slow=5.6,SNR=6.4						
ILAR	**Eielson Array**	**81.49**	**26**	P	**P**	**23 30 53.9**	**+0.6**
	0.7nm,0.8s,baz=248,slow=4.8,SNR=8.1						
JOF	**Joensuu**	**85.96**	**333**	*ep*	**P**	**23 31 15.2**	**-1.0**
	1.2nm,0.6s						
ARCES	**ARCESS Array B**	**87.00**	**340**	P	**P**	**23 31 19.7**	**-1.4**
	2.3nm,1.0s,baz=68,slow=5.6,SNR=6.1						
VNDA	**Vanda**	**87.17**	**173**	P	**P**	**23 31 22.9**	**+1.2**
	0.7nm,0.8s,baz=314,slow=7.8,SNR=3.3						
BRTR	**Keskin Array B**	**87.89**	**310**	P	**P**	**23 31 24.6**	**-1.6**
	0.9nm,0.7s,baz=113,slow=4.9,SNR=6.7						
FINES	**FINESS Array B**	**88.65**	**332**	P	**P**	**23 31 28.1**	**-1.1**
	4.2nm,1.0s,baz=72,slow=6.2,SNR=9.2						
YKA	**Yellowknife Ar**	**95.86**	**24**	P	**P**	**23 32 04.0**	**+1.5**
	0.1nm,0.7s,baz=296,slow=4.0,SNR=3.2						
TORD	**Torodi Ar. Bea**	**122.02**	**291**	PKP	**PKPdf**	**23 37 30.8**	**-0.7**
	0.4nm,0.8s,baz=60,slow=1.7,SNR=8.6						

MEX 27 23:20:07.9±0.3, 17°.32N×101°.36W, h22km±10km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.30**	**340**	*i* P	Pb	23 20 13.5	-1.2
ZIIG				*eS*	Sb	23 20 18.0	-1.3
CAIG	**El Cayaco**	**1.08**	**105**	*eP*	Pn	23 20 24.5	-3.2
CAIG				*i* S	Sb	23 20 37.7	-3.8
ARIG	**Puente Sto Nin**	**1.35**	**45**	*eP*	Pn	23 20 28.7	-2.8
ARIG				*eSn*	Sn	23 20 44.5	-4.4
MMIG	**Aquila**	**2.12**	**297**	*i* P	Pn	23 20 39.5	-2.6
MMIG				*i* S	Sn	23 21 03.8	-4.0
YAIG	**Yautepec**	**2.66**	**55**	*i* P	Pn	23 20 47.5	-2.2
YAIG				*i* S	Sn	23 21 18.6	-2.9

*ISCJB **27** 23:42:23.0±0.5, 59°.83S±0°.09×26°.3W±0°.2, h10km, mb4.0/10, MS3.4/1, Error ellipse: s-maj=16.4km s-min=10.3km az=144.7*
*IDC **27** 23:42:23.4±0.6, 59°.78S×26°.36W, h0km, mb4.1/9, mb1 4.2/10, mb1mx4.1/18, mbtmp4.1/10, ML4.0/1, MS3.2/2, Ms1 3.1/2, ms1mx3.0/16, Error ellipse: s-maj=23.4km s-min=17.6km az=55.0*
*NEIC **27** 23:42:24.6±0.4, 59°.79S×26°.34W, h10km, mb4.2/7, Error ellipse: s-maj=13.3km s-min=9.4km az=50.0*

ISC 27 23:42:24.6±0.5, 59°.8S±0°.1×26°.3W±0°.1, h10km, n39, σ0°91/37, mb4.1/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA2	**Neumayer--Watz**	**13.58**	**153**	*e*Pn	**Pn**	**23 45 36.0**	**-0.9**
SNAA	**Sanae**	**15.16**	**151**	*e*Pn	**Pn**	**23 45 57.5**	**-1.1**
SNAA	**Sanae**	**15.16**	**151**	*e*Pn	**Pn**	**23 45 57.8**	**-0.7**
	7.2nm,0.5s						
SNAA				*e*Sn	Sn	23 48 32.5	-14
SNAA	**Sanae**	**15.16**	**151**	Pn	**Pn**	**23 45 56.8**	**-1.7**
	0.7nm,0.3s,baz=320,slow=14,SNR=41						
SNAA				Sn	Sn	23 48 30.0	-16
	0.1nm,0.3s,baz=324,slow=19,SNR=5.3						
SNAA				LR	LR	23 50 29.4	
	comp=Z,50nm,19.1s,baz=18,slow=32						
QSPA	**South Pole Qui**	**30.45**	**180**	*e*P	**P**	**23 48 38.2**	**+1.2**
	2.9nm,0.5s						
QSPA	**South Pole Qui**	**30.45**	**180**	P	**P**	**23 48 37.6**	**+0.6**
	1.8nm,0.5s,baz=225,slow=3.2,SNR=27						
PLCA	**Paso Flores**	**33.28**	**285**	*e*P	**P**	**23 49 02.0**	**-0.1**
	3.7nm,1.0s						
PLCA	**Paso Flores**	**33.28**	**285**	P	**P**	**23 49 02.1**	**+0.1**
	1.2nm,0.8s,baz=170,slow=5.0,SNR=3.6						
CFAA	**Coronel Fontan**	**39.57**	**296**	P	**P**	**23 49 56.0**	**+0.3**
CFAA	**Coronel Fontan**	**39.57**	**296**	P	**P**	**23 49 56.0**	**+0.3**
	0.2nm,0.3s,baz=162,slow=3.2,SNR=5.7						
CPUP	**Villa Florida**	**39.70**	**314**	P	**P**	**23 49 56.8**	**+0.1**
CPUP	**Villa Florida**	**39.70**	**314**	P	**P**	**23 49 56.8**	**+0.1**
	1.3nm,0.5s,baz=269,slow=20,SNR=8.2						
SUR	**Sutherland**	**41.32**	**70**	P	**P**	**23 50 10.3**	**-0.1**
VNDA	**Vanda**	**42.85**	**183**	*e*P	**P**	**23 50 23.1**	**+1.0**
	1.1nm,0.5s						
VNDA	**Vanda**	**42.85**	**183**	P	**P**	**23 50 23.9**	**+1.8**
	1.4nm,0.6s,baz=199,slow=5.5,SNR=13						
BOSA	**Boshof**	**46.57**	**71**	*e*P	**P**	**23 50 53.4**	**+0.9**
	2.6nm,0.9s						
BOSA	**Boshof**	**46.57**	**71**	P	**P**	**23 50 53.3**	**+0.9**
	1.7nm,0.9s,baz=180,slow=4.0,SNR=3.1						
BOSA				LR	LR	00 06 00.2	
	comp=Z,37nm,18.3s,baz=155,slow=30						
LPAZ	**La Paz**	**52.97**	**307**	*e*P	**P**	**23 51 41.9**	**+0.1**
	2.0nm,0.8s						
LPAZ	**La Paz**	**52.97**	**307**	P	**P**	**23 51 41.9**	**+0.1**
	1.0nm,0.3s,baz=145,slow=5.7,SNR=9.0						
SAML	**Samuel**	**57.80**	**316**	*e*P	**P**	**23 52 14.8**	**-1.2**
	0.7nm,0.5s						
TOA0	**Torodi Ar. Sit**	**76.11**	**28**	*e*P	**P**	**23 54 12.9**	**+0.6**
TORD	**Torodi Ar. Bea**	**76.11**	**28**	P	**P**	**23 54 13.7**	**+1.4**
TORD	**Torodi Ar. Bea**	**76.11**	**28**	P	**P**	**23 54 13.7**	**+1.4**
	3.3nm,0.5s,baz=199,slow=6.2,SNR=68						
ASAR	**Alice Springs**	**95.27**	**162**	P	**P**	**23 55 47.9**	**-0.7**
ASAR	**Alice Springs**	**95.27**	**162**	P	**P**	**23 55 47.9**	**-0.7**
	0.8nm,0.7s,baz=181,slow=3.9,SNR=9.0						
NVAR	**Mina Array Bea**	**123.23**	**290**	PKPpre	PKPpre	00 01 16.7	
NVAR	**Mina Array Bea**	**123.23**	**290**	PKhKP	PKPpre	00 01 16.7	
	0.3nm,0.3s,baz=157,slow=4.9,SNR=2.9						
CMAR	**Chiang Mai Arr**	**123.26**	**112**	PKP	**PKPdf**	**00 01 21.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**123.26**	**112**	PKP	**PKPdf**	**00 01 21.6**	**+0.2**
	0.5nm,0.4s,baz=235,slow=3.2,SNR=4.4						
FINES	**FINESS Array B**	**127.46**	**29**	PKP	**PKPdf**	**00 01 27.9**	**-0.2**
FINES	**FINESS Array B**	**127.46**	**29**	PKP	**PKPdf**	**00 01 27.9**	**-0.2**
	0.8nm,0.9s,baz=264,slow=1.7,SNR=5.1						
ARCES	**ARCESS Array B**	**134.24**	**23**	PKP	**PKPdf**	**00 01 39.8**	**-0.9**
ARCES	**ARCESS Array B**	**134.24**	**23**	PKP	**PKPdf**	**00 01 39.8**	**-0.9**
	2.1nm,0.9s,baz=291,slow=3.6,SNR=4.1						
YKA	**Yellowknife Ar**	**139.22**	**315**	PKP	**PKPdf**	**00 01 49.4**	**-0.7**
YKA	**Yellowknife Ar**	**139.22**	**315**	PKP	**PKPdf**	**00 01 49.3**	**-0.7**
	0.3nm,0.6s,baz=137,slow=2.0,SNR=8.2						
SONM	**Songino Array**	**150.29**	**92**	PKPbc	**PKPbc**	**00 02 15.1**	**+0.1**
SONM	**Songino Array**	**150.29**	**92**	PKPbc	**PKPbc**	**00 02 15.1**	**+0.1**
	2.5nm,0.8s,baz=219,slow=2.1,SNR=12						
ILAR	**Eielson Array**	**152.85**	**306**	PKPbc	**PKPbc**	**00 02 18.4**	**-1.7**
ILAR	**Eielson Array**	**152.85**	**306**	PKPbc	**PKPbc**	**00 02 18.4**	**-1.7**
	0.3nm,0.5s,baz=152,slow=2.8,SNR=5.6						

WEL 28 00:14:01.3±0.3, 38°.59S×175°.74E, h152km±3km, ML3.5/15, 2C, Error ellipse: s-maj=3.2km s-min=2.3km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WNVZ	**Wahianoa**	**0.75**	**189**	⇑P	Pn	00 14 24.8	+0.3
MOVZ	**Moawhango**	**0.82**	**179**	PN	Pn	00 14 24.8	-0.1
MOVZ				SN	Sn	00 14 42.6	-0.5
BKZ	**Black Stump Fm**	**0.83**	**135**	PN	Pn	00 14 25.0	+0.1
BKZ				SN	Sn	00 14 42.8	-0.2
RAHZ	**Arahi**	**1.10**	**108**	PN	Pn	00 14 27.8	+0.7
URZ	**Urewera**	**1.12**	**74**	⇑PN	Pn	00 14 27.0	-0.3
URZ				SN	Sn	00 14 46.2	-0.9
WAZ	**Wanganui**	**1.31**	**206**	PN	Pn	00 14 28.9	-0.2
PNHZ	**Pukenui**	**1.38**	**165**	PN	Pn	00 14 29.6	-0.1
PNHZ				SN	Sn	00 14 50.6	-1.1
MWZ	**Matawai**	**1.42**	**80**	PN	Pn	00 14 30.1	-0.2
TSZ	**Takapari Road**	**1.48**	**173**	PN	Pn	00 14 30.6	-0.3
CKHZ	**Cape Kidnapper**	**1.49**	**136**	SN	Sn	00 14 53.9	+0.3
KAHZ	**Kahuranaki**	**1.50**	**144**	SN	Sn	00 14 53.8	0.0
WPHZ	**Waipukurau**	**1.57**	**160**	PN	Pn	00 14 31.7	-0.1
WPHZ				SN	Sn	00 14 54.0	-1.3
PRGZ	**Paritu Road**	**1.71**	**102**	PN	Pn	00 14 33.3	+0.1
DVHZ	**Dannevirke**	**1.75**	**169**	PN	Pn	00 14 32.9	-0.7
MHGZ	**Mahia Peninsul**	**1.78**	**109**	PN	Pn	00 14 34.2	+0.2
POWZ	**Post Office Ro**	**1.81**	**179**	PN	Pn	00 14 33.4	-0.9
PRHZ	**Porangahau**	**1.82**	**158**	PN	Pn	00 14 34.2	-0.2
CNGZ	**Carnagh Statio**	**1.94**	**88**	PN	Pn	00 14 36.0	+0.3
PUZ	**Puketiti**	**2.04**	**76**	PN	Pn	00 14 36.2	-0.8
MRZ	**Mangatainoka R**	**2.08**	**183**	PN	Pn	00 14 36.1	-1.3
OGWZ	**Otaki Gorge**	**2.27**	**191**	PN	Pn	00 14 38.2	-1.5
KIW	**Kapiti Island**	**2.36**	**195**	PN	Pn	00 14 39.0	-1.8
CAW	**Cannon Point**	**2.57**	**191**	PN	Pn	00 14 41.4	-1.9
MTW	**Mount Morrison**	**2.58**	**184**	PN	Pn	00 14 41.3	-2.1
DUWZ	**D'Urville Isla**	**2.62**	**212**	PN	Pn	00 14 41.7	-2.3
SNZO	**South Karori**	**2.84**	**196**	PN	Pn	00 14 44.1	-2.5
MSWZ	**Moikau Station**	**2.85**	**187**	PN	Pn	00 14 44.3	-2.5
TCW	**Tory Channel**	**2.86**	**203**	PN	Pn	00 14 44.5	-2.3
PLWZ	**Palliser**	**3.01**	**187**	PN	Pn	00 14 45.9	-2.9
TUWZ	**Tuamarina**	**3.16**	**205**	PN	Pn	00 14 48.1	-2.6
KHZ	**Kahutara**	**4.18**	**203**	PN	Pn	00 15 00.6	-3.2

*DDA **28** 00:41:13.3, 35°.63N×26°.96E, h20km, MD3.0*
*ATH **28** 00:41:18.7, 36°.04N×26°.89E, h28km±2km, MD3.2/9*
*ISK **28** 00:41:18.2, 35°.97N×26°.78E, h6km, MD3.2*
*ISCJB **28** 00:41:19.5±0.9, 35°.97N±0°.03×26°.87E±0°.03, h11km±6km, Error ellipse: s-maj=5.4km s-min=3.1km az=143.0*
*CSEM **28** 00:41:20.2±0.2, 36°.00N×26°.82E, h15km, MD3.2, Error ellipse: s-maj=7.0km s-min=3.8km az=145.0*
*THE **28** 00:41:22.0, 36°.04N×26°.89E, h52km±3km, ML2.8/1, Error ellipse: s-maj=3.5km s-min=0.4km az=70.0*

ISC 28 00:41:20.5±1.4, 35°.98N±0°.02×26°.88E±0°.03, h19km±3km, n51, σ1°00/79, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.49**	**152**	*e*Pn	**Pg**	**00 41 30.3**	**-0.2**
KARP				*e*SN	**Sb**	**00 41 37.6**	**+0.1**
NIS1	**Nisyros Isl.**	**0.67**	**21**	P	**Pg**	**00 41 34.3**	**+0.6**
NIS1				S	**Sb**	**00 41 43.7**	**+1.3**
NIS1	**Nisyros Isl.**	**0.67**	**21**	P	**Pg**	**00 41 34.3**	**+0.6**
NIS1				S	**Sb**	**00 41 43.7**	**+1.3**
DAT	**Datca**	**0.94**	**37**	*e*PG	**Pb**	**00 41 37.6**	**-0.7**
DAT				*e*SG	**Sb**	**00 41 51.9**	**+1.5**
DAT	**Datca**	**0.94**	**37**	*e*Pg	**Pb**	**00 41 37.6**	**-0.7**
DAT				*e*Sg	**Sb**	**00 41 51.9**	**+1.5**
ZKR	**Zakros**	**1.02**	**212**	P	**Pg**	**00 41 40.2**	**-0.1**
ZKR				S	**Sn**	**00 41 54.7**	**+1.1**
ZKR	**Zakros**	**1.02**	**212**	*e*PN	**Pg**	**00 41 40.2**	**-0.1**
ZKR				*e*SN	**Sn**	**00 41 54.7**	**+1.1**
ZKR	**Zakros**	**1.02**	**212**	P	**Pg**	**00 41 40.2**	**-0.1**
ZKR				S	**Sn**	**00 41 54.7**	**+1.1**
ARG	**Arkhangelos**	**1.04**	**77**	P	**Pb**	**00 41 39.2**	**-0.7**
ARG				S	**Sb**	**00 41 53.0**	**-0.2**
ARG	**Arkhangelos**	**1.04**	**77**	*e*PN	**Pb**	**00 41 39.2**	**-0.7**
ARG				*e*SN	**Sb**	**00 41 52.7**	**-0.5**
ARG	**Arkhangelos**	**1.04**	**77**	P	**Pb**	**00 41 39.2**	**-0.7**
ARG				S	**Sb**	**00 41 53.0**	**-0.2**
BODT	**Bodrum**	**1.13**	**18**	*e*PN	**Pn**	**00 41 41.4**	**-0.1**
BODT				*e*SN	**Sn**	**00 41 57.9**	**+1.4**
BODT	**Bodrum**	**1.13**	**18**	*e*Pn	**Pn**	**00 41 41.4**	**-0.1**
BODT				*e*Sn	**Sn**	**00 41 57.9**	**+1.4**
THR1	**Thera Island**	**1.21**	**289**	P	**Pn**	**00 41 42.2**	**-0.3**
THR1	**Thera Island**	**1.21**	**289**	P	**Pn**	**00 41 42.2**	**-0.3**
THR2	**Thira island,**	**1.25**	**292**	P	**Pn**	**00 41 42.5**	**-0.6**
THR2	**Thira island,**	**1.25**	**292**	P	**Pn**	**00 41 42.5**	**-0.6**
NPS	**Neapolis**	**1.25**	**235**	P	**Pn**	**00 41 43.2**	**+0.1**
NPS				S	**Sb**	**00 41 59.8**	**+0.3**
NPS	**Neapolis**	**1.25**	**235**	*e*PN	**Pn**	**00 41 43.1**	**0.0**
NPS				*e*SN	**Sb**	**00 41 59.7**	**+0.3**
NPS	**Neapolis**	**1.25**	**235**	P	**Pn**	**00 41 43.2**	**+0.1**
NPS				*e*Sn	**Sb**	**00 41 59.7**	**+0.3**
THR3	**Thira Island,**	**1.27**	**290**	P	**Pn**	**00 41 43.0**	**-0.2**
THR3	**Thira Island,**	**1.27**	**290**	P	**Pn**	**00 41 43.0**	**-0.2**
LAST	**Lasithi**	**1.40**	**235**	P	**Pn**	**00 41 45.5**	**+0.3**
LAST				S	**Sn**	**00 42 03.5**	**+0.2**
LAST	**Lasithi**	**1.40**	**235**	*e*PN	**Pn**	**00 41 45.5**	**+0.3**
LAST				*e*SN	**Sn**	**00 42 03.4**	**+0.2**
LAST	**Lasithi**	**1.40**	**235**	P	**Pn**	**00 41 45.5**	**+0.3**
LAST				*e*Sn	**Sn**	**00 42 03.4**	**+0.2**
MLSB	**Milas**	**1.50**	**29**	*e*PN	**Pn**	**00 41 47.0**	**+0.5**
MLSB	**Milas**	**1.50**	**29**	*e*Pn	**Pn**	**00 41 47.0**	**+0.5**
APE	**Apeiranthos**	**1.53**	**315**	*e*PN	**Pn**	**00 41 45.9**	**-1.0**
APE	**Apeiranthos**	**1.53**	**315**	P	**Pn**	**00 41 46.1**	**-0.9**
APE				S	**Sn**	**00 42 04.9**	**-1.5**
APE	**Apeiranthos**	**1.53**	**315**	*e*PN	**Pn**	**00 41 46.1**	**-0.9**
APE				*e*SN	**Sn**	**00 42 04.8**	**-1.6**
APE	**Apeiranthos**	**1.53**	**315**	P	**Pn**	**00 41 46.1**	**-0.9**
APE				*e*Sn	**Sn**	**00 42 04.8**	**-1.6**
YER	**Yerkesik**	**1.61**	**44**	*e*PN	**Pn**	**00 41 49.4**	**+1.3**
YER	**Yerkesik**	**1.61**	**44**	*e*Pn	**Pn**	**00 41 49.4**	**+1.3**
TURN	**Turunc**	**1.65**	**57**	*i* P	Pn	00 41 42.8	-5.7
TURN				*i* S	Sn	00 42 00.8	-8.4
DALY	**Dalyan (Mu˘la**	**1.66**	**59**	*e*PN	**Pn**	**00 41 49.9**	**+1.3**
DALY	**Dalyan (Mu˘la**	**1.66**	**59**	*e*Pn	**Pn**	**00 41 49.9**	**+1.3**
IDI	**Anoyia**	**1.76**	**247**	P	**Pn**	**00 41 50.2**	**+0.1**
IDI				S	**Sn**	**00 42 12.2**	**+0.2**
IDI	**Anoyia**	**1.76**	**247**	*e*PN	**Pn**	**00 41 50.2**	**+0.1**
IDI				*e*SN	**Sn**	**00 42 12.7**	**+0.7**
IDI	**Anoyia**	**1.76**	**247**	P	**Pn**	**00 41 50.2**	**+0.1**
IDI				S	**Sn**	**00 42 12.2**	**+0.2**
IDI				*e*Sn	**Sn**	**00 42 12.7**	**+0.7**
AYDN	**Tasoluk**	**1.86**	**25**	*i* P	**Pn**	**00 41 51.5**	**0.0**
AYDN				*i* S	**Sb**	**00 42 17.3**	**+0.4**
AYDN	**Tasoluk**	**1.86**	**25**	*i* P	**Pn**	**00 41 51.5**	**0.0**
AYDN				*i* S	**Sb**	**00 42 17.3**	**+0.4**
FETY	**Fethiye**	**1.90**	**69**	*e*PN	**Pn**	**00 41 53.4**	**+1.4**
FETY	**Fethiye**	**1.90**	**69**	*e*Pn	**Pn**	**00 41 53.4**	**+1.4**
SIVA	**Sivas**	**1.94**	**241**	*e*PB	**Pn**	**00 41 53.6**	**+1.1**
SIVA	**Sivas**	**1.94**	**241**	*e*Pb	**Pn**	**00 41 53.6**	**+1.1**
AKAS	**Kas**	**2.22**	**83**	*i* P	**Pn**	**00 41 55.4**	**-1.1**
AKAS				*i* S	**Sn**	**00 42 18.9**	**-4.7**
AKAS	**Kas**	**2.22**	**83**	*i* P	**Pn**	**00 41 55.4**	**-1.1**
KARN	**Karanos**	**2.48**	**257**	*e*PB	**Pn**	**00 42 00.8**	**+0.9**
KARN	**Karanos**	**2.48**	**257**	*e*Pb	**Pn**	**00 42 00.8**	**+0.9**
ELL	**Elmali**	**2.56**	**72**	*e*PN	**Pn**	**00 42 02.3**	**+1.1**
ELL	**Elmali**	**2.56**	**72**	*e*Pn	**Pn**	**00 42 02.3**	**+1.1**

ECX 28 00:59:53.5±0.3, 30°.57N×114°.58W, h4km, MD3.7, ML3.9, 3C-2D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	**San Pedro Mart**	**0.90**	**302**	*e*P	Pg	01 00 09.2	-2.0
SPX				*eS*	Sg	01 00 21.9	-1.3
SPX				⇑*e*		01 00 25.5	
	comp=N,3μm,0.3s						
RDX	**Rancho Dawling**	**1.79**	**320**	*e*P	Pn	01 00 24.5	-0.9
RDX				*eS*	Sn	01 00 48.6	-0.2
RDX				⇓*e*		01 00 52.0	
	comp=N,786nm,0.7s						
ECNX	**Esteban Cantu**	**2.04**	**303**	⇓*e*P	Pn	01 00 28.4	-0.4
ECNX				*eS*	Sn	01 00 55.4	+0.5
ECNX				⇑*e*		01 00 58.4	
	comp=E,728nm,0.3s						
PBX	**Punta Banda**	**2.18**	**303**	⇑*e*P	Pn	01 00 30.5	-0.1
PBX				*eS*	Sn	01 00 59.0	+0.9
RMX	**La Rumorosa**	**2.40**	**328**	*e*P	Pn	01 00 33.7	-0.1
CBX	**Cerro Bola**	**2.49**	**315**	*e*P	Pn	01 00 34.5	-0.5

*ISCJB **28** 01:04:38.3±0.5, 14°.19N±0°.08×53°.49E±0°.05, h10km, mb4.1/34, MS3.3/21, Error ellipse: s-maj=11.2km s-min=6.5km az=1.9*
*IDC **28** 01:04:38.7±0.7, 14°.14N×53°.57E, h0km, mb3.9/22, mb1 4.1/22, mb1mx4.0/33, mbtmp3.9/22, MS3.3/22, Ms1 3.3/22, ms1mx3.2/44, Error ellipse: s-maj=16.9km s-min=15.7km az=157.0*
*CSEM **28** 01:04:40.4±0.2, 14°.20N×53°.47E, h10km, mb4.5/11, Ms3.5, Error ellipse: s-maj=9.1km s-min=7.0km az=176.0*
*NEIC **28** 01:04:40.1±0.4, 14°.16N×53°.51E, h10km, mb4.8/12, Error ellipse: s-maj=8.4km s-min=6.9km az=188.0*

ISC 28 01:04:40.2±0.6, 14°.2N±0°.1×53°.52E±0°.07, h10km, n183, σ0°79/176, mb4.2/34, MS3.2/21, 1C, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**4.36**	**275**	⇑*iP*	**Pn**	**01 05 44.4**	**-2.1**
MUKL				*e*		01 05 44.4	
	baz=26,slow=7.4						
MUKL				*i* S	**Pb**	**01 05 56.5**	**-0.4**
MUKL				AML	AML	01 06 01.6	
	comp=E,43nm,0.4s						
ATD	**Arta Tunnel**	**10.73**	**257**	LR	LR	01 10 19.5	
	comp=E,310nm,18.8s,baz=51,slow=32						
KMBO	**Kilima Mbogo**	**22.15**	**228**	P	**P**	**01 09 37.0**	**+0.4**
KMBO	**Kilima Mbogo**	**22.15**	**228**	P	**P**	**01 09 37.0**	**+0.4**
	comp=E,2.1nm,0.6s,baz=44,slow=18,SNR=4.8						
KMBO				LR	LR	01 17 55.2	
	comp=E,80nm,20.6s,baz=86,slow=36						
KMBO	**Kilima Mbogo**	**22.15**	**228**	P	**P**	**01 09 37.0**	**+0.4**
EIL	**Elat**	**23.07**	**315**	LR	LR	01 18 43.3	
	comp=E,93nm,20.1s,baz=89,slow=36						
ASF	**Jabal al Asfar**	**23.50**	**323**	LR	LR	01 19 22.0	
	comp=E,65nm,21.8s,baz=272,slow=38						
MMAI	**Mount Meron Ar**	**24.98**	**322**	P	**P**	**01 10 05.5**	**+1.3**
MMAI	**Mount Meron Ar**	**24.98**	**322**	P	**P**	**01 10 05.5**	**+1.3**
	comp=E,2.9nm,0.8s,baz=135,slow=14,SNR=4.0						
MMAI				LR	LR	01 20 10.2	
	comp=E,74nm,19.2s,baz=110,slow=37						
MMAI	**Mount Meron Ar**	**24.98**	**322**	P	**P**	**01 10 05.5**	**+1.3**
GNI	**Garni**	**27.01**	**345**	P	**P**	**01 10 24.3**	**+1.7**
GNI	**Garni**	**27.01**	**345**	P	**P**	**01 10 24.3**	**+1.7**
	comp=E,1.1nm,0.4s,baz=198,slow=20,SNR=3.5						
GNI				LR	LR	01 22 57.9	
	comp=E,93nm,19.4s,baz=340,slow=41						
GNI	**Garni**	**27.01**	**345**	P	**P**	**01 10 24.3**	**+1.7**
MALT	**Malatya**	**27.52**	**334**	*e*P	**P**	**01 10 29.5**	**+2.4**
	comp=E,6.9nm,1.3s						
PYUN	**Piuthan**	**30.68**	**58**	*e*P	**P**	**01 10 53.3**	**-2.2**
	comp=E,16nm,0.8s						
KBZ	**Khabaz**	**30.84**	**345**	LR	LR	01 26 16.6	
	comp=E,96nm,18.3s,baz=181,slow=42						
BRTR	**Keskin Array B**	**30.88**	**329**	P	**P**	**01 10 57.8**	**+0.8**
BRTR	**Keskin Array B**	**30.88**	**329**	P	**P**	**01 10 57.8**	**+0.8**
	comp=E,0.9nm,1.1s,baz=121,slow=8.8,SNR=5.3						
BRTR	**Keskin Array B**	**30.88**	**329**	P	**P**	**01 10 57.8**	**+0.8**
DANN	**Dangsing**	**31.41**	**58**	*e*P	**P**	**01 11 01.0**	**-1.0**
	comp=E,12nm,0.9s						
DMN	**Daman**	**32.29**	**60**	*e*P	**P**	**01 11 08.6**	**-1.1**
	comp=E,7.2nm,0.2s						
PKIN	**Phulchoki**	**32.53**	**61**	*e*P	**P**	**01 11 11.7**	**-0.1**
	comp=E,6.5nm,0.5s						
GUN	**Gumba**	**33.03**	**60**	*e*P	**P**	**01 11 16.6**	**+0.2**
	comp=E,19nm,0.9s						
OPO	**Ambohidratompo**	**33.12**	**191**	LR	LR	01 22 13.1	
	comp=E,100nm,21.7s,baz=137,slow=32						
RAMN	**Ramite**	**33.37**	**62**	*e*P	**P**	**01 11 18.8**	**-0.4**
AAK	**Ala-Archa**	**33.65**	**28**	LR	LR	01 26 37.8	
	comp=E,33nm,18.6s,baz=189,slow=39						
TAPN	**Taplejung**	**34.43**	**62**	*e*P	**P**	**01 11 29.4**	**+0.9**
	comp=E,11nm,1.0s						
ABKAR	**Akbulak array**	**35.39**	**7**	*e*P	**P**	**01 11 36.3**	**+0.3**
	comp=E,1.5nm,0.7s						
ABKAR	**Akbulak array**	**35.39**	**7**	*e*P	**P**	**01 11 36.3**	**+0.3**
	comp=E,1.5nm,0.7s						
AKTO	**Aktyubinsk**	**36.36**	**5**	P	**P**	**01 11 46.0**	**+1.7**
AKTO	**Aktyubinsk**	**36.36**	**5**	P	**P**	**01 11 46.0**	**+1.7**
	comp=E,1.1nm,0.7s,baz=204,slow=20						
AKTO	**Aktyubinsk**	**36.36**	**5**	P	**P**	**01 11 46.0**	**+1.7**
MLR	**Muntele Rosu**	**38.95**	**329**	P	**P**	**01 12 07.7**	**+1.1**
MLR	**Muntele Rosu**	**38.95**	**329**	P	**P**	**01 12 07.7**	**+1.1**
	comp=E,0.2nm,0.6s,baz=117,slow=9.2,SNR=3.7						
MLR				LR	LR	01 30 37.2	
	comp=E,16nm,18.6s,baz=269,slow=40						
MLR	**Muntele Rosu**	**38.95**	**329**	P	**P**	**01 12 07.7**	**+1.1**
MK31	**Makanchi Array**	**40.46**	**31**	*e*P	**P**	**01 12 19.7**	**+0.7**
MK31	**Makanchi Array**	**40.46**	**31**	*e*P	**P**	**01 12 19.7**	**+0.7**
MKAR	**Makanchi Array**	**40.46**	**31**	P	**P**	**01 12 19.7**	**+0.7**
MKAR	**Makanchi Array**	**40.46**	**31**	P	**P**	**01 12

HAU	**Haudompre**	**51.47**	**321**	*e*P	**P**	**01 13 45.0**	**-0.8**
LASF	**Ste Croix**	**51.60**	**315**	*e*P	**P**	**01 13 45.7**	**-1.2**
LASF	**Ste Croix**	**51.60**	**315**	*e*P	**P**	**01 13 45.7**	**-1.2**
LASF	**Ste Croix**	**51.60**	**315**	*e*P	**P**	**01 13 45.7**	**-1.2**
PAGF	**Fort de Pagny**	**52.07**	**321**	*e*P	**P**	**01 13 49.5**	**-0.8**
	comp=E,2.3nm,0.8s						
PAGF	**Fort de Pagny**	**52.07**	**321**	*e*P	**P**	**01 13 49.5**	**-0.8**
	comp=E,2.3nm,0.8s						
PAGF	**Fort de Pagny**	**52.07**	**321**	*e*P	**P**	**01 13 49.5**	**-0.8**
	comp=E,1.1nm,0.8s						
SFTF	**Sexfontaines**	**52.35**	**321**	*e*P	**P**	**01 13 51.3**	**-1.0**
SFTF	**Sexfontaines**	**52.35**	**321**	*e*P	**P**	**01 13 51.3**	**-1.0**
SFTF	**Sexfontaines**	**52.35**	**321**	*e*P	**P**	**01 13 51.3**	**-1.0**
MEZF	**Maizieres J'vi**	**52.46**	**321**	*e*P	**P**	**01 13 52.5**	**-0.6**
MEZF	**Maizieres J'vi**	**52.46**	**321**	*e*P	**P**	**01 13 52.5**	**-0.6**
MEZF	**Maizieres J'vi**	**52.46**	**321**	*e*P	**P**	**01 13 52.5**	**-0.6**
MTLF	**Montolieu**	**52.50**	**314**	*e*P	**P**	**01 13 52.7**	**-0.8**
MTLF	**Montolieu**	**52.50**	**314**	*e*P	**P**	**01 13 52.7**	**-0.8**
MTLF	**Montolieu**	**52.50**	**314**	*e*P	**P**	**01 13 52.7**	**-0.8**
SMF	**Signal de Mont**	**52.51**	**319**	*e*P	**P**	**01 13 52.9**	**-0.6**
SMF	**Signal de Mont**	**52.51**	**319**	*e*P	**P**	**01 13 52.9**	**-0.6**
SMF	**Signal de Mont**	**52.51**	**319**	*e*P	**P**	**01 13 52.9**	**-0.6**
LOR	**Lormes**	**52.72**	**319**	*e*P	**P**	**01 13 55.0**	**-0.1**
	comp=E,15nm,1.0s						
LOR	**Lormes**	**52.72**	**319**	*e*P	**P**	**01 13 55.0**	**-0.1**
	comp=E,15nm,1.0s						
LOR	**Lormes**	**52.72**	**319**	*e*P	**P**	**01 13 55.0**	**-0.1**
	comp=E,7.4nm,1.0s						
SSF	**Saint Saulge**	**52.87**	**319**	*e*P	**P**	**01 13 55.9**	**-0.3**
	comp=E,19nm,1.0s						
SSF	**Saint Saulge**	**52.87**	**319**	*e*P	**P**	**01 13 55.9**	**-0.3**
	comp=E,19nm,1.0s						
SSF	**Saint Saulge**	**52.87**	**319**	*e*P	**P**	**01 13 55.9**	**-0.3**
	comp=E,9.6nm,1.0s						
AVF	**Avril sur Loir**	**52.87**	**319**	*e*P	**P**	**01 13 55.4**	**-0.8**
AVF	**Avril sur Loir**	**52.87**	**319**	*e*P	**P**	**01 13 55.4**	**-0.8**
AVF	**Avril sur Loir**	**52.87**	**319**	*e*P	**P**	**01 13 55.4**	**-0.8**
BGF	**Bois d'Agland**	**53.12**	**318**	*e*P	**P**	**01 13 57.2**	**-0.8**
	comp=E,29nm,1.0s						
BGF	**Bois d'Agland**	**53.12**	**318**	*e*P	**P**	**01 13 57.2**	**-0.8**
	comp=E,29nm,1.0s						
BGF	**Bois d'Agland**	**53.12**	**318**	*e*P	**P**	**01 13 57.2**	**-0.8**
	comp=E,15nm,1.0s						
GIVF	**Givet**	**53.25**	**323**	*e*P	**P**	**01 13 59.2**	**+0.3**
GIVF	**Givet**	**53.25**	**323**	*e*P	**P**	**01 13 59.2**	**+0.3**
GIVF	**Givet**	**53.25**	**323**	*e*P	**P**	**01 13 59.2**	**+0.3**
BAIF	**Baives**	**53.59**	**323**	*e*P	**P**	**01 14 00.9**	**-0.6**
	comp=E,6.1nm,0.8s						
BAIF	**Baives**	**53.59**	**323**	*e*P	**P**	**01 14 00.9**	**-0.6**
	comp=E,6.1nm,0.8s						
BAIF	**Baives**	**53.59**	**323**	*e*P	**P**	**01 14 00.9**	**-0.6**
	comp=E,3.0nm,0.8s						
EPF	**Esparros**	**53.73**	**313**	*e*P	**P**	**01 14 01.9**	**-0.8**
EPF	**Esparros**	**53.73**	**313**	*e*P	**P**	**01 14 01.9**	**-0.8**
EPF	**Esparros**	**53.73**	**313**	*e*P	**P**	**01 14 01.9**	**-0.8**
ETSF	**Etsaut**	**54.33**	**313**	*e*P	**P**	**01 14 06.3**	**-0.8**
ETSF	**Etsaut**	**54.33**	**313**	*e*P	**P**	**01 14 06.3**	**-0.8**
ETSF	**Etsaut**	**54.33**	**313**	*e*P	**P**	**01 14 06.3**	**-0.8**
SJPF	**Ste Jean**	**54.86**	**313**	*e*P	**P**	**01 14 10.8**	**-0.1**
SJPF	**Ste Jean**	**54.86**	**313**	*e*P	**P**	**01 14 10.8**	**-0.1**
SJPF	**Ste Jean**	**54.86**	**313**	*e*P	**P**	**01 14 10.8**	**-0.1**
SONM	**Songino Array**	**54.96**	**41**	P	**P**	**01 14 12.5**	**+0.9**
SONM	**Songino Array**	**54.96**	**41**	P	**P**	**01 14 12.5**	**+0.9**
	comp=E,0.9nm,0.7s,baz=246,slow=7.3,SNR=7.0						
SONM	**Songino Array**	**54.96**	**41**	P	**P**	**01 14 12.5**	**+0.9**
LDF	**La Druitiere**	**55.69**	**320**	*e*P	**P**	**01 14 16.3**	**-0.5**
LDF	**La Druitiere**	**55.69**	**320**	*e*P	**P**	**01 14 16.3**	**-0.5**
LDF	**La Druitiere**	**55.69**	**320**	*e*P	**P**	**01 14 16.3**	**-0.5**
NOA	**NORSAR Array B**	**55.84**	**337**	LR	LR	01 40 43.3	
	comp=E,22nm,18.5s,baz=5.0,slow=39						
ESDC	**Sonseca Array**	**56.15**	**308**	P	**P**	**01 14 19.8**	**-0.5**
ESDC	**Sonseca Array**	**56.15**	**308**	P	**P**	**01 14 19.8**	**-0.5**
	comp=E,1.1nm,0.8s,baz=79,slow=7.4,SNR=6.3						
ESDC	**Sonseca Array**	**56.15**	**308**	P	**P**	**01 14 19.8**	**-0.5**
SGMF	**Saint Gilles**	**57.13**	**319**	*e*P	**P**	**01 14 26.9**	**-0.1**
SGMF	**Saint Gilles**	**57.13**	**319**	*e*P	**P**	**01 14 26.9**	**-0.1**
SGMF	**Saint Gilles**	**57.13**	**319**	*e*P	**P**	**01 14 26.9**	**-0.1**
ARCES	**ARCESS Array B**	**58.08**	**349**	P	**P**	**01 14 32.8**	**-0.5**
ARCES	**ARCESS Array B**	**58.08**	**349**	P	**P**	**01 14 32.8**	**-0.5**
	comp=E,1.3nm,0.5s,baz=134,slow=8.7,SNR=13						
ARCES				LR	LR	01 42 42.8	
	comp=E,32nm,20.5s,baz=273,slow=39						
ARCES	**ARCESS Array B**	**58.08**	**349**	P	**P**	**01 14 32.8**	**-0.5**
KSAR	**Wonju Array Be**	**69.19**	**55**	P	**P**	**01 15 46.8**	**-0.5**
KSAR	**Wonju Array Be**	**69.19**	**55**	P	**P**	**01 15 46.8**	**-0.5**
KSRS	**Korea Array**	**69.22**	**55**	P	**P**	**01 15 46.8**	**-0.7**
	comp=E,1.4nm,0.8s,baz=255,slow=6.3,SNR=5.6						
MAW	**Mawson**	**81.83**	**176**	LR	LR	01 46 32.2	
	comp=E,84nm,19.2s,baz=259,slow=31						
WRA	**Warramunga Arr**	**86.38**	**111**	P	**P**	**01 17 23.2**	**-0.1**
WRA	**Warramunga Arr**	**86.38**	**111**	P	**P**	**01 17 23.2**	**-0.1**
	comp=E,1.4nm,0.6s,baz=303,slow=3.6,SNR=5.5						
WRA	**Warramunga Arr**	**86.38**	**111**	P	**P**	**01 17 23.2**	**-0.1**
WRAB	**Tennant Creek**	**86.39**	**111**	*e*P	**P**	**01 17 23.6**	**+0.2**
	comp=E,1.8nm,0.7s						
WRAB	**Tennant Creek**	**86.39**	**111**	*e*P	**P**	**01 17 23.6**	**+0.2**
	comp=E,1.8nm,0.7s						
ASAR	**Alice Springs**	**87.05**	**115**	P	**P**	**01 17 26.4**	**-0.1**
ASAR	**Alice Springs**	**87.05**	**115**	P	**P**	**01 17 26.4**	**-0.1**
	comp=E,1.1nm,0.7s,baz=291,slow=4.6,SNR=8.5						
ASAR	**Alice Springs**	**87.05**	**115**	P	**P**	**01 17 26.5**	**-0.1**
PDAR	**Pinedale Array**	**121.25**	**345**	PKP	**PKPdf**	**01 23 33.6**	**-0.5**
PDAR	**Pinedale Array**	**121.25**	**345**	PKP	**PKPdf**	**01 23 33.6**	**-0.5**
	comp=E,0.1nm,0.3s,baz=53,slow=6.0,SNR=3.1						
PDAR	**Pinedale Array**	**121.25**	**345**	PKIKP	**PKPdf**	**01 23 33.6**	**-0.5**
NVAR	**Mina Array Bea**	**127.12**	**352**	PKP	**PKPdf**	**01 23 45.7**	**+0.2**
NVAR	**Mina Array Bea**	**127.12**	**352**	PKP	**PKPdf**	**01 23 45.7**	**+0.2**
	comp=E,0.3nm,0.3s,baz=48,slow=2.2,SNR=3.8						
NVAR	**Mina Array Bea**	**127.12**	**352**	PKIKP	**PKPdf**	**01 23 45.7**	**+0.2**

IDC 28 01:24:42.0±1.1, **13°69S**×**76°56W**, **h50**km±7km, **mb3.7**/2, **mb1 4.0**/4, **mb1mx3.5**/19, **mbtmp3.8**/4, **MS2.8/3**, **Ms1 2.8**/3, **ms1mx2.6**/31, **Error ellipse: s-maj=28.8km s-min=8.5km az=70.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.71**	**351**	P	Pn	01 25 09.9	+0.3
	18nm,0.3s,baz=161,slow=15,SNR=34						
NNA				S	Sn	01 25 30.6	+0.3
	111nm,0.3s,baz=221,slow=19,SNR=13						
ATAH	**Atahualpa**	**6.76**	**344**	P	Pn	01 26 20.0	+0.8
	0.7nm,0.3s,baz=180,slow=6.6,SNR=4.2						
ATAH				S	Sn	01 27 41.8	+6.6
	1.2nm,0.3s,baz=322,slow=18,SNR=2.1						
ATAH				LR	LR	01 29 04.1	
	comp=Z,56nm,18.0s,baz=166,slow=39						
LPAZ	**La Paz**	**8.55**	**109**	P	Pn	01 26 44.4	+0.4
	1.3nm,0.3s,baz=298,slow=9.1,SNR=36						
LPAZ				S	Sn	01 28 22.4	+2.7
	baz=212,slow=24,SNR=7.4						
LPAZ				LR	LR	01 30 32.6	
	comp=Z,110nm,21.1s,baz=74,slow=41						
SIV	**San Ignacio**	**15.15**	**101**	LR	LR	01 35 12.0	
	comp=Z,20nm,18.8s,slow=42						
CFAA	**Coronel Fontan**	**19.40**	**158**	P	Pn	01 29 05.5	-0.1
	0.0nm,0.3s,baz=345,slow=20,SNR=3.0						
YKA	**Yellowknife Ar**	**81.54**	**343**	P	P	01 36 53.8	0.0
	0.6nm,0.8s,baz=139,slow=5.7,SNR=16						
YKA				pP	pP	01 37 07.9	-0.4
	0.5nm,0.8s,baz=139,slow=6.0,SNR=8.8						
TORD	**Torodi Ar. Bea**	**81.98**	**74**	P	P	01 36 55.9	-1.4
	1.8nm,0.7s,baz=263,slow=4.9,SNR=12						
TORD				pP	pP	01 37 11.4	-0.3
	0.8nm,0.9s,baz=263,slow=4.1,SNR=2.8						
SONM	**Songino Array**	**145.87**	**356**	PKPbc	PKPbc	01 44 16.3	+0.2
	1.0nm,0.7s,baz=344,slow=3.6,SNR=8.2						
SONM				pPKPbc	pPKPbc	01 44 30.0	-1.1
	1.1nm,0.8s,baz=350,slow=2.2,SNR=4.2						

ISCJB ***28*** *01:54:15.8±0.6, 40°.75N±0°.03×27°.57E±0°.05, h11km±5km, Error ellipse: s-maj=6.3km s-min=5.1km az=166.5*
CSEM ***28*** *01:54:15.9±0.2, 40°.75N×27°.56E, h12km, MD2.6, Error ellipse: s-maj=4.1km s-min=3.5km az=82.0*
DDA ***28*** *01:54:15.6, 40°.71N×27°.55E, h7km, MD2.5*
ISK ***28*** *01:54:15.5, 40°.75N×27°.60E, h2km, MD2.6*
ISC 28 01:54:15.9±0.9, **40°.73N**±0°.02×**27°.57E**±0°.03, **h12**km±7km, **n26**, σ**0°41/38**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRMT	**Marmara Adasi**	**0.13**	**170**	*e*PG	**Pg**	**01 54 19.3**	**0.0**
MRMT				*e*SG	**Sg**	01 54 21.6	-0.1
MRMT	**Marmara Adasi**	**0.13**	**170**	*e*Pg	**Pg**	01 54 19.3	0.0
MRMT				*e*Sg	**Sg**	01 54 21.6	-0.1
TKR	**Tekirdag**	**0.26**	**355**	*e*PG	**Pg**	01 54 21.6	+0.3
TKR				*e*SG	**Sg**	01 54 25.6	+0.7
TKR	**Tekirdag**	**0.26**	**355**	*e*Pg	**Pg**	01 54 21.6	+0.3
TKR				*e*Sg	**Sg**	01 54 25.6	+0.7
SART	**Tekirdag**	**0.30**	**261**	*i* P	**Pg**	01 54 21.3	-0.7
SART				*i* S	**Sg**	01 54 25.9	-0.3
SART	**Tekirdag**	**0.30**	**261**	*i* P	**Pg**	01 54 21.3	-0.7
SART				*i* S	**Sg**	01 54 25.9	-0.3
EDC	**Edincik**	**0.45**	**150**	*e*PG	**Pb**	01 54 26.0	+0.2
EDC				*e*SG	**Sb**	01 54 32.5	+0.1
EDC	**Edincik**	**0.45**	**150**	*e*Pg	**Pb**	01 54 26.0	+0.2
EDC				*e*Sg	**Sb**	01 54 32.5	+0.1
BNT	**Bandirma**	**0.46**	**144**	*e*PG	**Pg**	01 54 25.1	+0.1
BNT	**Bandirma**	**0.46**	**144**	*e*Pg	**Pg**	01 54 25.2	+0.1
GONE	**Gonen-Balikesi**	**0.69**	**172**	*e*PG	**Pb**	01 54 29.8	-0.1
GONE	**Gonen-Balikesi**	**0.69**	**172**	*e*Pg	**Pb**	01 54 29.8	-0.1
ERIK	**Erikli-Kesan**	**0.80**	**266**	*e*PG	**Pb**	01 54 32.3	+0.5
ERIK	**Erikli-Kesan**	**0.80**	**266**	*e*Pg	**Pb**	01 54 32.3	+0.5
CTKS	**Kestanelik-??a**	**0.87**	**55**	*e*PG	**Pg**	01 54 32.3	-0.5
CTKS	**Kestanelik-??a**	**0.87**	**55**	*e*Pg	**Pg**	01 54 32.3	-0.5
BALY	**Balya**	**0.99**	**178**	*i* P	**Pb**	01 54 34.8	-0.3
BALY				*i* S	**Sb**	01 54 48.8	+0.7
BALY	**Balya**	**0.99**	**178**	*i* P	**Pb**	01 54 34.8	-0.3
BALY				*i* S	**Sb**	01 54 48.8	+0.7
ARMT	**Armutlu**	**1.00**	**99**	*e*PG	**Pb**	01 54 35.1	-0.1
ARMT	**Armutlu**	**1.00**	**99**	*e*Pg	**Pb**	01 54 35.1	-0.1
BGKT	**Bogazkoy**	**1.02**	**64**	*e*PG	**Pb**	01 54 35.3	-0.2
BGKT	**Bogazkoy**	**1.02**	**64**	*e*Pg	**Pb**	01 54 35.3	-0.2
BALB	**Balikesir**	**1.12**	**167**	*e*PN	**Pg**	01 54 38.0	+0.6
BALB	**Balikesir**	**1.12**	**167**	*e*Pn	**Pg**	01 54 38.1	+0.6
DURS	**Dursunbey**	**1.33**	**148**	*i* P	**Pn**	01 54 40.2	-0.2
DURS				*i* S	**Sb**	01 54 57.3	-0.5
DURS	**Dursunbey**	**1.33**	**148**	*i* P	**Pn**	01 54 40.2	-0.2
DURS				*i* S	**Sb**	01 54 57.3	-0.5

IDC 28 01:54:34.2±2.2, **2°.87N**×**127°.56E**, **h0**km, **mb3.3**/3, **mb1 3.6**/3, **mb1mx3.4**/23, **mbtmp3.4**/3, **Error ellipse: s-maj=152.4km s-min=26.7km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.62**	**164**	P	P	01 59 46.8	-0.4
	0.3nm,0.3s,baz=343,slow=10,SNR=7.1						
ASAR	**Alice Springs**	**27.09**	**167**	P	P	02 00 18.8	-0.1
	0.2nm,0.3s,baz=356,slow=8.0,SNR=4.8						
MKAR	**Makanchi Array**	**58.73**	**325**	P	P	02 04 34.3	+0.3
	0.2nm,0.5s,baz=123,slow=7.1,SNR=4.7						

DDA ***28*** *02:33:51.1, 36°.17N×27°.51E, h12km, ML3.8*
ATH ***28*** *02:33:51.6, 36°.29N×27°.47E, h18km±1km, MD3.9/32, ML4.0*
ISCJB ***28*** *02:33:52.3±0.4, 36°.12N±0°.01×27°.53E±0°.01, h28km±3km, mb3.8/16, Error ellipse: s-maj=2.4km s-min=1.9km az=26.7*
THE ***28*** *02:33:53.8, 36°.24N×27°.53E, h11km, ML3.7/6, Error ellipse: s-maj=1.0km s-min=0.4km az=82.0*
CSEM ***28*** *02:33:53.5±0.1, 36°.16N×27°.53E, h20km, ML3.7/6, Mw3.6, Error ellipse: s-maj=2.1km s-min=1.6km az=33.0*
ISK ***28*** *02:33:53.3, 36°.26N×27°.43E, h22km, ML3.8*
IDC ***28*** *02:33:53.3±3.1, 36°.20N×27°.50E, h21km±19km, mb3.8/14, mb1 3.8/19, mb1mx3.8/30, mbtmp3.7/19, ML3.5/4, Error ellipse: s-maj=16.3km s-min=14.3km az=45.0*
NIC ***28*** *02:33:56.8±0.2, 35°.99N×27°.67E, h55km, mb4.4, ML4.0, MW3.6*
HLW ***28*** *02:33:57.0, 35°.98N×27°.75E, h33km±36km, Md4.0, Ml3.7*
ISC 28 02:33:53.6±0.8, **36°.20N**±0°.02×**27°.51E**±0°.02, **h23**km±6km, **n384**, σ**1°21/468**, **mb3.9**/16, **2C-2D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIS1	**Nisyros Isl.**	**0.49**	**327**	P	**Pb**	02 34 02.5	-1.1
NIS1				S	**Sb**	02 34 10.5	+0.1
NIS1	**Nisyros Isl.**	**0.49**	**327**	P	**Pb**	02 34 02.5	-1.1
NIS1				S	**Sb**	02 34 10.5	+0.1
ARG	**Arkhangelos**	**0.50**	**87**	P	**Pb**	02 34 02.8	-1.0
ARG				S	**Sb**	02 34 11.0	+0.4
ARG	**Arkhangelos**	**0.50**	**87**	*e*PN	**Pb**	02 34 02.2	-1.6
ARG				*e*SN	**Sb**	02 34 10.3	-0.3
ARG	**Arkhangelos**	**0.50**	**87**	*e*Pn	**Pb**	02 34 02.2	-1.6
ARG	**Arkhangelos**	**0.50**	**87**	P	**Pb**	02 34 02.8	-1.0
ARG				*e*Sn	**Sb**	02 34 10.3	-0.3
ARG				S	**Sb**	02 34 11.0	+0.4
DAT	**Datca**	**0.54**	**6**	*e*PG	**Pb**	02 34 03.7	-0.8
DAT				*e*SG	**Sb**	02 34 11.9	0.0
DAT	**Datca**	**0.54**	**6**	*e*Pg	**Pb**	02 34 03.7	-0.8
DAT				*e*Sg	**Sb**	02 34 11.9	0.0
KARP	**Karpathos**	**0.71**	**204**	*e*PN	**Pb**	02 34 06.1	-1.2
KARP				*e*SN	**Sn**	02 34 18.0	-0.4
KARP	**Karpathos**	**0.71**	**204**	*e*Pn	**Pb**	02 34 06.1	-1.2
KARP				*e*Sn	**Sn**	02 34 18.0	-0.4
BODT	**Bodrum**	**0.88**	**349**	*e*PG	**Pb**	02 34 09.2	-1.1
BODT				*e*SG	**Sb**	02 34 22.1	+0.5
BODT	**Bodrum**	**0.88**	**349**	*e*Pg	**Pb**	02 34 09.2	-1.1
BODT				*e*Sg	**Sb**	02 34 22.1	+0.5
TURN	**Turunc**	**1.11**	**52**	*i* P	Pn	02 34 07.7	-6.0
TURN				*i* S	Sb	02 34 19.3	-8.9
DALY	**Dalyan (Mu¨la**	**1.11**	**56**	*e*PN	**Pn**	02 34 13.5	-0.2
DALY				*e*SN	**Sn**	02 34 29.5	+1.2
DALY	**Dalyan (Mu¨la**	**1.11**	**56**	*e*Pn	**Pn**	02 34 13.5	-0.2
DALY				*e*Sn	**Sn**	02 34 29.5	+1.2
MLSB	**Milas**	**1.12**	**11**	*e*PG	**Pn**	02 34 13.3	-0.6
MLSB				*e*SG	**Sb**	02 34 28.3	-0.2
MLSB	**Milas**	**1.12**	**11**	*e*Pg	**Pn**	02 34 13.3	-0.6
MLSB				*e*Sg	**Sb**	02 34 28.3	-0.2
YER	**Yerkesik**	**1.12**	**33**	*e*PN	**Pn**	02 34 14.0	0.0
YER	**Yerkesik**	**1.12**	**33**	*e*Pn	**Pn**	02 34 14.0	0.0
FETY	**Fethiye**	**1.34**	**70**	*e*PN	**Pn**	02 34 17.2	+0.2
FETY	**Fethiye**	**1.34**	**70**	*e*Pn	**Pn**	02 34 17.2	+0.2
AYDN	**Tasoluk**	**1.49**	**11**	*i* P	**Pn**	02 34 19.0	-0.1
AYDN				*i* S	**Sb**	02 34 41.7	+2.4
AYDN	**Tasoluk**	**1.49**	**11**	*i* P	**Pn**	02 34 19.0	-0.1
AYDN				*i* S	**Sb**	02 34 41.7	+2.4
ZKR	**Zakros**	**1.51**	**225**	P	**Pn**	02 34 19.9	+0.7
ZKR				S	**Sb**	02 34 39.9	+0.3
ZKR	**Zakros**	**1.51**	**225**	*e*PN	**Pn**	02 34 19.7	+0.5
ZKR				*e*SN	**Sb**	02 34 42.3	+2.7
ZKR	**Zakros**	**1.51**	**225**	*e*Pn	**Pn**	02 34 19.7	+0.5
ZKR				S	**Sb**	02 34 39.9	+0.3
ZKR				*e*Sn	**Sb**	02 34 42.3	+2.7
GCAM	**G?zelcaml?**	**1.52**	**352**	*i* P	**Pn**	02 34 18.8	-0.6
GCAM				*i* S	**Sb**	02 34 43.0	+3.1
GCAM	**G?zelcaml?**	**1.52**	**352**	*i* P	**Pn**	02 34 18.8	-0.6
GCAM				*i* S	**Sb**	02 34 43.0	+3.1
THR1	**Thera Island**	**1.67**	**277**	P	**Pn**	02 34 21.2	-0.3
THR1	**Thera Island**	**1.67**	**277**	P	**Pn**	02 34 21.2	-0.3
KSL	**Kastellorizon**	**1.68**	**91**	*e*PN	**Pb**	02 34 23.0	-0.8
KSL	**Kastellorizon**	**1.68**	**91**	*e*Pn	**Pb**	02 34 23.0	-0.8
AKAS	**Kas**	**1.69**	**88**	*i* P	**Pb**	02 34 23.7	-0.5
AKAS				*i* S	**Sb**	02 34 46.6	+1.5
AKAS	**Kas**	**1.69**	**88**	*i* P	**Pb**	02 34 23.7	-0.5
AKAS				*i* S	**Sb**	02 34 46.6	+1.5
THR2	**Thira island,**	**1.70**	**279**	P	**Pn**	02 34 21.8	0.0
THR2	**Thira island,**	**1.70**	**279**	P	**Pn**	02 34 21.8	0.0
THR3	**Thira Island,**	**1.72**	**278**	P	**Pn**	02 34 22.1	0.0
THR3	**Thira Island,**	**1.72**	**278**	P	**Pn**	02 34 22.1	0.0
NPS	**Neapolis**	**1.80**	**240**	P	**Pn**	02 34 23.5	+0.2
NPS				S	**Sn**	02 34 46.9	+1.4
NPS	**Neapolis**	**1.80**	**240**	*e*PB	**Pn**	02 34 23.4	+0.2
NPS				*e*SN	**Sn**	02 34 46.6	+1.1
NPS	**Neapolis**	**1.80**	**240**	P	**Pn**	02 34 23.5	+0.2
NPS				*e*Sn	**Sn**	02 34 46.6	+1.1
NPS				S	**Sn**	02 34 46.9	+1.4
APE	**Apeiranthos**	**1.82**	**299**	*e*PN	**Pn**	02 34 23.4	-0.2
APE	**Apeiranthos**	**1.82**	**299**	P	**Pn**	02 34 23.3	-0.2
APE				S	**Sn**	02 34 46.2	+0.3
APE	**Apeiranthos**	**1.82**	**299**	*e*PN	**Pn**	02 34 23.1	-0.4
APE	**Apeiranthos**	**1.82**	**299**	*e*Pn	**Pn**	02 34 23.4	-0.2
APE				S	**Sn**	02 34 46.2	+0.3
GLHS	**Glhisar (BURDU**	**1.86**	**58**	*e*PN	**Pb**	02 34 25.8	-1.2
GLHS	**Glhisar (BURDU**	**1.86**	**58**	*e*Pn	**Pb**	02 34 25.8	-1.2
DNZL	**Cakiroluk**	**1.93**	**39**	*i* P	**Pb**	02 34 27.0	-1.3
DNZL				*i* S	**Sb**	02 34 53.5	+1.4
DNZL	**Cakiroluk**	**1.93**	**39**	*i* P	**Pb**	02 34 27.0	-1.3
GOLH	**Golhisar**	**1.95**	**57**	*i* P	**Pb**	02 34 28.4	-0.1
GOLH				*i* S	**Sb**	02 34 54.4	+2.0
GOLH	**Golhisar**	**1.95**	**57**	*i* P	**Pb**	02 34 28.4	-0.1
LAST	**Lasithi**	**1.95**	**239**	P	**Pn**	02 34 25.7	+0.3
LAST				S	**Sn**	02 34 50.7	+1.5
LAST	**Lasithi**	**1.95**	**239**	*e*PB	**Pn**	02 34 25.5	+0.1
LAST				*e*SN	**Sb**	02 34 51.3	-1.2
LAST	**Lasithi**	**1.95**	**239**	P	**Pn**	02 34 25.7	+0.3
LAST				S	**Sn**	02 34 50.7	+1.5
LAST				*e*Sn	**Sb**	02 34 51.3	-1.2
DENT	**Denizli**	**1.98**	**38**	*e*PN	**Pn**	02 34 26.9	+1.2
DENT	**Denizli**	**1.98**	**38**	*e*Pn	**Pn**	02 34 26.9	+1.2
ELL	**Elmali**	**2.01**	**73**	*e*PN	**Pb**	02 34 27.9	-1.7
ELL	**Elmali**	**2.01**	**73**	*e*Pn	**Pb**	02 34 27.9	-1.7
IZM	**Izmir**	**2.21**	**355**	*e*PN	**Pn**	02 34 29.1	+0.2
IZM	**Izmir**	**2.21**	**355**	*e*Pn	**Pn**	02 34 29.1	+0.2
BLCB	**Balcova**	**2.22**	**350**	*e*PN	**Pn**	02 34 29.0	0.0
BLCB	**Balcova**	**2.22**	**350**	*e*Pn	**Pn**	02 34 29.0	0.0
URLA	**Izmir**	**2.28**	**342**	*i* P	**Pn**	02 34 29.5	-0.4
URLA				*i* S	**Sb**	02 35 00.9	-1.0
URLA	**Izmir**	**2.28**	**342**	*i* P	**Pn**	02 34 29.5	-0.4
URLA				*i* S	**Sb**	02 35 00.9	-1.0
IDI	**Anoyia**	**2.32**	**248**	P	**Pn**	02 34 31.0	+0.6
IDI				S	**Sn**	02 34 59.6	+1.4
IDI	**Anoyia**	**2.32**	**248**	*e*PB	**Pn**	02 34 30.4	0.0
IDI	**Anoyia**	**2.32**	**248**	*e*Pb	**Pn**	02 34 30.4	0.0
IDI	**Anoyia**	**2.32**	**248**	P	**Pn**	02 34 31.0	+0.6
IDI				S	**Sn**	02 34 59.6	+1.4
KORT	**Korkueli**	**2.42**	**70**	*i* P	**Pb**	02 34 35.0	-1.6
KORT				*i* S	**Sn**	02 35 00.6	-0.3
KORT	**Korkueli**	**2.42**	**70**	*i* P	**Pb**	02 34 35.0	-1.6
KORT				*i* S	**Sn**	02 35 00.6	-0.3
MANT	**Manisa**	**2.44**	**20**	*i* P	**Pn**	02 34 32.2	0.0
MANT	**Manisa**	**2.44**	**20**	*i* P	**Pn**	02 34 32.2	0.0
CHOS	**Chios island**	**2.48**	**332**	P	**Pn**	02 34 32.3	-0.3
CHOS				S	**Sn**	02 35 02.1	-0.1
CHOS	**Chios island**	**2.48**	**332**	*e*PN	**Pn**	02 34 32.3	-0.3
CHOS	**Chios island**	**2.48**	**332**	P	**Pn**	02 34 32.3	-0.3
CHOS				S	**Sn**	02 35 02.1	-0.1
KULA	**Kula

ESKT	Eskisehir	4.24	38	ePN	Pn	02 34 58.8	+1.8		
ESKT	Eskisehir	4.24	38	ePn	Pn	02 34 58.8	+1.8		
KONT	Konya--Tatoy	4.25	64	ePN	Pn	02 34 59.8	+2.8		
KONT	Konya--Tatoy	4.25	64	ePn	Pn	02 34 59.8	+2.8		
ALFC	Alevga	4.27	103	⇓P	Pn	02 34 58.0	+0.8		
	5.0nm,0.3s								
ALFC				S	Sn	02 35 45.9	-0.4		
ALFC	Alevga	4.27	103	⇓iP	Pn	02 34 58.0	+0.8		
	5.0nm,0.3s								
ALFC				S	Sn	02 35 45.9	-0.4		
GELI	Tayfur-Gelibol	4.28	349	ePN	Pn	02 34 57.4	+0.1		
GELI	Tayfur-Gelibol	4.28	349	ePn	Pn	02 34 57.4	+0.1		
VLX	Vlachokerasia	4.28	287	ePN	Pn	02 34 59.0	+1.5		
VLX	Vlachokerasia	4.28	287	ePn	Pn	02 34 59.0	+1.5		
MDNY	Mudanya-Bursa	4.30	14	ePN	Pn	02 34 59.3	+1.6		
MDNY	Mudanya-Bursa	4.30	14	ePn	Pn	02 34 59.3	+1.6		
KDHN	Kadinhani	4.34	56	*i* P	Pn	02 35 00.5	+2.2		
KDHN	Kadinhani	4.34	56	*i* P	Pn	02 35 00.5	+2.2		
LKR	Lokris	4.35	306	ePN	Pn	02 34 58.4	+0.1		
LADK	Ladik-KONYA	4.36	61	ePN	Pn	02 35 00.9	+2.4		
LADK	Ladik-KONYA	4.36	61	ePn	Pn	02 35 00.9	+2.4		
SKIA	Skiathos	4.37	314	P	Pn	02 34 58.7	+0.1		
SKIA	Skiathos	4.37	314	P	Pn	02 34 58.7	+0.1		
ERMK	Ermenek	4.38	83	*i* P	Pn	02 35 01.9	+3.0		
ERMK	Ermenek	4.38	83	*i* P	Pn	02 35 01.9	+3.0		
KIZT	Kizilcal	4.38	51	ePN	Pn	02 35 01.2	+2.3		
KIZT	Kizilcal	4.38	51	ePn	Pn	02 35 01.2	+2.3		
MRMT	Marmara Adasi	4.40	1	ePN	Pn	02 35 00.4	+1.3		
MRMT	Marmara Adasi	4.40	1	ePn	Pn	02 35 00.4	+1.3		
GUR	Goura	4.49	294	ePN	Pn	02 35 01.6	+1.3		
GUR	Goura	4.49	294	ePn	Pn	02 35 01.6	+1.3		
ARMT	Armutlu	4.49	13	ePN	Pn	02 35 01.5	+1.3		
ARMT	Armutlu	4.49	13	ePn	Pn	02 35 01.5	+1.3		
ERIK	Erikli-Kesan	4.54	350	ePN	Pn	02 35 01.2	+0.4		
ERIK	Erikli-Kesan	4.54	350	ePn	Pn	02 35 01.2	+0.4		
SVRH	Sivrihisar-ESK	4.54	43	ePN	Pn	02 35 03.1	+2.1		
SVRH	Sivrihisar-ESK	4.54	43	ePn	Pn	02 35 03.1	+2.1		
SMTH	Samothraki Isl	4.54	341	ePN	Pn	02 35 01.2	+0.2		
SMTH	Samothraki Isl	4.54	341	ePn	Pn	02 35 01.2	+0.2		
ITM	Ithomi	4.59	284	ePN	Pn	02 34 04.7	+3.0		
ITM	Ithomi	4.59	284	ePn	Pn	02 34 04.7	+3.0		
NEO	Neokhori	4.60	314	ePN	Pn	02 35 02.8	+1.0		
NEO	Neokhori	4.60	314	ePn	Pn	02 35 02.8	+1.0		
SZAC	Souni-Zanaja	4.61	107	P	Pn	02 35 02.6	+0.7		
SZAC				S	Sn	02 35 54.2	-0.6		
SZAC	Souni-Zanaja	4.61	107	P	Pn	02 35 02.6	+0.7		
SZAC				S	Sn	02 35 54.2	-0.6		
GPA	Golpazari	4.64	27	ePN	Pn	02 35 04.2	+1.9		
GPA	Golpazari	4.64	27	ePn	Pn	02 35 04.2	+1.9		
ENEZ	Enez	4.66	347	ePN	Pn	02 35 03.1	+0.6		
ENEZ	Enez	4.66	347	ePn	Pn	02 35 03.1	+0.6		
KLV	Kalavryta, Ach	4.67	295	ePN	Pn	02 35 04.4	+1.7		
KLV	Kalavryta, Ach	4.67	295	ePn	Pn	02 35 04.4	+1.7		
PYL	PYLOS	4.70	280	ePN	Pn	02 35 05.2	+2.1		
PYL	PYLOS	4.70	280	ePn	Pn	02 35 05.2	+2.1		
MAMC	Mammari	4.75	101	P	Pn	02 35 05.0	+1.1		
MAMC	Mammari	4.75	101	P	Pn	02 35 05.0	+1.1		
PAIG	Paliouri	4.80	322	ePN	Pn	02 35 04.6	+0.2		
PAIG	Paliouri	4.80	322	ePn	Pn	02 35 04.6	+0.2		
KALE	Kalithea	4.81	299	ePN	Pn	02 35 06.2	+1.5		
KALE	Kalithea	4.81	299	ePn	Pn	02 35 06.2	+1.5		
ALN	Alexandroupoli	4.83	347	P	Pn	02 35 04.8	-0.1		
ALN				S	Sn	02 35 59.8	-0.3		
ALN	Alexandroupoli	4.83	347	ePN	Pn	02 35 05.1	+0.2		
ALN	Alexandroupoli	4.83	347	P	Pn	02 35 04.8	-0.1		
ALN	Alexandroupoli	4.83	347	ePn	Pn	02 35 05.1	+0.2		
ALN				S	Sn	02 35 59.8	-0.3		
AMT	Artemida-Makis	4.84	288	ePN	Pn	02 35 06.6	+1.5		
AMT	Artemida-Makis	4.84	288	ePn	Pn	02 35 06.6	+1.5		
GULT	Gulveren	4.84	28	ePN	Pn	02 35 07.0	+1.8		
GULT	Gulveren	4.84	28	ePn	Pn	02 35 07.0	+1.8		
TRIZ	Trizonia	4.85	298	ePN	Pn	02 35 06.8	+1.7		
TRIZ	Trizonia	4.85	298	ePn	Pn	02 35 06.8	+1.7		
LAKA	Lakka	4.87	296	ePN	Pn	02 35 06.8	+1.4		
LAKA	Lakka	4.87	296	ePn	Pn	02 35 06.8	+1.4		
CSS	Prodhromos	4.90	103	P	Pn	02 35 06.7	+0.8		
	3.6nm,0.5s								
CSS				S	Sn	02 36 01.0	-0.8		
CSS	Prodhromos	4.90	103	Pn	Pn	02 35 06.2	+0.3		
CSS	Prodhromos	4.90	103	P	Pn	02 35 06.7	+0.8		
	3.6nm,0.5s								
CSS				Sn	Sn	02 35 59.8	-2.0		
CSS				S	Sn	02 36 01.0	-0.8		
CRLT	Corlu	4.93	2	ePN	Pn	02 35 07.7	+1.5		
CRLT	Corlu	4.93	2	ePn	Pn	02 35 07.7	+1.5		
AGG	Agios Georgios	4.99	306	ePN	Pn	02 35 08.4	+1.3		
AGG	Agios Georgios	4.99	306	ePn	Pn	02 35 08.4	+1.3		
EFP	Efpalio	4.99	298	ePN	Pn	02 35 07.6	+0.5		
EFP	Efpalio	4.99	298	ePn	Pn	02 35 07.6	+0.5		
ISK	Istanbul-Kandi	5.01	14	ePN	Pn	02 35 09.2	+1.8		
ISK	Istanbul-Kandi	5.01	14	ePn	Pn	02 35 09.2	+1.8		
HMAT	Matruh	5.10	184	P	Pn	02 35 08.7	+0.1		
	baz=187								
HMAT				AMP		02 36 00.0			
	comp=E,80µm,0.6s,logA/T=5.2,baz=187								
HMAT	Matruh	5.10	184	P	Pn	02 35 08.7	+0.1		
RLS	Riolos of Patr	5.18	293	ePN	Pn	02 35 10.2	+0.6		
RLS	Riolos of Patr	5.18	293	ePn	Pn	02 35 10.2	+0.6		
RDO	Rodhopi	5.18	343	ePN	Pn	02 35 09.9	+0.2		
EVR	Evrytania	5.28	303	ePN	Pn	02 35 12.7	+1.5		
EVR	Evrytania	5.28	303	ePn	Pn	02 35 12.7	+1.5		
PHNC	Paralimni	5.44	101	P	Pn	02 35 17.5	+4.2		
	comp=E,6.7nm,0.6s								
PHNC				S	Sn	02 36 19.1	+3.9		
THL	Klokotos Trika	5.50	309	ePN	Pn	02 35 14.5	+0.5		
THL	Klokotos Trika	5.50	309	ePn	Pn	02 35 14.5	+0.5		
SOH	Sokhos	5.65	326	ePN	Pn	02 35 17.2	+0.9		
SOH	Sokhos	5.65	326	ePn	Pn	02 35 17.2	+0.9		
NVR	Nevrokopi	5.88	332	ePN	Pn	02 35 20.2	+0.8		
NVR	Nevrokopi	5.88	332	ePn	Pn	02 35 20.2	+0.8		
GULE	Gulek	5.93	77	*i* P	Pn	02 35 22.8	+2.6		
BRTR	Keskin Array B	5.99	52	Pn	Pn	02 35 24.2	+3.3		
	comp=E,1.9nm,0.3s,baz=235,slow=16,SNR=38								
BRTR				Sn	Sn	02 36 31.6	+2.8		
	comp=E,0.7nm,0.3s,baz=235,slow=26,SNR=4.9								
GRG	Griva	6.21	321	ePN	Pn	02 35 25.8	+1.9		
GRG	Griva	6.21	321	ePn	Pn	02 35 25.8	+1.9		
JAN	Janina	6.30	305	ePN	Pn	02 35 26.7	+1.6		
JAN	Janina	6.30	305	ePn	Pn	02 35 26.7	+1.6		
HNTI	Hanita	7.04	114	Pn	Pn	02 35 35.0	-0.2		
HNAT	Natroun	7.04	157	P	Pn	02 35 34.6	-0.7		
	baz=158								
HNAT	Natroun	7.04	157	P	Pn	02 35 34.6	-0.7		
OFRI	'Ofer	7.13	118	Pn	Pn	02 35 36.3	-0.2		
SWA2		7.14	195	P	Pn	02 35 37.3	+0.6		
	baz=197								
SWA2				S	Sn	02 36 54.6	-2.6		
	baz=197								
SWA2		7.14	195	P	Pn	02 35 37.3	+0.6		
SWA2				S	Sn	02 36 54.6	-2.6		
HWQ	Hawqa	7.16	103	eP	Pn	02 35 36.5	-0.5		
HWQ	Hawqa	7.16	103	eP	Pn	02 35 36.5	-0.5		
VTS	Vitosha	7.20	334	ePn	Pn	02 35 39.1	+1.5		
KOT	Kottamia	7.22	149	P	Pn	02 35 36.7	-1.1		
	baz=149								
KOT				S	Sn	02 36 52.8	-6.4		
	baz=149								
KOT	Kottamia	7.22	149	P	Pn	02 35 36.7	-1.1		
MMC7	Mount Meron ar	7.23	114	Pn	Pn	02 35 37.4	-0.5		
MMAI	Mount Meron Ar	7.24	114	Pn	Pn	02 35 37.2	-0.8		
	comp=E,12nm,0.3s,baz=306,slow=13,SNR=44								
MMAI				Sn	Sn	02 36 56.3	-3.3		
	comp=E,24nm,0.3s,baz=317,slow=26,SNR=15								
AMAG	Maghara	7.30	138	P	Pn	02 35 38.1	-0.8		
	baz=137								
AMAG	Maghara	7.30	138	P	Pn	02 35 38.1	-0.8		
KSDI	Kefar Szold	7.35	112	Pn	Pn	02 35 38.7	-0.8		
KSDI				Sn	Sn	02 36 59.4	-2.7		
RCY	Rachaya	7.35	109	eP	Pn	02 35 39.0	-0.7		
RCY	Rachaya	7.35	109	eP	Pn	02 35 39.0	-0.7		
HSAF	As Saff	7.38	151	P	Pn	02 35 39.5	-0.5		
	baz=152								
HSAF	As Saff	7.38	151	P	Pn	02 35 39.6	-0.5		
GLL	Jalalah	7.48	151	P	Pn	02 35 41.1	-0.3		
	baz=151								
GLL	Jalalah	7.48	151	P	Pn	02 35 41.1	-0.3		
MMLI	Mount Malkishu	7.54	118	Pn	Pn	02 35 41.5	-0.7		
KSHT	Keshet	7.56	113	Pn	Pn	02 35 42.5	+0.1		
HMDT	Nahal Hemdat	7.71	118	Pn	Pn	02 35 44.3	-0.2		
SUZ		7.75	143	P	Pn	02 35 44.6	-0.5		
	baz=143								
SUZ		7.75	143	P	Pn	02 35 44.6	-0.5		
KZIT	Kziot	7.80	131	Pn	Pn	02 35 45.1	-0.6		
RTMI	Retamim	7.88	129	Pn	Pn	02 35 45.9	-0.9		
BARS	Barje	7.94	328	ePn	Pn	02 35 49.6	+2.0		
YTIR	Yattir	7.95	125	Pn	Pn	02 35 47.1	-0.8		
DSI	Dead Sea	8.00	123	Pn	Pn	02 35 47.9	-0.6		
ZAF		8.09	147	P	Pn	02 35 49.8	+0.1		
	baz=147								
ZAF		8.09	147	P	Pn	02 35 49.8	+0.1		
MZDA	Masada	8.15	124	Pn	Pn	02 35 49.9	-0.6		
ZNM		8.16	145	P	Pn	02 35 50.4	-0.3		
	baz=145								
ZNM		8.16	145	P	Pn	02 35 50.4	-0.3		
RMNI	Mount Ramon	8.24	131	Pn	Pn	02 35 50.6	-1.2		
HNKL	Nakhl	8.28	137	P	Pn	02 35 51.4	-0.9		
	baz=137								
HNKL				AMP		02 37 00.0			
	comp=E,50µm,0.5s,logA/T=5.0,baz=137								
HNKL				S	Sn	02 37 19.1	-5.9		
	baz=137								
HNKL	Nakhl	8.28	137	P	Pn	02 35 51.4	-0.9		
KRMI	Paran Flat	8.56	133	Pn	Pn	02 35 55.3	-0.9		
PRNI	Paran	8.56	131	Pn	Pn	02 35 55.0	-1.1		
ASF	Jabal al Asfar	8.75	115	Pn	Pn	02 35 58.5	-0.3		
	comp=E,1.4nm,0.3s,baz=297,slow=2.3,SNR=12								
ASF				Sn	Sn	02 37 35.7	-1.0		
	comp=E,0.5nm,0.3s,baz=307,slow=23,SNR=3.5								
HRFI	Mount Harif	8.80	132	Pn	Pn	02 35 58.6	-0.9		
MBRI	Mt Berech	8.91	134	Pn	Pn	02 36 00.4	-0.6		
EIL	Elat	9.02	134	Pn	Pn	02 36 02.0	-0.4		
	comp=E,2.1nm,0.3s,baz=335,slow=9.0,SNR=21								
EIL				Sn	Sn	02 37 39.0	-4.4		
	comp=E,5.3nm,0.3s,baz=352,slow=3.9,SNR=6.7								
EIL	Elat	9.02	134	Pn	Pn	02 36 01.6	-0.9		
HFRF	Wahat Farafira	9.04	175	P	Pn	02 36 02.3	-0.5		
	baz=176								
HFRF	Wahat Farafira	9.04	175	P	Pn	02 36 02.3	-0.5		
MLR	Muntele Rosu	9.36	353	Pn	Pn	02 36 08.0	+0.8		
	comp=E,0.0nm,0.3s,baz=148,slow=15,SNR=2.6								
HKAT	Jabal Katrina	9.41	143	P	Pn	02 36 07.2	-0.7		
	baz=142								
HKAT	Jabal Katrina	9.41	143	P	Pn	02 36 07.2	-0.7		
DIVS	Divibare	9.77	326	ePn	Pn	02 36 11.3	-1.4		
KOLS	Kolonicke sedl	13.30	345	ePN	Pn	02 36 59.2	-1.7		
CRVS	Cervenica-Dubn	13.45	343	ePN	Pn	02 37 02.4	-0.6		
VYHS	Vyhne	13.85	335	ePN	Pn	02 37 09.0	+0.6		
AKASG	Malin Array Be	14.55	4	Pn	P	02 37 25.1	+0.8		
	comp=E,0.5nm,0.3s,baz=190,slow=9.9,SNR=4.4								
KEST	Kesra	14.72	274	Pn	P	02 37 28.3	+1.9		
	comp=E,0.3nm,0.3s,baz=99,slow=19,SNR=16								
GERES	GERESS Array B	16.20	326	Pn	P	02 37 42.5	-0.2		
	comp=E,0.1nm,0.3s,baz=131,slow=13,SNR=5.1								
KHC	Kasperske Hory	16.46	326	eP	P	02 37 48.0	+2.4		
KHC				epP	pP	02 37 53.0	+1.0		
KHC	Kasperske Hory	16.46	326	P	P	02 37 48.0	+2.4		
SBF	Sospel	17.15	303	eP	Pn	02 37 46.7	-5.1		
	comp=E,45nm,1.0s								
LPG	La Plagne	18.21	307	eP	Pn	02 38 04.5	-0.5		
	comp=E,16nm,0.9s								
LPG	La Plagne	18.21	307	eP	Pn	02 38 04.5	-0.5		
	comp=E,8.1nm,0.9s								
LPL	La Plagne	18.23	307	eP	Pn	02 38 04.3	-0.9		
LPL	La Plagne	18.23	307	eP	Pn	02 38 04.3	-0.9		
CABF	La Chapelle	19.09	310	eP	P	02 38 14.2	-0.4		
	comp=E,9.5nm,0.7s								
CABF	La Chapelle	19.09	310	eP	P	02 38 14.2	-0.4		
	comp=E,4.8nm,0.7s								
HINF	Hinteralfeld	19.18	314	eP	P	02 38 15.3	-0.3		
HINF	Hinteralfeld	19.18	314	eP	P	02 38 15.3	-0.3		
CDF	Champ du Feu	19.25	316	eP	P	02 38 16.5	+0.2		
	comp=E,43nm,1.6s								
CDF	Champ du Feu	19.25	316	eP	P	02 38 16.5	+0.2		
	comp=E,22nm,1.6s								
VIVF	Saint-Julien-l	19.35	304	eP	P	02 38 17.0	-0.4		
	comp=E,18nm,1.1s								
VIVF	Saint-Julien-l	19.35	304	eP	P	02 38 17.0	-0.4		
	comp=E,9.1nm,1.1s								
HAU	Haudompre	19.57	314	eP	P	02 38 20.3	+0.5		
HAU	Haudompre	19.57	314	eP	P	02 38 20.3	+0.5		
PAGF	Fort de Pagny	20.20	314	eP	P	02 38 27.0	+0.3		
PAGF	Fort de Pagny	20.20	314	eP	P	02 38 27.0	+0.3		
SFTF	Sexfontaines	20.44	313	eP	P	02 38 28.7	-0.5		
SFTF	Sexfontaines	20.44	313	eP	P	02 38 28.7	-0.5		
SMF	Signal de Mont	20.52	308	eP	P	02 38 29.7	-0.4		
	comp=E,4.4nm,0.5s								
SMF	Signal de Mont	20.52	308	eP	P	02 38 29.7	-0.4		
	comp=E,2.2nm,0.5s								
LOR	Lormes	20.75	310	eP	P	02 38 31.7	-0.9		
	comp=E,16nm,1.2s								
LOR	Lormes	20.75	310	eP	P	02 38 31.7	-0.9		
	comp=E,8.1nm,1.2s								
AVF	Avril sur Loir	20.89	308	eP	P	02 38 34.1	0.0		
AVF	Avril sur Loir	20.89	308	eP	P	02 38 34.1	0.0		
SSF	Saint Saulge	20.89	309	eP	P	02 38 33.6	-0.5		
	comp=E,11nm,0.7s								
SSF	Saint Saulge	20.89	309	eP	P	02 38 33.6	-0.5		
	comp=E,5.7nm,0.7s								
BGF	Bois d'Agland	21.13	307	eP	P	02 38 36.3	-0.4		
	comp=E,16nm,0.9s								
BGF	Bois d'Agland	21.13	307	eP	P	02 38 36.3	-0.4		
	comp=E,8.1nm,0.9s								
ESDC	Sonseca Array	25.00	288	P	P	02 39 15.3	-0.4		
	comp=E,1.5nm,0.5s,baz=83,slow=10,SNR=14								
FINES	FINESS Array B	25.29	358	P	P	02 39 18.0	+0.1		
	comp=E,0.8nm,0.7s,baz=181,slow=11,SNR=4.6								
FINES				PcP	PcP	02 42 50.2	-0.2		
	comp=E,1.0nm,0.7s,baz=30,slow=3.4,SNR=4.2								
HFS	Hagfors	25.56	344	P	P	02 39 20.5	0.0		
	comp=E,2.2nm,0.6s,baz=153,slow=10.0,SNR=9.1								
AKTO	Aktyubinsk	26.14	47	P	P	02 39 25.6	-0.3		
	comp=E,1.4nm,0.8s,baz=238,slow=9.2,SNR=7.9								
NB2	NORSAR Subarra	26.94	342	P	P	02 39 32.9	-0.1		
	comp=Z,0.5nm,0.6s,baz=145,slow=10								
NB2	NORSAR Subarra	26.94	342	P	P	02 39 32.9	-0.1		
	comp=Z,0.5nm,0.6s,SNR=4.4								
NOA	NORSAR Array B	26.94	342	P	P	02 39 32.9	-0.1		
	comp=Z,0.9nm,0.7s,baz=147,slow=8.5,SNR=4.4								
TORD	Tiri Ar. Bea	32.63	232	P	P	02 40 24.4	+0.6		
	comp=Z,8.8nm,0.6s,baz=33,slow=8.7,SNR=215								
ARCES	ARCESS Array B	33.41	359	P	P	02 40 30.7	+0.6		
	comp=Z,1.3nm,0.7s,baz=174,slow=9.1,SNR=4.3								
MKAR	Makanchi Array	41.60	58	P	P	02 41 40.3	+0.6		
	comp=Z,1.2nm,0.5s,baz=273,slow=7.1,SNR=18								
MKAR				PcP	PcP	02 43 36.4	-0.1		
	comp=Z,0.6nm,0.6s,baz=278,slow=3.2,SNR=4.0								
MKAR				ScP	ScP	02 47 26.0	+0.9		
	comp=Z,0.3nm,0.5s,baz=277,slow=3.7,SNR=4.4								
LIC	Lamto	42.16	233	eP	P	02 41 44.6	+0.1		
	comp=Z,12nm,0.6s								
LIC	Lamto	42.16	233	eP	P	02 41 44.6	+0.1		
	comp=Z,5.8nm,0.6s								
ZALV	Zalesovo Beam	42.90	47	P	P	02 41 50.2	0.0		
	comp=Z,2.5nm,0.5s,baz=265,slow=7.8,SNR=12								
DANN	Dangsing	47.63	83	eP	P	02 42 29.9	+1.5		
	comp=Z,19nm,0.5s								
KOLN	Koldanda	47.75	83	eP	P	02 42 30.6	+1.4		
	comp=Z,2.8nm,0.4s								
SONM	Songino Array	57.35	52	P	P	02 43 40.4	+0.5		
	comp=Z,0.6nm,0.5s,baz=294,slow=7.8,SNR=5.8								
SONM				ScP	ScP	02 48 31.8	-0.3		
	comp=Z,0.3nm,0.4s,baz=299,slow=5.9,SNR=3.4								
BOSA	Boshof	64.50	182	P	P	02 44 29.0	+0.5		
	comp=Z,1.8nm,1.0s,baz=24,slow=6.7,SNR=4.3								
YKA	Yellowknife Ar	77.04	343	P	P	02 45 43.0	-1.3		
	comp=Z,0.2nm,0.6s,baz=30,slow=5.1,SNR=5.8								
ILAR	Eielson Array	79.27	358	P	P	02 45 55.5	-1.2		
	comp=Z,0.3nm,0.6s,baz=350,slow=4.6,SNR=6.0								
PDAR	Pinedale Array	92.20	330	P	P	02 46 59.7	-2.1		
	comp=Z,0.2nm,0.4s,baz=74,slow=4.0,SNR=2.8								
WRA	Warramunga Arr	114.81	97	PKP	PKPdf	02 52 32.2	-0.5		
	comp=Z,0.4nm,0.8s,baz=302,slow=3.0,SNR=3.1								
ASAR	Alice Springs	116.36	101	PKP	**PKPdf**	02 52 35.0	-0.6		
	comp=Z,0.2nm,0.5s,baz=311,slow=1.5,SNR=5.0								

IDC 28 02:58:35.3±5.7, 7°39S×127°99E, h88km±58km, mb3.4/3, mb1 3.8/6, mb1mx3.5/21, mbtmp3.6/6, ML4.0/3, Error ellipse: s-maj=86.5km s-min=37.5km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	10.89	192	P	Pn	03 01 08.7	+0.4
	0.5nm,0.3s,baz=18,slow=12,SNR=32						
FITZ				S	Sn	03 03 03.4	-4.9
	2.9nm,0.3s,baz=72,slow=20,SNR=9.1						
WRA	Warramunga Arr	13.92	154	P	Pn	03 01 46.8	-1.9
	0.6nm,0.3s,baz=332,slow=14,SNR=11						
WRA				S	Sn	03 04 12.5	-9.5
	2.5nm,0.3s,baz=330,slow=22,SNR=15						
ASAR	Alice Springs	17.16	161	P	P	03 02 30.6	+0.7
	1.4nm,0.3s,baz=341,slow=11,SNR=127						
ASAR				S	Sn	03 05 32.5	-7.8
	0.9nm,0.3s,baz=323,slow=16,SNR=9.1						
SONM	Songino Array	58.20	343	P	P	03 08 21.1	+0.7
	1.1nm,0.7s,baz=165,slow=8.3,SNR=6.7						
MKAR	Makanchi Array	67.47	328	P	P	03 09 21.6	-0.2
	0.3nm,0.4s,baz=123,slow=5.3,SNR=5.3						
KURBB	Kurchatov Arra	71.81	329	P	P	03 09 47.6	-0.7
	0.2nm,0.3s,baz=133,slow=4.7,SNR=8.0						
TORD	Torodi Ar. Bea	126.92	281	PKP	PKPdf	03 17 30.0	0.0
	0.1nm,0.5s,baz=69,slow=3.0,SNR=3.5						

*IDC **28** 03:09:51.0±1.2, 42°.94N×78°.18E, h0km, mb3.2/3, mb1 3.5/8, mb1mx3.4/32, mbtmp3.5/8, ML3.6/5, Error ellipse: s-maj=17.9km s-min=10.0km az=146.0*
*NNC **28** 03:09:53.2±0.9, 43°.07N×78°.11E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=10.7km s-min=4.6km az=161.0*
ISC 28 03:09:52.4±1.1, 42°.9N±0°.1×78°.12E±0°.06, h11km, n27, σ1§02/26, 5C-7D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDC	Almaty	0.89	289	⇑P	Pg	03 10 09.7	+0.1
KNDC				⇑S	Sb	03 10 22.4	+0.6
ULHL	Ulahol	1.55	244	P	Pb	03 10 21.2	-0.1
	SNR=154						
TKM2	Tokmak 2	1.85	270	⇑Pn	Pb	03 10 26.6	+0.1
	18nm,0.4s						
TKM2				⇑Sn	Sg	03 10 51.4	-0.6
	235nm,0.5s						
TKM2	Tokmak 2	1.85	270	P	Pb	03 10 26.7	+0.3
	SNR=43						
KZA	Kyzart	2.29	249	P	Pb	03 10 33.9	-0.1
	SNR=60						
KBK	Karagaybulak	2.35	264	P	Pb	03 10 35.8	+0.9
	SNR=123						
CHMS	Chumysh	2.47	272	P	Pb	03 10 37.6	+0.7
	SNR=7.5						
USP	Ospenovka	2.67	278	P	Pb	03 10 38.6	-1.7
	SNR=21						
AAK	Ala-Archa	2.69	265	P	Pb	03 10 40.8	+0.1
	SNR=43						
AAK	Ala-Archa	2.69	265	Pn	Pb	03 10 40.5	-0.1
	13nm,0.3s,baz=100,slow=9.8,SNR=52						
AAK				Lg	Lg	03 11 17.5	
	36nm,0.3s,baz=224,slow=22,SNR=25						
UCH	Uchtor	2.76	256	P	Pb	03 10 41.9	-0.1
	SNR=21						
EKS2	Erkin-Say	3.21	266	P	Pb

TKM2	**Tokmak 2**	**3.17**	**37**	P	**Pn**	**03 38 33.5**	**-0.5**
	SNR=8.9							
KK31	**Karatay Array**	**3.25**	**326**	Pn	Pn	03 38 36.7	+1.8
	12nm,0.5s,baz=144,slow=14,SNR=109							
KK31				⇓Lg	Lg	03 39 23.7		
	21nm,0.5s,baz=148,slow=32,SNR=6.1							
MKAR	**Makanchi Array**	**9.28**	**44**	Pn	**Pn**	**03 39 57.9**	**+0.4**
	0.1nm,0.3s,baz=229,slow=13,SNR=3.0							
MKAR				Lg	Lg	03 42 31.6		
	0.2nm,0.3s,baz=214,slow=29,SNR=5.9							
TORD	**Torodi Ar. Bea**	**67.38**	**268**	P	**P**	**03 48 38.1**	**+0.2**
	0.3nm,0.4s,baz=55,slow=5.4,SNR=8.9							
YKA	**Yellowknife Ar**	**77.25**	**4**	P	**P**	**03 49 36.0**	**-0.1**
	0.2nm,0.5s,baz=350,slow=5.7,SNR=8.4							

*ISK **28** 03:45:30.4, 40.68N×30.61E, h5km, MD3.5*
*ISCJB **28** 03:45:31.5±0.5, 40.69N±0.02×30.63E±0.02, h4km±4km, Error ellipse: s-maj=3.5km s-min=2.6km az=2.9*
*CSEM **28** 03:45:31.9±0.1, 40.67N×30.62E, h2km, MD3.5, Error ellipse: s-maj=2.5km s-min=1.8km az=8.0*
*DDA **28** 03:45:31.1, 40.69N×30.61E, h11km, ML3.6*
ISC 28 03:45:31.9±0.9, 40.68N±0.02×30.62E±0.01, h10km±7km, n141, σ1§01/171, 4C-5D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPNC	**Sapanca-Adapaz**	**0.24**	**272**	PG	**Pg**	**03 45 36.3**	**-0.4**
SPNC				eSG	Sg	03 45 40.2	+0.2
SPNC	**Sapanca-Adapaz**	**0.24**	**272**	*i* Pg	**Pg**	**03 45 36.3**	**-0.4**
SPNC				eSg	Sg	03 45 40.2	+0.2
HENT	**Hendek**	**0.26**	**56**	*i* P	**Pg**	**03 45 36.8**	**-0.3**
HENT				*i* S	Sg	03 45 40.4	-0.2
HENT	**Hendek**	**0.26**	**56**	*i* P	**Pg**	**03 45 36.8**	**-0.3**
HENT				*i* S	Sg	03 45 40.4	-0.2
GULT	**Gulveren**	**0.26**	**198**	ePG	**Pg**	**03 45 36.9**	**-0.3**
GULT				eSG	Sg	03 45 41.4	+0.7
GULT	**Gulveren**	**0.26**	**198**	ePg	**Pg**	**03 45 36.9**	**-0.3**
GULT				eSg	Sg	03 45 41.4	+0.7
GPA	**Golpazari**	**0.46**	**211**	ePG	**Pg**	**03 45 40.3**	**-0.5**
GPA	**Golpazari**	**0.46**	**211**	ePg	**Pg**	**03 45 40.3**	**-0.5**
MDUB	**Mudurnu**	**0.49**	**115**	ePG	**Pg**	**03 45 41.1**	**-0.3**
MDUB	**Mudurnu**	**0.49**	**115**	ePg	**Pg**	**03 45 41.1**	**-0.3**
BORA	**Eskisehir**	**0.81**	**189**	*i* P	**Pg**	**03 45 46.8**	**-0.7**
BORA				*i* S	Sg	03 45 57.9	-0.1
BORA	**Eskisehir**	**0.81**	**189**	*i* P	**Pg**	**03 45 46.8**	**-0.7**
BORA				*i* S	Sg	03 45 57.9	-0.1
SILT	**Sile**	**0.88**	**303**	ePG	**Pg**	**03 45 48.4**	**-0.4**
SILT				eSG	Sb	03 46 01.6	+0.5
SILT	**Sile**	**0.88**	**303**	ePg	**Pg**	**03 45 48.4**	**-0.4**
SILT				eSg	Sb	03 46 01.6	+0.5
KDZE	**Karadeniz Ereo**	**0.89**	**44**	ePG	**Pg**	**03 45 48.4**	**-0.6**
KDZE	**Karadeniz Ereo**	**0.89**	**44**	ePg	**Pg**	**03 45 48.4**	**-0.6**
SGKT	**Sivrigoynuk**	**1.10**	**95**	*i* P	**Pg**	**03 45 52.1**	**-0.9**
SGKT				*i* S	Sg	03 46 05.5	-1.8
SGKT	**Sivrigoynuk**	**1.10**	**95**	*i* P	**Pg**	**03 45 52.1**	**-0.9**
SGKT				*i* S	Sg	03 46 05.5	-1.8
GEMT	**Gemlik**	**1.12**	**258**	ePN	**Pg**	**03 45 52.0**	**-1.3**
GEMT	**Gemlik**	**1.12**	**258**	ePn	**Pg**	**03 45 52.0**	**-1.3**
BUY	**Buyukada**	**1.15**	**279**	*i* P	**Pg**	**03 45 53.5**	**-0.6**
BUY				*i* S	Sb	03 46 09.2	+0.3
BUY	**Buyukada**	**1.15**	**279**	*i* P	**Pg**	**03 45 53.5**	**-0.6**
BUY				*i* S	Sb	03 46 09.2	+0.3
ESKT	**Eskisehir**	**1.17**	**171**	ePN	**Pb**	**03 45 54.2**	**-0.1**
ESKT	**Eskisehir**	**1.17**	**171**	ePn	**Pb**	**03 45 54.2**	**-0.1**
SEYT	**Eskypehyr**	**1.17**	**171**	*i* P	**Pb**	**03 45 54.5**	**+0.2**
SEYT				*i* S	Sg	03 46 07.4	-2.1
SEYT	**Eskypehyr**	**1.17**	**171**	*i* P	**Pb**	**03 45 54.5**	**+0.2**
SEYT				*i* S	Sg	03 46 07.4	-2.1
ISK	**Istanbul-Kandi**	**1.25**	**289**	ePN	**Pg**	**03 45 54.6**	**-1.1**
ISK	**Istanbul-Kandi**	**1.25**	**289**	ePn	**Pg**	**03 45 54.7**	**-1.1**
ARMT	**Armutlu**	**1.34**	**266**	ePN	**Pg**	**03 45 56.3**	**-1.4**
ARMT	**Armutlu**	**1.34**	**266**	ePn	**Pg**	**03 45 56.3**	**-1.4**
MDNY	**Mudanya-Bursa**	**1.36**	**257**	ePN	**Pb**	**03 45 57.2**	**+0.4**
MDNY	**Mudanya-Bursa**	**1.36**	**257**	ePn	**Pb**	**03 45 57.3**	**+0.4**
SVRH	**Sivrihisar-ESK**	**1.41**	**150**	ePN	**Pb**	**03 45 58.5**	**+0.1**
SVRH	**Sivrihisar-ESK**	**1.41**	**150**	ePn	**Pb**	**03 45 58.5**	**+0.1**
ORLT	**Orhaneli**	**1.46**	**245**	ePN	**Pn**	**03 45 58.8**	**+0.4**
ORLT	**Orhaneli**	**1.46**	**245**	ePn	**Pn**	**03 45 58.8**	**+0.4**
BGKT	**Bogazkoy**	**1.49**	**290**	ePN	**Pn**	**03 45 59.0**	**+0.3**
BGKT	**Bogazkoy**	**1.49**	**290**	ePn	**Pn**	**03 45 59.0**	**+0.3**
TVSB	**Tavsanli**	**1.52**	**216**	ePN	**Pn**	**03 45 59.8**	**+0.6**
TVSB	**Tavsanli**	**1.52**	**216**	ePn	**Pn**	**03 45 59.8**	**+0.6**
SAFT	**Safranbolu**	**1.66**	**70**	ePN	**Pb**	**03 46 02.3**	**-0.3**
SAFT	**Safranbolu**	**1.66**	**70**	ePn	**Pb**	**03 46 02.3**	**-0.3**
ALT	**Altintas**	**1.67**	**194**	ePN	**Pn**	**03 46 02.1**	**+0.9**
ALT	**Altintas**	**1.67**	**194**	ePn	**Pn**	**03 46 02.2**	**+0.9**
CTKS	**Kestanelik-??a**	**1.69**	**290**	ePN	**Pb**	**03 46 02.8**	**-0.4**
CTKS	**Kestanelik-??a**	**1.69**	**290**	ePn	**Pb**	**03 46 02.8**	**-0.4**
ELBA	**Catalca**	**1.72**	**286**	*i* P	**Pn**	**03 46 02.2**	**+0.3**
ELBA				*i* S	Sn	03 46 24.0	-0.1
ELBA	**Catalca**	**1.72**	**286**	*i* P	**Pn**	**03 46 02.2**	**+0.3**
ELBA				*i* S	Sn	03 46 24.0	-0.1
KCTX	**Karacabey (Bur**	**1.77**	**257**	ePN	**Pn**	**03 46 03.7**	**+1.0**
KCTX	**Karacabey (Bur**	**1.77**	**257**	ePn	**Pn**	**03 46 03.7**	**+1.0**
GDZ	**Gediz**	**1.81**	**209**	*i* P	**Pb**	**03 46 05.5**	**+0.2**
GDZ				*i* S	Sg	03 46 30.3	+0.1
GDZ	**Gediz**	**1.81**	**209**	*i* P	**Pb**	**03 46 05.5**	**+0.2**
GDZ				*i* S	Sg	03 46 30.3	+0.1
LOD	**Lodumlu**	**1.82**	**115**	ePN	**Pn**	**03 46 04.5**	**+1.2**
LOD	**Lodumlu**	**1.82**	**115**	ePn	**Pn**	**03 46 04.5**	**+1.2**
ANTO	**Ankara**	**1.85**	**115**	ePN	**Pb**	**03 46 05.2**	**-0.7**
ANTO	**Ankara**	**1.85**	**115**	ePn	**Pb**	**03 46 05.2**	**-0.7**
DST	**Dursunbey**	**1.87**	**236**	ePN	**Pb**	**03 46 05.7**	**-0.5**
DST	**Dursunbey**	**1.87**	**236**	ePn	**Pb**	**03 46 05.7**	**-0.5**
SLVT	**Silivri**	**1.91**	**288**	ePN	**Pb**	**03 46 05.9**	**-0.9**
SLVT	**Silivri**	**1.91**	**288**	ePn	**Pb**	**03 46 05.9**	**-0.9**
CTYL	**Yal??k??y-??at**	**1.93**	**295**	ePN	**Pn**	**03 46 05.7**	**+0.9**
CTYL	**Yal??k??y-??at**	**1.93**	**295**	ePn	**Pn**	**03 46 05.7**	**+0.9**
DURS	**Dursunbey**	**1.97**	**238**	*i* P	**Pn**	**03 46 05.2**	**+0.8**
DURS				*i* S	Sg	03 46 36.0	+1.0
DURS	**Dursunbey**	**1.97**	**238**	*i* P	**Pn**	**03 46 05.2**	**-0.2**
DURS				*i* S	Sg	03 46 36.0	+1.0
BOLV	**Bolvadin**	**1.97**	**172**	*i* P	**Pn**	**03 46 06.3**	**+0.8**
BOLV				*i* S	Sg	03 46 36.1	+0.8
BOLV	**Bolvadin**	**1.97**	**172**	*i* P	**Pn**	**03 46 06.3**	**+0.8**
BOLV				*i* S	Sg	03 46 36.1	+0.8
KIZT	**Kizilcal**	**2.04**	**151**	ePN	**Pn**	**03 46 06.6**	**+0.2**
KIZT	**Kizilcal**	**2.04**	**151**	ePn	**Pn**	**03 46 06.6**	**+0.2**
BNT	**Bandirma**	**2.08**	**262**	ePN	**Pn**	**03 46 08.2**	**+1.3**
BNT	**Bandirma**	**2.08**	**262**	ePn	**Pn**	**03 46 08.2**	**+1.3**
SHUT	**Suhut-Afyon**	**2.12**	**181**	ePN	**Pn**	**03 46 08.7**	**+1.1**
SHUT	**Suhut-Afyon**	**2.12**	**181**	ePn	**Pn**	**03 46 08.7**	**+1.1**
EDC	**Edincik**	**2.13**	**262**	ePN	**Pn**	**03 46 08.5**	**+1.0**
EDC	**Edincik**	**2.13**	**262**	ePn	**Pn**	**03 46 08.5**	**+1.0**
ELDT	**Eldivan**	**2.15**	**94**	eP	**Pn**	**03 46 08.6**	**+0.7**
ELDT	**Eldivan**	**2.15**	**94**	eP	**Pn**	**03 46 08.6**	**+0.7**
DEMI	**Demirci**	**2.19**	**223**	*i* P	**Pn**	**03 46 08.5**	**0.0**
DEMI	**Demirci**	**2.19**	**223**	*i* P	**Pn**	**03 46 08.5**	**0.0**
CRLT	**Corlu**	**2.23**	**283**	ePN	**Pn**	**03 46 09.8**	**+0.9**
CRLT	**Corlu**	**2.23**	**283**	ePn	**Pn**	**03 46 09.8**	**+0.9**
AFSR	**Af¯ar-Bala (A**	**2.25**	**122**	ePN	**Pn**	**03 46 10.4**	**+1.2**
AFSR	**Af¯ar-Bala (A**	**2.25**	**122**	ePn	**Pn**	**03 46 10.4**	**+1.2**
BALT	**Daday**	**2.26**	**67**	*i* P	**Pb**	**03 46 11.7**	**-1.2**
BALT				*i* S	Sn	03 46 37.5	0.0
BALT	**Daday**	**2.26**	**67**	*i* P	**Pb**	**03 46 11.7**	**-1.2**
BALT				*i* S	Sn	03 46 37.5	0.0
CANT	**Cankiri**	**2.28**	**91**	ePN	**Pn**	**03 46 10.6**	**+0.9**
MRMT	**Marmara Adasi**	**2.30**	**269**	ePN	**Pn**	**03 46 11.1**	**+1.1**
MRMT	**Marmara Adasi**	**2.30**	**269**	ePn	**Pn**	**03 46 11.1**	**+1.1**
GONE	**Gonen-Balikesi**	**2.33**	**255**	ePN	**Pn**	**03 46 10.8**	**+0.5**
GONE	**Gonen-Balikesi**	**2.33**	**255**	ePn	**Pn**	**03 46 10.8**	**+0.5**
BALB	**Balikesir**	**2.34**	**245**	ePN	**Pn**	**03 46 11.2**	**+0.8**
BALB	**Balikesir**	**2.34**	**245**	ePn	**Pn**	**03 46 11.3**	**+0.8**
KHAL	**Karahalli**	**2.46**	**201**	*i* P	**Pg**	**03 46 18.3**	**-0.8**
BALY	**Balya**	**2.48**	**249**	*i* P	**Pn**	**03 46 12.9**	**+0.5**
BALY				*i* S	Sg	03 46 50.3	-1.3
BALY	**Balya**	**2.48**	**249**	*i* P	**Pn**	**03 46 12.9**	**+0.5**
KRBG	**Karabiga-Canak**	**2.55**	**265**	ePN	**Pn**	**03 46 14.3**	**+1.0**
KRBG	**Karabiga-Canak**	**2.55**	**265**	ePn	**Pn**	**03 46 14.3**	**+1.0**
SART	**Tekirdag**	**2.62**	**271**	*i* P	**Pb**	**03 46 18.4**	**-0.5**
SART				*i* S	Sb	03 46 50.1	-1.0
SART	**Tekirdag**	**2.62**	**271**	*i* P	**Pb**	**03 46 18.4**	**-0.5**
SART				*i* S	Sb	03 46 50.1	-1.0
KULA	**Kula-Manisa**	**2.64**	**216**	ePN	**Pn**	**03 46 15.9**	**+1.3**
KULA	**Kula-Manisa**	**2.64**	**216**	ePn	**Pn**	**03 46 15.9**	**+1.3**
MANT	**Manisa**	**2.70**	**217**	*i* P	**Pg**	**03 46 22.0**	**-1.7**
MANT				*i* S	Sg	03 46 58.1	-0.6
KAMT	**Kaman**	**2.71**	**118**	ePN	**Pn**	**03 46 16.9**	**+1.2**
KAMT	**Kaman**	**2.71**	**118**	ePn	**Pn**	**03 46 16.9**	**+1.2**
AKHS	**Akhisar**	**2.81**	**231**	*i* P	**Pg**	**03 46 24.6**	**-1.1**
AKHS				*i* S	Sg	03 47 03.1	+0.9
AKS	**Akhisar**	**2.81**	**231**	ePN	**Pn**	**03 46 18.2**	**+1.2**
AKS	**Akhisar**	**2.81**	**231**	ePn	**Pn**	**03 46 18.2**	**+1.2**
LADK	**Ladik-KONYA**	**2.82**	**151**	ePN	**Pn**	**03 46 18.1**	**+1.0**
LADK	**Ladik-KONYA**	**2.82**	**151**	ePn	**Pn**	**03 46 18.2**	**+1.0**
BZK	**Bozkurt**	**2.85**	**62**	ePN	**Pn**	**03 46 19.1**	**+1.7**
BZK	**Bozkurt**	**2.85**	**62**	ePn	**Pn**	**03 46 19.1**	**+1.7**
LPK	**Lapseki**	**2.96**	**265**	ePN	**Pn**	**03 46 20.6**	**+1.7**
LPK	**Lapseki**	**2.96**	**265**	ePn	**Pn**	**03 46 20.6**	**+1.7**
KONT	**Konya--Tatoy**	**3.04**	**153**	ePN	**Pn**	**03 46 21.8**	**+1.6**
KONT	**Konya--Tatoy**	**3.04**	**153**	ePn	**Pn**	**03 46 21.8**	**+1.6**
CORM	**Corum**	**3.10**	**98**	ePN	**Pn**	**03 46 22.0**	**+1.0**
CORM	**Corum**	**3.10**	**98**	ePn	**Pn**	**03 46 22.0**	**+1.0**
ERIK	**Erikli-Kesan**	**3.12**	**271**	ePN	**Pn**	**03 46 22.7**	**+1.5**
ERIK	**Erikli-Kesan**	**3.12**	**271**	ePn	**Pn**	**03 46 22.7**	**+1.5**
EDRB	**Edirne**	**3.15**	**293**	ePN	**Pn**	**03 46 22.3**	**+0.8**
EDRB	**Edirne**	**3.15**	**293**	ePn	**Pn**	**03 46 22.3**	**+0.8**
GELI	**Tayfur-Gelibol**	**3.17**	**266**	ePN	**Pn**	**03 46 22.5**	**+0.6**
GELI	**Tayfur-Gelibol**	**3.17**	**266**	ePn	**Pn**	**03 46 22.5**	**+0.6**
BYBT	**Boyabat**	**3.23**	**75**	ePN	**Pn**	**03 46 24.2**	**+1.5**
BYBT	**Boyabat**	**3.23**	**75**	ePn	**Pn**	**03 46 24.2**	**+1.5**
EZN	**Ezine**	**3.40**	**257**	ePN	**Pn**	**03 46 26.5**	**+1.6**
EZN	**Ezine**	**3.40**	**257**	ePn	**Pn**	**03 46 26.5**	**+1.6**
ENEZ	**Enez**	**3.40**	**272**	ePN	**Pn**	**03 46 26.2**	**+1.3**
ENEZ	**Enez**	**3.40**	**272**	ePn	**Pn**	**03 46 26.3**	**+1.3**
IZM	**Izmir**	**3.45**	**230**	ePN	**Pn**	**03 46 27.4**	**+1.6**
IZM	**Izmir**	**3.45**	**230**	ePn	**Pn**	**03 46 27.4**	**+1.6**
DIKM	**Dikmen**	**3.63**	**73**	ePN	**Pn**	**03 46 30.2**	**+2.0**
DIKM	**Dikmen**	**3.63**	**73**	ePn	**Pn**	**03 46 30.2**	**+2.0**
ISR	**Istrita**	**5.35**	**327**	⇓*i* P	**Pn**	**03 46 54.0**	**+2.1**
ISR	**Istrita**	**5.35**	**327**	⇓*i* P	**Pn**	**03 46 54.0**	**+2.1**
VTS	**Vitosha**	**5.87**	**291**	⇑*i* P	**Pn**	**03 47 00.3**	**+1.2**
VTS	**Vitosha**	**5.87**	**291**	⇑*i* P	**Pn**	**03 47 00.3**	**+1.2**
MLR	**Muntele Rosu**	**5.90**	**326**	⇓*i* P	Pn	03 47 04.5	+5.0
VRI	**Vrincioaia**	**5.91**	**333**	⇑*i* P	**Pn**	**03 47 01.1**	**+1.6**
VRI	**Vrincioaia**	**5.91**	**333**	⇑*i* P	**Pn**	**03 47 01.1**	**+1.6**
DOPR	**Dopca**	**6.52**	**326**	⇓*i* P	**Pn**	**03 47 09.6**	**+1.7**
DOPR	**Dopca**	**6.52**	**326**	⇓*i* P	**Pn**	**03 47 09.6**	**+1.7**

IDC 28 03:45:48.5±0.4, 13.77N×144.75E, h122km±4km, mb3.3/10, mb1 3.5/10, mb1mx3.4/27, mbtmp3.3/10, Error ellipse: s-maj=23.1km s-min=12.9km az=76.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.21**	**148**	P	Pn	03 46 06.5	+1.0
	2μm,0.3s,baz=328,slow=2.5,SNR=466						
GUMO				S	Sn	03 46 19.5	+1.3
	488nm,0.3s,baz=343,slow=19,SNR=15						
MJAR	**Matsushiro Arr**	**23.43**	**347**	P	P	03 50 47.7	+0.9
	3.2nm,0.9s,baz=182,slow=7.1,SNR=9.8						
KSRS	**Korea Array**	**27.96**	**331**	P	P	03 51 26.5	-1.0
	1.5nm,0.6s,baz=141,slow=7.9,SNR=8.5						
WRA	**Warramunga Arr**	**35.03**	**197**	P	P	03 52 29.3	-0.4
	0.2nm,0.3s,baz=10,slow=8.1,SNR=10						
ASAR	**Alice Springs**	**38.69**	**196**	P	P	03 53 00.5	-0.2
	0.4nm,0.4s,baz=18,slow=13,SNR=9.3						
MKAR	**Makanchi Array**	**61.28**	**316**	P	P	03 55 51.2	+0.1
	0.5nm,0.4s,baz=92,slow=9.1,SNR=10						
MKAR				pP	pP	03 56 22.0	+1.4
	1.1nm,0.9s,baz=98,slow=8.7,SNR=5.2						
KURBB	**Kurchatov Arra**	**64.42**	**320**	P	P	03 56 11.2	-0.5
	0.6nm,0.4s,baz=103,slow=6.8,SNR=4.8						
KURBB				pP	pP	03 56 41.3	-0.2
	1.2nm,0.7s,baz=102,slow=6.6,SNR=3.3						
ILAR	**Eielson Array**	**68.46**	**25**	P	P	03 56 35.4	-1.8
	0.2nm,0.4s,baz=247,slow=5.5,SNR=7.4						
BVAR	**Borovoye Array**	**69.72**	**322**	P	P	03 56 44.8	-0.3
	0.3nm,0.3s,baz=109,slow=8.1,SNR=3.6						
YKA	**Yellowknife Ar**	**82.75**	**27**	P	P	03 57 58.3	-0.4
	0.2nm,0.5s,baz=286,slow=5.4,SNR=4.7						
YKA				pP	pP	03 58 30.7	+0.9
	0.1nm,0.5s,baz=280,slow=5.1,SNR=2.5						
NVAR	**Mina Array Bea**	**86.90**	**51**	P	P	03 58 21.4	+1.1
	0.3nm,0.6s,baz=270,slow=5.8,SNR=4.3						
TORD	**Torodi Ar. Bea**	**134.67**	**305**	PKP	PKPdf	04 04 54.0	+0.3
	0.2nm,0.7s,baz=48,slow=1.5,SNR=4.7						
LPAZ	**La Paz**	**148.16**	**99**	PKPbc	PKPbc	04 05 23.2	+1.3
	1.7nm,0.9s,baz=270,slow=1.0,SNR=6.8						

*DDA **28** 03:47:06.8, 40.67N×30.62E, h5km, ML3.4*
*ISK **28** 03:47:06.6, 40.68N×30.62E, h5km, MD3.5*
*CSEM **28** 03:47:08.0±0.1, 40.67N×30.63E, h2km, MD3.5, Error ellipse: s-maj=3.9km s-min=2.7km az=4.0*
ISC 28 03:47:07.1±1.0, 40.71N±0.02×30.68E±0.02, h9km±8km, n100, σ1§03/120, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPNC	**Sapanca-Adapaz**	**0.28**	**265**	PG	**Pg**	**03 47 13.0**	**+0.3**
SPNC				eSG	Sg	03 47 17.0	+0.5
SPNC	**Sapanca-Adapaz**	**0.28**	**265**	*i* Pg	**Pg**	**03 47 13.0**	**+0.3**
SPNC				eSg	Sg	03 47 17.0	+0.5
GULT	**Gulveren**	**0.31**	**204**	PG	**Pg**	**03 47 13.0**	**-0.2**
GULT				eSG	Sg	03 47 17.1	-0.1
GULT	**Gulveren**	**0.31**	**204**	*i* Pg	**Pg**	**03 47 13.0**	**-0.2**
GULT				eSg	Sg	03 47 17.2	-0.1
MDUB	**Mudurnu**	**0.47**	**121**	ePG	**Pg**	**03 47 16.7**	**+0.5**
MDUB				eSG	Sb	03 47 24.6	+0.1
MDUB	**Mudurnu**	**0.47**	**121**	ePg	**Pg**	**03 47 16.7**	**+0.5**
MDUB				eSg	Sb	03 47 24.6	+0.1
GPA	**Golpazari**	**0.51**	**214**	ePG	**Pg**	**03 47 16.2**	**-0.8**
GPA	**Golpazari**	**0.51**	**214**	ePg	**Pg**	**03 47 16.2**	**-0.8**
KDZE	**Karadeniz Ereo**	**0.83**	**44**	ePG	**Pb**	**03 47 24.1**	**+0.3**
KDZE	**Karadeniz Ereo**	**0.83**	**44**	ePg	**Pb**	**03 47 24.1**	**+0.3**
BORA	**Eskisehir**	**0.85**	**192**	*i* P	**Pb**	**03 47 22.4**	**-1.7**
BORA				*i* S	Sb	03 47 34.4	-1.2
BORA	**Eskisehir**	**0.85**	**192**	*i* P	**Pb**	**03 47 22.4**	**-1.7**
BORA				*i* S	Sb	03 47 34.4	-1.2
SILT	**Sile**	**0.90**	**300**	ePG	**Pb**	**03 47 24.7**	**-0.1**
SILT	**Sile**	**0.90**	**300**	ePg	**Pb**	**03 47 24.7**	**-0.1**
SGKT	**Sivrigoynuk**	**1.06**	**97**	*i* P	**Pb**	**03 47 28.1**	**+0.4**
SGKT	**Sivrigoynuk**	**1.06**	**97**	*i* P	**Pb**	**03 47 28.1**	**+0.4**
GEMT	**Gemlik**	**1.17**	**257**	ePN	**Pn**	**03 47 28.5**	**-1.1**
GEMT	**Gemlik**	**1.17**	**257**	ePn	**Pn**	**03 47 28.5**	**-1.1**
BUY	**Buyukada**	**1.19**	**277**	*i* P	**Pn**	**03 47 29.4**	**-0.5**
BUY				*i* S	Sb	03 47 45.5	+0.2
BUY	**Buyukada**	**1.19**	**277**	*i* P	**Pn**	**03 47 29.4**	**-0.5**
BUY				*i* S	Sb	03 47 45.5	+0.2
ESKT	**Eskisehir**	**1.20**	**174**	ePN	**Pg**	**03 47 30.9**	**+0.8**
ESKT	**Eskisehir**	**1.20**	**174**	ePn	**Pg**	**03 47 30.9**	**+0.8**
SEYT	**Eskypehyr**	**1.20**	**174**	*i* S	Sn	03 47 45.9	-0.7
SEYT	**Eskypehyr**	**1.20**	**174**	*i* S	Sn	03 47 45.9	-0.7
ISK	**Istanbul-Kandi**	**1.27**	**287**	ePN	**Pn**	**03 47 31.0**	**-0.1**
ISK	**Istanbul-Kandi**	**1.27**	**287**	ePn	**Pn**	**03 47 31.0**	**-0.1**
ARMT	**Armutlu**	**1.39**	**265**	ePN	**Pn**	**03 47 32.5**	**-0.1**
ARMT	**Armutlu**	**1.39**	**265**	ePn	**Pn**	**03 47 32.5**	**-0.1**
MDNY	**Mudanya-Bursa**	**1.41**	**256**	ePN	**Pb**	**03 47 33.7**	**+0.2**
MDNY	**Mudanya-Bursa**	**1.41**	**256**	ePn	**Pb**	**03 47 33.7**	**+0.2**
SVRH	**Sivrihisar-ESK**	**1.42**	**153**	ePN	**Pb**	**03 47 34.2**	**+0.4**
SVRH	**Sivrihisar-ESK**	**1.42**	**153**	ePn	**Pb**	**03 47 34.2**	**+0.4**
ORLT	**Orhaneli**	**1.51**	**244**	ePN	**Pb**	**03 47 35.0**	**-0.4**
ORLT	**Orhaneli**	**1.51**	**244**	ePn	**Pb**	**03 47 35.0**	**-0.4**
BGKT	**Bogazkoy**	**1.52**	**289**	ePN	**Pb**	**03 47 35.7**	**+0.3**
BGKT	**Bogazkoy**	**1.52**	**289**	ePn	**Pb**	**03 47 35.7**	**+0.3**
TVSB	**Tavsanli**	**1.57**	**217**	ePN	**Pn**	**03 47 35.3**	**+0.1**
TVSB	**Tavsanli**	**1.57**	**217**	ePn	**Pn**	**03 47 35.3**	**+0.1**
SAFT	**Safranbolu**	**1.61**	**70**	ePN	**Pb**	**03 47 37.9**	**+0.9**
SAFT	**Safranbolu**	**1.61**	**70**	ePn	**Pb**	**03 47 37.9**	**+0.9**
ALT	**Altintas**	**1.71**	**195**	ePN	**Pb**	**03 47 38.4**	**-0.4**
ALT	**Altintas**	**1.71**	**195**	ePn	**Pb**	**03 47 38.4**	**-0.4**
CTKS	**Kestanelik-??a**	**1.72**	**288**	ePN	**Pb**	**03 47 39.0**	**+0.1**
CTKS	**Kestanelik-??a**	**1.72**	**288**	ePn	**Pb**	**03 47 39.0**	**+0.1**
ELBA	**Catalca**	**1.75**	**285**	*i* P	**Pb**	**03 47 39.1**	**-0.3**
ELBA				*i* S	Sb	03 48 01.1	-0.5
LOD	**Lodumlu**	**1.80**	**117**	ePN	**Pb**	**03 47 40.4**	**+0.2**
LOD	**Lodumlu**	**1.80**	**117**	ePn	**Pb**	**03 47 40.4**	**+0.2**
KCTX	**Karacabey (Bur**	**1.82**	**257**	ePN	**Pb**	**03 47 40.2**	**-0.5**
KCTX	**Karacabey (Bur**	**1.82**	**257**	ePn	**Pb**	**03 47 40.2**	**-0.5**
ANTO	**Ankara**	**1.83**	**117**	ePN	**Pb**	**03 47 41.4**	**+0.7**
ANTO	**Ankara**	**1.83**	**117**	ePn	**Pb**	**03 47 41.4**	**+0.7**
GDZ	**Gediz**	**1.86**	**210**	*i* P	**Pb**	**03 47 41.8**	**+0.4**
GDZ				*i* S	Sb	03 48 05.8	+1.0
GDZ	**Gediz**	**1.86**	**210**	*i* P	**Pb**	**03 47 41.8**	**+0.4**
GDZ				*i* S	Sb	03 48 05.8	+1.0
DST	**Dursunbey**	**1.93**	**236**	ePN	**Pb**	**03 47 41.6**	**-0.8**
DST	**Dursunbey**	**1.93**	**236**	ePn	**Pb**	**03 47 41.6**	**-0.8**
SLVT	**Silivri**	**1.94**	**286**	ePN	**Pb**	**03 47 42.3**	**-0.2**
SLVT	**Silivri**	**1.94**	**286**	ePn	**Pb**	**03 47 42.3**	**-0.2**
CTYL	**Yal??k??y-??at**	**1.96**	**294**	ePN	**Pb**	**03 47 42.0**	**-0.9**
CTYL	**Yal??k??y-??at**	**1.96**	**294**	ePn	**Pb**	**03 47 42.0**	**-0.9**
BOLV	**Bolvadin**	**2.00**	**174**	*i* P	**Pn**	**03 47 41.9**	**+0.7**
BOLV				*i* S	Sn	03 48 06.1	-0.4
BOLV	**Bolvadin**	**2.00**	**174**	*i* P	**Pn**	**03 47 41.9**	**+0.7**
BOLV				*i* S	Sn	03 48 06.1	-0.4
DURS	**Dursunbey**	**2.02**	**237**	*i* P	**Pb**	**03 47 43.8**	**-0.2**
DURS				*i* S	Sb	03 48 09.9	+0.6
ELDT	**Eldivan**	**2.11**	**95**	*i* P	**Pb**	**03 47 44.8**	**-0.8**
ELDT	**Eldivan**	**2.11**	**95**	*i* P	**Pb**	**03 47 44.8**	**-0.8**
BNT	**Bandirma**	**2.13**	**261**	ePN	**Pb**	**03 47 44.6**	**-1.2**
BNT	**Bandirma**

BNN	**Bunyan**	**2.31**	**358**	*e*Pn	**Pn**	**04 19 36.1**	**+0.3**	
AKCD	**Akcadag**	**2.37**	**41**	*i* P	**Pg**	**04 19 43.6**	**+0.9**	
AKCD				*i* S	**Sn**	**04 20 06.3**	**+0.5**	
URFA	**Urfa**	**2.49**	**68**	*e*PN	**Pn**	**04 19 39.4**	**+1.3**	
URFA	**Urfa**	**2.49**	**68**	*e*Pn	**Pn**	**04 19 39.4**	**+1.3**	
KSRV	**Kasrt alli**	**2.58**	**104**	*e*P	**Pn**	**04 19 40.6**	**+1.4**	
KSRV				*e*S	**Sb**	**04 20 13.9**	**-1.5**	
KSRV				AML	AML	04 20 21.1		
	comp=Z,54nm,0.3s							
KSRV	**Kasrt alli**	**2.58**	**104**	*e*P	**Pn**	**04 19 40.6**	**+1.4**	
	SNR=45							
KSRV				*e*S	**Sb**	**04 20 13.9**	**-1.5**	
	comp=Z,54nm,0.3s,SNR=40							
MALT	**Malatya**	**2.67**	**48**	*e*PN	**Pn**	**04 19 42.2**	**+1.6**	
MALT	**Malatya**	**2.67**	**48**	*e*Pn	**Pn**	**04 19 42.2**	**+1.6**	
MYA	**Malataya**	**2.67**	**47**	*e*PN	**Pn**	**04 19 42.0**	**+1.3**	
MYA	**Malataya**	**2.67**	**47**	*e*Pn	**Pn**	**04 19 42.0**	**+1.3**	
DARE	**Darende-Malaty**	**2.83**	**31**	*e*PN	Pn	04 19 37.6	-5.3	
SVRC	**Sivrice-ELAZID**	**3.26**	**55**	*e*PN	**Pn**	**04 19 50.3**	**+1.5**	
SVRC	**Sivrice-ELAZID**	**3.26**	**55**	*e*Pn	**Pn**	**04 19 50.3**	**+1.5**	
SFNV	**Sufian**	**3.37**	**91**	*e*P	Pn	04 19 45.4	-4.9	
SFNV				*e*S	Sn	04 20 21.8	-8.7	
SFNV				AML	AML	04 20 54.5		
	comp=Z,32nm,0.4s							
PTK	**Pertek**	**3.62**	**48**	*e*PN	**Pn**	**04 19 55.3**	**+1.6**	
PTK	**Pertek**	**3.62**	**48**	*e*Pn	**Pn**	**04 19 55.3**	**+1.6**	
ZALF	**Zalf**	**3.79**	**162**	*e*P	Pn	04 19 59.6	+3.7	
ZALF				*e*S	**Sb**	**04 20 47.8**	**-2.6**	
ZALF				AML	AML	04 20 58.9		
	comp=N,9.3nm,0.4s							
ZALF				AML	AML	04 21 03.5		
	comp=E,7.2nm,0.6s							
ZALF	**Zalf**	**3.79**	**162**	*e*P	Pn	04 19 59.6	+3.7	
	SNR=45							
ZALF				*e*S	**Sb**	**04 20 47.8**	**-2.6**	
	comp=E,7.2nm,0.6s,SNR=40							

*SOF **28** 04:45:34.3, 39˚.51N×23˚.29E, h10km, MD3.3*
*CSEM **28** 04:45:39.8±0.1, 39˚.54N×23˚.46E, h15km, ML3.1/18, Error ellipse: s-maj=3.5km s-min=2.1km az=111.0*
*ISCJB **28** 04:45:39.7±0.4, 39˚.54N±0˚.01×23˚.47E±0˚.02, h12km±3km, Error ellipse: s-maj=3.4km s-min=2.0km az=23.0*
*ATH **28** 04:45:39.3, 39˚.52N×23˚.46E, h25km±1km, ML2.9*
*THE **28** 04:45:40.3, 39˚.54N×23˚.41E, h12km, ML3.1/18, Error ellipse: s-maj=0.4km s-min=0.2km az=115.0*
*BEO **28** 04:46:21.1±0.8, 42˚.23N×22˚.40E, h12km±9km, ML1.4/2*

ISC 28 04:45:39.7±0.9, 39˚.55N±0˚.01×23˚.44E±0˚.02, h14km±7km, n142, σ0°83/196, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XOR	**Xorichti**	**0.27**	**226**	P	**Pg**	**04 45 45.2**	**-0.1**
XOR				S	**Sg**	**04 45 49.4**	**+0.3**
XOR	**Xorichti**	**0.27**	**226**	P	**Pg**	**04 45 45.2**	**-0.1**
XOR				S	**Sg**	**04 45 49.4**	**+0.3**
NEO	**Neokhori**	**0.30**	**214**	*e*PB	**Pg**	**04 45 45.6**	**-0.2**
NEO				*e*SB	**Sg**	**04 45 50.5**	**+0.5**
NEO	**Neokhori**	**0.30**	**214**	*e*Pb	**Pg**	**04 45 45.6**	**-0.2**
NEO				*e*Sb	**Sg**	**04 45 50.5**	**+0.5**
SKIA	**Skiathos**	**0.39**	**177**	P	**Pg**	**04 45 47.5**	**+0.1**
SKIA				S	**Sb**	**04 45 53.8**	**-0.4**
SKIA	**Skiathos**	**0.39**	**177**	P	**Pg**	**04 45 47.5**	**+0.1**
SKIA				S	**Sb**	**04 45 53.8**	**-0.4**
PAIG	**Paliouri**	**0.42**	**26**	P	**Pb**	**04 45 48.8**	**-0.1**
PAIG				S	**Sb**	**04 45 55.5**	**+0.4**
PAIG	**Paliouri**	**0.42**	**26**	*e*PB	**Pb**	**04 45 48.8**	**-0.1**
PAIG				*e*SB	**Sb**	**04 45 55.3**	**+0.2**
PAIG	**Paliouri**	**0.42**	**26**	P	**Pb**	**04 45 48.8**	**-0.1**
PAIG				S	**Sb**	**04 45 55.5**	**+0.4**
AOS	**Alonnisos**	**0.51**	**138**	P	**Pg**	**04 45 49.9**	**+0.1**
AOS				S	**Sb**	**04 45 58.0**	**+0.2**
AOS	**Alonnisos**	**0.51**	**138**	*e*PB	**Pg**	**04 45 49.8**	**0.0**
AOS				*e*SB	**Sb**	**04 45 57.4**	**-0.4**
AOS	**Alonnisos**	**0.51**	**138**	P	**Pg**	**04 45 49.9**	**+0.1**
AOS				*e*Sb	**Sb**	**04 45 57.4**	**-0.4**
AOS				S	**Sb**	**04 45 58.0**	**+0.2**
SMIA	**Simia**	**0.69**	**195**	P	**Pg**	**04 45 53.4**	**+0.2**
SMIA				S	**Sb**	**04 46 03.4**	**+0.3**
SMIA	**Simia**	**0.69**	**195**	P	**Pg**	**04 45 53.4**	**+0.2**
SMIA				S	**Sb**	**04 46 03.4**	**+0.3**
PLG	**Polygyros**	**0.82**	**0**	P	**Pg**	**04 45 55.5**	**-0.2**
PLG				S	**Sn**	**04 46 07.9**	**-1.0**
PLG	**Polygyros**	**0.82**	**0**	*e*PN	**Pg**	**04 45 55.4**	**-0.2**
PLG				*e*SN	**Sb**	**04 46 07.2**	**+0.4**
PLG	**Polygyros**	**0.82**	**0**	P	**Pg**	**04 45 55.5**	**-0.2**
PLG				*e*Sn	**Sb**	**04 46 07.2**	**+0.4**
PLG				S	**Sn**	**04 46 07.9**	**-1.0**
MRKA	**Markates**	**0.85**	**172**	P	**Pg**	**04 45 56.3**	**+0.1**
MRKA	**Markates**	**0.85**	**172**	P	**Pg**	**04 45 56.3**	**+0.1**
OUR	**Ouranopolis**	**0.89**	**28**	P	**Pn**	**04 45 57.5**	**-0.3**
OUR				S	**Sn**	**04 46 10.5**	**+0.1**
OUR	**Ouranopolis**	**0.89**	**28**	P	**Pn**	**04 45 57.5**	**-0.3**
OUR				S	**Sn**	**04 46 10.5**	**+0.1**
ATAL	**Atalanti**	**0.92**	**201**	P	**Pb**	**04 45 57.3**	**-0.1**
ATAL				S	**Sn**	**04 46 10.4**	**-0.8**
ATAL	**Atalanti**	**0.92**	**201**	P	**Pb**	**04 45 57.3**	**-0.1**
ATAL				S	**Sn**	**04 46 10.4**	**-0.8**
LKR	**Lokris**	**0.96**	**201**	P	**Pb**	**04 45 58.1**	**-0.1**
LKR				S	**Sn**	**04 46 12.0**	**-0.3**
LKR	**Lokris**	**0.96**	**201**	*e*PN	**Pb**	**04 45 58.0**	**-0.1**
LKR	**Lokris**	**0.96**	**201**	P	**Pb**	**04 45 58.1**	**-0.1**
LKR				S	**Sn**	**04 46 12.0**	**-0.3**
AXAR	**Agios Charalam**	**0.99**	**218**	P	**Pb**	**04 45 58.4**	**-0.3**
AXAR				S	**Sn**	**04 46 12.7**	**-0.4**
AXAR	**Agios Charalam**	**0.99**	**218**	P	**Pb**	**04 45 58.4**	**-0.3**
AXAR				S	**Sn**	**04 46 12.7**	**-0.4**
AGG	**Agios Georgios**	**1.01**	**239**	P	**Pb**	**04 45 58.5**	**-0.5**
AGG				S	**Sn**	**04 46 13.2**	**-0.3**
AGG	**Agios Georgios**	**1.01**	**239**	*e*PN	**Pb**	**04 45 58.5**	**-0.5**
AGG	**Agios Georgios**	**1.01**	**239**	P	**Pb**	**04 45 58.5**	**-0.5**
AGG				S	**Sn**	**04 46 13.2**	**-0.3**
HORT	**Hortiatis**	**1.08**	**346**	P	**Pb**	**04 46 00.2**	**0.0**
HORT				S	**Sn**	**04 46 15.7**	**+0.4**
HORT	**Hortiatis**	**1.08**	**346**	P	**Pb**	**04 46 00.2**	**0.0**
HORT				S	**Sn**	**04 46 15.7**	**+0.4**
THL	**Klokotos Trika**	**1.10**	**271**	P	**Pb**	**04 46 00.0**	**-0.5**
THL				S	**Sn**	**04 46 15.7**	**0.0**
THL	**Klokotos Trika**	**1.10**	**271**	*e*PB	**Pb**	**04 45 59.8**	**-0.7**
THL	**Klokotos Trika**	**1.10**	**271**	P	**Pb**	**04 46 00.0**	**-0.5**
THL				S	**Sn**	**04 46 15.7**	**0.0**
THE	**Thessaloniki**	**1.14**	**342**	P	**Pn**	**04 46 01.3**	**+0.1**
THE				S	**Sn**	**04 46 17.5**	**+0.8**
THE	**Thessaloniki**	**1.14**	**342**	P	**Pn**	**04 46 01.3**	**+0.1**
THE				S	**Sn**	**04 46 17.5**	**+0.8**
MAKR	**Makrakomi, Fth**	**1.15**	**242**	P	**Pb**	**04 46 01.3**	**0.0**
MAKR				S	**Sn**	**04 46 16.9**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.15**	**242**	P	**Pb**	**04 46 01.3**	**0.0**
MAKR				S	**Sn**	**04 46 16.9**	**-0.1**
SOH	**Sokhos**	**1.27**	**357**	*e*PN	**Pb**	**04 46 03.6**	**+0.1**
SOH	**Sokhos**	**1.27**	**357**	*e*Pn	**Pb**	**04 46 03.6**	**+0.1**
DSF	**Desfina**	**1.34**	**212**	P	**Pn**	**04 46 03.4**	**-0.7**
DSF				S	**Sb**	**04 46 22.2**	**+0.4**
DSF	**Desfina**	**1.34**	**212**	P	**Pn**	**04 46 03.4**	**-0.7**
DSF				S	**Sb**	**04 46 22.2**	**+0.4**
LIA	**Limnos Island**	**1.39**	**75**	P	**Pn**	**04 46 04.9**	**+0.2**
LIA				S	**Sg**	**04 46 24.2**	**-0.3**
LIA	**Limnos Island**	**1.39**	**75**	*e*PB	**Pn**	**04 46 03.9**	**-0.8**
LIA	**Limnos Island**	**1.39**	**75**	*e*Pb	**Pn**	**04 46 03.9**	**-0.8**
LIA	**Limnos Island**	**1.39**	**75**	P	**Pn**	**04 46 04.9**	**+0.2**
LIA				S	**Sg**	**04 46 24.2**	**-0.3**
EVR	**Evrytania**	**1.42**	**244**	P	**Pn**	**04 46 04.9**	**-0.2**
EVR				S	**Sb**	**04 46 24.0**	**+0.1**
EVR	**Evrytania**	**1.42**	**244**	*e*PN	**Pb**	**04 46 06.1**	**+0.1**
EVR	**Evrytania**	**1.42**	**244**	P	**Pn**	**04 46 04.9**	**-0.2**
EVR	**Evrytania**	**1.42**	**244**	*e*Pn	**Pb**	**04 46 06.1**	**+0.1**
EVR				S	**Sb**	**04 46 24.0**	**+0.1**
KZN	**Kozani**	**1.49**	**301**	*e*PN	**Pb**	**04 46 07.8**	**+0.6**
KZN	**Kozani**	**1.49**	**301**	*e*Pn	**Pb**	**04 46 07.8**	**+0.6**
PTL	**Penteli**	**1.54**	**167**	*e*PN	**Pn**	**04 46 06.6**	**-0.2**
PTL	**Penteli**	**1.54**	**167**	*e*Pn	**Pn**	**04 46 06.6**	**-0.2**
KALE	**Kalithea**	**1.54**	**222**	P	**Pn**	**04 46 06.6**	**-0.2**
KALE				S	**Sn**	**04 46 27.0**	**+0.4**
KALE	**Kalithea**	**1.54**	**222**	*e*PN	**Pn**	**04 46 06.7**	**-0.1**
KALE	**Kalithea**	**1.54**	**222**	*e*Pn	**Pn**	**04 46 06.7**	**-0.1**
KALE				S	**Sn**	**04 46 27.0**	**+0.4**
SRS	**Serrai**	**1.57**	**4**	P	**Pn**	**04 46 07.3**	**+0.1**
SRS	**Serrai**	**1.57**	**4**	P	**Pn**	**04 46 07.3**	**+0.1**
LTK	**Loutraki**	**1.57**	**194**	P	**Pn**	**04 46 07.1**	**-0.1**
LTK	**Loutraki**	**1.57**	**194**	*e*PN	**Pb**	**04 46 08.4**	**-0.1**
LTK	**Loutraki**	**1.57**	**194**	P	**Pn**	**04 46 07.1**	**-0.1**
LTK	**Loutraki**	**1.57**	**194**	*e*Pn	**Pb**	**04 46 08.4**	**-0.1**
ATH	**Athens Observa**	**1.59**	**172**	*e*PN	**Pn**	**04 46 07.1**	**-0.4**
ATH	**Athens Observa**	**1.59**	**172**	*e*Pn	**Pn**	**04 46 07.1**	**-0.4**
TRIZ	**Trizonia**	**1.59**	**222**	*e*PN	**Pn**	**04 46 07.6**	**+0.1**
TRIZ	**Trizonia**	**1.59**	**222**	*e*Pn	**Pn**	**04 46 07.6**	**+0.1**
GRG	**Griva**	**1.61**	**331**	P	**Pn**	**04 46 08.0**	**+0.2**
GRG	**Griva**	**1.61**	**331**	*e*PB	**Pn**	**04 46 08.2**	**+0.4**
GRG	**Griva**	**1.61**	**331**	*e*Pb	**Pn**	**04 46 08.2**	**+0.4**
EFP	**Efpalio**	**1.64**	**227**	*e*PN	**Pn**	**04 46 08.6**	**+0.5**
EFP	**Efpalio**	**1.64**	**227**	*e*Pn	**Pn**	**04 46 08.6**	**+0.5**
KNT	**Kendrikon**	**1.66**	**346**	P	**Pn**	**04 46 08.5**	**+0.1**
KNT	**Kendrikon**	**1.66**	**346**	P	**Pn**	**04 46 08.5**	**+0.1**
KAVA	**Kavala**	**1.66**	**29**	P	**Pn**	**04 46 08.6**	**+0.2**
KAVA				S	**Sb**	**04 46 30.8**	**-0.1**
KAVA	**Kavala**	**1.66**	**29**	P	**Pn**	**04 46 08.6**	**+0.2**
KAVA				S	**Sb**	**04 46 30.8**	**-0.1**
LAKA	**Lakka**	**1.74**	**221**	P	**Pn**	**04 46 09.1**	**-0.4**
LAKA	**Lakka**	**1.74**	**221**	*e*PN	**Pb**	**04 46 11.2**	**-0.2**
LAKA	**Lakka**	**1.74**	**221**	P	**Pn**	**04 46 09.1**	**-0.4**
LAKA	**Lakka**	**1.74**	**221**	*e*Pn	**Pb**	**04 46 11.2**	**-0.2**
NAIG	**Nisos Aigina**	**1.79**	**179**	*e*PB	**Pn**	**04 46 09.9**	**-0.3**
NAIG	**Nisos Aigina**	**1.79**	**179**	*e*Pb	**Pn**	**04 46 09.9**	**-0.3**
KLV	**Kalavryta, Ach**	**1.81**	**214**	*e*PN	**Pn**	**04 46 10.6**	**0.0**
KLV	**Kalavryta, Ach**	**1.81**	**214**	*e*Pb	**Pn**	**04 46 10.6**	**0.0**
NVR	**Nevrokopi**	**1.82**	**10**	P	**Pn**	**04 46 11.3**	**+0.6**
NVR				S	**Sb**	**04 46 35.1**	**-0.5**
NVR	**Nevrokopi**	**1.82**	**10**	*e*PN	**Pb**	**04 46 12.9**	**0.0**
NVR	**Nevrokopi**	**1.82**	**10**	P	**Pn**	**04 46 11.3**	**+0.6**
NVR	**Nevrokopi**	**1.82**	**10**	*e*Pn	**Pb**	**04 46 12.9**	**0.0**
NVR				S	**Sb**	**04 46 35.1**	**-0.5**
GUR	**Goura**	**1.83**	**208**	P	**Pn**	**04 46 10.6**	**-0.2**
GUR				S	**Sn**	**04 46 34.1**	**+0.3**
GUR	**Goura**	**1.83**	**208**	*e*PN	**Pn**	**04 46 10.9**	**+0.1**
GUR	**Goura**	**1.83**	**208**	P	**Pn**	**04 46 10.6**	**-0.2**
GUR	**Goura**	**1.83**	**208**	*e*Pn	**Pn**	**04 46 10.9**	**+0.1**
GUR				S	**Sn**	**04 46 34.1**	**+0.3**
SMTH	**Samothraki Isl**	**1.85**	**60**	*e*PB	**Pn**	**04 46 10.8**	**-0.3**
SMTH	**Samothraki Isl**	**1.85**	**60**	*e*Pb	**Pn**	**04 46 10.8**	**-0.3**
VAY	**Valandovo**	**1.89**	**340**	*e*Pn	**Pn**	**04 46 12.2**	**+0.7**
VAY				*e*Sg	**Sb**	**04 46 37.0**	**-0.4**
VAY	**Valandovo**	**1.89**	**340**	*e*Pn	**Pb**	**04 46 12.7**	**-1.2**
VAY				*e*Sg	**Sb**	**04 46 37.4**	**0.0**
FNA	**Florina**	**2.00**	**309**	*e*PN	**Pb**	**04 46 15.8**	**-0.1**
FNA	**Florina**	**2.00**	**309**	*e*Pb	**Pb**	**04 46 15.8**	**-0.1**
MMB	**Musomiste**	**2.05**	**6**	*i* P	**Pn**	**04 46 10.9**	**-2.9**
MMB	**Musomiste**	**2.05**	**6**	*i* P	**Pn**	**04 46 10.9**	**-2.9**
DID	**Didima**	**2.05**	**184**	P	**Pn**	**04 46 13.8**	**0.0**
DID				S	**Sn**	**04 46 39.9**	**+0.7**
DID	**Didima**	**2.05**	**184**	*e*PB	**Pn**	**04 46 13.2**	**-0.6**
DID	**Didima**	**2.05**	**184**	*e*Pb	**Pn**	**04 46 13.2**	**-0.6**
DID	**Didima**	**2.05**	**184**	P	**Pn**	**04 46 13.8**	**0.0**
DID				S	**Sn**	**04 46 39.9**	**+0.7**
RDO	**Rodhopi**	**2.26**	**45**	P	**Pn**	**04 46 17.3**	**+0.6**
RDO	**Rodhopi**	**2.26**	**45**	*e*PB	**Pb**	**04 46 18.9**	**-1.4**
RDO	**Rodhopi**	**2.26**	**45**	P	**Pn**	**04 46 17.3**	**+0.6**
RDO	**Rodhopi**	**2.26**	**45**	*e*Pb	**Pb**	**04 46 18.9**	**-1.4**
KKB	**Krupnik**	**2.33**	**353**	*i* P	**Pn**	**04 46 14.6**	**-3.0**
KKB	**Krupnik**	**2.33**	**353**	*i* P	**Pn**	**04 46 14.6**	**-3.0**
RZN	**Rozhen**	**2.34**	**24**	*e*P	**Pn**	**04 46 16.1**	**-1.9**
RZN	**Rozhen**	**2.34**	**24**	*e*P	**Pn**	**04 46 16.1**	**-1.9**
CHOS	**Chios island**	**2.35**	**119**	P	**Pn**	**04 46 18.1**	**+0.1**
CHOS	**Chios island**	**2.35**	**119**	*e*PN	**Pn**	**04 46 18.0**	**+0.1**
CHOS	**Chios island**	**2.35**	**119**	*e*Pn	**Pn**	**04 46 18.0**	**+0.1**
ALN	**Alexandroupoli**	**2.41**	**55**	P	**Pn**	**04 46 19.0**	**+0.3**
ALN				S	**Sn**	**04 46 49.6**	**+1.7**
ALN	**Alexandroupoli**	**2.41**	**55**	*e*PN	**Pn**	**04 46 18.4**	**-0.3**
ALN	**Alexandroupoli**	**2.41**	**55**	*e*Pn	**Pn**	**04 46 18.4**	**-0.3**
ALN	**Alexandroupoli**	**2.41**	**55**	P	**Pn**	**04 46 19.0**	**+0.3**
ALN				S	**Sn**	**04 46 49.6**	**+1.7**
KDZ	**Kurdzhali**	**2.58**	**35**	*e*P	**Pn**	**04 46 18.5**	**-2.6**
KDZ	**Kurdzhali**	**2.58**	**35**	*e*P	**Pn**	**04 46 18.5**	**-2.6**
VLI	**Veliai**	**2.86**	**188**	*e*PN	**Pn**	**04 46 25.8**	**+0.9**
VLI	**Veliai**	**2.86**	**188**	*e*Pn	**Pn**	**04 46 25.8**	**+0.9**
APE	**Apeiranthos**	**2.98**	**146**	*e*PN	**Pn**	**04 46 26.2**	**-0.4**
APE	**Apeiranthos**	**2.98**	**146**	*e*Pn	**Pn**	**04 46 26.2**	**-0.4**
VTS	**Vitosha**	**3.04**	**357**	*e*Pg	**Pb**	**04 46 32.9**	**-0.8**
VTS				*e*Sg	Pg	04 46 45.3	+7.3
VTS	**Vitosha**	**3.04**	**357**	*e*P	**Pn**	**04 46 25.0**	**-2.6**
VTS	**Vitosha**	**3.04**	**357**	*e*P	**Pn**	**04 46 25.0**	**-2.6**
PGB	**Panagyurishte**	**3.04**	**10**	*i* Pg	**Pb**	**04 46 35.6**	**+1.9**
BARS	**Barje**	**3.48**	**340**	*e*Pg	**Pn**	**04 46 34.4**	**+0.9**
BARS	**Barje**	**3.48**	**340**	*e*Pg	**Pn**	**04 46 34.4**	**+0.9**
THR3	**Thira Island,**	**3.50**	**153**	P	**Pn**	**04 46 33.9**	**+0.2**
THR3	**Thira Island,**	**3.50**	**153**	P	**Pn**	**04 46 33.9**	**+0.2**
ZAPS	**Zavoj**	**3.77**	**351**	*e*Pg	**Pn**	**04 46 39.8**	**+2.4**
ZAPS				*e*Sg	**Pg**	**04 46 54.8**	**+3.0**
MPEP	**Malo Peshtene**	**3.81**	**3**	*e*P	**Pn**	**04 46 35.5**	**-2.4**
PDG	**Podgorica**	**4.28**	**314**	*e*Pn	**Pg**	**04 46 59.7**	**-1.9**
GRUS	**Gruza**	**4.79**	**336**	*e*Pn	Pn	04 46 56.4	+5.0
GRUS	**Gruza**	**4.79**	**336**	*e*Pn	Pn	04 46 56.4	+5.0
DIVS	**Divibare**	**5.22**	**332**	*e*Pn	Pn	04 47 02.1	+4.7
DIVS	**Divibare**	**5.22**	**332**	*e*Pn	Pn	04 47 02.1	+4.7

JMA 28 04:58:19.7±0.3, 33˚.61N×137˚.07E, h399km, M3.5, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRY	**Ryogami san**	**2.83**	**32**	P	Pn	04 59 22.8	+1.4
MAT	**Matsushiro**	**3.07**	**17**	P	Pn	04 59 23.8	+0.5
MAT				*e*S	S	05 00 13.6	-1.3
JAG	**Ashikaga**	**3.42**	**34**	P	Pn	04 59 26.3	0.0
JAG				*e*S	S	05 00 16.1	-4.3
JYT	**Yasato**	**3.66**	**44**	P	Pn	04 59 27.5	-0.9
JHO	**Hitachi**	**4.15**	**43**	P	Pn	04 59 33.2	+0.2
JHO				*e*S	S	05 00 28.1	-4.5

*DDA **28** 04:59:49.8, 38˚.82N×25˚.90E, h7km, MD2.7*
*ISCJB **28** 04:59:51.1±0.7, 38˚.85N±0˚.03×26˚.03E±0˚.06, h5km±7km, Error ellipse: s-maj=7.7km s-min=5.1km az=1.6*
*CSEM **28** 04:59:51.3±0.2, 38˚.86N×26˚.01E, h10km, ML2.1/4, Error ellipse: s-maj=5.9km s-min=4.8km az=88.0*
*THE **28** 04:59:51.2, 38˚.85N×26˚.02E, h1km±1km, ML2.1/4, Error ellipse: s-maj=1.4km s-min=0.4km az=126.0*

ISC 28 04:59:51.3±1.0, 38˚.86N±0˚.03×26˚.01E±0˚.03, h14km±9km, n17, σ1°00/30, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.37**	**342**	P	**Pg**	**04 59 58.6**	**-0.3**
SIGR				S	**Sg**	**05 00 04.4**	**+0.5**
SIGR	**SIGRI**	**0.37**	**342**	P	**Pg**	**04 59 58.6**	**-0.3**
SIGR				S	**Sg**	**05 00 04.4**	**+0.5**
PRK	**Paraskevi**	**0.44**	**28**	P	**Pg**	**04 59 59.5**	**-0.6**
PRK				S	**Sg**	**05 00 06.4**	**+0.4**
PRK	**Paraskevi**	**0.44**	**28**	P	**Pg**	**04 59 59.5**	**-0.6**
PRK				S	**Sg**	**05 00 06.4**	**+0.4**
CHOS	**Chios island**	**0.47**	**175**	P	**Pg**	**05 00 00.5**	**-0.2**
CHOS				S	**Sg**	**05 00 07.2**	**+0.2**
CHOS	**Chios island**	**0.47**	**175**	P	**Pg**	**05 00 00.5**	**-0.2**
CHOS				S	**Sg**	**05 00 07.2**	**+0.2**
AYVA	**Ayvalik**	**0.70**	**50**	*i* P	**Pg**	**05 00 04.4**	**-0.5**
AYVA				*i* S	**Sg**	**05 00 14.2**	**+0.1**
AYVA	**Ayvalik**	**0.70**	**50**	*i* P	**Pg**	**05 00 04.4**	**-0.5**
AYVA				*i* S	**Sg**	**05 00 14.2**	**+0.1**
BOZC	**Bozcaada**	**0.98**	**2**	*i* P	**Pb**	**05 00 09.2**	**-1.0**
BOZC				*i* S	**Sn**	**05 00 24.2**	**-0.3**
LIA	**Limnos Island**	**1.22**	**329**	P	**Pn**	**05 00 14.1**	**+0.1**
LIA				S	**Sg**	**05 00 31.9**	**+1.2**
LIA	**Limnos Island**	**1.22**	**329**	P	**Pn**	**05 00 14.1**	**+0.1**
LIA				S	**Sg**	**05 00 31.9**	**+1.2**
AKHS	**Akhisar**	**1.41**	**89**	*i* P	**Pg**	**05 00 18.5**	**0.0**
AKHS	**Akhisar**	**1.41**	**89**	*i* P	**Pg**	**05 00 18.5**	**0.0**
BALY	**Balya**	**1.53**	**54**	*i* P	**Pn**	**05 00 17.9**	**-0.4**
BALY				*i* S	**Sg**	**05 00 43.7**	**+3.1**
BALY	**Balya**	**1.53**	**54**	*i* P	**Pn**	**05 00 17.9**	**-0.4**
BALY				*i* S	**Sg**	**05 00 43.7**	**+3.1**
AOS	**Alonnisos**	**1.69**	**281**	P	**Pn**	**05 00 21.0**	**+0.6**
AOS	**Alonnisos**	**1.69**	**281**	P	**Pn**	**05 00 21.0**	**+0.6**

IDC 28 05:02:56.0±7.4, 6˚.27S×146˚.51E, h110km±74km, mb3.3/3, mb1 3.5/5, mb1mx3.2/19, mbtmp3.2/5, ML2.8/2, MS3.0/2, Ms1 3.0/2, ms1mx2.4/18, Error ellipse: s-maj=73.3km s-min=28.1km az=144.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.18**	**168**	P	Pn	05 03 45.3	+0.9
	3.3nm,0.3s,baz=15,slow=12,SNR=4.5						
PMG				S	Sn	05 04 22.4	+0.5
	6.8nm,0.3s,baz=0.0,slow=20,SNR=4.7						
CTA	**Charters Tower**	**13.74**	**181**	LR	LR	05 10 33.7	
	comp=Z,55nm,18.9s,baz=230,slow=33						
WRA	**Warramunga Arr**	**18.01**	**220**	P	P	05 06 56.6	-1.8
	0.1nm,0.3s,baz=41,slow=12,SNR=4.1						
ASAR	**Alice Springs**	**21.12**	**214**	P	P	05 07 31.5	-0.6
	1.1nm,0.8s,baz=38,slow=7.7,SNR=3.4						
FITZ	**Fitzroy Crossi**	**23.51**	**238**	P	P	05 07 56.9	+0.7
	2.5nm,0.9s,baz=34,slow=7.3,SNR=3.3						
FITZ				LR	LR	05 17 51.7	
	comp=Z,43nm,19.6s,baz=256,slow=38						
ILAR	**Eielson Array**	**85.92**	**23**	P	P	05 15 23.0	-0.3
	0.4nm,0.6s,baz=253,slow=5.0,SNR=8.4						
TORD	**Torodi Ar. Bea**	**144.68**	**284**	PKP	PKPdf	05 22 21.3	+0.5
	0.6nm,0.9s,baz=79,slow=3.4,SNR=2.8						

*CSEM **28** 05:08:06.0, 36˚.24N×21˚.27E, h18km, MD3.5, After ATH*

ATH 28 05:08:06.0, 36˚.24N×21˚.27E, h18km±5km, MD3.5/9, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.76**	**30**	*e*PN	Pb	05 08 20.5	-0.2
PYL	**PYLOS**	**0.76**	**30**	*e*Pn	Pb	05 08 20.5	-0.2
DYR	**Agios Nikonas**	**1.00**	**58**	*e*PN	Pg	05 08 25.4	-0.2
DYR	**Agios Nikonas**	**1.00**	**58**	*e*Pn	Pg	05 08 25.4	-0.2
ITM	**Ithomi**	**1.08**	**29**	*e*PN	Pg	05 08 27.0	+0.1
ITM				*e*SN	Sg	05 08 41.3	+0.2
ITM	**Ithomi**	**1.08**	**29**	*e*Pn	Pg	05 08 27.0	+0.1
ITM				*e*Sn	Sg	05 08 41.3	+0.2
AMT	**Artemida-Makis**	**1.34**	**15**	*e*PB	Pn	05 08 29.5	-0.3
AMT	**Artemida-Makis**	**1.34**	**15**	*e*Pb	Pn	05 08 29.5	-0.3
VLI	**Veliai**	**1.43**	**70**	*e*PN	Pg	05 08 33.5	0.0
VLI	**Veliai**	**1.43**	**70**	*e*Pn	Pg	05 08 33.5	0.0
KYTH	**Kithira**	**1.43**	**88**	*e*PN	Pb	05 08 32.6	+0.5
KYTH	**Kithira**	**1.43**	**88**	*e*Pn	Pb	05 08 32.6	+0.5
VLX	**Vlachokerasia**	**1.44**	**38**	*e*PN	Pb	05 08 33.1

TWK					*e*S		**Sn**	**05 09 19.7**	**+1.2**
	baz=248								
YOJ	**Yonaguni jima**	**1.33**	**57**	*e*P			**Pn**	**05 09 02.6**	**-0.3**
	baz=58								
YOJ					*e*S		**Sn**	**05 09 19.9**	**+0.4**
	baz=58								
YOJ	**Yonaguni jima**	**1.33**	**57**	P			**Pn**	**05 09 03.0**	**+0.1**
YOJ					*e*S		**Sn**	**05 09 20.2**	**+0.6**
NWF	**Wu-fen Shan**	**1.33**	**360**	*e*P			**Pn**	**05 09 03.8**	**+0.8**
	baz=348								
NWF					*e*S		**Sn**	**05 09 21.0**	**+1.2**
	baz=348								
WTCT	**Ta-ch'eng**	**1.39**	**276**	*e*P			**Pn**	**05 09 04.7**	**+1.0**
	baz=277								
WTCT					*e*S		**Sn**	**05 09 22.8**	**+1.8**
	baz=277								
CHN8	**Yiju**	**1.50**	**256**	*e*P			**Pn**	**05 09 05.4**	**+0.2**
	baz=256								
CHN8					*e*S		**Sn**	**05 09 25.2**	**+1.5**
	baz=256								
TWM1	**Shoushan**	**1.55**	**235**	*e*P			Pn	05 09 08.5	+2.6
	baz=233								
EAST	**Anshou**	**1.60**	**213**	*e*P			**Pn**	**05 09 06.3**	**-0.3**
	baz=210								
SCZT	**Fangliau**	**1.73**	**219**	*e*P			Pn	05 09 10.4	+2.1
	baz=211								
HATJ	**Hateruma jima**	**1.87**	**80**	P			**Pn**	**05 09 10.7**	**+0.4**
HATJ					*e*S		**Sn**	**05 09 33.0**	**+0.1**
PNG	**Penghu**	**2.06**	**266**	*e*P			**Pn**	**05 09 12.6**	**-0.3**
	baz=265								
JKRS	**Kuro-shima**	**2.09**	**76**	P			**Pn**	**05 09 14.3**	**+1.0**
JKRS					*e*S		**Sn**	**05 09 39.1**	**+0.8**
JIJ	**Ishigaki jima**	**2.24**	**73**	P			**Pn**	**05 09 15.5**	**+0.1**
JIJ					*e*S		**Sn**	**05 09 41.6**	**-0.4**
JTJ	**Tarama**	**2.81**	**71**	P			**Pn**	**05 09 23.6**	**+0.4**
JTJ					*e*S		**Sn**	**05 09 56.8**	**+0.8**

IDC 28 05:16:59.8±5.0, 46°64N×149°70E, h0km, mb3.5/5, mb1 3.8/5, mb1mx3.5/24, mbtmp3.5/5, Error ellipse: s-maj=137.6km s-min=30.8km az=174.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**38.10**	**38**	P	P	05 24 19.6	-0.2
	0.3nm,0.6s,baz=266,slow=6.7,SNR=4.7						
MKAR	**Makanchi Array**	**44.89**	**296**	P	P	05 25 16.6	+0.7
	0.4nm,0.7s,baz=70,slow=8.6,SNR=5.0						
YKA	**Yellowknife Ar**	**52.40**	**36**	P	P	05 26 14.1	+0.8
	0.3nm,0.4s,baz=300,slow=6.7,SNR=13						
GUN	**Gumba**	**52.66**	**273**	*e*P	P	05 26 17.2	+1.0
	4.3nm,0.4s						
RAMN	**Ramite**	**52.77**	**271**	*e*P	P	05 26 18.1	+1.2
	5.9nm,0.3s						
DMN	**Daman**	**53.38**	**273**	*e*P	P	05 26 22.4	+1.0
DANN	**Dangsing**	**53.84**	**275**	*e*P	P	05 26 26.3	+1.4
	5.6nm,0.4s						
KOLN	**Koldanda**	**54.32**	**274**	*e*P	P	05 26 28.1	-0.1
	2.5nm,0.3s						
PYUN	**Piuthan**	**54.53**	**275**	*e*P	P	05 26 31.3	+1.5
	4.8nm,0.4s						
FINES	**FINESS Array B**	**63.11**	**333**	P	P	05 27 27.6	-1.0
	0.7nm,0.4s,baz=38,slow=7.0,SNR=6.6						
PDAR	**Pinedale Array**	**66.69**	**52**	P	P	05 27 52.1	-0.5
	0.2nm,0.5s,baz=322,slow=2.8,SNR=2.2						

*CSEM **28** 05:19:15.9, 45°86N×26°94E, h67km, MD3.5/2, After BUC*

BUC 28 05:19:15.9±1.4, 45°86N×26°94E, h67km±14km, MD3.5/2, 21C-18D, Error ellipse: s-maj=13.3km s-min=7.4km az=77.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ODBI	**Odobesti**	**0.13**	**139**	↑*i*P	Pn	05 19 26.4	+0.6
ODBI	**Odobesti**	**0.13**	**139**	↑*i*P	Pn	05 19 26.4	+0.6
ODBI				*i* S	Sn	05 19 33.9	+0.9
ODBI	**Odobesti**	**0.13**	**139**	↑*i*P	Pn	05 19 26.4	+0.6
ODBI				*i* S	Sn	05 19 33.9	+0.9
VRI	**Vrincioaia**	**0.15**	**273**	↑*i*P	Pn	05 19 26.0	+0.1
VRI	**Vrincioaia**	**0.15**	**273**	↑*i*P	Pn	05 19 26.0	+0.1
VRI				*i* S	Sn	05 19 33.2	0.0
VRI	**Vrincioaia**	**0.15**	**273**	↑*i*P	Pn	05 19 26.0	+0.1
VRI				*i* S	Sn	05 19 33.2	0.0
PLOR	**Plostina**	**0.20**	**268**	↑*i*P	Pn	05 19 26.3	+0.1
PLOR				S	Sn	05 19 33.3	-0.4
PLOR	**Plostina**	**0.20**	**268**	↑*i*P	Pn	05 19 26.3	+0.1
PLOR				*i* S	Sn	05 19 33.3	-0.4
PLOR	**Plostina**	**0.20**	**268**	↑*i*P	Pn	05 19 26.3	+0.1
PLOR				*i* S	Sn	05 19 33.3	-0.4
PETR		**0.25**	**123**	↑*i*P	Pn	05 19 26.7	+0.4
PETR		**0.25**	**123**	↑*i*P	Pn	05 19 26.7	+0.4
PETR				*i* S	Sn	05 19 34.7	+0.7
PETR		**0.25**	**123**	↑*i*P	Pn	05 19 26.7	+0.4
PETR				*i* S	Sn	05 19 34.7	+0.7
TESR		**0.68**	**343**	↓*i*P	Pn	05 19 31.0	+0.6
TESR		**0.68**	**343**	↓*i*P	Pn	05 19 31.0	+0.6
TESR				*i* S	Sn	05 19 41.2	+0.1
TESR		**0.68**	**343**	↓*i*P	Pn	05 19 31.0	+0.6
TESR				*i* S	Sn	05 19 41.2	+0.1
MLR	**Muntele Rosu**	**0.79**	**242**	↓*i*P	Pn	05 19 32.3	+0.5
MLR	**Muntele Rosu**	**0.79**	**242**	↓*i*P	Pn	05 19 32.3	+0.5
MLR				*i* S	Sn	05 19 44.8	+1.3
MLR	**Muntele Rosu**	**0.79**	**242**	↓*i*P	Pn	05 19 32.3	+0.5
MLR				*i* S	Sn	05 19 44.8	+1.3
ISR	**Istrita**	**0.79**	**201**	↑*i*P	Pn	05 19 32.7	+1.0
ISR	**Istrita**	**0.79**	**201**	↑*i*P	Pn	05 19 32.7	+1.0
ISR				*i* S	Sn	05 19 45.2	+1.8
ISR	**Istrita**	**0.79**	**201**	↑*i*P	Pn	05 19 32.7	+1.0
ISR				*i* S	Sn	05 19 45.2	+1.8
SECR		**1.03**	**217**	↓*i*P	Pn	05 19 35.7	+1.1
SECR		**1.03**	**217**	↓*i*P	Pn	05 19 35.7	+1.1
SECR				*i* S	Sn	05 19 50.5	+2.0
SECR		**1.03**	**217**	↓*i*P	Pn	05 19 35.7	+1.1
SECR				*i* S	Sn	05 19 50.5	+2.0
DOPR	**Dopca**	**1.09**	**276**	↓*i*P	Pn	05 19 36.0	+0.6
DOPR	**Dopca**	**1.09**	**276**	↓*i*P	Pn	05 19 36.0	+0.6
DOPR				*i* S	Sn	05 19 50.2	+0.3
DOPR	**Dopca**	**1.09**	**276**	↓*i*P	Pn	05 19 36.0	+0.6
DOPR				*i* S	Sn	05 19 50.2	+0.3
VOIR		**1.39**	**253**	↑*i*P	Pn	05 19 39.6	+0.2
VOIR		**1.39**	**253**	↑*i*P	Pn	05 19 39.6	+0.2
VOIR		**1.39**	**253**	↑*i*P	Pn	05 19 39.6	+0.2
TLCR		**1.48**	**116**	↓*i*P	Pn	05 19 41.6	+1.1
TLCR		**1.48**	**116**	↓*i*P	Pn	05 19 41.6	+1.1
TLCR				*i* S	Sn	05 19 58.9	-0.1
TLCR		**1.48**	**116**	↓*i*P	Pn	05 19 41.6	+1.1
TLCR				*i* S	Sn	05 19 58.9	-0.1
TIRR	**Tirgusor**	**1.75**	**143**	↑*i*P	Pn	05 19 44.1	+0.1
TIRR	**Tirgusor**	**1.75**	**143**	↑*i*P	Pn	05 19 44.1	+0.1
TIRR				*i* S	Sn	05 20 04.5	-0.8
TIRR	**Tirgusor**	**1.75**	**143**	↑*i*P	Pn	05 19 44.1	+0.1
TIRR				*i* S	Sn	05 20 04.5	-0.8
HUMR	**Humele**	**1.92**	**227**	↓*i*P	Pn	05 19 46.4	0.0
HUMR	**Humele**	**1.92**	**227**	↓*i*P	Pn	05 19 46.4	0.0
HUMR	**Humele**	**1.92**	**227**	↓*i*P	Pn	05 19 46.4	0.0

IDC 28 05:22:39.7±1.7, 31°83S×177°89W, h0km, mb4.2/3, mb1 4.3/4, mb1mx3.9/20, mbtmp4.2/4, ML3.5/1, Error ellipse: s-maj=43.3km s-min=38.8km az=7.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.62**	**211**	Pn	Pn	05 24 31.8	-0.1
	0.7nm,0.3s,baz=45,slow=5.7,SNR=3.2						
URZ				Sn	Sn	05 25 53.5	-5.5
	3.0nm,0.3s,baz=15,slow=20,SNR=7.3						
CTA	**Charters Tower**	**34.15**	**281**	P	P	05 29 28.1	+1.4
	3.2nm,0.6s,baz=146,slow=3.6,SNR=2.5						
ASAR	**Alice Springs**	**43.15**	**268**	P	P	05 30 41.6	-0.7
	1.4nm,0.7s,baz=106,slow=7.9,SNR=14						
WRA	**Warramunga Arr**	**44.27**	**274**	P	P	05 30 50.5	-0.8
	2.6nm,0.5s,baz=112,slow=7.9,SNR=18						
FINES	**FINESS Array B**	**146.51**	**339**	PKPbc	PKPbc	05 42 21.6	-0.7
	3.0nm,0.5s,baz=44,slow=4.2,SNR=17						
BRTR	**Keskin Array B**	**153.34**	**296**	PKPbc	PKPbc	05 42 40.2	+0.2
	0.5nm,0.5s,baz=120,slow=4.5,SNR=3.4						
TORD	**Torodi Ar. Bea**	**161.40**	**179**	PKPab	PKPab	05 43 26.1	-0.9
	0.9nm,1.0s,baz=174,slow=2.9,SNR=3.8						

*NEIC **28** 05:23:27.9, 18°41N×68°64W, h137km, MD3.7(RSPR), After RSPR.*

RSPR 28 05:23:27.9, 18°41N×68°64W, h137km±1km, MD3.7/12, 23C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**0.80**	**298**	↑*i*P	Pn	05 23 49.4	-0.4
DR12				*e*S	Sn	05 24 06.1	-0.3
DR12	**Loma Pena Alta**	**0.80**	**298**	*i* Pu	Pn	05 23 49.4	-0.4
DR12				*e*S	Sn	05 24 06.1	-0.3
SMN1	**Samana, DR**	**0.98**	**322**	↑*e*P	Pn	05 23 51.1	-0.2
SMN1				*e*S	Sn	05 24 09.2	+0.1
AGPR	**Aguadilla, PR**	**1.45**	**88**	↑*e*P	Pn	05 23 56.0	+0.1
AGPR	**Aguadilla, PR**	**1.45**	**88**	↑*e*P	Pn	05 23 56.0	+0.1
AGPR				*e*S	Sn	05 24 17.4	+0.1
CRPR	**Cabo Rojo, PR**	**1.51**	**105**	↑*e*P	Pn	05 23 56.4	-0.1
CRPR	**Cabo Rojo, PR**	**1.51**	**105**	↑*e*P	Pn	05 23 56.4	-0.1
CRPR				*e*S	Sn	05 24 18.8	+0.3
LRS	**Lares**	**1.71**	**94**	↑*e*P	Pn	05 23 58.7	-0.2
LRS				*e*S	Sn	05 24 22.5	-0.1
LRS	**Lares**	**1.71**	**94**	↑*e*P	Pn	05 23 58.7	-0.2
LRS				*e*S	Sn	05 24 22.5	-0.1
AOPR	**Arecibo Observ**	**1.79**	**92**	↑*e*P	Pn	05 23 59.8	0.0
AOPR	**Arecibo Observ**	**1.79**	**92**	↑*e*P	Pn	05 23 59.8	0.0
AOPR				*e*S	Sn	05 24 24.1	-0.1
OBIP	**Obispado Ponce**	**1.97**	**101**	↑*e*P	Pn	05 24 01.9	0.0
OBIP	**Obispado Ponce**	**1.97**	**101**	↑*e*P	Pn	05 24 01.9	0.0
OBIP				*e*S	Sn	05 24 28.4	+0.5
CELP	**Cerrillos**	**1.99**	**99**	↑*e*P	Pn	05 24 02.3	+0.2
CELP				*e*S	Sn	05 24 28.6	+0.3
CELP	**Cerrillos**	**1.99**	**99**	↑*e*P	Pn	05 24 02.3	+0.2
CELP				*e*S	Sn	05 24 28.6	+0.3
SJG	**San Juan**	**2.38**	**97**	↑*e*P	Pn	05 24 06.7	-0.3
SJG	**San Juan**	**2.38**	**97**	↑*e*P	Pn	05 24 06.7	-0.3
SDDR	**Presa de Saban**	**2.57**	**283**	↑*e*P	Pn	05 24 09.5	+0.1
SDDR	**Presa de Saban**	**2.57**	**283**	↑*e*P	Pn	05 24 09.5	+0.1
SDDR				*e*S	Sn	05 24 41.5	+0.2
CBYP	**Canovanas**	**2.65**	**93**	↑*e*P	Pn	05 24 10.2	-0.1
CBYP	**Canovanas**	**2.65**	**93**	↑*e*P	Pn	05 24 10.2	-0.1
HUMP	**Col San Antoni**	**2.66**	**95**	↑*e*P	Pn	05 24 09.8	-0.6
HUMP	**Col San Antoni**	**2.66**	**95**	↑*e*P	Pn	05 24 09.8	-0.6
STVI	**Saint Thomas**	**3.50**	**90**	↑*e*P	Pn	05 24 21.4	+0.2
STVI	**Saint Thomas**	**3.50**	**90**	↑*e*P	Pn	05 24 21.4	+0.2

*NIED **28** 05:27:00, 37°60N×142°90E, h8km, Mw3.6 Best double couple: M_o2.92000×10^{14} NP1:ϕ_s32.00000°, δ81.00000°, λ152.00000°. NP2:ϕ_s127.00000°, δ62.00000°, λ10.00000°.*
*JMA **28** 05:27:03.7±0.2, 37°58N×142°91E, h37km, M4.0*
*ISCJB **28** 05:27:04.2±1.0, 37°61N±0°07×142°83E±0°07, h21km, mb3.4/3, Error ellipse: s-maj=10.3km s-min=7.5km az=149.5*
*IDC **28** 05:27:10.5±5.3, 37°48N×142°86E, h60km±49km, mb3.0/3, mb1 3.4/5, mb1mx3.1/26, mbtmp3.1/5, ML2.8/2, MS2.6/1, Ms1 2.6/1, ms1mx2.1/9, Error ellipse: s-maj=50.4km s-min=30.5km az=103.0*

ISC 28 05:27:06.3±1.3, 37°66N±0°07×142°75E±0°09, h21km, n17, σ1§10/20, mb3.4/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.36**	**306**	P	**Pn**	**05 27 29.0**	**-1.0**
JIO				S	**Sn**	**05 27 47.4**	**+0.1**
JFK	**Kawauchi**	**1.52**	**259**	P	**Pn**	**05 27 30.8**	**-1.4**
JFK				*e*S	**Sn**	**05 27 50.7**	**-0.6**
JMM	**Marumori**	**1.56**	**278**	P	**Pn**	**05 27 31.5**	**-1.3**
JMM				*e*S	**Sn**	**05 27 52.1**	**-0.3**
JMK	**Ichinoseki**	**1.76**	**317**	P	**Pn**	**05 27 35.0**	**-0.5**
JOU	**Okura**	**1.79**	**294**	P	**Pn**	**05 27 35.1**	**-0.8**
JFT	**Otama**	**1.92**	**266**	P	**Pn**	**05 27 37.5**	**-0.2**
JFT				*e*S	**Sn**	**05 28 02.2**	**+1.0**
JOM	**Ohasama**	**2.14**	**328**	P	**Pn**	**05 27 40.3**	**-0.4**
JYK	**Kaneyama**	**2.26**	**304**	P	**Pn**	**05 27 42.8**	**+0.4**
JANG	**Nango**	**2.87**	**341**	P	**Pn**	**05 27 51.8**	**+1.0**
JAG	**Ashikaga**	**2.91**	**246**	P	**Pn**	**05 27 51.2**	**-0.1**
MJAR	**Matsushiro Arr**	**3.80**	**254**	P	**Pn**	**05 28 06.3**	**+2.7**
	3.1nm,0.3s,baz=77,slow=14,SNR=13						
MAT	**Matsushiro**	**3.80**	**254**	P	**Pn**	**05 28 03.9**	**+0.4**
MAT				S	**Sn**	**05 28 49.2**	**+1.6**
ASAJ	**Asahikawa**	**6.45**	**359**	LR	LR	05 32 14.1	
	comp=Z,45nm,19.0s,baz=142,slow=46						
USRK	**Ussuriysk Arra**	**10.42**	**312**	P	Pn	05 29 40.4	+6.0
	0.2nm,0.3s,baz=103,slow=16,SNR=3.0						
MKAR	**Makanchi Array**	**44.69**	**302**	P	**P**	**05 35 18.2**	**+0.6**
	0.2nm,0.6s,baz=84,slow=9.0,SNR=2.8						
ILAR	**Eielson Array**	**48.39**	**33**	P	**P**	**05 35 46.5**	**+0.2**
	0.2nm,0.5s,baz=265,slow=6.0,SNR=3.4						
WRA	**Warramunga Arr**	**57.84**	**189**	P	**P**	**05 36 55.0**	**-1.3**
	0.5nm,0.8s,baz=15,slow=9.3,SNR=2.5						

*BEO **28** 06:21:49.3±2.3, 37°97N×23°72E, h0km, ML3.4/1*
*SOF **28** 06:22:05.5, 39°57N×23°41E, h7km, MD3.1*
*ISCJB **28** 06:22:07.8±0.4, 39°54N±0°01×23°45E±0°03, h9km±3km, Error ellipse: s-maj=3.4km s-min=2.0km az=15.2*
*ATH **28** 06:22:07.4, 39°54N×23°43E, h26km±1km, ML3.2*
*CSEM **28** 06:22:08.2±0.1, 39°54N×23°42E, h15km, ML3.5/14, Error ellipse: s-maj=3.1km s-min=1.8km az=105.0*
*THE **28** 06:22:08.5, 39°55N×23°40E, h10km, ML3.5/14, Error ellipse: s-maj=0.4km s-min=0.2km az=141.0*

ISC 28 06:22:08.6±0.9, 39°53N±0°01×23°43E±0°02, h10km±6km, n164, σ1§04/202, 4C-2D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XOR	**Xorichti**	**0.25**	**227**	P	**Pg**	**06 22 13.4**	**-0.2**
XOR				S	**Sg**	**06 22 17.3**	**+0.3**
XOR	**Xorichti**	**0.25**	**227**	P	**Pg**	**06 22 13.4**	**-0.2**
XOR				S	**Sg**	**06 22 17.3**	**+0.3**
NEO	**Neokhori**	**0.28**	**215**	*e*PB	**Pg**	**06 22 13.9**	**-0.3**
NEO				*e*SB	**Sg**	**06 22 18.4**	**+0.5**
NEO	**Neokhori**	**0.28**	**215**	*e*Pb	**Pg**	**06 22 13.9**	**-0.3**
NEO				*e*Sb	**Sg**	**06 22 18.4**	**+0.5**
SKIA	**Skiathos**	**0.37**	**175**	P	**Pg**	**06 22 15.8**	**-0.1**
SKIA				S	**Sg**	**06 22 21.9**	**+1.2**
SKIA	**Skiathos**	**0.37**	**175**	P	**Pg**	**06 22 15.8**	**-0.1**
SKIA				S	**Sg**	**06 22 21.9**	**+1.2**
PAIG	**Paliouri**	**0.44**	**26**	P	**Pg**	**06 22 17.1**	**-0.1**
PAIG				S	**Sg**	**06 22 23.7**	**+0.6**
PAIG	**Paliouri**	**0.44**	**26**	*e*PB	**Pg**	**06 22 17.1**	**-0.1**
PAIG				*e*SB	**Sg**	**06 22 23.4**	**+0.3**
PAIG	**Paliouri**	**0.44**	**26**	P	**Pg**	**06 22 17.1**	**-0.1**
PAIG				*e*Sb	**Sg**	**06 22 23.4**	**+0.3**
PAIG				S	**Sg**	**06 22 23.7**	**+0.6**
AOS	**Alonnisos**	**0.51**	**136**	P	**Pg**	**06 22 18.1**	**-0.3**
AOS				S	**Sg**	**06 22 26.6**	**+1.5**
AOS	**Alonnisos**	**0.51**	**136**	*e*PN	**Pg**	**06 22 18.1**	**-0.3**
AOS				*e*SN	**Sg**	**06 22 26.0**	**+0.9**
AOS	**Alonnisos**	**0.51**	**136**	P	**Pg**	**06 22 18.1**	**-0.3**
AOS				*e*Sn	**Sg**	**06 22 26.0**	**+0.9**
AOS				S	**Sg**	**06 22 26.6**	**+1.5**
SMIA	**Simia**	**0.68**	**195**	P	**Pg**	**06 22 21.8**	**+0.1**
SMIA				S	**Sg**	**06 22 31.3**	**+0.8**
SMIA	**Simia**	**0.68**	**195**	P	**Pg**	**06 22 21.8**	**+0.1**
SMIA				S	**Sg**	**06 22 31.3**	**+0.8**
MRKA	**Markates**	**0.84**	**171**	P	**Pb**	**06 22 24.6**	**-0.7**
MRKA	**Markates**	**0.84**	**171**	P	**Pb**	**06 22 24.6**	**-0.7**
PLG	**Polygyros**	**0.84**	**1**	P	**Pb**	**06 22 23.9**	**-1.5**
PLG				S	**Sb**	**06 22 35.7**	**-1.1**
PLG	**Polygyros**	**0.84**	**1**	*e*PN	**Pb**	**06 22 23.8**	**-1.6**
PLG	**Polygyros**	**0.84**	**1**	P	**Pb**	**06 22 23.9**	**-1.5**
PLG				S	**Sb**	**06 22 35.7**	**-1.1**
ATAL	**Atalanti**	**0.90**	**201**	P	**Pb**	**06 22 25.7**	**-0.6**
ATAL				S	**Sb**	**06 22 38.4**	**+0.1**
ATAL	**Atalanti**	**0.90**	**201**	P	**Pb**	**06 22 25.7**	**-0.6**
ATAL				S	**Sb**	**06 22 38.4**	**+0.1**
OUR	**Ouranopolis**	**0.91**	**28**	P	**Pb**	**06 22 25.8**	**-0.7**
OUR				S	**Sb**	**06 22 38.9**	**+0.2**
OUR	**Ouranopolis**	**0.91**	**28**	P	**Pb**	**06 22 25.8**	**-0.7**
OUR				S	**Sb**	**06 22 38.9**	**+0.2**
LKR	**Lokris**	**0.94**	**201**	P	**Pb**	**06 22 26.3**	**-0.8**
LKR				S	**Sb**	**06 22 40.2**	**+0.6**
LKR	**Lokris**	**0.94**	**201**	*e*PN	**Pb**	**06 22 26.3**	**-0.8**
LKR	**Lokris**	**0.94**	**201**	P	**Pb**	**06 22 26.3**	**-0.8**
LKR				S	**Sb**	**06 22 40.2**	**+0.6**
AXAR	**Agios Charalam**	**0.97**	**218**	P	**Pb**	**06 22 26.8**	**-0.8**
AXAR				S	**Sb**	**06 22 41.1**	**+0.6**
AXAR	**Agios Charalam**	**0.97**	**218**	P	**Pb**	**06 22 26.8**	**-0.8**
AXAR				S	**Sb**	**06 22 41.1**	**+0.6**
AGG	**Agios Georgios**	**0.99**	**239**	P	**Pb**	**06 22 26.8**	**-1.2**
AGG				S	**Sb**	**06 22 40.9**	**-0.2**
AGG	**Agios Georgios**	**0.99**	**239**	P	**Pb**	**06 22 26.8**	**-1.2**
AGG				S	**Sb**	**06 22 40.9**	**-0.2**
HORT	**Hortiatis**	**1.09**	**347**	P	**Pb**	**06 22 28.5**	**-1.2**
HORT				S	**Sb**	**06 22 44.0**	**-0.1**
HORT	**Hortiatis**	**1.09**	**347**	P	**Pb**	**06 22 28.5**	**-1.2**
HORT				S	**Sb**	**06 22 44.0**	**-0.1**
THL	**Klokotos Trika**	**1.09**	**272**	P	**Pb**	**06 22 28.3**	**-1.3**
THL				S	**Sb**	**06 22 43.9**	**0.0**
THL	**Klokotos Trika**	**1.09**	**272**	*e*PN	**Pb**	**06 22 28.1**	**-1.5**
THL	**Klokotos Trika**	**1.09**	**272**	P	**Pb**	**06 22 28.3**	**-1.3**
THL				S	**Sb**	**06 22 43.9**	**0.0**
MAKR	**Makrakomi, Fth**	**1.13**	**243**	P	**Pb**	**06 22 29.7**	**-0.6**
MAKR	**Makrakomi, Fth**	**1.13**	**243**	P	**Pb**	**06 22 29.7**	**-0.6**
THE	**Thessaloniki**	**1.15**	**342**	P	**Pn**	**06 22 29.6**	**-1.3**
THE				S	**Sb**	**06 22 46.3**	**+0.6**
THE	**Thessaloniki**	**1.15**	**342**	P	**Pn**	**06 22 29.6**	**-1.3**
THE				S	**Sb**	**06 22 46.3**	**+0.6**
SOH	**Sokhos**	**1.29**	**358**	P	**Pn**	**06 22 31.5**	**-1.3**
SOH				S	**Sb**	**06 22 49.4**	**-0.3**
SOH	**Sokhos**	**1.29**	**358**	*e*PN	**Pn**	**06 22 31.9**	**-0.9**
SOH				*e*SN	**Sb**	**06 22 48.6**	**-1.1**
SOH	**Sokhos**	**1.29**	**358**	P	**Pn**	**06 22 31.5**	**-1.3**
SOH	**Sokhos**	**1.29**	**358**	*e*Pn	**Pn**	**06 22 31.9**	**-0.9**
SOH				*e*Sn	**Sb**	**06 22 48.6**	**-1.1**
SOH				S	**Sb**	**06 22 49.4**	**-0.3**
DSF	**Desfina**	**1.32**	**212**	P	**Pn**	**06 22 32.0**	**-1.3**
DSF				S	**Sn**	**06 22 50.7**	**-0.3**
DSF	**Desfina**	**1.32**	**212**	P	**Pn**	**06 22 32.0**	**-1.3**
DSF				S	**Sn**	**06 22 50.7**	**-0.3**
EVR	**Evrytania**	**1.40**	**244**	P	**Pn**	**06 22 33.2**	**-1.2**
EVR	**Evrytania**	**1.40**	**244**	*e*PN	**Pn**	**06 22 34.9**	**+0.5**
EVR	**Evrytania**	**1.40**	**244**	P	**Pn**	**06 22 33.2**	**-1.2**
EVR	**Evrytania**	**1.40**	**244**	*e*Pn	**Pn**	**06 22 34.9**	**+0.5**
LIA	**Limnos Island**	**1.40**	**74**	P	**Pn**	**06 22 33.4**	**-0.9**
LIA				S	**Sn**	**06 22 53.2**	**+0.3**
LIA	**Limnos Island**	**1.40**	**74**	*e*PB	Pn	06 22 31.9	-2.4
LIA	**Limnos Island**	**1.40**	**74**	*e*Pb	Pn	06 22 31.9	-2.4
LIA	**Limnos Island**	**1.40**	**74**	P	**Pn**	**06 22 33.4**	**-0.9**
LIA				S	**Sn**	**06 22 53.2**	**+0.3**
KZN	**Kozani**	**1.49**	**302**	P	**Pn**	**06 22 34.1**	**-1.5**
KZN	**Kozani**	**1.49**	**302**	*e*PN	**Pn**	**06 22 34.3**	**-1.3**
KZN	**Kozani**	**1.49**	**302**	*e*Pn	**Pn**	**06 22 34.3**	**-1.3**
KALE	**Kalithea**	**1.52**	**222**	*e*PN	**Pn**	**06 22 35.2**	**-0.8**
KALE	**Kalithea**	**1.52**	**222**	*e*Pn	**Pn**	**06 22 35.2**	**-0.8**
PTL	**Penteli**	**1.52**	**167**	*e*PN	**Pn**	**06 22 34.7**	**-1.3**
PTL	**Penteli**	**1.52**	**167**	*e*Pn	**Pn**	**06 22 34.7**	**-1.3**
LTK	**Loutraki**	**1.55**	**194**	P	**Pn**	**06 22 35.6**	**-0.8**
LTK				S	**Sn**	**06 22 56.8**	**+0.2**
LTK	**Loutraki**	**1.55**	**194**	*e*PN	**Pn**	**06 22 35.2**	**-1.2**
LTK	**Loutraki**	**1.55**	**194**	*e*Pn	**Pn**	**06 22 35.2**	**-1.2**
LTK	**Loutraki**	**1.55**	**194**	P	**Pn**	**06 22 35.6**	**-0.8**
LTK				S	**Sn**	**06 22 56.8**	**+0.2**
TRIZ	**Trizonia**	**1.57**	**223**	*e*PB	**Pn**	**06 22 35.1**	**-1.5**
TRIZ	**Trizonia**	**1.57**	**223**	*e*Pb	**Pn**	**06 22 35.1**	**-1.5**
ATH	**Athens Observa**	**1.57**	**172**	P	**Pn**	**06 22 35.7**	**-1.0**
ATH	**Athens Observa**	**1.57**	**172**	*e*PN	**Pn**	**06 22 35.6**	**-1.1**
ATH	**Athens Observa**	**1.57**	**172**	P	**Pn**	**06 22 35.7**	**-1.0**
SRS	**Serrai**	**1.59**	**5**	P	**Pn**	**06 22 35.8**	**-1.1**
SRS	**Serrai**	**1.59**	**5**	P	**Pn**	**06 22 35.8**	**-1.1**
**EFP

MLR	**Muntele Rosu**	**6.24**	**17**⇑	*i*P	**Pn**	**06 23 41.6**	**+0.7**
MLR	**Muntele Rosu**	**6.24**	**17**⇑	*i*P	**Pn**	**06 23 41.6**	**+0.7**
VRI	**Vrincioaia**	**6.78**	**20**⇑	*i*P	**Pn**	**06 23 49.9**	**+1.7**

*DDA **28** 07:13:07.5, 40.°69N×30.°60E, h7km, MD2.9*
*ISK **28** 07:13:07.7, 40.°66N×30.°65E, h16km, MD2.3*
*ISCJB **28** 07:13:08.7±0.9, 40.°66N±0.°06×30.°64E±0.°05, h7km±8km, Error ellipse: s-maj=9.6km s-min=6.0km az=174.4*
*CSEM **28** 07:13:08.2±0.3, 40.°65N×30.°63E, h15km, MD2.3, Error ellipse: s-maj=7.4km s-min=4.6km az=176.0*

ISC 28 07:13:08.2±1.2, **40.°65N**±0.°05×**30.°63E**±0.°03, **h18**km±4km, **n10**, σ**0**s**56**/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GULT	**Gulveren**	**0.23**	**202**	*e*PG	**Pg**	**07 13 13.5**	**-0.2**
GULT				*e*SG	**Sb**	**07 13 17.9**	**+0.5**
GULT	**Gulveren**	**0.23**	**202**	*e*Pg	**Pg**	**07 13 13.5**	**-0.2**
GULT				*e*Sg	**Sb**	**07 13 17.9**	**+0.5**
SPNC	**Sapanca-Adapaz**	**0.25**	**280**	*e*PG	**Pg**	**07 13 13.7**	**-0.2**
SPNC				*e*SG	**Sb**	**07 13 18.2**	**+0.2**
SPNC	**Sapanca-Adapaz**	**0.25**	**280**	*e*Pg	**Pg**	**07 13 13.7**	**-0.2**
SPNC				*e*Sg	**Sb**	**07 13 18.2**	**+0.2**
MDUB	**Mudurnu**	**0.47**	**112**	*e*PG	**Pg**	**07 13 17.4**	**-0.3**
MDUB				*e*SG	**Sb**	**07 13 24.2**	**-0.4**
MDUB	**Mudurnu**	**0.47**	**112**	*e*Pg	**Pg**	**07 13 17.5**	**-0.3**
MDUB				*e*Sg	**Sb**	**07 13 24.2**	**-0.4**
BORA	**Eskisehir**	**0.78**	**190**	*i* P	**Pb**	**07 13 23.1**	**-0.2**
BORA				*i* S	**Sn**	**07 13 35.2**	**-0.4**
BORA	**Eskisehir**	**0.78**	**190**	*i* P	**Pb**	**07 13 23.1**	**-0.2**
BORA				*i* S	**Sn**	**07 13 35.2**	**-0.4**
SGKT	**Sivrigoynuk**	**1.09**	**93**	*i* P	**Pn**	**07 13 28.6**	**-0.2**
SGKT				*i* S	**Sg**	**07 13 45.0**	**+1.3**
SGKT	**Sivrigoynuk**	**1.09**	**93**	*i* P	**Pg**	**07 13 28.6**	**-0.2**
SGKT				*i* S	**Sg**	**07 13 45.0**	**+1.3**

*IDC **28** 07:29:54.1±1.0, 27.°72S×178.°06W, h158km±10km, mb4.0/12, mb1 4.1/13, mb1mx4.0/18, mbtmp4.0/13, Error ellipse: s-maj=17.8km s-min=16.0km az=117.0*
*NEIC **28** 07:29:54.9±0.8, 27.°71S×178.°03W, h167km±7km, mb4.5/10, Error ellipse: s-maj=11.2km s-min=8.8km az=95.0*

ISC 28 07:29:55.2±0.4, **27.°81S**±0.°07×**177.°82W**±0.°07, **h180**km, **n110**, σ**1**s**57**/106, **mb4.3**/19, **1C-2D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.44**	**183**	*e*Pn	**Pn**	**07 30 24.5**	**-2.1**
RAO				*e*Sn	**Sn**	**07 30 48.1**	**-2.9**
RAO	**Raoul Island**	**1.44**	**183**	P	**Pn**	**07 30 24.8**	**-1.7**
	753nm,0.3s,baz=92,slow=8.4,SNR=27						
RAO				S	**Sn**	**07 30 47.9**	**-3.1**
	1um,0.3s,baz=265,slow=23,SNR=16						
MSVF	**Nonsavu**	**10.73**	**338**	*e*Pn	**Pn**	**07 32 23.8**	**-0.6**
	67nm,1.2s						
PUZ	**Puketiti**	**10.75**	**197**	*e*PN	Pn	07 32 16.9	-7.6
PUZ					SN	07 34 08.8	-15
CNGZ	**Carnagh Statio**	**11.15**	**196**	PN	Pn	07 32 22.2	-7.4
URZ	**Urewera**	**11.25**	**201**	*e*Pn	Pn	07 32 26.6	-4.3
URZ				*e*Sn	Sn	07 34 24.9	-11
URZ	**Urewera**	**11.25**	**201**	PN	Pn	07 32 23.8	-7.1
URZ	**Urewera**	**11.25**	**201**	P	Pn	07 32 23.8	-7.1
	0.5nm,0.3s,baz=354,slow=21,SNR=9.9						
URZ				S	Sn	07 34 26.0	-10
	3.8nm,0.3s,baz=58,slow=23,SNR=8.8						
PRHZ	**Porangahau**	**13.24**	**199**	SN	Sn	07 35 08.0	-16
TSZ	**Takapari Road**	**13.26**	**201**	PN	Pn	07 32 51.8	-4.8
TSZ					SN	07 35 08.9	-15
BFZ	**Birch Farm**	**13.74**	**199**	PN	Pn	07 32 57.7	-4.9
BFZ					SN	07 35 19.5	-16
MRZ	**Mangatainoka R**	**13.93**	**201**	PN	Pn	07 32 57.2	-7.7
MRZ					SN	07 35 20.2	-20
TCW	**Tory Channel**	**14.86**	**204**	SN	Sn	07 35 43.7	-19
AFI	**Afiamalu**	**14.94**	**23**	P	Pn	07 33 12.2	-5.4
AFI				S	Sn	07 35 42.3	-22
AFI	**Afiamalu**	**14.94**	**23**	P	Pn	07 33 12.2	-5.4
	0.8nm,0.3s,baz=221,slow=9.3,SNR=2.7						
AFI				S	Sn	07 35 42.3	-22
	2.8nm,0.3s,baz=18,slow=23,SNR=4.0						
DZM	**Mont Dzumac**	**15.37**	**288**	*e*P	**P**	**07 33 24.9**	**+1.3**
DZM	**Mont Dzumac**	**15.37**	**288**	*e*P	**P**	**07 33 25.2**	**+1.5**
	12nm,0.6s						
DZM	**Mont Dzumac**	**15.37**	**288**	P	**P**	**07 33 25.1**	**+1.5**
	0.4nm,0.3s,baz=94,slow=17,SNR=8.5						
KHZ	**Kahutara**	**16.18**	**204**	*e*PN	P	07 33 26.0	-6.3
MQZ	**McQueen's Vall**	**17.62**	**203**	SN	S	07 36 43.5	-18
RAR	**Rarotonga**	**17.68**	**72**	P	**Pn**	**07 33 51.5**	**+0.8**
RAR				S	**S**	**07 36 59.5**	**-3.8**
RAR	**Rarotonga**	**17.68**	**72**	P	**Pn**	**07 33 51.4**	**+0.8**
	1.1nm,0.3s,baz=270,slow=5.1,SNR=3.5						
RAR				S	**S**	**07 36 59.5**	**-3.8**
	1.9nm,0.3s,baz=270,slow=16,SNR=3.8						
RPZ	**Rata Peaks**	**18.23**	**207**	*e*P	**Pn**	**07 33 56.9**	**+0.1**
	22nm,1.1s						
RPZ				S	S	07 36 58.8	-15
RPZ	**Rata Peaks**	**18.23**	**207**	S	S	07 36 58.8	-15
	1.2nm,0.3s,baz=294,slow=20,SNR=5.0						
CTAO	**Charters Tower**	**33.63**	**275**	*e*P	**P**	**07 36 18.7**	**-0.2**
	7.1nm,0.5s						
STKA	**Stephens Creek**	**35.29**	**253**	*e*P	**P**	**07 36 33.3**	**+0.3**
	0.3nm,0.5s						
STKA				PcP	**PcP**	**07 39 01.0**	**+1.6**
STKA	**Stephens Creek**	**35.29**	**253**	P	**P**	**07 36 33.0**	**0.0**
	1.0nm,0.3s,baz=92,slow=14,SNR=10						
STKA				PcP	**PcP**	**07 39 01.0**	**+1.6**
	4.1nm,0.8s,baz=96,slow=2.3,SNR=7.9						
ASAR	**Alice Springs**	**43.46**	**264**	P	**P**	**07 37 40.0**	**-0.8**
ASAR				PcP	**PcP**	**07 39 25.9**	**+0.2**
ASAR	**Alice Springs**	**43.46**	**264**	P	**P**	**07 37 40.0**	**-0.8**
	3.9nm,0.8s,baz=95,slow=6.9,SNR=45						
ASAR				PcP	**PcP**	**07 39 25.9**	**+0.2**
	1.1nm,0.6s,baz=128,slow=3.2,SNR=5.8						
WRAB	**Tennant Creek**	**44.21**	**269**	*e*P	**P**	**07 37 45.4**	**-1.3**
	5.3nm,0.7s						
WRAB				*e*		07 38 12.2	
WRA	**Warramunga Arr**	**44.22**	**269**	P	**P**	**07 37 45.6**	**-1.1**
WRA				PcP	**PP**	**07 39 28.9**	**-4.6**
WRA	**Warramunga Arr**	**44.22**	**269**	P	**P**	**07 37 45.6**	**-1.1**
	6.4nm,0.8s,baz=108,slow=7.7,SNR=29						
WRA				PcP	**PP**	**07 39 28.9**	**-4.6**
	4.5nm,0.8s,baz=102,slow=3.5,SNR=10						
SBA	**Scott Base**	**50.62**	**184**	*e*P	P	07 38 39.0	+3.8
	23nm,1.3s						
VNDA	**Vanda**	**50.68**	**186**	P	**P**	**07 38 38.3**	**+2.6**
VNDA	**Vanda**	**50.68**	**186**	P	**P**	**07 38 38.3**	**+2.6**
	1.7nm,0.6s,baz=12,slow=6.8,SNR=26						
QSPA	**South Pole Qui**	**62.29**	**180**	*e*P	**P**	**07 39 59.9**	**+2.0**
	6.3nm,1.0s						
MAW	**Mawson**	**74.78**	**200**	P	**P**	**07 41 16.1**	**+1.1**
MAW	**Mawson**	**74.78**	**200**	P	**P**	**07 41 16.1**	**+1.1**
	2.1nm,0.6s,baz=146,slow=7.1,SNR=3.6						
MJAR	**Matsushiro Arr**	**76.22**	**325**	P	**P**	**07 41 23.7**	**+0.1**
MJAR	**Matsushiro Arr**	**76.22**	**325**	P	**P**	**07 41 23.7**	**+0.1**
	10nm,0.8s,baz=167,slow=6.0,SNR=21						
MAJO	**Matsushiro**	**76.22**	**325**	*e*P	**P**	**07 41 23.6**	**-0.1**
	11nm,0.9s						
JNU	**Nakatsue**	**77.74**	**318**	*e*P	**P**	**07 41 32.3**	**0.0**
	4.5nm,0.7s						
SYO	**Syowa Base**	**79.66**	**193**⇑	*e*P	**P**	**07 41 41.2**	**-1.0**
SYO	**Syowa Base**	**79.66**	**193**⇓	*e*P	**P**	**07 41 44.6**	**+2.4**
ASAJ	**Asahikawa**	**80.22**	**332**	*e*P	**P**	**07 41 46.3**	**+0.8**
	7.1nm,0.9s						
KSRS	**Korea Array**	**82.49**	**319**	P	**P**	**07 41 58.9**	**+1.4**
	3.3nm,0.8s,baz=138,slow=6.1,SNR=12						
KSAR	**Wonju Array Be**	**82.50**	**319**	P	**P**	**07 41 58.9**	**+1.3**
PETK	**Petropavlovsk-**	**83.35**	**345**	P	**P**	**07 42 02.1**	**+0.5**
PETK	**Petropavlovsk-**	**83.35**	**345**	P	**P**	**07 42 02.1**	**+0.5**
	6.5nm,0.6s,baz=122,slow=7.6,SNR=17						
USRK	**Ussuriysk Arra**	**85.09**	**326**	P	**P**	**07 42 11.9**	**+1.4**
	4.8nm,0.7s,baz=140,slow=4.3,SNR=14						
NVAR	**Mina Array Bea**	**86.24**	**43**	P	**P**	**07 42 18.9**	**+2.2**
NVAR				pP	**pP**	**07 42 57.8**	**-3.4**
NVAR	**Mina Array Bea**	**86.24**	**43**	P	**P**	**07 42 18.9**	**+2.2**
	0.7nm,0.6s,baz=219,slow=5.6,SNR=5.7						
NVAR				pP	**pP**	**07 42 57.8**	**-3.4**
	0.1nm,0.4s,baz=46,slow=49,SNR=3.3						
CMAR	**Chiang Mai Arr**	**92.69**	**289**	P	**P**	**07 42 46.0**	**-1.2**
CMAR	**Chiang Mai Arr**	**92.69**	**289**	P	**P**	**07 42 46.0**	**-1.2**
	0.7nm,0.3s,baz=121,slow=3.0,SNR=5.0						
ILAR	**Eielson Array**	**95.38**	**13**	P	**P**	**07 42 58.0**	**-0.3**
ILAR	**Eielson Array**	**95.38**	**13**	P	**P**	**07 42 58.0**	**-0.3**
	0.5nm,1.0s,baz=219,slow=5.6,SNR=5.1						
ZALV	**Zalesovo Beam**	**116.19**	**319**	PKP	**PKPdf**	**07 48 16.3**	**-0.2**
ZALV	**Zalesovo Beam**	**116.19**	**319**	PKP	**PKPdf**	**07 48 16.3**	**-0.2**
	0.7nm,0.4s,baz=163,slow=2.8,SNR=3.1						
MK31	**Makanchi Array**	**116.21**	**311**	*e*PKPdf	**PKPdf**	**07 48 16.2**	**-0.6**
MKAR	**Makanchi Array**	**116.21**	**311**	PKP	**PKPdf**	**07 48 16.8**	**0.0**
MKAR	**Makanchi Array**	**116.21**	**311**	PKP	**PKPdf**	**07 48 16.8**	**0.0**
	1.1nm,0.5s,baz=212,slow=1.1,SNR=15						
BOSA	**Boshof**	**119.69**	**203**	PKP	**PKPdf**	**07 48 25.2**	**+0.8**
BOSA	**Boshof**	**119.69**	**203**	PKP	**PKPdf**	**07 48 25.2**	**+0.8**
	0.8nm,0.4s,baz=166,slow=4.0,SNR=3.8						
KBL	**Kabul**	**123.31**	**295**	*e*PKPdf	**PKPdf**	**07 48 32.2**	**+1.0**
KKAR	**Karatay Array**	**123.75**	**305**	*e*PKPdf	**PKPdf**	**07 48 31.2**	**-0.3**
ARCES	**ARCESS Array B**	**136.10**	**348**	PKPpre	PKPpre	07 48 46.1	
ARCES				PKP	**PKiKP**	**07 48 55.5**	**-0.3**
ARCES	**ARCESS Array B**	**136.10**	**348**	PKhKP	PKPpre	07 48 46.1	
	2.5nm,0.9s,baz=29,slow=2.1,SNR=3.8						
ARCES				PKP	**PKiKP**	**07 48 55.5**	**-0.3**
	3.1nm,0.7s,baz=96,slow=1.2,SNR=10.0						
JOF	**Joensuu**	**140.06**	**340**	*ep*	PKPdf	07 48 55.1	-6.4
	1.1nm,0.6s						
KAF	**Kangasniemi**	**142.16**	**342**	*ep*	PKPdf	07 48 59.4	-5.8
	1.7nm,0.5s						
FINES	**FINESS Array B**	**142.76**	**341**	PKPpre	PKPpre	07 49 02.5	
FINES	**FINESS Array B**	**142.76**	**341**	PKhKP	PKPpre	07 49 02.5	
	2.1nm,0.5s,baz=71,slow=4.7,SNR=10						
KBZ	**Khabaz**	**143.74**	**307**	PKP	**PKPdf**	**07 49 11.4**	**+2.8**
KBZ	**Khabaz**	**143.74**	**307**	PKP	**PKPdf**	**07 49 11.4**	**+2.8**
	4.8nm,1.0s,baz=56,slow=3.6,SNR=4.8						
HAKT	**HAKKARI**	**143.97**	**296**	*i* P	**PKPdf**	**07 49 08.9**	**-0.7**
ARTV	**Artvin**	**144.93**	**303**	*i* P	**PKPdf**	**07 49 11.1**	**0.0**
DAGI	**Agillar**	**144.96**	**303**	*i* P	**PKPdf**	**07 49 11.7**	**+0.7**
NB2	**NORSAR Subarra**	**146.22**	**352**	PKP	**PKPab**	**07 49 13.7**	**-1.2**
	comp=Z,3.9nm,0.7s,baz=24,slow=3.1						
NOA	**NORSAR Array B**	**146.22**	**352**	PKPbc	**PKPab**	**07 49 14.4**	**-0.5**
NOA	**NORSAR Array B**	**146.22**	**352**	PKPbc	**PKPab**	**07 49 14.4**	**-0.5**
	comp=Z,3.9nm,0.7s,baz=16,slow=2.5,SNR=22						
NAO01	**NORSAR Array S**	**146.45**	**352**	*e*PKPdf	**PKPab**	**07 49 14.1**	**-1.7**
KELT	**Kelkit**	**147.11**	**302**	*i* P	**PKPab**	**07 49 18.7**	**-0.6**
ELZG	**Elazig**	**147.59**	**299**	*i* P	**PKPab**	**07 49 20.7**	**-0.5**
KEMA	**Kemaliye**	**147.84**	**300**	*i* P	**PKPab**	**07 49 21.4**	**-0.8**
MALT	**Malatya**	**148.04**	**298**	*e*PKPbc	**PKPab**	**07 49 20.7**	**-2.2**
AKCD	**Akcadag**	**148.44**	**299**	*i* P	**PKPdf**	**07 49 14.8**	**-2.2**
GZT	**Gaziantep**	**148.85**	**297**	*i* P	**PKPab**	**07 49 22.9**	**-3.5**
AKASG	**Malin Array Be**	**149.30**	**326**	PKPbc	**PKPbc**	**07 49 22.4**	**+0.1**
AKASG	**Malin Array Be**	**149.30**	**326**	PKPbc	**PKPbc**	**07 49 22.4**	**+0.1**
	comp=Z,119nm,0.6s,baz=42,slow=3.5,SNR=42						
AK01	**Malin Array Si**	**149.31**	**325**	*e*PKPbc	**PKPbc**	**07 49 22.3**	**0.0**
AK01				*e*PKPab	**PKPab**	**07 49 27.6**	**+0.1**
KIEV	**Kiev**	**149.31**	**326**	*e*PKPbc	**PKPbc**	**07 49 22.2**	**-0.1**
AK02	**Malin Array Si**	**149.34**	**325**	*e*PKPbc	**PKPbc**	**07 49 22.5**	**+0.1**
AVNT	**Avonos**	**150.72**	**300**	*i* P	**PKPbc**	**07 49 26.6**	**+0.3**
ILGA	**Ilgaz**	**151.00**	**305**	*i* P	**PKPbc**	**07 49 28.1**	**+1.1**
GULE	**Gulek**	**151.06**	**297**	*i* P	**PKPbc**	**07 49 28.2**	**+1.0**
BALT	**Daday**	**151.09**	**306**	*i* P	**PKPbc**	**07 49 27.2**	**0.0**
ELDT	**Eldivan**	**151.37**	**304**	*i* P	**PKPbc**	**07 49 26.5**	**-1.3**
BR131	**Keskin Array S**	**151.42**	**303**	*e*PKPbc	**PKPbc**	**07 49 28.2**	**+0.3**
BRTR	**Keskin Array B**	**151.42**	**303**	PKPbc	**PKPbc**	**07 49 28.2**	**+0.3**
BRTR	**Keskin Array B**	**151.42**	**303**	PKPbc	**PKPbc**	**07 49 28.2**	**+0.3**
	comp=Z,4.8nm,0.6s,baz=141,slow=4.7,SNR=31						
CSS	**Prodhromos**	**152.54**	**293**	*e*PKPbc	**PKPbc**	**07 49 31.1**	**+0.7**
BUR08	**Bucovina Ar. S**	**153.27**	**324**	*e*PKPbc	**PKPbc**	**07 49 33.4**	**+1.7**
BUR08				*e*PKPab	**PKPab**	**07 49 45.2**	**+0.9**
CLL	**Collm**	**155.15**	**344**⇓	*i*PKPab	**PKPab**	**07 49 53.0**	**+1.0**
	comp=Z,6.0nm,0.8s						
VRAC	**Vranov**	**155.84**	**337**	PKPab	**PKPab**	**07 49 56.0**	**+1.0**
VRAC	**Vranov**	**155.84**	**337**	PKPab	**PKPab**	**07 49 56.0**	**+1.0**
	comp=Z,2.4nm,0.5s,baz=46,slow=3.6,SNR=3.7						
GERES	**GERESS Array B**	**157.19**	**340**	PKPab	**PKPab**	**07 50 02.0**	**+1.1**
GERES	**GERESS Array B**	**157.19**	**340**	PKPab	**PKPab**	**07 50 02.0**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=58,slow=3.8,SNR=3.4						
DAVOX	**Davos/Dischmat**	**160.12**	**344**	PKPab	**PKPab**	**07 50 15.4**	**+1.5**
DAVOX	**Davos/Dischmat**	**160.12**	**344**	PKPab	**PKPab**	**07 50 15.4**	**+1.5**
	comp=Z,1.6nm,0.4s,baz=322,slow=16,SNR=4.1						
TORD	**Torodi Ar. Bea**	**165.40**	**178**	PKP	**PKPdf**	**07 49 39.7**	**+1.0**
TORD				PKPab	**PKPab**	**07 50 38.6**	**+1.1**
TORD	**Torodi Ar. Bea**	**165.40**	**178**	PKP	**PKPdf**	**07 49 39.7**	**+1.0**
	comp=Z,0.7nm,0.9s,baz=270,slow=1.4,SNR=3.5						
TORD				PKPab	**PKPab**	**07 50 38.6**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=173,slow=3.8,SNR=18						

*TAP **28** 07:38:55.9, 24.°68N×122.°47E, h103km, ML3.8, C*
*ISCJB **28** 07:38:56.3±0.6, 24.°63N±0.°03×122.°51E±0.°02, h95km±6km, Error ellipse: s-maj=5.5km s-min=3.2km az=171.7*
*JMA **28** 07:38:56.4±0.2, 24.°78N×122.°56E, h96km±2km, M2.5*

ISC 28 07:38:56.8±1.5, **24.°62N**±0.°05×**122.°50E**±0.°03, **h94**km±10km, **n39**, σ**0**s**62**/75, **5D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.49**	**109**	P	**Pn**	**07 39 12.0**	**+0.2**
YOJ				*e*S	**Sn**	**07 39 23.9**	**+0.9**
TWC	**Suao**	**0.59**	**269**⇓	*i*P	**Pn**	**07 39 12.3**	**-0.3**
	baz=263						
TWC				S	**Sn**	**07 39 24.2**	**-0.3**
	baz=263						
TWB1	**Santiao Chiao**	**0.60**	**310**	*i* P	**Pn**	**07 39 12.6**	**-0.2**
	baz=299						
TWB1				S	**Sn**	**07 39 24.8**	**+0.1**
	baz=299						
ILA	**Ilan**	**0.70**	**282**	*e*P	**Pn**	**07 39 13.5**	**-0.1**
	baz=278						
ILA				*e*S	**Sn**	**07 39 26.9**	**+0.7**
	baz=278						
ENA	**Nanau**	**0.72**	**255**⇓	*i*P	**Pn**	**07 39 14.0**	**+0.2**
	baz=249						
ENA				*e*S	**Sn**	**07 39 26.6**	**+0.1**
	baz=249						
TWE	**Neicheng**	**0.77**	**278**	*i* P	**Pn**	**07 39 14.3**	**0.0**
	baz=274						
TWE				*e*S	**Sn**	**07 39 27.1**	**-0.3**
	baz=274						
NWF	**Wu-fen Shan**	**0.79**	**304**⇓	*i*P	**Pn**	**07 39 14.5**	**-0.1**
	baz=302						
NWF				S	**Sn**	**07 39 27.5**	**-0.4**
	baz=302						
ENTT	**Nioudou**	**0.85**	**271**	P	**Pn**	**07 39 15.5**	**+0.4**
	baz=271						
ENTT				*e*S	**Sn**	**07 39 29.2**	**+0.2**
	baz=271						
TWD	**Chiawan**	**0.99**	**237**	P	**Pn**	**07 39 16.3**	**-0.3**
	baz=229						
TWD				S	**Sn**	**07 39 31.7**	**+0.3**
	baz=229						
HWA	**Hwalien**	**1.04**	**232**	*e*P	**Pn**	**07 39 16.9**	**-0.3**
	baz=222						
HWA				*e*S	**Sn**	**07 39 32.8**	**+0.3**
	baz=222						
NSK	**Sanguang**	**1.04**	**273**⇓	*i*P	**Pn**	**07 39 17.4**	**+0.1**
	baz=264						
NSK				S	**Sn**	**07 39 32.6**	**-0.1**
	baz=264						
NNS	**Nan Shan**	**1.04**	**260**	*i* P	**Pn**	**07 39 17.4**	**0.0**
	baz=251						
NNS				S	**Sn**	**07 39 32.7**	**-0.1**
	baz=251						
TWY	**Chenhua**	**1.05**	**309**	*e*P	**Pn**	**07 39 16.9**	**-0.4**
	baz=299						
PCYT	**Pengchaiyu**	**1.08**	**339**	P	**Pn**	**07 39 17.9**	**+0.3**
	baz=331						
PCYT				*e*S	**Sn**	**07 39 32.6**	**-0.6**
	baz=331						
TWS1	**Kuangyinshan**	**1.09**	**296**	*e*P	**Pn**	**07 39 17.5**	**-0.4**
	baz=294						
TWS1				*e*S	**Sn**	**07 39 32.9**	**-0.7**
	baz=294						
IRIF	**Iriomote-Funau**	**1.15**	**104**	P	**Pn**	**07 39 18.5**	**0.0**
IRIF				*e*S	**Sn**	**07 39 34.4**	**-0.4**
WHF	**Hehuan Shan**	**1.23**	**247**⇓	*i*P	**Pn**	**07 39 19.7**	**-0.1**
	baz=245						
WHF				S	**Sn**	**07 39 37.0**	**-0.1**
	baz=245						
NCU	**National Centr**	**1.25**	**286**	*e*P	**Pn**	**07 39 19.2**	**-0.4**
	baz=292						
NCU				*e*S	**Sn**	**07 39 36.9**	**+0.1**
	baz=292						
TWT	**Tachien**	**1.26**	**253**	*i* P	**Pn**	**07 39 20.7**	**+0.7**
	baz=244						
TWT				S	**Sn**	**07 39 38.1**	**+0.6**
	baz=244						
ESL	**Shilin**	**1.27**	**231**	*e*P	**Pn**	**07 39 19.2**	**-0.7**
	baz=223						
ESL				*e*S	**Sn**	**07 39 36.4**	**-0.9**
	baz=223						
HATJ	**Hateruma jima**	**1.31**	**115**	P	**Pn**	**07 39 20.8**	**+0.4**
HATJ				*e*S	**Sn**	**07 39 39.5**	**+1.2**
NSTT	**Nanjuang**	**1.37**	**271**	*e*P	**Pn**	**07 39 20.8**	**-0.3**
	baz=268						
NSTT				*e*S	**Sn**	**07 39 39.3**	**-0.2**
	baz=268						
JKRS	**Kuro-shima**	**1.43**	**105**	P	**Pn**	**07 39 22.1**	**+0.3**
JKRS				*e*S	**Sn**	**07 39 41.2**	**+0.5**
JIJ	**Ishigaki jima**	**1.52**	**99**	P	**Pn**	**07 39 22.6**	**-0.3**
JIJ				*e*S	**Sn**	**07 39 42.0**	**-0.7**
EHY	**Hungye**	**1.55**	**224**	*e*P	**Pn**	**07 39 22.6**	**-0.7**
	baz=230						
NSY	**Sanyi**	**1.60**	**263**	*e*P	**Pn**	**07 39 24.2**	**+0.2**
	baz=261						
NSY				*e*S	**Sn**	**07 39 44.6**	**-0.1**
	baz=261						
SMLT	**Sun Moon Lake**	**1.64**	**244**	*e*P	**Pn**	**07 39 25.2**	**+0.6**
	baz=236						
SMLT				*e*S	**Sn**	**07 39 46.5**	**+0.9**
	baz=236						
TYC	**Yuchr**	**1.66**	**245**	*e*P	**Pn**	**07 39 25.2**	**+0.4**
	baz=246						
TYC				*e*S	**Sn**	**07 39 46.7**	**+0.7**
	baz=246						
TWF1	**Yuli**	**1.68**	**221**	*e*P	**Pn**	**07 39 24.4**	**-0.6**
	baz=227						
TWF1				*e*S	**Sn**	**07 39 45.0**	**-1.4**
	baz=227						
CHKT	**Chengkung**	**1.84**	**215**	*e*P	**Pn**	**07 39 26.3**	**-0.8**
	baz=208						
CHKT				*e*S	**Sn**	**07 39 48.5**	**-1.5**
	baz=208						
ALS	**Alishan**	**1.91**	**235**	*e*P	**Pn**	**07 39 28.3**	**+0.1**
	baz=227						
ALS				*e*S	**Sn**	**07 39 52.8**	**+0.7**
	baz=227						
CHN5	**Tsauling**	**1.96**	**239**	*e*P	**Pn**	**07 39 29.7**	**+1.0**
	baz=247						
CHN5				*e*S	**Sn**	**07 39 54.1**	**+1.2**
	baz=247						
ELDTW	**Lidau**	**1.97**	**224**	*e*P	**Pn**	**07 39 28.4**	**-0.5**
	baz=221						
ELDTW				*e*S	**Sn**	**07 39 52.7**	**-0.7**
	baz=221						
JTJ	**Tarama**	**2.00**	**89**	P	**Pn**	**07 39 29.2**	**+0.1**
JTJ				*e*S	**Sn**	**07 39 53.0**	**-0.8**
CHN4	**Tsaushan**	**2.16**	**234**	*e*P	**Pn**	**07 39 31.9**	**+0.6**
	baz=233						
CHN4				*e*S	**Sn**	**07 39 58.1**	**+0.6**
	baz=233						
WTP	**Ta-pu**	**2.21**	**232**	*e*P	**Pn**	**07 39 31.9**	**0.0**
	baz=230						
WTP				*e*S	**Sn**	**07 39 59.9**	**+1.2**
	baz=230						
TWG	**Pinlang**	**2.22**	**216**	*e*P	**Pn**	**07 39 31.1**	**-1.0**
	baz=219						
TWG				*e*S	**Sn**	**07 39 57.6**	**-1.4**
	baz=219						
CHN1	**Nanshi**	**2.31**	**232**	*e*P	**Pn**	**07 39 33.5**	**+0.3**
	baz=231						
CHN1				*e*S	**Sn**	**07 40 01.3**	**+0.3**
	baz=231						
EAST	**Anshuo**	**2.70**	**215**	*e*P	**Pn**	**07 39 39.5**	**+1.1**
	baz=210						

*IDC **28** 07:51:52.3±2.2, 6.°41S×130.°41E, h0km, mb4.1/1, mb1 4.2/3, mb1mx3.7/18, mbtmp4.0/3, ML4.0/1, Error ellipse: s-maj=138.8km s-min=31.4km az=70.0*
*ISCJB **28** 07:51:57.0±0.6, 6.°48S±0.°04×130.°34E±0.°05, h50km, mb4.1/1, Error ellipse: s-maj=7.8km s-min=5.2km az=2.3*
*AUST **28** 07:51:57.7, 6.°48S×130.°03E, h100km*

ISC 28 07:51:55.5±1.0, **6.°50S**±0.°06×**130.°18E**±0.°09, **h50**km, **n12**

	4.7nm,0.5s,baz=263,slow=10,SNR=14								
TRQA	**Tornquist**	**21.65**	**162**	*e*P		**P**	**08 16 29.9**	**+2.7**	
	2.1nm,0.8s								
PLCA	**Paso Flores**	**23.03**	**180**	P		**P**	**08 16 43.1**	**+1.6**	
PLCA	**Paso Flores**	**23.03**	**180**	P		**P**	**08 16 43.1**	**+1.6**	
	1.5nm,0.6s,baz=356,slow=11,SNR=5.1								
MTP	**Monte Pirata**	**35.81**	**8**	*e*P		**P**	**08 18 32.9**	**-1.9**	
	14nm,0.4s								
WVT	**Waverly**	**55.95**	**343**	*e*P		**P**	**08 21 11.5**	**-1.3**	
	1.7nm,0.4s								
TXAR	**Lajitas Array**	**56.67**	**325**	P		**P**	**08 21 18.4**	**+0.2**	
TXAR				pP		**pP**	**08 21 40.5**	**-1.0**	
TXAR	**Lajitas Array**	**56.67**	**325**	P		**P**	**08 21 18.4**	**+0.2**	
	0.2nm,0.5s,baz=157,slow=7.8,SNR=3.0								
TXAR				pP		**pP**	**08 21 40.5**	**-1.0**	
	0.2nm,0.6s,baz=156,slow=8.5,SNR=2.5								
SIUC	**Southern Illin**	**57.83**	**342**	*e*P		**P**	**08 21 25.5**	**-0.5**	
	15nm,0.7s								
WMOK	**Wichita Mounta**	**58.66**	**333**	*e*P		**P**	**08 21 34.2**	**+2.3**	
	0.6nm,0.4s								
ECSD	**EROS Data Cent**	**65.62**	**339**	*e*P		**P**	**08 22 18.3**	**0.0**	
	1.6nm,0.7s								
AGMN	**Agassiz Nation**	**69.46**	**342**	*e*P		**P**	**08 22 43.1**	**+0.8**	
	2.8nm,0.7s								
PDAR	**Pinedale Array**	**70.07**	**330**	P		**P**	**08 22 49.1**	**+2.6**	
PDAR	**Pinedale Array**	**70.07**	**330**	P		**P**	**08 22 49.1**	**+2.6**	
	0.3nm,0.6s,baz=133,slow=6.3,SNR=3.2								
ULM	**Lac du Bonnet**	**71.22**	**343**	P		**P**	**08 22 53.9**	**+0.9**	
ULM	**Lac du Bonnet**	**71.22**	**343**	P		**P**	**08 22 53.9**	**+0.9**	
	3.4nm,0.5s,baz=165,slow=7.4,SNR=5.5								
SCHQ	**Schefferville**	**72.23**	**2**	*e*P		**P**	**08 22 58.3**	**-0.6**	
	3.7nm,0.8s								
SCHQ	**Schefferville**	**72.23**	**2**	P		**P**	**08 22 58.5**	**-0.4**	
	3.1nm,0.7s,baz=176,slow=4.2,SNR=12								
TOA0	**Torodi Ar. Sit**	**77.42**	**72**	*e*P		**P**	**08 23 29.9**	**+0.1**	
TORD	**Torodi Ar. Bea**	**77.42**	**72**	P		**P**	**08 23 30.1**	**+0.4**	
TORD				pP		**pP**	**08 23 55.1**	**+0.8**	
TORD	**Torodi Ar. Bea**	**77.42**	**72**	P		**P**	**08 23 30.1**	**+0.4**	
	10nm,0.7s,baz=263,slow=5.3,SNR=102								
TORD				pP		**pP**	**08 23 55.1**	**+0.8**	
	2.5nm,0.8s,baz=254,slow=5.1,SNR=3.1								
ESDC	**Sonseca Array**	**84.08**	**45**	P		**P**	**08 24 06.2**	**+1.4**	
ESDC	**Sonseca Array**	**84.08**	**45**	P		**P**	**08 24 06.2**	**+1.4**	
	0.3nm,0.4s,baz=247,slow=6.6,SNR=4.1								
YKA	**Yellowknife Ar**	**87.09**	**341**	P		**P**	**08 24 19.5**	**+0.4**	
YKA				pP		**pP**	**08 24 43.2**	**-1.0**	
YKA	**Yellowknife Ar**	**87.09**	**341**	P		**P**	**08 24 19.5**	**+0.4**	
	1.4nm,0.7s,baz=135,slow=4.8,SNR=46								
YKA				pP		**pP**	**08 24 43.2**	**-1.0**	
	1.1nm,0.8s,baz=135,slow=4.7,SNR=5.4								
WRA	**Warramunga Arr**	**135.47**	**214**	PKP		**PKPdf**	**08 30 55.3**	**+1.0**	
WRA				pPKP		**pPKPdf**	**08 31 19.9**	**-0.6**	
WRA	**Warramunga Arr**	**135.47**	**214**	PKP		**PKPdf**	**08 30 55.3**	**+1.0**	
	0.4nm,0.8s,baz=144,slow=1.8,SNR=5.4								
WRA				pPKP		**pPKPdf**	**08 31 19.9**	**-0.6**	
	0.5nm,0.8s,baz=146,slow=1.8,SNR=2.5								
ZALV	**Zalesovo Beam**	**138.98**	**22**	PKP		**PKPdf**	**08 31 00.6**	**+0.9**	
ZALV	**Zalesovo Beam**	**138.98**	**22**	PKP		**PKPdf**	**08 31 00.6**	**+0.9**	
	0.8nm,0.5s,baz=318,slow=1.9,SNR=3.3								
MKAR	**Makanchi Array**	**143.20**	**32**	PKP		**PKPdf**	**08 31 06.4**	**-1.1**	
MKAR	**Makanchi Array**	**143.20**	**32**	PKP		**PKPdf**	**08 31 06.4**	**-1.1**	
	0.3nm,0.5s,baz=342,slow=2.6,SNR=1.6								
MJAR	**Matsushiro Arr**	**148.51**	**312**	pPKPbc		pPKPbc	08 31 45.8	-0.9	
MJAR	**Matsushiro Arr**	**148.51**	**312**	pPKPbc		pPKPbc	08 31 45.7	-0.9	
	1.8nm,0.7s,baz=112,slow=1.9,SNR=3.9								
SONM	**Songino Array**	**149.75**	**4**	PKPbc		**PKPbc**	**08 31 24.3**	**+0.9**	
SONM				pPKPbc		**pPKPbc**	**08 31 49.5**	**-0.1**	
SONM	**Songino Array**	**149.75**	**4**	PKPbc		**PKPbc**	**08 31 24.3**	**+0.9**	
	1.2nm,0.6s,baz=234,slow=0.4,SNR=4.5								
SONM				pPKPbc		**pPKPbc**	**08 31 49.5**	**-0.1**	
	1.1nm,0.6s,baz=318,slow=2.6,SNR=2.8								
HHC	**Hu-ho-hao-te**	**156.79**	**356**	*e*PKP		**PKPdf**	**08 31 27.5**	**-1.5**	
HHC				PP		**PP**	**08 35 39.0**	**+2.7**	
HHC				SS		SS	08 55 21.0	+0.5	
HHC				AMB		AMB			
	comp=Z,160nm,9.2s								

BGS 28 08:17:28.7±0.8, 50°08N×0°68E, h6km, ML2.2, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELSH	**Elham, Standar**	**1.11**	**15**	*e*P	Pg	08 17 49.2	-0.7
ELSH				AML	AML	08 17 50.6	
	comp=N,63nm,0.2s						
ELSH				AML	AML	08 18 13.2	
	comp=E,32nm,0.4s						
ELSH	**Elham, Standar**	**1.11**	**15**	P	Pg	08 17 49.2	-0.7
ELSH				AML	AML	08 17 50.6	
	comp=E,63nm,0.2s						
ELSH				AML	AML	08 18 13.2	
	comp=E,32nm,0.4s						
ELSH	**Elham, Standar**	**1.11**	**15**	*e*P	Pg	08 17 49.2	-0.7
ELSH				AML	AML	08 17 50.6	
	comp=N,63nm,0.2s						
ELSH				AML	AML	08 18 13.2	
	comp=E,32nm,0.4s						
WOL	**Wolverton**	**1.73**	**316**	AML	AML	08 18 33.8	
	comp=N,28nm,0.6s						
WOL				AML	AML	08 18 35.0	
	comp=E,40nm,0.4s						
WOL	**Wolverton**	**1.73**	**316**	AML	AML	08 18 33.8	
	comp=N,28nm,0.6s						
WOL				AML	AML	08 18 35.0	
	comp=E,40nm,0.4s						
JDG	**Jersey Dam (Ga**	**1.98**	**244**	*e*P	Pn	08 18 01.6	-1.2
JDG	**Jersey Dam (Ga**	**1.98**	**244**	P	Pn	08 18 01.6	-1.2
JDG	**Jersey Dam (Ga**	**1.98**	**244**	*e*P	Pn	08 18 01.6	-1.2
JDC	**Jersey Dam (Cr**	**1.99**	**244**	*e*P	Pn	08 18 01.5	-1.3
JDC				*e*S	Sn	08 18 26.7	-1.3
JDC	**Jersey Dam (Cr**	**1.99**	**244**	P	Pn	08 18 01.5	-1.3
JDC				S	Sn	08 18 26.7	-1.3
JDC	**Jersey Dam (Cr**	**1.99**	**244**	*e*P	Pn	08 18 01.5	-1.3
JDC				*e*S	Sn	08 18 26.7	-1.3
JSA	**Saint Aubin**	**2.06**	**245**	*e*P	Pn	08 18 02.5	-1.3
JSA				*e*S	Sn	08 18 27.8	-1.9
JSA				AML	AML	08 18 41.8	
	comp=E,20nm,0.5s						
JSA				AML	AML	08 18 42.0	
	comp=N,21nm,0.2s						
JSA	**Saint Aubin**	**2.06**	**245**	P	Pn	08 18 02.5	-1.3
JSA				S	Sn	08 18 27.8	-1.9
JSA				AML	AML	08 18 41.8	
	comp=N,20nm,0.5s						
JSA				AML	AML	08 18 42.0	
	comp=N,21nm,0.2s						
JSA	**Saint Aubin**	**2.06**	**245**	*e*P	Pn	08 18 02.5	-1.3
JSA				*e*S	Sn	08 18 27.8	-1.9
JSA				AML	AML	08 18 41.8	
	comp=E,20nm,0.5s						
JSA				AML	AML	08 18 42.0	
	comp=N,21nm,0.2s						
DYA	**Yadsworthy**	**2.98**	**279**	*e*P	Pn	08 18 15.6	-1.0
DYA				AML	AML	08 19 10.7	
	comp=N,13nm,0.3s						
DYA				AML	AML	08 19 19.9	
	comp=E,8.0nm,0.9s						
DYA	**Yadsworthy**	**2.98**	**279**	P	Pn	08 18 15.6	-1.0
DYA				AML	AML	08 19 10.7	
	comp=E,13nm,0.3s						
DYA				AML	AML	08 19 19.9	
	comp=E,8.0nm,0.9s						
DYA	**Yadsworthy**	**2.98**	**279**	*e*P	Pn	08 18 15.6	-1.0
DYA				AML	AML	08 19 10.7	
	comp=N,13nm,0.3s						
DYA				AML	AML	08 19 19.9	
	comp=E,8.0nm,0.9s						
MCH1	**Michaelchurch**	**3.01**	**311**	*e*P	Pn	08 18 16.1	-0.8
MCH1				AML	AML	08 19 13.8	
	comp=N,5.5nm,0.5s						
MCH1				AML	AML	08 19 17.6	
	comp=E,6.3nm,0.6s						
MCH1	**Michaelchurch**	**3.01**	**311**	P	Pn	08 18 16.1	-0.8
MCH1				AML	AML	08 19 13.8	
	comp=E,5.5nm,0.5s						
MCH1				AML	AML	08 19 17.6	
	comp=E,6.3nm,0.6s						
MCH1	**Michaelchurch**	**3.01**	**311**	*e*P	Pn	08 18 16.1	-0.8
MCH1				AML	AML	08 19 13.8	
	comp=N,5.5nm,0.5s						
MCH1				AML	AML	08 19 17.6	
	comp=E,6.3nm,0.6s						
HEX	**Exmoor**	**3.02**	**291**	*e*P	Pn	08 18 15.9	-1.2
HEX	**Exmoor**	**3.02**	**291**	P	Pn	08 18 15.9	-1.2
HEX	**Exmoor**	**3.02**	**291**	*e*P	Pn	08 18 15.9	-1.2
HLM1	**Long Mynd**	**3.31**	**319**	*e*P	Pn	08 18 20.2	-0.8
HLM1				AML	AML	08 19 18.3	
	comp=E,6.3nm,0.5s						
HLM1				AML	AML	08 19 21.1	
	comp=N,6.0nm,0.6s						
HLM1	**Long Mynd**	**3.31**	**319**	P	Pn	08 18 20.2	-0.8
HLM1				AML	AML	08 19 18.3	
	comp=N,6.3nm,0.5s						
HLM1				AML	AML	08 19 21.1	
	comp=N,6.0nm,0.6s						
HLM1	**Long Mynd**	**3.31**	**319**	*e*P	Pn	08 18 20.2	-0.8
HLM1				AML	AML	08 19 18.3	
	comp=E,6.3nm,0.5s						
HLM1				AML	AML	08 19 21.1	
	comp=N,6.0nm,0.6s						

*MDD **28** 08:35:27.2±1.9, 37°03N×13°40W, h0km, mb4.3/7, Error ellipse: s-maj=17.1km s-min=14.7km az=50.0, PRXIMO*
*INMG **28** 08:35:29.0±0.9, 36°81N×13°75W, h10km, ML2.8, Error ellipse: s-maj=5.0km s-min=4.3km az=87.0*
*CSEM **28** 08:35:30.7±0.3, 37°17N×13°12W, h10km, ML3.5/4, Error ellipse: s-maj=6.0km s-min=4.9km az=50.0*

ISC 28 08:35:27.3±3.4, 37°09N±0°09×13°3W±0°2, h10km, n75, σ1§27/137, 1C-1D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.60**	**88**	*i* Pn	Pn	08 36 23.6	+0.5
PFVI				*e*Sn	Sn	08 37 04.7	-0.9
PFVI				A	A	08 37 08.2	
	15nm,0.2s						
PFVI	**Vila Bisbo**	**3.60**	**88**	⇑P	Pn	08 36 23.6	+0.5
	4.0nm,0.1s,SNR=18						
PFVI				S	Sn	08 37 04.4	-1.2
	40nm,0.2s,SNR=10						
PFVI	**Vila Bisbo**	**3.60**	**88**	P	Pn	08 36 23.6	+0.5
	4.0nm,0.1s,SNR=18						
PFVI				S	Sn	08 37 04.4	-1.2
	40nm,0.2s,SNR=10						
PFVI				*e*Sn	Sn	08 37 04.7	-0.9
	15nm,0.2s						
PTEO	**Sao Teotonio**	**3.70**	**82**	*e*Pn	Pn	08 36 25.3	+0.9
PTEO				*e*Sn	Sn	08 37 07.0	-1.0
PTEO				A	A	08 37 14.2	
	8.8nm,0.1s						
PTEO	**Sao Teotonio**	**3.70**	**82**	P	Pn	08 36 25.3	+0.9
PTEO				S	Sn	08 37 07.0	-1.0
	4.4nm,0.1s						
PTEO	**Sao Teotonio**	**3.70**	**82**	P	Pn	08 36 25.3	+0.9
PTEO				S	Sn	08 37 07.0	-1.0
	4.4nm,0.1s						
PMAFR	**Mafra**	**3.70**	**58**	*e*Pn	Pn	08 36 26.1	+1.6
PMAFR				*e*Sn	Sn	08 37 08.9	+0.8
PMAFR	**Mafra**	**3.70**	**58**	P	Pn	08 36 24.5	0.0
	3.3nm,0.1s,SNR=7.9						
PMAFR				S	Sn	08 37 08.9	+0.8
	24nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**3.70**	**58**	P	Pn	08 36 24.5	0.0
	3.3nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**3.70**	**58**	*e*Pn	Pn	08 36 26.1	+1.6
PMAFR				S	Sn	08 37 08.9	+0.8
	24nm,0.2s,SNR=7.9						
MORF	**Marmelete**	**3.74**	**85**	*e*Pn	Pn	08 36 25.7	+0.6
MORF				*e*Sn	Sn	08 37 08.7	-0.5
MORF				A	A	08 37 11.0	
	18nm,0.2s						
MORF	**Marmelete**	**3.74**	**85**	P	Pn	08 36 25.7	+0.6
MORF				S	Sn	08 37 08.7	-0.5
	18nm,0.2s						
MORF	**Marmelete**	**3.74**	**85**	P	Pn	08 36 25.7	+0.6
MORF				S	Sn	08 37 08.7	-0.5
	18nm,0.2s						
PNCL	**Nicolau / Gran**	**3.94**	**74**	*e*Pn	Pn	08 36 28.9	+1.1
PNCL				*e*Sn	Sn	08 37 14.1	-0.1
PNCL				A	A	08 37 18.8	
	5.9nm,0.2s						
PNCL	**Nicolau / Gran**	**3.94**	**74**	*e*Pn	Pn	08 36 28.9	+1.1
PNCL				*e*Sn	Sn	08 37 14.1	-0.1
	5.9nm,0.2s						
PCVE	**Castro Verde**	**4.25**	**81**	*e*Pn	Pn	08 36 32.7	+0.7
PCVE				*e*Sn	Sn	08 37 20.4	-1.2
PCVE				A	A	08 37 26.1	
	5.8nm,0.1s						
PCVE	**Castro Verde**	**4.25**	**81**	P	Pn	08 36 32.7	+0.7
PCVE				S	Sn	08 37 20.4	-1.2
	5.8nm,0.1s						
PCVE	**Castro Verde**	**4.25**	**81**	P	Pn	08 36 32.7	+0.7
PCVE				S	Sn	08 37 20.4	-1.2
	5.8nm,0.1s						
PBDV	**Barranco-do-Ve**	**4.31**	**86**	*e*Pn	Pn	08 36 34.0	+1.1
PBDV				*e*Sn	Sn	08 37 22.9	-0.4
PBDV				A	A	08 37 28.0	
	8.5nm,0.1s						
PBDV	**Barranco-do-Ve**	**4.31**	**86**	P	Pn	08 36 34.0	+1.1
PBDV				S	Sn	08 37 22.9	-0.4
	8.5nm,0.1s						
PBDV	**Barranco-do-Ve**	**4.31**	**86**	P	Pn	08 36 34.0	+1.1
PBDV				S	Sn	08 37 22.9	-0.4
	8.5nm,0.1s						
PMTG	**Montargil**	**4.48**	**62**	*e*Pn	Pn	08 36 36.7	+1.4
PMTG				*e*Sn	Sn	08 37 27.4	-0.1
PMTG				A	A	08 37 31.7	
	4.1nm,0.1s						
PMTG	**Montargil**	**4.48**	**62**	*e*Pn	Pn	08 36 36.7	+1.4
PMTG				*e*Sn	Sn	08 37 27.4	-0.1
	4.1nm,0.1s						
PVAQ	**Vaqueiros**	**4.49**	**84**	*i* Pn	Pn	08 36 36.3	+1.0
PVAQ				*e*Sn	Sn	08 37 26.8	-0.7
PVAQ				A	A	08 37 30.6	
	10nm,0.3s						
PVAQ	**Vaqueiros**	**4.49**	**84**	⇓P	Pn	08 36 36.3	+1.0
PVAQ				S	Sn	08 37 26.8	-0.7
	10nm,0.3s						
PVAQ	**Vaqueiros**	**4.49**	**84**	P	Pn	08 36 36.3	+1.0
PVAQ				S	Sn	08 37 26.8	-0.7
	10nm,0.3s						
PTOM	**Tomar**	**4.62**	**55**	*e*Pn	Pn	08 36 39.0	+1.9
PTOM				*e*Sn	Sn	08 37 31.5	+0.8
PTOM	**Tomar**	**4.62**	**55**	P	Pn	08 36 39.0	+1.9
PTOM				S	Sn	08 37 31.5	+0.8
PTOM	**Tomar**	**4.62**	**55**	P	Pn	08 36 39.0	+1.9
PTOM				S	Sn	08 37 31.5	+0.8
EGRO	**El Granado**	**4.68**	**83**	P	Pn	08 36 38.7	+0.8
	1.1nm,0.1s,SNR=7.9						
EGRO				S	Sn	08 37 30.9	-1.4
	9.6nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.68**	**83**	P	Pn	08 36 38.7	+0.8
	1.1nm,0.1s,SNR=7.9						
EGRO				S	Sn	08 37 30.9	-1.4
	9.6nm,0.1s,SNR=7.9						
PMPST	**Porto Santo, M**	**4.70**	**213**	*e*Sn	Sn	08 37 10.0	-23
PMPST				A	A	08 37 11.3	
	22nm,0.3s						
PMPS	**Porto Santo**	**4.72**	**212**	*e*Pn	Pn	08 36 26.6	-12
PMPS				*e*Sn	Sn	08 37 10.4	-23
PMPS				A	A	08 37 13.9	
	11nm,0.2s						
PESTR	**Estremoz**	**4.87**	**67**	*e*Pn	Pn	08 36 42.4	+1.8
PESTR				*e*Sn	Sn	08 37 36.7	-0.3
PESTR	**Estremoz**	**4.87**	**67**	P	Pn	08 36 42.4	+1.8
PESTR				S	Sn	08 37 36.7	-0.3
PESTR	**Estremoz**	**4.87**	**67**	P	Pn	08 36 42.4	+1.8
PESTR				S	Sn	08 37 36.7	-0.3
PMRV	**Marv??o**	**5.22**	**62**	*e*Pn	Pn	08 36 46.9	+1.5
PMRV				*e*Sn	Sn	08 37 44.4	-1.3
PMRV				A	A	08 37 48.7	
	3.6nm,0.4s						
PMRV	**Marv??o**	**5.22**	**62**	P	Pn	08 36 46.9	+1.5
PMRV				S	Sn	08 37 44.4	-1.3
	3.6nm,0.4s						
PMRV	**Marv??o**	**5.22**	**62**	P	Pn	08 36 46.9	+1.5
PMRV				S	Sn	08 37 44.4	-1.3
	3.6nm,0.4s						
EBAD	**Badajoz**	**5.26**	**70**	P	Pn	08 36 46.6	+0.6
	0.9nm,0.1s,SNR=5.7						
EBAD				S	Sn	08 37 44.7	-2.0
	8.5nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**5.26**	**70**	P	Pn	08 36 46.6	+0.6
	0.9nm,0.1s,SNR=5.7						
EBAD				S	Sn	08 37 44.7	-2.0
	8.5nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.34**	**81**	P	Pn	08 36 48.1	+1.1
	0.7nm,0.1s,SNR=7.3						
EMIN				S	Sn	08 37 47.1	-1.4
	2.8nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.34**	**81**	P	Pn	08 36 48.1	+1.1
	0.7nm,0.1s,SNR=7.3						
EMIN				S	Sn	08 37 47.1	-1.4
	2.8nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**5.35**	**57**	*e*Pn	Pn	08 36 48.8	+1.7
PCBR				*e*Sn	Sn	08 37 48.9	+0.1
PCBR	**Castelo Branco**	**5.35**	**57**	P	Pn	08 36 48.8	+1.7
PCBR				S	Sn	08 37 48.9	+0.1
PCBR	**Castelo Branco**	**5.35**	**57**	P	Pn	08 36 48.8	+1.7
PCBR				S	Sn	08 37 48.9	+0.1
PVIS	**Viseu**	**5.57**	**48**	*e*Sn	Sn	08 37 54.9	+0.5
PVIS	**Viseu**	**5.57**	**48**	S	Sn	08 37 54.9	+0.5
PVIS	**Viseu**	**5.57**	**48**	S	Sn	08 37 54.9	+0.5
ESPR	**Espera**	**5.98**	**90**	P	Pn	08 36 57.2	+1.3
	1.0nm,0.1s,SNR=7.9						
ESPR				S	Sn	08 38 04.0	-0.4
	18nm,0.3s,SNR=7.9						
ESPR	**Espera**	**5.98**	**90**	P	Pn	08 36 57.2	+1.3
	1.0nm,0.1s,SNR=7.9						
ESPR				S	Sn	08 38 04.0	-0.4
	18nm,0.3s,SNR=7.9						
POLO	**Lamas de Olo**	**6.06**	**43**	*e*Pn	Pn	08 36 58.2	+1.2
POLO				*e*Sn	Sn	08 38 06.2	-0.3
POLO	**Lamas de Olo**	**6.06**	**43**	*e*Pn	Pn	08 36 58.2	+1.2
POLO				*e*Sn	Sn	08 38 06.2	-0.3
PCAB	**Cabril**	**6.17**	**40**	*e*Pn	Pn	08 36 59.6	+1.1
PCAB				*e*Sn	Sn	08 38 07.8	-1.4
PCAB				A	A	08 38 11.8	
	5.6nm,0.3s						
PCAB	**Cabril**	**6.17**	**40**	P	Pn	08 36 59.6	+1.1
PCAB				S	Sn	08 38 07.8	-1.4
	2.8nm,0.3s						
PCAB	**Cabril**	**6.17**	**40**	P	Pn	08 36 59.6	+1.1
PCAB				S	Sn	08 38 07.8	-1.4
	2.8nm,0.3s						
EZAM	**Zamans**	**6.19**	**34**	S	Sn	08 38 05.9	-3.6
	3.3nm,0.1s,SNR=7.9						
PGAV	**Gavieira, Arco**	**6.24**	**37**	*e*Pn	Pn	08 37 00.8	+1.3
PGAV				*e*Sn	Sn	08 38 09.8	-1.2
PGAV				A	A	08 38 12.7	
	6.3nm,0.8s						
PGAV	**Gavieira, Arco**	**6.24**	**37**	*e*Pn	Pn	08 37 00.8	+1.3
PGAV				*e*Sn	Sn	08 38 09.8	-1.2
	6.3nm,0.8s						
ELOB	**Lobios**	**6.27**	**39**	P	Pn	08 37 01.0	+1.1
	0.9nm,0.1s,SNR=7.9						
ELOB				S	Sn	08 38 09.0	-2.7
	3.0nm,0.1s						
ELOB	**Lobios**	**6.27**	**39**	P	Pn	08 37 01.0	+1.1
	0.9nm,0.1s,SNR=7.9						
ELOB				S	Sn	08 38 09.0	-2.7
	3.0nm,0.1s						
MVO	**Moncorvo**	**6.37**	**48**	*e*Pn	Pn	08 37 02.6	+1.4
MVO				*e*Sn	Sn	08 38 13.2	-0.8
MVO	**Moncorvo**	**6.37**	**48**	P	Pn	08 37 01.8	+0.6
	1.4nm,0.1s						
MVO				S	Sn	08 38 11.2	-2.7
	2.5nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**6.37**	**48**	P	Pn	08 37 01.8	+0.6
	1.4nm,0.1s						
MVO	**Moncorvo**	**6.37**	**48**	*e*Pn	Pn	08 37 02.6	+1.4
MVO				S	Sn	08 38 11.2	-2.7
	2.5nm,0.2s,SNR=7.9						
MVO				*e*Sn	Sb	08 38 13.2	-21
EPLA	**Plasencia**	**6.41**	**60**	P	Pn	08 37 03.4	+1.6
	0.7nm,0.1s,SNR=7.9						
EPLA				S	Sn	08 38 13.7	-1.2
	2.4nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**6.41**	**60**	P	Pn	08 37 03.3	+1.6
	0.7nm,0.1s,SNR=7.9						
EPLA				S	Sn	08 38 13.7	-1.2
	2.4nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.74**	**28**	P	Pn	08 37 06.3	+0.1
	1.0nm,0.1s,SNR=7.9						
EMAZ				S	Sn	08 38 16.7	-6.3
	5.6nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.74**	**28**	P	Pn	08 37 06.3	+0.1
	1.0nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**7.03**	**79**	P	Pn	08 37 11.5	+1.3
	0.4nm,0.1s,SNR=7.9						
EADA				S	Sn	08 38 27.9	-2.3
	3.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**7.03**	**79**	P	Pn	08 37 11.5	+1.3
	0.4nm,0.1s,SNR=7.9						
EADA				S	Sn	08 38 27.9	-2.3
	3.2nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**7.03**	**44**	P	Pn	08 37 11.7	+1.4
	2.3nm,0.2s,SNR=7.9						
ECAL				S	Sn	08 38 28.6	-1.7
	1.1nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**7.03**	**44**	P	Pn	08 37 11.7	+1.4
	2.3nm,0.2s,SNR=7.9						
ECAL				S	Sn	08 38 28.6	-1.7
	1.1nm,0.1s,SNR=7.9						
EQES	**Quesada**	**8.19**	**82**	S	Sn	08 38 56.8	-2.1
	0.1nm,0.2s,SNR=7.9						
EQES	**Quesada**	**8.19**	**82**	S	Sn	08 38 56.8	-2.1
	0.1nm,0.2s,SNR=7.9						

*ISCJB **28** 08:48:34.3±0.9, 51°49N±0°04×16°05E±0°04, h0km, Error ellipse: s-maj=6.3km s-min=3.6km az=15.7*
*CSEM **28** 08:48:35.6±0.4, 51°49N×16°05E, h2km, ML3.5/5, Error ellipse: s-maj=7.3km s-min=3.7km az=1.0*
*WAR **28** 08:48:36.2, 51°53N×16°07E*

*IDC **28** 09:03:07.4±0.6,1.38S×119.38E, h0km, mb4.0/12, mb1 4.2/13, mb1mx4.0/25, mbtmp4.0/13, ML3.6/1, MS3.7/17, Ms1 3.7/17, ms1mx3.5/35, Error ellipse: s-maj=31.0km s-min=13.3km az=67.0*

*BJI **28** 09:03:11.3, 1.40S×119.20E, h28km, mB5.0/4, mb4.7/8*

*ISCJB **28** 09:03:11.8±0.3, 1.36S±0.03×119.20E±0.05, h33km, mb4.2/16, MS3.6/14, Error ellipse: s-maj=6.8km s-min=4.2km az=161.1*

*NEIC **28** 09:03:12.6±0.4, 1.40S×119.35E, h35km, mb4.6/3, Error ellipse: s-maj=18.2km s-min=7.4km az=70.0*

*DJA **28** 09:03:14.9±0.3, 1°S±3'×11°9E±°, h90km±15km, M4.9/11, mb5.2/4, MLv4.8/11*

ISC 28 09:03:13.3±0.4,1.38S±0.04×119.20E±0.06, h35km, n74, σ1°85/72, mb4.3/16, MS3.7/14, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**0.80**	**53**	S	Pn	09 03 15.4	-13
	baz=0.4,SNR=8.0						
TTSI	**Tana Toraja**	**1.77**	**159**	P	**Pn**	**09 03 41.9**	**+0.5**
TTSI				S	**Sn**	**09 04 05.8**	**+3.2**
SGKI	**Sangatta, Kali**	**1.81**	**298**	P	Pn	09 03 48.8	+6.8
SGKI				S	**Sn**	**09 04 07.7**	**+4.0**
SMKI	**Samarinda**	**2.20**	**295**	P	**Pn**	**09 03 48.5**	**+1.2**
SPSI	**Sidrap Palu**	**2.63**	**167**	P	**Pn**	**09 03 54.5**	**+1.2**
KBKI	**Kotabaru**	**3.58**	**238**	P	**Pn**	**09 04 07.5**	**+1.2**
LUWI	**Luwuk**	**3.59**	**85**	P	**Pn**	**09 04 08.5**	**+2.0**
KAPI	**Kappang**	**3.65**	**171**	*e*Pn	**Pn**	**09 04 04.7**	**-2.7**
KAPI				Sn	**Sn**	**09 04 50.1**	**+0.9**
KAPI				*e*Sn	Sn	09 04 52.1	+2.9
KAPI	**Kappang**	**3.65**	**171**	P	**Pn**	**09 04 07.0**	**-0.4**
KAPI	**Kappang**	**3.65**	**171**	Pn	**Pn**	**09 04 05.6**	**-1.8**
	5.5nm,0.3s,baz=338,slow=10.0,SNR=19						
KAPI				Sn	**Sn**	**09 04 50.1**	**+0.9**
	6.8nm,0.3s,baz=152,slow=20,SNR=3.8						
KAPI				LR	LR	09 05 37.8	
	comp=Z,2μm,18.1s,baz=352,slow=41						
BKSI	**Bulukumba**	**4.02**	**167**	P	**Pn**	**09 04 14.4**	**+1.9**
MTKI	**Muara Teweh, K**	**4.32**	**276**	P	**Pn**	**09 04 17.9**	**+1.3**
BBKI	**Banjar Baru**	**4.82**	**245**	P	**Pn**	**09 04 23.9**	**+0.5**
KMSI	**Cibinong**	**5.16**	**68**	P	**Pn**	**09 04 30.6**	**+2.5**
	800nm,0.8s						
TSM	**Tawau**	**5.79**	**347**	P	**Pn**	**09 04 35.3**	**-1.5**
MNI	**Manado**	**6.30**	**64**	P	**Pn**	**09 04 45.6**	**+1.8**
	192nm,0.9s,0.9nm						
MYLDM	**Lahad Datu**	**6.55**	**354**	P	**Pn**	**09 04 48.5**	**+1.1**
MYLDM	**Lahad Datu**	**6.55**	**354**	P	**Pn**	**09 04 49.8**	**+2.5**
	82nm,1.0s,0.4nm						
SDKM	**Sandakan**	**7.26**	**344**	P	**Pn**	**09 04 54.6**	**-2.4**
STKI	**Sintang**	**7.85**	**280**	P	**Pn**	**09 05 05.5**	**+0.4**
KKM	**Kota Kinabalu**	**7.96**	**338**	*e*Pn	**Pn**	**09 05 04.4**	**-2.2**
KKM				*e*Sn	**Sn**	**09 06 39.1**	**+3.6**
LBMI	**Labuha**	**8.33**	**85**	P	**Pn**	**09 05 09.7**	**-2.1**
DAV	**Davao City (W)**	**10.54**	**37**	LR	LR	09 09 48.1	
	comp=Z,565nm,21.6s,baz=198,slow=38						
MTN	**Manton Dam**	**16.41**	**134**	S	**S**	**09 10 18.1**	**+4.4**
	baz=16,SNR=3.7						
FITZ	**Fitzroy Crossi**	**17.78**	**160**	P	**P**	**09 07 21.7**	**+3.1**
FITZ	**Fitzroy Crossi**	**17.78**	**160**	P	**P**	**09 07 21.7**	**+3.1**
	0.1nm,0.3s,baz=297,slow=3.5,SNR=6.8						
FITZ				LR	LR	09 16 02.6	
	comp=Z,343nm,18.0s,baz=342,slow=44						
FITZ	**Fitzroy Crossi**	**17.78**	**160**	P	**P**	**09 07 23.0**	**+4.3**
	baz=18,SNR=4.5						
MBWA	**Marble Bar**	**19.66**	**179**	*e*P	**P**	**09 07 39.6**	**+0.2**
PSI	**Prapat**	**20.69**	**282**	P	Pn	09 07 52.6	-0.6
PSI	**Prapat**	**20.69**	**282**	P	Pn	09 07 52.6	-0.7
	12nm,0.9s,baz=97,slow=8.1,SNR=4.9						
PSI				LR	LR	09 17 26.1	
	comp=Z,288nm,18.9s,baz=327,slow=41						
PSI	**Prapat**	**20.69**	**282**	P	Pn	09 08 07.4	+14
	baz=21,SNR=3.8						
WRA	**Warramunga Arr**	**23.66**	**142**	P	**P**	**09 08 18.9**	**-2.9**
WRA	**Warramunga Arr**	**23.66**	**142**	P	**P**	**09 08 18.9**	**-2.9**
	15nm,0.9s,baz=318,slow=11,SNR=15						
WRA				LR	LR	09 18 41.8	
	comp=Z,235nm,21.8s,baz=325,slow=40						
WRAB	**Tennant Creek**	**23.66**	**142**	*e*P	**P**	**09 08 20.8**	**-1.0**
	17nm,0.9s						
ASAR	**Alice Springs**	**26.34**	**148**	P	**P**	**09 08 44.6**	**-1.7**
ASAR				PcP	**PcP**	**09 12 10.9**	**-1.0**
ASAR	**Alice Springs**	**26.34**	**148**	P	**P**	**09 08 44.6**	**-1.7**
	3.5nm,1.1s,baz=329,slow=8.6,SNR=3.6						
ASAR				PcP	**PcP**	**09 12 10.9**	**-1.0**
	1.0nm,0.9s,baz=338,slow=2.0,SNR=4.8						
ASAR				LR	LR	09 20 16.1	
	comp=Z,194nm,18.6s,baz=199,slow=39						
CMAR	**Chiang Mai Arr**	**28.03**	**316**	P	**P**	**09 09 01.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**28.03**	**316**	P	**P**	**09 09 01.2**	**-0.3**
	0.6nm,0.4s,baz=137,slow=8.0,SNR=3.8						
GUMO	**Guam**	**29.48**	**59**	LR	LR	09 19 07.7	
	comp=Z,40nm,19.4s,baz=112,slow=33						
NWAO	**Narrogin (SRO)**	**31.43**	**183**	P	**P**	**09 09 29.6**	**-1.8**
	7.6nm,1.0s						
CTA	**Charters Tower**	**32.33**	**127**	LR	LR	09 22 28.8	
	comp=Z,94nm,19.0s,baz=89,slow=36						
STKA	**Stephens Creek**	**36.97**	**147**	P	**P**	**09 10 18.7**	**-0.7**
STKA	**Stephens Creek**	**36.97**	**147**	P	**P**	**09 10 18.7**	**-0.7**
	4.3nm,0.9s,baz=313,slow=7.4,SNR=7.5						
STKA				LR	LR	09 27 34.8	
	comp=Z,138nm,18.3s,baz=15,slow=40						
STKA	**Stephens Creek**	**36.97**	**147**	P	**P**	**09 10 22.4**	**+3.0**
	baz=37,SNR=4.6						
CMSA	**Cobar Meteorol**	**39.06**	**143**	P	**P**	**09 10 38.5**	**+1.4**
	baz=39,SNR=8.2						
KSAR	**Wonju Array Be**	**39.46**	**11**	P	**P**	**09 10 40.6**	**+0.3**
KSRS	**Korea Array**	**39.48**	**11**	P	**P**	**09 10 40.6**	**+0.2**
	0.4nm,0.3s,baz=191,slow=9.3,SNR=3.7						
KSRS				LR	LR	09 31 34.8	
	comp=Z,40nm,18.1s,baz=5.0,slow=43						
MJAR	**Matsushiro Arr**	**41.67**	**23**	P	**P**	**09 10 56.6**	**-2.0**
MJAR	**Matsushiro Arr**	**41.67**	**23**	P	**P**	**09 10 56.6**	**-2.0**
	1.7nm,0.8s,baz=203,slow=8.7,SNR=3.6						
MJAR				LR	LR	09 26 16.4	
	comp=Z,105nm,19.2s,baz=210,slow=33						
HHC	**Hu-ho-hao-te**	**42.60**	**351**	*e*P	**P**	**09 11 07.0**	**+0.7**
HHC				S	**S**	**09 17 29.8**	**+2.9**
HHC				pmax	pmax		
	comp=Z,32nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,6.0s						
GTA	**Gaotai**	**44.32**	**338**	*e*P	**P**	**09 11 22.5**	**+2.3**
GTA				pP	**pP**	**09 11 28.5**	**-2.0**
GTA				sP	**sP**	**09 11 32.0**	**-2.7**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SONM	**Songino Array**	**50.27**	**349**	P	**P**	**09 12 06.2**	**-0.2**
SONM	**Songino Array**	**50.27**	**349**	P	**P**	**09 12 06.2**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=166,slow=9.2,SNR=5.1						
MK31	**Makanchi Array**	**57.87**	**331**	*e*P	**P**	**09 13 02.8**	**+1.1**
MKAR	**Makanchi Array**	**57.87**	**331**	P	**P**	**09 13 01.7**	**0.0**
MKAR	**Makanchi Array**	**57.87**	**331**	P	**P**	**09 13 01.7**	**0.0**
	comp=Z,0.8nm,0.6s,baz=128,slow=8.1,SNR=9.9						
ZALV	**Zalesovo Beam**	**62.07**	**338**	P	**P**	**09 13 30.0**	**-0.4**
ZALV	**Zalesovo Beam**	**62.07**	**338**	P	**P**	**09 13 30.0**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=141,slow=5.7,SNR=5.0						
KURK	**Kurchatov**	**62.34**	**332**	*e*P	**P**	**09 13 32.6**	**+0.4**
	comp=Z,8.8nm,1.1s						
PETK	**Petropavlovsk-**	**63.09**	**25**	LR	LR	09 41 30.2	
	comp=Z,20nm,19.8s,baz=86,slow=36						
MAW	**Mawson**	**76.44**	**199**	LR	LR	09 45 29.4	
	comp=Z,67nm,18.2s,baz=277,slow=33						
VNDA	**Vanda**	**79.44**	**171**	P	**P**	**09 15 15.2**	**-0.3**
VNDA	**Vanda**	**79.44**	**171**	P	**P**	**09 15 15.2**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=329,slow=6.2,SNR=6.7						
VNDA				LR	LR	09 51 34.4	
	comp=Z,84nm,20.2s,baz=330,slow=37						
ASF	**Jabal al Asfar**	**84.21**	**302**	LR	LR	09 59 03.1	
	comp=Z,45nm,19.3s,baz=251,slow=40						
BRTR	**Keskin Array B**	**87.45**	**310**	P	**P**	**09 15 57.1**	**-0.7**
BRTR	**Keskin Array B**	**87.45**	**310**	P	**P**	**09 15 57.1**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=112,slow=5.5,SNR=7.1						
BRTR				LR	LR	10 01 52.6	
	comp=Z,25nm,18.9s,baz=208,slow=40						
BOSA	**Boshof**	**92.81**	**241**	LR	LR	09 55 22.7	
	comp=Z,50nm,18.9s,baz=352,slow=34						
YKA	**Yellowknife Ar**	**107.18**	**23**	PKiKP	**PKiKP**	**09 21 35.4**	**-0.2**
YKA	**Yellowknife Ar**	**107.18**	**23**	PKiKP	**PKiKP**	**09 21 35.4**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=275,slow=1.5,SNR=5.1						
RSSD	**Black Hills**	**122.76**	**36**	*e*PKPdf	**PKPdf**	**09 22 07.2**	**+1.0**
CFAA	**Coronel Fontan**	**146.44**	**168**	PKPbc	**PKPdf**	**09 22 49.5**	**-0.7**
CFAA	**Coronel Fontan**	**146.44**	**168**	PKPbc	**PKPdf**	**09 22 49.5**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=265,slow=3.2,SNR=4.6						
CPUP	**Villa Florida**	**152.25**	**187**	PKPbc	**PKPbc**	**09 23 05.8**	**-0.3**
	comp=Z,3.9nm,0.8s,baz=135,slow=2.9,SNR=11						

*CSEM **28** 09:12:13.1±0.2, 41.88N×20.25E, h2km, ML2.4, Error ellipse: s-maj=4.8km s-min=3.5km az=27.0*

*SKO **28** 09:12:13.4, 41.83N×20.34E, h15km, M2.0, ML2.4*

*TIR **28** 09:12:13.7, 41.91N×20.14E, h1km, ML2.4*

*PDG **28** 09:12:13.3±0.2, 41.89N×20.22E, h8km, ML2.8/9, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0*

*BEO **28** 09:12:15.0±0.3, 41.93N±0.28E, h5km±4km, ML2.4/6*

ISC 28 09:12:13.3±1.1, 41.90N±0.02×20.25E±0.02, h1km±10km, n48, σ0°96/88, 4C-13D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUK	**Puka**	**0.30**	**299**	*i* Pg	**Pg**	**09 12 18.5**	**-0.7**
PUK				*i* SG	**Sg**	**09 12 22.3**	**-0.9**
PUK	**Puka**	**0.30**	**299**	*i* Pg	**Pg**	**09 12 18.5**	**-0.7**
PUK				*i* Sg	**Sg**	**09 12 22.3**	**-0.9**
BCI	**Bajram Curri**	**0.49**	**344**	*i* PG	**Pg**	**09 12 21.8**	**-0.9**
BCI				*i* SG	**Sg**	**09 12 30.1**	**+1.0**
BCI	**Bajram Curri**	**0.49**	**344**	*i* Pg	**Pg**	**09 12 21.8**	**-0.9**
BCI				*i* Sg	**Sg**	**09 12 30.1**	**+1.0**
TIR	**Tirane**	**0.62**	**208**	*i* PG	**Pg**	**09 12 25.6**	**+0.4**
TIR				*i* SG	**Sb**	**09 12 35.4**	**-0.7**
TIR	**Tirane**	**0.62**	**208**	*e*Pg	**Pg**	**09 12 25.9**	**+0.7**
TIR				*e*Sg	**Sb**	**09 12 36.9**	**+0.8**
TIR	**Tirane**	**0.62**	**208**	*i* Pg	**Pg**	**09 12 25.6**	**+0.4**
TIR				*i* Sg	**Sb**	**09 12 35.4**	**-0.7**
PVY	**Plav**	**0.73**	**343**	⇑*i* Pg	**Pg**	**09 12 26.4**	**-0.9**
PVY				*e*Sg	**Sg**	**09 12 38.2**	**+1.4**
PVY	**Plav**	**0.73**	**343**	⇑*i* Pg	**Pg**	**09 12 26.4**	**-0.9**
PVY				*e*Sg	**Sg**	**09 12 38.2**	**+1.4**
ULC	**Ulcinj**	**0.76**	**275**	⇓*i* Pg	**Pg**	**09 12 26.9**	**-0.9**
ULC				*e*Sg	**Sg**	**09 12 38.4**	**+0.8**
ULC	**Ulcinj**	**0.76**	**275**	⇓*i* Pg	**Pg**	**09 12 26.9**	**-0.9**
ULC				*e*Sg	**Sg**	**09 12 38.4**	**+0.8**
SKO	**Skopje**	**0.89**	**85**	*e*Pg	**Pg**	**09 12 29.8**	**-0.6**
SKO				*e*Sg	**Sg**	**09 12 42.4**	**+0.5**
SKO				*e*Lg	Lg	09 12 43.3	
	comp=E,52nm,0.3s						
SKO				*e*Lg	Lg	09 12 43.4	
	comp=N,122nm,0.4s						
SKO	**Skopje**	**0.89**	**85**	*e*Pg	**Pg**	**09 12 30.2**	**-0.2**
SKO				*e*Sg	**Sg**	**09 12 42.9**	**+1.0**
SKO				*e*Lg	Lg	09 12 43.8	
	comp=N,122nm,0.4s						
TTG	**Podgorica**	**0.91**	**306**	⇓*i* Pg	**Pg**	**09 12 29.4**	**-1.3**
TTG				*e*Sg	**Sb**	**09 12 44.3**	**-0.1**
PDG	**Podgorica**	**0.91**	**306**	*e*Pg	**Pg**	**09 12 30.3**	**-0.5**
PDG				*e*Sg	**Sb**	**09 12 44.8**	**+0.3**
PDG	**Podgorica**	**0.91**	**306**	*e*Pg	**Pg**	**09 12 30.3**	**-0.5**
PDG				*e*Sg	**Sb**	**09 12 44.3**	**-0.2**
IVA	**Berane**	**1.01**	**345**	⇓*i* Pg	**Pg**	**09 12 31.9**	**-0.8**
IVA				*e*Sg	**Sb**	**09 12 47.9**	**+0.5**
BEY	**Berane**	**1.01**	**345**	⇓*i* Pg	**Pg**	**09 12 31.9**	**-0.8**
BEY				*e*Sg	**Sb**	**09 12 47.9**	**+0.4**
BUM	**Brajici-Budva**	**1.09**	**292**	⇓*i* Pg	**Pg**	**09 12 32.7**	**-1.5**
BUM				*e*Sg	**Sb**	**09 12 49.8**	**+0.1**
BUM	**Brajici-Budva**	**1.09**	**292**	⇓*i* Pg	**Pg**	**09 12 32.7**	**-1.5**
BUM				*e*Sg	**Sb**	**09 12 49.8**	**+0.1**
BIA	**Bitola**	**1.19**	**137**	*e*Pg	**Pg**	**09 12 35.0**	**-1.2**
BIA				*e*Sg	**Sg**	**09 12 50.7**	**-0.8**
BIA	**Bitola**	**1.19**	**137**	*e*Pg	**Pg**	**09 12 34.9**	**-1.2**
BIA				*e*Sg	**Sg**	**09 12 50.7**	**-0.8**
FNA	**Florina**	**1.40**	**142**	*e*P	**Pn**	**09 12 38.6**	**-1.4**
HCY	**Herceg Novi**	**1.42**	**293**	⇑*i* Pg	**Pn**	**09 12 38.4**	**-1.8**
HCY				*e*Sg	**Sg**	**09 13 00.6**	**+1.7**
HCY	**Herceg Novi**	**1.42**	**293**	⇑*i* Pg	**Pn**	**09 12 38.4**	**-1.8**
HCY				*e*Sg	**Sg**	**09 13 00.6**	**+1.7**
SELS	**Selova**	**1.47**	**26**	*e*Pn	**Pb**	**09 12 41.3**	**-0.1**
SELS				*e*Sn	**Sg**	**09 13 01.4**	**+0.9**
BARS	**Barje**	**1.48**	**51**	*e*Pg	**Pn**	**09 12 41.0**	**-0.1**
BARS				*e*Sg	**Sn**	**09 13 00.5**	**-0.5**
BARS	**Barje**	**1.48**	**51**	*e*Pg	**Pn**	**09 12 41.0**	**-0.1**
BARS				*e*Sg	**Sn**	**09 13 00.5**	**-0.5**
PLE	**Pljevlja**	**1.57**	**336**	⇓*i* Pg	**Pb**	**09 12 42.8**	**-0.4**
PLE				*e*Sg	**Sg**	**09 13 05.2**	**+1.5**
PLE	**Pljevlja**	**1.57**	**336**	⇓*i* Pg	**Pb**	**09 12 42.8**	**-0.4**
PLE				*e*Sg	**Sg**	**09 13 05.2**	**+1.5**
BRY	**Bratogost**	**1.62**	**309**	⇓*i* Pn	**Pn**	**09 12 43.1**	**0.0**
BRY				*e*Sn	**Sg**	**09 13 06.7**	**+1.4**
BRY	**Bratogost**	**1.62**	**309**	⇓*i* Pn	**Pn**	**09 12 43.1**	**0.0**
BRY				*e*Sn	**Sg**	**09 13 06.7**	**+1.4**
UPM	**Unac-Piva**	**1.64**	**323**	⇓*i* Pn	**Pb**	**09 12 44.1**	**-0.4**
UPM				*e*Sn	**Sg**	**09 13 07.5**	**+1.4**
UPM	**Unac-Piva**	**1.64**	**323**	⇓*i* Pn	**Pb**	**09 12 44.1**	**-0.4**
UPM				*e*Sn	**Sg**	**09 13 07.5**	**+1.4**
VAY	**Valandovo**	**1.83**	**108**	*e*Pg	**Pb**	**09 12 47.7**	**+0.1**
VAY				*e*Sg	**Sg**	**09 13 13.3**	**+1.2**
VAY	**Valandovo**	**1.83**	**108**	*e*Pg	**Pb**	**09 12 47.7**	**+0.1**
VAY				*e*Sg	**Sg**	**09 13 13.3**	**+1.2**
GRG	**Griva**	**1.87**	**119**	*e*P	**Pn**	**09 12 46.3**	**-0.1**
KZN	**Kozani**	**1.96**	**144**	*e*P	**Pb**	**09 12 49.3**	**-0.5**
GRUS	**Gruza**	**2.02**	**10**	*e*Pn	**Pb**	**09 12 49.9**	**-0.9**
GRUS	**Gruza**	**2.02**	**10**	*e*Pn	**Pb**	**09 12 49.9**	**-0.9**
BBLS	**Lazići**	**2.06**	**343**	*e*Pn	**Pn**	**09 12 49.9**	**+0.7**
BBLS				*e*Sn	**Sn**	**09 13 16.0**	**+0.4**
BBLS	**Lazići**	**2.06**	**343**	*e*Pn	**Pn**	**09 12 49.9**	**+0.7**
BBLS				*e*Sn	**Sn**	**09 13 16.0**	**+0.4**
STON	**Ston**	**2.13**	**298**	*e*Pn	**Pn**	**09 12 50.3**	**+0.3**
STON				Sn	**Sg**	**09 13 23.2**	**+1.6**
STON	**Ston**	**2.13**	**298**	*e*Pn	**Pn**	**09 12 50.2**	**+0.3**
DIVS	**Divibare**	**2.21**	**355**	*e*Pn	**Pn**	**09 12 52.6**	**+1.4**
DIVS				*e*Sn	**Sn**	**09 13 18.5**	**-0.6**
DIVS	**Divibare**	**2.21**	**355**	*e*Pn	**Pn**	**09 12 52.6**	**+1.4**
DIVS				*e*Sn	**Sn**	**09 13 18.5**	**-0.6**
KEK	**Kerkira**	**2.21**	**189**	*e*P	**Pg**	**09 12 57.0**	**+1.4**
AGG	**Agios Georgios**	**3.28**	**150**	*e*P	**Pn**	**09 13 07.2**	**+1.4**

IDC 28 09:18:41.9±3.3, 5.92S×76.99W, h174km±42km, mb3.1/4, mb1 3.4/5, mb1mx3.3/20, mbtmp3.1/5, Error ellipse: s-maj=65.0km s-min=17.6km az=49.0, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**1.84**	**229**	P	Pn	09 19 15.8	-1.5
	21nm,0.3s,baz=50,slow=10,SNR=221						
ATAH				S	Sn	09 19 45.3	+0.6
	24nm,0.3s,baz=59,slow=21,SNR=17						
NNA	**Nana**	**6.03**	**179**	P	Pn	09 20 09.4	+0.1
	2.5nm,0.3s,baz=354,slow=9.4,SNR=10						
NNA				S	Sn	09 21 17.6	-0.6
	3.0nm,0.3s,baz=349,slow=10,SNR=4.6						
LPAZ	**La Paz**	**13.48**	**141**	P	P	09 21 50.5	+0.4
	0.1nm,0.3s,baz=338,slow=11,SNR=2.0						
TXAR	**Lajitas Array**	**43.43**	**325**	P	P	09 26 27.6	-0.2
	0.3nm,0.6s,baz=143,slow=9.1,SNR=4.6						
PDAR	**Pinedale Array**	**56.77**	**332**	P	P	09 28 07.8	-0.2
	0.2nm,0.6s,baz=128,slow=12,SNR=2.5						
YKA	**Yellowknife Ar**	**74.03**	**343**	P	P	09 29 58.0	-0.1
	0.6nm,0.5s,baz=142,slow=6.1,SNR=20						
TORD	**Torodi Ar. Bea**	**80.39**	**76**	P	P	09 30 35.2	+0.6
	0.5nm,0.6s,baz=275,slow=6.1,SNR=11						
TORD				pP	pP	09 31 06.8	-11
	0.2nm,0.4s,baz=278,slow=5.6,SNR=1.9						

DJA 28 09:27:23.6±2.7, 0°S±12°×12°3E±1°9, h54km±11km, M4.1/4, mb3.5/1, mB4.6/1, MLv4.4/4, Mw(mB)3.8/1, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.94**	**204**	P	Pn	09 27 40.8	+0.2
LUWI				S	Sn	09 27 54.0	+0.9
MRSI	**Marisa**	**1.37**	**298**	P	Pn	09 27 47.3	+0.8
MRSI				S	Sn	09 28 04.2	+0.6
APSI	**Ampana**	**1.67**	**244**	P	Pn	09 27 51.1	+0.6
TTSI	**Tana Toraja**	**4.38**	**229**	P	Pn	09 28 26.9	-0.7
SPSI	**Sidrap Palu**	**5.05**	**222**	P	Pn	09 28 36.9	0.0

*HEL **28** 09:30:47.3±0.2, 61.06N×29.94E, h0km, ML2.0, ML1.7(UPP), Explosion*

*ISCJB **28** 09:30:47.4±0.8, 61.21N±0.04×29.65E±0.08, h0km, Error ellipse: s-maj=7.0km s-min=4.7km az=139.3*

*BER **28** 09:30:47.8±2.3, 61.12N×29.79E, h0km, ML2.2(NAO), Suspected explosion*

*NAO **28** 09:30:48.0±2.5, 61.14N×29.77E, ML2.2*

*CSEM **28** 09:30:48.5±0.4, 61.17N×29.78E, h2km, ML3.1/5, Error ellipse: s-maj=9.0km s-min=5.8km az=139.0, Mining explosion.*

*UPP **28** 09:30:49.9, 61.17N×29.78E, h0km, ML1.7, Suspected Mining explosion.*

ISC 28 09:30:45.3±1.0, 61.14N±0.05×29.92E±0.05, h0km, n39, σ1°70/58, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VJF	**Virojoki**	**1.30**	**243**	*e*P	**Pg**	**09 31 09.7**	**-0.6**
VJF				*e*SN	**Sn**	**09 31 30.5**	**+1.7**
VJF				MSG		09 31 30.5	
	comp=Z,11nm,0.4s						
VJF				*e*RG	Rg	09 31 31.2	
FIA0	**FINESS Array S**	**1.88**	**281**	Pg	**Pb**	**09 31 20.4**	**0.0**
	baz=107,slow=18						
FIA0				Lg	Lg	09 31 45.2	
	baz=102,slow=37						
FIA0				Rg	Rg	09 31 54.7	
	baz=96,slow=28						
FIA0	**FINESS Array S**	**1.88**	**281**	Pg	**Pb**	**09 31 20.4**	**0.0**
	baz=107,slow=18						
FIA0				Lg	Lg	09 31 45.2	
	baz=102,slow=37						
FIA0				Rg	Rg	09 31 54.7	
	baz=96,slow=28						
FIA0	**FINESS Array S**	**1.88**	**281**	*e*P	**Pb**	**09 31 20.5**	**0.0**
	baz=101						
FIA0				*e*SG	**Sg**	**09 31 46.6**	**+1.0**
FIA0				MSG		09 31 46.6	
	comp=Z,14nm,0.2s						
FIA0				*e*RG	Rg	09 31 54.0	
FIA0	**FINESS Array S**	**1.88**	**281**	P	**Pb**	**09 31 20.5**	**0.0**
FIA0				Lg	Lg	09 31 45.2	
	baz=102,slow=33,SNR=8.1						
FIA0				Sg	**Sg**	**09 31 46.6**	**+1.0**
	comp=Z,14nm,0.2s						
JOF	**Joensuu**	**1.90**	**20**	*e*PB	**Pg**	**09 31 22.0**	**+0.3**
JOF				*e*S	**Sg**	**09 31 47.0**	**+0.7**
JOF				MSG		09 31 47.0	
	comp=Z,12nm,0.2s						
KAF	**Kangasniemi**	**1.98**	**301**	*e*PB	**Pg**	**09 31 22.9**	**-0.3**
KAF				*e*S	**Sg**	**09 31 48.5**	**-0.4**
KAF				MSG		09 31 48.5	
	comp=Z,6.4nm,0.4s						
KAF	**Kangasniemi**	**1.98**	**301**	Pb	**Pg**	**09 31 22.9**	**-0.3**
KAF				S	**Sg**	**09 31 48.5**	**-0.4**
	comp=Z,6.4nm,0.4s						
PVF	**Pernaja**	**2.07**	**255**	*e*P	**Pb**	**09 31 23.0**	**-0.8**
PVF				*e*SB	**Sb**	**09 31 50.0**	**0.0**
PVF				MSG		09 31 50.0	
	comp=Z,9.4nm,0.2s						
PVF	**Pernaja**	**2.07**	**255**	P	**Pb**	**09 31 22.9**	**-0.8**
SUF	**Sumiainen**	**2.38**	**313**	*e*PB	**Pb**	**09 31 29.6**	**+0.6**
SUF				*e*SG	**Sg**	**09 32 01.8**	**0.0**
SUF				MSG		09 32 01.8	
	comp=Z,5.6nm,0.1s						
KEF	**Keuruu**	**2.62**	**295**	*e*P	**Pb**	**09 31 32.1**	**-1.0**
KEF				*e*S	**Sb**	**09 32 05.4**	**-0.3**
KEF				MSG		09 32 05.4	
	comp=Z,2.3nm,0.4s						
KEF	**Keuruu**	**2.62**	**295**	P	**Pb**	**09 31 32.1**	**-1.0**
VAF	**Ylistaro**	**3.90**	**302**	*e*P	**Pn**	**09 31 49.5**	**+3.0**
VAF				*e*SG	**Sg**	**09 32 52.0**	**+1.4**
VAF				MSG		09 32 52.0	
	comp=Z,3.8nm,0.4s						
VAF	**Ylistaro**	**3.90**	**302**	P	**Pn**	**09 31 49.4**	**+3.0**
VAF				Sg	**Sg**	**09 32 52.0**	**+1.4**
	comp=Z,3.8nm,0.4s						
RAF	**Rauma**	**3.96**	**272**	*e*P	**Pn**	**09 31 50.0**	**+2.8**
RAF				*e*SG	**Sg**	**09 32 51.8**	**-0.6**
RAF				MSG		09 32 51.8	
	comp=Z

BKSI	Bulukumba	12.06	226	P		Pn	09 37 56.6	+0.6
KAPI	Kappang	12.12	228	Pn		Pn	09 37 53.0	-3.9
	1.8nm,0.3s,baz=78,slow=9.3,SNR=5.7							
WRA	Warramunga Arr	23.57	167	P		P	09 40 13.7	-0.4
	3.7nm,0.4s,baz=345,slow=10,SNR=62							
ASAR	Alice Springs	27.10	170	P		P	09 40 45.7	-0.6
	0.4nm,0.4s,baz=347,slow=7.9,SNR=14							
STKA	Stephens Creek	36.88	162	P		P	09 42 12.1	+0.1
	1.3nm,0.4s,baz=331,slow=8.5,SNR=13							
MKAR	Makanchi Array	59.22	325	P		P	09 45 04.8	+0.4
	1.5nm,0.5s,baz=119,slow=8.1,SNR=16							
KURBB	Kurchatov Arra	63.35	327	P		P	09 45 32.4	+0.2
	1.4nm,0.5s,baz=127,slow=6.0,SNR=9.1							
BVAR	Borovoye Array	68.94	327	P		P	09 46 07.9	-0.2
	0.8nm,0.6s,baz=150,slow=6.3,SNR=4.3							

*ISCJB **28** 09:54:46.6±0.4,41.°12S±0.°03×175.°49E±0.°05,h47km±3km, mb3.5/3,MS3.8/1,Error ellipse: s-maj=7.8km s-min=3.5km az=38.1*

*IDC **28** 09:54:46.6±0.9,41.°00S×175.°44E,h32km±4km,mb3.3/2, mb1 3.5/4,mb1mx3.4/17,mbtmp3.4/4,ML2.9/2,MS3.9/1, Ms1 3.9/1,ms1mx3.1/14,Error ellipse: s-maj=30.6km s-min=22.5km az=148.0*

*WEL **28** 09:54:47.6±0.0,41.°05S×175.°43E,h34km,ML4.2/16,Error ellipse: s-maj=0.6km s-min=0.5km az=90.0*

WEL Felt from Wanganui to Wairarapa, maximum reported intensity MM 5.

*NEIC **28** 09:54:47.7,41.°05S×175.°44E,h35km,mb3.9/1, ML4.3(WEL),After WEL.*

NEIC Felt [IV] at Awapuni, Carterton, Featherston, Greytown, Hokowhitu, Levin, Martinborough, Masterton, Otaki, Palmerston North, Paraparaumu, Raumati Beach, Silverstream, Solway, Upper Hutt and Waikanae. Also felt at Wellington.

ISC 28 09:54:46.4±0.6,41.°05S±0.°02×175.°43E±0.°03,h34km±1km, n105,σ1§17/127,mb3.5/3,9C-6D,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MTW	Mount Morrison	0.12	154	⇓P*		Pb		09 54 53.5	+1.0
MTW				S*		Sb		09 54 58.1	+1.6
HOWZ	Holdsworth Sta	0.16	23	⇓P*		Pb		09 53.6	+0.9
HOWZ				S*		Sb		09 54 58.2	+1.1
CAW	Cannon Point	0.28	257	⇓P*		Pn		09 54 55.1	+1.2
CAW				S*		Sb		09 55 00.9	+1.7
OGWZ	Otaki Gorge	0.30	319	⇑P*		Pn		09 54 55.2	+0.9
PAWZ	Paruwai Farm	0.33	181	⇑P*		Pn		09 54 56.0	+1.1
PAWZ				S*		Sb		09 55 02.6	+2.3
TMWZ	Te Maipa	0.35	100	⇑P*		Pn		09 54 56.3	+1.1
MSWZ	Moikau Station	0.39	200	⇑P*		Pn		09 54 56.7	+0.9
MSWZ				S*		Sn		09 55 03.4	+1.6
MRZ	Mangatainoka R	0.40	16	P*		Pn		09 54 56.5	+0.6
MRZ				S*		Sn		09 55 03.3	+1.2
MRZ	Mangatainoka R	0.40	16	P*		Pn		09 54 56.5	+0.6
MRZ				S*		Sn		09 55 03.3	+1.2
TRWZ	Traveller	0.40	151	⇑P*		Pn		09 54 56.8	+0.9
KIW	Kapiti Island	0.44	295	⇑P*		Pn		09 54 57.3	+0.9
TIWZ	Tintock	0.44	52	⇑P*		Pn		09 54 57.3	+0.9
PLWZ	Palliser	0.54	194	⇑P*		Pn		09 54 58.7	+1.0
WEL	Wellington	0.56	244	P*		Pb		09 54 59.0	+1.1
WEL	Wellington	0.56	244	P*		Pb		09 54 59.1	+1.3
BHW	Baring Head	0.56	229	P*		Pb		09 54 58.9	+1.1
BHW	Baring Head	0.56	229	P*		Pb		09 54 58.9	+1.1
SNZO	South Karori	0.61	244	P*		Pb		09 54 59.8	+1.0
SNZO	South Karori	0.61	244	*e*Pn		Pb		09 54 59.9	+1.2
SNZO				*e*Sn		Sb		09 55 08.6	+1.4
POWZ	Post Office Ro	0.70	21	P*		Pb		09 55 01.2	+0.9
POWZ	Post Office Ro	0.70	21	P*		Pb		09 55 01.2	+0.9
BFZ	Birch Farm	0.72	60	P*		Pb		09 55 01.0	+0.5
BFZ	Birch Farm	0.72	60	P*		Pb		09 55 01.0	+0.5
TCW	Tory Channel	0.89	259	P*		Pb		09 55 03.9	+0.4
TCW	Tory Channel	0.89	259	P*		Pb		09 55 03.8	+0.4
DVHZ	Dannevirke	0.93	37	⇓P*		Pb		09 54 04.0	-0.1
TSZ	Takapari Road	1.07	22	P*		Pb		09 55 06.2	-0.2
CMWZ	Cape Campbell	1.15	232	P*		Pb		09 55 07.7	-0.1
CMWZ	Cape Campbell	1.15	232	P*		Pb		09 55 07.7	-0.1
DUWZ	D'Urville Isla	1.17	282	P*		Pb		09 55 08.4	+0.3
DUWZ	D'Urville Isla	1.17	282	P*		Pb		09 55 08.5	+0.3
TUWZ	Tuamarina	1.19	251	P*		Pn		09 55 07.3	+0.8
TUWZ	Tuamarina	1.19	251	P*		Pn		09 55 07.4	+0.8
PRHZ	Porangahau	1.20	50	P*		Pn		09 55 07.5	+0.7
PRHZ	Porangahau	1.20	50	P*		Pn		09 55 07.5	+0.7
WPHZ	Waipukurau	1.25	38	⇓P*		Pn		09 55 08.5	+1.1
PNHZ	Pukenui	1.27	28	⇓PN		Pn		09 55 09.0	+1.2
BSWZ	Blackbirch Sta	1.35	240	PN		Pn		09 55 09.8	+1.0
BSWZ	Blackbirch Sta	1.35	240	Pn		Pn		09 55 09.8	+1.0
PXZ	Pawanui	1.49	48	PN		Pn		09 55 11.0	+0.3
PXZ	Pawanui	1.49	48	Pn		Pn		09 55 11.0	+0.3
NNZ	Nelson	1.56	263	PN		Pn		09 55 13.5	+1.8
NNZ	Nelson	1.56	263	Pn		Pn		09 55 13.5	+1.8
BHHZ	Black Hill Sta	1.63	17	PN		Pn		09 55 14.3	+1.5
BHHZ	Black Hill Sta	1.63	17	Pn		Pn		09 55 14.3	+1.5
MOVZ	Moawhango	1.66	9	PN		Pn		09 55 14.7	+1.6
MOVZ	Moawhango	1.66	9	Pn		Pn		09 55 15.0	+1.8
MTVZ	Mangateitei	1.66	1	PN		Pb		09 55 15.8	-0.6
MTVZ	Mangateitei	1.66	1	Pn		Pb		09 55 16.0	-0.4
KAHZ	Kahuranaki	1.67	42	PN		Pn		09 55 13.7	+0.4
KAHZ	Kahuranaki	1.67	42	Pn		Pn		09 55 13.7	+0.4
WNVZ	Wahianoa	1.72	4	⇑PN		Pb		09 55 16.5	-1.1
WNVZ	Wahianoa	1.72	4	Pn		Pb		09 55 16.4	-1.1
TUVZ	Tukino	1.79	6	PN		Pb		09 55 17.7	-0.9
TUVZ	Tukino	1.79	6	Pn		Pb		09 55 17.7	-0.9
FWVZ	Far West T-bar	1.79	3	PN		Pb		09 55 17.6	-1.2
MCHZ	McNeill Hill	1.87	32	PN		Pn		09 55 16.9	+0.9
MCHZ	McNeill Hill	1.87	32	Pn		Pn		09 55 16.9	+0.9
NGZ	Ngauruhoe	1.87	4	PN		Pb		09 55 18.9	-1.2
NGZ	Ngauruhoe	1.87	4	Pn		Pb		09 55 18.6	-1.5
OTVZ	Oturere	1.89	6	PN		Pb		09 55 19.0	-1.4
OTVZ	Oturere	1.89	6	Pn		Pb		09 55 19.0	-1.4
WTVZ	West Tongariro	1.93	4	PN		Pb		09 55 19.7	-1.4
WTVZ	West Tongariro	1.93	4	Pn		Pb		09 55 19.7	-1.4
KRVZ	Karewarewa	1.96	5	PN		Pn		09 55 19.8	+2.5
KHZ	Kahutara	1.97	225	P*		Pn		09 55 17.4	0.0
KHZ	Kahutara	1.97	225	*e*Pn		Pn		09 55 17.3	0.0
KHZ				*e*Sn		Sn		09 55 35.6	-5.3
TWVZ	Taurewa	1.97	0	PN		Pb		09 55 20.1	-1.6
VRZ	Vera Road	1.99	345	Pn		Pb		09 55 21.3	-0.7
THZ	Tophouse	2.03	249	PN		Pn		09 55 18.8	+0.6
THZ	Tophouse	2.03	249	Pn		Pn		09 55 18.7	+0.5
BKZ	Black Stump Fm	2.05	24	PN		Pn		09 55 19.1	+0.6
BKZ	Black Stump Fm	2.05	24	Pn		Pn		09 55 19.1	+0.6
NRZ	Ngariki Road	2.06	326	*e*Pn		Pb		09 55 23.2	+0.1
WATZ	Wairara	2.35	6	Pn		Pn		09 55 24.1	+1.5
LTZ	Lake Taylor	2.93	233	PN		Pn		09 55 30.4	-0.1
LTZ	Lake Taylor	2.93	233	Pn		Pn		09 55 30.3	-0.3
URZ	Urewera	3.07	25	PN		Pn		09 55 31.5	-1.0
URZ	Urewera	3.07	25	Pn		Pn		09 55 31.4	-1.1
URZ				Sn		Sn		09 56 06.6	-1.4
URZ	Urewera	3.07	25	Pn		Pn		09 55 31.4	-1.1
	2.5nm,0.3s,baz=174,slow=9.8,SNR=14								
URZ				Sn		Sn		09 56 06.6	-1.4
	22nm,0.3s,baz=212,slow=15,SNR=8.2								
MWZ	Matawai	3.15	32	PN		Pn		09 55 32.6	-1.1
MWZ	Matawai	3.15	32	Pn		Pn		09 55 32.6	-1.1
TOZ	Tahuroa Road	3.31	1	PN		Pn		09 55 37.6	+1.8
MQZ	McQueen's Vall	3.36	217	PN		Pn		09 55 35.4	-1.1
MQZ	McQueen's Vall	3.36	217	Pn		Pn		09 55 35.4	-1.1
RPZ	Rata Peaks	4.20	229	PN		Pn		09 55 48.2	+0.2
RPZ	Rata Peaks	4.20	229	Pn		Pn		09 55 48.2	+0.2
RPZ				Sn		Sn		09 56 32.5	-3.3
RPZ	Rata Peaks	4.20	229	Pn		Pn		09 55 48.2	+0.2
	0.5nm,0.3s,baz=59,slow=8.3,SNR=4.5								
RPZ				Sn		Sn		09 56 32.5	-3.3
	4.8nm,0.3s,baz=329,slow=10,SNR=7.9								
LBZ	Lake Benmore	5.11	227	PN		Pn		09 56 00.4	-0.1
ODZ	Otahua Downs	5.32	220	PN		Pn		09 56 02.2	-1.1
HNR	Honiara	34.34	332	LR		LR		10 12 48.8	
	comp=Z,180nm,18.9s,baz=250,slow=32								
AS31	Alice Springs	38.71	284	*e*P		P		10 02 06.8	-0.5
ASAR	Alice Springs	38.71	284	P		P		10 02 08.1	+0.8
ASAR				pP		pP		10 02 15.9	-1.3
ASAR	Alice Springs	38.71	284	P		P		10 02 08.1	+0.8
	0.3nm,0.5s,baz=133,slow=8.4,SNR=7.5								
ASAR				pP		pP		10 02 15.9	-1.3
	2.1nm,1.0s,baz=130,slow=7.5,SNR=7.3								
WRAB	Tennant Creek	40.70	289	*e*P		P		10 02 24.2	+0.4
	1.7nm,0.7s								
WRA	Warramunga Arr	40.71	289	P		P		10 02 24.1	+0.2
WRA				pP		pP		10 02 33.7	-0.1
WRA	Warramunga Arr	40.71	289	P		P		10 02 24.1	+0.2
	0.5nm,0.5s,baz=126,slow=8.1,SNR=10								
WRA				pP		pP		10 02 33.7	-0.1
	0.8nm,0.7s,baz=126,slow=8.1,SNR=4.2								
YKA	Yellowknife Ar	117.33	29	PKP		PKPdf		10 13 27.1	-0.1
YKA	Yellowknife Ar	117.33	29	PKP		PKPdf		10 13 27.1	-0.1
	0.1nm,0.6s,baz=267,slow=2.0,SNR=3.4								
ARCES	ARCESS Array B	147.41	341	PKPbc		PKPbc		10 14 25.4	-0.1
ARCES				pPKPbc		pPKPbc		10 14 36.4	-0.1
ARCES	ARCESS Array B	147.41	341	PKPbc		PKPbc		10 14 25.4	-0.1
	1.2nm,0.7s,baz=118,slow=2.5,SNR=6.5								
ARCES				pPKPbc		pPKPbc		10 14 46.7	+0.1
	1.2nm,0.8s,baz=138,slow=4.7,SNR=6.8								
TORD	Torodi Ar. Bea	151.67	193	PKPbc		PKPbc		10 14 37.7	+0.1
TORD				pPKPbc		pPKPbc		10 14 48.1	-0.5
TORD	Torodi Ar. Bea	151.67	193	PKPbc		PKPbc		10 14 37.7	+0.1
	0.5nm,0.9s,baz=136,slow=2.3,SNR=3.1								
TORD				pPKPbc		pPKPbc		10 14 48.1	-0.5
	0.5nm,0.7s,baz=168,slow=2.2,SNR=3.4								

IDC 28 10:06:44.8±1.3,12.°41N×143.°78E,h0km,mb3.4/4, mb1 3.8/4,mb1mx3.5/25,mbtmp3.4/4,MS2.7/1,Ms1 2.7/1, ms1mx1.9/22,Error ellipse: s-maj=90.1km s-min=17.7km az=119.0,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.58	42	Pn		Pn		10 07 14.5	+0.4
	37nm,0.3s,baz=264,slow=18,SNR=27								
GUMO				Sn		Sn		10 07 34.8	-0.6
	41nm,0.3s,baz=221,slow=20,SNR=9.4								
MJAR	Matsushiro Arr	24.55	349	LR		LR		10 20 44.7	
	comp=Z,19nm,20.5s,baz=210,slow=34								
WRA	Warramunga Arr	33.46	196	P		P		10 13 26.2	+0.3
	0.6nm,0.8s,baz=20,slow=10.0,SNR=7.5								
ASAR	Alice Springs	37.13	195	P		P		10 13 56.6	-0.8
	0.6nm,0.9s,baz=13,slow=8.9,SNR=4.8								
ILAR	Eielson Array	70.08	25	P		P		10 17 58.5	0.0
	0.2nm,0.5s,baz=253,slow=6.2,SNR=6.0								
YKA	Yellowknife Ar	84.39	27	P		P		10 19 19.1	+0.2
	0.3nm,0.8s,baz=294,slow=5.7,SNR=7.2								

IDC 28 10:07:51.8±1.1,6.°16S×154.°36E,h0km,mb3.8/8, mb1 3.9/9,mb1mx3.8/20,mbtmp3.8/9,ML2.8/1,MS3.4/1, Ms1 3.4/1,ms1mx2.2/29,Error ellipse: s-maj=40.1km s-min=22.3km az=105.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.83	245	Pn		Pn		10 09 48.1	+1.0
	0.8nm,0.3s,baz=58,slow=13,SNR=4.6								
PMG				Sn		Sn		10 11 11.3	-5.3
	1.1nm,0.3s,baz=190,slow=23,SNR=7.4								
WRA	Warramunga Arr	23.79	233	P		P		10 13 06.0	-0.5
	0.6nm,0.7s,baz=58,slow=9.5,SNR=3.4								
ASAR	Alice Springs	26.27	226	P		P		10 13 29.1	0.0
	0.6nm,0.8s,baz=60,slow=9.7,SNR=7.9								
KAPI	Kappang	34.46	270	LR		LR		10 26 48.5	
	comp=Z,63nm,21.6s,baz=263,slow=33								
KSRS	Korea Array	49.91	332	P		P		10 16 46.6	-0.7
	0.8nm,0.7s,baz=153,slow=7.4,SNR=4.7								
VNDA	Vanda	71.43	178	P		P		10 19 13.6	0.0
	0.5nm,0.4s,baz=14,slow=5.4,SNR=8.3								
MKAR	Makanchi Array	82.36	319	P		P		10 20 16.0	+0.2
	1.2nm,0.7s,baz=94,slow=5.4,SNR=7.5								
ILAR	Eielson Array	82.83	22	P		P		10 20 18.0	+0.2
	0.3nm,0.8s,baz=231,slow=5.7,SNR=3.5								
ZALV	Zalesovo Beam	83.14	326	P		P		10 20 19.7	+0.2
	0.8nm,0.4s,baz=77,slow=6.2,SNR=4.8								
BVAR	Borovoye Array	91.25	323	P		P		10 20 59.3	+0.2
	1.6nm,0.9s,baz=96,slow=4.6,SNR=7.4								
TORD	Torodi Ar. Bea	152.19	287	PKPbc		PKPbc		10 27 50.3	-0.3
	1.1nm,0.5s,baz=62,slow=2.1,SNR=18								

*IDC **28** 10:19:29.3±1.4,2.°92S×130.°38E,h0km,mb4.1/5, mb1 4.3/7,mb1mx3.9/23,mbtmp4.1/7,ML4.1/2,Error ellipse: s-maj=71.5km s-min=18.4km az=67.0*

*ISCJB **28** 10:19:32.0±0.5,3.°06S±0.°04×130.°14E±0.°05,h25km, mb4.0/4,Error ellipse: s-maj=7.7km s-min=5.8km az=151.4*

*DJA **28** 10:19:35.6±1.0,3.°S±4.°×13.°0E±.°,h53km±37km,M3.9/6, MLv3.9/6*

*AUST **28** 10:19:36.0±0.0,2.°99S×130.°17E,h58km,Error ellipse: s-maj=1.1km s-min=0.8km az=20.0*

ISC 28 10:19:33.6±0.7,3.°01S±0.°06×130.°17E±0.°06,h25km,n25, σ1§21/26,mb4.0/4,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSAI	Masohi	1.28	255	P		Pb		10 19 58.5	+1.4
FAKI	Fak Fak	2.08	87	P		Pn		10 20 08.4	+1.4
FAKI	Fak Fak	2.08	87	P		Pn		10 20 08.4	+1.4
	baz=2.1,SNR=113								
AAI	Ambon	2.08	251	P		Pn		10 20 08.0	+1.0
AAI	Ambon	2.08	251	P		Pn		10 20 08.0	+1.0
	baz=2.1,SNR=7.1								
SWI	Sorong	2.40	27	P		Pn		10 20 11.6	+0.3
SWI				S		Sn		10 20 40.2	+0.3
SWI	Sorong	2.40	27	P		Pn		10 20 11.7	+0.4
	baz=2.4,SNR=11								
SWI				S		Sb		10 21 00.5	+15
	baz=2.4,SNR=7.5								
LBMI	Labuha	3.56	311	P		Pn		10 20 27.3	-0.1
LBMI				S		Sn		10 21 08.6	-0.1
TLE	Tual	3.65	136	P		Pn		10 20 32.0	+3.4
	baz=3.7,SNR=6.1								
RKPI	Ransiki, Papua	4.27	70	P		Pn		10 20 38.1	+0.9
LUWI	Luwuk	7.65	285	P		Pn		10 21 26.8	+3.2
	baz=7.6,SNR=13								
MTN	Manton Dam	9.81	174	P		Pn		10 21 54.6	+1.3
	baz=9.9,SNR=9.6								
KDU	Kakadu	9.88	167	P		Pn		10 21 54.7	+0.6
	baz=10.0,SNR=4.6								
PCI	Palu	10.54	281	P		Pn		10 22 03.4	+0.1
	baz=10,SNR=3.4								
FITZ	Fitzroy Crossi	15.64	196	Pn		Pn		10 23 13.0	+0.5
	0.4nm,0.3s,baz=21,slow=13,SNR=8.9								
FITZ	Fitzroy Crossi	15.64	196	P		P		10 23 15.3	-1.2
	baz=16,SNR=7.0								
WRA	Warramunga Arr	17.31	167	P		Pn		10 23 32.0	-1.8
	1.0nm,0.3s,baz=348,slow=11,SNR=23								
WRA				S		Sn		10 26 38.5	-7.4
	0.1nm,0.3s,baz=359,slow=23,SNR=4.3								
QIS	Mount Isa	19.71	153	P		P		10 24 02.3	+0.8
	baz=20,SNR=6.6								
ASAR	Alice Springs	20.85	170	P		P		10 24 13.6	-0.2
	8.2nm,0.6s,baz=348,slow=11,SNR=180								
ASAR				S		S		10 28 01.5	-3.8
	0.7nm,0.7s,baz=347,slow=16,SNR=3.8								
MEEK	Meekatharra	25.97	204	P		P		10 25 03.0	-1.5
	baz=26,SNR=5.2								
STKA	Stephens Creek	30.66	161	P		P		10 25 46.1	-0.2
	1.5nm,0.3s,baz=331,slow=9.7,SNR=18								
STKA	Stephens Creek	30.66	161	P		P		10 25 46.5	+0.2
	baz=31,SNR=13								
CMAR	Chiang Mai Arr	37.43	306	P		P		10 26 45.4	+0.2
	0.7nm,0.4s,baz=132,slow=6.4,SNR=4.3								
MKAR	Makanchi Array	65.02	326	P		P		10 30 11.9	+0.1
	0.4nm,0.5s,baz=122,slow=6.1,SNR=3.3								
KURBB	Kurchatov Arra	69.24	328	P		P		10 30 38.0	-0.4
	0.9nm,0.5s,baz=131,slow=6.1,SNR=6.2								

*CSEM **28** 10:21:45.9,35.°64N×22.°11E,h12km,MD3.6,After ATH*

ATH 28 10:21:45.9,35.°64N×22.°11E,h12km±4km,MD3.6/9, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KYTH	Kithira	0.99	49	*e*PN		Pg		10 22 05.1	+0.1
KYTH	Kithira	0.99	49	*e*Pn		Pg		10 22 05.1	+0.1
DYR	Agios Nikonas	1.13	9	*e*PB		Pb		10 22 07.5	0.0
DYR	Agios Nikonas	1.13	9	*e*Pb		Pb		10 22 07.5	0.0
VLI	Veliai	1.27	32	*e*PG		Pb		10 22 09.6	-0.1
VLI				*e*SB		Sg		10 22 27.1	+0.3
VLI	Veliai	1.27	32	*e*Pg		Pb		10 22 09.6	-0.1
VLI				*e*Sb		Sg		10 22 27.1	+0.3
PYL	PYLOS	1.29	347	*e*PB		Pb		10 22 10.1	0.0
PYL	PYLOS	1.29	347	*e*Pb		Pb		10 22 10.1	0.0
ITM	Ithomi	1.54	355	*e*PN		Pn		10 22 13.6	+0.3
ITM				*e*SB		Sg		10 22 36.7	+1.0
ITM	Ithomi	1.54	355	*e*Pn		Pn		10 22 13.6	+0.3
ITM				*e*Sb		Sg		10 22 36.7	+1.0
VLX	Vlachokerasia	1.74	7	*e*PN		Pb		10 22 18.0	0.0
VLX	Vlachokerasia	1.74	7	*e*Pn		Pb		10 22 18.0	0.0
DID	Didima	2.07	26	*e*PN		Pb		10 22 22.1	-1.4
DID	Didima	2.07	26	*e*Pn		Pb		10 22 22.1	-1.4
GUR	Goura	2.30	5	*e*PG		Pb		10 22 27.3	-0.2
GUR	Goura	2.30	5	*e*Pg		Pb		10 22 27.3	-0.2
KALE	Kalithea	2.75	0	*e*PB		Pn		10 22 32.4	+2.5
KALE	Kalithea	2.75	0	*e*Pb		Pn		10 22 32.4	+2.5

*CSEM **28** 10:22:07.1±0.1,54.°11N×2.°82W,h2km,ML4.0/7,Error ellipse: s-maj=4.4km s-min=2.2km az=67.0*

*LDG **28** 10:22:08.8±0.1,54.°15N×3.°00W,h9km,Ml4.0/31,Error ellipse: s-maj=2.9km s-min=1.6km az=70.0*

*NEIC **28** 10:22:09.5,54.°17N×3.°02W,h9km,ML3.7(BGS),After BGS.*

NEIC Felt [V] in Cumbria and Lancashire.

*BGS **28** 10:22:09.5±1.3,54.°17N×3.°02W,h9km±4km,ML3.7*

*BER **28** 10:22:10.4±2.7,54.°16N×2.°95W,h13km±8km,ML3.2, MW2.8,ML3.7(BGS)*

ISC 28 10:22:06.9±0.4,54.°10N±0.°01×2.°78W±0.°02,h11km±2km, n321,σ1§54/389,25D,United Kingdom

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KESW	Keswick, Cumbr	0.53	339	⇓*i*P		Pb		10 22 18.0	-0.1
KESW				AML	AML			10 22 18.4	
	comp=N,3μm,0.5s								
KESW				*e*S		Sg		10 22 24.1	0.0
KESW				AML	AML			10 22 25.9	
	comp=E,4μm,0.4s								
KESW	Keswick, Cumbr	0.53	339	⇓*i*P		Pb		10 22 18.0	-0.1
KESW				AML	AML			10 22 18.4	
	comp=N,3μm,0.5s								
KESW				*e*S		Sg		10 22 24.1	0.0
KESW				AML	AML			10 22 25.9	
	comp=E,4μm,0.4s								
KESW	Keswick, Cumbr	0.53	339	P		Pb		10 22 18.0	-0.1
KESW				AML	AML			10 22 18.4	
	comp=E,3μm,0.5s								
KESW				S		Sg		10 22 24.1	0.0
KESW				AML	AML			10 22 25.9	
	comp=E,4μm,0.4s								
KESW	Keswick, Cumbr	0.53	339	⇓*i*P		Pb		10 22 18.0	-0.1
KESW				AML	AML			10 22 18.4	
	comp=N,3μm,0.5s								
KESW				*e*S		Sg		10 22 24.1	0.0
KESW				AML	AML			10 22 25.9	
	comp=E,4μm,0.4s								
KESW	Keswick, Cumbr	0.53	339	⇓*i*P		Pb		10 22 18.0	-0.1
KESW				*e*S		Sg		10 22 24.1	0.0
KESW	Keswick, Cumbr	0.53	339	⇓*i*P		Pb		10 22 18.0	-0.1
	comp=E,3μm,0.5s								
KESW				*e*S		Sg		10 22 24.1	0.0
	comp=E,4μm,0.4s								
BBO1	Bothel	0.70	337	⇓*i*P		Pb		10 22 21.3	+0.3
BBO1				*e*S		Sg		10 22 29.6	+0.1
BBO1				AML	AML			10 22 30.7	
	comp=N,2μm,0.5s								
BBO1				AML	AML			10 22 30.9	
	comp=E,3μm,0.3s								
BBO1	Bothel	0.70	337	P		Pb		10 22 21.3	+0.3
BBO1				S		Sg		10 22 29.6	+0.1
BBO1				AML	AML			10 22 30.7	
	comp=E,2μm,0.5s								
BBO1				AML	AML			10 22 30.9	
	comp=E,3μm,0.3s								
BBO1	Bothel	0.70	337	⇓*i*P		Pb		10 22 21.3	+0.3
BBO1				*e*S		Sg		10 22 29.6	+0.1
BBO1				AML	AML			10 22 30.7	
	comp=N,2μm,0.5s								
BBO1				AML	AML			10 22 30.9	
	comp=E,3μm,0.3s								
BBO1	Bothel	0.70	337	⇓*i*

ECK	Cauldkaine Hil	1.11 350	⇓i/P	Pb	10 22 28.6	+0.6		comp=N,674nm,0.5s	
ECK	Cauldkaine Hil	1.11 350	⇓i/P	Pb	10 22 28.6	+0.6	EDI	Edinburgh	1.85 353 ePPn 10 22 37.4 -1.1
ECK	Cauldkaine Hil	1.11 350 P		Pb	10 22 28.6	+0.6	EDI		AML AML 10 23 06.7
ECK	Cauldkaine Hil	1.11 350	⇓i/P	Pb	10 22 28.6	+0.6		comp=E,513nm,0.7s	
ECK	Cauldkaine Hil	1.11 350	⇓i/P	Pb	10 22 28.6	+0.6	EDI		AML AML 10 23 08.2
ECK	Cauldkaine Hil	1.11 350	⇓i/P	Pb	10 22 28.6	+0.6		comp=N,674nm,0.5s	
KBI1	Birley Grange	1.13 138	eP	Pn	10 22 31.8	+3.2	EDI	Edinburgh	1.85 353 ePP 10 22 37.4 -1.1
KBI1	Birley Grange	1.13 138	eP	Pn	10 22 31.8	+3.2	EDI	Edinburgh	1.85 353 eP Pn 10 22 38.0 -0.4
KBI1	Birley Grange	1.13 138 P		Pn	10 22 31.8	+3.2	GMM	Mts of Mourne	1.87 276 eP Pn 10 22 38.9 +0.2
KBI1	Birley Grange	1.13 138	eP	Pn	10 22 31.8	+3.2	GMM	Mts of Mourne	1.87 276 eP Pn 10 22 38.9 +0.2
KBI1	Birley Grange	1.13 138	eP	Pn	10 22 31.8	+3.2	GMM	Mts of Mourne	1.87 276 P Pn 10 22 38.9 +0.2
KBI1	Birley Grange	1.13 138	eP	Pn	10 22 31.8	+3.2	GMM	Mts of Mourne	1.87 276 eP Pn 10 22 38.9 +0.2
	SNR=55						GMM	Mts of Mourne	1.87 276 eP Pn 10 22 38.9 +0.2
WME	Myndd Eilian	1.14 233	eP	Pg	10 22 28.7	-0.1	GMM	Mts of Mourne	1.87 276 eP Pn 10 22 38.9 +0.2
WME	Myndd Eilian	1.14 233	eP	Pg	10 22 28.7	-0.1	PGBU	Glenifferbraes	1.98 331 eP Pn 10 22 40.9 +0.6
WME	Myndd Eilian	1.14 233 P		Pg	10 22 28.7	-0.1	PGBU		AML AML 10 23 16.7
WME	Myndd Eilian	1.14 233	eP	Pg	10 22 28.7	-0.1		comp=E,661nm,0.4s	
WME	Myndd Eilian	1.14 233	eP	Pg	10 22 28.7	-0.1	PGBU		AML AML 10 23 17.9
WME	Myndd Eilian	1.14 233	eP	Pb	10 22 29.0	+0.4		comp=N,529nm,0.4s	
BWH	Wardlaw	1.20 335	eP	Pb	10 22 30.1	+0.6	PGBU	Glenifferbraes	1.98 331 eP Pn 10 22 40.9 +0.6
BWH	Wardlaw	1.20 335	eP	Pb	10 22 30.1	+0.6	PGBU		AML AML 10 23 16.7
BWH	Wardlaw	1.20 335 P		Pb	10 22 30.1	+0.6		comp=E,661nm,0.4s	
BWH	Wardlaw	1.20 335	eP	Pb	10 22 30.1	+0.6	PGBU		AML AML 10 23 17.9
BWH	Wardlaw	1.20 335	eP	Pb	10 22 30.1	+0.6		comp=N,529nm,0.4s	
BWH	Wardlaw	1.20 335	eP	Pb	10 22 30.1	+0.6	PGBU	Glenifferbraes	1.98 331 P Pn 10 22 40.9 +0.6
ESK	Eskdalemuir	1.25 349	⇓i/P	Pb	10 22 30.8	+0.4	PGBU		AML AML 10 23 16.7
ESK		AML	AML	10 22 31.8				comp=E,661nm,0.4s	
	comp=N,965nm,0.6s						PGBU		AML AML 10 23 17.9
ESK		eS	Sg	10 22 45.6	-1.4		comp=N,529nm,0.4s		
ESK	Eskdalemuir	1.25 349	⇓i/P	Pb	10 22 30.8	+0.4	PGBU	Glenifferbraes	1.98 331 eP Pn 10 22 40.9 +0.6
ESK		AML	AML	10 22 31.8			PGBU		AML AML 10 23 16.7
	comp=N,965nm,0.6s							comp=E,661nm,0.4s	
ESK		eS	Sg	10 22 45.6	-1.4		PGBU		AML AML 10 23 17.9
ESK	Eskdalemuir	1.25 349	P	Pb	10 22 30.8	+0.4		comp=N,529nm,0.4s	
ESK		AML	AML	10 22 31.8			PGBU	Glenifferbraes	1.98 331 eP Pn 10 22 40.9 +0.6
	comp=N,965nm,0.6s						PGBU	Glenifferbraes	1.98 331 eP Pn 10 22 40.9 +0.6
ESK		S	Sg	10 22 45.6	-1.4			comp=N,529nm,0.4s	
ESK	Eskdalemuir	1.25 349	⇓i/P	Pb	10 22 30.8	+0.4	SSW	Stow on the Wo	2.21 165 eP Pb 10 22 47.2 +0.5
ESK		AML	AML	10 22 31.8			SSW	Stow on the Wo	2.21 165 eP Pb 10 22 47.2 +0.5
	comp=N,965nm,0.6s						SSW	Stow on the Wo	2.21 165 P Pb 10 22 47.2 +0.5
ESK		eS	Sg	10 22 45.6	-1.4		SSW	Stow on the Wo	2.21 165 eP Pb 10 22 47.2 +0.5
ESK	Eskdalemuir	1.25 349	⇓i/P	Pb	10 22 30.8	+0.4	SSW	Stow on the Wo	2.21 165 eP Pb 10 22 47.2 +0.5
ESK		eS	Sg	10 22 45.6	-1.4		SSW	Stow on the Wo	2.21 165 eP Pb 10 22 47.2 +0.5
ESK	Eskdalemuir	1.25 349	⇓i/P	Pb	10 22 30.8	+0.4	EAB	Aberfoyle	2.28 338 eP Pn 10 22 45.5 +1.1
	comp=N,965nm,0.6s						EAB	Aberfoyle	2.28 338 eP Pn 10 22 45.5 +1.1
ESK		eS	Sg	10 22 45.6	-1.4		EAB	Aberfoyle	2.28 338 P Pn 10 22 45.5 +1.1
WLF1	Llynfaes	1.25 231	eP	Pg	10 22 30.8	-0.2	EAB	Aberfoyle	2.28 338 eP Pn 10 22 45.5 +1.1
WLF1		eS	Sg	10 22 47.3	0.0		EAB	Aberfoyle	2.28 338 eP Pn 10 22 45.5 +1.1
WLF1		AML	AML	10 22 48.7			EAB	Aberfoyle	2.28 338 eP Pn 10 22 45.3 +0.9
	comp=E,1µm,0.3s						DLF	Lyons Farm	2.37 252 eP Pn 10 22 46.4 +0.8
WLF1		AML	AML	10 22 48.7			DLF		eS Sb 10 23 19.0 +0.3
	comp=N,934nm,0.4s						ELO	Logie Almond	2.44 348 eP Pn 10 22 47.4 +0.8
WLF1	Llynfaes	1.25 231	eP	Pg	10 22 30.8	-0.2	SWN1	Swindon	2.66 167 eP Pn 10 22 53.2 +3.7
WLF1		eS	Sg	10 22 47.3	0.0		SWN1		AML AML 10 23 49.3
WLF1		AML	AML	10 22 48.7				comp=E,474nm,0.6s	
	comp=E,1µm,0.3s						SWN1		AML AML 10 23 50.0
WLF1		AML	AML	10 22 48.7				comp=N,476nm,0.8s	
	comp=N,934nm,0.4s						SWN1	Swindon	2.66 167 eP Pn 10 22 53.2 +3.7
WLF1	Llynfaes	1.25 231 P		Pg	10 22 30.8	-0.2	SWN1		AML AML 10 23 49.3
WLF1		S	Sg	10 22 47.3	0.0			comp=E,474nm,0.6s	
WLF1		AML	AML	10 22 48.7			SWN1		AML AML 10 23 50.0
	comp=N,1µm,0.3s							comp=N,476nm,0.8s	
WLF1		AML	AML	10 22 48.7			SWN1	Swindon	2.66 167 P Pn 10 22 53.2 +3.7
	comp=N,934nm,0.4s						SWN1		AML AML 10 23 49.3
WLF1	Llynfaes	1.25 231	eP	Pg	10 22 30.8	-0.2		comp=N,474nm,0.6s	
WLF1		eS	Sg	10 22 47.3	0.0		SWN1		AML AML 10 23 50.0
WLF1		AML	AML	10 22 48.7				comp=N,476nm,0.8s	
	comp=E,1µm,0.3s						SWN1	Swindon	2.66 167 eP Pn 10 22 53.2 +3.7
WLF1		AML	AML	10 22 48.7			SWN1		AML AML 10 23 49.3
	comp=N,934nm,0.4s							comp=E,474nm,0.6s	
WLF1	Llynfaes	1.25 231	eP	Pg	10 22 30.8	-0.2	SWN1		AML AML 10 23 50.0
WLF1		eS	Sg	10 22 47.3	0.0			comp=N,476nm,0.8s	
WLF1	Llynfaes	1.25 231	eP	Pg	10 22 30.8	-0.2	SWN1	Swindon	2.66 167 eP Pn 10 22 53.2 +3.7
WLF1		eS	Sg	10 22 47.3	0.0		SWN1	Swindon	2.66 167 eP Pn 10 22 53.2 +3.7
	comp=N,934nm,0.4s							comp=N,476nm,0.8s	
YLL	Llanberis	1.27 221	eP	Pg	10 22 31.0	-0.1	SKP1	Kophill	2.66 153 eP Pb 10 22 53.5 -1.0
YLL	Llanberis	1.27 221	eP	Pg	10 22 31.0	-0.1	SKP1	Kophill	2.66 153 eP Pb 10 22 53.5 -1.0
YLL	Llanberis	1.27 221 P		Pg	10 22 31.0	-0.1	SKP1	Kophill	2.66 153 P Pb 10 22 53.5 -1.0
YLL	Llanberis	1.27 221	eP	Pg	10 22 31.0	-0.1	SKP1	Kophill	2.66 153 eP Pb 10 22 53.5 -1.0
YLL	Llanberis	1.27 221	eP	Pg	10 22 31.0	-0.1	SKP1	Kophill	2.66 153 eP Pb 10 22 53.5 -1.0
	comp=N,2µm,0.5s						SKP1	Kophill	2.66 153 eP Pb 10 22 53.5 -1.0
YRC	Rhoscolyn	1.36 232	eP	Pn	10 22 32.5	+0.7	DRUM	Mains of Drumt	2.83 3 P Pn 10 22 53.1 +1.2
YRC	Rhoscolyn	1.36 232	eP	Pn	10 22 32.5	+0.7	DRUM	Mains of Drumt	2.83 3 eP Pn 10 22 53.1 +1.2
YRC	Rhoscolyn	1.36 232 P		Pn	10 22 32.5	+0.7	DRUM	Mains of Drumt	2.83 3 eP Pn 10 22 53.1 +1.2
YRC	Rhoscolyn	1.36 232	eP	Pn	10 22 32.5	+0.7	HEX	Exmoor	3.10 192 eP Pn 10 22 59.0 +3.4
YRC	Rhoscolyn	1.36 232	eP	Pn	10 22 32.5	+0.7	HEX	Exmoor	3.10 192 eP Pn 10 22 59.0 +3.4
YRC	Rhoscolyn	1.36 232	eP	Pn	10 22 32.5	+0.7	HEX	Exmoor	3.10 192 P Pn 10 22 59.0 +3.4
	SNR=55						HEX	Exmoor	3.10 192 eP Pn 10 22 59.0 +3.4
GAL1	Galloway	1.36 305	eP	Pg	10 22 32.0	-1.1	HEX	Exmoor	3.10 192 eP Pn 10 22 59.0 +3.4
GAL1		eS	Sg	10 22 46.7	-4.1		HEX	Exmoor	3.10 192 eP Pn 10 22 59.0 +3.4
GAL1		AML	AML	10 22 49.8			MME1	Meikle Cairn	3.23 358 eP Pn 10 22 58.2 +0.7
	comp=N,2µm,0.5s						MME1	Meikle Cairn	3.23 358 eP Pn 10 22 58.2 +0.7
GAL1		AML	AML	10 22 49.9			MME1	Meikle Cairn	3.23 358 P Pn 10 22 58.2 +0.7
	comp=E,1µm,0.3s						MME1	Meikle Cairn	3.23 358 eP Pn 10 22 58.2 +0.7
GAL1		AML	AML	10 22 50.7			MME1	Meikle Cairn	3.23 358 eP Pn 10 22 58.2 +0.7
GAL1	Galloway	1.36 305	eP	Pg	10 22 32.0	-1.1	MME1	Meikle Cairn	3.23 358 eP Pn 10 22 58.2 +0.7
GAL1		eS	Sg	10 22 46.7	-4.1		KSB	Sheil Bridge	3.46 335 eP Pn 10 23 01.3 +0.7
GAL1		AML	AML	10 22 49.8			MDO	Dochfour	3.47 346 eP Pn 10 23 01.6 +0.9
	comp=N,2µm,0.5s						MCD	Coleburn Disti	3.51 356 eP Pn 10 23 02.0 +0.7
GAL1		AML	AML	10 22 49.9			MCD		AML AML 10 24 08.2
	comp=E,1µm,0.3s							comp=N,142nm,0.4s	
GAL1		AML	AML	10 22 50.7			MCD	Coleburn Disti	3.51 356 eP Pn 10 23 02.0 +0.7
GAL1	Galloway	1.36 305	P	Pg	10 22 32.0	-1.1	MCD		AML AML 10 24 08.2
GAL1		S	Sg	10 22 46.7	-4.1			comp=N,142nm,0.4s	
GAL1		AML	AML	10 22 49.8			MCD	Coleburn Disti	3.51 356 P Pn 10 23 02.0 +0.7
	comp=E,2µm,0.5s						MCD		AML AML 10 24 08.2
GAL1		AML	AML	10 22 49.9				comp=N,142nm,0.4s	
	comp=E,1µm,0.3s						MCD	Coleburn Disti	3.51 356 eP Pn 10 23 02.0 +0.7
GAL1		AML	AML	10 22 50.7			MCD		AML AML 10 24 08.2
GAL1	Galloway	1.36 305	eP	Pg	10 22 32.0	-1.1		comp=N,142nm,0.4s	
GAL1		eS	Sg	10 22 46.7	-4.1		MCD	Coleburn Disti	3.51 356 eP Pn 10 23 02.0 +0.7
GAL1		AML	AML	10 22 49.8			MCD	Coleburn Disti	3.51 356 eP Pn 10 23 02.0 +0.7
	comp=N,2µm,0.5s							comp=N,142nm,0.4s	
GAL1		AML	AML	10 22 49.9			KPL	Plockton	3.63 335 eP Pn 10 23 04.0 +1.0
	comp=E,1µm,0.3s						KPL	Plockton	3.63 335 eP Pn 10 23 03.9 +1.0
GAL1		AML	AML	10 22 50.7			KAC	Achnashellach	3.70 338 eP Pn 10 23 04.8 +1.0
GAL1	Galloway	1.36 305	eP	Pg	10 22 32.0	-1.1	MVH1	Achvaich	3.92 349 eP Pn 10 23 07.6 +0.7
GAL1		eS	Sg	10 22 46.7	-4.1		FLN	La Foliniere	5.53 164 ePn Pn 10 23 30.5 +1.4
GAL1	Galloway	1.36 305	eP	Pg	10 22 32.0	-1.1		baz=346,SNR=1.0	
GAL1		eS	Sg	10 22 46.7	-4.1		FLN		eSn Sn 10 24 31.2 -1.4
	comp=E,1µm,0.3s,SNR=55							comp=N,60nm,0.4s	
YRE	Yr Eifl	1.49 222	eP	Pn	10 22 34.7	+1.2	FLN	La Foliniere	5.53 164 ePn Pn 10 23 30.5 +1.4
YRE	Yr Eifl	1.49 222	eP	Pn	10 22 34.7	+1.2	FLN		eSn Sn 10 24 31.2 -1.4
YRE	Yr Eifl	1.49 222 P		Pn	10 22 34.7	+1.2	FLN	La Foliniere	5.53 164 ePn Pn 10 23 30.5 +1.4
YRE	Yr Eifl	1.49 222	eP	Pn	10 22 34.7	+1.2		baz=346,SNR=1.0	
YRE	Yr Eifl	1.49 222	eP	Pn	10 22 34.7	+1.2	SNF	Seneffe	5.63 127 PN Pn 10 23 33.6 +3.2
YRE	Yr Eifl	1.49 222	eP	Pn	10 22 34.7	+1.2	SNF	Seneffe	5.63 127 Pn Pn 10 23 33.5 +3.2
HLM1	Long Mynd	1.58 182	eP	Pb	10 22 37.3	+1.2	LDF	La Druitiere	5.76 162 ePn Pn 10 23 34.0 +1.9
EBL	Broad Law	1.69 355	eP	Pn	10 22 37.1	+0.9		SNR=1.0	
EBL	Broad Law	1.69 355	eP	Pn	10 22 37.1	+0.9	LDF		eSn Sn 10 24 37.0 -1.1
EBL	Broad Law	1.69 355 P		Pn	10 22 37.1	+0.9	LDF		eSg Sg 10 25 12.0 +0.5
EBL	Broad Law	1.69 355	eP	Pn	10 22 37.1	+0.9		comp=N,16nm,0.4s	
EBL	Broad Law	1.69 355	eP	Pn	10 22 37.1	+0.9	LDF	La Druitiere	5.76 162 ePn Pn 10 23 34.0 +1.9
EBL	Broad Law	1.69 355	eP	Pn	10 22 37.1	+0.9	LDF		eSn Sn 10 24 37.0 -1.1
EAU	Auchinoon	1.79 348	eP	Pn	10 22 38.7	+1.0	LDF		eSg Sg 10 25 12.0 +0.5
EAU	Auchinoon	1.79 348	eP	Pn	10 22 38.7	+1.0	LDF	La Druitiere	5.76 162 ePn Pn 10 23 34.0 +1.9
EAU	Auchinoon	1.79 348 P		Pn	10 22 38.7	+1.0		SNR=1.0	
EAU	Auchinoon	1.79 348	eP	Pn	10 22 38.7	+1.0	LDF		eSg Sg 10 25 12.0 +0.5
EAU	Auchinoon	1.79 348	eP	Pn	10 22 38.7	+1.0		comp=N,8.1nm,0.4s	
EAU	Auchinoon	1.79 348	eP	Pn	10 22 38.7	+1.0	ROSF	Rostrenen	5.78 183 ePn Pn 10 23 34.2 +1.8
	SNR=55							SNR=1.0	
ESY	Stoneypath	1.83 3	eP	Pn	10 22 39.1	+0.9	ROSF		eSn Sn 10 24 35.1 -3.5
ESY	Stoneypath	1.83 3	eP	Pn	10 22 39.1	+0.9		comp=N,34nm,0.4s,SNR=1.0	
ESY	Stoneypath	1.83 3 P		Pn	10 22 39.1	+0.9	ROSF	Rostrenen	5.78 183 ePn Pn 10 23 34.2 +1.8
ESY	Stoneypath	1.83 3	eP	Pn	10 22 39.1	+0.9	ROSF		eSn Sn 10 24 35.1 -3.5
ESY	Stoneypath	1.83 3	eP	Pn	10 22 39.1	+0.9	GRR	Gorron	5.84 167 ePn Pn 10 23 34.9 +1.6
ESY	Stoneypath	1.83 3	⇓i/P	Pn	10 22 39.2	+1.0		SNR=1.0	
EDI	Edinburgh	1.85 353	eP	Pn	10 22 37.4	-1.1	GRR		eSn Sn 10 24 39.3 -0.9
EDI		AML	AML	10 23 06.7				comp=N,30nm,0.3s	
	comp=E,513nm,0.7s						GRR	Gorron	5.84 167 ePn Pn 10 23 34.9 +1.6
EDI		AML	AML	10 23 08.2			GRR		eSn Sn 10 24 39.3 -0.9
	comp=N,674nm,0.5s						GRR	Gorron	5.84 167 ePn Pn 10 23 34.9 +1.6
EDI	Edinburgh	1.85 353	eP	Pn	10 22 38.0	-0.4		SNR=1.0	
EDI		ePg		Pn	10 22 40.1	+1.6	SGMF	Saint Gilles	5.85 179 ePn Pn 10 23 35.1 +1.6
EDI		AML	AML	10 23 06.7				SNR=1.0	
	comp=E,513nm,0.7s						SGMF		eSn Sn 10 24 37.6 -2.9
EDI		AML	AML	10 23 08.2				comp=N,11nm,0.2s,SNR=1.0	
	comp=N,674nm,0.5s						SGMF	Saint Gilles	5.85 179 ePn Pn 10 23 35.1 +1.6
EDI	Edinburgh	1.85 353	P	Pn	10 22 37.4	-1.1	SGMF		eSn Sn 10 24 37.6 -2.9
EDI		AML	AML	10 23 06.7			SGMF	Saint Gilles	5.85 179 ePn Pn 10 23 35.1 +1.6
	comp=N,513nm,0.7s							SNR=1.0	
EDI		AML	AML	10 23 08.2			BAIF	Baives	5.91 130 ePn Pn 10 23 37.0 +2.8
BAIF				eSn	Sn	10 24 40.5	-1.3		
BAIF				eSg	Sg	10 25 17.8	+1.5		
	comp=N,71nm,0.7s								
BAIF	Baives	5.91 130	ePn	Pn	10 23 37.0	+2.8			
BAIF				eSn	Sn	10 24 40.5	-1.3		
BAIF				eSg	Sg	10 25 17.8	+1.5		
BAIF	Baives	5.91 130	ePn	Pn	10 23 37.0	+2.8			
BAIF				eSg	Sg	10 25 17.8	+1.5		
	comp=N,35nm,0.7s								
DOU	Dourbes	6.06 128	PN	Pn	10 23 41.7	+5.4			
DOU			SN	Sn	10 24 45.7	+0.2			
	comp=N,24nm,0.0s								
GIVF	Givet	6.16 127	ePn	Pn	10 23 40.9	+3.2			
	SNR=1.0								
GIVF			eSn	Sn	10 24 47.0	-1.0			
GIVF			eSg	Sg	10 25 25.5	+1.1			
	comp=N,84nm,0.6s								
GIVF	Givet	6.16 127	ePn	Pn	10 23 40.9	+3.2			
GIVF			eSn	Sn	10 24 47.0	-1.0			
GIVF			eSg	Sg	10 25 25.5	+1.1			
GIVF	Givet	6.16 127	ePn	Pn	10 23 40.9	+3.2			
	SNR=1.0								
GIVF			eSg	Sg	10 25 25.5	+1.1			
	comp=N,42nm,0.6s								
WTSB	Winterswijk	6.16 106	eSn	Sn	10 24 48.4	+0.4			
WTSB	Winterswijk	6.16 106	eSn	Sn	10 24 48.4	+0.4			
BCLA	Clavier	6.18 123	PN	Pn	10 23 42.2	+4.2			
BCLA			SN	Sn	10 24 48.2	-0.3			
	comp=E,38nm,0.0s								
QUIF	Quistinic	6.19 182	ePn	Pn	10 23 39.7	+1.6			
	SNR=1.0								
QUIF			eSn	Sn	10 24 46.0	-2.8			
	comp=E,25nm,0.5s								
QUIF	Quistinic	6.19 182	ePn	Pn	10 23 39.7	+1.6			
QUIF			eSn	Sn	10 24 46.0	-2.8			
QUIF	Quistinic	6.19 182	ePn	Pn	10 23 39.7	+1.6			
	SNR=1.0								
HGN	Heimansgroeve	6.29 119	ePn	Pn	10 23 42.6	+3.2			
HGN			eSn	Sn	10 24 50.4	-0.7			
HGN	Heimansgroeve	6.29 119	ePn	Pn	10 23 42.6	+3.2			
MEM	Membach	6.42 119	PN	Pn	10 23 44.6	+3.4			
MEM			SN	Sn	10 24 56.8	+2.4			
	comp=N,37nm,0.6s								
MEM	Membach	6.42 119	Pn	Pn	10 23 44.6	+3.4			
MEM			Sn	Sn	10 24 56.7	+2.4			
	comp=N,37nm,0.6s								
KMY	Karmoy	6.77 38	eP	Pn	10 23 46.6	+0.6			
KMY			eS	Sn	10 24 58.3	-4.7			
KMY			AML	AML	10 25 02.5				
	comp=Z,9.8nm,0.3s								
SNART	Snartemo	7.01 49	eP	Pn	10 23 47.8	-1.5			
SNART			eS	Sn	10 25 03.0	-5.7			
BLS5	Blasjo	7.36 40	eP	Pn	10 23 55.0	+0.8			
BLS5			eS	Sn	10 25 12.3	-5.3			
BLS5			AML	AML	10 25 31.5				
	comp=Z,14nm,0.4s								
MEZF	Maizieres J'vi	7.45 136	ePn	Pn	10 23 57.7	+2.4			
	baz=322,SNR=1.0								
MEZF			eSn	Sn	10 25 17.5	-2.2			
MEZF			eSg	Sg	10 26 05.1	-0.5			
	comp=Z,26nm,0.4s								
MEZF	Maizieres J'vi	7.45 136	ePn	Pn	10 23 57.7	+2.4			
MEZF			eSn	Sn	10 25 17.5	-2.2			
MEZF			eSg	Sg	10 26 05.1	-0.5			
MEZF	Maizieres J'vi	7.45 136	ePn	Pn	10 23 57.7	+2.4			
	baz=322,SNR=1.0								
MEZF			eSg	Sg	10 26 05.1	-0.5			
	comp=Z,13nm,0.4s								
EGD	Espegrend	7.56 32	eS	Sn	10 25 16.5	-5.9			
EGD			AML	AML	10 25 18.0				
	comp=Z,10.0nm,0.2s								
HYF	Humbligny	7.65 151	ePn	Pn	10 24 00.2	+2.0			
HYF	Humbligny	7.65 151	ePn	Pn	10 24 00.2	+2.0			
HYF	Humbligny	7.65 151	ePn	Pn	10 24 00.2	+2.0			
SFTF	Sexfontaines	7.68 137	ePn	Pn	10 24 01.1	+2.6			
	baz=321								
SFTF			eSn	Sn	10 25 23.1	-2.3			
	comp=Z,21nm,0.2s								
SFTF	Sexfontaines	7.68 137	ePn	Pn	10 24 01.1	+2.6			
SFTF			eSn	Sn	10 25 23.1	-2.3			
SFTF	Sexfontaines	7.68 137	ePn	Pn	10 24 01.1	+2.6			
	baz=321								
MFF	Saint Martin d	7.69 166	ePn	Pn	10 23 59.9	+1.2			
	SNR=1.0								
MFF			eSn	Sn	10 25 22.5	-3.2			
	comp=Z,12nm,0.3s,SNR=1.0								
MFF	Saint Martin d	7.69 166	ePn	Pn	10 23 59.9	+1.2			
MFF			eSn	Sn	10 25 22.5	-3.2			
MFF	Saint Martin d	7.69 166	ePn	Pn	10 23 59.9	+1.2			
	SNR=1.0								
PAGF	Fort de Pagny	7.69 133	ePn	Pn	10 24 01.5	+2.8			
PAGF			eSn	Sn	10 25 23.3	-2.4			
PAGF			eSg	Sg	10 26 12.7	-0.7			
	comp=Z,8.5nm,0.5s								
PAGF	Fort de Pagny	7.69 133	ePn	Pn	10 24 01.5	+2.8			
PAGF			eSn	Sn	10 25 23.3	-2.4			
PAGF			eSg	Sg	10 26 12.7	-0.7			
PAGF	Fort de Pagny	7.69 133	ePn	Pn	10 24 01.5	+2.8			
PAGF			eSg	Sg	10 26 12.7	-0.7			
	comp=Z,4.2nm,0.5s								
RUND	Rundenannen	7.72 32	eS	Sn	10 25 19.3	-7.1			
RUND			AML	AML	10 25 27.3				
	comp=Z,7.5nm,0.3s								
ASK	Askoy	7.72 31	eP	Pn	10 23 57.5	-1.6			
ASK			eS	Sn	10 25 17.8	-8.5			
ASK			AML	AML	10 25 27.0				
	comp=Z,8.6nm,0.3s								
ODD1	Odda	7.76 38	eS	Sn	10 25 23.2	-4.3			
ODD1			AML	AML	10 25 27.3				
	comp=Z,10nm,0.3s								
LOR	Lormes	8.03 146	ePn	Pn	10 24 04.4	+1.0			
	baz=333,SNR=1.0								
LOR			eSn	Sn	10 25 31.8	-2.3			
	comp=Z,12nm,0.3s,SNR=1.0								
LOR	Lormes	8.03 146	ePn	Pn	10 24 04.4	+1.0			
LOR			eSn	Sn	10 25 31.8	-2.3			
LOR	Lormes	8.03 146	ePn	Pn	10 24 04.4	+1.0			
	baz=333,SNR=1.0								
SUE	Sulen	8.07 27	eP	Pb	10 24 26.5	+0.1			
SUE			eS	Sn	10 25 49.9	+15			
SSF	Saint Saulge	8.10 148	ePn	Pn	10 24 05.2	+0.9			
	SNR=1.0								
SSF			eSn	Sn	10 25 32.3	-3.4			
	comp=Z,8.5nm,0.4s,SNR=1.0								
SSF	Saint Saulge	8.10 148	ePn	Pn	10 24 05.2	+0.9			
SSF			eSn	Sn	10 25 32.3	-3.4			
SSF	Saint Saulge	8.10 148	ePn	Pn	10 24 05.2	+0.9			
	SNR=1.0								
AVF	Avril sur Loir	8.29 149	ePn	Pn	10 24 07.6	+0.7			
	SNR=1.0								
AVF			eSn	Sn	10 25 37.0	-3.5			
	comp=Z,4.1nm,0.2s,SNR=1.0								
AVF	Avril sur Loir	8.29 149	ePn	Pn	10 24 07.6	+0.7			
AVF			eSn	Sn	10 25 37.0	-3.5			
AVF	Avril sur Loir	8.29 149	ePn	Pn	10 24 07.6	+0.7			
	SNR=1.0								
BGF	Bois d'Agland	8.36 152	ePn	Pn	10 24 09.2	+1.3			
	SNR=1.0								
BGF			eSn	Sn	10 25 39.3	-2.9			
	comp=Z,35nm,0.4s,SNR=1.0								
BGF	Bois d'Agland	8.36 152	ePn	Pn	10 24 09.2	+1.3			
BGF			eSn	Sn	10 25 39.3	-2.9			
BGF	Bois d'Agland	8.36 152	ePn	Pn	10 24 09.2	+1.3			
	SNR=1.0								
HAU	Haudompre	8.38 133	ePn	Pn	10 24 09.9	+1.8			
HAU			eSn	Sn	10 25 40.8	-1.9			
	comp=Z,14nm,0.3s,SNR=1.0								
HAU	Haud

CDF					*e*Sg		**Sg**	**10 26 38.5**	**-0.6**
CDF	**Champ du Feu**	**8.49**	**128**		*e*Pn		**Pn**	**10 24 11.9**	**+2.1**
CDF					*e*Sg		**Sg**	**10 26 38.5**	**-0.6**
	comp=Z,11nm,0.7s,SNR=1.0								
HYA	**Hoyanger**	**8.56**	**31**		*e*S		Sn	10 25 39.1	-7.8
SMF	**Signal de Mont**	**8.57**	**148**		*e*Pn		**Pn**	**10 24 11.9**	**+1.1**
	SNR=1.0								
SMF	**Signal de Mont**	**8.57**	**148**		*e*Pn		**Pn**	**10 24 11.9**	**+1.1**
SMF	**Signal de Mont**	**8.57**	**148**		*e*Pn		**Pn**	**10 24 11.9**	**+1.1**
	SNR=1.0								
ECH	**Echery**	**8.58**	**129**		*e*Pn		Pn	10 24 16.6	+5.7
ECH					*e*Sn		**Sn**	**10 25 50.5**	**+2.9**
HINF	**Hinteralfeld**	**8.74**	**132**		*e*Pn		**Pn**	**10 24 16.1**	**+3.0**
	SNR=1.0								
HINF					*e*Sn		**Sn**	**10 25 48.4**	**-3.2**
	comp=Z,9.2nm,0.5s,SNR=1.0								
HINF	**Hinteralfeld**	**8.74**	**132**		*e*Pn		**Pn**	**10 24 16.1**	**+3.0**
HINF					*e*Sn		**Sn**	**10 25 48.4**	**-3.2**
HINF	**Hinteralfeld**	**8.74**	**132**		*e*Pn		**Pn**	**10 24 16.1**	**+3.0**
	SNR=1.0								
BFO	**Black Forest**	**9.05**	**125**		*e*Pn		Pn	10 24 22.8	+5.5
BFO					*e*Sn		**Sn**	**10 25 58.2**	**-0.9**
RJF	**Les Rejaudoux**	**9.23**	**161**		*e*Pn		**Pn**	**10 24 20.6**	**+0.8**
	SNR=1.0								
RJF					*e*Sn		Sn	10 25 59.2	-4.3
	comp=Z,16nm,0.4s								
RJF	**Les Rejaudoux**	**9.23**	**161**		*e*Pn		**Pn**	**10 24 20.6**	**+0.8**
RJF					*e*Sn		Sn	10 25 59.2	-4.3
RJF	**Les Rejaudoux**	**9.23**	**161**		*e*Pn		**Pn**	**10 24 20.6**	**+0.8**
	SNR=1.0								
CABF	**La Chapelle**	**9.39**	**139**		*e*Pn		**Pn**	**10 24 23.8**	**+1.7**
	SNR=1.0								
CABF					*e*Sn		**Sn**	**10 26 04.4**	**-3.2**
	comp=Z,8.0nm,0.4s								
CABF	**La Chapelle**	**9.39**	**139**		*e*Pn		**Pn**	**10 24 23.8**	**+1.7**
CABF					*e*Sn		**Sn**	**10 26 04.4**	**-3.2**
CABF	**La Chapelle**	**9.39**	**139**		*e*Pn		**Pn**	**10 24 23.8**	**+1.7**
	SNR=1.0								
LFF	**La Frestale**	**9.45**	**165**		*e*Pn		**Pn**	**10 24 23.3**	**+0.6**
	SNR=1.0								
LFF					*e*Sn		Sn	10 26 04.1	-4.7
	comp=Z,11nm,0.3s								
LFF	**La Frestale**	**9.45**	**165**		*e*Pn		**Pn**	**10 24 23.3**	**+0.6**
LFF					*e*Sn		Sn	10 26 04.1	-4.7
LFF	**La Frestale**	**9.45**	**165**		*e*Pn		**Pn**	**10 24 23.3**	**+0.6**
	SNR=1.0								
CAF	**Calviac**	**9.70**	**159**		*e*Pn		**Pn**	**10 24 27.2**	**+0.9**
	SNR=1.0								
CAF					*e*Sn		Sn	10 26 11.0	-4.2
	comp=Z,13nm,0.3s								
CAF	**Calviac**	**9.70**	**159**		*e*Pn		**Pn**	**10 24 27.2**	**+0.9**
CAF					*e*Sn		Sn	10 26 11.0	-4.2
CAF	**Calviac**	**9.70**	**159**		*e*Pn		**Pn**	**10 24 27.2**	**+0.9**
	SNR=1.0								
SSB	**Saint Sauveur**	**10.01**	**149**		*e*Pn		Pn	10 24 34.8	+4.2
SSB					*e*Sn		**Sn**	**10 26 23.5**	**+0.6**
SSB	**Saint Sauveur**	**10.01**	**149**		*e*Pn		Pn	10 24 34.8	+4.2
SSB					*e*Sn		**Sn**	**10 26 23.5**	**+0.6**
BSD	**Bornholm Skovb**	**10.32**	**77**		*e*S		Sn	10 26 25.3	-4.8
VIVF	**Saint-Julien-l**	**10.44**	**149**		*e*Pn		**Pn**	**10 24 38.1**	**+1.8**
	SNR=1.0								
VIVF					*e*Sn		Sn	10 26 29.0	-4.2
	comp=Z,3.7nm,0.3s								
VIVF	**Saint-Julien-l**	**10.44**	**149**		*e*Pn		**Pn**	**10 24 38.1**	**+1.8**
VIVF					*e*Sn		Sn	10 26 29.0	-4.2
VIVF	**Saint-Julien-l**	**10.44**	**149**		*e*Pn		**Pn**	**10 24 38.1**	**+1.8**
	SNR=1.0								
LPL	**La Plagne**	**10.55**	**141**		*e*Pn		**Pn**	**10 24 40.6**	**+2.5**
LPL	**La Plagne**	**10.55**	**141**		*e*Pn		**Pn**	**10 24 40.6**	**+2.5**
LPL	**La Plagne**	**10.55**	**141**		*e*Pn		**Pn**	**10 24 40.6**	**+2.5**
LPG	**La Plagne**	**10.57**	**141**		*e*Pn		**Pn**	**10 24 40.5**	**+2.0**
LPG					*e*Sn		Sn	10 26 33.0	-4.0
	comp=Z,4.1nm,0.5s								
LPG	**La Plagne**	**10.57**	**141**		*e*Pn		**Pn**	**10 24 40.5**	**+2.0**
LPG					*e*Sn		Sn	10 26 33.0	-4.0
LPG	**La Plagne**	**10.57**	**141**		*e*Pn		**Pn**	**10 24 40.5**	**+2.0**
ORIF	**Oris-en-Rattie**	**10.77**	**145**		*e*Pn		**Pn**	**10 24 42.6**	**+1.7**
	SNR=1.0								
ORIF					*e*Sn		Sn	10 26 37.0	-4.4
	comp=Z,6.0nm,0.4s								
ORIF	**Oris-en-Rattie**	**10.77**	**145**		*e*Pn		**Pn**	**10 24 42.6**	**+1.7**
ORIF					*e*Sn		Sn	10 26 37.0	-4.4
ORIF	**Oris-en-Rattie**	**10.77**	**145**		*e*Pn		**Pn**	**10 24 42.6**	**+1.7**
	SNR=1.0								
TUE	**Stuetta**	**10.87**	**130**		Pn		Pn	10 24 50.1	+7.7
TUE					Sn		**Sn**	**10 26 45.7**	**+1.6**
LASF	**Ste Croix**	**10.93**	**154**		*e*Pn		**Pn**	**10 24 43.5**	**+0.5**
LASF	**Ste Croix**	**10.93**	**154**		*e*Pn		**Pn**	**10 24 43.5**	**+0.5**
LASF	**Ste Croix**	**10.93**	**154**		*e*Pn		**Pn**	**10 24 43.5**	**+0.5**
SJPF	**Ste Jean**	**11.04**	**174**		*e*Pn		**Pn**	**10 24 45.0**	**+0.4**
	SNR=1.0								
SJPF	**Ste Jean**	**11.04**	**174**		*e*Pn		**Pn**	**10 24 45.0**	**+0.4**
SJPF	**Ste Jean**	**11.04**	**174**		*e*Pn		**Pn**	**10 24 45.0**	**+0.4**
	SNR=1.0								
MTLF	**Montolieu**	**11.25**	**161**		*e*Pn		**Pn**	**10 24 47.8**	**+0.3**
	SNR=1.0								
MTLF					*e*Sn		Sn	10 26 47.4	-5.8
	comp=Z,5.7nm,0.4s								
MTLF	**Montolieu**	**11.25**	**161**		*e*Pn		**Pn**	**10 24 47.8**	**+0.3**
MTLF					*e*Sn		Sn	10 26 47.4	-5.8
MTLF	**Montolieu**	**11.25**	**161**		*e*Pn		**Pn**	**10 24 47.8**	**+0.3**
	SNR=1.0								
EPF	**Esparros**	**11.26**	**168**		*e*Pn		**Pn**	**10 24 47.7**	**0.0**
	SNR=1.0								
EPF					*e*Sn		Sn	10 26 47.6	-5.9
	comp=Z,2.2nm,0.3s								
EPF	**Esparros**	**11.26**	**168**		*e*Pn		**Pn**	**10 24 47.7**	**0.0**
EPF					*e*Sn		Sn	10 26 47.6	-5.9
EPF	**Esparros**	**11.26**	**168**		*e*Pn		**Pn**	**10 24 47.7**	**0.0**
	SNR=1.0								
ETSF	**Etsaut**	**11.30**	**172**		*e*Pn		**Pn**	**10 24 48.2**	**0.0**
	SNR=1.0								
ETSF	**Etsaut**	**11.30**	**172**		*e*Pn		**Pn**	**10 24 48.2**	**0.0**
ETSF	**Etsaut**	**11.30**	**172**		*e*Pn		**Pn**	**10 24 48.2**	**0.0**
	SNR=1.0								
ESLA	**Sonseca Array**	**14.45**	**184**		*e*Pn		**P**	**10 25 36.8**	**-1.3**

*GUC **28** 10:50:27.8±0.6,37.29S×72.36W,h99km±8km, ML4.1*
*ISCJB **28** 10:50:28.5±0.8,37.28S±0.06×72.2W±0.2,h91km±11km, mb3.1/1,Error ellipse: s-maj=29.2km s-min=5.9km az=15.9*
*IDC **28** 10:50:30.9±4.2,37.27S×72.02W,h96km±49km,mb3.0/1, mb1 3.2/3,mb1mx3.1/16,mbtmp2.9/3,Error ellipse: s-maj=91.2km s-min=19.8km az=101.0*

ISC 28 10:50:29.4±1.2,37.26S±0.08×72.4W±0.3,h80km±14km, n13,σ0.81/18,1C-2D,Central Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
CCHI	**Chillan**	**0.71**	**23**	⇓*iP*		**Pn**	**10 50 45.6**	**+0.5**
CCHI					AML	AML	10 50 58.6	
	comp=N,4μm,0.1s							
TMU	**Temuco**	**1.48**	**186**	*i* P		**Pn**	**10 50 54.0**	**-0.4**
TMU				*i* S		**Sn**	**10 51 13.1**	**-0.2**
TALC	**Talca**	**1.96**	**19**	*i* P		**Pn**	**10 51 00.1**	**-0.6**
TALC				*i* S		**Sn**	**10 51 24.9**	**+0.4**
VLCH	**Valdivia**	**2.63**	**194**		AML	AML	10 51 40.9	
	comp=N,1μm,0.4s							
PLCA	**Paso Flores**	**3.76**	**158**	P		**Pn**	**10 51 25.4**	**+0.3**
	comp=N,0.5nm,0.3s,baz=339,slow=12,SNR=10							
LMEL	**Las Melosas**	**3.85**	**29**	⇓*iP*		**Pn**	**10 51 27.4**	**+0.9**
LMEL				*i* S		**Sn**	**10 52 11.8**	**+1.3**
ANTU	**Antumapu**	**3.96**	**22**	*e*S		**Sn**	**10 52 12.5**	**-0.5**
SJCH	**San Jose de Ma**	**3.98**	**26**	*i* S		**Sn**	**10 52 13.0**	**-0.7**
CLCH	**Cerro Calan**	**4.15**	**22**	*i* P		**Pn**	**10 51 30.2**	**-0.1**
CLCH				*i* S		**Sn**	**10 52 17.2**	**-0.5**
PEL	**Peldehue**	**4.34**	**20**	⇑*iP*		**Pn**	**10 51 32.4**	**-0.6**
PEL				*i* S		**Sn**	**10 52 22.0**	**-0.4**
CFAA	**Coronel Fontan**	**6.61**	**33**	P		**Pn**	**10 52 02.8**	**-1.1**
	comp=N,0.4nm,0.3s,baz=192,slow=12,SNR=33							
CFAA				S		**Sn**	**10 53 16.6**	**-1.3**
	comp=N,0.7nm,0.3s,baz=108,slow=19,SNR=9.7							
TXAR	**Lajitas Array**	**72.43**	**332**	P		**P**	**11 01 48.0**	**+0.9**
	comp=N,0.2nm,0.6s,baz=148,slow=7.1,SNR=5.0							
WRA	**Warramunga Arr**	**117.77**	**209**	PKP		**PKPdf**	**11 09 06.4**	**-0.5**
	comp=N,0.4nm,0.9s,baz=160,slow=1.8,SNR=3.8							

*IDC **28** 10:57:14.9±5.2,22.73N×121.68E,h0km,mb3.4/3, mb1 3.6/3,mb1mx3.3/25,mbtmp3.4/3,Error ellipse: s-maj=382.8km s-min=29.6km az=60.0*
*ISCJB **28** 10:57:21.5±0.5,22.18N±0.02×120.54E±0.04,h43km±4km, mb3.2/3,Error ellipse: s-maj=6.1km s-min=4.0km az=171.5*
*TAP **28** 10:57:21.9,22.23N×120.57E,h31km,ML3.5,C*

ISC 28 10:57:22.0±1.0,22.19N±0.03×120.54E±0.04,h33km±5km, n45,σ0.66/74,mb3.3/3,3C-12D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
SCZT	**Fangliau**	**0.19**	**21**	⇑*iP*		**Pn**	**10 57 27.9**	**-0.6**
	baz=21							
SCZT				*i* S		**Sb**	**10 57 32.5**	**-0.4**
	baz=21							
TWP	**Hsiaoliuchiu**	**0.23**	**312**	⇓*iP*		**Pn**	**10 57 30.0**	**+0.9**
	baz=295							
HEN	**Hengchun**	**0.26**	**136**	⇓*iP*		**Pn**	**10 57 29.5**	**0.0**
	baz=141							
HEN				*i* S		**Sb**	**10 57 35.6**	**+1.6**
	baz=141							
EAST	**Anshuo**	**0.34**	**56**	⇑*iP*		**Pb**	**10 57 30.2**	**-0.1**
	baz=60							
EAST				S		**Sb**	**10 57 36.2**	**+0.3**
	baz=60							
TWK1	**Hengchun**	**0.35**	**135**	⇓*iP*		**Pn**	**10 57 30.8**	**0.0**
	baz=140							
TWK1				*i* S		**Sn**	**10 57 37.5**	**+0.9**
	baz=140							
TAW	**Tawu**	**0.36**	**63**	⇑*iP*		**Pb**	**10 57 30.4**	**-0.2**
	baz=67							
TAW				*i* S		**Sb**	**10 57 36.7**	**+0.3**
	baz=67							
KAU	**Kaohsiung**	**0.43**	**330**	P		**Pn**	**10 57 32.5**	**+0.5**
	baz=313							
TSEB	**Hengchuen, Pin**	**0.44**	**131**	⇓*iP*		**Pn**	**10 57 31.8**	**-0.2**
	baz=139							
TSEB				*i* S		**Sn**	**10 57 39.6**	**+0.7**
	baz=139							
SGLT	**Jiouru**	**0.53**	**355**	*e*P		**Pn**	**10 57 34.0**	**+0.6**
	baz=1.0							
ECL	**Taimali**	**0.55**	**43**	⇓*iP*		**Pb**	**10 57 33.1**	**-0.4**
	baz=47							
ECL				*i* S		**Sb**	**10 57 40.5**	**-0.8**
	baz=47							
TWM1	**Shoushan**	**0.64**	**350**	⇓*iP*		**Pb**	**10 57 35.3**	**+0.5**
	baz=347							
TTN	**Taitung**	**0.79**	**45**	*e*P		**Pb**	**10 57 37.7**	**+0.3**
	baz=58							
TWG	**Pinlang**	**0.79**	**38**	⇓*iP*		**Pn**	**10 57 37.1**	**+0.1**
	baz=38							
TWG				S		**Sn**	**10 57 47.6**	**-0.1**
	baz=38							
TAI1	**Yung-k'ang**	**0.89**	**341**	*e*P		**Pb**	**10 57 39.1**	**+0.1**
	baz=337							
LAY	**Lan-yu**	**0.95**	**99**	*e*P		**Pn**	**10 57 37.8**	**-1.2**
	baz=88							
LAY				*e*S		**Sn**	**10 57 51.2**	**-0.3**
	baz=88							
CHN1	**Nanshi**	**0.99**	**359**	⇓*iP*		**Pn**	**10 57 39.3**	**-0.3**
	baz=356							
CHN1				*e*S		**Sb**	**10 57 53.8**	**+0.3**
	baz=356							
WTP	**Ta-pu**	**1.05**	**3**	⇓*iP*		**Pn**	**10 57 40.0**	**-0.5**
TWK	**Hsinying**	**1.07**	**357**	*e*P		**Pn**	**10 57 40.4**	**-0.4**
	baz=354							
TWK				*e*S		**Sn**	**10 57 55.4**	**+0.7**
	baz=354							
ELDTW	**Lidau**	**1.08**	**24**	*e*P		**Pn**	**10 57 41.0**	**-0.1**
	baz=22							
ELDTW				*e*S		**Sn**	**10 57 55.4**	**+0.4**
	baz=22							
CHN4	**Tsaushan**	**1.16**	**2**	⇓*iP*		**Pn**	**10 57 41.3**	**-0.6**
	baz=359							
CHN4				*e*S		**Sn**	**10 57 56.6**	**0.0**
	baz=359							
CHKT	**Chengkung**	**1.18**	**40**	*e*P		**Pn**	**10 57 43.0**	**+0.8**
	baz=39							
CHKT				*e*S		**Sn**	**10 57 57.6**	**+0.4**
	baz=39							
CHN8	**Yiju**	**1.19**	**345**	*e*P		**Pn**	**10 57 42.0**	**-0.3**
	baz=342							
CHY	**Chiayi**	**1.30**	**355**	*e*P		**Pn**	**10 57 44.7**	**+0.7**
	baz=352							
ALS	**Alishan**	**1.33**	**10**	⇓*iP*		**Pn**	**10 57 44.4**	**-0.2**
	baz=356							
ALS				*e*S		**Sn**	**10 58 02.0**	**+0.6**
	baz=356							
TWF1	**Yuli**	**1.35**	**31**	P		**Pn**	**10 57 45.3**	**+0.7**
	baz=30							
TWF1				*e*S		**Sn**	**10 58 01.5**	**+0.1**
	baz=30							
CHN5	**Tsauling**	**1.41**	**5**	⇓*iP*		**Pn**	**10 57 44.9**	**-0.5**
	baz=348							
CHN5				*e*S		**Sn**	**10 58 03.8**	**+0.9**
	baz=348							
WSF	**Szhu**	**1.47**	**348**	*e*P		**Pn**	**10 57 44.8**	**-1.4**
	baz=344							
WSF				*e*S		**Sn**	**10 58 04.0**	**-0.3**
	baz=344							
WGK	**Gukeng**	**1.49**	**1**	*e*P		**Pn**	**10 57 45.9**	**-0.6**
	baz=345							
WGK				*e*S		**Sn**	**10 58 04.9**	**+0.1**
	baz=345							
EHY	**Hungye**	**1.49**	**29**	*e*P		**Pn**	**10 57 47.3**	**+0.7**
	baz=27							
EHY				*e*S		**Sn**	**10 58 05.0**	**0.0**
	baz=27							
PNG	**Penghu**	**1.65**	**327**	*e*P		**Pn**	**10 57 47.2**	**-1.4**
	baz=334							
WTCT	**Ta-ch'eng**	**1.68**	**352**	*e*P		**Pn**	**10 57 48.8**	**-0.4**
	baz=348							
SMLT	**Sun Moon Lake**	**1.71**	**11**	P		**Pn**	**10 57 49.7**	**-0.1**
	baz=353							
SMLT				*e*S		**Sn**	**10 58 10.7**	**+0.1**
	baz=353							
TYC	**Yuchr**	**1.73**	**10**	*e*P		**Pn**	**10 57 49.4**	**-0.4**
	baz=352							
TYC				*e*S		**Sn**	**10 58 11.1**	**+0.4**
	baz=352							
ESL	**Shilin**	**1.81**	**27**	*e*P		**Pn**	**10 57 51.9**	**+1.0**
	baz=26							
ESL				*e*S		**Sn**	**10 58 13.3**	**+0.6**
	baz=26							
WHF	**Hehuan Shan**	**2.06**	**19**	*e*P		**Pn**	**10 57 55.0**	**+0.3**
	baz=17							
WHF				*e*S		**Sn**	**10 58 19.6**	**+0.2**
	baz=17							
TWT	**Tachien**	**2.13**	**16**	*e*P		**Pn**	**10 57 56.1**	**+0.5**
	baz=359							
TWT				*e*S		**Sn**	**10 58 21.0**	**0.0**
	baz=359							
NNS	**Nan Shan**	**2.36**	**19**	*e*P		**Pn**	**10 57 59.7**	**+1.0**
	baz=17							
NNS				*e*S		**Sn**	**10 58 25.2**	**-1.5**
	baz=17							
NSTT	**Nanjuang**	**2.46**	**10**	*e*P		**Pn**	**10 57 59.6**	**-0.3**
	baz=353							
NSK	**Sanguang**	**2.58**	**17**	*e*P		**Pn**	**10 58 01.7**	**0.0**
	baz=16							
NSK				*e*S		**Sn**	**10 58 31.9**	**-0.1**
	baz=16							
ENTT	**Nioudou**	**2.61**	**21**	*e*P		**Pn**	**10 58 03.0**	**+1.0**
	baz=7.0							
ENTT				*e*S		**Sn**	**10 58 33.8**	**+1.3**
	baz=7.0							
TWC	**Suao**	**2.69**	**26**	*e*P		**Pn**	**10 58 04.0**	**+1.1**
	baz=26							
TWC				*e*S		**Sn**	**10 58 35.1**	**+0.7**
	baz=26							
KNM	**Kinmen**	**2.94**	**319**	*e*P		**Pn**	**10 58 06.3**	**-0.2**
	baz=312							
MKAR	**Makanchi Array**	**39.38**	**318**	P		**P**	**11 04 48.8**	**+0.2**
	0.4nm,0.7s,baz=99,slow=8.9,SNR=3.6							
WRA	**Warramunga Arr**	**43.99**	**161**	P		**P**	**11 05 25.2**	**-1.3**
	0.4nm,0.6s,baz=344,slow=8.6,SNR=4.5							
ASAR	**Alice Springs**	**47.40**	**163**	P		**P**	**11 05 53.1**	**-0.3**
	0.1nm,0.4s,baz=344,slow=6.9,SNR=4.5							

IDC 28 11:10:55.5±9.0,18.70N×145.59E,h202km±85km,mb3.2/9, mb1 3.5/9,mb1mx3.3/26,mbtmp3.2/9,Error ellipse: s-maj=28.5km s-min=14.2km az=91.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
WRA	**Warramunga Arr**	**39.96**	**197**	P		P	11 18 10.4	-0.1
	1.2nm,0.3s,baz=22,slow=8.9,SNR=33							
WRA					PcP	PcP	11 20 11.1	-0.6
	0.4nm,0.4s,baz=18,slow=3.7,SNR=7.6							
SONM	**Songino Array**	**43.07**	**321**	P		P	11 18 35.4	-0.3
	0.4nm,0.5s,baz=135,slow=8.8,SNR=3.1							
ASAR	**Alice Springs**	**43.63**	**196**	P		P	11 18 39.9	-0.3
	0.2nm,0.4s,baz=19,slow=6.5,SNR=10							
ASAR					PcP	PcP	11 20 23.7	-0.1
	0.3nm,0.9s,baz=20,slow=3.0,SNR=4.3							
MKAR	**Makanchi Array**	**58.38**	**314**	P		P	11 20 29.7	-0.1
	0.4nm,0.6s,baz=67,slow=7.9,SNR=4.4							
ILAR	**Eielson Array**	**63.69**	**26**	P		P	11 21 04.3	-0.8
	0.6nm,0.9s,baz=248,slow=5.1,SNR=5.5							
BVAR	**Borovoye Array**	**66.40**	**320**	P		P	11 21 23.1	+0.3
	0.9nm,0.5s,baz=84,slow=9.4,SNR=7.0							
INK	**Inuvik**	**69.41**	**23**	P		P	11 21 41.4	+0.2
	0.6nm,0.9s,baz=269,slow=7.5,SNR=4.6							
YKA	**Yellowknife Ar**	**78.03**	**28**	P		P	11 22 31.4	0.0
	0.3nm,0.5s,baz=290,slow=5.6,SNR=6.8							
NVAR	**Mina Array Bea**	**83.22**	**52**	P		P	11 23 00.5	+0.7
	1.4nm,0.9s,baz=261,slow=6.7,SNR=8.3							

*NIED **28** 11:21:00,42.50N×145.20E,h23km,Mw5.2 Best double couple: M0 6.92000×10^16 NP1:φs77.00000°,δ68.00000°, λ-124.00000°. NP2:φs318.00000°,δ40.00000°, λ-36.00000°.*
*IDC **28** 11:21:16.1±0.3,42.58N×145.08E,h0km,mb5.6/40, mb1 5.7/46,mb1mx5.7/47,mbtmp5.6/46,ML4.7/6,MS4.8/35, Ms1 4.8/35,ms1mx4.7/51,Error ellipse: s-maj=9.1km s-min=7.3km az=158.0*
*BJI **28** 11:21:17.0,42.67N×145.03E,h18km,mB5.4/34,mb5.4/67, Ms5.0/68,Ms7 4.8/62*
*ISCJB **28** 11:21:18.6±0.5,42.61N±0.02×144.98E±0.01,h24km±3km, mb5.8/462,MS5.0/213,Error ellipse: s-maj=2.9km s-min=1.7km az=162.7*
*NEIC **28** 11:21:18.8±0.8,42.65N×144.95E,h15km±5km,mb5.9/263, MS4.9/129,MW5.2,MW5.2(NIED),Error ellipse: s-maj=3.0km s-min=1.8km az=161.0,Moment Tensor Solution. s39 Moment tensor: Scale 10^16Nm; Mrr-6.14; Mθθ7.90; Mφφ-1.76; Mrθ-0.68; Mφr-3.26; Mθr-0.08; Best double couple: M0 7.90000×10^16 NP1:φs292.00000°, δ43.00000°,λ-83.00000°. NP2:φs103.00000°,δ48.00000°, λ-96.00000°. Principal axes: T 8.9200, Plg2.0000°, Azm196.0000°; N -2.7400, Plg4.0000°, Azm106.0000°; P -6.1900, Plg84.0000°, Azm314.0000°;*
NEIC Felt at Bihoro, Makubetsu and Sapporo. Recorded [4 JMA] in eastern Hokkaido; [2 JMA] in central and southeastern Hokkaido; [1 JMA] in southwestern Hokkaido. Also recorded [1 JMA] in Aomori and Iwate, Honshu.
*TEH **28** 11:21:18.0,42.68N×144.94E,h7km,ML5.3*
*JMA **28** 11:21:19.4,42.59N×145.09E,h38km±1km,M5.4*
JMA Felt IV J1.
*MOS **28** 11:21:19.5±0.8,42.57N×144.99E,h33km,mb6.1/149, MS5.0/72,Error ellipse: s-maj=5.6km s-min=3.6km az=104.1*
MOS Felt (II-III) at Yuzhno-Kuril'sk.
*SKHL **28** 11:21:20.2±0.3,42.57N×145.33E,h67km±8km,mb6.0/6, mbh5.4/2,Ms5.3/5,msh5.7/5*
SKHL Felt (II) at Yushno-Kurilsk.
*GCMT **28** 11:21:22.6±0.2,42.60N×145.04E,h22km,MW5.2, Moment Tensor Solution. s69,c109; s6,c6; Moment tensor: Scale 10^16Nm; Mrr-5.04±.22; Mθθ7.06±.16; Mφφ-2.02±.17; Mrθ-6.13±.36; Mθφ-3.23±.12; Mφr-0.80±.31; Best double couple: M0 9.20000×10^16 NP1:φs317.00000°, δ31.00000°,λ-43.00000°. NP2:φs86.00000°,δ69.00000°, λ-114.00000°. Principal axes: T 10.2000, Plg21.0000°, Azm193.0000°; N -2.0000, Plg22.0000°, Azm94.0000°; P -8.3000, Plg59.0000°, Azm322.0000°; Data Used: II IU IC G CN. Surface waves: sta= 91, comp=161, per= 50.*
*BGS **28** 11:21:23.1±1.2,43.03N×143.28E,h15km,mb5.9,MS5.3*
*SZGRF **28** 11:21:24.5,43.46N×145.98E,h30km,mb5.9,MS5.3, Hokkaido, Japan, region*
*DJA **28** 11:21:25.8±2.6,43°N±6'×14'5E±', h75km±23km, M5.5/45, mB5.9/29,mb5.5/45,Mw(mB)5.5/29,Mwp6.4/1*

ISC 28 11:21:19.6±0.3,42.67N±0.02×145.00E±0.02,h19km±1km, h19km:pP-P,n1864,σ1.04/1979,mb5.9/462,MS5.0/213, 261C-453D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
JAK	**Akkeshi**	**0.39**	**326**	⇑P		**Pn**	**11 21 29.9**	**-0.3**
JAK				*e*S		**Sn**	**11 21 37.8**	**+0.6**
NEM2	**Nemuro 2**	**0.88**	**38**	⇑P		**Pb**	**11 21 35.6**	**-0.7**
NEM2				*e*S		**Sb**	**11 21 47.5**	**-0.1**
JOB	**Onbets**	**0.89**	**286**	⇓P		**Pn**	**11 21 36.9**	**-0.1**
JNK	**Nakash**	**0.94**	**347**	⇑P		**Pn**	**11 21 37.3**	**-0.4**
JNK				*e*S		**Sn**	**11 21 50.6**	**0.0**
JAR	**Ashorobuto**	**1.10**	**305**	⇓P		**Pn**	**11 21 39.7**	**-0.2**
JAR				*e*S		**Sn**	**11 21 54.0**	**-0.6**
JCH	**Churui**	**1.21**	**268**	P		**Pn**	**11 21 41.2**	**-0.3**
JCH				*e*S		**Sn**	**11 21 57.6**	**+0.3**
JRA	**Rausu**	**1.27**	**4**	P		**Pn**	**11 21 42.1**	**-0.2**
JRA				*e*S		**Sg**	**11 21 59.2**	**-1.6**
YUK	**Yuzh-Kuril'sk**	**1.50**	**24**	*c i*PN		**Pn**	**11 21 45.1**	**-0.4**
YUK				*i* S		**Sn**	**11 22 04.0**	**-0.5**
	comp=N,4μm,0.5s			pmax	pmax			
YUK	**Yuzh-Kuril'sk**	**1.50**	**24**	⇑*iP*		**Pn**	**11 21 45.1**	**-0.4**
YUK				AMB	AMB		11 21 50.3	
	comp=N,4μm,0.5s							
YUK				AMB	AMB		11 21 50.3	
	comp=N,3μm,0.5s							
YUK				AMB

YSS comp=Z,2µm,1.0s eLQ LQ 11 23 45.0
YSS eLR LR 11 24 18.0
YSS AMS AMS 11 24 42.0
comp=Z,37µm,16.0s
YSS AMS AMS 11 24 42.0
comp=Z,20µm,16.0s
YSS AMS AMS 11 24 42.0
comp=Z,19µm,13.0s
YSS AMS AMS 11 24 42.0
comp=Z,21µm,13.0s
YSS AMS AMS 11 24 42.0
comp=Z,18µm,15.0s
YSS AMS AMS 11 24 42.0
comp=Z,31µm,15.0s
UGL Uglegorsk 6.73 343 *e*PN **Pn 11 22 59.4 +2.2**
UGL S Sb 11 24 24.3 -11
UGL pmax pmax
comp=Z,2µm,4.0s
UGL pmax pmax
comp=N,1µm,3.0s
UGL pmax pmax
comp=E,500nm,3.0s
UGL pmax pmax
comp=Z,190nm,0.7s
UGL smax smax
comp=N,2µm,4.0s
UGL smax smax
comp=E,4µm,4.0s
UGL smax smax
comp=N,1µm,1.3s
UGL smax smax
comp=E,410nm,0.9s
UGL MLR MLR
comp=Z,6µm,5.0s
UGL MLR MLR
comp=N,18µm,14.0s
UGL MLR MLR
comp=E,10µm,13.0s
UGL Uglegorsk 6.73 343 *e*P **Pn 11 22 59.4 +2.2**
UGL AMB AMB 11 23 04.0
comp=E,1µm,3.0s
UGL AMB AMB 11 23 04.0
comp=E,500nm,3.0s
UGL AMB AMB 11 23 04.0
comp=E,2µm,4.0s
UGL AMB AMB 11 23 05.5
comp=E,190nm,0.7s
UGL A A 11 24 30.0
comp=E,2µm,4.0s
UGL A A 11 24 30.0
comp=E,4µm,4.0s
UGL A A 11 24 31.0
comp=E,410nm,0.9s
UGL A A 11 24 31.0
comp=E,1µm,1.3s
UGL eL L 11 24 50.0
UGL AMS AMS 11 26 17.0
comp=E,6µm,5.0s
UGL AMS AMS 11 26 17.0
comp=E,18µm,14.0s
UGL AMS AMS 11 26 17.0
comp=E,10µm,13.0s
MAJO Matsushiro 8.06 223 *e*PN **Pn 11 23 14.5 -1.1**
MAJO Matsushiro 8.06 223 *e*Pn **Pn 11 23 14.5 -1.1**
MAJO *e*Sn **Sn 11 24 46.2 +0.1**
MAT Matsushiro 8.06 223 P **Pn 11 23 14.3 -1.3**
MAT eS **Sn 11 24 43.0 -3.1**
MJAR Matsushiro Arr 8.06 223 Pn **Pn 11 23 14.0 -1.5**
MJAR Matsushiro Arr 8.06 223 Pn **Pn 11 23 14.0 -1.5**
comp=E,54nm,0.3s,baz=28,slow=14,SNR=1040
TYV Tymovskoe 8.35 350 *e*P **Pn 11 23 21.0 +1.5**
TYV AMB AMB 11 23 22.0
comp=E,7.0nm,0.4s
TYV AMB AMB 11 23 22.8
comp=E,16nm,0.3s
TYV AMB AMB 11 23 22.8
comp=E,29nm,0.3s
TYV AMB AMB 11 23 34.0
comp=E,1µm,4.0s
TYV AMB AMB 11 23 34.0
comp=E,2µm,8.0s
TYV A A 11 25 13.5
comp=E,79nm,0.8s
TYV A A 11 25 13.5
comp=E,75nm,0.8s
TYV A A 11 25 20.0
comp=E,2µm,4.0s
TYV AMS AMS 11 27 38.0
comp=E,12µm,12.0s
TYV AMS AMS 11 27 38.0
comp=E,12µm,14.0s
USRK Ussuriysk Arra 9.58 284 Pn Pn 11 23 39.4 +3.0
comp=E,6.7nm,0.3s,baz=90,slow=15,SNR=82
USRK Sn Sn 11 25 32.1 +8.7
baz=115,slow=35,SNR=1.6
USRK LR LR 11 27 35.9
comp=E,3µm,18.2s,baz=321,slow=39
VLA Vladivostok 9.63 277*c i*PN Pn 11 23 41.4 +4.3
VLA *e*S Sn 11 25 31.2 +6.5
VLA pmax pmax
comp=Z,734nm,1.5s
JHJ Hachijo jima 2 10.39 205 Pn Pn 11 23 44.0 -3.4
comp=Z,36nm,0.3s,baz=242,slow=15,SNR=16
JHJ Sn Sn 11 25 32.1 -11
comp=Z,35nm,0.3s,baz=52,slow=19,SNR=3.6
JHJ LR LR 11 28 31.9
comp=Z,3µm,19.3s,baz=27,slow=42
JHE Heguri 10.82 225 P **Pn 11 23 52.3 -1.1**
NKL Nikolayevsk 10.88 346 *e*P **Pn 11 23 53.0 -1.1**
NKL AMB AMB 11 24 04.0
comp=Z,38nm,1.0s
NKL AMB AMB 11 24 04.0
comp=Z,43nm,1.0s
NKL AMB AMB 11 24 04.0
comp=Z,260nm,1.0s
NKL AMB AMB 11 24 09.0
comp=Z,700nm,7.0s
NKL AMB AMB 11 24 09.0
comp=Z,500nm,7.0s
NKL AMB AMB 11 24 09.0
comp=Z,2µm,7.0s
NKL A A 11 26 10.0
comp=Z,1µm,6.0s
NKL eL L 11 27 14.0
NKL AMS AMS 11 28 22.0
comp=Z,4µm,17.0s
NKL AMS AMS 11 28 22.0
comp=Z,4µm,17.0s
NKL AMS AMS 11 28 22.0
comp=Z,6µm,17.0s
OKH Okha 10.97 354 *e*PN Pn 11 23 58.6 +3.2
OKH pmax pmax
comp=Z,2µm,9.0s
OKH Okha 10.97 354 *e*P Pn 11 23 58.6 +3.2
OKH *e*P Pn 11 23 59.0 +3.6
OKH AMB AMB 11 24 03.6
comp=Z,300nm,0.9s
OKH AMB AMB 11 24 04.4
comp=Z,1µm,7.0s
OKH AMB AMB 11 24 04.4
comp=Z,2µm,9.0s
OKH *e*S **Sn 11 25 58.2 +0.7**
OKH eLQ LQ 11 27 04.0
OKH AMS AMS 11 29 05.0
comp=Z,16µm,15.0s
OKH AMS AMS 11 29 05.0
comp=Z,9µm,16.0s
OKH AMS AMS 11 29 05.0
comp=Z,14µm,16.0s
SKR Severo-Kuril's 11.06 40 *e*PN Pn 11 23 53.0 -3.6
SKR pmax pmax
comp=Z,540nm,1.0s
SKR pmax pmax
comp=N,170nm,0.5s
SKR pmax pmax
comp=E,150nm,0.5s
SKR MLR MLR
comp=N,6µm,16.0s
SKR MLR MLR
comp=E,6µm,16.0s
SKR MLR MLR
comp=Z,8µm,16.0s
SKR Severo-Kuril's 11.06 40 *e*P Pn 11 23 53.0 -3.6
SKR AMB AMB 11 24 03.0
comp=Z,540nm,1.0s
SKR AMB AMB 11 24 03.0
comp=Z,170nm,0.5s
SKR AMB AMB 11 24 03.0
comp=Z,150nm,0.5s
SKR *e*S Sn 11 25 52.0 -7.6
SKR A A 11 25 58.5
comp=Z,400nm,1.0s
SKR A A 11 25 58.5
comp=Z,220nm,1.0s
SKR A A 11 25 58.5
comp=Z,180nm,1.0s
SKR AMS AMS 11 28 06.0
comp=Z,6µm,16.0s
SKR AMS AMS 11 28 06.0
comp=Z,8µm,16.0s
SKR AMS AMS 11 28 06.0
comp=Z,5µm,16.0s
KLR Kul'dur 11.31 310 *e*PN **Pn 11 23 59.7 -0.4**
KLR pmax pmax
comp=N,160nm,1.6s
KLR pmax pmax
comp=E,670nm,1.6s
KLR pmax pmax
comp=Z,630nm,1.6s
KLR MLR MLR
comp=Z,43µm,12.0s
MDJ Mudanjiang 11.34 285 P **Pn 11 24 02.0 +1.6**
MDJ pP 11 24 05.8
MDJ sP 11 24 08.5
MDJ S Sn 11 26 12.3 +5.8
MDJ ScP **ScP 11 33 26.3 +1.0**
MDJ PcS **PcS 11 33 28.0 +0.4**
MDJ ScS **ScS 11 37 01.8 +1.2**
MDJ pmax pmax
comp=Z,57nm,1.5s
MDJ pmax pmax
comp=Z,240nm,3.5s
MDJ LR LR
comp=N,2µm,13.9s
MDJ LR LR
comp=E,2µm,16.3s
MDJ LR LR
comp=Z,3µm,19.6s
PEA0B Petropavlovsk- 13.45 35 *e*Pn **Pn 11 24 27.4 -1.9**
PEA0B *e*Sn **Sn 11 27 00.9 +2.7**
PETK Petropavlovsk- 13.45 35 P **Pn 11 24 27.5 -1.8**
PETK pmax pmax
comp=Z,5.0nm,0.3s
PETK Petropavlovsk- 13.45 35 Pn **Pn 11 24 27.5 -1.8**
PETK Petropavlovsk- 13.45 35 Pn **Pn 11 24 27.5 -1.8**
comp=Z,5.4nm,0.3s,baz=190,slow=11,SNR=44
JTY Toyota 13.76 237 P **Pn 11 24 33.3 -0.3**
PET Petropavlovsk 13.80 37 *e*P **Pn 11 24 35.7 +1.6**
PET *e*S **Sn 11 27 08.8 +2.1**
PET pmax pmax
comp=Z,89nm,0.7s
PET pmax pmax
comp=Z,500nm,10.4s
PET MLR MLR
comp=Z,6µm,17.0s
KSRS Korea Array 14.07 254 Pn **Pn 11 24 38.2 +0.4**
comp=Z,0.8nm,0.3s,baz=68,slow=12,SNR=122
KSRS Sn **Sn 11 27 18.3 +5.0**
comp=Z,0.8nm,0.3s,baz=67,slow=24,SNR=5.7
KSRS LR LR 11 29 57.1
comp=Z,3µm,19.1s,baz=63,slow=37
KSAR Wonju Array Be 14.11 254 Pn **Pn 11 24 38.2 -0.1**
KSAR Sn **Sn 11 27 18.3 +4.1**
JFA Akaike 14.29 236 P **Pn 11 24 39.3 -1.6**
CN2 Changchun 14.30 281 *e*P **Pn 11 24 41.3 +0.4**
CN2 *es*P 11 24 48.0
CN2 *e*S **Sn 11 27 19.8 +0.9**
CN2 pmax pmax
comp=Z,50nm,0.7s
CN2 LR LR
comp=N,3µm,15.0s
CN2 LR LR
comp=E,3µm,15.0s
CN2 LR LR
comp=Z,4µm,16.0s
JNU Nakatsue 14.65 234 *e*Pn **Pn 11 24 43.0 -2.8**
JNU *e*Sn **Sn 11 27 26.2 -1.4**
JNU Sn **Sn 11 27 33.1 +5.5**
JNU Nakatsue 14.65 234 Pn **Pn 11 24 43.9 -1.9**
comp=Z,1.0nm,0.3s,baz=49,slow=13,SNR=21
JNU Sn **Sn 11 27 33.1 +5.5**
comp=Z,0.2nm,0.3s,baz=80,slow=17,SNR=1.4
JNU LR LR 11 31 11.6
comp=Z,6µm,19.6s,baz=160,slow=41
JFI Itaya 14.74 236 P **Pn 11 24 45.4 -1.6**
INCN Inchon 14.98 256 P **Pn 11 24 50.3 +0.1**
SNR=7.0
SNY Shenyang 15.89 274 ⇓P **Pn 11 25 01.8 -0.2**
SNY S **Sn 11 27 56.5 -1.0**
SNY pmax pmax
comp=Z,29nm,1.4s
SNY pmax pmax
comp=Z,220nm,3.5s
SNY LR LR
comp=N,2µm,12.9s
SNY LR LR
comp=E,1µm,15.0s
SNY LR LR
comp=Z,2µm,20.8s
JSU Suzuyama 16.06 231 P **Pn 11 25 01.5 -2.9**
ZEA Zeya 16.15 319 *e*P **Pn 11 25 05.0 -0.4**
ZEA AMB AMB 11 25 08.5
comp=Z,130nm,0.9s
ZEA AMB AMB 11 25 08.5
comp=Z,120nm,1.0s
ZEA AMB AMB 11 25 08.5
comp=Z,240nm,1.0s
ZEA AMB AMB 11 25 14.0
comp=Z,700nm,6.0s
ZEA A A 11 28 27.0
comp=Z,700nm,6.0s
ZEA A A 11 28 27.0
comp=Z,1µm,11.0s
JFU Fukue jima 2 16.27 237 P **Pn 11 25 05.6 -1.4**
DL2 Dalian 18.08 266 ⇓P **Pn 11 25 28.3 -1.3**
DL2 S **Sn 11 28 47.3 -3.4**
DL2 pmax pmax
comp=Z,140nm,0.7s
DL2 pmax pmax
comp=Z,140nm,5.6s
DL2 LR LR
comp=N,590nm,15.1s
DL2 LR LR
comp=E,940nm,15.6s
DL2 LR LR
comp=Z,1µm,15.8s
HIA Hailar 18.70 299 *e*P **P 11 25 36.0 -0.8**
HIA comp=Z,178nm,0.8s *e*S **S 11 29 07.4 -1.4**
CLNS Chul'man 19.12 325 *e*P **P 11 25 41.0 -0.3**
CLNS pmax pmax
comp=Z,15nm,0.8s
CLNS pmax pmax
comp=N,12nm,0.9s
CLNS pmax pmax
comp=E,3.0nm,1.2s
CLNS MLR MLR
comp=E,3µm,14.0s
CLNS MLR MLR
comp=N,4µm,13.0s
CLNS MLR MLR
comp=Z,6µm,13.0s
JTK Tokunoshima 19.76 226 P **P 11 25 48.2 -0.2**
SEY Seymchan 20.75 10⇓*i*P **P 11 25 56.1 -2.8**
JOW Kunigami 20.88 226 *e*P **P 11 26 00.7 +0.1**
comp=Z,90nm,1.1s
JOW *e*S Sn 11 29 55.9 -2.5
FX1 Attu Island--F 21.37 52 *e*P **P 11 26 06.7 +1.1**
FX1 *e*S **S 11 30 05.7 +3.7**
FX1 S Sn 11 30 14.2 +4.3
FX1 Attu Island--F 21.37 52 P **P 11 26 06.5 +0.9**
comp=Z,456nm,0.6s,baz=276,slow=4.3,SNR=96
FX1 S Sn 11 30 14.2 +4.3
comp=Z,13nm,0.6s,baz=240,slow=20,SNR=2.8
YAK Yakutsk 21.42 340 *e*P **P 11 26 02.9 -3.2**
YAK *e* 11 26 16.8
YAK *e*S **S 11 29 56.5 -6.2**
YAK *e* 11 30 06.2
YAK *e**SS Sn 11 30 11.6 +0.7
YAK *e*SSS SSS 11 30 34.9
YAK *e* 11 37 24.9
YAK pmax pmax
comp=Z,127nm,0.9s
YAK pmax pmax
comp=N,41nm,1.1s
YAK pmax pmax
comp=E,34nm,1.1s
YAK smax smax
comp=N,292nm,1.8s
YAK smax smax
comp=E,289nm,1.8s
YAK MLR MLR
comp=Z,5µm,15.0s
YAK MLR MLR
comp=E,2µm,13.0s
YAK MLR MLR
comp=N,5µm,17.0s
BJI Beijing 21.75 273 P **P 11 26 08.8 -1.0**
BJI S S 11 30 02.0 -7.6
BJI pmax pmax
comp=Z,96nm,1.9s
BJI pmax pmax
comp=Z,410nm,3.7s
BJI LR LR
comp=N,2µm,14.2s
BJI LR LR
comp=E,2µm,18.4s
BJI LR LR
comp=Z,1µm,19.5s
SSE Sheshan 22.20 246 P **P 11 26 12.5 -2.2**
SSE S **S 11 30 15.0 -3.3**
SSE sS Sn 11 30 29.0 -1.0
SSE pmax pmax
comp=Z,78nm,1.2s
SSE pmax pmax
comp=Z,160nm,6.5s
SSE LR LR
comp=N,2µm,14.8s
SSE LR LR
comp=E,1µm,14.8s
SSE LR LR
comp=Z,2µm,19.6s
TIA Tai'an 22.41 263 P **P 11 26 15.8 -1.2**
TIA S **S 11 30 16.0 -6.3**
TIA pmax pmax
comp=Z,130nm,0.7s
TIA LR LR
comp=N,2µm,15.2s
TIA LR LR
comp=E,2µm,18.6s
TIA LR LR
comp=Z,2µm,14.2s
CIT Chita 23.11 305 *e*P **P 11 26 24.9 +0.7**
CIT *e* 11 26 35.3
CIT *e* 11 26 48.9
CIT *e*S **S 11 30 34.8 +0.4**
CIT pmax pmax
comp=Z,352nm,1.1s
NJ2 Nanjing 23.24 251 *e*P **P 11 26 24.3 -1.3**
NJ2 pP **pP 11 26 33.8 +2.6**
NJ2 sP **sP 11 26 38.0 +4.3**
NJ2 PP **PnPn 11 26 56.3 +4.9**
NJ2 S **S 11 30 32.0 -4.7**
NJ2 pmax pmax
comp=Z,60nm,1.0s
NJ2 pmax pmax
comp=Z,150nm,5.4s
NJ2 LR LR
comp=N,3µm,18.2s
NJ2 LR LR
comp=E,3µm,16.5s
NJ2 LR LR
comp=Z,3µm,15.6s
HHC Hu-ho-hao-te 24.92 277 *e*P **P 11 26 41.0 -0.5**
HHC sP **sP 11 26 48.0 -1.8**
HHC PP **PnPn 11 27 18.5 +4.1**
HHC S **S 11 31 01.5 -2.4**
HHC sS sS 11 31 08.0 -5.5
HHC SS **SnSn 11 32 00.0 +8.0**
HHC pmax pmax
comp=Z,130nm,1.0s
HHC pmax pmax
comp=Z,960nm,5.1s
HHC LR LR
comp=N,2µm,13.7s
HHC LR LR
comp=E,3µm,14.3s
HHC LR LR
comp=Z,4µm,14.6s
BTO Baotou 26.11 277 *e*P **P 11 26 52.8 +0.5**
TATO Taipei 26.19 235 *e*P **P 11 26 55.5 +2.6**
comp=Z,139nm,0.5s
TATO LR LR
comp=Z,4µm,20.0s
YHNB Yeheng 26.48 235 *e*P **P 11 26 56.6 +0.9**
comp=Z,218nm,0.4s
YHNB LR LR
comp=Z,5µm,21.0s
ULN Ulaanbaatar 27.01 294 *e*P **P 11 27 00.7 +0.3**
comp=Z,168nm,0.8s
ULN LR LR
comp=Z,2µm,20.0s
ULN Ulaanbaatar 27.01 294 P **P 11 27 00.8 +0.4**
SNR=114
ULN Ulaanbaatar 27.01 294 P **P 11 27 01.0 +0.6**
comp=Z,241nm,1.2s,comp=Z,2µm
WHN Wuhan 27.27 254 P **P 11 27 03.5 +0.9**
WHN S **S 11 31 40.0 -0.9**
WHN pmax pmax
comp=Z,190nm,0.7s
WHN LR LR
comp=N,4µm,15.6s
WHN LR LR
comp=E,2µm,11.3s
WHN LR LR
comp=Z,6µm,19.4s
SONM Songino Array 27.46 294 P **P 11 27 04.7 +0.3**
SONM PcP **PcP 11 30 22.4 -0.1**
SONM S **S 11 31 47.8 +3.8**
SONM Songino Array 27.46 294 P **P 11 27 04.7 +0.3**
comp=Z,220nm,0.7s,baz=82,slow=8.5,SNR=377
SONM PcP **PcP 11 30 22.4 -0.1**
comp=Z,6.8nm,0.8s,baz=136,slow=2.4,SNR=4.1
SONM S **S 11 31 47.7 +3.8**
comp=Z,1.6nm,0.9s,baz=42,slow=15,SNR=2.0
SONM LR LR 11 39 07.5
comp=Z,2µm,19.0s,baz=90,slow=39
YULB Yu-li 27.49 233 *e*P **P 11 27 06.7 +2.0**
comp=Z,99nm,0.4s
BILL Bilibino 27.84 17*d i*P **P 11 27 03.4 -4.0**
BILL *e* 11 27 11.9
BILL *e* 11 27 15.8
BILL *e* 11 27 53.2
BILL *e* 11 30 23.8
BILL *e* 11 31 51.7
BILL pmax pmax
comp=Z,41nm,1.0s
BILL MLR MLR
comp=Z,2µm,16.0s
BILL Bilibino 27.84 17 *e*P **P 11 27 04.8 -2.6**
comp=Z,29nm,0.6s
BILL *e*PcP **PcP 11 30 23.6 +0.8**
BILL *e*S **S 11 31 52.2 +2.9**
BILL LR LR
comp=Z,3µm,21.0s
TWG Pinlang 28.06 233 *e*P **P 11 27 08.8 -1.0**
comp=Z,105nm,0.4s
IRK Irkutsk 28.81 304⇑*i*P **P 11 27 16.2 0.0**
IRK pmax pmax
comp=Z,100nm,1.2s
ATKA Atka Island 28.85 56 *e*P **P 11 27 15.5 -1.0**
comp=Z,186nm,1.1s
GUMO Guam 28.98 180 LR LR 11 38 20.6
comp=Z,805nm,18.8s,baz=32,slow=36
TLY Talaya 29.18 302 *e*P **P 11 27 19.4 -0.1**
TLY *e*SSS SSS 11 33 45.8
TLY pmax pmax
comp=Z,53nm,1.2s
TLY MLR MLR
comp=Z,1µm,16.0s
TLY Talaya 29.18 302 P **P 11 27 20.9 +1.4**
comp=Z,281nm,0.9s,SNR=10
XAN Xi'an 29.40 265 P **P 11 27 22.0 +0.3**
XAN pP **pP 11 27 29.5 +1.9**
XAN sP sP 11 27 35.8 +5.8
XAN S **S 11 32 11.3 -3.2**
XAN pmax pmax
comp=Z,7.0nm,0.8s

XAN LR LR
comp=N,670nm,16.2s
XAN LR LR
comp=E,250nm,17.2s
XAN LR LR
comp=Z,230nm,16.2s
ZAK Zakamensk 29.40 300 ⇓ *i*P **P 11 27 22.1 +0.5**
ZAK *e* 11 30 27.7
ZAK pmax pmax
comp=Z,127nm,1.1s
WAKE Wake Island 29.64 135 PFAKE 11 27 40.0 +16
WAKE LR LR
comp=Z,2μm,22.0s
TIXI Tiksi 30.12 350 PFAKE 11 27 40.0 +12
TIXI LR LR
comp=Z,3μm,21.0s
MOY Mondy 30.82 302 *e*P **P 11 27 34.6 +0.4**
MOY pmax pmax
comp=Z,206nm,2.2s
LZH Lanzhou 32.24 272 ⇓ P **P 11 27 48.0 +1.1**
LZH pP **pP 11 27 51.8 -1.0**
LZH sP **sP 11 27 53.5 -1.7**
LZH S **S 11 33 00.3 +1.0**
LZH sS **sS 11 33 08.0 -1.0**
LZH pmax pmax
comp=Z,130nm,1.2s
LZH pmax pmax
comp=Z,410nm,4.8s
LZH LR LR
comp=N,1μm,13.6s
LZH LR LR
comp=E,1μm,14.6s
LZH LR LR
comp=Z,2μm,16.2s
GTA Gaotai 33.93 280 P **P 11 28 02.0 +0.4**
GTA pP **pP 11 28 05.8 -1.7**
GTA sP **sP 11 28 07.8 -2.1**
GTA PP **PnPn 11 29 16.0 +1.5**
GTA PcP **PcP 11 30 40.5 +0.9**
GTA S **S 11 33 27.0 +1.6**
GTA sS **sS 11 33 33.0 -2.1**
GTA PcS **PcS 11 34 26.8 +1.0**
GTA SS **SnSn 11 35 33.3 +1.7**
GTA ScS **ScS 11 38 24.0 -1.2**
GTA pmax pmax
comp=Z,31nm,1.0s
GTA pmax pmax
comp=Z,210nm,5.7s
GTA LR LR
comp=N,960nm,15.7s
GTA LR LR
comp=E,2μm,16.6s
GTA LR LR
comp=Z,2μm,15.7s
TNA Tin City 34.61 32 *e*P **P 11 28 07.5 +0.6**
comp=Z,211nm,1.2s
CD2 Chengdu 34.73 264 P **P 11 28 08.8 +0.3**
CD2 pP **pP 11 28 13.0 -1.4**
CD2 sP **sP 11 28 15.8 -1.0**
CD2 PP **PnPn 11 29 25.3 +0.8**
CD2 PcP **PcP 11 30 43.3 +1.3**
CD2 S **S 11 33 37.3 -0.4**
CD2 PcS **PcS 11 34 28.5 -0.2**
CD2 SS **SnSn 11 35 48.8 -2.3**
CD2 pmax pmax
comp=Z,50nm,0.9s
CD2 pmax pmax
comp=Z,270nm,5.1s
CD2 LR LR
comp=N,2μm,15.0s
CD2 LR LR
comp=E,2μm,12.7s
CD2 LR LR
comp=Z,2μm,16.0s
GYA Guiyang 35.13 255 ⇑ *i*P **P 11 28 11.8 -0.2**
GYA PP **PP 11 29 30.8 -1.0**
GYA PcP **PcP 11 30 44.3 +1.0**
GYA S **S 11 33 41.5 -2.5**
GYA ScP **ScP 11 34 29.8 +2.1**
GYA SS **SnSn 11 35 59.0 -1.9**
GYA pmax pmax
comp=Z,40nm,0.7s
GYA pmax pmax
comp=Z,100nm,4.9s
GYA LR LR
comp=N,1μm,18.1s
GYA LR LR
comp=E,1μm,19.0s
GYA LR LR
comp=Z,2μm,18.4s
TGY Tagaytay City 35.23 223 P **P 11 28 13.3 +0.5**
TGY Tagaytay City 35.23 223 P **P 11 28 13.3 +0.5**
comp=Z,94nm,0.3s,baz=320,slow=7.9,SNR=6.0
QIZ Qiongzhong 37.88 243 P **P 11 28 36.3 +0.9**
QIZ S **S 11 34 29.5 +3.6**
QIZ pmax pmax
comp=Z,19nm,1.8s
QIZ pmax pmax
comp=Z,270nm,4.3s
QIZ LR LR
comp=N,1μm,16.3s
QIZ LR LR
comp=E,890nm,16.6s
QIZ LR LR
comp=Z,2μm,17.8s
KMI Kunming 38.74 257 P **P 11 28 43.5 +0.6**
KMI pP **pP 11 28 48.0 -0.9**
KMI sP **sP 11 28 50.3 -1.0**
KMI PP **PnPn 11 30 15.0 +1.1**
KMI S **S 11 34 38.3 -1.1**
KMI SS SnSn 11 37 18.0 -11
KMI pmax pmax
comp=Z,63nm,0.7s
KMI pmax pmax
comp=Z,130nm,3.1s
KMI LR LR
comp=N,830nm,15.7s
KMI LR LR
comp=E,1μm,14.9s
KMI LR LR
comp=Z,980nm,17.3s
DAV Davao City (W) 39.38 211 PFAKE 11 29 00.0 +12
DAV LR LR
comp=Z,1μm,22.0s
SVW2 Sparrevohn 39.41 41 *e*P **P 11 28 48.4 +0.6**
comp=Z,54nm,1.0s
CTBH Cotabato--PC H 39.77 213 ⇓ *i*P **P 11 28 52.6 +1.3**
ZAA0 Zalesovo Array 40.40 308 *e*P **P 11 28 55.5 -0.6**
ZAA0 *e*PcP **PcP 11 30 59.2 +0.3**
ZALV Zalesovo Beam 40.40 308 P **P 11 28 55.8 -0.3**
ZALV 11 30 58.9
ZALV pmax pmax
comp=Z,53nm,0.7s
ZALV MLR MLR
comp=Z,2μm,18.4s
ZALV Zalesovo Beam 40.40 308 P **P 11 28 55.8 -0.3**
ZALV PcP **PcP 11 30 58.9 0.0**
ZALV ScP **ScP 11 34 46.6 -0.4**
ZALV Zalesovo Beam 40.40 308 P **P 11 28 55.8 -0.3**
comp=Z,53nm,0.7s,baz=86,slow=7.6,SNR=185
ZALV PcP **PcP 11 30 58.9 0.0**
comp=Z,55nm,0.7s,baz=76,slow=3.6,SNR=13
ZALV ScP **ScP 11 34 46.7 -0.4**
comp=Z,9.3nm,0.9s,baz=82,slow=4.1,SNR=5.4
ZALV LR LR 11 46 53.8
comp=Z,2μm,18.4s,baz=248,slow=38
OHAK Old Harbor 40.82 47 *e*P **P 11 28 59.0 -0.5**
comp=Z,131nm,1.1s
RSO Redoubt South 40.82 42 *e*P **P 11 29 00.4 +0.7**
WMQ Urumqi 41.03 292 P **P 11 29 02.0 +0.4**
WMQ sP **sP 11 29 09.0 -1.0**
WMQ PP **PnPn 11 30 40.0 -0.5**
WMQ PcP **PcP 11 31 02.0 +0.8**
WMQ ScP **ScP 11 34 51.0 +1.2**
WMQ S **S 11 35 14.0 +1.0**
WMQ sS **sS 11 35 22.0 -0.9**
WMQ SS **SS 11 38 12.0 -3.1**
WMQ ScS **ScS 11 39 04.0 -1.1**
WMQ pmax pmax
comp=Z,110nm,1.0s
WMQ pmax pmax
comp=Z,630nm,5.0s
WMQ LR LR
comp=N,780nm,16.0s
WMQ LR LR
comp=E,940nm,16.0s
WMQ LR LR
comp=Z,1μm,16.0s
SPU Mount Spurr 41.12 41 *e*P **P 11 29 02.6 +0.6**
KDAK Kodiak Island 41.13 46 P **P 11 29 01.5 -0.5**
KDAK Kodiak Island 41.13 46 P **P 11 29 01.5 -0.5**
comp=Z,154nm,0.8s,baz=292,slow=7.4,SNR=85
NVS Novosibirsk 41.17 309 ⇓ *i*P **P 11 29 02.2 -0.3**
NVS *i* 11 31 03.4
NVS *i* PPP PPP 11 31 10.2
NVS *i* S **S 11 35 12.0 -2.6**
NVS *e* 11 39 07.8
NVS pmax pmax
comp=Z,193nm,1.7s
NVS pmax pmax
comp=N,42nm,1.8s
NVS pmax pmax
comp=E,127nm,1.6s
NVS smax smax
comp=N,18nm,2.0s
NVS smax smax
comp=E,30nm,1.5s
TRF Thorofare Moun 41.85 38 *e*P **P 11 29 07.7 -0.5**
comp=E,104nm,0.8s
TRF *e*ScP **ScP 11 34 52.8 0.0**
COLD Coldfoot 41.90 32 *e*P **P 11 29 08.5 +0.2**
comp=E,107nm,0.7s
MCK McKinley 42.45 37 *e*P **P 11 29 12.8 0.0**
MCK pmax pmax
comp=Z,148nm,0.8s
MCK McKinley 42.45 37 *e*P **P 11 29 12.8 0.0**
comp=Z,148nm,0.8s
SEW Seward 42.49 42 *e*P **P 11 29 12.3 -0.9**
comp=Z,104nm,0.9s
SEW *e*ScP **ScP 11 34 55.1 -0.1**
PMR Palmer 42.50 40 *e*P **P 11 29 12.0 -1.2**
PMR *e*S S 11 35 42.4 +8.4
PMR pmax pmax
comp=Z,104nm,0.8s
PMR Palmer 42.50 40 *e*P **P 11 29 12.0 -1.2**
comp=Z,104nm,0.8s
PMR *e*ScP **ScP 11 34 56.3 +1.1**
PMR *e*S S 11 35 42.4 +8.4
SML Sawmill 42.86 40 *e*P **P 11 29 16.3 +0.1**
SML pmax pmax
comp=Z,72nm,0.7s
SML Sawmill 42.86 40 *e*P **P 11 29 16.2 +0.1**
comp=Z,72nm,0.7s
SML *e*ScP **ScP 11 34 56.4 -0.3**
COLA College 42.87 35 *e*P **P 11 29 16.7 +0.6**
COLA pmax pmax
comp=Z,492nm,0.7s
COLA MLR MLR
comp=Z,567nm,19.0s
COLA College 42.87 35 *e*P **P 11 29 16.7 +0.6**
comp=Z,492nm,0.7s
COLA LR LR
comp=Z,567nm,19.0s
ILAR Eielson Array 43.28 35 P **P 11 29 19.1 -0.4**
ILAR S **S 11 35 49.9 +4.3**
ILAR Eielson Array 43.28 35 P **P 11 29 19.1 -0.4**
comp=Z,213nm,0.7s,baz=264,slow=6.1,SNR=739
ILAR S **S 11 35 49.9 +4.3**
comp=Z,0.3nm,0.9s,baz=262,slow=11,SNR=3.1
ILAR LR LR 11 50 35.4
comp=Z,801nm,18.3s,baz=176,slow=41
UBPT Khong Chiam 43.46 243 P **P 11 29 23.4 +1.9**
comp=Z,44nm,1.1s
GAMI Galela, Maluku 43.48 205 P **P 11 29 21.6 0.0**
comp=Z,74nm,1.3s,comp=Z,5μm
MK31 Makanchi Array 43.70 298 *i*P **P 11 29 23.1 -0.1**
MK31 pmax pmax
comp=Z,167nm,0.6s
MK31 Makanchi Array 43.70 298 *e*P **P 11 29 23.2 +0.1**
MKAR Makanchi Array 43.70 298 P **P 11 29 23.3 +0.1**
MKAR 11 31 09.3
MKAR S **S 11 35 56.3 +4.2**
MKAR pmax pmax
comp=Z,119nm,0.7s
MKAR pmax pmax
comp=Z,20nm,0.8s
MKAR smax smax
comp=N,1.0nm,0.7s
MKAR MLR MLR
comp=Z,1μm,18.2s
MKAR Makanchi Array 43.70 298 P **P 11 29 23.3 +0.1**
MKAR PcP **PcP 11 31 09.3 -0.6**
MKAR S **S 11 35 56.3 +4.2**
MKAR Makanchi Array 43.70 298 P **P 11 29 23.3 +0.1**
comp=Z,119nm,0.7s,baz=80,slow=9.1,SNR=562
MKAR PcP **PcP 11 31 09.3 -0.6**
comp=Z,20nm,0.8s,baz=30,slow=3.7,SNR=4.1
MKAR S **S 11 35 56.3 +4.2**
comp=Z,0.7nm,0.7s,baz=80,slow=17,SNR=2.0
MKAR LR LR 11 48 45.5
comp=Z,1μm,18.2s,baz=242,slow=38
PAX Paxson 44.06 38 *e*P **P 11 29 25.4 -0.6**
PAX pmax pmax
comp=Z,51nm,0.7s
PAX Paxson 44.06 38 *e*P **P 11 29 25.4 -0.6**
comp=Z,51nm,0.7s
MYLDM Lahad Datu 44.12 220 P **P 11 29 26.3 -0.4**
MYLDM Lahad Datu 44.12 220 P **P 11 29 28.3 +1.6**
comp=Z,53nm,1.1s,comp=Z,1μm
DIV Divide 44.16 41 *e*P **P 11 29 26.9 +0.2**
comp=Z,158nm,0.9s
SDKM Sandakan 44.34 222 P **P 11 29 28.4 -0.3**
KKM Kota Kinabalu 44.48 223 *e*P **P 11 29 28.1 -1.8**
comp=Z,92nm,1.7s
KKM LR LR
comp=Z,982nm,20.0s
KKM Kota Kinabalu 44.48 223 P **P 11 29 29.1 -0.7**
KKM Kota Kinabalu 44.48 223 P **P 11 29 30.6 +0.8**
comp=Z,28nm,1.2s,comp=Z,472nm
DOT Dot Lake 44.62 37 *e*P **P 11 29 29.8 -0.5**
comp=Z,89nm,0.6s
LSA Lhasa 44.65 271 *e*P **P 11 29 31.1 -0.4**
LSA pmax pmax
comp=Z,52nm,0.8s
LSA MLR MLR
comp=Z,1μm,19.0s
LSA Lhasa 44.65 271 *e*P **P 11 29 31.1 -0.4**
comp=Z,52nm,0.8s
LSA LR LR
comp=Z,1μm,19.0s
BMRM Bremner River 44.75 41 *e*P **P 11 29 31.8 +0.4**
comp=Z,130nm,0.8s
BMRM *e*PcP **PcP 11 31 14.2 +0.9**
RAGM Ragged Mountai 44.81 42 *e*P **P 11 29 32.7 +0.8**
comp=Z,80nm,0.8s
KURK Kurchatov 44.83 304 *d i*P **P 11 29 31.8 -0.3**
KURK pmax pmax
comp=Z,427nm,1.3s
KURK MLR MLR
comp=Z,1μm,17.0s
KURK Kurchatov 44.83 304 *e*P **P 11 29 31.9 -0.2**
comp=Z,335nm,0.8s
KURK *e*PcP **PcP 11 31 13.2 -0.4**
KURK PcP **PP 11 31 14.0 -2.8**
KURK S S 11 36 14.8 +6.3
KURK Kurchatov 44.83 304 P **P 11 29 32.4 +0.2**
SNR=142
MNI Manado 44.84 209 P **P 11 29 32.8 +0.2**
comp=Z,164nm,0.8s
MENT Mentasta 44.86 38 *e*P **P 11 29 32.8 +0.5**
KURBB Kurchatov Arra 44.91 304 P **P 11 29 32.9 +0.1**
comp=Z,331nm,0.7s,baz=72,slow=8.8,SNR=599
KURBB PcP **PcP 11 31 14.0 0.0**
comp=Z,25nm,0.7s,baz=74,slow=3.7,SNR=4.1
KURBB S **S 11 36 14.8 +5.1**
comp=Z,2.6nm,0.9s,baz=71,slow=16,SNR=4.7
KURBB LR LR 11 50 11.3
comp=Z,830nm,18.3s,baz=60,slow=38
SRPI Serui, Papua 45.04 192 P **P 11 29 34.8 +0.7**
comp=Z,82nm,0.7s
RKPI Ransiki, Papua 45.05 195 P **P 11 29 35.0 +0.8**
comp=Z,178nm,1.2s
SWI Sorong 45.07 200 P **P 11 29 33.7 -0.6**
comp=Z,64nm,0.8s,comp=Z,989nm
JAY Jayapura 45.15 186 P **P 11 29 35.0 0.0**
comp=Z,56nm,1.0s,comp=Z,17μm
TSM Tawau 45.19 220 P **P 11 29 34.9 -0.4**
IMP Imphal 45.35 264 *e*P **P 11 29 36.0 -0.7**
IMP *ex* x 11 30 16.0
IMP *ex* x 11 36 25.0
CMMT Chiang Mai 45.47 253 P **P 11 29 38.6 +1.0**
comp=Z,49nm,0.7s,comp=Z,507nm
CHTO Chiang Mai 45.47 253 *e*P **P 11 29 38.1 +0.5**
CHTO pmax pmax
comp=Z,31nm,0.7s
CHTO MLR MLR
comp=Z,1μm,19.0s
CHTO Chiang Mai 45.47 253 *e*P **P 11 29 38.1 +0.5**
comp=Z,32nm,0.7s
CHTO LR LR
comp=Z,1μm,19.0s
CHTO Chiang Mai 45.47 253 P **P 11 29 38.7 +1.1**
SNR=16
CHTO Chiang Mai 45.47 253 P **P 11 29 38.1 +0.5**
comp=Z,54nm,0.8s,comp=Z,486nm
CM31 Chiang Mai Arr 45.71 253 *e*P **P 11 29 39.5 0.0**
comp=Z,20nm,0.7s
CMAR Chiang Mai Arr 45.71 253 P **P 11 29 40.4 +1.0**
CMAR PcP **PcP 11 31 17.4 +0.1**
CMAR S **S 11 36 26.8 +5.0**
CMAR Chiang Mai Arr 45.71 253 P **P 11 29 40.4 +1.0**
comp=Z,11nm,0.8s,baz=43,slow=7.6,SNR=42
CMAR PcP **PcP 11 31 17.4 +0.1**
comp=Z,7.9nm,0.9s,baz=16,slow=3.8,SNR=5.1
CMAR S **S 11 36 26.8 +5.0**
comp=Z,0.5nm,0.4s,baz=320,slow=19,SNR=2.3
CMAR LR LR 11 50 25.7
comp=Z,1μm,19.7s,baz=232,slow=38
EGAK Eagle 45.72 35 *e*P **P 11 29 38.8 -0.3**
comp=Z,266nm,0.6s
EGAK LR LR
comp=Z,486nm,20.0s
LBMI Labuha 45.90 205 P **P 11 29 41.0 0.0**
comp=Z,100nm,1.0s,comp=Z,1μm
KMSI Cibinong 45.96 210 P **P 11 29 41.7 +0.3**
comp=Z,284nm,1.0s,comp=Z,3μm
SHL Shillong 46.40 266 *e*P **P 11 29 46.0 +0.9**
SHL *ex* x 11 36 38.0
JOHN Johnston Islan 46.46 110 PFAKE 11 30 00.0 +15
JOHN LR LR
comp=Z,289nm,21.0s
WAMI Wamena 46.69 189 P **P 11 29 49.0 +1.9**
comp=Z,83nm,0.9s
FAKI Fak Fak 46.82 198 P **P 11 29 47.8 -0.4**
comp=Z,82nm,1.5s,comp=Z,1μm
MRSI Marisa 46.83 212 P **P 11 29 47.9 -0.3**
comp=Z,276nm,1.2s,comp=Z,2μm
CHBT CHBT 47.38 244 P **P 11 29 53.7 +1.2**
comp=Z,65nm,0.8s,comp=Z,4μm
PNL Peninsula 47.55 42 *e*P **P 11 29 53.9 +0.4**
comp=Z,74nm,1.1s
AGT Agartala 47.85 265 *ex* Pn 11 30 03.0
LUWI Luwuk 47.90 211 P **P 11 29 54.7 -1.9**
comp=Z,108nm,1.1s,comp=Z,3μm
MSAI Masohi 48.06 202 P **P 11 29 58.7 +0.9**
comp=Z,18nm,0.8s,comp=Z,1μm
INK Inuvik 48.12 30 P **P 11 29 57.9 +0.2**
INK Inuvik 48.12 30 P **P 11 29 57.9 +0.2**
comp=Z,133nm,0.6s,baz=301,slow=7.1,SNR=1403
TARA Tarawa 48.14 141 PFAKE 11 30 10.0 +12
TARA LR LR
comp=Z,1μm,19.0s
TAPN Taplejung 48.46 271 *e*P **P 11 30 01.6 +0.3**
comp=Z,112nm,0.6s
BTM Bintulu 48.51 225 P **P 11 30 01.5 +0.2**
AAI Ambon 48.59 203 P **P 11 30 01.8 -0.1**
comp=Z,176nm,1.4s,comp=Z,2μm
VOSK Vostochnaya 48.74 309 P **P 11 30 02.4 -0.3**
VOSK pmax pmax
comp=Z,246nm,1.0s
BVA0 Borovoye Array 48.97 309 *i*P **P 11 30 04.6 +0.1**
BVA0 pmax pmax
comp=Z,34nm,1.3s
BVAR Borovoye Array 48.97 309 P **P 11 30 04.6 +0.1**
BVAR 11 31 28.3
BVAR S **S 11 37 05.9 -1.6**
BVAR pmax pmax
comp=Z,86nm,0.7s
BVAR smax smax
comp=N,1.0nm,0.8s
BVAR MLR MLR
comp=Z,2μm,21.0s
BVAR Borovoye Array 48.97 309 P **P 11 30 04.6 +0.1**
BVAR PcP **PcP 11 31 28.3 0.0**
BVAR S **S 11 37 05.9 -1.6**
BVAR Borovoye Array 48.97 309 P **P 11 30 04.6 +0.1**
comp=Z,86nm,0.7s,baz=77,slow=8.4,SNR=389
BVAR PcP **PcP 11 31 28.3 0.0**
comp=Z,9.2nm,0.5s,baz=49,slow=3.4,SNR=4.0
BVAR S **S 11 37 05.9 -1.6**
comp=Z,1.2nm,0.8s,baz=98,slow=7.4,SNR=2.9
BVAR LR LR 11 52 19.7
comp=Z,2μm,21.0s,baz=70,slow=38
ODAN Odare 48.97 271 *e*P **P 11 30 05.1 0.0**
comp=Z,89nm,0.6s
BRVK Borovoye 49.02 310 *d i*P **P 11 30 04.8 -0.1**
BRVK pmax pmax
comp=Z,305nm,1.2s
BRVK MLR MLR
comp=Z,2μm,16.0s
BRVK Borovoye 49.02 310 *e*P **P 11 30 04.7 -0.1**
comp=Z,150nm,0.9s
BRVK LR LR
comp=Z,2μm,20.0s
BRVK Borovoye 49.02 310 P **P 11 30 05.3 +0.5**
SNR=82
PHET Kaeng Krachan 49.07 247 P **P 11 30 07.4 +1.8**
comp=Z,193nm,0.9s,comp=Z,2μm
GUN Gumba 49.50 273 *e*P **P 11 30 09.3 0.0**
comp=Z,234nm,0.5s
RAMN Ramite 49.51 271 *e*P **P 11 30 09.0 -0.2**
comp=Z,222nm,0.8s
TKM2 Tokmak 2 49.55 295 *e*P **P 11 30 09.8 +0.5**
TKM2 pmax pmax
comp=Z,111nm,0.8s
TKM2 MLR MLR
comp=Z,1μm,21.0s
TKM2 Tokmak 2 49.55 295 *e*P **P 11 30 09.8 +0.5**
comp=Z,111nm,0.8s
TKM2 LR LR
comp=Z,1μm,21.0s
TKM2 Tokmak 2 49.55 295 P **P 11 30 09.9 +0.6**
SNR=97
SBUM Sibu 49.59 225 P **P 11 30 09.5 -0.1**
SBUM Sibu 49.59 225 P **P 11 30 09.7 +0.1**
comp=Z,12nm,0.9s,comp=Z,485nm
SKAG Skagway 49.60 41 *e*P **P 11 30 10.3 +1.2**
comp=Z,42nm,0.8s
SMKI Samarinda 49.67 218 P **P 11 30 11.5 +1.3**
comp=Z,65nm,1.0s
ZRNK Zerenda 49.78 310 *i*P **P 11 30 10.6 -0.1**
ZRNK pmax pmax
comp=Z,246nm,0.8s
KKN Kakani 50.01 273 *e*P **P 11 30 13.0 0.0**
comp=Z,66nm,0.6s
PKI Pulchoki 50.04 273 *e*P **P 11 30 13.0 -0.3**
comp=Z,100nm,0.7s
PKIN Phulchoki 50.04 273 *e*P **P 11 30 13.9 +0.6**
comp=Z,104nm,0.6s
CHMS Chumnysh 50.08 296 *i*P **P 11 30 13.0 -0.1**
CHMS Chumysh 50.08 296 P **P 11 30 13.0 -0.1**
SNR=11
KBK Karagaybulak 50.09 295 *i*P **P 11 30 13.9 +0.5**
KBK Karagaybulak 50.09 295 P **P 11 30 13.9 +0.5**
SNR=50
USP Ospenovka 50.13 296 *i*P **P 11 30 13.8 +0.3**
USP Ospenovka 50.13 296 P **P 11 30 13.8 +0.3**
SNR=20
KZA Kyzart 50.14 295 *i*P **P 11 30 15.2 +1.1**
KZA Kyzart 50.14 295 P **P 11 30 15.2 +1.1**
SNR=40
DMN Daman 50.24 273 *e*P **P 11 30 14.9 +0.1**
comp=Z,110nm,0.8s
FRU Bishkek 50.24 296 ⇓ *i*P **P 11 30 14.0 -0.3**
FRU *e* 11 30 23.0
FRU pmax pmax
comp=Z,200nm,2.0s
FRU MLR MLR
comp=Z,1μm,14.0s
AAK Ala-Archa 50.41 295 *d i*P **P 11 30 15.8 +0.1**
AAK pmax pmax
comp=Z,105nm,1.2s
AAK MLR MLR
comp=Z,2μm,19.0s
AAK Ala-Archa 50.41 295 *e*P **P 11 30 15.8 +0.1**
comp=Z,16nm,1.2s
AAK Ala-Archa 50.41 295 P **P 11 30 16.0 +0.3**
SNR=27

AAK	**Ala-Archa**	**50.41**	**295**	P	**P**	**11**	**30**	**15.8**	**+0.1**
	SNR=41								
AAK	**Ala-Archa**	**50.41**	**295**	LR	LR	11	53	46.1	
	comp=Z,903nm,18.2s,baz=287,slow=39								
KSH	**Kashi**	**50.79**	**291**	*e*P	**P**	11	30	22.5	+3.9
KSH				PcP	**PcP**	**11**	**31**	**38.3**	**+2.9**
KSH				PP	**PP**	**11**	**32**	**19.3**	**+4.7**
KSH				ScP	**ScP**	**11**	**35**	**34.3**	**+3.9**
KSH				S	**S**	**11**	**37**	**38.5**	**+5.0**
KSH				ScS	**ScS**	**11**	**40**	**12.0**	**+3.5**
KSH				SS	**SS**	**11**	**41**	**11.5**	**+3.8**
KSH				pmax	pmax				
	comp=Z,14nm,0.4s								
KSH				LR	LR				
	comp=E,520nm,5.3s								
KSH				LR	LR				
	comp=Z,230nm,5.1s								
DANN	**Dangsing**	**50.82**	**275**	*e*P	**P**	**11**	**30**	**19.7**	**+0.5**
	comp=Z,445nm,0.7s								
EKS2	**Erkin-Say**	**50.87**	**296**	*e*P	**P**	**11**	**30**	**19.4**	**+0.2**
EKS2				*e*		11	31	36.4	
EKS2				pmax	pmax				
	comp=Z,73nm,1.4s								
EKS2				MLR	MLR				
	comp=Z,407nm,20.0s								
EKS2	**Erkin-Say**	**50.87**	**296**	*e*P	**P**	**11**	**30**	**19.4**	**+0.2**
	comp=Z,73nm,1.4s								
EKS2				*e*PcP	**PcP**	**11**	**31**	**36.4**	**+0.8**
EKS2				LR	LR				
	comp=Z,407nm,20.0s								
EKS2	**Erkin-Say**	**50.87**	**296**	P	P	**11**	**30**	**19.5**	**+0.2**
	SNR=43								
AML	**Almayashu**	**51.16**	**295**	P	**P**	**11**	**30**	**22.3**	**+0.6**
	SNR=62								
MTKI	**Muara Teweh, K**	**51.18**	**220**	P	**P**	**11**	**30**	**22.1**	**+0.5**
	comp=Z,120nm,1.3s,comp=Z,7μm								
KOLN	**Koldanda**	**51.26**	**274**	*e*P	**P**	**11**	**30**	**22.7**	**+0.3**
	comp=Z,149nm,0.7s								
KSM	**Kuching**	**51.43**	**227**	*e*P	**P**	**11**	**30**	**24.6**	**+1.0**
	comp=Z,24nm,0.9s								
KSM	**Kuching**	**51.43**	**227**	P	**P**	**11**	**30**	**23.8**	**+0.3**
KSM	**Kuching**	**51.43**	**227**	P	**P**	**11**	**30**	**24.4**	**+0.9**
	comp=Z,24nm,1.0s,comp=Z,432nm								
PYUN	**Piuthan**	**51.52**	**275**	*e*P	**P**	**11**	**30**	**24.6**	**+0.2**
	comp=Z,205nm,0.8s								
KIP	**Kipapa**	**51.71**	**95**	⇓*i*P	**P**	**11**	**30**	**26.3**	**+0.7**
KIP				pmax	pmax				
	comp=Z,33nm,0.9s								
KIP	**Kipapa**	**51.71**	**95**	*e*P	**P**	**11**	**30**	**26.5**	**+0.9**
	comp=Z,126nm,1.1s								
PMG	**Port Moresby**	**51.86**	**177**	*e*P	**P**	**11**	**30**	**25.6**	**-1.0**
	comp=Z,41nm,1.0s								
PMG				LR	LR				
	comp=Z,452nm,22.0s								
PMG	**Port Moresby**	**51.86**	**177**	P	**P**	**11**	**30**	**26.0**	**-0.6**
	comp=Z,46nm,1.4s								
PMG	**Port Moresby**	**51.86**	**177**	P	**P**	**11**	**30**	**25.7**	**-1.0**
	comp=Z,24nm,1.1s,baz=351,slow=6.4,SNR=6.8								
STKI	**Sintang**	**52.00**	**224**	P	**P**	**11**	**30**	**29.2**	**+1.4**
BBSI	**Bau Bau**	**52.09**	**209**	P	**P**	**11**	**30**	**29.4**	**+1.1**
	comp=Z,126nm,1.1s,comp=Z,1μm								
CRAG	**Craig**	**52.09**	**46**	*e*P	**P**	**11**	**30**	**29.5**	**+1.6**
	comp=Z,86nm,1.0s								
WRAK	**Wrangell Islan**	**52.13**	**44**	*e*P	**P**	**11**	**30**	**29.5**	**+1.3**
	comp=Z,54nm,1.0s								
WRAK				LR	LR				
	comp=Z,658nm,20.0s								
DLBC	**Dease Lake**	**52.53**	**41**	*e*P	**P**	**11**	**30**	**32.9**	**+1.6**
KBKI	**Kotabaru**	**52.67**	**217**	P	**P**	**11**	**30**	**32.1**	**-0.6**
	comp=Z,44nm,1.4s								
KAPI	**Kappang**	**52.71**	**212**	*e*P	**P**	**11**	**30**	**31.9**	**-1.1**
	comp=Z,108nm,1.4s								
KAPI				LR	LR				
	comp=Z,384nm,22.0s								
KAPI	**Kappang**	**52.71**	**212**	P	**P**	**11**	**30**	**32.3**	**-0.6**
	SNR=5.6								
KAPI	**Kappang**	**52.71**	**212**	P	**P**	**11**	**30**	**32.0**	**-0.9**
	comp=Z,58nm,1.4s,comp=Z,711nm								
LGTI	**Lohaghat**	**52.79**	**278**	*ex*	Pn	11	30	38.2	
KK31	**Karatay Array**	**52.82**	**298**	*i*P	**P**	**11**	**30**	**33.3**	**-0.3**
KK31				pmax	pmax				
	comp=Z,40nm,0.5s								
KKAR	**Karatay Array**	**52.82**	**298**	*e*P	**P**	**11**	**30**	**33.1**	**-0.5**
KKAR				pmax	pmax				
	comp=Z,69nm,0.7s								
KKAR	**Karatay Array**	**52.82**	**298**	*e*P	**P**	**11**	**30**	**33.1**	**-0.5**
	comp=Z,68nm,0.7s								
BKSI	**Bulukumba**	**52.84**	**212**	P	**P**	**11**	**30**	**32.3**	**-1.6**
	comp=Z,33nm,1.0s								
SVE	**Sverdlovsk**	**52.85**	**317**	*c*P	**P**	**11**	**30**	**33.6**	**0.0**
SVE				*e*S	**S**	**11**	**38**	**00.8**	**-0.2**
SVE				pmax	pmax				
	comp=Z,306nm,0.8s								
SVE				MLR	MLR				
	comp=Z,3μm,16.0s								
BBKI	**Banjar Baru**	**53.41**	**219**	P	**P**	**11**	**30**	**37.7**	**-0.5**
	comp=Z,94nm,1.1s,comp=Z,3μmcomp=Z,34μm								
HNR	**Honiara**	**53.62**	**162**	*e*P	**P**	**11**	**30**	**39.7**	**+0.1**
	comp=Z,68nm,0.8s								
HNR				LR	LR				
	comp=Z,1μm,20.0s								
HNR	**Honiara**	**53.62**	**162**	P	**P**	**11**	**30**	**38.4**	**-1.2**
	comp=Z,30nm,0.3s,baz=192,slow=11,SNR=3.9								
SOKR	**Solikamsk**	**53.63**	**321**	*d*P	**P**	**11**	**30**	**38.8**	**-0.4**
SOKR				pmax	pmax				
	comp=Z,190nm,0.7s								
SOKR				MLR	MLR				
	comp=Z,3μm,19.0s								
KULM	**Kulim**	**54.05**	**239**	*e*P	**P**	**11**	**30**	**43.4**	**+0.5**
	comp=Z,87nm,1.6s								
KULM				LR	LR				
	comp=Z,399nm,19.0s								
KULM	**Kulim**	**54.05**	**239**	P	**P**	**11**	**30**	**42.0**	**-0.9**
KULM	**Kulim**	**54.05**	**239**	P	**P**	**11**	**30**	**44.2**	**+1.3**
	comp=Z,30nm,1.1s,comp=Z,420nm								
ARU	**Arti**	**54.06**	**317**	*d*P	**P**	**11**	**30**	**42.0**	**-0.4**
ARU				*e*		11	31	45.8	
ARU						11	32	44.9	
ARU				PPP	PPP	11	33	52.5	
ARU				S	**S**	**11**	**38**	**18.0**	**+0.6**
ARU						11	40	26.3	
ARU				SSS	SSS	11	43	50.8	
ARU				pmax	pmax				
	comp=Z,386nm,1.2s								
ARU				MLR	MLR				
	comp=Z,3μm,16.0s								
ARU	**Arti**	**54.06**	**317**	P	**P**	**11**	**30**	**42.8**	**+0.4**
	comp=Z,2μm,0.6s,SNR=52								
SDNR	**Sundarnagar**	**54.07**	**282**	*e*P	**P**	**11**	**30**	**44.0**	**+1.1**
SMLA	**Simla**	**54.12**	**281**	*i*P	**P**	**11**	**30**	**43.4**	**+0.1**
SMLA				AMb	AMB	11	30	46.3	
	comp=Z,101nm,0.5s								
SMLA				*i* x	x	11	38	16.1	
SMLA				*ex*	x	11	38	16.5	
SMLA				*i* S	**S**	**11**	**38**	**16.9**	**-2.0**
ALE	**Alert**	**54.31**	**4**	P	**P**	**11**	**30**	**42.8**	**-1.1**
	comp=Z,574nm,1.0s,SNR=18								
IPM	**Ipoh**	**54.44**	**238**	*e*P	**P**	**11**	**30**	**46.1**	**+0.3**
	comp=Z,19nm,1.0s								
IPM	**Ipoh**	**54.44**	**238**	P	**P**	**11**	**30**	**45.2**	**-0.6**
IPM	**Ipoh**	**54.44**	**238**	P	**P**	**11**	**30**	**47.6**	**+1.8**
	comp=Z,15nm,1.2s								
THN	**Thein Dam**	**54.47**	**284**	*e*P	**P**	**11**	**30**	**44.2**	**-1.6**
THN				*ex*	x	11	36	50.0	
BHK	**Bhakra**	**54.51**	**282**	*e*P	**P**	**11**	**30**	**47.4**	**+1.2**
POHA	**Pohakuloa**	**54.56**	**95**	*e*P	**P**	**11**	**30**	**48.0**	**+1.1**
	comp=Z,293nm,1.0s								
MYKOM	**Kota Tinggi**	**54.83**	**234**	P	**P**	**11**	**30**	**48.2**	**-0.3**
KGM	**Kluang**	**54.97**	**234**	P	**P**	**11**	**30**	**49.2**	**-0.3**
KBS	**Kingsbay**	**55.58**	**350**	*e*P	**P**	**11**	**30**	**52.0**	**-1.2**
KBS				*e*S	**S**	**11**	**38**	**40.1**	**+2.7**
KBS				*e*SS	**SS**	**11**	**42**	**24.2**	**+2.6**
KBS				AMS	AMS	11	56	20.8	
	comp=Z,567nm,19.8s								
KBS	**Kingsbay**	**55.58**	**350**	*d*P	**P**	**11**	**30**	**52.8**	**-0.4**
KBS				pmax	pmax				
	comp=Z,152nm,1.3s								
KBS	**Kingsbay**	**55.58**	**350**	*e*P	**P**	**11**	**30**	**53.4**	**+0.2**
	comp=Z,120nm,0.9s								
KBS				LR	LR				
	comp=Z,662nm,19.0s								
NIL	**Nilore**	**55.59**	**286**	PFAKE		11	31	10.0	+16
NIL				LR	LR				
	comp=Z,123nm,22.0s								
RES	**Resolute Bay**	**56.44**	**16**	*e*P	**P**	**11**	**30**	**58.9**	**-0.5**
	comp=Z,325nm,0.7s								
RES	**Resolute Bay**	**56.44**	**16**	P	P	**11**	**30**	**58.9**	**-0.5**
	comp=Z,339nm,0.7s,baz=311,slow=7.1,SNR=908								
ABKAR	**Akbulak array**	**56.51**	**308**	*e*P	**P**	**11**	**31**	**00.6**	**+0.3**
	comp=Z,108nm,0.6s								
PSI	**Prapat**	**57.06**	**239**	P	**P**	**11**	**31**	**04.8**	**+0.1**
PSI	**Prapat**	**57.06**	**239**	P	P	11	31	15.8	+11
PSI	**Prapat**	**57.06**	**239**	P	**P**	**11**	**31**	**04.8**	**+0.1**
	comp=Z,16nm,0.8s,baz=15,slow=7.3,SNR=5.2								
VIS	**Vishakhapatnam**	**57.46**	**264**	*e*P	**P**	**11**	**31**	**07.2**	**-0.1**
YKW3	**Yellowknife Ar**	**57.53**	**33**	*e*P	**P**	**11**	**31**	**07.0**	**-0.2**
	comp=Z,2.1nm,0.9s								
YKA	**Yellowknife Ar**	**57.56**	**33**	P	**P**	**11**	**31**	**07.3**	**-0.2**
YKA				S	**S**	**11**	**39**	**09.4**	**+5.4**
YKA				P'P'		12	00	53.1	
YKA	**Yellowknife Ar**	**57.56**	**33**	P	**P**	**11**	**31**	**07.3**	**-0.2**
	comp=Z,68nm,0.7s,baz=304,slow=6.7,SNR=325								
YKA				S	**S**	**11**	**39**	**09.4**	**+5.4**
	comp=Z,0.3nm,0.8s,baz=297,slow=14,SNR=2.7								
YKA				PKPPKP	P'P'df	12	00	53.1	-7.7
	comp=Z,0.5nm,0.9s,baz=113,slow=3.1,SNR=4.3								
BJO	**Bjornoya**	**57.69**	**345**	*e*P	P	11	31	03.9	-4.3
BJO				AMS	AMS	12	01	02.5	
	comp=Z,2μm,17.6s								
KBL	**Kabul**	**58.07**	**289**	*e*P	**P**	**11**	**31**	**10.5**	**-1.2**
KBL				pmax	pmax				
	comp=Z,118nm,1.1s								
KBL	**Kabul**	**58.07**	**289**	*e*P	**P**	**11**	**31**	**10.5**	**-1.2**
	comp=Z,118nm,1.1s								
LVZ	**Lovozero**	**58.13**	**335**	*d*P	**P**	**11**	**31**	**10.1**	**-1.3**
LVZ				pmax	pmax				
	comp=Z,118nm,1.3s								
AJM	**Ajmer**	**58.55**	**278**	*e*P	**P**	**11**	**31**	**14.0**	**-1.0**
APA	**Apatity**	**58.70**	**335**	⇑*i*P	**P**	**11**	**31**	**14.1**	**-1.3**
APA				*i*		11	32	10.0	
APA				*i* S	S	11	39	12.0	-6.7
APA				*i* PS	**PnS**	**11**	**39**	**26.0**	**-5.2**
APA				pmax	pmax				
	comp=Z,81nm,0.6s								
APA				MLR	MLR				
	comp=Z,2μm,14.0s								
TMCR	**Tamitsa**	**59.15**	**331**	*e*P	**P**	**11**	**31**	**18.5**	**0.0**
TMCR				pmax	pmax				
	comp=Z,245nm,1.3s								
KEV	**Kevo**	**59.16**	**339**	*e*P	**P**	**11**	**31**	**18.2**	**-0.3**
KEV				pmax	pmax				
	comp=Z,147nm,0.8s								
KEV				MLR	MLR				
	comp=Z,1μm,19.0s								
KEV	**Kevo**	**59.16**	**339**	*e*P	**P**	**11**	**31**	**18.2**	**-0.3**
	comp=Z,147nm,0.8s								
KEV				LR	LR				
	comp=Z,1μm,19.0s								
KEV	**Kevo**	**59.16**	**339**	*e*p	**P**	**11**	**31**	**16.1**	**-2.4**
	comp=Z,103nm,0.6s								
ARCES	**ARCESS Array B**	**59.70**	**339**	P	**P**	**11**	**31**	**22.1**	**-0.2**
ARCES	**ARCESS Array B**	**59.70**	**339**	P	**P**	**11**	**31**	**22.1**	**-0.2**
	comp=Z,62nm,0.9s,baz=45,slow=7.0,SNR=199								
ARCES				LR	LR	12	01	32.4	
	comp=Z,1μm,18.8s,baz=39,slow=40								
ARE0	**ARCESS Array S**	**59.70**	**339**	*e*P	**P**	**11**	**31**	**19.4**	**-2.9**
ARE0	**ARCESS Array S**	**59.70**	**339**	*e*P	**P**	**11**	**31**	**22.0**	**-0.3**
DAG	**Danmarks Havn**	**60.38**	**356**	⇓*i*P	**P**	**11**	**31**	**26.1**	**-0.7**
DAG				pmax	pmax				
	comp=Z,91nm,0.8s								
DAG	**Danmarks Havn**	**60.38**	**356**	⇓*i*P	**P**	**11**	**31**	**26.1**	**-0.7**
	comp=Z,121nm,0.8s								
PGC	**Sidney**	**60.51**	**50**	*e*P	**P**	**11**	**31**	**28.5**	**+0.4**
	comp=Z,2.2nm,0.8s								
KTK1	**Kautokeino**	**60.65**	**339**	*e*P	P	11	31	25.3	-3.5
KTK1				AMS	AMS	12	03	36.8	
	comp=Z,3μm,14.9s								
NLWA	**Neilton Lookou**	**60.95**	**51**	*e*P	**P**	**11**	**31**	**32.4**	**+1.2**
	comp=Z,75nm,0.9s								
NLWA				LR	LR				
	comp=Z,468nm,21.0s								
HYB	**Hyderabad**	**61.17**	**267**	*i*P	**P**	**11**	**31**	**32.0**	**-1.1**
	comp=Z,60nm,1.0s								
HYB				*e*S	**S**	**11**	**39**	**52.0**	**+0.2**
TRO	**Tromso**	**61.28**	**341**	*e*P	**P**	**11**	**31**	**31.9**	**-1.1**
TRO				AMS	AMS	12	03	01.1	
	comp=Z,1μm,19.0s								
BMW	**Boistfort Moun**	**61.81**	**52**	P	**P**	**11**	**31**	**37.8**	**+0.7**
BMW	**Boistfort Moun**	**61.81**	**52**	P	**P**	**11**	**31**	**37.8**	**+0.7**
LATR	**Latur**	**62.01**	**270**	*e*P	**P**	**11**	**31**	**37.5**	**-1.2**
JOF	**Joensuu**	**62.30**	**332**	*e*p	**P**	**11**	**31**	**38.4**	**-1.6**
	comp=Z,118nm,0.5s								
CTA	**Charters Tower**	**62.45**	**179**	LR	LR	11	54	18.7	
	comp=Z,439nm,21.7s,baz=340,slow=32								
CTAO	**Charters Tower**	**62.45**	**179**	*e*P	**P**	**11**	**31**	**40.2**	**-1.2**
CTAO				pmax	pmax				
	comp=Z,43nm,1.0s								
CTAO				MLR	MLR				
	comp=Z,480nm,21.0s								
CTAO	**Charters Tower**	**62.45**	**179**	*e*P	**P**	**11**	**31**	**40.2**	**-1.2**
	comp=Z,43nm,1.0s								
CTAO				LR	LR				
	comp=Z,480nm,21.0s								
TDL	**Tradedollar La**	**62.47**	**51**	P	**P**	**11**	**31**	**42.3**	**+0.8**
RCM	**Mount Rainier-**	**62.47**	**51**	P	**P**	**11**	**31**	**42.6**	**+0.7**
LON	**Longmire**	**62.48**	**51**	*e*P	**P**	**11**	**31**	**41.8**	**+0.3**
LON				pmax	pmax				
	comp=Z,31nm,0.9s								
LON	**Longmire**	**62.48**	**51**	*e*P	**P**	**11**	**31**	**41.8**	**+0.3**
	comp=Z,31nm,0.9s								
LVP	**Lakeview Peak**	**62.51**	**52**	P	**P**	**11**	**31**	**42.4**	**+0.6**
STD	**Studebaker Rid**	**62.52**	**51**	P	**P**	**11**	**31**	**42.8**	**+0.8**
VALT	**Mount Saint He**	**62.56**	**51**	P	**P**	**11**	**31**	**43.4**	**+1.1**
NLW	**Nelson Butte**	**62.56**	**49**	P	**P**	**11**	**31**	**42.5**	**+0.3**
F04A	**Amboy**	**62.58**	**52**	P	**P**	**11**	**31**	**42.8**	**+0.6**
WPW	**White Pass**	**62.66**	**51**	P	**P**	**11**	**31**	**43.3**	**+0.5**
COR	**Corvallis**	**62.82**	**53**	*e*P	**P**	**11**	**31**	**45.1**	**+1.4**
COR				pmax	pmax				
	comp=Z,73nm,0.8s								
COR	**Corvallis**	**62.82**	**53**	*e*P	**P**	**11**	**31**	**45.1**	**+1.4**
	comp=Z,73nm,0.8s								
G04A	**Mulino**	**62.95**	**52**	P	**P**	**11**	**31**	**45.4**	**+0.7**
WTV	**Waterville**	**62.99**	**49**	P	**P**	**11**	**31**	**45.1**	**+0.2**
WRAB	**Tennant Creek**	**63.06**	**191**	*e*P	**P**	**11**	**31**	**43.4**	**-2.1**
WRAB				pmax	pmax				
	comp=Z,55nm,1.0s								
WRAB				MLR	MLR				
	comp=Z,523nm,22.0s								
WRAB	**Tennant Creek**	**63.06**	**191**	*e*P	**P**	**11**	**31**	**43.4**	**-2.1**
	comp=Z,55nm,1.0s								
WRAB				LR	LR				
	comp=Z,523nm,22.0s								
WRA	**Warramunga Arr**	**63.07**	**191**	P	**P**	**11**	**31**	**43.6**	**-2.0**
WRA				⇑*e*		12	00	51.1	
WRA	**Warramunga Arr**	**63.07**	**191**	P	**P**	**11**	**31**	**43.6**	**-2.0**
	comp=Z,32nm,1.1s,baz=7.1,slow=6.8,SNR=69								
WRA				PKP2bc		12	00	51.1	
	comp=Z,8.5nm,1.0s,baz=207,slow=2.2,SNR=15								
KEBM	**Edson Butte**	**63.16**	**55**	*e*P	**P**	**11**	**31**	**47.5**	**+1.3**
	comp=Z,196nm,1.0s								
IMYA	**Miami**	**63.17**	**296**	*e*P	**P**	**11**	**31**	**46.3**	**-0.1**
VLL	**Laurance Lake**	**63.27**	**52**	P	**P**	**11**	**31**	**47.7**	**+0.8**
H04A	**Detroit Lake**	**63.42**	**53**	P	**P**	**11**	**31**	**48.0**	**+0.2**
STEI	**Steigen**	**63.45**	**341**	*e*P	**P**	**11**	**31**	**47.0**	**-0.5**
STEI				AMB	AMB	11	31	48.7	
	comp=Z,116nm,1.0s								
VFP	**Flag Point**	**63.48**	**52**	P	**P**	**11**	**31**	**49.0**	**+0.7**
KBO	**Bosley Butte**	**63.60**	**56**	*e*P	**P**	**11**	**31**	**50.7**	**+1.6**
	comp=Z,211nm,1.2s								
ISRO	**Mashad**	**63.60**	**296**	*e*P	**P**	**11**	**31**	**49.0**	**-0.3**
IRO	**Indian Ridge**	**63.77**	**53**	P	**P**	**11**	**31**	**50.8**	**+0.6**
IMOG	**Moghan**	**63.81**	**296**	*e*P	**P**	**11**	**31**	**50.8**	**0.0**
IPAY	**Payeh**	**63.84**	**296**	*e*P	**P**	**11**	**31**	**51.1**	**+0.1**
IAKL	**Akhelmad**	**63.91**	**297**	*e*P	**P**	**11**	**31**	**51.8**	**+0.3**
IKRD	**Kardeh**	**63.97**	**297**	*e*P	P	11	31	47.9	-3.9
HAWA	**Hanford**	**63.97**	**50**	*e*P	**P**	**11**	**31**	**51.8**	**+0.4**
	comp=Z,74nm,1.0s								
HAWA				LR	LR				
	comp=Z,399nm,19.0s								
HUMO	**Hull Mountain**	**64.14**	**55**	*e*P	**P**	**11**	**31**	**53.6**	**+0.9**
	comp=Z,60nm,1.3s								
ISFR	**Sfrayin**	**64.15**	**297**	*e*P	**P**	**11**	**31**	**53.3**	**+0.3**
KRMB	**Red Mountain**	**64.19**	**57**	*e*P	**P**	**11**	**31**	**53.2**	**+0.2**
	comp=Z,285nm,2.9s								
NEW	**Newport**	**64.22**	**47**	*e*P	**P**	**11**	**31**	**53.1**	**+0.1**
	comp=Z,80nm,1.1s								
NEW				LR	LR				
	comp=Z,465nm,20.0s								
NEW	**Newport**	**64.22**	**47**	⇓P	**P**	**11**	**31**	**53.2**	**+0.1**
	baz=64,SNR=31								
NEW	**Newport**	**64.22**	**47**	P	**P**	**11**	**31**	**52.8**	**-0.2**
	comp=Z,58nm,1.1s,baz=300,slow=6.3,SNR=45								
MOS	**Moscow**	**64.38**	**323**	*e*P	P	11	31	50.3	-3.6
MOS				*e*S	**S**	**11**	**40**	**27.8**	**-3.2**
MOS				pmax	pmax				
	comp=Z,400nm,1.4s								
MOS				pmax	pmax				
	comp=N,200nm,1.3s								
MOS				pmax	pmax				
	comp=Z,372nm,1.3s								
MOS				pmax	pmax				
	comp=E,139nm,1.2s								
MOS				MLR	MLR				
	comp=Z,2μm,15.0s								
KAD	**Karad**	**64.46**	**270**	*e*P	**P**	**11**	**31**	**54.4**	**-0.6**
KAF	**Kangasniemi**	**64.56**	**333**	*e*p	**P**	**11**	**31**	**52.4**	**-2.6**
	comp=Z,63nm,0.5s								
A12A	**Yaak River Ran**	**64.61**	**46**	⇑P	**P**	**11**	**31**	**56.2**	**+0.6**
	baz=64,SNR=6.3								
KHMM	**Horse Mountain**	**64.67**	**57**	*e*P	**P**	**11**	**31**	**57.7**	**+1.4**
	comp=Z,157nm,1.0s								
YBH	**Yreka Blue Hor**	**64.80**	**56**	*e*P	**P**	**11**	**31**	**58.1**	**+1.1**
	comp=Z,75nm,0.9s								
YBH	**Yreka Blue Hor**	**64.80**	**56**	P	**P**	**11**	**31**	**57.8**	**+0.8**
	comp=Z,84nm,1.0s,baz=352,slow=4.0,SNR=169								
B12A	**Libby**	**64.92**	**46**	⇑P	**P**	**11**	**31**	**58.0**	**+0.4**
	baz=65								
MOR8	**Moi Rana**	**65.02**	**340**	*e*P	**P**	**11**	**31**	**56.2**	**-1.7**
MOR8				AMB	AMB	11	31	57.0	
	comp=Z,329nm,0.6s								
SUMG	**Summit**	**65.03**	**1**	⇓*i*P	**P**	**11**	**31**	**58.6**	**+0.2**
SUMG				pmax	pmax				
	comp=Z,230nm,0.9s								
SUMG	**Summit**	**65.03**	**1**	*e*P	**P**	**11**	**31**	**58.6**	**+0.2**
	comp=Z,308nm,0.9s								
SUMG	**Summit**	**65.03**	**1**	⇓*i*P	**P**	**11**	**31**	**58.6**	**+0.2**
	comp=Z,230nm,0.9s								
KONS	**Konsvik**	**65.09**	**341**	*e*P	P	11	31	52.6	-5.7
FIA1	**FINESS Array S**	**65.11**	**332**	*e*P	**P**	**11**	**31**	**58.1**	**-0.4**
FINES	**FINESS Array B**	**65.11**	**332**	P	**P**	**11**	**31**	**58.1**	**-0.4**
FINES	**FINESS Array B**	**65.11**	**332**	P	**P**	**11**	**31**	**58.1**	**-0.4**
	comp=Z,149nm,0.5s,baz=46,slow=8.2,SNR=443								
FINES				LR	LR	12	02	56.1	
	comp=Z,849nm,18.6s,baz=228,slow=38								
FLOS	**Flostrand**	**65.16**	**341**	*e*P	**P**	**11**	**31**	**58.5**	**-0.2**
FLOS				AMB	AMB	11	32	00.4	
	comp=Z,216nm,1.5s								
XMAS	**Kiritimati**	**65.20**	**112**	PFAKE		11	32	10.0	+10
XMAS				LR	LR				
	comp=Z,1μm,20.0s								
OBN	**Obninsk**	**65.24**	**323**	*d*P	**P**	**11**	**31**	**58.8**	**-0.7**
OBN				*e**PP	**pP**	**11**	**32**	**07.5**	**+1.8**
OBN				*e*		11	32	30.5	
OBN				*e*		11	34	20.7	
OBN				*e*S	**S**	**11**	**40**	**39.1**	**-2.5**
OBN				*e*SS	**SS**	**11**	**44**	**51.9**	**-1.6**
OBN				pmax	pmax				
	comp=Z,480nm,1.3s								
OBN				MLR	MLR				
	comp=Z,2μm,15.0s								
OBN	**Obninsk**	**65.24**	**323**	P	**P**	**11**	**31**	**59.1**	**-0.4**
	comp=Z,2μm,0.7s,SNR=14								
A13A	**Flathead Natio**	**65.27**	**46**	⇑P	**P**	**11**	**32**	**00.2**	**+0.2**
	baz=65,SNR=25								
VRHR	**Novokhopersk**	**65.38**	**318**	*e*P	**P**	**11**	**31**	**59.1**	**-1.4**
VRHR				*e*S	**S**	**11**	**40**	**40.1**	**-3.3**
VRHR				pmax	pmax				
	comp=N,530nm,1.8s								
VRHR				pmax	pmax				
	comp=Z,860nm,1.8s								
VRHR				pmax	pmax				
	comp=E,200nm,1.9s								
VRHR				pmax	pmax				
	comp=N,60nm,0.6s								
VRHR				pmax	pmax				
	comp=E,60nm,0.6s								
VRHR				pmax	pmax				
	comp=Z,290nm,0.6s								
VRHR				smax	smax				
	comp=N,130nm,2.5s								
VRHR				smax	smax				
	comp=E,210nm,2.5s								
VRHR				smax	smax				
	comp=Z,6.0nm,2.3s								
VRHR				MLR	MLR				
	comp=N,610nm,14.0s								
VRHR				MLR	MLR

comp=N,140nm,0.9s
VORD pmax pmax
comp=E,130nm,0.9s
VORD pmax pmax
comp=Z,230nm,0.9s
VORD smax smax
comp=N,100nm,2.0s
VORD smax smax
comp=E,60nm,2.0s
VORD smax smax
comp=Z,10.0nm,0.7s
VORD MLR MLR
comp=N,940nm,16.0s
VORD MLR MLR
comp=E,2µm,16.0s
VORD MLR MLR
comp=Z,3µm,16.0s
B15A Bradely Ranch, 66.62 45 ⇓P P 11 32 08.6 0.0
baz=66,SNR=106
F12A Elk City 66.75 49 ⇑P P 11 32 09.9 +0.3
baz=66,SNR=95
SCO Scoresbysund 66.76 355 ⇓*i*P P 11 32 09.1 +0.1
SCO pmax pmax
comp=Z,55nm,0.8s
SCO Scoresbysund 66.76 355 ⇓*i*P P 11 32 09.1 +0.1
comp=Z,55nm,0.8s
SLMT Seeley Lake 66.79 47 *e*P P 11 32 09.9 +0.1
AS31 Alice Springs 66.79 191 *e*P P 11 32 09.0 -0.8
ASAR Alice Springs 66.80 191 P P 11 32 08.8 -1.0
ASAR ⇑*e* 12 00 39.8
ASAR Alice Springs 66.80 191 P P 11 32 08.8 -1.0
comp=Z,8.9nm,0.7s,baz=6.9,slow=5.8,SNR=74
ASAR LR LR 11 59 12.6
comp=Z,312nm,21.9s,baz=0.6,slow=34
ASAR PKP2bc 12 00 39.8
comp=Z,2.5nm,0.8s,baz=193,slow=2.5,SNR=11
MSO Missoula 66.81 47 *e*P P 11 32 09.9 0.0
comp=Z,81nm,1.3s
MSO LR LR
comp=Z,217nm,19.0s
MSO Missoula 66.81 47 ⇑P P 11 32 09.9 0.0
baz=67,SNR=84
WVOR Wild Horse Val 66.83 53 *e*P P 11 32 10.4 +0.3
WVOR MLR MLR
comp=Z,356nm,21.0s
WVOR Wild Horse Val 66.83 53 *e*P P 11 32 10.4 +0.3
WVOR LR LR
comp=Z,356nm,21.0s
D14A Greenough 66.89 47 ⇓P P 11 32 10.3 -0.1
baz=67,SNR=96
E13A Victor 66.91 48 ⇑P P 11 32 10.3 -0.3
baz=67,SNR=41
C15A Salmond Ranch, 66.93 46 ⇑P P 11 32 11.4 +0.7
baz=67,SNR=135
OHCM Honcut 66.97 57 *e*P P 11 32 10.9 +0.1
G12A Big Creek, Yel 67.09 49 ⇓P P 11 32 11.5 -0.3
baz=67,SNR=57
CHMT Chamberlain Mo 67.12 47 *e*P P 11 32 11.7 -0.4
MAK Makhachkala 67.17 308 *e*P P 11 32 08.0 -4.1
MAK MLR MLR
comp=Z,2µm,17.0s
A17A Triple J Farms 67.19 44 ⇑P P 11 32 12.1 -0.1
baz=67,SNR=55
F13A Darby 67.23 48 ⇑P P 11 32 12.3 -0.3
baz=67,SNR=43
E14A Clinton 67.31 47 ⇑P P 11 32 13.0 -0.1
baz=67,SNR=34
BEKR Beckworth 67.34 56 *e*P P 11 32 13.7 +0.3
comp=Z,76nm,1.0s
C16A Fuhringer Ranc 67.37 45 ⇓P P 11 32 13.7 +0.3
baz=67,SNR=191
MSVF Nonsavu 67.37 146 PFAKE 11 32 30.0 +16
MSVF LR LR
comp=Z,1µm,19.0s
DZM Mont Dzumac 67.39 158 *e*S S 11 41 06.7 -1.7
comp=Z,889nm,28.4s
DZM *e*LQ LQ 11 49 27.3
comp=Z,2µm,32.0s
DZM *e*LR LR 11 52 35.2
comp=Z,954nm,22.0s
DZM Mont Dzumac 67.39 158 LR LR 11 56 55.6
comp=Z,623nm,20.3s,baz=11,slow=32
D15A Lincoln 67.44 46 ⇓P P 11 32 14.0 0.0
baz=67,SNR=41
FFC Flin Flon 67.49 35 *i* P P 11 32 13.6 -0.3
FFC Flin Flon 67.49 35 *e*P P 11 32 13.8 -0.1
comp=Z,101nm,1.0s
FFC LR LR
comp=Z,367nm,19.0s
B17A L&G Farms, Che 67.55 44 ⇑P P 11 32 14.6 +0.1
baz=67,SNR=28
A18A Metzger Ranch, 67.64 44 ⇑P P 11 32 14.8 -0.2
baz=67,SNR=30
MBWA Marble Bar 67.66 206 *e*P P 11 32 14.4 -0.8
comp=Z,19nm,0.8s
H12A Diamond D Ranc 67.71 50 ⇑P P 11 32 15.7 -0.1
baz=68,SNR=91
G13A Cobalt 67.72 49 ⇓P P 11 32 15.4 -0.4
baz=68,SNR=41
IANJ Anjilo 67.75 298 *e*P P 11 32 16.5 +0.3
F14A Wisdom 67.75 48 ⇓P P 11 32 15.9 -0.1
baz=68,SNR=13
E15A Deer Lodge 67.76 47 ⇑P P 11 32 16.0 +0.1
baz=68,SNR=144
MFID Camas Ranch 67.86 51 *e*P P 11 32 17.0 +0.3
comp=Z,41nm,0.8s
MFID Camas Ranch 67.86 51 ⇑P P 11 32 16.9 +0.3
baz=68,SNR=22
KMKR Kumukh 67.92 307 *i* P P 11 32 18.0 +0.9
KMKR pmax pmax
comp=Z,26nm,0.3s
ISHM Shahmirzad 67.95 299 *e*P P 11 32 17.9 +0.4
D16A Dana Ranch, Ca 67.96 46 ⇓P P 11 32 17.4 +0.2
baz=68,SNR=103
C17A Wharram Farm, 67.99 45 ⇓P P 11 32 17.2 -0.1
baz=68,SNR=92
B18A Beardsley Farm 68.01 44 ⇓P P 11 32 17.7 +0.2
baz=68,SNR=83
HRY Holter Researc 68.01 46 *e*P P 11 32 18.0 +0.5
H13A Challis 68.04 49 ⇑P P 11 32 17.9 +0.1
baz=68,SNR=186
G14A Jackson 68.06 48 ⇓P P 11 32 17.3 -0.7
baz=68,SNR=15
A19A Klindworth Far 68.19 43 ⇑P P 11 32 18.8 +0.2
baz=68,SNR=69
F15A Butte 68.21 47 ⇑P P 11 32 19.2 +0.3
baz=68,SNR=154
E16A East Helena 68.21 46 ⇑P P 11 32 19.2 +0.4
baz=68,SNR=30
LRM Limekiln Ridge 68.24 47 *e*P P 11 32 19.3 +0.2
EGMT Eagleton 68.26 44 *e*P P 11 32 19.0 0.0
comp=Z,138nm,1.0s
EGMT LR LR
comp=Z,329nm,21.0s
EGMT Eagleton 68.26 44 ⇑P P 11 32 19.1 0.0
baz=68,SNR=98
IPRN Peran 68.30 300 *e*P P 11 32 18.5 -1.0
D17A Six Diamond Ra 68.34 45 ⇑P P 11 32 19.6 0.0
baz=68,SNR=69
IFIR Firoozkooh 68.39 299 *e*P P 11 32 17.5 -2.8
B19A Brinkman Farms 68.40 43 ⇑P P 11 32 20.0 +0.2
baz=68,SNR=32
CMB Columbia Colle 68.44 58 *e*P P 11 32 20.5 +0.3
CMB pmax pmax
comp=Z,91nm,1.0s
CMB Columbia Colle 68.44 58 *e*P P 11 32 20.5 +0.3
comp=Z,91nm,1.0s
TBLU Trondheim 68.45 340 AMS AMS 12 07 34.0
comp=Z,2µm,19.6s
DLMT Dillon 68.45 48 *e*P P 11 32 20.3 0.0
comp=Z,92nm,0.8s
H14A Leadore 68.50 49 ⇑P P 11 32 20.4 -0.3
baz=68,SNR=52
I13A Wildhorse Cree 68.52 50 ⇓P P 11 32 21.4 +0.5
baz=68,SNR=120
SAO San Andreas Ge 68.55 59 *e*P P 11 32 21.3 +0.4
SAO pmax pmax
comp=Z,26nm,1.0s
SAO San Andreas Ge 68.55 59 *e*P P 11 32 21.3 +0.4
comp=Z,26nm,1.0s
HLID Hailey 68.58 50 *e*P P 11 32 21.5 +0.3
comp=Z,66nm,1.1s
HLID LR LR
comp=Z,359nm,20.0s
A20A Cobblestone Ra 68.63 43 ⇑P P 11 32 21.5 +0.2
baz=68,SNR=28
G15A Dillon 68.64 48 ⇓P P 11 32 21.6 +0.1
baz=68,SNR=179
MCMT McKenzie Canyo 68.65 48 *e*P P 11 32 21.9 +0.2
comp=Z,16nm,1.0s
E17A Martinsdale 68.69 46 ⇓P P 11 32 22.5 +0.6
baz=68,SNR=161
F16A Kennard Place, 68.71 47 ⇓P P 11 32 22.2 +0.3
baz=68,SNR=126
D18A Linhart Farms, 68.77 45 ⇓P P 11 32 22.7 +0.5
baz=68,SNR=23
BOZ Bozeman (W) 68.80 47 *e*P P 11 32 23.1 +0.6
BOZ pmax pmax
comp=Z,129nm,0.7s
BOZ MLR MLR
comp=Z,326nm,19.0s
BOZ Bozeman (W) 68.80 47 *e*P P 11 32 23.1 +0.6
comp=Z,129nm,0.7s
BOZ LR LR
comp=Z,326nm,19.0s
BOZ Bozeman (W) 68.80 47 ⇑P P 11 32 23.0 +0.6
baz=69,SNR=265
C19A Slack Wire Ran 68.81 44 ⇑P P 11 32 23.0 +0.5
baz=69
J13A Cove Ranch, Pi 68.81 50 ⇓P P 11 32 23.2 +0.6
baz=69,SNR=88
AFI Afiamalu 68.87 135 LR LR 11 58 34.2
comp=Z,377nm,19.0s,baz=75,slow=32
B20A Solberg Farm, 68.88 43 ⇓P P 11 32 22.7 -0.1
baz=69,SNR=57
I14A Mackay 68.89 49 ⇑P P 11 32 23.7 +0.5
baz=69,SNR=117
BMN Battle Mountai 68.89 54 *e*P P 11 32 23.7 +0.5
BMN pmax pmax
comp=Z,93nm,1.0s
BMN MLR MLR
comp=Z,318nm,21.0s
BMN Battle Mountai 68.89 54 *e*P P 11 32 23.7 +0.5
comp=Z,94nm,1.0s
BMN LR LR
comp=Z,318nm,21.0s
IDMV Damavand 68.90 299 *e*P P 11 32 22.8 -0.7
H15A Lima 68.90 48 ⇓P P 11 32 22.9 -0.3
baz=69,SNR=24
G16A Moss Hill, Enn 68.97 47 ⇓P P 11 32 23.9 +0.3
baz=69,SNR=134
IBAF Bafgh 69.01 294 *e*P P 11 32 23.4 -0.6
A21A Bergtoll Ranch 69.06 42 ⇑P P 11 32 24.2 +0.3
baz=69,SNR=30
IZAR Zarasai 69.12 328 *e*P P 11 32 24.4 +0.3
IZAR AMB AMB 11 32 25.1
comp=Z,109nm,0.7s
E18A Harlowton 69.12 45 ⇑P P 11 32 25.1 +0.6
baz=69,SNR=29
F17A Fitzpatrick Pl 69.15 46 ⇓P P 11 32 25.1 +0.4
baz=69,SNR=95
GUDG Gudauri 69.23 309 P P 11 32 25.8 +0.5
J14A Carey 69.23 50 ⇑P P 11 32 26.4 +1.2
baz=69,SNR=148
IDID Didziasalis 69.24 327 *e*P P 11 32 25.3 +0.5
IDID AMB AMB 11 32 26.0
comp=Z,129nm,1.1s
D19A Cripps Ranch, 69.27 44 ⇓P P 11 32 25.6 +0.3
baz=69,SNR=106
ISAL Salakas 69.30 328 *e*P P 11 32 25.6 +0.4
ISAL AMB AMB 11 32 26.4
comp=Z,176nm,0.8s
KIV Kislovodsk 69.30 311 *d i*P P 11 32 26.0 +0.5
KIV *e**PP **pP** 11 32 34.5 +2.7
KIV *e* 11 32 47.8
KIV *e* 11 34 57.5
KIV *e* 11 41 30.6
KIV pmax pmax
comp=Z,304nm,1.1s
KIV Kislovodsk 69.30 311 P P 11 32 26.9 +1.4
comp=Z,2µm,0.9s,SNR=29
KBZ Khabaz 69.33 311 P P 11 32 26.3 +0.7
KBZ pmax pmax
comp=Z,116nm,0.9s
KBZ MLR MLR
comp=Z,1µm,18.7s
KBZ Khabaz 69.33 311 P P 11 32 26.2 +0.7
KBZ Khabaz 69.33 311 P P 11 32 26.2 +0.7
comp=Z,116nm,0.9s,baz=46,slow=5.8,SNR=168
KBZ LR LR 12 08 10.0
comp=Z,1µm,18.6s,baz=29,slow=40
DGRG David-gareji 69.35 308 P P 11 32 26.2 +0.3
C20A Veseth Ranch, 69.36 44 ⇑P P 11 32 26.2 +0.4
baz=69,SNR=161
MICGM Minsk 69.36 326 ⇓*i*P P 11 32 25.0 -0.6
ZEI Tsey 69.37 309 *e*P P 11 32 25.2 -1.0
ZEI pmax pmax
comp=Z,133nm,1.3s
I15A Monteview 69.38 49 ⇑P P 11 32 26.5 +0.4
baz=69,SNR=9.9
MNK Minsk 69.38 326 ⇓*i*P P 11 32 25.0 -0.7
MNK *e*S S 11 41 28.0 -3.4
MNK pmax pmax
comp=N,620nm,1.0s
MNK pmax pmax
comp=E,320nm,1.0s
MNK MLR MLR
comp=Z,6µm,16.0s
B21A Ellsworth Farm 69.39 43 ⇑P P 11 32 26.0 +0.1
baz=69,SNR=6.7
IIGN Ignalina 69.42 328 *e*P P 11 32 26.3 +0.4
IIGN AMB AMB 11 32 27.2
comp=Z,188nm,0.7s
QLMT Earthquake Lak 69.43 48 *e*P P 11 32 26.7 +0.2
IVRN Varamin 69.45 299 *e*P P 11 32 25.3 -1.3
IVRN *e*P P 11 32 25.3 -1.3
NVAR Mina Array Bea 69.48 56 P P 11 32 27.3 +0.4
NVAR ⇑*e* 12 00 32.5
NVAR Mina Array Bea 69.48 56 P P 11 32 27.3 +0.4
comp=Z,75nm,0.8s,baz=285,slow=6.7,SNR=449
NVAR PKP2bc 12 00 32.5
comp=Z,0.4nm,0.7s,baz=152,slow=4.0,SNR=3.7
SEAG Tbilisi Sea 69.48 308 P P 11 32 27.9 +1.2
G17A Pierce Place, 69.49 47 ⇓P P 11 32 27.5 +0.7
baz=69,SNR=90
NACGM Naroch 69.52 327 *i* P P 11 32 24.0 -2.6
TBLG Delisi 69.54 308 P P 11 32 27.9 +0.9
TBLG Delisi 69.54 308 P P 11 32 27.9 +0.9
NV11 Mina Array Sit 69.57 56 *e*P P 11 32 27.9 +0.5
IR3 Iran Long-Peri 69.61 300 *e*P P 11 32 27.3 -0.3
H16A Russell Place, 69.61 48 ⇓P P 11 32 28.1 +0.5
baz=69,SNR=127
MLAC Mammoth Lakes 69.65 57 ⇑P P 11 32 28.8 +0.8
baz=70,SNR=12
F18A Big Timber 69.66 46 ⇓P P 11 32 28.3 +0.6
baz=69,SNR=122
MOL Molde 69.70 340 *e*P P 11 32 27.7 +0.1
D20A Manuel Ranch, 69.70 44 ⇓P P 11 32 28.5 +0.6
baz=70,SNR=173
ONI Oni 69.74 310 P P 11 32 29.5 +1.2
C21A Desert Coulee 69.75 43 ⇑P P 11 32 28.4 +0.2
baz=70,SNR=44
GOR Gori 69.75 309 P P 11 32 28.9 +0.7
GCMT Greycliff 69.75 46 *e*P P 11 32 28.5 +0.1
comp=Z,64nm,0.9s
DOMB Dombas 69.77 340 *e*P P 11 32 27.9 -0.1
DOMB AMB AMB 11 32 28.6
comp=Z,100nm,0.7s
IMEH Mehriz 69.77 294 *e*P P 11 32 27.4 -1.5
E19A Rath Farm, Rou 69.78 45 ⇑P P 11 32 28.9 +0.4
baz=70,SNR=105
YMR Madison River 69.79 48 *e*P P 11 32 29.1 +0.4
comp=Z,93nm,0.8s
J15A Blackfoot 69.79 49 ⇓P P 11 32 29.6 +0.9
baz=70,SNR=65
ELK Elko 69.87 53 *e*P P 11 32 29.9 +0.5
K14A Jones Ranch, D 69.92 50 ⇓P P 11 32 30.4 +0.9
baz=70,SNR=62
B22A Reddig Ranch S 69.98 42 ⇓P P 11 32 29.6 -0.1
baz=70,SNR=12
MTUM Tungsten Hills 69.99 57 *e*P P 11 32 30.4 +0.3
SFJD Kangerlussuaq 70.01 6 P P 11 32 28.8 -0.6
SFJD LR LR
comp=Z,864nm,20.0s
SFJD Kangerlussuaq 70.01 6 ⇓*i*P P 11 32 28.8 -0.6
comp=Z,69nm,0.8s
SFJD Kangerlussuaq 70.01 6 P P 11 32 28.8 -0.6
comp=Z,86nm,0.9s,baz=348,slow=5.3,SNR=26
I16A Newdale 70.01 48 ⇓P P 11 32 31.1 +1.1
baz=70,SNR=119
PTRM Twissleman Ran 70.02 60 *e*P P 11 32 31.1 +1.1
NB2 NORSAR Subarra 70.03 338 P P 11 32 29.1 -0.6
baz=36,slow=6.2
NB2 NORSAR Subarra 70.03 338 P P 11 32 29.1 -0.6
comp=Z,224nm,0.8s,baz=36,slow=6.2
NOA NORSAR Array B 70.03 338 P P 11 32 28.9 -0.8
NOA NORSAR Array B 70.03 338 P P 11 32 28.9 -0.8
comp=Z,163nm,0.7s,baz=35,slow=6.2,SNR=776
NOA LR LR 12 08 13.7
comp=Z,1µm,18.6s,baz=20,slow=40
A23A Redstone 70.08 41 ⇓P P 11 32 29.9 -0.4
baz=70
E20A Meyer Farm, Mu 70.09 45 ⇓P P 11 32 30.7 +0.4
baz=70,SNR=46
F19A Roth Farm, Mol 70.10 46 ⇑P P 11 32 30.8 +0.3
baz=70,SNR=141
G18A Lazy EL Ranch, 70.12 46 ⇑P P 11 32 30.4 -0.3
baz=70,SNR=29
LKWY Lake 70.16 47 *e*P P 11 32 32.7 +1.6
LKWY pmax pmax
comp=Z,73nm,0.9s
LKWY MLR MLR
comp=Z,606nm,20.0s
LKWY Lake 70.16 47 *e*P P 11 32 32.7 +1.6
comp=Z,73nm,0.9s
LKWY LR LR
comp=Z,606nm,20.0s
H17A Grant Village 70.17 48 ⇓P P 11 32 33.2 +2.0
baz=70,SNR=172
NC602 NORSAR Array S 70.19 338 *e*P P 11 32 28.5 -2.1
K15A Arbon 70.20 50 ⇓P P 11 32 32.3 +1.1
baz=70,SNR=58
L14A Malta 70.21 51 ⇑P P 11 32 32.0 +0.7
baz=70,SNR=21
RCTC Rector, Farmer 70.22 59 ⇑P P 11 32 30.9 -0.3
baz=70,SNR=6.9
NAO01 NORSAR Array S 70.28 338 *e*P P 11 32 30.4 -0.8
comp=Z,113nm,0.8s
IMW Indian Meadow 70.30 48 *e*P P 11 32 33.0 +1.1
comp=Z,111nm,0.9s
D21A La Casta Ranch 70.30 44 ⇓P P 11 32 31.9 +0.2
baz=70,SNR=33
IHRS Heris 70.33 304 *e*P P 11 32 32.4 +0.3
J16A Bone 70.33 49 ⇓P P 11 32 33.1 +1.0
baz=70,SNR=74
IRAZ Razeghan 70.35 300 *e*P P 11 32 32.1 -0.2
IZEF Zefreh 70.36 297 *e*P P 11 32 31.7 -0.8
DCID1 Drake Creek 70.36 49 *e*P P 11 32 33.4 +1.2
comp=Z,281nm,1.1s
B23A Brockton 70.36 42 ⇑P P 11 32 32.0 0.0
baz=70,SNR=84
SMMC Simmler 70.36 60 ⇓P P 11 32 32.8 +0.6
baz=70,SNR=8.0
TPH Tonopah 70.37 56 PFAKE 11 32 40.0 +7.6
TPH LR LR
comp=Z,199nm,20.0s
TIN Tinemaha 70.39 57 ⇓P P 11 32 33.1 +0.7
baz=70,SNR=11
RLMT Red Lodge 70.41 46 *e*P P 11 32 32.9 +0.4
comp=Z,30nm,0.7s
RLMT LR LR
comp=Z,195nm,21.0s
RLMT Red Lodge 70.41 46 ⇓P P 11 32 33.0 +0.5
baz=70,SNR=23
C22A Vida 70.41 43 ⇑P P 11 32 31.8 -0.4
baz=70,SNR=10
RRI2 Red Ridge 70.45 49 *e*P P 11 32 34.0 +1.1
comp=Z,182nm,0.9s
AKH Akhalkalaki 70.47 309 P P 11 32 34.2 +1.3
H18A Shoshone NF, C 70.48 47 ⇓P P 11 32 33.5 +0.5
baz=70,SNR=72
I17A Pilgrim Ck. 70.48 48 ⇑P P 11 32 34.6 +1.5
baz=70,SNR=140
MOOW Moose Ponds 70.50 48 *e*P P 11 32 34.0 +0.9
comp=Z,113nm,1.0s
A24A Westby 70.53 41 ⇓P P 11 32 32.9 -0.1
baz=70,SNR=33
GNI Garni 70.55 307 *e*P P 11 32 34.8 +1.4
comp=Z,257nm,1.4s
GNI LR LR
comp=Z,584nm,21.0s
GNI Garni 70.55 307 P P 11 32 35.1 +1.7
SNR=21
GNI Garni 70.55 307 P P 11 32 34.6 +1.2
comp=Z,12nm,0.4s,baz=101,slow=5.2,SNR=23
F20A Billings 70.55 45 ⇓P P 11 32 33.2 0.0
baz=70,SNR=17
TPAW Teton Pass 70.56 48 *e*P P 11 32 34.5 +1.0
comp=Z,161nm,1.0s
IKLH Kolahrood 70.59 298 *e*P P 11 32 33.5 -0.4
E21A Keefer Ranch, 70.61 44 ⇑P P 11 32 33.8 +0.3
baz=70
VES Vestal, Richgr 70.61 59 ⇑P P 11 32 33.3 -0.4
baz=70,SNR=31
K16A Soda Springs 70.63 49 ⇓P P 11 32 35.0 +1.1
baz=70,SNR=15
HVU Hansel Valley 70.64 51 *e*P P 11 32 34.6 +0.6
HVU pmax pmax
comp=Z,73nm,1.0s
HVU Hansel Valley 70.64 51 *e*P P 11 32 34.5 +0.6
comp=Z,73nm,1.0s
D22A Cohagen 70.66 43 ⇑P P 11 32 33.9 +0.1
baz=70,SNR=35
LOHW Long Hollow 70.67 48 *e*P P 11 32 35.0 +0.9
comp=Z,52nm,0.9s
SNOW Snow King Moun 70.69 48 *e*P P 11 32 35.4 +1.1
comp=Z,82nm,0.8s
C23A Lambert 70.72 42 ⇓P P 11 32 34.2 +0.1
baz=70,SNR=39
L15A Malad City 70.72 50 ⇑P P 11 32 34.8 +0.4
baz=70,SNR=41
PKM Peak Mountain 70.74 60 ⇑P P 11 32 35.4 +0.8
baz=71,SNR=12
DGMT Dagmar 70.75 41 *e*P P 11 32 34.2 -0.1
comp=Z,111nm,0.9s
DGMT LR LR
comp=Z,707nm,21.0s
DGMT Dagmar 70.75 41 ⇓P P 11 32 34.1 -0.1
baz=70,SNR=19
J17A Brown Place, J 70.77 48 ⇓P P 11 32 35.7 +0.9
baz=71,SNR=73
H19A Powell 70.85 47 ⇑P P 11 32 35.7 +0.5
baz=71,SNR=27
CWC Cottonwood Cre 70.87 58 ⇓P P 11 32 35.5 +0.1
baz=71,SNR=21
IMRD Marand 70.89 305 *e*P P 11 32 35.4 -0.1
IBND Bandar-abas 70.90 290 *e*P P 11 32 35.9 +0.4
G20A Bridger 70.90 46 ⇓P P 11 32 35.1 -0.3
baz=71,SNR=46
AHID Auburn Hatcher 70.95 49 *e*P P 11 32 36.4 +0.6
comp=Z,73nm,1.0s
AHID LR LR
comp=Z,348nm,20.0s
GRAC Grapevine Rang 70.96 57 ⇓P P 11 32 36.6 +0.9
baz=71,SNR=46
I18A Diamond G Ranc 71.04 48 ⇑P P 11 32 37.4 +0.9
baz=71,SNR=58
K17A Gardner Place, 71.06 49 ⇓P P 11 32 36.7 +0.2
baz=71,SNR=18
F21A Absaloka Mine, 71.07 45 ⇑P P 11 32 36.4 +0.1
baz=71,SNR=6.9
SBC Santa Barbara 71.09 60 ⇑P P 11 32 37.3 +0.8
baz=71
ISA Isabella 71.11 59 *e*P P 11 32 36.3 -0.5
ISA pmax pmax
comp=Z,45nm,1.1s
ISA Isabella 71.11 59 *e*P P 11 32 36.3 -0.5
comp=Z,45nm,1.1s
ISA Isabella 71.11 59 ⇑P P 11 32 36.2 -0.6
baz=71,SNR=13
D23A Lindsay 71.13 43 ⇓P P 11 32 37.0 +0.3
baz=71,SNR=73
SOC Sochi 71.18 312 *d i*P P 11 32 36.7 -0.2
SOC *e**PP **pP** 11 32 45.9 +2.7
SOC *e*S S 11 41 52.0 -0.7
SOC *e*SS **SS** 11 46 28.0 +2.3
SOC *e*SSS SSS 11 49 36.8
SOC pmax pmax
comp=Z,74nm,0.9s
SOC MLR MLR
comp=Z,1µm,16.0s
R11A Troy Canyon, C 71.19 55 ⇓P P 11 32 37.7 +0.3
baz=71,SNR=68
ARVC Arvin 71.22 59 ⇑P P 11 32 37.1 -0.2
baz=71,SNR=15
HYA Hoyanger 71.24 340 *e*P P 11 32 33.3 -3.7
L16A Fish Haven 71.25 50 ⇑P P 11 32 38.2 +0.5
baz=71,SNR=60
J18A Kendall Valley 71.25 48 ⇑P P 11 32 38.2 +0.4
baz=71,SNR=55

E22A **Miles City** 71.26 44 ⇑P P 11 32 37.3 -0.1
baz=71,SNR=25
I19A **Meeteetse** 71.27 47 ⇓P P 11 32 38.3 +0.5
baz=71,SNR=47
DAC **Darwin (Calif)** 71.28 58 eP P 11 32 38.1 +0.2
DAC pmax pmax
comp=Z,84nm,1.3s
DAC MLR MLR
comp=Z,306nm,20.0s
DAC **Darwin (Calif)** 71.28 58 eP P 11 32 38.1 +0.2
comp=Z,84nm,1.3s
DAC LR LR
comp=Z,306nm,20.0s
C24A **Savage** 71.28 42 ⇑P P 11 32 37.5 0.0
baz=71,SNR=15
IAZR **Azarshahr** 71.38 304 eP P 11 32 39.0 +0.4
G21A **Lodge Grass** 71.43 45 ⇓P P 11 32 38.5 -0.1
baz=71,SNR=23
IPIR **Pirpir** 71.44 297 eP P 11 32 39.5 +0.4
HWUT **Hardware Ranch** 71.44 50 eP P 11 32 39.0 +0.1
comp=Z,127nm,1.2s
HWUT LR LR
comp=Z,328nm,19.0s
MPMC **Manual Prospec** 71.48 58 ⇑P P 11 32 39.4 +0.3
baz=71,SNR=82
H20A **Greybull** 71.50 46 ⇓P P 11 32 38.9 -0.1
baz=71,SNR=38
AKASG **Malin Array Be** 71.50 323 P P 11 32 38.3 -0.4
AKASG pmax pmax
comp=Z,103nm,0.6s
AKASG **Malin Array Be** 71.50 323 P P 11 32 38.3 -0.4
AKASG **Malin Array Be** 71.50 323 P P 11 32 38.3 -0.4
comp=Z,103nm,0.6s,baz=41,slow=6.0,SNR=464
L17A **Cokeville** 71.51 50 ⇑P P 11 32 39.6 +0.3
baz=71,SNR=66
ARTV **Artvin** 71.51 309 *i* P P 11 32 39.7 +0.4
AK01 **Malin Array Si** 71.52 323 eP P 11 32 38.1 -0.7
KIEV **Kiev** 71.52 323 eP P 11 32 38.4 -0.4
KIEV pmax pmax
comp=Z,193nm,0.8s
KIEV MLR MLR
comp=Z,575nm,21.0s
KIEV **Kiev** 71.52 323 eP P 11 32 38.4 -0.4
comp=Z,193nm,0.8s
KIEV LR LR
comp=Z,575nm,21.0s
AK02 **Malin Array Si** 71.54 323 eP P 11 32 38.5 -0.5
E23A **Ismay** 71.54 43 ⇑P P 11 32 39.6 +0.4
baz=71,SNR=35
F22A **Rosebud** 71.55 44 ⇑P P 11 32 39.2 0.0
baz=71,SNR=68
DBOC **Borcka** 71.56 309 *i* P P 11 32 39.8 +0.5
DAGI **Agillar** 71.59 309 *i* P P 11 32 40.4 +0.8
ANN **Anapa** 71.59 314 eP P 11 32 38.4 -1.0
SUW **Suwalki** 71.60 328 eP P 11 32 38.8 -0.5
SUW pmax pmax
comp=Z,480nm,1.2s
SUW **Suwalki** 71.60 328 eP P 11 32 38.8 -0.5
comp=Z,480nm,1.2s
SUW **Suwalki** 71.60 328 eP P 11 32 38.8 -0.5
FURC **Furnace Creek,** 71.61 57 ⇑P P 11 32 40.4 +0.7
baz=71,SNR=79
OSI **Osito Adit** 71.62 60 eP P 11 32 40.6 +0.8
comp=Z,105nm,1.0s
OSI **Osito Adit** 71.62 60 ⇑P P 11 32 40.3 +0.5
baz=71,SNR=8.5
K18A **Toltan Ranch,** 71.62 49 ⇓P P 11 32 40.6 +0.7
baz=71,SNR=73
KONO **Kongsberg** 71.63 338 eP P 11 32 39.1 -0.3
KONO AMB AMB 11 32 41.1
comp=Z,84nm,1.5s
KONO eS S 11 41 56.9 -0.6
KONO AMS AMS 12 09 13.0
comp=Z,2µm,17.7s
KONO **Kongsberg** 71.63 338 eP P 11 32 39.1 -0.3
KONO pmax pmax
comp=Z,69nm,0.8s
KONO MLR MLR
comp=Z,2µm,20.0s
KONO **Kongsberg** 71.63 338 eP P 11 32 39.1 -0.3
comp=Z,69nm,0.8s
KONO LR LR
comp=Z,2µm,20.0s
DUG **Dugway** 71.65 52 eP P 11 32 40.6 +0.6
DUG pmax pmax
comp=Z,129nm,1.1s
DUG MLR MLR
comp=Z,276nm,21.0s
DUG **Dugway** 71.65 52 eP P 11 32 40.6 +0.6
comp=Z,129nm,1.1s
DUG LR LR
comp=Z,276nm,21.0s
DUG **Dugway** 71.65 52 ⇓P P 11 32 40.6 +0.6
baz=71,SNR=99
SUE **Sulen** 71.68 341 eP PcP 11 33 02.3 +3.6
BLG **Laguna Peak** 71.72 60 ⇑P P 11 32 40.3 -0.1
baz=72,SNR=6.2
LRMC **Laurel Mountai** 71.72 58 ⇓P P 11 32 40.6 +0.1
baz=72,SNR=6.8
J19A **Crowheart** 71.75 48 ⇑P P 11 32 41.2 +0.6
baz=72,SNR=164
DBAD **Bademkaya** 71.75 309 *i* P P 11 32 41.4 +0.8
IPAR **Pars** 71.79 294 eP P 11 32 40.1 -1.1
I20A **Worland** 71.79 47 ⇓P P 11 32 41.5 +0.7
baz=72,SNR=59
BW06 **Boulder Array** 71.80 48 eP P 11 32 40.9 -0.1
comp=Z,92nm,0.9s
BW06 LR LR
comp=Z,355nm,20.0s
BW06 **Boulder Array** 71.80 48 ⇓P P 11 32 41.0 -0.1
baz=72,SNR=72
PDAR **Pinedale Array** 71.80 48 P P 11 32 40.8 -0.2
PDAR **Pinedale Array** 71.80 48 P P 11 32 40.8 -0.2
comp=Z,59nm,0.8s,baz=276,slow=2.4,SNR=387
DDEM **Demirkent** 71.81 309 *i* P P 11 32 41.7 +0.8
G22A **Birney** 71.91 45 ⇓P P 11 32 41.4 -0.1
baz=72,SNR=32
EDW2 **Edwards Air Fo** 71.91 59 ⇓P P 11 32 41.9 +0.3
baz=72,SNR=49
H21A **Big Horn, Sher** 71.91 46 ⇑P P 11 32 41.7 +0.2
baz=72,SNR=55
CTU **Camp Tracy** 71.94 51 eP P 11 32 42.5 +0.7
comp=Z,68nm,1.1s
E24A **Baker** 72.00 43 ⇑P P 11 32 41.9 -0.1
baz=72,SNR=23
BANOM **Banah** 72.02 289 P P 11 32 42.4 0.0
SNR=29
F23A **Volborg** 72.02 44 ⇓P P 11 32 42.1 0.0
baz=72,SNR=104
ISRV **Sarvestan** 72.03 294 eP P 11 32 40.7 -2.0
M17A **Scullys Gap (B** 72.04 50 ⇑P P 11 32 42.5 0.0
baz=72,SNR=38
ASK **Askoy** 72.08 340 eP P 11 32 41.2 -0.8
ASK AMB AMB 11 32 43.4
comp=Z,436nm,1.2s
HMDM **Hanimaadhoo** 72.08 263 P P 11 32 43.8 +1.1
comp=Z,220nm,1.2s
RUND **Rundenannen** 72.09 340 eP P 11 32 41.6 -0.5
L18A **Fontenelle, Gr** 72.09 49 ⇑P P 11 32 43.0 +0.3
baz=72,SNR=78
DECC **Green Verdugo** 72.10 60 ⇓P P 11 32 42.7 0.0
baz=72,SNR=9.1
BER **Bergen** 72.13 340 eP P 11 32 41.7 -0.6
BER AMB AMB 11 32 43.3
comp=Z,311nm,1.0s
BER AMS AMS 12 10 10.6
comp=Z,1µm,18.4s
K19A **Absolon Red Bu** 72.16 48 ⇑P P 11 32 42.6 -0.5
baz=72,SNR=59
JLU **Jordanelle** 72.17 51 eP P 11 32 43.2 -0.1
comp=Z,92nm,1.3s
ODD1 **Odda** 72.21 339 eP P 11 32 43.1 +0.2
ODD1 AMB AMB 11 32 45.1
comp=Z,237nm,1.3s
J20A **Shoshoni** 72.22 47 ⇓P P 11 32 43.7 +0.3
baz=72,SNR=58
WBK **Wadi Bani Khal** 72.22 285 P P 11 32 44.9 +1.3
SNR=27
PASC **Pasadena Art C** 72.24 60 eP P 11 32 43.8 +0.3
comp=Z,208nm,1.0s
EGD **Espegrend** 72.25 340 eP P 11 32 42.4 -0.6
EGD AMB AMB 11 32 44.4
comp=Z,317nm,1.3s
HOMI **Horasan** 72.27 308 *i* P P 11 32 44.8 +0.9
MWC **Mount Wilson** 72.29 60 eP P 11 32 44.0 0.0
MWC pmax pmax
comp=Z,116nm,1.3s
MWC **Mount Wilson** 72.29 60 eP P 11 32 44.0 0.0
comp=Z,116nm,1.3s
H22A **Clearmont** 72.30 45 ⇑P P 11 32 43.8 -0.1
baz=72,SNR=21
I21A **Big Trails, Te** 72.33 46 ⇑P P 11 32 44.2 +0.1
baz=72,SNR=178
SHOC **Shoshone** 72.33 57 ⇑P P 11 32 44.1 +0.1
baz=72,SNR=14
L19A **Farson** 72.36 49 ⇓P P 11 32 44.3 -0.1
baz=72,SNR=63
G23A **Biddle** 72.39 44 ⇓P P 11 32 44.1 -0.2
baz=72,SNR=36
GSC **Goldstone** 72.39 58 eP P 11 32 44.7 +0.2
GSC pmax pmax
comp=Z,72nm,1.2s
GSC **Goldstone** 72.39 58 eP P 11 32 44.7 +0.2
comp=Z,72nm,1.2s
GSC **Goldstone** 72.39 58 ⇓P P 11 32 44.6 +0.2
baz=72,SNR=12
DAU **Daniels Canyon** 72.40 51 eP P 11 32 45.6 +0.8
DAU **Daniels Canyon** 72.40 51 eP P 11 32 45.6 +0.8
M18A **Lyman** 72.41 50 ⇑P P 11 32 44.7 +0.1
baz=72,SNR=29
F24A **Ekalaka** 72.43 43 ⇓P P 11 32 44.5 0.0
baz=72,SNR=80
MPU **Maple Canyon** 72.45 52 eP P 11 32 45.2 +0.3
comp=Z,91nm,1.0s
BFSC **Mount Baldy Ra** 72.53 59 ⇓P P 11 32 45.2 -0.2
baz=72,SNR=28
RRX **Edison Barstow** 72.54 59 ⇑P P 11 32 45.6 +0.3
baz=72
K20A **Yellowstone Ra** 72.54 48 ⇓P P 11 32 44.8 -0.5
baz=72,SNR=33
J21A **Lysite** 72.56 47 ⇑P P 11 32 45.5 -0.1
baz=72,SNR=63
CIS **Catalina Islan** 72.59 61 ⇑P P 11 32 45.5 -0.1
baz=72,SNR=5.4
SMDO **Samad** 72.59 285 P P 11 32 46.7 +0.8
SNR=19
BLS5 **Blasjo** 72.67 339 eP P 11 32 45.9 +0.2
BLS5 AMB AMB 11 32 47.7
comp=Z,98nm,1.2s
I22A **9 Mile Ranch,** 72.71 46 ⇑P P 11 32 46.5 +0.2
baz=72,SNR=52
GEVA **Gevas** 72.73 306 *i* P P 11 32 47.2 +0.7
SCI **San Clemente I** 72.77 61 ⇓P P 11 32 46.7 0.0
baz=73
HOQ **Hoqain** 72.79 286 P P 11 32 47.3 +0.4
SNR=22
G24A **Alzada** 72.80 44 ⇑P P 11 32 46.2 -0.5
baz=73,SNR=6.5
H23A **Clabaugh Cattl** 72.82 45 ⇑P P 11 32 46.5 -0.4
baz=73
HATD **Hatta, Dubai** 72.83 288 P P 11 32 47.5 +0.3
SNR=41
ARUT **Antelope Range** 72.84 54 eP P 11 32 47.4 +0.2
ARUT pmax pmax
comp=Z,83nm,1.1s
ARUT **Antelope Range** 72.84 54 eP P 11 32 47.4 +0.2
comp=Z,83nm,1.1s
TUQ **Turquoise Moun** 72.85 58 ⇓P P 11 32 47.7 +0.4
baz=73,SNR=63
M19A **Rock Springs** 72.87 49 ⇑P P 11 32 47.2 -0.2
baz=73,SNR=18
ASHO **Ashiyiah** 72.97 288 P P 11 32 48.0 0.0
SNR=37
L20A **Wamsutter** 72.98 48 ⇓P P 11 32 48.1 +0.1
baz=73,SNR=65
BBRC **Big Bear Solar** 72.99 59 ⇓P P 11 32 48.3 0.0
baz=73
HEC **Hector,Ludlow** 72.99 58 ⇓P P 11 32 48.4 +0.4
baz=73,SNR=47
JMDO **Jabal Madar** 72.99 285 P P 11 32 48.7 +0.5
SNR=25
J22A **Midwest** 73.04 46 ⇑P P 11 32 48.2 -0.1
baz=73,SNR=119
CCUT **Cedar City** 73.05 54 eP P 11 32 48.1 -0.4
comp=Z,92nm,1.2s
NAZ **Nazwa, Dubai** 73.06 288 P P 11 32 48.6 +0.1
SNR=14
MVU **Marysvale** 73.10 53 eP P 11 32 49.7 +0.8
comp=Z,82nm,1.3s
MVU LR LR
comp=Z,341nm,22.0s
HOMB **Homborsund** 73.11 338 eP P 11 32 48.1 0.0
MSU **Marysvale** 73.12 53 eP P 11 32 49.9 +1.0
MSU **Marysvale** 73.12 53 eP P 11 32 49.9 +1.0
H24A **Dirks Ranch, A** 73.13 44 ⇑P P 11 32 48.1 -0.6
baz=73,SNR=47
K21A **Alcova** 73.15 47 ⇑P P 11 32 48.9 -0.1
baz=73,SNR=54
TMUT **Trail Mountain** 73.17 52 eP P 11 32 49.7 +0.4
comp=Z,94nm,1.2s
MURC **Murrieta** 73.23 60 ⇑P P 11 32 49.5 0.0
baz=73,SNR=19
STAV **Stavanger** 73.29 339 eP P 11 32 46.0 -3.3
ULM **Lac du Bonnet** 73.30 36 P P 11 32 48.6 -0.8
ULM **Lac du Bonnet** 73.30 36 P P 11 32 48.6 -0.8
comp=Z,27nm,0.8s,baz=314,slow=7.1,SNR=37
ULM LR LR 12 09 24.0
comp=Z,372nm,18.2s,baz=318,slow=39
P17A **Butcher Ranch,** 73.32 52 ⇑P P 11 32 50.5 +0.5
baz=73,SNR=52
MDND **Maddock** 73.38 39 ⇑P P 11 32 50.0 0.0
baz=73,SNR=16
BSY **Bisya** 73.40 286 P P 11 32 51.4 +0.9
SNR=25
SNART **Snartemo** 73.41 338 eP P 11 32 48.0 -2.0
SNART AMB AMB 11 32 49.8
comp=Z,141nm,1.2s
M20A **Sweetwater, Wa** 73.41 49 ⇓P P 11 32 51.0 +0.4
baz=73,SNR=39
Q16A **Castle Valley** 73.44 52 ⇓P P 11 32 51.3 +0.5
baz=73,SNR=43
GMRC **Granite Mounta** 73.44 58 ⇓P P 11 32 51.1 +0.3
baz=73,SNR=51
ARQ **Araqi** 73.50 287 P P 11 32 51.7 +0.5
SNR=25
P18A **Preston Nutter** 73.50 51 ⇑P P 11 32 51.7 +0.4
baz=73,SNR=45
ASUD **Al Ashush, Dub** 73.52 288 P P 11 32 51.7 +0.5
SNR=16
K22A **Casper** 73.53 47 ⇓P P 11 32 51.0 -0.2
baz=73,SNR=44
J23A **Dilts Ranch, B** 73.53 46 ⇓P P 11 32 50.8 -0.4
baz=73,SNR=6.5
L21A **Rawlins** 73.54 48 ⇓P P 11 32 51.2 -0.2
baz=73,SNR=51
LDFC **Landfair** 73.59 57 eP P 11 32 52.0 +0.3
comp=Z,169nm,1.0s
SRU **San Rafael** 73.69 52 eP P 11 32 52.5 +0.2
SRU pmax pmax
comp=Z,127nm,1.0s
SRU **San Rafael** 73.69 52 eP P 11 32 52.5 +0.2
comp=Z,127nm,1.0s
SRU **San Rafael** 73.69 52 ⇑P P 11 32 52.4 +0.2
baz=74,SNR=121
O19A **Miners Draw (B** 73.69 50 ⇑P P 11 32 52.0 -0.2
baz=74,SNR=45
PFO **Pinyon Flat Ob** 73.70 59 eP P 11 32 51.4 -1.0
comp=Z,41nm,1.0s
PFO LR LR
comp=Z,466nm,19.0s
PFO **Pinyon Flat Ob** 73.70 59 ⇓P P 11 32 52.2 -0.1
baz=74,SNR=22
I24A **Kuemmerle Ranc** 73.71 45 ⇓P P 11 32 51.5 -0.7
baz=74,SNR=9.0
KELT **Kelkit** 73.72 310 *i* P P 11 32 53.2 +0.8
BELC **Belle Mtn. Jos** 73.74 59 ⇓P P 11 32 52.3 -0.3
baz=74,SNR=23
BSD **Bornholm Skovb** 73.75 333 ⇓*i*P P 11 32 51.6 -0.4
BSD pmax pmax
comp=Z,190nm,0.8s
BSD **Bornholm Skovb** 73.75 333 ⇓*i*P P 11 32 51.6 -0.4
comp=Z,185nm,0.7s
109C **Camp Elliot, M** 73.75 60 ⇑P P 11 32 52.5 +0.1
baz=74,SNR=11
M21A **Separation Pea** 73.79 48 ⇑P P 11 32 52.7 -0.2
baz=74,SNR=55
N20A **Spence Gulch,** 73.82 49 ⇑P P 11 32 53.6 +0.6
baz=74,SNR=106
LRW **Lerwick** 73.86 343 ⇓eP P 11 32 52.4 -0.2
LRW AMB AMB 11 32 53.3
comp=Z,134nm,0.8s
LRW **Lerwick** 73.86 343 P P 11 32 52.4 -0.2
LRW AMB AMB 11 32 53.3
comp=Z,134nm,0.8s
L22A **Ellis Ranch, M** 74.01 47 ⇓P P 11 32 54.4 +0.3
baz=74,SNR=55
J24A **Dixon Ranch, L** 74.06 45 ⇑P P 11 32 53.5 -0.7
baz=74,SNR=7.0
COP **Copenhagen** 74.09 334 ⇓*i*P P 11 32 54.1 +0.1
COP pmax pmax
comp=Z,120nm,0.8s
COP **Copenhagen** 74.09 334 ⇓*i*P P 11 32 54.1 +0.1
comp=Z,116nm,0.7s
NEE2 **Needles Airpor** 74.10 57 ⇑P P 11 32 54.5 0.0
baz=74
IRM **Iron Mountain** 74.17 58 ⇑P P 11 32 55.3 +0.4
baz=74,SNR=53
BAR **Barrett** 74.17 60 eP P 11 32 54.9 0.0
comp=Z,60nm,1.0s
MONP **Monument Peak** 74.19 60 ⇓P P 11 32 55.3 -0.1
baz=74,SNR=15
BEL **Belsk** 74.20 328 eP P 11 32 55.4 +0.7
P19A **Cripple Cowboy** 74.22 50 ⇑P P 11 32 55.6 +0.2
baz=74,SNR=62
STKA **Stephens Creek** 74.25 183 eP P 11 32 54.4 -0.7
comp=Z,3.9nm,0.9s
STKA **Stephens Creek** 74.25 183 P P 11 32 53.9 -1.2
comp=Z,6.9nm,0.8s,baz=325,slow=5.8,SNR=7.8
STKA LR LR 12 02 55.0
comp=Z,394nm,20.5s,baz=272,slow=34
N21A **Black Mountain** 74.28 49 ⇓P P 11 32 55.9 +0.1
baz=74,SNR=42
O20A **White River Ci** 74.30 50 ⇓P P 11 32 55.8 -0.1
baz=74,SNR=31
BC3 **Big Chuckawall** 74.31 59 ⇑P P 11 32 55.9 +0.1
baz=74,SNR=43
W13A **Hualapai Mount** 74.34 57 ⇑P P 11 32 56.5 +0.4
baz=74,SNR=29
L23A **Garrett** 74.34 47 ⇑P P 11 32 55.5 -0.6
baz=74,SNR=42
M22A **Cedar Creek Ra** 74.35 48 ⇓P P 11 32 56.1 0.0
baz=74,SNR=74
KIS **Kishinev** 74.36 320 κ *i*P P 11 32 54.0 -1.7
KIS *e* 11 33 02.0
KIS *e* 11 35 48.0
KIS pmax pmax
comp=Z,800nm,1.0s
KIS MLR MLR
comp=N,1µm,14.0s
KIS MLR MLR
comp=Z,2µm,14.0s
KIS MLR MLR
comp=Z,1µm,16.0s
KIS **Kishinev** 74.36 320 ⇓*i*P P 11 32 54.0 -1.7
comp=Z,800nm,1.0s
KIS **Kishinev** 74.36 320 *e*PcP P 11 33 02.0 +6.3
K24A **Anderson Ranch** 74.40 46 ⇓P P 11 32 55.2 -1.1
baz=74
LVV **L'vov** 74.41 325 *i* P P 11 32 54.8 -1.2
GKP **Gorka Klasztor** 74.42 330 eP P 11 32 56.1 +0.2
U15A **North Rim** 74.43 55 ⇑P P 11 32 57.5 +0.8
baz=74,SNR=94
MUD **Monsted U'grnd** 74.45 336 ⇓*i*P P 11 32 56.1 0.0
MUD pmax pmax
comp=Z,87nm,0.7s
MUD **Monsted U'grnd** 74.45 336 ⇓*i*P P 11 32 56.1 0.0
comp=Z,87nm,0.7s
LLD **Lille Linde** 74.46 334 *i* P P 11 32 56.1 0.0
LLD pmax pmax
comp=Z,110nm,0.7s
LLD **Lille Linde** 74.46 334 *i* P P 11 32 56.1 0.0
comp=Z,113nm,0.7s
DVTC **Desert V Tower** 74.55 60 ⇑P P 11 32 57.3 +0.1
baz=74
SWSC **Sam W. Stewart** 74.56 59 ⇓P P 11 32 57.1 -0.1
baz=74,SNR=11
P20A **De Beque** 74.65 50 ⇓P P 11 32 57.6 -0.2
baz=74,SNR=6.9
PDMCI **Parker Dam,Lak** 74.70 57 ⇑P P 11 32 58.2 +0.2
baz=74,SNR=39
DIYA **Diyarbakir** 74.72 308 *i* P P 11 32 59.1 +1.0
RGN **Rugen** 74.74 333 eP P 11 32 58.3 +0.5
comp=Z,228nm,0.8s
RGN **Rugen** 74.74 333 eP P 11 32 58.5 +0.8
comp=Z,111nm,0.6s
AGMN **Agassiz Nation** 74.76 37 eP P 11 32 57.1 -1.0
comp=Z,93nm,1.1s
AGMN LR LR
comp=Z,437nm,19.0s
ERBA **Erbaa** 74.76 312 *i* P P 11 32 59.0 +0.7
M23A **Laramie** 74.78 47 ⇑P P 11 32 58.5 -0.1
baz=75,SNR=26
L24A **Wheatland** 74.81 46 ⇑P P 11 32 58.3 -0.3
baz=75,SNR=11
Y12C **Blythe** 74.83 58 ⇑P P 11 32 59.2 +0.5
baz=75,SNR=34
N22A **Wattenberg Ran** 74.84 48 ⇓P P 11 32 59.5 +0.4
baz=75,SNR=67
S18A **Hurst Farm, Bl** 74.95 53 ⇑P P 11 32 59.7 0.0
baz=75,SNR=92
K25A **Mack Ranch, Ha** 74.97 45 ⇓P P 11 32 59.1 -0.5
baz=75,SNR=8.8
LEOM **Leova** 75.01 320 ⇑*i*P P 11 32 59.5 0.0
PHWY **Pilot Hill** 75.04 47 eP P 11 33 00.0 -0.2
comp=Z,73nm,1.4s
HAVZ **Havza** 75.06 312 *i* P P 11 33 00.5 +0.5
N23A **Red Feather La** 75.06 48 ⇑P P 11 33 00.7 +0.4
baz=75,SNR=65
Q20A **Ridgley Place,** 75.07 51 ⇓P P 11 33 00.2 0.0
baz=75,SNR=54
GLA **Glamis** 75.10 59 eP P 11 33 00.8 +0.5
GLA pmax pmax
comp=Z,101nm,1.0s
GLA **Glamis** 75.10 59 eP P 11 33 00.8 +0.5
comp=Z,101nm,1.0s
GLA **Glamis** 75.10 59 ⇓P P 11 33 00.8 +0.5
baz=75,SNR=28
PV04 **Paradox Valley** 75.11 51 eP P 11 33 00.5 0.0
KWP **Kalwaria Pacla** 75.12 325 eP P 11 33 00.5 +0.4
KWP pmax pmax
comp=Z,601nm,1.1s
KWP MLR MLR
comp=Z,2µm,19.0s
KWP **Kalwaria Pacla** 75.12 325 eP P 11 33 00.5 +0.4
comp=Z,601nm,1.1s
KWP LR LR
comp=Z,2µm,19.0s
KWP **Kalwaria Pacla** 75.12 325 ⇓*i*P P 11 33 00.6 +0.4
KWP **Kalwaria Pacla** 75.12 325 eP P 11 33 00.7 +0.6
P21A **Newcastle** 75.16 50 ⇑P P 11 33 01.1 +0.3
baz=75,SNR=112
O22A **Kremmling** 75.23 49 ⇓P P 11 33 01.2 -0.1
baz=75,SNR=58
BHD **Baghdad** 75.23 302 *ex* P 11 32 57.8 -3.2
BHD *ex* x 11 42 39.0
L25A **Engebretsen Ra** 75.24 46 ⇑P P 11 33 01.0 -0.1
baz=75,SNR=7.1
M24A **Cheyenne** 75.27 47 ⇑P P 11 33 01.9 +0.6
baz=75,SNR=44
K26A **Motz Farm, Whi** 75.27 45 ⇑P P 11 33 00.8 -0.5
baz=75
MALT **Malatya** 75.44 309 eP P 11 33 03.4 +1.2
MALT pmax pmax
comp=Z,124nm,1.3s
MALT MLR MLR
comp=Z,975nm,19.0s
MALT **Malatya** 75.44 309 eP P 11 33 03.4 +1.2
comp=Z,124nm,1.3s
MALT LR LR
comp=Z,975nm,19.0s
MALT **Malatya** 75.44 309 ⇓*i*P P 11 33 03.5 +1.2
PV01 **Paradox Valley** 75.48 51 eP P 11 33 02.9 +0.3
comp=Z,4µm,0.9s
P22A **Eagle** 75.50 49 ⇓P P 11 33 03.2 +0.4
baz=75,SNR=103
BUR08 **Bucovina Ar. S** 75.54 323 eP P 11 33 02.6 -0.2
O23A **Lake Granby, G** 75.54 48 ⇓P P 11 33 03.9 +0.8
baz=75,SNR=120
R20A **Redvale** 75.55 51 ⇑P P 11 33 03.5 +0.5
baz=75,SNR=50
Q21A **Lamborn Mesa,** 75.57 50 ⇑P P 11 33 03.5 +0.4
baz=75,SNR=44
WUAZ **Wupatki** 75.59 55 eP P 11 33 04.1 +0.8
comp=Z,148nm,1.1s
WUAZ LR LR
comp=Z,287nm,21.0s
WUAZ **Wupatki** 75.59 55 ⇓P P 11 33 04.1 +0.8
baz=75,SNR=31
Y14A **Wickenburg** 75.65 57 ⇓P P 11 33 04.0 +0.5
baz=76,SNR=105
SMCO **Snowmass** 75.67 50 eP P 11 33 04.2 +0.2

comp=Z,84nm,1.1s
N24A Carr 75.68 47 ⇑P P 11 33 04.2 +0.4
baz=76,SNR=21
TLCR 75.68 319⇑*i*P P 11 33 03.8 +0.4
M25A Palm-Egli Farm 75.70 46 ⇑P P 11 33 04.4 +0.6
baz=76,SNR=12
TESR 75.73 321⇑*i*P P 11 33 03.7 0.0
AKCD Akcadag 75.74 309 *i* P P 11 33 05.0 +0.9
K27A Flueckinger Fa 75.76 45 ⇓P P 11 33 03.5 -0.6
baz=76,SNR=11
KBD Kabd 75.79 297 *e*P P 11 33 03.8 -0.5
KBD AMb AMB 11 33 05.7
comp=Z,90nm,1.4s
L26A Underwood Farm 75.79 45 ⇑P P 11 33 03.9 -0.4
baz=76
S20A Disappointment 75.80 51 ⇑P P 11 33 04.7 +0.1
baz=76,SNR=65
KOLS Kolonicke sedl 75.83 325 *e*P P 11 33 04.7 +0.5
KOLS pmax pmax
comp=Z,88nm,1.0s
KOLS Kolonicke sedl 75.83 325 *e*P P 11 33 04.7 +0.5
OJC Ojcow 75.85 327 *e*P P 11 33 04.8 +0.5
OJC pmax pmax
comp=Z,397nm,1.0s
OJC Ojcow 75.85 327 *e*P P 11 33 04.8 +0.5
comp=Z,397nm,1.0s
OJC Ojcow 75.85 327 *i* P P 11 33 04.8 +0.5
OJC *e*pP pP 11 33 13.2 +2.5
OJC *e*S S 11 42 43.8 -1.6
OJC L L 12 09 29.6
comp=Z,2µm,18.6s
R21A Cimarron 75.90 51 ⇓P P 11 33 05.8 +0.7
baz=76,SNR=112
QRN Al-Qurain 75.92 296 *e*P P 11 33 04.6 -0.5
QRN AMb AMB 11 33 05.7
comp=Z,208nm,1.4s
Q22A Crested Butte, 75.92 50 ⇓P P 11 33 05.9 +0.6
baz=76,SNR=109
113A Mohawk Valley, 75.95 58 ⇑P P 11 33 05.3 +0.1
baz=76,SNR=60
BALT Daday 75.99 314 *i* P P 11 33 06.3 +0.8
ISCO Idaho Springs 76.00 49 *e*P P 11 33 06.1 +0.4
ISCO pmax pmax
comp=Z,65nm,1.0s
ISCO MLR MLR
comp=Z,303nm,21.0s
ISCO Idaho Springs 76.00 49 *e*P P 11 33 06.1 +0.4
comp=Z,65nm,1.0s
ISCO LR LR
comp=Z,303nm,21.0s
ISCO Idaho Springs 76.00 49 ⇓P P 11 33 06.2 +0.4
baz=76,SNR=95
CFR Carcaliu 76.01 319⇓*i*P P 11 33 05.3 0.0
NAY Al-Naaiem 76.04 297 *e*P P 11 33 04.9 -0.8
NAY AMb AMB 11 33 05.9
comp=Z,60nm,0.8s
PETR 76.04 320⇓*i*P P 11 33 06.9 +1.5
RDF Al-Radifah 76.05 296 *e*P P 11 33 05.8 0.0
RDF AMb AMB 11 33 07.2
comp=Z,274nm,1.3s
UZH Uzhgorod 76.06 325*c i*P P 11 33 04.6 -0.9
UZH *e*S S 11 42 45.3 -2.4
UZH MLR MLR
comp=Z,1µm,16.0s
O24A Longmont 76.07 48 ⇑P P 11 33 06.7 +0.7
baz=76,SNR=27
Z14A Wintersburg 76.07 57 ⇓P P 11 33 06.3 +0.4
baz=76
N25A Grover 76.12 47 ⇑P P 11 33 06.4 +0.2
baz=76
MVCO Mesa Verde 76.15 52 *e*P P 11 33 06.3 -0.2
comp=Z,68nm,0.9s
MVCO LR LR
comp=Z,329nm,20.0s
MVCO Mesa Verde 76.15 52 ⇑P P 11 33 06.9 +0.4
baz=76,SNR=66
ILGA Ilgaz 76.15 313 *i* P P 11 33 07.6 +1.1
BRSD Miller 76.16 42 ⇓P P 11 33 05.7 -0.5
baz=76,SNR=11
M26A McRoberts Ranc 76.16 46 ⇑P P 11 33 07.0 +0.6
baz=76,SNR=11
P23A Jefferson 76.17 49 ⇑P P 11 33 07.6 +0.9
baz=76,SNR=67
VRI Vrincioaia 76.17 321⇓*i*P P 11 33 06.9 +0.7
CRVS Cervenica-Dubn 76.20 326 *e*P P 11 33 05.8 -0.5
CRVS pmax pmax
comp=Z,66nm,1.2s
CRVS Cervenica-Dubn 76.20 326 *e*P P 11 33 05.8 -0.5
PLOR Plostina 76.22 321⇑*i*P P 11 33 06.9 +0.4
BSEG Bad Segeberg 76.23 334 *e*P P 11 33 06.7 +0.3
BSEG pmax pmax
comp=Z,250nm,0.8s
BSEG Bad Segeberg 76.23 334 *e*P P 11 33 06.7 +0.3
comp=Z,250nm,0.8s
S21A Coal Bank Pass 76.25 51 ⇑P P 11 33 07.9 +0.7
baz=76,SNR=69
NIE Niedzica 76.27 326 *e*P P 11 33 07.7 +0.9
NIE *e**PP PcP 11 33 16.2 -2.5
NIE Niedzica 76.27 326 *e*P P 11 33 07.7 +0.9
NIE *e*pP PcP 11 33 16.2 -2.5
BMR Baia Mare 76.27 324⇓*i*P P 11 33 07.7 +1.0
RUE Ruedersdorf 76.29 332 *e*P P 11 33 07.1 +0.4
comp=Z,170nm,0.8s
RUE Ruedersdorf 76.29 332 *e*P P 11 33 07.0 +0.4
comp=Z,313nm,1.3s
X16A Lo Mia Camp, P 76.29 56 ⇓P P 11 33 08.4 +1.0
baz=76,SNR=237
TRPA Tarpa 76.34 324⇓*i*P P 11 33 08.0 +0.9
TRPA Tarpa 76.34 324⇓*e*P P 11 33 07.8 +0.7
TIRR Tirgusor 76.41 319 *e*P P 11 33 07.6 0.0
TIRR pmax pmax
comp=Z,62nm,0.9s
TIRR Tirgusor 76.41 319 *e*P P 11 33 07.6 0.0
comp=Z,62nm,0.9s
TIRR Tirgusor 76.41 319⇓*i*P P 11 33 07.6 0.0
GRER 76.42 320⇓*i*P P 11 33 09.6 +2.0
R22A Saguache, Gunn 76.45 50 ⇑P P 11 33 09.3 +1.0
baz=76,SNR=73
Q23A Hartsel 76.50 49 ⇓P P 11 33 09.0 +0.4
baz=76,SNR=24
MVH1 Achvaich 76.52 344⇓*e*P P 11 33 07.7 -0.2
MVH1 Achvaich 76.52 344 P P 11 33 07.7 -0.2
M27A Reverse DX Ran 76.52 45 ⇑P P 11 33 08.5 +0.1
baz=76,SNR=8.3
N26A Koester Ranch, 76.57 46 ⇑P P 11 33 08.9 +0.1
baz=76
EFOR EFORIE 76.58 318⇑*i*P P 11 33 09.3 +0.8
P24A Kohler Place, 76.59 48 ⇑P P 11 33 09.7 +0.8
baz=76,SNR=20
GZT Gaziantep 76.59 309 *i* P P 11 33 10.1 +1.1
RAC Raciborz 76.59 328 *e*P P 11 33 09.6 +1.1
O25A Wiggins 76.60 47 ⇑P P 11 33 09.0 +0.1
baz=76,SNR=31
MCD Coleburn Disti 76.64 343⇓*i*P P 11 33 08.6 0.0
MCD Coleburn Disti 76.64 343 P P 11 33 08.6 0.0
U20A Newcomb 76.71 53 ⇓P P 11 33 09.8 +0.2
baz=76,SNR=10
KSP Ksiaz 76.71 329⇓*i*P P 11 33 09.5 +0.3
KSP MLR MLR
comp=Z,4µm,18.2s
KSP Ksiaz 76.71 329 *e*P P 11 33 09.5 +0.3
DOPR Dopca 76.72 321⇑*i*P P 11 33 10.9 +1.6
S22A 4UR Ranch, Cre 76.74 51 ⇑P P 11 33 10.7 +0.7
baz=76,SNR=66
PGOR Pogoanele 76.76 320⇑*i*P P 11 33 11.1 +1.6
OKC Ostrava-Krasne 76.81 328 *i* P P 11 33 10.3 +0.6
OKC MLR MLR
comp=Z,2µm,14.3s
OKC Ostrava-Krasne 76.81 328 *i* P P 11 33 10.3 +0.6
OKC AMS AMS 12 11 00.0
comp=Z,2µm,14.3s
ISR Istrita 76.81 320⇓*i*P P 11 33 10.8 +0.9
AMRR Amara 76.82 319⇑*i*P P 11 33 10.7 +0.9
MLR Muntele Rosu 76.82 321 P P 11 33 09.9 -0.2
MLR Muntele Rosu 76.82 321⇓*i*P P 11 33 10.1 +0.1
MLR Muntele Rosu 76.82 321 P P 11 33 09.9 -0.2
comp=Z,10nm,0.8s,baz=30,slow=5.2,SNR=48
MME1 Meikle Cairn 76.82 343⇓*i*P P 11 33 09.3 -0.3
MME1 Meikle Cairn 76.82 343 P P 11 33 09.3 -0.3
Q24A Divide 76.84 49 ⇑P P 11 33 10.7 +0.1
baz=77,SNR=23
W18A Petrified Fore 76.85 54 ⇓P P 11 33 11.1 +0.7
baz=77,SNR=20
T21A Navajo Lake 76.86 52 ⇑P P 11 33 11.1 +0.5
baz=77,SNR=22
EYMN Ely 76.92 35 *e*P P 11 33 09.7 -0.8
comp=Z,124nm,1.0s
EYMN LR LR
comp=Z,308nm,21.0s
O26A Horse Wrangler 76.94 47 ⇑P P 11 33 10.7 -0.2
baz=77,SNR=9.5
N27A Anderson Farm, 76.95 46 ⇓P P 11 33 11.0 +0.1
baz=77,SNR=31
P25A Willow Gulch B 76.99 48 ⇑P P 11 33 11.5 +0.3
baz=77,SNR=27
R23A Moffat 77.00 50 ⇑P P 11 33 12.1 +0.7
baz=77,SNR=72
MDO Dochfour 77.00 344⇓*i*P P 11 33 10.5 -0.2
MDO Dochfour 77.00 344 P P 11 33 10.5 -0.2
DRUM Mains of Drumt 77.08 342 *e*P P 11 33 10.8 -0.4
DRUM AMB AMB 11 33 12.2
comp=Z,252nm,1.1s
DRUM Mains of Drumt 77.08 342 P P 11 33 10.8 -0.4
DRUM AMB AMB 11 33 12.2
comp=Z,252nm,1.1s
UPC Upice 77.09 329 *i* P P 11 33 11.7 +0.4
UPC *e* 11 33 19.9
UPC Upice 77.09 329 *i* P P 11 33 11.7 +0.4
UPC *e*pP PcP 11 33 19.9 -2.3
MORC Moravsky Berou 77.09 328 *e*P P 11 33 11.8 +0.4
MORC pmax pmax
comp=Z,145nm,0.8s
MORC Moravsky Berou 77.09 328 *e*P P 11 33 11.8 +0.4
comp=Z,145nm,0.8s
MORC Moravsky Berou 77.09 328⇓*i*P P 11 33 12.0 +0.6
PSN Preselentsi 77.09 318 *i* P P 11 33 11.5 +0.1
DPC Dobruska-Polom 77.10 329 *e*P P 11 33 11.5 +0.1
DPC pmax pmax
comp=Z,432nm,1.4s
DPC Dobruska-Polom 77.10 329 *e*P P 11 33 11.5 +0.1
comp=Z,432nm,1.4s
DPC Dobruska-Polom 77.10 329 *i* P P 11 33 12.2 +0.8
DPC AMS AMS 12 10 10.0
comp=Z,1µm,16.9s
SECR 77.10 320⇑*i*P P 11 33 12.4 +0.9
X18A Snowflake 77.12 55 ⇓P P 11 33 12.7 +0.7
baz=77,SNR=54
OGNE Ogallala 77.12 46 *e*P P 11 33 11.7 -0.1
comp=Z,193nm,0.9s
OGNE LR LR
comp=Z,332nm,19.0s
OGNE Ogallala 77.12 46 ⇑P P 11 33 11.7 -0.1
baz=77,SNR=33
BR131 Keskin Array S 77.13 313 *e*P P 11 33 11.4 -0.5
comp=Z,0.6nm,0.3s
BRTR Keskin Array B 77.13 313 P P 11 33 11.6 -0.3
BRTR PP PP 11 36 04.8 -0.3
BRTR Keskin Array B 77.13 313 P P 11 33 11.6 -0.3
comp=Z,30nm,0.8s,baz=71,slow=3.7,SNR=101
BRTR PP PP 11 36 04.8 -0.3
comp=Z,11nm,1.0s,baz=69,slow=8.2,SNR=5.2
BRTR LR LR 12 13 26.7
comp=Z,892nm,18.1s,baz=198,slow=40
V20A Brimhall 77.13 53 ⇑P P 11 33 12.4 +0.3
baz=77,SNR=40
KAC Achnashellach 77.14 344⇓*i*P P 11 33 11.5 +0.1
KAC Achnashellach 77.14 344 P P 11 33 11.5 +0.1
KRLC Kraliky 77.14 329 *e*P P 11 33 12.3 +0.6
KRLC Kraliky 77.14 329 *e*P P 11 33 12.3 +0.6
U21A Nageezi 77.17 52 ⇑P P 11 33 12.8 +0.5
baz=77,SNR=40
T22A Edith 77.21 51 ⇓P P 11 33 13.3 +0.8
baz=77,SNR=69
S23A Nye Farm, Mont 77.24 50 ⇑P P 11 33 13.6 +0.9
baz=77,SNR=25
SULR 77.28 320⇓*i*P P 11 33 09.6 -2.9
KPL Plockton 77.36 344⇓*e*P P 11 33 12.7 0.0
KPL AMB AMB 11 33 13.5
comp=Z,222nm,0.8s
KPL Plockton 77.36 344 P P 11 33 12.7 0.0
KPL AMB AMB 11 33 13.5
comp=Z,222nm,0.8s
Q25A Bedland, Calha 77.37 48 ⇓P P 11 33 13.3 0.0
baz=77,SNR=79
R24A Sanders Place, 77.38 49 ⇓P P 11 33 14.0 +0.5
baz=77,SNR=67
P26A Davis Ranch, A 77.41 47 ⇓P P 11 33 13.4 -0.1
baz=77,SNR=26
O27A Beecher Island 77.43 46 ⇑P P 11 33 13.2 -0.4
baz=77,SNR=21
KSB Sheil Bridge 77.43 344⇓*i*P P 11 33 13.1 0.0
KSB Sheil Bridge 77.43 344 P P 11 33 13.1 0.0
ANTO Ankara 77.49 313 *e*P P 11 33 14.5 +0.6
ANTO pmax pmax
comp=Z,111nm,0.9s
ANTO MLR MLR
comp=Z,677nm,19.0s
ANTO Ankara 77.49 313 *e*P P 11 33 14.5 +0.6
comp=Z,111nm,0.9s
ANTO LR LR
comp=Z,677nm,19.0s
ANTO Ankara 77.49 313 P P 11 33 14.8 +0.9
SNR=20
SDCO Great Sand Dun 77.50 50 *e*P P 11 33 14.5 +0.3
comp=Z,36nm,1.0s
NRDL Niedersach Rie 77.52 334 *e*P P 11 33 13.7 +0.1
comp=Z,61nm,0.9s
CLL Collm 77.53 331⇓*i*P P 11 33 13.6 -0.2
CLL pmax pmax
comp=Z,246nm,1.0s
CLL MLR MLR
comp=Z,2µm,17.1s
CLL Collm 77.53 331 *e*P P 11 33 13.5 -0.2
comp=Z,160nm,0.8s
CLL Collm 77.53 331⇓*i*P P 11 33 13.6 -0.2
comp=Z,246nm,1.0s
CLL *i* sP sP 11 33 22.3 -0.1
CLL Lmax 12 11 00.0
CLL L L 12 12 00.0
comp=Z,1µm,18.0s
BBAL Bala 77.54 313 *i* P P 11 33 14.3 +0.1
BRG Berggiesshubel 77.55 331 *i* P P 11 33 13.8 -0.1
BRG pmax pmax
comp=Z,104nm,1.3s
BRG MLR MLR
comp=N,1µm,16.3s
BRG MLR MLR
comp=E,1µm,14.2s
BRG MLR MLR
comp=Z,3µm,14.3s
BRG Berggiesshubel 77.55 331 *e*P P 11 33 13.9 0.0
comp=Z,64nm,0.9s
W20A Ramah 77.58 54 ⇓P P 11 33 14.9 +0.2
baz=77,SNR=54
VYHS Vyhne 77.60 327 *e*P P 11 33 14.7 +0.5
VYHS pmax pmax
comp=Z,100nm,1.4s
VYHS Vyhne 77.60 327 *e*P P 11 33 14.7 +0.5
PVCC Panska Ves 77.61 330 *i* P P 11 33 14.8 +0.6
PVCC MLR MLR
comp=Z,2µm,18.3s
PVCC Panska Ves 77.61 330 *i* P P 11 33 14.8 +0.6
PVCC AMS AMS 12 10 40.0
comp=Z,2µm,18.3s
V21A Milan 77.62 53 ⇑P P 11 33 15.2 +0.4
baz=77,SNR=5.7
PSZ Piszkesteto 77.62 326 *e*P P 11 33 14.9 +0.5
PSZ pmax pmax
comp=Z,160nm,1.0s
PSZ MLR MLR
comp=Z,2µm,19.0s
PSZ Piszkesteto 77.62 326 *e*P P 11 33 14.9 +0.5
comp=Z,160nm,1.0s
PSZ LR LR
comp=Z,2µm,19.0s
PSZ Piszkesteto 77.62 326⇓*i*P P 11 33 16.7 +2.3
PSZ Piszkesteto 77.62 326⇓*e*P P 11 33 15.1 +0.7
U22A Llaves 77.68 52 ⇓P P 11 33 15.7 +0.6
baz=78,SNR=32
T23A Casias Ranch, 77.69 51 ⇑P P 11 33 15.8 +0.6
baz=78,SNR=25
FBE Freiberg 77.72 331 *e*P P 11 33 15.1 +0.3
comp=Z,121nm,0.8s
FBE *e*pP PcP 11 33 23.9 -1.0
S24A Houchin Ranch, 77.73 50 ⇑P P 11 33 16.0 +0.5
baz=78,SNR=31
ELO Logie Almond 77.76 343⇓*e*P P 11 33 14.9 0.0
ELO Logie Almond 77.76 343 P P 11 33 14.9 0.0
Q26A Hugo 77.77 48 ⇓P P 11 33 15.4 -0.1
baz=78,SNR=29
ECSD EROS Data Cent 77.81 41 *e*P P 11 33 14.9 -0.6
comp=Z,106nm,1.0s
ECSD LR LR
comp=Z,549nm,20.0s
P27A Ficken Ranch, 77.83 47 ⇑P P 11 33 15.3 -0.6
baz=78,SNR=14
PRD Provadia 77.83 318 *i* P P 11 33 16.2 +0.6
VRAC Vranov 77.84 328⇓*i*P P 11 33 16.3 +0.8
LOT Lotru 77.85 322⇑*i*P P 11 33 15.8 0.0
R25A Fountain Ranch 77.89 49 ⇑P P 11 33 16.0 -0.3
baz=78,SNR=19
DEV Deva 77.91 323⇑*i*P P 11 33 16.8 +0.8
V22A San Miguel Ran 77.97 52 ⇓P P 11 33 17.2 +0.4
baz=78,SNR=34
X20A Quemado 77.98 54 ⇓P P 11 33 18.0 +1.1
baz=78,SNR=168
CLZ Clausthal 77.98 333 *e*P P 11 33 16.8 +0.5
CLZ pmax pmax
comp=Z,151nm,0.8s
CLZ Clausthal 77.98 333 *e*P P 11 33 16.8 +0.5
comp=Z,151nm,0.8s
HUMR Humele 77.99 321⇓*i*P P 11 33 16.7 +0.2
ESY Stoneypath 78.02 342⇓*i*P P 11 33 16.4 -0.1
ESY Stoneypath 78.02 342 P P 11 33 16.4 -0.1
NEUB Neuenburg 78.04 332 *e*P P 11 33 16.6 0.0
comp=Z,139nm,0.9s
PRU Pruhonice 78.06 330 *i* P P 11 33 17.1 +0.4
PRU *e* 11 33 25.0
PRU MLR MLR
comp=Z,2µm,18.0s
PRU Pruhonice 78.06 330 *i* P P 11 33 17.1 +0.4
PRU *e*pP PcP 11 33 25.0 -1.4
PRU AMS AMS 12 10 50.0
comp=Z,2µm,18.0s
W21A San Fidel 78.09 53 ⇓P P 11 33 17.9 +0.5
baz=78,SNR=29
U23A El Rito 78.09 51 ⇓P P 11 33 18.3 +0.9
baz=78,SNR=99
TUC Tucson 78.12 57 *e*P P 11 33 17.9 +0.4
TUC pmax pmax
comp=Z,13nm,1.0s
TUC MLR MLR
comp=Z,302nm,19.0s
TUC Tucson 78.12 57 *e*P P 11 33 17.9 +0.4
comp=Z,13nm,1.0s
TUC LR LR
comp=Z,302nm,19.0s
EDI Edinburgh 78.15 342 AMB AMB 11 33 16.0
comp=Z,78nm,1.1s
EDI Edinburgh 78.15 342 AMB AMB 11 33 16.0
comp=Z,78nm,1.1s
SMOL Smolenice 78.15 327 *e*P P 11 33 18.6 +1.3
SMOL Smolenice 78.15 327 *e*P P 11 33 18.6 +1.3
S25A Robets Cordova 78.15 49 ⇓P P 11 33 17.2 -0.5
baz=78,SNR=32
EAB Aberfoyle 78.16 343⇓*i*P P 11 33 17.2 +0.1
EAB Aberfoyle 78.16 343 P P 11 33 17.2 +0.1
KSCO Kaye Shedlock' 78.19 47 ⇓P P 11 33 17.6 -0.2
baz=78,SNR=34
T24A Torres, Weston 78.22 50 ⇑P P 11 33 19.0 +0.8
baz=78,SNR=47
GULE Gulek 78.23 310 *i* P P 11 33 19.0 +0.9
R26A Arlington 78.25 48 ⇑P P 11 33 18.0 -0.2
baz=78,SNR=145
EBL Broad Law 78.25 342⇓*i*P P 11 33 17.8 +0.1
EBL Broad Law 78.25 342 P P 11 33 17.8 +0.1
TREC Trest 78.27 329 *i* P P 11 33 18.5 +0.5
TREC MLR MLR
comp=Z,2µm,19.2s
TREC Trest 78.27 329 *i* P P 11 33 18.5 +0.5
TREC AMS AMS 12 10 40.0
comp=Z,2µm,19.2s
EAU Auchinoon 78.28 342⇓*e*P P 11 33 18.1 +0.3
EAU Auchinoon 78.28 342 P P 11 33 18.1 +0.3
BUD Budapest 78.32 326⇓*e*P P 11 33 19.0 +0.8
GZR Gura Zlata 78.34 323⇑*i*P P 11 33 18.6 +0.1
YAYL Yayladag 78.35 308 *i* P P 11 33 19.4 +0.6
IBBN Ibbenburen 78.43 335 *e*P P 11 33 18.8 +0.1
comp=Z,152nm,0.7s
IBBN *e*pP PcP 11 33 27.6 -0.3
PKSN Nyarlorinc 78.44 325⇓*e*P P 11 33 19.7 +0.9
SPMN St. Paul 78.46 38 ⇓P P 11 33 18.2 -0.9
baz=78,SNR=16
TANN Tannenbergstha 78.46 331 *e*P P 11 33 19.1 +0.1
comp=Z,36nm,1.0s
X21A Alamocita Cree 78.47 54 ⇓P P 11 33 20.6 +1.0
baz=78,SNR=174
WERD Werda 78.49 331 *e*P P 11 33 19.3 +0.2
comp=Z,47nm,0.9s
Y20A Horse Springs, 78.49 54 ⇑P P 11 33 21.0 +1.2
baz=78,SNR=249
SZH Strazhica 78.49 319 *i* P P 11 33 19.4 +0.1
V23A Ortiz Mt. (NFS 78.51 52 ⇑P P 11 33 21.0 +1.3
baz=78,SNR=29
PLN Plauen 78.51 331 *e*P P 11 33 19.4 +0.2
comp=Z,314nm,1.0s
ZST Bratislava 78.53 327 *e*P P 11 33 19.3 -0.1
ZST pmax pmax
comp=Z,110nm,1.4s
ZST Bratislava 78.53 327 *e*P P 11 33 19.3 -0.1
PGBU Glenifferbraes 78.53 343⇓*e*P P 11 33 19.6 +0.3
PGBU AMB AMB 11 33 20.7
comp=Z,411nm,1.4s
PGBU Glenifferbraes 78.53 343 P P 11 33 19.6 +0.3
PGBU AMB AMB 11 33 20.7
comp=Z,411nm,1.4s
T25A Trinidad 78.54 50 ⇓P P 11 33 20.0 +0.1
baz=78,SNR=54
GUNZ Gunzen 78.55 331 *e*P P 11 33 19.7 +0.2
comp=Z,61nm,0.8s
U24A Moreno Valley 78.56 51 ⇑P P 11 33 21.1 +0.9
baz=78,SNR=32
MOX Moxa 78.57 332 *e*P P 11 33 19.6 +0.1
MOX pmax pmax
comp=Z,63nm,0.8s
MOX Moxa 78.57 332 *e*P P 11 33 19.6 +0.1
comp=Z,63nm,0.8s
W22A Albuquerque 78.58 53 ⇓P P 11 33 21.1 +0.9
baz=78,SNR=17
WERN Wernitzgruen 78.60 331 *e*P P 11 33 20.0 +0.2
comp=Z,67nm,0.8s
PKS7 Kunszentmiklos 78.61 326⇓*e*P P 11 33 20.6 +0.8
R27A Eads 78.62 48 ⇓P P 11 33 20.0 -0.2
baz=78,SNR=40
NKC Novy Kostel 78.62 331 *i* P P 11 33 20.0 +0.1
NKC MLR MLR
comp=Z,2µm,17.1s
NKC Novy Kostel 78.62 331 *i* P P 11 33 20.0 +0.1
NKC AMS AMS 12 11 30.0
comp=Z,2µm,17.1s
PKSG 78.66 326⇑*e*P P 11 33 21.1 +1.0
BZS Buzias 78.68 323⇓*i*P P 11 33 20.2 -0.1
BUY Buyukada 78.71 316 *i* P P 11 33 20.5 +0.1
ESK Eskdalemuir 78.71 342⇓*e*P P 11 33 20.3 +0.1
ESK AMB AMB 11 33 20.9
comp=Z,108nm,0.8s
ESK AMS AMS 12 16 00.8
comp=Z,749nm,6.1s
ESK Eskdalemuir 78.71 342 P P 11 33 20.3 +0.1
ESK AMB AMB 11 33 20.9
comp=Z,108nm,0.8s
ESK AMS AMS 12 16 00.8
comp=Z,749nm,6.1s
ESK Eskdalemuir 78.71 342 *e*P P 11 33 20.4 +0.2
ESK pmax pmax
comp=Z,88nm,0.6s
ESK MLR MLR
comp=Z,541nm,19.0s
ESK Eskdalemuir 78.71 342 *e*P P 11 33 20.4 +0.2
comp=Z,88nm,0.6s
ESK LR LR
comp=Z,541nm,19.0s
S26A Kim 78.72 49 ⇑P P 11 33 20.3 -0.5
baz=78,SNR=39
BORA Eskisehir 78.72 314 *i* P P 11 33 20.4 -0.4
SEYT Eskypehyr 78.78 314 *i* P P 11 33 20.8 -0.2
JMB Yambol 78.78 318 P P 11 33 23.1 +2.3
JMB Yambol 78.78 318 *i* P P 11 33 21.9 +1.1
BGNE Belgrade 78.79 43 ⇓P P 11 33 20.2 -0.8
baz=78,SNR=18
ECK Cauldkaine Hil 78.82 342⇓*i*P P 11 33 20.9 0.0
ECK Cauldkaine Hil 78.82 342 P P 11 33 20.9 0.0
PVL Pavlikeni 78.82 320 *i* P P 11 33 21.8 +0.8
ELBA Catalca 78.84 316 *i* P P 11 33 21.6 +0.4
Y21A Point of Rocks 78.84 54 ⇑P P 11 33 22.8 +1.1
baz=79,SNR=130

LAZ **Ladron** 78.89 53 *e*P P 11 33 22.7 +0.9
comp=Z,57nm,1.2s
X22A **Bernardo** 78.89 53 ⇓P P 11 33 23.3 +1.5
baz=79,SNR=63
XAL **Allendale** 78.90 341⇓*e*P P 11 33 21.0 -0.3
XAL **Allendale** 78.90 341 P P 11 33 21.0 -0.3
ANMO **Albuquerque** 78.91 53 *e*P P 11 33 22.4 +0.4
comp=Z,87nm,1.2s
ANMO LR LR
comp=Z,240nm,20.0s
PKST **T"s** 78.91 326⇓*e*P P 11 33 21.7 +0.2
Z20A **Nine Sixteen R** 78.91 55 ⇓P P 11 33 23.0 +1.0
baz=79,SNR=218
RBK **Rabkut** 78.92 284 P P 11 33 21.9 -0.2
SNR=5.3
W23A **Werner Place,** 78.94 52 ⇓P P 11 33 22.9 +0.8
baz=79,SNR=60
MANZ **Manzenberg** 78.94 331 *e*P P 11 33 21.8 +0.1
comp=Z,50nm,0.9s
T26A **Comanche Natio** 78.97 49 ⇓P P 11 33 21.9 -0.4
baz=79,SNR=84
UBBA **Unterbreizbach** 78.97 333 *e*P P 11 33 21.5 -0.1
S27A **Las Animas** 78.99 48 ⇑P P 11 33 21.9 -0.4
baz=79
WTSB **Winterswijk** 79.02 335 *e*P P 11 33 21.5 -0.4
V24A **Rampart Ranch,** 79.05 51 ⇑P P 11 33 23.7 +0.9
baz=79,SNR=63
U25A **Circle Dot Ran** 79.06 50 ⇑P P 11 33 22.9 +0.1
baz=79,SNR=59
ROTZ **Rotzenmuhle** 79.09 331 *e*P P 11 33 23.1 +0.6
comp=Z,78nm,1.1s
ROTZ *e*pP PcP 11 33 31.8 +0.9
KHC **Kasperske Hory** 79.12 330 *e*P P 11 33 23.0 +0.4
KHC pmax pmax
comp=Z,131nm,0.7s
KHC **Kasperske Hory** 79.12 330 *e*P P 11 33 23.0 +0.4
comp=Z,131nm,0.7s
KHC **Kasperske Hory** 79.12 330 *i*P P 11 33 23.1 +0.4
KHC *e*pP PcP 11 33 31.3 +0.2
KHC AMS AMS 12 11 30.0
comp=Z,2µm,18.7s
SCHQ **Schefferville** 79.15 18 P P 11 33 22.4 -0.3
SCHQ **Schefferville** 79.15 18 P P 11 33 22.4 -0.3
comp=Z,31nm,0.5s,baz=355,slow=6.0,SNR=102
SCHQ LR LR 12 10 35.3
comp=Z,881nm,21.0s,baz=153,slow=37
LENM **Lemitar** 79.15 53 *e*P P 11 33 24.1 +0.9
SOP **Sopron** 79.16 327⇓*e*P P 11 33 24.0 +1.1
ULDT **Uludag** 79.22 315 *i*P P 11 33 23.9 +0.4
CONA **Conrad Observa** 79.24 328 *i*pP P 11 33 24.1 +0.7
comp=Z,174nm,1.5s,SNR=42
CONA **Conrad Observa** 79.24 328 *i*P P 11 33 24.1 +0.7
comp=Z,174nm,1.5s
Y22D **IRIS PASSCAL i** 79.24 53 ⇓P P 11 33 24.9 +1.1
baz=79,SNR=8.1
LPM **Los Pinos Moun** 79.25 53 *e*P P 11 33 24.4 +0.6
120A **U Bar Ranch, L** 79.28 56 ⇓P P 11 33 24.8 +0.9
baz=79,SNR=114
BOLV **Bolvadin** 79.31 313 *i*P P 11 33 24.1 +0.1
Y22A **Socorro** 79.31 54 ⇑P P 11 33 24.9 +0.7
baz=79,SNR=97
GEC2 **GERESS Array S** 79.31 330 *e*P P 11 33 23.8 0.0
GEC2 pmax pmax
comp=Z,48nm,0.8s
GEC2 **GERESS Array S** 79.31 330 *e*P P 11 33 23.8 0.0
comp=Z,48nm,0.8s
GERES **GERESS Array B** 79.31 330 P P 11 33 23.7 0.0
GERES **GERESS Array B** 79.31 330 P P 11 33 23.7 0.0
comp=Z,29nm,0.7s,baz=33,slow=5.1,SNR=112
GERES LR LR 12 12 14.5
comp=Z,2µm,18.2s,baz=169,slow=38
X23A **Hourglass Bar** 79.32 53 ⇓P P 11 33 24.9 +0.7
baz=79,SNR=57
Z21A **St. Cloud Mine** 79.33 54 ⇑P P 11 33 25.4 +1.0
baz=79,SNR=173
W24A **Lazy 6 Ranch,** 79.33 52 ⇓P P 11 33 25.3 +1.0
baz=79,SNR=142
BUG **Bochum--Univer** 79.33 335 *e*P P 11 33 23.5 -0.2
comp=Z,102nm,0.9s
V25A **Rancho No Teng** 79.34 51 ⇓P P 11 33 24.9 +0.5
baz=79,SNR=43
PKS9 **Tamasi** 79.35 326⇓*e*P P 11 33 23.7 -0.2
KESW **Keswick, Cumbr** 79.36 342⇓*e*P P 11 33 24.1 +0.3
KESW AMB AMB 11 33 25.3
comp=Z,337nm,1.1s
KESW AMS AMS 12 15 43.0
comp=Z,911nm,19.2s
KESW **Keswick, Cumbr** 79.36 342 P P 11 33 24.1 +0.3
KESW AMB AMB 11 33 25.3
comp=Z,337nm,1.1s
KESW AMS AMS 12 15 43.0
comp=Z,911nm,19.2s
BNM **Barren Site** 79.36 53 *e*P P 11 33 24.6 +0.1
comp=Z,75nm,1.0s
WET **Wettzell** 79.37 330 *e*P P 11 33 24.6 +0.6
WET *e**PP PcP 11 33 33.3 +1.2
WET pmax pmax
comp=Z,146nm,1.2s
WET **Wettzell** 79.37 330 *e*P P 11 33 24.6 +0.6
comp=Z,146nm,1.2s
WET *e*pP PcP 11 33 33.3 +1.2
NWAO **Narrogin (SRO)** 79.43 203 *e*P P 11 33 24.4 +0.2
comp=Z,35nm,1.1s
U26A **Atchley Ranch,** 79.44 50 ⇓P P 11 33 24.9 0.0
baz=79,SNR=46
MPEP **Malo Peshtene** 79.47 321 *i*P P 11 33 25.2 +0.6
PKSM **Moragy** 79.50 325⇓*e*P P 11 33 24.4 -0.3
GRF **Grafenberg Arr** 79.50 332 *e*P P 11 33 25.3 +0.6
GRF pmax pmax
comp=Z,147nm,0.9s
GRF MLR MLR
comp=Z,1µm,19.1s
GRF **Grafenberg Arr** 79.50 332 *e*P P 11 33 25.3 +0.6
comp=Z,147nm,0.9s
GRF *e*L L 12 11 57.8
comp=Z,1µm,19.1s
GRFO **Grafenberg** 79.51 332 *e*P P 11 33 25.3 +0.6
GRFO pmax pmax
comp=Z,155nm,0.9s
GRFO **Grafenberg** 79.51 332 *e*P P 11 33 25.3 +0.6
comp=Z,155nm,0.9s
T27A **Campo** 79.54 49 ⇓P P 11 33 24.9 -0.4
baz=79,SNR=9.2
DIM **Dimitrovgrad** 79.61 319 *i*P P 11 33 26.0 +0.6
S28A **Manter** 79.61 48 ⇑P P 11 33 25.3 -0.3
baz=79,SNR=32
ABTO **Aybut** 79.67 284 P P 11 33 25.8 -0.4
SNR=14
HWQ **Hawqa** 79.67 307 *e*P P 11 33 26.0 0.0
319A **Douglas** 79.69 57 ⇑P P 11 33 26.9 +0.8
baz=80,SNR=155
ERMK **Ermenek** 79.73 311 *i*P P 11 33 26.0 -0.5
X24A **Lazy V L Ranch,** 79.77 52 ⇓P P 11 33 27.7 +1.0
baz=80,SNR=209
220A **Playas Peak, P** 79.79 56 ⇑P P 11 33 27.4 +0.7
baz=80,SNR=118
Z22A **Elephant Butte** 79.79 54 ⇑P P 11 33 27.4 +0.7
baz=80,SNR=142
121A **Cookes Peak, D** 79.80 55 ⇑P P 11 33 27.8 +1.0
baz=80,SNR=132
SART **Tekirdag** 79.81 317 *i*P P 11 33 26.8 +0.1
GDZ **Gediz** 79.82 314 *i*P P 11 33 26.7 0.0
T28A **Walsh** 79.83 48 ⇓P P 11 33 26.2 -0.7
baz=80,SNR=13
V26A **Tequesquite Ra** 79.84 50 ⇓P P 11 33 26.9 -0.1
baz=80,SNR=49
Y23A **Lovelace Mesa,** 79.86 53 ⇓P P 11 33 27.9 +0.8
baz=80,SNR=169
W25A **X Bar L Ranch,** 79.87 51 ⇑P P 11 33 27.8 +0.7
baz=80,SNR=143
CBKS **Cedar Bluff** 79.88 46 *e*P P 11 33 26.1 -0.9
CBKS pmax pmax
comp=Z,125nm,0.9s
CBKS **Cedar Bluff** 79.88 46 *e*P P 11 33 26.1 -0.9
comp=Z,126nm,0.9s
PGB **Panagyurishte** 79.88 320 *i*P P 11 33 27.7 +0.7
MOA **Molln** 79.92 329 *i*P P 11 33 27.2 +0.2
comp=Z,42nm,0.8s,SNR=28
MOA **Molln** 79.92 329 *i*P P 11 33 27.2 +0.2
comp=Z,42nm,0.8s
ARSA **Arzberg** 79.92 328⇓*i*P P 11 33 27.4 +0.3
comp=Z,76nm,1.4s,SNR=16
ARSA **Arzberg** 79.92 328⇓*i*P P 11 33 27.4 +0.3
comp=Z,76nm,1.4s
U27A **Thompson Grove** 79.94 49 ⇑P P 11 33 27.3 -0.1
baz=80,SNR=85

DURS **Dursunbey** 79.96 315 *i*P P 11 33 26.9 -0.6
PLD **Plovdiv** 79.97 319 *i*P P 11 33 27.9 +0.6
TNS **Taunus Mts** 80.00 333 *e*P P 11 33 27.5 +0.1
TNS pmax pmax
comp=Z,65nm,0.9s
TNS **Taunus Mts** 80.00 333 *e*P P 11 33 27.5 +0.1
comp=Z,65nm,0.9s
BEHE **Becsehely** 80.06 327⇓*e*P P 11 33 28.2 +0.5
BHL **Bhannes** 80.11 307 *e*P P 11 33 28.3 -0.1
122A **Conniff Cattle** 80.16 54 ⇓P P 11 33 29.8 +1.1
baz=80,SNR=17
221A **Mesquite Ranch** 80.17 55 ⇓P P 11 33 29.5 +0.7
baz=80,SNR=25
320A **Kipp Ranch, An** 80.18 56 ⇑P P 11 33 29.5 +0.6
baz=80,SNR=63
ISP **Isparta** 80.19 313 *e*P P 11 33 28.6 -0.2
ISP pmax pmax
comp=Z,69nm,1.3s
ISP MLR MLR
comp=Z,989nm,19.0s
ISP **Isparta** 80.19 313 *e*P P 11 33 28.6 -0.2
comp=Z,69nm,1.3s
ISP LR LR
comp=Z,989nm,19.0s
ISP **Isparta** 80.19 313⇓*i*P P 11 33 28.2 -0.6
KBI1 **Birley Grange** 80.20 340⇓*e*P P 11 33 28.4 0.0
KBI1 **Birley Grange** 80.20 340 P P 11 33 28.4 0.0
Z23A **Rita Site, Whi** 80.22 54 ⇑P P 11 33 29.6 +0.6
baz=80,SNR=63
Y24A **Capitan** 80.22 53 ⇑P P 11 33 29.4 +0.3
baz=80,SNR=106
ALN **Alexandroupoli** 80.22 318 P P 11 33 28.4 -0.3
X25A **Clemmons Ranch** 80.25 52 ⇓P P 11 33 29.9 +0.7
baz=80,SNR=129
T29A **Hugoton** 80.25 48 ⇓P P 11 33 28.4 -0.7
baz=80,SNR=5.6
RZN **Rozhen** 80.28 319 *i*P P 11 33 30.1 +0.8
RCY **Rachaya** 80.29 307 *e*P P 11 33 30.2 +0.8
BALY **Balya** 80.30 316 *i*P P 11 33 29.2 -0.1
VTS **Vitosha** 80.30 320 P P 11 33 29.9 +0.6
VTS **Vitosha** 80.30 320⇓*i*P P 11 33 30.1 +0.8
VTS **Vitosha** 80.30 320 *i*P P 11 33 30.0 +0.6
U28A **Mallet** 80.31 49 ⇓P P 11 33 28.7 -0.8
baz=80
GMM **Mts of Mourne** 80.31 343⇓*i*P P 11 33 28.8 -0.1
GMM **Mts of Mourne** 80.31 343 P P 11 33 28.8 -0.1
KHAL **Karahalli** 80.34 314 *i*P P 11 33 29.4 -0.2
HGN **Heimansgroeve** 80.34 335 *e*P P 11 33 28.6 -0.6
HGN *e*PPP PPP 11 36 25.7
HGN *e*S S 11 43 35.7 +2.1
GAZI **Gazipasa** 80.36 311 *i*P P 11 33 28.0 -1.6
W26A **Owens Ranch, T** 80.36 51 ⇓P P 11 33 30.3 +0.5
baz=80,SNR=38
BEBN **Eben Emael** 80.39 335 P P 11 33 29.2 -0.3
comp=Z,42nm,1.0s
TOD **Tromm** 80.41 333 *e*P P 11 33 29.7 +0.1
TOD **Tromm** 80.41 333 *e*P P 11 33 29.7 +0.1
V27A **Dan Oppiter Fa** 80.41 50 ⇓P P 11 33 29.4 -0.6
baz=80
MEM **Membach** 80.45 335 P P 11 33 29.4 -0.4
comp=Z,62nm,1.2s
222A **Williams Famil** 80.51 55 ⇓P P 11 33 31.1 +0.4
baz=80,SNR=64
RJOB **Jochberg** 80.57 330 *e*P P 11 33 31.2 +0.6
comp=Z,91nm,0.9s
SOKA **Soboth** 80.59 328⇑*i*P P 11 33 30.8 +0.1
comp=Z,238nm,1.4s
SOKA **Soboth** 80.59 328⇑*i*P P 11 33 30.8 +0.1
comp=Z,238nm,1.4s
PERS **Pernice** 80.59 328 *i*P P 11 33 30.7 0.0
ABH **Alteburg** 80.59 334 *e*P P 11 33 30.6 0.0
DIVS **Divibare** 80.59 323 P P 11 33 30.8 0.0
123A **Bell Site, Whi** 80.64 54 ⇓P P 11 33 31.9 +0.6
baz=80,SNR=7.8
Z24A **Sheeppen Canyo** 80.69 53 ⇓P P 11 33 32.1 +0.4
baz=80,SNR=68
CSS **Prodhromos** 80.70 309 P P 11 33 31.1 -0.4
CSS **Prodhromos** 80.70 309 *e*P P 11 33 31.6 +0.2
comp=Z,69nm,0.7s
CSS LR LR
comp=Z,613nm,19.0s
X26A **CR and CF Fran** 80.72 51 ⇓P P 11 33 32.1 +0.4
baz=80,SNR=54
WME **Myndd Eilian** 80.73 342⇓*i*P P 11 33 31.1 -0.1
WME **Myndd Eilian** 80.73 342 P P 11 33 31.1 -0.1
T30A **Plains** 80.75 48 ⇑P P 11 33 31.1 -0.7
baz=80,SNR=5.0
V28A **Channing** 80.76 49 ⇑P P 11 33 31.5 -0.3
baz=80,SNR=9.3
WPM1 **Penmaenmawr** 80.77 342⇓*e*P P 11 33 31.6 +0.2
WPM1 **Penmaenmawr** 80.77 342 P P 11 33 31.6 +0.2
FUR **Furstenfeldbru** 80.77 331 *e*P P 11 33 31.9 +0.3
FUR pmax pmax
comp=Z,142nm,0.9s
FUR **Furstenfeldbru** 80.77 331 *e*P P 11 33 31.9 +0.3
comp=Z,142nm,0.9s
U29A **Oasis Ranch, S** 80.78 48 ⇑P P 11 33 31.4 -0.5
baz=81,SNR=5.4
W27A **Bowe Ranch, En** 80.78 50 ⇓P P 11 33 32.2 +0.2
baz=81,SNR=73
SMTH **Samothraki Isl** 80.80 318 *e*P P 11 33 31.3 -0.6
SCIA **State Center** 80.83 40 *e*P P 11 33 31.9 0.0
comp=Z,159nm,0.8s
SCIA LR LR
comp=Z,582nm,20.0s
MMB **Musomiste** 80.83 320 *i*P P 11 33 32.7 +0.7
BCLA **Clavier** 80.84 335 P P 11 33 31.5 -0.3
comp=Z,32nm,1.0s
AKHS **Akhisar** 80.84 315 *i*P P 11 33 31.9 -0.3
WLF1 **Llynfaes** 80.85 342⇓*e*P P 11 33 31.7 -0.2
WLF1 AMB AMB 11 33 32.4
comp=Z,79nm,1.7s
WLF1 **Llynfaes** 80.85 342 P P 11 33 31.7 -0.2
WLF1 AMB AMB 11 33 32.4
comp=Z,79nm,1.7s
KORT **Korkueli** 80.88 313 *i*P P 11 33 31.7 -0.8
KAVA **Kavala** 80.90 319 P P 11 33 32.3 -0.1
RUP **Ruppelstein** 80.91 334 *e*P P 11 33 32.2 -0.1
RUP **Ruppelstein** 80.91 334 *e*P P 11 33 32.2 -0.1
KBA **Koelnbreinsper** 80.91 329⇓*i*P P 11 33 32.6 0.0
KBA pmax pmax
comp=Z,155nm,0.8s
KBA **Koelnbreinsper** 80.91 329⇓*i*P P 11 33 32.6 0.0
comp=Z,155nm,0.8s,SNR=46
KBA **Koelnbreinsper** 80.91 329⇓*i*P P 11 33 32.6 0.0
comp=Z,155nm,0.8s
OBKA **Obir** 80.92 328⇓*i*P P 11 33 32.4 -0.1
comp=Z,62nm,0.8s,SNR=11
OBKA **Obir** 80.92 328⇓*i*P P 11 33 32.4 -0.1
comp=Z,62nm,0.8s
KKB **Krupnik** 80.92 320 *i*P P 11 33 33.3 +0.8
YRC **Rhoscolyn** 80.93 342 *e*P P 11 33 31.9 -0.4
YRC **Rhoscolyn** 80.93 342 P P 11 33 31.9 -0.4
YLL **Llanberis** 80.94 342⇓*e*P P 11 33 32.5 +0.2
YLL **Llanberis** 80.94 342 P P 11 33 32.5 +0.2
FOEL **Foel Wylfa** 80.94 341 AMS AMS 12 16 37.1
comp=Z,894nm,15.8s
NVR **Nevrokopi** 80.95 319 P P 11 33 33.0 +0.4
NVR **Nevrokopi** 80.95 319 *e*P P 11 33 33.1 +0.4
223A **Chaparral, Ant** 80.99 55 ⇑P P 11 33 33.6 +0.4
baz=81,SNR=8.6
STU **Stuttgart** 80.99 332 *e*P P 11 33 32.9 +0.1
STU pmax pmax
comp=Z,103nm,0.8s
STU **Stuttgart** 80.99 332 *e*P P 11 33 32.8 +0.1
comp=Z,103nm,0.9s
STU **Stuttgart** 80.99 332 *e*P P 11 33 32.9 +0.1
comp=Z,103nm,0.8s
RAYN **Ar Rayn** 81.01 294 P P 11 33 33.5 +0.2
comp=Z,382nm,1.4s,SNR=24
X27A **F and S Farms,** 81.06 51 ⇑P P 11 33 34.0 +0.5
baz=81,SNR=28
V29A **Stinnett** 81.06 49 ⇓P P 11 33 32.9 -0.5
baz=81,SNR=6.2
U30A **WK&E Inc. Balk** 81.06 48 ⇓P P 11 33 32.8 -0.7
baz=81,SNR=12
SNF **Seneffe** 81.07 336 P P 11 33 32.9 -0.2
comp=Z,52nm,1.5s
DNZL **Cakiroluk** 81.08 314 *i*P P 11 33 33.5 -0.1
124A **Stringfield Ra** 81.08 54 ⇑P P 11 33 34.1 +0.3
baz=81,SNR=64
Z25A **Roswell** 81.10 53 ⇓P P 11 33 34.3 +0.5
baz=81,SNR=78
W28A **Vega** 81.13 50 ⇓P P 11 33 34.2 +0.4
baz=81,SNR=34

GOLH **Golhisar** 81.14 313 *i*P P 11 33 33.6 -0.3
YRE **Yr Eifl** 81.14 342⇓*i*P P 11 33 33.6 +0.1
YRE **Yr Eifl** 81.14 342 P P 11 33 33.6 +0.1
Y26A **Elida** 81.16 52 ⇓P P 11 33 34.4 +0.3
baz=81,SNR=23
MYKA **Terra Mystica** 81.17 328⇓*i*P P 11 33 33.3 -0.5
comp=Z,68nm,1.0s
MYKA **Terra Mystica** 81.17 328⇓*i*P P 11 33 33.3 -0.5
comp=Z,68nm,1.0s
T31A **Randall Ranch,** 81.18 47 ⇑P P 11 33 33.4 -0.6
baz=81,SNR=41
HLM1 **Long Mynd** 81.21 341⇓*e*P P 11 33 33.9 +0.1
HLM1 AMB AMB 11 33 35.0
comp=Z,79nm,1.0s
HLM1 **Long Mynd** 81.21 341 P P 11 33 33.9 +0.1
HLM1 AMB AMB 11 33 35.0
comp=Z,79nm,1.0s
WLF **Walferdange** 81.23 334 *e*P P 11 33 34.0 0.0
WLF **Walferdange** 81.23 334 PFAKE 11 33 50.0 +16
WLF LR LR
comp=Z,807nm,22.0s
SRS **Serrai** 81.26 319 P P 11 33 33.8 -0.5
GIVF **Givet** 81.26 335⇓*i*P P 11 33 33.3 -0.8
comp=Z,89nm,1.0s
GIVF **Givet** 81.26 335⇓*i*P P 11 33 33.3 -0.8
GIVF pmax pmax
comp=Z,89nm,1.0s
GIVF **Givet** 81.26 335⇓*i*P P 11 33 33.3 -0.8
comp=Z,89nm,1.0s
LANF **Langenberg** 81.28 333 *e*P P 11 33 34.2 -0.1
LANF **Langenberg** 81.28 333 *e*P P 11 33 34.2 -0.1
LANF **Langenberg** 81.28 333 *e*P P 11 33 34.2 -0.1
KSU1 **Kansas State U** 81.30 44 *e*P P 11 33 33.4 -1.2
comp=Z,90nm,0.8s
KSU1 LR LR
comp=Z,469nm,21.0s
LJU **Ljubljana** 81.31 328 *e*P P 11 33 34.0 -0.5
DOU **Dourbes** 81.34 335 P P 11 33 34.1 -0.4
comp=Z,28nm,1.4s
PRK **Paraskevi** 81.36 316 *e*P P 11 33 35.2 +0.4
WATA **Walderalm** 81.36 330⇑*i*P P 11 33 35.0 +0.1
WATA pmax pmax
comp=Z,141nm,1.0s
WATA **Walderalm** 81.36 330⇑*i*P P 11 33 35.0 +0.1
comp=Z,141nm,1.0s,SNR=25
WATA **Walderalm** 81.36 330⇑*i*P P 11 33 35.0 +0.1
comp=Z,141nm,1.0s
VISS **Visnje** 81.38 327 *i*P P 11 33 34.4 -0.5
WTTA **Wattenberg** 81.40 330⇑*i*P P 11 33 35.3 +0.1
WTTA pmax pmax
comp=Z,187nm,1.5s
WTTA **Wattenberg** 81.40 330⇑*i*P P 11 33 35.3 +0.1
comp=Z,187nm,1.5s,SNR=28
WTTA **Wattenberg** 81.40 330⇑*i*P P 11 33 35.2 +0.1
comp=Z,187nm,1.5s
RAR **Rarotonga** 81.40 129 LR LR 12 03 13.5
comp=Z,504nm,19.1s,baz=271,slow=31
LIA **Limnos Island** 81.41 318 P P 11 33 34.9 -0.2
LIA **Limnos Island** 81.41 318 *e*P P 11 33 34.9 -0.2
SKP1 **Kophill** 81.42 339 *e*P P 11 33 34.2 -0.6
SKP1 **Kophill** 81.42 339 P P 11 33 34.2 -0.6
SSW **Stow on the Wo** 81.46 340 *e*P P 11 33 34.7 -0.4
SSW **Stow on the Wo** 81.46 340 P P 11 33 34.7 -0.4
BOJS **Bojanci** 81.46 327 *i*P P 11 33 35.0 -0.3
PLE **Pljevlja** 81.47 323⇓*i*P P 11 33 36.1 +0.6
BAIF **Baives** 81.49 336⇓*i*P P 11 33 34.5 -0.8
comp=Z,66nm,0.9s
BAIF **Baives** 81.49 336⇓*i*P P 11 33 34.5 -0.8
BAIF pmax pmax
comp=Z,66nm,0.9s
BAIF **Baives** 81.49 336⇓*i*P P 11 33 34.5 -0.8
comp=Z,66nm,0.9s
ABTA **Abfaltersbach** 81.50 329⇓*i*P P 11 33 34.3 -1.3
comp=Z,81nm,1.1s,SNR=16
ABTA **Abfaltersbach** 81.50 329⇓*i*P P 11 33 34.3 -1.3
comp=Z,81nm,1.1s
MOTA **Moosalm** 81.53 330 *i*P P 11 33 36.0 +0.2
MOTA pmax pmax
comp=Z,146nm,0.9s
MOTA **Moosalm** 81.53 330 *i*P P 11 33 36.0 +0.2
comp=Z,146nm,0.9s,SNR=38
MOTA **Moosalm** 81.53 330 *i*P P 11 33 36.0 +0.2
comp=Z,146nm,0.9s
RETA **Reutte** 81.53 331⇓*i*P P 11 33 35.8 +0.1
comp=Z,152nm,1.3s,SNR=50
RETA **Reutte** 81.53 331⇓*i*P P 11 33 35.8 +0.1
comp=Z,152nm,1.3s
W29A **Amraillo** 81.54 50 ⇓P P 11 33 36.1 +0.1
baz=81
Z26A **Caprock** 81.54 52 ⇓P P 11 33 36.4 +0.3
baz=81,SNR=140
Y27A **Causey** 81.57 51 ⇑P P 11 33 36.4 +0.2
baz=81,SNR=69
125A **Gardner Draw,** 81.58 53 ⇓P P 11 33 36.6 +0.3
baz=81,SNR=125
VAY **Valandovo** 81.59 320 P P 11 33 36.1 +0.1
VAY **Valandovo** 81.59 320⇓*i*P P 11 33 36.0 +0.1
V30A **Spur Ranch, Mi** 81.61 49 ⇓P P 11 33 36.1 -0.2
baz=81
IVA **Berane** 81.61 323⇓*i*P P 11 33 36.6 +0.4
SKO **Skopje** 81.61 321⇓*i*P P 11 33 37.3 +1.1
JAVS **Javornik** 81.61 328 *i*P P 11 33 35.3 -0.9
U31A **Nine Bar Ranch** 81.62 48 ⇓P P 11 33 36.5 +0.2
baz=81,SNR=17
BFO **Black Forest** 81.67 332 *e*P P 11 33 36.0 -0.3
BFO pmax pmax
comp=Z,53nm,0.9s
BFO **Black Forest** 81.67 332 *e*P P 11 33 36.0 -0.3
comp=Z,53nm,0.9s
BFO **Black Forest** 81.67 332 *e*P P 11 33 36.1 -0.2
comp=Z,117nm,1.1s
BFO LR LR
comp=Z,949nm,19.0s
X28A **Dimmitt** 81.67 50 ⇑P P 11 33 36.7 0.0
baz=82,SNR=15
AMTX **Amarillo** 81.69 50 *e*P P 11 33 37.1 +0.3
comp=Z,82nm,0.9s
AMTX LR LR
comp=Z,368nm,22.0s
AMTX **Amarillo** 81.69 50 ⇑P P 11 33 37.1 +0.3
baz=82,SNR=41
SPAK **Spaichingen-Ko** 81.70 332 *e*P P 11 33 36.6 0.0
MCH1 **Michaelchurch** 81.72 341 *e*P P 11 33 36.3 -0.2
MCH1 AMB AMB 11 33 37.6
comp=Z,138nm,0.8s
MCH1 AMS AMS 12 16 58.2
comp=Z,916nm,17.0s
MCH1 **Michaelchurch** 81.72 341 P P 11 33 36.3 -0.2
MCH1 AMB AMB 11 33 37.6
comp=Z,138nm,0.8s
MCH1 AMS AMS 12 16 58.2
comp=Z,916nm,17.0s
AYDN **Tasoluk** 81.72 314 *i*P P 11 33 37.6 +0.8
MSTX **Muleshoe** 81.74 51 ⇑P P 11 33 36.9 -0.2
baz=82,SNR=24
CPRX **Cap Rock** 81.78 52 *e*P P 11 33 37.7 +0.3
comp=Z,73nm,0.9s
AKAS **Kas** 81.85 312 *i*P P 11 33 36.4 -1.3
SWN1 **Swindon** 81.86 340 *e*P P 11 33 37.6 +0.3
SWN1 AMB AMB 11 33 38.6
comp=Z,386nm,1.4s
SWN1 AMS AMS 12 16 38.2
comp=Z,1µm,13.5s
SWN1 **Swindon** 81.86 340 P P 11 33 37.6 +0.3
SWN1 AMB AMB 11 33 38.6
comp=Z,386nm,1.4s
SWN1 AMS AMS 12 16 38.2
comp=Z,1µm,13.5s
URLA **Izmir** 81.86 316 *i*P P 11 33 37.3 -0.3
TRI **Trieste** 81.89 328 *e*P P 11 33 36.6 -0.9
TRI pmax pmax
comp=Z,126nm,0.9s
TRI **Trieste** 81.89 328 *e*P P 11 33 36.6 -0.9
comp=Z,126nm,0.9s
WOL **Wolverton** 81.89 339 *e*P P 11 33 37.1 -0.3
WOL AMB AMB 11 33 39.5
comp=Z,208nm,0.8s
WOL **Wolverton** 81.89 339 P P 11 33 37.1 -0.3
WOL AMB AMB 11 33 39.5
comp=Z,208nm,0.8s
PLG **Polygyros** 81.90 319 P P 11 33 37.5 -0.2
PLG **Polygyros** 81.90 319 *e*P P 11 33 37.7 0.0
TURN **Turunc** 81.92 313 *i*P P 11 33 39.5 +1.7
FETA **Feichten** 81.94 330 *i*P P 11 33 38.0 0.0
comp=Z,109nm,1.3s,SNR=45
FETA **Feichten** 81.94 330 *i*P P 11 33 38.0 0.0

	comp=Z,109nm,1.3s									
GRG	**Griva**	**81.95**	**320**		P		**P**	**11 33 36.7**	**-1.3**
CDF	**Champ du Feu**	**81.95**	**333**	⇓	*i*P		**P**	**11 33 37.2**	**-0.7**
	comp=Z,269nm,1.1s									
CDF	**Champ du Feu**	**81.95**	**333**	⇓	*i*P		**P**	**11 33 37.2**	**-0.7**
CDF						pmax	pmax			
	comp=Z,269nm,1.1s									
CDF	**Champ du Feu**	**81.95**	**333**	⇓	*i*P		**P**	**11 33 37.2**	**-0.7**
	comp=Z,269nm,1.1s									
Z27A	**Tatum**	**81.95**	**52**	⇑	P		**P**	**11 33 38.3**	**+0.1**
	baz=82,SNR=211									
324A	**Moseley Ranch,**	**81.95**	**54**	⇓	P		**P**	**11 33 38.3**	**0.0**
	baz=82									
126A	**Clayton Basin,**	**81.96**	**53**	⇓	P		**P**	**11 33 38.3**	**0.0**
	baz=82,SNR=32									
X29A	**Tulia**	**82.00**	**50**	⇑	P		**P**	**11 33 38.6**	**+0.2**
	baz=82,SNR=25									
DAVA	**Damuels**	**82.02**	**331**	⇑	*i*P		**P**	**11 33 38.3**	**-0.1**
	comp=Z,132nm,1.1s,SNR=29									
DAVA	**Damuels**	**82.02**	**331**	⇑	*i*P		**P**	**11 33 38.3**	**-0.1**
	comp=Z,132nm,1.1s									
V31A	**Spring Creek L**	**82.06**	**48**	⇑	P		**P**	**11 33 39.0**	**+0.3**
	baz=82,SNR=47									
LIBD	**Limburg**	**82.07**	**333**		*e*P		**P**	**11 33 38.4**	**0.0**
LIBD	**Limburg**	**82.07**	**333**		*e*P		**P**	**11 33 38.4**	**0.0**
Y28A	**McKinney Farm,**	**82.08**	**51**	⇓	P		**P**	**11 33 38.8**	**-0.1**
	baz=82,SNR=10.0									
GDL2	**Guadalupe Moun**	**82.08**	**53**		*e*P		**P**	**11 33 39.4**	**+0.4**
W30A	**Crocket Farms**	**82.09**	**49**	⇑	P		**P**	**11 33 39.2**	**+0.3**
	baz=82									
CHOS	**Chios island**	**82.12**	**316**		P		**P**	**11 33 38.8**	**-0.2**
PAIG	**Paliouri**	**82.13**	**318**		P		**P**	**11 33 38.3**	**-0.6**
ECH	**Echery**	**82.16**	**333**		*e*P		**P**	**11 33 38.4**	**-0.5**
ECH						pmax	pmax			
	comp=Z,112nm,1.2s									
ECH						MLR	MLR			
	comp=Z,872nm,20.0s									
ECH	**Echery**	**82.16**	**333**		*e*P		**P**	**11 33 38.4**	**-0.5**
	comp=Z,112nm,1.2s									
ECH						LR	LR			
	comp=Z,872nm,20.0s									
ECH	**Echery**	**82.16**	**333**		*e*P		**P**	**11 33 38.7**	**-0.2**
FELD	**Feldberg im Sc**	**82.17**	**332**		*e*P		**P**	**11 33 38.7**	**-0.4**
TTG	**Podgorica**	**82.24**	**323**	⇓	*i*P		**P**	**11 33 39.4**	**0.0**
GLMI	**Grayling**	**82.28**	**33**		*e*P		**P**	**11 33 39.6**	**0.0**
	comp=Z,219nm,0.9s									
GLMI						LR	LR			
	comp=Z,1μm,20.0s									
226B	**Tecolote Peak,**	**82.29**	**53**	⇑	P		**P**	**11 33 40.3**	**+0.3**
	baz=82,SNR=125									
PHP	**Peshkopia**	**82.30**	**322**		P		**P**	**11 33 39.4**	**-0.4**
325A	**Bean Ranch, Si**	**82.31**	**54**	⇓	P		**P**	**11 33 40.4**	**+0.2**
	baz=82,SNR=58									
CLNB	**Carlsbad**	**82.32**	**53**		*e*P		**P**	**11 33 40.4**	**+0.2**
	comp=Z,30nm,1.4s									
127A	**Arkansas Junct**	**82.33**	**52**	⇓	P		**P**	**11 33 39.9**	**-0.3**
	baz=82,SNR=6.6									
PAGF	**Fort de Pagny**	**82.33**	**334**	⇓	*i*P		**P**	**11 33 39.5**	**-0.3**
	comp=Z,77nm,0.7s									
PAGF	**Fort de Pagny**	**82.33**	**334**	⇓	*i*P		**P**	**11 33 39.5**	**-0.3**
	comp=Z,77nm,0.7s									
BIA	**Bitola**	**82.41**	**321**		*i* P		**P**	**11 33 39.8**	**-0.6**
W31A	**Holland Ranch,**	**82.44**	**48**	⇑	P		**P**	**11 33 41.0**	**+0.3**
	baz=82,SNR=71									
Y29A	**Porterfield Fa**	**82.44**	**50**	⇑	P		**P**	**11 33 40.9**	**+0.1**
	baz=82,SNR=16									
DAVOX	**Davos/Dischmat**	**82.45**	**331**		P		**P**	**11 33 40.6**	**-0.1**
DAVOX	**Davos/Dischmat**	**82.45**	**331**		P		**P**	**11 33 40.6**	**-0.1**
	comp=Z,35nm,0.6s,baz=355,slow=5.8,SNR=32									
DAVOX						LR	LR	12 14 13.6		
	comp=Z,1μm,18.8s,baz=151,slow=38									
Z28A	**Tucker Farm, M**	**82.45**	**51**	⇑	P		**P**	**11 33 40.7**	**-0.2**
	baz=82,SNR=30									
X30A	**Coker Ranch, T**	**82.47**	**50**	⇑	P		**P**	**11 33 40.4**	**-0.5**
	baz=82,SNR=21									
MOF	**Molkenrain**	**82.48**	**333**		*e*P		**P**	**11 33 40.4**	**-0.3**
MOF	**Molkenrain**	**82.48**	**333**		*e*P		**P**	**11 33 40.4**	**-0.3**
MOF	**Molkenrain**	**82.48**	**333**		*e*P		**P**	**11 33 40.4**	**-0.3**
THEF	**They Montfort**	**82.54**	**334**		*e*P		**P**	**11 33 40.6**	**-0.3**
THEF	**They Montfort**	**82.54**	**334**		*e*P		**P**	**11 33 40.6**	**-0.3**
THEF	**They Montfort**	**82.54**	**334**		*e*P		**P**	**11 33 40.6**	**-0.3**
FNA	**Florina**	**82.57**	**320**		P		**P**	**11 33 40.9**	**-0.4**
LIT	**Litokhoron**	**82.57**	**319**		P		**P**	**11 33 40.2**	**-1.1**
STON	**Ston**	**82.57**	**324**		P		**P**	**11 33 40.0**	**-1.1**
MEZF	**Maizieres J'vi**	**82.60**	**334**	⇓	*i*P		**P**	**11 33 40.7**	**-0.5**
	comp=Z,195nm,1.0s									
MEZF	**Maizieres J'vi**	**82.60**	**334**	⇓	*i*P		**P**	**11 33 40.7**	**-0.5**
	comp=Z,195nm,1.0s									
HINF	**Hinteralfeld**	**82.61**	**333**	⇓	*i*P		**P**	**11 33 40.3**	**-1.0**
	comp=Z,46nm,0.8s									
HINF	**Hinteralfeld**	**82.61**	**333**	⇓	*i*P		**P**	**11 33 40.3**	**-1.0**
HINF						pmax	pmax			
	comp=Z,47nm,0.8s									
HINF	**Hinteralfeld**	**82.61**	**333**	⇓	*i*P		**P**	**11 33 40.3**	**-1.0**
	comp=Z,46nm,0.8s									
HAU	**Haudompre**	**82.61**	**333**	⇓	*i*P		**P**	**11 33 40.5**	**-0.8**
	comp=Z,179nm,1.2s									
HAU						*e*R				
	comp=Z,1μm,17.2s									
HAU	**Haudompre**	**82.61**	**333**	⇓	*i*P		**P**	**11 33 40.5**	**-0.8**
HAU						pmax	pmax			
	comp=Z,179nm,1.2s									
HAU	**Haudompre**	**82.61**	**333**	⇓	*i*P		**P**	**11 33 40.5**	**-0.8**
	comp=Z,179nm,1.2s									
AOS	**Alonnisos**	**82.62**	**318**		P		**P**	**11 33 40.6**	**-0.8**
ULC	**Ulcinj**	**82.62**	**322**	⇓	*i*P		**P**	**11 33 41.1**	**-0.4**
BBS	**Basel-Blauen**	**82.69**	**332**		*e*P		**P**	**11 33 41.6**	**-0.2**
BBS	**Basel-Blauen**	**82.69**	**332**		*e*P		**P**	**11 33 41.6**	**-0.2**
425A	**Indio Mountain**	**82.72**	**55**	⇓	P		**P**	**11 33 42.6**	**+0.3**
	baz=82,SNR=85									
KZN	**Kozani**	**82.76**	**320**		*e*P		**P**	**11 33 41.7**	**-0.6**
HEX	**Exmoor**	**82.77**	**341**	⇓	*i*P		**P**	**11 33 42.1**	**+0.1**
HEX	**Exmoor**	**82.77**	**341**		P		**P**	**11 33 42.1**	**+0.1**
XOR	**Xorichti**	**82.80**	**318**		P		**P**	**11 33 41.5**	**-1.0**
SKIA	**Skiathos**	**82.82**	**318**		P		**P**	**11 33 42.2**	**-0.3**
TIR	**Tirane**	**82.83**	**322**		*e*P		**P**	**11 33 42.9**	**+0.4**
TIR						MLR	MLR			
	comp=Z,1μm,19.0s									
TIR	**Tirane**	**82.83**	**322**		*e*P		**P**	**11 33 42.9**	**+0.4**
TIR						LR	LR			
	comp=Z,1μm,19.0s									
X31A	**McDonald Ranch**	**82.83**	**49**	⇓	P		**P**	**11 33 42.7**	**0.0**
	baz=83,SNR=57									
NEO	**Neokhori**	**82.83**	**318**		*e*P		**P**	**11 33 41.8**	**-0.8**
227A	**Bennet, Jal**	**82.85**	**53**	⇑	P		**P**	**11 33 43.0**	**+0.1**
	baz=83,SNR=13									
Z29A	**Hungry Hill Ra**	**82.86**	**51**	⇑	P		**P**	**11 33 43.4**	**+0.4**
	baz=83,SNR=132									
SFTF	**Sexfontaines**	**82.86**	**334**	⇓	*i*P		**P**	**11 33 41.9**	**-0.7**
	comp=Z,147nm,0.8s									
SFTF	**Sexfontaines**	**82.86**	**334**	⇓	*i*P		**P**	**11 33 41.9**	**-0.7**
	comp=Z,147nm,0.8s									
Y30A	**Stafford Cattl**	**82.87**	**50**	⇓	P		**P**	**11 33 42.8**	**-0.1**
	baz=83,SNR=11									
128A	**Castleberry Fa**	**82.88**	**52**	⇑	P		**P**	**11 33 43.3**	**+0.2**
	baz=83,SNR=76									
TUE	**Stuetta**	**82.90**	**331**		*e*P		**P**	**11 33 43.0**	**-0.1**
	comp=Z,68nm,0.8s									
TUE						LR	LR			
	comp=Z,1μm,19.0s									
326A	**Caldwell Ranch**	**82.94**	**54**	⇓	P		**P**	**11 33 43.6**	**+0.2**
	baz=83,SNR=100									
HTL	**Hartland**	**83.00**	**341**	⇓	*e*P		**P**	**11 33 43.4**	**+0.2**
HTL						AMB	AMB	11 33 44.8		
	comp=Z,143nm,1.2s									
HTL						AMS	AMS	12 18 11.5		
	comp=Z,1μm,15.7s									
HTL	**Hartland**	**83.00**	**341**		P		**P**	**11 33 43.4**	**+0.2**
HTL						AMB	AMB	11 33 44.8		
	comp=Z,143nm,1.2s									
HTL						AMS	AMS	12 18 11.5		
	comp=Z,1μm,15.7s									
NEST	**Nestorio**	**83.01**	**320**		P		**P**	**11 33 42.9**	**-0.7**
LOMF	**Lomont**	**83.02**	**333**		*e*P		**P**	**11 33 43.5**	**0.0**
LOMF	**Lomont**	**83.02**	**333**		*e*P		**P**	**11 33 43.5**	**0.0**
LOMF	**Lomont**	**83.02**	**333**		*e*P		**P**	**11 33 43.5**	**0.0**
MRKA	**Markates**	**83.12**	**318**		P		**P**	**11 33 43.7**	**-0.4**
Y31A	**Rekieta Farm,**	**83.17**	**49**	⇓	P		**P**	**11 33 44.1**	**-0.3**
	baz=83,SNR=23									
SMIA	**Simia**	**83.17**	**318**		P		**P**	**11 33 43.5**	**-0.9**
Z30A	**Sanderson Ranc**	**83.17**	**50**	⇑	P		**P**	**11 33 44.4**	**-0.1**
	baz=83,SNR=51									
228A	**UT Block 9, Go**	**83.18**	**52**	⇑	P		**P**	**11 33 44.8**	**+0.2**
	baz=83,SNR=29									
327A	**Balmorhea Ranc**	**83.19**	**53**	⇓	P		**P**	**11 33 45.2**	**+0.5**
	baz=83									
THL	**Klokotos Trika**	**83.22**	**319**		*e*P		**P**	**11 33 43.0**	**-1.6**
MRMA	**Marmari**	**83.22**	**317**		P		**P**	**11 33 43.9**	**-0.7**
129A	**Stewart Farms,**	**83.23**	**51**	⇓	P		**P**	**11 33 44.6**	**-0.2**
	baz=83,SNR=8.8									
VAL	**Valentia**	**83.35**	**345**		*e*P		**P**	**11 33 45.9**	**+0.9**
426A	**McDonald Obser**	**83.38**	**54**	⇑	P		**P**	**11 33 45.7**	**-0.1**
	baz=83,SNR=45									
DYA	**Yadsworthy**	**83.38**	**341**		*e*P		**P**	**11 33 45.0**	**-0.2**
DYA						AMB	AMB	11 33 45.7		
	comp=Z,135nm,1.3s									
DYA						AMS	AMS	12 18 08.3		
	comp=Z,1μm,16.6s									
DYA	**Yadsworthy**	**83.38**	**341**		P		**P**	**11 33 45.0**	**-0.2**
DYA						AMB	AMB	11 33 45.7		
	comp=Z,135nm,1.3s									
DYA						AMS	AMS	12 18 08.3		
	comp=Z,1μm,16.6s									
APE	**Apeiranthos**	**83.39**	**315**	⇓	*i*P		**P**	**11 33 44.0**	**-1.5**
APE	**Apeiranthos**	**83.39**	**315**		*e*P		**P**	**11 33 44.1**	**-1.5**
ATAL	**Atalanti**	**83.41**	**318**		P		**P**	**11 33 44.4**	**-1.2**
WMOK	**Wichita Mounta**	**83.41**	**48**		*e*P		**P**	**11 33 45.3**	**-0.4**
WMOK						pmax	pmax			
	comp=Z,86nm,1.2s									
WMOK						MLR	MLR			
	comp=Z,346nm,19.0s									
WMOK	**Wichita Mounta**	**83.41**	**48**		*e*P		**P**	**11 33 45.3**	**-0.4**
	comp=Z,86nm,1.2s									
WMOK						LR	LR			
	comp=Z,346nm,19.0s									
LKR	**Lokris**	**83.45**	**318**		P		**P**	**11 33 44.8**	**-1.0**
LKR	**Lokris**	**83.45**	**318**		*e*P		**P**	**11 33 44.9**	**-0.9**
AGG	**Agios Georgios**	**83.49**	**319**		P		**P**	**11 33 44.5**	**-1.5**
328A	**Wristen Ranch,**	**83.59**	**53**	⇑	P		**P**	**11 33 46.9**	**+0.2**
	baz=83,SNR=61									
Y32A	**R-V Farms, Ver**	**83.59**	**49**	⇓	P		**P**	**11 33 46.3**	**-0.3**
	baz=83,SNR=17									
MAKR	**Makrakomi, Fth**	**83.59**	**319**		P		**P**	**11 33 45.7**	**-0.9**
427A	**Hayter Ranch,**	**83.62**	**54**	⇑	P		**P**	**11 33 47.1**	**+0.1**
	baz=83,SNR=85									
KARP	**Karpathos**	**83.68**	**313**		*e*P		**P**	**11 33 46.6**	**-0.5**
JAN	**Janina**	**83.70**	**320**		P		**P**	**11 33 47.4**	**+0.3**
JAN	**Janina**	**83.70**	**320**		*e*P		**P**	**11 33 47.4**	**+0.3**
Z31A	**Sharp Cattle R**	**83.71**	**50**	⇓	P		**P**	**11 33 46.9**	**-0.3**
	baz=84,SNR=38									
229A	**Bryant Ranch,**	**83.74**	**52**	⇓	P		**P**	**11 33 47.7**	**+0.2**
	baz=84,SNR=41									
130A	**Snyder**	**83.77**	**51**	⇓	P		**P**	**11 33 47.5**	**-0.1**
	baz=84,SNR=10									
526A	**Mary Lane Ranc**	**83.78**	**55**	⇑	P		**P**	**11 33 48.1**	**+0.3**
	baz=84,SNR=112									
DSF	**Desfina**	**83.87**	**318**		P		**P**	**11 33 46.1**	**-1.9**
CABF	**La Chapelle**	**83.92**	**333**	⇓	*i*P		**P**	**11 33 47.5**	**-0.6**
	comp=Z,68nm,0.9s									
CABF	**La Chapelle**	**83.92**	**333**	⇓	*i*P		**P**	**11 33 47.5**	**-0.6**
CABF						pmax	pmax			
	comp=Z,68nm,0.9s									
CABF	**La Chapelle**	**83.92**	**333**	⇓	*i*P		**P**	**11 33 47.5**	**-0.6**
	comp=Z,68nm,0.9s									
LTK	**Loutraki**	**83.95**	**318**		P		**P**	**11 33 46.5**	**-1.9**
LTK	**Loutraki**	**83.95**	**318**		*e*P		**P**	**11 33 46.2**	**-2.2**
329A	**Wagon Wheel Ra**	**83.99**	**52**	⇓	P		**P**	**11 33 49.0**	**+0.2**
	baz=84,SNR=88									
527A	**Woodward Ranch**	**84.00**	**54**	⇓	P		**P**	**11 33 48.9**	**0.0**
	baz=84,SNR=46									
FLN	**La Foliniere**	**84.02**	**338**	⇓	*i*P		**P**	**11 33 47.7**	**-0.8**
	comp=Z,100nm,0.7s									
FLN						*e*R				
	comp=Z,948nm,22.0s									
FLN	**La Foliniere**	**84.02**	**338**	⇓	*i*P		**P**	**11 33 47.7**	**-0.8**
FLN						pmax	pmax			
	comp=Z,100nm,0.7s									
FLN	**La Foliniere**	**84.02**	**338**	⇓	*i*P		**P**	**11 33 47.7**	**-0.8**
	comp=Z,100nm,0.7s									
131A	**Roby**	**84.04**	**50**	⇓	P		**P**	**11 33 49.0**	**0.0**
	baz=84,SNR=28									
PMOR	**Pomariorio Ree**	**84.06**	**116**		*e*P		**P**	**11 33 49.3**	**+0.3**
	comp=Z,32nm,1.0s									
PMOR						*e*pP		**pP**	**11 34 00.2**	**+4.8**
	comp=Z,35nm,0.9s									
LOR	**Lormes**	**84.06**	**335**	⇓	*i*P		**P**	**11 33 48.0**	**-0.8**
	comp=Z,279nm,1.1s									
LOR						*e*R				
	comp=Z,1μm,18.0s									
LOR	**Lormes**	**84.06**	**335**	⇓	*i*P		**P**	**11 33 48.0**	**-0.8**
	comp=Z,279nm,1.1s									
LDF	**La Druitiere**	**84.07**	**338**	⇓	*i*P		**P**	**11 33 47.9**	**-0.9**
	comp=Z,99nm,0.7s									
LDF	**La Druitiere**	**84.07**	**338**	⇓	*i*P		**P**	**11 33 47.9**	**-0.9**
LDF						pmax	pmax			
	comp=Z,99nm,0.7s									
LDF	**La Druitiere**	**84.07**	**338**	⇓	*i*P		**P**	**11 33 47.9**	**-0.9**
	comp=Z,99nm,0.7s									
KALE	**Kalithea**	**84.08**	**318**		*e*P		**P**	**11 33 47.9**	**-1.2**
JSA	**Saint Aubin**	**84.08**	**339**		*e*P		**P**	**11 33 48.5**	**-0.2**
JSA						AMB	AMB	11 33 50.1		
	comp=Z,133nm,1.1s									
JSA	**Saint Aubin**	**84.08**	**339**		P		**P**	**11 33 48.5**	**-0.2**
JSA						AMB	AMB	11 33 50.1		
	comp=Z,133nm,1.1s									
Z32A	**Haskell**	**84.09**	**49**	⇓	P		**P**	**11 33 48.9**	**-0.3**
	baz=84,SNR=33									
626A	**Big Bend Ranch**	**84.12**	**55**	⇓	P		**P**	**11 33 49.5**	**+0.1**
	baz=84,SNR=86									
TRIZ	**Trizonia**	**84.13**	**318**		P		**P**	**11 33 48.2**	**-1.0**
TRIZ	**Trizonia**	**84.13**	**318**		*e*P		**P**	**11 33 48.3**	**-1.0**
428A	**Kincaid Ranch,**	**84.13**	**53**	⇑	P		**P**	**11 33 50.3**	**+0.7**
	baz=84,SNR=76									
TUL1	**Tulsa**	**84.13**	**45**	⇑	P		**P**	**11 33 49.2**	**-0.1**
	baz=84,SNR=33									
KEK	**Kerkira**	**84.16**	**321**		*e*P		**P**	**11 33 49.2**	**-0.2**
EFP	**Efpalio**	**84.16**	**319**		P		**P**	**11 33 49.0**	**-0.4**
EFP	**Efpalio**	**84.16**	**319**		*e*P		**P**	**11 33 49.1**	**-0.4**
230A	**Sterling City**	**84.20**	**51**	⇓	P		**P**	**11 33 50.0**	**+0.1**
	baz=84,SNR=81									
DID	**Didima**	**84.22**	**317**		P		**P**	**11 33 47.2**	**-2.6**
DID	**Didima**	**84.22**	**317**		*e*P		**P**	**11 33 47.1**	**-2.7**
LAKA	**Lakka**	**84.27**	**318**		*e*P		**P**	**11 33 49.6**	**-0.4**
GUR	**Goura**	**84.33**	**318**		P		**P**	**11 33 49.3**	**-1.1**
GUR	**Goura**	**84.33**	**318**		*e*P		**P**	**11 33 49.1**	**-1.3**
KLV	**Kalavryta, Ach**	**84.34**	**318**		*e*P		**P**	**11 33 49.3**	**-1.1**
SSF	**Saint Saulge**	**84.36**	**335**	⇓	*i*P		**P**	**11 33 49.6**	**-0.7**
	comp=Z,108nm,0.9s									
SSF	**Saint Saulge**	**84.36**	**335**	⇓	*i*P		**P**	**11 33 49.6**	**-0.7**
SSF						pmax	pmax			
	comp=Z,108nm,0.9s									
SSF	**Saint Saulge**	**84.36**	**335**	⇓	*i*P		**P**	**11 33 49.6**	**-0.7**
	comp=Z,108nm,0.9s									
HYF	**Humbligny**	**84.45**	**335**	⇓	*i*P		**P**	**11 33 50.5**	**-0.2**
HYF	**Humbligny**	**84.45**	**335**	⇓	*i*P		**P**	**11 33 50.5**	**-0.2**
GRR	**Gorron**	**84.46**	**338**	⇓	*i*P		**P**	**11 33 50.2**	**-0.5**
	comp=Z,190nm,0.9s									
GRR	**Gorron**	**84.46**	**338**	⇓	*i*P		**P**	**11 33 50.2**	**-0.5**
GRR						pmax	pmax			
	comp=Z,190nm,0.9s									
GRR	**Gorron**	**84.46**	**338**	⇓	*i*P		**P**	**11 33 50.2**	**-0.5**
	comp=Z,190nm,0.9s									
528A	**Cox Ranch, San**	**84.48**	**54**	⇑	P		**P**	**11 33 51.8**	**+0.4**
	baz=84,SNR=130									
VLC	**Villacollemand**	**84.49**	**329**		*e*P		**P**	**11 33 51.0**	**0.0**
	comp=Z,196nm,1.3s									
VLC						LR	LR			
	comp=Z,1μm,19.0s									
ABTX	**Abilene, Hawle**	**84.50**	**50**	⇓	P		**P**	**11 33 51.3**	**0.0**
	baz=84,SNR=52									
ZKR	**Zakros**	**84.52**	**314**		P		**P**	**11 33 51.5**	**+0.2**
330A	**Mertzon**	**84.52**	**52**	⇑	P		**P**	**11 33 51.2**	**-0.3**
	baz=84,SNR=70									
RSL	**Roselend**	**84.54**	**332**		*e*P		**P**	**11 33 52.2**	**+0.8**
RSL	**Roselend**	**84.54**	**332**		*e*P		**P**	**11 33 52.2**	**+0.8**
RSL	**Roselend**	**84.54**	**332**		*e*P		**P**	**11 33 52.2**	**+0.8**
TXAR	**Lajitas Array**	**84.56**	**55**		P		**P**	**11 33 51.6**	**-0.1**
TXAR						PKKPbc	**PKKPbc**	**11 52 02.9**	**+2.6**
TXAR						P'P'		12 00 11.0		
TXAR	**Lajitas Array**	**84.56**	**55**		P		**P**	**11 33 51.6**	**-0.1**
	comp=Z,42nm,0.8s,baz=294,slow=3.7,SNR=455									
TXAR						PKKPbc	**PKKPbc**	**11 52 02.9**	**+2.6**
	comp=Z,0.6nm,0.9s,baz=160,slow=4.0,SNR=4.2									
TXAR						PKPPKP	**P'P'df**	**12 00 11.0**	**-1.7**
	comp=Z,0.6nm,1.0s,baz=134,slow=3.6,SNR=4.2									
TXAR						LR	LR	12 09 17.2		
	comp=Z,236nm,18.9s,baz=0.0,slow=34									
OG35	**Corcelles**	**84.58**	**333**		*e*P		**P**	**11 33 51.5**	**0.0**
SMF	**Signal de Mont**	**84.62**	**334**	⇓	*i*P		**P**	**11 33 51.1**	**-0.5**
	comp=Z,293nm,0.9s									
SMF	**Signal de Mont**	**84.62**	**334**	⇓	*i*P		**P**	**11 33 51.1**	**-0.5**
SMF						pmax	pmax			
	comp=Z,293nm,0.9s									
SMF	**Signal de Mont**	**84.62**	**334**	⇓	*i*P		**P**	**11 33 51.1**	**-0.5**
	comp=Z,293nm,0.9s									
231A	**Bronte**	**84.63**	**51**	⇑	P		**P**	**11 33 51.7**	**-0.2**
	baz=84,SNR=76									
627A	**Terlingua Ranc**	**84.64**	**55**	⇓	P		**P**	**11 33 52.2**	**0.0**
	baz=84,SNR=42									
AVF	**Avril sur Loir**	**84.65**	**335**	⇓	*i*P		**P**	**11 33 51.2**	**-0.5**
	comp=Z,251nm,0.8s									
AVF	**Avril sur Loir**	**84.65**	**335**	⇓	*i*P		**P**	**11 33 51.2**	**-0.5**
AVF						pmax	pmax			
	comp=Z,251nm,0.8s									
AVF	**Avril sur Loir**	**84.65**	**335**	⇓	*i*P		**P**	**11 33 51.2**	**-0.5**
	comp=Z,251nm,0.8s									
LPL	**La Plagne**	**84.65**	**332**	⇓	*i*P		**P**	**11 33 51.9**	**-0.2**
	comp=Z,159nm,1.0s									
LPL	**La Plagne**	**84.65**	**332**	⇓	*i*P		**P**	**11 33 51.9**	**-0.2**
LPL						pmax	pmax			
	comp=Z,159nm,1.0s									
LPL	**La Plagne**	**84.65**	**332**	⇓	*i*P		**P**	**11 33 51.9**	**-0.2**
	comp=Z,159nm,1.0s									
LPG	**La Plagne**	**84.66**	**332**	⇓	*i*P		**P**	**11 33 52.0**	**-0.2**
	comp=Z,137nm,0.7s									
LPG	**La Plagne**	**84.66**	**332**	⇓	*i*P		**P**	**11 33 52.0**	**-0.2**
LPG						pmax	pmax			
	comp=Z,137nm,0.7s									
LPG	**La Plagne**	**84.66**	**332**	⇓	*i*P		**P**	**11 33 52.0**	**-0.2**
	comp=Z,137nm,0.7s									
RLS	**Riolos of Patr**	**84.67**	**319**		P		**P**	**11 33 51.9**	**-0.1**
RLS	**Riolos of Patr**	**84.67**	**319**		*e*P		**P**	**11 33 51.9**	**-0.1**
429A	**Davenport Ranc**	**84.67**	**53**	⇓	P		**P**	**11 33 51.9**	**-0.4**
	baz=84,SNR=24									
NPS	**Neapolis**	**84.72**	**314**		P		**P**	**11 33 51.5**	**-0.9**
VLX	**Vlachokerasia**	**84.75**	**318**		*e*P		**P**	**11 33 51.2**	**-1.4**
SLM	**Saint Louis**	**84.80**	**40**		*e*P		**P**	**11 33 52.2**	**-0.5**
SLM						pmax	pmax			
	comp=Z,142nm,0.9s									
SLM	**Saint Louis**	**84.80**	**40**		*e*P		**P**	**11 33 52.2**	**-0.5**
	comp=Z,142nm,0.9s									
AQU	**L'Aquila**	**84.82**	**326**		*e*P		**P**	**11 33 53.4**	**+0.6**
	comp=Z,107nm,0.8s									
AQU						LR	LR			
	comp=Z,3μm,19.0s									
AQU	**L'Aquila**	**84.82**	**326**	⇓	*i*P		**P**	**11 33 53.0**	**+0.3**
PPT	**Papeete**	**84.84**	**119**		LR		LR	12 06 51.6		
	comp=Z,530nm,18.5s,baz=353,slow=32									
529A	**Stev Forest Ra**	**84.85**	**53**	⇑

comp=Z,582nm,20.0s
SSB Saint Sauveur 85.60 333 *e*P **P 11 33 56.7 0.0**
PYM Petit Puy Mans 85.68 334 *e*P **P 11 33 57.5 +0.5**
PYM Petit Puy Mans 85.68 334 *e*P **P 11 33 57.5 +0.5**
PYM Petit Puy Mans 85.68 334 *e*P **P 11 33 57.5 +0.5**
SAOF Saorge 85.69 331 *e*P **P 11 33 56.5 -0.5**
SAOF Saorge 85.69 331 *e*P **P 11 33 56.5 -0.5**
SAOF Saorge 85.69 331 *e*P **P 11 33 56.5 -0.5**
432A Menard 85.71 51 ⇑P **P 11 33 57.2 -0.2**
baz=86,SNR=47
AUTN L'Aution 85.72 331 *e*P **P 11 33 57.2 -0.3**
AUTN L'Aution 85.72 331 *e*P **P 11 33 57.2 -0.3**
AUTN L'Aution 85.72 331 *e*P **P 11 33 57.2 -0.3**
OLIL Olney 85.73 39 *e*P **P 11 33 57.0 -0.2**
comp=Z,112nm,0.9s
CUC Castrocucco 85.74 323 PFAKE 11 34 10.0 +13
CUC LR LR
comp=Z,979nm,20.0s
MSNY Massena 85.74 27 *e*P **P 11 33 56.4 -0.8**
comp=Z,755nm,0.9s
TOUF Mont Tournerai 85.77 331 *e*P **P 11 33 57.2 -0.5**
TOUF Mont Tournerai 85.77 331 *e*P **P 11 33 57.2 -0.5**
TOUF Mont Tournerai 85.77 331 *e*P **P 11 33 57.2 -0.5**
531A Rocksprings 85.80 52 ⇓P **P 11 33 57.6 -0.2**
baz=86,SNR=40
SBF Sospel 85.84 331 ⇓*i*P **P 11 33 56.7 -1.1**
comp=Z,339nm,0.9s
SBF Sospel 85.84 331 ⇓*i*P **P 11 33 56.7 -1.1**
SBF pmax pmax
comp=Z,339nm,0.9s
SBF Sospel 85.84 331 ⇓*i*P **P 11 33 56.7 -1.1**
comp=Z,339nm,0.9s
RFTA Plano 85.85 48 *e*P **P 11 33 58.2 +0.2**
OG25 Le Caire 85.88 332 *e*P **P 11 33 58.0 -0.1**
OG25 Le Caire 85.88 332 *e*P **P 11 33 58.0 -0.1**
MFF Saint Martin d 85.88 337 ⇓*i*P **P 11 33 57.8 -0.1**
comp=Z,278nm,0.9s
MFF Saint Martin d 85.88 337 ⇓*i*P **P 11 33 57.8 -0.1**
MFF pmax pmax
comp=Z,278nm,0.9s
MFF Saint Martin d 85.88 337 ⇓*i*P **P 11 33 57.8 -0.1**
comp=Z,278nm,0.9s
MVIF Mont Vial 85.91 331 *e*P **P 11 33 57.9 -0.4**
MVIF Mont Vial 85.91 331 *e*P **P 11 33 57.9 -0.4**
MVIF Mont Vial 85.91 331 *e*P **P 11 33 57.9 -0.4**
VIVF Saint-Julien-l 85.93 333 ⇓*i*P **P 11 33 58.0 -0.2**
comp=Z,251nm,1.1s
VIVF Saint-Julien-l 85.93 333 ⇓*i*P **P 11 33 58.0 -0.2**
VIVF pmax pmax
comp=Z,251nm,1.1s
VIVF Saint-Julien-l 85.93 333 ⇓*i*P **P 11 33 58.0 -0.2**
comp=Z,251nm,1.1s
OCF Saint Nazaire 85.96 332 *e*P **P 11 33 58.8 +0.4**
OG26 St.-Nazaire-De 85.96 332 *e*P **P 11 33 58.8 +0.4**
REVF Revere 85.97 331 *e*P **P 11 33 58.7 +0.2**
REVF Revere 85.97 331 *e*P **P 11 33 58.7 +0.2**
REVF Revere 85.97 331 *e*P **P 11 33 58.7 +0.2**
TIP Timpagrande 85.98 322 *e*P **P 11 33 58.1 -0.6**
comp=Z,150nm,1.1s
TIP LR LR
comp=Z,2µm,19.0s
SIUC Southern Illin 86.02 40 *e*P **P 11 33 58.5 -0.2**
comp=Z,183nm,0.7s
BLO Bloomington 86.09 38 *e*P **P 11 33 58.7 -0.4**
BLO pmax pmax
comp=Z,127nm,1.4s
BLO Bloomington 86.09 38 *e*P **P 11 33 58.7 -0.4**
comp=Z,127nm,1.4s
CALN Calern 86.13 331 *e*P **P 11 33 58.9 -0.5**
CALN Calern 86.13 331 *e*P **P 11 33 58.9 -0.5**
CALN Calern 86.13 331 *e*P **P 11 33 58.9 -0.5**
LONY Lake Ozonia 86.17 27 *e*P **P 11 33 58.2 -1.2**
comp=Z,34nm,1.0s
LONY LR LR
comp=Z,577nm,19.0s
532A Rocksprings 86.20 52 ⇓P **P 11 33 59.5 -0.4**
baz=86,SNR=46
WHTX Lake Whitney 86.20 49 ⇓P **P 11 33 59.7 0.0**
baz=86,SNR=27
FRNY Flat Rock 86.31 26 *e*P **P 11 33 59.1 -1.0**
comp=Z,14nm,0.8s
631A Perdido Creek 86.34 53 ⇑P **P 11 34 00.1 -0.4**
baz=86,SNR=74
ERPA Erie 86.38 32 *e*P **P 11 34 00.1 -0.4**
comp=Z,70nm,0.7s
ERPA LR LR
comp=Z,412nm,22.0s
FRF La Foret Royal 86.38 331 ⇓*i*P **P 11 33 59.5 -0.9**
comp=Z,314nm,1.3s
FRF La Foret Royal 86.38 331 ⇓*i*P **P 11 33 59.5 -0.9**
FRF pmax pmax
comp=Z,314nm,1.3s
FRF La Foret Royal 86.38 331 ⇓*i*P **P 11 33 59.5 -0.9**
comp=Z,314nm,1.3s
PGF Pioggiola 86.39 329 ⇓*i*P **P 11 33 59.6 -1.0**
comp=Z,111nm,0.9s
PGF Pioggiola 86.39 329 ⇓*i*P **P 11 33 59.6 -1.0**
PGF pmax pmax
comp=Z,111nm,0.9s
PGF Pioggiola 86.39 329 ⇓*i*P **P 11 33 59.6 -1.0**
comp=Z,111nm,0.9s
SMRF Simiane la Rot 86.40 332 ⇓*i*P **P 11 34 00.5 -0.1**
comp=Z,187nm,1.2s
SMRF Simiane la Rot 86.40 332 ⇓*i*P **P 11 34 00.5 -0.1**
comp=Z,187nm,1.2s
USIN University of 86.55 39 *e*P **P 11 34 01.1 -0.3**
comp=Z,128nm,1.1s
RJF Les Rejaudoux 86.55 335 ⇓*i*P **P 11 34 01.1 -0.2**
comp=Z,334nm,1.2s
RJF *e*R
comp=Z,1µm,18.2s
RJF Les Rejaudoux 86.55 335 ⇓*i*P **P 11 34 01.1 -0.2**
RJF pmax pmax
comp=Z,334nm,1.2s
RJF Les Rejaudoux 86.55 335 ⇓*i*P **P 11 34 01.1 -0.2**
comp=Z,334nm,1.2s
PARMO Parma 86.60 41 *e*P **P 11 34 01.7 +0.1**
LMR La Mourre 86.63 331 ⇓*i*P **P 11 34 01.0 -0.6**
comp=Z,427nm,1.0s
LMR La Mourre 86.63 331 ⇓*i*P **P 11 34 01.0 -0.6**
LMR pmax pmax
comp=Z,427nm,1.0s
LMR La Mourre 86.63 331 ⇓*i*P **P 11 34 01.0 -0.6**
comp=Z,427nm,1.0s
ALLY Alegheny Colle 86.72 32 *e*P **P 11 34 02.3 +0.1**
comp=Z,48nm,0.7s
CAF Calviac 86.72 335 ⇓*i*P **P 11 34 02.5 +0.4**
comp=Z,470nm,1.0s
CAF Calviac 86.72 335 ⇓*i*P **P 11 34 02.5 +0.4**
CAF pmax pmax
comp=Z,470nm,1.0s
CAF Calviac 86.72 335 ⇓*i*P **P 11 34 02.5 +0.4**
comp=Z,470nm,1.0s
632A Uvalde 86.73 52 ⇓P **P 11 34 02.2 -0.2**
baz=86,SNR=13
ACSO Alum Creek Sta 86.76 35 *e*P **P 11 34 01.9 -0.4**
comp=Z,85nm,0.8s
ACSO LR LR
comp=Z,729nm,20.0s
NCB Newcomb 86.86 27 *e*P **P 11 34 02.5 -0.4**
comp=Z,98nm,1.2s
NCB LR LR
comp=Z,680nm,19.0s
LASF Ste Croix 86.89 333 ⇓*i*P **P 11 34 03.0 0.0**
comp=Z,209nm,1.1s
LASF Ste Croix 86.89 333 ⇓*i*P **P 11 34 03.0 0.0**
comp=Z,209nm,1.1s
WCI Wyandotte Cave 86.97 38 *e*P **P 11 34 03.0 -0.4**
WCI pmax pmax
comp=Z,90nm,1.0s
WCI Wyandotte Cave 86.97 38 *e*P **P 11 34 03.0 -0.4**
comp=Z,90nm,1.0s
GNAR Gosnell 87.03 42 *e*P **P 11 34 04.4 +0.7**
comp=Z,2µm,1.2s
HBAR Harrisburg 87.04 42 *e*P **P 11 34 04.4 +0.6**
LFF La Frestale 87.12 335 ⇓*i*P **P 11 34 04.2 +0.2**
comp=Z,371nm,0.9s
LFF La Frestale 87.12 335 ⇓*i*P **P 11 34 04.2 +0.2**
LFF pmax pmax
comp=Z,371nm,0.9s
LFF La Frestale 87.12 335 ⇓*i*P **P 11 34 04.2 +0.2**
comp=Z,371nm,0.9s
CEL Celeste 87.12 322 *e*P **P 11 34 04.1 -0.1**
comp=Z,42nm,0.8s
CEL LR LR
comp=Z,731nm,21.0s

MDV Middlebury 87.19 27 *e*P **P 11 34 04.1 -0.2**
732A Laxson Ranch, 87.20 53 ⇑P **P 11 34 04.6 -0.1**
baz=87,SNR=18
UTMT University of 87.29 41 *e*P **P 11 34 05.4 +0.4**
comp=Z,393nm,1.0s
LBNH Lisbon 87.38 26 *e*P **P 11 34 05.5 +0.2**
LBNH pmax pmax
comp=Z,21nm,0.8s
LBNH MLR MLR
comp=Z,650nm,20.0s
LBNH Lisbon 87.38 26 *e*P **P 11 34 05.5 +0.2**
comp=Z,21nm,0.8s
LBNH LR LR
comp=Z,650nm,20.0s
HALT Halls 87.40 41 *e*P **P 11 34 05.4 -0.2**
ACCN Adirondack Com 87.57 27 *e*P **P 11 34 05.9 -0.3**
comp=Z,95nm,1.3s
HNH Hanover 87.74 26 *e*P **P 11 34 07.5 +0.5**
comp=Z,88nm,1.1s
WVL Waterville 87.79 24 *e*P **P 11 34 07.3 +0.1**
comp=Z,351nm,1.4s
SNZO South Karori 87.80 158 PFAKE 11 34 20.0 +13
SNZO LR LR
comp=Z,790nm,20.0s
BINY Binghamton 87.81 29 *e*P **P 11 34 07.1 -0.3**
comp=Z,70nm,1.2s
BINY LR LR
comp=Z,453nm,20.0s
WVT Waverly 87.95 40 *e*P **P 11 34 07.9 -0.3**
WVT pmax pmax
comp=Z,63nm,0.8s
WVT Waverly 87.95 40 *e*P **P 11 34 07.9 -0.3**
comp=Z,63nm,0.8s
MTLF Montolieu 88.09 334 ⇓*i*P **P 11 34 08.8 +0.1**
comp=Z,265nm,1.3s
MTLF Montolieu 88.09 334 ⇓*i*P **P 11 34 08.8 +0.1**
MTLF pmax pmax
comp=Z,265nm,1.3s
MTLF Montolieu 88.09 334 ⇓*i*P **P 11 34 08.8 +0.1**
comp=Z,265nm,1.3s
TRY Troy 88.15 27 *e*P **P 11 34 08.9 0.0**
comp=Z,167nm,1.3s
LRDF Laroque-de-Fa 88.34 333 *e*P **P 11 34 10.6 +0.7**
LRDF Laroque-de-Fa 88.34 333 *e*P **P 11 34 10.6 +0.7**
SSPA Standing Stone 88.46 31 *e*P **P 11 34 09.8 -0.7**
comp=Z,84nm,0.9s
OXF Oxford 88.48 42 *e*P **P 11 34 10.5 -0.2**
OXF pmax pmax
comp=Z,241nm,1.2s
OXF MLR MLR
comp=Z,363nm,20.0s
OXF Oxford 88.48 42 *e*P **P 11 34 10.4 -0.2**
comp=Z,241nm,1.2s
OXF LR LR
comp=Z,363nm,20.0s
SJAF Saint Jean de 88.63 333 *e*P **P 11 34 11.3 0.0**
SJAF Saint Jean de 88.63 333 *e*P **P 11 34 11.3 0.0**
PLAL Pickwick Lake 88.76 41 PFAKE 11 34 20.0 +8.0
PLAL LR LR
comp=Z,346nm,19.0s
MLS Moulis 88.79 334 *e*P **P 11 34 12.5 +0.4**
MLS Moulis 88.79 334 *e*P **P 11 34 12.5 +0.4**
VSL Villasalto 88.86 327 PFAKE 11 34 20.0 +7.6
VSL LR LR
comp=Z,637nm,20.0s
EPF Esparros 88.97 335 ⇓*i*P **P 11 34 12.3 -0.6**
comp=Z,70nm,1.0s
EPF Esparros 88.97 335 ⇓*i*P **P 11 34 12.3 -0.6**
EPF pmax pmax
comp=Z,70nm,1.0s
EPF Esparros 88.97 335 ⇓*i*P **P 11 34 12.3 -0.6**
comp=Z,70nm,1.0s
HRV Adam Dziewonsk 89.05 26 *e*P **P 11 34 13.6 +0.4**
HRV pmax pmax
comp=Z,106nm,1.1s
HRV Adam Dziewonsk 89.05 26 *e*P **P 11 34 13.6 +0.4**
comp=Z,106nm,1.1s
RPZ Rata Peaks 89.12 161 LR LR 12 08 36.7
comp=Z,565nm,19.6s,baz=252,slow=32
TBI Tubuai 89.17 123 *e*LR LR 12 02 22.3
comp=Z,516nm,22.0s,baz=315
RESF Ens 89.17 335 *e*P **P 11 34 15.0 +1.0**
RESF Ens 89.17 335 *e*P **P 11 34 15.0 +1.0**
VIEF Viey 89.20 335 *e*P **P 11 34 14.9 +0.8**
VIEF Viey 89.20 335 *e*P **P 11 34 14.9 +0.8**
WES Weston 89.24 26 *e*P **P 11 34 14.2 +0.1**
WES pmax pmax
comp=Z,261nm,1.0s
WES Weston 89.24 26 *e*P **P 11 34 14.2 +0.1**
comp=Z,261nm,1.0s
ETSF Etsaut 89.36 335 ⇓*i*P **P 11 34 15.0 +0.2**
comp=Z,77nm,0.6s
ETSF Etsaut 89.36 335 ⇓*i*P **P 11 34 15.0 +0.2**
ETSF pmax pmax
comp=Z,77nm,0.6s
ETSF Etsaut 89.36 335 ⇓*i*P **P 11 34 15.0 +0.2**
comp=Z,77nm,0.6s
SJPF Ste Jean 89.37 336 ⇓*i*P **P 11 34 14.9 +0.1**
comp=Z,18nm,0.7s
SJPF Ste Jean 89.37 336 ⇓*i*P **P 11 34 14.9 +0.1**
SJPF pmax pmax
comp=Z,18nm,0.7s
SJPF Ste Jean 89.37 336 ⇓*i*P **P 11 34 14.9 +0.1**
comp=Z,18nm,0.7s
TZTN Tazewell 89.59 37 *e*P **P 11 34 15.7 -0.2**
comp=Z,75nm,0.8s
SWET Sewanee 89.59 39 *e*P **P 11 34 15.3 -0.7**
comp=Z,115nm,1.0s
BRNJ Basking Ridge 89.65 29 *e*P **P 11 34 16.2 +0.1**
VBMS Vicksburg 89.75 44 *e*P **P 11 34 17.4 +0.8**
comp=Z,244nm,1.3s
VBMS LR LR
comp=Z,575nm,20.0s
CPNY Central Park 89.77 29 *e*P **P 11 34 16.9 +0.3**
comp=Z,130nm,1.2s
SDMD Soldier's Deli 89.92 31 *e*P **P 11 34 17.3 -0.1**
comp=Z,51nm,1.2s
CPCT Cooper Cave 90.06 38 *e*P **P 11 34 17.6 -0.5**
TKL Tuckaleechee C 90.22 38 *e*P **P 11 34 18.7 -0.2**
BLA Blacksburg 90.38 35 *e*P **P 11 34 19.4 -0.2**
BLA pmax pmax
comp=Z,80nm,1.1s
BLA MLR MLR
comp=Z,597nm,20.0s
BLA Blacksburg 90.38 35 *e*P **P 11 34 19.4 -0.2**
comp=Z,80nm,1.1s
BLA LR LR
comp=Z,597nm,20.0s
CBN Corbin 90.76 32 *e*P **P 11 34 21.3 0.0**
CBN LR LR
comp=Z,516nm,22.0s
LRAL Lakeview Retre 90.86 41 *e*P **P 11 34 21.2 -0.6**
comp=Z,22nm,1.0s
LRAL LR LR
comp=Z,279nm,19.0s
JSRW J. Sargeant Re 91.00 33 *e*P **P 11 34 22.0 -0.5**
ATD Arta Tunnel 91.03 287 P **P 11 34 22.5 -0.5**
ATD Arta Tunnel 91.03 287 P **P 11 34 22.5 -0.5**
comp=Z,10nm,0.5s,baz=7.2,slow=13,SNR=5.1
KMSC Kings Mountain 91.74 36 ⇓P **P 11 34 25.4 -0.5**
baz=92,SNR=13
KEST Kesra 92.09 325 *e*P **P 11 34 27.5 -0.2**
KEST Kesra 92.09 325 P **P 11 34 27.1 -0.6**
comp=Z,17nm,0.8s,baz=306,slow=2.6,SNR=38
KEST LR LR 12 20 21.7
comp=Z,237nm,18.4s,baz=180,slow=38
PBRG Braganca 92.13 339 *e*P **P 11 34 26.8 -0.9**
comp=Z,43nm,1.4s
PGAV Gavieira, Arco 92.37 340 *e*P **P 11 34 28.3 -0.5**
PGAV A A 12 24 55.7
comp=Z,652nm,16.0s
BRAL Brewton 92.47 43 PFAKE 11 34 40.0 +11
BRAL LR LR
comp=Z,625nm,19.0s
JSC Jenkinsville 92.50 37 *e*P **P 11 34 29.4 0.0**
JSC Jenkinsville 92.50 37 *e*P **P 11 34 29.4 0.0**
PCAB Cabril 92.55 340 *e*P **P 11 34 28.9 -0.7**
MSEY Mahe Island 92.78 266 PFAKE 11 34 40.0 +9.0
MSEY LR LR
comp=Z,428nm,21.0s
MVO Moncorvo 92.81 339 *e*P **P 11 34 29.8 -1.0**
comp=Z,78nm,1.5s
MVO A A 12 23 10.6
comp=Z,556nm,18.0s
POLO Lamas de Olo 92.81 340 *e*P **P 11 34 30.2 -0.7**
comp=Z,40nm,1.5s

CNNC Cliffs of the 93.12 34 PFAKE 11 34 40.0 +7.8
CNNC LR LR
comp=Z,456nm,22.0s
ESDC Sonseca Array 93.34 337 P **P 11 34 32.9 -0.5**
ESDC Sonseca Array 93.34 337 P **P 11 34 32.9 -0.5**
comp=Z,15nm,0.7s,baz=13,slow=4.2,SNR=62
ESDC LR LR 12 21 26.5
comp=Z,446nm,18.7s,baz=20,slow=39
ESLA Sonseca Array 93.34 337 *e*P **P 11 34 33.0 -0.3**
comp=Z,2.8nm,0.7s
PVIS Viseu 93.45 340 *e*P **P 11 34 33.0 -0.8**
comp=Z,52nm,1.3s
PAB San Pablo 93.57 337 *e*P **P 11 34 34.2 -0.2**
PAB pmax pmax
comp=Z,47nm,1.3s
PAB MLR MLR
comp=Z,602nm,19.0s
PAB San Pablo 93.57 337 *e*P **P 11 34 34.2 -0.2**
comp=Z,47nm,1.3s
PAB LR LR
comp=Z,602nm,19.0s
MTE Manteigas 93.66 339 *e*P **P 11 34 34.5 -0.3**
comp=Z,71nm,1.2s
MTE A A 12 23 43.0
comp=Z,608nm,18.0s
MTE Manteigas 93.66 339 PFAKE 11 34 50.0 +15
MTE LR LR
comp=Z,796nm,19.0s
TIGA Tifton 93.81 40 ⇑P **P 11 34 35.3 -0.2**
baz=94
NHSC New Hope 93.97 37 PFAKE 11 34 50.0 +14
NHSC LR LR
comp=Z,618nm,20.0s
PCBR Castelo Branco 94.17 339 *e*P **P 11 34 36.1 -0.9**
PMRV Marv??o 94.53 339 *e*P **P 11 34 37.9 -0.8**
comp=Z,53nm,1.5s
PMRV A A 12 24 44.4
comp=Z,816nm,18.0s
PMTG Montargil 95.09 339 *e*P **P 11 34 40.3 -0.9**
comp=Z,33nm,1.9s
PESTR Estremoz 95.11 339 *e*P **P 11 34 40.3 -1.1**
EVO Evora 95.54 339 *e*P **P 11 34 42.9 -0.4**
comp=Z,46nm,1.2s
EVO Evora 95.54 339 ⇑*i*P **P 11 34 42.6 -0.7**
comp=Z,35nm,1.1s
EVO *e*R
comp=Z,620nm,17.2s
EVOP Sao Brissos 95.57 339 ⇑*i*P **P 11 34 42.6 -0.8**
EVOP pmax pmax
comp=Z,35nm,1.1s
EVOP Sao Brissos 95.57 339 ⇑*i*P **P 11 34 42.6 -0.8**
comp=Z,35nm,1.1s
PBEJ Beja 95.97 339 *e*P **P 11 34 45.0 -0.3**
comp=Z,34nm,1.3s
PNCL Nicolau / Gran 96.07 339 *e*P **P 11 34 44.7 -1.0**
PCVE Castro Verde 96.39 339 *e*P **P 11 34 46.3 -0.9**
PVAQ Vaqueiros 96.52 338 *e*P **P 11 34 47.3 -0.5**
PVAQ A A 12 25 19.3
comp=Z,1µm,18.0s
PTEO Sao Teotonio 96.65 339 *e*P **P 11 34 47.7 -0.7**
PBDV Barranco-do-Ve 96.73 339 *e*P **P 11 34 48.2 -0.6**
comp=Z,41nm,1.9s
MORF Marmelete 96.86 339 *e*P **P 11 34 49.1 -0.3**
comp=Z,59nm,1.3s
RTC Rabat Centre 99.47 337 PFAKE 11 35 10.0 +8.9
RTC LR LR
comp=Z,405nm,21.0s
MDT Midelt 99.87 334 LR LR 12 27 25.2
comp=Z,595nm,19.5s,baz=208,slow=40
TEIG Tepich 100.49 50 PFAKE 11 35 20.0 +14
TEIG LR LR
comp=Z,459nm,22.0s
KMBO Kilima Mbogo 103.77 281 Pdif **Pdif 11 35 20.3 -0.5**
KMBO LR LR
comp=Z,333nm,19.0s
KMBO Kilima Mbogo 103.77 281 Pdiff **Pdif 11 35 20.3 -0.5**
comp=Z,0.5nm,0.3s,baz=28,slow=5.8,SNR=5.3
TAM Tamanrasset 104.91 322 PFAKE 11 35 40.0 +14
TAM LR LR
comp=Z,474nm,20.0s
TGUH Tegucigalpa,Un 105.96 53 PFAKE 11 39 50.0
TGUH LR LR
comp=Z,297nm,19.0s
MBAR Mbarara 108.06 286 PFAKE 11 40 00.0
MBAR LR LR
comp=Z,742nm,20.0s
ABPO Ambohimpanom 108.25 261 PFAKE 11 40 00.0
ABPO LR LR
comp=Z,386nm,19.0s
DRV Dumont d'Urvil 109.07 182 Pdif **Pdif 11 35 41.0 -1.7**
DRV Dumont d'Urvil 109.07 182 PP PKiKP 11 39 37.0 -10
DRV SKKS 11 46 26.0
DRV SS SS 11 55 27.0 -7.0
SDDR Presa de Saban 110.13 37 PFAKE 11 40 00.0
SDDR LR LR
comp=Z,463nm,19.0s
JTS JuntasAbangare 110.31 53 PFAKE 11 40 00.0
JTS LR LR
comp=Z,218nm,19.0s
CASY Casey 111.81 194 PFAKE 11 40 00.0
CASY LR LR
comp=Z,682nm,22.0s
SJG San Juan 113.06 32 PFAKE 11 40 10.0
SJG LR LR
comp=Z,278nm,19.0s
BCIP Isla Barro Col 114.17 50 PFAKE 11 40 10.0 +12
BCIP LR LR
comp=Z,280nm,19.0s
TOA0 Torodi Ar. Sit 115.05 320 *e*PKPdf **PKPdf 11 39 58.7 -1.0**
TORD Torodi Ar. Bea 115.05 320 PKP **PKPdf 11 39 58.4 -1.3**
TORD PP **PP 11 40 53.5 -4.8**
TORD PKKPbc **PKKPbc 11 50 33.6 -0.3**
TORD Torodi Ar. Bea 115.05 320 PKP **PKPdf 11 39 58.4 -1.3**
comp=Z,2.6nm,0.5s,baz=14,slow=1.5,SNR=56
TORD PP **PP 11 40 53.5 -4.8**
comp=Z,27nm,1.1s,baz=18,slow=8.7,SNR=14
TORD PKKPbc **PKKPbc 11 50 33.6 -0.3**
comp=Z,1.6nm,0.8s,baz=212,slow=3.1,SNR=8.7
ANWB Willy Bob 115.09 28 PFAKE 11 40 10.0 +10
ANWB LR LR
comp=Z,430nm,20.0s
FDF Fort de France 118.03 29 PFAKE 11 40 20.0 +14
FDF LR LR
comp=Z,381nm,21.0s
SDV Santo Domingo 119.25 41 PFAKE 11 40 20.0 +12
SDV LR LR
comp=Z,2.0nm,21.0s
LSZ Lusaka 119.86 277 *e*PKPdf **PKPdf 11 40 09.2 +0.1**
LSZ LR LR
comp=Z,330nm,19.0s
GRGR Grenville 120.24 31 PFAKE 11 40 20.0 +10
GRGR LR LR
comp=Z,497nm,21.0s
VNDA Vanda 120.37 176 PKP **PKPdf 11 40 07.5 -0.5**
VNDA PKKPbc **PKKPbc 11 50 16.1 +0.2**
VNDA Vanda 120.37 176 PKP **PKPdf 11 40 07.5 -0.5**
comp=Z,1.9nm,0.7s,baz=317,slow=1.4,SNR=16
VNDA PKKPbc **PKKPbc 11 50 16.1 +0.2**
comp=Z,5.0nm,1.0s,baz=183,slow=4.4,SNR=7.8
SACV Santiago Islan 121.70 347 PFAKE 11 40 20.0 +7.5
SACV LR LR
comp=Z,636nm,22.0s
OTAV Otavalo 122.18 54 PFAKE 11 40 30.0 +16
OTAV LR LR
comp=Z,132nm,19.0s
LIC Lamto 124.22 323 *e*PKIKP **PKPdf 11 40 15.6 -1.8**
comp=Z,29nm,0.8s
LIC *e*R
comp=Z,660nm,21.0s
LIC Lamto 124.22 323 *e*PKPdf **PKPdf 11 40 15.6 -1.8**
MAW Mawson 125.81 208 PKP **PKPdf 11 40 18.5 -0.2**
MAW Mawson 125.81 208 PKP **PKPdf 11 40 18.5 -0.2**
comp=Z,2.0nm,0.6s,baz=37,slow=5.1,SNR=4.5
LBTB Lobatse 127.77 269 *e*PKPdf **PKPdf 11 40 24.3 +0.3**
BOSA Boshof 130.05 266 PKP **PKPdf 11 40 28.1 -0.2**
BOSA Boshof 130.05 266 PKP **PKPdf 11 40 28.1 -0.2**
comp=Z,3.8nm,0.7s,baz=343,slow=1.7,SNR=8.1
TSUM Tsumeb 130.11 281 *e*PKPdf **PKPdf 11 40 29.5 +1.0**
TSUM LR LR
comp=Z,252nm,19.0s
QSPA South Pole Qui 132.41 180 *e*PKPdf **PKPdf 11 40 31.0 -0.3**
NNA Nana 132.61 62 *e*PKPdf **PKPdf 11 40 33.3 0.0**
SUR Sutherland 135.28 264 PFAKE 11 40 50.0 +12
SUR LR LR
comp=Z,247nm,22.0s
SAML Samuel 138.30 45 *e*PKPdf **PKPdf 11 40 44.0 +0.1**

SAML					LR	LR			
	comp=Z,273nm,20.0s								
LPAZ	**La Paz**	**141.39**	**57**	PKPpre	PKPpre	11 40 41.0			
LPAZ				*e*PKPdf	**PKPdf**	**11 40 50.5**	**+0.3**		
LPAZ	**La Paz**	**141.39**	**57**	PKhKP	PKPpre	11 40 41.0			
	comp=Z,2.2nm,0.6s,baz=344,slow=6.1,SNR=7.3								
RCBR	**Riachuelo**	**143.30**	**2**	PKPpre	PKPpre	11 40 49.0			
RCBR				*e*PKPdf	PKPab	11 40 49.2	+0.3		
RCBR	**Riachuelo**	**143.30**	**2**	PKhKP	PKPpre	11 40 49.0			
	comp=Z,14nm,0.9s,baz=8.8,slow=2.3,SNR=6.6								
MAIT	**Maitri**	**143.57**	**204**	*e*P	PKPab	11 40 38.7	-10		
SIV	**San Ignacio**	**145.29**	**48**	PKPbc	**PKPbc**	**11 40 55.8**	**-0.3**		
SIV	**San Ignacio**	**145.29**	**48**	PKPbc	**PKPbc**	**11 40 55.8**	**-0.3**		
	comp=Z,109nm,0.8s,baz=310,slow=2.6,SNR=351								
SNAA	**Sanae**	**146.95**	**198**	*e*P	**PKPbc**	**11 40 58.7**	**-0.9**		
SNAA	**Sanae**	**146.95**	**198**	*e*Hokkaido		11 41 08.1			
SNAA	**Sanae**	**146.95**	**198**	*e*PKPdf	**PKPdf**	**11 40 56.3**	**-1.2**		
SNAA				*e*PKPbc	**PKPbc**	**11 40 58.4**	**-1.1**		
SNAA				*e*PKPab	**PKPab**	**11 41 01.3**	**+0.3**		
LCO	**Las Campanas**	**148.26**	**76**	*e*PKPdf	**PKPdf**	**11 41 01.4**	**+0.1**		
LCO				*e*PKPbc	**PKPbc**	**11 41 05.0**	**+0.3**		
LCO				*e*PKPab	**PKPab**	**11 41 07.7**	**-0.1**		
VNA2	**Neumayer--Watz**	**148.50**	**197**	*e*P	**PKPbc**	**11 41 03.7**	**0.0**		
VNA2	**Neumayer--Watz**	**148.50**	**197**	*e*Hokkaido	PKPbc	11 41 13.5	+10		
BDFB	**Brasilia**	**150.84**	**26**	PKP	**PKPdf**	**11 41 05.5**	**0.0**		
BDFB				PKPbc	**PKPbc**	**11 41 11.1**	**-0.1**		
BDFB	**Brasilia**	**150.84**	**26**	PKP	**PKPdf**	**11 41 05.5**	**0.0**		
	comp=Z,8.5nm,0.9s,baz=34,slow=3.4,SNR=9.0								
BDFB				PKPbc	**PKPbc**	**11 41 11.1**	**-0.1**		
	comp=Z,75nm,0.9s,baz=358,slow=3.7,SNR=57								
CFAA	**Coronel Fontan**	**151.47**	**78**	PKPbc	**PKPbc**	**11 41 11.9**	**-0.3**		
CFAA				PKPab	**PKPab**	**11 41 20.1**	**-0.5**		
CFAA	**Coronel Fontan**	**151.47**	**78**	PKPbc	**PKPbc**	**11 41 11.9**	**-0.3**		
	comp=Z,7.9nm,0.7s,baz=268,slow=2.6,SNR=29								
CFAA				PKPab	**PKPab**	**11 41 20.1**	**-0.5**		
	comp=Z,12nm,0.6s,baz=284,slow=3.1,SNR=21								
PLCA	**Paso Flores**	**153.50**	**98**	*e*PKPdf	**PKPdf**	**11 41 07.7**	**-1.1**		
PLCA				PKP	**PKPdf**	**11 41 08.1**	**-0.7**		
PLCA				PKPbc	**PKPbc**	**11 41 16.2**	**-0.3**		
PLCA				*e*PKPbc	**PKPbc**	**11 41 16.4**	**-0.1**		
PLCA				*e*PKPab	**PKPab**	**11 41 26.4**	**-2.6**		
PLCA				PKPab	PKPab	11 41 27.1	-1.8		
PLCA	**Paso Flores**	**153.50**	**98**	PKP	**PKPdf**	**11 41 08.1**	**-0.7**		
	comp=Z,10nm,1.2s,baz=307,slow=1.5,SNR=6.0								
PLCA				PKPbc	**PKPbc**	**11 41 16.2**	**-0.3**		
	comp=Z,6.7nm,0.8s,baz=239,slow=2.3,SNR=13								
PLCA				PKPab	**PKPab**	**11 41 27.1**	**-1.8**		
	comp=Z,23nm,0.7s,baz=274,slow=3.5,SNR=29								
CPUP	**Villa Florida**	**155.53**	**55**	PKP	**PKPdf**	**11 41 11.1**	**-0.8**		
CPUP				PKPab	**PKPab**	**11 41 37.4**	**-0.3**		
CPUP	**Villa Florida**	**155.53**	**55**	PKP	**PKPdf**	**11 41 11.1**	**-0.8**		
	comp=Z,0.9nm,0.5s,baz=313,slow=6.6,SNR=5.0								
CPUP				PKPab	**PKPab**	**11 41 37.4**	**-0.3**		
	comp=Z,12nm,0.8s,baz=305,slow=5.2,SNR=14								
SPB	**Sao Paulo**	**158.36**	**32**	PFAKE		11 41 30.0	+14		
SPB				LR	LR				
	comp=Z,362nm,21.0s								

JMA 28 11:22:31.4, 36.99N×137.68E, h0km, M0.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJN	**Nakama**	**0.40**	**74**	*e*S	Sg	11 22 45.6	+1.2
JSZ	**Suzu**	**0.52**	**331**	P	Pg	11 22 42.2	+0.8
JSZ				*e*S	Sg	11 22 49.4	+1.2
MAT	**Matsushiro**	**0.61**	**136**	S	Sg	11 22 51.9	+0.6
JNG	**Nsakai**	**0.67**	**150**	P	Pg	11 22 44.5	+0.1
JNG				S	Sg	11 22 54.0	+0.7
JGN	**Niukaw**	**0.82**	**201**	P	Pg	11 22 47.1	-0.1
JGN				S	Sg	11 22 57.7	-0.2

MAN 28 11:24:52, 11.30N×125.07E, h35km, mb4.1, ML2.9, MS2.6, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	**0.16**	**213**↑	*e*P	Pn	11 25 00.2	+1.7
PLP				*i* S	Sn	11 25 09.5	+6.6
MSLP	**Maasin**	**1.18**	**190**	*e*P	Pn	11 25 14.1	+2.0
MSLP				*e*S	Sn	11 25 31.3	+4.5
CNP	**Catarman**	**1.27**	**342**	*e*P	Pn	11 25 13.7	+0.4
CNP				*e*S	Sn	11 25 31.0	+2.0

ROM 28 11:28:42.9±0.2, 42.33N×13.44E, h11km±1km, Md1.8/4, Ml2.1/1, Error ellipse: s-maj=3.6km s-min=1.7km az=16.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.03**	**311**	Pg	Pg	11 28 45.4	+0.4
AQU				Sg	Sg	11 28 46.5	0.0
	366nm,0.2s						
FAGN	**Fagnano**	**0.13**	**121**	Pg	Pg	11 28 46.5	+0.4
FAGN				Sg	Sg	11 28 49.1	+0.7
	435nm,0.3s						
PTQR	**Pietraquaria**	**0.31**	**185**	Pg	Pg	11 28 49.8	+0.5
PTQR				Sg	Sg	11 28 54.5	+0.9

BUC 28 12:00:08.8±0.7, 45.98N×25.79E, h45km, MD2.6/2, 10C, Error ellipse: s-maj=10.8km s-min=3.7km az=353.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLR	**Muntele Rosu**	**0.50**	**168**↑	*i*P	Pn	12 00 20.2	+0.2
MLR	**Muntele Rosu**	**0.50**	**168**↑	*i*P	Pn	12 00 20.2	+0.2
MLR				*i* S	Sn	12 00 28.8	+0.9
PLOR	**Plostina**	**0.61**	**102**↑	*i*P	Pn	12 00 22.0	+0.7
PLOR	**Plostina**	**0.61**	**102**↑	*i*P	Pn	12 00 22.0	+0.7
PLOR				*i* S	Sn	12 00 30.1	-0.1
VRI	**Vrincioaia**	**0.66**	**99**↑	*i*P	Pn	12 00 22.2	+0.3
VRI	**Vrincioaia**	**0.66**	**99**↑	*i*P	Pn	12 00 22.2	+0.3
VRI				*i* S	Sn	12 00 33.5	+2.2
VOIR		**0.75**	**224**↑	*i*P	Pn	12 00 23.9	+0.7
VOIR		**0.75**	**224**↑	*i*P	Pn	12 00 23.9	+0.7
LOT	**Lotru**	**1.51**	**250**↑	*i*P	Pn	12 00 34.3	+0.7
LOT				S	Sn	12 00 52.6	+0.4
LOT	**Lotru**	**1.51**	**250**↑	*i*P	Pn	12 00 34.3	+0.7
LOT				*i* S	Sn	12 00 52.6	+0.4

JMA 28 12:07:09.1±0.2, 28.51N×140.06E, h439km, M3.1
IDC 28 12:07:13.1±2.9, 28.24N×139.17E, h474km±49km, mb2.9/6, mb1 3.0/7, mb1mx2.7/25, mbtmp2.9/7, Error ellipse: s-maj=350.9km s-min=16.0km az=85.0
ISC 28 12:07:09.0±0.9, 28.5N±0.1×140.4E±0.3, h450km, n12, σ1°35/13, mb3.4/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.14**	**131**	P	**P**	**12 08 11.0**	**+0.6**
CBIJ				*e*S	**S**	**12 08 59.6**	**-0.5**
JHHJ	**Haha-jima-NKT**	**2.47**	**139**	P	**P**	**12 08 13.0**	**+0.5**
JHHJ				S	**S**	**12 09 04.1**	**+0.2**
BSO3	**Boso 3**	**6.26**	**1**	*e*S	**S**	**12 10 05.1**	**+0.5**
JAG	**Ashikaga**	**7.91**	**355**	*e*S	**S**	**12 10 34.1**	**-3.1**
MJAR	**Matsushiro Arr**	**8.20**	**348**	P	P	12 09 12.0	+5.5
	0.7nm,0.3s,baz=23,slow=9.9,SNR=10.0						
WRA	**Warramunga Arr**	**48.54**	**188**	P	**P**	**12 15 08.9**	**-1.0**
	0.1nm,0.3s,baz=3.8,slow=7.4,SNR=6.4						
ASAR	**Alice Springs**	**52.27**	**188**	P	**P**	**12 15 36.4**	**-0.9**
	0.1nm,0.3s,baz=2.8,slow=6.0,SNR=5.0						
ARCES	**ARCESS Array B**	**71.67**	**340**	P	**P**	**12 17 45.5**	**+1.8**
	0.7nm,0.5s,baz=71,slow=8.1,SNR=7.3						
FINES	**FINESS Array B**	**75.96**	**333**	P	**P**	**12 18 09.0**	**+0.8**
	0.9nm,0.3s,baz=57,slow=5.1,SNR=8.3						
HFS	**Hagfors**	**81.48**	**336**	P	**P**	**12 18 38.2**	**+0.3**
	0.7nm,0.4s,baz=46,slow=6.2,SNR=5.6						
NOA	**NORSAR Array B**	**81.69**	**338**	P	**P**	**12 18 40.0**	**+1.0**
	0.2nm,0.4s,baz=46,slow=4.5,SNR=2.6						
TORD	**Torodi Ar. Bea**	**122.44**	**310**	PKP	**PKPdf**	**12 25 13.1**	**+0.1**
	0.4nm,1.1s,baz=102,slow=1.0,SNR=3.7						

ISCJB 28 13:05:29.9±0.7, 36.52N±0.04×25.6E±0.1, h9km±8km, Error ellipse: s-maj=15.1km s-min=5.6km az=15.9
CSEM 28 13:05:29.8±0.1, 36.51N×25.51E, h8km, ML2.9/1, Error ellipse: s-maj=4.6km s-min=2.4km az=94.0

ATH 28 13:05:29.0, 36.65N×25.46E, h66km±13km
THE 28 13:05:30.0, 36.54N×25.51E, h6km±2km, ML2.9/1, Error ellipse: s-maj=4.1km s-min=0.4km az=277.0
ISC 28 13:05:30.2±0.9, 36.52N±0.03×25.49E±0.08, h12km±6km, n17, σ0.945/28, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THR2	**Thira island,**	**0.08**	**210**	P	**Pg**	**13 05 32.5**	**-0.4**
THR2	**Thira island,**	**0.08**	**210**	P	**Pg**	**13 05 32.5**	**-0.4**
THR3	**Thira Island,**	**0.13**	**212**	P	**Pg**	**13 05 33.1**	**-0.3**
THR3	**Thira Island,**	**0.13**	**212**	P	**Pg**	**13 05 33.1**	**-0.3**
THR1	**Thera Island**	**0.15**	**188**	P	**Pg**	**13 05 33.7**	**-0.1**
THR1				S	**Sg**	**13 05 36.2**	**-0.1**
THR1	**Thera Island**	**0.15**	**188**	P	**Pg**	**13 05 33.7**	**-0.1**
THR1				S	**Sg**	**13 05 36.2**	**-0.1**
THR6	**Thira Island,**	**0.18**	**204**	P	**Pg**	**13 05 34.1**	**-0.1**
THR6				S	**Sg**	**13 05 37.6**	**+0.7**
THR6	**Thira Island,**	**0.18**	**204**	P	**Pg**	**13 05 34.1**	**-0.1**
THR6				S	**Sg**	**13 05 37.6**	**+0.7**
APE	**Apeiranthos**	**0.55**	**4**	P	**Pg**	**13 05 40.7**	**-0.2**
APE				S	**Sg**	**13 05 48.2**	**-0.1**
APE	**Apeiranthos**	**0.55**	**4**	*e*P	**Pg**	**13 05 40.8**	**-0.2**
APE				*e*S	**Sb**	**13 05 50.8**	**+1.2**
APE	**Apeiranthos**	**0.55**	**4**	P	**Pg**	**13 05 40.7**	**-0.2**
APE				S	**Sg**	**13 05 48.2**	**-0.1**
NPS	**Neapolis**	**1.26**	**175**	P	**Pn**	**13 05 53.1**	**-0.4**
NPS	**Neapolis**	**1.26**	**175**	P	**Pn**	**13 05 53.1**	**-0.4**
IDI	**Anoyia**	**1.32**	**202**	*e*P	**Pn**	**13 05 54.2**	**-0.2**
IDI				*e*S	**Sb**	**13 06 12.3**	**+0.6**
IDI	**Anoyia**	**1.32**	**202**	*e*P	**Pn**	**13 05 54.2**	**-0.2**
IDI				*e*S	**Sb**	**13 06 12.3**	**+0.6**
KARP	**Karpathos**	**1.67**	**125**	*e*P	**Pn**	**13 05 59.5**	**+0.3**
KARP				*e*S	**Sn**	**13 06 19.9**	**-0.6**
KARP	**Karpathos**	**1.67**	**125**	*e*P	**Pn**	**13 05 59.5**	**+0.3**
KARP				*e*S	**Sn**	**13 06 19.9**	**-0.6**

GRAL 28 13:21:10.8±0.4, 34.64N×36.82E, h15km±999km, MD3.1
NSSC 28 13:21:12.5±1.0, 34.65N×36.71E, h33km±9km, MD1.1, ML1.5
CSEM 28 13:21:13.2±0.9, 34.46N×36.63E, h10km, ML1.4, Error ellipse: s-maj=20.2km s-min=6.8km az=4.0
ISC 28 13:21:11.4±3.0, 34.7N±0.2×36.66E±0.05, h28km±14km, n12, σ0.977/22, 2D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWQ	**Hawqa**	**0.72**	**236**	*e*P	**Pb**	**13 21 24.9**	**-0.6**
HWQ				*e*S	**Sb**	**13 21 35.5**	**+0.5**
HWQ	**Hawqa**	**0.72**	**236**	*e*P	**Pb**	**13 21 24.9**	**-0.6**
HWQ				*e*S	**Sb**	**13 21 35.5**	**+0.5**
ROOS	**tl_alroos**	**0.73**	**135**	*e*P	**Pb**	**13 21 25.3**	**-0.3**
ROOS				*e*S	**Sb**	**13 21 35.4**	**+0.1**
ROOS				AML	AML	13 21 38.2	
	comp=E,1.6nm,0.3s						
ROOS				AML	AML	13 21 38.5	
	comp=N,1.0nm,0.3s						
ROOS				AML	AML	13 21 41.2	
	comp=Z,1.1nm,0.6s						
ROOS	**tl_alroos**	**0.73**	**135**	*e*P	**Pb**	**13 21 25.3**	**-0.3**
	SNR=91						
ROOS				*e*S	**Sb**	**13 21 35.4**	**+0.1**
	comp=Z,1.1nm,0.6s,SNR=59						
BHL	**Bhannes**	**1.15**	**227**	*e*P	**Pn**	**13 21 31.8**	**+0.2**
BHL	**Bhannes**	**1.15**	**227**	*e*P	**Pn**	**13 21 31.8**	**+0.2**
RCY	**Rachaya**	**1.37**	**210**	*e*P	**Pn**	**13 21 34.7**	**-0.1**
RCY				*e*S	**Sn**	**13 21 52.4**	**+0.3**
BRBR	**Barbar**	**1.41**	**205**	*i* P	**Pn**	**13 21 36.3**	**+1.1**
BRBR				*i* S	**Sn**	**13 21 52.7**	**-0.2**
BRBR				AML	AML	13 21 59.9	
	comp=N,30nm,0.6s						
BRBR				AML	AML	13 22 01.1	
	comp=E,45nm,0.6s						
BRBR				AML	AML	13 22 06.0	
	comp=Z,41nm,0.4s						
ZALF	**Zalf**	**1.85**	**162**↓	*e*P	**Pn**	**13 21 42.0**	**+0.8**
ZALF				*e*S	**Sn**	**13 22 02.3**	**-1.3**
ZALF				AML	AML	13 22 05.2	
	comp=N,31nm,0.6s						
ZALF				AML	AML	13 22 06.2	
	comp=E,24nm,0.7s						
ZALF	**Zalf**	**1.85**	**162**↓	*e*P	**Pn**	**13 21 42.0**	**+0.8**
	SNR=57						
ZALF				*e*S	**Sn**	**13 22 02.3**	**-1.3**
	comp=E,24nm,0.7s,SNR=49						
SALA	**Sala**	**1.97**	**178**	*e*P	**Pn**	**13 21 44.2**	**+1.1**
SALA				*e*S	**Sn**	**13 22 06.4**	**-0.5**
SALA				AML	AML	13 22 08.6	
	comp=E,7.7nm,0.6s						
SALA				AML	AML	13 22 11.6	
	comp=Z,43nm,0.3s						
SALA				AML	AML	13 22 16.8	
	comp=N,38nm,0.4s						
SALA	**Sala**	**1.97**	**178**	*e*P	**Pn**	**13 21 44.2**	**+1.1**
	SNR=57						
SALA				*e*S	**Sn**	**13 22 06.4**	**-0.5**
	comp=N,38nm,0.4s,SNR=49						

IDC 28 13:32:38.4±2.8, 22.91S×68.87W, h0km, mb3.5/2, mb1 3.6/4, mb1mx3.5/17, mbtmp3.4/4, ML3.8/1, Error ellipse: s-maj=58.6km s-min=56.1km az=50.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**6.62**	**6**	Pn	Pn	13 34 18.7	+0.9
	0.3nm,0.3s,baz=192,slow=9.3,SNR=9.1						
SIV	**San Ignacio**	**10.07**	**48**	Pn	Pn	13 35 02.9	-1.5
	0.4nm,0.3s,baz=263,slow=11,SNR=5.9						
TORD	**Torodi Ar. Bea**	**77.79**	**70**	P	P	13 44 38.5	+0.5
	0.3nm,0.7s,baz=250,slow=6.8,SNR=4.7						
YKA	**Yellowknife Ar**	**92.52**	**341**	P	P	13 45 50.4	-0.6
	0.1nm,0.5s,baz=135,slow=4.9,SNR=4.7						

GUC 28 13:39:45.6±0.7, 29.36S×71.03W, h52km±13km, MD3.8, ML3.3, 3C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**0.45**	**39**↑	*i*P	Pn	13 39 57.4	+0.6
LCO				*i* S	Sn	13 40 06.2	+1.3
LCO				AML	AML	13 40 07.2	
	comp=E,3μm,0.2s						
TLL	**Tololo Astrono**	**0.83**	**166**↑	*i*P	Pn	13 40 02.1	+0.7
TLL				*i* S	Sn	13 40 14.7	+1.7
TLL				AML	AML	13 40 16.1	
	comp=N,856nm,0.3s						
CMCH	**Combarbala**	**1.81**	**179**	*e*P	Pn	13 40 14.6	+0.1
CMCH				*e*S	Sn	13 40 37.0	+0.7
CMCH				AML	AML	13 40 40.3	
	comp=N,1μm,0.6s						
CPCH	**Copiapo**	**2.08**	**17**	*e*P	Pn	13 40 19.2	+1.0
CPCH				*i* S	Sn	13 40 43.8	+0.8
CDCH	**Caldera**	**2.29**	**5**	*e*P	Pn	13 40 21.5	+0.5
CDCH				*i* S	Sn	13 40 48.1	+0.1
CDCH				AML	AML	13 40 57.8	
	comp=N,192nm,0.2s						
CHNG	**Los Chungos**	**2.54**	**189**↑	*i*P	Pn	13 40 25.2	+0.8
CHNG				*e*S	Sn	13 40 54.9	+0.7
CHNG				AML	AML	13 41 04.6	
	comp=E,177nm,0.5s						

NIED 28 14:02:00, 39.20N×141.00E, h5km, Mw3.8 Best double couple: M0=5.63000×10^14 NP1:φ=31.00000°, δ=54.00000°, λ=94.00000°. NP2:φ=204.00000°, δ=36.00000°, λ=84.00000°.
ISCJB 28 14:02:02.9±0.5, 39.22N±0.03×140.97E±0.04, h18km±4km, mb3.9/13, MS2.9/1, Error ellipse: s-maj=5.1km s-min=4.9km az=31.6
JMA 28 14:02:03.1, 39.19N×140.95E, h7km±1km, M3.9
JMA Felt II J1.
IDC 28 14:02:09.3±2.1, 39.13N×140.73E, h56km±19km, mb3.7/13, mb1 3.8/16, mb1mx3.6/30, mbtmp3.6/16, ML3.0/3, MS3.0/3, Ms1 3.1/3, ms1mx2.8/28, Error ellipse: s-maj=21.0km s-min=12.7km az=102.0
ISC 28 14:02:03.3±1.1, 39.18N±0.03×140.95E±0.03, h7km±7km, n26, σ1°38/32, mb4.0/13, 2C-4D, Eastern Honshu

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

JMK	**Ichinoseki**	**0.31**	**137**↓	P		**Pg**	**14 02 09.3**	**0.0**	
JMK				*e*S		**Sg**	**14 02 13.7**	**+0.3**	
JRG	**Rokugo**	**0.33**	**312**↓	P		**Pg**	**14 02 09.5**	**-0.3**	
JRG				*e*S		**Sg**	**14 02 14.6**	**+0.4**	
JOM	**Ohasama**	**0.40**	**42**↓	P		**Pg**	**14 02 10.6**	**-0.5**	
JOM				S		**Sg**	**14 02 16.0**	**-0.3**	
JYK	**Kaneyama**	**0.53**	**241**↑	P		**Pg**	**14 02 13.3**	**-0.2**	
JYK				*e*S		**Sg**	**14 02 20.5**	**+0.1**	
OFUJ	**Ofunato**	**0.57**	**100**↓	P		**Pg**	**14 02 14.1**	**-0.2**	
OFUJ				*e*S		**Sg**	**14 02 22.1**	**+0.4**	
JIO	**Ouri**	**0.79**	**157**	P		**Pg**	**14 02 18.1**	**-0.3**	
JIO				*e*S		**Sb**	**14 02 29.6**	**-0.6**	
JOU	**Okura**	**0.84**	**196**↑	P		**Pg**	**14 02 19.3**	**-0.2**	
JOU				*e*S		**Sg**	**14 02 31.0**	**+0.6**	
MJAR	**Matsushiro Arr**	**3.41**	**220**	P		**Pn**	**14 02 58.8**	**+1.8**	
	0.8nm,0.3s,baz=32,slow=13,SNR=10								
MAT	**Matsushiro**	**3.41**	**220**	P		**Pn**	**14 02 58.5**	**+1.5**	
MAT				*e*S		**Sn**	**14 03 40.2**	**+2.5**	
ASAJ	**Asahikawa**	**5.09**	**13**	P		Pn	14 03 23.0	+3.0	
	1.7nm,0.3s,baz=221,slow=12,SNR=19								
ASAJ				S		**Sn**	**14 04 24.0**	**+5.0**	
	0.4nm,0.3s,baz=90,slow=20,SNR=2.4								
USRK	**Ussuriysk Arra**	**8.37**	**310**	P		**Pn**	**14 04 05.6**	**+0.6**	
	0.3nm,0.3s,baz=116,slow=14,SNR=4.2								
USRK				LR		LR	14 07 08.6		
	comp=Z,126nm,18.4s,baz=285,slow=36								
KSRS	**Korea Array**	**10.38**	**265**	P		Pn	14 04 36.2	+3.5	
	0.5nm,0.3s,baz=73,slow=14,SNR=14								
KSRS				LR		LR	14 08 07.4		
	comp=Z,59nm,18.1s,baz=125,slow=35								
ZALV	**Zalesovo Beam**	**40.22**	**311**	P		**P**	**14 09 39.4**	**-1.0**	
	1.0nm,0.6s,baz=88,slow=4.8,SNR=5.8								
CMAR	**Chiang Mai Arr**	**41.74**	**253**	LR		LR	14 28 14.7		
	comp=Z,18nm,19.6s,baz=195,slow=38								
MKAR	**Makanchi Array**	**42.70**	**300**	P		**P**	**14 10 00.0**	**-0.9**	
	1.2nm,0.8s,baz=92,slow=9.4,SNR=7.0								
KURBB	**Kurchatov Arra**	**44.42**	**306**	P		**P**	**14 10 13.6**	**-1.0**	
	1.6nm,0.7s,baz=81,slow=8.5,SNR=15								
ILAR	**Eielson Array**	**47.89**	**33**	P		**P**	**14 10 41.6**	**-0.1**	
	0.4nm,0.7s,baz=268,slow=6.2,SNR=6.2								
WRA	**Warramunga Arr**	**59.13**	**187**	P		**P**	**14 12 03.2**	**-1.5**	
	1.2nm,0.6s,baz=4.7,slow=7.2,SNR=13								
RES	**Resolute Bay**	**60.62**	**15**	P		**P**	**14 12 13.6**	**-0.7**	
	2.2nm,0.8s,baz=291,slow=8.0,SNR=3.6								
ARCES	**ARCESS Array B**	**61.87**	**339**	P		**P**	**14 12 21.5**	**-1.4**	
	3.1nm,0.9s,baz=347,slow=15,SNR=3.0								
ASAR	**Alice Springs**	**62.86**	**187**	P		**P**	**14 12 29.1**	**-0.9**	
	0.9nm,0.7s,baz=12,slow=5.2,SNR=11								
FINES	**FINESS Array B**	**66.75**	**332**	P		**P**	**14 12 54.2**	**-0.7**	
	2.8nm,0.9s,baz=69,slow=7.6,SNR=5.3								
HFS	**Hagfors**	**71.99**	**335**	P		**P**	**14 13 27.0**	**-0.3**	
	0.7nm,0.5s,baz=23,slow=4.7,SNR=3.7								
NOA	**NORSAR Array B**	**72.07**	**337**	P		**P**	**14 13 27.1**	**-0.8**	
	0.9nm,0.8s,baz=37,slow=5.9,SNR=3.2								
AKASG	**Malin Array Be**	**72.39**	**322**	P		**P**	**14 13 28.5**	**-1.5**	
	0.5nm,0.4s,baz=53,slow=5.0,SNR=3.7								
NVAR	**Mina Array Bea**	**74.00**	**53**	P		**P**	**14 13 41.6**	**+1.6**	
	0.7nm,0.9s,baz=311,slow=5.8,SNR=3.8								

ISCJB 28 14:05:30.6±0.6, 64.23N±0.08×40.1W±0.1, h10km, mb3.8/12, MS3.0/7, Error ellipse: s-maj=12.2km s-min=7.1km az=1.9
IDC 28 14:05:31.0±0.8, 63.99N×40.04W, h0km, mb3.7/14, mb1 4.0/16, mb1mx3.8/34, mbtmp3.8/16, ML4.0/2, MS3.1/11, Ms1 3.1/11, ms1mx2.9/39, Error ellipse: s-maj=25.0km s-min=14.4km az=5.0
ISC 28 14:05:32.4±0.7, 64.1N±0.1×40.18W±0.06, h10km, n26, σ2.905/22, mb3.8/13, MS3.1/7, Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFJD	**Kangerlussuaq**	**5.22**	**309**	*i* S	**Sn**	**14 07 50.0**	**-0.6**
SFJD	**Kangerlussuaq**	**5.22**	**309**	Pn	**Pn**	**14 06 51.0**	**+0.6**
	11nm,0.3s,baz=116,slow=10,SNR=23						
SFJD				Sn	**Sn**	**14 07 47.4**	**-3.2**
	22nm,0.3s,baz=217,slow=20,SNR=4.0						
SFJD				LR	LR	14 08 52.4	
	comp=Z,284nm,18.2s,baz=133,slow=38						
BORG	**Borgarnes**	**8.18**	**77**	LR	LR	14 10 05.2	
	comp=Z,167nm,21.8s,baz=128,slow=34						
SUMG	**Summit**	**8.55**	**4**	*i* P	**Pn**	**14 07 33.9**	**-2.5**
SUMG				*e*S	Sn	14 09 03.2	-10
FRB	**Frobisher Bay**	**12.44**	**281**	Pn	**Pn**	**14 08 28.8**	**-0.5**
	0.4nm,0.3s,baz=80,slow=4.3,SNR=3.8						
FRB				Sn	**Sn**	**14 10 49.1**	**+1.5**
	0.4nm,0.3s,baz=102,slow=18,SNR=2.5						
FRB				LR	LR	14 13 01.4	
	comp=Z,102nm,21.2s,baz=254,slow=36						
DAG	**Danmarks Havn**	**14.46**	**20**	*i* P	Pn	14 08 53.5	-3.3
SCHQ	**Scheffervill.**	**16.29**	**248**	Pn	**Pn**	**14 09 21.9**	**+0.9**
	0.

HOMB				*e*S	**Sg**	**14 21 08.1 +0.7**		
HOMB	**Homborsund**	**1.45**	**273**	*e*P	**Pn**	**14 20 48.2 -0.2**		
	SNR=50							
HOMB				*e*S	**Sg**	**14 21 08.1 +0.7**		
	SNR=50							
GNOU	**Gnosjoe**	**1.65**	**124**	P	**Pn**	**14 20 51.8 +0.6**		
KONO	**Kongsberg**	**1.65**	**330**	*e*P	**Pn**	**14 20 51.8 +0.6**		
KONO				*e*S	**Sn**	**14 21 14.4 +1.2**		
KONO				AML	AML	14 21 18.2		
	comp=Z,6.6nm,0.2s							
KONO	**Kongsberg**	**1.65**	**330**	*e*P	**Pn**	**14 20 51.8 +0.6**		
	SNR=50							
KONO				*e*S	**Sn**	**14 21 14.4 +1.2**		
	comp=Z,6.6nm,0.2s,SNR=50							
ASKU	**Askersund**	**1.99**	**69**	P	**Pn**	**14 20 57.3 +1.4**		
MUD	**Monsted U'grnd**	**2.11**	**213**	*i* P	**Pg**	**14 21 02.2 +0.8**		
MUD	**Monsted U'grnd**	**2.11**	**213**	*e*P	**Pg**	**14 21 02.2 +0.8**		
	SNR=49							
SNART	**Snartemo**	**2.13**	**274**	*e*P	**Pn**	**14 20 56.6 -1.2**		
SNART				AML	AML	14 21 23.8		
	comp=Z,6.4nm,0.1s							
UDD	**Uddeholm**	**2.22**	**32**	P	**Pn**	**14 21 00.4 +1.3**		
HFS	**Hagfors**	**2.29**	**33**	Pn	**Pn**	**14 21 00.7 +0.7**		
	baz=220,slow=16							
HFS				Sn	**Sn**	**14 21 29.0 +0.3**		
	baz=207,slow=28							
HFS				Lg	Lg	14 21 33.6		
	baz=206,slow=37							
HFS				Rg	Rg	14 21 43.2		
	baz=214,slow=28							
HFS	**Hagfors**	**2.29**	**33**	Pn	**Pn**	**14 21 00.7 +0.7**		
	baz=220,slow=16							
HFS				Sn	**Sn**	**14 21 29.0 +0.3**		
	baz=207,slow=28							
HFS				Lg	Lg	14 21 33.6		
	baz=206,slow=37							
HFS				Rg	Rg	14 21 43.2		
	baz=214,slow=28							
HFS	**Hagfors**	**2.29**	**33**	Pn	**Pn**	**14 21 00.7 +0.7**		
	baz=220,slow=14,SNR=7.8							
HFS				Sn	**Sn**	**14 21 29.0 +0.3**		
	baz=207,slow=26,SNR=9.8							
HFS				Lg	Lg	14 21 33.6		
	baz=206,slow=31,SNR=9.2							
NC602	**NORSAR Array S**	**2.51**	**3**	*e*P	**Pn**	**14 21 03.9 +0.8**		
NC602	**NORSAR Array S**	**2.51**	**3**	*e*P	**Pn**	**14 21 03.9 +0.8**		
	SNR=50							
NB2	**NORSAR Subarra**	**2.81**	**360**	Pn	**Pn**	**14 21 06.8 -0.5**		
	baz=179,slow=16							
NB2				Sn	**Sn**	**14 21 42.0 +0.2**		
NB2				Lg	Lg	14 21 50.4		
	baz=175,slow=37							
NB2	**NORSAR Subarra**	**2.81**	**360**	Pn	**Pn**	**14 21 06.8 -0.5**		
	baz=179,slow=16							
NB2				Sn	**Sn**	**14 21 42.0 +0.2**		
NB2				Lg	Lg	14 21 50.4		
	baz=175,slow=37							
NB2	**NORSAR Subarra**	**2.81**	**360**	Pn	**Pn**	**14 21 06.8 -0.5**		
	baz=179,slow=15,SNR=8.6							
NB2				Sn	**Sn**	**14 21 42.0 +0.2**		
NB2				Lg	Lg	14 21 50.4		
	baz=175,slow=31,SNR=3.7							
FIA0	**FINESS Array S**	**8.13**	**60**	Pn	**Pn**	**14 22 20.8 +0.7**		
	baz=254,slow=12							
FIA0	**FINESS Array S**	**8.13**	**60**	Pn	**Pn**	**14 22 20.8 +0.7**		
	baz=254,slow=12							
FIA0	**FINESS Array S**	**8.13**	**60**	Pn	**Pn**	**14 22 20.8 +0.7**		
	baz=254,slow=12,SNR=50							
ARA0	**ARCESS Array S**	**12.91**	**23**	Pn	**Pn**	**14 23 23.1 -2.4**		
	baz=202,slow=16							
ARA0	**ARCESS Array S**	**12.91**	**23**	P	**Pn**	**14 23 23.1 -2.4**		
	baz=202,slow=16							

CSEM ***28*** *14:50:07.2±0.1,50.06°N×0.78°E,h1km,ML2.4, Error ellipse: s-maj=3.8km s-min=1.8km az=171.0, Mining explosion.*

BGS 28 14:50:08.6±0.5, 50.06°N×0.78°E, h6km, ML2.4, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WOL	**Wolverton**	**1.79**	**315**	AML	AML	14 51 17.3	
WOL	comp=E,40nm,0.5s			AML	AML	14 51 18.6	
WOL	**Wolverton**	**1.79**	**315**	AML	AML	14 51 17.3	
WOL	comp=E,40nm,0.5s			AML	AML	14 51 18.6	
	comp=N,38nm,0.5s						
SKP1	**Kophill**	**1.94**	**329**	*e*P	Pn	14 50 41.6	-0.6
SKP1	**Kophill**	**1.94**	**329**	P	Pn	14 50 41.6	-0.6
SKP1	**Kophill**	**1.94**	**329**	*e*P	Pn	14 50 41.6	-0.6
SKP1	**Kophill**	**1.94**	**329**	*e*P	Pn	14 50 41.6	-0.6
	comp=N,40nm,0.5s						
JDG	**Jersey Dam (Ga**	**2.03**	**246**	*e*P	Pn	14 50 42.4	-1.0
JDG				*e*S	Sn	14 51 06.9	-2.2
JDG	**Jersey Dam (Ga**	**2.03**	**246**	P	Pn	14 50 42.4	-1.0
JDG				S	Sn	14 51 06.9	-2.2
JDG	**Jersey Dam (Ga**	**2.03**	**246**	*e*P	Pn	14 50 42.4	-1.0
JDG				*e*S	Sn	14 51 06.9	-2.2
JDG	**Jersey Dam (Ga**	**2.03**	**246**	*e*P	Pn	14 50 42.4	-1.0
JDG				*e*S	Sn	14 51 06.9	-2.2
	comp=N,24nm,0.4s						
JDC	**Jersey Dam (Cr**	**2.04**	**246**	*e*P	Pn	14 50 42.4	-1.1
JDC	**Jersey Dam (Cr**	**2.04**	**246**	P	Pn	14 50 42.4	-1.1
JDC	**Jersey Dam (Cr**	**2.04**	**246**	*e*P	Pn	14 50 42.4	-1.1
JDC	**Jersey Dam (Cr**	**2.04**	**246**	*e*P	Pn	14 50 42.4	-1.0
JSA	**Saint Aubin**	**2.11**	**247**	*e*P	Pn	14 50 43.4	-1.1
JSA				*e*S	Sn	14 51 09.2	-1.8
JSA	comp=E,33nm,0.3s			AML	AML	14 51 16.5	
JSA	comp=N,24nm,0.4s			AML	AML	14 51 23.0	
JSA	**Saint Aubin**	**2.11**	**247**	P	Pn	14 50 43.4	-1.1
JSA				S	Sn	14 51 09.2	-1.8
JSA	comp=N,33nm,0.3s			AML	AML	14 51 16.5	
JSA	comp=N,24nm,0.4s			AML	AML	14 51 23.0	
JSA	**Saint Aubin**	**2.11**	**247**	*e*P	Pn	14 50 43.4	-1.1
JSA				*e*S	Sn	14 51 09.2	-1.8
JSA	comp=E,33nm,0.3s			AML	AML	14 51 16.5	
JSA	comp=N,24nm,0.4s			AML	AML	14 51 23.0	
JSA	**Saint Aubin**	**2.11**	**247**	*e*P	Pn	14 50 43.4	-1.0
JSA				*e*S	Sn	14 51 09.2	-1.8
SNF	**Seneffe**	**2.29**	**77**	PN	Pn	14 50 46.2	-0.7
SNF	**Seneffe**	**2.29**	**77**	Pn	Pn	14 50 46.1	-0.8
DOU	**Dourbes**	**2.46**	**88**	PN	Pn	14 50 48.7	-0.5
DOU	**Dourbes**	**2.46**	**88**	Pn	Pn	14 50 48.7	-0.5
BCLA	**Clavier**	**2.92**	**81**	PN	Pn	14 50 55.3	-0.4
BCLA	**Clavier**	**2.92**	**81**	Pn	Pn	14 50 55.3	-0.4
DYA	**Yadsworthy**	**3.05**	**279**	*e*P	Pn	14 50 56.4	-1.0
DYA	comp=E,11nm,0.7s			AML	AML	14 51 57.4	
DYA	comp=N,15nm,0.3s			AML	AML	14 51 58.1	
DYA	**Yadsworthy**	**3.05**	**279**	P	Pn	14 50 56.4	-1.0
DYA				AML	AML	14 51 57.4	
DYA	comp=N,11nm,0.7s			AML	AML	14 51 58.1	
DYA	comp=N,15nm,0.3s			AML	AML	14 51 58.1	
DYA	**Yadsworthy**	**3.05**	**279**	*e*P	Pn	14 50 56.4	-1.0
DYA	comp=E,11nm,0.7s			AML	AML	14 51 57.4	
DYA	comp=N,15nm,0.3s			AML	AML	14 51 58.1	
DYA	**Yadsworthy**	**3.05**	**279**	*e*P	Pn	14 50 56.4	-1.0
	comp=N,33nm,0.3s						
MCH1	**Michaelchurch**	**3.08**	**311**	*e*P	Pn	14 50 56.5	-1.3
MCH1	comp=E,11nm,0.9s			AML	AML	14 51 55.0	
MCH1	comp=N,7.0nm,0.3s			AML	AML	14 51 55.7	
MCH1	**Michaelchurch**	**3.08**	**311**	P	Pn	14 50 56.5	-1.3
MCH1	comp=N,11nm,0.9s			AML	AML	14 51 55.0	
MCH1	comp=N,7.0nm,0.3s			AML	AML	14 51 55.7	
MCH1	**Michaelchurch**	**3.08**	**311**	*e*P	Pn	14 50 56.5	-1.3
MCH1	comp=E,11nm,0.9s			AML	AML	14 51 55.0	
MCH1	comp=N,7.0nm,0.3s			AML	AML	14 51 55.7	
MCH1	**Michaelchurch**	**3.08**	**311**	*e*P	Pn	14 50 56.5	-1.2
	comp=N,11nm,0.9s						
HLM1	**Long Mynd**	**3.37**	**318**	*e*P	Pn	14 51 01.0	-0.8
HLM1				AML	AML	14 52 02.9	
HLM1	comp=N,6.5nm,0.5s			AML	AML	14 52 07.2	
HLM1	**Long Mynd**	**3.37**	**318**	P	Pn	14 51 01.0	-0.8
HLM1				AML	AML	14 52 02.9	
HLM1	comp=E,6.5nm,0.5s			AML	AML	14 52 07.2	
HLM1	**Long Mynd**	**3.37**	**318**	*e*P	Pn	14 51 01.0	-0.8
HLM1	comp=E,8.2nm,0.5s			AML	AML	14 52 02.9	
HLM1	comp=N,6.5nm,0.5s			AML	AML	14 52 07.2	
HLM1	**Long Mynd**	**3.37**	**318**	*e*P	Pn	14 51 01.0	-0.8
	comp=E,8.2nm,0.5s						
MEM	**Membach**	**3.39**	**79**	PN	Pn	14 51 01.7	-0.4
MEM				SN	Sn	14 51 42.7	+0.1
	comp=N,7.5nm,0.0s						
MEM	**Membach**	**3.39**	**79**	Pn	Pn	14 51 01.7	-0.4
MEM				Sn	Sn	14 51 42.7	0.0

NNC 28 15:07:58.9±4.3, 51.27°N×89.52°E, h0km, mb3.6, mpv3.4, 7C-7D, Error ellipse: s-maj=36.2km s-min=29.2km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**6.53**	**229**	⇓P	Pn	15 09 36.8	+0.7
	3.2nm,0.5s,baz=56,slow=13,SNR=40						
MK31				⇑Lg	Lg	15 11 25.8	
	8.7nm,0.6s,baz=53,slow=27,SNR=5.9						
KURK	**Kurchatov**	**6.90**	**270**	⇓P	Pn	15 09 40.9	-0.3
	2.2nm,0.4s						
KURK				⇑Sn	Sn	15 11 05.8	+5.4
	4.6nm,0.6s						
KURK				⇑Lg	Lg	15 11 38.0	
	16nm,0.9s						
KUR17	**Kurchatov Arra**	**7.01**	**269**	⇑P	Pn	15 09 44.0	+1.3
	0.3nm,0.5s,baz=82,slow=15						
KUR17				⇓Sn	Sn	15 11 03.8	+0.8
	0.4nm,0.4s						
KUR17				⇓Lg	Lg	15 11 41.3	
	1.6nm,1.0s,baz=84,slow=31						
VOSK	**Vostochnaya**	**11.52**	**284**	⇑P	Pn	15 10 43.2	-1.3
	0.6nm,0.7s						
VOSK				⇑Sn	Sn	15 12 52.0	-1.8
	1.5nm,0.6s						
BVA0	**Borovoye Array**	**11.88**	**286**	⇓P	Pn	15 10 49.8	+0.4
	0.1nm,0.3s,baz=95,slow=15,SNR=6.8						
BVA0				⇓Sn	Sn	15 13 00.1	-2.5
	0.4nm,0.7s,baz=88,slow=22,SNR=4.5						
ZRNK	**Zerenda**	**12.72**	**286**	⇓P	Pn	15 10 59.4	-1.5
	0.7nm,0.4s						
ZRNK				⇑Sn	Sn	15 13 18.4	-4.6
	1.3nm,0.5s						

IDC ***28*** *15:16:51.6±1.1,2.08°S×139.34°E,h0km,mb3.9/6, mb1 4.2/8,mb1mx3.9/19,mbtmp4.0/8,ML4.3/2,MS3.3/3, Ms1 3.2/3,ms1mx2.7/27, Error ellipse: s-maj=39.3km s-min=19.2km az=83.0*

ISCJB ***28*** *15:16:55.4±0.6,2.22°S±0.06°×139.11°E±0.05,h29km, mb3.9/5,MS3.2/3, Error ellipse: s-maj=8.6km s-min=6.5km az=9.1*

AUST ***28*** *15:16:55.8±0.0,1.99°S×139.08°E,h36km, Error ellipse: s-maj=2.0km s-min=1.0km az=10.0*

ISC 28 15:16:57.2±0.8, 2.20°S±0.08°×139.04°E±0.07, h29km, n30, σ1s78/27, mb3.9/5, MS3.4/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.69**	**101**	P	Pn	15 17 20.6	-4.3
	baz=1.7,SNR=18						
FAKI	**Fak Fak**	**6.82**	**264**	P	Pn	15 18 38.6	+3.1
	baz=6.9,SNR=12						
FAKI				S	**Sn**	**15 19 55.4**	**+3.2**
	baz=6.9,SNR=5.9						
PMG	**Port Moresby**	**10.79**	**132**	Pn	**Pn**	**15 19 31.6**	**+1.7**
	0.3nm,0.3s,baz=302,slow=13,SNR=3.6						
KDU	**Kakadu**	**12.29**	**212**	P	**Pn**	**15 19 49.9**	**-0.5**
	baz=12,SNR=13						
MTN	**Manton Dam**	**13.16**	**216**	P	**Pn**	**15 20 02.6**	**+0.3**
	baz=13,SNR=12						
MTN				S	**Sn**	**15 22 29.0**	**+1.1**
	baz=13,SNR=3.5						
LUWI	**Luwuk**	**16.30**	**274**	P	Pn	15 20 36.7	-7.6
	baz=16,SNR=5.2						
MTSU	**Mount Surprise**	**16.66**	**162**	P	**P**	**15 20 50.8**	**-0.3**
	baz=17,SNR=4.3						
WRA	**Warrumunga Arr**	**18.23**	**194**	P	**P**	**15 21 08.1**	**-0.2**
	1.0nm,0.3s,baz=20,slow=12,SNR=42						
WRA				S	**Sn**	**15 24 26.6**	**-4.4**
	0.1nm,0.3s,baz=16,slow=22,SNR=4.7						
QIS	**Mount Isa**	**18.26**	**178**	P	**Pn**	**15 21 10.0**	**+1.3**
	baz=19,SNR=5.1						
CTA	**Charters Tower**	**19.13**	**159**	P	**P**	**15 21 17.9**	**-0.3**
	0.6nm,0.3s,baz=326,slow=11,SNR=5.8						
PCI	**Palu**	**19.24**	**274**	S	**Sn**	**15 24 54.1**	**-1.5**
	baz=19,SNR=8.4						
WSI	**Waingapu**	**20.05**	**248**	S	S	15 24 57.8	-15
	baz=20,SNR=5.6						
FITZ	**Fitzroy Crossi**	**20.56**	**219**	P	**P**	**15 21 34.4**	**+0.6**
	1.6nm,0.6s,baz=49,slow=11,SNR=7.2						
FITZ				S	**S**	**15 25 18.1**	**-4.4**
	1.7nm,0.7s,baz=169,slow=18,SNR=4.6						
FITZ	**Fitzroy Crossi**	**20.56**	**219**	P	Pn	15 21 35.1	-1.0
	baz=21,SNR=4.6						
ASAR	**Alice Springs**	**21.92**	**193**	P	**P**	**15 21 48.9**	**+0.4**
	7.6nm,0.5s,baz=24,slow=11,SNR=35						
QLP	**Quilpie**	**24.75**	**169**	P	**P**	**15 22 16.4**	**-0.1**
	baz=25,SNR=22						
EIDS	**Eidsvold**	**25.80**	**154**	P	**P**	**15 22 27.9**	**+2.0**
	baz=26,SNR=3.8						
RMQ	**Roma**	**25.89**	**160**	P	**P**	**15 22 28.8**	**+1.9**
	baz=26,SNR=11						
STKA	**Stephens Creek**	**29.62**	**176**	P	**P**	**15 22 59.1**	**-1.0**
	1.8nm,0.5s,baz=341,slow=11,SNR=18						
STKA				LR	LR	15 36 57.0	
	comp=Z,91nm,19.2s,baz=201,slow=41						
STKA	**Stephens Creek**	**29.62**	**176**	P	**P**	**15 22 59.3**	**-0.8**
	baz=30,SNR=13						
FORT	**Forrest**	**30.27**	**199**	P	**P**	**15 23 06.5**	**+0.7**
	baz=31,SNR=14						
BBOO	**Buckleboo**	**30.58**	**185**	P	**P**	**15 23 08.1**	**-0.5**
	baz=31,SNR=6.8						
MEEK	**Meekatharra**	**31.23**	**217**	P	**P**	**15 23 15.0**	**+0.6**
	baz=32,SNR=3.2						
MORW	**Morawa**	**34.55**	**217**	P	**P**	**15 23 43.8**	**+0.4**
	baz=35,SNR=7.1						
KSRS	**Korea Array**	**40.78**	**346**	LR	LR	15 39 18.8	
	comp=Z,14nm,19.2s,baz=200,slow=33						
CMAR	**Chiang Mai Arr**	**44.47**	**299**	P	**P**	**15 25 06.8**	**+0.5**
	0.6nm,0.7s,baz=108,slow=7.2,SNR=5.5						
MKAR	**Makanchi Array**	**69.59**	**322**	P	**P**	**15 28 03.5**	**-0.2**
	0.8nm,0.7s,baz=108,slow=7.6,SNR=5.2						
AAK	**Ala-Archa**	**73.07**	**316**	LR	LR	15 59 17.8	
	comp=Z,25nm,21.9s,slow=35						
ILAR	**Eielson Array**	**85.23**	**24**	P	**P**	**15 29 28.2**	**-2.7**
	0.7nm,0.8s,baz=252,slow=5.1,SNR=7.1						
TORD	**Torodi Ar. Bea**	**136.43**	**287**	PKP	**PKPdf**	**15 36 17.0**	**-0.5**
	0.3nm,0.6s,baz=54,slow=1.9,SNR=2.6						

IDC ***28*** *15:29:26.7±0.5,48.28°S×75.94°W,h0km,mb4.6/15, mb1 4.7/17,mb1mx4.7/21,mbtmp4.5/17,ML3.6/2,MS4.4/17, Ms1 4.4/17,ms1mx4.3/22, Error ellipse: s-maj=20.0km s-min=13.4km az=97.0*

GCMT ***28*** *15:29:30.8±0.3,48.48°S×76.28°W,h18km±1km,MW5.1, Moment Tensor Solution. s27,c40; s60,c77; Moment tensor: Scale 10^{16}Nm; Mrr3.19±.21; Mθθ1.25±.12; Mφφ-4.43±.16; Mrθ0.02±.32; Mrφ-0.26±.11; Mθφ-4.55±.51; Best double couple: M05.90000×10^{16} NP1:φ7.00000°, δ20.00000°, λ97.00000°. NP2:φ180.00000°, δ70.00000°, λ88.00000°. Principal axes: T 5.3200, Plg65.0000°, Azm86.0000°; N 1.2500, Plg2.0000°, Azm181.0000°; P -6.5600, Plg25.0000°, Azm272.0000°; Data Used: II IU IC G CN.*

MOS ***28*** *15:29:31.5±1.1,48.21°S×75.72°W,h33km,mb5.3/14 Error ellipse: s-maj=22.1km s-min=12.2km az=88.4*

ISCJB ***28*** *15:29:31.2±0.3,48.21°S±0.05°×75.77°W±0.08,h33km, mb4.8/29,MS4.5/19, Error ellipse: s-maj=8.1km s-min=7.1km az=42.1*

BJI ***28*** *15:29:31.4,48.30°S×76.00°W,h39km,mB5.2/14,Ms5.3/10, Ms7 4.9/11*

NEIC ***28*** *15:29:32.7±1.4,48.29°S×75.96°W,h41km±11km,mb5.2/17, Error ellipse: s-maj=12.7km s-min=6.5km az=77.0*

ISC 28 15:29:32.1±0.3, 48.25°S±0.06°×76.01°W±0.07, h35km, n303, σ1s25/331, mb4.9/29, MS4.5/19, 90C-74D, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COYC	**Coyhaique**	**3.80**	**47**	*e*P	**Pn**	**15 30 27.4**	**-0.7**
COYC				*e*S	Sn	15 31 26.8	+15
PLCA	**Paso Flores**	**8.47**	**29**	*e*P	**Pn**	**15 31 32.7**	**+0.4**
PLCA				Lg	Lg	15 33 51.4	
PLCA	**Paso Flores**	**8.47**	**29**	Pn	**Pn**	**15 31 32.6**	**+0.4**
	0.2nm,0.3s,baz=207,slow=14,SNR=17						
PLCA				Lg	Lg	15 33 51.4	
	0.5nm,0.3s,baz=282,slow=18,SNR=6.1						
PLCA				LR	LR	15 34 48.4	
	comp=Z,5μm,18.4s,baz=201,slow=38						
EFI	**East Falkland**	**12.05**	**113**	*e*P	**Pn**	**15 32 21.2**	**+0.1**
EFI	**East Falkland**	**12.05**	**113**	*e*P	**Pn**	**15 32 21.2**	**+0.1**
TRQA	**Tornquist**	**14.42**	**50**	*e*Pn	**Pn**	**15 32 54.4**	**+0.7**
	28nm,1.2s						
LMEL	**Las Melosas**	**15.04**	**19**	*e*P	**P**	**15 33 06.7**	**-0.3**
CFAA	**Coronel Fontan**	**17.65**	**22**	Pn	**Pn**	**15 33 35.2**	**+0.1**
CFAA	**Coronel Fontan**	**17.65**	**22**	Pn	**Pn**	**15 33 35.2**	**+0.1**
	0.1nm,0.3s,baz=194,slow=12,SNR=24						
CFAA				LR	LR	15 40 39.3	
	comp=Z,395nm,18.4s,baz=195,slow=38						
PMSA	**Palmer Station**	**17.77**	**163**	LR	LR	15 38 49.0	
	comp=Z,996nm,18.4s,baz=296,slow=32						
TLL	**Tololo Astrono**	**18.50**	**14**	*e*P	**P**	**15 33 45.4**	**0.0**
LPA	**La Plata**	**18.93**	**52**	*ce*P	**Pn**	**15 33 54.0**	**+3.4**
LPA				SCS		15 45 23.0	
LPA				PKIKP	**PKiKP**	**15 46 06.0**	**+1.2**
LCO	**Las Campanas**	**19.65**	**14**	*e*P	**P**	**15 33 57.8**	**-0.1**
	185nm,1.3s						
LCO	**Las Campanas**	**19.65**	**14**	*e*P	**P**	**15 33 57.9**	**0.0**
CPUP	**Villa Florida**	**26.32**	**40**	P	**P**	**15 35 04.3**	**-0.1**
CPUP	**Villa Florida**	**26.32**	**40**	P	**P**	**15 35 04.3**	**-0.1**
	12nm,0.8s,baz=209,slow=8.8,SNR=26						
CPUP				LR	LR	15 46 29.0	
	comp=Z,2μm,19.8s,baz=191,slow=39						
LPAZ	**La Paz**	**32.53**	**14**	P	**P**	**15 36 00.8**	**+0.5**
LPAZ	**La Paz**	**32.53**	**14**	P	**P**	**15 36 00.8**	**+0.5**
	21nm,1.1s,baz=172,slow=6.9,SNR=38						
SPB	**Sao Paulo**	**33.44**	**53**	*e*P	**P**	**15 36 07.1**	**-0.4**
	44nm,1.0s						
VNA2	**Neumayer--Watz**	**38.50**	**151**	*e*P	**P**	**15 36 52.0**	**+1.7**
BDFB	**Brasilia**	**39.84**	**45**	P	**P**	**15 37 01.9**	**-0.3**
BDFB	**Brasilia**	**39.84**	**45**	P	**P**	**15 37 01.9**	**-0.3**
	38nm,1.1s,baz=206,slow=6.8,SNR=25						
BDFB				LR	LR	15 54 40.7	
	comp=Z,3μm,18.7s,baz=40,slow=38						
SNAA	**Sanae**	**39.93**	**152**	*e*P	**P**	**15 37 03.5**	**+1.2**
SNAA	**Sanae**	**39.93**	**152**	*e*P	**P**	**15 37 00.5**	**-1.9**
	46nm,1.3s						
SNAA	**Sanae**	**39.93**	**152**	P	**P**	**15 37 01.3**	**-1.0**
	1.9nm,0.8s,baz=262,slow=9.8,SNR=7.8						
SNAA				LR	LR	15 51 36.5	
	comp=Z,263nm,18.5s,baz=201,slow=33						
SAML	**Samuel**	**40.64**	**20**	*e*P	**P**	**15 37 08.8**	**0.0**
	57nm,1.2s						
QSPA	**South Pole Qui**	**41.99**	**180**	P	**P**	**15 37 20.3**	**+0.7**
QSPA	**South Pole Qui**	**41.99**	**180**	P	**P**	**15 37 20.3**	**+0.7**
	16nm,1.1s,baz=150,slow=7.4,SNR=19						
QSPA				LR	LR	15 53 46.3	
	comp=Z,321nm,19.1s,baz=301,slow=35						
OTAV	**Otavalo**	**48.34**	**357**	*e*P	**P**	**15 38 11.5**	**+0.8**
	45nm,1.3s						
VNDA	**Vanda**	**49.55**	**194**	P	**P**	**15 38 16.8**	**-2.0**
VNDA	**Vanda**	**49.55**	**194**	P	**P**	**15 38 16.8**	**-2.0**
	3.5nm,1.0s,baz=142,slow=4.4,SNR=3.4						
VNDA				LR	LR	15 58 35.3	
	comp=Z,207nm,18.3s,baz=125,slow=35						
ROSC	**El Rosal**	**52.91**	**2**	*e*P	**P**	**15 38 47.4**	**+2.4**
ROSC	**El Rosal**	**52.91**	**2**	LR	LR	16 00 32.3	
	comp=Z,412nm,18.2s,baz=200,slow=35						
JTS	**JuntasAbangare**	**58.82**	**350**	*e*P	**P**	**15 39 27.5**	**+0.6**
	45nm,1.3s						
MAW	**Mawson**	**60.39**	**163**	P	**P**	**15 39 37.7**	**+0.6**
MAW	**Mawson**	**60.39**	**163**	P	**P**	**15 39 37.7**	**+0.6**
	6.1nm,1.0s,baz=217,slow=5.1,SNR=6.5						
MAW				LR	LR	16 05 41.5	
	comp=Z,553nm,18.5s,baz=210,slow=36						
TBI	**Tubuai**	**62.09**	**266**	*e*S	**S**	**15 48 13.3**	**+1.5**
	404nm,29.8s						
TBI				*e*LR	LR	15 58 14.4	
	881nm,26.5s,baz=139						
PPT2	**Papeete2**	**66.19**	**270**	*e*S	**S**	**15 49 00.8**	**-2.0**
	179nm,24.5s						
PPT2				*e*LR	LR	16 00 01.9	
	886nm,25.8s,baz=134						
PPT	**Papeete**	**66.20**	**270**	LR	LR	16 00 43.6	
	comp=Z,631nm,19.7s,baz=176,slow=28						
SUR	**Sutherland**	**70.77**	**117**	P	**P**	**15 40 46.0**	**+1.0**
SUR	**Sutherland**	**70.77**	**117**	P	**P**	**15 40 46.0**	**+1.0**
	11nm,0.8s,baz=224,slow=8.8,SNR=6.0						
RAO	**Raoul Island**	**76.05**	**242**	LR	LR	16 08 39.5	
	comp=Z,147nm,19.0s,baz=77,slow=31						
BOSA	**Boshof**	**76.14**	**117**	P	**P**	**15 41 16.2**	**-0.3**
BOSA	**Boshof**	**76.14**	**117**	P	**P**	**15 41 16.2**	**-0.3**
	14nm,0.9s,baz=208,slow=6.8,SNR=16						
BOSA				LR	LR	16 09 15.1	
	comp=Z,277nm,21.7s,baz=228,slow=31						
TSUM	**Tsumeb**	**78.25**	**106**	P	**P**	**15 41 28.1**	**-0.4**
TSUM	**Tsumeb**	**78.25**	**106**	P	**P**	**15 41 28.1**	**-0.4**
	4.3nm,0.9s,baz=219,slow=4.7,SNR=8.5						
LPIG	**La Paz**	**78.32**	**328**	LR	LR	16 08 27.9	
	comp=Z,7.5nm,19.3s,baz=236,slow=30						
LBTB	**Lobatse**	**79.00**	**115**	*e*P	**P**	**15 41 31.9**	**-0.6**
	26nm,1.3s						
LBTB	**Lobatse**	**79.00**	**115**	P	**P**	**15 41 32.2**	**-0.3**
	7.1nm,0.8s,baz=238,slow=6.2,SNR=9.8						
732A	**Laxson Ranch,**	**79.59**	**339**	⇑P	**P**	**15 41 35.6**	**+0.4**
	baz=80,SNR=5.2						
632A	**U

	baz=83									
428A	**Kincaid Ranch,**	82.18	337	⇑P		P		15 41 49.6	+0.4	
	baz=83									
330A	**Mertzon**	82.45	338	⇓P		P		15 41 50.4	0.0	
	baz=83,SNR=5.1									
426A	**McDonald Obser**	82.48	336	⇑P		P		15 41 51.8	+0.9	
	baz=83									
427A	**Hayter Ranch,**	82.49	336	⇓P		P		15 41 50.9	+0.2	
	baz=83									
232A	**Coleman**	82.54	340	⇑P		P		15 41 51.1	+0.1	
	baz=83,SNR=5.6									
329A	**Wagon Wheel Ra**	82.72	338	⇑P		P		15 41 52.6	+0.6	
	baz=83,SNR=8.4									
231A	**Bronte**	82.75	339	⇑P		P		15 41 51.5	-0.5	
	baz=83									
328A	**Wristen Ranch,**	82.83	337	⇑P		P		15 41 52.9	+0.4	
	baz=83									
425A	**Indio Mountain**	82.86	335	⇓P		P		15 41 53.4	+0.7	
	baz=83									
230A	**Sterling City**	82.89	339	⇓P		P		15 41 52.9	+0.1	
	baz=83									
327A	**Balmorhea Ranc**	83.00	337	⇑P		P		15 41 53.8	+0.5	
	baz=83									
326A	**Caldwell Ranch**	83.08	336	⇑P		P		15 41 54.6	+0.8	
	baz=84									
229A	**Bryant Ranch,**	83.14	338	⇓P		P		15 41 54.5	+0.4	
	baz=84									
KMSC	**Kings Mountain**	83.16	356	⇑P		P		15 41 54.4	+0.4	
	baz=84									
ABTX	**Abilene, Hawle**	83.25	340	⇑P		P		15 41 54.5	-0.1	
	baz=84									
325A	**Bean Ranch, Si**	83.41	335	⇑P		P		15 41 55.6	0.0	
	baz=84									
131A	**Roby**	83.47	339	⇑P		P		15 41 56.2	+0.5	
	baz=84									
228A	**UT Block 9, Go**	83.48	338	⇑P		P		15 41 56.6	+0.8	
	baz=84									
130A	**Snyder**	83.53	339	⇑P		P		15 41 56.1	0.0	
	baz=84									
227A	**Bennet, Jal**	83.56	337	⇓P		P		15 41 56.9	+0.7	
	baz=84									
PLAL	**Pickwick Lake**	83.56	350	P		P		15 41 55.6	-0.4	
	32nm,1.0s									
SWET	**Sewanee**	83.57	352	*e*P		P		15 41 55.8	-0.4	
	21nm,1.3s									
324A	**Moseley Ranch,**	83.62	335	⇑P		P		15 41 55.7	-0.9	
	baz=84									
CPCT	**Cooper Cave**	83.68	353	*e*P		P		15 41 56.3	-0.3	
226B	**Tecolote Peak,**	83.85	336	⇓P		P		15 41 58.0	+0.3	
	baz=84									
Z32A	**Haskell**	83.87	340	⇓P		P		15 41 58.0	+0.3	
	baz=84									
128A	**Castleberry Fa**	83.93	338	⇑P		P		15 41 58.9	+0.8	
	baz=84									
Z31A	**Sharp Cattle R**	84.03	340	⇑P		P		15 41 59.2	+0.6	
	baz=84									
225A	**Deer Hill, Car**	84.06	336	⇓P		P		15 41 59.0	0.0	
	baz=84									
127A	**Arkansas Junct**	84.21	337	⇑P		P		15 41 59.8	+0.2	
	baz=85									
Z30A	**Sanderson Ranc**	84.23	339	⇓P		P		15 41 59.6	0.0	
	baz=85,SNR=7.0									
Z29A	**Hungry Hill Ra**	84.34	339	⇓P		P		15 42 00.4	+0.1	
	baz=85									
126A	**Clayton Basin,**	84.35	337	⇓P		P		15 42 00.6	+0.3	
	baz=85									
320A	**Kipp Ranch, An**	84.42	332	⇑P		P		15 42 01.9	+1.2	
	baz=85									
125A	**Gardner Draw,**	84.53	336	⇑P		P		15 42 01.2	0.0	
	baz=85									
Z28A	**Tucker Farm, M**	84.54	338	⇓P		P		15 42 01.3	+0.1	
	baz=85									
WVT	**Waverly**	84.67	350	*e*P		P		15 42 01.0	-0.6	
WVT				pmax		pmax				
	comp=Z,6.0nm,0.9s									
WVT	**Waverly**	84.67	350	*e*P		P		15 42 01.0	-0.6	
	comp=Z,6.2nm,0.9s									
319A	**Douglas**	84.69	332	⇑P		P		15 42 03.3	+1.2	
	baz=85									
Y30A	**Stafford Cattl**	84.74	339	⇑P		P		15 42 02.4	+0.3	
	baz=85									
Z27A	**Tatum**	84.78	337	⇓P		P		15 42 02.7	+0.3	
	baz=85									
124A	**Stringfield Ra**	84.79	335	⇓P		P		15 42 03.6	+0.9	
	baz=85									
Z26A	**Caprock**	84.93	337	⇑P		P		15 42 02.7	-0.6	
	baz=85									
220A	**Playas Peak, P**	84.95	333	⇓P		P		15 42 04.3	+1.0	
	baz=85,SNR=5.5									
123A	**Bell Site, Whi**	84.96	335	⇑P		P		15 42 03.8	+0.5	
	baz=85									
WMOK	**Wichita Mounta**	85.09	341	*e*P		P		15 42 03.4	-0.5	
WMOK				pmax		pmax				
	comp=Z,29nm,1.6s									
WMOK	**Wichita Mounta**	85.09	341	*e*P		P		15 42 03.4	-0.5	
	comp=Z,29nm,1.6s									
Y28A	**McKinney Farm,**	85.10	338	⇓P		P		15 42 04.7	+0.7	
	baz=86									
Z25A	**Roswell**	85.14	336	⇑P		P		15 42 05.9	+1.6	
	baz=86									
X31A	**McDonald Ranch**	85.25	340	⇑P		P		15 42 05.3	+0.6	
	baz=86									
X30A	**Coker Ranch, T**	85.28	340	⇓P		P		15 42 04.5	-0.4	
	baz=86									
MSTX	**Muleshoe**	85.28	338	⇓P		P		15 42 05.4	+0.4	
	baz=86									
Y27A	**Causey**	85.30	338	⇓P		P		15 42 05.3	+0.3	
	baz=86									
121A	**Cookes Peak, D**	85.31	333	⇓P		P		15 42 06.8	+1.6	
	baz=86									
Z24A	**Sheeppen Canyo**	85.36	336	⇑P		P		15 42 06.4	+0.9	
	baz=86									
X29A	**Tulia**	85.47	339	⇑P		P		15 42 06.7	+0.8	
	baz=86									
Y26A	**Elida**	85.51	337	⇑P		P		15 42 06.5	+0.3	
	baz=86									
120A	**U Bar Ranch, L**	85.58	333	⇓P		P		15 42 08.1	+1.6	
	baz=86									
Z22A	**Elephant Butte**	85.74	334	⇓P		P		15 42 08.5	+1.2	
	baz=86,SNR=6.4									
AMTX	**Amarillo**	85.89	339	⇓P		P		15 42 09.0	+1.0	
	baz=86									
Y24A	**Capitan**	85.94	336	⇑P		P		15 42 09.3	+1.0	
	baz=86,SNR=6.2									
Z21A	**St. Cloud Mine**	86.00	334	⇓P		P		15 42 10.3	+1.7	
	baz=86									
Z20A	**Nine Sixteen R**	86.09	333	⇑P		P		15 42 10.7	+1.6	
	baz=86,SNR=7.6									
X26A	**CR and CF Fran**	86.10	337	⇓P		P		15 42 09.8	+0.8	
	baz=86									
W29A	**Amarillo**	86.11	339	⇑P		P		15 42 09.7	+0.6	
	baz=86									
Y23A	**Lovelace Mesa,**	86.12	335	⇓P		P		15 42 10.5	+1.3	
	baz=86									
X25A	**Clemmons Ranch**	86.30	337	⇓P		P		15 42 10.5	+0.4	
	baz=87									
V31A	**Spring Creek L**	86.32	341	⇓P		P		15 42 11.2	+1.2	
	baz=87									
W28A	**Vega**	86.37	339	⇑P		P		15 42 11.0	+0.7	
	baz=87									
Y22A	**Socorro**	86.38	335	⇓P		P		15 42 11.6	+1.1	
	baz=87									
W27A	**Bowe Ranch, En**	86.40	338	⇑P		P		15 42 10.8	+0.3	
	baz=87,SNR=6.1									
V30A	**Spur Ranch, Mi**	86.50	340	⇑P		P		15 42 11.7	+0.8	
	baz=87									
X24A	**Lazy VL Ranch,**	86.54	336	⇓P		P		15 42 11.8	+0.5	
	baz=87,SNR=5.2									
W26A	**Owens Ranch, T**	86.60	338	⇓P		P		15 42 11.7	+0.2	
	baz=87									
Y21A	**Point of Rocks**	86.65	334	⇑P		P		15 42 13.6	+1.7	
	baz=87,SNR=5.5									
X23A	**Hourglass Bar**	86.77	335	⇓P		P		15 42 13.7	+1.3	
	baz=87									
Y20A	**Horse Springs,**	86.77	334	⇑P		P		15 42 13.0	+0.5	
	baz=87,SNR=5.3									
W25A	**X Bar L Ranch,**	86.90	337	⇑P		P		15 42 13.1	+0.1	
	baz=87,SNR=5.5									
X22A	**Bernardo**	86.93	335	⇑P		P		15 42 14.4	+1.2	
	baz=87									
V27A	**Dan Oppiter Fa**	87.00	338	⇓P		P		15 42 14.3	+0.9	
	baz=87									
X21A	**Alamocita Cree**	87.09	334	⇑P		P		15 42 15.0	+1.0	
	baz=88,SNR=6.4									
W24A	**Lazy 6 Ranch,**	87.14	336	⇓P		P		15 42 15.3	+1.1	
	baz=88									
U30A	**WK&E Inc. Balk**	87.22	340	⇑P		P		15 42 15.2	+0.8	
	baz=88									
V26A	**Tequesquite Ra**	87.28	338	⇓P		P		15 42 15.0	+0.3	
	baz=88									
X20A	**Quemado**	87.39	334	⇑P		P		15 42 16.4	+1.0	
	baz=88									
113A	**Mohawk Valley,**	87.45	329	⇑P		P		15 42 17.3	+1.8	
	baz=88									
V25A	**Rancho No Teng**	87.53	337	⇑P		P		15 42 16.4	+0.4	
	baz=88									
T31A	**Randall Ranch,**	87.56	341	⇑P		P		15 42 16.4	+0.5	
	baz=88									
V24A	**Rampart Ranch,**	87.59	337	⇑P		P		15 42 17.2	+0.8	
	baz=88									
U27A	**Thompson Grove**	87.63	339	⇓P		P		15 42 17.6	+1.2	
	baz=88									
W21A	**San Fidel**	87.68	335	⇓P		P		15 42 18.3	+1.5	
	baz=88									
X18A	**Snowflake**	87.82	333	⇑P		P		15 42 19.4	+1.9	
	baz=88									
U26A	**Atchley Ranch,**	87.83	338	⇑P		P		15 42 19.7	+2.2	
	baz=88									
LSZ	**Lusaka**	87.90	111	*e*P		P		15 42 19.6	+1.2	
	comp=Z,30nm,1.6s									
W20A	**Ramah**	87.94	334	⇑P		P		15 42 19.0	+0.9	
	baz=88									
U25A	**Circle Dot Ran**	88.00	337	⇑P		P		15 42 19.3	+1.0	
	baz=88,SNR=5.1									
GLA	**Glamis**	88.08	328	⇓P		P		15 42 19.6	+1.1	
	baz=88									
X16A	**Lo Mia Camp, P**	88.19	331	⇑P		P		15 42 20.4	+1.2	
	baz=89									
T27A	**Campo**	88.21	339	⇓P		P		15 42 19.9	+0.7	
	baz=89									
V22A	**San Miguel Ran**	88.22	335	⇑P		P		15 42 20.7	+1.3	
	baz=89,SNR=5.3									
Y14A	**Wickenburg**	88.26	330	⇑P		P		15 42 20.7	+1.3	
	baz=89									
V21A	**Milan**	88.32	335	⇓P		P		15 42 21.2	+1.4	
	baz=89									
MONP	**Monument Peak**	88.50	327	⇑P		P		15 42 21.9	+1.1	
	baz=89									
S28A	**Manter**	88.52	340	⇑P		P		15 42 21.5	+0.9	
	baz=89									
SSPA	**Standing Stone**	88.52	359	*e*P		P		15 42 20.1	-0.2	
	comp=Z,34nm,1.5s									
T26A	**Comanche Natio**	88.53	338	⇑P		P		15 42 21.6	+0.8	
	baz=89									
V20A	**Brimhall**	88.55	334	⇑P		P		15 42 22.2	+1.2	
	baz=89									
Y12C	**Blythe**	88.61	329	⇑P		P		15 42 22.9	+1.9	
	baz=89									
T25A	**Trinidad**	88.70	338	⇓P		P		15 42 22.8	+1.2	
	baz=89									
T24A	**Torres, Weston**	88.81	337	⇓P		P		15 42 23.5	+1.3	
	baz=89									
BC3	**Big Chuckawall**	88.84	328	⇑P		P		15 42 23.6	+1.4	
	baz=89									
U21A	**Nageezi**	88.91	335	⇑P		P		15 42 24.3	+1.6	
	baz=89									
S26A	**Kim**	88.93	339	⇑P		P		15 42 23.3	+0.8	
	baz=89									
U20A	**Newcomb**	89.11	334	⇑P		P		15 42 24.7	+1.2	
	baz=90									
PFO	**Pinyon Flat Ob**	89.16	327	⇓P		P		15 42 24.9	+1.1	
	baz=90									
PFO	**Pinyon Flat Ob**	89.16	327	LR		LR		16 13 38.2		
	comp=Z,46nm,20.5s,baz=83,slow=30									
WUAZ	**Wupatki**	89.18	332	*e*P		P		15 42 25.4	+1.6	
	comp=Z,22nm,1.3s									
WUAZ	**Wupatki**	89.18	332	⇑P		P		15 42 25.3	+1.5	
	baz=90									
IRM	**Iron Mountain**	89.19	328	⇑P		P		15 42 25.2	+1.4	
	baz=90									
S25A	**Rests Cordova**	89.20	338	⇑P		P		15 42 25.0	+1.0	
	baz=90,SNR=6.3									
T22A	**Edith**	89.25	336	⇑P		P		15 42 25.6	+1.3	
	baz=90,SNR=8.5									
BELC	**Belle Mtn. Jos**	89.35	328	⇓P		P		15 42 26.4	+1.7	
	baz=90									
S24A	**Houchin Ranch,**	89.39	337	⇑P		P		15 42 25.8	+0.8	
	baz=90									
R26A	**Arlington**	89.57	339	⇓P		P		15 42 26.2	+0.7	
	baz=90									
W13A	**Hualapai Mount**	89.61	330	⇓P		P		15 42 26.8	+0.9	
	baz=90									
R25A	**Fountain Ranch**	89.63	338	⇑P		P		15 42 27.5	+1.6	
	baz=90									
MVCO	**Mesa Verde**	89.88	335	⇑P		P		15 42 28.0	+0.9	
	baz=90									
S22A	**4UR Ranch, Cre**	89.91	336	⇑P		P		15 42 28.8	+1.4	
	baz=90,SNR=9.2									
R24A	**Sanders Place,**	89.92	337	⇓P		P		15 42 28.6	+1.4	
	baz=90,SNR=6.9									
R23A	**Moffat**	90.06	337	⇓P		P		15 42 29.4	+1.4	
	baz=90									
S21A	**Coal Bank Pass**	90.10	335	⇑P		P		15 42 29.1	+0.8	
	baz=90									
BFSC	**Mount Baldy Ra**	90.17	327	⇑P		P		15 42 29.5	+1.1	
	baz=90									
Q26A	**Hugo**	90.18	339	⇓P		P		15 42 29.9	+1.5	
	baz=91									
HEC	**Hector,Ludlow**	90.22	328	⇓P		P		15 42 30.3	+1.7	
	baz=91									
U15A	**North Rim**	90.30	331	⇑P		P		15 42 31.0	+1.8	
	baz=91									
R22A	**Saguache, Gunn**	90.35	336	⇑P		P		15 42 31.2	+1.8	
	baz=91									
DZM	**Mont Dzumac**	90.50	235	*e*LR		LR		16 11 21.2		
	comp=Z,374nm,23.9s									
Q24A	**Divide**	90.62	338	⇓P		P		15 42 31.3	+0.6	
	baz=91									
R21A	**Cimarron**	90.69	336	⇓P		P		15 42 32.6	+1.7	
	baz=91									
Q22A	**Crested Butte,**	90.98	336	⇓P		P		15 42 33.8	+1.4	
	baz=91									
P23A	**Jefferson**	91.18	337	⇓P		P		15 42 34.7	+1.4	
	baz=92									
ISCO	**Idaho Springs**	91.53	338	*e*P		P		15 42 36.4	+1.5	
ISCO					pmax		pmax			
	comp=Z,15nm,1.6s									
ISCO	**Idaho Springs**	91.53	338	*e*P		P		15 42 36.4	+1.5	
	comp=Z,15nm,1.6s									
ISCO	**Idaho Springs**	91.53	338	⇓P		P		15 42 35.6	+0.7	
	baz=92									
PKM	**Peak Mountain**	91.56	325	⇑P		P		15 42 36.3	+1.3	
	baz=92									
TOA0	**Torodi Ar. Sit**	91.69	72	*e*P		P		15 42 35.9	+0.1	
TORD	**Torodi Ar. Bea**	91.69	72	P		P		15 42 35.6	-0.2	
TORD	**Torodi Ar. Bea**	91.69	72	P		P		15 42 35.6	-0.2	
	comp=Z,3.5nm,0.8s,baz=232,slow=4.3,SNR=14									
TORD					LR		LR	16 21 10.8		
	comp=Z,121nm,19.4s,baz=230,slow=34									
O23A	**Lake Granby, G**	91.99	338	⇑P		P		15 42 38.3	+1.3	
	baz=92									
O22A	**Kremmling**	92.11	337	⇑P		P		15 42 38.6	+1.1	
	baz=92									
Q16A	**Castle Valley**	92.25	333	⇓P		P		15 42 40.1	+2.0	
	baz=93									
N20A	**Spruce Gulch,**	93.19	336	⇓P		P		15 42 43.4	+0.9	
	baz=94									
ECSD	**EROS Data Cent**	93.38	345	*e*P		P		15 42 42.0	-1.0	
	comp=Z,1.4nm,0.5s									
STKA	**Stephens Creek**	93.41	211	LR		LR		16 20 20.1		
	comp=Z,163nm,20.0s,baz=204,slow=33									
NVAR	**Mina Array Bea**	94.14	328	P		P		15 42 48.6	+1.8	
NVAR	**Mina Array Bea**	94.14	328	P		P		15 42 48.6	+1.8	
	comp=Z,0.6nm,0.9s,baz=179,slow=4.2,SNR=3.7									
PDAR	**Pinedale Array**	95.34	336	P		P		15 42 52.0	-0.3	
PDAR	**Pinedale Array**	95.34	336	P		P		15 42 52.0	-0.3	
	comp=Z,0.7nm,0.8s,baz=144,slow=6.3,SNR=6.1									
J20A	**Shoshoni**	95.50	337	⇓P		P		15 42 53.4	+0.6	
	baz=96									
J19A	**Crowheart**	95.67	336	⇓P		P		15 42 54.6	+0.9	
	baz=96									
I21A	**Big Trails, Te**	95.72	338	⇑P		P		15 42 54.1	+0.2	
	baz=96									
I18A	**Diamond G Ranc**	96.28	336	⇓P		P		15 42 57.6	+1.1	
	baz=97									
YKA	**Yellowknife Ar**	114.60	341	PKP		PKPdf		15 48 06.6	-0.5	
YKA	**Yellowknife Ar**	114.60	341	PKP		PKPdf		15 48 06.6	-0.5	
	comp=Z,0.5nm,0.8s,baz=138,slow=2.6,SNR=8.5									
GERES	**GERESS Array B**	123.80	53	PKP		**PKPdf**		15 48 25.2	-0.2	
GERES	**GERESS Array B**	123.80	53	PKP		**PKPdf**		15 48 25.2	-0.2	
	comp=Z,4.2nm,0.8s,baz=222,slow=1.3,SNR=18									
CLL	**Collm**	124.88	50	*i* PKIKP		**PKPdf**		15 48 27.8	+0.6	
CLL					pmax		pmax			
	comp=Z,7.0nm,1.0s									
CLL	**Collm**	124.88	50	*i* PKPdf		**PKPdf**		15 48 27.8	+0.6	
	comp=Z,7.0nm,1.0s									
CLL					LmV			16 40 00.0		
	comp=Z,200nm,20.2s									
ILAR	**Eielson Array**	125.33	330		PKP	**PKPdf**		15 48 27.4	-0.3	
ILAR	**Eielson Array**	125.33	330		PKP	**PKPdf**		15 48 27.4	-0.3	
	comp=Z,2.8nm,0.9s,baz=161,slow=2.0,SNR=28									
TRF	**Thorofare Moun**	125.67	328	*e*PKPdf		**PKPdf**		15 48 27.7	-0.9	
VYHS	**Vyhne**	126.37	55	*e*PKIKP		**PKPdf**		15 48 30.7	+0.5	
VYHS	**Vyhne**	126.37	55	*e*PKP		**PKPdf**		15 48 30.7	+0.5	
CRVS	**Cervenica-Dubn**	128.04	56	*e*PKIKP		**PKPdf**		15 48 33.8	+0.4	
CRVS	**Cervenica-Dubn**	128.04	56	*e*PKP		**PKPdf**		15 48 33.8	+0.4	
KOLS	**Kolonicke sedl**	128.51	57	*e*PKIKP		**PKPdf**		15 48 34.8	+0.5	
KOLS	**Kolonicke sedl**	128.51	57	*e*PKP		**PKPdf**		15 48 34.8	+0.5	
NB2	**NORSAR Subarra**	129.35	39	PKPdf		**PKPdf**		15 48 35.3	-0.3	
	comp=Z,3.7nm,1.2s,baz=241,slow=1.9									
NOA	**NORSAR Array B**	129.35	39	PKP		**PKPdf**		15 48 35.5	0.0	
NOA	**NORSAR Array B**	129.35	39	PKP		**PKPdf**		15 48 35.5	0.0	
	comp=Z,1.3nm,0.8s,baz=242,slow=2.1,SNR=5.9									
BRTR	**Keskin Array B**	130.30	72	PKP		**PKPdf**		15 48 37.8	-0.5	
BRTR	**Keskin Array B**	130.30	72	PKP		**PKPdf**		15 48 37.8	-0.5	
	comp=Z,1.4nm,0.8s,baz=211,slow=1.7,SNR=8.2									
KIEV	**Kiev**	133.28	57	*e*PKIKP		**PKPdf**		15 48 42.3	-1.0	
KIEV	**Kiev**	133.28	57	*e*PKPdf		**PKPdf**		15 48 42.3	-1.0	
AKASG	**Malin Array Be**	133.30	57	PKIKP		**PKPdf**		15 48 42.7	-0.6	
AKASG	**Malin Array Be**	133.30	57	PKP		**PKPdf**		15 48 42.7	-0.6	
AKASG	**Malin Array Be**	133.30	57	PKP		**PKPdf**		15 48 42.7	-0.6	
	comp=Z,0.9nm,0.6s,baz=256,slow=3.7,SNR=4.8									
FINES	**FINESS Array B**	136.02	43	PKPpre		PKPpre		15 48 37.5		
FINES				PKP		**PKPdf**		15 48 48.0	0.0	
FINES	**FINESS Array B**	136.02	43	PKhKP		PKPpre		15 48 37.5		
	comp=Z,2.2nm,0.9s,baz=264,slow=2.8,SNR=4.5									
FINES				PKP		**PKPdf**		15 48 48.0	0.0	
	comp=Z,2.7nm,0.9s,baz=242,slow=3.0,SNR=6.4									
KBS	**Kingsbay**	136.49	16	*c i* PKIKP		**PKPdf**		15 48 50.1	+1.6	
KBS					pmax		pmax			
	comp=Z,12nm,1.2s									
KIV	**Kislovodsk**	138.27	72	*i* PKIKP		**PKPdf**		15 48 49.2	-3.7	
KIV				*e*				15 51 43.4		
KIV					pmax		pmax			
	comp=Z,16nm,1.0s									
KIV					pmax		pmax			
	comp=Z,9.0nm,0.6s									
OBN	**Obninsk**	139.14	54	*d i* PKIKP		**PKPdf**		15 48 54.7	+0.8	
OBN					pmax		pmax			
	comp=Z,23nm,1.2s									
OBN					MLR		MLR			
	comp=Z,200nm,19.0s									
VORD	**Divnogorie**	139.19	61	*e*PKIKP		**PKPdf**		15 48 54.8	+0.6	
VORD					pmax		pmax			
	comp=N,40nm,1.1s									
VORD					pmax		pmax			
	comp=E,140nm,1.1s									
VORD					pmax		pmax			
	comp=Z,10.0nm,1.1s									
VSR	**Storozhevoye**	139.21	61	*e*PKIKP		**PKPdf**		15 48 54.6	+0.4	
VSR					pmax		pmax			
	comp=Z,10.0nm,1.5s									
VSR					pmax		pmax			
	comp=N,3.0nm,0.4s									
VSR					pmax		pmax			
	comp=E,4.0nm,0.8s									
MOS	**Moscow**	139.91	54	*e*PKIKP		**PKPdf**		15 48 54.8	-0.6	
VRHR	**Novokhopersk**	140.61	62	*e*PKIKP		**PKPdf**		15 48 57.8	+1.0	
VRHR					pmax		pmax			
	comp=Z,30nm,1.6s									
VRHR					pmax		pmax			
	comp=N,10.0nm,0.5s									
VRHR					pmax		pmax			
	comp=E,20nm,0.8s									
BILL	**Bilibino**	143.72	326	*e*PKHKP		PKPpre		15 48 57.5		
BILL					pmax		pmax			
	comp=Z,14nm,1.0s									
PETK	**Petropavlovsk-**	146.30	299	PKP2		**PKPbc**		15 49 08.4	+0.3	
PETK	**Petropavlovsk-**	146.30	299	PKPbc		**PKPbc**		15 49 08.3	+0.3	
PETK	**Petropavlovsk-**	146.30	299	PKPbc		**PKPbc**		15 49 08.3	+0.3	
	comp=Z,7.1nm,0.8s,baz=112,slow=1.6,SNR=7.1									
CMAR	**Chiang Mai Arr**	150.00	170	PKP		**PKPdf**		15 49 14.1	+0.2	
CMAR				PKPbc		**PKiKP**		15 49 19.6	-0.1	
CMAR	**Chiang Mai Arr**	150.00	170	PKP		**PKPdf**		15 49 14.1	+0.2	
	comp=Z,1.0nm,0.

ZALV	**Zalesovo Beam**	**166.69**	**57**	PKP	**PKPdf**	**15 49 31.9**	**-0.8**
	comp=Z,1.0nm,0.9s,baz=270,slow=1.4,SNR=5.9						
ZALV				PKPab	**PKPab**	**15 50 34.9**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=270,slow=4.3,SNR=5.4						
ZALV				PP	**PP**	**15 54 20.8**	**-3.5**
	comp=Z,1.0nm,0.6s,baz=292,slow=7.8,SNR=6.6						
LZH	**Lanzhou**	**167.84**	**179**	*e*PKP	**PKPdf**	**15 49 37.0**	**+2.6**
LZH				pPKP	**pPKPdf**	**15 49 48.0**	**+2.1**
LZH				sPKP		15 49 51.5	
LZH				PP	PP	15 54 35.5	+6.0
LZH				SKKS		16 01 17.5	
LZH				SS	**SS**	**16 15 18.5**	**+3.4**
LZH				AMB	AMB		
	comp=Z,200nm,6.2s						
LZH				LR	LR		
	comp=N,390nm,18.5s						
LZH				LR	LR		
	comp=E,330nm,17.1s						
LZH				LR	LR		
	comp=Z,410nm,19.2s						
WMQ	**Urumqi**	**167.84**	**105**	PKP	**PKPdf**	**15 49 34.5**	**+0.5**
WMQ				PKS	**PKSdf**	**15 53 07.0**	**+0.5**
WMQ				PP	**PP**	**15 54 34.0**	**+3.5**
WMQ				SKS	**SKSdf**	**15 56 34.0**	**-0.9**
WMQ				SKKS	**SKKSac**	**16 01 15.0**	**+0.7**
WMQ				SS	**SS**	**16 15 17.0**	**+0.1**
WMQ				AMB	AMB		
	comp=Z,140nm,12.0s						
WMQ				LR	LR		
	comp=N,160nm,26.0s						
WMQ				LR	LR		
	comp=E,290nm,26.0s						
WMQ				LR	LR		
	comp=Z,140nm,26.0s						
BJI	**Beijing**	**168.01**	**231**	PKP	**PKPdf**	**15 49 34.5**	**+0.4**
BJI				PP	**PP**	**15 54 35.0**	**+4.1**
BJI				SS	SS	16 15 21.5	+3.8
BJI				LR	LR		
	comp=Z,82nm,25.4s						
GTA	**Gaotai**	**170.66**	**160**	PKP	**PKPdf**	**15 49 36.5**	**+0.5**
GTA				pPKP	**pPKPdf**	**15 49 49.3**	**+1.8**
GTA				sPKP		15 49 52.3	
GTA				PKPab	**PKPab**	**15 50 55.8**	**+2.1**
GTA				PKS	**PKSdf**	**15 53 08.5**	**+0.1**
GTA				PP	**PP**	**15 54 46.5**	**+2.6**
GTA				SKKS		16 01 23.5	
GTA				AMB	AMB		
	comp=Z,110nm,5.2s						
GTA				LR	LR		
	comp=E,68nm,18.1s						
GTA				LR	LR		
	comp=Z,92nm,19.5s						
HHC	**Hu-ho-hao-te**	**170.84**	**219**	*e*PKP	**PKPdf**	**15 49 34.3**	**-1.7**
HHC				sPKP		15 49 49.0	
HHC				PKS	**PKSdf**	**15 53 05.5**	**-2.9**
HHC				PP	**PP**	**15 54 45.5**	**+0.5**
HHC				SKS	**SKSdf**	**15 56 32.5**	**-4.0**
HHC				SKKS	**SKKSac**	**16 01 27.5**	**-1.5**
HHC				SS	**SS**	**16 15 42.8**	**-2.8**
HHC				AMB	AMB		
	comp=Z,83nm,9.6s						
HHC				LR	LR		
	comp=N,240nm,20.1s						
HHC				LR	LR		
	comp=E,230nm,20.4s						
HHC				LR	LR		
	comp=Z,400nm,20.0s						
ZAK	**Zakamensk**	**177.82**	**12**	↑*i*PKP2	PKPab	15 51 25.1	-0.1
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						

TIF 28 15:48:00.0, 42°.53N×43°.55E, h3km±9km, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONI	**Oni**	**0.10**	**312**	P	Pg	15 48 02.5	+0.4
ONI				S	Sg	15 48 04.4	+0.9
GOR	**Gori**	**0.68**	**142**	P	Pg	15 48 13.2	0.0
GOR				S	Sb	15 48 24.4	-0.1
GUDG	**Gudauri**	**0.69**	**95**	P	Pb	15 48 14.7	-0.3
AKH	**Akhalkalaki**	**1.11**	**182**	P	Pn	15 48 22.7	-0.1
AKH				S	Sb	15 48 38.0	+0.7
TBLG	**Delisi**	**1.19**	**132**	P	Pn	15 48 24.8	+1.3
TBLG				S	Sn	15 48 41.6	+1.3
DGRG	**David-gareji**	**1.73**	**128**	P	Pg	15 48 34.2	+0.8
DGRG				S	Sg	15 49 01.0	+5.2
ARTV	**Artvin**	**1.81**	**223**	*e*P	Pn	15 48 32.3	-0.1
ARTV				*e*S	Sn	15 48 54.5	-1.4
DAGI	**Agillar**	**1.89**	**221**	*e*P	Pn	15 48 33.9	+0.5
DAGI				*e*S	Sn	15 48 57.9	0.0
DBAD	**Bademkaya**	**2.05**	**223**	*e*P	Pn	15 48 36.3	+0.8
DBAD				*e*S	Sn	15 49 02.0	+0.3
DDEM	**Demirkent**	**2.12**	**220**	*e*P	Pb	15 48 37.9	-1.2
DDEM				*e*S	Sb	15 49 05.8	-0.1

*CSEM **28** 15:48:09.4±1.8, 51°.47N×16°.15E, h1km, Error ellipse: s-maj=28.5km s-min=12.0km az=4.0*
*PRU **28** 15:48:11.3, 51°.40N×16°.19E, h0km*
WAR 28 15:48:09.2, 51°.54N×16°.09E, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.70**	**170**	*e*PKIKP	Pg	15 48 22.4	-0.3
KSP				*e*		15 48 30.5	
KSP	**Ksiaz**	**0.70**	**170**	*e*Pg	Pg	15 48 22.4	-0.3
KSP				*e*Sg	Sg	15 48 30.4	-1.5
KSP	**Ksiaz**	**0.70**	**170**	*e*Pg	Pg	15 48 22.4	-0.3
UPC	**Upice**	**1.03**	**183**	*e*PKIKP	Pg	15 48 28.6	-0.4
UPC	**Upice**	**1.03**	**183**	*e*PG	Pg	15 48 28.6	-0.4
UPC	**Upice**	**1.03**	**183**	Pg	Pg	15 48 28.6	-0.4
DPC	**Dobruska-Polom**	**1.20**	**173**	*e*PKIKP	Pg	15 48 30.8	-1.4
DPC				*e*		15 48 45.3	
DPC	**Dobruska-Polom**	**1.20**	**173**	*e*Pg	Pg	15 48 30.8	-1.4
DPC				*e*SG	Sg	15 48 45.3	-2.5
	comp=Z,7.7nm,0.5s						
DPC	**Dobruska-Polom**	**1.20**	**173**	Pg	Pg	15 48 30.8	-1.4
DPC				Sg	Sg	15 48 45.3	-2.5
	7.7nm,0.5s						
PVCC	**Panska Ves**	**1.39**	**224**	*e*SG	Sn	15 48 55.4	+0.4
PVCC	**Panska Ves**	**1.39**	**224**	Sg	Sn	15 48 55.4	+0.4
PRU	**Pruhonice**	**1.83**	**213**	*e*PG	Pb	15 48 43.7	+0.1
PRU				*e*SG	Sb	15 49 06.8	-0.4
	comp=Z,5.0nm,0.3s						
PRU	**Pruhonice**	**1.83**	**213**	Pg	Pb	15 48 43.7	+0.1
PRU				Sg	Sb	15 49 06.8	-0.4
	5.0nm,0.3s						
CLL	**Collm**	**1.95**	**264**	*i* Pg	Pg	15 48 48.3	+1.8
CLL				*e*		15 48 51.0	
CLL				*e*Sg	Sg	15 49 15.0	+3.2
	comp=Z,5.0nm,1.0s						
NKC	**Novy Kostel**	**2.65**	**242**	*e*SG	Sg	15 49 37.1	+2.6
	comp=Z,5.3nm,0.3s						
NKC	**Novy Kostel**	**2.65**	**242**	Sg	Sg	15 49 37.1	+2.6
	comp=Z,5.3nm,0.3s						
KHC	**Kasperske Hory**	**2.90**	**215**	*e*PG	Pb	15 49 02.9	+1.1
KHC				*e*SN	Sn	15 49 30.5	-1.7
KHC				*e*SG	Sg	15 49 40.2	-2.2
KHC	**Kasperske Hory**	**2.90**	**215**	Pg	Pb	15 49 02.9	+1.1
KHC				Sn	Sn	15 49 30.5	-1.7
KHC				Sg	Sg	15 49 40.2	-2.2

*CSEM **28** 16:01:43.4±0.7, 51°.46N×16°.08E, h2km, ML3.0/5, Error ellipse: s-maj=10.7km s-min=5.7km az=21.0*
*WAR **28** 16:01:43.4, 51°.53N×16°.07E*
*PRU **28** 16:01:44.3, 51°.45N×16°.09E, h0km*
ISC 28 16:01:43.4±1.6, 51°.47N±0°.07×16°.07E±0°.04, h0km, n19, σ0s60/34, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.64**	**167**	*e*Pg	**Pg**	**16 01 56.4**	**+0.7**
KSP				*e*Sg	**Sb**	**16 02 05.7**	**-1.3**
UPC	**Upice**	**0.96**	**182**	*e*PG	**Pb**	**16 02 02.5**	**-0.5**
UPC	**Upice**	**0.96**	**182**	Pg	**Pb**	**16 02 02.5**	**-0.5**
DPC	**Dobruska-Polom**	**1.13**	**172**	*e*PG	**Pg**	**16 02 05.2**	**+0.2**
DPC				*e*SG	**Sg**	**16 02 19.4**	**-0.3**
	comp=Z,14nm,0.4s						
DPC	**Dobruska-Polom**	**1.13**	**172**	Pg	**Pg**	**16 02 05.2**	**+0.2**
DPC				Sg	**Sg**	**16 02 19.4**	**-0.3**
	14nm,0.4s						
PVCC	**Panska Ves**	**1.34**	**226**	*e*PG	**Pb**	**16 02 09.8**	**+0.5**
PVCC				*e*SG	**Sb**	**16 02 26.9**	**-0.1**
	comp=Z,62nm,0.2s						
PVCC	**Panska Ves**	**1.34**	**226**	Pg	**Pb**	**16 02 09.8**	**+0.5**
PVCC				Sg	**Sb**	**16 02 26.9**	**-0.1**
	62nm,0.2s						
PRU	**Pruhonice**	**1.77**	**214**	*e*PG	**Pb**	**16 02 16.8**	**+0.1**
PRU				*e*SG	**Sg**	**16 02 40.4**	**+0.1**
	comp=Z,7.4nm,0.3s						
PRU	**Pruhonice**	**1.77**	**214**	Pg	**Pb**	**16 02 16.8**	**+0.1**
PRU				Sg	**Sg**	**16 02 40.4**	**+0.1**
	7.4nm,0.3s						
CLL	**Collm**	**1.93**	**266**	*i* Pn	**Pn**	**16 02 16.8**	**-0.6**
CLL				*i* Pg	**Pb**	**16 02 19.4**	**0.0**
CLL				*i*		16 02 24.4	
CLL				*e*Sg	**Sg**	**16 02 46.0**	**+0.6**
	comp=Z,8.0nm,0.3s						
MORC	**Moravsky Berou**	**1.94**	**151**	*e*Pn	**Pn**	**16 02 17.2**	**-0.4**
MORC				*e*Sg	**Sb**	**16 02 44.2**	**-0.1**
OKC	**Ostrava-Krasne**	**2.10**	**140**	*e*SG	**Sb**	**16 02 48.4**	**-0.5**
	comp=Z,10nm,0.5s						
OKC	**Ostrava-Krasne**	**2.10**	**140**	Sg	**Sb**	**16 02 48.4**	**-0.5**
	comp=Z,10nm,0.5s						
VRAC	**Vranov**	**2.19**	**171**	*e*Sg	**Sg**	**16 02 53.2**	**-0.5**
NKC	**Novy Kostel**	**2.61**	**243**	*e*PN	**Pn**	**16 02 27.4**	**+0.6**
NKC				*e*PG	**Pg**	**16 02 32.6**	**-0.8**
NKC				*e*SG	**Sg**	**16 03 06.9**	**-0.3**
NKC	**Novy Kostel**	**2.61**	**243**	Pn	**Pn**	**16 02 27.4**	**+0.6**
KHC	**Kasperske Hory**	**2.84**	**215**	*e*PN	**Pn**	**16 02 30.2**	**+0.3**
KHC				*e*PG	**Pb**	**16 02 36.2**	**+1.3**
KHC				*e*SN	**Sn**	**16 03 04.7**	**-0.1**
KHC				*e*SG	**Sg**	**16 03 14.1**	**-0.3**
	comp=Z,3.6nm,0.3s						
KHC	**Kasperske Hory**	**2.84**	**215**	Pn	**Pn**	**16 02 30.2**	**+0.3**
VYHS	**Vyhne**	**3.47**	**148**	*e*SG	**Sg**	**16 03 36.5**	**+1.7**

WEL 28 16:03:09.2±0.2, 39°.98S×173°.75E, h210km±2km, ML3.9/14, 4C-5D, Error ellipse: s-maj=1.8km s-min=1.2km az=90.0, Off west coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	**0.83**	**171**	PN	Pn	16 03 39.5	+0.5
DUWZ				SN	S	16 04 02.0	-0.3
VRZ	**Vera Road**	**1.16**	**43**	PN	Pn	16 03 41.0	-0.1
VRZ				SN	S	16 04 05.6	-0.2
KIW	**Kapiti Island**	**1.25**	**135**	PN	Pn	16 03 41.9	+0.1
KIW				SN	S	16 04 05.7	-1.3
QRZ	**Quartz Range**	**1.26**	**227**	⇑PN	Pn	16 03 41.5	-0.3
QRZ				SN	S	16 04 05.4	-1.7
NNZ	**Nelson**	**1.27**	**193**	⇑PN	Pn	16 03 41.9	0.0
TCW	**Tory Channel**	**1.29**	**162**	PN	Pn	16 03 42.5	+0.4
TCW				SN	S	16 04 07.2	-0.5
OGWZ	**Otaki Gorge**	**1.37**	**128**	PN	Pn	16 03 43.0	+0.3
OGWZ				SN	S	16 04 08.2	-0.5
TUWZ	**Tuamarina**	**1.46**	**174**	PN	Pn	16 03 43.5	+0.1
TUWZ				SN	S	16 04 09.5	-0.4
CAW	**Cannon Point**	**1.51**	**139**	PN	Pn	16 03 43.9	0.0
SNZO	**South Karori**	**1.52**	**152**	PN	Pn	16 03 43.7	-0.2
WEL	**Wellington**	**1.52**	**149**	PN	Pn	16 03 43.8	-0.2
MRZ	**Mangatainoka R**	**1.56**	**116**	PN	Pn	16 03 44.3	-0.1
WNVZ	**Wahianoa**	**1.57**	**66**	PN	Pn	16 03 44.8	+0.1
FWVZ	**Far West T-bar**	**1.57**	**63**	PN	Pn	16 03 44.6	-0.1
FWVZ				SN	S	16 04 10.7	-1.3
POWZ	**Post Office Ro**	**1.60**	**106**	PN	Pn	16 03 44.9	+0.2
POWZ				SN	S	16 04 11.2	-0.8
HOWZ	**Holdsworth Sta**	**1.63**	**125**	PN	Pn	16 03 44.9	-0.1
MOVZ	**Moawhango**	**1.65**	**70**	⇓PN	Pn	16 03 44.9	-0.3
BHW	**Baring Head**	**1.66**	**149**	PN	Pn	16 03 44.8	-0.4
WTVZ	**West Tongariro**	**1.67**	**59**	⇓PN	Pn	16 03 45.4	-0.1
OTVZ	**Oturere**	**1.69**	**62**	PN	Pn	16 03 45.8	0.0
HIZ	**Hauiti**	**1.70**	**31**	⇓PN	Pn	16 03 45.1	-0.6
TSZ	**Takapari Road**	**1.70**	**93**	PN	Pn	16 03 45.7	0.0
KRVZ	**Karewarewa**	**1.71**	**59**	PN	Pn	16 03 45.7	-0.2
BSWZ	**Blackbirch Sta**	**1.73**	**177**	PN	Pn	16 03 46.0	+0.2
MTW	**Mount Morrison**	**1.78**	**132**	PN	Pn	16 03 46.1	-0.3
TIWZ	**Tintock**	**1.82**	**117**	PN	Pn	16 03 46.8	0.0
MSWZ	**Moikau Station**	**1.83**	**142**	PN	Pn	16 03 46.4	-0.4
BHHZ	**Black Hill Sta**	**1.85**	**75**	PN	Pn	16 03 46.6	-0.5
DVHZ	**Dannevirke**	**1.88**	**101**	PN	Pn	16 03 47.3	0.0
PNHZ	**Pukenui**	**1.89**	**89**	PN	Pn	16 03 47.5	0.0
THZ	**Tophouse**	**1.89**	**199**	PN	Pn	16 03 47.0	-0.4
PAWZ	**Paruwai Farm**	**1.90**	**138**	PN	Pn	16 03 47.2	-0.3
PLWZ	**Palliser**	**1.96**	**145**	PN	Pn	16 03 47.6	-0.5
TMWZ	**Te Maipa**	**1.98**	**125**	PN	Pn	16 03 48.3	-0.1
BFZ	**Birch Farm**	**2.04**	**111**	⇑PN	Pn	16 03 48.8	0.0
TRWZ	**Traveller**	**2.05**	**134**	PN	Pn	16 03 48.7	-0.2
WPHZ	**Waipukurau**	**2.07**	**93**	PN	Pn	16 03 49.3	0.0
PRHZ	**Porangahau**	**2.23**	**98**	PN	Pn	16 03 51.1	+0.2
BKZ	**Black Stump Fm**	**2.27**	**70**	⇓PN	Pn	16 03 50.8	-0.6
DSZ	**Denniston Nort**	**2.30**	**219**	PN	Pn	16 03 50.7	-0.9
MCHZ	**McNeill Hill**	**2.34**	**78**	⇓PN	Pn	16 03 52.5	+0.5
PXZ	**Pawanui**	**2.39**	**92**	PN	Pn	16 03 52.7	+0.1
KAHZ	**Kahuranaki**	**2.42**	**87**	PN	Pn	16 03 53.2	+0.3
KHZ	**Kahutara**	**2.44**	**184**	⇑PN	Pn	16 03 52.1	-0.8
CKHZ	**Cape Kidnapper**	**2.59**	**84**	PN	Pn	16 03 54.9	+0.3
RAHZ	**Arahi**	**2.79**	**69**	PN	Pn	16 03 56.6	-0.5
LTZ	**Lake Taylor**	**3.01**	**201**	PN	Pn	16 03 58.1	-1.5
URZ	**Urewera**	**3.13**	**58**	PN	Pn	16 03 58.9	-2.0
MHGZ	**Mahia Peninsul**	**3.32**	**77**	PN	Pn	16 04 03.0	-0.2
MWZ	**Matawai**	**3.37**	**62**	PN	Pn	16 04 02.1	-1.7
PRGZ	**Paritu Road**	**3.37**	**73**	PN	Pn	16 04 03.1	-0.7
CRLZ	**Canterbury Las**	**3.69**	**193**	PN	Pn	16 04 05.0	-2.5
CNGZ	**Carnagh Statio**	**3.77**	**68**	PN	Pn	16 04 07.8	-0.8
WVZ	**Waitaha Valley**	**3.83**	**215**	PN	Pn	16 04 07.1	-2.1
PUZ	**Puketiti**	**4.00**	**63**	PN	Pn	16 04 09.4	-2.0
RPZ	**Rata Peaks**	**4.24**	**207**	PN	Pn	16 04 12.3	-2.0
FOZ	**Fox Glacier**	**4.69**	**219**	PN	Pn	16 04 16.3	-3.6
LBZ	**Lake Benmore**	**5.14**	**210**	PN	Pn	16 04 22.7	-2.9
JCZ	**Jackson Bay**	**5.52**	**221**	PN	Pn	16 04 24.9	-5.7
ODZ	**Otahua Downs**	**5.55**	**203**	PN	Pn	16 04 28.9	-1.9
WKZ	**Wanaka**	**5.97**	**214**	PN	Pn	16 04 32.4	-3.9
TUZ	**Tuapeka**	**6.69**	**205**	PN	Pn	16 04 42.5	-2.8

*CSEM **28** 16:31:22.8±0.2, 39°.08N×24°.26E, h5km, ML2.3/2, Error ellipse: s-maj=3.6km s-min=3.4km az=104.0*
*ATH **28** 16:31:23.1, 39°.09N×24°.27E, h4km, MD2.9/8, ML2.3*
*THE **28** 16:31:23.5, 39°.08N×24°.20E, h15km±1km, ML2.3/2, Error ellipse: s-maj=1.4km s-min=0.6km az=223.0*
ISC 28 16:31:22.9±1.1, 39°.08N±0°.03×24°.26E±0°.03, h11km±12km, n28, σ0s41/42, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOS	**Alonnisos**	**0.31**	**287**	P	**Pg**	**16 31 29.1**	**-0.1**
AOS				S	**Sg**	**16 31 33.6**	**+0.2**
AOS	**Alonnisos**	**0.31**	**287**	*e*PG	**Pg**	**16 31 29.2**	**0.0**
AOS	**Alonnisos**	**0.31**	**287**	P	**Pg**	**16 31 29.1**	**-0.1**
AOS				S	**Sg**	**16 31 33.6**	**+0.2**
SKIA	**Skiathos**	**0.63**	**278**	P	**Pg**	**16 31 35.1**	**+0.1**
SKIA	**Skiathos**	**0.63**	**278**	P	**Pg**	**16 31 35.1**	**+0.1**
MRKA	**Markates**	**0.65**	**235**	P	**Pg**	**16 31 35.0**	**-0.4**
MRKA				S	**Sg**	**16 31 44.2**	**+0.3**
MRKA	**Markates**	**0.65**	**235**	P	**Pg**	**16 31 35.0**	**-0.4**
MRKA				S	**Sg**	**16 31 44.2**	**+0.3**
NEO	**Neokhori**	**0.84**	**286**	*e*PB	**Pb**	**16 31 39.6**	**+0.1**
NEO				*e*SG	**Sb**	**16 31 50.9**	**0.0**
NEO	**Neokhori**	**0.84**	**286**	*e*Pb	**Pb**	**16 31 39.6**	**+0.1**
NEO				*e*Sg	**Sb**	**16 31 50.9**	**0.0**
XOR	**Xorichti**	**0.88**	**289**	P	**Pg**	**16 31 39.1**	**-0.8**
XOR				S	**Sg**	**16 31 51.3**	**-0.1**
XOR	**Xorichti**	**0.88**	**289**	P	**Pg**	**16 31 39.1**	**-0.8**
XOR				S	**Sg**	**16 31 51.3**	**-0.1**
PAIG	**Paliouri**	**0.96**	**332**	P	**Pg**	**16 31 41.1**	**-0.3**
PAIG				S	**Sg**	**16 31 54.3**	**+0.4**
PAIG	**Paliouri**	**0.96**	**332**	P	**Pg**	**16 31 41.1**	**-0.3**
PAIG				S	**Sg**	**16 31 54.3**	**+0.4**
PTL	**Penteli**	**1.07**	**197**	*e*PG	**Pg**	**16 31 43.2**	**-0.3**
PTL	**Penteli**	**1.07**	**197**	*e*Pg	**Pg**	**16 31 43.2**	**-0.3**
LKR	**Lokris**	**1.07**	**247**	*e*PB	**Pg**	**16 31 42.3**	**-1.3**
LKR	**Lokris**	**1.07**	**247**	*e*Pb	**Pg**	**16 31 42.3**	**-1.3**
LIA	**Limnos Island**	**1.08**	**41**	P	**Pg**	**16 31 43.5**	**-0.2**
LIA	**Limnos Island**	**1.08**	**41**	*e*PG	**Pg**	**16 31 43.5**	**-0.2**
LIA				*e*SG	**Sg**	**16 31 57.7**	**-0.2**
LIA	**Limnos Island**	**1.08**	**41**	P	**Pg**	**16 31 43.5**	**-0.2**
LIA				*e*Sg	**Sg**	**16 31 57.7**	**-0.2**
ATH	**Athens Observa**	**1.19**	**201**	*e*Pg	**Pb**	**16 31 45.3**	**-0.1**
ATH				*e*Sb	**Sb**	**16 32 01.2**	**+0.5**
NAIG	**Nisos Aigina**	**1.45**	**205**	*e*PN	**Pg**	**16 31 50.7**	**0.0**
NAIG	**Nisos Aigina**	**1.45**	**205**	*e*Pn	**Pg**	**16 31 50.7**	**0.0**
AGG	**Agios Georgios**	**1.51**	**268**	*e*PB	**Pg**	**16 31 51.9**	**+0.1**
AGG	**Agios Georgios**	**1.51**	**268**	*e*Pb	**Pg**	**16 31 51.9**	**+0.1**
CHOS	**Chios island**	**1.56**	**116**	*e*PB	**Pg**	**16 31 52.7**	**-0.2**
CHOS	**Chios island**	**1.56**	**116**	*e*Pb	**Pg**	**16 31 52.7**	**-0.2**

*AUST **28** 16:51:46.0±0.9, 10°.90S×126°.04E, h74km, Error ellipse: s-maj=1.4km s-min=1.0km az=35.0*
IDC 28 16:51:14.6±3.5, 8°.59S×124°.75E, h65km±39km, mb3.7/4, mb1 3.9/8, mb1mx3.6/21, mbtmp3.7/8, ML3.8/4, Error ellipse: s-maj=48.8km s-min=20.6km az=59.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**6.11**	**305**	P	Pn	16 52 41.8	-0.6
	0.6nm,0.3s,baz=84,slow=19,SNR=3.6						
MTN	**Manton Dam**	**7.56**	**125**	P	Pn	16 53 02.3	+0.1
	baz=5.3,SNR=38						
MTN				S	Sn	16 54 24.6	-2.0
	baz=5.3,SNR=6.0						
KDU	**Kakadu**	**8.61**	**119**	P	Pn	16 53 17.9	+1.4
	baz=6.5,SNR=7.6						
KDU				S	Sn	16 54 51.4	-0.9
	baz=6.5,SNR=3.6						
FITZ	**Fitzroy Crossi**	**9.49**	**175**	P	Pn	16 53 29.2	+0.5
	1.1nm,0.3s,baz=351,slow=11,SNR=27						
FITZ				S	Sn	16 55 15.4	+1.5
	1.9nm,0.3s,baz=156,slow=20,SNR=12						
FITZ	**Fitzroy Crossi**	**9.49**	**175**	P	Pn	16 53 29.8	+1.1
	baz=7.2,SNR=25						
FITZ				S	Sn	16 55 17.1	+3.2
	baz=7.2,SNR=6.9						
WRA	**Warramunga Arr**	**14.61**	**142**	P	Pn	16 54 36.0	-2.0
	0.6nm,0.3s,baz=324,slow=14,SNR=29						
WRA				S	Sn	16 57 11.3	-7.4
	0.3nm,0.3s,baz=318,slow=24,SNR=4.7						
ASAR	**Alice Springs**	**17.36**	**151**	P	Pn	16 55 12.6	-0.2
	0.2nm,0.3s,baz=323,slow=12,SNR=24						
ASAR				S	Sn	16 58 21.5	-4.0
	0.2nm,0.3s,baz=318,slow=18,SNR=7.6						
QIS	**Mount Isa**	**18.64**	**131**	P	Pn	16 55 32.8	+4.5
	baz=16,SNR=5.0						
MEEK	**Meekatharra**	**18.87**	**197**	P	Pn	16 55 39.9	+8.9
	baz=17,SNR=3.1						
MTSU	**Mount Surprise**	**21.25**	**119**	P	P	16 56 02.1	+6.5
	baz=19,SNR=3.9						
CMAR	**Chiang Mai Arr**	**37.03**	**317**	P	P	16 58 18.8	+0.4
	0.9nm,0.9s,baz=139,slow=5.9,SNR=5.5						
MJAR	**Matsushiro Arr**	**46.64**	**15**	P	P	16 59 37.3	+0.6
	2.0nm,0.8s,baz=194,slow=9.4,SNR=6.2						
MKAR	**Makanchi Array**	**66.83**	**330**	P	P	17 02 00.1	+0.4
	2.2nm,0.8s,baz=132,slow=6.3,SNR=13						
ZALV	**Zalesovo Beam**	**70.82**	**336**	P	P	17 02 23.0	-1.2
	2.0nm,0.8s,baz=134,slow=4.2,SNR=9.1						

WEL 28 17:35:54.0±0.1, 39°.29S×175°.17E, h26km, ML3.0/17, 5C-4D, Error ellipse: s-maj=0.7km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKVZ	**Pokaka**	**0.14**	**90**	P*	Pb	17 35 58.9	-0.3
PKVZ				S*	Sb	17 36 03.0	+0.3
MTVZ	**Mangateitei**	**0.25**	**112**	P*	Pb	17 36 00.2	-0.3
MTVZ				S*	Sb	17 36 04.4	-0.6
FWVZ	**Far West T-bar**	**0.30**	**83**	P*	Pb	17 36 01.0	-0.4
FWVZ				S*	Sb	17 36 06.1	-0.4
TWVZ	**Taurewa**	**0.30**	**43**	P*	Pb	17 36 00.7	-0.6
WPVZ	**Whakapapa**	**0.30**	**74**	⇓P*	Pb	17 36 01.1	-0.2
WPVZ				S*	Sb	17 36 06.4	+0.1
DRZ	**Dome Shelter**	**0.30**	**87**	P*	Pb	17 36 01.8	+0.3
DRZ				S*	Sb	17 36 06.3	-0.4
WNVZ	**Wahianoa**	**0.33**	**96**	P*	Pb	17 36 01.5	-0.3
NGZ	**Ngauruhoe**	**0.35**	**71**	P*	Pb	17 36 01.7	-0.4
VRZ	**Vera Road**	**0.36**	**297**	P*	Pb	17 36 01.4	-0.6
VRZ				S*	Sb	17 36 08.1	+0.6
WTVZ	**West Tongariro**	**0.37**	**62**	⇓P*	Pb	17 36 01.9	-0.4
OTVZ	**Oturere**	**0.40**	**72**	⇓P*	Pb	17 36 02.5	-0.3
OTVZ				S*	Sb	17 36 08.8	-0.1
KRVZ	**Karewarewa**	**0.41**	**62**	⇓P*	Pb	17 36 02.5	-0.5
KRVZ				S*	Sb	17 36 08.9	-0.3
MOVZ	**Moawhango**	**0.47**	**105**	⇑P*	Pb	17 36 03.2	-0.6
MOVZ				S*	Sb	17 36 09.5	-0.9
WAZ	**Wanganui**	**0.49**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**4.37**	**198**	PN	**Pn**	**17 43 00.6**	**+1.5**
PUZ				SN	**Sn**	**17 43 47.9**	**-0.9**
CNGZ	**Carnagh Statio**	**4.78**	**197**	PN	**Pn**	**17 43 04.8**	**+0.2**
MWZ	**Matawai**	**4.83**	**203**	PN	**Pn**	**17 43 06.4**	**+1.0**
MWZ				SN	**Sn**	**17 44 00.4**	**+0.3**
URZ	**Urewera**	**4.91**	**207**	PN	**Pn**	**17 43 08.3**	**+1.8**
URZ				SN	**Sn**	**17 44 01.8**	**-0.2**
URZ	**Urewera**	**4.91**	**207**	Pn	**Pn**	**17 43 08.5**	**+2.0**
	4.3nm,0.3s,baz=270,slow=3.9,SNR=55						
URZ				Sn	**Sn**	**17 44 02.2**	**+0.2**
	1.8nm,0.3s,baz=342,slow=20,SNR=4.4						
PRGZ	**Paritu Road**	**5.27**	**198**	PN	**Pn**	**17 43 11.9**	**+0.5**
MHGZ	**Mahia Peninsul**	**5.48**	**197**	PN	**Pn**	**17 43 14.9**	**+0.6**
RAHZ	**Arahi**	**5.50**	**204**	PN	**Pn**	**17 43 16.2**	**+1.6**
BKZ	**Black Stump Fm**	**5.94**	**207**	PN	**Pn**	**17 43 20.6**	**0.0**
MCHZ	**McNeill Hill**	**6.11**	**204**	PN	**Pn**	**17 43 23.5**	**+0.6**
BHHZ	**Black Hill Sta**	**6.38**	**208**	PN	**Pn**	**17 43 27.1**	**+0.4**
TSZ	**Takapari Road**	**6.92**	**206**	PN	**Pn**	**17 43 32.1**	**-1.9**
HOWZ	**Holdsworth Sta**	**7.82**	**206**	PN	Pn	17 43 42.8	-3.5
OGWZ	**Otaki Gorge**	**7.87**	**208**	PN	**Pn**	**17 43 44.9**	**-2.1**
KIW	**Kapiti Island**	**8.01**	**209**	PN	**Pn**	**17 43 46.2**	**-2.8**
MTW	**Mount Morrison**	**8.05**	**205**	PN	Pn	17 43 46.4	-3.0
TCW	**Tory Channel**	**8.57**	**210**	PN	Pn	17 43 52.9	-3.6
TUWZ	**Tuamarina**	**8.89**	**211**	PN	Pn	17 43 57.4	-3.5
KHZ	**Kahutara**	**9.88**	**209**	PN	Pn	17 44 11.0	-3.4
LTZ	**Lake Taylor**	**10.71**	**212**	PN	Pn	17 44 20.9	-5.0
OXZ	**Oxford**	**11.25**	**211**	PN	Pn	17 44 27.2	-6.0
ASAR	**Alice Springs**	**41.34**	**272**	P	**P**	**17 49 36.9**	**+0.8**
	0.3nm,0.6s,baz=117,slow=8.0,SNR=6.2						
WRA	**Warramunga Arr**	**42.65**	**277**	P	**P**	**17 49 47.4**	**+0.6**
	0.2nm,0.3s,baz=115,slow=8.0,SNR=10						
FINES	**FINESS Array B**	**147.76**	**337**	PKPbc	**PKPdf**	**18 01 29.1**	**-1.2**
	0.7nm,0.9s,baz=29,slow=3.2,SNR=3.9						

*DDA **28** 18:11:05.8, 38°.94N×29°.99E, h7km, MD2.8*
*ISK **28** 18:11:05.8, 38°.97N×29°.98E, h5km, MD2.9*
*ISCJB **28** 18:11:06.0±0.5, 38°.95N±0°.03×30°.00E±0°.03, h4km±5km, Error ellipse: s-maj=5.1km s-min=3.5km az=156.0*
*CSEM **28** 18:11:06.2±0.1, 38°.94N×30°.00E, h5km, MD2.9, Error ellipse: s-maj=2.3km s-min=1.5km az=155.0*

ISC 28 18:11:06.1±0.9, 38°.95N±0°.02×30°.00E±0°.02, h7km±8km, n34, σ0843/54, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALT	**Altintas**	**0.14**	**38**	*e*PG	**Pg**	**18 11 08.9**	**-0.2**
ALT				*e*SG	**Sg**	**18 11 11.3**	**+0.1**
ALT	**Altintas**	**0.14**	**38**	*e*Pg	**Pg**	**18 11 08.9**	**-0.2**
ALT				*e*Sg	**Sg**	**18 11 11.3**	**+0.1**
GDZ	**Gediz**	**0.43**	**289**	*i* P	**Pg**	**18 11 14.8**	**+0.2**
GDZ				*i* S	**Sg**	**18 11 21.2**	**+1.0**
GDZ	**Gediz**	**0.43**	**289**	*i* P	**Pg**	**18 11 14.8**	**+0.2**
GDZ				*i* S	**Sg**	**18 11 21.2**	**+1.0**
TVSB	**Tavsanli**	**0.66**	**320**	*e*PG	**Pg**	**18 11 18.6**	**-0.2**
TVSB				*e*SG	**Sg**	**18 11 27.2**	**-0.2**
TVSB	**Tavsanli**	**0.66**	**320**	*e*Pg	**Pg**	**18 11 18.6**	**-0.2**
TVSB				*e*Sg	**Sg**	**18 11 27.2**	**-0.2**
KHAL	**Karahalli**	**0.70**	**215**	*i* P	**Pg**	**18 11 19.6**	**0.0**
KHAL				*i* S	**Sg**	**18 11 29.0**	**+0.2**
KHAL	**Karahalli**	**0.70**	**215**	*i* P	**Pg**	**18 11 19.6**	**0.0**
KHAL				*i* S	**Sg**	**18 11 29.0**	**+0.2**
KHL	**Karahalli**	**0.73**	**211**	*e*PG	**Pb**	**18 11 20.5**	**-0.7**
KHL	**Karahalli**	**0.73**	**211**	*e*Pg	**Pb**	**18 11 20.5**	**-0.7**
BOLV	**Bolvadin**	**0.77**	**107**	*i* P	**Pg**	**18 11 21.2**	**+0.1**
BOLV				*i* S	**Sb**	**18 11 32.3**	**-0.4**
BOLV	**Bolvadin**	**0.77**	**107**	*i* P	**Pg**	**18 11 21.2**	**+0.1**
BOLV				*i* S	**Sb**	**18 11 32.3**	**-0.4**
ESKT	**Eskisehir**	**0.87**	**49**	*e*PG	**Pg**	**18 11 23.1**	**+0.2**
ESKT	**Eskisehir**	**0.87**	**49**	*e*Pg	**Pg**	**18 11 23.1**	**+0.2**
SEYT	**Eskypehyr**	**0.87**	**49**	*i* P	**Pb**	**18 11 23.9**	**+0.2**
SEYT				*i* S	**Sb**	**18 11 35.3**	**-0.3**
SEYT	**Eskypehyr**	**0.87**	**49**	*i* P	**Pb**	**18 11 23.9**	**+0.2**
SEYT				*i* S	**Sb**	**18 11 35.3**	**-0.3**
BORA	**Eskisehir**	**1.00**	**20**	*i* P	**Pg**	**18 11 25.0**	**-0.3**
BORA				*i* S	**Sg**	**18 11 38.4**	**+0.2**
BORA	**Eskisehir**	**1.00**	**20**	*i* P	**Pg**	**18 11 25.0**	**-0.3**
BORA				*i* S	**Sg**	**18 11 38.4**	**+0.2**
DEMI	**Demirci**	**1.01**	**276**	*i* P	**Pb**	**18 11 26.0**	**0.0**
DEMI				*i* S	**Sb**	**18 11 38.8**	**-0.6**
DEMI	**Demirci**	**1.01**	**276**	*i* P	**Pb**	**18 11 26.0**	**0.0**
DEMI				*i* S	**Sb**	**18 11 38.8**	**-0.6**
KULA	**Kula-Manisa**	**1.14**	**248**	*e*PN	**Pb**	**18 11 27.9**	**-0.2**
KULA	**Kula-Manisa**	**1.14**	**248**	*e*Pn	**Pb**	**18 11 27.9**	**-0.2**
MANT	**Manisa**	**1.22**	**249**	*i* P	**Pg**	**18 11 29.7**	**+0.2**
MANT				*i* S	**Sg**	**18 11 45.5**	**+0.2**
MANT	**Manisa**	**1.22**	**249**	*i* P	**Pg**	**18 11 29.7**	**+0.2**
MANT				*i* S	**Sg**	**18 11 45.5**	**+0.2**
SVRH	**Sivrihisar-ESK**	**1.28**	**67**	*e*PN	**Pg**	**18 11 30.8**	**0.0**
SVRH	**Sivrihisar-ESK**	**1.28**	**67**	*e*Pn	**Pg**	**18 11 30.8**	**0.0**
KIZT	**Kizilcal**	**1.47**	**92**	*e*PN	**Pb**	**18 11 33.5**	**-0.3**
KIZT	**Kizilcal**	**1.47**	**92**	*e*Pn	**Pb**	**18 11 33.5**	**-0.3**
GULT	**Gulveren**	**1.54**	**15**	*e*PN	**Pb**	**18 11 34.5**	**-0.5**
GULT	**Gulveren**	**1.54**	**15**	*e*Pn	**Pb**	**18 11 34.5**	**-0.5**
ARMT	**Armutlu**	**1.84**	**332**	*e*PN	**Pn**	**18 11 38.9**	**+0.8**
ARMT	**Armutlu**	**1.84**	**332**	*e*Pn	**Pn**	**18 11 38.9**	**+0.8**
BALY	**Balya**	**2.01**	**294**	*i* P	**Pn**	**18 11 41.0**	**+0.5**
BALY				*i* S	**Sb**	**18 12 07.3**	**-1.0**
BALY	**Balya**	**2.01**	**294**	*i* P	**Pn**	**18 11 41.0**	**+0.5**
BALY				*i* S	**Sb**	**18 12 07.3**	**-1.0**

*IDC **28** 18:14:32.5±0.8, 22°.64S×171°.03E, h0km, mb4.4/11, mb1 4.6/14, mb1mx4.4/22, mbtmp4.5/14, ML4.1/3, MS3.9/16, Ms1 3.9/16, ms1mx3.8/26, Error ellipse: s-maj=21.6km s-min=19.8km az=166.0*
*NEIC **28** 18:14:33.4±0.3, 22°.70S×171°.08E, h10km, mb4.8/15, Error ellipse: s-maj=8.7km s-min=7.9km az=222.0*
*ISCJB **28** 18:14:36.7±1.1, 22°.66S±0°.07×170°.88E±0°.05, h35km±9km, mb4.6/24, MS4.0/13, Error ellipse: s-maj=11.5km s-min=7.5km az=0.3*
*NOU **28** 18:14:36.8±1.2, 20°.89S×170°.87E, h30km, MD3.2, ML3.3*
*SZGRF **28** 18:14:37.3, 22°.23S×172°.76E, h33km, mb5.7, Southeast of Loyalty Islands*
*AUST **28** 18:15:31.1, 21°.97S×167°.31E, h300km*

ISC 28 18:14:36.3±4.0, 22°.61S±0°.09×170°.99E±0°.08, h25km±27km, n193, σ0886/193, mb4.7/24, MS4.1/13, 21C-5D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.83**	**276**	*e*P	**Pn**	**18 15 34.1**	**+0.5**
BAYA				*e*S	**Sn**	**18 16 15.7**	**-2.1**
LASL	**Noumea**	**4.13**	**274**	*e*P	**Pn**	**18 15 38.0**	**+0.2**
LASL				*e*S	**Sn**	**18 16 23.5**	**-2.0**
LASL				AMP		18 16 40.8	
	comp=Z,204nm,0.9s						
NORM	**Noumea**	**4.19**	**274**	*e*P	**Pn**	**18 15 38.1**	**-0.5**
NORM				*e*S	**Sn**	**18 16 24.3**	**-2.5**
MVNO	**Noumea**	**4.22**	**274**	*e*S	**Sn**	**18 16 27.1**	**-0.5**
DZM	**Mont Dzumac**	**4.24**	**276**	*e*Pn	**Pn**	**18 15 39.3**	**-0.2**
	comp=Z,45nm,0.2s						
DZM				*e*Sn	**Sn**	**18 16 26.4**	**-1.8**
	comp=Z,112nm,0.3s						
DZM	**Mont Dzumac**	**4.24**	**276**	*e*P	**Pn**	**18 15 38.7**	**-0.7**
DZM	**Mont Dzumac**	**4.24**	**276**	*e*Pn	**Pn**	**18 15 39.3**	**-0.2**
DZM				*e*Sn	**Sn**	**18 16 25.1**	**-3.2**
DZM				Sn	Sb	18 16 26.7	-15
DZM	**Mont Dzumac**	**4.24**	**276**	Pn	**Pn**	**18 15 39.5**	**0.0**
	comp=Z,9.0nm,0.3s,baz=119,slow=17,SNR=611						
DZM				Sn	**Sn**	**18 16 26.7**	**-1.5**
	comp=Z,15nm,0.3s,baz=141,slow=21,SNR=8.7						
NOUC	**Port Laguerre**	**4.37**	**276**	*e*P	**Pn**	**18 15 42.7**	**+1.6**
NOUC				*e*S	**Sn**	**18 16 30.0**	**-1.2**
NOUC				AMP		18 16 46.4	
	comp=Z,62nm,4.6s						
MSVF	**Nonsavu**	**8.22**	**55**	*e*Pn	Pn	18 16 39.2	+5.2
	comp=Z,69nm,0.9s						
URZ	**Urewera**	**16.46**	**163**	*e*Pn	Pn	18 18 21.0	-4.5
	comp=Z,34nm,0.9s						
URZ	**Urewera**	**16.46**	**163**	Pn	**Pn**	**18 18 24.7**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=112,slow=12,SNR=2.9						
URZ				LR	LR	18 23 44.5	
	comp=Z,562nm,18.6s,baz=349,slow=34						
HNR	**Honiara**	**16.85**	**319**	Pn	**Pn**	**18 18 30.3**	**-0.3**
HNR	**Honiara**	**16.85**	**319**	Pn	**Pn**	**18 18 30.3**	**-0.3**
	comp=Z,3.6nm,0.3s,baz=66,slow=2.1,SNR=6.2						
HNR				LR	LR	18 24 01.8	
	comp=Z,187nm,21.4s,baz=115,slow=34						
AFI	**Afiamalu**	**18.50**	**65**	LR	LR	18 24 22.8	
	comp=Z,307nm,19.0s,baz=269,slow=32						
RMQ	**Roma**	**20.58**	**255**	P	Pn	18 19 17.4	+1.5
	baz=18,SNR=16						
RPZ	**Rata Peaks**	**21.05**	**180**	P	**P**	**18 19 18.0**	**-0.4**
RPZ	**Rata Peaks**	**21.05**	**180**	P	**P**	**18 19 18.0**	**-0.4**
	comp=Z,11nm,1.0s,baz=337,slow=15,SNR=2.8						
RPZ				LR	LR	18 26 26.4	
	comp=Z,300nm,18.8s,baz=111,slow=34						
CTA	**Charters Tower**	**23.17**	**272**	P	**P**	**18 19 41.8**	**+0.7**
CTA	**Charters Tower**	**23.17**	**272**	P	**P**	**18 19 41.8**	**+0.7**
	comp=Z,6.1nm,0.6s,baz=125,slow=12,SNR=9.8						
CTA				LR	LR	18 28 04.4	
	comp=Z,244nm,18.1s,baz=92,slow=35						
CTAO	**Charters Tower**	**23.17**	**272**	*e*P	**P**	**18 19 42.5**	**+1.4**
	comp=Z,6.3nm,0.6s						
CMSA	**Cobar Meteorol**	**24.17**	**243**	P	**P**	**18 19 52.5**	**+1.8**
	baz=22,SNR=12						
QLP	**Quilpie**	**24.63**	**255**	P	**P**	**18 19 56.0**	**+1.1**
	baz=22,SNR=15						
MTSU	**Mount Surprise**	**25.38**	**275**	P	**P**	**18 20 03.4**	**+1.5**
	baz=22,SNR=16						
PMG	**Port Moresby**	**26.35**	**296**	*e*P	**P**	**18 20 10.8**	**+0.3**
	comp=Z,16nm,0.9s						
PMG	**Port Moresby**	**26.35**	**296**	P	**P**	**18 20 11.3**	**+0.8**
	comp=Z,7.1nm,0.6s,baz=196,slow=3.1,SNR=6.0						
STKA	**Stephens Creek**	**27.64**	**244**	P	**P**	**18 20 21.7**	**-0.4**
STKA	**Stephens Creek**	**27.64**	**244**	P	**P**	**18 20 21.7**	**-0.4**
	comp=Z,2.5nm,0.8s,baz=87,slow=12,SNR=7.8						
STKA				LR	LR	18 30 32.0	
	comp=Z,230nm,20.2s,baz=220,slow=35						
STKA	**Stephens Creek**	**27.64**	**244**	P	**P**	**18 20 23.9**	**+1.8**
	baz=25,SNR=4.5						
TAU	**Tasmania Unive**	**28.22**	**219**	P	P	18 20 23.6	-3.5
AS31	**Alice Springs**	**34.06**	**261**	*e*P	**P**	**18 21 18.4**	**-0.4**
ASAR	**Alice Springs**	**34.06**	**261**	P	**P**	**18 21 18.8**	**-0.1**
ASAR	**Alice Springs**	**34.06**	**261**	P	**P**	**18 21 18.8**	**-0.1**
	comp=Z,5.1nm,0.7s,baz=88,slow=9.5,SNR=80						
WRAB	**Tennant Creek**	**34.19**	**267**	P	**P**	**18 21 19.2**	**-0.8**
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	**34.20**	**267**	P	**P**	**18 21 19.0**	**-1.1**
WRA	**Warramunga Arr**	**34.20**	**267**	P	**P**	**18 21 19.0**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=98,slow=8.2,SNR=22						
TBI	**Tubuai**	**36.34**	**99**	*e*LR	LR	18 31 29.7	
	comp=Z,157nm,27.5s,baz=251						
PPT2	**Papeete2**	**37.29**	**90**	*e*LR	LR	18 31 59.1	
	comp=Z,126nm,24.0s						
PPT	**Papeete**	**37.30**	**90**	LR	LR	18 33 33.6	
	comp=Z,189nm,19.7s,baz=191,slow=31						
KDU	**Kakadu**	**37.91**	**278**	P	**P**	**18 21 52.1**	**+0.3**
	baz=34,SNR=3.7						
MTN	**Manton Dam**	**39.08**	**277**	P	**P**	**18 22 01.6**	**-0.1**
	baz=36,SNR=6.2						
TLE	**Tual**	**40.58**	**289**	S	S	18 27 43.6	-39
	baz=37,SNR=5.5						
FITZ	**Fitzroy Crossi**	**42.63**	**267**	LR	LR	18 41 19.8	
	comp=Z,231nm,18.6s,baz=106,slow=38						
FITZ	**Fitzroy Crossi**	**42.63**	**267**	P	**P**	**18 22 31.6**	**+0.7**
	baz=39,SNR=11						
GUMO	**Guam**	**44.15**	**322**	P	**P**	**18 22 43.1**	**0.0**
SWI	**Sorong**	**44.25**	**294**	P	**P**	**18 22 44.5**	**+0.5**
	baz=41,SNR=4.6						
SWI				S	S	18 28 48.1	-28
	baz=41,SNR=26						
MBWA	**Marble Bar**	**47.40**	**262**	*e*P	**P**	**18 23 08.2**	**-0.6**
	comp=Z,7.6nm,0.7s						
MEEK	**Meekatharra**	**47.52**	**254**	P	**P**	**18 23 09.7**	**-0.1**
	baz=44,SNR=5.4						
NWAO	**Narrogin (SRO)**	**48.22**	**245**	P	**P**	**18 23 14.7**	**-0.4**
	comp=Z,4.7nm,0.7s						
NWAO	**Narrogin (SRO)**	**48.22**	**245**	LR	LR	18 42 40.1	
	comp=Z,202nm,20.2s,baz=327,slow=35						
BLDU	**Ballidu**	**48.79**	**248**	P	**P**	**18 23 19.5**	**0.0**
	baz=46,SNR=5.6						
WSI	**Waingapu**	**50.14**	**276**	P	P	18 23 33.2	+3.3
	baz=47,SNR=3.2						
VNDA	**Vanda**	**55.14**	**182**	LR	LR	18 45 12.7	
	comp=Z,150nm,18.3s,baz=344,slow=33						
SBA	**Scott Base**	**55.33**	**181**	P	**P**	**18 24 07.9**	**+0.5**
	comp=Z,8.5nm,1.0s						
KKM	**Kota Kinabalu**	**60.65**	**291**	*e*P	**P**	**18 24 46.3**	**+0.5**
	comp=Z,12nm,0.8s						
KSM	**Kuching**	**63.73**	**284**	*e*P	**P**	**18 25 07.0**	**+0.6**
	comp=Z,26nm,0.9s						
KSM	**Kuching**	**63.73**	**284**	P	**P**	**18 25 07.6**	**+1.2**
	baz=60,SNR=21						
MJAR	**Matsushiro Arr**	**66.48**	**332**	P	**P**	**18 25 23.7**	**0.0**
MJAR	**Matsushiro Arr**	**66.48**	**332**	P	**P**	**18 25 23.7**	**0.0**
	comp=Z,2.5nm,0.9s,baz=170,slow=4.8,SNR=5.9						
MJAR				LR	LR	18 51 39.1	
	comp=Z,58nm,21.0s,baz=155,slow=34						
MAJO	**Matsushiro**	**66.48**	**332**	*e*P	**P**	**18 25 23.5**	**-0.3**
QSPA	**South Pole Qui**	**67.46**	**180**	*e*P	**P**	**18 25 29.7**	**-0.1**
	comp=Z,7.7nm,0.9s						
IPM	**Ipoh**	**73.38**	**282**	*e*P	**P**	**18 26 07.0**	**+0.3**
	comp=Z,5.8nm,0.6s						
KULM	**Kulim**	**74.06**	**283**	*e*P	**P**	**18 26 10.8**	**+0.1**
MAW	**Mawson**	**75.94**	**202**	LR	LR	18 57 59.9	
	comp=Z,79nm,18.1s,baz=288,slow=34						
PETK	**Petropavlovsk-**	**76.28**	**352**	P	**P**	**18 26 22.5**	**-0.1**
PETK	**Petropavlovsk-**	**76.28**	**352**	P	**P**	**18 26 22.5**	**-0.1**
	comp=Z,7.6nm,0.8s,baz=156,slow=11,SNR=6.6						
PETK				LR	LR	18 57 26.3	
	comp=Z,97nm,18.1s,baz=321,slow=34						
CMAR	**Chiang Mai Arr**	**81.37**	**294**	P	**P**	**18 26 53.5**	**+2.2**
CMAR				PKKPbc	**PKKPbc**	**18 45 25.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**81.37**	**294**	P	**P**	**18 26 53.5**	**+2.2**
	comp=Z,4.6nm,0.8s,baz=138,slow=4.3,SNR=35						
CMAR				PKKPbc	**PKKPbc**	**18 45 25.5**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=295,slow=4.3,SNR=6.2						
CHTO	**Chiang Mai**	**81.53**	**294**	*e*P	**P**	**18 26 53.8**	**+1.6**
	comp=Z,14nm,1.3s						
SNAA	**Sanae**	**85.87**	**182**	*e*P	**P**	**18 27 13.2**	**-0.4**
SNAA	**Sanae**	**85.87**	**182**	*e*P	**P**	**18 27 12.6**	**-1.0**
	comp=Z,11nm,1.1s						
VNA2	**Neumayer--Watz**	**86.71**	**181**	*e*P	**P**	**18 27 17.6**	**-0.1**
CMB	**Columbia Colle**	**88.20**	**47**	*e*P	**P**	**18 27 24.9**	**-0.4**
	comp=Z,4.2nm,0.9s						
NVAR	**Mina Array Bea**	**89.82**	**48**	P	**P**	**18 27 33.4**	**+0.2**
NVAR	**Mina Array Bea**	**89.82**	**48**	P	**P**	**18 27 33.4**	**+0.2**
	comp=Z,4.0nm,1.0s,baz=223,slow=8.6,SNR=12						
NVAR				LR	LR	19 01 49.8	
	comp=Z,166nm,20.5s,baz=84,slow=32						
NV11	**Mina Array Sit**	**89.92**	**48**	*e*P	**P**	**18 27 33.2**	**-0.4**
SHL	**Shillong**	**90.36**	**298**	*e*P	**P**	**18 27 38.0**	**+2.0**
ULN	**Ulaanbaatar**	**90.53**	**323**	*e*P	**P**	**18 27 36.0**	**-0.2**
	comp=Z,12nm,1.1s						
SONM	**Songino Array**	**90.88**	**323**	P	**P**	**18 27 38.3**	**+0.5**
SONM	**Songino Array**	**90.88**	**323**	P	**P**	**18 27 38.3**	**+0.5**
	comp=Z,7.9nm,1.0s,baz=116,slow=3.4,SNR=6.9						
ILAR	**Eielson Array**	**92.96**	**17**	P	**P**	**18 27 44.0**	**-2.8**
ILAR	**Eielson Array**	**92.96**	**17**	P	**P**	**18 27 44.0**	**-2.8**
	comp=Z,0.8nm,0.8s,baz=221,slow=6.0,SNR=5.9						
TXAR	**Lajitas Array**	**96.94**	**61**	LR	LR	19 03 33.3	
	comp=Z,42nm,19.4s,baz=0.0,slow=30						
PDAR	**Pinedale Array**	**97.70**	**47**	LR	LR	19 09 12.9	
	comp=Z,62nm,18.0s,baz=73,slow=34						
MKAR	**Makanchi Array**	**105.27**	**315**	Pdif	**Pdif**	**18 28 44.0**	**+1.4**
MKAR	**Makanchi Array**	**105.27**	**315**	Pdiff	**Pdif**	**18 28 44.0**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=102,slow=7.4,SNR=3.6						
BDFB	**Brasilia**	**126.11**	**131**	PKP	**PKPdf**	**18 33 37.9**	**+0.4**
BDFB	**Brasilia**	**126.11**	**131**	PKP	**PKPdf**	**18 33 37.9**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=207,slow=2.3,SNR=4.0						
ARCES	**ARCESS Array B**	**128.73**	**345**	PKP	**PKPdf**	**18 33 39.9**	**-0.8**
ARCES	**ARCESS Array B**	**128.73**	**345**	PKP	**PKPdf**	**18 33 39.9**	**-0.8**
	comp=Z,3.1nm,0.6s,baz=90,slow=1.2,SNR=14						
JOF	**Joensuu**	**131.48**	**337**	*ep*	**PKPdf**	**18 33 43.8**	**-2.3**
	comp=Z,2.8nm,0.6s						
KAF	**Kangasniemi**	**133.78**	**338**	*ep*	**PKPdf**	**18 33 48.4**	**-2.0**
	comp=Z,1.7nm,0.6s						
FINES	**FINESS Array B**	**134.31**	**337**	PKP	**PKPdf**	**18 33 50.6**	**-0.8**
FINES	**FINESS Array B**	**134.31**	**337**	PKP	**PKPdf**	**18 33 50.6**	**-0.8**
	comp=Z,4.5nm,1.0s,baz=63,slow=3.7,SNR=8.3						
NOA	**NORSAR Array B**	**139.11**	**345**	PKPpre	PKPpre	18 33 53.9	
NOA				PKP	**PKPdf**	**18 34 01.2**	**+0.8**
NOA	**NORSAR Array B**	**139.11**	**345**	PKhKP	PKPpre	18 33 53.9	
	comp=Z,0.2nm,0.5s,baz=33,slow=2.7,SNR=2.5						
NOA				PKP	**PKPdf**	**18 34 01.2**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=37,slow=2.1,SNR=3.7						
BRTR	**Keskin Array B**	**140.13**	**305**	PKP	**PKPdf**	**18 34 04.3**	**+1.2**
BRTR	**Keskin Array B**	**140.13**	**305**	PKP	**PKPdf**	**18 34 04.3**	**+1.2**
	comp=Z,1.0nm,0.9s,baz=100,slow=1.8,SNR=5.8						
RUE	**Ruedersdorf**	**145.43**	**335**	*e*PKPbc	**PKPab**	**18 34 12.2**	**+0.2**
OKC	**Ostrava-Krasne**	**145.45**	**329**	*e*PKP	**PKPab**	**18 34 12.2**	**0.0**
BSEG	**Bad Segeberg**	**145.47**	**340**	*e*PKPbc	**PKPab**	**18 34 12.2**	**+0.1**
KSP	**Ksiaz**	**145.62**	**331**	*e*P	**PKPab**	**18 34 12.9**	**+0.1**
MORC	**Moravsky Berou**	**145.78**	**329**	*e*PKPdf	**PKPbc**	**18 34 13.0**	**-0.1**
PSZ	**Piszkesteto**	**145.79**	**325**	*e*PKPdf	**PKPbc**	**18 34 11.1**	**-1.6**
PSZ	**Piszkesteto**	**145.79**	**325**	*e*PKPdf	**PKPdf**	**18 34 12.7**	**0.0**
DPC	**Dobruska-Polom**	**145.95**	**331**	*e*PKP	**PKPab**	**18 34 14.1**	**0.0**
DPC				*ex*	x	18 34 25.8	
UPC	**Upice**	**145.98**	**331**	*e*PKP	**PKPbc**	**18 34 13.7**	**+0.1**
UPC				*ex*	x	18 34 25.6	
VYHS	**Vyhne**	**145.99**	**326**	*e*PKP	**PKPab**	**18 34 14.4**	**+0.1**
BUD	**Budapest**	**146.52**	**325**	*e*PKPdf	**PKPab**	**18 34 16.2**	**-0.1**
PVCC	**Panska Ves**	**146.60**	**332**	*e*PKP	**PKPab**	**18 34 16.0**	**-0.5**
PVCC				*ep*PKP	**PKiKP**	**18 34 20.0**	**+1.7**
PVCC				*ex*	x	18 34 26.5	
BRG	**Berggiesshubel**	**146.60**	**333**	*e*PKPbc	**PKPab**	**18 34 15.8**	**-0.7**
CLL	**Collm**	**146.65**	**335**	*e*PKPbc	**PKPbc**	**18 34 15.6**	**0.0**
CLL	**Collm**	**146.65**	**335**	*i* PKPbc	**PKPbc**	**18 34 15.5**	**0.0**
	comp=Z,25nm,0.9s						
CLL				*e*PKPab	**PKiKP**	**18 34 19.0**	**+0.6**
	comp=Z,15nm,0.9s						
NRDL	**Niedersach Rie**	**146.75**	**339**	*e*PKPbc	**PKPbc**	**18 34 16.0**	**+0.3**
FBE	**Freiberg**	**146.81**	**334**	*e*PKPbc	**PKPab**	**18 34 16.6**	**-0.7**
PRU	**Pruhonice**	**147.01**	**332**	*e*PKP	**PKPbc**	**18 34 16.8**	**+0.2**
PRU				*ex*	x	18 34 25.1	
ZST	**Bratislava**	**147.06**	**327**	*e*PKP	**PKPbc**	**18 34 16.3**	**-0.6**
TREC	**Trest**	**147.08**	**330**	*e*PKP	**PKPbc**	**18 34 17.0**	**+0.1**
CLZ	**Clausthal**	**147.20**	**338**	*e*PKPbc	**PKPbc**	**18 34 17.7**	**+0.5**
NEUB	**Neuenburg**	**147.20**	**336**	*e*PKPbc	**PKPbc**	**18 34 17.5**	**+0.4**
PKSM	**Moragy**	**147.51**	**323**	*e*PKPdf	**PKPbc**	**18 34 17.0**	**-1.1**
TANN	**Tannenbergstha**	**147.56**	**334**	*e*PKPbc	**PKPbc**	**18 34 18.7**	**+0.4**
WERD	**Werda**	**147.60**	**334**	*e*PKPbc	**PKPbc**	**18 34 18.7**	**+0.4**
PLN	**Plauen**	**147.63**	**334**	*e*PKPbc	**PKPbc**	**18 34 18.8**	**+0.4**
GUNZ	**Gunzen**	**147.65**	**334**	*e*PKPbc	**PKPbc**	**18 34 19.1**	**+0.6**
IBBN	**Ibbenburen**	**147.67**	**341**	*e*PKPbc	**PKPbc**	**18 34 18.7**	**+0.3**
SOP	**Sopron**	**147.68**	**327**	*e*PKPdf	**PKPbc**	**18 34 19.3**	**+0.7**
WERN	**Wernitzgruen**	**147.69**	**334**	*e*PKPbc	**PKPbc**	**18 34 19.3**	**+0.7**
NKC	**Novy Kostel**	**147.71**	**334**	*e*PKP	**PKPbc**	**18 34 18.8**	**+0.2**
MOX	**Moxa**	**147.71**	**335**	*e*PKPbc	**PKPbc**	**18 34 19.0**	**+0.4**

WRA	**Warramunga Arr**	**47.22**	**263**	P	**P**	**18 35 41.1**	**-1.2**
WRA	**Warramunga Arr**	**47.22**	**263**	P	**P**	**18 35 41.1**	**-1.2**
	2.7nm,0.7s,baz=100,slow=8.2,SNR=29						
FITZ	**Fitzroy Crossi**	**55.65**	**263**	P	**P**	**18 36 44.4**	**-1.0**
FITZ	**Fitzroy Crossi**	**55.65**	**263**	P	**P**	**18 36 44.4**	**-1.0**
	1.2nm,0.7s,baz=121,slow=5.9,SNR=4.3						
MJAR	**Matsushiro Arr**	**73.59**	**322**	P	**P**	**18 38 40.8**	**-1.4**
MJAR	**Matsushiro Arr**	**73.59**	**322**	P	**P**	**18 38 40.8**	**-1.4**
	1.6nm,0.7s,baz=166,slow=6.8,SNR=8.0						
KSRS	**Korea Array**	**80.35**	**317**	P	**P**	**18 39 21.1**	**+0.9**
	0.2nm,0.3s,baz=136,slow=5.8,SNR=4.2						
KSAR	**Wonju Array Be**	**80.37**	**317**	P	**P**	**18 39 21.1**	**+0.8**
USRK	**Ussuriysk Arra**	**82.30**	**325**	P	**P**	**18 39 31.4**	**+1.1**
	3.9nm,0.9s,baz=132,slow=2.9,SNR=6.8						
MDJ	**Mudanjiang**	**83.87**	**324**	*e*P	**P**	**18 39 39.7**	**+1.3**
	6.6nm,0.8s						
ILAR	**Eielson Array**	**89.70**	**12**	P	**P**	**18 40 06.0**	**-0.4**
ILAR	**Eielson Array**	**89.70**	**12**	P	**P**	**18 40 06.0**	**-0.4**
	0.6nm,0.9s,baz=214,slow=6.4,SNR=5.2						
CMAR	**Chiang Mai Arr**	**93.53**	**288**	P	**P**	**18 40 26.4**	**+1.2**
CMAR	**Chiang Mai Arr**	**93.53**	**288**	P	**P**	**18 40 26.4**	**+1.2**
	2.0nm,0.8s,baz=130,slow=2.6,SNR=20						
YKA	**Yellowknife Ar**	**97.18**	**24**	P	Pdif	18 40 40.7	-0.2
YKA	**Yellowknife Ar**	**97.18**	**24**	P	Pdif	18 40 40.7	-0.2
	0.2nm,0.8s,baz=239,slow=4.3,SNR=5.2						
AKASG	**Malin Array Be**	**146.19**	**332**	PKPbc	**PKPbc**	**18 46 48.7**	**-0.2**
AKASG	**Malin Array Be**	**146.19**	**332**	PKPbc	**PKPbc**	**18 46 48.7**	**-0.2**
	1.1nm,0.4s,baz=44,slow=4.3,SNR=5.1						
BR131	**Keskin Array S**	**150.37**	**312**	*e*P	**PKPbc**	**18 47 01.0**	**+0.5**
BRTR	**Keskin Array B**	**150.37**	**312**	PKPbc	**PKPbc**	**18 47 00.4**	**-0.1**
BRTR	**Keskin Array B**	**150.37**	**312**	PKPbc	**PKPbc**	**18 47 00.4**	**-0.1**
	1.3nm,0.8s,baz=134,slow=3.6,SNR=10						

*DDA **28** 18:28:21.3,39.°03N×41.°95E,h16km,MD3.6*
*ISK **28** 18:28:21.8,39.°10N×41.°82E,h5km,MD3.6*
*CSEM **28** 18:28:22.3±0.2,39.°08N×41.°84E,h2km,MD3.6,Error ellipse: s-maj=5.6km s-min=4.2km az=41.0*
ISC 28 18:28:21.5±1.0,**39.°06N**±0.°02×**41.°91E**±0.°02,**h13**km±9km,
n77,σ1§**42**/91,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRTB	**Varto-Mus**	**0.37**	**286**	*e*PG	**Pg**	**18 28 28.1**	**-0.8**
VRTB				*e*SG	**Sg**	**18 28 32.6**	**-1.4**
VRTB	**Varto-Mus**	**0.37**	**286**	*e*Pg	**Pg**	**18 28 28.1**	**-0.8**
VRTB				*e*Sg	**Sg**	**18 28 32.6**	**-1.4**
TATV	**Tatvan**	**0.62**	**153**	*i* P	**Pn**	**18 28 34.1**	**-2.1**
TATV				*i* S	**Sn**	**18 28 46.1**	**0.0**
TATV	**Tatvan**	**0.62**	**153**	*i* P	**Pn**	**18 28 34.1**	**-2.1**
TATV				*i* S	**Sn**	**18 28 46.1**	**0.0**
TUTA	**Tutak**	**0.78**	**64**	*i* P	**Pb**	**18 28 36.0**	**-1.1**
TUTA				*i* S	**Sn**	**18 28 48.4**	**-1.7**
TUTA	**Tutak**	**0.78**	**64**	*i* P	**Pb**	**18 28 35.8**	**-1.3**
TUTA				*i* S	**Sb**	**18 28 47.2**	**-0.4**
TUTA	**Tutak**	**0.78**	**64**	*i* P	**Pb**	**18 28 35.8**	**-1.3**
TUTA				*i* S	**Sn**	**18 28 48.4**	**-1.7**
ERZM	**Erzurum**	**0.94**	**334**	*i* P	**Pb**	**18 28 38.2**	**-1.6**
ERZM	**Erzurum**	**0.94**	**334**	*i* P	**Pb**	**18 28 38.6**	**-1.3**
ERZM	**Erzurum**	**0.94**	**334**	*i* P	**Pb**	**18 28 38.2**	**-1.6**
EZM	**Erzurum**	**0.94**	**333**	*e*PG	**Pb**	**18 28 39.0**	**-0.9**
BNGB	**Bing ¶ll**	**0.96**	**266**	*e*PG	**Pb**	**18 28 38.6**	**-1.5**
BNGB				*e*SG	**Sb**	**18 28 52.7**	**-0.1**
HOMI	**Horasan**	**0.98**	**360**	*i* P	**Pb**	**18 28 39.4**	**-1.1**
HOMI				*i* S	**Sn**	**18 28 57.1**	**+1.9**
HOMI	**Horasan**	**0.98**	**360**	*i* P	**Pb**	**18 28 39.7**	**-0.8**
GEVA	**Gevas**	**1.17**	**129**	*i* P	**Pg**	**18 28 44.1**	**+0.1**
GEVA				*i* S	**Sb**	**18 28 56.8**	**-2.0**
GEVA	**Gevas**	**1.17**	**129**	*i* P	**Pg**	**18 28 44.1**	**+0.1**
GEVA				*i* S	**Sg**	**18 29 03.1**	**+3.9**
GEVA	**Gevas**	**1.17**	**129**	*i* P	**Pg**	**18 28 44.1**	**+0.1**
GEVA				*i* S	**Sg**	**18 29 03.1**	**+3.9**
VANB	**Van**	**1.25**	**112**	*e*PN	Pg	18 28 47.6	+2.2
VANB	**Van**	**1.25**	**112**	*e*Pn	Pg	18 28 47.6	+2.2
BEST	**Besiri**	**1.27**	**204**	*i* P	**Pg**	**18 28 46.5**	**+0.6**
BEST				*i* S	**Sg**	**18 29 06.0**	**+3.5**
BEST	**Besiri**	**1.27**	**204**	*i* P	**Pg**	**18 28 46.7**	**+0.8**
BEST				*i* S	**Sg**	**18 29 06.2**	**+3.7**
KOPT	**Kop Dagi**	**1.45**	**312**	*i* P	**Pb**	**18 28 48.5**	**-0.1**
KOPT	**Kop Dagi**	**1.45**	**312**	*i* P	**Pb**	**18 28 48.5**	**-0.1**
DYDN	**Diyadin**	**1.46**	**70**	*i* P	**Pg**	**18 28 48.8**	**-0.8**
DYDN				*i* S	**Sg**	**18 29 08.9**	**+0.3**
DYDN	**Diyadin**	**1.46**	**70**	*i* P	**Pg**	**18 28 48.8**	**-0.8**
DYDN				*i* S	**Sg**	**18 29 08.9**	**+0.3**
CLDR	**Caldiran**	**1.56**	**86**	*e*PN	**Pg**	**18 28 51.4**	**-0.1**
CLDR	**Caldiran**	**1.56**	**86**	*e*Pn	**Pg**	**18 28 51.4**	**-0.1**
SIRN	**S¨–rnak**	**1.61**	**166**	*i* P	Pg	18 28 57.7	+5.3
SIRN				*i* S	**Sg**	**18 29 15.3**	**+1.9**
DIY	**Diyarbakir**	**1.76**	**229**	*e*PN	**Pb**	**18 28 53.3**	**-0.4**
DIY	**Diyarbakir**	**1.76**	**229**	*e*Pn	**Pb**	**18 28 53.3**	**-0.4**
ERZN	**Erzincan**	**1.78**	**288**	*e*PN	**Pn**	**18 28 52.5**	**+0.5**
KARS	**Kars**	**1.80**	**30**	*e*PN	**Pb**	**18 28 54.2**	**-0.3**
KARS	**Kars**	**1.80**	**30**	*e*Pn	**Pb**	**18 28 54.2**	**-0.3**
DIYA	**Diyarbakir**	**1.81**	**232**	*i* P	**Pg**	**18 28 55.0**	**-1.1**
DIYA				*i* S	**Sg**	**18 29 21.0**	**+1.4**
DIYA	**Diyarbakir**	**1.81**	**232**	*i* P	**Pg**	**18 28 55.0**	**-1.1**
DIYA				*i* S	**Sg**	**18 29 21.0**	**+1.4**
DDEM	**Demirkent**	**1.83**	**356**	*i* P	**Pb**	**18 28 54.9**	**0.0**
DDEM	**Demirkent**	**1.83**	**356**	*i* P	**Pb**	**18 28 54.8**	**-0.2**
DDEM	**Demirkent**	**1.83**	**356**	*i* P	**Pb**	**18 28 54.9**	**0.0**
BAYT	**Ayd¨–ntepe-Bay**	**1.91**	**315**	*e*PN	**Pn**	**18 28 54.9**	**+1.0**
BAYT	**Ayd¨–ntepe-Bay**	**1.91**	**315**	*e*Pn	**Pn**	**18 28 54.9**	**+1.0**
MARD	**Mardin**	**1.96**	**207**	*i* P	**Pb**	**18 28 57.2**	**+0.1**
MARD				*i* S	**Sg**	**18 29 23.6**	**-0.9**
MARD	**Mardin**	**1.96**	**207**	*i* P	**Pb**	**18 28 56.5**	**-0.6**
MARD				*i* S	**Sb**	**18 29 21.1**	**-0.4**
DBAD	**Bademkaya**	**1.96**	**355**	*i* P	**Pb**	**18 28 57.5**	**+0.4**
DBAD	**Bademkaya**	**1.96**	**355**	*i* P	**Pb**	**18 28 57.5**	**+0.4**
PTK	**Pertek**	**1.97**	**266**	*e*PN	**Pb**	**18 28 55.9**	**-1.5**
PTK	**Pertek**	**1.97**	**266**	*e*Pn	**Pb**	**18 28 55.9**	**-1.5**
DAGI	**Agillar**	**2.01**	**0**	*i* P	**Pb**	**18 28 56.8**	**-1.2**
DAGI	**Agillar**	**2.01**	**0**	*i* P	**Pb**	**18 28 57.0**	**-1.0**
HAKT	**HAKKARI**	**2.06**	**136**	*i* P	**Pg**	**18 28 59.5**	**-1.5**
HAKT	**HAKKARI**	**2.06**	**136**	*i* P	**Pg**	**18 28 59.5**	**-1.5**
HKR	**Hakkari**	**2.06**	**135**	*e*PN	**Pg**	**18 28 59.2**	**-1.9**
HKR	**Hakkari**	**2.06**	**135**	*e*Pn	**Pg**	**18 28 59.2**	**-1.9**
ARTV	**Artvin**	**2.12**	**0**	*i* P	**Pb**	**18 29 00.6**	**+0.7**
ARTV	**Artvin**	**2.12**	**0**	*i* P	**Pb**	**18 29 00.6**	**+0.7**
SVRC	**Sivrice-ELAZID**	**2.15**	**252**	*e*PN	**Pb**	**18 28 58.6**	**-1.8**
SVRC	**Sivrice-ELAZID**	**2.15**	**252**	*e*Pn	**Pb**	**18 28 58.6**	**-1.8**
CUKT	**Cukurca**	**2.25**	**143**	*e*PN	**Pb**	**18 29 02.1**	**0.0**
CUKT	**Cukurca**	**2.25**	**143**	*e*Pn	**Pb**	**18 29 02.1**	**0.0**
DBOC	**Borcka**	**2.29**	**355**	*i* P	**Pb**	**18 29 03.1**	**+0.4**
DBOC	**Borcka**	**2.29**	**355**	*i* P	**Pb**	**18 29 03.1**	**+0.4**
KELT	**Kelkit**	**2.32**	**299**	*i* P	**Pb**	**18 29 04.0**	**+0.7**
KELT	**Kelkit**	**2.32**	**299**	*i* P	**Pb**	**18 29 04.0**	**+0.7**
GUMT	**Gumushane**	**2.34**	**307**	*e*PN	**Pn**	**18 29 00.8**	**+1.0**
GUMT	**Gumushane**	**2.34**	**307**	*e*Pn	**Pn**	**18 29 00.8**	**+1.0**
BCA	**Borcka**	**2.39**	**355**	*e*PN	**Pb**	**18 29 02.3**	**-2.1**
BCA	**Borcka**	**2.39**	**355**	*e*Pn	**Pb**	**18 29 02.3**	**-2.1**
GNI	**Garni**	**2.44**	**63**	*e*PN	**Pb**	**18 29 04.5**	**-0.9**
GNI	**Garni**	**2.44**	**63**	*e*Pn	**Pb**	**18 29 04.5**	**-0.9**
ESPY	**Espiye-Giresun**	**3.07**	**308**	*e*PN	**Pn**	**18 29 11.7**	**+2.0**
ESPY	**Espiye-Giresun**	**3.07**	**308**	*e*Pn	**Pn**	**18 29 11.7**	**+2.0**
DARE	**Darende-Malaty**	**3.20**	**269**	*e*PN	**Pb**	**18 29 17.4**	**-0.8**
DGRG	**David-gareji**	**3.56**	**47**	P	Pn	18 29 19.4	+2.9
DGRG	**David-gareji**	**3.56**	**47**	P	Pn	18 29 19.4	+2.9
ONI	**Oni**	**3.71**	**18**	P	**Pn**	**18 29 20.7**	**+2.1**
ONI	**Oni**	**3.71**	**18**	P	**Pn**	**18 29 20.7**	**+2.1**
GUDG	**Gudauri**	**3.92**	**29**	P	Pn	18 29 25.6	+4.0
GUDG	**Gudauri**	**3.92**	**29**	P	Pn	18 29 25.6	+4.0

*CSEM **28** 18:34:21.4,42.°51N×13.°39E,h9km,MD1.8/7,After ROM*
ROM 28 18:34:21.4±0.1,**42.°51N×13.°39E,h9**km±1km,**Md1.8/7,**
Ml1.7/3,Error ellipse: s-maj=1.1km s-min=1.1km az=104.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.03**	**32**	Pg	Pg	18 34 23.7	+0.4
CAMP				Sg	Sg	18 34 24.9	+0.3
CAMP	**Campotosto**	**0.03**	**32**	Pg	Pg	18 34 23.7	+0.4
CAMP				Sg	Sg	18 34 24.9	+0.3
AQU	**L'Aquila**	**0.15**	**176**	*e*PKPdf	Pg	18 34 25.2	+0.3
AQU	**L'Aquila**	**0.15**	**176**	Pg	Pg	18 34 25.3	+0.5
AQU				Sg	Sg	18 34 27.9	+0.7
AQU	**L'Aquila**	**0.15**	**176**	Pg	Pg	18 34 25.3	+0.5
AQU				Sg	Sg	18 34 27.9	+0.7
TERO	**Teramo**	**0.20**	**55**	Pg	Pg	18 34 26.0	+0.4
TERO				Sg	Sg	18 34 29.2	+0.8
	131nm,0.1s						
TERO	**Teramo**	**0.20**	**55**	Pg	Pg	18 34 26.0	+0.4
TERO				Sg	Sg	18 34 29.2	+0.8
	131nm,0.1s						
LNSS	**Leonessa**	**0.27**	**290**	Pg	Pg	18 34 27.5	+0.5
LNSS				Sg	Sb	18 34 32.6	-0.9
	72nm,0.1s						
LNSS	**Leonessa**	**0.27**	**290**	Pg	Pg	18 34 27.5	+0.5
LNSS				Sg	Sb	18 34 32.6	-0.9
	72nm,0.1s						
VCEL	**Villa Celiera**	**0.35**	**109**	Pg	Pg	18 34 28.9	+0.3
VCEL				Sg	Sb	18 34 35.5	-0.4
	140nm,0.8s						
VCEL	**Villa Celiera**	**0.35**	**109**	Pg	Pg	18 34 28.9	+0.3
VCEL				Sg	Sb	18 34 35.5	-0.4
	140nm,0.8s						
NRCA	**Norcia**	**0.38**	**328**	Pg	Pg	18 34 29.4	+0.4
NRCA				Sg	Sb	18 34 35.5	-1.1
NRCA	**Norcia**	**0.38**	**328**	Pg	Pg	18 34 29.4	+0.4
NRCA				Sg	Sb	18 34 35.5	-1.1

*ISK **28** 19:12:44.1,37.°17N×28.°55E,h14km,MD2.5*
*CSEM **28** 19:12:45.3±0.4,37.°10N×28.°48E,h19km±1km,MD2.5,Error ellipse: s-maj=9.7km s-min=8.0km az=37.0*
*DDA **28** 19:12:45.3,37.°09N×28.°53E,h7km,MD2.8*
*ISCJB **28** 19:12:46.2±0.8,37.°08N±0.°05×28.°45E±0.°06,h16km±13km,Error ellipse: s-maj=8.6km s-min=6.9km az=44.8*
ISC 28 19:12:45.6±1.2,**37.°15N**±0.°05×**28.°49E**±0.°03,**h13**km±10km,
n16,σ1§**18**/23,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.17**	**264**	*e*PG	**Pb**	**19 12 49.5**	**-1.1**
YER				*e*SG	**Sb**	**19 12 53.0**	**-0.9**
YER	**Yerkesik**	**0.17**	**264**	*e*Pg	**Pb**	**19 12 49.5**	**-1.1**
TURN	**Turunc**	**0.29**	**162**	*i* P	**Pg**	**19 12 52.8**	**+1.1**
TURN				*i* S	**Sb**	**19 12 59.6**	**+2.2**
TURN	**Turunc**	**0.29**	**162**	*i* P	**Pg**	**19 12 52.8**	**+1.1**
TURN				*i* S	**Sb**	**19 12 59.6**	**+2.2**
DALY	**Dalyan (Mu¨la**	**0.36**	**158**	*e*PG	**Pg**	**19 12 51.9**	**-1.0**
DALY				*e*SG	**Sg**	**19 12 57.7**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.36**	**158**	*e*Pg	**Pg**	**19 12 51.9**	**-1.0**
DALY				*e*Sg	**Sg**	**19 12 57.7**	**0.0**
MLSB	**Milas**	**0.59**	**284**	*e*PG	**Pb**	**19 12 56.9**	**-0.8**
MLSB	**Milas**	**0.59**	**284**	*e*Pg	**Pb**	**19 12 56.9**	**-0.8**
DNZL	**Cakiroluk**	**0.70**	**39**	*i* P	**Pb**	**19 12 59.4**	**-0.3**
DNZL				*i* S	**Sn**	**19 13 12.3**	**+0.2**
DNZL	**Cakiroluk**	**0.70**	**39**	*i* P	**Pb**	**19 12 59.4**	**-0.3**
DNZL				*i* S	**Sn**	**19 13 12.3**	**+0.2**
FETY	**Fethiye**	**0.70**	**137**	*e*PG	**Pb**	**19 12 57.8**	**-1.9**
FETY	**Fethiye**	**0.70**	**137**	*e*Pg	**Pb**	**19 12 57.8**	**-1.9**
DAT	**Datca**	**0.84**	**240**	*e*PG	**Pb**	**19 13 01.9**	**-0.3**
DAT	**Datca**	**0.84**	**240**	*e*Pg	**Pb**	**19 13 01.9**	**-0.3**
BODT	**Bodrum**	**0.95**	**265**	*e*PG	**Pb**	**19 13 03.7**	**-0.2**
BODT	**Bodrum**	**0.95**	**265**	*e*Pg	**Pb**	**19 13 03.7**	**-0.2**

*ISCJB **28** 19:22:39.7±0.5,37.°87N±0.°03×21.°43E±0.°03,h21km±4km,Error ellipse: s-maj=5.4km s-min=4.1km az=21.7*
*CSEM **28** 19:22:39.2±0.3,37.°85N×21.°40E,h16km±1km,MD2.9,Error ellipse: s-maj=6.2km s-min=4.7km az=24.0*
*ATH **28** 19:22:39.5,37.°85N×21.°41E,h22km±2km,MD2.9/13*
*THE **28** 19:22:39.5,37.°85N×21.°41E,h17km±1km,ML2.2/1,Error ellipse: s-maj=1.3km s-min=0.7km az=210.0*
ISC 28 19:22:39.5±0.9,**37.°85N**±0.°02×**21.°41E**±0.°02,**h17**km±6km,
n36,σ0§**63**/61,**Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.21**	**12**	P	**Pg**	**19 22 44.4**	**-0.2**
RLS				S	**Sg**	**19 22 48.2**	**+0.2**
RLS	**Riolos of Patr**	**0.21**	**12**	*e*PB	**Pg**	**19 22 44.4**	**-0.2**
RLS	**Riolos of Patr**	**0.21**	**12**	P	**Pg**	**19 22 44.4**	**-0.2**
RLS				S	**Sg**	**19 22 48.2**	**+0.2**
AMT	**Artemida-Makis**	**0.39**	**143**	P	**Pg**	**19 22 47.3**	**-0.3**
AMT				S	**Sb**	**19 22 54.1**	**+0.2**
AMT	**Artemida-Makis**	**0.39**	**143**	*e*PB	**Pg**	**19 22 47.3**	**-0.3**
AMT				*e*SB	**Sb**	**19 22 54.1**	**+0.2**
AMT	**Artemida-Makis**	**0.39**	**143**	P	**Pg**	**19 22 47.3**	**-0.3**
AMT				*e*Sb	**Sb**	**19 22 54.1**	**+0.2**
KFL	**Anninata**	**0.56**	**298**	P	**Pg**	**19 22 50.2**	**-0.4**
KFL				S	**Sb**	**19 22 59.6**	**+1.0**
KFL	**Anninata**	**0.56**	**298**	P	**Pg**	**19 22 50.2**	**-0.4**
KFL				S	**Sb**	**19 22 59.6**	**+1.0**
LAKA	**Lakka**	**0.60**	**49**	P	**Pg**	**19 22 50.8**	**-0.6**
LAKA				S	**Sb**	**19 23 00.6**	**+0.9**
LAKA	**Lakka**	**0.60**	**49**	*e*PN	**Pg**	**19 22 50.9**	**-0.5**
LAKA				*e*SN	**Sb**	**19 23 00.6**	**+0.9**
LAKA	**Lakka**	**0.60**	**49**	*e*Pn	**Pg**	**19 22 50.9**	**-0.5**
LAKA				S	**Sb**	**19 23 00.6**	**+0.9**
EFP	**Efpalio**	**0.70**	**34**	*e*PB	**Pg**	**19 22 52.4**	**-0.8**
EFP				*e*SN	**Sb**	**19 23 03.6**	**+0.9**
EFP	**Efpalio**	**0.70**	**34**	*e*Pb	**Pg**	**19 22 52.4**	**-0.8**
EFP				*e*Sn	**Sb**	**19 23 03.6**	**+0.9**
VLS	**Valsamata**	**0.73**	**297**	P	**Pb**	**19 22 52.8**	**-1.0**
VLS				S	**Sb**	**19 23 04.0**	**+0.5**
VLS	**Valsamata**	**0.73**	**297**	*e*PN	**Pb**	**19 22 53.4**	**-0.4**
VLS				SN	**Sn**	**19 23 05.1**	**-0.8**
VLS	**Valsamata**	**0.73**	**297**	P	**Pb**	**19 22 52.8**	**-1.0**
VLS	**Valsamata**	**0.73**	**297**	*e*Pn	**Pb**	**19 22 53.4**	**-0.4**
VLS				S	**Sb**	**19 23 04.0**	**+0.5**
VLS				Sn	**Sn**	**19 23 05.1**	**-0.8**
TRIZ	**Trizonia**	**0.73**	**45**	*e*PB	**Pb**	**19 22 53.3**	**-0.6**
TRIZ				*e*SN	**Sn**	**19 23 05.3**	**-0.7**
TRIZ	**Trizonia**	**0.73**	**45**	*e*Pb	**Pb**	**19 22 53.3**	**-0.6**
TRIZ				*e*Sn	**Sn**	**19 23 05.3**	**-0.7**
GUR	**Goura**	**0.74**	**83**	P	**Pb**	**19 22 53.1**	**-1.0**
GUR				S	**Sb**	**19 23 04.0**	**0.0**
GUR	**Goura**	**0.74**	**83**	*e*PB	**Pb**	**19 22 53.2**	**-0.9**
GUR				*e*SN	**Sg**	**19 23 04.2**	**+0.2**
GUR	**Goura**	**0.74**	**83**	*e*Pb	**Pb**	**19 22 53.2**	**-0.9**
GUR				*e*Sn	**Sg**	**19 23 04.2**	**+0.2**
ITM	**Ithomi**	**0.78**	**148**	*e*PN	**Pg**	**19 22 54.9**	**+0.1**
ITM	**Ithomi**	**0.78**	**148**	*e*Pn	**Pg**	**19 22 54.9**	**+0.1**
KALE	**Kalithea**	**0.79**	**46**	*e*PN	**Pb**	**19 22 54.1**	**-0.8**
KALE				*e*SN	**Sg**	**19 23 06.5**	**+1.0**
KALE	**Kalithea**	**0.79**	**46**	*e*Pn	**Pb**	**19 22 54.1**	**-0.8**
KALE				*e*Sn	**Sg**	**19 23 06.5**	**+1.0**
VLX	**Vlachokerasia**	**0.91**	**121**	*e*PN	**Pn**	**19 22 57.8**	**+0.2**
VLX				*e*SN	**Sn**	**19 23 10.8**	**+0.4**
VLX	**Vlachokerasia**	**0.91**	**121**	*e*Pn	**Pn**	**19 22 57.8**	**+0.2**
VLX				*e*Sn	**Sn**	**19 23 10.8**	**+0.4**
PYL	**PYLOS**	**0.99**	**164**	*e*PN	**Pb**	**19 22 58.3**	**+0.1**
PYL	**PYLOS**	**0.99**	**164**	*e*Pn	**Pb**	**19 22 58.3**	**+0.1**
EVR	**Evrytania**	**1.11**	**16**	*e*PN	**Pg**	**19 23 01.5**	**+0.4**
EVR	**Evrytania**	**1.11**	**16**	*e*Pn	**Pg**	**19 23 01.5**	**+0.4**
AGG	**Agios Georgios**	**1.38**	**31**	*e*PN	**Pb**	**19 23 05.1**	**+0.2**
AGG	**Agios Georgios**	**1.38**	**31**	*e*Pn	**Pb**	**19 23 05.1**	**+0.2**
DID	**Didima**	**1.49**	**103**	*e*PN	**Pg**	**19 23 07.6**	**-0.6**
DID	**Didima**	**1.49**	**103**	*e*Pn	**Pg**	**19 23 07.6**	**-0.6**

*DDA **28** 19:23:43.8,36.°90N×27.°31E,h7km,MD2.8*
*ISK **28** 19:23:43.7,36.°93N×27.°27E,h7km,MD2.6*
CSEM 28 19:23:44.2±0.3,**36.°92N×27.°29E,h10**km,**MD2.6,Error ellipse: s-maj=6.3km s-min=4.5km az=61.0,**
Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BODT	**Bodrum**	**0.14**	**8**	*e*PG	Pg	19 23 47.0	-0.5
BODT				*e*SG	Sg	19 23 49.8	0.0
BODT	**Bodrum**	**0.14**	**8**	*e*Pg	Pg	19 23 47.0	-0.5
BODT				*e*Sg	Sg	19 23 49.8	-0.1
DAT	**Datca**	**0.30**	**129**	*e*PG	Pg	19 23 49.1	-0.9
DAT				*e*SG	Sb	19 23 55.9	-1.1
DAT	**Datca**	**0.30**	**129**	*e*Pg	Pg	19 23 49.5	-0.9
DAT				*e*Sg	Sb	19 23 55.9	-1.1
MLSB	**Milas**	**0.54**	**46**	*e*PG	Pg	19 23 55.0	+0.2
MLSB				*e*SG	Sg	19 24 02.6	+0.5
MLSB	**Milas**	**0.54**	**46**	*e*Pg	Pg	19 23 55.0	+0.1
MLSB				*e*Sg	Sg	19 24 02.6	+0.5
GCAM	**G?zelcaml?**	**0.78**	**357**	*i* P	Pg	19 23 59.5	+0.1
GCAM				*i* S	Sb	19 24 11.2	+0.7
GCAM	**G?zelcaml?**	**0.78**	**357**	*i* P	Pg	19 23 59.4	+0.1
GCAM				*i* S	Sb	19 24 11.2	+0.6
YER	**Yerkesik**	**0.83**	**75**	*e*PG	Pg	19 24 00.4	+0.2
YER	**Yerkesik**	**0.83**	**75**	*e*Pg	Pg	19 24 00.4	+0.1
AYDN	**Tasoluk**	**0.88**	**32**	*i* P	Pg	19 24 00.6	-0.7
AYDN				*i* S	Sg	19 24 11.6	-1.2
AYDN	**Tasoluk**	**0.88**	**32**	*i* P	Pg	19 24 00.6	-0.7
AYDN				*i* S	Sg	19 24 11.6	-1.2
TURN	**Turunc**	**1.06**	**92**	*i* P	Pg	19 23 58.6	-5.9
TURN				*i* S	Sg	19 24 11.3	-7.0
DALY	**Dalyan (Mu¨la**	**1.10**	**95**	*e*PN	Pg	19 24 05.4	+0.1
DALY	**Dalyan (Mu¨la**	**1.10**	**95**	*e*Pn	Pg	19 24 05.4	0.0
APE	**Apeiranthos**	**1.41**	**277**	*e*PN	Pn	19 24 10.2	+0.1
APE	**Apeiranthos**	**1.41**	**277**	*e*Pn	Pn	19 24 10.2	+0.1
FETY	**Fethiye**	**1.47**	**101**	*e*PN	Pb	19 24 11.6	-0.1
FETY	**Fethiye**	**1.47**	**101**	*e*Pn	Pb	19 24 11.6	-0.1

*IDC **28** 19:26:18.9±1.0,22.°59S×174.°89W,h0km,mb4.1/12,mb1 4.3/13,mb1mx4.2/21,mbtmp4.1/13,ML3.7/1,Error ellipse: s-maj=35.3km s-min=20.7km az=139.0*
*NEIC **28** 19:26:20.8±0.5,22.°65S×174.°97W,h10km,mb4.8/4,Error ellipse: s-maj=15.1km s-min=11.3km az=149.0*
*ISCJB **28** 19:26:22.6±0.5,22.°70S±0.°10×174.°93W±0.°10,h33km,mb4.2/16,Error ellipse: s-maj=15.0km s-min=11.6km az=147.4*
ISC 28 19:26:24.4±0.5,**22.°7S**±0.°1×**174.°9W**±0.°1,**h33**km,**n41,**
σ1§13/37,mb4.2/16,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**14.13**	**87**	Pn	**Pn**	**19 29 42.0**	**-0.3**
URZ	**Urewera**	**16.93**	**202**	P	**Pn**	**19 30 18.0**	**-0.7**
URZ	**Urewera**	**16.93**	**202**	P	**Pn**	**19 30 18.0**	**-0.7**
	0.3nm,0.3s,baz=41,slow=19,SNR=2.2						
DZM	**Mont Dzumac**	**17.25**	**269**	*e*LR	LR	19 34 58.7	
	92nm,21.4s						
TBI	**Tubuai**	**23.43**	**97**	*e*LR	LR	19 36 51.4	
	94nm,29.0s						
PPT2	**Papeete2**	**24.31**	**82**	*e*LR	LR	19 36 57.3	
	68nm,26.0s						
CTA	**Charters Tower**	**36.18**	**267**	P	**P**	**19 33 23.9**	**-0.3**
CTA	**Charters Tower**	**36.18**	**267**	P	**P**	**19 33 23.9**	**-0.3**
	1.4nm,0.5s,baz=100,slow=1.2,SNR=3.4						
STKA	**Stephens Creek**	**39.49**	**247**	P	**P**	**19 33 52.1**	**+0.1**
STKA	**Stephens Creek**	**39.49**	**247**	P	**P**	**19 33 52.1**	**+0.1**
	1.1nm,0.4s,baz=96,slow=10,SN

2.8nm,0.8s,baz=169,slow=8.6,SNR=15
CMAR LR LR 19 50 07.6
comp=Z,25nm,19.3s,baz=225,slow=37
STKA Stephens Creek 33.29 133 P **P 19 36 37.3 +1.4**
2.3nm,0.8s,baz=320,slow=7.2,SNR=5.1
ODAN Odare 45.24 326 *e*P **P 19 38 16.0 +0.1**
7.1nm,0.6s
TAPN Taplejung 45.45 327 *e*P **P 19 38 18.0 +0.3**
RAMN Ramite 45.74 325 *e*P **P 19 38 20.1 +0.2**
GUN Gumba 46.89 326 *e*P **P 19 38 29.2 +0.1**
KOLN Koldanda 48.09 323 *e*P **P 19 38 38.2 0.0**
5.7nm,0.6s
DANN Dangsing 48.43 324 *e*P **P 19 38 40.6 -0.3**
9.2nm,0.8s
KSRS Korea Array 49.74 15 P **P 19 38 49.5 -0.9**
1.3nm,0.8s,baz=193,slow=7.0,SNR=7.4
MJAR Matsushiro Arr 52.37 25 P P 19 39 08.1 -2.2
0.6nm,0.5s,baz=209,slow=8.1,SNR=3.8
USRK Usuriysk Arra 57.13 16 P **P 19 39 43.2 -1.3**
4.1nm,0.7s,baz=198,slow=7.1,SNR=6.7
MKAR Makanchi Array 63.75 336 P **P 19 40 30.0 +0.1**
0.6nm,0.5s,baz=143,slow=7.1,SNR=7.0
KURBB Kurchatov Arra 68.32 337 P **P 19 40 58.7 -0.4**
1.1nm,0.8s,baz=152,slow=5.2,SNR=10
ZALV Zalesovo Beam 68.91 342 P **P 19 41 02.5 -0.2**
1.5nm,0.7s,baz=141,slow=4.6,SNR=10
BVAR Borovoye Array 73.44 334 P **P 19 41 30.7 +0.5**
1.4nm,1.0s,baz=134,slow=6.2,SNR=6.9
BRTR Keskin Array B 89.22 311 P **P 19 42 54.1 -0.2**
0.2nm,0.4s,baz=126,slow=2.0,SNR=3.6
YKA Yellowknife Ar 117.86 23 PKP **PKPdf 19 48 44.8 +0.7**
0.2nm,0.5s,baz=320,slow=2.1,SNR=4.2

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*BJI **28** 19:54:33.8, 52.˙60N×35.˙00W, h10km, mB5.3/25, mb4.9/34, Ms5.4/26, Ms7.5 1/27*
*MOS **28** 19:54:33.8±1.1, 52.˙59N×35.˙15W, h10km, mb5.1/81, MS4.8/53, Error ellipse: s-maj=6.9km s-min=5.5km az=137.1*
*IDC **28** 19:54:33.2±0.4, 52.˙61N×34.˙88W, h0km, mb4.2/31, mb1 4.4/34, mb1mx4.3/39, mbtmp4.2/34, ML3.8/3, MS4.9/40, Ms1 4.9/40, ms1mx4.9/45, Error ellipse: s-maj=13.9km s-min=9.5km az=179.0*
*PDA **28** 19:54:34.8, 52.˙62N×34.˙95W, h10km, mb4.9*
*NEIC **28** 19:54:35.0±0.2, 52.˙67N×35.˙03W, h10km, mb5.0/125, MS4.9/142, MW5.6, MW5.4, Error ellipse: s-maj=7.6km s-min=3.3km az=181.0, Moment Tensor Solution. s43 Moment tensor: Scale 10^17 Nm; Mrr 0.06; Mθθ -0.25; Mφφ 0.19; Mrθ 0.15; Mθφ -1.67; Mφr -0.34; Best double couple: Mo 1.70000×10^17 NP1: ϕs 184.00000°, δ 84.00000°, λ 11.00000°. NP2: ϕs 93.00000°, δ 79.00000°, λ 174.00000°. Principal axes: T 1.7300, Plg 12.0000°, Azm 49.0000°; N -0.0100, Plg 77.0000°, Azm 212.0000°; P -1.7200, Plg 3.0000°, Azm 318.0000°;*
*ISCJB **28** 19:54:35.8±0.1, 52.˙68N±0.˙04×35.˙01W±0.˙02, h19km, mb4.7/211, MS4.9/215 Error ellipse: s-maj=5.2km s-min=1.8km az=178.4*
*CSEM **28** 19:54:35.3±0.1, 52.˙69N×35.˙11W, h10km, mb4.9/99, Ms4.8, Mw5.6, Error ellipse: s-maj=6.1km s-min=3.0km az=3.0*
*GCMT **28** 19:54:40.7±0.1, 52.˙74N×34.˙70W, h19km, MW5.6, Moment Tensor Solution. s79, c144; s48, c52; Moment tensor: Scale 10^17 Nm; Mrr 0.28±.04; Mθθ -0.51±.04; Mφφ 0.80±.04; Mrθ 0.01±.08; Mθφ -2.62±.03; Mφr 0.42±.08; Best double couple: Mo 2.70000×10^17 NP1: ϕs 277.00000°, δ 81.00000°, λ -179.00000°. NP2: ϕs 187.00000°, δ 89.00000°, λ -9.00000°. Principal axes: T 2.8800, Plg 6.0000°, Azm 232.0000°; N -0.2900, Plg 81.0000°, Azm 3.0000°; P -2.5900, Plg 7.0000°, Azm 142.0000°; Data Used: ll IU IC G CN. Surface waves: sta=108, comp=214, per= 50.*

ISC 28 19:54:36.9±0.4, 52.˙64N±0.˙05×35.˙04W±0.˙03, h19km±1km, h18km: pP-P, n1025, σ1.943/946, mb4.8/210, MS4.9/218, 149C-140D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BORG	**Borgarnes** 220nm,1.3s	**14.03**	**25**	P		**Pn**	**19 57 52.5**	**-1.9**
BORG	**Borgarnes** comp=Z,5µm,21.9s,baz=224,slow=29	**14.03**	**25**	LR		LR	20 01 25.0	
BORG	**Borgarnes** 220nm,1.3s	**14.03**	**25**	P		**Pn**	**19 57 52.5**	**-1.9**
PGRA	**Graciosa** 175nm,1.2s	**14.46**	**157**	*e*P		**P**	**19 58 06.2**	**-1.0**
PGRA				*e*LQ		LQ	20 00 46.1	
PGRA	**Graciosa** 175nm,1.2s	**14.46**	**157**	*e*P		**P**	**19 58 06.2**	**-1.0**
ROSA	**Rosais** 269nm,1.6s	**14.70**	**159**	*e*P		**P**	**19 58 10.6**	**+0.8**
ROSA				*e*LQ		LQ	20 00 53.6	
ROSA	**Rosais** 269nm,1.6s	**14.70**	**159**	*e*P		**P**	**19 58 10.6**	**+0.8**
PSET	**Sete Cidades** 157nm,1.0s	**16.18**	**153**	*e*P		**P**	**19 58 28.4**	**+2.1**
PSET				*e*LQ		LQ	20 01 41.6	
PSET	**Sete Cidades** 157nm,1.0s	**16.18**	**153**	*e*P		**P**	**19 58 28.4**	**+2.1**
CMLA	**Cha da Macela** 177nm,1.9s	**16.29**	**152**	*e*P		**P**	**19 58 29.1**	**+1.6**
CMLA	**Cha da Macela** 177nm,1.9s	**16.29**	**152**	*e*P		**P**	**19 58 29.1**	**+1.6**
SFJD	**Kangerlussuaq** 179nm,1.0s	**16.31**	**338**	*e*Pn		**Pn**	**19 58 22.4**	**-2.2**
SFJD	**Kangerlussuaq** 99nm,0.9s	**16.31**	**338**	*i* P		**Pn**	**19 58 23.5**	**-1.1**
SFJD	comp=Z,8µm,14.0s							
SFJD	**Kangerlussuaq** comp=Z,1.3nm,0.3s,baz=150,slow=12,SNR=9.1	**16.31**	**338**	Pn		**Pn**	**19 58 22.9**	**-1.6**
SFJD				LR		LR	20 03 31.6	
SFJD	**Kangerlussuaq** comp=Z,7µm,19.8s,baz=147,slow=33	**16.31**	**338**	*e*Pn		**Pn**	**19 58 22.4**	**-2.2**
PSMN	**Pico do Norte,** comp=Z,60nm,1.8s	**17.13**	**152**	*e*P		**P**	**19 58 40.2**	**+3.4**
DLF	**Lyons Farm**	**17.14**	**76**	*e*P		**Pn**	**19 58 33.0**	**-2.2**
ESK	**Eskdalemuir**	**18.82**	**69**	*e*P		**P**	**19 58 55.3**	**0.0**
ESK	comp=Z,36nm,0.9s				pmax	pmax		
ESK	**Eskdalemuir** comp=Z,36nm,0.9s	**18.82**	**69**	*e*Pn		**P**	**19 58 55.3**	**0.0**
ESK	**Eskdalemuir** comp=Z,36nm,0.9s	**18.82**	**69**	*e*P		**P**	**19 58 55.3**	**0.0**
EKA	**Eskdalemuir Ar**	**18.85**	**69**	P		**P**	**19 58 52.4**	**-3.2**
EKA	**Eskdalemuir Ar** baz=277,slow=9.2,SNR=9.6	**18.85**	**69**	P		**P**	**19 58 52.4**	**-3.2**
SCHQ	**Schefferville** comp=Z,220nm,1.4s	**18.85**	**289**	*e*Pn		**P**	**19 58 54.7**	**-0.9**
SCHQ				P		P	**19 58 55.0**	**-0.7**
SCHQ				S		Sn	20 02 19.0	-7.5
SCHQ				*e*Sn		S	20 02 21.6	-7.5
SCHQ	**Schefferville** comp=Z,0.5nm,0.3s,baz=95,slow=9.8,SNR=20	**18.85**	**289**	P		**P**	**19 58 55.0**	**-0.7**
SCHQ	comp=Z,1.1nm,0.3s,baz=90,slow=20,SNR=3.3			S		Sn	20 02 19.0	-7.5
SCHQ	comp=Z,5µm,21.2s,baz=83,slow=33			LR		LR	20 04 58.1	
SCHQ	**Schefferville** comp=Z,220nm,1.4s	**18.85**	**289**	*e*Pn		**P**	**19 58 54.7**	**-0.9**
SCHQ	**Schefferville**	**18.85**	**289**	P		**P**	**19 58 55.0**	**-0.7**
SCO	**Scoresbysund**	**18.87**	**14**	*e*P		**Pn**	**19 58 58.1**	**+1.8**
SCO	comp=Z,10.0nm,1.0s				pmax	pmax		
SCO	comp=Z,7µm,19.0s				MLR	MLR		
SCO	**Scoresbysund** comp=Z,9.7nm,1.0s	**18.87**	**14**	*i* P		**Pn**	**19 58 58.1**	**+1.8**
SCO	comp=Z,7µm,18.0s							
SUMG	**Summit**	**20.07**	**357**	*e*P		**P**	**19 59 09.8**	**+0.6**
SUMG	comp=Z,32nm,1.0s				pmax	pmax		
SUMG	comp=Z,13µm,15.0s				MLR	MLR		
SUMG	**Summit** comp=Z,43nm,1.0s	**20.07**	**357**	*e*P		**P**	**19 59 08.5**	**-0.6**
SUMG	**Summit** comp=Z,32nm,1.0s	**20.07**	**357**	*i* P		**P**	**19 59 09.8**	**+0.6**
SUMG	comp=Z,13µm,15.0s							
SUMG	**Summit**	**20.07**	**357**	*e*P		**P**	**19 59 08.5**	**-0.6**
	comp=Z,43nm,1.0s							
ROSF	**Rostrenen** comp=Z,82nm,1.1s	**20.56**	**89**	*e*P		Pn	19 59 15.8	-0.8
ROSF	**Rostrenen**	**20.56**	**89**	*e*P		Pn	19 59 15.8	-0.8
ROSF	comp=Z,82nm,1.1s				pmax	pmax		
ROSF	**Rostrenen** comp=Z,82nm,1.1s	**20.56**	**89**	*e*P		Pn	19 59 15.8	-0.8
ROSF	**Rostrenen** comp=Z,41nm,1.1s	**20.56**	**89**	*e*P		Pn	19 59 15.8	-0.8
FRB	**Frobisher Bay**	**20.59**	**316**	P		**P**	**19 59 14.4**	**0.0**
FRB	**Frobisher Bay** comp=Z,49nm,1.1s,baz=106,slow=11,SNR=21	**20.59**	**316**	P		**P**	**19 59 14.4**	**0.0**
FRB	comp=Z,2µm,19.5s,baz=116,slow=32			LR		LR	20 05 38.5	
FRB	**Frobisher Bay**	**20.59**	**316**	P		**P**	**19 59 14.4**	**0.0**
QUIF	**Quistinic** comp=Z,163nm,1.3s	**20.80**	**90**	*e*P		**P**	**19 59 17.8**	**+0.9**
QUIF	**Quistinic**	**20.80**	**90**	*e*P		**P**	**19 59 17.8**	**+0.9**
QUIF	comp=Z,163nm,1.3s				pmax	pmax		
QUIF	**Quistinic** comp=Z,163nm,1.3s	**20.80**	**90**	*e*P		**P**	**19 59 17.8**	**+0.9**
QUIF	**Quistinic** comp=Z,82nm,1.3s	**20.80**	**90**	*e*P		**P**	**19 59 17.8**	**+0.9**
PGAV	**Gavieira, Arco** comp=Z,87nm,1.7s	**20.94**	**110**	*e*P		Pn	19 59 25.5	+4.4
PGAV				*e*LQ		LQ	20 03 14.4	
PGAV	comp=Z,4µm,20.0s			*e*LR		LR	20 04 18.0	
SGMF	**Saint Gilles** comp=Z,135nm,1.0s	**21.04**	**89**	*e*P		**P**	**19 59 20.7**	**+1.3**
SGMF	**Saint Gilles**	**21.04**	**89**	*e*P		**P**	**19 59 20.7**	**+1.3**
SGMF	comp=Z,135nm,1.0s				pmax	pmax		
SGMF	**Saint Gilles** comp=Z,135nm,1.0s	**21.04**	**89**	*e*P		**P**	**19 59 20.7**	**+1.3**
SGMF	**Saint Gilles** comp=Z,68nm,1.0s	**21.04**	**89**	*e*P		**P**	**19 59 20.7**	**+1.3**
POLO	**Lamas de Olo** comp=Z,30nm,1.8s	**21.59**	**111**	*e*P		**P**	**19 59 25.4**	**-0.1**
POLO	**Lamas de Olo** comp=Z,30nm,1.8s	**21.59**	**111**	*e*P		**P**	**19 59 25.4**	**-0.1**
JMIC	**Jan Mayen** comp=Z,8µm,21.3s,baz=220,slow=30	**21.91**	**23**	LR		LR	20 05 40.5	
PBRG	**Braganca** comp=Z,84nm,1.7s	**21.92**	**108**	*e*P		**P**	**19 59 31.3**	**+2.3**
PBRG	**Braganca** comp=Z,84nm,1.7s	**21.92**	**108**	*e*P		**P**	**19 59 31.3**	**+2.3**
PVIS	**Viseu** comp=Z,66nm,2.4s	**21.97**	**112**	*e*P		**P**	**19 59 31.6**	**+2.0**
PVIS	**Viseu** comp=Z,66nm,2.4s	**21.97**	**112**	*e*P		**P**	**19 59 31.6**	**+2.0**
FLN	**La Foliniere** comp=Z,52nm,0.8s	**22.09**	**86**	*e*P		**P**	**19 59 31.8**	**+1.0**
FLN	comp=Z,1µm,17.8s				*e*R			
FLN	**La Foliniere**	**22.09**	**86**	*e*P		**P**	**19 59 31.8**	**+1.0**
FLN	comp=Z,52nm,0.8s				pmax	pmax		
FLN	**La Foliniere** comp=Z,52nm,0.8s	**22.09**	**86**	*e*P		**P**	**19 59 31.8**	**+1.0**
FLN	**La Foliniere** comp=Z,26nm,0.8s	**22.09**	**86**	*e*P		**P**	**19 59 31.8**	**+1.0**
MVO	**Moncorvo** comp=Z,67nm,1.6s	**22.16**	**110**	*e*P		P	19 59 39.5	+7.8
MVO				*e*LQ		LQ	20 03 35.9	
MVO	comp=Z,3µm,20.0s			*e*LR		LR	20 04 48.8	
MTE	**Manteigas**	**22.38**	**112**	*e*P		P	19 59 41.4	+7.4
MTE				*e*LQ		LQ	20 03 38.7	
MTE	comp=Z,3µm,20.0s			*e*LR		LR	20 04 47.0	
MTE	**Manteigas** comp=Z,24nm,1.0s	**22.38**	**112**	P		**P**	**19 59 38.1**	**+4.1**
MTE	comp=Z,4µm,21.0s			LR		LR		
LDF	**La Druitiere** comp=Z,116nm,1.3s	**22.38**	**86**	*e*P		**P**	**19 59 34.0**	**+0.2**
LDF	**La Druitiere**	**22.38**	**86**	*e*P		**P**	**19 59 34.0**	**+0.2**
LDF	comp=Z,116nm,1.3s				pmax	pmax		
LDF	**La Druitiere** comp=Z,116nm,1.3s	**22.38**	**86**	*e*P		**P**	**19 59 34.0**	**+0.2**
LDF	**La Druitiere** comp=Z,58nm,1.3s	**22.38**	**86**	*e*P		**P**	**19 59 34.0**	**+0.2**
PTOM	**Tomar** comp=Z,108nm,1.5s	**22.43**	**115**	*e*P		P	19 59 41.2	+6.8
EMMW	**East Machias** comp=Z,244nm,1.2s	**22.68**	**263**	*e*P		**P**	**19 59 36.1**	**-0.9**
EMMW				*e*S		**S**	**20 03 46.2**	**+2.0**
EMMW	**East Machias** comp=Z,244nm,1.2s	**22.68**	**263**	*e*P		**P**	**19 59 36.1**	**-0.9**
EMMW				*e*S		**S**	**20 03 46.2**	**+2.0**
PCBR	**Castelo Branco** comp=Z,84nm,1.6s	**22.80**	**113**	*e*P		P	19 59 45.3	+7.0
PMTG	**Montargil** comp=Z,50nm,1.5s	**22.92**	**116**	*e*P		P	19 59 46.0	+6.4
PMRV	**Marv??o** comp=Z,43nm,1.5s	**23.13**	**114**	*e*P		**P**	**19 59 41.7**	**-0.1**
PMRV				*e*LQ		LQ	20 03 53.0	
PMRV	comp=Z,3µm,20.0s			*e*LR		LR	20 05 23.4	
PMRV	**Marv??o** comp=Z,43nm,1.5s	**23.13**	**114**	*e*P		**P**	**19 59 41.7**	**-0.1**
MFF	**Saint Martin d** comp=Z,186nm,1.5s	**23.23**	**91**	*e*P		**P**	**19 59 42.5**	**-0.3**
MFF	**Saint Martin d**	**23.23**	**91**	*e*P		**P**	**19 59 42.5**	**-0.3**
MFF	comp=Z,186nm,1.5s				pmax	pmax		
MFF	**Saint Martin d** comp=Z,186nm,1.5s	**23.23**	**91**	*e*P		**P**	**19 59 42.5**	**-0.3**
MFF	**Saint Martin d** comp=Z,93nm,1.5s	**23.23**	**91**	*e*P		**P**	**19 59 42.5**	**-0.3**
EVOP	**Sao Brissos**	**23.36**	**116**	*e*P		**P**	**19 59 43.2**	**-0.9**
EVOP	comp=Z,38nm,1.1s				pmax	pmax		
EVOP	**Sao Brissos** comp=Z,38nm,1.1s	**23.36**	**116**	*e*P		**P**	**19 59 43.2**	**-0.9**
EVOP	**Sao Brissos** comp=Z,19nm,1.1s	**23.36**	**116**	*e*P		**P**	**19 59 43.2**	**-0.9**
PESTR	**Estremoz** comp=Z,32nm,1.3s	**23.41**	**115**	*e*P		P	19 59 50.6	+6.0
EVO	**Evora** comp=Z,38nm,1.1s	**23.41**	**116**	*e*P		**P**	**19 59 43.2**	**-1.5**
EVO	comp=Z,2µm,20.2s				*e*R			
PNCL	**Nicolau / Gran** comp=Z,39nm,1.8s	**23.44**	**118**	*e*P		P	19 59 51.6	+6.7
PMOZ	**Porto Moniz, M** comp=Z,3µm,20.0s	**23.63**	**140**	*e*LQ		LQ	20 04 05.9	
PMOZ				*e*LR		LR	20 05 38.5	
PBEJ	**Beja** comp=Z,37nm,1.9s	**23.86**	**117**	*e*P		P	19 59 58.3	+9.3
PCVE	**Castro Verde**	**24.05**	**118**	*e*P		P	19 59 58.1	+7.3
WVL	**Waterville** comp=Z,74nm,0.9s	**24.09**	**264**	*e*P		**P**	**19 59 50.0**	**-1.0**
WVL				*e*S		S	20 04 19.0	+12
WVL	**Waterville** comp=Z,74nm,0.9s	**24.09**	**264**	*e*P		**P**	**19 59 50.0**	**-1.0**
SNF	**Seneffe** comp=Z,25nm,2.1s	**24.32**	**79**	P		**P**	**19 59 53.1**	**-0.1**
PVAQ	**Vaqueiros** comp=Z,1µm,20.0s	**24.39**	**118**	*e*LQ		LQ	20 04 14.6	
PVAQ				*e*LR		LR	20 05 43.4	
BAIF	**Baives** comp=Z,38nm,0.8s	**24.44**	**80**	*e*P		**P**	**19 59 55.1**	**+0.9**
BAIF	**Baives**	**24.44**	**80**	*e*P		**P**	**19 59 55.1**	**+0.9**
BAIF	comp=Z,38nm,0.8s				pmax	pmax		
BAIF	**Baives** comp=Z,38nm,0.8s	**24.44**	**80**	*e*P		**P**	**19 59 55.1**	**+0.9**
BAIF	**Baives** comp=Z,19nm,0.8s	**24.44**	**80**	*e*P		**P**	**19 59 55.1**	**+0.9**
LFF	**La Frestale**	**24.59**	**94**	*e*P		**P**	**19 59 55.8**	**+0.2**
LFF	**La Frestale**	**24.59**	**94**	*e*P		**P**	**19 59 55.8**	**+0.2**
LFF	**La Frestale**	**24.59**	**94**	*e*P		**P**	**19 59 55.8**	**+0.2**
LFF	**La Frestale**	**24.59**	**94**	*e*P		**P**	**19 59 55.8**	**+0.2**
PAB	**San Pablo**	**24.77**	**110**	P		**P**	**19 59 56.0**	**-1.4**
PAB	comp=Z,52nm,1.8s				pmax	pmax		
PAB	comp=Z,4µm,20.0s				MLR	MLR		
PAB	**San Pablo** comp=Z,52nm,1.8s	**24.77**	**110**	P		**P**	**19 59 56.0**	**-1.4**
PAB	comp=Z,4µm,20.0s				LR	LR		
PAB	**San Pablo** comp=Z,4µm,20.0s	**24.77**	**110**	P		**P**	**19 59 56.0**	**-1.4**
GIVF	**Givet** comp=Z,44nm,1.1s	**24.79**	**80**	*e*P		**P**	**19 59 59.4**	**+2.0**
GIVF	**Givet**	**24.79**	**80**	*e*P		**P**	**19 59 59.4**	**+2.0**
GIVF	comp=Z,44nm,1.1s				pmax	pmax		
GIVF	**Givet** comp=Z,44nm,1.1s	**24.79**	**80**	*e*P		**P**	**19 59 59.4**	**+2.0**
GIVF	**Givet** comp=Z,22nm,1.1s	**24.79**	**80**	*e*P		**P**	**19 59 59.4**	**+2.0**
TCF	**Toulx Ste Croi** comp=Z,73nm,1.2s	**24.82**	**90**	*e*P		**P**	**19 59 57.8**	**+0.1**
TCF	**Toulx Ste Croi**	**24.82**	**90**	*e*P		**P**	**19 59 57.8**	**+0.1**
TCF	comp=Z,73nm,1.2s				pmax	pmax		
TCF	**Toulx Ste Croi** comp=Z,73nm,1.2s	**24.82**	**90**	*e*P		**P**	**19 59 57.8**	**+0.1**
TCF	**Toulx Ste Croi** comp=Z,37nm,1.2s	**24.82**	**90**	*e*P		**P**	**19 59 57.8**	**+0.1**
ESDC	**Sonseca Array**	**24.91**	**109**	P		**P**	**19 59 55.4**	**-3.2**
ESDC	**Sonseca Array** comp=Z,1.5nm,0.8s,baz=313,slow=8.4,SNR=7.1	**24.91**	**109**	P		**P**	**19 59 55.4**	**-3.2**
ESDC	comp=Z,2µm,18.5s,baz=310,slow=33			LR		LR	20 08 00.9	
ESLA	**Sonseca Array** comp=Z,9.0nm,1.3s	**24.91**	**109**	*e*P		**P**	**19 59 55.2**	**-3.4**
ETSF	**Etsaut** comp=Z,62nm,1.3s	**24.92**	**99**	*e*P		**P**	**19 59 57.9**	**-0.8**
ETSF	**Etsaut**	**24.92**	**99**	*e*P		**P**	**19 59 57.9**	**-0.8**
ETSF	comp=Z,62nm,1.3s				pmax	pmax		
ETSF	**Etsaut** comp=Z,62nm,1.3s	**24.92**	**99**	*e*P		**P**	**19 59 57.9**	**-0.8**
ETSF	**Etsaut** comp=Z,31nm,1.3s	**24.92**	**99**	*e*P		**P**	**19 59 57.9**	**-0.8**
DAG	**Danmarks Havn**	**25.01**	**9**	*i* P		**P**	**19 59 58.1**	**-1.1**
DAG	comp=Z,8.0nm,1.0s				pmax	pmax		
DAG	comp=Z,8µm,15.0s				MLR	MLR		
DAG	**Danmarks Havn** comp=Z,8.4nm,1.0s	**25.01**	**9**	*i* P		**P**	**19 59 58.1**	**-1.1**
DAG	comp=Z,8µm,14.0s							
DAG	**Danmarks Havn** comp=Z,8.4nm,1.0s,SNR=42	**25.01**	**9**	*i* P		**P**	**19 59 58.2**	**-1.0**
BGF	**Bois d'Agland** comp=Z,84nm,0.9s	**25.08**	**89**	*e*P		**P**	**20 00 00.2**	**+0.2**
BGF	**Bois d'Agland**	**25.08**	**89**	*e*P		**P**	**20 00 00.2**	**+0.2**
BGF	comp=Z,84nm,0.9s				pmax	pmax		
BGF	**Bois d'Agland** comp=Z,84nm,0.9s	**25.08**	**89**	*e*P		**P**	**20 00 00.2**	**+0.2**
BGF	**Bois d'Agland** comp=Z,42nm,0.9s	**25.08**	**89**	*e*P		**P**	**20 00 00.2**	**+0.2**
SSF	**Saint Saulge** comp=Z,52nm,1.0s	**25.25**	**87**	*e*P		**P**	**20 00 01.8**	**+0.3**
SSF	**Saint Saulge**	**25.25**	**87**	*e*P		**P**	**20 00 01.8**	**+0.3**
SSF	comp=Z,52nm,1.0s				pmax	pmax		
SSF	**Saint Saulge** comp=Z,52nm,1.0s	**25.25**	**87**	*e*P		**P**	**20 00 01.8**	**+0.3**
SSF	**Saint Saulge** comp=Z,26nm,1.0s	**25.25**	**87**	*e*P		**P**	**20 00 01.8**	**+0.3**
AVF	**Avril sur Loir** comp=Z,48nm,1.0s	**25.28**	**88**	*e*P		**P**	**20 00 02.2**	**+0.4**
AVF	**Avril sur Loir**	**25.28**	**88**	*e*P		**P**	**20 00 02.2**	**+0.4**
AVF	comp=Z,48nm,1.0s				pmax	pmax		
AVF	**Avril sur Loir** comp=Z,48nm,1.0s	**25.28**	**88**	*e*P		**P**	**20 00 02.2**	**+0.4**
AVF	**Avril sur Loir** comp=Z,24nm,1.0s	**25.28**	**88**	*e*P		**P**	**20 00 02.2**	**+0.4**
LOR	**Lormes** comp=Z,46nm,0.8s	**25.37**	**87**	*e*P		**P**	**20 00 02.8**	**+0.1**
LOR	comp=Z,2µm,22.2s				*e*R			
LOR	**Lormes** comp=Z,46nm,0.8s	**25.37**	**87**	*e*P		**P**	**20 00 02.8**	**+0.1**
LOR	**Lormes** comp=Z,23nm,0.8s	**25.37**	**87**	*e*P		**P**	**20 00 02.8**	**+0.1**
EPF	**Esparros** comp=Z,133nm,2.0s	**25.39**	**98**	*e*P		**P**	**20 00 03.4**	**+0.5**
EPF	**Esparros**	**25.39**	**98**	*e*P		**P**	**20 00 03.4**	**+0.5**
EPF	comp=Z,133nm,2.0s				pmax	pmax		
EPF	**Esparros** comp=Z,133nm,2.0s	**25.39**	**98**	*e*P		**P**	**20 00 03.4**	**+0.5**
EPF	**Esparros** comp=Z,66nm,2.0s	**25.39**	**98**	*e*P		**P**	**20 00 03.4**	**+0.5**
MEZF	**Maizieres J'vi** comp=Z,77nm,0.9s	**25.56**	**83**	*e*P		**P**	**20 00 03.7**	**-0.6**
MEZF	**Maizieres J'vi** comp=Z,77nm,0.9s	**25.56**	**83**	*e*P		**P**	**20 00 03.7**	**-0.6**
MEZF	**Maizieres J'vi** comp=Z,38nm,0.9s	**25.56**	**83**	*e*P		**P**	**20 00 03.7**	**-0.6**
MUD	**Monsted U'grnd**	**25.58**	**64**	*e*P		P	20 00 14.1	+10
MUD	comp=Z,24nm,1.2s				pmax	pmax		
MUD	comp=Z,2µm,18.0s				MLR	MLR		
MUD	**Monsted U'grnd** comp=Z,24nm,1.1s	**25.58**	**64**	*i* P		P	20 00 14.1	+10
MUD	comp=Z,2µm,17.0s							
LBNH	**Lisbon**	**25.64**	**266**	*e*P		**P**	**20 00 01.1**	**-4.1**
LBNH	comp=Z,30nm,1.1s				pmax	pmax		
LBNH	comp=Z,2µm,20.0s				MLR	MLR		
LBNH	**Lisbon** comp=Z,30nm,1.1s	**25.64**	**266**	*e*P		**P**	**20 00 01.1**	**-4.1**
LBNH	comp=Z,2µm,20.0s				LR	LR		
SMF	**Signal de Mont** comp=Z,117nm,1.5s	**25.64**	**88**	*e*P		**P**	**20 00 05.1**	**-0.1**
SMF	**Signal de Mont**	**25.64**	**88**	*e*P		**P**	**20 00 05.1**	**-0.1**
SMF	comp=Z,117nm,1.5s				pmax	pmax		
SMF	**Signal de Mont** comp=Z,117nm,1.5s	**25.64**	**88**	*e*P		**P**	**20 00 05.1**	**-0.1**
SMF	**Signal de Mont** comp=Z,55nm,1.5s	**25.64**	**88**	*e*P		**P**	**20 00 05.1**	**-0.1**
SFTF	**Sexfontaines** comp=Z,100nm,1.1s	**25.67**	**84**	*e*P		**P**	**20 00 06.0**	**+0.6**
SFTF	**Sexfontaines** comp=Z,100nm,1.1s	**25.67**	**84**	*e*P		**P**	**20 00 06.0**	**+0.6**
SFTF	**Sexfontaines** comp=Z,50nm,1.1s	**25.67**	**84**	*e*P		**P**	**20 00 06.0**	**+0.6**
WLF	**Walferdange**	**25.75**	**80**	PFAKE			20 00 20.0	+14
WLF	comp=Z,2µm,21.0s				LR	LR		
PAGF	**Fort de Pagny** comp=Z,18nm,1.0s	**25.94**	**83**	*e*P		**P**	**20 00 09.1**	**+1.2**
PAGF	**Fort de Pagny** comp=Z,18nm,1.0s	**25.94**	**83**	*e*P		**P**	**20 00 09.1**	**+1.2**
PAGF	**Fort de Pagny** comp=Z,9.2nm,1.0s	**25.94**	**83**	*e*P		**P**	**20 00 09.1**	**+1.2**
NAO01	**NORSAR Array S** comp=Z,4.0nm,0.8s	**25.99**	**53**	*e*P		**P**	**20 00 08.5**	**+0.4**
NAO01	**NORSAR Array S** comp=Z,4.0nm,0.8s	**25.99**	**53**	*e*P		**P**	**20 00 08.5**	**+0.4**
NB2	**NORSAR Subarra** comp=Z,0.6nm,0.8s,baz=273,slow=9.3	**26.14**	**53**	P		**P**	**20 00 10.4**	**+0.8**
NB2	**NORSAR Subarra** comp=Z,0.6nm,0.8s,baz=273,slow=9.3,SNR=9.5	**26.14**	**53**	P		**P**	**20 00 10.4**	**+0.8**
NOA	**NORSAR Array B**	**26.14**	**53**	P		**P**	**20 00 07.7**	**-1.9**
NOA	**NORSAR Array B** comp=Z,3.1nm,0.8s,baz=276,slow=9.7,SNR=8.1	**26.14**	**53**	P		**P**	**20 00 07.7**	**-1.9**
NOA	comp=Z,2µm,19.1s,baz=275,slow=34				LR	LR	20 09 10.0	
NOA	**NORSAR Array B**	**26.14**	**53**	P		**P**	**20 00 07.7**	**-1.9**
HNH	**Hanover** comp=Z,68nm,0.9s	**26.14**	**265**	*e*P		**P**	**20 00 10.9**	**+1.2**
HNH	**Hanover** comp=Z,68nm,0.9s	**26.14**	**265**	*e*P		**P**	**20 00 10.9**	**+1.2**
WES	**Weston**	**26.30**	**262**	*e*P		**P**	**20 00 10.8**	**-0.4**
WES	comp=Z,46nm,1.0s				pmax	pmax		
WES	**Weston** comp=Z,46nm,1.0s	**26.30**	**262**	*e*P		**P**	**20 00 10.8**	**-0.4**
WES	**Weston** comp=Z,46nm,1.0s	**26.30**	**262**	*e*P		**P**	**20 00 10.8**	**-0.4**
MTLF	**Montolieu** comp=Z,53nm,1.5s	**26.35**	**96**	*e*P		**P**	**20 00 13.8**	**+

MTLF pmax pmax
comp=Z,53nm,1.5s
MTLF Montolieu 26.35 96 *e*P **P 20 00 13.8 +2.2**
comp=Z,53nm,1.5s
MTLF Montolieu 26.35 96 *e*P **P 20 00 13.8 +2.2**
comp=Z,27nm,1.5s
HRV Adam Dziewonsk 26.38 262 *e*P **P 20 00 12.9 +1.1**
HRV pmax pmax
comp=Z,25nm,0.9s
HRV Adam Dziewonsk 26.38 262 *e*P **P 20 00 12.9 +1.1**
comp=Z,25nm,0.9s
HRV Adam Dziewonsk 26.38 262 *e*P **P 20 00 12.9 +1.1**
comp=Z,25nm,0.9s
MDV Middlebury 26.53 266 *e*P **P 20 00 12.3 -0.9**
MDV Middlebury 26.53 266 *e*P **P 20 00 12.3 -0.9**
HAU Haudompre 26.55 83 *e*P **P 20 00 14.4 +1.0**
comp=Z,37nm,0.9s
HAU *e*R
comp=Z,2µm,17.2s
HAU Haudompre 26.55 83 *e*P **P 20 00 14.4 +1.0**
HAU pmax pmax
comp=Z,37nm,0.9s
HAU Haudompre 26.55 83 *e*P **P 20 00 14.4 +1.0**
comp=Z,37nm,0.9s
HAU Haudompre 26.55 83 *e*P **P 20 00 14.4 +1.0**
comp=Z,19nm,0.9s
BRYW Bryant College 26.71 261 *e*P **P 20 00 13.3 -1.6**
comp=Z,71nm,1.1s
BRYW Bryant College 26.71 261 *e*P **P 20 00 13.3 -1.6**
comp=Z,71nm,1.1s
SSB Saint Sauveur 26.73 90 PFAKE 20 00 30.0 +15
SSB LR LR
comp=Z,2µm,20.0s
CDF Champ du Feu 26.94 82 *e*P **P 20 00 18.0 +1.0**
comp=Z,30nm,1.2s
CDF Champ du Feu 26.94 82 *e*P **P 20 00 18.0 +1.0**
CDF pmax pmax
comp=Z,30nm,1.2s
CDF Champ du Feu 26.94 82 *e*P **P 20 00 18.0 +1.0**
comp=Z,30nm,1.2s
CDF Champ du Feu 26.94 82 *e*P **P 20 00 18.0 +1.0**
comp=Z,15nm,1.2s
HINF Hinteralfeld 26.94 83 *e*P **P 20 00 17.8 +0.9**
comp=Z,18nm,0.9s
HINF Hinteralfeld 26.94 83 *e*P **P 20 00 17.8 +0.9**
HINF pmax pmax
comp=Z,18nm,0.9s
HINF Hinteralfeld 26.94 83 *e*P **P 20 00 17.8 +0.9**
comp=Z,18nm,0.9s
HINF Hinteralfeld 26.94 83 *e*P **P 20 00 17.8 +0.9**
comp=Z,9.0nm,0.9s
LASF Ste Croix 26.94 93 *e*P **P 20 00 18.8 +1.8**
comp=Z,114nm,1.7s
LASF Ste Croix 26.94 93 *e*P **P 20 00 18.8 +1.8**
comp=Z,114nm,1.7s
LASF Ste Croix 26.94 93 *e*P **P 20 00 18.8 +1.8**
comp=Z,57nm,1.7s
ECH Echery 26.95 82 *e*P **P 20 00 16.9 -0.1**
ECH pmax pmax
comp=Z,34nm,1.5s
ECH MLR MLR
comp=Z,2µm,20.0s
ECH Echery 26.95 82 *e*P **P 20 00 16.9 -0.1**
comp=Z,34nm,1.5s
ECH LR LR
comp=Z,2µm,20.0s
ECH Echery 26.95 82 *e*P **P 20 00 16.9 -0.1**
comp=Z,2µm,20.0s
CABF La Chapelle 27.02 86 *e*P **P 20 00 19.0 +1.2**
comp=Z,36nm,1.1s
CABF La Chapelle 27.02 86 *e*P **P 20 00 19.0 +1.2**
CABF pmax pmax
comp=Z,36nm,1.1s
CABF La Chapelle 27.02 86 *e*P **P 20 00 19.0 +1.2**
comp=Z,36nm,1.1s
CABF La Chapelle 27.02 86 *e*P **P 20 00 19.0 +1.2**
comp=Z,18nm,1.1s
VIVF Saint-Julien-l 27.03 91 *e*P **P 20 00 19.3 +1.6**
comp=Z,31nm,1.0s
VIVF Saint-Julien-l 27.03 91 *e*P **P 20 00 19.3 +1.6**
VIVF pmax pmax
comp=Z,31nm,1.0s
VIVF Saint-Julien-l 27.03 91 *e*P **P 20 00 19.3 +1.6**
comp=Z,31nm,1.0s
VIVF Saint-Julien-l 27.03 91 *e*P **P 20 00 19.3 +1.6**
comp=Z,16nm,1.0s
LONY Lake Ozonia 27.05 269 *e*P **P 20 00 17.3 -0.6**
comp=Z,41nm,1.1s
LONY LR LR
comp=Z,2µm,19.0s
LONY Lake Ozonia 27.05 269 *e*P **P 20 00 17.3 -0.6**
comp=Z,41nm,1.1s
NCB Newcomb 27.18 267 *e*P **P 20 00 18.4 -0.7**
comp=Z,61nm,1.2s
NCB LR LR
comp=Z,2µm,19.0s
NCB Newcomb 27.18 267 *e*P **P 20 00 18.4 -0.7**
comp=Z,61nm,1.2s
HFS Hagfors 27.43 55 P **P 20 00 21.0 -0.1**
HFS Hagfors 27.43 55 P **P 20 00 21.0 -0.1**
comp=Z,2.6nm,0.8s,baz=258,slow=12,SNR=6.1
HFS LR LR 20 09 20.5
comp=Z,3µm,21.5s,baz=282,slow=32
HFS Hagfors 27.43 55 P **P 20 00 21.0 -0.1**
TRY Troy 27.52 264 *e*P **P 20 00 24.5 +2.4**
comp=Z,43nm,1.0s
BFO Black Forest 27.61 81 PFAKE 20 00 30.0 +7.1
BFO LR LR
comp=Z,1µm,19.0s
ORIF Oris-en-Rattie 27.73 90 *e*P **P 20 00 24.8 +0.7**
comp=Z,29nm,1.1s
ORIF *e*R
comp=Z,2µm,21.5s
ORIF Oris-en-Rattie 27.73 90 *e*P **P 20 00 24.8 +0.7**
ORIF pmax pmax
comp=Z,29nm,1.1s
ORIF Oris-en-Rattie 27.73 90 *e*P **P 20 00 24.8 +0.7**
comp=Z,29nm,1.1s
ORIF Oris-en-Rattie 27.73 90 *e*P **P 20 00 24.8 +0.7**
comp=Z,14nm,1.1s
BNI Bardonecchia 28.15 89 PFAKE 20 00 40.0 +12
BNI LR LR
comp=Z,3µm,20.0s
TUE Stuetta 29.07 84 P **P 20 00 36.8 +0.7**
comp=Z,7.0nm,0.8s
TUE LR LR
comp=Z,895nm,19.0s
TUE Stuetta 29.07 84 P **P 20 00 36.8 +0.7**
comp=Z,7.0nm,0.8s
CLL Collm 29.19 73 *i* P **P 20 00 40.0 +3.1**
CLL *e*S **S 20 05 26.0 -2.2**
CLL pmax pmax
comp=Z,61nm,2.1s
CLL MLR MLR
comp=Z,1µm,21.6s
CLL Collm 29.19 73 *e*P **P 20 00 36.0 -0.9**
CLL *i* sP **P 20 00 40.0 +3.1**
comp=Z,61nm,2.1s
CLL *e*PP **PnPn 20 01 29.0 -0.7**
CLL *e*S **S 20 05 26.0 -2.2**
CLL L L 20 10 00.0
comp=Z,1µm,21.6s
BINY Binghamton 29.24 266 PFAKE 20 00 50.0 +13
BINY LR LR
comp=Z,2µm,22.0s
DAVOX Davos/Dischmat 29.25 83 P **P 20 00 37.6 -0.1**
DAVOX Davos/Dischmat 29.25 83 P **P 20 00 37.6 -0.1**
comp=Z,2.3nm,0.8s,baz=323,slow=20,SNR=2.8
DAVOX LR LR 20 11 37.4
comp=Z,2µm,20.2s,baz=297,slow=35
DAVOX Davos/Dischmat 29.25 83 P **P 20 00 37.6 -0.1**
NKC Novy Kostel 29.28 75 *e*S **S 20 05 33.2 +3.5**
NKC AMS AMS 20 13 20.0
comp=Z,2µm,16.3s
BBSR BB Station 29.47 238 PFAKE 20 00 50.0 +10
BBSR LR LR
comp=Z,3µm,22.0s
MDT Midelt 29.52 120 LR LR 20 10 57.8
comp=Z,912nm,19.5s,baz=256,slow=34
SADO Sadowa 29.75 273 P **P 20 00 41.4 -0.6**
SADO Sadowa 29.75 273 P **P 20 00 41.4 -0.6**
comp=Z,12nm,0.9s,baz=73,slow=9.1,SNR=5.1
SADO LR LR 20 12 04.1
comp=Z,3µm,19.8s,baz=71,slow=35
SADO Sadowa 29.75 273 P **P 20 00 41.3 -0.6**
BRG Berggiesshubel 29.91 73 *e*P **P 20 00 43.2 -0.1**
BRG *e* 20 00 50.5

BRG SS **S 20 05 34.0 -5.4**
BRG pmax pmax
comp=Z,7.0nm,1.4s
BRG pmax pmax
comp=Z,21nm,1.3s
BRG MLR MLR
comp=N,722nm,11.5s
BRG MLR MLR
comp=E,2µm,14.3s
BRG MLR MLR
comp=Z,2µm,14.0s
BRG Berggiesshubel 29.91 73 *e*P **P 20 00 43.2 -0.1**
comp=Z,7.0nm,1.4s
KHC Kasperske Hory 30.40 77 *e*P **P 20 00 45.0 -2.7**
KHC *e*S **S 20 05 50.1 +2.8**
KHC MLR MLR
comp=Z,2µm,15.8s
KHC Kasperske Hory 30.40 77 P **P 20 00 45.4 -2.4**
comp=Z,5.5nm,1.1s
KHC Kasperske Hory 30.40 77 *e*P **P 20 00 45.0 -2.7**
KHC *e* x 20 00 56.1
KHC *e* x 20 01 03.1
KHC *e*S **S 20 05 50.1 +2.8**
KHC AMS AMS 20 12 30.0
comp=Z,2µm,15.8s
KHC Kasperske Hory 30.40 77 P **P 20 00 45.3 -2.4**
comp=Z,5.5nm,1.1s
KHC *e*S **S 20 05 50.1 +2.8**
PVCC Panska Ves 30.41 74 *e*P P 20 00 51.9 +4.2
PVCC MLR MLR
comp=Z,2µm,14.2s
PVCC Panska Ves 30.41 74 *e*P P 20 00 51.9 +4.2
PVCC AMS AMS 20 12 50.0
comp=Z,2µm,14.2s
GERES GERESS Array B 30.60 77 P **P 20 00 49.0 -0.5**
GERES GERESS Array B 30.60 77 P **P 20 00 49.0 -0.5**
comp=Z,1.8nm,0.9s,baz=303,slow=7.8,SNR=7.0
GERES LR LR 20 12 16.6
comp=Z,861nm,19.6s,baz=293,slow=35
GERES GERESS Array B 30.60 77 P **P 20 00 49.0 -0.5**
PRU Pruhonice 30.61 75 *e*P **P 20 00 51.9 +2.4**
PRU *e*S **S 20 05 49.0 -1.5**
PRU MLR MLR
comp=Z,2µm,14.2s
PRU Pruhonice 30.61 75 *e*P **P 20 00 51.9 +2.4**
PRU *e*S **S 20 05 49.0 -1.5**
PRU AMS AMS 20 12 50.0
comp=Z,2µm,14.2s
KBS Kingsbay 30.87 16 *e*P P 20 00 56.7 +5.2
KBS pmax pmax
comp=Z,11nm,1.3s
KBS MLR MLR
comp=Z,2µm,20.0s
KBS Kingsbay 30.87 16 *e*P P 20 00 56.7 +5.2
comp=Z,12nm,1.3s
KBS LR LR
comp=Z,2µm,20.0s
VLC Villacollemand 30.88 87 PFAKE 20 01 00.0 +8.1
VLC LR LR
comp=Z,1µm,20.0s
UPC Upice 31.26 73 *e*P **P 20 00 58.0 +2.8**
UPC *e* 20 01 03.4
UPC Upice 31.26 73 *e*P **P 20 00 58.0 +2.8**
UPC *ex* x 20 01 03.4
SSPA Standing Stone 31.31 265 *e*P **P 20 00 55.4 -0.4**
comp=Z,6.8nm,0.6s
SSPA Standing Stone 31.31 265 *e*P **P 20 00 55.4 -0.4**
comp=Z,6.8nm,0.6s
SDMD Soldier's Deli 31.43 262 P P 20 01 05.0 +8.2
comp=Z,59nm,1.4s
TREC Trest 31.46 76 AMS AMS 20 13 00.0
comp=Z,2µm,14.5s
DPC Dobruska-Polom 31.50 73 *e*P P 20 01 00.8 +3.4
DPC *e*S **S 20 06 03.1 -1.5**
DPC MLR MLR
comp=Z,2µm,13.2s
DPC Dobruska-Polom 31.50 73 *e*P P 20 01 00.8 +3.4
DPC *e*S **S 20 06 03.1 -1.5**
DPC AMS AMS 20 15 10.0
comp=Z,2µm,13.2s
MYKA Terra Mystica 31.59 81 ⇑ *i*pP **P 20 00 58.2 0.0**
comp=Z,14nm,0.8s
MYKA Terra Mystica 31.59 81 ⇑ *i* P **P 20 00 58.2 0.0**
comp=Z,14nm,0.8s
MYKA Terra Mystica 31.59 81 ⇑ *i* P **P 20 00 58.2 0.0**
comp=Z,14nm,0.8s
ERPA Erie 31.72 269 PFAKE 20 01 10.0 +11
ERPA LR LR
comp=Z,2µm,19.0s
ARCES ARCESS Array B 32.05 35 P P 20 00 57.9 -4.0
ARCES ARCESS Array B 32.05 35 P P 20 00 57.9 -4.0
comp=Z,3.3nm,0.8s,baz=258,slow=7.1,SNR=7.9
ARE0 ARCESS Array S 32.05 35 P P 20 00 57.6 -4.3
JAVS Javornik 32.21 82 *e*P **P 20 01 03.3 -0.4**
RES Resolute Bay 32.26 334 P P **20 01 03.6 -0.1**
RES Resolute Bay 32.26 334 P P **20 01 03.6 -0.1**
comp=Z,1nm,1.1s,baz=98,slow=12,SNR=5.9
RES Resolute Bay 32.26 334 P **P 20 01 03.6 -0.1**
MORC Moravsky Berou 32.46 74 P P 20 01 01.5 -4.4
MORC pmax pmax
comp=Z,42nm,1.7s
MORC Moravsky Berou 32.46 74 P P 20 01 01.5 -4.4
comp=Z,42nm,1.7s
MORC Moravsky Berou 32.46 74 ⇓ *i* P **P 20 01 06.1 +0.2**
MORC Moravsky Berou 32.46 74 *e*P **P 20 01 06.0 +0.2**
PERS Pernice 32.47 80 *i* P **P 20 01 06.1 +0.1**
CBN Corbin 32.52 261 PFAKE 20 01 20.0 +14
CBN LR LR
comp=Z,4µm,21.0s
KEV Kevo 32.57 35 P P 20 01 10.1 +3.6
KEV pmax pmax
comp=Z,26nm,1.3s
KEV MLR MLR
comp=Z,535nm,22.0s
KEV Kevo 32.57 35 P P 20 01 10.1 +3.6
comp=Z,26nm,1.3s
KEV LR LR
comp=Z,535nm,22.0s
KEV Kevo 32.57 35 *e*p **P 20 01 08.9 +2.4**
comp=Z,3.8nm,1.0s
KEV Kevo 32.57 35 *e*P **P 20 01 08.9 +2.4**
comp=Z,3.8nm,1.0s
VISS Visnje 32.72 82 *i* P **P 20 01 09.9 +1.8**
OKC Ostrava-Krasne 32.79 73 *e*P **P 20 01 07.5 -1.1**
OKC MLR MLR
comp=Z,1µm,11.6s
OKC Ostrava-Krasne 32.79 73 *e*P **P 20 01 07.5 -1.1**
OKC AMS AMS 20 14 20.0
comp=Z,1µm,11.6s
ZST Bratislava 32.91 76 *e*P **P 20 01 09.5 -0.2**
ZST *e* 20 01 17.1
ZST pmax pmax
comp=Z,43nm,2.4s
ZST Bratislava 32.91 76 *e*P **P 20 01 09.5 -0.2**
ZST *ep*P **pP 20 01 17.1 +1.6**
VSL Villasalto 32.96 96 PFAKE 20 01 20.0 +10
VSL LR LR
comp=Z,1µm,19.0s
GLMI Grayling 33.05 277 PFAKE 20 01 20.0 +9.0
GLMI LR LR
comp=Z,1µm,19.0s
KAF Kangasniemi 33.16 49 *e*p **P 20 01 10.0 -1.7**
comp=Z,2.6nm,0.6s
FINES FINESS Array B 33.20 50 P P 20 01 08.8 -3.3
FINES FINESS Array B 33.20 50 P P 20 01 08.8 -3.3
comp=Z,6.3nm,0.8s,baz=264,slow=3.8,SNR=20
FINES LR LR 20 12 53.9
comp=Z,4µm,21.8s,baz=279,slow=33
FIA1 FINESS Array S 33.20 50 *e*P **P 20 01 10.5 -1.6**
FIA1 FINESS Array S 33.20 50 *e*P **P 20 01 10.5 -1.6**
BEL Belsk 33.47 69 *e*P P 20 01 18.0 +3.5
OJC Ojcow 33.58 72 *e*P **P 20 01 15.1 -0.5**
OJC Ojcow 33.58 72 *e*P **P 20 01 15.1 -0.5**
AQU L'Aquila 33.71 88 P **P 20 01 19.8 +3.0**
comp=Z,32nm,1.1s
AQU LR LR
comp=Z,2µm,21.0s
VYHS Vyhne 33.80 75 *e*P **P 20 01 17.9 +0.4**
VYHS *e* 20 01 25.7
VYHS pmax pmax
comp=Z,7.0nm,1.6s
VYHS Vyhne 33.80 75 *e*P **P 20 01 17.9 +0.4**
VYHS *ep*P **pP 20 01 25.7 +2.5**
SUW Suwalki 33.95 64 *e*P **P 20 01 18.5 -0.2**
SUW pmax pmax
comp=Z,30nm,0.9s
SUW Suwalki 33.95 64 *e*P **P 20 01 18.5 -0.2**
comp=Z,30nm,0.9s
SUW Suwalki 33.95 64 *e*P **P 20 01 19.5 +0.8**
SUW Suwalki 33.95 64 *e*P **P 20 01 18.5 -0.2**
comp=Z,30nm,0.9s
ACSO Alum Creek Sta 34.66 269 PFAKE 20 01 40.0 +15
ACSO LR LR
comp=Z,2µm,19.0s
PSZ Piszkesteto 34.69 75 P **P 20 01 23.1 -2.2**
PSZ pmax pmax
comp=Z,24nm,1.4s
PSZ MLR MLR
comp=Z,736nm,20.0s
PSZ Piszkesteto 34.69 75 P **P 20 01 23.1 -2.2**
comp=Z,24nm,1.4s
PSZ LR LR
comp=Z,736nm,20.0s
PSZ Piszkesteto 34.69 75 P **P 20 01 23.1 -2.2**
comp=Z,24nm,1.4s
CNNC Cliffs of the 34.80 257 PFAKE 20 01 40.0 +14
CNNC LR LR
comp=Z,4µm,19.0s
BLA Blacksburg 35.00 262 PFAKE 20 01 40.0 +12
BLA LR LR
comp=Z,3µm,19.0s
APA Apatity 35.10 38 ⇑ *i* P **P 20 01 31.0 +2.5**
APA *i* S **S 20 07 02.0 +2.1**
APA MLR MLR
comp=Z,3µm,23.0s
COWI Conover 35.11 281 *e*P **P 20 01 28.1 -0.7**
comp=Z,22nm,1.1s
COWI LR LR
comp=Z,3µm,19.0s
COWI Conover 35.11 281 *e*P **P 20 01 28.1 -0.7**
comp=Z,22nm,1.1s
CRVS Cervenica-Dubn 35.14 73 *e*P **P 20 01 29.2 +0.1**
CRVS *e* 20 01 36.2
CRVS pmax pmax
comp=Z,12nm,1.3s
CRVS Cervenica-Dubn 35.14 73 *e*P **P 20 01 29.2 +0.1**
CRVS *ep*P **pP 20 01 36.1 +1.2**
JOF Joensuu 35.23 47 *ep* P 20 01 26.2 -3.4
comp=Z,3.6nm,0.7s
KEST Kesra 35.38 101 P **P 20 01 30.9 -0.4**
KEST Kesra 35.38 101 P **P 20 01 30.9 -0.4**
comp=Z,2.7nm,0.9s,baz=259,slow=3.9,SNR=5.5
KEST Kesra 35.38 101 P **P 20 01 31.0 -0.4**
LVZ Lovozero 35.51 38 *e*P **P 20 01 32.9 +0.8**
LVZ pmax pmax
comp=Z,12nm,1.0s
KWP Kalwaria Pacla 35.52 71 *e*P **P 20 01 32.1 -0.3**
KWP pmax pmax
comp=Z,9.0nm,0.6s
KWP MLR MLR
comp=Z,1µm,20.0s
KWP Kalwaria Pacla 35.52 71 *e*P **P 20 01 32.1 -0.3**
comp=Z,8.9nm,0.6s
KWP LR LR
comp=Z,1µm,20.0s
KWP Kalwaria Pacla 35.52 71 ⇓ *i* P P 20 01 38.2 +5.8
KWP Kalwaria Pacla 35.52 71 *e*P **P 20 01 35.1 +2.7**
KWP Kalwaria Pacla 35.52 71 *e*P **P 20 01 32.1 -0.3**
comp=Z,8.9nm,0.6s
EYMN Ely 35.58 286 *e*P **P 20 01 30.4 -2.4**
comp=Z,29nm,1.2s
EYMN LR LR
comp=Z,3µm,19.0s
EYMN Ely 35.58 286 *e*P **P 20 01 30.5 -2.4**
comp=Z,29nm,1.2s
KOLS Kolonicke sedl 35.60 72 *e*P **P 20 01 33.0 0.0**
KOLS *e* 20 01 41.6
KOLS pmax pmax
comp=Z,8.0nm,1.2s
KOLS Kolonicke sedl 35.60 72 *e*P **P 20 01 33.0 0.0**
KOLS *ep*P **pP 20 01 41.6 +2.8**
UZH Uzhgorod 35.76 73 *e*P **P 20 01 34.3 0.0**
UZH *i* 20 01 42.9
LVV L'vov 36.20 70 *e*P P 20 01 45.0 +6.9
MNK Minsk 36.28 61 *e*P **P 20 01 38.0 -0.8**
MICGM Minsk 36.31 61 *e*P **P 20 01 38.0 -1.0**
CUC Castrocucco 36.57 89 PFAKE 20 01 50.0 +8.5
CUC LR LR
comp=Z,1µm,20.0s
BZS Buzias 36.88 78 ⇑ *i* P **P 20 01 43.4 -0.6**
ULM Lac du Bonnet 37.01 291 P **P 20 01 44.4 -0.6**
ULM Lac du Bonnet 37.01 291 P **P 20 01 44.4 -0.6**
comp=Z,4.2nm,0.8s,baz=56,slow=9.0,SNR=4.9
ULM LR LR 20 15 46.3
comp=Z,2µm,18.5s,baz=250,slow=34
ULM Lac du Bonnet 37.01 291 P **P 20 01 44.4 -0.6**
SFIN Scholer Farm 37.07 272 ⇑ P **P 20 01 46.9 +1.2**
baz=37
TZTN Tazewell 37.33 264 *e*P **P 20 01 49.9 +2.0**
comp=Z,42nm,1.0s
JSC Jenkinsville 37.47 259 *e*P **P 20 01 49.2 +0.1**
JSC Jenkinsville 37.47 259 *e*P **P 20 01 49.2 +0.1**
JSC Jenkinsville 37.47 259 *e*P **P 20 01 49.2 +0.1**
TIP Timpagrande 37.65 90 PFAKE 20 02 00.0 +9.4
TIP LR LR
comp=Z,2µm,19.0s
NHSC New Hope 37.65 257 PFAKE 20 02 00.0 +9.4
NHSC LR LR
comp=Z,2µm,20.0s
CEL Celeste 37.69 92 PFAKE 20 02 00.0 +9.0
CEL LR LR
comp=Z,2µm,22.0s
TMCR Tamitsa 37.77 43 *e*P **P 20 01 52.3 +1.0**
TMCR pmax pmax
comp=Z,55nm,1.3s
BUR08 Bucovina Ar. S 37.94 73 *e*P **P 20 01 53.3 +0.2**
BUR08 Bucovina Ar. S 37.94 73 *e*P **P 20 01 53.3 +0.2**
AGMN Agassiz Nation 37.95 289 P **P 20 01 51.2 -1.8**
comp=Z,33nm,1.6s
AGMN LR LR
comp=Z,3µm,21.0s
AGMN Agassiz Nation 37.95 289 P **P 20 01 51.2 -1.8**
comp=Z,33nm,1.6s
BURAR Bucovina Array 37.96 73 ⇓ *i* P **P 20 01 52.6 -0.7**
BURAR Bucovina Array 37.96 73 ⇓ *i* P **P 20 01 52.6 -0.7**
TIR Tirane 38.22 85 PFAKE 20 02 10.0 +15
TIR LR LR
comp=Z,1µm,20.0s
HDIL Hopedale 38.30 274 P **P 20 01 57.3 +1.2**
HDIL LR LR
comp=Z,2µm,21.0s
HDIL Hopedale 38.30 274 P **P 20 01 57.3 +1.2**
FFC Flin Flon 38.34 301 *i* P **P 20 01 57.4 +1.1**
FFC Flin Flon 38.34 301 *e*P **P 20 01 56.1 -0.2**
comp=Z,20nm,1.2s
FFC LR LR
comp=Z,900nm,19.0s
FFC Flin Flon 38.34 301 *e*P **P 20 01 56.1 -0.2**
comp=Z,20nm,1.2s
WDD Wield Dalam 38.41 96 PFAKE 20 02 10.0 +13
WDD LR LR
comp=Z,1µm,19.0s
BARS Barje 38.55 81 *e*P **P 20 01 57.1 -1.0**
CPCT Cooper Cave 38.65 264 *e*P **P 20 01 56.8 -2.2**
CPCT Cooper Cave 38.65 264 *e*P **P 20 01 56.8 -2.2**
SACV Santiago Islan 38.66 162 PFAKE 20 02 10.0 +11
SACV LR LR
comp=Z,848nm,20.0s
KIEV Kiev 38.72 66 *e*P **P 20 02 00.8 +1.4**
KIEV pmax pmax
comp=Z,13nm,0.9s
KIEV MLR MLR
comp=Z,1µm,19.0s
KIEV Kiev 38.72 66 *e*P **P 20 02 00.8 +1.4**
comp=Z,13nm,0.9s
KIEV LR LR
comp=Z,1µm,19.0s
KIEV Kiev 38.72 66 *e*P **P 20 02 00.8 +1.4**
comp=Z,13nm,0.9s
AK01 Malin Array Si 38.72 66 *e*P **P 20 01 58.2 -1.2**
AK01 Malin Array Si 38.72 66 *e*P **P 20 01 58.2 -1.2**
AKASG Malin Array Be 38.72 66 P P **P 20 01 58.5 -0.9**
AKASG Malin Array Be 38.72 66 P P **P 20 01 58.5 -0.9**
AKASG Malin Array Be 38.72 66 P P **P 20 01 58.5 -0.9**
comp=Z,4.0nm,0.9s,baz=300,slow=8.2,SNR=12
AKASG LR LR 20 17 23.8
comp=Z,1µm,19.6s,baz=295,slow=36
AKASG Malin Array Be 38.72 66 P P **P 20 01 58.5 -0.9**
AK02 Malin Array Si 38.73 66 *e*P **P 20 01 59.0 -0.5**
AK02 Malin Array Si 38.73 66 *e*P **P 20 01 59.0 -0.5**

TESR		**39.37**	**73**	⇓	*i*P		**P**	**20 02 08.1**	**+3.1**
MLR	**Muntele Rosu**	**39.51**	**75**	⇑	*i*P		**P**	**20 02 07.3**	**+1.0**
MLR	**Muntele Rosu**	**39.51**	**75**	⇑	*i*P		**P**	**20 02 07.3**	**+1.0**
VTS	**Vitosha**	**39.51**	**81**	⇓	*i*P		P	20 02 14.3	+7.9
PLOR	**Plostina**	**39.73**	**74**	⇑	*i*P		**P**	**20 02 08.5**	**+0.5**
PLOR	**Plostina**	**39.73**	**74**	⇑	*i*P		**P**	**20 02 08.5**	**+0.5**
VRI	**Vrincioaia**	**39.77**	**74**	⇓	*i*P		**P**	**20 02 10.3**	**+2.0**
VRI	**Vrincioaia**	**39.77**	**74**	⇓	*i*P		**P**	**20 02 10.3**	**+2.0**
SCIA	**State Center**	**39.88**	**278**		PFAKE			20 02 20.0	+11
SCIA					LR	LR			
	comp=Z,2μm,19.0s								
OBN	**Obninsk**	**40.59**	**57**		*e*P		**P**	**20 02 16.5**	**+1.6**
OBN					*e*			20 02 23.4	
OBN					*e*SS	SS		20 11 23.3	+0.6
OBN					pmax	pmax			
	comp=Z,31nm,1.6s								
OBN					MLR	MLR			
	comp=Z,3μm,20.0s								
FVM	**French Village**	**40.59**	**272**		*e*P		**P**	**20 02 14.6**	**-0.6**
FVM					pmax	pmax			
	comp=Z,30nm,1.0s								
FVM	**French Village**	**40.59**	**272**		*e*P		**P**	**20 02 14.6**	**-0.6**
	comp=Z,30nm,1.0s								
FVM	**French Village**	**40.59**	**272**		*e*P		**P**	**20 02 14.6**	**-0.6**
	comp=Z,30nm,1.0s								
ANWB	**Willy Bob**	**40.71**	**221**		PFAKE			20 02 30.0	+14
ANWB					LR	LR			
	comp=Z,1μm,20.0s								
MOS	**Moscow**	**40.83**	**56**		*e*P		**P**	**20 02 18.8**	**+1.9**
MOS					*e*			20 03 53.5	
MOS					*e*			20 04 12.0	
MOS					*e*			20 12 20.9	
MOS					MLR	MLR			
	comp=Z,2μm,14.0s								
MOS					MLR	MLR			
	comp=N,1μm,16.0s								
MOS					MLR	MLR			
	comp=E,1μm,14.0s								
ECSD	**EROS Data Cent**	**40.85**	**283**		*e*P		**P**	**20 02 17.6**	**+0.3**
	comp=E,29nm,1.3s								
ECSD					LR	LR			
	comp=Z,4μm,19.0s								
ECSD	**EROS Data Cent**	**40.85**	**283**		*e*P		**P**	**20 02 17.6**	**+0.3**
	comp=Z,29nm,1.3s								
CFR	**Carcaliu**	**40.97**	**74**	⇓	*i*P		P	20 02 13.6	-4.6
YKW3	**Yellowknife Ar**	**41.09**	**316**		*e*P		**P**	**20 02 18.3**	**-0.6**
	comp=Z,0.7nm,1.5s								
YKW3	**Yellowknife Ar**	**41.09**	**316**		*e*P		**P**	**20 02 18.3**	**-0.6**
	comp=Z,0.7nm,1.5s								
YKA	**Yellowknife Ar**	**41.11**	**316**		P		**P**	**20 02 18.9**	**-0.2**
YKA					PcP		**PcP**	**20 04 17.6**	**-0.6**
YKA	**Yellowknife Ar**	**41.11**	**316**		P		**P**	**20 02 18.9**	**-0.2**
	comp=Z,4.5nm,1.0s,baz=63,slow=8.6,SNR=36								
YKA					PcP		**PcP**	**20 04 17.6**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=59,slow=3.2,SNR=4.0								
YKA	**Yellowknife Ar**	**41.11**	**316**		P		**P**	**20 02 18.9**	**-0.2**
YKA	**Yellowknife Ar**	**41.11**	**316**		PcP		**PcP**	**20 04 17.6**	**-0.6**
PLAL	**Pickwick Lake**	**41.12**	**266**		PFAKE			20 02 30.0	+10
PLAL					LR	LR			
	comp=Z,2μm,19.0s								
TIRR	**Tirgusor**	**41.54**	**75**	⇓	*i*P		**P**	**20 02 24.8**	**+1.9**
TIRR	**Tirgusor**	**41.54**	**75**	⇓	*i*P		**P**	**20 02 24.8**	**+1.9**
GRTK	**Grand Turk**	**41.62**	**236**		PFAKE			20 02 30.0	+6.2
GRTK					LR	LR			
	comp=Z,2μm,20.0s								
GNAR	**Gosnell**	**41.65**	**269**		P		**P**	**20 02 24.7**	**+0.8**
	comp=Z,2μm,1.4s								
GNAR	**Gosnell**	**41.65**	**269**		P		**P**	**20 02 24.7**	**+0.8**
	comp=Z,2μm,1.4s								
LRAL	**Lakeview Retre**	**41.79**	**263**		*e*P		**P**	**20 02 24.9**	**-0.2**
	comp=Z,4.6nm,0.5s								
LRAL					LR	LR			
	comp=Z,3μm,19.0s								
LRAL	**Lakeview Retre**	**41.79**	**263**		*e*P		**P**	**20 02 24.9**	**-0.2**
	comp=Z,4.6nm,0.5s								
SJG	**San Juan**	**42.17**	**227**		PFAKE			20 02 40.0	+12
SJG					LR	LR			
	comp=Z,1μm,20.0s								
OXF	**Oxford**	**42.24**	**267**		*e*P		**P**	**20 02 27.8**	**-1.0**
OXF					pmax	pmax			
	comp=Z,70nm,1.1s								
OXF					MLR	MLR			
	comp=Z,2μm,19.0s								
OXF	**Oxford**	**42.24**	**267**		*e*P		**P**	**20 02 27.8**	**-1.0**
	comp=Z,70nm,1.1s								
OXF					LR	LR			
	comp=Z,2μm,19.0s								
OXF	**Oxford**	**42.24**	**267**		*e*P		**P**	**20 02 27.8**	**-1.0**
	comp=Z,70nm,1.1s								
A24A	**Westby**	**42.25**	**294**	⇓	P		**P**	**20 02 30.5**	**+1.8**
	baz=42								
DGMT	**Dagmar**	**42.60**	**293**		*e*P		**P**	**20 02 33.4**	**+1.8**
	comp=Z,32nm,1.1s								
DGMT					LR	LR			
	comp=Z,1μm,20.0s								
DGMT	**Dagmar**	**42.60**	**293**	⇑	P		**P**	**20 02 33.4**	**+1.8**
	baz=42								
TAM	**Tamanrasset**	**42.89**	**118**		PFAKE			20 02 50.0	+16
TAM					LR	LR			
	comp=Z,486nm,20.0s								
B23A	**Brockton**	**43.05**	**294**	⇑	P		**P**	**20 02 37.0**	**+1.7**
	baz=43								
FDF	**Fort de France**	**43.13**	**219**		PFAKE			20 02 50.0	+14
FDF					LR	LR			
	comp=Z,2μm,20.0s								
BRAL	**Brewton**	**43.24**	**261**		PFAKE			20 02 50.0	+13
BRAL					LR	LR			
	comp=Z,2μm,21.0s								
A22A	**Carney Farms,**	**43.28**	**295**	⇓	P		**P**	**20 02 38.5**	**+1.4**
	baz=43								
C23A	**Lambert**	**43.52**	**293**	⇓	P		**P**	**20 02 40.9**	**+1.9**
	baz=43								
KSU1	**Kansas State U**	**43.63**	**277**		*e*P		**P**	**20 02 40.4**	**+0.4**
	comp=Z,37nm,0.8s								
KSU1					LR	LR			
	comp=Z,1μm,20.0s								
KSU1	**Kansas State U**	**43.63**	**277**		*e*P		**P**	**20 02 40.4**	**+0.4**
	comp=Z,37nm,0.8s								
SDDR	**Presa de Saban**	**43.83**	**234**		PFAKE			20 02 50.0	+8.2
SDDR					LR	LR			
	comp=Z,1μm,20.0s								
VSR	**Storozhevoye**	**43.88**	**61**		*e*P		**P**	**20 02 42.6**	**+0.8**
VSR					*e*PP		**pP**	**20 02 45.7**	**-2.0**
VSR					*e*			20 04 25.4	
VSR					*e*S		**S**	**20 09 12.6**	**+0.8**
VSR					*e*SS		**SS**	**20 12 27.6**	**-0.2**
VSR					pmax	pmax			
	comp=N,7.0nm,0.9s								
VSR					pmax	pmax			
	comp=E,10.0nm,0.9s								
VSR					pmax	pmax			
	comp=Z,10.0nm,0.9s								
VSR					pmax	pmax			
	comp=Z,10.0nm,2.2s								
VSR					pmax	pmax			
	comp=N,10.0nm,1.1s								
VSR					pmax	pmax			
	comp=E,10.0nm,1.1s								
VSR					smax	smax			
	comp=N,130nm,4.4s								
VSR					smax	smax			
	comp=E,60nm,4.4s								
VSR					smax	smax			
	comp=Z,60nm,4.4s								
VSR					MLR	MLR			
	comp=N,630nm,13.0s								
VSR					MLR	MLR			
	comp=E,700nm,13.0s								
VSR					MLR	MLR			
	comp=Z,1μm,13.0s								
D23A	**Lindsay**	**43.89**	**292**	⇑	P		**P**	**20 02 43.8**	**+1.8**
	baz=44								
C22A	**Vida**	**43.95**	**293**	⇓	P		**P**	**20 02 44.2**	**+1.7**
	baz=44								
BBGH	**Gun Hill**	**44.01**	**216**		PFAKE			20 02 50.0	+6.8
BBGH					LR	LR			
	comp=Z,4μm,21.0s								
VORD	**Divnogorie**	**44.08**	**61**		*e*P		**P**	**20 02 42.6**	**-0.8**
VORD					*e*S		**S**	**20 09 12.9**	**-1.8**
VORD					*e*SS		**SS**	**20 12 27.6**	**-4.2**
VORD					pmax	pmax			
	comp=N,20nm,0.9s								
VORD					pmax	pmax			
	comp=E,20nm,0.9s								
VORD					pmax	pmax			
	comp=Z,10.0nm,0.9s								
VORD					smax	smax			
	comp=E,270nm,5.2s								
VORD					smax	smax			
	comp=Z,90nm,5.2s								
VORD					smax	smax			
	comp=N,30nm,4.9s								
VORD					MLR	MLR			
	comp=N,840nm,16.0s								
VORD					MLR	MLR			
	comp=E,710nm,16.0s								
VORD					MLR	MLR			
	comp=Z,1μm,16.0s								
VBMS	**Vicksburg**	**44.49**	**265**		PFAKE			20 03 00.0	+13
VBMS					LR	LR			
	comp=Z,3μm,19.0s								
C21A	**Desert Coulee**	**44.58**	**294**	⇑	P		**P**	**20 02 48.0**	**+0.5**
	baz=44								
F23A	**Volborg**	**44.83**	**291**	⇑	P		**P**	**20 02 51.2**	**+1.7**
	baz=45								
A19A	**Klindworth Far**	**44.87**	**296**	⇓	P		**P**	**20 02 51.0**	**+1.1**
	baz=45								
H24A	**Dirks Ranch, A**	**44.91**	**289**	⇓	P		**P**	**20 02 51.1**	**+0.8**
	baz=45								
D21A	**La Casta Ranch**	**44.95**	**293**	⇑	P		**P**	**20 02 50.6**	**+0.1**
	baz=45								
GTBY	**Guantanamo Bay**	**44.98**	**239**		PFAKE			20 03 00.0	+9.1
GTBY					LR	LR			
	comp=Z,2μm,22.0s								
G23A	**Biddle**	**45.12**	**290**	⇑	P		**P**	**20 02 54.0**	**+2.0**
	baz=45								
C20A	**Veseth Ranch,**	**45.15**	**294**	⇑	P		**P**	**20 02 53.7**	**+1.7**
	baz=45								
TUL1	**Tulsa**	**45.20**	**273**	⇓	P		**P**	**20 02 54.3**	**+1.7**
	baz=45								
VRHR	**Novokhopersk**	**45.25**	**60**		*e*P		**P**	**20 02 53.4**	**+0.7**
VRHR					*e*PP		**pP**	**20 02 55.9**	**-2.7**
VRHR					*e*			20 04 39.9	
VRHR					*e*S		**S**	**20 09 32.9**	**+1.3**
VRHR					*e*SS		**SS**	**20 12 54.5**	**+0.5**
VRHR					pmax	pmax			
	comp=Z,9.0nm,0.9s								
VRHR					pmax	pmax			
	comp=N,3.0nm,0.5s								
VRHR					pmax	pmax			
	comp=E,10.0nm,0.9s								
VRHR					pmax	pmax			
	comp=N,8.0nm,1.4s								
VRHR					pmax	pmax			
	comp=E,20nm,1.4s								
VRHR					pmax	pmax			
	comp=Z,10.0nm,1.4s								
VRHR					smax	smax			
	comp=N,90nm,2.8s								
VRHR					smax	smax			
	comp=E,90nm,2.8s								
VRHR					smax	smax			
	comp=Z,30nm,2.8s								
VRHR					MLR	MLR			
	comp=Z,1μm,18.0s								
VRHR					MLR	MLR			
	comp=N,170nm,9.0s								
VRHR					MLR	MLR			
	comp=E,920nm,18.0s								
F22A	**Rosebud**	**45.28**	**291**	⇑	P		**P**	**20 02 55.5**	**+2.4**
	baz=45								
D20A	**Manuel Ranch,**	**45.58**	**294**	⇑	P		**P**	**20 02 57.3**	**+1.8**
	baz=45								
GRGR	**Grenville**	**45.70**	**218**		PFAKE			20 03 10.0	+13
GRGR					LR	LR			
	comp=Z,1μm,20.0s								
C19A	**Slack Wire Ran**	**45.71**	**295**	⇑	P		**P**	**20 02 58.1**	**+1.5**
	baz=46								
B18A	**Beardsley Farm**	**45.73**	**296**	⇑	P		**P**	**20 02 58.1**	**+1.4**
	baz=46								
OGNE	**Ogallala**	**45.73**	**283**		PFAKE			20 03 10.0	+13
OGNE					LR	LR			
	comp=Z,3μm,19.0s								
E20A	**Meyer Farm, Mu**	**45.91**	**293**	⇑	P		**P**	**20 03 00.1**	**+2.0**
	baz=46								
EGMT	**Eagleton**	**45.93**	**296**		PFAKE			20 03 10.0	+12
EGMT					LR	LR			
	comp=Z,723nm,20.0s								
D19A	**Cripps Ranch,**	**45.95**	**294**	⇑	P		**P**	**20 02 59.6**	**+1.2**
	baz=46								
H22A	**Clearmont**	**46.03**	**290**	⇑	P		**P**	**20 03 00.6**	**+1.4**
	baz=46								
G21A	**Lodge Grass**	**46.15**	**291**	⇓	P		**P**	**20 03 01.4**	**+1.4**
	baz=46								
E19A	**Rath Farm, Rou**	**46.31**	**293**	⇑	P		**P**	**20 03 03.1**	**+1.8**
	baz=46								
F20A	**Billings**	**46.34**	**292**	⇓	P		**P**	**20 03 02.7**	**+1.2**
	baz=46								
N26A	**Koester Ranch,**	**46.51**	**284**	⇑	P		**P**	**20 03 04.3**	**+1.3**
	baz=46								
I22A	**9 Mile Ranch,**	**46.53**	**289**	⇓	P		**P**	**20 03 04.5**	**+1.4**
	baz=46								
ANN	**Anapa**	**46.57**	**69**		pmax	pmax			
	comp=Z,42nm,1.2s								
ANN	**Anapa**	**46.57**	**69**		*e*P		P	20 03 06.9	+3.7
ANN					*e*			20 04 39.0	
ANN					*e*			20 04 58.7	
ANN					*e*S		S	20 09 58.4	+7.6
ANN					pmax	pmax			
	comp=Z,35nm,1.6s								
ANN					MLR	MLR			
	comp=N,571nm,16.0s								
ANN					MLR	MLR			
	comp=E,1μm,16.0s								
ANN					MLR	MLR			
	comp=Z,1μm,16.0s								
G20A	**Bridger**	**46.72**	**292**	⇓	P		**P**	**20 03 06.0**	**+1.4**
	baz=46								
F19A	**Roth Farm, Mol**	**46.75**	**293**	⇑	P		**P**	**20 03 06.1**	**+1.3**
	baz=47								
T31A	**Randall Ranch,**	**46.77**	**277**	⇓	P		**P**	**20 03 06.9**	**+1.9**
	baz=47								
B16A	**M & M Farms, S**	**46.77**	**297**	⇓	P		**P**	**20 03 06.6**	**+1.7**
	baz=47								
J22A	**Midwest**	**46.82**	**289**	⇓	P		**P**	**20 03 07.2**	**+1.7**
	baz=47								
ISP	**Isparta**	**46.85**	**81**		PFAKE			20 03 20.0	+14
ISP					LR	LR			
	comp=Z,694nm,19.0s								
E18A	**Harlowton**	**46.87**	**294**	⇓	P		**P**	**20 03 07.5**	**+1.7**
	baz=47								
ANTO	**Ankara**	**46.90**	**77**		PFAKE			20 03 20.0	+14
ANTO					LR	LR			
	comp=Z,1μm,20.0s								
O26A	**Horse Wrangler**	**46.93**	**283**	⇓	P		**P**	**20 03 08.8**	**+2.4**
	baz=47								
D17A	**Six Diamond Ra**	**46.95**	**295**	⇓	P		**P**	**20 03 07.7**	**+1.3**
	baz=47								
A15A	**Johnson Ranch,**	**47.00**	**298**	⇓	P		**P**	**20 03 08.3**	**+1.6**
	baz=47								
H20A	**Greybull**	**47.04**	**291**	⇓	P		**P**	**20 03 09.2**	**+2.1**
	baz=47								
I21A	**Big Trails, Te**	**47.04**	**290**	⇑	P		**P**	**20 03 08.4**	**+1.2**
	baz=47								
M24A	**Cheyenne**	**47.06**	**286**	⇓	P		**P**	**20 03 08.1**	**+0.8**
	baz=47								
C16A	**Fuhringer Ranc**	**47.15**	**297**	⇑	P		**P**	**20 03 09.6**	**+1.7**
	baz=47								
F18A	**Big Timber**	**47.16**	**293**	⇓	P		**P**	**20 03 10.0**	**+2.0**
	baz=47,SNR=6.5								
L23A	**Garrett**	**47.17**	**287**	⇑	P		**P**	**20 03 09.5**	**+1.2**
	baz=47								
GCMT	**Greycliff**	**47.20**	**293**		*e*P		**P**	**20 03 10.2**	**+1.8**
	comp=Z,20nm,1.4s								
B15A	**Bradely Ranch,**	**47.30**	**298**	⇓	P		**P**	**20 03 09.9**	**+0.9**
	baz=47								
K22A	**Casper**	**47.31**	**288**	⇑	P		**P**	**20 03 09.6**	**+0.3**
	baz=47								
A14A	**Double T Ranch**	**47.37**	**299**	⇓	P		**P**	**20 03 10.0**	**+0.4**
	baz=47								
RLMT	**Red Lodge**	**47.38**	**292**		P		**P**	**20 03 12.2**	**+2.3**
	comp=Z,13nm,1.0s								
RLMT					LR	LR			
	comp=Z,1μm,20.0s								
P26A	**Davis Ranch, A**	**47.39**	**283**	⇑	P		**P**	**20 03 09.9**	**0.0**
	baz=47								
G18A	**Lazy EL Ranch,**	**47.42**	**293**	⇓	P		**P**	**20 03 10.6**	**+0.5**
	baz=47								
I20A	**Worland**	**47.44**	**290**	⇑	P		**P**	**20 03 10.3**	**+0.1**
	baz=47								
E17A	**Martinsdale**	**47.46**	**295**	⇓	P		**P**	**20 03 11.1**	**+0.7**
	baz=47								
H19A	**Powell**	**47.49**	**292**	⇓	P		**P**	**20 03 09.0**	**-1.6**
	baz=47								
O25A	**Wiggins**	**47.49**	**284**	⇑	P		**P**	**20 03 10.6**	**-0.1**
	baz=47								
BR131	**Keskin Array S**	**47.50**	**77**		*e*P		P	20 03 06.5	-4.2
	comp=Z,6.9nm,0.9s								
BRTR	**Keskin Array B**	**47.50**	**77**		P		**P**	**20 03 08.1**	**-2.6**
BRTR	**Keskin Array B**	**47.50**	**77**		P		**P**	**20 03 08.1**	**-2.6**
	comp=Z,1.7nm,0.8s,baz=299,slow=7.2,SNR=10								
BRTR					LR		LR	20 24 53.9	
	comp=Z,381nm,18.1s,baz=300,slow=38								
D16A	**Dana Ranch, Ca**	**47.50**	**296**	⇓	P		**P**	**20 03 10.1**	**-0.6**
	baz=47,SNR=6.3								
PHWY	**Pilot Hill**	**47.53**	**286**		P		**P**	**20 03 10.2**	**-1.0**
	comp=Z,4.6nm,0.8s								
PHWY	**Pilot Hill**	**47.53**	**286**		P		**P**	**20 03 10.2**	**-1.0**
	comp=Z,4.6nm,0.8s								
M23A	**Laramie**	**47.58**	**286**	⇓	P		**P**	**20 03 11.4**	**-0.1**
	baz=47								
WALA	**Waterton Lakes**	**47.58**	**299**		*e*P		P	20 03 07.5	-3.8
	comp=Z,1.0nm,1.1s								
C15A	**Salmond Ranch,**	**47.64**	**297**	⇑	P		**P**	**20 03 11.5**	**-0.2**
	baz=47								
B14A	**Marquette Ranc**	**47.65**	**298**	⇑	P		**P**	**20 03 11.9**	**+0.1**
	baz=47								
MTDJ	**Mount Denham**	**47.66**	**240**		PFAKE			20 03 20.0	+7.9
MTDJ					LR	LR			
	comp=Z,1μm,20.0s								
F17A	**Fitzpatrick Pl**	**47.68**	**294**	⇑	P		**P**	**20 03 13.3**	**+1.2**
	baz=48,SNR=6.2								
SOKR	**Solikamsk**	**47.73**	**43**		*e*P		**P**	**20 03 14.8**	**+2.8**
SOKR					pmax	pmax			
	comp=Z,10.0nm,1.1s								
J20A	**Shoshoni**	**47.78**	**290**	⇑	P		**P**	**20 03 14.4**	**+1.5**
	baz=48								
WMOK	**Wichita Mounta**	**47.80**	**274**		*e*P		**P**	**20 03 12.1**	**-0.9**
WMOK					pmax	pmax			
	comp=Z,14nm,1.1s								
WMOK					MLR	MLR			
	comp=Z,1μm,20.0s								
WMOK	**Wichita Mounta**	**47.80**	**274**		*e*P		**P**	**20 03 12.1**	**-0.9**
	comp=Z,14nm,1.1s								
WMOK					LR	LR			
	comp=Z,1μm,20.0s								
WMOK	**Wichita Mounta**	**47.80**	**274**		*e*P		**P**	**20 03 12.1**	**-0.9**
	comp=Z,14nm,1.1s								
HRY	**Holter Researc**	**47.85**	**295**		*e*P		**P**	**20 03 13.2**	**-0.1**
	comp=Z,13nm,0.9s								
HRY	**Holter Researc**	**47.85**	**295**		*e*P		**P**	**20 03 13.2**	**-0.1**
	comp=Z,13nm,0.9s								
E16A	**East Helena**	**47.87**	**295**	⇑	P		**P**	**20 03 14.7**	**+1.2**
	baz=48								
H18A	**Shoshone NF, C**	**47.87**	**292**	⇓	P		**P**	**20 03 15.6**	**+1.9**
	baz=48,SNR=6.8								
R27A	**Eads**	**47.88**	**281**	⇑	P		**P**	**20 03 14.7**	**+1.1**
	baz=48								
I19A	**Meeteetse**	**47.88**	**291**	⇓	P		**P**	**20 03 15.5**	**+1.7**
	baz=48								
Q26A	**Hugo**	**47.90**	**282**	⇓	P		**P**	**20 03 13.7**	**-0.1**
	baz=48								
D15A	**Lincoln**	**48.03**	**296**	⇑	P		**P**	**20 03 16.0**	**+1.3**
	baz=48								
O24A	**Longmont**	**48.05**	**284**	⇓	P		**P**	**20 03 15.6**	**+0.5**
	baz=48								
N23A	**Red Feather La**	**48.07**	**286**	⇑	P		**P**	**20 03 17.2**	**+1.8**
	baz=48								
G17A	**Pierce Place,**	**48.08**	**293**	⇓	P		**P**	**20 03 15.8**	**+0.6**
	baz=48								
M22A	**Cedar Creek Ra**	**48.13**	**287**	⇑	P		**P**	**20 03 16.9**	**+1.1**
	baz=48								
R26A	**Arlington**	**48.26**	**281**	⇓	P		**P**	**20 03 16.9**	**+0.3**
	baz=48								
C14A	**Swan Lake**	**48.26**	**298**	⇑	P		**P**	**20 03 17.3**	**+0.8**
	baz=48								
B13A	**Whitefish**	**48.28**	**299**	⇑	P		**P**	**20 03 18.4**	**+1.8**
	baz=48								
LKWY	**Lake**	**48.35**	**292**		PFAKE			20 03 30.0	+13
LKWY					LR	LR			
	comp=Z,3μm,20.0s								
K20A	**Yellowstone Ra**	**48.36**	**289**	⇓	P		**P**	**20 03 18.5**	**+1.1**
	baz=48								
BOZ	**Bozeman (W)**	**48.38**	**294**		*e*P		**P**	**20 03 17.7**	**+0.2**
BOZ					pmax	pmax			
	comp=Z,20nm,1.4s								
BOZ					MLR	MLR			
	comp=Z,623nm,21.0s								
BOZ	**Bozeman (W)**	**48.38**	**294**		*e*P		**P**	**20 03 17.7**	**+0.2**
	comp=Z,20nm,1.4s								
BOZ					LR	LR			
	comp=Z,623nm,21.0s								
BOZ	**Bozeman (W)**	**48.38**	**294**	⇓	P		**P**	**20 03 18.5**	**+1.0**
	baz=48,SNR=6.5								
BOZ	**Bozeman (W)**	**48.38**	**294**		*e*P		**P**	**20 03 17.7**	**+0.2**
	comp=Z,20nm,1.4s								
J19A	**Crowheart**	**48.39**	**290**	⇓	P		**P**	**20 03 18.9**	**+1.3**
	baz=48								
N22A	**Wattenberg Ran**	**48.43**	**286**	⇑	P		**P**	**20 03 19.6**	**+1.4**
	baz=48								
SLMT	**Seeley Lake**	**48.44**	**297**		*e*P		**P**	**20 03 20.9**	**+3.0**
	comp=Z,6.6nm,1.0s								
M21A	**Separation Pea**	**48.45**	**287**	⇓	P		**P**	**20 03 19.7**	**+1.4**
	baz=48								
E15A	**Deer Lodge**	**48.47**	**296**	⇑	P		**P**	**20 03 19.7**	**+1.5**
	baz=48,SNR=5.6								
CHMT	**Chamberlain Mo**	**48.51**	**296**		*e*P		**P**	**20 03 21.4**	**+2.9**
	comp=Z,6.1nm,1.1s								
D14A	**Greenough**	**48.54**	**297**	⇓	P		**P**	**20 03 19.6**	**+0.9**
	baz=48								
K19A	**Absolon Red Bu**	**48.55**	**289**	⇑	P		**P**	**20 03 19.3**	**+0.4**
	baz=48								
SWMT	**Swartz Lake**	**48.55**	**297**		*e*P		**P**	**20 03 17.5**	**-1.2**
	comp=Z,9.4nm,0.9s								
SWMT	**Swartz Lake**	**48.55**	**297**		*e*P		**P**	**20 03 17.5**	**-1.2**
	comp=Z,9.4nm,0.9s								
I18A	**Diamond G Ranc**	**48.56**	**291**	⇓	P		**P**	**20 03 20.1**	**+1.1**
	baz=48								
ISCO	**Idaho Springs**	**48.58**	**284**		*e*P		**P**	**20 03 17.3**	**-2.0**
ISCO					pmax	pmax			
	comp=Z,5.0nm,0.8s								
ISCO					MLR	MLR			
	comp=Z,774nm,20.0s								
ISCO	**Idaho Springs**	**48.58**	**284**		*e*P		**P**	**20 03 17.3**	**-2.0**
	comp=Z,4.9nm,0.8s								
ISCO					LR	LR			
	comp=Z,774nm,20.0s								
ISCO	**Idaho Springs**	**48.58**	**284**	⇑	P		**P**	**20 03

BW06 LR LR
comp=Z,1µm,19.0s
BW06 Boulder Array 48.99 290 ⇓P P 20 03 23.5 +1.1
baz=49
PDAR Pinedale Array 48.99 290 P P 20 03 21.8 -0.6
PDAR Pinedale Array 48.99 290 P P 20 03 21.8 -0.6
comp=Z,3.9nm,1.0s,baz=65,slow=7.1,SNR=13
PDAR LR LR 20 23 09.8
comp=Z,2µm,18.7s,baz=59,slow=35
PDAR Pinedale Array 48.99 290 P P 20 03 21.8 -0.6
M20A Sweetwater, Wa 49.01 288 ⇓P P 20 03 22.7 +0.2
baz=49
D13A Huson 49.05 297 ⇑P P 20 03 23.8 +1.2
baz=49,SNR=5.9
MOOW Moose Ponds 49.05 292 eP P 20 03 21.9 -0.9
comp=Z,9.8nm,1.3s
MOOW Moose Ponds 49.05 292 eP P 20 03 21.9 -0.9
comp=Z,9.8nm,1.3s
LOHW Long Hollow 49.06 291 eP P 20 03 24.5 +1.6
comp=Z,49nm,2.0s
IMW Indian Meadow 49.07 292 P P 20 03 24.9 +1.9
comp=Z,5.3nm,0.9s
TOA0 Torodi Ar. Sit 49.08 130 eP P 20 03 23.1 +0.1
TOA0 Torodi Ar. Sit 49.08 130 eP P 20 03 23.1 +0.1
TORD Torodi Ar. Bea 49.08 130 P P 20 03 20.2 -2.8
TORD Torodi Ar. Bea 49.08 130 P P 20 03 20.2 -2.8
comp=Z,2.1nm,0.8s,baz=330,slow=7.5,SNR=10
TORD LR LR 20 22 06.5
comp=Z,3µm,18.8s,baz=325,slow=34
DLMT Dillon 49.09 294 P P 20 03 24.0 +1.0
comp=Z,12nm,1.0s
DLMT Dillon 49.09 294 P P 20 03 24.0 +1.0
comp=Z,12nm,1.0s
U27A Thompson Grove 49.12 279 ⇓P P 20 03 24.0 +0.8
baz=49
G15A Dillon 49.15 294 ⇓P P 20 03 24.8 +1.3
baz=49
Z32A Haskell 49.19 274 ⇓P P 20 03 24.0 +0.3
baz=49
C12B Naegeli Ranch, 49.23 298 ⇑P P 20 03 24.2 +0.3
baz=49
J17A Brown Place, J 49.27 291 ⇑P P 20 03 25.6 +1.1
baz=49
W29A Amraillo 49.28 277 ⇑P P 20 03 26.2 +1.8
baz=49
R24A Sanders Place, 49.29 282 ⇑P P 20 03 25.5 +0.8
baz=49
L19A Farson 49.30 289 ⇓P P 20 03 24.7 0.0
baz=49
E13A Victor 49.30 296 ⇓P P 20 03 25.4 +0.8
baz=49
TPAW Teton Pass 49.33 291 P P 20 03 24.7 -0.3
comp=Z,27nm,1.5s
TPAW Teton Pass 49.33 291 P P 20 03 24.7 -0.3
comp=Z,27nm,1.5s
K18A Toltan Ranch, 49.35 290 ⇑P P 20 03 26.1 +1.0
baz=49
AMTX Amarillo 49.46 277 eP P 20 03 26.2 +0.4
comp=Z,32nm,1.0s
AMTX LR LR
comp=Z,2µm,19.0s
AMTX Amarillo 49.46 277 ⇑P P 20 03 27.2 +1.4
baz=49
AMTX Amarillo 49.46 277 eP P 20 03 26.2 +0.4
comp=Z,32nm,1.0s
N20A Spence Gulch, 49.47 287 ⇑P P 20 03 27.2 +1.2
baz=49
D12A Red Ives Fores 49.56 298 ⇑P P 20 03 27.0 +0.6
baz=49
MCMT McKenzie Canyo 49.56 294 eP P 20 03 24.9 -1.8
comp=Z,6.7nm,1.4s
MCMT McKenzie Canyo 49.56 294 eP P 20 03 24.9 -1.8
comp=Z,6.7nm,1.4s
T25A Trinidad 49.59 281 ⇑P P 20 03 28.5 +1.5
baz=49
G14A Jackson 49.64 295 ⇓P P 20 03 28.0 +0.7
baz=49
U26A Atchley Ranch, 49.69 280 ⇓P P 20 03 28.9 +1.2
baz=50
DLBC Dease Lake 49.73 317 P P 20 03 27.4 -0.1
DLBC Dease Lake 49.73 317 P P 20 03 27.4 -0.1
comp=Z,3.2nm,0.9s,baz=42,slow=7.0,SNR=5.2
DLBC Dease Lake 49.73 317 P P 20 03 27.4 -0.1
S24A Houchin Ranch, 49.74 282 ⇓P P 20 03 29.7 +1.4
baz=50
NEW Newport 49.76 300 eP P 20 03 27.3 -0.6
comp=Z,42nm,1.6s
NEW LR LR
comp=Z,262nm,22.0s
NEW Newport 49.76 300 ⇓P P 20 03 28.5 +0.6
baz=50
NEW Newport 49.76 300 eP P 20 03 27.3 -0.6
comp=Z,42nm,1.6s
X29A Tulia 49.77 276 ⇓P P 20 03 29.6 +1.4
baz=50
F13A Darby 49.78 296 ⇓P P 20 03 29.1 +0.8
baz=50
AHID Auburn Hatcher 49.87 291 PFAKE 20 03 40.0 +11
AHID LR LR
comp=Z,1µm,22.0s
EGAK Eagle 49.92 327 eP P 20 03 28.9 +0.2
comp=Z,43nm,1.5s
EGAK LR LR
comp=Z,644nm,19.0s
EGAK Eagle 49.92 327 eP P 20 03 29.0 +0.2
comp=Z,43nm,1.5s
Q22A Crested Butte, 49.95 284 ⇑P P 20 03 30.8 +1.0
baz=50
H14A Leadore 49.98 294 ⇓P P 20 03 31.6 +1.8
baz=50
T24A Torres, Weston 50.02 281 ⇑P P 20 03 31.8 +1.5
baz=50
KIV Kislovodsk 50.06 67 eP P 20 03 32.2 +1.9
KIV *e* 20 05 28.8
KIV *eSS* **SS 20 14 17.6 +4.7**
KIV pmax pmax
comp=Z,8.0nm,1.2s
KIV MLR MLR
comp=Z,1µm,18.0s
U25A Circle Dot Ran 50.08 280 ⇑P P 20 03 31.6 +0.9
baz=50
V26A Tequesquite Ra 50.11 279 ⇓P P 20 03 31.6 +0.8
baz=50
Y29A Porterfield Fa 50.15 276 ⇓P P 20 03 32.2 +1.1
baz=50
G13A Cobalt 50.16 295 ⇑P P 20 03 31.5 +0.3
baz=50,SNR=7.6
L17A Cokeville 50.17 290 ⇓P P 20 03 31.9 +0.7
baz=50
W27A Bowe Ranch, En 50.17 278 ⇑P P 20 03 31.7 +0.5
baz=50
131A Roby 50.18 274 ⇑P P 20 03 32.0 +0.7
baz=50
Z30A Sanderson Ranc 50.21 275 ⇓P P 20 03 32.1 +0.5
baz=50
J15A Blackfoot 50.23 292 ⇑P P 20 03 31.5 -0.1
baz=50
R22A Saguache, Gunn 50.27 284 ⇑P P 20 03 32.0 -0.2
baz=50
F12A Elk City 50.31 296 ⇑P P 20 03 33.3 +1.0
baz=50,SNR=5.9
O19A Miners Draw (B 50.31 287 ⇑P P 20 03 33.4 +1.1
baz=50
KBZ Khabaz 50.32 67 P P 20 03 32.0 -0.1
KBZ Khabaz 50.32 67 P P 20 03 32.0 -0.1
KBZ Khabaz 50.32 67 P P 20 03 32.0 -0.1
comp=Z,1.3nm,0.8s,baz=320,slow=18,SNR=1.8
KBZ LR LR 20 25 43.4
comp=Z,908nm,18.9s,baz=316,slow=37
KBZ Khabaz 50.32 67 P P 20 03 32.0 -0.1
ARU Arti 50.35 46 *c i* **P P 20 03 33.5 +1.3**
ARU 20 04 51.6
ARU 20 05 26.2
ARU PPP PPP 20 06 23.6
ARU S **S 20 10 47.1 +3.2**
ARU 20 13 24.7
ARU SS **SS 20 14 19.8 +2.9**
ARU SSS SSS 20 15 42.5
ARU pmax pmax
comp=Z,16nm,1.7s
CSS Prodhromos 50.45 82 PFAKE 20 03 40.0 +6.8
CSS LR LR
comp=Z,628nm,19.0s
I14A Mackay 50.46 293 ⇓P P 20 03 33.9 +0.4
baz=50
X27A F and S Farms, 50.48 277 ⇓P P 20 03 34.4 +0.8
baz=50

H13A Challis 50.51 295 ⇓P P 20 03 34.8 +1.1
baz=50
W26A Owens Ranch, T 50.58 278 ⇓P P 20 03 35.4 +1.1
baz=50
V25A Rancho No Teng 50.59 280 ⇑P P 20 03 35.5 +1.0
baz=50,SNR=8.1
R21A Cimarron 50.65 284 ⇑P P 20 03 36.0 +0.9
baz=50
332A Millersview 50.69 272 ⇑P P 20 03 35.6 +0.4
baz=51
MSTX Muleshoe 50.74 277 ⇓P P 20 03 36.4 +0.8
baz=51
I13A Wildhorse Cree 50.84 294 ⇑P P 20 03 37.5 +1.1
baz=51,SNR=8.9
H12A Diamond D Ranc 50.85 295 ⇓P P 20 03 37.3 +0.9
baz=51,SNR=7.1
HWUT Hardware Ranch 50.88 290 eP P 20 03 36.9 +0.2
comp=Z,27nm,0.9s
HWUT LR LR
comp=Z,949nm,22.0s
HWUT Hardware Ranch 50.88 290 eP P 20 03 36.9 +0.2
comp=Z,27nm,0.9s
J14A Carey 50.89 293 ⇓P P 20 03 37.3 +0.6
baz=51
W25A X Bar L Ranch, 50.91 279 ⇓P P 20 03 38.2 +1.3
baz=51
X26A CR and CF Fran 50.97 278 ⇓P P 20 03 39.5 +2.2
baz=51
Z28A Tucker Farm, M 50.97 276 ⇑P P 20 03 38.3 +1.0
baz=51
SVE Sverdlovsk 51.01 45 ⇓ *eP* **P 20 03 39.3 +2.2**
SVE *e* 20 05 36.9
SVE *eS* S 20 10 59.3 +6.3
SVE pmax pmax
comp=Z,11nm,1.1s
SVE MLR MLR
comp=Z,723nm,14.0s
Y27A Causey 51.03 277 ⇑P P 20 03 38.3 +0.5
baz=51
V24A Rampart Ranch, 51.05 280 ⇓P P 20 03 39.2 +1.1
baz=51
432A Menard 51.08 272 ⇓P P 20 03 38.5 +0.4
baz=51
331A San Angelo 51.16 272 ⇑P P 20 03 40.0 +1.3
baz=51
T22A Edith 51.16 282 ⇑P P 20 03 40.3 +1.4
baz=51
230A Sterling City 51.17 273 ⇑P P 20 03 39.9 +1.1
baz=51
K14A Jones Ranch, D 51.19 292 ⇑P P 20 03 38.4 -0.5
baz=51
J13A Cove Ranch, Pi 51.21 293 ⇑P P 20 03 40.3 +1.2
baz=51,SNR=6.7
HLID Hailey 51.23 294 eP P 20 03 40.2 +0.9
HLID LR LR
comp=Z,577nm,20.0s
HLID Hailey 51.23 294 ⇓P P 20 03 40.7 +1.4
baz=51,SNR=7.2
HLID Hailey 51.23 294 eP P 20 03 40.2 +0.9
MALT Malatya 51.25 75 P P 20 03 40.1 +0.8
MALT pmax pmax
comp=Z,25nm,1.5s
MALT MLR MLR
comp=Z,905nm,20.0s
MALT Malatya 51.25 75 P P 20 03 40.1 +0.8
comp=Z,25nm,1.5s
MALT LR LR
comp=Z,905nm,20.0s
MALT Malatya 51.25 75 P P 20 03 40.1 +0.8
comp=Z,25nm,1.5s
R20A Redvale 51.26 285 ⇓P P 20 03 40.9 +1.3
baz=51
S21A Coal Bank Pass 51.26 284 ⇑P P 20 03 41.0 +1.3
baz=51
JCT Junction City 51.36 271 ⇓P P 20 03 41.3 +1.2
baz=51
P18A Preston Nutter 51.40 287 ⇓P P 20 03 41.8 +1.0
baz=51
Y26A Elida 51.41 277 ⇑P P 20 03 42.8 +2.2
baz=51
Z27A Tatum 51.46 276 ⇑P P 20 03 42.7 +1.7
baz=51
HVU Hansel Valley 51.46 291 P P 20 03 39.7 -1.3
HVU pmax pmax
comp=Z,14nm,1.3s
HVU Hansel Valley 51.46 291 P P 20 03 39.6 -1.3
comp=Z,14nm,1.3s
HVU Hansel Valley 51.46 291 P P 20 03 39.7 -1.3
comp=Z,14nm,1.3s
W24A Lazy 6 Ranch, 51.48 280 ⇑P P 20 03 42.7 +1.4
baz=51,SNR=14
S20A Disappointment 51.49 284 ⇓P P 20 03 42.4 +1.1
baz=51
128A Castleberry Fa 51.49 275 ⇓P P 20 03 43.6 +2.3
baz=51
ZEI Tsey 51.49 67 eP P 20 03 45.4 +4.1
ZEI pmax pmax
comp=Z,14nm,1.7s
X25A Clemmons Ranch 51.50 279 ⇓P P 20 03 43.0 +1.6
baz=51
229A Bryant Ranch, 51.54 274 ⇑P P 20 03 43.9 +2.3
baz=51
330A Mertzon 51.54 273 ⇑P P 20 03 43.2 +1.6
baz=51
U22A Llaves 51.56 282 ⇓P P 20 03 43.9 +2.0
baz=51
V23A Ortiz Mt. (NFS 51.59 281 ⇑P P 20 03 43.8 +1.7
baz=51
DOT Dot Lake 51.62 327 eP P 20 03 41.5 -0.2
comp=Z,34nm,1.5s
DOT Dot Lake 51.62 327 eP P 20 03 41.5 -0.2
comp=Z,34nm,1.5s
532A Rocksprings 51.67 271 ⇑P P 20 03 43.6 +1.0
baz=52
431A Sonora 51.71 272 ⇓P P 20 03 43.5 +0.7
baz=52
ILAR Eielson Array 51.74 330 P P 20 03 42.8 +0.2
ILAR PcP **PcP 20 04 55.0 -0.6**
ILAR Eielson Array 51.74 330 P P 20 03 42.8 +0.2
comp=Z,3.1nm,0.8s,baz=44,slow=5.5,SNR=38
ILAR PcP **PcP 20 04 55.0 -0.6**
comp=Z,1.5nm,0.9s,baz=20,slow=2.6,SNR=4.0
ILAR LR LR 20 24 03.7
comp=Z,463nm,20.7s,baz=58,slow=34
ILAR Eielson Array 51.74 330 P P 20 03 42.8 +0.2
ILAR Eielson Array 51.74 330 PcP PcP 20 04 55.0 -0.6
SRU San Rafael 51.91 287 ⇑P P 20 03 44.0 -0.3
baz=52
228A UT Block 9, Go 51.91 275 ⇓P P 20 03 45.4 +1.0
baz=52
V22A San Miguel Ran 51.91 281 ⇓P P 20 03 45.2 +0.7
baz=52
Y25A Mesa, Roswell 51.93 278 ⇓P P 20 03 45.0 +0.5
baz=52
Z26A Caprock 51.95 277 ⇑P P 20 03 46.2 +1.5
baz=52
W23A Werner Place, 51.96 280 ⇓P P 20 03 46.0 +1.1
baz=52
COLA College 51.97 330 eP P 20 03 44.7 +0.5
COLA MLR MLR
comp=Z,849nm,19.0s
COLA College 51.97 330 eP P 20 03 44.7 +0.5
COLA LR LR
comp=Z,849nm,19.0s
COLA College 51.97 330 eP P 20 03 44.7 +0.5
WRAK Wrangell Islan 51.97 316 PFAKE 20 04 00.0 +16
WRAK LR LR
comp=Z,875nm,20.0s
329A Wagon Wheel Ra 51.98 274 ⇑P P 20 03 45.9 +1.1
baz=52
MVCO Mesa Verde 51.98 284 eP P 20 03 45.6 +0.6
comp=Z,25nm,1.3s
MVCO LR LR
comp=Z,2µm,22.0s
MVCO Mesa Verde 51.98 284 ⇑P P 20 03 46.0 +1.0
baz=52
MVCO Mesa Verde 51.98 284 eP P 20 03 45.6 +0.6
comp=Z,25nm,1.3s
127A Arkansas Junct 51.98 276 ⇑P P 20 03 46.9 +2.0
baz=52
U21A Nageezi 52.01 282 ⇑P P 20 03 46.0 +0.8
baz=52
430A Baggett Ranch, 52.02 273 ⇓P P 20 03 45.9 +0.8
baz=52
531A Rocksprings 52.03 271 ⇑P P 20 03 46.2 +0.9
baz=52
632A Uvalde 52.04 270 ⇓P P 20 03 46.0 +0.7
baz=52

TEIG Tepich 52.05 253 PFAKE 20 04 00.0 +15
TEIG LR LR
comp=Z,2µm,19.0s
MFID Camas Ranch 52.12 294 P P 20 03 46.9 +1.1
comp=Z,29nm,1.4s
MFID Camas Ranch 52.12 294 ⇑P P 20 03 45.9 +0.1
baz=52
MFID Camas Ranch 52.12 294 P P 20 03 46.9 +1.1
comp=Z,29nm,1.4s
HAWA Hanford 52.21 299 PFAKE 20 04 00.0 +14
HAWA LR LR
comp=Z,401nm,22.0s
ANMO Albuquerque 52.29 280 *eP* **P 20 03 48.3 +1.0**
comp=Z,14nm,1.3s
ANMO LR LR
comp=Z,2µm,20.0s
ANMO Albuquerque 52.29 280 *eP* **P 20 03 48.3 +1.0**
comp=Z,14nm,1.3s
SDV Santo Domingo 52.32 227 PFAKE 20 04 00.0 +12
SDV LR LR
comp=Z,1.0nm,22.0s
Y24A Capitan 52.38 279 ⇑P P 20 03 48.9 +1.0
baz=52
X23A Hourglass Bar 52.38 280 ⇓P P 20 03 49.2 +1.2
baz=52
Z25A Roswell 52.39 277 ⇓P P 20 03 48.9 +1.0
baz=52
LIC Lamto 52.41 141 *eP* **P 20 03 48.3 +0.3**
comp=Z,11nm,0.6s,baz=321
LIC *eR*
comp=Z,3µm,21.2s
LIC Lamto 52.41 141 *eP* **P 20 03 48.3 +0.3**
comp=Z,11nm,0.6s
Q16A Castle Valley 52.41 287 ⇓P P 20 03 47.6 -0.6
baz=52
V21A Milan 52.42 282 ⇑P P 20 03 49.2 +0.9
baz=52
DUG Dugway 52.52 289 eP P 20 03 49.6 +0.7
DUG pmax pmax
comp=Z,30nm,1.4s
DUG MLR MLR
comp=Z,690nm,22.0s
DUG Dugway 52.52 289 eP P 20 03 49.5 +0.7
comp=Z,30nm,1.4s
DUG LR LR
comp=Z,690nm,22.0s
DUG Dugway 52.52 289 ⇑P P 20 03 48.7 -0.1
baz=52
DUG Dugway 52.52 289 eP P 20 03 49.5 +0.7
comp=Z,30nm,1.4s
530A J-C Ranch, Com 52.53 272 ⇓P P 20 03 49.4 +0.5
baz=52
429A Davenport Ranc 52.53 273 ⇓P P 20 03 49.1 +0.1
baz=52
S18A Hurst Farm, Bl 52.54 285 ⇓P P 20 03 49.7 +0.5
baz=52
PAX Paxson 52.55 327 eP P 20 03 48.8 +0.1
PAX pmax pmax
comp=Z,17nm,1.2s
PAX Paxson 52.55 327 eP P 20 03 48.8 +0.1
comp=Z,17nm,1.2s
PAX Paxson 52.55 327 eP P 20 03 48.8 +0.1
comp=Z,17nm,1.2s
U20A Newcomb 52.55 283 ⇑P P 20 03 48.8 -0.4
baz=52
631A Perdido Creek 52.59 271 ⇑P P 20 03 50.7 +1.3
baz=52
732A Laxson Ranch, 52.71 270 ⇑P P 20 03 50.8 +0.6
baz=53
Z24A Sheeppen Canyo 52.75 278 ⇓P P 20 03 51.6 +0.9
baz=53
Y23A Lovelace Mesa, 52.75 279 ⇓P P 20 03 51.8 +1.1
baz=53
125A Gardner Draw, 52.78 277 ⇓P P 20 03 51.2 +0.3
baz=53
226B Tecolote Peak, 52.89 276 ⇑P P 20 03 52.6 +1.0
baz=53
W21A San Fidel 52.89 281 ⇑P P 20 03 52.9 +1.1
baz=53
V20A Brimhall 52.91 282 ⇓P P 20 03 52.5 +0.6
baz=53
428A Kincaid Ranch, 52.94 274 ⇓P P 20 03 53.0 +1.0
baz=53
BNM Barren Site 52.94 280 eP P 20 03 50.0 -2.1
comp=Z,16nm,1.3s
BNM Barren Site 52.94 280 eP P 20 03 50.0 -2.1
comp=Z,16nm,1.3s
MMAI Mount Meron Ar 53.03 82 P P 20 03 50.0 -2.6
MMAI Mount Meron Ar 53.03 82 P P 20 03 50.0 -2.6
comp=Z,1.5nm,0.7s,baz=308,slow=7.1,SNR=2.7
MMAI Mount Meron Ar 53.03 82 P P 20 03 50.0 -2.6
LAZ Ladron 53.08 280 eP P 20 03 50.0 -3.1
comp=Z,4.4nm,1.1s
LAZ Ladron 53.08 280 eP P 20 03 50.0 -3.1
comp=Z,4.4nm,1.1s
529A Stev Forest Ra 53.08 273 ⇓P P 20 03 53.7 +0.7
baz=53
MCK McKinley 53.12 329 eP P 20 03 52.6 -0.2
MCK McKinley 53.12 329 eP P 20 03 52.6 -0.2
MCK McKinley 53.12 329 eP P 20 03 52.6 -0.2
124A Stringfield Ra 53.24 277 ⇑P P 20 03 55.5 +1.1
baz=53
225A Deer Hill, Car 53.27 276 ⇑P P 20 03 55.2 +0.7
baz=53
427A Hayter Ranch, 53.29 274 ⇓P P 20 03 55.7 +1.1
baz=53
Y22A Socorro 53.29 280 ⇑P P 20 03 55.6 +1.0
baz=53
MVU Marysvale 53.29 287 P P 20 03 53.6 -1.1
MVU LR LR
comp=Z,2µm,19.0s
MVU Marysvale 53.29 287 P P 20 03 53.6 -1.1
326A Caldwell Ranch 53.31 275 ⇑P P 20 03 56.4 +1.7
baz=53
Z23A Rita Site, Whi 53.32 278 ⇓P P 20 03 55.8 +1.0
baz=53
MAK Makhachkala 53.38 65 eP P 20 03 56.1 +1.2
MAK *e* 20 05 58.2
MAK *eS* **S 20 11 29.5 +3.7**
MAK *eSSS* SSS 20 16 53.9
MAK pmax pmax
comp=Z,14nm,0.4s
MAK MLR MLR
comp=Z,1µm,17.0s
W20A Ramah 53.39 282 ⇓P P 20 03 56.2 +0.7
baz=53
528A Cox Ranch, San 53.40 273 ⇓P P 20 03 56.6 +1.2
baz=53
X21A Alamocita Cree 53.43 281 ⇑P P 20 03 57.3 +1.5
baz=53
ELK Elko 53.54 291 eP P 20 03 57.6 +1.1
ELK Elko 53.54 291 eP P 20 03 57.6 +1.1
BMRM Bremner River 53.66 325 eP P 20 03 51.5 -5.3
comp=Z,2.3nm,0.7s
Y21A Point of Rocks 53.67 280 ⇑P P 20 03 58.8 +1.3
baz=54
GNI Garni 53.69 69 eP P 20 03 58.6 +1.1
comp=Z,22nm,1.1s
GNI Garni 53.69 69 LR LR 20 27 16.5
comp=Z,939nm,19.9s,baz=298,slow=37
GNI Garni 53.69 69 eP P 20 03 58.6 +1.1
comp=Z,22nm,1.1s
TRF Thorofare Moun 53.74 330 eP P 20 03 57.1 -0.4
comp=Z,113nm,1.8s
TRF Thorofare Moun 53.74 330 eP P 20 03 57.1 -0.4
comp=Z,113nm,1.8s
Z22A Elephant Butte 53.76 279 ⇓P P 20 03 59.0 +0.9
baz=54
123A Bell Site, Whi 53.77 278 ⇓P P 20 03 58.9 +0.8
baz=54
X20A Quemado 53.79 281 ⇓P P 20 03 59.4 +1.0
baz=54
426A McDonald Obser 53.80 275 ⇓P P 20 03 59.0 +0.5
baz=54,SNR=5.6
NLWA Neilton Lookou 53.83 303 eP P 20 03 58.8 +0.6
comp=Z,56nm,1.4s
NLWA LR LR
comp=Z,1µm,19.0s
NLWA Neilton Lookou 53.83 303 eP P 20 03 58.8 +0.6
comp=Z,56nm,1.4s
325A Bean Ranch, Si 53.87 276 ⇑P P 20 03 59.6 +0.6
baz=54
527A Woodward Ranch 53.91 274 ⇑P P 20 04 00.8 +1.5
baz=54
628A Black Gap, Mar 53.94 273 ⇑P P 20 04 00.4 +1.0
baz=54
324A Moseley Ranch, 54.13 276 ⇑P P 20 04 03.5 +2.7

baz=54
W18A Petrified Fore 54.13 283 ⇓P P 20 04 00.7 -0.1
baz=54
Z21A St. Cloud Mine 54.15 280 ⇓P P 20 04 01.3 +0.3
baz=54
Y20A Horse Springs, 54.16 281 ⇑P P 20 04 02.3 +1.2
baz=54
526A Mary Lane Ranc 54.27 274 ⇑P P 20 04 03.2 +1.4
baz=54
627A Terlingua Ranc 54.27 273 ⇑P P 20 04 03.0 +1.1
baz=54,SNR=19
425A Indio Mountain 54.30 275 ⇓P P 20 04 03.0 +1.0
baz=54
SML Sawmill 54.32 328 *e*P P 20 04 01.7 +0.1
SML pmax pmax
comp=Z,10.0nm,1.2s
SML Sawmill 54.32 328 *e*P P 20 04 01.7 +0.1
comp=Z,9.9nm,1.2s
SML Sawmill 54.32 328 *e*P P 20 04 01.7 +0.1
comp=Z,9.9nm,1.2s
WVOR Wild Horse Val 54.32 295 *e*P P 20 04 01.4 -0.6
WVOR pmax pmax
comp=Z,20nm,0.8s
WVOR MLR MLR
comp=Z,437nm,19.0s
WVOR Wild Horse Val 54.32 295 *e*P P 20 04 01.4 -0.6
comp=Z,20nm,0.8s
WVOR LR LR
comp=Z,437nm,19.0s
WVOR Wild Horse Val 54.32 295 *e*P P 20 04 01.4 -0.6
comp=Z,20nm,0.8s
TXAR Lajitas Array 54.53 273 P P 20 04 03.4 -0.2
TXAR Lajitas Array 54.53 273 P P 20 04 03.4 -0.2
comp=Z,3.7nm,1.0s,baz=69,slow=6.9,SNR=8.3
TXAR LR LR 20 26 09.4
comp=Z,1μm,19.6s,baz=0.0,slow=35
TXAR Lajitas Array 54.53 273 P P 20 04 03.4 -0.2
CCUT Cedar City 54.61 287 *e*P P 20 04 05.1 +0.8
comp=Z,14nm,1.3s
CCUT Cedar City 54.61 287 *e*P P 20 04 05.1 +0.8
comp=Z,14nm,1.3s
222A Williams Famil 54.65 278 ⇑P P 20 04 05.6 +1.1
baz=54
626A Big Bend Ranch 54.65 274 ⇓P P 20 04 05.7 +1.1
baz=54
X18A Snowflake 54.67 282 ⇑P P 20 04 05.2 +0.5
baz=54
PMR Palmer 54.73 328 *e*P P 20 04 04.2 -0.3
PMR Palmer 54.73 328 *e*P P 20 04 04.2 -0.3
PMR Palmer 54.73 328 *e*P P 20 04 04.2 -0.3
U15A North Rim 54.75 286 ⇑P P 20 04 05.3 -0.1
baz=55
121A Cookes Peak, D 54.76 279 ⇑P P 20 04 06.5 +1.1
baz=55
WUAZ Wupatki 54.83 284 P P 20 04 04.2 -1.7
WUAZ LR LR
comp=Z,836nm,19.0s
WUAZ Wupatki 54.83 284 ⇑P P 20 04 07.0 +1.1
baz=55
WUAZ Wupatki 54.83 284 P P 20 04 04.2 -1.7
Z20A Nine Sixteen R 54.84 280 ⇓P P 20 04 07.8 +1.9
baz=55
BMN Battle Mountai 54.87 292 PFAKE 20 04 20.0 +14
BMN LR LR
comp=Z,1μm,19.0s
221A Mesquite Ranch 55.12 279 ⇓P P 20 04 08.7 +0.7
baz=55
120A U Bar Ranch, L 55.26 280 ⇑P P 20 04 10.0 +1.0
baz=55
R11A Troy Canyon, C 55.35 289 ⇓P P 20 04 09.5 -0.1
baz=55
TIXI Tiksi 55.49 6 PFAKE 20 04 20.0 +10
TIXI LR LR
comp=Z,1μm,22.0s
MOD Modoc 55.59 296 *e*P P 20 04 09.9 -1.4
comp=Z,38nm,1.2s
MOD Modoc 55.59 296 *e*P P 20 04 09.9 -1.4
comp=Z,38nm,1.2s
X16A Lo Mia Camp, P 55.63 283 ⇑P P 20 04 12.4 +0.7
baz=56
AB31 Akbulak array 55.64 52 *i* P P 20 04 11.5 +0.2
AB31 pmax pmax
comp=Z,3.0nm,0.6s
ABKAR Akbulak array 55.64 52 *e*P P 20 04 11.1 -0.2
comp=Z,5.4nm,1.0s
ABKAR Akbulak array 55.64 52 *e*P P 20 04 11.1 -0.2
comp=Z,5.4nm,1.0s
220A Playas Peak, P 55.65 279 ⇓P P 20 04 13.1 +1.3
baz=56
320A Kipp Ranch, An 56.05 278 ⇓P P 20 04 15.8 +1.1
baz=56
TGUH Tegucigalpa,Un 56.39 247 PFAKE 20 04 30.0 +13
TGUH LR LR
comp=Z,1μm,21.0s
BCIP Isla Barro Col 56.47 237 PFAKE 20 04 30.0 +12
BCIP LR LR
comp=Z,578nm,19.0s
319A Douglas 56.47 279 ⇑P P 20 04 19.2 +1.5
baz=56
TPH Tonopah 56.48 290 PFAKE 20 04 30.0 +12
TPH LR LR
comp=Z,953nm,20.0s
W13A Hualapai Mount 56.60 285 ⇑P P 20 04 19.4 +0.7
baz=56
TUC Tucson 56.72 281 *e*P P 20 04 20.1 +0.8
TUC pmax pmax
comp=Z,2.0nm,1.3s
TUC MLR MLR
comp=Z,3μm,19.0s
TUC Tucson 56.72 281 *e*P P 20 04 20.1 +0.8
comp=Z,2.4nm,1.3s
TUC LR LR
comp=Z,3μm,19.0s
TUC Tucson 56.72 281 *e*P P 20 04 20.1 +0.8
comp=Z,2.4nm,1.3s
TNA Tin City 56.74 339 *e*P P 20 04 19.5 +0.6
comp=Z,20nm,1.2s
TNA Tin City 56.74 339 *e*P P 20 04 19.5 +0.6
comp=Z,20nm,1.2s
NV11 Mina Array Sit 56.76 291 *e*P P 20 04 20.3 +0.7
NV11 Mina Array Sit 56.76 291 *e*P P 20 04 20.3 +0.7
NVAR Mina Array Bea 56.85 291 P P 20 04 20.5 +0.2
NVAR Mina Array Bea 56.85 291 P P 20 04 20.5 +0.2
comp=Z,0.4nm,0.3s,baz=64,slow=3.4,SNR=4.1
NVAR LR LR 20 27 52.7
comp=Z,1μm,18.6s,baz=312,slow=35
NVAR Mina Array Bea 56.85 291 P P 20 04 20.5 +0.2
Y14A Wickenburg 56.89 284 ⇑P P 20 04 21.7 +1.1
baz=57
BEKR Beckworth 57.01 294 P P 20 04 22.6 +1.2
comp=Z,14nm,1.4s
BEKR Beckworth 57.01 294 P P 20 04 22.6 +1.2
comp=Z,14nm,1.4s
Z14A Wintersburg 57.26 283 ⇓P P 20 04 24.9 +1.9
baz=57
ROSC El Rosal 57.55 228 P P 20 04 26.4 +0.7
ROSC El Rosal 57.55 228 P P 20 04 26.4 +0.7
comp=Z,22nm,0.5s,baz=86,slow=23,SNR=17
ROSC LR LR 20 25 40.1
comp=Z,744nm,20.4s,baz=20,slow=32
ROSC El Rosal 57.55 228 P P 20 04 26.4 +0.7
BRVK Borovoye 57.66 44 *e*P P 20 04 26.5 +0.9
BRVK pmax pmax
comp=Z,16nm,1.7s
BRVK MLR MLR
comp=Z,1μm,17.0s
BRVK Borovoye 57.66 44 *e*P P 20 04 24.5 -1.1
BRVK LR LR
comp=Z,4μm,21.0s
BRVK Borovoye 57.66 44 *e*P P 20 04 24.5 -1.1
BVAR Borovoye Array 57.73 44 LR LR 20 27 31.9
comp=Z,3μm,20.7s,baz=316,slow=34
GMRC Granite Mounta 57.86 286 ⇓P P 20 04 28.3 +0.8
baz=58
Y12C Blythe 57.92 285 ⇓P P 20 04 28.8 +1.1
baz=58
DAC Darwin (Calif) 57.94 289 PFAKE 20 04 40.0 +12
DAC LR LR
comp=Z,775nm,19.0s
IRM Iron Mountain 58.00 286 ⇓P P 20 04 29.3 +1.0
baz=58
MPMC Manual Prospec 58.03 289 ⇓P P 20 04 29.7 +1.1
baz=58
GSC Goldstone 58.16 288 ⇑P P 20 04 30.5 +1.0
baz=58
113A Mohawk Valley, 58.17 283 ⇑P P 20 04 31.2 +1.8
baz=58

KHMM Horse Mountain 58.17 297 P P 20 04 29.0 -0.6
KHMM Horse Mountain 58.17 297 P P 20 04 29.0 -0.6
214A Organ Pipe Nat 58.18 282 ⇑P P 20 04 31.0 +1.4
baz=58
JTS JuntasAbangare 58.21 242 PFAKE 20 04 40.0 +10
JTS LR LR
comp=Z,2μm,22.0s
BHD Baghdad 58.22 76 *ex* P 20 04 26.5 -3.3
BHD *ex* x 20 12 30.5
HEC Hector,Ludlow 58.22 287 ⇑P P 20 04 30.3 +0.4
baz=58
RCBR Riachuelo 58.25 181 PFAKE 20 04 40.0 +10
RCBR LR LR
comp=Z,935nm,21.0s
BC3 Big Chuckawall 58.53 285 ⇑P P 20 04 32.9 +0.8
baz=58
BILL Bilibino 58.59 351 *e*P P 20 04 31.0 -0.9
BILL *e* 20 05 24.3
BILL *e* 20 06 40.0
BILL pmax pmax
comp=Z,5.0nm,1.2s
BILL MLR MLR
comp=Z,3μm,16.0s
BILL Bilibino 58.59 351 PFAKE 20 04 40.0 +8.1
BILL LR LR
comp=Z,3μm,20.0s
GLA Glamis 58.59 284 ⇓P P 20 04 33.3 +0.8
baz=58
BELC Belle Mtn. Jos 58.61 286 ⇑P P 20 04 33.6 +0.9
baz=58
EDW2 Edwards Air Fo 59.15 288 ⇓P P 20 04 37.0 +0.7
baz=59
PFO Pinyon Flat Ob 59.16 286 *e*P P 20 04 36.1 -0.4
comp=Z,5.7nm,0.8s
PFO LR LR
comp=Z,706nm,20.0s
PFO Pinyon Flat Ob 59.16 286 ⇓P P 20 04 35.9 -0.6
baz=59
PFO Pinyon Flat Ob 59.16 286 *e*P P 20 04 36.1 -0.4
comp=Z,5.7nm,0.8s
SWSC Sam W. Stewart 59.24 285 ⇑P P 20 04 38.0 +1.1
baz=59
BFSC Mount Baldy Ra 59.41 287 ⇑P P 20 04 39.2 +1.0
baz=59
MURC Murrieta 59.60 287 ⇑P P 20 04 40.3 +0.8
baz=59
MONP Monument Peak 59.65 285 ⇑P P 20 04 40.4 +0.4
baz=60
PKM Peak Mountain 60.19 289 ⇑P P 20 04 44.6 +1.0
baz=60
NVS Novosibirsk 61.33 35 ⇑*i*P P 20 04 51.9 +1.1
NVS pmax pmax
comp=Z,39nm,1.7s
NVS pmax pmax
comp=N,18nm,2.5s
NVS pmax pmax
comp=E,3.0nm,2.0s
ZAA0 Zalesovo Array 62.60 35 *e*P P 20 04 58.9 -0.5
ZAA0 Zalesovo Array 62.60 35 *e*P P 20 04 58.9 -0.5
ZALV Zalesovo Beam 62.60 35 P P 20 04 58.9 -0.5
ZALV Zalesovo Beam 62.60 35 P P 20 04 58.9 -0.5
ZALV Zalesovo Beam 62.60 35 P P 20 04 58.9 -0.5
comp=E,1.0nm,0.6s,baz=313,slow=8.5,SNR=7.0
ZALV LR LR 20 32 31.4
comp=E,994nm,19.1s,baz=157,slow=36
ZALV Zalesovo Beam 62.60 35 P P 20 04 58.9 -0.5
KURK Kurchatov 62.83 41 *e*P P 20 05 02.4 +1.4
KURK pmax pmax
comp=Z,17nm,1.7s
KURK MLR MLR
comp=Z,1μm,19.0s
KURK Kurchatov 62.83 41 *e*P P 20 04 60.0 -1.0
KURK Kurchatov 62.83 41 *e*P P 20 05 00.0 -1.0
KURBB Kurchatov Arra 62.87 41 LR LR 20 34 25.5
comp=Z,1μm,18.0s,baz=325,slow=38
OTAV Otavalo 63.52 230 *e*P P 20 05 07.6 +1.1
comp=Z,16nm,1.2s
OTAV LR LR
comp=Z,877nm,21.0s
OTAV Otavalo 63.52 230 *e*P P 20 05 07.6 +1.1
comp=Z,16nm,1.2s
SEY Seymchan 64.62 356 *e*P P 20 05 12.7 +0.1
YAK Yakutsk 65.03 8 *e*P P 20 05 13.9 -1.4
YAK *e* 20 05 45.6
YAK *e*PPP PPP 20 09 10.1
YAK *e*S S 20 13 49.6 -6.4
YAK *e**SS sS 20 14 11.6 +5.7
YAK *e* 20 15 04.3
YAK pmax pmax
comp=Z,12nm,1.1s
YAK pmax pmax
comp=N,6.0nm,1.3s
YAK pmax pmax
comp=E,5.0nm,2.0s
YAK pmax pmax
comp=Z,170nm,7.1s
YAK smax smax
comp=E,196nm,4.0s
YAK smax smax
comp=N,252nm,6.8s
KKAR Karatay Array 65.15 51 P P 20 05 16.8 +0.4
KKAR pmax pmax
comp=Z,4.0nm,0.9s
KKAR Karatay Array 65.15 51 P P 20 05 16.8 +0.4
comp=Z,3.7nm,0.9s
KKAR Karatay Array 65.15 51 P P 20 05 16.8 +0.4
comp=Z,3.7nm,0.9s
SAML Samuel 65.90 211 *e*P P 20 05 19.2 -2.2
comp=Z,21nm,1.3s
SAML LR LR
comp=Z,1μm,22.0s
SAML Samuel 65.90 211 *e*P P 20 05 19.2 -2.2
comp=Z,21nm,1.3s
EKS2 Erkin-Say 67.02 49 PFAKE 20 05 40.0 +11
EKS2 LR LR
comp=Z,1μm,20.0s
AAK Ala-Archa 67.37 49 *c i*P P 20 05 33.2 +2.3
AAK pmax pmax
comp=Z,24nm,1.7s
AAK Ala-Archa 67.37 49 *e*P P 20 05 30.4 -0.5
comp=Z,10nm,1.2s
AAK LR LR
comp=Z,2μm,20.0s
AAK Ala-Archa 67.37 49 *e*P P 20 05 30.4 -0.5
comp=Z,10nm,1.2s
MK31 Makanchi Array 67.42 41 *e*P P 20 05 28.3 -2.6
MK31 Makanchi Array 67.42 41 *e*P P 20 05 28.3 -2.6
MKAR Makanchi Array 67.42 41 P P 20 05 28.1 -2.9
MKAR Makanchi Array 67.42 41 P P 20 05 28.1 -2.9
MKAR Makanchi Array 67.42 41 P P 20 05 28.1 -2.9
comp=Z,1.1nm,0.7s,baz=342,slow=4.7,SNR=9.2
MKAR LR LR 20 36 48.8
comp=Z,1μm,19.2s,baz=320,slow=38
TKM2 Tokmak 2 67.65 48 PFAKE 20 05 40.0 +7.3
TKM2 LR LR
comp=Z,2μm,21.0s
BDFB Brasilia 68.92 193 P P 20 05 39.9 -0.7
BDFB Brasilia 68.92 193 P P 20 05 39.9 -0.7
comp=Z,4.5nm,0.7s,baz=14,slow=7.1,SNR=5.6
BDFB LR LR 20 30 46.7
comp=Z,1μm,20.2s,baz=153,slow=32
BDFB Brasilia 68.92 193 P P 20 05 39.9 -0.7
MOY Mondy 69.68 27 *e*P P 20 05 48.3 +3.2
IRK Irkutsk 70.05 25 *e*P P 20 05 49.1 +1.9
IRK pmax pmax
comp=Z,25nm,1.6s
IRK Irkutsk 70.05 25 *e*P P 20 05 49.1 +1.9
comp=Z,25nm,1.6s
PAYG Puerto Ayora 70.24 241 PFAKE 20 06 00.0 +11
PAYG LR LR
comp=Z,1μm,20.0s
TLY Talaya 70.40 26 *e*P P 20 05 51.8 +2.5
TLY *e* 20 08 22.6
TLY *e*PS S 20 14 59.0 -1.7
TLY *e* 20 15 53.2
TLY pmax pmax
comp=Z,5.0nm,1.0s
TLY MLR MLR
comp=N,610nm,19.0s
TLY Talaya 70.40 26 *e*P P 20 05 51.8 +2.5
comp=N,5.0nm,1.0s
KSH Kashi 70.52 50 *e*P P 20 05 53.0 +2.6
KSH pP pP 20 05 57.3 +0.8
KSH sP sP 20 06 00.5 +1.7
KSH PcP PcP 20 06 14.8 +3.2
KSH PP PP 20 08 30.3 +4.2

KSH S S 20 15 04.5 +1.8
KSH SKS SKSac 20 15 49.0 -2.2
KSH ScS SKKSac 20 15 51.0 -0.3
KSH SS SS 20 19 36.5 +3.5
KSH pmax pmax
comp=Z,4.0nm,0.8s
KSH LR LR
comp=N,9μm,18.8s
KSH LR LR
comp=E,2μm,12.9s
KSH LR LR
comp=Z,180nm,3.9s
KBL Kabul 71.03 58 P P 20 05 49.6 -4.1
KBL Kabul 71.03 58 P P 20 05 49.6 -4.1
ZAK Zakamensk 71.47 27 *e*P P 20 05 58.5 +2.5
ZAK pmax pmax
comp=Z,4.0nm,1.7s
ZAK Zakamensk 71.47 27 *e*P P 20 05 58.5 +2.5
comp=Z,4.0nm,1.7s
WMQ Urumqi 72.03 40 P P 20 06 01.0 +1.6
WMQ sP sP 20 06 08.0 +0.3
WMQ PP PP 20 08 43.0 +4.2
WMQ S S 20 15 21.0 +1.1
WMQ sS sS 20 15 29.0 -0.9
WMQ ScS SKKSac 20 16 03.0 +0.5
WMQ SS SS 20 20 00.0 +4.3
WMQ pmax pmax
comp=Z,25nm,1.1s
WMQ pmax pmax
comp=Z,220nm,6.0s
WMQ LR LR
comp=E,97nm,16.0s
WMQ LR LR
comp=Z,100nm,16.0s
NNA Nana 73.69 223 PFAKE 20 06 20.0 +11
NNA LR LR
comp=Z,545nm,20.0s
NIL Nilore 73.87 56 PFAKE 20 06 20.0 +10
NIL LR LR
comp=Z,13nm,19.0s
PETK Petropavlovsk- 74.08 352 LR LR 20 40 06.5
comp=Z,2μm,18.7s,baz=228,slow=37
LPAZ La Paz 74.38 213 *e*P P 20 06 11.4 -2.7
comp=Z,13nm,1.1s
LPAZ La Paz 74.38 213 P P 20 06 13.9 -0.2
comp=Z,3.4nm,0.8s,baz=32,slow=6.4,SNR=9.7
LPAZ LR LR 20 36 04.9
comp=Z,430nm,20.8s,baz=208,slow=34
LPAZ La Paz 74.38 213 *e*P P 20 06 11.4 -2.7
comp=Z,13nm,1.1s
SONM Songino Array 74.64 26 P P 20 06 15.4 +0.6
SONM Songino Array 74.64 26 P P 20 06 15.4 +0.6
comp=Z,7.4nm,0.8s,baz=328,slow=5.4,SNR=5.5
SONM LR LR 20 40 35.8
comp=Z,859nm,19.4s,baz=346,slow=37
SONM Songino Array 74.64 26 P P 20 06 15.4 +0.6
ULN Ulaanbaatar 74.78 25 *e*P P 20 06 16.0 +0.4
comp=Z,16nm,1.1s
ULN LR LR
comp=Z,531nm,19.0s
ULN Ulaanbaatar 74.78 25 *e*P P 20 06 16.0 +0.4
comp=Z,531nm,19.0s
MBAR Mbarara 76.01 110 PFAKE 20 06 30.0 +6.9
MBAR LR LR
comp=Z,614nm,21.0s
HIA Hailar 76.23 17 PFAKE 20 06 30.0 +6.2
HIA LR LR
comp=Z,711nm,19.0s
SPB Sao Paulo 76.68 192 PFAKE 20 06 40.0 +14
SPB LR LR
comp=Z,1μm,22.0s
KLR Kul'dur 77.89 9 *e*P P 20 06 31.7 -1.3
KLR Kul'dur 77.89 9 *e*P P 20 06 31.7 -1.3
KMBO Kilima Mbogo 80.22 105 LR LR 20 43 24.3
comp=Z,532nm,18.4s,baz=102,slow=37
GTA Gaotai 80.30 34 *e*P P 20 06 49.5 +2.9
GTA pP pP 20 06 53.5 -0.2
GTA sP sP 20 06 56.3 +1.3
GTA PP PP 20 09 53.0 +4.4
GTA S S 20 16 52.0 +0.9
GTA sS sS 20 17 01.8 +0.5
GTA SS SS 20 22 03.8 +2.7
GTA pmax pmax
comp=Z,3.0nm,1.4s
GTA pmax pmax
comp=Z,120nm,5.7s
GTA LR LR
comp=N,760nm,17.6s
GTA LR LR
comp=E,590nm,15.2s
GTA LR LR
comp=Z,1μm,17.1s
LVC Limon Verde 80.54 211 *e*P P 20 06 48.6 +0.6
comp=Z,18nm,1.0s
LVC LR LR
comp=Z,804nm,20.0s
LVC Limon Verde 80.54 211 *e*P P 20 06 48.6 +0.6
comp=Z,18nm,1.0s
CPUP Villa Florida 81.01 200 P P 20 06 49.9 -0.2
CPUP Villa Florida 81.01 200 P P 20 06 49.9 -0.2
comp=Z,3.3nm,0.6s,baz=11,slow=5.9,SNR=13
CPUP LR LR 20 38 01.2
comp=Z,661nm,21.9s,baz=351,slow=32
CPUP Villa Florida 81.01 200 P P 20 06 49.9 -0.2
MDJ Mudanjiang 82.22 11 P P 20 06 54.5 -2.0
MDJ S S 20 17 08.5 -2.0
MDJ ScS ScS 20 17 24.5 -2.0
MDJ pmax pmax
comp=Z,4.0nm,0.9s
MDJ pmax pmax
comp=Z,88nm,6.0s
MDJ LR LR
comp=N,580nm,15.0s
MDJ LR LR
comp=E,290nm,17.6s
MDJ LR LR
comp=Z,680nm,15.7s
MDJ Mudanjiang 82.22 11 PFAKE 20 07 10.0 +13
MDJ LR LR
comp=Z,533nm,21.0s
CN2 Changchun 82.47 14 *e*P P 20 06 56.8 -1.0
CN2 *e*S S 20 17 09.3 -3.9
CN2 LR LR
comp=N,600nm,18.0s
CN2 LR LR
comp=E,600nm,18.0s
CN2 LR LR
comp=Z,800nm,18.0s
HHC Hu-ho-hao-te 82.49 25 *e*P P 20 06 55.0 -3.1
HHC PP PP 20 10 04.3 -2.2
HHC S S 20 17 07.3 -6.4
HHC sS SKSac 20 17 15.8 -2.4
HHC SS SS 20 22 29.5 -3.9
HHC pmax pmax
comp=Z,34nm,1.0s
HHC pmax pmax
comp=Z,320nm,6.8s
HHC LR LR
comp=N,2μm,19.8s
HHC LR LR
comp=E,630nm,18.1s
HHC LR LR
comp=Z,3μm,19.6s
USRK Ussuriysk Arra 82.89 9 P P 20 07 01.3 +1.3
comp=Z,0.7nm,0.5s,baz=0.0,slow=3.9,SNR=3.4
USRK LR LR 20 42 21.7
comp=Z,521nm,20.4s,baz=351,slow=35
PYUN Piuhan 83.19 52 *e*P P 20 07 04.0 +1.9
comp=Z,64nm,1.5s
DANN Dangsing 83.35 51 *e*P P 20 07 06.1 +3.1
comp=Z,25nm,1.0s
KOLN Koldanda 83.76 51 *e*P P 20 07 07.2 +2.2
BJI Beijing 84.37 22 P P 20 07 05.3 -2.4
BJI S S 20 17 30.5 -1.9
BJI SS SS 20 23 02.8 +1.9
BJI pmax pmax
comp=Z,7.0nm,0.7s
BJI LR LR
comp=N,870nm,25.6s
BJI LR LR
comp=E,560nm,20.4s
BJI LR LR
comp=Z,960nm,41.1s
KKN Kakani 84.54 50 *e*P P 20 07 11.5 +2.5
comp=Z,27nm,1.1s
LZH Lanzhou 84.66 32 *e*P P 20 07 10.5 +1.1

LZH				pP	**pP**	**20 07 15.0**	**-0.6**
LZH				sP	**sP**	**20 07 17.5**	**-0.4**
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
GUN	**Gumba**	**84.71**	**50**	*eP*	**P**	**20 07 12.4**	**+2.3**
	comp=Z,32nm,1.1s						
PKIN	**Phulchoki**	**84.77**	**50**	*eP*	**P**	**20 07 11.9**	**+1.6**
	comp=Z,5.3nm,0.8s						
TSUM	**Tsumeb**	**84.81**	**131**	PFAKE		20 07 20.0	+10
TSUM				LR	LR		
	comp=Z,549nm,19.0s						
LSA	**Lhasa**	**85.54**	**45**	PFAKE		20 07 20.0	+5.7
LSA				LR	LR		
	comp=Z,2μm,22.0s						
ERM	**Erimo**	**85.71**	**1**	*eP*	**P**	**20 07 15.4**	**+1.1**
ERM				pmax	pmax		
	comp=Z,27nm,1.2s						
ERM				MLR	MLR		
	comp=Z,892nm,22.0s						
ERM	**Erimo**	**85.71**	**1**	PFAKE		20 07 20.0	+5.7
ERM				LR	LR		
	comp=Z,1μm,19.0s						
ERM	**Erimo**	**85.71**	**1**	*eP*	**P**	**20 07 15.4**	**+1.1**
	comp=Z,892nm,22.0s						
RAMN	**Ramite**	**85.86**	**50**	*eP*	**P**	**20 07 18.0**	**+2.3**
	comp=Z,15nm,0.9s						
TAPN	**Taplejung**	**86.03**	**49**	*eP*	**P**	**20 07 18.8**	**+2.2**
ODAN	**Odare**	**86.31**	**49**	*eP*	**P**	**20 07 20.3**	**+2.4**
	comp=Z,24nm,1.2s						
LSZ	**Lusaka**	**86.71**	**120**	PFAKE		20 07 30.0	+10
LSZ				LR	LR		
	comp=Z,953nm,19.0s						
LCO	**Las Campanas**	**87.07**	**211**	PFAKE		20 07 30.0	+8.7
LCO				LR	LR		
	comp=Z,614nm,20.0s						
XAN	**Xi'an**	**88.13**	**29**	P	P	20 07 32.5	+6.2
XAN				pP	pP	20 07 43.5	+11
XAN				S	S	20 17 47.5	-22
XAN				SS	SS	20 24 07.0	+11
XAN				pmax	pmax		
	comp=Z,1.0nm,2.2s						
XAN				pmax	pmax		
	comp=Z,31nm,10.8s						
XAN				LR	LR		
	comp=N,710nm,23.5s						
XAN				LR	LR		
	comp=E,260nm,23.6s						
XAN				LR	LR		
	comp=Z,310nm,28.6s						
INCN	**Inchon**	**88.84**	**14**	PFAKE		20 07 40.0	+10
INCN				LR	LR		
	comp=Z,498nm,20.0s						
KSRS	**Korea Array**	**89.06**	**13**	P	**P**	**20 07 29.9**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=1.3,slow=4.4,SNR=3.5						
KSRS				LR	LR	20 49 51.1	
	comp=Z,623nm,18.1s,baz=358,slow=37						
KSAR	**Wonju Array Be**	**89.06**	**14**	P	**P**	**20 07 29.9**	**-0.6**
KSAR	**Wonju Array Be**	**89.06**	**14**	P	**P**	**20 07 30.0**	**-0.6**
CD2	**Chengdu**	**89.36**	**34**	P	**P**	**20 07 32.0**	**-0.2**
CD2				pP	**pP**	**20 07 36.8**	**-1.6**
CD2				sP	**sP**	**20 07 39.0**	**-1.6**
CD2				PP	**PP**	**20 11 03.0**	**+0.8**
CD2				SKS	**SKSac**	**20 17 59.0**	**-2.3**
CD2				S	**SKKSac**	**20 18 16.5**	**+3.0**
CD2				ScS	**S**	**20 18 22.0**	**+0.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.4s						
CD2				LR	LR		
	comp=N,1μm,19.4s						
CD2				LR	LR		
	comp=E,2μm,24.6s						
CD2				LR	LR		
	comp=Z,1μm,18.2s						
MAJO	**Matsushiro**	**90.99**	**5**	PFAKE		20 07 50.0	+10
MAJO				LR	LR		
	comp=Z,693nm,19.0s						
MJAR	**Matsushiro Arr**	**90.99**	**5**	LR	LR	20 49 39.4	
	comp=Z,556nm,18.6s,baz=10.0,slow=36						
NJ2	**Nanjing**	**92.63**	**22**	*eP*	**P**	**20 07 47.8**	**+0.5**
NJ2				pP	**pP**	**20 07 51.5**	**-2.0**
NJ2				sP	**sP**	**20 07 54.5**	**-1.2**
NJ2				PP	**PP**	**20 11 30.8**	**+2.9**
NJ2				S	**S**	**20 18 47.0**	**-3.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,190nm,3.6s						
NJ2				LR	LR		
	comp=N,750nm,16.1s						
NJ2				LR	LR		
	comp=E,1μm,22.2s						
NJ2				LR	LR		
	comp=Z,770nm,18.0s						
TRQA	**Tornquist**	**93.32**	**201**	PFAKE		20 08 00.0	+10
TRQA				LR	LR		
	comp=Z,1μm,19.0s						
MSEY	**Mahe Island**	**93.99**	**92**	PFAKE		20 08 00.0	+6.2
MSEY				LR	LR		
	comp=Z,252nm,19.0s						
SSE	**Sheshan**	**94.06**	**20**	P	**P**	**20 07 51.5**	**-2.4**
SSE				S	**S**	**20 18 58.0**	**-5.5**
SSE				pmax	pmax		
	comp=Z,28nm,0.7s						
SSE				pmax	pmax		
	comp=Z,85nm,6.6s						
SSE				LR	LR		
	comp=N,420nm,25.3s						
SSE				LR	LR		
	comp=E,730nm,25.3s						
SSE				LR	LR		
	comp=Z,1μm,20.4s						
KMI	**Kunming**	**94.26**	**38**	P	**P**	**20 07 54.3**	**-0.9**
KMI				pP	**pP**	**20 08 01.0**	**-0.4**
KMI				sP	**sP**	**20 08 04.0**	**+0.3**
KMI				PP	**PP**	**20 11 42.0**	**+0.7**
KMI				SKS	**SKSac**	**20 18 28.5**	**-1.1**
KMI				S	**S**	**20 19 01.5**	**-4.4**
KMI				SS	**SS**	**20 25 24.8**	**-0.7**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,43nm,4.7s						
KMI				LR	LR		
	comp=N,460nm,23.3s						
KMI				LR	LR		
	comp=E,410nm,18.8s						
KMI				LR	LR		
	comp=Z,650nm,20.8s						
GYA	**Guiyang**	**94.44**	**34**	*eP*	**P**	**20 07 55.0**	**-0.8**
GYA				PP	**PP**	**20 11 43.3**	**+0.9**
GYA				SKS	S	20 18 27.8	-39
GYA				S	**ScS**	**20 19 02.3**	**-6.1**
GYA				SS	**SS**	**20 25 26.8**	**-0.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=N,450nm,18.1s						
GYA				LR	LR		
	comp=E,330nm,19.0s						
GYA				LR	LR		
	comp=Z,460nm,18.4s						
BOSA	**Boshof**	**96.44**	**130**	LR	LR	20 49 17.4	
	comp=Z,953nm,20.2s,baz=339,slow=34						
SUR	**Sutherland**	**97.65**	**135**	PFAKE		20 08 20.0	+10
SUR				LR	LR		
	comp=Z,1μm,22.0s						
PLCA	**Paso Flores**	**97.96**	**206**	LR	LR	20 50 44.2	
	comp=Z,510nm,21.2s,baz=14,slow=34						
CHTO	**Chiang Mai**	**98.43**	**44**	PFAKE		20 08 20.0	+6.0
CHTO				LR	LR		
	comp=Z,549nm,21.0s						
CMAR	**Chiang Mai Arr**	**98.75**	**44**	P	Pdif	20 08 16.2	+0.9
CMAR	**Chiang Mai Arr**	**98.75**	**44**	P	Pdif	20 08 16.2	+0.9
	comp=Z,0.1nm,0.4s,baz=322,slow=5.7,SNR=2.9						
CMAR				LR	LR	20 55 04.5	
	comp=Z,646nm,20.3s,baz=327,slow=37						
CMAR	**Chiang Mai Arr**	**98.75**	**44**	P	Pdif	20 08 16.2	+0.8
TATO	**Taipei**	**100.04**	**22**	PFAKE		20 08 30.0	+9.0
TATO				LR	LR		
	comp=Z,1μm,20.0s						
YHNB	**Yeheng**	**100.31**	**22**	PFAKE		20 08 30.0	+7.7
YHNB				LR	LR		
	comp=Z,1μm,20.0s						
ABPO	**Ambohimpanom**	**100.32**	**108**	PFAKE		20 08 30.0	+7.6
ABPO				LR	LR		
	comp=Z,404nm,20.0s						
JOHN	**Johnston Islan**	**100.51**	**316**	PFAKE		20 08 30.0	+6.9
JOHN				LR	LR		
	comp=Z,334nm,22.0s						
QIZ	**Qiongzhong**	**102.39**	**34**	P	**Pdif**	**20 08 29.8**	**-1.7**
QIZ				S	**Sdif**	**20 20 12.0**	**-2.6**
QIZ				pmax	pmax		
	comp=Z,29nm,2.1s						
DGAR	**Diego Garcia**	**106.45**	**81**	PFAKE		20 13 10.0	
DGAR				LR	LR		
	comp=Z,823nm,19.0s						
KULM	**Kulim**	**111.20**	**48**	PFAKE		20 13 20.0	
KULM				LR	LR		
	comp=Z,538nm,19.0s						
KKM	**Kota Kinabalu**	**116.64**	**32**	PFAKE		20 13 30.0	+10
KKM				LR	LR		
	comp=Z,523nm,22.0s						
DAV	**Davao City (W)**	**118.27**	**22**	PFAKE		20 13 30.0	+6.9
DAV				LR	LR		
	comp=Z,616nm,21.0s						
PPT2	**Papeete2**	**118.66**	**279**	*e*LR	LR	20 49 36.3	
	comp=Z,519nm,25.0s						
KSM	**Kuching**	**118.74**	**40**	PFAKE		20 13 40.0	+16
KSM				LR	LR		
	comp=Z,434nm,22.0s						
TARA	**Tarawa**	**121.30**	**327**	PFAKE		20 13 40.0	+11
TARA				LR	LR		
	comp=Z,914nm,21.0s						
FUNA	**Funafuti**	**127.96**	**315**	PFAKE		20 13 50.0	+8.4
FUNA				LR	LR		
	comp=Z,3μm,19.0s						
KAPI	**Kappang**	**128.18**	**33**	PFAKE		20 13 50.0	+8.0
KAPI				LR	LR		
	comp=Z,218nm,22.0s						
HNR	**Honiara**	**135.23**	**339**	PFAKE		20 14 10.0	+15
HNR				LR	LR		
	comp=Z,532nm,21.0s						
PMG	**Port Moresby**	**136.85**	**357**	PFAKE		20 14 10.0	+12
PMG				LR	LR		
	comp=Z,265nm,20.0s						
QSPA	**South Pole Qui**	**142.53**	**180**	PFAKE		20 14 20.0	+13
QSPA				LR	LR		
	comp=Z,298nm,19.0s						
MBWA	**Marble Bar**	**143.04**	**41**	PFAKE		20 14 20.0	+11
MBWA				LR	LR		
	comp=Z,312nm,21.0s						
DZM	**Mont Dzumac**	**145.31**	**323**	*e*LR	LR	21 01 54.1	
	comp=Z,484nm,23.9s						
DZM	**Mont Dzumac**	**145.31**	**323**	PKPbc	**PKPbc**	**20 14 11.3**	**-1.9**
DZM	**Mont Dzumac**	**145.31**	**323**	PKPbc	**PKPbc**	**20 14 11.3**	**-1.9**
	comp=Z,5.3nm,0.8s,baz=36,slow=19,SNR=2.0						
DZM	**Mont Dzumac**	**145.31**	**323**	PKPbc	**PKPbc**	**20 14 11.3**	**-1.9**
WRAB	**Tennant Creek**	**146.33**	**18**	*e*PKP2	**PKPdf**	**20 14 14.8**	**-0.3**
WRAB				MLR	MLR		
	comp=Z,330nm,20.0s						
WRAB	**Tennant Creek**	**146.33**	**18**	*eP*	**PKPdf**	**20 14 14.8**	**-0.3**
WRAB				LR	LR		
	comp=Z,330nm,20.0s						
WRAB	**Tennant Creek**	**146.33**	**18**	*eP*	**PKPdf**	**20 14 14.8**	**-0.3**
WRA	**Warramunga Arr**	**146.33**	**18**	PKPbc	**PKPdf**	**20 14 14.7**	**-0.4**
WRA	**Warramunga Arr**	**146.33**	**18**	PKPbc	**PKPdf**	**20 14 14.7**	**-0.4**
	comp=Z,4.2nm,0.7s,baz=341,slow=3.0,SNR=18						
WRA	**Warramunga Arr**	**146.33**	**18**	PKPbc	**PKPdf**	**20 14 14.7**	**-0.4**
CTAO	**Charters Tower**	**147.49**	**358**	PFAKE		20 14 30.0	+8.4
CTAO				LR	LR		
	comp=Z,425nm,19.0s						
AS31	**Alice Springs**	**149.86**	**21**	*e*PKPbc	**PKPbc**	**20 14 24.6**	**-1.1**
AS31	**Alice Springs**	**149.86**	**21**	*e*PKPbc	**PKPbc**	**20 14 24.6**	**-1.1**
ASAR	**Alice Springs**	**149.86**	**21**	PKPbc	**PKPbc**	**20 14 23.8**	**-1.9**
ASAR	**Alice Springs**	**149.86**	**21**	PKPbc	**PKPbc**	**20 14 23.8**	**-1.9**
	comp=Z,2.5nm,0.7s,baz=349,slow=1.8,SNR=15						
ASAR	**Alice Springs**	**149.86**	**21**	PKPbc	**PKPbc**	**20 14 23.8**	**-1.9**
MIR	**Mirnyy**	**151.28**	**139**	↑*i*PKIKP	**PKPab**	**20 14 37.0**	**+1.2**
MIR				*i*		20 14 45.0	
MIR				pmax	pmax		
	comp=Z,56nm,1.5s						
VNDA	**Vanda**	**154.25**	**188**	PKPbc	**PKPbc**	**20 14 32.4**	**-1.5**
VNDA	**Vanda**	**154.25**	**188**	PKPbc	**PKPbc**	**20 14 32.4**	**-1.5**
	comp=Z,1.6nm,0.9s,baz=117,slow=2.3,SNR=3.8						
CASY	**Casey**	**158.19**	**142**	PFAKE		20 14 40.0	+8.9
CASY				LR	LR		
	comp=Z,714nm,22.0s						
CAN	**Canberra**	**162.45**	**349**	PFAKE		20 14 50.0	+13
CAN				LR	LR		
	comp=Z,247nm,19.0s						

*DDA **28** 20:08:59.8,38°.73N×27°.26E,h24km,MD3.1*
*ISCJB **28** 20:09:00.0±0.2,38°.75N±0°.02×27°.23E±0°.02,h0km,Error ellipse: s-maj=2.6km s-min=2.3km az=11.0*
*CSEM **28** 20:09:00.4±0.1,38°.75N×27°.24E,h1km,MD3.6,Error ellipse: s-maj=2.6km s-min=2.1km az=98.0*
*ISK **28** 20:09:00.7,38°.74N×27°.26E,h9km,MD3.6*
*ATH **28** 20:09:01.0,38°.73N×27°.29E,h30km±6km,MD3.3/6*
ISC 28 20:08:59.5±0.7,38.73N±0°.02×27.24E±0°.02,h0km,n94,
σ0s59/127,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IZM	**Izmir**	**0.33**	**176**	PG			**Pb**	**20 09 07.6**	**-0.8**
IZM				*e*SG			**Sb**	**20 09 13.7**	**-0.5**
IZM	**Izmir**	**0.33**	**176**	*i* Pg			**Pb**	**20 09 07.6**	**-0.8**
IZM				*i*Sg			**Sb**	**20 09 13.7**	**-0.5**
BLCB	**Balcova**	**0.38**	**204**	*e*PG			**Pb**	**20 09 08.3**	**-0.8**
BLCB				*e*SG			**Sb**	**20 09 14.7**	**-0.7**
BLCB	**Balcova**	**0.38**	**204**	*e*Pg			**Pb**	**20 09 08.3**	**-0.8**
BLCB				*e*Sg			**Sb**	**20 09 14.7**	**-0.7**
AKS	**Akhisar**	**0.47**	**72**	*e*PG			**Pb**	**20 09 10.1**	**-0.7**
AKS	**Akhisar**	**0.47**	**72**	*e*Pg			**Pb**	**20 09 10.1**	**-0.7**
AKHS	**Akhisar**	**0.48**	**72**	*i* P			**Pb**	**20 09 10.0**	**-0.8**
AKHS				*i* S			**Sb**	**20 09 16.8**	**-1.6**
AKHS	**Akhisar**	**0.48**	**72**	*i* P			**Pb**	**20 09 10.0**	**-0.8**
AKHS				*i* S			**Sb**	**20 09 16.8**	**-1.6**
URLA	**Izmir**	**0.62**	**234**	*i* P			**Pb**	**20 09 12.9**	**-0.4**
URLA				*i* S			**Sb**	**20 09 22.0**	**-0.6**
URLA	**Izmir**	**0.62**	**234**	*i* P			**Pb**	**20 09 12.9**	**-0.4**
URLA				*i* S			**Sb**	**20 09 22.0**	**-0.6**
AYVA	**Ayvalik**	**0.72**	**324**	*i* P			**Pg**	**20 09 12.8**	**-0.5**
AYVA				*i* S			**Sb**	**20 09 25.8**	**+0.6**
AYVA	**Ayvalik**	**0.72**	**324**	*i* P			**Pg**	**20 09 12.8**	**-0.5**
AYVA				*i* S			**Sb**	**20 09 25.8**	**+0.6**
PRK	**Paraskevi**	**0.91**	**305**	*e*PN			**Pn**	**20 09 19.7**	**+0.1**
PRK				*e*SN			**Sn**	**20 09 33.2**	**-0.2**
PRK	**Paraskevi**	**0.91**	**305**	*e*Pn			**Pn**	**20 09 19.7**	**+0.1**
PRK				*e*Sn			**Sn**	**20 09 33.2**	**-0.2**
CHOS	**Chios island**	**0.99**	**250**	*e*PN			**Pn**	**20 09 20.5**	**-0.2**
CHOS				*e*SN			**Sn**	**20 09 35.1**	**-0.3**
CHOS	**Chios island**	**0.99**	**250**	*e*Pn			**Pn**	**20 09 20.5**	**-0.2**
CHOS				*e*Sn			**Sn**	**20 09 35.1**	**-0.3**
GCAM	**G?zelcaml?**	**1.03**	**180**	*i* P			**Pb**	**20 09 20.0**	**-0.1**
GCAM				*i* S			**Sb**	**20 09 34.2**	**0.0**
GCAM	**G?zelcaml?**	**1.03**	**180**	*i* P			**Pb**	**20 09 20.0**	**-0.1**
GCAM				*i* S			**Sb**	**20 09 34.2**	**0.0**
BALB	**Balikesir**	**1.04**	**29**	*e*PG			**Pn**	**20 09 21.1**	**-0.2**
BALB				*e*SG			**Sn**	**20 09 36.1**	**-0.4**
BALB	**Balikesir**	**1.04**	**29**	*e*Pg			**Pn**	**20 09 21.1**	**-0.2**
BALY	**Balya**	**1.05**	**16**	*i* P			**Pb**	**20 09 20.7**	**+0.1**
BALY				*i* S			**Sg**	**20 09 34.1**	**+0.8**
BALY	**Balya**	**1.05**	**16**	*i* P			**Pb**	**20 09 20.7**	**+0.1**
BALY				*i* S			**Sg**	**20 09 34.1**	**+0.8**
MANT	**Manisa**	**1.06**	**103**	*i* P			**Pb**	**20 09 20.9**	**0.0**
MANT				*i* S			**Sg**	**20 09 34.4**	**+0.7**
MANT	**Manisa**	**1.06**	**103**	*i* S			**Sg**	**20 09 34.4**	**+0.7**
MANT	**Manisa**	**1.06**	**103**	*i* P			**Pb**	**20 09 20.9**	**0.0**
KULA	**Kula-Manisa**	**1.14**	**101**	*e*PN			**Pg**	**20 09 21.6**	**+0.3**
KULA	**Kula-Manisa**	**1.14**	**101**	*e*Pn			**Pg**	**20 09 21.6**	**+0.3**
AYDN	**Tasoluk**	**1.18**	**154**	*i* P			**Pb**	**20 09 22.6**	**-0.2**
AYDN				*i* S			**Sg**	**20 09 37.8**	**+0.3**
AYDN	**Tasoluk**	**1.18**	**154**	*i* P			**Pb**	**20 09 22.6**	**-0.2**
AYDN				*i* S			**Sg**	**20 09 37.8**	**+0.3**
DEMI	**Demirci**	**1.20**	**74**	*i* P			**Pb**	**20 09 23.0**	**-0.1**
DEMI				*i* S			**Sg**	**20 09 38.4**	**+0.4**
DEMI	**Demirci**	**1.20**	**74**	*i* P			**Pb**	**20 09 23.0**	**-0.1**
DEMI				*i* S			**Sg**	**20 09 38.4**	**+0.4**
DURS	**Dursunbey**	**1.30**	**48**	*i* P			**Pg**	**20 09 24.6**	**+0.2**
DURS				*i* S			**Sb**	**20 09 41.8**	**-0.3**
DURS	**Dursunbey**	**1.30**	**48**	*i* P			**Pg**	**20 09 24.6**	**+0.2**
DURS				*i* S			**Sb**	**20 09 41.8**	**-0.3**
EZN	**Ezine**	**1.30**	**327**	*e*PN			**Pn**	**20 09 25.7**	**+0.7**
EZN	**Ezine**	**1.30**	**327**	*e*Pn			**Pn**	**20 09 25.7**	**+0.7**
GONE	**Gonen-Balikesi**	**1.36**	**15**	*e*PN			**Pb**	**20 09 26.2**	**+0.3**
GONE	**Gonen-Balikesi**	**1.36**	**15**	*e*Pn			**Pb**	**20 09 26.2**	**+0.3**
DST	**Dursunbey**	**1.39**	**51**	*e*PN			**Pn**	**20 09 26.2**	**0.0**
DST	**Dursunbey**	**1.39**	**51**	*e*Pn			**Pn**	**20 09 26.2**	**0.0**
BOZC	**Bozcaada**	**1.44**	**321**	*i* P			**Pn**	**20 09 27.0**	**+0.1**
BOZC				*i* S			**Sg**	**20 09 46.0**	**+0.2**
MLSB	**Milas**	**1.50**	**163**	*e*PN			**Pg**	**20 09 28.7**	**+0.5**
MLSB	**Milas**	**1.50**	**163**	*e*Pn			**Pg**	**20 09 28.7**	**+0.5**
KRBG	**Karabiga-Canak**	**1.66**	**2**	*e*PN			**Pn**	**20 09 30.1**	**+0.2**
KRBG	**Karabiga-Canak**	**1.66**	**2**	*e*Pn			**Pn**	**20 09 30.1**	**+0.2**
BODT	**Bodrum**	**1.67**	**178**	*e*PN			**Pb**	**20 09 31.1**	**0.0**
BODT	**Bodrum**	**1.67**	**178**	*e*Pn			**Pb**	**20 09 31.1**	**0.0**
LPK	**Lapseki**	**1.68**	**348**	*e*PN			**Pb**	**20 09 31.0**	**-0.3**
LPK	**Lapseki**	**1.68**	**348**	*e*Pn			**Pb**	**20 09 31.0**	**-0.3**
BNT	**Bandirma**	**1.71**	**18**	*e*PN			**Pb**	**20 09 31.3**	**-0.5**
BNT	**Bandirma**	**1.71**	**18**	*e*Pn			**Pb**	**20 09 31.3**	**-0.5**
KCTX	**Karacabey (Bur**	**1.76**	**29**	*e*PN			**Pn**	**20 09 31.6**	**+0.3**
KCTX	**Karacabey (Bur**	**1.76**	**29**	*e*Pn			**Pn**	**20 09 31.6**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.77**	**341**	*e*PN			**Pn**	**20 09 31.9**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.77**	**341**	*e*Pn			**Pn**	**20 09 31.9**	**+0.6**
YER	**Yerkesik**	**1.80**	**152**	*e*PN			**Pb**	**20 09 33.3**	**0.0**
YER	**Yerkesik**	**1.80**	**152**	*e*Pn			**Pb**	**20 09 33.3**	**0.0**
KHAL	**Karahalli**	**1.81**	**101**	*i* P			**Pg**	**20 09 34.2**	**+0.1**
KHAL				*i* S			**Sb**	**20 09 56.5**	**-0.2**
KHAL	**Karahalli**	**1.81**	**101**	*i* P			**Pg**	**20 09 34.2**	**+0.1**
KHAL				*i* S			**Sb**	**20 09 56.5**	**-0.2**
ORLT	**Orhaneli**	**1.84**	**44**	*e*PN			**Pb**	**20 09 33.5**	**-0.6**
ORLT	**Orhaneli**	**1.84**	**44**	*e*Pn			**Pb**	**20 09 33.5**	**-0.6**
TVSB	**Tavsanli**	**1.88**	**67**	*e*PN			**Pn**	**20 09 32.9**	**-0.1**
TVSB	**Tavsanli**	**1.88**	**67**	*e*Pn			**Pn**	**20 09 32.9**	**-0.1**
MRMT	**Marmara Adasi**	**1.89**	**8**	*e*PN			**Pb**	**20 09 34.3**	**-0.6**
MRMT	**Marmara Adasi**	**1.89**	**8**	*e*Pn			**Pb**	**20 09 34.3**	**-0.6**
SART	**Tekirdag**	**1.96**	**359**	*i* P			**Pn**	**20 09 33.9**	**-0.1**
SART				*i* S			**Sn**	**20 09 58.3**	**-1.0**
SART	**Tekirdag**	**1.96**	**359**	*i* P			**Pn**	**20 09 33.9**	**-0.1**
SART				*i* S			**Sn**	**20 09 58.3**	**-1.0**
LIA	**Limnos Island**	**1.97**	**307**	*e*PN			**Pn**	**20 09 34.3**	**+0.1**
LIA				*e*SB			**Sn**	**20 09 59.7**	**+0.1**
LIA	**Limnos Island**	**1.97**	**307**	*e*Pn			**Pn**	**20 09 34.3**	**+0.1**
LIA				*e*Sb			**Sn**	**20 09 59.7**	**+0.1**
ERIK	**Erikli-Kesan**	**2.02**	**344**	*e*PN			**Pn**	**20 09 35.9**	**+1.2**
ERIK	**Erikli-Kesan**	**2.02**	**344**	*e*Pn			**Pn**	**20 09 35.9**	**+1.2**
DAT	**Datca**	**2.02**	**172**	*e*PN			**Pb**	**20 09 36.5**	**-0.6**
DAT	**Datca**	**2.02**	**172**	*e*Pn			**Pb**	**20 09 36.5**	**-0.6**
APE	**Apeiranthos**	**2.14**	**220**	*e*PN			**Pb**	**20 09 38.3**	**-0.8**
APE	**Apeiranthos**	**2.14**	**220**	*e*PB			**Pn**	**20 09 37.8**	**+1.3**
APE	**Apeiranthos**	**2.14**	**220**	*e*Pb			**Pn**	**20 09 37.8**	**+1.3**
APE	**Apeiranthos**	**2.14**	**220**	*e*Pn			**Pb**	**20 09 38.3**	**-0.8**
ENEZ	**Enez**	**2.17**	**338**	*e*PN			**Pn**	**20 09 38.0**	**+1.1**
ENEZ	**Enez**	**2.17**	**338**	*e*Pn			**Pn**	**20 09 38.0**	**+1.1**
ARMT	**Armutlu**	**2.22**	**34**	*e*PN			**Pn**	**20 09 37.7**	**+0.1**
ARMT	**Armutlu**	**2.22**	**34**	*e*Pn			**Pn**	**20 09 37.7**	**+0.1**
ALT	**Altintas**	**2.27**	**81**	*e*PN			**Pn**	**20 09 38.4**	**+0.1**
ALT	**Altintas**	**2.27**	**81**	*e*Pn			**Pn**	**20 09 38.4**	**+0.1**
GEMT	**Gemlik**	**2.27**	**41**	*e*PN			**Pn**	**20 09 39.5**	**+1.2**
GEMT	**Gemlik**	**2.27**	**41**	*e*Pn			**Pn**	**20 09 39.5**	**+1.2**
ALN	**Alexandroupoli**	**2.35**	**337**	*e*PN			**Pn**	**20 09 40.1**	**+0.7**
ALN	**Alexandroupoli**	**2.35**	**337**	*e*Pn			**Pn**	**20 09 40.1**	**+0.7**
CRLT	**Corlu**	**2.43**	**9**	*e*PN			**Pn**	**20 09 41.2**	**+0.8**
CRLT	**Corlu**	**2.43**	**9**	*e*Pn			**Pn**	**20 09 41.2**	**+0.8**
SLVT	**Silivri**	**2.61**	**16**	*e*PN			**Pn**	**20 09 43.5**	**+0.6**
SLVT	**Silivri**	**2.61**	**16**	*e*Pn			**Pn**	**20 09 43.5**	**+0.6**
EDRB	**Edirne**	**3.13**	**353**	*e*PN			**Pn**	**20 09 51.2**	**+1.0**
EDRB	**Edirne**	**3.13**	**353**	*e*Pn			**Pn**	**20 09 51.2**	**+1.0**
SOH	**Sokhos**	**3.65**	**306**	*e*PN			**Pn**	**20 09 57.5**	**+0.2**
SOH	**Sokhos**	**3.65**	**306**	*e*Pn			**Pn**	**20 09 57.5**	**+0.2**

*ISK **28** 20:12:57.4,36°.12N×27°.49E,h10km,MD2.9*
*ISCJB **28** 20:12:58.5±1.2,36°.15N±0°.04×27°.52E±0°.05,h10km±8km, Error ellipse: s-maj=7.6km s-min=6.6km az=163.9*
*CSEM **28** 20:12:58.6±0.2,36°.15N×27°.51E,h10km,MD2.8, Error ellipse: s-maj=5.3km s-min=4.3km az=35.0*
*ATH **28** 20:12:59.2,36°.23N×27°.58E,h20km±2km,MD2.8/4*
ISC 28 20:12:58.4±1.3,36°.15N±0°.04×27°.49E±0°.03,h9km±10km, n23,σ0s37/34,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NIS1	**Nisyros Isl.**	**0.52**	**330**	*e*PB			**Pg**	**20 13 08.6**	**+0.2**
NIS1				*e*SB			**Sb**	**20 13 16.8**	**-0.4**
NIS1	**Nisyros Isl.**	**0.52**	**330**	*e*Pb			**Pg**	**20 13 08.6**	**+0.2**
NIS1				*e*Sb			**S

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**1.92**	**81**	Pn	**Pn**	**20 41 51.0**	**-0.5**
	8.7nm,0.3s,baz=253,slow=19,SNR=6.2						
JMIC				Sn	**Sn**	**20 42 13.7**	**-1.9**
	15nm,0.3s,baz=256,slow=12,SNR=6.4						
SCO	**Scoresbysund**	**2.56**	**267**	*i* P	**Pn**	**20 41 58.3**	**-1.9**
BORG	**Borgarnes**	**6.62**	**207**	Pn	**Pn**	**20 42 55.5**	**-0.4**
	2.3nm,0.3s,baz=17,slow=7.5,SNR=7.0						
ARCES	**ARCESS Array B**	**13.40**	**76**	Pn	**Pn**	**20 44 28.7**	**0.0**
	0.1nm,0.3s,baz=289,slow=11,SNR=4.7						
HFS	**Hagfors**	**15.59**	**119**	Pn	**Pn**	**20 44 58.0**	**-0.2**
	0.1nm,0.3s,baz=325,slow=8.8,SNR=2.6						
KAF	**Kangasniemi**	**18.02**	**98**	*ep*	**P**	**20 45 29.5**	**+0.2**
	3.5nm,0.7s						
FINES	**FINESS Array B**	**18.43**	**100**	P	**Pn**	**20 45 33.4**	**-0.5**
	0.2nm,0.3s,baz=316,slow=11,SNR=13						
FINES				LR	LR	20 51 56.0	
	comp=Z,196nm,18.7s,baz=99,slow=35						
GERES	**GERESS Array B**	**25.65**	**134**	P	**P**	**20 46 49.0**	**+0.8**
	0.5nm,0.7s,baz=336,slow=9.4,SNR=5.1						
YKA	**Yellowknife Ar**	**36.07**	**309**	P	**P**	**20 48 21.8**	**+1.9**
	0.1nm,0.3s,baz=33,slow=9.0,SNR=4.1						

*CSEM **28** 21:13:04.7, 33.31N×35.45E, h2km, ML2.8, After GRAL*
*NSSC **28** 21:13:04.0±5.3, 33.29N×35.59E, h0km±25km, ML1.5*
*GRAL **28** 21:13:04.7±0.3, 33.31N×35.45E, h53km±20km, MD2.8*
ISC 28 21:13:03.0±1.3**, 33.29N**±0.05×**35.53E**±0.06**, h8**km±12km**, n10**, σ0**92/15, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.26**	**319**	*eP*	**Pg**	**21 13 08.5**	**+0.3**
MATL	**Matarih**	**0.26**	**319**	*eP*	**Pg**	**21 13 08.5**	**+0.3**
RCY	**Rachaya**	**0.33**	**51**	*eP*	**Pb**	**21 13 11.4**	**+0.2**
RCY				*eS*	**Sb**	**21 13 16.5**	**-0.3**
BRBR	**Barbar**	**0.37**	**71**	*eP*	Pg	21 13 06.8	-3.6
BRBR				*eS*	**Sg**	**21 13 13.3**	**-2.0**
BRBR				AML	AML	21 13 15.6	
	comp=N,19nm,0.2s						
BRBR				AML	AML	21 13 17.1	
	comp=Z,40nm,0.6s						
BRBR				AML	AML	21 13 17.3	
	comp=E,50nm,0.4s						
BHL	**Bhannes**	**0.62**	**9**	*eP*	**Pb**	**21 13 15.8**	**-0.5**
BHL	**Bhannes**	**0.62**	**9**	*eP*	**Pb**	**21 13 15.8**	**-0.5**
TCHB	**Talchebab**	**0.72**	**149**	*eP*	**Pg**	**21 13 16.3**	**-0.6**
TCHB				*eS*	**Sg**	**21 13 26.9**	**+0.6**
TCHB				AML	AML	21 13 27.8	
	comp=E,71nm,0.6s						
TCHB				AML	AML	21 13 30.0	
	comp=N,55nm,0.3s						
TCHB				AML	AML	21 13 33.2	
	comp=Z,27nm,0.4s						
HWQ	**Hawqa**	**1.04**	**19**	*eP*	**Pn**	**21 13 23.8**	**-0.4**
HWQ				*eS*	**Sg**	**21 13 37.6**	**+0.9**
HWQ	**Hawqa**	**1.04**	**19**	*eP*	**Pn**	**21 13 23.8**	**-0.4**
HWQ				*eS*	**Sg**	**21 13 37.6**	**+0.9**
SALA	**Sala**	**1.16**	**119**	*eP*	**Pg**	**21 13 26.6**	**+1.3**
SALA				*eS*	**Sn**	**21 13 42.6**	**+0.6**
SALA				AML	AML	21 13 44.3	
	comp=E,4.4nm,0.3s						
SALA				AML	AML	21 13 44.7	
	comp=Z,26nm,0.3s						

*IDC **28** 21:15:20.7±4.5, 38.3N×74.10E, h110km±33km, mb3.5/7, mb1 3.5/13, mb1mx3.3/32, mbtmp3.4/13, Error ellipse: s-maj=41.0km s-min=20.6km az=168.0*
*ISCJB **28** 21:15:22.4±0.3, 38.26N±0.02×73.93E±0.06, h124km, mb3.8/8, Error ellipse: s-maj=7.2km s-min=3.4km az=171.5*
*BJI **28** 21:15:24.3, 38.39N×73.94E, h143km, mb4.4/1*
*NNC **28** 21:15:25.2±5.2, 38.79N×73.71E, h0km, mb3.8, mpv4.1, Error ellipse: s-maj=54.1km s-min=30.9km az=24.0*
ISC 28 21:15:23.0±0.6**, 38.31N**±0.05×**74.02E**±0.06**, h124**km**, n46, σ1**8**9/50, mb3.9/8, 2C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.95**	**51**	P	**Pn**	**21 15 55.5**	**-0.6**
KSH				S	**Sn**	**21 16 16.8**	**-4.6**
KSH				smax	smax		
	comp=N,2μm,0.3s						
KSH				smax	smax		
	comp=E,2μm,0.4s						
AML	**Almayashu**	**3.83**	**356**	P	**Pn**	**21 16 22.4**	**+1.8**
	SNR=91						
KZA	**Kyzart**	**3.88**	**14**	P	**Pn**	**21 16 23.9**	**+2.5**
	SNR=23						
UCH	**Uchtor**	**3.93**	**5**	P	**Pn**	**21 16 24.7**	**+2.6**
	SNR=13						
ULHL	**Ulahol**	**4.29**	**23**	P	**Pn**	**21 16 29.5**	**+2.9**
	SNR=26						
AAK	**Ala-Archa**	**4.34**	**5**	P	**Pn**	**21 16 29.9**	**+2.7**
	SNR=14						
AAK	**Ala-Archa**	**4.34**	**5**	P	**Pn**	**21 16 28.9**	**+1.7**
	comp=E,3.7nm,0.3s,baz=148,slow=7.4,SNR=30						
AAK				S	**Sn**	**21 17 17.2**	**+0.2**
	comp=E,4.7nm,0.3s,baz=229,slow=22,SNR=6.9						
EKS2	**Erkin-Say**	**4.35**	**358**	P	**Pn**	**21 16 29.7**	**+2.3**
	SNR=85						
KBK	**Karagaybulak**	**4.40**	**9**	P	**Pn**	**21 16 30.9**	**+2.8**
	SNR=13						
CHCP	**Chirah Chowk**	**4.68**	**188**	P	Pn	21 16 35.3	+3.6
CHMS	**Chumysh**	**4.72**	**7**	P	**Pn**	**21 16 34.8**	**+2.6**
	SNR=13						
TKM2	**Tokmak 2**	**4.76**	**14**	P	**Pn**	**21 16 35.8**	**+2.9**
	SNR=19						
CEP	**Cherat**	**4.79**	**201**	P	**Pn**	**21 16 35.4**	**+2.1**
CEP				S	**Sn**	**21 17 26.0**	**-1.9**
USP	**Ospenovka**	**4.97**	**4**	P	Pn	21 16 38.9	+3.4
	SNR=8.0						
KK31	**Karatay Array**	**5.48**	**332**	⇓Pn	**Pn**	**21 16 42.4**	**0.0**
	comp=E,13nm,0.5s,baz=150,slow=12,SNR=102						
KK31				⇓Sn	**Sn**	**21 17 39.5**	**-4.8**
	comp=E,43nm,0.5s,baz=150,slow=23,SNR=14						
THW	**Thamme Wali**	**5.80**	**199**	P	**Pn**	**21 16 48.0**	**+1.1**
DHRM	**DHARAMSHALA**	**6.33**	**162**	*eP*	**Pn**	**21 16 56.1**	**+2.0**
DHRM				*eS*	**Sn**	**21 18 03.6**	**-1.5**
DHRM				*eS*	**Sn**	**21 18 04.1**	**-1.0**
DHRM				AML	AML	21 18 09.6	
	comp=E,189nm,0.3s						
DHRM				AML	AML	21 18 09.7	
	comp=N,134nm,0.2s						
SARP	**Sargodha**	**6.47**	**190**	P	**Pn**	**21 16 56.8**	**+1.1**
SMLA	**Simla**	**7.62**	**159**	*eP*	**Pn**	**21 17 12.3**	**+1.0**
SMLA				*eS*	**Sn**	**21 18 31.7**	**-4.3**
SMLA				⇓		21 18 33.7	
	comp=E,1μm,0.3s						
SMLA				⇓		21 18 33.7	
	comp=N,1μm,0.4s						
DDI	**Dehra Dun**	**8.64**	**156**	*eS*	**Sn**	**21 19 00.0**	**-0.9**
MK31	**Makanchi Array**	**10.44**	**33**	⇑P	**Pn**	**21 17 51.7**	**+2.4**
	comp=N,1.2nm,0.6s,baz=213,slow=16,SNR=19						
MKAR	**Makanchi Array**	**10.44**	**33**	P	**Pn**	**21 17 48.5**	**-0.8**
	comp=N,0.3nm,0.3s,baz=202,slow=15,SNR=20						
PYUN	**Piuthan**	**12.64**	**141**	*eP*	**Pn**	**21 18 18.2**	**-0.5**
	comp=N,15nm,0.3s						
PYUN				*eS*	Sn	21 20 28.8	-9.3
KURBB	**Kurchatov Array**	**12.72**	**13**	P	**Pn**	**21 18 18.1**	**-1.2**
	comp=N,0.1nm,0.3s,baz=202,slow=12,SNR=5.2						
DANN	**Dangsing**	**12.84**	**138**	*eP*	**Pn**	**21 18 20.8**	**-0.4**
	comp=N,12nm,0.5s						
KOLN	**Koldanda**	**13.22**	**140**	*eP*	**Pn**	**21 18 26.7**	**+0.6**
	comp=N,11nm,0.5s						
KKN	**Kakani**	**14.10**	**135**	*eP*	**Pn**	**21 18 37.9**	**+0.4**
PKIN	**Phulchoki**	**14.33**	**135**	*eP*	**Pn**	**21 18 41.1**	**+0.6**
	comp=N,4.3nm,0.3s						
PKI	**Pulchoki**	**14.34**	**135**	*eP*	**Pn**	**21 18 41.1**	**+0.4**
	comp=N,5.5nm,0.3s						
GUN	**Gumba**	**14.35**	**133**	*eP*	**Pn**	**21 18 41.1**	**+0.3**
AB31	**Akbulak array**	**14.91**	**322**	P	**Pn**	**21 18 45.9**	**-1.4**
	comp=N,0.4nm,0.3s,baz=130,slow=13,SNR=24						
BVA0	**Borovoye Array**	**14.93**	**351**	⇑P	**P**	**21 18 51.1**	**+1.1**
	comp=N,0.2nm,0.5s,baz=152,slow=7.9,SNR=4.8						
BVAR	**Borovoye Array**	**14.93**	**351**	P	**Pn**	**21 18 46.3**	**-1.3**
	comp=N,0.2nm,0.3s,baz=156,slow=10.0,SNR=5.6						
BHPL	**Bhopal**	**15.30**	**168**	*eS*	Sn	21 21 29.9	-12
ODAN	**Odare**	**16.02**	**132**	*eP*	**P**	**21 19 03.8**	**+1.2**
	comp=N,6.5nm,0.5s						
AKTO	**Aktyubinsk**	**16.62**	**322**	P	**Pn**	**21 19 07.3**	**-1.2**
	baz=129,slow=14						
AKTO				S	Sn	21 22 02.4	-11
	comp=N,0.1nm,0.3s,baz=54,slow=19,SNR=6.1						
ZALV	**Zalesovo Beam**	**17.31**	**22**	P	**Pn**	**21 19 16.9**	**+0.2**
	comp=N,0.8nm,0.3s,baz=215,slow=9.7,SNR=15						
LZH	**Lanzhou**	**23.82**	**86**	*eP*	**P**	**21 20 23.8**	**-0.9**
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
SONM	**Songino Array**	**25.34**	**57**	P	**P**	**21 20 37.4**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=243,slow=7.9,SNR=2.2						
BRTR	**Keskin Array B**	**31.22**	**285**	P	**P**	**21 21 31.3**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=90,slow=5.6,SNR=5.8						
FINES	**FINESS Array B**	**37.38**	**324**	P	**P**	**21 22 23.4**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=108,slow=12,SNR=7.1						
ARCES	**ARCESS Array B**	**40.43**	**336**	P	**P**	**21 22 49.9**	**+1.2**
	comp=Z,1.0nm,0.5s,baz=115,slow=8.5,SNR=16						
NB2	**NORSAR Subarra**	**44.41**	**322**	P	**P**	**21 23 21.2**	**+0.2**
	comp=Z,4.3nm,1.1s,baz=91,slow=7.9						
NOA	**NORSAR Array B**	**44.41**	**322**	P	**P**	**21 23 21.0**	**0.0**
	comp=Z,1.0nm,0.6s,baz=92,slow=8.0,SNR=5.0						
TORD	**Torodi Ar. Bea**	**68.14**	**270**	P	**P**	**21 26 09.5**	**-0.5**
	comp=Z,1.9nm,0.4s,baz=48,slow=5.6,SNR=62						
YKA	**Yellowknife Ar**	**79.30**	**4**	P	**P**	**21 27 15.0**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=347,slow=5.2,SNR=8.3						

*ISCJB **28** 21:17:28.2±1.2, 33.27N±0.04×35.41E±0.07, h1km±8km, Error ellipse: s-maj=10.3km s-min=5.8km az=164.3*
*CSEM **28** 21:17:28.7±0.5, 33.27N×35.44E, h2km, ML2.9, Error ellipse: s-maj=10.2km s-min=4.8km az=73.0*
*NSSC **28** 21:17:28.3±1.2, 33.24N×35.40E, h0km±6km, ML1.2*
*GRAL **28** 21:17:30.7±0.3, 33.33N×35.47E, h1km±43km, MD2.9*
ISC 28 21:17:29.0±1.5**, 33.27N**±0.03×**35.44E**±0.06**, h1**km±12km**, n14, σ0**85/24, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.23**	**337**	*eP*	**Pg**	**21 17 34.3**	**+0.8**
MATL	**Matarih**	**0.23**	**337**	*eP*	**Pg**	**21 17 34.3**	**+0.8**
RCY	**Rachaya**	**0.40**	**56**	*eP*	**Pg**	**21 17 37.0**	**+0.3**
RCY				*eS*	**Sg**	**21 17 41.5**	**-0.4**
BRBR	**Barbar**	**0.45**	**72**	*eP*	**Pg**	**21 17 38.4**	**+0.7**
BRBR				*eS*	**Sg**	**21 17 45.0**	**+1.4**
BRBR				AML	AML	21 17 46.3	
	comp=N,7.3nm,0.3s						
BRBR				AML	AML	21 17 48.0	
	comp=E,15nm,0.3s						
BHL	**Bhannes**	**0.65**	**16**	*eP*	**Pg**	**21 17 41.3**	**-0.2**
BHL	**Bhannes**	**0.65**	**16**	*eP*	**Pg**	**21 17 41.3**	**-0.2**
TCHB	**Talchebab**	**0.75**	**143**	*eP*	**Pg**	**21 17 42.6**	**-0.7**
TCHB				*eS*	**Sg**	**21 17 53.1**	**+0.1**
TCHB				AML	AML	21 17 54.0	
	comp=E,30nm,0.3s						
TCHB				AML	AML	21 17 56.5	
	comp=N,26nm,0.7s						
TCHB	**Talchebab**	**0.75**	**143**	*eP*	**Pg**	**21 17 42.6**	**-0.7**
	SNR=75						
TCHB				*eS*	**Sg**	**21 17 53.1**	**+0.1**
	comp=N,26nm,0.7s,SNR=59						
HWQ	**Hawqa**	**1.09**	**23**	*eP*	**Pg**	**21 17 49.1**	**-0.7**
HWQ				*eS*	**Sg**	**21 18 02.7**	**-1.3**
HWQ	**Hawqa**	**1.09**	**23**	*eP*	**Pg**	**21 17 49.1**	**-0.7**
HWQ				*eS*	**Sg**	**21 18 02.7**	**-1.3**
SALA	**Sala**	**1.23**	**117**	*eP*	**Pg**	**21 17 52.0**	**-0.5**
SALA				*eS*	**Sg**	**21 18 09.7**	**+1.4**
SALA				AML	AML	21 18 11.0	
	comp=E,1.5nm,0.3s						
SALA				AML	AML	21 18 11.6	
	comp=N,9.3nm,0.2s						
SALA	**Sala**	**1.23**	**117**	*eP*	**Pg**	**21 17 52.0**	**-0.5**
	SNR=57						
SALA				*eS*	**Sg**	**21 18 09.7**	**+1.4**
	comp=N,9.3nm,0.2s,SNR=49						
HAWK	**Haweek**	**1.48**	**33**	*eP*	**Pn**	**21 17 56.6**	**-0.3**
HAWK				*eS*	**Sn**	**21 18 17.4**	**+0.5**
HAWK	**Haweek**	**1.48**	**33**	*eP*	**Pn**	**21 17 56.6**	**-0.3**
	SNR=57						
HAWK				*eS*	**Sn**	**21 18 17.4**	**+0.5**
	SNR=49						

MAN 28 21:21:06, 9.84N×125.39E, h17km, mb4.2, ML3.0, MS2.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.60**	**299**	*eP*	Pb	21 21 18.9	+0.7
MSLP				*eS*	Sn	21 21 31.1	+1.9
BUTP	**Butuan**	**0.89**	**165**	*eP*	Pb	21 21 23.2	+0.1
PLP	**Palo**	**1.38**	**343**	⇑*eP*	Pn	21 21 30.0	-0.5
PLP				*eS*	Sg	21 21 50.0	-0.7
OCLP	**Ormoc**	**1.43**	**327**	*eP*	Pg	21 21 33.4	-0.2
LLP	**Lapu-Lapu**	**1.48**	**289**	*eP*	Pn	21 21 20.7	-11

*ISK **28** 21:23:54.3, 40.08N×38.67E, h2km, MD3.0*
*CSEM **28** 21:23:55.6±0.2, 40.07N×38.66E, h5km, MD3.1, Error ellipse: s-maj=4.7km s-min=4.4km az=80.0*
*DDA **28** 21:23:55.1, 40.07N×38.67E, h14km, MD3.1*
ISC 28 21:23:55.2±1.1**, 40.07N**±0.02×**38.65E**±0.02**, h10**km±9km**, n39, σ0**53/60, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUSE	**Susehri**	**0.37**	**293**	*i* P	**Pb**	**21 24 03.8**	**-0.2**
SUSE				*i* S	**Sb**	**21 24 09.3**	**-0.6**
SUSE	**Susehri**	**0.37**	**293**	*i* P	**Pb**	**21 24 03.8**	**-0.2**
SUSE				*i* S	**Sb**	**21 24 09.3**	**-0.6**
KELT	**Kelkit**	**0.47**	**80**	*i* P	**Pg**	**21 24 04.9**	**+0.3**
KELT				*i* S	**Sg**	**21 24 11.0**	**+0.2**
KELT	**Kelkit**	**0.47**	**80**	*i* P	**Pg**	**21 24 04.9**	**+0.3**
KELT				*i* S	**Sg**	**21 24 11.0**	**+0.2**
ILIC	**ilic-Erzincan**	**0.62**	**186**	*e*PG	**Pg**	**21 24 07.0**	**-0.2**
ILIC				*e*SG	**Sb**	**21 24 17.2**	**+0.3**
ILIC	**ilic-Erzincan**	**0.62**	**186**	*e*Pg	**Pg**	**21 24 07.0**	**-0.2**
ILIC				*e*Sg	**Sb**	**21 24 17.2**	**+0.3**
EZC	**Erzincan**	**0.63**	**120**	*e*PG	**Pg**	**21 24 06.5**	**-0.9**
EZC				*e*SG	**Sb**	**21 24 16.6**	**-0.6**
EZC	**Erzincan**	**0.63**	**120**	*e*Pg	**Pg**	**21 24 06.5**	**-0.9**
EZC				*e*Sg	**Sb**	**21 24 16.7**	**-0.6**
GUMT	**Gumushane**	**0.75**	**58**	*e*PG	**Pg**	**21 24 09.6**	**-0.2**
GUMT	**Gumushane**	**0.75**	**58**	*e*Pg	**Pg**	**21 24 09.6**	**-0.2**
KEMA	**Kemaliye**	**0.81**	**189**	*i* P	**Pg**	**21 24 10.4**	**-0.3**
KEMA				*i* S	**Sb**	**21 24 22.0**	**-0.3**
KEMA	**Kemaliye**	**0.81**	**189**	*i* P	**Pg**	**21 24 10.4**	**-0.3**
KEMA				*i* S	**Sb**	**21 24 22.0**	**-0.3**
ESPY	**Espiye-Giresun**	**0.85**	**4**	*e*PG	**Pg**	**21 24 11.5**	**-0.2**
ESPY				*e*SG	**Sb**	**21 24 23.4**	**-0.3**
ESPY	**Espiye-Giresun**	**0.85**	**4**	*e*Pg	**Pg**	**21 24 11.5**	**-0.2**
ESPY				*e*Sg	**Sb**	**21 24 23.4**	**-0.3**
GRSN	**GIRESUNGRSN**	**0.91**	**341**	*i* P	**Pb**	**21 24 12.9**	**-0.1**
GRSN				*i* S	**Sg**	**21 24 24.4**	**-0.1**
GRSN	**GIRESUNGRSN**	**0.91**	**341**	*i* P	**Pb**	**21 24 12.9**	**-0.1**
GRSN				*i* S	**Sg**	**21 24 24.4**	**-0.1**
ERZN	**Erzincan**	**0.96**	**120**	*e*PG	**Pg**	**21 24 13.7**	**0.0**
RSDY	**Resadiye-TOKAT**	**1.06**	**289**	*e*PG	**Pb**	**21 24 15.6**	**-0.1**
RSDY	**Resadiye-TOKAT**	**1.06**	**289**	*e*Pg	**Pb**	**21 24 15.6**	**-0.1**
BAYT	**Ayd¨–ntepe-Bay**	**1.19**	**74**	*e*PN	**Pb**	**21 24 17.0**	**-1.0**
BAYT	**Ayd¨–ntepe-Bay**	**1.19**	**74**	*e*Pn	**Pb**	**21 24 17.0**	**-1.0**
MACK	**Trabzon**	**1.22**	**44**	*i* P	**Pg**	**21 24 19.2**	**+0.4**
MACK				*i* S	**Sn**	**21 24 34.8**	**-0.3**
MACK	**Trabzon**	**1.22**	**44**	*i* P	**Pg**	**21 24 19.2**	**+0.4**
MACK				*i* S	**Sn**	**21 24 34.8**	**-0.3**
KTUT	**Trabzon**	**1.25**	**42**	*e*PN	**Pb**	**21 24 18.8**	**-0.2**
KTUT	**Trabzon**	**1.25**	**42**	*e*Pn	**Pb**	**21 24 18.8**	**-0.2**
PTK	**Pertek**	**1.31**	**154**	*e*PN	**Pg**	**21 24 21.1**	**+0.7**
PTK	**Pertek**	**1.31**	**154**	*e*Pn	**Pg**	**21 24 21.1**	**+0.7**
ERBA	**Erbaa**	**1.57**	**294**	*e*P	**Pb**	**21 24 24.8**	**+0.4**
ERBA				*e*S	**Sn**	**21 24 42.8**	**-0.9**
ERBA	**Erbaa**	**1.57**	**294**	*e*P	**Pb**	**21 24 24.8**	**+0.4**
ERBA				*e*S	**Sn**	**21 24 42.8**	**-0.9**
MALT	**Malatya**	**1.76**	**186**	*e*PN	**Pb**	**21 24 27.4**	**-0.2**
MALT	**Malatya**	**1.76**	**186**	*e*Pn	**Pb**	**21 24 27.4**	**-0.2**
BINT	**Bingol**	**1.86**	**129**	*e*Pn	**Pb**	**21 24 29.7**	**+0.4**
BNGB	**Bing¶l**	**1.90**	**124**	*e*PN	**Pb**	**21 24 29.7**	**-0.4**
DDEM	**Demirkent**	**2.51**	**70**	*i* P	**Pb**	**21 24 40.2**	**-0.2**
DDEM				*i* S	**Sb**	**21 25 11.7**	**+0.4**
DBAD	**Bademkaya**	**2.51**	**67**	*i* P	**Pb**	**21 24 39.6**	**-0.8**
DBAD				*i* S	**Sb**	**21 25 12.2**	**+0.8**
DBAD	**Bademkaya**	**2.51**	**67**	*i* P	**Pb**	**21 24 39.6**	**-0.8**
BCA	**Borcka**	**2.65**	**58**	*e*PN	**Pn**	**21 24 39.1**	**+1.1**
BCA	**Borcka**	**2.65**	**58**	*e*Pn	**Pn**	**21 24 39.1**	**+1.1**
DAGI	**Agillar**	**2.69**	**67**	*i* P	**Pb**	**21 24 43.2**	**-0.3**
DAGI				*i* S	**Sb**	**21 25 15.6**	**-0.9**

*SOF **28** 21:37:55.2, 41.76N×22.82E, h12km, MD2.6*
*ISCJB **28** 21:37:55.6±0.4, 41.74N±0.02×22.83E±0.03, h3km±4km, Error ellipse: s-maj=4.0km s-min=2.8km az=151.9*
*SKO **28** 21:37:56.0, 41.72N×22.87E, h15km, M1.8, ML2.2*
*THE **28** 21:37:56.8, 41.72N×22.86E, h2km±1km, ML2.6/2, Error ellipse: s-maj=1.9km s-min=0.8km az=278.0*
*CSEM **28** 21:37:56.2±0.1, 41.73N×22.83E, h5km, MD2.6, Error ellipse: s-maj=2.0km s-min=1.7km az=87.0*
*BEO **28** 21:37:56.7±1.0, 41.71N×22.99E, h21km±5km, ML2.5/5*
*ATH **28** 21:37:57.5, 41.62N×22.89E, h22km±5km, MD3.3/5*
ISC 28 21:37:56.7±1.0**, 41.71N**±0.02×**22.87E**±0.02**, h11**km±8km**, n62, σ0**83/89, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.23**	**46**	*i* Pg	**Pg**	**21 38 01.0**	**-0.4**
KKB	**Krupnik**	**0.23**	**46**	*i* Pg	**Pg**	**21 38 01.0**	**-0.4**
VAY	**Valandovo**	**0.45**	**210**	P	**Pg**	**21 38 05.3**	**-0.2**
VAY				S	**Sg**	**21 38 11.3**	**-0.2**
VAY	**Valandovo**	**0.45**	**210**	*i* Pg	**Pg**	**21 38 05.2**	**-0.2**
VAY				*i* Sg	**Sg**	**21 38 11.8**	**+0.3**
VAY				*e*Lg	Lg	21 38 12.0	
	comp=E,397nm,0.5s						
VAY				*e*Lg	Lg	21 38 12.0	
	comp=N,229nm,0.4s						
VAY	**Valandovo**	**0.45**	**210**	*i* Pg	Pg	21 38 01.7	-3.8
VAY	**Valandovo**	**0.45**	**210**	P	**Pg**	**21 38 05.3**	**-0.2**
VAY				S	**Sg**	**21 38 11.3**	**-0.2**
VAY				*i* Sg	**Sb**	**21 38 12.2**	**-1.2**
VAY				*e*Lg	Lg	21 38 12.5	
	comp=N,229nm,0.4s						
KNT	**Kendrikon**	**0.55**	**177**	P	**Pg**	**21 38 07.3**	**-0.1**
KNT	**Kendrikon**	**0.55**	**177**	P	**Pg**	**21 38 07.3**	**-0.1**
MMB	**Musomiste**	**0.66**	**100**	*i* Pg	**Pg**	**21 38 09.6**	**+0.1**
MMB	**Musomiste**	**0.66**	**100**	*i* Pg	**Pg**	**21 38 09.6**	**+0.1**
SRS	**Serrai**	**0.81**	**137**	P	**Pb**	**21 38 11.9**	**-0.9**
SRS	**Serrai**	**0.81**	**137**	P	**Pb**	**21 38 11.9**	**-0.9**
NVR	**Nevrokopi**	**0.83**	**115**	P	**Pb**	**21 38 12.6**	**-0.7**
NVR				S	**Sb**	**21 38 24.0**	**-0.4**
NVR	**Nevrokopi**	**0.83**	**115**	*e*PN	**Pb**	**21 38 12.5**	**-0.7**
NVR				*e*SN	**Sb**	**21 38 23.5**	**-0.9**
NVR	**Nevrokopi**	**0.83**	**115**	P	**Pb**	**21 38 12.6**	**-0.7**
GRG	**Griva**	**0.83**	**205**	P	**Pb**	**21 38 12.3**	**-0.9**
GRG	**Griva**	**0.83**	**205**	*e*PN	**Pb**	**21 38 12.4**	**-0.8**
GRG				*e*SN	**Sb**	**21 38 22.7**	**-1.7**
GRG	**Griva**	**0.83**	**205**	P	**Pb**	**21 38 12.3**	**-0.9**
GRG				*e*Sn	**Sb**	**21 38 22.7**	**-1.7**
VTS	**Vitosha**	**0.92**	**16**	P	**Pb**	**21 38 13.4**	**-1.4**
VTS				S	**Sb**	**21 38 26.3**	**-0.7**
VTS	**Vitosha**	**0.92**	**16**	*e*Pg	**Pb**	**21 38 13.4**	**-1.4**
VTS				*e*Sg	**Sb**	**21 38 25.8**	**-1.2**
VTS	**Vitosha**	**0.92**	**16**	*i* Pg	**Pb**	**21 38 13.3**	**-1.5**
VTS	**Vitosha**	**0.92**	**16**	P	**Pb**	**21 38 13.4**	**-1.4**
VTS				*e*Sg	**Sb**	**21 38 25.8**	**-1.2**
VTS				S	**Sb**	**21 38 26.3**	**-0.7**
SOH	**Sokhos**	**0.96**	**157**	P	**Pb**	**21 38 15.1**	**-0.4**
SOH				S	**Sb**	**21 38 28.4**	**+0.2**
SOH	**Sokhos**	**0.96**	**157**	P	**Pb**	**21 38 15.1**	**-0.4**
SOH				S	**Sb**	**21 38 28.4**	**+0.2**
SKO	**Skopje**	**1.10**	**284**	*e*Pg	**Pg**	**21 38 19.7**	**+1.9**
SKO				*e*Sg	**Sb**	**21 38 31.2**	**-0.9**
SKO				*e*Lg	Lg	21 38 32.8	
	comp=N,23nm,0.4s						
SKO				*e*Lg	Lg	21 38 34.2	
	comp=E,16nm,0.4s						
SKO	**Skopje**	**1.10**	**284**	*e*Pg	**Pg**	**21 38 20.2**	**+2.4**
SKO				*e*Sg	**Sb**	**21 38 31.6**	**-0.5**
SKO				*e*Lg	Lg	21 38 34.7	
	comp=E,16nm,0.4s						
PGB	**Panagyurishte**	**1.28**	**49**	*i* Pg	**Pn**	**21 38 20.0**	**-0.7**
PGB	**Panagyurishte**	**1.28**	**49**	*i* Pg	**Pn**	**21 38 20.0**	**-0.7**
BARS	**Barje**	**1.35**	**325**	*e*Pg	**Pn**	**21 38 21.4**	**-0.2**
BARS				*e*Sg	**Sg**	**21 38 41.2**	**+1.0**
BARS	**Barje**	**1.35**	**325**	*e*Pg

KULA	Kula-Manisa	0.68	206	*e*Pg	Pg	21 51 44.0	-0.4
MANT	Manisa	0.74	211	*i* P	Pg	21 51 45.3	-0.2
MANT				*i* S	Sg	21 51 54.3	-0.9
MANT	Manisa	0.74	211	*i* P	Pg	21 51 45.3	-0.2
MANT				*i* S	Sg	21 51 54.3	-0.9
ALT	Altintas	0.84	95	*e*PG	Pb	21 51 47.8	0.0
ALT	Altintas	0.84	95	*e*Pg	Pb	21 51 47.8	0.0
KHAL	Karahalli	0.84	155	*i* P	Pg	21 51 47.2	-0.1
KHAL				*i* S	Sg	21 51 58.0	-0.3
KHAL	Karahalli	0.84	155	*i* P	Pg	21 51 47.2	-0.1
KHAL				*i* S	Sg	21 51 58.0	-0.3
KHL	Karahalli	0.89	155	*e*PG	Pg	21 51 47.9	-0.4
KHL	Karahalli	0.89	155	*e*Pg	Pg	21 51 47.9	-0.4
ORLT	Orhaneli	0.92	353	*e*PG	Pb	21 51 49.0	-0.2
ORLT	Orhaneli	0.92	353	*e*Pg	Pb	21 51 49.0	-0.2
AKHS	Akhisar	0.99	256	*i* P	Pb	21 51 50.4	+0.1
AKHS				*e*S	Sb	21 52 03.3	0.0
AKHS	Akhisar	0.99	256	*i* P	Pb	21 51 50.4	+0.1
AKHS				*e*S	Sb	21 52 03.3	0.0
AKS	Akhisar	0.99	256	*e*PG	Pg	21 51 50.1	0.0
AKS	Akhisar	0.99	256	*e*Pg	Pg	21 51 50.1	0.0
ULDT	Uludag	1.01	4	*i* P	Pb	21 51 50.7	-0.1
ULDT				*i* S	Sg	21 52 03.6	-0.3
ULDT	Uludag	1.01	4	*i* P	Pb	21 51 50.7	-0.1
ULDT				*i* S	Sg	21 52 03.6	-0.3
BALB	Balikesir	1.03	300	*e*PG	Pb	21 51 51.2	+0.2
BALB	Balikesir	1.03	300	*e*Pg	Pb	21 51 51.2	+0.2
MDNY	Mudanya-Bursa	1.24	355	*e*PN	Pg	21 51 54.4	-0.6
MDNY	Mudanya-Bursa	1.24	355	*e*Pn	Pg	21 51 54.4	-0.6
KCTX	Karacabey (Bur	1.25	335	*e*PN	Pn	21 51 55.2	+0.6
KCTX	Karacabey (Bur	1.25	335	*e*Pn	Pn	21 51 55.2	+0.6
BALY	Balya	1.26	299	*i* P	Pn	21 51 55.3	+0.6
BALY				*i* S	Sg	21 52 10.4	-1.2
BALY	Balya	1.26	299	*i* P	Pn	21 51 55.3	+0.6
BALY				*i* S	Sg	21 52 10.4	-1.2
GEMT	Gemlik	1.31	5	*e*PN	Pg	21 51 56.2	0.0
GEMT	Gemlik	1.31	5	*e*Pn	Pg	21 51 56.2	0.0
SHUT	Suhut-Afyon	1.31	116	*e*PN	Pn	21 51 55.8	+0.3
SHUT	Suhut-Afyon	1.31	116	*e*Pn	Pn	21 51 55.8	+0.3
BORA	Eskisehir	1.33	55	*i* P	Pn	21 51 55.7	0.0
BORA				*i* S	Sg	21 52 13.6	-0.2
BORA	Eskisehir	1.33	55	*i* P	Pn	21 51 55.7	0.0
BORA				*i* S	Sg	21 52 13.6	-0.2
GONE	Gonen-Balikesi	1.39	312	*e*PN	Pg	21 51 57.7	-0.1
GONE	Gonen-Balikesi	1.39	312	*e*Pn	Pg	21 51 57.7	-0.1
ADVT	Abdulvahap	1.41	22	*e*PN	Pg	21 51 57.8	-0.4
ADVT	Abdulvahap	1.41	22	*e*Pn	Pg	21 51 57.8	-0.4
ARMT	Armutlu	1.44	355	*e*PN	Pb	21 51 58.2	+0.2
ARMT	Armutlu	1.44	355	*e*Pn	Pb	21 51 58.2	+0.2
ESKT	Eskisehir	1.46	74	*e*PN	Pb	21 51 58.3	-0.1
ESKT	Eskisehir	1.46	74	*e*Pn	Pb	21 51 58.3	-0.1
BNT	Bandirma	1.50	325	*e*PN	Pb	21 51 59.2	+0.2
BNT	Bandirma	1.50	325	*e*Pn	Pb	21 51 59.2	+0.2
GULT	Gulveren	1.73	41	*e*PN	Pn	21 52 02.2	+1.0
GULT	Gulveren	1.73	41	*e*Pn	Pn	21 52 02.2	+1.0
BLCB	Balcova	1.73	245	*e*PN	Pb	21 52 02.5	-0.4
BLCB	Balcova	1.73	245	*e*Pn	Pb	21 52 02.5	-0.4
MRMT	Marmara Adasi	1.84	323	*e*PN	Pb	21 52 04.2	-0.7
MRMT	Marmara Adasi	1.84	323	*e*Pn	Pb	21 52 04.2	-0.7
CTKS	Kestanelik-??a	2.14	349	*e*PN	Pb	21 52 08.9	-1.1
CTKS	Kestanelik-??a	2.14	349	*e*Pn	Pb	21 52 08.9	-1.1
GELI	Tayfur-Gelibol	2.35	303	*e*PN	Pn	21 52 11.2	+1.6
GELI	Tayfur-Gelibol	2.35	303	*e*Pn	Pn	21 52 11.2	+1.6

DDA ***28*** *22:02:33.9, 39°.46N×23°.98E, h6km, MD3.3*
SOF ***28*** *22:02:35.1, 39°.61N×23°.62E, h0km, MD3.4*
IDC ***28*** *22:02:36.6±1.0, 39°.34N×24°.04E, h0km, mb3.6/8, mb1 3.7/15, mb1mx3.6/33, mbtmp3.6/15, ML3.5/7, MS3.0/11, Ms1 3.0/11, ms1mx2.8/44, Error ellipse: s-maj=16.2km s-min=12.9km az=111.0*
ATH ***28*** *22:02:37.9, 39°.41N×24°.09E, h34km±2km, MD4.1/26, ML4.0*
PDG ***28*** *22:02:37.3±0.5, 39°.39N×24°.05E, h15km, ML3.7/8, Error ellipse: s-maj=0.5km s-min=0.5km az=0.0*
BEO ***28*** *22:02:38.0, 39°.51N×24°.35E, h0km*
ISCJB ***28*** *22:02:38.2±0.3, 39°.42N±0°.01×24°.06E±0°.01, h23km±3km, mb3.5/8, MS3.0/6, Error ellipse: s-maj=1.9km s-min=1.6km az=9.9*
THE ***28*** *22:02:38.2, 39°.38N×24°.07E, h12km, ML4.1/13, Error ellipse: s-maj=0.9km s-min=0.5km az=250.0*
CSEM ***28*** *22:02:39.1±0.1, 39°.37N×24°.05E, h20km, ML4.1/13, Error ellipse: s-maj=2.3km s-min=2.0km az=97.0*

ISC 28 22:02:38.3±0.9, 39°.38N±0°.02×24°.06E±0°.02, h13km±6km, n360, σ0.96/451, mb3.5/8, MS3.0/6, 39C-19D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AOS	Alonnisos	0.25	213	P	Pg	22 02 43.2	-0.4
AOS				S	Sg	22 02 47.5	+0.3
AOS	Alonnisos	0.25	213	P	Pg	22 02 43.2	-0.4
AOS				S	Sg	22 02 47.5	+0.3
SKIA	Skiathos	0.51	245	P	Pg	22 02 47.6	-0.6
SKIA				S	Sb	22 02 56.7	+0.3
SKIA	Skiathos	0.51	245	P	Pg	22 02 47.6	-0.6
SKIA				S	Sb	22 02 56.7	+0.3
PAIG	Paliouri	0.62	332	P	Pg	22 02 50.4	+0.1
PAIG				S	Sb	22 02 59.7	+0.1
PAIG	Paliouri	0.62	332	*e*PN	Pg	22 02 50.3	0.0
PAIG				*e*SN	Sb	22 02 59.9	+0.3
PAIG	Paliouri	0.62	332	P	Pg	22 02 50.4	+0.1
PAIG				S	Sb	22 02 59.7	+0.1
XOR	Xorichti	0.67	269	P	Pg	22 02 50.7	-0.6
XOR				S	Sb	22 03 01.4	+0.2
XOR	Xorichti	0.67	269	P	Pg	22 02 50.7	-0.6
XOR				S	Sb	22 03 01.4	+0.2
MRKA	Markates	0.77	209	P	Pg	22 02 52.4	-0.8
MRKA				S	Sg	22 03 03.6	+0.3
MRKA	Markates	0.77	209	P	Pg	22 02 52.4	-0.8
MRKA				S	Sg	22 03 03.6	+0.3
SMIA	Simia	0.83	233	P	Pg	22 02 53.3	-1.0
SMIA				S	Sb	22 03 06.4	+0.7
SMIA	Simia	0.83	233	P	Pg	22 02 53.3	-1.0
SMIA				S	Sb	22 03 06.4	+0.7
OUR	Ouranopolis	0.95	357	P	Pg	22 02 56.0	-0.7
OUR				S	Sn	22 03 10.1	-0.8
OUR	Ouranopolis	0.95	357	P	Pg	22 02 56.0	-0.7
OUR				S	Sn	22 03 10.1	-0.8
LIA	Limnos Island	1.01	59	P	Pb	22 02 56.9	-0.7
LIA				S	Sg	22 03 10.7	-0.2
LIA	Limnos Island	1.01	59	P	Pb	22 02 56.9	-0.7
LIA				S	Sg	22 03 10.7	-0.2
ATAL	Atalanti	1.06	230	P	Pb	22 02 57.3	-1.2
ATAL				S	Sg	22 03 12.8	+0.2
ATAL	Atalanti	1.06	230	P	Pb	22 02 57.3	-1.2
ATAL				S	Sg	22 03 12.8	+0.2
PLG	Polygyros	1.10	335	P	Pb	22 02 58.3	-0.9
PLG				S	Sb	22 03 13.4	0.0
PLG	Polygyros	1.10	335	P	Pb	22 02 58.3	-0.9
PLG				S	Sb	22 03 13.4	0.0
LKR	Lokris	1.10	229	P	Pb	22 02 57.9	-1.3
LKR				S	Sg	22 03 14.1	+0.3
LKR	Lokris	1.10	229	P	Pb	22 02 57.9	-1.3
LKR				S	Sg	22 03 14.1	+0.3
AXAR	Agios Charalam	1.25	241	P	Pn	22 03 00.9	-0.6
AXAR				S	Sg	22 03 18.9	+0.3
AXAR	Agios Charalam	1.25	241	P	Pn	22 03 00.9	-0.6
AXAR				S	Sg	22 03 18.9	+0.3
PTL	Penteli	1.34	187	P	Pn	22 03 02.2	-0.5
PTL				S	Sb	22 03 19.3	-1.1
PTL	Penteli	1.34	187	*e*PN	Pn	22 03 02.3	-0.5
PTL	Penteli	1.34	187	*e*Pn	Pn	22 03 02.3	-0.5
PTL				S	Sb	22 03 19.3	-1.1
MRMA	Marmari	1.35	169	P	Pn	22 03 02.3	-0.5
MRMA	Marmari	1.35	169	P	Pn	22 03 02.3	-0.5
AGG	Agios Georgios	1.39	256	P	Pn	22 03 02.8	-0.7
AGG				S	Sb	22 03 22.1	+0.2
AGG	Agios Georgios	1.39	256	*e*PB	Pn	22 03 02.9	-0.6
AGG				*e*SN	Sb	22 03 22.0	+0.2
AGG	Agios Georgios	1.39	256	*e*Pb	Pn	22 03 02.9	-0.6
AGG				*e*Sn	Sb	22 03 22.0	+0.2
LIT	Litokhoron	1.41	301	P	Pn	22 03 03.1	-0.6
LIT				S	Sn	22 03 21.9	-0.2
LIT	Litokhoron	1.41	301	*e*PN	Pn	22 03 03.3	-0.4
LIT	Litokhoron	1.41	301	*e*Pn	Pn	22 03 03.3	-0.4
LIT				S	Sn	22 03 21.9	-0.2
SIGR	SIGRI	1.41	96	P	Pn	22 03 03.0	-0.6
SIGR	SIGRI	1.41	96	P	Pn	22 03 03.0	-0.6
HORT	Hortiatis	1.42	329	P	Pn	22 03 03.3	-0.6
HORT				S	Sn	22 03 22.0	-0.5
HORT	Hortiatis	1.42	329	P	Pn	22 03 03.3	-0.6
HORT				S	Sn	22 03 22.0	-0.5
ATHU	Athens Univers	1.43	189	P	Pn	22 03 03.5	-0.5
ATHU	Athens Univers	1.43	189	P	Pn	22 03 03.5	-0.5
ATH	Athens Observa	1.43	191	P	Pn	22 03 03.6	-0.4
ATH				S	Sb	22 03 23.1	+0.1
ATH	Athens Observa	1.43	191	*e*PN	Pn	22 03 03.7	-0.3
ATH	Athens Observa	1.43	191	*e*Pn	Pn	22 03 03.7	-0.3
ATH				S	Sb	22 03 23.1	+0.1
THE	Thessaloniki	1.50	326	P	Pn	22 03 04.8	-0.2
THE				S	Sn	22 03 23.7	-0.8
THE	Thessaloniki	1.50	326	P	Pn	22 03 04.8	-0.2
THE				S	Sn	22 03 23.7	-0.8
SOH	Sokhos	1.54	340	P	Pn	22 03 05.3	-0.2
SOH				S	Sn	22 03 24.6	-0.8
SOH	Sokhos	1.54	340	*e*PN	Pn	22 03 05.4	-0.1
SOH	Sokhos	1.54	340	*e*Pn	Pn	22 03 05.4	-0.1
SOH				S	Sn	22 03 24.6	-0.8
DSF	Desfina	1.54	231	P	Pn	22 03 04.5	-1.0
DSF	Desfina	1.54	231	P	Pn	22 03 04.5	-1.0
SMTH	Samothraki Isl	1.57	46	*e*PB	Pn	22 03 04.6	-1.3
SMTH	Samothraki Isl	1.57	46	*e*Pb	Pn	22 03 04.6	-1.3
THL	Klokotos Trika	1.59	277	P	Pn	22 03 05.8	-0.4
THL				S	Sn	22 03 26.3	-0.3
THL	Klokotos Trika	1.59	277	*e*PB	Pn	22 03 05.9	-0.3
THL				*e*SN	Sn	22 03 26.5	-0.1
THL	Klokotos Trika	1.59	277	*e*Pb	Pn	22 03 05.9	-0.3
THL				*e*Sn	Sn	22 03 26.5	-0.1
LTK	Loutraki	1.60	212	*e*PN	Pn	22 03 05.9	-0.5
LTK				*e*SN	Sb	22 03 26.9	-0.5
LTK	Loutraki	1.60	212	*e*Pn	Pn	22 03 05.9	-0.5
LTK				*e*Sn	Sb	22 03 27.7	-0.3
BOZC	Bozcaada	1.61	73	*i* P	Pn	22 03 05.9	-0.5
BOZC				*i* S	Sb	22 03 27.8	-0.2
NAIG	Nisos Aigina	1.68	196	*e*PN	Pn	22 03 07.0	-0.4
NAIG	Nisos Aigina	1.68	196	*e*Pn	Pn	22 03 07.0	-0.4
SRS	Serrai	1.77	349	P	Pn	22 03 07.9	-0.8
SRS				S	Sn	22 03 30.2	-0.9
SRS	Serrai	1.77	349	P	Pn	22 03 07.9	-0.8
SRS				S	Sn	22 03 30.2	-0.9
KALE	Kalithea	1.79	237	*e*PN	Pn	22 03 08.6	-0.4
KALE				*e*SN	Sn	22 03 31.6	-0.2
KALE	Kalithea	1.79	237	*e*Pn	Pn	22 03 08.6	-0.4
KALE				*e*Sn	Sn	22 03 31.6	-0.2
EZN	Ezine	1.81	75	*e*PN	Pn	22 03 08.4	-0.7
EZN				*e*SN	Sn	22 03 31.5	-0.4
EVR	Evrytania	1.81	256	P	Pn	22 03 09.2	-0.1
EVR				S	Sn	22 03 32.0	-0.2
EVR	Evrytania	1.81	256	P	Pn	22 03 09.2	+0.1
EVR				S	Sn	22 03 32.0	-0.2
CHOS	Chios island	1.85	122	*e*PB	Pn	22 03 09.9	+0.1
CHOS	Chios island	1.85	122	*e*Pb	Pn	22 03 09.9	+0.1
TRIZ	Trizonia	1.85	237	*e*PN	Pn	22 03 09.7	-0.1
TRIZ	Trizonia	1.85	237	*e*Pn	Pn	22 03 09.7	-0.1
EFP	Efpalio	1.93	241	*e*PN	Pn	22 03 11.0	+0.1
EFP				*e*SN	Sn	22 03 35.0	0.0
EFP	Efpalio	1.93	241	*e*Pn	Pn	22 03 11.0	+0.1
EFP				*e*Sn	Sn	22 03 35.0	0.0
GUR	Goura	1.97	223	P	Pn	22 03 11.0	-0.5
GUR	Goura	1.97	223	*e*PN	Pn	22 03 11.2	-0.3
GUR	Goura	1.97	223	*e*Pn	Pn	22 03 11.2	-0.3
DID	Didima	1.98	199	P	Pn	22 03 11.0	-0.6
DID				S	Sn	22 03 36.0	-0.3
DID	Didima	1.98	199	*e*PN	Pn	22 03 11.0	-0.6
DID				*e*SN	Sn	22 03 35.7	-0.8
DID	Didima	1.98	199	P	Pn	22 03 11.0	-0.6
DID				*e*Sn	Sn	22 03 35.5	-0.8
DID				S	Sn	22 03 36.0	-0.3
LAKA	Lakka	1.98	236	*e*PN	Pn	22 03 11.8	+0.2
LAKA	Lakka	1.98	236	*e*Pn	Pn	22 03 11.8	+0.2
PSA1	Psathopyrgos	2.00	239	*e*PB	Pb	22 03 13.2	-1.3
DIDY	Didyma	2.02	200	P	Pn	22 03 11.3	-0.8
DIDY	Didyma	2.02	200	P	Pn	22 03 11.3	-0.8
GRG	Griva	2.02	322	*e*PB	Pn	22 03 12.6	+0.5
GRG	Griva	2.02	322	*e*Pb	Pn	22 03 12.6	+0.5
AYVA	Ayvalik	2.04	91	*i* P	Pn	22 03 12.6	+0.2
AYVA	Ayvalik	2.04	91	*i* P	Pn	22 03 12.6	+0.2
ENEZ	Enez	2.10	49	*e*PN	Pn	22 03 11.8	-1.4
GELI	Tayfur-Gelibol	2.12	61	*e*PN	Pn	22 03 12.5	-0.9
ALN	Alexandroupoli	2.15	45	P	Pn	22 03 12.6	-1.2
ALN	Alexandroupoli	2.15	45	*e*PN	Pn	22 03 12.6	-1.2
ALN	Alexandroupoli	2.15	45	P	Pn	22 03 12.6	-1.2
MMB	Musomiste	2.22	354	*i* Pg	Pn	22 03 13.4	-0.9
MMB	Musomiste	2.22	354	*i* Pg	Pn	22 03 13.4	-0.9
URLA	Izmir	2.23	116	*i* P	Pn	22 03 15.3	+0.3
URLA				*i* S	Sb	22 03 47.1	+1.1
URLA	Izmir	2.23	116	*i* P	Pn	22 03 15.3	+0.3
VAY	Valandovo	2.25	330	*i* Pn	Pn	22 03 14.6	-0.6
VAY				*e*Sg	Sg	22 03 51.6	+1.2
VAY	Valandovo	2.25	330	*i* Pn	Pn	22 03 15.0	-0.2
ERIK	Erikli-Kesan	2.28	55	*e*PN	Pn	22 03 14.6	-1.1
LPK	Lapseki	2.30	64	*e*PN	Pn	22 03 15.1	-0.9
RZN	Rozhen	2.36	12	*i* P	Pn	22 03 15.6	-1.3
RZN	Rozhen	2.36	12	*i* P	Pn	22 03 15.6	-1.3
VLX	Vlachokerasia	2.40	214	*e*PN	Pn	22 03 17.7	+0.2
VLX				*e*SN	Sn	22 03 46.4	-0.4
VLX	Vlachokerasia	2.40	214	*e*Pn	Pn	22 03 17.7	+0.2
VLX				*e*Sn	Sn	22 03 46.4	-0.4
FNA	Florina	2.49	305	*e*PN	Pn	22 03 19.1	+0.5
FNA	Florina	2.49	305	*e*Pn	Pn	22 03 19.1	+0.5
KDZ	Kurdzhali	2.49	24	*i* P	Pn	22 03 17.4	-1.2
KDZ	Kurdzhali	2.49	24	*i* P	Pn	22 03 17.4	-1.2
BLCB	Balcova	2.53	112	*e*PN	Pn	22 03 19.1	0.0
APE	Apeiranthos	2.58	153	*e*PN	Pn	22 03 19.7	-0.2
APE	Apeiranthos	2.58	153	P	Pn	22 03 19.6	-0.3
APE	Apeiranthos	2.58	153	*i* P	Pn	22 03 19.6	-0.3
APE	Apeiranthos	2.58	153	*e*PN	Pn	22 03 19.6	-0.3
APE	Apeiranthos	2.58	153	P	Pn	22 03 19.6	-0.3
KKB	Krupnik	2.59	344	*i* Pg	Pn	22 03 19.8	-0.1
KKB	Krupnik	2.59	344	*i* Pg	Pn	22 03 19.8	-0.1
BIA	Bitola	2.66	309	*i* Pn	Pn	22 03 21.9	+1.0
BIA	Bitola	2.66	309	*i* Pn	Pn	22 03 21.8	+1.0
IZM	Izmir	2.69	110	*e*PN	Pn	22 03 21.2	-0.1
KRBG	Karabiga-Canak	2.69	67	*e*PN	Pn	22 03 20.9	-0.4
PLD	Plovdiv	2.76	10	*i* P	Pn	22 03 21.4	-0.9
PLD	Plovdiv	2.76	10	*i* P	Pn	22 03 21.4	-0.9
BALY	Balya	2.78	81	*i* P	Pn	22 03 22.6	+0.1
BALY	Balya	2.78	81	*i* P	Pn	22 03 22.6	+0.1
KBN	Korca	2.80	297	*e*PN	Pn	22 03 21.8	+1.1
KBN				*e*SN	Sn	22 03 58.2	+1.6
KBN	Korca	2.80	297	*e*Pn	Pn	22 03 21.8	-1.1
KBN				*e*Sn	Sn	22 03 58.2	+1.6
GONE	Gonen-Balikesi	2.88	76	*e*PN	Pn	22 03 23.6	-0.2
DIM	Dimitrovgrad	2.89	22	*i* P	Pn	22 03 24.0	0.0
DIM	Dimitrovgrad	2.89	22	*i* P	Pn	22 03 24.0	0.0
DYR	Agios Nikonas	2.95	208	*e*PN	Pn	22 03 26.2	+1.3
DYR	Agios Nikonas	2.95	208	*e*Pn	Pn	22 03 26.2	+1.3
AKHS	Akhisar	2.96	99	*i* P	Pn	22 03 26.2	+1.1
AKHS	Akhisar	2.96	99	*i* P	Pn	22 03 26.2	+1.1
AKS	Akhisar	2.96	99	*e*PN	Pn	22 03 25.2	+0.1
BALB	Balikesir	2.97	84	*e*PN	Pn	22 03 25.2	+0.1
MRMT	Marmara Adasi	2.98	65	*e*PN	Pn	22 03 24.8	-0.5
GCAM	G?zelcaml?	3.00	123	*i* P	Pn	22 03 26.3	+0.7
GCAM	G?zelcaml?	3.00	123	*i* P	Pn	22 03 26.3	+0.7
PYL	PYLOS	3.08	217	*e*PN	Pn	22 03 28.5	+1.8
PYL	PYLOS	3.08	217	*e*Pn	Pn	22 03 28.5	+1.8
EDC	Edincik	3.08	71	*e*PN	Pn	22 03 26.8	+0.1
TKR	Tekirdag	3.11	58	*e*PN	Pn	22 03 26.8	-0.3
BNT	Bandirma	3.13	71	*e*PN	Pn	22 03 26.9	-0.4
PGB	Panagyurishte	3.17	1	*i* P	Pb	22 03 33.6	-0.8
EDRB	Edirne	3.20	39	*e*PN	Pn	22 03 27.4	-0.9
KYTH	Kithira	3.20	195	*e*PN	Pn	22 03 28.7	+0.3
KYTH	Kithira	3.20	195	*e*Pn	Pn	22 03 28.7	+0.3
SKO	Skopje	3.26	323	*i* Pn	Pn	22 03 30.4	+1.2
SKO				*e*Sg	Sn	22 04 07.9	0.0
SKO	Skopje	3.26	323	*i* Pn	Pn	22 03 30.8	+1.6
VTS	Vitosha	3.27	349	*i* P	Pn	22 03 29.8	+0.4
VTS	Vitosha	3.27	349	*e*Pn	Pn	22 03 30.1	+0.6
VTS				*e*Sn	Sn	22 04 08.0	-0.3
VTS	Vitosha	3.27	349	*i* P	Pn	22 03 30.0	+0.6
VTS	Vitosha	3.27	349	*i* P	Pn	22 03 30.0	+0.6
VTS				*e*Sn	Sn	22 04 08.0	-0.3
CRLT	Corlu	3.31	57	*e*PN	Pn	22 03 29.2	-0.7
DURS	Dursunbey	3.42	85	*i* P	Pn	22 03 32.3	+0.8
DURS	Dursunbey	3.42	85	*i* P	Pn	22 03 32.3	+0.8
KCTX	Karacabey (Bur	3.43	74	*e*PN	Pn	22 03 31.1	-0.3
BODT	Bodrum	3.45	131	*e*PN	Pn	22 03 31.6	-0.2
AYDN	Tasoluk	3.46	119	*i* P	Pn	22 03 32.7	+0.8
AYDN	Tasoluk	3.46	119	*i* P	Pn	22 03 32.7	+0.8
DST	Dursunbey	3.54	85	*e*PN	Pn	22 03 33.5	+0.6
PHP	Peshkopia	3.59	311	*e*PN	Pn	22 03 34.5	+0.8
PHP				*e*SN	Sn	22 04 16.9	+0.9
PHP	Peshkopia	3.59	311	*e*Pn	Pn	22 03 34.5	+0.8
PHP				*e*Sn	Sn	22 04 16.9	+0.9
MLSB	Milas	3.59	124	*e*PN	Pn	22 03 33.8	+0.1
JMB	Yambol	3.63	31	*i* P	Pn	22 03 33.7	-0.5
JMB	Yambol	3.63	31	*i* P	Pn	22 03 33.7	-0.5
DEMI	Demirci	3.63	94	*i* P	Pn	22 03 35.8	+1.4
DEMI				*i* S	Sb	22 04 28.3	+1.8
DEMI	Demirci	3.63	94	*i* P	Pn	22 03 35.8	+1.4
SLVT	Silivri	3.67	59	*e*PN	Pn	22 03 34.7	0.0
KULA	Kula-Manisa	3.69	102	*e*PN	Pn	22 03 35.6	+0.4
ELBA	Catalca	3.78	61	*i* P	Pn	22 03 36.3	0.0
ELBA	Catalca	3.78	61	*i* P	Pn	22 03 36.3	0.0
ORLT	Orhaneli	3.79	78	*e*PN	Pn	22 03 36.8	+0.4
BARS	Barje	3.83	334	*e*PN	Pn	22 03 37.3	+0.4
BARS	Barje	3.83	334	*e*Pn	Pn	22 03 37.3	+0.4
DAT	Datca	3.84	133	*e*PN	Pn	22 03 37.0	-0.2
MDNY	Mudanya-Bursa	3.84	74	*e*PN	Pn	22 03 37.4	+0.3
CTYL	Yal??k??y-??at	3.85	56	*e*PN	Pn	22 03 36.3	-0.9
CTKS	Kestanelik-??a	3.87	60	*e*PN	Pn	22 03 36.9	-0.7
ARMT	Armutlu	3.88	71	*e*PN	Pn	22 03 37.7	+0.1
PVL	Pavlikeni	3.95	14	*i* P	Pn	22 03 35.6	-3.0
PVL	Pavlikeni	3.95	14	*i* P	Pn	22 03 35.6	-3.0
MPEP	Malo Peshtene	3.98	357	*i* P	Pn	22 03 35.9	-3.1
ULDT	Uludag	3.99	77	*i* P	Pn	22 03 39.8	+0.5
ULDT	Uludag	3.99	77	*i* P	Pn	22 03 39.8	+0.5
YER	Yerkesik	4.01	123	*e*PN	Pn	22 03 40.0	+0.4
BGKT	Bogazkoy	4.03	62	*e*PN	Pn	22 03 40.9	+0.2
ZAPS	Zavoj	4.03	345	*e*PN	Pn	22 03 41.0	+1.2
GEMT	Gemlik	4.08	73	*e*PN	Pn	22 03 40.8	+0.3
SZH	Strazhica	4.13	19	*i* P	Pn	22 03 41.2	+0.1
SZH	Strazhica	4.13	19	*i* P	Pn	22 03 41.2	+0.1
ISK	Istanbul-Kandi	4.18	65	*e*PN	Pn	22 03 42.0	+0.2
TVSB	Tavsanli	4.19	87	*e*PN	Pn	22 03 42.6	+0.6
GDZ	Gediz	4.22	92	*i* P	Pn	22 03 44.0	+1.5
GDZ	Gediz	4.22	92	*i* P	Pn	22 03 44.0	+1.5
DNZL	Cakiroluk	4.26	112	*i* P	Pn	22 03 44.4	+1.3
DNZL	Cakiroluk	4.26	112	*i* P	Pn	22 03 44.4	+1.3
TURN	Turunc	4.37	124	*i* P	Pn	22 03 42.7	-1.7
TURN	Turunc	4.37	124	*i* P	Pn	22 03 42.7	-1.7
ZIMR		4.38	13	*i* P	Pg	22 04 01.0	-1.2
KHL	Karahalli	4.40	102	*e*PN	Pn	22 03 46.1	+1.2
SELS	Selova	4.43	331	*e*Pn	Pn	22 03 45.3	+0.1
DALY	Dalyan (Mu¨la	4.44	124	*e*PN	Pn	22 03

TLCR		**6.79**	**30**⇑	*i*P		**Pn**	**22 04 17.6**	**+0.1**
SAFT	**Safranbolu**	**6.85**	**72**	*e*PN		**Pn**	**22 04 19.7**	**+1.2**
AFSR	**Afˆar-Bala (A**	**6.98**	**87**	*e*PN		**Pn**	**22 04 21.4**	**+1.1**
TESR		**7.37**	**14**⇑	*i*P		**Pn**	**22 04 27.3**	**+1.7**
TESR		**7.37**	**14**⇑	*i*P		**Pn**	**22 04 27.3**	**+1.7**
BRTR	**Keskin Array B**	**7.41**	**84**	Pn		**Pn**	**22 04 27.0**	**+0.7**
	1.1nm,0.3s,baz=263,slow=13,SNR=29							
BRTR				Sn		**Sn**	**22 05 46.8**	**-3.5**
	0.2nm,0.3s,baz=270,slow=24,SNR=3.4							
BRTR				Lg		Lg	22 06 38.3	
	baz=267,slow=27,SNR=3.5							
DRGR		**7.47**	**353**⇓	*i*P		**Pn**	**22 04 26.9**	**-0.1**
DRGR		**7.47**	**353**⇓	*i*P		**Pn**	**22 04 26.9**	**-0.1**
LEOM	**Leova**	**7.72**	**22**⇓	*i*P		**Pn**	**22 04 31.0**	**+0.6**
LEOM	**Leova**	**7.72**	**22**⇓	*i*P		**Pn**	**22 04 31.0**	**+0.6**
PKSM	**Moragy**	**7.90**	**332**⇑	*i*P		**Pn**	**22 04 33.3**	**+0.5**
PKSM	**Moragy**	**7.90**	**332**⇑	*e*		**Pn**	**22 04 33.4**	**+0.6**
PKSM	**Moragy**	**7.90**	**332**⇑	*e*P		**Pn**	**22 04 33.4**	**+0.6**
PKS6	**Bocsa**	**7.93**	**337**	*e*		**Pn**	**22 04 33.1**	**-0.1**
PKS6	**Bocsa**	**7.93**	**337**	*e*P		**Pn**	**22 04 33.1**	**-0.1**
PKS2	**Kecel**	**7.94**	**335**	*e*		**Pn**	**22 04 33.5**	**+0.1**
PKS2	**Kecel**	**7.94**	**335**	*e*P		**Pn**	**22 04 33.5**	**+0.1**
PRAR	**RASCA**	**8.13**	**10**⇑	*i*P		**Pn**	**22 04 37.8**	**+1.8**
PRAR	**RASCA**	**8.13**	**10**⇑	*i*P		**Pn**	**22 04 37.8**	**+1.8**
BURAR	**Bucovina Array**	**8.27**	**5**⇓	*i*P		**Pn**	**22 04 38.7**	**+0.7**
BURAR	**Bucovina Array**	**8.27**	**5**⇓	*i*P		**Pn**	**22 04 38.7**	**+0.7**
PKS9	**Tamasi**	**8.35**	**331**⇑	*e*		**Pn**	**22 04 39.5**	**+0.5**
PKS9	**Tamasi**	**8.35**	**331**⇑	*e*P		**Pn**	**22 04 39.5**	**+0.5**
NVLJ	**Novalja**	**8.58**	**310**	*e*Pn		**Pn**	**22 04 40.7**	**-1.5**
NVLJ				Sn		**Sn**	**22 06 14.2**	**-4.5**
NVLJ	**Novalja**	**8.58**	**310**	*e*Pn		**Pn**	**22 04 40.6**	**-1.5**
BOJS	**Bojanci**	**8.93**	**316**	*i* Pn		**Pn**	**22 04 48.8**	**+1.8**
BOJS				*i* Sn		**Sn**	**22 06 24.3**	**-3.1**
BOJS	**Bojanci**	**8.93**	**316**	Pn		**Pn**	**22 04 48.8**	**+1.8**
PKST	**T˜˜s**	**9.01**	**333**⇑	*e*		**Pn**	**22 04 49.3**	**+1.2**
KOLS	**Kolonicke sedl**	**9.63**	**353**	*e*PN		Pn	22 04 49.5	-7.1
KOLS				*e*			22 05 00.7	
KOLS				*e*			22 07 47.8	
CRVS	**Cervenica-Dubn**	**9.70**	**350**	*e*PN		**Pn**	**22 04 55.0**	**-2.5**
CRVS				*e*			22 07 51.3	
PERS	**Pernice**	**9.76**	**321**	*i* Pn		**Pn**	**22 04 59.9**	**+1.5**
PERS				*i* Sn		**Sn**	**22 06 47.1**	**-0.9**
PERS	**Pernice**	**9.76**	**321**	*i* Pn		**Pn**	**22 04 59.9**	**+1.5**
PERS				*i* Sn		**Sn**	**22 06 47.1**	**-0.9**
JAVS	**Javornik**	**9.82**	**315**	*i* Pn		**Pn**	**22 04 59.4**	**+0.1**
JAVS				*i* Sn		**Sn**	**22 06 46.4**	**-3.0**
JAVS	**Javornik**	**9.82**	**315**	*i* Pn		**Pn**	**22 04 59.4**	**+0.1**
SOKA	**Soboth**	**9.83**	**321**⇑	*i*Pn		**Pn**	**22 05 00.7**	**+1.3**
SOKA	**Soboth**	**9.83**	**321**	Pn		**Pn**	**22 05 00.7**	**+1.3**
VYHS	**Vyhne**	**9.85**	**339**	*e*PN		Pn	22 04 56.1	-3.5
VYHS				*e*			22 05 07.6	
VYHS				*e*			22 07 52.2	
VOY	**Vojsko**	**10.00**	**315**	*e*Pn		**Pn**	**22 05 02.6**	**+0.9**
VOY				*e*Sn		**Sn**	**22 06 48.8**	**-5.0**
VOY	**Vojsko**	**10.00**	**315**	*e*Pn		**Pn**	**22 05 02.6**	**+0.9**
ARSA	**Arzberg**	**10.02**	**324**⇑	*i*Pn		**Pn**	**22 05 03.6**	**+1.7**
ARSA				⇑ *i*Sn		**Sn**	**22 06 54.0**	**-0.2**
ARSA	**Arzberg**	**10.02**	**324**	Pn		**Pn**	**22 05 03.6**	**+1.7**
ARSA				Sn		**Sn**	**22 06 54.0**	**-0.2**
CONA	**Conrad Observa**	**10.40**	**328**⇓	*i*Pn		**Pn**	**22 05 08.3**	**+1.2**
CONA	**Conrad Observa**	**10.40**	**328**	Pn		**Pn**	**22 05 08.3**	**+1.2**
MMAI	**Mount Meron Ar**	**11.15**	**121**	Pn		**Pn**	**22 05 17.7**	**+0.2**
	0.9nm,0.3s,baz=306,slow=12,SNR=11							
MMAI				Sn		Sn	22 07 15.7	-6.3
	baz=270,slow=26,SNR=2.5							
MMAI				LR		LR	22 09 44.9	
	comp=Z,46nm,18.4s,baz=50,slow=38							
ABTA	**Abfaltersbach**	**11.19**	**315**⇑	*i*Pn		**Pn**	**22 05 18.0**	**-0.1**
ABTA	**Abfaltersbach**	**11.19**	**315**	Pn		**Pn**	**22 05 18.0**	**-0.1**
VRAC	**Vranov**	**11.26**	**334**	LR		LR	22 09 38.2	
	comp=Z,57nm,19.1s,baz=152,slow=37							
AKASG	**Malin Array Be**	**11.89**	**16**	Pn		**Pn**	**22 05 26.4**	**-1.0**
	0.5nm,0.3s,baz=200,slow=12,SNR=3.1							
GERES	**GERESS Array B**	**12.02**	**325**	Pn		**Pn**	**22 05 31.8**	**+2.4**
	0.2nm,0.3s,baz=147,slow=13,SNR=5.7							
GERES				LR		LR	22 09 14.2	
	comp=Z,33nm,19.2s,baz=274,slow=33							
KEST	**Kesra**	**12.23**	**257**	Pn		**Pn**	**22 05 32.7**	**+0.4**
	0.1nm,0.3s,baz=39,slow=13,SNR=7.1							
ASF	**Jabal al Asfar**	**12.66**	**121**	LR		LR	22 11 10.3	
	comp=Z,36nm,21.1s,baz=12,slow=41							
EIL	**Elat**	**13.20**	**134**	Pn		**Pn**	**22 05 45.2**	**-0.2**
	0.1nm,0.3s,baz=335,slow=14,SNR=3.0							
KBZ	**Khabaz**	**14.75**	**67**	Pn		P	22 06 16.4	+3.8
	0.2nm,0.3s,baz=255,slow=16,SNR=3.3							
GNI	**Garni**	**15.93**	**81**	LR		LR	22 12 57.1	
	comp=Z,76nm,21.8s,baz=241,slow=39							
ESDC	**Sonseca Array**	**21.59**	**280**	P		**P**	**22 07 27.1**	**-0.7**
	0.2nm,0.3s,baz=72,slow=12,SNR=3.6							
HFS	**Hagfors**	**21.77**	**346**	P		**P**	**22 07 29.2**	**-0.3**
	1.1nm,0.7s,baz=169,slow=8.2,SNR=5.2							
HFS				LR		LR	22 16 43.3	
	comp=Z,45nm,18.6s,baz=162,slow=39							
FINES	**FINESS Array B**	**22.12**	**3**	P		**P**	**22 07 32.6**	**-0.6**
	1.2nm,0.8s,baz=167,slow=9.0,SNR=3.5							
FINES				LR		LR	22 15 35.5	
	comp=Z,35nm,19.6s,baz=212,slow=35							
NB2	**NORSAR Subarra**	**23.10**	**344**	P		**P**	**22 07 43.2**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=146,slow=10							
NB2	**NORSAR Subarra**	**23.10**	**344**	P		**P**	**22 07 43.2**	**-0.5**
	comp=Z,0.6nm,0.5s,SNR=5.3							
NOA	**NORSAR Array B**	**23.10**	**344**	P		**P**	**22 07 43.7**	**0.0**
	comp=Z,1.3nm,0.6s,baz=153,slow=11,SNR=5.5							
NOA				LR		LR	22 16 34.3	
	comp=Z,34nm,18.6s,baz=155,slow=36							
EKA	**Eskdalemuir Ar**	**24.16**	**320**	P		**P**	**22 07 54.4**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=118,slow=10,SNR=4.9							
ARCES	**ARCESS Array B**	**30.22**	**1**	LR		LR	22 22 04.5	
	comp=Z,36nm,18.2s,baz=177,slow=39							
TORD	**Torodi Ar. Bea**	**32.75**	**223**	P		**P**	**22 09 10.6**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=32,slow=9.1,SNR=26							
MKAR	**Makanchi Array**	**42.31**	**60**	P		**P**	**22 10 32.6**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=270,slow=8.9,SNR=8.2							
MKAR				LR		LR	22 30 25.0	
	comp=Z,38nm,20.1s,baz=77,slow=39							
ZALV	**Zalesovo Beam**	**42.82**	**49**	P		**P**	**22 10 36.2**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=265,slow=8.9,SNR=9.2							
CMAR	**Chiang Mai Arr**	**67.00**	**85**	LR		LR	22 43 50.5	
	comp=Z,21nm,19.9s,baz=180,slow=37							

GUC 28 22:15:25.0±0.8, 31°.18S×67°.85W, h150km, ML3.9, 4C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
CMCH	**Cambarbala**	**2.70**	**269**	*e*P		Pn	22 16 09.0	+0.3
CMCH				*i* S		Sn	22 16 43.1	+0.6
CMCH				AML		AML	22 16 44.1	
	comp=E,2μm,0.4s							
TLL	**Tololo Astrono**	**2.74**	**291**	*e*P		Pn	22 16 10.6	+1.1
TLL				*i* S		Sn	22 16 44.8	+1.1
TLL				AML		AML	22 16 52.5	
	comp=N,169nm,0.5s							
FCH	**Farellones**	**2.98**	**223**⇑	*i*P		Pn	22 16 12.9	+0.4
FCH				*i* S		Sn	22 16 50.2	+1.0
FCH				AML		AML	22 16 59.4	
	comp=N,67nm,0.2s							
PEL	**Peldehue**	**3.10**	**230**⇑	*i*P		Pn	22 16 14.3	+0.6
PEL				*i* S		Sn	22 16 52.0	+0.5
PEL				AML		AML	22 16 56.5	
	comp=N,143nm,0.3s							
ROCH	**El Roble**	**3.23**	**236**⇑	*i*P		Pn	22 16 15.6	+0.1
ROCH				*i* S		Sn	22 16 54.2	-0.4
ROCH				AML		AML	22 16 57.5	
	comp=N,160nm,0.3s							
LCO	**Las Campanas**	**3.29**	**310**⇑	*i*P		Pn	22 16 17.3	+0.9
LCO				*i* S		Sn	22 16 56.9	+0.8
LCO				AML		AML	22 16 58.1	
	comp=E,277nm,0.3s							
LMEL	**Las Melosas**	**3.32**	**216**	*e*P		Pn	22 16 17.8	+1.1
LMEL				AML		AML	22 17 08.2	
	comp=N,50nm,0.0s							
RCDM	**Rinconada Maip**	**3.40**	**227**	*e*P		Pn	22 16 18.0	+0.5
RCDM				*i* S		Sn	22 16 59.0	+0.8
RCDM				AML		AML	22 16 59.9	
	comp=E,152nm,0.4s							

*CSEM **28** 22:18:45.9, 36°.15N×21°.40E, h28km, MD3.5, After ATH*
ATH 28 22:18:45.9, 36°.15N×21°.40E, h28km±4km, MD3.5/14, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PYL	**PYLOS**	**0.79**	**20**	*e*PN		Pn	22 19 02.0	+0.7
PYL				*e*SN		Sn	22 19 12.6	+0.4
PYL	**PYLOS**	**0.79**	**20**	*e*Pn		Pn	22 19 02.0	+0.7
PYL				*e*Sn		Sn	22 19 12.6	+0.4
DYR	**Agios Nikonas**	**0.97**	**51**	*e*PN		Pb	22 19 04.5	+0.3
DYR				*e*SN		Sb	22 19 19.0	+2.4
DYR	**Agios Nikonas**	**0.97**	**51**	*e*Pn		Pb	22 19 04.5	+0.3
DYR				*e*Sn		Sb	22 19 19.0	+2.4
ITM	**Ithomi**	**1.11**	**22**	*e*PN		Pb	22 19 06.9	+0.3
ITM	**Ithomi**	**1.11**	**22**	*e*Pn		Pb	22 19 06.9	+0.3
KYTH	**Kithira**	**1.33**	**84**	*e*PN		Pb	22 19 10.9	+0.6
KYTH	**Kithira**	**1.33**	**84**	*e*Pn		Pb	22 19 10.9	+0.6
VLI	**Veliai**	**1.36**	**65**	*e*PN		Pb	22 19 11.2	+0.4
VLI	**Veliai**	**1.36**	**65**	*e*Pn		Pb	22 19 11.2	+0.4
AMT	**Artemida-Makis**	**1.40**	**10**	*e*PN		Pb	22 19 11.5	0.0
AMT	**Artemida-Makis**	**1.40**	**10**	*e*Pn		Pb	22 19 11.5	0.0
VLX	**Vlachokerasia**	**1.45**	**33**	*e*PN		Pb	22 19 12.6	+0.2
VLX	**Vlachokerasia**	**1.45**	**33**	*e*Pn		Pb	22 19 12.6	+0.2
GUR	**Goura**	**1.94**	**23**	*e*PB		Pb	22 19 19.4	-1.3
GUR	**Goura**	**1.94**	**23**	*e*Pb		Pb	22 19 19.4	-1.3
DID	**Didima**	**2.00**	**47**	*e*PN		Pn	22 19 19.2	+1.3
DID	**Didima**	**2.00**	**47**	*e*Pn		Pn	22 19 19.2	+1.3
LAKA	**Lakka**	**2.14**	**12**	*e*PB		Pb	22 19 22.7	-1.3
LAKA	**Lakka**	**2.14**	**12**	*e*Pb		Pb	22 19 22.7	-1.3
TRIZ	**Trizonia**	**2.28**	**13**	*e*PB		Pb	22 19 25.1	-1.2
TRIZ	**Trizonia**	**2.28**	**13**	*e*Pb		Pb	22 19 25.1	-1.2
KALE	**Kalithea**	**2.31**	**15**	*e*PB		Pb	22 19 25.4	-1.7
KALE	**Kalithea**	**2.31**	**15**	*e*Pb		Pb	22 19 25.4	-1.7
PTL	**Penteli**	**2.73**	**45**	*e*PN		Pn	22 19 28.9	+0.9
PTL	**Penteli**	**2.73**	**45**	*e*Pn		Pn	22 19 28.9	+0.9
LKR	**Lokris**	**2.80**	**27**	*e*PN		Pn	22 19 30.0	+1.1
LKR	**Lokris**	**2.80**	**27**	*e*Pn		Pn	22 19 30.0	+1.1

IDC 28 22:27:30.8±57.0, 22°.75S×177°.25W, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.7/18, mbtmp3.9/3, Error ellipse: s-maj=1041.0km s-min=160.1km az=86.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**37.49**	**247**	P		P	22 34 46.1	-0.3
	0.9nm,0.5s,baz=86,slow=12,SNR=6.7							
ASAR	**Alice Springs**	**44.72**	**259**	P		P	22 35 46.2	0.0
	0.5nm,0.4s,baz=97,slow=7.7,SNR=10.0							
WRA	**Warramunga Arr**	**45.02**	**264**	P		P	22 35 48.3	-0.2
	0.5nm,0.3s,baz=102,slow=8.2,SNR=15							

*IDC **28** 22:37:38.8±2.3, 4°.28S×129°.26E, h0km, mb3.6/1, mb1 3.7/3, mb1mx3.4/20, mbtmp3.5/3, ML3.5/2, Error ellipse: s-maj=159.8km s-min=29.8km az=69.0*
*AUST **28** 22:37:48.9±0.0, 4°.11S×132°.13E, h62km, Error ellipse: s-maj=2.1km s-min=1.1km az=243.0*
ISC 28 22:37:46.1±1.4, 4°.18S±0°.09×132°.3E±0°.2, h10km, n8, σ1s37/6, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
FAKI	**Fak Fak**	**1.25**	**359**	S		**Sn**	**22 38 26.7**	**+0.2**
	baz=1.2,SNR=71							
SWI	**Sorong**	**3.45**	**343**	P		Pn	22 38 37.1	-2.8
	baz=3.4,SNR=8.1							
KDU	**Kakadu**	**8.46**	**179**	P		**Pn**	**22 39 50.6**	**+1.9**
	baz=8.6,SNR=5.2							
MTN	**Manton Dam**	**8.69**	**187**	P		**Pn**	**22 39 51.9**	**0.0**
	baz=8.8,SNR=5.4							
LUWI	**Luwuk**	**9.99**	**288**	P		Pn	22 40 05.7	-4.1
	baz=9.8,SNR=8.2							
PCI	**Palu**	**12.85**	**284**	P		**Pn**	**22 40 49.0**	**0.0**
	baz=13,SNR=3.5							
WRA	**Warramunga Arr**	**15.80**	**173**	Pn		**Pn**	**22 41 28.1**	**-0.7**
	0.2nm,0.3s,baz=344,slow=13,SNR=3.8							
ASAR	**Alice Springs**	**19.44**	**176**	P		**P**	**22 42 11.6**	**-1.3**
	0.3nm,0.3s,baz=356,slow=9.9,SNR=9.0							

*DDA **28** 22:40:13.2, 38°.74N×27°.25E, h22km, MD3.0*
*ISCJB **28** 22:40:14.4±0.4, 38°.75N±0°.02×27°.24E±0°.02, h7km±3km, Error ellipse: s-maj=3.2km s-min=2.8km az=30.1*
*ISK **28** 22:40:14.0, 38°.75N×27°.23E, h8km, MD3.2*
*ATH **28** 22:40:15.4, 38°.73N×27°.24E, h5km, MD3.2/3*
ISC 28 22:40:14.5±1.0, 38°.75N±0°.02×27°.26E±0°.02, h5km±9km, n77, σ0s78/113, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
IZM	**Izmir**	**0.35**	**179**	PG		**Pg**	**22 40 21.1**	**-0.3**
IZM				*e*SG		**Sg**	**22 40 26.9**	**+0.8**
IZM	**Izmir**	**0.35**	**179**	*i* Pg		**Pg**	**22 40 21.1**	**-0.3**
IZM				*e*Sg		**Sg**	**22 40 26.9**	**+0.8**
BLCB	**Balcova**	**0.40**	**204**	*e*PG		**Pg**	**22 40 21.7**	**-0.6**
BLCB				*e*SG		**Sg**	**22 40 28.4**	**+0.8**
BLCB	**Balcova**	**0.40**	**204**	*e*Pg		**Pg**	**22 40 21.7**	**-0.6**
BLCB				*e*Sg		**Sg**	**22 40 28.4**	**+0.8**
AKS	**Akhisar**	**0.45**	**74**	*e*PG		**Pg**	**22 40 23.3**	**0.0**
AKS				*e*SG		**Sb**	**22 40 30.9**	**-1.1**
AKS	**Akhisar**	**0.45**	**74**	*e*Pg		**Pg**	**22 40 23.3**	**0.0**
AKS				*e*Sg		**Sb**	**22 40 30.9**	**-1.1**
AKHS	**Akhisar**	**0.46**	**74**	*i* P		**Pg**	**22 40 23.5**	**+0.2**
AKHS				*i* S		**Sg**	**22 40 30.6**	**+1.4**
AKHS	**Akhisar**	**0.46**	**74**	*i* P		**Pg**	**22 40 23.5**	**+0.2**
AKHS				*i* S		**Sg**	**22 40 30.6**	**+1.4**
URLA	**Izmir**	**0.65**	**233**	*i* P		**Pg**	**22 40 26.1**	**-0.9**
URLA				*i* S		**Sg**	**22 40 35.8**	**+0.4**
URLA	**Izmir**	**0.65**	**233**	*i* P		**Pg**	**22 40 26.1**	**-0.9**
URLA				*i* S		**Sg**	**22 40 35.8**	**+0.4**
AYVA	**Ayvalik**	**0.71**	**322**	*i* P		**Pg**	**22 40 27.2**	**-0.9**
AYVA				*i* S		**Sb**	**22 40 40.9**	**+1.6**
AYVA	**Ayvalik**	**0.71**	**322**	*i* P		**Pg**	**22 40 27.2**	**-0.9**
AYVA				*i* S		**Sb**	**22 40 40.9**	**+1.6**
PRK	**Paraskevi**	**0.91**	**303**	*e*PB		**Pb**	**22 40 33.2**	**+0.4**
PRK				*e*SB		**Sb**	**22 40 45.7**	**+0.5**
PRK	**Paraskevi**	**0.91**	**303**	*e*Pb		**Pb**	**22 40 33.2**	**+0.4**
PRK				*e*Sb		**Sb**	**22 40 45.7**	**+0.5**
CHOS	**Chios island**	**1.01**	**249**	*e*PG		**Pg**	**22 40 34.0**	**+0.1**
CHOS				*e*SB		**Sb**	**22 40 48.8**	**+0.7**
CHOS	**Chios island**	**1.01**	**249**	*e*Pg		**Pg**	**22 40 34.0**	**+0.1**
CHOS				*e*Sb		**Sb**	**22 40 48.8**	**+0.7**
BALB	**Balikesir**	**1.01**	**29**	*e*PG		**Pb**	**22 40 34.6**	**+0.2**
BALB				*e*SG		**Sb**	**22 40 48.9**	**+0.9**
BALB	**Balikesir**	**1.01**	**29**	*e*Pg		**Pb**	**22 40 34.6**	**+0.2**
BALB				*e*Sg		**Sb**	**22 40 48.9**	**+0.9**
BALY	**Balya**	**1.03**	**16**	*i* P		**Pg**	**22 40 34.1**	**-0.1**
BALY				*i* S		**Sb**	**22 40 48.4**	**-0.1**
BALY	**Balya**	**1.03**	**16**	*i* P		**Pg**	**22 40 34.1**	**-0.1**
BALY				*i* S		**Sb**	**22 40 48.4**	**-0.1**
GCAM	**G?zelcaml?**	**1.05**	**181**	*i* P		**Pg**	**22 40 32.9**	**-1.8**
GCAM				*i* S		**Sb**	**22 40 48.8**	**-0.4**
GCAM	**G?zelcaml?**	**1.05**	**181**	*i* P		**Pg**	**22 40 32.9**	**-1.8**
GCAM				*i* S		**Sb**	**22 40 48.8**	**-0.4**
MANT	**Manisa**	**1.05**	**104**	*i* P		**Pg**	**22 40 34.4**	**-0.3**
MANT				*i* S		**Sg**	**22 40 47.8**	**-0.6**
MANT	**Manisa**	**1.05**	**104**	*i* P		**Pg**	**22 40 34.4**	**-0.3**
MANT				*i* S		**Sg**	**22 40 47.8**	**-0.6**
KULA	**Kula-Manisa**	**1.13**	**102**	*e*PN		**Pg**	**22 40 35.7**	**-0.4**
KULA	**Kula-Manisa**	**1.13**	**102**	*e*Pn		**Pg**	**22 40 35.7**	**-0.4**
DEMI	**Demirci**	**1.18**	**75**	*i* P		**Pg**	**22 40 36.5**	**-0.6**
DEMI				*i* S		**Sg**	**22 40 52.2**	**-0.1**
DEMI	**Demirci**	**1.18**	**75**	*i* P		**Pg**	**22 40 36.5**	**-0.6**
DEMI				*i* S		**Sg**	**22 40 52.2**	**-0.1**
AYDN	**Tasoluk**	**1.20**	**156**	*i* P		**Pg**	**22 40 36.8**	**-0.7**
AYDN				*i* S		**Sg**	**22 40 51.3**	**-1.7**
AYDN	**Tasoluk**	**1.20**	**156**	*i* P		**Pg**	**22 40 36.8**	**-0.7**
AYDN				*i* S		**Sg**	**22 40 51.3**	**-1.7**
DURS	**Dursunbey**	**1.27**	**48**	*i* P		**Pg**	**22 40 38.0**	**-0.9**
DURS				*i* S		**Sg**	**22 40 55.1**	**-0.3**
DURS	**Dursunbey**	**1.27**	**48**	*i* P		**Pg**	**22 40 38.0**	**-0.9**
DURS				*i* S		**Sg**	**22 40 55.1**	**-0.3**
EZN	**Ezine**	**1.29**	**326**	*e*PN		**Pg**	**22 40 38.5**	**-0.8**
EZN	**Ezine**	**1.29**	**326**	*e*Pn		**Pg**	**22 40 38.5**	**-0.8**
GONE	**Gonen-Balikesi**	**1.33**	**14**	*e*PN		**Pg**	**22 40 39.5**	**-0.6**
GONE	**Gonen-Balikesi**	**1.33**	**14**	*e*Pn		**Pg**	**22 40 39.5**	**-0.6**
DST	**Dursunbey**	**1.36**	**51**	*e*PN		**Pg**	**22 40 39.9**	**-0.7**
DST	**Dursunbey**	**1.36**	**51**	*e*Pn		**Pg**	**22 40 39.9**	**-0.7**
BOZC	**Bozcaada**	**1.43**	**320**	*i* P		Pn	22 40 36.9	-4.2
BOZC				*i* S		**Sg**	**22 40 57.2**	**-3.4**
MLSB	**Milas**	**1.51**	**164**	*e*PN		**Pn**	**22 40 42.4**	**+0.2**
MLSB	**Milas**	**1.51**	**164**	*e*Pn		**Pn**	**22 40 42.4**	**+0.2**
KRBG	**Karabiga-Canak**	**1.64**	**1**	*e*PN		**Pn**	**22 40 44.2**	**+0.3**
KRBG	**Karabiga-Canak**	**1.64**	**1**	*e*Pn		**Pn**	**22 40 44.2**	**+0.3**
EDC	**Edincik**	**1.66**	**16**	*e*PN		**Pn**	**22 40 44.3**	**+0.1**
EDC	**Edincik**	**1.66**	**16**	*e*Pn		**Pn**	**22 40 44.3**	**+0.1**
LPK	**Lapseki**	**1.66**	**347**	*e*PN		**Pn**	**22 40 44.1**	**-0.2**
LPK	**Lapseki**	**1.66**	**347**	*e*Pn		**Pn**	**22 40 44.1**	**-0.2**
BODT	**Bodrum**	**1.69**	**178**	*e*PN		**Pn**	**22 40 44.7**	**+0.1**
BODT	**Bodrum**	**1.69**	**178**	*e*Pn		**Pn**	**22 40 44.7**	**+0.1**
KCTX	**Karacabey (Bur**	**1.73**	**29**	*e*PN		**Pn**	**22 40 45.2**	**-0.1**
KCTX	**Karacabey (Bur**	**1.73**	**29**	*e*Pn		**Pn**	**22 40 45.2**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.75**	**340**	*e*PN		**Pn**	**22 40 45.5**	**0.0**
GELI	**Tayfur-Gelibol**	**1.75**	**340**	*e*Pn		**Pn**	**22 40 45.5**	**0.0**
GDZ	**Gediz**	**1.77**	**78**	*i* P		**Pn**	**22 40 45.6**	**-0.2**
GDZ				*i* S		**Sn**	**22 41 10.1**	**+1.3**
GDZ	**Gediz**	**1.77**	**78**	*i* P		**Pn**	**22 40 45.6**	**-0.2**
GDZ				*i* S		**Sn**	**22 41 10.1**	**+1.3**
KHAL	**Karahalli**	**1.79**	**102**	*i* P		**Pb**	**22 40 47.9**	**0.0**
KHAL				*i* S		**Sn**	**22 41 09.9**	**+0.5**
KHAL	**Karahalli**	**1.79**	**102**	*i* P		**Pb**	**22 40 47.9**	**0.0**
KHAL				*i* S		**Sn**	**22 41 09.9**	**+0.5**
YER	**Yerkesik**	**1.81**	**153**	*e*PN		**Pn**	**22 40 46.5**	**+0.2**
YER	**Yerkesik**	**1.81**	**153**	*e*Pn		**Pn**	**22 40 46.5**	**+0.2**
KHL	**Karahalli**	**1.83**	**103**	*e*PN		**Pn**	**22 40 47.0**	**+0.3**
KHL	**Karahalli**	**1.83**	**103**	*e*Pn		**Pn**	**22 40 47.0**	**+0.3**
TVSB	**Tavsanli**	**1.85**	**67**	*e*PN		**Pn**	**22 40 47.4**	**+0.4**
TVSB	**Tavsanli**	**1.85**	**67**	*e*Pn		**Pn**	**22 40 47.4**	**+0.4**
MRMT	**Marmara Adasi**	**1.87**	**8**	*e*PN		**Pn**	**22 40 46.9**	**-0.2**
MRMT	**Marmara Adasi**	**1.87**	**8**	*e*Pn		**Pn**	**22 40 46.9**	**-0.2**
SART	**Tekirdag**	**1.93**	**358**	*i* P		**Pn**	**22 40 47.0**	**-1.1**
SART				*i* S		**Sn**	**22 41 11.7**	**-1.1**
SART	**Tekirdag**	**1.93**	**358**	*i* P		**Pn**	**22 40 47.0**	**-1.1**
SART				*i* S		**Sn**	**22 41 11.7**	**-1.1**
ERIK	**Erikli-Kesan**	**2.00**	**344**	*e*PN		**Pn**	**22 40 49.1**	**+0.2**
ERIK	**Erikli-Kesan**	**2.00**	**344**	*e*Pn		**Pn**	**22 40 49.1**	**+0.2**
ENEZ	**Enez**	**2.15**	**337**	*e*PN		**Pn**	**22 40 51.0**	**-0.1**
ENEZ	**Enez**	**2.15**	**

mb4.3/58,MS3.8/17,Error ellipse: s-maj=6.6km s-min=4.5km az=44.9

BJI ***28*** *23:00:05.3,41.99N×144.30E,h35km,mB4.8/19,mb4.6/28, Ms4.2/17,Ms7 4.0/16*

NEIC ***28*** *23:00:07.0±0.6,41.82N×144.31E,h39km±5km,mb4.6/16, MW4.3(NIED),Error ellipse: s-maj=6.2km s-min=5.0km az=155.0*

NEIC Recorded [2 JMA] in southeastern Hokkaido.

ISC 28 23:00:07.5±0.5,41.89N±0.04×144.28E±0.04,h42km±2km, h41km:pP-P,n171,σ1s46/221,mb4.4/58,MS3.9/18,8C-1D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
ERM	**Erimo**	**0.85**	**279**	*d*	*i*	**P**	**23 00 22.6**	**-0.4**
ERM	**Erimo**	**0.85**	**279**		*e*Pn	**Pn**	**23 00 22.7**	**-0.4**
ERM					*e*Sn	**Sn**	**23 00 34.9**	**+0.6**
JEM	**Erimo**	**0.85**	**279**		P	**Pn**	**23 00 22.2**	**-0.8**
JCH	**Churui**	**1.00**	**317**		P	**Pn**	**23 00 24.2**	**-0.9**
JCH					*e*S	**Sn**	**23 00 39.0**	**+1.1**
JOB	**Onbets**	**1.07**	**342**		P	**Pn**	**23 00 25.0**	**-1.0**
JOB					*e*S	**Sn**	**23 00 40.4**	**+0.7**
JAK	**Akkeshi**	**1.15**	**15**		P	**Pn**	**23 00 24.6**	**-2.5**
JAK					*e*S	**Sn**	**23 00 40.3**	**-1.4**
JNBK	**Urakawa-nobuka**	**1.20**	**290**		P	**Pn**	**23 00 27.8**	**-0.1**
JAR	**Ashorobuto**	**1.46**	**345**		P	**Pn**	**23 00 29.8**	**-1.6**
JAR					*e*S	**Sn**	**23 00 48.5**	**-0.8**
JNK	**Nakash**	**1.73**	**11**		P	**Pn**	**23 00 32.8**	**-2.3**
YUK	**Yuzh-Kuril'sk**	**2.44**	**28**	⇑	*i*	**P**	**23 00 46.0**	**+1.2**
YUK					*i*	**Sn**	**23 01 15.9**	**+2.5**
YUK					pmax	pmax		
	comp=N,33nm,0.2s							
YUK					pmax	pmax		
	comp=E,45nm,0.2s							
YUK					pmax	pmax		
	comp=Z,102nm,0.2s							
YUK					smax	smax		
	comp=E,654nm,0.8s							
YUK					smax	smax		
	comp=N,1μm,0.8s							
ASAJ	**Asahikawa**	**2.55**	**332**		*e*Pn	**Pn**	**23 00 46.8**	**+0.4**
ASAJ					*e*Sn	**Sn**	**23 01 15.8**	**-0.3**
ASAJ	**Asahikawa**	**2.55**	**332**		Pn	**Pn**	**23 00 47.0**	**+0.7**
	comp=N,8.5nm,0.3s,baz=177,slow=12,SNR=38							
ASAJ					LR	LR	23 02 21.3	
	comp=N,2μm,18.1s,baz=213,slow=52							
YSS	**Yuzh-Sakhalins**	**5.18**	**348**		*e*P	**Pn**	**23 01 23.3**	**+0.8**
YSS					*e*S	**Sn**	**23 02 22.1**	**+1.1**
YSS					smax	smax		
	comp=N,70nm,1.0s							
YSS					smax	smax		
	comp=E,40nm,1.0s							
YSS					MLR	MLR		
	comp=Z,500nm,12.0s							
YSS					MLR	MLR		
	comp=N,500nm,13.0s							
MAJO	**Matsushiro**	**7.12**	**223**		*e*P	**Pn**	**23 01 48.4**	**-0.8**
MAJO	**Matsushiro**	**7.12**	**223**		*e*Pn	**Pn**	**23 01 48.4**	**-0.8**
MAT	**Matsushiro**	**7.12**	**223**		P	**Pn**	**23 01 48.0**	**-1.2**
MAT					*e*S	**Sn**	**23 03 04.4**	**-4.4**
MJAR	**Matsushiro Arr**	**7.12**	**223**		Pn	**Pn**	**23 01 48.0**	**-1.1**
MJAR	**Matsushiro Arr**	**7.12**	**223**		Pn	**Pn**	**23 01 48.0**	**-1.1**
	comp=N,0.5nm,0.3s,baz=28,slow=12,SNR=15							
USRK	**Ussuriysk Arra**	**9.29**	**289**		Pn	**Pn**	**23 02 19.7**	**+0.9**
	comp=N,0.2nm,0.3s,baz=100,slow=14,SNR=5.5							
USRK					LR	LR	23 06 18.5	
	comp=N,370nm,19.6s,baz=59,slow=40							
MDJ	**Mudanjiang**	**11.06**	**289**		P	**Pn**	**23 02 42.3**	**-0.7**
MDJ					S	**Sn**	**23 04 44.5**	**-0.8**
MDJ					ScP	**ScP**	**23 12 07.0**	**-0.3**
MDJ					PcS	**PcS**	**23 12 11.8**	**-0.1**
MDJ					pmax	pmax		
	comp=Z,3.0nm,1.2s							
MDJ					pmax	pmax		
	comp=Z,25nm,4.0s							
MDJ					LR	LR		
	comp=N,130nm,15.3s							
MDJ					LR	LR		
	comp=E,220nm,20.3s							
MDJ					LR	LR		
	comp=Z,310nm,18.2s							
KLR	**Kul'dur**	**11.44**	**314**		*e*P	**Pn**	**23 02 49.4**	**+1.2**
KSRS	**Korea Array**	**13.36**	**256**		Pn	**Pn**	**23 03 14.5**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=68,slow=12,SNR=4.2							
KSRS					LR	LR	23 08 16.4	
	comp=Z,115nm,19.4s,baz=70,slow=37							
KSAR	**Wonju Array Be**	**13.39**	**256**		Pn	**Pn**	**23 03 14.5**	**-0.3**
PET	**Petropavlovsk**	**14.75**	**36**		*e*P	Pn	23 03 25.4	-7.8
BJI	**Beijing**	**21.27**	**274**		P	**P**	**23 04 50.5**	**+0.3**
BJI					S	**S**	**23 08 45.8**	**+1.6**
BJI					pmax	pmax		
	comp=Z,9.0nm,0.6s							
BJI					LR	LR		
	comp=N,120nm,21.1s							
BJI					LR	LR		
	comp=E,270nm,14.3s							
BJI					LR	LR		
	comp=Z,120nm,19.4s							
SEY	**Seymchan**	**21.62**	**10**		*e*P	**P**	**23 04 50.7**	**-3.0**
YAK	**Yakutsk**	**21.99**	**341**		*e*P	P	23 04 51.4	-6.2
YAK					*e**PP	pP	23 05 01.5	-6.5
YAK					*e*PPP	PPP	23 05 26.0	
YAK					*e*S	**S**	**23 08 53.2**	**-4.5**
YAK					*e*SSS	SSS	23 09 42.1	
YAK					*e*		23 16 10.6	
YAK					pmax	pmax		
	comp=Z,13nm,0.9s							
YAK					pmax	pmax		
	comp=N,5.0nm,1.1s							
YAK					pmax	pmax		
	comp=Z,18nm,0.7s							
YAK					smax	smax		
	comp=N,75nm,1.4s							
YAK					smax	smax		
	comp=E,25nm,1.4s							
YAK					MLR	MLR		
	comp=Z,122nm,20.0s							
HHC	**Hu-ho-hao-te**	**24.50**	**279**		*e*P	**P**	**23 05 21.3**	**-1.6**
HHC					pP	**pP**	**23 05 32.8**	**-1.4**
HHC					sP	**sP**	**23 05 38.3**	**-0.9**
HHC					PP	**PnPn**	**23 05 58.0**	**+3.0**
HHC					S	**S**	**23 09 35.0**	**-5.5**
HHC					sS	**sS**	**23 09 55.0**	**-4.2**
HHC					SS	**SnSn**	**23 10 32.3**	**+5.0**
HHC					pmax	pmax		
	comp=Z,18nm,0.9s							
HHC					pmax	pmax		
	comp=Z,140nm,5.5s							
HHC					LR	LR		
	comp=N,280nm,13.2s							
HHC					LR	LR		
	comp=E,320nm,10.3s							
HHC					LR	LR		
	comp=Z,330nm,14.7s							
ULN	**Ulaanbaatar**	**26.86**	**296**		*e*P	**P**	**23 05 44.2**	**-0.1**
	comp=Z,8.2nm,1.2s							
SONM	**Songino Array**	**27.30**	**296**		P	**P**	**23 05 49.8**	**+1.5**
SONM	**Songino Array**	**27.30**	**296**		P	**P**	**23 05 49.8**	**+1.5**
	comp=Z,3.9nm,0.9s,baz=88,slow=10.0,SNR=10							
SONM					LR	LR	23 17 42.4	
	comp=Z,132nm,19.7s,baz=50,slow=39							
BILL	**Bilibino**	**28.75**	**17**		*e*P	P	23 05 56.8	-3.9
BILL					*e*		23 06 10.9	
BILL					pmax	pmax		
	comp=Z,6.0nm,1.2s							
ZAK	**Zakamensk**	**29.34**	**301**		*e*P	**P**	**23 06 07.1**	**+0.8**
ZAK					pmax	pmax		
	comp=Z,3.0nm,1.4s							
LZH	**Lanzhou**	**31.74**	**273**		*e*P	**P**	**23 06 30.5**	**+2.8**
LZH					pP	**pP**	**23 06 42.0**	**+2.9**
LZH					sP	**sP**	**23 06 46.5**	**+2.4**
LZH					*e*S	**S**	**23 11 36.0**	**+1.2**
LZH					pmax	pmax		
	comp=Z,18nm,1.0s							
LZH					pmax	pmax		
	comp=Z,120nm,5.1s							
LZH					LR	LR		
	comp=N,390nm,15.8s							
LZH					LR	LR		
	comp=E,200nm,13.6s							
LZH					LR	LR		
	comp=Z,530nm,16.6s							
CD2	**Chengdu**	**34.12**	**265**		P	**P**	**23 06 49.3**	**+0.9**
CD2					pP	**pP**	**23 07 00.5**	**+0.7**
CD2					sP	**sP**	**23 07 05.3**	**+0.5**
CD2					PP	**PnPn**	**23 08 04.0**	**+1.1**
CD2					S	**S**	**23 12 11.0**	**-0.6**
CD2					PcS	**PcS**	**23 13 11.5**	**+0.2**
CD2					SS	**SnSn**	**23 14 20.3**	**-1.5**
CD2					pmax	pmax		
	comp=Z,10.0nm,0.5s							
CD2					pmax	pmax		
	comp=Z,80nm,5.2s							
GYA	**Guiyang**	**34.41**	**256**		*e*P	**P**	**23 06 51.5**	**+0.5**
GYA					pmax	pmax		
	comp=Z,10.0nm,0.8s							
QIZ	**Qiongzhong**	**37.05**	**243**		P	**P**	**23 07 13.5**	**0.0**
QIZ					S	**S**	**23 12 56.8**	**+0.3**
QIZ					pmax	pmax		
	comp=Z,14nm,1.2s							
KMI	**Kunming**	**38.05**	**257**		P	**P**	**23 07 22.8**	**+0.6**
KMI					pP	**pP**	**23 07 35.5**	**+1.7**
KMI					sP	**sP**	**23 07 40.8**	**+2.1**
KMI					PP	**PnPn**	**23 08 53.5**	**+2.2**
KMI					S	**S**	**23 13 11.3**	**-0.8**
KMI					SS	**SnSn**	**23 15 48.3**	**-8.9**
KMI					pmax	pmax		
	comp=Z,8.0nm,1.0s							
KMI					pmax	pmax		
	comp=Z,100nm,4.8s							
KMI					LR	LR		
	comp=N,100nm,14.7s							
KMI					LR	LR		
	comp=E,190nm,14.7s							
KMI					LR	LR		
	comp=Z,120nm,11.9s							
ZAA0	**Zalesovo Array**	**40.47**	**308**		*e*P	**P**	**23 07 41.5**	**-0.3**
ZAA0					*e*PcP	**PcP**	**23 09 44.1**	**+0.3**
ZALV	**Zalesovo Beam**	**40.47**	**308**		P	**P**	**23 07 41.7**	**-0.1**
ZALV							23 09 44.4	
ZALV					pmax	pmax		
	comp=Z,3.0nm,0.7s							
ZALV					pmax	pmax		
	comp=Z,1.0nm,0.6s							
ZALV					MLR	MLR		
	comp=Z,47nm,20.7s							
ZALV	**Zalesovo Beam**	**40.47**	**308**		P	**P**	**23 07 41.7**	**-0.1**
ZALV					PcP	**PcP**	**23 09 44.4**	**+0.6**
ZALV	**Zalesovo Beam**	**40.47**	**308**		P	**P**	**23 07 41.7**	**-0.1**
	comp=Z,3.2nm,0.7s,baz=91,slow=7.7,SNR=19							
ZALV					PcP	**PcP**	**23 09 44.4**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=82,slow=3.0,SNR=4.1							
ZALV					LR	LR	23 25 41.6	
	comp=Z,47nm,20.7s,baz=227,slow=38							
WMQ	**Urumqi**	**40.84**	**292**		P	**P**	**23 07 45.0**	**-0.1**
WMQ					pP	**pP**	**23 07 57.0**	**+0.3**
WMQ					sP	**sP**	**23 08 03.0**	**+1.4**
WMQ					PP	**PnPn**	**23 09 23.0**	**-1.0**
WMQ					PcP	**PcP**	**23 09 47.0**	**+1.7**
WMQ					ScP	**ScP**	**23 13 31.0**	**-0.4**
WMQ					S	**S**	**23 13 53.0**	**-0.3**
WMQ					sS	**sS**	**23 14 13.0**	**+0.4**
WMQ					SS	**SS**	**23 16 50.0**	**-5.2**
WMQ					ScS	**ScS**	**23 17 45.0**	**-1.4**
WMQ					pmax	pmax		
	comp=Z,16nm,1.0s							
WMQ					pmax	pmax		
	comp=Z,150nm,5.0s							
WMQ					LR	LR		
	comp=N,230nm,16.0s							
WMQ					LR	LR		
	comp=E,200nm,16.0s							
WMQ					LR	LR		
	comp=Z,140nm,16.0s							
TRF	**Thorofare Moun**	**42.80**	**37**		*e*P	**P**	**23 08 00.5**	**-0.5**
	comp=Z,56nm,2.6s							
COLD	**Coldfoot**	**42.85**	**31**		*e*P	**P**	**23 08 01.4**	**+0.3**
	comp=Z,30nm,2.4s							
MK31	**Makanchi Array**	**43.59**	**298**		*e*P	**P**	**23 08 06.6**	**-0.9**
MK31	**Makanchi Array**	**43.59**	**298**		*e*P	**P**	**23 08 06.6**	**-0.9**
MKAR	**Makanchi Array**	**43.59**	**298**		P	**P**	**23 08 07.0**	**-0.5**
MKAR					pmax	pmax		
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**43.59**	**298**		*e*P	**P**	**23 08 08.1**	**+0.6**
MKAR	**Makanchi Array**	**43.59**	**298**		P	**P**	**23 08 07.0**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=113,slow=8.6,SNR=10							
SML	**Sawmill**	**43.80**	**39**		*e*P	**P**	**23 08 09.7**	**+0.8**
SML					pmax	pmax		
	comp=Z,2.0nm,0.8s							
SML	**Sawmill**	**43.80**	**39**		*e*P	**P**	**23 08 09.7**	**+0.8**
	comp=Z,2.4nm,0.8s							
ILAR	**Eielson Array**	**44.23**	**35**		P	**P**	**23 08 11.8**	**-0.4**
ILAR	**Eielson Array**	**44.23**	**35**		P	**P**	**23 08 11.8**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=263,slow=6.2,SNR=22							
KURK	**Kurchatov**	**44.84**	**305**		*e*P	**P**	**23 08 17.3**	**0.0**
KURK					pmax	pmax		
	comp=Z,6.0nm,1.2s							
KURK	**Kurchatov**	**44.84**	**305**		*e*P	**P**	**23 08 17.4**	**+0.1**
	comp=Z,3.8nm,0.7s							
KURK					*e*PcP	**PcP**	**23 09 57.8**	**-0.7**
CMAR	**Chiang Mai Arr**	**44.97**	**253**		P	**P**	**23 08 17.7**	**-1.0**
CMAR	**Chiang Mai Arr**	**44.97**	**253**		P	**P**	**23 08 17.7**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=43,slow=7.7,SNR=3.8							
CMAR					LR	LR	23 29 28.9	
	comp=Z,43nm,18.3s,baz=45,slow=39							
TAPN	**Taplejung**	**47.94**	**271**		*e*P	**P**	**23 08 42.0**	**-0.3**
	comp=Z,12nm,1.1s							
ODAN	**Odare**	**48.45**	**271**		*e*P	**P**	**23 08 44.5**	**-1.7**
RAMN	**Ramite**	**48.99**	**271**		*e*P	**P**	**23 08 49.3**	**-1.0**
	comp=Z,32nm,0.7s							
GUN	**Gumba**	**49.01**	**273**		*e*P	**P**	**23 08 50.5**	**-0.1**
	comp=Z,8.2nm,0.5s							
TKM2	**Tokmak 2**	**49.41**	**296**		*e*P	**P**	**23 08 53.4**	**+0.1**
TKM2					pmax	pmax		
	comp=Z,32nm,0.7s							
TKM2	**Tokmak 2**	**49.41**	**296**		*e*P	**P**	**23 08 53.4**	**+0.1**
	comp=Z,32nm,0.7s							
KKN	**Kakani**	**49.52**	**273**		*e*P	**P**	**23 08 54.8**	**+0.5**
	comp=Z,7.8nm,0.7s							
DMN	**Daman**	**49.75**	**273**		*e*P	**P**	**23 08 56.0**	**-0.1**
DANN	**Dangsing**	**50.35**	**275**		*e*P	**P**	**23 09 01.6**	**+0.9**
	comp=Z,20nm,0.7s							
KSH	**Kashi**	**50.58**	**291**		*e*P	P	23 09 05.5	+3.4
KSH					*e*pP	pP	23 09 18.8	+4.8
KSH					*e*sP	sP	23 09 23.5	+4.7
KSH					PcP	**PcP**	**23 10 23.8**	**+4.4**
KSH					PP	PP	23 11 03.8	+5.8
KSH					ScP	**ScP**	**23 14 12.5**	**+0.5**
KSH					PcS	**PcS**	**23 14 19.3**	**+2.5**
KSH					S	**S**	**23 16 15.8**	**+2.2**
KSH					sS	sS	23 16 38.0	+4.6
KSH					ScS	**ScS**	**23 18 50.0**	**+0.4**
KSH					SS	**SS**	**23 19 50.0**	**+2.3**
KSH					pmax	pmax		
	comp=Z,3.0nm,0.1s							
KSH					pmax	pmax		
	comp=Z,120nm,5.2s							
KSH					LR	LR		
	comp=N,460nm,8.6s							
KSH					LR	LR		
	comp=E,290nm,5.8s							
KSH					LR	LR		
	comp=Z,160nm,5.5s							
KOLN	**Koldanda**	**50.78**	**274**		*e*P	**P**	**23 09 04.7**	**+0.8**
PYUN	**Piuthan**	**51.06**	**275**		*e*P	**P**	**23 09 06.6**	**+0.6**
	comp=Z,25nm,1.1s							
KKAR	**Karatay Array**	**52.72**	**298**		*e*P	**P**	**23 09 18.1**	**+0.2**
KKAR	**Karatay Array**	**52.72**	**298**		*e*P	**P**	**23 09 18.1**	**+0.2**
HNR	**Honiara**	**53.05**	**161**		LR	LR	23 28 23.8	
	comp=Z,54nm,21.5s,baz=145,slow=32							
SVE	**Sverdlovsk**	**53.05**	**317**	⇑	*e*P	**P**	**23 09 20.7**	**+0.6**
SVE					pmax	pmax		
	comp=Z,9.0nm,0.8s							
ARU	**Arti**	**54.26**	**317**	*c*	*i*P	**P**	**23 09 28.8**	**-0.2**
ARU					PPP	PPP	23 12 40.9	
ARU					S	S	23 17 09.5	+6.2
ARU					pmax	pmax		
	comp=Z,8.0nm,1.0s							
ABKAR	**Akbulak array**	**56.58**	**309**		*e*P	**P**	**23 09 45.8**	**+0.1**
RES	**Resolute Bay**	**57.34**	**16**		*e*P	**P**	**23 09 49.8**	**-1.0**
	comp=Z,2.5nm,0.6s							
YKA	**Yellowknife Ar**	**58.51**	**32**		P	**P**	**23 09 58.6**	**-0.5**
YKA	**Yellowknife Ar**	**58.51**	**32**		P	**P**	**23 09 58.6**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=301,slow=6.8,SNR=8.6							
KEV	**Kevo**	**59.70**	**339**		*e*p	**P**	**23 10 06.3**	**-0.9**
ARCES	**ARCESS Array B**	**60.25**	**339**		P	P	23 10 14.8	+3.7
ARCES	**ARCESS Array B**	**60.25**	**339**		P	P	23 10 14.8	+3.7
	comp=Z,2.1nm,0.9s,baz=46,slow=8.7,SNR=3.7							
ARCES					LR	LR	23 39 06.4	
	comp=Z,40nm,18.5s,baz=104,slow=39							
DAG	**Danmarks Havn**	**61.12**	**356**		*e*P	**pP**	**23 10 27.1**	**-1.9**
DAG					pmax	pmax		
	comp=Z,2.0nm,0.8s							
DAG	**Danmarks Havn**	**61.12**	**356**		*i*P	pP	23 10 27.1	-1.9
	comp=Z,3.2nm,0.8s							
WRA	**Warramunga Arr**	**62.20**	**191**		P	**P**	**23 10 23.2**	**-1.6**
WRA	**Warramunga Arr**	**62.20**	**191**		P	**P**	**23 10 23.2**	**-1.6**
	comp=Z,2.2nm,0.7s,baz=9.1,slow=7.0,SNR=13							
JOF	**Joensuu**	**62.74**	**332**		*e*p	**P**	**23 10 25.3**	**-2.6**
	comp=Z,1.3nm,0.6s							
KAF	**Kangasniemi**	**65.02**	**333**		*e*p	**P**	**23 10 41.4**	**-1.5**
	comp=Z,1.6nm,0.7s							
OBN	**Obninsk**	**65.55**	**323**		*e*P	**P**	**23 10 44.6**	**-1.8**
OBN					*e*		23 10 52.5	
OBN					*e*		23 13 09.4	
OBN					pmax	pmax		
	comp=Z,4.0nm,0.9s							
OBN					MLR	MLR		
	comp=Z,100nm,17.0s							
FINES	**FINESS Array B**	**65.56**	**332**		P	**P**	**23 10 46.0**	**-0.3**
FINES	**FINESS Array B**	**65.56**	**332**		P	**P**	**23 10 46.0**	**-0.3**
	comp=Z,1.9nm,0.5s,baz=46,slow=7.2,SNR=19							
FINES					LR	LR	23 42 24.7	
	comp=Z,178nm,18.9s,baz=38,slow=39							
SUMG	**Summit**	**65.82**	**1**		*i*P	**P**	**23 10 48.6**	**+0.2**
SUMG					*i*		23 11 01.1	
SUMG					pmax	pmax		
	comp=Z,5.0nm,0.8s							
SUMG	**Summit**	**65.82**	**1**		*e*P	**P**	**23 10 49.0**	**+0.6**
	comp=Z,278nm,3.0s							
SUMG	**Summit**	**65.82**	**1**		*i*P	**P**	**23 10 48.6**	**+0.2**
	comp=Z,5.2nm,0.7s							
SUMG					*i*		23 11 01.1	
ASAR	**Alice Springs**	**65.93**	**190**		P	**P**	**23 10 48.5**	**-0.6**
ASAR	**Alice Springs**	**65.93**	**190**		P	**P**	**23 10 48.5**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=7.9,slow=5.6,SNR=9.7							
SLMT	**Seeley Lake**	**67.72**	**46**		*e*P	**P**	**23 11 00.8**	**+0.2**
LRM	**Limekiln Ridge**	**69.17**	**47**		*e*P	**P**	**23 11 10.1**	**+0.3**
KIV	**Kislovodsk**	**69.41**	**311**		*e*P	**P**	**23 11 09.2**	**-2.0**
KIV					*e*		23 11 15.3	
KIV					*e*		23 11 30.6	
KIV					pmax	pmax		
	comp=Z,6.0nm,1.1s							
KIV					MLR	MLR		
	comp=Z,100nm,14.0s							
KBZ	**Khabaz**	**69.43**	**311**		P	**P**	**23 11 12.7**	**+1.5**
KBZ					pmax	pmax		
	comp=Z,3.0nm,0.8s							
KBZ	**Khabaz**	**69.43**	**311**		P	**P**	**23 11 12.7**	**+1.5**
KBZ	**Khabaz**	**69.43**	**311**		P	**P**	**23 11 12.7**	**+1.5**
	comp=Z,2.5nm,0.8s,baz=20,slow=7.2,SNR=5.6							
BOZ	**Bozeman (W)**	**69.72**	**46**		*e*P	**P**	**23 11 13.7**	**+0.6**
BOZ					pmax	pmax		
	comp=Z,4.0nm,0.6s							
BOZ	**Bozeman (W)**	**69.72**	**46**		*e*P	**P**	**23 11 13.7**	**+0.6**
	comp=Z,3.7nm,0.6s							
NVAR	**Mina Array Bea**	**70.36**	**56**		P	**P**	**23 11 17.4**	**+0.1**
NVAR	**Mina Array Bea**	**70.36**	**56**		P	**P**	**23 11 17.4**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=292,slow=7.7,SNR=5.9							
NB2	**NORSAR Subarra**	**70.55**	**338**		P	**P**	**23 11 17.3**	**-0.5**
	comp=Z,5.5nm,1.2s,baz=33,slow=6.5							
NOA	**NORSAR Array B**	**70.55**	**338**		P	**P**	**23 11 17.7**	**-0.1**
NOA	**NORSAR Array B**	**70.55**	**338**		P	**P**	**23 11 17.7**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=36,slow=6.1,SNR=4.6							
NOA					LR	LR	23 46 28.4	
	comp=Z,60nm,18.6s,baz=30,slow=39							
HFS	**Hagfors**	**70.57**	**336**		P	**P**	**23 11 17.8**	**0.0**
HFS	**Hagfors**	**70.57**	**336**		P	**P**	**23 11 17.8**	**0.0**
	comp=Z,1.6nm,0.5s,baz=61,slow=7.0,SNR=15							
IMW	**Indian Meadow**	**71.22**	**48**		*e*P	**P**	**23 11 22.2**	**-0.3**
	comp=Z,30nm,2.5s							
MOOW	**Moose Ponds**	**71.42**	**48**		*e*P	**P**	**23 11 24.7**	**+1.0**
	comp=Z,11nm,1.9s							
FRB	**Frobisher Bay**	**71.53**	**15**		P	**P**	**23 11 22.8**	**-0.8**
FRB	**Frobisher Bay**	**71.53**	**15**		P	**P**	**23 11 22.8**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=339,slow=8.5,SNR=4.4							
AKASG	**Malin Array Be**	**71.81**	**323**		P	**P**	**23 11 25.0**	**-0.5**
AKASG					pmax	pmax		
	comp=Z,2.0nm,0.6s							
AKASG	**Malin Array Be**	**71.81**	**323**		P	**P**	**23 11 25.0**	**-0.5**
AKASG	**Malin Array Be**	**71.81**	**323**		P	**P**	**23 11 25.0**	**-0.5**
	comp=Z,2.1nm,0.6s,baz=42,slow=6.2,SNR=10							
DUG	**Dugway**	**72.55**	**52**		*e*P	**P**	**23 11 30.8**	**+0.5**
DUG	**Dugway**	**72.55**	**52**		*e*P	**P**	**23 11 30.8**	**+0.5**
PDAR	**Pinedale Array**	**72.72**	**48**		P	**P**	**23 11 31.2**	**-0.2**
PDAR	**Pinedale Array**	**72.72**	**48**		P	**P**	**23 11 31.2**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=260,slow=2.1,SNR=11							
KWP	**Kalwaria Pacla**	**75.45**	**325**		*e*P	**P**	**23 11 47.7**	**+0.7**
BUR08	**Bucovina Ar. S**	**75.84**	**322**		*e*P	**P**	**23 11 49.8**	**+0.5**
PV04	**Paradox Valley**	**76.01**	**51**		*e*P	**P**	**23 11 50.3**	**-0.3**
CRVS	**Cervenica-Dubn**	**76.54**	**325**		*e*P	**P**	**23 11 54.9**	**+1.7**
CRVS	**Cervenica-Dubn**	**76.54**	**325**		*e*P	**P**	**23 11 54.9**	**+1.7**
BRTR	**Keskin Array B**	**77.27**	**312**		P	**P**	**23 11 58.4**	**+0.8**
BRTR	**Keskin Array B**	**77.27**	**312**		P	**P**	**23 11 58.4**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=98,slow=3.1,SNR=4.2							
BRTR					LR	LR	23 55 17.7	
	comp=Z,25nm,19.1s,baz=198,slow=43							
DPC	**Dobruska-Polom**	**77.50**	**329**		*e*P	**P**	**23 11 59.4**	**+0.9**
DPC					pmax	pmax		
	comp=Z,5.0nm,1.0s							
DPC	**Dobruska-Polom**	**77.50**	**329**		*e*P	**P**	**23 11 59.4**	**+0.9**
	comp=Z,5.1nm,1.0s							
DPC	**Dobruska-Polom**	**77.50**	**329**		*e*P	**P**	**23 11 58.8**	**+0.3**
DPC					*e*pP	**PcP**	**23 12 09.4**	**+0.6**
VYHS	**Vyhne**	**77.96**	**326**		*e*P	**P**	**23 12 03.3**	**+2.2**
VYHS	**Vyhne**	**77.96**	**326**		*e*P	**P**	**23 12 03.3**	**+2.2**
CLL	**Collm**	**77.96**	**331**		*i*P	**P**	**23 12 00.9**	**-0.1**
CLL					pmax	pmax		
	comp=Z,4.0nm,0.

AVF	**Avril sur Loir**	**85.13**	**334**	*e*P	**P**	**23 12 39.1**	**+0.1**
	comp=Z,11nm,0.8s						
TXAR	**Lajitas Array**	**85.44**	**54**	P	**P**	**23 12 41.2**	**+0.2**
TXAR	**Lajitas Array**	**85.44**	**54**	P	**P**	**23 12 41.2**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=296,slow=3.2,SNR=17						
MBDF	**Montbardon**	**85.75**	**331**	*e*P	**P**	**23 12 42.9**	**+0.5**
MBDF	**Montbardon**	**85.75**	**331**	*e*P	**P**	**23 12 42.9**	**+0.5**
MBDF	**Montbardon**	**85.75**	**331**	*e*P	**P**	**23 12 42.9**	**+0.5**

NEIC ***28*** *23:14:47.8±1.9, 7°.15S×129°.40E, h41*$^{km}_{\pm 18}$*, mb4.0/4, Error ellipse: s-maj=26.9km s-min=9.8km az=54.0*
IDC ***28*** *23:14:48.5±5.6, 7°.17S×129°.34E, h44*$^{km}_{\pm 53}$*, mb3.9/4, mb1 4.3/7, mb1mx3.9/20, mbtmp4.1/7, ML4.5/3, Error ellipse: s-maj=86.1km s-min=22.5km az=57.0*
AUST ***28*** *23:14:54.9±0.7, 7°.40S×129°.39E, h97km, Error ellipse: s-maj=1.7km s-min=0.8km az=252.0*

ISC 28 23:14:55.9±0.6, 7°.66S±0°.06×129°.12E±0°.09, h131^{km}**, n49, σ1°96/49, mb3.9/7, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**4.05**	**347**	P	**Pn**	**23 15 53.7**	**-2.7**
	baz=3.9,SNR=5.4						
TLE	**Tual**	**4.12**	**61**	P	Pn	23 15 52.1	-5.1
	baz=3.8,SNR=6.8						
MTN	**Manton Dam**	**5.52**	**159**	P	**Pn**	**23 16 18.0**	**+2.1**
	baz=5.7,SNR=160						
MTN				S	**Sn**	**23 17 19.7**	**+1.3**
	baz=5.7,SNR=6.2						
FAKI	**Fak Fak**	**5.65**	**34**	P	Pn	23 16 10.3	-7.4
	baz=5.3,SNR=12						
FAKI				S	Sn	23 17 05.8	-16
	baz=5.3,SNR=6.2						
KDU	**Kakadu**	**5.99**	**147**	P	**Pn**	**23 16 24.2**	**+2.0**
	baz=6.1,SNR=4.4						
KDU				S	**Sn**	**23 17 28.2**	**-1.4**
	baz=6.1,SNR=6.8						
FITZ	**Fitzroy Crossi**	**10.92**	**198**	*e*Pn	**Pn**	**23 17 29.1**	**+0.6**
	4.6nm,0.5s						
FITZ				S	**Sn**	**23 19 27.6**	**-1.3**
FITZ	**Fitzroy Crossi**	**10.92**	**198**	P	**Pn**	**23 17 29.1**	**+0.6**
	1.9nm,0.3s,baz=31,slow=12,SNR=46						
FITZ				S	**Sn**	**23 19 27.6**	**-1.3**
	3.4nm,0.3s,baz=103,slow=17,SNR=7.1						
WRAB	**Tennant Creek**	**13.21**	**158**	*e*Pn	**Pn**	**23 17 57.9**	**-0.6**
	6.7nm,0.5s						
WRAB				*e*Sn	Sn	23 20 16.9	-7.5
WRA	**Warramunga Arr**	**13.22**	**158**	P	**Pn**	**23 17 58.3**	**-0.3**
WRA				S	Sn	23 20 17.4	-7.1
WRA	**Warramunga Arr**	**13.22**	**158**	P	**Pn**	**23 17 58.3**	**-0.3**
	3.2nm,0.3s,baz=326,slow=14,SNR=21						
WRA				S	Sn	23 20 17.4	-7.1
	2.2nm,0.3s,baz=332,slow=23,SNR=5.9						
COEN	**Coen**	**15.15**	**116**	P	**Pn**	**23 18 20.6**	**-2.6**
	baz=15,SNR=7.6						
COEN				S	Sn	23 20 58.5	-13
	baz=15,SNR=5.6						
PALU	**Palau**	**15.83**	**20**	P	P	23 18 37.5	+4.8
	baz=16,SNR=4.1						
QIS	**Mount Isa**	**16.35**	**143**	P	**P**	**23 18 38.7**	**+0.3**
	baz=16,SNR=8.1						
AS31	**Alice Springs**	**16.56**	**164**	*e*Pn	**P**	**23 18 42.6**	**+1.8**
AS31				*e*Sn	**S**	**23 21 48.0**	**+1.6**
ASAR	**Alice Springs**	**16.56**	**164**	P	**P**	**23 18 42.6**	**+1.8**
ASAR				S	**Sn**	**23 21 39.9**	**-5.2**
ASAR	**Alice Springs**	**16.56**	**164**	P	**P**	**23 18 42.6**	**+1.8**
	1.7nm,0.3s,baz=337,slow=10,SNR=72						
ASAR				S	**Sn**	**23 21 39.9**	**-5.2**
	0.7nm,0.3s,baz=334,slow=20,SNR=6.9						
MTSU	**Mount Surprise**	**18.09**	**127**	P	**Pn**	**23 19 00.9**	**+1.9**
	baz=18,SNR=15						
CISI	**Cisompet, Garu**	**21.12**	**269**	S	Sn	23 23 56.7	+22
	baz=21,SNR=4.6						
QLP	**Quilpie**	**23.67**	**144**	P	P	23 20 00.5	+4.9
	baz=24,SNR=4.6						
STKA	**Stephens Creek**	**26.75**	**156**	*e*P	**P**	**23 20 27.0**	**+3.6**
	0.6nm,0.7s						
STKA	**Stephens Creek**	**26.75**	**156**	P	P	23 20 28.0	+4.6
	0.8nm,0.5s,baz=348,slow=9.3,SNR=3.7						
BKNI	**Bangkinang**	**29.10**	**285**	S	S	23 25 11.9	-15
	baz=29,SNR=3.0						
CMAR	**Chiang Mai Arr**	**39.50**	**311**	P	**P**	**23 22 14.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**39.50**	**311**	P	**P**	**23 22 14.5**	**+0.6**
	0.9nm,0.3s,baz=139,slow=7.3,SNR=5.9						
CHTO	**Chiang Mai**	**39.72**	**312**	*e*P	**P**	**23 22 15.9**	**+0.1**
	1.9nm,0.6s						
ODAN	**Odare**	**53.04**	**312**	*e*P	**P**	**23 24 00.7**	**+0.7**
	11nm,0.4s						
TAPN	**Taplejung**	**53.08**	**313**	*e*P	**P**	**23 24 01.2**	**+0.8**
	9.4nm,0.4s						
RAMN	**Ramite**	**53.67**	**312**	*e*P	**P**	**23 24 05.8**	**+1.2**
	16nm,0.5s						
GUN	**Gumba**	**54.74**	**312**	*e*P	**P**	**23 24 13.1**	**+0.7**
	14nm,0.5s						
PKI	**Pulchoki**	**54.90**	**311**	*e*P	**P**	**23 24 14.5**	**+0.9**
	6.1nm,0.4s						
PKIN	**Phulchoki**	**54.91**	**311**	*e*P	**P**	**23 24 13.7**	**+0.1**
KKN	**Kakani**	**55.11**	**312**	*e*P	**P**	**23 24 15.3**	**+0.3**
	8.1nm,0.5s						
DMN	**Daman**	**55.14**	**311**	*e*P	**P**	**23 24 16.7**	**+1.4**
	7.6nm,0.4s						
KOLN	**Koldanda**	**56.36**	**311**	*e*P	**P**	**23 24 24.8**	**+0.9**
	7.6nm,0.4s						
DANN	**Dangsing**	**56.54**	**311**	*e*P	**P**	**23 24 25.4**	**+0.1**
	5.2nm,0.5s						
PYUN	**Piuthan**	**56.99**	**311**	*e*P	**P**	**23 24 29.3**	**+1.0**
	7.0nm,0.5s						
ULN	**Ulaanbaatar**	**58.63**	**343**	*e*P	**P**	**23 24 37.4**	**-1.9**
	0.9nm,0.7s						
MK31	**Makanchi Array**	**68.30**	**327**	*e*P	**P**	**23 25 42.6**	**-0.2**
MKAR	**Makanchi Array**	**68.30**	**327**	P	**P**	**23 25 43.4**	**+0.6**
MKAR	**Makanchi Array**	**68.30**	**327**	P	**P**	**23 25 43.4**	**+0.6**
	1.4nm,0.5s,baz=115,slow=8.8,SNR=20						
ZALV	**Zalesovo Beam**	**71.79**	**334**	P	**P**	**23 26 03.4**	**-0.6**
ZALV	**Zalesovo Beam**	**71.79**	**334**	P	**P**	**23 26 03.4**	**-0.6**
	1.3nm,0.6s,baz=127,slow=5.8,SNR=8.9						
KURK	**Kurchatov**	**72.63**	**329**	*e*P	**P**	**23 26 08.7**	**-0.2**
	2.0nm,0.8s						
ULM	**Lac du Bonnet**	**123.47**	**33**	PKP	**PKPdf**	**23 33 40.3**	**+2.6**
ULM	**Lac du Bonnet**	**123.47**	**33**	PKP	**PKPdf**	**23 33 40.3**	**+2.6**
	1.5nm,0.5s,baz=315,slow=2.9,SNR=2.8						
TORD	**Torodi Ar. Bea**	**128.08**	**281**	PKP	**PKPdf**	**23 33 49.8**	**+2.3**
TORD	**Torodi Ar. Bea**	**128.08**	**281**	PKP	**PKPdf**	**23 33 49.8**	**+2.3**
	0.3nm,0.5s,baz=94,slow=1.7,SNR=7.7						
LPAZ	**La Paz**	**150.71**	**144**	PKPbc	**PKPab**	**23 34 38.2**	**-3.5**
LPAZ	**La Paz**	**150.71**	**144**	PKPbc	**PKPab**	**23 34 38.2**	**-3.5**
	1.8nm,1.0s,baz=236,slow=3.6,SNR=2.8						

MEX 28 23:24:29.0±0.7, 18°.05N×100°.44W, h75$^{km}_{\pm 12}$**, MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.24**	**21**	*e*P	Pn	23 24 39.9	-0.6
ARIG				*e*S	Sn	23 24 46.6	-2.3
MEIG	**Mezcala**	**0.79**	**99**	*e*P	Pn	23 24 44.2	-1.2
MEIG				*e*S	Sn	23 24 55.8	-1.9
CAIG	**El Cayaco**	**1.01**	**171**	*e*P	Pn	23 24 45.7	-2.2
CAIG				*e*S	Sn	23 25 00.8	-1.3
MMIG	**Aquila**	**2.77**	**275**	*i* P	Pn	23 25 10.6	-0.6
MMIG				*i* S	Sn	23 25 41.6	-2.0

IDC 28 23:36:12.1±1.8, 2°.67N×95°.17E, h0^{km}**, mb4.0/6, mb1 4.1/8, mb1mx3.7/27, mbtmp4.0/8, ML4.0/2, Error ellipse: s-maj=51.2km s-min=23.6km az=44.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.75**	**88**	Pn	Pn	23 37 11.4	-0.1
	3.4nm,0.3s,baz=301,slow=12,SNR=14						
CMAR	**Chiang Mai Arr**	**16.12**	**13**	Pn	Pn	23 40 01.1	+0.9
	0.4nm,0.3s,baz=199,slow=11,SNR=24						
WRA	**Warramunga Arr**	**44.53**	**122**	P	P	23 44 26.1	+0.1
	0.6nm,0.6s,baz=299,slow=9.2,SNR=3.4						
MKAR	**Makanchi Array**	**45.35**	**348**	P	P	23 44 32.4	+0.3
	2.2nm,0.6s,baz=168,slow=8.3,SNR=36						
KSRS	**Korea Array**	**45.84**	**37**	P	P	23 44 34.9	-1.2
	0.6nm,0.4s,baz=224,slow=7.6,SNR=3.5						
ZALV	**Zalesovo Beam**	**51.81**	**352**	P	P	23 45 21.9	+0.1
	5.2nm,0.6s,baz=182,slow=7.2,SNR=34						
FINES	**FINESS Array B**	**77.77**	**333**	P	P	23 48 09.9	-1.0
	1.5nm,0.9s,baz=103,slow=6.1,SNR=4.1						
ARCES	**ARCESS Array B**	**80.48**	**340**	P	P	23 48 26.2	+0.5
	1.8nm,1.0s,baz=93,slow=5.4,SNR=4.5						

IDC 29 00:51:47.6±1.9, 0°.52S×132°.98E, h0^{km}**, mb3.7/4, mb1 3.9/6, mb1mx3.7/22, mbtmp3.7/6, ML3.4/2, MS2.2/1, Ms1 2.2/1, ms1mx1.9/34, Error ellipse: s-maj=97.7km s-min=21.6km az=77.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.90**	**202**	P	P	00 56 09.6	-0.3
	0.1nm,0.3s,baz=23,slow=13,SNR=4.2						
FITZ				S	Sn	00 59 27.2	-16
	0.0nm,0.3s,baz=129,slow=17,SNR=2.1						
WRA	**Warramunga Arr**	**19.34**	**176**	P	P	00 56 15.3	+0.5
	0.1nm,0.3s,baz=352,slow=11,SNR=5.8						
WRA				S	Sn	00 59 41.6	-12
	0.3nm,0.3s,baz=360,slow=23,SNR=6.9						
ASAR	**Alice Springs**	**23.02**	**178**	P	P	00 56 55.0	+0.5
	4.4nm,0.8s,baz=2.8,slow=11,SNR=39						
STKA	**Stephens Creek**	**32.23**	**166**	P	P	00 58 16.9	-0.9
	1.1nm,0.5s,baz=344,slow=11,SNR=4.1						
KSRS	**Korea Array**	**38.08**	**353**	LR	LR	01 14 35.2	
	comp=Z,4.0nm,21.5s,baz=245,slow=36						
MKAR	**Makanchi Array**	**64.62**	**324**	P	P	01 02 27.3	+0.2
	0.2nm,0.6s,baz=108,slow=7.7,SNR=3.1						
ZALV	**Zalesovo Beam**	**67.24**	**331**	P	P	01 02 43.6	-0.1
	0.3nm,0.4s,baz=133,slow=6.3,SNR=1.8						

IDC 29 01:13:03.0±6.5, 6°.24S×146°.46E, h105$^{km}_{\pm 50}$**, mb3.5/3, mb1 3.6/5, mb1mx3.3/19, mbtmp3.5/5, Error ellipse: s-maj=56.2km s-min=47.7km az=34.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.23**	**168**	P	Pn	01 13 53.0	+1.2
	7.9nm,0.3s,baz=356,slow=13,SNR=18						
PMG				S	Sn	01 14 29.8	+0.2
	13nm,0.3s,baz=176,slow=19,SNR=12						
CTA	**Charters Tower**	**13.77**	**181**	P	P	01 16 18.0	-0.7
	0.9nm,0.3s,baz=7.4,slow=13,SNR=6.7						
WRA	**Warramunga Arr**	**18.01**	**220**	P	P	01 17 05.7	0.0
	0.3nm,0.3s,baz=42,slow=11,SNR=6.9						
ASAR	**Alice Springs**	**21.12**	**214**	P	P	01 17 40.3	+0.8
	1.5nm,0.5s,baz=44,slow=8.6,SNR=20						
FITZ	**Fitzroy Crossi**	**23.49**	**238**	P	P	01 18 03.0	-0.5
	3.0nm,0.6s,baz=59,slow=12,SNR=10						
STKA	**Stephens Creek**	**25.91**	**190**	P	P	01 18 24.9	-0.4
	2.4nm,0.9s,baz=0.0,slow=5.1,SNR=2.8						
TORD	**Torodi Ar. Bea**	**144.62**	**284**	PKP	PKPbc	01 32 27.7	+0.3
	0.3nm,0.7s,baz=66,slow=3.7,SNR=4.0						

ISCJB ***29*** *01:14:31.7±0.7, 44°.53N±0°.03×110°.88W±0°.06, h6*$^{km}_{\pm 6}$*, Error ellipse: s-maj=7.6km s-min=4.4km az=169.5*
NEIC ***29*** *01:14:33.0, 44°.54N×110°.77W, h15km, ML2.7(SLC), After SLC.*

ISC 29 01:14:33.2±1.2, 44°.57N±0°.03×110°.75W±0°.04, h14$^{km}_{\pm 11}$**, n23, σ1°37/37, 5C-2D, Yellowstone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H16A	**Russell Place,**	**0.38**	**291**	⇑P	**Pn**	**01 14 43.3**	**-1.2**
	baz=0.4						
H16A				⇑S	**Sb**	**01 14 48.9**	**+1.2**
	baz=0.4						
QLMT	**Earthquake Lak**	**0.55**	**298**	*e*Pg	**Pg**	**01 14 43.7**	**-0.4**
QLMT				*e*Sg	**Sb**	**01 14 53.8**	**+1.2**
I17A	**Pilgrim Ck.**	**0.66**	**169**	⇑P	**Pn**	**01 14 49.4**	**+1.0**
	baz=0.6						
G17A	**Pierce Place,**	**0.75**	**0**	⇓S	**Sb**	**01 14 59.3**	**+1.0**
	baz=0.8						
G16A	**Moss Hill, Enn**	**1.00**	**312**	⇑P	**Pn**	**01 14 54.5**	**+1.6**
	baz=1.0						
DCID1	**Drake Creek**	**1.02**	**198**	*e*Pn	**Pn**	**01 14 55.5**	**+2.1**
I18A	**Diamond G Ranc**	**1.10**	**142**	⇓P	**Pg**	**01 14 56.3**	**+1.9**
	baz=1.1						
REDW	**Red Top Meadow**	**1.21**	**184**	*e*Pn	**Pn**	**01 14 54.9**	**-1.0**
RRI2	**Red Ridge**	**1.29**	**199**	*e*Pn	**Pn**	**01 14 56.1**	**-0.9**
RRI2				*e*Pg	**Pg**	**01 15 00.1**	**+2.0**
J18A	**Kendall Valley**	**1.46**	**159**	⇑P	**Pg**	**01 15 00.8**	**-0.4**
	baz=1.4						
DLMT	**Dillon**	**1.53**	**302**	*e*Pn	**Pb**	**01 15 01.4**	**0.0**
DLMT				*e*Pg	**Pg**	**01 15 04.8**	**+2.1**
LRM	**Limekiln Ridge**	**1.74**	**317**	*e*Pn	**Pn**	**01 15 02.5**	**-0.6**
LRM				*e*Pg	**Pb**	**01 15 05.9**	**+0.9**
LRM				*e*Sg	**Sg**	**01 15 29.8**	**+0.7**
AHID	**Auburn Hatcher**	**1.82**	**188**	*e*Pn	**Pn**	**01 15 02.5**	**-1.8**
BW06	**Boulder Array**	**2.00**	**154**	*e*Pn	**Pn**	**01 15 06.7**	**0.0**
BW06				*e*Pg	**Pg**	**01 15 10.4**	**-1.1**
HRY	**Holter Researc**	**2.27**	**341**	*e*Pn	**Pn**	**01 15 10.1**	**-0.3**
HRY				*e*Pg	**Pb**	**01 15 14.9**	**+0.8**
HRY				*e*Sn	**Sn**	**01 15 38.0**	**-0.3**
HRY				*e*Sg	**Sg**	**01 15 45.1**	**-1.1**
HLID	**Hailey**	**2.83**	**250**	*e*Pn	**Pn**	**01 15 16.4**	**-1.7**
HLID				*e*Sg	**Sg**	**01 16 02.8**	**-1.2**
HVU	**Hansel Valley**	**3.16**	**209**	*e*Pg	**Pb**	**01 15 29.6**	**+0.4**
HVU				*e*Sn	**Sn**	**01 15 59.2**	**-1.0**
MSO	**Missoula**	**3.18**	**316**	*e*Pg	**Pg**	**01 15 34.7**	**+0.6**
MSO				*e*Sg	**Sg**	**01 16 13.2**	**-2.1**
SLMT	**Seeley Lake**	**3.29**	**325**	*e*Pg	**Pg**	**01 15 36.1**	**-0.1**
MFID	**Camas Ranch**	**3.84**	**254**	*e*Pn	**Pn**	**01 15 30.5**	**-1.5**
DAU	**Daniels Canyon**	**4.17**	**185**	*e*Pg	**Pg**	**01 15 52.0**	**-1.1**
BMO	**Blue Mountains**	**4.68**	**276**	*e*Pn	**Pn**	**01 15 42.4**	**-1.2**
BMO				*e*Pg	**Pb**	**01 15 57.0**	**+1.9**
DGMT	**Dagmar**	**5.97**	**47**	*e*Pg	**Pg**	**01 16 24.8**	**-2.6**

IDC ***29*** *01:17:10.0±1.7, 1°.20N×96°.99E, h0km, mb4.0/7, mb1 4.0/9, mb1mx3.7/27, mbtmp3.9/9, ML3.8/2, Error ellipse: s-maj=40.0km s-min=25.8km az=48.0*
ISCJB ***29*** *01:17:12.7±0.9, 1°.3N±0°.1×97°.06E±0°.09, h28km, mb4.1/12, Error ellipse: s-maj=16.2km s-min=11.9km az=20.5*
NEIC ***29*** *01:17:12.8±10.0, 1°.25N×97°.05E, h15*$^{km}_{\pm 63}$*, mb4.3/6, Error ellipse: s-maj=33.3km s-min=9.6km az=49.0*

ISC 29 01:17:14.7±1.3, 1°.3N±0°.2×97°.1E±0°.1, h28^{km}**, n27, σ0°62/27, mb4.2/12, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.38**	**51**	Pn	**Pn**	**01 17 51.9**	**-0.1**
PSI	**Prapat**	**2.38**	**51**	Pn	**Pn**	**01 17 51.9**	**-0.1**
	4.3nm,0.3s,baz=204,slow=18,SNR=20						
IPM	**Ipoh**	**5.06**	**51**	*e*Pn	**Pn**	**01 18 29.7**	**+0.9**
KULM	**Kulim**	**5.34**	**42**	*e*Pn	**Pn**	**01 18 32.6**	**+0.1**
	9.9nm,0.5s						
CMAR	**Chiang Mai Arr**	**17.15**	**6**	P	**Pn**	**01 21 11.5**	**-1.1**
CMAR	**Chiang Mai Arr**	**17.15**	**6**	P	**Pn**	**01 21 11.5**	**-1.1**
	0.4nm,0.3s,baz=192,slow=14,SNR=7.1						
KKM	**Kota Kinabalu**	**19.67**	**76**	*e*P	**P**	**01 21 41.9**	**0.0**
	40nm,1.1s						
WRA	**Warramunga Arr**	**42.19**	**122**	P	**P**	**01 25 05.0**	**-0.5**
WRA	**Warramunga Arr**	**42.19**	**122**	P	**P**	**01 25 05.0**	**-0.5**
	0.7nm,0.6s,baz=302,slow=9.2,SNR=3.8						
WRAB	**Tennant Creek**	**42.20**	**122**	*e*P	**P**	**01 25 05.6**	**+0.1**
	7.4nm,1.2s						
KSAR	**Wonju Array Be**	**45.81**	**35**	P	**P**	**01 25 34.3**	**+0.1**
KSRS	**Korea Array**	**45.84**	**35**	P	**P**	**01 25 34.3**	**-0.2**
	2.4nm,0.9s,baz=221,slow=8.7,SNR=9.9						
EKS2	**Erkin-Say**	**46.17**	**336**	*e*P	**P**	**01 25 38.8**	**+1.6**
	5.7nm,1.2s						
SONM	**Songino Array**	**47.05**	**9**	P	**P**	**01 25 44.2**	**+0.2**
SONM	**Songino Array**	**47.05**	**9**	P	**P**	**01 25 44.2**	**+0.2**
	1.6nm,0.8s,baz=185,slow=9.4,SNR=8.3						
MK31	**Makanchi Array**	**47.12**	**346**	*e*P	**P**	**01 25 45.2**	**+0.8**
MKAR	**Makanchi Array**	**47.12**	**346**	P	**P**	**01 25 44.6**	**+0.3**
MKAR	**Makanchi Array**	**47.12**	**346**	P	**P**	**01 25 44.6**	**+0.3**
	0.7nm,0.6s,baz=162,slow=8.9,SNR=13						
KURK	**Kurchatov**	**51.67**	**345**	*e*P	**P**	**01 26 19.3**	**+0.3**
	5.4nm,1.1s						
USRK	**Ussuriysk Arra**	**52.76**	**31**	P	**P**	**01 26 27.7**	**+0.5**
	1.7nm,0.7s,baz=232,slow=5.7,SNR=6.5						
ZAA0	**Zalesovo Array**	**53.44**	**351**	*e*P	**P**	**01 26 32.6**	**+0.5**
ZALV	**Zalesovo Beam**	**53.44**	**351**	P	**P**	**01 26 32.7**	**+0.6**
ZALV	**Zalesovo Beam**	**53.44**	**351**	P	**P**	**01 26 32.7**	**+0.6**
	3.1nm,0.5s,baz=181,slow=6.4,SNR=16						
BRVK	**Borovoye**	**56.18**	**341**	*e*P	**P**	**01 26 51.2**	**-0.8**
	1.7nm,0.6s						
ABKAR	**Akbulak array**	**57.37**	**332**	*e*P	**P**	**01 27 00.4**	**0.0**
	2.5nm,0.8s						
FINES	**FINESS Array B**	**79.85**	**333**	P	**P**	**01 29 20.3**	**-0.2**
	2.1nm,1.0s,baz=101,slow=7.2,SNR=3.9						

ISK ***29*** *01:42:41.7, 37°.11N×36°.25E, h7km, MD3.4*
CSEM ***29*** *01:42:42.6±0.2, 37°.10N×36°.24E, h8km, MD3.4, Error ellipse: s-maj=4.6km s-min=4.1km az=151.0*
DDA ***29*** *01:42:43.9, 37°.08N×36°.42E, h8km, MD3.3*
NSSC ***29*** *01:42:46.3±7.4, 36°.94N×36°.15E, h0*$^{km}_{\pm 26}$*, MD1.7, ML2.6*

ISC 29 01:42:42.4±1.1, 37°.08N±0°.03×36°.27E±0°.02, h5$^{km}_{\pm 10}$**, n42, σ0°67/57, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.42**	**260**	*e*PG	**Pg**	**01 42 50.3**	**-0.3**
CEYT				*e*SG	**Sg**	**01 42 56.6**	**+0.5**
CEYT	**Ceyhan**	**0.42**	**260**	*e*Pg	**Pg**	**01 42 50.3**	**-0.3**
CEYT				*e*Sg	**Sg**	**01 42 56.6**	**+0.5**
DRWC	**Darouich**	**0.56**	**145**	*e*P	**Pb**	**01 42 54.7**	**0.0**
DRWC				*e*S	**Sb**	**01 43 02.1**	**-0.9**
DRWC				AML	AML	01 43 06.0	
	comp=E,167nm,0.2s						
DRWC				AML	AML	01 43 08.7	
	comp=N,444nm,0.4s						
DRWC	**Darouich**	**0.56**	**145**	*e*P	**Pb**	**01 42 54.7**	**0.0**
	SNR=75						
DRWC				*e*S	**Sb**	**01 43 02.1**	**-0.9**
	comp=N,444nm,0.4s,SNR=59						
GAZ	**Gaziantep**	**0.76**	**83**	*e*PG	**Pg**	**01 42 56.0**	**-0.9**
GAZ				*e*SG	**Sb**	**01 43 08.6**	**-0.1**
GAZ	**Gaziantep**	**0.76**	**83**	*e*Pg	**Pg**	**01 42 56.0**	**-0.9**
GAZ				*e*Sg	**Sb**	**01 43 08.6**	**-0.1**
KRTS	**Karatas**	**0.88**	**235**	*e*PG	**Pg**	**01 42 59.1**	**-0.2**
KRTS	**Karatas**	**0.88**	**235**	*e*Pg	**Pg**	**01 42 59.1**	**-0.2**
HTY	**Hatay**	**0.97**	**186**	*e*PG	**Pb**	**01 43 01.3**	**-0.3**
HTY	**Hatay**	**0.97**	**186**	*e*Pg	**Pb**	**01 43 01.3**	**-0.3**
BTCH	**Batrach**	**1.05**	**172**	*e*P	**Pb**	**01 43 03.2**	**0.0**
BTCH				*e*S	**Sn**	**01 43 18.9**	**-0.1**
BTCH				AML	AML	01 43 25.4	
	comp=E,439nm,0.6s						
BTCH				AML	AML	01 43 29.8	
	comp=N,338nm,0.8s						
BTCH	**Batrach**	**1.05**	**172**	*e*P	**Pb**	**01 43 03.2**	**+0.1**
BTCH				*e*S	**Sn**	**01 43 19.9**	**+0.9**
BTCH				AML	AML	01 43 25.4	
	comp=E,439nm,0.6s						
BTCH				AML	AML	01 43 25.9	
	comp=Z,204nm,0.7s						
BTCH				AML	AML	01 43 29.8	
	comp=N,338nm,0.8s						
BTCH	**Batrach**	**1.05**	**172**	*e*P	**Pb**	**01 43 03.2**	**0.0**
	SNR=67						
BTCH				*e*S	**Sn**	**01 43 18.9**	**-0.1**
	comp=N,338nm,0.8s,SNR=49						
GZT	**Gaziantep**	**1.07**	**75**	*i* P	**Pg**	**01 43 02.2**	**-0.7**
GZT				*i* S	**Sg**	**01 43 17.3**	**+0.6**
WRDH	**Warideh**	**1.58**	**176**	*e*P	**Pn**	**01 43 09.7**	**-1.3**
WRDH				*e*S	**Sn**	**01 43 32.1**	**+0.2**
WRDH				AML	AML	01 43 42.9	
	comp=N,129nm,0.6s						
WRDH				AML	AML	01 43 43.2	
	comp=Z,76nm,0.5s						
WRDH				AML	AML	01 43 46.0	
	comp=E,42nm,0.4s						
WRDH	**Warideh**	**1.58**	**176**	*e*P	**Pn**	**01 43 09.7**	**-1.3**
	SNR=57						
WRDH				*e*S	**Sn**	**01 43 32.1**	**+0.2**
	comp=E,42nm,0.4s,SNR=49						
SLMH	**Al Salmeh**	**1.59**	**123**	*e*S	**Sg**	**01 43 33.9**	**+0.4**
ATAB	**Bozova**	**1.66**	**76**	*i* P	**Pb**	**01 43 13.5**	**+0.1**
ATAB				*i* S	**Sb**	**01 43 34.6**	**-0.1**
ATAB	**Bozova**	**1.66**	**76**	*i* P	**Pn**	**01 43 13.5**	**+0.1**
ATAB				*i* S	**Sb**	**01 43 34.6**	**-0.1**
NIG	**Nigde**	**1.67**	**308**	*e*PN	**Pn**	**01 43 11.7**	**-0.8**
NIG	**Nigde**	**1.67**	**308**	*e*Pn	**Pn**	**01 43 11.7**	**-0.8**
BNN	**Bunyan**	**1.80**	**349**	*e*PN	**Pn**	**01 43 13.8**	**-0.3**
BNN	**Bunyan**	**1.80**	**349**	*e*Pn	**Pn**	**01 43 13.8**	**-0.3**
KFRA	**Kufra**	**1.92**	**167**	*e*P	**Pg**	**01 43 20.9**	**+1.8**
KFRA				*e*S	**Sg**	**01 43 43.4**	**-0.5**
KFRA				AML	AML	01

	baz=279							
TWS1	**Kuangyinshan**	**1.04**	**306**	P		**Pn**	**01 53 11.8**	**-0.7**
	baz=304							
WHF	**Hehuan Shan**	**1.05**	**251**	*i* P		**Pn**	**01 53 12.1**	**-0.9**
	baz=249							
WHF				*e*S		**Sn**	**01 53 26.4**	**-0.7**
	baz=249							
ESL	**Shilin**	**1.08**	**231**	*e*P		**Pn**	**01 53 11.8**	**-1.2**
	baz=229							
ESL				*e*S		**Sn**	**01 53 25.8**	**-1.4**
	baz=229							
TWT	**Tachien**	**1.10**	**258**	*e*P		**Pn**	**01 53 13.4**	**0.0**
	baz=255							
NSTT	**Nanjuang**	**1.24**	**277**	P		**Pn**	**01 53 14.7**	**-0.4**
	baz=274							
NSTT				*e*S		**Sn**	**01 53 31.2**	**+0.3**
	baz=274							
EHY	**Hungye**	**1.36**	**224**	*e*P		**Pn**	**01 53 15.0**	**-1.8**
	baz=222							
HATJ	**Hateruma jima**	**1.40**	**108**	*e*S		**Sn**	**01 53 35.6**	**+0.9**
SMLT	**Sun Moon Lake**	**1.46**	**246**	*e*P		**Pn**	**01 53 17.9**	**-0.3**
	baz=244							
SMLT				*e*S		**Sn**	**01 53 36.4**	**0.0**
	baz=244							
TYC	**Yuchr**	**1.49**	**247**	*e*P		**Pn**	**01 53 18.4**	**0.0**
	baz=245							
TYC				*e*S		**Sn**	**01 53 37.5**	**+0.6**
	baz=245							
TWF1	**Yuli**	**1.49**	**220**	*e*P		**Pn**	**01 53 16.9**	**-1.6**
	baz=219							
JKRS	**Kuro-shima**	**1.53**	**99**	P		**Pn**	**01 53 18.9**	**-0.1**
JKRS				*e*S		**Sn**	**01 53 38.6**	**+0.6**
JIJ	**Ishigaki jima**	**1.64**	**94**	P		**Pn**	**01 53 19.9**	**-0.6**
JIJ				*e*S		**Sn**	**01 53 39.9**	**-0.6**
ALS	**Alishan**	**1.72**	**236**	P		**Pn**	**01 53 21.9**	**0.0**
	baz=234							
ALS				*e*S		**Sn**	**01 53 43.3**	**+0.4**
	baz=234							
CHN5	**Tsauling**	**1.77**	**240**	*e*P		**Pn**	**01 53 22.5**	**+0.1**
	baz=239							
CHN5				*e*S		**Sn**	**01 53 45.1**	**+1.2**
	baz=239							
ELDTW	**Lidau**	**1.78**	**223**	*e*P		**Pn**	**01 53 21.1**	**-1.5**
	baz=222							
CHN4	**Tsaushan**	**1.97**	**235**	*e*P		**Pn**	**01 53 25.3**	**+0.3**
	baz=234							
CHN4				*e*S		**Sn**	**01 53 49.8**	**+1.2**
	baz=234							
WTP	**Ta-pu**	**2.02**	**232**	*e*P		**Pn**	**01 53 26.1**	**+0.4**
	baz=231							
WTP				*e*S		**Sn**	**01 53 51.7**	**+1.8**
	baz=231							
TWK	**Hsinying**	**2.10**	**235**	*e*P		**Pn**	**01 53 27.8**	**+1.0**
	baz=233							
CHN1	**Nanshi**	**2.12**	**232**	*e*P		**Pn**	**01 53 27.2**	**+0.2**
	baz=231							
CHN1				*e*S		**Sn**	**01 53 53.0**	**+0.7**
	baz=231							
JTJ	**Tarama**	**2.15**	**86**	P		**Pn**	**01 53 27.4**	**+0.1**
JTJ				*e*S		**Sn**	**01 53 52.4**	**-0.5**

IDC 29 01:54:21.0±1.2, 4.05N×126.74E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/23, mbtmp3.6/5, Error ellipse: s-maj=78.5km s-min=22.5km az=71.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.98**	**163**	P	P	01 59 45.5	-1.1
	0.8nm,0.5s,baz=344,slow=10,SNR=5.7						
ASAR	**Alice Springs**	**28.42**	**166**	P	P	02 00 17.9	+0.4
	0.2nm,0.3s,baz=348,slow=12,SNR=2.8						
STKA	**Stephens Creek**	**38.42**	**159**	P	P	02 01 44.9	+0.4
	0.8nm,0.6s,baz=348,slow=9.3,SNR=2.4						
MKAR	**Makanchi Array**	**57.30**	**325**	P	P	02 04 10.4	-0.3
	0.3nm,0.4s,baz=117,slow=8.4,SNR=7.8						
ILAR	**Eielson Array**	**84.82**	**25**	P	P	02 06 57.6	+0.4
	0.2nm,0.8s,baz=251,slow=5.6,SNR=3.4						

IDC 29 02:00:02.4±3.5, 2.79N×95.97E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/25, mbtmp3.8/6, Error ellipse: s-maj=160.0km s-min=21.3km az=60.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.91**	**123**	P	P	02 08 11.0	-0.3
	0.7nm,0.6s,baz=301,slow=9.1,SNR=4.0						
ASAR	**Alice Springs**	**45.33**	**128**	P	P	02 08 22.6	-0.1
	0.3nm,0.4s,baz=296,slow=7.6,SNR=4.4						
MKAR	**Makanchi Array**	**45.42**	**347**	P	P	02 08 23.2	+0.2
	1.4nm,0.7s,baz=161,slow=8.7,SNR=14						
SONM	**Songino Array**	**45.77**	**10**	P	P	02 08 25.9	+0.1
	0.6nm,0.5s,baz=184,slow=6.9,SNR=2.3						
ZALV	**Zalesovo Beam**	**51.81**	**352**	P	P	02 09 11.2	-0.9
	0.5nm,0.3s,baz=175,slow=7.1,SNR=3.9						
STKA	**Stephens Creek**	**55.32**	**132**	P	P	02 09 38.2	0.0
	2.8nm,1.1s,baz=307,slow=10,SNR=2.5						

*ISCJB **29** 02:11:38.4±0.7, 37.70N±0.03×43.04E±0.04, h9km±6km, Error ellipse: s-maj=6.1km s-min=4.9km az=145.6*
*ISK **29** 02:11:38.7, 37.71N×43.12E, h11km, MD2.9*
*CSEM **29** 02:11:39.0±0.4, 37.72N×43.07E, h10km, ML3.1, Error ellipse: s-maj=8.0km s-min=7.2km az=32.0*
*DDA **29** 02:11:40.2, 37.87N×42.85E, h40km, MD3.1, ML3.1*
ISC 29 02:11:37.9±1.3, 37.71N±0.03×43.00E±0.03, h7km±12km, n22, σ0.57/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRN	**S¨¯rnak**	**0.51**	**246**	*i* P	**Pn**	**02 11 52.0**	**+0.3**
SIRN				*i* S	**Sb**	**02 11 57.3**	**+0.4**
SIRN	**S¨¯rnak**	**0.51**	**246**	*i* P	**Pn**	**02 11 52.0**	**+0.3**
SIRN				*i* S	**Sb**	**02 11 57.3**	**+0.4**
HAKT	**HAKKARI**	**0.58**	**105**	*i* P	**Pb**	**02 11 50.5**	**-0.1**
HAKT				*i* S	**Sn**	**02 12 01.4**	**-1.2**
HAKT	**HAKKARI**	**0.58**	**105**	*i* P	**Pb**	**02 11 50.4**	**-0.1**
GEVA	**Gevas**	**0.61**	**4**	*i* P	**Pb**	**02 11 51.4**	**+0.4**
GEVA				*i* S	**Sn**	**02 12 02.6**	**-0.6**
GEVA	**Gevas**	**0.61**	**4**	*i* P	**Pb**	**02 11 51.4**	**+0.4**
CUKT	**Cukurca**	**0.67**	**133**	*e*PG	**Pg**	**02 11 50.3**	**-0.5**
CUKT				*e*SG	**Sg**	**02 12 00.0**	**+0.5**
CUKT	**Cukurca**	**0.67**	**133**	*e*Pg	**Pg**	**02 11 50.3**	**-0.5**
CUKT				*e*Sg	**Sg**	**02 12 00.0**	**+0.5**
VANB	**Van**	**0.94**	**19**	*e*PG	**Pb**	**02 11 56.6**	**0.0**
VANB				*e*SG	**Sb**	**02 12 09.8**	**+0.5**
VANB	**Van**	**0.94**	**19**	*e*Pg	**Pb**	**02 11 56.6**	**0.0**
VANB				*e*Sg	**Sb**	**02 12 09.8**	**+0.5**
TATV	**Tatvan**	**0.99**	**324**	*i* P	**Pb**	**02 11 57.0**	**-0.5**
TATV				*i* S	**Sb**	**02 12 10.7**	**-0.1**
TATV	**Tatvan**	**0.99**	**324**	*i* P	**Pb**	**02 11 57.0**	**-0.5**
TATV				*i* S	**Sb**	**02 12 10.7**	**-0.1**
BEST	**Besiri**	**1.38**	**278**	*i* P	**Pn**	**02 12 02.3**	**-1.4**
BEST				*i* S	**Sn**	**02 12 22.0**	**-0.3**
CLDR	**Caldiran**	**1.61**	**26**	*e*PN	**Pn**	**02 12 07.3**	**+0.4**
CLDR				*e*SN	**Sn**	**02 12 27.8**	**-0.2**
CLDR	**Caldiran**	**1.61**	**26**	*e*Pn	**Pn**	**02 12 07.3**	**+0.4**
CLDR				*e*Sn	**Sn**	**02 12 27.8**	**-0.2**
MARD	**Mardin**	**1.81**	**258**	*i* P	**Pn**	**02 12 09.8**	**+0.2**
MARD				*i* S	**Sn**	**02 12 33.2**	**+0.4**
VRTB	**Varto-Mus**	**1.89**	**321**	*e*PN	**Pb**	**02 12 13.1**	**+0.2**
VRTB	**Varto-Mus**	**1.89**	**321**	*e*Pn	**Pb**	**02 12 13.1**	**+0.2**
DIYA	**Diyarbakir**	**2.29**	**276**	*i* P	**Pn**	**02 12 17.4**	**+1.2**
DIYA				*i* S	**Sb**	**02 12 48.7**	**+0.6**
DIYA	**Diyarbakir**	**2.29**	**276**	*i* P	**Pn**	**02 12 17.4**	**+1.2**
DIYA				*i* S	**Sb**	**02 12 48.7**	**+0.6**
ELZG	**Elazig**	**3.27**	**285**	*i* P	**Pn**	**02 12 29.2**	**-0.4**
ELZG				*i* S	**Sg**	**02 13 22.7**	**-0.2**
ELZG	**Elazig**	**3.27**	**285**	*i* P	**Pn**	**02 12 29.2**	**-0.4**

IDC 29 02:12:46.5±1.0, 3.55S×141.09E, h0km, mb3.6/8, mb1 3.9/10, mb1mx3.7/21, mbtmp3.7/10, ML3.5/2, MS4.2/1, Ms1 4.2/1, ms1mx2.5/23, Error ellipse: s-maj=28.7km s-min=21.1km az=89.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.37**	**134**	Pn	Pn	02 14 50.3	+1.1
	0.6nm,0.3s,baz=304,slow=16,SNR=2.3						
PMG				Sn	Sn	02 16 27.5	+2.9
	0.9nm,0.3s,baz=330,slow=16,SNR=2.2						
WRA	**Warramunga Arr**	**17.57**	**202**	P	Pn	02 16 52.5	-0.6
	0.5nm,0.3s,baz=24,slow=12,SNR=14						
WRA				S	Sn	02 20 00.2	-9.4
	0.2nm,0.3s,baz=26,slow=23,SNR=4.3						
FITZ	**Fitzroy Crossi**	**20.93**	**225**	P	P	02 17 30.4	-0.6
	1.7nm,0.9s,baz=35,slow=12,SNR=4.7						
FITZ				S	S	02 21 14.4	-11
	3.3nm,1.1s,baz=340,slow=23,SNR=2.4						
ASAR	**Alice Springs**	**21.17**	**199**	P	P	02 17 33.2	-0.4
	0.5nm,0.5s,baz=27,slow=11,SNR=8.7						
KAPI	**Kappang**	**21.33**	**265**	P	P	02 17 36.4	+1.0
	1.9nm,0.5s,baz=75,slow=13,SNR=2.7						
RPZ	**Rata Peaks**	**47.98**	**151**	LR	LR	02 38 56.5	
	comp=Z,228nm,18.5s,baz=15,slow=33						
MKAR	**Makanchi Array**	**71.91**	**322**	P	P	02 24 12.3	+0.6
	0.8nm,0.7s,baz=111,slow=7.9,SNR=7.4						
ZALV	**Zalesovo Beam**	**73.86**	**329**	P	P	02 24 23.5	+0.4
	0.3nm,0.3s,baz=119,slow=4.2,SNR=2.3						
KURBB	**Kurchatov Arra**	**75.79**	**324**	P	P	02 24 33.7	-0.6
	0.2nm,0.2s,baz=106,slow=6.3,SNR=3.4						
ILAR	**Eielson Array**	**85.62**	**24**	P	P	02 25 26.0	-0.7
	0.5nm,0.7s,baz=254,slow=4.2,SNR=5.6						
YKA	**Yellowknife Ar**	**99.73**	**27**	P	Pdif	02 26 31.9	-0.3
	0.1nm,0.7s,baz=282,slow=3.7,SNR=3.0						

*IDC **29** 02:20:03.2±0.5, 16.33S×172.50W, h0km, mb4.3/19, mb1 4.5/19, mb1mx4.4/26, mbtmp4.3/19, MS3.9/19, Ms1 3.9/19, ms1mx3.7/36, Error ellipse: s-maj=23.6km s-min=14.7km az=141.0*
*ISCJB **29** 02:20:05.3±0.4, 16.35S±0.1×172.57W±0.09, h24km, mb4.3/38, MS4.0/18, Error ellipse: s-maj=17.3km s-min=8.3km az=145.3*
*NEIC **29** 02:20:07.3±5.3, 16.37S×172.48W, h27km±36km, mb4.5/22, Error ellipse: s-maj=12.7km s-min=7.2km az=144.0*
ISC 29 02:20:07.0±0.5, 16.14S±0.09×172.5W±0.1, h24km, n109, σ1.22/95, mb4.4/38, MS4.0/18, 9C-1D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.33**	**18**	Pn	Pn	02 20 39.1	-4.8
AFI				Sn	**Sn**	**02 21 07.8**	**-4.1**
AFI	**Afiamalu**	**2.33**	**18**	Pn	Pn	02 20 39.1	-4.8
	22nm,0.3s,baz=17,slow=4.9,SNR=9.8						
AFI				Sn	**Sn**	**02 21 07.8**	**-4.1**
	88nm,0.3s,baz=127,slow=15,SNR=9.9						
MSVF	**Nonsavu**	**9.18**	**259**	*e*Pn	Pn	02 22 23.4	+5.3
	41nm,1.0s						
RAR	**Rarotonga**	**13.07**	**115**	LR	LR	02 26 55.1	
	comp=Z,301nm,19.8s,baz=266,slow=32						
DZM	**Mont Dzumac**	**20.74**	**250**	*e*LR	LR	02 29 41.7	
	200nm,20.9s						
DZM	**Mont Dzumac**	**20.74**	**250**	*e*P	**P**	**02 24 46.4**	**+0.2**
	14nm,1.0s						
PPT	**Papeete**	**21.99**	**97**	LR	LR	02 30 36.3	
	comp=Z,292nm,19.2s,baz=182,slow=29						
PPT2	**Papeete2**	**21.99**	**97**	*e*LR	LR	02 29 45.0	
	536nm,27.5s						
TBI	**Tubuai**	**22.82**	**112**	*e*LR	LR	02 30 13.0	
	724nm,28.5s						
URZ	**Urewera**	**23.85**	**201**	P	**P**	**02 25 17.2**	**-1.3**
URZ	**Urewera**	**23.85**	**201**	P	**P**	**02 25 17.2**	**-1.3**
	20nm,1.1s,baz=78,slow=9.3,SNR=2.3						
HNR	**Honiara**	**27.66**	**281**	LR	LR	02 35 19.3	
	comp=Z,400nm,20.8s,baz=332,slow=33						
CTAO	**Charters Tower**	**39.33**	**258**	*e*P	**P**	**02 27 33.6**	**-1.1**
	7.0nm,0.9s						
STKA	**Stephens Creek**	**44.42**	**241**	P	**P**	**02 28 14.9**	**-1.2**
STKA	**Stephens Creek**	**44.42**	**241**	P	**P**	**02 28 14.9**	**-1.2**
	8.6nm,0.9s,baz=90,slow=9.1,SNR=15						
STKA				LR	LR	02 45 10.3	
	comp=Z,147nm,18.3s,baz=28,slow=34						
WRAB	**Tennant Creek**	**50.51**	**257**	*e*P	**P**	**02 29 02.7**	**-1.0**
	6.2nm,1.1s						
WRA	**Warramunga Arr**	**50.52**	**257**	P	**P**	**02 29 02.1**	**-1.7**
WRA	**Warramunga Arr**	**50.52**	**257**	P	**P**	**02 29 02.1**	**-1.7**
	1.6nm,0.7s,baz=95,slow=7.1,SNR=6.6						
AS31	**Alice Springs**	**50.70**	**252**	*e*P	**P**	**02 29 04.2**	**-1.0**
ASAR	**Alice Springs**	**50.71**	**252**	P	**P**	**02 29 04.1**	**-1.1**
ASAR	**Alice Springs**	**50.71**	**252**	P	**P**	**02 29 04.1**	**-1.1**
	16nm,0.8s,baz=85,slow=8.5,SNR=107						
GUMO	**Guam**	**51.46**	**303**	LR	LR	02 47 58.6	
	comp=Z,71nm,18.1s,baz=124,slow=32						
MJAR	**Matsushiro Arr**	**70.06**	**320**	P	**P**	**02 31 17.9**	**+0.7**
MJAR	**Matsushiro Arr**	**70.06**	**320**	P	**P**	**02 31 18.0**	**+0.7**
	4.7nm,1.0s,baz=160,slow=5.6,SNR=9.3						
MJAR				LR	LR	02 55 37.9	
	comp=Z,69nm,21.7s,baz=125,slow=30						
MAJO	**Matsushiro**	**70.06**	**320**	*e*P	**P**	**02 31 18.2**	**+1.0**
	8.9nm,1.0s						
ASAJ	**Asahikawa**	**72.62**	**328**	LR	LR	02 56 02.1	
	comp=Z,53nm,21.2s,baz=36,slow=30						
PETK	**Petropavlovsk-**	**73.60**	**342**	LR	LR	03 03 17.4	
	comp=Z,68nm,18.4s,baz=234,slow=35						
YBH	**Yreka Blue Hor**	**73.67**	**37**	*e*P	**P**	**02 31 40.9**	**+2.0**
	3.2nm,0.8s						
YBH	**Yreka Blue Hor**	**73.67**	**37**	P	**P**	**02 31 40.5**	**+1.6**
	3.9nm,0.8s,baz=203,slow=8.8,SNR=13						
NVAR	**Mina Array Bea**	**74.31**	**41**	P	**P**	**02 31 43.8**	**+0.9**
NVAR	**Mina Array Bea**	**74.31**	**41**	P	**P**	**02 31 43.8**	**+0.9**
	2.3nm,0.7s,baz=225,slow=11,SNR=12						
TUC	**Tucson**	**76.20**	**50**	*e*P	**P**	**02 31 54.6**	**+0.9**
	1.9nm,1.4s						
WVOR	**Wild Horse Val**	**76.48**	**38**	*e*P	**P**	**02 31 55.2**	**0.0**
	2.9nm,0.6s						
KSRS	**Korea Array**	**77.29**	**315**	P	**P**	**02 32 00.9**	**+1.3**
	3.5nm,0.9s,baz=127,slow=6.6,SNR=17						
KSRS				LR	LR	02 58 34.0	
	comp=Z,37nm,20.9s,baz=347,slow=30						
KSAR	**Wonju Array Be**	**77.31**	**315**	P	**P**	**02 32 00.9**	**+1.2**
ELK	**Elko**	**77.57**	**41**	*e*P	**P**	**02 32 02.3**	**+0.8**
ELK	**Elko**	**77.57**	**41**	P	**P**	**02 32 02.1**	**+0.6**
	1.1nm,0.9s,baz=223,slow=5.8,SNR=3.8						
USRK	**Ussuriysk Arra**	**78.49**	**323**	P	**P**	**02 32 06.7**	**+0.6**
	1.0nm,0.7s,baz=101,slow=8.1,SNR=2.7						
USRK				LR	LR	03 01 06.2	
	comp=Z,83nm,21.1s,baz=100,slow=31						
DUG	**Dugway**	**78.82**	**42**	*e*P	**P**	**02 32 09.1**	**+0.8**
	3.7nm,1.0s						
HLID	**Hailey**	**79.66**	**39**	*e*P	**P**	**02 32 13.6**	**+0.8**
	5.8nm,1.4s						
BMRM	**Bremner River**	**80.03**	**13**	*e*P	**P**	**02 32 15.1**	**+0.8**
	16nm,1.2s						
TXAR	**Lajitas Array**	**80.31**	**56**	P	**P**	**02 32 17.6**	**+1.0**
TXAR	**Lajitas Array**	**80.31**	**56**	P	**P**	**02 32 17.6**	**+1.0**
	0.4nm,0.8s,baz=235,slow=4.4,SNR=4.9						
TXAR				LR	LR	03 01 32.1	
	comp=Z,45nm,21.3s,baz=0.0,slow=31						
ANMO	**Albuquerque**	**80.62**	**50**	*e*P	**P**	**02 32 19.6**	**+1.3**
	4.8nm,1.4s						
ANMO	**Albuquerque**	**80.62**	**50**	P	**P**	**02 32 19.5**	**+1.3**
	1.1nm,0.8s,baz=222,slow=7.0,SNR=4.1						
TRF	**Thorofare Moun**	**81.20**	**10**	*e*P	**P**	**02 32 20.3**	**-0.3**
	7.5nm,0.8s						
MCK	**McKinley**	**81.69**	**10**	*e*P	**P**	**02 32 23.7**	**+0.6**
	16nm,0.9s						
TPAW	**Teton Pass**	**81.74**	**40**	*e*P	**P**	**02 32 24.5**	**+0.4**
	3.2nm,0.8s						
MOOW	**Moose Ponds**	**82.00**	**40**	*e*P	**P**	**02 32 25.4**	**0.0**
	2.0nm,1.0s						
LOHW	**Long Hollow**	**82.02**	**40**	*e*P	**P**	**02 32 24.8**	**-0.7**
	1.3nm,0.8s						
CHMT	**Chamberlain Mo**	**82.20**	**36**	*e*P	**P**	**02 32 27.3**	**+1.0**
	1.3nm,0.9s						
BW06	**Boulder Array**	**82.24**	**41**	*e*P	**P**	**02 32 27.0**	**+0.3**
	1.2nm,0.6s						
PDAR	**Pinedale Array**	**82.25**	**41**	P	**P**	**02 32 27.0**	**+0.3**
PDAR	**Pinedale Array**	**82.25**	**41**	P	**P**	**02 32 27.0**	**+0.3**
	1.2nm,0.8s,baz=194,slow=1.9,SNR=4.8						
PDAR				LR	LR	03 05 01.2	
	comp=Z,91nm,18.5s,baz=72,slow=33						
BOZ	**Bozeman (W)**	**82.46**	**38**	*e*P	**P**	**02 32 28.4**	**+0.7**
	5.6nm,1.4s						
COLA	**College**	**82.93**	**10**	*e*P	**P**	**02 32 29.9**	**+0.5**
	15nm,0.9s						
ILAR	**Eielson Array**	**83.01**	**11**	P	**P**	**02 32 30.2**	**+0.3**
ILAR	**Eielson Array**	**83.01**	**11**	P	**P**	**02 32 30.2**	**+0.3**
	2.5nm,0.7s,baz=217,slow=5.8,SNR=24						
ILAR				LR	LR	03 05 51.0	
	comp=Z,42nm,21.0s,baz=166,slow=33						
COLD	**Coldfoot**	**84.74**	**9**	*e*P	**P**	**02 32 39.8**	**+1.1**
BILL	**Bilibino**	**85.36**	**352**	*e*P	**P**	**02 32 42.7**	**+1.0**
	8.5nm,1.2s						
WMOK	**Wichita Mounta**	**86.27**	**52**	*e*P	**P**	**02 32 47.0**	**-0.1**
	1.5nm,0.8s						
MAW	**Mawson**	**87.36**	**198**	P	**P**	**02 32 51.0**	**-0.8**
	4.0nm,1.0s,baz=90,slow=2.0,SNR=3.9						
PLCA	**Paso Flores**	**88.37**	**132**	P	**P**	**02 32 55.4**	**-2.0**
PLCA	**Paso Flores**	**88.37**	**132**	P	**P**	**02 32 55.4**	**-2.0**
	1.2nm,0.7s,baz=294,slow=2.5,SNR=4.2						
PLCA				LR	LR	03 02 48.5	
	comp=Z,131nm,19.8s,baz=79,slow=29						
INK	**Inuvik**	**88.78**	**14**	P	**P**	**02 32 58.0**	**-0.3**
INK	**Inuvik**	**88.78**	**14**	P	**P**	**02 32 58.0**	**-0.3**
	1.3nm,0.8s,baz=217,slow=5.7,SNR=6.6						
YKA	**Yellowknife Ar**	**90.44**	**23**	P	**P**	**02 33 06.7**	**+0.5**
YKA	**Yellowknife Ar**	**90.44**	**23**	P	**P**	**02 33 06.7**	**+0.5**
	0.8nm,0.9s,baz=234,slow=4.6,SNR=16						
ATAH	**Atahualpa**	**91.96**	**98**	LR	LR	03 02 21.7	
	comp=Z,272nm,21.1s,baz=301,slow=28						
CMAR	**Chiang Mai Arr**	**93.67**	**288**	P	**P**	**02 33 23.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**93.67**	**288**	P	**P**	**02 33 23.1**	**+0.9**
	0.9nm,0.5s,baz=77,slow=3.1,SNR=7.4						
ULM	**Lac du Bonnet**	**93.97**	**39**	LR	LR	03 11 29.4	
	comp=Z,88nm,19.0s,baz=108,slow=33						
SONM	**Songino Array**	**95.97**	**318**	LR	LR	03 10 31.3	
	comp=Z,65nm,20.5s,baz=59,slow=32						
LPAZ	**La Paz**	**98.75**	**110**	LR	LR	03 07 34.5	
	comp=Z,50nm,19.9s,baz=78,slow=29						
ROSC	**El Rosal**	**99.17**	**88**	LR	LR	03 13 33.1	
	comp=Z,58nm,18.6s,baz=183,slow=32						
KURK	**Kurchatov**	**114.27**	**319**	*e*PKP	PKPdf	02 38 43.8	-0.6
NAO01	**NORSAR Array S**	**135.29**	**358**	*e*PKPdf	**PKPdf**	**02 39 25.5**	**+1.1**
TSUM	**Tsumeb**	**143.50**	**196**	*e*PKPdf	**PKPdf**	**02 39 39.4**	**-1.4**
KWP	**Kalwaria Pacla**	**144.39**	**343**	*e*PKPdf	PKPbc	02 39 39.5	-0.1
KWP	**Kalwaria Pacla**	**144.39**	**343**	*i*P	**PKPdf**	**02 39 41.2**	**0.0**
MALT	**Malatya**	**145.00**	**315**	*e*PKPbc	**PKPdf**	**02 39 44.4**	**+1.6**
MALT	**Malatya**	**145.00**	**315**	*i*P	**PKPdf**	**02 39 44.5**	**+1.7**
UPC	**Upice**	**145.04**	**351**	*e*PKP	**PKPdf**	**02 39 42.8**	**+0.5**
DPC	**Dobruska-Polom**	**145.14**	**350**	*e*PKP	**PKPdf**	**02 39 43.2**	**+0.6**
DPC				*ex*	x	02 40 08.7	
OKC	**Ostrava-Krasne**	**145.30**	**348**	*e*PKP	**PKPdf**	**02 39 43.8**	**+1.0**
BUR08	**Bucovina Ar. S**	**145.35**	**339**	*e*PKPbc	**PKPdf**	**02 39 44.4**	**+1.3**
BURAR	**Bucovina Array**	**145.37**	**339**	*i*P	**PKPab**	**02 39 44.8**	**+1.7**
MORC	**Moravsky Berou**	**145.48**	**348**	*e*PKPbc	**PKPab**	**02 39 43.7**	**+0.3**
MORC	**Moravsky Berou**	**145.48**	**348**	*i*P	**PKPab**	**02 39 44.2**	**+0.8**
PRU	**Pruhonice**	**145.76**	**352**	*e*PKP	**PKPbc**	**02 39 43.8**	**-0.2**
KMBO	**Kilima Mbogo**	**145.97**	**242**	*e*PKPbc	**PKPab**	**02 39 46.8**	**+0.2**
KMBO	**Kilima Mbogo**	**145.97**	**242**	PKPbc	**PKPab**	**02 39 47.0**	**+0.4**
	1.5nm,0.8s,baz=138,slow=3.9,SNR=5.2						
KHC	**Kasperske Hory**	**146.73**	**353**	*e*PKP	**PKPab**	**02 39 48.2**	**+0.1**
KHC				*ep*PKP	**pPKPdf**	**02 39 58.0**	**+4.6**
DRGR		**146.93**	**341**	*i*P	**PKPbc**	**02 39 46.7**	**-1.0**
GERES	**GERESS Array B**	**146.99**	**352**	PKPbc	**PKPbc**	**02 39 47.6**	**-0.2**
GERES	**GERESS Array B**	**146.99**	**352**	PKPbc	**PKPbc**	**02 39 47.6**	**-0.2**
	2.3nm,1.0s,baz=17,slow=3.6,SNR=11						
BR131	**Keskin Array S**	**147.28**	**321**	*e*PKPbc	**PKPbc**	**02 39 49.8**	**+0.8**
BRTR	**Keskin Array B**	**147.28**	**321**	PKPbc	**PKPab**	**02 39 50.0**	**-0.8**
BRTR	**Keskin Array B**	**147.28**	**321**	PKPbc	**PKPab**	**02 39 50.0**	**-0.8**
	3.0nm,0.9s,baz=90,slow=2.5,SNR=14						
CONA	**Conrad Observa**	**147.56**	**349**	*i*PKiKP	**PKiKP**	**02 39 51.7**	**+0.2**
	4.0nm,0.9s						
CONA	**Conrad Observa**	**147.56**	**349**	*i*P	**PKiKP**	**02 39 51.7**	**+0.2**
BZS	**Buzias**	**148.32**	**341**	*i*P	**PKPbc**	**02 39 52.9**	**+1.5**
ABTA	**Abfaltersbach**	**149.20**	**353**	*i*PKiKP	**PKiKP**	**02 39 54.6**	**-0.4**
	3.6nm,0.9s						
ABTA	**Abfaltersbach**	**149.20**	**353**	*i*P	**PKiKP**	**02 39 54.6**	**-0.4**
ESDC	**Sonseca Array**	**154.51**	**21**	PKPab	**PKPab**	**02 40 21.0**	**+0.6**
ESDC	**Sonseca Array**	**154.51**	**21**	PKPab	**PKPab**	**02 40 21.0**	**+0.6**
	0.4nm,0.6s,baz=301,slow=4.3,SNR=3.7						
TORD	**Torodi Ar. Bea**	**173.64**	**117**	PKP	**PKPdf**	**02 40 14.9**	**-0.6**
TORD				PKPab	**PKPab**	**02 41 44.5**	**-0.5**
TORD	**Torodi Ar. Bea**	**173.64**	**117**	PKP	**PKPdf**	**02 40 14.9**	**-0.6**

Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.67**	**216**	*eP*	Pb	02 53 39.2	0.0
BUTP				*eS*	Sb	02 53 48.4	+0.1
MSLP	**Maasin**	**1.30**	**298**	*eP*	Pn	02 53 49.4	0.0
MSLP				*eS*	Sn	02 54 05.8	-0.5
CGP	**Cagayan de Oro**	**1.68**	**231**	*eP*	Pn	02 53 53.9	-0.7
CGP				*eS*	Sb	02 54 16.9	-0.5
BUKP	**Musuan**	**1.88**	**210**	*eP*	Pb	02 53 59.3	-0.7
TBP	**Tagbilaran**	**2.13**	**275**	*eP*	Pn	02 54 01.3	+0.4
TBP				*eS*	Sb	02 54 29.9	-0.6
GUIM	**Jordan**	**3.56**	**288**	*eP*	Pn	02 54 21.9	+1.5

*CSEM **29** 02:57:56.8, 63.°95N×21.°27W, h8km, ML3.9, After REY*
REY 29 02:57:56.8, 63.°95N×21.°27W, h8km, ML3.8, ML3.9, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBJA	**Bjarnastaoir**	**0.02**	**242**	P	Pg	02 57 58.3	+0.1
IBJA				S	Sg	02 57 59.3	+0.1
ISOL	**Solvholt**	**0.15**	**100**	P	Pg	02 57 59.9	0.0
ISOL				S	Sg	02 58 02.2	+0.2
IKRO	**Krokur**	**0.16**	**24**	P	Pg	02 58 00.1	0.0
IKRO				S	Sg	02 58 02.7	+0.3
ISAN	**Sandskeio**	**0.17**	**308**	P	Pg	02 58 00.3	0.0
ISAN				S	Sg	02 58 03.1	+0.4
IVOS	**Vogsosar**	**0.22**	**242**	P	Pg	02 58 01.1	0.0
IVOS				S	Sg	02 58 04.6	+0.5
IHEI	**Heioarbar**	**0.25**	**3**	P	Pg	02 58 01.7	0.0
IHEI				S	Sg	02 58 05.6	+0.5
IKAS	**Kald??rsel**	**0.27**	**285**	P	Pg	02 58 02.0	-0.1
IKAS				S	Sg	02 58 06.0	+0.4
IASM	**Asmuli**	**0.31**	**112**	P	Pg	02 58 02.7	-0.2
IASM				S	Sg	02 58 07.2	+0.1
IKRI	**Krysuvik**	**0.36**	**258**	P	Pg	02 58 03.5	-0.4
IKRI				S	Sg	02 58 08.5	-0.2
ISAU	**Saurbar**	**0.38**	**84**	P	Pg	02 58 03.8	-0.4
ISAU				S	Sg	02 58 09.1	-0.1
IKUD	**Kuludalsa**	**0.45**	**324**	P	Pg	02 58 04.8	-0.8
IKUD				S	Sg	02 58 11.0	-0.6
IVOG	**Vogar**	**0.50**	**272**	P	Pg	02 58 05.8	-0.6
IVOG				S	Sg	02 58 12.9	0.0
IGRV	**Grindav??k**	**0.53**	**260**	P	Pg	02 58 06.3	-0.8
IGRV				S	Sg	02 58 13.8	-0.3
IGYG	**Gygjarholskot**	**0.57**	**54**	P	Pg	02 58 06.8	-1.0
IGYG				S	Sg	02 58 14.9	-0.3
IHAU	**Haukadalur**	**0.58**	**88**	P	Pg	02 58 07.1	-0.8
IHAU				S	Sg	02 58 15.1	-0.3
INYL	**Nylenda**	**0.65**	**272**	P	Pg	02 58 07.9	-1.4
INYL				S	Sg	02 58 17.0	-0.7
IVES	**Vestmannaeyjar**	**0.67**	**139**	P	Pg	02 58 08.9	-0.9
IVES				S	Sg	02 58 18.3	-0.2
IMID	**Miomork**	**0.68**	**115**	P	Pg	02 58 08.9	-1.0
IMID				S	Sg	02 58 18.2	-0.6
IASB	**`sbjarnarst**	**0.80**	**358**	P	Pg	02 58 10.6	-1.5
IASB				S	Sg	02 58 21.5	-1.0
IESK	**Eystri-Skogar**	**0.92**	**117**	P	Pg	02 58 12.7	-1.7
IESK				S	Sg	02 58 25.0	-1.3
IVAT	**Vatnsfell**	**1.06**	**76**	P	Pg	02 58 29.2	-2.1
IVAT				S	Sg	02 58 39.2	-1.8
IHVO	**Lagu-Hvolar**	**1.16**	**111**	P	Pg	02 58 16.6	-2.4
IHVO				S	Sg	02 58 32.3	-1.8
ISNB	**Snabyli**	**1.19**	**99**	P	Pb	02 58 17.2	-2.4
ISNB				S	Sg	02 58 33.3	-1.8

*ISCJB **29** 03:02:19.4±0.3, 6.°93S±0.°04×126.°62E±0.°05, h407km, mb3.7/14, Error ellipse: s-maj=7.3km s-min=5.3km az=163.3*
*AUST **29** 03:02:22.6, 6.°99S×127.°02E, h450km*
*IDC **29** 03:02:22.2±1.8, 7.°01S×126.°53E, h426km×21km, mb3.4/14, mb1 3.4/18, mb1mx3.3/26, mbtmp3.3/18, Error ellipse: s-maj=21.0km s-min=8.4km az=68.0*
ISC 29 03:02:20.8±0.6, 6.°93S±0.°06×126.°72E±0.°09, h407km, n38, σ1§17/29, mb3.8/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**6.80**	**54**	P	**P**	**03 04 02.2**	**-0.8**
	baz=6.6,SNR=8.1						
FAKI				S	**S**	**03 05 24.1**	**-1.4**
	baz=6.6,SNR=3.8						
LUWI	**Luwuk**	**7.05**	**326**	P	P	03 04 10.7	+4.9
	baz=7.3,SNR=5.3						
KAPI	**Kappang**	**7.19**	**285**	P	P	03 04 06.7	-0.6
	0.2nm,0.3s,baz=102,slow=13,SNR=1.8						
MTN	**Manton Dam**	**7.31**	**144**	P	**P**	**03 04 09.7**	**+1.2**
	baz=7.1,SNR=25						
FITZ	**Fitzroy Crossi**	**11.15**	**185**	P	**P**	**03 04 51.1**	**+0.1**
	0.4nm,0.3s,baz=12,slow=9.9,SNR=41						
FITZ				S	**S**	**03 06 52.4**	**-2.5**
	0.3nm,0.3s,baz=19,slow=18,SNR=2.7						
FITZ	**Fitzroy Crossi**	**11.15**	**185**	P	**P**	**03 04 51.5**	**+0.5**
	baz=11,SNR=5.2						
WRA	**Warramunga Arr**	**14.90**	**151**	P	**P**	**03 05 32.0**	**0.0**
	0.8nm,0.3s,baz=336,slow=9.6,SNR=26						
WRA				S	**S**	**03 08 07.7**	**-2.5**
	0.2nm,0.3s,baz=320,slow=20,SNR=6.7						
PALU	**Palau**	**16.16**	**29**	S	S	03 08 16.6	-18
	baz=16,SNR=5.1						
ASAR	**Alice Springs**	**18.01**	**158**	P	**P**	**03 06 05.6**	**+0.3**
	2.2nm,0.3s,baz=338,slow=8.6,SNR=98						
ASAR				S	**S**	**03 09 10.8**	**+0.1**
	0.4nm,0.3s,baz=340,slow=21,SNR=12						
CISI	**Cisompet, Garu**	**18.77**	**267**	S	S	03 09 16.5	-7.8
	baz=19,SNR=4.4						
GIRL	**Giralia**	**19.71**	**216**	P	**P**	**03 06 23.1**	**+0.8**
	baz=20,SNR=3.3						
MEEK	**Meekatharra**	**21.06**	**201**	P	**P**	**03 06 33.9**	**-0.6**
	baz=21,SNR=14						
CTA	**Charters Tower**	**23.02**	**127**	P	**P**	**03 06 55.2**	**+2.9**
	4.2nm,0.9s,baz=270,slow=10,SNR=2.9						
BBOO	**Buckleboo**	**27.17**	**163**	P	**P**	**03 07 29.8**	**+0.6**
	baz=27,SNR=5.7						
NWAO	**Narrogin (SRO)**	**27.32**	**198**	P	**P**	**03 07 29.9**	**-0.6**
	6.9nm,0.6s,baz=25,slow=10,SNR=5.1						
STKA	**Stephens Creek**	**28.44**	**153**	P	**P**	**03 07 41.2**	**+0.9**
	2.2nm,0.4s,baz=328,slow=9.5,SNR=11						
STKA	**Stephens Creek**	**28.44**	**153**	P	**P**	**03 07 41.2**	**+0.9**
	baz=28,SNR=5.8						
CMAR	**Chiang Mai Arr**	**37.25**	**313**	P	P	03 08 56.1	+0.1
	0.7nm,0.3s,baz=141,slow=6.4,SNR=3.4						
KSRS	**Korea Array**	**44.17**	**1**	P	**P**	**03 09 52.1**	**+0.7**
	1.4nm,0.8s,baz=179,slow=9.2,SNR=7.0						
MJAR	**Matsushiro Arr**	**44.57**	**13**	P	**P**	**03 09 53.9**	**-0.6**
	1.9nm,0.7s,baz=196,slow=9.6,SNR=5.8						
ODAN	**Odare**	**50.79**	**313**	*eP*	P	03 10 41.3	-0.9
	7.7nm,0.7s						
TAPN	**Taplejung**	**50.85**	**314**	*eP*	P	03 10 42.3	-0.3
USRK	**Ussuriysk Arra**	**51.12**	**5**	P	**P**	**03 10 44.0**	**+0.1**
	1.5nm,0.7s,baz=198,slow=5.5,SNR=3.5						
RAMN	**Ramite**	**51.42**	**313**	*eP*	**P**	**03 10 46.8**	**0.0**
	20nm,0.7s						
GUN	**Gumba**	**52.49**	**313**	*eP*	P	03 10 54.4	-0.3
	11nm,0.7s						
DMN	**Daman**	**52.89**	**312**	*eP*	P	03 10 57.2	-0.2
	9.3nm,0.4s						
KOLN	**Koldanda**	**54.09**	**312**	*eP*	P	03 11 05.8	-0.2
	12nm,0.7s						
DANN	**Dangsing**	**54.29**	**312**	*eP*	P	03 11 06.8	-0.7
	12nm,0.8s						
PYUN	**Piuthan**	**54.72**	**312**	*eP*	P	03 11 10.0	-0.5
	37nm,0.8s						
SONM	**Songino Array**	**57.41**	**344**	P	**P**	**03 11 29.1**	**+0.4**
	1.3nm,0.8s,baz=154,slow=6.4,SNR=5.6						
PETK	**Petropavlovsk-**	**65.33**	**20**	P	**P**	**03 12 21.9**	**+1.1**
	2.6nm,0.6s,baz=219,slow=3.8,SNR=4.1						
MKAR	**Makanchi Array**	**66.42**	**328**	P	**P**	**03 12 28.1**	**+0.1**
	2.0nm,0.7s,baz=129,slow=8.1,SNR=15						
AAK	**Ala-Archa**	**68.42**	**321**	P	**P**	**03 12 40.0**	**-0.5**
	1.4nm,0.7s,baz=121,slow=5.9,SNR=4.0						
ZALV	**Zalesovo Beam**	**70.12**	**335**	P	**P**	**03 12 49.6**	**-0.8**
	3.0nm,0.6s,baz=122,slow=4.8,SNR=12						
KURBB	**Kurchatov Arra**	**70.78**	**330**	P	**P**	**03 12 54.2**	**-0.1**
	3.2nm,0.8s,baz=130,slow=5.2,SNR=20						
BVAR	**Borovoye Array**	**76.30**	**329**	P	P	03 13 24.8	-1.2
	1.2nm,0.8s,baz=130,slow=5.8,SNR=7.4						
TORD	**Torodi Ar. Bea**	**125.60**	**281**	PKP	**PKPdf**	**03 20 33.6**	**-2.0**
	0.1nm,0.4s,baz=55,slow=2.8,SNR=3.6						
TXAR	**Lajitas Array**	**127.67**	**58**	PKP	**PKPdf**	**03 20 39.3**	**0.0**
	0.1nm,0.6s,baz=216,slow=4.5,SNR=2.8						

IDC 29 03:19:07.3±1.1, 12.°91N×92.°32E, h0km, mb3.7/13, mb1 3.8/14, mb1mx3.7/27, mbtmp3.7/14, ML4.0/1, Error ellipse: s-maj=31.3km s-min=20.1km az=49.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.43**	**48**	Pn	Pn	03 21 11.2	+0.4
	0.5nm,0.3s,baz=237,slow=15,SNR=4.0						
CMAR				Sn	Sn	03 22 40.2	-6.7
	0.3nm,0.3s,baz=236,slow=27,SNR=4.8						
MKAR	**Makanchi Array**	**34.81**	**348**	P	P	03 26 00.1	+0.3
	1.1nm,0.8s,baz=168,slow=7.4,SNR=7.6						
SONM	**Songino Array**	**36.75**	**16**	P	P	03 26 17.2	+0.6
	0.7nm,0.7s,baz=201,slow=7.8,SNR=4.4						
KSRS	**Korea Array**	**40.06**	**46**	P	P	03 26 44.3	-0.1
	0.6nm,0.5s,baz=240,slow=9.7,SNR=3.7						
ZALV	**Zalesovo Beam**	**41.37**	**353**	P	P	03 26 55.3	+0.4
	1.2nm,0.6s,baz=177,slow=7.4,SNR=5.0						
USRK	**Ussuriysk Arra**	**46.06**	**40**	P	P	03 27 31.1	-1.8
	1.0nm,0.6s,baz=244,slow=7.1,SNR=2.9						
WRA	**Warramunga Arr**	**52.69**	**128**	P	P	03 28 23.6	-0.4
	0.2nm,0.6s,baz=302,slow=9.4,SNR=3.5						
WRA				PcP	PcP	03 29 33.6	-0.3
	0.3nm,0.5s,baz=317,slow=2.7,SNR=3.0						
ASAR	**Alice Springs**	**54.55**	**132**	P	P	03 28 38.2	+0.6
	0.2nm,0.3s,baz=308,slow=6.4,SNR=3.4						
BRTR	**Keskin Array B**	**57.84**	**309**	P	P	03 29 01.0	-0.1
	0.3nm,0.7s,baz=98,slow=9.0,SNR=2.6						
FINES	**FINESS Array B**	**67.45**	**332**	P	P	03 30 04.7	0.0
	0.3nm,0.4s,baz=90,slow=4.6,SNR=4.0						
ARCES	**ARCESS Array B**	**69.95**	**340**	P	P	03 30 19.6	-0.5
	1.1nm,0.9s,baz=96,slow=6.4,SNR=3.8						
HFS	**Hagfors**	**73.23**	**329**	P	P	03 30 40.1	-0.1
	0.5nm,0.4s,baz=116,slow=6.7,SNR=5.0						
NOA	**NORSAR Array B**	**74.49**	**330**	P	P	03 30 47.5	-0.1
	0.5nm,0.6s,baz=90,slow=5.8,SNR=2.8						
ILAR	**Eielson Array**	**90.77**	**22**	P	P	03 32 12.0	-0.2
	0.2nm,0.8s,baz=308,slow=4.5,SNR=3.4						

*ISCJB **29** 03:29:13.4±0.6, 52.°6N±0.°1×32.°28W±0.°10, h13km, mb3.9/30, Error ellipse: s-maj=17.0km s-min=7.3km az=17.0*
*IDC **29** 03:29:13.2±0.9, 52.°58N×32.°24W, h0km, mb3.7/17, mb1 3.8/18, mb1mx3.7/35, mbtmp3.7/18, ML4.2/1, Error ellipse: s-maj=26.5km s-min=14.0km az=20.0*
*CSEM **29** 03:29:14.4±0.2, 52.°58N×32.°22W, h10km, mb4.3/14, Ms2.7, Error ellipse: s-maj=13.7km s-min=5.7km az=18.0*
*NEIC **29** 03:29:14.6±0.4, 52.°54N×32.°23W, h10km, mb4.3/12, Error ellipse: s-maj=12.0km s-min=5.1km az=197.0*
ISC 29 03:29:15.0±0.7, 52.°5N±0.°1×32.°23W±0.°08, h13km, n113, σ0§69/113, mb4.0/30, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKA	**Eskdalemuir Ar**	**17.29**	**69**	P	**Pn**	**03 33 16.0**	**+0.2**
EKA	**Eskdalemuir Ar**	**17.29**	**69**	P	**Pn**	**03 33 16.0**	**+0.2**
	baz=270,slow=9.7,SNR=11						
EKA	**Eskdalemuir Ar**	**17.29**	**69**	P	**Pn**	**03 33 16.0**	**+0.2**
SCHQ	**Schefferville**	**20.50**	**290**	P	**P**	**03 33 52.9**	**+0.4**
SCHQ	**Schefferville**	**20.50**	**290**	P	**P**	**03 33 52.9**	**+0.4**
	2.1nm,0.5s,baz=84,slow=11,SNR=3.8						
SCHQ	**Schefferville**	**20.50**	**290**	P	**P**	**03 33 52.9**	**+0.4**
LDF	**La Druitiere**	**20.68**	**88**	*eP*	**P**	**03 33 55.5**	**+1.1**
	23nm,1.1s						
LDF	**La Druitiere**	**20.68**	**88**	*eP*	**P**	**03 33 55.5**	**+1.1**
	23nm,1.1s						
LDF	**La Druitiere**	**20.68**	**88**	*eP*	**P**	**03 33 55.5**	**+1.1**
	11nm,1.1s						
FRB	**Frobisher Bay**	**21.86**	**315**	P	**P**	**03 34 07.2**	**+0.2**
FRB	**Frobisher Bay**	**21.86**	**315**	P	**P**	**03 34 07.2**	**+0.2**
	1.6nm,0.8s,baz=90,slow=10,SNR=4.1						
FRB	**Frobisher Bay**	**21.86**	**315**	P	**P**	**03 34 07.2**	**+0.2**
BAIF	**Baives**	**22.77**	**82**	*eP*	**P**	**03 34 15.4**	**-1.4**
BAIF	**Baives**	**22.77**	**82**	*eP*	**P**	**03 34 15.4**	**-1.4**
BAIF	**Baives**	**22.77**	**82**	*eP*	**P**	**03 34 15.4**	**-1.4**
TCF	**Toulx Ste Croi**	**23.11**	**92**	*eP*	**P**	**03 34 19.8**	**-0.6**
	63nm,1.6s						
TCF	**Toulx Ste Croi**	**23.11**	**92**	*eP*	**P**	**03 34 19.8**	**-0.6**
	63nm,1.6s						
TCF	**Toulx Ste Croi**	**23.11**	**92**	*eP*	**P**	**03 34 19.8**	**-0.6**
	31nm,1.6s						
ESDC	**Sonseca Array**	**23.27**	**112**	P	**P**	**03 34 23.4**	**+1.2**
ESDC	**Sonseca Array**	**23.27**	**112**	P	**P**	**03 34 23.4**	**+1.2**
	0.2nm,0.3s,baz=317,slow=9.3,SNR=2.6						
ESDC	**Sonseca Array**	**23.27**	**112**	P	**P**	**03 34 23.4**	**+1.2**
SSF	**Saint Saulge**	**23.54**	**89**	*eP*	**P**	**03 34 24.1**	**-0.7**
	12nm,1.1s						
SSF	**Saint Saulge**	**23.54**	**89**	*eP*	**P**	**03 34 24.1**	**-0.7**
	12nm,1.1s						
SSF	**Saint Saulge**	**23.54**	**89**	*eP*	**P**	**03 34 24.1**	**-0.7**
	6.2nm,1.1s						
AVF	**Avril sur Loir**	**23.57**	**90**	*eP*	**P**	**03 34 24.8**	**-0.2**
	21nm,1.2s						
AVF	**Avril sur Loir**	**23.57**	**90**	*eP*	**P**	**03 34 24.8**	**-0.2**
	21nm,1.2s						
AVF	**Avril sur Loir**	**23.57**	**90**	*eP*	**P**	**03 34 24.8**	**-0.2**
	10nm,1.2s						
LOR	**Lormes**	**23.66**	**88**	*eP*	**P**	**03 34 25.0**	**-1.0**
LOR				*eR*			
	94nm,20.5s						
LOR	**Lormes**	**23.66**	**88**	*eP*	**P**	**03 34 25.0**	**-1.0**
LOR	**Lormes**	**23.66**	**88**	*eP*	**P**	**03 34 25.0**	**-1.0**
MEZF	**Maizieres J'vi**	**23.87**	**85**	*eP*	**P**	**03 34 27.6**	**-0.3**
	18nm,0.7s						
MEZF	**Maizieres J'vi**	**23.87**	**85**	*eP*	**P**	**03 34 27.6**	**-0.3**
	18nm,0.7s						
MEZF	**Maizieres J'vi**	**23.87**	**85**	*eP*	**P**	**03 34 27.6**	**-0.3**
	8.9nm,0.7s						
SMF	**Signal de Mont**	**23.93**	**90**	*eP*	**P**	**03 34 27.4**	**-1.2**
SMF	**Signal de Mont**	**23.93**	**90**	*eP*	**P**	**03 34 27.4**	**-1.2**
SMF	**Signal de Mont**	**23.93**	**90**	*eP*	**P**	**03 34 27.4**	**-1.2**
SFTF	**Sexfontaines**	**23.98**	**85**	*eP*	**P**	**03 34 28.3**	**-0.7**
	24nm,0.8s						
SFTF	**Sexfontaines**	**23.98**	**85**	*eP*	**P**	**03 34 28.3**	**-0.7**
	24nm,0.8s						
SFTF	**Sexfontaines**	**23.98**	**85**	*eP*	**P**	**03 34 28.3**	**-0.7**
	12nm,0.8s						
WLF	**Walferdange**	**24.08**	**81**	*eP*	**P**	**03 34 31.3**	**+1.4**
	6.7nm,0.9s						
WLF	**Walferdange**	**24.08**	**81**	*eP*	**P**	**03 34 31.3**	**+1.4**
	6.7nm,0.9s						
NOA	**NORSAR Array B**	**24.84**	**53**	P	**P**	**03 34 36.8**	**+0.1**
NOA	**NORSAR Array B**	**24.84**	**53**	P	**P**	**03 34 36.8**	**+0.1**
	2.5nm,0.9s,baz=273,slow=9.9,SNR=3.7						
NOA	**NORSAR Array B**	**24.84**	**53**	P	**P**	**03 34 36.8**	**+0.1**
HINF	**Hinteralfeld**	**25.25**	**85**	*eP*	**P**	**03 34 41.6**	**+1.0**
	6.4nm,0.7s						
HINF	**Hinteralfeld**	**25.25**	**85**	*eP*	**P**	**03 34 41.6**	**+1.0**
	6.4nm,0.7s						
HINF	**Hinteralfeld**	**25.25**	**85**	*eP*	**P**	**03 34 41.6**	**+1.0**
	3.2nm,0.7s						
CDF	**Champ du Feu**	**25.25**	**83**	*eP*	**P**	**03 34 41.5**	**+0.8**
	3.7nm,0.7s						
CDF	**Champ du Feu**	**25.25**	**83**	*eP*	**P**	**03 34 41.5**	**+0.8**
	3.7nm,0.7s						
CDF	**Champ du Feu**	**25.25**	**83**	*eP*	**P**	**03 34 41.5**	**+0.8**
	1.9nm,0.7s						
CABF	**La Chapelle**	**25.32**	**88**	*eP*	**P**	**03 34 42.4**	**+1.1**
CABF	**La Chapelle**	**25.32**	**88**	*eP*	**P**	**03 34 42.4**	**+1.1**
CABF	**La Chapelle**	**25.32**	**88**	*eP*	**P**	**03 34 42.4**	**+1.1**
CLL	**Collm**	**27.58**	**74**	*i P*	**P**	**03 35 01.4**	**-0.1**
	comp=Z,3.0nm,0.7s						
GERES	**GERESS Array B**	**28.95**	**79**	P	**P**	**03 35 13.6**	**-0.3**
GERES	**GERESS Array B**	**28.95**	**79**	P	**P**	**03 35 13.6**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=308,slow=6.6,SNR=4.6						
GERES	**GERESS Array B**	**28.95**	**79**	P	**P**	**03 35 13.6**	**-0.3**
MORC	**Moravsky Berou**	**30.84**	**75**	*eP*	**P**	**03 35 30.8**	**+0.2**
	comp=Z,1.5nm,0.8s						
MORC	**Moravsky Berou**	**30.84**	**75**	*eP*	**P**	**03 35 30.8**	**+0.2**
	comp=Z,1.5nm,0.8s						
ARCES	**ARCESS Array B**	**31.14**	**35**	P	**P**	**03 35 32.6**	**-0.3**
ARCES	**ARCESS Array B**	**31.14**	**35**	P	**P**	**03 35 32.6**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=263,slow=8.4,SNR=5.1						
ARCES	**ARCESS Array B**	**31.14**	**35**	P	**P**	**03 35 32.6**	**-0.3**
FINES	**FINESS Array B**	**31.94**	**51**	P	**P**	**03 35 39.8**	**-0.2**
FINES	**FINESS Array B**	**31.94**	**51**	P	**P**	**03 35 39.8**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=282,slow=9.5,SNR=6.0						
FINES	**FINESS Array B**	**31.94**	**51**	P	**P**	**03 35 39.8**	**-0.2**
AQU	**L'Aquila**	**32.00**	**90**	*eP*	**P**	**03 35 40.8**	**0.0**
	comp=Z,9.3nm,0.6s						
AQU	**L'Aquila**	**32.00**	**90**	*eP*	**P**	**03 35 40.8**	**0.0**
	comp=Z,9.3nm,0.6s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RES	**Resolute Bay**	**33.08**	**334**	P	**P**	**03 35 50.0**	**+0.1**
RES	**Resolute Bay**	**33.08**	**334**	P	**P**	**03 35 50.0**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=96,slow=10,SNR=2.0						
RES	**Resolute Bay**	**33.08**	**334**	P	**P**	**03 35 50.0**	**+0.1**
KEST	**Kesra**	**33.69**	**103**	P	**P**	**03 35 55.5**	**-0.2**
KEST	**Kesra**	**33.69**	**103**	P	**P**	**03 35 55.5**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=345,slow=16,SNR=1.4						
KEST	**Kesra**	**33.69**	**103**	P	**P**	**03 35 55.5**	**-0.2**
AKASG	**Malin Array Be**	**37.19**	**68**	P	**P**	**03 36 24.7**	**-0.8**
AKASG	**Malin Array Be**	**37.19**	**68**	P	**P**	**03 36 24.7**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=302,slow=8.7,SNR=3.5						
AKASG	**Malin Array Be**	**37.19**	**68**	P	**P**	**03 36 24.7**	**-0.8**
YKA	**Yellowknife Ar**	**42.36**	**317**	P	**P**	**03 37 08.3**	**0.0**
YKA				PcP	PcP	03 39 08.4	+7.0
YKA	**Yellowknife Ar**	**42.36**	**317**	P	**P**	**03 37 08.3**	**0.0**
	comp=Z,0.3nm,0.9s,baz=63,slow=8.7,SNR=3.7						
YKA				PcP	PcP	03 39 08.4	+7.0
	comp=Z,0.3nm,0.7s,baz=63,slow=3.5,SNR=6.7						
YKA	**Yellowknife Ar**	**42.36**	**317**	P	**P**	**03 37 08.4**	**0.0**
BR131	**Keskin Array S**	**45.85**	**79**	*eP*	**P**	**03 37 37.6**	**+0.8**
	comp=Z,3.1nm,0.9s						
BR131	**Keskin Array S**	**45.85**	**79**	*eP*	**P**	**03 37 37.6**	**+0.8**
	comp=Z,3.1nm,0.9s						
BRTR	**Keskin Array B**	**45.85**	**79**	P	**P**	**03 37 38.0**	**+1.2**
BRTR	**Keskin Array B**	**45.85**	**79**	P	**P**	**03 37 38.0**	**+1.2**
	comp=Z,2.5nm,0.7s,baz=304,slow=6.1,SNR=19						
BRTR	**Keskin Array B**	**45.85**	**79**	P	**P**	**03 37 38.0**	**+1.2**
TORD	**Torodi Ar. Bea**	**47.73**	**133**	P	**P**	**03 37 51.5**	**0.0**
TORD	**Torodi Ar. Bea**	**47.73**	**133**	P	**P**	**03 37 51.5**	**0.0**
	comp=Z,0.8nm,0.8s,baz=336,slow=7.0,SNR=14						
TORD	**Torodi Ar. Bea**	**47.73**	**133**	P	**P**	**03 37 51.5**	**0.0**
PDAR	**Pinedale Array**	**50.62**	**292**	P	**P**	**03 38 13.2**	**-0.6**
PDAR	**Pinedale Array**	**50.62**	**292**	P	**P**	**03 38 13.2**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=64,slow=6.1,SNR=3.3						
PDAR	**Pinedale Array**	**50.62**	**292**	P	**P**	**03 38 13.2**	**-0.6**
ABKAR	**Akbulak array**	**54.34**	**54**	*eP*	**P**	**03 38 41.2**	**+0.4**
	comp=Z,3.1nm,1.1s						
ABKAR	**Akbulak array**	**54.34**	**54**	*eP*	**P**	**03 38 41.2**	**+0.4**
	comp=Z,3.0nm,1.1s						
WVOR	**Wild Horse Val**	**55.90**	**297**	*eP*	**P**	**03 38 52.4**	**0.0**
	comp=Z,2.7nm,1.0s						
WVOR	**Wild Horse Val**	**55.90**	**297**	*eP*	**P**	**03 38 52.4**	**0.0**
	comp=Z,2.7nm,1.0s						
ZALV	**Zalesovo Beam**	**61.67**	**37**	P	**P**	**03 39 31.7**	**-0.5**
ZALV	**Zalesovo Beam**	**61.67**	**37**	P	**P**	**03 39 31.7**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=297,slow=6.3,SNR=2.7						
ZALV	**Zalesovo Beam**	**61.67**	**37**	P	**P**	**03 39 31.7**	**-0.5**
MK31	**Makanchi Array**	**66.35**	**43**	*eP*	**P**	**03 40 03.4**	**+0.3**
MK31	**Makanchi Array**	**66.35**	**43**	*eP*	**P**	**03 40 03.4**	**+0.3**
MKAR	**Makanchi Array**	**66.35**	**43**	P	**P**	**03 40 03.5**	**+0.4**
MKAR	**Makanchi Array**	**66.35**	**43**	P	**P**	**03 40 03.5**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=326,slow=5.2,SNR=16						
MKAR	**Makanchi Array**	**66.35**	**43**	P	**P**	**03 40 03.5**	**+0.4**
SONM	**Songino Array**	**73.96**	**28**	P	**P**	**03 40 50.3**	**+0.5**
SONM	**Songino Array**	**73.96**	**28**	P	**P**	**03 40 50.3**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=341,slow=7.9,SNR=3.6						
SONM	**Songino Array**	**73.96**	**28**	P	**P**	**03 40 50.3**	**+0.5**
BOSA	**Boshof**	**95.08**	**132**	*eP*	**P**	**03 42 36.9**	**-0.6**
	comp=Z,4.4nm,0.9s						
BOSA	**Boshof**	**95.08**	**132**	*eP*	**P**	**03 42 36.9**	**-0.6**
	comp=Z,4.3nm,0.9s	

BAIF	**Baives**	**22.77**	**82**	*e*P		**P**	**03 36 36.0**	**-1.3**
	comp=Z,46nm,1.1s								
BAIF	**Baives**	**22.77**	**82**	*e*P		**P**	**03 36 36.0**	**-1.3**
	comp=Z,23nm,1.1s								
TCF	**Toulx Ste Croi**	**23.11**	**92**	*e*P		**P**	**03 36 40.4**	**-0.6**
TCF	**Toulx Ste Croi**	**23.11**	**92**	*e*P		**P**	**03 36 40.4**	**-0.6**
TCF	**Toulx Ste Croi**	**23.11**	**92**	*e*P		**P**	**03 36 40.4**	**-0.6**
TCF	**Toulx Ste Croi**	**23.11**	**92**	*e*P		**P**	**03 36 40.4**	**-0.6**
GIVF	**Givet**	**23.13**	**81**	*e*P		**P**	**03 36 40.4**	**-0.7**
	comp=Z,35nm,1.3s								
GIVF	**Givet**	**23.13**	**81**	*e*P		**P**	**03 36 40.4**	**-0.7**
GIVF					pmax	pmax			
	comp=Z,35nm,1.3s								
GIVF	**Givet**	**23.13**	**81**	*e*P		**P**	**03 36 40.4**	**-0.7**
	comp=Z,35nm,1.3s								
GIVF	**Givet**	**23.13**	**81**	*e*P		**P**	**03 36 40.4**	**-0.7**
	comp=Z,18nm,1.3s								
ETSF	**Etsaut**	**23.23**	**102**	*e*P		**P**	**03 36 42.4**	**+0.2**
	comp=Z,20nm,1.1s								
ETSF	**Etsaut**	**23.23**	**102**	*e*P		**P**	**03 36 42.4**	**+0.2**
ETSF					pmax	pmax			
	comp=Z,20nm,1.0s								
ETSF	**Etsaut**	**23.23**	**102**	*e*P		**P**	**03 36 42.4**	**+0.2**
	comp=Z,20nm,1.0s								
ETSF	**Etsaut**	**23.23**	**102**	*e*P		**P**	**03 36 42.4**	**+0.2**
	comp=Z,10nm,1.1s								
ESDC	**Sonseca Array**	**23.28**	**112**	P		**P**	**03 36 42.0**	**-0.7**
ESDC	**Sonseca Array**	**23.28**	**112**	P		**P**	**03 36 42.0**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=312,slow=8.9,SNR=3.3								
ESDC					LR	LR	03 44 10.1		
	comp=Z,96nm,18.1s,baz=320,slow=32								
ESDC	**Sonseca Array**	**23.28**	**112**	P		**P**	**03 36 42.0**	**-0.7**
BGF	**Bois d'Agland**	**23.37**	**91**	*e*P		**P**	**03 36 44.0**	**+0.4**
	comp=Z,19nm,0.8s								
BGF	**Bois d'Agland**	**23.37**	**91**	*e*P		**P**	**03 36 44.0**	**+0.4**
BGF					pmax	pmax			
	comp=Z,19nm,0.8s								
BGF	**Bois d'Agland**	**23.37**	**91**	*e*P		**P**	**03 36 44.0**	**+0.4**
	comp=Z,19nm,0.8s								
BGF	**Bois d'Agland**	**23.37**	**91**	*e*P		**P**	**03 36 44.0**	**+0.4**
	comp=Z,9.4nm,0.8s								
SSF	**Saint Saulge**	**23.55**	**89**	*e*P		**P**	**03 36 44.9**	**-0.4**
SSF	**Saint Saulge**	**23.55**	**89**	*e*P		**P**	**03 36 44.9**	**-0.4**
SSF	**Saint Saulge**	**23.55**	**89**	*e*P		**P**	**03 36 44.9**	**-0.4**
SSF	**Saint Saulge**	**23.55**	**89**	*e*P		**P**	**03 36 44.9**	**-0.4**
AVF	**Avril sur Loir**	**23.57**	**90**	*e*P		**P**	**03 36 45.3**	**-0.2**
	comp=Z,33nm,1.4s								
AVF	**Avril sur Loir**	**23.57**	**90**	*e*P		**P**	**03 36 45.3**	**-0.2**
AVF					pmax	pmax			
	comp=Z,33nm,1.4s								
AVF	**Avril sur Loir**	**23.57**	**90**	*e*P		**P**	**03 36 45.3**	**-0.2**
	comp=Z,33nm,1.4s								
AVF	**Avril sur Loir**	**23.57**	**90**	*e*P		**P**	**03 36 45.3**	**-0.2**
	comp=Z,16nm,1.4s								
LOR	**Lormes**	**23.67**	**88**	*e*P		**P**	**03 36 45.9**	**-0.6**
	comp=Z,17nm,0.9s								
LOR				*e*R					
	comp=Z,148nm,21.8s								
LOR	**Lormes**	**23.67**	**88**	*e*P		**P**	**03 36 45.9**	**-0.6**
	comp=Z,17nm,0.9s								
LOR	**Lormes**	**23.67**	**88**	*e*P		**P**	**03 36 45.9**	**-0.6**
	comp=Z,8.6nm,0.9s								
MEZF	**Maizieres J'vi**	**23.87**	**85**	*e*P		**P**	**03 36 47.9**	**-0.5**
	comp=Z,56nm,0.9s								
MEZF	**Maizieres J'vi**	**23.87**	**85**	*e*P		**P**	**03 36 47.9**	**-0.5**
	comp=Z,56nm,0.9s								
MEZF	**Maizieres J'vi**	**23.87**	**85**	*e*P		**P**	**03 36 47.9**	**-0.5**
	comp=Z,28nm,0.9s								
SMF	**Signal de Mont**	**23.94**	**90**	*e*P		**P**	**03 36 48.6**	**-0.5**
	comp=Z,14nm,0.9s								
SMF	**Signal de Mont**	**23.94**	**90**	*e*P		**P**	**03 36 48.6**	**-0.5**
SMF					pmax	pmax			
	comp=Z,14nm,0.9s								
SMF	**Signal de Mont**	**23.94**	**90**	*e*P		**P**	**03 36 48.6**	**-0.5**
	comp=Z,14nm,0.9s								
SMF	**Signal de Mont**	**23.94**	**90**	*e*P		**P**	**03 36 48.6**	**-0.5**
	comp=Z,7.0nm,0.9s								
SFTF	**Sexfontaines**	**23.98**	**85**	*e*P		**P**	**03 36 48.9**	**-0.6**
	comp=Z,45nm,0.9s								
SFTF	**Sexfontaines**	**23.98**	**85**	*e*P		**P**	**03 36 48.9**	**-0.6**
	comp=Z,45nm,0.9s								
SFTF	**Sexfontaines**	**23.98**	**85**	*e*P		**P**	**03 36 48.9**	**-0.6**
	comp=Z,22nm,0.9s								
MUD	**Monsted U'grnd**	**24.09**	**64**	*e*P		**P**	**03 36 51.4**	**+1.0**
MUD					pmax	pmax			
	comp=Z,10.0nm,1.0s								
MUD	**Monsted U'grnd**	**24.09**	**64**	*i* P		**P**	**03 36 51.4**	**+1.0**
	comp=Z,10nm,1.0s								
MUD	**Monsted U'grnd**	**24.09**	**64**	*e*P		**P**	**03 36 51.4**	**+1.0**
	comp=Z,10.0nm,1.0s								
PAGF	**Fort de Pagny**	**24.26**	**84**	*e*P		**P**	**03 36 51.5**	**-0.5**
PAGF	**Fort de Pagny**	**24.26**	**84**	*e*P		**P**	**03 36 51.5**	**-0.5**
PAGF	**Fort de Pagny**	**24.26**	**84**	*e*P		**P**	**03 36 51.5**	**-0.5**
NAO01	**NORSAR Array S**	**24.67**	**53**	*e*P		**P**	**03 36 55.7**	**0.0**
	comp=Z,11nm,1.0s								
NAO01	**NORSAR Array S**	**24.67**	**53**	*e*P		**P**	**03 36 55.7**	**0.0**
	comp=Z,11nm,1.0s								
NB2	**NORSAR Subarra**	**24.84**	**53**	P		**P**	**03 36 56.9**	**-0.3**
	comp=Z,11nm,1.0s,baz=273,slow=11								
NB2	**NORSAR Subarra**	**24.84**	**53**	P		**P**	**03 36 56.9**	**-0.3**
	comp=Z,11nm,1.0s,SNR=9.1								
NOA	**NORSAR Array B**	**24.84**	**53**	P		**P**	**03 36 57.2**	**+0.1**
NOA	**NORSAR Array B**	**24.84**	**53**	P		**P**	**03 36 57.2**	**+0.1**
	comp=Z,7.7nm,0.9s,baz=272,slow=9.7,SNR=9.0								
NOA					LR	LR	03 44 36.4		
	comp=Z,64nm,18.9s,baz=220,slow=32								
NOA	**NORSAR Array B**	**24.84**	**53**	P		**P**	**03 36 57.2**	**+0.1**
HAU	**Haudompre**	**24.87**	**85**	*e*P		**P**	**03 36 57.1**	**-0.5**
	comp=Z,49nm,1.2s								
HAU				*e*R					
	comp=Z,73nm,20.2s								
HAU	**Haudompre**	**24.87**	**85**	*e*P		**P**	**03 36 57.1**	**-0.5**
HAU					pmax	pmax			
	comp=Z,49nm,1.2s								
HAU	**Haudompre**	**24.87**	**85**	*e*P		**P**	**03 36 57.1**	**-0.5**
	comp=Z,49nm,1.2s								
HAU	**Haudompre**	**24.87**	**85**	*e*P		**P**	**03 36 57.1**	**-0.5**
	comp=Z,25nm,1.2s								
HINF	**Hinteralfeld**	**25.25**	**85**	*e*P		**P**	**03 37 02.2**	**+1.1**
	comp=Z,17nm,0.9s								
HINF	**Hinteralfeld**	**25.25**	**85**	*e*P		**P**	**03 37 02.2**	**+1.1**
HINF					pmax	pmax			
	comp=Z,17nm,0.9s								
HINF	**Hinteralfeld**	**25.25**	**85**	*e*P		**P**	**03 37 02.2**	**+1.1**
	comp=Z,17nm,0.9s								
HINF	**Hinteralfeld**	**25.25**	**85**	*e*P		**P**	**03 37 02.2**	**+1.1**
	comp=Z,8.5nm,0.9s								
CDF	**Champ du Feu**	**25.26**	**83**	*e*P		**P**	**03 37 02.1**	**+0.9**
	comp=Z,20nm,1.1s								
CDF	**Champ du Feu**	**25.26**	**83**	*e*P		**P**	**03 37 02.1**	**+0.9**
CDF					pmax	pmax			
	comp=Z,20nm,1.0s								
CDF	**Champ du Feu**	**25.26**	**83**	*e*P		**P**	**03 37 02.1**	**+0.9**
	comp=Z,20nm,1.0s								
CDF	**Champ du Feu**	**25.26**	**83**	*e*P		**P**	**03 37 02.1**	**+0.9**
	comp=Z,9.8nm,1.1s								
VIVF	**Saint-Julien-l**	**25.32**	**93**	*e*P		**P**	**03 37 02.8**	**+1.1**
VIVF	**Saint-Julien-l**	**25.32**	**93**	*e*P		**P**	**03 37 02.8**	**+1.1**
VIVF	**Saint-Julien-l**	**25.32**	**93**	*e*P		**P**	**03 37 02.8**	**+1.1**
VIVF	**Saint-Julien-l**	**25.32**	**93**	*e*P		**P**	**03 37 02.8**	**+1.1**
CABF	**La Chapelle**	**25.33**	**88**	*e*P		**P**	**03 37 03.0**	**+1.2**
	comp=Z,36nm,1.2s								
CABF	**La Chapelle**	**25.33**	**88**	*e*P		**P**	**03 37 03.0**	**+1.2**
CABF					pmax	pmax			
	comp=Z,36nm,1.2s								
CABF	**La Chapelle**	**25.33**	**88**	*e*P		**P**	**03 37 03.0**	**+1.2**
	comp=Z,36nm,1.2s								
CABF	**La Chapelle**	**25.33**	**88**	*e*P		**P**	**03 37 03.0**	**+1.2**
	comp=Z,18nm,1.2s								
BFO	**Black Forest**	**25.93**	**83**	*e*P		**P**	**03 37 07.6**	**+0.4**
BFO					pmax	pmax			
	comp=Z,25nm,1.5s								
BFO	**Black Forest**	**25.93**	**83**	*e*P		**P**	**03 37 07.6**	**+0.4**
	comp=Z,25nm,1.5s								
BFO	**Black Forest**	**25.93**	**83**	*e*P		**P**	**03 37 07.6**	**+0.4**
	comp=Z,25nm,1.5s								
HFS	**Hagfors**	**26.09**	**55**	P		**P**	**03 37 07.2**	**-1.3**
HFS	**Hagfors**	**26.09**	**55**	P		**P**	**03 37 07.2**	**-1.3**
	comp=Z,1.8nm,0.8s,baz=239,slow=10.0,SNR=4.3								
HFS					LR	LR	03 46 03.6		
	comp=Z,87nm,21.5s,baz=306,slow=33								
HFS	**Hagfors**	**26.09**	**55**	P		**P**	**03 37 07.2**	**-1.3**
DAVOX	**Davos/Dischmat**	**27.56**	**85**	P		**P**	**03 37 22.4**	**+0.3**
DAVOX	**Davos/Dischmat**	**27.56**	**85**	P		**P**	**03 37 22.4**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=278,slow=7.1,SNR=3.8								
DAVOX	**Davos/Dischmat**	**27.56**	**85**	P		**P**	**03 37 22.4**	**+0.3**

CLL	**Collm**	**27.58**	**74**	*i* P		**P**	**03 37 21.9**	**-0.1**
CLL					pmax	pmax			
	comp=Z,6.0nm,1.0s								
CLL	**Collm**	**27.58**	**74**	*i* P		**P**	**03 37 21.9**	**-0.1**
	comp=Z,6.0nm,1.0s								
CLL				*e*pP		**pP**	**03 37 24.0**	**-2.0**
CLL				L		L	03 46 00.0		
	comp=Z,100nm,21.9s								
CLL	**Collm**	**27.58**	**74**	*i* P		**P**	**03 37 21.9**	**-0.1**
	comp=Z,6.0nm,1.0s								
BRG	**Berggiesshubel**	**28.29**	**75**	*e*P		**P**	**03 37 28.4**	**0.0**
BRG					pmax	pmax			
	comp=Z,5.0nm,1.2s								
BRG					MLR	MLR			
	comp=N,190nm,15.6s								
BRG					MLR	MLR			
	comp=E,134nm,18.5s								
BRG					MLR	MLR			
	comp=Z,199nm,16.2s								
BRG	**Berggiesshubel**	**28.29**	**75**	*e*P		**P**	**03 37 28.4**	**0.0**
	comp=Z,199nm,16.2s								
KHC	**Kasperske Hory**	**28.76**	**78**	*e*P		**P**	**03 37 32.6**	**0.0**
KHC	**Kasperske Hory**	**28.76**	**78**	*e*P		**P**	**03 37 32.6**	**0.0**
KHC	**Kasperske Hory**	**28.76**	**78**	*e*P		**P**	**03 37 32.6**	**0.0**
GERES	**GERESS Array B**	**28.95**	**79**	P		**P**	**03 37 34.5**	**+0.1**
GERES	**GERESS Array B**	**28.95**	**79**	P		**P**	**03 37 34.5**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=292,slow=7.1,SNR=11								
GERES					LR	LR	03 47 34.3		
	comp=Z,30nm,18.8s,baz=286,slow=33								
GERES	**GERESS Array B**	**28.95**	**79**	P		**P**	**03 37 34.5**	**+0.1**
UPC	**Upice**	**29.65**	**74**	*e*P		**P**	**03 37 41.3**	**+0.9**
UPC	**Upice**	**29.65**	**74**	*e*P		**P**	**03 37 41.3**	**+0.9**
UPC	**Upice**	**29.65**	**74**	*e*P		**P**	**03 37 41.3**	**+0.9**
DPC	**Dobruska-Polom**	**29.89**	**75**	*e*P		**P**	**03 37 42.5**	**-0.1**
DPC	**Dobruska-Polom**	**29.89**	**75**	*e*P		**P**	**03 37 42.5**	**-0.1**
DPC	**Dobruska-Polom**	**29.89**	**75**	*e*P		**P**	**03 37 42.5**	**-0.1**
VRAC	**Vranov**	**30.48**	**76**	LR		LR	03 49 53.0		
	comp=Z,82nm,19.4s,baz=282,slow=36								
MORC	**Moravsky Berou**	**30.85**	**75**	*e*P		**P**	**03 37 51.7**	**+0.6**
MORC					pmax	pmax			
	comp=Z,17nm,1.7s								
MORC	**Moravsky Berou**	**30.85**	**75**	*e*P		**P**	**03 37 51.7**	**+0.6**
	comp=Z,17nm,1.7s								
MORC	**Moravsky Berou**	**30.85**	**75**	*e*P		**P**	**03 37 51.7**	**+0.6**
	comp=Z,17nm,1.7s								
ARCES	**ARCESS Array B**	**31.14**	**35**	P		**P**	**03 37 53.1**	**-0.3**
ARCES	**ARCESS Array B**	**31.14**	**35**	P		**P**	**03 37 53.1**	**-0.3**
	comp=Z,3.3nm,0.9s,baz=292,slow=9.6,SNR=6.9								
ARCES					LR	LR	03 47 22.5		
	comp=Z,46nm,18.7s,baz=16,slow=30								
ARCES	**ARCESS Array B**	**31.14**	**35**	P		**P**	**03 37 53.1**	**-0.3**
KAF	**Kangasniemi**	**31.93**	**49**	*e*P		**P**	**03 37 59.3**	**-1.1**
KAF					pmax	pmax			
	comp=Z,6.0nm,0.7s								
KAF	**Kangasniemi**	**31.93**	**49**	*e*p		**P**	**03 37 59.3**	**-1.1**
	comp=Z,5.7nm,0.7s								
KAF	**Kangasniemi**	**31.93**	**49**	*e*P		**P**	**03 37 59.3**	**-1.1**
	comp=Z,6.0nm,0.7s								
FINES	**FINESS Array B**	**31.94**	**51**	P		**P**	**03 38 00.1**	**-0.3**
FINES	**FINESS Array B**	**31.94**	**51**	P		**P**	**03 38 00.1**	**-0.3**
	comp=Z,4.1nm,0.9s,baz=286,slow=6.8,SNR=8.9								
FINES					LR	LR	03 49 36.9		
	comp=Z,60nm,21.5s,baz=217,slow=34								
FINES	**FINESS Array B**	**31.94**	**51**	P		**P**	**03 38 00.2**	**-0.3**
RES	**Resolute Bay**	**33.07**	**334**	*e*P		**P**	**03 38 10.4**	**+0.2**
	comp=Z,9.6nm,1.3s								
RES	**Resolute Bay**	**33.07**	**334**	P		**P**	**03 38 09.9**	**-0.3**
	comp=Z,2.8nm,1.0s,baz=86,slow=7.8,SNR=2.8								
RES	**Resolute Bay**	**33.07**	**334**	*e*P		**P**	**03 38 10.4**	**+0.2**
	comp=Z,9.6nm,1.3s								
KEST	**Kesra**	**33.70**	**103**	P		**P**	**03 38 14.9**	**-1.3**
KEST	**Kesra**	**33.70**	**103**	P		**P**	**03 38 14.9**	**-1.3**
	comp=Z,2.3nm,1.1s,baz=307,slow=5.1,SNR=3.6								
KEST	**Kesra**	**33.70**	**103**	P		**P**	**03 38 14.9**	**-1.3**
JOF	**Joensuu**	**34.05**	**47**	*e*P		**P**	**03 38 17.3**	**-1.6**
JOF					pmax	pmax			
	comp=Z,3.0nm,0.7s								
JOF	**Joensuu**	**34.05**	**47**	*e*p		**P**	**03 38 17.3**	**-1.6**
	comp=Z,2.5nm,0.7s								
JOF	**Joensuu**	**34.05**	**47**	*e*P		**P**	**03 38 17.3**	**-1.6**
	comp=Z,3.0nm,0.7s								
BUR08	**Bucovina Ar. S**	**36.33**	**74**	*e*P		**P**	**03 38 39.9**	**+1.0**
BUR08	**Bucovina Ar. S**	**36.33**	**74**	*e*P		**P**	**03 38 39.9**	**+1.0**
TMCR	**Tamitsa**	**36.66**	**44**	*e*P		**P**	**03 38 40.6**	**-0.7**
TMCR					pmax	pmax			
	comp=Z,21nm,1.1s								
TMCR	**Tamitsa**	**36.66**	**44**	*e*P		**P**	**03 38 40.6**	**-0.7**
	comp=Z,21nm,1.1s								
KIEV	**Kiev**	**37.18**	**68**	*e*P		**P**	**03 38 44.8**	**-1.1**
KIEV					pmax	pmax			
	comp=Z,21nm,1.3s								
KIEV	**Kiev**	**37.18**	**68**	*e*P		**P**	**03 38 44.8**	**-1.1**
	comp=Z,21nm,1.3s								
KIEV	**Kiev**	**37.18**	**68**	*e*P		**P**	**03 38 44.8**	**-1.1**
	comp=Z,21nm,1.3s								
AK01	**Malin Array Si**	**37.19**	**68**	*e*P		**P**	**03 38 45.6**	**-0.4**
AK01	**Malin Array Si**	**37.19**	**68**	*e*P		**P**	**03 38 45.6**	**-0.4**
AKASG	**Malin Array Be**	**37.19**	**68**	P		**P**	**03 38 45.5**	**-0.5**
AKASG	**Malin Array Be**	**37.19**	**68**	P		**P**	**03 38 45.5**	**-0.5**
AKASG	**Malin Array Be**	**37.19**	**68**	P		**P**	**03 38 45.5**	**-0.5**
	comp=Z,3.1nm,0.8s,baz=301,slow=8.3,SNR=7.2								
AKASG	**Malin Array Be**	**37.19**	**68**	P		**P**	**03 38 45.5**	**-0.5**
ULM	**Lac du Bonnet**	**38.62**	**293**	LR		LR	03 53 24.2		
	comp=Z,86nm,18.6s,baz=322,slow=34								
OBN	**Obninsk**	**39.20**	**58**	*e*P		**P**	**03 39 02.8**	**0.0**
OBN				*i* S		**S**	**03 45 05.0**	**+2.7**
OBN				*e*SS		**SS**	**03 47 48.0**	**-6.9**
OBN					pmax	pmax			
	comp=Z,27nm,1.2s								
OBN					MLR	MLR			
	comp=Z,100nm,15.0s								
OBN	**Obninsk**	**39.20**	**58**	*e*P		**P**	**03 39 02.8**	**0.0**
	comp=Z,27nm,1.2s								
OBN				*i* S		**S**	**03 45 05.0**	**+2.7**
	comp=Z,100nm,15.0s								
FFC	**Flin Flon**	**39.85**	**302**	*e*P		**P**	**03 39 08.5**	**+0.2**
FFC					pmax	pmax			
	comp=Z,9.0nm,1.4s								
FFC	**Flin Flon**	**39.85**	**302**	*e*P		**P**	**03 39 08.4**	**+0.2**
	comp=Z,9.2nm,1.4s								
FFC	**Flin Flon**	**39.85**	**302**	*e*P		**P**	**03 39 08.4**	**+0.2**
	comp=Z,9.2nm,1.4s								
YKA	**Yellowknife Ar**	**42.35**	**317**	P		**P**	**03 39 28.1**	**-0.6**
YKA				PcP		**PcP**	**03 41 22.8**	**+1.0**
YKA	**Yellowknife Ar**	**42.35**	**317**	P		**P**	**03 39 28.1**	**-0.6**
	comp=Z,1.7nm,1.1s,baz=62,slow=8.4,SNR=9.9								
YKA				PcP		**PcP**	**03 41 22.8**	**+1.0**
	comp=Z,0.1nm,0.6s,baz=70,slow=3.7,SNR=2.9								
YKA	**Yellowknife Ar**	**42.35**	**317**	P		**P**	**03 39 28.1**	**-0.6**
VSR	**Storozhevoye**	**42.43**	**62**	*e*P		**P**	**03 39 29.3**	**-0.2**
VSR					pmax	pmax			
	comp=N,6.0nm,0.9s								
VSR					pmax	pmax			
	comp=E,10.0nm,0.9s								
VSR					pmax	pmax			
	comp=Z,10.0nm,0.9s								
ECSD	**EROS Data Cent**	**42.52**	**285**	*e*P		**P**	**03 39 29.9**	**-0.5**
	comp=Z,18nm,1.5s								
ECSD	**EROS Data Cent**	**42.52**	**285**	*e*P		**P**	**03 39 29.9**	**-0.5**
	comp=Z,18nm,1.5s								
VORD	**Divnogorie**	**42.63**	**62**	*e*P		**P**	**03 39 30.3**	**-0.8**
VORD					pmax	pmax			
	comp=N,10.0nm,0.8s								
VORD					pmax	pmax			
	comp=E,20nm,0.8s								
VORD					pmax	pmax			
	comp=Z,10.0nm,0.8s								
VRHR	**Novokhopersk**	**43.81**	**61**	*e*P		**P**	**03 39 40.6**	**-0.1**
VRHR					pmax	pmax			
	comp=Z,10.0nm,1.0s								
VRHR					pmax	pmax			
	comp=N,7.0nm,0.5s								
VRHR					pmax	pmax			
	comp=E,10.0nm,1.0s								
ANN	**Anapa**	**45.00**	**71**	*e*P		**P**	**03 39 48.1**	**-2.1**
ANN					pmax	pmax			
	comp=Z,64nm,5.4s								
BR131	**Keskin Array S**	**45.85**	**79**	*e*P		**P**	**03 39 58.0**	**+0.8**
	comp=Z,5.3nm,0.8s								
BR131	**Keskin Array S**	**45.85**	**79**	*e*P		**P**	**03 39 58.0**	**+0.8**
	comp=Z,5.3nm,0.8s								
BRTR	**Keskin Array B**	**45.85**	**79**	P		**P**	**03 39 58.9**	**+1.6**
BRTR	**Keskin Array B**	**45.85**	**79**	P		**P**	**03 39 58.9**	**+1.6**
	comp=Z,5.8nm,0.8s,baz=311,slow=5.8,SNR=31								
BRTR	**Keskin Array B**	**45.85**	**79**	P		**P**	**03 39 58.9**	**+1.6**
SOKR	**Solikamsk**	**46.62**	**44**	*e*P		**P**	**03 40 03.9**	**+1.1**

SOKR					pmax	pmax			
	comp=Z,10.0nm,0.8s								
TOA0	**Torodi Ar. Sit**	**47.74**	**133**	*e*P		**P**	**03 40 11.9**	**-0.2**
TOA0	**Torodi Ar. Sit**	**47.74**	**133**	*e*P		**P**	**03 40 11.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**47.74**	**133**	P		**P**	**03 40 12.5**	**+0.4**
TORD	**Torodi Ar. Bea**	**47.74**	**133**	P		**P**	**03 40 12.5**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=330,slow=8.9,SNR=10								
TORD	**Torodi Ar. Bea**	**47.74**	**133**	P		**P**	**03 40 12.5**	**+0.4**
KBZ	**Khabaz**	**48.78**	**69**	LR		LR	03 58 54.5		
	comp=Z,40nm,20.9s,baz=8.5,slow=34								
ARU	**Arti**	**49.18**	**47**	*d i* P		**P**	**03 40 22.8**	**+0.1**
ARU							03 42 15.3		
ARU					S	**S**	**03 47 27.7**	**+0.2**
ARU					pmax	pmax			
	comp=Z,13nm,1.0s								
WMOK	**Wichita Mounta**	**49.50**	**277**	*e*P		**P**	**03 40 25.7**	**+0.2**
WMOK					pmax	pmax			
	comp=Z,5.0nm,1.0s								
WMOK	**Wichita Mounta**	**49.50**	**277**	*e*P		**P**	**03 40 25.7**	**+0.2**
	comp=Z,4.9nm,1.0s								
WMOK	**Wichita Mounta**	**49.50**	**277**	*e*P		**P**	**03 40 25.7**	**+0.2**
	comp=Z,4.9nm,1.0s								
MALT	**Malatya**	**49.62**	**77**	*e*P		**P**	**03 40 27.5**	**+1.1**
MALT					pmax	pmax			
	comp=Z,12nm,1.5s								
MALT	**Malatya**	**49.62**	**77**	*e*P		**P**	**03 40 27.5**	**+1.1**
	comp=Z,12nm,1.5s								
MALT	**Malatya**	**49.62**	**77**	*e*P		**P**	**03 40 27.5**	**+1.1**
	comp=Z,12nm,1.5s								
ZEI	**Tsey**	**49.95**	**69**	*e*P		**P**	**03 40 29.6**	**+0.5**
ZEI					pmax	pmax			
	comp=Z,4.0nm,1.2s								
BW06	**Boulder Array**	**50.62**	**292**	*e*P		**P**	**03 40 33.6**	**-0.5**
	comp=Z,7.6nm,1.3s								
BW06	**Boulder Array**	**50.62**	**292**	*e*P		**P**	**03 40 33.7**	**-0.5**
	comp=Z,7.6nm,1.3s								
PDAR	**Pinedale Array**	**50.62**	**292**	P		**P**	**03 40 33.8**	**-0.4**
PDAR	**Pinedale Array**	**50.62**	**292**	P		**P**	**03 40 33.8**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=60,slow=8.9,SNR=4.3								
PDAR					LR	LR	04 01 06.2		
	comp=Z,59nm,18.0s,baz=247,slow=35								
PDAR	**Pinedale Array**	**50.62**	**292**	P		**P**	**03 40 33.8**	**-0.4**
MOOW	**Moose Ponds**	**50.66**	**293**	*e*P		**P**	**03 40 34.6**	**+0.1**
	comp=Z,11nm,1.9s								
MOOW	**Moose Ponds**	**50.66**	**293**	*e*P		**P**	**03 40 34.6**	**+0.1**
	comp=Z,11nm,1.9s								
AMTX	**Amarillo**	**51.16**	**279**	*e*P		**P**	**03 40 39.0**	**+0.9**
AMTX	**Amarillo**	**51.16**	**279**	*e*P		**P**	**03 40 39.0**	**+0.9**
HWUT	**Hardware Ranch**	**52.50**	**292**	*e*P		**P**	**03 40 48.0**	**-0.2**
	comp=Z,9.7nm,1.0s								
HWUT	**Hardware Ranch**	**52.50**	**292**	*e*P		**P**	**03 40 48.0**	**-0.2**
	comp=Z,9.7nm,1.0s								
ILAR	**Eielson Array**	**52.67**	**331**	P		**P**	**03 40 49.5**	**+0.6**
ILAR				PcP		**PcP**	**03 41 57.8**	**-0.8**
ILAR	**Eielson Array**	**52.67**	**331**	P		**P**	**03 40 49.5**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=44,slow=4.7,SNR=4.1								
ILAR				PcP		**PcP**	**03 41 57.8**	**-0.8**
	comp=Z,0.2nm,0.7s,baz=46,slow=2.6,SNR=3.0								
ILAR	**Eielson Array**	**52.67**	**331**	P		**P**	**03 40 49.5**	**+0.6**
ANMO	**Albuquerque**	**53.98**	**282**	*e*P		**P**	**03 40 59.2**	**0.0**
ANMO	**Albuquerque**	**53.98**	**282**	*e*P		**P**	**03 40 59.2**	**0.0**
DUG	**Dugway**	**54.15**	**291**	*e*P		**P**	**03 41 00.7**	**+0.5**
DUG					pmax	pmax			
	comp=Z,2.0nm,0.6s								
DUG	**Dugway**	**54.15**	**291**	*e*P		**P**	**03 41 00.7**	**+0.5**
	comp=Z,2.3nm,0.6s								
DUG	**Dugway**	**54.15**	**291**	*

n76,σ0ᵍ87/102**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.32**	**200**	P	**Pg**	**03 34 15.1**	**-0.1**
SIGR				S	**Sg**	**03 34 19.6**	**+0.1**
SIGR	**SIGRI**	**0.32**	**200**	P	**Pg**	**03 34 15.1**	**-0.1**
SIGR				S	**Sg**	**03 34 19.6**	**+0.1**
BOZC	**Bozcaada**	**0.33**	**8**	*i* P	**Pg**	**03 34 15.3**	**-0.1**
BOZC				*i* S	**Sg**	**03 34 20.0**	**+0.2**
PRK	**Paraskevi**	**0.34**	**141**	P	**Pg**	**03 34 15.3**	**-0.3**
PRK				S	**Sg**	**03 34 20.5**	**+0.3**
PRK	**Paraskevi**	**0.34**	**141**	*e*PB	**Pg**	**03 34 15.4**	**-0.2**
PRK				*e*SB	**Sg**	**03 34 20.2**	**0.0**
PRK	**Paraskevi**	**0.34**	**141**	*e*Pb	**Pg**	**03 34 15.4**	**-0.2**
PRK				*e*Sb	**Sg**	**03 34 20.2**	**0.0**
PRK				S	**Sg**	**03 34 20.5**	**+0.3**
EZN	**Ezine**	**0.40**	**39**	*e*PG	**Pg**	**03 34 15.8**	**-0.9**
EZN				*e*SG	**Sg**	**03 34 22.2**	**+0.2**
EZN	**Ezine**	**0.40**	**39**	*e*Pg	**Pg**	**03 34 15.8**	**-0.9**
EZN				*e*Sg	**Sg**	**03 34 22.2**	**+0.2**
AYVA	**Ayvalik**	**0.58**	**111**	*i* P	**Pg**	**03 34 19.5**	**-0.4**
AYVA				*i* S	**Sg**	**03 34 27.6**	**+0.1**
AYVA	**Ayvalik**	**0.58**	**111**	*i* P	**Pg**	**03 34 19.5**	**-0.4**
AYVA				*i* S	**Sg**	**03 34 27.6**	**+0.1**
LIA	**Limnos Island**	**0.73**	**302**	P	**Pg**	**03 34 23.0**	**+0.1**
LIA				S	**Sb**	**03 34 34.2**	**+0.7**
LIA	**Limnos Island**	**0.73**	**302**	*e*PN	**Pg**	**03 34 23.1**	**+0.1**
LIA				*e*SN	**Sb**	**03 34 34.5**	**+1.0**
LIA	**Limnos Island**	**0.73**	**302**	P	**Pg**	**03 34 23.0**	**+0.1**
LIA				S	**Sb**	**03 34 34.2**	**+0.7**
LIA				*e*Sn	**Sb**	**03 34 34.5**	**+1.0**
GELI	**Tayfur-Gelibol**	**0.96**	**22**	*e*PG	**Pg**	**03 34 25.9**	**-1.2**
GELI				*e*SG	**Sb**	**03 34 40.4**	**+0.5**
GELI	**Tayfur-Gelibol**	**0.96**	**22**	*e*Pg	**Pg**	**03 34 25.9**	**-1.2**
GELI				*e*Sg	**Sb**	**03 34 40.4**	**+0.5**
SMTH	**Samothraki Isl**	**1.02**	**340**	*e*PN	**Pg**	**03 34 27.8**	**-0.6**
SMTH				*e*SN	**Sg**	**03 34 41.7**	**0.0**
SMTH	**Samothraki Isl**	**1.02**	**340**	*e*Pn	**Pg**	**03 34 27.8**	**-0.6**
SMTH				*e*Sn	**Sg**	**03 34 41.7**	**0.0**
LPK	**Lapseki**	**1.04**	**34**	*e*PG	**Pg**	**03 34 28.0**	**-0.7**
LPK				*e*SG	**Sb**	**03 34 42.7**	**+0.4**
LPK	**Lapseki**	**1.04**	**34**	*e*Pg	**Pg**	**03 34 28.0**	**-0.7**
LPK				*e*Sg	**Sb**	**03 34 42.7**	**+0.4**
CHOS	**Chios island**	**1.13**	**178**	P	**Pg**	**03 34 29.0**	**-1.4**
CHOS				S	**Sg**	**03 34 44.4**	**-0.7**
CHOS	**Chios island**	**1.13**	**178**	*e*PN	**Pg**	**03 34 29.3**	**-1.1**
CHOS	**Chios island**	**1.13**	**178**	P	**Pg**	**03 34 29.0**	**-1.4**
CHOS	**Chios island**	**1.13**	**178**	*e*Pn	**Pg**	**03 34 29.3**	**-1.1**
CHOS				S	**Sg**	**03 34 44.4**	**-0.7**
ERIK	**Erikli-Kesan**	**1.22**	**19**	*e*PN	**Pg**	**03 34 30.9**	**-1.3**
ERIK	**Erikli-Kesan**	**1.22**	**19**	*e*Pn	**Pg**	**03 34 30.9**	**-1.3**
ENEZ	**Enez**	**1.23**	**6**	*e*PN	**Pg**	**03 34 31.2**	**-1.1**
ENEZ	**Enez**	**1.23**	**6**	*e*Pn	**Pg**	**03 34 31.2**	**-1.1**
BALY	**Balya**	**1.27**	**79**	*i* P	**Pn**	**03 34 31.7**	**-0.7**
BALY				*i* S	**Sg**	**03 34 48.3**	**-1.5**
KRBG	**Karabiga-Canak**	**1.33**	**48**	*e*PN	**Pn**	**03 34 32.5**	**-0.7**
KRBG	**Karabiga-Canak**	**1.33**	**48**	*e*Pn	**Pn**	**03 34 32.5**	**-0.7**
ALN	**Alexandroupoli**	**1.38**	**2**	P	**Pn**	**03 34 33.5**	**-0.4**
ALN				S	**Sb**	**03 34 52.5**	**+0.4**
ALN	**Alexandroupoli**	**1.38**	**2**	*e*PN	**Pn**	**03 34 34.0**	**+0.1**
ALN	**Alexandroupoli**	**1.38**	**2**	P	**Pn**	**03 34 33.5**	**-0.4**
ALN	**Alexandroupoli**	**1.38**	**2**	*e*Pn	**Pn**	**03 34 34.0**	**+0.1**
ALN				S	**Sb**	**03 34 52.5**	**+0.4**
BLCB	**Balcova**	**1.39**	**144**	*e*PN	**Pg**	**03 34 34.9**	**-0.6**
GONE	**Gonen-Balikesi**	**1.41**	**67**	*e*PN	**Pb**	**03 34 34.6**	**-0.3**
BALB	**Balikesir**	**1.46**	**84**	*e*PN	**Pg**	**03 34 35.9**	**-0.8**
IZM	**Izmir**	**1.49**	**138**	*e*PN	**Pb**	**03 34 36.1**	**-0.3**
AKS	**Akhisar**	**1.55**	**114**	*e*PN	**Pb**	**03 34 37.2**	**-0.2**
MRMT	**Marmara Adasi**	**1.64**	**48**	*e*PN	**Pn**	**03 34 38.2**	**+0.7**
MRMT	**Marmara Adasi**	**1.64**	**48**	*e*Pn	**Pn**	**03 34 38.2**	**+0.7**
EDC	**Edincik**	**1.66**	**59**	*e*PN	**Pb**	**03 34 38.5**	**-0.8**
EDC	**Edincik**	**1.66**	**59**	*e*Pn	**Pb**	**03 34 38.5**	**-0.8**
AOS	**Alonnisos**	**1.68**	**259**	P	**Pn**	**03 34 37.1**	**-0.8**
AOS	**Alonnisos**	**1.68**	**259**	*e*PN	**Pb**	**03 34 39.5**	**0.0**
AOS	**Alonnisos**	**1.68**	**259**	P	**Pn**	**03 34 37.1**	**-0.8**
AOS	**Alonnisos**	**1.68**	**259**	*e*Pn	**Pb**	**03 34 39.5**	**0.0**
OUR	**Ouranopolis**	**1.75**	**298**	P	**Pn**	**03 34 38.7**	**-0.2**
OUR	**Ouranopolis**	**1.75**	**298**	P	**Pn**	**03 34 38.7**	**-0.2**
TKR	**Tekirdag**	**1.89**	**38**	*e*PN	**Pn**	**03 34 42.0**	**+1.2**
TKR	**Tekirdag**	**1.89**	**38**	*e*Pn	**Pn**	**03 34 42.0**	**+1.2**
KCTX	**Karacabey (Bur**	**1.96**	**67**	*e*PN	**Pn**	**03 34 42.3**	**+0.4**
KCTX	**Karacabey (Bur**	**1.96**	**67**	*e*Pn	**Pn**	**03 34 42.3**	**+0.4**
DST	**Dursunbey**	**2.03**	**87**	*e*PN	**Pn**	**03 34 43.7**	**+0.9**
CRLT	**Corlu**	**2.09**	**39**	*e*PN	**Pn**	**03 34 45.0**	**+1.4**
CRLT	**Corlu**	**2.09**	**39**	*e*Pn	**Pn**	**03 34 45.0**	**+1.4**
KULA	**Kula-Manisa**	**2.30**	**115**	*e*PN	**Pn**	**03 34 47.8**	**+1.2**
MDNY	**Mudanya-Bursa**	**2.38**	**68**	*e*PN	**Pn**	**03 34 48.7**	**+1.1**
MDNY	**Mudanya-Bursa**	**2.38**	**68**	*e*Pn	**Pn**	**03 34 48.7**	**+1.1**
EDRB	**Edirne**	**2.40**	**13**	*e*PN	**Pn**	**03 34 49.5**	**+1.7**
EDRB	**Edirne**	**2.40**	**13**	*e*Pn	**Pn**	**03 34 49.5**	**+1.7**
SLVT	**Silivri**	**2.41**	**44**	*e*PN	**Pn**	**03 34 49.1**	**+1.1**
SLVT	**Silivri**	**2.41**	**44**	*e*Pn	**Pn**	**03 34 49.1**	**+1.1**
ARMT	**Armutlu**	**2.44**	**64**	*e*PN	**Pn**	**03 34 50.2**	**+1.8**
ARMT	**Armutlu**	**2.44**	**64**	*e*Pn	**Pn**	**03 34 50.2**	**+1.8**
NVR	**Nevrokopi**	**2.45**	**319**	*e*PN	**Pn**	**03 34 48.6**	**0.0**
NVR	**Nevrokopi**	**2.45**	**319**	*e*Pn	**Pn**	**03 34 48.6**	**0.0**
CTKS	**Kestanelik-??a**	**2.58**	**47**	*e*PN	**Pn**	**03 34 51.4**	**+1.1**
CTKS	**Kestanelik-??a**	**2.58**	**47**	*e*Pn	**Pn**	**03 34 51.4**	**+1.1**
CTYL	**Yal??k??y-??at**	**2.62**	**41**	*e*PN	**Pn**	**03 34 51.7**	**+0.8**
CTYL	**Yal??k??y-??at**	**2.62**	**41**	*e*Pn	**Pn**	**03 34 51.7**	**+0.8**
TVSB	**Tavsanli**	**2.68**	**90**	*e*PN	**Pn**	**03 34 53.4**	**+1.5**
BGKT	**Bogazkoy**	**2.70**	**51**	*e*PN	**Pn**	**03 34 53.3**	**+1.4**
BGKT	**Bogazkoy**	**2.70**	**51**	*e*Pn	**Pn**	**03 34 53.3**	**+1.4**
HRT	**Hereke**	**3.10**	**64**	*e*PN	**Pn**	**03 34 59.1**	**+1.5**
HRT	**Hereke**	**3.10**	**64**	*e*Pn	**Pn**	**03 34 59.1**	**+1.5**

*IDC **29** 03:52:02.6±5.7, 36°.85N×71°.75E, h100km±42km, mb3.2/5, mb1 3.3/10, mb1mx3.1/31, mbtmp3.2/10, Error ellipse: s-maj=55.3km s-min=35.0km az=152.0*
*ISCJB **29** 03:52:05.8±0.6, 37°.13N±0°.05×72°.02E±0°.09, h142km, mb3.4/5, Error ellipse: s-maj=10.0km s-min=6.5km az=175.6*
*NNC **29** 03:52:11.6±7.8, 37°.68N×71°.53E, h164km±112km, mb2.8, mpv3.7, Error ellipse: s-maj=74.5km s-min=38.3km az=17.0*

ISC 29 03:52:05.8±0.9**, 37°.04N**±0°.07×**72°.1E**±0°.1**, h142km, n24,** σ1ᵍ**34**/24**, mb3.4**/5**, 4C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.22**	**13**	P	**Pn**	**03 53 21.8**	**-0.6**
	SNR=113						
EKS2	**Erkin-Say**	**5.75**	**12**	P	**Pn**	**03 53 29.4**	**+0.1**
	SNR=11						
AAK	**Ala-Archa**	**5.87**	**17**	P	**Pn**	**03 53 31.4**	**+0.6**
	SNR=11						
AAK	**Ala-Archa**	**5.87**	**17**	P	**Pn**	**03 53 31.2**	**+0.4**
	2.9nm,0.3s,baz=219,slow=9.7,SNR=10						
AAK				S	**Sn**	**03 54 35.5**	**-1.7**
	1.4nm,0.3s,baz=151,slow=19,SNR=7.9						
KK31	**Karatay Array**	**6.18**	**349**	P	Pn	03 53 31.2	-3.6
	4.4nm,0.5s,baz=178,slow=13,SNR=46						
KK31				⇑S	Sn	03 54 35.1	-9.3
	3.8nm,0.6s,baz=173,slow=17,SNR=4.4						
TKM2	**Tokmak 2**	**6.45**	**23**	⇑P	**Pn**	**03 53 39.0**	**+0.5**
	1.9nm,0.2s						
TKM2				⇑S	**Sn**	**03 54 49.1**	**-1.9**
	0.4nm,0.1s						
TKM2	**Tokmak 2**	**6.45**	**23**	P	**Pn**	**03 53 39.8**	**+1.2**
	SNR=5.1						
USP	**Ospenovka**	**6.48**	**16**	P	**Pn**	**03 53 39.2**	**+0.4**
	SNR=12						
MKAR	**Makanchi Array**	**12.32**	**35**	P	**Pn**	**03 54 58.8**	**+2.4**
	0.1nm,0.3s,baz=226,slow=14,SNR=3.4						
MKAR				S	**Sn**	**03 57 11.7**	**-0.7**
	0.0nm,0.3s,baz=214,slow=33,SNR=2.1						
PYUN	**Piuthan**	**12.77**	**131**	*e*P	**Pn**	**03 55 04.1**	**+1.5**
	10nm,0.4s						
DANN	**Dangsing**	**13.06**	**128**	*e*P	**P**	**03 55 09.0**	**-2.4**
	6.0nm,0.4s						
KOLN	**Koldanda**	**13.38**	**130**	*e*P	**P**	**03 55 12.9**	**-1.9**
	6.7nm,0.4s						
KURBB	**Kurchatov Arra**	**14.33**	**17**	P	**P**	**03 55 26.6**	**+1.7**
	0.0nm,0.3s,baz=207,slow=10.0,SNR=3.1						
PKI	**Pulchoki**	**14.65**	**126**	*e*P	**P**	**03 55 27.2**	**-1.9**
AB31	**Akbulak array**	**15.08**	**328**	⇓P	Pn	03 55 25.3	-6.2
	0.4nm,0.3s,baz=136,slow=14,SNR=15						
AB31				⇑S	Sn	03 58 00.3	-18
	0.8nm,0.6s,baz=153,slow=23,SNR=7.2						
BVAR	**Borovoye Array**	**16.03**	**356**	P	**P**	**03 55 44.1**	**+0.3**
	0.2nm,0.3s,baz=171,slow=13,SNR=4.8						
AKTO	**Aktyubinsk**	**16.79**	**327**	⇓P	**P**	**03 55 51.6**	**-0.6**
	0.9nm,0.8s						
AKTO	**Aktyubinsk**	**16.79**	**327**	P	**P**	**03 55 51.6**	**-0.6**
	0.3nm,0.3s,baz=136,slow=8.5,SNR=14						
ZALV	**Zalesovo Beam**	**19.05**	**23**	P	**Pn**	**03 56 19.6**	**+0.4**
	0.3nm,0.3s,baz=231,slow=9.1,SNR=2.9						
ARCES	**ARCESS Array B**	**41.00**	**337**	P	**P**	**03 59 35.7**	**+1.3**
	1.0nm,0.8s,baz=111,slow=9.4,SNR=9.9						
HFS	**Hagfors**	**43.21**	**321**	P	**P**	**03 59 52.8**	**+0.4**
	0.9nm,0.4s,baz=94,slow=11,SNR=10						
NOA	**NORSAR Array B**	**44.50**	**323**	P	**P**	**04 00 03.4**	**+0.6**
	0.5nm,0.6s,baz=94,slow=7.5,SNR=3.5						
TORD	**Torodi Ar. Bea**	**66.64**	**269**	P	**P**	**04 02 40.8**	**-0.6**
	0.2nm,0.6s,baz=48,slow=6.7,SNR=6.2						
YKA	**Yellowknife Ar**	**80.66**	**3**	P	P	04 04 05.3	+2.9
	0.2nm,0.5s,baz=351,slow=5.4,SNR=5.3						

*IDC **29** 03:55:26.0±0.9, 25°.81N×67°.36E, h0km, mb3.6/12, mb1 3.7/13, mb1mx3.6/31, mbtmp3.6/13, ML3.5/1, MS3.2/4, Ms1 3.2/4, ms1mx2.8/30, Error ellipse: s-maj=23.7km s-min=20.3km az=40.0*
*ISCJB **29** 03:55:28.6±0.9, 25°.8N±0°.1×67°.65E±0°.07, h33km, mb3.5/12, MS3.2/4, Error ellipse: s-maj=19.1km s-min=8.7km az=12.8*

ISC 29 03:55:30.8±1.1**, 25°.8N**±0°.2×**67°.6E**±0°.1**, h35**km**, n25,** σ1ᵍ**62**/21**, mb3.5**/12**, MS3.2**/4**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDI	**New Delhi**	**9.03**	**69**	*e*P	**Pn**	**03 57 37.0**	**-1.6**
POO	**Poona**	**9.29**	**140**	*ex*	Sn	03 59 19.0	-6.6
PYUN	**Piuthan**	**13.92**	**77**	*e*P	**Pn**	**03 58 44.0**	**-1.8**
	14nm,0.6s						
KOLN	**Koldanda**	**14.43**	**79**	*e*P	Pn	03 58 48.0	-4.7
	11nm,0.5s						
DANN	**Dangsing**	**14.62**	**76**	*e*P	**Pn**	**03 58 54.6**	**-0.8**
	20nm,0.8s						
PKI	**Pulchoki**	**16.02**	**80**	*e*P	**Pn**	**03 59 10.9**	**-2.9**
	11nm,0.6s						
GUN	**Gumba**	**16.45**	**79**	*e*P	**Pn**	**03 59 17.0**	**-2.3**
	41nm,0.9s						
RAMN	**Ramite**	**17.07**	**82**	*e*P	**Pn**	**03 59 25.0**	**-2.0**
	24nm,0.7s						
AAK	**Ala-Archa**	**17.70**	**17**	P	**Pn**	**03 59 34.3**	**-0.3**
	0.1nm,0.3s,baz=185,slow=12,SNR=2.9						
ODAN	**Odare**	**17.78**	**82**	*e*P	**P**	**03 59 36.0**	**-0.3**
	32nm,1.1s						
TAPN	**Taplejung**	**18.06**	**81**	*e*P	**P**	**03 59 38.8**	**-0.7**
MKAR	**Makanchi Array**	**23.97**	**25**	P	**P**	**04 00 43.2**	**+1.3**
	0.3nm,0.7s,baz=209,slow=9.7,SNR=3.9						
KURBB	**Kurchatov Arra**	**26.15**	**16**	P	**P**	**04 01 02.3**	**+0.7**
	0.3nm,0.3s,baz=209,slow=9.0,SNR=3.1						
BVAR	**Borovoye Array**	**27.25**	**4**	P	**P**	**04 01 12.6**	**+1.1**
	0.2nm,0.3s,baz=198,slow=11,SNR=2.3						
ZALV	**Zalesovo Beam**	**30.88**	**20**	LR	LR	04 15 44.7	
	comp=Z,37nm,21.2s,baz=64,slow=39						
SONM	**Songino Array**	**37.50**	**44**	P	**P**	**04 02 43.5**	**+2.2**
	0.9nm,0.9s,baz=241,slow=7.9,SNR=4.4						
AKASG	**Malin Array Be**	**38.40**	**321**	P	**P**	**04 02 49.8**	**+1.2**
	0.4nm,0.4s,baz=111,slow=7.9,SNR=3.8						
MLR	**Muntele Rosu**	**38.59**	**311**	P	**P**	**04 02 49.3**	**-1.2**
	0.3nm,0.3s,baz=106,slow=15,SNR=4.9						
FINES	**FINESS Array B**	**45.23**	**333**	P	**P**	**04 03 42.7**	**-1.7**
	0.4nm,0.5s,baz=111,slow=10,SNR=4.2						
FINES				LR	LR	04 24 21.6	
	comp=Z,36nm,19.6s,baz=206,slow=38						
ARCES	**ARCESS Array B**	**50.15**	**342**	P	**P**	**04 04 21.6**	**-0.7**
	1.6nm,0.9s,baz=133,slow=6.3,SNR=5.4						
ARCES				LR	LR	04 26 47.4	
	comp=Z,22nm,18.5s,baz=131,slow=38						
NOA	**NORSAR Array B**	**51.59**	**329**	LR	LR	04 30 04.7	
	comp=Z,20nm,19.3s,baz=130,slow=40						
TORD	**Torodi Ar. Bea**	**62.84**	**272**	P	**P**	**04 05 52.6**	**-0.9**
	0.9nm,0.7s,baz=62,slow=5.2,SNR=13						
WRA	**Warramunga Arr**	**79.17**	**118**	P	**P**	**04 07 33.9**	**+1.5**
	0.5nm,1.0s,baz=318,slow=4.2,SNR=2.7						
ASAR	**Alice Springs**	**80.85**	**122**	P	**P**	**04 07 43.6**	**+2.2**
	0.1nm,0.3s,baz=302,slow=5.3,SNR=2.7						
YKA	**Yellowknife Ar**	**91.98**	**1**	P	**P**	**04 08 35.5**	**-0.1**
	0.1nm,0.7s,baz=350,slow=4.6,SNR=3.4						

*TIR **29** 04:24:14.4, 41°.84N×19°.52E, h1km, ML3.4*
*CSEM **29** 04:24:44.5±0.3, 41°.83N×19°.45E, h2km, ML3.4, Error ellipse: s-maj=5.9km s-min=3.5km az=65.0*
*ISCJB **29** 04:24:45.0±0.8, 41°.83N±0°.03×19°.51E±0°.05, h6km±4km, Error ellipse: s-maj=6.9km s-min=5.1km az=145.6*
*BEO **29** 04:24:45.0±0.7, 41°.77N×19°.34E, h15km±4km, ML2.1/7*

ISC 29 04:24:44.0±1.4**, 41°.79N**±0°.04×**19°.44E**±0°.04**, h3**km±10**km, n26,** σ1ᵍ**60**/47**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.42**	**53**	*e*PG	**Pg**	**04 24 51.9**	**-0.3**
PUK				*e*SG	**Sg**	**04 24 58.3**	**+0.6**
PUK	**Puka**	**0.42**	**53**	*e*Pg	**Pg**	**04 24 51.9**	**-0.3**
PUK				*e*Sg	**Sg**	**04 24 58.3**	**+0.6**
TIR	**Tirane**	**0.55**	**144**	*e*PG	**Pb**	**04 24 55.6**	**-0.6**
TIR				*e*SG	**Sb**	**04 25 04.8**	**+0.4**
TIR	**Tirane**	**0.55**	**144**	*e*Pg	**Pb**	**04 24 55.7**	**-0.6**
TIR				*e*Sg	**Sb**	**04 25 05.1**	**+0.7**
TIR	**Tirane**	**0.55**	**144**	*e*Pg	**Pb**	**04 24 55.6**	**-0.6**
TIR				*e*Sg	**Sb**	**04 25 04.8**	**+0.4**
PDG	**Podgorica**	**0.65**	**348**	*e*Pg	**Pg**	**04 24 56.8**	**+0.2**
PDG				*e*Sg	**Sb**	**04 25 07.6**	**+0.1**
PDG	**Podgorica**	**0.65**	**348**	*e*Pg	**Pg**	**04 24 56.8**	**+0.2**
PDG				*e*Sg	**Sb**	**04 25 07.6**	**+0.1**
BCI	**Bajram Curri**	**0.74**	**39**	*e*PG	**Pg**	**04 24 57.9**	**-0.4**
BCI				*e*SG	**Sg**	**04 25 07.9**	**0.0**
BCI	**Bajram Curri**	**0.74**	**39**	*e*Pg	**Pg**	**04 24 57.9**	**-0.4**
BCI				*e*Sg	**Sg**	**04 25 07.9**	**0.0**
PHP	**Peshkopia**	**0.76**	**98**	*e*PG	**Pg**	**04 24 57.8**	**-0.8**
PHP				*e*SG	**Sg**	**04 25 08.9**	**+0.5**
PHP	**Peshkopia**	**0.76**	**98**	*e*Pg	**Pg**	**04 24 57.8**	**-0.8**
PHP				*e*Sg	**Sg**	**04 25 08.9**	**+0.5**
STON	**Ston**	**1.68**	**311**	*e*Pn	**Pn**	**04 24 05.0**	**-9.3**
STON				Sn	**Sg**	**04 25 39.3**	**+1.2**
IVAS	**Ivanjica**	**1.86**	**16**	*e*Pn	**Pn**	**04 25 17.2**	**+0.4**
IVAS				*e*Sn	**Sn**	**04 25 40.8**	**-0.1**
IVAS	**Ivanjica**	**1.86**	**16**	*e*Pn	**Pn**	**04 25 17.2**	**+0.4**
IVAS				*e*Sn	**Sn**	**04 25 40.8**	**-0.1**
SELS	**Selova**	**1.89**	**40**	*e*Pn	**Pn**	**04 25 17.7**	**+0.5**
SELS				*e*Sn	**Sn**	**04 25 41.1**	**-0.5**
SELS	**Selova**	**1.89**	**40**	*e*Pn	**Pn**	**04 25 17.7**	**+0.5**
SELS				*e*Sn	**Sn**	**04 25 41.1**	**-0.5**
BARS	**Barje**	**2.04**	**59**	*e*Sn	**Sn**	**04 25 46.3**	**+1.1**
BARS	**Barje**	**2.04**	**59**	*e*Sn	**Sn**	**04 25 46.3**	**+1.1**
BBLS	**Lazići**	**2.08**	**359**	*e*Pn	**Pn**	**04 25 19.2**	**-0.6**
BBLS				*e*Sn	**Sn**	**04 25 45.4**	**-0.8**
BBLS	**Lazići**	**2.08**	**359**	*e*Pn	**Pn**	**04 25 19.2**	**-0.6**
BBLS				*e*Sn	**Sn**	**04 25 45.4**	**-0.8**
GRUS	**Gruza**	**2.30**	**24**	*e*Sn	**Sn**	**04 25 52.1**	**+0.6**
GRUS	**Gruza**	**2.30**	**24**	*e*Sn	**Sn**	**04 25 52.1**	**+0.6**
DIVS	**Divibare**	**2.34**	**10**	*e*Pn	**Pn**	**04 25 23.5**	**0.0**
DIVS				*e*Sn	**Sn**	**04 25 51.9**	**-0.9**
DIVS	**Divibare**	**2.34**	**10**	*e*Pn	**Pn**	**04 25 23.5**	**0.0**
DIVS				*e*Sn	**Sn**	**04 25 51.9**	**-0.9**
ZAPS	**Zavoj**	**2.79**	**57**	*e*Pn	**Pn**	**04 25 30.4**	**+0.8**
ZAPS				*e*Sn	**Sn**	**04 26 03.5**	**-0.2**
ZAPS	**Zavoj**	**2.79**	**57**	*e*Pn	**Pn**	**04 25 30.4**	**+0.8**
ZAPS				*e*Sn	**Sn**	**04 26 03.5**	**-0.2**

*ISCJB **29** 04:42:20.2±0.3, 36°.11N±0°.02×71°.19E±0°.02, h99km±3km, mb4.5/88, Error ellipse: s-maj=3.2km s-min=3.1km az=11.4*
*MOS **29** 04:42:20.6±0.9, 36°.12N×71°.12E, h103km, mb4.6/51, Error ellipse: s-maj=6.6km s-min=4.3km az=95.3*
*BJI **29** 04:42:20.1, 36°.10N×71°.10E, h94km, mB4.8/15, mb4.6/26*
*IDC **29** 04:42:20.9±2.8, 36°.10N×71°.05E, h91km±25km, mb4.0/25, mb1 4.2/29, mb1mx4.1/34, mbtmp4.1/29, MS3.0/10, Ms1 3.0/10, ms1mx2.8/35, Error ellipse: s-maj=15.1km s-min=9.6km az=0.0*
*TEH **29** 04:42:21.0, 36°.05N×71°.27E, h92km, ML4.5*
*NEIC **29** 04:42:21.6±0.6, 36°.13N×71°.10E, h96km±5km, mb4.7/42, Error ellipse: s-maj=5.5km s-min=4.4km az=155.0*
*NNC **29** 04:42:25.2±4.8, 36°.50N×70°.57E, h112km±50km, mb3.9, mpv4.9, Error ellipse: s-maj=35.9km s-min=26.4km az=18.0*

ISC 29 04:42:21.5±0.3**, 36°.12N**±0°.03×**71°.16E**±0°.03**, h99**km±3km**, h98**km**:pP-P, n361,** σ1ᵍ**49**/390**, mb4.5**/88**, 21C-19D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.34**	**228**	*e*PN	**Pn**	**04 42 58.0**	**-0.7**
KBL				*e*		04 43 26.5	
KBL	**Kabul**	**2.34**	**228**	*e*Pn	**Pn**	**04 42 58.0**	**-0.7**
KBL				*e*Sn	**Sn**	**04 43 26.5**	**-0.6**
CEP	**Cherat**	**2.37**	**165**	⇓P	**Pn**	**04 42 59.8**	**+0.8**
CEP				S	**Sn**	**04 43 29.0**	**+1.3**
CHCP	**Chirah Chowk**	**3.00**	**144**	P	**Pn**	**04 43 08.4**	**+1.1**
THW	**Thamme Wali**	**3.35**	**172**	P	**Pn**	**04 43 12.4**	**+0.4**
SARP	**Sargodha**	**4.37**	**163**	P	**Pn**	**04 43 24.7**	**-1.0**
JMU	**Jammu**	**4.59**	**137**	*ex*	Pn	04 43 23.0	-5.6
JMU				*ex*	x	04 44 19.5	
KSH	**Kashi**	**5.10**	**47**	P	**Pn**	**04 43 33.0**	**-2.7**
KSH				S	Sn	04 44 21.8	-12
KSH				smax	smax		
	comp=N,890nm,0.5s						
KSH				smax	smax		
	comp=E,580nm,0.3s						
THN	**Thein Dam**	**5.26**	**133**	*e*P	**Pn**	**04 43 36.8**	**-1.0**
THN				*ex*	x	04 44 35.0	
DHRM	**DHARAMSHALA**	**5.75**	**131**	*e*P	**Pn**	**04 43 44.6**	**0.0**
DHRM				*ex*	x	04 44 47.0	
DHRM				AML	AML	04 44 49.0	
	comp=E,1μm,0.5s						
DHRM				AML	AML	04 44 50.0	
	comp=N,1μm,0.2s						
AML	**Almayashu**	**6.32**	**17**	*i* PN	**Pn**	**04 43 53.3**	**+0.8**
AML	**Almayashu**	**6.32**	**17**	P	**Pn**	**04 43 53.4**	**+0.8**
	SNR=458						
BHK	**Bhakra**	**6.41**	**135**	*e*P	**Pn**	**04 43 54.0**	**+0.6**
BHK				*e*S	**Sn**	**04 45 07.2**	**+2.0**
UCH	**Uchtor**	**6.63**	**22**	P	**Pn**	**04 43 58.4**	**+1.6**
	SNR=11						
SDNR	**Sundarnagar**	**6.67**	**132**	*e*P	**Pn**	**04 43 56.5**	**-0.5**
SDNR				*ex*	x	04 45 05.1	
KZA	**Kyzart**	**6.75**	**27**	*i* PN	**Pn**	**04 43 59.4**	**+1.1**
KZA	**Kyzart**	**6.75**	**27**	P	**Pn**	**04 43 59.4**	**+1.1**
	SNR=65						
EKS2	**Erkin-Say**	**6.84**	**16**	*e*PN	**Pn**	**04 44 00.1**	**+0.7**
EKS2				pmax	pmax		
	comp=Z,102nm,0.6s						
EKS2	**Erkin-Say**	**6.84**	**16**	*e*Pn	**Pn**	**04 44 00.1**	**+0.7**
	comp=Z,102nm,0.6s						
EKS2				*e*Sn	**Sn**	**04 45 15.3**	**-0.5**
EKS2	**Erkin-Say**	**6.84**	**16**	P	**Pn**	**04 44 00.3**	**+1.0**
	SNR=97						
QUE	**Quetta**	**6.88**	**212**	*e*PN	**Pn**	**04 44 00.0**	**0.0**
QUE	**Quetta**	**6.88**	**212**	*e*P	**Pn**	**04 44 00.0**	**0.0**
QUE				*e

WMQ LR LR
comp=E,75nm,6.0s
GUN Gumba 14.91 119 *e*P Pn 04 45 43.0 -4.6
comp=Z,55nm,6.0s
JBP Jabalpur 15.00 147⇑ *i x* **Pn 04 45 44.7 -3.6**
JBP *ex* x 04 48 19.1
comp=Z,50nm,0.4s
KUR17 Kurchatov Arra 15.44 18⇑P **P 04 45 56.1 +0.1**
comp=Z,0.4nm,0.7s
KURBB Kurchatov Arra 15.45 18 P **Pn 04 45 52.1 -1.6**
comp=Z,0.5nm,0.3s,baz=206,slow=10.0,SNR=21
KURBB LR LR 04 51 55.8
comp=Z,34nm,20.5s,baz=260,slow=37
AB31 Akbulak array 15.48 331⇑P **Pn 04 45 51.2 -3.0**
comp=Z,18nm,0.5s,baz=147,slow=13,SNR=399
AB31 ⇓S Sn 04 48 32.2 -13
comp=Z,28nm,0.8s,baz=150,slow=24,SNR=9.7
AB31 Akbulak array 15.48 331 *i* P **Pn 04 45 51.3 -2.9**
AB31 pmax pmax
comp=Z,16nm,0.3s
ABKAR Akbulak array 15.48 331 *e*Pn **Pn 04 45 51.3 -2.9**
comp=Z,41nm,0.5s
KURK Kurchatov 15.55 18 ⇓P **P 04 45 57.7 +0.4**
comp=Z,8.6nm,0.9s
KURK Kurchatov 15.55 18 P **Pn 04 45 52.1 -3.0**
KURK pmax pmax
comp=Z,1.0nm,0.3s
KURK MLR MLR
comp=Z,34nm,20.5s
KURK Kurchatov 15.55 18 *e*Pn **Pn 04 45 53.4 -1.6**
comp=Z,12nm,0.9s
RAMN Ramite 16.01 120 *e*P **Pn 04 45 57.1 -4.1**
comp=Z,65nm,0.5s
BANOM Banah 16.27 236 P **P 04 46 06.4 +0.8**
SNR=12
NGP Nagpur 16.43 153 *ex* **Pn 04 46 02.9 -3.4**
NGP *ex* x 04 48 51.2
TAPN Taplejung 16.55 117 *e*P **Pn 04 46 04.3 -3.7**
comp=Z,94nm,0.6s
TAPN *e*S Sn 04 48 58.3 -14
VOSK Vostochnaya 16.61 360 P **Pn 04 46 05.7 -2.5**
ODAN Odare 16.62 119 *e*P **Pn 04 46 04.9 -3.9**
comp=Z,78nm,0.6s
ZRNK Zerenda 16.90 356 ⇓P **Pn 04 46 10.4 -1.4**
comp=Z,19nm,1.3s
BVA0 Borovoye Array 16.92 358 ⇓P **Pn 04 46 10.2 -1.7**
comp=Z,1.4nm,0.8s
BVA0 Borovoye Array 16.92 358 P **Pn 04 46 10.8 -1.2**
BVA0 pmax pmax
comp=Z,2.0nm,0.7s
BVAR Borovoye Array 16.92 358 P **Pn 04 46 10.5 -1.5**
BVAR S Sn 04 49 10.7 -8.9
BVAR pmax pmax
comp=Z,2.0nm,0.3s
BVAR smax smax
comp=N,1.0nm,0.3s
BVAR MLR MLR
comp=Z,25nm,21.3s
BVAR Borovoye Array 16.92 358 P **Pn 04 46 10.5 -1.5**
BVAR S Sn 04 49 10.7 -8.9
BVAR Borovoye Array 16.92 358 P **Pn 04 46 10.5 -1.5**
comp=Z,1.6nm,0.3s,baz=166,slow=13,SNR=38
BVAR S Sn 04 49 10.7 -8.9
comp=Z,0.9nm,0.3s,baz=172,slow=22,SNR=5.0
BVAR LR LR 04 53 54.7
comp=Z,24nm,21.3s,baz=78,slow=41
BRVK Borovoye 16.95 358⇑P **Pn 04 46 10.2 -2.2**
comp=Z,17nm,0.8s
BRVK Borovoye 16.95 358 *d* P **Pn 04 46 11.1 -1.3**
BRVK pmax pmax
comp=Z,8.0nm,0.6s
BRVK Borovoye 16.95 358 *e*Pn **Pn 04 46 12.5 +0.1**
comp=Z,13nm,0.7s
BRVK Borovoye 16.95 358 P **Pn 04 46 10.7 -1.7**
SNR=8.7
WBK Wadi Bani Khal 17.12 222 P **P 04 46 18.3 +3.3**
SNR=5.7
ASHO Ashiyiah 17.28 233 P **P 04 46 17.4 +0.7**
SNR=9.0
BOK Bokaro 17.68 130 *e*P **P 04 46 19.6 -1.4**
BOK *ex* x 04 49 22.0
BOK AML AML 04 49 32.2
comp=E,7.6nm,0.2s
BOK AML AML 04 49 32.8
comp=N,9.3nm,0.1s
JMDO Jabal Madar 17.79 223 P **Pn 04 46 23.8 +0.9**
SNR=5.5
ASUD Al Ashush, Dub 17.80 234 P **Pn 04 46 23.4 +0.5**
SNR=5.4
LSA Lhasa 17.95 105 *e*P **Pn 04 46 25.1 -0.1**
LSA pmax pmax
comp=Z,10.0nm,0.6s
LSA Lhasa 17.95 105 *e*P **Pn 04 46 25.1 -0.1**
comp=Z,10nm,0.6s
BSY Bisya 18.01 226 P **Pn 04 46 26.7 +1.2**
SNR=11
HYB Hyderabad 19.75 159 *i* P **Pn 04 46 45.0 -1.0**
HYB *e*S S 04 50 12.0 -8.9
HYB Hyderabad 19.75 159 *e*P **P 04 46 44.5 +0.9**
ZAA0 Zalesovo Array 20.21 24 *e*P **P 04 46 48.9 +0.6**
ZALV Zalesovo Beam 20.21 24 P **P 04 46 48.8 +0.5**
ZALV pmax pmax
comp=Z,14nm,0.5s
ZALV MLR MLR
comp=Z,36nm,18.6s
ZALV Zalesovo Beam 20.21 24 P **P 04 46 48.8 +0.5**
ZALV Zalesovo Beam 20.21 24 P **P 04 46 48.8 +0.5**
comp=Z,14nm,0.5s,baz=225,slow=10,SNR=62
ZALV LR LR 04 55 05.7
comp=Z,36nm,18.6s,baz=30,slow=38
NVS Novosibirsk 20.50 20⇓ *i* P **P 04 46 51.7 +0.3**
NVS *e*S **S** 04 50 31.4 -3.6
NVS *e*SS **SnSn 04 51 06.8 +4.5**
NVS pmax pmax
comp=N,14nm,1.3s
NVS pmax pmax
comp=Z,19nm,1.3s
NVS pmax pmax
comp=E,4.0nm,0.9s
NVS smax smax
comp=N,17nm,1.8s
NVS smax smax
comp=E,5.0nm,0.9s
SHL Shillong 20.63 115 *i* P **P 04 46 54.0 +0.7**
SHL *i* x x 04 50 33.0
DGRG David-gareji 20.76 293 P **P 04 46 55.0 +0.6**
GNI Garni 21.14 289 *e*P **P 04 47 00.6 +2.0**
comp=E,31nm,0.9s
GNI Garni 21.14 289 P **P 04 47 01.1 +2.5**
SNR=8.3
GNI Garni 21.14 289 P **P 04 46 57.0 -1.6**
comp=E,27nm,0.8s,baz=3.2,slow=3.7,SNR=14
SEAG Tbilisi Sea 21.22 293 P **P 04 47 01.4 +2.0**
TBLG Delisi 21.27 293 *e*P **P 04 47 01.6 +1.8**
TBLG Delisi 21.27 293 P **P 04 47 01.6 +1.8**
GUDG Gudauri 21.55 295 P **P 04 47 05.9 +2.8**
GOR Gori 21.76 294 P **P 04 47 08.0 +2.9**
SVE Sverdlovsk 21.90 344 *e*P **P 04 47 06.4 +0.1**
SVE pmax pmax
comp=Z,16nm,0.9s
ZEI Tsey 22.02 296 *e*P **P 04 47 10.5 +2.4**
ZEI pmax pmax
comp=Z,25nm,1.5s
ARU Arti 22.04 341 *c i*P **P 04 47 08.6 +0.8**
ARU 04 47 38.7
ARU S **S 04 51 03.6 -1.0**
ARU pmax pmax
comp=Z,31nm,1.7s
AKH Akhalkalaki 22.16 292 P **P 04 47 12.1 +2.5**
BHD Baghdad 22.18 270 *ex* **P 04 47 11.7 +2.2**
BHD *ex* x 04 51 10.7
ONI Oni 22.32 295 P **P 04 47 14.4 +3.4**
IMP Imphal 22.59 114 *e*P **P 04 47 14.0 0.0**
GTA Gaotai 22.85 73⇑P **P 04 47 20.5 +4.0**
GTA pP pP 04 47 41.5 +5.4
GTA sP sP 04 47 53.3 +5.0
GTA S **S 04 51 21.3 +2.8**
GTA sS **sS 04 51 56.0 +2.2**
GTA pmax pmax
comp=Z,9.0nm,0.7s
GTA pmax pmax
comp=Z,72nm,4.3s
GTA LR LR
comp=N,180nm,17.1s
GTA LR LR
comp=E,270nm,19.0s
GTA LR LR
comp=Z,74nm,12.4s
KBZ Khabaz 22.89 298 P **P 04 47 17.1 +0.3**
KBZ pmax pmax
comp=Z,9.0nm,0.9s
KBZ MLR MLR
comp=Z,27nm,20.1s
KBZ Khabaz 22.89 298 P **P 04 47 17.1 +0.3**
KBZ Khabaz 22.89 298 P **P 04 47 17.1 +0.3**
comp=Z,9.1nm,0.9s,baz=161,slow=8.7,SNR=12
KBZ LR LR 04 57 31.6
comp=Z,27nm,20.1s,baz=250,slow=40
KIV Kislovodsk 23.08 299⇓ *e*P **P 04 47 20.6 +1.9**
KIV *e**PP **pP 04 47 43.2 +4.7**
KIV *e*S **S 04 51 18.6 -3.5**
KIV pmax pmax
comp=Z,11nm,0.7s
KIV MLR MLR
comp=Z,100nm,18.0s
RBK Rabkut 23.86 223 P **P 04 47 26.3 +0.3**
SNR=9.8
ABTO Aybut 24.50 225 P **P 04 47 31.7 0.0**
SNR=7.1
SOKR Solikamsk 25.26 343 *e*P **P 04 47 39.4 +1.3**
SOKR pmax pmax
comp=Z,10.0nm,1.2s
VRHR Novokhopersk 25.88 315 *e*P **P 04 47 45.2 +1.3**
VRHR pmax pmax
comp=Z,10.0nm,0.6s
VRHR pmax pmax
comp=N,7.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.6s
MALT Malatya 26.09 285 *e*P **P 04 47 47.5 +1.4**
MALT pmax pmax
comp=Z,9.0nm,1.1s
MALT Malatya 26.09 285 *e*P **P 04 47 47.5 +1.4**
comp=Z,9.3nm,1.1s
LZH Lanzhou 26.34 80 *e*P **P 04 47 50.5 +2.0**
LZH pP **pP 04 48 11.5 +1.2**
LZH sP **sP 04 48 23.5 +1.7**
LZH pmax pmax
comp=Z,13nm,1.0s
ANN Anapa 26.93 299 *e*P **P 04 47 49.0 -4.4**
ANN pmax pmax
comp=Z,43nm,1.7s
ZAK Zakamensk 27.15 48 *e*P **P 04 47 54.0 -1.4**
ZAK 04 48 20.3
ZAK pmax pmax
comp=Z,2.0nm,0.8s
VSR Storozhevoye 27.36 314 *e*P **P 04 47 57.6 +0.4**
VSR *e**PP **pP 04 48 21.7 +2.6**
VSR *e*S **S 04 52 24.8 -4.9**
VSR pmax pmax
comp=N,6.0nm,1.0s
VSR pmax pmax
comp=Z,10.0nm,1.0s
VSR pmax pmax
comp=E,4.0nm,0.5s
VSR smax smax
comp=N,30nm,1.2s
VSR smax smax
comp=Z,4.0nm,1.4s
VSR smax smax
comp=E,8.0nm,0.6s
CD2 Chengdu 27.59 91 P **P 04 48 00.0 +0.4**
CD2 pP **pP 04 48 21.0 -0.5**
CD2 sP **sP 04 48 32.3 -0.7**
CD2 PP **PnPn 04 48 51.5 +1.1**
CD2 S **S 04 52 32.0 -1.9**
CD2 sS **sS 04 53 08.5 -3.7**
CD2 SS **SnSn 04 53 56.5 +0.9**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.0s
SONM Songino Array 28.45 55 P **P 04 48 09.1 +2.0**
SONM Songino Array 28.45 55 P **P 04 48 09.1 +2.0**
comp=Z,2.6nm,0.8s,baz=259,slow=9.8,SNR=20
KMI Kunming 29.18 103 P **P 04 48 14.5 +0.6**
KMI pP **pP 04 48 36.0 0.0**
KMI sP **sP 04 48 45.5 -2.0**
KMI pmax pmax
comp=Z,5.0nm,1.0s
MMAI Mount Meron Ar 29.51 275 P **P 04 48 16.1 -0.5**
MMAI Mount Meron Ar 29.51 275 P **P 04 48 16.1 -0.5**
comp=Z,1.3nm,0.6s,baz=74,slow=9.8,SNR=5.0
BR131 Keskin Array S 29.68 288 *e*P **P 04 48 18.4 +0.3**
comp=Z,2.1nm,0.7s
BRTR Keskin Array B 29.68 288 P **P 04 48 18.1 0.0**
BRTR Keskin Array B 29.68 288 P **P 04 48 18.1 0.0**
comp=Z,2.6nm,0.7s,baz=97,slow=9.2,SNR=12
CMAR Chiang Mai Arr 30.16 118 P **P 04 48 22.9 +0.5**
CMAR Chiang Mai Arr 30.16 118 P **P 04 48 22.9 +0.5**
comp=Z,0.8nm,0.3s,baz=305,slow=7.7,SNR=5.8
OBN Obninsk 30.31 320⇓ *e*P **P 04 48 25.2 +1.9**
OBN *e**PP **pP 04 48 46.2 +0.8**
OBN *e* 04 49 25.7
OBN *e*S S 04 53 08.8 -7.2
OBN pmax pmax
comp=Z,7.0nm,0.4s
GYA Guiyang 31.68 98 *e*P **P 04 48 35.5 -0.4**
GYA pmax pmax
comp=Z,10.0nm,0.9s
HHC Hu-ho-hao-te 31.78 69 *e*P **P 04 48 36.3 -0.2**
HHC sP **sP 04 49 10.0 -0.2**
HHC PP **PnPn 04 49 44.3 -0.3**
HHC PcP **PcP 04 51 27.0 +1.5**
HHC S **S 04 53 37.0 -2.5**
HHC sS **sS 04 54 16.0 -2.0**
HHC ScP **ScP 04 55 00.3 +0.5**
HHC PcS **PcS 04 55 09.8 -0.4**
HHC SS **SnSn 04 55 33.0 -4.0**
HHC ScS **ScS 04 58 56.3 -2.0**
HHC pmax pmax
comp=Z,37nm,0.6s
HHC pmax pmax
comp=Z,150nm,6.3s
HHC LR LR
comp=N,360nm,13.9s
HHC LR LR
comp=E,690nm,15.9s
HHC LR LR
comp=Z,150nm,14.4s
AKASG Malin Array Be 33.29 309 P **P 04 48 49.5 0.0**
AKASG pmax pmax
comp=Z,6.0nm,0.6s
AKASG Malin Array Be 33.29 309 P **P 04 48 49.5 0.0**
AKASG Malin Array Be 33.29 309 P **P 04 48 49.5 0.0**
comp=Z,5.7nm,0.6s,baz=82,slow=7.4,SNR=23
AK02 Malin Array Si 33.29 309 *e*P **P 04 48 49.9 +0.4**
AK01 Malin Array Si 33.29 309 *e*P **P 04 48 49.3 -0.2**
KIEV Kiev 33.30 309 *e*P **P 04 48 50.5 +1.0**
KIEV pmax pmax
comp=Z,9.0nm,0.6s
KIEV Kiev 33.30 309 *e*P **P 04 48 50.5 +1.0**
comp=Z,8.7nm,0.6s
CFR Carcaliu 33.54 299⇑ *i*P **P 04 48 54.2 +2.5**
VRI Vrincioaia 34.53 300⇓ *i*P P 04 49 10.1 +10
PLOR Plostina 34.59 300⇑ *i*P **P 04 49 02.8 +2.0**
TESR 34.60 301⇑ *i*P **P 04 49 02.6 +1.8**
MLR Muntele Rosu 35.08 300⇑ *i*P **P 04 49 07.7 +2.5**
BJI Beijing 35.37 70 P **P 04 49 06.5 -1.0**
BURAR Bucovina Array 35.60 303⇑ *i*P **P 04 49 10.6 +1.0**
BUR08 Bucovina Ar. S 35.62 303 *e*P **P 04 49 11.1 +1.4**
JOF Joensuu 36.27 330 *e*P **P 04 49 14.6 -0.3**
JOF pmax pmax
comp=Z,7.0nm,0.6s
JOF Joensuu 36.27 330 *ep* **P 04 49 14.6 -0.3**
comp=Z,7.4nm,0.6s
WHN Wuhan 36.29 86 *e*P **P 04 49 12.5 -3.0**
APE Apeiranthos 36.38 285⇓ *i*P **P 04 49 16.5 +0.2**
LOT Lotru 36.61 300⇓ *i*P **P 04 49 19.9 +1.6**
DRGR 37.31 302⇑ *i*P P 04 49 27.9 +3.8
GZR Gura Zlata 37.31 300⇑ *i*P P 04 49 27.7 +3.6
KWP Kalwaria Pacla 37.34 307 *e*P **P 04 49 25.4 +1.2**
KWP pmax pmax
comp=Z,11nm,0.6s
KWP Kalwaria Pacla 37.34 307 *e*P **P 04 49 25.4 +1.2**
comp=Z,11nm,0.6s
KWP Kalwaria Pacla 37.34 307⇑ *i*P **P 04 49 25.8 +1.6**
KWP Kalwaria Pacla 37.34 307 *e*P P 04 49 27.7 +3.5
KOLS Kolonicke sedl 37.60 305 *e*P P 04 49 29.8 +3.3
KOLS pmax pmax
comp=Z,4.0nm,0.8s
KOLS Kolonicke sedl 37.60 305 *e*P P 04 49 29.8 +3.3
KOLS *e*PP **PnPn 04 50 57.6 +1.5**
FIA1 FINESS Array S 37.87 326 *e*P **P 04 49 28.8 +0.3**
FINES FINESS Array B 37.87 326 P **P 04 49 29.3 +0.8**
FINES FINESS Array B 37.87 326 P **P 04 49 29.3 +0.8**
comp=Z,4.9nm,0.6s,baz=115,slow=9.0,SNR=16
FINES LR LR 05 04 53.1
comp=Z,33nm,20.9s,baz=215,slow=36
QIZ Qiongzhong 37.99 106 P **P 04 49 29.3 -0.7**
QIZ pP **pP 04 49 50.0 -2.6**
QIZ S **S 04 55 15.0 0.0**
QIZ pmax pmax
comp=Z,290nm,3.8s
KAF Kangasniemi 38.02 327 *e*P **P 04 49 28.4 -1.3**
KAF pmax pmax
comp=Z,2.0nm,0.6s
KAF Kangasniemi 38.02 327 *ep* **P 04 49 28.4 -1.3**
comp=Z,2.3nm,0.6s
CRVS Cervenica-Dubn 38.14 305 *e*PP PP 04 51 03.4 +3.5
OJC Ojcow 39.24 308 *e*P **P 04 49 43.2 +3.1**
OJC Ojcow 39.24 308 *e*P **P 04 49 43.2 +3.1**
NJ2 Nanjing 39.40 82 *e*P **P 04 49 41.8 +0.1**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
VYHS Vyhne 39.88 305 *e*P P 04 49 48.7 +3.2
VYHS Vyhne 39.88 305 *e*P P 04 49 48.7 +3.2
MORC Moravsky Berou 40.70 307 *e*P **P 04 49 53.2 +1.0**
MORC pmax pmax
comp=Z,7.0nm,0.7s
MORC Moravsky Berou 40.70 307 *e*P **P 04 49 53.2 +1.0**
comp=Z,6.5nm,0.7s
MORC Moravsky Berou 40.70 307⇓ *i*P **P 04 49 53.5 +1.3**
KEV Kevo 41.20 338 *e*P **P 04 49 55.4 -0.6**
KEV pmax pmax
comp=Z,4.0nm,0.7s
KEV Kevo 41.20 338 *ep* **P 04 49 55.4 -0.6**
comp=Z,4.0nm,0.7s
DPC Dobruska-Polom 41.47 308 *e*P **P 04 49 59.6 +1.1**
DPC Dobruska-Polom 41.47 308 *e*P **P 04 49 58.9 +0.4**
comp=Z,9.9nm,0.7s
DPC Dobruska-Polom 41.47 308 *e*P **P 04 49 59.6 +1.1**
DPC *ex* x 04 50 02.2
ARCES ARCESS Array B 41.55 338 P **P 04 49 59.2 +0.3**
ARCES ARCESS Array B 41.55 338 P **P 04 49 59.2 +0.3**
comp=Z,7.1nm,0.7s,baz=116,slow=8.3,SNR=38
ARCES LR LR 05 08 19.5
comp=Z,42nm,20.2s,baz=307,slow=38
ARE0 ARCESS Array S 41.55 338 *e*P **P 04 49 59.9 +1.0**
ARE0 ARCESS Array S 41.55 338 *e*P **P 04 49 59.8 +1.0**
UPC Upice 41.66 308 *e*P P 04 50 03.5 +3.4
UPC Upice 41.66 308 *e*P P 04 50 03.5 +3.4
CN2 Changchun 41.67 62 *e*P **P 04 50 00.0 -0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CONA Conrad Observa 41.90 304⇑ *i*P **P 04 50 03.1 +1.0**
comp=Z,6.2nm,0.8s
CONA Conrad Observa 41.90 304⇑ *i*P **P 04 50 03.1 +1.0**
comp=Z,6.2nm,0.9s
KTK1 Kautokeino 42.02 336 *e*P **P 04 50 02.3 -0.4**
KTK1 AMB AMB 04 50 05.8
comp=Z,38nm,1.0s
BRG Berggiesshubel 42.96 309 *e*P **P 04 50 11.2 +0.6**
BRG pmax pmax
comp=Z,4.0nm,0.8s
BRG pmax pmax
comp=Z,10.0nm,0.7s
GERES GERESS Array B 43.26 306 P **P 04 50 12.5 -0.6**
GERES GERESS Array B 43.26 306 P **P 04 50 12.5 -0.6**
comp=Z,1.1nm,0.7s,baz=90,slow=8.0,SNR=6.9
GERES LR LR 05 11 30.6
comp=Z,32nm,18.0s,baz=264,slow=40
CLL Collm 43.53 309 *i* P **P 04 50 17.6 +2.4**
CLL pmax pmax
comp=Z,5.0nm,0.7s
CLL Collm 43.53 309 *i* (P) **P 04 50 17.6 +2.4**
comp=Z,5.0nm,0.7s
TRO Tromso 43.67 336 *e*P **P 04 50 17.2 +1.2**
TRO AMB AMB 04 50 19.2
comp=Z,24nm,1.3s
MOR8 Moi Rana 44.21 331 *e*P **P 04 50 20.5 0.0**
MOR8 AMB AMB 04 50 22.7
comp=Z,22nm,0.9s
STEI Steigen 44.37 333 *e*P **P 04 50 24.4 +2.8**
STEI AMB AMB 04 50 29.2
comp=Z,22nm,1.3s
NB2 NORSAR Subarra 44.76 323 P **P 04 50 24.5 -0.4**
baz=97,slow=7.9
NB2 NORSAR Subarra 44.76 323 P **P 04 50 24.5 -0.4**
comp=Z,6.1nm,0.6s,baz=97,slow=7.9
NOA NORSAR Array B 44.76 323 P **P 04 50 24.3 -0.7**
NOA NORSAR Array B 44.76 323 P **P 04 50 24.3 -0.7**
comp=Z,5.8nm,0.6s,baz=97,slow=7.8,SNR=34
NOA LR LR 05 10 58.6
comp=Z,15nm,19.1s,baz=320,slow=38
KSAR Wonju Array Be 44.86 71 P **P 04 50 27.8 +1.9**
KSRS Korea Array 44.88 71 P **P 04 50 27.8 +1.7**
comp=Z,5.5nm,1.1s,baz=267,slow=7.4,SNR=9.3
KSRS LR LR 05 13 13.9
comp=Z,16nm,18.2s,baz=207,slow=41
NAO01 NORSAR Array S 44.91 323 *e*P **P 04 50 26.5 +0.5**
comp=Z,11nm,1.0s
FETA Feichten 45.46 303⇑ *i*P **P 04 50 30.4 -0.4**
comp=Z,7.4nm,1.3s
FETA Feichten 45.46 303⇑ *i*P **P 04 50 30.4 -0.4**
comp=Z,7.4nm,1.3s
DAVA Damuels 45.99 304⇓ *i*P **P 04 50 34.7 -0.3**
comp=Z,6.5nm,0.6s
DAVA Damuels 45.99 304⇓ *i*P **P 04 50 34.7 -0.3**
comp=Z,6.5nm,0.6s
CDF Champ du Feu 47.54 306 *e*P **P 04 50 47.3 +0.4**
CDF Champ du Feu 47.54 306 *e*P **P 04 50 47.3 +0.4**
CDF Champ du Feu 47.54 306 *e*P **P 04 50 47.3 +0.4**
PGF Pioggiola 47.56 298 *e*P **P 04 50 45.6 -1.6**
PGF Pioggiola 47.56 298 *e*P **P 04 50 45.6 -1.6**
PGF Pioggiola 47.56 298 *e*P **P 04 50 45.6 -1.6**
HINF Hinteralfeld 47.92 305 *e*P **P 04 50 49.7 -0.1**
HINF Hinteralfeld 47.92 305 *e*P **P 04 50 49.7 -0.1**
HINF Hinteralfeld 47.92 305 *e*P **P 04 50 49.7 -0.1**
HAU Haudompre 48.22 305 *e*P **P 04 50 52.1 0.0**
HAU *e*R
comp=Z,30nm,17.8s
HAU Haudompre 48.22 305 *e*P **P 04 50 52.1 0.0**
HAU Haudompre 48.22 305 *e*P **P 04 50 52.1 0.0**
SBF Sospel 48.36 300 *e*P **P 04 50 52.5 -0.8**
comp=Z,41nm,1.0s
SBF Sospel 48.36 300 *e*P **P 04 50 52.5 -0.8**
SBF pmax pmax
comp=Z,41nm,1.0s
SBF Sospel 48.36 300 *e*P **P 04 50 52.5 -0.8**
comp=Z,41nm,1.0s
LPG La Plagne 48.46 302 *e*P **P 04 50 54.6 +0.3**
comp=Z,14nm,0.9s
LPG La Plagne 48.46 302 *e*P **P 04 50 54.6 +0.3**
LPG pmax pmax
comp=Z,14nm,0.9s
LPG La Plagne 48.46 302 *e*P **P 04 50 54.6 +0.3**
comp=Z,14nm,0.9s
LPL La Plagne 48.47 302 *e*P **P 04 50 54.4 +0.1**
comp=Z,16nm,1.0s
LPL La Plagne 48.47 302 *e*P **P 04 50 54.4 +0.1**
LPL pmax pmax
comp=Z,16nm,1.0s
LPL La Plagne 48.47 302 *e*P **P 04 50 54.4 +0.1**
comp=Z,16nm,1.0s
JNU Nakatsue 48.56 75 P **P 04 50 56.5 +1.5**
JNU Nakatsue 48.56 75 P **P 04 50 56.5 +1.5**
comp=Z,4.3nm,0.7s,baz=317,slow=1.8,SNR=3.7
MBDF Montbardon 48.62 301 *e*P **P 04 50 55.5 +0.1**
comp=Z,10.0nm,0.6s
MBDF Montbardon 48.62 301 *e*P **P 04 50 55.5 +0.1**
MBDF pmax pmax
comp=Z,10.0nm,0.6s
MBDF Montbardon 48.62 301 *e*P **P 04 50 55.5 +0.1**
comp=Z,10.0nm,0.6s
KMBO Kilima Mbogo 48.67 228 *e*P **P 04 50 57.1 +1.0**
comp=Z,2.5nm,0.7s
KMBO Kilima Mbogo 48.67 228 P **P 04 50 56.3 +0.1**
comp=Z,2.0nm,0.6s,baz=42,slow=13,SNR=7.3
KBS Kingsbay 49.01 347 *e*P **P 04 50 59.1 +1.4**
KBS AMB AMB 04 50 59.6
comp=Z,10nm,0.8s
KBS Kingsbay 49.01 347 *e*P **P 04 50 58.8 +1.1**
KBS pmax pmax
comp=Z,8.0nm,0.8s

KBS Kingsby 49.01 347 eP P 04 50 58.8 +1.1
comp=Z,7.8nm,0.8s
ORIF Oris-en-Rattie 49.19 301 eP P 04 50 59.3 -0.4
ORIF eR
comp=Z,35nm,21.2s
ORIF Oris-en-Rattie 49.19 301 eP P 04 50 59.3 -0.4
ORIF Oris-en-Rattie 49.19 301 eP P 04 50 59.3 -0.4
BAIF Baives 49.23 308 eP P 04 51 00.7 +0.9
BAIF Baives 49.23 308 eP P 04 51 00.7 +0.9
BAIF Baives 49.23 308 eP P 04 51 00.7 +0.9
KEST Kesra 49.28 289 eP P 04 51 00.9 +0.4
KEST Kesra 49.28 289 eP P 04 51 01.3 +0.9
comp=Z,2.3nm,0.9s,baz=34,slow=5.1,SNR=5.6
SMRF Simiane la Rot 49.63 300 eP P 04 51 02.6 -0.4
SMRF Simiane la Rot 49.63 300 eP P 04 51 02.6 -0.4
LOR Lormes 50.02 305 eP P 04 51 06.0 +0.2
comp=Z,10nm,1.0s
LOR eR
comp=Z,34nm,19.8s
LOR Lormes 50.02 305 eP P 04 51 06.0 +0.2
comp=Z,10nm,1.0s
VIVF Saint-Julien-l 50.04 302 eP P 04 51 05.3 -0.7
comp=Z,9.9nm,0.8s
VIVF Saint-Julien-l 50.04 302 eP P 04 51 05.3 -0.7
VIVF pmax pmax
comp=Z,10.0nm,0.8s
VIVF Saint-Julien-l 50.04 302 eP P 04 51 05.3 -0.7
comp=Z,9.9nm,0.8s
SMF Signal de Mont 50.17 304 eP P 04 51 06.9 -0.1
comp=Z,7.6nm,0.8s
SMF Signal de Mont 50.17 304 eP P 04 51 06.9 -0.1
SMF pmax pmax
comp=Z,8.0nm,0.8s
SMF Signal de Mont 50.17 304 eP P 04 51 06.9 -0.1
comp=Z,7.6nm,0.8s
SSF Saint Saulge 50.30 305 eP P 04 51 08.4 +0.5
SSF Saint Saulge 50.30 305 eP P 04 51 08.4 +0.5
SSF Saint Saulge 50.30 305 eP P 04 51 08.4 +0.5
AVF Avril sur Loir 50.47 304 eP P 04 51 08.3 -0.9
AVF Avril sur Loir 50.47 304 eP P 04 51 08.3 -0.9
AVF Avril sur Loir 50.47 304 eP P 04 51 08.3 -0.9
BGF Bois d'Agland 50.86 304 eP P 04 51 11.0 -1.1
BGF Bois d'Agland 50.86 304 eP P 04 51 11.0 -1.1
BGF Bois d'Agland 50.86 304 eP P 04 51 11.0 -1.1
TCF Toulx Ste Croi 51.35 304 eP P 04 51 15.5 -0.4
TCF Toulx Ste Croi 51.35 304 eP P 04 51 15.5 -0.4
TCF Toulx Ste Croi 51.35 304 eP P 04 51 15.5 -0.4
CAF Calviac 51.81 302 eP P 04 51 18.9 -0.4
comp=Z,6.2nm,0.6s
CAF Calviac 51.81 302 eP P 04 51 18.9 -0.4
CAF pmax pmax
comp=Z,6.0nm,0.6s
CAF Calviac 51.81 302 eP P 04 51 18.9 -0.4
comp=Z,6.2nm,0.6s
LDF La Druitiere 52.31 307 eP P 04 51 22.1 -0.8
comp=Z,37nm,1.2s
LDF La Druitiere 52.31 307 eP P 04 51 22.1 -0.8
LDF pmax pmax
comp=Z,37nm,1.2s
LDF La Druitiere 52.31 307 eP P 04 51 22.1 -0.8
comp=Z,37nm,1.2s
LFF La Frestale 52.71 303 eP P 04 51 25.2 -0.7
LFF La Frestale 52.71 303 eP P 04 51 25.2 -0.7
LFF La Frestale 52.71 303 eP P 04 51 25.2 -0.7
GRR Gorron 52.84 307 eP P 04 51 26.4 -0.4
GRR Gorron 52.84 307 eP P 04 51 26.4 -0.4
GRR Gorron 52.84 307 eP P 04 51 26.4 -0.4
MJAR Matsushiro Arr 52.97 68 P P 04 51 29.1 +1.1
MJAR Matsushiro Arr 52.97 68 P P 04 51 29.1 +1.1
comp=Z,2.4nm,0.7s,baz=283,slow=10,SNR=7.4
SGMF Saint Gilles 53.97 308 eP P 04 51 34.9 -0.1
comp=Z,28nm,1.1s
SGMF Saint Gilles 53.97 308 eP P 04 51 34.9 -0.1
SGMF pmax pmax
comp=Z,28nm,1.0s
SGMF Saint Gilles 53.97 308 eP P 04 51 34.9 -0.1
comp=Z,28nm,1.0s
ETSF Etsaut 54.22 301 eP P 04 51 36.5 -0.6
comp=Z,10nm,0.8s
ETSF Etsaut 54.22 301 eP P 04 51 36.5 -0.6
ETSF pmax pmax
comp=Z,10.0nm,0.8s
ETSF Etsaut 54.22 301 eP P 04 51 36.5 -0.6
comp=Z,10nm,0.8s
DAG Danmarks Havn 55.13 344 iP P 04 51 43.8 +0.8
DAG pmax pmax
comp=Z,3.0nm,0.8s
DAG Danmarks Havn 55.13 344 iP P 04 51 43.8 +0.8
comp=Z,3.5nm,0.8s
TAM Tamanrasset 57.70 276 eP P 04 52 01.6 -0.7
TAM pmax pmax
comp=Z,2.0nm,0.8s
TAM Tamanrasset 57.70 276 eP P 04 52 01.6 -0.7
comp=Z,1.9nm,0.8s
ESDC Sonseca Array 57.75 298 P P 04 52 00.6 -1.6
ESDC Sonseca Array 57.75 298 P P 04 52 00.6 -1.6
comp=Z,0.2nm,0.3s,baz=52,slow=8.6,SNR=4.5
BILL Bilibino 58.90 26‖ eP P 04 52 09.7 0.0
BILL e*PP pP 04 52 32.2 -1.7
BILL eS S 05 00 08.0 +0.5
BILL eSS SS 05 03 59.3 -2.5
BILL pmax pmax
comp=Z,31nm,0.7s
SUMG Summit 61.47 341 eP P 04 52 29.5 +1.9
SUMG pmax pmax
comp=Z,19nm,1.2s
SUMG Summit 61.47 341 eP P 04 52 29.5 +1.9
comp=Z,19nm,1.2s
SUMG Summit 61.47 341 iP P 04 52 25.6 -2.0
comp=Z,7.0nm,0.8s
LSZ Lusaka 65.28 226 eP P 04 52 53.3 +0.1
comp=Z,1.8nm,0.7s
TOA0 Torodi Ar. Sit 65.84 269 eP P 04 52 54.8 -2.0
TORD Torodi Ar. Bea 65.84 269 P P 04 52 54.8 -2.0
TORD Torodi Ar. Bea 65.84 269 P P 04 52 54.8 -2.0
comp=Z,4.6nm,0.8s,baz=48,slow=5.7,SNR=59
COLD Coldfoot 72.30 16 eP P 04 53 36.5 +0.6
comp=Z,6.4nm,1.0s
LBTB Lobatse 74.48 222 eP P 04 53 50.0 +0.6
comp=Z,27nm,1.2s
COLA College 74.81 16 eP P 04 53 51.2 +0.7
COLA pmax pmax
comp=Z,6.0nm,0.8s
COLA College 74.81 16 eP P 04 53 51.2 +0.7
comp=Z,6.2nm,0.8s
ILAR Eielson Array 75.11 16 P P 04 53 52.4 0.0
ILAR Eielson Array 75.11 16 P P 04 53 52.4 0.0
comp=Z,2.1nm,0.8s,baz=321,slow=4.7,SNR=25
LIC Lamto 75.20 267 eP P 04 53 52.5 -1.2
comp=Z,8.4nm,0.7s
LIC Lamto 75.20 267 eP P 04 53 52.5 -1.2
comp=Z,8.4nm,0.7s
MCK McKinley 75.53 17 eP P 04 53 55.0 +0.2
MCK pmax pmax
comp=Z,3.0nm,0.5s
MCK McKinley 75.53 17 eP P 04 53 55.0 +0.2
comp=Z,2.9nm,0.5s
PAX Paxson 76.99 16 eP P 04 54 03.0 -0.1
PAX pmax pmax
comp=Z,4.0nm,0.7s
PAX Paxson 76.99 16 eP P 04 54 03.0 -0.1
comp=Z,4.1nm,0.7s
BOSA Boshof 77.54 220 eP P 04 54 06.8 +0.2
comp=Z,20nm,1.0s
BOSA Boshof 77.54 220 P P 04 54 07.1 +0.5
comp=Z,18nm,0.9s,baz=52,slow=5.2,SNR=19
BMRM Bremner River 78.94 17 eP P 04 54 14.6 +0.7
comp=Z,5.2nm,0.9s
KDAK Kodiak Island 79.50 22 P P 04 54 17.2 +0.3
KDAK Kodiak Island 79.50 22 P P 04 54 17.2 +0.3
comp=Z,8.2nm,0.9s,baz=205,slow=2.2,SNR=4.6
PNL Peninsula 81.27 15 eP P 04 54 27.3 +0.9
comp=Z,7.6nm,0.9s
YKW3 Yellowknife Ar 81.55 3 eP P 04 54 27.1 -0.7
YKA Yellowknife Ar 81.62 3 P P 04 54 28.6 +0.5
YKA PKKPbc PKKPbc 05 12 58.0 -2.1
YKA Yellowknife Ar 81.62 3 P P 04 54 28.6 +0.5
comp=Z,2.5nm,0.6s,baz=348,slow=5.3,SNR=84
YKA PKKPbc PKKPbc 05 12 57.9 -2.1
comp=Z,0.1nm,0.7s,baz=166,slow=1.9,SNR=6.6
WRA Warramunga Arr 81.68 122 P P 04 54 29.1 -0.1
WRA Warramunga Arr 81.68 122 P P 04 54 29.1 -0.1
comp=Z,2.0nm,0.5s,baz=325,slow=4.9,SNR=37
WRAB Tennant Creek 81.68 122 eP P 04 54 28.9 -0.2
WRAB pmax pmax
comp=Z,6.0nm,0.9s
WRAB Tennant Creek 81.68 122 eP P 04 54 28.9 -0.2
comp=Z,5.9nm,0.9s
SUR Sutherland 82.85 221 eP P 04 54 36.7 +1.5
comp=Z,45nm,1.4s
ASAR Alice Springs 83.93 125 P P 04 54 40.9 +0.1
ASAR Alice Springs 83.93 125 P P 04 54 40.9 +0.1
comp=Z,3.1nm,0.9s,baz=323,slow=5.6,SNR=21
CFAA Coronel Fontan 146.16 266 PKPbc PKPdf 05 01 49.7 +0.4
CFAA Coronel Fontan 146.16 266 PKPbc PKPdf 05 01 49.7 +0.4
comp=Z,0.5nm,0.8s,baz=79,slow=2.0,SNR=17
PLCA Paso Flores 149.82 249 PKPbc PKPbc 05 02 00.5 +0.5
PLCA PKPab PKPab 05 02 05.8 0.0
PLCA Paso Flores 149.82 249 PKPbc PKPbc 05 02 00.5 +0.5
comp=Z,2.4nm,0.9s,baz=142,slow=3.0,SNR=4.6
PLCA PKPab PKPab 05 02 05.8 0.0
comp=Z,1.7nm,0.9s,baz=255,slow=8.9,SNR=2.9

MEX 29 04:46:07.0±0.5, 17.18N×100.76W, h4km±3km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.49	106	eP	Pg	04 46 15.9	-0.6
CAIG				*i* S	Sg	04 46 23.5	+0.6
ZIIG	Zihuatanejo	0.79	302	eP	Pg	04 46 21.0	-1.2
ZIIG				*i* S	Sg	04 46 31.7	-0.9
ACX	Acapulco	0.92	110	*i* P	Pg	04 46 22.4	-2.4
ACX				*i* S	Sg	04 46 33.4	-3.3
ARIG	Puente Sto Nin	1.16	20	eP	Pg	04 46 25.9	-3.5
ARIG				eS	Sg	04 46 40.9	-3.7
MEIG	Mezcala	1.32	56	eP	Pn	04 46 28.8	-3.5
MEIG				*i* S	Sg	04 46 45.5	-4.2
YAIG	Yautepec	2.32	44	eP	Pn	04 46 42.6	-3.6
YAIG				*i* S	Sn	04 47 11.1	-4.4
PNIG	Pinotepa	2.65	107	*i* P	Pn	04 46 47.4	-3.1
PNIG				*i* S	Sn	04 47 18.7	-4.4

*ISK **29** 04:58:28.8, 39.47N×28.04E, h15km, MD2.7*
*ISCJB **29** 04:58:29.9±0.5, 39.49N±0.03×28.06E±0.03, h3km±6km, Error ellipse: s-maj=5.2km s-min=3.9km az=41.1*
*CSEM **29** 04:58:30.0±0.3, 39.49N×28.04E, h5km, MD2.7, Error ellipse: s-maj=6.4km s-min=4.3km az=50.0*
*DDA **29** 04:58:30.2, 39.54N×28.04E, h7km, MD2.8*

ISC 29 04:58:29.8±1.2, 39.46N±0.03×28.03E±0.02, h1km±14km, n30, σ0.53/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	Balikesir	0.21	326	ePG	Pg	04 58 34.1	+0.2
BALB				eSG	Sg	04 58 37.8	+1.1
BALB	Balikesir	0.21	326	ePg	Pg	04 58 34.1	+0.2
BALB				eSg	Sg	04 58 37.8	+1.1
DURS	Dursunbey	0.37	68	*i* P	Pg	04 58 36.9	+0.1
DURS				*i* S	Sg	04 58 41.5	-0.1
DURS	Dursunbey	0.37	68	*i* P	Pg	04 58 36.9	+0.1
DURS				*i* S	Sg	04 58 41.5	-0.1
BALY	Balya	0.42	311	*i* P	Pg	04 58 38.0	+0.1
BALY				*i* S	Sg	04 58 43.9	+0.5
BALY	Balya	0.42	311	*i* P	Pg	04 58 38.0	+0.1
BALY				*i* S	Sg	04 58 43.9	+0.5
DST	Dursunbey	0.47	72	ePG	Pg	04 58 38.4	-0.5
DST				eSG	Sg	04 58 45.5	+0.5
DST	Dursunbey	0.47	72	ePg	Pg	04 58 38.4	-0.5
DST				eSg	Sg	04 58 45.5	+0.5
AKHS	Akhisar	0.61	196	*i* P	Pg	04 58 38.3	-3.1
AKHS				*i* S	Sb	04 58 52.5	+0.3
AKHS	Akhisar	0.61	196	*i* P	Pg	04 58 38.3	-3.1
AKHS				*i* S	Sb	04 58 52.5	+0.3
AKS	Akhisar	0.61	197	ePG	Pg	04 58 40.9	-0.5
AKS	Akhisar	0.61	197	ePg	Pg	04 58 40.9	-0.5
GONE	Gonen-Balikesi	0.64	335	ePG	Pg	04 58 41.0	-1.1
GONE	Gonen-Balikesi	0.64	335	ePg	Pg	04 58 41.0	-1.1
DEMI	Demirci	0.68	128	*i* P	Pb	04 58 43.9	-0.4
DEMI	Demirci	0.68	128	*i* P	Pb	04 58 43.9	-0.4
KCTX	Karacabey (Bur	0.84	17	ePG	Pg	04 58 45.2	-0.7
KCTX	Karacabey (Bur	0.84	17	ePg	Pg	04 58 45.2	-0.7
MANT	Manisa	1.05	157	*i* P	Pn	04 58 52.0	+0.2
MANT				*i* S	Sb	04 59 05.2	-0.1
MANT	Manisa	1.05	157	*i* P	Pn	04 58 52.0	+0.2
MANT				*i* S	Sb	04 59 05.2	-0.1
KULA	Kula-Manisa	1.06	153	ePG	Pg	04 58 49.9	-0.3
KULA	Kula-Manisa	1.06	153	ePg	Pg	04 58 49.9	-0.3
TVSB	Tavsanli	1.10	90	ePN	Pg	04 58 50.7	-0.3
TVSB				eSN	Sg	04 59 05.7	+0.4
TVSB	Tavsanli	1.10	90	ePn	Pg	04 58 50.7	-0.3
TVSB				eSn	Sg	04 59 05.7	+0.4
GDZ	Gediz	1.18	108	*i* P	Pn	04 58 53.9	+0.4
GDZ	Gediz	1.18	108	*i* P	Pn	04 58 53.9	+0.4
SART	Tekirdag	1.39	332	*i* P	Pb	04 58 56.4	-0.2
SART				*i* S	Sg	04 59 13.6	-0.8
SART	Tekirdag	1.39	332	*i* P	Pb	04 58 56.4	-0.2
SART				*i* S	Sg	04 59 13.6	-0.8
BORA	Eskisehir	1.91	77	*i* P	Pb	04 59 05.4	-0.1
BORA				*i* S	Sg	04 59 32.2	+1.0
BORA	Eskisehir	1.91	77	*i* P	Pb	04 59 05.4	-0.1

*IDC **29** 05:27:02.9±6.7, 0.90N×126.20E, h33km±54km, mb4.0/11, mb1 4.2/13, mb1mx3.9/24, mbtmp4.0/13, ML3.9/2, MS2.8/2, Ms1 2.8/2, ms1mx2.2/28, Error ellipse: s-maj=27.1km s-min=13.8km az=81.0*
*ISCJB **29** 05:27:04.5±0.5, 0.91N±0.05×126.11E±0.03, h70km±6km, mb4.1/11, Error ellipse: s-maj=8.1km s-min=5.3km az=167.1*
*DJA **29** 05:27:04.3±0.8, 1.1N±3.1×126.6E±1.1, h17km±11km, M4.4/9, mb4.6/2, mB5.0/2, MLv4.4/9, Mw(mB)4.2/2*

ISC 29 05:27:05.5±1.0, 0.98N±0.06×126.10E±0.04, h55km±11km, n25, σ1.9×49/30, mb4.3/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.28	99	P	Pn	05 27 25.8	-1.4
TNTI				S	Sn	05 27 44.1	+0.7
MNI	Manado	1.34	290	P	Pn	05 27 27.1	-0.8
MNI				S	Sn	05 27 44.7	0.0
GAMI	Galela, Maluku	1.89	63	P	Pn	05 27 35.2	-0.3
GAMI				S	Sn	05 27 59.6	+1.4
LBMI	Labuha	2.13	139	P	Pn	05 27 38.4	-0.4
LBMI				S	Sn	05 28 07.8	+3.7
KMSI	Cibinong	2.15	259	P	Pn	05 27 38.7	-0.3
KMSI				S	Sn	05 28 05.6	+1.0
SGSI	Sangihe	2.75	348	P	Pn	05 27 45.7	-1.5
LUWI	Luwuk	3.89	239	P	Pn	05 28 04.8	+2.0
MRSI	Marisa	4.19	263	P	Pn	05 28 08.4	+1.5
SKSI	Soroako, Sulaw	5.90	234	P	Pn	05 28 32.1	+1.6
	40nm,0.9s,429nm0.1nm						
TTSI	Tana Toraja	7.44	237	P	Pn	05 28 55.1	+3.5
KAPI	Kappang	8.70	227	Pn	Pn	05 29 07.9	-0.8
	1.5nm,0.3s,baz=315,slow=4.3,SNR=4.3						
KAPI				Sn	Sn	05 30 44.4	-1.1
	0.2nm,0.3s,baz=144,slow=19,SNR=1.6						
KAPI				LR	LR	05 32 43.3	
	comp=Z,87nm,22.0s,baz=197,slow=39						
FITZ	Fitzroy Crossi	18.97	181	P	P	05 31 20.5	-2.0
	0.3nm,0.3s,baz=14,slow=7.8,SNR=8.3						
WRA	Warramunga Arr	22.31	159	P	P	05 31 55.9	-2.7
	4.5nm,0.5s,baz=337,slow=11,SNR=22						
ASAR	Alice Springs	25.65	163	P	P	05 32 28.6	-1.7
	5.6nm,0.5s,baz=343,slow=11,SNR=66						
CMAR	Chiang Mai Arr	31.81	305	P	P	05 33 27.3	+2.0
	0.7nm,0.4s,baz=72,slow=8.6,SNR=4.3						
JNU	Nakatsue	32.28	8	P	P	05 33 29.3	+0.1
	3.7nm,0.5s,baz=194,slow=4.2,SNR=3.1						
STKA	Stephens Creek	35.83	157	P	P	05 33 58.9	-1.1
	2.0nm,0.5s,baz=342,slow=11,SNR=6.4						
KSRS	Korea Array	36.33	2	P	P	05 34 05.2	+1.1
	0.5nm,0.3s,baz=186,slow=10,SNR=4.4						
KSRS				LR	LR	05 48 50.2	
	comp=Z,12nm,21.0s,baz=182,slow=36						
MJAR	Matsushiro Arr	37.12	16	P	P	05 34 09.7	-1.2
	2.7nm,0.7s,baz=192,slow=9.8,SNR=8.2						
USRK	Ussuriysk Arra	43.35	6	P	P	05 35 02.6	+0.3
	2.7nm,0.7s,baz=207,slow=6.9,SNR=7.2						
SONM	Songino Array	49.70	343	P	P	05 35 52.7	+0.5
	0.6nm,0.7s,baz=161,slow=9.4,SNR=4.5						
PETK	Petropavlovsk-	58.20	22	P	P	05 36 54.6	+0.7
	2.0nm,0.6s,baz=242,slow=3.1,SNR=3.8						
MKAR	Makanchi Array	59.46	326	P	P	05 37 02.1	-0.7
	1.1nm,0.4s,baz=119,slow=7.9,SNR=20						
TORD	Torodi Ar. Bea	123.12	286	PKP	PKPdf	05 45 56.6	-0.5
	0.4nm,0.7s,baz=106,slow=2.1,SNR=3.3						
TXAR	Lajitas Array	123.75	53	PKP	PKPdf	05 45 59.0	+0.9
	0.3nm,0.9s,baz=342,slow=5.7,SNR=2.8						

JMA 29 05:40:19.9±0.1, 38.04N×143.65E, h42km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	1.86	284	P	Pn	05 40 50.2	+1.0
JIO				S	Sn	05 41 12.6	+1.1
OFUJ	Ofunato	1.87	304	P	Pn	05 40 50.5	+1.1
JMK	Ichinoseki	2.11	296	P	Pn	05 40 54.2	+1.5
JMK				eS	Sn	05 41 19.2	+1.4
JOM	Ohasama	2.33	309	P	Pn	05 40 57.3	+1.5
JOM				eS	Sn	05 41 24.9	+1.7
JOU	Okura	2.38	279	P	Pn	05 40 57.9	+1.5
JOU				S	Sn	05 41 25.8	+1.5
JFT	Otama	2.68	260	P	Pn	05 41 02.1	+1.6
JFT				eS	Sn	05 41 32.9	+1.2
JRG	Rokugo	2.72	301	P	Pn	05 41 03.0	+1.9
JRG				eS	Sn	05 41 35.1	+2.3
JYK	Kaneyama	2.73	290	P	Pn	05 41 03.0	+1.8
JYK				eS	Sn	05 41 35.1	+2.2
JANG	Nango	2.86	325	P	Pn	05 41 03.9	+0.9
JANG				eS	Sn	05 41 37.1	+0.9
JTM	Tenmabayashi	3.40	325	P	Pn	05 41 10.8	+0.5
JTM				S	Sn	05 41 49.4	+0.1
BSO1	Boso 1	4.01	213	P	Pn	05 41 17.5	-0.6
JRY	Ryogami san	4.30	243	P	Pn	05 41 23.2	+0.3
JRY				S	Sn	05 42 10.0	-1.8
JKB	Kayabe	4.34	333	S	Sn	05 42 11.6	-0.9
JCH	Churui	4.58	357	P	Pn	05 41 26.3	-0.2
JCH				S	Sn	05 42 15.4	-3.0
MAT	Matsushiro	4.59	253	P	Pn	05 41 29.1	+2.3
MAT				S	Sn	05 42 20.1	+1.2
JOD2	Odawara 2	4.60	234	eS	Sn	05 42 16.1	-3.0

KRSC 29 06:16:24.6±0.8, 50.60N×157.53E, h42km±41km, ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.90	276	eP	Pn	06 16 39.6	-1.2
SKR				eS	Sn	06 16 50.4	-2.3
ASAK	Asacha	1.80	7	eP	Pn	06 16 55.0	+1.7
ASAK				S	Sn	06 17 17.6	+2.6
MTVR	Mutnovka	1.93	12	P	Pn	06 16 57.1	+2.0
MTVR				S	Sn	06 17 20.8	+2.5
RUS	Russkaya	1.94	18	P	Pn	06 16 56.7	+1.7
RUS				S	Sn	06 17 19.8	+1.8
GRL	Gorelyy	1.98	10	P	Pn	06 16 58.4	+2.6
GRL				S	Sn	06 17 22.8	+3.2
PET	Petropavlovsk	2.53	16	S	Sn	06 17 36.0	+3.4
UGLR	Uglovaya	2.73	17	P	Pn	06 17 08.8	+2.7
AVH	Avacha	2.77	15	P	Pn	06 17 09.9	+3.3
AVH				S	Sn	06 17 43.4	+4.5
SMAR	Somma	2.78	16	P	Pn	06 17 09.3	+2.4
KOK	Koryaka	2.78	14	P	Pn	06 17 10.1	+3.4
KOK				S	Sn	06 17 42.8	+3.7
SDLR	Sedlovina	2.81	17	P	Pn	06 17 09.3	+2.1
SDLR				S	Sn	06 17 42.5	+2.6
KRER	Koryakskii	2.81	15	P	Pn	06 17 10.2	+2.9
KRER				S	Sn	06 17 43.1	+3.0
SPN	Mys Shipunski	2.94	31	P	Pn	06 17 11.4	+2.6
SPN				S	Sn	06 17 46.2	+3.4
GNL	Ganaly	3.11	5	eP	Pn	06 17 13.4	+2.1
MKZ	Mys Kozlova	4.72	31	P	Pn	06 17 34.4	+1.3
MKZ				S	Sn	06 18 26.7	+0.2

*ISCJB **29** 06:44:12.0±0.7, 6.86N±0.07×72.98W±0.07, h165km±7km, mb3.0/2, Error ellipse: s-maj=13.8km s-min=7.2km az=44.9*
*FUNV **29** 06:44:12.8, 6.76N×73.18W, h151km, MW3.2*
*IDC **29** 06:44:15.3±3.7, 5.69N×73.19W, h244km±233km, mb2.7/2, mb1 3.1/2, mb1mx2.7/21, mbtmp2.7/2, Error ellipse: s-maj=619.7km s-min=78.4km az=7.0*

ISC 29 06:44:12.6±1.0, 6.84N±0.07×73.01W±0.08, h160km±10km, n15, σ1.8×23/23, 3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.23	34‖	*i*P	Pn	06 44 41.5	+1.0
CAPV				eS	Sn	06 45 01.2	-0.8
ROSC	El Rosal	2.37	214	P	Pn	06 44 53.4	+0.4
	38nm,0.3s,baz=341,slow=3.4,SNR=267						
ROSC				S	Sn	06 45 22.2	-2.1
	36nm,0.3s,baz=96,slow=18,SNR=9.6						
VIGV	El Vigia	2.57	39‖	eP	Pn	06 44 56.0	+0.9
VIGV				eS	Sn	06 45 27.6	-0.4
SOCV	Socops	2.57	56‖	eP	Pn	06 44 56.2	+1.2
SOCV				eS	Sn	06 45 28.2	+0.2
ELOV	Elorza	3.51	87	eP	Pn	06 45 07.7	+1.0
ELOV				eS	Sn	06 45 48.1	-0.8
CURV	Curarigua	4.36	44	eP	Pn	06 45 18.2	+0.3
CURV				eS	Sn	06 46 07.6	-1.2
DABV	Dabajuro	4.68	30	eP	Pn	06 45 23.0	+1.0
DABV				eS	Sn	06 46 14.3	-2.0
TEPV	Terepaima	4.89	50	eP	Pn	06 45 25.3	+0.5
SIQV	Siquisique	4.93	40	eP	Pn	06 45 25.4	+0.1
SIQV				eS	Sn	06 46 19.7	-2.5
BAUV	El Baul	5.35	67	eS	Sn	06 46 29.8	-2.1
MAPV	Macapo	5.40	56	eP	Pn	06 45 32.1	+0.7
MONV	Montecano	5.90	30	eP	Pn	06 45 37.8	-0.2
TURV	Turiamo	6.24	55	eP	Pn	06 45 42.5	-0.1
TXAR	Lajitas Array	36.53	312	P	P	06 51 03.7	+0.7
	0.1nm,0.6s,baz=122,slow=9.7,SNR=4.2						
YKA	Yellowknife Ar	63.28	340	P	P	06 54 24.3	+0.3
	0.4nm,0.6s,baz=134,slow=6.6,SNR=22						

IDC 29 06:54:15.5±1.2, 21.10N×146.61E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/27, mbtmp3.7/6, Error ellipse: s-maj=52.3km s-min=22.5km az=91.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.52	197	P	P	07 02 12.5	-0.5
	0.8nm,0.6s,baz=18,slow=9.0,SNR=8.0						
ASAR	Alice Springs	46.19	196	P	P	07 02 42.8	+0.5
	0.1nm,0.3s,baz=16,slow=7.2,SNR=3.4						
ZALV	Zalesovo Beam	56.66	321	P	P	07 04 00.6	+0.1
	1.0nm,0.4s,baz=111,slow=6.3,SNR=3.4						
KURBB	Kurchatov Arra	60.14	317	P	P	07 04 25.3	+0.4
	0.2nm,0.3s,baz=94,slow=8.3,SNR=3.5						
YKA	Yellowknife Ar	75.47	28	P	P	07 06 01.8	+0.5
	0.3nm,0.7s,baz=290,slow=6.0,SNR=5.7						
FINES	FINESS Array B	85.07	335	P	P	07 06 52.0	-1.0
	0.5nm,0.4s,baz=35,slow=5.1,SNR=4.1						
TORD	Torodi Ar. Bea	131.56	312	PKP	PKPdf	07 13 30.0	-1.2
	0.5nm,1.0s,baz=29,slow=0.5,SNR=2.6						

IDC 29 07:00:03.3±1.6, 23.14S×170.47E, h0km, mb4.1/9, mb1 4.2/10, mb1mx4.1/18, mbtmp4.0/10, ML3.2/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/29, Error ellipse: s-maj=55.3km s-min=22.7km az=152.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.87	285	Pn	Pn	07 01 02.7	-1.5
	1.6nm,0.3s,baz=114,slow=15,SNR=42						
DZM				LR	LR	07 01 49.8	
	comp=Z,214nm,21.1s,baz=32,slow=28						
URZ	Urewera	16.11	161	LR	LR	07 08 44.6	
	comp=Z,129nm,21.0s,baz=94,slow=32						
RPZ	Rata Peaks	20.53	179	LR	LR	07 11 04.0	
	comp=Z,148nm,18.3s,baz=22,slow=32						
CTA	Charters Tower	22.71	273	LR	LR	07 12 10.6	
	comp=Z,39nm,19.6s,baz=50,slow=32						
STKA	Stephens Creek	26.98	245	P	P	07 05 47.5	+0.6
	1.5nm,0.8s,baz=102,slow=11,SNR=2.9						
STKA				LR	LR	07 15 07.7	
	comp=Z,87nm,20.1s,baz=24,slow=34						
ASAR	Alice Springs	33.50	262	P	P	07 06 44.0	-0.7
	1.7nm

	0.7nm,0.9s,baz=103,slow=9.6,SNR=3.0							
VNDA	**Vanda**	**54.59**	**182**	LR	LR	07 29 02.2		
	comp=Z,50nm,19.3s,baz=92,slow=32							
KSRS	**Korea Array**	**72.36**	**326**	P	P	07 11 32.0	+1.0	
	0.6nm,0.5s,baz=133,slow=5.2,SNR=3.8							
PETK	**Petropavlovsk-**	**76.73**	**352**	P	P	07 11 55.6	-0.5	
	2.7nm,0.8s,baz=126,slow=7.5,SNR=3.7							
PETK				LR	LR	07 43 04.0		
	comp=Z,41nm,18.4s,baz=51,slow=34							
CMAR	**Chiang Mai Arr**	**81.15**	**294**	P	P	07 12 21.5	+0.4	
	1.2nm,0.6s,baz=145,slow=3.8,SNR=5.2							
NVAR	**Mina Array Bea**	**90.53**	**48**	P	P	07 13 07.1	-0.5	
	0.5nm,0.8s,baz=211,slow=5.8,SNR=6.3							
SONM	**Songino Array**	**91.01**	**323**	P	P	07 13 10.2	+0.7	
	1.6nm,1.0s,baz=143,slow=5.2,SNR=4.3							
ILAR	**Eielson Array**	**93.60**	**17**	P	P	07 13 20.2	-0.6	
	1.8nm,0.9s,baz=234,slow=5.9,SNR=17							
GERES	**GERESS Array B**	**148.44**	**330**	PKPbc	PKPbc	07 19 51.4	-0.5	
	1.8nm,0.8s,baz=40,slow=2.3,SNR=14							

IDC 29 07:15:28.5±1.6,5°82S×130°56E, h0km, mb4.1/3, mb1 4.4/6, mb1mx4.0/19, mbtmp4.3/6, ML4.4/3, Error ellipse: s-maj=70.3km s-min=21.0km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.12**	**201**	Pn	Pn	07 18 36.7	+0.5
	2.2nm,0.3s,baz=35,slow=16,SNR=36						
FITZ				Sn	Sn	07 20 52.1	-11
	1.6nm,0.3s,baz=219,slow=22,SNR=6.8						
WRA	**Warramunga Arr**	**14.51**	**166**	Pn	Pn	07 18 54.0	-1.3
	1.5nm,0.3s,baz=348,slow=13,SNR=38						
WRA				Sn	Sn	07 21 26.6	-11
	2.3nm,0.3s,baz=346,slow=21,SNR=11						
ASAR	**Alice Springs**	**18.03**	**170**	P	P	07 19 41.3	0.0
	1.6nm,0.3s,baz=349,slow=13,SNR=51						
ASAR				S	Sn	07 22 53.4	-9.3
	0.5nm,0.3s,baz=354,slow=28,SNR=6.3						
STKA	**Stephens Creek**	**27.90**	**160**	P	P	07 21 20.3	0.0
	0.8nm,0.4s,baz=348,slow=10.0,SNR=3.8						
CMAR	**Chiang Mai Arr**	**39.42**	**308**	P	P	07 23 00.7	+0.1
	0.8nm,0.3s,baz=154,slow=7.7,SNR=5.9						
MKAR	**Makanchi Array**	**67.55**	**326**	P	P	07 26 26.6	-0.2
	1.0nm,0.4s,baz=117,slow=7.4,SNR=17						

*NNC **29** 07:50:54.5±0.5,50°.71N×73°.61E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=9.1km s-min=4.1km az=35.0*
*ISCJB **29** 07:50:55.1±0.4,50°.70N±0°.04×73°.61E±0°.06, h10km, mb3.4/2, Error ellipse: s-maj=7.5km s-min=3.9km az=44.5*
*IDC **29** 07:50:56.2±0.6,50°.82N×73°.65E, h0km, mb3.2/2, mb1 3.5/8, mb1mx3.3/32, mbtmp3.3/8, ML3.3/6, Error ellipse: s-maj=11.3km s-min=6.7km az=42.0*

ISC 29 07:50:56.2±0.7,50°.83N±0°.06×73°.68E±0°.04, h10km, n20, σ1s40/31, 15C-8D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VOSK	**Vostochnaya**	**2.53**	**320**	⇑Pn	**Pn**	**07 51 38.5**	**+1.1**
	7.5nm,0.5s						
VOSK				⇑Sn	**Sb**	**07 52 11.3**	**-1.7**
	32nm,0.7s						
BVA0	**Borovoye Array**	**3.00**	**318**	Pn	**Pn**	**07 51 45.0**	**+1.2**
	0.1nm,0.5s,baz=128,slow=14,SNR=45						
BVA0				⇑Pg	**Pb**	**07 51 48.6**	**-1.2**
	0.5nm,0.3s,baz=142,slow=16,SNR=10						
BVA0				⇑Lg	Lg	07 52 28.0	
	3.8nm,0.5s,baz=129,slow=26,SNR=7.4						
BVAR	**Borovoye Array**	**3.00**	**318**	Pn	**Pn**	**07 51 45.1**	**+1.3**
	2.8nm,0.3s,baz=129,slow=17,SNR=20						
BVAR				Sn	**Sn**	**07 52 21.9**	**+2.1**
	4.9nm,0.3s,baz=122,slow=21,SNR=6.9						
BVAR				Lg	Lg	07 52 34.0	
	8.7nm,0.3s,baz=120,slow=27,SNR=13						
KUR17	**Kurchatov Arra**	**3.05**	**92**	⇓Pn	**Pn**	**07 51 46.2**	**+1.7**
	0.4nm,0.6s						
KUR17				⇓Pg	**Pb**	**07 51 50.2**	**-0.4**
	0.6nm,0.5s						
BRVK	**Borovoye**	**3.07**	**318**	Pn	**Pn**	**07 51 45.5**	**+0.8**
BRVK				Pg	**Pb**	**07 51 50.0**	**-0.9**
BRVK				Lg	Lg	07 52 30.9	
KUR16	**Kurchatov Arra**	**3.07**	**92**	⇑Lg	Lg	07 52 30.8	
	1.9nm,0.7s						
KURBB	**Kurchatov Arra**	**3.09**	**92**	Pn	**Pn**	**07 51 46.7**	**+1.7**
	0.5nm,0.3s,baz=279,slow=14,SNR=38						
KURBB				Lg	Lg	07 52 33.7	
	1.6nm,0.3s,baz=278,slow=30,SNR=10						
KURK	**Kurchatov**	**3.14**	**90**	⇑Pn	**Pn**	**07 51 47.3**	**+1.6**
	3.1nm,0.6s						
KURK				⇓Pg	**Pb**	**07 51 51.6**	**-0.5**
	7.4nm,0.5s						
KURK				⇑Lg	Lg	07 52 32.4	
	44nm,0.6s						
ZRNK	**Zerenda**	**3.59**	**308**	⇑Pn	**Pn**	**07 51 52.8**	**+0.9**
	1.5nm,0.3s						
ZRNK				⇑Pg	**Pb**	**07 52 00.4**	**+0.5**
	3.7nm,0.4s						
ZRNK				⇑Sn	**Sn**	**07 52 37.2**	**+2.8**
	5.8nm,0.5s						
ZRNK				⇑Lg	Lg	07 52 47.3	
	48nm,0.9s						
MK31	**Makanchi Array**	**6.97**	**122**	⇑Pn	**Pn**	**07 52 39.6**	**+1.2**
	0.4nm,0.5s,baz=300,slow=11,SNR=12						
MK31				⇑Pg	Pb	07 53 00.1	+2.7
	1.2nm,0.5s,baz=291,slow=13,SNR=4.2						
MK31				Lg	Lg	07 54 34.5	
	6.2nm,0.6s,baz=311,slow=26,SNR=2.8						
MKAR	**Makanchi Array**	**6.97**	**122**	Pn	**Pn**	**07 52 39.8**	**+1.4**
	0.2nm,0.3s,baz=313,slow=10,SNR=10						
MKAR				Sn	**Sn**	**07 53 57.5**	**-0.2**
	0.2nm,0.3s,baz=312,slow=21,SNR=2.7						
MKAR				Lg	Lg	07 54 35.7	
	1.0nm,0.3s,baz=328,slow=30,SNR=11						
ZALV	**Zalesovo Beam**	**7.50**	**61**	Pn	**Pn**	**07 52 46.9**	**+1.4**
	0.4nm,0.3s,baz=249,slow=15,SNR=6.6						
ZALV				Sn	**Sn**	**07 54 07.3**	**-3.3**
	0.2nm,0.3s,baz=242,slow=18,SNR=2.8						
TKM2	**Tokmak 2**	**8.02**	**170**	⇓Pn	**Pn**	**07 52 53.3**	**+0.4**
	2.9nm,1.1s						
TKM2				⇑Lg	Lg	07 55 10.4	
	14nm,0.8s						
KK31	**Karatay Array**	**8.02**	**197**	⇑Pn	**Pn**	**07 52 52.3**	**-0.6**
	0.2nm,0.3s,baz=12,slow=15,SNR=8.5						
AAK	**Ala-Archa**	**8.22**	**176**	Pn	**Pn**	**07 52 55.9**	**+0.3**
	1.1nm,0.3s,baz=346,slow=0.9,SNR=11						
AAK				Sn	**Sn**	**07 54 29.4**	**+0.9**
	0.3nm,0.3s,baz=253,slow=20,SNR=3.6						
AAK				Lg	Lg	07 55 14.9	
	0.4nm,0.3s,baz=232,slow=23,SNR=6.4						
AB31	**Akbulak array**	**8.98**	**265**	⇓Pn	**Pn**	**07 53 05.5**	**-0.4**
	0.3nm,0.3s,baz=79,slow=8.4,SNR=16						
AB31				⇓Lg	Lg	07 55 42.0	
	6.7nm,1.3s,baz=79,slow=29,SNR=3.5						
AKTO	**Aktyubinsk**	**9.96**	**274**	⇓Pn	**Pn**	**07 53 17.6**	**-1.8**
	0.1nm,0.4s						
AKTO				⇓Sn	**Sn**	**07 55 10.2**	**-1.0**
	0.3nm,1.1s						
AKTO	**Aktyubinsk**	**9.96**	**274**	Pn	**Pn**	**07 53 18.4**	**-1.0**
	0.7nm,0.3s,baz=86,slow=12,SNR=9.2						
ILAR	**Eielson Array**	**60.52**	**19**	P	**P**	**08 01 06.6**	**+0.6**
	0.4nm,0.5s,baz=328,slow=5.6,SNR=12						
YKA	**Yellowknife Ar**	**66.83**	**4**	P	**P**	**08 01 47.6**	**0.0**
	0.1nm,0.6s,baz=352,slow=6.8,SNR=5.7						

CSEM 29 08:03:59.8,41°.16N×1°.93E, h0km, ML1.1, Mining explosion. After MDD, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EPOB	**Poblet**	**0.67**	**287**	Pg	Pg	08 04 12.6	-0.2
	6.6nm,0.9s,SNR=18						
EPOB				Lg	Lg	08 04 20.9	
	4.8nm,0.6s,SNR=7.9						
CFON	**Fontmartina**	**0.71**	**32**	Pg	Pg	08 04 13.7	0.0
	2.7nm,0.5s,SNR=9.8						
CFON				Lg	Lg	08 04 22.1	
	2.7nm,0.2s,SNR=9.2						
EMIR	**Miracle**	**0.82**	**338**	Pg	Pg	08 04 13.7	-1.9
	7.5nm,0.8s,SNR=8.7						
EMIR				Lg	Lg	08 04 27.7	
	15nm,0.8s						
CLLI	**Llivia**	**1.32**	**1**	Pg	Pg	08 04 24.4	-1.0
	SNR=7.9						
CLLI				Lg	Lg	08 04 41.8	
	SNR=7.9						
CSOR	**Sort**	**1.36**	**334**	Pg	Pg	08 04 24.9	-1.1
	3.3nm,0.5s,SNR=8.5						
CSOR				Lg	Lg	08 04 43.1	
	5.8nm,0.7s,SNR=5.9						
EJON	**La Jonquera**	**1.48**	**29**	Pg	Pn	08 04 26.3	-1.4
	SNR=7.9						
EJON				Lg	Lg	08 04 45.5	
	SNR=7.9						
ESAC	**San Caprasio**	**1.89**	**288**	Pg	Pn	08 04 32.5	-1.0
	SNR=7.9						

*JMA **29** 08:07:52.9±0.2,24°.84N×122°.34E, h44km, M2.2*
*TAP **29** 08:07:53.4,24°.15N×122°.45E, h61km±1km, ML3.0, C*
*ISCJB **29** 08:07:54.3±0.6,24°.08N±0°.04×122°.40E±0°.02, h30km±5km, Error ellipse: s-maj=6.6km s-min=3.4km az=172.3*

ISC 29 08:07:54.8±1.1,24°.12N±0°.05×122°.40E±0°.03, h30km±12km, n25, σ1s05/39, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.66**	**59**	P	**Pb**	**08 08 06.7**	**-1.1**
YOJ				S	**Sb**	**08 08 16.8**	**+0.1**
ENA	**Nanau**	**0.67**	**297**	P	**Pb**	**08 08 07.9**	**-0.2**
	baz=301						
ENA				*e*S	**Sb**	**08 08 18.4**	**+1.4**
	baz=301						
TWC	**Suao**	**0.70**	**314**	P	**Pn**	**08 08 07.8**	**-0.8**
	baz=310						
TWC				S	**Sb**	**08 08 18.0**	**+0.2**
	baz=310						
TWD	**Chiawan**	**0.73**	**267**	*e*P	**Pn**	**08 08 08.1**	**-1.0**
	baz=258						
TWD				*e*S	**Sn**	**08 08 21.2**	**+1.9**
	baz=258						
TWE	**Neicheng**	**0.89**	**312**	P	**Pn**	**08 08 10.8**	**-0.6**
	baz=305						
TWE				*e*S	**Sn**	**08 08 23.8**	**+0.5**
	baz=305						
ENTT	**Nioudou**	**0.92**	**305**	*e*P	**Pn**	**08 08 11.2**	**-0.4**
	baz=293						
ESL	**Shilin**	**0.93**	**251**	*e*P	**Pn**	**08 08 10.8**	**-1.1**
	baz=250						
NNS	**Nan Shan**	**0.99**	**289**	*e*P	**Pn**	**08 08 11.8**	**-0.9**
	baz=286						
NNS				*e*S	**Sn**	**08 08 26.2**	**+0.5**
	baz=286						
WHF	**Hehuan Shan**	**1.03**	**272**	*e*P	**Pn**	**08 08 13.1**	**-0.6**
	baz=261						
WHF				*e*S	**Sn**	**08 08 27.1**	**-0.2**
	baz=261						
NSK	**Sanguang**	**1.09**	**301**	*e*P	**Pn**	**08 08 13.9**	**-0.3**
	baz=298						
NSK				*e*S	**Sn**	**08 08 28.8**	**+0.5**
	baz=298						
NWF	**Wu-fen Shan**	**1.10**	**330**	*e*P	**Pn**	**08 08 13.2**	**-1.1**
	baz=326						
NWF				*e*S	**Sn**	**08 08 27.9**	**-0.6**
	baz=326						
IRIF	**Iriomote-Funau**	**1.24**	**80**	P	**Pn**	**08 08 16.3**	**+0.3**
IRIF				S	**Sn**	**08 08 32.8**	**+1.1**
TWF1	**Yuli**	**1.26**	**233**	P	**Pn**	**08 08 14.9**	**-1.6**
	baz=245						
TWF1				*e*S	**Sn**	**08 08 30.6**	**-1.9**
	baz=245						
HATJ	**Hateruma jima**	**1.29**	**93**	*e*S	**Sb**	**08 08 37.0**	**+2.4**
CHKT	**Chengkung**	**1.39**	**223**	*e*P	Pn	08 08 15.2	-2.9
	baz=224						
SMLT	**Sun Moon Lake**	**1.39**	**260**	*e*P	**Pn**	**08 08 17.7**	**-0.5**
	baz=260						
TYC	**Yuchr**	**1.42**	**262**	*e*P	**Pn**	**08 08 19.2**	**+0.6**
	baz=260						
TYC				*e*S	**Sn**	**08 08 36.1**	**-0.2**
	baz=260						
JKRS	**Kuro-shima**	**1.48**	**85**	P	Pn	08 08 20.1	+0.7
JKRS				*e*S	**Sb**	**08 08 40.2**	**+0.2**
ELDTW	**Lidau**	**1.57**	**234**	*e*P	Pn	08 08 17.7	-3.0
	baz=227						
ALS	**Alishan**	**1.58**	**248**	*e*P	**Pn**	**08 08 20.5**	**-0.5**
	baz=247						
JIJ	**Ishigaki jima**	**1.61**	**81**	P	**Pn**	**08 08 20.9**	**-0.3**
JIJ				*e*S	**Sn**	**08 08 41.0**	**0.0**
CHN5	**Tsauling**	**1.66**	**252**	*e*P	**Pn**	**08 08 22.3**	**+0.4**
	baz=251						
CHN5				*e*S	**Sn**	**08 08 43.5**	**+1.3**
	baz=251						
TWG	**Pinlang**	**1.77**	**223**	*e*P	**Pn**	**08 08 21.2**	**-2.3**
	baz=232						
CHN4	**Tsaushan**	**1.82**	**245**	*e*P	**Pn**	**08 08 24.7**	**+0.6**
	baz=245						
CHN4				*e*S	**Sn**	**08 08 47.8**	**+1.6**
	baz=245						
WTP	**Ta-pu**	**1.85**	**242**	*e*P	**Pn**	**08 08 25.3**	**+0.7**
	baz=242						
WTP				*e*S	**Sn**	**08 08 48.0**	**+1.0**
	baz=242						

IDC 29 08:11:58.3±0.9,21°.09N×146°.62E, h0km, mb3.8/10, mb1 4.0/10, mb1mx3.8/26, mbtmp3.8/10, MS2.6/1, Ms1 2.6/1, ms1mx2.2/39, Error ellipse: s-maj=31.6km s-min=20.6km az=85.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**7.64**	**193**	LR	LR	08 16 39.4	
	comp=Z,43nm,19.1s,baz=76,slow=37						
KSRS	**Korea Array**	**22.99**	**319**	P	P	08 17 06.0	+1.4
	1.2nm,0.7s,baz=140,slow=8.6,SNR=7.5						
SONM	**Songino Array**	**41.86**	**319**	P	P	08 19 49.8	-0.5
	0.3nm,0.6s,baz=108,slow=4.8,SNR=4.2						
WRA	**Warramunga Arr**	**42.51**	**197**	P	P	08 19 55.9	+0.3
	1.2nm,0.7s,baz=16,slow=8.8,SNR=5.9						
ASAR	**Alice Springs**	**46.18**	**196**	P	P	08 20 24.6	-0.4
	0.4nm,0.7s,baz=23,slow=7.3,SNR=3.8						
ZALV	**Zalesovo Beam**	**56.67**	**321**	P	P	08 21 43.2	-0.1
	0.9nm,0.4s,baz=103,slow=7.9,SNR=4.2						
MKAR	**Makanchi Array**	**57.46**	**313**	P	P	08 21 49.2	+0.1
	0.6nm,0.9s,baz=88,slow=8.5,SNR=3.4						
YKA	**Yellowknife Ar**	**75.48**	**28**	P	P	08 23 44.2	+0.1
	0.5nm,0.5s,baz=288,slow=5.9,SNR=15						
ARCES	**ARCESS Array B**	**80.49**	**342**	P	P	08 24 11.3	-0.5
	1.7nm,0.9s,baz=70,slow=5.8,SNR=3.1						
NVAR	**Mina Array Bea**	**81.00**	**52**	P	P	08 24 16.1	+0.6
	0.6nm,0.7s,baz=258,slow=5.5,SNR=4.6						
FINES	**FINESS Array B**	**85.08**	**335**	P	P	08 24 35.0	-0.8
	1.1nm,0.5s,baz=77,slow=6.2,SNR=8.1						

*CSEM **29** 08:18:07.5±0.2,40°.42N×21°.87E, h8km, ML1.9/5, Error ellipse: s-maj=4.0km s-min=3.1km az=52.0*
*ATH **29** 08:18:07.6,40°.42N×21°.88E, h5km±2km, MD2.9/7*

THE 29 08:18:08.1,40°.42N×21°.86E, h3km±1km, ML1.9/5, Error ellipse: s-maj=1.8km s-min=0.3km az=248.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KZN	**Kozani**	**0.13**	**211**	P	Pg	08 18 10.4	-0.3
KZN				S	Sg	08 18 12.6	+0.1
KZN	**Kozani**	**0.13**	**211**	*e*PG	Pg	08 18 10.2	-0.5
KZN				*e*SG	Sg	08 18 12.8	+0.3
KZN	**Kozani**	**0.13**	**211**	P	Pg	08 18 10.4	-0.3
KZN				S	Sg	08 18 12.6	+0.1
FNA	**Florina**	**0.52**	**315**	P	Pg	08 18 17.9	-0.3
FNA				S	Sg	08 18 25.2	+0.2
FNA	**Florina**	**0.52**	**315**	*e*PG	Pg	08 18 17.7	-0.5
FNA				*e*SB	Sg	08 18 26.2	+1.2
FNA	**Florina**	**0.52**	**315**	P	Pg	08 18 17.9	-0.3
FNA				S	Sg	08 18 25.2	+0.2
FNA				*e*Sb	Sb	08 18 26.2	-1.7
LIT	**Litokhoron**	**0.58**	**123**	P	Pg	08 18 18.8	-0.5
LIT				S	Sg	08 18 27.6	+0.8
LIT	**Litokhoron**	**0.58**	**123**	*e*PB	Pg	08 18 19.0	-0.3
LIT				*e*SB	Sg	08 18 27.3	+0.5
LIT	**Litokhoron**	**0.58**	**123**	P	Pg	08 18 18.8	-0.5
LIT				*e*Sb	Sg	08 18 27.3	+0.5
LIT				S	Sb	08 18 27.6	-2.0
NEST	**Nestorio**	**0.62**	**270**	P	Pg	08 18 19.7	-0.4
NEST				S	Sg	08 18 28.8	+0.6
NEST	**Nestorio**	**0.62**	**270**	P	Pg	08 18 19.7	-0.4
NEST				S	Sg	08 18 28.8	+0.6
GRG	**Griva**	**0.68**	**37**	P	Pg	08 18 20.7	-0.6
GRG				S	Sg	08 18 31.0	+0.8
GRG	**Griva**	**0.68**	**37**	*e*PB	Pg	08 18 20.6	-0.7
GRG				S	Sg	08 18 31.0	+0.8
THL	**Klokotos Trika**	**0.86**	**172**	P	Pg	08 18 24.2	-0.4
THL				S	Sb	08 18 36.7	-0.8
THL	**Klokotos Trika**	**0.86**	**172**	*e*PB	Pg	08 18 24.6	0.0
THL				*e*SB	Sb	08 18 37.0	-0.5
THL	**Klokotos Trika**	**0.86**	**172**	P	Pg	08 18 24.2	-0.4
THL	**Klokotos Trika**	**0.86**	**172**	*e*Pb	Pg	08 18 24.6	0.0
THL				S	Sb	08 18 36.7	-0.8
THL				*e*Sb	Sg	08 18 37.0	+1.3
KNT	**Kendrikon**	**1.09**	**46**	P	Pg	08 18 28.2	-0.8
KNT	**Kendrikon**	**1.09**	**46**	P	Pg	08 18 28.2	-0.8
AGG	**Agios Georgios**	**1.44**	**165**	*e*PG	Pn	08 18 34.3	-0.8
AGG	**Agios Georgios**	**1.44**	**165**	*e*Pg	Pn	08 18 34.3	-0.8
PAIG	**Paliouri**	**1.48**	**109**	P	Pn	08 18 34.6	-1.0
PAIG	**Paliouri**	**1.48**	**109**	*e*PG	Pn	08 18 34.8	-0.8
PAIG	**Paliouri**	**1.48**	**109**	P	Pn	08 18 34.6	-1.0

*IDC **29** 08:26:57.8±0.6,39°.63N×74°.02E, h0km, mb4.1/17, mb1 4.3/22, mb1mx4.2/31, mbtmp4.2/22, ML3.9/6, MS3.5/16, Ms1 3.5/16, ms1mx3.3/41, Error ellipse: s-maj=12.2km s-min=10.0km az=111.0*
*ISCJB **29** 08:27:00.5±0.2,39°.57N±0°.02×74°.07E±0°.04, h28km, mb4.3/45, MS3.5/16, Error ellipse: s-maj=4.3km s-min=3.0km az=148.5*
*MOS **29** 08:27:01.7±1.5,39°.61N×73°.99E, h33km, mb4.5/27, Error ellipse: s-maj=8.6km s-min=5.7km az=96.5*
*BJI **29** 08:27:02.3,39°.68N×73°.95E, h31km, mB4.5/6, mb4.4/12, ML4.4/5, Ms4.1/10, Ms7 3.8/7*
*NNC **29** 08:27:02.8±2.4,39°.96N×73°.75E, h11km±9km, mb4.5, mpv4.6, Error ellipse: s-maj=18.8km s-min=8.5km az=12.0*
*NEIC **29** 08:27:03.7±0.5,39°.67N×74°.12E, h35km, mb4.7/13, Error ellipse: s-maj=9.8km s-min=7.4km az=142.0*

ISC 29 08:27:02.1±0.4,39°.63N±0°.04×74°.06E±0°.04, h28km, n198, σ1s81/176, mb4.3/45, MS3.6/16, 21C-13D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.48**	**94**	Pg	**Pn**	**08 27 25.3**	**-1.7**
KSH				Sg	**Sn**	**08 27 43.8**	**-1.7**
KSH				smax	smax		
	comp=N,5μm,0.9s						
KSH				smax	smax		
	comp=E,5μm,0.9s						
AML	**Almayashu**	**2.51**	**354**	P	**Pn**	**08 27 41.8**	**+0.3**
	SNR=282						
KZA	**Kyzart**	**2.60**	**20**	P	**Pb**	**08 27 46.0**	**-2.4**
	SNR=549						
UCH	**Uchtor**	**2.62**	**7**	P	**Pn**	**08 27 44.4**	**+1.5**
	SNR=49						
AAK	**Ala-Archa**	**3.02**	**6**	*d i*PN	**Pn**	**08 27 49.5**	**+1.3**
AAK	**Ala-Archa**	**3.02**	**6**	*e*Pn	**Pn**	**08 27 49.5**	**+1.3**
AAK				Lg	Lg	08 28 28.6	
AAK	**Ala-Archa**	**3.02**	**6**	Pn	**Pn**	**08 27 49.7**	**+1.4**
	comp=E,106nm,0.3s,baz=162,slow=7.1,SNR=168						
AAK				Pg	**Pb**	**08 27 53.0**	**-2.3**
	comp=E,130nm,0.3s,baz=171,slow=12,SNR=139						
AAK				Lg	Lg	08 28 28.6	
	comp=E,119nm,0.3s,baz=300,slow=22,SNR=14						
AAK				LR	LR	08 29 00.9	
	comp=E,524nm,19.7s,baz=179,slow=41						
EKS2	**Erkin-Say**	**3.04**	**356**	*e*PN	**Pn**	**08 27 49.2**	**+0.8**
EKS2	**Erkin-Say**	**3.04**	**356**	*e*Pn	**Pn**	**08 27 49.2**	**+0.8**
EKS2	**Erkin-Say**	**3.04**	**356**	P	**Pn**	**08 27 49.3**	**+0.9**
	SNR=134						
ULHL	**Ulahol**	**3.09**	**32**	P	Pn	08 27 52.5	+3.2
	SNR=32						
KBK	**Karagaybulak**	**3.10**	**12**	P	**Pn**	**08 27 52.2**	**+2.9**
	SNR=20						
FRU	**Bishkek**	**3.23**	**7**	⇓*e*PN	**Pn**	**08 27 52.5**	**+1.5**
FRU				*i* S	**Sb**	**08 28 39.0**	**+1.4**
FRU				pmax	pmax		
	comp=Z,2μm,1.4s						
FRU				smax	smax		
	comp=E,10μm,1.8s						
CHMS	**Chumysh**	**3.41**	**9**	P	**Pn**	**08 27 56.3**	**+2.9**
	SNR=20						
TKM2	**Tokmak 2**	**3.48**	**19**	⇑Pn	**Pn**	**08 27 55.9**	**+1.2**
	comp=E,149nm,0.6s						
TKM2				⇑Lg	Lg	08 28 45.0	
	comp=E,416nm,0.6s						
TKM2	**Tokmak 2**	**3.48**	**19**	PN	**Pn**	**08 27 57.3**	**+2.6**
TKM2						08 28 46.2	
TKM2				pmax	pmax		
	comp=Z,149nm,0.6s						
TKM2				pmax	pmax		
	comp=N,416nm,0.6s						
TKM2	**Tokmak 2**	**3.48**	**19**	*e*Pn	**Pn**	**08 27 56.2**	**+1.5**
TKM2	**Tokmak 2**	**3.48**	**19**	P	Pn	08 27 57.9	+3.2
	SNR=31						
USP	**Ospenovka**	**3.65**	**5**	P	**Pn**	**08 27 59.0**	**+2.2**
	SNR=28						
KNDC	**Almaty**	**4.20**	**30**	⇑Pn	Pn	08 28 07.3	+3.0
	comp=N,417nm,0.8s						
KNDC				⇓Lg	Lg	08 29 10.3	
	comp=N,2μm,0.9s						
AAA	**Alma-Ata**	**4.23**	**30**	*i* PN	**Pb**	**08 28 16.4**	**+0.5**
AAA				*i* S	**Sb**	**08 29 09.3**	**+2.7**
AAA				pmax	pmax		
	comp=Z,351nm,0.5s						
AAA				smax	smax		
	comp=N,3μm,0.8s						
KK31	**Karatay Array**	**4.38**	**324**	⇑Pn	**Pn**	**08 28 06.0**	**-0.9**
	comp=N,20nm,0.5s,baz=134,slow=12,SNR=869						
KK31				⇑Pg	**Pb**	**08 28 15.7**	**-2.7**
	comp=N,59nm,0.5s,baz=143,slow=14,SNR=37						
KK31				⇓Sn	**Sn**	**08 28 56.5**	**-0.4**
	comp=N,54nm,0.5s,baz=57,slow=15,SNR=4.9						
KK31				⇓Lg	Lg	08 29 12.3	
	comp=N,114nm,0.4s,baz=140,slow=30,SNR=3.8						
KK31	**Karatay Array**	**4.38**	**324**	*e*PN	**Pn**	**08 28 05.9**	**-0.9**
KK31						08 29 13.4	
KK31				pmax	pmax		
	comp=Z,28nm,0.2s						

KURBB Lg Lg 08 32 52.7
comp=Z,0.3nm,0.3s,baz=201,slow=30,SNR=12
KURBB LR LR 08 34 10.4
comp=Z,301nm,19.6s,baz=205,slow=38
KUR15 Kurchatov Arra 11.44 15 ⇓Pn **Pn 08 29 44.5 +1.1**
comp=Z,0.2nm,0.7s
KUR14 Kurchatov Arra 11.44 15 ⇓Lg Lg 08 32 55.4
comp=Z,8.4nm,1.1s
KURK Kurchatov 11.54 15 ⇓Pn **Pn 08 29 44.9 +0.1**
comp=Z,4.0nm,0.8s
KURK ⇑Lg Lg 08 32 59.9
comp=Z,487nm,1.8s
KURK Kurchatov 11.54 15 P **Pn 08 29 42.3 -2.6**
KURK 08 31 52.4
KURK MLR MLR
comp=Z,301nm,19.6s
KURK Kurchatov 11.54 15 *e*Pn **Pn 08 29 44.0 -0.9**
KURK Sn **Sn 08 31 52.4 -0.3**
KURK Lg Lg 08 32 52.7
VOSK Vostochnaya 13.27 352 ⇑Pn Pn 08 30 05.0 -3.6
comp=Z,12nm,0.7s
VOSK ⇑Lg Lg 08 33 49.9
comp=Z,123nm,1.4s
VOSK Vostochnaya 13.27 352 P Pn 08 30 04.9 -3.6
VOSK pmax pmax
comp=Z,12nm,0.7s
BVA0 Borovoye Array 13.63 351 Pn Pn 08 30 10.1 -3.4
comp=Z,2.5nm,0.6s,baz=162,slow=14,SNR=42
BVA0 ⇑Lg Lg 08 34 01.9
comp=Z,12nm,1.4s,baz=157,slow=24,SNR=3.9
BVA0 Borovoye Array 13.63 351 *i* P Pn 08 30 10.1 -3.4
BVA0 pmax pmax
comp=Z,3.0nm,0.6s
BVAR Borovoye Array 13.63 351 P Pn 08 30 10.2 -3.3
BVAR pmax pmax
comp=Z,2.0nm,0.3s
BVAR MLR MLR
comp=Z,154nm,21.6s
BVAR Borovoye Array 13.63 351 Pn Pn 08 30 10.2 -3.3
BVAR Lg Lg 08 33 59.4
BVAR Borovoye Array 13.63 351 Pn Pn 08 30 10.2 -3.3
comp=Z,1.8nm,0.3s,baz=166,slow=13,SNR=28
BVAR Lg Lg 08 33 59.4
comp=Z,0.5nm,0.3s,baz=153,slow=23,SNR=4.2
BVAR LR LR 08 35 26.1
comp=Z,154nm,21.6s,baz=80,slow=37
PYUN Piuthan 13.67 145 *e*P **Pn 08 30 12.6 -1.8**
comp=Z,48nm,0.5s
PYUN *e*S **Sn 08 32 42.4 -3.0**
BRVK Borovoye 13.68 350 ⇑Pn Pn 08 30 09.9 -4.2
comp=Z,17nm,0.5s
BRVK ⇓Lg Lg 08 34 03.1
comp=Z,110nm,1.2s
BRVK Borovoye 13.68 350 *c i*P Pn 08 30 10.8 -3.3
BRVK Borovoye 13.68 350 *e*Pn **Pn 08 30 12.6 -1.5**
comp=Z,19nm,0.5s
ZRNK Zerenda 13.77 347 ⇓Pn Pn 08 30 11.6 -3.7
comp=Z,18nm,1.4s
ZRNK ⇑Lg Lg 08 34 05.1
comp=Z,113nm,1.6s
DANN Dangsing 13.82 142 *e*P **Pn 08 30 15.5 -0.9**
comp=Z,23nm,0.4s
AB31 Akbulak array 13.92 318 ⇑P Pn 08 30 13.1 -4.3
comp=Z,11nm,0.7s,baz=129,slow=15,SNR=91
AB31 Akbulak array 13.92 318 *i* P Pn 08 30 13.1 -4.3
AB31 pmax pmax
comp=Z,4.0nm,0.4s
KOLN Koldanda 14.23 143 *e*P **Pn 08 30 21.0 -1.0**
comp=Z,17nm,0.5s
KKN Kakani 15.04 138 *e*P **Pn 08 30 32.1 -0.8**
comp=Z,18nm,0.6s
GUN Gumba 15.25 136 *e*P **Pn 08 30 34.5 -1.4**
comp=Z,21nm,0.4s
PKIN Phulchoki 15.27 139 *e*P **Pn 08 30 34.4 -1.6**
PKI Pulchoki 15.28 138 *e*P **Pn 08 30 35.3 -0.9**
comp=Z,40nm,0.9s
PKI *e*S **Sn 08 33 23.9 -0.8**
AKTO Aktyubinsk 15.63 319 ⇑P Pn 08 30 34.9 -5.4
comp=Z,3.0nm,0.9s
AKTO Aktyubinsk 15.63 319 P **Pn 08 30 36.9 -3.4**
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO Aktyubinsk 15.63 319 Pn **Pn 08 30 36.9 -3.4**
AKTO Aktyubinsk 15.63 319 Pn **Pn 08 30 36.9 -3.4**
comp=Z,0.6nm,0.3s,baz=134,slow=14,SNR=16
ZAA0 Zalesovo Array 16.08 23 *e*Pn **Pn 08 30 45.0 -1.0**
ZALV Zalesovo Beam 16.08 23 P **Pn 08 30 45.1 -0.9**
ZALV MLR MLR
comp=Z,108nm,20.6s
ZALV Zalesovo Beam 16.08 23 Pn **Pn 08 30 45.1 -0.9**
ZALV Lg Lg 08 35 19.4
ZALV Zalesovo Beam 16.08 23 Pn **Pn 08 30 45.1 -0.9**
comp=Z,0.3nm,0.3s,baz=202,slow=11,SNR=12
ZALV Lg Lg 08 35 19.4
comp=Z,0.2nm,0.3s,baz=201,slow=23,SNR=2.8
ZALV LR LR 08 37 23.2
comp=Z,108nm,20.6s,baz=276,slow=39
RAMN Ramite 16.40 137 *e*P **Pn 08 30 49.6 -1.0**
comp=Z,53nm,1.0s
NVS Novosibirsk 16.42 19 *i* P **P 08 30 51.8 -1.1**
NVS *i* 08 34 02.2
TAPN Taplejung 16.70 133 *e*P **Pn 08 30 53.4 -0.9**
comp=Z,33nm,1.1s
ODAN Odare 16.90 135 *e*P **Pn 08 30 56.0 -0.9**
comp=Z,26nm,0.5s
JBP Jabalpur 17.16 161 ⇑*e*P **Pn 08 30 59.1 -0.9**
JBP *i* x x 08 31 03.7
comp=Z,14nm,0.7s
JBP *ex* x 08 33 60.0
AKL Akola 19.04 172 *e*P **Pn 08 31 24.2 +1.3**
AKL *ex* x 08 34 44.7
ARU Arti 19.67 334 *c i*P P 08 31 23.6 -5.1
ARU SS **S 08 35 09.5 +0.7**
ARU pmax pmax
comp=Z,9.0nm,0.8s
GTA Gaotai 19.85 82 *e*P **Pn 08 31 33.0 +0.3**
GTA pP **pP 08 31 38.0 -0.5**
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA LR LR
comp=N,210nm,16.6s
GTA LR LR
comp=E,250nm,14.2s
GTA LR LR
comp=Z,260nm,13.3s
MAK Makhachkala 20.20 288 *e*P **P 08 31 33.6 -1.0**
MAK MLR MLR
comp=Z,134nm,10.0s
SHL Shillong 20.49 128 *e*P **P 08 31 36.1 -1.9**
MOY Mondy 22.20 48 *e*P **P 08 31 58.0 +1.8**
MOY pmax pmax
comp=Z,20nm,1.6s
GNI Garni 22.46 281 P P 08 32 04.6 +5.4
comp=Z,1.6nm,0.8s
GNI Garni 22.46 281 P P 08 32 04.6 +5.4
comp=Z,6.8nm,0.3s,baz=170,slow=14,SNR=5.9
GNI LR LR 08 42 02.2
comp=Z,65nm,18.0s,baz=79,slow=40
SOKR Solikamsk 22.75 337 *e*P **P 08 32 02.1 +0.3**
SOKR pmax pmax
comp=Z,10.0nm,1.2s
SOKR MLR MLR
comp=Z,120nm,19.0s
ZEI Tsey 22.86 288 *e*P **P 08 32 07.3 +3.9**
ZEI pmax pmax
comp=Z,6.0nm,0.6s
ZAK Zakamensk 23.14 53 *e*P **P 08 32 06.4 +0.3**
ZAK pmax pmax
comp=Z,1.0nm,0.9s
KBZ Khabaz 23.56 290 P **P 08 32 14.4 +4.3**
KBZ pmax pmax
comp=Z,2.0nm,0.8s
KBZ MLR MLR
comp=Z,69nm,20.5s
KBZ Khabaz 23.56 290 P **P 08 32 14.4 +4.3**
KBZ Khabaz 23.56 290 P **P 08 32 14.4 +4.3**
comp=Z,2.3nm,0.8s,baz=117,slow=14,SNR=2.8
KBZ LR LR 08 42 35.5
comp=Z,69nm,20.4s,baz=265,slow=40
KIV Kislovodsk 23.71 291 ⇑*e*P **P 08 32 08.6 -3.1**
KIV pmax pmax
comp=Z,8.0nm,0.8s
KIV MLR MLR
comp=Z,100nm,19.0s
LZH Lanzhou 23.73 89 *e*P **P 08 32 11.0 -1.0**
LZH pmax pmax
comp=Z,14nm,1.0s
SONM Songino Array 24.62 60 P **P 08 32 20.3 +0.2**
SONM Songino Array 24.62 60 P **P 08 32 20.3 +0.2**
comp=Z,1.8nm,0.8s,baz=263,slow=11,SNR=16
SONM LR LR 08 42 46.1
comp=Z,231nm,18.1s,baz=247,slow=38
BHD Baghdad 24.64 264 *ex* P **P 08 32 23.3 +3.1**
BHD *ex* x 08 36 43.3
ULN Ulaanbaatar 25.06 60 *e*P **P 08 32 25.1 +1.0**
comp=Z,9.4nm,1.1s
VRHR Novokhopersk 25.30 308 *e*P **P 08 32 26.5 +0.4**
VRHR pmax pmax
comp=N,6.0nm,0.5s
VRHR pmax pmax
comp=E,7.0nm,0.5s
VRHR pmax pmax
comp=Z,8.0nm,0.5s
VSR Storozhevoye 26.84 307 *e*P **P 08 32 39.4 -0.6**
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=Z,20nm,0.8s
HHC Hu-ho-hao-te 28.51 75 *e*P P 08 32 59.0 +3.8
HHC S **S 08 37 42.0 +0.7**
HHC pmax pmax
comp=Z,37nm,0.6s
HHC pmax pmax
comp=Z,210nm,5.6s
OBN Obninsk 29.31 314 ⇑*e*P P 08 32 58.7 -3.2
OBN *eS* **S 08 37 48.4 -4.8**
OBN pmax pmax
comp=Z,6.0nm,0.5s
OBN MLR MLR
comp=Z,100nm,20.0s
CMAR Chiang Mai Arr 30.12 127 P **P 08 33 09.2 -0.4**
CMAR Chiang Mai Arr 30.12 127 P **P 08 33 09.2 -0.4**
comp=Z,0.6nm,0.3s,baz=320,slow=9.7,SNR=2.8
ASF Jabal al Asfar 30.85 268 LR LR 08 47 29.8
comp=Z,37nm,19.7s,baz=188,slow=40
BR131 Keskin Array S 30.93 283 *e*P **P 08 33 17.6 +0.9**
comp=Z,2.2nm,0.7s
BRTR Keskin Array B 30.93 283 P **P 08 33 16.6 -0.1**
BRTR Keskin Array B 30.93 283 P **P 08 33 16.5 -0.1**
comp=Z,2.0nm,0.7s,baz=83,slow=7.6,SNR=7.8
AKASG Malin Array Be 33.02 305 P **P 08 33 33.4 -1.3**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array B 33.02 305 P **P 08 33 33.4 -1.3**
AKASG Malin Array Be 33.02 305 P **P 08 33 33.4 -1.3**
comp=Z,2.2nm,0.5s,baz=81,slow=7.2,SNR=9.5
AK01 Malin Array Si 33.02 305 *e*P **P 08 33 34.4 -0.3**
AK02 Malin Array Si 33.03 305 *e*P **P 08 33 34.5 -0.3**
JOF Joensuu 34.47 327 *e*P **P 08 33 45.7 -1.5**
JOF pmax pmax
comp=Z,3.0nm,0.5s
JOF Joensuu 34.47 327 *ep* **P 08 33 45.7 -1.5**
comp=Z,2.9nm,0.5s
MLR Muntele Rosu 35.49 296 ⇑*i* P 08 34 00.4 +4.0
BUR08 Bucovina Ar. S 35.75 299 *e*P **P 08 33 59.0 +0.4**
FIA1 FINESS Array S 36.34 323 *e*P **P 08 34 02.5 -0.8**
FINES FINESS Array B 36.34 323 P **P 08 34 02.9 -0.3**
FINES FINESS Array B 36.34 323 P **P 08 34 02.9 -0.3**
comp=Z,5.2nm,0.4s,baz=107,slow=9.6,SNR=23
FINES LR LR 08 49 21.2
comp=Z,101nm,18.4s,baz=41,slow=37
KAF Kangasniemi 36.41 324 *e*P **P 08 34 03.1 -0.7**
KAF pmax pmax
comp=Z,2.0nm,0.5s
KAF Kangasniemi 36.41 324 *ep* **P 08 34 03.1 -0.7**
comp=Z,2.3nm,0.5s
QIZ Qiongzhong 37.00 113 P P 08 34 21.0 +12
QIZ S S 08 40 07.5 +14
KOLS Kolonicke sedl 37.57 302 *e*P P 08 34 17.9 +4.0
KOLS Kolonicke sedl 37.57 302 *e*P P 08 34 17.9 +4.0
CRVS Cervenica-Dubn 38.11 302 *e*P P 08 34 23.4 +4.9
CRVS Cervenica-Dubn 38.11 302 *e*P P 08 34 23.4 +4.9
KEV Kevo 38.86 336 *e*P **P 08 34 25.5 +1.1**
KEV Kevo 38.86 336 *ep* **P 08 34 25.5 +1.1**
comp=Z,0.4nm,0.3s
ARCES ARCESS Array B 39.24 335 P **P 08 34 27.2 -0.5**
ARCES ARCESS Array B 39.24 335 P **P 08 34 27.2 -0.5**
comp=Z,2.9nm,0.5s,baz=109,slow=7.7,SNR=36
ARCES LR LR 08 51 12.6
comp=Z,92nm,19.8s,baz=292,slow=37
ARE0 ARCESS Array S 39.24 335 *e*P **P 08 34 28.8 +1.1**
ATD Arta Tunnel 39.33 233 P P **08 34 29.5 +0.4**
ATD Arta Tunnel 39.33 233 P **P 08 34 29.5 +0.4**
comp=Z,6.2nm,0.3s,baz=236,slow=21,SNR=3.9
VYHS Vyhne 39.89 302 *e*P P 08 34 38.0 +4.7
VYHS Vyhne 39.89 302 *e*P P 08 34 38.0 +4.7
KSAR Wonju Array Be 41.63 75 P **P 08 34 47.4 -0.4**
KSRS Korea Array 41.66 75 P **P 08 34 47.4 -0.6**
comp=Z,0.4nm,0.4s,baz=278,slow=8.5,SNR=4.1
USRK Ussuriysk Arra 42.59 64 LR LR 08 53 18.6
comp=Z,95nm,18.7s,baz=17,slow=37
GERES GERESS Array B 43.18 303 P **P 08 35 00.7 +0.3**
GERES GERESS Array B 43.18 303 P **P 08 35 00.7 +0.3**
comp=Z,2.0nm,0.5s,baz=69,slow=7.3,SNR=19
KHC Kasperske Hory 43.20 303 *e*P **P 08 35 00.0 -0.5**
KHC Kasperske Hory 43.20 303 *e*P **P 08 35 00.0 -0.5**
NB2 NORSAR Subarra 43.41 321 P P **08 35 01.1 -0.9**
comp=Z,6.0nm,0.6s,baz=90,slow=8.6
NOA NORSAR Array B 43.41 321 P **P 08 35 01.2 -0.8**
NOA NORSAR Array B 43.41 321 P **P 08 35 01.2 -0.8**
comp=Z,5.2nm,0.6s,baz=91,slow=8.0,SNR=29
NOA LR LR 08 53 39.6
comp=Z,73nm,21.0s,baz=260,slow=37
CDF Champ du Feu 47.43 304 *e*P **P 08 35 35.7 +1.6**
comp=Z,8.8nm,0.8s
CDF Champ du Feu 47.43 304 *e*P **P 08 35 35.7 +1.6**
CDF pmax pmax
comp=Z,9.0nm,0.8s
CDF Champ du Feu 47.43 304 *e*P **P 08 35 35.7 +1.6**
comp=Z,8.8nm,0.8s
PAGF Fort de Pagny 48.38 304 *e*P **P 08 35 43.4 +2.0**
comp=Z,1.7nm,0.5s
PAGF Fort de Pagny 48.38 304 *e*P **P 08 35 43.4 +2.0**
comp=Z,1.7nm,0.5s
GIVF Givet 48.52 307 *e*P **P 08 35 45.1 +2.7**
GIVF Givet 48.52 307 *e*P **P 08 35 45.1 +2.7**
GIVF Givet 48.52 307 *e*P **P 08 35 45.1 +2.7**
LPG La Plagne 48.62 300 *e*P **P 08 35 46.2 +2.6**
comp=Z,12nm,0.9s
LPG La Plagne 48.62 300 *e*P **P 08 35 46.2 +2.6**
LPG pmax pmax
comp=Z,12nm,0.9s
LPG La Plagne 48.62 300 *e*P **P 08 35 46.2 +2.6**
comp=Z,12nm,0.9s
LPL La Plagne 48.62 300 *e*P **P 08 35 46.2 +2.7**
comp=Z,6.2nm,0.6s
LPL La Plagne 48.62 300 *e*P **P 08 35 46.2 +2.7**
LPL pmax pmax
comp=Z,6.0nm,0.6s
LPL La Plagne 48.62 300 *e*P **P 08 35 46.2 +2.7**
comp=Z,6.2nm,0.6s
LOR Lormes 49.96 303 *e*P **P 08 35 55.0 +1.5**
comp=Z,4.4nm,0.6s
LOR Lormes 49.96 303 *e*P **P 08 35 55.0 +1.5**
comp=Z,4.4nm,0.6s
AVF Avril sur Loir 50.44 303 *e*P **P 08 35 59.1 +2.0**
comp=Z,18nm,0.9s
AVF Avril sur Loir 50.44 303 *e*P **P 08 35 59.1 +2.0**
AVF pmax pmax
comp=Z,18nm,0.9s
AVF Avril sur Loir 50.44 303 *e*P **P 08 35 59.1 +2.0**
comp=Z,18nm,0.9s
LASF Ste Croix 51.03 299 *e*P **P 08 36 03.7 +2.1**
comp=Z,18nm,1.0s
LASF Ste Croix 51.03 299 *e*P **P 08 36 03.7 +2.1**
comp=Z,18nm,1.0s
KMBO Kilima Mbogo 52.72 229 P **P 08 36 14.8 +0.1**
KMBO Kilima Mbogo 52.72 229 P **P 08 36 14.8 +0.1**
comp=Z,0.7nm,0.4s,baz=318,slow=7.5,SNR=2.6
SGMF Saint Gilles 53.70 306 *e*P **P 08 36 24.2 +2.9**
comp=Z,24nm,0.8s
SGMF Saint Gilles 53.70 306 *e*P **P 08 36 24.2 +2.9**
SGMF pmax pmax
comp=Z,24nm,0.8s
SGMF Saint Gilles 53.70 306 *e*P **P 08 36 24.2 +2.9**
comp=Z,24nm,0.8s
ROSF Rostrenen 54.12 307 *e*P **P 08 36 27.1 +2.7**
ROSF Rostrenen 54.12 307 *e*P **P 08 36 27.1 +2.7**
ROSF Rostrenen 54.12 307 *e*P **P 08 36 27.1 +2.7**
QUIF Quistinic 54.20 306 *e*P **P 08 36 27.7 +2.7**
comp=Z,13nm,0.7s
QUIF Quistinic 54.20 306 *e*P **P 08 36 27.7 +2.7**
QUIF pmax pmax
comp=Z,13nm,0.7s
QUIF Quistinic 54.20 306 *e*P **P 08 36 27.7 +2.7**
comp=Z,13nm,0.7s
BILL Bilibino 54.73 27 ⇑*e*P **P 08 36 31.4 +2.9**
BILL pmax pmax
comp=Z,2.0nm,1.0s
BILL MLR MLR
comp=Z,100nm,18.0s
ESDC Sonseca Array 58.16 297 P **P 08 36 54.0 +0.6**
ESDC Sonseca Array 58.16 297 P **P 08 36 54.0 +0.6**
comp=Z,2.1nm,0.6s,baz=55,slow=7.0,SNR=8.1
SUMG Summit 58.89 341 *i* P **P 08 37 01.2 +2.8**
SUMG pmax pmax
comp=Z,6.0nm,1.0s
SUMG Summit 58.89 341 *i* P **P 08 37 01.2 +2.8**
comp=Z,6.0nm,1.0s
TOA0 Torodi Ar. Sit 68.20 269 *e*P **P 08 37 59.4 -0.9**
TORD Torodi Ar. Bea 68.20 269 P **P 08 37 59.2 -1.1**
TORD Torodi Ar. Bea 68.20 269 P **P 08 37 59.2 -1.1**
comp=Z,1.9nm,0.5s,baz=48,slow=5.4,SNR=27
TORD LR LR 09 08 44.0
comp=Z,48nm,19.6s,baz=235,slow=37
COLD Coldfoot 68.29 17 *e*P **P 08 37 58.7 -1.3**
ILAR Eielson Array 71.09 17 P **P 08 38 16.6 -0.8**
ILAR Eielson Array 71.09 17 P **P 08 38 16.6 -0.8**
comp=Z,1.1nm,0.9s,baz=318,slow=5.0,SNR=12
ILAR LR LR 09 13 16.9
comp=Z,47nm,20.4s,baz=47,slow=39
SML Sawmill 73.25 20 *e*P **P 08 38 31.9 +1.5**
SML pmax pmax
comp=Z,1.0nm,0.8s
SML Sawmill 73.25 20 *e*P **P 08 38 31.9 +1.5**
comp=Z,1.5nm,0.8s
YKA Yellowknife Ar 77.98 4 P **P 08 38 57.0 -0.3**
YKA Yellowknife Ar 77.98 4 P **P 08 38 57.0 -0.3**
comp=Z,1.3nm,0.6s,baz=348,slow=5.6,SNR=33
WRA Warramunga Ar 81.67 124 P **P 08 39 18.4 +0.5**
WRA Warramunga Ar 81.67 124 P **P 08 39 18.4 +0.5**
comp=Z,0.8nm,0.5s,baz=326,slow=5.0,SNR=14
ASAR Alice Springs 84.14 127 P **P 08 39 30.4 -0.2**
ASAR Alice Springs 84.14 127 P **P 08 39 30.4 -0.2**
comp=Z,0.7nm,0.8s,baz=316,slow=5.1,SNR=11
PDAR Pinedale Array 97.92 3 LR LR 09 28 23.8
comp=Z,25nm,19.3s,baz=263,slow=38

CSEM ***29*** *08:36:59.6, 42°.33N×13°.47E, h10km, MD2.0/6, After ROM*
ROM 29 08:36:59.6±0.2, 42°.33N×13°.47E, h10km±1km, Md2.0/6, Ml1.5/4, Error ellipse: s-maj=5.0km s-min=1.7km az=32.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**302**	Pg	Pg	08 37 02.2	+0.4
AQU				Sg	Sg	08 37 03.6	+0.1
	609nm,0.6s						
AQU	**L'Aquila**	**0.06**	**302**	Pg	Pg	08 37 02.2	+0.4
AQU				Sg	Sg	08 37 03.6	+0.1
	609nm,0.6s						
FAGN	**Fagnano**	**0.11**	**124**	Pg	Pg	08 37 02.8	+0.4
FAGN				Sg	Sg	08 37 05.0	+0.5
	613nm,0.5s						
FAGN	**Fagnano**	**0.11**	**124**	Pg	Pg	08 37 02.8	+0.4
FAGN				Sg	Sg	08 37 05.0	+0.5
	613nm,0.5s						
CAMP	**Campotosto**	**0.21**	**349**	Pg	Pg	08 37 04.8	+0.5
CAMP				Sg	Sg	08 37 08.9	+1.4
	13nm,0.6s						
CAMP	**Campotosto**	**0.21**	**349**	Pg	Pg	08 37 04.8	+0.5
CAMP				Sg	Sg	08 37 08.9	+1.4
	13nm,0.6s						
VCEL	**Villa Celiera**	**0.29**	**76**	Pg	Pg	08 37 05.8	+0.2
	133nm,0.9s						
VCEL	**Villa Celiera**	**0.29**	**76**	Pg	Pg	08 37 05.8	+0.2
	133nm,0.9s						
TERO	**Teramo**	**0.32**	**19**	Pg	Pg	08 37 06.2	+0.2
TERO				Sg	Sb	08 37 11.8	-0.8
	35nm,0.5s						
TERO	**Teramo**	**0.32**	**19**	Pg	Pg	08 37 06.2	+0.2
TERO				Sg	Sb	08 37 11.8	-0.8
	35nm,0.5s						
NRCA	**Norcia**	**0.57**	**333**	Pg	Pg	08 37 11.0	+0.1
NRCA				Sg	Sg	08 37 18.1	-0.4
	5.0nm,0.3s						
NRCA	**Norcia**	**0.57**	**333**	Pg	Pg	08 37 11.0	+0.1
NRCA				Sg	Sg	08 37 18.1	-0.4
	5.0nm,0.3s						

IDC ***29*** *08:40:05.2±5.9, 36°.24N×71°.32E, h75km±44km, mb3.4/6, mb1 3.6/11, mb1mx3.3/31, mbtmp3.5/11, ML3.8/5, Error ellipse: s-maj=52.0km s-min=32.9km az=147.0*
ISCJB ***29*** *08:40:16.1±1.2, 36°.95N±0°.09×71°.42E±0°.08, h188km, mb3.4/5, Error ellipse: s-maj=12.3km s-min=9.4km az=1.1*
NNC ***29*** *08:40:17.6±4.6, 37°.10N×71°.29E, h195km±42km, mb2.8, mpv4.1, Error ellipse: s-maj=41.2km s-min=25.0km az=26.0*
ISC 29 08:40:17.3±1.7, 37°.1N±0°.1×71°.2E±0°.1, h188km, n23, σ1§67/21, mb3.5/5, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.42**	**20**	P	**Pn**	**08 41 36.0**	**-1.2**
	SNR=120						
KZA	**Kyzart**	**5.91**	**31**	P	**Pn**	**08 41 41.8**	**-1.7**
	SNR=8.7						
EKS2	**Erkin-Say**	**5.94**	**19**	P	**Pn**	**08 41 43.3**	**-0.4**
	SNR=29						
KK31	**Karatay Array**	**6.06**	**355**	P	**Pn**	**08 41 44.6**	**-0.5**
	8.5nm,0.2s,baz=179,slow=13,SNR=301						
KK31				⇑S	**Sn**	**08 42 55.0**	**+0.4**
	6.9nm,0.4s,baz=179,slow=22,SNR=11						
AAK	**Ala-Archa**	**6.12**	**23**	P	**Pn**	**08 41 45.0**	**-1.0**
	4.6nm,0.3s,baz=165,slow=6.0,SNR=35						
AAK				S	**Sn**	**08 42 58.0**	**+1.9**
	0.8nm,0.3s,baz=330,slow=18,SNR=9.2						
CHMS	**Chumysh**	**6.53**	**24**	P	Pn	08 41 46.2	-5.0
	SNR=6.9						
USP	**Ospennovka**	**6.70**	**21**	P	**Pn**	**08 41 53.0**	**-0.4**
	SNR=5.1						
TKM2	**Tokmak 2**	**6.76**	**29**	⇑P	**Pn**	**08 41 53.1**	**-1.3**
	4.6nm,0.5s						
TKM2				⇓S	**Sn**	**08 43 11.2**	**0.0**
	4.8nm,1.1s						
TKM2	**Tokmak 2**	**6.76**	**29**	P	**Pn**	**08 41 53.3**	**-1.1**
	SNR=12						
MK31	**Makanchi Array**	**12.74**	**37**	⇓P	**Pn**	**08 43 09.8**	**-2.1**
	0.6nm,0.5s,baz=217,slow=13,SNR=5.5						
MKAR	**Makanchi Array**	**12.74**	**37**	P	**Pn**	**08 43 11.8**	**0.0**
	0.1nm,0.3s,baz=216,slow=12,SNR=5.4						
KURBB	**Kurchatov Arra**	**14.54**	**19**	P	P	08 43 38.3	+2.6
	0.1nm,0.3s,baz=207,slow=10,SNR=9.3						
AB31	**Akbulak array**	**14.68**	**330**	P	**P**	**08 43 37.4**	**+0.1**
	0.9nm,0.4s,baz=153,slow=11,SNR=37						
AB31				⇑S	**Sn**	**08 46 17.6**	**-2.2**
	1.7nm,0.6s,baz=154,slow=24,SNR=12						
BVAR	**Borovoye Array**	**15.98**	**358**	P	**Pn**	**08 43 54.9**	**+3.2**
	0.4nm,0.3s,baz=161,slow=9.9,SNR=5.7						
AKTO	**Aktyubinsk**	**16.39**	**329**	P	**Pn**	**08 43 59.6**	**+2.9**
	0.2nm,0.3s						
AKTO				⇑S	**S**	**08 46 56.1**	**-1.3**
	0.3nm,0.6s						
AKTO	**Aktyubinsk**	**16.39**	**329**	P	**Pn**	**08 43 59.3**	**+2.7**
	0.9nm,0.3s,baz=155,slow=11,SNR=11						
ZALV	**Zalesovo Beam**	**19.34**	**25**	P	**Pn**	**08 44 30.9**	**-0.6**
	2.3nm,0.3s,baz=205,slow=11,SNR=13						
FINES	**FINESS Array B**	**37.12**	**326**	P	P	08 47 14.0	+4.6
	0.7nm,0.3s,baz=121,slow=9.5,SNR=9.7						
ARCES	**ARCESS Array B**	**40.70**	**337**	P	P	08 47 45.2	+6.2
	0.7nm,0.5s,baz=112,slow=9.8,SNR=6.8						
NB2	**NORSAR Subarra**	**44.04**	**323**	P	P	08 48 11.5	+5.4
	comp=Z,1.0nm,0.5s,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**44.04**	**323**	P	P	08 48 10.9	+4.9
	comp=Z,1.2nm,0.6s,baz=96,slow=7.7,SNR=6.9						
TORD	**Torodi Ar. Bea**	**65.90**	**269**	P	**P**	**08 50 42.9**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=60,slow=5.8,SNR=4.7						
YKA	**Yellowknife Ar**	**80.68**	**3**	P	P	08 52 14.2	+5.3
	comp=Z,0.1nm,0.5s,baz=351,slow=5.5,SNR=7.8						

IDC ***29*** *08:50:56.2±0.9, 18°.26N×95°.13W, h0km, mb3.6/6,*

mb1 3.9/8,mb1mx3.7/24,mbtmp3.6/8,ML3.4/2,MS3.2/4, Ms1 3.2/4,ms1mx2.7/29,Error ellipse: s-maj=37.2km s-min=13.1km az=65.0

*ISCJB **29** 08:50:58.7±1.0, 18°27N±0°02×95°15W±0°04,h22km,8km, mb3.5/6,MS3.3/3,Error ellipse: s-maj=5.8km s-min=3.6km az=5.2*

*MEX **29** 08:50:59.8±0.6, 18°42N×95°18W,h12km±20km,MD4.2*

*NEIC **29** 08:50:59.8, 18°42N×95°18W,h12km,MD4.2(MEX),After MEX.*

ISC 29 08:50:59.1±1.7, 18°26N±0°06×95°13W±0°05, h23km±15km, n185,σ1°60/192, mb3.6/6, MS3.6/3, 81C-74D, Veracruz

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**1.19**	**169**	*e*P	**Pb**	**08 51 21.1**	**+0.1**
CMIG				*i* S	**Sb**	**08 51 37.0**	**+1.1**
CMIG	**Matias Romero**	**1.19**	**169**	*e*P	**Pb**	**08 51 21.1**	**+0.1**
CMIG				*i* S	**Sb**	**08 51 37.0**	**+1.1**
CMIG	**Matias Romero**	**1.19**	**169**	Pn	**Pb**	**08 51 20.9**	**0.0**
	65nm,0.3s,baz=337,slow=15,SNR=1523						
CMIG				Sn	**Sb**	**08 51 36.3**	**+0.4**
	112nm,0.3s,baz=315,slow=20,SNR=20						
VHO	**Vista Hermosa**	**1.93**	**233**	*e*P	**Pn**	**08 51 30.5**	**-0.4**
VHO				*i* S	**Sn**	**08 51 53.7**	**-0.9**
VHO	**Vista Hermosa**	**1.93**	**233**	*e*P	**Pn**	**08 51 30.5**	**-0.4**
VHO				*i* S	**Sn**	**08 51 53.7**	**-0.9**
UTMO	**Huajuapan**	**2.58**	**261**	*e*P	**Pn**	**08 51 38.6**	**-1.2**
UTMO				*i* S	**Sn**	**08 52 08.3**	**-2.3**
UTMO	**Huajuapan**	**2.58**	**261**	*e*P	**Pn**	**08 51 38.6**	**-1.2**
UTMO				*i* S	**Sn**	**08 52 08.3**	**-2.3**
HUIG	**Huatulco**	**2.65**	**201**	*e*P	**Pn**	**08 51 40.6**	**+0.1**
HUIG				*e*S	**Sb**	**08 52 14.6**	**-3.4**
HUIG	**Huatulco**	**2.65**	**201**	*e*P	**Pn**	**08 51 40.6**	**+0.1**
HUIG				*e*S	**Sb**	**08 52 14.6**	**-3.4**
PNIG	**Pinotepa**	**3.42**	**238**	*e*P	**Pn**	**08 51 50.6**	**-0.5**
PNIG				*i* S	**Sn**	**08 52 31.8**	**+0.8**
PNIG	**Pinotepa**	**3.42**	**238**	*e*P	**Pn**	**08 51 50.6**	**-0.5**
PNIG				*i* S	**Sn**	**08 52 31.8**	**+0.8**
ACX	**Acapulco**	**4.72**	**254**	*e*P	**Pn**	**08 52 09.4**	**+0.4**
ACX				*i* S	**Sn**	**08 53 02.7**	**-0.4**
ACX	**Acapulco**	**4.72**	**254**	*e*P	**Pn**	**08 52 09.4**	**+0.4**
ACX				*i* S	**Sn**	**08 53 02.7**	**-0.4**
CAIG	**El Cayaco**	**5.05**	**257**	*e*P	**Pn**	**08 52 11.0**	**-2.5**
CAIG				*i* S	**Sn**	**08 53 10.6**	**-0.6**
CAIG	**El Cayaco**	**5.05**	**257**	*e*P	**Pn**	**08 52 11.0**	**-2.5**
CAIG				*i* S	**Sn**	**08 53 10.6**	**-0.6**
TEIG	**Tepich**	**6.76**	**72**	*e*Pn	**Pn**	**08 52 37.6**	**+0.6**
	89nm,0.4s						
TEIG				*e*Sn	**Sn**	**08 53 49.1**	**-4.3**
TEIG	**Tepich**	**6.76**	**72**	Pn	**Pn**	**08 52 37.6**	**+0.6**
	27nm,0.3s,baz=254,slow=8.3,SNR=237						
TEIG				Sn	**Sn**	**08 53 50.2**	**-3.2**
	21nm,0.3s,baz=352,slow=21,SNR=9.1						
TEIG				LR	LR	08 55 39.5	
	comp=Z,88nm,21.0s,baz=61,slow=42						
TGUH	**Tegucigalpa,Un**	**8.62**	**118**	Pn	**Pn**	**08 53 05.1**	**+2.5**
732A	**Laxson Ranch,**	**11.33**	**338**	⇓P	**Pn**	**08 53 40.3**	**+0.6**
	baz=11,SNR=6.3						
632A	**Uvalde**	**11.98**	**340**	⇑P	**Pn**	**08 53 48.2**	**-0.4**
	baz=12,SNR=7.6						
631A	**Perdido Creek**	**12.17**	**337**	⇓P	**Pn**	**08 53 50.6**	**-0.5**
	baz=12,SNR=11						
532A	**Rocksprings**	**12.59**	**341**	⇑P	**Pn**	**08 53 57.8**	**+0.8**
	baz=12,SNR=13						
531A	**Rocksprings**	**12.84**	**338**	⇑P	**Pn**	**08 54 01.8**	**+1.5**
	baz=13,SNR=13						
JCT	**Junction City**	**12.89**	**342**	⇓P	**Pn**	**08 54 01.1**	**0.0**
	baz=13						
530A	**J-C Ranch, Com**	**13.12**	**336**	⇑P	**Pn**	**08 54 04.3**	**+0.1**
	baz=13						
628A	**Black Gap, Mar**	**13.23**	**329**	⇑P	**Pn**	**08 54 08.5**	**+2.7**
	baz=13,SNR=6.3						
432A	**Menard**	**13.26**	**342**	⇓P	**Pn**	**08 54 05.7**	**-0.4**
	baz=13						
431A	**Sonora**	**13.33**	**339**	⇓P	**Pn**	**08 54 08.6**	**+1.5**
	baz=13,SNR=6.1						
TXAR	**Lajitas Array**	**13.51**	**326**	Pn	**Pn**	**08 54 11.8**	**+2.3**
	0.0nm,0.3s,baz=161,slow=14,SNR=8.8						
430A	**Baggett Ranch,**	**13.65**	**337**	⇓P	**Pn**	**08 54 14.4**	**+3.0**
	baz=14,SNR=11						
332A	**Millersview**	**13.72**	**343**	⇓P	**Pn**	**08 54 12.1**	**-0.3**
	baz=14						
528A	**Cox Ranch, San**	**13.75**	**331**	⇓P	**Pn**	**08 54 15.7**	**+2.9**
	baz=14,SNR=6.3						
429A	**Davenport Ranc**	**13.76**	**335**	⇓P	**Pn**	**08 54 15.3**	**+2.3**
	baz=14						
WHTX	**Lake Whitney**	**13.83**	**352**	⇑P	**Pn**	**08 54 14.5**	**+0.6**
	baz=14,SNR=25						
331A	**San Angelo**	**13.85**	**341**	⇑P	**Pn**	**08 54 14.7**	**+0.6**
	baz=14						
626A	**Big Bend Ranch**	**13.93**	**325**	⇑P	**Pn**	**08 54 17.8**	**+2.5**
	baz=14						
527A	**Woodward Ranch**	**14.13**	**328**	⇓P	**Pn**	**08 54 20.6**	**+2.5**
	baz=14,SNR=6.3						
232A	**Coleman**	**14.17**	**344**	⇑P	**Pn**	**08 54 18.6**	**+0.1**
	baz=14						
428A	**Kincaid Ranch,**	**14.18**	**332**	⇓P	**Pn**	**08 54 20.1**	**+1.3**
	baz=14						
330A	**Mertzon**	**14.19**	**338**	⇓P	**Pn**	**08 54 20.3**	**+1.5**
	baz=14						
526A	**Mary Lane Ranc**	**14.31**	**327**	⇑P	**Pn**	**08 54 23.5**	**+3.0**
	baz=14						
231A	**Bronte**	**14.40**	**342**	⇓P	**Pn**	**08 54 22.2**	**+0.5**
	baz=14						
329A	**Wagon Wheel Ra**	**14.56**	**336**	⇑P	**Pn**	**08 54 25.8**	**+1.9**
	baz=14						
230A	**Sterling City**	**14.61**	**339**	⇓P	**Pn**	**08 54 25.5**	**+0.9**
	baz=14						
427A	**Hayter Ranch,**	**14.61**	**331**	⇓P	**Pn**	**08 54 27.0**	**+2.3**
	baz=14						
426A	**McDonald Obser**	**14.77**	**328**	⇓P	**Pn**	**08 54 29.1**	**+2.2**
	baz=15,SNR=9.4						
328A	**Wristen Ranch,**	**14.80**	**333**	⇑P	**Pn**	**08 54 29.2**	**+2.0**
	baz=15						
ABTX	**Abilene, Hawle**	**14.87**	**345**	⇓P	**Pn**	**08 54 27.6**	**-0.5**
	baz=15						
326A	**Caldwell Ranch**	**15.27**	**330**	⇓P	**Pn**	**08 54 35.7**	**+2.2**
	baz=15						
425A	**Indio Mountain**	**15.35**	**326**	⇓P	**Pn**	**08 54 36.7**	**+2.1**
	baz=15						
Z32A	**Haskell**	**15.48**	**346**	⇓P	**Pn**	**08 54 36.0**	**-0.2**
	baz=15						
129A	**Stewart Farms,**	**15.54**	**338**	⇓P	**Pn**	**08 54 39.5**	**+2.5**
	baz=15,SNR=7.9						
Z31A	**Sharp Cattle R**	**15.66**	**344**	⇑P	**Pn**	**08 54 38.5**	**+0.1**
	baz=16						
128A	**Castleberry Fa**	**15.76**	**337**	⇑P	**Pn**	**08 54 41.5**	**+1.7**
	baz=16,SNR=5.3						
Z30A	**Sanderson Ranc**	**15.90**	**341**	⇓P	**Pn**	**08 54 42.6**	**+1.0**
	baz=16						
226B	**Tecolote Peak,**	**15.99**	**331**	⇑P	**P**	**08 54 45.4**	**-0.8**
	baz=16						
Z29A	**Hungry Hill Ra**	**16.06**	**340**	⇓P	**Pn**	**08 54 44.7**	**+1.0**
	baz=16,SNR=9.3						
324A	**Moseley Ranch,**	**16.13**	**326**	⇑P	**P**	**08 54 46.8**	**-1.0**
	baz=16						
Y32A	**R-V Farms, Ver**	**16.15**	**347**	⇑P	**Pn**	**08 54 45.3**	**+0.5**
	baz=16						
127A	**Arkansas Junct**	**16.15**	**334**	⇓P	**Pn**	**08 54 46.5**	**+1.5**
	baz=16						
Y31A	**Rekieta Farm,**	**16.30**	**345**	⇓P	**Pn**	**08 54 46.4**	**-0.2**
	baz=16,SNR=6.6						
Z28A	**Tucker Farm, M**	**16.32**	**338**	⇑P	**Pn**	**08 54 48.3**	**+1.2**
	baz=16,SNR=5.9						
225A	**Deer Hill, Car**	**16.33**	**329**	⇑P	**P**	**08 54 49.5**	**-0.5**
	baz=16						
126A	**Clayton Basin,**	**16.41**	**333**	⇑P	**P**	**08 54 50.4**	**-0.4**
	baz=16						
Y29A	**Porterfield Fa**	**16.60**	**341**	⇓P	**Pn**	**08 54 51.8**	**+1.2**
	baz=16,SNR=9.4						
224A	**Cornudas Mount**	**16.65**	**328**	⇓P	**P**	**08 54 53.9**	**+0.3**
	baz=16						
Z27A	**Tatum**	**16.66**	**336**	⇑P	**Pn**	**08 54 53.0**	**+1.7**
	baz=16,SNR=10						
125A	**Gardner Draw,**	**16.71**	**331**	⇑P	**P**	**08 54 53.6**	**-0.5**
	baz=17,SNR=6.6						
Y28A	**McKinney Farm,**	**16.84**	**339**	⇓P	**Pn**	**08 54 54.2**	**+0.6**
	baz=17,SNR=9.2						
Z26A	**Caprock**	**16.93**	**334**	⇑P	**Pn**	**08 54 55.6**	**+0.9**
	baz=17,SNR=7.6						
MSTX	**Muleshoe**	**17.07**	**338**	⇓P	**Pn**	**08 54 56.2**	**-0.3**
	baz=17,SNR=6.1						
124A	**Stringfield Ra**	**17.12**	**329**	⇑P	**P**	**08 54 59.3**	**+0.4**
	baz=17						
Y27A	**Causey**	**17.14**	**337**	⇓P	**Pn**	**08 54 58.7**	**+1.3**
	baz=17						
Z25A	**Roswell**	**17.25**	**332**	⇑P	**P**	**08 55 00.3**	**+0.1**
	baz=17,SNR=7.1						
TUL1	**Tulsa**	**17.59**	**358**	⇑P	**Pn**	**08 55 02.1**	**-0.8**
	baz=18,SNR=8.1						
Z24A	**Sheeppen Canyo**	**17.59**	**331**	⇑P	**P**	**08 55 05.5**	**+1.4**
	baz=18						
W29A	**Amarillo**	**17.77**	**342**	⇑P	**Pn**	**08 55 06.0**	**+0.8**
	baz=18						
Y25A	**Mesa, Roswell**	**17.79**	**333**	⇑P	**P**	**08 55 07.1**	**+1.0**
	baz=18,SNR=7.8						
X27A	**F and S Farms,**	**17.80**	**338**	⇓P	**P**	**08 55 07.0**	**+0.8**
	baz=18						
X26A	**CR and CF Fran**	**17.98**	**336**	⇑P	**P**	**08 55 09.3**	**+1.1**
	baz=18,SNR=7.3						
Y24A	**Capitan**	**18.12**	**331**	⇓P	**P**	**08 55 11.7**	**+1.9**
	baz=18						
W27A	**Bowe Ranch, En**	**18.16**	**339**	⇓P	**P**	**08 55 10.8**	**+0.6**
	baz=18						
X25A	**Clemmons Ranch**	**18.30**	**334**	⇓P	**Pn**	**08 55 13.7**	**+2.0**
	baz=18						
Z22A	**Elephant Butte**	**18.32**	**327**	⇓P	**Pn**	**08 55 13.5**	**+1.4**
	baz=18						
Y23A	**Lovelace Mesa,**	**18.41**	**330**	⇑P	**Pn**	**08 55 15.0**	**+1.8**
	baz=18						
W26A	**Owens Ranch, T**	**18.44**	**337**	⇓P	**Pn**	**08 55 14.4**	**+1.0**
	baz=18						
V28A	**Channing**	**18.52**	**342**	⇑P	**Pn**	**08 55 15.3**	**+0.8**
	baz=18						
W25A	**X Bar L Ranch,**	**18.82**	**336**	⇑P	**Pn**	**08 55 19.4**	**+1.3**
	baz=19						
Y22A	**Socorro**	**18.86**	**328**	⇓P	**Pn**	**08 55 20.5**	**+1.9**
	baz=19						
V26A	**Tequesquite Ra**	**19.08**	**338**	⇑P	**Pn**	**08 55 21.4**	**+0.2**
	baz=19,SNR=8.6						
Z20A	**Nine Sixteen R**	**19.10**	**323**	⇑P	**Pn**	**08 55 24.2**	**+2.7**
	baz=19						
W24A	**Lazy 6 Ranch,**	**19.20**	**334**	⇑P	**Pn**	**08 55 23.7**	**+1.1**
	baz=19,SNR=6.9						
U27A	**Thompson Grove**	**19.33**	**341**	⇑P	**P**	**08 55 23.6**	**+0.6**
	baz=19,SNR=6.2						
X22A	**Bernardo**	**19.34**	**329**	⇓P	**Pn**	**08 55 26.3**	**+1.9**
	baz=19						
V25A	**Rancho No Teng**	**19.42**	**336**	⇓P	**Pn**	**08 55 26.0**	**+0.7**
	baz=19,SNR=9.1						
ANMO	**Albuquerque**	**19.44**	**331**	P	**P**	**08 55 25.3**	**+1.0**
	0.1nm,0.3s,baz=152,slow=10,SNR=7.1						
Y20A	**Horse Springs,**	**19.58**	**325**	⇑P	**Pn**	**08 55 28.7**	**+1.4**
	baz=20						
V24A	**Rampart Ranch,**	**19.58**	**335**	⇓P	**Pn**	**08 55 28.0**	**+0.7**
	baz=20,SNR=9.8						
U26A	**Atchley Ranch,**	**19.60**	**339**	⇓P	**P**	**08 55 27.1**	**+1.0**
	baz=20,SNR=5.6						
S31A	**Mullinville**	**19.66**	**350**	⇓P	**Pn**	**08 55 27.9**	**-0.2**
	baz=20						
X21A	**Alamocita Cree**	**19.68**	**327**	⇑P	**Pn**	**08 55 29.8**	**+1.3**
	baz=20						
T28A	**Walsh**	**19.77**	**343**	⇓P	**Pn**	**08 55 29.3**	**0.0**
	baz=20						
U25A	**Circle Dot Ran**	**19.84**	**337**	⇓P	**Pn**	**08 55 30.3**	**-0.1**
	baz=20						
S30A	**Montezuma**	**19.87**	**347**	⇓P	**P**	**08 55 29.6**	**+0.8**
	baz=20						
T27A	**Campo**	**19.89**	**342**	⇓P	**P**	**08 55 30.0**	**+0.9**
	baz=20,SNR=5.2						
V23A	**Ortiz Mt. (NFS**	**19.98**	**333**	⇓P	**P**	**08 55 31.5**	**+1.3**
	baz=20						
S29A	**Ulysses**	**19.99**	**346**	⇑P	**P**	**08 55 30.5**	**+0.3**
	baz=20						
TKL	**Tuckaleechee C**	**20.04**	**28**	P	Pn	08 55 35.1	+2.6
	1.2nm,0.4s,baz=186,slow=12,SNR=5.0						
X20A	**Quemado**	**20.12**	**326**	⇑P	Pn	08 55 34.1	+0.3
	baz=20						
S28A	**Manter**	**20.15**	**344**	⇑P	**P**	**08 55 32.6**	**+0.6**
	baz=20						
U24A	**Moreno Valley**	**20.18**	**336**	⇓P	Pn	08 55 35.0	+0.5
	baz=20						
T26A	**Comanche Natio**	**20.26**	**340**	⇑P	**P**	**08 55 34.2**	**+0.9**
	baz=20						
V22A	**San Miguel Ran**	**20.44**	**332**	⇑P	**P**	**08 55 36.9**	**+1.6**
	baz=20						
U23A	**El Rito**	**20.48**	**334**	⇑P	**P**	**08 55 37.1**	**+1.4**
	baz=20						
T25A	**Trinidad**	**20.50**	**338**	⇑P	Pn	08 55 37.9	-0.3
	baz=20,SNR=6.1						
W20A	**Ramah**	**20.58**	**327**	⇑P	Pn	08 55 39.6	+0.5
	baz=20						
S26A	**Kim**	**20.63**	**341**	⇑P	**P**	**08 55 38.6**	**+1.4**
	baz=20						
T24A	**Torres, Weston**	**20.68**	**337**	⇓P	Pn	08 55 40.1	-0.1
	baz=21,SNR=5.9						
U22A	**Laves**	**20.81**	**332**	⇑P	**P**	**08 55 40.9**	**+1.6**
	baz=21						
X18A	**Snowflake**	**20.91**	**324**	⇓P	Pn	08 55 43.0	+0.1
	baz=21						
S25A	**Robets Cordova**	**20.98**	**339**	⇓P	**P**	**08 55 42.6**	**+1.5**
	baz=21						
T23A	**Casias Ranch,**	**21.02**	**335**	⇑P	**P**	**08 55 43.8**	**+2.2**
	baz=21						
R27A	**Eads**	**21.05**	**343**	⇑P	**P**	**08 55 42.3**	**+0.6**
	baz=21,SNR=5.3						
V20A	**Brimhall**	**21.09**	**329**	⇓P	**P**	**08 55 44.5**	**+2.3**
	baz=21						
U21A	**Nageezi**	**21.21**	**331**	⇑P	**P**	**08 55 45.7**	**+2.2**
	baz=21						
S24A	**Houchin Ranch,**	**21.24**	**337**	⇓P	**P**	**08 55 46.4**	**+2.5**
	baz=21						
R26A	**Arlington**	**21.25**	**342**	⇑P	**P**	**08 55 45.9**	**+2.1**
	baz=21						
T22A	**Edith**	**21.36**	**333**	⇑P	**P**	**08 55 47.9**	**+2.7**
	baz=21						
R25A	**Fountain Ranch**	**21.37**	**340**	⇓P	**P**	**08 55 46.8**	**+1.6**
	baz=21						
S23A	**Nye Farm, Mont**	**21.59**	**336**	⇑P	**P**	**08 55 50.0**	**+2.3**
	baz=22						
T21A	**Navajo Lake**	**21.62**	**332**	⇑P	**P**	**08 55 50.5**	**+2.6**
	baz=22						
KSCO	**Kaye Shedlock'**	**21.68**	**344**	⇓P	**P**	**08 55 49.7**	**+1.2**
	baz=22						
X16A	**Lo Mia Camp, P**	**21.69**	**321**	⇑P	**P**	**08 55 51.5**	**+2.7**
	baz=22						
R24A	**Sanders Place,**	**21.73**	**338**	⇑P	**P**	**08 55 51.4**	**+2.3**
	baz=22						
Q26A	**Hugo**	**21.85**	**342**	⇓P	**P**	**08 55 52.4**	**+2.1**
	baz=22						
S22A	**4UR Ranch, Cre**	**21.95**	**335**	⇑P	**P**	**08 55 54.0**	**+2.4**
	baz=22						
113A	**Mohawk Valley,**	**22.12**	**314**	⇓P	**P**	**08 55 57.0**	**+3.8**
	baz=22						
MVCO	**Mesa Verde**	**22.24**	**331**	⇑P	**P**	**08 55 56.4**	**+1.8**
	baz=22						
S21A	**Coal Bank Pass**	**22.29**	**333**	⇓P	**P**	**08 55 57.3**	**+2.0**
	baz=22						
R22A	**Saguache, Gunn**	**22.34**	**335**	⇑P	**P**	**08 55 58.8**	**+3.0**
	baz=22						
Q24A	**Divide**	**22.40**	**339**	⇑P	**P**	**08 55 58.7**	**+2.3**
	baz=22						
S20A	**Disappointment**	**22.68**	**332**	⇓P	**P**	**08 56 00.1**	**+0.7**
	baz=23						
R21A	**Cimarron**	**22.78**	**334**	⇑P	**P**	**08 56 02.0**	**+1.5**
	baz=23						
R20A	**Redvale**	**22.98**	**332**	⇑P	**P**	**08 56 05.3**	**+2.8**
	baz=23						
P23A	**Jefferson**	**23.00**	**338**	⇓P	**P**	**08 56 04.7**	**+1.9**
	baz=23						
GLA	**Glamis**	**23.01**	**314**	⇑P	**P**	**08 56 06.6**	**+3.9**
	baz=23						
SFIN	**Scholer Farm**	**23.11**	**16**	⇑P	**P**	**08 56 00.1**	**-3.3**
	baz=23						
PDMCI	**Parker Dam,Lak**	**23.30**	**317**	⇑P	**P**	**08 56 09.3**	**+3.9**
	baz=23						
ISCO	**Idaho Springs**	**23.30**	**339**	⇓P	**P**	**08 56 07.0**	**+1.1**
	baz=23						
N27A	**Anderson Farm,**	**23.36**	**346**	⇓P	**P**	**08 56 06.7**	**+0.6**
	baz=23						
O24A	**Longmont**	**23.42**	**341**	⇓P	**P**	**08 56 08.8**	**+2.0**
	baz=23						
P22A	**Eagle**	**23.53**	**337**	⇓P	**P**	**08 56 09.6**	**+1.6**
	baz=23						
O23A	**Lake Granby, G**	**23.78**	**339**	⇓P	**P**	**08 56 12.5**	**+2.1**
	baz=24						
M27A	**Reverse DX Ran**	**24.01**	**347**	⇓P	**P**	**08 56 13.7**	**+1.4**
	baz=24						
N23A	**Red Feather La**	**24.40**	**340**	⇑P	**P**	**08 56 17.5**	**+1.3**
	baz=24						
PFO	**Pinyon Flat Ob**	**24.45**	**313**	LR	LR	09 06 33.5	
	comp=Z,25nm,19.9s,baz=264,slow=38						
M24A	**Cheyenne**	**24.58**	**342**	⇑P	**P**	**08 56 19.0**	**+1.4**
	baz=24						
K25A	**Mack Ranch, Ha**	**25.39**	**345**	⇑P	**P**	**08 56 26.4**	**+1.5**
	baz=25						
K22A	**Casper**	**26.17**	**341**	⇓P	**P**	**08 56 32.9**	**+0.8**
	baz=26						
J24A	**Dixon Ranch, L**	**26.26**	**344**	⇓P	**P**	**08 56 33.3**	**+0.4**
	baz=26						
PDAR	**Pinedale Array**	**27.33**	**336**	P	**P**	**08 56 43.1**	**+0.5**
	0.4nm,0.7s,baz=146,slow=9.8,SNR=3.3						
H24A	**Dirks Ranch, A**	**27.56**	**345**	⇑P	**P**	**08 56 46.3**	**+1.7**
	baz=28						
NVAR	**Mina Array Bea**	**28.49**	**320**	P	**P**	**08 56 53.8**	**+0.8**
	0.5nm,0.6s,baz=138,slow=9.4,SNR=4.5						
K14A	**Jones Ranch, D**	**28.66**	**331**	⇓P	**P**	**08 56 56.9**	**+2.6**
	baz=28						
I17A	**Pilgrim Ck.**	**28.70**	**336**	⇓P	**P**	**08 56 56.1**	**+1.3**
	baz=29						
H18A	**Shoshone NF, C**	**29.02**	**338**	⇑P	**P**	**08 56 58.7**	**+1.0**
	baz=29						
F18A	**Big Timber**	**30.11**	**339**	⇑P	**P**	**08 57 08.1**	**+0.9**
	baz=30						
D22A	**Cohagen**	**30.21**	**345**	⇑P	**P**	**08 57 08.2**	**+0.2**
	baz=30						
E19A	**Rath Farm, Rou**	**30.30**	**341**	⇑P	**P**	**08 57 09.2**	**+0.4**
	baz=30						
F17A	**Fitzpatrick Pl**	**30.43**	**338**	⇑P	**P**	**08 57 11.2**	**+1.1**
	baz=30						
G15A	**Dillon**	**30.49**	**335**	⇑P	**P**	**08 57 11.4**	**+0.8**
	baz=30						
D20A	**Manuel Ranch,**	**30.68**	**342**	⇓P	**P**	**08 57 12.5**	**+0.4**
	baz=31						
D19A	**Cripps Ranch,**	**30.96**	**342**	⇓P	**P**	**08 57 15.4**	**+0.7**
	baz=31						
F15A	**Butte**	**31.05**	**336**	⇑P	**P**	**08 57 16.4**	**+0.8**
	baz=31						
C20A	**Veseth Ranch,**	**31.21**	**343**	⇑P	**P**	**08 57 18.1**	**+1.3**
	baz=31						
D17A	**Six Diamond Ra**	**31.52**	**340**	⇑P	**P**	**08 57 20.6**	**+0.9**
	baz=31						
B20A	**Solberg Farm,**	**31.88**	**344**	⇓P	**P**	**08 57 23.4**	**+0.8**
	baz=32						
C17A	**Wharram Farm,**	**31.97**	**340**	⇓P	**P**	**08 57 24.6**	**+1.0**
	baz=32						
EGMT	**Eagleton**	**32.00**	**341**	⇑P	**P**	**08 57 25.1**	**+1.3**
	baz=32						
LPAZ	**La Paz**	**43.42**	**141**	P	**P**	**08 59 00.9**	**-0.3**
	0.8nm,0.6s,baz=345,slow=7.1,SNR=5.5						
YKA	**Yellowknife Ar**	**46.23**	**348**	P	**P**	**08 59 21.7**	**-0.6**
	0.9nm,0.7s,baz=153,slow=7.6,SNR=19						
SIV	**San Ignacio**	**47.78**	**133**	P	**P**	**08 59 36.0**	**+0.9**
	1.6nm,0.7s,baz=319,slow=8.2,SNR=6.0						
ILAR	**Eielson Array**	**57.76**	**337**	P	**P**	**09 00 49.0**	**+0.8**
	0.2nm,0.9s,baz=98,slow=7.4,SNR=3.3						
ARCES	**ARCESS Array B**	**83.04**	**18**	LR	LR	09 43 24.8	
	comp=Z,23nm,18.7s,baz=172,slow=38						
FINES	**FINESS Array B**	**87.90**	**24**	LR	LR	09 44 05.7	
	comp=Z,26nm,19.1s,baz=193,slow=36						

*DDA **29** 08:51:10.2, 38°42N×39°09E,h12km,MD3.2*

*CSEM **29** 08:51:10.6±0.2, 38°43N×39°07E, h0km±2km, MD3.2, Error ellipse: s-maj=3.9km s-min=3.5km az=4.0*

ISK 29 08:51:09.6, 38°45N×39°07E, h5km, MD3.0, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.08**	**308**	*i* P	Pg	08 51 13.6	+1.9
ELZG				*i* S	Sg	08 51 15.7	+2.6
ELZG	**Elazig**	**0.08**	**308**	*i* P	Pg	08 51 13.6	+1.9
ELZG				*i* S	Sg	08 51 15.7	+2.6
SVRC	**Sivrice-ELAZID**	**0.20**	**110**	PG	Pg	08 51 14.0	+0.1
SVRC				*e*SG	Sg	08 51 17.5	+0.8
SVRC	**Sivrice-ELAZID**	**0.20**	**110**	*i* Pg	Pg	08 51 14.0	+0.2
SVRC				*e*Sg	Sg	08 51 17.5	+0.8
PTK	**Pertek**	**0.51**	**30**	*e*PG	Pg	08 51 20.0	+0.2
PTK				*e*SG	Sg	08 51 27.8	+1.1
PTK	**Pertek**	**0.51**	**30**	*e*Pg	Pg	08 51 20.0	+0.2
PTK				*e*Sg	Sg	08 51 27.8	+1.1
MYA	**Malataya**	**0.52**	**257**	*e*PG	Pg	08 51 20.4	+0.6
MYA				*e*SG	Sb	08 51 28.0	-1.2
MYA	**Malataya**	**0.52**	**257**	*e*Pg	Pg	08 51 20.4	+0.7
MYA				*e*Sg	Sb	08 51 28.0	-1.3
MALT	**Malatya**	**0.52**	**255**	*e*PG	Pg	08 51 19.8	0.0
MALT				*e*SG	Sg	08 51 27.7	+1.0
MALT	**Malatya**	**0.52**	**255**	*e*Pg	Pg	08 51 19.8	0.0
MALT				*e*Sg	Sg	08 51 27.7	+1.0
AKCD	**Akcadag**	**0.91**	**261**	*i* P	Pg	08 51 27.5	+0.1
AKCD				*i* S	Sb	08 51 41.0	+0.3
AKCD	**Akcadag**	**0.91**	**261**	*i* P	Pg	08 51 27.5	+0.2
AKCD				*i* S	Sb	08 51 41.0

CRLT	**Corlu**	**0.02**	**184**	*i* Pg	Pg	08 53 14.7	0.0
CRLT				*e*Sg	Sg	08 53 15.4	+0.3
TKR	**Tekirdag**	**0.22**	**223**	*e*PG	Pg	08 53 19.6	+1.2
TKR				*e*SG	Sg	08 53 23.8	+2.5
TKR	**Tekirdag**	**0.22**	**223**	*e*Pg	Pg	08 53 19.6	+1.2
TKR				*e*Sg	Sg	08 53 23.8	+2.5
SLVT	**Silivri**	**0.36**	**78**	*e*PG	Pg	08 53 22.1	+1.0
SLVT				*e*SG	Sb	08 53 28.5	-1.0
SLVT	**Silivri**	**0.36**	**78**	*e*Pg	Pg	08 53 22.1	+1.0
SLVT				*e*Sg	Sb	08 53 28.5	-1.0
MRMT	**Marmara Adasi**	**0.56**	**191**	*e*PG	Pg	08 53 25.7	+0.7
MRMT	**Marmara Adasi**	**0.56**	**191**	*e*Pg	Pg	08 53 25.7	+0.7
CTKS	**Kestanelik-??a**	**0.59**	**82**	*e*PG	Pb	08 53 26.4	-0.6
CTKS	**Kestanelik-??a**	**0.59**	**82**	*e*Pg	Pb	08 53 26.5	-0.6
ISK	**Istanbul-Kandi**	**1.00**	**95**	*e*PG	Pg	08 53 33.6	+0.3
ISK	**Istanbul-Kandi**	**1.00**	**95**	*e*Pg	Pg	08 53 33.6	+0.3
EDRB	**Edirne**	**1.02**	**313**	*e*PG	Pb	08 53 34.8	+0.3
EDRB	**Edirne**	**1.02**	**313**	*e*Pg	Pb	08 53 34.8	+0.3
ARMT	**Armutlu**	**1.03**	**124**	*e*PG	Pb	08 53 35.1	+0.4
ARMT	**Armutlu**	**1.03**	**124**	*e*Pg	Pb	08 53 35.1	+0.3
ERIK	**Erikli-Kesan**	**1.05**	**243**	*e*PG	Pb	08 53 35.1	+0.2
ERIK	**Erikli-Kesan**	**1.05**	**243**	*e*Pg	Pb	08 53 35.1	+0.2
LPK	**Lapseki**	**1.08**	**224**	*e*PG	Pb	08 53 35.8	+0.4
LPK	**Lapseki**	**1.08**	**224**	*e*Pg	Pb	08 53 35.8	+0.3
GONE	**Gonen-Balikesi**	**1.11**	**182**	*e*PN	Pn	08 53 36.6	0.0
GONE	**Gonen-Balikesi**	**1.11**	**182**	*e*Pn	Pn	08 53 36.6	0.0
GELI	**Tayfur-Gelibol**	**1.22**	**232**	*e*PN	Pb	08 53 37.9	0.0
GELI	**Tayfur-Gelibol**	**1.22**	**232**	*e*Pn	Pb	08 53 37.9	0.0

ISK ***29*** *08:55:50.4, 37˚.28N×28˚.24E, h13km, MD2.7*
ISCJB ***29*** *08:55:51.1±0.4, 37˚.28N±0˚.02×28˚.24E±0˚.03, h0km, Error ellipse: s-maj=3.7km s-min=3.1km az=34.6*
CSEM ***29*** *08:55:51.5±0.1, 37˚.26N×28˚.23E, h2km, MD2.7, Error ellipse: s-maj=2.6km s-min=2.0km az=35.0*
DDA ***29*** *08:55:51.0, 37˚.22N×28˚.20E, h7km, MD2.7*
ISC 29 08:55:51.9±0.9, 37°28N±0°.02×28°24E±0°.02, h0km, n28, σ1s00/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.15**	**166**	*e*PG	**Pg**	**08 55 54.3**	**-0.4**
YER				*e*SG	**Sg**	**08 55 57.3**	**+0.8**
YER	**Yerkesik**	**0.15**	**166**	*e*Pg	**Pg**	**08 55 54.3**	**-0.4**
YER				*e*Sg	**Sg**	**08 55 57.3**	**+0.8**
MLSB	**Milas**	**0.37**	**273**	*e*PG	**Pg**	**08 55 58.2**	**-0.7**
MLSB				*e*SG	**Sg**	**08 56 04.1**	**+0.4**
MLSB	**Milas**	**0.37**	**273**	*e*Pg	**Pg**	**08 55 58.2**	**-0.7**
MLSB				*e*Sg	**Sg**	**08 56 04.1**	**+0.4**
AYDN	**Tasoluk**	**0.48**	**323**	*i* P	**Pg**	**08 56 01.3**	**+0.3**
AYDN				*i* S	**Sg**	**08 56 08.4**	**+1.2**
AYDN	**Tasoluk**	**0.48**	**323**	*i* P	**Pg**	**08 56 01.3**	**+0.3**
AYDN				*i* S	**Sg**	**08 56 08.4**	**+1.2**
TURN	**Turunc**	**0.50**	**144**	*i* P	**Pg**	**08 56 00.1**	**-1.3**
TURN				*i* S	**Sg**	**08 56 07.4**	**-0.4**
TURN	**Turunc**	**0.50**	**144**	*i* P	**Pg**	**08 56 00.1**	**-1.3**
TURN				*i* S	**Sg**	**08 56 07.4**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.57**	**144**	*e*PG	**Pg**	**08 56 02.1**	**-0.6**
DALY	**Dalyan (Mu¨la**	**0.57**	**144**	*e*Pg	**Pg**	**08 56 02.1**	**-0.6**
DAT	**Datca**	**0.76**	**224**	*e*PG	**Pg**	**08 56 05.7**	**-0.7**
DAT				*e*SG	**Sg**	**08 56 16.6**	**+0.3**
DAT	**Datca**	**0.76**	**224**	*e*Pg	**Pg**	**08 56 05.7**	**-0.7**
DAT				*e*Sg	**Sg**	**08 56 16.6**	**+0.3**
DNZL	**Cakiroluk**	**0.76**	**57**	*i* P	Pg	08 56 02.1	-4.4
DNZL				*i* S	**Sg**	**08 56 16.5**	**+0.1**
DNZL	**Cakiroluk**	**0.76**	**57**	*i* P	Pg	08 56 02.1	-4.4
DNZL				*i* S	**Sg**	**08 56 16.5**	**+0.1**
BODT	**Bodrum**	**0.77**	**254**	*e*PG	**Pg**	**08 56 05.8**	**-0.8**
BODT	**Bodrum**	**0.77**	**254**	*e*Pg	**Pg**	**08 56 05.8**	**-0.8**
GCAM	**G?zelcaml?**	**0.90**	**298**	*i* P	**Pg**	**08 56 08.6**	**-0.6**
GCAM				*i* S	**Sg**	**08 56 19.9**	**-1.0**
GCAM	**G?zelcaml?**	**0.90**	**298**	*i* P	**Pg**	**08 56 08.6**	**-0.6**
GCAM				*i* S	**Sg**	**08 56 19.9**	**-1.0**
FETY	**Fethiye**	**0.93**	**133**	*e*PG	**Pg**	**08 56 09.6**	**-0.1**
FETY	**Fethiye**	**0.93**	**133**	*e*Pg	**Pg**	**08 56 09.6**	**-0.1**
GOLH	**Golhisar**	**1.06**	**92**	*i* P	**Pb**	**08 56 12.7**	**-0.4**
GOLH				*i* S	**Sg**	**08 56 25.6**	**-0.2**
GOLH	**Golhisar**	**1.06**	**92**	*i* P	**Pb**	**08 56 12.7**	**-0.4**
GOLH				*i* S	**Sg**	**08 56 25.6**	**-0.2**
MANT	**Manisa**	**1.24**	**12**	*i* P	**Pg**	**08 56 15.5**	**-0.1**
MANT				*i* S	**Sg**	**08 56 30.4**	**-1.3**
MANT	**Manisa**	**1.24**	**12**	*i* P	**Pg**	**08 56 15.5**	**-0.1**
MANT				*i* S	**Sg**	**08 56 30.4**	**-1.3**
KHAL	**Karahalli**	**1.48**	**42**	*i* P	**Pg**	**08 56 19.7**	**-0.5**
KHAL	**Karahalli**	**1.48**	**42**	*i* P	**Pg**	**08 56 19.7**	**-0.5**
AKAS	**Kas**	**1.51**	**133**	*i* P	**Pn**	**08 56 19.5**	**-0.9**
AKAS				*i* S	**Sn**	**08 56 45.4**	**+4.6**
AKAS	**Kas**	**1.51**	**133**	*i* P	**Pn**	**08 56 19.5**	**-0.9**

CSEM ***29*** *08:57:42.6±0.1, 42˚.26N×13˚.49E, h15km, ML3.5/10, Error ellipse: s-maj=2.1km s-min=1.6km az=66.0*
ROM ***29*** *08:57:42.7±0.1, 42˚.25N×13˚.49E, h10km, Md2.9/30, Ml3.0/28, Error ellipse: s-maj=0.9km s-min=0.7km az=59.0*
ISC 29 08:57:42.8±0.8, 42°26N±0°.02×13°49E±0°.02, h14km±4km, n70, σ0s54/96, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.07**	**81**	Pg	**Pg**	**08 57 45.4**	**-0.3**
FAGN				Sg	**Sg**	**08 57 46.9**	**-0.8**
	47µm,0.3s						
FAGN	**Fagnano**	**0.07**	**81**	Pg	**Pg**	**08 57 45.4**	**-0.3**
FAGN				Sg	**Sg**	**08 57 46.9**	**-0.8**
	47µm,0.3s						
AQU	**L'Aquila**	**0.12**	**327**	Pg	**Pg**	**08 57 46.4**	**+0.2**
AQU				Sg	**Sg**	**08 57 48.7**	**+0.1**
	8µm,0.5s						
AQU	**L'Aquila**	**0.12**	**327**	Pg	**Pg**	**08 57 46.4**	**+0.2**
AQU				Sg	**Sg**	**08 57 48.7**	**+0.1**
	8µm,0.5s						
PTQR	**Pietraquaria**	**0.24**	**196**	Pg	**Pg**	**08 57 48.5**	**+0.4**
PTQR				Sg	**Sb**	**08 57 52.7**	**-0.5**
PTQR	**Pietraquaria**	**0.24**	**196**	Pg	**Pg**	**08 57 48.5**	**+0.4**
PTQR				Sg	**Sb**	**08 57 52.7**	**-0.5**
FIAM	**Fiamignano**	**0.28**	**273**	Pg	**Pg**	**08 57 49.2**	**+0.5**
FIAM				Sg	**Sb**	**08 57 53.8**	**-0.4**
	1µm,0.5s						
FIAM	**Fiamignano**	**0.28**	**273**	Pg	**Pg**	**08 57 49.2**	**+0.5**
FIAM				Sg	**Sb**	**08 57 53.8**	**-0.4**
	1µm,0.5s						
CAMP	**Campotosto**	**0.29**	**348**	Pg	**Pg**	**08 57 49.1**	**+0.2**
CAMP				Sg	**Sb**	**08 57 54.2**	**-0.3**
	392nm,0.6s						
CAMP	**Campotosto**	**0.29**	**348**	Pg	**Pg**	**08 57 49.1**	**+0.2**
CAMP				Sg	**Sb**	**08 57 54.2**	**-0.3**
	392nm,0.6s						
VCEL	**Villa Celiera**	**0.30**	**62**	Pg	**Pg**	**08 57 49.2**	**+0.2**
VCEL				Sg	**Sb**	**08 57 55.6**	**+0.8**
	3µm,0.6s						
VCEL	**Villa Celiera**	**0.30**	**62**	Pg	**Pg**	**08 57 49.2**	**+0.2**
VCEL				Sg	**Sb**	**08 57 55.6**	**+0.8**
	3µm,0.6s						
TERO	**Teramo**	**0.38**	**13**	Pg	**Pg**	**08 57 50.3**	**-0.2**
TERO				Sg	**Sg**	**08 57 56.3**	**+0.7**
	2µm,0.4s						
TERO	**Teramo**	**0.38**	**13**	Pg	**Pg**	**08 57 50.3**	**-0.2**
TERO				Sg	**Sg**	**08 57 56.3**	**+0.7**
	2µm,0.4s						
INTR	**Introdacqua**	**0.39**	**128**	Pg	**Pg**	**08 57 51.0**	**+0.3**
INTR				Sg	**Sg**	**08 57 56.9**	**+0.8**
	2µm,0.3s						
INTR	**Introdacqua**	**0.39**	**128**	Pg	**Pg**	**08 57 51.0**	**+0.3**
INTR				Sg	**Sg**	**08 57 56.9**	**+0.8**
	2µm,0.3s						
VVLD	**Villa Vallelon**	**0.40**	**165**	Pg	**Pg**	**08 57 51.0**	**+0.2**
VVLD				Sg	**Sg**	**08 57 57.0**	**+0.8**
	1µm,0.4s						
VVLD	**Villa Vallelon**	**0.40**	**165**	Pg	**Pg**	**08 57 51.0**	**+0.2**
VVLD				Sg	**Sg**	**08 57 57.0**	**+0.8**
	1µm,0.4s						
GUAR	**Guarcino**	**0.48**	**196**	Pg	**Pg**	**08 57 52.5**	**+0.2**
	748nm,0.4s						
GUAR	**Guarcino**	**0.48**	**196**	Pg	**Pg**	**08 57 52.5**	**+0.2**
	748nm,0.4s						
LNSS	**Leonessa**	**0.48**	**316**	Pg	**Pg**	**08 57 52.5**	**+0.1**
	1µm,0.5s						
LNSS	**Leonessa**	**0.48**	**316**	Pg	**Pg**	**08 57 52.5**	**+0.1**
	1µm,0.5s						
CERT	**Cerreto**	**0.49**	**231**	Pg	**Pg**	**08 57 52.7**	**+0.3**
CERT				Sg	**Sb**	**08 58 00.0**	**-0.2**
	2µm,0.6s						
CERT	**Cerreto**	**0.49**	**231**	Pg	**Pg**	**08 57 52.7**	**+0.3**
CERT				Sg	**Sb**	**08 58 00.0**	**-0.2**
	2µm,0.6s						
LPEL	**Lama dei Pelig**	**0.56**	**112**	Pg	**Pg**	**08 57 53.6**	**-0.2**
LPEL				Sg	**Sg**	**08 58 01.8**	**+0.6**
	2µm,0.4s						
LPEL	**Lama dei Pelig**	**0.56**	**112**	Pg	**Pg**	**08 57 53.6**	**-0.2**
LPEL				Sg	**Sg**	**08 58 01.8**	**+0.6**
	2µm,0.4s						
POFI	**Posta Fibreno**	**0.56**	**163**	Pg	**Pg**	**08 57 53.6**	**-0.3**
	313nm,0.5s						
POFI	**Posta Fibreno**	**0.56**	**163**	Pg	**Pg**	**08 57 53.6**	**-0.3**
	313nm,0.5s						
SDI	**San Donato**	**0.60**	**156**	Pg	**Pg**	**08 57 54.4**	**-0.1**
SDI				Sg	**Sb**	**08 58 03.9**	**+0.6**
SDI	**San Donato**	**0.60**	**156**	Pg	**Pg**	**08 57 54.4**	**-0.1**
SDI				Sg	**Sb**	**08 58 03.9**	**+0.6**
MTCE	**Montecelio**	**0.60**	**248**	Pg	**Pg**	**08 57 54.5**	**-0.1**
	368nm,0.5s						
MTCE	**Montecelio**	**0.60**	**248**	Pg	**Pg**	**08 57 54.5**	**-0.1**
	368nm,0.5s						
MNS	**Montasola**	**0.61**	**282**	Pg	**Pg**	**08 57 54.6**	**-0.2**
	509nm,0.5s						
MNS	**Montasola**	**0.61**	**282**	Pg	**Pg**	**08 57 54.6**	**-0.2**
	509nm,0.5s						
CAFR	**Castel Frentan**	**0.64**	**92**	Pg	**Pg**	**08 57 55.5**	**+0.2**
	2µm,0.4s						
CAFR	**Castel Frentan**	**0.64**	**92**	Pg	**Pg**	**08 57 55.5**	**+0.2**
	2µm,0.4s						
NRCA	**Norcia**	**0.64**	**335**	Pg	**Pg**	**08 57 55.1**	**-0.3**
NRCA	**Norcia**	**0.64**	**335**	Pg	**Pg**	**08 57 55.1**	**-0.3**
OFFI	**Offida**	**0.69**	**12**	Pg	**Pb**	**08 57 57.0**	**+0.3**
	2µm,0.6s						
OFFI	**Offida**	**0.69**	**12**	Pg	**Pb**	**08 57 57.0**	**+0.3**
	2µm,0.6s						
GIUL	**Giuliano Di Ro**	**0.72**	**194**	Pg	**Pg**	**08 57 56.5**	**-0.3**
	601nm,0.9s						
GIUL	**Giuliano Di Ro**	**0.72**	**194**	Pg	**Pg**	**08 57 56.5**	**-0.3**
	601nm,0.9s						
RMP	**Rome, Mte Porz**	**0.73**	**233**	Pg	**Pg**	**08 57 56.6**	**-0.5**
	905nm,0.4s						
RMP	**Rome, Mte Porz**	**0.73**	**233**	Pg	**Pg**	**08 57 56.6**	**-0.5**
	905nm,0.4s						
RNI2	**Rionero Sannit**	**0.74**	**138**	Pg	**Pg**	**08 57 57.4**	**+0.2**
	643nm,0.6s						
RNI2	**Rionero Sannit**	**0.74**	**138**	Pg	**Pg**	**08 57 57.4**	**+0.2**
	643nm,0.6s						
CESX	**Cesi**	**0.76**	**298**	Pg	**Pg**	**08 57 57.5**	**-0.1**
	402nm,0.6s						
CESX	**Cesi**	**0.76**	**298**	Pg	**Pg**	**08 57 57.5**	**-0.1**
	402nm,0.6s						
CERA	**Filignano**	**0.77**	**149**	Pg	**Pg**	**08 57 57.0**	**-0.7**
	677nm,0.8s						
CERA	**Filignano**	**0.77**	**149**	Pg	**Pg**	**08 57 57.0**	**-0.7**
	677nm,0.8s						
FDMO	**Fiordimonte**	**0.83**	**339**	Pg	**Pg**	**08 57 58.4**	**-0.6**
	335nm,0.7s						
FDMO	**Fiordimonte**	**0.83**	**339**	Pg	**Pg**	**08 57 58.4**	**-0.6**
	335nm,0.7s						
MIDA	**Miranda**	**0.84**	**137**	Pg	**Pg**	**08 57 58.2**	**-0.9**
	367nm,0.5s						
MIDA	**Miranda**	**0.84**	**137**	Pg	**Pg**	**08 57 58.2**	**-0.9**
	367nm,0.5s						
CESI	**CESI - Serrava**	**0.86**	**330**	Pg	**Pg**	**08 57 59.3**	**-0.3**
	105nm,0.4s						
CESI	**CESI - Serrava**	**0.86**	**330**	Pg	**Pg**	**08 57 59.3**	**-0.3**
	105nm,0.4s						
GUMA	**Gualdo di Mace**	**0.87**	**22**	Pg	**Pb**	**08 57 58.9**	**-0.8**
	1µm,0.4s						
GUMA	**Gualdo di Mace**	**0.87**	**22**	Pg	**Pb**	**08 57 58.9**	**-0.8**
	1µm,0.4s						
ASSB	**Assisi San Ben**	**1.00**	**322**	Pg	**Pb**	**08 58 01.9**	**0.0**
	209nm,0.5s						
ASSB	**Assisi San Ben**	**1.00**	**322**	Pg	**Pb**	**08 58 01.9**	**0.0**
	209nm,0.5s						
VAGA	**Valle Agricola**	**1.01**	**146**	Pg	**Pb**	**08 58 01.3**	**-0.8**
VAGA	**Valle Agricola**	**1.01**	**146**	Pg	**Pb**	**08 58 01.3**	**-0.8**
SNTG	**Esanatoglia**	**1.08**	**338**	Pg	**Pb**	**08 58 03.2**	**-0.1**
	57nm,0.3s						
SNTG	**Esanatoglia**	**1.08**	**338**	Pg	**Pb**	**08 58 03.2**	**-0.1**
	57nm,0.3s						
TOLF	**Tolfa**	**1.12**	**261**	Pg	**Pg**	**08 58 04.6**	**+0.2**
	136nm,0.5s						
TOLF	**Tolfa**	**1.12**	**261**	Pg	**Pg**	**08 58 04.6**	**+0.2**
	136nm,0.5s						
CING	**Cingoli**	**1.14**	**349**	Pg	**Pb**	**08 58 04.4**	**+0.1**
	170nm,0.5s						
CING	**Cingoli**	**1.14**	**349**	Pg	**Pb**	**08 58 04.4**	**+0.1**
	170nm,0.5s						
NVLJ	**Novalja**	**2.52**	**23**	*e*Pn	**Pn**	**08 58 24.6**	**+1.3**
NVLJ				Sn	**Sn**	**08 58 52.0**	**-1.8**
NVLJ	**Novalja**	**2.52**	**23**	*e*Pn	**Pn**	**08 58 24.5**	**+1.3**
NVLJ				Sn	**Sn**	**08 58 51.9**	**-1.8**

CSEM ***29*** *09:02:44.4±0.7, 34˚.39N×36˚.79E, h3km±6km, ML2.3, Error ellipse: s-maj=15.2km s-min=4.9km az=104.0*
ISCJB ***29*** *09:02:45.2±1.9, 34˚.40N±0˚.03×36˚.7E±0˚.1, h2km±10km, Error ellipse: s-maj=14.7km s-min=4.9km az=11.5*
NSSC ***29*** *09:02:45.7±2.0, 34˚.41N×36˚.61E, h0km±7km, MD1.4, ML2.1*
GRAL ***29*** *09:02:47.4±0.3, 34˚.43N×36˚.71E, h14km±999km, MD3.2*
ISC 29 09:02:46.0±1.7, 34°42N±0°.03×36°61E±0°.08, h3km±14km, n13, σ0s62/23, 5C-3D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAWK	**Haweek**	**0.19**	**300**	*e*P	**Pg**	**09 02 48.0**	**-1.8**
HAWK				*e*S	**Sg**	**09 02 53.5**	**+1.2**
HAWK				AML	AML	09 02 56.4	
	comp=E,801nm,0.2s						
HAWK				AML	AML	09 02 58.0	
	comp=N,594nm,0.3s						
HWQ	**Hawqa**	**0.57**	**255**	*e*P	**Pb**	**09 02 59.0**	**+0.3**
HWQ				*e*S	**Sb**	**09 03 07.6**	**+0.4**
HWQ	**Hawqa**	**0.57**	**255**	*e*P	**Pb**	**09 02 59.0**	**+0.3**
HWQ				*e*S	**Sb**	**09 03 07.6**	**+0.4**
BIDA	**Albida**	**0.63**	**338**	*e*P	**Pg**	**09 02 58.8**	**+0.6**
BIDA				*e*S	**Sb**	**09 03 09.3**	**+0.2**
BIDA	**Albida**	**0.63**	**338**	*e*P	**Pg**	**09 02 58.8**	**+0.6**
	SNR=75						
BIDA				*e*S	**Sb**	**09 03 09.3**	**+0.2**
	SNR=59						
BHL	**Bhannes**	**0.95**	**237**	*e*P	**Pb**	**09 03 05.1**	**0.0**
BHL	**Bhannes**	**0.95**	**237**	*e*P	**Pb**	**09 03 05.1**	**0.0**
WRDH	**Warideh**	**1.09**	**352**	*e*P	**Pg**	**09 03 06.7**	**-0.3**
WRDH				*e*S	**Sb**	**09 03 21.9**	**-0.4**
WRDH				AML	AML	09 03 28.4	
	comp=N,145nm,0.6s						
WRDH	**Warideh**	**1.09**	**352**	*e*P	**Pg**	**09 03 06.7**	**-0.3**
	SNR=57						
WRDH				*e*S	**Sb**	**09 03 21.9**	**-0.4**
	comp=N,145nm,0.6s,SNR=59						
RCY	**Rachaya**	**1.13**	**215**	*e*P	**Pg**	**09 03 07.7**	**0.0**
RCY				*e*S	**Sg**	**09 03 22.7**	**+0.4**
BRBR	**Barbar**	**1.15**	**209**	*e*P	**Pb**	**09 03 08.8**	**+0.2**
BRBR				*e*S	**Sg**	**09 03 23.0**	**+0.1**
BRBR				AML	AML	09 03 35.9	
	comp=E,41nm,0.4s						
ARNB	**Al Arnab**	**1.52**	**340**	*e*P	**Pn**	**09 03 13.8**	**-0.5**
ARNB				*e*S	**Sg**	**09 03 35.7**	**+0.6**
ARNB				AML	AML	09 03 38.5	
	comp=E,82nm,0.3s						
ARNB	**Al Arnab**	**1.52**	**340**	*e*P	**Pn**	**09 03 13.8**	**-0.5**
	SNR=57						

MOS ***29*** *09:03:21.7±1.8, 48˚.78N×155˚.73E, h10km, mb4.4/1, Error ellipse: s-maj=25.0km s-min=8.3km az=71.2*
KRSC ***29*** *09:03:22.1±1.1, 48˚.62N×156˚.39E, h10km±10km, ML4.3*
IDC ***29*** *09:03:31.0±3.3, 48˚.98N×155˚.51E, h74km±31km, mb3.2/9, mb1 3.5/12, mb1mx3.4/28, mbtmp3.3/12, MS2.9/2, Ms1 2.9/2, ms1mx2.4/14, Error ellipse: s-maj=35.4km s-min=13.9km az=140.0*
ISC 29 09:03:23.4±0.8, 48°92N±0°.08×155°6E±0°.1, h10km, n38, σ2s37/34, mb3.6/10, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.81**	**11**	*e*PN	**Pn**	**09 03 54.7**	**+0.2**
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,110nm,0.5s						
SKR	**Severo-Kuril's**	**1.81**	**11**	P	**Pb**	**09 03 55.3**	**-1.2**
SKR					**Sb**	**09 04 19.4**	**+0.2**
MIPR	**Malaya Ipel'ka**	**3.45**	**12**	P	Pb	09 04 20.5	-4.1
ASAK	**Asacha**	**3.78**	**22**	P	Pn	09 04 24.1	+2.4
ASAK				S	**Sn**	**09 05 10.3**	**+4.1**
MTVR	**Mutnovka**	**3.94**	**24**	P	Pn	09 04 26.4	+2.4
MTVR				S	**Sn**	**09 05 12.7**	**+2.3**
RUS	**Russkaya**	**3.99**	**27**	PN	**Pn**	**09 04 26.3**	**+1.7**
RUS	**Russkaya**	**3.99**	**27**	P	**Pn**	**09 04 26.3**	**+1.7**
RUS				S	**Sn**	**09 05 12.0**	**+0.7**
APC	**Apacha**	**4.14**	**13**	P	Pb	09 04 31.4	-4.9
PETK	**Petropavlovsk-**	**4.41**	**17**	PN	Pn	09 04 33.5	+3.1
PETK				S	**Sb**	**09 05 29.2**	**-4.9**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				smax	smax		
	comp=N,1.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,119nm,18.6s						
PETK	**Petropavlovsk-**	**4.41**	**17**	P	Pn	09 04 33.5	+3.1
	comp=Z,1.5nm,0.3s,baz=181,slow=15,SNR=15						
PETK				S	**Sb**	**09 05 29.1**	**-4.9**
	comp=Z,0.5nm,0.3s,baz=161,slow=31,SNR=2.7						
PETK				LR	LR	09 06 26.7	
	comp=Z,119nm,18.6s,baz=128,slow=40						
PET	**Petropavlovsk**	**4.55**	**24**	*e*PN	Pn	09 04 35.0	+2.7
PET				pmax	pmax		
	comp=Z,27nm,0.9s						
PET	**Petropavlovsk**	**4.55**	**24**	S	**Sn**	**09 05 28.1**	**+2.9**
UGLR	**Uglovaya**	**4.76**	**24**	P	Pn	09 04 38.8	+3.5
UGLR				S	**Sn**	**09 05 34.1**	**+3.5**
KOK	**Koryaka**	**4.79**	**23**	P	Pn	09 04 39.6	+3.9
KOK				S	**Sn**	**09 05 35.5**	**+4.3**
AVH	**Avacha**	**4.79**	**23**	P	Pn	09 04 39.1	+3.4
AVH				S	**Sn**	**09 05 34.6**	**+3.4**
SMAR	**Somma**	**4.81**	**24**	P	Pn	09 04 40.2	+4.2
SDLR	**Sedlovina**	**4.84**	**24**	P	Pn	09 04 39.3	+2.9
SDLR				S	**Sn**	**09 05 35.4**	**+2.8**
GNL	**Ganaly**	**5.01**	**16**	P	Pn	09 04 43.1	+4.4
GNL				S	**Sn**	**09 05 41.3**	**+4.6**
SPN	**Mys Shipunski**	**5.04**	**32**	PN	**Pn**	**09 04 40.4**	**+1.3**
SPN	**Mys Shipunski**	**5.04**	**32**	P	**Pn**	**09 04 40.4**	**+1.3**
SPN				S	**Sn**	**09 05 37.2**	**-0.1**
MKZ	**Mys Kozlova**	**6.82**	**32**	PN	**Pn**	**09 05 03.8**	**+0.4**
MKZ	**Mys Kozlova**	**6.82**	**32**	P	**Pn**	**09 05 03.8**	**+0.4**
ASAJ	**Asahikawa**	**10.14**	**247**	P	Pn	09 05 54.6	+5.6
	comp=Z,1.1nm,0.3s,baz=86,slow=18,SNR=6.9						
ERM	**Erimo**	**11.11**	**236**	*e*PN	**Pn**	**09 06 02.3**	**+0.1**
USRK	**Ussuriysk Arra**	**16.85**	**263**	P	**P**	**09 07 22.4**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=56,slow=9.8,SNR=5.8						
BILL	**Bilibino**	**19.92**	**12**	*e*P	Pn	09 07 58.7	+2.1
BILL				*e*		09 08 12.9	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KSRS	**Korea Array**	**23.05**	**251**	P	**P**	**09 08 30.8**	**+2.1**
	comp=Z,0.8nm,0.6s,baz=43,slow=9.6,SNR=4.2						
SONM	**Songino Array**	**32.23**	**287**	LR	LR	09 24 02.8	
	comp=Z,30nm,20.8s,baz=129,slow=38						
ILAR	**Eielson Array**	**33.83**	**41**	P	**P**	**09 10 05.3**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=238,slow=6.2,SNR=4.3						
MKAR	**Makanchi Array**	**47.43**	**297**	*e*P	**P**	**09 11 57.9**	**0.0**
MKAR	**Makanchi Array**	**47.43**	**297**	P	**P**	**09 11 56.5**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=61,slow=7.6,SNR=6.2						
YKA	**Yellowknife Ar**	**48.20**	**39**	P	**P**	**09 12 03.6**	**0.0**
	comp=Z,0.2nm,0.6s,baz=297,slow=7.3,SNR=4.0						
BRVK	**Borovoye**	**50.80**	**309**	*e*P	**P**	**09 12 22.5**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
NVAR	**Mina Array Bea**	**59.99**	**65**	P	**P**	**09 13 29.0**	**-1.3**
	comp=Z,0.2nm,0.6s,baz=196,slow=34,SNR=3.2						
PDAR	**Pinedale Array**	**62.15**	**56**	P	**P**	**09 13 45.1**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=267,slow=3.0,SNR=3.5						
WRA	**Warramunga Arr**	**71.11**	**201**	P	**P**	**09 14 40.7**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=18,slow=6.6,SNR=9.4						
ASAR	**Alice Springs**	**74.80**	**201**	P	**P**	**09 15 03.5**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=14

Ms1 3.1/1, **ms1mx2.4**/14, **Error ellipse: s-maj=77.3km s-min=39.4km az=28.0, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**11.04**	**21**	Pn	Pn	09 22 24.2	+1.3
	0.2nm,0.3s,baz=205,slow=14,SNR=21						
CMIG	**Matias Romero**	**12.71**	**97**	Pn	Pn	09 22 46.9	+1.3
	0.2nm,0.3s,baz=286,slow=15,SNR=3.1						
ANMO	**Albuquerque**	**15.94**	**5**	Pn	P	09 23 34.0	+0.8
	0.0nm,0.3s,baz=213,slow=9.9,SNR=6.9						
PFO	**Pinyon Flat Ob**	**16.35**	**334**	LR	LR	09 29 25.0	
	comp=Z,59nm,18.9s,baz=124,slow=36						
NVAR	**Mina Array Bea**	**21.29**	**337**	P	P	09 24 34.0	+1.9
	2.2nm,0.9s,baz=163,slow=12,SNR=12						
PDAR	**Pinedale Array**	**23.71**	**357**	P	P	09 24 57.5	0.0
	0.6nm,0.8s,baz=161,slow=9.4,SNR=5.2						
YKA	**Yellowknife Ar**	**43.68**	**356**	P	P	09 27 48.5	-1.3
	0.3nm,0.7s,baz=171,slow=7.8,SNR=9.5						
ILAR	**Eielson Array**	**52.51**	**340**	P	P	09 28 57.9	-0.4
	0.2nm,0.7s,baz=150,slow=6.2,SNR=6.9						

TRN 29 09:47:60.0, 15.01N×61.09W, h170km, MD3.5, M3.1(FDF), **8C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDF	**Fort de France**	**0.28**	**193**	*eP*	Pn	09 48 24.0	+1.1
FDF	**Fort de France**	**0.28**	**193**	*eP*	Pn	09 48 24.1	+1.1
FDF	**Fort de France**	**0.28**	**193**	*eP*	Pn	09 48 24.1	+1.1
FDF				*eS*	Sn	09 48 40.4	-0.1
FDF				*eS*	Sn	09 48 40.8	+0.2
DSTT	**Stowe**	**0.32**	**319**	↑*iP*	Pn	09 48 24.6	+1.7
DSTT				*eS*	Sn	09 48 41.3	+0.7
MVM	**Montagne Vaucl**	**0.49**	**157**	*eP*	Pn	09 48 24.3	+0.7
DWS	**Wesley**	**0.60**	**339**	*eP*	Pn	09 48 25.9	+1.9
DWS				*eS*	Sn	09 48 44.5	+1.8
MGG	**Marie-Galante**	**0.93**	**346**	*eP*	Pn	09 48 26.9	+0.7
MGG	**Marie-Galante**	**0.93**	**346**	*eP*	Pn	09 48 26.9	+0.7
TBG	**Guadaloupe-3**	**1.00**	**327**	*eP*	Pn	09 48 27.3	+0.6
TBG	**Guadaloupe-3**	**1.00**	**327**	*eP*	Pn	09 48 27.3	+0.7
PHG	**Guadaloupe-2**	**1.14**	**332**	↑*eP*	Pn	09 48 28.8	+0.8
PHG	**Guadaloupe-2**	**1.14**	**332**	↑*iP*	Pn	09 48 28.8	+0.9
DOG	**Dongo Capester**	**1.14**	**333**	*eP*	Pn	09 48 28.6	+0.7
DOG	**Dongo Capester**	**1.14**	**333**	↑*iP*	Pn	09 48 28.6	+0.7
SCG	**Saint Claude**	**1.17**	**331**	*eP*	Pn	09 48 29.1	+1.0
SCG				*eS*	Sn	09 48 49.8	-0.1
SLB	**Belfond**	**1.17**	**178**	*eP*	Pn	09 48 30.1	+1.9
SLB				*eS*	Sn	09 48 50.6	+0.6
BCG	**Bois Riant Cap**	**1.19**	**335**	*eP*	Pn	09 48 29.1	+0.8
BCG	**Bois Riant Cap**	**1.19**	**335**	*eP*	Pn	09 48 29.2	+0.9
LZG	**Guadaloupe-1**	**1.31**	**330**	↑*eP*	Pn	09 48 30.1	+0.8
LZG	**Guadaloupe-1**	**1.31**	**330**	*eP*	Pn	09 48 30.2	+0.9
SEG	**Port Louis**	**1.45**	**344**	↑*iP*	Pn	09 48 31.5	+0.9
SEG	**Port Louis**	**1.45**	**344**	↑*iP*	Pn	09 48 31.5	+1.0
SVV	**Soufriere Volc**	**1.68**	**184**	*eP*	Pn	09 48 34.2	+1.1
SVV				*eS*	Sn	09 48 59.4	+0.8
SVB	**Belmont**	**1.73**	**185**	↑*iP*	Pn	09 48 34.1	+0.6
SVB				*eS*	Sn	09 48 58.4	-1.1
BPA	**Boggy Peak**	**2.16**	**340**	*eP*	Pn	09 48 39.3	+1.1
BPA				*eS*	Sn	09 49 07.9	0.0
SKI	**Saint Kitts**	**2.81**	**326**	*eP*	Pn	09 48 46.6	+0.8
SKI				*eS*	Sn	09 49 21.7	+0.2
TOSP	**Speyside**	**3.72**	**172**	*eP*	Pn	09 48 58.6	+1.3
TOSP				*eS*	Sn	09 49 40.2	-1.8

*IDC **29** 10:04:15.4±2.1, 31.49N×140.01E, h0km, mb3.2/2, mb1 3.3/3, mb1mx3.1/25, mbtmp3.1/3, ML2.7/1, Error ellipse: s-maj=173.9km s-min=20.9km az=87.0*
*ISCJB **29** 10:04:19.4±1.0, 32.00N±0.06×140.7E±0.1, h73km, mb3.3/2, Error ellipse: s-maj=15.4km s-min=7.8km az=170.6*
*JMA **29** 10:04:22.2±0.2, 32.13N×140.74E, h33km, M3.4*
ISC 29 10:04:20.8±1.4, **32.01N**±0.09×**140.7E**±0.1, **h73km, n11, σ1§13/14, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**1.29**	**325**	P	**Pn**	**10 04 43.7**	**+0.5**
JHCJ				S	**Sn**	**10 04 58.9**	**-1.1**
JHJ2	**Mitsune**	**1.32**	**327**	P	**Pn**	**10 04 44.2**	**+0.7**
JHJ2				*eS*	**Sn**	**10 04 59.7**	**-0.8**
JHJ	**Hachijo jima 2**	**1.34**	**326**	Pn	**Pn**	**10 04 44.3**	**+0.5**
	18nm,0.3s,baz=72,slow=21,SNR=15						
JHJ				Sn	**Sn**	**10 04 59.1**	**-1.9**
	44nm,0.3s,baz=256,slow=23,SNR=5.8						
BSO1	**Boso 1**	**2.65**	**5**	P	**Pn**	**10 05 01.9**	**+1.1**
BSO2	**Boso 2**	**2.74**	**1**	*eS*	**Sn**	**10 05 33.6**	**-0.5**
BSO3	**Boso 3**	**2.79**	**357**	P	**Pn**	**10 05 03.9**	**+0.9**
BSO3				*eS*	**Sn**	**10 05 35.0**	**-0.4**
JOD2	**Odawara 2**	**3.51**	**338**	*eS*	**Sn**	**10 05 52.9**	**-0.4**
JIE	**Ise**	**4.09**	**307**	P	**Pn**	**10 05 22.9**	**+2.1**
MJAR	**Matsushiro Arr**	**4.96**	**336**	Pn	Pn	10 05 37.0	+4.2
	0.3nm,0.3s,baz=163,slow=14,SNR=4.3						
WRA	**Warramunga Arr**	**52.01**	**188**	P	**P**	**10 13 22.2**	**-0.6**
	0.1nm,0.4s,baz=34,slow=7.7,SNR=4.2						
ASAR	**Alice Springs**	**55.73**	**188**	P	**P**	**10 13 49.6**	**-0.4**
	0.1nm,0.3s,baz=3.8,slow=5.6,SNR=3.4						

IDC 29 10:10:57.4±4.4, **23.39N×95.68E, h0km, mb3.4**/3, **mb1 3.6**/3, **mb1mx3.2**/25, **mbtmp3.4**/3, **Error ellipse: s-maj=411.2km s-min=27.8km az=59.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**25.72**	**338**	P	P	10 16 29.4	0.0
	0.7nm,0.7s,baz=158,slow=9.8,SNR=5.8						
WRA	**Warramunga Arr**	**57.24**	**136**	P	P	10 20 46.9	0.0
	0.2nm,0.5s,baz=323,slow=7.4,SNR=6.6						
ASAR	**Alice Springs**	**59.72**	**139**	P	P	10 21 03.9	-0.2
	0.1nm,0.4s,baz=321,slow=6.8,SNR=5.6						

IDC 29 10:16:54.6±2.7, **1.75S×140.24E, h0km, mb3.6**/4, **mb1 3.8**/5, **mb1mx3.6**/18, **mbtmp3.7**/5, **ML3.8**/1, **Error ellipse: s-maj=93.8km s-min=22.7km az=93.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.98**	**197**	P	P	10 21 17.2	-0.6
	0.3nm,0.3s,baz=20,slow=12,SNR=20						
FITZ	**Fitzroy Crossi**	**21.67**	**221**	P	P	10 21 46.6	-0.4
	2.0nm,1.0s,baz=32,slow=13,SNR=3.4						
ASAR	**Alice Springs**	**22.63**	**195**	P	P	10 21 57.8	+0.4
	1.9nm,0.8s,baz=26,slow=10,SNR=19						
MKAR	**Makanchi Array**	**69.98**	**322**	P	P	10 28 08.0	-0.1
	0.3nm,0.4s,baz=115,slow=8.8,SNR=4.8						
ZALV	**Zalesovo Beam**	**71.89**	**329**	P	P	10 28 19.8	+0.3
	0.3nm,0.3s,baz=108,slow=4.7,SNR=2.4						

*IDC **29** 10:24:41.6±3.2, 4.59S×104.05E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.6/24, mbtmp3.9/5, Error ellipse: s-maj=171.1km s-min=24.1km az=52.0*
*ISCJB **29** 10:24:45.5±0.7, 4.43S±0.06×104.30E±0.07, h33km, mb3.9/5, Error ellipse: s-maj=11.2km s-min=6.9km az=151.9*
*DJA **29** 10:24:47.9±1.9, 5°S±18°×10°4E±2°, h37km±16km, M4.1/3, MLv4.1/3*
ISC 29 10:24:47.2±1.0, **4.51S**±0.08×**104.21E**±0.09, **h35km, n10, σ0§76/13, mb4.0/5, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**0.53**	**196**	P	**Pn**	**10 24 58.3**	**-0.1**
LWLI				S	**Sn**	**10 25 06.9**	**+0.7**
KASI	**Kota Agung**	**1.05**	**164**	P	**Pn**	**10 25 04.8**	**-0.7**
KASI				S	**Sn**	**10 25 17.6**	**-1.3**
KSI	**Kapahiang**	**1.82**	**298**	P	**Pn**	**10 25 17.0**	**+0.9**
MASI	**Maura Aman, Be**	**2.38**	**305**	P	**Pn**	**10 25 22.7**	**-1.1**
CGJI	**Cibinong**	**2.56**	**145**	P	**Pn**	**10 25 26.6**	**+0.3**
CGJI				S	**Sn**	**10 25 57.1**	**+0.8**
FITZ	**Fitzroy Crossi**	**24.94**	**124**	P	**P**	**10 30 07.6**	**+0.1**
	2.4nm,0.9s,baz=314,slow=9.0,SNR=5.7						
WRA	**Warramunga Arr**	**33.11**	**120**	P	**P**	**10 31 20.4**	**+0.2**
	1.4nm,0.7s,baz=296,slow=9.4,SNR=17						
ASAR	**Alice Springs**	**34.39**	**126**	P	**P**	**10 31 31.4**	**+0.1**
	1.5nm,0.7s,baz=296,slow=7.9,SNR=26						
STKA	**Stephens Creek**	**44.36**	**132**	P	**P**	**10 32 54.4**	**0.0**
	3.9nm,0.6s,baz=303,slow=7.6,SNR=10						
MKAR	**Makanchi Array**	**54.63**	**342**	P	**P**	**10 34 12.3**	**-0.1**
	0.1nm,0.4s,baz=156,slow=8.6,SNR=2.8						

IDC 29 10:25:56.6±0.8, **13.62N×144.55E, h126km**±4km, **mb3.3**/7, **mb1 3.6**/7, **mb1mx3.3**/26, **mbtmp3.3**/7, **MS4.1**/1, **Ms1 4.1**/1, **ms1mx2.6**/24, **Error ellipse: s-maj=25.8km s-min=18.1km az=107.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.31**	**96**	P	Pn	10 26 15.6	+1.4
	677nm,0.3s,baz=249,slow=1.6,SNR=642						
GUMO				S	Sn	10 26 29.0	+1.5
	2µm,0.3s,baz=39,slow=22,SNR=142						
PMG	**Port Moresby**	**23.02**	**173**	LR	LR	10 38 25.0	
	comp=Z,572nm,21.9s,baz=297,slow=32						
WRA	**Warramunga Arr**	**34.84**	**197**	P	P	10 32 34.4	-1.3
	0.3nm,0.4s,baz=22,slow=9.5,SNR=6.5						
ASAR	**Alice Springs**	**38.50**	**196**	P	P	10 33 05.5	-1.2
	0.3nm,0.5s,baz=21,slow=11,SNR=7.3						
DZM	**Mont Dzumac**	**41.46**	**149**	P	P	10 33 32.0	+0.7
	7.0nm,0.6s,baz=322,slow=12,SNR=11						
CMAR	**Chiang Mai Arr**	**44.01**	**283**	P	P	10 33 52.8	+0.8
	0.9nm,0.4s,baz=83,slow=7.5,SNR=5.4						
ILAR	**Eielson Array**	**68.67**	**25**	P	P	10 36 44.4	-1.7
	0.2nm,0.5s,baz=251,slow=6.0,SNR=5.4						
YKA	**Yellowknife Ar**	**82.97**	**27**	P	P	10 38 07.2	-0.2
	0.3nm,0.9s,baz=284,slow=5.1,SNR=4.6						
NVAR	**Mina Array Bea**	**87.14**	**51**	P	P	10 38 29.0	0.0
	0.3nm,0.7s,baz=264,slow=4.9,SNR=2.8						
CFAA	**Coronel Fontan**	**145.03**	**126**	PKPbc	PKPbc	10 45 19.0	-0.2
	0.2nm,0.5s,baz=342,slow=3.2,SNR=2.9						
LPAZ	**La Paz**	**148.33**	**99**	PKPbc	PKPbc	10 45 30.5	+0.7
	1.1nm,0.7s,baz=287,slow=5.1,SNR=5.6						

*IDC **29** 10:28:09.8±3.0, 13.97N×91.51W, h0km, mb3.8/5, mb1 4.1/7, mb1mx3.8/25, mbtmp3.8/7, ML3.8/2, MS3.2/7, Ms1 3.2/7, ms1mx2.9/30, Error ellipse: s-maj=122.0km s-min=37.8km az=41.0*
*CASC **29** 10:28:12.2±2.5, 13.64N×91.82W, h2km±24km, MD3.9*
ISC 29 10:28:10.4±2.6, **13.64N**±0.10×**91.92W**±0.07, **h4km**±14km, **n29, σ0§84/27, mb3.8/5, MS3.2/5, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.72**	**22**	*eP*	**Pb**	**10 28 27.1**	**+1.5**
FUG	**Fuego 3**	**1.31**	**52**	*eP*	**Pg**	**10 28 34.8**	**-0.8**
PCG	**Pacaya**	**1.47**	**59**	*eP*	**Pn**	**10 28 38.0**	**0.0**
PCG				*eS*	**Sn**	**10 28 58.6**	**+0.7**
NBG	**Las Nubes**	**1.79**	**58**	*eP*	**Pn**	**10 28 43.4**	**+1.0**
NBG				*eS*	**Sg**	**10 29 08.0**	**0.0**
RTR	**El Retiro**	**2.22**	**83**	*eP*	**Pn**	**10 28 48.9**	**+0.7**
SBLS	**San Blas**	**2.24**	**85**	*eP*	**Pn**	**10 28 48.4**	**-0.1**
BOQS	**Boqueron**	**2.56**	**88**	*eP*	**Pn**	**10 28 53.6**	**+0.6**
MRL	**Marmol**	**2.58**	**56**	*eP*	**Pn**	**10 28 54.2**	**+1.1**
MRL				*eS*	**Sb**	**10 29 28.1**	**-1.4**
SNET	**Serv Nac Est T**	**2.61**	**89**	*eP*	**Pn**	**10 28 54.1**	**+0.6**
LFRS	**El Faro**	**2.77**	**90**	*eP*	**Pn**	**10 28 56.3**	**+0.5**
LBRS	**Las Brisas**	**2.79**	**88**	*eP*	**Pn**	**10 28 56.8**	**+0.8**
SNVI	**San Vicente**	**2.99**	**90**	*eP*	**Pn**	**10 28 59.4**	**+0.6**
SNVI				*eS*	**Sn**	**10 29 35.6**	**+0.4**
BLLM	**Bellamira**	**3.58**	**93**	*eP*	**Pn**	**10 29 07.1**	**+0.3**
CAHU	**Cacacuatique**	**3.60**	**88**	*eP*	**Pn**	**10 29 08.3**	**+1.1**
CNCH	**Conchagua**	**3.99**	**95**	*eP*	**Pn**	**10 29 13.2**	**+0.7**
CMIG	**Matias Romero**	**4.47**	**321**	Pn	Pn	10 29 18.1	-0.9
	2.3nm,0.3s,baz=150,slow=14,SNR=48						
CMIG				Sn	**Sn**	**10 30 12.0**	**+0.6**
	11nm,0.3s,baz=86,slow=11,SNR=7.4						
CMIG				LR	LR	10 31 10.4	
	comp=Z,164nm,21.6s,baz=158,slow=40						
TEIG	**Tepich**	**7.42**	**28**	Pn	**Pn**	**10 29 59.3**	**-0.2**
	8.9nm,0.3s,baz=234,slow=7.5,SNR=34						
TEIG				Sn	Sn	10 31 13.3	-11
	baz=57,slow=11,SNR=2.2						
TXAR	**Lajitas Array**	**19.04**	**327**	P	**P**	**10 32 34.6**	**+0.9**
	0.1nm,0.3s,baz=149,slow=11,SNR=25						
TXAR				LR	LR	10 39 57.3	
	comp=Z,37nm,18.4s,baz=0.0,slow=37						
ATAH	**Atahualpa**	**24.62**	**146**	LR	LR	10 42 03.7	
	comp=Z,72nm,18.8s,baz=216,slow=34						
ANMO	**Albuquerque**	**24.95**	**331**	P	**P**	**10 33 35.1**	**-0.1**
	1.5nm,0.8s,baz=164,slow=13,SNR=10.0						
SJG	**San Juan**	**25.17**	**76**	LR	LR	10 43 19.1	
	comp=Z,61nm,18.7s,baz=273,slow=37						
PFO	**Pinyon Flat Ob**	**29.87**	**316**	LR	LR	10 47 35.6	
	comp=Z,36nm,19.2s,baz=296,slow=39						
YKA	**Yellowknife Ar**	**51.39**	**347**	P	P	10 37 13.8	-2.3
	0.5nm,0.7s,baz=149,slow=7.4,SNR=14						
YKA				PcP	**PcP**	**10 38 29.3**	**-1.4**
	0.7nm,0.8s,baz=146,slow=3.6,SNR=13						
CPUP	**Villa Florida**	**52.06**	**140**	LR	LR	10 58 21.3	
	comp=Z,37nm,19.1s,baz=0.3,slow=35						
DLBC	**Dease Lake**	**53.01**	**336**	P	**P**	**10 37 28.5**	**+0.1**
	2.6nm,0.9s,baz=115,slow=4.2,SNR=8.8						
INK	**Inuvik**	**60.80**	**344**	P	P	10 38 21.1	-2.2
	0.5nm,0.7s,baz=167,slow=7.5,SNR=3.4						
ILAR	**Eielson Array**	**63.20**	**337**	P	**P**	**10 38 38.5**	**-1.1**
	1.6nm,0.9s,baz=134,slow=4.6,SNR=16						
ARCES	**ARCESS Array B**	**86.45**	**18**	LR	LR	11 21 19.1	
	comp=Z,22nm,18.1s,baz=158,slow=37						
CMAR	**Chiang Mai Arr**	**146.35**	**341**	PKPbc	**PKPdf**	**10 47 52.5**	**+0.2**
	1.0nm,0.2s,baz=344,slow=4.1,SNR=14						

IDC 29 10:30:16.6±6.9, **6.08N×95.43E, h0km, mb3.4**/3, **mb1 3.6**/3, **mb1mx3.3**/25, **mbtmp3.4**/3, **Error ellipse: s-maj=363.6km s-min=28.3km az=57.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**42.12**	**347**	P	P	10 38 10.4	-0.2
	0.6nm,0.7s,baz=168,slow=8.1,SNR=6.1						
WRA	**Warramunga Arr**	**46.19**	**125**	P	P	10 38 43.9	+0.3
	0.4nm,0.5s,baz=305,slow=9.0,SNR=7.0						
ASAR	**Alice Springs**	**47.79**	**130**	P	P	10 38 55.6	-0.5
	0.1nm,0.3s,baz=298,slow=8.1,SNR=3.9						

*IDC **29** 10:49:27.2±3.0, 9.51S×108.44E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/22, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=126.6km s-min=21.4km az=49.0*
*ISCJB **29** 10:49:28.2±0.6, 9.70S±0.07×108.28E±0.05, h27km, mb3.9/5, Error ellipse: s-maj=10.5km s-min=6.9km az=157.6*
*AUST **29** 10:49:30.3, 9.87S×108.34E, h35km*
*DJA **29** 10:49:37.1±1.6, 8°S±19°×10°9E±°, h187km±18km, M3.4/9, MLv3.4/9*
ISC 29 10:49:30.0±0.8, **9.71S**±0.07×**108.34E**±0.06, **h27km, n22, σ1§39/19, mb3.8/5, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLJI	**Cilicap**	**2.09**	**19**	P	**Pn**	**10 50 02.8**	**-0.4**
CISI	**Cisompet, Garu**	**2.20**	**346**	P	**Pb**	**10 50 09.1**	**-0.1**
CISI	**Cisompet, Garu**	**2.20**	**346**	P	**Pn**	**10 50 04.6**	**-0.2**
	baz=2.4,SNR=3.1						
XMI	**Christmas Isla**	**2.71**	**254**	P	Pb	10 50 24.3	+6.5
	baz=2.7,SNR=3.2						
BJII	**Banjamegara**	**2.72**	**30**	P	**Pn**	**10 50 10.3**	**-1.8**
XMIS	**Christmas Isla**	**2.75**	**254**	P	**Pn**	**10 50 12.0**	**-0.4**
	baz=2.7,SNR=10						
XMIS				S	**Sn**	**10 50 42.0**	**-2.9**
	baz=2.7,SNR=4.8						
UGM	**Wanagama**	**2.80**	**51**	P	**Pn**	**10 50 12.0**	**-1.1**
	baz=2.9,SNR=17						
TGJI	**Tegal**	**2.93**	**15**	P	**Pn**	**10 50 13.0**	**-1.8**
LEM	**Lembang**	**2.95**	**346**	P	**Pn**	**10 50 15.8**	**+0.5**
LEM	**Lembang**	**2.95**	**346**	P	**Pn**	**10 50 17.6**	**+2.3**
	baz=3.1,SNR=3.9						
SMRI	**Semarang**	**3.36**	**38**	P	Pn	10 50 13.7	-7.1
PWJI	**Pagerwojo**	**3.81**	**64**	P	**Pn**	**10 50 27.4**	**+0.4**
SJI	**Sawahan**	**3.92**	**60**	P	**Pn**	**10 50 29.9**	**+1.4**
WSI	**Waingapu**	**11.79**	**91**	P	**Pn**	**10 52 15.2**	**-1.3**
	baz=12,SNR=4.1						
PCI	**Palu**	**14.40**	**53**	P	**P**	**10 52 58.0**	**-0.9**
	baz=14,SNR=16						
FITZ	**Fitzroy Crossi**	**18.74**	**118**	P	**Pn**	**10 53 48.3**	**+0.9**
	0.1nm,0.3s,baz=276,slow=9.2,SNR=3.2						
MEEK	**Meekatharra**	**19.44**	**151**	S	S	10 57 17.1	-16
	baz=19,SNR=6.1						
WRA	**Warramunga Arr**	**27.08**	**115**	P	**P**	**10 55 11.2**	**+0.6**
	0.6nm,0.8s,baz=285,slow=12,SNR=4.6						
ASAR	**Alice Springs**	**28.08**	**123**	P	**P**	**10 55 21.4**	**+1.8**
	0.2nm,0.5s,baz=301,slow=9.0,SNR=6.0						
HHC	**Hu-ho-hao-te**	**50.39**	**3**	*eP*	P	10 58 19.0	-6.1
HHC				S	S	11 05 23.0	-14
HHC				pmax	pmax		
	comp=Z,37nm,0.7s						
HHC				pmax	pmax		
	comp=Z,250nm,6.9s						
SONM	**Songino Array**	**57.32**	**358**	P	**P**	**10 59 15.5**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=178,slow=8.7,SNR=5.9						
MKAR	**Makanchi Array**	**60.87**	**340**	P	**P**	**10 59 40.5**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=141,slow=8.0,SNR=12						

*AUST **29** 11:11:45.6±0.0, 7.68S×119.45E, h177km, Error ellipse: s-maj=1.4km s-min=1.1km az=236.0*
IDC 29 11:11:54.9±1.9, **7.86S×120.31E, h193km**±20km, **mb3.0**/3, **mb1 3.0**/6, **mb1mx2.9**/24, **mbtmp2.9**/6, **Error ellipse: s-maj=64.4km s-min=12.6km az=54.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.79**	**180**	P	Pn	11 12 24.8	-6.0
	baz=2.2,SNR=5.4						
KAPI	**Kappang**	**2.88**	**349**	P	Pn	11 12 43.2	+0.3
	1.7nm,0.3s,baz=179,slow=8.2,SNR=6.3						
UGM	**Wanagama**	**9.69**	**269**	P	Pn	11 14 03.2	-7.2
	baz=8.8,SNR=3.5						
FITZ	**Fitzroy Crossi**	**11.42**	**153**	P	Pn	11 14 30.9	-1.8
	0.2nm,0.3s,baz=344,slow=14,SNR=9.3						
FITZ				S	Sn	11 16 30.6	-9.3
	0.3nm,0.3s,baz=140,slow=17,SNR=4.3						
FITZ	**Fitzroy Crossi**	**11.42**	**153**	P	Pn	11 14 30.2	-2.4
	baz=12,SNR=5.4						
FITZ				S	Sn	11 16 32.7	-7.3
	baz=12,SNR=3.8						
MTN	**Manton Dam**	**11.74**	**116**	P	Pn	11 14 37.6	+0.8
	baz=13,SNR=8.4						
MTN				S	Sn	11 16 42.7	-5.0
	baz=13,SNR=7.5						
FAKI	**Fak Fak**	**12.86**	**68**	P	Pn	11 14 48.6	-2.4
	baz=14,SNR=5.4						
KDU	**Kakadu**	**12.89**	**113**	P	Pn	11 14 52.9	+1.6
	baz=14,SNR=5.0						
KDU				S	Sn	11 17 08.0	-7.1
	baz=14,SNR=4.1						
WRA	**Warramunga Arr**	**18.14**	**133**	P	P	11 15 53.0	+0.1
	0.2nm,0.3s,baz=307,slow=13,SNR=13						
WRA				S	S	11 19 10.9	+0.3
	0.2nm,0.3s,baz=313,slow=21,SNR=8.0						
MEEK	**Meekatharra**	**18.74**	**185**	P	P	11 15 56.4	-2.9
	baz=19,SNR=6.8						
MEEK				S	S	11 19 16.4	-6.1
	baz=19,SNR=5.1						
ASAR	**Alice Springs**	**20.42**	**142**	P	P	11 16 17.6	+0.2
	0.4nm,0.3s,baz=319,slow=9.0,SNR=22						
COEN	**Coen**	**23.25**	**107**	P	P	11 16 48.7	+3.4
	baz=24,SNR=6.3						
STKA	**Stephens Creek**	**31.04**	**143**	P	P	11 17 55.6	+0.9
	0.9nm,0.4s,baz=333,slow=7.1,SNR=7.0						
MKAR	**Makanchi Array**	**64.05**	**332**	P	P	11 22 07.8	-0.3
	0.2nm,0.5s,baz=142,slow=7.3,SNR=3.2						

IDC 29 11:39:45.9±55.0, **19.58S×179.54E, h0km, mb4.4**/3, **mb1 4.5**/3, **mb1mx3.8**/18, **mbtmp4.4**/3, **Error ellipse: s-maj=984.7km s-min=141.8km az=80.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NFK	**Norfolk Island**	**14.15**	**226**	P	P	11 43 26.3	+11
	baz=19,SNR=3.2						
QLP	**Quilpie**	**33.14**	**251**	P	P	11 46 27.6	+3.5
	baz=39,SNR=8.0						
MTSU	**Mount Surprise**	**33.33**	**267**	P	P	11 46 31.9	+6.0
	baz=40,SNR=9.4						
STKA	**Stephens Creek**	**36.13**	**243**	P	P	11 46 50.1	+0.2
	1.4nm,0.5s,baz=101,slow=9.6,SNR=7.1						
STKA	**Stephens Creek**	**36.13**	**243**	P	P	11 46 50.4	+0.5
	baz=41,SNR=5.0						
WRA	**Warramunga Arr**	**42.44**	**262**	P	P	11 47 42.7	-0.1
	3.0nm,0.4s,baz=97,slow=7.8,SNR=72						
ASAR	**Alice Springs**	**42.49**	**256**	P	P	11 47 42.8	-0.4
	3.8nm,0.5s,baz=94,slow=7.6,SNR=140						
FITZ	**Fitzroy Crossi**	**50.86**	**262**	P	P	11 48 45.8	-3.0
	baz=57,SNR=3.6						

*ISCJB **29** 11:51:13.5±0.6, 0.73N±0.06×99.37E±0.08, h103km±6km, mb3.2/3, Error ellipse: s-maj=15.0km s-min=7.5km az=144.9*
*DJA **29** 11:51:15.4±0.5, 1°N±5°×9°9E±°, h75km±9km, M3.4/6, MLv3.4/6*
*IDC **29** 11:51:18.1±2.9, 1.15N×99.87E, h106km±27km, mb3.0/3, mb1 3.2/3, mb1mx2.9/25, mbtmp3.0/3

comp=Z,232nm,19.1s,baz=258,slow=31
TBI Tubuai 22.58 110 *e*LQ LQ 12 06 49.9
671nm,28.0s
TBI *e*LR LR 12 07 54.2
335nm,29.0s
URZ Urewera 23.00 201 P **P 12 02 40.1 -0.3**
15nm,1.2s
URZ S **S 12 06 47.8 -0.3**
URZ Urewera 23.00 201 P **P 12 02 40.1 -0.3**
22nm,0.7s,baz=27,slow=9.8,SNR=12
URZ S **S 12 06 47.8 -0.3**
9.8nm,0.9s,baz=300,slow=16,SNR=2.8
HNR Honiara 27.76 282 LR LR 12 12 37.4
comp=Z,237nm,21.2s,baz=100,slow=33
CTA Charters Tower 39.07 259 LR LR 12 16 51.9
comp=Z,81nm,18.7s,baz=273,slow=30
STKA Stephens Creek 43.92 242 P P 12 05 39.2 -3.1
STKA Stephens Creek 43.92 242 P P 12 05 39.2 -3.1
2.3nm,0.8s,baz=122,slow=9.2,SNR=4.7
STKA LR LR 12 22 28.4
comp=Z,167nm,19.9s,baz=27,slow=34
WRAB Tennant Creek 50.24 258 *e*P P 12 06 28.4 -3.3
5.8nm,1.1s
WRA Warramunga Arr 50.25 258 P P 12 06 27.9 -3.9
WRA Warramunga Arr 50.25 258 P P 12 06 27.9 -3.9
2.1nm,0.7s,baz=95,slow=7.1,SNR=24
AS31 Alice Springs 50.37 253 *e*P P 12 06 29.6 -3.2
ASAR Alice Springs 50.37 253 P P 12 06 29.2 -3.5
ASAR Alice Springs 50.37 253 P P 12 06 29.2 -3.5
5.9nm,0.8s,baz=85,slow=8.6,SNR=61
ASAR LR LR 12 26 58.4
comp=Z,104nm,19.5s,baz=92,slow=35
VNDA Vanda 61.84 186 P **P 12 07 53.8 0.0**
VNDA Vanda 61.84 186 P **P 12 07 53.8 0.0**
4.2nm,1.1s,baz=14,slow=5.6,SNR=7.7
VNDA LR LR 12 31 17.4
comp=Z,87nm,19.4s,baz=11,slow=33
MJAR Matsushiro Arr 70.68 320 P **P 12 08 49.2 -1.8**
MJAR Matsushiro Arr 70.68 320 P **P 12 08 49.2 -1.8**
3.8nm,1.1s,baz=169,slow=5.9,SNR=5.9
MJAR LR LR 12 33 45.7
comp=Z,77nm,20.3s,baz=105,slow=31
QSPA South Pole Qui 73.02 180 *e*P **P 12 09 04.3 -0.4**
17nm,1.2s
PETK Petropavlovsk- 74.42 342 P **P 12 09 12.0 -0.8**
PETK Petropavlovsk- 74.42 342 P **P 12 09 12.0 -0.8**
6.1nm,0.8s,baz=120,slow=8.8,SNR=8.7
PETK LR LR 12 43 32.6
comp=Z,36nm,18.1s,baz=319,slow=37
NVAR Mina Array Bea 75.03 41 P **P 12 09 16.2 -0.8**
NVAR Mina Array Bea 75.03 41 P **P 12 09 16.2 -0.8**
1.3nm,0.8s,baz=231,slow=9.5,SNR=6.1
KSRS Korea Array 77.86 315 P **P 12 09 32.2 -0.6**
3.0nm,0.9s,baz=134,slow=5.8,SNR=13
KSRS LR LR 12 37 19.6
comp=Z,55nm,20.9s,baz=25,slow=31
KSAR Wonju Array Be 77.88 315 P **P 12 09 32.2 -0.7**
MSU Marysvale 79.05 44 *e*P **P 12 09 39.4 -0.2**
2.7nm,1.0s
USRK Ussuriysk Arra 79.14 323 P **P 12 09 38.9 -0.7**
1.7nm,0.9s,baz=100,slow=4.6,SNR=4.2
USRK LR LR 12 45 11.2
comp=Z,84nm,18.4s,baz=8.9,slow=36
BMO Blue Mountains 79.46 36 P **P 12 09 41.1 -0.5**
1.2nm,0.8s
PMR Palmer 80.56 11 *e*P P 12 09 44.5 -2.4
23nm,1.8s
TXAR Lajitas Array 80.88 56 P **P 12 09 49.5 0.0**
TXAR Lajitas Array 80.88 56 P **P 12 09 49.5 0.0**
2.1nm,1.2s,baz=224,slow=3.5,SNR=7.6
TXAR LR LR 12 40 27.7
comp=Z,59nm,18.6s,baz=165,slow=32
BMRM Bremner River 80.91 13 *e*P **P 12 09 47.9 -1.1**
4.5nm,0.5s
PV01 Paradox Valley 81.29 46 *e*P **P 12 09 52.5 +0.8**
205nm,1.0s
GDL2 Guadalupe Moun 81.58 53 *e*P **P 12 09 53.3 +0.1**
1.1nm,0.2s
SMCO Snowmass 82.89 46 *e*P **P 12 09 59.9 -0.4**
9.3nm,1.4s
PDAR Pinedale Array 82.96 41 P P 12 09 59.0 -1.4
PDAR Pinedale Array 82.96 41 P P 12 09 59.0 -1.4
0.8nm,0.6s,baz=197,slow=3.1,SNR=4.4
PDAR LR LR 12 43 16.6
comp=Z,127nm,18.1s,baz=78,slow=33
COLA College 83.82 10 *e*P P 12 10 02.3 -1.6
8.2nm,1.0s
ILAR Eielson Array 83.89 11 P P 12 10 02.3 -2.0
ILAR Eielson Array 83.89 11 P P 12 10 02.3 -2.0
1.2nm,0.8s,baz=225,slow=5.7,SNR=14
ILAR LR LR 12 44 22.4
comp=Z,65nm,19.2s,baz=183,slow=34
MAW Mawson 86.50 198 LR LR 12 48 08.0
comp=Z,109nm,19.8s,baz=297,slow=35
PLCA Paso Flores 87.84 132 P **P 12 10 24.8 +0.1**
PLCA Paso Flores 87.84 132 P **P 12 10 24.8 +0.1**
1.2nm,0.7s,baz=245,slow=6.2,SNR=3.1
PLCA LR LR 12 42 32.8
comp=Z,106nm,18.4s,baz=181,slow=31
YKA Yellowknife Ar 91.28 23 P P 12 10 38.6 -1.3
YKA Yellowknife Ar 91.28 23 P P 12 10 38.6 -1.3
0.4nm,0.9s,baz=235,slow=4.2,SNR=8.0
CMAR Chiang Mai Arr 93.86 288 P **P 12 10 53.1 +0.1**
CMAR Chiang Mai Arr 93.86 288 P **P 12 10 53.1 +0.1**
0.7nm,0.4s,baz=112,slow=2.4,SNR=8.4
CMAR LR LR 12 47 19.5
comp=Z,32nm,20.7s,baz=28,slow=32
ULM Lac du Bonnet 94.71 39 LR LR 12 50 04.9
comp=Z,205nm,18.1s,baz=340,slow=33
SONM Songino Array 96.58 318 LR LR 12 46 53.6
comp=Z,52nm,20.7s,baz=261,slow=31
KMBO Kilima Mbogo 145.49 241 PKPbc **PKPbc 12 17 14.9 +0.5**
KMBO Kilima Mbogo 145.49 241 PKPbc **PKPbc 12 17 14.9 +0.5**
3.7nm,0.8s,baz=120,slow=3.9,SNR=13
CLL Collm 145.52 354 *e*PKiKP **PKiKP 12 17 17.0 +0.1**
MALT Malatya 145.56 314 *e*PKPdf **PKPbc 12 17 12.4 -1.3**
UPC Upice 145.90 350 *e*PKP **PKPdf 12 17 14.4 +0.8**
UPC *ex* x 12 17 18.0
KOLS Kolonicke sedl 145.96 342 *e*PKP **PKPdf 12 17 15.3 +1.6**
DPC Dobruska-Polom 146.00 350 *e*PKP **PKPdf 12 17 14.8 +1.0**
PVCC Panska Ves 146.10 352 *e*PKP **PKPdf 12 17 15.6 +1.7**
PVCC *ex* x 12 17 23.4
BUR08 Bucovina Ar. S 146.15 338 *e*PKPdf **PKPdf 12 17 12.8 -1.4**
BUR08 *e*PKPbc **PKPbc 12 17 15.5 +0.3**
OKC Ostrava-Krasne 146.15 347 *e*PKP **PKPdf 12 17 15.2 +1.2**
CRVS Cervenica-Dubn 146.22 343 *e*PKP **PKPdf 12 17 15.4 +1.2**
MORC Moravsky Berou 146.33 348 PKPbc **PKPdf 12 17 15.8 +1.5**
PRU Pruhonice 146.63 352 *e*PKP **PKPab 12 17 19.5 +2.0**
NKC Novy Kostel 146.64 354 *e*PKP **PKPab 12 17 19.9 +2.3**
VYHS Vyhne 147.26 346 *e*PKP **PKPdf 12 17 18.0 +2.0**
KHC Kasperske Hory 147.60 352 *e*PKPbc **PKPbc 12 17 20.3 +1.1**
KHC Kasperske Hory 147.60 352 *e*PKP **PKPbc 12 17 20.0 +0.8**
KHC *ex* x 12 17 24.5
GERES GERESS Array B 147.86 352 PKPbc **PKPdf 12 17 18.6 +1.5**
GERES GERESS Array B 147.86 352 PKPbc **PKPdf 12 17 18.6 +1.5**
0.4nm,0.4s,baz=353,slow=4.9,SNR=3.9
BR131 Keskin Array S 147.91 320 *e*PKPbc **PKPdf 12 17 20.4 +2.9**
BRTR Keskin Array B 147.91 320 PKPbc **PKPdf 12 17 20.2 +2.7**
BRTR Keskin Array B 147.91 320 PKPbc **PKPdf 12 17 20.2 +2.7**
4.5nm,0.9s,baz=114,slow=1.5,SNR=16
MMAI Mount Meron Ar 150.19 308 PKPbc **PKPbc 12 17 26.7 +0.3**
MMAI Mount Meron Ar 150.19 308 PKPbc **PKPbc 12 17 26.7 +0.3**
1.4nm,0.6s,baz=69,slow=8.2,SNR=2.9
DAVOX Davos/Dischmat 150.27 357 PKPbc **PKPbc 12 17 25.5 -0.8**
DAVOX Davos/Dischmat 150.27 357 PKPbc **PKPbc 12 17 25.5 -0.8**
1.9nm,0.7s,baz=314,slow=24,SNR=3.1
EIL Elat 151.84 301 PKPbc **PKPbc 12 17 32.1 +1.9**
EIL Elat 151.84 301 PKPbc **PKPbc 12 17 32.1 +1.9**
2.6nm,0.5s,baz=27,slow=16,SNR=4.0
TORD Torodi Ar. Bea 173.26 124 PKPab **PKPab 12 19 11.5 -1.6**
TORD Torodi Ar. Bea 173.26 124 PKPab **PKPab 12 19 11.5 -1.6**
0.8nm,0.7s,baz=249,slow=1.7,SNR=5.0

*NNC **29** 11:58:57.6±4.3,41°.38N×77°.75E,h0km,mb3.9,mpv3.5, Error ellipse: s-maj=35.3km s-min=25.8km az=16.0*
*KNET **29** 11:59:03.5±0.5,41°.50N×77°.18E,h0km,ml3.0, Error ellipse: s-maj=9.5km s-min=2.3km az=56.0*
ISC 29 11:59:02.5±3.2,41°.4N±0°.1×77°.2E±0°.1,h10km,n9, σ1=9.06°/11,5C-7D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**1.06**	**319**	⇓P	**Pg**	**11 59 22.9**	**0.0**
	42nm,0.1s,SNR=365						
ULHL				⇑S	**Sn**	**11 59 38.5**	**0.0**
	81nm,0.1s						
KZA	**Kyzart**	**1.57**	**294**	⇓P	**Pg**	**11 59 33.1**	**+0.5**
	46nm,0.3s,SNR=36						
KNDC	**Almaty**	**1.78**	**355**	⇑P	**Pn**	**11 59 33.8**	**+0.4**
	55nm,0.3s						
KNDC				⇑S	**Sg**	**11 59 58.1**	**-1.5**
	202nm,0.8s						
TKM2	**Tokmak 2**	**1.88**	**322**	⇓Pn	**Pb**	**11 59 37.4**	**+0.4**
	14nm,0.3s						
TKM2				⇑Sn	**Sg**	**12 00 03.5**	**+0.5**
	101nm,0.7s						
TKM2	**Tokmak 2**	**1.88**	**322**	P	**Pb**	**11 59 37.5**	**+0.4**
	19nm,0.1s,SNR=99						
KBK	**Karagaybulak**	**2.05**	**307**	P	**Pg**	**11 59 41.6**	**-0.2**
	28nm,0.3s,SNR=16						
CHMS	**Chumysh**	**2.37**	**312**	⇓P	**Pb**	**11 59 46.3**	**+1.0**
	19nm,0.5s,SNR=11						
KK31	**Karatay Array**	**5.21**	**291**	⇓Pg	**Pg**	**12 00 40.0**	**-2.2**
	1.8nm,0.6s,baz=103,slow=15,SNR=14						
KK31				⇑Lg	Lg	12 01 55.8	
	1.6nm,0.4s,baz=106,slow=29,SNR=5.0						
MK31	**Makanchi Array**	**6.49**	**33**	⇓Pn	Pn	12 00 32.7	-5.4
	1.0nm,0.6s,baz=199,slow=14,SNR=5.4						
MK31				⇓Lg	Lg	12 02 12.3	
	1.2nm,0.5s,baz=216,slow=25,SNR=4.1						

IDC 29 12:05:02.7±1.5,22°.51S×174°.96W,h0km,mb3.9/7, mb1 4.2/8,mb1mx4.0/21,mbtmp4.0/8,ML2.3/1,Error ellipse: s-maj=74.4km s-min=19.4km az=150.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.07**	**20**	Pn	Pn	12 07 13.3	-1.8
	1.8nm,0.3s,baz=311,slow=22,SNR=3.4						
AFI				Sn	Sn	12 08 50.4	-7.7
	2.2nm,0.3s,baz=52,slow=18,SNR=2.9						
CTA	**Charters Tower**	**36.16**	**266**	P	P	12 12 07.4	+0.4
	3.2nm,0.6s,baz=95,slow=11,SNR=5.4						
STKA	**Stephens Creek**	**39.54**	**247**	P	P	12 12 34.7	-0.9
	0.4nm,0.3s,baz=90,slow=10,SNR=3.5						
ASAR	**Alice Springs**	**46.85**	**258**	P	P	12 13 34.9	0.0
	0.6nm,0.5s,baz=97,slow=6.8,SNR=11						
WRA	**Warramunga Arr**	**47.16**	**263**	P	P	12 13 36.8	-0.4
	1.5nm,0.6s,baz=95,slow=8.4,SNR=33						
NVAR	**Mina Array Bea**	**80.58**	**42**	P	P	12 17 17.0	-0.4
	0.9nm,0.7s,baz=224,slow=9.1,SNR=8.4						
TXAR	**Lajitas Array**	**85.79**	**56**	P	P	12 17 44.4	0.0
	0.9nm,0.9s,baz=208,slow=9.5,SNR=7.6						
ILAR	**Eielson Array**	**89.67**	**12**	P	P	12 18 03.4	+1.3
	0.3nm,0.9s,baz=218,slow=6.2,SNR=3.9						

*ISCJB **29** 12:11:00.6±0.5,50°.70N±0°.05×73°.64E±0°.06,h10km, mb3.4/2,Error ellipse: s-maj=7.5km s-min=4.5km az=35.1*
*NNC **29** 12:11:00.4±0.9,50°.61N×73°.55E,h0km,mb3.1,mpv2.8, Error ellipse: s-maj=13.9km s-min=6.5km az=34.0*
*IDC **29** 12:11:02.6±0.9,50°.95N×73°.70E,h0km,mb3.3/2, mb1 3.4/7,mb1mx3.2/31,mbtmp3.2/7,ML2.9/5,Error ellipse: s-maj=20.6km s-min=7.6km az=27.0*
ISC 29 12:11:02.0±0.8,50°.78N±0°.08×73°.62E±0°.05,h10km,n18, σ1=51/22,13C-9D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VOSK	**Vostochnaya**	**2.55**	**321**	⇑Pn	**Pn**	**12 11 43.7**	**+0.3**
	4.0nm,0.7s						
VOSK				⇓Pg	**Pb**	**12 11 46.7**	**-1.1**
	7.7nm,0.5s						
VOSK				⇑Sn	**Sn**	**12 12 16.5**	**+2.0**
	37nm,0.6s						
BVA0	**Borovoye Array**	**3.01**	**320**	Pn	**Pn**	**12 11 51.9**	**+2.1**
	0.6nm,0.4s,baz=123,slow=15,SNR=28						
BVA0				⇑Lg	Lg	12 12 34.6	
	2.7nm,0.6s,baz=128,slow=26,SNR=11						
BVAR	**Borovoye Array**	**3.01**	**320**	Pn	**Pn**	**12 11 50.5**	**+0.7**
	2.0nm,0.3s,baz=122,slow=16,SNR=20						
BVAR				Lg	Lg	12 12 34.3	
	7.3nm,0.3s,baz=116,slow=27,SNR=14						
BRVK	**Borovoye**	**3.08**	**319**	⇓Pn	**Pb**	**12 11 54.7**	**-2.2**
	6.1nm,0.5s						
BRVK				⇑Sn	**Sb**	**12 12 33.5**	**-1.0**
	78nm,0.7s						
KUR17	**Kurchatov Arra**	**3.08**	**91**	⇑Pn	**Pn**	**12 11 51.9**	**+1.2**
	0.3nm,0.7s						
KUR17				⇑Pg	**Pg**	**12 11 59.0**	**-2.1**
	0.4nm,0.5s						
KUR17				⇓Lg	Lg	12 12 36.5	
	1.6nm,0.7s						
KURBB	**Kurchatov Arra**	**3.12**	**91**	Pn	**Pn**	**12 11 52.4**	**+1.1**
	0.3nm,0.3s,baz=278,slow=14,SNR=54						
KURBB				Lg	Lg	12 12 38.2	
	0.8nm,0.3s,baz=289,slow=29,SNR=14						
KURK	**Kurchatov**	**3.18**	**89**	⇑Pn	**Pn**	**12 11 52.2**	**+0.2**
	3.2nm,0.8s						
KURK				⇑Pg	**Pb**	**12 11 58.1**	**-0.3**
	6.5nm,0.8s						
KURK				⇑Lg	Lg	12 12 39.5	
	26nm,0.7s						
ZRNK	**Zerenda**	**3.60**	**309**	⇓Pn	**Pn**	**12 11 58.5**	**+0.7**
	2.0nm,0.5s						
ZRNK				⇓Sn	**Sn**	**12 12 43.1**	**+2.8**
	8.3nm,0.7s						
ZRNK				⇑Lg	Lg	12 12 53.2	
	16nm,0.7s						
MK31	**Makanchi Array**	**6.98**	**121**	⇓Pg	Pg	12 13 07.1	-8.4
	0.8nm,0.6s,baz=299,slow=14,SNR=5.0						
MK31				⇓Lg	Lg	12 14 40.7	
	5.9nm,0.7s,baz=323,slow=25,SNR=4.0						
MKAR	**Makanchi Array**	**6.98**	**121**	Pn	Pn	12 12 46.0	+1.7
	0.1nm,0.3s,baz=301,slow=13,SNR=3.6						
MKAR				Sn	**Sn**	**12 14 05.8**	**+2.2**
	0.1nm,0.3s,baz=334,slow=31,SNR=3.4						
MKAR				Lg	Lg	12 14 42.2	
	0.5nm,0.3s,baz=313,slow=26,SNR=5.5						
ZALV	**Zalesovo Beam**	**7.55**	**61**	Pn	**Pn**	**12 12 52.1**	**0.0**
	0.2nm,0.3s,baz=249,slow=13,SNR=6.9						
ZALV				Sn	**Sn**	**12 14 17.4**	**-0.4**
	0.2nm,0.3s,baz=255,slow=23,SNR=5.7						
KK31	**Karatay Array**	**7.96**	**197**	⇓Pn	**Pn**	**12 12 56.4**	**-1.4**
	0.2nm,0.3s,baz=24,slow=15,SNR=5.0						
KK31				⇑Lg	Lg	12 15 07.3	
	2.8nm,0.7s,baz=24,slow=30,SNR=3.9						
TKM2	**Tokmak 2**	**7.97**	**169**	⇑Lg	Lg	12 15 10.9	
	8.8nm,0.8s						
AAK	**Ala-Archa**	**8.17**	**175**	Sn	Sn	12 14 34.2	+1.1
	0.2nm,0.3s,baz=346,slow=7.0,SNR=2.7						
AAK				Lg	Lg	12 15 20.9	
	0.4nm,0.3s,baz=192,slow=17,SNR=4.1						
AB31	**Akbulak array**	**8.94**	**265**	⇓Pn	**Pn**	**12 13 11.2**	**+0.1**
	0.2nm,0.4s,baz=85,slow=9.2,SNR=6.9						
AB31				⇑Lg	Lg	12 15 40.4	
	1.6nm,0.8s,baz=77,slow=30,SNR=4.1						
AKTO	**Aktyubinsk**	**9.93**	**274**	Pn	**Pn**	**12 13 24.4**	**-0.3**
	0.4nm,0.3s,baz=82,slow=9.3,SNR=4.2						
AKTO				Lg	Lg	12 16 19.7	
	0.2nm,0.3s,baz=9.7,slow=23,SNR=4.0						
ILAR	**Eielson Array**	**60.58**	**19**	P	**P**	**12 21 12.1**	**-0.1**
	0.3nm,0.7s,baz=326,slow=4.6,SNR=7.7						
YKA	**Yellowknife Ar**	**66.89**	**4**	P	**P**	**12 21 55.8**	**+2.1**
	0.2nm,0.9s,baz=354,slow=6.8,SNR=5.0						

GUC 29 12:24:47.1±0.4,30°.74S×72°.24W,h20km±3km,MD3.7, ML3.2,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMCH	**Combarbala**	**1.15**	**112**	*e*P	Pn	12 25 07.3	-1.0
CMCH				*i* S	Sb	12 25 22.8	-0.3
CMCH				AML	AML	12 25 32.9	
	comp=N,1μm,0.7s						
CHNG	**Los Chungos**	**1.30**	**151**	*e*P	Pn	12 25 09.7	-0.5
CHNG				*i* S	Sn	12 25 26.6	-0.5
ROCH	**El Roble**	**2.46**	**155**	*e*P	Pn	12 25 27.1	+0.7
ROCH				*i* S	Sn	12 25 58.0	+1.9
ROCH				AML	AML	12 26 17.4	
	comp=E,83nm,0.5s						
PEL	**Peldehue**	**2.74**	**152**	*i* P	Pn	12 25 31.0	+1.0
PEL				*i* S	Sn	12 26 04.8	+2.1
PEL				AML	AML	12 26 08.7	
	comp=E,124nm,0.3s						
LMEL	**Las Melosas**	**3.55**	**151**	*i* P	Pn	12 25 42.7	+1.4
LMEL				*i* S	Sn	12 26 24.8	+1.9
LMEL				AML	AML	12 26 27.1	
	comp=N,53nm,0.2s						

*ISK **29** 12:36:12.0,40°.38N×39°.70E,h22km,MD2.4*
*ISCJB **29** 12:36:13.7±0.7,40°.40N±0°.04×39°.71E±0°.04,h6km±9km, Error ellipse: s-maj=7.3km s-min=4.6km az=9.8*
*CSEM **29** 12:36:13.0±0.3,40°.48N×39°.71E,h12km,MD2.4, Error ellipse: s-maj=6.4km s-min=3.5km az=10.0*
*DDA **29** 12:36:15.3,40°.12N×39.64E,h7km,MD2.7*
ISC 29 12:36:13.1±1.0,40°.42N±0°.05×39°.70E±0°.02,h16km±9km, n14,σ0=0.62/26,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMT	**Gumushane**	**0.17**	**284**	*e*PG	**Pb**	**12 36 17.9**	**-0.1**
GUMT				*e*SG	**Sb**	**12 36 21.2**	**0.0**
GUMT	**Gumushane**	**0.17**	**284**	*e*Pg	**Pb**	**12 36 17.9**	**-0.1**
GUMT				*e*Sg	**Sb**	**12 36 21.2**	**0.0**
BAYT	**Ayd¨¬ntepe-Bay**	**0.34**	**94**	*e*PG	**Pg**	**12 36 19.9**	**-0.3**
BAYT				*e*SG	**Sg**	**12 36 25.5**	**+0.3**
BAYT	**Ayd¨¬ntepe-Bay**	**0.34**	**94**	*e*Pg	**Pg**	**12 36 19.9**	**-0.3**
BAYT				*e*Sg	**Sg**	**12 36 25.5**	**+0.3**
KELT	**Kelkit**	**0.43**	**232**	*i* P	**Pb**	**12 36 22.1**	**-0.3**
KELT				*i* S	**Sg**	**12 36 27.8**	**0.0**
KELT	**Kelkit**	**0.43**	**232**	*i* P	**Pb**	**12 36 22.1**	**-0.3**
KELT				*i* S	**Sg**	**12 36 27.8**	**0.0**
EZC	**Erzincan**	**0.71**	**202**	*e*Pg	**Pn**	**12 36 28.1**	**-0.6**
EZC				*e*Sg	**Sn**	**12 36 39.6**	**+0.2**
KOPT	**Kop Dagi**	**0.73**	**123**	*i* P	**Pb**	**12 36 28.0**	**+0.4**
KOPT				*i* S	**Sb**	**12 36 38.3**	**+0.8**
KOPT	**Kop Dagi**	**0.73**	**123**	*i* P	**Pb**	**12 36 28.0**	**+0.4**
KOPT				*i* S	**Sb**	**12 36 38.3**	**+0.8**
ERZN	**Erzincan**	**0.83**	**179**	*e*PG	**Pb**	**12 36 28.1**	**-1.0**
ERZN				*e*SG	**Sb**	**12 36 39.5**	**-0.6**
ESPY	**Espiye-Giresun**	**0.89**	**304**	*e*PG	**Pb**	**12 36 29.3**	**-0.8**
ESPY	**Espiye-Giresun**	**0.89**	**304**	*e*Pg	**Pb**	**12 36 29.3**	**-0.8**
SUSE	**Susehri**	**1.16**	**260**	*i* P	**Pg**	**12 36 36.0**	**+0.5**
SUSE				*i* S	**Sg**	**12 36 51.8**	**+1.1**
SUSE	**Susehri**	**1.16**	**260**	*i* P	**Pg**	**12 36 36.0**	**+0.5**
SUSE				*i* S	**Sg**	**12 36 51.8**	**+1.1**

IDC 29 12:49:35.9±13.0,17°.41S×170°.09W,h0km,mb3.7/3, mb1 3.8/4,mb1mx3.5/21,mbtmp3.6/4,ML1.3/1,Error ellipse: s-maj=275.3km s-min=33.3km az=89.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.84**	**335**	Pn	Pn	12 50 36.3	-0.2
	1.3nm,0.3s,baz=30,slow=20,SNR=4.5						
AFI				Sn	Sn	12 51 22.9	+0.5
	1.5nm,0.3s,baz=197,slow=20,SNR=2.9						
STKA	**Stephens Creek**	**45.85**	**242**	P	P	12 57 59.6	-0.4
	1.1nm,0.8s,baz=81,slow=13,SNR=2.9						
WRA	**Warramunga Arr**	**52.50**	**258**	P	P	12 58 51.5	+0.3
	0.3nm,0.4s,baz=97,slow=6.9,SNR=13						
ASAR	**Alice Springs**	**52.54**	**253**	P	P	12 58 51.4	-0.2
	0.4nm,0.5s,baz=97,slow=7.7,SNR=10						

IDC 29 13:01:03.7±1.9,17°.44S×178°.02W,h0km,mb3.9/4, mb1 4.1/4,mb1mx3.7/19,mbtmp3.9/4,Error ellipse: s-maj=119.5km s-min=27.7km az=146.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.17**	**241**	P	P	13 08 33.4	-0.1
	0.4nm,0.3s,baz=97,slow=13,SNR=4.3						
ASAR	**Alice Springs**	**45.27**	**254**	P	P	13 09 23.3	-0.1
	3.6nm,0.6s,baz=91,slow=8.3,SNR=60						
ILAR	**Eielson Array**	**85.35**	**13**	P	P	13 13 42.0	-0.3
	0.2nm,0.4s,baz=216,slow=5.1,SNR=7.3						
TXAR	**Lajitas Array**	**85.44**	**58**	P	P	13 13 44.0	+0.3
	0.4nm,0.7s,baz=240,slow=4.7,SNR=5.1						

IDC 29 13:05:16.6±3.9,16°.51S×178°.98W,h0km,mb4.3/4, mb1 4.5/4,mb1mx3.8/19,mbtmp4.3/4,Error ellipse: s-maj=168.6km s-min=34.8km az=137.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.84**	**239**	P	P	13 12 44.0	+0.3
	2.2nm,0.4s,baz=92,slow=11,SNR=17						
WRA	**Warramunga Arr**	**44.37**	**258**	P	P	13 13 28.7	-0.4
	1.3nm,0.5s,baz=95,slow=7.0,SNR=8.8						
ASAR	**Alice Springs**	**44.66**	**253**	P	P	13 13 31.0	-0.5
	10nm,0.4s,baz=86,slow=8.4,SNR=74						
ILAR	**Eielson Array**	**84.66**	**13**	P	P	13 17 51.8	+0.1
	0.3nm,1.0s,baz=224,slow=6.2,SNR=4.0						

IDC 29 13:14:22.5±3.5,55°.82S×30°.09W,h0km,mb3.8/3, mb1 4.0/3,mb1mx3.8/14,mbtmp3.8/3,MS3.4/1,Ms1 3.4/1, ms1mx3.0/17,Error ellipse: s-maj=111.7km s-min=44.2km az=3.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPUP	**Villa Florida**	**35.46**	**315**	P	P	13 21 19.9	-0.5
	0.5nm,0.4s,baz=87,slow=20,SNR=3.3						
CPUP				LR	LR	13 32 31.0	
	comp=Z,68nm,21.1s,baz=328,slow=31						
LPAZ	**La Paz**	**48.93**	**308**	P	P	13 23 11.3	+0.2
	1.9nm,0.7s,baz=170,slow=6.1,SNR=6.7						
TORD	**Torodi Ar. Bea**	**73.70**	**32**	P	P	13 25 58.0	+0.1
	0.7nm,0.7s,baz=203,slow=7.6,SNR=5.9						
ILAR	**Eielson Array**	**148.75**	**312**	PKPbc	PKPbc	13 34 09.5	-0.7
	1.2nm,1.0s,baz=127,slow=2.0,SNR=8.6						

*ISCJB **29** 13:19:01.2±0.7,19°.5S±0°.1×177°.6W±0°.1,h550km,mb3.7/4, Error ellipse: s-maj=21.7km s-min=9.3km az=143.7*
*IDC **29** 13:19:02.0±1.5,19°.50S×177°.64W,h545km±24km,mb3.1/4, mb1 3.4/6,mb1mx3.0/21,mbtmp3.4/6, Error ellipse: s-maj=21.3km s-min=19.7km az=6.0*
*AUST **29** 13:19:04.2±0.0,19°.48S×177°.23W,h600km, Error ellipse: s-maj=2.6km s-min=1.7km az=351.0*
ISC 29 13:19:02.0±0.8,19°.5S±0°.2×177°.6W±0°.1,h550km,n15, σ1=9.08/17,mb3.8/4,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.82**	**46**	P	**P**	**13 20 58.9**	**+0.8**
	5.9nm,0.3s,baz=44,slow=17,SNR=7.8						
AFI				S	**S**	**13 22 31.7**	**-1.6**
	5.8nm,0.3s,baz=69,slow=24,SNR=6.9						
URZ	**Urewera**	**19.30**	**193**	P	**P**	**13 22 50.0**	**-1.5**
	4.5nm,0.3s,baz=289,slow=3.0,SNR=34						
QLP	**Quilpie**	**35.77**	**251**	P	**P**	**13 25 16.1**	**+0.8**
	baz=36,SNR=4

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**1.70**	**34**	*eP*	Pn	13 30 35.8	0.0
CNGN				*eS*	Sn	13 30 58.4	+2.1
MGAN	**Managua**	**1.74**	**52**	*eP*	Pn	13 30 36.1	-0.3
MGAN				*eS*	Sn	13 30 58.8	+1.4
GBS2	**Las Lilas**	**2.18**	**96**	*i P*	Pn	13 30 43.1	+0.7
GBS2				*i S*	Sn	13 31 08.1	-0.1
CNCH	**Conchagua**	**2.19**	**355**	*eP*	Pn	13 30 43.1	+0.4
CNCH				*eS*	Sn	13 31 10.1	+1.3
LIM1	**Limonal**	**2.39**	**99**	*i P*	Pn	13 30 45.7	+0.3
LIM1				*i S*	Sn	13 31 13.2	-0.4
BLLM	**Bellamira**	**2.42**	**346**	*eP*	Pn	13 30 45.7	-0.1
CUI	**Cuipilapa**	**2.48**	**99**	*i P*	Pn	13 30 46.9	+0.3
CUI				*i S*	Sn	13 31 15.5	-0.3
AMAS	**Alto Masis**	**2.66**	**100**	*i P*	Pn	13 30 48.9	-0.2
SNVI	**San Vicente**	**2.77**	**335**	*eP*	Pn	13 30 51.6	+0.9
SNVI				*eS*	Sn	13 31 23.3	+0.2
LFRS	**El Faro**	**2.88**	**332**	*eP*	Pn	13 30 51.5	-0.7
LFRS				*eS*	Sn	13 31 26.4	+0.7
CGA2	**Cerro Gallo 2**	**3.31**	**108**	*eP*	Pn	13 30 59.2	+1.1
CGA2				*eS*	Sn	13 31 36.3	-0.2
SBLS	**San Blas**	**3.35**	**325**	*eP*	Pn	13 30 59.0	+0.2
SBLS				*eS*	Sn	13 31 37.8	+0.2
LAJ	**Bijagual**	**3.68**	**109**	*eP*	Pn	13 30 59.2	-4.1
LAJ				*eS*	Sn	13 31 35.9	-10
SJS	**Escuela Geolog**	**3.72**	**107**	*eP*	Pn	13 31 06.7	+3.0
SJS				*eS*	Sn	13 31 52.0	+5.4
QCR	**Quepos**	**3.81**	**115**	*eP*	Pn	13 31 06.2	+1.4
ACR	**Cerro Adams**	**5.04**	**118**	*eP*	Pn	13 31 23.2	+1.5

BGS 29 14:02:01.5±0.7, 50.06N×0.69E, h6km, ML2.4, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELSH	**Elham, Standar**	**1.13**	**14**	*eP*	Pg	14 02 22.4	-0.7
ELSH				AML	AML	14 02 43.7	
	comp=E,58nm,0.2s						
ELSH				AML	AML	14 02 44.6	
	comp=N,76nm,0.4s						
ELSH	**Elham, Standar**	**1.13**	**14**	P	Pg	14 02 22.4	-0.7
ELSH				AML	AML	14 02 43.7	
	comp=N,58nm,0.2s						
ELSH				AML	AML	14 02 44.6	
	comp=N,76nm,0.4s						
ELSH	**Elham, Standar**	**1.13**	**14**	*eP*	Pg	14 02 22.4	-0.7
ELSH				AML	AML	14 02 43.7	
	comp=E,58nm,0.2s						
ELSH				AML	AML	14 02 44.6	
	comp=N,76nm,0.4s						
JDG	**Jersey Dam (Ga**	**1.98**	**245**	*eP*	Pn	14 02 34.4	-1.0
JDG	**Jersey Dam (Ga**	**1.98**	**245**	P	Pn	14 02 34.4	-1.0
JDG	**Jersey Dam (Ga**	**1.98**	**245**	*eP*	Pn	14 02 34.4	-1.0
JDC	**Jersey Dam (Cr**	**1.98**	**245**	*eP*	Pn	14 02 34.4	-1.1
JDC	**Jersey Dam (Cr**	**1.98**	**245**	P	Pn	14 02 34.4	-1.1
JDC	**Jersey Dam (Cr**	**1.98**	**245**	*eP*	Pn	14 02 34.4	-1.1
JSA	**Saint Aubin**	**2.06**	**246**	*eP*	Pn	14 02 35.4	-1.1
JSA				*eS*	Sn	14 03 01.2	-1.1
JSA				AML	AML	14 03 11.8	
	comp=N,23nm,0.4s						
JSA				AML	AML	14 03 12.6	
	comp=E,23nm,0.3s						
JSA	**Saint Aubin**	**2.06**	**246**	P	Pn	14 02 35.4	-1.1
JSA				S	Sn	14 03 01.2	-1.1
JSA				AML	AML	14 03 11.8	
	comp=E,23nm,0.4s						
JSA				AML	AML	14 03 12.6	
	comp=E,23nm,0.3s						
JSA	**Saint Aubin**	**2.06**	**246**	*eP*	Pn	14 02 35.4	-1.1
JSA				*eS*	Sn	14 03 01.2	-1.1
JSA				AML	AML	14 03 11.8	
	comp=N,23nm,0.4s						
JSA				AML	AML	14 03 12.6	
	comp=E,23nm,0.3s						
DYA	**Yadsworthy**	**2.99**	**279**	*eP*	Pn	14 02 48.8	-0.6
DYA				AML	AML	14 03 46.1	
	comp=N,14nm,0.4s						
DYA				AML	AML	14 03 55.9	
	comp=E,11nm,0.4s						
DYA	**Yadsworthy**	**2.99**	**279**	P	Pn	14 02 48.8	-0.6
DYA				AML	AML	14 03 46.1	
	comp=E,14nm,0.4s						
DYA				AML	AML	14 03 55.9	
	comp=E,11nm,0.4s						
DYA	**Yadsworthy**	**2.99**	**279**	*eP*	Pn	14 02 48.8	-0.6
DYA				AML	AML	14 03 46.1	
	comp=N,14nm,0.4s						
DYA				AML	AML	14 03 55.9	
	comp=E,11nm,0.4s						
MCH1	**Michaelchurch**	**3.03**	**311**	*eP*	Pn	14 02 49.1	-0.8
MCH1	**Michaelchurch**	**3.03**	**311**	P	Pn	14 02 49.1	-0.8
MCH1	**Michaelchurch**	**3.03**	**311**	*eP*	Pn	14 02 49.1	-0.8
HLM1	**Long Mynd**	**3.33**	**319**	*eP*	Pn	14 02 53.1	-1.0
HLM1				AML	AML	14 03 37.2	
	comp=E,8.8nm,0.3s						
HLM1				AML	AML	14 03 37.2	
	comp=N,8.2nm,0.2s						
HLM1	**Long Mynd**	**3.33**	**319**	P	Pn	14 02 53.1	-1.0
HLM1				AML	AML	14 03 37.2	
	comp=N,8.8nm,0.3s						
HLM1				AML	AML	14 03 37.2	
	comp=N,8.2nm,0.2s						
HLM1	**Long Mynd**	**3.33**	**319**	*eP*	Pn	14 02 53.1	-1.0
HLM1				AML	AML	14 03 37.2	
	comp=E,8.8nm,0.3s						
HLM1				AML	AML	14 03 37.2	
	comp=N,8.2nm,0.2s						

IDC 29 14:15:54.2±4.4, 18.17N×46.48W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.6/25, mbtmp3.7/5, MS3.3/7, Ms1 3.3/7, ms1mx3.0/38, Error ellipse: s-maj=162.3km s-min=30.9km az=18.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**18.70**	**273**	LR	LR	14 25 43.0	
	comp=Z,98nm,22.0s,baz=98,slow=32						
BBTS	**Babate**	**28.92**	**92**	LR	LR	14 32 14.8	
	comp=Z,39nm,18.3s,baz=70,slow=34						
LPAZ	**La Paz**	**40.34**	**213**	LR	LR	14 39 15.7	
	comp=Z,26nm,21.1s,baz=54,slow=35						
TORD	**Torodi Ar. Bea**	**46.55**	**89**	P	P	14 24 23.6	-0.4
	0.4nm,0.8s,baz=274,slow=8.8,SNR=2.4						
TORD				LR	LR	14 41 32.7	
	comp=Z,58nm,18.6s,baz=295,slow=33						
PDAR	**Pinedale Array**	**58.22**	**309**	P	P	14 25 51.0	+0.3
	0.6nm,1.0s,baz=119,slow=5.2,SNR=3.7						
NOA	**NORSAR Array B**	**58.79**	**29**	LR	LR	14 48 08.4	
	comp=Z,22nm,18.4s,baz=270,slow=33						
YKA	**Yellowknife Ar**	**63.96**	**331**	P	P	14 26 28.2	-0.7
	0.4nm,0.8s,baz=100,slow=6.3,SNR=4.4						
BRTR	**Keskin Array B**	**71.14**	**53**	P	P	14 27 15.6	+0.5
	0.3nm,0.4s,baz=270,slow=5.8,SNR=2.6						
KBZ	**Khabaz**	**77.23**	**48**	LR	LR	15 02 27.5	
	comp=Z,20nm,18.4s,baz=11,slow=36						
ILAR	**Eielson Array**	**78.08**	**334**	P	P	14 27 54.9	+0.2
	2.2nm,0.8s,baz=72,slow=4.7,SNR=29						
KURBB	**Kurchatov Array**	**96.22**	**32**	LR	LR	15 11 31.1	
	comp=Z,16nm,20.0s,baz=295,slow=35						

IDC 29 14:16:56.6±4.4, 12.43S×166.96E, h254km±41km, mb3.6/8, mb1 3.7/9, mb1mx3.4/23, mbtmp3.6/9, Error ellipse: s-maj=27.5km s-min=20.2km az=0.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.60**	**183**	P	Pn	14 19 12.1	+1.9
	0.3nm,0.3s,baz=125,slow=21,SNR=7.6						
DZM				S	S	14 20 56.8	-1.8
	0.3nm,0.3s,baz=78,slow=20,SNR=2.7						
CTA	**Charters Tower**	**21.27**	**246**	P	P	14 21 24.0	+0.4
	4.0nm,0.5s,baz=71,slow=12,SNR=7.5						
WRA	**Warramunga Arr**	**32.16**	**252**	P	P	14 23 00.3	-0.7
	1.2nm,0.4s,baz=84,slow=9.0,SNR=26						
ASAR	**Alice Springs**	**33.27**	**246**	P	P	14 23 09.8	-0.8
	1.4nm,0.4s,baz=68,slow=10,SNR=53						
FITZ	**Fitzroy Crossi**	**40.19**	**257**	P	P	14 24 09.2	+0.3
	1.0nm,0.3s,baz=62,slow=7.7,SNR=14						
QSPA	**South Pole Qui**	**77.58**	**180**	P	P	14 28 24.5	-0.1
	2.0nm,0.7s,baz=328,slow=7.5,SNR=10.0						
ILAR	**Eielson Array**	**84.45**	**18**	P	P	14 28 59.5	-0.9
	2.6nm,0.6s,baz=245,slow=5.1,SNR=58						
MKAR	**Makanchi Array**	**95.34**	**317**	P	P	14 29 52.6	+0.7
	0.4nm,0.6s,baz=102,slow=6.3,SNR=5.7						
YKA	**Yellowknife Ar**	**95.66**	**27**	P	P	14 29 51.6	-1.4
	0.3nm,0.5s,baz=259,slow=4.6,SNR=6.9						
ARCES	**ARCESS Array B**	**117.96**	**346**	PKP	PKPdf	14 35 12.6	+0.1
	1.6nm,0.3s,baz=74,slow=2.1,SNR=57						
FINES	**FINESS Array B**	**123.49**	**339**	PKP	PKPdf	14 35 23.5	+0.3
	0.5nm,0.4s,baz=57,slow=5.1,SNR=5.3						
NOA	**NORSAR Array B**	**128.34**	**345**	PKP	PKPdf	14 35 33.5	+0.8
	0.4nm,0.6s,baz=26,slow=2.0,SNR=2.7						
HFS	**Hagfors**	**128.45**	**343**	PKP	PKPdf	14 35 33.2	+0.4
	0.7nm,0.7s,baz=102,slow=6.1,SNR=3.4						
ESDC	**Sonseca Array**	**151.70**	**345**	PKPbc	PKPbc	14 36 20.9	-0.4
	0.6nm,0.4s,baz=19,slow=1.6,SNR=3.7						

IDC ***29*** *14:23:41.8±2.9, 3.57N×128.04E, h63km±27km, mb4.0/15, mb1 4.1/17, mb1mx3.9/29, mbtmp4.0/17, ML4.7/2, MS3.2/5, Ms1 3.2/5, ms1mx2.7/40, Error ellipse: s-maj=27.2km s-min=10.5km az=80.0*

ISCJB ***29*** *14:23:42.5±0.4, 3.59N±0.04×127.96E±0.05, h84km, mb4.2/15, Error ellipse: s-maj=6.6km s-min=5.0km az=160.4*

AUST ***29*** *14:23:45.3, 3.50N×128.00E, h100km*

DJA ***29*** *14:23:47.3±0.8, 3.7N±7×12.8E±7, h51km±9km, M4.7/17, mB5.1/9, mb4.8/17, MLv5.0/10, Mw(mB)4.4/9*

ISC 29 14:23:45.4±0.6, 3.39N±0.06×127.85E±0.07, h84km, n62, σ1952/49, mb4.0/15, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**1.54**	**182**	P	**Pn**	**14 24 12.4**	**+0.9**
TNTI	**Ternate**	**2.64**	**191**	P	**Pn**	**14 24 28.1**	**+2.0**
MNI	**Manado**	**3.57**	**237**	P	**Pn**	**14 24 38.8**	**+0.2**
LBMI	**Labuha**	**4.02**	**185**	P	**Pn**	**14 24 47.2**	**+2.6**
DAV	**Davao City (W)**	**4.30**	**328**	P	Pn	14 24 45.9	-2.6
	66nm,0.3s,baz=116,slow=4.6,SNR=5.2						
DAV				S	**Sn**	**14 25 41.1**	**+3.6**
	7.7nm,0.3s,baz=216,slow=23,SNR=3.4						
KMSI	**Cibinong**	**4.77**	**234**	P	**Pn**	**14 24 56.3**	**+1.4**
CTBH	**Cotabato--PC H**	**5.23**	**317**	*i* P	Pn	14 24 57.1	-4.1
SWI	**Sorong**	**5.43**	**141**	P	**Pn**	**14 25 03.9**	**0.0**
	69nm,0.9s,1μm0.4nm						
SWI	**Sorong**	**5.43**	**141**	P	**Pn**	**14 25 04.0**	**+0.2**
	baz=5.4,SNR=15						
SWI				S	**Sn**	**14 26 03.0**	**-2.1**
	baz=5.4,SNR=16						
MRSI	**Marisa**	**6.58**	**244**	P	**Pn**	**14 25 21.3**	**+1.8**
	511nm,0.6s,4μm1.8nm						
LUWI	**Luwuk**	**6.72**	**229**	P	Pn	14 25 25.1	+3.6
	199nm,0.8s,3μm1.1nm						
LUWI	**Luwuk**	**6.72**	**229**	P	**Pn**	**14 25 22.9**	**+1.5**
	baz=6.9,SNR=3.4						
MSAI	**Masohi**	**6.78**	**171**	P	Pn	14 25 29.0	+6.7
AAI	**Ambon**	**7.04**	**177**	P	Pn	14 25 30.3	+4.5
	146nm,1.1s,1μm0.4nm						
FAKI	**Fak Fak**	**7.66**	**145**	P	**Pn**	**14 25 35.4**	**+1.1**
	51nm,1.0s,0.1nm						
FAKI	**Fak Fak**	**7.66**	**145**	P	**Pn**	**14 25 34.7**	**+0.4**
	baz=7.7,SNR=17						
FAKI				S	**Sn**	**14 26 58.8**	**-0.7**
	baz=7.7,SNR=4.3						
PALU	**Palau**	**7.68**	**59**	P	**Pn**	**14 25 34.0**	**-0.6**
	baz=7.5,SNR=4.0						
PALU				S	Sn	14 26 44.1	-16
	baz=7.5,SNR=8.8						
RKPI	**Ransiki, Papua**	**7.98**	**127**	P	Pn	14 25 46.6	+7.9
SKSI	**Soroako, Sulaw**	**8.77**	**228**	P	**Pn**	**14 25 49.1**	**-0.5**
	70nm,0.7s,686nm						
BAKI	**Biak**	**9.43**	**119**	P	Pn	14 26 01.8	+3.4
	109nm,1.3s,1μm						
MYLDM	**Lahad Datu**	**9.49**	**281**	P	**Pn**	**14 26 00.6**	**+1.3**
	40nm,1.1s						
TLE	**Tual**	**10.21**	**151**	P	Pn	14 26 16.7	+7.6
TLE	**Tual**	**10.21**	**151**	P	Pn	14 26 15.5	+6.4
	baz=10,SNR=4.1						
TTSI	**Tana Toraja**	**10.26**	**232**	P	**Pn**	**14 26 09.1**	**-0.7**
	49nm,0.9s,750nm						
BBSI	**Bau Bau**	**10.27**	**211**	P	Pn	14 26 14.2	+4.2
	73nm,1.1s						
SPSI	**Sidrap Palu**	**10.89**	**228**	P	**Pn**	**14 26 18.3**	**-0.1**
	53nm,0.6s,626nm						
BKSI	**Bulukumba**	**11.60**	**222**	P	**Pn**	**14 26 30.6**	**+2.6**
	32nm,0.6s,458nm						
KAPI	**Kappang**	**11.62**	**224**	P	**Pn**	**14 26 28.4**	**0.0**
	28nm,1.1s						
KAPI	**Kappang**	**11.62**	**224**	P	**Pn**	**14 26 27.1**	**-1.2**
	3.1nm,0.3s,baz=184,slow=16,SNR=8.6						
KAPI				S	**Sn**	**14 28 32.2**	**-4.2**
	0.8nm,0.3s,baz=66,slow=20,SNR=1.8						
KKM	**Kota Kinabalu**	**11.89**	**283**	P	**Pn**	**14 26 34.0**	**+1.9**
	baz=12,SNR=3.2						
JAY	**Jayapura**	**14.12**	**114**	P	P	14 27 10.8	+4.1
SBUM	**Sibu**	**15.64**	**267**	P	**P**	**14 27 23.9**	**+0.4**
	14nm,0.8s						
MTN	**Manton Dam**	**16.45**	**169**	P	**Pn**	**14 27 31.3**	**0.0**
	baz=17,SNR=5.0						
MTN				S	S	14 31 00.3	+20
	baz=17,SNR=11						
KDU	**Kakadu**	**16.62**	**164**	P	**Pn**	**14 27 33.1**	**-0.1**
	baz=17,SNR=18						
GMJI	**Gumukmas**	**18.46**	**231**	P	**Pn**	**14 27 59.8**	**+4.1**
	73nm,1.1s						
PWJI	**Pagerwojo**	**19.61**	**235**	P	**P**	**14 28 09.1**	**+1.8**
GUMO	**Guam**	**19.63**	**58**	LR	LR	14 33 45.3	
	comp=Z,36nm,18.8s,baz=114,slow=31						
FITZ	**Fitzroy Crossi**	**21.47**	**186**	P	**P**	**14 28 25.9**	**-1.2**
	2.6nm,0.5s,baz=22,slow=10,SNR=17						
FITZ	**Fitzroy Crossi**	**21.47**	**186**	P	**P**	**14 28 25.9**	**-1.2**
	baz=22,SNR=13						
WRA	**Warramunga Arr**	**24.05**	**165**	P	**P**	**14 28 52.4**	**-0.5**
	32nm,0.8s,baz=344,slow=9.7,SNR=96						
QIS	**Mount Isa**	**26.45**	**155**	P	**P**	**14 29 14.9**	**+0.2**
	baz=27,SNR=6.0						
ASAR	**Alice Springs**	**27.53**	**168**	P	**P**	**14 29 24.4**	**-0.1**
	2.4nm,0.6s,baz=0.1,slow=8.3,SNR=54						
ASAR				sP	sP	14 29 47.8	-5.7
	4.5nm,0.8s,baz=341,slow=9.7,SNR=7.8						
ASAR				PcP	**PcP**	**14 32 39.5**	**-1.2**
	0.7nm,0.6s,baz=1.4,slow=2.7,SNR=4.3						
JNU	**Nakatsue**	**29.71**	**5**	P	P	14 29 40.4	-3.3
	5.1nm,0.8s,baz=114,slow=7.3,SNR=4.8						
MEEK	**Meekatharra**	**31.16**	**196**	P	**P**	**14 29 56.6**	**+0.1**
	baz=32,SNR=6.7						
CMAR	**Chiang Mai Arr**	**32.01**	**300**	P	**P**	**14 30 03.3**	**-0.7**
	1.0nm,0.3s,baz=113,slow=7.1,SNR=11						
KSRS	**Korea Array**	**33.90**	**0**	P	P	14 30 16.7	-3.6
	3.1nm,0.8s,baz=178,slow=11,SNR=16						
KSRS				LR	LR	14 45 50.0	
	comp=Z,23nm,19.1s,baz=185,slow=39						
MORW	**Morawa**	**34.20**	**199**	P	**P**	**14 30 24.2**	**+1.2**
	baz=34,SNR=3.7						
MJAR	**Matsushiro Arr**	**34.35**	**15**	P	P	14 30 19.6	-4.7
	1.4nm,0.7s,baz=182,slow=11,SNR=4.8						
MJAR				LR	LR	14 42 16.0	
	comp=Z,38nm,19.5s,baz=220,slow=33						
KLBR	**Kellerberrin**	**36.09**	**195**	P	**P**	**14 30 39.6**	**+0.4**
	baz=36,SNR=8.7						
BBOO	**Buckleboo**	**36.83**	**168**	P	**P**	**14 30 45.7**	**+0.2**
	baz=37,SNR=19						
STKA	**Stephens Creek**	**37.43**	**161**	P	**P**	**14 30 49.9**	**-0.7**
	18nm,0.6s,baz=336,slow=7.5,SNR=48						
STKA				LR	LR	14 46 11.5	
	comp=Z,99nm,19.4s,baz=178,slow=36						
STKA	**Stephens Creek**	**37.43**	**161**	P	**P**	**14 30 50.2**	**-0.4**
	baz=38,SNR=44						
NWAO	**Narrogin (SRO)**	**37.49**	**195**	P	**P**	**14 30 51.6**	**+0.5**
	6.7nm,0.9s,baz=40,slow=9.4,SNR=6.2						
ARMA	**Armidale**	**40.58**	**148**	P	**P**	**14 31 18.1**	**+1.1**
	baz=41,SNR=6.2						
ARPS	**Mount Arapiles**	**42.03**	**163**	P	**P**	**14 31 29.4**	**+0.8**
	baz=42,SNR=7.4						
SONM	**Songino Array**	**47.98**	**341**	P	**P**	**14 32 14.9**	**-1.0**
	1.2nm,0.7s,baz=154,slow=7.1,SNR=6.1						
PETK	**Petropavlovsk-**	**55.33**	**21**	P	P	14 33 07.6	-2.8
	2.9nm,0.8s,baz=183,slow=11,SNR=4.4						
MKAR	**Makanchi Array**	**58.47**	**325**	P	**P**	**14 33 31.0**	**-1.7**
	1.4nm,0.5s,baz=114,slow=7.4,SNR=23						
MKAR				LR	LR	14 59 25.2	
	comp=Z,20nm,20.5s,baz=174,slow=37						
ZALV	**Zalesovo Beam**	**61.40**	**333**	P	P	14 33 50.6	-2.0
	0.5nm,0.4s,baz=119,slow=8.7,SNR=3.9						
AKTO	**Aktyubinsk**	**74.62**	**321**	P	P	14 35 13.5	-2.1
	1.0nm,0.6s,baz=110,slow=5.5,SNR=7.0						
VNDA	**Vanda**	**82.95**	**173**	P	**P**	**14 36 01.1**	**+0.4**
	2.0nm,0.9s,baz=307,slow=5.1,SNR=5.8						
TORD	**Torodi Ar. Bea**	**124.08**	**288**	PKP	**PKPdf**	**14 42 34.1**	**-1.1**
	0.4nm,0.6s,baz=32,slow=2.1,SNR=2.9						

IDC 29 14:29:17.9±1.9, 10.60S×124.76E, h0km, mb3.6/1, mb1 4.0/4, mb1mx3.6/20, mbtmp3.8/4, ML3.7/3, Error ellipse: s-maj=98.4km s-min=28.1km az=64.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**7.51**	**174**	Pn	Pn	14 31 09.9	+1.2
	0.5nm,0.3s,baz=2.1,slow=11,SNR=36						
FITZ				Sn	Sn	14 32 28.1	-6.6
	1.9nm,0.3s,baz=106,slow=18,SNR=11						
FITZ	**Fitzroy Crossi**	**7.51**	**174**	S	Sn	14 32 28.1	-6.6
	baz=22,SNR=6.2						
WRA	**Warramunga Arr**	**13.10**	**136**	Pn	Pn	14 32 24.4	-1.1
	0.5nm,0.3s,baz=306,slow=14,SNR=13						
WRA				Sn	Sn	14 34 40.9	-11
	0.7nm,0.3s,baz=309,slow=24,SNR=8.9						
ASAR	**Alice Springs**	**15.65**	**147**	Pn	Pn	14 32 59.5	-0.6
	0.6nm,0.3s,baz=318,slow=10,SNR=24						
ASAR				Sn	Sn	14 35 42.0	-12
	0.6nm,0.3s,baz=317,slow=22,SNR=12						
MKAR	**Makanchi Array**	**68.56**	**330**	P	P	14 40 22.4	0.0
	0.6nm,0.8s,baz=140,slow=6.3,SNR=4.0						

WEL 29 14:44:52.8±0.2, 38.42S×176.22E, h110km±1km, ML3.6/12, 7C-5D, Error ellipse: s-maj=1.4km s-min=1.3km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRRZ	**Plateau Road**	**0.16**	**121**	PN	Pn	14 45 07.7	-0.4
PRRZ				SN	Sn	14 45 19.8	+0.2
ALRZ	**Allen Road**	**0.17**	**147**	PN	Pn	14 45 07.9	-0.3
ALRZ				SN	Sn	14 45 19.8	+0.1
RRRZ	**Republican Roa**	**0.24**	**72**	PN	Pn	14 45 08.2	-0.1
RRRZ				SN	Sn	14 45 20.2	+0.1
WHTZ	**Whakaora**	**0.33**	**220**	PN	Pn	14 45 08.7	-0.1
WATZ	**Wairara**	**0.48**	**233**	⇑PN	Pn	14 45 09.5	-0.1
WATZ				SN	Sn	14 45 22.3	+0.1
RATZ	**Rangitukua**	**0.57**	**218**	⇑PN	Pn	14 45 10.1	-0.2
OPRZ	**Ohinepanea**	**0.63**	**25**	⇓PN	Pn	14 45 10.5	-0.1
OPRZ				SN	Sn	14 45 24.3	+0.4
RITZ	**Rihia Road**	**0.63**	**207**	⇑PN	Pn	14 45 10.8	+0.2
URZ	**Urewera**	**0.71**	**78**	⇓PN	Pn	14 45 10.9	-0.4
URZ				SN	Sn	14 45 24.3	-0.8
BKZ	**Black Stump Fm**	**0.78**	**164**	⇑PN	Pn	14 45 11.7	-0.2
BKZ				SN	Sn	14 45 25.9	-0.5
NMHZ	**Naumai**	**0.82**	**146**	⇑PN	Pn	14 45 12.9	+0.6
RAHZ	**Arahi**	**0.84**	**127**	PN	Pn	14 45 12.8	+0.3
TOZ	**Tahuroa Road**	**0.89**	**320**	⇓PN	Pn	14 45 13.2	+0.4
TWVZ	**Taurewa**	**0.90**	**223**	PN	Pn	14 45 12.9	-0.2
TWVZ				SN	Sn	14 45 28.1	-0.3
WPVZ	**Whakapapa**	**0.95**	**214**	PN	Pn	14 45 13.7	+0.1
FWVZ	**Far West T-bar**	**0.99**	**212**	PN	Pn	14 45 13.6	-0.6
FWVZ				SN	Sn	14 45 29.7	-0.6
TRVZ	**Turoa**	**1.03**	**211**	PN	Pn	14 45 14.9	+0.3
MWZ	**Matawai**	**1.03**	**86**	⇓PN	Pn	14 45 14.0	-0.3
MWZ				SN	Sn	14 45 29.9	-0.7
WNVZ	**Wahianoa**	**1.03**	**208**	PN	Pn	14 45 14.6	+0.1
MOVZ	**Moawhango**	**1.05**	**200**	PN	Pn	14 45 14.3	-0.4
BHHZ	**Black Hill Sta**	**1.08**	**187**	⇑PN	Pn	14 45 14.6	-0.3
HIZ	**Hauiti**	**1.08**	**264**	⇓PN	Pn	14 45 15.0	+0.2
MCHZ	**McNeill Hill**	**1.09**	**160**	⇑PN	Pn	14 45 15.5	+0.5
PKVZ	**Pokaka**	**1.11**	**218**	PN	Pn	14 45 15.2	0.0
MTVZ	**Mangateitei**	**1.13**	**211**	PN	Pn	14 45 15.6	+0.2
VRZ	**Vera Road**	**1.35**	**238**	PN	Pn	14 45 17.9	+0.1
PRGZ	**Paritu Road**	**1.40**	**112**	PN	Pn	14 45 18.4	0.0
CKHZ	**Cape Kidnapper**	**1.41**	**152**	PN	Pn	14 45 18.6	+0.1
KAHZ	**Kahuranaki**	**1.47**	**160**	PN	Pn	14 45 19.1	-0.2
PNHZ	**Pukenui**	**1.50**	**181**	PN	Pn	14 45 18.8	-0.8
MHGZ	**Mahia Peninsul**	**1.51**	**120**	PN	Pn	14 45 19.8	+0.1
CNGZ	**Carnagh Statio**	**1.56**	**93**	PN	Pn	14 45 20.7	+0.4
PUZ	**Puketiti**	**1.64**	**79**	PN	Pn	14 45 21.1	-0.2
WAZ	**Wanganui**	**1.65**	**215**	PN	Pn	14 45 21.3	-0.1
TSZ	**Takapari Road**	**1.65**	**187**	PN	Pn	14 45 20.4	-1.1
WPHZ	**Waipukurau**	**1.66**	**174**	PN	Pn	14 45 20.5	-1.0
PXZ	**Pawanui**	**1.69**	**163**	PN	Pn	14 45 21.1	-0.8
MXZ	**Matakaoa Point**	**1.85**	**63**	PN	Pn	14 45 24.2	+0.3
PRHZ	**Porangahau**	**1.88**	**170**	PN	Pn	14 45 23.0	-1.2
DVHZ	**Dannevirke**	**1.88**	**181**	PN	Pn	14

comp=Z,29nm,0.3s

KEV	**Kevo**	**3.17**	**312**	P	Pn	14 53 21.1	+0.1
KEV				S	Sb	14 53 58.4	-7.8
RNF	**Rovaniemi**	**3.22**	**253**	*e*S	Sn	14 53 59.0	-1.8
ARA0	**ARCESS Array S**	**3.50**	**304**	Pn	Pn	14 53 24.3	-1.3
	baz=122,slow=16						
ARA0				Sn	Sn	14 54 06.3	-1.5
	baz=119,slow=28						
ARA0				Lg	Lg	14 54 18.3	
	baz=125,slow=28						
ARA0	**ARCESS Array S**	**3.50**	**304**	Pn	Pn	14 53 24.3	-1.3
	baz=122,slow=16						
ARA0				Sn	Sn	14 54 06.3	-1.5
	baz=119,slow=28						
ARA0				Lg	Lg	14 54 18.3	
	baz=125,slow=28						
ARA0	**ARCESS Array S**	**3.50**	**304**	Pn	Pn	14 53 24.3	-1.3
	baz=122,slow=15,SNR=50						
ARA0				Sn	Sn	14 54 06.3	-1.4
	baz=119,slow=23,SNR=50						
ARA0				Lg	Lg	14 54 18.3	
	baz=125,slow=27,SNR=3.4						
ARCES	**ARCESS Array B**	**3.50**	**304**	Pn	Pn	14 53 24.8	-0.8
	comp=Z,3.6nm,0.3s,baz=120,slow=15,SNR=13						
ARCES				Pg	Pg	14 53 34.0	-3.1
	comp=Z,1.8nm,0.3s,baz=117,slow=17,SNR=10						
ARCES				Sn	Sn	14 54 06.8	-0.9
	comp=Z,4.7nm,0.3s,baz=119,slow=25,SNR=22						
ARCES				Lg	Lg	14 54 18.3	
	comp=Z,9.0nm,0.3s,baz=120,slow=31,SNR=11						
KIF	**Kilpisjarvi**	**4.95**	**291**	MSG		14 55 03.6	
	comp=Z,12nm,0.3s						
SUF	**Sumiainen**	**5.97**	**216**	MSG		14 55 34.5	
	comp=Z,7.9nm,0.3s						
KAF	**Kangasniemi**	**6.48**	**213**	MSG		14 55 56.1	
	comp=Z,5.0nm,0.3s						
FIA0	**FINESS Array S**	**7.13**	**211**	Pn	Pn	14 54 10.9	-4.5
	baz=21,slow=16						
FIA0				Sn	Sn	14 55 27.7	-9.4
FIA0				Lg	Lg	14 56 01.1	
	baz=37,slow=22						
FIA0	**FINESS Array S**	**7.13**	**211**	Pn	Pn	14 54 10.9	-4.5
	baz=21,slow=16						
FIA0				Sn	Sn	14 55 27.7	-9.4
FIA0				Lg	Lg	14 56 01.1	
	baz=37,slow=22						
FIA0	**FINESS Array S**	**7.13**	**211**	Pn	Pn	14 54 10.9	-4.6
	baz=21,slow=15,SNR=50						
FIA0				Lg	Lg	14 56 01.1	
	baz=37,slow=21,SNR=34						
FINES	**FINESS Array B**	**7.13**	**211**	Pn	Pn	14 54 11.3	-4.1
	comp=Z,0.1nm,0.3s,baz=31,slow=12,SNR=5.2						
FINES				Sn	Sn	14 55 29.4	-7.7
	comp=Z,0.3nm,0.3s,baz=27,slow=22,SNR=3.6						
FINES				Lg	Lg	14 56 00.7	
	comp=Z,0.9nm,0.3s,baz=34,slow=20,SNR=4.1						
HFS	**Hagfors**	**11.61**	**238**	Pn	Pn	14 55 06.1	-11
HFS				Sn	Sn	14 57 10.8	-16
	baz=78,slow=37						
HFS				Lg	Lg	14 58 22.5	
	baz=58,slow=37						
HFS	**Hagfors**	**11.61**	**238**	P	Pn	14 55 06.1	-11
HFS				Sn	Sn	14 57 10.8	-16
	baz=78,slow=37						
HFS				Lg	Lg	14 58 22.5	
	baz=58,slow=37						
HFS	**Hagfors**	**11.61**	**238**	Pn	Pn	14 55 12.4	-4.3
	comp=Z,0.1nm,0.3s,baz=35,slow=16,SNR=4.8						
HFS				Sn	Sn	14 57 16.6	-10
	comp=Z,0.2nm,0.3s,baz=52,slow=22,SNR=5.7						
HFS				Lg	Lg	14 58 21.5	
	comp=Z,0.1nm,0.3s,baz=60,slow=23,SNR=3.3						
HFS	**Hagfors**	**11.61**	**238**	Sn	Sn	14 57 10.8	-16
	baz=78,slow=36,SNR=50						
HFS				Lg	Lg	14 58 22.5	
	baz=58,slow=30,SNR=50						
NOA	**NORSAR Array B**	**11.78**	**246**	Pn	Pn	14 55 11.6	-7.5
	comp=Z,0.1nm,0.3s,baz=48,slow=23,SNR=2.5						
NOA				Lg	Lg	14 58 38.0	
	comp=Z,0.3nm,0.3s,baz=230,slow=3.5,SNR=4.0						

IDC 29 15:04:28.2±8.4, 2°12.N×126°03.E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/23, mbtmp3.5/4, Error ellipse: s-maj=134.8km s-min=105.1km az=134.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.10**	**181**	P	P	15 09 04.5	+0.9
	1.4nm,0.9s,baz=335,slow=12,SNR=2.3						
WRA	**Warramunga Arr**	**23.39**	**160**	P	P	15 09 38.6	-0.3
	0.9nm,0.3s,baz=338,slow=11,SNR=9.0						
ASAR	**Alice Springs**	**26.75**	**164**	P	P	15 10 09.7	-0.2
	0.2nm,0.4s,baz=339,slow=7.2,SNR=6.8						
STKA	**Stephens Creek**	**36.90**	**158**	P	P	15 11 38.6	-0.2
	0.7nm,0.4s,baz=338,slow=10,SNR=4.7						

*SKO **29** 15:08:22.7, 40°.76N×21°.73E, h22km, M1.5, ML1.9*
*ISCJB **29** 15:08:23.4±0.5, 40°.76N±0°.04×21°.71E±0°.04, h8km±7km, Error ellipse: s-maj=7.3km s-min=4.0km az=151.4*
*CSEM **29** 15:08:23.5±0.2, 40°.77N×21°.72E, h10km, MD2.8, Error ellipse: s-maj=3.8km s-min=3.5km az=143.0*
*ATH **29** 15:08:23.2, 40°.77N×21°.71E, h18km±4km, MD2.8/6*
*THE **29** 15:08:23.7, 40°.78N×21°.70E, h10km±4km, ML2.0/4, Error ellipse: s-maj=4.7km s-min=0.4km az=313.0*

ISC 29 15:08:23.4±0.9, 40°.78N±0°.03×21°.72E±0°.02, h12km±8km, n26, σ0°.946/42, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	**Florina**	**0.26**	**271**	P	**Pg**	**15 08 29.0**	**+0.1**
FNA				S	**Sg**	**15 08 32.3**	**-0.1**
FNA	**Florina**	**0.26**	**271**	*e*PB	**Pg**	**15 08 28.9**	**+0.1**
FNA	**Florina**	**0.26**	**271**	*e*Pb	**Pg**	**15 08 28.9**	**+0.1**
FNA				S	**Sg**	**15 08 32.3**	**-0.1**
BIA	**Bitola**	**0.38**	**309**	*e*Pg	**Pb**	**15 08 31.9**	**-0.3**
BIA				*i* Sg	**Sb**	**15 08 37.9**	**-0.3**
BIA				*e*Lg	Lg	15 08 38.8	
	comp=N,49nm,0.2s						
BIA				*e*Lg	Lg	15 08 39.2	
	comp=E,49nm,0.2s						
BIA	**Bitola**	**0.38**	**309**	*e*Pg	**Pb**	**15 08 31.9**	**-0.3**
BIA				*e*Lg	Lg	15 08 39.1	
	comp=E,49nm,0.2s						
KZN	**Kozani**	**0.47**	**175**	*e*PB	**Pg**	**15 08 31.8**	**-0.9**
KZN				*e*SB	**Sg**	**15 08 39.5**	**+0.5**
KZN	**Kozani**	**0.47**	**175**	*e*Pb	**Pg**	**15 08 31.8**	**-0.9**
KZN				*e*Sb	**Sg**	**15 08 39.5**	**+0.5**
GRG	**Griva**	**0.55**	**71**	P	**Pg**	**15 08 34.2**	**+0.1**
GRG				S	**Sb**	**15 08 42.5**	**-0.4**
GRG	**Griva**	**0.55**	**71**	*e*PN	**Pg**	**15 08 34.2**	**+0.1**
GRG	**Griva**	**0.55**	**71**	P	**Pg**	**15 08 34.2**	**+0.1**
GRG				S	**Sb**	**15 08 42.5**	**-0.4**
NEST	**Nestorio**	**0.62**	**235**	P	**Pg**	**15 08 35.6**	**0.0**
NEST				S	**Sb**	**15 08 44.5**	**-0.7**
NEST	**Nestorio**	**0.62**	**235**	P	**Pg**	**15 08 35.6**	**0.0**
NEST				S	**Sb**	**15 08 44.5**	**-0.7**
VAY	**Valandovo**	**0.84**	**50**	*e*Pg	**Pg**	**15 08 39.2**	**-0.5**
VAY				*i* Sg	**Sb**	**15 08 52.0**	**+0.7**
VAY				*e*Lg	Lg	15 08 54.6	
	comp=N,28nm,0.5s						
VAY				*e*Lg	Lg	15 08 54.8	
	comp=E,21nm,0.5s						
VAY	**Valandovo**	**0.84**	**50**	*e*Pg	**Pb**	**15 08 39.6**	**-0.4**
VAY				*e*Lg	Lg	15 08 55.3	
	comp=E,21nm,0.5s						
LIT	**Litokhoron**	**0.90**	**139**	P	**Pg**	**15 08 40.4**	**-0.3**
LIT				S	**Sn**	**15 08 54.3**	**-0.6**
LIT	**Litokhoron**	**0.90**	**139**	*e*PN	**Pg**	**15 08 40.7**	**0.0**
LIT	**Litokhoron**	**0.90**	**139**	P	**Pg**	**15 08 40.4**	**-0.3**
LIT	**Litokhoron**	**0.90**	**139**	*e*Pn	**Pg**	**15 08 40.7**	**0.0**
LIT				S	**Sn**	**15 08 54.3**	**-0.6**
KNT	**Kendrikon**	**0.97**	**66**	P	**Pb**	**15 08 42.0**	**-0.3**
KNT				S	**Sn**	**15 08 56.7**	**-0.1**
KNT	**Kendrikon**	**0.97**	**66**	P	**Pb**	**15 08 42.0**	**-0.3**
KNT				S	**Sn**	**15 08 56.7**	**-0.1**
SKO	**Skopje**	**1.21**	**350**	*e*Pg	**Pg**	**15 08 46.2**	**-0.5**
SKO				*e*Lg	Lg	15 09 06.4	
	comp=N,26nm,0.3s						
SKO				*e*Lg	Lg	15 09 06.5	
	comp=E,19nm,0.5s						
SKO	**Skopje**	**1.21**	**350**	*e*Pg	**Pg**	**15 08 46.6**	**-0.1**
SKO				*e*Lg	Lg	15 09 01.9	
	comp=E,19nm,0.5s						
THL	**Klokotos Trika**	**1.23**	**169**	*e*PN	**Pg**	**15 08 47.1**	**0.0**
THL				*e*SN	**Sn**	**15 09 03.5**	**+0.4**
THL	**Klokotos Trika**	**1.23**	**169**	*e*Pn	**Pg**	**15 08 47.1**	**0.0**
THL				*e*Sn	**Sn**	**15 09 03.5**	**+0.4**
AGG	**Agios Georgios**	**1.82**	**165**	*e*PN	**Pn**	**15 08 55.5**	**+0.9**
AGG	**Agios Georgios**	**1.82**	**165**	*e*Pn	**Pn**	**15 08 55.5**	**+0.9**

*IDC **29** 15:10:32.1±1.3, 28°.62N×142°.52E, h0km, mb3.7/8, mb1 3.8/10, mb1mx3.6/27, mbtmp3.7/10, ML3.5/2, Error ellipse: s-maj=43.2km s-min=19.4km az=74.0*
*JMA **29** 15:10:33.4±0.1, 28°.77N×142°.61E, h35km, M3.9*

ISC 29 15:10:34.9±1.4, 28°.86N±0°.06×143°.0E±0°.2, h41km, n30, σ2°.906/39, mb3.7/7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.90**	**202**	P	**Pn**	**15 11 01.7**	**-3.1**
CBIJ				*e*S	**Sn**	**15 11 22.7**	**-4.8**
JHHJ	**Haha-jima-NKT**	**2.34**	**198**	*e*S	**Sn**	**15 11 33.9**	**-4.4**
JHCJ	**Hachijojimakas**	**5.01**	**328**	P	**Pn**	**15 11 48.0**	**+0.5**
JHCJ				*e*S	**Sn**	**15 12 43.3**	**-0.9**
JHJ2	**Mitsune**	**5.03**	**328**	P	**Pn**	**15 11 48.0**	**+0.1**
JHJ2				*e*S	**Sn**	**15 12 42.5**	**-2.3**
JHJ	**Hachijo jima 2**	**5.06**	**328**	Pn	**Pn**	**15 11 47.8**	**-0.4**
	2.7nm,0.3s,baz=318,slow=14,SNR=6.0						
JHJ				Sn	**Sn**	**15 12 42.1**	**-3.2**
	8.5nm,0.3s,baz=351,slow=16,SNR=3.6						
BSO1	**Boso 1**	**6.02**	**344**	P	**Pn**	**15 12 01.0**	**+0.1**
BSO1				*e*S	**Sn**	**15 13 06.9**	**-1.4**
BSO2	**Boso 2**	**6.17**	**343**	*e*S	**Sn**	**15 13 09.1**	**-3.2**
BSO3	**Boso 3**	**6.29**	**341**	P	**Pn**	**15 12 05.2**	**+0.4**
BSO3				*e*S	**Sn**	**15 13 15.0**	**-0.2**
BSO4	**Boso 4**	**6.51**	**340**	P	**Pn**	**15 12 08.9**	**+0.9**
BSO4				*e*S	**Sn**	**15 13 21.1**	**+0.2**
TATJ	**Tateyama 2**	**6.69**	**338**	P	Pn	15 12 13.0	+2.4
JYO	**Yokosk**	**6.94**	**337**	P	Pn	15 12 16.2	+2.2
JYO				*e*S	**Sn**	**15 13 32.9**	**+1.2**
JOD2	**Odawara 2**	**7.19**	**334**	P	**Pn**	**15 12 18.2**	**+0.8**
JOD2				*e*S	**Sn**	**15 13 34.8**	**-3.0**
JYN	**Shimob**	**7.61**	**331**	P	Pn	15 12 25.7	+2.4
JYN				*e*S	**Sn**	**15 13 48.2**	**-0.1**
JHU	**Hanno**	**7.64**	**337**	P	**Pn**	**15 12 23.6**	**0.0**
JHU				*e*S	**Sn**	**15 13 46.2**	**-2.7**
JYT	**Yasato**	**7.71**	**343**	*e*S	**Sn**	**15 13 51.3**	**+0.7**
JNY	**Yasuok**	**7.80**	**327**	P	Pn	15 12 28.8	+2.9
JRY	**Ryogami san**	**7.92**	**335**	P	**Pn**	**15 12 28.0**	**+0.5**
JRY				*e*S	**Sn**	**15 13 53.5**	**-2.4**
JHO	**Hitachi**	**7.99**	**346**	P	**Pn**	**15 12 27.3**	**-1.1**
JHO				*e*S	**Sn**	**15 13 52.2**	**-5.3**
JAO	**Obara**	**8.02**	**324**	P	**Pn**	**15 12 30.4**	**+1.5**
JAG	**Ashikaga**	**8.11**	**339**	P	**Pn**	**15 12 29.8**	**-0.2**
JAG				*e*S	**Sn**	**15 13 57.5**	**-2.9**
MJAR	**Matsushiro Arr**	**8.65**	**334**	Pn	**Pn**	**15 12 37.7**	**+0.2**
	1.0nm,0.3s,baz=150,slow=6.9,SNR=18						
MAT	**Matsushiro**	**8.65**	**334**	P	**Pn**	**15 12 37.6**	**+0.1**
MAT				S	**Sn**	**15 14 13.8**	**0.0**
MAT	**Matsushiro**	**8.65**	**334**	P	**Pn**	**15 12 38.4**	**+0.9**
SONM	**Songino Array**	**33.97**	**314**	P	**P**	**15 17 16.0**	**+1.5**
	0.3nm,0.3s,baz=116,slow=11,SNR=3.4						
ZALV	**Zalesovo Beam**	**48.64**	**318**	P	P	15 19 16.8	+2.2
	0.5nm,0.4s,baz=91,slow=7.5,SNR=4.3						
WRA	**Warramunga Arr**	**49.23**	**191**	P	**P**	**15 19 20.2**	**+0.8**
	1.1nm,0.8s,baz=10,slow=7.8,SNR=6.5						
MKAR	**Makanchi Array**	**49.92**	**308**	P	**P**	**15 19 25.5**	**+1.0**
	0.4nm,0.6s,baz=81,slow=9.3,SNR=4.9						
KURBB	**Kurchatov Arra**	**52.33**	**313**	P	**P**	**15 19 43.6**	**+1.2**
	1.2nm,0.6s,baz=91,slow=8.2,SNR=15						
ASAR	**Alice Springs**	**52.95**	**190**	P	**P**	**15 19 47.3**	**-0.1**
	0.2nm,0.8s,baz=11,slow=8.5,SNR=6.6						
YKA	**Yellowknife Ar**	**70.25**	**29**	P	P	15 21 49.7	+6.2
	0.2nm,0.6s,baz=292,slow=6.2,SNR=4.3						

*IDC **29** 15:10:50.6±8.2, 35°.78N×20°.65E, h0km, mb3.8/4, mb1 3.7/5, mb1mx3.4/27, mbtmp3.6/5, ML4.0/1, Error ellipse: s-maj=148.5km s-min=53.8km az=48.0*
*CSEM **29** 15:11:01.7±0.5, 36°.61N×21°.18E, h5km, ML3.3/7, Error ellipse: s-maj=9.0km s-min=5.4km az=21.0*
*ATH **29** 15:11:01.8, 36°.60N×21°.21E, h20km±2km, MD3.2/17*
*THE **29** 15:11:04.8, 36°.67N×21°.34E, h10km±1km, ML3.3/7, Error ellipse: s-maj=1.6km s-min=1.0km az=55.0*

ISC 29 15:11:01.2±1.6, 36°.60N±0°.05×21°.16E±0°.05, h15km±8km, n74, σ0°.976/105, mb3.7/4, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.55**	**58**	P	**Pb**	**15 11 13.0**	**+0.5**
PYL				S	**Sg**	**15 11 18.3**	**-1.2**
PYL	**PYLOS**	**0.55**	**58**	*e*PN	**Pb**	**15 11 13.0**	**+0.5**
PYL				*e*SN	**Sg**	**15 11 19.4**	**-0.1**
PYL	**PYLOS**	**0.55**	**58**	P	**Pb**	**15 11 13.0**	**+0.5**
PYL				S	**Sg**	**15 11 18.3**	**-1.2**
PYL				*e*Sn	**Sg**	**15 11 19.4**	**-0.1**
ITM	**Ithomi**	**0.84**	**47**	P	**Pg**	**15 11 17.6**	**+0.1**
ITM				S	**Sg**	**15 11 28.3**	**-0.4**
ITM	**Ithomi**	**0.84**	**47**	*e*PN	**Pg**	**15 11 17.7**	**+0.2**
ITM				*e*SN	**Sg**	**15 11 28.2**	**-0.4**
ITM	**Ithomi**	**0.84**	**47**	P	**Sg**	**15 11 17.6**	**+0.1**
ITM				S	**Sg**	**15 11 28.3**	**-0.4**
DYR	**Agios Nikonas**	**0.96**	**80**	P	**Pn**	**15 11 20.1**	**0.0**
DYR				S	**Sb**	**15 11 32.0**	**0.0**
DYR	**Agios Nikonas**	**0.96**	**80**	*e*PN	**Pn**	**15 11 20.2**	**+0.1**
DYR				*e*SN	**Sb**	**15 11 32.0**	**0.0**
DYR	**Agios Nikonas**	**0.96**	**80**	P	**Pn**	**15 11 20.1**	**0.0**
DYR				S	**Sb**	**15 11 32.0**	**0.0**
AMT	**Artemida-Makis**	**1.03**	**25**	P	**Pn**	**15 11 21.2**	**+0.2**
AMT				S	**Sn**	**15 11 35.6**	**+0.4**
AMT	**Artemida-Makis**	**1.03**	**25**	*e*PN	**Pn**	**15 11 21.2**	**+0.2**
AMT				*e*SN	**Sn**	**15 11 36.1**	**+0.9**
AMT	**Artemida-Makis**	**1.03**	**25**	P	**Pn**	**15 11 21.2**	**+0.2**
AMT				S	**Sn**	**15 11 35.6**	**+0.4**
AMT				*e*Sn	**Sn**	**15 11 36.1**	**+0.9**
VLX	**Vlachokerasia**	**1.24**	**52**	P	**Pb**	**15 11 24.8**	**+0.4**
VLX				S	**Sg**	**15 11 41.3**	**0.0**
VLX	**Vlachokerasia**	**1.24**	**52**	*e*PN	**Pb**	**15 11 24.7**	**+0.4**
VLX				*e*SN	**Sg**	**15 11 41.3**	**0.0**
VLX	**Vlachokerasia**	**1.24**	**52**	P	**Pb**	**15 11 24.8**	**+0.4**
VLX				S	**Sg**	**15 11 41.3**	**0.0**
VLI	**Veliai**	**1.44**	**85**	P	**Pb**	**15 11 28.0**	**+0.5**
VLI				S	**Sb**	**15 11 45.9**	**+0.2**
VLI	**Veliai**	**1.44**	**85**	*e*PN	**Pb**	**15 11 28.1**	**+0.5**
VLI				*e*SN	**Sg**	**15 11 48.6**	**+1.1**
VLI	**Veliai**	**1.44**	**85**	P	**Pb**	**15 11 28.0**	**+0.5**
VLI				S	**Sb**	**15 11 45.9**	**+0.2**
VLI				*e*Sn	**Sg**	**15 11 48.6**	**+1.1**
RLS	**Riolos of Patr**	**1.47**	**10**	P	**Pg**	**15 11 29.5**	**-0.1**
RLS	**Riolos of Patr**	**1.47**	**10**	*e*PN	**Pg**	**15 11 29.4**	**-0.1**
RLS	**Riolos of Patr**	**1.47**	**10**	*e*Pn	**Pg**	**15 11 29.4**	**-0.1**
KFL	**Anninata**	**1.53**	**349**	P	**Pg**	**15 11 30.7**	**+0.1**
KFL	**Anninata**	**1.53**	**349**	P	**Pg**	**15 11 30.7**	**+0.1**
KYTH	**Kithira**	**1.55**	**101**	P	**Pg**	**15 11 31.0**	**+0.1**
KYTH	**Kithira**	**1.55**	**101**	*e*PN	**Pg**	**15 11 30.8**	**-0.1**
KYTH	**Kithira**	**1.55**	**101**	*e*Pn	**Pg**	**15 11 30.8**	**-0.1**
GUR	**Goura**	**1.63**	**35**	P	**Pb**	**15 11 30.8**	**-0.2**
GUR				S	**Sb**	**15 11 51.1**	**-0.3**
GUR	**Goura**	**1.63**	**35**	*e*PN	**Pb**	**15 11 30.8**	**-0.2**
GUR				*e*SN	**Sg**	**15 11 53.7**	**-0.1**
GUR	**Goura**	**1.63**	**35**	P	**Pb**	**15 11 30.8**	**-0.2**
GUR				S	**Sb**	**15 11 51.1**	**-0.3**
GUR				*e*Sn	**Sg**	**15 11 53.7**	**-0.1**
VLS	**Valsamata**	**1.63**	**344**	*e*PN	**Pb**	**15 11 31.2**	**+0.2**
VLS				*e*SN	**Sg**	**15 11 54.2**	**+0.4**
VLS	**Valsamata**	**1.63**	**344**	*e*Pn	**Pb**	**15 11 31.2**	**+0.2**
VLS				*e*Sn	**Sg**	**15 11 54.2**	**+0.4**
KLV	**Kalavryta, Ach**	**1.64**	**29**	*e*PN	**Pb**	**15 11 31.1**	**0.0**
KLV				*e*SN	**Sg**	**15 11 53.3**	**-0.7**
KLV	**Kalavryta, Ach**	**1.64**	**29**	*e*Pn	**Pb**	**15 11 31.1**	**0.0**
KLV				*e*Sn	**Sg**	**15 11 53.3**	**-0.7**
LAKA	**Lakka**	**1.76**	**22**	P	**Pb**	**15 11 33.2**	**+0.1**
LAKA				S	**Sb**	**15 11 55.3**	**+0.3**
LAKA	**Lakka**	**1.76**	**22**	*e*PN	**Pb**	**15 11 33.2**	**+0.1**
LAKA	**Lakka**	**1.76**	**22**	P	**Pb**	**15 11 33.2**	**+0.1**
LAKA				S	**Sb**	**15 11 55.3**	**+0.3**
DID	**Didima**	**1.89**	**61**	P	**Pn**	**15 11 33.6**	**+0.7**
DID	**Didima**	**1.89**	**61**	*e*PB	**Pn**	**15 11 33.4**	**+0.5**
DID	**Didima**	**1.89**	**61**	P	**Pn**	**15 11 33.6**	**+0.7**
TRIZ	**Trizonia**	**1.90**	**22**	P	**Pb**	**15 11 35.6**	**0.0**
TRIZ	**Trizonia**	**1.90**	**22**	*e*PN	**Pb**	**15 11 35.6**	**0.0**
TRIZ	**Trizonia**	**1.90**	**22**	P	**Pb**	**15 11 35.6**	**0.0**
EFP	**Efpalio**	**1.91**	**18**	P	**Pb**	**15 11 36.0**	**+0.2**
EFP	**Efpalio**	**1.91**	**18**	*e*PN	**Pb**	**15 11 35.9**	**+0.2**
EFP	**Efpalio**	**1.91**	**18**	P	**Pb**	**15 11 36.0**	**+0.2**
KALE	**Kalithea**	**1.95**	**23**	P	**Pb**	**15 11 36.2**	**-0.2**
KALE				S	**Sb**	**15 12 00.1**	**-0.4**
KALE	**Kalithea**	**1.95**	**23**	*e*PN	**Pb**	**15 11 36.6**	**+0.2**
KALE	**Kalithea**	**1.95**	**23**	P	**Pb**	**15 11 36.2**	**-0.2**
KALE				S	**Sb**	**15 12 00.1**	**-0.4**
LTK	**Loutraki**	**2.02**	**45**	P	**Pn**	**15 11 35.8**	**+1.1**
LTK	**Loutraki**	**2.02**	**45**	*e*PB	**Pn**	**15 11 35.8**	**+1.1**
LTK	**Loutraki**	**2.02**	**45**	*e*Pb	**Pn**	**15 11 35.8**	**+1.1**
DSF	**Desfina**	**2.11**	**31**	P	**Pn**	**15 11 37.3**	**+1.4**
DSF	**Desfina**	**2.11**	**31**	P	**Pn**	**15 11 37.3**	**+1.4**
EVR	**Evrytania**	**2.37**	**12**	P	**Pn**	**15 11 41.3**	**+1.8**
EVR	**Evrytania**	**2.37**	**12**	P	**Pn**	**15 11 41.3**	**+1.8**
LKR	**Lokris**	**2.51**	**35**	P	**Pn**	**15 11 42.0**	**+0.6**
LKR	**Lokris**	**2.51**	**35**	*e*PN	**Pn**	**15 11 42.1**	**+0.6**
LKR	**Lokris**	**2.51**	**35**	P	**Pn**	**15 11 42.0**	**+0.6**
MAKR	**Makrakomi, Fth**	**2.53**	**17**	P	**Pb**	**15 11 44.8**	**-1.4**
MAKR	**Makrakomi, Fth**	**2.53**	**17**	P	**Pb**	**15 11 44.8**	**-1.4**
AGG	**Agios Georgios**	**2.59**	**21**	P	**Pn**	**15 11 44.8**	**+2.3**
AGG	**Agios Georgios**	**2.59**	**21**	P	**Pn**	**15 11 44.8**	**+2.3**
PTL	**Penteli**	**2.59**	**55**	*e*PN	**Pn**	**15 11 42.9**	**+0.3**
PTL	**Penteli**	**2.59**	**55**	*e*Pn	**Pn**	**15 11 42.9**	**+0.3**
VTS	**Vitosha**	**6.19**	**14**	*e*Pn	**Pn**	**15 12 34.1**	**+2.1**
BARS	**Barje**	**6.22**	**4**	*e*Pn	Pn	15 12 35.9	+3.5
GRUS	**Gruza**	**7.28**	**357**	*e*Pn	**Pn**	**15 12 47.0**	**0.0**
BBLS	**Lazići**	**7.38**	**350**	*e*Pn	**Pn**	**15 12 48.5**	**+0.2**
NVLJ	**Novalja**	**9.28**	**331**	Sn	Sn	15 14 51.0	-7.3
AKASG	**Malin Array Be**	**15.24**	**20**	Pn	**Pn**	**15 14 37.2**	**+1.6**
	0.6nm,0.3s,baz=206,slow=9.2,SNR=3.1						
FINES	**FINESS Array B**	**25.05**	**6**	P	**P**	**15 16 24.1**	**-0.4**
	0.9nm,0.5s,baz=178,slow=9.7,SNR=9.7						
KURBB	**Kurchatov Arra**	**42.77**	**52**	P	**P**	**15 18 56.4**	**-1.5**
	0.9nm,0.6s,baz=278,slow=8.6,SNR=12						
MKAR	**Makanchi Array**	**45.71**	**57**	P	**P**	**15 19 19.6**	**-1.9**
	0.3nm,0.4s,baz=272,slow=6.6,SNR=7.6						
ZALV	**Zalesovo Beam**	**46.38**	**47**	P	**P**	**15 19 24.9**	**-1.7**
	0.9nm,0.4s,baz=267,slow=8.9,SNR=6.7						

*DDA **29** 15:15:31.5, 37°.51N×35°.46E, h5km, MD2.8*
*ISK **29** 15:15:33.4, 37°.49N×35°.50E, h5km, MD3.0*
*ISCJB **29** 15:15:34.3±0.6, 37°.50N±0°.03×35°.47E±0°.04, h6km±6km, Error ellipse: s-maj=5.3km s-min=5.0km az=160.8*
*CSEM **29** 15:15:34.5±0.2, 37°.45N×35°.46E, h8km, MD3.0, Error ellipse: s-maj=5.6km s-min=5.2km az=53.0*

ISC 29 15:15:33.8±1.1, 37°.49N±0°.03×35°.43E±0°.03, h10km±10km, n32, σ0°.995/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.32**	**92**	*e*PG	**Pg**	**15 15 39.7**	**-0.4**
KOZT				*e*SG	**Sg**	**15 15 44.6**	**+0.2**
KOZT	**Kozan**	**0.32**	**92**	*e*Pg	**Pg**	**15 15 39.7**	**-0.4**
KOZT				*e*Sg	**Sg**	**15 15 44.6**	**+0.2**
CEYT	**Ceyhan**	**0.55**	**152**	*e*PG	**Pg**	**15 15 44.1**	**-0.3**
CEYT				*e*SG	**Sb**	**15 15 52.6**	**-0.7**
CEYT	**Ceyhan**	**0.55**	**152**	*e*Pg	**Pg**	**15 15 44.1**	**-0.3**
CEYT				*e*Sg	**Sb**	**15 15 52.7**	**-0.7**
GULE	**Gulek**	**0.56**	**248**	*i* P	**Pg**	**15 15 44.1**	**-0.6**
GULE				*i* S	**Sb**	**15 15 54.6**	**+0.6**
GULE	**Gulek**	**0.56**	**248**	*i* P	**Pg**	**15 15 44.1**	**-0.6**
GULE				*i* S	**Sb**	**15 15 54.6**	**+0.6**
YURE	**YUREGIR**	**0.69**	**166**	*i* P	**Pg**	**15 15 47.2**	**+0.2**
YURE				*i* S	**Sb**	**15 15 58.7**	**+1.3**
YURE	**YUREGIR**	**0.69**	**166**	*i* P	**Pg**	**15 15 47.2**	**+0.2**
YURE

comp=Z,2.0nm,0.4s,baz=341,slow=11,SNR=17
WRA S **S** **15 37 57.0 -1.5**
comp=Z,1.0nm,0.8s,baz=334,slow=18,SNR=3.7
ASAR Alice Springs 25.99 164 P **P** **15 34 25.9 +0.5**
comp=Z,0.8nm,0.4s,baz=349,slow=14,SNR=37
ASAR PcP **PcP** **15 37 52.9 -0.1**
comp=Z,0.2nm,0.4s,baz=355,slow=2.4,SNR=4.0
ASAR S **S** **15 38 51.7 -1.2**
comp=Z,0.4nm,0.8s,baz=350,slow=19,SNR=4.2
MKAR Makanchi Array 59.29 326 P **P** **15 38 51.8 -2.0**
comp=Z,0.3nm,0.3s,baz=118,slow=7.7,SNR=11

*ISK **29** 15:34:22.8, 38˚.44N ± 29˚.71E, h3km, MD3.0*
*CSEM **29** 15:34:23.3 ± 0.1, 38˚.44N ± 29˚.73E, h0km ± 1km, MD3.0, Error ellipse: s-maj=1.8km s-min=1.7km az=168.0*
*DDA **29** 15:34:23.2, 38˚.46N ± 0˚.02 × 29˚.72E, h7km, MD3.1*
ISC 29 15:34:23.2 ± 1.2, **38˚.46N** ± 0˚.02 × **29˚.73E** ± 0˚.02, **h2**km ± 10km, **n50**, σ 0 **92**/65, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KHAL	**Karahalli**	**0.21**	**244**	*i*	P	**Pg**	**15 34 27.6**	**+0.4**
KHAL				*i*	S	**Sg**	**15 34 30.4**	**+0.5**
KHAL	**Karahalli**	**0.21**	**244**	*i*	P	**Pg**	**15 34 27.6**	**+0.4**
KHAL				*i*	S	**Sg**	**15 34 30.4**	**+0.5**
KHL	**Karahalli**	**0.21**	**230**	*e*	PG	**Pg**	**15 34 27.4**	**+0.2**
KHL				*e*	SG	**Sg**	**15 34 30.7**	**+0.7**
KHL	**Karahalli**	**0.21**	**230**	*e*	Pg	**Pg**	**15 34 27.4**	**+0.2**
KHL				*e*	Sg	**Sg**	**15 34 30.7**	**+0.7**
SHUT	**Suhut-Afyon**	**0.65**	**82**	*e*	PG	**Pg**	**15 34 36.1**	**+0.4**
SHUT	**Suhut-Afyon**	**0.65**	**82**	*e*	Pg	**Pg**	**15 34 36.1**	**+0.4**
GDZ	**Gediz**	**0.66**	**343**	*i*	P	**Pg**	**15 34 36.2**	**+0.4**
GDZ				*i*	S	**Sb**	**15 34 45.7**	**-1.4**
GDZ	**Gediz**	**0.66**	**343**	*i*	P	**Pg**	**15 34 36.2**	**+0.4**
GDZ				*i*	S	**Sb**	**15 34 45.7**	**-1.4**
KULA	**Kula-Manisa**	**0.84**	**274**	*e*	PG	**Pg**	**15 34 39.4**	**+0.2**
KULA				*e*	SG	**Sb**	**15 34 51.2**	**-1.1**
KULA	**Kula-Manisa**	**0.84**	**274**	*e*	Pg	**Pg**	**15 34 39.4**	**+0.2**
KULA				*e*	Sg	**Sb**	**15 34 51.2**	**-1.1**
DENT	**Denizli**	**0.89**	**218**	*e*	PG	**Pg**	**15 34 40.0**	**-0.2**
DENT	**Denizli**	**0.89**	**218**	*e*	Pg	**Pg**	**15 34 40.1**	**-0.2**
ISP	**Isparta**	**0.89**	**135**	*e*	PG	**Pg**	**15 34 40.6**	**+0.3**
ISP	**Isparta**	**0.89**	**135**	*e*	Pg	**Pg**	**15 34 40.6**	**+0.3**
DNZL	**Cakiroluk**	**0.94**	**215**	*e*	P	**Pg**	**15 34 40.9**	**-0.3**
DNZL				*i*	S	**Sn**	**15 34 58.9**	**+1.2**
DNZL	**Cakiroluk**	**0.94**	**215**	*e*	P	**Pg**	**15 34 40.9**	**-0.3**
DEMI	**Demirci**	**0.98**	**307**	*i*	P	**Pb**	**15 34 42.4**	**-0.6**
DEMI				*i*	S	**Sb**	**15 34 55.3**	**-1.1**
DEMI	**Demirci**	**0.98**	**307**	*i*	P	**Pb**	**15 34 42.4**	**-0.6**
DEMI				*i*	S	**Sb**	**15 34 55.3**	**-1.1**
BOLV	**Bolvadin**	**0.99**	**75**	*i*	P	**Pg**	**15 34 42.2**	**0.0**
BOLV				*i*	S	**Sn**	**15 34 59.4**	**+0.5**
BOLV	**Bolvadin**	**0.99**	**75**	*i*	P	**Pg**	**15 34 42.2**	**0.0**
BOLV				*i*	S	**Sn**	**15 34 59.4**	**+0.5**
TVSB	**Tavsanli**	**1.01**	**348**	*e*	PG	**Pb**	**15 34 43.2**	**-0.2**
TVSB	**Tavsanli**	**1.01**	**348**	*e*	Pg	**Pb**	**15 34 43.2**	**-0.2**
GOLH	**Golhisar**	**1.23**	**186**	*e*	P	**Pb**	**15 34 46.4**	**-0.8**
GOLH				*e*	S	**Sn**	**15 35 08.4**	**+3.7**
GOLH	**Golhisar**	**1.23**	**186**	*e*	P	**Pb**	**15 34 46.4**	**-0.8**
ESKT	**Eskisehir**	**1.37**	**39**	*e*	PN	**Pg**	**15 34 50.5**	**+1.1**
ESKT	**Eskisehir**	**1.37**	**39**	*e*	Pn	**Pg**	**15 34 50.5**	**+1.1**
DURS	**Dursunbey**	**1.50**	**320**	*i*	P	**Pb**	**15 34 51.4**	**-0.4**
DURS				*i*	S	**Sg**	**15 35 12.1**	**+0.8**
DURS	**Dursunbey**	**1.50**	**320**	*i*	P	**Pb**	**15 34 51.4**	**-0.4**
AKS	**Akhisar**	**1.56**	**286**	*e*	PN	**Pb**	**15 34 52.1**	**-0.6**
AKS	**Akhisar**	**1.56**	**286**	*e*	Pn	**Pb**	**15 34 52.1**	**-0.6**
ORLT	**Orhaneli**	**1.71**	**338**	*e*	PN	**Pb**	**15 34 55.0**	**-0.4**
ORLT	**Orhaneli**	**1.71**	**338**	*e*	Pn	**Pb**	**15 34 55.0**	**-0.4**
SVRH	**Sivrihisar-ESK**	**1.71**	**54**	*e*	PN	**Pb**	**15 34 54.6**	**-0.8**
SVRH	**Sivrihisar-ESK**	**1.71**	**54**	*e*	Pn	**Pb**	**15 34 54.6**	**-0.8**
KIZT	**Kizilcal**	**1.73**	**75**	*e*	PN	**Pb**	**15 34 54.8**	**-1.0**
KIZT	**Kizilcal**	**1.73**	**75**	*e*	Pn	**Pb**	**15 34 54.8**	**-1.0**
CAVI	**Cavuskoy**	**1.74**	**3**	*e*	PN	**Pb**	**15 34 55.0**	**-0.9**
CAVI	**Cavuskoy**	**1.74**	**3**	*e*	Pn	**Pb**	**15 34 55.0**	**-0.9**
YER	**Yerkesik**	**1.75**	**221**	*e*	PN	**Pn**	**15 34 54.3**	**-0.3**
YER	**Yerkesik**	**1.75**	**221**	*e*	Pn	**Pn**	**15 34 54.3**	**-0.3**
BALB	**Balikesir**	**1.86**	**310**	*e*	PN	**Pb**	**15 34 56.6**	**-1.3**
BALB	**Balikesir**	**1.86**	**310**	*e*	Pn	**Pb**	**15 34 56.6**	**-1.3**
IZI	**Iznik**	**1.88**	**354**	*e*	PN	**Pb**	**15 34 57.8**	**-0.6**
IZI	**Iznik**	**1.88**	**354**	*e*	Pn	**Pb**	**15 34 57.8**	**-0.6**
GULT	**Gulveren**	**2.06**	**17**	*e*	PN	**Pb**	**15 34 59.7**	**-1.7**
GULT	**Gulveren**	**2.06**	**17**	*e*	Pn	**Pb**	**15 34 59.7**	**-1.7**
ARMT	**Armutlu**	**2.21**	**343**	*e*	PN	**Pb**	**15 35 02.4**	**-1.4**
ARMT	**Armutlu**	**2.21**	**343**	*e*	Pn	**Pb**	**15 35 02.4**	**-1.4**
GONE	**Gonen-Balikesi**	**2.24**	**316**	*e*	PN	**Pn**	**15 35 01.7**	**+0.4**
GONE	**Gonen-Balikesi**	**2.24**	**316**	*e*	Pn	**Pn**	**15 35 01.7**	**+0.4**

*BJI **29** 15:40:44.1, 17˚.02N × 146˚.41E, h252km, mB4.6/22, mb4.7/48*
*ISCJB **29** 15:40:51.7 ± 0.7, 17˚.49N ± 0˚.04 × 145˚.45E ± 0˚.03, h250km ± 7km, mb4.5/112, Error ellipse: s-maj=5.8km s-min=4.5km az=9.0*
*MOS **29** 15:40:51.4 ± 1.1, 17˚.54N × 145˚.43E, h254km, mb4.7/34, Error ellipse: s-maj=11.5km s-min=6.5km az=110.6*
*IDC **29** 15:40:52.3 ± 0.9, 17˚.51N × 145˚.53E, h251km ± 8km, mb4.2/28, mb1 4.3/30, mb1mx4.3/34, mbtmp4.2/30, Error ellipse: s-maj=12.9km s-min=6.1km az=87.0*
*NEIC **29** 15:40:53.4 ± 0.8, 17˚.48N × 145˚.46E, h258km ± 8km, mb4.6/51, Error ellipse: s-maj=6.2km s-min=5.6km az=107.0*
*DJA **29** 15:40:54.5 ± 3.5, 17˚.N ± 8˚ × 14˚.6E ± 1˚.8, h276km ± 39km, M4.9/12, mB5.2/2, mb4.9/12, Mw(mB)4.6/2*
ISC 29 15:40:52.9 ± 0.4, **17˚.43N** ± 0˚.04 × **145˚.58E** ± 0˚.06, **h257**km ± 2km, **h257**km:**pP-P**, **n357**, σ 1 **30**/422, **mb4.6**/112, **68C-62D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**3.88**	**190**	*e*	P	**Pn**	**15 41 55.6**	**-0.2**
GUMO					S	**S**	**15 42 43.8**	**-2.0**
GUMO	**Guam**	**3.88**	**190**		P	**Pn**	**15 41 55.5**	**-0.2**
	56nm,0.3s,baz=67,slow=1.3,SNR=79							
GUMO					S	**S**	**15 42 43.7**	**-2.0**
	185nm,0.3s,baz=163,slow=19,SNR=14							
JHJ	**Hachijo jima 2**	**16.47**	**343**		P	**P**	**15 44 27.5**	**-0.9**
	17nm,0.3s,baz=82,slow=19,SNR=13							
JOW	**Kunigami**	**18.54**	**303**	*e*	P	**P**	**15 44 52.3**	**+1.4**
	57nm,0.6s							
MJAR	**Matsushiro Arr**	**20.12**	**343**		P	**P**	**15 45 04.4**	**-3.4**
MJAR	**Matsushiro Arr**	**20.12**	**343**		P	**P**	**15 45 04.4**	**-3.4**
	3.0nm,0.3s,baz=164,slow=9.5,SNR=32							
MAJO	**Matsushiro**	**20.12**	**343**	*e*	P	**P**	**15 45 04.5**	**-3.3**
MAJO					pmax	pmax		
	comp=Z,6.0nm,0.4s							
MAJO	**Matsushiro**	**20.12**	**343**	*e*	P	**P**	**15 45 04.5**	**-3.3**
	comp=Z,6.4nm,0.4s							
MAT	**Matsushiro**	**20.12**	**343**		P	**P**	**15 45 04.3**	**-3.5**
JAY	**Jayapura**	**20.39**	**194**		P	**P**	**15 45 10.1**	**-0.8**
	comp=Z,35nm,1.0s							
JNU	**Nakatsue**	**20.47**	**322**	*e*	P	**P**	**15 45 12.0**	**+0.4**
JNU					S	S	15 48 34.9	-10
JNU	**Nakatsue**	**20.47**	**322**		P	**P**	**15 45 09.9**	**-1.7**
	comp=Z,29nm,0.8s,baz=126,slow=4.7,SNR=28							
JNU					S	S	15 48 34.9	-10
	comp=Z,4.2nm,0.8s,baz=149,slow=8.9,SNR=3.0							
SRPI	**Serui, Papua**	**21.27**	**207**		P	**P**	**15 45 21.8**	**+2.0**
	comp=Z,74nm,0.6s,comp=Z,4μm							
SWI	**Sorong**	**23.01**	**219**		P	**P**	**15 45 36.3**	**+0.6**
	comp=Z,46nm,0.6s,comp=Z,594nm							
YULB	**Yu-li**	**23.50**	**289**	*e*	P	**P**	**15 45 39.9**	**-0.2**
	comp=Z,13nm,0.5s							
TWG	**Pinlang**	**23.61**	**287**	*e*	P	**P**	**15 45 40.5**	**-0.7**
	comp=Z,240nm,0.8s							
YHNB	**Yeheng**	**23.68**	**292**	*e*	P	**P**	**15 45 42.4**	**+0.5**
	comp=Z,136nm,0.8s							
SSLB	**Suanglung**	**23.88**	**289**	*e*	P	**P**	**15 45 43.5**	**-0.1**
	comp=Z,92nm,0.9s							
TPUB	**Ta-pu**	**24.09**	**288**	*e*	P	**P**	**15 45 45.1**	**-0.4**
	comp=Z,39nm,0.8s							
FAKI	**Fak Fak**	**24.12**	**214**		P	**P**	**15 45 49.3**	**+3.5**
	comp=Z,58nm,1.0s							
ERM	**Erimo**	**24.59**	**356**	*e*	P	**P**	**15 45 52.7**	**+3.0**
ERM					pmax	pmax		
	comp=Z,27nm,1.2s							
KSRS	**Korea Array**	**25.28**	**326**		P	**P**	**15 45 56.6**	**+0.6**
	comp=Z,20nm,0.8s,baz=151,slow=9.3,SNR=60							
KSAR	**Wonju Array Be**	**25.29**	**326**		P	**P**	**15 45 56.6**	**+0.5**
PMG	**Port Moresby**	**26.71**	**177**	*e*	P	**P**	**15 46 08.8**	**-0.2**
	comp=Z,14nm,0.6s							
PMG	**Port Moresby**	**26.71**	**177**		P	**P**	**15 46 10.2**	**+1.1**
	comp=Z,13nm,0.4s,baz=356,slow=9.9,SNR=15							
ASAJ	**Asahikawa**	**26.72**	**355**		P	**P**	**15 46 09.2**	**+0.4**
ASAJ	**Asahikawa**	**26.72**	**355**		P	**P**	**15 46 09.2**	**+0.4**
	comp=Z,9.6nm,0.6s,baz=187,slow=9.9,SNR=20							
NJ2	**Nanjing**	**28.20**	**306**	*e*	P	**P**	**15 46 22.0**	**-0.1**
NJ2					pmax	pmax		
	comp=Z,20nm,0.8s							
USRK	**Ussuriysk Arra**	**29.04**	**340**		P	**P**	**15 46 28.8**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=138,slow=9.9,SNR=4.3							
WHN	**Wuhan**	**31.26**	**300**		P	**P**	**15 46 49.8**	**+0.8**
CN2	**Changchun**	**31.31**	**331**	*e*	P	**P**	**15 46 51.3**	**+2.0**
CN2				*es*	P	**sP**	**15 48 10.0**	**0.0**
CN2				*e*	S	**S**	**15 51 38.0**	**+1.2**
CN2					pmax	pmax		
	comp=Z,20nm,0.6s							
KLR	**Kul'dur**	**33.64**	**344**	*e*	P	P	15 47 03.8	-5.6
KLR				*e*			15 49 39.3	
KAPI	**Kappang**	**33.88**	**231**		P	**P**	**15 47 11.2**	**-0.7**
KAPI	**Kappang**	**33.88**	**231**		P	**P**	**15 47 11.2**	**-0.7**
	comp=Z,14nm,0.7s,baz=75,slow=12,SNR=6.1							
QIZ	**Qiongzhong**	**33.94**	**278**		P	**P**	**15 47 11.8**	**-0.7**
QIZ					S	**S**	**15 52 17.5**	**-0.6**
QIZ					pmax	pmax		
	comp=Z,26nm,1.3s							
BJI	**Beijing**	**33.98**	**318**		P	**P**	**15 47 13.0**	**+0.6**
BJI					pmax	pmax		
	comp=Z,17nm,0.9s							
BJI					pmax	pmax		
	comp=Z,86nm,4.7s							
SBUM	**Sibu**	**35.97**	**249**		P	**P**	**15 47 30.5**	**+0.7**
	comp=Z,15nm,0.6s							
XAN	**Xi'an**	**36.69**	**304**		P	**P**	**15 47 36.0**	**+0.3**
XAN					pmax	pmax		
	comp=Z,12nm,0.8s							
XAN					pmax	pmax		
	comp=Z,16nm,5.3s							
PEA0B	**Petropavlovsk-**	**36.85**	**12**	*e*	P	**P**	**15 47 37.4**	**+0.8**
PETK	**Petropavlovsk-**	**36.85**	**12**		P	**P**	**15 47 37.5**	**+0.9**
PETK							15 49 53.0	
PETK	**Petropavlovsk-**	**36.85**	**12**		P	**P**	**15 47 37.5**	**+0.9**
PETK					PcP	**PcP**	**15 49 53.0**	**+0.5**
PETK	**Petropavlovsk-**	**36.85**	**12**		P	**P**	**15 47 37.5**	**+0.9**
	comp=Z,3.8nm,0.8s,baz=164,slow=8.8,SNR=23							
PETK					PcP	**PcP**	**15 49 53.0**	**+0.5**
	comp=Z,2.5nm,0.9s,baz=202,slow=6.1,SNR=4.3							
GYA	**Guiyang**	**37.08**	**291**	*i*	P	**P**	**15 47 40.5**	**+1.4**
GYA					pP	**pP**	**15 48 32.0**	**+0.8**
GYA					sP	**sP**	**15 49 00.3**	**-0.4**
GYA					PP	**PnPn**	**15 49 13.3**	**-0.2**
GYA					PcP	**PcP**	**15 49 55.0**	**+1.1**
GYA					S	**S**	**15 53 06.8**	**+1.0**
GYA					ScP	**ScP**	**15 53 17.3**	**+1.1**
GYA					ScS	**ScS**	**15 57 23.3**	**-1.5**
GYA					pmax	pmax		
	comp=Z,30nm,0.9s							
CTA	**Charters Tower**	**37.29**	**179**		P	**P**	**15 47 41.6**	**+0.9**
CTA	**Charters Tower**	**37.29**	**179**		P	**P**	**15 47 41.6**	**+0.9**
	comp=Z,6.4nm,0.5s,baz=4.7,slow=10,SNR=20							
HHC	**Hu-ho-hao-te**	**37.41**	**316**	*e*	P	**P**	**15 47 43.5**	**+1.8**
HHC					sP	**sP**	**15 49 04.8**	**+1.4**
HHC					PP	**PnPn**	**15 49 19.3**	**+2.0**
HHC					S	**S**	**15 53 11.5**	**+1.0**
HHC					sS	**sS**	**15 54 44.0**	**+0.3**
HHC					ScS	**ScS**	**15 57 26.0**	**-0.1**
HHC					pmax	pmax		
	comp=Z,30nm,0.5s							
HHC					pmax	pmax		
	comp=Z,160nm,5.8s							
WRAB	**Tennant Creek**	**38.73**	**197**	*e*	P	**P**	**15 47 53.1**	**+0.4**
WRAB					pmax	pmax		
	comp=Z,41nm,0.6s							
WRAB	**Tennant Creek**	**38.73**	**197**	*e*	P	**P**	**15 47 53.1**	**+0.4**
	comp=Z,41nm,0.6s							
WRA	**Warramunga Arr**	**38.75**	**197**		P	**P**	**15 47 53.4**	**+0.5**
WRA					PcP	**PcP**	**15 49 59.6**	**+0.7**
WRA					S	**S**	**15 53 28.3**	**-2.3**
WRA	**Warramunga Arr**	**38.75**	**197**		P	**P**	**15 47 53.4**	**+0.5**
	comp=Z,20nm,0.3s,baz=20,slow=8.3,SNR=80							
WRA					PcP	**PcP**	**15 49 59.6**	**+0.7**
	comp=Z,1.2nm,0.4s,baz=17,slow=4.0,SNR=2.1							
WRA					S	**S**	**15 53 28.3**	**-2.3**
	comp=Z,1.6nm,1.1s,baz=24,slow=15,SNR=3.7							
FITZ	**Fitzroy Crossi**	**40.39**	**210**		P	**P**	**15 48 07.3**	**+0.9**
FITZ	**Fitzroy Crossi**	**40.39**	**210**		P	**P**	**15 48 07.3**	**+0.9**
	comp=Z,15nm,0.3s,baz=36,slow=11,SNR=23							
KMI	**Kunming**	**40.51**	**288**		P	**P**	**15 48 09.0**	**+1.3**
KMI					pP	**pP**	**15 49 01.0**	**+0.4**
KMI					sP	**sP**	**15 49 26.5**	**-3.3**
KMI					pmax	pmax		
	comp=Z,14nm,0.7s							
LZH	**Lanzhou**	**41.27**	**305**	*e*	P	**P**	**15 48 15.5**	**+1.9**
LZH					pP	**pP**	**15 49 07.5**	**+0.8**
LZH					sP	**sP**	**15 49 35.8**	**-0.1**
LZH				*e*	S	**S**	**15 54 10.3**	**+2.2**
LZH					sS	**sS**	**15 55 43.0**	**+0.4**
LZH					pmax	pmax		
	comp=Z,63nm,1.1s							
LZH					pmax	pmax		
	comp=Z,200nm,5.4s							
CHBT	**CHBT**	**41.95**	**270**		P	**P**	**15 48 21.4**	**+2.2**
	comp=Z,21nm,0.5s							
AS31	**Alice Springs**	**42.41**	**196**	*e*	P	**P**	**15 48 23.1**	**+0.4**
ASAR	**Alice Springs**	**42.41**	**196**		P	**P**	**15 48 23.4**	**+0.6**
ASAR					PcP	**PcP**	**15 50 11.2**	**+0.4**
ASAR					ScP	**ScP**	**15 53 35.9**	**-0.9**
ASAR					S	**S**	**15 54 23.7**	**-1.0**
ASAR	**Alice Springs**	**42.41**	**196**		P	**P**	**15 48 23.4**	**+0.6**
	comp=Z,14nm,0.4s,baz=17,slow=7.0,SNR=229							
ASAR					PcP	**PcP**	**15 50 11.2**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=29,slow=4.2,SNR=2.5							
ASAR					ScP	**ScP**	**15 53 35.9**	**-0.9**
	comp=Z,0.8nm,0.9s,baz=24,slow=3.4,SNR=4.3							
ASAR					S	**S**	**15 54 23.7**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=20,slow=20,SNR=4.2							
ULN	**Ulaanbaatar**	**43.70**	**323**	*e*	P	**P**	**15 48 32.2**	**-0.7**
	comp=Z,11nm,1.0s							
ULN				*e*	PcP	**PcP**	**15 50 14.3**	**-0.7**
ULN	**Ulaanbaatar**	**43.70**	**323**		P	**P**	**15 48 33.7**	**+0.8**
	comp=Z,13nm,1.1s							
SONM	**Songino Array**	**44.06**	**322**		P	**P**	**15 48 35.5**	**-0.2**
SONM					PcP	**PcP**	**15 50 16.1**	**-0.1**
SONM					ScP	**ScP**	**15 53 41.2**	**-2.1**
SONM	**Songino Array**	**44.06**	**322**		P	**P**	**15 48 35.6**	**-0.2**
	comp=Z,4.8nm,0.7s,baz=128,slow=6.7,SNR=25							
SONM					PcP	**PcP**	**15 50 16.1**	**-0.1**
	comp=Z,3.1nm,0.9s,baz=103,slow=2.4,SNR=5.3							
SONM					ScP	**ScP**	**15 53 41.2**	**-2.1**
	comp=Z,0.4nm,0.4s,baz=104,slow=4.6,SNR=2.4							
CHTO	**Chiang Mai**	**44.24**	**279**	*e*	P	**P**	**15 48 37.8**	**+0.3**
CHTO					pmax	pmax		
	comp=Z,9.0nm,0.8s							
CHTO	**Chiang Mai**	**44.24**	**279**	*e*	P	**P**	**15 48 37.8**	**+0.3**
	comp=Z,8.9nm,0.8s							
CHTO	**Chiang Mai**	**44.24**	**279**		P	**P**	**15 48 38.2**	**+0.7**
	comp=Z,15nm,0.8s							
DZM	**Mont Dzumac**	**44.26**	**152**	*e*	P	**P**	**15 48 39.1**	**+1.6**
CM31	**Chiang Mai Arr**	**44.28**	**279**	*e*	P	**P**	**15 48 39.1**	**+1.4**
	comp=Z,16nm,0.6s							
CMAR	**Chiang Mai Arr**	**44.28**	**279**		P	**P**	**15 48 38.9**	**+1.1**
CMAR					PcP	**PcP**	**15 50 18.6**	**+1.2**
CMAR	**Chiang Mai Arr**	**44.28**	**279**		P	**P**	**15 48 38.9**	**+1.1**
	comp=Z,15nm,0.6s,baz=72,slow=6.7,SNR=165							
CMAR					PcP	**PcP**	**15 50 18.6**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=63,slow=2.6,SNR=5.0							
GTA	**Gaotai**	**45.23**	**309**	*e*	P	**P**	**15 48 45.8**	**+0.7**
GTA					pP	**pP**	**15 49 37.3**	**-1.9**
GTA					sP	**sP**	**15 50 04.0**	**-4.2**
GTA					PcP	**PcP**	**15 50 21.3**	**+0.8**
GTA					PP	**PP**	**15 50 37.3**	**+1.3**
GTA					ScP	**ScP**	**15 53 48.0**	**-0.3**
GTA					pmax	pmax		
	comp=Z,12nm,0.6s							
YAK	**Yakutsk**	**45.94**	**350**	*de*	P	**P**	**15 48 48.5**	**-1.5**
YAK				*e*			15 50 21.0	
YAK				*e*			15 50 37.8	
YAK				*e*	S	S	15 55 30.8	+16
YAK					pmax	pmax		
	comp=E,6.0nm,0.9s							
YAK					pmax	pmax		
	comp=N,14nm,1.0s							
YAK					pmax	pmax		
	comp=Z,61nm,0.9s							
YAK					pmax	pmax		
	comp=Z,40nm,2.8s							
YAK					pmax	pmax		
	comp=E,34nm,3.5s							
YAK					pmax	pmax		
	comp=N,9.0nm,2.1s							
YAK					smax	smax		
	comp=N,52nm,3.8s							
MBWA	**Marble Bar**	**45.97**	**214**	*e*	P	**P**	**15 48 51.1**	**+0.3**
	comp=N,20nm,0.8s							
ZAK	**Zakamensk**	**47.09**	**324**	*e*	P	**P**	**15 48 58.4**	**-1.0**
ZAK					pmax	pmax		
	comp=Z,8.0nm,1.0s							
STKA	**Stephens Creek**	**49.17**	**184**	*e*	P	**P**	**15 49 15.3**	**+0.1**
	comp=Z,1.7nm,0.5s							
STKA	**Stephens Creek**	**49.17**	**184**		P	**P**	**15 49 15.5**	**+0.3**
	comp=Z,8.4nm,0.5s,baz=10,slow=6.9,SNR=54							
UNV	**Unalaska Valle**	**51.76**	**34**	*e*	P	**P**	**15 49 34.7**	**+0.4**
	comp=Z,15nm,0.6s							
BILL	**Bilibino**	**52.28**	**10**	*i*	P	**P**	**15 49 37.8**	**-0.1**
BILL				*e**	PP	**pP**	**15 50 33.8**	**+0.2**
BILL				*e*			15 51 36.5	
BILL				*e*	S	**S**	**15 56 42.0**	**-0.4**
BILL					pmax	pmax		
	comp=Z,24nm,1.2s							
TAPN	**Taplejung**	**54.01**	**291**	*e*	P	**P**	**15 49 52.3**	**+0.8**
	comp=Z,71nm,0.7s							
ODAN	**Odare**	**54.31**	**291**	*e*	P	**P**	**15 49 54.3**	**+0.7**
	comp=Z,41nm,0.3s							
RAMN	**Ramite**	**55.01**	**291**	*e*	P	**P**	**15 49 59.2**	**+0.6**
	comp=Z,41nm,0.4s							
WMQ	**Urumqi**	**55.05**	**312**		P	**P**	**15 49 59.0**	**+0.6**
WMQ					pP	**pP**	**15 50 55.0**	**+0.3**
WMQ					sP	**sP**	**15 51 23.0**	**-0.1**
WMQ					PP	**PP**	**15 52 07.0**	**+2.5**
WMQ					ScP	**ScP**	**15 54 30.0**	**-0.3**
WMQ					S	**S**	**15 57 20.0**	**-0.5**
WMQ					sS	**sS**	**15 58 59.0**	**-0.8**
WMQ					ScS	**ScS**	**15 59 19.0**	**-2.0**
WMQ					pmax	pmax		
	comp=Z,19nm,0.9s							
WMQ					pmax	pmax		
	comp=Z,130nm,5.0s							
WMQ					LR	LR		
	comp=N,87nm,18.0s							
WMQ					LR	LR		
	comp=E,67nm,18.0s							
WMQ					LR	LR		
	comp=Z,61nm,18.0s							
GUN	**Gumba**	**55.60**	**292**	*e*	P	**P**	**15 50 03.9**	**+0.9**
	comp=Z,169nm,0.6s							
PKI	**Pulchoki**	**56.04**	**292**	*e*	P	**P**	**15 50 06.4**	**+0.4**
	comp=Z,158nm,0.4s							
PKIN	**Phulchoki**	**56.05**	**292**	*e*	P	**P**	**15 50 06.2**	**+0.2**
	comp=Z,59nm,0.4s							
KKN	**Kakani**	**56.14**	**292**	*e*	P	**P**	**15 50 07.1**	**+0.5**
	comp=Z,87nm,0.6s							
DMN	**Daman**	**56.30**	**292**	*e*	P	**P**	**15 50 08.5**	**+0.7**
	comp=Z,180nm,0.4s							
NWAO	**Narrogin (SRO)**	**56.94**	**208**		P	**P**	**15 50 12.3**	**+0.6**
NWAO	**Narrogin (SRO)**	**56.94**	**208**		P	**P**	**15 50 12.3**	**+0.6**
	comp=Z,39nm,0.7s,baz=39,slow=8.1,SNR=30							
TNA	**Tin City**	**57.03**	**21**	*e*	P	**P**	**15 50 12.2**	**+0.3**
	comp=Z,20nm,1.2s							
DANN	**Dangsing**	**57.45**	**293**	*e*	P	**P**	**15 50 16.8**	**+0.9**
	comp=Z,409nm,0.5s							
KOLN	**Koldanda**	**57.63**	**292**	*e*	P	**P**	**15 50 17.5**	**+0.5**
	comp=Z,71nm,0.5s							
PYUN	**Piuthan**	**58.14**	**293**	*e*	P	**P**	**15 50 21.0**	**+0.4**
	comp=Z,114nm,0.6s							
ZAA0	**Zalesovo Array**	**58.95**	**323**	*e*	P	**P**	**15 50 24.1**	**-1.2**
ZALV	**Zalesovo Beam**	**58.95**	**323**		P	**P**	**15 50 23.9**	**-1.5**
ZALV	**Zalesovo Beam**	**58.95**	**323**		P	**P**	**15 50 23.9**	**-1.5**
ZALV	**Zalesovo Beam**	**58.95**	**323**		P	**P**	**15 50 23.9**	**-1.5**
	comp=Z,6.2nm,0.6s,baz=107,slow=6.5,

KK31	Karatay Array	67.49	310	*i*	P		P	15 51 21.4	-0.1
KK31					pmax		pmax		
	comp=Z,15nm,0.6s								
KKAR	Karatay Array	67.49	310	*e*	P		P	15 51 21.2	-0.3
KKAR					pmax		pmax		
	comp=Z,14nm,0.6s								
KKAR	Karatay Array	67.49	310	*e*	P		P	15 51 21.2	-0.3
	comp=Z,14nm,0.6s								
POO	Poona	67.79	283	*ex*			P	15 51 20.0	-3.8
KBL	Kabul	69.42	301	*e*	P		P	15 51 33.7	-0.1
KBL					pmax		pmax		
	comp=Z,23nm,1.0s								
KBL	Kabul	69.42	301	*e*	P		P	15 51 33.7	-0.1
	comp=Z,23nm,1.0s								
SKAG	Skagway	69.62	32	*e*	P		P	15 51 35.5	+1.2
	comp=Z,13nm,0.9s								
DLBC	Dease Lake	72.41	33	*e*	P		P	15 51 52.6	+1.5
SVE	Sverdlovsk	72.84	325	⇓	*e*	P	P	15 51 49.3	-4.3
SVE					pmax		pmax		
	comp=Z,14nm,0.8s								
ARU	Arti	74.03	325	*d*	*i*	P	P	15 52 00.0	-0.5
ARU								15 54 46.6	
ARU					S		S	16 01 08.6	-2.7
ARU					pmax		pmax		
	comp=Z,16nm,0.6s								
AB31	Akbulak array	74.19	317	*i*	P		P	15 52 00.5	-1.0
AB31					pmax		pmax		
	comp=Z,8.0nm,0.5s								
ABKAR	Akbulak array	74.19	317	*e*	P		P	15 52 00.5	-1.1
	comp=Z,15nm,0.6s								
AKTO	Aktyubinsk	75.23	319	*i*	P		P	15 52 05.7	-1.8
AKTO					pmax		pmax		
	comp=Z,1.0nm,0.6s								
OSR	Olympics--Salm	77.66	44		P		P	15 52 23.6	+2.3
NLWA	Neilton Lookou	77.75	44	*e*	P		P	15 52 23.4	+1.7
	comp=Z,26nm,1.0s								
MPOR	Mary's Peak	78.60	47		P		P	15 52 28.6	+2.0
FL2	Flat Top 2	79.03	45		P		P	15 52 30.9	+2.1
TDL	Tradedollar La	79.09	45		P		P	15 52 31.1	+2.0
YKW3	Yellowknife Ar	79.13	28	*e*	P		P	15 52 27.9	-1.0
	comp=Z,0.1nm,0.6s								
YKA	Yellowknife Ar	79.16	28		P		P	15 52 28.8	-0.2
YKA	Yellowknife Ar	79.16	28		P		P	15 52 28.8	-0.2
	comp=Z,3.8nm,0.4s,baz=288,slow=5.1,SNR=45								
LON	Longmire	79.27	44	*e*	P		P	15 52 30.8	+0.8
LON					pmax		pmax		
	comp=Z,3.0nm,0.7s								
LON	Longmire	79.27	44	*e*	P		P	15 52 30.8	+0.8
	comp=Z,3.3nm,0.7s								
KHMM	Horse Mountain	79.32	50	*e*	P		P	15 52 32.7	+2.2
	comp=Z,6.3nm,0.7s								
VLL	Laurance Lake	79.67	46		P		P	15 52 34.1	+1.8
KCPM	Cahto Peak	79.71	52	*e*	P		P	15 52 34.2	+1.6
	comp=Z,6.5nm,0.8s								
YBH	Yreka Blue Hor	79.86	49	*e*	P		P	15 52 34.6	+1.3
	comp=Z,9.5nm,1.0s								
TBM	Table Mountain	79.97	44		P		P	15 52 35.2	+1.4
RES	Resolute Bay	80.68	14	*e*	P		P	15 52 36.6	-0.2
	comp=Z,9.2nm,0.8s								
LBCM	Butte Creek Ri	81.08	50		P		P	15 52 41.4	+1.5
MOD	Modoc	81.55	49	*e*	P		P	15 52 42.2	-0.2
	comp=Z,39nm,1.3s								
NEW	Newport	81.92	42	⇓	P		P	15 52 44.8	+0.7
	baz=82								
BEKR	Beckworth	82.07	51	*e*	P		P	15 52 45.9	+0.8
	comp=Z,3.3nm,0.6s								
CMB	Columbia Colle	82.55	53	*e*	P		P	15 52 48.7	+1.2
CMB					pmax		pmax		
	comp=Z,8.0nm,0.9s								
CMB	Columbia Colle	82.55	53	*e*	P		P	15 52 48.7	+1.2
	comp=Z,8.0nm,0.9s								
C11A	Tepee Creek (N	82.61	42	⇓	P		P	15 52 48.6	+1.0
	baz=82								
BMO	Blue Mountains	82.81	45	*e*	P		P	15 52 48.9	+0.2
BMO					pmax		pmax		
	comp=Z,3.0nm,0.5s								
BMO	Blue Mountains	82.81	45	*e*	P		P	15 52 48.9	+0.2
	comp=Z,3.0nm,0.5s								
KEV	Kevo	83.10	342	*e*	P		P	15 52 47.4	-2.1
KEV					pmax		pmax		
	comp=Z,3.0nm,0.5s								
KEV	Kevo	83.10	342	*e*	p		P	15 52 47.4	-2.1
	comp=Z,2.5nm,0.5s								
D12A	Red Ives Fores	83.43	43	⇑	P		P	15 52 52.1	+0.2
	baz=83								
BSMT	Bassoo Peak	83.54	42	*e*	P		P	15 52 53.2	+0.6
	comp=Z,5.9nm,0.7s								
B13A	Whitefish	83.58	41	⇑	P		P	15 52 53.3	+0.8
	baz=84								
ARCES	ARCESS Array B	83.66	342		P		P	15 52 51.1	-1.4
ARCES	ARCESS Array B	83.66	342		P		P	15 52 51.1	-1.4
	comp=Z,7.1nm,0.8s,baz=52,slow=5.1,SNR=34								
ARE0	ARCESS Array S	83.66	342	*e*	P		P	15 52 51.1	-1.3
C13A	Hot Springs	83.73	42	⇑	P		P	15 52 53.9	+0.5
	baz=84								
BLMT	Blacktail Moun	83.76	42	*e*	P		P	15 52 54.7	+1.0
	comp=Z,6.4nm,0.5s								
F12A	Elk City	83.91	44	⇑	P		P	15 52 54.4	+0.1
	baz=84,SNR=10								
D13A	Huson	84.00	43	⇓	P		P	15 52 54.7	-0.1
	baz=84,SNR=6.2								
NVAR	Mina Array Bea	84.01	52		P		P	15 52 56.4	+1.2
NVAR	Mina Array Bea	84.01	52		P		P	15 52 56.4	+1.2
	comp=Z,5.0nm,0.6s,baz=269,slow=5.9,SNR=40								
A14A	Double T Ranch	84.03	41	⇓	P		P	15 52 55.9	+1.0
	baz=84								
NV11	Mina Array Sit	84.12	52	*e*	P		P	15 52 56.5	+0.9
MFID	Camas Ranch	84.26	46	*e*	P		P	15 52 57.1	+0.9
	comp=Z,12nm,1.0s								
MFID	Camas Ranch	84.26	46	⇑	P		P	15 52 57.1	+0.9
	baz=84,SNR=6.7								
B14A	Marquette Ranc	84.33	41	⇓	P		P	15 52 57.3	+0.9
	baz=84,SNR=9.7								
E13A	Victor	84.39	43	⇑	P		P	15 52 56.8	+0.1
	baz=84								
A15A	Johnson Ranch,	84.46	40	⇑	P		P	15 52 57.3	+0.3
	baz=84								
F13A	Darby	84.51	44	⇓	P		P	15 52 57.4	0.0
	baz=84,SNR=12								
H12A	Diamond D Ranc	84.56	45	⇑	P		P	15 52 58.1	+0.4
	baz=84								
SLMT	Seeley Lake	84.57	42	*e*	P		P	15 52 57.2	-0.5
	comp=Z,7.2nm,1.0s								
D14A	Greenough	84.62	42	⇑	P		P	15 52 57.2	-0.7
	baz=84								
B15A	Bradely Ranch,	84.80	41	⇓	P		P	15 52 58.9	+0.2
	baz=85,SNR=11								
G13A	Cobalt	84.81	44	⇓	P		P	15 52 59.3	+0.4
	baz=85,SNR=28								
CHMT	Chamberlain Mo	84.84	42	*e*	P		P	15 52 59.1	0.0
	comp=Z,2.1nm,0.6s								
E14A	Clinton	84.85	43	⇓	P		P	15 52 58.6	-0.5
	baz=85								
C15A	Salmond Ranch,	84.95	42	⇓	P		P	15 52 60.0	+0.4
	baz=85								
H13A	Challis	84.97	45	⇑	P		P	15 53 00.5	+0.8
	baz=85,SNR=8.7								
VRHR	Novokhopersk	85.07	322	*e*	P		P	15 52 57.5	-2.3
VRHR					pmax		pmax		
	comp=Z,10.0nm,0.7s								
VRHR					pmax		pmax		
	comp=N,6.0nm,0.5s								
VRHR					pmax		pmax		
	comp=E,10.0nm,0.7s								
JOF	Joensuu	85.11	335	*e*	P		P	15 52 57.4	-2.4
JOF					pmax		pmax		
	comp=Z,11nm,0.7s								
JOF	Joensuu	85.11	335	*e*	p		P	15 52 57.4	-2.4
	comp=Z,11nm,0.7s								
HLID	Hailey	85.19	46	*e*	P		P	15 53 01.9	+1.0
	comp=Z,5.6nm,1.0s								
HLID	Hailey	85.19	46	⇓	P		P	15 53 01.7	+0.8
	baz=85,SNR=8.6								
D15A	Lincoln	85.26	42	⇑	P		P	15 53 01.4	+0.3
	baz=85								
G14A	Jackson	85.27	44	⇑	P		P	15 53 01.3	0.0
	baz=85								
I13A	Wildhorse Cree	85.28	46	⇓	P		P	15 53 02.2	+0.9
	baz=85,SNR=7.5								
B16A	M & M Farms, S	85.29	41	⇓	P		P	15 53 01.5	+0.4
	baz=85,SNR=5.1								
EDW2	Edwards Air Fo	85.32	55	⇑	P		P	15 53 02.3	+0.8
	baz=85								
MPMC	Manual Prospec	85.35	54	⇑	P		P	15 53 02.6	+0.7
	baz=85								
LRMC	Laurel Mountai	85.37	54	⇑	P		P	15 53 02.5	+0.6
	baz=85								
E15A	Deer Lodge	85.40	43	⇑	P		P	15 53 02.3	+0.5
	baz=85,SNR=14								
J13A	Cove Ranch, Pi	85.41	46	⇑	P		P	15 53 03.0	+1.1
	baz=85,SNR=6.4								
C16A	Fuhringer Ranc	85.49	41	⇑	P		P	15 53 02.3	+0.2
	baz=85,SNR=5.2								
ELK	Elko	85.54	49	*e*	P		P	15 53 02.9	+0.2
H14A	Leadore	85.55	45	⇑	P		P	15 53 03.3	+0.7
	baz=85,SNR=13								
F15A	Butte	85.70	43	⇑	P		P	15 53 03.8	+0.4
	baz=86,SNR=14								
I14A	Mackay	85.72	45	⇑	P		P	15 53 04.1	+0.6
	baz=86								
A17A	Triple J Farms	85.72	40	⇑	P		P	15 53 03.7	+0.5
	baz=86								
LRM	Limekiln Ridge	85.73	43	*e*	P		P	15 53 04.2	+0.6
	comp=Z,30nm,0.5s								
BFSC	Mount Baldy Ra	85.78	56	⇑	P		P	15 53 03.8	-0.1
	baz=86								
MCMT	McKenzie Canyo	85.82	44	*e*	P		P	15 53 03.5	-0.5
	comp=Z,0.9nm,0.6s								
G15A	Dillon	85.94	44	⇓	P		P	15 53 04.7	+0.2
	baz=86								
E16A	East Helena	85.99	42	⇓	P		P	15 53 05.3	+0.6
	baz=86								
R11A	Troy Canyon, C	86.06	51	⇓	P		P	15 53 05.7	+0.4
	baz=86								
GSC	Goldstone	86.11	54	⇑	P		P	15 53 06.2	+0.7
	baz=86								
A18A	Metzger Ranch,	86.26	40	⇑	P		P	15 53 06.2	+0.4
	baz=86								
OBN	Obninsk	86.27	327	⇓	*e*	P	P	15 53 04.7	-0.9
OBN					*e*	PP	pP	15 54 02.7	-4.6
OBN					*e*	S	SKSac	16 03 00.1	-6.7
OBN					pmax		pmax		
	comp=Z,7.0nm,1.2s								
F16A	Kennard Place,	86.29	43	⇑	P		P	15 53 06.9	+0.8
	baz=86								
BOZ	Bozeman (W)	86.33	43	⇑	P		P	15 53 07.3	+0.9
	baz=86								
G16A	Moss Hill, Enn	86.37	44	⇑	P		P	15 53 07.3	+0.7
	baz=86,SNR=7.3								
K14A	Jones Ranch, D	86.39	47	⇓	P		P	15 53 07.5	+0.8
	baz=86								
D17A	Six Diamond Ra	86.39	42	⇓	P		P	15 53 07.5	+0.9
	baz=86								
VSR	Storozhevoye	86.45	323	*e*	P		P	15 53 04.7	-1.9
VSR					pmax		pmax		
	comp=N,4.0nm,0.7s								
VSR					pmax		pmax		
	comp=E,7.0nm,0.7s								
VSR					pmax		pmax		
	comp=Z,10.0nm,0.7s								
VORD	Divnogorie	86.48	323	*e*	P		P	15 53 04.4	-2.3
VORD					pmax		pmax		
	comp=N,50nm,0.6s								
VORD					pmax		pmax		
	comp=E,50nm,0.6s								
VORD					pmax		pmax		
	comp=Z,10.0nm,0.6s								
B18A	Beardsley Farm	86.50	40	⇓	P		P	15 53 07.8	+0.8
	baz=86								
L14A	Malta	86.52	47	⇑	P		P	15 53 08.2	+0.8
	baz=86								
J15A	Blackfoot	86.60	46	⇑	P		P	15 53 08.6	+0.9
	baz=86,SNR=6.3								
ZEI	Tsey	86.61	314	*e*	P		P	15 53 05.5	-2.4
ZEI					pmax		pmax		
	comp=Z,6.0nm,0.6s								
TUQ	Turquoise Moun	86.75	54	⇑	P		P	15 53 08.8	+0.2
	baz=87								
K15A	Arbon	86.79	46	⇑	P		P	15 53 09.6	+1.0
	baz=87								
A19A	Klindworth Far	86.92	39	⇓	P		P	15 53 10.2	+1.2
	baz=87								
H16A	Russell Place,	86.93	44	⇓	P		P	15 53 10.3	+1.0
	baz=87								
KBZ	Khabaz	86.95	315		P		P	15 53 07.9	-1.2
KBZ	Khabaz	86.95	315		P		P	15 53 07.9	-1.2
KBZ	Khabaz	86.95	315		P		P	15 53 07.9	-1.2
	comp=Z,9.1nm,0.8s,baz=104,slow=3.7,SNR=16								
KIV	Kislovodsk	87.01	315	⇓	*e*	P	P	15 53 08.6	-1.0
KIV					pmax		pmax		
	comp=Z,5.0nm,1.0s								
E18A	Harlowton	87.11	42	⇓	P		P	15 53 10.8	+0.7
	baz=87								
L15A	Malad City	87.13	47	⇓	P		P	15 53 11.0	+0.7
	baz=87								
BELC	Belle Mtn. Jos	87.16	55	⇑	P		P	15 53 11.1	+0.5
	baz=87								
GMRC	Granite Mounta	87.17	55	⇑	P		P	15 53 11.6	+1.0
	baz=87								
C19A	Slack Wire Ran	87.20	41	⇑	P		P	15 53 11.5	+1.1
	baz=87								
J16A	Bone	87.20	45	⇓	P		P	15 53 11.5	+0.8
	baz=87								
K16A	Soda Springs	87.38	46	⇑	P		P	15 53 12.1	+0.6
	baz=87								
DUG	Dugway	87.46	49	*e*	P		P	15 53 12.9	+1.0
DUG					pmax		pmax		
	comp=Z,6.0nm,0.9s								
DUG	Dugway	87.46	49	*e*	P		P	15 53 12.9	+1.0
	comp=Z,6.4nm,0.9s								
DUG	Dugway	87.46	49	⇑	P		P	15 53 12.8	+1.0
	baz=87								
F18A	Big Timber	87.48	43	⇑	P		P	15 53 12.3	+0.4
	baz=87								
KAF	Kangasniemi	87.52	336	*e*	P		P	15 53 08.1	-3.4
KAF					pmax		pmax		
	comp=Z,5.0nm,0.7s								
KAF	Kangasniemi	87.52	336	*e*	p		P	15 53 08.1	-3.4
	comp=Z,5.2nm,0.7s								
BC3	Big Chuckawall	87.70	56	⇓	P		P	15 53 14.4	+1.3
	baz=88								
IRM	Iron Mountain	87.77	55	⇓	P		P	15 53 14.4	+1.0
	baz=88								
ARUT	Antelope Range	87.85	51	*e*	P		P	15 53 15.2	+1.4
ARUT					pmax		pmax		
	comp=Z,3.0nm,0.6s								
ARUT	Antelope Range	87.85	51	*e*	P		P	15 53 15.2	+1.4
	comp=Z,3.0nm,0.6s								
FINES	FINESS Array B	87.98	335		P		P	15 53 11.6	-2.0
FINES	FINESS Array B	87.98	335		P		P	15 53 11.6	-2.0
	comp=Z,6.9nm,0.6s,baz=70,slow=4.6,SNR=38								
D20A	Mauel Ranch,	88.03	41	⇓	P		P	15 53 14.9	+0.6
	baz=88								
RLMT	Red Lodge	88.08	43	⇓	P		P	15 53 16.1	+1.3
	baz=88								
FFC	Flin Flon	88.22	32	*e*	P		P	15 53 14.8	-0.1
FFC					pmax		pmax		
	comp=Z,8.0nm,1.0s								
FFC	Flin Flon	88.22	32	*e*	P		P	15 53 14.8	-0.1
	comp=Z,7.6nm,1.0s								
J18A	Kendall Valley	88.31	45	⇓	P		P	15 53 16.5	+0.6
	baz=88								
C21A	Desert Coulee	88.37	40	⇑	P		P	15 53 16.6	+0.7
	baz=88								
W13A	Hualapai Mount	88.44	54	⇓	P		P	15 53 17.2	+0.5
	baz=88								
MVU	Marysvale	88.50	50	*e*	P		P	15 53 18.3	+1.4
	comp=Z,2.2nm,0.8s								
PDMCI	Parker Dam,Lak	88.51	55	⇓	P		P	15 53 17.8	+1.1
	baz=88								
G20A	Bridger	88.72	43	⇑	P		P	15 53 17.7	0.0
	baz=89								
BW06	Boulder Array	88.79	45	⇑	P		P	15 53 18.3	+0.1
	baz=89								
PDAR	Pinedale Array	88.79	45		P		P	15 53 18.2	0.0
PDAR	Pinedale Array	88.79	45		P		P	15 53 18.2	0.0
	comp=Z,0.7nm,0.4s,baz=101,slow=1.8,SNR=15								
J19A	Crowheart	88.94	45	⇓	P		P	15 53 19.5	+0.7
	baz=89								
Q16A	Castle Valley	89.11	49	⇑	P		P	15 53 20.5	+0.8
	baz=89								
U15A	North Rim	89.18	52	⇑	P		P	15 53 20.5	+0.2
	baz=89								
D22A	Cohagen	89.22	40	⇓	P		P	15 53 20.5	+0.6
	baz=89								
K19A	Absolon Red Bu	89.25	45	⇓	P		P	15 53 20.8	+0.5
	baz=89								
SRU	San Rafael	89.50	49	*e*	P		P	15 53 22.2	+0.6
SRU					pmax		pmax		
	comp=Z,6.0nm,0.7s								
SRU	San Rafael	89.50	49	*e*	P		P	15 53 22.2	+0.6
	comp=Z,5.6nm,0.7s								
SRU	San Rafael	89.50	49	⇑	P		P	15 53 22.3	+0.6
	baz=89								
P18A	Preston Nutter	89.51	48	⇑	P		P	15 53 22.3	+0.6
	baz=89								
Y14A	Wickenburg	89.52	55	⇑	P		P	15 53 23.0	+1.4
	baz=90								
C23A	Lambert	89.55	40	⇑	P		P	15 53 21.8	+0.4
	baz=89								
J20A	Shoshoni	89.55	44	⇓	P		P	15 53 22.5	+0.9
	baz=89								
K20A	Yellowstone Ra	89.66	45	⇓	P		P	15 53 22.8	+0.6
	baz=90								
Z14A	Wintersburg	89.77	55	⇑	P		P	15 53 24.3	+1.6
	baz=90								
I21A	Big Trails, Te	89.89	44	⇑	P		P	15 53 23.6	+0.3
	baz=90								
WUAZ	Wupatki	90.21	53	⇑	P		P	15 53 25.7	+0.8
	baz=90								
M20A	Sweetwater, Wa	90.23	46	⇓	P		P	15 53 25.1	+0.2
	baz=90								
P19A	Cripple Cowboy	90.41	48	⇓	P		P	15 53 26.6	+0.8
	baz=90								
S18A	Hurst Farm, Bl	90.42	50	⇑	P		P	15 53 27.2	+1.3
	baz=90								
N20A	Spence Gulch,	90.44	47	⇓	P		P	15 53 26.5	+0.6
	baz=90								
L21A	Rawlins	90.60	45	⇓	P		P	15 53 27.5	+0.8
	baz=90								
O20A	White River Ci	90.73	47	⇓	P		P	15 53 28.0	+0.8
	baz=91								
M21A	Separation Pea	90.75	46	⇑	P		P	15 53 27.4	+0.1
	baz=91								
N21A	Black Mountain	90.99	47	⇑	P		P	15 53 29.8	+1.3
	baz=91								
Q20A	Ridgley Place,	91.17	49	⇑	P		P	15 53 30.1	+0.9
	baz=91								
NACGM	Naroch	91.29	330	*e*			P	15 53 25.0	-4.2
S20A	Disappointment	91.56	50	⇑	P		P	15 53 32.3	+1.0
	baz=92								
X18A	Snowflake	91.66	53	⇓	P		P	15 53 33.1	+1.4
	baz=92								
N22A	Wattenberg Ran	91.70	46	⇑	P		P	15 53 32.0	+0.1
	baz=92								
Q21A	Lamborn Mesa,	91.73	48	⇓	P		P	15 53 32.9	+1.0
	baz=92								
O22A	Kremmling	91.91	47	⇓	P		P	15 53 33.6	+0.7
	baz=92								
R21A	Cimarron	91.93	49	⇓	P		P	15 53 33.8	+0.9
	baz=92								
P22A	Eagle	92.00	47	⇓	P		P	15 53 33.9	+0.7
	baz=92								
SMCO	Snowmass	92.02	48	*e*	P		P	15 53 34.4	+1.0
	comp=Z,4.4nm,0.9s								
N23A	Red Feather La	92.02	46	⇑	P		P	15 53 34.3	+1.0
	baz=92								
Q22A	Crested Butte,	92.19	48	⇑	P		P	15 53 35.1	+0.9
	baz=92								
AKASG	Malin Array Be	92.28	325		P		P	15 53 31.5	-2.3
AKASG	Malin Array Be	92.28	325		P		P	15 53 31.5	-2.3
AKASG	Malin Array Be	92.28	325		P		P	15 53 31.5	-2.3
	comp=Z,0.7nm,0.5s,baz=56,slow=5.6,SNR=3.7								
V20A	Brimhall	92.29	51	⇓	P		P	15 53 35.6	+1.0
	baz=92								
O23A	Lake Granby, G	92.33	47	⇓	P		P	15 53 35.7	+1.0
	baz=92								
W20A	Ramah	92.53	52	⇓	P		P	15 53 36.5	+0.8
	baz=92								
U21A	Nageezi	92.64	51	⇑	P		P	15 53 37.2	+1.0
	baz=93								
S22A	4UR Ranch, Cre	92.71	49	⇑	P		P	15 53 38.0	+1.4
	baz=93								
ISCO	Idaho Springs	92.71	47	⇑	P		P	15 53 37.2	+0.6
	baz=93								
P23A	Jefferson	92.73	47	⇑	P		P	15 53 38.3	+1.6
	baz=93								
X20A	Quemado	92.76	53	⇓	P		P	15 53 38.5	+1.7
	baz=93								
Y20A	Horse Springs,	93.10	53	⇓	P		P	15 53 39.5	+1.1
	baz=93								
Z20A	Nine Sixteen R	93.25	54	⇑	P		P	15 53 40.4	+1.5
	baz=93								
NOA	NORSAR Array B	93.71	340		P		P	15 53 38.0	-2.3
NOA	NORSAR Array B	93.71	340		P		P	15 53 38.0	-2.3
	comp=Z,0.7nm,0.8s,baz=52,slow=4.3,SNR=4.7								
Z22A	Elephant Butte	94.44	53	⇑	P		P	15 53 45.4	+1.0
	baz=94								
T25A	Trinidad	94.71	49	⇑	P		P	15 53 45.6	0.0
	baz=95								
W24A	Lazy 6 Ranch,	94.81	51	⇑	P		P	15 53 47.1	+1.0
	baz=95								
R26A	Arlington	94.88	48	⇓	P		P	15 53 46.4	+0.1
	baz=95								
BRTR	Keskin Array B	94.91	314		P		P	15 53 44.6	-1.8
BRTR	Keskin Array B	94.91	314		P		P	15 53 44.6	-1.8
	comp=Z,2.1nm,0.7s,baz=70,slow=2.6,SNR=15								
U25A	Circle Dot Ran	95.03	50	⇓	P		P	15 53 46.7	-0.4
	baz=95								
V25A	Rancho No Teng	95.12	50	⇓	P		P	15 53 48.4	+0.8
	baz=95								
Z26A	Caprock	96.70	52	⇓	P		P	15 53 55.6	+0.9
	baz=97								
CRVS	Cervenica-Dubn	97.45	327	*e*	P		P	15 53 56.0	-1.5
CRVS	Cervenica-Dubn	97.45	327	*e*	P		P	15 53 56.0	-1.5
LSZ	Lusaka	120.12	262	*e*	PKPdf		PKPdf	15 59 14.8	+0.6
TSUM	Tsumeb	130.75	259		SKPbc		SKPbc	16 02 33.5	-0.6
TSUM	Tsumeb	130.75	259		SKPbc		SKPbc	16 02 33.5	-0.6
	comp=Z,7.7nm,0.9s,baz=79,slow=6.1,SNR=10								
TORD	Torodi Ar. Bea	133.15	308		PKP		PKPdf	15 59 38.4	-0.6
TORD					PP		PP	16 02 11.8	+3.8
TORD					SKPbc		SKPbc	16 02 39.6	-2.9
TORD	Torodi Ar. Bea	133.15	308		PKP		PKPdf	15 59 38.4	-0.6
	comp

PYL	PYLOS	0.50	1	ePG	Pg	15 45 54.1	-0.6
PYL				eSB	Sg	15 46 01.3	0.0
PYL	PYLOS	0.50	1	ePg	Pg	15 45 54.1	-0.6
PYL				eSb	Sg	15 46 01.3	0.0
PYL				S	Sg	15 46 01.7	+0.4
DYR	Agios Nikonas	0.61	53	P	Pg	15 45 56.4	-0.3
DYR				S	Sg	15 46 05.7	+1.0
DYR	Agios Nikonas	0.61	53	ePG	Pg	15 45 56.4	-0.3
DYR				eSB	Sb	15 46 06.7	-0.4
DYR	Agios Nikonas	0.61	53	P	Pg	15 45 56.4	-0.3
DYR				S	Sg	15 46 05.7	+1.0
DYR				eSb	Sb	15 46 06.7	-0.4
ITM	Ithomi	0.80	11	P	Pg	15 46 00.0	-0.4
ITM				S	Sg	15 46 11.5	+0.7
ITM	Ithomi	0.80	11	ePB	Pg	15 46 00.2	-0.2
ITM				eSB	Sg	15 46 11.3	+0.5
ITM	Ithomi	0.80	11	ePb	Sg	15 46 00.2	-0.2
ITM				S	Sg	15 46 11.5	+0.7
VLI	Veliai	1.02	71	P	Pg	15 46 04.7	0.0
VLI				S	Sb	15 46 19.0	0.0
VLI	Veliai	1.02	71	ePN	Pg	15 46 04.6	-0.1
VLI				eSB	Sb	15 46 18.7	-0.3
VLI	Veliai	1.02	71	P	Pg	15 46 04.7	0.0
VLI				eSb	Sb	15 46 18.7	-0.3
VLI				S	Sb	15 46 19.0	0.0
KYTH	Kithira	1.06	96	P	Pb	15 46 05.7	-0.1
KYTH	Kithira	1.06	96	ePB	Pn	15 46 06.3	-0.2
KYTH	Kithira	1.06	96	P	Pb	15 46 05.7	-0.1
KYTH	Kithira	1.06	96	ePb	Pn	15 46 06.3	-0.2
VLX	Vlachokerasia	1.11	28	P	Pg	15 46 05.3	-0.9
VLX				S	Sb	15 46 21.2	-0.3
VLX	Vlachokerasia	1.11	28	ePN	Pg	15 46 05.4	-0.8
VLX				eSB	Sb	15 46 22.3	+0.6
VLX	Vlachokerasia	1.11	28	P	Pg	15 46 05.3	-0.9
VLX				S	Sb	15 46 21.2	-0.3
VLX				eSb	Sb	15 46 22.1	+0.6
AMT	Artemida-Makis	1.14	359	P	Pg	15 46 06.4	-0.4
AMT				S	Sn	15 46 23.3	-0.4
AMT	Artemida-Makis	1.14	359	ePB	Pg	15 46 06.5	-0.4
AMT				eSB	Sb	15 46 22.3	0.0
AMT	Artemida-Makis	1.14	359	ePb	Pg	15 46 06.5	-0.4
AMT				eSb	Sb	15 46 22.3	0.0
AMT				S	Sn	15 46 23.3	-0.4
GUR	Goura	1.62	17	P	Pn	15 46 14.1	-0.2
GUR				S	Sn	15 46 36.1	+0.5
GUR	Goura	1.62	17	ePG	Pn	15 46 14.6	+0.3
GUR				eSB	Sg	15 46 37.9	+0.9
GUR	Goura	1.62	17	P	Pn	15 46 14.1	-0.2
GUR	Goura	1.62	17	ePg	Pn	15 46 14.6	+0.3
GUR				S	Sn	15 46 36.1	+0.5
GUR				eSb	Sg	15 46 37.9	+0.9
DID	Didima	1.64	47	P	Pb	15 46 15.3	-0.5
DID	Didima	1.64	47	ePG	Pb	15 46 15.4	-0.4
DID	Didima	1.64	47	P	Pb	15 46 15.3	-0.5
RLS	Riolos of Patr	1.68	353	P	Pn	15 46 14.8	-0.2
RLS	Riolos of Patr	1.68	353	ePB	Pg	15 46 16.8	-0.3
RLS	Riolos of Patr	1.68	353	P	Pn	15 46 14.8	-0.2
RLS	Riolos of Patr	1.68	353	ePb	Pg	15 46 16.8	-0.3
KLV	Kalavryta, Ach	1.68	11	ePG	Pn	15 46 15.3	+0.2
KLV				eSB	Sg	15 46 40.2	+1.1
KLV	Kalavryta, Ach	1.68	11	ePg	Pn	15 46 15.3	+0.2
KLV				eSb	Sg	15 46 40.2	+1.1
LAKA	Lakka	1.86	6	P	Pb	15 46 19.1	-0.3
LAKA	Lakka	1.86	6	ePN	Pb	15 46 19.3	-0.1
LAKA				eSN	Sg	15 46 45.0	+0.4
LAKA	Lakka	1.86	6	P	Pb	15 46 19.1	-0.3
LAKA				eSn	Sg	15 46 45.0	+0.4
LTK	Loutraki	1.91	31	P	Pb	15 46 19.5	-0.7
LTK	Loutraki	1.91	31	ePG	Pb	15 46 19.7	-0.5
LTK	Loutraki	1.91	31	P	Pb	15 46 19.5	-0.7
TRIZ	Trizonia	1.99	8	P	Pb	15 46 21.7	0.0
TRIZ	Trizonia	1.99	8	ePN	Pb	15 46 21.6	-0.1
TRIZ	Trizonia	1.99	8	ePn	Pb	15 46 21.6	-0.1
VLS	Valsamata	2.00	333	P	Pn	15 46 20.2	+0.7
VLS	Valsamata	2.00	333	P	Pn	15 46 20.2	+0.7
KALE	Kalithea	2.02	9	P	Pb	15 46 21.9	-0.4
KALE	Kalithea	2.02	9	ePN	Pb	15 46 21.9	-0.4
KALE	Kalithea	2.02	9	P	Pb	15 46 21.9	-0.4
EFP	Efpalio	2.04	4	P	Pb	15 46 21.9	-0.6
EFP	Efpalio	2.04	4	ePG	Pb	15 46 22.9	+0.4
EFP	Efpalio	2.04	4	P	Pb	15 46 21.9	-0.6
EFP	Efpalio	2.04	4	ePg	Pb	15 46 22.9	+0.4

*ISCJB **29** 15:53:37.1±0.9, 56°.8S±0°.1×23°.0W±0°.5, h10km, mb4.3/4, MS3.5/4, Error ellipse: s-maj=36.7km s-min=14.2km az=164.5*
*IDC **29** 15:53:37.3±0.8, 56°.85S×23°.17W, h0km, mb4.3/4, mb1 4.2/5, mb1mx3.9/18, mbtmp4.2/5, ML3.7/1, MS3.4/5, Ms1 3.4/5, ms1mx3.2/22, Error ellipse: s-maj=42.9km s-min=24.8km az=88.0*
ISC 29 15:53:38.6±0.8, 57°.0S±0°.1×22°.8W±0°.3, h10km, n16, σ2s01/13, mb4.3/4, MS3.5/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA2	Neumayer--Watz	15.49	161	eP	Pn	15 57 19.3	+2.6
SNAA	Sanae	16.96	158	eP	P	15 57 38.2	+0.6
SNAA	Sanae	16.96	158	P	P	15 57 38.0	+0.4
	0.2nm,0.3s,baz=310,slow=11,SNR=40						
SNAA				S	Sn	16 00 39.1	-4.9
	0.1nm,0.3s,baz=334,slow=15,SNR=6.2						
SNAA				LR	LR	16 02 28.1	
	comp=Z,24nm,20.6s,baz=358,slow=31						
PMSA	Palmer Station	21.19	231	LR	LR	16 04 27.5	
	comp=Z,202nm,20.6s,baz=273,slow=31						
QSPA	South Pole Qui	33.29	180	P	P	16 00 17.3	+1.3
	3.1nm,1.1s,baz=231,slow=5.0						
PLCA	Paso Flores	34.53	277	LR	LR	16 12 50.3	
	comp=Z,89nm,19.1s,baz=175,slow=34						
BOSA	Boshof	43.91	71	LR	LR	16 16 32.0	
	comp=Z,41nm,19.5s,baz=177,slow=31						
LPAZ	La Paz	52.90	301	P	P	16 02 54.3	-1.1
	2.1nm,0.5s,baz=164,slow=6.7,SNR=3.0						
DBIC	Dimbokro	65.09	20	P	P	16 04 17.3	-1.8
	0.9nm,0.4s,baz=175,slow=1.8,SNR=2.7						
TORD	Torodi Ar. Bea	72.75	25	P	P	16 05 08.4	+1.7
	6.0nm,0.7s,baz=199,slow=6.5,SNR=38						
KMBO	Kilima Mbogo	73.16	65	LR	LR	16 33 42.2	
	comp=Z,47nm,19.9s,baz=95,slow=33						
CMAR	Chiang Mai Arr	122.48	107	PKP	PKPdf	16 12 34.1	+0.1
	0.6nm,0.7s,baz=217,slow=3.9,SNR=5.5						
FINES	FINESS Array B	124.09	26	PKP	PKPdf	16 12 36.2	+0.6
	1.3nm,0.7s,baz=180,slow=0.4,SNR=4.7						
YKA	Yellowknife Ar	138.49	316	PKP	PKPdf	16 13 02.5	-0.3
	1.2nm,1.0s,baz=123,slow=2.2,SNR=9.7						
SONM	Songino Array	148.38	85	PKPbc	PKPbc	16 13 24.2	-0.2
	0.4nm,0.4s,baz=218,slow=2.0,SNR=5.8						
ILAR	Eielson Array	152.55	310	PKPbc	PKPbc	16 13 32.9	-0.6
	1.0nm,0.6s,baz=132,slow=2.7,SNR=17						

IDC 29 16:04:54.5±3.9, 11°.83S×115°.61E, h0km, mb3.1/2, mb1 3.3/3, mb1mx3.2/19, mbtmp3.1/3, ML2.8/1, Error ellipse: s-maj=220.6km s-min=26.9km az=45.0, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.73	116	P	P	16 09 25.0	-0.9
	0.0nm,0.3s,baz=291,slow=13,SNR=3.5						
ASAR	Alice Springs	21.00	127	P		16 09 40.4	+0.6
	0.4nm,0.6s,baz=303,slow=9.7,SNR=11						
MKAR	Makanchi Array	65.54	336	P	P	16 15 39.9	0.0
	0.2nm,0.6s,baz=149,slow=6.7,SNR=3.4						

*ISCJB **29** 16:10:32.6±0.7, 37°.87N±0°.04×21°.37E±0°.05, h26km±4km, Error ellipse: s-maj=7.2km s-min=5.9km az=23.5*
*CSEM **29** 16:10:32.4±0.2, 37°.86N×21°.38E, h18km±1km, ML2.1/6, Error ellipse: s-maj=4.7km s-min=4.4km az=131.0*
*ATH **29** 16:10:32.7, 37°.87N×21°.36E, h20km±1km, MD2.7/11*
*THE **29** 16:10:33.5, 37°.88N×21°.44E, h14km±1km, ML2.1/6, Error ellipse: s-maj=1.9km s-min=0.5km az=298.0*
ISC 29 16:10:32.5±1.2, 37°.87N±0°.03×21°.38E±0°.03, h19km±2km, n31, σ0s44/56, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	Riolos of Patr	0.20	19	P	Pg	16 10 37.9	+0.3
RLS				S	Sg	16 10 40.8	-0.3
RLS	Riolos of Patr	0.20	19	ePB	Pg	16 10 37.9	+0.3
RLS				eSB	Sg	16 10 41.9	+0.8
RLS	Riolos of Patr	0.20	19	P	Pg	16 10 37.9	+0.3
RLS				S	Sg	16 10 40.8	-0.3
AMT	Artemida-Makis	0.42	142	P	Pb	16 10 41.4	0.0
AMT				S	Sb	16 10 47.9	+0.4
AMT	Artemida-Makis	0.42	142	ePB	Pb	16 10 41.5	0.0
AMT				eSB	Sb	16 10 48.3	+0.8
AMT	Artemida-Makis	0.42	142	ePb	Pb	16 10 41.5	0.0
AMT				S	Sb	16 10 47.9	+0.4
AMT				eSb	Sb	16 10 48.3	+0.8
KFL	Anninata	0.53	298	P	Pn	16 10 44.4	-0.6
KFL	Anninata	0.53	298	P	Pn	16 10 44.4	-0.6
LAKA	Lakka	0.60	51	P	Pb	16 10 44.3	-0.1
LAKA				S	Sb	16 10 53.0	+0.5
LAKA	Lakka	0.60	51	ePB	Pb	16 10 44.5	+0.1
LAKA				eSN	Sb	16 10 53.3	+0.8
LAKA	Lakka	0.60	51	ePb	Pb	16 10 44.5	+0.1
LAKA				S	Sb	16 10 53.0	+0.5
LAKA				eSn	Sb	16 10 53.3	+0.8
KLV	Kalavryta, Ach	0.63	73	ePB	Pb	16 10 44.7	-0.2
KLV	Kalavryta, Ach	0.63	73	ePn	Pb	16 10 44.7	-0.2
EFP	Efpalio	0.70	36	P	Pb	16 10 46.0	0.0
EFP				S	Sg	16 10 55.9	+0.3
EFP	Efpalio	0.70	36	ePN	Pb	16 10 46.0	0.0
EFP				eSN	Sn	16 10 56.9	-0.7
EFP	Efpalio	0.70	36	P	Pb	16 10 46.0	0.0
EFP				S	Sg	16 10 55.9	+0.3
EFP				eSn	Sn	16 10 56.9	-0.7
VLS	Valsamata	0.70	297	ePN	Pb	16 10 46.2	+0.2
VLS	Valsamata	0.70	297	ePn	Pb	16 10 46.2	+0.2
TRIZ	Trizonia	0.74	47	P	Pg	16 10 47.0	-0.1
TRIZ				S	Sg	16 10 57.5	+0.6
TRIZ	Trizonia	0.74	47	ePN	Pg	16 10 46.9	-0.1
TRIZ				eSN	Sn	16 10 58.0	-0.7
TRIZ	Trizonia	0.74	47	P	Pg	16 10 47.0	-0.1
TRIZ				S	Sg	16 10 57.5	+0.6
TRIZ				eSn	Sn	16 10 58.0	-0.7
GUR	Goura	0.76	84	P	Pb	16 10 46.7	-0.5
GUR				S	Sb	16 10 57.7	+0.4
GUR	Goura	0.76	84	ePN	Pb	16 10 46.8	-0.5
GUR	Goura	0.76	84	P	Pb	16 10 46.7	-0.5
GUR				S	Sb	16 10 57.7	+0.4
KALE	Kalithea	0.80	49	P	Pb	16 10 48.0	+0.2
KALE				S	Sg	16 10 59.1	+0.4
KALE	Kalithea	0.80	49	ePB	Pb	16 10 47.8	0.0
KALE				eSN	Sn	16 10 59.9	-0.3
KALE	Kalithea	0.80	49	ePb	Pb	16 10 47.8	0.0
KALE				S	Sg	16 10 59.1	+0.4
KALE				eSn	Sn	16 10 59.9	-0.3
ITM	Ithomi	0.81	147	ePN	Pn	16 10 49.0	+0.1
ITM	Ithomi	0.81	147	ePn	Pn	16 10 49.0	+0.1
DID	Didima	1.52	103	ePN	Pg	16 11 01.6	-0.1
DID	Didima	1.52	103	ePn	Pg	16 11 01.6	-0.1

*ISCJB **29** 16:24:40.6±0.7, 29°.97S±0°.04×71°.44W±0°.07, h52km±6km, mb4.7/57, MS4.0/8, Error ellipse: s-maj=10.5km s-min=5.8km az=174.5*
*GUC **29** 16:24:40.2±0.5, 29°.98S×71°.45W, h47km±3km, ML4.8*
*IDC **29** 16:24:40.7±2.5, 30°.02S×71°.38W, h42km±22km, mb4.5/15, mb1 4.5/20, mb1mx4.4/23, mbtmp4.4/20, ML4.5/5, MS3.8/12, Ms1 3.7/12, ms1mx3.6/24, Error ellipse: s-maj=18.8km s-min=13.5km az=81.0*
*NEIC **29** 16:24:40.8±0.2, 30°.00S×71°.39W, mb4.8/42, Error ellipse: s-maj=5.8km s-min=3.9km az=72.0*
NEIC Felt [IV] at Coquimbo, La Serena and Vicuna; [II] at Ovalle. Also felt at Andacollo.
*BJI **29** 16:24:42.8, 30°.00S×71°.40W, h43km, mB4.9/3, Ms5.6/2, Ms7 5.2/2*
ISC 29 16:24:40.8±0.5, 29°.97S±0°.03×71°.52W±0°.06, h45km±4km, h45km:pP-P, n457, σ1s18/473, mb4.7/57, MS4.0/8, 170C-147D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLL	Tololo Astrono	0.65	108	eP	Pn	16 24 53.2	-0.7
TLL				i S	Sn	16 25 03.2	-0.2
TLL	Tololo Astrono	0.65	108	eP	Pn	16 24 53.2	-0.7
TLL				i S	Sn	16 25 03.2	-0.2
TLL				AML	AML	16 25 11.8	
	comp=E,83μm,0.6s						
LCO	Las Campanas	1.19	37	eP	Pn	16 25 01.5	+0.2
LCO				i S	Sn	16 25 17.1	+0.6
LCO	Las Campanas	1.19	37	eP	Pn	16 25 01.5	+0.2
LCO				i S	Sn	16 25 17.1	+0.6
LCO				AML	AML	16 25 18.6	
	comp=E,37μm,0.6s						
CMCH	Combarbala	1.28	160	eP	Pn	16 25 02.1	-0.2
CMCH				i S	Sn	16 25 18.5	+0.1
CMCH	Combarbala	1.28	160	eP	Pn	16 25 02.1	-0.2
CMCH				i S	Sn	16 25 18.5	+0.1
CHNG	Los Chungos	1.91	180	iP	Pn	16 25 10.5	-0.3
CHNG	Los Chungos	1.91	180	iP	Pn	16 25 10.5	-0.3
CPCH	Copiapo	2.80	22	eP	Pn	16 25 22.5	-0.6
CPCH	Copiapo	2.80	22	eP	Pn	16 25 22.5	-0.6
CFAA	Coronel Fontan	3.26	121	P	Pn	16 25 31.6	+2.2
CFAA				S	Sn	16 26 12.2	+5.2
CFAA	Coronel Fontan	3.26	121	P	Pn	16 25 31.6	+2.2
	comp=E,23nm,0.3s,baz=309,slow=10,SNR=648						
CFAA				S	Sn	16 26 12.2	+5.2
	comp=E,28nm,0.3s,baz=197,slow=4.1,SNR=8.4						
CFAA				LR	LR	16 26 55.9	
	comp=E,246nm,19.2s,baz=286,slow=43						
LVC	Limon Verde	7.69	18	eP	Pn	16 26 27.8	-2.7
	comp=E,82nm,0.7s						
PLCA	Paso Flores	10.77	176	eP	Pn	16 27 11.5	-0.8
	comp=E,21nm,0.3s						
PLCA	Paso Flores	10.77	176	P	Pn	16 27 10.8	-1.5
	comp=E,0.5nm,0.3s,baz=345,slow=13,SNR=10.0						
PLCA				LR	LR	16 31 46.1	
	comp=E,267nm,20.7s,baz=187,slow=40						
TRQA	Tornquist	11.29	138	eP	Pn	16 27 18.7	-0.8
	comp=E,53nm,1.3s						
CPUP	Villa Florida	13.03	77	P	Pn	16 27 40.3	-3.0
CPUP	Villa Florida	13.03	77	P	Pn	16 27 40.3	-3.0
	comp=E,1.8nm,0.3s,baz=246,slow=13,SNR=16						
CPUP				LR	LR	16 33 10.8	
	comp=E,774nm,19.4s,baz=220,slow=40						
LPAZ	La Paz	13.97	14	eP	Pn	16 27 58.1	+1.4
	comp=E,9.1nm,0.8s						
LPAZ	La Paz	13.97	14	P	Pn	16 27 58.5	+1.9
	comp=E,0.7nm,0.3s,baz=195,slow=7.4,SNR=18						
SIV	San Ignacio	16.90	37	P	Pn	16 28 32.3	-1.9
SIV	San Ignacio	16.90	37	P	Pn	16 28 32.3	-1.9
	comp=E,2.6nm,0.3s,baz=218,slow=11,SNR=30						
SIV				LR	LR	16 36 20.1	
	comp=E,432nm,21.0s,slow=42						
NNA	Nana	18.57	343	P	P	16 28 53.4	-0.7
NNA	Nana	18.57	343	P	P	16 28 53.4	-0.7
	comp=E,1.1nm,0.3s,baz=140,slow=7.9,SNR=2.0						
NNA				LR	LR	16 34 31.2	
	comp=E,182nm,20.8s,baz=129,slow=32						
SAML	Samuel	22.32	22	eP	P	16 29 35.6	+0.9
	comp=E,10nm,1.0s						
SPB	Sao Paulo	22.40	79	eP	P	16 29 35.6	+0.1
	comp=E,32nm,1.1s						
ATAH	Atahualpa	23.62	343	P	P	16 29 50.3	+2.0
ATAH	Atahualpa	23.62	343	P	P	16 29 50.3	+2.0
	comp=E,4.2nm,0.6s,baz=173,slow=8.4,SNR=4.5						
ATAH				LR	LR	16 37 09.4	
	comp=E,151nm,21.7s,baz=342,slow=32						
USHA	Ushuaia	24.95	176	P	P	16 30 00.0	+0.4
USHA	Ushuaia	24.95	176	P	P	16 30 00.0	+0.4
	comp=E,22nm,0.8s,baz=338,slow=7.7,SNR=11						
BDFB	Brasilia	25.87	62	P	P	16 30 07.6	-0.9
BDFB	Brasilia	25.87	62	P	P	16 30 07.6	-0.9
	comp=E,9.0nm,0.5s,baz=236,slow=8.1,SNR=12						
BDFB				LR	LR	16 41 23.9	
	comp=E,399nm,20.1s,baz=176,slow=39						
ROSC	El Rosal	34.73	355	P	P	16 31 29.5	+2.3
ROSC	El Rosal	34.73	355	P	P	16 31 29.5	+2.3
	comp=E,6.3nm,0.3s,baz=270,slow=17,SNR=3.9						
SNAA	Sanae	55.16	159	eP	P	16 34 08.2	-0.1
SNAA	Sanae	55.16	159	eP	P	16 34 08.0	-0.4
	comp=E,5.8nm,0.6s						
732A	Laxson Ranch,	64.38	332	⇓P	P	16 35 13.3	+1.2
	baz=65,SNR=9.0						
632A	Uvalde	65.00	333	⇑P	P	16 35 17.3	+1.2
	baz=65,SNR=12						
631A	Perdido Creek	65.23	332	⇓P	P	16 35 18.2	+0.6
	baz=66,SNR=5.3						
532A	Rocksprings	65.60	333	⇑P	P	16 35 21.2	+1.2
	baz=66,SNR=22						
JCT	Junction City	65.87	333	⇑P	P	16 35 22.8	+1.0
	baz=66,SNR=9.4						
531A	Rocksprings	65.88	333	⇓P	P	16 35 23.1	+1.2
	baz=66,SNR=10.0						
530A	J-C Ranch, Com	66.19	332	⇓P	P	16 35 25.0	+1.2
	baz=67,SNR=11						
432A	Menard	66.22	334	⇓P	P	16 35 24.5	+0.5
	baz=67,SNR=8.8						
628A	Black Gap, Mar	66.26	330	⇑P	P	16 35 25.7	+1.3
	baz=67,SNR=16						
WHTX	Lake Whitney	66.36	336	⇑P	P	16 35 25.6	+0.8
	baz=67						
431A	Sonora	66.37	333	⇑P	P	16 35 25.7	+0.7
	baz=67,SNR=6.4						
627A	Terlingua Ranc	66.45	330	⇓P	P	16 35 26.5	+0.8
	baz=67,SNR=5.2						
TXAR	Lajitas Array	66.47	330	P	P	16 35 26.6	+0.9
TXAR	Lajitas Array	66.47	330	P	P	16 35 26.6	+0.9
	comp=E,5.2nm,0.6s,baz=152,slow=8.2,SNR=65						
TXAR				LR	LR	16 59 52.7	
	comp=E,42nm,19.3s,baz=130,slow=32						
529A	Stev Forest Ra	66.53	331	⇑P	P	16 35 27.3	+1.2
	baz=67,SNR=19						
332A	Millersview	66.65	334	⇑P	P	16 35 27.5	+0.7
	baz=67,SNR=12						
430A	Baggett Ranch,	66.71	332	⇑P	P	16 35 28.1	+0.9
	baz=67,SNR=8.0						
528A	Cox Ranch, San	66.80	331	⇓P	P	16 35 28.6	+0.7
	baz=67,SNR=16						
429A	Davenport Ranc	66.83	332	⇓P	P	16 35 29.0	+1.0
	baz=67,SNR=12						
331A	San Angelo	66.85	333	⇓P	P	16 35 28.6	+0.6
	baz=67,SNR=5.6						
626A	Big Bend Ranch	66.86	329	⇑P	P	16 35 29.7	+1.5
	baz=67,SNR=12						
232A	Coleman	67.06	334	⇓P	P	16 35 30.0	+0.6
	baz=67,SNR=12						
527A	Woodward Ranch	67.14	330	⇑P	P	16 35 30.9	+0.8
	baz=68,SNR=20						
330A	Mertzon	67.23	333	⇓P	P	16 35 31.0	+0.5
	baz=68,SNR=7.1						
428A	Kincaid Ranch,	67.25	331	⇓P	P	16 35 31.7	+1.0
	baz=68,SNR=8.2						
526A	Mary Lane Ranc	67.28	330	⇓P	P	16 35 32.3	+1.3
	baz=68,SNR=18						
231A	Bronte	67.36	334	⇓P	P	16 35 31.8	+0.5
	baz=68,SNR=5.2						
WVT	Waverly	67.52	346	eP	P	16 35 31.6	-0.5
	comp=E,13nm,0.9s						
329A	Wagon Wheel Ra	67.63	332	⇓P	P	16 35 33.8	+0.8
	baz=68,SNR=7.6						
230A	Sterling City	67.63	333	⇓P	P	16 35 33.4	+0.4
	baz=68						
427A	Hayter Ranch,	67.66	331	⇑P	P	16 35 34.1	+0.9
	baz=68,SNR=5.9						
ABTX	Abilene, Hawle	67.72	335	⇓P	P	16 35 34.3	+0.8
	baz=68						
426A	McDonald Obser	67.78	330	⇑P	P	16 35 35.1	+0.9
	baz=68,SNR=11						
328A	Wrisken Ranch,	67.88	331	⇑P	P	16 35 35.2	+0.6
	baz=68,SNR=8.3						
229A	Bryant Ranch,	67.98	332	⇑P	P	16 35 35.5	+0.3
	baz=68						
131A	Roby	68.05	334	⇑P	P	16 35 36.3	+0.7
	baz=68						
VNDA	Vanda	68.13	191	P	P	16 35 36.7	+1.2
VNDA	Vanda	68.13	191	P	P	16 35 36.7	+1.2
	comp=E,2.0nm,1.1s,baz=204,slow=2.8,SNR=3.6						
130A	Snyder	68.20	333	⇓P	P	16 35 37.0	+0.4
	baz=69						
Z32A	Haskell	68.27	335	⇑P	P	16 35 37.5	+0.6
	baz=69,SNR=5.9						
425A	Indio Mountain	68.30	329	⇓P	P	16 35 37.8	+0.5
	baz=69,SNR=10						
326A	Caldwell Ranch	68.31	330	⇑P	P	16 35 38.3	+0.9
	baz=69,SNR=11						
228A	UT Block 9, Go	68.43	332	⇑P	P	16 35 38.6	+0.6
	baz=69,SNR=11						
Z31A	Sharp Cattle R	68.53	334	⇑P	P	16 35 39.2	+0.6
	baz=69						
129A	Stewart Farms,	68.58	333	⇑P	P	16 35 39.5	+0.5
	baz=69						
227A	Bennet, Jal	68.62	331	⇑P	P	16 35 40.4	+1.1
	baz=69,SNR=5.8						
TBI	Tubuai	68.75	255	eLR	LR	16 56 42.8	
	comp=E,136nm,27.8s						
325A	Bean Ranch, Si	68.79	330	⇑P	P	16 35 40.8	+0.3
	baz=69,SNR=21						
128A	Castleberry Fa	68.82	332	⇑P	P	16 35 41.0	+0.5
	baz=69						
Z30A	Sanderson Ranc	68.87	334	⇑P	P	16 35 41.2	+0.4
	baz=69						
Y32A	R-V Farms, Ver	68.88	335	⇑P	P	16 35 41.3	+0.6
	baz=69						
226B	Tecolote Peak,	69.05	331	⇑P	P	16 35 43.1	+1.2
	baz=69,SNR=9.9						
Z29A	Hungry Hill Ra	69.08	333	⇑P	P	16 35 42.1	+0.1
	baz=70,SNR=5.7						
324A	Moseley Ranch,	69.08	329	⇑P	P	16 35 41.9	-0.3
	baz=69,SNR=12						
Y31A	Rekieta Farm,	69.15	335	⇓P	P	16 35 43.1	+0.7
	baz=70,SNR=10						
127A	Arkansas Junct	69.23	332	⇓P	P	16 35 43.6	+0.6
	baz=70						
WMOK	Wichita Mounta	69.31	336	eP	P	16 35 42.9	-0.5
	comp=E,9.3nm,1.2s			

Z24A **Sheeppen Canyo** 70.64 330 ⇑P P 16 35 52.6 +0.8
baz=71,SNR=10
W29A **Amraillo** 70.70 334 ⇑P P 16 35 52.5 +0.5
baz=71
319A **Douglas** 70.78 326 ⇑P P 16 35 54.1 +1.5
baz=71
122A **Conniff Cattle** 70.82 329 ⇑P P 16 35 54.6 +1.7
baz=71
220A **Playas Peak, P** 70.86 327 ⇑P P 16 35 54.4 +1.3
baz=71,SNR=11
Y25A **Mesa, Roswell** 70.86 331 ⇓P P 16 35 53.4 +0.3
baz=71
V30A **Spur Ranch, Mi** 70.91 335 ⇓P P 16 35 54.5 +1.2
baz=71
Z23A **Rita Site, Whi** 70.96 330 ⇓P P 16 35 55.1 +1.4
baz=71,SNR=11
121A **Cookes Peak, D** 71.04 328 ⇑P P 16 35 55.6 +1.4
baz=71,SNR=12
X26A **CR and CF Fran** 71.04 332 ⇑P P 16 35 54.9 +0.7
baz=71,SNR=9.1
Y24A **Capitan** 71.18 331 ⇓P P 16 35 55.8 +0.8
baz=72
W27A **Bowe Ranch, En** 71.19 333 ⇑P P 16 35 55.5 +0.5
baz=72,SNR=7.1
Z22A **Elephant Butte** 71.27 329 ⇑P P 16 35 57.1 +1.5
baz=72,SNR=8.7
PPT2 **Papeete2** 71.30 260 eLR LR 16 57 47.0
comp=E,153nm,23.8s
X25A **Clemmons Ranch** 71.37 332 ⇓P P 16 35 56.5 +0.3
baz=72
120A **U Bar Ranch, L** 71.44 327 ⇑P P 16 35 58.2 +1.6
baz=72,SNR=8.7
Y23A **Lovelace Mesa,** 71.45 330 ⇑P P 16 35 58.1 +1.4
baz=72,SNR=11
V28A **Channing** 71.47 334 ⇑P P 16 35 57.7 +1.0
baz=72
W26A **Owens Ranch, T** 71.49 333 ⇓P P 16 35 57.9 +1.0
baz=72
U30A **WK&E Inc. Balk** 71.58 336 ⇓P P 16 35 58.3 +1.0
baz=72
Z21A **St. Cloud Mine** 71.64 329 ⇑P P 16 35 59.2 +1.4
baz=72
V27A **Dan Oppiter Fa** 71.71 334 ⇓P P 16 35 59.2 +1.0
baz=72
T31A **Randall Ranch,** 71.75 337 ⇑P P 16 35 58.9 +0.7
baz=72
W25A **X Bar L Ranch,** 71.89 332 ⇓P P 16 35 59.8 +0.5
baz=72,SNR=6.3
Z20A **Nine Sixteen R** 71.89 328 ⇓P P 16 36 01.0 +1.6
baz=72,SNR=17
T30A **Plains** 72.01 336 ⇓P P 16 36 00.4 +0.6
baz=72
U28A **Mallet** 72.03 334 ⇑P P 16 36 00.6 +0.6
baz=72
X23A **Hourglass Bar** 72.06 330 ⇑P P 16 36 01.6 +1.3
baz=72,SNR=5.6
V26A **Tequesquite Ra** 72.12 333 ⇓P P 16 36 01.3 +0.7
baz=72,SNR=10
S31A **Mullinville** 72.15 337 ⇓P P 16 36 01.4 +0.7
baz=72
Y21A **Point of Rocks** 72.22 329 ⇓P P 16 36 03.1 +1.7
baz=73,SNR=8.7
W24A **Lazy 6 Ranch,** 72.27 331 ⇑P P 16 36 02.5 +0.9
baz=73,SNR=6.6
U27A **Thompson Grove** 72.29 334 ⇑P P 16 36 03.7 +2.0
baz=73
LAZ **Ladron** 72.32 330 eP P 16 36 03.5 +1.6
comp=E,5.1nm,1.2s
LAZ epP pP 16 36 17.4 +2.3
X22A **Bernardo** 72.35 330 ⇑P P 16 36 03.9 +1.8
baz=73
Y20A **Horse Springs,** 72.46 328 ⇑P P 16 36 04.4 +1.6
baz=73,SNR=5.9
ANMO **Albuquerque** 72.49 330 eP P 16 36 03.1 +0.2
comp=E,11nm,1.3s
V25A **Rancho No Teng** 72.49 332 ⇓P P 16 36 03.7 +0.8
baz=73,SNR=16
W23A **Werner Place,** 72.54 331 ⇓P P 16 36 04.6 +1.3
baz=73,SNR=7.0
U26A **Atchley Ranch,** 72.62 333 ⇓P P 16 36 04.3 +0.7
baz=73,SNR=6.1
T28A **Walsh** 72.64 335 ⇓P P 16 36 04.1 +0.4
baz=73
X21A **Alamocita Cree** 72.64 329 ⇑P P 16 36 05.6 +1.7
baz=73,SNR=12
V24A **Rampart Ranch,** 72.66 332 ⇓P P 16 36 04.8 +0.9
baz=73
S29A **Ulysses** 72.72 336 ⇑P P 16 36 05.2 +1.1
baz=73
W22A **Albuquerque** 72.77 330 ⇑P P 16 36 06.1 +1.5
baz=73
T27A **Campo** 72.82 334 ⇑P P 16 36 05.6 +0.9
baz=73,SNR=15
U25A **Circle Dot Ran** 72.89 333 ⇓P P 16 36 06.2 +1.0
baz=73,SNR=7.9
S28A **Manter** 72.98 335 ⇓P P 16 36 06.4 +0.8
baz=73,SNR=5.8
214A **Organ Pipe Nat** 73.00 324 ⇓P P 16 36 07.4 +1.6
baz=73,SNR=7.6
X20A **Quemado** 73.04 329 ⇑P P 16 36 07.9 +1.7
baz=73,SNR=8.1
V23A **Ortiz Mt. (NFS** 73.05 331 ⇑P P 16 36 07.9 +1.7
baz=73
W21A **San Fidel** 73.15 330 ⇓P P 16 36 08.5 +1.6
baz=74
S27A **Las Animas** 73.43 334 ⇑P P 16 36 09.1 +0.8
baz=74,SNR=5.6
DBIC **Dimbokro** 73.50 72 P P 16 36 08.9 -0.2
DBIC **Dimbokro** 73.50 72 P P 16 36 08.9 -0.2
comp=E,6.0nm,0.7s,baz=264,slow=9.7,SNR=12
V22A **San Miguel Ran** 73.50 331 ⇑P P 16 36 10.7 +1.8
baz=74,SNR=15
W20A **Ramah** 73.53 329 ⇓P P 16 36 10.5 +1.4
baz=74,SNR=9.2
T25A **Trinidad** 73.53 333 ⇓P P 16 36 10.4 +1.3
baz=74,SNR=14
S26A **Kim** 73.59 334 ⇑P P 16 36 10.5 +1.2
baz=74,SNR=22
X18A **Snowflake** 73.69 328 ⇑P P 16 36 11.5 +1.5
baz=74
V21A **Milan** 73.72 330 ⇓P P 16 36 11.6 +1.4
baz=74
U22A **Llaves** 73.87 331 ⇑P P 16 36 13.0 +1.9
baz=74,SNR=10
R27A **Eads** 73.92 335 ⇓P P 16 36 11.9 +0.8
baz=74,SNR=6.9
S25A **Robets Cordova** 74.00 333 ⇓P P 16 36 13.1 +1.4
baz=74,SNR=17
V20A **Brimhall** 74.08 329 ⇓P P 16 36 13.5 +1.2
baz=74,SNR=7.0
W18A **Petrified Fore** 74.08 328 ⇑P P 16 36 13.6 +1.3
baz=74
T23A **Casias Ranch,** 74.10 332 ⇓P P 16 36 13.7 +1.3
baz=74
113A **Mohawk Valley,** 74.13 324 ⇑P P 16 36 13.8 +1.5
baz=74
R26A **Arlington** 74.18 334 ⇓P P 16 36 13.8 +1.1
baz=75,SNR=12
U21A **Nageezi** 74.26 330 ⇓P P 16 36 14.9 +1.5
baz=75,SNR=6.4
S24A **Houchin Ranch,** 74.28 333 ⇓P P 16 36 15.4 +1.8
baz=75,SNR=26
X16A **Lo Mia Camp, P** 74.31 327 ⇑P P 16 36 15.1 +1.5
baz=75,SNR=12
R25A **Fountain Ranch** 74.36 334 ⇑P P 16 36 14.9 +1.1
baz=75
T22A **Edith** 74.44 331 ⇓P P 16 36 16.1 +1.8
baz=75,SNR=8.3
KSCO **Kaye Shedlock'** 74.50 335 ⇓P P 16 36 15.9 +1.3
baz=75
U20A **Newcomb** 74.59 330 ⇓P P 16 36 16.4 +1.2
baz=75
Y14A **Wickenburg** 74.68 325 ⇑P P 16 36 17.1 +1.5
baz=75
T21A **Navajo Lake** 74.68 331 ⇑P P 16 36 17.4 +1.6
baz=75
Q26A **Hugo** 74.75 335 ⇑P P 16 36 17.4 +1.4
baz=75
R24A **Sanders Place,** 74.75 333 ⇑P P 16 36 17.8 +1.6
baz=75,SNR=14
GLA **Glamis** 74.90 323 ⇓P P 16 36 18.5 +1.6
baz=75
P27A **Ficken Ranch,** 74.97 336 ⇑P P 16 36 18.6 +1.4
baz=75
Q25A **Bedland, Calha** 75.02 334 ⇑P P 16 36 18.9 +1.3
baz=75
S22A **4UR Ranch, Cre** 75.03 332 ⇓P P 16 36 19.3 +1.5
baz=75,SNR=7.5

WUAZ **Wupatki** 75.17 327 eP P 16 36 20.2 +1.6
comp=E,22nm,1.3s
WUAZ **Wupatki** 75.17 327 ⇓P P 16 36 20.1 +1.6
baz=76,SNR=9.0
P26A **Davis Ranch, A** 75.25 335 ⇓P P 16 36 20.1 +1.2
baz=76,SNR=6.3
MVCO **Mesa Verde** 75.28 330 eP P 16 36 20.2 +0.9
comp=E,12nm,0.8s
MVCO **Mesa Verde** 75.28 330 ⇓P P 16 36 20.6 +1.3
baz=76
Y12C **Blythe** 75.29 324 ⇓P P 16 36 20.7 +1.7
baz=76
SWSC **Sam W. Stewart** 75.32 323 ⇓P P 16 36 20.8 +1.5
baz=76
S21A **Coal Bank Pass** 75.36 331 ⇓P P 16 36 21.3 +1.5
baz=76,SNR=9.4
Q24A **Divide** 75.41 334 ⇓P P 16 36 21.3 +1.3
baz=76,SNR=13
R22A **Saguache, Gunn** 75.41 332 ⇑P P 16 36 21.5 +1.4
baz=76
O27A **Beecher Island** 75.49 336 ⇓P P 16 36 21.7 +1.4
baz=76
P25A **Willow Gulch B** 75.51 334 ⇓P P 16 36 22.0 +1.6
baz=76,SNR=12
MONP **Monument Peak** 75.61 322 ⇓P P 16 36 22.9 +1.7
baz=76
BC3 **Big Chuckawall** 75.70 323 ⇓P P 16 36 23.0 +1.4
baz=76,SNR=9.8
S20A **Disappointment** 75.74 331 ⇓P P 16 36 23.6 +1.7
baz=76,SNR=12
O26A **Horse Wrangler** 75.84 335 ⇓P P 16 36 23.7 +1.5
baz=76
R21A **Cimarron** 75.86 332 ⇑P P 16 36 24.0 +1.4
baz=76,SNR=8.9
IRM **Iron Mountain** 75.94 324 ⇑P P 16 36 24.3 +1.4
baz=76,SNR=5.6
Q22A **Crested Butte,** 76.02 332 ⇑P P 16 36 25.2 +1.7
baz=76,SNR=5.6
O25A **Wiggins** 76.02 335 ⇑P P 16 36 24.9 +1.7
baz=76
P23A **Jefferson** 76.03 333 ⇓P P 16 36 25.1 +1.5
baz=76
W13A **Hualapai Mount** 76.04 325 ⇑P P 16 36 25.1 +1.5
baz=76,SNR=6.4
R20A **Redvale** 76.05 331 ⇓P P 16 36 25.3 +1.7
baz=76,SNR=5.6
N27A **Anderson Farm,** 76.06 336 ⇓P P 16 36 24.7 +1.3
baz=76
PV01 **Paradox Valley** 76.09 331 P P 16 36 25.3 +1.5
comp=E,575nm,0.9s
PFO **Pinyon Flat Ob** 76.19 323 ⇑P P 16 36 26.0 +1.6
baz=76
BELC **Belle Mtn. Jos** 76.25 323 ⇓P P 16 36 26.2 +1.5
baz=77
Q21A **Lamborn Mesa,** 76.26 332 ⇑P P 16 36 26.2 +1.4
baz=77
ISCO **Idaho Springs** 76.31 334 eP P 16 36 26.3 +1.1
comp=E,12nm,1.0s
ISCO **Idaho Springs** 76.31 334 ⇑P P 16 36 26.4 +1.3
baz=77,SNR=12
SMCO **Snowmass** 76.31 332 eP P 16 36 26.8 +1.5
comp=E,24nm,0.8s
S18A **Hurst Farm, Bl** 76.33 329 ⇓P P 16 36 26.8 +1.6
baz=77,SNR=24
U15A **North Rim** 76.34 327 ⇓P P 16 36 27.1 +1.7
baz=77,SNR=8.9
MURC **Murrieta** 76.57 322 ⇓P P 16 36 28.0 +1.6
baz=77
P22A **Eagle** 76.58 333 ⇑P P 16 36 28.2 +1.6
baz=77
M27A **Reverse DX Ran** 76.65 337 ⇑P P 16 36 28.5 +1.7
baz=77
Q20A **Ridgley Place,** 76.66 331 ⇓P P 16 36 28.2 +1.2
baz=77
GMRC **Granite Mounta** 76.68 324 ⇓P P 16 36 28.8 +1.6
baz=77,SNR=7.5
O23A **Lake Granby, G** 76.78 334 ⇑P P 16 36 29.2 +1.4
baz=77,SNR=7.1
P21A **Newcastle** 76.80 332 ⇑P P 16 36 29.5 +1.7
baz=77
ECSD **EROS Data Cent** 76.87 342 eP P 16 36 27.8 0.0
comp=E,24nm,1.0s
MAW **Mawson** 76.91 164 LR LR 17 11 04.4
comp=E,82nm,19.0s,baz=186,slow=36
O22A **Kremmling** 76.98 333 ⇓P P 16 36 29.9 +1.0
baz=77,SNR=11
HEC **Hector,Ludlow** 77.07 323 ⇑P P 16 36 30.9 +1.6
baz=77,SNR=5.8
CIS **Catalina Islan** 77.07 321 ⇑P P 16 36 30.9 +1.7
baz=77
P20A **Eloque** 77.16 332 ⇑P P 16 36 31.5 +1.7
baz=78
BFSC **Mount Baldy Ra** 77.31 322 ⇑P P 16 36 31.8 +1.1
baz=78
TUQ **Turquoise Moun** 77.33 324 ⇓P P 16 36 32.3 +1.5
baz=78,SNR=7.8
N23A **Red Feather La** 77.38 334 ⇑P P 16 36 32.4 +1.3
baz=78,SNR=6.9
O21A **Pagoda** 77.39 333 ⇑P P 16 36 33.0 +1.8
baz=78
M24A **Cheyenne** 77.46 335 ⇑P P 16 36 32.9 +1.5
baz=78,SNR=5.6
N22A **Wattenberg Ran** 77.50 334 ⇑P P 16 36 33.3 +1.6
baz=78,SNR=5.4
P19A **Cripple Cowboy** 77.52 331 ⇓P P 16 36 33.3 +1.4
baz=78,SNR=18
O20A **White River Ci** 77.64 332 ⇓P P 16 36 34.1 +1.7
baz=78
K27A **Fluekinger Fa** 77.64 337 ⇓P P 16 36 33.7 +1.4
baz=78
GSC **Goldstone** 77.68 323 eP P 16 36 34.0 +1.3
comp=E,8.2nm,1.0s
GSC **Goldstone** 77.68 323 ⇑P P 16 36 34.0 +1.3
baz=78,SNR=5.2
SRU **San Rafael** 77.74 330 ⇓P P 16 36 34.1 +1.1
baz=78
CCUT **Cedar City** 77.75 327 eP P 16 36 35.0 +1.7
comp=E,18nm,1.2s
M23A **Laramie** 77.79 334 ⇓P P 16 36 34.4 +1.0
baz=78,SNR=5.6
N21A **Black Mountain** 77.88 333 ⇑P P 16 36 35.4 +1.5
baz=78,SNR=8.5
EDW2 **Edwards Air Fo** 77.97 322 ⇓P P 16 36 35.4 +1.1
baz=78,SNR=5.1
ARUT **Antelope Range** 77.98 327 eP P 16 36 36.0 +1.6
comp=E,31nm,1.3s
MSU **Marysvale** 77.98 328 eP P 16 36 35.8 +1.3
comp=E,5.8nm,0.9s
MVU **Marysvale** 77.99 328 eP P 16 36 35.8 +1.2
comp=E,5.1nm,0.8s
MVU epP pP 16 36 49.2 +1.4
P18A **Preston Nutter** 78.05 330 ⇓P P 16 36 36.3 +1.3
baz=78,SNR=7.0
M22A **Cedar Creek Ra** 78.07 334 ⇑P P 16 36 36.4 +1.4
baz=78
N20A **Spence Gulch,** 78.24 332 ⇑P P 16 36 36.8 +1.0
baz=79,SNR=6.2
LRMC **Laurel Mountai** 78.27 323 ⇑P P 16 36 37.3 +1.3
baz=79,SNR=6.8
M21A **Separation Pea** 78.54 333 ⇑P P 16 36 38.5 +1.0
baz=79,SNR=6.7
L22A **Ellis Ranch, M** 78.55 334 ⇑P P 16 36 39.0 +1.5
baz=79
K24A **Anderson Ranch** 78.55 336 ⇓P P 16 36 39.2 +1.8
baz=79
FURC **Furnace Creek,** 78.61 324 ⇓P P 16 36 39.5 +1.9
baz=79
MPMC **Manual Prospec** 78.62 324 ⇑P P 16 36 39.2 +1.2
baz=79
M20A **Sweetwater, Wa** 78.76 333 ⇑P P 16 36 39.7 +0.9
baz=79,SNR=6.7
ISA **Isabella** 78.83 323 eP P 16 36 40.4 +1.4
comp=E,22nm,1.2s
ISA **Isabella** 78.83 323 ⇓P P 16 36 40.6 +1.6
baz=79,SNR=10.0
L21A **Rawlins** 78.85 334 ⇓P P 16 36 40.0 +0.9
baz=79,SNR=13
K23A **Bowen Ranch, D** 78.87 335 ⇑P P 16 36 40.8 +1.6
baz=79
PKM **Peak Mountain** 78.96 321 ⇓P P 16 36 41.5 +1.6
baz=79,SNR=7.1
J24A **Dixon Ranch, L** 79.03 336 ⇑P P 16 36 41.5 +1.6
baz=79,SNR=7.1
K22A **Casper** 79.11 334 ⇓P P 16 36 42.3 +1.7
baz=80
DAU **Daniels Canyon** 79.13 330 eP P 16 36 41.8 +0.9
comp=E,7.1nm,0.9s
L20A **Wamsutter** 79.26 333 ⇑P P 16 36 42.1 +0.7
baz=80,SNR=7.8
VES **Vestal, Richgr** 79.28 322 ⇑P P 16 36 42.6 +1.3
baz=80
JLU **Jordanelle** 79.37 330 eP P 16 36 43.5 +1.3
comp=E,7.1nm,0.8s
K21A **Alcova** 79.37 334 ⇓P P 16 36 42.9 +0.9
baz=80,SNR=5.4
R11A **Troy Canyon, C** 79.45 326 ⇑P P 16 36 43.9 +1.4
baz=80,SNR=9.8
I24A **Kuemmerle Ranc** 79.48 336 ⇓P P 16 36 43.7 +1.3
baz=80
RSSD **Black Hills** 79.50 337 eP P 16 36 43.0 +0.3
comp=E,11nm,1.0s
DUG **Dugway** 79.64 329 eP P 16 36 44.3 +0.8
comp=E,16nm,1.4s
DUG **Dugway** 79.64 329 ⇑P P 16 36 44.6 +1.1
baz=80,SNR=7.0
L19A **Farson** 79.75 332 ⇓P P 16 36 45.1 +1.0
baz=80,SNR=8.5
K20A **Yellowstone Ra** 79.81 333 ⇑P P 16 36 45.5 +1.2
baz=80
L18A **Fontenelle, Gr** 79.88 332 ⇓P P 16 36 45.8 +1.1
baz=80
TSUM **Tsumeb** 79.90 106 eP P 16 36 46.3 +0.8
comp=E,2.5nm,0.7s
TSUM epP pP 16 36 57.5 -1.2
J21A **Lysite** 80.06 334 ⇑P P 16 36 46.6 +1.0
baz=80
K19A **Absolon Red Bu** 80.15 333 ⇑P P 16 36 46.5 +0.3
baz=80,SNR=7.3
I22A **9 Mile Ranch,** 80.17 335 ⇑P P 16 36 46.7 +0.6
baz=81,SNR=6.9
H24A **Dirks Ranch, A** 80.23 337 ⇑P P 16 36 47.0 +0.5
baz=81,SNR=8.6
HWUT **Hardware Ranch** 80.25 331 eP P 16 36 47.1 +0.4
comp=E,12nm,0.8s
J20A **Shoshoni** 80.31 334 ⇓P P 16 36 48.0 +1.0
baz=81,SNR=5.5
L17A **Cokeville** 80.37 331 ⇓P P 16 36 47.9 +0.5
baz=81
BW06 **Boulder Array** 80.39 333 ⇓P P 16 36 48.2 +0.7
baz=81
PDAR **Pinedale Array** 80.39 333 P P 16 36 47.9 +0.4
PDAR **Pinedale Array** 80.39 333 P P 16 36 47.9 +0.4
comp=E,1.7nm,0.6s,baz=153,slow=4.3,SNR=14
PDAR LR LR 17 08 06.3
comp=E,31nm,19.8s,baz=246,slow=32
I21A **Big Trails, Te** 80.40 335 ⇓P P 16 36 47.8 +0.3
baz=81,SNR=7.7
K18A **Toltan Ranch,** 80.47 332 ⇓P P 16 36 49.0 +1.0
baz=81,SNR=10
J19A **Crowheart** 80.61 333 ⇑P P 16 36 49.3 +0.7
baz=81,SNR=19
H22A **Clearmont** 80.73 336 ⇑P P 16 36 50.1 +0.9
baz=81
I20A **Worland** 80.83 334 ⇑P P 16 36 50.3 +0.6
baz=81,SNR=8.2
NVAR **Mina Array Bea** 80.85 325 P P 16 36 51.5 +1.5
NVAR **Mina Array Bea** 80.85 325 P P 16 36 51.5 +1.5
comp=E,3.8nm,0.8s,baz=156,slow=6.9,SNR=29
HVU **Hansel Valley** 80.91 330 eP P 16 36 50.5 +0.3
comp=E,8.0nm,0.8s
AGMN **Agassiz Nation** 80.91 344 eP P 16 36 49.8 -0.1
comp=E,10nm,0.8s
AGMN epP pP 16 37 02.9 -0.3
G23A **Biddle** 80.92 336 ⇓P P 16 36 50.5 +0.4
baz=81,SNR=5.1
L15A **Malad City** 80.93 330 ⇑P P 16 36 51.0 +0.7
baz=81
J18A **Kendall Valley** 80.94 333 ⇑P P 16 36 50.7 +0.2
baz=81,SNR=6.1
H21A **Big Horn, Sher** 81.01 335 ⇓P P 16 36 50.8 +0.2
baz=81
F24A **Ekalaka** 81.16 337 ⇓P P 16 36 51.9 +0.5
baz=82,SNR=6.3
ELK **Elko** 81.18 328 eP P 16 36 52.5 +0.7
comp=E,6.0nm,0.8s
I19A **Meeteetse** 81.23 334 ⇑P P 16 36 52.5 +0.6
baz=82
H20A **Greybull** 81.24 334 ⇑P P 16 36 52.1 +0.3
baz=82,SNR=7.9
I18A **Diamond G Ranc** 81.27 333 ⇑P P 16 36 53.4 +1.2
baz=82
F23A **Volborg** 81.38 337 ⇑P P 16 36 52.8 +0.3
baz=82,SNR=6.5
MDND **Maddock** 81.47 341 ⇑P P 16 36 53.5 +0.6
baz=82
K15A **Arbon** 81.54 331 ⇑P P 16 36 54.3 +0.7
baz=82
BOSA **Boshof** 81.56 118 eP P 16 36 53.7 -0.5
comp=E,7.0nm,0.7s
BOSA **Boshof** 81.56 118 P P 16 36 53.9 -0.3
comp=E,7.1nm,0.9s,baz=216,slow=8.1,SNR=7.3
BOSA LR LR 17 06 44.0
comp=E,71nm,19.0s,baz=71,slow=31
G21A **Lodge Grass** 81.58 335 ⇓P P 16 36 54.6 +0.9
baz=82
K14A **Jones Ranch, D** 81.71 330 ⇓P P 16 36 54.6 +0.2
baz=82
F22A **Rosebud** 81.72 336 ⇓P P 16 36 54.7 +0.4
baz=82,SNR=7.5
E24A **Baker** 81.74 338 ⇑P P 16 36 55.3 +0.9
baz=82,SNR=8.3
H19A **Powell** 81.77 334 ⇑P P 16 36 55.2 +0.5
baz=82
G20A **Bridger** 81.94 335 ⇓P P 16 36 55.6 0.0
baz=82,SNR=7.8
H18A **Shoshone NF, C** 82.03 334 ⇑P P 16 36 56.7 +0.5
baz=82,SNR=11
E22A **Miles City** 82.19 337 ⇑P P 16 36 57.0 +0.3
baz=83
D24A **Glendive** 82.24 338 ⇓P P 16 36 57.6 +0.7
baz=83
RLMT **Red Lodge** 82.26 334 eP P 16 36 57.8 +0.4
comp=E,4.9nm,0.6s
RLMT **Red Lodge** 82.26 334 ⇑P P 16 36 57.9 +0.5
baz=83
TOA0 **Torodi Ar. Sit** 82.43 70 eP P 16 36 58.7 +0.1
TORD **Torodi Ar. Bea** 82.43 70 P P 16 36 58.6 -0.1
TORD **Torodi Ar. Bea** 82.43 70 P P 16 36 58.6 -0.1
comp=E,8.0nm,0.8s,baz=260,slow=4.0,SNR=30
TORD LR LR 17 12 29.0
comp=E,116nm,18.8s,baz=235,slow=35
G18A **Lazy EL Ranch,** 82.53 334 ⇓P P 16 36 59.0 +0.3
baz=83,SNR=6.3
D23A **Lindsay** 82.58 338 ⇑P P 16 36 59.8 +1.0
baz=83,SNR=12
C24A **Savage** 82.64 338 ⇓P P 16 36 59.8 +0.8
baz=83,SNR=6.7
ULM **Lac du Bonnet** 82.74 345 P P 16 36 59.1 -0.3
ULM **Lac du Bonnet** 82.74 345 P P 16 36 59.1 -0.3
comp=E,9.6nm,0.9s,baz=164,slow=4.1,SNR=8.0
F19A **Roth Farm, Mol** 82.75 335 ⇓P P 16 37 00.3 +0.5
baz=83
J13A **Cove Ranch, Pi** 82.83 330 ⇓P P 16 37 01.3 +1.0
baz=83,SNR=6.0
D22A **Cohagen** 82.88 337 ⇓P P 16 37 01.3 +1.0
baz=83
BEKR **Beckworth** 82.98 324 eP P 16 37 02.1 +0.9
comp=E,5.6nm,1.0s
E20A **Meyer Farm, Mu** 83.01 335 ⇓P P 16 37 01.7 +0.6
baz=83,SNR=9.9
HLID **Hailey** 83.06 330 eP P 16 37 02.5 +1.0
comp=E,7.4nm,1.0s
HLID **Hailey** 83.06 330 ⇑P P 16 37 02.7 +1.1
baz=83,SNR=10
F18A **Big Timber** 83.09 334 ⇑P P 16 37 01.9 +0.4
baz=84,SNR=8.1
C23A **Lambert** 83.12 338 ⇓P P 16 37 02.1 +0.6
baz=84,SNR=5.4
E19A **Rath Farm, Rou** 83.21 335 ⇑P P 16 37 02.4 +0.3
baz=84,SNR=11
I13A **Wildhorse Cree** 83.22 330 ⇓P P 16 37 03.6 +1.2
baz=84,SNR=15
DGMT **Dagmar** 83.39 339 eP P 16 37 03.3 +0.4
comp=E,70nm,1.0s
DGMT **Dagmar** 83.39 339 ⇓P P 16 37 03.8 +0.9
baz=84,SNR=5.4
MCMT **McKenzie Canyo** 83.43 332 eP P 16 37 04.3 +0.8
comp=E,3.7nm,1.1s
D20A **Manuel Ranch,** 83.51 336 ⇑P P 16 37 03.9 +0.3
baz=84,SNR=6.4
LBTB **Lobatse** 83.60 115 eP P 16 37 04.2 -0.6
comp=E,18nm,0.8s
LBTB epP pP 16 37 16.8 -1.4
B23A **Brockton** 83.64 338 ⇓P P 16 37 05.2 +1.0
baz=84
C21A **Desert Coulee** 83.78 337 ⇓P P 16 37 05.1 +0.2

	baz=84,SNR=6.2								
H13A	**Challis**	**83.80**	**331**	⇑P		**P**		**16 37 06.1**	**+0.8**
	baz=84,SNR=8.2								
B22A	**Reddig Ranch S**	**83.82**	**338**	⇓P		**P**		**16 37 05.8**	**+0.6**
	baz=84								
C20A	**Veseth Ranch,**	**84.00**	**336**	⇓P		**P**		**16 37 06.3**	**+0.2**
	baz=84								
H12A	**Diamond D Ranc**	**84.04**	**330**	⇓P		**P**		**16 37 07.2**	**+0.6**
	baz=84								
F15A	**Butte**	**84.11**	**333**	⇑P		**P**		**16 37 07.9**	**+1.0**
	baz=84								
G13A	**Cobalt**	**84.22**	**331**	⇓P		**P**		**16 37 08.3**	**+0.9**
	baz=85,SNR=11								
B21A	**Ellsworth Farm**	**84.27**	**337**	⇑P		**P**		**16 37 08.0**	**+0.6**
	baz=85								
C19A	**Slack Wire Ran**	**84.39**	**336**	⇓P		**P**		**16 37 08.4**	**+0.3**
	baz=85								
A22A	**Carney Farms,**	**84.40**	**338**	⇑P		**P**		**16 37 08.6**	**+0.5**
	baz=85,SNR=7.3								
D17A	**Six Diamond Ra**	**84.50**	**334**	⇑P		**P**		**16 37 09.2**	**+0.4**
	baz=85,SNR=7.6								
SCHQ	**Schefferville**	**84.55**	**3**	P		**P**		**16 37 08.6**	**0.0**
SCHQ	**Schefferville**	**84.55**	**3**	P		**P**		**16 37 08.6**	**0.0**
	comp=E,5.6nm,0.9s,baz=214,slow=3.6,SNR=6.1								
WDC	**Whiskeytown Da**	**84.63**	**324**	*e*P		**P**		**16 37 09.0**	**-0.3**
	comp=E,1.7nm,0.5s								
F13A	**Darby**	**84.82**	**331**	⇑P		**P**		**16 37 10.9**	**+0.5**
	baz=85,SNR=7.5								
EGMT	**Eagleton**	**84.89**	**335**	⇑P		**P**		**16 37 10.9**	**+0.3**
	baz=85								
A20A	**Cobblestone Ra**	**84.97**	**337**	⇑P		**P**		**16 37 11.5**	**+0.6**
	baz=85								
E14A	**Clinton**	**84.98**	**332**	⇑P		**P**		**16 37 12.2**	**+1.0**
	baz=85								
D15A	**Lincoln**	**85.11**	**333**	⇑P		**P**		**16 37 12.7**	**+0.9**
	baz=86								
F12A	**Elk City**	**85.18**	**331**	⇓P		**P**		**16 37 12.7**	**+0.5**
	baz=86,SNR=8.8								
B18A	**Beardsley Farm**	**85.21**	**336**	⇓P		**P**		**16 37 12.7**	**+0.5**
	baz=86								
E13A	**Victor**	**85.29**	**332**	⇓P		**P**		**16 37 13.4**	**+0.8**
	baz=86,SNR=5.4								
C16A	**Fuhringer Ranc**	**85.44**	**334**	⇑P		**P**		**16 37 14.3**	**+0.9**
	baz=86								
MSO	**Missoula**	**85.50**	**332**	⇑P		**P**		**16 37 15.9**	**+2.1**
	baz=86								
D14A	**Greenough**	**85.53**	**333**	⇓P		**P**		**16 37 15.5**	**+1.6**
	baz=86								
YBH	**Yreka Blue Hor**	**85.56**	**324**	*e*P		**P**		**16 37 13.9**	**-0.2**
	comp=E,6.8nm,1.3s								
SLMT	**Seeley Lake**	**85.66**	**333**	*e*P		**P**		**16 37 14.8**	**+0.2**
	comp=E,4.6nm,1.0s								
C15A	**Salmond Ranch,**	**85.75**	**334**	⇑P		**P**		**16 37 15.3**	**+0.4**
	baz=86								
D13A	**Huson**	**85.92**	**332**	⇓P		**P**		**16 37 16.3**	**+0.5**
	baz=86,SNR=8.4								
A17A	**Triple J Farms**	**86.00**	**335**	⇑P		**P**		**16 37 16.2**	**+0.1**
	baz=86,SNR=5.3								
B15A	**Bradely Ranch,**	**86.17**	**334**	⇑P		**P**		**16 37 16.7**	**-0.3**
	baz=86,SNR=8.3								
A16A	**West Butte Ran**	**86.33**	**335**	⇑P		**P**		**16 37 17.9**	**+0.1**
	baz=87,SNR=8.9								
C13A	**Hot Springs**	**86.44**	**332**	⇑P		**P**		**16 37 18.5**	**+0.2**
	baz=87								
B14A	**Marquette Ranc**	**86.48**	**334**	⇑P		**P**		**16 37 18.7**	**+0.2**
	baz=87								
BSMT	**Bassoo Peak**	**86.67**	**332**	*e*P		**P**		**16 37 19.6**	**+0.1**
	comp=E,6.9nm,1.2s								
A15A	**Johnson Ranch,**	**86.78**	**334**	⇓P		**P**		**16 37 20.0**	**0.0**
	baz=87								
C12B	**Naegeli Ranch,**	**86.83**	**332**	⇑P		**P**		**16 37 21.1**	**+0.9**
	baz=87								
B13A	**Whitefish**	**86.96**	**333**	⇑P		**P**		**16 37 21.4**	**+0.6**
	baz=87								
RPZ	**Rata Peaks**	**86.99**	**220**	P		**P**		**16 37 22.7**	**+1.3**
RPZ	**Rata Peaks**	**86.99**	**220**	P		**P**		**16 37 22.7**	**+1.3**
	comp=E,14nm,1.0s,baz=62,slow=6.0,SNR=5.3								
A14A	**Double T Ranch**	**87.04**	**334**	⇓P		**P**		**16 37 21.6**	**+0.3**
	baz=87								
C11A	**Tepee Creek (N**	**87.25**	**332**	⇑P		**P**		**16 37 22.8**	**+0.5**
	baz=88								
FFC	**Flin Flon**	**88.34**	**343**	*e*P		**P**		**16 37 26.6**	**-0.6**
	comp=E,1.9nm,0.8s								
YKA	**Yellowknife Ar**	**98.39**	**341**	P		**P**		**16 38 12.6**	**-0.7**
YKA	**Yellowknife Ar**	**98.39**	**341**	P		**P**		**16 38 12.5**	**-0.7**
	comp=E,0.7nm,0.6s,baz=141,slow=4.5,SNR=21								
DZM	**Mont Dzumac**	**103.96**	**234**	*e*LR		LR		17 12 53.8	
	comp=E,102nm,24.5s								
ASAR	**Alice Springs**	**121.34**	**207**	PKP		**PKPdf**		**16 43 28.4**	**-1.2**
ASAR	**Alice Springs**	**121.34**	**207**	PKP		**PKPdf**		**16 43 28.4**	**-1.2**
	comp=E,0.8nm,0.4s,baz=126,slow=1.6,SNR=36								
WRA	**Warramunga Ar**	**124.48**	**210**	PKP		**PKPdf**		**16 43 34.8**	**-0.9**
WRA	**Warramunga Ar**	**124.48**	**210**	PKP		**PKPdf**		**16 43 34.8**	**-0.9**
	comp=E,2.9nm,0.5s,baz=159,slow=1.6,SNR=21								
FITZ	**Fitzroy Crossi**	**129.43**	**201**	PKP		**PKPdf**		**16 43 44.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**129.43**	**201**	PKP		**PKPdf**		**16 43 44.4**	**-0.7**
	comp=E,3.7nm,0.7s,baz=188,slow=8.5,SNR=13								
BVAR	**Borovoye Array**	**143.96**	**39**	PKP		PKPbc		16 44 09.8	+1.0
BVAR	**Borovoye Array**	**143.96**	**39**	PKP		PKPbc		16 44 09.8	+1.0
	comp=E,1.9nm,0.6s,baz=274,slow=2.0,SNR=5.6								
KKAR	**Karatay Array**	**147.08**	**56**	*e*PKPbc		**PKPbc**		**16 44 18.5**	**-0.1**
EKS2	**Erkin-Say**	**149.52**	**56**	P		**PKPbc**		**16 44 26.2**	**+1.0**
	SNR=8.4								
KURBB	**Kurchatov Arra**	**149.55**	**39**	PKPbc		**PKPbc**		**16 44 25.0**	**+0.2**
	comp=E,4.5nm,0.5s,baz=304,slow=3.1,SNR=19								
KURK	**Kurchatov**	**149.55**	**39**	PKPbc		**PKPbc**		**16 44 25.0**	**+0.2**
AML	**Almayashu**	**149.57**	**57**	P		**PKPbc**		**16 44 26.7**	**+1.0**
	SNR=7.0								
HYB	**Hyderabad**	**149.98**	**108**	*i* PKP		**PKPdf**		**16 44 21.0**	**-1.0**
HYB				*e*				16 44 29.0	
HYB				*e*				16 44 51.0	
AAK	**Ala-Archa**	**150.04**	**56**	*e*PKPbc		**PKPbc**		**16 44 27.1**	**+0.5**
AAK	**Ala-Archa**	**150.04**	**56**	PKPbc		**PKPbc**		**16 44 27.7**	**+1.2**
	baz=230,slow=11								
KBK	**Karagaybulak**	**150.36**	**55**	P		**PKPbc**		**16 44 28.2**	**+0.9**
	SNR=5.6								
ZAA0	**Zalesovo Array**	**150.54**	**29**	*e*PKPbc		**PKPbc**		**16 44 27.2**	**+0.1**
ZALV	**Zalesovo Beam**	**150.54**	**29**	PKPbc		**PKPbc**		**16 44 27.3**	**+0.2**
ZALV	**Zalesovo Beam**	**150.54**	**29**	PKPbc		**PKPbc**		**16 44 27.3**	**+0.2**
	comp=E,28nm,0.7s,baz=306,slow=3.1,SNR=80								
KZA	**Kyzart**	**150.72**	**57**	P		**PKPbc**		**16 44 29.8**	**+1.3**
	SNR=5.2								
TKM2	**Tokmak 2**	**150.75**	**55**	P		**PKPbc**		**16 44 28.8**	**+0.5**
	SNR=9.1								
ULHL	**Ulahol**	**151.39**	**56**	P		**PKPbc**		**16 44 30.9**	**+1.1**
	SNR=6.7								
PSI	**Prapat**	**151.50**	**160**	PKPbc		**PKPbc**		**16 44 29.4**	**-1.3**
PSI	**Prapat**	**151.50**	**160**	PKPbc		**PKPbc**		**16 44 29.4**	**-1.3**
	comp=E,4.4nm,0.7s,baz=190,slow=9.6,SNR=2.9								
KSM	**Kuching**	**151.61**	**184**	*e*PKPbc		**PKPbc**		**16 44 29.9**	**-0.9**
KSH	**Kashi**	**151.77**	**62**	PKPbc		**PKPbc**		**16 44 30.5**	**-0.1**
KSH				*ep*PKP		**PKPab**		**16 44 41.5**	**+1.8**
KSH				sPKP				16 44 45.3	
KSH				PP		PP		16 48 19.5	+7.9
KSH				LR		LR			
	comp=N,450nm,8.6s								
KSH				LR		LR			
	comp=E,170nm,9.0s								
KSH				LR		LR			
	comp=Z,370nm,14.5s								
MKAR	**Makanchi Array**	**153.65**	**43**	PKPbc		**PKPbc**		**16 44 34.3**	**-0.2**
MKAR				PKPab		**PKPab**		**16 44 47.2**	**0.0**
MKAR	**Makanchi Array**	**153.65**	**43**	PKPbc		**PKPbc**		**16 44 34.3**	**-0.2**
	comp=E,1.4nm,0.7s,baz=285,slow=1.6,SNR=5.0								
MKAR				PKPab		**PKPab**		**16 44 47.2**	**0.0**
	comp=Z,2.2nm,0.8s,baz=263,slow=4.9,SNR=6.0								
MJAR	**Matsushiro Arr**	**154.35**	**293**	PKPab		**PKPab**		**16 44 50.9**	**+0.3**
MJAR	**Matsushiro Arr**	**154.35**	**293**	PKPab		**PKPab**		**16 44 50.9**	**+0.3**
	comp=E,5.1nm,1.0s,baz=99,slow=3.2,SNR=9.8								
WMQ	**Urumqi**	**158.46**	**44**	PKP		**PKPdf**		**16 44 33.5**	**+0.4**
CN2	**Changchun**	**160.69**	**320**	*e*PKP		**PKPdf**		**16 44 37.0**	**+1.4**
SONM	**Songino Array**	**162.09**	**5**	PKPab		**PKPab**		**16 45 24.3**	**+0.7**
SONM	**Songino Array**	**162.09**	**5**	PKPab		**PKPab**		**16 45 24.3**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=343,slow=4.5,SNR=8.3								
CMAR	**Chiang Mai Arr**	**165.62**	**141**	PKP		**PKPdf**		**16 44 40.2**	**-0.8**
CMAR	**Chiang Mai Arr**	**165.62**	**141**	PKP		**PKPdf**		**16 44 40.2**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=252,slow=1.8,SNR=4.7								
HHC	**Hu-ho-hao-te**	**168.86**	**348**	*e*PKP		**PKPdf**		**16 44 40.0**	**-2.9**
HHC				PKS		**PKSdf**		**16 48 12.0**	**-3.5**
HHC				PP		**PP**		**16 49 43.5**	**+1.2**
HHC				SKS		**SKSdf**		**16 51 38.3**	**-4.7**
HHC				SKKS		**SKKSac**		**16 56 25.8**	**-0.5**
HHC				SS		**SS**		**17 10 31.3**	**-0.7**
HHC				AMB		AMB			
	comp=Z,120nm,9.0s								
HHC				LR		LR			
	comp=N,200nm,20.7s								
HHC				LR		LR			
	comp=E,240nm,20.2s								
HHC				LR		LR			
	comp=Z,210nm,21.7s								
KMI	**Kunming**	**172.98**	**132**	PKP		**PKPdf**		**16 44 42.3**	**-3.4**
KMI				pPKP		**pPKPdf**		**16 45 00.5**	**+0.8**
GYA	**Guiyang**	**176.15**	**155**	*e*PKP		**PKPdf**		**16 44 46.0**	**-0.5**
GYA				pPKP		**pPKPdf**		**16 44 57.8**	**-2.7**
GYA				sPKP				16 45 03.5	
GYA				PKS		**PKSdf**		**16 48 16.3**	**-2.6**
GYA				PP		**PP**		**16 50 21.8**	**+3.4**
GYA				AMB		AMB			
	comp=Z,120nm,8.0s								

*IDC **29** 16:28:50.0±3.4,8°.94S×110°.65E,h0km,mb3.6/4, mb1 3.7/4,mb1mx3.5/21,mbtmp3.6/4,Error ellipse: s-maj=154.6km s-min=23.2km az=51.0*
*DJA **29** 16:28:51.7±1.3,9°.5S×117°.0E±°,h11km±13km, M3.8/10, MLv3.8/10*
*ISCJB **29** 16:28:53.7±0.9,9°.34S±0°.07×110°.44E±0°.06,h51km, mb3.6/4,Error ellipse: s-maj=10.9km s-min=7.3km az=26.7*

ISC 29 16:28:56.0±1.3,9°.2S±0°.1×110°.47E±0°.06,h51km,n15, σ1§61/18,mb3.5/4,South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCJI	**Pacitan**	**1.24**	**34**	P	**Pn**	**16 29 14.6**	**-2.5**
PCJI				S	**Sn**	**16 29 33.9**	**+1.2**
UGM	**Wanagama**	**1.31**	**2**	P	**Pn**	**16 29 16.5**	**-1.5**
UGM				S	**Sn**	**16 29 37.1**	**+2.7**
PWJI	**Pagerwojo**	**1.78**	**48**	P	**Pn**	**16 29 22.7**	**-1.7**
SJI	**Sawahan**	**1.96**	**41**	P	**Pn**	**16 29 26.1**	**-0.9**
BJII	**Banjamegara**	**2.03**	**338**	P	**Pn**	**16 29 28.2**	**+0.4**
CLJI	**Cilicap**	**2.08**	**316**	P	**Pn**	**16 29 26.2**	**-2.2**
CLJI				S	**Sn**	**16 29 53.5**	**+0.4**
SMRI	**Semarang**	**2.16**	**359**	P	**Pn**	**16 29 31.2**	**+1.5**
KRKI	**Karangkates**	**2.23**	**62**	P	**Pn**	**16 29 31.2**	**+0.7**
TGJI	**Tegal**	**2.70**	**330**	P	**Pn**	**16 29 35.7**	**-1.2**
GMJI	**Gumukmas**	**3.09**	**72**	P	**Pn**	**16 29 42.9**	**+0.6**
LEM	**Lembang**	**3.69**	**310**	P	**Pn**	**16 29 52.5**	**+1.7**
WRA	**Warramunga Arr**	**25.40**	**117**	P	**P**	**16 34 18.1**	**-0.9**
	1.0nm,0.8s,baz=290,slow=11,SNR=5.5						
ASAR	**Alice Springs**	**26.61**	**125**	P	**P**	**16 34 31.7**	**+1.8**
	0.4nm,0.7s,baz=300,slow=9.5,SNR=6.7						
SONM	**Songino Array**	**56.92**	**357**	P	**P**	**16 38 35.0**	**-1.0**
	0.4nm,0.6s,baz=173,slow=7.4,SNR=5.7						
MKAR	**Makanchi Array**	**61.17**	**338**	P	**P**	**16 39 05.0**	**-0.4**
	1.0nm,0.6s,baz=133,slow=8.5,SNR=4.7						

KRSC 29 16:32:42.1±1.6,48°.32N×156°.90E,h13km±12km,ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.42**	**348**	P	Pn	16 33 22.1	+0.8
SKR				*i* S	Sn	16 33 51.3	+0.5
PAU	**Pauzhetka**	**3.15**	**359**	P	Pn	16 33 33.1	+1.7
PAU				*i* S	Sn	16 34 09.9	+1.1
MIPR	**Malaya Ipel'ka**	**3.96**	**359**	P	Pn	16 33 44.9	+2.3
ASAK	**Asacha**	**4.12**	**9**	P	Pn	16 33 47.0	+2.2
RUS	**Russkaya**	**4.25**	**13**	P	Pn	16 33 47.9	+1.5
RUS				*i* S	Sn	16 34 36.2	+0.4
MTVR	**Mutnovka**	**4.25**	**11**	P	Pn	16 33 48.3	+1.6
MTVR				*i* S	Sn	16 34 36.1	-0.1
PET	**Petropavlovsk**	**4.84**	**13**	P	Pn	16 33 56.5	+1.9
UGLR	**Uglovaya**	**5.04**	**13**	P	Pn	16 34 00.3	+2.7
AVH	**Avacha**	**5.09**	**13**	P	Pn	16 34 01.0	+2.9
SMAR	**Somma**	**5.09**	**13**	P	Pn	16 34 01.3	+2.9
KOK	**Koryaka**	**5.10**	**12**	P	Pn	16 34 00.9	+2.6
SDLR	**Sedlovina**	**5.12**	**13**	P	Pn	16 34 00.3	+1.7
SDLR				*i* S	Sn	16 34 57.4	-0.3
KRER	**Koryakskii**	**5.13**	**13**	P	Pn	16 34 01.4	+2.6
GNL	**Ganaly**	**5.42**	**7**	P	Pn	16 34 05.6	+2.9
MKZ	**Mys Kozlova**	**6.94**	**24**	P	Pn	16 34 26.0	+2.7

*NIED **29** 16:35:00,43°.10N×143°.90E,h119km,Mw3.7 Best double couple: M0 3.86000×10^19 NP1:φ=81.00000°, δ=86.00000°,λ=112.00000°. NP2:φ=182.00000°,δ=22.00000°, λ=11.00000°.*
*ISCJB **29** 16:35:19.1±0.4,43°.03N±0°.05×143°.99E±0°.06, h129km±2km,mb3.7/15,Error ellipse: s-maj=8.0km s-min=6.4km az=158.9*
*JMA **29** 16:35:20.5±0.1,43°.06N×143°.94E,h122km±1km, M3.7*
JMA Felt I J1.
*IDC **29** 16:35:21.0±1.3,43°.06N×143°.90E,h132km±9km,mb3.5/15, mb1 3.7/16,mb1mx3.5/28,mbtmp3.5/16,Error ellipse: s-maj=15.8km s-min=14.2km az=126.0*

ISC 29 16:35:20.1±0.7,43°.03N±0°.05×143°.99E±0°.05,h124km±5km, n33,σ0°64/43,mb3.8/15,4C-8D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOB	**Onbets**	**0.17**	**222**	⇑P	**Pn**	**16 35 37.8**	**+0.7**
JOB				*e*S	**Sn**	**16 35 50.5**	**+0.6**
JAR	**Ashorobuto**	**0.31**	**328**	⇓P	**Pn**	**16 35 37.8**	**+0.3**
JAR				*e*S	**Sn**	**16 35 50.6**	**-0.1**
JAK	**Akkeshi**	**0.52**	**94**	⇑P	**Pn**	**16 35 38.8**	**+0.3**
JAK				*e*S	**Sn**	**16 35 52.8**	**+0.3**
JCH	**Churui**	**0.62**	**228**	⇑P	**Pn**	**16 35 39.4**	**+0.1**
JCH				*e*S	**Sn**	**16 35 52.9**	**-0.8**
JNK	**Nakash**	**0.77**	**44**	⇓P	**Pn**	**16 35 40.5**	**+0.2**
JTKR	**Abashiri--Toko**	**0.94**	**356**	⇓P	**Pn**	**16 35 42.1**	**+0.3**
JTKR				*e*S	**Sn**	**16 35 58.0**	**-0.3**
JFR	**Furan**	**1.03**	**278**	⇓P	**Pn**	**16 35 42.6**	**-0.1**
JMP	**Maruseppu**	**1.08**	**335**	⇓P	**Pn**	**16 35 43.2**	**0.0**
JNBK	**Urakawa-nobuka**	**1.19**	**231**	⇑P	**Pn**	**16 35 44.4**	**+0.1**
JNBK				*e*S	**Sn**	**16 36 01.6**	**-1.0**
JEM	**Erimo**	**1.19**	**212**	P	**Pn**	**16 35 44.5**	**+0.2**
JRA	**Rausu**	**1.22**	**42**	⇓P	**Pn**	**16 35 45.2**	**+0.6**
JKK2	**Kamakawa 2**	**1.23**	**313**	⇓P	**Pn**	**16 35 45.0**	**+0.2**
JKK2				*e*S	**Sn**	**16 36 03.1**	**-0.5**
NEM2	**Nemuro 2**	**1.32**	**75**	P	**Pn**	**16 35 45.7**	**0.0**
NEM2				*e*S	**Sn**	**16 36 04.1**	**-1.1**
ASAJ	**Asahikawa**	**1.48**	**317**	P	**Pn**	**16 35 48.0**	**+0.5**
	73nm,0.3s,baz=178,slow=10,SNR=1493						
ASAJ				S	**Sn**	**16 36 09.1**	**+0.7**
	15nm,0.3s,baz=251,slow=31,SNR=4.4						
JHR	**Hokuryu**	**1.80**	**294**	⇓P	**Pn**	**16 35 52.0**	**+0.8**
JEW	**Eniwo**	**1.88**	**265**	P	**Pn**	**16 35 52.7**	**+0.5**
JEW				*e*S	**Sn**	**16 36 16.4**	**-0.3**
MJAR	**Matsushiro Arr**	**7.86**	**216**	P	**Pn**	**16 37 13.5**	**+1.8**
	0.3nm,0.3s,baz=78,slow=23,SNR=4.6						
SONM	**Songino Array**	**26.63**	**294**	P	**P**	**16 40 47.3**	**+0.2**
	2.0nm,0.5s,baz=86,slow=8.7,SNR=24						
ZALV	**Zalesovo Beam**	**39.59**	**307**	P	**P**	**16 42 37.7**	**-1.3**
	1.0nm,0.3s,baz=81,slow=8.5,SNR=5.5						
MKAR	**Makanchi Array**	**42.87**	**297**	P	**P**	**16 43 05.5**	**-0.3**
	0.7nm,0.4s,baz=83,slow=10.0,SNR=5.5						
ILAR	**Eielson Array**	**43.42**	**36**	P	**P**	**16 43 09.9**	**0.0**
	1.4nm,0.4s,baz=258,slow=5.4,SNR=26						
KURBB	**Kurchatov Arra**	**44.10**	**304**	P	**P**	**16 43 15.6**	**0.0**
	1.8nm,0.5s,baz=72,slow=8.7,SNR=7.4						
BVAR	**Borovoye Array**	**49.17**	**309**	P	**P**	**16 43 47.5**	**+0.1**
	1.9nm,0.4s,baz=74,slow=8.5,SNR=14						
INK	**Inuvik**	**48.17**	**30**	P	**P**	**16 43 47.4**	**+0.2**
	1.3nm,0.3s,baz=295,slow=5.4,SNR=12						
YKA	**Yellowknife Ar**	**57.66**	**33**	P	**P**	**16 44 57.3**	**+0.4**
	0.5nm,0.6s,baz=306,slow=6.7,SNR=11						
WRA	**Warramunga Arr**	**63.29**	**190**	P	**P**	**16 45 35.0**	**-0.6**
	0.3nm,0.7s,baz=6.8,slow=6.9,SNR=2.8						
FINES	**FINESS Array B**	**64.44**	**332**	P	**P**	**16 45 42.0**	**-0.7**
	2.2nm,0.6s,baz=52,slow=9.0,SNR=15						
ASAR	**Alice Springs**	**67.02**	**190**	P	**P**	**16 45 59.9**	**+0.3**
	0.3nm,0.8s,baz=7.0,slow=6.7,SNR=4.9						
NB2	**NORSAR Subarra**	**69.41**	**338**	P	**P**	**16 46 13.5**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=35,slow=6.2						
NOA	**NORSAR Array B**	**69.41**	**338**	P	**P**	**16 46 13.5**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=34,slow=6.3,SNR=4.8						
AKASG	**Malin Array Be**	**70.77**	**322**	P	**P**	**16 46 21.9**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=45,slow=6.2,SNR=3.5						
PDAR	**Pinedale Array**	**72.11**	**48**	P	**P**	**16 46 31.8**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=240,slow=2.4,SNR=4.5						
TXAR	**Lajitas Array**	**84.95**	**54**	P	**P**	**16 47 42.4**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=293,slow=4.7,SNR=3.3						

*IDC **29** 16:35:19.6±0.7,39°.02N×71°.70E,h0km,mb4.0/16, mb1 4.2/22,mb1mx4.1/33,mbtmp4.0/22,ML4.1/6,MS3.1/8, Ms1 3.1/8,ms1mx2.8/34,Error ellipse: s-maj=13.0km s-min=10.3km az=145.0*
*BJI **29** 16:35:21.9,39°.19N×71°.41E,h31km,mB4.7/4,mb4.3/11, ML4.0/3,Ms4.0/1*
*NNC **29** 16:35:23.4±2.1,39°.41N×71°.42E,h0km,mb4.2,mpv4.4, Error ellipse: s-maj=17.5km s-min=10.7km az=22.0*
*MOS **29** 16:35:24.1±1.4,39°.21N×71°.57E,h33km,mb4.2/12,Error ellipse: s-maj=8.3km s-min=5.5km az=92.4*
*NEIC **29** 16:35:27.9±0.8,39°.28N×71°.65E,h54km±7km,mb4.9/5, Error ellipse: s-maj=9.1km s-min=6.6km az=158.0*

ISC 29 16:35:22.5±0.7,39°.14N±0°.02×71°.63E±0°.03,h17km±4km, n176,σ1§71/161,mb4.1/27,MS3.1/6,16C-13D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.38**	**27**	P	Pn	16 36 17.9	+3.0
	SNR=79						
KSH	**Kashi**	**3.39**	**82**	Pn	**Pn**	**16 36 14.5**	**-0.3**
KSH				smax	smax		
	comp=N,620nm,0.4s						
KSH				smax	smax		
	comp=E,450nm,0.8s						
UCH	**Uchtor**	**3.79**	**34**	P	Pn	16 36 24.6	+4.1
	SNR=13						
EKS2	**Erkin-Say**	**3.88**	**24**	*e*PN	Pn	16 36 24.7	+3.2
EKS2				*e*S	**Sb**	**16 37 15.2**	**-2.0**
EKS2	**Erkin-Say**	**3.88**	**24**	*e*P	Pn	16 36 24.7	+3.2
EKS2				*e*S	**Sb**	**16 37 15.2**	**-2.0**
EKS2	**Erkin-Say**	**3.88**	**24**	P	Pn	16 36 25.0	+3.5
	SNR=105						
KZA	**Kyzart**	**4.03**	**42**	P	Pn	16 36 27.4	+3.6
	SNR=207						
KK31	**Karatay Array**	**4.05**	**348**	⇑Pn	Pn	16 36 26.7	+3.0
	comp=E,23nm,0.3s						
KK31				⇑Sn	**Sn**	**16 37 14.1**	**+3.3**
	comp=E,56nm,0.5s						
KK31				⇓Lg	Lg	16 37 24.0	
	comp=E,177nm,0.8s,baz=168,slow=31,SNR=6.7						
KKAR	**Karatay Array**	**4.05**	**348**	*e*PN	**Pn**	**16 36 26.0**	**+2.3**
KKAR				*e*S	**Sn**	**16 37 14.2**	**+3.4**
KKAR	**Karatay Array**	**4.05**	**348**	*e*P	**Pn**	**16 36 26.0**	**+2.3**
KKAR				*e*S	**Sn**	**16 37 14.2**	**+3.4**
AAK	**Ala-Archa**	**4.11**	**31**	*c iP*N	Pn	16 36 28.4	+3.7
AAK	**Ala-Archa**	**4.11**	**31**	*e*P	Pn	16 36 28.3	+3.6
AAK				Sn	**Sb**	**16 37 19.8**	**-4.2**
AAK	**Ala-Archa**	**4.11**	**31**	Pn	Pn	16 36 28.5	+3.8
	comp=E,29nm,0.3s,baz=201,slow=6.2,SNR=143						
AAK				Sn	**Sb**	**16 37 19.8**	**-4.2**
	comp=E,13nm,0.3s,baz=336,slow=21,SNR=8.1						
KBK	**Karagaybulak**	**4.32**	**35**	P	Pn	16 36 31.6	+4.0
	SNR=85						
FRU	**Bishkek**	**4.33**	**31**	*e*PN	Pn	16 36 32.0	+4.4
FRU				*i*		16 36 43.5	
FRU				*i* S	**Sb**	**16 37 26.0**	**-4.1**
FRU				*i*		16 37 39.0	
FRU				pmax	pmax		
	comp=Z,190nm,1.8s						
FRU				pmax	pmax		
	comp=E,550nm,1.8s						
CHMS	**Chumysh**	**4.52**	**30**	P	Pn	16 36 34.1	+3.8
	SNR=110						
ULHL	**Ulahol**	**4.68**	**47**	P	Pn	16 36 35.9	+3.3
	SNR=19						
TKM2	**Tokmak 2**	**4.83**	**37**	⇓Pn	Pn	16 36 38.

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PYUN				*e*S	Sn	16 41 16.4	-11
DANN	**Dangsing**	**14.74**	**133**	*e*P	Pn	16 38 49.1	-1.4
AKTO	**Aktyubinsk**	**14.84**	**324**	⇑Pn	**Pn**	**16 38 50.1**	**-1.3**
	comp=Z,3.1nm,0.6s						
AKTO				⇓Sn	**Sn**	**16 41 30.7**	**-4.6**
	comp=Z,3.1nm,0.7s						
AKTO	**Aktyubinsk**	**14.84**	**324**	P	**Pn**	**16 38 49.6**	**-1.8**
AKTO						16 41 32.1	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				smax	smax		
	comp=N,1.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,89nm,19.9s						
AKTO	**Aktyubinsk**	**14.84**	**324**	Pn	**Pn**	**16 38 49.6**	**-1.8**
AKTO				Sn	**Sn**	**16 41 32.1**	**-3.1**
AKTO	**Aktyubinsk**	**14.84**	**324**	Pn	**Pn**	**16 38 49.6**	**-1.8**
	comp=Z,0.8nm,0.3s,baz=133,slow=16,SNR=16						
AKTO				Sn	**Sn**	**16 41 32.1**	**-3.1**
	comp=Z,0.5nm,0.3s,baz=0.0,slow=20,SNR=8.7						
AKTO				LR	LR	16 45 03.7	
	comp=Z,89nm,19.9s,baz=314,slow=39						
KOLN	**Koldanda**	**15.10**	**135**	*e*P	**Pn**	**16 38 53.5**	**-1.7**
	comp=Z,9.4nm,0.5s						
KKN	**Kakani**	**16.04**	**131**	*e*P	Pn	16 39 04.2	-3.3
	comp=Z,11nm,0.5s						
PKIN	**Phulchoki**	**16.26**	**131**	*e*P	Pn	16 39 07.6	-2.8
	comp=Z,8.6nm,0.4s						
PKI	**Pulchoki**	**16.28**	**131**	*e*P	**Pn**	**16 39 08.9**	**-1.7**
	comp=Z,13nm,0.5s						
GUN	**Gumba**	**16.30**	**129**	*e*P	**Pn**	**16 39 09.0**	**-2.0**
	comp=Z,11nm,0.4s						
ZAA0	**Zalesovo Array**	**17.32**	**27**	*e*P	**Pn**	**16 39 23.1**	**-0.3**
ZALV	**Zalesovo Beam**	**17.32**	**27**	P	**Pn**	**16 39 22.7**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ZALV	**Zalesovo Beam**	**17.32**	**27**	P	**Pn**	**16 39 22.7**	**-0.6**
ZALV	**Zalesovo Beam**	**17.32**	**27**	P	**Pn**	**16 39 22.7**	**-0.6**
	comp=Z,2.9nm,0.3s,baz=227,slow=13,SNR=68						
RAMN	**Ramite**	**17.44**	**130**	*e*P	**Pn**	**16 39 23.0**	**-2.3**
	comp=Z,14nm,0.6s						
NVS	**Novosibirsk**	**17.55**	**23**	*e*P	**Pn**	**16 39 25.9**	**-0.2**
NVS				pmax	pmax		
	comp=Z,11nm,0.9s						
NVS				pmax	pmax		
	comp=N,5.0nm,0.8s						
TAPN	**Taplejung**	**17.83**	**126**	*e*P	Pn	16 39 27.1	-3.1
ODAN	**Odare**	**17.99**	**128**	*e*P	**Pn**	**16 39 29.8**	**-2.2**
	comp=N,10nm,0.5s						
ARU	**Arti**	**19.34**	**338***d*	*i*P	**P**	**16 39 47.8**	**+0.9**
ARU				S	**S**	**16 43 26.0**	**+1.1**
ARU				pmax	pmax		
	comp=Z,13nm,1.7s						
GNI	**Garni**	**20.71**	**281**	*e*P	**P**	**16 40 02.5**	**+0.5**
	comp=Z,16nm,1.0s						
GNI	**Garni**	**20.71**	**281**	P	Pn	16 40 05.5	+1.0
	comp=Z,2.2nm,0.4s,baz=75,slow=3.4,SNR=5.6						
GNI				LR	LR	16 49 37.6	
	comp=Z,25nm,19.8s,baz=100,slow=41						
ZEI	**Tsey**	**21.22**	**289**	*e*P	P	16 40 13.6	+6.0
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA	**Gaotai**	**21.79**	**80**	*e*P	**P**	**16 40 16.3**	**+2.6**
GTA				pP	**pP**	**16 40 20.5**	**+1.9**
GTA				sP	**sP**	**16 40 23.0**	**+2.2**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KBZ	**Khabaz**	**21.97**	**291**	P	**P**	**16 40 16.0**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KBZ				MLR	MLR		
	comp=Z,36nm,18.1s						
KBZ	**Khabaz**	**21.97**	**291**	P	**P**	**16 40 16.0**	**+0.6**
KBZ	**Khabaz**	**21.97**	**291**	P	**P**	**16 40 16.0**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=132,slow=4.4,SNR=3.9						
KBZ				LR	LR	16 50 32.5	
	comp=Z,36nm,18.1s,baz=259,slow=41						
KIV	**Kislovodsk**	**22.13**	**292**⇓	*e*P	P	16 40 23.2	+5.9
KIV				*e*S	**S**	**16 44 22.8**	**+2.3**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZAK	**Zakamensk**	**24.94**	**53**	*e*P	**P**	**16 40 45.7**	**+0.9**
ZAK				*e*		16 45 09.9	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
LZH	**Lanzhou**	**25.63**	**87**	*e*P	**P**	**16 40 52.5**	**+1.2**
LZH				pP	**pP**	**16 40 57.0**	**+0.5**
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
SONM	**Songino Array**	**26.50**	**59**	P	**P**	**16 40 59.9**	**+0.9**
SONM	**Songino Array**	**26.50**	**59**	P	**P**	**16 40 59.9**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=267,slow=8.9,SNR=5.5						
OBN	**Obninsk**	**28.32**	**316**⇓	*e*P	**P**	**16 41 15.1**	**0.0**
OBN				*e**PP	**PnPn**	**16 42 02.8**	**-1.0**
OBN				*e*		16 42 18.1	
OBN				*e*S	**S**	**16 45 57.3**	**-3.3**
OBN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BR131	**Keskin Array S**	**29.21**	**283**	*e*P	**P**	**16 41 24.4**	**+1.1**
	comp=Z,0.9nm,0.6s						
BRTR	**Keskin Array B**	**29.21**	**283**	P	**P**	**16 41 24.8**	**+1.4**
BRTR	**Keskin Array B**	**29.21**	**283**	P	**P**	**16 41 24.8**	**+1.4**
	comp=Z,1.3nm,0.7s,baz=88,slow=6.0,SNR=9.0						
HHC	**Hu-ho-hao-te**	**30.46**	**74**	*e*P	P	16 41 32.0	-2.4
HHC				S	S	16 46 28.0	-6.8
HHC				pmax	pmax		
	comp=Z,200nm,5.9s						
AKASG	**Malin Array Be**	**31.75**	**305**	*e*P	**P**	**16 41 45.6**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**31.75**	**305**	P	**P**	**16 41 45.5**	**0.0**
AKASG	**Malin Array Be**	**31.75**	**305**	P	**P**	**16 41 45.5**	**0.0**
	comp=Z,0.6nm,0.3s,baz=80,slow=8.0,SNR=4.4						
FINES	**FINESS Array B**	**35.61**	**324**	P	**P**	**16 42 19.1**	**+0.2**
FINES	**FINESS Array B**	**35.61**	**324**	P	**P**	**16 42 19.1**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=112,slow=11,SNR=8.9						
FINES				LR	LR	16 57 54.2	
	comp=Z,38nm,19.6s,baz=125,slow=38						
KOLS	**Kolonicke sedl**	**36.23**	**302**	*e*P	**P**	**16 42 26.0**	**+1.6**
KOLS	**Kolonicke sedl**	**36.23**	**302**	*e*P	**P**	**16 42 26.0**	**+1.6**
CRVS	**Cervenica-Dubn**	**36.77**	**302**	*e*P	P	16 42 42.2	+13
CRVS	**Cervenica-Dubn**	**36.77**	**302**	*e*	P	16 42 42.2	+13
VYHS	**Vyhne**	**38.54**	**302**	*e*P	**P**	**16 42 46.4**	**+2.4**
VYHS	**Vyhne**	**38.54**	**302**	*e*P	**P**	**16 42 46.4**	**+2.4**
ARCES	**ARCESS Array B**	**38.92**	**336**	P	**P**	**16 42 47.4**	**+0.5**
ARCES	**ARCESS Array B**	**38.92**	**336**	P	**P**	**16 42 47.4**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=110,slow=7.9,SNR=13						
ARCES				LR	LR	16 59 46.6	
	comp=Z,54nm,20.6s,baz=153,slow=38						
GERES	**GERESS Array B**	**41.86**	**303**	P	**P**	**16 43 13.1**	**+1.5**
GERES	**GERESS Array B**	**41.86**	**303**	P	**P**	**16 43 13.1**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=64,slow=9.0,SNR=7.0						
GERES				LR	LR	17 02 11.2	
	comp=Z,44nm,19.0s,baz=216,slow=38						
KHC	**Kasperske Hory**	**41.90**	**303**	*e*P	**P**	**16 43 13.0**	**+1.1**
KHC	**Kasperske Hory**	**41.90**	**303**	*e*P	**P**	**16 43 13.0**	**+1.1**
NB2	**NORSAR Subarra**	**42.60**	**321**	P	**P**	**16 43 17.3**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=92,slow=8.6						
NOA	**NORSAR Array B**	**42.60**	**321**	P	**P**	**16 43 17.3**	**-0.2**
NOA	**NORSAR Array B**	**42.60**	**321**	P	**P**	**16 43 17.3**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=96,slow=7.7,SNR=4.1						
NOA				LR	LR	17 02 10.1	
	comp=Z,20nm,21.8s,baz=125,slow=38						
HINF	**Hinteralfeld**	**46.55**	**303**	*e*P	**P**	**16 43 49.5**	**+0.4**
HINF	**Hinteralfeld**	**46.55**	**303**	*e*P	**P**	**16 43 49.5**	**+0.4**
HINF	**Hinteralfeld**	**46.55**	**303**	*e*P	**P**	**16 43 49.5**	**+0.4**
HAU	**Haudompre**	**46.83**	**303**	*e*P	**P**	**16 43 52.0**	**+0.7**
HAU	**Haudompre**	**46.83**	**303**	*e*P	**P**	**16 43 52.0**	**+0.7**
HAU	**Haudompre**	**46.83**	**303**	*e*P	**P**	**16 43 52.0**	**+0.7**
LPG	**La Plagne**	**47.23**	**300**	*e*P	**P**	**16 43 55.9**	**+1.1**
	comp=Z,17nm,1.0s						
LPG	**La Plagne**	**47.23**	**300**	*e*P	**P**	**16 43 55.9**	**+1.1**
LPG				pmax	pmax		
	comp=Z,17nm,1.0s						
LPG	**La Plagne**	**47.23**	**300**	*e*P	**P**	**16 43 55.9**	**+1.1**
	comp=Z,17nm,1.0s						
LPL	**La Plagne**	**47.23**	**300**	*e*P	**P**	**16 43 55.8**	**+1.1**
	comp=Z,11nm,0.8s						
LPL	**La Plagne**	**47.23**	**300**	*e*P	**P**	**16 43 55.8**	**+1.1**
LPL				pmax	pmax		
	comp=Z,11nm,0.8s						
LPL	**La Plagne**	**47.23**	**300**	*e*P	**P**	**16 43 55.8**	**+1.1**
	comp=Z,11nm,0.8s						
MBDF	**Montbardon**	**47.44**	**299**	*e*P	**P**	**16 43 57.3**	**+1.1**
MBDF	**Montbardon**	**47.44**	**299**	*e*P	**P**	**16 43 57.3**	**+1.1**
MBDF	**Montbardon**	**47.44**	**299**	*e*P	**P**	**16 43 57.3**	**+1.1**
BAIF	**Baives**	**47.69**	**306**	*e*P	**P**	**16 43 58.3**	**+0.4**
BAIF	**Baives**	**47.69**	**306**	*e*P	**P**	**16 43 58.3**	**+0.4**
BAIF	**Baives**	**47.69**	**306**	*e*P	**P**	**16 43 58.3**	**+0.4**
SMF	**Signal de Mont**	**48.84**	**302**	*e*P	**P**	**16 44 07.2**	**+0.3**
SMF	**Signal de Mont**	**48.84**	**302**	*e*P	**P**	**16 44 07.2**	**+0.3**
SMF	**Signal de Mont**	**48.84**	**302**	*e*P	**P**	**16 44 07.2**	**+0.3**
AVF	**Avril sur Loir**	**49.12**	**302**	*e*P	**P**	**16 44 09.4**	**+0.4**
	comp=Z,14nm,0.9s						
AVF	**Avril sur Loir**	**49.12**	**302**	*e*P	**P**	**16 44 09.4**	**+0.4**
AVF				pmax	pmax		
	comp=Z,14nm,0.9s						
AVF	**Avril sur Loir**	**49.12**	**302**	*e*P	**P**	**16 44 09.4**	**+0.4**
	comp=Z,14nm,0.9s						
LASF	**Ste Croix**	**49.62**	**299**	*e*P	**P**	**16 44 14.0**	**+1.1**
LASF	**Ste Croix**	**49.62**	**299**	*e*P	**P**	**16 44 14.0**	**+1.1**
TCF	**Toulx Ste Croi**	**50.02**	**302**	*e*P	**P**	**16 44 16.7**	**+0.8**
	comp=Z,8.3nm,0.8s						
TCF	**Toulx Ste Croi**	**50.02**	**302**	*e*P	**P**	**16 44 16.7**	**+0.8**
TCF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TCF	**Toulx Ste Croi**	**50.02**	**302**	*e*P	**P**	**16 44 16.7**	**+0.8**
	comp=Z,8.3nm,0.8s						
CAF	**Calviac**	**50.55**	**300**	*e*P	**P**	**16 44 21.0**	**+1.0**
CAF	**Calviac**	**50.55**	**300**	*e*P	**P**	**16 44 21.0**	**+1.0**
CAF	**Calviac**	**50.55**	**300**	*e*P	**P**	**16 44 21.0**	**+1.0**
LDF	**La Druitiere**	**50.82**	**306**	*e*P	**P**	**16 44 23.0**	**+1.1**
LDF	**La Druitiere**	**50.82**	**306**	*e*P	**P**	**16 44 23.0**	**+1.1**
LDF	**La Druitiere**	**50.82**	**306**	*e*P	**P**	**16 44 23.0**	**+1.1**
MTLF	**Montolieu**	**50.99**	**298**	*e*P	**P**	**16 44 24.2**	**+0.9**
MTLF	**Montolieu**	**50.99**	**298**	*e*P	**P**	**16 44 24.2**	**+0.9**
MTLF	**Montolieu**	**50.99**	**298**	*e*P	**P**	**16 44 24.2**	**+0.9**
GRR	**Gorron**	**51.35**	**306**	*e*P	**P**	**16 44 25.9**	**+0.1**
GRR	**Gorron**	**51.35**	**306**	*e*P	**P**	**16 44 25.9**	**+0.1**
GRR	**Gorron**	**51.35**	**306**	*e*P	**P**	**16 44 25.9**	**+0.1**
LFF	**La Frestale**	**51.44**	**301**	*e*P	**P**	**16 44 27.1**	**+0.5**
LFF	**La Frestale**	**51.44**	**301**	*e*P	**P**	**16 44 27.1**	**+0.5**
LFF	**La Frestale**	**51.44**	**301**	*e*P	**P**	**16 44 27.1**	**+0.5**
MFF	**Saint Martin d**	**51.46**	**303**	*e*P	**P**	**16 44 27.7**	**+1.0**
MFF	**Saint Martin d**	**51.46**	**303**	*e*P	**P**	**16 44 27.7**	**+1.0**
MFF	**Saint Martin d**	**51.46**	**303**	*e*P	**P**	**16 44 27.7**	**+1.0**
MAT	**Matsushiro**	**51.56**	**71**	PKP	P	16 44 36.4	+8.7
MJAR	**Matsushiro Arr**	**51.57**	**71**	P	**P**	**16 44 26.2**	**-1.5**
MJAR	**Matsushiro Arr**	**51.57**	**71**	P	**P**	**16 44 26.2**	**-1.5**
	comp=Z,1.2nm,0.8s,baz=296,slow=11,SNR=4.6						
MJA0	**Matsu Arr-Jizo**	**51.59**	**71**	*e*P	**P**	**16 44 27.2**	**-0.7**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SGMF	**Saint Gilles**	**52.46**	**306**	*e*P	**P**	**16 44 35.3**	**+1.1**
SGMF	**Saint Gilles**	**52.46**	**306**	*e*P	**P**	**16 44 35.3**	**+1.1**
SGMF	**Saint Gilles**	**52.46**	**306**	*e*P	**P**	**16 44 35.3**	**+1.1**
BILL	**Bilibino**	**56.03**	**27**⇑	*e*P	P	16 44 54.1	-5.7
BILL				*e*		16 47 04.2	
BILL				pmax	pmax		
	comp=Z,15nm,1.4s						
COCO	**West Island**	**56.21**	**150**	*i* P	**P**	**16 45 02.5**	**+0.8**
ESDC	**Sonseca Array**	**56.70**	**297**	P	**P**	**16 45 05.2**	**+0.1**
ESDC	**Sonseca Array**	**56.70**	**297**	P	**P**	**16 45 05.2**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=57,slow=7.2,SNR=7.9						
TORD	**Torodi Ar. Bea**	**66.30**	**268**	P	**P**	**16 46 10.0**	**-0.2**
TORD	**Torodi Ar. Bea**	**66.30**	**268**	P	**P**	**16 46 10.0**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=50,slow=5.7,SNR=28						
INK	**Inuvik**	**71.22**	**10**	P	**P**	**16 46 40.9**	**+0.8**
INK	**Inuvik**	**71.22**	**10**	P	**P**	**16 46 40.9**	**+0.8**
	comp=Z,4.0nm,0.5s,baz=8.2,slow=6.9,SNR=18						
ILAR	**Eielson Array**	**72.11**	**16**	P	**P**	**16 46 45.5**	**0.0**
ILAR	**Eielson Array**	**72.11**	**16**	P	**P**	**16 46 45.5**	**0.0**
	comp=Z,1.3nm,0.9s,baz=320,slow=4.8,SNR=12						
YKA	**Yellowknife Ar**	**78.59**	**3**	P	**P**	**16 47 23.1**	**+0.3**
YKA	**Yellowknife Ar**	**78.59**	**3**	P	**P**	**16 47 23.1**	**+0.3**
	comp=Z,2.5nm,0.5s,baz=350,slow=5.6,SNR=60						
WRA	**Warramunga Arr**	**82.97**	**123**	P	**P**	**16 47 46.8**	**-0.1**
WRA	**Warramunga Arr**	**82.97**	**123**	P	**P**	**16 47 46.8**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=327,slow=4.9,SNR=8.5						
ASAR	**Alice Springs**	**85.36**	**125**	P	**P**	**16 47 59.0**	**0.0**
ASAR	**Alice Springs**	**85.36**	**125**	P	**P**	**16 47 59.0**	**0.0**
	comp=Z,1.0nm,0.7s,baz=313,slow=4.6,SNR=19						

DJA 29 16:44:09.5±3.4**, 9˚S**±26˚×**11˚3E**±1˚1**, h10km, M3.7**/6**, MLv3.7**/6**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.27**	**18**	P	Pn	16 44 32.3	-1.1
GMJI	**Gumukmas**	**1.27**	**18**	P	Pn	16 44 32.2	-1.2
	318nm,0.3s,19µm						
KRKI	**Karangkates**	**1.45**	**336**	P	Pn	16 44 36.0	+0.3
KRKI	**Karangkates**	**1.45**	**336**	P	Pn	16 44 35.8	+0.1
	1µm,0.3s,38µm						
BLJI	**Banyuglugur**	**1.82**	**18**	P	Pb	16 44 42.0	-0.9
PWJI	**Pagerwojo**	**1.90**	**320**	P	Pn	16 44 42.5	+0.5
PWJI	**Pagerwojo**	**1.90**	**320**	P	Pn	16 44 42.7	+0.7
	156nm,0.4s,6µm						
SJI	**Sawahan**	**2.15**	**324**	P	Pn	16 44 46.5	+0.9
SJI	**Sawahan**	**2.15**	**324**	P	Pn	16 44 46.3	+0.7
	81nm,0.4s,5µm						
IGBI	**Denpasar**	**2.18**	**72**	P	Pn	16 44 26.8	-19
PCJI	**Pacitan**	**2.25**	**305**	P	Pn	16 44 47.8	+1.0

IDC 29 16:48:20.6±1.8**, 2˚74N**×**125˚39E, h0km, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.3**/22**, mbtmp3.5**/3**, Error ellipse: s-maj=202.3km s-min=25.6km az=63.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.19**	**159**	P	P	16 53 38.4	-0.6
	0.7nm,0.9s,baz=339,slow=11,SNR=6.1						
STKA	**Stephens Creek**	**37.71**	**157**	P	P	16 55 39.0	+0.9
	1.4nm,0.8s,baz=343,slow=11,SNR=5.4						
MKAR	**Makanchi Array**	**57.62**	**326**	P	P	16 58 12.1	-0.5
	0.3nm,0.5s,baz=122,slow=8.2,SNR=7.8						

*CSEM **29** 16:56:44.5, 35˚16N×3˚91W, h1km, MD2.5, After CNRM*
CNRM 29 16:56:44.5, 35˚16N×**3˚91W, h1km, MD2.5, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPAL	**Palemas**	**0.07**	**338**	*i* P	Pg	16 56 45.0	-0.9
MPAL				*i* S	Sg	16 56 47.0	+0.1
TOU	**Touzarine**	**0.23**	**147**	*i* P	Pg	16 56 49.5	+0.3
TOU				*i* S	Sg	16 56 52.0	-0.4
ZAI	**Zaio**	**0.97**	**101**	*i* P	Pg	16 57 02.0	-1.3
ZAI				*i* S	Sg	16 57 16.0	0.0
TGT	**Taghat**	**1.44**	**221**	*i* P	Pn	16 57 10.0	-1.8
TGT				*i* S	Sg	16 57 29.0	-2.0
OLHC	**Oulhaca**	**2.04**	**87**	P	Pg	16 57 26.0	+2.3
OLHC	**Oulhaca**	**2.04**	**87**	P	Pg	16 57 26.0	+2.3

*CRAAG **29** 16:57:06.0, 36˚72N×0˚99E, Ml3.6*
*ISCJB **29** 16:57:08.3±0.4, 36˚73N±0˚02×1˚03E±0˚03, h10km, Error ellipse: s-maj=4.1km s-min=3.3km az=157.8*
*CSEM **29** 16:57:09.3±0.2, 36˚66N×1˚04E, h10km, mb4.1/17, Error ellipse: s-maj=5.2km s-min=3.6km az=63.0*
*MDD **29** 16:57:09.5±0.4, 36˚69N×1˚06E, h0km, mb4.1/17, Error ellipse: s-maj=6.2km s-min=3.8km az=76.0, PRXIMO*
ISC 29 16:57:08.5±0.8**, 36˚69N**±0˚04×**1˚07E**±0˚04**, h10km, n85,** σ**1s70**/109**, 2D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.54**	**137**	P	**Pg**	**16 57 20.0**	**+1.0**
EBNR	**Beni Rached**	**0.54**	**137**	P	**Pg**	**16 57 20.0**	**+1.0**
ECHF	**Ech Chlef**	**0.57**	**157**	P	**Pg**	**16 57 19.0**	**-0.6**
ECHF	**Ech Chlef**	**0.57**	**157**	P	**Pg**	**16 57 19.0**	**-0.6**
ECHA	**Ech Chlef**	**0.59**	**156**	P	**Pg**	**16 57 19.0**	**-0.8**
ECHA	**Ech Chlef**	**0.59**	**156**	P	**Pg**	**16 57 19.0**	**-0.8**
OKGL	**Djebel Kef Gue**	**0.73**	**208**	P	**Pb**	**16 57 23.9**	**+0.5**
	446nm,0.2s,SNR=7.9						
OKGL				S	**Sb**	**16 57 33.2**	**-0.2**
	3µm,0.3s,SNR=7.9						
OKGL	**Djebel Kef Gue**	**0.73**	**208**	P	**Pn**	**16 57 25.0**	**+0.1**
OKGL	**Djebel Kef Gue**	**0.73**	**208**	P	**Pb**	**16 57 23.9**	**+0.5**
	446nm,0.2s,SNR=7.9						
OKGL				S	**Sb**	**16 57 33.2**	**-0.2**
	3µm,0.3s,SNR=7.9						
EANR	**'Ain N'Sour**	**0.73**	**178**	P	**Pg**	**16 57 23.0**	**+0.3**
EANR	**'Ain N'Sour**	**0.73**	**178**	P	**Pg**	**16 57 23.0**	**+0.3**
EANR	**'Ain N'Sour**	**0.73**	**178**	P	**Pg**	**16 57 23.0**	**+0.3**
OJBR	**Djebel Berber**	**1.25**	**208**	P	Pn	16 57 24.0	-8.0
OJBR	**Djebel Berber**	**1.25**	**208**	P	Pn	16 57 24.0	-8.0
ETRT	**Tiaret**	**1.31**	**172**	P	**Pb**	**16 57 33.5**	**+0.3**
ETRT	**Tiaret**	**1.31**	**172**	P	**Pb**	**16 57 33.5**	**+0.3**
ETRT	**Tiaret**	**1.31**	**172**	P	**Pb**	**16 57 33.5**	**+0.3**
EMHD	**Djebel Mahouad**	**1.59**	**107**	P	**Pb**	**16 57 39.0**	**+0.9**
EMHD	**Djebel Mahouad**	**1.59**	**107**	P	**Pb**	**16 57 39.0**	**+0.9**
EMHD	**Djebel Mahouad**	**1.59**	**107**	P	**Pb**	**16 57 39.0**	**+0.9**
ODJA	**Bouhanifia**	**1.68**	**217**	P	Pn	16 57 26.0	-12
ODJA	**Bouhanifia**	**1.68**	**217**	P	Pn	16 57 26.0	-12
EMUR	**La Murta**	**2.17**	**303**	P	**Pn**	**16 57 44.4**	**-0.4**
	8.3nm,0.2s,SNR=11						
EMUR				S	**Sn**	**16 58 09.6**	**-2.2**
	7.0nm,0.2s						
EMUR	**La Murta**	**2.17**	**303**	P	**Pn**	**16 57 44.4**	**-0.4**
	8.3nm,0.2s,SNR=11						
EMUR				S	**Sn**	**16 58 09.6**	**-2.2**
	7.0nm,0.2s						
EBEN	**Beniarda**	**2.26**	**333**	P	**Pn**	**16 57 46.4**	**+0.4**
	3.0nm,0.2s,SNR=20						
EBEN				S	**Sn**	**16 58 13.2**	**-0.8**
	3.1nm,0.2s						
EBEN	**Beniarda**	**2.26**	**333**	P	**Pn**	**16 57 46.4**	**+0.4**
	3.0nm,0.2s,SNR=20						
EBEN				S	**Sn**	**16 58 13.2**	**-0.8**
	3.1nm,0.2s						
EIBI	**Ibiza**	**2.35**	**5**	⇓P	**Pn**	**16 57 47.4**	**+0.3**
	6.9nm,0.2s,SNR=18						
EIBI				S	**Sn**	**16 58 13.1**	**-2.9**
	29nm,0.1s,SNR=10						
EIBI	**Ibiza**	**2.35**	**5**	P	**Pn**	**16 57 47.4**	**+0.3**
	6.9nm,0.2s,SNR=18						
ENIJ	**Nijar**	**2.64**	**277**	P	**Pn**	**16 57 51.9**	**+0.7**
	1.9nm,0.1s,SNR=7.9						
ENIJ				S	**Sn**	**16 58 25.0**	**+1.6**
	9.9nm,0.3s,SNR=7.9						
ENIJ	**Nijar**	**2.64**	**277**	P	**Pn**	**16 57 51.9**	**+0.7**
	1.9nm,0.1s,SNR=7.9						
ENIJ				S	**Sn**	**16 58 25.0**	**+1.6**
	9.9nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**2.85**	**314**	⇓P	**Pn**	**16 57 55.0**	**+0.9**
	10.0nm,0.3s,SNR=18						
ETOB				S	**Sn**	**16 58 27.3**	**-1.3**
	4.9nm,0.2s						
ETOB	**Tobarra**	**2.85**	**314**	P	**Pn**	**16 57 55.0**	**+0.9**
	10.0nm,0.3s,SNR=18						
ETOB				S	**Sn**	**16 58 27.3**	**-1.3**
	4.9nm,0.2s						
EHUE	**Huescar**	**3.13**	**292**	S	**Sn**	**16 58 37.0**	**+1.5**
	5.3nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**3.13**	**292**	S	**Sn**	**16 58 37.0**	**+1.5**
	5.3nm,0.2s,SNR=7.9						
EBER	**Berja**	**3.19**	**275**	P	**Pn**	**16 57 58.7**	**-0.1**
	2.2nm,0.2s,SNR=13						
EBER				S	**Sn**	**16 58 33.9**	**-3.0**
	9.6nm,0.3s						
EBER	**Berja**	**3.19**	**275**	P	**Pn**	**16 57 58.7**	**-0.1**
	2.2nm,0.2s,SNR=13						
EBER				S	**Sn**	**16 58 33.9**	**-3.0**
	9.6nm,0.3s						
EVIA	**Vianos**	**3.44**	**306**	P	**Pn**	**16 58 02.6**	**+0.4**
	6.2nm,0.2s,SNR=7.9						
EVIA				S	**Sn**	**16 58 41.8**	**-1.3**
	9.6nm,0.3s,SNR=7.9						
EVIA	**Vianos**	**3.44**	**306**	P	**Pn**	**16 58 02.6**	**+0.4**
	6.2nm,0.2s,SNR=7.9						
EVIA				S	**Sn**	**16 58 41.8**	**-1.3**
	9.6nm,0.3s,SNR=7.9						
EQES	**Quesada**	**3.49**	**290**	P	**Pn**	**16 58 04.5**	**+1.6**
	1.9nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**16 58 44.5**	**+0.2**
	9.9nm,0.2s,SNR=8.3						
EQES	**Quesada**	**3.49**	**290**	P	**Pn**	**16 58 04.5**	**+1.6**
	1.9nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**16 58 44.5**	**+0.2**
	9.9nm,0.2s,SNR=8.3						
EQUE	**Quentar**	**3.65**	**280**	S	**Sn**	**16 58 50.0**	**+1.7**
	3.5nm,0.1s,SNR=4.0						
EQUE	**Quentar**	**3.65**	**280**	S	**Sn**	**16 58 50.0**	**+1.7**
	3.5nm,0.1s,SNR=4.0						
EGUA	**Guajares**	**3.73**	**274**	S	**Sn**	**16 58 48.3**	**-1.7**
	8.2nm,0.3s,SNR=7.9						
EGUA	**Guajares**	**3.73**	**274**	S	**Sn**	**16 58 48.3**	**-1.7**
	8.2nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**3.87**	**342**	P	**Pn**	**16 58 09.5**	**+1.4**
	3.4nm,0.1s,SNR=11						
EMOS				S	**Sn**	**16 58 49.1**	**-4.7**
	1.7nm,0.1s						
EMOS	**Mosqueruela**	**3.87**	**342**	P	**Pn**	**16 58 09.5**	**+1.4**
	3.4nm,0.1s,SNR=11						
ERON	**Agron**	**3.92**	**276**	P	**Pn**	**16 58 10.5**	**+1.6**
	0.9nm,0.2s,SNR=7.9						
ERON	**Agron**	**3.92**	**276**	P	**Pn**	**16 58 10.5**	**+1.6**
	0.9nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	**4.14**	**292**	P	**Pn**	**16 58 13.3**	**+1.6**
	1.8nm,0.2s,SNR=7.9						
EBAN				S	**Sn**	**16 58 59.5**	**-0.7**
	3.2nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	**4.14**	**292**	P	**Pn**	**16 58 13.3**	**+1.6**
	1.8nm,0.2s,SNR=7.9						
EBAN				S	**Sn**	**16 58 59.5**	**-0.7**
	3.2nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**4.30**	**353**	P	**Pn**	**16 58 15.4**	**+1.4**
	1.7nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**4.30**	**353**	P	**Pn**	**16 58 15.4**	**+1.4**
	1.7nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**4.66**	**0**	P	**Pn**	**16 58 19.7**	**+0.7**
	1.4nm,0.1s,SNR=10.0						
EPOB				S	**Sn**	**16 59 09.0**	**-4.2**
	1.1nm,0.1s						
EPOB	**Poblet**	**4.66**	**0**	P	**Pn**	**16 58 19.7**	**+0.7**
	1.4nm,0.1s,SNR=10.0						
EMIJ	**Mijas**	**4.70**	**270**	P	**Pn**	**16 58 21.0**	**+1.5**
	0.7nm,0.1s,SNR=4.0						
EMIJ				S	**Sn**	**16 59 09.2**	**-4.8**
	1.0nm,0.3s,SNR=4.0						
EMIJ	**Mijas**	**4.70**	**270**	P	**Pn**	**16 58 21.0**	**+1.5**
	0.7nm,0.1s,SNR=4.0						
EADA	**Adamuz**	**4.73**	**290**	P	**Pn**	**16 58 20.1**	**+0.2**
	0.3nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**16 59 12.0**	**-2.9**
	4.8nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**4.73**	**290**	P	**Pn**	**16 58 20.1**	**+0.2**
	0.3nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**16 59 12.0**	**-2.9**
	4.8nm,0.3s,SNR=7.9						
ETOR	**Torete**	**4.80**	**330**	P	**Pn**	**16 58 24.0**	**+3.1**
	2.0nm,0.3s,SNR=7.9						
ETOR	**Torete**	**4.80**	**330**	P	**Pn**	**16 58 24.0**	**+3.1**
	2.0nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**4.96**	**308**	P	**Pn**	**16 58 23.3**	**+0.2**
	6.9nm,0.2s,baz=120,slow=12,SNR=14						
ESDC	**Sonseca Array**	**4.96**	**308**	P	**Pn**	**16 58 23.3**	**+0.2**
	6.9nm,0.2s,slow=12,SNR=14						
CFON	**Fontmartina**	**5.18**	**11**	P	**Pn**	**16 58 26.8**	**+0.7**
	3.2nm,0.2s,SNR=8.8						
CFON				S	**Sn**	**16 59 21.3**	**-4.7**
	2.8nm,0.2s,SNR=4.0						
CFON	**Fontmartina**	**5.18**	**11**	P	**Pn**	**16 58 26.8**	**+0.7**
	3.2nm,0.2s,SNR=8.8						
EMIR	**Miracle**	**5.23**	**4**	P	**Pn**	**16 58 28.4**	**+1.6**
	7.5nm,0.2s,SNR=7.5						
EMIR				S	**Sn**	**16 59 26.0**	**-1.2**
	2.4nm,0.3s,SNR=4.0						
EMIR	**Miracle**	**5.23**	**4**	P	**Pn**	**16 58 28.4**	**+1.6**
	7.5nm,0.2s,SNR=7.5						
CSOR	**Sort**	**5.68**	**0**	P	**Pn**	**16 58 34.5**	**+1.4**
	4.7nm,0.2s,SNR=11						
CSOR				S	**Sn**	**16 59 37.6**	**-0.8**
	3.9nm,0.4s						
CSOR	**Sort**	**5.68**	**0**	P	**Pn**	**16 58 34.5**	**+1.4**
	4.7nm,0.2s,SNR=11						
CSOR				S	**Sn**	**16 59 37.6**	**-0.8**
	3.9nm,0.4s						
GUD	**Guadarrama**	**5.69**	**316**	P	**Pn**	**16 58 33.8**	**+0.7**
	1.0nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**5.69**	**316**	P	**Pn**	**16 58 33.8**	**+0.7**
	1.0nm,0.3s,SNR=7.9						
CLLI	**Llivia**	**5.83**	**7**	P	**Pn**	**16 58 36.9**	**+1.8**
	0.7nm,0.2s,SNR=7.9						
CLLI	**Llivia**	**5.83**	**7**	P	**Pn**	**16 58 36.9**	**+1.8**
	0.7nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**6.27**	**282**	P	**Pn**	**16 58 41.0**	**0.0**
	0.2nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**16 59 48.5**	**-4.3**
	1.1nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**6.27**	**282**	P	**Pn**	**16 58 41.0**	**0.0**
	0.2nm,0.1s,SNR=7.9						

IEPA	**Eparoz**	**6.35**	**344**	P	Pn	16 58 45.8	+3.7
	1.4nm,0.2s,SNR=7.9						
IELO	**Elcoad**	**6.40**	**345**	P	**Pn**	**16 58 45.1**	**+2.2**
	0.4nm,0.2s,SNR=7.9						
IELO	**Elcoad**	**6.40**	**345**	P	**Pn**	**16 58 45.1**	**+2.2**
	0.4nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**7.39**	**334**	P	**Pn**	**16 58 58.6**	**+2.2**
	3.1nm,0.3s,SNR=8.9						
ELAN	**Lanestosa**	**7.39**	**334**	P	**Pn**	**16 58 58.6**	**+2.2**
	3.1nm,0.3s,SNR=8.9						
MVO	**Moncorvo**	**7.73**	**308**	P	**Pn**	**16 59 01.4**	**+0.2**
	1.0nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**7.73**	**308**	P	**Pn**	**16 59 01.4**	**+0.2**
	1.0nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**8.01**	**313**	P	**Pn**	**16 59 05.9**	**+0.9**
	1.5nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**8.01**	**313**	P	**Pn**	**16 59 05.9**	**+0.9**
	1.5nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**8.18**	**326**	P	**Pn**	**16 59 10.2**	**+3.0**
	0.5nm,0.3s,SNR=4.0						
EARI	**Arriondas**	**8.18**	**326**	P	**Pn**	**16 59 10.2**	**+3.0**
	0.5nm,0.3s,SNR=4.0						

IDC 29 17:02:45.7±8.7, 20°55S×67°82W, h179km±76km, mb3.3/1, mb1 3.1/2, mb1mx2.9/17, mbtmp3.0/2, Error ellipse: s-maj=122.6km s-min=87.4km az=91.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.25**	**356**	P	Pn	17 03 50.5	-0.2
	0.6nm,0.3s,baz=178,slow=6.7,SNR=13						
LPAZ				S	Sn	17 04 41.7	+0.1
	0.1nm,0.3s,baz=23,slow=8.4,SNR=1.6						
TORD	**Torodi Ar. Bea**	**76.08**	**70**	P	P	17 14 14.1	+0.1
	0.7nm,0.8s,baz=257,slow=4.7,SNR=7.0						
MKAR	**Makanchi Array**	**144.27**	**36**	PKP	PKPdf	17 21 59.7	-0.6
	0.1nm,0.5s,baz=282,slow=1.3,SNR=3.5						

NIED ***29*** *17:21:00,23.90N×123.40E,h35km,Mw5.1 Best double couple: M0 4.22000×10^16 NP1:φ52.00000°,δ70.00000°, λ70.00000°. NP2:φ280.00000°,δ28.00000°,λ134.00000°.*

DJA ***29*** *17:21:53.8±0.6,24.7°N±7.7°×12.4°E±.7°,h10km,M5.0/10, mB5.4/3,mb4.8/10,MLv5.1/1,Mw(mB)4.8/3*

IDC ***29*** *17:21:53.5±0.5,23.95N×123.41E,h0km,mb4.6/26, mb1 4.7/27,mb1mx4.7/31,mbtmp4.6/27,ML3.9/1,MS4.3/25, Ms1 4.3/25,ms1mx4.2/41,Error ellipse: s-maj=17.0km s-min=12.1km az=68.0*

BJI ***29*** *17:21:54.2,23.72N×123.60E,h32km,mB4.8/41,mb4.7/52, ML4.5/6,Ms4.8/61,Ms7 4.7/56*

JMA ***29*** *17:21:57.7±0.2,23.86N×123.37E,h27km±3km,M5.2*

JMA Felt II J1.

ISCJB ***29*** *17:21:57.9±0.3,23.91N±0.02×123.36E±0.02,h38km±2km, mb4.8/148,MS4.5/48,Error ellipse: s-maj=4.2km s-min=2.6km az=164.0*

MOS ***29*** *17:21:57.4±1.1,23.99N×123.38E,h33km,mb5.1/60, MS4.6/17,Error ellipse: s-maj=8.2km s-min=4.5km az=116.6*

NEIC ***29*** *17:21:58.7±1.3,23.94N×123.36E,h33km±9km,mb4.9/65, MW5.0(NIED),Error ellipse: s-maj=5.6km s-min=4.5km az=142.0*

TEH ***29*** *17:21:59.0,23.94N×123.30E,h29km,ML4.9*

GCMT ***29*** *17:22:00.3±0.2,23.71N×123.38E,h33km±1km,MW5.1, Moment Tensor Solution. s55,c79; s70,c115; Moment tensor: Scale 10^16Nm; Mrr2.89±.16; Mθθ-3.04±.11; Mφφ0.15±.12; Mrθ2.41±.14; Mrφ-1.71±.08; Mθφ2.67±.18; Best double couple: M0 5.00000×10^16 NP1:φ269.00000°, δ26.00000°,λ129.00000°. NP2:φ47.00000°,δ70.00000°, λ73.00000°. Principal axes: T 4.7300, Plg61.0000°, Azm291.0000°; N 0.4500, Plg16.0000°, Azm53.0000°; P -5.1800, Plg23.0000°, Azm151.0000°; Data Used: II IU IC G CN.*

SZGRF ***29*** *17:22:06.8,25.19N×122.71E,h33km,mb4.8,MS4.5, Taiwan region*

ISC 29 17:21:58.3±0.4, 23°90N±0.03×123°37E±0.02, h29km±2km, h28km:pP-P,n464,σ1$44/526,mb4.9/147,MS4.6/48, 40C-17D,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.42**	**68**	P	**Pb**	**17 22 06.9**	**-0.6**
HATJ				S	**Sb**	**17 22 13.6**	**-0.1**
IRIF	**Iriomote-Funau**	**0.54**	**37**	P	**Pb**	**17 22 08.8**	**-0.6**
IRIF				S	**Sb**	**17 22 17.0**	**+0.1**
YOJ	**Yonaguni jima**	**0.65**	**329**	P	**Pb**	**17 22 11.0**	**-0.1**
YOJ				S	**Sb**	**17 22 19.5**	**-0.4**
JKRS	**Kuro-shima**	**0.67**	**60**	P	**Pb**	**17 22 11.1**	**-0.4**
JKRS				S	**Sn**	**17 22 21.3**	**-0.1**
JIJ	**Ishigaki jima**	**0.84**	**57**	P	**Pn**	**17 22 13.3**	**-0.9**
JIJ				S	**Sb**	**17 22 25.2**	**-0.1**
JTJ	**Tarama**	**1.42**	**58**	P	**Pn**	**17 22 22.3**	**+0.1**
JTJ				S	**Sb**	**17 22 41.2**	**-0.6**
NACB	**Ninganchiao**	**1.65**	**280**	*e*Pn	**Pn**	**17 22 24.6**	**-0.8**
YULB	**Yu-li**	**1.97**	**256**	*e*Pn	**Pn**	**17 22 28.2**	**-1.5**
YULB				*e*Sn	**Sn**	**17 22 49.9**	**-3.6**
JMJ	**Miyako jima 2**	**1.97**	**62**	P	**Pb**	**17 22 31.9**	**-1.7**
YHNB	**Yeheng**	**1.98**	**293**	*e*Pn	**Pn**	**17 22 30.9**	**+0.9**
TATO	**Taipei**	**2.02**	**302**	*e*Pn	**Pn**	**17 22 31.1**	**+0.6**
JOGS	**Gusukube**	**2.04**	**65**	P	**Pn**	**17 22 32.0**	**+1.3**
SSLB	**Suanglung**	**2.22**	**268**	*e*Pn	**Pn**	**17 22 32.3**	**-0.9**
TWG	**Pinlang**	**2.37**	**244**	⇑*e*Pn	**Pn**	**17 22 33.8**	**-1.5**
TPUB	**Ta-pu**	**2.59**	**257**	⇑*e*Pn	**Pn**	**17 22 39.0**	**+0.7**
TPUB				*e*Sn	**Sn**	**17 23 07.1**	**-1.6**
JKE	**Kume jima 2**	**3.92**	**51**	P	**Pn**	**17 22 56.8**	**+0.2**
JKE				S	**Sn**	**17 23 43.1**	**+1.4**
JAGN	**Aguni-jima**	**4.41**	**52**	P	**Pn**	**17 23 03.2**	**-0.1**
QZH	**Quanzhou**	**4.48**	**284**	Pn	**Pn**	**17 23 06.3**	**+2.0**
QZH				Sn	**Sn**	**17 23 54.8**	**-0.6**
QZH				smax	smax		
	comp=N,1μm,0.9s						
QZH				smax	smax		
	comp=E,870nm,1.0s						
QZH				LR	LR		
	comp=N,6μm,10.2s						
QZH				LR	LR		
	comp=E,23μm,18.6s						
QZH				LR	LR		
	comp=Z,18μm,15.4s						
JJT2	**Tamagusuku 2**	**4.55**	**60**	P	**Pn**	**17 23 07.3**	**+2.0**
JIH	**Iheya**	**5.19**	**52**	P	**Pn**	**17 23 15.5**	**+1.4**
JIH				S	**Sn**	**17 24 14.5**	**+1.5**
JOW	**Kunigami**	**5.31**	**56**	*e*Pn	Pn	17 23 11.0	-4.7
	comp=Z,25nm,0.4s						
JOW	**Kunigami**	**5.31**	**56**	P	**Pn**	**17 23 14.7**	**-1.0**
JOW				S	**Sn**	**17 24 19.2**	**+3.3**
JTK	**Tokunoshima**	**6.34**	**51**	P	**Pn**	**17 23 28.2**	**-1.7**
JTK				S	**Sn**	**17 24 41.6**	**+0.3**
JAMN	**Amaminishikomi**	**6.78**	**49**	P	**Pn**	**17 23 33.3**	**-2.5**
JAM	**Amami Oshima**	**7.18**	**50**	P	**Pn**	**17 23 39.2**	**-2.1**
JAM				*e*S	**Sn**	**17 25 04.5**	**+2.6**
JMZ	**Minamidaito 2**	**7.38**	**73**	P	**Pn**	**17 23 41.0**	**-3.1**
SSE	**Sheshan**	**7.43**	**345**	P	**Pn**	**17 23 45.5**	**+0.8**
SSE				S	**Sn**	**17 25 10.5**	**+2.5**
SSE				pmax	pmax		
	comp=Z,200nm,0.8s						
SSE				LR	LR		
	comp=N,3μm,13.9s						
SSE				LR	LR		
	comp=E,2μm,13.9s						
SSE				LR	LR		
	comp=Z,5μm,13.6s						
NJ2	**Nanjing**	**9.05**	**335**	*e*P	**Pn**	**17 24 08.0**	**+1.0**
NJ2				pP		17 24 15.0	
NJ2				sP		17 24 22.5	
NJ2				S	**Sn**	**17 25 52.5**	**+4.6**
NJ2				sS		17 26 02.5	
NJ2				pmax	pmax		
	comp=Z,110nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,240nm,10.9s						
NJ2				LR	LR		
	comp=N,3μm,14.5s						
NJ2				LR	LR		
	comp=E,2μm,12.4s						
NJ2				LR	LR		
	comp=Z,4μm,14.7s						
GZH	**Guangzhou**	**9.24**	**267**	P	Pn	17 24 06.3	-3.4
GZH				S	**Sn**	**17 25 49.5**	**-3.2**
GZH				smax	smax		
	comp=N,140nm,1.0s						
GZH				smax	smax		
	comp=E,170nm,1.0s						
TGY	**Tagaytay City**	**10.02**	**194**	Pn	**Pn**	**17 24 22.4**	**+2.0**
TGY	**Tagaytay City**	**10.02**	**194**	Pn	**Pn**	**17 24 22.4**	**+2.0**
	baz=279,slow=16,SNR=3.3						
WHN	**Wuhan**	**10.40**	**311**	P	**Pn**	**17 24 27.5**	**+2.0**
WHN				S	**Sn**	**17 26 24.5**	**+3.4**
WHN				LR	LR		
	comp=N,5μm,12.0s						
WHN				LR	LR		
	comp=E,6μm,12.1s						
WHN				LR	LR		
	comp=Z,9μm,14.6s						
JNU	**Nakatsue**	**11.31**	**34**	Pn	**Pn**	**17 24 41.0**	**+3.0**
JNU	**Nakatsue**	**11.31**	**34**	Pn	**Pn**	**17 24 41.0**	**+3.0**
	comp=Z,0.3nm,0.3s,baz=152,slow=7.4,SNR=8.9						
TIA	**Tai'an**	**13.40**	**338**	P	Pn	17 25 09.8	+3.2
TIA				LR	LR		
	comp=N,3μm,14.2s						
TIA				LR	LR		
	comp=E,3μm,12.3s						
TIA				LR	LR		
	comp=Z,4μm,13.7s						
QIZ	**Qiongzhong**	**13.49**	**252**	P	**Pn**	**17 25 08.8**	**+0.9**
QIZ				S	**Sn**	**17 27 38.3**	**+1.3**
QIZ				pmax	pmax		
	comp=Z,29nm,1.5s						
QIZ				LR	LR		
	comp=N,630nm,21.7s						
QIZ				LR	LR		
	comp=E,580nm,15.9s						
QIZ				LR	LR		
	comp=Z,1μm,18.8s						
INCN	**Inchon**	**13.82**	**11**	Pn	**Pn**	**17 25 12.2**	**-0.2**
	comp=Z,48nm,1.0s						
KSAR	**Wonju Array Be**	**14.04**	**15**	Pn	**Pn**	**17 25 16.6**	**+1.3**
KSRS	**Korea Array**	**14.06**	**15**	Pn	**Pn**	**17 25 16.6**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=190,slow=12,SNR=33						
KSRS				LR	LR	17 31 14.5	
	comp=Z,1μm,19.7s,baz=197,slow=40						
DL2	**Dalian**	**15.03**	**355**	*e*P	**P**	**17 25 33.5**	**-0.3**
DL2				*e*S	Sn	17 28 21.8	+7.5
DL2				pmax	pmax		
	comp=Z,370nm,5.9s						
DL2				LR	LR		
	comp=N,1μm,13.7s						
DL2				LR	LR		
	comp=Z,1μm,14.7s						
GYA	**Guiyang**	**15.34**	**283**	⇑*i*P	**Pn**	**17 25 33.5**	**+0.5**
GYA				pP	**P**	**17 25 39.8**	**+2.4**
GYA				sP	**sP**	**17 25 44.0**	**-4.8**
GYA				S	**Sn**	**17 28 22.0**	**-0.1**
GYA				pmax	pmax		
	comp=Z,50nm,0.7s						
GYA				pmax	pmax		
	comp=Z,150nm,6.8s						
GYA				LR	LR		
	comp=N,3μm,14.2s						
GYA				LR	LR		
	comp=E,3μm,15.8s						
GYA				LR	LR		
	comp=Z,4μm,17.7s						
XAN	**Xi'an**	**16.17**	**312**	P	**P**	**17 25 46.5**	**0.0**
XAN				pP	**pP**	**17 25 55.8**	**+1.6**
XAN				sP	**sP**	**17 26 01.5**	**+3.6**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				LR	LR		
	comp=N,820nm,18.8s						
XAN				LR	LR		
	comp=E,820nm,14.6s						
XAN				LR	LR		
	comp=Z,800nm,14.6s						
CTBH	**Cotabato--PC H**	**16.61**	**177**	⇑*i*P	**P**	**17 25 52.6**	**+1.2**
DAV	**Davao City (W)**	**16.87**	**172**	LR	LR	17 31 48.5	
	comp=Z,1μm,21.0s,baz=341,slow=35						
JHJ	**Hachijo jima 2**	**17.08**	**54**	P	**P**	**17 25 59.9**	**+3.3**
	comp=Z,5.6nm,0.3s,baz=219,slow=14,SNR=4.8						
JHJ				LR	LR	17 32 20.3	
	comp=Z,301nm,20.2s,baz=146,slow=37						
BJI	**Beijing**	**17.20**	**341**	P	**P**	**17 25 58.5**	**+0.7**
BJI				S	**Sn**	**17 29 09.0**	**+2.1**
BJI				pmax	pmax		
	comp=Z,33nm,0.7s						
BJI				pmax	pmax		
	comp=Z,250nm,8.1s						
BJI				LR	LR		
	comp=N,3μm,14.6s						
BJI				LR	LR		
	comp=E,1μm,13.9s						
BJI				LR	LR		
	comp=Z,980nm,23.8s						
SNY	**Shenyang**	**17.88**	**0**	⇓P	**P**	**17 26 07.0**	**+1.7**
SNY				S	**S**	**17 29 28.5**	**-0.7**
SNY				pmax	pmax		
	comp=Z,13nm,0.5s						
SNY				pmax	pmax		
	comp=Z,560nm,8.6s						
SNY				LR	LR		
	comp=E,2μm,17.9s						
SNY				LR	LR		
	comp=Z,2μm,15.5s						
MAJO	**Matsushiro**	**17.95**	**42**	P	**P**	**17 26 06.0**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAJO	**Matsushiro**	**17.95**	**42**	P	**P**	**17 26 06.0**	**-0.1**
	comp=Z,7.2nm,0.8s						
MAT	**Matsushiro**	**17.95**	**42**	S	**Pn**	**17 26 05.9**	**+0.2**
MAT				S	**S**	**17 29 29.6**	**-1.1**
MJAR	**Matsushiro Arr**	**17.95**	**42**	P	**P**	**17 26 06.0**	**-0.1**
MJAR	**Matsushiro Arr**	**17.95**	**42**	P	**P**	**17 26 06.0**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=228,slow=9.0,SNR=13						
CD2	**Chengdu**	**18.75**	**296**	⇓P	**Pn**	**17 26 16.3**	**+0.7**
CD2				pP	**pP**	**17 26 23.0**	**+0.2**
CD2				sP	**sP**	**17 26 27.5**	**+1.1**
CD2				PP	**PnPn**	**17 26 32.3**	**+4.3**
CD2				S	**Sn**	**17 29 40.0**	**-4.6**
CD2				SS	**SnSn**	**17 30 04.8**	**+6.2**
CD2				pmax	pmax		
	comp=Z,150nm,0.5s						
CD2				pmax	pmax		
	comp=Z,2μm,4.5s						
CD2				LR	LR		
	comp=N,2μm,12.6s						
CD2				LR	LR		
	comp=E,3μm,14.4s						
CD2				LR	LR		
	comp=Z,4μm,17.4s						
KMI	**Kunming**	**18.82**	**278**	P	**P**	**17 26 14.0**	**-2.0**
KMI				pP	**pP**	**17 26 22.0**	**-1.7**
KMI				sP	**sP**	**17 26 25.0**	**-2.4**
KMI				PP	**PnPn**	**17 26 31.8**	**+2.7**
KMI				S	**Sn**	**17 29 41.3**	**-5.3**
KMI				SS	**SnSn**	**17 30 07.0**	**+6.5**
KMI				pmax	pmax		
	comp=Z,11nm,1.3s						
KMI				pmax	pmax		
	comp=Z,380nm,6.5s						
KMI				LR	LR		
	comp=N,300nm,15.7s						
KMI				LR	LR		
	comp=E,3μm,15.7s						
KMI				LR	LR		
	comp=Z,3μm,14.9s						
MYLDM	**Lahad Datu**	**19.20**	**195**	P	sP	17 26 41.3	+10
HHC	**Hu-ho-hao-te**	**19.59**	**332**	*e*P	**Pn**	**17 26 25.0**	**-0.7**
HHC				sP	**sP**	**17 26 36.0**	**+0.4**
HHC				PP	**PnPn**	**17 26 43.3**	**+3.8**
HHC				S	**S**	**17 29 58.8**	**-5.1**
HHC				SS	**SnSn**	**17 30 25.8**	**+6.4**
HHC				PcP	**PcP**	**17 30 45.0**	**+1.5**
HHC				ScP	**ScP**	**17 34 18.5**	**+0.9**
HHC				PcS	**PcS**	**17 34 20.5**	**-0.3**
HHC				pmax	pmax		
	comp=Z,63nm,0.9s						
HHC				pmax	pmax		
	comp=Z,560nm,5.8s						
HHC				LR	LR		
	comp=N,4μm,12.1s						
HHC				LR	LR		
	comp=E,2μm,12.0s						
HHC				LR	LR		
	comp=Z,4μm,12.6s						
CN2	**Changchun**	**19.92**	**4**	⇑P	**P**	**17 26 27.8**	**+0.1**
CN2				*e*sP	**sP**	**17 26 38.0**	**-1.1**
CN2				*e*S	**S**	**17 30 05.0**	**-5.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,13.0s						
CN2				LR	LR		
	comp=E,500nm,13.0s						
CN2				LR	LR		
	comp=Z,600nm,15.0s						
BTO	**Baotou**	**20.08**	**329**	*e*P	**P**	**17 26 29.0**	**-0.6**
LZH	**Lanzhou**	**20.78**	**310**	*e*P	Pn	17 26 39.0	-0.8
LZH				pP	pP	17 26 47.3	+2.3
LZH				sP	sP	17 26 52.5	+3.8
LZH				*e*S	**S**	**17 30 22.5**	**-5.3**
LZH				pmax	pmax		
	comp=Z,53nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,4.4s						
LZH				LR	LR		
	comp=N,1μm,11.7s						
LZH				LR	LR		
	comp=E,2μm,13.6s						
LZH				LR	LR		
	comp=Z,3μm,15.0s						
MDJ	**Mudanjiang**	**21.28**	**12**	P	**P**	**17 26 42.3**	**-0.1**
MDJ				pP	**pP**	**17 26 48.0**	**-2.2**
MDJ				sP	**sP**	**17 26 50.5**	**-3.3**
MDJ				S	**S**	**17 30 41.0**	**+3.7**
MDJ				ScS	ScS	17 37 56.5	-8.6
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,60nm,8.2s						
MDJ				LR	LR		
	comp=N,1μm,17.9s						
MDJ				LR	LR		
	comp=E,1μm,14.2s						
MDJ				LR	LR		
	comp=Z,2μm,16.4s						
MDJ	**Mudanjiang**	**21.28**	**12**	*e*P	**P**	**17 26 40.6**	**-1.8**
	comp=Z,7.7nm,0.8s						
USRK	**Ussuriysk Arra**	**21.45**	**17**	P	**P**	**17 26 45.8**	**+1.7**
	comp=Z,6.9nm,0.7s,baz=205,slow=9.7,SNR=14						
USRK				LR	LR	17 36 01.3	
	comp=Z,1μm,18.4s,baz=342,slow=40						
GAMI	**Galela, Maluku**	**22.34**	**168**	P	**P**	**17 26 54.5**	**+0.5**
	comp=Z,70nm,0.9s,comp=Z,3μm						
GUMO	**Guam**	**22.76**	**113**	LR	LR	17 35 02.5	
	comp=Z,794nm,18.1s,baz=120,slow=35						
CMMT	**Chiang Mai**	**23.29**	**262**	P	**P**	**17 27 05.1**	**+1.2**
	comp=Z,21nm,0.9s						
CHTO	**Chiang Mai**	**23.30**	**262**	*e*P	**P**	**17 27 04.3**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,17nm,0.9s						
CHTO	**Chiang Mai**	**23.30**	**262**	*e*P	**P**	**17 27 04.3**	**+0.3**
	comp=Z,17nm,0.9s						
CHTO	**Chiang Mai**	**23.30**	**262**	P	**P**	**17 27 04.8**	**+0.8**
	comp=Z,24nm,0.9s						
TNTI	**Ternate**	**23.32**	**170**	P	**P**	**17 27 03.8**	**-0.3**
	comp=Z,105nm,0.8s,comp=Z,1μm						
MRSI	**Marisa**	**23.33**	**184**	P	**P**	**17 27 06.7**	**+2.5**
	comp=Z,34nm,0.8s,comp=Z,544nm						
CM31	**Chiang Mai Arr**	**23.40**	**261**	*e*P	**P**	**17 27 05.9**	**+0.9**
	comp=Z,6.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**23.40**	**261**	P	**P**	**17 27 06.2**	**+1.2**
CMAR				PcP	**PcP**	**17 30 51.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**23.40**	**261**	P	**P**	**17 27 06.2**	**+1.2**
	comp=Z,5.6nm,0.9s,baz=61,slow=8.1,SNR=38						
CMAR				PcP	**PcP**	**17 30 51.5**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=42,slow=1.6,SNR=6.1						
CMAR				LR	LR	17 38 25.8	
	comp=Z,477nm,18.1s,baz=76,slow=42						
SBUM	**Sibu**	**23.90**	**208**	P	P	17 27 18.5	+8.8
	comp=Z,18nm,1.0s						
GTA	**Gaotai**	**25.22**	**313**	*e*P	**P**	**17 27 20.8**	**-1.0**
GTA				pP	**pP**	**17 27 29.5**	**-0.6**
GTA				sP	**sP**	**17 27 32.5**	**-1.1**
GTA				S	**S**	**17 31 42.5**	**-3.1**
GTA				pmax	pmax		
	comp=Z,14nm,0.9s						
GTA				pmax	pmax		
	comp=Z,170nm,7.1s						
GTA				LR	LR		
	comp=N,960nm,11.9s						
GTA				LR	LR		
	comp=E,2μm,13.8s						
GTA				LR	LR		
	comp=Z,2μm,14.3s						
HIA	**Hailar**	**25.48**	**354**	*e*P	**P**	**17 27 22.0**	**-1.9**
	comp=Z,10nm,0.6s						
ASAJ	**Asahikawa**	**25.59**	**33**	P	**P**	**17 27 23.9**	**-1.0**
ASAJ	**Asahikawa**	**25.59**	**33**	P	**P**	**17 27 23.9**	**-1.0**
	comp=Z,8.6nm,0.8s,baz=272,slow=10,SNR=8.3						
ASAJ				LR	LR	17 37 39.8	
	comp=Z,1μm,21.2s,baz=239,slow=37						
SWI	**Sorong**	**25.78**	**162**	P	sP	17 27 43.2	+4.5
KLR	**Kul'dur**	**26.13**	**13**	*e*P	P	17 27 24.2	-5.5
KLR				MLR	MLR		
	comp=N,1μm,12.0s						
KLR				MLR	MLR		
	comp=E,700nm,12.0s						
KLR				MLR	MLR		
	comp=Z,4μm,12.0s						
ULN	**Ulaanbaatar**	**27.21**	**336**	*e*P	**P**	**17 27 37.2**	**-2.5**
	comp=Z,7.3nm,0.8s						
ULN	**Ulaanbaatar**	**27.21**	**336**	P	**P**	**17 27 38.8**	**-1.0**
	comp=Z,10.0nm,1.0s						
YUK	**Yuzh-Kuril'sk**	**27.25**	**37**	P	**P**	**17 27 41.4**	**+1.5**
YUK				*e*PPP	PPP	17 28 31.6	
YUK				*e*S	**S**	**17 32 14.9**	**-2.4**
YUK				SSS	SSS	17 33 31.7	
YUK				MLR	MLR		
	comp=Z,746nm,24.0s						
YUK				MLR	MLR		
	comp=N,237nm,18.0s						
YUK				MLR	MLR		
	comp=E,187nm,18.0s						
YUK				MLR	MLR		
	comp=Z,370nm,18.0s						
SONM	**Songino Array**	**27.44**	**335**	P	**P**	**17 27 40.4**	**-1.4**
SONM	**Songino Array**	**27.44**	**335**	P	**P**	**17 27 40.4**	**-1.4**
	comp=Z,12nm,0.9s,baz=141,slow=8.6,SNR=53						
SONM				LR	LR	17 39 45.2	
	comp=Z,2μm,20.2s,baz=63,slow=39						
YSS	**Yuzh-Sakhalins**	**27.75**	**29**	*e*P	**P**	**17 27 45.0**	**+0.6**
YSS				*e*		17 28 39.1	
YSS				MLR	MLR		
	comp=N,1μm,18.0s						
YSS				MLR	MLR		
	comp=Z,600nm,18.0s						
YSS				MLR	MLR		
	comp=E,600nm,20.0s						
KAPI	**Kappang**	**28.95**	**187**	LR	LR	17 40 12.2	
	comp=E,450nm,19.0s,baz=5.6,slow=38						
MYKOM	**Kota Tinggi**	**28.99**	**224**	P	sP	17 28 06.9	-0.7
	comp=E,9.6nm,0.8s						
LSA	**Lhasa**	**29.28**	**288**	*e*P	**P**	**17 27 59.8**	**+1.1**
LSA				pmax	pmax		
	comp=Z,11nm,0.8s						
LSA	**Lhasa**	**29.28**	**288**	*e*P	**P**	**17 27 59.8**	**+1.1**
	comp=Z,11nm,0.8s						
ZAK	**Zakamensk**	**30.71**	**334**	*e*P	**P**	**17 28 08.3**	**-2.4**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PSI	**Prapat**	**31.60**	**232**	LR	LR	17 42 04.2	
	comp=Z,362nm,18.1s,baz=41,slow=38						
TAPN	**Taplejung**	**32.27**	**284**	*e*P	**P**	**17 28 25.8**	**+0.8**
	comp=Z,29nm,0.6s						
ODAN	**Odare**	**32.58**	**283**	*e*P	**P**	**17 28 27.9**	**+0.3**
	comp=Z,43nm,0.7s						
MOY	**Mondy**	**32.62**	**334**	*e*P	**P**	**17 28 26.1**	**-1.4**
RAMN	**Ramite**	**33.28**	**283**	*e*P	**P**	**17 28 34.1**	**+0.4**
	comp=Z,39nm,0.9s						
GUN	**Gumba**	**33.88**	**285**	*e*P	**P**	**17 28 39.7**	**+0.6**
	comp=Z,51nm,0.9s						
PKI	**Pulchoki**	**34.31**	**284**	*e*P	**P**	**17 28 43.0**	**+0.2**
	comp=Z,14nm,0.6s						
PKIN	**Phulchoki**	**34.32**	**284**	*e*P	**P**	**17 28 43.1**	**+0.3**
	comp=Z,12nm,0.7s						
KKN	**Kakani**	**34.41**	**285**	*e*P	**P**	**17 28 43.7**	**+0.1**
	comp=Z,31nm,0.8s						
DMN	**Da

WMQ Urumqi 35.30 313 P **P** 17 28 51.5 +0.6
WMQ pP **pP** 17 29 00.0 +0.6
WMQ sP **sP** 17 29 03.0 +0.1
WMQ PP **PP** 17 30 12.0 +0.8
WMQ PcP **PcP** 17 31 23.0 +2.0
WMQ S **S** 17 34 23.0 -0.2
WMQ ScP **ScP** 17 35 06.0 +1.2
WMQ ScS **ScS** 17 39 08.0 -1.0
WMQ pmax pmax
comp=Z,12nm,0.9s
WMQ pmax pmax
comp=Z,130nm,5.0s
WMQ LR LR
comp=N,810nm,15.0s
WMQ LR LR
comp=E,920nm,15.0s
WMQ LR LR
comp=Z,940nm,15.0s
DANN Dangsing 35.73 286 *e*P **P** 17 28 55.4 +0.4
comp=Z,50nm,0.8s
KOLN Koldanda 35.90 285 *e*P **P** 17 28 56.7 +0.3
comp=Z,32nm,0.8s
PYUN Piuthan 36.42 285 *e*P **P** 17 29 01.1 +0.3
comp=Z,63nm,0.7s
YAK Yakutsk 38.35 5 *e*P **P** 17 29 14.0 -2.5
YAK *e**PP **pP** 17 29 21.0 -4.0
YAK *e*PPP PPP 17 31 09.8
YAK *e*S **S** 17 35 08.3 -0.7
YAK *e*SS **SnSn** 17 37 53.8 -1.8
YAK *e* 17 39 18.9
YAK pmax pmax
comp=Z,30nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=Z,65nm,3.3s
YAK pmax pmax
comp=N,30nm,3.7s
YAK smax smax
comp=E,86nm,4.3s
YAK smax smax
comp=N,67nm,4.1s
YAK MLR MLR
comp=Z,684nm,14.0s
YAK MLR MLR
comp=E,265nm,13.0s
YAK MLR MLR
comp=N,576nm,13.0s
PETK Petropavlovsk- 39.00 33 P **P** 17 29 21.1 -1.0
PETK Petropavlovsk- 39.00 33 P **P** 17 29 21.1 -1.0
PETK Petropavlovsk- 39.00 33 P **P** 17 29 21.1 -1.0
comp=N,1.5nm,0.5s,baz=251,slow=9.0,SNR=6.2
PETK LR LR 17 45 06.1
comp=N,293nm,20.3s,baz=230,slow=36
MK31 Makanchi Array 39.94 315*ce*P **P** 17 29 28.8 -1.3
MK31 pmax pmax
comp=Z,4.0nm,0.4s
MK31 Makanchi Array 39.94 315 *e*P **P** 17 29 28.7 -1.3
MKAR Makanchi Array 39.94 315 P **P** 17 29 29.2 -0.9
MKAR 17 31 34.5
MKAR Makanchi Array 39.94 315 P **P** 17 29 29.1 -0.9
MKAR PcP **PcP** 17 31 34.5 -0.5
MKAR Makanchi Array 39.94 315 P **P** 17 29 29.1 -0.9
comp=Z,5.9nm,0.5s,baz=100,slow=10,SNR=106
MKAR PcP **PcP** 17 31 34.5 -0.5
comp=Z,2.5nm,0.8s,baz=95,slow=4.9,SNR=4.5
MKAR LR LR 17 47 21.1
comp=Z,525nm,20.5s,baz=110,slow=38
ZAA0 Zalesovo Array 41.58 326 *e*P **P** 17 29 41.0 -2.4
ZALV Zalesovo Beam 41.58 326 P **P** 17 29 41.6 -1.8
ZALV Zalesovo Beam 41.58 326 P **P** 17 29 41.6 -1.8
ZALV Zalesovo Beam 41.58 326 P **P** 17 29 41.6 -1.8
comp=Z,10nm,0.6s,baz=111,slow=7.9,SNR=68
ZALV PcP **PcP** 17 31 39.0 -1.2
comp=Z,1.1nm,0.5s,baz=122,slow=4.0,SNR=4.5
ZALV LR LR 17 48 17.7
comp=Z,1μm,18.6s,baz=187,slow=38
FITZ Fitzroy Crossi 41.80 177 P **P** 17 29 43.5 -2.1
FITZ Fitzroy Crossi 41.80 177 P **P** 17 29 43.5 -2.1
comp=Z,4.9nm,0.8s,baz=344,slow=10.0,SNR=7.2
FITZ LR LR 17 50 25.5
comp=Z,78nm,18.4s,baz=360,slow=41
KSH Kashi 42.73 303 *e*P **P** 17 29 56.0 +2.8
KSH pP **pP** 17 30 06.5 +4.7
KSH sP sP 17 30 10.8 +5.6
KSH PP PP 17 31 38.0 +5.5
KSH PcP **PcP** 17 31 48.0 +3.5
KSH ScP **ScP** 17 35 34.0 +0.5
KSH PcS **PcS** 17 35 37.8 +1.0
KSH S **S** 17 36 17.3 +2.1
KSH sS **sS** 17 36 34.0 +4.6
KSH SS **SS** 17 39 22.5 -3.8
KSH ScS **ScS** 17 39 52.0 -0.6
KSH pmax pmax
comp=Z,2.0nm,0.4s
KSH pmax pmax
comp=Z,41nm,1.2s
KSH LR LR
comp=N,200nm,5.8s
KSH LR LR
comp=E,250nm,9.7s
KSH LR LR
comp=Z,180nm,7.8s
NVS Novosibirsk 42.83 327 *e*P P 17 29 49.3 -4.2
NVS pmax pmax
comp=Z,6.0nm,0.8s
NVS pmax pmax
comp=N,3.0nm,0.8s
NVS pmax pmax
comp=E,2.0nm,0.9s
ULHL Ulahol 42.93 307 *i* P **P** 17 29 55.7 +0.9
ULHL Ulahol 42.93 307 P **P** 17 29 55.7 +0.9
SNR=7.9
TKM2 Tokmak 2 43.52 308 *e*P **P** 17 29 59.9 +0.3
TKM2 pmax pmax
comp=Z,16nm,0.8s
TKM2 Tokmak 2 43.52 308 *e*P **P** 17 29 59.9 +0.3
comp=Z,16nm,0.8s
TKM2 Tokmak 2 43.52 308 P **P** 17 30 00.2 +0.6
SNR=11
KURK Kurchatov 43.60 320 *e*P **P** 17 29 58.0 -1.8
KURK pmax pmax
comp=Z,15nm,0.9s
KURK Kurchatov 43.60 320 *e*P **P** 17 29 58.0 -1.8
comp=Z,15nm,0.9s
KURK Kurchatov 43.60 320 P **P** 17 29 59.4 -0.4
SNR=5.4
KURBB Kurchatov Arra 43.62 319 P **P** 17 29 58.4 -1.6
comp=Z,7.1nm,0.8s,baz=111,slow=8.2,SNR=56
KZA Kyzart 43.63 307 *i* P **P** 17 30 01.9 +1.2
KZA Kyzart 43.63 307 P **P** 17 30 01.9 +1.2
SNR=5.6
KBK Karagaybulak 43.94 307 *i* P **P** 17 30 03.9 +0.9
KBK Karagaybulak 43.94 307 P **P** 17 30 03.9 +0.9
SNR=8.5
AAK Ala-Archa 44.27 307*c i*P **P** 17 30 05.7 +0.1
AAK pmax pmax
comp=Z,9.0nm,0.8s
AAK Ala-Archa 44.27 307 *e*P **P** 17 30 05.6 0.0
comp=Z,3.5nm,0.8s
AAK Ala-Archa 44.27 307 P **P** 17 30 05.7 +0.1
comp=Z,3.0nm,0.7s,baz=122,slow=8.0,SNR=14
AML Almayashu 44.78 306 *i* P **P** 17 30 11.1 +1.2
AML Almayashu 44.78 306 P **P** 17 30 11.1 +1.2
SNR=11
EKS2 Erkin-Say 44.80 307 *e*P **P** 17 30 09.7 0.0
EKS2 pmax pmax
comp=Z,4.0nm,0.8s
EKS2 Erkin-Say 44.80 307 *e*P **P** 17 30 09.7 0.0
comp=Z,3.5nm,0.8s
EKS2 Erkin-Say 44.80 307 P **P** 17 30 10.0 +0.2
SNR=5.5
WRAB Tennant Creek 44.86 165 *e*P **P** 17 30 09.8 -0.4
WRAB pmax pmax
comp=Z,6.0nm,0.7s
WRAB Tennant Creek 44.86 165 *e*P **P** 17 30 09.8 -0.4
comp=Z,6.4nm,0.7s
WRA Warramunga Arr 44.87 165 P **P** 17 30 09.6 -0.7
WRA Warramunga Arr 44.87 165 P **P** 17 30 09.6 -0.7
comp=Z,6.2nm,0.7s,baz=347,slow=8.6,SNR=16
KK31 Karatay Array 47.23 307*ce*P **P** 17 30 28.8 0.0
KK31 pmax pmax
comp=Z,2.0nm,0.5s
KKAR Karatay Array 47.23 307 *e*P **P** 17 30 28.3 -0.5
KKAR pmax pmax
comp=Z,2.0nm,0.5s
KKAR Karatay Array 47.23 307 *e*P **P** 17 30 28.2 -0.5
comp=Z,1.9nm,0.5s
KBL Kabul 48.09 296 *e*P **P** 17 30 36.5 +0.7
KBL pmax pmax
comp=Z,30nm,1.0s
KBL Kabul 48.09 296 *e*P **P** 17 30 36.5 +0.7
comp=Z,30nm,1.0s
AS31 Alice Springs 48.38 167 *e*P **P** 17 30 37.3 -0.5
ASAR Alice Springs 48.38 167 P **P** 17 30 37.8 0.0
ASAR Alice Springs 48.38 167 P **P** 17 30 37.8 0.0
comp=Z,4.5nm,0.7s,baz=4.1,slow=6.9,SNR=53
ASAR LR LR 17 51 28.2
comp=Z,210nm,19.5s,baz=286,slow=37
HNR Honiara 48.73 129 LR LR 17 49 18.6
comp=Z,282nm,18.6s,baz=108,slow=34
VOSK Vostochnaya 48.74 320 P **P** 17 30 37.2 -3.1
VOSK pmax pmax
comp=Z,8.0nm,1.1s
BVA0 Borovoye Array 49.16 320 *i* P **P** 17 30 42.4 -1.1
BVA0 pmax pmax
comp=Z,1.0nm,0.5s
BVAR Borovoye Array 49.16 320 P **P** 17 30 42.5 -1.0
BVAR 17 32 06.1
BVAR Borovoye Array 49.16 320 P **P** 17 30 42.5 -1.0
BVAR PcP **PcP** 17 32 06.1 -0.4
BVAR Borovoye Array 49.16 320 P **P** 17 30 42.5 -1.0
comp=Z,2.1nm,0.4s,baz=111,slow=11,SNR=19
BVAR PcP **PcP** 17 32 06.1 -0.4
comp=Z,2.6nm,0.6s,baz=86,slow=4.6,SNR=4.7
BRVK Borovoye 49.23 320*c i*P **P** 17 30 42.8 -1.2
BRVK pmax pmax
comp=Z,15nm,1.2s
BRVK Borovoye 49.23 320 *e*P **P** 17 30 41.6 -2.4
comp=Z,15nm,0.9s
BRVK Borovoye 49.23 320 P **P** 17 30 43.9 -0.2
SNR=5.1
BILL Bilibino 51.28 19 *e*P **P** 17 30 57.7 -1.6
BILL pmax pmax
comp=Z,3.0nm,0.8s
BILL Bilibino 51.28 19 *e*P **P** 17 30 57.6 -1.6
comp=Z,2.7nm,0.8s
AB31 Akbulak array 55.07 314*ce*P **P** 17 31 27.2 -0.3
AB31 pmax pmax
comp=Z,6.0nm,0.4s
ABKAR Akbulak array 55.07 314 *e*P **P** 17 31 27.4 -0.1
comp=Z,6.5nm,0.5s
IMYA Miami 55.24 299 *e*P **P** 17 31 31.2 +2.0
SVE Sverdlovsk 55.46 324‖ *e*P **P** 17 31 29.4 -0.8
SVE pmax pmax
comp=Z,22nm,1.0s
SVE MLR MLR
comp=Z,747nm,17.0s
IPAY Payeh 56.12 299 *e*P **P** 17 31 37.3 +1.7
AKTO Aktyubinsk 56.37 316 P **P** 17 31 37.5 +0.7
AKTO Aktyubinsk 56.37 316 P **P** 17 31 37.5 +0.7
AKTO Aktyubinsk 56.37 316 P **P** 17 31 37.5 +0.7
comp=Z,2.7nm,0.6s,baz=108,slow=17,SNR=8.8
IKRD Kardeh 56.47 299 *e*P P 17 31 34.6 -3.5
ARU Arti 56.54 323*c i*P **P** 17 31 36.4 -1.5
ARU 17 33 40.8
ARU S **S** 17 39 26.2 -1.3
ARU pmax pmax
comp=Z,26nm,1.0s
ARU MLR MLR
comp=Z,352nm,17.0s
ISFR Sfrayin 56.85 300 *e*P **P** 17 31 41.8 +1.0
SOKR Solikamsk 57.86 327⇑ *i*P **P** 17 31 47.0 -0.1
SOKR pmax pmax
comp=Z,9.0nm,0.8s
SOKR MLR MLR
comp=Z,770nm,26.0s
STKA Stephens Creek 58.14 162 P **P** 17 31 49.7 +0.3
STKA Stephens Creek 58.14 162 P **P** 17 31 49.7 +0.3
comp=Z,8.3nm,0.7s,baz=338,slow=8.1,SNR=33
BSY Bisya 60.25 283 P **P** 17 32 05.6 +1.2
SNR=5.9
DZM Mont Dzumac 61.99 134 *e*S **S** 17 40 36.7 -2.2
comp=Z,707nm,27.4s
DZM *e*SS **SS** 17 44 45.2 +3.1
comp=Z,220nm,24.4s
DZM *e*LR LR 17 50 49.8
comp=Z,1μm,25.3s
DZM Mont Dzumac 61.99 134 LR LR 17 54 25.5
comp=Z,518nm,19.6s,baz=110,slow=32
IZEF Zefreh 62.10 296 *e*P **P** 17 32 17.9 +0.8
IPAR Pars 62.15 292 *e*P **P** 17 32 18.3 +0.8
ISRV Sarvestan 62.20 292 *e*P **P** 17 32 17.7 -0.2
IKLH Kolahrood 62.63 296 *e*P **P** 17 32 21.4 +0.7
IPIR Pirpir 63.33 296 *e*P **P** 17 32 27.0 +1.6
RBK Rabkut 64.47 279 P **P** 17 32 33.4 +0.7
SNR=5.2
ABTO Aybut 65.34 279 P **P** 17 32 38.8 +0.5
SNR=5.2
GNI Garni 66.61 305 *e*P **P** 17 32 47.8 +1.4
comp=Z,7.6nm,0.8s
ZEI Tsey 66.69 308 *e*P **P** 17 32 46.4 -0.5
ZEI pmax pmax
comp=Z,15nm,0.9s
VRHR Novokhopersk 66.70 317 *e*P **P** 17 32 44.4 -2.1
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,9.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s
TMCR Tamitsa 66.75 332 *e*P **P** 17 32 45.5 -1.1
TMCR pmax pmax
comp=Z,32nm,1.1s
RDF Al-Radifah 67.02 293 *e*P **P** 17 32 48.6 -0.4
RDF AMb AMB 17 32 51.1
comp=Z,120nm,0.8s
NAY Al-Naaiem 67.20 293 *e*P **P** 17 32 49.7 -0.4
NAY AMb AMB 17 32 51.6
comp=Z,38nm,0.7s
KBZ Khabaz 67.21 309 P **P** 17 32 50.5 +0.6
KBZ Khabaz 67.21 309 P **P** 17 32 50.5 +0.6
KBZ Khabaz 67.21 309 P **P** 17 32 50.5 +0.6
comp=Z,14nm,0.9s,baz=116,slow=4.9,SNR=29
TRF Thorofare Moun 67.28 29 *e*P **P** 17 32 49.6 -0.6
comp=Z,7.2nm,0.9s
KIV Kislovodsk 67.32 309‖ *e*P **P** 17 32 51.8 +1.1
KIV *i* S **S** 17 41 48.4 +4.1
KIV pmax pmax
comp=Z,24nm,1.0s
KIV MLR MLR
comp=Z,300nm,17.0s
RST Umm Al-Ruwaisa 67.34 293 *e*P **P** 17 32 49.9 -1.1
RST AMb AMB 17 32 52.6
comp=Z,5.2nm,0.9s
MCK McKinley 67.84 29 *e*P **P** 17 32 52.9 -0.7
MCK pmax pmax
comp=Z,15nm,1.0s
MCK McKinley 67.84 29 *e*P **P** 17 32 52.9 -0.7
comp=Z,15nm,1.0s
PMR Palmer 68.10 31 *e*P **P** 17 32 53.0 -2.2
PMR pmax pmax
comp=Z,12nm,0.8s
PMR Palmer 68.10 31 *e*P **P** 17 32 53.0 -2.2
comp=Z,12nm,0.8s
COLA College 68.12 27 *e*P **P** 17 32 55.9 +0.6
COLA pmax pmax
comp=Z,10.0nm,0.8s
COLA College 68.12 27 *e*P **P** 17 32 55.9 +0.6
comp=Z,9.5nm,0.8s
APA Apatity 68.15 336⇑ *i*P **P** 17 32 54.8 -0.6
APA pmax pmax
comp=Z,54nm,1.4s
APA MLR MLR
comp=Z,700nm,18.0s
VORD Divnogorie 68.17 317 *e*P **P** 17 32 54.7 -1.1
VORD pmax pmax
comp=N,6.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.7s
VORD pmax pmax
comp=Z,5.0nm,0.7s
VSR Storozhevoye 68.20 318 *e*P **P** 17 32 54.8 -1.2
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,2.0nm,0.6s
VSR pmax pmax
comp=Z,7.0nm,0.6s
VSR MLR MLR
comp=N,150nm,18.0s
VSR MLR MLR
comp=E,320nm,18.0s
VSR MLR MLR
comp=Z,410nm,18.0s
SEW Seward 68.21 33 *e*P **P** 17 32 55.9 0.0
comp=Z,20nm,1.0s
SML Sawmill 68.44 31 *e*P **P** 17 32 57.0 -0.4
SML pmax pmax
comp=Z,2.0nm,0.8s
SML Sawmill 68.44 31 *e*P **P** 17 32 57.0 -0.4
comp=Z,2.2nm,0.8s
ILAR Eielson Array 68.55 27 P **P** 17 32 57.0 -0.9
ILAR Eielson Array 68.55 27 P **P** 17 32 57.0 -0.9
comp=Z,2.1nm,0.6s,baz=278,slow=5.9,SNR=18
ILAR LR LR 18 06 01.4
comp=Z,177nm,18.4s,baz=311,slow=39
OBN Obninsk 68.96 322‖ *e*P **P** 17 32 59.6 -1.0
OBN *e*S S 17 41 53.0 -10
OBN pmax pmax
comp=Z,5.0nm,0.5s
OBN MLR MLR
comp=Z,300nm,19.0s
SOC Sochi 69.50 310 *e*P **P** 17 33 01.5 -2.7
SOC *e*S **S** 17 42 08.9 -1.2
SOC MLR MLR
comp=Z,345nm,17.0s
PAX Paxson 69.52 29 *e*P **P** 17 33 04.2 +0.1
PAX pmax pmax
comp=Z,5.0nm,0.8s
PAX Paxson 69.52 29 *e*P **P** 17 33 04.2 +0.1
comp=Z,4.8nm,0.8s
DIV Divide 69.78 31 *e*P **P** 17 33 05.5 -0.3
comp=Z,19nm,0.9s
JOF Joensuu 69.93 331 *e*P **P** 17 33 05.3 -1.2
JOF pmax pmax
comp=Z,7.0nm,0.5s
JOF Joensuu 69.93 331 *ep* **P** 17 33 05.3 -1.2
comp=Z,6.6nm,0.5s
KEV Kevo 69.98 338 *e*P **P** 17 33 05.1 -1.6
KEV pmax pmax
comp=Z,7.0nm,0.7s
KEV Kevo 69.98 338 *ep* **P** 17 33 05.1 -1.6
comp=Z,7.1nm,0.7s
DOT Dot Lake 69.99 28 *e*P **P** 17 33 05.0 -1.9
comp=Z,6.9nm,0.7s
BMRM Bremner River 70.37 31 *e*P **P** 17 33 09.2 -0.2
comp=Z,11nm,0.9s
ARCES ARCESS Array B 70.55 338 P **P** 17 33 09.8 -0.4
ARCES ARCESS Array B 70.55 338 P **P** 17 33 09.8 -0.4
comp=Z,3.1nm,0.8s,baz=47,slow=7.9,SNR=12
ARE0 ARCESS Array S 70.55 338 *e*P **P** 17 33 09.8 -0.4
ANN Anapa 70.79 311 *e*P **P** 17 33 10.6 -1.5
ANN *e*S **S** 17 42 24.2 -0.9
ANN pmax pmax
comp=Z,36nm,0.9s
EGAK Eagle 70.94 27 *e*P **P** 17 33 12.5 -0.1
comp=Z,8.5nm,0.8s
MALT Malatya 71.81 304 *e*P **P** 17 33 19.5 +0.9
MALT pmax pmax
comp=Z,39nm,0.8s
MALT Malatya 71.81 304 *e*P **P** 17 33 19.5 +0.9
comp=Z,39nm,0.8s
MALT Malatya 71.81 304⇑ *i*P **P** 17 33 19.8 +1.2
KAF Kangasniemi 72.39 331 *e*P **P** 17 33 19.1 -2.3
KAF pmax pmax
comp=Z,7.0nm,0.8s
KAF Kangasniemi 72.39 331 *ep* **P** 17 33 19.1 -2.3
comp=Z,7.1nm,0.8s
FIA1 FINESS Array S 72.69 330 *e*P **P** 17 33 21.7 -1.6
FINES FINESS Array B 72.69 330 P **P** 17 33 22.5 -0.8
FINES FINESS Array B 72.69 330 P **P** 17 33 22.5 -0.8
comp=Z,16nm,0.7s,baz=74,slow=5.9,SNR=49
FINES LR LR 18 08 47.3
comp=Z,869nm,19.6s,baz=257,slow=39
SIM Simferopol' 73.02 312*c i*P **P** 17 33 25.0 -0.5
SIM pmax pmax
comp=Z,25nm,0.7s
SIM MLR MLR
comp=Z,140nm,17.7s
PNL Peninsula 73.22 32 *e*P **P** 17 33 27.2 +0.7
comp=Z,11nm,0.8s
AFI Afiamalu 73.65 114 LR LR 18 03 28.7
comp=Z,253nm,20.3s,baz=222,slow=34
AKASG Malin Array Be 74.41 319 P **P** 17 33 32.5 -1.1
AKASG Malin Array Be 74.41 319 P **P** 17 33 32.5 -1.1
AKASG Malin Array Be 74.41 319 P **P** 17 33 32.5 -1.1
comp=Z,16nm,0.8s,baz=59,slow=6.1,SNR=35
AK01 Malin Array Si 74.42 319 *e*P **P** 17 33 32.3 -1.3
KIEV Kiev 74.42 319 *e*P **P** 17 33 32.0 -1.6
KIEV pmax pmax
comp=Z,11nm,0.8s
KIEV Kiev 74.42 319 *e*P **P** 17 33 32.0 -1.6
comp=Z,11nm,0.8s
AK02 Malin Array Si 74.43 319 *e*P **P** 17 33 32.2 -1.4
NACGM Naroch 74.44 323 *e* **P** 17 33 32.0 -1.7
BR131 Keskin Array S 74.95 307 *e*P **P** 17 33 36.9 -0.2
comp=Z,19nm,0.7s
BRTR Keskin Array B 74.95 307 P **P** 17 33 36.9 -0.2
BRTR Keskin Array B 74.95 307 P **P** 17 33 36.9 -0.2
comp=Z,24nm,0.8s,baz=100,slow=5.7,SNR=130
SKAG Skagway 75.24 31 *e*P **P** 17 33 39.1 +1.0
comp=Z,8.1nm,0.8s
ANTO Ankara 75.52 307 *e*P **P** 17 33 40.4 +0.1
ANTO pmax pmax
comp=Z,24nm,0.6s
ANTO Ankara 75.52 307 *e*P **P** 17 33 40.4 +0.1
comp=Z,24nm,0.6s
ANTO Ankara 75.52 307 P **P** 17 33 40.6 +0.4
SNR=5.8
TLCR 76.50 314⇑ *i*P **P** 17 33 45.6 -0.1
SUW Suwalki 76.72 323 *e*P **P** 17 33 46.1 -0.7
SUW pmax pmax
comp=Z,84nm,0.8s
SUW Suwalki 76.72 323 *e*P **P** 17 33 46.1 -0.7
comp=Z,84nm,0.8s
SUW Suwalki 76.72 323 *e*P **P** 17 33 46.0 -0.7
DAG Danmarks Havn 76.94 352 *i* P **P** 17 33 46.5 -1.1
DAG pmax pmax
comp=Z,5.0nm,0.8s
DAG Danmarks Havn 76.94 352 *i* P **P** 17 33 46.5 -1.1
comp=Z,6.2nm,0.8s
CFR Carcaliu 76.95 314⇑ *i*P **P** 17 33 47.9 -0.3
TIRR Tirgusor 77.03 313⇑ *i*P **P** 17 33 48.6 0.0
PRAR RASCA 77.41 316⇑ *i*P **P** 17 33 50.9 +0.1
TESR 77.45 315⇑ *i*P **P** 17 33 50.7 -0.3
VRI Vrincioaia 77.63 315‖ *i*P **P** 17 33 52.5 +0.4
PLOR Plostina 77.69 315‖ *i*P **P** 17 33 52.8 +0.4
BUR08 Bucovina Ar. S 77.95 317 *e*P **P** 17 33 53.7 -0.2
BURAR Bucovina Array 77.95 317‖ *i*P **P** 17 33 53.7 -0.2
ISR Istrita 78.03 314⇑ *i*P **P** 17 33 54.6 +0.3
DLBC Dease Lake 78.16 31 *e*P **P** 17 33 55.0 +0.2
MLR Muntele Rosu 78.28 315‖ *i*P **P** 17 33 56.0 +0.2
SECR 78.37 314‖ *i*P **P** 17 33 57.1 +0.9
DOPR Dopca 78.46 315‖ *i*P **P** 17 33 57.2 +0.5
RES Resolute Bay 78.61 10 *e*P **P** 17 33 56.3 -0.6
comp=Z,4.8nm,0.7s
KWP Kalwaria Pacla 78.70 319 *e*P **P** 17 33 57.7 -0.2
KWP pmax pmax
comp=Z,27nm,0.8s
KWP Kalwaria Pacla 78.70 319 *e*P **P** 17 33 57.7 -0.2
comp=Z,28nm,0.8s
KWP Kalwaria Pacla 78.70 319⇑ *i*P **P** 17 33 58.2 +0.3
KWP Kalwaria Pacla 78.70 319 *e*P **P** 17 33 58.0 +0.1
VOIR 78.88 315‖ *i*P **P** 17 33 59.8 +0.7
BEL Belsk 78.92 322 *e*P **P** 17 33 59.0 0.0
KOLS Kolonicke sedl 79.24 319 *e*P **P** 17 34 00.6 -0.3
KOLS pmax pmax
comp=Z,3.0nm,0.9s
KOLS Kolonicke sedl 79.24 319 *e*P **P** 17 34 00.6 -0.3
HUMR Humele 79.28 314‖ *i*P **P** 17 34 01.0 -0.2
NB2 NORSAR Subarra 79.40 333 P **P** 17 34 00.1 -1.4
comp=Z,6.3nm,0.5s,baz=55,slow=5.6
NOA NORSAR Array B 79.40 333 P **P** 17 34 00.5 -1.1
NOA NORSAR Array B 79.40 333 P **P** 17 34 00.5 -1.1
comp=Z,8.7nm,0.7s,baz=57,slow=5.7,SNR=45
TRPA Tarpa 79.41 318⇑ *i*P **P** 17 34 02.1 +0.4
NAO01 NORSAR Array S 79.64 333 *e*P **P** 17 34 01.3 -1.5
comp=Z,4.5nm,0.8s
LOT Lotru 79.71 315⇑ *i*P **P** 17 34 03.8 +0.2
CRVS Cervenica-Dubn 79.74 319 *e*P **P** 17 34 02.6 -1.0
CRVS pmax pmax
comp=Z,24nm,2.2s
CRVS Cervenica-Dubn 79.74 319 *e*P **P** 17 34 02.6 -1.0
URZ Urewera 79.76 140 LR LR 18 03 30.6
comp=Z,275nm,18.6s,baz=336,slow=31
DRGR 79.84 317⇑ *i*P **P** 17 34 04.3 0.0

OJC	**Ojcow**	**80.17 321**	*e*P	**P**	**17 34 05.9**	**0.0**
OJC	**Ojcow**	**80.17 321**	*e*P	**P**	**17 34 05.9**	**0.0**
MPEP	**Malo Peshtene**	**80.57 313**	*e*P	**P**	**17 34 07.1**	**-1.1**
BSD	**Bornholm Skovb**	**80.60 326**	*i* P	**P**	**17 34 07.4**	**-0.7**
BSD			pmax	pmax		
	comp=Z,9.0nm,0.8s					
BSD	**Bornholm Skovb**	**80.60 326**	*i* P	**P**	**17 34 07.4**	**-0.7**
	comp=Z,9.3nm,0.7s					
PGB	**Panagyurishte**	**80.61 312**	*e*P	**P**	**17 34 08.0**	**-0.4**
VTS	**Vitosha**	**81.23 313** ⇓	*i*P	**P**	**17 34 11.9**	**0.0**
VTS	**Vitosha**	**81.23 313**	*e*P	**P**	**17 34 12.0**	**0.0**
MMB	**Musomiste**	**81.29 312**	*e*P	**P**	**17 34 11.3**	**-0.8**
VYHS	**Vyhne**	**81.49 319**	*e*P	**P**	**17 34 13.3**	**+0.3**
VYHS			pmax	pmax		
	comp=Z,6.0nm,0.9s					
VYHS	**Vyhne**	**81.49 319**	*e*P	**P**	**17 34 13.2**	**+0.3**
COP	**Copenhagen**	**81.56 328**	*i* P	**P**	**17 34 13.9**	**+0.8**
COP			pmax	pmax		
	comp=Z,9.0nm,0.8s					
COP	**Copenhagen**	**81.56 328**	*i* P	**P**	**17 34 13.9**	**+0.8**
	comp=Z,8.7nm,0.8s					
KKB	**Krupnik**	**81.62 312**	*e*P	**P**	**17 34 13.4**	**-0.4**
MORC	**Moravsky Berou**	**81.67 321**	*e*P	**P**	**17 34 13.6**	**-0.3**
MORC			pmax	pmax		
	comp=Z,3.0nm,0.7s					
MORC	**Moravsky Berou**	**81.67 321**	*e*P	**P**	**17 34 13.6**	**-0.3**
	comp=Z,3.0nm,0.7s					
MORC	**Moravsky Berou**	**81.67 321** ⇑	*i*P	**P**	**17 34 14.2**	**+0.2**
KSP	**Ksiaz**	**81.89 322** ⇑	*e*P	**P**	**17 34 15.1**	**0.0**
KSP	**Ksiaz**	**81.89 322**	*e*P	**P**	**17 34 15.0**	**0.0**
KRLC	**Kraliky**	**81.97 321**	*e*P	**P**	**17 34 15.7**	**+0.2**
KRLC			*e*		17 34 22.2	
KRLC	**Kraliky**	**81.97 321**	*e*P	**P**	**17 34 15.7**	**+0.2**
KRLC			*e*PCP	**PcP**	**17 34 22.2**	**+1.2**
DPC	**Dobruska-Polom**	**82.10 322**	*e*P	**P**	**17 34 16.2**	**0.0**
DPC			*e*		17 34 25.9	
DPC			MLR	MLR		
	comp=Z,300nm,19.4s					
DPC	**Dobruska-Polom**	**82.10 322**	*e*P	**P**	**17 34 16.2**	**0.0**
DPC			*e*pP	**pP**	**17 34 25.9**	**+0.5**
DPC			AMS	AMS	18 14 20.0	
	comp=Z,300nm,19.4s					
UPC	**Upice**	**82.20 322**	*e*P	**P**	**17 34 17.0**	**+0.3**
UPC	**Upice**	**82.20 322**	*e*P	**P**	**17 34 17.0**	**+0.3**
YKW3	**Yellowknife Ar**	**82.40 23**	*e*P	**P**	**17 34 17.1**	**-0.3**
	comp=Z,0.1nm,0.6s					
VRAC	**Vranov**	**82.44 321** ⇑	*i*P	**P**	**17 34 18.1**	**+0.2**
YKA	**Yellowknife Ar**	**82.44 23**	P	**P**	**17 34 17.4**	**-0.3**
YKA	**Yellowknife Ar**	**82.44 23**	P	**P**	**17 34 17.4**	**-0.3**
	comp=Z,6.4nm,0.6s,baz=305,slow=5.3,SNR=94					
PKSM	**Moragy**	**82.63 317** ⇑	*i*P	**P**	**17 34 18.9**	**-0.1**
ZST	**Bratislava**	**82.66 320**	*e*P	**P**	**17 34 20.1**	**+1.0**
ZST	**Bratislava**	**82.66 320**	*e*P	**P**	**17 34 20.1**	**+1.0**
MUD	**Monsted U'grnd**	**82.72 329**	*i* P	**P**	**17 34 19.3**	**+0.1**
MUD			pmax	pmax		
	comp=Z,10.0nm,0.8s					
MUD	**Monsted U'grnd**	**82.72 329**	*i* P	**P**	**17 34 19.3**	**+0.1**
	comp=Z,10nm,0.8s					
SCO	**Scoresbysund**	**82.73 349**	*i* P	**P**	**17 34 19.5**	**+0.5**
SCO			pmax	pmax		
	comp=Z,9.0nm,0.8s					
SCO	**Scoresbysund**	**82.73 349**	*i* P	**P**	**17 34 19.5**	**+0.5**
	comp=Z,8.5nm,0.8s					
SUMG	**Summit**	**82.98 355**	*e*P	**P**	**17 34 20.3**	**-0.5**
SUMG			pmax	pmax		
	comp=Z,23nm,0.9s					
SUMG	**Summit**	**82.98 355**	*e*P	**P**	**17 34 20.3**	**-0.5**
	comp=Z,23nm,0.9s					
SUMG	**Summit**	**82.98 355**	*i* P	**P**	**17 34 20.9**	**+0.1**
	comp=Z,19nm,0.8s					
PVCC	**Panska Ves**	**83.00 323**	*e*P	**P**	**17 34 22.4**	**+1.6**
PVCC			*e*		17 34 39.7	
PVCC			MLR	MLR		
	comp=Z,400nm,16.8s					
PVCC	**Panska Ves**	**83.00 323**	*e*P	**P**	**17 34 22.4**	**+1.6**
PVCC			*ex*	x	17 34 39.7	
PVCC			AMS	AMS	18 14 40.0	
	comp=Z,400nm,16.8s					
TREC	**Trest**	**83.08 321**	*e*P	**P**	**17 34 21.3**	**0.0**
TREC			MLR	MLR		
	comp=Z,200nm,19.4s					
TREC	**Trest**	**83.08 321**	*e*P	**P**	**17 34 21.3**	**0.0**
TREC			AMS	AMS	18 13 50.0	
	comp=Z,200nm,19.4s					
BRG	**Berggiesshubel**	**83.18 323**	*e*P	**P**	**17 34 21.5**	**-0.2**
BRG			pmax	pmax		
	comp=Z,5.0nm,1.0s					
BRG			pmax	pmax		
	comp=Z,6.0nm,0.8s					
BRG			MLR	MLR		
	comp=N,195nm,18.1s					
BRG			MLR	MLR		
	comp=E,267nm,16.2s					
BRG			MLR	MLR		
	comp=Z,440nm,14.6s					
PRU	**Pruhonice**	**83.28 322**	*e*P	**P**	**17 34 22.2**	**-0.1**
PRU			MLR	MLR		
	comp=Z,300nm,18.0s					
PRU	**Pruhonice**	**83.28 322**	*e*P	**P**	**17 34 22.2**	**-0.1**
PRU			AMS	AMS	18 14 50.0	
	comp=Z,300nm,18.0s					
CLL	**Collm**	**83.47 324**	*e*P	**P**	**17 34 23.0**	**-0.2**
CLL			pmax	pmax		
	comp=Z,8.0nm,1.2s					
CLL			MLR	MLR		
	comp=Z,400nm,18.0s					
CLL	**Collm**	**83.47 324**	*e*P	**P**	**17 34 22.7**	**-0.5**
	comp=Z,8.0nm,1.3s					
CLL	**Collm**	**83.47 324**	*e*P	**P**	**17 34 23.0**	**-0.2**
	comp=Z,8.0nm,1.2s					
CLL			LmV		18 15 00.0	
	comp=Z,400nm,18.0s					
FBE	**Freiberg**	**83.48 323**	*e*P	**P**	**17 34 23.3**	**0.0**
	comp=Z,10.0nm,1.2s					
CONA	**Conrad Observa**	**83.52 320** ⇑	*i*P	**P**	**17 34 23.8**	**+0.1**
	comp=Z,8.3nm,1.0s					
CONA	**Conrad Observa**	**83.52 320** ⇑	*i*P	**P**	**17 34 23.8**	**+0.1**
	comp=Z,8.3nm,1.0s					
TANN	**Tannenbergstha**	**84.22 323**	*e*P	**P**	**17 34 26.9**	**-0.3**
	comp=Z,4.0nm,1.0s					
KHC	**Kasperske Hory**	**84.25 322**	*e*P	**P**	**17 34 26.9**	**-0.4**
KHC			pmax	pmax		
	comp=Z,4.0nm,0.8s					
KHC	**Kasperske Hory**	**84.25 322**	*e*P	**P**	**17 34 26.9**	**-0.4**
	comp=Z,3.8nm,0.8s					
KHC	**Kasperske Hory**	**84.25 322**	*e*P	**P**	**17 34 27.0**	**-0.4**
KHC			AMS	AMS	18 15 40.0	
	comp=Z,400nm,14.6s					
WERD	**Werda**	**84.29 323**	*e*P	**P**	**17 34 27.2**	**-0.3**
	comp=Z,4.0nm,1.1s					
GUNZ	**Gunzen**	**84.32 323**	*e*P	**P**	**17 34 27.5**	**-0.2**
	comp=Z,6.0nm,1.0s					
GEC2	**GERESS Array S**	**84.32 321**	*e*P	**P**	**17 34 27.6**	**-0.2**
GEC2			pmax	pmax		
	comp=Z,7.0nm,0.9s					
GEC2	**GERESS Array S**	**84.32 321**	*e*P	**P**	**17 34 27.6**	**-0.2**
	comp=Z,7.0nm,0.9s					
GERES	**GERESS Array B**	**84.32 321**	P	**P**	**17 34 27.4**	**-0.3**
GERES	**GERESS Array B**	**84.32 321**	P	**P**	**17 34 27.4**	**-0.3**
	comp=Z,9.9nm,0.8s,baz=57,slow=4.9,SNR=66					
NKC	**Novy Kostel**	**84.33 323**	*e*P	**P**	**17 34 27.8**	**+0.1**
NKC			MLR	MLR		
	comp=Z,400nm,15.7s					
NKC	**Novy Kostel**	**84.33 323**	*e*P	**P**	**17 34 27.8**	**+0.1**
NKC			AMS	AMS	18 17 00.0	
	comp=Z,400nm,15.7s					
WERN	**Wernitzgruen**	**84.34 323**	*e*P	**P**	**17 34 27.4**	**-0.3**
	comp=Z,9.0nm,1.2s					
MOA	**Molln**	**84.49 320** ⇑	*i*P	**P**	**17 34 28.7**	**+0.2**
	comp=Z,13nm,0.8s					
MOA	**Molln**	**84.49 320** ⇑	*i*P	**P**	**17 34 28.7**	**+0.2**
	comp=Z,13nm,0.8s					
PERS	**Pernice**	**84.58 319**	*i* P	**P**	**17 34 28.5**	**-0.6**
CLZ	**Clausthal**	**84.60 325**	*e*P	**P**	**17 34 29.3**	**+0.3**
CLZ			pmax	pmax		
	comp=Z,7.0nm,1.0s					
CLZ	**Clausthal**	**84.60 325**	*e*P	**P**	**17 34 29.3**	**+0.3**
	comp=Z,7.0nm,1.0s					
SOKA	**Soboth**	**84.61 319** ⇓	*i*P	**P**	**17 34 28.9**	**-0.4**
	comp=Z,7.8nm,0.9s					
SOKA	**Soboth**	**84.61 319** ⇓	*i*P	**P**	**17 34 28.9**	**-0.4**
	comp=Z,7.8nm,0.9s					
MANZ	**Manzenberg**	**84.64 323**	*e*P	**P**	**17 34 29.3**	**0.0**
	comp=Z,4.0nm,0.9s					
ROTZ	**Rotzenmuhle**	**84.70 323**	*e*P	**P**	**17 34 29.6**	**+0.1**
	comp=Z,8.0nm,1.1s					
PDKS	**Podkum**	**84.94 318**	*i* P	**P**	**17 34 30.6**	**-0.3**
LJU	**Ljubljana**	**85.23 319**	*i* P	**P**	**17 34 31.9**	**-0.4**
GRF	**Grafenberg Arr**	**85.28 323**	*e*P	**P**	**17 34 32.6**	**+0.1**
GRF			pmax	pmax		
	comp=Z,13nm,1.2s					
GRF			MLR	MLR		
	comp=Z,200nm,21.4s					
GRF	**Grafenberg Arr**	**85.28 323**	*e*P	**P**	**17 34 32.6**	**+0.1**
	comp=Z,13nm,1.2s					
GRF			*e*L	L	18 18 16.2	
	comp=Z,202nm,21.4s					
RJOB	**Jochberg**	**85.41 321**	*e*P	**P**	**17 34 33.0**	**-0.2**
	comp=Z,7.0nm,1.1s					
KBA	**Koelnbreinsper**	**85.42 320** ⇑	*i*P	**P**	**17 34 33.4**	**0.0**
KBA			pmax	pmax		
	comp=Z,6.0nm,0.6s					
KBA	**Koelnbreinsper**	**85.42 320** ⇑	*i*PcP	**P**	**17 34 33.4**	**0.0**
	comp=Z,6.4nm,0.7s					
KBA	**Koelnbreinsper**	**85.42 320** ⇑	*i*P	**P**	**17 34 33.4**	**0.0**
	comp=Z,6.4nm,0.6s					
BUG	**Bochum--Univer**	**86.44 326**	*e*P	**P**	**17 34 38.2**	**+0.1**
KMBO	**Kilima Mbogo**	**86.90 267**	P	**P**	**17 34 42.4**	**+1.1**
KMBO	**Kilima Mbogo**	**86.90 267**	P	**P**	**17 34 42.4**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=228,slow=23,SNR=6.6					
KMBO			LR	LR	18 13 52.3	
	comp=Z,98nm,20.0s,baz=91,slow=36					
FETA	**Feichten**	**86.98 321** ⇓	*i*PcP	**P**	**17 34 41.0**	**0.0**
	comp=Z,5.0nm,0.9s					
FETA	**Feichten**	**86.98 321** ⇓	*i*P	**P**	**17 34 41.0**	**0.0**
	comp=Z,5.0nm,0.9s					
RAR	**Rarotonga**	**87.17 115**	LR	LR	18 06 03.7	
	comp=Z,272nm,20.1s,baz=312,slow=30					
DAVA	**Damuels**	**87.32 321** ⇑	*i*PcP	**P**	**17 34 43.6**	**+0.9**
	comp=Z,7.5nm,0.9s					
DAVA	**Damuels**	**87.32 321** ⇑	*i*P	**P**	**17 34 43.6**	**+0.9**
	comp=Z,7.5nm,0.9s					
WLF	**Walferdange**	**88.04 325**	P	**P**	**17 34 46.0**	**+0.1**
WLF	**Walferdange**	**88.04 325**	*e*P	**P**	**17 34 46.2**	**+0.3**
TUE	**Stuetta**	**88.07 321**	*e*P	**P**	**17 34 45.9**	**-0.5**
	comp=Z,5.5nm,0.6s					
CDF	**Champ du Feu**	**88.16 323**	*e*P	**P**	**17 34 46.2**	**-0.4**
	comp=Z,21nm,1.0s					
CDF	**Champ du Feu**	**88.16 323**	*e*P	**P**	**17 34 46.2**	**-0.4**
CDF			pmax	pmax		
	comp=Z,21nm,1.0s					
CDF	**Champ du Feu**	**88.16 323**	*e*P	**P**	**17 34 46.2**	**-0.4**
	comp=Z,21nm,1.0s					
GIVF	**Givet**	**88.48 326**	*e*P	**P**	**17 34 47.6**	**-0.4**
GIVF	**Givet**	**88.48 326**	*e*P	**P**	**17 34 47.6**	**-0.4**
GIVF	**Givet**	**88.48 326**	*e*P	**P**	**17 34 47.6**	**-0.4**
HINF	**Hinteralfeld**	**88.73 323**	*e*P	**P**	**17 34 48.4**	**-0.9**
HINF	**Hinteralfeld**	**88.73 323**	*e*P	**P**	**17 34 48.4**	**-0.9**
HINF	**Hinteralfeld**	**88.73 323**	*e*P	**P**	**17 34 48.4**	**-0.9**
HAU	**Haudompre**	**88.90 323**	*e*P	**P**	**17 34 49.2**	**-0.9**
	comp=Z,8.6nm,0.7s					
HAU			*e*R			
	comp=Z,363nm,19.0s					
HAU	**Haudompre**	**88.90 323**	*e*P	**P**	**17 34 49.2**	**-0.9**
HAU			pmax	pmax		
	comp=Z,9.0nm,0.7s					
HAU	**Haudompre**	**88.90 323**	*e*P	**P**	**17 34 49.2**	**-0.9**
	comp=Z,8.6nm,0.7s					
SFTF	**Sexfontaines**	**89.49 324**	*e*P	**P**	**17 34 52.2**	**-0.6**
	comp=Z,49nm,1.2s					
SFTF	**Sexfontaines**	**89.49 324**	*e*P	**P**	**17 34 52.2**	**-0.6**
	comp=Z,49nm,1.2s					
LPG	**La Plagne**	**90.12 321**	*e*P	**P**	**17 34 56.0**	**-0.2**
	comp=Z,39nm,0.8s					
LPG	**La Plagne**	**90.12 321**	*e*P	**P**	**17 34 56.0**	**-0.2**
LPG			pmax	pmax		
	comp=Z,39nm,0.8s					
LPG	**La Plagne**	**90.12 321**	*e*P	**P**	**17 34 56.0**	**-0.2**
	comp=Z,39nm,0.8s					
LPL	**La Plagne**	**90.12 321**	*e*P	**P**	**17 34 56.0**	**-0.1**
	comp=Z,24nm,0.8s					
LPL	**La Plagne**	**90.12 321**	*e*P	**P**	**17 34 56.0**	**-0.1**
LPL			pmax	pmax		
	comp=Z,24nm,0.8s					
LPL	**La Plagne**	**90.12 321**	*e*P	**P**	**17 34 56.0**	**-0.1**
	comp=Z,24nm,0.8s					
SBF	**Sospel**	**90.65 319**	*e*P	**P**	**17 34 58.1**	**-0.3**
	comp=Z,291nm,1.6s					
SBF	**Sospel**	**90.65 319**	*e*P	**P**	**17 34 58.1**	**-0.3**
SBF			pmax	pmax		
	comp=Z,291nm,1.6s					
SBF	**Sospel**	**90.65 319**	*e*P	**P**	**17 34 58.1**	**-0.3**
	comp=Z,291nm,1.6s					
LOR	**Lormes**	**90.69 324**	*e*P	**P**	**17 34 57.8**	**-0.6**
LOR			*e*R			
	comp=Z,308nm,17.0s					
LOR	**Lormes**	**90.69 324**	*e*P	**P**	**17 34 57.8**	**-0.6**
ORIF	**Oris-en-Rattie**	**90.96 321**	*e*P	**P**	**17 34 59.6**	**-0.2**
	comp=Z,23nm,0.9s					
ORIF			*e*R			
	comp=Z,336nm,19.2s					
ORIF	**Oris-en-Rattie**	**90.96 321**	*e*P	**P**	**17 34 59.6**	**-0.2**
ORIF			pmax	pmax		
	comp=Z,23nm,0.9s					
ORIF	**Oris-en-Rattie**	**90.96 321**	*e*P	**P**	**17 34 59.6**	**-0.2**
	comp=Z,23nm,0.9s					
SSF	**Saint Saulge**	**91.01 324**	*e*P	**P**	**17 34 59.5**	**-0.4**
	comp=Z,8.5nm,1.0s					
SSF	**Saint Saulge**	**91.01 324**	*e*P	**P**	**17 34 59.5**	**-0.4**
SSF			pmax	pmax		
	comp=Z,9.0nm,1.0s					
SSF	**Saint Saulge**	**91.01 324**	*e*P	**P**	**17 34 59.5**	**-0.4**
	comp=Z,8.5nm,1.0s					
SMF	**Signal de Mont**	**91.08 323**	*e*P	**P**	**17 34 59.7**	**-0.5**
	comp=Z,22nm,0.9s					
SMF	**Signal de Mont**	**91.08 323**	*e*P	**P**	**17 34 59.7**	**-0.5**
SMF			pmax	pmax		
	comp=Z,22nm,0.9s					
SMF	**Signal de Mont**	**91.08 323**	*e*P	**P**	**17 34 59.7**	**-0.5**
	comp=Z,22nm,0.9s					
AVF	**Avril sur Loir**	**91.26 323**	*e*P	**P**	**17 35 00.4**	**-0.6**
AVF	**Avril sur Loir**	**91.26 323**	*e*P	**P**	**17 35 00.4**	**-0.6**
AVF	**Avril sur Loir**	**91.26 323**	*e*P	**P**	**17 35 00.4**	**-0.6**
LMR	**La Mourre**	**91.51 319**	*e*P	**P**	**17 35 01.7**	**-0.6**
LMR	**La Mourre**	**91.51 319**	*e*P	**P**	**17 35 01.7**	**-0.6**
LMR	**La Mourre**	**91.51 319**	*e*P	**P**	**17 35 01.7**	**-0.6**
BSMT	**Bassoo Peak**	**91.57 35**	*e*P	**P**	**17 35 03.8**	**+1.0**
	comp=Z,9.0nm,0.7s					
SMRF	**Simiane la Rot**	**91.68 320**	*e*P	**P**	**17 35 02.9**	**-0.2**
SMRF	**Simiane la Rot**	**91.68 320**	*e*P	**P**	**17 35 02.9**	**-0.2**
VIVF	**Saint-Julien-l**	**91.69 321**	*e*P	**P**	**17 35 02.7**	**-0.4**
	comp=Z,15nm,0.8s					
VIVF	**Saint-Julien-l**	**91.69 321**	*e*P	**P**	**17 35 02.7**	**-0.4**
VIVF			pmax	pmax		
	comp=Z,15nm,0.8s					
VIVF	**Saint-Julien-l**	**91.69 321**	*e*P	**P**	**17 35 02.7**	**-0.4**
	comp=Z,15nm,0.8s					
BMO	**Blue Mountains**	**92.04 38**	*e*P	**P**	**17 35 04.8**	**-0.1**
BMO			pmax	pmax		
	comp=Z,4.0nm,1.0s					
BMO	**Blue Mountains**	**92.04 38**	*e*P	**P**	**17 35 04.8**	**-0.1**
	comp=Z,4.1nm,1.0s					
TCF	**Toulx Ste Croi**	**92.19 324**	*e*P	**P**	**17 35 05.3**	**-0.1**
	comp=Z,24nm,1.3s					
TCF	**Toulx Ste Croi**	**92.19 324**	*e*P	**P**	**17 35 05.3**	**-0.1**
TCF			pmax	pmax		
	comp=Z,24nm,1.3s					
TCF	**Toulx Ste Croi**	**92.19 324**	*e*P	**P**	**17 35 05.3**	**-0.1**
	comp=Z,24nm,1.3s					
FFC	**Flin Flon**	**92.58 24**	*c*eP	**P**	**17 35 07.0**	**0.0**
FFC	**Flin Flon**	**92.58 24**	*e*P	**P**	**17 35 05.0**	**-2.0**
	comp=Z,9.8nm,0.9s					
SLMT	**Seeley Lake**	**92.64 35**	*e*P	**P**	**17 35 08.6**	**+1.0**
	comp=Z,3.3nm,0.7s					
CAF	**Calviac**	**93.11 323**	*e*P	**P**	**17 35 09.9**	**+0.2**
	comp=Z,17nm,1.0s					
CAF	**Calviac**	**93.11 323**	*e*P	**P**	**17 35 09.9**	**+0.2**
CAF			pmax	pmax		
	comp=Z,17nm,1.0s					
CAF	**Calviac**	**93.11 323**	*e*P	**P**	**17 35 09.9**	**+0.2**
	comp=Z,17nm,1.0s					
RJF	**Les Rejaudoux**	**93.18 323**	*e*P	**P**	**17 35 10.1**	**+0.1**
	comp=Z,30nm,1.2s					
RJF			*e*R			
	comp=Z,216nm,17.5s					
RJF	**Les Rejaudoux**	**93.18 323**	*e*P	**P**	**17 35 10.1**	**+0.1**
RJF			pmax	pmax		
	comp=Z,30nm,1.2s					
RJF	**Les Rejaudoux**	**93.18 323**	*e*P	**P**	**17 35 10.1**	**+0.1**
	comp=Z,30nm,1.2s					
KEST	**Kesra**	**93.95 312**	P	**P**	**17 35 14.1**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=326,slow=5.3,SNR=7.7					
KEST			LR	LR	18 26 51.8	
	comp=Z,63nm,19.4s,baz=278,slow=42					
DLMT	**Dillon**	**94.32 36**	*e*P	**P**	**17 35 15.9**	**+0.4**
PPT	**Papeete**	**94.36 107**	LR	LR	18 09 25.1	
	comp=Z,211nm,21.9s,baz=319,slow=30					
PPT2	**Papeete2**	**94.36 107**	*e*LR	LR	18 05 34.3	
	comp=Z,390nm,23.8s,baz=286					
HLID	**Hailey**	**94.47 38**	*e*P	**P**	**17 35 18.1**	**+1.9**
	comp=Z,2.1nm,0.8s					
NVAR	**Mina Array Bea**	**95.26 44**	P	**P**	**17 35 21.4**	**+1.4**
NVAR	**Mina Array Bea**	**95.26 44**	P	**P**	**17 35 21.4**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=294,slow=4.8,SNR=7.6					
TBI	**Tubuai**	**96.73 112**	*e*LR	LR	18 06 06.5	
	comp=Z,251nm,26.8s,baz=297					
TXAR	**Lajitas Array**	**110.38 43**	PKiKP	**PKiKP**	**17 40 28.6**	**+0.1**
TXAR	**Lajitas Array**	**110.38 43**	PKiKP	**PKiKP**	**17 40 28.6**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=66,slow=1.1,SNR=3.1					
TORD	**Torodi Ar. Bea**	**112.16 296**	PKiKP	**PKiKP**	**17 40 35.2**	**+3.3**
TORD			PP	PP	17 41 10.2	-5.9
TORD	**Torodi Ar. Bea**	**112.16 296**	PKiKP	**PKiKP**	**17 40 35.2**	**+3.3**
	comp=Z,0.3nm,0.5s,baz=43,slow=2.3,SNR=3.5					
TORD			PP	PP	17 41 10.2	-5.9
	comp=Z,0.6nm,0.8s,baz=58,slow=6.7,SNR=4.3					
DBIC	**Dimbokro**	**121.07 294**	PP	PP	17 42 18.2	-0.4
	comp=Z,1.1nm,0.5s,baz=72,slow=3.2,SNR=2.8					

IDC ***29*** *17:24:03.9±0.7, 23.97N×123.43E, h0km, mb4.0/14, mb1 4.2/14, mb1mx4.0/27, mbtmp4.0/14, MS4.5/1, Ms1 4.5/1, ms1mx3.1/42, Error ellipse: s-maj=38.0km s-min=15.6km az=64.0*

ISCJB ***29*** *17:24:06.6±1.1, 23.83N±0.07×123.30E±0.05, h29km±7km, mb4.0/14, MS4.5/1, Error ellipse: s-maj=12.5km s-min=7.3km az=8.8*

JMA ***29*** *17:24:08.2±0.2, 23.87N×123.37E, h24km±3km, M4.0*

JMA Felt I J1.

ISC 29 17:24:08.3±1.7, 23.9N±0.1×123.36E±0.06, h28km±11km, n21, σ0.62/27, mb4.1/14, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.43**	**69**	P	**Pb**		**17 24 17.1**	**-0.5**
HATJ				S	**Sb**		**17 24 23.7**	**-0.2**
IRIF	**Iriomote-Funau**	**0.55**	**38**	P	**Pb**		**17 24 19.2**	**-0.3**
IRIF				S	**Sb**		**17 24 27.5**	**+0.4**
YOJ	**Yonaguni jima**	**0.65**	**330**	P	**Pb**		**17 24 21.4**	**+0.3**
YOJ				S	**Sb**		**17 24 29.4**	**-0.4**
JKRS	**Kuro-shima**	**0.68**	**60**	P	**Pb**		**17 24 21.6**	**0.0**
JKRS				S	**Sb**		**17 24 31.2**	**+0.5**
JIJ	**Ishigaki jima**	**0.85**	**57**	P	**Pb**		**17 24 23.8**	**-0.7**
JIJ				S	**Sb**		**17 24 35.2**	**-0.4**
JTJ	**Tarama**	**1.43**	**59**	P	**Pn**		**17 24 33.2**	**+0.9**
JTJ				S	**Sb**		**17 24 52.2**	**+0.1**
JMJ	**Miyako jima 2**	**1.98**	**62**	P	**Pn**		**17 24 41.4**	**+1.4**
MKAR	**Makanchi Array**	**39.93**	**315**	P	**P**		**17 31 39.7**	**-0.3**
	0.8nm,0.5s,baz=106,slow=8.5,SNR=6.1							
ZALV	**Zalesovo Beam**	**41.58**	**326**	P	**P**		**17 31 52.3**	**-1.1**
	2.3nm,0.5s,baz=120,slow=7.3,SNR=4.5							
KURBB	**Kurchatov Arra**	**43.61**	**319**	P	**P**		**17 32 09.7**	**-0.4**
	0.5nm,0.3s,baz=114,slow=9.8,SNR=4.1							
WRA	**Warramunga Arr**	**44.87**	**165**	P	**P**		**17 32 19.8**	**-0.5**
	1.6nm,0.7s,baz=348,slow=8.7,SNR=2.9							
ASAR	**Alice Springs**	**48.38**	**167**	P	**P**		**17 32 47.8**	**0.0**
	0.7nm,0.7s,baz=351,slow=5.0,SNR=3.7							
BVAR	**Borovoye Array**	**49.16**	**320**	P	**P**		**17 32 53.3**	**-0.3**
	0.7nm,0.5s,baz=92,slow=10,SNR=2.7							
STKA	**Stephens Creek**	**58.14**	**162**	P	**P**		**17 34 00.3**	**+0.8**
	4.4nm,1.2s,baz=325,slow=8.5,SNR=2.9							
ILAR	**Eielson Array**	**68.55**	**27**	P	**P**		**17 35 07.3**	**-0.8**
	0.4nm,0.7s,baz=268,slow=4.9,SNR=3.9							
FINES	**FINESS Array B**	**72.69**	**330**	P	**P**		**17 35 33.1**	**-0.2**
	1.9nm,0.7s,baz=64,slow=6.3,SNR=5.0							
AKASG	**Malin Array Be**	**74.40**	**319**	P	**P**		**17 35 43.1**	**-0.5**
	2.0nm,0.8s,baz=59,slow=6.3,SNR=4.4							
AKASG				LR	LR		18 13 44.9	
	comp=Z,282nm,20.9s,baz=65,slow=40							
BRTR	**Keskin Array B**	**74.94**	**307**	P	**P**		**17 35 48.0**	**+0.8**
	3.1nm,0.7s,baz=91,slow=5.0,SNR=5.5							
NOA	**NORSAR Array B**	**79.40**	**333**	P	**P**		**17 36 11.1**	**-0.5**
	1.8nm,0.7s,baz=54,slow=5.7,SNR=3.8							
YKA	**Yellowknife Ar**	**82.45**	**23**	P	**P**		**17 36 27.9**	**+0.2**
	0.9nm,0.6s,baz=303,slow=5.3,SNR=4.9							
GERES	**GERESS Array B**	**84.32**	**321**	P	**P**		**17 36 38.0**	**+0.2**
	0.9nm,0.7s,baz=52,slow=6.4,SNR=5.0							

IDC 29 17:27:07.4±49.0, 16.50S×177.03W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/19, mbtmp4.0/3, Error ellipse: s-maj=902.5km s-min=153.5km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.47**	**240**	P	P		17 34 48.2	+0.2
	1.1nm,0

0.5nm,0.3s,baz=299,slow=10,SNR=5.9
SONM Songino Array 49.38 346 P P 17 45 56.6 0.0
1.1nm,0.6s,baz=165,slow=9.4,SNR=6.9
MKAR Makanchi Array 58.16 328 P P 17 47 00.0 -0.2
0.9nm,0.5s,baz=121,slow=8.7,SNR=13
MKAR pP pP 17 47 36.2 -0.2
0.5nm,0.6s,baz=125,slow=8.2,SNR=4.4

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*ATH **29** 17:41:30.7, 41.92N×23.02E, h23km±3km, MD3.1/5*
*ISCJB **29** 17:41:30.7±0.6, 41.91N±0.02×23.04E±0.05, h5km±4km, Error ellipse: s-maj=5.9km s-min=3.2km az=166.5*
*SKO **29** 17:41:30.7, 41.91N×23.04E, h26km, ML1.6, ML1.9*
*THE **29** 17:41:31.8, 41.89N×23.03E, h2km±3km, ML2.2/3, Error ellipse: s-maj=3.8km s-min=0.9km az=229.0*
*CSEM **29** 17:41:31.5±0.1, 41.92N×23.04E, h2km, ML2.2/3, Error ellipse: s-maj=2.8km s-min=1.6km az=78.0*
*BEO **29** 17:41:33.1±1.2, 41.94N×23.01E, h6km±5km, ML1.8/4*

ISC 29 17:41:31.5±1.1, 41.90N±0.02×23.03E±0.03, h5km±10km, n28, σ0=48/52, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.67**	**211**	P	**Pg**	**17 41 44.7**	**+0.3**
VAY				S	**Sg**	**17 41 53.5**	**+0.4**
VAY	**Valandovo**	**0.67**	**211**	*i* Pg	**Pg**	**17 41 45.0**	**+0.6**
VAY				*i* Sg	**Sg**	**17 41 53.7**	**+0.6**
VAY				*e*Lg	Lg	17 41 53.9	
	comp=E,30nm,0.2s						
VAY				*e*Lg	Lg	17 41 54.1	
	comp=N,43nm,0.5s						
VAY	**Valandovo**	**0.67**	**211**	P	**Pg**	**17 41 44.7**	**+0.3**
VAY	**Valandovo**	**0.67**	**211**	*i* Pg	**Pb**	**17 41 45.4**	**-0.3**
VAY				S	**Sg**	**17 41 53.5**	**+0.4**
VAY				*i* Sg	**Sb**	**17 41 54.2**	**-1.1**
VAY				*e*Lg	Lg	17 41 54.6	
	comp=N,43nm,0.5s						
VTS	**Vitosha**	**0.70**	**11**	P	**Pg**	**17 41 44.8**	**-0.2**
VTS				S	**Sg**	**17 41 54.3**	**+0.1**
VTS	**Vitosha**	**0.70**	**11**	*e*Pg	**Pg**	**17 41 45.0**	**0.0**
VTS				*e*Sg	**Sg**	**17 41 54.3**	**+0.1**
VTS	**Vitosha**	**0.70**	**11**	*e*Pg	**Pg**	**17 41 45.0**	**0.0**
VTS				S	**Sg**	**17 41 54.3**	**+0.1**
KNT	**Kendrikon**	**0.74**	**187**	P	**Pg**	**17 41 45.9**	**+0.1**
KNT				S	**Sg**	**17 41 55.9**	**+0.5**
KNT	**Kendrikon**	**0.74**	**187**	P	**Pg**	**17 41 45.9**	**+0.1**
KNT				S	**Sg**	**17 41 55.9**	**+0.5**
NVR	**Nevrokopi**	**0.83**	**131**	P	**Pg**	**17 41 47.6**	**+0.1**
NVR				S	**Sg**	**17 41 58.9**	**+0.6**
NVR	**Nevrokopi**	**0.83**	**131**	*e*PN	**Pg**	**17 41 47.7**	**+0.2**
NVR				*e*SN	**Sg**	**17 41 58.7**	**+0.4**
NVR	**Nevrokopi**	**0.83**	**131**	P	**Pg**	**17 41 47.6**	**+0.1**
NVR				S	**Sg**	**17 41 58.9**	**+0.6**
SRS	**Serrai**	**0.89**	**151**	P	**Pg**	**17 41 48.5**	**-0.1**
SRS				S	**Sb**	**17 42 01.5**	**-0.2**
SRS	**Serrai**	**0.89**	**151**	P	**Pg**	**17 41 48.5**	**-0.1**
SRS				S	**Sb**	**17 42 01.5**	**-0.2**
GRG	**Griva**	**1.05**	**207**	P	**Pg**	**17 41 51.3**	**-0.4**
GRG				S	**Sb**	**17 42 06.4**	**+0.1**
GRG	**Griva**	**1.05**	**207**	*e*PN	**Pg**	**17 41 51.1**	**-0.6**
GRG				*e*SN	**Sg**	**17 42 05.9**	**+0.6**
GRG	**Griva**	**1.05**	**207**	P	**Pg**	**17 41 51.3**	**-0.4**
GRG				S	**Sb**	**17 42 06.4**	**+0.1**
SOH	**Sokhos**	**1.11**	**167**	*e*PB	**Pg**	**17 41 51.4**	**-1.3**
SOH				*e*SN	**Sb**	**17 42 08.3**	**+0.4**
BARS	**Barje**	**1.28**	**316**	*e*Pg	**Pn**	**17 41 55.8**	**-0.3**
BARS				*e*Sg	**Sg**	**17 42 12.1**	**-0.6**
BARS	**Barje**	**1.28**	**316**	*e*Pg	**Pn**	**17 41 55.8**	**-0.3**
BARS				*e*Sg	**Sg**	**17 42 12.1**	**-0.6**
ZAPS	**Zavoj**	**1.40**	**348**	*e*Pg	**Pb**	**17 41 58.0**	**-0.2**
ZAPS				*e*Sg	**Sg**	**17 42 16.7**	**+0.1**
KAVA	**Kavala**	**1.44**	**128**	P	**Pn**	**17 41 58.1**	**-0.1**
KAVA	**Kavala**	**1.44**	**128**	P	**Pn**	**17 41 58.1**	**-0.1**
PLG	**Polygyros**	**1.56**	**168**	*e*PN	**Pn**	**17 41 58.8**	**-1.1**
SELS	**Selova**	**1.93**	**314**	*e*Pn	**Pn**	**17 42 05.8**	**+0.8**
SELS				*e*Sn	**Sn**	**17 42 30.2**	**+0.5**
PAIG	**Paliouri**	**2.03**	**166**	*e*PN	**Pn**	**17 42 06.1**	**-0.3**
GRUS	**Gruza**	**2.61**	**320**	*e*Pn	**Pn**	**17 42 14.9**	**+0.5**
GRUS				*e*Sn	**Sn**	**17 42 47.0**	**+0.5**
GRUS	**Gruza**	**2.61**	**320**	*e*Pn	**Pn**	**17 42 14.9**	**+0.5**
GRUS				*e*Sn	**Sn**	**17 42 47.0**	**+0.5**

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*ISCJB **29** 17:43:06.7±0.7, 76.96N±0.04×18.7E±0.3, h10km, Error ellipse: s-maj=8.8km s-min=5.4km az=152.7*
*CSEM **29** 17:43:07.1±0.1, 77.01N×18.26E, h2km, ML2.6, Error ellipse: s-maj=7.4km s-min=2.1km az=67.0*
*NAO **29** 17:43:07.5±0.9, 77.03N×18.75E, ML2.7*
*BER **29** 17:43:10.8±2.8, 77.09N×18.99E, h18km±17km, MD2.2, ML2.6, ML2.7(NAO)*

ISC 29 17:43:08.5±0.9, 77.10N±0.05×19.14E±0.07, h10km, n19, σ0=90/29, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSP	**Hornsund**	**0.81**	**265**	*e*P	**Pg**	**17 43 22.8**	**-1.3**
HSP				*e*S	**Sb**	**17 43 37.0**	**+1.3**
SPA0	**Spitsbergen Ar**	**1.24**	**332**	Pg	**Pn**	**17 43 31.4**	**-0.4**
	baz=152,slow=22						
SPA0				Pn	**Pn**	**17 43 32.0**	**+0.2**
	baz=150,slow=18						
SPA0				Lg	Lg	17 43 48.0	
	baz=145,slow=28						
SPA0	**Spitsbergen Ar**	**1.24**	**332**	Pg	**Pn**	**17 43 31.4**	**-0.4**
	baz=152,slow=22						
SPA0				Pn	**Pn**	**17 43 32.0**	**+0.2**
	baz=150,slow=18						
SPA0				Lg	Lg	17 43 48.0	
	baz=145,slow=28						
SPA0	**Spitsbergen Ar**	**1.24**	**332**	Pg	**Pn**	**17 43 31.4**	**-0.4**
	baz=152,slow=20,SNR=93						
SPA0	**Spitsbergen Ar**	**1.24**	**332**	Pn	**Pn**	**17 43 32.0**	**+0.2**
	baz=150,slow=17,SNR=55						
SPA0				Lg	Lg	17 43 48.0	
	baz=145,slow=25,SNR=91						
HOPEN	**Hopen**	**1.47**	**111**	*e*P	**Pn**	**17 43 36.4**	**+1.5**
HOPEN				*e*S	**Sn**	**17 43 53.9**	**-0.3**
HOPEN	**Hopen**	**1.47**	**111**	*e*P	**Pn**	**17 43 36.4**	**+1.5**
	SNR=55						
KBS	**Kingsbay**	**2.37**	**324**	Pn	**Pn**	**17 43 46.5**	**-0.8**
KBS				Pg	**Pb**	**17 43 51.1**	**-0.1**
KBS				Lg	Lg	17 44 20.6	
KBS	**Kingsbay**	**2.37**	**324**	*e*P	**Pn**	**17 43 46.9**	**-0.4**
KBS				*e*Pg	**Pb**	**17 43 51.0**	**-0.2**
KBS				*e*Sg	**Sb**	**17 44 21.9**	**+1.5**
KBS				AML	AML	17 44 25.5	
	comp=Z,65nm,0.2s						
KBS	**Kingsbay**	**2.37**	**324**	Pn	**Pn**	**17 43 46.5**	**-0.8**
KBS	**Kingsbay**	**2.37**	**324**	*e*P	**Pn**	**17 43 46.9**	**-0.4**
	SNR=55						
KBS	**Kingsbay**	**2.37**	**324**	Pg	**Pb**	**17 43 51.1**	**-0.1**
KBS				Lg	Lg	17 44 20.6	
KBS				*e*Sg	**Sb**	**17 44 21.9**	**+1.5**
	comp=Z,65nm,0.2s,SNR=92						
BJO	**Bjornoya**	**2.61**	**180**	*e*Pg	**Pb**	**17 43 55.1**	**-0.1**
BJO				*e*Sg	**Sb**	**17 44 28.7**	**+1.5**
BJO	**Bjornoya**	**2.61**	**180**	*e*Pg	**Pb**	**17 43 55.1**	**-0.1**
	SNR=91						
BJO				*e*Sg	**Sb**	**17 44 28.7**	**+1.5**
	SNR=91						
KEV	**Kevo**	**7.71**	**159**	*e*p	**Pn**	**17 45 00.9**	**+0.4**
	comp=Z,0.6nm,0.4s						
KEV	**Kevo**	**7.71**	**159**	*e*P	**Pn**	**17 45 00.9**	**+0.4**
	comp=Z,0.6nm,0.4s						
ARA0	**ARCESS Array S**	**7.81**	**163**	Pn	**Pn**	**17 45 01.2**	**-0.8**
	baz=354,slow=12						
ARA0				Sn	Sn	17 46 23.8	-6.6
	baz=3.1,slow=22						
ARA0	**ARCESS Array S**	**7.81**	**163**	Pn	**Pn**	**17 45 01.2**	**-0.8**
	baz=354,slow=12						
ARA0				Sn	Sn	17 46 23.8	-6.6
	baz=3.1,slow=22						
ARA0	**ARCESS Array S**	**7.81**	**163**	Pn	**Pn**	**17 45 01.2**	**-0.8**
	baz=354,slow=12,SNR=55						

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*TIR **29** 17:46:04.3, 39.54N×20.41E, h1km, ML3.4*
*CSEM **29** 17:46:09.1±0.3, 39.65N×20.42E, h2km, MD3.2, Error ellipse: s-maj=5.5km s-min=4.1km az=74.0*
*ATH **29** 17:46:09.0, 39.68N×20.44E, h11km±2km, MD3.2/13*
*THE **29** 17:46:09.4, 39.70N×20.43E, h0km±2km, ML2.8/7, Error ellipse: s-maj=2.0km s-min=0.7km az=294.0*

ISC 29 17:46:09.4±1.1, 39.68N±0.02×20.45E±0.02, h1km±10km, n58, σ0=89/97, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.31**	**95**	P	**Pg**	**17 46 15.3**	**-0.2**
JAN				S	**Sg**	**17 46 20.7**	**+1.2**
JAN	**Janina**	**0.31**	**95**	*e*PB	**Pg**	**17 46 15.3**	**-0.2**
JAN				*e*SB	**Sg**	**17 46 20.7**	**+1.2**
JAN	**Janina**	**0.31**	**95**	P	**Pg**	**17 46 15.3**	**-0.2**
JAN				S	**Sg**	**17 46 20.7**	**+1.2**
KEK	**Kerkira**	**0.50**	**274**	P	**Pg**	**17 46 18.8**	**-0.2**
KEK				S	**Sg**	**17 46 25.7**	**+0.2**
KEK	**Kerkira**	**0.50**	**274**	*e*PB	**Pg**	**17 46 18.8**	**-0.2**
KEK				*e*SB	**Sg**	**17 46 25.7**	**+0.2**
KEK	**Kerkira**	**0.50**	**274**	P	**Pg**	**17 46 18.8**	**-0.2**
KEK				S	**Sg**	**17 46 25.7**	**+0.2**
NEST	**Nestorio**	**0.87**	**32**	P	**Pg**	**17 46 25.2**	**-0.8**
NEST				S	**Sg**	**17 46 37.9**	**+0.6**
NEST	**Nestorio**	**0.87**	**32**	P	**Pg**	**17 46 25.2**	**-0.8**
NEST				S	**Sg**	**17 46 37.9**	**+0.6**
KBN	**Korca**	**0.98**	**15**	*i* PG	**Pg**	**17 46 27.5**	**-0.7**
KBN				*i* SG	**Sb**	**17 46 43.4**	**+0.7**
KBN	**Korca**	**0.98**	**15**	*i* Pg	**Pg**	**17 46 27.5**	**-0.7**
KBN				*i* Sg	**Sb**	**17 46 43.4**	**+0.7**
KZN	**Kozani**	**1.19**	**58**	*e*PN	**Pg**	**17 46 31.1**	**-1.2**
THL	**Klokotos Trika**	**1.22**	**95**	P	**Pg**	**17 46 32.5**	**-0.3**
THL				S	**Sn**	**17 46 50.7**	**0.0**
THL	**Klokotos Trika**	**1.22**	**95**	*e*PG	**Pg**	**17 46 31.8**	**-1.0**
THL				*e*SB	**Sb**	**17 46 49.6**	**+0.1**
THL	**Klokotos Trika**	**1.22**	**95**	*e*Pg	**Pg**	**17 46 31.8**	**-1.0**
THL	**Klokotos Trika**	**1.22**	**95**	P	**Pg**	**17 46 32.5**	**-0.3**
THL				*e*Sb	**Sb**	**17 46 49.6**	**+0.1**
THL				S	**Sn**	**17 46 50.7**	**0.0**
EVR	**Evrytania**	**1.30**	**125**	P	**Pg**	**17 46 33.7**	**-0.7**
EVR				S	**Sn**	**17 46 53.9**	**+0.9**
EVR	**Evrytania**	**1.30**	**125**	*e*PB	**Pg**	**17 46 33.7**	**-0.7**
EVR	**Evrytania**	**1.30**	**125**	P	**Pg**	**17 46 33.7**	**-0.7**
EVR				S	**Sn**	**17 46 53.9**	**+0.9**
FNA	**Florina**	**1.31**	**33**	P	**Pg**	**17 46 33.5**	**-1.1**
FNA				S	**Sn**	**17 46 53.3**	**+0.1**
FNA	**Florina**	**1.31**	**33**	*e*PG	**Pg**	**17 46 33.3**	**-1.3**
FNA				*e*SB	**Sn**	**17 46 52.9**	**-0.3**
FNA	**Florina**	**1.31**	**33**	P	**Pg**	**17 46 33.5**	**-1.1**
FNA				*e*Sb	**Sn**	**17 46 52.9**	**-0.3**
FNA				S	**Sn**	**17 46 53.3**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.47**	**117**	P	**Pn**	**17 46 36.7**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.47**	**117**	P	**Pn**	**17 46 36.7**	**-0.4**
BIA	**Bitola**	**1.50**	**26**	*e*Pn	**Pn**	**17 46 35.0**	**-2.6**
BIA				*i* Sn	**Sn**	**17 46 58.6**	**+0.9**
BIA	**Bitola**	**1.50**	**26**	*e*Pn	**Pn**	**17 46 34.9**	**-2.6**
BIA				*i* Sn	**Sn**	**17 46 58.6**	**+0.9**
VLS	**Valsamata**	**1.51**	**176**	*e*PG	**Pn**	**17 46 36.2**	**-1.4**
VLS				*e*SB	**Sn**	**17 46 59.0**	**+1.1**
VLS	**Valsamata**	**1.51**	**176**	*e*Pn	**Pn**	**17 46 36.2**	**-1.4**
AGG	**Agios Georgios**	**1.60**	**114**	P	**Pn**	**17 46 39.0**	**0.0**
AGG	**Agios Georgios**	**1.60**	**114**	*e*PG	**Pn**	**17 46 38.9**	**0.0**
AGG	**Agios Georgios**	**1.60**	**114**	P	**Pn**	**17 46 39.0**	**0.0**
LIT	**Litokhoron**	**1.63**	**74**	P	**Pn**	**17 46 39.5**	**+0.2**
LIT				S	**Sg**	**17 47 01.7**	**0.0**
LIT	**Litokhoron**	**1.63**	**74**	*e*PG	**Pn**	**17 46 39.5**	**+0.2**
LIT				*e*SB	**Sg**	**17 47 02.7**	**+1.0**
LIT	**Litokhoron**	**1.63**	**74**	P	**Pn**	**17 46 39.5**	**+0.2**
LIT				S	**Sg**	**17 47 01.7**	**0.0**
LIT				*e*Sb	**Sg**	**17 47 02.7**	**+1.0**
EFP	**Efpalio**	**1.69**	**137**	*e*PN	**Pb**	**17 46 41.2**	**-0.2**
EFP				*e*SB	**Sg**	**17 47 04.3**	**+0.5**
EFP	**Efpalio**	**1.69**	**137**	*e*Pn	**Pb**	**17 46 41.2**	**-0.2**
EFP				*e*Sb	**Sg**	**17 47 04.3**	**+0.5**
TIR	**Tirane**	**1.72**	**345**	*i* PN	**Pn**	**17 46 40.4**	**-0.2**
TIR				*i* SN	**Sg**	**17 47 08.2**	**+3.4**
TIR	**Tirane**	**1.72**	**345**	*i* Pn	**Pn**	**17 46 40.4**	**-0.2**
TIR				*i* Sn	**Sg**	**17 47 08.2**	**+3.4**
TRIZ	**Trizonia**	**1.83**	**136**	*e*PG	**Pb**	**17 46 43.2**	**-0.4**
TRIZ	**Trizonia**	**1.83**	**136**	*e*Pg	**Pb**	**17 46 43.2**	**-0.4**
KALE	**Kalithea**	**1.84**	**134**	*e*PG	**Pb**	**17 46 43.5**	**-0.5**
KALE				*e*SN	**Sb**	**17 47 07.7**	**+0.1**
KALE	**Kalithea**	**1.84**	**134**	*e*Pg	**Pb**	**17 46 43.5**	**-0.5**
KALE				*e*Sn	**Sb**	**17 47 07.7**	**+0.1**
LAKA	**Lakka**	**1.87**	**140**	*e*PG	**Pb**	**17 46 43.7**	**-0.7**
LAKA	**Lakka**	**1.87**	**140**	*e*Pg	**Pb**	**17 46 43.7**	**-0.7**
GRG	**Griva**	**1.96**	**49**	*e*PN	**Pn**	**17 46 44.2**	**+0.3**
GRG	**Griva**	**1.96**	**49**	*e*Pn	**Pn**	**17 46 44.2**	**+0.3**
PHP	**Peshkopia**	**2.00**	**360**	*i* PG	**Pn**	**17 46 44.0**	**-0.4**
PHP				*i* SG	**Sb**	**17 47 11.7**	**-0.4**
PHP	**Peshkopia**	**2.00**	**360**	*i* Pg	**Pn**	**17 46 44.0**	**-0.4**
PHP				*i* Sg	**Sb**	**17 47 11.7**	**-0.4**
KLV	**Kalavryta, Ach**	**2.11**	**140**	*e*PN	**Pn**	**17 46 46.6**	**+0.7**
KLV	**Kalavryta, Ach**	**2.11**	**140**	*e*Pg	**Pn**	**17 46 46.6**	**+0.7**
NEO	**Neokhori**	**2.18**	**99**	*e*PN	**Pn**	**17 46 47.7**	**+0.8**
NEO	**Neokhori**	**2.18**	**99**	*e*Pn	**Pn**	**17 46 47.7**	**+0.8**
GUR	**Goura**	**2.29**	**139**	*e*PN	**Pn**	**17 46 49.3**	**+0.9**
GUR	**Goura**	**2.29**	**139**	*e*Pn	**Pn**	**17 46 49.3**	**+0.9**
VAY	**Valandovo**	**2.30**	**44**	*e*Pn	**Pn**	**17 46 48.6**	**+0.1**
VAY				*i* Sn	**Sn**	**17 47 16.9**	**-0.6**
VAY	**Valandovo**	**2.30**	**44**	*e*Pn	**Pn**	**17 46 49.1**	**+0.6**
VAY				*i* Sn	**Sn**	**17 47 17.4**	**-0.1**
AOS	**Alonnisos**	**2.71**	**100**	*e*PB	**Pn**	**17 46 54.1**	**0.0**
DID	**Didima**	**3.08**	**134**	*e*PN	**Pn**	**17 46 59.3**	**0.0**
DID				*e*SN	**Sn**	**17 47 36.7**	**-0.1**
DID	**Didima**	**3.08**	**134**	*e*Pn	**Pn**	**17 46 59.3**	**0.0**
DID				*e*Sn	**Sn**	**17 47 36.7**	**-0.1**

IDC 29 17:46:47.1±2.1, 0.97S×127.55E, h0km, mb3.2/2, mb1 3.2/3, mb1mx3.1/21, mbtmp3.1/3, ML2.9/1, Error ellipse: s-maj=178.9km s-min=25.5km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.00**	**161**	P	P	17 51 21.1	-0.3
	0.0nm,0.3s,baz=340,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**23.39**	**165**	P	P	17 51 58.0	+0.2
	0.2nm,0.5s,baz=350,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**61.88**	**326**	P	P	17 57 08.3	-0.1
	0.3nm,0.3s,baz=114,slow=8.1,SNR=7.8						

IDC 29 18:01:33.2±18.0, 4.19S×106.03E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/24, mbtmp3.5/4, Error ellipse: s-maj=305.5km s-min=194.3km az=144.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**23.65**	**127**	P	P	18 06 46.6	+0.1
	0.9nm,0.7s,baz=305,slow=12,SNR=2.7						
WRA	**Warramunga Arr**	**31.71**	**122**	P	P	18 07 58.7	-0.3
	0.3nm,0.7s,baz=296,slow=10,SNR=5.5						
ASAR	**Alice Springs**	**33.14**	**128**	P	P	18 08 11.3	-0.3
	0.3nm,0.3s,baz=301,slow=8.1,SNR=29						
STKA	**Stephens Creek**	**43.25**	**134**	P	P	18 09 37.0	+0.3
	1.2nm,0.7s,baz=314,slow=10.0,SNR=5.0						

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*ISK **29** 18:12:34.7, 40.25N×35.24E, h5km, MD2.9*
*DDA **29** 18:12:35.3, 40.24N×35.20E, h7km, MD2.6*
*CSEM **29** 18:12:36.2±0.2, 40.26N×35.25E, h2km, MD2.9, Error ellipse: s-maj=4.5km s-min=3.9km az=157.0*

ISC 29 18:12:35.4±1.2, 40.24N±0.02×35.24E±0.02, h3km±11km, n28, σ0=57/44, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CORM	**Corum**	**0.47**	**263**	*e*PG	**Pg**	**18 12 45.1**	**+0.7**
CORM				*e*SG	**Sb**	**18 12 52.6**	**-1.2**
CORM	**Corum**	**0.47**	**263**	*e*Pg	**Pg**	**18 12 45.1**	**+0.7**
CORM				*e*Sg	**Sb**	**18 12 52.6**	**-1.2**
YOZ	**Yozgat**	**0.60**	**174**	*e*PG	**Pg**	**18 12 47.6**	**+0.7**
YOZ				*e*SG	**Sb**	**18 12 57.2**	**-0.3**
YOZ	**Yozgat**	**0.60**	**174**	*e*Pg	**Pg**	**18 12 47.6**	**+0.7**
YOZ				*e*Sg	**Sb**	**18 12 57.3**	**-0.3**
HAVZ	**Havza**	**0.91**	**23**	*e*P	**Pg**	**18 12 53.3**	**+0.4**
HAVZ				*i* S	**Sb**	**18 13 06.4**	**-0.2**
HAVZ	**Havza**	**0.91**	**23**	*e*P	**Pg**	**18 12 53.3**	**+0.4**
HAVZ				*i* S	**Sb**	**18 13 06.4**	**-0.2**
KVT	**Kavak**	**1.04**	**36**	*e*PG	**Pg**	**18 12 55.4**	**0.0**
KVT	**Kavak**	**1.04**	**36**	*e*Pg	**Pg**	**18 12 55.4**	**0.0**
ERBA	**Erbaa**	**1.24**	**69**	*i* P	**Pg**	**18 12 58.9**	**-0.3**
ERBA				*i* S	**Sn**	**18 13 18.6**	**+1.6**
ERBA	**Erbaa**	**1.24**	**69**	*i* P	**Pg**	**18 12 58.9**	**-0.3**
ERBA				*i* S	**Sn**	**18 13 18.6**	**+1.6**
ELDT	**Eldivan**	**1.41**	**281**	*e*P	**Pn**	**18 13 01.9**	**-0.3**
ELDT				*i* S	**Sg**	**18 13 20.6**	**-0.1**
ELDT	**Eldivan**	**1.41**	**281**	*e*P	**Pn**	**18 13 01.9**	**-0.3**
ELDT				*i* S	**Sg**	**18 13 20.6**	**-0.1**
ILGA	**Ilgaz**	**1.42**	**306**	*i* P	**Pg**	**18 13 03.5**	**+0.8**
ILGA				*i* S	**Sg**	**18 13 20.9**	**0.0**
ILGA	**Ilgaz**	**1.42**	**306**	*i* P	**Pg**	**18 13 03.4**	**+0.8**
ILGA				*i* S	**Sg**	**18 13 20.9**	**0.0**
BNN	**Bunyan**	**1.46**	**161**	*e*PN	**Pg**	**18 13 03.6**	**+0.2**
BNN	**Bunyan**	**1.46**	**161**	*e*Pn	**Pg**	**18 13 03.6**	**+0.2**
KAMT	**Kaman**	**1.46**	**234**	*e*PN	**Pn**	**18 13 02.9**	**+0.1**
KAMT	**Kaman**	**1.46**	**234**	*e*Pn	**Pn**	**18 13 02.9**	**+0.1**
RSDY	**Resadiye-TOKAT**	**1.60**	**84**	*e*PN	**Pb**	**18 13 05.6**	**-0.2**
RSDY	**Resadiye-TOKAT**	**1.60**	**84**	*e*Pn	**Pb**	**18 13 05.6**	**-0.2**
BBAL	**Bala**	**1.77**	**248**	*i* P	**Pb**	**18 13 08.4**	**-0.2**
BBAL				*i* S	**Sg**	**18 13 32.2**	**-0.1**
BBAL	**Bala**	**1.77**	**248**	*i* P	**Pb**	**18 13 08.4**	**-0.2**
BBAL				*i* S	**Sg**	**18 13 32.2**	**-0.1**
AFSR	**Afʿar-Bala (A**	**1.85**	**245**	*e*PN	**Pb**	**18 13 09.7**	**-0.2**
AFSR	**Afʿar-Bala (A**	**1.85**	**245**	*e*Pn	**Pb**	**18 13 09.7**	**-0.2**
BALT	**Daday**	**1.91**	**313**	*i* P	**Pb**	**18 13 10.7**	**-0.4**
BALT				*i* S	**Sn**	**18 13 33.7**	**-0.1**
BALT	**Daday**	**1.91**	**313**	*i* P	**Pb**	**18 13 10.7**	**-0.4**
BALT				*i* S	**Sn**	**18 13 33.7**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.92**	**144**	*e*PN	**Pg**	**18 13 12.0**	**-0.3**
SARI	**SarD1z-Kayseri**	**1.92**	**144**	*e*Pn	**Pg**	**18 13 12.0**	**-0.3**

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*JMA **29** 18:12:38.3±0.4, 23.79N×122.93E, h49km, M1.7*
*TAP **29** 18:12:39.1, 23.68N×122.61E, h14km±2km, ML2.8, D*

ISC 29 18:12:36.2±1.4, 23.68N±0.05×122.88E±0.03, h27km±14km, n27, σ0=97/52, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.79**	**9**	P	**Pb**	**18 12 51.8**	**+0.4**
YOJ				S	**Sb**	**18 13 01.0**	**-0.7**
HATJ	**Hateruma jima**	**0.93**	**66**	P	**Pn**	**18 12 54.0**	**+0.5**
HATJ				*e*S	**Sn**	**18 13 05.3**	**-0.7**
IRIF	**Iriomote-Funau**	**1.02**	**50**	P	**Pn**	**18 12 54.9**	**+0.2**
IRIF				S	**Sn**	**18 13 08.0**	**-0.2**
JKRS	**Kuro-shima**	**1.18**	**62**	P	**Pn**	**18 12 57.6**	**+0.7**
HWA	**Hwalien**	**1.20**	**285**	*e*P	**Pn**	**18 12 57.6**	**+0.3**
	baz=287						
HWA				*e*S	**Sn**	**18 13 10.3**	**-2.4**
	baz=287						
TWD	**Chiawan**	**1.24**	**289**	*e*P	**Pn**	**18 12 58.3**	**+0.5**
	baz=293						
TWD				*e*S	**Sn**	**18 13 11.9**	**-1.7**
	baz=293						
ENA	**Nanau**	**1.28**	**306**	*e*P	**Pn**	**18 12 59.1**	**+0.7**
	baz=313						
ENA				*e*S	**Sn**	**18 13 14.3**	**-0.3**
	baz=313						
TWC	**Suao**	**1.32**	**315**	*e*P	**Pb**	**18 13 01.3**	**+1.0**
	baz=323						
TWC				*e*S	**Sb**	**18 13 16.9**	**0.0**
	baz=323						
ESL	**Shilin**	**1.33**	**276**	*e*P	**Pn**	**18 12 58.5**	**-0.5**
	baz=276						
ESL				S	**Sn**	**18 13 14.2**	**-1.7**
	baz=276						
JIJ	**Ishigaki jima**	**1.34**	**59**	P	**Pn**	**18 12 59.3**	**+0.1**
JIJ				*e*S	**Sn**	**18 13 16.0**	**-0.2**
EHY	**Hungye**	**1.44**	**263**	P	**Pn**	**18 13 01.4**	**+0.9**
	baz=261						
EHY				*e*S	**Sn**	**18 13 17.8**	**-0.8**
	baz=261						
TWF1	**Yuli**	**1.49**	**258**	P	**Pn**	**18 13 01.9**	**+0.7**
	baz=254						
TWF1				S	**Sn**	**18 13 19.4**	**-0.4**
	baz=254						
CHKT	**Chengkung**	**1.50**	**248**	*e*P	**Pb**	**18 13 03.8**	**+0.3**
	baz=242						
CHKT				*e*S	**Sn**	**18 13 20.2**	**0.0**
	baz=242						
TWE	**Neicheng**	**1.52**	**313**	*e*P	**Pn**	**18 13 02.7**	**+1.1**
	baz=320						
TWE				*e*S	**Sb**	**18 13 21.5**	**-1.0**
	baz=320						
ENTT	**Nioudou**	**1.53**	**309**	*e

baz=0.1
H23A Clabaugh Cattl 0.50 0 ⇓P Pg 18 19 38.2 +0.3
baz=0.5
I24A Kuemmerle Ranc 0.60 110 ⇓P Pg 18 19 39.3 -0.5
baz=0.6
J23A Dilts Ranch, B 0.67 189 P Pg 18 19 40.8 -0.3
baz=0.7,SNR=20
J23A ⇑S Sg 18 19 50.0 +0.3
baz=0.7
I22A 9 Mile Ranch, 0.80 258 ⇓P Pg 18 19 43.6 0.0
baz=0.8,SNR=12
H22A Clearmont 0.86 308 ⇑P Pb 18 19 45.3 -0.6
baz=0.9,SNR=20
J24A Dixon Ranch, L 0.91 143 P Pg 18 19 44.9 -0.7
baz=0.9,SNR=98
J24A ⇑S Sg 18 19 56.6 -0.8
baz=0.9
H24A Dirks Ranch, A 0.92 41 ⇓P Pg 18 19 45.2 -0.7
baz=0.9
G23A Biddle 1.14 0 ⇓P Pg 18 19 49.5 -0.6
baz=1.1
G23A ⇑S Sb 18 20 06.2 +0.4
baz=1.1
H21A Big Horn, Sher 1.30 296 ⇓P Pb 18 19 53.0 -0.4
baz=1.3
K23A Bowen Ranch, D 1.32 187 ⇑P Pg 18 19 52.5 -1.0
baz=1.3,SNR=12
G22A Birney 1.32 332 ⇓P Pg 18 19 53.0 -0.5
baz=1.3
I21A Big Trails, Te 1.39 260 ⇓P Pn 18 19 53.3 -1.2
baz=1.4
I21A ⇓S Sn 18 20 14.4 +0.9
baz=1.4
K24A Anderson Ranch 1.41 162 ⇑P Pn 18 19 53.9 -0.9
baz=1.4,SNR=20
K24A ⇓S Sb 18 20 14.0 +0.4
baz=1.4
G24A Alzada 1.45 29 ⇑P Pn 18 19 55.0 -0.4
baz=1.4
G24A ⇓S Sn 18 20 15.7 +0.7
baz=1.4
K22A Casper 1.63 210 ⇑P Pn 18 19 57.6 -0.3
baz=1.7,SNR=34
K22A ⇓S Sn 18 20 19.7 +0.3
baz=1.7
J21A Lysite 1.65 245 ⇑P Pn 18 19 57.8 -0.3
baz=1.7,SNR=27
J21A ⇑S Sn 18 20 19.1 -0.7
baz=1.7
F23A Volborg 1.66 360 ⇓P Pn 18 19 58.4 +0.1
baz=1.6
F23A ⇓S Sg 18 20 21.6 0.0
baz=1.6
G21A Lodge Grass 1.73 313 ⇓P Pb 18 19 59.7 -1.1
baz=1.7
G21A ⇑S Sg 18 20 23.6 -0.4
baz=1.7
F22A Rosebud 1.82 341 ⇑P Pn 18 20 00.8 +0.3
baz=1.8,SNR=19
F22A ⇓S Sg 18 20 25.7 -1.1
baz=1.8
K25A Mack Ranch, Ha 1.83 142 ⇑P Pn 18 20 00.7 +0.1
baz=1.8,SNR=33
K25A ⇑Sb Sb 18 20 26.4 +0.7
baz=1.8
F24A Ekalaka 1.91 21 ⇑Pb Pb 18 20 03.5 -0.2
baz=1.9,SNR=16
F24A ⇓Sb Sg 18 20 29.3 -0.3
baz=1.9
H20A Greybull 1.91 284 ⇑P Pn 18 20 02.3 +0.5
baz=1.9,SNR=15
H20A ⇓S Sb 18 20 28.1 0.0
baz=1.9
L23A Garrett 1.96 186 ⇓P Pn 18 20 02.4 -0.1
baz=2.0,SNR=31
L23A ⇑S Sn 18 20 28.9 +1.3
baz=2.0
K21A Alcova 1.96 224 ⇓P Pn 18 20 02.9 +0.3
baz=2.0,SNR=14
K21A ⇑S Sb 18 20 29.0 -0.7
baz=2.0
I20A Worland 1.97 268 ⇓P Pn 18 20 03.4 +0.9
baz=2.0,SNR=68
I20A ⇑S Sb 18 20 29.5 -0.3
baz=2.0
L24A Wheatland 2.05 170 ⇑P Pn 18 20 03.7 +0.1
baz=2.1,SNR=14
J20A Shoshoni 2.07 251 ⇑P Pb 18 20 05.7 -0.8
baz=2.1
J20A ⇓S Sb 18 20 32.3 -0.3
baz=2.1
K26A Motz Farm, Whi 2.12 129 ⇑P Pn 18 20 05.1 +0.6
baz=2.1,SNR=26
L22A Ellis Ranch, M 2.17 201 ⇓P Pn 18 20 06.4 +1.1
baz=2.2
L25A Engebretsen Ra 2.18 151 ⇑P Pn 18 20 06.1 +0.6
baz=2.2
G20A Bridger 2.32 301 ⇓P Pn 18 20 07.4 +0.1
baz=2.3,SNR=32
E22A Miles City 2.41 351 ⇑P Pn 18 20 08.7 +0.2
baz=2.4,SNR=7.1
K20A Yellowstone Ra 2.56 238 ⇓P Pn 18 20 12.0 +1.2
baz=2.6
I19A Meeteetse 2.59 271 ⇓P Pn 18 20 11.9 +0.8
baz=2.6,SNR=22
M23A Laramie 2.60 185 ⇓P Pn 18 20 12.3 +1.0
baz=2.6
E24A Baker 2.62 17 ⇑P Pn 18 20 12.5 +1.0
baz=2.6
M24A Cheyenne 2.63 170 ⇓P Pn 18 20 12.2 +0.5
baz=2.7,SNR=17
H19A Powell 2.64 285 ⇑P Pn 18 20 12.2 +0.4
baz=2.6,SNR=10
K27A Flueckinger Fa 2.68 119 ⇓P Pn 18 20 12.4 +0.1
baz=2.7,SNR=21
J19A Crowheart 2.77 255 ⇓P Pn 18 20 15.3 +1.7
baz=2.8
K19A Absolon Red Bu 2.80 245 ⇓P Pn 18 20 15.2 +1.2
baz=2.8
M22A Cedar Creek Ra 2.80 199 ⇓P Pn 18 20 15.1 +1.0
baz=2.8
M25A Palm-Egli Farm 2.81 159 ⇑P Pn 18 20 15.2 +1.1
baz=2.8
RLMT Red Lodge 2.96 292 *eP* **Pn 18 20 17.2 +1.0**
RLMT Red Lodge 2.96 292 ⇑P Pn 18 20 17.4 +1.2
baz=2.9
F19A Roth Farm, Mol 3.09 307 ⇑P Pn 18 20 18.6 +0.7
baz=3.1
D23A Lindsay 3.12 2 ⇓P Pn 18 20 19.2 +0.9
baz=3.1
H18A Shoshone NF, C 3.12 283 ⇓P Pn 18 20 19.4 +1.0
baz=3.1
D24A Glendive 3.15 14 ⇓P Pn 18 20 20.0 +1.3
baz=3.1
N23A Red Feather La 3.19 187 ⇑P Pn 18 20 20.3 +0.8
baz=3.2
G18A Lazy EL Ranch, 3.22 294 ⇓P Pn 18 20 20.5 +0.7
baz=3.2,SNR=25
PDAR Pinedale Array 3.29 248 Pn Pn 18 20 21.9 +1.0
PDAR Pg **Pb 18 20 26.4 -1.0**
PDAR Lg Lg 18 21 07.4
PDAR Pinedale Array 3.29 248 Pn Pn 18 20 21.9 +1.0
2.8nm,0.3s,baz=67,slow=17,SNR=19
PDAR Pg **Pb 18 20 26.4 -1.0**
2.8nm,0.3s,baz=69,slow=18,SNR=27
PDAR Lg Lg 18 21 07.4
5.5nm,0.3s,baz=69,slow=33,SNR=9.6
F18A Big Timber 3.57 303 ⇓P Pn 18 20 25.4 +0.9
baz=3.6,SNR=15
C22A Vida 3.70 355 ⇑P Pn 18 20 26.8 +0.5
baz=3.7
LOHW Long Hollow 3.79 265 *eP* **Pn 18 20 25.8 -1.9**
MOOW Moose Ponds 3.87 267 *eP* **Pn 18 20 29.7 +0.8**
SNOW Snow King Moun 3.92 263 P Pn 18 20 31.9 +2.3
OGNE Ogallala 3.99 140 *eP* **Pn 18 20 30.4 +0.2**
IMW Indian Meadow 4.00 270 *eP* **Pn 18 20 31.5 +0.9**
TPAW Teton Pass 4.06 264 *eP* **Pn 18 20 32.9 +1.5**
ISCO Idaho Springs 4.26 182 *eP* **Pn 18 20 34.9 +0.6**
AHID Auburn Hatcher 4.35 255 P Pn 18 20 36.6 +1.3
E17A Martinsdale 4.54 304 ⇓P Pn 18 20 38.6 +0.7
baz=4.5,SNR=11
P26A Davis Ranch, A 4.75 160 ⇑P Pn 18 20 40.2 -0.6
baz=4.8,SNR=8.0
D17A Six Diamond Ra 4.83 312 ⇓P Pn 18 20 42.7 +0.8
baz=4.8,SNR=13
SMCO Snowmass 5.02 194 *eP* **Pn 18 20 46.2 +1.4**
6.3nm,0.7s
HWUT Hardware Ranch 5.15 244 *eP* **Pn 18 20 47.0 +0.7**
3.3nm,0.6s
Q26A Hugo 5.33 164 ⇓P Pn 18 20 48.8 0.0
baz=5.3,SNR=8.5
R26A Arlington 5.94 165 ⇓P Pn 18 20 57.0 -0.1
baz=6.0,SNR=17
ECSD EROS Data Cent 6.36 90 P Pn 18 21 04.4 +1.6
8.0nm,0.9s
ULM Lac du Bonnet 8.97 43 Lg Lg 18 24 03.4
0.4nm,0.3s,baz=90,slow=19,SNR=2.5
NVAR Mina Array Bea 11.22 244 Pn Pn 18 22 10.6 +1.0
NVAR Mina Array Bea 11.22 244 Pn Pn 18 22 10.6 +1.0
0.0nm,0.3s,baz=57,slow=16,SNR=2.7
MKAR Makanchi Array 89.27 355 P P 18 32 24.7 -0.8
MKAR Makanchi Array 89.27 355 P P 18 32 24.7 -0.8
0.1nm,0.4s,baz=15,slow=6.0,SNR=3.3

MAN 29 18:19:35,12°22N×125°06E,h33km,mb4.2,ML3.1,MS2.8, 2D,Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.49**	**307**	*eP*	**Pn**	18 19 47.5	+1.8
CNP				*eS*	Sn	18 19 55.5	+2.4
BESP	**Borongan**	**0.71**	**149**	*eP*	**Pb**	18 19 50.2	+1.1
PLP	**Palo**	**1.05**	**184**	⇓*eP*	**Pn**	18 19 53.8	+0.4
PLP				*eS*	Sb	18 20 07.7	-0.5
OCLP	**Ormoc**	**1.24**	**201**	*eP*	**Pb**	18 19 58.2	+0.3
MSLP	**Maasin**	**2.08**	**186**	*eP*	**Pn**	18 20 09.3	+1.8
RCP	**Roxas**	**2.36**	**254**	⇓*eP*	**Pn**	18 20 13.3	+1.8
GUIM	**Jordan**	**2.89**	**237**	*eP*	**Pn**	18 20 20.2	+1.4

IDC ***29*** *18:21:09.5±0.8, 11°.41N×85°.81W, h0km, mb3.9/12, mb1 4.1/13, mb1mx3.9/27, mbtmp3.9/13, ML3.8/1, MS3.4/6, Ms1 3.3/6, ms1mx3.1/31, Error ellipse: s-maj=36.4km s-min=15.9km az=49.0*
ISCJB ***29*** *18:21:13.0±0.7, 10°.87N±0°.10×86°.36W±0°.08, h59km±6km, mb3.9/13, MS3.3/3, Error ellipse: s-maj=20.8km s-min=4.2km az=37.8*
CASC ***29*** *18:21:12.2±1.9, 10°.71N×86°.46W, h52km±79km, MD4.1*
ISC 29 18:21:13.7±1.3, 10°.9N±0°.1×86°.24W±0°.09, h44km±11km, n45,σ1°27/45, mb3.9/13, MS3.5/3, 1D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NY14	**Universidad de**	**0.74**	**110**	*i* P	**Pn**	**18 21 28.8**	**+1.1**
GBS2	**Las Lilas**	**0.78**	**95**	*i* P	**Pn**	**18 21 29.9**	**+1.6**
GBS3	**Finca Las Im˜ ¡**	**0.78**	**99**	*i* P	**Pn**	**18 21 29.7**	**+1.4**
LAPC	**Finca la Perla**	**0.80**	**100**	*i* P	**Pn**	**18 21 29.8**	**+1.2**
LIM1	**Limonal**	**0.99**	**102**	*i* P	**Pn**	**18 21 32.6**	**+1.4**
MESS	**Mesas**	**1.04**	**99**	*i* P	**Pn**	**18 21 33.4**	**+1.5**
COLC	**Colonia**	**1.04**	**103**	*i* P	**Pn**	**18 21 33.2**	**+1.2**
MGAN	**Managua**	**1.23**	**360**	*eP*	**Pn**	**18 21 37.1**	**+2.6**
FORC	**Fortuna**	**1.60**	**106**	*eP*	**Pn**	**18 21 40.4**	**+0.8**
CGA2	**Cerro Gallo 2**	**1.96**	**117**	⇓*eP*	**Pn**	**18 21 45.0**	**+0.5**
LAJ	**Bijagual**	**2.33**	**116**	*eP*	Pn	18 21 46.2	-3.5
SJS	**Escuela Geolog**	**2.35**	**114**	*eP*	**Pn**	**18 21 51.8**	**+1.8**
QCR	**Quepos**	**2.52**	**126**	*eP*	Pn	18 21 56.5	+4.4
BUS	**Buena Vista**	**2.79**	**119**	*eP*	**Pn**	**18 21 56.9**	**+0.7**
CNCH	**Conchagua**	**2.82**	**327**	*eP*	**Pn**	**18 21 56.8**	**+0.4**
CNCH				*eS*	**Sn**	**18 22 29.5**	**+0.1**
BLLM	**Bellamira**	**3.19**	**322**	*eP*	**Pn**	**18 22 00.8**	**-0.7**
BLLM				*eS*	**Sn**	**18 22 37.9**	**-0.3**
VSM	**San Miguel**	**3.20**	**322**	*eP*	**Pn**	**18 22 01.8**	**+0.1**
SNVI	**San Vicente**	**3.70**	**317**	*eP*	**Pn**	**18 22 08.6**	**0.0**
SNVI				*eS*	**Sn**	**18 22 49.9**	**-1.1**
ACR	**Cerro Adams**	**3.77**	**126**	*eP*	**Pn**	**18 22 10.3**	**+1.0**
ACR				*eS*	**Sn**	**18 22 51.2**	**-1.3**
LFRS	**El Faro**	**3.86**	**315**	*eP*	**Pn**	**18 22 09.7**	**-1.0**
RBDL	**Robledal**	**4.63**	**314**	*eP*	**Pn**	**18 22 21.6**	**+0.2**
RBDL				*eS*	**Sn**	**18 23 13.6**	**-0.5**
TEIG	**Tepich**	**9.47**	**348**	LR	LR	18 27 46.7	
	comp=Z,277nm,18.4s,baz=356,slow=44						
CMIG	**Matias Romero**	**10.40**	**307**	Pn	**Pn**	**18 23 40.0**	**-0.3**
	0.7nm,0.3s,baz=111,slow=10,SNR=12						
CMIG				Sn	**Sn**	**18 25 36.5**	**+1.0**
	0.2nm,0.3s,baz=348,slow=19,SNR=1.8						
ROSC	**El Rosal**	**13.24**	**116**	LR	LR	18 29 14.8	
	comp=Z,68nm,18.3s,baz=360,slow=37						
ATAH	**Atahualpa**	**19.55**	**156**	LR	LR	18 32 14.9	
	comp=Z,171nm,20.7s,baz=98,slow=34						
TXAR	**Lajitas Array**	**24.51**	**321**	P	**P**	**18 26 29.8**	**+0.5**
	2.4nm,0.6s,baz=136,slow=10.0,SNR=26						
TXAR				PcP	PcP	18 30 10.5	+3.5
	0.8nm,0.8s,baz=134,slow=3.9,SNR=5.9						
TKL	**Tuckaleechee C**	**24.74**	**5**	P	**P**	**18 26 32.7**	**+1.6**
	5.8nm,0.9s,baz=188,slow=13,SNR=6.4						
LPIG	**La Paz**	**26.38**	**303**	LR	LR	18 38 18.5	
	comp=Z,8.6nm,19.6s,baz=238,slow=39						
SADO	**Sadowa**	**34.29**	**9**	P	**P**	**18 27 54.2**	**-1.6**
	4.5nm,0.6s,baz=183,slow=4.4,SNR=4.3						
SIV	**San Ignacio**	**36.53**	**137**	P	P	18 28 18.8	+3.4
	1.8nm,0.8s,baz=330,slow=8.0,SNR=5.6						
SIV				PcP	**PcP**	**18 30 40.2**	**+1.7**
	1.1nm,0.7s,baz=270,slow=4.0,SNR=3.7						
PDAR	**Pinedale Array**	**37.69**	**332**	P	**P**	**18 28 24.2**	**-1.0**
	1.0nm,0.8s,baz=119,slow=12,SNR=7.9						
PDAR				PcP	**PcP**	**18 30 43.2**	**+1.3**
	0.4nm,0.7s,baz=130,slow=2.8,SNR=2.6						
ELK	**Elko**	**39.20**	**324**	P	**P**	**18 28 38.8**	**+0.8**
	0.4nm,0.5s,baz=164,slow=15,SNR=3.3						
ELK				PcP	**PcP**	**18 30 49.0**	**+2.3**
	1.2nm,0.8s,baz=27,slow=2.3,SNR=4.5						
NVAR	**Mina Array Bea**	**39.64**	**319**	P	P	18 28 43.8	+2.2
	1.5nm,0.8s,baz=140,slow=7.1,SNR=7.9						
NVAR				PcP	**PcP**	**18 30 50.1**	**+2.1**
	2.2nm,0.7s,baz=134,slow=3.9,SNR=9.1						
BDFB	**Brasilia**	**46.13**	**124**	P	P	18 29 35.8	+1.5
	1.3nm,0.4s,baz=270,slow=7.1,SNR=3.2						
SCHQ	**Schefferville**	**46.42**	**15**	P	**P**	**18 29 34.3**	**-1.6**
	3.6nm,0.8s,baz=220,slow=12,SNR=4.5						
SCHQ				LR	LR	18 49 46.4	
	comp=Z,48nm,18.8s,baz=346,slow=38						
YKA	**Yellowknife Ar**	**55.41**	**344**	P	**P**	**18 30 42.1**	**-1.2**
	0.3nm,0.6s,baz=135,slow=7.6,SNR=6.7						
YKA				PcP	**PcP**	**18 31 43.3**	**+0.1**
	0.3nm,0.7s,baz=142,slow=3.8,SNR=6.3						
RES	**Resolute Bay**	**63.94**	**357**	P	**P**	**18 31 40.6**	**-1.3**
	1.4nm,0.7s,baz=124,slow=11,SNR=3.9						
ILAR	**Eielson Array**	**67.90**	**336**	P	**P**	**18 32 07.2**	**-0.3**
	0.5nm,0.6s,baz=129,slow=3.8,SNR=8.2						
TORD	**Torodi Ar. Bea**	**85.58**	**78**	P	**P**	**18 33 46.6**	**-1.6**
	0.2nm,0.6s,baz=286,slow=4.6,SNR=2.6						
AKASG	**Malin Array Be**	**97.09**	**35**	LR	LR	19 13 40.9	
	comp=Z,89nm,19.9s,baz=100,slow=33						
MKAR	**Makanchi Array**	**121.65**		PKP	**PKPdf**	**18 40 03.3**	**+0.3**
	0.2nm,0.7s,baz=12,slow=3.5,SNR=2.8						
KSRS	**Korea Array**	**122.20**	**328**	PKP	**PKPdf**	**18 40 06.1**	**+1.9**
	1.2nm,0.7s,baz=16,slow=1.6,SNR=6.0						
ASAR	**Alice Springs**	**139.77**	**246**	PKhKP	PKPpre	18 40 37.5	
	0.5nm,0.6s,baz=101,slow=1.9,SNR=3.2						
ASAR				PKP	**PKiKP**	**18 40 41.5**	**+1.3**
	0.5nm,0.6s,baz=104,slow=1.8,SNR=8.5						
WRA	**Warramunga Arr**	**139.96**	**252**	PKP	PKPdf	18 40 41.8	+3.6
	0.6nm,0.6s,baz=89,slow=2.4,SNR=7.3						
CMAR	**Chiang Mai Arr**	**150.38**	**350**	PKPbc	**PKPbc**	**18 41 02.0**	**+0.7**
	1.6nm,0.9s,baz=332,slow=3.2,SNR=10						

IDC 29 18:26:11.8±1.8, 4°.68N×124°.94E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/24, mbtmp3.5/5, MS2.4/1, Ms1 2.4/1, ms1mx1.8/25, Error ellipse: s-maj=118.0km s-min=24.0km az=67.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**10.93**	**208**	LR	LR	18 32 30.9	
	comp=Z,20nm,18.9s,baz=87,slow=35						
FITZ	**Fitzroy Crossi**	**22.65**	**178**	P	P	18 31 14.6	-0.1
	0.8nm,0.6s,baz=0.0,slow=8.1,SNR=4.7						
WRA	**Warramunga Arr**	**26.15**	**160**	P	P	18 31 48.2	+0.2
	0.3nm,0.4s,baz=338,slow=9.7,SNR=7.3						
ASAR	**Alice Springs**	**29.50**	**163**	P	P	18 32 17.9	0.0
	0.2nm,0.4s,baz=345,slow=7.1,SNR=10						
STKA	**Stephens Creek**	**39.66**	**158**	P	P	18 33 45.3	-0.3
	2.0nm,1.1s,baz=326,slow=3.6,SNR=3.9						
MKAR	**Makanchi Array**	**55.77**	**326**	P	P	18 35 50.5	-0.1
	0.2nm,0.3s,baz=122,slow=8.3,SNR=5.7						

IDC 29 18:28:42.3±4.0, 11°.03N×140°.74E, h72km±40km, mb3.2/6, mb1 3.5/7, mb1mx3.3/25, mbtmp3.3/7, ML3.6/1, Error ellipse: s-maj=32.7km s-min=19.7km az=104.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.77**	**57**	P	Pn	18 29 51.8	+0.1
	2.6nm,0.3s,baz=199,slow=18,SNR=2.6						
GUMO				S	Sn	18 30 45.2	-0.5
	1.1nm,0.3s,baz=198,slow=20,SNR=2.2						
WRA	**Warramunga Arr**	**31.42**	**192**	P	P	18 34 56.4	-0.4
	0.4nm,0.9s,baz=12,slow=9.5,SNR=3.3						
ASAR	**Alice Springs**	**35.13**	**191**	P	P	18 35 29.2	+0.1
	0.3nm,0.5s,baz=19,slow=11,SNR=8.8						
CMAR	**Chiang Mai Arr**	**41.02**	**285**	P	P	18 36 18.8	0.0
	0.7nm,0.9s,baz=97,slow=7.4,SNR=4.9						
MKAR	**Makanchi Array**	**60.59**	**318**	P	P	18 38 45.4	-0.1
	0.3nm,0.8s,baz=99,slow=9.5,SNR=2.8						
ILAR	**Eielson Array**	**72.59**	**25**	P	P	18 40 00.8	-0.8
	0.3nm,0.5s,baz=243,slow=6.0,SNR=4.4						
YKA	**Yellowknife Ar**	**86.96**	**27**	P	P	18 41 20.1	+0.9
	0.2nm,0.5s,baz=278,slow=4.2,SNR=6.3						

SZGRF ***29*** *18:53:04.6, 40°.61N×72°.64E, h33km, mb4.6, MS3.9, Kyrgyzstan*
LDG ***29*** *18:53:06.1±0.1, 41°.40N×71°.56E, h10km, Mb5.0/42, Ms3.5/7, Error ellipse: s-maj=8.6km s-min=4.4km az=29.0*
BJI ***29*** *18:53:07.1, 41°.69N×71°.30E, h10km, mB4.8/16, mb4.7/30, ML4.9/4, Ms4.6/19, Ms7 4.3/17*
IDC ***29*** *18:53:07.6±0.4, 41°.52N×71°.46E, h0km, mb4.5/33, mb1 4.6/39, mb1mx4.6/44, mbtmp4.5/39, ML4.2/6, MS3.7/21, Ms1 3.7/21, ms1mx3.5/47, Error ellipse: s-maj=10.3km s-min=6.7km az=165.0*
ISCJB ***29*** *18:53:10.0±0.1, 41°.55N±0°.02×71°.38E±0°.02, h23km, mb4.7/158, MS3.9/37, Error ellipse: s-maj=2.6km s-min=2.2km az=13.1*
NNC ***29*** *18:53:10.8±2.0, 41°.74N×71°.50E, h0km, mb4.8, mpv5.1, Error ellipse: s-maj=19.8km s-min=7.2km az=30.0*
MOS ***29*** *18:53:11.5±1.0, 41°.55N×71°.35E, h33km, mb5.1/77, Error ellipse: s-maj=5.2km s-min=3.7km az=41.7*
GCMT ***29*** *18:53:11.8±0.4, 41°.62N×71°.26E, h20km±1km, MW4.8, Moment Tensor Solution. s19,c20; s60,c86; Moment tensor: Scale 10¹⁶Nm; Mrr 1.89±.16; Mθθ -1.03±.11; Mφφ -0.86±.09; Mrθ 0.30±.24; Mrφ -0.78±.05; Mθφ -0.01±.18; Best double couple: M₀1.80000×10¹⁶ NP1:φs223.00000°, δ42.00000°, λ82.00000°. NP2:φs54.00000°, δ49.00000°, λ97.00000°. Principal axes: T 1.9200, Plg83.0000°, Azm17.0000°; N -0.1900, Plg6.0000°, Azm229.0000°; P -1.7400, Plg3.0000°, Azm139.0000°; Data Used: IU II IC CN G.*
NEIC ***29*** *18:53:13.2±1.3, 41°.61N×71°.43E, h35km±9km, mb5.1/66 Error ellipse: s-maj=5.1km s-min=3.0km az=194.0*
TEH ***29*** *18:53:16.4, 41°.98N×71°.52E, h80km, ML4.9*
ISC 29 18:53:12.0±0.5, 41°.63N±0°.03×71°.41E±0°.03, h28km±3km, h27km:pP-P, n576,σ1°33/610, mb4.7/158, MS3.8/37, 56C-37D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**1.62**	**336**	⇓P	**Pn**	**18 53 39.5**	**+0.8**
	651nm,0.5s,baz=157,slow=17						
KK31				⇑S	**Sb**	**18 54 01.1**	**-0.1**
	3µm,0.6s,baz=149,slow=29,SNR=12						
KK31	**Karatay Array**	**1.62**	**336**	*ce*PN	**Pn**	**18 53 39.5**	**+0.8**
KK31				pmax	pmax		
	comp=Z,461nm,0.2s						
KKAR	**Karatay Array**	**1.62**	**336**	*e*PN	**Pn**	**18 53 38.9**	**+0.3**
KKAR	**Karatay Array**	**1.62**	**336**	*eP*	**Pn**	**18 53 38.9**	**+0.3**
AML	**Almayashu**	**1.78**	**73**	*i* PN	**Pn**	**18 53 41.8**	**+0.6**
AML	**Almayashu**	**1.78**	**73**	P	**Pn**	**18 53 41.8**	**+0.6**
	SNR=5060						
EKS2	**Erkin-Say**	**2.04**	**59**	*e*PN	**Pb**	**18 53 46.7**	**-1.8**
EKS2	**Erkin-Say**	**2.04**	**59**	*eP*	**Pb**	**18 53 46.7**	**-1.8**
EKS2	**Erkin-Say**	**2.04**	**59**	P	**Pb**	**18 53 46.8**	**-1.6**
	SNR=2885						
UCH	**Uchtor**	**2.39**	**75**	P	**Pb**	**18 53 53.7**	**-0.9**
	SNR=25						
AAK	**Ala-Archa**	**2.51**	**65**	*c i*PN	**Pn**	**18 53 53.5**	**+2.5**
AAK				pmax	pmax		
	comp=Z,2µm,0.7s						
AAK	**Ala-Archa**	**2.51**	**65**	*e*P	**Pn**	**18 53 53.4**	**+2.3**
AAK				Lg	Lg	18 54 28.0	
AAK	**Ala-Archa**	**2.51**	**65**	P	**Pb**	**18 53 53.9**	**-2.5**
	SNR=833						
AAK	**Ala-Archa**	**2.51**	**65**	Pn	**Pn**	**18 53 53.6**	**+2.6**
	comp=Z,155nm,0.3s,baz=218,slow=4.9,SNR=369						
AAK				Pg	**Pb**	**18 53 55.7**	**-0.7**
	comp=Z,216nm,0.3s,baz=226,slow=14,SNR=378						
AAK				Lg	Lg	18 54 28.0	
	comp=Z,382nm,0.3s,baz=193,slow=9.3,SNR=16						
AAK				LR	LR	18 54 48.3	
	comp=Z,504nm,18.2s,baz=59,slow=40						
FRU	**Bishkek**	**2.67**	**62**	⇑*e*PN	**Pn**	**18 53 56.0**	**+2.8**
FRU				*i* S	**Sb**	**18 54 32.0**	**+0.6**
FRU				pmax	pmax		
	comp=Z,6µm,2.1s						
FRU				smax	smax		
	comp=E,17µm,1.8s						
USP	**Ospenovka**	**2.81**	**53**	*i* PN	**Pn**	**18 53 57.0**	**+1.9**
USP	**Ospenovka**	**2.81**	**53**	P	**Pn**	**18 53 57.0**	**+1.9**
	SNR=19						
KBK	**Karagaybulak**	**2.83**	**68**	*i* PN	**Pn**	**18 53 58.4**	**+3.0**
KBK	**Karagaybulak**	**2.83**	**68**	P	**Pn**	**18 53 58.4**	**+3.0**
	SNR=691						
CHMS	**Chumysh**	**2.83**	**60**	*i* PN	**Pn**	**18 53 57.4**	**+2.0**
CHMS	**Chumysh**	**2.83**	**60**	P	**Pn**	**18 53 57.4**	**+2.0**
	SNR=77						
KZA	**Kyzart**	**2.91**	**80**	*i* PN	**Pn**	**18 53 58.8**	**+2.1**
KZA	**Kyzart**	**2.91**	**80**	P	**Pn**	**18 53 58.9**	**+2.1**
	SNR=435						
TKM2	**Tokmak 2**	**3.37**	**66**	⇑Pn	**Pn**	**18 54 04.9**	**+1.9**
	comp=E,426nm,0.6s						
TKM2				⇓Lg	Lg	18 54 53.6	
	comp=E,2µm,0.8s						
TKM2	**Tokmak 2**	**3.37**	**66**	PN	**Pn**	**18 54 04.8**	**+1.9**
TKM2						18 54 53.6	
TKM2				pmax	pmax		
	comp=Z,426nm,0.6s						
TKM2				pmax	pmax		
	comp=N,1µm,0.7s						
TKM2	**Tokmak 2**	**3.37**	**66**	*eP*	**Pn**	**18 54 04.1**	**+1.2**
TKM2	**Tokmak 2**	**3.37**	**66**	P	**Pn**	**18 54 04.8**	**+1.9**
	SNR=29						
ULHL	**Ulahol**	**3.66**	**79**	*i* PN	**Pn**	**18 54 08.9**	**+2.0**
ULHL	**Ulahol**	**3.66**	**79**	P	**Pn**	**18 54 09.0**	**+2.0**
	SNR=27						
KSH	**Kashi**	**4.07**	**120**	Pn	**Pn**	**18 54 13.0**	**+0.5**
KSH				Sn	**Sn**	**18 55 00.5**	**+1.3**
KSH				smax	smax		
	comp=N,2µm,1.0s						
KSH				smax	smax		
	comp=E,2µm,0.9s						
KNDC	**Almaty**	**4.41**	**67**	⇑Pn	Pn	18 54 22.3	+5.2
KNDC				⇑Lg	Lg	18 55 27.9	
AAA	**Alma-Ata**	**4.42**	**66**	*i* PN	**Pb**	**18 54 30.1**	**+1.3**
AAA				*i* S	**Sb**	**18 55 26.2**	**+4.6**
AAA				pmax	pmax		
	comp=Z,1µm,0.5s						
AAA				smax	smax		
	comp=E,4µm,0.7s						
KBL	**Kabul**	**7.32**	**196**	*eP*	**Pn**	**18 54 58.2**	**+1.0**
KBL				pmax	pmax		
	comp=Z,72nm,0.4s						
KBL	**Kabul**	**7.32**	**196**	*eP*	**Pn**	**18 54 58.2**	**+1.0**
	comp=Z,72nm,0.4s						
CEP	**Cherat**	**7.80**	**177**	P	**Pn**	**18 55 04.2**	**+0.4**
CEP				S	**Sn**	**18 56 32.0**	**+0.7**

	comp=N,2.0nm,0.3s								
MKAR					MLR	MLR			
	comp=Z,378nm,19.2s								
MKAR	**Makanchi Array**	**9.36**	**53**		Pn	**Pn**	**18 55 26.1**	**+1.1**	
MKAR					Sn	**Sn**	**18 57 08.0**	**-1.4**	
MKAR					Lg	Lg	18 58 02.5		
MKAR	**Makanchi Array**	**9.36**	**53**		Pn	**Pn**	**18 55 26.1**	**+1.1**	
	comp=Z,1.2nm,0.3s,baz=240,slow=12,SNR=81								
MKAR					Sn	**Sn**	**18 57 08.0**	**-1.4**	
	comp=Z,1.5nm,0.3s,baz=244,slow=20,SNR=3.8								
MKAR					Lg	Lg	18 58 02.5		
	comp=Z,4.5nm,0.3s,baz=234,slow=31,SNR=6.0								
MKAR					LR	LR	18 59 21.4		
	comp=Z,378nm,19.2s,baz=313,slow=40								
THN	**Thein Dam**	**9.80**	**158**	*e*P		**Pn**	**18 55 30.9**	**-0.1**	
THN				*ex*		x	18 57 12.0		
DHRM	**DHARAMSHALA**	**10.14**	**156**	*e*P		**Pn**	**18 55 35.4**	**-0.6**	
DHRM					AMB	AMB	18 55 41.5		
	comp=Z,73nm,0.6s								
KUR17	**Kurchatov Arra**	**10.25**	**26**	⇑	Pn	**Pn**	**18 55 35.6**	**-1.4**	
	comp=Z,1.7nm,1.1s								
KUR17				⇑	Lg	Lg	18 58 32.7		
	comp=Z,54nm,1.1s								
KURBB	**Kurchatov Arra**	**10.26**	**26**		Pn	**Pn**	**18 55 35.6**	**-1.6**	
	comp=Z,0.2nm,0.3s,baz=216,slow=13,SNR=30								
KURBB					Sn	**Sn**	**18 57 36.1**	**+5.0**	
	comp=Z,0.7nm,0.3s,baz=213,slow=26,SNR=5.5								
KURBB					Lg	Lg	18 58 32.8		
	comp=Z,1.7nm,0.3s,baz=224,slow=28,SNR=6.3								
IMYA	**Miami**	**10.26**	**243**	*e*P		**Pn**	**18 55 35.4**	**-2.1**	
KURK	**Kurchatov**	**10.37**	**26**	⇓	Pn	**Pn**	**18 55 36.5**	**-2.2**	
	comp=Z,21nm,0.9s								
KURK				⇓	Lg	Lg	18 58 36.9		
	comp=Z,460nm,0.8s								
KURK	**Kurchatov**	**10.37**	**26**	*e*P		**Pn**	**18 55 37.6**	**-1.1**	
KURK					pmax	pmax			
	comp=Z,17nm,1.2s								
KURK	**Kurchatov**	**10.37**	**26**	*e*P		**Pn**	**18 55 36.6**	**-2.0**	
	comp=Z,39nm,1.0s								
KURK					Sn	**Sn**	**18 57 36.1**	**+2.3**	
KURK					Lg	Lg	18 58 32.8		
KURK	**Kurchatov**	**10.37**	**26**	P		**Pn**	**18 55 40.7**	**+2.0**	
	SNR=12								
ISRO	**Mashad**	**10.70**	**244**	*e*P		**Pn**	**18 55 43.4**	**-0.1**	
ABKT	**Ailbek**	**10.87**	**254**	Pn		**Pn**	**18 55 43.7**	**-2.0**	
	comp=Z,202nm,0.5s,SNR=11								
IMOG	**Moghan**	**10.90**	**244**	*e*P		**Pn**	**18 55 45.4**	**-1.0**	
IPAY	**Payeh**	**10.95**	**246**	*e*P		**Pn**	**18 55 45.7**	**-1.2**	
BHK	**Bhakra**	**10.96**	**157**	*ex*		Sn	18 57 42.0	-6.5	
SDNR	**Sundarnagar**	**11.05**	**154**	*e*P		**Pn**	**18 55 48.0**	**-0.2**	
SDNR				*ex*		x	18 57 41.1		
AB31	**Akbulak array**	**11.08**	**317**	Pn		**Pn**	**18 55 47.8**	**-0.8**	
	comp=Z,18nm,0.7s,baz=129,slow=14,SNR=210								
AB31				⇑	Sn	**Sn**	**18 57 51.5**	**+0.1**	
	comp=Z,58nm,0.8s,baz=231,slow=7.0,SNR=5.3								
AB31				⇑	Lg	Lg	18 59 06.8		
	comp=Z,156nm,1.0s								
AB31	**Akbulak array**	**11.08**	**317**	*ce*P		**Pn**	**18 55 47.7**	**-0.8**	
AB31					pmax	pmax			
	comp=Z,3.0nm,0.2s								
ABKAR	**Akbulak array**	**11.08**	**317**	*e*P		**Pn**	**18 55 47.6**	**-0.9**	
	comp=Z,2.0nm,0.8s								
VOSK	**Vostochnaya**	**11.10**	**359**	⇓	Pn	**Pn**	**18 55 48.9**	**+0.1**	
VOSK				⇓	Sn	**Sn**	**18 57 51.4**	**-0.5**	
VOSK				⇑	Lg	Lg	18 59 02.6		
IKRD	**Kardeh**	**11.11**	**248**	*e*P		Pn	18 55 38.1	-11	
ISFR	**Sfrayin**	**11.34**	**251**	*e*P		Pn	18 55 48.8	-3.6	
BVA0	**Borovoye Array**	**11.42**	**357**	Pn		**Pn**	**18 55 52.4**	**-0.8**	
	comp=Z,3.6nm,0.6s,baz=165,slow=15,SNR=225								
BVA0				⇑	Sn	**Sn**	**18 57 59.5**	**-0.2**	
	comp=Z,38nm,1.2s,baz=166,slow=22,SNR=20								
BVA0				⇑	Lg	Lg	18 59 11.9		
	comp=Z,47nm,1.4s,baz=150,slow=29,SNR=3.8								
BVA0	**Borovoye Array**	**11.42**	**357**	*i* P		**Pn**	**18 55 52.3**	**-0.8**	
BVA0					pmax	pmax			
	comp=Z,3.0nm,0.5s								
BVAR	**Borovoye Array**	**11.42**	**357**	P		**Pn**	**18 55 52.4**	**-0.7**	
BVAR							18 57 57.9		
BVAR					pmax	pmax			
	comp=Z,4.0nm,0.3s								
BVAR					smax	smax			
	comp=N,10.0nm,0.3s								
BVAR					MLR	MLR			
	comp=Z,312nm,19.2s								
BVAR	**Borovoye Array**	**11.42**	**357**	Pn		**Pn**	**18 55 52.4**	**-0.7**	
BVAR				Sn		**Sn**	**18 57 57.9**	**-1.8**	
BVAR				Lg		Lg	18 59 12.4		
BVAR	**Borovoye Array**	**11.42**	**357**	Pn		**Pn**	**18 55 52.4**	**-0.7**	
	comp=Z,3.8nm,0.3s,baz=163,slow=11,SNR=82								
BVAR					Sn	**Sn**	**18 57 57.9**	**-1.8**	
	comp=Z,9.7nm,0.3s,baz=165,slow=23,SNR=18								
BVAR					Lg	Lg	18 59 12.4		
	comp=Z,4.4nm,0.3s,baz=156,slow=22,SNR=2.7								
BVAR					LR	LR	19 00 33.4		
	comp=Z,312nm,19.2s,baz=353,slow=39								
ZRNK	**Zerenda**	**11.44**	**353**	⇓	Pn	**Pn**	**18 55 52.7**	**-0.7**	
ZRNK				⇓	Sn	**Sn**	**18 57 59.7**	**-0.5**	
ZRNK				⇑	Lg	Lg	18 59 12.0		
SMLA	**Simla**	**11.46**	**154**	*i* P		**Pn**	**18 55 51.6**	**-2.1**	
SMLA					AMB	AMB	18 56 04.7		
	comp=Z,26nm,0.5s								
SMLA				*i*	x	x	18 57 48.0		
SMLA				*i*	x	x	18 57 48.2		
BRVK	**Borovoye**	**11.46**	**357**	⇓	Pn	**Pn**	**18 55 53.4**	**-0.2**	
	comp=Z,64nm,0.8s								
BRVK				⇓	Sn	**Sn**	**18 57 58.7**	**-1.9**	
	comp=Z,248nm,1.2s								
BRVK				⇓	Lg	Lg	18 59 13.3		
	comp=Z,480nm,1.3s								
BRVK	**Borovoye**	**11.46**	**357**	*e*P		**Pn**	**18 55 53.2**	**-0.4**	
BRVK					pmax	pmax			
	comp=Z,50nm,0.9s								
BRVK	**Borovoye**	**11.46**	**357**	*e*P		**Pn**	**18 55 52.9**	**-0.8**	
	comp=Z,40nm,0.8s								
BRVK	**Borovoye**	**11.46**	**357**	P		**Pn**	**18 55 53.7**	**+0.1**	
	SNR=15								
WMQ	**Urumqi**	**12.18**	**74**	P		Pn	18 56 00.0	-3.6	
WMQ				sP			18 56 15.0		
WMQ					pmax	pmax			
	comp=Z,15nm,0.8s								
WMQ					LR	LR			
	comp=N,840nm,6.0s								
WMQ					LR	LR			
	comp=E,570nm,6.0s								
WMQ					LR	LR			
	comp=Z,380nm,6.0s								
DDI	**Dehra Dun**	**12.50**	**152**	*ex*		**Pn**	**18 56 07.0**	**-1.0**	
DDI				*e*P		P	18 56 08.6	-11	
DDI					AMB	AMB	18 56 09.2		
	comp=Z,162nm,0.7s								
DDI				*ex*		x	18 58 14.5		
IDAH	**Dahanechah**	**12.77**	**230**	*e*P		**Pn**	**18 56 09.7**	**-2.2**	
AKTO	**Aktyubinsk**	**12.79**	**318**	⇑	Pn	**Pn**	**18 56 12.6**	**+0.7**	
	comp=Z,7.3nm,0.8s								
AKTO				⇓	Sn	**Sn**	**18 58 33.2**	**0.0**	
	comp=Z,15nm,1.2s								
AKTO				⇓	Lg	Lg	18 59 55.6		
	comp=Z,14nm,1.1s								
AKTO	**Aktyubinsk**	**12.79**	**318**	*i* P		**Pn**	**18 56 12.5**	**+0.7**	
AKTO					pmax	pmax			
	comp=Z,7.0nm,0.8s								
AKTO	**Aktyubinsk**	**12.79**	**318**	Pn		**Pn**	**18 56 10.8**	**-1.0**	
AKTO				Sn		**Sn**	**18 58 30.5**	**-2.7**	
AKTO	**Aktyubinsk**	**12.79**	**318**	Pn		**Pn**	**18 56 10.8**	**-1.0**	
	comp=Z,1.4nm,0.3s,baz=118,slow=12,SNR=40								
AKTO				Sn		**Sn**	**18 58 30.5**	**-2.7**	
	comp=Z,1.2nm,0.3s,baz=155,slow=21,SNR=5.6								
AKTO				LR		LR	19 01 45.9		
	comp=Z,316nm,20.7s,baz=130,slow=40								
ITEG	**Tejag**	**13.31**	**233**	*e*P		**Pn**	**18 56 16.7**	**-2.6**	
NDI	**New Delhi**	**13.76**	**158**	*ex*		Pn	18 56 21.0	-4.1	
NDI				*ex*		x	18 58 47.0		
IANJ	**Anjilo**	**15.00**	**251**	*e*P		**Pn**	**18 56 40.1**	**-2.1**	
ZAA0	**Zalesovo Array**	**15.23**	**31**	*e*P		**Pn**	**18 56 42.3**	**-2.7**	
ZALV	**Zalesovo Beam**	**15.23**	**31**	P		**Pn**	**18 56 42.9**	**-2.1**	
ZALV							18 59 28.2		
ZALV					pmax	pmax			
	comp=Z,1.0nm,0.3s								
ZALV					smax	smax			
	comp=N,1.0nm,0.3s								
ZALV					MLR	MLR			
	comp=Z,53nm,21.8s								
ZALV	**Zalesovo Beam**	**15.23**	**31**	Pn		**Pn**	**18 56 42.9**	**-2.1**	
ZALV				Sn		**Sn**	**18 59 28.2**	**-4.4**	
ZALV	**Zalesovo Beam**	**15.23**	**31**	Pn		**Pn**	**18 56 42.9**	**-2.1**	
	comp=Z,0.5nm,0.3s,baz=226,slow=12,SNR=20								
ZALV					Sn	**Sn**	**18 59 28.2**	**-4.4**	
	comp=Z,1.1nm,0.3s,baz=230,slow=21,SNR=5.2								
ZALV					LR	LR	19 03 49.5		
	comp=Z,53nm,21.8s,baz=213,slow=42								
ISHM	**Shahmirzad**	**15.28**	**254**	*e*P		**Pn**	**18 56 43.5**	**-2.5**	
NVS	**Novosibirsk**	**15.36**	**27**	*e*P		**Pn**	**18 56 46.5**	**-0.1**	
IALA	**Alasht**	**15.50**	**255**	*e*P		Pn	18 56 43.5	-5.4	
ILAS	**Lasjerd**	**15.72**	**253**	*e*P		**Pn**	**18 56 53.0**	**+1.3**	
IFIR	**Firoozkooh**	**15.74**	**254**	*e*P		**Pn**	**18 56 50.5**	**-1.5**	
PYUN	**Piuthan**	**16.49**	**141**	*e*P		Pn	18 56 55.1	-6.4	
	comp=Z,140nm,0.5s								
DANN	**Dangsing**	**16.65**	**139**	*e*P		Pn	18 56 57.6	-6.0	
	comp=Z,124nm,0.6s								
SVE	**Sverdlovsk**	**16.72**	**339**	⇑	*e*P	**Pn**	**18 57 03.8**	**-0.3**	
SVE					*e*S	**Sn**	**19 00 04.1**	**-4.7**	
SVE					pmax	pmax			
	comp=Z,34nm,1.1s								
SVE					MLR	MLR			
	comp=Z,861nm,8.0s								
IVRN	**Varamin**	**16.79**	**253**	*e*P		**Pn**	**18 57 05.2**	**+0.1**	
ARU	**Arti**	**16.99**	**335**	*c*	*i*P	**Pn**	**18 57 07.1**	**-0.3**	
ARU					S	**Sn**	**19 00 15.5**	**+0.2**	
ARU					pmax	pmax			
	comp=Z,50nm,2.5s								
ARU	**Arti**	**16.99**	**335**		Pn	**Pn**	**18 57 06.7**	**-0.7**	
	comp=Z,183nm,0.5s,SNR=12								
KOLN	**Koldanda**	**17.05**	**140**	*e*P		Pn	18 57 03.4	-5.2	
	comp=Z,68nm,0.5s								
IR3	**Iran Long-Peri**	**17.07**	**256**	*e*P		**Pn**	**18 57 08.3**	**-0.4**	
IZEF	**Zefreh**	**17.48**	**246**	*e*P		**P**	**18 57 15.5**	**+0.5**	
MAK	**Makhachkala**	**17.72**	**282**	*e*P		**Pn**	**18 57 13.8**	**-2.8**	
MAK					*e*S	**Sn**	**19 00 32.2**	**-1.0**	
MAK					pmax	pmax			
	comp=Z,332nm,1.4s								
MAK					MLR	MLR			
	comp=Z,434nm,15.0s								
IKLH	**Kolahrood**	**17.76**	**249**	*e*P		**Pn**	**18 57 17.1**	**-0.4**	
KKN	**Kakani**	**17.87**	**136**	*e*P		Pn	18 57 14.0	-4.8	
	comp=Z,56nm,0.5s								
KKN					*e*S	Sn	19 00 21.6	-16	
IRAZ	**Razeghan**	**17.90**	**257**	*e*P		**Pn**	**18 57 18.6**	**-0.5**	
DMN	**Daman**	**17.93**	**137**	*e*P		Pn	18 57 14.5	-5.0	
	comp=Z,75nm,0.7s								
GUN	**Gumba**	**18.09**	**135**	*e*P		**Pn**	**18 57 17.2**	**-4.4**	
	comp=Z,144nm,0.9s								
PKIN	**Phulchoki**	**18.11**	**136**	*e*P		Pn	18 57 16.2	-5.5	
	comp=Z,31nm,0.4s								
PKI	**Pulchoki**	**18.12**	**136**	*e*P		Pn	18 57 17.1	-4.8	
	comp=Z,200nm,1.1s								
BHJ	**Bhuj**	**18.38**	**185**	*e*P		**P**	**18 57 22.6**	**-2.1**	
BHJ					AMB	AMB	18 57 27.8		
	comp=Z,40nm,0.9s								
IPIR	**Pirpir**	**18.60**	**248**	*e*P		**Pn**	**18 57 29.3**	**+1.6**	
IBND	**Bandar-abas**	**18.67**	**225**	*e*P		**P**	**18 57 27.3**	**-0.5**	
IPAR	**Pars**	**18.94**	**237**	*e*P		**Pn**	**18 57 32.4**	**+0.5**	
RAMN	**Ramite**	**19.24**	**135**	*e*P		**P**	**18 57 30.0**	**-4.4**	
	comp=Z,145nm,0.8s								
DGRG	**David-gareji**	**19.47**	**278**	P		**Pn**	**18 57 37.5**	**-0.4**	
TAPN	**Taplejung**	**19.54**	**132**	*e*P		**P**	**18 57 34.8**	**-2.8**	
	comp=Z,123nm,1.0s								
ODAN	**Odare**	**19.74**	**133**	*e*P		**P**	**18 57 37.4**	**-2.4**	
	comp=Z,126nm,0.9s								
SEAG	**Tbilisi Sea**	**19.84**	**279**	P		**P**	**18 57 38.7**	**-1.9**	
TBLG	**Delisi**	**19.90**	**279**	*e*P		**P**	**18 57 40.5**	**-0.7**	
TBLG	**Delisi**	**19.90**	**279**	P		**P**	**18 57 40.5**	**-0.7**	
LSA	**Lhasa**	**19.92**	**120**	*e*P		**Pn**	**18 57 44.1**	**+0.3**	
LSA					pmax	pmax			
	comp=Z,47nm,1.3s								
LSA	**Lhasa**	**19.92**	**120**	*e*P		**Pn**	**18 57 44.1**	**+0.3**	
	comp=Z,47nm,1.3s								
GUDG	**Gudauri**	**19.99**	**281**	P		**P**	**18 57 43.2**	**+0.8**	
BANOM	**Banah**	**20.03**	**223**	P		**P**	**18 57 43.5**	**+0.8**	
	SNR=6.3								
SOKR	**Solikamsk**	**20.13**	**338**	*e*P		**P**	**18 57 44.4**	**+0.9**	
SOKR					pmax	pmax			
	comp=Z,10.0nm,1.1s								
SOKR					MLR	MLR			
	comp=Z,790nm,32.0s								
GNI	**Garni**	**20.19**	**275**	*e*P		**P**	**18 57 45.1**	**+0.6**	
	comp=Z,80nm,1.1s								
GNI	**Garni**	**20.19**	**275**	P		**P**	**18 57 45.5**	**+0.9**	
	comp=Z,53nm,1.1s,baz=143,slow=1.3,SNR=27								
KZR	**Kazreti**	**20.19**	**278**	P		**P**	**18 57 44.8**	**+0.4**	
GOR	**Gori**	**20.32**	**280**	P		Pn	18 57 47.3	-0.7	
ZEI	**Tsey**	**20.38**	**282**	*e*P		**P**	**18 57 45.4**	**-1.3**	
ZEI					pmax	pmax			
	comp=Z,23nm,1.4s								
ONI	**Oni**	**20.73**	**282**	P		Pn	18 57 53.6	+0.8	
AKH	**Akhalkalaki**	**20.87**	**279**	P		**P**	**18 57 53.2**	**+1.3**	
KBZ	**Khabaz**	**21.02**	**285**	P		**P**	**18 57 52.4**	**-0.9**	
KBZ					pmax	pmax			
	comp=Z,5.0nm,0.9s								
KBZ					MLR	MLR			
	comp=Z,216nm,18.2s								
KBZ	**Khabaz**	**21.02**	**285**	P		**P**	**18 57 52.4**	**-0.9**	
KBZ	**Khabaz**	**21.02**	**285**	P		**P**	**18 57 52.4**	**-0.9**	
	comp=Z,4.6nm,0.8s,baz=47,slow=8.8,SNR=3.6								
KBZ					LR	LR	19 08 05.5		
	comp=Z,216nm,18.2s,baz=267,slow=43								
NAZ	**Nazwa, Dubai**	**21.12**	**223**	P		**P**	**18 57 54.2**	**-0.3**	
	SNR=27								
KIV	**Kislovodsk**	**21.16**	**286**	⇓	*e*P	**P**	**18 57 54.4**	**-0.5**	
KIV					*e*		18 58 15.5		
KIV					*e*S	**S**	**19 01 44.8**	**-4.0**	
KIV					pmax	pmax			
	comp=Z,13nm,1.0s								
KIV					MLR	MLR			
	comp=Z,200nm,20.0s								
ASHO	**Ashiyiah**	**21.17**	**222**	P		**P**	**18 57 55.7**	**+0.5**	
	SNR=10								
NGP	**Nagpur**	**21.41**	**160**	*e*P		**P**	**18 57 55.6**	**-2.0**	
NGP				*ex*		x	18 58 03.1		
	comp=Z,110nm,1.3s								
NGP				*ex*		x	19 01 49.5		
BOK	**Bokaro**	**21.50**	**141**	*e*P		**P**	**18 58 00.5**	**+1.9**	
HOQ	**Hoqain**	**21.51**	**218**	P		**P**	**18 58 00.2**	**+1.5**	
	SNR=12								
ASUD	**Al Ashush, Dub**	**21.59**	**223**	P		**P**	**18 58 00.6**	**+1.1**	
	SNR=6.8								
SMDO	**Samad**	**21.64**	**215**	P		**P**	**18 58 00.2**	**0.0**	
	SNR=13								
WBK	**Wadi Bani Khal**	**21.65**	**213**	P		**P**	**18 58 00.9**	**+0.7**	
	SNR=14								
GTA	**Gaotai**	**21.67**	**86**	*e*P		**P**	**18 58 01.8**	**+1.3**	
GTA					pP	**pP**	**18 58 06.5**	**-1.6**	
GTA					sP	**sP**	**18 58 09.8**	**-1.8**	
GTA					S	**S**	**19 01 54.8**	**-4.2**	
GTA					sS	Sn	19 02 01.0	-7.6	
GTA					pmax	pmax			
	comp=Z,32nm,1.1s								
GTA					pmax	pmax			
	comp=Z,190nm,7.6s								
GTA					LR	LR			
	comp=N,1μm,20.0s								
GTA					LR	LR			
	comp=E,1μm,19.9s								
GTA					LR	LR			
	comp=Z,470nm,14.2s								
ARQ	**Araqi**	**22.09**	**219**	P		**P**	**18 58 07.4**	**+2.5**	
	SNR=8.6								
JMDO	**Jabal Madar**	**22.22**	**214**	P		**P**	**18 58 06.6**	**+0.2**	
	SNR=14								
BSY	**Bisya**	**22.29**	**217**	P		**P**	**18 58 07.4**	**+0.4**	
	SNR=19								
VRHR	**Novokhopersk**	**22.49**	**305**	*e*P		**P**	**18 58 08.5**	**-0.5**	
VRHR					pmax	pmax			
	comp=N,5.0nm,0.8s								
VRHR					pmax	pmax			
	comp=E,20nm,0.8s								
VRHR					pmax	pmax			
	comp=Z,20nm,0.8s								
MOY	**Mondy**	**22.51**	**53**	*e*P		**P**	**18 58 11.0**	**+1.6**	
MOY					pmax	pmax			
	comp=Z,59nm,1.6s								
KBD	**Kabd**	**22.89**	**245**	*e*P		**P**	**18 58 13.0**	**-0.4**	
POO	**Poona**	**23.12**	**174**	*ex*		x	18 58 12.0		
NAY	**Al-Naaiem**	**23.16**	**245**	*e*P		**P**	**18 58 15.6**	**-0.5**	
NAY					AMb	AMB	18 58 20.3		
	comp=Z,81nm,1.2s								
RST	**Umm Al-Ruwaisa**	**23.17**	**246**	*e*P		**P**	**18 58 15.7**	**-0.6**	
SHL	**Shillong**	**23.31**	**127**	*e*P		**P**	**18 58 17.0**	**-0.9**	
SHL				*e*S		**S**	**19 02 30.0**	**+1.2**	
SOC	**Sochi**	**23.34**	**285**	*e*P		**P**	**18 58 15.4**	**-2.4**	
SOC				*e*			18 58 44.0		
SOC				*e*S		**S**	**19 02 27.4**	**-1.3**	
SOC				*e*SSS		SSS	19 03 13.6		
SOC					pmax	pmax			
	comp=Z,7.0nm,0.6s								
SOC					MLR	MLR			
	comp=Z,240nm,16.0s								
ZAK	**Zakamensk**	**23.66**	**57**	⇑	*i*P	**P**	**18 58 22.1**	**+1.1**	
ZAK					pmax	pmax			
	comp=Z,16nm,1.0s								
VORD	**Divnogorie**	**23.91**	**304**	*e*P		**P**	**18 58 23.6**	**+0.4**	
VORD					pmax	pmax			
	comp=Z,60nm,1.4s								
VORD					pmax	pmax			
	comp=N,10.0nm,0.7s								
VORD					pmax	pmax			
	comp=E,60nm,0.7s								
VSR	**Storozhevoye**	**24.03**	**305**	*e*P		**P**	**18 58 23.6**	**-0.8**	
VSR				*e*S		**S**	**19 02 36.3**	**-3.3**	
VSR					pmax	pmax			
	comp=N,10.0nm,1.0s								
VSR					pmax	pmax			
	comp=E,50nm,1.0s								
VSR					pmax	pmax			
	comp=Z,20nm,1.0s								
VSR					smax	smax			
	comp=N,70nm,2.2s								
VSR					smax	smax			
	comp=Z,10.0nm,1.8s								
VSR					smax	smax			
	comp=E,40nm,2.2s								
TLY	**Talaya**	**24.12**	**54**	P		**P**	**18 58 27.8**	**+2.6**	
	comp=E,66nm,0.8s,SNR=5.2								
IRK	**Irkutsk**	**24.62**	**53**	*e*P		**P**	**18 58 30.6**	**+0.8**	
IRK					pmax	pmax			
	comp=Z,30nm,1.5s								
ANN	**Anapa**	**24.86**	**289**	*e*P		**P**	**18 58 32.1**	**+0.2**	
ANN				*e*PPP		PPP	18 59 12.5		
ANN				*e*S		**S**	**19 02 49.9**	**-3.1**	
ANN				*e*SSS		SSS	19 03 53.8		
ANN					pmax	pmax			
	comp=Z,28nm,0.9s								
HYB	**Hyderabad**	**24.90**	**164**	*i* P		**P**	**18 58 30.5**	**-2.1**	
HYB	**Hyderabad**	**24.90**	**164**	*e*P		**P**	**18 58 31.5**	**-1.1**	
IMP	**Imphal**	**25.13**	**125**	*e*P		**P**	**18 58 35.0**	**+0.3**	
MALT	**Malatya**	**25.40**	**273**	*e*P		**P**	**18 58 39.3**	**+2.2**	
MALT					pmax	pmax			
	comp=Z,15nm,1.1s								
MALT	**Malatya**	**25.40**	**273**	*e*P		**P**	**18 58 39.3**	**+2.2**	
	comp=Z,15nm,1.1s								
SONM	**Songino Array**	**25.46**	**64**	P		**P**	**18 58 38.1**	**+0.4**	
SONM				Lg		Lg	19 06 37.8		
SONM	**Songino Array**	**25.46**	**64**	P		**P**	**18 58 38.1**	**+0.4**	
	comp=Z,4.5nm,0.7s,baz=272,slow=9.7,SNR=23								
SONM				Lg		Lg	19 06 37.8		
	comp=Z,0.9nm,1.0s,baz=265,slow=35,SNR=2.6								
SONM				LR		LR	19 09 18.5		
	comp=Z,217nm,21.0s,baz=84,slow=38								
LZH	**Lanzhou**	**25.76**	**92**	*e*P		**P**	**18 58 42.3**	**+1.8**	
LZH				pP		**pP**	**18 58 49.3**	**+0.7**	
LZH				sP		**sP**	**18 58 53.0**	**+1.0**	
LZH					pmax	pmax			
	comp=Z,25nm,1.2s								
LZH					pmax	pmax			
	comp=Z,69nm,4.9s								
LZH					LR	LR			
	comp=N,390nm,9.8s								
LZH					LR	LR			
	comp=E,550nm,11.1s								
LZH					LR	LR			
	comp=Z,490nm,11.6s								
ULN	**Ulaanbaatar**	**25.91**	**64**	*e*P		**P**	**18 58 41.0**	**-0.7**	
	comp=Z,34nm,1.5s								
ULN	**Ulaanbaatar**	**25.91**	**64**	P		**P**	**18 58 43.0**	**+1.4**	
	SNR=13								
VIS	**Vishakhapatnam**	**25.93**	**153**	*e*P		**P**	**18 58 43.2**	**+1.3**	
MOS	**Moscow**	**26.08**	**314**	*e*P		**P**	**18 58 41.2**	**-1.7**	
OBN	**Obninsk**	**26.47**	**313**	⇑	*e*P	**P**	**18 58 46.8**	**+0.4**	
OBN					*i* S	**S**	**19 03 19.5**	**+1.2**	
OBN					pmax	pmax			
	comp=Z,36nm,1.2s								
OBN					MLR	MLR			
	comp=Z,200nm,23.0s								
SIM	**Simferopol'**	**27.19**	**290**	*e*P		**P**	**18 58 54.0**	**+0.9**	
SIM				S		**S**	**19 03 35.0**	**+5.0**	
SIM					pmax	pmax			
	comp=Z,20nm,0.7s								
SIM					MLR	MLR			
	comp=Z,130nm,18.1s								
RAYN	**Ar Rayn**	**28.16**	**238**	P		**P**	**18 59 02.0**	**0.0**	
	comp=Z,76nm,0.9s,SNR=15								
BR131	**Keskin Array S**	**28.56**	**279**	*e*P		**P**	**18 59 06.6**	**+1.1**	
	comp=Z,3.8nm,0.8s								
BRTR	**Keskin Array B**	**28.56**	**279**	P		**P**	**18 59 06.5**	**+1.0**	
BRTR	**Keskin Array B

comp=Z,5.0nm,1.1s
CHTO Chiang Mai 32.67 126 *e*P **P 18 59 41.0 -0.8**
comp=Z,4.8nm,1.1s
MLR Muntele Rosu 32.83 292⇑*i*P **P 18 59 45.1 +1.9**
LVZ Lovozero 32.87 335 *e*P **P 18 59 44.5 +1.4**
LVZ pmax pmax
comp=Z,54nm,1.7s
CM31 Chiang Mai Arr 32.94 126 *e*P **P 18 59 45.3 +1.2**
comp=Z,2.0nm,0.6s
CMAR Chiang Mai Arr 32.94 126 P **P 18 59 43.1 -1.1**
CMAR PcP **PcP 19 02 28.1 0.0**
CMAR Chiang Mai Arr 32.94 126 P **P 18 59 43.1 -1.1**
comp=Z,1.3nm,0.6s,baz=316,slow=8.3,SNR=13
CMAR PcP **PcP 19 02 28.1 0.0**
comp=Z,1.5nm,0.8s,baz=302,slow=3.2,SNR=6.6
CMAR LR LR 19 15 36.6
comp=Z,112nm,18.6s,baz=319,slow=41
BURAR Bucovina Array 33.02 296⇑*i*P **P 18 59 44.7 -0.1**
BUR08 Bucovina Ar. S 33.03 296 *e*P **P 18 59 43.6 -1.2**
FINES FINESS Array B 33.52 322 P **P 18 59 49.7 +0.9**
FINES FINESS Array B 33.52 322 P **P 18 59 49.7 +0.9**
comp=Z,2.0nm,0.6s,baz=106,slow=9.4,SNR=27
FINES LR LR 19 14 51.9
comp=Z,70nm,21.2s,baz=289,slow=39
LVV L'vov 33.59 301 *e*P **P 18 59 50.0 +0.5**
LVV *e*S **S 19 05 14.2 +4.1**
LVV MLR MLR
comp=Z,80nm,15.0s
LVV MLR MLR
comp=E,100nm,16.0s
LVV MLR MLR
comp=N,100nm,14.0s
KAF Kangasniemi 33.60 323 *e*P **P 18 59 49.9 +0.4**
KAF pmax pmax
comp=Z,1.0nm,0.6s
KAF Kangasniemi 33.60 323 *e*p **P 18 59 49.9 +0.4**
comp=Z,1.3nm,0.6s
DGPR DIGLIPUR 33.99 140 *e*P **P 18 59 53.2 0.0**
SUW Suwalki 34.00 308 *e*P **P 18 59 54.0 +0.9**
TRPA Tarpa 34.74 298⇓*i*P **P 19 00 01.4 +1.9**
KOLS Kolonicke sedl 34.82 299 *e*P **P 19 00 01.0 +0.8**
KOLS pmax pmax
comp=Z,5.0nm,1.3s
KOLS Kolonicke sedl 34.82 299 *e*P **P 19 00 01.0 +0.8**
KOLS *e*PP **PP 19 01 22.0 +2.8**
DRGR 34.83 295⇓*i*P **P 19 00 01.6 +1.2**
CRVS Cervenica-Dubn 35.35 299 *e*P **P 19 00 05.8 +1.0**
CRVS pmax pmax
comp=Z,3.0nm,1.1s
CRVS Cervenica-Dubn 35.35 299 *e*P **P 19 00 05.8 +1.0**
CRVS *e*PP **PnPn 19 01 23.1 -0.3**
VTS Vitosha 35.39 288⇑*i*P **P 19 00 07.2 +1.8**
BZS Buzias 35.80 294⇓*i*P **P 19 00 10.6 +2.0**
WHN Wuhan 36.09 94 P **P 19 00 11.5 +0.2**
WHN S S 19 05 41.3 -7.6
WHN LR LR
comp=Z,690nm,16.2s
KEV Kevo 36.21 336 *e*P **P 19 00 12.7 +0.8**
KEV pmax pmax
comp=Z,2.0nm,0.7s
KEV Kevo 36.21 336 *e*p **P 19 00 12.7 +0.8**
comp=Z,2.4nm,0.7s
OJC Ojcow 36.27 302 *e*P **P 19 00 13.5 +0.9**
OJC Ojcow 36.27 302 *e*P **P 19 00 13.5 +0.9**
ARCES ARCESS Array B 36.58 335 P **P 19 00 16.5 +1.4**
ARCES ARCESS Array B 36.58 335 P **P 19 00 16.5 +1.4**
comp=Z,6.7nm,0.8s,baz=108,slow=8.4,SNR=32
ARCES LR LR 19 16 30.1
comp=Z,102nm,21.0s,baz=115,slow=38
ARE0 ARCESS Array S 36.58 335 *e*P **P 19 00 16.2 +1.1**
VYHS Vyhne 37.13 299 *e*P **P 19 00 21.2 +1.2**
VYHS pmax pmax
comp=Z,3.0nm,1.1s
VYHS Vyhne 37.13 299 *e*P **P 19 00 21.2 +1.2**
VYHS *e*PP **PP 19 01 43.3 -1.5**
OKC Ostrava-Krasne 37.37 301 AMS AMS 19 16 20.0
comp=Z,100nm,14.7s
GKP Gorka Klasztor 37.56 307 *e*P **P 19 00 25.1 +1.6**
MORC Moravsky Berou 37.77 301 *e*P **P 19 00 26.4 +0.9**
MORC pmax pmax
comp=Z,8.0nm,1.3s
MORC Moravsky Berou 37.77 301 *e*P **P 19 00 26.4 +0.9**
comp=Z,7.8nm,1.3s
MORC Moravsky Berou 37.77 301⇓*i*P **P 19 00 27.1 +1.6**
KRLC Kraliky 38.21 302 *e*P **P 19 00 30.3 +1.1**
KRLC Kraliky 38.21 302 *e*P **P 19 00 30.3 +1.1**
KSP Ksiaz 38.41 303 *e*P **P 19 00 31.9 +1.2**
KSP Ksiaz 38.41 303 *e*P **P 19 00 32.0 +1.2**
DPC Dobruska-Polom 38.46 302 *e*P **P 19 00 33.2 +1.9**
DPC *e* 19 00 42.1
DPC MLR MLR
comp=Z,100nm,15.7s
DPC Dobruska-Polom 38.46 302 *e*P **P 19 00 33.2 +1.9**
DPC *ex* x 19 00 37.1
DPC *e*pP **pP 19 00 42.1 +2.6**
DPC AMS AMS 19 18 30.0
comp=Z,100nm,15.7s
UPC Upice 38.63 303 *e*P **P 19 00 34.4 +1.7**
UPC Upice 38.63 303 *e*P **P 19 00 34.4 +1.7**
NJ2 Nanjing 38.74 89 *e*P **P 19 00 34.5 +0.8**
NJ2 pP **pP 19 00 39.8 -2.2**
NJ2 PcP **PcP 19 02 40.5 -4.5**
NJ2 S **S 19 06 33.0 +3.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s
NJ2 pmax pmax
comp=Z,170nm,5.2s
NJ2 LR LR
comp=N,140nm,23.6s
NJ2 LR LR
comp=E,210nm,20.8s
NJ2 LR LR
comp=Z,240nm,23.6s
BSD Bornholm Skovb 38.79 310 *i*P **P 19 00 34.1 +0.2**
BSD pmax pmax
comp=Z,16nm,0.9s
BSD Bornholm Skovb 38.79 310 *i*P **P 19 00 34.1 +0.2**
comp=Z,16nm,0.8s
TREC Trest 39.17 301 *e*P **P 19 00 39.1 +1.9**
TREC Trest 39.17 301 *e*P **P 19 00 39.1 +1.9**
CONA Conrad Observa 39.19 299⇑*i*P **P 19 00 38.8 +1.3**
comp=Z,11nm,1.0s,SNR=7.9
CONA Conrad Observa 39.19 299⇑*i*P **P 19 00 38.8 +1.3**
comp=Z,11nm,1.0s
PVCC Panska Ves 39.54 303 *e*P **P 19 00 42.2 +2.0**
PVCC Panska Ves 39.54 303 *e*P **P 19 00 42.2 +2.0**
QIZ Qiongzhong 39.65 113 P **P 19 00 40.3 -1.1**
QIZ S **S 19 06 44.3 +1.3**
QIZ pmax pmax
comp=Z,25nm,1.2s
QIZ pmax pmax
comp=Z,180nm,5.2s
QIZ LR LR
comp=Z,420nm,4.7s
PRU Pruhonice 39.65 302 *e*P **P 19 00 42.5 +1.4**
PRU MLR MLR
comp=Z,200nm,17.1s
PRU Pruhonice 39.65 302 *e*P **P 19 00 42.5 +1.4**
PRU *ex* x 19 00 47.2
PRU AMS AMS 19 18 30.0
comp=Z,200nm,17.1s
YAK Yakutsk 39.69 39*c i*P **P 19 00 41.3 0.0**
YAK *e**PP **pP 19 00 47.6 -2.0**
YAK *e* 19 02 19.5
YAK *e* 19 02 53.3
YAK *e*S **S 19 06 38.2 -4.6**
YAK *e* 19 10 45.6
YAK pmax pmax
comp=Z,24nm,0.9s
YAK pmax pmax
comp=E,10.0nm,1.5s
YAK pmax pmax
comp=Z,102nm,3.4s
YAK pmax pmax
comp=N,19nm,3.2s
YAK smax smax
comp=E,13nm,6.5s
YAK smax smax
comp=N,5.0nm,5.6s
YAK MLR MLR
comp=Z,263nm,15.0s
YAK MLR MLR
comp=E,138nm,12.0s
YAK MLR MLR
comp=N,88nm,14.0s

RGN Rugen 39.76 309 *e*P **P 19 00 43.7 +1.8**
comp=Z,57nm,0.9s
BRG Berggiesshubel 39.87 304 *e*P **P 19 00 44.4 +1.4**
BRG pmax pmax
comp=Z,10.0nm,0.9s
BRG MLR MLR
comp=N,153nm,17.6s
BRG MLR MLR
comp=E,124nm,15.5s
BRG MLR MLR
comp=Z,299nm,17.0s
BRG Berggiesshubel 39.87 304 *e*P **P 19 00 44.4 +1.4**
comp=Z,10.0nm,0.9s
SOKA Soboth 40.02 297⇑*i*P **P 19 00 45.0 +0.6**
comp=Z,11nm,1.1s
SOKA Soboth 40.02 297⇑*i*P **P 19 00 45.0 +0.6**
comp=Z,11nm,1.1s
COP Copenhagen 40.16 311 *e*P **P 19 00 47.0 +1.8**
COP pmax pmax
comp=Z,12nm,1.0s
COP Copenhagen 40.16 311 *i*P **P 19 00 47.0 +1.8**
comp=Z,12nm,0.9s
FBE Freiberg 40.23 304 *e*P **P 19 00 47.6 +1.6**
comp=Z,15nm,0.8s
MOA Molln 40.26 299⇑*i*P **P 19 00 47.0 +0.8**
comp=Z,5.8nm,0.9s
MOA Molln 40.26 299⇑*i*P **P 19 00 47.0 +0.8**
comp=Z,5.8nm,0.9s
LLD Lille Linde 40.31 311 *i*P **P 19 00 48.5 +2.0**
LLD pmax pmax
comp=Z,33nm,0.8s
LLD Lille Linde 40.31 311 *i*P **P 19 00 48.5 +2.0**
comp=Z,33nm,0.8s
CLL Collm 40.38 304⇑*i*P **P 19 00 48.0 +0.8**
CLL pmax pmax
comp=Z,13nm,1.0s
CLL Collm 40.38 304 *e*P **P 19 00 48.1 +0.8**
comp=Z,10.0nm,0.8s
CLL Collm 40.38 304⇑*i*P **P 19 00 48.0 +0.8**
comp=Z,13nm,1.0s
CLL *e*PP **PP 19 02 21.0 +0.8**
CLL *e*S S 19 07 01.0 +7.6
CLL LmV 19 19 00.0
comp=Z,200nm,19.6s
GEC2 GERESS Array S 40.41 301 *e*P **P 19 00 49.1 +1.5**
GEC2 pmax pmax
comp=Z,11nm,0.9s
GEC2 GERESS Array S 40.41 301 *e*P **P 19 00 49.1 +1.5**
comp=Z,11nm,0.9s
GERES GERESS Array B 40.41 301 P **P 19 00 48.8 +1.2**
GERES GERESS Array B 40.41 301 P **P 19 00 48.8 +1.2**
comp=Z,9.1nm,0.8s,baz=69,slow=7.4,SNR=72
GERES LR LR 19 19 25.7
comp=Z,131nm,18.1s,baz=262,slow=39
KHC Kasperske Hory 40.43 301 *e*P **P 19 00 49.0 +1.3**
KHC MLR MLR
comp=Z,100nm,15.6s
KHC Kasperske Hory 40.43 301 *e*P **P 19 00 49.0 +1.3**
KHC *ex* x 19 00 51.7
KHC *ex* x 19 00 53.3
KHC *ex* x 19 01 11.4
KHC AMS AMS 19 20 10.0
comp=Z,100nm,15.6s
NB2 NORSAR Subarra 40.58 320 P **P 19 00 49.4 +0.6**
comp=Z,18nm,1.0s,baz=91,slow=8.6
NOA NORSAR Array B 40.58 320 P **P 19 00 49.1 +0.3**
NOA NORSAR Array B 40.58 320 P **P 19 00 49.1 +0.3**
comp=Z,11nm,0.9s,baz=91,slow=8.3,SNR=30
NOA LR LR 19 18 34.8
comp=Z,123nm,21.7s,baz=105,slow=38
WET Wettzell 40.88 301 *e*P **P 19 00 52.8 +1.4**
WET pmax pmax
comp=Z,12nm,1.0s
WET Wettzell 40.88 301 *e*P **P 19 00 52.8 +1.4**
comp=Z,12nm,1.0s
TANN Tannenbergstha 40.88 303 *e*P **P 19 00 52.7 +1.3**
comp=Z,6.0nm,0.9s
NKC Novy Kostel 40.93 303 *e*P **P 19 00 53.4 +1.6**
NKC MLR MLR
comp=Z,200nm,16.4s
NKC Novy Kostel 40.93 303 *e*P **P 19 00 53.4 +1.6**
NKC AMS AMS 19 19 20.0
comp=Z,200nm,16.4s
GUNZ Gunzen 40.97 303 *e*P **P 19 00 53.5 +1.3**
comp=Z,10.0nm,1.1s
WERD Werda 40.97 303 *e*P **P 19 00 53.4 +1.3**
comp=Z,5.0nm,0.8s
PLN Plauen 41.06 303 *e*P **P 19 00 54.2 +1.4**
comp=Z,31nm,1.0s
NEUB Nenburg 41.16 304 *e*P **P 19 00 54.8 +1.2**
comp=Z,12nm,0.8s
MANZ Manzenberg 41.19 303 *e*P **P 19 00 55.4 +1.5**
comp=Z,3.0nm,0.4s
RJOB Jochberg 41.25 299 *e*P **P 19 00 57.1 +2.6**
comp=Z,8.0nm,1.0s
MOX Moxa 41.37 304 *e*P **P 19 00 56.6 +1.2**
MOX pmax pmax
comp=Z,10.0nm,1.0s
MOX Moxa 41.37 304 *e*P **P 19 00 56.6 +1.2**
comp=Z,10.0nm,1.0s
GRF Grafenberg Arr 41.81 302 *e*P **P 19 01 01.1 +2.1**
GRF pmax pmax
comp=Z,17nm,0.8s
GRF MLR MLR
comp=Z,100nm,19.5s
GRF Grafenberg Arr 41.81 302 *e*P **P 19 01 01.1 +2.1**
comp=Z,17nm,0.8s
GRF *e*L L 19 20 02.7
comp=Z,146nm,19.5s
CLZ Clausthal 41.90 306 *e*P **P 19 01 01.1 +1.3**
CLZ pmax pmax
comp=Z,8.0nm,0.9s
CLZ Clausthal 41.90 306 *e*P **P 19 01 01.1 +1.3**
comp=Z,8.0nm,0.9s
NRDL Niedersach Rie 41.94 307 *e*P **P 19 01 01.6 +1.7**
comp=Z,18nm,1.0s
KLR Kul'dur 42.02 58 *e*P P 19 00 57.0 -3.7
KLR MLR MLR
comp=Z,800nm,11.0s
WTTA Wattenberg 42.13 299⇑*i*P **P 19 01 02.3 +0.4**
WTTA Wattenberg 42.13 299⇑*i*P **P 19 01 02.3 +0.4**
comp=Z,16nm,1.0s
WTTA Wattenberg 42.13 299⇑*i*P **P 19 01 02.3 +0.4**
UBBA Unterbreizbach 42.34 304 *e*P **P 19 01 04.0 +0.9**
comp=Z,7.0nm,1.2s
MOTA Moosalm 42.46 299⇑*i*P **P 19 01 04.6 +0.1**
MOTA Moosalm 42.46 299⇑*i*P **P 19 01 04.6 +0.1**
comp=Z,9.0nm,0.9s
MOTA Moosalm 42.46 299⇑*i*P **P 19 01 04.6 +0.1**
FETA Feichten 42.79 299⇓*i*P **P 19 01 07.9 +0.7**
comp=Z,9.2nm,1.1s
FETA Feichten 42.79 299⇓*i*P **P 19 01 07.9 +0.7**
comp=Z,9.2nm,1.1s
KSAR Wonju Array Be 43.10 76 P **P 19 01 09.3 -0.2**
KSAR PcP **PcP 19 02 58.8 -0.4**
KSRS Korea Array 43.12 76 P **P 19 01 09.3 -0.4**
comp=Z,4.1nm,0.9s,baz=286,slow=7.2,SNR=12
KSRS PcP **PcP 19 02 58.8 -0.4**
comp=Z,1.2nm,0.8s,baz=307,slow=2.8,SNR=4.9
KSRS LR LR 19 19 44.1
comp=Z,54nm,18.5s,baz=290,slow=37
DAVA Damuels 43.27 299⇑*i*P **P 19 01 11.6 +0.5**
comp=Z,22nm,0.9s,SNR=8.8
DAVA Damuels 43.27 299⇑*i*P **P 19 01 11.6 +0.5**
IBBN Ibbenburen 43.39 307 *e*P **P 19 01 13.2 +1.4**
comp=Z,18nm,0.8s
USRK Ussuriysk Arra 43.57 65 P **P 19 01 13.7 +0.4**
comp=Z,3.6nm,0.6s,baz=320,slow=9.4,SNR=12
USRK LR LR 19 20 41.5
comp=Z,143nm,21.2s,baz=196,slow=38
SPAK Spaichingen-Ko 43.76 301 *e*P **P 19 01 15.9 +1.0**
BUG Bochum–Univer 43.88 306 *e*P **P 19 01 17.1 +1.4**
comp=Z,12nm,0.8s
BFO Black Forest 43.99 301 *e*P **P 19 01 17.7 +1.0**
BFO pmax pmax
comp=Z,7.0nm,0.8s
BFO Black Forest 43.99 301 *e*P **P 19 01 17.7 +1.0**
comp=Z,7.0nm,0.8s
LANF Langenberg 44.15 302 *e*P **P 19 01 19.2 +1.2**
LANF Langenberg 44.15 302 *e*P **P 19 01 19.2 +1.2**
LANF Langenberg 44.15 302 *e*P **P 19 01 19.2 +1.2**
FELD Feldberg im Sc 44.33 301 *e*P **P 19 01 20.1 +0.5**
RUP Ruppelstein 44.43 303 *e*P **P 19 01 21.6 +1.3**
RUP Ruppelstein 44.43 303 *e*P **P 19 01 21.6 +1.3**
CDF Champ du Feu 44.65 301 *e*P **P 19 01 22.6 +0.6**
comp=Z,26nm,1.0s

CDF Champ du Feu 44.65 301 *e*P **P 19 01 22.6 +0.6**
CDF pmax pmax
comp=Z,26nm,1.0s
CDF Champ du Feu 44.65 301 *e*P **P 19 01 22.6 +0.6**
comp=Z,26nm,1.0s
BBS Basel-Blauen 44.77 300 *e*P **P 19 01 22.9 -0.1**
BBS Basel-Blauen 44.77 300 *e*P **P 19 01 22.9 -0.1**
MEM Membach 44.85 305 P **P 19 01 23.8 +0.3**
comp=Z,8.8nm,1.2s
MOF Molkenrain 44.90 301 *e*P **P 19 01 24.6 +0.6**
MOF Molkenrain 44.90 301 *e*P **P 19 01 24.6 +0.6**
MOF Molkenrain 44.90 301 *e*P **P 19 01 24.6 +0.6**
WLF Walferdange 45.01 303 P **P 19 01 26.7 +1.9**
comp=Z,14nm,1.2s
WLF Walferdange 45.01 303 *e*P **P 19 01 24.8 0.0**
WLF pmax pmax
comp=Z,16nm,1.0s
WLF Walferdange 45.01 303 *e*P **P 19 01 26.5 +1.7**
comp=Z,8.0nm,0.8s
WLF Walferdange 45.01 303 *e*P **P 19 01 24.8 0.0**
comp=Z,16nm,1.0s
HINF Hinteralfeld 45.09 301 *e*P **P 19 01 26.0 +0.5**
comp=Z,13nm,0.9s
HINF Hinteralfeld 45.09 301 *e*P **P 19 01 26.0 +0.5**
HINF pmax pmax
comp=Z,13nm,0.9s
HINF Hinteralfeld 45.09 301 *e*P **P 19 01 26.0 +0.5**
comp=Z,13nm,0.9s
BCLA Clavier 45.34 305 P **P 19 01 28.2 +0.8**
HAU Haudompre 45.36 301 *e*P **P 19 01 28.2 +0.6**
comp=Z,32nm,0.9s
HAU *e*R
comp=Z,108nm,21.2s
HAU Haudompre 45.36 301 *e*P **P 19 01 28.2 +0.6**
HAU pmax pmax
comp=Z,32nm,0.9s
HAU Haudompre 45.36 301 *e*P **P 19 01 28.2 +0.6**
comp=Z,32nm,0.9s
THEF They Montfort 45.52 302 *e*P **P 19 01 29.8 +0.9**
THEF They Montfort 45.52 302 *e*P **P 19 01 29.8 +0.9**
THEF They Montfort 45.52 302 *e*P **P 19 01 29.8 +0.9**
PAGF Fort de Pagny 45.59 302 *e*P **P 19 01 30.6 +1.2**
comp=Z,7.3nm,1.1s
PAGF Fort de Pagny 45.59 302 *e*P **P 19 01 30.6 +1.2**
comp=Z,7.3nm,1.1s
GIVF Givet 45.72 304 *e*P **P 19 01 31.6 +1.2**
comp=Z,18nm,0.8s
GIVF Givet 45.72 304 *e*P **P 19 01 31.6 +1.2**
GIVF pmax pmax
comp=Z,18nm,0.8s
GIVF Givet 45.72 304 *e*P **P 19 01 31.6 +1.2**
comp=Z,18nm,0.8s
DOU Dourbes 45.86 304 P **P 19 01 33.1 +1.6**
PSI Prapat 45.88 140 P **P 19 01 34.0 +1.9**
PSI Prapat 45.88 140 P **P 19 01 34.0 +1.9**
comp=Z,2.6nm,0.3s,baz=213,slow=8.7,SNR=4.0
PSI LR LR 19 21 27.8
comp=Z,187nm,20.2s,baz=121,slow=37
LPG La Plagne 45.88 298 *e*P **P 19 01 33.0 +0.9**
comp=Z,15nm,0.9s
LPG La Plagne 45.88 298 *e*P **P 19 01 33.0 +0.9**
LPG pmax pmax
comp=Z,15nm,0.9s
LPG La Plagne 45.88 298 *e*P **P 19 01 33.0 +0.9**
comp=Z,15nm,0.9s
LPL La Plagne 45.89 298 *e*P **P 19 01 32.9 +0.8**
comp=Z,10nm,0.7s
LPL La Plagne 45.89 298 *e*P **P 19 01 32.9 +0.8**
LPL pmax pmax
comp=Z,11nm,0.6s
LPL La Plagne 45.89 298 *e*P **P 19 01 32.9 +0.8**
comp=Z,10nm,0.6s
RSL Roselend 45.90 298 *e*P **P 19 01 33.9 +1.8**
RSL Roselend 45.90 298 *e*P **P 19 01 33.9 +1.8**
RSL Roselend 45.90 298 *e*P **P 19 01 33.9 +1.8**
SNF Seneffe 45.94 305 P **P 19 01 32.9 +0.8**
CABF La Chapelle 45.96 299 *e*P **P 19 01 32.6 +0.2**
CABF La Chapelle 45.96 299 *e*P **P 19 01 32.6 +0.2**
CABF La Chapelle 45.96 299 *e*P **P 19 01 32.6 +0.2**
SBF Sospel 45.98 295 *e*P **P 19 01 33.4 +0.8**
comp=Z,177nm,1.4s
SBF Sospel 45.98 295 *e*P **P 19 01 33.4 +0.8**
SBF pmax pmax
comp=Z,177nm,1.4s
SBF Sospel 45.98 295 *e*P **P 19 01 33.4 +0.8**
comp=Z,177nm,1.4s
MEZF Maizieres J'vi 46.04 302 *e*P **P 19 01 34.1 +1.2**
comp=Z,81nm,1.3s
MEZF Maizieres J'vi 46.04 302 *e*P **P 19 01 34.1 +1.2**
comp=Z,81nm,1.3s
BNI Bardonecchia 46.08 297 *e*P **P 19 01 33.9 +0.4**
BNI pmax pmax
comp=Z,26nm,1.2s
BNI Bardonecchia 46.08 297 *e*P **P 19 01 33.9 +0.4**
comp=Z,26nm,1.2s
BAIF Baives 46.11 304 *e*P **P 19 01 34.8 +1.3**
comp=Z,70nm,1.2s
BAIF Baives 46.11 304 *e*P **P 19 01 34.8 +1.3**
BAIF pmax pmax
comp=Z,70nm,1.2s
BAIF Baives 46.11 304 *e*P **P 19 01 34.8 +1.3**
comp=Z,70nm,1.2s
MBDF Montbardon 46.13 297 *e*P **P 19 01 34.0 +0.1**
comp=Z,37nm,0.9s
MBDF Montbardon 46.13 297 *e*P **P 19 01 34.0 +0.1**
MBDF pmax pmax
comp=Z,37nm,0.9s
MBDF Montbardon 46.13 297 *e*P **P 19 01 34.0 +0.1**
comp=Z,37nm,0.9s
SFTF Sexfontaines 46.14 302 *e*P **P 19 01 34.4 +0.7**
comp=Z,48nm,1.1s
SFTF Sexfontaines 46.14 302 *e*P **P 19 01 34.4 +0.7**
comp=Z,48nm,1.0s
FRF La Foret Royal 46.62 295 *e*P **P 19 01 38.0 +0.4**
comp=Z,76nm,1.2s
FRF La Foret Royal 46.62 295 *e*P **P 19 01 38.0 +0.4**
FRF pmax pmax
comp=Z,76nm,1.2s
FRF La Foret Royal 46.62 295 *e*P **P 19 01 38.0 +0.4**
comp=Z,76nm,1.2s
ORIF Oris-en-Rattie 46.66 297 *e*P **P 19 01 38.4 +0.4**
comp=Z,48nm,1.4s
ORIF *e*R
comp=Z,143nm,18.2s
ORIF Oris-en-Rattie 46.66 297 *e*P **P 19 01 38.4 +0.4**
ORIF pmax pmax
comp=Z,48nm,1.4s
ORIF Oris-en-Rattie 46.66 297 *e*P **P 19 01 38.4 +0.4**
comp=Z,48nm,1.4s
LMR La Mourre 46.80 295 *e*P **P 19 01 39.6 +0.7**
comp=Z,31nm,1.1s
LMR La Mourre 46.80 295 *e*P **P 19 01 39.6 +0.7**
LMR pmax pmax
comp=Z,31nm,1.1s
LMR La Mourre 46.80 295 *e*P **P 19 01 39.6 +0.7**
comp=Z,31nm,1.1s
LOR Lormes 47.19 301 *e*P **P 19 01 41.9 -0.1**
comp=Z,9.7nm,0.9s
LOR *e*R
comp=Z,163nm,22.2s
LOR Lormes 47.19 301 *e*P **P 19 01 41.9 -0.1**
comp=Z,9.7nm,0.9s
SMRF Simiane la Rot 47.19 296 *e*P **P 19 01 42.6 +0.5**
comp=Z,58nm,1.2s
SMRF Simiane la Rot 47.19 296 *e*P **P 19 01 42.6 +0.5**
comp=Z,58nm,1.2s
JNU Nakatsue 47.20 80 P **P 19 01 41.5 -0.8**
JNU Nakatsue 47.20 80 P **P 19 01 41.5 -0.8**
comp=Z,5.5nm,0.9s,baz=9.7,slow=7.5,SNR=3.9
SMF Signal de Mont 47.41 300 *e*P **P 19 01 43.9 +0.2**
comp=Z,13nm,0.7s
SMF Signal de Mont 47.41 300 *e*P **P 19 01 43.9 +0.2**
SMF pmax pmax
comp=Z,13nm,0.7s
SMF Signal de Mont 47.41 300 *e*P **P 19 01 43.9 +0.2**
comp=Z,13nm,0.7s
VIVF Saint-Julien-l 47.48 298 *e*P **P 19 01 45.1 +0.8**
comp=Z,40nm,1.2s
VIVF Saint-Julien-l 47.48 298 *e*P **P 19 01 45.1 +0.8**
VIVF pmax pmax
comp=Z,40nm,1.2s
VIVF Saint-Julien-l 47.48 298 *e*P **P 19 01 45.1 +0.8**
comp=Z,40nm,1.2s
SSF Saint Saulge 47.48 301 *e*P **P 19 01 44.4 +0.1**
comp=Z,9.8nm,0.8s
SSF Saint Saulge 47.48 301 *e*P **P 19 01 44.4 +0.1**

SSF pmax pmax
comp=Z,10.0nm,0.8s
SSF Saint Saulge 47.48 301 *eP* **P 19 01 44.4 +0.1**
comp=Z,9.8nm,0.8s
AVF Avril sur Loir 47.67 300 *eP* **P 19 01 46.1 +0.4**
comp=Z,42nm,0.9s
AVF Avril sur Loir 47.67 300 *eP* **P 19 01 46.1 +0.4**
AVF pmax pmax
comp=Z,42nm,0.9s
AVF Avril sur Loir 47.67 300 *eP* **P 19 01 46.1 +0.4**
comp=Z,42nm,0.9s
KEST Kesra 47.89 284 *eP* **P 19 01 49.0 +1.3**
KEST Kesra 47.89 284 P **P 19 01 48.1 +0.4**
comp=Z,3.2nm,1.0s,baz=347,slow=7.6,SNR=6.6
HYF Humbligny 47.97 301 *eP* **P 19 01 48.8 +0.7**
HYF Humbligny 47.97 301 *eP* **P 19 01 48.8 +0.7**
AGO Saint Agoulin 48.07 300 *eP* **P 19 01 50.5 +1.6**
AGO Saint Agoulin 48.07 300 *eP* **P 19 01 50.5 +1.6**
BGF Bois d'Agland 48.08 300 *eP* **P 19 01 49.2 +0.3**
comp=Z,29nm,1.0s
BGF Bois d'Agland 48.08 300 *eP* **P 19 01 49.2 +0.3**
BGF pmax pmax
comp=Z,29nm,1.0s
BGF Bois d'Agland 48.08 300 *eP* **P 19 01 49.2 +0.3**
comp=Z,29nm,1.0s
LBL Lubilhac 48.29 299 *eP* **P 19 01 52.0 +1.4**
LBL Lubilhac 48.29 299 *eP* **P 19 01 52.0 +1.4**
LBL Lubilhac 48.29 299 *eP* **P 19 01 52.0 +1.4**
LASF Ste Croix 48.31 297 *eP* **P 19 01 51.7 +1.0**
comp=Z,37nm,1.0s
LASF Ste Croix 48.31 297 *eP* **P 19 01 51.7 +1.0**
comp=Z,37nm,1.0s
TCF Toulx Ste Croi 48.59 300 *eP* **P 19 01 53.6 +0.7**
comp=Z,35nm,1.1s
TCF Toulx Ste Croi 48.59 300 *eP* **P 19 01 53.6 +0.7**
TCF pmax pmax
comp=Z,35nm,1.1s
TCF Toulx Ste Croi 48.59 300 *eP* **P 19 01 53.6 +0.7**
comp=Z,35nm,1.1s
CAF Calviac 49.18 299 *eP* **P 19 01 58.5 +1.1**
comp=Z,22nm,1.0s
CAF Calviac 49.18 299 *eP* **P 19 01 58.5 +1.1**
CAF pmax pmax
comp=Z,22nm,1.0s
CAF Calviac 49.18 299 *eP* **P 19 01 58.5 +1.1**
comp=Z,22nm,1.0s
LDF La Druitiere 49.26 304 *eP* **P 19 01 58.3 +0.4**
comp=Z,62nm,1.0s
LDF La Druitiere 49.26 304 *eP* **P 19 01 58.3 +0.4**
LDF pmax pmax
comp=Z,62nm,1.0s
LDF La Druitiere 49.26 304 *eP* **P 19 01 58.3 +0.4**
comp=Z,62nm,1.0s
RJF Les Rejaudoux 49.40 299 *eP* **P 19 02 00.2 +1.1**
comp=Z,24nm,0.8s
RJF *eR*
comp=Z,82nm,22.5s
RJF Les Rejaudoux 49.40 299 *eP* **P 19 02 00.2 +1.1**
RJF pmax pmax
comp=Z,24nm,0.8s
RJF Les Rejaudoux 49.40 299 *eP* **P 19 02 00.2 +1.1**
comp=Z,24nm,0.8s
FLN La Foliniere 49.43 304 *eP* **P 19 01 59.3 +0.1**
comp=Z,26nm,0.9s
FLN *eR*
comp=Z,153nm,21.0s
FLN La Foliniere 49.43 304 *eP* **P 19 01 59.3 +0.1**
FLN pmax pmax
comp=Z,27nm,0.9s
FLN La Foliniere 49.43 304 *eP* **P 19 01 59.3 +0.1**
comp=Z,26nm,0.9s
MTLF Montolieu 49.69 297 *eP* **P 19 02 02.2 +0.9**
comp=Z,41nm,1.2s
MTLF Montolieu 49.69 297 *eP* **P 19 02 02.2 +0.9**
MTLF pmax pmax
comp=Z,41nm,1.2s
MTLF Montolieu 49.69 297 *eP* **P 19 02 02.2 +0.9**
comp=Z,41nm,1.2s
GRR Gorron 49.79 304 *eP* **P 19 02 02.1 +0.1**
comp=Z,74nm,1.2s
GRR Gorron 49.79 304 *eP* **P 19 02 02.1 +0.1**
GRR pmax pmax
comp=Z,74nm,1.2s
GRR Gorron 49.79 304 *eP* **P 19 02 02.1 +0.1**
comp=Z,74nm,1.2s
DAG Danmarks Havn 49.92 342 *i* P **P 19 02 03.9 +1.3**
DAG pmax pmax
comp=Z,20nm,1.0s
DAG Danmarks Havn 49.92 342 *i* P **P 19 02 03.9 +1.3**
comp=Z,20nm,1.0s
MFF Saint Martin d 49.99 301 *eP* **P 19 02 03.6 +0.1**
comp=Z,32nm,1.0s
MFF Saint Martin d 49.99 301 *eP* **P 19 02 03.6 +0.1**
MFF pmax pmax
comp=Z,32nm,1.0s
MFF Saint Martin d 49.99 301 *eP* **P 19 02 03.6 +0.1**
comp=Z,32nm,1.0s
LFF La Frestale 50.05 299 *eP* **P 19 02 05.0 +1.0**
comp=Z,46nm,0.9s
LFF La Frestale 50.05 299 *eP* **P 19 02 05.0 +1.0**
LFF pmax pmax
comp=Z,46nm,0.9s
LFF La Frestale 50.05 299 *eP* **P 19 02 05.0 +1.0**
comp=Z,46nm,0.9s
ASAJ Asahikawa 50.71 62 P **P 19 02 08.3 -0.7**
ASAJ Asahikawa 50.71 62 P **P 19 02 08.3 -0.7**
comp=Z,15nm,1.0s,baz=279,slow=17,SNR=3.1
SGMF Saint Gilles 50.90 304 *eP* **P 19 02 10.8 +0.5**
comp=Z,76nm,1.2s
SGMF Saint Gilles 50.90 304 *eP* **P 19 02 10.8 +0.5**
SGMF pmax pmax
comp=Z,76nm,1.2s
SGMF Saint Gilles 50.90 304 *eP* **P 19 02 10.8 +0.5**
comp=Z,76nm,1.2s
MAJO Matsushiro 50.94 72 *eP* **P 19 02 10.1 -0.7**
MAJO pmax pmax
comp=Z,16nm,1.0s
MAJO Matsushiro 50.94 72 *eP* **P 19 02 10.1 -0.7**
comp=Z,16nm,1.0s
MAT Matsushiro 50.94 72 P **P 19 02 10.0 -0.8**
MJAR Matsushiro Arr 50.94 72 P **P 19 02 10.6 -0.3**
MJAR Matsushiro Arr 50.94 72 P **P 19 02 10.6 -0.3**
comp=Z,10nm,0.9s,baz=289,slow=9.7,SNR=34
EPF Esparros 51.07 297 *eP* **P 19 02 11.5 -0.3**
comp=Z,22nm,1.1s
EPF Esparros 51.07 297 *eP* **P 19 02 11.5 -0.3**
EPF pmax pmax
comp=Z,23nm,1.1s
EPF Esparros 51.07 297 *eP* **P 19 02 11.5 -0.3**
comp=Z,22nm,1.1s
ROSF Rostrenen 51.31 304 *eP* **P 19 02 13.7 +0.3**
comp=Z,51nm,1.1s
ROSF Rostrenen 51.31 304 *eP* **P 19 02 13.7 +0.3**
ROSF pmax pmax
comp=Z,51nm,1.1s
ROSF Rostrenen 51.31 304 *eP* **P 19 02 13.7 +0.3**
comp=Z,51nm,1.1s
QUIF Quistinic 51.40 304 *eP* **P 19 02 14.3 +0.2**
comp=Z,64nm,1.1s
QUIF Quistinic 51.40 304 *eP* **P 19 02 14.3 +0.2**
QUIF pmax pmax
comp=Z,64nm,1.1s
QUIF Quistinic 51.40 304 *eP* **P 19 02 14.3 +0.2**
comp=Z,64nm,1.1s
ETSF Etsaut 51.73 297 *eP* **P 19 02 17.5 +0.8**
comp=Z,26nm,1.0s
ETSF Etsaut 51.73 297 *eP* **P 19 02 17.5 +0.8**
ETSF pmax pmax
comp=Z,26nm,1.0s
ETSF Etsaut 51.73 297 *eP* **P 19 02 17.5 +0.8**
comp=Z,26nm,1.0s
SJPF Ste Jean 52.08 298 *eP* **P 19 02 20.1 +0.8**
comp=Z,34nm,1.2s
SJPF Ste Jean 52.08 298 *eP* **P 19 02 20.1 +0.8**
SJPF pmax pmax
comp=Z,34nm,1.2s
SJPF Ste Jean 52.08 298 *eP* **P 19 02 20.1 +0.8**
comp=Z,34nm,1.2s
BILL Bilibino 53.89 28⇓ *eP* **P 19 02 33.4 +1.1**
BILL pmax pmax
comp=Z,3.0nm,1.2s
BILL MLR MLR
comp=Z,200nm,16.0s
ESDC Sonseca Array 55.46 295 P **P 19 02 44.3 +0.2**
ESDC Sonseca Array 55.46 295 P **P 19 02 44.3 +0.2**
comp=Z,4.9nm,0.8s,baz=58,slow=7.4,SNR=23
SUMG Summit 56.34 340 *eP* **P 19 02 51.6 +1.3**
SUMG pmax pmax
comp=Z,23nm,0.8s
SUMG Summit 56.34 340 *eP* **P 19 02 51.6 +1.3**
comp=Z,23nm,0.8s
SUMG Summit 56.34 340 *i* P **P 19 02 52.6 +2.3**
comp=Z,22nm,0.8s
TAM Tamanrasset 57.48 273 *eP* **P 19 02 58.5 -0.3**
TAM pmax pmax
comp=Z,2.0nm,0.8s
TAM Tamanrasset 57.48 273 *eP* **P 19 02 58.5 -0.3**
comp=Z,2.0nm,0.8s
PMRV Marv??o 57.90 296 *eP* **P 19 03 02.1 +0.7**
DAV Davao City (W) 58.91 110 LR LR 19 33 35.2
comp=Z,98nm,19.0s,baz=274,slow=41
PBEJ Beja 58.92 295 *eP* **P 19 03 09.8 +1.2**
comp=Z,24nm,1.7s
PVAQ Vaqueiros 59.14 294 *eP* **P 19 03 10.7 +0.6**
comp=Z,34nm,1.6s
SFJD Kangerlussuaq 63.11 338 *i* P **P 19 03 37.2 +0.8**
comp=Z,6.3nm,0.9s
KAPI Kappang 63.97 124 LR LR 19 32 06.9
comp=Z,85nm,21.3s,baz=275,slow=37
TOA0 Torodi Ar. Sit 66.25 267 *eP* **P 19 03 56.1 -1.6**
TORD Torodi Ar. Bea 66.25 267 P **P 19 03 56.7 -1.0**
TORD Torodi Ar. Bea 66.25 267 P **P 19 03 56.7 -1.0**
comp=Z,5.1nm,0.9s,baz=47,slow=4.8,SNR=30
GUMO Guam 68.78 91 LR LR 19 34 15.7
comp=Z,37nm,18.9s,baz=108,slow=36
LSZ Lusaka 69.27 225 P **P 19 04 16.1 -0.6**
LSZ Lusaka 69.27 225 P **P 19 04 16.1 -0.6**
comp=Z,4.3nm,0.8s,baz=51,slow=12,SNR=8.7
ILAR Eielson Array 69.77 16 P **P 19 04 19.3 +0.2**
ILAR Eielson Array 69.77 16 P **P 19 04 19.3 +0.2**
comp=Z,2.0nm,0.9s,baz=323,slow=4.7,SNR=20
DBIC Dimbokro 75.33 266 P **P 19 04 52.5 -0.5**
DBIC Dimbokro 75.33 266 P **P 19 04 52.5 -0.5**
comp=Z,5.7nm,0.8s,baz=43,slow=6.4,SNR=11
LIC Lamto 75.75 266 *eP* **P 19 04 54.9 -0.5**
comp=Z,17nm,0.8s
LIC Lamto 75.75 266 *eP* **P 19 04 54.9 -0.5**
comp=Z,17nm,0.8s
YKW3 Yellowknife Ar 76.05 3 *eP* **P 19 04 56.8 +0.6**
comp=Z,0.2nm,1.0s
YKA Yellowknife Ar 76.11 3 P **P 19 04 57.2 +0.5**
YKA Yellowknife Ar 76.11 3 P **P 19 04 57.2 +0.5**
comp=Z,8.5nm,0.8s,baz=351,slow=6.0,SNR=130
SCHQ Schefferville 77.51 337 P **P 19 05 04.9 +0.2**
SCHQ Schefferville 77.51 337 P **P 19 05 04.9 +0.2**
comp=Z,2.6nm,0.9s,baz=54,slow=14,SNR=2.6
FITZ Fitzy Crossi 77.74 128 P **P 19 05 05.7 -0.6**
FITZ Fitzroy Crossi 77.74 128 P **P 19 05 05.7 -0.6**
comp=Z,3.3nm,1.0s,baz=351,slow=11,SNR=2.7
TSUM Tsumeb 78.36 231 *eP* **P 19 05 09.8 -0.2**
comp=Z,8.8nm,1.0s
LBTB Lobatse 78.71 222 *eP* **P 19 05 11.5 -0.2**
comp=Z,17nm,1.3s
LBTB Lobatse 78.71 222 P **P 19 05 11.6 -0.2**
comp=Z,3.0nm,0.5s,baz=38,slow=4.6,SNR=6.4
BOSA Boshof 81.88 220 P **P 19 05 27.9 -0.8**
BOSA Boshof 81.88 220 P **P 19 05 27.9 -0.8**
comp=Z,5.2nm,0.9s,baz=78,slow=2.2,SNR=5.1
FFC Flin Flon 83.85 356 *eP* **P 19 05 39.2 +0.5**
FFC pmax pmax
comp=Z,12nm,1.1s
FFC Flin Flon 83.85 356 *eP* **P 19 05 39.2 +0.5**
comp=Z,12nm,1.1s
WRA Warramunga Arr 84.46 123 P **P 19 05 41.3 -0.9**
WRA Warramunga Arr 84.46 123 P **P 19 05 41.3 -0.9**
comp=Z,6.6nm,0.6s,baz=327,slow=4.7,SNR=59
WRAB Tennant Creek 84.46 123 *eP* **P 19 05 41.7 -0.5**
WRAB pmax pmax
comp=Z,19nm,1.0s
WRAB Tennant Creek 84.46 123 *eP* **P 19 05 41.7 -0.5**
comp=Z,19nm,1.0s
PMG Port Moresby 85.72 106 P **P 19 05 48.4 -0.2**
PMG Port Moresby 85.72 106 P **P 19 05 48.4 -0.2**
comp=Z,5.2nm,0.7s,baz=322,slow=6.6,SNR=3.5
AS31 Alice Springs 86.95 125 *eP* **P 19 05 53.5 -1.0**
ASAR Alice Springs 86.95 125 P **P 19 05 53.9 -0.6**
ASAR Alice Springs 86.95 125 P **P 19 05 53.9 -0.6**
comp=Z,9.4nm,0.9s,baz=325,slow=5.3,SNR=74
A14A Double T Ranch 89.68 3⇓P **P 19 06 07.8 +0.5**
baz=89
A15A Johnson Ranch, 89.70 3⇓P **P 19 06 07.7 +0.3**
baz=89
AGMN Agassiz Nation 89.75 352 *eP* **P 19 06 07.7 +0.2**
comp=Z,4.8nm,1.0s
B14A Marquette Ranc 90.30 3⇓P **P 19 06 10.4 +0.2**
baz=90
B18A Beardsley Farm 90.35 1⇑P **P 19 06 10.6 +0.2**
baz=90
B15A Bradely Ranch, 90.37 3⇓P **P 19 06 11.3 +0.7**
baz=90
C13A Hot Springs 90.92 4⇑P **P 19 06 13.8 +0.7**
baz=90
C19A Slack Wire Ran 91.02 0⇓P **P 19 06 13.6 0.0**
baz=91
LON Longmire 91.22 9 *eP* **P 19 06 15.1 +0.6**
LON pmax pmax
comp=Z,2.0nm,0.8s
LON Longmire 91.22 9 *eP* **P 19 06 15.1 +0.6**
comp=Z,2.0nm,0.8s
SLMT Seeley Lake 91.41 3 *eP* **P 19 06 16.2 +0.8**
comp=Z,5.7nm,1.1s
D12A Red Ives Fores 91.50 5⇑P **P 19 06 15.8 0.0**
baz=91
D14A Greenough 91.56 3⇑P **P 19 06 16.3 +0.2**
baz=91
D17A Six Diamond Ra 91.58 1⇓P **P 19 06 17.2 +0.9**
baz=91
CHMT Chamberlain Mo 91.74 3 *eP* **P 19 06 17.4 +0.3**
comp=Z,6.1nm,1.6s
CTA Charters Tower 92.39 115 LR LR 19 46 20.4
comp=Z,62nm,21.0s,baz=233,slow=35
F12A Elk City 92.79 5⇓P **P 19 06 21.6 -0.3**
baz=92
F13A Darby 92.81 4⇑P **P 19 06 22.4 +0.4**
baz=92
F17A Fitzpatrick Pl 92.83 1⇑P **P 19 06 23.3 +1.2**
baz=92
F15A Butte 92.84 3⇓P **P 19 06 22.9 +0.7**
baz=92
F18A Big Timber 92.84 1⇑P **P 19 06 23.2 +1.1**
baz=92
BOZ Bozeman (W) 93.06 2⇑P **P 19 06 23.8 +0.7**
baz=93
G13A Cobalt 93.51 4⇓P **P 19 06 25.4 +0.2**
baz=93
H12A Diamond D Ranc 94.02 4⇓P **P 19 06 27.4 -0.2**
baz=94
H14A Leadore 94.03 3⇓P **P 19 06 28.3 +0.6**
baz=94
H13A Challis 94.04 4⇑P **P 19 06 27.6 -0.1**
baz=94
ECSD EROS Data Cent 94.34 351 *eP* **P 19 06 29.7 +0.9**
comp=Z,3.8nm,1.1s
I14A Mackay 94.71 4⇓P **P 19 06 31.7 +0.9**
baz=94
I12A Atlanta 94.76 5⇓P **P 19 06 31.6 +0.6**
baz=94
I16A Newdale 94.84 2⇑P **P 19 06 31.7 +0.3**
baz=94
I21A Big Trails, Te 94.93 359⇑P **P 19 06 32.0 +0.2**
baz=95
J19A Crowheart 95.49 0⇓P **P 19 06 34.7 +0.3**
baz=95
PDAR Pinedale Array 95.98 1 P **P 19 06 37.3 +0.6**
PDAR Pinedale Array 95.98 1 P **P 19 06 37.3 +0.6**
comp=Z,1.0nm,0.8s,baz=33,slow=3.3,SNR=10
PDAR LR LR 19 52 20.1
comp=Z,38nm,21.1s,baz=231,slow=37
VNDA Vanda 130.33 163 PKP **PKPdf 19 12 18.5 +0.3**
VNDA Vanda 130.33 163 PKP **PKPdf 19 12 18.5 +0.3**
comp=Z,0.8nm,0.8s,baz=27,slow=4.5,SNR=3.8
PLCA Paso Flores 151.50 259 PKPbc **PKPbc 19 13 03.2 +0.1**
PLCA Paso Flores 151.50 259 PKPbc **PKPbc 19 13 03.2 +0.1**
comp=Z,7.8nm,1.1s,baz=115,slow=2.2,SNR=6.4

ROM 29 18:53:47.2±0.2, 42.24N×13.53E, h6km±2km, Md1.9/3, Error ellipse: s-maj=1.6km s-min=0.9km az=44.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.05**	**58**	Pg	Pg	18 53 49.0	+0.3
FAGN				Sg	Sg	18 53 50.0	+0.2
PTQR	**Pietraquaria**	**0.24**	**204**	Pg	Pg	18 53 52.6	+0.6
PTQR				Sg	Sg	18 53 56.9	+1.6

339nm,0.5s
3.0nm,0.2s

IDC 29 19:01:31.1±0.8, 2.94N×65.22E, h0km, mb3.8/13, mb1 4.0/13, mb1mx3.8/28, mbtmp3.8/13, MS3.5/1, Ms1 3.5/1, ms1mx2.6/35, Error ellipse: s-maj=22.7km s-min=18.7km az=17.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**27.79**	**219**	LR	LR	19 15 58.6	
	comp=Z,98nm,18.5s,baz=344,slow=31						
CMAR	**Chiang Mai Arr**	**36.44**	**63**	P	P	19 08 39.5	+1.4
	1.9nm,1.1s,baz=247,slow=9.3,SNR=9.9						
GNI	**Garni**	**41.42**	**336**	P	P	19 09 21.3	+1.6
	1.4nm,0.4s,baz=323,slow=15,SNR=4.6						
MKAR	**Makanchi Array**	**46.14**	**16**	P	P	19 09 56.9	-0.4
	0.5nm,0.9s,baz=204,slow=6.7,SNR=2.7						
BRTR	**Keskin Array B**	**46.48**	**326**	P	P	19 10 00.2	-0.1
	1.2nm,0.8s,baz=138,slow=10.0,SNR=7.6						
AKTO	**Aktyubinsk**	**47.72**	**354**	P	P	19 10 09.5	-0.1
	1.4nm,0.8s,baz=181,slow=7.3,SNR=3.9						
BOSA	**Boshof**	**49.55**	**228**	P	P	19 10 25.0	+0.7
	2.0nm,0.9s,baz=86,slow=16,SNR=4.2						
ZALV	**Zalesovo Beam**	**53.33**	**14**	P	P	19 10 50.4	-1.6
	1.4nm,0.7s,baz=200,slow=8.5,SNR=5.7						
SONM	**Songino Array**	**57.04**	**32**	P	P	19 11 19.3	+0.2
	0.2nm,0.4s,baz=249,slow=7.6,SNR=3.9						
TORD	**Torodi Ar. Bea**	**63.56**	**283**	P	P	19 12 04.1	-0.1
	0.4nm,0.7s,baz=107,slow=4.8,SNR=2.6						
WRA	**Warramunga Arr**	**71.48**	**112**	P	P	19 12 54.3	0.0
	1.5nm,0.8s,baz=286,slow=5.4,SNR=7.1						
ASAR	**Alice Springs**	**71.79**	**116**	P	P	19 12 55.5	-0.5
	1.5nm,0.9s,baz=266,slow=5.1,SNR=9.3						
ESDC	**Sonseca Array**	**72.16**	**311**	P	P	19 12 56.9	-1.1
	0.1nm,0.2s,baz=81,slow=5.4,SNR=6.2						
MJAR	**Matsushiro Arr**	**74.61**	**53**	P	P	19 13 12.2	-0.2
	0.3nm,0.5s,baz=276,slow=4.8,SNR=2.9						
TXAR	**Lajitas Array**	**146.19**	**342**	PKPbc	PKPbc	19 21 14.2	-0.1
	2.4nm,0.8s,baz=61,slow=2.7,SNR=5.5						

*ISCJB **29** 19:13:39.6±0.2, 53.06N±0.03×167.17W±0.04, h37km, mb4.2/41, MS3.4/12, Error ellipse: s-maj=4.7km s-min=3.4km az=4.6*
*IDC **29** 19:13:41.0±1.9, 53.23N×167.20W, h36km±14km, mb3.9/27, mb1 4.1/29, mb1mx4.1/34, mbtmp3.9/29, ML3.9/2, MS3.5/13, Ms1 3.5/13, ms1mx3.2/46, Error ellipse: s-maj=18.2km s-min=9.6km az=172.0*
*NEIC **29** 19:13:41.6, 53.04N×167.03W, h22km, mb4.4/18, ML4.2(AEIC), After AEIC.*
ISC 29 19:13:41.2±0.5, 53.15N±0.07×167.10W±0.04, h37km, n243, σ1s15/259, mb4.3/41, MS3.5/12, 52C-49D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**0.56**	**299**	P	Pn	19 13 53.4	+0.7
OKFG				S	Sn	19 14 02.7	+2.1
MGOD	**Makushin Gods**	**0.67**	**12**	P	Pn	19 13 54.9	+0.7
OKSO	**Okmok South**	**0.67**	**289**	P	Pn	19 13 54.6	+0.4
OKSO				S	Sn	19 14 04.7	+1.2
MREP	**Makushin Rep't**	**0.70**	**17**	P	Pn	19 13 55.9	+1.2
OKCE	**Okmok Cone E**	**0.70**	**294**	P	Pn	19 13 55.6	+1.0
OKSP	**Okmok Steeple**	**0.73**	**279**	P	Pn	19 13 55.7	+0.8
UNV	**Unalaska Valle**	**0.79**	**27**	P	Pn	19 13 55.8	+0.1
UNV				S	Sn	19 14 07.5	+1.2
MCIR	**Makushin Cirqu**	**0.82**	**9**	P	Pn	19 13 57.6	+1.4
MTBL	**Makushin Table**	**0.86**	**17**	P	Pn	19 13 57.9	+1.1
NIKO	**Nikolski**	**1.07**	**262**	*eP*	Pn	19 13 54.2	-5.4
AKLV	**Akutan Long Va**	**1.23**	**33**	P	Pn	19 14 02.3	+0.5
AKUT	**Akutan**	**1.27**	**38**	P	Pn	19 14 02.6	+0.4
AKUT				S	Sn	19 14 19.1	+1.1
SSLW	**Shishaldin Wes**	**2.40**	**46**	P	Pn	19 14 19.3	+1.4
FALS	**False Pass**	**2.77**	**50**	P	Pn	19 14 25.1	+2.2
DRIA	**Deer Island**	**3.38**	**55**	P	Pn	19 14 32.9	+1.5
DT1	**Dutton Round H**	**3.45**	**53**	P	Pn	19 14 34.3	+2.1
DTNA	**Dutton South F**	**3.49**	**53**	P	Pn	19 14 34.3	+1.5
DOL	**Dolgoi Island**	**3.67**	**55**	P	Pn	19 14 37.2	+1.8
KOWE	**Korovin West**	**4.42**	**263**	P	Pn	19 14 47.4	+1.8
SDPT	**Sand Point**	**4.47**	**58**	P	Pn	19 14 48.1	+1.9
KDAK	**Kodiak Island**	**9.46**	**55**	Pn	Pn	19 15 53.5	-1.1
KDAK				Sn	Sn	19 17 34.4	-5.1
KDAK	**Kodiak Island**	**9.46**	**55**	Pn	Pn	19 15 53.5	-1.1
	1.7nm,0.3s,baz=179,slow=5.1,SNR=12						
KDAK				Sn	Sn	19 17 34.4	-5.1
	baz=0.0,slow=20,SNR=2.3						
RSO	**Redoubt South**	**10.73**	**41**	*eP*	Pn	19 16 16.6	+4.3
	32nm,0.6s						
GAMB	**Gambell**	**10.93**	**349**	*eP*	**Pn**	**19 16 17.5**	**+2.9**
	47nm,0.9s						
FX1	**Attu Island--F**	**11.89**	**277**	Pn	**Pn**	**19 16 31.1**	**+3.1**
FX1	**Attu Island--F**	**11.89**	**277**	Pn	**Pn**	**19 16 31.1**	**+3.1**
	1.7nm,0.3s,baz=60,slow=20,SNR=7.6						
SEW	**Seward**	**11.93**	**47**	*eP*	**Pn**	**19 16 31.6**	**+3.2**
	14nm,0.6s						
TNA	**Tin City**	**12.46**	**358**	*eP*	**Pn**	**19 16 38.4**	**+2.7**
	28nm,1.2s						
SML	**Sawmill**	**13.26**	**42**	*eP*	**Pn**	**19 16 47.7**	**+1.0**
	2.1nm,0.7s						
TRF	**Thorofare Moun**	**13.54**	**34**	*eP*	Pn	19 16 54.5	+3.9
	13nm,1.0s						
DIV	**Divide**	**14.01**	**47**	*eP*	**Pn**	**19 16 56.4**	**-0.5**
	9.5nm,0.4s						
MCK	**McKinley**	**14.18**	**34**	*eP*	**P**	**19 17 04.1**	**-2.0**
	13nm,1.0s						
BMRM	**Bremner River**	**14.47**	**48**	*eP*	**Pn**	**19 17 03.0**	**0.0**
	16nm,0.7s						
PAX	**Paxson**	**15.01**	**41**	*eP*	**Pn**	**19 17 08.1**	**-2.3**
	4.6nm,0.7s						
ILAR	**Eielson Array**	**15.54**	**34**	Pn	**Pn**	**19 17 16.4**	**-0.8**
ILAR	**Eielson Array**	**15.54**	**34**	Pn	**Pn**	**19 17 16.4**	**-0.8**
	0.3nm,0.3s,baz=225,slow=10,SNR=17						
ILAR				LR	LR	19 23 56.4	
	comp=Z,228nm,18.6s,baz=211,slow=40						
DOT	**Dot Lake**	**15.91**	**40**	*eP*	**Pn**	**19 17 23.0**	**+1.1**
	4.8nm,0.6s						
COLD	**Coldfoot**	**16.34**	**24**	*eP*	**P**	**19 17 29.7**	**-0.3**
	11nm,1.0s						
PNL	**Peninsula**	**16.57**	**56**	*eP*	**Pn**	**19 17 30.1**	**-0.3**
	25nm,0.5s						
EGAK	**Eagle**	**17.57**	**38**	*eP*	**P**	**19 17 44.1**	**+0.5**
	10nm,1.0s						
SKAG	**Skagway**	**18.59**	**57**	*eP*	**Pn**	**19 17 57.6**	**+2.3**
	46nm,0.9s						
WRAK	**Wrangell Islan**	**20.17**	**67**	*eP*	**P**	**19 18 13.1**	**+1.0**
	12nm,1.0s						
DIB	**Dawson Inlet,**	**20.64**	**76**	T	T	19 39 35.4	
	SNR=7.0						
PETK	**Petropavlovsk-**	**21.00**	**284**	P	**P**	**19 18 21.4**	**+0.3**
PETK	**Petropavlovsk-**	**21.00**	**284**	P	**P**	**19 18 21.4**	**+0.3**
	4.0nm,0.4s,baz=87,slow=12,SNR=34						
PETK				LR	LR	19 25 22.9	
	comp=Z,72nm,19.2s,baz=75,slow=34						
DLBC	**Dease Lake**	**21.30**	**61**	*eP*	**P**	**19 18 25.7**	**+1.4**
DLBC	**Dease Lake**	**21.30**	**61**	P	**P**	**19 18 26.2**	**+1.9**
	7.5nm,0.6s,baz=269,slow=10,SNR=7.9						
DLBC				LR	LR	19 25 47.8	
	comp=Z,50nm,19.1s,baz=310,slow=34						
INK	**Inuvik**	**21.94**	**33**	P	**P**	**19 18 29.0**	**-2.0**
INK	**Inuvik**	**21.94**	**33**	P	**P**	**19 18 29.0**	**-2.0**
	10.0nm,0.5s,baz=247,slow=9.2,SNR=24						
INK				LR	LR	19 27 59.7	
	comp=Z,166nm,18.6s,baz=252,slow=39						
YKW3	**Yellowknife Ar**	**28.68**	**50**	*eP*	**P**	**19 19 34.4**	**+0.3**
	0.1nm,0.9s						
YKA	**Yellowknife Ar**	**28.69**	**50**	P	**P**	**19 19 34.6**	**+0.5**
YKA				PcP	**PcP**	**19 22 43.4**	**-0.3**
YKA				ScP	**ScP**	**19 26 21.7**	**-0.1**
	0.2nm,0.7s,baz=268,slow=3.6,SNR=4.2						
NEW	**Newport**	**31.49**	**78**⇓	P	**P**	**19 20 00.1**	**+0.9**
	baz=31						
YBH	**Yreka Blue Hor**	**31.62**	**93**	P	**P**	**19 20 02.5**	**+2.1**
YBH	**Yreka Blue Hor**	**31.62**	**93**	P	**P**	**19 20 02.6**	**+2.1**
	0.7nm,0.3s,baz=275,slow=13,SNR=4.7						
YBH				LR	LR	19 29 44.1	
	comp=Z,79nm,19.0s,baz=290,slow=30						

A12A	Yaak River Ran	32.04	76	⇑P		P	19 20 05.8	+1.8
	baz=32							
B13A	Whitefish	33.00	77	⇓P		P	19 20 13.7	+1.2
	baz=33							
C13A	Hot Springs	33.27	78	⇓P		P	19 20 15.7	+0.8
	baz=33							
A14A	Double T Ranch	33.33	75	⇓P		P	19 20 15.8	+0.4
	baz=33,SNR=11							
D13A	Huson	33.63	79	⇓P		P	19 20 18.3	+0.3
	baz=34							
B14A	Marquette Ranc	33.71	76	⇑P		P	19 20 19.1	+0.4
	baz=34,SNR=5.0							
A15A	Johnson Ranch,	33.73	75	⇓P		P	19 20 19.5	+0.7
	baz=34							
F12A	Elk City	33.85	81	⇓P		P	19 20 20.4	+0.5
	baz=34							
MSO	Missoula	34.07	79	⇑P		P	19 20 22.4	+0.5
	baz=34							
B15A	Bradely Ranch,	34.14	76	⇑P		P	19 20 22.9	+0.5
	baz=34							
D14A	Greenough	34.20	78	⇑P		P	19 20 22.9	-0.1
	baz=34,SNR=5.8							
F13A	Darby	34.38	81	⇑P		P	19 20 25.3	+0.7
	baz=34							
C15A	Salmond Ranch,	34.38	76	⇓P		P	19 20 24.9	+0.4
	baz=34,SNR=7.9							
E14A	Clinton	34.55	79	⇓P		P	19 20 26.6	+0.6
	baz=34							
H12A	Diamond D Ranc	34.74	83	⇓P		P	19 20 28.2	+0.5
	baz=35							
D15A	Lincoln	34.80	78	⇑P		P	19 20 28.5	+0.3
	baz=35							
G13A	Cobalt	34.81	82	⇓P		P	19 20 28.6	+0.3
	baz=35							
C16A	Fuhringer Ranc	34.87	76	⇓P		P	19 20 29.6	+0.9
	baz=35							
I12A	Atlanta	34.99	84	⇑P		P	19 20 30.8	+0.9
	baz=35							
E15A	Deer Lodge	35.05	79	⇑P		P	19 20 30.3	0.0
	baz=35							
D16A	Dana Ranch, Ca	35.38	77	⇑P		P	19 20 34.4	+1.3
	baz=35							
I13A	Wildhorse Cree	35.53	83	⇓P		P	19 20 35.7	+1.1
	baz=35							
HLID	Hailey	35.55	84	⇓P		P	19 20 35.6	+0.9
	baz=35							
E16A	East Helena	35.56	78	⇓P		P	19 20 35.5	+0.8
	baz=35							
H14A	Leadore	35.59	82	⇓P		P	19 20 35.5	+0.5
	baz=35							
B18A	Beardsley Farm	35.72	74	⇑P		P	19 20 36.5	+0.5
	baz=36,SNR=7.4							
MCMT	McKenzie Canyo	35.78	81	eP		P	19 20 37.0	+0.3
	0.8nm,0.4s							
J13A	Cove Ranch, Pi	35.79	84	⇓P		P	19 20 37.6	+0.9
	baz=36							
EGMT	Eagleton	35.92	74	eP		P	19 20 37.8	0.0
	20nm,0.9s							
EGMT	Eagleton	35.92	74	⇑P		P	19 20 38.0	+0.3
	baz=36,SNR=14							
A19A	Klindworth Far	36.05	73	⇓P		P	19 20 39.4	+0.6
	baz=36,SNR=5.2							
BOZ	Bozeman (W)	36.06	79	⇓P		P	19 20 39.9	+0.9
	baz=36							
E17A	Martinsdale	36.08	77	⇓P		P	19 20 40.1	+0.9
	baz=36							
D18A	Linhart Farms,	36.32	76	⇑P		P	19 20 42.5	+1.4
	baz=36							
NVAR	Mina Array Bea	36.32	94	P		P	19 20 42.0	+0.6
NVAR	Mina Array Bea	36.32	94	P		P	19 20 42.0	+0.6
	0.7nm,0.6s,baz=296,slow=8.8,SNR=7.1							
C19A	Slack Wire Ran	36.48	74	⇓P		P	19 20 43.5	+1.0
	baz=36,SNR=12							
F17A	Fitzpatrick Pl	36.49	78	⇑P		P	19 20 43.7	+1.1
	baz=36							
D19A	Cripps Ranch,	36.87	75	⇑P		P	19 20 46.6	+0.8
	baz=37							
C20A	Veseth Ranch,	37.09	74	⇓P		P	19 20 48.6	+0.9
	baz=37							
E19A	Rath Farm, Rou	37.30	76	⇓P		P	19 20 50.4	+1.0
	baz=37							
D20A	Manuel Ranch,	37.34	75	⇓P		P	19 20 50.9	+1.1
	baz=37							
RLMT	Red Lodge	37.74	78	⇑P		P	19 20 54.4	+1.1
	baz=38							
H18A	Shoshone NF, C	37.75	79	⇑P		P	19 20 54.8	+1.3
	baz=38							
D21A	La Casta Ranch	38.02	74	⇑P		P	19 20 56.4	+0.9
	baz=38							
G20A	Bridger	38.31	77	⇓P		P	19 20 58.8	+0.8
	baz=38							
B23A	Brockton	38.44	71	⇓P		P	19 20 59.8	+0.8
	baz=38							
D22A	Cohagen	38.44	74	⇓P		P	19 20 59.7	+0.7
	baz=38							
L17A	Cokeville	38.52	83	⇓P		P	19 21 00.7	+0.7
	baz=38							
C23A	Lambert	38.67	72	⇓P		P	19 21 01.6	+0.7
	baz=38,SNR=9.9							
BW06	Boulder Array	38.91	82	⇓P		P	19 21 03.7	+0.4
	baz=39							
PDAR	Pinedale Array	38.91	82	P		P	19 21 03.4	+0.1
PDAR	Pinedale Array	38.91	82	P		P	19 21 03.4	+0.1
	1.3nm,0.8s,baz=302,slow=6.5,SNR=9.7							
E22A	Miles City	38.96	74	⇑P		P	19 21 03.9	+0.5
	baz=39							
D23A	Lindsay	38.99	73	⇓P		P	19 21 04.7	+1.0
	baz=39							
I20A	Worland	39.07	79	⇑P		P	19 21 05.3	+0.8
	baz=39							
F22A	Rosebud	39.14	75	⇑P		P	19 21 05.6	+0.6
	baz=39							
C24A	Savage	39.25	72	⇑P		P	19 21 07.1	+1.3
	baz=39							
D24A	Glendive	39.53	73	⇑P		P	19 21 09.2	+1.0
	baz=39,SNR=9.4							
I21A	Big Trails, Te	39.65	79	⇑P		P	19 21 09.6	+0.3
	baz=40							
F23A	Volborg	39.67	75	⇑P		P	19 21 10.2	+0.9
	baz=40							
H22A	Clearmont	39.75	77	⇑P		P	19 21 10.7	+0.6
	baz=40							
BBRC	Big Bear Solar	39.93	98	⇓P		P	19 21 13.2	+1.4
	baz=40							
SRU	San Rafael	40.57	87	⇑P		P	19 21 18.4	+1.4
	baz=40							
O19A	Miners Draw (B	40.66	84	⇑P		P	19 21 18.8	+1.0
	baz=40							
L21A	Rawlins	40.69	81	⇓P		P	19 21 18.5	+0.4
	baz=40							
MJAR	Matsushiro Arr	41.10	269	P		P	19 21 20.4	-0.8
MJAR	Matsushiro Arr	41.10	269	P		P	19 21 20.4	-0.8
	0.5nm,0.6s,baz=30,slow=7.1,SNR=4.2							
P19A	Cripple Cowboy	41.16	85	⇓P		P	19 21 22.7	+0.7
	baz=41							
U15A	North Rim	41.24	91	⇑P		P	19 21 23.9	+1.2
	baz=41							
M22A	Cedar Creek Ra	41.49	81	⇑P		P	19 21 25.2	+0.5
	baz=41							
S18A	Hurst Farm, Bl	41.80	88	⇓P		P	19 21 27.9	+0.7
	baz=42							
MDND	Maddock	41.82	69	⇑P		P	19 21 27.6	+0.7
	baz=42							
ULM	Lac du Bonnet	42.57	64	P		P	19 21 31.0	-2.0
ULM	Lac du Bonnet	42.57	64	P		P	19 21 31.0	-2.0
	4.0nm,0.8s,baz=319,slow=6.5,SNR=4.2							
S20A	Disappointment	42.69	87	⇑P		P	19 21 34.8	+0.3
	baz=42							
S21A	Coal Bank Pass	43.14	86	⇓P		P	19 21 38.9	+0.7
	baz=43							
AGMN	Agassiz Nation	43.65	66	eP		P	19 21 41.0	-0.7
	4.6nm,0.9s							
T21A	Navajo Lake	43.73	87	⇑P		P	19 21 43.5	+0.6
	baz=44							
U21A	Nageezi	44.03	88	⇓P		P	19 21 45.6	+0.3
	baz=44,SNR=7.5							
Q25A	Bedland, Calha	44.45	82	⇑P		P	19 21 49.1	+0.5
	baz=44							
U22A	Llaves	44.55	87	⇑P		P	19 21 50.4	+1.0
	baz=44							
P26A	Davis Ranch, A	44.58	81	⇑P		P	19 21 50.5	+1.0
	baz=44							
S24A	Houchin Ranch,	44.70	84	⇑P		P	19 21 51.5	+0.7
	baz=44							
X20A	Quemado	44.80	90	⇓P		P	19 21 52.3	+0.9
	baz=45							
V22A	San Miguel Ran	44.83	88	⇓P		P	19 21 52.5	+0.9
	baz=45							
X21A	Alamocita Cree	45.29	90	⇓P		P	19 21 56.2	+0.9
	baz=45,SNR=5.1							
R26A	Arlington	45.33	82	⇓P		P	19 21 56.3	+0.8
	baz=45							
S26A	Kim	45.76	83	⇑P		P	19 21 59.1	+0.2
	baz=46							
U25A	Circle Dot Ran	46.01	85	⇓P		P	19 22 01.7	+0.8
	baz=46							
V25A	Rancho No Teng	46.26	86	⇑P		P	19 22 03.8	+0.9
	baz=46							
Z22A	Elephant Butte	46.61	90	⇑P		P	19 22 06.7	+1.1
	baz=46							
220A	Playas Peak, P	46.61	93	⇑P		P	19 22 07.1	+1.4
	baz=46							
KSRS	Korea Array	46.68	278	P		P	19 22 05.3	-0.6
	1.2nm,0.9s,baz=58,slow=7.4,SNR=3.9							
KSRS				LR		LR	19 39 16.7	
	comp=Z,38nm,19.9s,baz=163,slow=33							
Y23A	Lovelace Mesa,	46.69	89	⇑P		P	19 22 07.2	+0.9
	baz=46							
KSAR	Wonju Array Be	46.71	278	P		P	19 22 05.3	-0.9
V26A	Tequesquite Ra	46.78	85	⇓P		P	19 22 07.9	+1.0
	baz=47							
Y25A	Mesa, Roswell	47.51	88	⇑P		P	19 22 13.4	+0.8
	baz=47							
JNU	Nakatsue	47.84	271	LR		LR	19 40 56.0	
	comp=Z,52nm,18.3s,baz=39,slow=34							
U30A	WK&E Inc. Balk	48.17	82	⇑P		P	19 22 17.7	+0.1
	baz=48							
224A	Cornudas Mount	48.30	90	⇑P		P	19 22 19.4	+0.7
	baz=48							
Z26A	Caprock	48.39	88	⇑P		P	19 22 20.3	+0.8
	baz=48							
126A	Clayton Basin,	48.80	89	⇑P		P	19 22 23.2	+0.6
	baz=49							
Z27A	Tatum	48.82	87	⇑P		P	19 22 23.4	+0.7
	baz=49							
425A	Indio Mountain	49.53	91	⇓P		P	19 22 28.8	+0.6
	baz=49							
SUMG	Summit	49.62	18	eP		P	19 22 27.6	-1.1
	7.5nm,0.8s							
426A	McDonald Obser	50.19	90	⇓P		P	19 22 34.0	+0.6
	baz=50							
329A	Wagon Wheel Ra	50.85	88	⇑P		P	19 22 39.1	+1.0
	baz=51							
428A	Kincaid Ranch,	50.96	89	⇑P		P	19 22 40.0	+1.0
	baz=51							
528A	Cox Ranch, San	51.30	90	⇓P		P	19 22 42.4	+0.8
	baz=51							
TXAR	Lajitas Array	51.37	91	P		P	19 22 41.9	-0.2
TXAR				PcP		PcP	19 23 56.6	+0.3
TXAR				ScP		ScP	19 27 49.9	+0.2
TXAR	Lajitas Array	51.37	91	P		P	19 22 41.9	-0.2
	2.2nm,0.8s,baz=302,slow=5.1,SNR=14							
TXAR				PcP		PcP	19 23 56.6	+0.3
	0.5nm,0.6s,baz=34,slow=0.7,SNR=2.6							
TXAR				ScP		ScP	19 27 49.9	+0.2
	0.4nm,0.9s,baz=332,slow=5.1,SNR=3.4							
529A	Stev Forest Ra	51.67	89	⇓P		P	19 22 44.5	+0.2
	baz=52							
ULN	Ulaanbaatar	51.72	301	eP		P	19 22 43.0	-1.5
	2.8nm,0.8s							
628A	Black Gap, Mar	51.73	91	⇓P		P	19 22 44.9	+0.3
	baz=52							
232A	Coleman	51.97	86	⇑P		P	19 22 46.9	+0.5
	baz=52							
SONM	Songino Array	52.08	302	P		P	19 22 45.6	-1.6
SONM				PcP		PcP	19 23 58.7	-0.1
SONM				ScP		ScP	19 27 54.2	+1.7
SONM	Songino Array	52.08	302	P		P	19 22 45.6	-1.6
	1.0nm,0.5s,baz=79,slow=7.5,SNR=4.1							
SONM				PcP		PcP	19 23 58.7	-0.1
	1.1nm,0.4s,baz=77,slow=1.7,SNR=4.5							
SONM				ScP		ScP	19 27 54.2	+1.7
	0.3nm,0.6s,baz=90,slow=2.9,SNR=2.4							
530A	J-C Ranch, Com	52.19	89	⇑P		P	19 22 48.3	+0.2
	baz=52							
431A	Sonora	52.24	88	⇓P		P	19 22 48.4	-0.2
	baz=52							
SCHQ	Schefferville	53.92	45	P		P	19 23 00.1	-0.4
SCHQ	Schefferville	53.92	45	P		P	19 23 00.1	-0.4
	16nm,0.9s,baz=311,slow=8.4,SNR=12							
SCHQ				LR		LR	19 46 46.6	
	comp=Z,60nm,18.0s,baz=90,slow=37							
HHC	Hu-ho-hao-te	53.92	292	eP		P	19 23 03.0	+2.2
HHC				S		S	19 30 32.3	-1.2
HHC				pmax		pmax		
	comp=Z,38nm,0.6s							
HHC				pmax		pmax		
	comp=Z,230nm,5.8s							
ARCES	ARCESS Array B	57.28	355	P		P	19 23 23.7	-0.7
ARCES				PcP		PcP	19 24 17.9	-0.4
ARCES	ARCESS Array B	57.28	355	P		P	19 23 23.7	-0.7
	comp=Z,3.5nm,0.9s,baz=34,slow=6.6,SNR=8.6							
ARCES				PcP		PcP	19 24 17.9	-0.4
	comp=Z,3.5nm,0.6s,baz=44,slow=4.0,SNR=12							
ARCES				LR		LR	19 50 14.6	
	comp=Z,35nm,19.8s,baz=264,slow=38							
ZALV	Zalesovo Beam	57.77	318	P		P	19 23 27.5	-0.5
ZALV				PcP		PcP	19 24 19.9	-0.4
ZALV	Zalesovo Beam	57.77	318	P		P	19 23 27.5	-0.5
	comp=Z,0.5nm,0.4s,baz=39,slow=9.6,SNR=4.4							
ZALV				PcP		PcP	19 24 19.9	-0.4
	comp=Z,1.8nm,0.9s,baz=46,slow=4.3,SNR=7.8							
JOF	Joensuu	63.38	351	ep		P	19 24 05.1	-1.0
	comp=Z,1.5nm,0.5s							
MKAR	Makanchi Array	64.26	314	P		P	19 24 10.2	-2.1
MKAR	Makanchi Array	64.26	314	P		P	19 24 10.2	-2.1
	comp=Z,0.6nm,0.7s,baz=61,slow=6.4,SNR=7.6							
KAF	Kangasniemi	64.60	353	ep		P	19 24 12.2	-1.9
	comp=Z,2.6nm,0.5s							
FINES	FINESS Array B	65.28	353	P		P	19 24 17.1	-1.4
FINES	FINESS Array B	65.28	353	P		P	19 24 17.1	-1.4
	comp=Z,1.9nm,0.5s,baz=20,slow=7.8,SNR=26							
FINES				LR		LR	19 54 05.7	
	comp=Z,33nm,21.6s,baz=344,slow=37							
NOA	NORSAR Array B	66.16	1	P		P	19 24 23.5	-0.7
NOA	NORSAR Array B	66.16	1	P		P	19 24 23.5	-0.7
	comp=Z,0.3nm,0.5s,baz=355,slow=5.6,SNR=2.7							
NOA				LR		LR	19 50 34.6	
	comp=Z,23nm,21.5s,baz=315,slow=34							
GYA	Guiyang	67.10	284	eP		P	19 24 33.8	+2.9
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
PMOR	Pomariorio Ree	69.86	160	eT		T	20 41 12.9	
	comp=Z,3.3nm,0.3s							
PMOR	Pomariorio Ree	69.86	160	eT		T	20 41 12.9	
	comp=Z,3.3nm,0.3s							
PPT2	Papeete2	72.05	162	eLR		LR	19 47 17.6	
	comp=Z,68nm,22.5s							
KKAR	Karatay Array	72.11	319	eP		P	19 25 01.4	-0.1
	comp=Z,0.7nm,0.6s							
AKASG	Malin Array Be	75.62	349	P		P	19 25 20.2	-1.5
AKASG	Malin Array Be	75.62	349	P		P	19 25 20.2	-1.5
	comp=Z,1.4nm,0.5s,baz=15,slow=5.4,SNR=4.0							
BAIF	Baives	76.91	6	eP		P	19 25 28.5	-0.6
BAIF	Baives	76.91	6	eP		P	19 25 28.5	-0.6
CMAR	Chiang Mai Arr	77.78	284	P		P	19 25 34.2	-0.2
CMAR	Chiang Mai Arr	77.78	284	P		P	19 25 34.2	-0.2
	comp=Z,4.2nm,0.8s,baz=24,slow=6.3,SNR=32							
KOLS	Kolonicke sedl	77.99	354	eP		P	19 25 35.8	+0.6
LDF	La Druitiere	78.03	9	eP		P	19 25 34.8	-0.6
	comp=Z,4.3nm,0.6s							
LDF	La Druitiere	78.03	9	eP		P	19 25 34.8	-0.6
	comp=Z,4.3nm,0.6s							
GRR	Gorron	78.17	9	eP		P	19 25 35.5	-0.7
GRR	Gorron	78.17	9	eP		P	19 25 35.5	-0.7
GERES	GERESS Array B	78.38	359	P		P	19 25 36.2	-1.3
GERES	GERESS Array B	78.38	359	P		P	19 25 36.2	-1.3
	comp=Z,0.4nm,0.5s,baz=33,slow=5.4,SNR=4.3							
GERES				LR		LR	20 04 05.2	
	comp=Z,23nm,18.3s,baz=326,slow=39							
VYHS	Vyhne	78.61	356	eP		P	19 25 38.5	-0.2
SFTF	Sexfontaines	78.81	5	eP		P	19 25 38.9	-0.8
SFTF	Sexfontaines	78.81	5	eP		P	19 25 38.9	-0.8
SSF	Saint Saulge	79.85	7	eP		P	19 25 44.9	-0.5
	comp=Z,5.8nm,0.7s							
SSF	Saint Saulge	79.85	7	eP		P	19 25 44.9	-0.5
	comp=Z,5.8nm,0.7s							
MFF	Saint Martin d	80.01	9	eP		P	19 25 45.8	-0.5
MFF	Saint Martin d	80.01	9	eP		P	19 25 45.8	-0.5
AVF	Avril sur Loir	80.11	7	eP		P	19 25 46.0	-0.8
AVF	Avril sur Loir	80.11	7	eP		P	19 25 46.0	-0.8
KBZ	Khabaz	80.12	338	P		P	19 25 47.2	+0.4
KBZ	Khabaz	80.12	338	P		P	19 25 47.2	+0.4
	comp=Z,4.5nm,0.9s,baz=196,slow=1.9,SNR=9.0							
SMF	Signal de Mont	80.29	6	eP		P	19 25 47.5	-0.3
SMF	Signal de Mont	80.29	6	eP		P	19 25 47.5	-0.3
LFF	La Frestale	81.74	9	eP		P	19 25 55.1	-0.4
	comp=Z,14nm,0.6s							
LFF	La Frestale	81.74	9	eP		P	19 25 55.1	-0.4
	comp=Z,14nm,0.6s							
VIVF	Saint-Julien-l	82.12	6	eP		P	19 25 57.4	-0.2
VIVF	Saint-Julien-l	82.12	6	eP		P	19 25 57.4	-0.2
MBDF	Montbardon	82.36	4	eP		P	19 25 59.7	+0.7
	comp=Z,14nm,0.7s							
MBDF	Montbardon	82.36	4	eP		P	19 25 59.7	+0.7
	comp=Z,14nm,0.7s							
BR131	Keskin Array S	85.78	344	eP		P	19 26 16.5	0.0
	comp=Z,6.8nm,0.9s							
BRTR	Keskin Array B	85.78	344	P		P	19 26 16.4	0.0
BRTR	Keskin Array B	85.78	344	P		P	19 26 16.4	0.0
	comp=Z,6.9nm,0.8s,baz=34,slow=2.6,SNR=29							
ESDC	Sonseca Array	86.41	13	P		P	19 26 18.9	-0.6
ESDC	Sonseca Array	86.41	13	P		P	19 26 18.9	-0.6
	comp=Z,0.8nm,0.5s,baz=344,slow=4.6,SNR=9.2							
ROSC	El Rosal	87.81	85	LR		LR	20 03 46.4	
	comp=Z,41nm,19.3s,baz=305,slow=34							
WRA	Warramunga Arr	88.57	233	P		P	19 26 28.9	-1.0
WRA	Warramunga Arr	88.57	233	P		P	19 26 28.9	-1.0
	comp=Z,1.7nm,0.8s,baz=34,slow=5.7,SNR=9.0							
FITZ	Fitzroy Crossi	91.44	241	P		P	19 26 42.7	-0.6
FITZ	Fitzroy Crossi	91.44	241	P		P	19 26 42.7	-0.6
	comp=Z,1.1nm,0.7s,baz=45,slow=7.1,SNR=3.5							
ASAR	Alice Springs	91.96	232	P		P	19 26 45.0	-0.7
ASAR	Alice Springs	91.96	232	P		P	19 26 45.0	-0.7
	comp=Z,1.3nm,0.9s,baz=37,slow=4.9,SNR=9.2							
TORD	Torodi Ar. Bea	113.28	12	PKiKP		PKiKP	19 32 13.8	-1.2
TORD	Torodi Ar. Bea	113.28	12	PKiKP		PKiKP	19 32 13.8	-1.2
	comp=Z,0.2nm,0.5s,baz=0.7,slow=1.4,SNR=2.8							
BOSA	Boshof	153.85	335	PKPbc		PKPbc	19 33 36.2	0.0
BOSA				PKPab		PKPab	19 33 48.9	-0.4
BOSA	Boshof	153.85	335	PKPbc		PKPbc	19 33 36.2	0.0
	comp=Z,2.4nm,0.6s,baz=22,slow=2.0,SNR=3.7							
BOSA				PKPab		PKPab	19 33 48.9	-0.4
	comp=Z,2.1nm,0.6s,baz=31,slow=5.7,SNR=5.4							

IDC 29 19:15:53.4±1.2, 2°.91N×65°.16E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.5/26, mbtmp3.6/7, MS3.7/1, Ms1 3.7/1, ms1mx2.8/30, Error ellipse: s-maj=40.7km s-min=23.4km az=34.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OPO	Ambohidratompo	27.73	219	LR		LR	19 31 03.6	
	comp=Z,134nm,19.1s,baz=321,slow=33							
CMAR	Chiang Mai Arr	36.51	63	P		P	19 23 01.5	+0.7
	0.2nm,0.4s,baz=226,slow=7.4,SNR=4.0							
BRTR	Keskin Array B	46.47	326	P		P	19 24 22.6	+0.1
	0.9nm,0.8s,baz=123,slow=8.0,SNR=4.4							
ZALV	Zalesovo Beam	53.37	14	P		P	19 25 12.9	-1.6
	0.8nm,0.8s,baz=198,slow=9.1,SNR=4.0							
SONM	Songino Array	57.09	32	P		P	19 25 41.8	+0.1
	0.8nm,0.6s,baz=202,slow=3.1,SNR=2.9							
WRA	Warramunga Arr	71.53	112	P		P	19 27 17.0	+0.2
	0.8nm,0.9s,baz=288,slow=5.5,SNR=3.8							
ASAR	Alice Springs	71.83	116	P		P	19 27 18.0	-0.6
	0.7nm,0.8s,baz=290,slow=5.8,SNR=6.9							
ESDC	Sonseca Array	72.13	311	P		P	19 27 20.1	-0.1
	0.2nm,0.4s,baz=106,slow=8.1,SNR=3.1							
TXAR	Lajitas Array	146.19	342	PKPbc		PKPbc	19 35 36.5	-0.1
	1.1nm,0.8s,baz=57,slow=2.2,SNR=9.4							

IDC 29 19:17:04.9±1.6, 3°.03N×65°.30E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.5/26, mbtmp3.5/7, MS3.3/3, Ms1 3.4/3, ms1mx3.0/27, Error ellipse: s-maj=44.5km s-min=25.5km az=50.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ATD	Arta Tunnel	23.79	292	LR		LR	19 29 36.6	
	comp=Z,43nm,19.4s,baz=126,slow=32							
CMAR	Chiang Mai Arr	36.33	63	P		P	19 24 11.5	+0.6
	0.1nm,0.3s,baz=243,slow=8.0,SNR=3.7							
CMAR				LR		LR	19 38 14.9	
	comp=Z,75nm,18.7s,baz=329,slow=35							
MKAR	Makanchi Array	46.02	16	P		P	19 25 29.8	-0.5
	0.5nm,0.8s,baz=234,slow=6.4,SNR=3.0							
BRTR	Keskin Array B	46.45	326	P		P	19 25 33.9	0.0
	0.6nm,0.9s,baz=116,slow=6.7,SNR=2.9							
ZALV	Zalesovo Beam	53.22	14	P		P	19 26 24.1	-0.9
	1.0nm,0.9s,baz=211,slow=8.3,SNR=3.8							
SONM	Songino Array	56.92	32	P		P	19 26 52.0	0.0
	2.0nm,0.3s,baz=240,slow=2.8,SNR=2.2							
KSRS	Korea Array	66.59	50	LR		LR	19 58 09.4	
	comp=Z,26nm,18.3s,baz=218,slow=37							
WRA	Warramunga Arr	71.45	112	P		P	19 28 27.8	-0.1
	0.6nm,0.8s,baz=292,slow=7.0,SNR=3.2							
ASAR	Alice Springs	71.76	116	P		P	19 28 29.4	-0.3
	0.6nm,0.9s,baz=293,slow=4.8,SNR=4.2							
TXAR	Lajitas Array	146.12	343	PKPbc		PKPbc	19 36 47.6	-0.3
	1.1nm,0.8s,baz=50,slow=2.8,SNR=7.3							

**IDC 29 19:29:32.0±1.7, 3°.60N×126°.97E, h0km, mb3.5/5, mb1 3.7/

CAMP	**Campotosto**	**0.27**	**352**	Pg	Pg	19 40 17.5	+0.8
CAMP	**Campotosto**	**0.27**	**352**	Pg	Pg	19 40 17.5	+0.8

CSEM ***29*** *19:40:40.9, 42°.37N × 13°.33E, h10km, MD1.7/3, After ROM*
ROM 29 19:40:40.9±0.3, 42°.37N×13°.33E, h10km±1km, Md1.7/3, Ml2.1/1, Error ellipse: s-maj=4.5km s-min=2.2km az=87.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**105**	Pg	Pg	19 40 43.6	+0.5
AQU				Sg	Sg	19 40 44.9	+0.2
	460nm,0.4s						
AQU	**L'Aquila**	**0.06**	**105**	Pg	Pg	19 40 43.6	+0.5
AQU				Sg	Sg	19 40 44.9	+0.2
	460nm,0.4s						
CAMP	**Campotosto**	**0.18**	**19**	Pg	Pg	19 40 45.4	+0.5
CAMP				Sg	Sg	19 40 48.4	+0.7
CAMP	**Campotosto**	**0.18**	**19**	Pg	Pg	19 40 45.4	+0.5
CAMP				Sg	Sg	19 40 48.4	+0.7
FAGN	**Fagnano**	**0.21**	**118**	Pg	Pb	19 40 46.9	-0.1
FAGN				Sg	Sg	19 40 49.8	+1.2
	277nm,0.3s						
FAGN	**Fagnano**	**0.21**	**118**	Pg	Pb	19 40 46.9	-0.1
FAGN				Sg	Sg	19 40 49.8	+1.2
	277nm,0.3s						
PTQR	**Pietraquaria**	**0.35**	**171**	Pg	Pg	19 40 48.5	+0.5
PTQR				Sg	Sg	19 40 53.7	+1.0
	5.0nm,0.2s						
PTQR	**Pietraquaria**	**0.35**	**171**	Pg	Pg	19 40 48.5	+0.5
PTQR				Sg	Sg	19 40 53.7	+1.0
	5.0nm,0.2s						

WEL 29 20:01:35.5±0.5, 35°.92S × 178°.68E, h176km±9km, ML3.6/7, Error ellipse: s-maj=8.9km s-min=7.3km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**2.17**	**189**	PN	Pn	20 02 14.0	-0.2
PUZ				SN	Sn	20 02 42.9	-1.5
MWZ	**Matawai**	**2.58**	**201**	PN	Pn	20 02 18.8	-0.1
MWZ				eSN	Sn	20 02 52.8	0.0
CNGZ	**Carnagh Statio**	**2.58**	**188**	PN	Pn	20 02 19.4	+0.5
URZ	**Urewera**	**2.65**	**208**	PN	Pn	20 02 19.5	-0.2
URZ				SN	Sn	20 02 54.7	+0.6
NMHZ	**Naumai**	**3.50**	**205**	PN	Pn	20 02 30.0	-0.3
BKZ	**Black Stump Fm**	**3.67**	**208**	PN	Pn	20 02 33.0	+0.6
BHHZ	**Black Hill Sta**	**4.12**	**209**	PN	Pn	20 02 37.7	-0.3
PXZ	**Pawanui**	**4.34**	**199**	SN	Sn	20 03 29.9	-2.1
PRHZ	**Porangahau**	**4.63**	**200**	PN	Pn	20 02 42.9	-1.6
BFZ	**Birch Farm**	**5.12**	**201**	PN	Pn	20 02 48.8	-2.1
KIW	**Kapiti Island**	**5.75**	**210**	PN	Pn	20 02 56.3	-2.9
TCW	**Tory Channel**	**6.31**	**212**	PN	Pn	20 03 03.1	-3.3

MOS ***29*** *20:10:52.9±0.7, 36°.56N × 71°.05E, h221km, mb4.3/24, Error ellipse: s-maj=12.0km s-min=5.0km az=78.0*
ISCJB ***29*** *20:10:53.2±0.3, 36°.59N±0°.02 × 71°.02E±0°.05, h224km±3km, mb4.0/34, Error ellipse: s-maj=6.6km s-min=3.2km az=160.2*
BJI ***29*** *20:10:53.5, 36°.85N × 70°.92E, h214km, mB4.6/4, mb4.4/13*
IDC ***29*** *20:10:54.1±0.6, 36°.48N × 70°.96E, h221km±5km, mb3.9/21, mb1 4.0/24, mb1mx3.7/35, mbtmp3.9/24, Error ellipse: s-maj=11.3km s-min=8.9km az=41.0*
NEIC ***29*** *20:10:54.3±0.3, 36°.60N × 70°.98E, mb4.7/11, Error ellipse: s-maj=7.8km s-min=6.0km az=75.0*
NNC ***29*** *20:10:58.4±3.3, 37°.11N × 70°.86E, h185km±27km, mb3.9, mpv5.3, Error ellipse: s-maj=28.0km s-min=18.6km az=24.0*
ISC 29 20:10:54.4±0.4, 36°.58N±0°.04 × 70°.99E±0°.05, h225km±3km, h224km: pP-P, n164, σ1°.47/199, mb4.2/34, 10C-15D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.58**	**219**	*e*PN	**Pn**	**20 11 40.2**	**-0.9**
KBL	**Kabul**	**2.58**	**219**	*e*P	**Pn**	**20 11 40.2**	**-0.9**
CEP	**Cherat**	**2.85**	**164**	⇓P	**Pn**	**20 11 44.3**	**+0.4**
CEP				S	**S**	**20 12 22.0**	**-0.6**
CHCP	**Chirah Chowk**	**3.46**	**147**	⇓P	**Pn**	**20 11 51.4**	**+0.6**
THW	**Thamme Wali**	**3.83**	**170**	⇓P	**Pn**	**20 11 55.4**	**+0.3**
SARP	**Sargodha**	**4.85**	**163**	⇓P	**Pn**	**20 12 07.4**	**-0.2**
KSH	**Kashi**	**4.91**	**52**	P	Pn	20 12 03.0	-5.3
KSH				S	S	20 12 53.0	-14
KSH				smax	smax		
	comp=N,920nm,0.4s						
KSH				smax	smax		
	comp=E,820nm,0.7s						
JMU	**Jammu**	**5.02**	**139**	*e*P	**Pn**	**20 12 10.0**	**+0.3**
JMU				*ex*	x	20 13 05.0	
THN	**Thein Dam**	**5.69**	**135**	*e*P	**Pn**	**20 12 16.8**	**-1.3**
THN				*e*P	**S**	**20 13 19.0**	**-5.4**
AML	**Almayashu**	**5.93**	**20**	*i* PN	**Pn**	**20 12 20.4**	**-1.0**
AML	**Almayashu**	**5.93**	**20**	P	**Pn**	**20 12 20.4**	**-1.0**
	SNR=2063						
DHRM	**DHARAMSHALA**	**6.16**	**133**	*e*P	**Pn**	**20 12 24.4**	**+0.2**
DHRM				*e*S	**S**	**20 13 32.1**	**-3.5**
DHRM				AML	AML	20 13 34.2	
	comp=E,3μm,0.4s						
DHRM				AML	AML	20 13 34.3	
	comp=N,1μm,0.2s						
UCH	**Uchtor**	**6.26**	**25**	P	**Pn**	**20 12 25.1**	**-0.7**
	SNR=68						
KZA	**Kyzart**	**6.41**	**30**	*i* PN	**Pn**	**20 12 26.3**	**-1.2**
KZA	**Kyzart**	**6.41**	**30**	P	**Pn**	**20 12 26.3**	**-1.2**
	SNR=166						
EKS2	**Erkin-Say**	**6.44**	**19**	*e*PN	**Pn**	**20 12 26.9**	**-0.8**
EKS2				pmax	pmax		
	comp=Z,114nm,0.5s						
EKS2	**Erkin-Say**	**6.44**	**19**	*e*Pn	**Pn**	**20 12 26.9**	**-0.8**
	comp=Z,114nm,0.5s						
EKS2	**Erkin-Say**	**6.44**	**19**	P	**Pn**	**20 12 26.9**	**-0.8**
	SNR=352						
KK31	**Karatay Array**	**6.53**	**357**	P	**Pn**	**20 12 27.3**	**-1.4**
	comp=Z,75nm,0.5s,baz=174,slow=12,SNR=1476						
KK31				⇑S	S	20 13 33.4	-10
	comp=Z,65nm,0.3s,baz=181,slow=23,SNR=15						
KKAR	**Karatay Array**	**6.53**	**357**	*e*PN	**Pn**	**20 12 27.3**	**-1.4**
KKAR				pmax	pmax		
	comp=Z,130nm,0.5s						
KKAR	**Karatay Array**	**6.53**	**357**	*e*P	**Pn**	**20 12 27.3**	**-1.4**
	comp=Z,130nm,0.5s						
AAK	**Ala-Archa**	**6.62**	**23**	*d* iPN	**Pn**	**20 12 29.4**	**-0.7**
AAK				pmax	pmax		
	comp=Z,655nm,0.6s						
AAK	**Ala-Archa**	**6.62**	**23**	P	**Pn**	**20 12 29.1**	**-0.9**
AAK				S	S	20 13 38.6	-7.7
AAK	**Ala-Archa**	**6.62**	**23**	P	**Pn**	**20 12 29.1**	**-0.9**
	comp=Z,162nm,0.3s,baz=160,slow=4.2,SNR=1920						
AAK				S	S	20 13 38.6	-7.7
	comp=Z,17nm,0.3s,baz=143,slow=2.5,SNR=4.3						
KBK	**Karagaybulak**	**6.79**	**25**	*i* PN	**Pn**	**20 12 31.9**	**-0.4**
KBK	**Karagaybulak**	**6.79**	**25**	P	**Pn**	**20 12 31.9**	**-0.4**
	SNR=276						
BHK	**Bhakra**	**6.84**	**137**	*e*P	**Pn**	**20 12 33.8**	**+1.0**
BHK				*ex*	x	20 13 47.2	
FRU	**Bishkek**	**6.84**	**23**	⇓*i* PN	**Pn**	**20 12 33.0**	**+0.3**
FRU				pmax	pmax		
	comp=Z,270nm,0.8s						
ULHL	**Ulahol**	**6.97**	**34**	*i* PN	**Pn**	**20 12 33.4**	**-1.1**
ULHL	**Ulahol**	**6.97**	**34**	P	**Pn**	**20 12 33.4**	**-1.1**
	SNR=140						
CHMS	**Chumysh**	**7.03**	**23**	*i* PN	**Pn**	**20 12 34.1**	**-1.1**
CHMS	**Chumysh**	**7.03**	**23**	P	**Pn**	**20 12 34.1**	**-1.1**
	SNR=165						
SDNR	**Sundarnagar**	**7.09**	**134**	*e*P	**Pn**	**20 12 35.0**	**-1.0**
SDNR				*ex*	x	20 13 51.1	
USP	**Ospenovka**	**7.20**	**21**	*i* PN	**Pn**	**20 12 35.8**	**-1.5**
USP	**Ospenovka**	**7.20**	**21**	P	**Pn**	**20 12 35.8**	**-1.5**
	SNR=278						
TKM2	**Tokmak 2**	**7.26**	**28**	⇑P	**Pn**	**20 12 37.2**	**-1.0**
	comp=Z,242nm,0.8s						
TKM2				⇓S	S	20 13 54.5	-6.6
	comp=Z,82nm,1.1s						
TKM2	**Tokmak 2**	**7.26**	**28**	*i* PN	**Pn**	**20 12 37.6**	**-0.6**
TKM2	**Tokmak 2**	**7.26**	**28**	*e*Pn	**Pn**	**20 12 37.2**	**-1.0**
	comp=Z,259nm,0.8s						
TKM2	**Tokmak 2**	**7.26**	**28**	P	**Pn**	**20 12 37.6**	**-0.6**
	SNR=183						
SMLA	**Simla**	**7.48**	**135**	*i* P	**Pn**	**20 12 40.7**	**-0.2**
SMLA				*e*S	**S**	**20 14 02.5**	**-3.7**
SMLA				AML	AML	20 14 03.2	
	comp=N,578nm,0.3s						
SMLA				AML	AML	20 14 03.8	
	comp=E,409nm,0.2s						
SMLA						20 14 05.6	
	comp=E,7μm,0.3s						
SMLA				⇓		20 14 06.1	
	comp=N,5μm,0.3s						
KNDC	**Almaty**	**8.06**	**33**	⇑P	**Pn**	**20 12 48.5**	**+0.1**
	comp=N,218nm,0.6s						
DDI	**Dehra Dun**	**8.59**	**135**	*e*P	**Pn**	**20 12 54.9**	**-0.4**
DDI				*ex*	x	20 14 20.5	
DDI				*e*S	**S**	**20 14 26.6**	**-5.8**
NDI	**New Delhi**	**9.46**	**145**	*e*P	**Pn**	**20 13 04.5**	**-1.9**
PYUN	**Piuthan**	**13.20**	**126**	*e*P	**Pn**	**20 13 52.5**	**-1.3**
	comp=N,99nm,0.4s						
MK31	**Makanchi Array**	**13.23**	**36**	⇓P	**Pn**	**20 13 52.7**	**-1.1**
	comp=N,4.8nm,0.5s,baz=219,slow=16,SNR=156						
MK31	**Makanchi Array**	**13.23**	**36**	*e*P	**Pn**	**20 13 52.3**	**-1.5**
MK31	**Makanchi Array**	**13.23**	**36**	*e*Pn	**Pn**	**20 13 52.3**	**-1.5**
MKAR	**Makanchi Array**	**13.23**	**36**	P	**Pn**	**20 13 52.5**	**-1.3**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MKAR	**Makanchi Array**	**13.23**	**36**	P	**Pn**	**20 13 52.5**	**-1.3**
MKAR	**Makanchi Array**	**13.23**	**36**	P	**Pn**	**20 13 52.5**	**-1.3**
	comp=Z,2.7nm,0.3s,baz=221,slow=17,SNR=115						
DANN	**Dangsing**	**13.54**	**124**	*e*P	**Pn**	**20 13 57.5**	**-0.6**
KOLN	**Koldanda**	**13.82**	**126**	*e*P	**Pn**	**20 14 01.1**	**-0.3**
	comp=Z,24nm,0.3s						
WMQ	**Urumqi**	**14.66**	**55**	P	**P**	**20 14 11.5**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,15nm,1.0s						
DMN	**Daman**	**14.92**	**123**	*e*P	**Pn**	**20 14 14.9**	**0.0**
	comp=Z,58nm,0.4s						
DMN				*e*S	S	20 16 53.5	-6.6
KKN	**Kakani**	**14.93**	**122**	*e*P	**Pn**	**20 14 14.4**	**-0.5**
	comp=Z,133nm,0.5s						
AB31	**Akbulak array**	**15.01**	**331**	P	**Pn**	**20 14 13.9**	**-1.6**
	comp=Z,6.2nm,0.4s,baz=143,slow=12,SNR=206						
AB31				⇑S	S	**20 16 58.1**	**-3.2**
	comp=Z,9.1nm,0.7s,baz=153,slow=23,SNR=7.5						
ABKAR	**Akbulak array**	**15.01**	**331**	*e*P	**Pn**	**20 14 13.8**	**-1.7**
	comp=Z,14nm,0.4s						
ABKAR				*e*S	S	20 16 52.1	-9.2
KUR16	**Kurchatov Arra**	**15.05**	**19**	⇑P	**Pn**	**20 14 13.8**	**-2.1**
	comp=Z,0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**15.05**	**19**	P	**Pn**	**20 14 14.1**	**-1.8**
	comp=Z,1.0nm,0.3s,baz=209,slow=12,SNR=126						
KURBB				S	S	**20 16 58.0**	**-4.2**
	baz=200,slow=26,SNR=2.5						
PKIN	**Phulchoki**	**15.14**	**122**	*e*P	**P**	**20 14 17.3**	**-0.3**
	comp=Z,68nm,0.3s						
PKI	**Pulchoki**	**15.15**	**122**	*e*P	**P**	**20 14 17.5**	**-0.3**
	comp=Z,86nm,0.6s						
KURK	**Kurchatov**	**15.16**	**19**	⇓P	**Pn**	**20 14 15.5**	**-1.7**
	comp=Z,21nm,0.9s						
KURK	**Kurchatov**	**15.16**	**19**	*e*P	**Pn**	**20 14 15.7**	**-1.6**
KURK				pmax	pmax		
	comp=Z,30nm,1.2s						
KURK	**Kurchatov**	**15.16**	**19**	P	**Pn**	**20 14 14.1**	**-3.2**
KURK				S	**S**	**20 16 58.0**	**-6.6**
GUN	**Gumba**	**15.26**	**120**	*e*P	**P**	**20 14 18.8**	**-0.2**
	comp=Z,71nm,0.4s						
VOSK	**Vostochnaya**	**16.14**	**360**	⇓P	**P**	**20 14 28.0**	**-0.1**
	comp=Z,33nm,0.7s						
RAMN	**Ramite**	**16.36**	**122**	*e*P	**Pn**	**20 14 32.3**	**+0.1**
	comp=Z,59nm,0.4s						
ZRNK	**Zerenda**	**16.43**	**356**	⇓P	**P**	**20 14 31.5**	**+0.3**
	comp=Z,30nm,1.1s						
BVA0	**Borovoye Array**	**16.45**	**359**	P	**Pn**	**20 14 32.5**	**-0.2**
	comp=Z,3.0nm,0.6s,baz=172,slow=15,SNR=96						
BVA0				⇑S	S	**20 17 31.6**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=181,slow=20,SNR=7.7						
BVAR	**Borovoye Array**	**16.45**	**359**	P	**Pn**	**20 14 32.3**	**-0.4**
BVAR				S	**S**	**20 17 30.5**	**-1.5**
BVAR				pmax	pmax		
	comp=Z,8.0nm,0.3s						
BVAR	**Borovoye Array**	**16.45**	**359**	P	**Pn**	**20 14 32.3**	**-0.4**
BVAR				S	**S**	**20 17 30.5**	**-1.5**
BVAR	**Borovoye Array**	**16.45**	**359**	P	**Pn**	**20 14 32.3**	**-0.4**
	comp=Z,8.0nm,0.3s,baz=162,slow=14,SNR=61						
BVAR				S	**S**	**20 17 30.5**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=167,slow=21,SNR=3.5						
BRVK	**Borovoye**	**16.49**	**358**	⇑P	**Pn**	**20 14 32.5**	**-0.6**
	comp=Z,32nm,0.5s						
BRVK				⇓S	**S**	**20 17 33.6**	**+1.0**
	comp=Z,21nm,1.0s						
BRVK	**Borovoye**	**16.49**	**358**	*e*P	**Pn**	**20 14 32.9**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,23nm,0.6s						
BRVK	**Borovoye**	**16.49**	**358**	*e*Pn	**P**	**20 14 31.9**	**+0.1**
	comp=Z,27nm,0.4s						
AKTO	**Aktyubinsk**	**16.71**	**330**	⇓P	**Pn**	**20 14 35.2**	**-0.5**
	comp=Z,5.0nm,0.7s						
AKTO				⇑S	**S**	**20 17 35.1**	**-2.1**
	comp=Z,2.8nm,1.1s						
AKTO	**Aktyubinsk**	**16.71**	**330**	P	**Pn**	**20 14 35.3**	**-0.5**
AKTO				S	**S**	**20 17 35.4**	**-1.7**
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.3s						
AKTO	**Aktyubinsk**	**16.71**	**330**	P	**Pn**	**20 14 35.3**	**-0.4**
AKTO				S	**S**	**20 17 35.4**	**-1.7**
AKTO	**Aktyubinsk**	**16.71**	**330**	P	**Pn**	**20 14 35.3**	**-0.4**
	comp=Z,5.0nm,0.3s,baz=136,slow=11,SNR=120						
AKTO				S	**S**	**20 17 35.4**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=62,slow=15,SNR=3.4						
TAPN	**Taplejung**	**16.89**	**118**	*e*P	**Pn**	**20 14 38.9**	**+0.4**
	comp=Z,91nm,0.5s						
ODAN	**Odare**	**16.97**	**120**	*e*P	**Pn**	**20 14 39.8**	**+0.5**
	comp=Z,58nm,0.5s						
BOK	**Bokaro**	**18.09**	**131**	*e*P	**P**	**20 14 50.0**	**+0.4**
BOK				*ex*	x	20 17 56.5	
LSA	**Lhasa**	**18.21**	**106**	*e*P	**Pn**	**20 14 54.2**	**+0.1**
LSA				pmax	pmax		
	comp=Z,18nm,0.5s						
LSA	**Lhasa**	**18.21**	**106**	*e*P	**Pn**	**20 14 54.2**	**+0.1**
	comp=Z,18nm,0.5s						
ZAA0	**Zalesovo Array**	**19.85**	**25**	*e*P	**P**	**20 15 08.0**	**-0.1**
ZALV	**Zalesovo Beam**	**19.85**	**25**	P	**P**	**20 15 08.4**	**+0.3**
ZALV				S	**S**	**20 18 36.9**	**-2.1**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ZALV	**Zalesovo Beam**	**19.85**	**25**	P	**P**	**20 15 08.4**	**+0.3**
ZALV				S	**S**	**20 18 36.9**	**-2.1**
ZALV	**Zalesovo Beam**	**19.85**	**25**	P	**P**	**20 15 08.4**	**+0.3**
	comp=Z,3.6nm,0.3s,baz=223,slow=11,SNR=58						
ZALV				S	**S**	**20 18 36.9**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=210,slow=20,SNR=5.2						
NVS	**Novosibirsk**	**20.11**	**21**	*e*P	**P**	**20 15 11.5**	**+0.6**
NVS				*i* S	**S**	**20 18 41.8**	**-2.2**
NVS				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NVS				pmax	pmax		
	comp=N,8.0nm,0.7s						
NVS				smax	smax		
	comp=N,17nm,1.0s						
SVE	**Sverdlovsk**	**21.42**	**344**	*e*P	**P**	**20 15 25.5**	**+0.9**
SVE				pmax	pmax		
	comp=Z,12nm,0.8s						
ARU	**Arti**	**21.56**	**341**	*d* iP	**P**	**20 15 26.7**	**+0.8**
ARU						20 16 03.7	
ARU				S	**S**	**20 19 09.8**	**+0.7**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZEI	**Tsey**	**21.70**	**295**	*e*P	**P**	**20 15 30.9**	**+3.1**
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.9s						
GTA	**Gaotai**	**22.85**	**74**	⇑P	**P**	**20 15 40.5**	**+2.2**
GTA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZAK	**Zakamensk**	**26.94**	**49**	*e*P	**P**	**20 16 15.2**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
SONM	**Songino Array**	**28.30**	**55**	P	**P**	**20 16 28.9**	**+1.8**
SONM	**Songino Array**	**28.30**	**55**	P	**P**	**20 16 28.9**	**+1.8**
	comp=Z,2.6nm,0.7s,baz=257,slow=9.7,SNR=13						
MMAI	**Mount Meron Ar**	**29.34**	**274**	PcP	**PcP**	**20 19 38.2**	**+1.4**
MMAI	**Mount Meron Ar**	**29.34**	**274**	PcP	**PcP**	**20 19 38.2**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=59,slow=3.9,SNR=4.2						
BRTR	**Keskin Array B**	**29.40**	**288**	P	**P**	**20 16 37.3**	**+0.3**
BRTR				pP	**pP**	**20 17 22.6**	**+0.5**
BRTR	**Keskin Array B**	**29.40**	**288**	P	**P**	**20 16 37.3**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=120,slow=8.5,SNR=3.2						
BRTR				pP	**pP**	**20 17 22.6**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=103,slow=8.3,SNR=3.5						
CHTO	**Chiang Mai**	**30.26**	**118**	*e*P	**P**	**20 16 45.9**	**+1.3**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CHTO	**Chiang Mai**	**30.26**	**118**	*e*P	**P**	**20 16 45.9**	**+1.3**
	comp=Z,3.2nm,0.6s						
CM31	**Chiang Mai Arr**	**30.50**	**119**	*e*P	**P**	**20 16 47.4**	**+0.7**
	comp=Z,1.9nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.50**	**119**	P	**P**	**20 16 47.8**	**+1.1**
CMAR	**Chiang Mai Arr**	**30.50**	**119**	P	**P**	**20 16 47.8**	**+1.1**
	comp=Z,5.6nm,0.8s,baz=301,slow=8.4,SNR=43						
AKASG	**Malin Array Be**	**32.89**	**309**	P	**P**	**20 17 07.9**	**+0.7**
AKASG				*SP	**sP**	**20 18 16.9**	**-1.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**32.89**	**309**	P	**P**	**20 17 07.9**	**+0.7**
AKASG				sP	**sP**	**20 18 16.9**	**-1.7**
AKASG	**Malin Array Be**	**32.89**	**309**	P	**P**	**20 17 07.9**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=108,slow=9.4,SNR=3.6						
AKASG				sP	**sP**	**20 18 16.9**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=104,slow=9.9,SNR=2.2						
JOF	**Joensuu**	**35.80**	**330**	*e*P	**P**	**20 17 32.8**	**+0.9**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
JOF	**Joensuu**	**35.80**	**330**	*e*p	**P**	**20 17 32.8**	**+0.9**
	comp=Z,2.2nm,0.4s						
KOLS	**Kolonicke sedl**	**37.23**	**305**	*e*P	P	20 17 38.0	-6.2
KOLS	**Kolonicke sedl**	**37.23**	**305**	*e*P	P	20 17 38.0	-6.2
FINES	**FINESS Array B**	**37.41**	**326**	P	**P**	**20 17 46.4**	**+0.9**
FINES	**FINESS Array B**	**37.41**	**326**	P	**P**	**20 17 46.4**	**+0.9**
	comp=Z,1.5nm,0.5s,baz=121,slow=8.7,SNR=18						
ARCES	**ARCESS Array B**	**41.07**	**338**	P	**P**	**20 18 17.1**	**+1.5**
ARCES	**ARCESS Array B**	**41.07**	**338**	P	**P**	**20 18 17.1**	**+1.5**
	comp=Z,1.4nm,0.5s,baz=114,slow=7.5,SNR=19						
PSI	**Prapat**	**42.34**	**136**	P	**P**	**20 18 26.8**	**+0.1**
PSI	**Prapat**	**42.34**	**136**	P	**P**	**20 18 26.8**	**+0.1**
	comp=Z,6.1nm,0.5s,baz=333,slow=6.8,SNR=4.3						
YAK	**Yakutsk**	**43.91**	**36**	*i* P	**P**	**20 18 38.9**	**+0.4**
NB2	**NORSAR Subarra**	**44.31**	**323**	P	**P**	**20 18 42.1**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=95,slow=7.9						
NB2	**NORSAR Subarra**	**44.31**	**323**	P	pP	20 19 30.3	+0.7
	comp=Z,0.9nm,0.6s,baz=95,slow=8.6						
NOA	**NORSAR Array B**	**44.31**	**323**	P	**P**	**20 18 42.4**	**+0.6**
NOA				pP	**pP**	**20 19 29.5**	**-0.1**
NOA				sP	**sP**	**20 19 53.9**	**-1.1**
NOA	**NORSAR Array B**	**44.31**	**323**	P	**P**	**20 18 42.4**	**+0.6**
	comp=Z,2.0nm,0.5s,baz=97,slow=7.7,SNR=16						
NOA				pP	**pP**	**20 19 29.5**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=96,slow=8.1,SNR=3.4						
NOA				sP	**sP**	**20 19 53.9**	**-1.1**
	comp=Z,1.9nm,0.8s,baz=96,slow=8.1,SNR=3.3						
YSS	**Yuzh-Sakhalins**	**52.78**	**55**	*i* P	**P**	**20 19 45.3**	**-1.0**
MJAR	**Matsushiro Arr**	**52.93**	**69**	P	**P**	**20 19 48.4**	**+0.8**
MJAR				sP	**sP**	**20 21 06.6**	**+4.6**
MJAR	**Matsushiro Arr**	**52.93**	**69**	P	**P**	**20 19 48.4**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=306,slow=8.1,SNR=3.9						
MJAR				sP	**sP**	**20 21 06.6**	**+4.6**
	comp=Z,0.9nm,0.7s,baz=290,slow=9.7,SNR=3.6						
BILL	**Bilibino**	**58.54**	**26**	⇑*e*P	**P**	**20 20 27.9**	**+1.0**
BILL				*e**PP	**pP**	**20 21 20.6**	**+3.2**
BILL				*e*		20 22 39.0	
BILL				*e*S	**S**	**20 28 11.1**	**-1.1**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TORD	**Torodi Ar. Bea**	**65.71**	**269**	P	**P**	**20 21 14.2**	**-1.1**
TORD				pP	**pP**	**20 22 05.3**	**-1.6**
TORD	**Torodi Ar. Bea**	**65.71**	**269**	P	**P**	**20 21 14.2**	**-1.1**
	comp=Z,1.2nm,0.4s,baz=51,slow=5.8,SNR=28						
TORD				pP	**pP**	**20 22 05.4**	**-1.6**
	comp=Z,1.0nm,0.8s,baz=46,slow=5.8,SNR=2.6						
FX1	**Attu Island--F**	**68.34**	**40**	P	**P**	**20 21 31.8**	**+0.6**
FX1	**Attu Island--F**	**68.34**	**40**	P	**P**	**20 21 31.8**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=326,slow=11,SNR=3.4						
INK	**Inuvik**	**73.83**	**9**	P	**P**	**20 22 05.2**	**+1.4**
INK	**Inuvik**	**73.83**	**9**	P	**P**	**20 22 05.2**	**+1.4**
	comp=Z,3.9nm,0.5s,baz=357,slow=7.1,SNR=24						
ILAR	**Eielson Array**	**74.70**	**16**	P	**P**	**20 22 08.8**	**-0.1**
ILAR	**Eielson Array**	**74.70**	**16**	P	**P**	**20 22 08.8**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=322,slow=4.8,SNR=18						
FITZ	**Fitzroy Crossi**	**74.95**	**127**	P	**P**	**20 22 11.4**	**+0.4**
FITZ	**Fitzroy Crossi**	**74.95**	**127**	P	**P**	**20 22 11.4**	**+0.4**
	comp=Z,3.9nm,0.6s,baz=306,slow=4.9,SNR=28						
PAX	**Paxson**	**76.58**	**16**	*e*P	**P**	**

SIQV	**Siquisique**	**4.93**	**40**	*e*P		**Pn**	**20 27 04.7**	**-0.1**	
BAUV	**El Baul**	**5.34**	**67**	*e*P		**Pn**	**20 27 10.5**	**+0.4**	
MAPV	**Macapo**	**5.39**	**56**	*e*P		**Pn**	**20 27 11.2**	**+0.3**	
MONV	**Montecano**	**5.90**	**30**	*e*P		**Pn**	**20 27 17.8**	**+0.2**	
TURV	**Turiamo**	**6.24**	**54**	*e*P		**Pn**	**20 27 22.2**	**+0.1**	
BIRV	**Birongo**	**7.58**	**61**	*e*P		**Pn**	**20 27 40.0**	**+0.1**	
CUPV	**Cœpira**	**7.82**	**65**	*e*P		**Pn**	**20 27 42.6**	**-0.6**	
TXAR	**Lajitas Array**	**36.54**	**312**	P		**P**	**20 32 43.0**	**-0.3**	
	0.3nm,0.6s,baz=112,slow=9.8,SNR=3.8								
PDAR	**Pinedale Array**	**48.14**	**324**	P		**P**	**20 34 16.8**	**-0.2**	
	0.3nm,0.5s,baz=128,slow=10,SNR=3.0								
YKA	**Yellowknife Ar**	**63.29**	**340**	P		**P**	**20 36 04.2**	**0.0**	
	0.7nm,0.6s,baz=131,slow=6.6,SNR=21								
ASAR	**Alice Springs**	**149.21**	**234**	PKPbc		**PKPdf**	**20 45 22.1**	**+3.0**	
	0.3nm,0.5s,baz=122,slow=3.2,SNR=3.4								
WRA	**Warramunga Arr**	**150.45**	**241**	PKPbc		**PKPbc**	**20 45 25.5**	**-1.0**	
	0.3nm,0.5s,baz=103,slow=2.1,SNR=11								

IDC 29 20:45:32.6±1.0,18°11S×69°45W,h121km±6km,mb4.0/5, mb1 4.0/8,mb1mx3.7/21,mbtmp4.0/8,MS2.6/1,Ms1 2.6/1, ms1mx2.1/29,Error ellipse: s-maj=28.4km s-min=19.0km az=18.0,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.21**	**35**	P	Pn	20 46 09.9	+0.4
	119nm,0.3s,baz=235,slow=6.4,SNR=3082						
LPAZ				S	Sn	20 46 36.3	-1.5
	8.7nm,0.3s,baz=254,slow=20,SNR=2.6						
SIV	**San Ignacio**	**8.29**	**77**	P	Pn	20 47 29.1	-1.0
	9.1nm,0.3s,baz=283,slow=11,SNR=64						
SIV				S	Sn	20 48 59.1	-3.0
	0.9nm,0.3s,baz=1.0,slow=20,SNR=3.2						
SIV				LR	LR	20 51 07.0	
	comp=Z,46nm,21.1s,slow=40						
NNA	**Nana**	**9.38**	**309**	P	Pn	20 47 38.7	-6.1
	7.3nm,0.3s,baz=141,slow=11,SNR=9.9						
NNA				S	Sn	20 49 21.9	-6.8
	2.6nm,0.3s,baz=228,slow=17,SNR=2.8						
CFAA	**Coronel Fontan**	**13.48**	**176**	P	Pn	20 48 38.7	-0.4
	0.1nm,0.3s,baz=348,slow=14,SNR=6.7						
CFAA				S	Sn	20 51 01.9	-5.9
	0.1nm,0.3s,baz=218,slow=17,SNR=4.6						
CPUP	**Villa Florida**	**13.88**	**128**	P	Pn	20 48 44.9	+0.7
	0.6nm,0.3s,baz=286,slow=17,SNR=6.6						
BDFB	**Brasilia**	**20.66**	**86**	P	P	20 50 04.0	+1.0
	8.2nm,0.7s,baz=253,slow=11,SNR=13						
DBIC	**Dimbokro**	**68.31**	**75**	P	P	20 56 20.9	-0.3
	5.2nm,0.7s,baz=222,slow=7.5,SNR=7.5						
TORD	**Torodi Ar. Bea**	**76.73**	**71**	P	P	20 57 10.5	-0.6
	3.1nm,0.5s,baz=255,slow=5.5,SNR=30						
TORD				pP	pP	20 57 42.6	+1.0
	0.3nm,0.6s,baz=248,slow=6.4,SNR=1.1						
YBH	**Yreka Blue Hor**	**77.23**	**322**	P	P	20 57 14.1	+0.6
	1.2nm,0.5s,baz=83,slow=8.1,SNR=2.6						
YKA	**Yellowknife Ar**	**87.84**	**341**	P	P	20 58 06.9	-0.9
	0.7nm,0.4s,baz=133,slow=4.8,SNR=21						
YKA				pP	pP	20 58 38.0	-1.0
	0.3nm,0.5s,baz=133,slow=4.7,SNR=3.2						
ZALV	**Zalesovo Beam**	**139.08**	**23**	PKP	PKPdf	21 04 44.0	-0.8
	0.2nm,0.4s,baz=3.8,slow=4.3,SNR=2.2						
ZALV				pPKP	pPKPdf	21 05 15.7	-1.8
	0.2nm,0.3s,baz=273,slow=38,SNR=1.8						
SONM	**Songino Array**	**150.16**	**6**	PKPbc	PKPbc	21 05 10.3	+0.9
	0.3nm,0.5s,baz=2.9,slow=2.9,SNR=3.3						
SONM				pPKPbc	pPKPbc	21 05 42.0	0.0
	0.1nm,0.3s,baz=298,slow=36,SNR=2.8						

*NNC **29** 20:53:52.9±4.7,39°66N×73°46E,h0km,mb3.5,mpv3.1, Error ellipse: s-maj=44.1km s-min=26.5km az=19.0*

ISC 29 20:54:00.4±4.4,40°1N±0°3×73°54E±0°09,h10km,n9, σ1§26/10,3C-4D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.01**	**3**	P	**Pn**	**20 54 35.9**	**+1.2**
	SNR=28						
UCH	**Uchtor**	**2.23**	**19**	P	Sg	20 55 20.0	+8.0
	SNR=5.0						
KZA	**Kyzart**	**2.34**	**33**	P	**Pn**	**20 54 40.1**	**+0.8**
	SNR=6.3						
EKS2	**Erkin-Say**	**2.54**	**4**	P	**Pb**	**20 54 45.1**	**-1.1**
	SNR=8.6						
KBK	**Karagaybulak**	**2.74**	**22**	P	**Pn**	**20 54 46.8**	**+2.2**
	SNR=7.1						
ULHL	**Ulahol**	**2.94**	**43**	P	**Pb**	**20 54 51.6**	**-1.4**
	SNR=9.1						
TKM2	**Tokmak 2**	**3.19**	**28**	⇑Pn	**Pn**	**20 54 51.6**	**+0.8**
	3.1nm,0.5s						
TKM2				⇑Lg	Lg	20 55 45.7	
	18nm,0.6s						
KK31	**Karatay Array**	**3.74**	**324**	Pn	**Pn**	**20 54 58.8**	**+0.5**
	1.0nm,0.3s,baz=135,slow=13,SNR=64						
KK31				⇓Pg	**Pg**	**20 55 12.0**	**0.0**
	2.2nm,0.4s,baz=145,slow=16,SNR=6.7						
KK31				⇓Sn	**Sb**	**20 55 51.8**	**-0.2**
	2.6nm,0.3s,baz=45,slow=73,SNR=4.8						
KK31				⇑Lg	Lg	20 56 05.0	
	6.9nm,0.5s,baz=147,slow=29,SNR=2.8						
AB31	**Akbulak array**	**13.28**	**318**	⇓Pn	Pn	20 57 04.8	-4.1
	0.2nm,0.4s,baz=119,slow=8.8,SNR=5.3						
AB31				⇓Sn	**Sn**	**20 59 36.6**	**+0.1**
	0.3nm,0.6s						

*BJI **29** 21:31:16.1,11°50S×119°25E,h56km,mB5.1/28,mb4.9/47, Ms4.6/23,Ms7 4.3/22*

*IDC **29** 21:31:19.3±0.5,10°41S×118°90E,h0km,mb4.5/18, mb1 4.7/21,mb1mx4.6/24,mbtmp4.6/21,ML4.7/3,MS3.7/16, Ms1 3.6/16,ms1mx3.5/30,Error ellipse: s-maj=18.2km s-min=11.7km az=68.0*

*AUST **29** 21:31:19.7±1.2,10°54S×118°86E,h0km,Error ellipse: s-maj=0.6km s-min=0.5km az=38.0*

*TEH **29** 21:31:23.0,10°74S×118°76E,h39km,ML4.8*

*NEIC **29** 21:31:24.8±0.8,10°54S×118°83E,h44km±8km,mb4.8/20, Error ellipse: s-maj=9.6km s-min=5.3km az=58.0*

*ISCJB **29** 21:31:24.2±0.4,10°65S±0°03×118°78E±0°02,h58km±4km, mb4.8/54,MS3.8/16,Error ellipse: s-maj=4.8km s-min=3.6km az=25.7*

*DJA **29** 21:31:25.7±0.3,11°S±3°×11°9E±°,h45km±7km,M5.3/29, mB5.7/19,mb5.2/29,MLv5.7/16,Mw(mB)5.3/19*

ISC 29 21:31:26.3±0.3,10°61S±0°04×118°85E±0°03,h59km±2km, n223,σ1§91/250,mb4.8/54,MS3.8/16,1C,South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.71**	**57**	P	**Pn**	**21 31 53.4**	**-0.3**
WSI				S	**Sn**	**21 32 15.3**	**+0.8**
WSI	**Waingapu**	**1.71**	**57**	P	**Pn**	**21 31 53.2**	**-0.5**
	baz=1.7,SNR=213						
WSI				S	**Sn**	**21 32 15.0**	**+0.5**
	baz=1.7,SNR=5.2						
BASI	**Baing, Sumba**	**1.75**	**77**	P	**Pn**	**21 31 54.4**	**+0.1**
BASI				S	**Sn**	**21 32 16.2**	**+0.7**
MMRI	**Maumere**	**3.88**	**60**	P	**Pn**	**21 32 22.7**	**-0.7**
MMRI				S	**Sn**	**21 33 03.5**	**-4.2**
KHKI	**Kahang-Kahang**	**3.89**	**305**	P	**Pn**	**21 32 23.0**	**-0.6**
IGBI	**Denpasar**	**4.06**	**296**	P	**Pn**	**21 32 23.9**	**-2.0**
IGBI				S	**Sn**	**21 33 08.8**	**-3.3**
DNP	**Denpasar**	**4.07**	**298**	P	**Pn**	**21 32 25.0**	**-1.0**
DNP				S	**Sn**	**21 33 11.1**	**-1.2**
BSSI	**Bau Bau, Buton**	**4.72**	**20**	P	**Pn**	**21 32 36.6**	**+1.6**
BYJI	**Banyuwangi**	**5.03**	**298**	P	**Pn**	**21 32 38.6**	**-0.6**
	370nm,0.7s,18µm4.3nm						
ABJI	**Asem Bagus**	**5.34**	**301**	P	Pn	21 32 54.1	+11
BKSI	**Bulukumba**	**5.40**	**14**	P	**Pn**	**21 32 45.0**	**+0.7**
	710nm,0.7s,15µm5.5nm						
BKSI				S	**Sn**	**21 33 42.1**	**-3.1**
	710nm,0.7s,15µm5.5nm						
KAPI	**Kappang**	**5.63**	**9**	*e*Pn	**Pn**	**21 32 47.1**	**-0.3**
KAPI				*e*Sn	**Sn**	**21 33 45.3**	**-5.5**
KAPI				Sn	Sn	21 33 45.9	-4.9
KAPI	**Kappang**	**5.63**	**9**	P	Pn	**21 32 47.1**	**-0.3**
	311nm,1.1s,7µm2.2nm						
KAPI	**Kappang**	**5.63**	**9**	Pn	**Pn**	**21 32 47.1**	**-0.3**
	29nm,0.3s,baz=191,slow=7.5,SNR=55						
KAPI				Sn	**Sn**	**21 33 45.9**	**-4.9**
	129nm,0.3s,baz=146,slow=22,SNR=15						
KAPI				LR	LR	21 35 32.2	
	comp=Z,589nm,20.9s,baz=195,slow=47						
GMJI	**Gumukmas**	**5.81**	**293**	P	**Pn**	**21 32 47.3**	**-2.6**
	260nm,0.8s,12µm						
GMJI				S	**Sn**	**21 33 50.4**	**-4.9**
	260nm,0.8s,12µm						
BLJI	**Banyuglugur**	**5.91**	**298**	P	**Pn**	**21 32 49.7**	**-1.6**
	252nm,0.5s,20µm4.9nm						
KMMI	**Kalianget**	**5.98**	**306**	P	**Pn**	**21 32 53.0**	**+0.8**
	329nm,0.8s,4µm1.2nm						
BBSI	**Bau Bau**	**6.28**	**36**	P	**Pn**	**21 32 56.5**	**+0.1**
	200nm,0.9s,2µm0.7nm						
KRKI	**Karangkates**	**6.76**	**291**	P	**Pn**	**21 33 03.1**	**+0.2**
	384nm,0.5s,55µm15nm						
PWJI	**Pagerwojo**	**7.41**	**290**	P	**Pn**	**21 33 08.7**	**-3.1**
	146nm,0.6s,12µm3.3nm						
SJI	**Sawahan**	**7.55**	**292**	P	**Pn**	**21 33 13.7**	**-0.1**
	144nm,0.3s,12µm3.2nm						
TTSI	**Tana Toraja**	**7.57**	**7**	P	**Pn**	**21 33 16.7**	**+2.6**
	178nm,0.8s						
KBKI	**Kotabaru**	**7.73**	**340**	P	**Pn**	**21 33 16.8**	**+0.6**
	86nm,0.7s						
PCJI	**Pacitan**	**7.94**	**287**	P	Pn	21 33 15.5	-3.5
	140nm,0.6s,7µm3.2nm						
BBKI	**Banjar Baru**	**8.13**	**330**	P	**Pn**	**21 33 22.7**	**+0.9**
	421nm,1.2s,7µm						
SKSI	**Soroako, Sulaw**	**8.40**	**17**	P	Pn	21 33 29.3	+3.9
UGM	**Wanagama**	**8.64**	**287**	*e*Pn	Pn	21 33 25.4	-3.4
UGM	**Wanagama**	**8.64**	**287**	P	Pn	21 33 25.3	-3.4
	baz=8.6,SNR=15						
UGM				S	Sn	21 34 57.8	-7.0
	baz=8.6,SNR=7.6						
BJII	**Banjamegara**	**9.59**	**289**	P	Pn	21 33 47.2	+5.4
PCI	**Palu**	**9.69**	**6**	S	**Sn**	**21 35 24.9**	**-5.5**
	baz=9.7,SNR=11						
FITZ	**Fitzroy Crossi**	**9.94**	**139**	*e*Pn	**Pn**	**21 33 45.9**	**-0.6**
FITZ				*e*Sn	**Sn**	**21 35 31.1**	**-5.4**
FITZ	**Fitzroy Crossi**	**9.94**	**139**	Pn	**Pn**	**21 33 45.6**	**-0.8**
	8.4nm,0.3s,baz=326,slow=9.1,SNR=206						
FITZ				Sn	Sn	21 35 29.7	-6.8
	17nm,0.3s,baz=166,slow=18,SNR=17						
FITZ				LR	LR	21 37 44.4	
	comp=Z,437nm,19.6s,baz=327,slow=38						
FITZ	**Fitzroy Crossi**	**9.94**	**139**	P	**Pn**	**21 33 45.4**	**-1.0**
	baz=10.0,SNR=184						
FITZ				S	**Sn**	**21 35 30.6**	**-6.0**
	baz=10.0,SNR=12						
SMKI	**Samarinda**	**10.22**	**351**	P	Pn	21 33 53.5	+3.1
TGJI	**Tegal**	**10.30**	**290**	P	**Pn**	**21 33 48.8**	**-2.7**
	42nm,0.9s						
MTKI	**Muara Teweh, K**	**10.37**	**338**	P	**Pn**	**21 33 54.1**	**+1.7**
	130nm,0.8s						
MBWA	**Marble Bar**	**10.53**	**175**	*e*Pn	**Pn**	**21 33 53.7**	**-0.7**
MBWA				*e*Sn	Sn	21 35 38.6	-12
PBKI	**Pangkalan Bun**	**10.60**	**317**	P	**Pn**	**21 33 56.6**	**+1.1**
	186nm,1.3s,2µm						
CISI	**Cisompet, Garu**	**11.31**	**285**	P	Pn	21 34 00.8	-4.4
	77nm,0.7s,2µm						
CISI	**Cisompet, Garu**	**11.31**	**285**	P	Pn	21 34 01.1	-4.1
	baz=11,SNR=24						
CISI				S	Sn	21 35 57.8	-12
	baz=11,SNR=5.4						
MRSI	**Marisa**	**11.43**	**16**	P	**Pn**	**21 34 08.0**	**+1.1**
	55nm,1.2s						
LEM	**Lembang**	**11.72**	**288**	P	Pn	21 34 18.9	+8.0
MTN	**Manton Dam**	**12.24**	**102**	P	**Pn**	**21 34 15.5**	**-2.3**
	baz=12,SNR=15						
MTN				S	Sn	21 36 22.1	-11
	baz=12,SNR=13						
DBJI	**Dramaga**	**12.62**	**288**	P	**Pn**	**21 34 21.5**	**-1.6**
	64nm,0.7s						
GIRL	**Giralia**	**12.76**	**200**	P	**Pn**	**21 34 25.2**	**+0.3**
	baz=13,SNR=24						
STKI	**Sintang**	**12.89**	**325**	P	**Pn**	**21 34 28.9**	**+2.1**
	69nm,0.9s						
XMI	**Christmas Isla**	**12.94**	**269**	P	**Pn**	**21 34 25.6**	**-1.9**
	baz=13,SNR=3.4						
XMI				S	Sn	21 36 37.5	-12
	baz=13,SNR=6.6						
XMIS	**Christmas Isla**	**12.97**	**269**	*e*Pn	Pn	21 34 22.2	-5.7
XMIS				*e*Sn	Sn	21 36 30.9	-20
XMIS	**Christmas Isla**	**12.97**	**269**	P	Pn	21 34 22.4	-5.5
	baz=13,SNR=5.5						
XMIS				S	Sn	21 36 33.8	-17
	baz=13,SNR=5.6						
KDU	**Kakadu**	**13.51**	**100**	S	Sn	21 36 55.4	-8.3
	baz=14,SNR=4.9						
CGJI	**Cibinong**	**13.60**	**286**	P	Pn	21 34 32.3	-4.1
SBUM	**Sibu**	**14.55**	**333**	P	**Pn**	**21 34 50.3**	**+1.2**
SBUM	**Sibu**	**14.55**	**333**	P	**Pn**	**21 34 49.3**	**+0.3**
	87nm,1.2s,879nm						
TLE	**Tual**	**14.61**	**71**	P	Pn	21 34 45.8	-4.0
	baz=15,SNR=5.0						
KSM	**Kuching**	**14.70**	**324**	*e*Pn	**Pn**	**21 34 51.8**	**+0.8**
KSM	**Kuching**	**14.70**	**324**	P	**Pn**	**21 34 51.4**	**+0.4**
KSM	**Kuching**	**14.70**	**324**	P	**P**	**21 34 56.6**	**+0.8**
	baz=15,SNR=13						
TSM	**Tawau**	**14.83**	**356**	P	**P**	**21 34 56.2**	**-1.0**
BTM	**Bintulu**	**14.87**	**337**	P	**Pn**	**21 34 55.0**	**+1.9**
FAKI	**Fak Fak**	**15.34**	**61**	P	**Pn**	**21 34 55.6**	**-3.7**
	baz=15,SNR=8.1						
FAKI				S	**Sn**	**21 37 47.8**	**-0.4**
	baz=15,SNR=4.1						
LWLI	**Liwa**	**15.66**	**290**	P	**P**	**21 35 08.0**	**+1.5**
SWI	**Sorong**	**15.68**	**53**	P	**Pn**	**21 35 00.6**	**-3.1**
	baz=16,SNR=4.9						
MYLDM	**Lahad Datu**	**15.69**	**359**	P	**P**	**21 35 07.1**	**+0.4**
MEEK	**Meekatharra**	**15.95**	**181**	P	**Pn**	**21 35 05.9**	**-1.0**
	baz=16,SNR=176						
MEEK				S	Sn	21 37 46.3	-17
	baz=16,SNR=21						
SDKM	**Sandakan**	**16.22**	**354**	P	**P**	**21 35 13.6**	**+0.9**
KKM	**Kota Kinabalu**	**16.75**	**351**	*e*Pn	**Pn**	**21 35 16.9**	**-0.2**
KKM	**Kota Kinabalu**	**16.75**	**351**	P	**P**	**21 35 18.1**	**-0.4**
KKM	**Kota Kinabalu**	**16.75**	**351**	P	**P**	**21 35 18.1**	**-0.4**
	baz=17,SNR=15						
KDM	**Kudat**	**17.52**	**353**	P	**P**	**21 35 29.8**	**+2.8**
WRA	**Warramunga Arr**	**17.58**	**124**	P	**Pn**	**21 35 26.3**	**-1.1**
WRA				S	Sn	21 38 26.5	-16
WRA	**Warramunga Arr**	**17.58**	**124**	P	**Pn**	**21 35 26.3**	**-1.1**
	2.3nm,0.3s,baz=295,slow=13,SNR=115						
WRA				S	Sn	21 38 26.5	-16
	2.2nm,0.3s,baz=293,slow=23,SNR=5.8						
WRAB	**Tennant Creek**	**17.59**	**124**	*e*Pn	**Pn**	**21 35 26.9**	**-0.5**
	22nm,0.8s						
WRAB				*e*Sn	Sn	21 38 27.7	-15
MORW	**Morawa**	**18.55**	**188**	P	**Pn**	**21 35 39.6**	**+0.6**
	baz=19,SNR=121						
MORW				S	Sn	21 38 48.7	-17
	baz=19,SNR=9.8						
DAV	**Davao City (W)**	**18.80**	**21**	LR	LR	21 42 40.9	
	comp=Z,215nm,21.4s,baz=268,slow=37						
MYKOM	**Kota Tinggi**	**19.35**	**309**	P	**P**	**21 35 46.1**	**-1.0**
ASAR	**Alice Springs**	**19.36**	**134**	P	**Pn**	**21 35 48.9**	**+0.1**
ASAR				S	S	21 39 12.0	-11
ASAR	**Alice Springs**	**19.36**	**134**	P	**Pn**	**21 35 48.9**	**+0.1**
	1.3nm,0.3s,baz=319,slow=14,SNR=106						
ASAR				S	S	21 39 12.0	-11
	1.1nm,0.3s,baz=307,slow=23,SNR=9.0						
ASAR				LR	LR	21 43 45.2	
	comp=Z,125nm,21.5s,baz=307,slow=38						
AS31	**Alice Springs**	**19.36**	**134**	*e*Pn	**Pn**	**21 35 48.7**	**-0.1**
AS31				*e*Sn	S	21 39 14.4	-8.9
KGM	**Kluang**	**19.90**	**308**	P	**P**	**21 35 53.0**	**-0.1**
BLDU	**Ballidu**	**20.01**	**185**	P	Pn	21 35 57.1	+0.7
	baz=20,SNR=12						
BKNI	**Bangkinang**	**20.77**	**300**	P	Pn	21 36 04.1	-1.5
	baz=21,SNR=5.1						
KMBL	**Kambalda**	**20.85**	**173**	P	Pn	21 36 05.6	-0.7
	baz=21,SNR=34						
KMBL				S	S	21 39 44.0	-8.6
	baz=21,SNR=5.7						
KLBR	**Kellerberrin**	**20.91**	**183**	P	Pn	21 36 12.3	+5.3
	baz=21,SNR=23						
KLBR				S	S	21 39 41.8	-12
	baz=21,SNR=8.8						
FORT	**Forrest**	**21.82**	**158**	*e*P	**P**	**21 36 12.9**	**-0.7**
	112nm,0.7s						
FRIM	**Kepong**	**21.98**	**308**	P	**P**	**21 36 15.2**	**-0.3**
KTGM	**Kuala Trenggan**	**22.26**	**315**	P	**P**	**21 36 19.2**	**+0.7**
NWAO	**Narrogin (SRO)**	**22.26**	**184**	*e*P	**P**	**21 36 20.9**	**+2.5**
NWAO				S	**S**	**21 40 13.1**	**-6.7**
NWAO	**Narrogin (SRO)**	**22.26**	**184**	P	**P**	**21 36 20.2**	**+1.8**
	8.9nm,0.7s,baz=3.5,slow=13,SNR=6.1						
NWAO				S	**S**	**21 40 13.1**	**-6.7**
	30nm,0.4s,baz=91,slow=19,SNR=6.7						
NWAO				LR	LR	21 44 50.4	
	comp=Z,266nm,19.3s,baz=260,slow=36						
QIS	**Mount Isa**	**22.29**	**119**	P	**P**	**21 36 20.9**	**+2.1**
	baz=22,SNR=11						
QIS				S	**S**	**21 40 18.3**	**-2.2**
	baz=22,SNR=5.3						
JAY	**Jayapura**	**23.14**	**71**	P	**P**	**21 36 27.2**	**-0.6**
	baz=23,SNR=4.7						
IPM	**Ipoh**	**23.23**	**309**	*e*P	**P**	**21 36 28.9**	**+0.3**
	14nm,0.9s						
IPM	**Ipoh**	**23.23**	**309**	P	**P**	**21 36 28.8**	**+0.3**
PALU	**Palau**	**23.67**	**42**	S	S	21 40 31.2	-12
	baz=24,SNR=3.8						
PSI	**Prapat**	**23.89**	**303**	P	**P**	**21 36 34.5**	**-0.3**
PSI	**Prapat**	**23.89**	**303**	P	**P**	**21 36 34.5**	**-0.3**
	24nm,0.5s,baz=158,slow=9.7,SNR=22						
PSI	**Prapat**	**23.89**	**303**	P	**P**	**21 36 34.4**	**-0.4**
	baz=24,SNR=15						
PSI				S	**S**	**21 40 50.4**	**+3.2**
	baz=24,SNR=8.1						
COEN	**Coen**	**24.00**	**100**	*e*P	**P**	**21 36 36.9**	**+1.1**
	114nm,0.8s						
COEN	**Coen**	**24.00**	**100**	P	**P**	**21 36 36.6**	**+0.9**
	baz=24,SNR=5.4						
COEN				S	Sn	21 41 03.2	-14
	baz=24,SNR=4.1						
KULM	**Kulim**	**24.03**	**310**	*e*P	**P**	**21 36 34.9**	**-1.1**
	8.1nm,0.8s						
KULM	**Kulim**	**24.03**	**310**	P	**P**	**21 36 36.3**	**+0.3**
GSI	**Gunungsitoli**	**24.25**	**298**	P	**P**	**21 36 37.8**	**-0.2**
	baz=24,SNR=7.8						
GSI				S	**S**	**21 40 52.0**	**-0.7**
	baz=24,SNR=4.8						
TGY	**Tagaytay City**	**24.64**	**5**	P	**P**	**21 36 41.8**	**+0.4**
TGY	**Tagaytay City**	**24.64**	**5**	P	**P**	**21 36 41.8**	**+0.4**
	367nm,0.9s,baz=191,slow=5.7,SNR=13						
MTSU	**Mount Surprise**	**25.76**	**110**	P	**P**	**21 36 54.0**	**+2.2**
	baz=26,SNR=7.2						
BBOO	**Buckleboo**	**27.20**	**147**	*e*P	**P**	**21 37 06.7**	**+2.3**
	343nm,0.9s						
CTA	**Charters Tower**	**28.02**	**113**	P	**P**	**21 37 11.5**	**-0.5**
CTA	**Charters Tower**	**28.02**	**113**	P	**P**	**21 37 11.5**	**-0.5**
	4.5nm,1.0s,baz=282,slow=19,SNR=2.6						
UBPT	**Khong Chiam**	**28.93**	**333**	P	**P**	**21 37 20.2**	**+0.2**
	19nm,1.3s,1µm						
STKA	**Stephens Creek**	**29.84**	**139**	*e*P	**P**	**21 37 27.4**	**-0.5**
	2.8nm,0.8s						
STKA	**Stephens Creek**	**29.84**	**139**	P	**P**	**21 37 29.0**	**+1.0**
	1.4nm,0.7s,baz=266,slow=8.4,SNR=5.5						
STKA				LR	LR	21 50 54.9	
	comp=Z,185nm,20.9s,baz=112,slow=39						
QIZ	**Qiongzhong**	**30.76**	**343**	P	**P**	**21 37 37.5**	**+1.3**
QIZ				S	S	21 42 42.3	+7.0
QIZ				LR	LR		
	comp=Z,410nm,4.7s						
CM31	**Chiang Mai Arr**	**34.92**	**326**	*e*P	**P**	**21 38 12.3**	**-0.3**
	comp=Z,3.9nm,0.4s						
CMAR	**Chiang Mai Arr**	**34.92**	**326**	P	**P**	**21 38 12.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**34.92**	**326**	P	**P**	**21 38 12.3**	**-0.3**
	comp=Z,4.1nm,0.5s,baz=156,slow=7.1,SNR=57						
CMMT	**Chiang Mai**	**35.21**	**326**	P	**P**	**21 38 15.4**	**+0.3**
	comp=Z,9.6nm,1.1s,comp=Z,415nm						
CHTO	**Chiang Mai**	**35.21**	**326**	*e*P	**P**	**21 38 14.8**	**-0.3**
	comp=Z,6.1nm,0.9s						
CHTO	**Chiang Mai**	**35.21**	**326**	P	**P**	**21 38 14.9**	**-0.2**
GYA	**Guiyang**	**38.70**	**342**	P	**P**	**21 38 45.8**	**+1.1**
GYA				pP	**pP**	**21 39 01.3**	**+1.6**
GYA				sP	**sP**	**21 39 08.5**	**+1.8**
GYA				PP	**PnPn**	**21 40 19.0**	**+2.0**
GYA				S	**ScP**	**21 44 40.0**	**+1.1**
GYA				sS	**sS**	**21 45 06.0**	**+2.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=N,480nm,17.2s						
GYA				LR	LR		
	comp=E,440nm,18.8s						
GYA				LR	LR		
	comp=Z,410nm,17.4s						
KMI	**Kunming**	**38.83**	**336**	P	**pP**	**21 39 02.5**	**+1.5**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KMI	**Kunming**	**38.83**	**336**	P	**P**	**21 38 46.5**	**+0.5**
KMI				pP	**pP**	**21 38 57.3**	**-3.7**
KMI				sP	**sP**	**21 39 03.0**	**-4.9**
KMI				S	S	21 44 47.0	+7.2
KMI				SS	**SS**	**21 47 32.3**	**-0.9**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KMI				LR	LR		
	comp=N,160nm,23.0s						
KMI				LR	LR		
	comp=E,140nm,19.5s						
KMI				LR	LR		
	comp=Z,160nm,25.3s						
WHN	**Wuhan**	**41.14**	**354**	P	**P**	**21 39 05.0**	**+0.3**
WHN				pmax	pmax		
	comp=Z,100nm,1.1s						
NJ2	**Nanjing**	**42.42**	**0**	*

BJI	**Beijing**	**50.45 357**		P	**P**	**21 40 16.5**	**-1.5**
BJI				S	S	21 47 34.3	+7.0
BJI				pmax	pmax		
	comp=Z,52nm,0.7s						
BJI				pmax	pmax		
	comp=Z,130nm,6.1s						
KOLN	**Koldanda**	**51.19 319**	*eP*	**P**		**21 40 22.9**	**-1.2**
	comp=Z,19nm,0.6s						
DANN	**Dangsing**	**51.49 320**	*eP*	**P**		**21 40 25.4**	**-1.0**
	comp=Z,52nm,0.6s						
HHC	**Hu-ho-hao-te**	**51.64 353**	*eP*	**P**		**21 40 25.8**	**-1.2**
HHC				S	**S**	**21 47 42.5**	**-1.5**
HHC				pmax	pmax		
	comp=Z,45nm,0.7s						
HHC				pmax	pmax		
	comp=Z,220nm,6.6s						
PYUN	**Piuthan**	**51.81 319**	*eP*	**P**		**21 40 27.6**	**-1.1**
	comp=Z,73nm,0.9s						
GTA	**Gaotai**	**52.82 342**	⇑P	**P**		**21 40 36.0**	**+0.1**
GTA			pP	**pP**		**21 40 47.3**	**-4.2**
GTA			sP	sP		21 40 51.0	-7.3
GTA			S	**S**		**21 48 02.3**	**+2.1**
GTA			pmax	pmax			
	comp=Z,26nm,0.9s						
GTA			pmax	pmax			
	comp=Z,100nm,6.7s						
MDJ	**Mudanjiang**	**55.82 9**	*eP*	**P**		**21 40 56.4**	**-1.0**
	comp=Z,19nm,0.8s						
USRK	**Ussuriysk Arra**	**55.84 11**	P	**P**		**21 40 56.7**	**-0.8**
	comp=Z,6.8nm,0.5s,baz=188,slow=6.7,SNR=27						
USRK			LR	LR		22 04 08.0	
	comp=Z,56nm,20.1s,baz=101,slow=35						
ASAJ	**Asahikawa**	**58.58 20**	LR	LR		22 06 08.4	
	comp=Z,39nm,18.3s,baz=285,slow=36						
SONM	**Songino Array**	**59.23 350**	P	**P**		**21 41 21.0**	**-0.4**
SONM	**Songino Array**	**59.23 350**	P	**P**		**21 41 21.0**	**-0.4**
	comp=Z,15nm,0.8s,baz=166,slow=8.4,SNR=82						
SONM			LR	LR		22 08 14.8	
	comp=Z,50nm,20.9s,baz=82,slow=38						
WMQ	**Urumqi**	**61.13 335**	P	**P**		**21 41 34.0**	**-0.5**
WMQ			pP	**pP**		**21 41 50.0**	**-0.5**
WMQ			sP	**sP**		**21 41 57.0**	**-0.2**
WMQ			PcP	**PcP**		**21 42 16.0**	**-0.9**
WMQ			PP	**PP**		**21 43 51.0**	**+1.1**
WMQ			ScP	**ScP**		**21 46 11.0**	**-2.5**
WMQ			S	**S**		**21 49 46.0**	**-3.5**
WMQ			pmax	pmax			
	comp=Z,24nm,1.0s						
WMQ			pmax	pmax			
	comp=Z,130nm,5.0s						
WMQ			LR	LR			
	comp=N,130nm,18.0s						
WMQ			LR	LR			
	comp=E,110nm,18.0s						
WMQ			LR	LR			
	comp=Z,130nm,18.0s						
KSH	**Kashi**	**63.80 324**	*eP*	**P**		**21 41 52.0**	**-0.5**
KSH			pP	**pP**		**21 42 09.5**	**+0.9**
KSH			sP	**sP**		**21 42 15.5**	**+0.2**
KSH			PcP	**PcP**		**21 42 27.3**	**-0.7**
KSH			PP	**PP**		**21 44 15.5**	**+1.9**
KSH			ScP			21 46 23.3	
KSH			PcS			21 46 30.0	
KSH			S	**S**		**21 50 17.5**	**-5.9**
KSH			sS	**sS**		**21 50 50.5**	**0.0**
KSH			ScS	**SKSac**		**21 51 36.5**	**-4.7**
KSH			SS	**SS**		**21 54 33.5**	**+0.8**
KSH			pmax	pmax			
	comp=Z,5.0nm,0.5s						
KSH			pmax	pmax			
	comp=Z,51nm,0.9s						
KSH			LR	LR			
	comp=N,230nm,6.4s						
KSH			LR	LR			
	comp=E,220nm,6.3s						
KSH			LR	LR			
	comp=Z,350nm,5.2s						
KBL	**Kabul**	**65.13 316**	*eP*	**P**		**21 41 59.9**	**-1.6**
	comp=Z,18nm,0.8s						
KBL	**Kabul**	**65.13 316**	P	**P**		**21 42 00.9**	**-0.5**
	baz=65,SNR=17						
MK31	**Makanchi Array**	**65.81 333**	*eP*	**P**		**21 42 04.7**	**-0.7**
MKAR	**Makanchi Array**	**65.81 333**	P	**P**		**21 42 05.0**	**-0.4**
MKAR	**Makanchi Array**	**65.81 333**	P	**P**		**21 42 05.0**	**-0.4**
	comp=Z,12nm,0.7s,baz=153,slow=6.6,SNR=148						
MKAR			LR	LR		22 14 28.9	
	comp=Z,41nm,18.4s,baz=170,slow=39						
KZA	**Kyzart**	**65.92 326**	P	**P**		**21 42 06.9**	**+0.3**
	SNR=19						
TKM2	**Tokmak 2**	**66.30 327**	P	**P**		**21 42 08.7**	**-0.1**
	SNR=7.9						
KBK	**Karagaybulak**	**66.48 326**	P	**P**		**21 42 10.1**	**+0.2**
	SNR=12						
AAK	**Ala-Archa**	**66.71 326**	*eP*	**P**		**21 42 10.9**	**-0.4**
	comp=Z,12nm,0.6s						
AAK	**Ala-Archa**	**66.71 326**	LR	LR		22 16 17.9	
	comp=Z,66nm,21.0s,baz=324,slow=40						
AML	**Almayashu**	**66.83 325**	P	**P**		**21 42 12.4**	**0.0**
	SNR=34						
EKS2	**Erkin-Say**	**67.13 325**	*eP*	**P**		**21 42 14.7**	**+0.7**
	comp=Z,13nm,0.8s						
EKS2	**Erkin-Say**	**67.13 325**	P	**P**		**21 42 14.3**	**+0.4**
	SNR=20						
USP	**Ospenovka**	**67.13 326**	P	**P**		**21 42 13.6**	**-0.3**
	SNR=10						
MAW	**Mawson**	**67.68 200**	LR	LR		22 07 35.4	
	comp=Z,70nm,20.4s,baz=121,slow=32						
KKAR	**Karatay Array**	**69.26 324**	*eP*	**P**		**21 42 26.3**	**-0.8**
	comp=Z,2.6nm,0.7s						
ABPO	**Ambohimpanom**	**69.36 254**	*eP*	**P**		**21 42 27.5**	**-1.0**
	comp=Z,5.5nm,0.8s						
OPO	**Ambohidratompo**	**69.43 254**	P	**P**		**21 42 29.8**	**+0.8**
OPO	**Ambohidratompo**	**69.43 254**	P	**P**		**21 42 29.8**	**+0.8**
	comp=Z,3.2nm,0.9s,baz=94,slow=4.7,SNR=7.9						
KURK	**Kurchatov**	**70.36 334**	*eP*	**P**		**21 42 32.7**	**-1.0**
	comp=Z,12nm,1.0s						
VNDA	**Vanda**	**70.43 171**	P	**P**		**21 42 36.1**	**+2.3**
VNDA	**Vanda**	**70.43 171**	P	**P**		**21 42 36.1**	**+2.3**
	comp=Z,2.5nm,0.9s,baz=270,slow=4.3,SNR=6.2						
VNDA			LR	LR		22 11 47.0	
	comp=Z,61nm,18.9s,baz=315,slow=34						
ZAA0	**Zalesovo Array**	**70.48 339**	*eP*	**P**		**21 42 32.8**	**-1.6**
ZALV	**Zalesovo Beam**	**70.48 339**	P	**P**		**21 42 33.1**	**-1.3**
ZALV	**Zalesovo Beam**	**70.48 339**	P	**P**		**21 42 33.1**	**-1.3**
	comp=Z,16nm,0.6s,baz=143,slow=5.3,SNR=80						
IDAH	**Dahanechah**	**70.82 310**	*eP*	**P**		**21 42 37.8**	**+0.6**
PETK	**Petropavlovsk-**	**71.60 23**	P	**P**		**21 42 41.5**	**+0.4**
PETK	**Petropavlovsk-**	**71.60 23**	P	**P**		**21 42 41.5**	**+0.4**
	comp=Z,3.1nm,0.7s,baz=197,slow=8.9,SNR=2.2						
IMYA	**Miami**	**72.30 314**	*eP*	**P**		**21 42 46.6**	**+0.6**
IMOG	**Moghan**	**72.74 313**	*ePn*	**P**		**21 42 49.5**	**+0.7**
IPAY	**Payeh**	**73.14 313**	*eP*	**P**		**21 42 52.9**	**+1.8**
IBAF	**Bafgh**	**73.62 307**	*eP*	**P**		**21 42 54.6**	**+0.7**
IKRD	**Kardeh**	**73.64 313**	*eP*	**P**		**21 42 51.1**	**-2.9**
ISFR	**Sfrayin**	**74.13 313**	*eP*	**P**		**21 42 56.3**	**-0.6**
IMEH	**Mehriz**	**74.29 307**	*eP*	**P**		**21 42 57.9**	**0.0**
IPIR	**Pirpir**	**77.71 307**	*eP*	**P**		**21 43 18.7**	**+1.3**
ABKAR	**Akbulak array**	**78.78 325**	*eP*	**P**		**21 43 22.5**	**-0.1**
	comp=Z,4.1nm,0.6s						
KBD	**Kabd**	**79.10 303**	*eP*	P		21 43 28.1	+3.4
RDF	**Al-Radifah**	**79.14 302**	*eP*	**P**		**21 43 27.8**	**+2.8**
RDF			AMb	AMB		21 43 31.6	
	comp=Z,80nm,1.4s						
NAY	**Al-Naaiem**	**79.50 303**	*eP*	**P**		**21 43 29.7**	**+2.8**
NAY			AMb	AMB		21 43 38.7	
	comp=Z,25nm,1.6s						
KMBO	**Kilima Mbogo**	**81.53 270**	*eP*	**P**		**21 43 37.2**	**-1.3**
KMBO	**Kilima Mbogo**	**81.53 270**	P	**P**		**21 43 40.9**	**+2.4**
	comp=Z,1.3nm,0.7s,baz=78,slow=22,SNR=5.4						
KBZ	**Khabaz**	**87.30 315**	P	**P**		**21 44 08.4**	**+1.7**
KBZ	**Khabaz**	**87.30 315**	P	**P**		**21 44 08.4**	**+1.7**
	comp=Z,2.2nm,0.9s,baz=137,slow=5.4,SNR=5.1						
BOSA	**Boshof**	**88.11 241**	P	**P**		**21 44 12.9**	**+1.8**
BOSA	**Boshof**	**88.11 241**	P	**P**		**21 44 12.9**	**+1.8**
	comp=Z,2.1nm,0.7s,baz=318,slow=14,SNR=5.6						
BOSA			LR	LR		22 17 08.6	
	comp=Z,85nm,18.7s,baz=270,slow=31						
MALT	**Malatya**	**89.09 309**	*eP*	**P**		**21 44 14.8**	**-0.7**
	comp=Z,5.0nm,0.9s						
BRTR	**Keskin Array B**	**93.04 310**	P	**P**		**21 44 34.1**	**+0.3**
BRTR	**Keskin Array B**	**93.04 310**	P	**P**		**21 44 34.1**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=137,slow=6.3,SNR=5.9						
FINES	**FINESS Array B**	**100.56 331**	P	**Pdif**		**21 45 07.0**	**-0.1**
FINES	**FINESS Array B**	**100.56 331**	P	**Pdif**		**21 45 07.0**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=79,slow=9.9,SNR=5.0						
KOLS	**Kolonicke sedl**	**102.22 318**	PDIF	**Pdif**		**21 45 16.7**	**+1.8**
VYHS	**Vyhne**	**104.49 317**	PDIF	**Pdif**		**21 45 26.3**	**+1.3**
TORD	**Torodi Ar. Bea**	**118.58 279**	PKP	**PKPdf**		**21 50 10.2**	**+1.8**
TORD	**Torodi Ar. Bea**	**118.58 279**	PKP	**PKPdf**		**21 50 10.2**	**+1.8**
	comp=Z,1.7nm,0.7s,baz=66,slow=1.7,SNR=12						
NVAR	**Mina Array Bea**	**122.14 51**	PKP	**PKPdf**		**21 50 17.5**	**+2.5**
NVAR	**Mina Array Bea**	**122.14 51**	PKP	**PKPdf**		**21 50 17.5**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=270,slow=1.8,SNR=2.0						
DBIC	**Dimbokro**	**124.26 271**	PKP	**PKPdf**		**21 50 21.4**	**+1.9**
DBIC	**Dimbokro**	**124.26 271**	PKP	**PKPdf**		**21 50 21.4**	**+1.9**
	comp=Z,3.1nm,0.8s,baz=78,slow=2.3,SNR=6.2						
TXAR	**Lajitas Array**	**136.21 59**	PKP	**PKPdf**		**21 50 45.8**	**+4.0**
TXAR	**Lajitas Array**	**136.21 59**	PKP	**PKPdf**		**21 50 45.8**	**+4.0**
	comp=Z,0.3nm,0.8s,baz=357,slow=3.8,SNR=3.0						
CPUP	**Villa Florida**	**143.10 186**	PKP	**PKPdf**		**21 50 55.2**	**+0.9**
CPUP	**Villa Florida**	**143.10 186**	PKP	**PKPdf**		**21 50 55.2**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=80,slow=6.1,SNR=1.9						
LVC	**Limon Verde**	**146.12 167**	PKP	**PKPdf**		**21 50 58.9**	**-1.1**
BDFB	**Brasilia**	**150.85 207**	PKPbc	**PKPbc**		**21 51 15.3**	**+2.0**
BDFB	**Brasilia**	**150.85 207**	PKPbc	**PKPbc**		**21 51 15.3**	**+2.0**
	comp=Z,1.5nm,0.4s,baz=186,slow=8.9,SNR=3.3						
LPAZ	**La Paz**	**152.40 165**	PKPbc	**PKPbc**		**21 51 20.5**	**+3.0**
LPAZ			PKPab	**PKPab**		**21 51 29.9**	**+2.4**
LPAZ	**La Paz**	**152.40 165**	PKPbc	**PKPbc**		**21 51 20.5**	**+3.0**
	comp=Z,0.9nm,0.8s,baz=170,slow=4.4,SNR=6.5						
LPAZ			PKPab	**PKPab**		**21 51 29.9**	**+2.4**
	comp=Z,2.6nm,0.9s,baz=172,slow=4.5,SNR=8.9						

*ISK **29** 21:31:52.2, 37.57N×35.56E, h8km, MD2.6*
*CSEM **29** 21:31:53.9±0.5, 37.52N×35.61E, h20km, MD2.6, Error ellipse: s-maj=13.8km s-min=12.3km az=51.0*
*ISCJB **29** 21:31:54.3±0.8, 37.49N±0.04×35.64E±0.06, h8km±7km, Error ellipse: s-maj=8.6km s-min=6.7km az=25.5*
*DDA **29** 21:31:55.0, 37.47N×35.72E, h6km, MD2.7*
ISC 29 21:31:53.8±0.9, **37.52N**±0.03×**35.61E**±0.03, **h13**km±7km, **n22**, σ1§**28**/**32**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.17**	**102**	*e*PG	**Pg**	**21 31 58.2**	**+0.4**
KOZT				*e*SG	**Sg**	**21 32 00.6**	**0.0**
KOZT	**Kozan**	**0.17**	**102**	*e*Pg	**Pg**	**21 31 58.2**	**+0.4**
KOZT				*e*Sg	**Sg**	**21 32 00.6**	**0.0**
CEYT	**Ceyhan**	**0.52**	**168**	*e*PG	**Pg**	**21 32 03.6**	**-0.3**
CEYT				*e*SG	**Sb**	**21 32 12.9**	**+0.9**
CEYT	**Ceyhan**	**0.52**	**168**	*e*Pg	**Pg**	**21 32 03.6**	**-0.3**
CEYT				*e*Sg	**Sb**	**21 32 12.9**	**+0.9**
GULE	**Gulek**	**0.70**	**251**	*i* P	**Pn**	**21 32 09.9**	**+0.3**
GULE				*i* S	**Sn**	**21 32 22.4**	**+2.0**
GULE	**Gulek**	**0.70**	**251**	*i* P	**Pn**	**21 32 09.9**	**+0.3**
GULE				*i* S	**Sn**	**21 32 22.4**	**+2.0**
KRTS	**Karatas**	**0.96**	**192**	*e*PG	**Pb**	**21 32 11.5**	**-0.7**
KRTS	**Karatas**	**0.96**	**192**	*e*Pg	**Pb**	**21 32 11.5**	**-0.7**
NIG	**Nigde**	**0.99**	**307**	*e*PG	**Pb**	**21 32 10.1**	**-2.9**
NIG	**Nigde**	**0.99**	**307**	*e*Pg	**Pb**	**21 32 10.1**	**-2.9**
KMRS	**Kahramanmaras**	**1.02**	**90**	*e*PG	**Pb**	**21 32 13.0**	**-0.4**
KMRS	**Kahramanmaras**	**1.02**	**90**	*e*Pg	**Pb**	**21 32 13.0**	**-0.4**
PINB	**Pinarbasi**	**1.32**	**28**	*e*P	**Pg**	**21 32 19.9**	**+0.8**
PINB				*i* S	**Sg**	**21 32 38.6**	**+2.4**
PINB	**Pinarbasi**	**1.32**	**28**	*e*P	**Pg**	**21 32 19.9**	**+0.8**
PINB				*i* S	**Sg**	**21 32 38.6**	**+2.4**
BNN	**Bunyan**	**1.35**	**8**	*e*PN	**Pn**	**21 32 17.4**	**-1.0**
BNN	**Bunyan**	**1.35**	**8**	*e*Pn	**Pn**	**21 32 17.4**	**-1.0**
KUZU	**Kuzuini**	**1.38**	**122**	*e*P	**Pn**	**21 32 17.8**	**-1.0**
KUZU				*i* S	**Sn**	**21 32 36.4**	**-0.6**
KUZU	**Kuzuini**	**1.38**	**122**	*e*P	**Pn**	**21 32 17.8**	**-1.0**
KUZU				*i* S	**Sn**	**21 32 36.4**	**-0.6**
SARI	**SarD1z-Kayseri**	**1.44**	**36**	*e*PG	Pn	21 32 13.4	-6.3
SARI	**SarD1z-Kayseri**	**1.44**	**36**	*e*Pg	Pn	21 32 13.4	-6.3
AKCD	**Akcadag**	**1.99**	**66**	*i* P	**Pg**	**21 32 31.7**	**-0.1**
AKCD				*i* S	**Sg**	**21 32 58.3**	**+0.7**
AKCD	**Akcadag**	**1.99**	**66**	*i* P	**Pg**	**21 32 31.7**	**-0.1**
AKCD				*i* S	**Sg**	**21 32 58.3**	**+0.7**

*ISCJB **29** 21:39:25.3±0.5, 8.37S±0.06×108.38E±0.04, h55km, Error ellipse: s-maj=9.3km s-min=4.8km az=154.7*
*AUST **29** 21:39:26.2, 8.39S×108.38E, h35km*
*DJA **29** 21:39:28.0±0.7, 8.35±11×10.85E±, h50km±17km, M4.0/12, MLv4.0/12*
ISC 29 21:39:26.1±1.3, **8.29S**±0.06×**108.38E**±0.04, **h55**km, **n17**, σ1§**17**/**20**, **Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLJI	**Cilicap**	**0.84**	**48**	P	**Pn**	**21 39 43.6**	**+1.7**
CISI	**Cisompet, Garu**	**0.91**	**322**	P	**Pn**	**21 39 43.3**	**+0.4**
CISI	**Cisompet, Garu**	**0.91**	**322**	P	**Pn**	**21 39 43.1**	**+0.2**
	baz=1.0,SNR=280						
TGJI	**Tegal**	**1.59**	**28**	P	**Pn**	**21 39 50.6**	**-1.3**
BJII	**Banjamegara**	**1.62**	**54**	P	**Pn**	**21 39 52.2**	**-0.2**
LEM	**Lembang**	**1.63**	**332**	P	**Pn**	**21 39 54.3**	**+1.6**
LEM	**Lembang**	**1.63**	**332**	P	**Pn**	**21 39 54.0**	**+1.3**
	baz=1.7,SNR=27						
UGM	**Wanagama**	**2.15**	**80**	P	**Pn**	**21 40 00.3**	**+0.7**
UGM	**Wanagama**	**2.15**	**80**	P	**Pn**	**21 39 59.7**	**+0.1**
	baz=2.2,SNR=22						
UGM				S	**Sn**	**21 40 24.3**	**-1.0**
	baz=2.2,SNR=5.6						
DBJI	**Dramaga**	**2.36**	**317**	P	**Pn**	**21 40 03.0**	**+0.6**
SMRI	**Semarang**	**2.38**	**59**	P	**Pn**	**21 40 03.8**	**+1.0**
SMRI	**Semarang**	**2.38**	**59**	P	**Pn**	**21 40 03.6**	**+0.9**
	baz=2.4,SNR=13						
PCJI	**Pacitan**	**2.77**	**88**	P	**Pn**	**21 40 09.1**	**+1.1**
CGJI	**Cibinong**	**3.14**	**302**	P	**Pn**	**21 40 14.1**	**+1.0**
PWJI	**Pagerwojo**	**3.40**	**86**	P	**Pn**	**21 40 17.7**	**+1.0**
XMI	**Christmas Isla**	**3.42**	**231**	P	**Pn**	**21 40 18.0**	**+1.1**
	baz=3.4,SNR=6.2						
XMI				S	**Sn**	**21 40 55.1**	**-1.1**
	baz=3.4,SNR=7.9						
XMIS	**Christmas Isla**	**3.46**	**231**	P	**Pn**	**21 40 18.3**	**+0.8**
	baz=3.4,SNR=31						
XMIS				S	**Sn**	**21 40 55.4**	**-2.0**
	baz=3.4,SNR=10						

*CSEM **29** 21:40:56.8±0.5, 40.41N×25.97E, h2km, MD3.0, Error ellipse: s-maj=8.5km s-min=6.2km az=59.0*
*ISK **29** 21:40:56.8, 40.43N×26.04E, h2km, MD3.0*
*DDA **29** 21:40:58.2, 40.36N×26.10E, h7km, MD2.6*
ISC 29 21:40:57.2±1.4, **40.41N**±0.04×**26.04E**±0.06, **h16**km±12km, **n23**, σ0§**32**/**32**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GELI	**Tayfur-Gelibol**	**0.33**	**91**	*e*PG	**Pg**	**21 41 04.4**	**+0.3**
GELI				*e*SG	**Sb**	**21 41 09.9**	**0.0**
GELI	**Tayfur-Gelibol**	**0.33**	**91**	*e*Pg	**Pg**	**21 41 04.4**	**+0.3**
GELI				*e*Sg	**Sb**	**21 41 09.9**	**0.0**
ERIK	**Erikli-Kesan**	**0.45**	**54**	*e*PG	**Pg**	**21 41 06.3**	**+0.1**
ERIK				*e*SG	**Sb**	**21 41 13.3**	**+0.1**
ERIK	**Erikli-Kesan**	**0.45**	**54**	*e*Pg	**Pg**	**21 41 06.3**	**+0.1**
ERIK				*e*Sg	**Sb**	**21 41 13.3**	**+0.1**
LPK	**Lapseki**	**0.55**	**93**	*e*PG	**Pb**	**21 41 08.5**	**0.0**
LPK				*e*SG	**Sb**	**21 41 16.9**	**+0.7**
LPK	**Lapseki**	**0.55**	**93**	*e*Pg	**Pb**	**21 41 08.5**	**0.0**
LPK				*e*Sg	**Sb**	**21 41 16.9**	**+0.7**
BOZC	**Bozcaada**	**0.56**	**179**	*i* P	**Pg**	**21 41 08.4**	**+0.1**
BOZC				*i* S	**Sg**	**21 41 15.8**	**0.0**
KRBG	**Karabiga-Canak**	**0.96**	**90**	*e*PG	**Pb**	**21 41 15.4**	**-0.1**
KRBG	**Karabiga-Canak**	**0.96**	**90**	*e*Pg	**Pb**	**21 41 15.4**	**-0.1**
MRMT	**Marmara Adasi**	**1.20**	**80**	*e*PN	**Pg**	**21 41 20.7**	**+0.3**
MRMT	**Marmara Adasi**	**1.20**	**80**	*e*Pn	**Pg**	**21 41 20.7**	**+0.3**
GONE	**Gonen-Balikesi**	**1.31**	**105**	*e*PN	**Pg**	**21 41 22.9**	**+0.5**
GONE	**Gonen-Balikesi**	**1.31**	**105**	*e*Pn	**Pg**	**21 41 22.9**	**+0.5**
BALY	**Balya**	**1.38**	**118**	*i* P	**Pg**	**21 41 23.8**	**0.0**
BALY				*i* S	**Sg**	**21 41 41.4**	**-0.4**
BALY	**Balya**	**1.38**	**118**	*i* P	**Pg**	**21 41 23.8**	**0.0**
BALY				*i* S	**Sg**	**21 41 41.4**	**-0.4**
EDC	**Edincik**	**1.40**	**92**	*e*PN	**Pg**	**21 41 24.1**	**+0.1**
EDC	**Edincik**	**1.40**	**92**	*e*Pn	**Pg**	**21 41 24.1**	**+0.1**
CRLT	**Corlu**	**1.48**	**60**	*e*PN	**Pg**	**21 41 25.2**	**-0.4**
CRLT	**Corlu**	**1.48**	**60**	*e*Pn	**Pg**	**21 41 25.2**	**-0.4**
EDRB	**Edirne**	**1.53**	**20**	*e*PN	**Pb**	**21 41 25.4**	**+0.1**
EDRB	**Edirne**	**1.53**	**20**	*e*Pn	**Pb**	**21 41 25.4**	**+0.1**
DST	**Dursunbey**	**2.14**	**111**	*e*PN	**Pb**	**21 41 35.2**	**-0.4**
DST	**Dursunbey**	**2.14**	**111**	*e*Pn	**Pb**	**21 41 35.2**	**-0.4**

*IDC **29** 21:57:43.2±0.9, 13.05N×124.64E, h0km, mb3.7/9, mb1 3.9/10, mb1mx3.7/26, mbtmp3.8/10, ML3.8/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/34, Error ellipse: s-maj=40.0km s-min=14.7km az=71.0*
*ISCJB **29** 21:57:47.5±0.6, 13.05N±0.04×124.62E±0.06, h44km, mb3.7/9, MS3.0/1, Error ellipse: s-maj=8.8km s-min=5.6km az=154.8*
*MAN **29** 21:57:47, 13.02N×124.45E, h13km, mb4.8, ML3.7, MS3.7*
ISC 29 21:57:49.3±0.8, **13.01N**±0.06×**124.59E**±0.08, **h44**km, **n22**, σ1§**08**/**22**, **mb3.9**/**9**, **2C-1D**, **Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.50**	**171**	*e*P	**Pn**	**21 57 58.4**	**-1.8**
CNP				*e*S	**Sn**	**21 58 06.7**	**-1.3**
PLP	**Palo**	**1.87**	**168**⇑	*e*P	**Pn**	**21 58 19.0**	**+0.1**
PLP				*i* S	**Sn**	**21 58 44.1**	**+2.8**
AUQP	**San Andres**	**1.89**	**280**	*e*P	Pn	21 58 23.3	+4.3
OCLP	**Ormoc**	**1.95**	**179**	*e*P	**Pn**	**21 58 21.2**	**+1.3**
GQP	**Guinayangan**	**2.26**	**293**⇑	*e*P	**Pn**	**21 58 23.2**	**-1.0**
GQP				*i* S	**Sn**	**21 58 51.4**	**+0.5**
RCP	**Roxas**	**2.30**	**232**⇓	*e*P	**Pn**	**21 58 23.7**	**-1.1**
RCP				*e*S	**Sn**	**21 58 52.2**	**+0.3**
MSLP	**Maasin**	**2.87**	**175**	*e*P	Pn	21 58 37.0	+4.4
GUIM	**Jordan**	**3.07**	**220**	*e*P	**Pn**	**21 58 34.6**	**-0.7**
SJMP	**San Jose**	**3.43**	**261**	*e*P	**Pn**	**21 58 39.7**	**-0.5**
TGY	**Tagaytay City**	**3.71**	**287**	Pn	**Pn**	**21 58 46.0**	**+1.9**
	18nm,0.3s,baz=45,slow=5.7,SNR=1.9						
DAV	**Davao City (W)**	**5.98**	**170**	LR	LR	22 02 11.4	
	comp=Z,272nm,18.7s,baz=59,slow=45						
KAPI	**Kappang**	**18.54**	**195**	P	**Pn**	**22 02 03.4**	**+0.5**
	0.3nm,0.3s,baz=12,slow=4.5,SNR=6.0						
KAPI				LR	LR	22 09 15.8	
	comp=Z,64nm,20.9s,baz=348,slow=37						
KSRS	**Korea Array**	**24.53**	**6**	P	**P**	**22 03 04.4**	**-0.2**
	0.7nm,0.8s,baz=167,slow=7.9,SNR=3.9						
CMAR	**Chiang Mai Arr**	**25.25**	**286**	P	**P**	**22 03 11.6**	**+0.1**
	0.3nm,0.7s,baz=107,slow=7.6,SNR=3.0						
MJAR	**Matsushiro Arr**	**26.43**	**25**	LR	LR	22 12 59.2	
	comp=Z,48nm,20.0s,baz=205,slow=35						
WRA	**Warramunga Ar**	**34.12**	**163**	P	**P**	**22 04 30.4**	**+0.2**
	0.8nm,0.6s,baz=341,slow=9.6,SNR=6.7						
ASAR	**Alice Springs**	**37.57**	**166**	P	**P**	**22 04 59.5**	**-0.2**
	2.4nm,0.6s,baz=347,slow=7.8,SNR=27						
SONM	**Songino Array**	**37.90**	**340**	P	**P**	**22 05 02.4**	**+0.1**
	0.3nm,0.4s,baz=140,slow=7.0,SNR=3.3						
STKA	**Stephens Creek**	**47.52**	**160**	P	**P**	**22 06 20.1**	**-0.2**
	1.2nm,0.5s,baz=333,slow=9.9,SNR=8.0						
MKAR	**Makanchi Array**	**48.86**	**322**	P	**P**	**22 06 30.6**	**+0.1**
	1.8nm,1.0s,baz=125,slow=7.6,SNR=7.1						
ZALV	**Zalesovo Beam**	**51.45**	**331**	P	**P**	**22 06 49.2**	**-0.8**
	0.4nm,0.5s,baz=114,slow=8.4,SNR=3.9						
KURBB	**Kurchatov Arra**	**52.90**	**325**	P	**P**	**22 07 00.5**	**-0.3**
	1.1nm,0.9s,baz=122,slow=7.7,SNR=8.1						

IDC 29 22:23:49.8±2.1, **6.70S**×**129.54E**, **h0**km, **mb3.4**/1, **mb1 4.0**/4, **mb1mx3.6**/20, **mbtmp3.8**/4, **ML4.1/3**, **Error ellipse: s-maj=78.8km s-min=28.1km az=77.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.96**	**198**	Pn	Pn	22 26 41.7	+0.1
	1.0nm,0.3s,baz=28,slow=12,SNR=21						
FITZ				Sn	Sn	22 28 42.2	-14
	0.5nm,0.3s,baz=274,slow=23,SNR=6.5						
WRA	**Warramunga Arr**	**13.96**	**161**	Pn	Pn	22 27 08.7	-0.4
	0.9nm,0.3s,baz=340,slow=13,SNR=15						
WRA				Sn	Sn	22 29 33.2	-12
	0.5nm,0.3s,baz=331,slow=

MOS ***29*** *22:44:01.3±1.0, 32°.70S×69°.68W, h100km, mb5.0/26, Error ellipse: s-maj=14.2km s-min=7.7km az=101.2*

ISCJB ***29*** *22:44:02.0±0.3, 32°.72S±0°.02×69°.71W±0°.05, h107km±2km, mb4.9/107, Error ellipse: s-maj=6.6km s-min=3.8km az=177.2*

GUC ***29*** *22:44:03.3±0.6, 32°.80S×70°.04W, h122km±3km, ML5.1*

NEIC ***29*** *22:44:03.3, 32°.80S×70°.04W, h122km, mb4.9/80, MD4.9(SJA), After GUC.*

NEIC Felt [IV] at Mendoza. Felt [III] at Santiago and in Cordillera and Maipo; [II] at Cabildo, Chacabuco, La Ligua, Los Andes, Puchuncavi, Quillota, San Felipe and Zapallar, Chile. Also felt at Limache and Valparaiso.

IDC ***29*** *22:44:04.8±0.4, 32°.76S×69°.75W, h122km±3km, mb4.4/20, mb1 4.5/22, mb1mx4.4/23, mbtmp4.4/22, MS3.5/8, Ms1 3.5/8, ms1mx3.3/22, Error ellipse: s-maj=12.7km s-min=9.9km az=67.0*

BJI ***29*** *22:44:07.3, 32°.70S×69°.70W, h126km, mB5.0/2*

ISC 29 22:44:04.5±0.3, 32°.78S±0°.03×69°.87W±0°.04, h122km±2km, h121km:pP-P, n723, σ1°11/870, mb4.9/107, 224C-210D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JACH	**Jahuel**	**0.61**	**279**	⇓*iP*	**Pn**	**22 44 21.4**	**-2.1**
JACH	**Jahuel**	**0.61**	**279**	⇓*iP*	**Pn**	**22 44 21.4**	**-2.1**
FCH	**Farellones**	**0.65**	**213**	⇓*iP*	**Pn**	**22 44 23.0**	**-1.1**
FCH				*i* S	**Sn**	**22 44 38.0**	**-0.8**
FCH				AML	AML	22 44 39.6	
	comp=N,49μm,0.3s						
PEL	**Peldehue**	**0.77**	**242**	⇓*iP*	**Pn**	**22 44 22.6**	**-2.1**
PEL				*i* S	**Sn**	**22 44 37.3**	**-2.7**
PEL				AML	AML	22 44 38.0	
	comp=N,122μm,0.3s						
CLCH	**Cerro Calan**	**0.83**	**222**	⇓*iP*	**Pn**	**22 44 23.4**	**-1.8**
CLCH				*i* S	**Sn**	**22 44 39.0**	**-1.9**
CLCH				AML	AML	22 44 40.6	
	comp=E,38μm,0.6s						
FSR	**Penalolen**	**0.89**	**218**	⇑*iP*	**Pn**	**22 44 24.2**	**-1.5**
FSR				*i* S	**Sn**	**22 44 39.6**	**-2.1**
FSR	**Penalolen**	**0.89**	**218**	⇑*iP*	**Pn**	**22 44 24.2**	**-1.5**
FSR				*i* S	**Sn**	**22 44 39.6**	**-2.1**
STL	**Santa Lucia**	**0.92**	**224**	⇑*iP*	**Pn**	**22 44 24.1**	**-1.9**
STL				*i* S	**Sn**	**22 44 39.9**	**-2.3**
SAN	**Santiago**	**0.94**	**224**	⇑*iP*	**Pn**	**22 44 24.3**	**-1.9**
SAN				*i* S	**Sn**	**22 44 40.0**	**-2.6**
SAN	**Santiago**	**0.94**	**224**	⇑*iP*	**Pn**	**22 44 24.3**	**-1.9**
SAN				*i* S	**Sn**	**22 44 40.0**	**-2.6**
SAN	**Santiago**	**0.94**	**224**	⇑*iP*	**Pn**	**22 44 24.3**	**-1.9**
SAN				*i* S	**Sn**	**22 44 40.0**	**-2.6**
SJCH	**San Jose de Ma**	**0.94**	**205**	*eP*	**Pn**	**22 44 23.8**	**-2.5**
SJCH				*i* S	**Sn**	**22 44 40.3**	**-2.5**
SJCH	**San Jose de Ma**	**0.94**	**205**	*eP*	**Pn**	**22 44 23.8**	**-2.5**
SJCH				*i* S	**Sn**	**22 44 40.3**	**-2.5**
ROCH	**El Roble**	**0.98**	**259**	⇑*iP*	**Pn**	**22 44 24.5**	**-2.2**
ROCH				*i* S	**Sn**	**22 44 40.8**	**-2.7**
ROCH				AML	AML	22 44 41.7	
	comp=N,124μm,0.5s						
PCH	**Pirque**	**0.99**	**213**	⇑*iP*	**Pn**	**22 44 24.9**	**-1.9**
PCH	**Pirque**	**0.99**	**213**	⇑*iP*	**Pn**	**22 44 24.9**	**-1.9**
ANTU	**Antumapu**	**1.01**	**219**	*eP*	**Pn**	**22 44 25.0**	**-1.9**
ANTU				*i* S	**Sn**	**22 44 41.7**	**-2.1**
ANTU	**Antumapu**	**1.01**	**219**	*eP*	**Pn**	**22 44 25.0**	**-1.9**
ANTU				*i* S	**Sn**	**22 44 41.7**	**-2.1**
ANTU				AML	AML	22 44 43.9	
	comp=E,30μm,0.4s						
PTCH	**Petorca**	**1.03**	**300**	⇓*iP*	**Pn**	**22 44 25.5**	**-1.6**
PTCH				*i* S	**Sn**	**22 44 41.7**	**-2.4**
PTCH	**Petorca**	**1.03**	**300**	⇓*iP*	**Pn**	**22 44 25.5**	**-1.6**
PTCH				*i* S	**Sn**	**22 44 41.7**	**-2.4**
PTCH				AML	AML	22 44 44.9	
	comp=N,57μm,0.3s						
LMEL	**Las Melosas**	**1.10**	**194**	⇑*iP*	**Pn**	**22 44 26.2**	**-1.6**
LMEL				*i* S	**Sn**	**22 44 44.2**	**-1.4**
LMEL	**Las Melosas**	**1.10**	**194**	⇑*iP*	**Pn**	**22 44 26.2**	**-1.6**
LMEL				*i* S	**Sn**	**22 44 44.2**	**-1.4**
TACH	**Talagante**	**1.25**	**225**	⇑*iP*	**Pn**	**22 44 27.1**	**-2.2**
PACH	**Papudo**	**1.34**	**280**	⇑*iP*	**Pn**	**22 44 28.1**	**-2.2**
PACH	**Papudo**	**1.34**	**280**	⇑*iP*	**Pn**	**22 44 28.1**	**-2.2**
CACH	**El Canelo**	**1.46**	**204**	⇓*iP*	**Pn**	**22 44 30.6**	**-1.2**
CACH	**El Canelo**	**1.46**	**204**	⇓*iP*	**Pn**	**22 44 30.6**	**-1.2**
IHA	**Instituto Hidr**	**1.51**	**260**	⇑*iP*	**Pn**	**22 44 29.5**	**-2.6**
IHA				*i* S	**Sn**	**22 44 49.3**	**-3.8**
IHA	**Instituto Hidr**	**1.51**	**260**	⇑*iP*	**Pn**	**22 44 29.5**	**-2.6**
IHA				*i* S	**Sn**	**22 44 49.3**	**-3.8**
LCCH	**Las Cruces**	**1.58**	**244**	*eP*	**Pn**	**22 44 30.7**	**-2.3**
LCCH	**Las Cruces**	**1.58**	**244**	*eP*	**Pn**	**22 44 30.7**	**-2.3**
CHNG	**Los Chungos**	**1.64**	**303**	⇑*iP*	**Pn**	**22 44 31.7**	**-2.0**
CHNG				*i* S	**Sn**	**22 44 53.0**	**-3.0**
CHNG	**Los Chungos**	**1.64**	**303**	⇑*iP*	**Pn**	**22 44 31.7**	**-2.0**
CHNG				*i* S	**Sn**	**22 44 53.0**	**-3.0**
CFAA	**Coronel Fontan**	**1.82**	**50**	P	**Pn**	**22 44 34.8**	**-1.1**
CFAA				S	**Sn**	**22 44 58.0**	**-1.8**
CFAA	**Coronel Fontan**	**1.82**	**50**	P	**Pn**	**22 44 34.8**	**-1.1**
	comp=N,35nm,0.3s,baz=226,slow=11,SNR=5625						
CFAA				S	**Sn**	**22 44 58.0**	**-1.8**
	comp=N,147nm,0.3s,baz=49,slow=16,SNR=29						
CMCH	**Combarbala**	**1.87**	**329**	⇓*iP*	**Pn**	**22 44 34.9**	**-1.6**
CMCH				*i* S	**Sn**	**22 44 59.2**	**-1.8**
CMCH	**Combarbala**	**1.87**	**329**	⇓*iP*	**Pn**	**22 44 34.9**	**-1.6**
CMCH				*i* S	**Sn**	**22 44 59.2**	**-1.8**
TLL	**Tololo Astrono**	**2.73**	**343**	⇑*iPn*	**Pn**	**22 44 45.6**	**-2.0**
TLL				*i* S	**Sn**	**22 45 17.4**	**-3.3**
LCO	**Las Campanas**	**3.83**	**349**	*ePn*	**Pn**	**22 45 00.2**	**-1.8**
LCO				*eSn*	**Sn**	**22 45 42.6**	**-4.0**
LCO	**Las Campanas**	**3.83**	**349**	⇑*iP*	**Pn**	**22 45 00.3**	**-1.8**
PLCA	**Paso Flores**	**7.95**	**184**	*ePn*	**Pn**	**22 45 55.2**	**-2.1**
PLCA				*eSn*	**Sn**	**22 47 24.8**	**-0.9**
PLCA	**Paso Flores**	**7.95**	**184**	P	**Pn**	**22 45 54.9**	**-2.5**
	comp=N,6.1nm,0.3s,baz=357,slow=11,SNR=24						
PLCA				S	**Sn**	**22 47 24.2**	**-1.5**
	comp=N,1.1nm,0.3s,baz=74,slow=13,SNR=3.7						
PLCA				LR	LR	22 49 19.8	
	comp=N,285nm,21.0s,baz=358,slow=39						
LVC	**Limon Verde**	**10.17**	**5**	*ePn*	Pn	22 46 21.9	-5.6
LVC				*eSn*	**Sn**	**22 48 17.1**	**-2.7**
CPUP	**Villa Florida**	**12.67**	**63**	P	Pn	22 46 56.0	-4.4
CPUP	**Villa Florida**	**12.67**	**63**	P	Pn	22 46 56.0	-4.4
	comp=N,0.8nm,0.3s,baz=92,slow=20,SNR=3.9						
LPAZ	**La Paz**	**16.50**	**6**	*ePn*	**Pn**	**22 47 49.6**	**+0.1**
	comp=N,42nm,0.9s						
LPAZ				*eSn*	**Sn**	**22 50 52.6**	**-0.6**
LPAZ	**La Paz**	**16.50**	**6**	P	**Pn**	**22 47 49.6**	**+0.1**
	comp=N,0.8nm,0.3s,baz=174,slow=8.6,SNR=125						
LPAZ				LR	LR	22 53 28.6	
	comp=N,61nm,19.1s,baz=214,slow=34						
SIV	**San Ignacio**	**18.52**	**28**	P	**P**	**22 48 11.3**	**-0.4**
SIV	**San Ignacio**	**18.52**	**28**	P	**P**	**22 48 11.3**	**-0.4**
	comp=N,1.0nm,0.3s,baz=218,slow=9.8,SNR=16						
EFI	**East Falkland**	**20.76**	**159**	*eP*	**P**	**22 48 33.4**	**-2.0**
EFI				pmax	pmax		
	comp=Z,112nm,0.6s						
EFI	**East Falkland**	**20.76**	**159**	*eP*	**P**	**22 48 33.4**	**-2.0**
	comp=Z,112nm,0.6s						
NNA	**Nana**	**21.66**	**341**	*eP*	**P**	**22 48 45.8**	**+0.2**
NNA	**Nana**	**21.66**	**341**	P	**P**	**22 48 45.6**	**+0.1**
	comp=Z,17nm,0.9s,baz=202,slow=11,SNR=8.0						
SPB	**Sao Paulo**	**21.76**	**71**	*eP*	**P**	**22 48 45.9**	**-0.5**
	comp=Z,29nm,0.8s						
USHA	**Ushuaia**	**22.07**	**178**	P	**P**	**22 48 49.5**	**+0.2**
USHA	**Ushuaia**	**22.07**	**178**	P	**P**	**22 48 49.5**	**+0.2**
	comp=Z,196nm,0.8s,baz=342,slow=7.6,SNR=74						
SAML	**Samuel**	**24.51**	**16**	*eP*	**P**	**22 49 11.6**	**-1.0**
	comp=Z,34nm,0.8s						
SAML				*e*		22 49 38.7	
BDFB	**Brasilia**	**26.15**	**54**	P	**P**	**22 49 27.0**	**-0.6**
BDFB	**Brasilia**	**26.15**	**54**	P	**P**	**22 49 27.0**	**-0.6**
	comp=Z,3.9nm,0.7s,baz=236,slow=7.3,SNR=7.8						
BDFB				LR	LR	23 00 52.5	
	comp=Z,160nm,18.1s,baz=357,slow=39						
CAM4	**Nova Friburgo**	**26.27**	**74**	⇑*iP*	**P**	**22 49 28.0**	**-0.8**
CAM4				*i*		22 49 30.2	
CAM4				*i*		22 49 32.3	
CAM4				*i*		22 49 53.9	
CAM4				*i*		22 49 58.3	
CAM4				*i*		22 50 08.4	
CAM4				*i*		22 50 15.0	
CAM4				*i*		22 50 29.8	
CAM4				*i*		22 50 33.7	
ATAH	**Atahualpa**	**26.72**	**341**	P	**P**	**22 49 34.6**	**+1.5**
	comp=Z,6.1nm,0.8s,baz=164,slow=6.0,SNR=3.7						
ATAH				LR	LR	22 58 25.0	
	comp=Z,55nm,19.3s,baz=43,slow=32						
PMSA	**Palmer Station**	**32.22**	**175**	P	**P**	22 50 24.0	+3.3
PMSA	**Palmer Station**	**32.22**	**175**	P	**P**	22 50 24.0	+3.3
	comp=Z,42nm,0.9s,baz=14,slow=6.5,SNR=4.6						
OTAV	**Otavalo**	**33.83**	**344**	*eP*	**P**	**22 50 38.2**	**+2.5**
	comp=Z,6.2nm,1.3s						
SDV	**Santo Domingo**	**41.44**	**359**	*eP*	**P**	**22 51 38.7**	**-0.8**
	comp=Z,11nm,1.0s						
RCBR	**Riachuelo**	**41.46**	**57**	P	**P**	**22 51 39.0**	**-0.5**
RCBR				pP	**pP**	**22 52 07.8**	**+0.6**
RCBR	**Riachuelo**	**41.46**	**57**	pP	pP	22 52 07.8	+0.6
	comp=Z,4.9nm,0.7s,baz=222,slow=13,SNR=3.6						
JTS	**JuntasAbangare**	**45.19**	**339**	*eP*	**P**	**22 52 11.3**	**+2.0**
	comp=Z,77nm,1.8s						
TGUH	**Tegucigalpa,Un**	**49.46**	**338**	*eP*	**P**	**22 52 43.5**	**+1.1**
	comp=Z,65nm,1.0s						
TGUH				*ep*P	**pP**	**22 53 11.8**	**+1.0**
TGUH				*es*P	**sP**	**22 53 25.4**	**+1.1**
VNA2	**Neumayer--Watz**	**50.44**	**158**	*eP*	P	22 52 53.6	+4.4
VNA2	**Neumayer--Watz**	**50.44**	**158**	*ePP*	PP	22 54 42.7	-3.0
CRPR	**Cabo Rojo, PR**	**50.57**	**3**	*eP*	**P**	**22 52 50.5**	**-0.3**
CRPR				*epP*	**pP**	**22 53 20.1**	**+0.9**
CRPR				*esP*	**sP**	**22 53 34.1**	**+1.4**
OBIP	**Obispado Ponce**	**50.63**	**4**	*epP*	pP	22 53 21.4	+1.7
CELP	**Cerrillos**	**50.67**	**4**	*eP*	**P**	**22 52 51.5**	**+0.1**
CELP				*epP*	**pP**	**22 53 21.5**	**+1.6**
SJG	**San Juan**	**50.73**	**5**	P	**P**	**22 52 50.9**	**-1.1**
SJG				pP	**pP**	**22 53 20.6**	**+0.1**
SJG	**San Juan**	**50.73**	**5**	P	**P**	**22 52 50.8**	**-1.1**
	comp=Z,20nm,0.6s,baz=128,slow=0.3,SNR=7.3						
SJG				pP	**pP**	**22 53 20.5**	**+0.1**
	comp=Z,22nm,0.7s,baz=336,slow=22,SNR=2.7						
CBYP	**Canovanas**	**50.91**	**5**	*eP*	**P**	**22 52 51.9**	**-1.4**
	comp=Z,50nm,1.2s						
CBYP				*epP*	**pP**	**22 53 21.9**	**+0.1**
CBYP				*esP*	**sP**	**22 53 35.8**	**+0.4**
SDDR	**Presa de Saban**	**51.49**	**358**	*eP*	**P**	**22 52 57.3**	**-0.3**
	comp=Z,20nm,0.7s						
SNAA	**Sanae**	**52.03**	**158**	*eP*	**P**	**22 53 02.0**	**+0.8**
SNAA	**Sanae**	**52.03**	**158**	*eP*	**P**	**22 53 01.3**	**+0.1**
SNAA				*epP*	**pP**	**22 53 30.8**	**+1.0**
SNAA	**Sanae**	**52.03**	**158**	P	**P**	**22 53 01.0**	**-0.2**
	comp=Z,8.7nm,0.4s,baz=286,slow=5.9,SNR=32						
CMIG	**Matias Romero**	**55.06**	**330**	P	**P**	**22 53 24.7**	**+0.9**
CMIG	**Matias Romero**	**55.06**	**330**	P	**P**	**22 53 24.7**	**+0.9**
	comp=Z,12nm,0.9s,baz=133,slow=5.2,SNR=16						
TEIG	**Tepich**	**55.57**	**339**	*eP*	**P**	**22 53 27.6**	**+0.3**
TEIG				*epP*	**pP**	**22 53 56.5**	**+0.1**
TEIG	**Tepich**	**55.57**	**339**	P	**P**	**22 53 27.4**	**+0.1**
	comp=Z,88nm,0.6s,baz=112,slow=1.5,SNR=73						
TIGA	**Tifton**	**65.18**	**347**	⇓*pP*	**P**	**22 54 32.0**	**-0.6**
	baz=66						
VNDA	**Vanda**	**65.64**	**191**	*eP*	**P**	**22 54 36.8**	**+1.8**
VNDA	**Vanda**	**65.64**	**191**	P	**P**	**22 54 36.1**	**+1.1**
	comp=Z,1.7nm,0.9s,baz=164,slow=4.1,SNR=6.6						
NHSC	**New Hope**	**66.25**	**351**	*eP*	**P**	**22 54 40.0**	**+0.6**
	comp=Z,38nm,0.6s						
SYO	**Syowa Base**	**66.33**	**158**	⇑*eP*	**P**	**22 54 38.2**	**-1.3**
SYO	**Syowa Base**	**66.33**	**158**	⇑*epP*	pP	22 55 07.5	-1.8
HKT	**Hockley**	**67.07**	**336**	*eP*	**P**	**22 54 45.5**	**+1.0**
HKT				pmax	pmax		
	comp=Z,85nm,2.4s						
HKT	**Hockley**	**67.07**	**336**	*eP*	**P**	**22 54 45.5**	**+1.0**
	comp=Z,85nm,2.4s						
GOGA	**Godfrey**	**67.08**	**348**	*eP*	**P**	**22 54 43.3**	**-1.3**
GOGA				*e**PP	**pP**	**22 55 15.7**	**+1.2**
GOGA	**Godfrey**	**67.08**	**348**	*eP*	**P**	**22 54 43.3**	**-1.3**
GOGA				*epP*	**pP**	**22 55 15.7**	**+1.2**
LRAL	**Lakeview Retre**	**67.43**	**344**	*eP*	**P**	**22 54 46.5**	**-0.3**
	comp=Z,14nm,1.0s						
LRAL				*epP*	**pP**	**22 55 17.9**	**+1.2**
732A	**Laxson Ranch,**	**67.52**	**332**	⇓*pP*	**P**	**22 54 48.3**	**+0.8**
	baz=68,SNR=12						
632A	**Uvalde**	**68.14**	**332**	⇓*pP*	**P**	**22 54 52.2**	**+0.8**
	baz=68,SNR=14						
631A	**Perdido Creek**	**68.37**	**331**	⇓*pP*	**P**	**22 54 53.1**	**+0.3**
	baz=69,SNR=7.4						
KMSC	**Kings Mountain**	**68.42**	**350**	⇓*pP*	**P**	**22 54 52.7**	**-0.4**
	baz=69,SNR=8.0						
532A	**Rocksprings**	**68.73**	**332**	⇓*pP*	**P**	**22 54 56.1**	**+0.9**
	baz=69,SNR=35						
JCT	**Junction City**	**69.01**	**333**	⇑*P*	**P**	**22 54 57.4**	**+0.6**
	baz=69,SNR=13						
CPCT	**Cooper Cave**	**69.25**	**347**	*eP*	**P**	**22 54 58.4**	**+0.2**
CPCT				*epP*	**pP**	**22 55 28.9**	**+0.7**
CPCT				*esP*	**sP**	**22 55 42.1**	**+0.7**
SWET	**Sewanee**	**69.30**	**346**	*eP*	**P**	**22 54 58.6**	**0.0**
	comp=Z,57nm,0.7s						
SWET				*epP*	**pP**	**22 55 28.3**	**-0.3**
TKL	**Tuckaleechee C**	**69.32**	**348**	P	**P**	**22 54 57.9**	**-0.7**
TKL				*epP*	**pP**	**22 55 28.3**	**-0.4**
TKL	**Tuckaleechee C**	**69.32**	**348**	P	**P**	**22 54 57.9**	**-0.7**
	comp=Z,16nm,0.6s,baz=170,slow=7.5,SNR=31						
TKL				pP	**pP**	**22 55 28.2**	**-0.4**
	comp=Z,9.8nm,0.9s,baz=168,slow=4.1,SNR=3.7						
530A	**J-C Ranch, Com**	**69.33**	**331**	⇓*pP*	**P**	**22 54 59.6**	**+0.8**
	baz=70,SNR=5.2						
432A	**Menard**	**69.36**	**333**	⇑*P*	**P**	**22 54 59.2**	**+0.3**
	baz=70,SNR=8.8						
628A	**Black Gap, Mar**	**69.39**	**330**	⇓*pP*	**P**	**22 55 00.1**	**+0.9**
	baz=70,SNR=17						
OXF	**Oxford**	**69.41**	**343**	*eP*	**P**	**22 54 58.5**	**-0.7**
OXF				*e**PP	**pP**	**22 55 28.7**	**-0.6**
OXF				pmax	pmax		
	comp=Z,26nm,0.5s						
OXF	**Oxford**	**69.41**	**343**	*eP*	**P**	**22 54 58.5**	**-0.7**
	comp=Z,26nm,0.5s						
OXF				*epP*	**pP**	**22 55 28.7**	**-0.6**
WHTX	**Lake Whitney**	**69.49**	**335**	⇓*pP*	**P**	**22 55 00.1**	**+0.4**
	baz=70,SNR=11						
431A	**Sonora**	**69.50**	**332**	⇓*pP*	**P**	**22 55 00.1**	**+0.2**
	baz=70,SNR=9.4						
627A	**Terlingua Ranc**	**69.58**	**329**	⇑*P*	**P**	**22 55 00.9**	**+0.5**
	baz=70,SNR=7.7						
TXAR	**Lajitas Array**	**69.60**	**329**	P	**P**	**22 55 01.2**	**+0.7**
TXAR				pP	**pP**	**22 55 30.9**	**+0.3**
TXAR	**Lajitas Array**	**69.60**	**329**	P	**P**	**22 55 01.2**	**+0.7**
	comp=Z,7.6nm,0.6s,baz=154,slow=8.7,SNR=80						
TXAR				pP	**pP**	**22 55 30.9**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=151,slow=6.8,SNR=4.6						
529A	**Stev Forest Ra**	**69.67**	**330**	⇓*pP*	**P**	**22 55 01.6**	**+0.7**
	baz=70,SNR=15						
332A	**Millersview**	**69.79**	**333**	⇓*pP*	**P**	**22 55 01.9**	**+0.3**
	baz=70,SNR=17						
430A	**Baggett Ranch,**	**69.84**	**332**	⇓*pP*	**P**	**22 55 02.7**	**+0.7**
	baz=70,SNR=22						
528A	**Cox Ranch, San**	**69.94**	**330**	⇑*P*	**P**	**22 55 03.0**	**+0.4**
	baz=70,SNR=17						
429A	**Davenport Ranc**	**69.97**	**331**	⇑*P*	**P**	**22 55 03.5**	**+0.8**
	baz=70,SNR=14						
331A	**San Angelo**	**69.99**	**332**	⇓*pP*	**P**	**22 55 03.2**	**+0.4**
	baz=70,SNR=19						
626A	**Big Bend Ranch**	**69.99**	**329**	⇓*pP*	**P**	**22 55 04.1**	**+1.2**
	baz=70,SNR=18						
TZTN	**Tazewell**	**70.14**	**348**	*eP*	**P**	**22 55 03.5**	**-0.1**
	comp=Z,50nm,1.6s						
232A	**Coleman**	**70.20**	**333**	⇓*pP*	**P**	**22 55 04.6**	**+0.4**
	baz=70,SNR=23						
527A	**Woodward Ranch**	**70.27**	**329**	⇑*P*	**P**	**22 55 05.3**	**+0.5**
	baz=70,SNR=13						
BLA	**Blacksburg**	**70.33**	**351**	*eP*	**P**	**22 55 04.6**	**-0.2**
BLA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BLA	**Blacksburg**	**70.33**	**351**	*eP*	**P**	**22 55 04.6**	**-0.2**
	comp=Z,8.8nm,0.6s						
BLA				*epP*	**pP**	**22 55 35.6**	**+0.7**
330A	**Mertzon**	**70.37**	**332**	⇓*pP*	**P**	**22 55 05.4**	**+0.2**
	baz=71,SNR=17						
428A	**Kincaid Ranch,**	**70.39**	**330**	⇓*pP*	**P**	**22 55 05.8**	**+0.5**
	baz=71,SNR=8.3						
526A	**Mary Lane Ranc**	**70.41**	**329**	⇓*pP*	**P**	**22 55 06.5**	**+0.9**
	baz=71,SNR=22						
231A	**Bronte**	**70.50**	**333**	⇑*P*	**P**	**22 55 06.1**	**+0.2**
	baz=71,SNR=29						
JSRW	**J. Sargeant Re**	**70.51**	**353**	*eP*	**P**	**22 55 06.7**	**+0.9**
JSRW				*epP*	**pP**	**22 55 36.1**	**+0.2**
WVT	**Waverly**	**70.59**	**345**	*eP*	**P**	**22 55 06.0**	**-0.3**
WVT				*e**PP	**pP**	**22 55 35.8**	**-0.7**
WVT				pmax	pmax		
	comp=Z,75nm,0.6s						
WVT	**Waverly**	**70.59**	**345**	*eP*	**P**	**22 55 06.0**	**-0.3**
	comp=Z,75nm,0.6s						
WVT				*epP*	**pP**	**22 55 35.8**	**-0.7**
329A	**Wagon Wheel Ra**	**70.76**	**331**	⇑*P*	**P**	**22 55 08.0**	**+0.4**
	baz=71,SNR=20						
230A	**Sterling City**	**70.77**	**332**	⇑*P*	**P**	**22 55 07.5**	**-0.1**
	baz=71						
427A	**Hayter Ranch,**	**70.80**	**330**	⇓*pP*	**P**	**22 55 08.3**	**+0.5**
	baz=71,SNR=7.4						
MEH	**Mehetia**	**70.82**	**261**	*eP*	**P**	**22 55 09.8**	**+1.5**
	comp=Z,171nm,1.3s						
ABTX	**Abilene, Hawle**	**70.86**	**334**	⇓*pP*	**P**	**22 55 08.4**	**+0.3**
	baz=71,SNR=8.3						
426A	**McDonald Obser**	**70.91**	**329**	⇓*pP*	**P**	**22 55 09.3**	**+0.7**
	baz=71,SNR=22						
328A	**Wristen Ranch,**	**71.01**	**331**	⇑*P*	**P**	**22 55 09.4**	**+0.3**
	baz=71,SNR=16						
229A	**Bryant Ranch,**	**71.11**	**332**	⇓*pP*	**P**	**22 55 09.6**	**-0.1**
	baz=71						
131A	**Roby**	**71.19**	**333**	⇓*pP*	**P**	**22 55 10.5**	**+0.4**
	baz=71,SNR=13						
327A	**Balmorhea Ranc**	**71.28**	**330**	⇓*pP*	**P**	**22 55 11.1**	**+0.4**
	baz=72						
130A	**Snyder**	**71.34**	**333**	⇓*pP*	**P**	**22 55 11.1**	**+0.1**
	baz=72,SNR=14						
Z32A	**Haskell**	**71.41**	**334**	⇓*pP*	**P**	**22 55 11.7**	**+0.3**
	baz=72,SNR=18						
425A	**Indio Mountain**	**71.42**	**329**	⇓*pP*	**P**	**22 55 11.9**	**+0.2**
	baz=72,SNR=17						
326A	**Caldwell Ranch**	**71.44**	**330**	⇓*pP*	**P**	**22 55 12.3**	**+0.6**
	baz=72,SNR=16						
228A	**UT Block 9, Go**	**71.56**	**331**	⇓*pP*	**P**	**22 55 12.7**	**+0.3**
	baz=72,SNR=15						
Z31A	**Sharp Cattle R**	**71.67**	**334**	⇓*pP*	**P**	**22 55 13.4**	**+0.5**
	baz=72,SNR=18						
129A	**Stewart Farms,**	**71.72**	**332**	⇑*P*	**P**	**22 55 13.4**	**+0.1**
	baz=72						
227A	**Bennet, Jal**	**71.76**	**330**	⇓*pP*	**P**	**22 55 14.3**	**+0.8**
	baz=72						
TVO	**Taravao**	**71.85**	**260**	*eP*	**P**	**22 55 16.1**	**+1.6**
	comp=Z,85nm,1.0s						
325A	**Bean Ranch, Si**	**71.92**	**329**	⇑*P*	**P**	**22 55 14.7**	**+0.1**
	baz=72,SNR=19						
128A	**Castleberry Fa**	**71.96**	**331**	⇑*P*	**P**	**22 55 15.1**	**+0.3**
	baz=72,SNR=22						
Z30A	**Sanderson Ranc**	**72.01**	**333**	⇑*P*	**P**	**22 55 15.1**	**0.0**
	baz=72,SNR=18						
Y32A	**R-V Farms, Ver**	**72.02**	**334**	⇑*P*	**P**	**22 55 15.4**	**+0.4**
	baz=72,SNR=14						
TIAR	**Tiarei**	**72.04**	**260**	*eP*	**P**	**22 55 17.0**	**+1.4**
	comp=Z,80nm,0.9s						
PMOR	**Pomariorio Ree**	**72.09**	**263**	*eP*	**P**	**22 55 17.2**	**+1.3**
	comp=Z,21nm,0.8s						
PAE	**Paea**	**72.18**	**260**	*eP*	**P**	**22 55 17.9**	**+1.5**
	comp=Z,18nm,0.9s						
226B	**Tecolote Peak,**	**72.18**	**330**	⇑*P*	**P**	**22 55 17.0**	**+0.9**
	baz=72,SNR=11						
324A	**Moseley Ranch,**	**72.20**	**328**	⇑*P*	**P**	**22 55 15.9**	**-0.5**
	baz=72,SNR=22						
Z29A	**Hungry Hill Ra**	**72.21**	**332**	⇓*pP*	**P**	**22 55 16.2**	**-0.1**
	baz=72,SNR=18						
PPT2	**Papeete2**	**72.21**	**260**	*eP*	**P**	**22 55 18.4**	**+1.7**
	comp=Z,114nm,1.0s						
PPT	**Papeete**	**72.22**	**260**	P	**P**	**22 55 18.6**	**+1.9**
PPT	**Papeete**	**72.22**	**260**	P	**P**	**22 55 18.6**	**+1.9**
	comp=Z,101nm,0.8s,baz=96,slow=2.6,SNR=10.0						
Y31A	**Rekieta Farm,**	**72.28**	**334**	⇓*pP*	**P**	**22 55 16.9**	**+0.3**
	baz=73,SNR=18					

baz=74
Y25A Mesa, Roswell 74.00 330 ⇑P P 22 55 28.1 +1.3
baz=74
V30A Spur Ranch, Mi 74.05 334 ⇓P P 22 55 28.1 +1.1
baz=74
Z23A Rita Site, Whi 74.08 329 ⇑P P 22 55 28.8 +1.5
baz=74,SNR=18
121A Cookes Peak, D 74.16 327 ⇑P P 22 55 29.2 +1.3
baz=74,SNR=26
W28A Vega 74.17 333 ⇓P P 22 55 28.3 +0.6
baz=74
X26A CR and CF Fran 74.18 331 ⇓P P 22 55 28.6 +0.7
baz=74,SNR=26
U31A Nine Bar Ranch 74.29 335 ⇑P P 22 55 28.8 +0.5
baz=75
Y24A Capitan 74.31 330 ⇑P P 22 55 29.2 +0.5
baz=75,SNR=7.4
W27A Bowe Ranch, En 74.33 332 ⇓P P 22 55 29.0 +0.3
baz=75,SNR=27
Z22A Elephant Butte 74.40 328 ⇑P P 22 55 30.4 +1.2
baz=75,SNR=14
X25A Clemmons Ranch 74.51 331 ⇑P P 22 55 29.9 +0.1
baz=75,SNR=16
SFIN Scholer Farm 74.52 346 ⇑P P 22 55 28.4 -1.1
baz=75
120A U Bar Ranch, L 74.56 327 ⇑P P 22 55 31.4 +1.2
baz=75,SNR=13
Y23A Lovelace Mesa, 74.58 329 ⇓P P 22 55 31.3 +1.1
baz=75,SNR=9.8
V28A Channing 74.61 333 ⇓P P 22 55 31.0 +0.7
baz=75
W26A Owens Ranch, T 74.63 332 ⇓P P 22 55 31.3 +0.9
baz=75,SNR=11
U30A WK&E Inc. Balk 74.72 335 ⇓P P 22 55 31.5 +0.7
baz=75,SNR=5.9
Z21A St. Cloud Mine 74.76 328 ⇓P P 22 55 32.8 +1.4
baz=75,SNR=13
V27A Dan Oppiter Fa 74.85 333 ⇑P P 22 55 32.4 +0.8
baz=75,SNR=5.5
X24A Lazy VL Ranch, 74.86 330 ⇑P P 22 55 32.5 +0.6
baz=75
U29A Oasis Ranch, S 74.87 334 ⇑P P 22 55 32.5 +0.8
baz=75
T31A Randall Ranch, 74.88 336 ⇑P P 22 55 32.2 +0.5
baz=75
Y22A Socorro 74.98 329 ⇑P P 22 55 33.6 +1.0
baz=75,SNR=6.1
BNM Barren Site 75.01 329 *eP* P 22 55 33.4 +0.5
comp=Z,4.8nm,0.9s
BNM *epP* **pP** 22 56 03.4 0.0
Z20A Nine Sixteen R 75.01 327 ⇑P P 22 55 34.1 +1.3
baz=75,SNR=9.5
W25A X Bar L Ranch, 75.02 331 ⇓P P 22 55 33.1 +0.3
baz=75,SNR=16
T30A Plains 75.14 335 ⇓P P 22 55 33.6 +0.4
baz=75
HDIL Hopedale 75.15 345 *eP* P 22 55 32.9 -0.2
comp=Z,30nm,0.6s
HDIL *epP* **pP** 22 56 02.9 -0.8
LPM Los Pinos Moun 75.15 329 *eP* P 22 55 34.8 +1.2
U28A Mallet 75.16 333 ⇓P P 22 55 34.0 +0.5
baz=75
X23A Hourglass Bar 75.19 330 ⇑P P 22 55 35.1 +1.3
baz=75
V26A Tequesquite Ra 75.25 332 ⇓P P 22 55 34.4 +0.4
baz=76,SNR=9.6
S31A Mullinville 75.29 336 ⇑P P 22 55 34.7 +0.6
baz=76
Y21A Point of Rocks 75.35 328 ⇑P P 22 55 36.4 +1.6
baz=76,SNR=11
TUC Tucson 75.38 325 *eP* P 22 55 35.8 +1.0
TUC pmax pmax
comp=Z,5.0nm,1.8s
TUC Tucson 75.38 325 *eP* P 22 55 35.8 +1.0
comp=Z,4.7nm,1.8s
W24A Lazy 6 Ranch, 75.40 331 ⇓P P 22 55 35.7 +0.7
baz=76,SNR=17
U27A Thompson Grove 75.43 333 ⇑P P 22 55 35.5 +0.5
baz=76,SNR=5.4
LAZ Ladron 75.45 329 *eP* P 22 55 36.0 +0.7
comp=Z,15nm,1.4s
LAZ *epP* **pP** 22 56 06.6 +0.8
X22A Bernardo 75.48 329 ⇑P P 22 55 37.0 +1.6
baz=76
T29A Hugoton 75.51 335 ⇑P P 22 55 35.8 +0.4
baz=76
Y20A Horse Springs, 75.58 328 ⇓P P 22 55 37.4 +1.3
baz=76,SNR=6.4
ANMO Albuquerque 75.62 330 *eP* P 22 55 36.9 +0.7
comp=Z,28nm,1.3s
ANMO *epP* **pP** 22 56 08.5 +1.7
ANMO *esP* **sP** 22 56 21.4 +1.6
V25A Rancho No Teng 75.62 331 ⇓P P 22 55 36.9 +0.6
baz=76,SNR=23
S30A Montezuma 75.64 335 ⇓P P 22 55 36.7 +0.5
baz=76
W23A Werner Place, 75.67 330 ⇑P P 22 55 37.7 +1.2
baz=76,SNR=14
KSU1 Kansas State U 75.71 339 *eP* P 22 55 36.1 -0.2
comp=Z,19nm,0.7s
KSU1 *esP* **sP** 22 56 21.0 +1.1
U26A Atchley Ranch, 75.76 332 ⇑P P 22 55 37.4 +0.4
baz=76,SNR=11
X21A Alamocita Cree 75.77 328 ⇓P P 22 55 38.6 +1.5
baz=76,SNR=16
T28A Walsh 75.78 334 ⇑P P 22 55 37.0 +0.1
baz=76
V24A Rampart Ranch, 75.79 331 ⇓P P 22 55 37.9 +0.6
baz=76,SNR=9.3
S29A Ulysses 75.86 335 ⇓P P 22 55 38.1 +0.8
baz=76,SNR=8.4
W22A Albuquerque 75.90 329 ⇑P P 22 55 39.2 +1.4
baz=76
T27A Campo 75.95 333 ⇓P P 22 55 38.4 +0.5
baz=76,SNR=12
U25A Circle Dot Ran 76.03 332 ⇑P P 22 55 39.2 +0.7
baz=76,SNR=21
214A Organ Pipe Nat 76.09 323 ⇑P P 22 55 40.1 +1.4
baz=76,SNR=11
S28A Manter 76.11 334 ⇓P P 22 55 39.4 +0.5
baz=76,SNR=12
X20A Quemado 76.17 328 ⇑P P 22 55 40.7 +1.3
baz=76
V23A Ortiz Mt. (NFS 76.19 330 ⇑P P 22 55 40.8 +1.4
baz=76
W21A San Fidel 76.28 329 ⇑P P 22 55 41.5 +1.6
baz=76
T26A Comanche Natio 76.38 333 ⇓P P 22 55 41.3 +0.8
baz=77,SNR=15
CBKS Cedar Bluff 76.45 336 *eP* P 22 55 41.4 +0.7
CBKS pmax pmax
comp=Z,32nm,0.8s
CBKS Cedar Bluff 76.45 336 *eP* P 22 55 41.4 +0.7
comp=Z,32nm,0.8s
S27A Las Animas 76.57 334 ⇓P P 22 55 42.0 +0.5
baz=77,SNR=8.9
V22A San Miguel Ran 76.64 330 ⇑P P 22 55 43.8 +1.8
baz=77,SNR=42
W20A Ramah 76.66 328 ⇓P P 22 55 43.3 +1.2
baz=77,SNR=17
T25A Trinidad 76.67 332 ⇓P P 22 55 43.5 +1.4
baz=77,SNR=34
U23A El Rito 76.69 331 ⇓P P 22 55 43.8 +1.5
baz=77,SNR=13
S26A Kim 76.73 333 ⇑P P 22 55 43.4 +1.1
baz=77,SNR=28
X18A Snowflake 76.81 327 ⇑P P 22 55 44.3 +1.3
baz=77,SNR=5.1
V21A Milan 76.85 329 ⇓P P 22 55 44.4 +1.2
baz=77
T24A Torres, Weston 76.87 332 ⇑P P 22 55 44.7 +1.4
baz=77,SNR=13
U22A Llaves 77.01 330 ⇓P P 22 55 45.6 +1.5
baz=77,SNR=10.0
R27A Eads 77.06 334 ⇑P P 22 55 44.7 +0.5
baz=77,SNR=14
S25A Robets Cordova 77.13 332 ⇑P P 22 55 45.8 +1.1
baz=77,SNR=22
LONY Lake Ozonia 77.16 357 *eP* P 22 55 45.2 +0.8
comp=Z,14nm,1.1s
W18A Petrified Fore 77.20 327 ⇓P P 22 55 46.3 +1.2
baz=77
V20A Brimhall 77.21 329 ⇑P P 22 55 46.3 +1.1
baz=78,SNR=11
113A Mohawk Valley, 77.22 323 ⇑P P 22 55 46.3 +1.3
baz=77
T23A Casias Ranch, 77.23 331 ⇑P P 22 55 46.6 +1.2
baz=78
R26A Arlington 77.31 334 ⇑P P 22 55 46.4 +0.8
baz=78,SNR=21
FRNY Flat Rock 77.32 357 *eP* P 22 55 46.2 +0.9
comp=Z,14nm,0.8s
U21A Nageezi 77.39 330 ⇓P P 22 55 47.6 +1.4
baz=78,SNR=34
X16A Lo Mia Camp, P 77.42 326 ⇑P P 22 55 47.8 +1.4
baz=78,SNR=27
S24A Houchin Ranch, 77.42 332 ⇑P P 22 55 48.0 +1.5
baz=78,SNR=38
R25A Fountain Ranch 77.50 333 ⇓P P 22 55 47.4 +0.7
baz=78,SNR=5.4
T22A Edith 77.57 330 ⇓P P 22 55 48.8 +1.6
baz=78,SNR=20
SDCO Great Sand Dun 77.63 332 *eP* P 22 55 48.7 +1.1
comp=Z,13nm,0.8s
KSCO Kaye Shedlock' 77.64 334 ⇑P P 22 55 48.3 +0.9
baz=78,SNR=5.3
U20A Newcomb 77.72 329 ⇓P P 22 55 49.0 +1.0
baz=78,SNR=8.5
Y14A Wickenburg 77.78 324 ⇑P P 22 55 49.4 +1.2
baz=78,SNR=7.5
T21A Navajo Lake 77.81 330 ⇓P P 22 55 49.7 +1.2
baz=78,SNR=10
Q26A Hugo 77.89 334 ⇑P P 22 55 50.0 +1.2
baz=78
R24A Sanders Place, 77.89 332 ⇓P P 22 55 50.3 +1.4
baz=78,SNR=26
GLA Glamis 77.99 323 *eP* P 22 55 50.8 +1.4
GLA pmax pmax
comp=Z,9.0nm,0.7s
GLA Glamis 77.99 323 *eP* P 22 55 50.8 +1.4
comp=Z,8.8nm,0.7s
GLA Glamis 77.99 323 ⇑P P 22 55 50.8 +1.4
baz=78,SNR=6.8
P27A Ficken Ranch, 78.10 335 ⇑P P 22 55 50.7 +0.8
baz=78
R23A Moffat 78.14 332 ⇓P P 22 55 51.4 +1.1
baz=78,SNR=14
Q25A Bedland, Calha 78.15 333 ⇑P P 22 55 51.1 +0.7
baz=78
S22A 4UR Ranch, Cre 78.16 331 ⇓P P 22 55 51.5 +1.0
baz=78,SNR=14
WUAZ Wupatki 78.29 326 *eP* P 22 55 51.9 +0.8
comp=Z,25nm,1.4s
WUAZ *epP* **pP** 22 56 22.6 +0.8
WUAZ Wupatki 78.29 326 ⇑P P 22 55 52.5 +1.4
baz=78,SNR=10.0
BGNE Belgrade 78.29 339 ⇓P P 22 55 51.1 +0.3
baz=79,SNR=6.2
DVTC Desert V Tower 78.34 322 ⇓P P 22 55 52.9 +1.6
baz=78
P26A Davis Ranch, A 78.38 334 ⇓P P 22 55 52.4 +0.9
baz=79
Y12C Blythe 78.39 323 ⇑P P 22 55 52.9 +1.5
baz=79,SNR=6.2
SWSC Sam W. Stewart 78.40 322 ⇑P P 22 55 53.0 +1.4
baz=79
MVCO Mesa Verde 78.41 329 *eP* P 22 55 52.9 +1.0
comp=Z,20nm,1.0s
MVCO *epP* **pP** 22 56 24.2 +1.6
MVCO Mesa Verde 78.41 329 ⇑P P 22 55 52.9 +1.0
baz=79,SNR=11
S21A Coal Bank Pass 78.49 330 ⇑P P 22 55 53.6 +1.3
baz=79,SNR=9.9
Q24A Divide 78.54 333 ⇑P P 22 55 53.8 +1.1
baz=79
O27A Beecher Island 78.63 335 ⇓P P 22 55 54.0 +1.2
baz=79
PDMCI Parker Dam,Lak 78.63 324 ⇑P P 22 55 54.0 +1.2
baz=79
P25A Willow Gulch B 78.65 334 ⇓P P 22 55 54.3 +1.3
baz=79,SNR=11
BAR Barrett 78.65 321 *eP* P 22 55 54.7 +1.7
comp=Z,18nm,0.9s
MONP Monument Peak 78.69 321 ⇓P P 22 55 54.9 +1.4
baz=79
Q23A Hartsel 78.76 332 ⇓P P 22 55 54.6 +0.8
baz=79
BC3 Big Chuckawall 78.78 323 ⇑P P 22 55 55.1 +1.2
baz=79,SNR=13
S20A Disappointment 78.87 330 ⇑P P 22 55 55.9 +1.5
baz=79,SNR=14
P24A Kohler Place, 78.93 333 ⇓P P 22 55 55.7 +1.1
baz=79
O26A Horse Wrangler 78.97 335 ⇑P P 22 55 55.8 +1.1
baz=79
R21A Cimarron 78.99 331 ⇑P P 22 55 56.2 +1.1
baz=79
BOSA Boshof 79.02 117 *eP* P 22 55 55.7 +0.3
BOSA pP **pP** 22 56 25.2 -1.0
BOSA Boshof 79.02 117 P P 22 55 55.2 -0.2
comp=Z,5.5nm,0.8s,baz=262,slow=3.3,SNR=9.5
BOSA pP **pP** 22 56 25.2 -1.0
comp=Z,11nm,0.7s,baz=226,slow=5.0,SNR=3.5
BOSA LR LR 23 30 20.3
comp=Z,43nm,18.5s,baz=333,slow=35
IRM Iron Mountain 79.03 323 ⇓P P 22 55 56.4 +1.4
baz=79,SNR=8.7
OGNE Ogallala 79.14 336 ⇑P P 22 55 56.3 +0.7
baz=79
W13A Hualapai Mount 79.15 325 ⇑P P 22 55 57.2 +1.4
baz=79,SNR=13
Q22A Crested Butte, 79.15 331 ⇓P P 22 55 57.2 +1.2
baz=79,SNR=13
O25A Wiggins 79.15 334 ⇓P P 22 55 57.0 +1.3
baz=79,SNR=5.1
P23A Jefferson 79.17 332 ⇓P P 22 55 57.2 +1.2
baz=79
R20A Redvale 79.18 330 ⇑P P 22 55 57.4 +1.3
baz=79,SNR=10
N27A Anderson Farm, 79.19 335 ⇓P P 22 55 57.0 +1.1
baz=80,SNR=7.5
PFO Pinyon Flat Ob 79.26 322 *eP* P 22 55 57.1 +0.6
comp=Z,18nm,1.1s
PFO *epP* **pP** 22 56 28.1 +0.8
PFO Pinyon Flat Ob 79.26 322 ⇑P P 22 55 58.1 +1.7
baz=80,SNR=7.0
BELC Belle Mtn. Jos 79.33 322 ⇑P P 22 55 58.3 +1.4
baz=80,SNR=6.5
Q21A Lamborn Mesa, 79.40 331 ⇓P P 22 55 58.3 +1.1
baz=80
ISCO Idaho Springs 79.44 333 *eP* P 22 55 58.4 +0.9
ISCO pmax pmax
comp=Z,12nm,0.9s
ISCO Idaho Springs 79.44 333 *eP* P 22 55 58.4 +0.9
comp=Z,12nm,0.9s
ISCO *epP* **pP** 22 56 29.4 +1.1
ISCO Idaho Springs 79.44 333 ⇑P P 22 55 58.4 +0.9
baz=80,SNR=13
SMCO Snowmass 79.45 332 *eP* P 22 55 59.0 +1.3
comp=Z,22nm,0.8s
SMCO *epP* **pP** 22 56 32.4 +3.9
N26A Koester Ranch, 79.45 335 ⇑P P 22 55 58.3 +0.9
baz=80
U15A North Rim 79.46 326 ⇑P P 22 55 59.2 +1.5
baz=80,SNR=9.2
S18A Hurst Farm, Bl 79.46 329 ⇓P P 22 55 58.9 +1.3
baz=80,SNR=38
O24A Longmont 79.52 333 ⇑P P 22 55 58.5 +0.8
baz=80
PV04 Paradox Valley 79.58 330 *eP* P 22 55 59.5 +1.4
MURC Murrieta 79.65 321 ⇑P P 22 56 00.0 +1.6
baz=80,SNR=5.1
P22A Eagle 79.72 332 ⇓P P 22 56 00.1 +1.2
baz=80
GMRC Granite Mounta 79.78 323 ⇑P P 22 56 00.8 +1.6
baz=80,SNR=12
M27A Reverse DX Ran 79.78 336 ⇑P P 22 55 59.9 +0.9
baz=80
Q20A Ridgley Place, 79.80 331 ⇑P P 22 55 60.0 +0.7
baz=80
O23A Lake Granby, G 79.92 333 ⇑P P 22 56 01.0 +1.0
baz=80,SNR=9.1
P21A Newcastle 79.93 331 ⇑P P 22 56 01.3 +1.3
baz=80
ECSD EROS Data Cent 79.97 341 *eP* P 22 55 59.9 0.0
comp=Z,36nm,0.8s
ECSD *epP* **pP** 22 56 30.0 -0.8
O22A Kremmling 80.12 332 ⇑P P 22 56 01.9 +0.8
baz=80,SNR=13
HEC Hector,Ludlow 80.15 323 ⇓P P 22 56 02.8 +1.6
baz=80
L27A T5 Ranch, Ells 80.25 336 ⇓P P 22 56 02.6 +1.0
baz=80
M25A Palm-Egli Farm 80.29 335 ⇓P P 22 56 02.7 +0.8
baz=81
P20A De Beque 80.30 331 ⇓P P 22 56 03.0 +1.0
baz=81,SNR=6.5
BFSC Mount Baldy Ra 80.38 322 ⇓P P 22 56 03.7 +1.2
baz=81,SNR=7.5
TUQ Turquoise Moun 80.42 323 ⇓P P 22 56 03.9 +1.2
baz=81,SNR=5.8
N23A Red Feather La 80.52 333 ⇓P P 22 56 04.2 +1.0
baz=81,SNR=8.3
MWC Mount Wilson 80.58 321 *eP* P 22 56 05.3 +1.7
MWC pmax pmax
comp=Z,25nm,1.0s
MWC Mount Wilson 80.58 321 *eP* P 22 56 05.2 +1.7
comp=Z,25nm,1.0s
M24A Cheyenne 80.60 334 ⇓P P 22 56 04.7 +1.2
baz=81,SNR=8.2
N22A Wattenberg Ran 80.64 333 ⇑P P 22 56 05.2 +1.3
baz=81,SNR=9.4
P19A Cripple Cowboy 80.65 330 ⇑P P 22 56 05.0 +1.0
baz=81,SNR=15
GSC Goldstone 80.77 323 *eP* P 22 56 06.0 +1.6
GSC *e*PP* **pP** 22 56 36.5 +1.1
GSC pmax pmax
comp=Z,11nm,0.9s
GSC Goldstone 80.77 323 *eP* P 22 56 06.0 +1.6
comp=Z,11nm,0.9s
GSC *epP* **pP** 22 56 36.5 +1.1
GSC Goldstone 80.77 323 ⇑P P 22 56 05.7 +1.2
baz=81,SNR=6.2
K27A Fluecknger Fa 80.77 336 ⇑P P 22 56 05.5 +1.2
baz=81,SNR=5.3
O20A White River Ci 80.77 331 ⇓P P 22 56 05.3 +0.8
baz=81
CCUT Cedar City 80.87 326 *eP* P 22 56 07.0 +1.9
comp=Z,18nm,0.9s
CCUT *epP* **pP** 22 56 37.4 +1.3
SRU San Rafael 80.87 329 *eP* P 22 56 05.6 +0.6
SRU *e*PP* **pP** 22 56 34.9 -1.1
SRU pmax pmax
comp=Z,18nm,0.8s
SRU San Rafael 80.87 329 *eP* P 22 56 05.6 +0.6
comp=Z,18nm,0.8s
SRU *epP* **pP** 22 56 34.9 -1.1
SRU San Rafael 80.87 329 ⇑P P 22 56 05.8 +0.7
baz=81
L25A Engebretsen Ra 80.89 335 ⇓P P 22 56 06.3 +1.3
baz=81,SNR=7.3
M23A Laramie 80.93 334 ⇓P P 22 56 06.3 +0.9
baz=81,SNR=10
SHOC Shoshone 80.97 323 ⇓P P 22 56 06.6 +1.2
baz=81
Q16A Castle Valley 80.99 329 ⇓P P 22 56 06.7 +1.0
baz=81,SNR=11
N21A Black Mountain 81.02 332 ⇑P P 22 56 07.2 +1.3
baz=81
EDW2 Edwards Air Fo 81.05 322 ⇓P P 22 56 06.9 +0.9
baz=81,SNR=9.1
K26A Motz Farm, Whi 81.09 336 ⇓P P 22 56 07.0 +1.0
baz=81
MSU Marysvale 81.11 328 *eP* P 22 56 07.7 +1.3
MSU *e*PP* **pP** 22 56 38.3 +1.0
MSU Marysvale 81.11 328 *eP* P 22 56 07.7 +1.3
MSU *epP* **pP** 22 56 38.3 +1.0
MVU Marysvale 81.12 328 *eP* P 22 56 06.9 +0.5
comp=Z,13nm,0.9s
L24A Wheatland 81.14 334 ⇑P P 22 56 07.2 +0.9
baz=81
LBTB Lobatse 81.16 114 *eP* P 22 56 07.2 +0.2
comp=Z,17nm,0.8s
LBTB *epP* **pP** 22 56 36.8 -1.1
P18A Preston Nutter 81.18 330 ⇓P P 22 56 07.8 +0.9
baz=81,SNR=14
M22A Cedar Creek Ra 81.21 333 ⇑P P 22 56 07.7 +0.8
baz=82
OSI Osito Adit 81.23 321 ⇓P P 22 56 08.2 +1.3
baz=81
BSC Santa Cruz Isl 81.25 320 ⇑P P 22 56 08.5 +1.6
baz=81
K25A Mack Ranch, Ha 81.25 335 ⇓P P 22 56 08.2 +1.3
baz=82,SNR=6.3
P17A Butcher Ranch, 81.27 329 ⇓P P 22 56 07.9 +0.8
baz=82
O19A Miners Draw (B 81.27 331 ⇓P P 22 56 07.7 +0.6
baz=82,SNR=12
LRMC Laurel Mountai 81.35 322 ⇓P P 22 56 08.5 +0.9
baz=82
N20A Spence Gulch, 81.37 332 ⇓P P 22 56 08.4 +0.7
baz=82
L23A Garrett 81.48 334 ⇑P P 22 56 08.7 +0.4
baz=82
M21A Separation Pea 81.68 333 ⇓P P 22 56 09.9 +0.6
baz=82
ARVC Arvin 81.68 321 ⇑P P 22 56 10.5 +1.3
baz=82
L22A Ellis Ranch, M 81.68 333 ⇓P P 22 56 10.4 +1.1
baz=82
K24A Anderson Ranch 81.69 335 ⇑P P 22 56 10.3 +1.1
baz=82
FURC Furnace Creek, 81.70 323 ⇓P P 22 56 10.6 +1.4
baz=82,SNR=6.5
MPMC Manual Prospec 81.70 323 ⇑P P 22 56 10.4 +0.9
baz=82,SNR=6.0
M20A Sweetwater, Wa 81.90 332 ⇓P P 22 56 10.8 +0.3
baz=82,SNR=6.5
ISA Isabella 81.90 322 *eP* P 22 56 11.2 +0.8
ISA pmax pmax
comp=Z,14nm,0.8s
ISA Isabella 81.90 322 *eP* P 22 56 11.2 +0.8
comp=Z,14nm,0.8s
ISA Isabella 81.90 322 ⇓P P 22 56 11.9 +1.4
baz=82
DAC Darwin (Calif) 81.92 323 *eP* P 22 56 11.5 +0.8
DAC pmax pmax
comp=Z,22nm,0.9s
DAC Darwin (Calif) 81.92 323 *eP* P 22 56 11.4 +0.8
comp=Z,22nm,0.9s
L21A Rawlins 81.98 333 ⇓P P 22 56 11.3 +0.5
baz=82,SNR=12
K23A Bowen Ranch, D 82.01 334 ⇓P P 22 56 11.8 +0.8
baz=82,SNR=7.9
PKM Peak Mountain 82.03 321 ⇑P P 22 56 12.8 +1.6
baz=82,SNR=6.7
TOA0 Torodi Ar. Sit 82.09 69 *eP* P 22 56 11.4 -0.3
TOA0 *epP* **pP** 22 56 41.9 -0.8
TORD Torodi Ar. Bea 82.09 69 P P 22 56 12.1 +0.3
TORD pP **pP** 22 56 42.0 -0.8
TORD PKKPbc **PKKPbc** 23 14 40.3 +1.0
TORD Torodi Ar. Bea 82.09 69 P P 22 56 12.1 +0.3
comp=Z,3.1nm,0.7s,baz=289,slow=7.4,SNR=67
TORD pP **pP** 22 56 42.0 -0.8
comp=Z,12nm,0.7s,baz=261,slow=4.7,SNR=12
TORD PKKPbc **PKKPbc** 23 14 40.3 +1.0
comp=Z,0.1nm,0.4s,baz=47,slow=2.0,SNR=5.1
TORD LR LR 23 28 10.2
comp=Z,43nm,20.1s,baz=210,slow=32
MPU Maple Canyon 82.10 329 *eP* P 22 56 12.6 +1.1
comp=Z,12nm,0.9s
J24A Dixon Ranch, L 82.16 335 ⇓P P 22 56 12.8 +1.2
baz=82,SNR=12
K22A Casper 82.25 334 ⇓P P 22 56 12.9 +0.7
baz=82,SNR=7.3
DAU Daniels Canyon 82.26 329 *eP* P 22 56 13.7 +1.2
DAU Daniels Canyon 82.26 329 *eP* P 22 56 13.7 +1.2
M19A Rock Springs 82.30 331 ⇑P P 22 56 12.9 +0.3
baz=83
VES Vestal, Richgr 82.36 322 ⇑P P 22 56 14.0 +1.3
baz=83,SNR=5.9
L20A Wamsutter 82.40 332 ⇓P P 22 56 13.6 +0.5
baz=83
JLU Jordanelle 82.50 329 *eP* P 22 56 14.7 +1.1
comp=Z,8.5nm,0.8s
K21A Alcova 82.51 333 ⇑P P 22 56 14.2 +0.6
baz=83,SNR=5.4
R11A Troy Canyon, C 82.56 325 ⇑P P 22 56 15.2 +1.3
baz=83,SNR=27
I24A Kuemmerle Ranc 82.61 335 ⇑P P 22 56 14.7 +0.7
baz=83,SNR=6.1
RSSD Black Hills 82.64 336 *eP* P 22 56 14.8 +0.6
RSSD pmax pmax
comp=Z,21nm,0.9s
RSSD Black Hills 82.64 336 *eP* P 22 56 14.8 +0.6
comp=Z,21nm,0.9s
EYMN Ely 82.67 346 *eP* P 22 56 13.8 -0.2
comp=Z,17nm,0.8s
EYMN *epP* **pP** 22 56 44.0 -1.1
DUG Dugway 82.77 328 *eP* P 22 56 15.5 +0.6
DUG pmax pmax
comp=Z,63nm,1.9s
DUG Dugway 82.77 328 *eP* P 22 56 15.5 +0.6

comp=Z,63nm,1.9s
DUG Dugway 82.77 328 ⇓P P 22 56 15.7 +0.8
baz=83,SNR=14
TIN Tinemaha 82.85 323 ⇓P P 22 56 16.7 +1.3
baz=83
L19A Farson 82.88 332 ⇓P P 22 56 16.1 +0.6
baz=83,SNR=7.1
J22A Midwest 82.89 334 ⇑P P 22 56 15.5 +0.1
baz=83,SNR=5.6
M17A Scullys Gap (B 82.89 330 ⇑P P 22 56 15.7 +0.1
baz=83
K20A Yellowstone Ra 82.95 332 ⇑P P 22 56 16.1 +0.2
baz=83
J21A Lysite 83.19 333 ⇑P P 22 56 17.4 +0.3
baz=84
MTUM Tungsten Hills 83.25 323 eP P 22 56 19.0 +1.4
K19A Absolon Red Bu 83.29 332 ⇑P P 22 56 17.7 +0.1
baz=84,SNR=12
I22A 9 Mile Ranch, 83.31 334 ⇑P P 22 56 18.0 +0.4
baz=84,SNR=10
H24A Dirks Ranch, A 83.36 336 ⇓P P 22 56 17.8 0.0
baz=84,SNR=16
HWUT Hardware Ranch 83.38 330 eP P 22 56 18.4 +0.3
comp=Z,64nm,1.7s
J20A Shoshoni 83.44 333 ⇓P P 22 56 19.1 +0.8
baz=84,SNR=9.5
H23A Clabaugh Cattl 83.50 335 ⇓P P 22 56 18.5 0.0
baz=84
L17A Cokeville 83.50 331 ⇓P P 22 56 18.7 0.0
baz=84,SNR=5.0
PDAR Pinedale Array 83.52 332 P P 22 56 18.8 0.0
PDAR Pinedale Array 83.52 332 P P 22 56 18.8 0.0
comp=Z,4.8nm,0.7s,baz=135,slow=6.9,SNR=22
BW06 Boulder Array 83.52 332 eP P 22 56 19.1 +0.3
comp=Z,6.6nm,1.0s
BW06 Boulder Array 83.52 332 ⇓P P 22 56 19.4 +0.6
baz=84
I21A Big Trails, Te 83.54 334 ⇓P P 22 56 18.9 +0.1
baz=84,SNR=8.8
MLAC Mammoth Lakes 83.60 323 ⇑P P 22 56 20.5 +1.1
baz=84
K18A Toltan Ranch, 83.61 331 ⇑P P 22 56 19.9 +0.7
baz=84,SNR=13
J19A Crowheart 83.74 332 ⇓P P 22 56 20.2 +0.3
baz=84,SNR=12
G24A Alzada 83.83 336 ⇓P P 22 56 20.4 +0.3
baz=84
H22A Clearmont 83.86 335 ⇑P P 22 56 20.5 +0.1
baz=84
NV11 Mina Array Sit 83.88 324 eP P 22 56 20.6 -0.1
NVAR Mina Array Bea 83.95 324 P P 22 56 22.1 +1.0
NVAR Mina Array Bea 83.95 324 P P 22 56 22.1 +1.0
comp=Z,12nm,0.8s,baz=157,slow=5.9,SNR=72
I20A Worland 83.97 333 ⇑P P 22 56 21.5 +0.5
baz=84,SNR=7.0
AGMN Agassiz Nation 84.00 343 eP P 22 56 21.1 +0.3
comp=Z,11nm,0.9s
AGMN epP pP 22 56 50.4 -1.5
AGMN esP sP 22 57 04.8 0.0
HVU Hansel Valley 84.04 329 eP P 22 56 22.0 +0.6
HVU e*PP pP 22 56 52.6 +0.1
HVU pmax pmax
comp=Z,20nm,0.8s
HVU Hansel Valley 84.04 329 eP P 22 56 22.0 +0.6
comp=Z,20nm,0.8s
HVU epP pP 22 56 52.6 +0.1
G23A Biddle 84.05 336 ⇑P P 22 56 21.2 0.0
baz=84
L15A Malad City 84.06 330 ⇓P P 22 56 21.6 +0.1
baz=84,SNR=5.9
K17A Gardner Place, 84.06 331 ⇑P P 22 56 21.8 +0.2
baz=84
H21A Big Horn, Sher 84.14 334 ⇑P P 22 56 21.9 +0.1
baz=84
F24A Ekalaka 84.29 337 ⇑P P 22 56 23.1 +0.6
baz=85
ELK Elko 84.30 327 eP P 22 56 23.5 +0.6
comp=Z,169nm,0.9s
ELK epP pP 22 56 54.3 +0.3
ELK Elko 84.30 327 P P 22 56 23.5 +0.6
comp=Z,11nm,0.8s,baz=146,slow=3.4,SNR=46
I19A Meeteetse 84.37 333 ⇑P P 22 56 23.4 +0.3
baz=85,SNR=6.0
H20A Greybull 84.38 334 ⇑P P 22 56 23.0 +0.1
baz=85,SNR=8.1
G22A Birney 84.38 335 ⇓P P 22 56 23.2 +0.2
baz=85
K16A Soda Springs 84.40 331 ⇓P P 22 56 24.0 +0.7
baz=85,SNR=9.4
I18A Diamond G Ranc 84.41 332 ⇓P P 22 56 23.7 +0.4
baz=85,SNR=14
J17A Brown Place, J 84.48 331 ⇑P P 22 56 24.1 +0.5
baz=85,SNR=5.2
F23A Volborg 84.51 336 ⇓P P 22 56 23.6 +0.1
baz=85
MDND Maddock 84.58 340 ⇑P P 22 56 24.0 +0.2
baz=85
LOHW Long Hollow 84.65 332 eP P 22 56 24.9 +0.3
comp=Z,19nm,1.4s
K15A Arbon 84.68 330 ⇑P P 22 56 25.0 +0.4
baz=85,SNR=5.3
CMB Columbia Colle 84.70 322 eP P 22 56 25.6 +0.9
CMB pmax pmax
comp=Z,17nm,1.5s
CMB Columbia Colle 84.70 322 eP P 22 56 25.6 +0.9
comp=Z,17nm,1.5s
G21A Lodge Grass 84.72 335 ⇓P P 22 56 25.0 +0.3
baz=85
J16A Bone 84.78 331 ⇓P P 22 56 25.4 +0.3
baz=85,SNR=5.7
MOOW Moose Ponds 84.82 332 eP P 22 56 25.8 +0.4
comp=Z,3.4nm,0.8s
K14A Jones Ranch, D 84.84 329 ⇓P P 22 56 25.5 +0.1
baz=85,SNR=8.8
F22A Rosebud 84.86 335 ⇓P P 22 56 25.3 0.0
baz=85,SNR=6.1
E24A Baker 84.87 337 ⇑P P 22 56 25.6 +0.3
baz=85
I17A Pilgrim Ck. 84.89 332 ⇑P P 22 56 26.6 +0.9
baz=85,SNR=11
H19A Powell 84.91 333 ⇑P P 22 56 25.9 +0.3
baz=85,SNR=5.2
G20A Bridger 85.08 334 ⇑P P 22 56 26.4 -0.1
baz=85,SNR=12
E23A Ismay 85.15 336 ⇓P P 22 56 26.7 0.0
baz=85
H18A Shoshone NF, C 85.17 333 ⇑P P 22 56 27.4 +0.3
baz=85,SNR=19
F21A Absaloka Mine, 85.20 335 ⇑P P 22 56 27.6 +0.6
baz=86
J15A Blackfoot 85.22 330 ⇓P P 22 56 28.0 +0.8
baz=86,SNR=6.5
I16A Newdale 85.22 331 ⇓P P 22 56 27.8 +0.5
baz=86,SNR=7.3
H17A Grant Village 85.29 332 ⇑P P 22 56 28.7 +1.0
baz=86
E22A Miles City 85.32 336 ⇓P P 22 56 27.8 +0.2
baz=86
LKWY Lake 85.36 332 eP P 22 56 29.9 +1.8
LKWY pmax pmax
comp=Z,6.0nm,0.9s
LKWY Lake 85.36 332 eP P 22 56 29.9 +1.8
comp=Z,5.8nm,0.9s
RLMT Red Lodge 85.39 333 eP P 22 56 28.3 +0.2
comp=Z,10nm,0.6s
RLMT epP pP 22 56 58.3 -1.1
RLMT Red Lodge 85.39 333 ⇓P P 22 56 28.7 +0.5
baz=86
F20A Billings 85.55 334 ⇑P P 22 56 29.0 +0.2
baz=86
G18A Lazy EL Ranch, 85.67 333 ⇓P P 22 56 29.6 +0.1
baz=86,SNR=17
YMR Madison River 85.67 332 eP P 22 56 30.4 +0.9
comp=Z,43nm,0.9s
YMR epP pP 22 57 01.3 +0.5
YMR esP sP 22 57 14.7 +1.0
D23A Lindsay 85.71 337 ⇓P P 22 56 30.2 +0.7
baz=86,SNR=11
C24A Savage 85.76 337 ⇓P P 22 56 30.5 +0.8
baz=86,SNR=5.7
E21A Keefer Ranch, 85.80 335 ⇓P P 22 56 30.6 +0.7
baz=86
H16A Russell Place, 85.81 332 ⇓P P 22 56 31.1 +0.9
baz=86,SNR=11
ULM Lac du Bonnet 85.82 344 eP P 22 56 29.5 -0.4
comp=Z,12nm,0.9s
ULM Lac du Bonnet 85.82 344 P P 22 56 29.4 -0.4
comp=Z,9.7nm,0.7s,baz=180,slow=3.4,SNR=14

F19A Roth Farm, Mol 85.89 334 ⇓P P 22 56 31.1 +0.6
baz=86
J13A Cove Ranch, Pi 85.96 329 ⇑P P 22 56 32.0 +1.1
baz=86,SNR=24
QLMT Earthquake Lak 85.99 332 eP P 22 56 32.6 +1.5
D22A Cohagen 86.02 336 ⇑P P 22 56 31.5 +0.5
baz=86
BEKR Beckworth 86.07 323 eP P 22 56 32.9 +1.3
comp=Z,7.5nm,1.1s
I14A Mackay 86.08 330 ⇑P P 22 56 32.7 +1.2
baz=86,SNR=16
G17A Pierce Place, 86.13 332 ⇓P P 22 56 32.2 +0.5
baz=86
E20A Meyer Farm, Mu 86.14 335 ⇑P P 22 56 32.2 +0.5
baz=86,SNR=32
HLID Hailey 86.19 329 ⇑P P 22 56 33.1 +1.0
baz=86,SNR=19
F18A Big Timber 86.22 333 ⇓P P 22 56 32.3 +0.2
baz=86,SNR=22
D21A La Casta Ranch 86.22 336 ⇓P P 22 56 32.5 +0.4
baz=86
OHCM Honcut 86.25 322 eP P 22 56 33.7 +1.5
C23A Lambert 86.25 337 ⇑P P 22 56 32.5 +0.4
baz=86,SNR=9.4
H15A Lima 86.31 331 ⇑P P 22 56 33.5 +0.8
baz=87,SNR=5.7
E19A Rath Farm, Rou 86.35 334 ⇓P P 22 56 33.0 +0.3
baz=87,SNR=35
I13A Wildhorse Cree 86.35 330 ⇓P P 22 56 34.0 +1.1
baz=87,SNR=32
C22A Vida 86.43 337 ⇓P P 22 56 33.4 +0.4
baz=87
G16A Moss Hill, Enn 86.47 332 ⇑P P 22 56 33.8 +0.4
baz=87
DGMT Dagmar 86.52 338 ⇑P P 22 56 34.0 +0.6
baz=87
MCMT McKenzie Canyo 86.56 331 eP P 22 56 35.2 +1.2
comp=Z,13nm,0.8s
F17A Fitzpatrick Pl 86.58 333 ⇑P P 22 56 34.5 +0.6
baz=87,SNR=7.3
H14A Leadore 86.60 330 ⇓P P 22 56 35.0 +0.9
baz=87,SNR=15
D20A Manuel Ranch, 86.65 335 ⇓P P 22 56 34.4 +0.3
baz=87,SNR=12
I12A Atlanta 86.69 329 ⇑P P 22 56 35.3 +0.7
baz=87,SNR=19
MFID Damas Ranch 86.69 328 ⇑P P 22 56 35.1 +0.6
baz=87,SNR=11
G15A Dillon 86.69 331 ⇑P P 22 56 35.2 +0.6
baz=87,SNR=9.8
BOZ Bozeman (W) 86.75 332 eP P 22 56 34.8 +0.1
BOZ pmax pmax
comp=Z,7.0nm,0.9s
BOZ Bozeman (W) 86.75 332 eP P 22 56 34.8 +0.1
comp=Z,7.1nm,0.9s
BOZ Bozeman (W) 86.75 332 ⇑P P 22 56 35.0 +0.2
baz=87
E18A Harlowton 86.85 334 ⇑P P 22 56 35.8 +0.6
baz=87
A24A Westby 86.86 338 ⇓P P 22 56 35.4 +0.4
baz=87
F16A Kennard Place, 86.86 332 ⇑P P 22 56 35.6 +0.4
baz=87
DLMT Dillon 86.90 331 eP P 22 56 36.6 +1.2
comp=Z,32nm,1.4s
C21A Desert Coulee 86.91 336 ⇑P P 22 56 35.7 +0.4
baz=87
H13A Challis 86.93 330 ⇑P P 22 56 36.5 +0.9
baz=87,SNR=33
B22A Reddig Ranch S 86.95 337 ⇑P P 22 56 36.0 +0.5
baz=87
D19A Cripps Ranch, 86.98 335 ⇑P P 22 56 35.8 +0.1
baz=87,SNR=10
E17A Martinsdale 87.12 333 ⇓P P 22 56 36.9 +0.3
baz=87,SNR=5.8
G14A Jackson 87.15 331 ⇓P P 22 56 37.2 +0.5
baz=87
H12A Diamond D Ranc 87.18 330 ⇑P P 22 56 37.3 +0.4
baz=87,SNR=9.8
WVOR Wild Horse Val 87.20 326 eP P 22 56 37.9 +0.9
WVOR pmax pmax
comp=Z,15nm,1.2s
WVOR Wild Horse Val 87.20 326 eP P 22 56 37.9 +0.9
comp=Z,15nm,1.2s
LRM Limekiln Ridge 87.22 332 eP P 22 56 37.9 +0.8
F15A Butte 87.25 332 ⇑P P 22 56 37.9 +0.7
baz=88,SNR=15
SCHQ Schefferville 87.30 2 P P 22 56 36.8 -0.2
SCHQ pP pP 22 57 08.2 -0.1
SCHQ Schefferville 87.30 2 P P 22 56 36.8 -0.2
comp=Z,2.2nm,0.5s,baz=55,slow=18,SNR=9.4
SCHQ pP pP 22 57 08.2 -0.1
comp=Z,6.2nm,0.7s,baz=156,slow=3.5,SNR=5.0
D18A Linhart Farms, 87.34 334 ⇓P P 22 56 37.7 +0.2
baz=88,SNR=11
G13A Cobalt 87.35 330 ⇓P P 22 56 38.4 +0.7
baz=88,SNR=22
B21A Ellsworth Farm 87.40 336 ⇓P P 22 56 37.9 +0.2
baz=88,SNR=6.8
E16A East Helena 87.50 333 ⇑P P 22 56 38.7 +0.4
baz=88
C19A Slack Wire Ran 87.52 335 ⇓P P 22 56 38.4 +0.1
baz=88,SNR=11
A22A Carney Farms, 87.53 337 ⇑P P 22 56 38.5 +0.3
baz=88,SNR=10
F14A Wisdom 87.58 331 ⇓P P 22 56 39.7 +0.9
baz=88,SNR=5.5
MOD Modoc 87.59 325 eP P 22 56 39.9 +1.0
comp=Z,22nm,0.8s
KCPM Cahto Peak 87.59 322 eP P 22 56 40.4 +1.5
comp=Z,29nm,1.3s
D17A Six Diamond Ra 87.64 333 ⇓P P 22 56 39.4 +0.4
baz=88,SNR=24
WDC Whiskeytown Da 87.71 323 eP P 22 56 38.4 -0.9
WDC pmax pmax
comp=Z,11nm,1.0s
WDC Whiskeytown Da 87.71 323 eP P 22 56 38.4 -0.9
comp=Z,11nm,1.0s
E15A Deer Lodge 87.79 332 ⇓P P 22 56 40.2 +0.6
baz=88,SNR=5.5
G12A Big Creek, Yel 87.84 330 ⇑P P 22 56 40.4 +0.4
baz=88,SNR=11
J08A Circle Bar Ran 87.84 327 P P 22 56 41.2 +1.2
A21A Bergtoll Ranch 87.86 337 ⇓P P 22 56 40.3 +0.5
baz=88
D16A Dana Ranch, Ca 87.86 333 ⇓P P 22 56 40.8 +0.8
baz=88,SNR=12
F13A Darby 87.95 331 ⇑P P 22 56 40.9 +0.4
baz=88,SNR=21
EGMT Eagleton 88.02 334 eP P 22 56 41.0 +0.3
comp=Z,13nm,0.9s
EGMT Eagleton 88.02 334 ⇓P P 22 56 40.6 -0.1
baz=88,SNR=6.7
C17A Wharram Farm, 88.06 334 ⇑P P 22 56 41.0 +0.1
baz=88,SNR=10
A20A Cobblestone Ra 88.10 336 ⇓P P 22 56 41.2 +0.1
baz=88
E14A Clinton 88.12 331 ⇑P P 22 56 42.1 +0.8
baz=88,SNR=5.5
D15A Lincoln 88.25 332 ⇑P P 22 56 42.5 +0.6
baz=88,SNR=8.0
F12A Elk City 88.31 330 ⇓P P 22 56 42.4 +0.3
baz=89,SNR=16
B18A Beardsley Farm 88.34 335 ⇓P P 22 56 42.2 +0.1
baz=89,SNR=13
E13A Victor 88.42 331 ⇑P P 22 56 43.4 +0.8
baz=89,SNR=15
A19A Klindworth Far 88.43 336 ⇓P P 22 56 42.6 0.0
baz=89,SNR=7.4
CHMT Chamberlain Mo 88.43 332 eP P 22 56 43.6 +0.8
KHMM Hoge Mountain 88.54 322 eP P 22 56 45.2 +1.8
comp=Z,16nm,0.9s
C16A Fuhringer Ranc 88.57 333 ⇓P P 22 56 43.7 +0.3
baz=89,SNR=11
MSO Missoula 88.64 331 eP P 22 56 44.7 +1.0
comp=Z,19nm,2.0s
MSO Missoula 88.64 331 ⇓P P 22 56 44.1 +0.5
baz=89
YBH Yreka Blue Hor 88.65 323 eP P 22 56 43.8 0.0
YBH Yreka Blue Hor 88.65 323 P P 22 56 43.7 -0.1
comp=Z,4.3nm,0.7s,baz=171,slow=2.8,SNR=14
D14A Greenough 88.67 332 ⇑P P 22 56 44.2 +0.4
baz=89,SNR=13
SLMT Seeley Lake 88.79 332 eP P 22 56 44.8 +0.3
A18A Metzger Ranch, 88.81 335 ⇑P P 22 56 44.1 -0.2
baz=89,SNR=5.5
C15A Salmond Ranch, 88.88 333 ⇑P P 22 56 45.3 +0.5
baz=89,SNR=6.0

D13A Huson 89.06 331 ⇑P P 22 56 46.1 +0.5
baz=89,SNR=14
B16A M & M Farms, S 89.07 334 ⇓P P 22 56 45.4 -0.2
baz=89,SNR=5.2
A17A Triple J Farms 89.14 334 ⇑P P 22 56 46.0 +0.2
baz=89,SNR=6.0
SWMT Swartz Lake 89.21 332 eP P 22 56 47.2 +0.9
B15A Bradely Ranch, 89.31 333 ⇓P P 22 56 46.8 0.0
baz=90
C13A Hot Springs 89.58 332 ⇓P P 22 56 48.4 +0.4
baz=90,SNR=6.2
B14A Marquette Ranc 89.62 333 ⇑P P 22 56 48.2 -0.1
baz=90
BSMT Bassoo Peak 89.80 332 eP P 22 56 49.9 +0.7
A15A Johnson Ranch, 89.92 333 ⇑P P 22 56 49.0 -0.6
baz=90,SNR=5.6
B13A Whitefish 90.09 332 ⇑P P 22 56 50.4 0.0
baz=90
A14A Double T Ranch 90.17 333 ⇓P P 22 56 50.6 -0.2
baz=90,SNR=6.1
WALA Waterton Lakes 90.43 333 eP P 22 56 51.8 -0.2
comp=Z,0.3nm,0.9s
HAWA Hanford 90.66 328 eP P 22 56 54.1 +1.1
comp=Z,9.9nm,0.8s
OD2 Odessa Site #2 91.07 329 P P 22 56 55.6 +0.7
NEW Newport 91.08 331 ⇑P P 22 56 54.9 0.0
baz=91
FFC Flin Flon 91.43 342 eP P 22 56 56.7 +0.4
FFC Flin Flon 91.43 342 eP P 22 56 56.3 -0.1
comp=Z,6.8nm,1.1s
ETW Entiat 91.94 329 P P 22 56 59.5 +0.5
ESDC Sonseca Array 94.43 45 P P 22 57 10.4 -0.2
ESDC Sonseca Array 94.43 45 P P 22 57 10.4 -0.2
comp=Z,0.1nm,0.3s,baz=238,slow=3.1,SNR=4.4
YKA Yellowknife Ar 101.50 341 P Pdif 22 57 41.5 -0.3
YKA pP pP 22 58 12.9 -0.6
YKA PP PP 23 01 48.0 -5.6
YKA Yellowknife Ar 101.50 341 P Pdif 22 57 41.4 -0.3
comp=Z,0.8nm,0.8s,baz=142,slow=4.5,SNR=17
YKA pP pP 22 58 12.9 -0.6
comp=Z,0.4nm,0.6s,baz=143,slow=4.5,SNR=2.9
YKA PP PP 23 01 48.0 -5.6
comp=Z,0.3nm,0.7s,baz=142,slow=7.7,SNR=3.7
GERES GERESS Array B 110.02 44 PKiKP PKiKP 23 02 21.0 -0.3
GERES GERESS Array B 110.02 44 PKiKP PKiKP 23 02 21.0 -0.3
comp=Z,0.4nm,0.6s,baz=221,slow=1.2,SNR=4.1
VYHS Vyhne 112.94 46 eP Pdif 22 58 32.5 -0.5
VYHS Vyhne 112.94 46 PDIF Pdif 22 58 32.5 -0.5
ILAR Eielson Array 113.94 333 PKiKP PKiKP 23 02 28.1 -0.1
ILAR PP PP 23 03 23.4 -1.0
ILAR Eielson Array 113.94 333 PKiKP PKiKP 23 02 28.1 -0.1
comp=Z,0.9nm,0.8s,baz=191,slow=1.3,SNR=9.9
ILAR PP PP 23 03 23.4 -1.0
comp=Z,0.5nm,1.0s,baz=109,slow=5.1,SNR=4.5
NOA NORSAR Array B 114.03 32 PKKPab PKKPab 23 13 15.8 +1.2
NOA NORSAR Array B 114.03 32 PKKPab PKKPab 23 13 15.8 +1.2
comp=Z,1.2nm,0.8s,baz=65,slow=4.5,SNR=4.1
ASAR Alice Springs 119.45 205 PKP PKPdf 23 02 39.1 -1.1
ASAR SKP 23 06 03.6
ASAR PKKPbc PKKPbc 23 12 51.8 +0.1
ASAR Alice Springs 119.45 205 PKP PKPdf 23 02 39.1 -1.1
comp=Z,1.5nm,0.7s,baz=146,slow=2.1,SNR=15
ASAR SKP 23 06 03.6
comp=Z,1.1nm,0.9s,baz=162,slow=2.1,SNR=5.9
ASAR PKKPbc PKKPbc 23 12 51.8 +0.1
comp=Z,0.7nm,0.6s,baz=337,slow=2.9,SNR=7.6
BRTR Keskin Array B 119.66 60 PKP PKPdf 23 02 38.7 -1.4
BRTR Keskin Array B 119.66 60 PKP PKPdf 23 02 38.7 -1.4
comp=Z,0.7nm,0.7s,baz=222,slow=2.7,SNR=5.8
KIEV Kiev 120.03 47 ePKiKP PKPdf 23 02 38.8 -1.4
KIEV Kiev 120.03 47 ePKPdf PKPdf 23 02 38.8 -1.4
AKASG Malin Array Be 120.04 46 PKiKP PKPdf 23 02 39.1 -1.2
AKASG Malin Array Be 120.04 46 PKP PKPdf 23 02 39.1 -1.2
AKASG Malin Array Be 120.04 46 PKP PKPdf 23 02 39.1 -1.2
comp=Z,1.4nm,0.6s,baz=247,slow=3.0,SNR=6.2
FINES FINESS Array B 120.97 34 PKP PKPdf 23 02 41.6 -0.1
FINES PKKPbc PKKPbc 23 12 46.0 -0.6
FINES FINESS Array B 120.97 34 PKP PKPdf 23 02 41.6 -0.1
comp=Z,0.8nm,0.7s,baz=157,slow=6.2,SNR=4.3
FINES PKKPbc PKKPbc 23 12 46.0 -0.6
comp=Z,0.7nm,0.5s,baz=68,slow=4.2,SNR=9.0
ARCES ARCESS Array B 122.16 24 PKP PKPdf 23 02 43.6 -0.2
ARCES ARCESS Array B 122.16 24 PKP PKPdf 23 02 43.6 -0.2
comp=Z,0.6nm,0.5s,baz=243,slow=3.6,SNR=9.6
WRA Warramunga Arr 122.69 207 PKP PKPdf 23 02 45.6 -0.8
WRA Warramunga Arr 122.69 207 PKP PKPdf 23 02 45.6 -0.8
comp=Z,4.1nm,0.7s,baz=159,slow=1.5,SNR=17
OBN Obninsk 125.31 42 ⇑i/PKiKP PKPdf 23 02 49.8 -0.4
OBN e PS SP 23 14 30.3 +0.4
OBN pmax pmax
comp=Z,6.0nm,0.8s
FITZ Fitzroy Crossi 127.27 199 PKP PKPdf 23 02 54.8 -0.5
FITZ Fitzroy Crossi 127.27 199 PKP PKPdf 23 02 54.8 -0.5
comp=Z,2.7nm,0.6s,baz=251,slow=6.2,SNR=6.5
KIV Kislovodsk 127.31 57 ⇓i/PKiKP PKPdf 23 02 54.8 +0.2
KIV e 23 04 52.0
KIV ePS PS 23 15 01.4 -1.4
KIV pmax pmax
comp=Z,4.0nm,0.9s
FX1 Attu Island--F 131.31 314 PKP PKPdf 23 03 01.1 -0.6
FX1 Attu Island--F 131.31 314 PKP PKPdf 23 03 01.1 -0.6
comp=Z,1.5nm,0.8s,baz=264,slow=10,SNR=3.1
BILL Bilibino 132.52 335 ⇑i/PKiKP PKPdf 23 03 04.5 +0.9
BILL e 23 05 28.4
BILL pmax pmax
comp=Z,48nm,1.2s
ABKAR Akbulak array 139.51 51 ePKPdf PKPdf 23 03 18.0 +0.8
PETK Petropavlovsk- 140.59 316 PKiKP PKPdf 23 03 18.1 -0.9
PETK Petropavlovsk- 140.59 316 PKP PKPdf 23 03 18.1 -0.9
PETK Petropavlovsk- 140.59 316 PKP PKPdf 23 03 18.1 -0.9
comp=Z,5.7nm,0.7s,baz=134,slow=4.2,SNR=6.6
BRVK Borovoye 145.09 43 ePKiKP PKPdf 23 03 27.6 +0.7
BRVK Borovoye 145.09 43 ePKPdf PKPdf 23 03 27.6 +0.7
BVAR Borovoye Array 145.16 43 PKiKP PKPab 23 03 27.8 +0.6
BVAR Borovoye Array 145.16 43 PKPbc PKPab 23 03 27.8 +0.6
BVAR Borovoye Array 145.16 43 PKPbc PKPab 23 03 27.8 +0.6
comp=Z,13nm,0.6s,baz=289,slow=3.0,SNR=132
KKAR Karatay Array 147.37 60 ePKiKP PKPdf 23 03 31.0 -0.2
KKAR Karatay Array 147.37 60 ePKPdf PKPdf 23 03 31.0 -0.2
HYB Hyderabad 147.73 111 i PKP PKPbc 23 03 35.0 -0.5
YAK Yakutsk 148.16 343 ePKP2 PKPbc 23 03 34.2 -1.0
YAK pmax pmax
comp=Z,42nm,0.8s
YAK pmax pmax
comp=N,7.0nm,1.3s
YAK pmax pmax
comp=E,5.0nm,1.3s
AML Almayashu 149.80 61 P PKPdf 23 03 37.0 +1.3
SNR=6.1
EKS2 Erkin-Say 149.81 60 ePKHKP PKPpre 23 03 35.6
EKS2 Erkin-Say 149.81 60 ePKPdf PKPdf 23 03 35.6 +0.4
EKS2 ePKPbc PKiKP 23 03 40.8 -0.3
EKS2 epPKPdf pPKPdf 23 04 10.4 +2.2
EKS2 Erkin-Say 149.81 60 P PKPbc 23 03 41.1 +1.0
SNR=6.8
USP Ospenovka 150.25 59 P PKPbc 23 03 41.8 +0.7
SNR=13
AAK Ala-Archa 150.33 60 PKiKP PKPdf 23 03 36.6 +0.5
AAK e 23 03 37.2
AAK Ala-Archa 150.33 60 PKP PKPdf 23 03 36.6 +0.5
AAK ePKPdf PKPbc 23 03 37.2 -4.3
AAK PKPbc PKiKP 23 03 42.2 0.0
AAK PKPab PKPab 23 03 48.3 0.0
AAK Ala-Archa 150.33 60 PKP PKPdf 23 03 36.6 +0.5
comp=E,1.4nm,0.8s,baz=183,slow=2.3,SNR=9.1
AAK PKPbc PKiKP 23 03 42.2 0.0
comp=E,16nm,0.7s,baz=200,slow=3.0,SNR=75
AAK PKPab PKPab 23 03 48.3 0.0
comp=E,8.8nm,0.8s,baz=283,slow=3.1,SNR=7.6
CHMS Chumysh 150.47 60 P PKPbc 23 03 42.4 +0.8
SNR=7.4
IPM Ipoh 150.58 161 ePKPdf PKPdf 23 03 37.2 0.0
IPM ePKPbc PKPbc 23 03 41.7 -1.1
KBK Karagaybulak 150.66 60 P PKPbc 23 03 43.1 +0.8
SNR=9.1
KURBB Kurchatov Arra 150.75 43 PKP PKPdf 23 03 35.9 -0.4
comp=E,14nm,0.7s,baz=299,slow=3.0,SNR=25
KURBB PKPbc PKPbc 23 03 42.0 +0.1
comp=E,14nm,0.7s,baz=300,slow=3.0,SNR=114
KURBB PKPab PKPab 23 03 48.6 -0.8
comp=E,5.0nm,0.7s,baz=303,slow=3.2,SNR=9.1
KURBB pPKPbc pPKPbc 23 04 15.1 +0.4
comp=E,11nm,0.8s,baz=294,slow=3.0,SNR=7.4
KURK Kurchatov 150.76 43c i/PKiKP PKPbc 23 03 42.7 +0.7
KURK pmax pmax

	comp=Z,35nm,1.7s							
KURK	**Kurchatov**	**150.76**	**43**	PKP	**PKPdf**	**23 03 35.9**	**-0.4**
KURK				PKPbc	**PKPbc**	**23 03 42.0**	**+0.1**
KURK				*e*PKPdf	**PKiKP**	**23 03 42.2**	**-0.4**
KURK				PKPab	**PKPab**	**23 03 48.6**	**-0.8**
KURK				*e*pPKPdf	**pPKPdf**	**23 04 13.5**	**+4.2**
KURK				pPKPbc	**pPKPbc**	**23 04 15.1**	**+0.4**
NVS	**Novosibirsk**	**150.94**	**33**	*i* PKIKP	**PKPbc**	**23 03 42.6**	**+0.3**
NVS				*i*		23 04 13.9	
NVS				pmax	pmax		
	comp=Z,47nm,1.0s						
NVS				pmax	pmax		
	comp=N,3.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,7.0nm,0.8s						
KZA	**Kyzart**	**150.96**	**61**	P	**PKPbc**	**23 03 44.5**	**+1.1**
	SNR=7.8						
TKM2	**Tokmak 2**	**151.10**	**59**	P	**PKPbc**	**23 03 44.0**	**+0.6**
	SNR=7.9						
ULHL	**Ulahol**	**151.67**	**61**	P	**PKPbc**	**23 03 45.7**	**+1.0**
	SNR=8.8						
KSH	**Kashi**	**151.73**	**66**	PKPbc	**PKPbc**	**23 03 44.5**	**-0.3**
KSH				pPKP	**pPKPdf**	**23 04 11.0**	**-0.3**
KSH				PKS	**PKSdf**	**23 07 15.8**	**+2.8**
KSH				PP	**PP**	**23 07 23.5**	**-3.0**
KSH				LR	LR		
	comp=N,130nm,4.4s						
KSH				LR	LR		
	comp=E,220nm,4.6s						
KSH				LR	LR		
	comp=Z,220nm,5.2s						
ZAA0	**Zalesovo Array**	**152.23**	**33**	*e*PKPbc	**PKPbc**	**23 03 44.7**	**-0.5**
ZALV	**Zalesovo Beam**	**152.23**	**33**	PKIKP	**PKPdf**	**23 03 38.1**	**-0.3**
ZALV						23 04 18.2	
ZALV	**Zalesovo Beam**	**152.23**	**33**	PKP	**PKPdf**	**23 03 38.1**	**-0.3**
ZALV				PKPbc	**PKPbc**	**23 03 45.4**	**+0.1**
ZALV				PKPab	**PKPab**	**23 03 55.6**	**+0.1**
ZALV				pPKPbc	**pPKPbc**	**23 04 18.2**	**+0.2**
ZALV	**Zalesovo Beam**	**152.23**	**33**	PKP	**PKPdf**	**23 03 38.1**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=0.0,slow=1.5,SNR=9.2						
ZALV				PKPbc	**PKPbc**	**23 03 45.4**	**+0.1**
	comp=Z,38nm,0.5s,baz=305,slow=3.1,SNR=152						
ZALV				PKPab	**PKPab**	**23 03 55.6**	**+0.1**
	comp=Z,6.4nm,0.5s,baz=329,slow=3.2,SNR=5.7						
ZALV				pPKPbc	**pPKPbc**	**23 04 18.2**	**+0.2**
	comp=Z,25nm,0.6s,baz=303,slow=3.2,SNR=9.3						
ASAJ	**Asahikawa**	**152.34**	**304**	PKPbc	**PKPbc**	**23 03 46.1**	**+0.2**
ASAJ				PKPab	**PKPab**	**23 03 57.5**	**+1.1**
ASAJ	**Asahikawa**	**152.34**	**304**	PKPbc	**PKPbc**	**23 03 46.1**	**+0.2**
	comp=Z,11nm,0.6s,baz=280,slow=3.9,SNR=5.6						
ASAJ				PKPab	**PKPab**	**23 03 57.5**	**+1.1**
	comp=Z,18nm,0.8s,baz=267,slow=3.2,SNR=5.5						
MKAR	**Makanchi Array**	**154.60**	**48**	PKIKP	**PKPdf**	**23 03 42.9**	**+0.7**
MKAR						23 04 24.5	
MKAR	**Makanchi Array**	**154.60**	**48**	PKP	**PKPdf**	**23 03 42.9**	**+0.7**
MKAR				PKPbc	**PKPbc**	**23 03 50.7**	**0.0**
MKAR				PKPab	**PKPab**	**23 04 05.4**	**-0.5**
MKAR				pPKPbc	**pPKPbc**	**23 04 24.5**	**+1.0**
MKAR	**Makanchi Array**	**154.60**	**48**	PKP	**PKPdf**	**23 03 42.9**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=70,slow=1.7,SNR=3.1						
MKAR				PKPbc	**PKPbc**	**23 03 50.7**	**0.0**
	comp=Z,3.2nm,0.9s,baz=330,slow=1.4,SNR=12						
MKAR				PKPab	**PKPab**	**23 04 05.4**	**-0.5**
	comp=Z,3.5nm,0.6s,baz=284,slow=2.2,SNR=13						
MKAR				pPKPbc	**pPKPbc**	**23 04 24.5**	**+1.0**
	comp=Z,2.1nm,0.6s,baz=293,slow=3.0,SNR=4.4						
MJAR	**Matsushiro Arr**	**156.63**	**287**	PKP	**PKPdf**	**23 03 45.6**	**+0.4**
MJAR				PKPbc	PKPab	23 03 54.5	-20
MJAR				PKPab	PKPab	23 04 15.4	+0.4
MJAR	**Matsushiro Arr**	**156.63**	**287**	PKP	**PKPdf**	**23 03 45.6**	**+0.4**
	comp=Z,0.3nm,0.2s,baz=170,slow=2.0,SNR=3.0						
MJAR				PKPbc	PKPab	23 03 54.5	-20
	comp=Z,0.8nm,0.5s,baz=171,slow=1.8,SNR=4.7						
MJAR				PKPab	PKPab	23 04 15.4	+0.4
	comp=Z,5.5nm,0.8s,baz=129,slow=2.0,SNR=13						
WMQ	**Urumqi**	**159.30**	**51**	PKP	**PKPdf**	**23 03 46.0**	**-2.3**
USRK	**Ussuriysk Arra**	**159.50**	**310**	PKPab	**pPKPab**	**23 04 27.5**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=57,slow=7.0,SNR=4.6						
CMAR	**Chiang Mai Arr**	**162.55**	**142**	PKP	**PKPdf**	**23 03 52.7**	**+0.3**
CMAR				pPKPab	**pPKPab**	**23 05 12.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**162.55**	**142**	PKP	**PKPdf**	**23 03 52.7**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=249,slow=2.8,SNR=7.4						
CMAR				pPKPab	**pPKPab**	**23 05 12.0**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=216,slow=5.6,SNR=1.8						
CN2	**Changchun**	**163.73**	**317**	*e*PKP	**PKPdf**	**23 03 56.0**	**+3.2**
SONM	**Songino Array**	**164.70**	**10**	PKP	**PKPdf**	**23 03 54.3**	**+0.6**
SONM				PKPab	**PKPab**	**23 04 50.1**	**+0.3**
SONM				pPKPab	**pPKPab**	**23 05 21.8**	**+0.3**
SONM	**Songino Array**	**164.70**	**10**	PKP	**PKPdf**	**23 03 54.3**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=218,slow=2.1,SNR=4.6						
SONM				PKPab	**PKPab**	**23 04 50.1**	**+0.3**
	comp=Z,3.3nm,0.8s,baz=323,slow=4.5,SNR=15						
SONM				pPKPab	**pPKPab**	**23 05 21.8**	**+0.3**
	comp=Z,1.9nm,1.0s,baz=339,slow=4.7,SNR=4.1						
KSRS	**Korea Array**	**164.71**	**293**	PKPab	**PKPab**	**23 04 51.5**	**+1.4**
	comp=Z,4.1nm,0.9s,baz=81,slow=4.4,SNR=9.2						
KSAR	**Wonju Array Be**	**164.75**	**293**	PKPab	**PKPab**	**23 04 51.5**	**+1.2**
GTA	**Gaotai**	**169.36**	**49**	PKP	**PKPdf**	**23 03 58.3**	**+0.9**
GTA				pPKP	**pPKPdf**	**23 04 30.5**	**0.0**
GTA				sPKP		23 04 49.0	
GTA				PKPab	**PKPab**	**23 05 11.5**	**+0.7**
KMI	**Kunming**	**170.00**	**138**	PKP	**PKPdf**	**23 03 57.5**	**-0.9**
HHC	**Hu-ho-hao-te**	**171.87**	**352**	*e*PKP	**PKPdf**	**23 03 58.0**	**-0.7**
HHC				PKS	**PKSdf**	**23 07 29.3**	**-1.7**
HHC				PP	**PP**	**23 09 15.0**	**+2.9**
HHC				SKS	**SKSdf**	**23 10 49.8**	**-1.0**
HHC				SKKS	**SKKSac**	**23 15 50.8**	**+2.9**
HHC				SS	**SS**	**23 30 11.3**	**+1.6**
HHC				AMB	AMB		
	comp=Z,220nm,9.3s						
GYA	**Guiyang**	**173.01**	**154**	PKP	**PKPdf**	**23 03 55.5**	**-4.2**
GYA				pPKP	**pPKPdf**	**23 04 31.0**	**-1.8**
GYA				sPKP		23 04 44.0	
GYA				PKPab	**PKPab**	**23 05 25.5**	**-1.6**
GYA				PKS	**PKSdf**	**23 07 27.8**	**-4.3**
GYA				PP	**PP**	**23 09 18.3**	**+0.2**
GYA				AMB	AMB		
	comp=Z,120nm,8.2s						

*CSEM **29** 22:56:55.8±0.4, 42.°99N×13.°48E, h5km, ML2.7/6, Error ellipse: s-maj=8.3km s-min=4.9km az=168.0*

ROM 29 22:56:57.2±0.1, 43.°03N×13.°29E, h26km±1km, Md2.2/11, Ml1.9/7, 8C, Error ellipse: s-maj=1.2km s-min=1.1km az=63.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.14**	**273**	Pg	Pb	22 57 02.3	-0.1
FDMO				Sg	Sb	22 57 06.1	+0.2
	165nm,0.1s						
FDMO	**Fiordimonte**	**0.14**	**273**	Pg	Pb	22 57 02.3	-0.1
FDMO				Sg	Sb	22 57 06.1	+0.2
	165nm,0.1s						
NRCA	**Norcia**	**0.23**	**213**	Pg	Pb	22 57 03.5	0.0
NRCA				Sg	Sb	22 57 08.2	+0.5
NRCA	**Norcia**	**0.23**	**213**	Pg	Pb	22 57 03.5	0.0
CESI	**CESI - Serrava**	**0.28**	**265**	↑*i* Pg	Pb	22 57 04.2	+0.1
CESI				Sg	Sb	22 57 09.6	+0.8
	75nm,0.3s						
CESI	**CESI - Serrava**	**0.28**	**265**	↑*i* Pg	Pb	22 57 04.2	+0.1
CESI				Sg	Sb	22 57 09.6	+0.8
	75nm,0.3s						
SNTG	**Esanatoglia**	**0.34**	**312**	↑*i* Pg	Pb	22 57 05.0	+0.1
SNTG				Sg	Sb	22 57 10.6	+0.4
	32nm,0.2s						
SNTG	**Esanatoglia**	**0.34**	**312**	↑*i* Pg	Pb	22 57 05.0	+0.1
SNTG				Sg	Sb	22 57 10.6	+0.4
	32nm,0.2s						
CING	**Cingoli**	**0.35**	**349**	Pg	Pb	22 57 05.1	-0.1
CING				Sg	Sb	22 57 11.2	+0.6
CING	**Cingoli**	**0.35**	**349**	Pg	Pb	22 57 05.1	-0.1
CING				Sg	Sb	22 57 11.2	+0.6
ASSB	**Assisi San Ben**	**0.46**	**272**	↑Pg	Pb	22 57 06.8	-0.1
ASSB				Sg	Sb	22 57 14.3	+0.9
	123nm,0.2s						
ASSB	**Assisi San Ben**	**0.46**	**272**	↑Pg	Pb	22 57 06.8	-0.1
ASSB				Sg	Sb	22 57 14.3	+0.9
	123nm,0.2s						
GUMA	**Gualdo di Mace**	**0.48**	**86**	Pg	Pb	22 57 01.8	-5.3
GUMA				Sg	Sb	22 57 05.3	-8.6
	739nm,0.3s						
GUMA	**Gualdo di Mace**	**0.48**	**86**	Pg	Pb	22 57 01.8	-5.3
GUMA				Sg	Sb	22 57 05.3	-8.6
	739nm,0.3s						
ARVD	**Arcevia**	**0.53**	**332**	↑Pg	Pb	22 57 08.0	0.0
ARVD				Sg	Sn	22 57 16.7	-0.7
	23nm,0.4s						
ARVD	**Arcevia**	**0.53**	**332**	↑Pg	Pb	22 57 08.0	0.0
ARVD				Sg	Sn	22 57 16.7	-0.7
	23nm,0.4s						
AOI	**Ancona**	**0.57**	**24**	Pg	Pb	22 57 08.9	+0.2
AOI	**Ancona**	**0.57**	**24**	Pg	Pb	22 57 08.9	+0.2
MURB	**Monte Urbino**	**0.60**	**293**	Pg	Pb	22 57 09.4	+0.1
	94nm,0.3s						
MURB	**Monte Urbino**	**0.60**	**293**	Pg	Pb	22 57 09.4	+0.1
	94nm,0.3s						
PIEI	**Pieia**	**0.75**	**313**	Pg	Pb	22 57 11.4	-0.3
	16nm,0.2s						
PIEI	**Pieia**	**0.75**	**313**	Pg	Pb	22 57 11.4	-0.3
	16nm,0.2s						
FSSB	**Fossombrone**	**0.76**	**331**	Pg	Pn	22 57 12.1	-0.2
	39nm,0.4s						
FSSB	**Fossombrone**	**0.76**	**331**	Pg	Pn	22 57 12.1	-0.2
	39nm,0.4s						
NVLJ	**Novalja**	**1.92**	**36**	*e*Pn	Pn	22 57 28.8	+0.7
NVLJ				Sn	Sn	22 57 52.1	+0.8
NVLJ	**Novalja**	**1.92**	**36**	*e*Pn	Pn	22 57 28.8	+0.7
NVLJ				Sn	Sn	22 57 52.1	+0.7

*NIED **29** 23:07:00, 34.°00N×132.°70E, h47km, Mw3.5 Best double couple: M0 2.12000×10^14 NP1:φs169.00000°, δ72.00000°, λ-82.00000°. NP2:φs324.00000°, δ20.00000°, λ-114.00000°.*

JMA 29 23:07:30.8, 33.°98N×132.°74E, h46km, M3.5, 4C-5D Broadband fault plane solution: P waves. NP1: φs149.00000°, δ82.00000°, λ-115.00000°. **NP2:** φs42.00000°, δ26.00000°, λ-18.00000°. **Principal axes:** T Plg33.0000°, Azm259.0000°; N Plg24.0000°, Azm152.0000°; P Plg47.0000°, Azm33.0000°; **Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHM	**Kurahashi**	**0.24**	**312**	↓P	Pn	23 07 38.9	-0.1
JHM				S	Sn	23 07 44.5	-0.3
JET	**Tanbara**	**0.33**	**128**	↑P	Pn	23 07 39.7	-0.2
JET				S	Sn	23 07 46.3	0.0
JNA	**Nagahama**	**0.47**	**207**	↓P	Pn	23 07 41.5	0.0
JNA				S	Sn	23 07 49.1	0.0
JKU	**Kubokawa**	**0.72**	**158**	↓P	Pn	23 07 44.7	0.0
JKU				S	Sn	23 07 54.8	0.0
JHT	**Toyohira**	**0.73**	**339**	↓P	Pn	23 07 44.9	0.0
JHT				S	Sn	23 07 55.3	+0.3
UWA2	**Uwa jima 2**	**0.77**	**187**	↑P	Pn	23 07 45.6	+0.2
UWA2				S	Sn	23 07 56.1	+0.1
JMN	**Monobe**	**0.98**	**105**	↑P	Pn	23 07 48.1	-0.1
JJS	**Sakaide**	**1.06**	**68**	↑P	Pn	23 07 49.2	-0.1
JJS				S	Sn	23 08 02.8	-0.2
JHS	**Saijyo**	**1.06**	**17**	↓P	Pn	23 07 49.8	+0.4
JHS				S	Sn	23 08 03.1	+0.6
JGT	**Gotsu**	**1.10**	**342**	P	Pn	23 07 49.8	0.0
JGT				S	Sn	23 08 04.4	+0.6
MAT	**Matsushiro**	**5.15**	**59**	P	Pn	23 08 47.9	+2.5

*NNC **29** 23:17:15.1±3.0, 37.°93N×71.°65E, h161km±60km, mb2.6, mpv3.6 Error ellipse: s-maj=33.6km s-min=17.6km az=26.0*

ISC 29 23:17:11.6±3.1, 37.°7N±0.°2×71.°6E±0.°1, h150km, n11, σ1§47/15, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.68**	**19**	P	**Pn**	**23 18 21.8**	**+0.7**
	SNR=84						
UCH	**Uchtor**	**5.01**	**25**	P	**Sn**	**23 19 23.8**	**+0.6**
	SNR=12						
KZA	**Kyzart**	**5.16**	**31**	P	**Pn**	**23 18 26.7**	**-0.7**
	SNR=9.2						
EKS2	**Erkin-Say**	**5.20**	**18**	P	**Pn**	**23 18 28.9**	**+1.2**
	SNR=7.8						
KK31	**Karatay Array**	**5.45**	**351**	↑Pn	**Pn**	**23 18 33.0**	**+2.2**
	9.4nm,0.7s,baz=179,slow=13,SNR=69						
KK31				↓Sn	**Sn**	**23 19 34.6**	**+1.8**
	15nm,0.4s,baz=171,slow=15,SNR=3.7						
KBK	**Karagaybulak**	**5.54**	**26**	P	**Pn**	**23 18 33.2**	**+0.9**
	SNR=9.2						
CHMS	**Chumysh**	**5.78**	**23**	P	**Pn**	**23 18 35.4**	**+0.1**
	SNR=9.9						
USP	**Ospenovka**	**5.95**	**21**	P	**Pn**	**23 18 37.9**	**+0.3**
	SNR=6.6						
TKM2	**Tokmak 2**	**6.01**	**29**	↓Pn	**Pn**	**23 18 38.3**	**-0.3**
	2.4nm,0.6s						
TKM2				↑Sn	**Sn**	**23 19 47.0**	**+0.4**
	5.0nm,0.7s						
AB31	**Akbulak array**	**14.30**	**327**	Pn	**P**	**23 20 29.1**	**-0.6**
	0.5nm,0.5s,baz=2.5,slow=27,SNR=20						
AB31				Sn	**Sn**	**23 23 02.8**	**-2.6**
	1.6nm,0.6s,baz=290,slow=52,SNR=6.2						
AKTO	**Aktyubinsk**	**16.01**	**327**	↑Pn	**P**	**23 20 50.2**	**+1.5**
	0.2nm,0.8s						
AKTO				↑Sn	**S**	**23 23 44.2**	**-2.1**
	0.1nm,0.5s						

*ISCJB **29** 23:21:30.8±0.5, 15.°65N±0.°06×93.°65W±0.°04, h94km±8km, mb3.7/5, Error ellipse: s-maj=11.0km s-min=4.1km az=30.6*

*IDC **29** 23:21:30.8±3.5, 15.°52N×93.°39W, h72km±25km, mb3.5/5, mb1 3.7/7, mb1mx3.5/24, mbtmp3.4/7, MS3.0/2, Ms1 3.0/2, ms1mx2.4/30, Error ellipse: s-maj=51.8km s-min=23.2km az=33.0*

*CASC **29** 23:21:31.7±2.3, 15.°81N×93.°27W, h0km±99km, MD3.8*

*MEX **29** 23:21:32.2±0.7, 15.°45N×93.°69W, h33km±61km, MD4.0*

ISC 29 23:21:32.0±0.9, 15.°65N±0.°05×93.°67W±0.°04, h83km±9km, n27, σ1§51/44, mb3.7/5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.24**	**25**	*i* P	**Pn**	**23 21 54.2**	**0.0**
TGIG				*i* S	**Sn**	**23 22 10.9**	**+0.1**
CCIG	**Comitan**	**1.60**	**67**	*e*P	**Pn**	**23 21 58.3**	**-0.6**
CCIG				*e*S	**Sn**	**23 22 17.5**	**-1.7**
CMIG	**Matias Romero**	**1.84**	**321**	*e*P	**Pn**	**23 22 02.8**	**+0.9**
CMIG				*e*S	**Sn**	**23 22 24.9**	**+0.1**
CMIG	**Matias Romero**	**1.84**	**321**	P	**Pn**	**23 22 02.8**	**+0.9**
	9.4nm,0.3s,baz=130,slow=11,SNR=44						
CMIG				S	**Sn**	**23 22 26.4**	**+1.6**
	44nm,0.3s,baz=108,slow=20,SNR=13						
HUIG	**Huatulco**	**2.35**	**273**	*e*P	**Pn**	**23 22 07.3**	**-1.4**
HUIG				*e*S	**Sn**	**23 22 33.1**	**-3.7**
JAT	**Jato**	**2.37**	**124**	*e*P	**Pn**	**23 22 08.0**	**-0.9**
JAT				*e*S	**Sn**	**23 22 39.4**	**+2.2**
FUG	**Fuego 3**	**2.98**	**113**	*e*P	**Pn**	**23 22 16.1**	**-1.2**
PCG	**Pacaya**	**3.21**	**113**	*e*P	**Pn**	**23 22 22.1**	**+1.6**
PCG				*e*S	**Sn**	**23 22 59.0**	**+1.0**
VHO	**Vista Hermosa**	**3.26**	**296**	*e*P	**Pn**	**23 22 21.9**	**+0.7**
VHO				*e*S	**Sn**	**23 22 58.1**	**-1.0**
NBG	**Las Nubes**	**3.38**	**108**	*e*P	**Pn**	**23 22 22.5**	**-0.3**
NBG				*e*S	**Sn**	**23 23 04.6**	**+2.6**
IXG	**Ixpaco**	**3.44**	**115**	*e*P	**Pn**	**23 22 23.9**	**+0.4**
IXG				*e*S	**Sn**	**23 23 05.7**	**+2.5**
MRL	**Marmol**	**3.88**	**98**	*e*P	**Pn**	**23 22 28.3**	**-1.2**
MRL				*e*S	**Sn**	**23 23 13.4**	**-0.7**
RBDL	**Robledal**	**4.14**	**111**	*e*P	**Pn**	**23 22 33.7**	**+0.6**
SBLS	**San Blas**	**4.31**	**114**	*e*P	**Pn**	**23 22 35.4**	**-0.1**
SBLS				*e*S	**Sn**	**23 23 23.6**	**-1.0**
SNJE	**San Jose**	**4.31**	**114**	*e*P	**Pn**	**23 22 34.9**	**-0.5**
SNJE				*e*S	**Sn**	**23 23 24.9**	**+0.3**
BOQS	**Boqueron**	**4.66**	**114**	*e*P	**Pn**	**23 22 40.3**	**+0.2**
BOQS				*e*S	**Sn**	**23 23 32.4**	**-0.7**
LFRS	**El Faro**	**4.89**	**114**	*e*P	**Pn**	**23 22 43.3**	**+0.1**
LFRS				*e*S	**Sn**	**23 23 37.3**	**-1.4**
SNVI	**San Vicente**	**5.10**	**113**	*e*P	**Pn**	**23 22 45.0**	**-1.0**
SNVI				*e*S	**Sn**	**23 23 42.4**	**-1.3**
CNCH	**Conchagua**	**6.13**	**112**	*e*P	**Pn**	**23 23 00.2**	**+0.2**
TEIG	**Tepich**	**6.86**	**48**	P	**Pn**	**23 23 08.2**	**-1.7**
	31nm,0.3s,baz=253,slow=1.7,SNR=63						
TEIG				S	**Sn**	**23 24 23.4**	**-3.1**
	30nm,0.3s,baz=72,slow=22,SNR=14						
TEIG				LR	LR	23 26 19.7	
	comp=Z,79nm,19.4s,baz=152,slow=43						
TXAR	**Lajitas Array**	**16.44**	**328**	P	**P**	**23 25 21.5**	**+2.4**
	0.0nm,0.3s,baz=148,slow=14,SNR=10						
ANMO	**Albuquerque**	**22.38**	**331**	P	**P**	**23 26 26.8**	**+3.0**
	0.6nm,0.5s,baz=132,slow=13,SNR=4.9						
NVAR	**Mina Array Bea**	**31.38**	**321**	P	P	23 27 49.2	+4.0
	0.9nm,0.7s,baz=134,slow=8.4,SNR=7.4						
NVAR				pP	pP	23 28 06.0	+1.5
	0.9nm,0.8s,baz=148,slow=7.6,SNR=3.2						
SADO	**Sadowa**	**31.52**	**20**	LR	LR	23 42 04.5	
	comp=Z,33nm,19.8s,baz=358,slow=39						
YKA	**Yellowknife Ar**	**49.06**	**347**	P	**P**	**23 30 10.8**	**+0.4**
	1.1nm,0.6s,baz=151,slow=7.5,SNR=18						
YKA				PcP	**PcP**	**23 31 32.0**	**-1.0**
	0.2nm,0.6s,baz=152,slow=4.4,SNR=3.8						
BDFB	**Brasilia**	**54.77**	**122**	P	**P**	**23 30 51.8**	**-1.9**
	0.4nm,0.3s,baz=285,slow=16,SNR=3.1						
ILAR	**Eielson Array**	**60.69**	**337**	P	**P**	**23 31 35.5**	**+1.2**
	0.4nm,0.7s,baz=123,slow=4.3,SNR=5.0						
ILAR				pP	**pP**	**23 31 54.8**	**-0.7**
	0.6nm,1.0s,baz=141,slow=3.2,SNR=3.0						

*ISCJB **29** 23:31:23.5±0.3, 22.°91N±0.°04×94.°36E±0.°04, h105km, mb4.2/26, Error ellipse: s-maj=7.4km s-min=3.5km az=135.6*

*NEIC **29** 23:31:26.1±0.2, 22.°96N×94.°54E, mb4.3/11, Error ellipse: s-maj=7.8km s-min=3.9km az=59.0*

*IDC **29** 23:31:26.1±0.7, 22.°96N×94.°54E, h112km±6km, mb3.8/20, mb1 3.9/21, mb1mx3.8/28, mbtmp3.8/21, MS3.0/1, Ms1 3.0/1, ms1mx2.3/39, Error ellipse: s-maj=16.6km s-min=10.3km az=57.0*

ISC 29 23:31:25.2±0.4, 22.°91N±0.°06×94.°38E±0.°06, h105km, n78, σ1§31/91, mb4.2/26, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.91**	**348**	*e*P	**Pn**	**23 31 57.0**	**+0.1**
IMP				*e*S	**Sn**	**23 32 19.0**	**-2.0**
AGT	**Agartala**	**3.03**	**289**	*ex*	Pn	23 32 17.0	+5.5
AGT				*e*S	**Sn**	**23 32 46.0**	**-1.2**
SHL	**Shillong**	**3.49**	**320**	*i* P	**Pn**	**23 32 18.0**	**+0.2**
SHL				*i* x	**Sn**	**23 32 55.0**	**-3.4**
CHTO	**Chiang Mai**	**5.90**	**133**	*e*Pn	**Pn**	**23 32 49.8**	**-0.6**
	10nm,0.6s						
CHTO				*e*Sn	**Sn**	**23 33 55.8**	**-0.9**
CM31	**Chiang Mai Arr**	**6.16**	**135**	*e*Pn	**Pn**	**23 32 53.7**	**0.0**
	7.5nm,0.4s						
CM31				*e*Sn	**Sn**	**23 34 00.2**	**-2.6**
CMAR	**Chiang Mai Arr**	**6.16**	**135**	P	**Pn**	**23 32 53.1**	**-0.6**
CMAR				S	**Sn**	**23 34 03.8**	**+0.9**
CMAR	**Chiang Mai Arr**	**6.16**	**135**	P	**Pn**	**23 32 53.1**	**-0.6**
	0.6nm,0.3s,baz=311,slow=14,SNR=12						
CMAR				S	**Sn**	**23 34 03.8**	**+0.9**
	1.8nm,0.3s,baz=319,slow=23,SNR=4.5						
LSA	**Lhasa**	**7.35**	**337**	*e*Pn	**Pn**	**23 33 10.7**	**+0.3**
	60nm,0.4s						
LSA				*e*Sn	**Sn**	**23 34 31.1**	**-1.4**
ODAN	**Odare**	**7.46**	**303**	*e*Pn	**Pn**	**23 33 11.1**	**-0.6**
ODAN				*e*Sn	Sn	23 34 28.1	-6.8
	464nm,0.3s						
TAPN	**Taplejung**	**7.49**	**308**	*e*Pn	**Pn**	**23 33 11.3**	**-0.7**
TAPN				*e*Sn	**Sn**	**23 34 29.6**	**-5.9**
RAMN	**Ramite**	**8.12**	**301**	*e*Pn	**Pn**	**23 33 19.7**	**-0.9**
RAMN				*e*Sn	Sn	23 34 41.5	-9.4
	176nm,0.4s						
BWNR	**Bhubaneshwar**	**8.39**	**254**	*e*P	Pn	23 33 19.7	-4.4
BWNR				*ex*	x	23 34 41.6	
GUN	**Gumba**	**9.15**	**305**	*e*Pn	**Pn**	**23 33 33.6**	**-1.1**
GUN				*e*Sn	Sn	23 35 08.5	-7.6
	297nm,0.3s						
PKI	**Pulchoki**	**9.35**	**302**	*e*Pn	**Pn**	**23 33 35.5**	**-1.9**
PKI				*e*Sn	Sn	23 35 11.7	-9.2
	104nm,0.4s						
PKIN	**Phulchoki**	**9.36**	**302**	*e*Pn	**Pn**	**23 33 36.1**	**-1.4**
PKIN				*e*Sn	Sn	23 35 13.5	-7.6
	164nm,0.5s						
KKN	**Kakani**	**9.55**	**302**	*e*Pn	**Pn**	**23 33 38.9**	**-1.1**
KKN				*e*Sn	Sn	23 35 18.4	-7.3
	124nm,0.4s						
DMN	**Daman**	**9.61**	**301**	*e*Pn	**Pn**	**23 33 39.0**	**-1.8**
DMN				*e*Sn	Sn	23 35 19.5	-7.5
	112nm,0.5s						
KOLN	**Koldanda**	**10.88**	**299**	*e*Pn	**Pn**	**23 33 55.3**	**-2.8**
KOLN				*e*Sn	Sn	23 35 48.5	-9.4
	126nm,0.3s						
DANN	**Dangsing**	**11.00**	**302**	*e*Pn	**Pn**	**23 33 57.1**	**-2.7**
DANN				*e*Sn	Sn	23 35 51.4	-10
	99nm,0.4s						
PYUN	**Piuthan**	**11.51**	**299**	*e*Pn	Pn	23 34 03.1	-3.4
PYUN				*e*Sn	Sn	23 36 03.6	-10
	120nm,0.5s						
NGP	**Nagpur**	**14.32**	**266**	*e*P	**Pn**	**23 34 40.5**	**-2.8**
NGP				AMB	AMB	23 34 51.1	
	comp=Z,6.

KMBO	**Kilima Mbogo**	**60.48**	**255**	P		**P**	**23 41 25.3**	**+0.5**	
	comp=Z,1.7nm,0.8s,baz=54,slow=11,SNR=7.0								
ARCES	**ARCESS Array B**	**61.36**	**338**	P		**P**	**23 41 30.0**	**+0.4**	
ARCES	**ARCESS Array B**	**61.36**	**338**	P		**P**	**23 41 30.0**	**+0.4**	
	comp=Z,3.9nm,0.9s,baz=94,slow=8.0,SNR=10								
NB2	**NORSAR Subarra**	**66.95**	**328**	P		**P**	**23 42 06.5**	**+0.2**	
	comp=Z,0.5nm,0.5s,baz=86,slow=6.2								
NOA	**NORSAR Array B**	**66.95**	**328**	P		**P**	**23 42 06.5**	**+0.2**	
NOA	**NORSAR Array B**	**66.95**	**328**	P		**P**	**23 42 06.5**	**+0.2**	
	comp=Z,0.4nm,0.6s,baz=66,slow=4.4,SNR=2.9								
GERES	**GERESS Array B**	**67.09**	**315**	P		**P**	**23 42 08.0**	**+0.5**	
GERES				pP		**PcP**	**23 42 36.5**	**+1.5**	
GERES	**GERESS Array B**	**67.09**	**315**	P		**P**	**23 42 08.0**	**+0.5**	
	comp=Z,0.3nm,0.4s,baz=76,slow=6.1,SNR=4.1								
GERES				pP		**PcP**	**23 42 36.5**	**+1.5**	
	comp=Z,1.2nm,0.7s,baz=83,slow=5.5,SNR=6.1								
STKA	**Stephens Creek**	**70.77**	**139**	*eP*		**P**	**23 42 30.2**	**-0.2**	
	comp=Z,0.3nm,0.5s								
STKA	**Stephens Creek**	**70.77**	**139**	P		**P**	**23 42 30.4**	**0.0**	
	comp=Z,1.2nm,0.4s,baz=310,slow=5.0,SNR=8.6								
KEST	**Kesra**	**73.14**	**302**	*eP*		**P**	**23 42 45.2**	**+0.5**	
KEST	**Kesra**	**73.14**	**302**	P		**P**	**23 42 45.5**	**+0.7**	
	comp=Z,0.7nm,0.8s,baz=59,slow=5.9,SNR=4.0								
ILAR	**Eielson Array**	**80.80**	**22**	P		**P**	**23 43 25.3**	**-1.7**	
ILAR				pP		**pP**	**23 43 54.5**	**+0.4**	
ILAR	**Eielson Array**	**80.80**	**22**	P		**P**	**23 43 25.3**	**-1.7**	
	comp=Z,0.2nm,0.5s,baz=302,slow=5.2,SNR=3.4								
ILAR				pP		**pP**	**23 43 54.5**	**+0.4**	
	comp=Z,0.3nm,0.6s,baz=286,slow=5.2,SNR=2.9								
BOSA	**Boshof**	**84.00**	**236**	*eP*		**P**	**23 43 44.9**	**+0.5**	
	comp=Z,3.3nm,0.4s								
BOSA	**Boshof**	**84.00**	**236**	P		**P**	**23 43 44.9**	**+0.5**	
	comp=Z,2.9nm,0.4s,baz=83,slow=5.1,SNR=20								
TORD	**Torodi Ar. Bea**	**87.40**	**283**	P		**P**	**23 44 02.1**	**+0.8**	
TORD	**Torodi Ar. Bea**	**87.40**	**283**	P		**P**	**23 44 02.1**	**+0.8**	
	comp=Z,2.2nm,0.9s,baz=46,slow=3.6,SNR=14								
DBIC	**Dimbokro**	**95.87**	**280**	*eP*		**P**	**23 44 41.3**	**+0.6**	
	comp=Z,0.9nm,0.4s								
DBIC	**Dimbokro**	**95.87**	**280**	P		**P**	**23 44 41.3**	**+0.6**	
	comp=Z,1.4nm,0.6s,baz=93,slow=5.7,SNR=4.7								
KIP	**Kipapa**	**96.85**	**63**	*eP*		**P**	**23 44 44.8**	**-0.2**	
	comp=Z,71nm,0.5s								
CPUP	**Villa Florida**	**154.08**	**257**	PKPbc		**PKPbc**	**23 51 12.6**	**-0.7**	
CPUP	**Villa Florida**	**154.08**	**257**	PKPbc		**PKPbc**	**23 51 12.6**	**-0.7**	
	comp=Z,1.4nm,0.5s,baz=30,slow=10,SNR=8.5								

CASC 29 23:33:29.1±2.6, 13°24N×90°89W, h1km±6km, MD3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**1.02**	**24**	*eP*	Pg	23 33 48.6	-0.4
IXG				*eS*	Sn	23 34 06.2	+0.2
PCG	**Pacaya**	**1.18**	**13**	*eP*	Pg	23 33 50.6	-1.6
PCG				*eS*	Sn	23 34 10.1	-0.1
FUG	**Fuego 3**	**1.21**	**2**	*eP*	Pg	23 33 48.1	-4.4
FUG				*eS*	Sn	23 34 10.8	+0.3
JAT	**Jato**	**1.30**	**326**	*eP*	Pg	23 33 51.5	-2.5
JAT				*eS*	Sg	23 34 10.9	0.0
SBLS	**San Blas**	**1.37**	**64**	*eP*	Pn	23 33 54.5	-1.2
SBLS				*eS*	Sb	23 34 14.0	-0.2
RTR	**El Retiro**	**1.38**	**61**	*eP*	Pn	23 33 55.3	-0.4
RTR				*eS*	Sg	23 34 13.2	-0.7
SNJE	**San Jose**	**1.40**	**63**	*eP*	Pn	23 33 55.1	-1.0
NBG	**Las Nubes**	**1.44**	**21**	*eP*	Pn	23 33 55.1	-1.7
NBG				*eS*	Sn	23 34 17.7	+1.1
RBDL	**Robledal**	**1.46**	**53**	*eP*	Pn	23 33 55.9	-1.0
RBDL				*eS*	Sg	23 34 12.6	-3.9
BOQS	**Boqueron**	**1.64**	**72**	*eP*	Pn	23 33 59.4	0.0
BOQS				*eS*	Sb	23 34 21.8	-0.2
LFRS	**El Faro**	**1.82**	**78**	*eP*	Pb	23 34 03.0	-0.4
LFRS				*eS*	Sn	23 34 25.7	+0.1
MTO2	**Montecristo 2**	**1.88**	**52**	*eP*	Pn	23 34 02.2	-0.6
SNVI	**San Vicente**	**2.03**	**79**	*eP*	Pn	23 34 05.6	+0.9
SNVI				*eS*	Sb	23 34 32.6	-0.4
MRL	**Marmol**	**2.16**	**32**	*eP*	Pn	23 34 06.2	-0.3
MRL				*eS*	Sb	23 34 36.8	0.0

*CSEM **29** 23:53:22.6, 42°28N×13°49E, h10km, MD1.9/11, After ROM*

ROM 29 23:53:22.6±0.1, 42°28N×13°49E, h10km, Md1.9/11, Ml1.5/4, Error ellipse: s-maj=1.2km s-min=1.0km az=31.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.07**	**102**	Pg	Pg	23 53 25.3	+0.3
FAGN				Sg	Sg	23 53 26.9	+0.2
	462nm,0.4s						
FAGN	**Fagnano**	**0.07**	**102**	Pg	Pg	23 53 25.3	+0.3
FAGN				Sg	Sg	23 53 26.9	+0.2
	462nm,0.4s						
AQU	**L'Aquila**	**0.10**	**319**	Pg	Pg	23 53 25.9	+0.6
AQU				Sg	Sg	23 53 27.7	+0.6
	145nm,0.4s						
AQU	**L'Aquila**	**0.10**	**319**	Pg	Pg	23 53 25.9	+0.6
AQU				Sg	Sg	23 53 27.7	+0.6
	145nm,0.4s						
PTQR	**Pietraquaria**	**0.27**	**194**	Pg	Pg	23 53 28.9	+0.7
PTQR				Sg	Sg	23 53 32.9	+1.0
	5.0nm,0.2s						
PTQR	**Pietraquaria**	**0.27**	**194**	Pg	Pg	23 53 28.9	+0.7
PTQR				Sg	Sg	23 53 32.9	+1.0
	5.0nm,0.2s						
FIAM	**Fiamignano**	**0.28**	**267**	Pg	Pb	23 53 29.1	-0.7
FIAM				Sg	Sb	23 53 33.6	-1.0
FIAM	**Fiamignano**	**0.28**	**267**	Pg	Pb	23 53 29.1	-0.7
FIAM				Sg	Sb	23 53 33.6	-1.0
VCEL	**Villa Celiera**	**0.28**	**67**	Pg	Pb	23 53 29.4	-0.6
VCEL				Sg	Sb	23 53 34.0	-1.0
	107nm,0.6s						
VCEL	**Villa Celiera**	**0.28**	**67**	Pg	Pb	23 53 29.4	-0.6
VCEL				Sg	Sb	23 53 34.0	-1.0
	107nm,0.6s						
TERO	**Teramo**	**0.35**	**14**	Pg	Pg	23 53 29.8	+0.1
TERO				Sg	Sg	23 53 35.3	+0.8
TERO	**Teramo**	**0.35**	**14**	Pg	Pg	23 53 29.8	+0.1
TERO				Sg	Sg	23 53 35.3	+0.8
INTR	**Introdacqua**	**0.41**	**131**	Pg	Pg	23 53 31.2	+0.4
INTR				Sg	Sb	23 53 37.6	-0.9
INTR	**Introdacqua**	**0.41**	**131**	Pg	Pg	23 53 31.2	+0.4
INTR				Sg	Sb	23 53 37.6	-0.9
VVLD	**Villa Vallelon**	**0.42**	**166**	Pg	Pg	23 53 31.4	+0.3
VVLD				Sg	Sg	23 53 37.6	+0.9
	188nm,2.0s						
VVLD	**Villa Vallelon**	**0.42**	**166**	Pg	Pg	23 53 31.4	+0.3
VVLD				Sg	Sg	23 53 37.6	+0.9
	188nm,2.0s						
LPEL	**Lama dei Pelig**	**0.57**	**114**	Pg	Pg	23 53 33.6	-0.2
LPEL				Sg	Sb	23 53 42.8	-0.2
LPEL	**Lama dei Pelig**	**0.57**	**114**	Pg	Pg	23 53 33.6	-0.2
LPEL				Sg	Sb	23 53 42.8	-0.2
NRCA	**Norcia**	**0.62**	**334**	Pg	Pg	23 53 34.9	+0.2
	14nm,0.1s						
NRCA	**Norcia**	**0.62**	**334**	Pg	Pg	23 53 34.9	+0.2
	14nm,0.1s						
SDI	**San Donato**	**0.62**	**157**	Pg	Pg	23 53 34.5	-0.2
SDI				Sg	Sb	23 53 44.4	-0.1
SDI	**San Donato**	**0.62**	**157**	Pg	Pg	23 53 34.5	-0.2
SDI				Sg	Sb	23 53 44.4	-0.1
SOP	**Sopron**	**5.82**	**21**	*e*		00 09 51.4	

IDC 29 23:53:36.0±1.1, 0°48S×121°99E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.6/23, mbtmp3.7/6, ML4.0/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/29, Error ellipse: s-maj=44.4km s-min=19.6km az=75.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**5.03**	**206**	Pn	Pn	23 54 51.4	-1.3
	6.3nm,0.3s,baz=32,slow=5.0,SNR=18						
KAPI				Sn	Sn	23 55 46.3	-5.3
	3.4nm,0.3s,baz=38,slow=19,SNR=3.4						
WRA	**Warramunga Arr**	**22.82**	**149**	P	P	23 58 39.9	-0.9
	1.1nm,0.7s,baz=331,slow=10,SNR=4.7						
ASAR	**Alice Springs**	**25.79**	**154**	P	P	23 59 09.9	+0.9
	0.2nm,0.3s,baz=353,slow=15,SNR=3.0						
KSRS	**Korea Array**	**38.14**	**8**	LR	LR	00 16 52.5	
	comp=Z,24nm,18.5s,baz=240,slow=37						
MJAR	**Matsushiro Arr**	**39.80**	**21**	P	P	00 01 11.2	+0.2
	0.8nm,0.2s,baz=192,slow=9.5,SNR=4.9						
MKAR	**Makanchi Array**	**58.49**	**329**	P	P	00 03 34.6	+0.5
	0.6nm,0.5s,baz=129,slow=8.9,SNR=5.8						
ZALV	**Zalesovo Beam**	**62.33**	**336**	P	P	00 03 59.4	-0.7
	1.3nm,0.9s,baz=124,slow=7.2,SNR=5.8						

*BJI **30** 00:02:54.7, 52°57N×35°01W, h7km, mB5.1/17, mb4.9/22, Ms4.6/6, Ms7 4.5/13*
*MOS **30** 00:02:56.9±0.9, 52°67N×34°69W, h10km, mb5.0/91, MS4.1/22, Error ellipse: s-maj=6.5km s-min=4.9km az=152.6*
*IDC **30** 00:02:56.5±0.4, 52°65N×34°69W, h0km, mb4.4/34, mb1 4.6/38, mb1mx4.5/43, mbtmp4.4/38, ML4.0/4, MS3.9/41, Ms1 4.0/41, ms1mx3.9/44, Error ellipse: s-maj=12.5km s-min=9.0km az=11.0*
*ISCJB **30** 00:02:57.4±0.1, 52°68N±0°03×34°72W±0°02, h13km, mb4.7/237, MS4.1/80, Error ellipse: s-maj=4.5km s-min=1.5km az=2.0*
*NEIC **30** 00:02:58.7±0.1, 52°66N×34°65W, h10km, mb4.9/137, MS4.1/19, Error ellipse: s-maj=4.3km s-min=1.7km az=183.0*
*CSEM **30** 00:02:58.5±0.1, 52°69N×34°66W, h10km, mb4.8/99, Ms3.8, Mw4.9, Error ellipse: s-maj=4.5km s-min=1.9km az=7.0*
*GCMT **30** 00:03:02.1±0.2, 52°82N×34°61W, h17km±1km, MW4.9, Moment Tensor Solution. s36,c42; s83,c124; Moment tensor: Scale 10^{16}Nm; M_{rr}=0.17±.12; $M_{t\theta}$=-0.61±.12; $M_{\phi\phi}$=0.78±.10; $M_{r\theta}$=0.71±.28; $M_{\theta\theta}$=-3.00±.09; $M_{r\phi}$=1.06±.28; Best double couple: M_0=3.30000×10^{16} NP1:ϕ_s=278.00000°, δ=70.00000°, λ=-170.00000°. NP2:ϕ_s=185.00000°, δ=81.00000°, λ=-20.00000°. Principal axes: T 3.2100, Plg7.0000°, Azm233.0000°; N 0.2400, Plg68.0000°, Azm341.0000°; P -3.4500, Plg20.0000°, Azm140.0000°; Data Used: ll lU IC G CN.*

ISC 30 00:02:59.7±0.4, 52°64N±0°05×34°69W±0°04, h18km±1km, h18km:pP-P, n1065, σ0s99/1083, mb4.8/237, MS4.1/80, 157C-129D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**13.95**	**24**	Pn	**Pn**	**00 06 16.4**	**+0.3**
BORG	**Borgarnes**	**13.95**	**24**	Pn	**Pn**	**00 06 16.4**	**+0.3**
	1.2nm,0.3s,baz=184,slow=6.5,SNR=3.7						
BORG				LR	LR	00 09 46.6	
	comp=Z,454nm,21.7s,baz=256,slow=29						
BORG	**Borgarnes**	**13.95**	**24**	P	**Pn**	**00 06 16.4**	**+0.3**
ROSA	**Rosais**	**14.62**	**160**	*e*LQ	LQ	00 09 13.3	
PSET	**Sete Cidades**	**16.08**	**154**	*e*LQ	LQ	00 09 49.5	
CMLA	**Cha da Macela**	**16.19**	**153**	*e*LQ	LQ	00 09 54.5	
SFJD	**Kangerlussuaq**	**16.39**	**338**	*e*Pn	**Pn**	**00 06 47.6**	**-0.9**
	52nm,0.9s						
SFJD	**Kangerlussuaq**	**16.39**	**338**	*i* P	**Pn**	**00 06 47.0**	**-1.5**
	35nm,0.9s						
SFJD							
	comp=Z,680nm,15.0s						
SFJD	**Kangerlussuaq**	**16.39**	**338**	Pn	**Pn**	**00 06 46.4**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=157,slow=11,SNR=12						
SFJD	**Kangerlussuaq**	**16.39**	**338**	*e*Pn	**Pn**	**00 06 47.6**	**-0.9**
	comp=Z,52nm,0.9s						
ESK	**Eskdalemuir**	**18.63**	**69**	*e*P	**Pn**	**00 07 16.6**	**+0.3**
ESK				pmax	pmax		
	comp=Z,63nm,1.1s						
ESK	**Eskdalemuir**	**18.63**	**69**	*e*Pn	**Pn**	**00 07 16.6**	**+0.3**
	comp=Z,63nm,1.1s						
ESK	**Eskdalemuir**	**18.63**	**69**	*e*P	**Pn**	**00 07 16.6**	**+0.3**
	comp=Z,63nm,1.1s						
EKA	**Eskdalemuir Ar**	**18.65**	**69**	P	**P**	**00 07 15.6**	**-0.6**
EKA	**Eskdalemuir Ar**	**18.65**	**69**	P	**P**	**00 07 15.6**	**-0.6**
	baz=275,slow=9.4,SNR=35						
EKA	**Eskdalemuir Ar**	**18.65**	**69**	P	**P**	**00 07 15.6**	**-0.6**
SCO	**Scoresbysund**	**18.83**	**13**	*i* P	**Pn**	**00 07 20.1**	**+1.5**
SCO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SCO	**Scoresbysund**	**18.83**	**13**	*i* P	**Pn**	**00 07 20.1**	**+1.5**
	comp=Z,7.5nm,0.8s						
SCHQ	**Schefferville**	**19.05**	**289**	*e*P	**P**	**00 07 19.0**	**-1.7**
	comp=Z,34nm,0.9s						
SCHQ	**Schefferville**	**19.05**	**289**	P	**P**	**00 07 18.6**	**-2.1**
	comp=Z,0.6nm,0.3s,baz=93,slow=6.8,SNR=15						
SCHQ				LR	LR	00 13 22.5	
	comp=Z,510nm,20.1s,baz=101,slow=33						
SCHQ	**Schefferville**	**19.05**	**289**	*e*P	**P**	**00 07 19.0**	**-1.7**
	comp=Z,34nm,0.9s						
SUMG	**Summit**	**20.08**	**357**	*i* P	**P**	**00 07 31.4**	**-0.8**
SUMG				pmax	pmax		
	comp=Z,18nm,0.9s						
SUMG				MLR	MLR		
	comp=Z,760nm,20.0s						
SUMG	**Summit**	**20.08**	**357**	*e*P	**P**	**00 07 30.5**	**-1.6**
	comp=Z,40nm,1.2s						
SUMG	**Summit**	**20.08**	**357**	*i* P	**P**	**00 07 31.4**	**-0.8**
	comp=Z,18nm,0.9s						
SUMG							
	comp=Z,760nm,20.0s						
SUMG	**Summit**	**20.08**	**357**	*i* P	**P**	**00 07 31.4**	**-0.8**
	comp=Z,760nm,20.0s						
ROSF	**Rostrenen**	**20.35**	**90**	*e*P	**P**	**00 07 35.1**	**+0.2**
	comp=Z,163nm,1.6s						
ROSF	**Rostrenen**	**20.35**	**90**	*e*P	**P**	**00 07 35.1**	**+0.2**
ROSF				pmax	pmax		
	comp=Z,163nm,1.6s						
ROSF	**Rostrenen**	**20.35**	**90**	*e*P	**P**	**00 07 35.1**	**+0.2**
	comp=Z,163nm,1.6s						
ROSF	**Rostrenen**	**20.35**	**90**	*e*P	**P**	**00 07 35.1**	**+0.2**
	comp=Z,82nm,1.6s						
QUIF	**Quistinic**	**20.59**	**91**	*e*P	**P**	**00 07 37.7**	**+0.2**
	comp=Z,52nm,0.9s						
QUIF	**Quistinic**	**20.59**	**91**	*e*P	**P**	**00 07 37.7**	**+0.2**
QUIF				pmax	pmax		
	comp=Z,52nm,0.9s						
QUIF	**Quistinic**	**20.59**	**91**	*e*P	**P**	**00 07 37.7**	**+0.2**
	comp=Z,52nm,0.9s						
QUIF	**Quistinic**	**20.59**	**91**	*e*P	**P**	**00 07 37.7**	**+0.2**
	comp=Z,26nm,0.9s						
PGAV	**Gavieira, Arco**	**20.74**	**110**	*e*P	**P**	**00 07 39.5**	**+0.3**
	comp=Z,88nm,1.6s						
PGAV				*e*LQ	LQ	00 11 34.5	
PGAV				*e*LR	LR	00 12 38.7	
	comp=Z,329nm,20.0s						
PGAV	**Gavieira, Arco**	**20.74**	**110**	*e*P	**P**	**00 07 39.5**	**+0.3**
	comp=Z,88nm,1.6s						
FRB	**Frobisher Bay**	**20.74**	**316**	P	**P**	**00 07 38.7**	**-0.2**
FRB	**Frobisher Bay**	**20.74**	**316**	P	**P**	**00 07 38.7**	**-0.2**
	comp=Z,31nm,1.0s,baz=108,slow=10,SNR=28						
FRB				LR	LR	00 13 38.4	
	comp=Z,307nm,20.1s,baz=230,slow=31						
FRB	**Frobisher Bay**	**20.74**	**316**	P	**P**	**00 07 38.7**	**-0.2**
SGMF	**Saint Gilles**	**20.82**	**89**	*e*P	**P**	**00 07 40.4**	**+0.4**
	comp=Z,61nm,0.9s						
SGMF	**Saint Gilles**	**20.82**	**89**	*e*P	**P**	**00 07 40.4**	**+0.4**
SGMF				pmax	pmax		
	comp=Z,61nm,0.9s						
SGMF	**Saint Gilles**	**20.82**	**89**	*e*P	**P**	**00 07 40.4**	**+0.4**
	comp=Z,61nm,0.9s						
SGMF	**Saint Gilles**	**20.82**	**89**	*e*P	**P**	**00 07 40.4**	**+0.4**
	comp=Z,31nm,0.9s						
PCAB	**Cabril**	**21.04**	**111**	*e*P	**P**	**00 07 44.6**	**+2.2**
	comp=Z,82nm,1.2s						
PCAB	**Cabril**	**21.04**	**111**	*e*P	**P**	**00 07 44.6**	**+2.2**
	comp=Z,82nm,1.2s						
POLO	**Lamas de Olo**	**21.39**	**111**	*e*P	**P**	**00 07 47.5**	**+1.3**
	comp=Z,56nm,0.9s						
POLO	**Lamas de Olo**	**21.39**	**111**	*e*P	**P**	**00 07 47.5**	**+1.3**
	comp=Z,56nm,0.9s						
PVRL	**Vila Real**	**21.50**	**111**	*e*P	**P**	**00 07 48.3**	**+1.0**
	comp=Z,96nm,1.9s						
PVRL	**Vila Real**	**21.50**	**111**	*e*P	**P**	**00 07 48.3**	**+1.0**
	comp=Z,96nm,1.9s						
PBRG	**Braganca**	**21.72**	**109**	*e*P	**P**	**00 07 50.4**	**+0.7**
	comp=Z,90nm,1.5s						
PBRG	**Braganca**	**21.72**	**109**	*e*P	**P**	**00 07 50.4**	**+0.7**
	comp=Z,90nm,1.5s						
PVIS	**Viseu**	**21.77**	**112**	*e*P	**P**	**00 07 50.5**	**+0.2**
	comp=Z,90nm,1.3s						
PVIS	**Viseu**	**21.77**	**112**	*e*P	**P**	**00 07 50.5**	**+0.2**
	comp=Z,90nm,1.3s						
GRR	**Gorron**	**21.80**	**88**	*e*P	**P**	**00 07 50.3**	**-0.2**
	comp=Z,80nm,1.0s						
GRR	**Gorron**	**21.80**	**88**	*e*P	**P**	**00 07 50.3**	**-0.2**
GRR				pmax	pmax		
	comp=Z,80nm,1.0s						
GRR	**Gorron**	**21.80**	**88**	*e*P	**P**	**00 07 50.3**	**-0.2**
	comp=Z,80nm,1.0s						
GRR	**Gorron**	**21.80**	**88**	*e*P	**P**	**00 07 50.3**	**-0.2**
	comp=Z,40nm,1.0s						
JMIC	**Jan Mayen**	**21.83**	**23**	LR	LR	00 14 01.6	
	comp=Z,825nm,20.3s,baz=256,slow=30						
FLN	**La Foliniere**	**21.88**	**86**	*e*P	**P**	**00 07 51.2**	**-0.1**
	comp=Z,54nm,0.8s						
FLN				*e*R			
	comp=Z,300nm,22.9s						
FLN	**La Foliniere**	**21.88**	**86**	*e*P	**P**	**00 07 51.2**	**-0.1**
FLN				pmax	pmax		
	comp=Z,54nm,0.8s						
FLN	**La Foliniere**	**21.88**	**86**	*e*P	**P**	**00 07 51.2**	**-0.1**
	comp=Z,54nm,0.8s						
FLN	**La Foliniere**	**21.88**	**86**	*e*P	**P**	**00 07 51.2**	**-0.1**
	comp=Z,27nm,0.8s						
MVO	**Moncorvo**	**21.96**	**110**	*e*P	**P**	**00 07 54.0**	**+1.6**
	comp=Z,49nm,1.4s						
MVO				*e*LQ	LQ	00 11 59.7	
MVO				*e*LR	LR	00 13 10.1	
	comp=Z,323nm,20.0s						
MVO	**Moncorvo**	**21.96**	**110**	*e*P	**P**	**00 07 54.0**	**+1.6**
	comp=Z,49nm,1.4s						
LDF	**La Druitiere**	**22.17**	**87**	*e*P	**P**	**00 07 54.2**	**-0.2**
LDF	**La Druitiere**	**22.17**	**87**	*e*P	**P**	**00 07 54.2**	**-0.2**
LDF	**La Druitiere**	**22.17**	**87**	*e*P	**P**	**00 07 54.2**	**-0.2**
LDF	**La Druitiere**	**22.17**	**87**	*e*P	**P**	**00 07 54.2**	**-0.2**
MTE	**Manteigas**	**22.18**	**113**	*e*P	**P**	**00 07 55.1**	**+0.4**
	comp=Z,46nm,1.4s						
MTE				*e*LQ	LQ	00 12 02.1	
MTE				*e*LR	LR	00 13 01.1	
	comp=Z,320nm,18.0s						
MTE	**Manteigas**	**22.18**	**113**	*e*P	**P**	**00 07 55.1**	**+0.4**
	comp=Z,46nm,1.4s						
PMAFR	**Mafra**	**22.23**	**118**	*e*P	**P**	**00 07 56.5**	**+1.3**
	comp=Z,141nm,0.7s						
PMAFR	**Mafra**	**22.23**	**118**	*e*P	**P**	**00 07 56.5**	**+1.3**
	comp=Z,141nm,0.7s						
PTOM	**Tomar**	**22.24**	**115**	*e*P	**P**	**00 07 55.3**	**+0.1**
	comp=Z,124nm,1.6s						
PTOM	**Tomar**	**22.24**	**115**	*e*P	**P**	**00 07 55.3**	**+0.1**
	comp=Z,124nm,1.6s						
PCBR	**Castelo Branco**	**22.60**	**114**	*e*P	**P**	**00 07 59.3**	**+0.2**
	comp=Z,93nm,1.3s						
PCBR	**Castelo Branco**	**22.60**	**114**	*e*P	**P**	**00 07 59.3**	**+0.2**
	comp=Z,93nm,1.3s						
PMTG	**Montargil**	**22.73**	**116**	*e*P	**P**	**00 08 01.0**	**+0.6**
	comp=Z,57nm,1.8s						
PMTG	**Montargil**	**22.73**	**116**	*e*P	**P**	**00 08 01.0**	**+0.6**
	comp=Z,57nm,1.8s						
MENF	**Mencas**	**22.82**	**80**	*e*P	**P**	**00 08 02.2**	**+0.8**
MENF	**Mencas**	**22.82**	**80**	*e*P	**P**	**00 08 02.2**	**+0.8**
MENF	**Mencas**	**22.82**	**80**	*e*P	**P**	**00 08 02.2**	**+0.8**
PMRV	**Marv??o**	**22.93**	**114**	*e*P	**P**	**00 08 02.4**	**-0.2**
	comp=Z,48nm,1.1s						
PMRV				*e*LQ	LQ	00 12 16.4	
PMRV				*e*LR	LR	00 13 49.8	
	comp=Z,268nm,20.0s						
PMRV	**Marv??o**	**22.93**	**114**	*e*P	**P**	**00 08 02.4**	**-0.2**
	comp=Z,48nm,1.1s						
MFF	**Saint Martin d**	**23.02**	**91**	*e*P	**P**	**00 08 02.6**	**-0.9**
	comp=Z,38nm,0.8s						
MFF	**Saint Martin d**	**23.02**	**91**	*e*P	**P**	**00 08 02.6**	**-0.9**
MFF				pmax	pmax		
	comp=Z,38nm,0.8s						
MFF	**Saint Martin d**	**23.02**	**91**	*e*P	**P**	**00 08 02.6**	**-0.9**
	comp=Z,38nm,0.8s						
MFF	**Saint Martin d**	**23.02**	**91**	*e*P	**P**	**00 08 02.6**	**-0.9**
	comp=Z,19nm,0.8s						
EVOP	**Sao Brissos**	**23.17**	**117**	*e*P	**P**	**00 08 04.0**	**-1.0**
EVOP				pmax	pmax		
	comp=Z,52nm,1.2s						
EVOP	**Sao Brissos**	**23.17**	**117**	*e*P	**P**	**00 08 04.0**	**-1.0**
	comp=Z,52nm,1.2s						
EVOP	**Sao Brissos**	**23.17**	**117**	*e*P	**P**	**00 08 04.0**	**-1.0**
	comp=Z,26nm,1.2s						
PESTR	**Estremoz**	**23.22**	**116**	*e*P	**P**	**00 08 04.7**	**-0.8**
	comp=Z,38nm,1.0s						
PESTR	**Estremoz**	**23.22**	**116**	*e*P	**P**	**00 08 04.7**	**-0.8**
	comp=Z,38nm,1.0s						
EVO	**Evora**	**23.22**	**117**	*e*P	**P**	**00 08 04.0**	**-1.6**
	comp=Z,52nm,1.2s						
EVO				*e*R			
	comp=Z,204nm,20.5s						
EVO	**Evora**	**23.22**	**117**	*e*P	**P**	**00 08 04.2**	**-1.4**
	comp=Z,26nm,1.3s						
EVO	**Evora**	**23.22**	**117**	*e*P	**P**	**00 08 04.2**	**-1.4**
	comp=Z,26nm,1.3s						
PNCL	**Nicolau / Gran**	**23.25**	**118**	*e*P	**P**	**00 08 06.5**	**+0.7**
	comp=Z,36nm,2.0s						
PNCL	**Nicolau / Gran**	**23.25**	**118**	*e*P	**P**	**00 08 06.5**	**+0.7**
	comp=Z,36nm,2.0s						
PTEO	**Sao Teotonio**	**23.56**	**119**	*e*P	**P**	**00 08 08.8**	**-0.1**
PTEO	**Sao Teotonio**	**23.56**	**119**	*e*P	**P**	**00 08 08.8**	**-0.1**
**PBE

TCF pmax pmax
comp=Z,36nm,1.0s
TCF Toulx Ste Croi 24.61 90 *e*P **P 00 08 18.2 -0.5**
comp=Z,36nm,1.0s
TCF Toulx Ste Croi 24.61 90 *e*P **P 00 08 18.2 -0.5**
comp=Z,18nm,1.0s
RJF Les Rejaudoux 24.67 93 *e*P **P 00 08 18.9 -0.3**
comp=Z,32nm,1.1s
RJF *e*R
comp=Z,372nm,20.0s
RJF Les Rejaudoux 24.67 93 *e*P **P 00 08 18.9 -0.3**
RJF pmax pmax
comp=Z,32nm,1.0s
RJF Les Rejaudoux 24.67 93 *e*P **P 00 08 18.9 -0.3**
comp=Z,32nm,1.0s
RJF Les Rejaudoux 24.67 93 *e*P **P 00 08 18.9 -0.3**
comp=Z,16nm,1.1s
ESDC Sonseca Array 24.70 109 P **P 00 08 18.7 -0.9**
ESDC Sonseca Array 24.70 109 P **P 00 08 18.7 -0.9**
comp=Z,4.6nm,0.8s,baz=314,slow=9.0,SNR=33
ESDC LR LR 00 15 42.1
comp=Z,292nm,19.5s,baz=310,slow=31
ESDC Sonseca Array 24.70 109 P **P 00 08 18.7 -0.9**
ESLA Sonseca Array 24.70 109 *e*P **P 00 08 20.2 +0.6**
comp=Z,2.5nm,0.9s
ESLA Sonseca Array 24.70 109 *e*P **P 00 08 20.2 +0.6**
comp=Z,2.5nm,0.9s
ETSF Etsaut 24.71 99 *e*P **P 00 08 19.8 +0.1**
comp=Z,33nm,0.8s
ETSF Etsaut 24.71 99 *e*P **P 00 08 19.8 +0.1**
ETSF pmax pmax
comp=Z,33nm,0.8s
ETSF Etsaut 24.71 99 *e*P **P 00 08 19.8 +0.1**
comp=Z,33nm,0.8s
ETSF Etsaut 24.71 99 *e*P **P 00 08 19.8 +0.1**
comp=Z,17nm,0.8s
BCLA Clavier 24.76 79 P **P 00 08 19.4 -0.6**
BGF Bois d'Agland 24.87 89 *e*P **P 00 08 20.8 -0.2**
comp=Z,86nm,0.9s
BGF Bois d'Agland 24.87 89 *e*P **P 00 08 20.8 -0.2**
BGF pmax pmax
comp=Z,88nm,0.9s
BGF Bois d'Agland 24.87 89 *e*P **P 00 08 20.8 -0.2**
comp=Z,88nm,0.9s
BGF Bois d'Agland 24.87 89 *e*P **P 00 08 20.8 -0.2**
comp=Z,44nm,0.9s
DAG Danmarks Havn 24.99 9 *i*P **P 00 08 21.7 -0.1**
DAG pmax pmax
comp=Z,5.0nm,1.0s
DAG MLR MLR
comp=Z,680nm,15.0s
DAG Danmarks Havn 24.99 9 *i*P **P 00 08 21.7 -0.1**
comp=Z,5.4nm,1.0s
DAG
comp=Z,680nm,14.0s
HGN Heimansgroeve 25.02 78 *e*P **P 00 08 22.0 -0.2**
comp=Z,16nm,1.1s
SSF Saint Saulge 25.04 87 *e*P **P 00 08 21.9 -0.6**
comp=Z,55nm,0.8s
SSF Saint Saulge 25.04 87 *e*P **P 00 08 21.9 -0.6**
SSF pmax pmax
comp=Z,55nm,0.8s
SSF Saint Saulge 25.04 87 *e*P **P 00 08 21.9 -0.6**
comp=Z,55nm,0.8s
SSF Saint Saulge 25.04 87 *e*P **P 00 08 21.9 -0.6**
comp=Z,28nm,0.8s
AVF Avril sur Loir 25.07 88 *e*P **P 00 08 22.1 -0.6**
comp=Z,50nm,0.9s
AVF Avril sur Loir 25.07 88 *e*P **P 00 08 22.1 -0.6**
AVF pmax pmax
comp=Z,50nm,0.9s
AVF Avril sur Loir 25.07 88 *e*P **P 00 08 22.1 -0.6**
comp=Z,50nm,0.9s
AVF Avril sur Loir 25.07 88 *e*P **P 00 08 22.1 -0.6**
comp=Z,25nm,0.9s
MEM Membach 25.11 78 P **P 00 08 24.2 +1.0**
comp=Z,12nm,1.2s
WTSB Winterswijk 25.13 75 *e*P **P 00 08 23.2 -0.1**
comp=Z,76nm,1.3s
WTSB Winterswijk 25.13 75 *e*P **P 00 08 23.2 -0.1**
comp=Z,76nm,1.3s
LOR Lormes 25.16 87 *e*P **P 00 08 22.9 -0.7**
comp=Z,58nm,0.9s
LOR *e*R
comp=Z,274nm,17.8s
LOR Lormes 25.16 87 *e*P **P 00 08 22.9 -0.7**
comp=Z,58nm,0.9s
LOR Lormes 25.16 87 *e*P **P 00 08 22.9 -0.7**
comp=Z,29nm,0.9s
EPF Esparros 25.18 98 *e*P **P 00 08 24.0 +0.1**
comp=Z,28nm,1.0s
EPF Esparros 25.18 98 *e*P **P 00 08 24.0 +0.1**
EPF pmax pmax
comp=Z,28nm,1.0s
EPF Esparros 25.18 98 *e*P **P 00 08 24.0 +0.1**
comp=Z,28nm,1.0s
EPF Esparros 25.18 98 *e*P **P 00 08 24.0 +0.1**
comp=Z,14nm,1.0s
CAF Calviac 25.19 93 *e*P **P 00 08 23.4 -0.6**
comp=Z,40nm,1.2s
CAF Calviac 25.19 93 *e*P **P 00 08 23.4 -0.6**
CAF pmax pmax
comp=Z,40nm,1.2s
CAF Calviac 25.19 93 *e*P **P 00 08 23.4 -0.6**
comp=Z,40nm,1.2s
CAF Calviac 25.19 93 *e*P **P 00 08 23.4 -0.6**
comp=Z,20nm,1.2s
AGO Saint Agoulin 25.28 90 *e*P **P 00 08 25.5 +0.8**
AGO Saint Agoulin 25.28 90 *e*P **P 00 08 25.5 +0.8**
AGO Saint Agoulin 25.28 90 *e*P **P 00 08 25.5 +0.8**
MEZF Maizieres J'vi 25.35 83 *e*P **P 00 08 24.7 -0.6**
comp=Z,84nm,0.7s
MEZF Maizieres J'vi 25.35 83 *e*P **P 00 08 24.7 -0.6**
comp=Z,84nm,0.7s
MEZF Maizieres J'vi 25.35 83 *e*P **P 00 08 24.7 -0.6**
comp=Z,42nm,0.7s
PYM Petit Puy Mans 25.35 91 *e*P **P 00 08 25.9 +0.4**
PYM Petit Puy Mans 25.35 91 *e*P **P 00 08 25.9 +0.4**
PYM Petit Puy Mans 25.35 91 *e*P **P 00 08 25.9 +0.4**
PYM Petit Puy Mans 25.35 91 *e*P **P 00 08 25.9 +0.4**
MUD Monsted U'grnd 25.40 64⇓ *i*P **P 00 08 27.4 +1.8**
MUD pmax pmax
comp=Z,23nm,0.8s
MUD MLR MLR
comp=Z,400nm,11.0s
MUD Monsted U'grnd 25.40 64⇓ *i*P **P 00 08 27.4 +1.8**
comp=Z,23nm,0.7s
MUD
comp=Z,390nm,11.0s
MUD Monsted U'grnd 25.40 64 *i*P **P 00 08 27.4 +1.8**
comp=Z,400nm,11.0s
SMF Signal de Mont 25.43 88 *e*P **P 00 08 25.5 -0.6**
comp=Z,95nm,1.3s
SMF Signal de Mont 25.43 88 *e*P **P 00 08 25.5 -0.6**
SMF pmax pmax
comp=Z,95nm,1.3s
SMF Signal de Mont 25.43 88 *e*P **P 00 08 25.5 -0.6**
comp=Z,95nm,1.3s
SMF Signal de Mont 25.43 88 *e*P **P 00 08 25.5 -0.6**
comp=Z,48nm,1.3s
SFTF Sexfontaines 25.46 84 *e*P **P 00 08 27.4 +1.0**
comp=Z,64nm,0.6s
SFTF Sexfontaines 25.46 84 *e*P **P 00 08 27.4 +1.0**
comp=Z,64nm,0.6s
SFTF Sexfontaines 25.46 84 *e*P **P 00 08 27.4 +1.0**
comp=Z,32nm,0.6s
WLF Walferdange 25.55 80 P **P 00 08 30.2 +3.1**
comp=Z,20nm,1.3s
WLF Walferdange 25.55 80 *e*P **P 00 08 28.2 +1.1**
WLF pmax pmax
comp=Z,30nm,1.1s
WLF Walferdange 25.55 80 *e*P **P 00 08 28.2 +1.1**
comp=Z,30nm,1.1s
WLF Walferdange 25.55 80 *e*P **P 00 08 28.2 +1.1**
comp=Z,30nm,1.1s
BUG Bochum-Univer 25.58 76 *e*P **P 00 08 28.6 +1.3**
comp=Z,19nm,1.1s
IBBN Ibbenburen 25.59 74 *e*P **P 00 08 28.9 +1.5**
comp=Z,71nm,1.4s
PAGF Fort de Pagny 25.73 83 *e*P **P 00 08 28.2 -0.6**
comp=Z,33nm,1.3s
PAGF Fort de Pagny 25.73 83 *e*P **P 00 08 28.2 -0.6**
comp=Z,33nm,1.3s
PAGF Fort de Pagny 25.73 83 *e*P **P 00 08 28.2 -0.6**
comp=Z,16nm,1.3s
LBL Lubilhac 25.76 91 *e*P **P 00 08 29.3 +0.2**
LBL Lubilhac 25.76 91 *e*P **P 00 08 29.3 +0.2**
LBL Lubilhac 25.76 91 *e*P **P 00 08 29.3 +0.2**
comp=Z,26nm,1.1s
NAO01 NORSAR Array S 25.82 53 *e*P **P 00 08 29.1 -0.4**
comp=Z,26nm,1.1s
NAO01 NORSAR Array S 25.82 53 *e*P **P 00 08 29.1 -0.4**
comp=Z,26nm,1.1s
NOA NORSAR Array B 25.98 53 P **P 00 08 30.5 -0.4**
NOA NORSAR Array B 25.98 53 P **P 00 08 30.5 -0.4**
comp=Z,15nm,1.0s,baz=273,slow=9.0,SNR=16
NOA LR LR 00 17 30.4
comp=Z,278nm,19.1s,baz=275,slow=34
NOA NORSAR Array B 25.98 53 P **P 00 08 30.5 -0.4**
THEF They Montfort 26.03 83 *e*P **P 00 08 32.8 +1.3**
THEF They Montfort 26.03 83 *e*P **P 00 08 32.8 +1.3**
THEF They Montfort 26.03 83 *e*P **P 00 08 32.8 +1.3**
THEF They Montfort 26.03 83 *e*P **P 00 08 32.8 +1.3**
RUP Ruppelstein 26.08 80 *e*P **P 00 08 32.6 +0.6**
RUP Ruppelstein 26.08 80 *e*P **P 00 08 32.6 +0.6**
RUP Ruppelstein 26.08 80 *e*P **P 00 08 32.6 +0.6**
MTLF Montolieu 26.14 96 *e*P **P 00 08 33.4 +0.9**
comp=Z,19nm,0.8s
MTLF Montolieu 26.14 96 *e*P **P 00 08 33.4 +0.9**
MTLF pmax pmax
comp=Z,19nm,0.8s
MTLF Montolieu 26.14 96 *e*P **P 00 08 33.4 +0.9**
comp=Z,19nm,0.8s
MTLF Montolieu 26.14 96 *e*P **P 00 08 33.4 +0.9**
comp=Z,9.3nm,0.8s
ABH Alteburg 26.30 79 *e*P **P 00 08 36.4 +2.4**
ABH Alteburg 26.30 79 *e*P **P 00 08 36.4 +2.4**
HAU Haudompre 26.34 84 *e*P **P 00 08 33.9 -0.5**
comp=Z,44nm,0.9s
HAU *e*R
comp=Z,231nm,18.8s
HAU Haudompre 26.34 84 *e*P **P 00 08 33.9 -0.5**
HAU pmax pmax
comp=Z,44nm,0.9s
HAU Haudompre 26.34 84 *e*P **P 00 08 33.9 -0.5**
comp=Z,44nm,0.9s
HAU Haudompre 26.34 84 *e*P **P 00 08 33.9 -0.5**
comp=Z,22nm,0.9s
HNH Hanover 26.35 265 *e*P **P 00 08 36.1 +1.7**
HNH Hanover 26.35 265 *e*P **P 00 08 36.1 +1.7**
FRNY Flat Rock 26.55 269 *e*P **P 00 08 36.8 +0.6**
comp=Z,135nm,2.5s
FRNY Flat Rock 26.55 269 *e*P **P 00 08 36.8 +0.6**
comp=Z,135nm,2.5s
TNS Taunus Mts 26.71 78 *e*P **P 00 08 38.2 +0.5**
TNS pmax pmax
comp=Z,22nm,1.7s
TNS Taunus Mts 26.71 78 *e*P **P 00 08 38.2 +0.5**
comp=Z,22nm,1.7s
TNS Taunus Mts 26.71 78 *e*P **P 00 08 38.2 +0.5**
comp=Z,22nm,1.7s
CDF Champ du Feu 26.73 82 *e*P **P 00 08 38.1 +0.2**
comp=Z,9.9nm,0.8s
CDF Champ du Feu 26.73 82 *e*P **P 00 08 38.1 +0.2**
CDF pmax pmax
comp=Z,10.0nm,0.8s
CDF Champ du Feu 26.73 82 *e*P **P 00 08 38.1 +0.2**
comp=Z,9.9nm,0.8s
CDF Champ du Feu 26.73 82 *e*P **P 00 08 38.1 +0.2**
comp=Z,4.9nm,0.8s
HINF Hinteralfeld 26.73 84 *e*P **P 00 08 37.5 -0.4**
comp=Z,28nm,1.0s
HINF Hinteralfeld 26.73 84 *e*P **P 00 08 37.5 -0.4**
HINF pmax pmax
comp=Z,28nm,1.0s
HINF Hinteralfeld 26.73 84 *e*P **P 00 08 37.5 -0.4**
comp=Z,28nm,1.0s
HINF Hinteralfeld 26.73 84 *e*P **P 00 08 37.5 -0.4**
comp=Z,14nm,1.0s
LASF Ste Croix 26.73 93 *e*P **P 00 08 37.7 -0.2**
comp=Z,25nm,1.0s
LASF Ste Croix 26.73 93 *e*P **P 00 08 37.7 -0.2**
comp=Z,25nm,1.0s
LASF Ste Croix 26.73 93 *e*P **P 00 08 37.7 -0.2**
comp=Z,12nm,1.0s
MDV Middlebury 26.74 267 *e*P **P 00 08 40.6 +2.7**
MDV Middlebury 26.74 267 *e*P **P 00 08 40.6 +2.7**
ECH Echery 26.74 83 *e*P **P 00 08 38.4 +0.4**
ECH pmax pmax
comp=Z,13nm,0.9s
ECH Echery 26.74 83 *e*P **P 00 08 38.4 +0.4**
comp=Z,13nm,0.9s
ECH Echery 26.74 83 *e*P **P 00 08 40.4 +2.4**
ECH Echery 26.74 83 *e*P **P 00 08 38.4 +0.4**
comp=Z,13nm,0.9s
LANF Langenberg 26.81 81 *e*P **P 00 08 39.7 +1.1**
LANF Langenberg 26.81 81 *e*P **P 00 08 39.7 +1.1**
LANF Langenberg 26.81 81 *e*P **P 00 08 39.7 +1.1**
LANF Langenberg 26.81 81 *e*P **P 00 08 39.7 +1.1**
CABF La Chapelle 26.81 86 *e*P **P 00 08 39.5 +0.8**
comp=Z,45nm,1.1s
CABF La Chapelle 26.81 86 *e*P **P 00 08 39.5 +0.8**
CABF pmax pmax
comp=Z,45nm,1.1s
CABF La Chapelle 26.81 86 *e*P **P 00 08 39.5 +0.8**
comp=Z,45nm,1.1s
CABF La Chapelle 26.81 86 *e*P **P 00 08 39.5 +0.8**
comp=Z,23nm,1.1s
VIVF Saint-Julien-I 26.82 91 *e*P **P 00 08 38.9 +0.2**
comp=Z,68nm,1.4s
VIVF Saint-Julien-I 26.82 91 *e*P **P 00 08 38.9 +0.2**
VIVF pmax pmax
comp=Z,68nm,1.4s
VIVF Saint-Julien-I 26.82 91 *e*P **P 00 08 38.9 +0.2**
comp=Z,68nm,1.4s
VIVF Saint-Julien-I 26.82 91 *e*P **P 00 08 38.9 +0.2**
comp=Z,34nm,1.4s
MOF Molkenrain 26.89 83 *e*P **P 00 08 38.9 -0.4**
MOF Molkenrain 26.89 83 *e*P **P 00 08 38.9 -0.4**
MOF Molkenrain 26.89 83 *e*P **P 00 08 38.9 -0.4**
MOF Molkenrain 26.89 83 *e*P **P 00 08 38.9 -0.4**
NRDL Niedersach Rie 26.90 72 *e*P **P 00 08 42.0 +2.8**
comp=Z,66nm,1.5s
LOMF Lomont 26.92 85 *e*P **P 00 08 40.2 +0.5**
LOMF Lomont 26.92 85 *e*P **P 00 08 40.2 +0.5**
LOMF Lomont 26.92 85 *e*P **P 00 08 40.2 +0.5**
LOMF Lomont 26.92 85 *e*P **P 00 08 40.2 +0.5**
HFS Hagfors 27.26 55 P **P 00 08 42.2 -0.3**
HFS Hagfors 27.26 55 P **P 00 08 42.2 -0.3**
comp=Z,6.1nm,0.9s,baz=260,slow=8.7,SNR=9.2
HFS LR LR 00 18 02.0
comp=Z,329nm,19.5s,baz=270,slow=33
HFS Hagfors 27.26 55 P **P 00 08 42.2 -0.3**
LONY Lake Ozonia 27.26 269 *e*P **P 00 08 42.7 0.0**
comp=Z,184nm,2.8s
LONY Lake Ozonia 27.26 269 *e*P **P 00 08 42.7 0.0**
comp=Z,184nm,2.8s
CLZ Clausthal 27.27 73 *e*P **P 00 08 46.0 +3.3**
CLZ pmax pmax
comp=Z,51nm,1.9s
CLZ Clausthal 27.27 73 *e*P **P 00 08 46.0 +3.3**
comp=Z,51nm,1.9s
LLD Lille Linde 27.31 65 *e*P **P 00 08 45.0 +2.1**
LLD Lille Linde 27.31 65 *i*P **P 00 08 45.0 +2.1**
LLD Lille Linde 27.31 65 *e*P **P 00 08 45.0 +2.1**
ACCN Adirondack Com 27.37 266 *e*P **P 00 08 43.9 +0.3**
ACCN Adirondack Com 27.37 266 *e*P **P 00 08 43.9 +0.3**
NCB Newcomb 27.39 268 *e*P **P 00 08 44.2 +0.4**
comp=Z,15nm,0.8s
NCB Newcomb 27.39 268 *e*P **P 00 08 44.2 +0.4**
comp=Z,15nm,0.8s
BFO Black Forest 27.40 82 *e*P **P 00 08 43.9 0.0**
BFO pmax pmax
comp=Z,9.0nm,0.9s
BFO Black Forest 27.40 82 *e*P **P 00 08 43.9 0.0**
comp=Z,9.1nm,0.9s
BFO Black Forest 27.40 82 *e*P **P 00 08 43.9 0.0**
comp=Z,9.0nm,0.9s
FELD Feldberg im Sc 27.40 83 *e*P **P 00 08 44.3 +0.3**
FELD Feldberg im Sc 27.40 83 *e*P **P 00 08 44.3 +0.3**
SENIN Lac Senin/Sane 27.67 86 *e*P **P 00 08 46.6 +0.1**
comp=Z,158nm,2.6s
SENIN Lac Senin/Sane 27.67 86 *e*P **P 00 08 46.6 +0.1**
comp=Z,158nm,2.6s
LPG La Plagne 27.76 88 *e*P **P 00 08 47.9 +0.5**
comp=Z,22nm,1.1s
LPG La Plagne 27.76 88 *e*P **P 00 08 47.9 +0.5**
LPG pmax pmax
comp=Z,22nm,1.1s
LPG La Plagne 27.76 88 *e*P **P 00 08 47.9 +0.5**
comp=Z,22nm,1.1s
LPG La Plagne 27.76 88 *e*P **P 00 08 47.9 +0.5**
comp=Z,11nm,1.1s
NEUB Neuenburg 28.31 74 *e*P **P 00 08 54.6 +2.7**
comp=Z,13nm,1.0s
MOX Moxa 28.43 75 *e*P **P 00 08 55.4 +2.4**
MOX pmax pmax
comp=Z,7.0nm,1.0s
MOX Moxa 28.43 75 *e*P **P 00 08 55.4 +2.4**
comp=Z,7.0nm,1.0s
MOX Moxa 28.43 75 *e*P **P 00 08 55.4 +2.4**
comp=Z,7.0nm,1.0s
GRF Grafenberg Arr 28.57 77 *e*L L 00 19 11.0
comp=Z,180nm,18.7s
PLN Plauen 28.81 75 *e*P **P 00 08 56.5 +0.1**
comp=Z,355nm,0.0s
TUE Stuetta 28.86 84 *e*P **P 00 08 58.8 +1.7**
comp=Z,44nm,1.8s
TUE Stuetta 28.86 84 *e*P **P 00 08 58.8 +1.7**
comp=Z,44nm,1.8s
WERD Werda 28.91 75 *e*P **P 00 08 57.2 -0.1**
comp=Z,4.0nm,0.8s
GUNZ Gunzen 28.96 75 *e*P **P 00 08 57.6 -0.2**
comp=Z,6.0nm,1.2s
MANZ Manzenberg 28.98 76 *e*P **P 00 08 57.6 -0.3**
comp=Z,23nm,1.8s
CLL Collm 28.99 73 *i*P **P 00 08 58.2 +0.2**
CLL pmax pmax
comp=Z,23nm,0.9s
CLL Collm 28.99 73 *e*P **P 00 08 57.8 -0.2**
comp=Z,23nm,0.9s
CLL Collm 28.99 73 *i*P **P 00 08 58.2 +0.2**
comp=Z,7.0nm,0.6s
CLL *i*pP **pP 00 09 00.9 -2.6**
comp=Z,23nm,0.9s
CLL *e* 00 09 07.0
CLL *e*S **S 00 13 48.0 0.0**
CLL L L 00 18 00.0
comp=Z,200nm,20.2s
CLL Collm 28.99 73 *i*P **P 00 08 58.2 +0.2**
comp=Z,23nm,0.9s
TANN Tannenbergstha 29.01 75 *e*P **P 00 08 58.2 -0.1**
comp=Z,7.0nm,0.8s
WERN Wernitzgruen 29.01 76 *e*P **P 00 08 58.2 -0.1**
comp=Z,9.0nm,1.2s
RUE Ruedersdorf 29.03 71 *e*P **P 00 08 57.9 -0.4**
comp=Z,18nm,0.8s
DAVOX Davos/Dischmat 29.04 84 P **P 00 08 58.4 -0.2**
DAVOX Davos/Dischmat 29.04 84 P **P 00 08 58.4 -0.2**
comp=Z,3.2nm,0.8s,baz=307,slow=9.7,SNR=4.3
DAVOX LR LR 00 20 51.7
comp=Z,110nm,19.9s,baz=90,slow=37
DAVOX Davos/Dischmat 29.04 84 P **P 00 08 58.4 -0.2**
NKC Novy Kostel 29.08 76 AMS AMS 00 19 40.0
comp=Z,400nm,14.3s
MDT Midelt 29.34 121 P **P 00 09 01.8 +0.4**
MDT Midelt 29.34 121 P **P 00 09 01.8 +0.4**
comp=Z,3.0nm,0.8s,baz=305,slow=5.3,SNR=6.2
MDT LR LR 00 19 08.0
comp=Z,111nm,18.2s,baz=348,slow=33
MDT Midelt 29.34 121 P **P 00 09 01.8 +0.4**
FBE Freiberg 29.34 74 *e*P **P 00 09 01.3 +0.2**
comp=Z,22nm,1.0s
FETA Feichten 29.44 83⇑ *i*P **P 00 09 02.3 +0.1**
comp=Z,3.8nm,1.0s
FETA Feichten 29.44 83⇑ *i*P **P 00 09 02.3 +0.1**
comp=Z,3.8nm,1.0s
FETA Feichten 29.44 83⇑ *i*P **P 00 09 02.3 +0.1**
comp=Z,3.8nm,1.0s
SQTA Sankt Quirin 29.63 82⇑ *i*P **P 00 09 04.8 +0.9**
SQTA Sankt Quirin 29.63 82⇑ *i*pP **P 00 09 04.8 +0.9**
SQTA Sankt Quirin 29.63 82⇑ *i*P **P 00 09 04.8 +0.9**
SQTA Sankt Quirin 29.63 82⇑ *i*P **P 00 09 04.8 +0.9**
BBSR BB Station 29.65 239 PFAKE 00 09 20.0 +16
BBSR LR LR
comp=Z,419nm,21.0s
BRG Berggiesshubel 29.71 74 *e*P **P 00 09 07.0 +2.6**
comp=Z,14nm,1.1s
BRG
comp=N,275nm,10.3s
BRG
comp=E,385nm,14.8s
BRG
comp=Z,432nm,12.5s
BRG Berggiesshubel 29.71 74 *e*P **P 00 09 07.0 +2.6**
BRG pmax pmax
comp=Z,14nm,1.1s
BRG MLR MLR
comp=N,275nm,10.3s
BRG MLR MLR
comp=E,385nm,14.8s
BRG MLR MLR
comp=Z,432nm,12.5s
BRG Berggiesshubel 29.71 74 *e*P **P 00 09 07.2 +2.9**
comp=Z,14nm,1.1s
SADO Sadowa 29.96 273 P **P 00 09 06.7 0.0**
SADO Sadowa 29.96 273 P **P 00 09 06.7 0.0**
comp=Z,15nm,0.9s,baz=77,slow=10,SNR=13
SADO LR LR 00 20 28.4
comp=Z,284nm,19.6s,baz=66,slow=35
SADO Sadowa 29.96 273 P **P 00 09 06.7 0.0**
KHC Kasperske Hory 30.20 77 *e*P **P 00 09 08.9 +0.1**
KHC *e* 00 09 15.7
KHC MLR MLR
comp=Z,300nm,11.1s
KHC Kasperske Hory 30.20 77 *e*P **P 00 09 09.3 +0.5**
comp=Z,4.1nm,0.8s
KHC Kasperske Hory 30.20 77 *e*P **P 00 09 08.9 +0.1**
KHC *ex* x 00 09 15.7
KHC AMS AMS 00 22 10.0
comp=Z,300nm,11.1s
KHC Kasperske Hory 30.20 77 *e*P **P 00 09 08.9 +0.1**
comp=Z,300nm,11.1s
PVCC Panska Ves 30.21 74 *e*P **P 00 09 11.9 +3.1**
PVCC *e* 00 09 19.3
PVCC MLR MLR
comp=Z,400nm,14.3s
PVCC Panska Ves 30.21 74 *e*P **P 00 09 11.9 +3.1**
PVCC *ex* x 00 09 19.3
PVCC AMS AMS 00 21 20.0
comp=Z,400nm,14.3s
GEC2 GERESS Array S 30.40 77 *e*P **P 00 09 10.8 +0.2**
GEC2 pmax pmax
comp=Z,9.0nm,1.5s
GEC2 GERESS Array S 30.40 77 *e*P **P 00 09 10.8 +0.2**
comp=Z,9.0nm,1.5s
GEC2 GERESS Array S 30.40 77 *e*P **P 00 09 11.2 +0.6**
GEC2 GERESS Array S 30.40 77 *e*P **P 00 09 10.8 +0.2**
comp=Z,9.0nm,1.5s
GERES GERESS Array B 30.40 77 P **P 00 09 09.6 -1.0**
GERES GERESS Array B 30.40 77 P **P 00 09 09.6 -1.0**
comp=Z,2.3nm,0.7s,baz=300,slow=8.6,SNR=26
GERES LR LR 00 20 35.6
comp=Z,128nm,18.7s,baz=292,slow=35
GERES GERESS Array B 30.40 77 P **P 00 09 09.6 -1.0**
PRU Pruhonice 30.41 75 *e*P **P 00 09 09.1 -1.5**
PRU MLR MLR
comp=Z,400nm,11.9s
PRU Pruhonice 30.41 75 *e*P **P 00 09 09.1 -1.5**
PRU AMS AMS 00 21 10.0
comp=Z,400nm,11.9s
PRU Pruhonice 30.41 75 *e*P **P 00 09 09.1 -1.5**
comp=Z,400nm,11.9s
GKP Gorka Klasztor 30.73 68 *e*P **P 00 09 14.2 +0.9**
UPC Upice 31.06 73 *e*P **P 00 09 16.5 +0.2**
UPC *e* 00 09 19.7
UPC Upice 31.06 73 *e*P **P 00 09 16.5 +0.2**
UPC *e*pP **pP 00 09 19.7 -2.1**
KSP Ksiaz 31.09 73 *e*P **P 00 09 18.0 +1.5**
TREC Trest 31.26 76 *e*P **P 00 09 17.9 -0.2**
TREC MLR MLR
comp=Z,400nm,14.9s
TREC Trest 31.26 76 *e*P **P 00 09 17.9 -0.2**
TREC AMS AMS 00 21 20.0
comp=Z,400nm,14.9s
DPC Dobruska-Polom 31.31 73 *e*P **P 00 09 19.4 +0.9**
DPC MLR MLR
comp=Z,300nm,14.9s
DPC Dobruska-Polom 31.31 73 *e*P **P 00 09 18.9 +0.4**
comp=Z,16nm,1.1s
DPC Dobruska-Polom 31.31 73 *e*P **P 00 09 19.4 +0.9**
DPC AMS AMS 00 21 30.0
comp=Z,300nm,14.9s
DPC Dobruska-Polom 31.31 73 *e*P **P 00 09 18.9 +0.4**
comp=Z,16nm,1.1s
SSPA Standing Stone 31.52 265 *e*P **P 00 09 20.6 +0.2**
comp=Z,11nm,0.7s
SSPA Standing Stone 31.52 265 *e*P **P 00 09 20.6 +0.2**
comp=Z,11nm,0.7s

KRLC Kraliky 31.69 74 *e*P P 00 09 23.4 +1.5
KRLC Kraliky 31.69 74 *e*P P 00 09 23.4 +1.5
ARCES ARCESS Array B 31.93 35 P P 00 09 22.9 -0.9
ARCES ARCESS Array B 31.93 35 P P 00 09 22.9 -0.9
comp=Z,6.5nm,0.6s,baz=252,slow=7.1,SNR=40
ARCES LR LR 00 19 42.9
comp=Z,102nm,20.3s,baz=223,slow=32
ARCES ARCESS Array B 31.93 35 P P 00 09 22.9 -0.9
ARE0 ARCESS Array S 31.93 35 *e*P P 00 09 23.1 -0.7
ARE0 ARCESS Array S 31.93 35 *e*P P 00 09 23.1 -0.7
MORC Moravsky Berou 32.26 74 *e*P P 00 09 29.5 +2.6
MORC pmax pmax
comp=Z,39nm,1.7s
MORC Moravsky Berou 32.26 74 *e*P P 00 09 29.5 +2.6
comp=Z,38nm,1.7s
MORC Moravsky Berou 32.26 74⇓*i*P P 00 09 26.7 -0.2
MORC Moravsky Berou 32.26 74⇓*i*P P 00 09 26.7 -0.2
RES Resolute Bay 32.35 334 P P 00 09 25.8 -1.5
RES Resolute Bay 32.35 334 P P 00 09 25.8 -1.5
comp=Z,4.6nm,0.9s,baz=68,slow=7.6,SNR=3.5
RES Resolute Bay 32.35 334 P P 00 09 25.8 -1.5
OKC Ostrava-Krasne 32.59 73 *e*P P 00 09 30.0 +0.3
OKC *e* 00 09 32.8
OKC MLR MLR
comp=Z,300nm,12.7s
OKC Ostrava-Krasne 32.59 73 *e*P P 00 09 30.0 +0.3
OKC *ep*P pP 00 09 32.8 -2.4
OKC AMS AMS 00 22 50.0
comp=Z,300nm,12.7s
ZST Bratislava 32.71 77 *e*P P 00 09 33.5 +2.7
ZST pmax pmax
comp=Z,20nm,1.9s
ZST Bratislava 32.71 77 *e*P P 00 09 33.5 +2.7
KAF Kangasniemi 33.00 49 *e*P P 00 09 30.9 -2.3
KAF pmax pmax
comp=Z,7.0nm,0.5s
KAF Kangasniemi 33.00 49 *ep* P 00 09 30.9 -2.3
comp=Z,6.6nm,0.5s
FINES FINESS Array B 33.04 50 P P 00 09 32.9 -0.7
FINES FINESS Array B 33.04 50 P P 00 09 32.9 -0.7
comp=Z,8.3nm,0.7s,baz=285,slow=7.3,SNR=18
FINES LR LR 00 21 14.2
comp=Z,413nm,21.9s,baz=54,slow=33
FINES FINESS Array B 33.04 50 P P 00 09 32.8 -0.7
FIA1 FINESS Array S 33.04 50 *e*P P 00 09 32.9 -0.6
FIA1 FINESS Array S 33.04 50 *e*P P 00 09 32.9 -0.6
OJC Ojcow 33.38 72 *e*P P 00 09 36.2 -0.5
OJC *e*S S 00 14 54.4 -2.2
OJC Ojcow 33.38 72 *e*P P 00 09 36.0 -0.7
comp=Z,14nm,0.9s
OJC Ojcow 33.38 72 *e*P P 00 09 36.2 -0.5
OJC *e*S S 00 14 54.4 -2.2
OJC L L 00 21 28.1
comp=Z,200nm,21.2s
OJC Ojcow 33.38 72 *e*P P 00 09 36.0 -0.7
comp=Z,14nm,0.9s
AQU L'Aquila 33.50 88 PFAKE 00 09 50.0 +12
AQU LR LR
comp=Z,332nm,21.0s
VYHS Vyhne 33.59 75 *e*P P 00 09 41.2 +2.6
VYHS pmax pmax
comp=Z,9.0nm,1.6s
VYHS Vyhne 33.59 75 *e*P P 00 09 41.2 +2.6
VYHS *e*PP PP 00 10 55.0 +0.5
SUW Suwalki 33.77 64 *e*P P 00 09 39.7 -0.2
SUW pmax pmax
comp=Z,34nm,1.0s
SUW Suwalki 33.77 64 *e*P P 00 09 39.7 -0.2
comp=Z,34nm,1.0s
SUW Suwalki 33.77 64 *e*P P 00 09 39.4 -0.5
SUW Suwalki 33.77 64 *e*P P 00 09 39.7 -0.2
comp=Z,34nm,1.0s
NIE Niedzica 34.04 73 *e*P P 00 09 42.0 -0.4
NIE Niedzica 34.04 73 *e*P P 00 09 42.0 -0.4
PSZ Piszkesteto 34.49 75 PFAKE 00 10 00.0 +14
PSZ LR LR
comp=Z,123nm,20.0s
PSZ Piszkesteto 34.49 75⇑*e*P P 00 09 50.0 +3.6
PKSM Moragy 34.59 79⇓*i*P P 00 09 46.7 -0.5
PKSM Moragy 34.59 79⇓*e*P P 00 09 46.3 -0.9
ACSO Alum Creek Sta 34.87 269 *e*P P 00 09 50.5 +0.9
comp=Z,43nm,0.9s
ACSO Alum Creek Sta 34.87 269 *e*P P 00 09 50.5 +0.9
comp=Z,43nm,0.9s
CRVS Cervenica-Dubn 34.94 73 *e*P P 00 09 52.5 +2.3
CRVS pmax pmax
comp=Z,15nm,1.4s
CRVS Cervenica-Dubn 34.94 73 *e*P P 00 09 52.5 +2.3
CRVS *e*PP PP 00 11 10.6 +1.2
APA Apatity 34.98 38⇑*i*P P 00 09 50.4 +0.1
APA pmax pmax
comp=Z,31nm,1.0s
JOF Joensuu 35.08 47 *e*P P 00 09 48.9 -2.3
JOF pmax pmax
comp=Z,6.0nm,0.7s
JOF Joensuu 35.08 47 *ep* P 00 09 48.9 -2.3
comp=Z,6.4nm,0.7s
KEST Kesra 35.17 101 *e*P P 00 09 52.9 +0.5
KEST Kesra 35.17 101 P P 00 09 52.5 +0.1
comp=Z,5.9nm,0.9s,baz=287,slow=3.2,SNR=28
KEST Kesra 35.17 101 *e*P P 00 09 52.9 +0.5
KWP Kalwaria Pacla 35.33 71 *e*P P 00 09 54.0 +0.5
KWP pmax pmax
comp=Z,15nm,1.0s
KWP MLR MLR
comp=Z,240nm,20.0s
KWP Kalwaria Pacla 35.33 71 *e*P P 00 09 54.0 +0.5
comp=Z,15nm,1.0s
KWP LR LR
comp=Z,240nm,20.0s
KWP Kalwaria Pacla 35.33 71⇓*i*P P 00 09 54.4 +0.9
KWP Kalwaria Pacla 35.33 71 *e*P P 00 09 56.1 +2.6
KWP Kalwaria Pacla 35.33 71 *e*P P 00 09 54.0 +0.5
comp=Z,15nm,1.0s
KOLS Kolonicke sedl 35.40 73 *e*P P 00 09 57.0 +2.8
KOLS pmax pmax
comp=Z,7.0nm,1.1s
KOLS Kolonicke sedl 35.40 73 *e*P P 00 09 57.0 +2.8
UZH Uzhgorod 35.56 73 *e*P P 00 09 56.2 +0.7
UZH *i* 00 09 59.6
EYMN Ely 35.78 286 PFAKE 00 10 10.0 +13
EYMN LR LR
comp=Z,370nm,19.0s
TRPA Tarpa 35.94 74⇑*i*P P 00 10 00.0 +1.2
TRPA Tarpa 35.94 74⇑*e*P P 00 09 59.8 +1.0
TRPA Tarpa 35.94 74⇑*i*P P 00 10 00.0 +1.2
MICAM Minsk 36.12 61⇓*e*P P 00 10 02.0 +1.7
BZS Buzias 36.67 78⇓*i*P P 00 10 05.3 +0.2
GRUS Gruza 37.07 81 *e*P P 00 10 08.1 -0.4
KMSC Kings Mountain 37.13 261 ⇓P P 00 10 09.3 +0.2
baz=37
ULM Lac du Bonnet 37.21 292 *e*P P 00 10 08.8 -0.7
ULM Lac du Bonnet 37.21 292 P P 00 10 08.5 -1.1
comp=Z,2.2nm,0.5s,baz=62,slow=9.8,SNR=3.7
ULM LR LR 00 24 02.4
comp=Z,179nm,20.1s,baz=11,slow=34
ULM Lac du Bonnet 37.21 292 *e*P P 00 10 08.9 -0.7
SFIN Scholer Farm 37.28 272 ⇓P P 00 10 10.3 0.0
baz=37,SNR=6.3
TZTN Tazewell 37.54 264 *e*P P 00 10 13.1 +0.5
comp=Z,44nm,1.6s
TZTN Tazewell 37.54 264 *e*P P 00 10 13.1 +0.5
comp=Z,44nm,1.6s
TMCR Tamitsa 37.63 43 *e*P P 00 10 11.8 -1.1
TMCR pmax pmax
comp=Z,48nm,1.4s
BUR08 Bucovina Ar. S 37.74 73 *e*P P 00 10 14.8 +0.6
BUR08 Bucovina Ar. S 37.74 73 *e*P P 00 10 14.8 +0.6
NHSC New Hope 37.85 257 *e*P P 00 10 15.8 +0.7
comp=Z,12nm,0.6s
NHSC New Hope 37.85 257 *e*P P 00 10 15.8 +0.7
comp=Z,12nm,0.6s
SPMN St. Paul 37.96 283 ⇓P P 00 10 15.9 -0.1
baz=38
LOT Lotru 38.05 77⇑*i*P P 00 10 16.7 -0.1
LOT Lotru 38.05 77⇑*i*P P 00 10 16.7 -0.1
WCI Wyandotte Cave 38.12 269 *e*P P 00 10 17.8 +0.3
WCI pmax pmax
comp=Z,17nm,0.8s
WCI Wyandotte Cave 38.12 269 *e*P P 00 10 17.8 +0.3
comp=Z,17nm,0.8s
WCI Wyandotte Cave 38.12 269 *e*P P 00 10 17.8 +0.3
comp=Z,17nm,0.8s
BARS Barje 38.34 82 *e*P P 00 10 18.5 -0.7

HDIL Hopedale 38.51 274 *e*P P 00 10 22.0 +1.3
comp=Z,48nm,1.5s
HDIL Hopedale 38.51 274 *e*P P 00 10 22.0 +1.3
comp=Z,48nm,1.5s
KIEV Kiev 38.52 66 *e*P P 00 10 19.4 -1.2
KIEV pmax pmax
comp=Z,80nm,2.2s
KIEV Kiev 38.52 66 *e*P P 00 10 19.4 -1.2
comp=Z,80nm,2.2s
KIEV Kiev 38.52 66 *e*P P 00 10 19.4 -1.2
comp=Z,80nm,2.2s
AK01 Malin Array Si 38.53 66 *e*P P 00 10 19.9 -0.8
AK01 *e*PP PP 00 11 48.0 -0.7
AK01 Malin Array Si 38.53 66 *e*P P 00 10 19.9 -0.8
FFC Flin Flon 38.53 301 *ce*P P 00 10 21.1 +0.4
FFC Flin Flon 38.53 301 *e*P P 00 10 20.8 +0.2
comp=Z,17nm,1.4s
FFC Flin Flon 38.53 301 *e*P P 00 10 20.8 +0.2
comp=Z,17nm,1.4s
AKASG Malin Array Be 38.53 66 *ce*P P 00 10 22.7 +2.0
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKASG Malin Array Be 38.53 66 P P 00 10 19.3 -1.4
AKASG Malin Array Be 38.53 66 P P 00 10 19.3 -1.4
comp=Z,3.9nm,0.7s,baz=303,slow=8.5,SNR=15
AKASG LR LR 00 25 22.8
comp=Z,186nm,20.0s,baz=315,slow=35
AKASG Malin Array Be 38.53 66 P P 00 10 19.3 -1.4
AK02 Malin Array Si 38.54 67 *e*P P 00 10 20.1 -0.7
AK02 *e*PP PP 00 11 47.1 -1.7
AK02 Malin Array Si 38.54 67 *e*P P 00 10 20.1 -0.7
SACV Santiago Islan 38.59 163 PFAKE 00 10 30.0 +8.4
SACV LR LR
comp=Z,457nm,22.0s
CPCT Cooper Cave 38.85 264 *e*P P 00 10 24.5 +0.9
CPCT Cooper Cave 38.85 264 *e*P P 00 10 24.5 +0.9
USIN University of 39.13 270 *e*P P 00 10 26.3 +0.5
comp=Z,33nm,1.0s
USIN University of 39.13 270 *e*P P 00 10 26.3 +0.5
comp=Z,33nm,1.0s
VTS Vitosha 39.31 81⇑*i*P P 00 10 29.7 +2.2
VTS Vitosha 39.31 81⇑*i*P P 00 10 29.7 +2.2
PLOR Plostina 39.53 74⇑*i*P P 00 10 26.5 -2.7
VRI Vrincioaia 39.56 74⇓*i*P P 00 10 30.1 +0.6
VRI Vrincioaia 39.56 74⇓*i*P P 00 10 30.1 +0.6
GOGA Godfrey 39.60 261 *e*P P 00 10 30.5 +0.6
GOGA pmax pmax
comp=Z,12nm,1.2s
GOGA Godfrey 39.60 261 *e*P P 00 10 30.5 +0.6
comp=Z,12nm,1.2s
GOGA Godfrey 39.60 261 *e*P P 00 10 30.5 +0.6
comp=Z,12nm,1.2s
SWET Sewanee 39.87 265 *e*P P 00 10 32.7 +0.6
comp=Z,12nm,1.0s
SWET Sewanee 39.87 265 *e*P P 00 10 32.7 +0.6
comp=Z,12nm,1.0s
SIUC Southern Illin 40.23 271 *e*P P 00 10 35.5 +0.4
comp=Z,43nm,0.9s
SIUC Southern Illin 40.23 271 *e*P P 00 10 35.5 +0.4
comp=Z,43nm,0.9s
SLM Saint Louis 40.27 272 *e*P P 00 10 36.0 +0.7
SLM pmax pmax
comp=Z,25nm,0.7s
SLM Saint Louis 40.27 272 *e*P P 00 10 36.0 +0.7
comp=Z,25nm,0.7s
SLM Saint Louis 40.27 272 *e*P P 00 10 36.0 +0.7
comp=Z,25nm,0.7s
OBN Obninsk 40.41 57⇓*e*P P 00 10 35.9 -0.4
OBN *i* 00 10 39.4
OBN *e* 00 12 18.0
OBN *e*S S 00 16 46.3 +2.9
OBN pmax pmax
comp=Z,45nm,1.6s
OBN MLR MLR
comp=Z,200nm,17.0s
WVT Waverly 40.41 268 *e*P P 00 10 36.2 -0.4
WVT pmax pmax
comp=Z,6.0nm,0.8s
WVT Waverly 40.41 268 *e*P P 00 10 36.2 -0.4
comp=Z,5.7nm,0.8s
WVT Waverly 40.41 268 *e*P P 00 10 36.2 -0.4
comp=Z,5.7nm,0.8s
CFR Carcaliu 40.77 74⇑*i*P P 00 10 36.8 -2.6
CFR Carcaliu 40.77 74⇑*i*P P 00 10 36.8 -2.6
FVM French Village 40.80 272 *e*P P 00 10 40.0 +0.3
FVM pmax pmax
comp=Z,28nm,1.1s
FVM French Village 40.80 272 *e*P P 00 10 40.0 +0.3
comp=Z,28nm,1.1s
FVM French Village 40.80 272 *e*P P 00 10 40.0 +0.3
comp=Z,28nm,1.1s
ECSD EROS Data Cent 41.05 283 *e*P P 00 10 42.1 +0.3
comp=Z,14nm,0.9s
ECSD EROS Data Cent 41.05 283 *e*P P 00 10 42.1 +0.3
comp=Z,14nm,0.9s
YKW3 Yellowknife Ar 41.24 316 *e*P P 00 10 43.1 +0.1
comp=Z,0.1nm,0.8s
YKW3 Yellowknife Ar 41.24 316 *e*P P 00 10 43.1 +0.1
comp=Z,0.1nm,0.8s
YKA Yellowknife Ar 41.26 316 P P 00 10 42.6 -0.5
YKA PcP PcP 00 12 40.6 -0.9
YKA Yellowknife Ar 41.26 316 P P 00 10 42.6 -0.5
comp=Z,3.7nm,1.0s,baz=62,slow=8.8,SNR=23
YKA PcP PcP 00 12 40.6 -0.9
comp=Z,0.8nm,0.7s,baz=66,slow=3.3,SNR=6.2
YKA Yellowknife Ar 41.26 316 P P 00 10 42.7 -0.5
HALT Halls 41.48 269 *e*P P 00 10 44.9 -0.5
HALT Halls 41.48 269 *e*P P 00 10 44.8 -0.5
LRAL Lakeview Retre 42.00 263 *e*P P 00 10 49.9 +0.3
comp=Z,27nm,1.3s
LRAL Lakeview Retre 42.00 263 *e*P P 00 10 49.9 +0.3
comp=Z,27nm,1.3s
OXF Oxford 42.45 267 *e*P P 00 10 52.2 -1.1
OXF pmax pmax
comp=Z,34nm,0.9s
OXF Oxford 42.45 267 *e*P P 00 10 52.2 -1.1
comp=Z,34nm,0.9s
OXF Oxford 42.45 267 *e*P P 00 10 52.2 -1.1
comp=Z,34nm,0.9s
VSR Storozhevoye 43.70 61 *e*P P 00 11 02.5 -0.7
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,20nm,0.9s
KSU1 Kansas State U 43.84 278 *e*P P 00 11 04.1 -0.4
comp=Z,22nm,0.8s
KSU1 Kansas State U 43.84 278 *e*P P 00 11 04.1 -0.4
comp=Z,22nm,0.8s
VORD Divnogorie 43.90 61 *e*P P 00 11 04.0 -0.8
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,30nm,0.9s
VORD pmax pmax
comp=Z,30nm,0.9s
VORD MLR MLR
comp=N,230nm,16.0s
VORD MLR MLR
comp=E,120nm,16.0s
VORD MLR MLR
comp=Z,200nm,16.0s
VRHR Novokhopersk 45.07 60 *e*P P 00 11 13.6 -0.5
VRHR pmax pmax
comp=N,6.0nm,0.8s
VRHR pmax pmax
comp=E,5.0nm,0.8s
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR MLR MLR
comp=Z,240nm,14.0s
VRHR MLR MLR
comp=N,30nm,13.0s
VRHR MLR MLR
comp=E,100nm,14.0s
TUL1 Tulsa 45.41 274 ⇓P P 00 11 16.4 -0.6
baz=45,SNR=6.7
INK Inuvik 45.48 329 P P 00 11 15.5 -1.6
INK Inuvik 45.48 329 P P 00 11 15.5 -1.6
comp=E,4.0nm,0.8s,baz=45,slow=9.2,SNR=21
INK LR LR 00 28 46.7
comp=E,116nm,19.4s,baz=99,slow=34
INK Inuvik 45.48 329 P P 00 11 15.5 -1.6
CBKS Cedar Bluff 45.91 280 *e*P P 00 11 20.6 -0.4
CBKS pmax pmax
comp=Z,17nm,0.8s
CBKS Cedar Bluff 45.91 280 *e*P P 00 11 20.6 -0.4
comp=Z,17nm,0.8s
CBKS Cedar Bluff 45.91 280 *e*P P 00 11 20.6 -0.4
comp=Z,17nm,0.8s
EGMT Eagleton 46.13 296 *e*P P 00 11 23.1 +0.3
comp=Z,58nm,1.5s
EGMT Eagleton 46.13 296 *e*P P 00 11 23.0 +0.3
comp=Z,58nm,1.5s
ANN Anapa 46.37 69 *e*P P 00 11 30.0 +5.5
ANN pmax pmax
comp=Z,9.0nm,0.8s
ANN MLR MLR
comp=N,117nm,12.0s
ANN MLR MLR
comp=Z,166nm,12.0s
T31A Randall Ranch, 46.98 278 ⇓P P 00 11 29.1 -0.4
baz=47
E18A Harlowton 47.07 294 ⇓P P 00 11 30.5 +0.4
baz=47
P27A Ficken Ranch, 47.14 282 ⇑P P 00 11 30.8 +0.1
baz=47
O26A Horse Wrangler 47.14 283 ⇑P P 00 11 30.9 +0.1
baz=47
D17A Six Diamond Ra 47.15 295 ⇓P P 00 11 30.9 +0.1
baz=47,SNR=5.6
A15A Johnson Ranch, 47.19 299 ⇑P P 00 11 31.0 0.0
baz=47
M24A Cheyenne 47.26 286 ⇑P P 00 11 32.1 +0.3
baz=47
BRTR Keskin Array B 47.29 77 P P 00 11 32.7 +0.7
BRTR PcP PcP 00 13 03.5 +0.7
BRTR Keskin Array B 47.29 77 P P 00 11 32.7 +0.7
comp=Z,3.5nm,0.7s,baz=305,slow=5.9,SNR=23
BRTR PcP PcP 00 13 03.5 +0.7
comp=Z,0.6nm,0.9s,baz=353,slow=5.8,SNR=1.6
BRTR LR LR 00 30 49.6
comp=Z,61nm,18.4s,baz=301,slow=35
BRTR Keskin Array B 47.29 77 P P 00 11 32.7 +0.7
BRTR Keskin Array B 47.29 77 PcP PcP 00 13 03.5 +0.7
S29A Ulysses 47.51 279 ⇑P P 00 11 33.4 -0.2
baz=47
KSCO Kaye Shedlock' 47.52 282 ⇑P P 00 11 33.7 -0.1
baz=47
A14A Double T Ranch 47.56 299 ⇓P P 00 11 33.6 -0.3
baz=47
RLMT Red Lodge 47.57 292 *e*P P 00 11 39.1 +4.9
comp=Z,14nm,1.4s
P26A Davis Ranch, A 47.59 283 ⇑P P 00 11 34.1 -0.2
baz=48
SOKR Solikamsk 47.59 44 *e*P P 00 11 34.8 +1.0
SOKR pmax pmax
comp=Z,20nm,1.6s
D16A Dana Ranch, Ca 47.69 296 ⇑P P 00 11 35.1 +0.1
baz=48,SNR=6.9
O25A Wiggins 47.70 284 ⇓P P 00 11 35.1 0.0
baz=48
PHWY Pilot Hill 47.74 286 *e*P P 00 11 36.3 +0.7
comp=Z,10nm,1.0s
PHWY Pilot Hill 47.74 286 *e*P P 00 11 36.3 +0.7
comp=Z,10nm,1.0s
WALA Waterton Lakes 47.77 299 *e*P P 00 11 35.0 -0.5
comp=Z,0.6nm,1.1s
WALA Waterton Lakes 47.77 299 *e*P P 00 11 35.0 -0.5
comp=Z,0.6nm,1.1s
C15A Salmond Ranch, 47.83 297 ⇑P P 00 11 36.4 +0.3
baz=48,SNR=5.1
B14A Marquette Ranc 47.84 298 ⇓P P 00 11 36.1 -0.1
baz=48
K21A Alcova 47.95 289 ⇑P P 00 11 35.8 -1.3
baz=48
V31A Spring Creek L 47.96 276 ⇑P P 00 11 37.2 +0.1
baz=48
S28A Manter 48.00 280 ⇑P P 00 11 36.7 -0.7
baz=48
HRY Holter Researc 48.04 296 *e*P P 00 11 38.2 +0.5
HRY Holter Researc 48.04 296 *e*P P 00 11 38.2 +0.5
E16A East Helena 48.06 295 ⇑P P 00 11 37.7 -0.1
baz=48
R27A Eads 48.09 281 ⇓P P 00 11 38.0 -0.2
baz=48,SNR=6.3
Q26A Hugo 48.10 282 ⇑P P 00 11 38.2 -0.1
baz=48
P25A Willow Gulch B 48.11 283 ⇓P P 00 11 38.1 -0.3
baz=48
D15A Lincoln 48.22 296 ⇑P P 00 11 39.2 +0.1
baz=48,SNR=8.1
N23A Red Feather La 48.28 286 ⇓P P 00 11 39.7 -0.1
baz=48,SNR=12
W31A Holland Ranch, 48.41 276 ⇓P P 00 11 40.2 -0.3
baz=48
L21A Rawlins 48.43 288 ⇑P P 00 11 40.9 0.0
baz=48
R26A Arlington 48.46 282 ⇓P P 00 11 40.9 -0.2
baz=48,SNR=16
B13A Whitefish 48.47 299 ⇓P P 00 11 40.4 -0.5
baz=48
V30A Spur Ranch, Mi 48.48 277 ⇑P P 00 11 41.0 -0.2
baz=48
YBMT Yellow Bay 48.53 298 *e*P P 00 11 42.0 +0.5
comp=Z,12nm,1.0s
YBMT Yellow Bay 48.53 298 *e*P P 00 11 42.0 +0.5
comp=Z,12nm,1.0s
S27A Las Animas 48.54 281 ⇓P P 00 11 41.6 -0.1
baz=48
Q25A Bedland, Calha 48.54 283 ⇑P P 00 11 41.6 -0.2
baz=48
K20A Yellowstone Ra 48.56 289 ⇓P P 00 11 41.9 +0.1
baz=48
BOZ Bozeman (W) 48.57 294 *e*P P 00 11 42.2 +0.4
BOZ pmax pmax
comp=Z,17nm,1.2s
BOZ Bozeman (W) 48.57 294 *e*P P 00 11 42.2 +0.4
comp=Z,16nm,1.2s
BOZ Bozeman (W) 48.57 294 ⇓P P 00 11 41.7 -0.2
baz=48
BOZ Bozeman (W) 48.57 294 *e*P P 00 11 42.2 +0.4
comp=Z,16nm,1.2s
J19A Crowheart 48.59 290 ⇑P P 00 11 42.1 +0.1
baz=48
SLMT Seeley Lake 48.63 297 *e*P P 00 11 42.7 +0.5
SLMT Seeley Lake 48.63 297 *e*P P 00 11 42.7 +0.5
N22A Wattenberg Ran 48.63 286 ⇑P P 00 11 43.0 +0.4
baz=48
M21A Separation Pea 48.66 288 ⇑P P 00 11 42.7 +0.1
baz=48,SNR=8.3
E15A Deer Lodge 48.66 296 ⇑P P 00 11 42.4 0.0
baz=48
CHMT Chamberlain Mo 48.70 297 *e*P P 00 11 42.9 +0.1
CHMT Chamberlain Mo 48.70 297 *e*P P 00 11 42.9 +0.1
O23A Lake Granby, G 48.70 285 ⇓P P 00 11 43.2 +0.2
baz=48
D14A Greenough 48.73 297 ⇑P P 00 11 43.2 +0.2
baz=48
SWMT Swartz Lake 48.74 298 *e*P P 00 11 42.8 -0.3
SWMT Swartz Lake 48.74 298 *e*P P 00 11 42.8 -0.3
K19A Absolon Red Bu 48.75 290 ⇑P P 00 11 43.4 +0.1
baz=49
ISCO Idaho Springs 48.78 285 *e*P P 00 11 44.3 +0.5
ISCO pmax pmax
comp=Z,9.0nm,1.0s
ISCO Idaho Springs 48.78 285 *e*P P 00 11 44.2 +0.5
comp=Z,9.0nm,1.0s
ISCO Idaho Springs 48.78 285 ⇓P P 00 11 43.5 -0.2
baz=49,SNR=5.3
ISCO Idaho Springs 48.78 285 *e*P P 00 11 44.2 +0.5
comp=Z,9.0nm,1.0s
X31A McDonald Ranch 48.81 275 ⇓P P 00 11 43.8 +0.2
baz=49
T27A Campo 48.84 280 ⇓P P 00 11 43.7 -0.3
baz=49,SNR=6.7
V29A Stinnett 48.91 278 ⇓P P 00 11 44.4 0.0
baz=49
Y32A R-V Farms, Ver 48.91 274 ⇓P P 00 11 44.2 -0.1
baz=49
TOA0 Torodi Ar. Sit 48.92 130 *e*P P 00 11 44.5 -0.1
TOA0 Torodi Ar. Sit 48.92 130 *e*P P 00 11 44.5 -0.1
TORD Torodi Ar. Bea 48.92 130 P P 00 11 44.3 -0.3
TORD Torodi Ar. Bea 48.92 130 P P 00 11 44.3 -0.3
comp=Z,8.1nm,0.8s,baz=328,slow=7.7,SNR=41
TORD LR LR 00 30 08.2
comp=Z,223nm,20.8s,baz=330,slow=33
TORD Torodi Ar. Bea 48.92 130 P P 00 11 44.3 -0.3
LRM Limekiln Ridge 48.92 295 *e*P P 00 11 46.0 +1.4
LRM Limekiln Ridge 48.92 295 *e*P P 00 11 46.0 +1.4
S26A Kim 48.92 281 ⇑P P 00 11 44.4 -0.2
baz=49

F15A **Butte** 48.93 295 ⇓P P 00 11 43.8 -0.9
baz=49
C13A **Hot Springs** 48.95 298 ⇑P P 00 11 44.1 -0.5
baz=49
BSMT **Bassoo Peak** 48.96 298 eP P 00 11 52.9 +8.0
L20A **Wamsutter** 48.97 289 ⇑P P 00 11 45.0 0.0
baz=49,SNR=6.4
Q24A **Divide** 49.05 283 ⇑P P 00 11 45.3 -0.4
baz=49
R25A **Fountain Ranch** 49.06 282 ⇓P P 00 11 45.5 -0.2
baz=49,SNR=5.2
WHTX **Lake Whitney** 49.08 271 ⇓P P 00 11 45.7 0.0
baz=49,SNR=8.0
O22A **Kremmling** 49.10 286 ⇑P P 00 11 46.3 +0.2
baz=49,SNR=6.5
MSO **Missoula** 49.12 297 eP P 00 11 47.2 +1.2
comp=Z,5.3nm,1.1s
MSO **Missoula** 49.12 297 ⇑P P 00 11 45.5 -0.5
baz=49
MSO **Missoula** 49.12 297 eP P 00 11 47.2 +1.2
comp=Z,5.2nm,1.1s
E14A **Clinton** 49.13 296 ⇑P P 00 11 46.2 0.0
baz=49,SNR=9.6
P23A **Jefferson** 49.19 284 ⇓P P 00 11 47.3 +0.4
baz=49,SNR=5.8
BW06 **Boulder Array** 49.19 290 eP P 00 11 46.7 0.0
comp=Z,8.9nm,1.0s
BW06 **Boulder Array** 49.19 290 ⇑P P 00 11 46.1 -0.6
baz=49
BW06 **Boulder Array** 49.19 290 eP P 00 11 46.7 0.0
comp=Z,8.9nm,1.0s
PDAR **Pinedale Array** 49.19 290 P P 00 11 45.6 -1.1
PDAR **Pinedale Array** 49.19 290 P P 00 11 45.6 -1.1
comp=Z,2.9nm,0.6s,baz=69,slow=8.1,SNR=19
PDAR LR LR 00 31 34.7
comp=Z,186nm,18.5s,baz=63,slow=35
PDAR **Pinedale Array** 49.19 290 P P 00 11 45.6 -1.1
M20A **Sweetwater, Wa** 49.21 288 ⇑P P 00 11 46.3 -0.5
baz=49
D13A **Huson** 49.24 297 ⇑P P 00 11 46.5 -0.4
baz=49
MOOW **Moose Ponds** 49.25 292 eP P 00 11 48.3 +1.2
comp=Z,5.1nm,1.0s
MOOW **Moose Ponds** 49.25 292 eP P 00 11 48.3 +1.2
comp=Z,5.1nm,1.0s
LOHW **Long Hollow** 49.26 292 eP P 00 11 48.3 +1.1
comp=Z,3.8nm,0.9s
LOHW **Long Hollow** 49.26 292 eP P 00 11 48.3 +1.1
comp=Z,3.8nm,0.9s
IMW **Indian Meadow** 49.27 292 eP P 00 11 49.2 +1.8
comp=Z,65nm,2.9s
IMW **Indian Meadow** 49.27 292 eP P 00 11 49.2 +1.8
comp=Z,65nm,2.9s
DLMT **Dillon** 49.28 295 eP P 00 11 54.5 +7.2
comp=Z,11nm,1.1s
T26A **Comanche Natio** 49.29 281 ⇓P P 00 11 47.9 +0.4
baz=49,SNR=8.9
U27A **Thompson Grove** 49.33 279 ⇓P P 00 11 47.8 +0.1
baz=49,SNR=8.4
G15A **Dillon** 49.35 294 ⇑P P 00 11 47.7 -0.1
baz=49
Z32A **Haskell** 49.40 274 ⇓P P 00 11 47.9 -0.2
baz=49,SNR=6.5
C12B **Naegeli Ranch,** 49.41 299 ⇑P P 00 11 48.0 -0.1
baz=49,SNR=5.5
V28A **Channing** 49.41 278 ⇓P P 00 11 48.1 -0.2
baz=49
Y31A **Rekieta Farm,** 49.43 275 ⇓P P 00 11 48.6 +0.2
baz=49
J17A **Brown Place, J** 49.47 291 ⇑P P 00 11 48.6 -0.2
baz=49
W29A **Amarillo** 49.49 277 ⇓P P 00 11 49.1 +0.2
baz=49
Q23A **Hartsel** 49.49 284 ⇓P P 00 11 49.4 +0.3
baz=49
E13A **Victor** 49.49 297 ⇓P P 00 11 48.7 -0.1
baz=49
L19A **Farson** 49.50 289 ⇑P P 00 11 48.9 -0.2
baz=49
R24A **Sanders Place,** 49.50 283 ⇑P P 00 11 49.5 +0.5
baz=49
TPAW **Teton Pass** 49.53 292 eP P 00 11 50.9 +1.6
comp=Z,7.2nm,0.9s
TPAW **Teton Pass** 49.53 292 eP P 00 11 50.9 +1.6
comp=Z,7.2nm,0.9s
K18A **Toltan Ranch,** 49.55 290 ⇑P P 00 11 49.4 -0.1
baz=49
AMTX **Amarillo** 49.67 277 eP P 00 11 51.1 +0.8
comp=Z,26nm,0.8s
AMTX **Amarillo** 49.67 277 ⇓P P 00 11 49.9 -0.4
baz=50,SNR=5.5
AMTX **Amarillo** 49.67 277 eP P 00 11 51.1 +0.8
comp=Z,26nm,0.8s
N20A **Spence Gulch,** 49.67 287 ⇓P P 00 11 50.6 +0.2
baz=50
MCMT **McKenzie Canyo** 49.76 294 eP P 00 11 51.8 +0.8
comp=Z,3.3nm,1.2s
MCMT **McKenzie Canyo** 49.76 294 eP P 00 11 51.8 +0.8
comp=Z,3.3nm,1.2s
V27A **Dan Oppiter Fa** 49.78 279 ⇑P P 00 11 51.3 +0.1
baz=50
Z31A **Sharp Cattle R** 49.80 274 ⇑P P 00 11 50.7 -0.5
baz=50,SNR=5.9
T25A **Trinidad** 49.80 281 ⇑P P 00 11 51.4 0.0
baz=50,SNR=6.8
G14A **Jackson** 49.84 295 ⇑P P 00 11 51.8 +0.2
baz=50
KIV **Kislovodsk** 49.87 67⇑ eP P 00 11 52.4 +0.7
KIV e 00 13 11.2
KIV eS S 00 19 02.4 +1.8
KIV pmax pmax
comp=Z,4.0nm,1.2s
KIV MLR MLR
comp=Z,100nm,18.0s
DLBC **Dease Lake** 49.87 317 P P 00 11 51.6 +0.2
DLBC **Dease Lake** 49.87 317 P P 00 11 51.6 +0.2
comp=Z,1.4nm,0.3s,baz=263,slow=23,SNR=3.3
DLBC LR LR 00 31 08.1
comp=Z,78nm,20.5s,baz=313,slow=34
DLBC **Dease Lake** 49.87 317 P P 00 11 51.7 +0.2
U26A **Atchley Ranch,** 49.90 280 ⇑P P 00 11 52.2 0.0
baz=50
NEW **Newport** 49.95 300 eP P 00 11 56.9 +4.7
comp=Z,11nm,1.3s
NEW LR LR
comp=Z,116nm,20.0s
R23A **Moffat** 49.95 283 ⇑P P 00 11 52.5 -0.1
baz=50,SNR=5.8
F13A **Darby** 49.98 296 ⇑P P 00 11 52.3 -0.3
baz=50
SMCO **Snowmass** 49.99 285 eP P 00 11 53.5 +0.5
comp=Z,4.0nm,1.0s
SMCO **Snowmass** 49.99 285 eP P 00 11 53.5 +0.5
comp=Z,4.0nm,1.0s
L18A **Fontenelle, Gr** 50.00 290 ⇑P P 00 11 52.3 -0.5
baz=50
EGAK **Eagle** 50.03 328 eP P 00 11 52.8 +0.3
comp=Z,8.5nm,0.9s
EGAK **Eagle** 50.03 328 eP P 00 11 52.8 +0.3
comp=Z,8.4nm,0.9s
P21A **Newcastle** 50.04 285 ⇓P P 00 11 53.6 +0.4
baz=50
SDCO **Great Sand Dun** 50.05 282 eP P 00 11 54.0 +0.6
comp=Z,42nm,2.4s
SDCO **Great Sand Dun** 50.05 282 eP P 00 11 54.0 +0.6
comp=Z,42nm,2.4s
O20A **White River Ci** 50.11 287 ⇓P P 00 11 54.1 +0.4
baz=50
KBZ **Khabaz** 50.13 67 P P 00 11 53.6 +0.1
KBZ **Khabaz** 50.13 67 P P 00 11 53.5 +0.1
KBZ **Khabaz** 50.13 67 P P 00 11 53.5 +0.1
comp=Z,1.5nm,0.9s,baz=356,slow=10,SNR=2.4
KBZ LR LR 00 34 11.7
comp=Z,119nm,18.2s,baz=323,slow=37
KBZ **Khabaz** 50.13 67 P P 00 11 53.5 +0.1
Q22A **Crested Butte,** 50.15 284 ⇑P P 00 11 54.6 +0.4
baz=50,SNR=6.1
H14A **Leadore** 50.18 294 ⇑P P 00 11 54.2 0.0
baz=50
ARU **Arti** 50.21 46c iP P 00 11 53.8 -0.1
ARU 00 13 48.2
ARU S S 00 19 07.7 +2.9
ARU SS SS 00 22 33.1 -4.4
ARU pmax pmax
comp=Z,17nm,1.7s
T24A **Torres, Weston** 50.23 281 ⇓P P 00 11 55.0 +0.3
baz=50,SNR=6.0
U25A **Circle Dot Ran** 50.29 280 ⇑P P 00 11 55.5 +0.4
baz=50,SNR=15
V26A **Tequesquite Ra** 50.32 279 ⇓P P 00 11 54.8 -0.5
baz=50
Y29A **Porterfield Fa** 50.36 276 ⇓P P 00 11 55.3 -0.3
baz=50
G13A **Cobalt** 50.36 295 ⇑P P 00 11 55.4 0.0
baz=50,SNR=5.7
W27A **Bowse Ranch, En** 50.38 278 ⇑P P 00 11 56.0 +0.3
baz=50,SNR=7.7
131A **Roby** 50.39 274 ⇓P P 00 11 55.0 -0.8
baz=50
Z30A **Sanderson Ranc** 50.42 275 ⇑P P 00 11 55.3 -0.7
baz=50
232A **Coleman** 50.49 273 ⇓P P 00 11 55.8 -0.6
baz=50,SNR=6.1
F12A **Elk City** 50.50 296 ⇓P P 00 11 56.5 0.0
baz=50
O19A **Miners Draw (B** 50.52 287 ⇑P P 00 11 57.5 +0.8
baz=50,SNR=22
Q21A **Lamborn Mesa,** 50.56 285 ⇑P P 00 11 57.0 -0.2
baz=50,SNR=5.7
M17A **Scullys Gap (B** 50.65 289 ⇑P P 00 11 57.4 -0.4
baz=50
I14A **Mackay** 50.66 294 ⇓P P 00 11 57.7 -0.1
baz=50
X27A **F and S Farms,** 50.68 278 ⇑P P 00 11 57.9 -0.1
baz=51,SNR=5.7
H13A **Challis** 50.70 295 ⇓P P 00 11 58.2 +0.1
baz=50
L16A **Fish Haven** 50.74 290 ⇓P P 00 11 58.0 -0.4
baz=51
W26A **Owens Ranch, T** 50.79 279 ⇑P P 00 11 58.9 +0.1
baz=51
Z29A **Hungry Hill Ra** 50.79 275 ⇑P P 00 11 58.6 -0.2
baz=51
V25A **Rancho No Teng** 50.79 280 ⇑P P 00 11 58.7 -0.2
baz=51,SNR=14
130A **Snyder** 50.80 274 ⇑P P 00 11 58.5 -0.3
baz=51,SNR=5.7
S22A **4UR Ranch, Cre** 50.84 283 ⇓P P 00 11 59.7 +0.3
baz=51
T23A **Casias Ranch,** 50.84 282 ⇑P P 00 11 59.6 +0.3
baz=51
R21A **Cimarron** 50.86 284 ⇑P P 00 11 59.8 +0.4
baz=51
231A **Bronte** 50.86 273 ⇑P P 00 11 58.5 -0.7
baz=51
SVE **Sverdlovsk** 50.86 45⇑ eP P 00 11 59.2 +0.3
SVE eS S 00 19 21.7 +7.8
SVE pmax pmax
comp=Z,10.0nm,1.4s
P19A **Cripple Cowboy** 50.87 287 ⇓P P 00 11 59.6 +0.1
baz=51
332A **Millersview** 50.90 272 ⇓P P 00 11 58.6 -1.0
baz=51,SNR=6.7
Q20A **Ridgley Place,** 50.91 285 ⇓P P 00 11 59.4 -0.3
baz=51,SNR=5.9
G12A **Big Creek, Yel** 50.94 296 ⇑P P 00 11 59.4 -0.5
baz=51
MSTX **Muleshoe** 50.95 277 ⇑P P 00 11 59.6 -0.4
baz=51,SNR=11
I13A **Wildhorse Cree** 51.04 294 ⇑P P 00 12 00.9 +0.3
baz=51,SNR=5.6
H12A **Dimond D Ranc** 51.05 295 ⇑P P 00 12 00.6 -0.1
baz=51,SNR=7.0
MALT **Malatya** 51.05 75 eP P 00 12 01.2 +0.5
MALT pmax pmax
comp=Z,2.0nm,0.6s
MALT MLR MLR
comp=Z,145nm,22.0s
MALT **Malatya** 51.05 75 eP P 00 12 01.2 +0.5
comp=Z,2.2nm,0.6s
MALT LR LR
comp=Z,145nm,22.0s
MALT **Malatya** 51.05 75⇓ iP P 00 12 01.5 +0.8
MALT **Malatya** 51.05 75 eP P 00 12 01.2 +0.5
comp=Z,2.2nm,0.6s
HWUT **Hardware Ranch** 51.08 290 eP P 00 12 01.0 0.0
comp=Z,17nm,0.8s
HWUT **Hardware Ranch** 51.08 290 eP P 00 12 01.0 0.0
comp=Z,17nm,0.8s
COLD **Coldfoot** 51.09 333 eP P 00 12 01.0 +0.5
comp=Z,5.5nm,1.0s
COLD **Coldfoot** 51.09 333 eP P 00 12 01.0 +0.5
comp=Z,5.5nm,1.0s
W25A **X Bar L Ranch,** 51.12 279 ⇓P P 00 12 01.5 +0.2
baz=51,SNR=11
X26A **CR and CF Fran** 51.18 278 ⇓P P 00 12 02.0 +0.3
baz=51,SNR=5.1
Z28A **Tucker Farm, M** 51.18 276 ⇓P P 00 12 01.4 -0.4
baz=51
Y27A **Causey** 51.24 277 ⇓P P 00 12 02.1 -0.2
baz=51
V24A **Rampart Ranch,** 51.26 280 ⇓P P 00 12 03.0 +0.5
baz=51,SNR=7.0
432A **Menard** 51.28 272 ⇑P P 00 12 01.9 -0.6
baz=51,SNR=16
L15A **Malad City** 51.29 291 ⇓P P 00 12 02.7 +0.1
baz=51
ZEI **Tsey** 51.30 68 eP P 00 12 03.0 +0.3
ZEI pmax pmax
comp=Z,9.0nm,0.9s
129A **Stewart Farms,** 51.32 275 ⇓P P 00 12 02.3 -0.5
baz=51
331A **San Angelo** 51.37 273 ⇑P P 00 12 02.5 -0.6
baz=51,SNR=5.3
T22A **Edith** 51.37 283 ⇓P P 00 12 03.7 +0.4
baz=51,SNR=5.4
230A **Sterling City** 51.38 274 ⇑P P 00 12 03.0 -0.2
baz=51
K14A **Jones Ranch, D** 51.39 292 ⇑P P 00 12 03.4 +0.1
baz=51,SNR=5.2
U23A **El Rito** 51.41 282 ⇓P P 00 12 04.4 +0.8
baz=51,SNR=7.5
HLID **Hailey** 51.43 294 PFAKE 00 12 20.0 +16
HLID LR LR
comp=Z,77nm,19.0s
R20A **Redvale** 51.46 285 ⇑P P 00 12 04.5 +0.5
baz=51,SNR=9.3
S21A **Coal Bank Pass** 51.47 284 ⇑P P 00 12 04.8 +0.7
baz=51,SNR=11
JCT **Junction City** 51.57 271 eP P 00 12 04.1 -0.5
JCT pmax pmax
comp=Z,21nm,1.0s
JCT **Junction City** 51.57 271 eP P 00 12 04.1 -0.5
comp=Z,21nm,1.0s
JCT **Junction City** 51.57 271 ⇓P P 00 12 04.2 -0.5
baz=52,SNR=7.5
JCT **Junction City** 51.57 271 eP P 00 12 04.1 -0.5
comp=Z,21nm,1.0s
P18A **Preston Nutter** 51.61 287 ⇑P P 00 12 04.6 -0.5
baz=51,SNR=6.0
Y26A **Elida** 51.62 278 ⇑P P 00 12 05.6 +0.5
baz=52
PV04 **Paradox Valley** 51.64 285 eP P 00 12 06.3 +1.1
PV04 **Paradox Valley** 51.64 285 eP P 00 12 06.3 +1.1
HVU **Hansel Valley** 51.66 291 eP P 00 12 06.4 +1.1
HVU pmax pmax
comp=Z,7.0nm,1.0s
HVU **Hansel Valley** 51.66 291 eP P 00 12 06.4 +1.1
comp=Z,6.6nm,1.0s
HVU **Hansel Valley** 51.66 291 eP P 00 12 06.4 +1.1
comp=Z,6.6nm,1.0s
Z27A **Tatum** 51.67 277 ⇓P P 00 12 05.1 -0.3
baz=52,SNR=6.4
S20A **Disappointment** 51.69 284 ⇓P P 00 12 05.8 +0.1
baz=52
W24A **Lazy 6 Ranch,** 51.69 280 ⇑P P 00 12 06.5 +0.8
baz=52,SNR=34
128A **Castleberry Fa** 51.70 275 ⇑P P 00 12 05.4 -0.2
baz=52
X25A **Clemmons Ranch** 51.71 279 ⇑P P 00 12 06.2 +0.5
baz=52
DOT **Dot Lake** 51.74 328 eP P 00 12 06.4 +1.0
comp=Z,7.7nm,1.1s
DOT **Dot Lake** 51.74 328 eP P 00 12 06.4 +1.0
comp=Z,7.7nm,1.1s
330A **Mertzon** 51.75 273 ⇑P P 00 12 05.7 -0.3
baz=52,SNR=6.2
T21A **Navajo Lake** 51.76 283 ⇓P P 00 12 06.5 +0.3
baz=52
U22A **Llaves** 51.77 282 ⇑P P 00 12 07.1 +0.8
baz=52,SNR=6.2
V23A **Ortiz Mt. (NFS** 51.80 281 ⇑P P 00 12 07.6 +1.1
baz=52
ILAR **Eielson Array** 51.86 330 P P 00 12 06.4 +0.2
ILAR PcP PcP 00 13 18.6 -0.2
ILAR **Eielson Array** 51.86 330 P P 00 12 06.4 +0.2
comp=Z,3.2nm,0.8s,baz=44,slow=5.7,SNR=33
ILAR PcP PcP 00 13 18.6 -0.2
comp=Z,1.4nm,0.8s,baz=27,slow=3.1,SNR=3.5
ILAR LR LR 00 32 35.4
comp=Z,61nm,19.9s,baz=67,slow=34
ILAR **Eielson Array** 51.86 330 P P 00 12 06.4 +0.2
ILAR **Eielson Array** 51.86 330 PcP PcP 00 13 18.6 -0.2
532A **Rocksprings** 51.88 271 ⇑P P 00 12 06.4 -0.6
baz=52,SNR=9.3
431A **Sonora** 51.92 272 ⇑P P 00 12 07.2 0.0
baz=52,SNR=11
DBIC **Dimbokro** 51.93 141 P P 00 12 06.5 -0.8
DBIC **Dimbokro** 51.93 141 P P 00 12 06.5 -0.8
comp=Z,5.2nm,0.7s,baz=334,slow=6.9,SNR=11
DBIC LR LR 00 31 19.8
comp=Z,194nm,18.9s,baz=317,slow=33
DBIC **Dimbokro** 51.93 141 P P 00 12 06.5 -0.8
P17A **Butcher Ranch,** 52.00 288 ⇑P P 00 12 08.0 +0.2
baz=52
COLA **College** 52.08 330 PFAKE 00 12 20.0 +12
COLA LR LR
comp=Z,145nm,21.0s
SRU **San Rafael** 52.11 287 eP P 00 12 09.3 +0.6
SRU pmax pmax
comp=Z,10.0nm,0.8s
SRU **San Rafael** 52.11 287 eP P 00 12 09.3 +0.6
comp=Z,9.8nm,0.8s
SRU **San Rafael** 52.11 287 ⇑P P 00 12 08.9 +0.2
baz=52,SNR=11
SRU **San Rafael** 52.11 287 eP P 00 12 09.3 +0.6
comp=Z,9.8nm,0.8s
V22A **San Miguel Ran** 52.12 282 ⇑P P 00 12 09.7 +0.8
baz=52,SNR=8.9
228A **UT Block 9, Go** 52.12 275 ⇓P P 00 12 08.3 -0.5
baz=52
Y25A **Mesa, Roswell** 52.14 278 ⇑P P 00 12 09.0 0.0
baz=52,SNR=8.0
X24A **Lazy VL Ranch,** 52.15 279 ⇓P P 00 12 09.5 +0.4
baz=52
Z26A **Caprock** 52.16 277 ⇓P P 00 12 08.8 -0.3
baz=52
W23A **Werner Place,** 52.17 280 ⇓P P 00 12 09.9 +0.6
baz=52
329A **Wagon Wheel Ra** 52.19 274 ⇓P P 00 12 08.7 -0.5
baz=52,SNR=10
MVCO **Mesa Verde** 52.19 284 eP P 00 12 10.9 +1.5
comp=Z,9.1nm,0.8s
MVCO **Mesa Verde** 52.19 284 ⇑P P 00 12 09.7 +0.3
baz=52,SNR=10
MVCO **Mesa Verde** 52.19 284 eP P 00 12 10.9 +1.5
comp=Z,9.1nm,0.8s
127A **Arkansas Junct** 52.19 276 ⇑P P 00 12 08.9 -0.4
baz=52
BMO **Blue Mountains** 52.19 297 eP P 00 12 08.3 -0.9
comp=Z,4.5nm,1.0s
BMO **Blue Mountains** 52.19 297 eP P 00 12 08.3 -0.9
comp=Z,4.5nm,1.0s
U21A **Nageezi** 52.21 283 ⇓P P 00 12 09.5 -0.1
baz=52,SNR=6.1
430A **Baggett Ranch,** 52.23 273 ⇑P P 00 12 09.3 -0.2
baz=52,SNR=8.3
632A **Uvalde** 52.25 271 ⇑P P 00 12 09.8 +0.1
baz=52
LIC **Lamto** 52.27 142 eP P 00 12 09.6 -0.3
baz=340
LIC eR
comp=Z,228nm,19.2s
LIC **Lamto** 52.27 142 eP P 00 12 09.6 -0.3
MFID **Camas Ranch** 52.31 295 eP P 00 12 11.6 +1.5
comp=Z,13nm,1.4s
MFID **Camas Ranch** 52.31 295 eP P 00 12 11.6 +1.5
comp=Z,13nm,1.4s
TMUT **Trail Mountain** 52.38 288 eP P 00 12 12.9 +2.0
comp=Z,8.2nm,0.8s
TMUT **Trail Mountain** 52.38 288 eP P 00 12 12.9 +2.0
comp=Z,8.2nm,0.8s
SDV **Santo Domingo** 52.47 227 eP P 00 12 12.6 +1.0
comp=Z,9.9nm,1.0s
SDV **Santo Domingo** 52.47 227 eP P 00 12 12.6 +1.0
comp=Z,9.9nm,1.0s
ANMO **Albuquerque** 52.50 280 eP P 00 12 12.6 +0.9
comp=Z,7.6nm,1.0s
ANMO **Albuquerque** 52.50 280 eP P 00 12 12.6 +0.9
comp=Z,7.6nm,1.0s
Y24A **Capitan** 52.59 279 ⇑P P 00 12 12.8 +0.4
baz=52,SNR=11
X23A **Hourglass Bar** 52.59 280 ⇑P P 00 12 13.1 +0.8
baz=52,SNR=9.5
Z25A **Roswell** 52.60 278 ⇓P P 00 12 12.9 +0.6
baz=52,SNR=6.5
Q16A **Castle Valley** 52.62 287 ⇓P P 00 12 13.3 +0.8
baz=52
126A **Clayton Basin,** 52.62 277 ⇑P P 00 12 12.8 +0.4
baz=52
V21A **Milan** 52.62 282 ⇑P P 00 12 13.5 +0.8
baz=52
PAX **Paxson** 52.67 328 eP P 00 12 13.1 +0.7
PAX pmax pmax
comp=Z,17nm,1.4s
PAX **Paxson** 52.67 328 eP P 00 12 13.1 +0.7
comp=Z,16nm,1.4s
PAX **Paxson** 52.67 328 eP P 00 12 13.1 +0.7
comp=Z,16nm,1.4s
DUG **Dugway** 52.72 290 eP P 00 12 14.3 +1.2
DUG pmax pmax
comp=Z,21nm,1.3s
DUG **Dugway** 52.72 290 eP P 00 12 14.3 +1.2
comp=Z,20nm,1.3s
DUG **Dugway** 52.72 290 ⇑P P 00 12 13.9 +0.8
baz=52,SNR=12
DUG **Dugway** 52.72 290 eP P 00 12 14.3 +1.2
comp=Z,20nm,1.3s
530A **J-C Ranch, Com** 52.74 272 ⇓P P 00 12 12.7 -0.6
baz=53
429A **Davenport Ranc** 52.74 273 ⇑P P 00 12 12.8 -0.5
baz=53,SNR=12
S18A **Hurst Farm, Bl** 52.75 285 ⇓P P 00 12 14.4 +0.9
baz=53,SNR=19
328A **Wristen Ranch,** 52.77 275 ⇑P P 00 12 13.0 -0.5
baz=53,SNR=6.4
631A **Perdido Creek** 52.80 271 ⇑P P 00 12 13.2 -0.5
baz=53
732A **Laxson Ranch,** 52.92 270 ⇑P P 00 12 14.1 -0.4
baz=53
Y23A **Lovelace Mesa,** 52.96 279 ⇑P P 00 12 15.4 +0.3
baz=53,SNR=11
Z24A **Sheeppen Canyo** 52.96 278 ⇑P P 00 12 15.5 +0.5
baz=53,SNR=6.2
125A **Gardner Draw,** 52.99 277 ⇓P P 00 12 15.1 -0.2
baz=53
LPM **Los Pinos Moun** 53.04 280 eP P 00 12 17.1 +1.4
LPM **Los Pinos Moun** 53.04 280 eP P 00 12 17.1 +1.4
226B **Tecolote Peak,** 53.10 276 ⇓P P 00 12 16.0 0.0
baz=53
V20A **Brimhall** 53.12 283 ⇓P P 00 12 16.7 +0.5
baz=53,SNR=5.6
428A **Kincaid Ranch,** 53.15 274 ⇑P P 00 12 16.1 -0.3
baz=53,SNR=5.7
MAK **Makhachkala** 53.19 65 eP P 00 12 14.7 -1.7
MAK MLR MLR
comp=Z,276nm,16.0s
MCK **McKinley** 53.23 330 eP P 00 12 17.0 +0.6
MCK pmax pmax
comp=Z,27nm,1.2s
MCK **McKinley** 53.23 330 eP P 00 12 17.0 +0.6
comp=Z,27nm,1.2s
MCK **McKinley** 53.23 330 eP P 00 12 17.0 +0.6
comp=Z,27nm,1.2s
LAZ **Ladron** 53.28 280 eP P 00 12 18.4 +0.9
comp=Z,5.1nm,1.2s
LAZ **Ladron** 53.28 280 eP P 00 12 18.4 +0.9
comp=Z,5.1nm,1.2s
529A **Stev Forest Ra** 53.29 273 ⇑P P 00 12 17.2 -0.2
baz=53,SNR=13
LON **Longmire** 53.37 301 eP P 00 12 23.1 +5.4
LON pmax pmax
comp=Z,77nm,2.9s
LON **Longmire** 53.37 301 eP P 00 12 23.1 +5.4
comp=Z,77nm,2.9s
124A **Stringfield Ra** 53.45 278 ⇑P P 00 12 18.7 -0.1
baz=53,SNR=9.8
MSU **Marysvale** 53.47 288 eP P 00 12 19.9 +1.1
MSU **Marysvale** 53.47 288 eP P 00 12 19.9 +1.1
MSU **Marysvale** 53.47 288 eP P 00 12 19.9 +1.1
225A **Deer Hill, Car** 53.48 277 ⇓P P 00 12 19.0 +0.1
baz=53
GNI **Garni** 53.50 70 eP P 00 12 19.9 +1.0
comp=Z,7.0nm,0.8s

GNI LR LR
comp=Z,188nm,20.0s
GNI Garni 53.50 70 *e*P **P** 00 12 19.9 +1.0
comp=Z,7.0nm,0.8s
MVU Marysvale 53.50 288 *e*P **P** 00 12 20.2 +1.1
comp=Z,7.3nm,0.8s
MVU Marysvale 53.50 288 *e*P **P** 00 12 20.2 +1.1
comp=Z,7.3nm,0.8s
427A Hayter Ranch, 53.50 275 ⇓P **P** 00 12 18.9 -0.1
baz=53,SNR=9.4
Y22A Socorro 53.50 280 ⇑P **P** 00 12 19.4 +0.3
baz=53,SNR=6.7
326A Caldwell Ranch 53.52 275 ⇑P **P** 00 12 19.3 +0.2
baz=53,SNR=16
Z23A Rita Site, Whi 53.52 279 ⇑P **P** 00 12 19.3 +0.2
baz=53,SNR=6.3
528A Cox Ranch, San 53.61 273 ⇓P **P** 00 12 19.8 -0.1
baz=54,SNR=10
X21A Alamocita Cree 53.64 281 ⇑P **P** 00 12 20.9 +0.7
baz=54,SNR=12
ELK Elko 53.74 292 *e*P **P** 00 12 21.9 +1.1
ELK Elko 53.74 292 *e*P **P** 00 12 21.9 +1.1
BMRM Bremner River 53.78 325 *e*P P 00 12 29.8 +9.2
comp=Z,6.3nm,0.9s
TRF Thorofare Moun 53.85 330 *e*P **P** 00 12 21.0 -0.2
comp=Z,28nm,1.5s
TRF Thorofare Moun 53.85 330 *e*P **P** 00 12 21.0 -0.2
comp=Z,28nm,1.5s
Y21A Point of Rocks 53.88 280 ⇑P **P** 00 12 22.6 +0.7
baz=54,SNR=10.0
224A Cornudas Mount 53.92 277 ⇓P **P** 00 12 22.2 +0.1
baz=54,SNR=10
Z22A Elephant Butte 53.97 279 ⇑P **P** 00 12 23.0 +0.5
baz=54,SNR=23
X20A Quemado 54.00 282 ⇓P **P** 00 12 23.4 +0.6
baz=54
426A McDonald Obser 54.01 275 ⇓P **P** 00 12 23.1 +0.3
baz=54,SNR=8.9
NLWA Neilton Lookou 54.01 303 *e*P **P** 00 12 23.3 +0.9
comp=Z,30nm,1.0s
NLWA Neilton Lookou 54.01 303 *e*P **P** 00 12 23.3 +0.9
comp=Z,30nm,1.0s
527A Woodward Ranch 54.12 274 ⇓P **P** 00 12 23.3 -0.4
baz=54,SNR=9.2
628A Black Gap, Mar 54.15 273 ⇑P **P** 00 12 23.6 -0.1
baz=54,SNR=11
W18A Petrified Fore 54.34 283 ⇓P **P** 00 12 25.6 +0.4
baz=54
324A Moseley Ranch, 54.34 277 ⇑P **P** 00 12 24.7 -0.5
baz=54
Z21A St. Cloud Mine 54.36 280 ⇓P **P** 00 12 25.5 +0.2
baz=54,SNR=12
Y20A Horse Springs, 54.37 281 ⇑P **P** 00 12 25.9 +0.5
baz=54,SNR=8.4
SML Sawmill 54.43 328 *e*P **P** 00 12 26.1 +0.8
SML pmax pmax
comp=Z,3.0nm,0.9s
SML Sawmill 54.43 328 *e*P **P** 00 12 26.1 +0.8
comp=Z,3.4nm,0.9s
SML Sawmill 54.43 328 *e*P **P** 00 12 26.1 +0.8
comp=Z,3.4nm,0.9s
526A Mary Lane Ranc 54.48 274 ⇓P **P** 00 12 26.2 0.0
baz=54
627A Terlingua Ranc 54.48 273 ⇑P **P** 00 12 26.3 +0.1
baz=54,SNR=36
425A Indio Mountain 54.51 276 ⇑P **P** 00 12 26.4 0.0
baz=54
TXAR Lajitas Array 54.74 273 P **P** 00 12 28.1 0.0
TXAR Lajitas Array 54.74 273 P **P** 00 12 28.1 0.0
comp=Z,2.3nm,0.7s,baz=60,slow=7.4,SNR=18
TXAR LR LR 00 36 33.5
comp=Z,125nm,18.4s,baz=185,slow=37
TXAR Lajitas Array 54.74 273 P **P** 00 12 28.0 0.0
CCUT Cedar City 54.81 288 *e*P **P** 00 12 29.6 +1.0
comp=Z,5.5nm,0.9s
CCUT Cedar City 54.81 288 *e*P **P** 00 12 29.6 +1.0
comp=Z,5.5nm,0.9s
PMR Palmer 54.85 328 *e*P **P** 00 12 28.8 +0.6
PMR pmax pmax
comp=Z,8.0nm,0.8s
PMR Palmer 54.85 328 *e*P **P** 00 12 28.8 +0.6
comp=Z,8.5nm,0.8s
PMR Palmer 54.85 328 *e*P **P** 00 12 28.8 +0.6
comp=Z,8.5nm,0.8s
222A Williams Famil 54.86 278 ⇓P **P** 00 12 28.8 -0.1
baz=55
626A Big Bend Ranch 54.86 274 ⇑P **P** 00 12 28.8 -0.2
baz=55,SNR=7.3
X18A Snowflake 54.88 283 ⇑P **P** 00 12 29.1 0.0
baz=55
U15A North Rim 54.95 286 ⇓P **P** 00 12 29.4 -0.3
baz=55,SNR=10
121A Cookes Peak, D 54.97 279 ⇓P **P** 00 12 30.0 +0.2
baz=55,SNR=7.4
WUAZ Wupatki 55.04 284 *e*P **P** 00 12 30.6 +0.4
comp=Z,18nm,1.3s
WUAZ Wupatki 55.04 284 ⇓P **P** 00 12 30.7 +0.4
baz=55,SNR=6.1
WUAZ Wupatki 55.04 284 *e*P **P** 00 12 30.6 +0.4
comp=Z,18nm,1.3s
Z20A Nine Sixteen R 55.05 280 ⇑P **P** 00 12 30.8 +0.5
baz=55,SNR=6.2
120A U Bar Ranch, L 55.47 280 ⇑P **P** 00 12 33.8 +0.5
baz=55,SNR=6.6
ABKAR Akbulak array 55.48 52 *e*P **P** 00 12 33.1 +0.1
ABKAR Akbulak array 55.48 52 *e*P **P** 00 12 33.1 +0.1
R11A Troy Canyon, C 55.55 290 ⇓P **P** 00 12 34.4 +0.5
baz=55,SNR=6.1
MOD Modoc 55.78 296 *e*P **P** 00 12 35.2 -0.3
comp=Z,27nm,1.3s
MOD Modoc 55.78 296 *e*P **P** 00 12 35.2 -0.3
comp=Z,27nm,1.3s
X16A Lo Mia Camp, P 55.84 283 ⇓P **P** 00 12 36.9 +0.9
baz=56,SNR=33
220A Playas Peak, P 55.86 279 ⇓P **P** 00 12 36.9 +0.8
baz=56,SNR=7.6
SPU Mount Spurr 56.09 329 *e*P **P** 00 12 37.4 +0.1
SPU Mount Spurr 56.09 329 *e*P **P** 00 12 37.4 +0.1
319A Douglas 56.68 279 ⇑P **P** 00 12 42.4 +0.5
baz=57
W13A Hualapai Mount 56.80 286 ⇑P **P** 00 12 43.0 +0.1
baz=57
TNA Tin City 56.82 339 *e*P **P** 00 12 42.0 -0.3
comp=Z,6.2nm,0.8s
TNA Tin City 56.82 339 *e*P **P** 00 12 42.0 -0.3
comp=Z,6.2nm,0.8s
TUC Tucson 56.92 281 *e*P **P** 00 12 44.3 +0.6
TUC pmax pmax
comp=Z,1.0nm,1.0s
TUC Tucson 56.92 281 *e*P **P** 00 12 44.2 +0.6
comp=Z,1.5nm,1.0s
TUC Tucson 56.92 281 *e*P **P** 00 12 44.2 +0.6
comp=Z,1.5nm,1.0s
NV11 Mina Array Sit 56.96 291 *e*P **P** 00 12 44.1 +0.2
NV11 Mina Array Sit 56.96 291 *e*P **P** 00 12 44.1 +0.2
NVAR Mina Array Bea 57.04 292 P **P** 00 12 44.7 +0.1
NVAR Mina Array Bea 57.04 292 P **P** 00 12 44.7 +0.1
comp=Z,1.2nm,0.5s,baz=53,slow=5.0,SNR=11
NVAR LR LR 00 36 18.2
comp=Z,167nm,18.3s,baz=44,slow=35
NVAR Mina Array Bea 57.04 292 P **P** 00 12 44.7 +0.1
Y14A Wickenburg 57.10 284 ⇑P **P** 00 12 45.7 +0.9
baz=57,SNR=8.8
BEKR Beckworth 57.21 294 *e*P **P** 00 12 45.9 +0.2
comp=Z,7.4nm,1.2s
BEKR Beckworth 57.21 294 *e*P **P** 00 12 45.9 +0.2
comp=Z,7.4nm,1.2s
Z14A Wintersburg 57.47 284 ⇓P **P** 00 12 48.3 +0.9
baz=57,SNR=6.0
GRAC Grapevine Rang 57.50 290 ⇓P **P** 00 12 48.2 +0.6
baz=57
PDMCI Parker Dam,Lak 57.51 285 ⇓P **P** 00 12 48.5 +0.9
baz=57,SNR=5.0
BRVK Borovoye 57.52 44*c i*P **P** 00 12 47.7 +0.3
BRVK pmax pmax
comp=Z,17nm,1.7s
BRVK Borovoye 57.52 44 *e*P **P** 00 12 47.8 +0.4
comp=Z,9.5nm,1.0s
BRVK LR LR
comp=Z,417nm,20.0s
BRVK Borovoye 57.52 44 *e*P **P** 00 12 47.8 +0.4
comp=Z,9.5nm,1.0s
FURC Furnace Creek, 57.58 289 ⇓P **P** 00 12 48.3 +0.2
baz=57
MTUM Tungsten Hills 57.94 291 *e*P **P** 00 12 52.3 +1.4
MTUM Tungsten Hills 57.94 291 *e*P **P** 00 12 52.3 +1.4
TIN Tinemaha 57.96 290 ⇑P **P** 00 12 51.6 +0.8
baz=58
KRMB Red Mountain 58.01 298 *e*P P 00 12 59.5 +8.3
comp=Z,130nm,2.8s
GMRC Granite Mounta 58.07 287 ⇓P **P** 00 12 52.2 +0.5
baz=58
Y12C Blythe 58.13 285 ⇓P **P** 00 12 52.7 +0.8
baz=58,SNR=18
OHCM Honcut 58.20 294 *e*P **P** 00 12 53.2 +0.8
OHCM Honcut 58.20 294 *e*P **P** 00 12 53.2 +0.8
IRM Iron Mountain 58.20 286 ⇓P **P** 00 12 53.5 +0.9
baz=58
MPMC Manual Prospec 58.23 289 ⇓P **P** 00 12 53.5 +0.5
baz=58,SNR=9.4
KHMM Horse Mountain 58.36 297 *e*P P 00 13 02.2 +8.4
comp=Z,24nm,1.3s
GSC Goldstone 58.37 288 ⇓P **P** 00 12 54.3 +0.6
baz=58
113A Mohawk Valley, 58.37 284 ⇓P **P** 00 12 54.4 +0.7
baz=58,SNR=7.8
214A Organ Pipe Nat 58.38 282 ⇑P **P** 00 12 54.4 +0.5
baz=58,SNR=6.7
CMB Columbia Colle 58.50 293 *e*P P 00 13 03.9 +9.3
CMB pmax pmax
comp=Z,6.0nm,1.1s
CMB Columbia Colle 58.50 293 *e*P P 00 13 03.9 +9.3
comp=Z,6.2nm,1.1s
BILL Bilibino 58.63 351 *e*P **P** 00 12 54.7 -0.3
BILL *e*S **S** 00 21 02.0 +4.1
BILL pmax pmax
comp=Z,2.0nm,0.8s
BILL MLR MLR
comp=Z,100nm,18.0s
BC3 Big Chuckawall 58.74 286 ⇓P **P** 00 12 57.3 +0.9
baz=59,SNR=14
GLA Glamis 58.80 285 *e*P **P** 00 12 58.1 +1.4
GLA pmax pmax
comp=Z,10.0nm,0.8s
GLA Glamis 58.80 285 *e*P **P** 00 12 58.1 +1.4
comp=Z,9.6nm,0.8s
GLA Glamis 58.80 285 ⇓P **P** 00 12 57.7 +1.0
baz=59
GLA Glamis 58.80 285 *e*P **P** 00 12 58.1 +1.4
comp=Z,9.6nm,0.8s
BELC Belle Mtn. Jos 58.81 286 ⇓P **P** 00 12 58.0 +1.0
baz=59,SNR=11
KDAK Kodiak Island 58.89 326 LR LR 00 40 50.7
comp=Z,83nm,18.7s,baz=93,slow=39
ISA Isabella 59.08 289 *e*P **P** 00 13 00.4 +1.7
ISA pmax pmax
comp=Z,11nm,0.9s
ISA Isabella 59.08 289 *e*P **P** 00 13 00.4 +1.7
comp=Z,11nm,0.9s
ISA Isabella 59.08 289 ⇓P **P** 00 12 59.6 +0.9
baz=59
ISA Isabella 59.08 289 *e*P **P** 00 13 00.4 +1.7
comp=Z,11nm,0.9s
EDW2 Edwards Air Fo 59.35 288 ⇓P **P** 00 13 01.3 +0.7
baz=59,SNR=5.2
PFO Pinyon Flat Ob 59.36 286 *e*P **P** 00 13 02.1 +1.4
comp=Z,12nm,0.9s
PFO Pinyon Flat Ob 59.36 286 ⇑P **P** 00 13 01.4 +0.7
baz=59,SNR=5.3
PFO Pinyon Flat Ob 59.36 286 *e*P **P** 00 13 02.2 +1.4
comp=Z,12nm,0.9s
SWSC Sam W. Stewart 59.45 285 ⇑P **P** 00 13 01.5 +0.3
baz=59
BFSC Mount Baldy Ra 59.61 288 ⇓P **P** 00 13 02.5 0.0
baz=59
MURC Murrieta 59.80 287 ⇑P **P** 00 13 04.2 +0.5
baz=60
DVTC Desert V Tower 59.83 285 ⇓P **P** 00 13 04.3 +0.4
baz=60
MONP Monument Peak 59.85 286 ⇓P **P** 00 13 04.5 +0.2
baz=60
BAR Barrett 60.15 286 *e*P **P** 00 13 07.5 +1.4
comp=Z,15nm,0.9s
BAR Barrett 60.15 286 *e*P **P** 00 13 07.5 +1.4
comp=Z,15nm,0.9s
NVS Novosibirsk 61.21 36 *e*P **P** 00 13 12.9 0.0
NVS pmax pmax
comp=Z,39nm,1.7s
ZAA0 Zalesovo Array 62.48 35 *e*P **P** 00 13 20.8 -0.7
ZAA0 Zalesovo Array 62.48 35 *e*P **P** 00 13 20.8 -0.7
ZALV Zalesovo Beam 62.48 35 P **P** 00 13 20.6 -0.9
ZALV Zalesovo Beam 62.48 35 P **P** 00 13 20.6 -0.9
ZALV Zalesovo Beam 62.48 35 P **P** 00 13 20.6 -0.9
comp=Z,1.0nm,0.6s,baz=322,slow=8.1,SNR=7.4
ZALV LR LR 00 41 02.1
comp=Z,97nm,18.6s,baz=325,slow=37
ZALV Zalesovo Beam 62.48 35 P **P** 00 13 20.6 -0.9
KURK Kurchatov 62.70 41*ce*P **P** 00 13 23.0 +0.1
KURK pmax pmax
comp=Z,11nm,1.7s
KURK Kurchatov 62.70 41 *e*P **P** 00 13 22.6 -0.3
KURK LR LR
comp=Z,185nm,22.0s
KURK Kurchatov 62.70 41 *e*P **P** 00 13 22.6 -0.3
OTAV Otavalo 63.68 231 *e*P **P** 00 13 31.0 +0.6
comp=Z,6.4nm,1.3s
OTAV Otavalo 63.68 231 *e*P **P** 00 13 31.0 +0.6
comp=Z,6.4nm,1.3s
KKAR Karatay Array 64.99 51 *e*P **P** 00 13 38.7 +0.5
KKAR Karatay Array 64.99 51 *e*P **P** 00 13 38.7 +0.5
KKAR Karatay Array 64.99 51 *e*P **P** 00 13 38.7 +0.5
SAML Samuel 66.00 211 *e*P **P** 00 13 44.1 -0.8
comp=Z,7.8nm,0.8s
SAML Samuel 66.00 211 *e*P **P** 00 13 44.1 -0.8
comp=Z,7.8nm,0.8s
EKS2 Erkin-Say 66.86 50 *e*P **P** 00 13 52.0 +1.6
EKS2 pmax pmax
comp=Z,13nm,0.9s
EKS2 MLR MLR
comp=Z,200nm,22.0s
EKS2 Erkin-Say 66.86 50 *e*P **P** 00 13 52.0 +1.6
comp=Z,13nm,0.9s
EKS2 LR LR
comp=Z,200nm,22.0s
EKS2 Erkin-Say 66.86 50 *e*P **P** 00 13 52.0 +1.6
comp=Z,13nm,0.9s
AAK Ala-Archa 67.22 49*d i*P **P** 00 13 53.9 +1.2
AAK pmax pmax
comp=Z,21nm,1.7s
AAK Ala-Archa 67.22 49 *e*P **P** 00 13 54.0 +1.3
comp=Z,1.6nm,1.1s
AAK LR LR
comp=Z,228nm,20.0s
AAK Ala-Archa 67.22 49 *e*P **P** 00 13 54.0 +1.3
comp=Z,1.6nm,1.1s
MK31 Makanchi Array 67.29 42 *e*P **P** 00 13 52.8 -0.1
MK31 Makanchi Array 67.29 42 *e*P **P** 00 13 52.8 -0.1
MK31 Makanchi Array 67.29 42 *e*P **P** 00 13 52.8 -0.1
MKAR Makanchi Array 67.29 42*ce*P **P** 00 13 52.7 -0.2
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR Makanchi Array 67.29 42 P **P** 00 13 52.8 -0.1
MKAR Makanchi Array 67.29 42 P **P** 00 13 52.8 -0.1
comp=Z,2.7nm,0.6s,baz=332,slow=5.0,SNR=48
MKAR LR LR 00 45 00.5
comp=Z,120nm,19.3s,baz=331,slow=38
MKAR Makanchi Array 67.29 42 P **P** 00 13 52.8 -0.1
TKM2 Tokmak 2 67.50 48 PFAKE 00 14 10.0 +15
TKM2 LR LR
comp=Z,253nm,22.0s
BDFB Brasilia 68.97 194 P **P** 00 14 03.8 +0.1
BDFB Brasilia 68.97 194 P **P** 00 14 03.8 +0.1
comp=Z,2.4nm,0.6s,baz=11,slow=10,SNR=4.8
BDFB LR LR 00 38 56.3
comp=Z,156nm,19.1s,baz=222,slow=31
BDFB Brasilia 68.97 194 P **P** 00 14 03.8 +0.1
KSH Kashi 70.36 50 P **P** 00 14 14.0 +1.7
KSH pP **pP** 00 14 19.0 +0.9
KSH sP **sP** 00 14 21.0 +0.7
KSH PcP **PcP** 00 14 36.0 +2.2
KSH PP **PP** 00 16 52.0 +4.5
KSH S **S** 00 23 24.0 +0.2
KSH sS **sS** 00 23 32.0 -1.4
KSH SKS **SKSac** 00 24 11.3 -1.7
KSH ScS **ScS** 00 24 13.8 -0.5
KSH pmax pmax
comp=Z,2.0nm,0.4s
KSH LR LR
comp=Z,190nm,6.6s
ZAK Zakamensk 71.38 27 *e*P **P** 00 14 15.8 -2.5
ZAK pmax pmax
comp=Z,2.0nm,2.0s
ZAK Zakamensk 71.38 27 *e*P **P** 00 14 15.8 -2.5
comp=Z,2.0nm,2.0s
WMQ Urumqi 71.89 40 P P 00 14 16.0 -5.4
WMQ pmax pmax
comp=Z,15nm,1.0s
WMQ Urumqi 71.89 40 P **P** 00 14 23.3 +1.9
WMQ sP **sP** 00 14 30.0 +0.5
WMQ PcP **PcP** 00 14 41.0 +0.9
WMQ PP **PP** 00 17 05.0 +4.5
WMQ S **S** 00 23 43.0 +1.7
WMQ sS **sS** 00 23 51.0 0.0
WMQ ScS **SKKSac** 00 24 25.0 +0.6
WMQ pmax pmax
comp=Z,15nm,1.0s
WMQ pmax pmax
comp=Z,100nm,6.0s
WMQ LR LR
comp=N,100nm,18.0s
WMQ LR LR
comp=E,120nm,18.0s
WMQ LR LR
comp=Z,110nm,18.0s
PETK Petropavlovsk- 74.12 352 P **P** 00 14 35.5 +1.1
PETK Petropavlovsk- 74.12 352 P **P** 00 14 35.5 +1.1
PETK Petropavlovsk- 74.12 352 P **P** 00 14 35.5 +1.1
comp=Z,1.2nm,0.7s,baz=61,slow=7.2,SNR=2.7
PETK LR LR 00 48 18.2
comp=Z,92nm,18.1s,baz=357,slow=37
PETK Petropavlovsk- 74.12 352 P **P** 00 14 35.5 +1.1
LPAZ La Paz 74.49 213 *e*P **P** 00 14 38.1 +0.5
comp=Z,9.5nm,0.8s
LPAZ La Paz 74.49 213 P **P** 00 14 37.7 +0.1
comp=Z,7.6nm,0.8s,baz=19,slow=4.8,SNR=34
LPAZ LR LR 00 44 25.0
comp=Z,63nm,18.9s,baz=199,slow=33
LPAZ La Paz 74.49 213 *e*P **P** 00 14 38.1 +0.5
comp=Z,10.0nm,0.8s
SONM Songino Array 74.55 26 P **P** 00 14 36.6 -0.5
SONM Songino Array 74.55 26 P **P** 00 14 36.6 -0.5
comp=Z,1.2nm,0.5s,baz=301,slow=20,SNR=2.2
SONM LR LR 00 49 06.1
comp=Z,120nm,19.4s,baz=234,slow=37
SONM Songino Array 74.55 26 P **P** 00 14 36.6 -0.5
HIA Hailar 76.18 17 PFAKE 00 15 00.0 +14
HIA LR LR
comp=Z,107nm,20.0s
KMBO Kilima Mbogo 80.02 105 P **P** 00 15 06.5 -1.8
KMBO Kilima Mbogo 80.02 105 P **P** 00 15 06.5 -1.8
comp=Z,0.6nm,0.2s,baz=69,slow=16,SNR=3.6
KMBO LR LR 00 47 25.0
comp=Z,74nm,20.3s,baz=292,slow=33
KMBO Kilima Mbogo 80.02 105 P **P** 00 15 06.5 -1.8
GTA Gaotai 80.19 34 *e*P P 00 15 12.5 +3.6
GTA pP **PcP** 00 15 16.5 +0.4
GTA sP sP 00 15 18.8 +1.9
GTA pmax pmax
comp=Z,4.0nm,1.6s
GTA pmax pmax
comp=Z,140nm,4.3s
GTA LR LR
comp=Z,94nm,18.5s
LVC Limon Verde 80.64 212 *e*P **P** 00 15 12.4 +1.0
comp=Z,66nm,0.9s
LVC Limon Verde 80.64 212 *e*P **P** 00 15 12.4 +1.0
comp=Z,66nm,0.9s
CPUP Villa Florida 81.08 200 P **P** 00 15 12.9 -0.3
CPUP Villa Florida 81.08 200 P **P** 00 15 12.9 -0.3
comp=Z,3.8nm,0.8s,baz=266,slow=20,SNR=11
CPUP LR LR 00 46 33.5
comp=Z,58nm,21.5s,baz=256,slow=32
CPUP Villa Florida 81.08 200 P **P** 00 15 13.0 -0.3
MDJ Mudanjiang 82.19 11 P **pP** 00 15 29.3 +4.2
MDJ pmax pmax
comp=Z,11nm,0.9s
MDJ pmax pmax
comp=Z,28nm,4.1s
HHC Hu-ho-hao-te 82.41 25 *e*P **P** 00 15 22.0 +1.4
HHC sP **sP** 00 15 28.3 -0.4
HHC PP **PP** 00 18 32.0 +3.3
HHC S **S** 00 25 35.0 -0.8
HHC SKS **SKSac** 00 25 37.0 -3.5
HHC sS **SKKSac** 00 25 42.8 -1.3
HHC SS **SS** 00 30 57.5 +2.4
HHC pmax pmax
comp=Z,21nm,0.7s
HHC pmax pmax
comp=Z,220nm,6.9s
HHC LR LR
comp=Z,370nm,16.5s
CN2 Changchun 82.43 14 *e*P **P** 00 15 18.3 -2.1
USRK Ussuriysk Arra 82.86 10 P **P** 00 15 23.4 +0.8
comp=Z,0.8nm,0.5s,baz=172,slow=30,SNR=2.5
USRK LR LR 00 50 42.4
comp=Z,57nm,18.6s,baz=351,slow=35
BJI Beijing 84.30 22 P **P** 00 15 29.0 -1.1
BJI S **S** 00 25 53.3 -1.3
BJI pmax pmax
comp=Z,11nm,0.5s
BJI pmax pmax
comp=Z,49nm,4.2s
BJI LR LR
comp=N,89nm,37.1s
BJI LR LR
comp=E,110nm,36.0s
BJI LR LR
comp=Z,110nm,36.7s
LZH Lanzhou 84.55 33 *e*P **P** 00 15 33.0 +1.3
LZH pP **pP** 00 15 38.5 +0.8
LZH sP **sP** 00 15 40.8 +1.0
LZH pmax pmax
comp=Z,20nm,1.4s
KSRS Korea Array 89.01 14 LR LR 00 56 44.7
comp=Z,56nm,18.6s,baz=343,slow=36
CD2 Chengdu 89.24 35 P **P** 00 15 54.0 -0.5
CD2 pP **pP** 00 15 58.8 -1.7
CD2 sP **sP** 00 16 01.0 -1.6
CD2 PP **PP** 00 19 25.8 +1.6
CD2 SKS **SKSac** 00 26 21.5 -2.1
CD2 S **S** 00 26 40.0 -3.0
CD2 SS **SS** 00 32 35.5 -0.2
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,80nm,5.6s
MJAR Matsushiro Arr 90.98 6 LR LR 00 58 10.3
comp=Z,34nm,18.9s,baz=305,slow=36
NJ2 Nanjing 92.56 22 *e*P **P** 00 16 08.3 -1.5
NJ2 pmax pmax
comp=Z,20nm,1.0s
GYA Guiyang 94.32 34 P **P** 00 16 18.0 -0.2
GYA PP **PP** 00 20 06.8 +2.4
GYA SKS **SKSac** 00 26 51.3 -1.3
GYA S **S** 00 27 25.5 -3.6
GYA SS **SS** 00 33 49.5 +0.5
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,90nm,5.8s
GYA LR LR
comp=Z,450nm,22.4s
BOSA Boshof 96.28 130 LR LR 00 57 37.0
comp=Z,133nm,18.4s,baz=334,slow=34
PLCA Paso Flores 98.05 207 LR LR 01 02 33.5
comp=Z,83nm,20.7s,baz=3.5,slow=36
CHTO Chiang Mai 98.29 44 PFAKE 00 16 50.0 +14
CHTO LR LR
comp=Z,100nm,21.0s
CMAR Chiang Mai Arr 98.61 44 LR LR 01 04 02.5
comp=Z,95nm,18.1s,baz=129,slow=37
OPO Ambohidratompo 99.75 108 LR LR 00 59 35.5
comp=Z,130nm,18.6s,baz=359,slow=34
QIZ Qiongzhong 102.28 34 P **Pdif** 00 16 52.8 -1.1
QIZ S **Sdif** 00 28 34.3 -2.3
DZM Mont Dzumac 145.44 324 *e*PKP **PKPdf** 00 22 36.5 0.0
DZM Mont Dzumac 145.44 324 *e*PKIKP **PKPdf** 00 22 36.5 0.0
WRAB Tennant Creek 146.27 19 *e*PKP2 **PKPdf** 00 22 38.3 +0.4
WRAB Tennant Creek 146.27 19 *e*PKPdf **PKPdf** 00 22 38.3 +0.4
WRAB Tennant Creek 146.27 19 *e*PKIKP **PKPdf** 00 22 38.3 +0.4
WRA Warramunga Arr 146.27 19 PKPbc **PKPbc** 00 22 38.5 -0.5
WRA Warramunga Arr 146.27 19 PKPbc **PKPbc** 00 22 38.5 -0.5
comp=Z,1.7nm,0.5s,baz=343,slow=3.1,SNR=10
WRA Warramunga Arr 146.27 19 PKPbc **PKPbc** 00 22 38.5 -0.5
ASAR Alice Springs 149.79 21 PKPbc **PKPbc** 00 22 47.6 -0.7
ASAR Alice Springs 149.79 21 PKPbc **PKPbc** 00 22 47.6 -0.7
comp=Z,1.7nm,0.7s,baz=0.9,slow=1.9,SNR=13
ASAR Alice Springs 149.79 21 PKPbc **PKPbc** 00 22 47.7 -0.7

VNDA	**Vanda**	**154.28 188**	PKPbc	**PKPbc**	**00 22 57.4**	**+0.5**
VNDA	**Vanda**	**154.28 188**	PKPbc	**PKPbc**	**00 22 57.4**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=264,slow=4.5,SNR=9.6					
VNDA	**Vanda**	**154.28 188**	PKPbc	**PKPbc**	**00 22 57.4**	**+0.5**

*ISK **30** 00:08:12.4, 40˚.70N×35˚.45E, h5km, MD2.9*
*CSEM **30** 00:08:13.7±0.4, 40˚.65N×35˚.45E, h5km, MD2.8, Error ellipse: s-maj=12.8km s-min=6.4km az=108.0*
*DDA **30** 00:08:17.8, 41˚.12N×35˚.30E, h7km, MD2.8*

ISC 30 00:08:13.1±1.3, 40˚.69N±0˚.03×35˚.47E±0˚.05, h2km±13km, n16, σ0.41/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAVZ	**Havza**	**0.43**	**26**	*e*P	**Pb**	**00 08 23.2**	**-0.3**
HAVZ				*e*S	**Sb**	**00 08 30.7**	**+0.3**
HAVZ	**Havza**	**0.43**	**26**	*e*P	**Pb**	**00 08 23.2**	**-0.3**
HAVZ				*e*S	**Sb**	**00 08 30.7**	**+0.3**
CORM	**Corum**	**0.82**	**232**	*e*PG	**Pg**	**00 08 28.4**	**-0.4**
CORM				*e*SG	**Sg**	**00 08 40.1**	**+0.7**
CORM	**Corum**	**0.82**	**232**	*e*Pg	**Pg**	**00 08 28.4**	**-0.4**
DIKM	**Dikmen**	**0.97**	**351**	*e*PG	**Pg**	**00 08 31.5**	**-0.3**
DIKM				*e*SG	**Sg**	**00 08 44.9**	**+0.5**
DIKM	**Dikmen**	**0.97**	**351**	*e*Pg	**Pg**	**00 08 31.5**	**-0.3**
DIKM				*e*Sg	**Sg**	**00 08 44.9**	**+0.5**
YOZ	**Yozgat**	**1.05**	**186**	*e*PG	**Pg**	**00 08 33.1**	**-0.2**
YOZ	**Yozgat**	**1.05**	**186**	*e*Pg	**Pg**	**00 08 33.1**	**-0.2**
ILGA	**Ilgaz**	**1.38**	**286**	*e*P	**Pn**	**00 08 39.4**	**-0.2**
ILGA				*e*S	**Sn**	**00 08 58.8**	**+0.2**
ILGA	**Ilgaz**	**1.38**	**286**	*e*P	**Pn**	**00 08 39.4**	**-0.2**
BALT	**Daday**	**1.79**	**299**	*e*P	**Pb**	**00 08 46.3**	**-0.4**
BALT				*e*S	**Sg**	**00 09 11.2**	**+0.7**
BALT	**Daday**	**1.79**	**299**	*e*P	**Pb**	**00 08 46.3**	**-0.4**
BALT				*e*S	**Sg**	**00 09 11.2**	**+0.7**
KAMT	**Kaman**	**1.89**	**226**	*e*PN	**Pn**	**00 08 46.6**	**+0.1**
KAMT	**Kaman**	**1.89**	**226**	*e*Pn	**Pn**	**00 08 46.6**	**+0.1**
AFSR	**Afˇar-Bala (A**	**2.22**	**237**	*e*PN	**Pn**	**00 08 51.0**	**-0.1**
AFSR	**Afˇar-Bala (A**	**2.22**	**237**	*e*Pn	**Pn**	**00 08 51.0**	**-0.1**

*ISK **30** 00:39:46.9, 41˚.12N×34˚.85E, h5km, MD2.7*
*CSEM **30** 00:39:47.6±0.1, 41˚.12N×34˚.83E, h2km, MD2.7, Error ellipse: s-maj=3.4km s-min=2.9km az=108.0*
*DDA **30** 00:39:47.7, 41˚.08N×34˚.84E, h7km, MD2.8*

ISC 30 00:39:47.7±1.1, 41˚.12N±0˚.03×34˚.84E±0˚.03, h5km±12km, n17, σ0.39/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BYBT	**Boyabat**	**0.35**	**351**	*e*PG	**Pg**	**00 39 54.5**	**+0.1**
BYBT				*e*SG	**Sg**	**00 39 58.9**	**-0.1**
BYBT	**Boyabat**	**0.35**	**351**	*e*Pg	**Pg**	**00 39 54.5**	**+0.1**
BYBT				*e*Sg	**Sg**	**00 39 58.9**	**-0.1**
DIKM	**Dikmen**	**0.61**	**31**	*e*PG	**Pg**	**00 39 59.5**	**0.0**
DIKM				*e*SG	**Sg**	**00 40 08.0**	**+0.6**
DIKM	**Dikmen**	**0.61**	**31**	*e*Pg	**Pg**	**00 39 59.5**	**0.0**
DIKM				*e*Sg	**Sg**	**00 40 08.0**	**+0.6**
HAVZ	**Havza**	**0.67**	**94**	*e*P	**Pg**	**00 40 01.0**	**+0.6**
HAVZ				*e*S	**Sb**	**00 40 10.8**	**-0.5**
KVT	**Kavak**	**0.91**	**92**	*e*PG	**Pg**	**00 40 04.6**	**-0.6**
KVT	**Kavak**	**0.91**	**92**	*e*Pg	**Pg**	**00 40 04.6**	**-0.6**
CORM	**Corum**	**0.96**	**190**	*e*PG	**Pg**	**00 40 06.4**	**+0.4**
CORM				*e*SG	**Sg**	**00 40 18.6**	**+0.2**
CORM	**Corum**	**0.96**	**190**	*e*Pg	**Pg**	**00 40 06.4**	**+0.4**
CORM				*e*Sg	**Sg**	**00 40 18.6**	**+0.2**
BZK	**Bozkurt**	**1.05**	**323**	*e*PG	**Pg**	**00 40 07.9**	**+0.1**
BZK	**Bozkurt**	**1.05**	**323**	*e*Pg	**Pg**	**00 40 07.9**	**+0.1**
BALT	**Daday**	**1.17**	**291**	*e*P	**Pg**	**00 40 09.7**	**-0.4**
BALT				*e*S	**Sn**	**00 40 27.6**	**+0.3**
BALT	**Daday**	**1.17**	**291**	*e*P	**Pg**	**00 40 09.7**	**-0.4**
BALT				*e*S	**Sn**	**00 40 27.6**	**+0.3**
ELDT	**Eldivan**	**1.25**	**240**	*e*P	**Pg**	**00 40 11.1**	**-0.4**
ELDT				*e*S	**Sb**	**00 40 28.6**	**+0.4**
ELDT	**Eldivan**	**1.25**	**240**	*e*P	**Pg**	**00 40 11.1**	**-0.4**
ELDT				*e*S	**Sb**	**00 40 28.6**	**+0.4**
YOZ	**Yozgat**	**1.52**	**166**	*e*PN	**Pb**	**00 40 16.1**	**-0.3**
YOZ	**Yozgat**	**1.52**	**166**	*e*Pn	**Pb**	**00 40 16.2**	**-0.3**

NNC 30 00:42:12.3±4.2, 38˚.60N×71˚.01E, h19km±21km, mb3.6, mpv3.2, 3C-1D, Error ellipse: s-maj=35.2km s-min=23.9km az=15.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.52**	**355**	Pn	Pn	00 43 22.9	+3.2
	1.9nm,0.5s,baz=180,slow=12,SNR=34						
KK31				⇑Pg	Pb	00 43 34.2	+3.2
	1.8nm,0.4s,baz=187,slow=18,SNR=4.3						
KK31				⇓Sn	Sn	00 44 17.9	+6.2
	3.0nm,0.5s						
KK31				Lg	Lg	00 44 36.6	
	16nm,0.8s,baz=172,slow=28,SNR=8.5						
TKM2	**Tokmak 2**	**5.55**	**37**	Pn	Pn	00 43 33.9	-0.2
TKM2				Sn	Sn	00 44 38.3	+0.8
AB31	**Akbulak array**	**13.29**	**327**	⇑Pn	Pn	00 45 18.2	-1.6
	0.9nm,0.6s						
AB31				⇑Sn	Sn	00 47 44.0	-3.0
	0.3nm,0.4s						

*AUST **30** 00:44:48.9±0.2, 7˚.38S×120˚.14E, h525km, Error ellipse: s-maj=0.8km s-min=0.5km az=19.0*
*ISCJB **30** 00:44:49.1±0.2, 7˚.38S±0˚.02×120˚.17E±0˚.02, h548km±2km, mb4.6/56, Error ellipse: s-maj=3.5km s-min=3.1km az=31.1*
*NEIC **30** 00:44:49.4±0.2, 7˚.28S×120˚.19E, mb4.8/22, Error ellipse: s-maj=7.3km s-min=4.5km az=54.0*
*IDC **30** 00:44:49.9±0.4, 7˚.25S×120˚.22E, h538km±4km, mb3.9/22, mb1 4.0/24, mb1mx4.0/29, mbtmp4.0/24, Error ellipse: s-maj=10.0km s-min=6.3km az=52.0*
*DJA **30** 00:44:49.3±0.1, 7˚S±2˚×12˚0E±˚, h546km±2km, M5.1/50, mb5.3/50, mB5.5/43, MLv5.5/19, Mw(mB)5.0/43, Mwp6.8/1*

ISC 30 00:44:49.7±0.3, 7˚.43S±0˚.03×120˚.16E±0˚.04, h539km±2km, h540km:pP-P, n266, σ1.40/393, mb4.7/56, 1C-2D, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSSI	**Bau Bau, Buton**	**1.32**	**14**	P	**P**	**00 45 56.0**	**+0.2**
BKSI	**Bulukumba**	**2.10**	**359**	P	**P**	**00 45 59.3**	**+0.4**
WSI	**Waingapu**	**2.23**	**177**	P	**P**	**00 46 00.1**	**+0.6**
WSI				S	**S**	**00 46 54.2**	**-2.0**
WSI	**Waingapu**	**2.23**	**177**	P	**P**	**00 46 00.1**	**+0.6**
	baz=2.3,SNR=14						
WSI				S	**S**	**00 46 55.1**	**-1.1**
	baz=2.3,SNR=10						
MMRI	**Maumere**	**2.38**	**120**	P	**P**	**00 45 59.8**	**-0.4**
MMRI				S	**S**	**00 46 54.1**	**-3.5**
KAPI	**Kappang**	**2.44**	**350**	*e*P	**P**	**00 46 00.8**	**+0.2**
KAPI				*e*S	**S**	**00 46 58.3**	**+0.1**
KAPI	**Kappang**	**2.44**	**350**	P	**P**	**00 46 00.8**	**+0.2**
KAPI	**Kappang**	**2.44**	**350**	P	**P**	**00 46 00.7**	**0.0**
	baz=160,slow=1.9						
KAPI				S	**S**	**00 46 56.8**	**-1.4**
	baz=301,slow=21,SNR=18						
BASI	**Baing, Sumba**	**2.80**	**172**	P	**P**	**00 46 03.7**	**+1.1**
BASI				S	**S**	**00 47 01.6**	**-0.3**
BBSI	**Bau Bau**	**3.08**	**51**	P	**P**	**00 46 05.8**	**+1.3**
BBSI				S	**S**	**00 47 06.3**	**+1.3**
SPSI	**Sidrap Palu**	**3.47**	**353**	P	**P**	**00 46 07.7**	**+0.7**
KHKI	**Kahang-Kahang**	**4.61**	**258**	P	**P**	**00 46 15.2**	**-0.4**
SRBI	**Singaraja**	**4.95**	**262**	P	**P**	**00 46 18.8**	**+0.4**
SRBI				S	**S**	**00 47 29.5**	**-1.3**
SKSI	**Soroako, Sulaw**	**5.01**	**14**	P	**P**	**00 46 19.9**	**+0.8**
	272nm,0.9s,3μm1.1nm						
SKSI				S	**S**	**00 47 32.3**	**+0.3**
	272nm,0.9s,3μm1.1nm						
DNP	**Denpasar**	**5.06**	**256**	P	**P**	**00 46 20.4**	**+1.0**
	2μm,0.4s,278μm82nm						
DNP				S	**S**	**00 47 32.1**	**-0.5**
	2μm,0.4s,278μm82nm						
IGBI	**Denpasar**	**5.15**	**254**	P	**P**	**00 46 20.3**	**+0.1**
	2μm,0.3s,117μm19nm						
BYJI	**Banyuwangi**	**5.81**	**262**	P	**P**	**00 46 27.6**	**+1.6**
	814nm,1.1s,12μm5.3nm						
KMMI	**Kalianget**	**6.16**	**273**	P	**P**	**00 46 31.3**	**+2.0**
	340nm,0.8s,4μm1.0nm						
PCI	**Palu**	**6.49**	**357**	S	**S**	**00 47 56.3**	**-0.2**
	baz=6.5,SNR=10						
BLJI	**Banyuglugur**	**6.52**	**267**	P	**P**	**00 46 32.9**	**+0.3**
	311nm,0.7s,8μm2.1nm						
BBKI	**Banjar Baru**	**6.60**	**306**	P	**P**	**00 46 35.3**	**+1.8**
	2μm,0.9s,23μm7.3nm						
GMJI	**Gumukmas**	**6.71**	**262**	P	**P**	**00 46 33.7**	**-0.8**
	194nm,0.7s,5μm2.5nm						
GMJI				S	**S**	**00 48 00.6**	**+0.4**
	194nm,0.7s,5μm2.5nm						
LUWI	**Luwuk**	**6.86**	**22**	P	**P**	00 46 32.4	-3.6
LUWI	**Luwuk**	**6.86**	**22**	P	**P**	**00 46 36.0**	**+0.1**
	baz=6.9,SNR=17						
SGKI	**Sangatta, Kali**	**7.32**	**339**	P	**P**	00 46 51.5	+11
SMKI	**Samarinda**	**7.54**	**337**	P	**P**	**00 46 44.3**	**+1.7**
	1μm,0.9s,13μm3.8nm						
KRKI	**Karangkates**	**7.67**	**264**	P	**P**	**00 46 43.9**	**0.0**
	1μm,0.5s,25μm12nm						
KRKI				S	**S**	**00 48 18.2**	**+0.8**
	1μm,0.5s,25μm12nm						
PWJI	**Pagerwojo**	**8.30**	**265**	P	**P**	**00 46 48.8**	**-1.4**
	231nm,0.4s,4μm						
PWJI				S	**S**	**00 48 27.2**	**-1.8**
	231nm,0.4s,4μm						
MTKI	**Muara Teweh, K**	**8.32**	**321**	P	**P**	**00 46 50.7**	**+0.4**
	1μm,0.9s,18μm						
SJI	**Sawahan**	**8.33**	**267**	P	**P**	**00 46 51.1**	**+0.6**
	314nm,0.6s,10μm						
AAI	**Ambon**	**8.82**	**65**	P	**P**	**00 46 54.5**	**-0.9**
	910nm,0.9s,12μm						
AAI	**Ambon**	**8.82**	**65**	P	**P**	**00 46 54.7**	**-0.7**
	baz=8.8,SNR=27						
AAI				S	**S**	**00 48 37.8**	**-0.8**
	baz=8.8,SNR=7.5						
PCJI	**Pacitan**	**8.94**	**265**	P	**P**	**00 46 55.5**	**-1.1**
	498nm,0.5s,7μm						
UGM	**Wanagama**	**9.57**	**267**	*e*Pn	**P**	**00 47 02.2**	**-0.9**
UGM				*e*S	**S**	**00 48 48.9**	**-3.8**
UGM	**Wanagama**	**9.57**	**267**	P	**P**	**00 47 02.4**	**-0.7**
	baz=9.5,SNR=41						
MSAI	**Masohi**	**9.62**	**66**	P	**P**	**00 47 01.2**	**-2.5**
	51nm,0.4s,1μm						
SMRI	**Semarang**	**9.65**	**272**	P	**P**	**00 47 04.8**	**+0.9**
SMRI	**Semarang**	**9.65**	**272**	P	**P**	**00 47 04.9**	**+0.9**
	baz=9.6,SNR=4.8						
PBKI	**Pangkalan Bun**	**9.68**	**299**	P	**P**	**00 47 05.5**	**+1.3**
	1μm,1.0s,9μm						
LBMI	**Labuha**	**9.95**	**48**	P	**P**	**00 47 06.5**	**-0.6**
	1μm,1.0s,16μm						
MNI	**Manado**	**9.98**	**28**	P	**P**	**00 47 06.4**	**-0.9**
	3μm,0.9s,18μm						
BJII	**Banjamegara**	**10.37**	**270**	P	**P**	**00 47 12.2**	**+0.8**
	124nm,0.5s,2μm						
TNTI	**Ternate**	**10.87**	**42**	P	**P**	**00 47 14.8**	**-1.7**
	564nm,0.8s,7μm						
TGJI	**Tegal**	**10.97**	**272**	P	**P**	**00 47 17.4**	**-0.2**
	175nm,0.9s,7μm734μm						
CLJI	**Cilicap**	**11.05**	**268**	P	**P**	**00 47 16.2**	**-2.2**
	528nm,0.5s,20μm						
STKI	**Sintang**	**11.42**	**310**	P	**P**	**00 47 23.1**	**+0.8**
	171nm,1.0s,15μm						
FITZ	**Fitzroy Crossi**	**11.87**	**154**	*e*P	**P**	**00 47 28.0**	**+1.1**
FITZ				*e*S	**S**	**00 49 35.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**11.87**	**154**	P	**P**	**00 47 27.4**	**+0.6**
	21nm,0.3s,baz=342,slow=7.3,SNR=581						
FITZ				S	**S**	**00 49 34.9**	**-1.3**
	1.9nm,0.3s,baz=153,slow=23,SNR=15						
FITZ	**Fitzroy Crossi**	**11.87**	**154**	P	**P**	**00 47 27.5**	**+0.6**
	baz=12,SNR=309						
FITZ				S	**S**	**00 49 36.7**	**+0.5**
	baz=12,SNR=18						
TSM	**Tawau**	**11.87**	**349**	P	**P**	**00 47 27.2**	**+0.2**
GAMI	**Galela, Maluku**	**11.95**	**40**	P	**P**	**00 47 25.3**	**-2.4**
	490nm,1.0s,5μm						
MTN	**Manton Dam**	**12.06**	**117**	P	**P**	**00 47 28.5**	**-0.4**
	baz=12,SNR=215						
CISI	**Cisompet, Garu**	**12.24**	**269**	P	**P**	**00 47 29.5**	**-1.4**
CISI	**Cisompet, Garu**	**12.24**	**269**	P	**P**	**00 47 29.7**	**-1.2**
	baz=12,SNR=15						
CISI				S	**S**	**00 49 40.0**	**-3.6**
	baz=12,SNR=6.4						
LEM	**Lembang**	**12.46**	**272**	P	**P**	**00 47 33.2**	**-0.1**
	236nm,0.7s						
LEM	**Lembang**	**12.46**	**272**	P	**P**	**00 47 33.5**	**+0.2**
	baz=12,SNR=6.6						
SBUM	**Sibu**	**12.62**	**321**	P	**P**	**00 47 35.9**	**+1.2**
SBUM	**Sibu**	**12.62**	**321**	P	**P**	**00 47 35.6**	**+0.9**
	414nm,0.8s,5μm						
TLE	**Tual**	**12.62**	**83**	P	**P**	**00 47 34.5**	**-0.2**
	230nm,0.8s,4μm						
TLE	**Tual**	**12.62**	**83**	P	**P**	**00 47 34.0**	**-0.7**
	baz=13,SNR=12						
TLE				S	**S**	00 49 42.5	-8.1
	baz=13,SNR=5.0						
MYLDM	**Lahad Datu**	**12.64**	**352**	P	**P**	**00 47 36.2**	**+1.2**
MYLDM	**Lahad Datu**	**12.64**	**352**	P	**P**	**00 47 36.1**	**+1.2**
	67nm,1.1s						
BTM	**Bintulu**	**12.71**	**326**	P	**P**	**00 47 36.8**	**+1.1**
FAKI	**Fak Fak**	**12.84**	**70**	P	**P**	**00 47 34.0**	**-3.1**
FAKI	**Fak Fak**	**12.84**	**70**	P	**P**	**00 47 34.1**	**-2.9**
	baz=13,SNR=37						
FAKI				S	**S**	00 49 42.7	-12
	baz=13,SNR=6.6						
SWI	**Sorong**	**12.84**	**60**	P	**P**	**00 47 35.0**	**-2.0**
	289nm,1.1s,2μm						
SWI	**Sorong**	**12.84**	**60**	P	**P**	**00 47 35.1**	**-2.0**
	baz=13,SNR=9.7						
SWI				S	**S**	**00 49 49.5**	**-5.4**
	baz=13,SNR=5.5						
KDU	**Kakadu**	**13.19**	**114**	P	**P**	**00 47 39.6**	**-1.0**
	baz=13,SNR=4.0						
KSM	**Kuching**	**13.23**	**312**	*e*P	**P**	**00 47 41.5**	**+0.6**
KSM	**Kuching**	**13.23**	**312**	P	**P**	**00 47 41.6**	**+0.6**
KSM	**Kuching**	**13.23**	**312**	P	**P**	**00 47 40.8**	**-0.2**
	165nm,1.0s,1μm						
KSM	**Kuching**	**13.23**	**312**	P	**P**	**00 47 41.6**	**+0.6**
	baz=13,SNR=25						
CBJI	**Citeko**	**13.26**	**274**	P	**P**	**00 47 39.3**	**-2.0**
	1μm,0.8s						
SDKM	**Sandakan**	**13.32**	**347**	P	**P**	**00 47 41.8**	**-0.3**
DBJI	**Dramaga**	**13.34**	**273**	P	**P**	**00 47 41.0**	**-1.3**
	267nm,1.0s,3μm						
MBWA	**Marble Bar**	**13.65**	**182**	*e*P	**P**	**00 47 45.6**	**+0.3**
MBWA				*e*S	**S**	**00 50 10.7**	**+0.7**
KKM	**Kota Kinabalu**	**13.96**	**344**	*e*P	**P**	**00 47 46.9**	**-1.8**
KKM				*e*S	**S**	**00 50 15.3**	**-0.8**
KKM	**Kota Kinabalu**	**13.96**	**344**	P	**P**	**00 47 47.6**	**-1.1**
KKM	**Kota Kinabalu**	**13.96**	**344**	P	**P**	**00 47 47.5**	**-1.2**
	114nm,0.5s,2μm						
KKM	**Kota Kinabalu**	**13.96**	**344**	P	**P**	**00 47 47.5**	**-1.2**
	baz=14,SNR=20						
KKM				S	**S**	**00 50 14.4**	**-1.8**
	baz=14,SNR=6.1						
XMI	**Christmas Isla**	**14.61**	**257**	P	**P**	**00 47 54.4**	**-1.0**
	baz=15,SNR=19						
XMI				S	**S**	00 50 35.2	+6.7
	baz=15,SNR=4.1						
XMIS	**Christmas Isla**	**14.65**	**257**	*e*P	**P**	**00 47 54.2**	**-1.6**
XMIS				*e*S	**S**	**00 50 27.7**	**-1.6**
XMIS	**Christmas Isla**	**14.65**	**257**	P	**P**	**00 47 54.6**	**-1.2**
	baz=15,SNR=40						
PPBI	**Pangkal Pinang**	**14.92**	**290**	P	**P**	**00 47 58.9**	**+0.3**
	164nm,0.8s,27μm						
CTBH	**Cotabato--PC H**	**15.12**	**16**	⇓*i*P	**P**	**00 47 59.3**	**-1.3**
RKPI	**Ransiki, Papua**	**15.15**	**68**	P	**P**	**00 47 59.2**	**-1.9**
	294nm,0.7s,5μm						
DAV	**Davao City (W)**	**15.39**	**21**	P	**P**	**00 48 00.8**	**-2.6**
DAV	**Davao City (W)**	**15.39**	**21**	P	**P**	**00 48 00.8**	**-2.6**
	61nm,0.3s,baz=110,slow=6.6,SNR=4.0						
PAGZ	**Pagadian**	**15.52**	**12**	*e*P	**P**	**00 48 03.8**	**-0.9**
KASI	**Kota Agung**	**15.68**	**276**	P	**P**	**00 48 03.0**	**-3.5**
	163nm,0.7s,2μm						
BUKP	**Musuan**	**15.98**	**18**	*e*P	**P**	**00 48 08.1**	**-1.3**
GIRL	**Giralia**	**16.16**	**200**	P	**P**	**00 48 12.3**	**+1.2**
	baz=16,SNR=14						
LWLI	**Liwa**	**16.19**	**278**	P	**P**	**00 48 09.6**	**-2.0**
	172nm,0.6s,7μm						
SRPI	**Serui, Papua**	**16.95**	**72**	P	**P**	**00 48 17.8**	**-0.8**
	752nm,0.5s,12μm						
KSI	**Kahiang**	**17.88**	**281**	P	**P**	**00 48 29.3**	**+2.1**
	101nm,0.6s,6μm						
GUIM	**Jordan**	**18.10**	**8**	*e*P	**P**	**00 48 28.0**	**-1.1**
ENPP	**El Nido**	**18.53**	**358**	*e*P	**P**	**00 48 33.7**	**+0.7**
WRA	**Warramunga Arr**	**18.54**	**134**	P	**P**	**00 48 33.1**	**+0.1**
WRA	**Warramunga Arr**	**18.54**	**134**	P	**P**	**00 48 33.1**	**+0.1**
	46nm,0.3s,baz=313,slow=11,SNR=287						
WRAB	**Tennant Creek**	**18.54**	**134**	*e*P	**P**	**00 48 33.4**	**+0.4**
	636nm,0.8s						
MYKOM	**Kota Tinggi**	**18.68**	**299**	P	**P**	**00 48 35.5**	**+1.1**
MYKOM	**Kota Tinggi**	**18.68**	**299**	P	**P**	**00 48 35.8**	**+1.4**
	26nm,0.8s						
MEEK	**Meekatharra**	**19.16**	**184**	P	**P**	**00 48 39.1**	**+0.5**
	baz=19,SNR=87						
MEEK				S	**S**	**00 51 43.4**	**-1.3**
	baz=19,SNR=10						
KGM	**Kluang**	**19.25**	**299**	P	**P**	**00 48 40.6**	**+1.0**
KRJI	**Kerinci**	**19.37**	**285**	P	**P**	**00 48 41.9**	**+1.0**
	260nm,0.8s						
ASAR	**Alice Springs**	**20.84**	**142**	P	**P**	**00 48 54.6**	**+0.6**
ASAR				PcP	**PcP**	**00 52 39.0**	**0.0**
ASAR				ScP	**ScP**	**00 55 24.3**	**-0.7**
ASAR	**Alice Springs**	**20.84**	**142**	P	**P**	**00 48 54.6**	**+0.6**
	150nm,0.4s,baz=320,slow=8.3,SNR=1475						
ASAR				PcP	**PcP**	**00 52 39.0**	**0.0**
	10nm,0.5s,baz=329,slow=1.5,SNR=6.3						
ASAR				ScP	**ScP**	**00 55 24.3**	**-0.7**
	5.3nm,0.7s,baz=340,slow=2.5,SNR=5.0						
PPI	**Padang Panjang**	**20.89**	**288**	P	**P**	**00 48 56.3**	**+1.8**
	66nm,0.7s,8μm						
KTGM	**Kuala Trenggan**	**21.20**	**306**	P	**P**	**00 48 58.6**	**+1.3**
MORW	**Morawa**	**21.87**	**190**	P	**P**	**00 49 03.9**	**+0.8**
	baz=22,SNR=12						
QIS	**Mount Isa**	**22.90**	**127**	P	**P**	**00 49 12.8**	**+0.3**
	baz=23,SNR=15						
KULM	**Kulim**	**23.21**	**302**	P	**P**	**00 49 15.3**	**0.0**
BLDU	**Ballidu**	**23.29**	**188**	P	**P**	**00 49 16.1**	**+0.3**
	baz=24,SNR=33						
PSI	**Prapat**	**23.51**	**295**	P	**P**	**00 49 17.9**	**-0.2**
PSI				S	**S**	**00 52 52.1**	**-2.1**
PSI	**Prapat**	**23.51**	**295**	P	**P**	**00 49 17.9**	**-0.2**
	8.1nm,0.4s,baz=136,slow=6.6,SNR=9.6						
PSI				S	**S**	**00 52 52.1**	**-2.1**
	2.4nm,0.4s,baz=271,slow=20,SNR=11						
PSI	**Prapat**	**23.51**	**295**	P	**P**	**00 49 18.0**	**-0.1**
	baz=23,SNR=5.6						
PSI				S	**S**	**00 52 51.9**	**-2.3**
	baz=23,SNR=21						
COEN	**Coen**	**23.51**	**108**	*e*P	**P**	**00 49 17.7**	**-0.3**
	502nm,0.6s						
COEN	**Coen**	**23.51**	**108**	P	**P**	**00 49 17.5**	**-0.4**
	baz=24,SNR=5.7						
KMBL	**Kambalda**	**23.87**	**176**	P	**P**	**00 49 21.4**	**+0.5**
	baz=24,SNR=12						
KMBL				S	**S**	**00 53 01.5**	**+2.3**
	baz=24,SNR=4.9						
KLBR	**Kellerberrin**	**24.14**	**185**	P	**P**	**00 49 23.9**	**+0.5**
	baz=24,SNR=38						
KLBR				S	**S**	**00 53 02.8**	**-0.7**
	baz=24,SNR=7.1						
GSI	**Gunungsitoli**	**24.15**	**290**	P	**P**	**00 49 22.2**	**-1.5**
	60nm,1.2s						
GSI	**Gunungsitoli**	**24.15**	**290**	P	**P**	**00 49 22.4**	**-1.2**
	baz=24,SNR=8.3						
FORT	**Forrest**	**24.38**	**163**	*e*P	**P**	**00 49 26.4**	**+0.9**
	210nm,0.6s						
FORT	**Forrest**	**24.38**	**163**	P	**P**	**00 49 26.4**	**+0.9**
	baz=24,SNR=139						
NWAO	**Narrogin (SRO)**	**25.51**	**186**	*e*P	**P**	**00 49 36.0**	**+0.6**
	20nm,0.8s						
MTSU	**Mount Surprise**	**25.81**	**117**	P	**P**	**00 49 38.9**	**+0.6**
	baz=26,SNR=82						
PMG	**Port Moresby**	**26.77**	**96**	*e*P	**P**	**00 49 46.4**	**-0.5**
	42nm,0.5s						
PMG	**Port Moresby**	**26.77**	**96**	P	**P**	**00 49 47.1**	**+0.2**
	36nm,0.5s,baz=320,slow=1.3,SNR=16						
QIZ	**Qiongzhong**	**28.20**	**339**	P	**P**	**00 50 01.5**	**+2.3**
QIZ				sP	**sP**	**00 52 30.3**	**-0.5**
QIZ				S	**S**	**00 54 12.0**	**+4.8**
QIZ				ScS	**ScS**	**00 59 41.0**	**+1.1**
CTA	**Charters Tower**	**28.24**	**119**	P	**P**	**00 50 00.2**	**+0.6**
CTA				PcP	**PcP**	**00 52 56.1**	**+0.4**
CTA	**Charters Tower**	**28.24**	**119**	P	**P**	**00 50 00.2**	**+0.6**
	61nm,1.0s,baz=295,slow=10,SNR=27						
CTA				PcP	**PcP**	**00 52 56.1**	**+0.4**
	12nm,0.6s,baz=286,slow=6.7,SNR=7.0						
CTAO	**Charters Tower**	**28.24**	**119**	*e*P	**P**	**00 49 59.5**	**-0.1**
	73nm,1.0s						
BBOO	**Buckleboo**	**29.25**	**152**	*e*P	**P**	**00 50 08.8**	**+0.6**
	2μm,0.6s						
BBOO	**Buckleboo**	**29.25**	**152**	P	**P**	**00 50 08.7**	**+0.6**
	baz=29,SNR=385						
QLP	**Quilpie**	**29.77**	**133**	P	**P**	**00 50 14.1**	**+1.3**
	baz=30,SNR=77						
STKA	**Stephens Creek**	**31.47**	**143**	*e*P	**P**	**00 50 28.1**	**+0.7**
	30nm,0.8s						
STKA				S	**S**	**00 54 58.8**	**+1.3**
STKA				ScP	**ScP**	**00 55 55.4**	**-1.0**
STKA	**Stephens Creek**	**31.47**	**143**	P	**P**	**00 50 28.4**	**

CD2					SS	**SS**	**01 00 45.3**	**-3.1**
CD2					pmax	pmax		
	comp=Z,20nm,0.5s							
CD2					pmax	pmax		
	comp=Z,220nm,5.4s							
JNU	**Nakatsue**	**41.60**	**14**		P	**P**	**00 51 49.1**	**-1.6**
JNU	**Nakatsue**	**41.60**	**14**		P	**P**	**00 51 49.1**	**-1.6**
	comp=Z,6.4nm,0.7s,baz=168,slow=6.0,SNR=5.6							
MOO	**Moorlands**	**42.24**	**150**		P	**P**	**00 51 57.9**	**+2.2**
	baz=42,SNR=4.9							
XAN	**Xi'an**	**42.60**	**346**		P	**P**	**00 51 57.0**	**-1.6**
XAN					pmax	pmax		
	comp=Z,4.0nm,0.9s							
KSAR	**Wonju Array Be**	**45.22**	**9**		P	**P**	**00 52 18.1**	**-0.7**
KSAR					PcP	**PcP**	**00 53 48.0**	**+0.6**
KSRS	**Korea Array**	**45.24**	**9**		P	**P**	**00 52 18.1**	**-0.8**
	comp=Z,10nm,0.7s,baz=189,slow=8.1,SNR=41							
KSRS					PcP	**PcP**	**00 53 48.0**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=192,slow=2.3,SNR=4.2							
LZH	**Lanzhou**	**45.93**	**342**	*eP*		**P**	**00 52 25.0**	**+0.6**
LZH					pP	**pP**	**00 54 06.5**	**+3.2**
LZH					sP	**sP**	**00 55 03.5**	**+0.2**
LZH					pmax	pmax		
	comp=Z,14nm,1.0s							
ODAN	**Odare**	**46.59**	**318**	*eP*		**P**	**00 52 28.5**	**-1.2**
	comp=Z,8.4nm,0.3s							
TAPN	**Taplejung**	**46.72**	**319**	*eP*		**P**	**00 52 30.1**	**-0.6**
	comp=Z,11nm,0.3s							
NOUC	**Port Laguerre**	**46.74**	**113**	*eP*		**P**	**00 52 30.7**	**+0.1**
DZM	**Mont Dzumac**	**46.86**	**113**	*eP*		**P**	**00 52 31.6**	**0.0**
DZM	**Mont Dzumac**	**46.86**	**113**	*eP*		**P**	**00 52 32.5**	**+0.9**
	comp=Z,49nm,1.0s							
DZM	**Mont Dzumac**	**46.86**	**113**		P	**P**	**00 52 32.7**	**+1.1**
	comp=Z,36nm,0.8s,baz=261,slow=7.3,SNR=35							
MAJO	**Matsushiro**	**46.91**	**20**	*eP*		**P**	**00 52 29.3**	**-2.4**
	comp=Z,14nm,0.6s							
MAT	**Matsushiro**	**46.91**	**20**		P	**P**	**00 52 29.0**	**-2.6**
MJAR	**Matsushiro Arr**	**46.91**	**20**		P	**P**	**00 52 29.3**	**-2.3**
MJAR	**Matsushiro Arr**	**46.91**	**20**		P	**P**	**00 52 29.3**	**-2.3**
	comp=Z,15nm,0.7s,baz=197,slow=8.8,SNR=37							
RAMN	**Ramite**	**47.18**	**318**	*eP*		**P**	**00 52 33.4**	**-0.7**
BJI	**Beijing**	**47.38**	**356**		P	**P**	**00 52 35.8**	**+0.8**
BJI					S	**S**	**00 58 51.8**	**+2.4**
BJI					SS	**SS**	**01 02 29.8**	**+3.3**
BJI					pmax	pmax		
	comp=Z,17nm,0.6s							
BJI					pmax	pmax		
	comp=Z,170nm,4.8s							
HYB	**Hyderabad**	**47.96**	**301**	*i* P		**P**	**00 52 38.0**	**-1.9**
GUN	**Gumba**	**48.29**	**318**	*eP*		**P**	**00 52 41.7**	**-0.9**
PKI	**Pulchoki**	**48.38**	**317**	*eP*		**P**	**00 52 42.0**	**-1.2**
	comp=Z,11nm,0.3s							
PKIN	**Phulchoki**	**48.40**	**317**	*eP*		**P**	**00 52 42.2**	**-1.1**
	comp=Z,6.6nm,0.4s							
KKN	**Kakani**	**48.61**	**318**	*eP*		**P**	**00 52 43.7**	**-1.1**
HHC	**Hu-ho-hao-te**	**48.69**	**351**	*eP*		**P**	**00 52 46.8**	**+1.8**
HHC					PcP	**PcP**	**00 54 01.0**	**+1.0**
HHC					PP	**PP**	**00 54 49.0**	**+3.6**
HHC					sP	**sP**	**00 55 23.8**	**-1.2**
HHC					ScP	**ScP**	**00 57 03.8**	**+0.2**
HHC					PcS	**PcS**	**00 57 57.3**	**+0.1**
HHC					S	**S**	**00 59 10.0**	**+2.3**
HHC					ScS	**ScS**	**01 01 39.5**	**+0.2**
HHC					sS	**sS**	**01 02 10.3**	**+0.8**
HHC					SS	**SS**	**01 02 50.5**	**+3.0**
HHC					pmax	pmax		
	comp=Z,29nm,0.6s							
HHC					pmax	pmax		
	comp=Z,180nm,6.4s							
KOLN	**Koldanda**	**49.74**	**316**	*eP*		**P**	**00 52 51.6**	**-1.5**
DANN	**Dangsing**	**50.00**	**317**	*eP*		**P**	**00 52 53.7**	**-1.4**
	comp=Z,40nm,0.4s							
GTA	**Gaotai**	**50.28**	**339**	⇑P		**P**	**00 52 57.0**	**+0.2**
GTA					pP	**pP**	**00 54 39.5**	**+1.2**
GTA					sP	**sP**	**00 55 39.8**	**+2.4**
GTA					ScP	**ScP**	**00 57 11.5**	**+1.0**
GTA					S	**S**	**00 59 28.5**	**-0.9**
GTA					pmax	pmax		
	comp=Z,15nm,0.8s							
PYUN	**Piuthan**	**50.37**	**316**	*eP*		**P**	**00 52 56.3**	**-1.4**
	comp=Z,22nm,0.4s							
CN2	**Changchun**	**51.22**	**5**	*eP*		**P**	**00 53 02.0**	**-1.3**
CN2				*ep*	P	**pP**	**00 54 45.0**	**-0.4**
CN2				*es*	P	**sP**	**00 55 43.0**	**-1.4**
CN2				*eS*		**S**	**00 59 41.5**	**-0.1**
CN2					SS	**SS**	**01 03 28.8**	**+1.8**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.6s							
CN2					pmax	pmax		
	comp=Z,100nm,4.0s							
USRK	**Ussuriysk Arra**	**52.50**	**11**		P	**P**	**00 53 11.0**	**-1.5**
	comp=Z,11nm,0.4s,baz=200,slow=6.4,SNR=55							
MDJ	**Mudanjiang**	**52.50**	**8**		P	**P**	**00 53 11.5**	**-1.1**
MDJ					pmax	pmax		
	comp=Z,18nm,0.8s							
MDJ					pmax	pmax		
	comp=Z,39nm,4.5s							
MDJ	**Mudanjiang**	**52.50**	**8**	*eP*		**P**	**00 53 11.5**	**-1.1**
	comp=Z,3.6nm,0.5s							
SONM	**Songino Array**	**56.36**	**349**		P	**P**	**00 53 39.1**	**-0.7**
SONM	**Songino Array**	**56.36**	**349**		P	**P**	**00 53 39.1**	**-0.7**
	comp=Z,8.1nm,0.6s,baz=171,slow=7.5,SNR=9.1							
RPZ	**Rata Peaks**	**57.17**	**138**	*eP*		**P**	**00 53 46.1**	**+0.8**
	comp=Z,182nm,0.6s							
MSVF	**Nonsavu**	**57.22**	**106**	*eP*		**P**	**00 53 47.6**	**+1.4**
	comp=Z,43nm,0.7s							
KHZ	**Kahutara**	**58.37**	**136**	*eP*		**P**	**00 53 54.2**	**+0.8**
	comp=Z,75nm,1.0s							
SNZO	**South Karori**	**58.81**	**134**	*eP*		**P**	**00 53 56.3**	**-0.1**
	comp=Z,57nm,0.7s							
WMQ	**Urumqi**	**58.87**	**333**		P	**P**	**00 53 57.0**	**+0.1**
WMQ					PcP	**PcP**	**00 54 39.0**	**-0.2**
WMQ					pP	**pP**	**00 55 45.0**	**+1.9**
WMQ					PP	**PP**	**00 56 17.0**	**+1.3**
WMQ					sP	**sP**	**00 56 41.0**	**+0.1**
WMQ					ScP	**ScP**	**00 57 47.0**	**-1.0**
WMQ					S	**S**	**01 01 22.0**	**+0.5**
WMQ					ScS	**ScS**	**01 02 50.0**	**-2.1**
WMQ					sS	**sS**	**01 04 31.0**	**-0.8**
WMQ					SS	**SS**	**01 05 30.0**	**+2.7**
WMQ					pmax	pmax		
	comp=Z,12nm,1.0s							
WMQ					pmax	pmax		
	comp=Z,110nm,6.0s							
URZ	**Urewera**	**59.66**	**130**	*eP*		**P**	**00 54 01.1**	**-1.1**
	comp=Z,45nm,0.6s							
KSH	**Kashi**	**62.06**	**322**	*eP*		**P**	**00 54 17.3**	**-0.8**
KSH					PcP	**PcP**	**00 54 49.8**	**-2.5**
KSH					pP	**pP**	**00 56 06.3**	**+0.4**
KSH					PP	**PP**	**00 56 44.0**	**+0.3**
KSH					sP	**sP**	**00 57 02.8**	**-0.4**
KSH					ScP	**ScP**	**00 58 00.8**	**-1.6**
KSH					PcS	**PcS**	**00 58 53.0**	**-3.2**
KSH					S	**S**	**01 02 00.3**	**-1.1**
KSH					ScS	**SKSac**	**01 03 12.8**	**-3.7**
KSH					sS	**sS**	**01 05 12.0**	**-2.3**
KSH					SS	**SS**	**01 06 18.3**	**+1.1**
KSH					pmax	pmax		
	comp=Z,4.0nm,0.4s							
KSH					pmax	pmax		
	comp=Z,40nm,1.3s							
MK31	**Makanchi Array**	**63.61**	**332**	*eP*		**P**	**00 54 27.1**	**-0.7**
MK31				*ep*	P	**pP**	**00 56 16.4**	**0.0**
MKAR	**Makanchi Array**	**63.61**	**332**		P	**P**	**00 54 27.1**	**-0.6**
MKAR					pP	**pP**	**00 56 16.8**	**+0.4**
MKAR	**Makanchi Array**	**63.61**	**332**		P	**P**	**00 54 27.1**	**-0.6**
	comp=Z,8.1nm,0.5s,baz=145,slow=7.5,SNR=93							
MKAR					pP	**pP**	**00 56 16.8**	**+0.4**
	comp=Z,4.1nm,0.8s,baz=132,slow=7.2,SNR=4.5							
KBL	**Kabul**	**63.81**	**314**	*eP*		**P**	**00 54 28.1**	**-1.4**
	comp=Z,5.8nm,0.4s							
KBL	**Kabul**	**63.81**	**314**		P	**P**	**00 54 28.6**	**-1.0**
	baz=64,SNR=4.6							
AAK	**Ala-Archa**	**64.87**	**324**	*eP*		**P**	**00 54 35.3**	**-0.8**
	comp=Z,3.3nm,0.8s							
AAK				*ep*	P	**pP**	**00 56 26.0**	**+0.7**
AAK					pP	**pwP**	**00 56 26.2**	**+1.0**
AAK	**Ala-Archa**	**64.87**	**324**		P	**P**	**00 54 35.8**	**-0.3**
	comp=Z,3.7nm,0.7s,baz=124,slow=5.7,SNR=15							
AAK					pP	**pwP**	**00 56 26.2**	**+1.0**
	comp=Z,2.9nm,0.9s,baz=152,slow=6.7,SNR=5.0							
KKAR	**Karatay Array**	**67.50**	**323**	*eP*		**P**	**00 54 50.8**	**-1.4**
	comp=Z,1.1nm,0.6s							
KKAR				*ep*	P	**pP**	**00 56 43.0**	**+0.5**

ZAA0	**Zalesovo Array**	**68.01**	**338**	*eP*		**P**	**00 54 53.0**	**-1.9**
ZAA0				*ep*	P	**pP**	**00 56 45.1**	**-0.4**
ZALV	**Zalesovo Beam**	**68.01**	**338**		P	**P**	**00 54 53.2**	**-1.8**
ZALV					pP	**pP**	**00 56 44.5**	**-1.1**
ZALV	**Zalesovo Beam**	**68.01**	**338**		P	**P**	**00 54 53.2**	**-1.8**
	comp=Z,4.5nm,0.5s,baz=140,slow=4.3,SNR=35							
ZALV					pP	**pP**	**00 56 44.5**	**-1.1**
	comp=Z,2.5nm,0.7s,baz=134,slow=4.7,SNR=3.2							
KURK	**Kurchatov**	**68.12**	**333**	*eP*		**P**	**00 54 54.6**	**-1.1**
	comp=Z,8.9nm,0.8s							
KURK				*ep*	P	**pP**	**00 56 46.0**	**-0.4**
PETK	**Petropavlovsk-**	**68.19**	**23**		P	**P**	**00 54 55.6**	**-0.6**
PETK	**Petropavlovsk-**	**68.19**	**23**		P	**P**	**00 54 55.6**	**-0.6**
	comp=Z,4.1nm,0.5s,baz=202,slow=7.2,SNR=10							
OPO	**Ambohidratompo**	**71.57**	**253**		P	**P**	**00 55 18.2**	**+0.9**
OPO	**Ambohidratompo**	**71.57**	**253**		P	**P**	**00 55 18.2**	**+0.9**
	comp=Z,7.7nm,0.6s,baz=82,slow=3.9,SNR=36							
VNDA	**Vanda**	**73.35**	**171**	*eP*		**P**	**00 55 26.9**	**+0.7**
	comp=Z,15nm,0.6s							
VNDA	**Vanda**	**73.35**	**171**		P	**P**	**00 55 27.3**	**+1.1**
	comp=Z,16nm,0.6s,baz=316,slow=6.4,SNR=133							
ABKAR	**Akbulak array**	**76.96**	**324**	*eP*		**P**	**00 55 45.2**	**-1.6**
	comp=Z,1.1nm,0.4s							
ABKAR				*ep*	P	**pP**	**00 57 40.9**	**-0.1**
SYO	**Syowa Base**	**79.72**	**201**	⇓*eP*		**P**	**00 56 00.8**	**-0.4**
QSPA	**South Pole Qui**	**82.55**	**180**	*eP*		**P**	**00 56 16.6**	**+0.6**
	comp=Z,5.5nm,0.5s							
KMBO	**Kilima Mbogo**	**82.83**	**270**	*eP*		**P**	**00 56 19.2**	**+0.6**
	comp=Z,6.2nm,1.0s							
KMBO				*ep*	P	**pP**	**00 58 14.8**	**-0.2**
KMBO	**Kilima Mbogo**	**82.83**	**270**		P	**P**	**00 56 19.8**	**+1.2**
	comp=Z,4.5nm,0.9s,baz=53,slow=8.0,SNR=15							
KBZ	**Khabaz**	**85.99**	**315**		P	**P**	**00 56 32.4**	**-0.7**
KBZ	**Khabaz**	**85.99**	**315**		P	**P**	**00 56 32.4**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=26,slow=0.6,SNR=6.0							
ASF	**Jabal al Asfar**	**88.25**	**303**		pP	pP	00 58 42.6	+0.1
ASF	**Jabal al Asfar**	**88.25**	**303**		pP	pP	00 58 42.6	+0.1
	comp=Z,5.2nm,1.1s,baz=189,slow=2.6,SNR=7.7							
EIL	**Elat**	**89.50**	**300**		pP	pP	00 58 48.8	+0.2
EIL	**Elat**	**89.50**	**300**		pP	pP	00 58 48.8	+0.2
	comp=Z,8.8nm,1.2s,baz=63,slow=11,SNR=4.2							
MMAI	**Mount Meron Ar**	**89.63**	**303**		P	**P**	**00 56 50.5**	**-0.1**
MMAI	**Mount Meron Ar**	**89.63**	**303**		P	**P**	**00 56 50.5**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=99,slow=5.2,SNR=5.2							
LSZ	**Lusaka**	**89.96**	**255**	*eP*		**P**	**00 56 52.7**	**+0.2**
	comp=Z,7.3nm,1.0s							
BOSA	**Boshof**	**90.77**	**241**		P	**P**	**00 56 56.6**	**+0.6**
BOSA	**Boshof**	**90.77**	**241**		P	**P**	**00 56 56.6**	**+0.6**
	comp=Z,3.0nm,0.6s,baz=159,slow=18,SNR=10							
BRTR	**Keskin Array B**	**92.03**	**310**		P	**P**	**00 57 00.1**	**-1.4**
BRTR					pP	**pP**	**00 59 00.1**	**-0.3**
BRTR	**Keskin Array B**	**92.03**	**310**		P	**P**	**00 57 00.1**	**-1.4**
	comp=Z,0.9nm,1.0s,baz=134,slow=7.0,SNR=4.7							
BRTR					pP	**pP**	**00 59 00.1**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=140,slow=3.2,SNR=3.3							
FINES	**FINESS Array B**	**98.43**	**331**		PKKPbc	PKKPbc	01 13 57.6	-2.6
FINES	**FINESS Array B**	**98.43**	**331**		PKKPbc	PKKPbc	01 13 57.6	-2.6
	comp=Z,0.7nm,0.6s,baz=341,slow=4.0,SNR=5.7							
VYHS	**Vyhne**	**103.03**	**318**		PDIF	**Pdif**	**00 57 52.6**	**+2.0**
YKA	**Yellowknife Ar**	**112.30**	**24**		PKiKP	**PKiKP**	**01 02 22.7**	**-1.2**
YKA					PKKPbc	**PKKPbc**	**01 13 15.4**	**-3.0**
YKA	**Yellowknife Ar**	**112.30**	**24**		PKiKP	**PKiKP**	**01 02 22.7**	**-1.2**
	comp=Z,0.8nm,0.5s,baz=298,slow=1.9,SNR=32							
YKA					PKKPbc	**PKKPbc**	**01 13 15.4**	**-3.0**
	comp=Z,0.3nm,0.6s,baz=122,slow=3.6,SNR=6.5							
NVAR	**Mina Array Bea**	**119.14**	**50**		PKP	**PKPdf**	**01 02 39.0**	**+0.8**
NVAR	**Mina Array Bea**	**119.14**	**50**		PKP	**PKPdf**	**01 02 39.0**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=284,slow=0.6,SNR=6.5							
TORD	**Torodi Ar. Bea**	**119.31**	**281**		PKP	**PKPdf**	**01 02 38.5**	**-0.3**
TORD					PKKPbc	**PKKPab**	**01 12 55.1**	**-1.5**
TORD	**Torodi Ar. Bea**	**119.31**	**281**		PKP	**PKPdf**	**01 02 38.5**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=44,slow=2.1,SNR=35							
TORD					PKKPbc	**PKKPab**	**01 12 55.1**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=288,slow=3.3,SNR=8.8							
DBIC	**Dimbokro**	**125.46**	**273**		PKP	**PKPdf**	**01 02 51.3**	**+0.7**
DBIC	**Dimbokro**	**125.46**	**273**		PKP	**PKPdf**	**01 02 51.3**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=126,slow=4.7,SNR=5.0							
LAZ	**Ladron**	**128.93**	**51**	*e*	PKPdf	**PKPdf**	**01 02 57.4**	**+0.4**
SCHQ	**Schefferville**	**132.40**	**5**		PKP	**PKPdf**	**01 03 03.4**	**+0.7**
SCHQ					SKPbc	**SKPbc**	**01 05 38.7**	**-0.7**
SCHQ	**Schefferville**	**132.40**	**5**		PKP	**PKPdf**	**01 03 03.4**	**+0.7**
	comp=Z,3.2nm,0.8s,baz=36,slow=11,SNR=5.6							
SCHQ					SKPbc	**SKPbc**	**01 05 38.7**	**-0.7**
	comp=Z,4.9nm,1.0s,baz=170,slow=1.1,SNR=5.1							
TXAR	**Lajitas Array**	**133.42**	**56**		PKPpre	PKPpre	01 02 53.3	
TXAR					PKP	**PKiKP**	**01 03 06.2**	**-0.7**
TXAR					SKPbc	**SKPbc**	**01 05 44.0**	**+0.4**
TXAR	**Lajitas Array**	**133.42**	**56**		PKhKP	PKPpre	01 02 53.3	
	comp=Z,0.2nm,0.4s,baz=224,slow=2.1,SNR=5.0							
TXAR					PKP	**PKiKP**	**01 03 06.2**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=192,slow=1.1,SNR=9.3							
TXAR					SKPbc	**SKPbc**	**01 05 44.0**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=254,slow=2.0,SNR=12							
WVT	**Waverly**	**141.66**	**38**		PKPdf	PKPdf	01 03 15.0	-5.3
LCO	**Las Campanas**	**142.28**	**164**	*e*	PKPdf	**PKPdf**	**01 03 18.7**	**-3.3**
SSPA	**Standing Stone**	**143.22**	**23**	*e*	PKPdf	PKPab	01 03 20.5	-0.3
TZTN	**Tazewell**	**143.84**	**33**	*e*	PKPdf	**PKPdf**	**01 03 24.2**	**+0.1**
CPCT	**Cooper Cave**	**144.09**	**36**	*e*	PKPdf	PKPbc	01 03 22.9	-1.1
LRAL	**Lakeview Retre**	**144.19**	**41**	*e*	PKPdf	PKPbc	01 03 23.1	-1.3
BRAL	**Brewton**	**145.39**	**44**	*e*	PKPdf	**PKPbc**	**01 03 27.6**	**-0.5**
CPUP	**Villa Florida**	**146.35**	**184**		PKP	**PKPdf**	**01 03 29.0**	**+0.3**
CPUP					PKPbc	**PKPbc**	**01 03 31.6**	**+0.7**
CPUP	**Villa Florida**	**146.35**	**184**		PKP	**PKPdf**	**01 03 29.0**	**+0.3**
	comp=Z,6.5nm,0.5s,baz=101,slow=8.7,SNR=24							
CPUP					PKPbc	**PKPbc**	**01 03 31.6**	**+0.7**
	comp=Z,6.5nm,0.5s,baz=174,slow=2.3,SNR=24							
LVC	**Limon Verde**	**148.84**	**164**	*e*	PKPdf	**PKPdf**	**01 03 34.9**	**+1.6**
LVC				*e*	PKPbc	**PKiKP**	**01 03 38.8**	**0.0**
LVC				*e*	PKPab	**PKPab**	**01 03 44.7**	**+0.9**
BDFB	**Brasilia**	**154.26**	**207**		PKP	**PKPdf**	**01 03 42.0**	**+0.7**
BDFB					PKPab	**PKPab**	**01 04 07.4**	**+1.0**
BDFB	**Brasilia**	**154.26**	**207**		PKP	**PKPdf**	**01 03 42.0**	**+0.7**
	comp=Z,3.5nm,0.9s,baz=160,slow=6.2,SNR=5.1							
BDFB					PKPab	**PKPab**	**01 04 07.4**	**+1.0**
	comp=Z,2.4nm,0.5s,baz=130,slow=4.3,SNR=4.4							
LPAZ	**La Paz**	**155.04**	**161**		PKP	**PKPdf**	**01 03 43.8**	**+0.9**
LPAZ					PKPab	**PKPab**	**01 04 10.8**	**+0.4**
LPAZ	**La Paz**	**155.04**	**161**		PKP	**PKPdf**	**01 03 43.8**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=40,slow=1.0,SNR=10							
LPAZ					PKPab	**PKPab**	**01 04 10.8**	**+0.4**
	comp=Z,14nm,0.7s,baz=176,slow=2.4,SNR=35							

*ROM **30** 00:57:24.7±0.4, 42°.70N×9°.80E, h22km±5km, Ml2.7/13, Error ellipse: s-maj=5.0km s-min=3.8km az=19.0*
*STR **30** 00:57:25.4±0.2, 42°.54N×8°.99E, h5km, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*GEN **30** 00:57:25.4, 42°.67N×9°.73E, h37km, ML2.7*
*CSEM **30** 00:57:26.2±0.2, 42°.69N×9°.82E, h30km, ML3.0/9, Error ellipse: s-maj=7.3km s-min=3.2km az=4.0*
*LDG **30** 00:57:26.7±0.2, 42°.64N×9°.80E, h10km, Md2.9/1, Ml2.8/7, Error ellipse: s-maj=6.2km s-min=2.7km az=179.0*

ISC 30 00:57:24.3±1.4, 42.72N±0.04×9.80E±0.03, h10km±12km, n116, σ1s00/142, 3C, Corsica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGF	**Pioggiola**	**0.62**	**254**	*e*Pg	**Pn**	**00 57 39.1**	**-0.2**
	SNR=1.0						
PGF				*e*Sg	**Sb**	**00 57 46.3**	**+0.3**
PGF				*e*Sn	**Sn**	**00 57 49.1**	**-0.2**
	763nm,0.3s						
PGF	**Pioggiola**	**0.62**	**254**	*e*Pg	**Pn**	**00 57 39.1**	**-0.2**
	SNR=1.0						
PGF				*e*Sg	**Sb**	**00 57 46.3**	**+0.3**
PGF				*e*Sn	**Sn**	**00 57 49.1**	**-0.2**
	382nm,0.3s						
GROG	**Isola di Gorgo**	**0.71**	**5**	Pg	**Pb**	**00 57 39.4**	**+0.5**
GROG	**Isola di Gorgo**	**0.71**	**5**	Pg	**Pb**	**00 57 39.4**	**+0.5**
CASP	**Castiglione de**	**0.79**	**84**	Pg	**Pb**	**00 57 40.1**	**0.0**
CASP				Sg	**Sg**	**00 57 50.3**	**+0.6**
	1μm,0.3s						
CASP	**Castiglione de**	**0.79**	**84**	Pg	**Pb**	**00 57 40.1**	**0.0**
CASP				Sg	**Sg**	**00 57 50.3**	**+0.6**
	1μm,0.3s						
GRFL	**Gerfalco**	**0.96**	**63**	Pg	**Pb**	**00 57 43.4**	**+0.2**
	155nm,0.6s						
GRFL	**Gerfalco**	**0.96**	**63**	Pg	**Pb**	**00 57 43.4**	**+0.2**
	155nm,0.6s						
MAON	**Monte Argentar**	**1.02**	**106**	Pg	**Pg**	**00 57 43.4**	**-0.6**
MAON				Sg	**Sg**	**00 57 56.6**	**-0.7**
	208nm,0.3s						
MAON	**Monte Argentar**	**1.02**	**106**	Pg	**Pg**	**00 57 43.4**	**-0.6**
MAON				Sg	**Sg**	**00 57 56.6**	**-0.7**

	208nm,0.3s								
PII	**Pisa**	**1.14**	**28**		Pg	**Pb**	**00 57 45.4**	**-0.7**
PII	**Pisa**	**1.14**	**28**		Pg	**Pb**	**00 57 45.4**	**-0.7**
ARCI	**Arcidosso**	**1.24**	**83**		Pg	**Pn**	**00 57 46.7**	**-1.1**
	225nm,0.3s								
ARCI	**Arcidosso**	**1.24**	**83**		Pg	**Pn**	**00 57 46.7**	**-1.1**
	225nm,0.3s								
MAIM	**Mastiano**	**1.30**	**23**		Pg	**Pn**	**00 57 47.6**	**-1.0**
MAIM	**Mastiano**	**1.30**	**23**		Pg	**Pn**	**00 57 47.6**	**-1.0**
CSNT	**Castellina Chi**	**1.33**	**55**		Pg	**Pb**	**00 57 49.8**	**+0.4**
	46nm,0.6s								
CSNT	**Castellina Chi**	**1.33**	**55**		Pg	**Pb**	**00 57 49.8**	**+0.4**
	46nm,0.6s								
CRDM	**Cardoso**	**1.40**	**21**		P	**Pn**	**00 57 48.9**	**-1.1**
BDI	**Bagni Di Lucca**	**1.47**	**23**		Pg	**Pn**	**00 57 50.1**	**-0.8**
	64nm,0.4s								
BDI	**Bagni Di Lucca**	**1.47**	**23**		Pg	**Pn**	**00 57 50.1**	**-0.8**
	64nm,0.4s								
LATE	**Laterza**	**1.48**	**93**		Pg	**Pn**	**00 57 51.3**	**+0.2**
	166nm,0.4s								
LATE	**Laterza**	**1.48**	**93**		Pg	**Pn**	**00 57 51.3**	**+0.2**
	166nm,0.4s								
SACS	**San Casciano d**	**1.56**	**84**		Pg	**Pn**	**00 57 52.0**	**-0.2**
	91nm,1.2s								
SACS	**San Casciano d**	**1.56**	**84**		Pg	**Pn**	**00 57 52.0**	**-0.2**
	91nm,1.2s								
VALM	**Valbona**	**1.66**	**11**		P	**Pn**	**00 57 52.5**	**-1.1**
CODM	**Codolo**	**1.67**	**1**		P	**Pn**	**00 57 52.3**	**-1.5**
CAFI	**Castiglion Fio**	**1.70**	**68**		Pg	**Pn**	**00 57 54.0**	**-0.1**
	43nm,0.6s								
CAFI	**Castiglion Fio**	**1.70**	**68**		Pg	**Pn**	**00 57 54.0**	**-0.1**
	43nm,0.6s								
MGAB	**Montegabbione**	**1.71**	**83**		Pg	**Pn**	**00 57 53.9**	**-0.4**
	39nm,0.5s								
MGAB	**Montegabbione**	**1.71**	**83**		Pg	**Pn**	**00 57 53.9**	**-0.4**
	39nm,0.5s								
GSCL	**Gusciola**	**1.73**	**19**		Pg	**Pn**	**00 57 55.0**	**+0.5**
	3.0nm,0.8s								
GSCL	**Gusciola**	**1.73**	**19**		Pg	**Pn**	**00 57 55.0**	**+0.5**
	3.0nm,0.8s								
SEI	**Scarperia**	**1.75**	**40**		Pg	**Pn**	**00 57 54.7**	**-0.1**
	40nm,0.3s								
SEI	**Scarperia**	**1.75**	**40**		Pg	**Pn**	**00 57 54.7**	**-0.1**
	40nm,0.3s								
GRAM	**Graiana**	**1.78**	**6**		P	**Pn**	**00 57 54.1**	**-1.2**
RORO	**Rocca Rossa**	**1.88**	**318**		P	**Pn**	**00 57 54.5**	**-2.1**
PARC	**Parchiule**	**2.01**	**62**		Pg	**Pn**	**00 57 58.7**	**+0.3**
	116nm,1.8s								
PARC	**Parchiule**	**2.01**	**62**		Pg	**Pn**	**00 57 58.7**	**+0.3**
	116nm,1.8s								
MURB	**Monte Urbino**	**2.07**	**74**		Pg	**Pn**	**00 58 00.1**	**+0.9**
	69nm,0.3s								
MURB	**Monte Urbino**	**2.07**	**74**		Pg	**Pn**	**00 58 00.1**	**+0.9**
	69nm,0.

CFON				Lg	Lg	00 58 58.2			
	2.5nm,0.3s,SNR=5.9								
CFON	**Fontmartina**	**5.55**	**263**	Pg	**Pn**	**00 58 47.0**	**-0.1**		
	2.2nm,0.3s,SNR=7.5								
CFON				Lg	Lg	00 58 58.2			
	2.5nm,0.3s,SNR=5.9								
MTLF	**Montolieu**	**5.59**	**279**	*e*Pn	**Pn**	**00 58 47.9**	**+0.3**		
MTLF	**Montolieu**	**5.59**	**279**	*e*Pn	**Pn**	**00 58 47.9**	**+0.3**		
CLLI	**Llivia**	**5.78**	**270**	Pg	**Pn**	**00 58 51.1**	**+0.8**		
	3.2nm,0.6s,SNR=9.6								
CLLI				Lg	Lg	00 59 04.3			
	5.5nm,0.8s,SNR=6.1								
CLLI	**Llivia**	**5.78**	**270**	Pg	**Pn**	**00 58 51.1**	**+0.8**		
	3.2nm,0.6s,SNR=9.6								
CLLI				Lg	Lg	00 59 04.3			
	5.5nm,0.8s,SNR=6.1								
SMF	**Signal de Mont**	**5.79**	**315**	*e*Pn	**Pn**	**00 58 51.5**	**+1.3**		
	SNR=1.0								
SMF	**Signal de Mont**	**5.79**	**315**	*e*Pn	**Pn**	**00 58 51.5**	**+1.3**		
	SNR=1.0								
HAU	**Haudompre**	**5.82**	**336**	*e*Pn	**Pn**	**00 58 52.0**	**+1.3**		
	SNR=1.0								
HAU	**Haudompre**	**5.82**	**336**	*e*Pn	**Pn**	**00 58 52.0**	**+1.3**		
	SNR=1.0								
CDF	**Champ du Feu**	**5.96**	**344**	*e*Pn	**Pn**	**00 58 53.7**	**+0.9**		
	SNR=1.0								
CDF	**Champ du Feu**	**5.96**	**344**	*e*Pn	**Pn**	**00 58 53.7**	**+0.9**		
	SNR=1.0								
CAF	**Calviac**	**6.02**	**294**	*e*Pn	**Pn**	**00 58 53.5**	**+0.1**		
	SNR=1.0								
CAF	**Calviac**	**6.02**	**294**	*e*Pn	**Pn**	**00 58 53.5**	**+0.1**		
	SNR=1.0								
EMIR	**Miracle**	**6.19**	**265**	Pg	**Pn**	**00 58 56.5**	**+0.7**		
	1.1nm,3.0s,SNR=7.9								
EMIR	**Miracle**	**6.19**	**265**	Pg	**Pn**	**00 58 56.5**	**+0.7**		
	1.1nm,3.0s,SNR=7.9								
LOR	**Lormes**	**6.20**	**319**	*e*Pn	**Pn**	**00 58 56.7**	**+0.8**		
	SNR=1.0								
LOR	**Lormes**	**6.20**	**319**	*e*Pn	**Pn**	**00 58 56.7**	**+0.8**		
	SNR=1.0								
BGF	**Bois d'Agland**	**6.27**	**310**	*e*Pn	**Pn**	**00 58 57.6**	**+0.7**		
BGF	**Bois d'Agland**	**6.27**	**310**	*e*Pn	**Pn**	**00 58 57.6**	**+0.7**		
CSOR	**Sort**	**6.41**	**270**	Pg	**Pn**	**00 59 00.5**	**+1.5**		
	0.4nm,0.2s,SNR=7.9								
CSOR				Lg	Lg	00 59 08.6			
	0.7nm,0.2s,SNR=7.9								
CSOR	**Sort**	**6.41**	**270**	Pg	**Pn**	**00 59 00.4**	**+1.5**		
	0.4nm,0.2s,SNR=7.9								
CSOR				Lg	Lg	00 59 08.6			
	0.7nm,0.2s,SNR=7.9								
TCF	**Toulx Ste Croi**	**6.50**	**306**	*e*Pn	**Pn**	**00 59 01.0**	**+1.0**		
	SNR=1.0								
TCF	**Toulx Ste Croi**	**6.50**	**306**	*e*Pn	**Pn**	**00 59 01.0**	**+1.0**		
	SNR=1.0								
EPOB	**Poblet**	**6.64**	**261**	Pg	**Pn**	**00 59 04.5**	**+2.5**		
	0.4nm,0.2s,SNR=7.9								
EPOB				Lg	Lg	00 59 15.9			
	0.4nm,0.3s,SNR=7.9								
EPOB	**Poblet**	**6.64**	**261**	Pg	**Pn**	**00 59 04.5**	**+2.5**		
	0.4nm,0.2s,SNR=7.9								
EPF	**Esparros**	**6.96**	**276**	*e*Pn	**Pn**	**00 59 06.1**	**-0.3**		
EPF	**Esparros**	**6.96**	**276**	*e*Pn	**Pn**	**00 59 06.1**	**-0.3**		

MEX 30 01:09:00.5±0.8, 16°48N×98°19W, h9km±9km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.10**	**145**	*i* P	Pg	01 09 01.9	-1.1
PNIG				*i* S	Sg	01 09 05.0	+0.2
UTMO	**Huajuapan**	**1.40**	**15**	*e*P	Pn	01 09 22.6	-3.9
UTMO				*e*S	Sb	01 09 40.5	-4.8
VHO	**Vista Hermosa**	**1.51**	**67**	*i* P	Pn	01 09 24.2	-4.0
VHO				*i* S	Sn	01 09 42.5	-5.7
CAIG	**El Cayaco**	**2.07**	**286**	*i* P	Pn	01 09 33.0	-2.6
CAIG				*i* S	Sn	01 09 57.3	-4.3
HUIG	**Huatulco**	**2.12**	**109**	*i* P	Pn	01 09 32.5	-3.6
HUIG				*i* S	Sn	01 09 58.3	-4.4
YAIG	**Yautepec**	**2.52**	**341**	*i* P	Pn	01 09 38.7	-3.2
YAIG				*i* S	Sn	01 10 09.3	-3.6
CMIG	**Matias Romero**	**3.22**	**79**	*i* P	Pn	01 09 47.9	-3.5
CMIG				*i* S	Sn	01 10 26.1	-3.9

IDC 30 01:16:04.8±44.0, 15°07S×177°57W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/19, mbtmp3.9/3, Error ellipse: s-maj=827.7km s-min=168.9km az=76.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.74**	**238**	P	P	01 23 46.7	-1.0
	0.8nm,0.5s,baz=85,slow=12,SNR=3.3						
WRA	**Warramunga Arr**	**46.00**	**257**	P	P	01 24 30.8	+0.4
	0.7nm,0.8s,baz=89,slow=8.2,SNR=2.5						
ASAR	**Alice Springs**	**46.39**	**252**	P	P	01 24 33.4	-0.1
	2.9nm,0.5s,baz=88,slow=8.3,SNR=33						

MEX 30 01:38:15.3±0.5, 15°49N×93°65W, h16km±10km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.37**	**22**	*e*P	Pn	01 38 36.2	-3.8
TGIG				*e*S	Sn	01 38 52.8	-5.1
CCIG	**Comitan**	**1.65**	**62**	*e*P	Pn	01 38 40.7	-3.2
CCIG				*e*S	Sn	01 38 59.1	-6.0
CMIG	**Matias Romero**	**1.98**	**323**	*e*P	Pn	01 38 44.7	-3.5
CMIG				*e*S	Sn	01 39 07.9	-4.9
HUIG	**Huatulco**	**2.38**	**277**	*e*P	Pn	01 38 50.5	-3.2
HUIG				*e*S	Sn	01 39 17.7	-5.0

IDC 30 01:52:32.3±1.4, 2°72S×142°39E, h0km, mb3.7/7, mb1 4.0/8, mb1mx3.8/21, mbtmp3.8/8, ML4.5/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/17, Error ellipse: s-maj=54.6km s-min=20.3km az=102.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**17.67**	**168**	LR	LR	02 03 16.9	
	comp=Z,47nm,19.3s,baz=52,slow=36						
WRA	**Warramunga Arr**	**18.84**	**204**	P	Pn	01 56 54.9	+0.6
	1.6nm,0.3s,baz=21,slow=12,SNR=30						
ASAR	**Alice Springs**	**22.38**	**201**	P	P	01 57 33.0	+0.6
	3.0nm,0.6s,baz=33,slow=9.2,SNR=21						
FITZ	**Fitzroy Crossi**	**22.44**	**226**	P	P	01 57 31.1	-1.9
	2.4nm,0.5s,baz=48,slow=10,SNR=12						
STKA	**Stephens Creek**	**29.01**	**181**	LR	LR	02 11 10.6	
	comp=Z,68nm,19.7s,baz=34,slow=39						
MKAR	**Makanchi Array**	**72.07**	**321**	P	P	02 03 58.6	+0.1
	0.2nm,0.4s,baz=108,slow=7.9,SNR=4.5						
ZALV	**Zalesovo Beam**	**73.83**	**329**	P	P	02 04 09.1	+0.4
	0.4nm,0.3s,baz=116,slow=6.6,SNR=3.4						
KURBB	**Kurchatov Arra**	**75.88**	**324**	P	P	02 04 22.1	+1.4
	0.2nm,0.2s,baz=91,slow=4.8,SNR=2.9						
BVAR	**Borovoye Array**	**81.44**	**324**	P	P	02 04 50.3	-1.0
	0.4nm,0.5s,baz=98,slow=7.4,SNR=3.4						
ILAR	**Eielson Array**	**84.34**	**24**	P	P	02 05 04.8	-1.2
	0.3nm,0.6s,baz=266,slow=5.3,SNR=4.5						
LPAZ	**La Paz**	**144.41**	**123**	PKP	PKPdf	02 12 12.7	+0.3
	1.4nm,0.8s,baz=210,slow=3.1,SNR=6.5						

IDC 30 01:55:10.2±13.0, 23°67S×179°65E, h633km±132km, mb3.4/6, mb1 3.5/6, mb1mx3.2/19, mbtmp3.4/6, Error ellipse: s-maj=115.2km s-min=24.1km az=54.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.15**	**270**	P	P	02 00 40.5	+0.3
	9.0nm,0.3s,baz=95,slow=10,SNR=16						
STKA	**Stephens Creek**	**34.51**	**248**	P	P	02 01 07.5	-0.6
	2.4nm,0.4s,baz=95,slow=9.9,SNR=11						
ASAR	**Alice Springs**	**41.75**	**260**	P	P	02 02 06.8	+0.1
	3.6nm,0.5s,baz=98,slow=7.3,SNR=30						
WRA	**Warramunga Arr**	**42.10**	**266**	P	P	02 02 08.9	-0.5
	5.1nm,0.5s,baz=102,slow=8.4,SNR=16						
FITZ	**Fitzroy Crossi**	**50.52**	**266**	P	P	02 03 13.6	+1.0
	2.6nm,0.5s,baz=102,slow=12,SNR=7.7						
VNDA	**Vanda**	**54.58**	**185**	P	P	02 03 40.7	+0.3
	0.5nm,0.5s,baz=3.4,slow=7.6,SNR=8.6						
BRTR	**Keskin Array B**	**147.18**	**307**	PKPbc	PKPbc	02 13 43.4	-0.8
	0.3nm,0.4s,baz=126,slow=2.0,SNR=3.5						
TORD	**Torodi Ar. Bea**	**169.35**	**191**	PKPab	PKPab	02 15 23.6	-0.6
	0.4nm,0.8s,baz=171,slow=5.1,SNR=7.1						

IDC ***30*** *01:58:36.0±0.5, 11°.13N×140°.66E, h0km, mb4.3/20, mb1 4.5/20, mb1mx4.4/29, mbtmp4.3/20, MS3.9/12, Ms1 3.9/12, ms1mx3.6/29, Error ellipse: s-maj=22.7km s-min=11.9km az=73.0*

NEIC ***30*** *01:58:37.7±0.2, 11°.06N×140°.56E, h10km, mb4.9/25, Error ellipse: s-maj=8.0km s-min=5.6km az=67.0*

ISCJB ***30*** *01:58:39.7±1.1, 11°.02N±0°.05×140°.56E±0°.05, h34km±10km, mb4.6/75, MS4.1/20, Error ellipse: s-maj=7.6km s-min=7.5km az=18.6*

MOS ***30*** *01:58:39.4±1.1, 11°.04N×140°.41E, h33km, mb4.9/21, Error ellipse: s-maj=12.1km s-min=7.1km az=105.4*

BJI ***30*** *01:58:41.6, 11°.00N×140°.50E, h45km, mb5.0/25, mb4.7/34, Ms4.5/24, Ms7 4.2/24*

DJA ***30*** *01:58:48.7±0.9, 11°.1N±8°×14°.1E±1°.0, h98km±15km, M5.0/12, mB5.4/9, mb4.8/12, MLv5.2/1, Mw(mB)4.8/9*

ISC 30 01:58:43.0±0.4, 11°.03N±0°.05×140°.55E±0°.05, h47km±2km, n151, σ1ϑ58/198, mb4.7/75, MS4.1/20, 3C-3D, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.93**	**58**	*e*Pn	**Pn**	**01 59 56.2**	**+1.5**
GUMO				*e*S	Sn	02 00 56.0	+5.5
GUMO	**Guam**	**4.93**	**58**	Pn	**Pn**	**01 59 54.9**	**+0.3**
	17nm,0.3s,baz=209,slow=14,SNR=8.3						
SWI	**Sorong**	**14.99**	**219**	P	**P**	**02 02 15.6**	**-1.1**
	29nm,1.8s,1μm						
DAV	**Davao City (W)**	**15.29**	**256**	LR	LR	02 07 24.8	
	comp=Z,211nm,19.0s,baz=101,slow=34						
FAKI	**Fak Fak**	**16.13**	**211**	P	**P**	**02 02 30.5**	**+1.2**
	88nm,1.3s,1μm						
AAI	**Ambon**	**19.10**	**221**	P	**Pn**	**02 03 03.0**	**-0.3**
	209nm,1.2s,6μm						
MRSI	**Marisa**	**21.25**	**242**	P	**P**	**02 03 25.9**	**+0.5**
	109nm,1.4s,2μm						
PMG	**Port Moresby**	**21.34**	**162**	*e*P	**P**	**02 03 25.4**	**-0.9**
	29nm,0.9s						
PMG	**Port Moresby**	**21.34**	**162**	P	**P**	**02 03 25.9**	**-0.4**
	22nm,1.0s,baz=319,slow=8.3,SNR=5.0						
LUWI	**Luwuk**	**21.36**	**237**	P	**P**	**02 03 26.1**	**-0.5**
	183nm,1.4s,2μm						
JHJ	**Hachijo jima 2**	**22.00**	**358**	LR	LR	02 10 32.4	
	comp=Z,396nm,18.4s,baz=233,slow=33						
SSLB	**Suanglung**	**22.56**	**307**	*e*P	**P**	**02 03 39.3**	**-0.1**
	34nm,0.9s						
MYLDM	**Lahad Datu**	**22.58**	**257**	P	**P**	**02 03 41.2**	**+1.5**
	127nm,1.6s,2μm						
YHNB	**Yeheng**	**22.70**	**309**	*e*P	**P**	**02 03 40.7**	**-0.2**
	53nm,1.0s						
SKSI	**Soroako, Sulaw**	**23.38**	**236**	P	**P**	**02 03 48.5**	**+0.6**
	36nm,1.8s,650nm						
JNU	**Nakatsue**	**23.71**	**339**	P	**P**	**02 03 49.9**	**-0.9**
JNU	**Nakatsue**	**23.71**	**339**	P	**P**	**02 03 49.9**	**-0.9**
	4.9nm,0.6s,baz=332,slow=4.1,SNR=4.1						
BBSI	**Bau Bau**	**24.28**	**228**	P	**P**	**02 03 59.7**	**+3.6**
	68nm,1.1s,1μm						
TTSI	**Tana Toraja**	**24.92**	**237**	P	**P**	**02 04 04.4**	**+2.5**
	35nm,1.2s,4μm						
MJAR	**Matsushiro Arr**	**25.49**	**356**	P	**P**	**02 04 04.3**	**-2.6**
MJAR	**Matsushiro Arr**	**25.49**	**356**	P	**P**	**02 04 04.3**	**-2.6**
	1.9nm,0.7s,baz=180,slow=11,SNR=5.0						
MAJO	**Matsushiro**	**25.49**	**356**	*e*P	**P**	**02 04 05.9**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MAJO	**Matsushiro**	**25.49**	**356**	*e*P	**P**	**02 04 05.9**	**-1.0**
	comp=Z,3.0nm,0.5s						
MAT	**Matsushiro**	**25.49**	**356**	P	**P**	**02 04 09.5**	**+2.6**
MAT				S	**S**	**02 08 29.2**	**-1.8**
KSRS	**Korea Array**	**28.66**	**339**	P	**P**	**02 04 34.8**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=160,slow=7.6,SNR=5.5						
KSAR	**Wonju Array Be**	**28.66**	**339**	P	**P**	**02 04 34.8**	**-0.6**
NJ2	**Nanjing**	**28.95**	**320**	*e*P	**P**	**02 04 39.5**	**+1.5**
NJ2				pP	**pP**	**02 04 49.8**	**-0.6**
NJ2				sP	**sP**	**02 04 54.8**	**-1.3**
NJ2				S	**S**	**02 09 27.0**	**+1.3**
NJ2				sS	**sS**	**02 09 45.0**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,100nm,4.0s						
NJ2				LR	LR		
	comp=N,230nm,16.3s						
NJ2				LR	LR		
	comp=E,190nm,19.1s						
NJ2				LR	LR		
	comp=Z,330nm,14.3s						
QIZ	**Qiongzhong**	**30.66**	**289**	P	**P**	**02 04 53.0**	**-0.4**
QIZ				S	**S**	**02 09 53.5**	**+0.6**
QIZ				sS	**sS**	**02 10 11.5**	**-2.2**
QIZ				pmax	pmax		
	comp=Z,12nm,1.6s						
WRAB	**Tennant Creek**	**31.37**	**191**	*e*P	**P**	**02 04 57.1**	**-2.4**
WRAB				pmax	pmax		
	comp=Z,15nm,1.1s						
WRAB	**Tennant Creek**	**31.37**	**191**	*e*P	**P**	**02 04 57.1**	**-2.4**
	comp=Z,15nm,1.1s						
WRA	**Warramunga Arr**	**31.38**	**191**	P	**P**	**02 04 59.3**	**-0.3**
WRA	**Warramunga Arr**	**31.38**	**191**	P	**P**	**02 04 59.3**	**-0.3**
	comp=Z,6.5nm,0.9s,baz=11,slow=9.1,SNR=17						
WRA				LR	LR	02 17 55.5	
	comp=Z,175nm,18.1s,baz=35,slow=37						
USRK	**Ussuriysk Arra**	**33.87**	**349**	P	**P**	**02 05 21.6**	**+0.5**
	comp=Z,2.7nm,0.8s,baz=163,slow=10,SNR=5.9						
USRK				LR	LR	02 18 04.2	
	comp=Z,184nm,18.5s,baz=235,slow=35						
ASAR	**Alice Springs**	**35.09**	**191**	P	**P**	**02 05 31.6**	**-0.3**
ASAR				PcP	**PcP**	**02 08 04.3**	**+1.4**
ASAR	**Alice Springs**	**35.09**	**191**	P	**P**	**02 05 31.6**	**-0.3**
	comp=Z,2.7nm,0.6s,baz=17,slow=13,SNR=22						
ASAR				PcP	**PcP**	**02 08 04.3**	**+1.4**
	comp=Z,2.7nm,0.9s,baz=13,slow=4.6,SNR=5.9						
CN2	**Changchun**	**35.17**	**341**	*e*P	P	02 05 35.5	+3.1
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
GYA	**Guiyang**	**35.42**	**300**	P	**P**	**02 05 35.5**	**+0.5**
GYA				pP	**pP**	**02 05 47.8**	**+0.3**
GYA				sP	**sP**	**02 05 53.3**	**+0.2**
GYA				PP	**PP**	**02 06 57.0**	**+0.9**
GYA				S	**S**	**02 11 06.3**	**-0.6**
GYA				sS	**sS**	**02 11 28.0**	**+0.1**
GYA				ScP	**ScP**	**02 11 46.0**	**-0.3**
GYA				ScS	**ScS**	**02 15 49.5**	**-1.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.6s						
GYA				LR	LR		
	comp=N,540nm,17.2s						
GYA				LR	LR		
	comp=E,500nm,18.8s						
GYA				LR	LR		
	comp=Z,480nm,17.4s						
BJI	**Beijing**	**36.06**	**327**	P	**P**	**02 05 41.0**	**+0.9**
BJI				S	**S**	**02 11 18.3**	**+2.3**
BJI				pmax	pmax		
	comp=Z,12nm,0.5s						
BJI				pmax	pmax		
	comp=Z,140nm,5.0s						
BJI				LR	LR		
	comp=N,230nm,18.9s						
BJI				LR	LR		
	comp=E,210nm,18.0s						
BJI				LR	LR		
	comp=Z,120nm,17.7s						
KLR	**Kul'dur**	**38.78**	**351**	*e*P	P	02 05 58.0	-5.0
HHC	**Hu-ho-hao-te**	**39.16**	**324**	*e*P	**P**	**02 06 06.8**	**+0.3**
HHC				sP	**sP**	**02 06 24.5**	**-0.2**
HHC				PP	**PnPn**	**02 07 41.5**	**+1.6**
HHC				PcP	**PcP**	**02 08 14.5**	**-0.7**
HHC				ScP	**ScP**	**02 11 59.5**	**-0.5**
HHC				S	**S**	**02 12 03.8**	**+0.5**
HHC				sS	**sS**	**02 12 24.5**	**-0.1**
HHC				SS	**SS**	**02 14 49.0**	**-8.6**
HHC				ScS	**ScS**	**02 16 09.8**	**-1.8**
HHC				pmax	pmax		
	comp=Z,38nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,5.7s						
HHC				LR	LR		
	comp=N,380nm,14.7s						
HHC				LR	LR		
	comp=E,340nm,14.4s						
HHC				LR	LR		
	comp=Z,580nm,14.5s						
CD2	**Chengdu**	**39.38**	**306**	P	**P**	**02 06 08.5**	**+0.1**
CD2				pP	**pP**	**02 06 21.0**	**0.0**
CD2				sP	**sP**	**02 06 26.5**	**-0.1**
CD2				PP	**PnPn**	**02 07 43.8**	**+1.3**
CD2				PcP	**PcP**	**02 08 15.5**	**-0.6**
CD2				S	**S**	**02 12 06.3**	**-0.5**
CD2				sS	**sS**	**02 12 27.3**	**-0.7**
CD2				SS	**SS**	**02 14 54.3**	**-7.9**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,230nm,5.2s						
CMAR	**Chiang Mai Arr**	**40.83**	**285**	P	**P**	**02 06 20.8**	**+0.3**
CMAR	**Chiang Mai Arr**	**40.83**	**285**	P	**P**	**02 06 20.8**	**+0.3**
	comp=Z,9.2nm,1.0s,baz=92,slow=6.5,SNR=32						
LZH	**Lanzhou**	**41.49**	**313**	*e*P	**P**	**02 06 24.0**	**-1.9**
LZH				pP	**pP**	**02 06 35.8**	**-2.8**
LZH				sP	**sP**	**02 06 40.5**	**-3.7**
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
DZM	**Mont Dzumac**	**41.56**	**142**	P	**P**	**02 06 25.1**	**-1.4**
DZM	**Mont Dzumac**	**41.56**	**142**	P	**P**	**02 06 25.1**	**-1.4**
	comp=Z,12nm,0.9s,baz=320,slow=23,SNR=5.6						
PSI	**Prapat**	**42.08**	**262**	P	**P**	**02 06 28.7**	**-2.2**
	comp=Z,17nm,1.0s						
STKA	**Stephens Creek**	**42.67**	**179**	P	**P**	**02 06 34.5**	**-0.7**
STKA	**Stephens Creek**	**42.67**	**179**	P	**P**	**02 06 34.5**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=343,slow=8.0,SNR=3.8						
STKA				LR	LR	02 24 56.2	
	comp=Z,116nm,18.8s,baz=214,slow=37						
GTA	**Gaotai**	**45.85**	**315**	*e*P	**P**	**02 07 01.3**	**+0.5**
GTA				pP	**pP**	**02 07 14.5**	**+0.8**
GTA				sP	**sP**	**02 07 19.5**	**+0.2**
GTA				PcP	**PcP**	**02 08 38.0**	**+0.4**
GTA				S	**S**	**02 13 43.8**	**+2.0**
GTA				sS	**sS**	**02 14 04.8**	**+1.4**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,110nm,6.2s						
GTA				LR	LR		
	comp=N,250nm,16.6s						
GTA				LR	LR		
	comp=E,310nm,17.6s						
GTA				LR	LR		
	comp=Z,120nm,18.1s						
ULN	**Ulaanbaatar**	**46.23**	**929**	P	**P**	**02 07 05.2**	**+1.5**
SONM	**Songino Array**	**46.54**	**329**	P	**P**	**02 07 05.7**	**-0.4**
SONM	**Songino Array**	**46.54**	**329**	P	**P**	**02 07 05.7**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=133,slow=7.0,SNR=10						
MSVF	**Nonsavu**	**46.78**	**127**	*e*P	**P**	**02 07 08.8**	**+0.5**
MSVF				pmax	pmax		
	comp=Z,15nm,0.9s						
MSVF	**Nonsavu**	**46.78**	**127**	*e*P	**P**	**02 07 08.8**	**+0.5**
	comp=Z,15nm,0.9s						
SHL	**Shillong**	**48.14**	**294**	*ex*	x	02 07 20.0	
ZAK	**Zakamensk**	**49.74**	**329**	*e*P	**P**	**02 07 30.2**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TLY	**Talaya**	**50.39**	**331**	*e*P	**P**	**02 07 36.1**	**+0.5**
YAK	**Yakutsk**	**51.52**	**353**	*e*P	**P**	**02 07 43.2**	**-0.6**
MOY	**Mondy**	**51.67**	**330**	*e*P	**P**	**02 07 45.5**	**+0.2**
HVS	**Khovu-Aksy**	**55.20**	**326**	*e*P	**P**	**02 08 10.6**	**-0.6**
HVS				pmax	pmax		
	comp=Z,22nm,1.2s						
WMQ	**Urumqi**	**55.92**	**316**	P	**P**	**02 08 18.0**	**+1.5**
WMQ				pP	**pP**	**02 08 31.0**	**+1.3**
WMQ				sP	**sP**	**02 08 36.0**	**+0.9**
WMQ				PcP	**PcP**	**02 09 16.0**	**+1.3**
WMQ				PP	**PP**	**02 10 25.0**	**+3.5**
WMQ				ScP	**ScP**	**02 13 10.0**	**-0.1**
WMQ				S	**S**	**02 16 01.0**	**-0.1**
WMQ				ScS	**ScS**	**02 18 00.0**	**-1.9**
WMQ				SS	**SS**	**02 19 48.0**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,16nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,100nm,5.0s						
WMQ				LR	LR		
	comp=N,160nm,16.0s						
WMQ				LR	LR		
	comp=E,200nm,16.0s						
WMQ				LR	LR		
	comp=Z,220nm,16.0s						
BILL	**Bilibino**	**59.42**	**11**	*i*P	**P**	**02 08 39.3**	**-1.2**
BILL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HYB	**Hyderabad**	**60.22**	**284**	*i* P	**P**	**02 08 47.5**	**+0.6**
MK31	**Makanchi Array**	**60.46**	**318**	*e*P	**P**	**02 08 47.7**	**-0.4**
MK31	**Makanchi Array**	**60.46**	**318**	*e*P	**P**	**02 08 47.7**	**-0.4**
MKAR	**Makanchi Array**	**60.46**	**318**	*ce*P	**P**	**02 08 47.9**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**60.46**	**318**	*e*P	**P**	**02 08 48.0**	**-0.2**
MKAR	**Makanchi Array**	**60.46**	**318**	P	**P**	**02 08 47.9**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=91,slow=9.7,SNR=15						
ZALV	**Zalesovo Beam**	**61.31**	**326**	P	**P**	**02 08 52.5**	**-1.1**
ZALV	**Zalesovo Beam**	**61.31**	**326**	P	**P**	**02 08 52.5**	**-1.1**
ZALV	**Zalesovo Beam**	**61.31**	**326**	P	**P**	**02 08 52.5**	**-1.1**
	comp=Z,1.3nm,0.7s,baz=123,slow=6.5,SNR=7.7						
NVS	**Novosibirsk**	**62.50**	**327**	*e*P	**P**	**02 09 00.8**	**-0.8**
NVS				pmax	pmax		
	comp=Z,28nm,2.2s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.5s						
KSH	**Kashi**	**63.48**	**309**	*e*P	**P**	**02 09 11.3**	**+2.7**
KSH				pP	**pP**	**02 09 24.5**	**+2.5**
KSH				sP	**sP**	**02 09 29.8**	**+2.4**
KSH				PcP	**PcP**	**02 09 47.0**	**+2.0**
KSH				PP	**PP**	**02 11 33.0**	**+4.4**
KSH				ScP		02 13 46.0	
KSH				PcS		02 13 49.5	
KSH				S	**S**	**02 17 39.5**

	comp=Z,8.0nm,1.0s								
COLA	**College**	**72.29**	**25**	*e*P		**P**	**02 10 01.7**	**-1.6**
ILAR	**Eielson Array**	**72.67**	**25**	P		**P**	**02 10 03.5**	**-2.1**
ILAR	**Eielson Array**	**72.67**	**25**	P		**P**	**02 10 03.5**	**-2.1**
	comp=Z,1.6nm,0.6s,baz=251,slow=5.5,SNR=20								
PAX	**Paxson**	**72.97**	**27**	*e*P		**P**	**02 10 06.4**	**-1.2**
PAX				pmax		pmax			
	comp=Z,6.0nm,1.0s								
PAX	**Paxson**	**72.97**	**27**	*e*P		**P**	**02 10 06.4**	**-1.2**
	comp=Z,6.3nm,1.0s								
BMRM	**Bremner River**	**73.08**	**29**	*e*P		**P**	**02 10 07.7**	**-0.5**
	comp=Z,14nm,1.2s								
DOT	**Dot Lake**	**73.70**	**27**	*e*P		**P**	**02 10 10.9**	**-0.9**
	comp=Z,14nm,0.8s								
ABKAR	**Akbulak array**	**75.61**	**318**	*e*P		**P**	**02 10 22.5**	**-0.5**
	comp=Z,0.3nm,0.3s								
ARU	**Arti**	**76.46**	**326**	*d i*P		**P**	**02 10 27.6**	**-0.1**
ARU							02 13 15.9		
ARU				S		**S**	**02 20 12.6**	**+2.9**
ARU				pmax		pmax			
	comp=Z,15nm,2.5s								
ARU				MLR		MLR			
	comp=Z,151nm,18.0s								
DLBC	**Dease Lake**	**80.40**	**32**	*e*P		**P**	**02 10 49.6**	**0.0**
YKW3	**Yellowknife Ar**	**87.02**	**27**	*e*P		**P**	**02 11 22.9**	**-0.3**
	comp=Z,0.1nm,0.8s								
YKA	**Yellowknife Ar**	**87.05**	**27**	P		**P**	**02 11 22.9**	**-0.4**
YKA	**Yellowknife Ar**	**87.05**	**27**	P		**P**	**02 11 22.9**	**-0.4**
	comp=Z,3.6nm,0.8s,baz=290,slow=5.1,SNR=39								
HUMO	**Hull Mountain**	**87.35**	**47**	*e*P		**P**	**02 11 25.9**	**+0.5**
	comp=Z,17nm,1.5s								
ZEI	**Tsey**	**87.43**	**313**	*e*P		**P**	**02 11 24.1**	**-1.8**
ZEI				pmax		pmax			
	comp=Z,9.0nm,1.6s								
YBH	**Yreka Blue Hor**	**87.72**	**48**	*e*P		**P**	**02 11 27.7**	**+0.5**
	comp=Z,11nm,1.3s								
KIV	**Kislovodsk**	**88.02**	**314**	*e*P		**P**	**02 11 27.7**	**-0.9**
KIV				*e*			02 14 52.3		
KIV				*e*SS		SS	02 28 01.0	+3.7
KIV				pmax		pmax			
	comp=Z,2.0nm,1.0s								
WDC	**Whiskeytown Da**	**88.10**	**49**	*e*P		**P**	**02 11 29.0**	**+0.1**
WDC				pmax		pmax			
	comp=Z,9.0nm,1.3s								
WDC	**Whiskeytown Da**	**88.10**	**49**	*e*P		**P**	**02 11 29.0**	**+0.1**
	comp=Z,9.4nm,1.3s								
ARCES	**ARCESS Array B**	**88.18**	**341**	P		**P**	**02 11 27.1**	**-1.5**
ARCES	**ARCESS Array B**	**88.18**	**341**	P		**P**	**02 11 27.1**	**-1.5**
	comp=Z,3.7nm,0.9s,baz=74,slow=6.4,SNR=7.1								
ARCES				LR		LR	02 55 24.8		
	comp=Z,62nm,18.9s,baz=216,slow=39								
JOF	**Joensuu**	**88.80**	**334**	*e*P		**P**	**02 11 29.0**	**-2.7**
JOF				pmax		pmax			
	comp=Z,2.0nm,0.8s								
JOF	**Joensuu**	**88.80**	**334**	*e*p		**P**	**02 11 29.0**	**-2.7**
	comp=Z,1.9nm,0.8s								
OBN	**Obninsk**	**88.89**	**326**	⇓*e*P		**P**	**02 11 32.1**	**-0.2**
OBN				pmax		pmax			
	comp=Z,8.0nm,0.9s								
OBN				MLR		MLR			
	comp=Z,100nm,17.0s								
MOD	**Modoc**	**89.43**	**47**	*e*P		**P**	**02 11 36.1**	**+0.8**
	comp=Z,6.4nm,1.1s								
BEKR	**Beckworth**	**89.89**	**49**	*e*P		**P**	**02 11 37.9**	**+0.3**
	comp=Z,8.5nm,1.4s								
NEW	**Newport**	**89.92**	**41**	*e*P		**P**	**02 11 37.6**	**+0.2**
	comp=Z,13nm,1.8s								
CMB	**Columbia Colle**	**90.32**	**51**	*e*P		**P**	**02 11 39.8**	**+0.4**
CMB				pmax		pmax			
	comp=Z,18nm,1.8s								
CMB	**Columbia Colle**	**90.32**	**51**	*e*P		**P**	**02 11 39.8**	**+0.4**
	comp=Z,18nm,1.8s								
WVOR	**Wild Horse Val**	**90.49**	**47**	*e*P		**P**	**02 11 41.0**	**+0.7**
WVOR				pmax		pmax			
	comp=Z,8.0nm,1.3s								
WVOR	**Wild Horse Val**	**90.49**	**47**	*e*P		**P**	**02 11 41.0**	**+0.7**
	comp=Z,8.1nm,1.3s								
KAF	**Kangasniemi**	**91.25**	**335**	*e*P		P	02 11 39.7	-3.4
KAF				pmax		pmax			
	comp=Z,2.0nm,0.7s								
KAF	**Kangasniemi**	**91.25**	**335**	*e*p		P	02 11 39.7	-3.4
	comp=Z,1.8nm,0.7s								
FINES	**FINESS Array B**	**91.64**	**334**	P		**P**	**02 11 43.0**	**-2.0**
FINES	**FINESS Array B**	**91.64**	**334**	P		**P**	**02 11 43.0**	**-2.0**
	comp=Z,1.6nm,0.7s,baz=60,slow=5.5,SNR=6.9								
FINES				LR		LR	02 55 33.7		
	comp=Z,82nm,18.2s,baz=69,slow=37								
NVAR	**Mina Array Bea**	**91.80**	**50**	P		**P**	**02 11 45.3**	**-1.3**
NVAR	**Mina Array Bea**	**91.80**	**50**	P		**P**	**02 11 45.3**	**-1.3**
	comp=Z,2.1nm,0.8s,baz=262,slow=6.0,SNR=14								
MFID	**Camas Ranch**	**92.20**	**45**	*e*P		**P**	**02 11 48.1**	**0.0**
	comp=Z,5.6nm,1.0s								
HLID	**Hailey**	**93.13**	**45**	*e*P		**P**	**02 11 53.0**	**+0.4**
	comp=Z,3.3nm,1.0s								
ELK	**Elko**	**93.42**	**48**	*e*pP		pP	02 12 07.9	-0.1
MCMT	**McKenzie Canyo**	**93.79**	**43**	*e*P		**P**	**02 11 55.5**	**-0.1**
AKASG	**Malin Array Be**	**94.61**	**324**	LR		LR	02 57 37.1		
	comp=Z,66nm,19.8s,baz=50,slow=37								
DUG	**Dugway**	**95.34**	**47**	*e*P		**P**	**02 12 03.3**	**+0.6**
DUG				pmax		pmax			
	comp=Z,42nm,2.6s								
DUG	**Dugway**	**95.34**	**47**	*e*P		**P**	**02 12 03.3**	**+0.6**
	comp=Z,42nm,2.6s								
FFC	**Flin Flon**	**96.20**	**31**	*c e*P		**P**	**02 12 06.1**	**+0.1**
HFS	**Hagfors**	**97.48**	**336**	LR		LR	03 00 33.7		
	comp=Z,62nm,18.8s,baz=289,slow=38								
NOA	**NORSAR Array B**	**97.86**	**338**	LR		LR	03 01 08.0		
	comp=Z,51nm,18.6s,baz=205,slow=38								
MLR	**Muntele Rosu**	**98.77**	**320**	LR		LR	03 01 42.8		
	comp=Z,17nm,18.1s,baz=86,slow=38								
KOLS	**Kolonicke sedl**	**99.43**	**324**	*e*P		**Pdif**	**02 12 20.1**	**-0.6**
KOLS	**Kolonicke sedl**	**99.43**	**324**	PDIF		**Pdif**	**02 12 20.1**	**-0.6**
CRVS	**Cervenica-Dubn**	**99.91**	**324**	*e*P		**Pdif**	**02 12 21.8**	**-1.1**
CRVS	**Cervenica-Dubn**	**99.91**	**324**	PDIF		**Pdif**	**02 12 21.8**	**-1.1**
TSUM	**Tsumeb**	**124.54**	**254**	PKPdf		**PKPdf**	**02 17 39.0**	**+0.8**
TORD	**Torodi Ar. Bea**	**132.62**	**299**	PKP		**PKPdf**	**02 17 54.1**	**+0.5**
TORD	**Torodi Ar. Bea**	**132.62**	**299**	PKP		**PKPdf**	**02 17 54.1**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=69,slow=2.4,SNR=4.3								
PLCA	**Paso Flores**	**139.68**	**143**	PKP		**PKPdf**	**02 18 07.0**	**+0.8**
PLCA	**Paso Flores**	**139.68**	**143**	PKP		**PKPdf**	**02 18 07.0**	**+0.8**
	comp=Z,2.8nm,0.9s,baz=177,slow=4.8,SNR=3.6								
LCO	**Las Campanas**	**145.78**	**126**	*e*PKPdf		**PKPab**	**02 18 18.3**	**-0.1**
LVC	**Limon Verde**	**149.61**	**116**	*e*PKPbc		**PKPbc**	**02 18 29.6**	**+1.0**
LPAZ	**La Paz**	**151.66**	**104**	PKP		**PKPdf**	**02 18 29.0**	**+1.3**
LPAZ				*e*PKPdf		**PKPbc**	**02 18 29.2**	**-4.9**
LPAZ				*e*PKPbc		**PKiKP**	**02 18 35.3**	**+0.8**
LPAZ	**La Paz**	**151.66**	**104**	PKP		**PKPdf**	**02 18 29.0**	**+1.3**
	comp=Z,1.6nm,1.1s,baz=359,slow=3.1,SNR=4.2								
LPAZ				PKPbc		**PKiKP**	**02 18 35.4**	**+0.9**
	comp=Z,5.5nm,1.0s,baz=308,slow=2.4,SNR=18								
SIV	**San Ignacio**	**158.41**	**106**	PKPab		**PKPab**	**02 19 11.0**	**+0.1**
SIV	**San Ignacio**	**158.41**	**106**	PKPab		**PKPab**	**02 19 11.0**	**+0.1**
	comp=Z,2.1nm,0.9s,baz=253,slow=6.8,SNR=4.1								

*JMA **30** 02:00:56.1±0.4, 37.26N×135.01E, h385km±4km, M3.0*
*IDC **30** 02:00:56.6±2.0, 37.10N×135.10E, h391km±25km, mb2.8/1, mb1 2.7/4, mb1mx2.4/30, mbtmp2.7/4, Error ellipse: s-maj=49.1km s-min=35.8km az=16.0*
*ISCJB **30** 02:00:57.1±0.6, 37.27N±0.09×135.09E±0.08, h372km, mb3.0/1, Error ellipse: s-maj=12.6km s-min=8.5km az=5.7*
ISC 30 02:00:57.0±1.0,**37.2N**±0.1×**135.09E**±0.07,**h372**km,**n16,** σ1**9**/**15**/**19**,**Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JKY	**Yasaka**	**1.60**	**180**	P		P	**Pn**	**02 01 48.6**	**+0.6**
JKY				*e*S		S	**S**	**02 02 29.4**	**+0.4**
JKSM	**Kasumi**	**1.68**	**192**	P		P	**Pn**	**02 01 48.8**	**+0.4**
JWT	**Wachi**	**1.96**	**173**	P		P	**Pn**	**02 01 51.0**	**+0.8**
JGM	**Miyama**	**2.02**	**139**	P		P	**Pn**	**02 01 51.3**	**+0.7**
MJAR	**Matsushiro Arr**	**2.59**	**104**	P		P	**Pn**	**02 01 55.9**	**+1.2**
	0.8nm,0.3s,baz=283,slow=9.4,SNR=8.2								
JSD	**Sado**	**2.64**	**71**	P		P	**Pn**	**02 01 56.2**	**+1.2**
JHS	**Saijyo**	**2.74**	**216**	P		P	**Pn**	**02 01 56.2**	**+0.2**
JIE	**Ise**	**3.12**	**155**	P		P	**Pn**	**02 02 00.3**	**+1.1**
JHK	**Hiroka**	**3.13**	**89**	P		P	**Pn**	**02 02 00.0**	**+0.8**
JKN2	**Miekihoku**	**3.14**	**162**	P		P	**Pn**	**02 01 59.9**	**+0.6**
JAG	**Ashikaga**	**3.59**	**102**	P		P	**Pn**	**02 02 04.6**	**+1.2**
JAG				*e*S		S	**S**	**02 02 57.9**	**+0.9**
JYT	**Yasato**	**4.22**	**102**	P		P	**Pn**	**02 02 10.1**	**+0.6**
JHO	**Hitachi**	**4.43**	**96**	P		P	**Pn**	**02 02 11.5**	**-0.2**
JHO				S		S	**S**	**02 03 09.3**	**-2.9**
KSRS	**Korea Array**	**5.71**	**274**	P		P	**Pn**	**02 02 26.4**	**+1.1**
	0.6nm,0.3s,baz=93,slow=12,SNR=15								
USRK	**Ussuriysk Arra**	**7.34**	**342**	P		P	**Pn**	**02 02 45.3**	**+0.6**
	0.8nm,0.3s,baz=156,slow=11,SNR=12								
KURBB	**Kurchatov Arra**	**41.88**	**307**	P		P	**Pn**	**02 08 10.7**	**-1.4**
	0.3nm,0.2s,baz=77,slow=8.7,SNR=4.5								

*IDC **30** 02:34:58.3±2.3, 50.14N×87.88E, h0km, mb3.5/1, mb1 3.5/5, mb1mx3.2/31, mbtmp3.5/5, ML3.2/4, Error ellipse: s-maj=23.5km s-min=14.1km az=97.0*
*NNC **30** 02:35:01.3±2.7, 49.86N×87.57E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=20.9km s-min=12.9km az=73.0*
ISC 30 02:35:00.1±2.1,**50.16N**±0.07×**87.9E**±0.1,**h11**km,**n9,** σ1**9**/**05**/**14**,**6C-3D**,**Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**4.24**	**335**	⇑Pn		Pn	**Pn**	**02 36 04.8**	**+0.3**
	0.7nm,0.3s,baz=155,slow=14,SNR=6.2								
ZALV				⇓Sn		Sn	**Sn**	**02 36 56.0**	**+2.0**
	1.0nm,0.3s,baz=157,slow=21,SNR=5.4								
ZALV				Lg		Lg		02 37 13.4	
	2.5nm,0.3s,baz=152,slow=26,SNR=6.5								
MK31	**Makanchi Array**	**5.02**	**230**	⇑Pn		Pn	**Pn**	**02 36 16.3**	**+1.0**
	1.8nm,0.4s,baz=60,slow=13,SNR=110								
MK31				⇓Sn		Sn	**Sn**	**02 37 14.2**	**+0.9**
	8.5nm,0.8s,baz=66,slow=19,SNR=10								
MK31				⇓Lg		Lg		02 37 30.9	
	13nm,0.7s,baz=53,slow=28,SNR=4.0								
MKAR	**Makanchi Array**	**5.02**	**230**	Pn		Pn	**Pn**	**02 36 16.4**	**+1.1**
	2.3nm,0.3s,baz=50,slow=13,SNR=88								
MKAR				Sn		Sn	**Sn**	**02 37 13.4**	**+0.1**
	2.2nm,0.3s,baz=56,slow=21,SNR=16								
MKAR				Lg		Lg		02 37 34.5	
	1.6nm,0.3s,baz=50,slow=29,SNR=8.3								
KURK	**Kurchatov**	**5.94**	**279**	⇑Pn		Pn	**Pn**	**02 36 27.7**	**-0.2**
	5.1nm,0.7s								
KURK				⇑Sn		Sn	**Sn**	**02 37 36.7**	**+0.7**
	5.4nm,0.6s								
KURK				⇑Lg		Lg		02 38 05.5	
	11nm,0.6s								
KURBB	**Kurchatov Arra**	**6.00**	**278**	⇑Pn		Pn	**Pn**	**02 36 28.9**	**+0.2**
	1.2nm,0.8s								
KURBB				⇓Sn		Sn	**Sn**	**02 37 38.7**	**+1.3**
	2.5nm,0.6s								
KURBB				⇑Lg		Lg		02 38 06.8	
	4.9nm,0.7s								
KURBB	**Kurchatov Arra**	**6.00**	**278**	Pn		Pn	**Pn**	**02 36 29.2**	**+0.5**
	0.5nm,0.3s,baz=89,slow=14,SNR=111								
KURBB				Sn		Sn	**Sn**	**02 37 36.6**	**-0.8**
	0.3nm,0.3s,baz=87,slow=28,SNR=6.4								
KURBB				Lg		Lg		02 38 10.6	
	0.4nm,0.3s,baz=86,slow=33,SNR=8.7								
BVAR	**Borovoye Array**	**11.25**	**291**	Sn		Sn		02 39 39.2	-7.2
	0.2nm,0.3s,baz=98,slow=21,SNR=3.8								
AKTO	**Aktyubinsk**	**19.03**	**282**	P		P	**P**	**02 39 21.3**	**-0.5**
	0.0nm,0.3s,baz=88,slow=8.8,SNR=4.0								
BRTR	**Keskin Array B**	**38.99**	**276**	P		P	**P**	**02 42 25.0**	**-1.4**
	0.4nm,0.5s,baz=56,slow=5.2,SNR=4.0								

*NSSC **30** 02:37:46.2±1.4, 32.67N×35.18E, h4km±6km, MD1.2, ML2.4*
*ISCJB **30** 02:37:47.2±0.3, 32.67N±0.02×35.19E±0.03, h14km±2km, Error ellipse: s-maj=4.8km s-min=2.5km az=21.3*
*CSEM **30** 02:37:47.4±0.1, 32.68N×35.22E, h12km, ML2.8, Error ellipse: s-maj=3.2km s-min=1.8km az=108.0*
*GRAL **30** 02:37:48.4±0.3, 32.70N×35.29E, h2km±2km, MD3.3*
ISC 30 02:37:47.4±0.9,**32.70N**±0.02×**35.22E**±0.03,**h17**km±6km, **n49,** σ0**9**/**56**/**72**,**1C-6D**,**Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BLGI	**Bet Lehem HaGe**	**0.04**	**329**	Pg		Pg	**Pg**	**02 37 50.9**	**+0.3**
OFRI	**'Ofer**	**0.21**	**249**	Pg		Pg	**Pg**	**02 37 52.3**	**-0.2**
MMLI	**Mount Malkishu**	**0.31**	**146**	Pg		Pg	**Pg**	**02 37 53.8**	**-0.3**
MMLI				Sg		Sg	**Sg**	**02 37 58.3**	**-0.3**
MMA0	**Mount Meron ar**	**0.35**	**26**	Pg		Pg	**Pg**	**02 37 54.6**	**-0.3**
MMA0				Sg		Sb	**Sb**	**02 38 00.8**	**+0.2**
MMC7	**Mount Meron ar**	**0.36**	**24**	Pg		Pg	**Pg**	**02 37 55.1**	**+0.2**
HNTI	**Hanita**	**0.39**	**354**	Pg		Pb	**Pg**	**02 37 55.9**	**+0.1**
HNTI				Sg		Sb	**Sb**	**02 38 01.9**	**+0.4**
SLTI	**Sal'it**	**0.48**	**198**	Pg		Pg	**Pg**	**02 37 56.6**	**-0.4**
SLTI				Sg		Sg	**Sg**	**02 38 03.4**	**-0.1**
HMDT	**Nahal Hemdat**	**0.51**	**149**	Pg		Pg	**Pg**	**02 37 57.4**	**-0.3**
HMDT				Sg		Sb	**Sb**	**02 38 04.9**	**-0.1**
KSHT	**Keshet**	**0.57**	**60**	Pg		Pb	**Pg**	**02 37 59.2**	**+0.2**
KSDI	**Kefar Szold**	**0.62**	**37**	Pg		Pg	**Pg**	**02 37 59.6**	**-0.1**
TCHB	**Talchebab**	**0.63**	**92**	⇓*e*P		Pg	**Pg**	**02 37 59.8**	**-0.1**
TCHB						AML	AML	02 38 00.4	
	comp=Z,174nm,0.2s								
TCHB	**Talchebab**	**0.63**	**92**	*i* P		Pg	**Pg**	**02 37 59.8**	**-0.1**
TCHB				*e*S		Sb	**Sb**	**02 38 08.7**	**+0.1**
TCHB						AML	AML	02 38 14.5	
	comp=E,204nm,0.2s								
TCHB	**Talchebab**	**0.63**	**92**	*i* P		Pg	**Pg**	**02 37 59.8**	**-0.1**
	SNR=93								
TCHB				*e*S		Sb	**Sb**	**02 38 08.7**	**+0.1**
	comp=E,204nm,0.2s,SNR=97								
MATL	**Matarih**	**0.80**	**7**	*e*P		Pb	**Pb**	**02 38 02.5**	**-0.3**
MATL	**Matarih**	**0.80**	**7**	*e*P		Pb	**Pb**	**02 38 02.5**	**-0.3**
BRBR	**Barbar**	**0.94**	**41**	⇓*e*P		Pb	**Pb**	**02 38 05.2**	**-0.2**
BRBR						AML	AML	02 38 20.5	
	comp=Z,200nm,0.4s								
BRBR	**Barbar**	**0.94**	**41**	*i* P		Pb	**Pb**	**02 38 05.2**	**-0.2**
BRBR				*e*S		Sb	**Sb**	**02 38 18.2**	**+0.5**
BRBR						AML	AML	02 38 21.5	
	comp=N,118nm,0.3s								
RCY	**Rachaya**	**0.95**	**33**	*e*P		Pb	**Pb**	**02 38 04.9**	**-0.6**
RCY				*e*S		Sb	**Sb**	**02 38 17.0**	**-0.9**
DSI	**Dead Sea**	**1.13**	**173**	Pg		Pn	**Pn**	**02 38 07.1**	**-1.3**
DSI				Sg		Sn	**Sn**	**02 38 23.6**	**+0.1**
TOTH	**TOTAH**	**1.21**	**57**	⇓*e*P		Pn	**Pn**	**02 38 09.7**	**0.0**
TOTH						AML	AML	02 38 27.5	
	comp=Z,102nm,0.2s								
TOTH	**TOTAH**	**1.21**	**57**	*i* P		Pn	**Pn**	**02 38 09.7**	**0.0**
TOTH				*i* S		Sn	**Sn**	**02 38 25.9**	**+0.3**
TOTH	**TOTAH**	**1.21**	**57**	*i* P		Pn	**Pn**	**02 38 09.6**	**0.0**
	SNR=66								
TOTH				*i* S		Sn	**Sn**	**02 38 26.0**	**+0.3**
	SNR=62								
QASN	**Qassioun**	**1.22**	**46**	⇑*e*P		Pg	**Pg**	**02 38 10.6**	**-0.4**
QASN				*e*S		Sg	**Sg**	**02 38 26.8**	**-0.2**
QASN						AML	AML	02 38 29.4	
	comp=Z,343nm,0.2s								
QASN	**Qassioun**	**1.22**	**46**	*e*P		Pb	**Pb**	**02 38 10.5**	**+0.4**
QASN				*e*S		Sg	**Sg**	**02 38 26.9**	**-0.1**
QASN						AML	AML	02 38 28.0	
	comp=E,113nm,0.2s								
QASN	**Qassioun**	**1.22**	**46**	*e*P		Pb	**Pb**	**02 38 10.5**	**+0.4**
	SNR=66								
QASN				*e*S		Sg	**Sg**	**02 38 26.9**	**-0.1**
	comp=E,113nm,0.2s,SNR=62								
BHL	**Bhannes**	**1.26**	**17**	*e*P		Pn	**Pn**	**02 38 10.3**	**+0.1**
BHL				*e*S		Sn	**Sn**	**02 38 26.9**	**0.0**
BHL	**Bhannes**	**1.26**	**17**	*e*P		Pn	**Pn**	**02 38 10.4**	**+0.1**
BHL				*e*S		Sn	**Sn**	**02 38 26.9**	**0.0**
SALA	**Sala**	**1.28**	**89**	⇓*e*P		Pn	**Pn**	**02 38 10.8**	**+0.1**
SALA						AML	AML	02 38 28.4	
	comp=Z,162nm,0.2s								
SALA						AML	AML	02 38 28.8	
	comp=Z,226nm,0.6s								
SALA	**Sala**	**1.28**	**89**	*i* P		Pn	**Pn**	**02 38 10.7**	**+0.1**
SALA				*e*S		Sb	**Sb**	**02 38 27.4**	**+0.1**
SALA						AML	AML	02 38 30.3	
	comp=N,137nm,0.3s								
SALA	**Sala**	**1.28**	**89**	*i* P		Pn	**Pn**	**02 38 10.7**	**+0.1**
	SNR=66								
SALA				*e*S		Sb	**Sb**	**02 38 27.4**	**+0.1**
	comp=N,137nm,0.3s,SNR=62								
YTIR	**Yattir**	**1.33**	**184**	Pn		Pn	**Pn**	**02 38 10.3**	**-1.0**
MZDA	**Masada**	**1.39**	**175**	Pn		Pn	**Pn**	**02 38 11.4**	**-0.5**
MZDA				Sn		Sb	**Sb**	**02 38 30.1**	**-0.1**
HWQ	**Hawqa**	**1.69**	**21**	*e*P		Pb	**Pb**	**02 38 17.3**	**-0.8**
HWQ	**Hawqa**	**1.69**	**21**	*e*P		Pb	**Pb**	**02 38 17.3**	**-0.8**
RTMI	**Retamim**	**1.70**	**195**	Pn		Pn	**Pn**	**02 38 16.5**	**+0.3**
ZALF	**Zalf**	**1.80**	**82**	⇓*e*P		Pn	**Pn**	**02 38 18.6**	**+1.0**
ZALF				*e*S		Sb	**Sb**	**02 38 41.4**	**-0.6**
ZALF	**Zalf**	**1.80**	**82**	*i* P		Pn	**Pn**	**02 38 18.6**	**+1.0**
ZALF	**Zalf**	**1.80**	**82**	*i* P		Pn	**Pn**	**02 38 18.6**	**+1.0**
	SNR=51								
KZIT	**Kziot**	**1.92**	**202**	Pn		Pn	**Pn**	**02 38 19.7**	**+0.5**
HAWK	**Haweek**	**2.07**	**28**	⇓*e*P		Pb	**Pb**	**02 38 23.4**	**-1.2**
RMNI	**Mount Ramon**	**2.13**	**191**	Pn		Pn	**Pn**	**02 38 23.6**	**+1.4**
PRNI	**Paran**	**2.34**	**185**	Pn		Pn	**Pn**	**02 38 26.5**	**+1.4**
KRMI	**Paran Flat**	**2.60**	**189**	Pn		Pn	**Pn**	**02 38 29.1**	**+0.4**
AMAG	**Maghara**	**2.67**	**220**	P		Pn	**Pn**	**02 38 29.8**	**+0.2**
AMAG				S		Sn	**Sn**	**02 39 01.6**	**0.0**
HNKL	**Nakhl**	**2.95**	**201**	P		Pn	**Pn**	**02 38 34.0**	**+0.5**
HNKL				S		Sn	**Sn**	**02 39 08.9**	**+0.3**
HBST	**Basata**	**3.49**	**187**	P		Pn	**Pn**	**02 38 42.1**	**+1.2**
SUZ		**3.50**	**216**	P		Pn	**Pn**	**02 38 41.9**	**+0.8**
HDHB	**Dhahab**	**3.99**	**188**	P		Pn	**Pn**	**02 38 49.2**	**+1.4**
HKAT	**Jabal Katrina**	**4.29**	**195**	P		Pn	**Pn**	**02 38 52.6**	**+0.5**

*IDC **30** 03:26:14.0±0.9, 23.95N×123.33E, h0km, mb3.6/9, mb1 3.7/9, mb1mx3.6/25, mbtmp3.6/9, MS3.3/2, Ms1 3.3/2, ms1mx2.5/30, Error ellipse: s-maj=38.7km s-min=19.5km az=67.0*
*ISCJB **30** 03:26:18.0±1.2, 23.89N±0.09×123.38E±0.07, h41km±10km, mb3.4/9, MS3.2/2, Error ellipse: s-maj=16.3km s-min=9.2km az=21.9*
*JMA **30** 03:26:17.9±0.2, 23.84N×123.38E, h27km±3km, M3.9*
ISC 30 03:26:18.4±1.5,**23.9N**±0.1×**123.38E**±0.06,**h29**km±10km, **n16,** σ0**8**/**69**/**20**,**mb3.5**/9,**Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.40**	**73**	P		P	**Pb**	**03 26 27.1**	**-0.1**
HATJ				S		S	**Sb**	**03 26 33.6**	**+0.3**
IRIF	**Iriomote-Funau**	**0.51**	**39**	P		P	**Pn**	**03 26 29.2**	**-0.5**
IRIF				S		Sn	**Sn**	**03 26 37.8**	**+0.4**
YOJ	**Yonaguni jima**	**0.62**	**327**	P		P	**Pn**	**03 26 31.4**	**+0.1**
YOJ				S		Sn	**Sn**	**03 26 41.0**	**+0.8**
JKRS	**Kuro-shima**	**0.65**	**62**	P		P	**Pn**	**03 26 31.4**	**-0.2**
JKRS				S		Sn	**Sn**	**03 26 41.2**	**+0.4**
JIJ	**Ishigaki jima**	**0.81**	**58**	P		P	**Pn**	**03 26 33.8**	**-0.1**
JIJ				S		Sn	**Sn**	**03 26 45.0**	**0.0**
JTJ	**Tarama**	**1.39**	**60**	P		P	**Pn**	**03 26 42.3**	**+0.5**
GUMO	**Guam**	**22.77**	**113**	LR		LR		03 38 48.6	
	comp=Z,46nm,21.2s,baz=96,slow=33								
SONM	**Songino Array**	**27.41**	**335**	P		P	**P**	**03 32 00.1**	**-1.4**
	0.2nm,0.4s,baz=141,slow=9.6,SNR=3.9								
MKAR	**Makanchi Array**	**39.92**	**315**	P		P	**P**	**03 33 50.0**	**+0.1**
	0.2nm,0.5s,baz=104,slow=11,SNR=6.6								
ZALV	**Zalesovo Beam**	**41.55**	**326**	P		P	**P**	**03 34 01.9**	**-1.3**
	0.7nm,0.5s,baz=123,slow=7.1,SNR=3.2								
WRA	**Warramunga Arr**	**44.90**	**165**	P		P	**P**	**03 34 29.9**	**-0.7**
	0.5nm,0.7s,baz=348,slow=8.6,SNR=3.1								
WRA				LR		LR		03 53 30.9	
	comp=Z,56nm,21.7s,baz=180,slow=36								
ASAR	**Alice Springs**	**48.41**	**167**	P		P	**P**	**03 34 58.8**	**+0.7**
	0.2nm,0.3s,baz=3.3,slow=6.5,SNR=4.6

0.3nm,0.3s,baz=242,slow=9.1,SNR=3.6
MDT LR LR 04 29 51.9
comp=Z,27nm,18.8s,baz=93,slow=43
TORD Torodi Ar. Bea 14.60 191 Pn Pn 04 26 38.4 -0.1
0.1nm,0.3s,baz=18,slow=12,SNR=16
TORD Lg Lg 04 30 49.4
0.5nm,0.3s,baz=10.0,slow=26,SNR=7.6
GERES GERESS Array B 22.40 16 P P 04 28 09.7 -1.1
0.9nm,0.7s,baz=203,slow=9.7,SNR=6.0
DBIC Dimbokro 22.60 205 P P 04 28 12.7 -0.2
1.2nm,0.6s,baz=0.0,slow=10,SNR=2.8
ARCES ARCESS Array B 43.73 11 P P 04 31 17.3 +0.1
1.2nm,0.7s,baz=191,slow=8.3,SNR=3.8
MKAR Makanchi Array 62.42 49 P P 04 33 35.7 +0.2
0.8nm,0.8s,baz=297,slow=4.2,SNR=6.8
YKA Yellowknife Ar 77.99 335 P P 04 35 10.7 +0.3
0.2nm,0.4s,baz=52,slow=5.9,SNR=7.9

IDC 30 04:31:40.2±2.3, 18°32.5'×177°45.W, h0km, mb3.8/5, mb1 4.2/5, mb1mx3.8/20, mbtmpg3.8/5, Error ellipse: s-maj=132.0km s-min=26.8km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.46**	**260**	P	P	04 40 01.9	+0.4
	0.9nm,0.4s,baz=96,slow=7.7,SNR=22						
ASAR	**Alice Springs**	**45.56**	**255**	P	P	04 40 02.7	+0.4
	0.4nm,0.4s,baz=91,slow=7.5,SNR=9.2						
FITZ	**Fitzroy Crossi**	**53.87**	**261**	P	P	04 41 04.5	-1.1
	2.4nm,0.8s,baz=85,slow=12,SNR=3.6						
TXAR	**Lajitas Array**	**85.44**	**57**	P	P	04 44 20.3	0.0
	0.5nm,0.8s,baz=218,slow=5.7,SNR=4.6						
ILAR	**Eielson Array**	**86.08**	**13**	P	P	04 44 22.5	0.0
	0.4nm,0.8s,baz=227,slow=5.4,SNR=5.6						

*DDA **30** 04:31:46.9, 39°58N×27°75E, h7km, MD2.8*
*ISCJB **30** 04:31:47.3±0.4, 39°58N±0°03×27°75E±0°03, h7km±4km, Error ellipse: s-maj=4.8km s-min=3.9km az=40.2*
*CSEM **30** 04:31:47.6±0.1, 39°58N×27°75E, h8km, MD2.8, Error ellipse: s-maj=2.2km s-min=1.9km az=60.0*
*ISK **30** 04:31:47.2, 39°59N×27°77E, h7km, MD2.8*
ISC 30 04:31:46.9±0.8, 39°56N±0°02×27°73E±0°02, h11km±6km, n44, σ0°94/61, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALB	**Balikesir**	**0.14**	**55**	*e*PG	**Pg**	**04 31 49.7**	**-0.4**
BALB				*e*SG	**Sg**	**04 31 52.0**	**-0.4**
BALB	**Balikesir**	**0.14**	**55**	*e*Pg	**Pg**	**04 31 49.7**	**-0.4**
BALB				*e*Sg	**Sg**	**04 31 52.0**	**-0.4**
BALY	**Balya**	**0.20**	**334**	*i* P	**Pg**	**04 31 51.6**	**+0.4**
BALY				*i* S	**Sg**	**04 31 54.3**	**+0.1**
BALY	**Balya**	**0.20**	**334**	*i* P	**Pg**	**04 31 51.6**	**+0.4**
BALY				*i* S	**Sg**	**04 31 54.3**	**+0.1**
GONE	**Gonen-Balikesi**	**0.49**	**356**	*e*PG	**Pg**	**04 31 56.5**	**+0.2**
GONE				*e*SG	**Sg**	**04 32 03.5**	**+0.6**
GONE	**Gonen-Balikesi**	**0.49**	**356**	*e*Pg	**Pg**	**04 31 56.6**	**+0.2**
GONE				*e*Sg	**Sg**	**04 32 03.5**	**+0.6**
DURS	**Dursunbey**	**0.57**	**86**	*i* P	**Pg**	**04 31 58.3**	**+0.2**
DURS				*i* S	**Sg**	**04 32 06.1**	**+0.4**
DURS	**Dursunbey**	**0.57**	**86**	*i* P	**Pg**	**04 31 58.3**	**+0.2**
DURS				*i* S	**Sg**	**04 32 06.1**	**+0.4**
AKS	**Akhisar**	**0.68**	**175**	*e*PG	**Pg**	**04 32 01.2**	**+0.4**
AKS	**Akhisar**	**0.68**	**175**	*e*Pg	**Pg**	**04 32 01.2**	**+0.4**
AKHS	**Akhisar**	**0.69**	**175**	*i* P	**Pb**	**04 32 01.3**	**+0.4**
AKHS				*i* S	**Sb**	**04 32 11.6**	**+1.2**
AKHS	**Akhisar**	**0.69**	**175**	*i* P	**Pb**	**04 32 01.3**	**+0.4**
AKHS				*i* S	**Sb**	**04 32 11.6**	**+1.2**
DST	**Dursunbey**	**0.69**	**86**	*e*PG	**Pg**	**04 32 00.3**	**+0.1**
DST	**Dursunbey**	**0.69**	**86**	*e*Pg	**Pg**	**04 32 00.3**	**+0.1**
EDC	**Edincik**	**0.79**	**7**	*e*PG	**Pg**	**04 32 02.6**	**+0.4**
EDC	**Edincik**	**0.79**	**7**	*e*Pg	**Pg**	**04 32 02.6**	**+0.4**
AYVA	**Ayvalik**	**0.85**	**253**	*i* P	**Pn**	**04 32 04.4**	**-0.4**
AYVA				*i* S	**Sg**	**04 32 14.7**	**+0.4**
AYVA	**Ayvalik**	**0.85**	**253**	*i* P	**Pn**	**04 32 04.4**	**-0.4**
AYVA				*i* S	**Sg**	**04 32 14.7**	**+0.4**
KRBG	**Karabiga-Canak**	**0.90**	**338**	*e*PG	**Pb**	**04 32 05.1**	**+0.6**
KRBG	**Karabiga-Canak**	**0.90**	**338**	*e*Pg	**Pb**	**04 32 05.1**	**+0.6**
DEMI	**Demirci**	**0.92**	**124**	*i* P	**Pn**	**04 32 06.3**	**+0.4**
DEMI				*i* S	**Sg**	**04 32 17.0**	**+0.3**
DEMI	**Demirci**	**0.92**	**124**	*i* P	**Pn**	**04 32 06.3**	**+0.4**
DEMI				*i* S	**Sg**	**04 32 17.0**	**+0.3**
MRMT	**Marmara Adasi**	**1.05**	**354**	*e*PG	**Pb**	**04 32 07.1**	**0.0**
MRMT	**Marmara Adasi**	**1.05**	**354**	*e*Pg	**Pb**	**04 32 07.1**	**0.0**
LPK	**Lapseki**	**1.10**	**318**	*e*PN	**Pg**	**04 32 09.1**	**+1.0**
LPK	**Lapseki**	**1.10**	**318**	*e*Pn	**Pg**	**04 32 09.1**	**+1.0**
MDNY	**Mudanya-Bursa**	**1.20**	**47**	*e*PN	**Pg**	**04 32 10.3**	**+0.5**
MDNY	**Mudanya-Bursa**	**1.20**	**47**	*e*Pn	**Pg**	**04 32 10.4**	**+0.5**
KULA	**Kula-Manisa**	**1.27**	**145**	*e*PN	**Pg**	**04 32 11.9**	**+0.6**
KULA	**Kula-Manisa**	**1.27**	**145**	*e*Pn	**Pg**	**04 32 11.9**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.28**	**311**	*e*PN	**Pg**	**04 32 11.7**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.28**	**311**	*e*Pn	**Pg**	**04 32 11.7**	**+0.2**
ARMT	**Armutlu**	**1.32**	**40**	*e*PN	**Pb**	**04 32 12.2**	**+0.4**
ARMT	**Armutlu**	**1.32**	**40**	*e*Pn	**Pb**	**04 32 12.2**	**+0.4**
TVSB	**Tavsanli**	**1.34**	**94**	*e*PN	**Pg**	**04 32 12.9**	**+0.2**
TVSB	**Tavsanli**	**1.34**	**94**	*e*Pn	**Pg**	**04 32 12.9**	**+0.2**
GEMT	**Gemlik**	**1.42**	**52**	*e*PN	**Pg**	**04 32 14.1**	**0.0**
GEMT	**Gemlik**	**1.42**	**52**	*e*Pn	**Pg**	**04 32 14.1**	**0.0**
GDZ	**Gediz**	**1.44**	**109**	*i* P	**Pb**	**04 32 14.3**	**+0.6**
GDZ				*i* S	**Sn**	**04 32 31.0**	**-0.9**
GDZ	**Gediz**	**1.44**	**109**	*i* P	**Pb**	**04 32 14.3**	**+0.6**
GDZ				*i* S	**Sn**	**04 32 31.0**	**-0.9**
URLA	**Izmir**	**1.49**	**217**	*i* P	**Pn**	**04 32 14.2**	**+0.5**
URLA				*i* S	**Sn**	**04 32 27.2**	**-6.0**
URLA	**Izmir**	**1.49**	**217**	*i* P	**Pn**	**04 32 14.2**	**+0.5**
IZI	**Iznik**	**1.54**	**59**	*e*PN	**Pb**	**04 32 15.3**	**-0.3**
IZI	**Iznik**	**1.54**	**59**	*e*Pn	**Pb**	**04 32 15.3**	**-0.3**

*ISCJB **30** 04:45:49.8±0.4, 44°15N±0°05×139°80E±0°08, h274km±4km, mb3.4/17, Error ellipse: s-maj=9.9km s-min=8.1km az=27.4*
*JMA **30** 04:45:49.9±0.4, 44°23N×139°69E, h269km±4km, M3.6*
*IDC **30** 04:45:50.3±0.7, 44°26N×139°70E, h258km±7km, mb3.3/17, mb1 3.4/20, mb1mx3.4/29, mbtmpg3.2/20, Error ellipse: s-maj=14.4km s-min=10.6km az=168.0*
ISC 30 04:45:50.6±0.7, 44°11N±0°06×139°83E±0°07, h270km±7km, n37, σ1°920/47, mb3.4/17, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSK	**Shakotan**	**0.89**	**148**	P	**Pn**	**04 46 27.2**	**-0.1**
JHR	**Hokuryu**	**1.42**	**104**	P	**Pn**	**04 46 30.7**	**+0.5**
JEW	**Eniwo**	**1.73**	**137**	P	**Pn**	**04 46 33.4**	**+0.8**
JEW				*e*S	**S**	**04 47 07.2**	**+1.4**
JWK2	**Keihoku**	**1.90**	**50**	P	**Pn**	**04 46 34.0**	**+0.2**
JWK2				*e*S	**S**	**04 47 08.1**	**0.0**
ASAJ	**Asahikawa**	**1.99**	**89**	P	**Pn**	**04 46 34.1**	**-0.5**
	19nm,0.3s,baz=277,slow=6.5,SNR=42						
ASAJ				S	**S**	**04 47 09.3**	**-0.2**
	1.0nm,0.3s,baz=287,slow=19,SNR=3.5						
JOSM	**Okushiri--Mats**	**2.05**	**188**	P	**Pn**	**04 46 35.6**	**+0.4**
JKK2	**Kamakawa 2**	**2.12**	**95**	P	**Pn**	**04 46 36.1**	**+0.3**
JKK2				*e*S	**S**	**04 47 11.9**	**+0.3**
JSE	**Soyaes**	**2.14**	**66**	P	**Pn**	**04 46 35.5**	**-0.4**
JSE				*e*S	**S**	**04 47 10.9**	**-0.9**
JFR	**Furan**	**2.22**	**114**	P	**Pn**	**04 46 36.9**	**+0.2**
JKB	**Kayabe**	**2.39**	**158**	P	**Pn**	**04 46 38.5**	**+0.2**
JNBK	**Urakawa-nobuka**	**2.81**	**130**	P	**Pn**	**04 46 42.8**	**+0.4**
JNBK				*e*S	**S**	**04 47 24.2**	**+0.6**
JTKR	**Abashiri--Toko**	**2.94**	**91**	P	**Pn**	**04 46 44.6**	**+0.9**
JTKR				*e*S	**S**	**04 47 26.4**	**+0.5**
JAR	**Ashorobuto**	**2.97**	**105**	P	**Pn**	**04 46 44.6**	**+0.6**
JCH	**Churui**	**2.98**	**119**	P	**Pn**	**04 46 43.4**	**-0.7**
JCH				*e*S	**S**	**04 47 23.6**	**-3.0**
JAK	**Akkeshi**	**3.71**	**106**	*e*S	**S**	**04 47 38.4**	**-2.4**
JANG	**Nango**	**3.94**	**161**	P	**Pn**	**04 46 54.6**	**-0.1**
JANG				*e*S	**S**	**04 47 43.7**	**-2.1**
NEM2	**Nemuro 2**	**4.35**	**98**	*e*S	**S**	**04 47 49.9**	**-4.2**
USRK	**Ussuriysk Arra**	**5.64**	**274**	P	**Pn**	**04 47 13.6**	**-1.1**
	0.3nm,0.3s,baz=88,slow=15,SNR=4.0						
MJAR	**Matsushiro Arr**	**7.66**	**190**	P	**Pn**	**04 47 39.8**	**-0.1**
	0.8nm,0.3s,baz=4.4,slow=13,SNR=9.5						
SONM	**Songino Array**	**23.43**	**291**	P	**P**	**04 50 36.1**	**+0.2**
	1.0nm,0.8s,baz=103,slow=6.7,SNR=7.2						
ZALV	**Zalesovo Beam**	**36.52**	**306**	P	**P**	**04 52 29.6**	**-0.8**
	1.2nm,0.4s,baz=90,slow=8.3,SNR=6.9						
MKAR	**Makanchi Array**	**39.68**	**295**	P	**P**	**04 52 56.1**	**-0.7**
	0.5nm,0.4s,baz=81,slow=12,SNR=12						
ILAR	**Eielson Array**	**44.31**	**36**	P	**P**	**04 53 33.5**	**-0.2**
	0.5nm,0.7s,baz=280,slow=6.1,SNR=9.4						
INK	**Inuvik**	**48.73**	**30**	P	**P**	**04 54 08.0**	**+0.3**
	1.6nm,0.3s,baz=278,slow=4.3,SNR=31						
ARCES	**ARCESS Array B**	**56.98**	**338**	P	**P**	**04 55 06.5**	**-1.2**
	6.5nm,1.1s,baz=54,slow=8.2,SNR=4.6						
YKA	**Yellowknife Ar**	**58.36**	**32**	P	**P**	**04 55 17.7**	**+0.3**
	0.2nm,0.4s,baz=306,slow=6.7,SNR=15						
YKA				PcP	**PcP**	**04 56 06.4**	**+1.3**
	0.2nm,0.4s,baz=311,slow=3.6,SNR=13						
FINES	**FINESS Array B**	**62.04**	**330**	P	**P**	**04 55 41.5**	**-0.8**
	2.3nm,0.5s,baz=52,slow=7.3,SNR=13						
WRA	**Warramunga Arr**	**63.94**	**186**	P	**P**	**04 55 56.7**	**+1.5**
	0.4nm,1.1s,baz=5.5,slow=6.8,SNR=5.2						
KBZ	**Khabaz**	**65.50**	**308**	P	**P**	**04 56 05.2**	**+0.2**
	0.6nm,0.3s,baz=282,slow=2.1,SNR=3.9						
NB2	**NORSAR Subarra**	**67.22**	**336**	P	**P**	**04 56 14.6**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=35,slow=6.5						
NOA	**NORSAR Array B**	**67.22**	**336**	P	**P**	**04 56 15.1**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=26,slow=8.7,SNR=4.5						
ASAR	**Alice Springs**	**67.66**	**186**	P	**P**	**04 56 21.1**	**+2.3**
	comp=Z,0.3nm,0.6s,baz=354,slow=5.2,SNR=5.7						
AKASG	**Malin Array Be**	**68.03**	**320**	P	**P**	**04 56 20.2**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=48,slow=6.6,SNR=5.6						
NVAR	**Mina Array Bea**	**71.75**	**54**	P	**P**	**04 56 44.2**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=300,slow=4.1,SNR=3.2						
BRTR	**Keskin Array B**	**73.34**	**309**	P	**P**	**04 56 53.4**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=63,slow=5.7,SNR=3.7						
PDAR	**Pinedale Array**	**73.58**	**46**	P	**P**	**04 56 55.9**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=308,slow=1.5,SNR=9.0						
GERES	**GERESS Array B**	**76.10**	**327**	P	**P**	**04 57 08.1**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=46,slow=5.8,SNR=4.2						

DDA 30 04:49:43.9, 39°83N×27°92E, h7km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALY	**Balya**	**0.25**	**250**	*i* P	Pg	04 49 50.2	+1.3
BALY				*i* S	Sg	04 49 53.1	+0.8
DURS	**Dursunbey**	**0.48**	**118**	*i* P	Pg	04 49 53.5	+0.1
DURS				*i* S	Sb	04 50 04.6	+2.4

*MOS **30** 04:54:51.6±0.8, 59°16N×151°69W, h10km, mb5.3/129, MS4.2/7, Error ellipse: s-maj=7.8km s-min=3.7km az=91.2*
*BJI **30** 04:54:55.2, 59°25N×152°02W, h32km, mB5.0/27, mb5.1/43, Ms4.9/26, Ms7 4.5/26*
*ISCJB **30** 04:54:57.0±0.2, 59°16N±0°01×151°54W±0°02, h49km±2km, mb5.1/290, MS4.2/46, Error ellipse: s-maj=2.5km s-min=1.8km az=31.0*
*IDC **30** 04:54:57.1±0.5, 59°18N×151°64W, h35km±4km, mb4.7/27, mb1 4.9/30, mb1mx4.8/31, mbtmpg4.7/30, ML4.7/3, MS4.0/32, Ms1 4.0/32, ms1mx4.0/42, Error ellipse: s-maj=11.0km s-min=8.9km az=13.0*
*NEIC **30** 04:54:58.4±0.1, 59°12N×151°52W, h47km±1km, mb5.1/184, ML4.9(AEIC), MW4.9(USGS), Error ellipse: s-maj=2.0km s-min=1.7km az=175.0*
NEIC Felt [IV] at Anchor Point; [III] at Homer and Seward; [II] at Soldotna. Also felt at Ninilchik and Sterling.
*GCMT **30** 04:55:00.9±0.3, 59°18N×151°47W, h40km±1km, MW5.0, Moment Tensor Solution. s46,c54; s63,c93; Moment tensor: Scale 10^{16}Nm; M_{rr}=2.71±.15; $M_{\theta\theta}$=0.11±.12; $M_{\phi\phi}$=2.60±.10; $M_{r\theta}$=0.38±.10; $M_{r\phi}$=0.51±.08; $M_{\theta\phi}$=2.36±.10; Best double couple: M_0=3.60000×10^{16} NP1:ϕ_s13.00000°, δ24.00000°, λ-88.00000°. NP2:ϕ_s190.00000°, δ66.00000°, λ-91.00000°. Principal axes: T 3.6100, Plg21.0000°, Azm281.0000°; N 0.0100, Plg1.0000°, Azm190.0000°; P -3.6200, Plg69.0000°, Azm98.0000°; Data Used: II IU IC CN G.*
*SZGRF **30** 04:55:05.2, 60°19N×151°09W, h33km, mb5.1, MS3.8, Kenai Peninsula, Alaska, United States*
ISC 30 04:54:57.4±0.4, 59°05N±0°03×151°47W±0°03, h43km±2km, h42km:pP-P, n1213, σ1°926/1302, mb5.1/289, MS4.2/46, 246C-239D, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOM	**Homer**	**0.61**	**352**	P	**Pn**	**04 55 11.2**	**+1.4**
SYI	**Shuyak Island**	**0.65**	**228**	P	**Pn**	**04 55 11.6**	**+1.3**
BRLK	**Bradley Lake**	**0.78**	**22**	P	**Pn**	**04 55 12.3**	**+0.3**
BRLK				S	**Sn**	**04 55 23.0**	**+0.5**
NNL	**Ninilchik**	**1.00**	**5**	P	**Pn**	**04 55 16.5**	**+1.5**
AUP	**Augustine Pinn**	**1.05**	**288**	P	**Pn**	**04 55 17.3**	**+1.5**
AUP	**Augustine Pinn**	**1.05**	**288**	P	**Pn**	**04 55 17.3**	**+1.5**
AUL	**Augustine Lava**	**1.06**	**289**	P	**Pn**	**04 55 17.8**	**+2.0**
AUL				S	**Sn**	**04 55 33.1**	**+3.6**
AUW	**Augustine West**	**1.08**	**288**	P	**Pn**	**04 55 17.5**	**+1.5**
AUNW	**Augustine NWes**	**1.08**	**288**	P	**Pn**	**04 55 17.6**	**+1.5**
OPT	**Oil Point**	**1.08**	**305**	P	**Pn**	**04 55 17.8**	**+1.6**
FOSS	**Fourpeaked Sta**	**1.18**	**259**	P	**Pn**	**04 55 18.6**	**+1.1**
ILIM	**Iliamna**	**1.28**	**324**	P	**Pn**	**04 55 20.0**	**+1.2**
INE	**Iliamna NE**	**1.30**	**322**	P	**Pn**	**04 55 20.1**	**+0.9**
KDAK	**Kodiak Island**	**1.40**	**205**	P	**Pn**	**04 55 19.9**	**-0.5**
KDAK				Sn	**Sn**	**04 55 37.3**	**-0.4**
KDAK				S	**Sn**	**04 55 38.6**	**+1.0**
KDAK	**Kodiak Island**	**1.40**	**205**	Pn	**Pn**	**04 55 19.9**	**-0.5**
	281nm,0.3s,baz=41,slow=12,SNR=942						
KDAK				Sn	**Sn**	**04 55 37.3**	**-0.4**
	481nm,0.3s,baz=27,slow=9.0,SNR=13						
SEW	**Seward**	**1.47**	**43**	P	**Pn**	**04 55 21.1**	**-0.3**
SEW				S	**Sn**	**04 55 38.4**	**-1.0**
RED	**Redoubt Volcan**	**1.52**	**335**	P	**Pn**	**04 55 23.2**	**+1.0**
RED				S	**Sn**	**04 55 44.4**	**+3.6**
RSO	**Redoubt South**	**1.56**	**336**	*e*Pn	**Pn**	**04 55 23.7**	**+0.9**
KAPH	**Katmai Pasha**	**1.56**	**254**	P	**Pn**	**04 55 23.7**	**+0.9**
SLKM	**Skilak Lake**	**1.59**	**23**	P	**Pn**	**04 55 23.6**	**+0.5**
SLKM	**Skilak Lake**	**1.59**	**23**	P	**Pn**	**04 55 23.6**	**+0.5**
DFR	**Drift River**	**1.66**	**339**	P	**Pn**	**04 55 25.0**	**+0.8**
KAWH	**Katmai**	**1.86**	**250**	P	**Pn**	**04 55 27.4**	**+0.6**
KAKN	**Katmai Knife C**	**2.02**	**250**	P	**Pn**	**04 55 29.5**	**+0.4**
KABR	**Katmai Barrier**	**2.05**	**245**	P	**Pn**	**04 55 29.7**	**+0.3**
OHAK	**Old Harbor**	**2.07**	**208**	P	**Pn**	**04 55 28.9**	**-0.7**
KCE	**Katmai Mt Cerb**	**2.10**	**249**	P	**Pn**	**04 55 31.4**	**+1.3**
KABU	**Katmai Buttres**	**2.14**	**250**	P	**Pn**	**04 55 31.5**	**+0.8**
SPU	**Mount Spurr**	**2.16**	**352**	P	**Pn**	**04 55 31.8**	**+0.9**
CKL	**Chakachamna La**	**2.20**	**349**	P	**Pn**	**04 55 32.5**	**+1.1**
RC01	**Rabbit Creek A**	**2.22**	**22**	*e*Pn	**Pn**	**04 55 32.3**	**+0.6**
RC01				*e*S	**Sn**	**04 55 59.3**	**+1.4**
BGL	**Barrier Glacie**	**2.27**	**349**	P	**Pn**	**04 55 33.8**	**+1.4**
KELA	**Mount Kelaz**	**2.31**	**256**	P	**Pn**	**04 55 33.5**	**+0.5**
CNTC	**Contact Creek**	**2.44**	**253**	P	**Pn**	**04 55 35.6**	**+0.8**
STLK	**Strandline Lak**	**2.46**	**356**	P	**Pn**	**04 55 36.5**	**+1.4**
MID	**Middleton Isla**	**2.66**	**80**	P	**Pn**	**04 55 36.8**	**-0.9**
MID	**Middleton Isla**	**2.66**	**80**	P	**Pn**	**04 55 36.8**	**-0.9**
PMR	**Palmer**	**2.80**	**24**	P	**Pn**	**04 55 39.9**	**+0.2**
PMR	**Palmer**	**2.80**	**24**	P	**Pn**	**04 55 39.9**	**+0.2**
SVW2	**Sparrevohn**	**2.91**	**317**	P	**Pn**	**04 55 41.8**	**+0.6**
SKT	**Skwentna**	**2.94**	**359**	P	**Pn**	**04 55 42.9**	**+1.3**
SML	**Sawmill**	**3.17**	**28**	P	**Pn**	**04 55 45.8**	**+1.0**
SML	**Sawmill**	**3.17**	**28**	P	**Pn**	**04 55 45.8**	**+1.0**
EYAK	**Cordova Ski Ar**	**3.26**	**60**	P	**Pn**	**04 55 45.1**	**-0.8**
VLZ	**Valdez**	**3.31**	**49**	P	**Pn**	**04 55 46.5**	**-0.1**
DIV	**Divide**	**3.53**	**51**	P	**Pn**	**04 55 49.6**	**-0.2**
KLU	**Klutina**	**3.69**	**46**	P	**Pn**	**04 55 52.2**	**+0.3**
RAGM	**Ragged Mountai**	**3.69**	**66**	P	**Pn**	**04 55 51.4**	**-0.5**
GOAT	**Goat Mountain**	**3.73**	**63**	P	**Pn**	**04 55 52.0**	**-0.6**
BMRM	**Bremner River**	**3.95**	**58**	P	**Pn**	**04 55 54.6**	**-0.8**
BMRM				*e*S	**Sn**	**04 56 37.9**	**-2.6**
HUR	**Hurricane**	**4.04**	**12**	P	**Pn**	**04 55 58.3**	**+1.6**
ANNE	**Aniakchak Nort**	**4.11**	**241**	P	**Pn**	**04 55 58.9**	**+1.2**
ANPK	**Aniakchak Peak**	**4.18**	**241**	P	**Pn**	**04 55 59.9**	**+1.2**
ANPB	**Aniakchak Plen**	**4.27**	**241**	P	**Pn**	**04 56 00.6**	**+0.7**
TRF	**Thorofare Moun**	**4.45**	**7**	P	**Pn**	**04 56 02.8**	**+0.3**
TT01	**Tatalina**	**4.46**	**332**	P	**Pn**	**04 56 03.1**	**+0.7**
DHY	**Denali Highway**	**4.50**	**24**	P	**Pn**	**04 56 03.8**	**+0.7**
RND	**Reindeer**	**4.55**	**15**	P	**Pn**	**04 56 04.5**	**+0.8**
RND	**Reindeer**	**4.55**	**15**	P	**Pn**	**04 56 04.5**	**+0.8**
VRDI	**Verde Repeater**	**4.56**	**58**	P	**Pn**	**04 56 03.2**	**-0.8**
HARP	**HAARP**	**4.58**	**40**	P	**Pn**	**04 56 04.6**	**+0.6**
WASW	**Wrangell South**	**4.62**	**48**	P	**Pn**	**04 56 05.0**	**+0.1**
CHGN	**Chignik**	**4.63**	**236**	*e*Pn	**Pn**	**04 56 05.3**	**+0.5**
MCK	**McKinley**	**4.85**	**13**	*e*P	**Pn**	**04 56 08.6**	**+0.8**
MCK				*e*S	**Sn**	**04 56 58.6**	**-4.1**
MCK	**McKinley**	**4.85**	**13**	*e*Pn	**Pn**	**04 56 08.6**	**+0.8**
MCK				*e*S	**Sn**	**04 56 58.6**	**-4.1**
PAX	**Paxson**	**4.90**	**34**	P	**Pn**	**04 56 08.8**	**+0.3**
PAX	**Paxson**	**4.90**	**34**	P	**Pn**	**04 56 08.8**	**+0.3**
KIAG	**Kiagna River**	**4.95**	**64**	P	**Pn**	**04 56 08.2**	**-1.0**
MESA	**MESA**	**4.97**	**73**	P	**Pn**	**04 56 09.7**	**+0.1**
BALM	**Baldy**	**4.99**	**63**	P	**Pn**	**04 56 08.9**	**-0.9**
BALM	**Baldy**	**4.99**	**63**	P	**Pn**	**04 56 08.9**	**-0.9**
VNHG	**Veniaminof 1**	**5.01**	**239**	P	**Pn**	**04 56 10.5**	**+0.4**
BARN	**Barnard Glacie**	**5.31**	**64**	P	**Pn**	**04 56 13.6**	**-0.6**
MENT	**Mentasta**	**5.42**	**41**	*e*Pn	**Pn**	**04 56 16.4**	**+0.7**
MENT				*e*S	**Sn**	**04 57 13.2**	**-3.6**
DDM	**Donnelly Dome**	**5.46**	**27**	P	**Pn**	**04 56 18.0**	**+1.8**
SAMH	**Samovar Hills**	**5.54**	**74**	P	**Pn**	**04 56 17.6**	**+0.3**
NEA	**Nenana**	**5.66**	**11**	P	**Pn**	**04 56 18.8**	**0.0**
WRH	**Wood River Hil**	**5.67**	**15**	P	**Pn**	**04 56 19.4**	**+0.4**
HDA	**Harding Lake**	**5.79**	**20**	P	**Pn**	**04 56 21.6**	**+1.0**
DOT	**Dot Lake**	**5.83**	**35**	P	**Pn**	**04 56 21.7**	**+0.6**
CCB	**Clear Creek Bu**	**5.88**	**16**	P	**Pn**	**04 56 21.9**	**+0.1**
MLY	**Manley**	**6.01**	**3**	P	**Pn**	**04 56 24.2**	**+0.5**
COLA	**College**	**6.09**	**15**	P	**Pn**	**04 56 25.1**	**+0.4**
COLA	**College**	**6.09**	**15**	P	**Pn**	**04 56 25.1**	**+0.4**
MDM	**Murphy Dome**	**6.12**	**13**	P	**Pn**	**04 56 25.5**	**+0.3**
IL1	**Eielson Array**	**6.13**	**19**	P	**Pn**	**04 56 25.4**	**+0.1**
ILAR	**Eielson Array**	**6.13**	**19**	Pn	**Pn**	**04 56 24.8**	**-0.6**
ILAR				Sn	**Sn**	**04 57 31.3**	**-2.8**
ILAR	**Eielson Array**	**6.13**	**19**	Pn	**Pn**	**04 56 24.8**	**-0.6**
	45nm,0.3s,baz=205,slow=13,SNR=873						
ILAR				Sn	**Sn**	**04 57 31.3**	**-2.8**
	67nm,0.3s,baz=194,slow=26,SNR=11						
ILAR				LR	LR	04 58 57.8	
	comp=Z,2μm,20.8s,baz=169,slow=40						
SDPT	**Sand Point**	**6.14**	**237**	P	**Pn**	**04 56 25.7**	**+0.3**
BCA3	**Beaver Creek A**	**6.19**	**45**	P	**Pn**	**04 56 26.4**	**+0.3**
PNL	**Peninsula**	**6.21**	**79**	P	**Pn**	**04 56 25.4**	**-0.9**
GLM	**Gilmore Dome**	**6.26**	**16**	P	**Pn**	**04 56 28.2**	**+1.1**
PS4A	**Pavlof South-4**	**6.75**	**241**	P	**Pn**	**04 56 34.0**	**+0.1**
IM3	**Indian Mountai**	**7.04**	**352**	P	**Pn**	**04 56 38.1**	**+0.4**
DTNA	**Dutton South F**	**7.05**	**241**	P	**Pn**	**04 56 38.0**	**0.0**
PRP	**Porcupine Dome**	**7.05**	**21**	P	**Pn**	**04 56 38.8**	**+0.7**
DT1	**Dutton Round H**	**7.09**	**241**	P	**Pn**	**04 56 38.8**	**+0.3**
DRIA	**Deer Island**	**7.17**	**240**	P	**Pn**	**04 56 38.9**	**-0.8**
HYT	**Haines Junctio**	**7.24**	**70**	P	**Pn**	**04 56 40.3**	**-0.3**
EGAK	**Eagle**	**7.52**	**36**	*e*Pn	**Pn**	**04 56 44.7**	**+0.4**
	246nm,0.7s						
DAWY	**Dawson**	**7.64**	**44**	P	**Pn**	**04 56 44.9**	**-1.2**
FALS	**False Pass**	**7.76**	**242**	*e*Pn	**Pn**	**04 56 48.8**	**+1.2**
FALS				*e*S	**Sn**	**04 58 14.0**	**-0.1**
COLD	**Coldfoot**	**8.23**

BSMT **Bassoo Peak** 24.23 101 *eP* P 05 00 10.7 +0.6
BLMT **Blacktail Moun** 24.34 101 *eP* P 05 00 12.3 +1.2
C13A **Hot Springs** 24.45 101 ⇑P P 05 00 13.0 +1.0
baz=24,SNR=30
D12A **Red Ives Fores** 24.47 103 ⇑P P 05 00 12.9 +0.6
baz=24,SNR=65
KTRM **Thompson Ridge** 24.49 122 P P 05 00 15.3 +2.8
A15A **Johnson Ranch,** 24.55 97 ⇑P P 05 00 13.1 +0.2
baz=24,SNR=32
JTMT **Jette** 24.55 101 *eP* P 05 00 14.0 +1.1
JTMT *e* 05 00 30.3
KRMB **Red Mountain** 24.57 123 *eP* P 05 00 15.0 +1.7
comp=Z,202nm,2.3s
YBMT **Yellow Bay** 24.61 100 *eP* P 05 00 12.8 -0.8
comp=Z,36nm,1.1s
YBMT *e* 05 00 31.6
B14A **Marquette Ranc** 24.66 99 ⇓P P 05 00 14.7 +0.7
baz=25,SNR=94
C14A **Swan Lake** 24.81 100 ⇑P P 05 00 16.2 +0.9
baz=25
SWMT **Swartz Lake** 24.85 101 *eP* P 05 00 16.6 +0.9
SWMT *e* 05 00 32.1
D13A **Huson** 24.90 102 ⇓P P 05 00 16.6 +0.6
baz=25,SNR=55
YBH **Yreka Blue Hor** 24.93 121 *eP* P 05 00 19.0 +2.6
comp=Z,38nm,0.9s
YBH **Yreka Blue Hor** 24.93 121 P P 05 00 19.2 +2.8
comp=Z,35nm,0.9s,baz=340,slow=4.8,SNR=99
YBH LR LR 05 08 12.0
comp=Z,509nm,20.6s,baz=356,slow=32
BMO **Blue Mountains** 25.05 109 *eP* P 05 00 19.1 +1.6
comp=Z,72nm,1.1s
B15A **Bradely Ranch,** 25.06 98 ⇓P P 05 00 17.7 +0.2
baz=25,SNR=79
A16A **West Butte Ran** 25.15 96 ⇑P P 05 00 18.5 +0.2
baz=25,SNR=62
KHMM **Horse Mountain** 25.18 124 *eP* P 05 00 21.0 +2.2
comp=Z,57nm,1.4s
SLMT **Seeley Lake** 25.29 101 *eP* P 05 00 20.3 +0.6
MSO **Missoula** 25.34 102 *eP* P 05 00 20.8 +0.7
comp=Z,34nm,1.1s
MSO **Missoula** 25.34 102 ⇓P P 05 00 20.4 +0.4
baz=25,SNR=38
C15A **Salmond Ranch,** 25.38 99 ⇓P P 05 00 21.3 +0.8
baz=25,SNR=48
D14A **Greenough** 25.39 101 ⇓P P 05 00 21.1 +0.6
baz=25,SNR=53
F12A **Elk City** 25.42 105 ⇓P P 05 00 21.8 +1.0
baz=25,SNR=50
B16A **M & M Farms, S** 25.43 97 ⇓P P 05 00 20.8 -0.1
baz=25,SNR=18
E13A **Victor** 25.48 103 ⇓P P 05 00 21.9 +0.5
baz=25,SNR=34
A17A **Triple J Farms** 25.61 95 ⇑P P 05 00 22.7 +0.1
baz=26,SNR=24
CHMT **Chamberlain Mo** 25.63 101 *eP* P 05 00 23.4 +0.6
RES **Resolute Bay** 25.71 31 *eP* P 05 00 23.5 +0.5
comp=Z,40nm,0.8s
RES **Resolute Bay** 25.71 31 P P 05 00 23.6 +0.5
comp=Z,38nm,0.8s,baz=254,slow=11,SNR=42
RES LR LR 05 10 45.1
comp=Z,207nm,21.4s,baz=257,slow=37
C16A **Fuhringer Ranc** 25.81 98 ⇓P P 05 00 24.7 +0.4
baz=26,SNR=38
G12A **Big Creek, Yel** 25.83 107 ⇓P P 05 00 25.2 +0.6
baz=26
E14A **Clinton** 25.84 102 ⇓P P 05 00 25.5 +0.7
baz=26,SNR=11
F13A **Darby** 25.86 104 ⇑P P 05 00 25.7 +0.9
baz=26,SNR=56
D15A **Lincoln** 25.91 100 ⇑P P 05 00 25.7 +0.4
baz=26,SNR=15
WDC **Whiskeytown Da** 25.94 123 *eP* P 05 00 27.6 +2.1
WDC pmax pmax
comp=Z,25nm,1.1s
WDC **Whiskeytown Da** 25.94 123 *eP* P 05 00 27.6 +2.1
comp=Z,25nm,1.1s
A18A **Metzger Ranch,** 26.07 94 ⇓P P 05 00 26.7 +0.1
baz=26,SNR=9.8
KIPM **Iron Peak** 26.17 125 *eP* P 05 00 30.1 +2.4
comp=Z,64nm,1.1s
WVOR **Wild Horse Val** 26.23 115 *eP* P 05 00 29.7 +1.5
WVOR pmax pmax
comp=Z,36nm,1.2s
WVOR **Wild Horse Val** 26.23 115 *eP* P 05 00 29.7 +1.5
comp=Z,36nm,1.2s
KCPM **Cahto Peak** 26.23 125 *eP* P 05 00 30.6 +2.3
comp=Z,29nm,1.2s
E15A **Deer Lodge** 26.27 101 ⇓P P 05 00 29.0 +0.4
baz=26,SNR=11
F14A **Wisdom** 26.32 103 ⇑P P 05 00 30.0 +0.9
baz=26,SNR=14
G13A **Cobalt** 26.40 105 ⇑P P 05 00 30.9 +1.2
baz=26,SNR=26
D16A **Dana Ranch, Ca** 26.41 99 ⇓P P 05 00 30.4 +0.6
baz=26,SNR=20
C17A **Wharram Farm,** 26.42 98 ⇑P P 05 00 29.9 0.0
baz=26,SNR=19
B18A **Beardsley Farm** 26.43 95 ⇑P P 05 00 30.4 +0.5
baz=26,SNR=18
H12A **Diamond D Ranc** 26.48 107 ⇓P P 05 00 31.2 +0.7
baz=26,SNR=16
HRY **Holter Researc** 26.49 100 *eP* P 05 00 30.9 +0.4
A19A **Klindworth Far** 26.63 93 ⇑P P 05 00 32.2 +0.5
baz=27,SNR=16
G14A **Jackson** 26.68 104 ⇑P P 05 00 33.4 +1.0
baz=27,SNR=22
E16A **East Helena** 26.68 100 ⇑P P 05 00 33.1 +0.9
baz=27,SNR=23
EGMT **Eagleton** 26.68 96 *eP* P 05 00 32.4 +0.2
comp=Z,139nm,1.4s
EGMT **Eagleton** 26.68 96 ⇓P P 05 00 32.3 +0.1
baz=27,SNR=19
F15A **Butte** 26.74 102 ⇓P P 05 00 33.8 +0.9
baz=27,SNR=13
H13A **Challis** 26.76 106 ⇓P P 05 00 34.2 +1.1
baz=27,SNR=33
D17A **Six Diamond Ra** 26.77 98 ⇑P P 05 00 33.2 +0.1
baz=27,SNR=20
LRM **Limekiln Ridge** 26.78 102 *eP* P 05 00 33.8 +0.5
B19A **Brinkman Farms** 26.82 94 ⇓P P 05 00 34.2 +0.8
baz=27
MFID **Camas Ranch** 26.83 110 *eP* P 05 00 34.4 +0.8
comp=Z,16nm,0.8s
MFID *ePcP* PcP 05 03 55.5 +0.4
MFID **Camas Ranch** 26.83 110 ⇓P P 05 00 34.8 +1.2
baz=27,SNR=21
FFC **Flin Flon** 26.86 77 *eP* P 05 00 34.0 +0.3
FFC pmax pmax
comp=Z,19nm,1.0s
FFC **Flin Flon** 26.86 77 *eP* P 05 00 34.0 +0.3
comp=Z,19nm,1.0s
I12A **Atlanta** 26.89 108 ⇑P P 05 00 35.3 +1.1
baz=27,SNR=25
DLMT **Dillon** 27.02 103 *eP* P 05 00 36.4 +1.0
comp=Z,19nm,0.9s
A20A **Cobblestone Ra** 27.08 93 ⇓P P 05 00 36.1 +0.3
baz=27,SNR=12
E17A **Martinsdale** 27.15 100 ⇑P P 05 00 37.6 +1.1
baz=27,SNR=11
H14A **Leadore** 27.17 105 ⇑P P 05 00 37.8 +1.1
baz=27,SNR=29
D18A **Linhart Farms,** 27.20 97 ⇑P P 05 00 37.6 +0.7
baz=27,SNR=20
G15A **Dillon** 27.22 103 ⇑P P 05 00 38.1 +0.9
baz=27,SNR=12
F16A **Kennard Place,** 27.22 101 ⇓P P 05 00 38.0 +0.9
baz=27
C19A **Slack Wire Ran** 27.23 96 ⇑P P 05 00 38.1 +0.9
baz=27,SNR=38
MCMT **McKenzie Canyo** 27.27 104 *eP* P 05 00 39.0 +1.3
comp=Z,5.0nm,1.1s
I13A **Wildhorse Cree** 27.30 107 ⇓P P 05 00 39.1 +1.1
baz=27,SNR=21
B20A **Solberg Farm,** 27.31 94 ⇓P P 05 00 38.3 +0.5
baz=27,SNR=11
BOZ **Bozeman (W)** 27.32 102 *eP* P 05 00 39.3 +1.3
BOZ pmax pmax
comp=Z,20nm,1.1s
BOZ **Bozeman (W)** 27.32 102 *eP* P 05 00 39.3 +1.3
comp=Z,20nm,1.1s
BOZ **Bozeman (W)** 27.32 102 ⇓P P 05 00 39.2 +1.2
baz=27,SNR=21
HLID **Hailey** 27.41 108 *eP* P 05 00 40.3 +1.3
comp=Z,62nm,1.8s
HLID **Hailey** 27.41 108 ⇓P P 05 00 40.2 +1.3
baz=27,SNR=10

OHCM **Honcut** 27.42 123 *eP* P 05 00 40.4 +1.6
BEKR **Beckworth** 27.48 120 *eP* P 05 00 40.8 +1.2
comp=Z,5.5nm,1.0s
BEKR *ePcP* PcP 05 03 56.3 -0.6
G16A **Moss Hill, Enn** 27.52 103 ⇑P P 05 00 41.0 +1.2
baz=28,SNR=25
H15A **Lima** 27.53 104 ⇑P P 05 00 40.9 +0.9
baz=28,SNR=13
E18A **Harlowton** 27.56 98 ⇑P P 05 00 41.5 +1.4
baz=28,SNR=7.3
I14A **Mackay** 27.62 106 ⇓P P 05 00 42.1 +1.3
baz=28,SNR=17
F17A **Fitzpatrick Pl** 27.63 100 ⇑P P 05 00 42.0 +1.2
baz=28,SNR=45
J13A **Cove Ranch, Pi** 27.65 108 ⇓P P 05 00 42.4 +1.3
baz=28,SNR=12
D19A **Cripps Ranch,** 27.69 96 ⇓P P 05 00 42.0 +0.7
baz=28,SNR=25
B21A **Ellsworth Farm** 27.84 93 ⇑P P 05 00 42.9 +0.4
baz=28
PET **Petropavlovsk** 27.94 280 *eP* P 05 00 46.5 +3.2
PET *eS* S 05 05 25.0 +1.1
PET MLR MLR
comp=Z,400nm,14.0s
QLMT **Earthquake Lak** 27.99 103 *eP* P 05 00 45.4 +1.4
G17A **Pierce Place,** 27.99 101 ⇓P P 05 00 45.7 +1.6
baz=28
J14A **Carey** 28.03 107 ⇓P P 05 00 46.3 +1.9
baz=28
I15A **Monteview** 28.05 105 ⇓P P 05 00 45.7 +1.1
baz=28
F18A **Big Timber** 28.11 99 ⇓P P 05 00 46.6 +1.6
baz=28,SNR=33
D20A **Manuel Ranch,** 28.12 96 ⇓P P 05 00 46.0 +0.9
baz=28,SNR=12
H16A **Russell Place,** 28.17 103 ⇓P P 05 00 47.2 +1.5
baz=28,SNR=32
C21A **Desert Coulee** 28.18 94 ⇑P P 05 00 46.2 +0.7
baz=28
E19A **Rath Farm, Rou** 28.21 97 ⇑P P 05 00 47.0 +1.1
baz=28,SNR=27
GCMT **Greycliff** 28.21 99 *eP* P 05 00 47.9 +1.9
comp=Z,109nm,1.4s
WCN **Washoe City** 28.21 120 *eP* P 05 00 47.9 +1.8
WCN pmax pmax
comp=Z,19nm,1.0s
WCN **Washoe City** 28.21 120 *eP* P 05 00 47.9 +1.8
comp=Z,19nm,1.0s
YMR **Madison River** 28.34 102 *eP* P 05 00 48.4 +1.2
comp=Z,77nm,1.2s
YMR *e* 05 01 06.0
PEA0B **Petropavlovsk-** 28.38 280 *eP* P 05 00 46.0 -1.3
PETK **Petropavlovsk-** 28.38 280 P P 05 00 46.2 -1.0
PETK **Petropavlovsk-** 28.38 280 P P 05 00 46.2 -1.0
PETK **Petropavlovsk-** 28.38 280 P P 05 00 46.2 -1.0
comp=Z,13nm,0.7s,baz=78,slow=12,SNR=35
PETK LR LR 05 11 48.0
comp=Z,234nm,21.4s,baz=257,slow=36
BMN **Battle Mountai** 28.46 116 *eP* P 05 00 49.8 +1.5
BMN pmax pmax
comp=Z,26nm,1.4s
BMN **Battle Mountai** 28.46 116 *eP* P 05 00 49.8 +1.5
comp=Z,26nm,1.4s
J15A **Blackfoot** 28.51 106 ⇓P P 05 00 50.4 +1.8
baz=28,SNR=13
E20A **Meyer Farm, Mu** 28.52 97 ⇑P P 05 00 49.5 +0.9
baz=28,SNR=10
F19A **Roth Farm, Mol** 28.54 99 ⇓P P 05 00 50.4 +1.5
baz=28,SNR=15
G18A **Lazy EL Ranch,** 28.59 100 ⇓P P 05 00 50.4 +1.0
baz=28,SNR=13
A23A **Redstone** 28.61 90 ⇓P P 05 00 49.8 +0.4
baz=28
I16A **Newdale** 28.64 104 ⇑P P 05 00 51.4 +1.5
baz=29,SNR=7.4
LKWY **Lake** 28.69 102 *eP* P 05 00 53.3 +2.9
LKWY pmax pmax
comp=Z,64nm,1.7s
LKWY **Lake** 28.69 102 *eP* P 05 00 53.3 +2.9
comp=Z,64nm,1.7s
H17A **Grant Village** 28.73 102 ⇓P P 05 00 53.4 +2.7
baz=29,SNR=10.0
D21A **La Casta Ranch** 28.73 95 ⇓P P 05 00 51.6 +1.1
baz=29
K14A **Jones Ranch, D** 28.78 108 ⇓P P 05 00 53.4 +2.4
baz=29,SNR=26
C22A **Vida** 28.86 93 ⇓P P 05 00 54.2 +2.6
baz=29
RLMT **Red Lodge** 28.88 100 *eP* P 05 00 53.6 +1.7
comp=Z,18nm,0.9s
RLMT *e* 05 01 05.7
RLMT **Red Lodge** 28.88 100 ⇓P P 05 00 53.7 +1.7
baz=29,SNR=9.6
IMW **Indian Meadow** 28.90 104 *eP* P 05 00 54.4 +2.1
comp=Z,35nm,0.9s
IMW *e* 05 01 06.0
CMB **Columbia Colle** 28.98 123 *eP* P 05 00 54.2 +1.4
CMB *e* 05 04 00.6
CMB pmax pmax
comp=Z,31nm,1.6s
CMB **Columbia Colle** 28.98 123 *eP* P 05 00 54.1 +1.4
comp=Z,31nm,1.6s
CMB *ePcP* PcP 05 04 00.6 +0.2
F20A **Billings** 28.98 98 ⇑P P 05 00 54.1 +1.3
baz=29,SNR=15
H18A **Shoshone NF, C** 28.99 101 ⇑P P 05 00 54.3 +1.3
baz=29,SNR=19
K15A **Arbon** 28.99 107 ⇑P P 05 00 55.2 +2.3
baz=29,SNR=9.1
J16A **Bone** 29.01 105 ⇓P P 05 00 54.6 +1.4
baz=29,SNR=8.9
E21A **Keefer Ranch,** 29.03 96 ⇓P P 05 00 54.1 +0.9
baz=29
I17A **Pilgrim Ck.** 29.07 103 ⇓P P 05 00 56.1 +2.4
baz=29,SNR=20
A24A **Westby** 29.08 89 ⇑P P 05 00 54.4 +0.8
baz=29
D22A **Cohagen** 29.09 94 ⇓P P 05 00 54.9 +1.2
baz=29,SNR=12
L14A **Malta** 29.13 109 ⇓P P 05 00 56.4 +2.2
baz=29,SNR=8.0
ELK **Elko** 29.15 113 P P 05 00 56.8 +2.3
ELK **Elko** 29.15 113 P P 05 00 56.8 +2.3
comp=Z,20nm,0.9s,baz=314,slow=8.7,SNR=45
ELK LR LR 05 11 23.6
comp=Z,456nm,20.2s,baz=323,slow=34
C23A **Lambert** 29.18 92 ⇑P P 05 00 55.4 +1.0
baz=29,SNR=7.7
TPAW **Teton Pass** 29.19 104 *eP* P 05 00 56.5 +1.7
comp=Z,21nm,0.8s
TPAW *e* 05 01 08.4
DGMT **Dagmar** 29.27 90 ⇓P P 05 00 55.5 +0.3
baz=29
LOHW **Long Hollow** 29.27 104 *eP* P 05 00 57.2 +1.7
comp=Z,23nm,0.9s
H19A **Powell** 29.34 100 ⇓P P 05 00 58.0 +2.0
baz=29,SNR=15
G20A **Bridger** 29.35 99 ⇑P P 05 00 57.3 +1.2
baz=29,SNR=18
K16A **Soda Springs** 29.35 106 ⇑P P 05 00 57.8 +1.6
baz=29
J17A **Brown Place, J** 29.40 104 ⇑P P 05 00 58.5 +1.9
baz=29,SNR=18
F21A **Absaloka Mine,** 29.49 97 ⇑P P 05 00 58.4 +1.1
baz=29
HVU **Hansel Valley** 29.55 109 *eP* P 05 00 59.8 +1.9
HVU pmax pmax
comp=Z,84nm,1.7s
HVU **Hansel Valley** 29.55 109 *eP* P 05 00 59.8 +1.9
comp=Z,84nm,1.7s
HVU *e* 05 01 16.1
L15A **Malad City** 29.57 108 ⇓P P 05 01 00.3 +2.2
baz=30,SNR=25
NVAR **Mina Array Bea** 29.58 119 P P 05 01 00.6 +2.3
NVAR PcP PcP 05 04 03.2 +1.1
NVAR **Mina Array Bea** 29.58 119 P P 05 01 00.6 +2.3
comp=Z,14nm,0.8s,baz=308,slow=8.8,SNR=82
NVAR PcP PcP 05 04 03.2 +1.1
comp=Z,4.2nm,0.8s,baz=304,slow=2.4,SNR=10
NVAR LR LR 05 12 01.9
comp=Z,587nm,18.6s,baz=43,slow=34
D23A **Lindsay** 29.58 93 ⇑P P 05 00 59.0 +1.0
baz=30,SNR=14
I18A **Diamond G Ranc** 29.60 103 ⇑P P 05 01 00.5 +2.1
baz=30
NV11 **Mina Array Sit** 29.64 119 *eP* P 05 01 00.5 +1.8
E22A **Miles City** 29.68 95 ⇑P P 05 00 59.9 +1.0
baz=30,SNR=11
K17A **Gardner Place,** 29.74 105 ⇑P P 05 01 00.8 +1.2
baz=30
C24A **Savage** 29.75 92 ⇓P P 05 01 00.9 +1.4
baz=30,SNR=13
I19A **Meeteetse** 29.78 101 ⇑P P 05 01 01.4 +1.4
baz=30,SNR=14
J18A **Kendall Valley** 29.86 104 ⇑P P 05 01 02.3 +1.6
baz=30,SNR=46
G21A **Lodge Grass** 29.86 98 ⇓P P 05 01 01.5 +1.0
baz=30,SNR=7.1
F22A **Rosebud** 29.97 96 ⇓P P 05 01 02.4 +0.9
baz=30,SNR=7.5
H20A **Greybull** 29.97 100 ⇑P P 05 01 02.7 +1.2
baz=30,SNR=10
E23A **Ismay** 29.97 94 ⇑P P 05 01 02.9 +1.4
baz=30
MLAC **Mammoth Lakes** 30.00 121 ⇑P P 05 01 04.9 +2.9
baz=30
L16A **Fish Haven** 30.03 107 ⇓P P 05 01 04.2 +2.0
baz=30,SNR=10
D24A **Glendive** 30.07 92 ⇑P P 05 01 04.1 +1.7
baz=30,SNR=28
L17A **Cokeville** 30.25 106 ⇓P P 05 01 05.7 +1.6
baz=30
K18A **Toltan Ranch,** 30.26 104 ⇓P P 05 01 05.8 +1.5
baz=30,SNR=21
HWUT **Hardware Ranch** 30.27 107 *eP* P 05 01 06.1 +1.7
comp=Z,79nm,1.5s
HWUT *e* 05 01 22.6
HWUT *ePcP* PcP 05 04 03.9 0.0
I20A **Worland** 30.28 101 ⇓P P 05 01 05.9 +1.6
baz=30,SNR=9.7
J19A **Crowheart** 30.30 102 ⇑P P 05 01 06.4 +1.8
baz=30,SNR=12
G22A **Birney** 30.33 97 ⇑P P 05 01 05.7 +1.0
baz=30,SNR=8.9
MTUM **Tungsten Hills** 30.35 121 *eP* P 05 01 07.7 +2.6
H21A **Big Horn, Sher** 30.36 99 ⇑P P 05 01 05.9 +0.9
baz=30,SNR=6.8
BW06 **Boulder Array** 30.41 104 *eP* P 05 01 06.9 +1.3
comp=Z,12nm,1.1s
BW06 **Boulder Array** 30.41 104 ⇑P P 05 01 06.8 +1.2
baz=30,SNR=20
PDAR **Pinedale Array** 30.41 104 P P 05 01 06.8 +1.1
PDAR **Pinedale Array** 30.41 104 P P 05 01 06.8 +1.1
comp=Z,9.8nm,0.9s,baz=306,slow=5.3,SNR=52
PDAR LR LR 05 12 32.1
comp=Z,302nm,21.2s,baz=357,slow=35
F23A **Volborg** 30.44 95 ⇑P P 05 01 06.6 +0.9
baz=30,SNR=7.9
E24A **Baker** 30.45 93 ⇑P P 05 01 06.9 +1.3
baz=30,SNR=5.2
SKR **Severo-Kuril's** 30.56 278 *eP* P 05 01 01.5 -5.0
K19A **Absolon Red Bu** 30.73 103 ⇓P P 05 01 09.3 +1.0
baz=31,SNR=24
J20A **Shoshoni** 30.73 101 ⇓P P 05 01 10.3 +2.0
baz=31,SNR=14
H22A **Clearmont** 30.73 98 ⇑P P 05 01 09.3 +1.0
baz=31
DUG **Dugway** 30.74 111 *eP* P 05 01 09.9 +1.5
DUG *e* 05 04 05.7
DUG pmax pmax
comp=Z,20nm,0.9s
DUG **Dugway** 30.74 111 *eP* P 05 01 09.9 +1.5
comp=Z,20nm,0.9s
DUG *e* 05 01 27.7
DUG *ePcP* PcP 05 04 05.7 +0.6
DUG **Dugway** 30.74 111 ⇑P P 05 01 10.3 +1.8
baz=31,SNR=20
TIN **Tinemaha** 30.75 121 ⇑P P 05 01 11.0 +2.5
baz=31
L18A **Fontenelle, Gr** 30.79 105 ⇓P P 05 01 10.9 +1.9
baz=31
I21A **Big Trails, Te** 30.80 100 ⇑P P 05 01 10.0 +1.0
baz=31,SNR=22
G23A **Biddle** 30.81 96 ⇑P P 05 01 10.0 +1.1
baz=31,SNR=11
M17A **Scullys Gap (B** 30.82 107 ⇑P P 05 01 10.3 +1.2
baz=31
F24A **Ekalaka** 30.86 94 ⇓P P 05 01 10.3 +1.0
baz=31
R11A **Troy Canyon, C** 30.89 116 ⇑P P 05 01 11.3 +1.5
baz=31,SNR=48
RCTC **Rector, Farmer** 30.92 123 ⇓P P 05 01 11.6 +1.7
baz=31,SNR=6.1
L19A **Farson** 31.00 104 ⇑P P 05 01 11.4 +0.6
baz=31,SNR=15
J21A **Lysite** 31.06 101 ⇑P P 05 01 12.5 +1.2
baz=31
JLU **Jordanelle** 31.09 109 *eP* P 05 01 13.1 +1.4
comp=Z,27nm,1.2s
JLU *e* 05 01 30.2
K20A **Yellowstone Ra** 31.10 103 ⇓P P 05 01 12.3 +0.7
baz=31,SNR=14
M18A **Lyman** 31.15 106 ⇓P P 05 01 12.6 +0.5
baz=31,SNR=5.7
I22A **9 Mile Ranch,** 31.16 99 ⇓P P 05 01 13.5 +1.5
baz=31,SNR=25
GRAC **Grapevine Rang** 31.17 120 ⇓P P 05 01 14.7 +2.5
baz=31,SNR=11
G24A **Alzada** 31.22 95 ⇑P P 05 01 13.3 +0.7
baz=31
H23A **Clabaugh Cattl** 31.24 97 ⇓P P 05 01 13.3 +0.5
baz=31
CWC **Cottonwood Cre** 31.32 121 ⇑P P 05 01 15.4 +1.8
baz=31,SNR=6.0
DAU **Daniels Canyon** 31.33 109 *eP* P 05 01 16.1 +2.3
DAU **Daniels Canyon** 31.33 109 *eP* P 05 01 16.1 +2.3
VES **Vestal, Richgr** 31.39 123 ⇑P P 05 01 15.4 +1.5
baz=31,SNR=6.4
SMMC **Simmler** 31.45 125 ⇑P P 05 01 17.0 +2.4
baz=31
MPU **Maple Canyon** 31.45 109 *eP* P 05 01 16.6 +1.8
comp=Z,23nm,1.1s
J22A **Midwest** 31.50 100 ⇑P P 05 01 16.2 +1.1
baz=31,SNR=15
M19A **Rock Springs** 31.55 105 ⇑P P 05 01 16.2 +0.6
baz=32,SNR=10.0
H24A **Dirks Ranch, A** 31.55 96 ⇓P P 05 01 16.1 +0.6
baz=32,SNR=14
L20A **Wamsutter** 31.58 103 ⇓P P 05 01 16.5 +0.6
baz=32,SNR=13
K21A **Alcova** 31.67 101 ⇓P P 05 01 17.5 +0.8
baz=32,SNR=24
DAC **Darwin (Calif)** 31.67 121 *eP* P 05 01 18.8 +2.1
DAC pmax pmax
comp=Z,33nm,1.5s
DAC **Darwin (Calif)** 31.67 121 *eP* P 05 01 18.8 +2.1
comp=Z,33nm,1.5s
DAC *e* 05 01 34.9
ISA **Isabella** 31.80 123 *eP* P 05 01 19.4 +1.7
ISA pmax pmax
comp=Z,13nm,0.9s
ISA **Isabella** 31.80 123 *eP* P 05 01 19.4 +1.7
comp=Z,13nm,0.9s
ISA **Isabella** 31.80 123 ⇑P P 05 01 19.5 +1.8
baz=32,SNR=6.4
ALE **Alert** 31.82 14 P P 05 01 17.6 +0.3
comp=Z,478nm,0.8s,SNR=31
FURC **Furnace Creek,** 31.84 120 ⇓P P 05 01 20.3 +2.4
baz=32,SNR=16
PKM **Peak Mountain** 31.88 125 ⇓P P 05 01 20.8 +2.2
baz=32,SNR=8.4
MPMC **Manual Prospec** 31.90 121 ⇓P P 05 01 20.7 +2.0
baz=32,SNR=18
J23A **Dilts Ranch, B** 31.98 99 ⇓P P 05 01 20.4 +1.1
baz=32
K22A **Casper** 32.03 101 ⇑P P 05 01 20.5 +0.7
baz=32,SNR=5.9
MDND **Maddock** 32.04 87 ⇑P P 05 01 20.4 +0.9
baz=32
M20A **Sweetwater, Wa** 32.04 104 ⇑P P 05 01 21.4 +1.5
baz=32,SNR=26
ARVC **Arvin** 32.10 124 ⇑P P 05 01 21.5 +1.2
baz=32
L21A **Rawlins** 32.10 102 ⇑P P 05 01 21.3 +0.9
baz=32,SNR=15
I24A **Kuemmerle Ranc** 32.13 97 ⇓P P 05 01 21.3 +0.7
baz=32,SNR=10
TMUT **Trail Mountain** 32.22 110 *eP* P 05 01 23.0 +1.4
comp=Z,30nm,0.9s
TMUT *e* 05 01 35.9
RSSD **Black Hills** 32.25 96 *eP* P 05 01 23.0 +1.2
RSSD *e* 05 04 09.1
RSSD pmax pmax
comp=Z,40nm,0.9s

RSSD	**Black Hills**	32.25	96	*e*P	P	05 01 23.0	+1.2
	comp=Z,40nm,0.9s						
RSSD				*e*		05 01 34.1	
RSSD				*e*PcP	PcP	05 04 09.1	0.0
LRMC	**Laurel Mountai**	32.30	122	⇓P	P	05 01 23.8	+1.7
	baz=32,SNR=6.9						
P17A	**Butcher Ranch,**	32.31	109	⇑P	P	05 01 23.9	+1.7
	baz=32						
ARUT	**Antelope Range**	32.34	114	*e*P	P	05 01 24.4	+1.9
ARUT				pmax	pmax		
	comp=Z,33nm,1.1s						
ARUT	**Antelope Range**	32.34	114	*e*P	P	05 01 24.4	+1.9
	comp=Z,33nm,1.1s						
ARUT				*e*		05 01 41.3	
MVU	**Marysvale**	32.35	112	*e*P	P	05 01 25.1	+2.3
	comp=Z,33nm,1.1s						
MVU				*e*		05 01 37.2	
MVU				*e*PcP	PcP	05 04 11.1	+1.5
MVU				*e*ScP	ScP	05 07 51.6	+2.2
MSU	**Marysvale**	32.36	112	*e*P	P	05 01 25.1	+2.3
MSU				*e*		05 04 10.8	
MSU	**Marysvale**	32.36	112	*e*P	P	05 01 25.1	+2.3
MSU				*e*		05 01 40.5	
MSU				*e*PcP	PcP	05 04 10.8	+1.2
MSU				*e*ScP	ScP	05 07 51.9	+2.4
M21A	**Separation Pea**	32.37	103	⇓P	P	05 01 23.8	+0.9
	baz=32,SNR=41						
K23A	**Bowen Ranch, D**	32.41	100	⇑P	P	05 01 24.0	+0.9
	baz=32,SNR=9.0						
P18A	**Preston Nutter**	32.43	108	⇓P	P	05 01 25.1	+1.6
	baz=32,SNR=15						
ULM	**Lac du Bonnet**	32.45	81	*e*P	P	05 01 23.4	+0.3
	comp=Z,30nm,1.4s						
ULM				PcP	PcP	05 04 08.6	-0.7
ULM	**Lac du Bonnet**	32.45	81	P	P	05 01 23.5	+0.3
	comp=Z,7.4nm,0.6s,baz=306,slow=9.3,SNR=11						
ULM				PcP	PcP	05 04 08.6	-0.7
	comp=Z,6.5nm,0.7s,baz=251,slow=2.3,SNR=4.8						
ULM				LR	LR	05 15 14.8	
	comp=Z,583nm,18.1s,baz=161,slow=37						
O19A	**Miners Draw (B**	32.47	106	⇑P	P	05 01 25.2	+1.6
	baz=32,SNR=15						
J24A	**Dixon Ranch, L**	32.49	98	⇑P	P	05 01 24.7	+0.9
	baz=32						
N20A	**Spence Gulch,**	32.49	105	⇓P	P	05 01 25.8	+1.8
	baz=32,SNR=36						
L22A	**Ellis Ranch, M**	32.53	101	⇑P	P	05 01 25.9	+1.7
	baz=32,SNR=17						
Q16A	**Castle Valley**	32.53	110	⇑P	P	05 01 26.3	+2.1
	baz=32,SNR=57						
CCUT	**Cedar City**	32.57	114	*e*P	P	05 01 26.2	+1.6
	comp=Z,26nm,1.1s						
CCUT				*e*		05 01 43.3	
SHOC	**Shoshone**	32.57	120	⇓P	P	05 01 26.5	+2.1
	baz=33,SNR=7.8						
OSI	**Osito Adit**	32.58	124	⇑P	P	05 01 26.6	+2.0
	baz=33						
EDW2	**Edwards Air Fo**	32.67	123	⇓P	P	05 01 27.0	+1.6
	baz=33,SNR=5.3						
SRU	**San Rafael**	32.70	109	*e*P	P	05 01 27.5	+1.8
SRU				pmax	pmax		
	comp=Z,129nm,1.2s						
SRU	**San Rafael**	32.70	109	*e*P	P	05 01 27.5	+1.8
	comp=Z,129nm,1.2s						
SRU				*e*		05 01 43.6	
SRU	**San Rafael**	32.70	109	⇑P	P	05 01 27.7	+2.1
	baz=33,SNR=70						
BSC	**Santa Cruz Isl**	32.73	126	⇓P	P	05 01 27.5	+1.7
	baz=33						
L23A	**Garrett**	32.84	101	⇓P	P	05 01 27.9	+1.0
	baz=33,SNR=55						
GSC	**Goldstone**	32.84	121	*e*P	P	05 01 29.0	+2.2
GSC				pmax	pmax		
	comp=Z,30nm,1.1s						
GSC	**Goldstone**	32.84	121	*e*P	P	05 01 29.0	+2.2
	comp=Z,30nm,1.1s						
GSC				*e*		05 01 46.4	
GSC	**Goldstone**	32.84	121	⇓P	P	05 01 28.8	+1.9
	baz=33,SNR=9.2						
K24A	**Anderson Ranch**	32.85	99	⇓P	P	05 01 27.0	+0.1
	baz=33,SNR=5.3						
BLG	**Laguna Peak**	32.87	125	⇓P	P	05 01 28.7	+1.7
	baz=33						
M22A	**Cedar Creek Ra**	32.91	102	⇑P	P	05 01 28.6	+1.1
	baz=33,SNR=14						
N21A	**Black Mountain**	32.92	104	⇑P	P	05 01 28.9	+1.2
	baz=33,SNR=29						
O20A	**White River Ci**	33.03	106	⇓P	P	05 01 30.0	+1.4
	baz=33,SNR=39						
P19A	**Cripple Cowboy**	33.05	107	⇑P	P	05 01 30.4	+1.6
	baz=33,SNR=30						
RRX	**Edison Barstow**	33.11	122	⇑P	P	05 01 31.3	+2.3
	baz=33						
TUQ	**Turquoise Moun**	33.12	120	⇑P	P	05 01 31.5	+2.1
	baz=33,SNR=5.4						
MWC	**Mount Wilson**	33.20	124	*e*P	P	05 01 32.0	+1.9
MWC				pmax	pmax		
	comp=Z,67nm,1.5s						
MWC	**Mount Wilson**	33.20	124	*e*P	P	05 01 32.0	+1.9
	comp=Z,67nm,1.5s						
MWC				*e*		05 01 45.0	
L24A	**Wheatland**	33.28	100	⇑P	P	05 01 32.0	+1.3
	baz=33,SNR=7.2						
M23A	**Laramie**	33.30	101	⇓P	P	05 01 32.1	+1.2
	baz=33						
O21A	**Pagoda**	33.36	105	⇑P	P	05 01 32.7	+1.2
	baz=33						
BFSC	**Mount Baldy Ra**	33.36	123	⇑P	P	05 01 33.4	+1.9
	baz=33,SNR=11						
K25A	**Mack Ranch, Ha**	33.41	98	⇑P	P	05 01 32.4	+0.6
	baz=33						
N22A	**Wattenberg Ran**	33.42	103	⇑P	P	05 01 33.4	+1.3
	baz=33,SNR=16						
P20A	**De Beque**	33.44	106	⇓P	P	05 01 33.5	+1.4
	baz=33						
HEC	**Hector,Ludlow**	33.45	121	⇓P	P	05 01 34.0	+1.9
	baz=33,SNR=7.3						
PHWY	**Pilot Hill**	33.56	101	*e*P	P	05 01 34.1	+0.8
	comp=Z,35nm,1.5s						
N23A	**Red Feather La**	33.61	102	⇓P	P	05 01 35.0	+1.3
	baz=34,SNR=20						
BBRC	**Big Bear Solar**	33.66	122	⇑P	P	05 01 36.0	+1.8
	baz=34						
AGMN	**Agassiz Nation**	33.67	84	*e*P	P	05 01 34.0	+0.1
	comp=Z,16nm,0.8s						
K26A	**Motz Farm, Whi**	33.70	97	⇑P	P	05 01 34.9	+0.7
	baz=34						
M24A	**Cheyenne**	33.76	100	⇓P	P	05 01 36.5	+1.6
	baz=34,SNR=16						
LDFC	**Landfair**	33.78	119	*e*P	P	05 01 36.8	+1.7
	comp=Z,41nm,0.9s						
GMRC	**Granite Mounta**	33.79	120	⇓P	P	05 01 37.1	+1.9
	baz=34,SNR=15						
O22A	**Kremmling**	33.86	104	⇑P	P	05 01 37.2	+1.3
	baz=34,SNR=8.4						
P21A	**Newcastle**	33.89	105	⇑P	P	05 01 37.6	+1.5
	baz=34,SNR=36						
Q20A	**Ridgley Place,**	33.91	107	⇓P	P	05 01 37.0	+0.8
	baz=34,SNR=20						
U15A	**North Rim**	33.98	114	⇓P	P	05 01 38.9	+2.0
	baz=34,SNR=31						
PV04	**Paradox Valley**	34.05	108	*e*P	P	05 01 38.8	+1.4
PV04				*e*		05 01 54.1	
SCI	**San Clemente I**	34.06	125	⇑P	P	05 01 39.3	+2.0
	baz=34						
S18A	**Hurst Farm, Bl**	34.07	110	⇓P	P	05 01 38.9	+1.2
	baz=34,SNR=18						
MURC	**Murrieta**	34.10	123	⇓P	P	05 01 39.3	+1.5
	baz=34						
O23A	**Lake Granby, G**	34.14	103	⇑P	P	05 01 40.2	+1.9
	baz=34,SNR=36						
M25A	**Palm-Egli Farm**	34.17	100	⇓P	P	05 01 40.0	+1.6
	baz=34,SNR=9.2						
K27A	**Flueckinger Fa**	34.18	96	⇓P	P	05 01 39.3	+0.8
	baz=34,SNR=12						
P22A	**Eagle**	34.18	105	⇑P	P	05 01 39.9	+1.3
	baz=34,SNR=9.4						
N24A	**Carr**	34.20	101	⇑P	P	05 01 40.4	+1.7
	baz=34						
L26A	**Underwood Farm**	34.23	98	⇑P	P	05 01 39.9	+1.0
	baz=34						
NEE2	**Needles Airpor**	34.27	119	⇑P	P	05 01 41.1	+1.9
	baz=34						
BELC	**Belle Mtn. Jos**	34.29	121	⇑P	P	05 01 41.2	+1.7
	baz=34,SNR=11						
W13A	**Hualapai Mount**	34.33	118	⇓P	P	05 01 41.7	+1.8
	baz=34,SNR=27						
Q21A	**Lamborn Mesa,**	34.36	106	⇑P	P	05 01 41.3	+1.2
	baz=34,SNR=6.7						
SMCO	**Snowmass**	34.40	105	*e*P	P	05 01 42.1	+1.5
	comp=Z,55nm,1.8s						
PV01	**Paradox Valley**	34.41	108	*e*P	P	05 01 41.9	+1.3
	comp=Z,8μm,1.2s						
PV01				*e*		05 01 57.5	
PFO	**Pinyon Flat Ob**	34.42	122	*e*P	P	05 01 42.0	+1.4
	comp=Z,17nm,1.3s						
PFO				*e*		05 01 58.3	
PFO	**Pinyon Flat Ob**	34.42	122	⇑P	P	05 01 42.3	+1.6
	baz=34						
R20A	**Redvale**	34.46	108	⇑P	P	05 01 42.6	+1.5
	baz=34,SNR=65						
IRM	**Iron Mountain**	34.53	120	⇓P	P	05 01 43.5	+2.0
	baz=34,SNR=22						
L27A	**T5 Ranch, Ells**	34.59	97	⇑P	P	05 01 42.9	+0.9
	baz=34						
ISCO	**Idaho Springs**	34.60	103	*e*P	P	05 01 44.3	+1.9
ISCO				pmax	pmax		
	comp=Z,36nm,2.0s						
ISCO	**Idaho Springs**	34.60	103	*e*P	P	05 01 44.3	+1.9
	comp=Z,36nm,2.0s						
ISCO	**Idaho Springs**	34.60	103	⇑P	P	05 01 44.2	+1.8
	baz=34,SNR=9.1						
N25A	**Grover**	34.62	100	⇓P	P	05 01 44.0	+1.7
	baz=34						
O24A	**Longmont**	34.63	102	⇑P	P	05 01 44.0	+1.6
	baz=35,SNR=5.2						
BRSD	**Miller**	34.65	91	⇓P	P	05 01 42.6	+0.2
	baz=34,SNR=5.4						
Q22A	**Crested Butte,**	34.67	106	⇑P	P	05 01 44.1	+1.1
	baz=35,SNR=9.2						
R21A	**Cimarron**	34.73	107	⇓P	P	05 01 44.6	+1.2
	baz=35,SNR=13						
S20A	**Disappointment**	34.75	108	⇑P	P	05 01 44.9	+1.3
	baz=35,SNR=24						
109C	**Camp Elliot, M**	34.75	124	⇑P	P	05 01 45.3	+2.0
	baz=35						
P23A	**Jefferson**	34.81	104	⇑P	P	05 01 46.2	+2.0
	baz=35,SNR=15						
BC3	**Big Chuckawall**	34.82	121	⇓P	P	05 01 45.8	+1.7
	baz=35,SNR=6.2						
PDMCI	**Parker Dam,Lak**	34.87	119	⇑P	P	05 01 46.0	+1.7
	baz=35,SNR=10						
M27A	**Reverse DX Ran**	34.96	98	⇓P	P	05 01 47.2	+2.1
	baz=35						
N26A	**Koester Ranch,**	35.04	100	⇑P	P	05 01 47.6	+1.6
	baz=35						
MONP	**Monument Peak**	35.05	123	⇓P	P	05 01 48.0	+1.8
	baz=35,SNR=8.7						
O25A	**Wiggins**	35.12	101	⇑P	P	05 01 48.2	+1.5
	baz=35,SNR=6.0						
WUAZ	**Wupatki**	35.15	114	*e*P	P	05 01 49.0	+2.0
	comp=Z,79nm,1.2s						
WUAZ	**Wupatki**	35.15	114	⇓P	P	05 01 48.9	+2.0
	baz=35,SNR=32						
Y12C	**Blythe**	35.16	120	⇓P	P	05 01 48.7	+1.9
	baz=35,SNR=13						
S21A	**Coal Bank Pass**	35.16	108	⇑P	P	05 01 49.0	+1.8
	baz=35,SNR=21						
MVCO	**Mesa Verde**	35.17	109	*e*P	P	05 01 48.4	+1.2
	comp=Z,53nm,1.4s						
MVCO	**Mesa Verde**	35.17	109	⇓P	P	05 01 48.2	+1.0
	baz=35,SNR=15						
P24A	**Kohler Place,**	35.17	103	⇓P	P	05 01 48.7	+1.6
	baz=35						
Q23A	**Hartsel**	35.17	104	⇓P	P	05 01 49.0	+1.7
	baz=35,SNR=7.4						
SWSC	**Sam W. Stewart**	35.28	122	⇓P	P	05 01 49.7	+1.9
	baz=35,SNR=5.6						
DVTC	**Desert V Tower**	35.38	123	⇑P	P	05 01 51.0	+2.1
	baz=35						
N27A	**Anderson Farm,**	35.41	99	⇑P	P	05 01 50.3	+1.2
	baz=35,SNR=15						
O26A	**Horse Wrangler**	35.43	100	⇑P	P	05 01 50.6	+1.3
	baz=35						
Q24A	**Divide**	35.47	104	⇑P	P	05 01 51.4	+1.5
	baz=35,SNR=13						
P25A	**Willow Gulch B**	35.55	102	⇓P	P	05 01 52.2	+1.8
	baz=36,SNR=24						
OGNE	**Ogallala**	35.56	98	⇓P	P	05 01 51.2	+0.9
	baz=36						
S22A	**4UR Ranch, Cre**	35.57	107	⇑P	P	05 01 52.3	+1.6
	baz=36,SNR=16						
GLA	**Glamis**	35.61	121	*e*P	P	05 01 52.2	+1.4
GLA				pmax	pmax		
	comp=Z,36nm,1.1s						
GLA	**Glamis**	35.61	121	*e*P	P	05 01 52.2	+1.4
	comp=Z,36nm,1.1s						
GLA				*e*		05 02 09.4	
GLA	**Glamis**	35.61	121	⇑P	P	05 01 52.6	+1.8
	baz=36,SNR=8.1						
Y14A	**Wickenburg**	35.69	118	⇑P	P	05 01 53.4	+2.0
	baz=36,SNR=27						
R23A	**Moffat**	35.73	105	⇓P	P	05 01 54.0	+2.0
	baz=36,SNR=33						
T21A	**Navajo Lake**	35.82	108	⇓P	P	05 01 54.4	+1.7
	baz=36,SNR=8.7						
U20A	**Newcomb**	35.83	110	⇑P	P	05 01 54.6	+1.9
	baz=36,SNR=10						
O27A	**Beecher Island**	35.90	100	⇑P	P	05 01 54.2	+0.9
	baz=36						
P26A	**Davis Ranch, A**	35.93	101	⇓P	P	05 01 55.1	+1.5
	baz=36,SNR=8.2						
Q25A	**Bedland, Calha**	35.96	103	⇑P	P	05 01 55.6	+1.6
	baz=36,SNR=18						
S23A	**Nye Farm, Mont**	36.02	106	⇓P	P	05 01 56.8	+2.3
	baz=36,SNR=6.4						
X16A	**Lo Mia Camp, P**	36.02	115	⇓P	P	05 01 56.8	+2.4
	baz=36,SNR=23						
R24A	**Sandre Place,**	36.05	104	⇑P	P	05 01 56.6	+1.8
	baz=36,SNR=20						
T22A	**Edith**	36.11	108	⇑P	P	05 01 57.8	+2.5
	baz=36,SNR=40						
EYMN	**Ely**	36.14	81	*e*P	P	05 01 55.1	0.0
	comp=Z,68nm,1.5s						
Z14A	**Wintersburg**	36.20	118	⇓P	P	05 01 57.6	+1.9
	baz=36,SNR=16						
U21A	**Nageezi**	36.20	109	⇑P	P	05 01 57.7	+1.6
	baz=36,SNR=25						
SDCO	**Great Sand Dun**	36.23	105	*e*P	P	05 01 58.3	+1.9
	comp=Z,37nm,0.8s						
W18A	**Petrified Fore**	36.25	113	⇓P	P	05 01 58.3	+1.9
	baz=36						
V20A	**Brimhall**	36.31	111	⇓P	P	05 01 58.4	+1.4
	baz=36,SNR=9.4						
P27A	**Ficken Ranch,**	36.32	100	⇑P	P	05 01 57.8	+0.9
	baz=36,SNR=7.1						
Q26A	**Hugo**	36.32	102	⇓P	P	05 01 58.6	+1.6
	baz=36,SNR=14						
113A	**Mohawk Valley,**	36.33	120	⇑P	P	05 01 58.6	+1.7
	baz=36,SNR=14						
ECSD	**EROS Data Cent**	36.35	90	*e*P	P	05 01 56.6	-0.3
	comp=Z,10nm,0.7s						
ECSD				*e*PcP	PcP	05 04 19.6	-1.0
S24A	**Houchin Ranch,**	36.46	105	⇓P	P	05 02 00.3	+2.0
	baz=36,SNR=40						
T23A	**Casias Ranch,**	36.52	107	⇓P	P	05 02 00.7	+1.9
	baz=36						
R25A	**Fountain Ranch**	36.53	104	⇑P	P	05 02 00.7	+1.9
	baz=36,SNR=70						
X18A	**Snowflake**	36.63	113	⇑P	P	05 02 01.7	+2.1
	baz=37,SNR=28						
U22A	**Llaves**	36.64	108	⇑P	P	05 02 01.6	+1.9
	baz=37,SNR=12						
YAK	**Yakutsk**	36.67	309	*e*P	P	05 02 09.6	+10
YAK				*e*		05 02 16.4	
YAK				pmax	pmax		
	comp=E,29nm,1.3s						
YAK				pmax	pmax		
	comp=Z,69nm,0.9s						
YAK				pmax	pmax		
	comp=N,20nm,1.7s						
KSCO	**Kaye Shedlock'**	36.71	101	⇑P	P	05 02 01.8	+1.6
	baz=37,SNR=16						
V21A	**Milan**	36.71	110	⇓P	P	05 02 02.4	+2.0
	baz=37,SNR=20						
R26A	**Arlington**	36.84	103	⇑P	P	05 02 02.4	+1.1
	baz=37,SNR=13						
W20A	**Ramah**	36.84	111	⇑P	P	05 02 03.4	+1.9
	baz=37,SNR=70						
V22A	**San Miguel Ran**	36.98	109	⇓P	P	05 02 04.5	+1.8
	baz=37,SNR=43						
T24A	**Torres, Weston**	36.98	106	⇓P	P	05 02 05.0	+2.3
	baz=37,SNR=45						
U23A	**El Rito**	37.00	108	⇑P	P	05 02 05.1	+2.2
	baz=37,SNR=71						
R27A	**Eads**	37.17	102	⇓P	P	05 02 05.4	+1.2
	baz=37,SNR=17						
BGNE	**Belgrade**	37.22	94	⇑P	P	05 02 05.1	+0.7
	baz=37,SNR=15						
T25A	**Trinidad**	37.25	105	⇓P	P	05 02 06.7	+1.8
	baz=37,SNR=18						
W21A	**San Fidel**	37.26	110	⇑P	P	05 02 06.5	+1.5
	baz=37						
SPMN	**St. Paul**	37.29	85	⇓P	P	05 02 05.2	+0.3
	baz=37,SNR=10						
X20A	**Quemado**	37.31	112	⇑P	P	05 02 07.3	+1.9
	baz=37,SNR=14						
S26A	**Kim**	37.35	103	⇑P	P	05 02 07.1	+1.5
	baz=37,SNR=54						
U24A	**Moreno Valley**	37.39	107	⇑P	P	05 02 08.5	+2.3
	baz=37,SNR=14						
214A	**Organ Pipe Nat**	37.44	119	⇑P	P	05 02 08.3	+2.0
	baz=37,SNR=25						
V23A	**Ortiz Mt. (NFS**	37.47	108	⇓P	P	05 02 09.4	+2.6
	baz=37,SNR=15						
S27A	**Las Animas**	37.59	103	⇑P	P	05 02 09.1	+1.4
	baz=38,SNR=20						
T26A	**Comanche Natio**	37.63	104	⇑P	P	05 02 09.5	+1.4
	baz=38,SNR=66						
W22A	**Albuquerque**	37.67	110	⇓P	P	05 02 10.7	+2.2
	baz=38						
X21A	**Alamocita Cree**	37.73	111	⇓P	P	05 02 11.3	+2.3
	baz=38,SNR=83						
U25A	**Circle Dot Ran**	37.83	106	⇓P	P	05 02 11.6	+1.8
	baz=38,SNR=58						
Y20A	**Horse Springs,**	37.88	112	⇓P	P	05 02 12.7	+2.4
	baz=38,SNR=16						
V24A	**Rampart Ranch,**	37.93	107	⇓P	P	05 02 13.0	+2.2
	baz=38,SNR=28						
W23A	**Werner Place,**	37.95	109	⇑P	P	05 02 13.1	+2.2
	baz=38,SNR=36						
ANMO	**Albuquerque**	37.97	109	*e*P	P	05 02 12.4	+1.4
	comp=N,39nm,1.5s						
X22A	**Bernardo**	38.06	110	⇓P	P	05 02 14.3	+2.5
	baz=38						
TUC	**Tucson**	38.07	116	*e*P	P	05 02 14.0	+2.2
TUC				*e*		05 04 27.3	
TUC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
TUC	**Tucson**	38.07	116	*e*P	P	05 02 14.0	+2.2
	comp=Z,7.3nm,1.2s						
TUC				*e*		05 02 29.2	
TUC				*e*PcP	PcP	05 04 27.3	+1.1
LAZ	**Ladron**	38.08	110	*e*P	P	05 02 13.7	+1.7
	comp=Z,21nm,1.5s						
LAZ				*e*		05 02 29.0	
Y21A	**Point of Rocks**	38.14	111	⇑P	P	05 02 15.1	+2.6
	baz=38,SNR=29						
T27A	**Campo**	38.16	103	⇑P	P	05 02 14.3	+1.8
	baz=38,SNR=39						
S28A	**Manter**	38.16	102	⇑P	P	05 02 13.7	+1.2
	baz=38,SNR=24						
U26A	**Atchley Ranch,**	38.16	105	⇑P	P	05 02 14.5	+1.9
	baz=38,SNR=41						
V25A	**Rancho No Teng**	38.17	106	⇑P	P	05 02 14.6	+1.9
	baz=38,SNR=45						
W24A	**Lazy 6 Ranch,**	38.28	108	⇑P	P	05 02 15.5	+1.9
	baz=38,SNR=25						
CBKS	**Cedar Bluff**	38.33	98	*e*P	P	05 02 15.2	+1.4
CBKS				pmax	pmax		
	comp=Z,63nm,0.9s						
CBKS	**Cedar Bluff**	38.33	98	*e*P	P	05 02 15.2	+1.4
	comp=Z,63nm,0.9s						
LENM	**Lemitar**	38.35	111	*e*P	P	05 02 16.4	+2.2
LENM				*e*		05 02 31.8	
X23A	**Hourglass Bar**	38.40	109	⇓P	P	05 02 16.1	+1.5
	baz=38,SNR=28						
LPM	**Los Pinos Moun**	38.40	110	*e*P	P	05 02 16.4	+1.8
LPM				*e*		05 02 31.2	
T28A	**Walsh**	38.42	103	⇓P	P	05 02 16.0	+1.4
	baz=38,SNR=12						
Z20A	**Nine Sixteen R**	38.43	113	⇓P	P	05 02 17.3	+2.4
	baz=38,SNR=40						
Y22D	**IRIS PASSCAL I**	38.45	111	⇓P	P	05 02 17.1	+2.1
	baz=38						
BNM	**Barren Site**	38.53	110	*e*P	P	05 02 17.6	+1.8
	comp=Z,46nm,1.4s						
BNM				*e*		05 02 32.9	
BNM				*e*PcP	PcP	05 04 28.8	+1.1
S29A	**Ulysses**	38.53	101	⇑P	P	05 02 16.8	+1.2
	baz=38,SNR=7.5						
Y22A	**Socorro**	38.54	111	⇑P	P	05 02 18.1	+2.3
	baz=38,SNR=18						
U27A	**Thompson Grove**	38.60	104	⇑P	P	05 02 17.7	+1.4
	baz=38,SNR=30						
V26A	**Tequesquite Ra**	38.61	106	⇓P	P	05 02 18.1	+1.7
	baz=39,SNR=72						
Z21A	**St. Cloud Mine**	38.71	112	⇓P	P	05 02 19.7	+2.4
	baz=39,SNR=24						
W25A	**X Bar L Ranch,**	38.74	107	⇓P	P	05 02 19.1	+1.7
	baz=39,SNR=22						
X24A	**Lazy V L Ranch,**	38.78	108	⇑P	P	05 02 19.6	+1.8
	baz=39,SNR=17						
T29A	**Hugoton**	38.80	102	⇑P	P	05 02 19.1	+1.2
	baz=39						
S30A	**Montezuma**	38.85	100	⇓P	P	05 02 19.3	+1.0
	baz=39						
120A	**U Bar Ranch, L**	38.88	114	⇓P	P	05 02 20.8	+2.2
	baz=39,SNR=15						
U28A	**Mallet**	38.94	103	⇑P	P	05 02 20.1	+1.1
	baz=39,SNR=18						
Y23A	**Lovelace Mesa,**	38.99	110	⇑P	P	05 02 21.5	+1.9
	baz=39,SNR=28						
Z22A	**Elephant Butte**	39.10	111	⇑P	P	05 02 22.4	+2.0
	baz=39,SNR=51						
V27A	**Dan Oppiter Fa**	39.12	105	⇑P	P	05 02 21.9	+1.4
	baz=39						
W26A	**Owens Ranch, T**	39.18	106	⇓P	P	05 02 22.7	+1.6
	baz=39,SNR=19						
X25A	**Clemmons Ranch**	39.19	108	⇓P	P	05 02 23.1	+1.9
	baz=39,SNR=5.7						
T30A	**Plains**	39.27	101	⇓P	P	05 02 22.9	+1.2
	baz=39						
Y24A	**Capitan**	39.29	109	⇓P	P	05 02 24.0	+1.9
	baz=39,SNR=27						
121A	**Cookes Peak, D**	39.30	113	⇑P	P	05 02 24.3	+2.2
	baz=39,SNR=38						
U29A	**Oasis Ranch, S**	39.36	102	⇑P	P	05 02 23.4	+0.9
	baz=39						
S31A	**Mullinville**	39.37	99

baz=40,SNR=14
Y26A Elida 40.09 107 ⇓P P 05 02 30.1 +1.4
baz=40,SNR=5.0
U31A Nine Bar Ranch 40.14 101 ⇑P P 05 02 30.2 +1.2
baz=40,SNR=6.9
Z25A Roswell 40.17 109 ⇑P P 05 02 30.9 +1.7
baz=40,SNR=19
YUK Yuzh-Kuril'sk 40.17 277 *d* iP P 05 02 28.6 -0.4
YUK *i* 05 04 00.2
YUK *i* 05 04 31.5
YUK *i* S S 05 08 26.5 -5.9
YUK *i* SS SS 05 11 29.9 -1.1
YUK *i* SSS SSS 05 11 56.3
YUK *i* 05 12 29.9
YUK pmax pmax
comp=Z,229nm,1.4s
YUK pmax pmax
comp=E,124nm,1.4s
YUK pmax pmax
comp=N,155nm,1.4s
YUK pmax pmax
comp=Z,131nm,3.6s
YUK MLR MLR
comp=Z,123nm,20.0s
YUK MLR MLR
comp=E,87nm,20.0s
YUK MLR MLR
comp=N,80nm,20.0s
V30A Spur Ranch, Mi 40.19 102 ⇓P P 05 02 30.2 +0.8
baz=40
W29A Amraillo 40.22 104 ⇑P P 05 02 30.7 +1.1
baz=40
JFWS Jewell Farm 40.22 86 *e*P P 05 02 29.4 -0.1
JFWS pmax pmax
comp=Z,20nm,0.8s
JFWS Jewell Farm 40.22 86 *e*P P 05 02 29.4 -0.1
comp=Z,20nm,0.8s
124A Stringfield Ra 40.28 110 ⇓P P 05 02 31.8 +1.5
baz=40,SNR=19
223A Chaparral, Ant 40.38 112 ⇓P P 05 02 32.6 +1.5
baz=40
AMTX Amarillo 40.39 104 *e*P P 05 02 32.7 +1.7
comp=Z,140nm,1.4s
AMTX *e* 05 02 45.5
AMTX Amarillo 40.39 104 ⇓P P 05 02 32.2 +1.2
baz=40,SNR=7.3
X28A Dimmitt 40.42 105 ⇑P P 05 02 32.4 +1.1
baz=40,SNR=10
Y27A Causey 40.44 107 ⇑P P 05 02 32.9 +1.4
baz=40,SNR=55
Z26A Caprock 40.53 108 ⇓P P 05 02 33.5 +1.2
baz=40,SNR=28
MSTX Muleshoe 40.57 106 ⇑P P 05 02 33.7 +1.1
baz=40,SNR=41
V31A Spring Creek L 40.61 102 ⇑P P 05 02 34.1 +1.3
baz=40,SNR=9.5
125A Gardner Draw, 40.70 109 ⇑P P 05 02 35.5 +1.8
baz=41,SNR=24
W30A Crocket Farms 40.70 103 ⇓P P 05 02 34.7 +1.0
baz=41
X29A Tulia 40.72 105 ⇑P P 05 02 35.1 +1.3
baz=41,SNR=16
224A Cornudas Mount 40.76 111 ⇓P P 05 02 35.8 +1.6
baz=41,SNR=21
Z27A Tatum 40.88 107 ⇓P P 05 02 36.1 +1.0
baz=41,SNR=18
Y28A McKinney Farm, 40.88 106 ⇓P P 05 02 35.8 +0.7
baz=41,SNR=13
SUMG Summit 40.94 25 ⇓*i*P P 05 02 36.2 +0.7
SUMG pmax pmax
comp=Z,22nm,0.8s
SUMG Summit 40.94 25 *e*P P 05 02 36.1 +0.7
comp=Z,29nm,0.8s
SUMG *e*PcP PcP 05 04 35.9 +0.9
SUMG Summit 40.94 25 ⇓*i*P P 05 02 36.2 +0.7
comp=Z,22nm,0.8s
SUMG *i* 05 02 51.3
126A Clayton Basin, 41.02 109 ⇑P P 05 02 37.8 +1.5
baz=41
W31A Holland Ranch, 41.02 102 ⇑P P 05 02 37.0 +0.8
baz=41,SNR=10
225A Deer Hill, Car 41.07 110 ⇑P P 05 02 38.3 +1.5
baz=41,SNR=7.4
X30A Coker Ranch, T 41.14 104 ⇓P P 05 02 38.3 +1.1
baz=41,SNR=25
Y29A Porterfield Fa 41.20 105 ⇑P P 05 02 39.1 +1.3
baz=41,SNR=8.9
DAG Danmarks Havn 41.22 15 ⇓*i*P P 05 02 37.1 -0.2
DAG pmax pmax
comp=Z,47nm,0.9s
DAG Danmarks Havn 41.22 15 ⇓*i*P P 05 02 37.1 -0.2
comp=Z,56nm,0.9s
324A Moseley Ranch, 41.30 111 ⇓P P 05 02 40.3 +1.6
baz=41,SNR=33
Z28A Tucker Farm, M 41.31 106 ⇓P P 05 02 39.1 +0.4
baz=41,SNR=5.7
127A Arkansas Junct 41.32 108 ⇑P P 05 02 39.5 +0.7
baz=41,SNR=5.5
226B Tecolote Peak, 41.41 109 ⇑P P 05 02 41.1 +1.6
baz=41,SNR=24
X31A McDonald Ranch 41.44 103 ⇑P P 05 02 40.9 +1.3
baz=41,SNR=16
SFJD Kangerlussuaq 41.50 36 *e*P P 05 02 39.7 0.0
comp=Z,26nm,1.0s
SFJD Kangerlussuaq 41.50 36 *i*P P 05 02 40.7 +1.0
comp=Z,20nm,0.8s
Y30A Stafford Cattl 41.58 104 ⇓P P 05 02 41.8 +1.0
baz=42
325A Bean Ranch, Si 41.60 111 ⇑P P 05 02 42.8 +1.7
baz=42,SNR=27
Z29A Hungry Hill Ra 41.67 106 ⇑P P 05 02 42.7 +1.1
baz=42,SNR=20
CLNS Chul'man 41.70 305 *e*P P 05 02 40.5 -1.0
CLNS *e* 05 04 17.5
CLNS *e* 05 04 38.0
CLNS *e*PPP PPP 05 04 43.9
CLNS *e*S S 05 08 52.8 -2.2
CLNS pmax pmax
comp=Z,8.0nm,1.2s
CLNS pmax pmax
comp=N,4.0nm,1.1s
CLNS pmax pmax
comp=E,10.0nm,1.1s
CLNS pmax pmax
comp=E,6.0nm,1.1s
CLNS pmax pmax
comp=E,7.0nm,0.8s
CLNS pmax pmax
comp=N,8.0nm,0.9s
CLNS smax smax
comp=N,70nm,14.6s
CLNS smax smax
comp=E,307nm,15.0s
CLNS MLR MLR
comp=Z,441nm,15.0s
CLNS MLR MLR
comp=N,83nm,13.0s
CLNS MLR MLR
comp=E,148nm,13.0s
128A Castleberry Fa 41.80 107 ⇑P P 05 02 43.6 +0.9
baz=42,SNR=26
Y31A Rekieta Farm, 41.83 104 ⇓P P 05 02 43.4 +0.6
baz=42,SNR=7.0
227A Bennet, Jal 41.89 109 ⇑P P 05 02 44.5 +1.1
baz=42
Z30A Sanderson Ranc 41.93 105 ⇓P P 05 02 44.6 +0.8
baz=42,SNR=17
WMOK Wichita Mounta 41.96 102 *e*P P 05 02 44.9 +1.0
WMOK pmax pmax
comp=Z,44nm,1.0s
WMOK Wichita Mounta 41.96 102 *e*P P 05 02 44.9 +1.0
comp=Z,44nm,1.0s
WMOK *e* 05 02 57.6
425A Indio Mountain 42.08 111 ⇓P P 05 02 47.0 +2.0
baz=42,SNR=79
129A Stewart Farms, 42.09 107 ⇓P P 05 02 45.7 +0.6
baz=42
326A Caldwell Ranch 42.13 110 ⇓P P 05 02 46.9 +1.5
baz=42,SNR=10
228A UT Block 9, Go 42.15 108 ⇓P P 05 02 46.6 +1.0
baz=42,SNR=8.6
Y32A R-V Farms, Ver 42.21 103 ⇑P P 05 02 46.8 +0.9
baz=42,SNR=14
327A Balmorhea Ranc 42.32 109 ⇓P P 05 02 48.3 +1.4
baz=42
Z31A Sharp Cattle R 42.40 104 ⇑P P 05 02 47.8 +0.3
baz=42,SNR=12

TUL1 Tulsa 42.57 98 ⇑P P 05 02 48.8 0.0
baz=42,SNR=11
130A Snyder 42.57 106 ⇓P P 05 02 49.6 +0.7
baz=42,SNR=7.5
426A McDonald Obser 42.63 110 ⇑P P 05 02 51.2 +1.6
baz=43,SNR=20
328A Wristen Ranch, 42.64 109 ⇓P P 05 02 50.7 +1.2
baz=43,SNR=5.2
229A Bryant Ranch, 42.66 107 ⇑P P 05 02 50.4 +0.7
baz=43
Z32A Haskell 42.74 104 ⇓P P 05 02 50.7 +0.4
baz=43,SNR=8.6
427A Hayter Ranch, 42.79 110 ⇓P P 05 02 51.8 +1.1
baz=43,SNR=17
131A Roby 42.80 105 ⇓P P 05 02 51.4 +0.7
baz=43
329A Wagon Wheel Ra 42.97 108 ⇑P P 05 02 52.9 +0.7
baz=43,SNR=16
ERM Erimo 43.00 277 *e*P P 05 02 52.5 +0.3
ERM Erimo 43.00 277 *e*P P 05 02 52.5 +0.3
230A Sterling City 43.07 106 ⇓P P 05 02 53.9 +1.0
baz=43,SNR=15
526A Mary Lane Ranc 43.11 111 ⇑P P 05 02 55.2 +1.8
baz=43,SNR=24
ABTX Abilene, Hawle 43.21 104 ⇓P P 05 02 54.7 +0.6
baz=43,SNR=6.9
428A Kincaid Ranch, 43.24 109 ⇓P P 05 02 56.1 +1.7
baz=43,SNR=54
527A Woodward Ranch 43.27 110 ⇑P P 05 02 55.8 +1.1
baz=43,SNR=13
231A Bronte 43.43 106 ⇑P P 05 02 56.3 +0.5
baz=43,SNR=12
330A Mertzon 43.43 107 ⇑P P 05 02 56.7 +0.8
baz=43,SNR=40
SCHQ Schefferville 43.43 57 *e*P P 05 02 55.8 +0.3
comp=Z,25nm,0.9s
SCHQ Schefferville 43.43 57 P P 05 02 55.2 -0.4
comp=Z,18nm,0.9s,baz=318,slow=8.3,SNR=23
SCHQ LR LR 05 21 46.9
comp=Z,474nm,18.2s,baz=0.6,slow=37
626A Big Bend Ranch 43.51 111 ⇓P P 05 02 58.0 +1.4
baz=44,SNR=23
KLR Kul'dur 43.62 292 *e*P P 05 02 51.8 -5.3
528A Cox Ranch, San 43.66 110 ⇓P P 05 02 59.6 +1.8
baz=44,SNR=16
SFIN Scholer Farm 43.68 86 ⇓P P 05 02 57.6 -0.1
baz=44,SNR=8.3
429A Davenport Ranc 43.71 108 ⇑P P 05 02 58.9 +0.7
baz=44,SNR=21
FVM French Village 43.75 91 *e*P P 05 02 57.7 -0.6
FVM *e* 05 04 41.4
FVM pmax pmax
comp=Z,22nm,1.1s
FVM French Village 43.75 91 *e*P P 05 02 57.6 -0.6
comp=Z,22nm,1.1s
FVM *e*PP PP 05 04 41.4 +0.9
232A Coleman 43.80 105 ⇑P P 05 02 59.6 +0.7
baz=44,SNR=18
331A San Angelo 43.88 106 ⇑P P 05 03 00.2 +0.8
baz=44,SNR=6.8
430A Baggett Ranch, 43.90 107 ⇓P P 05 03 00.6 +0.8
baz=44,SNR=25
TXAR Lajitas Array 43.91 111 P P 05 03 01.5 +1.6
TXAR Lajitas Array 43.91 111 P P 05 03 01.5 +1.6
comp=Z,13nm,0.9s,baz=328,slow=6.1,SNR=82
TXAR LR LR 05 20 20.4
comp=Z,270nm,21.6s,baz=295,slow=35
627A Terlingua Ranc 43.95 111 ⇓P P 05 03 01.6 +1.5
baz=44,SNR=33
529A Stev Forest Ra 43.96 109 ⇓P P 05 03 01.5 +1.3
baz=44,SNR=22
332A Millersview 44.16 105 ⇓P P 05 03 02.2 +0.5
baz=44,SNR=6.4
628A Black Gap, Mar 44.16 110 ⇓P P 05 03 03.3 +1.5
baz=44,SNR=44
431A Sonora 44.30 107 ⇑P P 05 03 03.8 +0.9
baz=44,SNR=31
530A J-C Ranch, Com 44.38 108 ⇑P P 05 03 04.4 +0.9
baz=44,SNR=20
OLIL Olney 44.39 88 *e*P P 05 03 03.6 +0.2
comp=Z,44nm,0.8s
432A Menard 44.55 106 ⇓P P 05 03 05.4 +0.6
baz=44,SNR=7.7
SIUC Southern Illin 44.58 90 *e*P P 05 03 04.8 -0.1
comp=Z,19nm,0.9s
531A Rocksprings 44.75 107 ⇑P P 05 03 07.4 +0.9
baz=45
WHTX Lake Whitney 44.81 103 ⇓P P 05 03 07.6 +0.7
baz=45,SNR=6.3
JCT Junction City 44.86 106 ⇓P P 05 03 08.4 +1.1
baz=45,SNR=64
BLO Bloomington 44.87 86 *e*P P 05 03 07.3 0.0
BLO pmax pmax
comp=Z,17nm,0.6s
BLO Bloomington 44.87 86 *e*P P 05 03 07.2 0.0
comp=Z,17nm,0.6s
532A Rocksprings 45.10 107 ⇑P P 05 03 09.8 +0.5
baz=45,SNR=14
PARMO Parma 45.10 92 *e*P P 05 03 09.6 +0.5
USIN University of 45.19 89 *e*P P 05 03 09.9 +0.1
comp=Z,35nm,0.8s
631A Perdido Creek 45.36 108 ⇑P P 05 03 11.5 +0.3
baz=45,SNR=25
632A Uvalde 45.67 107 ⇓P P 05 03 14.2 +0.5
baz=46,SNR=9.1
WCI Wyandotte Cave 45.70 87 *e*P P 05 03 13.5 -0.4
WCI *e* 05 04 51.2
WCI pmax pmax
comp=Z,8.0nm,0.8s
WCI Wyandotte Cave 45.70 87 *e*P P 05 03 13.5 -0.4
comp=Z,8.0nm,0.8s
WCI *e*PcP PcP 05 04 51.2 0.0
ACSO Alum Creek Sta 45.91 83 *e*P P 05 03 14.4 -1.0
comp=Z,16nm,0.8s
SCO Scoresbysund 45.91 21 *i*P P 05 03 15.9 +0.8
SCO pmax pmax
comp=Z,6.0nm,1.0s
SCO Scoresbysund 45.91 21 *i*P P 05 03 15.9 +0.8
comp=Z,6.0nm,1.0s
ERPA Erie 46.04 79 *e*P P 05 03 16.5 +0.1
comp=Z,45nm,0.9s
732A Laxson Ranch, 46.22 108 ⇑P P 05 03 19.0 +1.0
baz=46,SNR=9.8
ALLY Alegheny Colle 46.30 79 *e*P P 05 03 19.3 +0.8
comp=Z,60nm,0.9s
WVT Waverly 46.50 90 *e*P P 05 03 19.8 -0.4
WVT *e* 05 04 54.2
WVT pmax pmax
comp=Z,6.0nm,0.8s
WVT Waverly 46.50 90 *e*P P 05 03 19.8 -0.4
comp=Z,5.7nm,0.8s
WVT *e*PcP PcP 05 04 54.1 +0.2
MSNY Massena 46.51 72 *e*P P 05 03 20.2 +0.1
comp=Z,410nm,0.9s
LONY Lake Ozonia 46.92 72 *e*P P 05 03 22.5 -0.8
comp=Z,24nm,0.8s
OXF Oxford 46.94 93 *e*P P 05 03 23.7 +0.1
OXF pmax pmax
comp=Z,73nm,1.0s
OXF Oxford 46.94 93 *e*P P 05 03 23.7 +0.1
comp=Z,73nm,1.0s
USRK Ussuriysk Arra 47.05 287 P P 05 03 22.9 -1.5
comp=Z,1.5nm,0.6s,baz=47,slow=8.6,SNR=5.2
USRK pP pP 05 03 34.0 -2.3
comp=Z,5.5nm,0.7s,baz=48,slow=6.7,SNR=8.5
USRK LR LR 05 24 28.2
comp=Z,219nm,20.4s,baz=12,slow=38
FRNY Flat Rock 47.25 71 *e*P P 05 03 25.1 -0.9
comp=Z,48nm,0.8s
HKT Hockley 47.28 103 *e*P P 05 03 27.3 +1.1
HKT pmax pmax
comp=Z,87nm,1.5s
HKT Hockley 47.28 103 *e*P P 05 03 27.3 +1.1
comp=Z,87nm,1.5s
NCB Newcomb 47.57 73 *e*P P 05 03 28.0 -0.4
comp=Z,49nm,1.0s
BINY Binghamton 48.00 75 *e*P P 05 03 31.9 +0.1
comp=Z,82nm,0.9s
MDV Middlebury 48.06 72 *e*P P 05 03 32.1 -0.1
SWET Sewanee 48.19 90 *e*P P 05 03 32.9 -0.5
comp=Z,35nm,0.6s
SSPA Standing Stone 48.20 78 *e*P P 05 03 33.3 0.0
comp=Z,49nm,1.0s
ACCN Adirondack Com 48.27 73 *e*P P 05 03 34.0 +0.1
comp=Z,41nm,0.8s
ACCN *e*PP PP 05 05 26.4 +0.1
TZTN Tazewell 48.40 86 *e*P P 05 03 35.0 +0.1

comp=Z,62nm,1.4s
LBNH Lisbon 48.50 71 *e*P P 05 03 35.4 -0.2
LBNH pmax pmax
comp=Z,29nm,0.9s
LBNH Lisbon 48.50 71 *e*P P 05 03 35.4 -0.2
comp=Z,29nm,0.9s
HNH Hanover 48.72 71 *e*P P 05 03 37.2 -0.1
CPCT Cooper Cave 48.74 88 *e*P P 05 03 37.3 -0.2
CPCT *e*PcP PcP 05 05 01.5 -0.5
TRY Troy 48.76 73 *e*P P 05 03 37.5 -0.1
comp=Z,33nm,0.8s
TKL Tuckaleechee C 48.96 87 *e*P P 05 03 39.1 -0.1
TKL *e*PcP PcP 05 05 02.8 0.0
FFD Franklin Falls 49.20 71 *e*P P 05 03 41.5 +0.6
comp=Z,30nm,0.7s
LRAL Lakeview Retre 49.34 92 *e*P P 05 03 41.8 -0.3
comp=Z,13nm,0.8s
LRAL *e*PP PP 05 05 39.4 +3.3
MVL Millersville 49.45 78 *e*P P 05 03 43.5 +0.5
comp=Z,29nm,0.8s
BLA Blacksburg 49.49 83 *e*P P 05 03 43.3 0.0
BLA pmax pmax
comp=Z,29nm,0.9s
BLA Blacksburg 49.49 83 *e*P P 05 03 43.3 0.0
comp=Z,29nm,0.9s
MAJO Matsushiro 49.63 276 *e*P P 05 03 44.2 -0.2
MAJO pmax pmax
comp=Z,32nm,0.9s
MAJO Matsushiro 49.63 276 *e*P P 05 03 44.2 -0.2
comp=Z,32nm,0.9s
MAT Matsushiro 49.63 276 P P 05 03 43.8 -0.6
MAT S S 05 10 49.2 -0.4
MJAR Matsushiro Arr 49.63 276 P P 05 03 44.4 0.0
MJAR Matsushiro Arr 49.63 276 P P 05 03 44.4 0.0
comp=Z,15nm,1.0s,baz=12,slow=6.2,SNR=29
MJAR LR LR 05 26 01.3
comp=Z,79nm,18.3s,baz=60,slow=38
SDMD Soldier's Deli 49.65 79 *e*P P 05 03 44.5 0.0
comp=Z,37nm,0.9s
CPNY Central Park 50.06 75 *e*P P 05 03 48.1 +0.7
comp=Z,136nm,1.4s
WES Weston 50.17 72 *e*P P 05 03 48.6 +0.3
WES pmax pmax
comp=Z,259nm,1.2s
WES Weston 50.17 72 *e*P P 05 03 48.6 +0.3
comp=Z,259nm,1.2s
YLE Yale 50.17 74 *e*P P 05 03 49.1 +0.8
comp=Z,184nm,0.8s
CBN Corbin 50.30 80 *e*P P 05 03 49.5 +0.2
comp=Z,32nm,0.8s
BRYW Bryant College 50.41 72 *e*P P 05 03 50.3 +0.1
comp=Z,353nm,1.4s
BRYW *e*PcP PcP 05 05 08.1 +0.1
JSRW J. Sargeant Re 50.43 81 *e*P P 05 03 50.6 +0.3
CN2 Changchun 50.54 291 *e*P P 05 03 50.3 -0.8
CN2 *e*pP pP 05 04 02.8 -0.3
CN2 pmax pmax
comp=Z,30nm,1.1s
CN2 pmax pmax
comp=Z,100nm,5.0s
CN2 LR LR
comp=N,300nm,22.0s
CN2 LR LR
comp=E,200nm,22.0s
CN2 LR LR
comp=Z,200nm,22.0s
KMSC Kings Mountain 50.62 86 ⇓P P 05 03 51.4 -0.4
baz=50,SNR=10
GOGA Godfrey 50.87 89 *e*P P 05 03 53.3 -0.4
GOGA Godfrey 50.87 89 *e*P P 05 03 53.3 -0.4
KEV Kevo 51.48 1 *e*P P 05 03 57.8 0.0
KEV pmax pmax
comp=Z,18nm,0.9s
KEV Kevo 51.48 1 *e*P P 05 03 57.8 0.0
comp=Z,18nm,0.9s
KEV Kevo 51.48 1 *e*p P 05 03 56.2 -1.6
comp=Z,13nm,0.9s
ARCES ARCESS Array B 51.69 1 P P 05 03 58.8 -0.7
ARCES ARCESS Array B 51.69 1 P P 05 03 58.8 -0.7
comp=Z,16nm,1.0s,baz=357,slow=6.8,SNR=52
ARCES LR LR 05 27 51.8
comp=Z,97nm,19.4s,baz=145,slow=38
TIGA Tifton 52.36 91 ⇑P P 05 04 03.7 -1.1
baz=52
NHSC New Hope 52.80 86 *e*P P 05 04 08.5 +0.4
comp=Z,72nm,0.9s
LVZ Lovozero 53.28 357 *d* iP P 05 04 11.7 +0.5
LVZ pmax pmax
comp=Z,43nm,0.9s
APA Apatity 53.63 358 ⇑*i*P P 05 04 14.2 +0.4
APA pmax pmax
comp=Z,31nm,1.0s
APA MLR MLR
comp=Z,200nm,12.0s
KSRS Korea Array 54.16 284 P P 05 04 18.4 +0.5
comp=Z,14nm,0.7s,baz=40,slow=6.9,SNR=40
KSRS LR LR 05 28 32.4
comp=Z,68nm,19.5s,baz=38,slow=37
KSAR Wonju Array Be 54.19 284 P P 05 04 18.4 +0.2
ZAK Zakamensk 55.21 311 *e*P P 05 04 24.4 -1.2
ZAK pmax pmax
comp=Z,3.0nm,1.2s
ULN Ulaanbaatar 55.69 307 *e*P P 05 04 29.0 -0.1
ULN Ulaanbaatar 55.69 307 P P 05 04 29.3 +0.2
SNR=9.2
SONM Songino Array 55.98 307 P P 05 04 31.6 +0.4
SONM Songino Array 55.98 307 P P 05 04 31.6 +0.4
comp=Z,26nm,0.9s,baz=42,slow=7.5,SNR=115
SONM LR LR 05 30 12.0
comp=Z,405nm,20.6s,baz=62,slow=38
TMCR Tamitsa 56.89 355 *e*P P 05 04 36.7 -0.5
TMCR pmax pmax
comp=Z,21nm,0.4s
BJI Beijing 57.84 295 P P 05 04 42.5 -1.8
BJI S S 05 12 38.0 -2.4
BJI SS SS 05 16 30.5 -0.3
BJI pmax pmax
comp=Z,15nm,0.7s
BJI pmax pmax
comp=Z,120nm,4.3s
BJI LR LR
comp=N,240nm,17.4s
BJI LR LR
comp=E,200nm,19.8s
BJI LR LR
comp=Z,160nm,20.1s
HVS Khovu-Aksy 58.12 318 *e*P P 05 04 46.8 +0.6
HVS pmax pmax
comp=Z,69nm,1.2s
NVS Novosibirsk 58.29 326 *e*P P 05 04 45.3 -1.9
NVS pmax pmax
comp=Z,18nm,1.3s
NVS pmax pmax
comp=N,5.0nm,1.2s
NVS pmax pmax
comp=E,11nm,1.3s
JOF Joensuu 58.34 359 *e*P P 05 04 45.2 -2.2
JOF pmax pmax
comp=Z,6.0nm,0.6s
JOF Joensuu 58.34 359 *e*p P 05 04 45.2 -2.2
comp=Z,6.0nm,0.6s
ZAA0 Zalesovo Array 58.60 325 *e*P P 05 04 48.6 -0.8
ZALV Zalesovo Beam 58.60 325 P P 05 04 48.8 -0.6
ZALV Zalesovo Beam 58.60 325 P P 05 04 48.8 -0.6
ZALV Zalesovo Beam 58.60 325 P P 05 04 48.8 -0.6
comp=Z,3.1nm,0.4s,baz=28,slow=6.7,SNR=25
ZALV LR LR 05 33 47.6
comp=Z,88nm,18.1s,baz=249,slow=40
KAF Kangasniemi 59.15 1 *e*P P 05 04 51.7 -1.4
KAF pmax pmax
comp=Z,6.0nm,0.7s
KAF Kangasniemi 59.15 1 *e*p P 05 04 51.7 -1.4
comp=Z,6.4nm,0.7s
HHC Hu-ho-hao-te 59.32 299 *e*P P 05 04 54.8 +0.1
HHC PcP PcP 05 05 43.3 +0.9
HHC PP PP 05 07 07.3 +1.7
HHC PcS PcS 05 09 43.0 -1.5
HHC S S 05 13 02.0 +2.1
HHC ScS ScS 05 14 42.3 +1.3
HHC pmax pmax
comp=Z,69nm,0.8s
HHC pmax pmax
comp=Z,210nm,6.3s
HHC LR LR
comp=N,290nm,16.9s
HHC LR LR

comp=E,560nm,17.2s
HHC LR LR

comp=Z,410nm,16.8s
NB2 NORSAR Subarra 59.49 10 P **P** **05 04 54.9 -0.6**
baz=350,slow=6.9
NB2 NORSAR Subarra 59.49 10 P **P** **05 04 54.9 -0.6**
comp=Z,21nm,0.9s,baz=350,slow=6.9
NOA NORSAR Array B 59.49 10 P **P** **05 04 54.9 -0.6**
NOA NORSAR Array B 59.49 10 P **P** **05 04 54.9 -0.6**
comp=Z,14nm,0.9s,baz=350,slow=6.8,SNR=43
NOA LR LR 05 32 34.7

comp=Z,54nm,19.0s,baz=15,slow=38
NAO01 NORSAR Array S 59.65 10 *eP* **P** **05 04 56.1 -0.5**
comp=Z,20nm,0.8s
SOKR Solikamsk 59.66 344*c iP* **P** **05 04 55.7 -0.8**
SOKR pmax pmax

comp=Z,40nm,1.1s
FIA1 FINESS Array S 59.82 1 *eP* **P** **05 04 57.5 -0.2**
FIA1 *e* 05 05 09.7
FINES FINESS Array B 59.82 1 P **P** **05 04 57.5 -0.2**
FINES pP **pP** **05 05 07.8 -2.1**
FINES FINESS Array B 59.82 1 P **P** **05 04 57.5 -0.2**
comp=Z,14nm,0.7s,baz=3.4,slow=9.5,SNR=37
FINES pP **pP** **05 05 07.8 -2.1**

comp=Z,34nm,0.8s,baz=15,slow=7.9,SNR=19
BBSR BB Station 61.26 74 *eP* **P** **05 05 07.6 -0.3**
comp=Z,47nm,1.0s
SVE Sverdlovsk 61.67 341⇓*eP* **P** **05 05 10.0 -0.4**
SVE pmax pmax

comp=Z,32nm,1.0s
ARU Arti 62.40 342*d iP* **P** **05 05 14.0 -1.2**
ARU 05 05 53.2
ARU S **S** **05 13 37.8 -0.6**
ARU pmax pmax

comp=Z,37nm,1.2s
ARU Arti 62.40 342 P **P** **05 05 14.0 -1.2**
comp=Z,184nm,1.1s,SNR=5.0
JOW Kunigami 62.45 277 *eP* **P** **05 05 15.7 -0.3**
comp=Z,48nm,1.2s
NJ2 Nanjing 62.96 288 *eP* **P** **05 05 18.3 -1.0**
NJ2 S **S** **05 13 44.0 -2.1**
NJ2 pmax pmax

comp=Z,30nm,0.7s
NJ2 LR LR

comp=N,300nm,28.5s
NJ2 LR LR

comp=E,510nm,23.6s
NJ2 LR LR

comp=Z,320nm,19.4s
KURK Kurchatov 63.25 327*c iP* **P** **05 05 20.1 -0.9**
KURK pmax pmax

comp=Z,18nm,1.2s
KURK Kurchatov 63.25 327 *eP* **P** **05 05 20.2 -0.8**
KURK Kurchatov 63.25 327 P **P** **05 05 20.6 -0.4**
SNR=6.5
BRVK Borovoye 63.27 333*c iP* **P** **05 05 20.0 -1.1**
BRVK pmax pmax

comp=Z,45nm,1.0s
BRVK pmax pmax

comp=Z,52nm,1.7s
BRVK Borovoye 63.27 333 *eP* **P** **05 05 20.3 -0.7**
comp=Z,29nm,1.0s
BRVK Borovoye 63.27 333 P **P** **05 05 20.7 -0.4**
SNR=11
BVA0 Borovoye Array 63.27 333 *i* P **P** **05 05 19.9 -1.2**
BVA0 pmax pmax

comp=Z,6.0nm,1.0s
VOSK Vostochnaya 63.41 333 P **P** **05 05 20.6 -1.4**
VOSK pmax pmax

comp=Z,8.0nm,0.8s
ZRNK Zerenda 63.66 334 *i* P **P** **05 05 22.4 -1.3**
ZRNK pmax pmax

comp=Z,35nm,1.0s
MUD Monsted U'grnd 63.81 12 *eP* **P** **05 05 25.6 +1.1**
MUD pmax pmax

comp=Z,9.0nm,1.2s
MUD Monsted U'grnd 63.81 12 *i* P **P** **05 05 25.6 +1.1**
comp=Z,9.0nm,1.1s
TGUH Tegucigalpa,Un 64.85 105 *eP* **P** **05 05 32.2 +0.3**
comp=Z,29nm,1.0s
IZAR Zarasai 65.53 1 *eP* **P** **05 05 36.2 +0.4**
IZAR AMB AMB 05 05 49.7

comp=Z,12nm,0.9s
GTA Gaotai 65.61 306 ⇑P **P** **05 05 36.5 -0.3**
GTA pP **pP** **05 05 49.3 +0.1**
GTA PP **PP** **05 08 02.8 +1.8**
GTA S **S** **05 14 16.8 -2.3**
GTA SS **SS** **05 18 32.8 +0.2**
GTA pmax pmax

comp=Z,20nm,1.3s
GTA pmax pmax

comp=Z,95nm,6.2s
GTA LR LR

comp=N,360nm,20.9s
GTA LR LR

comp=E,410nm,21.4s
GTA LR LR

comp=Z,360nm,18.8s
BSD Bornholm Skovb 65.66 9 *eP* **P** **05 05 37.5 +0.9**
BSD pmax pmax

comp=Z,31nm,0.9s
BSD Bornholm Skovb 65.66 9 *i* P **P** **05 05 37.5 +0.9**
comp=Z,31nm,0.8s
MK31 Makanchi Array 65.66 323 *eP* **P** **05 05 35.5 -1.3**
MK31 Makanchi Array 65.66 323 *eP* **P** **05 05 35.5 -1.3**
MKAR Makanchi Array 65.66 323 *eP* **P** **05 05 35.8 -1.1**
MKAR Makanchi Array 65.66 323 *eP* **P** **05 05 35.8 -1.1**
MKAR Makanchi Array 65.66 323 P **P** **05 05 35.7 -1.1**
comp=Z,8.0nm,0.9s,baz=41,slow=5.5,SNR=56
MKAR LR LR 05 39 18.6

comp=Z,95nm,18.0s,baz=13,slow=41
ISAL Salakas 65.71 1 *eP* **P** **05 05 37.4 +0.5**
ISAL AMB AMB 05 05 51.0

comp=Z,17nm,1.1s
IIGN Ignalina 65.93 1 *eP* **P** **05 05 38.9 +0.5**
IIGN AMB AMB 05 05 57.5

comp=Z,13nm,1.1s
IDID Didziasalis 65.97 1 *eP* **P** **05 05 39.1 +0.5**
IDID AMB AMB 05 05 57.5

comp=Z,12nm,1.1s
OBN Obninsk 66.00 355⇑*iP* **P** **05 05 38.5 -0.3**
OBN *e*S **pS** **05 14 39.5 +1.5**
OBN pmax pmax

comp=Z,10.0nm,0.5s
XAN Xi'an 66.08 296 P **P** **05 05 38.8 -1.0**
XAN pmax pmax

comp=Z,4.0nm,0.8s
XAN pmax pmax

comp=Z,14nm,4.6s
NACGM Naroch 66.39 1 *e* **P** **05 05 39.0 -2.3**
WHN Wuhan 66.40 290 P **P** **05 05 41.0 -0.7**
WHN S **S** **05 14 28.0 -0.5**
WHN LR LR

comp=Z,530nm,14.1s
WMQ Urumqi 66.49 317⇑*iP* **P** **05 05 43.0 +0.8**
WMQ PcP **PcP** **05 06 12.0 +0.5**
WMQ PP **PP** **05 08 12.0 +3.6**
WMQ S **S** **05 14 34.0 +4.6**
WMQ pmax pmax

comp=Z,24nm,1.0s
WMQ pmax pmax

comp=Z,100nm,6.0s
WMQ LR LR

comp=N,220nm,18.0s
WMQ LR LR

comp=E,210nm,18.0s
WMQ LR LR

comp=Z,290nm,18.0s
LZH Lanzhou 66.68 301 *eP* **P** **05 05 43.5 -0.2**
LZH pP **pP** **05 05 56.5 +0.4**
LZH PcP **PcP** **05 06 10.8 -1.8**
LZH pmax pmax

comp=Z,60nm,0.8s
LZH pmax pmax

comp=Z,86nm,4.2s
LZH LR LR

comp=N,280nm,13.7s
LZH LR LR

comp=E,230nm,11.1s
LZH LR LR

comp=Z,460nm,14.5s
SUW Suwalki 67.21 3 *eP* **P** **05 05 45.0 -1.5**
IBBN Ibbenburen 67.73 14 *eP* **P** **05 05 50.3 +0.5**
comp=Z,11nm,0.9s
NRDL Niedersach Rie 67.81 12 *eP* **P** **05 05 50.6 +0.3**
comp=Z,16nm,1.1s

AKTO Aktyubinsk 68.25 340 *i* P **P** **05 05 52.2 -1.0**
AKTO pmax pmax

comp=Z,4.0nm,1.0s
CLZ Clausthal 68.48 12 *eP* **P** **05 05 55.4 +0.7**
CLZ pmax pmax

comp=Z,22nm,0.9s
CLZ Clausthal 68.48 12 *eP* **P** **05 05 55.4 +0.7**
comp=Z,22nm,0.9s
BUG Bochum–Univer 68.52 14 *eP* **P** **05 05 54.9 +0.1**
comp=Z,22nm,0.9s
SSLB Suanglung 68.69 281 *eP* **P** **05 05 55.4 -1.0**
comp=Z,402nm,2.5s
AB31 Akbulak array 69.04 339 *i* P **P** **05 05 56.9 -1.2**
AB31 pmax pmax

comp=Z,15nm,0.7s
NEUB Neuenburg 69.25 11 *eP* **P** **05 05 59.8 +0.4**
comp=Z,23nm,1.0s
CLL Collm 69.28 10 *i* P **P** **05 05 59.8 +0.3**
CLL pmax pmax

comp=Z,9.0nm,0.9s
CLL Collm 69.28 10 *eP* **P** **05 05 59.5 0.0**
comp=Z,9.0nm,0.9s
CLL Collm 69.28 10 *i* P **P** **05 05 59.8 +0.3**
comp=Z,9.0nm,0.9s
CLL *i* 05 06 01.7
CLL *i* pP **pP** **05 06 13.7 +1.7**
CLL L L 05 36 00.0

comp=Z,100nm,20.6s
BAIF Baives 69.45 16 *eP* **P** **05 06 00.6 0.0**
comp=Z,29nm,1.0s
BAIF Baives 69.45 16 *eP* **P** **05 06 00.6 0.0**
BAIF pmax pmax

comp=Z,29nm,1.0s
BAIF Baives 69.45 16 *eP* **P** **05 06 00.6 0.0**
comp=Z,29nm,1.0s
UBBA Unterbreizbach 69.45 12 *eP* **P** **05 06 01.0 +0.5**
comp=Z,6.0nm,1.1s
GIVF Givet 69.50 16 *eP* **P** **05 06 00.7 -0.2**
comp=Z,42nm,1.0s
GIVF Givet 69.50 16 *eP* **P** **05 06 00.7 -0.2**
GIVF pmax pmax

comp=Z,42nm,1.0s
GIVF Givet 69.50 16 *eP* **P** **05 06 00.7 -0.2**
comp=Z,42nm,1.0s
FBE Freiberg 69.69 10 *eP* **P** **05 06 02.7 +0.6**
comp=Z,13nm,1.0s
VRHR Novokhopersk 69.69 351 *eP* P 05 05 50.0 -12
VRHR pmax pmax

comp=N,20nm,0.4s
VRHR pmax pmax

comp=E,20nm,0.4s
VRHR pmax pmax

comp=Z,10.0nm,0.4s
VSR Storozhevoye 69.75 353 *eP* **P** **05 06 01.4 -1.0**
VSR pmax pmax

comp=N,10.0nm,0.6s
VSR pmax pmax

comp=Z,10.0nm,0.6s
VSR pmax pmax

comp=E,2.0nm,0.3s
BRG Berggiesshubel 69.79 10 *eP* **P** **05 06 03.0 +0.3**
comp=E,13nm,0.9s
BRG *ep*P **pP** **05 06 18.8 +3.5**

comp=E,12nm,0.9s
BRG S **S** **05 15 10.0 +1.6**
BRG *e*PKPPKP P'P'df 05 33 55.5 -18

comp=E,11nm,2.2s
BRG Berggiesshubel 69.79 10 *eP* **P** **05 06 03.0 +0.3**
BRG S **S** **05 15 10.0 +1.6**
BRG pmax pmax

comp=Z,13nm,0.9s
BRG pmax pmax

comp=Z,12nm,0.9s
BRG pmax pmax

comp=Z,11nm,2.2s
BRG Berggiesshubel 69.79 10 *eP* **P** **05 06 03.1 +0.4**
comp=Z,13nm,1.0s
MOX Moxa 69.80 11 *eP* **P** **05 06 03.1 +0.3**
MOX pmax pmax

comp=Z,17nm,0.9s
MOX Moxa 69.80 11 *eP* **P** **05 06 03.1 +0.3**
comp=Z,17nm,0.9s
ROSF Rostrenen 69.84 22 *eP* **P** **05 06 03.6 +0.5**
comp=Z,128nm,1.6s
ROSF Rostrenen 69.84 22 *eP* **P** **05 06 03.6 +0.5**
ROSF pmax pmax

comp=Z,128nm,1.6s
ROSF Rostrenen 69.84 22 *eP* **P** **05 06 03.6 +0.5**
comp=Z,128nm,1.6s
TNS Taunus Mts 69.86 14 *eP* **P** **05 06 03.5 +0.3**
TNS pmax pmax

comp=Z,11nm,1.0s
TNS Taunus Mts 69.86 14 *eP* **P** **05 06 03.5 +0.3**
comp=Z,11nm,1.0s
FLN La Foliniere 69.95 20 *eP* **P** **05 06 03.3 -0.4**
comp=Z,53nm,1.1s
FLN *eR*

comp=Z,115nm,20.2s
FLN La Foliniere 69.95 20 *eP* **P** **05 06 03.3 -0.4**
FLN pmax pmax

comp=Z,53nm,1.1s
FLN La Foliniere 69.95 20 *eP* **P** **05 06 03.3 -0.4**
comp=Z,53nm,1.1s
VORD Divnogorie 69.99 353 *eP* **P** **05 06 02.8 -1.1**
VORD pmax pmax

comp=N,20nm,0.8s
VORD pmax pmax

comp=E,10.0nm,0.8s
VORD pmax pmax

comp=Z,10.0nm,0.8s
PLN Plauen 70.01 11 *eP* **P** **05 06 04.4 +0.3**
comp=Z,62nm,0.9s
KSP Ksiaz 70.01 8⇓*eP* **P** **05 06 04.4 +0.3**
KSP Ksiaz 70.01 8 *eP* **P** **05 06 04.7 +0.6**
SGMF Saint Gilles 70.06 22 *eP* **P** **05 06 04.3 -0.1**
comp=Z,128nm,1.5s
SGMF Saint Gilles 70.06 22 *eP* **P** **05 06 04.3 -0.1**
SGMF pmax pmax

comp=Z,128nm,1.5s
SGMF Saint Gilles 70.06 22 *eP* **P** **05 06 04.3 -0.1**
comp=Z,128nm,1.5s
WERD Werda 70.06 11 *eP* **P** **05 06 04.7 +0.3**
comp=Z,7.0nm,1.0s
TANN Tannenbergstha 70.11 11 *eP* **P** **05 06 05.1 +0.3**
comp=Z,9.0nm,1.1s
GUNZ Gunzen 70.15 11 *eP* **P** **05 06 05.3 +0.3**
comp=Z,11nm,1.1s
LDF La Druitiere 70.18 20 *eP* **P** **05 06 05.0 -0.1**
comp=Z,79nm,1.5s
LDF La Druitiere 70.18 20 *eP* **P** **05 06 05.0 -0.1**
LDF pmax pmax

comp=Z,79nm,1.5s
LDF La Druitiere 70.18 20 *eP* **P** **05 06 05.0 -0.1**
comp=Z,79nm,1.5s
PVCC Panska Ves 70.19 9 *eP* **P** **05 06 05.5 +0.3**
PVCC Panska Ves 70.19 9 *eP* **P** **05 06 05.5 +0.3**
WERN Wernitzgruen 70.23 11 *eP* **P** **05 06 06.0 +0.5**
comp=Z,14nm,1.1s
GRR Gorron 70.24 20 *eP* **P** **05 06 05.2 -0.3**
comp=Z,51nm,1.2s
GRR Gorron 70.24 20 *eP* **P** **05 06 05.2 -0.3**
GRR pmax pmax

comp=Z,51nm,1.2s
GRR Gorron 70.24 20 *eP* **P** **05 06 05.2 -0.3**
comp=Z,51nm,1.2s
QUIF Quistinic 70.27 22 *eP* **P** **05 06 05.5 -0.2**
comp=Z,96nm,1.5s
QUIF Quistinic 70.27 22 *eP* **P** **05 06 05.5 -0.2**
QUIF pmax pmax

comp=Z,96nm,1.5s
QUIF Quistinic 70.27 22 *eP* **P** **05 06 05.5 -0.2**
comp=Z,96nm,1.5s
NKC Novy Kostel 70.29 11 *eP* **P** **05 06 06.1 +0.3**
NKC Novy Kostel 70.29 11 *eP* **P** **05 06 06.1 +0.3**
UPC Upice 70.32 8 *eP* **P** **05 06 06.7 +0.7**
UPC Upice 70.32 8 *eP* **P** **05 06 06.7 +0.7**
UPC *es*P **sP** **05 06 21.1 -2.3**
MANZ Manzenberg 70.50 11 *eP* **P** **05 06 07.3 +0.2**
comp=Z,5.0nm,0.8s
DPC Dobruska-Polom 70.50 8 *eP* **P** **05 06 07.7 +0.6**
DPC pmax pmax

comp=Z,37nm,0.9s
DPC Dobruska-Polom 70.50 8 *eP* **P** **05 06 07.7 +0.6**
comp=Z,37nm,0.9s
DPC Dobruska-Polom 70.50 8 *eP* **P** **05 06 07.8 +0.6**
DPC *es*P **sP** **05 06 22.1 -2.5**

AKASG Malin Array Be 70.61 360 P **P** **05 06 07.0 -0.7**
AKASG Malin Array Be 70.61 360 P **P** **05 06 07.0 -0.7**
AKASG Malin Array Be 70.61 360 P **P** **05 06 07.0 -0.7**
comp=Z,10nm,0.6s,baz=2.2,slow=6.1,SNR=35
AKASG LR LR 05 40 49.2

comp=Z,75nm,20.1s,baz=15,slow=39
KIEV Kiev 70.61 360 *eP* **P** **05 06 07.0 -0.7**
KIEV pmax pmax

comp=Z,18nm,0.7s
KIEV Kiev 70.61 360 *eP* **P** **05 06 07.0 -0.7**
comp=Z,18nm,0.7s
AK01 Malin Array Si 70.61 360 *eP* **P** **05 06 07.2 -0.6**
PRA Prague 70.63 10 P P 05 06 04.0 -3.9
AK02 Malin Array Si 70.65 360 *eP* **P** **05 06 07.0 -0.9**
GRF Grafenberg Arr 70.70 12 *eP* **P** **05 06 09.0 +0.7**
GRF pmax pmax

comp=Z,12nm,0.8s
GRF Grafenberg Arr 70.70 12 *eP* **P** **05 06 09.0 +0.7**
comp=Z,12nm,0.8s
GRF *e*L L 05 32 00.5

comp=Z,65nm,21.8s
PRU Pruhonice 70.72 10 *eP* **P** **05 06 08.8 +0.4**
PRU Pruhonice 70.72 10 *eP* **P** **05 06 08.8 +0.4**
ROTZ Rotzenmuhle 70.72 11 *eP* **P** **05 06 09.1 +0.6**
comp=Z,14nm,1.0s
CD2 Chengdu 71.07 299 P P 05 06 15.0 +4.1
CD2 pP pP 05 06 19.8 -3.7
CD2 sP sP 05 06 22.0 -6.3
CD2 PcP **PcP** **05 06 35.8 +4.8**
CD2 S S 05 15 30.5 +6.5
CD2 sS sS 05 15 36.8 -8.1
CD2 pmax pmax

comp=Z,20nm,0.5s
CD2 pmax pmax

comp=Z,260nm,5.4s
CD2 LR LR

comp=N,480nm,14.1s
CD2 LR LR

comp=E,500nm,18.6s
CD2 LR LR

comp=Z,630nm,14.0s
MEZF Maizieres J'vi 71.09 16 *eP* **P** **05 06 10.7 0.0**
comp=Z,23nm,0.8s
MEZF Maizieres J'vi 71.09 16 *eP* **P** **05 06 10.7 0.0**
comp=Z,23nm,0.8s
PAGF Fort de Pagny 71.14 16 *eP* **P** **05 06 11.2 +0.2**
comp=Z,11nm,0.8s
PAGF Fort de Pagny 71.14 16 *eP* **P** **05 06 11.2 +0.2**
comp=Z,11nm,0.8s
OKC Ostrava-Krasne 71.14 7 *eP* **P** **05 06 11.4 +0.4**
OKC Ostrava-Krasne 71.14 7 *eP* **P** **05 06 11.4 +0.4**
MORC Moravsky Berou 71.16 8 *eP* **P** **05 06 10.7 -0.5**
MORC pmax pmax

comp=Z,7.0nm,0.8s
MORC Moravsky Berou 71.16 8 *eP* **P** **05 06 10.7 -0.5**
comp=Z,7.2nm,0.8s
MORC Moravsky Berou 71.16 8⇑*iP* **P** **05 06 10.9 -0.3**
TKM2 Tokmak 2 71.20 325 *eP* **P** **05 06 11.6 -0.1**
TKM2 pmax pmax

comp=Z,13nm,0.9s
TKM2 Tokmak 2 71.20 325 *eP* **P** **05 06 11.6 -0.1**
comp=Z,13nm,0.9s
TKM2 Tokmak 2 71.20 325 P **P** **05 06 11.7 -0.1**
SNR=8.4
USP Ospenovka 71.20 326 P **P** **05 06 11.3 -0.2**
SNR=15
CHMS Chumysh 71.37 326 *iP* **P** **05 06 12.6 +0.1**
CHMS Chumysh 71.37 326 P **P** **05 06 12.6 +0.1**
SNR=6.9
STU Stuttgart 71.38 13 *eP* **P** **05 06 12.9 +0.5**
SFTF Sexfontaines 71.38 16 *eP* **P** **05 06 12.2 -0.3**
comp=Z,84nm,1.3s
SFTF Sexfontaines 71.38 16 *eP* **P** **05 06 12.2 -0.3**
comp=Z,84nm,1.3s
WET Wettzell 71.41 11 *eP* **P** **05 06 13.2 +0.6**
WET pmax pmax

comp=Z,16nm,1.4s
WET Wettzell 71.41 11 *eP* **P** **05 06 13.2 +0.6**
comp=Z,16nm,1.4s
LVV L'vov 71.43 3 *eP* **P** **05 06 12.4 -0.3**
KHC Kasperske Hory 71.48 10 *eP* **P** **05 06 13.9 +0.8**
KHC *e* 05 06 26.2
KHC pmax pmax

comp=Z,12nm,0.9s
KHC Kasperske Hory 71.48 10 *eP* **P** **05 06 13.9 +0.8**
comp=Z,12nm,0.9s
KHC *e* 05 06 26.2
KHC Kasperske Hory 71.48 10 *eP* **P** **05 06 13.9 +0.8**
KHC *es*P sP 05 06 25.8 -4.7
CDF Champ du Feu 71.49 15 *eP* **P** **05 06 13.1 -0.1**
comp=Z,17nm,0.9s
CDF Champ du Feu 71.49 15 *eP* **P** **05 06 13.1 -0.1**
CDF pmax pmax

comp=Z,17nm,0.9s
CDF Champ du Feu 71.49 15 *eP* **P** **05 06 13.1 -0.1**
comp=Z,17nm,0.9s
TREC Trest 71.49 9 *eP* **P** **05 06 13.2 +0.1**
TREC Trest 71.49 9 *eP* **P** **05 06 13.2 +0.1**
VRAC Vranov 71.56 8⇓*iP* **P** **05 06 14.1 +0.6**
FRU Bishkek 71.56 326 *eP* **P** **05 06 14.0 +0.3**
KWP Kalwaria Pacla 71.57 4⇑*iP* **P** **05 06 13.6 0.0**
KWP Kalwaria Pacla 71.57 4 *eP* **P** **05 06 14.1 +0.5**
ULHL Ulahol 71.62 325 *iP* **P** **05 06 14.1 -0.2**
ULHL Ulahol 71.62 325 P **P** **05 06 14.1 -0.2**
SNR=12
KBK Karagaybulak 71.63 326 *iP* **P** **05 06 14.4 +0.1**
KBK Karagaybulak 71.63 326 P **P** **05 06 14.4 +0.1**
SNR=7.4
ECH Echery 71.67 15 *eP* **P** **05 06 14.3 +0.1**
ECH pmax pmax

comp=Z,13nm,1.0s
ECH Echery 71.67 15 *eP* **P** **05 06 14.3 +0.1**
comp=Z,13nm,1.0s
NIE Niedzica 71.68 6 *eP* **P** **05 06 14.5 +0.2**
NIE Niedzica 71.68 6 *eP* **P** **05 06 14.5 +0.2**
BFO Black Forest 71.70 14 *eP* **P** **05 06 14.7 +0.3**
BFO pmax pmax

comp=Z,12nm,1.1s
BFO Black Forest 71.70 14 *eP* **P** **05 06 14.7 +0.3**
comp=Z,10.0nm,1.1s
BFO Black Forest 71.70 14 *eP* **P** **05 06 14.7 +0.3**
comp=Z,12nm,1.1s
HAU Haudompre 71.76 15 *eP* **P** **05 06 14.5 -0.3**
comp=Z,19nm,0.8s
HAU *eR*

comp=Z,89nm,21.2s
HAU Haudompre 71.76 15 *eP* **P** **05 06 14.5 -0.3**
HAU pmax pmax

comp=Z,19nm,0.8s
HAU Haudompre 71.76 15 *eP* **P** **05 06 14.5 -0.3**
comp=Z,19nm,0.8s
GEC2 GERESS Array S 71.78 10 *eP* **P** **05 06 15.2 +0.2**
GEC2 pmax pmax

comp=Z,8.0nm,1.0s
GEC2 GERESS Array S 71.78 10 *eP* **P** **05 06 15.2 +0.2**
comp=Z,8.0nm,1.0s
GERES GERESS Array B 71.78 10 P **P** **05 06 15.5 +0.5**
GERES GERESS Array B 71.78 10 P **P** **05 06 15.5 +0.5**
comp=Z,3.0nm,0.7s,baz=353,slow=5.4,SNR=24
AAK Ala-Archa 71.78 326*c iP* **P** **05 06 15.0 -0.2**
AAK pmax pmax

comp=Z,45nm,1.2s
AAK Ala-Archa 71.78 326 *eP* **P** **05 06 14.7 -0.5**
comp=Z,3.4nm,1.0s
AAK Ala-Archa 71.78 326 P **P** **05 06 15.4 +0.2**
SNR=8.5
AAK Ala-Archa 71.78 326 LR LR 05 41 28.9
comp=Z,134nm,18.5s,baz=9.1,slow=39
EKS2 Erkin-Say 71.96 327 *eP* **P** **05 06 16.2 0.0**
EKS2 pmax pmax

comp=Z,20nm,0.9s
EKS2 Erkin-Say 71.96 327 *eP* **P** **05 06 16.2 0.0**
comp=Z,20nm,0.9s
EKS2 Erkin-Say 71.96 327 P **P** **05 06 16.1 0.0**
SNR=16
HINF Hinteralfeld 72.02 15 *eP* **P** **05 06 15.6 -0.7**
comp=Z,26nm,1.2s
HINF Hinteralfeld 72.02 15 *eP* **P** **05 06 15.6 -0.7**
HINF pmax pmax

comp=Z,27nm,1.2s
HINF Hinteralfeld 72.02 15 *eP* **P** **05 06 15.6 -0.7**
comp=Z,26nm,1.2s
KZA Kyzart 72.07 325 *iP* **P** **05 06 17.3 0.0**
KZA Kyzart 72.07 325 P **P** **05 06 17.3 0.0**
SNR=7.4
MFF Saint Martin d 72.10 20 *eP* **P** **05 06 16.6 -0.2**

comp=Z,24nm,0.9s
MFF Saint Martin d 72.10 20 *e*P **P 05 06 16.6 -0.2**
MFF pmax pmax
comp=Z,24nm,0.9s
MFF Saint Martin d 72.10 20 *e*P **P 05 06 16.6 -0.2**
comp=Z,24nm,0.9s
LOR Lormes 72.12 17 *e*P **P 05 06 16.4 -0.5**
comp=Z,29nm,0.9s
LOR *e*R
comp=Z,98nm,18.2s
LOR Lormes 72.12 17 *e*P **P 05 06 16.4 -0.5**
comp=Z,29nm,0.9s
CRVS Cervenica-Dubn 72.25 5 *e*P **P 05 06 17.4 -0.3**
CRVS pmax pmax
comp=Z,19nm,1.8s
CRVS Cervenica-Dubn 72.25 5 *e*P **P 05 06 17.4 -0.3**
KOLS Kolonicke sedl 72.25 4 *e*P **P 05 06 18.3 +0.6**
KOLS pmax pmax
comp=Z,14nm,1.5s
KOLS Kolonicke sedl 72.25 4 *e*P **P 05 06 18.3 +0.6**
SSF Saint Saulge 72.27 18 *e*P **P 05 06 17.5 -0.3**
comp=Z,43nm,1.0s
SSF Saint Saulge 72.27 18 *e*P **P 05 06 17.5 -0.3**
SSF pmax pmax
comp=Z,43nm,1.0s
SSF Saint Saulge 72.27 18 *e*P **P 05 06 17.5 -0.3**
comp=Z,43nm,1.0s
KKAR Karatay Array 72.45 329 *e*P **P 05 06 18.2 -0.8**
KKAR pmax pmax
comp=Z,12nm,0.8s
KKAR Karatay Array 72.45 329 *e*P **P 05 06 18.2 -0.8**
comp=Z,12nm,0.8s
AVF Avril sur Loir 72.50 18 *e*P **P 05 06 18.8 -0.4**
comp=Z,36nm,0.9s
AVF Avril sur Loir 72.50 18 *e*P **P 05 06 18.8 -0.4**
AVF pmax pmax
comp=Z,36nm,0.9s
AVF Avril sur Loir 72.50 18 *e*P **P 05 06 18.8 -0.4**
comp=Z,36nm,0.9s
VYHS Vyhne 72.52 7 *e*P **P 05 06 20.0 +0.7**
VYHS pmax pmax
comp=Z,11nm,1.2s
VYHS Vyhne 72.52 7 *e*P **P 05 06 20.0 +0.7**
VYHS *e*pP **pP 05 06 31.9 0.0**
UZH Uzhgorod 72.56 4 *e*P **P 05 06 19.0 -0.5**
UZH *i* 05 06 36.2
BGF Bois d'Agland 72.65 18 *e*P **P 05 06 19.7 -0.4**
comp=Z,42nm,1.0s
BGF Bois d'Agland 72.65 18 *e*P **P 05 06 19.7 -0.4**
BGF pmax pmax
comp=Z,42nm,1.0s
BGF Bois d'Agland 72.65 18 *e*P **P 05 06 19.7 -0.4**
comp=Z,42nm,1.0s
ZST Bratislava 72.70 8 *e*P **P 05 06 20.3 -0.1**
ZST pmax pmax
comp=Z,13nm,1.2s
ZST Bratislava 72.70 8 *e*P **P 05 06 20.3 -0.1**
ZST *e*pP **pP 05 06 32.6 -0.3**
SMF Signal de Mont 72.72 18 *e*P **P 05 06 19.9 -0.6**
comp=Z,29nm,1.0s
SMF Signal de Mont 72.72 18 *e*P **P 05 06 19.9 -0.6**
SMF pmax pmax
comp=Z,29nm,1.0s
SMF Signal de Mont 72.72 18 *e*P **P 05 06 19.9 -0.6**
comp=Z,29nm,1.0s
RJOB Jochberg 72.79 11 *e*P **P 05 06 21.4 +0.4**
comp=Z,11nm,0.9s
TCF Toulx Ste Croi 72.81 19 *e*P **P 05 06 20.0 -1.1**
comp=Z,37nm,1.3s
TCF Toulx Ste Croi 72.81 19 *e*P **P 05 06 20.0 -1.1**
TCF pmax pmax
comp=Z,37nm,1.3s
TCF Toulx Ste Croi 72.81 19 *e*P **P 05 06 20.0 -1.1**
comp=Z,37nm,1.3s
CONA Conrad Observa 72.88 9 *i* P **P 05 06 22.1 +0.6**
comp=Z,13nm,0.9s,SNR=9.2
CONA Conrad Observa 72.88 9 *i* P **P 05 06 22.1 +0.6**
comp=Z,13nm,0.9s
TRPA Tarpa 73.07 4⇓ *i*P **P 05 06 22.9 +0.5**
TRPA Tarpa 73.07 4⇓ *e*P **P 05 06 23.0 +0.5**
CABF La Chapelle 73.09 16 *e*P **P 05 06 22.9 +0.1**
comp=Z,32nm,1.0s
CABF La Chapelle 73.09 16 *e*P **P 05 06 22.9 +0.1**
CABF pmax pmax
comp=Z,32nm,1.0s
CABF La Chapelle 73.09 16 *e*P **P 05 06 22.9 +0.1**
comp=Z,32nm,1.0s
WTTA Wattenberg 73.14 12⇓ *i*P **P 05 06 23.4 +0.2**
WTTA pmax pmax
comp=Z,20nm,1.0s
WTTA Wattenberg 73.14 12⇓ *i*P **P 05 06 23.4 +0.2**
comp=Z,20nm,1.0s,SNR=9.4
WTTA Wattenberg 73.14 12⇓ *i*P **P 05 06 23.4 +0.2**
comp=Z,20nm,1.0s
PSZ Piszkesteto 73.16 6 *e*P **P 05 06 23.4 +0.2**
PSZ *e* 05 06 36.2
PSZ pmax pmax
comp=Z,19nm,0.9s
PSZ Piszkesteto 73.16 6 *e*P **P 05 06 23.4 +0.2**
comp=Z,19nm,0.9s
PSZ *e* 05 06 36.2
PSZ Piszkesteto 73.16 6⇓ *i*P **P 05 06 23.6 +0.4**
PSZ Piszkesteto 73.17 6⇓ *e*P **P 05 06 23.9 +0.7**
SOP Sopron 73.17 8⇓ *e*P **P 05 06 23.7 +0.6**
FETA Feichten 73.28 13⇓ *i*P **P 05 06 24.9 +0.9**
comp=Z,15nm,1.0s
FETA Feichten 73.28 13⇓ *i*P **P 05 06 24.9 +0.9**
comp=Z,15nm,1.0s
GYA Guiyang 73.49 294⇑ *i*P **P 05 06 24.8 -0.7**
GYA PP **PP 05 09 12.0 +2.8**
GYA S **S 05 15 49.8 -2.2**
GYA SKS **SKSac 05 16 22.5 -6.0**
GYA SS **SS 05 20 35.0 +0.6**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,110nm,5.3s
GYA LR LR
comp=N,510nm,19.2s
GYA LR LR
comp=E,480nm,20.8s
GYA LR LR
comp=Z,490nm,21.4s
KBA Koelnbreinsper 73.50 11⇓ *i*P **P 05 06 25.9 +0.6**
KBA pmax pmax
comp=Z,29nm,0.9s
KBA Koelnbreinsper 73.50 11⇓ *i*P **P 05 06 25.9 +0.6**
comp=Z,29nm,0.9s,SNR=9.4
KBA Koelnbreinsper 73.50 11⇓ *i*P **P 05 06 25.9 +0.6**
comp=Z,29nm,0.9s
ARSA Arzberg 73.52 9⇑ *i*P **P 05 06 25.6 +0.4**
comp=Z,9.0nm,0.9s
ARSA Arzberg 73.52 9⇑ *i*P **P 05 06 25.6 +0.4**
comp=Z,9.0nm,0.9s
BUR08 Bucovina Ar. S 73.63 2 *e*P **P 05 06 25.9 -0.1**
RJF Les Rejaudoux 73.64 20 *e*P **P 05 06 25.5 -0.5**
comp=Z,41nm,1.4s
RJF *e*R
comp=Z,190nm,21.2s
RJF Les Rejaudoux 73.64 20 *e*P **P 05 06 25.5 -0.5**
RJF pmax pmax
comp=Z,41nm,1.4s
RJF Les Rejaudoux 73.64 20 *e*P **P 05 06 25.5 -0.5**
comp=Z,41nm,1.4s
TUE Stuetta 73.66 14 *e*P **P 05 06 27.1 +0.8**
comp=Z,16nm,1.0s
LFF La Frestale 73.86 20 *e*P **P 05 06 27.2 0.0**
comp=Z,43nm,1.0s
LFF La Frestale 73.86 20 *e*P **P 05 06 27.2 0.0**
LFF pmax pmax
comp=Z,43nm,1.0s
LFF La Frestale 73.86 20 *e*P **P 05 06 27.2 0.0**
comp=Z,43nm,1.0s
SOKA Soboth 74.05 10⇓ *i*P **P 05 06 28.5 +0.1**
comp=Z,16nm,1.0s
SOKA Soboth 74.05 10⇓ *i*P **P 05 06 28.5 +0.1**
comp=Z,16nm,1.0s
CAF Calviac 74.11 19 *e*P **P 05 06 28.4 -0.3**
comp=Z,18nm,0.9s
CAF Calviac 74.11 19 *e*P **P 05 06 28.4 -0.3**
CAF pmax pmax
comp=Z,18nm,0.9s
CAF Calviac 74.11 19 *e*P **P 05 06 28.4 -0.3**
comp=Z,18nm,0.9s
OBKA Obir 74.17 10⇑ *i*P **P 05 06 29.2 0.0**
comp=Z,32nm,0.8s,SNR=10
OBKA Obir 74.17 10⇑ *i*P **P 05 06 29.2 0.0**
comp=Z,32nm,0.8s
KSH Kashi 74.21 324 P **P 05 06 32.3 +2.8**
KSH pP **PcP 05 06 45.0 +0.7**
KSH PcP **pP 05 06 47.3 +5.2**
KSH PP PP 05 09 20.5 +5.6
KSH S **S 05 16 01.8 +2.1**
KSH SKS **SKSac 05 16 31.0 -2.5**
KSH ScS **ScS 05 16 36.3 -0.2**
KSH SS SS 05 20 52.3 +7.8
KSH pmax pmax
comp=Z,11nm,0.6s
KSH LR LR
comp=N,620nm,11.8s
KSH LR LR
comp=E,430nm,10.0s
KSH LR LR
comp=Z,300nm,5.5s
LPL La Plagne 74.25 16 *e*P **P 05 06 30.5 +0.7**
comp=Z,27nm,1.0s
LPL La Plagne 74.25 16 *e*P **P 05 06 30.5 +0.7**
LPL pmax pmax
comp=Z,27nm,1.0s
LPL La Plagne 74.25 16 *e*P **P 05 06 30.5 +0.7**
comp=Z,27nm,1.0s
LPG La Plagne 74.28 16 *e*P **P 05 06 30.9 +0.9**
comp=Z,41nm,1.3s
LPG La Plagne 74.28 16 *e*P **P 05 06 30.9 +0.9**
LPG pmax pmax
comp=Z,41nm,1.3s
LPG La Plagne 74.28 16 *e*P **P 05 06 30.9 +0.9**
comp=Z,41nm,1.3s
KIS Kishinev 74.31 360 *e*P **P 05 06 31.0 +1.2**
KIS *e* 05 06 47.0
KIS Kishinev 74.31 360 *e*P **P 05 06 31.0 +1.2**
DRGR 74.41 4⇑ *i*P **P 05 06 30.9 +0.4**
VIVF Saint-Julien-l 74.60 17 *e*P **P 05 06 31.5 -0.1**
comp=Z,25nm,0.9s
VIVF Saint-Julien-l 74.60 17 *e*P **P 05 06 31.5 -0.1**
VIVF pmax pmax
comp=Z,25nm,0.9s
VIVF Saint-Julien-l 74.60 17 *e*P **P 05 06 31.5 -0.1**
comp=Z,25nm,0.9s
ORIF Oris-en-Rattie 74.72 16 *e*P **P 05 06 32.4 0.0**
comp=Z,26nm,1.1s
ORIF *e*R
comp=Z,118nm,18.0s
ORIF Oris-en-Rattie 74.72 16 *e*P **P 05 06 32.4 0.0**
ORIF pmax pmax
comp=Z,26nm,1.1s
ORIF Oris-en-Rattie 74.72 16 *e*P **P 05 06 32.4 0.0**
comp=Z,26nm,1.1s
PKSM Moragy 74.78 7⇓ *e*P **P 05 06 32.5 -0.1**
MBDF Montbardon 75.03 16 *e*P **P 05 06 35.0 +0.7**
comp=Z,18nm,0.8s
MBDF Montbardon 75.03 16 *e*P **P 05 06 35.0 +0.7**
MBDF pmax pmax
comp=Z,18nm,0.8s
MBDF Montbardon 75.03 16 *e*P **P 05 06 35.0 +0.7**
comp=Z,18nm,0.8s
LASF Ste Croix 75.23 18 *e*P **P 05 06 35.4 +0.2**
comp=Z,51nm,1.4s
LASF Ste Croix 75.23 18 *e*P **P 05 06 35.4 +0.2**
comp=Z,51nm,1.4s
SJPF Ste Jean 75.26 22 *e*P **P 05 06 35.0 -0.4**
comp=Z,62nm,1.7s
SJPF Ste Jean 75.26 22 *e*P **P 05 06 35.0 -0.4**
SJPF pmax pmax
comp=Z,62nm,1.7s
SJPF Ste Jean 75.26 22 *e*P **P 05 06 35.0 -0.4**
comp=Z,62nm,1.7s
PBRG Braganca 75.34 27 *e*P **P 05 06 36.8 +0.9**
VRI Vrincioaia 75.43 1⇓ *i*P **P 05 06 36.5 +0.1**
PLOR Plostina 75.45 1⇑ *i*P **P 05 06 36.6 +0.1**
BZS Buzias 75.54 5⇑ *i*P **P 05 06 37.2 +0.3**
SMRF Simiane la Rot 75.59 17 *e*P **P 05 06 38.0 +0.7**
comp=Z,83nm,1.4s
SMRF Simiane la Rot 75.59 17 *e*P **P 05 06 38.0 +0.7**
comp=Z,83nm,1.4s
ETSF Etsaut 75.59 22 *e*P **P 05 06 37.8 +0.4**
comp=Z,59nm,1.3s
ETSF Etsaut 75.59 22 *e*P **P 05 06 37.8 +0.4**
ETSF pmax pmax
comp=Z,59nm,1.3s
ETSF Etsaut 75.59 22 *e*P **P 05 06 37.8 +0.4**
comp=Z,59nm,1.3s
PVRL Vila Real 75.61 27 *e*P **P 05 06 38.9 +1.4**
EPF Esparros 75.64 21 *e*P **P 05 06 36.8 -0.8**
EPF Esparros 75.64 21 *e*P **P 05 06 36.8 -0.8**
EPF Esparros 75.64 21 *e*P **P 05 06 36.8 -0.8**
MTLF Montolieu 75.67 19 *e*P **P 05 06 37.6 -0.1**
comp=Z,27nm,0.9s
MTLF Montolieu 75.67 19 *e*P **P 05 06 37.6 -0.1**
MTLF pmax pmax
comp=Z,27nm,0.9s
MTLF Montolieu 75.67 19 *e*P **P 05 06 37.6 -0.1**
comp=Z,27nm,0.9s
MLR Muntele Rosu 75.80 2⇓ *i*P **P 05 06 39.1 +0.5**
MVO Moncorvo 75.88 27 *e*P **P 05 06 39.9 +0.8**
SBF Sospel 75.97 16 *e*P **P 05 06 39.5 0.0**
comp=Z,52nm,0.8s
SBF Sospel 75.97 16 *e*P **P 05 06 39.5 0.0**
SBF pmax pmax
comp=Z,52nm,0.8s
SBF Sospel 75.97 16 *e*P **P 05 06 39.5 0.0**
comp=Z,52nm,0.8s
PVIS Viseu 76.10 28 *e*P **P 05 06 41.4 +1.1**
CFR Carcaliu 76.13 0⇑ *i*P **P 05 06 39.7 -0.6**
FRF La Foret Royal 76.16 16 *e*P **P 05 06 40.4 -0.1**
comp=Z,52nm,1.2s
FRF La Foret Royal 76.16 16 *e*P **P 05 06 40.4 -0.1**
FRF pmax pmax
comp=Z,52nm,1.2s
FRF La Foret Royal 76.16 16 *e*P **P 05 06 40.4 -0.1**
comp=Z,52nm,1.2s
ANN Anapa 76.25 353 *e*P **P 05 06 42.2 +1.2**
ANN pmax pmax
comp=Z,20nm,1.0s
PPT Papeete 76.36 178 LR LR 05 34 25.8
comp=Z,125nm,20.4s,baz=349,slow=31
LMR La Mourre 76.36 16 *e*P **P 05 06 41.8 +0.2**
comp=Z,87nm,1.4s
LMR La Mourre 76.36 16 *e*P **P 05 06 41.8 +0.2**
LMR pmax pmax
comp=Z,87nm,1.4s
LMR La Mourre 76.36 16 *e*P **P 05 06 41.8 +0.2**
comp=Z,87nm,1.4s
PPT2 Papeete2 76.38 178 *e*LR LR 05 30 19.4
comp=Z,185nm,23.0s
MTE Manteigas 76.49 28 *e*P **P 05 06 43.5 +1.0**
comp=Z,44nm,1.7s
KIV Kislovodsk 76.69 350⇑ *e*P **P 05 06 43.7 +0.1**
KIV *e* 05 06 54.5
KIV pmax pmax
comp=Z,12nm,0.8s
KIV MLR MLR
comp=Z,100nm,21.0s
TIRR Tirgusor 76.85 0 *e*P **P 05 06 43.7 -0.7**
TIRR Tirgusor 76.85 0 *e*P **P 05 06 43.7 -0.7**
TIRR Tirgusor 76.85 0⇑ *i*P **P 05 06 44.2 -0.2**
KBZ Khabaz 76.89 349 P **P 05 06 45.0 +0.4**
KBZ *PP **PcP 05 06 55.4 -0.2**
KBZ Khabaz 76.89 349 P **P 05 06 45.0 +0.4**
KBZ pP **PcP 05 06 55.4 -0.2**
KBZ Khabaz 76.89 349 P **P 05 06 45.0 +0.4**
comp=Z,7.9nm,0.9s,baz=348,slow=5.4,SNR=21
KBZ pP **PcP 05 06 55.4 -0.2**
comp=Z,10nm,0.8s,baz=321,slow=1.5,SNR=8.0
KBZ LR LR 05 44 26.3
comp=Z,60nm,21.8s,baz=16,slow=39
PCBR Castelo Branco 77.03 28 *e*P **P 05 06 46.3 +0.8**
comp=Z,32nm,0.8s
PMAFR Mafra 77.43 29 *e*P **P 05 06 48.6 +0.9**
comp=Z,94nm,1.3s
PMRV Marv??o 77.44 28 *e*P **P 05 06 48.5 +0.6**
PGF Pioggiola 77.48 15 *e*P **P 05 06 47.8 -0.3**
comp=Z,92nm,1.3s
PGF Pioggiola 77.48 15 *e*P **P 05 06 47.8 -0.3**
PGF pmax pmax
comp=Z,92nm,1.3s
PGF Pioggiola 77.48 15 *e*P **P 05 06 47.8 -0.3**
comp=Z,92nm,1.3s
LSA Lhasa 77.57 308 *e*P **P 05 06 49.6 +0.3**
LSA pmax pmax
comp=Z,10.0nm,0.4s
LSA Lhasa 77.57 308 *e*P **P 05 06 49.6 +0.3**
comp=Z,9.8nm,0.4s
SDV Santo Domingo 77.72 93 *e*P **P 05 06 49.5 -0.4**
comp=Z,15nm,1.2s
ZEI Tsey 77.74 348 *e*P **P 05 06 48.7 -1.0**
ZEI pmax pmax
comp=Z,12nm,1.0s
PESTR Estremoz 77.93 28 *e*P **P 05 06 50.9 +0.3**
ESDC Sonseca Array 78.00 25 P **P 05 06 51.6 +0.7**
ESDC PP **PP 05 09 48.4 +1.7**
ESDC Sonseca Array 78.00 25 P **P 05 06 51.6 +0.7**
comp=Z,11nm,0.8s,baz=343,slow=5.3,SNR=39
ESDC PP **PP 05 09 48.4 +1.7**
comp=Z,0.1nm,0.3s,baz=349,slow=8.0,SNR=4.4
ESDC LR LR 05 38 48.6
comp=Z,59nm,21.8s,baz=345,slow=34
ESLA Sonseca Array 78.00 25 *e*P **P 05 06 51.8 +0.8**
comp=Z,4.2nm,0.9s
PAB San Pablo 78.04 25 *e*P **P 05 06 52.2 +1.0**
PAB San Pablo 78.04 25 *e*P **P 05 06 52.2 +1.0**
EVOP Sao Brissos 78.12 29 *e*P **P 05 06 51.7 +0.1**
EVOP pmax pmax
comp=Z,48nm,1.2s
EVOP Sao Brissos 78.12 29 *e*P **P 05 06 51.7 +0.1**
comp=Z,48nm,1.2s
EVO Evora 78.14 28 *e*P **P 05 06 51.7 0.0**
comp=Z,48nm,1.2s
EVO *e*R
comp=Z,160nm,22.8s
EVO Evora 78.14 28 *e*P **P 05 06 52.1 +0.4**
comp=Z,30nm,1.5s
QIZ Qiongzhong 78.25 287 P **P 05 06 51.0 -1.6**
QIZ S **S 05 16 42.5 -1.8**
QIZ pmax pmax
comp=Z,19nm,1.1s
HNR Honiara 78.58 229 LR LR 05 34 59.7
comp=Z,153nm,21.8s,baz=17,slow=31
VTS Vitosha 78.62 4⇑ *i*P **P 05 06 53.3 -1.2**
PBEJ Beja 78.66 29 *e*P **P 05 06 55.3 +0.7**
MORF Marmelete 79.14 29 *e*P **P 05 06 57.5 +0.2**
comp=Z,39nm,1.7s
PFVI Vila Bisbo 79.26 30 *e*P **P 05 06 58.8 +0.9**
PVAQ Vaqueiros 79.29 29 *e*P **P 05 06 58.9 +0.9**
PBDV Barranco-do-Ve 79.39 29 *e*P **P 05 06 59.6 +1.0**
comp=Z,36nm,1.4s
KBL Kabul 80.86 327 *e*P **P 05 07 04.5 -2.3**
KBL pmax pmax
comp=Z,13nm,0.8s
KBL Kabul 80.86 327 *e*P **P 05 07 04.5 -2.3**
comp=Z,13nm,0.8s
SHL Shillong 80.90 305 *ex* x 05 07 08.5
TAPN Taplejung 81.04 309 *e*P **P 05 07 08.3 +0.3**
comp=Z,128nm,0.9s
OTAV Otavalo 81.11 105 *e*P **P 05 07 08.7 0.0**
comp=Z,7.3nm,0.9s
GUN Gumba 81.26 311 *e*P **P 05 07 09.1 -0.2**
comp=Z,95nm,1.0s
BR131 Keskin Array S 81.49 356 *e*P **P 05 07 10.1 0.0**
comp=Z,7.4nm,0.8s
BRTR Keskin Array B 81.49 356 P **P 05 07 10.1 0.0**
BRTR pP **pP 05 07 21.5 -1.3**
BRTR Keskin Array B 81.49 356 P **P 05 07 10.1 0.0**
comp=Z,5.8nm,0.9s,baz=7.1,slow=3.0,SNR=27
BRTR pP **pP 05 07 21.5 -1.3**
comp=Z,8.0nm,0.8s,baz=1.7,slow=2.3,SNR=12
BRTR LR LR 05 44 25.0
comp=Z,35nm,20.3s,baz=192,slow=36
KKN Kakani 81.61 312 *e*P **P 05 07 11.0 +0.1**
ODAN Odare 81.61 309 *e*P **P 05 07 11.1 +0.2**
comp=Z,84nm,1.0s
TIP Timpagrande 81.64 9 *e*P **P 05 07 10.4 -0.4**
comp=Z,22nm,1.1s
DANN Dangsing 81.68 313 *e*P **P 05 07 11.4 0.0**
comp=Z,249nm,0.8s
PKIN Phulchoki 81.75 311 *e*P **P 05 07 12.3 +0.6**
comp=Z,22nm,0.8s
PKI Pulchoki 81.75 311 *e*P **P 05 07 11.4 -0.4**
comp=Z,77nm,1.0s
DMN Daman 81.83 312 *e*P **P 05 07 12.5 +0.3**
comp=Z,66nm,0.8s
RAMN Ramite 81.84 310 *e*P **P 05 07 12.2 0.0**
comp=Z,179nm,0.9s
TBI Tubuai 82.11 178 *e*LR LR 05 33 00.1
comp=Z,188nm,24.0s
PYUN Piuthan 82.20 313 *e*P **P 05 07 13.8 -0.2**
comp=Z,270nm,1.0s
KOLN Koldanda 82.27 313 *e*P **P 05 07 14.2 -0.2**
MALT Malatya 82.64 352⇑ *i*P **P 05 07 15.3 -0.7**
CHTO Chiang Mai 83.67 296 *e*P **P 05 07 20.6 -0.9**
CHTO pmax pmax
comp=Z,10.0nm,1.0s
CHTO Chiang Mai 83.67 296 *e*P **P 05 07 20.6 -0.9**
comp=Z,9.5nm,1.0s
CMAR Chiang Mai Arr 83.97 296 P **P 05 07 22.6 -0.4**
CMAR pP **pP 05 07 34.5 -1.3**
CMAR Chiang Mai Arr 83.97 296 P **P 05 07 22.6 -0.4**
comp=Z,8.8nm,1.0s,baz=11,slow=5.6,SNR=50
CMAR pP **pP 05 07 34.5 -1.3**
comp=Z,8.8nm,1.0s,baz=19,slow=5.5,SNR=5.2
CMAR LR LR 05 47 56.3
comp=Z,127nm,18.9s,baz=29,slow=38
KEST Kesra 84.23 16 P **P 05 07 24.7 +0.5**
KEST Kesra 84.23 16 P **P 05 07 24.7 +0.5**
comp=Z,9.3nm,0.9s,baz=280,slow=2.3,SNR=20
KEST LR LR 05 48 10.7
comp=Z,32nm,18.2s,baz=261,slow=38
RAYN Ar Rayn 96.54 344 P **P 05 08 22.0 -0.4**
comp=Z,71nm,0.9s,SNR=5.0
WRA Warramunga Arr 99.08 246 P **Pdif 05 08 32.5 -1.2**
WRA PP PP 05 12 42.2 +5.7
WRA Warramunga Arr 99.08 246 P **Pdif 05 08 32.5 -1.2**
comp=Z,0.1nm,0.3s,baz=32,slow=5.6,SNR=7.5
WRA PP PP 05 12 42.2 +5.7
comp=Z,1.1nm,1.0s,baz=33,slow=9.5,SNR=4.8
ASAR Alice Springs 102.48 245 P **Pdif 05 08 49.3 +0.6**
ASAR Alice Springs 102.48 245 P **Pdif 05 08 49.3 +0.6**
comp=Z,0.4nm,0.8s,baz=52,slow=3.6,SNR=3.8
TORD Torodi Ar. Bea 104.82 27 Pdif **Pdif 05 08 59.4 0.0**
TORD Torodi Ar. Bea 104.82 27 Pdiff **Pdif 05 08 59.4 0.0**
comp=Z,0.4nm,0.9s,baz=343,slow=4.5,SNR=2.5
KMBO Kilima Mbogo 121.83 350 PKP **PKPdf 05 13 47.1 +0.1**
KMBO Kilima Mbogo 121.83 350 PKP **PKPdf 05 13 47.1 +0.1**
comp=Z,2.2nm,0.8s,baz=247,slow=24,SNR=6.5
VNDA Vanda 139.33 194 PKP **PKPdf 05 14 16.8 -1.0**
VNDA Vanda 139.33 194 PKP **PKPdf 05 14 16.8 -1.0**
comp=Z,1.7nm,1.1s,baz=18,slow=2.8,SNR=3.1
LBTB Lobatse 145.92 5 *e*PKPbc **PKPab 05 14 32.3 -0.2**
QSPA South Pole Qui 148.85 180 *e*PKPbc **PKPbc 05 14 38.7 0.0**
BOSA Boshof 149.49 6 *e*PKPbc **PKPbc 05 14 40.8 -0.8**
BOSA *e*PKPab **PKPab 05 14 47.0 +0.5**
BOSA Boshof 149.49 6 PKPbc **PKPbc 05 14 39.8 -1.8**
comp=Z,8.3nm,0.8s,baz=355,slow=3.0,SNR=11
MIR Mirnyy 150.88 228⇑ *i*PKIKP **PKPbc 05 14 44.0 +0.5**
MIR *i* 05 14 50.5
MIR pmax pmax
comp=Z,42nm,1.0s

IDC 30 05:11:42.2±5.0, 6°53S×125°42E, h521km±69km, mb2.9/3, mb1 3.0/7, mb1mx2.8/23, mbtmp2.9/7, Error ellipse: s-maj=156.4km s-min=16.0km az=56.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**5.84**	**285**	P	P	05 13 18.6	+0.7
	0.8nm,0.3s,baz=56,slow=7.4,SNR=4.1						
FITZ	**Fitzroy Crossi**	**11.50**	**179**	P	P	05 14 13.7	-1.8
	0.2nm,0.3s,baz=342,slow=9.6,SNR=8.2						
WRA	**Warramunga Arr**	**15.90**	**148**	P	P	05 15 01.3	-0.2
	0.6nm,0.3s,baz=323,slow=11,SNR=32						
ASAR	**Alice Springs**	**18.89**	**155**	P	P	05 15 30.1	+0.4
	0.8nm,0.3s,baz=332,slow=9.2,SNR=36						
STKA	**Stephens Creek**	**29.40**	**151**	P	P	05 17 03.2	+0.2
	1.4nm,0.5s,baz=327,slow=10.0,SNR=4.9						
MKAR	**Makanchi Array**	**65.41**	**329**	P	P	05 21 34.5	+1.4
	0.4nm,0.6s,baz=132,slow=6.8,SNR=6.6						
ZALV	**Zalesovo Beam**	**69.22**	**336**	P	P	05 21 55.0	-1.4
	0.5nm,0.5s,baz=132,slow=2.1,SNR=3.8						

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*IDC **30** 05:13:53.8±2.8, 3°93S×136°00E, h0km, mb3.4/1, mb1 4.0/4, mb1mx3.7/18, mbtmp3.8/4, ML3.8/3, Error*

ellipse: s-maj=100.4km s-min=28.4km az=86.0
*AUST **30** 05:14:33.0±0.0,6.00S×134.51E,h57km±1km, Error ellipse: s-maj=2.8km s-min=1.0km az=271.0*
ISC 30 05:13:58.8±1.9,4.2S±0.1×136.2E±0.2,h35km,n8, σ3.98/10,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDU	**Kakadu**	**9.21**	**203**	P	**Pn**	**05 16 11.4**	**+2.2**
	baz=7.0,SNR=12						
MTN	**Manton Dam**	**9.94**	**210**	P	**Pn**	**05 16 21.7**	**+2.4**
	baz=7.6,SNR=3.8						
MTN				S	**Sn**	**05 18 13.0**	**+3.2**
	baz=7.6,SNR=3.9						
WRA	**Warramunga Arr**	**15.78**	**186**	Pn	**Pn**	**05 17 40.0**	**+1.5**
	0.3nm,0.3s,baz=5.7,slow=12,SNR=9.6						
WRA				Sn	**Sn**	**05 20 26.5**	**-5.8**
	0.2nm,0.3s,baz=11,slow=22,SNR=6.0						
PCI	**Palu**	**16.62**	**281**	P	P	05 18 08.6	+17
	baz=16,SNR=5.8						
FITZ	**Fitzroy Crossi**	**17.25**	**216**	P	**Pn**	**05 17 56.9**	**-0.2**
	0.3nm,0.3s,baz=43,slow=15,SNR=7.5						
FITZ				S	**Sn**	**05 21 01.0**	**-7.1**
	0.2nm,0.3s,baz=217,slow=18,SNR=3.1						
FITZ	**Fitzroy Crossi**	**17.25**	**216**	P	**P**	**05 17 59.1**	**+0.7**
	baz=15,SNR=5.5						
ASAR	**Alice Springs**	**19.50**	**186**	P	**Pn**	**05 18 25.8**	**+1.2**
	0.5nm,0.3s,baz=9.6,slow=11,SNR=28						
MKAR	**Makanchi Array**	**69.41**	**324**	P	**P**	**05 25 02.0**	**-1.3**
	0.2nm,0.4s,baz=111,slow=7.9,SNR=3.4						

*FUNV **30** 05:33:31.4, 10.24N×61.15W,h19km, MW3.2*
*ISCJB **30** 05:33:32.4±0.6, 10.14N±0.03×61.36W±0.04,h78km±5km, Error ellipse: s-maj=7.6km s-min=5.5km az=21.7*
*TRN **30** 05:33:35.1, 10.14N×61.21W,h52km, MD3.1*
ISC 30 05:33:33.3±1.3,10.13N±0.04×61.33W±0.05,h71km±7km, n15,σ1.18/27,2C,Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPA	**Siparia**	**0.18**	**274**	*e*P	**Pn**	**05 33 44.9**	**+0.9**
SIPA				*e*S	**Sn**	**05 33 50.5**	**-1.3**
TPP	**Pointe-a-Pierr**	**0.22**	**326**	⇑*i*P	**Pn**	**05 33 44.9**	**+0.7**
TPP				*e*S	**Sn**	**05 33 52.0**	**-0.2**
BUAY	**Buenos Aires**	**0.36**	**266**	*e*P	**Pn**	**05 33 46.7**	**+1.6**
BUAY				*e*S	**Sn**	**05 33 53.8**	**+0.1**
TBH	**Brigand Hill**	**0.43**	**36**	⇑*e*P	**Pn**	**05 33 45.6**	**-0.2**
TBH				*e*S	**Sn**	**05 33 52.7**	**-2.1**
TRN	**Trinidad (W)**	**0.52**	**351**	*e*P	**Pn**	**05 33 47.2**	**+0.7**
GUIV	**Guiria**	**1.02**	**300**	*e*P	**Pn**	**05 33 52.4**	**+0.2**
GUIV				*e*S	**Sn**	**05 34 07.0**	**+0.7**
TOSP	**Speyside**	**1.40**	**34**	*e*P	**Pn**	**05 33 57.3**	**+0.3**
TOSP				*e*S	**Sn**	**05 34 13.3**	**-1.5**
RIOV	**Rio Grande**	**2.10**	**193**	*e*P	**Pn**	**05 34 07.7**	**+1.2**
RIOV				*e*S	**Sn**	**05 34 33.6**	**+1.9**
SVB	**Belmont**	**3.12**	**1**	*e*P	**Pn**	**05 34 22.4**	**+2.1**
SVB				*e*S	**Sn**	**05 34 56.6**	**+0.1**
MCLT	**Moule a Chique**	**3.58**	**6**	*e*S	**Sn**	**05 35 08.1**	**+0.6**
LUEV	**Luepa**	**4.26**	**182**	*e*P	**Pn**	**05 34 35.6**	**-0.4**
LUEV				*e*S	**Sn**	**05 35 23.9**	**-0.7**
CUPV	**Cœpira**	**4.40**	**269**	*e*P	**Pn**	**05 34 37.7**	**0.0**
CUPV				*e*S	**Sn**	**05 35 27.4**	**-0.3**
BIRV	**Birongo**	**4.88**	**274**	*e*P	**Pn**	**05 34 44.9**	**+0.6**
BIRV				*e*S	**Sn**	**05 35 38.9**	**-0.6**
BAUV	**El Baul**	**6.73**	**260**	*e*P	**Pn**	**05 35 09.3**	**-0.3**
MAPV	**Macapo**	**7.03**	**268**	*e*P	**Pn**	**05 35 13.1**	**-0.6**
MAPV				*e*S	**Sn**	**05 36 29.7**	**-2.5**

*CSEM **30** 06:03:25.2±0.2,37.00N×29.08E,h10km,MD2.8,Error ellipse: s-maj=5.2km s-min=4.0km az=169.0*
ISK 30 06:03:24.8,37.01N×29.07E,h6km,MD2.8,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.37**	**178**	*e*Pg	Pg	06 03 32.1	0.0
FETY				*e*Sg	Sb	06 03 39.0	-1.1
FETY	**Fethiye**	**0.37**	**178**	*e*Pg	Pg	06 03 32.1	0.0
FETY				*e*Sg	Sb	06 03 39.0	-1.0
GLHS	**Glhisar (BURDU**	**0.37**	**67**	*e*PG	Pg	06 03 31.9	-0.4
GLHS				*e*SG	Sb	06 03 38.8	-1.4
GLHS	**Glhisar (BURDU**	**0.37**	**67**	*e*Pg	Pg	06 03 31.9	-0.3
GLHS				*e*Sg	Sb	06 03 38.8	-1.4
GOLH	**Golhisar**	**0.46**	**60**	*i* P	Pg	06 03 34.0	+0.2
GOLH				*i* S	Sb	06 03 41.2	-1.3
GOLH	**Golhisar**	**0.46**	**60**	*i* P	Pg	06 03 34.0	+0.2
GOLH				*i* S	Sb	06 03 41.2	-1.3
YER	**Yerkesik**	**0.64**	**281**	*e*PG	Pb	06 03 38.0	-0.5
YER	**Yerkesik**	**0.64**	**281**	*e*Pg	Pb	06 03 38.0	-0.5
ELL	**Elmali**	**0.72**	**111**	*e*PG	Pg	06 03 38.9	0.0
ELL	**Elmali**	**0.72**	**111**	*e*Pg	Pg	06 03 38.9	0.0
DENT	**Denizli**	**0.74**	**358**	*e*PG	Pb	06 03 39.9	-0.3
DENT	**Denizli**	**0.74**	**358**	*e*Pg	Pb	06 03 39.9	-0.4
KORT	**Korkueli**	**1.03**	**90**	*i* P	Pg	06 03 44.5	-0.2
KORT				*i* S	Sn	06 04 00.1	-0.6
KORT	**Korkueli**	**1.03**	**90**	*i* P	Pg	06 03 44.5	-0.2
KORT				*i* S	Sn	06 04 00.1	-0.7
DAT	**Datca**	**1.23**	**257**	*e*PN	Pg	06 03 48.0	-0.6
DAT	**Datca**	**1.23**	**257**	*e*Pn	Pg	06 03 48.0	-0.5
BODT	**Bodrum**	**1.41**	**273**	*e*PN	Pb	06 03 51.7	+0.1
BODT	**Bodrum**	**1.41**	**273**	*e*Pn	Pg	06 03 51.7	-0.1
KULA	**Kula-Manisa**	**1.54**	**348**	*e*PN	Pb	06 03 53.6	-0.2
KULA	**Kula-Manisa**	**1.54**	**348**	*e*Pn	Pb	06 03 53.6	-0.2

*CSEM **30** 06:03:58.9±0.2,37.93N×29.14E,h2km,MD3.0,Error ellipse: s-maj=4.6km s-min=3.5km az=125.0*
*ISCJB **30** 06:03:59.2±0.8,37.94N±0.04×29.14E±0.05,h5km±6km, Error ellipse: s-maj=7.4km s-min=5.9km az=37.4*
*ISK **30** 06:03:59.0,37.95N×29.13E,h7km,MD3.0*
*DDA **30** 06:03:59.3,37.96N×29.12E,h7km,MD3.0*
ISC 30 06:03:59.4±1.0,37.93N±0.03×29.14E±0.03,h12km±10km, n28,σ0.57/40,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.19**	**205**	PG	**Pg**	**06 04 03.7**	**0.0**
DENT	**Denizli**	**0.19**	**205**	*i* Pg	**Pg**	**06 04 03.7**	**0.0**
KHL	**Karahalli**	**0.50**	**38**	*e*PG	**Pg**	**06 04 08.9**	**-0.3**
KHL				*e*SG	**Sg**	**06 04 16.0**	**+0.1**
KHL	**Karahalli**	**0.50**	**38**	*e*Pg	**Pg**	**06 04 08.9**	**-0.3**
KHL				*e*Sg	**Sg**	**06 04 16.0**	**+0.1**
KHAL	**Karahalli**	**0.52**	**32**	*i* P	**Pg**	**06 04 09.4**	**-0.3**
KHAL				*i* S	**Sg**	**06 04 16.1**	**-0.6**
KHAL	**Karahalli**	**0.52**	**32**	*i* P	**Pg**	**06 04 09.4**	**-0.3**
KHAL				*i* S	**Sg**	**06 04 16.1**	**-0.6**
KULA	**Kula-Manisa**	**0.69**	**327**	*e*PG	**Pg**	**06 04 12.8**	**-0.2**
KULA				*e*SG	**Sg**	**06 04 22.2**	**+0.1**
KULA	**Kula-Manisa**	**0.69**	**327**	*e*Pg	**Pg**	**06 04 12.8**	**-0.2**
KULA				*e*Sg	**Sg**	**06 04 22.2**	**+0.1**
ISP	**Isparta**	**1.10**	**95**	*e*PN	**Pb**	**06 04 20.7**	**+0.2**
ISP	**Isparta**	**1.10**	**95**	*e*Pn	**Pb**	**06 04 20.7**	**+0.2**
DEMI	**Demirci**	**1.16**	**344**	*i* P	**Pb**	**06 04 21.2**	**-0.3**
DEMI				*i* S	**Sb**	**06 04 35.8**	**-0.7**
DEMI	**Demirci**	**1.16**	**344**	*i* P	**Pb**	**06 04 21.2**	**-0.3**
DEMI				*i* S	**Sb**	**06 04 35.8**	**-0.7**
GDZ	**Gediz**	**1.19**	**13**	*i* P	**Pn**	**06 04 21.6**	**-0.4**
GDZ				*i* S	**Sb**	**06 04 37.1**	**-0.3**
GDZ	**Gediz**	**1.19**	**13**	*i* P	**Pn**	**06 04 21.6**	**-0.4**
GDZ				*i* S	**Sb**	**06 04 37.1**	**-0.3**
MLSB	**Milas**	**1.25**	**240**	*e*PN	**Pn**	**06 04 22.5**	**-0.3**
MLSB	**Milas**	**1.25**	**240**	*e*Pn	**Pn**	**06 04 22.5**	**-0.3**
SHUT	**Suhut-Afyon**	**1.28**	**60**	*e*PN	**Pg**	**06 04 24.3**	**+0.3**
SHUT	**Suhut-Afyon**	**1.28**	**60**	*e*Pn	**Pg**	**06 04 24.3**	**+0.3**
ALT	**Altintas**	**1.36**	**34**	*e*PN	**Pn**	**06 04 24.7**	**+0.3**
ALT	**Altintas**	**1.36**	**34**	*e*Pn	**Pn**	**06 04 24.7**	**+0.3**
AKS	**Akhisar**	**1.41**	**313**	*e*PN	**Pg**	**06 04 26.3**	**-0.2**
AKS	**Akhisar**	**1.41**	**313**	*e*Pn	**Pg**	**06 04 26.3**	**-0.2**
TVSB	**Tavsanli**	**1.54**	**9**	*e*PN	**Pn**	**06 04 27.2**	**+0.4**
TVSB	**Tavsanli**	**1.54**	**9**	*e*Pn	**Pn**	**06 04 27.2**	**+0.4**
IZM	**Izmir**	**1.55**	**288**	*e*PN	**Pn**	**06 04 27.1**	**+0.2**
IZM	**Izmir**	**1.55**	**288**	*e*Pn	**Pn**	**06 04 27.1**	**+0.2**
DURS	**Dursunbey**	**1.75**	**343**	*i* P	**Pg**	**06 04 33.3**	**+0.3**
DURS				*i* S	**Sg**	**06 04 57.6**	**+1.9**
DURS	**Dursunbey**	**1.75**	**343**	*i* P	**Pg**	**06 04 33.3**	**+0.3**
DURS				*i* S	**Sg**	**06 04 57.6**	**+1.9**

IDC 30 06:15:15.8±2.9,30.25S×138.49E,h0km,mb1 3.3/3, mb1mx3.3/16,mbtmp3.1/3,ML3.1/3,Error ellipse: s-maj=69.1km s-min=15.0km az=44.0,South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.12**	**122**	Pn	Pn	06 16 06.8	+0.5
	0.8nm,0.3s,baz=303,slow=12,SNR=15						
STKA				Pg	Pb	06 16 12.7	+0.5
	4.2nm,0.3s,baz=300,slow=16,SNR=37						
STKA				Sn	Sn	06 16 43.5	-0.8
	3.2nm,0.3s,baz=305,slow=16,SNR=4.2						
STKA				Lg	Lg	06 16 55.0	
	7.3nm,0.3s,baz=6.3,slow=18,SNR=8.1						
ASAR	**Alice Springs**	**7.73**	**327**	Pn	Pn	06 17 10.3	+0.6
	0.2nm,0.3s,baz=152,slow=12,SNR=7.9						
ASAR				Sn	Sn	06 18 38.9	+0.8
	0.2nm,0.3s,baz=152,slow=22,SNR=4.2						
WRA	**Warramunga Arr**	**10.93**	**339**	Pn	Pn	06 17 53.0	-0.7
	0.2nm,0.3s,baz=154,slow=13,SNR=12						
WRA				Sn	Sn	06 19 57.2	+0.5
	0.1nm,0.3s,baz=159,slow=24,SNR=4.9						

*THE **30** 06:31:51.7, 37.54N×20.82E,h17km±2km, ML2.7/1, Error ellipse: s-maj=2.9km s-min=0.7km az=263.0*
*CSEM **30** 06:31:52.7±0.5, 37.60N×21.01E,h2km, ML2.7/1, Error ellipse: s-maj=10.0km s-min=5.4km az=64.0*
*ATH **30** 06:31:52.9, 37.62N×20.94E,h18km±2km, MD3.0/18*
*ISCJB **30** 06:31:53.6±0.9, 37.64N±0.04×20.97E±0.07,h17km±6km, Error ellipse: s-maj=9.9km s-min=4.8km az=147.3*
ISC 30 06:31:53.2±1.3, 37.60N±0.03×20.95E±0.05,h22km±8km, n53,σ0.74/67,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.52**	**346**	P	**Pb**	**06 32 03.0**	**-0.7**
KFL				S	**Sb**	**06 32 11.6**	**+0.7**
KFL	**Anninata**	**0.52**	**346**	P	**Pb**	**06 32 03.0**	**-0.7**
KFL				S	**Sb**	**06 32 11.6**	**+0.7**
AMT	**Artemida-Makis**	**0.61**	**96**	P	**Pb**	**06 32 04.5**	**-0.7**
AMT				S	**Sn**	**06 32 15.6**	**-0.1**
AMT	**Artemida-Makis**	**0.61**	**96**	*e*PB	**Pb**	**06 32 04.7**	**-0.5**
AMT				*e*SN	**Sn**	**06 32 14.7**	**-1.0**
AMT	**Artemida-Makis**	**0.61**	**96**	P	**Pb**	**06 32 04.5**	**-0.7**
AMT				*e*Sn	**Sn**	**06 32 14.7**	**-1.0**
RLS	**Riolos of Patr**	**0.61**	**42**	P	**Pb**	**06 32 04.8**	**-0.5**
RLS	**Riolos of Patr**	**0.61**	**42**	*e*PN	**Pb**	**06 32 04.7**	**-0.5**
RLS				*e*SN	**Sb**	**06 32 13.6**	**+0.1**
RLS	**Riolos of Patr**	**0.61**	**42**	P	**Pb**	**06 32 04.8**	**-0.5**
RLS				*e*Sn	**Sb**	**06 32 13.6**	**+0.1**
VLS	**Valsamata**	**0.64**	**334**	*e*PN	**Pb**	**06 32 05.4**	**-0.3**
VLS	**Valsamata**	**0.64**	**334**	*e*Pn	**Pb**	**06 32 05.4**	**-0.3**
ITM	**Ithomi**	**0.89**	**118**	P	**Pb**	**06 32 09.2**	**-0.6**
ITM				S	**Sn**	**06 32 22.6**	**+0.1**
ITM	**Ithomi**	**0.89**	**118**	*e*PN	**Pn**	**06 32 10.8**	**+0.5**
ITM				*e*SN	**Sn**	**06 32 22.7**	**+0.2**
ITM	**Ithomi**	**0.89**	**118**	P	**Pb**	**06 32 09.2**	**-0.6**
ITM	**Ithomi**	**0.89**	**118**	*e*Pn	**Pn**	**06 32 10.8**	**+0.5**
ITM				*e*Sn	**Sn**	**06 32 22.7**	**+0.2**
PYL	**PYLOS**	**0.95**	**138**	P	**Pb**	**06 32 09.7**	**-1.2**
PYL	**PYLOS**	**0.95**	**138**	*e*PB	**Pb**	**06 32 10.1**	**-0.8**
PYL	**PYLOS**	**0.95**	**138**	P	**Pb**	**06 32 09.7**	**-1.2**
PYL	**PYLOS**	**0.95**	**138**	*e*Pn	**Pb**	**06 32 10.1**	**-0.8**
LAKA	**Lakka**	**1.04**	**52**	P	**Pn**	**06 32 11.8**	**-0.6**
LAKA	**Lakka**	**1.04**	**52**	*e*PN	**Pb**	**06 32 12.9**	**+0.5**
LAKA				*e*SN	**Sn**	**06 32 26.7**	**+0.5**
LAKA	**Lakka**	**1.04**	**52**	P	**Pn**	**06 32 11.8**	**-0.6**
LAKA	**Lakka**	**1.04**	**52**	*e*Pn	**Pb**	**06 32 12.9**	**+0.5**
LAKA				*e*Sn	**Sn**	**06 32 26.7**	**+0.5**
KLV	**Kalavryta, Ach**	**1.05**	**65**	*e*PB	**Pn**	**06 32 11.9**	**-0.7**
GUR	**Goura**	**1.16**	**73**	P	**Pn**	**06 32 13.7**	**-0.4**
GUR	**Goura**	**1.16**	**73**	*e*PB	**Pn**	**06 32 14.0**	**-0.1**
GUR	**Goura**	**1.16**	**73**	P	**Pn**	**06 32 13.7**	**-0.4**
VLX	**Vlachokerasia**	**1.16**	**101**	P	**Pn**	**06 32 13.6**	**-0.6**
VLX				S	**Sn**	**06 32 31.2**	**+1.8**
VLX	**Vlachokerasia**	**1.16**	**101**	P	**Pn**	**06 32 13.6**	**-0.6**
VLX				S	**Sn**	**06 32 31.2**	**+1.8**
TRIZ	**Trizonia**	**1.17**	**49**	P	**Pn**	**06 32 14.2**	**0.0**
TRIZ	**Trizonia**	**1.17**	**49**	*e*PN	**Pb**	**06 32 15.0**	**+0.3**
TRIZ	**Trizonia**	**1.17**	**49**	P	**Pn**	**06 32 14.2**	**0.0**
TRIZ	**Trizonia**	**1.17**	**49**	*e*Pn	**Pb**	**06 32 15.0**	**+0.3**
KALE	**Kalithea**	**1.23**	**50**	P	**Pn**	**06 32 15.3**	**+0.2**
KALE	**Kalithea**	**1.23**	**50**	*e*PN	**Pb**	**06 32 15.5**	**-0.2**
KALE	**Kalithea**	**1.23**	**50**	P	**Pn**	**06 32 15.3**	**+0.2**
DYR	**Agios Nikonas**	**1.39**	**127**	*e*PN	**Pb**	**06 32 20.2**	**+1.8**
DYR	**Agios Nikonas**	**1.39**	**127**	*e*Pn	**Pb**	**06 32 20.2**	**+1.8**
EVR	**Evrytania**	**1.48**	**27**	*e*PN	**Pb**	**06 32 20.2**	**+0.2**
EVR	**Evrytania**	**1.48**	**27**	*e*Pn	**Pb**	**06 32 20.2**	**+0.2**
LTK	**Loutraki**	**1.65**	**75**	*e*PN	**Pb**	**06 32 23.0**	**+0.1**
LTK	**Loutraki**	**1.65**	**75**	*e*Pn	**Pb**	**06 32 23.0**	**+0.1**
AGG	**Agios Georgios**	**1.79**	**37**	*e*PN	**Pb**	**06 32 25.5**	**+0.3**
AGG	**Agios Georgios**	**1.79**	**37**	*e*Pn	**Pb**	**06 32 25.5**	**+0.3**
VLI	**Veliai**	**1.82**	**118**	*e*PN	**Pb**	**06 32 25.6**	**-0.1**
VLI	**Veliai**	**1.82**	**118**	*e*Pn	**Pb**	**06 32 25.6**	**-0.1**
DID	**Didima**	**1.82**	**92**	*e*PB	**Pb**	**06 32 24.9**	**-0.9**
DID	**Didima**	**1.82**	**92**	*e*Pb	**Pb**	**06 32 24.9**	**-0.9**
LKR	**Lokris**	**1.93**	**56**	*e*PB	**Pb**	**06 32 26.3**	**-1.3**
LKR	**Lokris**	**1.93**	**56**	*e*Pb	**Pb**	**06 32 26.3**	**-1.3**
KYTH	**Kithira**	**2.13**	**128**	*e*PN	**Pb**	**06 32 30.6**	**-0.5**
KYTH	**Kithira**	**2.13**	**128**	*e*Pn	**Pb**	**06 32 30.6**	**-0.5**
THL	**Klokotos Trika**	**2.13**	**23**	*e*PN	**Pb**	**06 32 30.3**	**-0.8**
THL	**Klokotos Trika**	**2.13**	**23**	*e*Pn	**Pb**	**06 32 30.3**	**-0.8**

MEX 30 06:32:03.2±0.3,15.36N×93.79W,h16km±999km,MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.53**	**107**	*e*P	Pn	06 32 26.5	-3.4
THIG				*e*S	Sn	06 32 44.7	-4.8
TGIG		**1.55**	**24**	*e*P	Pn	06 32 26.7	-3.5
TGIG				*i* S	Sn	06 32 45.1	-5.0
CCIG	**Comitan**	**1.83**	**60**	*e*P	Pn	06 32 31.2	-3.1
CCIG				*e*S	Sn	06 32 52.4	-4.9
CMIG	**Matias Romero**	**2.02**	**329**	*e*P	Pn	06 32 33.9	-2.8
CMIG				*e*S	Sn	06 32 57.3	-4.3
HUIG	**Huatulco**	**2.28**	**281**	*e*P	Pn	06 32 37.4	-2.7
HUIG				*i* S	Sn	06 33 03.3	-4.5

GUC 30 07:13:28.4±0.8,23.98S×68.00W,h155km±11km,ML3.5, 2C-3D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**1.08**	**350**	*i* S	Sn	07 14 15.8	+0.9
SPCH				AML	AML	07 14 18.7	
	comp=E,276nm,0.2s						
LVC	**Limon Verde**	**1.60**	**328**	⇓*i*P	Pn	07 14 00.6	+0.9
LVC				*i* S	Sn	07 14 25.4	+1.6
CEN1	**Los Morros**	**2.10**	**286**	⇑*i*P	Pn	07 14 08.1	+2.9
CEN1				*i* S	Sn	07 14 37.3	+3.8
CEN1				AML	AML	07 14 39.2	
	comp=N,128nm,0.3s						
PB04	**Plate Boundary**	**2.19**	**321**	⇑*i*P	Pn	07 14 11.7	+5.6
PB04				*i* S	Sn	07 14 44.0	+8.9
PB04				AML	AML	07 14 46.0	
	comp=N,190nm,0.2s						
ANCH	**Antofagasta**	**2.23**	**277**	⇓*i*P	Pn	07 14 07.8	+1.3
ANCH				*i* S	Sn	07 14 36.7	+0.9
ANCH				AML	AML	07 14 38.7	
	comp=E,332nm,0.1s						
PB09	**Plate Boundary**	**2.46**	**332**	⇓*i*P	Pn	07 14 10.6	+1.1
PB09				*i* S	Sn	07 14 43.0	+1.8
PB09				AML	AML	07 14 44.8	
	comp=N,270nm,0.4s						
PB01	**Plate Boundary**	**3.23**	**334**	*e*P	Pn	07 14 18.8	-0.2
PB01				*i* S	Sn	07 14 57.9	-0.4
PB01				AML	AML	07 15 01.4	
	comp=E,70nm,0.2s						

IDC 30 07:28:27.3±7.1,18.94S×177.91W,h611km±75km, mb2.7/4,mb1 3.0/4,mb1mx2.8/19,mbtmp2.7/4,Error ellipse: s-maj=92.7km s-min=33.5km az=147.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.92**	**260**	P	P	07 35 49.2	-0.5
	0.4nm,0.3s,baz=97,slow=7.7,SNR=12						
WRA				PcP	PcP	07 37 17.3	-0.2
	0.2nm,0.5s,baz=95,slow=3.5,SNR=4.0						
ASAR	**Alice Springs**	**44.98**	**255**	P	P	07 35 50.2	+0.2
	0.7nm,0.4s,baz=88,slow=8.0,SNR=15						
ASAR				PcP	PcP	07 37 17.9	+0.1
	0.7nm,0.7s,baz=109,slow=3.8,SNR=5.3						
TXAR	**Lajitas Array**	**86.15**	**57**	P	P	07 40 05.9	+0.5
	0.2nm,0.5s,baz=214,slow=4.2,SNR=3.9						
ILAR	**Eielson Array**	**86.78**	**13**	P	P	07 40 07.0	-0.4
	0.2nm,0.8s,baz=207,slow=5.8,SNR=4.8						
ARCES	**ARCESS Array B**	**127.41**	**350**	PKP	PKPdf	07 46 22.9	-0.2
	2.0nm,0.9s,baz=18,slow=1.1,SNR=3.8						
BRTR	**Keskin Array B**	**145.84**	**314**	PKPbc	PKPbc	07 46 59.7	-0.1
	0.4nm,0.5s,baz=101,slow=2.9,SNR=2.9						
GERES	**GERESS Array B**	**148.72**	**345**	PKPbc	PKPbc	07 47 06.4	-0.6
	0.4nm,0.5s,baz=327,slow=2.2,SNR=4.3						
TORD	**Torodi Ar. Bea**	**174.23**	**176**	PKP	PKPdf	07 47 26.7	-1.9
	0.3nm,0.7s,baz=207,slow=0.3,SNR=2.3						

WEL 30 07:34:34.1±0.3,40.37S×173.38E,h192km±2km,ML3.6/9, 5C-2D,Error ellipse: s-maj=1.9km s-min=1.6km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.59**	**137**	PN	Pn	07 35 00.9	+0.2
DUWZ				*e*SN	Sn	07 35 20.9	-0.4
QRZ	**Quartz Range**	**0.79**	**235**	⇑PN	Pn	07 35 01.5	-0.2
QRZ				SN	Sn	07 35 21.7	-1.4
NNZ	**Nelson**	**0.85**	**180**	⇑PN	Pn	07 35 01.9	-0.1
NNZ				SN	Sn	07 35 22.9	-0.8
TCW	**Tory Channel**	**1.08**	**141**	PN	Pn	07 35 03.9	+0.4
TCW				SN	Sn	07 35 25.4	-1.1
TUWZ	**Tuamarina**	**1.14**	**158**	PN	Pn	07 35 04.1	+0.1
NWEZ	**Newall Road**	**1.16**	**19**	PN	Pn	07 35 04.1	-0.2
KIW	**Kapiti Island**	**1.26**	**113**	PN	Pn	07 35 05.1	+0.1
KIW				SN	Sn	07 35 27.3	-1.7
SNZO	**South Karori**	**1.37**	**134**	⇓PN	Pn	07 35 05.8	0.0
SNZO				SN	Sn	07 35 29.4	-1.3
WAZ	**Wanganui**	**1.37**	**64**	⇑PN	Pn	07 35 06.4	+0.3
BSWZ	**Blackbirch Sta**	**1.39**	**165**	PN	Pn	07 35 06.3	+0.2
BSWZ				SN	Sn	07 35 30.7	-0.4
OGWZ	**Otaki Gorge**	**1.43**	**109**	PN	Pn	07 35 06.6	+0.2
THZ	**Tophouse**	**1.44**	**194**	⇑PN	Pn	07 35 06.2	-0.4
CAW	**Cannon Point**	**1.48**	**120**	PN	Pn	07 35 06.8	0.0
VRZ	**Vera Road**	**1.63**	**41**	PN	Pn	07 35 07.6	-0.8
MRZ	**Mangatainoka R**	**1.70**	**101**	PN	Pn	07 35 08.7	-0.3
HOWZ	**Holdsworth Sta**	**1.71**	**109**	PN	Pn	07 35 08.8	-0.2
MSWZ	**Moikau Station**	**1.76**	**127**	PN	Pn	07 35 09.1	-0.4
MTW	**Mount Morrison**	**1.79**	**117**	PN	Pn	07 35 09.4	-0.5
DSZ	**Denniston Nort**	**1.82**	**220**	⇑PN	Pn	07 35 09.4	-0.8
POWZ	**Post Office Ro**	**1.82**	**91**	PN	Pn	07 35 09.9	-0.3
PAWZ	**Paruwai Farm**	**1.85**	**124**	PN	Pn	07 35 10.0	-0.4
PLWZ	**Palliser**	**1.86**	**131**	PN	Pn	07 35 10.0	-0.6
PKVZ	**Pokaka**	**1.86**	**55**	PN	Pn	07 35 09.8	-0.9
MTVZ	**Mangateitei**	**1.88**	**59**	PN	Pn	07 35 10.1	-0.8
TIWZ	**Tintock**	**1.95**	**103**	PN	Pn	07 35 11.2	-0.4
TRVZ	**Turoa**	**1.98**	**58**	PN	Pn	07 35 11.0	-1.1
TSZ	**Takapari Road**	**2.00**	**82**	PN	Pn	07 35 11.4	-0.7
WNVZ	**Wahianoa**	**2.00**	**59**	PN	Pn	07 35 11.3	-0.9
FWVZ	**Far West T-bar**	**2.01**	**57**	PN	Pn	07 35 11.2	-1.2
TRWZ	**Traveller**	**2.03**	**121**	PN	Pn	07 35 11.9	-0.4
TMWZ	**Te Maipa**	**2.04**	**112**	PN	Pn	07 35 12.1	-0.4
KHZ	**Kahutara**	**2.05**	**177**	PN	Pn	07 35 11.5	-0.9
MOVZ	**Moawhango**	**2.06**	**63**	PN	Pn	07 35 11.5	-1.2
TUVZ	**Tukino**	**2.07**	**59**	PN	Pn	07 35 12.2	-0.8
DVHZ	**

LPAZ	**La Paz**	**10.55**	**4**	LR	LR	08 00 52.8		
	comp=Z,37nm,19.2s,baz=314,slow=36							
TORD	**Torodi Ar. Bea**	**79.23**	**69**	P	P	08 06 43.3	0.0	
	0.4nm,0.8s,baz=232,slow=3.9,SNR=2.6							
WRA	**Warramunga Arr**	**128.28**	**208**	PKP	PKPdf	08 13 44.6	-0.3	
	0.2nm,0.5s,baz=163,slow=1.8,SNR=4.7							

IDC 30 07:59:54.1±4.3, 52°12N×35°92E, h0km, mb1 3.6/3, mb1mx3.2/25, mbtmp3.6/3, ML2.9/4, Error ellipse: s-maj=51.6km s-min=15.9km az=128.0, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**4.42**	**254**	Pn	Pn	08 01 01.0	-1.4
	0.6nm,0.3s,baz=52,slow=15,SNR=4.1						
AKASG				Pg	Pb	08 01 11.1	-1.5
	1.2nm,0.3s,baz=55,slow=15,SNR=4.0						
AKASG				Sn	Sn	08 01 53.8	-0.8
	1.3nm,0.3s,baz=67,slow=26,SNR=3.3						
AKASG				Lg	Lg	08 02 11.2	
	2.2nm,0.3s,baz=66,slow=26,SNR=5.0						
FINES	**FINESS Array B**	**10.78**	**334**	Pn	Pn	08 02 24.1	-5.4
	0.2nm,0.3s,baz=152,slow=13,SNR=3.6						
FINES				Sn	Sn	08 04 15.1	-16
	0.2nm,0.3s,baz=156,slow=21,SNR=3.7						
HFS	**Hagfors**	**14.70**	**312**	Pn	Pn	08 03 15.8	-7.3
	0.1nm,0.3s,baz=101,slow=12,SNR=2.6						
ARCES	**ARCESS Array B**	**18.14**	**348**	P	Pn	08 04 06.2	-1.0
	0.2nm,0.3s,baz=155,slow=11,SNR=6.7						

*ISCJB **30** 08:50:34.6±0.3, 38°25N±0.02×108°90W±0.02, h10km, Error ellipse: s-maj=2.5km s-min=2.2km az=39.4*
*NEIC **30** 08:50:34.0, 38°26N×108°91W, h1km, ML2.5(SLC), After SLC.*

ISC 30 08:50:34.4±0.7, 38°27N±0.02×108°91W±0.02, h10km, n42, σ1§10/68, 15C-22D, Colorado

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PV04	**Paradox Valley**	**0.13**	**2**	*e*Pg	**Pg**	**08 50 37.0**	**-0.5**
PV10	**Paradox Valley**	**0.15**	**317**	*e*Pg	**Pg**	**08 50 36.7**	**-1.2**
PV01	**Paradox Valley**	**0.30**	**116**	*e*Pg	**Pg**	**08 50 40.3**	**-0.2**
PV01				*e*Sg	**Sb**	**08 50 47.2**	**+0.1**
R20A	**Redvale**	**0.42**	**100**	P	**Pg**	**08 50 42.5**	**-0.4**
	baz=0.4,SNR=96						
R20A				⇓S	**Sg**	**08 50 47.4**	**-1.1**
	baz=0.4						
S20A	**Disappointment**	**0.61**	**135**	P	**Pg**	**08 50 45.9**	**-0.5**
	baz=0.6,SNR=37						
S20A				⇑S	**Sg**	**08 50 54.4**	**-0.1**
	baz=0.6						
Q20A	**Ridgley Place,**	**0.84**	**35**	⇓P	**Pg**	**08 50 49.5**	**-1.1**
	baz=0.8						
Q20A				⇓S	**Sg**	**08 51 00.3**	**-1.3**
	baz=0.8						
S18A	**Hurst Farm, Bl**	**1.03**	**236**	P	**Pg**	**08 50 53.5**	**-0.8**
	baz=1.0,SNR=39						
S18A				⇓S	**Sg**	**08 51 07.1**	**-0.7**
	baz=1.0						
S21A	**Coal Bank Pass**	**1.07**	**124**	⇓P	**Pg**	**08 50 55.0**	**-0.1**
	baz=1.1,SNR=11						
R21A	**Cimarron**	**1.07**	**84**	⇓P	**Pg**	**08 50 54.0**	**-1.1**
	baz=1.1,SNR=5.3						
R21A				⇑S	**Sg**	**08 51 08.7**	**-0.4**
	baz=1.1						
MVCO	**Mesa Verde**	**1.10**	**163**	*e*Pg	**Pg**	**08 50 55.6**	**-0.1**
MVCO				*e*Sg	**Sb**	**08 51 10.1**	**-0.3**
MVCO	**Mesa Verde**	**1.10**	**163**	P	**Pg**	**08 50 55.5**	**-0.1**
	baz=1.1,SNR=145						
MVCO				⇑S	**Sb**	**08 51 10.0**	**-0.3**
	baz=1.1						
Q21A	**Lamborn Mesa,**	**1.19**	**61**	⇑P	**Pb**	**08 50 56.2**	**-1.0**
	baz=1.2						
Q21A				⇓S	**Sb**	**08 51 11.9**	**-0.8**
	baz=1.2						
P20A	**De Beque**	**1.30**	**18**	⇓P	**Pn**	**08 50 58.2**	**-0.5**
	baz=1.3						
P20A				⇓S	**Sb**	**08 51 14.9**	**-0.9**
	baz=1.3						
P19A	**Cripple Cowboy**	**1.36**	**358**	⇓S	**Sb**	**08 51 17.4**	**-0.4**
	baz=1.4						
SRU	**San Rafael**	**1.52**	**304**	*e*Pn	**Pb**	**08 51 02.2**	**-0.6**
SRU				*e*Sn	**Sb**	**08 51 22.0**	**-0.2**
SRU	**San Rafael**	**1.52**	**304**	⇑Pg	**Pn**	**08 51 02.0**	**+0.2**
	baz=1.5,SNR=138						
SRU				⇑S	**Sb**	**08 51 21.9**	**-0.3**
	baz=1.5						
Q22A	**Crested Butte,**	**1.68**	**69**	⇓Pg	**Pb**	**08 51 05.3**	**-0.3**
	baz=1.7,SNR=8.2						
Q22A				⇓S	**Sb**	**08 51 26.5**	**-0.3**
	baz=1.7						
P21A	**Newcastle**	**1.69**	**42**	⇑Sg	**Sg**	**08 51 29.1**	**+0.2**
	baz=1.7						
P18A	**Preston Nutter**	**1.71**	**323**	⇑Pg	**Pb**	**08 51 06.0**	**-0.2**
	baz=1.7,SNR=77						
P18A				⇓Sb	**Sb**	**08 51 28.3**	**+0.4**
	baz=1.7						
S22A	**4UR Ranch, Cre**	**1.72**	**107**	⇑Pg	**Pg**	**08 51 06.9**	**-0.6**
	baz=1.7,SNR=12						
SMCO	**Snowmass**	**1.77**	**58**	*e*Pn	**Pb**	**08 51 06.9**	**-0.3**
SMCO				*e*Sn	**Sb**	**08 51 29.2**	**-0.3**
P17A	**Butcher Ranch,**	**1.87**	**311**	Pg	**Pb**	**08 51 08.4**	**-0.3**
	baz=1.9,SNR=25						
P17A				⇓Sb	**Sb**	**08 51 32.6**	**+0.3**
	baz=1.9						
Q16A	**Castle Valley**	**1.89**	**291**	⇓Pb	**Pb**	**08 51 08.5**	**-0.7**
	baz=1.9,SNR=79						
Q16A				⇑Sb	**Sb**	**08 51 33.3**	**+0.5**
	baz=1.9						
U20A	**Newcomb**	**1.91**	**171**	⇓Pb	**Pb**	**08 51 09.7**	**+0.2**
	baz=1.9						
O20A	**White River Ci**	**1.94**	**15**	⇓Pg	**Pb**	**08 51 10.0**	**+0.1**
	baz=1.9,SNR=46						
O20A				⇓Sb	**Sb**	**08 51 35.0**	**+0.8**
	baz=1.9						
O19A	**Miners Draw (B**	**2.04**	**355**	⇓Pb	**Pb**	**08 51 11.0**	**-0.6**
	baz=2.0,SNR=25						
O19A				⇑Sb	**Sb**	**08 51 37.9**	**+0.9**
	baz=2.0						
TMUT	**Trail Mountain**	**2.07**	**300**	*e*Pn	**Pn**	**08 51 10.0**	**+0.5**
TMUT				*e*Sn	**Sb**	**08 51 38.6**	**+0.4**
U21A	**Nageezi**	**2.09**	**151**	⇑Sb	**Sg**	**08 51 40.9**	**-0.7**
	baz=2.1						
P22A	**Eagle**	**2.14**	**51**	⇓Sb	**Sb**	**08 51 40.9**	**+0.8**
	baz=2.1						
V20A	**Brimhall**	**2.49**	**172**	⇓Sb	**Sg**	**08 51 52.6**	**-1.8**
	baz=2.5						
MSU	**Marysvale**	**2.58**	**276**	*e*Pg	**Pb**	**08 51 20.7**	**-0.2**
MSU				*e*Sg	**Sb**	**08 51 54.2**	**+1.5**
MVU	**Marysvale**	**2.61**	**276**	*e*Pn	**Pn**	**08 51 18.4**	**+1.6**
MVU				*e*Sn	**Sb**	**08 51 54.7**	**+1.1**
O22A	**Kremmling**	**2.64**	**43**	⇑Sb	**Sb**	**08 51 55.8**	**+1.3**
	baz=2.6						
P23A	**Jefferson**	**2.64**	**64**	⇑Sb	**Sb**	**08 51 55.6**	**+0.9**
	baz=2.6						
V21A	**Milan**	**2.66**	**157**	⇑Sb	**Sg**	**08 51 57.6**	**-2.3**
	baz=2.7						
N21A	**Black Mountain**	**2.71**	**23**	⇓Sb	**Sb**	**08 51 58.0**	**+1.4**
	baz=2.7						
MPU	**Maple Canyon**	**2.75**	**310**	*e*Pn	**Pb**	**08 51 23.4**	**-0.4**
DAU	**Daniels Canyon**	**2.81**	**320**	Pn	**Pn**	**08 51 20.5**	**+0.8**
DAU				*e*Sn	**Sn**	**08 51 56.4**	**+2.6**
JLU	**Jordanelle**	**3.05**	**321**	*e*Pg	**Pb**	**08 51 30.8**	**+1.8**
JLU				*e*Sn	**Sn**	**08 52 02.6**	**+2.9**
WUAZ	**Wupatki**	**3.38**	**216**	Pn	**Pn**	**08 51 28.3**	**+0.9**
WUAZ				*e*Sg	**Sg**	**08 52 20.1**	**-3.0**
DUG	**Dugway**	**3.59**	**304**	*e*Pg	**Pg**	**08 51 42.1**	**-1.1**
DUG				*e*Sg	**Sg**	**08 52 26.4**	**-3.3**
ANMO	**Albuquerque**	**3.86**	**148**	*e*Pg	**Pg**	**08 51 47.5**	**-0.8**

*NIED **30** 08:51:00, 34°20N×136°90E, h340km, Mw4.4 Best double couple: M0 3.86000×10^15 NP1:φ0=34.00000°, δ69.00000°, λ-139.00000°. NP2:φ0=287.00000°, δ52.00000°, λ-27.00000°.*
*ISCJB **30** 08:51:11.7±0.3, 34°18N±0.05×136°90E±0.04, h351km±2km, mb3.7/21, Error ellipse: s-maj=7.7km s-min=5.7km az=164.3*
*JMA **30** 08:51:11.8±0.2, 34°19N×136°85E, h352km±2km, M3.8*
*IDC **30** 08:51:12.4±0.5, 34°16N×136°90E, h343km±5km, mb3.4/17, mb1 3.6/23, mb1mx3.5/35, mbtmp3.5/23, Error ellipse: s-maj=10.7km s-min=8.7km az=58.0*

ISC 30 08:51:12.6±0.6, 34°20N±0.06×136°88E±0.05, h346km±5km, n57, σ0§85/80, mb3.7/21, 3C-6D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	**Ise**	**0.24**	**323**	⇓P	**Pn**	**08 51 56.1**	**+0.1**
JIE				S	**S**	**08 52 30.1**	**-0.7**
TTO2	**TONANKAI O.B.S**	**0.48**	**166**	⇓P	**Pn**	**08 51 56.5**	**+0.4**
TTO2				S	**S**	**08 52 33.0**	**+2.0**
JAA	**Atsumi**	**0.48**	**26**	⇓P	**Pn**	**08 51 56.6**	**+0.3**
JAA				S	**S**	**08 52 31.7**	**+0.3**
TTO3	**TONANKAI O.B.S**	**0.54**	**128**	P	**Pn**	**08 51 56.8**	**+0.4**
TTO4	**TONANKAI O.B.S**	**0.57**	**109**	P	**Pn**	**08 51 56.6**	**+0.3**
TTO4				*e*S	**S**	**08 52 32.3**	**+1.0**
TTO1	**TONANKAI O.B.S**	**0.58**	**188**	⇓P	**Pn**	**08 51 56.6**	**+0.2**
TTO1				S	**S**	**08 52 32.4**	**+1.0**
TK02	**Tokai 2**	**0.77**	**109**	P	**Pn**	**08 51 57.2**	**+0.3**
JWY	**Kouya**	**1.07**	**271**	P	**Pn**	**08 51 58.4**	**0.0**
JWY				S	**S**	**08 52 33.7**	**-1.3**
JWZ	**Kozaga**	**1.18**	**236**	⇓P	**Pn**	**08 51 58.0**	**-0.8**
JWZ				S	**S**	**08 52 33.9**	**-1.9**
JGM	**Miyama**	**1.50**	**355**	P	**Pn**	**08 52 00.7**	**+0.3**
JGM				S	**S**	**08 52 38.7**	**0.0**
JWT	**Wachi**	**1.63**	**312**	⇑P	**Pn**	**08 52 00.4**	**-0.7**
JWT				S	**S**	**08 52 39.0**	**-1.0**
JYN	**Shimob**	**1.88**	**46**	P	**Pn**	**08 52 03.1**	**+0.3**
JAI	**Aioi**	**2.06**	**259**	⇑P	**Pn**	**08 52 03.6**	**-0.4**
JAI				S	**S**	**08 52 43.8**	**-1.4**
JOD2	**Odawara 2**	**2.10**	**59**	P	**Pn**	**08 52 04.2**	**-0.1**
JOD2				S	**S**	**08 52 46.3**	**+0.5**
JKG	**Kaga**	**2.12**	**348**	P	**Pn**	**08 52 04.5**	**+0.2**
JKG				S	**S**	**08 52 45.5**	**-0.4**
JRY	**Ryogami san**	**2.46**	**42**	⇓P	**Pn**	**08 52 07.0**	**0.0**
JRY				*e*S	**S**	**08 52 49.6**	**-1.1**
MAT	**Matsushiro**	**2.58**	**24**	P	**Pn**	**08 52 07.8**	**-0.2**
MAT				S	**S**	**08 52 51.8**	**-0.7**
MJAR	**Matsushiro Arr**	**2.58**	**24**	P	**Pn**	**08 52 08.0**	**0.0**
	5.8nm,0.3s,baz=196,slow=9.5,SNR=224						
MJAR				S	**S**	**08 52 51.9**	**-0.5**
	1.1nm,0.3s,baz=194,slow=15,SNR=12						
JHJ	**Hachijo jima 2**	**2.65**	**113**	P	**Pn**	**08 52 08.5**	**-0.1**
	25nm,0.3s,baz=238,slow=4.0,SNR=16						
JHJ				S	**S**	**08 52 53.5**	**-0.1**
	12nm,0.3s,baz=66,slow=20,SNR=3.5						
JHJ2	**Mitsune**	**2.67**	**113**	P	**Pn**	**08 52 08.5**	**-0.4**
JHS	**Saijyo**	**3.21**	**285**	⇑P	**Pn**	**08 52 13.9**	**+0.3**
JHS				S	**S**	**08 53 02.7**	**0.0**
BSO1	**Boso 1**	**3.41**	**81**	P	**Pn**	**08 52 12.9**	**-2.0**
BSO1				S	**S**	**08 53 02.6**	**-2.6**
JTO	**Tosashimizu**	**3.66**	**250**	P	**Pn**	**08 52 17.9**	**-0.1**
JNU	**Nakatsue**	**5.12**	**260**	P	**Pn**	**08 52 33.7**	**+0.2**
	1.1nm,0.3s,baz=76,slow=7.9,SNR=14						
JNU				S	**S**	**08 53 37.7**	**-1.1**
	baz=348,slow=20,SNR=2.9						
KSRS	**Korea Array**	**7.97**	**297**	P	**Pn**	**08 53 07.5**	**+1.2**
	1.9nm,0.3s,baz=111,slow=12,SNR=64						
USRK	**Ussuriysk Arra**	**10.68**	**341**	P	**P**	**08 53 39.6**	**0.0**
	3.6nm,0.3s,baz=152,slow=12,SNR=82						
ASAJ	**Asahikawa**	**10.85**	**22**	P	**Pn**	**08 53 39.8**	**-0.8**
	1.5nm,0.3s,baz=206,slow=11,SNR=8.7						
SONM	**Songino Array**	**26.54**	**310**	P	**P**	**08 56 21.2**	**+1.3**
	2.4nm,0.8s,baz=119,slow=9.5,SNR=6.2						
CMAR	**Chiang Mai Arr**	**37.20**	**255**	P	**P**	**08 57 51.5**	**-0.7**
	1.4nm,0.4s,baz=52,slow=6.8,SNR=7.0						
ZALV	**Zalesovo Beam**	**41.20**	**315**	P	**P**	**08 58 24.7**	**+0.3**
	0.8nm,0.4s,baz=90,slow=7.2,SNR=2.6						
ZALV				PcP	**PcP**	**09 00 15.6**	**-0.3**
	2.2nm,0.4s,baz=101,slow=2.5,SNR=7.3						
TAPN	**Taplejung**	**42.47**	**275**	*e*P	**P**	**08 58 35.0**	**-0.3**
	5.1nm,0.2s						
MKAR	**Makanchi Array**	**42.57**	**304**	P	**P**	**08 58 36.0**	**+0.4**
	4.4nm,0.6s,baz=91,slow=9.8,SNR=55						
MKAR				PcP	**PcP**	**09 00 20.6**	**-0.1**
	0.4nm,0.4s,baz=75,slow=5.1,SNR=4.4						
MKAR				ScP	**ScP**	**09 03 37.1**	**-0.7**
	0.3nm,0.6s,baz=98,slow=2.7,SNR=3.8						
ODAN	**Odare**	**42.91**	**274**	*e*P	**P**	**08 58 37.9**	**-0.9**
RAMN	**Ramite**	**43.53**	**275**	*e*P	**P**	**08 58 43.1**	**-0.6**
	35nm,0.8s						
GUN	**Gumba**	**43.77**	**276**	*e*P	**P**	**08 58 45.6**	**-0.1**
	26nm,0.8s						
PKI	**Pulchoki**	**44.28**	**276**	*e*P	**P**	**08 58 49.0**	**-0.7**
	6.9nm,0.4s						
KKN	**Kakani**	**44.31**	**276**	*e*P	**P**	**08 58 49.6**	**-0.2**
KURBB	**Kurchatov Arra**	**44.90**	**310**	P	**P**	**08 58 54.1**	**+0.2**
	2.6nm,0.7s,baz=89,slow=8.9						
DANN	**Dangsing**	**45.36**	**278**	*e*P	**P**	**08 58 57.9**	**-0.2**
	68nm,0.6s						
KOLN	**Koldanda**	**45.70**	**277**	*e*P	**P**	**08 59 00.3**	**-0.3**
	27nm,0.9s						
BVAR	**Borovoye Array**	**49.79**	**314**	P	**P**	**08 59 31.3**	**+0.2**
	1.8nm,0.6s,baz=105,slow=9.3,SNR=10						
BVAR				PcP	**PcP**	**09 00 46.2**	**+0.1**
	1.3nm,0.6s,baz=90,slow=3.0,SNR=5.8						
WRA	**Warramunga Arr**	**53.89**	**183**	P	**P**	**09 00 00.1**	**-1.3**
	1.7nm,0.4s,baz=360,slow=7.6,SNR=55						
ASAR	**Alice Springs**	**57.62**	**183**	P	**P**	**09 00 27.6**	**0.0**
	0.4nm,0.3s,baz=0.4,slow=6.7,SNR=18						
AKTO	**Aktyubinsk**	**57.83**	**312**	P	**P**	**09 00 30.6**	**+1.8**
	2.0nm,0.7s,baz=78,slow=12,SNR=5.7						
STKA	**Stephens Creek**	**65.87**	**176**	P	**P**	**09 01 23.6**	**+1.6**
	0.9nm,0.6s,baz=7.4,slow=8.8,SNR=3.9						
YKA	**Yellowknife Ar**	**68.08**	**28**	P	**P**	**09 01 35.9**	**+0.5**
	0.1nm,0.8s,baz=297,slow=6.1,SNR=2.8						
KBZ	**Khabaz**	**69.90**	**310**	P	**P**	**09 01 47.9**	**+1.1**
	7.5nm,0.8s,baz=72,slow=3.6,SNR=19						
RDF	**Al-Radifah**	**73.88**	**294**	*e*P	**P**	**09 02 10.7**	**+0.1**
RDF				AMb	AMB	09 02 13.9	
	comp=Z,68nm,1.6s						
NAY	**Al-Naaiem**	**73.95**	**295**	*e*P	**P**	**09 02 10.7**	**-0.3**
NAY				AMb	AMB	09 02 11.9	
	comp=Z,16nm,1.7s						
RST	**Umm Al-Ruwaisa**	**74.01**	**295**	*e*P	**P**	**09 02 10.6**	**-0.7**
RST				AMb	AMB	09 02 11.5	
	comp=Z,2.3nm,0.8s						
AKASG	**Malin Array Be**	**74.22**	**321**	P	**P**	**09 02 11.2**	**-0.9**
	comp=Z,6.6nm,0.4s,baz=50,slow=6.8,SNR=6.6						
HFS	**Hagfors**	**75.09**	**334**	P	**P**	**09 02 16.6**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=56,slow=8.8,SNR=3.7						
NOA	**NORSAR Array B**	**75.31**	**336**	P	**P**	**09 02 16.9**	**-1.4**
	comp=Z,1.5nm,0.9s,baz=42,slow=5.6,SNR=3.9						
BRTR	**Keskin Array B**	**77.90**	**310**	P	**P**	**09 02 33.6**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=101,slow=3.9,SNR=9.4						
NVAR	**Mina Array Bea**	**79.64**	**51**	P	**P**	**09 02 43.3**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=248,slow=3.8,SNR=3.3						
GERES	**GERESS Array B**	**83.09**	**326**	P	**P**	**09 03 00.6**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=37,slow=5.2,SNR=11						
TORD	**Torodi Ar. Bea**	**116.51**	**310**	PKP	**PKPdf**	**09 09 14.8**	**-1.5**
	comp=Z,0.7nm,1.1s,baz=43,slow=2.5,SNR=3.9						

*IDC **30** 08:56:45.3±1.4, 32°94N×22°31E, h0km, mb3.3/3, mb1 3.6/5, mb1mx3.4/28, mbtmp3.5/5, ML3.7/2, Error ellipse: s-maj=60.3km s-min=24.0km az=139.0*
*HLW **30** 08:56:45.5, 33°37N×22°16E, h33km±31km, Md3.9, MI3.2*
*ISCJB **30** 08:56:46.0±0.6, 33°03N±0.04×22°34E±0.06, h10km, mb3.2/2, Error ellipse: s-maj=7.9km s-min=4.5km az=154.0*
*ATH **30** 08:56:49.9, 33°16N×22°30E, h106km±22km*
*CSEM **30** 08:56:50.1±0.2, 33°02N×22°23E, h40km, Mw3.1, Error ellipse: s-maj=6.9km s-min=4.4km az=65.0*
*THE **30** 08:57:25.0, 35°69N×22°32E, h14km±6km, Error ellipse: s-maj=10.4km s-min=2.7km az=48.0*

ISC 30 08:56:47.1±0.9, 33°04N±0.04×22°30E±0.07, h10km, n75, σ1§16/82, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTBQ	**Tobruq**	**1.69**	**125**	*i* P	**Pb**	**08 57 20.0**	**+1.8**
	SNR=93						
LTBQ				*e*S	**Sn**	**08 57 36.8**	**-1.5**
	40nm,0.5s,SNR=93						
VAM	**Vamos**	**2.84**	**33**	*e*P	**Pn**	**08 57 33.1**	**+0.7**
VAM				*e*S	**Sn**	**08 58 05.8**	**-0.9**
VAM	**Vamos**	**2.84**	**33**	*e*P	**Pn**	**08 57 33.1**	**+0.7**
VAM				*e*S	**Sn**	**08 58 05.8**	**-0.9**
SIVA	**Sivas**	**2.87**	**46**	P	Sn	08 57 59.8	-7.7
SIVA	**Sivas**	**2.87**	**46**	P	Sn	08 57 59.8	-7.7
ANKY	**Antikythira Is**	**2.94**	**16**	*e*P	**Pn**	**08 57 35.1**	**+1.3**
ANKY				*e*S	**Sn**	**08 58 08.4**	**-0.7**
ANKY	**Antikythira Is**	**2.94**	**16**	*e*P	**Pn**	**08 57 35.1**	**+1.3**
ANKY				*e*S	**Sn**	**08 58 08.4**	**-0.7**
KYTH	**Kithira**	**3.29**	**10**	P	**Pn**	**08 57 40.4**	**+1.7**
KYTH	**Kithira**	**3.29**	**10**	*e*P	**Pn**	**08 57 40.1**	**+1.4**
KYTH	**Kithira**	**3.29**	**10**	P	**Pn**	**08 57 40.4**	**+1.7**
LAST	**Lasithi**	**3.38**	**50**	*e*P	**Pn**	**08 57 41.4**	**+1.4**
LAST	**Lasithi**	**3.38**	**50**	*e*P	**Pn**	**08 57 41.4**	**+1.4**
NPS	**Neapolis**	**3.53**	**50**	*e*P	**Pn**	**08 57 43.8**	**+1.8**
NPS				*e*S	**Sn**	**08 58 21.9**	**-1.9**
NPS	**Neapolis**	**3.53**	**50**	*e*P	**Pn**	**08 57 43.8**	**+1.8**
NPS				*e*S	**Sn**	**08 58 21.9**	**-1.9**
VLI	**Veliai**	**3.70**	**8**	P	**Pn**	**08 57 45.9**	**+1.5**
VLI	**Veliai**	**3.70**	**8**	*e*P	**Pn**	**08 57 45.9**	**+1.5**
VLI				*e*S	**Sn**	**08 58 25.7**	**-2.4**
VLI	**Veliai**	**3.70**	**8**	*e*P	**Pn**	**08 57 45.9**	**+1.5**
VLI				*e*S	**Sn**	**08 58 25.7**	**-2.4**
DYR	**Agios Nikonas**	**3.71**	**0**	P	**Pn**	**08 57 44.9**	**+0.4**
DYR	**Agios Nikonas**	**3.71**	**0**	*e*P	**Pn**	**08 57 45.2**	**+0.7**
DYR	**Agios Nikonas**	**3.71**	**0**	*e*P	**Pn**	**08 57 45.2**	**+0.7**
ZKR	**Zakros**	**3.85**	**57**	*e*P	**Pn**	**08 57 48.0**	**+1.6**
ZKR	**Zakros**	**3.85**	**57**	*e*P	**Pn**	**08 57 48.0**	**+1.6**
PYL	**PYLOS**	**3.87**	**353**	P	**Pn**	**08 57 47.0**	**+0.4**
PYL	**PYLOS**	**3.87**	**353**	*e*P	**Pn**	**08 57 47.1**	**+0.4**
PYL	**PYLOS**	**3.87**	**353**	*e*P	**Pn**	**08 57 47.1**	**+0.4**
ITM	**Ithomi**	**4.14**	**356**	P	**Pn**	**08 57 50.9**	**+0.5**
ITM	**Ithomi**	**4.14**	**356**	*e*P	**Pn**	**08 57 50.9**	**+0.5**
ITM	**Ithomi**	**4.14**	**356**	*e*P	**Pn**	**08 57 50.9**	**+0.5**
HMAT	**Matruh**	**4.51**	**114**	P	**Pn**	**08 57 55.3**	**-0.2**
	baz=117						
HMAT	**Matruh**	**4.51**	**114**	P	**Pn**	**08 57 55.3**	**-0.2**
DID	**Didima**	**4.52**	**10**	P	**Pn**	**08 57 56.1**	**+0.5**
DID	**Didima**	**4.52**	**10**	*e*P	**Pn**	**08 57 56.1**	**+0.5**
DID	**Didima**	**4.52**	**10**	*e*P	**Pn**	**08 57 56.1**	**+0.5**
SWA2		**4.66**	**144**	P	**Pn**	**08 57 58.9**	**+1.4**
	baz=144						
SWA2				AMP		08 58 00.0	
	comp=N,70μm,0.1s,logA/T=5.8,baz=144						
SWA2		**4.66**	**144**	P	**Pn**	**08 57 58.9**	**+1.4**
KARP	**Karpathos**	**4.74**	**57**	*e*P	**Pn**	**08 58 00.2**	**+1.6**
KARP	**Karpathos**	**4.74**	**57**	*e*P	**Pn**	**08 58 00.2**	**+1.6**
NAIG	**Nisos Aigina**	**4.80**	**11**	*e*P	**Pn**	**08 57 59.9**	**+0.4**
NAIG	**Nisos Aigina**	**4.80**	**11**	*e*P	**Pn**	**08 57 59.9**	**+0.4**
APE	**Apeiranthos**	**4.81**	**33**	*e*P	**Pn**	**08 57 59.2**	**-0.5**
APE	**Apeiranthos**	**4.81**	**33**	*e*P	**Pn**	**08 57 59.2**	**-0.5**
GUR	**Goura**	**4.88**	**0**	P	**Pn**	**08 58 02.0**	**+1.4**
GUR	**Goura**	**4.88**	**0**	*e*P	**Pn**	**08 58 02.1**	**+1.4**
GUR	**Goura**	**4.88**	**0**	P	**Pn**	**08 58 02.0**	**+1.4**
KLV	**Kalavryta, Ach**	**4.99**	**359**	*e*P	**Pn**	**08 58 03.7**	**+1.6**
KLV	**Kalavryta, Ach**	**4.99**	**359**	*e*P	**Pn**	**08 58 03.7**	**+1.6**
LTK	**Loutraki**	**5.00**	**6**	*e*P	**Pn**	**08 58 02.5**	**+0.3**
LTK	**Loutraki**	**5.00**	**6**	*e*P	**Pn**	**08 58 02.5**	**+0.3**
RLS	**Riolos of Patr**	**5.05**	**353**	*e*P	**Pn**	**08 58 04.2**	**+1.4**
RLS	**Riolos of Patr**	**5.05**	**353**	*e*P	**Pn**	**08 58 04.2**	**+1.4**
LAKA	**Lakka**	**5.19**	**357**	*e*P	**Pn**	**08 58 06.4**	**+1.5**
LAKA	**Lakka**	**5.19**	**357**	*e*P	**Pn**	**08 58 06.4**	**+1.5**
VLS	**Valsamata**	**5.31**	**345**	*e*P	**Pn**	**08 58 06.6**	**+0.2**
VLS	**Valsamata**	**5.31**	**345**	*e*P	**Pn**	**08 58 06.6**	**+0.2**
TRIZ	**Trizonia**	**5.31**	**358**	*e*P	**Pn**	**08 58 07.2**	**+0.7**
TRIZ	**Trizonia**	**5.31**	**358**	*e*P	**Pn**	**08 58 07.2**	**+0.7**
KALE	**Kalithea**	**5.34**	**359**	*e*P	**Pn**	**08 58 07.4**	**+0.5**
KALE	**Kalithea**	**5.34**	**359**	*e*P	**Pn**	**08 58 07.4**	**+0.5**
EFP	**Efpalio**	**5.38**	**357**	*e*P	**Pn**	**08 58 08.8**	**+1.4**
EFP	**Efpalio**	**5.38**	**357**	*e*P	**Pn**	**08 58 08.8**	**+1.4**
LKR	**Lokris**	**5.62**	**6**	*e*P	**Pn**	**08 58 11.0**	**+0.2**
LKR	**Lokris**	**5.62**	**6**	*e*P	**Pn**	**08 58 11.0**	**+0.2**
AGG	**Agios Georgios**	**5.97**	**0**	P	**Pn**	**08 58 16.0**	**+0.5**
AGG	**Agios Georgios**	**5.97**	**0**	*e*P	**Pn**	**08

baz=39,SNR=76
BBOO Buckleboo 43.37 241 P P 09 18 13.3 +0.2
baz=44,SNR=46
WRA Warramunga Arr 44.44 259 P P 09 18 20.3 -1.3
2.9nm,0.3s,baz=90,slow=8.1,SNR=161
WRA ScP ScP 09 22 56.5 +2.9
0.6nm,0.9s,baz=93,slow=3.6,SNR=5.8
WRA S S 09 24 12.7 -4.5
0.5nm,0.7s,baz=96,slow=14,SNR=4.8
ASAR Alice Springs 44.64 254 P P 09 18 22.6 -0.5
54nm,0.6s,baz=88,slow=8.1,SNR=856
ASAR PcP PcP 09 19 54.4 +0.3
1.5nm,0.6s,baz=92,slow=5.6,SNR=4.8
ASAR ScP ScP 09 22 57.8 +3.4
1.2nm,0.8s,baz=102,slow=5.0,SNR=5.8
ASAR S S 09 24 17.1 -2.9
1.5nm,0.8s,baz=88,slow=15,SNR=13
KDU Kakadu 47.29 269 P P 09 18 43.1 -0.2
baz=47,SNR=36
MTN Manton Dam 48.54 268 P P 09 18 52.3 -0.3
baz=49,SNR=21
FORT Forrest 49.94 244 P P 09 19 02.3 -0.4
baz=50,SNR=11
FAKI Fak Fak 50.23 281 P P 09 19 05.4 +0.3
baz=50,SNR=3.2
FITZ Fitzroy Crossi 52.83 260 P P 09 19 23.8 0.0
3.6nm,0.4s,baz=109,slow=7.0,SNR=28
FITZ Fitzroy Crossi 52.83 260 P P 09 19 24.2 +0.4
baz=53,SNR=8.3
MEEK Meekatharra 58.32 249 P P 09 20 01.5 -0.4
baz=58,SNR=6.9
VNDA Vanda 60.83 185 P P 09 20 18.6 +1.0
2.0nm,0.6s,baz=346,slow=7.9,SNR=17
PCI Palu 62.58 278 P P 09 20 32.9 +2.7
baz=63,SNR=9.4
MJAR Matsushiro Arr 67.42 323 P P 09 20 60.0 -0.1
0.5nm,0.5s,baz=146,slow=5.9,SNR=5.4
UGM Wanagama 69.39 268 P P 09 21 12.9 +0.4
baz=70,SNR=3.5
NVAR Mina Array Bea 79.32 44 P P 09 22 09.6 +1.4
1.6nm,0.7s,baz=224,slow=8.8,SNR=14
MAW Mawson 84.15 200 P P 09 22 32.3 +0.3
3.5nm,0.5s,baz=132,slow=6.8,SNR=5.7
ILAR Eielson Array 85.55 13 P P 09 22 38.3 -0.4
0.5nm,0.4s,baz=218,slow=5.8,SNR=15
TXAR Lajitas Array 86.01 58 P P 09 22 44.4 +2.4
1.9nm,0.7s,baz=213,slow=7.6,SNR=22
PDAR Pinedale Array 87.25 44 P P 09 22 48.6 +1.0
1.1nm,0.5s,baz=222,slow=3.6,SNR=14
YKA Yellowknife Ar 94.08 25 P P 09 23 18.6 +0.3
0.5nm,0.7s,baz=244,slow=4.5,SNR=15
MKAR Makanchi Array 108.66 314 PKiKP PKiKP 09 28 25.1 -0.6
0.4nm,0.5s,baz=91,slow=1.8,SNR=6.7
ARCES ARCESS Array B 125.87 350 PKP PKPdf 09 28 58.2 +0.3
2.9nm,0.9s,baz=35,slow=2.2,SNR=7.2
FINES FINESS Array B 132.72 344 PKP PKPdf 09 29 10.8 -0.4
0.7nm,0.6s,baz=29,slow=3.2,SNR=2.8
FINES SKPbc SKPab 09 31 50.5 +0.8
0.9nm,0.5s,baz=94,slow=1.8,SNR=5.6
BRTR Keskin Array B 144.30 315 PKP PKPab 09 29 33.1 -0.2
1.1nm,0.7s,baz=41,slow=2.4,SNR=8.6
MMAI Mount Meron Ar 145.69 303 PKPbc PKPab 09 29 38.4 -0.4
3.3nm,0.5s,baz=90,slow=4.3,SNR=3.5
GERES GERESS Array B 147.15 345 PKPbc PKPbc 09 29 41.4 +0.7
2.0nm,0.5s,baz=22,slow=3.2,SNR=16
CONA Conrad Observa 147.39 342 i PKPbc PKPbc 09 29 42.8 +1.5
FETA Feichten 149.55 347 i PKPbc PKPbc 09 29 47.6 +0.8
4.0nm,0.7s
TORD Torodi Ar. Bea 175.66 185 PKP PKPdf 09 30 06.6 -0.4
0.9nm,0.7s,baz=315,slow=1.5,SNR=6.6
TORD PKPab PKPab 09 31 47.3 -1.2
1.0nm,0.7s,baz=174,slow=3.3,SNR=4.9

*CSEM **30** 09:13:55.2±0.1, 42.36N×13.42E, h10km, ML3.5/9, Error ellipse: s-maj=2.6km s-min=1.8km az=69.0*
*ROM **30** 09:13:55.0±0.1, 42.36N×13.43E, h9km, Ml3.1/26, Error ellipse: s-maj=1.1km s-min=0.8km az=65.0*
ISC 30 09:13:55.1±0.8, 42.36N±0.02×13.42E±0.02, h10km±4km, n70, σ0°60/96, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AQU	**L'Aquila**	**0.01**	**265**	Pg		**Pg**	**09 13 56.8**	**-0.2**
AQU				Sg		**Sg**	**09 13 57.5**	**-0.8**
AQU	**L'Aquila**	**0.01**	**265**	Pg		**Pg**	**09 13 56.8**	**-0.2**
AQU				Sg		**Sg**	**09 13 57.5**	**-0.8**
FAGN	**Fagnano**	**0.15**	**126**	Pg		**Pg**	**09 13 59.1**	**+0.6**
FAGN				Sg		**Sg**	**09 14 01.8**	**+0.9**
	12µm,0.4s							
FAGN	**Fagnano**	**0.15**	**126**	Pg		**Pg**	**09 13 59.1**	**+0.6**
FAGN				Sg		**Sg**	**09 14 01.8**	**+0.9**
	12µm,0.4s							
CAMP	**Campotosto**	**0.18**	**358**	Pg		**Pg**	**09 13 59.6**	**+0.5**
CAMP				Sg		**Sg**	**09 14 02.7**	**+0.9**
	1µm,0.8s							
CAMP	**Campotosto**	**0.18**	**358**	Pg		**Pg**	**09 13 59.6**	**+0.5**
CAMP				Sg		**Sg**	**09 14 02.7**	**+0.9**
	1µm,0.8s							
FIAM	**Fiamignano**	**0.24**	**249**	Pg		**Pb**	**09 14 00.9**	**-0.7**
FIAM				Sg		**Sg**	**09 14 04.9**	**+1.5**
	4µm,0.4s							
FIAM	**Fiamignano**	**0.24**	**249**	Pg		**Pb**	**09 14 00.9**	**-0.7**
FIAM				Sg		**Sg**	**09 14 04.9**	**+1.5**
	4µm,0.4s							
TERO	**Teramo**	**0.30**	**27**	Pg		**Pg**	**09 14 01.4**	**+0.2**
TERO				Sg		**Sg**	**09 14 06.1**	**+0.8**
	2µm,0.4s							
TERO	**Teramo**	**0.30**	**27**	Pg		**Pg**	**09 14 01.4**	**+0.2**
TERO				Sg		**Sg**	**09 14 06.1**	**+0.8**
	2µm,0.4s							
VCEL	**Villa Celiera**	**0.32**	**83**	Pg		**Pg**	**09 14 02.0**	**+0.5**
VCEL				Sg		**Sg**	**09 14 06.3**	**+0.6**
	4µm,0.4s							
VCEL	**Villa Celiera**	**0.32**	**83**	Pg		**Pg**	**09 14 02.0**	**+0.5**
VCEL				Sg		**Sg**	**09 14 06.3**	**+0.6**
	4µm,0.4s							
PTQR	**Pietraquaria**	**0.33**	**182**	Pg		**Pg**	**09 14 02.4**	**+0.6**
PTQR				Sg		**Sb**	**09 14 07.6**	**-1.0**
PTQR	**Pietraquaria**	**0.33**	**182**	Pg		**Pg**	**09 14 02.4**	**+0.6**
PTQR				Sg		**Sb**	**09 14 07.6**	**-1.0**
LNSS	**Leonessa**	**0.37**	**312**	Pg		**Pg**	**09 14 03.1**	**+0.5**
LNSS				Sg		**Sb**	**09 14 09.2**	**-0.6**
	2µm,0.5s							
LNSS	**Leonessa**	**0.37**	**312**	Pg		**Pg**	**09 14 03.1**	**+0.5**
LNSS				Sg		**Sb**	**09 14 09.2**	**-0.6**
	2µm,0.5s							
INTR	**Introdacqua**	**0.50**	**133**	Pg		**Pb**	**09 14 05.4**	**-0.6**
INTR				Sg		**Sb**	**09 14 13.1**	**-0.2**
	2µm,0.7s							
INTR	**Introdacqua**	**0.50**	**133**	Pg		**Pb**	**09 14 05.4**	**-0.6**
INTR				Sg		**Sb**	**09 14 13.1**	**-0.2**
	2µm,0.7s							
VVLD	**Villa Vallelon**	**0.51**	**163**	Pg		**Pg**	**09 14 05.1**	**+0.1**
	954nm,0.5s							
VVLD	**Villa Vallelon**	**0.51**	**163**	Pg		**Pg**	**09 14 05.1**	**+0.1**
	954nm,0.5s							
CERT	**Cerreto**	**0.52**	**219**	Pg		**Pg**	**09 14 05.7**	**+0.5**
CERT				Sg		**Sb**	**09 14 13.8**	**-0.1**
	3µm,0.4s							
CERT	**Cerreto**	**0.52**	**219**	Pg		**Pg**	**09 14 05.7**	**+0.5**
CERT				Sg		**Sb**	**09 14 13.8**	**-0.1**
	3µm,0.4s							
NRCA	**Norcia**	**0.53**	**335**	Pg		**Pg**	**09 14 05.4**	**0.0**
NRCA				Sg		**Sb**	**09 14 13.6**	**-0.6**
NRCA	**Norcia**	**0.53**	**335**	Pg		**Pg**	**09 14 05.4**	**0.0**
NRCA				Sg		**Sb**	**09 14 13.6**	**-0.6**
MNS	**Montasola**	**0.55**	**273**	Pg		**Pg**	**09 14 05.9**	**+0.1**
	658nm,0.6s							
MNS	**Montasola**	**0.55**	**273**	Pg		**Pg**	**09 14 05.9**	**+0.1**
	658nm,0.6s							
GUAR	**Guarcino**	**0.57**	**188**	Pg		**Pg**	**09 14 06.4**	**+0.3**
	662nm,0.4s							
GUAR	**Guarcino**	**0.57**	**188**	Pg		**Pg**	**09 14 06.4**	**+0.3**
	662nm,0.4s							
TRTR	**Tortoreto Alta**	**0.58**	**39**	Pg		**Pb**	**09 14 07.8**	**+0.4**
	2µm,0.5s							
TRTR	**Tortoreto Alta**	**0.58**	**39**	Pg		**Pb**	**09 14 07.8**	**+0.4**
	2µm,0.5s							
MTCE	**Montecelio**	**0.60**	**237**	Pg		**Pg**	**09 14 07.1**	**+0.3**
	605nm,0.8s							
MTCE	**Montecelio**	**0.60**	**237**	Pg		**Pg**	**09 14 07.1**	**+0.3**
	605nm,0.8s							
OFFI	**Offida**	**0.61**	**19**	Pg		**Pb**	**09 14 07.9**	**0.0**
	3µm,0.6s							
OFFI	**Offida**	**0.61**	**19**	Pg		**Pb**	**09 14 07.9**	**0.0**
	3µm,0.6s							
LPEL	**Lama dei Pelig**	**0.65**	**118**	Pg		**Pg**	**09 14 07.6**	**0.0**
LPEL	**Lama dei Pelig**	**0.65**	**118**	Pg		**Pg**	**09 14 07.6**	**0.0**
POFI	**Posta Fibreno**	**0.67**	**161**	Pg		**Pg**	**09 14 07.9**	**-0.2**
POFI	**Posta Fibreno**	**0.67**	**161**	Pg		**Pg**	**09 14 07.9**	**-0.2**
CAFR	**Castel Frentan**	**0.70**	**100**	Pg		**Pb**	**09 14 09.2**	**-0.2**
	2µm,0.4s							
CAFR	**Castel Frentan**	**0.70**	**100**	Pg		**Pb**	**09 14 09.2**	**-0.2**
	2µm,0.4s							
SDI	**San Donato**	**0.71**	**156**	Pg		**Pg**	**09 14 08.3**	**-0.5**
	249nm,0.4s							
SDI	**San Donato**	**0.71**	**156**	Pg		**Pg**	**09 14 08.3**	**-0.5**
	249nm,0.4s							
FDMO	**Fiordimonte**	**0.72**	**340**	Pg		**Pg**	**09 14 08.8**	**-0.3**
FDMO				Sg		**Sb**	**09 14 20.2**	**+0.4**
	242nm,0.3s							
FDMO	**Fiordimonte**	**0.72**	**340**	Pg		**Pg**	**09 14 08.8**	**-0.3**
FDMO				Sg		**Sb**	**09 14 20.2**	**+0.4**
	242nm,0.3s							
CESI	**CESI - Serrava**	**0.75**	**330**	Pg		**Pg**	**09 14 09.4**	**-0.2**
	230nm,0.6s							
CESI	**CESI - Serrava**	**0.75**	**330**	Pg		**Pg**	**09 14 09.4**	**-0.2**
	230nm,0.6s							
GUMA	**Gualdo di Mace**	**0.80**	**28**	Pg		**Pg**	**09 14 09.0**	**-1.6**
	2µm,0.4s							
GUMA	**Gualdo di Mace**	**0.80**	**28**	Pg		**Pg**	**09 14 09.0**	**-1.6**
	2µm,0.4s							
GIUL	**Giuliano Di Ro**	**0.81**	**189**	Pg		**Pg**	**09 14 10.3**	**-0.3**
	282nm,0.5s							
GIUL	**Giuliano Di Ro**	**0.81**	**189**	Pg		**Pg**	**09 14 10.3**	**-0.3**
	282nm,0.5s							
CERA	**Filignano**	**0.88**	**149**	Pg		**Pg**	**09 14 11.4**	**-0.6**
	551nm,0.7s							
CERA	**Filignano**	**0.88**	**149**	Pg		**Pg**	**09 14 11.4**	**-0.6**
	551nm,0.7s							
ASSB	**Assisi San Ben**	**0.89**	**321**	Pg		**Pg**	**09 14 11.8**	**-0.4**
	296nm,0.6s							
ASSB	**Assisi San Ben**	**0.89**	**321**	Pg		**Pg**	**09 14 11.8**	**-0.4**
	296nm,0.6s							
MIDA	**Miranda**	**0.95**	**139**	Pg		**Pg**	**09 14 12.7**	**-0.6**
	345nm,0.7s							
MIDA	**Miranda**	**0.95**	**139**	Pg		**Pg**	**09 14 12.7**	**-0.6**
	345nm,0.7s							
SNTG	**Esanatoglia**	**0.97**	**339**	Pg		**Pg**	**09 14 13.1**	**-0.6**
	81nm,0.3s							
SNTG	**Esanatoglia**	**0.97**	**339**	Pg		**Pg**	**09 14 13.1**	**-0.6**
	81nm,0.3s							
CING	**Cingoli**	**1.03**	**351**	Pg		**Pb**	**09 14 14.4**	**-0.7**
	264nm,0.5s							
CING	**Cingoli**	**1.03**	**351**	Pg		**Pb**	**09 14 14.4**	**-0.7**
	264nm,0.5s							
MGAB	**Montegabbione**	**1.11**	**300**	Pg		**Pg**	**09 14 16.8**	**+0.3**
	203nm,0.5s							
MGAB	**Montegabbione**	**1.11**	**300**	Pg		**Pg**	**09 14 16.8**	**+0.3**
	203nm,0.5s							
VAGA	**Valle Agricola**	**1.12**	**147**	Pg		**Pg**	**09 14 16.7**	**+0.1**
VAGA	**Valle Agricola**	**1.12**	**147**	Pg		**Pg**	**09 14 16.7**	**+0.1**
MURB	**Monte Urbino**	**1.12**	**324**	Pg		**Pg**	**09 14 16.9**	**+0.2**
	513nm,0.3s							
MURB	**Monte Urbino**	**1.12**	**324**	Pg		**Pg**	**09 14 16.9**	**+0.2**
	513nm,0.3s							
ARVD	**Arcevia**	**1.20**	**343**	Pg		**Pn**	**09 14 17.6**	**-0.3**
	214nm,0.8s							
ARVD	**Arcevia**	**1.20**	**343**	Pg		**Pn**	**09 14 17.6**	**-0.3**
	214nm,0.8s							
NVLJ	**Novalja**	**2.45**	**25**	ePn		**Pn**	**09 14 36.1**	**+1.1**
NVLJ				Sn		**Sn**	**09 15 04.8**	**-0.3**
NVLJ	**Novalja**	**2.45**	**25**	ePn		**Pn**	**09 14 36.1**	**+1.1**
NVLJ				Sn		**Sn**	**09 15 04.7**	**-0.3**

*IDC **30** 09:17:07.7±3.2, 55.22N×12.15E, h0km, mb1 3.3/4, mb1mx3.0/27, mbtmp3.2/4, ML2.8/4, Error ellipse: s-maj=29.6km s-min=22.0km az=28.0*
*ISCJB **30** 09:17:21.4±1.1, 56.49N±0.05×11.9E±0.1, h0km, Error ellipse: s-maj=11.5km s-min=6.9km az=158.9*
*CSEM **30** 09:17:22.5±0.4, 56.48N×11.95E, h2km, ML2.1, Error ellipse: s-maj=9.5km s-min=4.4km az=62.0, Mining explosion.*
*UPP **30** 09:17:23.0, 56.49N×11.96E, h0km, ML2.1, Mining explosion.*
*NAO **30** 09:17:23.1±3.0, 56.60N×11.98E, ML2.0*
*BER **30** 09:17:26.4±4.7, 56.58N×12.65E, h13km±39km, ML2.0(NAO)*
ISC 30 09:17:22.4±1.0, 56.54N±0.04×12.12E±0.05, h0km, n22, σ1°25/30, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FABU	**Falkenberg**	**0.57**	**35**	P		**Pb**	**09 17 35.4**	**+0.1**
FABU				S		**Sb**	**09 17 44.8**	**+0.8**
BJUU	**Bjuv**	**0.68**	**132**	P		**Pb**	**09 17 36.7**	**-0.5**
DEL	**Delary**	**0.97**	**93**	P		**Pb**	**09 17 42.4**	**+0.3**
BORU	**Boraas**	**1.16**	**18**	P		**Pg**	**09 17 45.6**	**+1.0**
LUNU	**Lund**	**1.17**	**140**	P		**Pb**	**09 17 45.1**	**-0.4**
GNOU	**Gnosjoe**	**1.17**	**49**	P		**Pn**	**09 17 46.4**	**+0.3**
TJOU	**Tjoern**	**1.52**	**350**	P		**Pn**	**09 17 51.4**	**+0.5**
VXJU	**Vaexsjoe**	**1.60**	**75**	P		**Pg**	**09 17 53.7**	**+0.6**
MUD	**Monsted U'grnd**	**1.64**	**268**	*i* P		**Sg**	**09 18 16.4**	**+1.5**
	2µm,0.7s							
FKPU	**Falk**	**1.85**	**27**	P		**Pb**	**09 17 57.5**	**+0.5**
VANU	**Vaenersborg**	**1.96**	**359**	P		**Pb**	**09 17 58.7**	**-0.3**
HFS	**Hagfors**	**3.70**	**12**	Pn		**Pn**	**09 18 20.4**	**-0.4**
	baz=208,slow=11							
HFS				Pg		**Pb**	**09 18 26.2**	**-2.4**
	baz=188,slow=16							
HFS				Lg		Lg	09 19 18.3	
	baz=194,slow=37							
HFS	**Hagfors**	**3.70**	**12**	Pn		**Pn**	**09 18 20.4**	**-0.4**
	baz=208,slow=11							
HFS				Pg		**Pb**	**09 18 26.2**	**-2.4**
	baz=188,slow=16							
HFS				Lg		Lg	09 19 18.3	
	baz=194,slow=37							
HFS	**Hagfors**	**3.70**	**12**	Pn		**Pn**	**09 18 22.6**	**+1.8**
	0.2nm,0.3s,baz=189,slow=12,SNR=5.8							
HFS						Sn		**Sb**	**09 19 17.6**	**+3.5**
	0.7nm,0.3s,baz=189,slow=32,SNR=6.7							
HFS	**Hagfors**	**3.70**	**12**	Pn		**Pn**	**09 18 20.4**	**-0.4**
	baz=208,slow=11,SNR=55							
HFS				Lg		Lg	09 19 18.3	
	baz=194,slow=32,SNR=91							
NB2	**NORSAR Subarra**	**4.54**	**354**	Pn		**Pn**	**09 18 32.5**	**+0.1**
	baz=177,slow=14							
NB2						Sn		**Sn**	**09 19 25.8**	**-0.1**
NB2						Lg		Lg	09 19 44.8	
NB2	**NORSAR Subarra**	**4.54**	**354**	Pn		**Pn**	**09 18 32.5**	**+0.1**
	baz=177,slow=14							
NB2						Sn		**Sn**	**09 19 25.8**	**-0.1**
NB2						Lg		Lg	09 19 44.8	
NB2	**NORSAR Subarra**	**4.54**	**354**	P		**Pn**	**09 18 32.5**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=174,slow=12							
NB2	**NORSAR Subarra**	**4.54**	**354**	Pn		**Pn**	**09 18 32.5**	**+0.1**
	baz=177,slow=14,SNR=55							
NB2						Sn		**Sn**	**09 19 25.8**	**-0.1**
	SNR=55							
NB2						Lg		Lg	09 19 44.8	
NOA	**NORSAR Array B**	**4.54**	**354**	Pn		**Pn**	**09 18 32.4**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=174,slow=12,SNR=10.0							
NOA						Sn		**Sb**	**09 19 39.2**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=285,slow=15,SNR=3.5							
FINES	**FINESS Array B**	**8.72**	**50**	Pn		Pn	09 19 23.3	-6.2
	comp=Z,0.3nm,0.3s,baz=242,slow=11,SNR=3.7							
FINES						Sn		**Sn**	**09 21 08.0**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=316,slow=27,SNR=5.6							
ARCES	**ARCESS Array B**	**14.33**	**19**	Pn		**Pn**	**09 20 43.6**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=205,slow=13,SNR=5.0							

JMA 30 09:45:29.1, 39.02N×140.80E, h5km±1km, M0.7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JMK	**Ichinoseki**	**0.33**	**102**	P		Pg	09 45 35.5	-0.1
JMK				S		Sg	09 45 40.2	+0.2
JRG	**Rokugo**	**0.40**	**341**	P		Pg	09 45 37.1	+0.3
JRG				S		Sg	09 45 42.5	+0.4
JOM	**Ohasama**	**0.59**	**40**	P		Pg	09 45 40.6	+0.1
JOM				*e*S		Sg	09 45 48.2	-0.1
JIO	**Ouri**	**0.71**	**143**	P		Pg	09 45 42.6	-0.1
JIO				S		Sg	09 45 52.0	+0.1

*ISCJB **30** 09:45:29.5±0.7, 37.38N±0.09×134.7E±0.1, h378km, mb2.7/3, Error ellipse: s-maj=13.1km s-min=10.8km az=43.3*
*IDC **30** 09:45:29.5±3.8, 37.11N×134.21E, h351km±99km, mb2.5/3, mb1 2.8/5, mb1mx2.6/28, mbtmp2.6/5, Error ellipse: s-maj=199.9km s-min=20.9km az=56.0*
*JMA **30** 09:45:30.1±0.2, 37.31N×134.92E, h390km±2km, M2.8*
ISC 30 09:45:30.0±0.9, 37.38N±0.10×134.8E±0.1, h378km, n14, σ0°95/16, mb2.8/3, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JJH	**Hakui**	**1.64**	**106**	P		**Pn**	**09 46 22.7**	**+1.0**
JKG	**Kaga**	**1.64**	**132**	P		**Pn**	**09 46 22.5**	**+0.7**
JSZ	**Suzu**	**2.03**	**87**	P		**Pn**	**09 46 25.4**	**+1.4**
JWT	**Wachi**	**2.15**	**167**	P		**Pn**	**09 46 25.8**	**+0.8**
JWT				S		**S**	**09 47 08.9**	**-0.4**
MAT	**Matsushiro**	**2.84**	**106**	P		**Pn**	**09 46 30.8**	**+0.6**
MAT	**Matsushiro**	**2.84**	**106**	P		**Pn**	**09 46 30.9**	**+0.7**
MJAR	**Matsushiro Arr**	**2.84**	**106**	P		**Pn**	**09 46 31.0**	**+0.8**
	1.0nm,0.3s,baz=282,slow=11,SNR=39							
JMM	**Marumori**	**4.77**	**82**	P		**Pn**	**09 46 48.8**	**+0.3**
JFK	**Kawauchi**	**4.83**	**88**	P		**Pn**	**09 46 48.7**	**-0.4**
JRG	**Rokugo**	**4.99**	**64**	P		**Pn**	**09 46 52.1**	**+1.3**
JRG				*e*S		**S**	**09 47 55.3**	**-1.1**
USRK	**Ussuriysk Arra**	**7.14**	**343**	P		**P**	**09 47 16.1**	**+0.7**
	0.4nm,0.3s,baz=159,slow=10,SNR=11							
MKAR	**Makanchi Array**	**39.44**	**301**	P		**P**	**09 52 23.5**	**-1.6**
	0.1nm,0.6s,baz=100,slow=7.7,SNR=2.3							
WRA	**Warramunga Arr**	**57.02**	**181**	P		**P**	**09 54 38.0**	**+0.1**
	0.4nm,0.5s,baz=359,slow=7.5,SNR=10							
ASAR	**Alice Springs**	**60.73**	**181**	P		**P**	**09 55 03.3**	**+0.2**
	0.3nm,0.9s,baz=8.5,slow=6.9,SNR=2.9							

MEX 30 09:48:46.9±0.4, 18.04N×99.66W, h52km±3km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MEIG	**Mezcala**	**0.12**	**160**	*e*P		Pn	09 48 53.7	-1.5
MEIG				*e*S		Sn	09 48 59.4	-1.7
ARIG	**Puente Sto Nin**	**0.69**	**290**	*i* P		Pn	09 48 59.2	-1.5
ARIG				*e*S		Sn	09 49 08.9	-1.8
YAIG	**Yautepec**	**0.99**	**35**	*i* P		Pn	09 49 03.1	-1.7
YAIG				*i* S		Sn	09 49 16.1	-1.9
CAIG	**El Cayaco**	**1.14**	**210**	*e*P		Pn	09 49 04.7	-1.9
CAIG				*e*S		Sn	09 49 19.5	-1.7
PPM	**Popocatepetl**	**1.42**	**44**	*e*P		Pn	09 49 09.4	-1.6
PPM				*e*S		Sn	09 49 26.2	-2.8
ZIIG	**Zihuatanejo**	**1.77**	**256**	*e*P		Pn	09 49 13.4	-1.7
ZIIG				*e*S		Sn	09 49 34.2	-2.3
UTMO	**Huajupan**	**1.78**	**97**	*e*P		Pn	09 49 14.9	-0.7
UTMO				*e*S		Sn	09 49 34.6	-2.7
PNIG	**Pinotepa**	**2.20**	**138**	*e*P		Pn	09 49 20.2	-0.9
PNIG				*i* S		Sn	09 49 45.4	-1.8

*PDG **30** 10:04:12.6, 27.80N×61.50E, h100km, mb5.5/1*
*BGS **30** 10:04:23.2±1.5, 27.82N×61.49E, h67km, mb5.5*
*MOS **30** 10:04:24.8±0.8, 27.76N×61.42E, h66km, mb5.9/114, MS4.1/19, Error ellipse: s-maj=4.6km s-min=2.8km az=119.3*
*ISCJB **30** 10:04:25.7±0.3, 27.70N±0.02×61.43E±0.01, h76km±2km, mb5.5/324, Error ellipse: s-maj=2.9km s-min=2.1km az=179.7*
*CSEM **30** 10:04:26.8±0.1, 27.72N×61.48E, h69km, mb5.5/99, Ms4.6, Mw5.2, Error ellipse: s-maj=3.0km s-min=2.6km az=161.0*
*NEIC **30** 10:04:26.9±0.2, 27.74N×61.42E, mb5.7/135, MW5.2, Error ellipse: s-maj=4.6km s-min=3.1km az=190.0, Moment Tensor Solution. s12 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.84; $M_{θθ}$5.90; $M_{φφ}$-4.06; $M_{rθ}$5.79; $M_{rφ}$0.89; $M_{θφ}$-0.29; Best double couple: $M_0$7.80000×10^{16} NP1: φs40.00000°, δ30.00000°, λ-155.00000°. NP2: φs288.00000°, δ78.00000°, λ-63.00000°. Principal axes: T 9.0300, Plg27.0000°, Azm356.0000°; N -3.7200, Plg26.0000°, Azm102.0000°; P -5.3100, Plg49.0000°, Azm228.0000°;*
*PDA **30** 10:04:27.3, 27.75N×61.43E, h70km, Mw5.2*
*IDC **30** 10:04:27.1±0.4, 27.75N×61.50E, h71km±3km, mb5.0/35, mb1 5.1/37, mb1mx5.1/37, mbtmp5.0/37, MS4.1/30, Ms1 4.1/30, ms1mx3.9/45, Error ellipse: s-maj=9.4km s-min=7.1km az=3.0*
*SFS **30** 10:04:27.0, 27.70N×61.43E, h70km, ML5.2*
*BJI **30** 10:04:28.8, 28.05N×61.51E, h85km, mB5.3/29, mb5.3/56, Ms4.6/30, Ms7 4.1/32*
*GCMT **30** 10:04:28.9±0.2, 27.64N×61.37E, h85km±2km, MW5.2, Moment Tensor Solution. s67,c92; s2,c2; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.57±.18; $M_{θθ}$3.82±.19; $M_{φφ}$-2.26±.19; $M_{rθ}$6.01±.11; $M_{rφ}$3.61±.18; $M_{θφ}$-0.43±.13; Best double couple: $M_0$7.60000×10^{16} NP1: φs21.00000°, δ35.00000°, λ-167.00000°. NP2: φs280.00000°, δ83.00000°, λ-56.00000°. Principal axes: T 8.4700, Plg29.0000°, Azm343.0000°; N -1.6700, Plg34.0000°, Azm95.0000°; P -6.8100, Plg42.0000°, Azm222.0000°; Data Used: II IU IC G CN. Surface waves: sta= 87, comp=138, per= 50.*
*THR **30** 10:04:29.8±1.0, 27.89N×61.15E, h42km±7km, ML5.0*
*TEH **30** 10:04:29.9, 27.79N×61.39E, h26km, ML5.2*
*DJA **30** 10:04:30.4±1.7, 28.1°N±10.6°×62.2°E±1.4, h89km±19km, M5.1/8, mB5.7/3, mb5.1/8, Mw(mB)5.2/3*
*SZGRF **30** 10:04:30.7, 26.71N×58.97E, h69km, mb5.4, Southern Iran*
*OMAN **30** 10:04:34.4±0.1, 27.03N×61.26E, h78km±8km, Error ellipse: s-maj=6.6km s-min=3.2km az=15.0*
ISC 30 10:04:27.3±0.2, 27.74N±0.03×61.45E±0.02, h73km±1km, h73km:pP-P, n1617, σ1°23/1858, mb5.6/322, 361C-78D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZHSF	**Zahedan**	**1.96**	**343**	*e*Pg		Pn	10 05 02.0	+3.3
ZHSF				*e*Sg		**Sn**	**10 05 24.5**	**+2.0**
ZHSF	**Zahedan**	**1.96**	**343

HOQ	Hoqain SNR=149	5.57 223	Pn	Pn	10 05 44.3	-3.4			
WBK	Wadi Bani Khal SNR=218	5.58 204	Pn	Pn	10 05 43.1	-4.7			
SMDO	Samad SNR=1058	5.58 214	P	Pn	**10 05 45.0**	**-2.9**			
SMDO	Samad SNR=1000	5.58 214	P	Pn	**10 05 45.0**	**-2.9**			
HATD	Hatta, Dubai SNR=197	5.58 240	P	Pn	**10 05 45.0**	**-2.8**			
HATD			⇑S	Sn	10 06 41.9	-8.8			
HATD	Hatta, Dubai	5.58 240	P	Pn	**10 05 46.0**	**-1.8**			
ITEG	Tejag	5.64 336	Pn	Pn	**10 05 50.0**	**+1.2**			
ITEG			Sn	Sn	**10 06 52.7**	**+0.3**			
ITEG	Tejag	5.64 336	*e*Pn	Pn	**10 05 50.0**	**+1.2**			
ITEG	comp=Z,9µm,0.3s		*e*		10 05 51.7				
ITEG	Tejag	5.64 336	*e*Pn	Pn	**10 05 50.0**	**+1.2**			
ITEG			Sn	Sn	**10 06 52.7**	**+0.3**			
ASHO	Ashiyiah SNR=150	5.71 239	Pn	Pn	**10 05 47.6**	**-2.1**			
ASHO	Ashiyiah SNR=150	5.71 239	Pn	Pn	**10 05 47.6**	**-2.1**			
ASHO	Ashiyiah SNR=150	5.71 239	P	Pn	**10 05 48.9**	**-0.8**			
NAZ	Nazwa, Dubai SNR=60	5.87 243	P	Pn	**10 05 52.6**	**+0.9**			
NAZ			⇑S	Sn	**10 06 54.6**	**-3.0**			
NAZ	Nazwa, Dubai	5.87 243	P	Pn	**10 05 51.2**	**-0.5**			
SHRT	Shahrakht	5.97 351	*e*Pn	Pn	**10 05 54.0**	**+0.8**			
SHRT			Sn	Sn	**10 06 57.6**	**-2.6**			
SHRT	comp=N,488nm,0.6s		AML	AML	10 07 35.3				
SHRT	comp=E,550nm,0.7s		AML	AML	10 07 52.1				
SHRT	Shahrakht	5.97 351	*e*Pn	Pn	**10 05 54.0**	**+0.8**			
FAQ	Al Faqa, Dubai	6.04 242	P	Pn	**10 05 54.1**	**0.0**			
JMDO	Jabal Madar SNR=643	6.14 210	P	Pn	**10 05 52.8**	**-2.7**			
JMDO	Jabal Madar SNR=643	6.14 210	P	Pn	**10 05 52.8**	**-2.7**			
ARQ	Araqi SNR=797	6.24 227	P	Pn	**10 05 56.8**	**-0.1**			
ARQ	Araqi SNR=797	6.24 227	P	Pn	**10 05 56.8**	**-0.1**			
BSYO	Bisya SNR=211	6.27 218	P	Pn	**10 05 56.6**	**-0.7**			
BSY	Bisya SNR=1964	6.28 219	P	Pn	**10 05 56.5**	**-1.0**			
BSY	SNR=211		P	Pn	**10 05 56.6**	**-0.9**			
ASUD	Al Ashush, Dub SNR=662	6.31 242	⇑P	Pn	**10 05 58.7**	**+0.9**			
ASUD			⇓S	Sn	**10 07 05.2**	**-3.2**			
ASUD	Al Ashush, Dub	6.31 242	P	Pn	**10 05 58.4**	**+0.7**			
IBAF	Bafgh	6.39 308	Pn	Pn	**10 06 00.7**	**+1.6**			
IBAF	Bafgh	6.39 308	*e*Pn	Pn	**10 06 01.1**	**+2.0**			
IBAF	comp=Z,10µm,0.4s		*e*		10 06 47.9				
IBAF	Bafgh	6.39 308	*e*Pn	Pn	**10 06 01.1**	**+2.0**			
IMEH	Mehriz	6.97 303	Pn	Pn	**10 06 08.6**	**+1.5**			
IMEH	Mehriz	6.97 303	*e*Pn	Pn	**10 06 09.0**	**+1.9**			
IMEH	comp=Z,3µm,0.4s		*e*		10 08 45.0				
IMEH	Mehriz	6.97 303	*e*Pn	Pn	**10 06 09.0**	**+1.9**			
GHIR	Ghir-Karzin	7.50 276	*e*Pn	Pn	**10 06 14.4**	**+0.3**			
GHIR	Ghir-Karzin	7.50 276	*e*Pn	Pn	**10 06 14.4**	**+0.3**			
ISRV	Sarvestan	7.51 285	*e*Pn	Pn	**10 06 15.7**	**+1.3**			
ISRV			*e*Sn	Sn	**10 07 35.0**	**-3.2**			
ISRV	comp=Z,11µm,0.3s		*e*		10 07 49.2				
ISRV	Sarvestan	7.51 285	*e*Pn	Pn	**10 06 15.7**	**+1.3**			
ISRV			*e*Sn	Sn	**10 07 35.0**	**-3.2**			
ICHK	Chekchek	7.58 308	Pn	Pn	**10 06 16.8**	**+1.5**			
ICHK	Chekchek	7.58 308	*e*Pn	Pn	**10 06 17.6**	**+2.3**			
ICHK	comp=Z,4µm,0.4s		*e*		10 07 14.5				
ICHK	Chekchek	7.58 308	*e*Pn	Pn	**10 06 17.6**	**+2.3**			
IPAR	Pars	7.66 288	*e*Pn	Pn	**10 06 18.0**	**+1.5**			
IPAR			*e*Sn	Sn	**10 07 38.1**	**-3.8**			
IPAR	comp=Z,7µm,0.4s		*e*		10 07 43.5				
IPAR	Pars	7.66 288	*e*Pn	Pn	**10 06 18.0**	**+1.5**			
IPAR			*e*Sn	Sn	**10 07 38.1**	**-3.8**			
SHI	Shiraz	8.07 286	*e*Pn	Pn	**10 06 23.5**	**+1.5**			
SHI			*e*Sn	Sn	**10 07 48.2**	**-3.6**			
SHI	comp=Z,5µm,0.2s		*e*		10 07 58.6				
SHI	Shiraz	8.07 286	*e*Pn	Pn	**10 06 23.5**	**+1.5**			
SHI			*e*Sn	Sn	**10 07 48.2**	**-3.6**			
IMOG	Moghan	8.54 348⇑	*e*Pn	Pn	**10 06 30.9**	**+2.5**			
IMOG	comp=Z,8µm,0.5s		*e*		10 06 32.1				
IMOG	Moghan	8.54 348⇑	*e*Pn	Pn	**10 06 30.9**	**+2.5**			
IMYA	Miami	8.65 353⇑	*e*Pn	Pn	**10 06 31.5**	**+1.6**			
IMYA	comp=Z,4µm,0.6s		*e*		10 09 22.3				
IMYA	Miami	8.65 353⇑	*e*Pn	Pn	**10 06 31.5**	**+1.6**			
BHJ	Bhuj	8.65 119	*e*P	Pn	10 06 26.5	-3.3			
BHJ	comp=Z,1µm,1.0s		AMB	AMB	10 06 27.7				
BHJ			*ex*	x	10 07 54.7				
BHJ			*ex*	x	10 07 54.8				
ISRO	Mashad	8.71 349⇓	*e*Pn	Pn	**10 06 32.6**	**+2.0**			
ISRO	Mashad	8.71 349⇓	*e*Pn	Pn	**10 06 32.6**	**+2.0**			
IPAY	Payeh	8.93 347⇓	*e*Pn	Pn	**10 06 35.5**	**+1.7**			
IPAY	comp=Z,10µm,0.5s		*e*		10 06 37.4				
IPAY	Payeh	8.93 347⇓	*e*Pn	Pn	**10 06 35.5**	**+1.7**			
NASN	Na'in	9.01 306	*e*Pn	Pn	**10 06 37.0**	**+2.0**			
NASN	Na'in	9.01 306	*e*Pn	Pn	**10 06 37.0**	**+2.0**			
IAKL	Akhelmad	9.13 346	*e*Pn	Pn	**10 06 37.9**	**+1.4**			
IAKL	comp=Z,10µm,0.3s		*e*		10 06 39.8				
IAKL			*e*Sn	Sn	**10 08 13.4**	**-4.3**			
IKRD	Kardeh	9.35 345	*e*Pn	Pn	**10 06 38.3**	**-1.1**			
IKRD	comp=Z,3µm,0.3s		*e*		10 06 44.1				
IKRD	Kardeh	9.35 345	*e*Pn	Pn	**10 06 38.3**	**-1.1**			
IGAR	Gharneh	9.38 302	*e*Pn	Pn	**10 06 41.8**	**+1.9**			
IGAR	comp=Z,380nm,0.2s		*e*		10 07 07.2				
KBL	Kabul	9.40 42	*e*P	Pn	**10 06 41.1**	**+0.9**			
KBL			*e*		10 08 25.4				
KBL	Kabul	9.40 42	*e*Pn	Pn	**10 06 41.0**	**+0.9**			
KBL			*e*Sn	Sn	**10 08 25.4**	**+1.1**			
KBL	Kabul	9.40 42	*e*Pn	Pn	**10 06 41.0**	**+0.9**			
KBL			*e*S	Sn	**10 08 25.4**	**+1.1**			
IZEF	Zefreh	9.40 305	*e*Pn	Pn	**10 06 41.8**	**+1.5**			
IZEF	comp=Z,775nm,0.4s		*e*		10 07 07.2				
IZEF	Zefreh	9.40 305	*e*Pn	Pn	**10 06 41.8**	**+1.5**			
ISFR	Sfrayin	9.73 343	*e*Pn	Pn	**10 06 46.6**	**+1.8**			
ISFR	comp=Z,6µm,0.4s		*e*		10 06 48.1				
IANJ	Anjilo	10.03 322	*e*Pn	Pn	**10 06 50.3**	**+1.6**			
IANJ	comp=Z,3µm,0.5s		*e*		10 06 52.5				
IANJ	Anjilo	10.03 322	*e*Pn	Pn	**10 06 50.3**	**+1.6**			
IKLH	Kolahrood	10.16 306	*e*Pn	Pn	**10 06 51.9**	**+1.3**			
IKLH	comp=Z,2µm,0.5s		*e*		10 07 19.9				
IKLH	Kolahrood	10.16 306	*e*Pn	Pn	**10 06 51.9**	**+1.3**			
IPIR	Pirpir	10.37 301	*e*Pn	Pn	**10 06 55.0**	**+1.5**			
IPIR	Pirpir	10.37 301	*e*Pn	Pn	**10 06 55.0**	**+1.5**			
ILAS	Lasjerd	10.51 319	*e*Pn	Pn	**10 06 57.0**	**+1.7**			
ILAS	comp=Z,1µm,0.4s		*e*		10 07 10.9				
ILAS	Lasjerd	10.51 319	*e*Pn	Pn	**10 06 57.0**	**+1.7**			
VAN	Vannovskaya	10.56 345	*e*P	Pn	**10 06 54.9**	**-0.9**			
VAN	Vannovskaya	10.56 345	*e*P	Pn	**10 06 54.9**	**-0.9**			
ISHM	Shahmirzad	10.62 321	*e*Pn	Pn	**10 06 58.4**	**+1.6**			
ISHM	comp=Z,1µm,0.3s		*e*		10 07 03.7				
ISHM	Shahmirzad	10.62 321	*e*Pn	Pn	**10 06 58.4**	**+1.6**			
MRVT	Maraveh tapeh	10.87 337	*e*Pn	Pn	**10 07 02.7**	**+2.6**			
MRVT	Maraveh tapeh	10.87 337	*e*Pn	Pn	10 07 04.0	+3.9			
MRVT	Maraveh tapeh	10.87 337	*e*Pn	Pn	**10 07 02.7**	**+2.6**			
GHVR	GHOM	10.99 310	*e*Pn	Pn	**10 07 03.8**	**+2.1**			
GHVR	GHOM	10.99 310	*e*Pn	Pn	**10 07 04.0**	**+2.3**			
GHVR	GHOM	10.99 310	*e*Pn	Pn	**10 07 03.8**	**+2.1**			
IVRN	Varamin	11.01 313	*e*Pn	Pn	**10 07 03.1**	**+1.1**			
IVRN	Varamin	11.01 313	*e*Pn	Pn	**10 07 03.1**	**+1.1**			
IALA	Alasht comp=Z,1µm,0.4s	11.09 321	*e*		10 07 09.9				
IALA			*e*Pn	Pn	**10 07 04.2**	**+0.9**			
DAMV	Damavand	11.27 317	*e*Pn	Pn	**10 07 07.6**	**+1.9**			
DAMV	Damavand	11.27 317	*e*P	Pn	**10 07 06.0**	**+0.4**			
DAMV	Damavand	11.27 317	*e*P	Pn	**10 07 06.0**	**+0.4**			
DAMV	Damavand	11.27 317	*e*Pn	Pn	**10 07 07.6**	**+1.9**			
IPRN	Peran comp=Z,3µm,0.5s	11.47 320	*e*		10 07 24.2				
IPRN			*e*Pn	Pn	**10 07 09.7**	**+1.4**			
SHGR	Shooshtar-Gavs	11.80 295	*e*Pn	Pn	**10 07 13.5**	**+0.8**			
SHGR	Shooshtar-Gavs	11.80 295	*e*Pn	Pn	**10 07 13.5**	**+0.8**			
AJM	Ajmer	11.82 93	*ex*	Pn	10 07 09.0	-4.1			
AJM			*ex*	x	10 09 08.0				
QRN	Al-Qurain	11.97 278	*e*P	Pn	**10 07 12.6**	**-2.5**			
QRN	comp=Z,209nm,0.6s		AML	AML	10 09 16.1				
THKV	Tehran--Karaj	12.12 315	*e*Pn	Pn	**10 07 17.0**	**-0.3**			
THKV	Tehran--Karaj	12.12 315	*e*Pn	Pn	**10 07 17.0**	**-0.3**			
RBK	Rabkut SNR=58	12.18 215	⇑Pn	Pn	10 07 14.3	-3.7			
KBD	Kabd	12.19 280	*e*P	Pn	**10 07 16.3**	**-1.7**			
KBD	comp=Z,149nm,0.4s		AML	AML	10 09 23.5				
KBD	Kabd	12.19 280	*e*P	Pn	**10 07 16.3**	**-1.7**			
UMR	Umm Al-Rimmam	12.20 282	*e*P	Pn	**10 07 15.8**	**-2.3**			
RDF	Al-Radifah	12.30 279	*e*P	Pn	**10 07 17.3**	**-2.3**			
RDF	comp=Z,182nm,0.5s		AML	AML	10 09 24.3				
IRAZ	Razeghan	12.44 311	*e*Pn	Pn	**10 07 22.2**	**+0.6**			
IRAZ	comp=Z,1µm,0.5s		*e*		10 07 40.3				
IRAZ	Razeghan	12.44 311	*e*Pn	Pn	**10 07 22.2**	**+0.6**			
NAY	Al-Naaiem	12.58 280	*e*P	Pn	**10 07 21.3**	**-2.1**			
NAY	comp=Z,37nm,0.6s		AML	AML	10 09 29.3				
KHET	Khetri	12.71 85	*e*P	Pn	**10 07 22.4**	**-2.7**			
KHET	comp=Z,82nm,1.1s		AMB	AMB	10 07 22.9				
RST	Umm Al-Ruwaisa	12.81 281	*e*P	Pn	**10 07 24.1**	**-2.5**			
THN	Thein Dam	13.21 66	*e*P	Pn	**10 07 29.0**	**-2.8**			
THN			*ex*	x	10 09 46.0				
KUDL	Kundal	13.31 85	*e*P	Pn	**10 07 30.1**	**-3.0**			
KUDL	comp=Z,48nm,0.3s		AMB	AMB	10 07 31.6				
BHK	Bhakra	13.54 71	*e*P	Pn	**10 07 34.4**	**-1.8**			
BHK			*ex*	x	10 09 54.2				
DHRM	DHARAMSHALA	13.63 67	*e*P	Pn	**10 07 35.7**	**-2.0**			
DHRM	comp=Z,266nm,0.6s		AMB	AMB	10 07 40.3				
SONA	Sohna	13.83 84	*e*P	Pn	10 07 36.2	-3.8			
AYAN	Aya Nagar	13.86 83	*e*P	Pn	**10 07 38.4**	**-2.0**			
AYAN	comp=Z,72nm,0.5s		AMB	AMB	10 07 42.1				
NDI	New Delhi	13.94 82	*ex*	Pn	10 07 38.0	-3.5			
NDI			*ex*	x	10 10 00.0				
ZNJK	Zanjan	13.99 313	*e*P	Pn	**10 07 42.0**	**-0.3**			
ZNJK	Zanjan	13.99 313	*e*P	Pn	**10 07 42.0**	**-0.3**			
SDNR	Sundarnagar	14.01 71	*e*P	Pn	**10 07 40.0**	**-2.5**			
SDNR			*ex*	x	10 10 05.1				
SMLA	Simla	14.11 72	*i*P	Pn	**10 07 42.4**	**-1.3**			
SMLA	comp=Z,295nm,0.8s		AMB	AMB	10 07 44.1				
SMLA			*i*x	x	10 10 05.6				
POO	Poona comp=Z,50nm,1.0s	14.62 126⇓	*i*x	Pn	10 07 44.0	-6.5			
DDI	Dehra Dun	14.76 76	*e*P	Pn	10 07 48.9	-3.3			
DDI			*ex*	x	10 10 12.6				
DDI			*ex*	x	10 10 18.6				
RAYN	Ar Rayn comp=Z,2µm,0.7s,SNR=54	14.98 257	Pn	Pn	10 07 50.0	-5.1			
BHPL	Bhopal	15.11 104	*e*P	Pn	**10 07 54.9**	**-1.8**			
BHPL			*ex*	x	10 10 28.8				
BHPL			*ex*	x	10 10 32.1				
LKRN	Lenkeran, Azer SNR=36	15.22 319	⇑P	Pn	**10 07 57.8**	**-0.1**			
LKRN	Lenkeran, Azer SNR=36	15.22 319	⇑Pn	Pn	**10 07 57.8**	**-0.1**			
KAD	Karad	15.68 129	*e*P	Pn	**10 08 02.8**	**-1.2**			
BHD	Baghdad	15.70 295	*ex*	Pn	10 07 54.6	-10			
BHD			*ex*	x	10 10 57.4				
BHD			*ex*	x	10 12 35.0				
BHD			*ex*	x	10 12 42.3				
BHD			*ex*	x	10 13 28.0				
GLBA	Ciilabad SNR=92	15.80 320	P	Pn	**10 08 05.2**	**-0.2**			
GLBA	Ciilabad SNR=92	15.80 320	Pn	Pn	**10 08 05.2**	**-0.2**			
GOBA	Gobu SNR=12	15.91 326	⇑P	P	**10 08 08.2**	**-0.8**			
GOBA	Gobu SNR=12	15.91 326	⇑Pn	P	**10 08 08.2**	**-0.8**			
NDR	Nardaran SNR=3.8	15.92 327	P	P	**10 08 08.9**	**-0.2**			
NDR	Nardaran SNR=3.8	15.92 327	Pn	P	**10 08 08.9**	**-0.2**			
PTH	Pithoragarh	16.58 79	*e*P	Pn	**10 08 16.0**	**+0.6**			
PTH			*ex*	x	10 11 08.5				
LGTI	Lohaghat	16.60 80	*e*P	Pn	**10 08 13.2**	**-2.3**			
LGTI			*ex*	x	10 11 10.2				
LATR	Latur	16.70 121	*ex*	Pn	10 08 09.6	-7.2			
PQL	Pirkuli SNR=132	16.78 324	P	Pn	**10 08 17.7**	**0.0**			
PQL	Pirkuli SNR=132	16.78 324	Pn	Pn	**10 08 17.7**	**0.0**			
SIZA	Siyzn SNR=75	16.83 325	P	Pn	**10 08 18.3**	**0.0**			
SIZA	Siyzn SNR=75	16.83 325	Pn	Pn	**10 08 18.3**	**0.0**			
KSH	Kashi	16.84 42⇑	*i*P	Pn	10 08 12.0	-6.5			
KSH			S	Sn	10 11 07.5	-18			
KSH			PcP	**PcP**	**10 13 02.3**	**+0.1**			
KSH	comp=Z,45nm,1.1s		pmax	pmax					
KSH	comp=Z,470nm,1.4s		pmax	pmax					
KSH	comp=N,2µm,9.7s		LR	LR					
KSH	comp=E,3µm,7.8s		LR	LR					
KSH	comp=Z,4µm,15.2s		LR	LR					
IML	Ismayilli SNR=12	17.00 323	P	Pn	**10 08 19.8**	**-0.5**			
IML	Ismayilli SNR=12	17.00 323	Pn	Pn	**10 08 19.8**	**-0.5**			
KK31	Karatay Array	17.00 23	*i*P	Pn	**10 08 18.3**	**-2.0**			
KK31	comp=Z,69nm,0.5s		pmax	pmax					
KK31	Karatay Array comp=Z,69nm,0.5s	17.00 23	*i*P	Pn	**10 08 18.3**	**-2.0**			
KKAR	Karatay Array	17.00 23	*e*P	Pn	**10 08 17.4**	**-2.9**			
KKAR			*e*		10 11 29.3				
KKAR	Karatay Array	17.00 23	*e*Pn	Pn	**10 08 17.4**	**-2.9**			
KKAR			*e*Sn	Sn	**10 11 29.3**	**+0.6**			
KKAR	Karatay Array	17.00 23	*e*Pn	Pn	**10 08 17.4**	**-2.9**			
KKAR			*e*Sn	Sn	**10 11 29.3**	**+0.6**			
BRDA	Brd SNR=23	17.18 320	P	P	**10 08 23.1**	**+0.1**			
BRDA	Brd SNR=23	17.18 320	Pn	P	**10 08 23.1**	**+0.1**			
QUBA	Quba, Azerbaij SNR=43	17.25 325	P	Pn	**10 08 23.6**	**+0.2**			
QUBA	Quba, Azerbaij SNR=43	17.25 325	P	Pn	**10 08 23.6**	**+0.2**			
JBP	Jabalpur	17.35 101⇑	*i*P	Pn	**10 08 22.8**	**-1.9**			
JBP			*ex*	x	10 11 15.1				
AML	Almayashu	17.49 32	*i*P	Pn	**10 08 26.5**	**-0.3**			
AML	Almayashu SNR=96	17.49 32	P	Pn	**10 08 26.5**	**-0.3**			
AML	Almayashu	17.49 32	*i*P	Pn	**10 08 26.5**	**-0.3**			
MUKL	Al Mukalla	17.54 224	*e*P	P	**10 08 27.3**	**+0.1**			
CUKT	Cukurca	17.76 307	*e*P	P	**10 08 29.6**	**-0.1**			
SEKA	Sheki SNR=96	17.82 323	P	P	**10 08 29.6**	**-0.5**			
SEKA	Sheki SNR=96	17.82 323	P	P	**10 08 29.6**	**-0.5**			
HKR	Hakkari	17.82 308	*e*P	P	**10 08 28.7**	**-1.7**			
HAKT	HAKKARI	17.84 308	*i*P	P	**10 08 30.0**	**-0.6**			
HAKT	HAKKARI	17.84 308	*i*P	P	**10 08 30.0**	**-0.6**			
GANJ	Ganja SNR=29	17.92 320	P	P	**10 08 30.9**	**-0.3**			
GANJ	Ganja SNR=29	17.92 320	P	P	**10 08 30.9**	**-0.3**			
EKS2	Erkin-Say	17.95 31	*e*P	P	**10 08 30.9**	**-0.8**			
EKS2			*e*S	Sn	**10 11 51.2**	**-0.5**			
EKS2	comp=Z,909nm,0.8s		pmax	pmax					
EKS2	Erkin-Say comp=Z,909nm,0.8s	17.95 31	*e*P	P	**10 08 30.9**	**-0.8**			
EKS2			*e*S	Sn	**10 11 51.2**	**-0.5**			
EKS2	Erkin-Say SNR=1145	17.95 31	P	P	**10 08 31.0**	**-0.7**			
EKS2	Erkin-Say comp=Z,909nm,0.8s	17.95 31	*e*P	P	**10 08 30.9**	**-0.8**			
EKS2			*e*S	Sn	**10 11 51.2**	**-0.5**			
UCH	Uchtor SNR=15	17.96 33	P	P	**10 08 31.6**	**-0.5**			
KZA	Kyzart	18.21 35	*i*P	P	**10 08 34.1**	**-0.8**			
KZA	Kyzart SNR=332	18.21 35	P	P	**10 08 34.1**	**-0.8**			
KZA	Kyzart	18.21 35	*i*P	P	**10 08 34.1**	**-0.8**			
AAK	Ala-Archa	18.26 32	*c*P	P	**10 08 34.6**	**-0.5**			
AAK	comp=Z,1µm,1.0s		pmax	pmax					
AAK	Ala-Archa comp=Z,352nm,0.8s	18.26 32	*e*P	P	**10 08 34.2**	**-0.9**			
AAK			S	Sn	**10 11 54.9**	**-4.3**			
AAK	Ala-Archa comp=Z,15nm,0.3s,baz=189,slow=8.9,SNR=469	18.26 32	P	P	**10 08 34.3**	**-0.8**			
AAK	comp=Z,0.3nm,0.3s,baz=209,slow=19,SNR=1.8		S	Sn	**10 11 54.9**	**-4.3**			
AAK	Ala-Archa comp=Z,1µm,1.0s	18.26 32	*i*P	P	**10 08 34.6**	**-0.5**			
AAK			S	Sn	**10 11 54.9**	**-4.3**			
FRU	Bishkek	18.47 32⇑	*i*P	P	**10 08 37.0**	**-0.3**			
FRU			*e*S	S	**10 12 02.0**	**-1.7**			
FRU	comp=Z,1µm,2.5s		pmax	pmax					
FRU	comp=Z,480nm,2.0s		pmax	pmax					
FRU	comp=E,400nm,3.0s		smax	smax					
FRU	comp=E,140nm,2.0s		smax	smax					
FRU	Bishkek comp=E,480nm,2.0s	18.47 32	*i*P	P	**10 08 37.0**	**-0.3**			
KBK	Karagaybulak SNR=84	18.49 33	*i*P	Pn	**10 08 38.5**	**-0.1**			
KBK	Karagaybulak	18.49 33	P	Pn	**10 08 38.5**	**-0.1**			
KBK	Karagaybulak	18.49 33	*i*P	Pn	**10 08 38.5**	**-0.1**			
CLDR	Caldiran	18.50 312	*e*P	Pn	**10 08 38.8**	**+0.1**			
GNI	Garni	18.54 316	*e*P	Pn	**10 08 40.1**	**+0.9**			
GNI	Garni comp=E,349nm,0.8s	18.54 316	*e*P	Pn	**10 08 39.9**	**+0.6**			
GNI			S	Sn	**10 12 08.5**	**+2.4**			
GNI	Garni SNR=67	18.54 316	P	Pn	**10 08 40.4**	**+1.1**			
GNI	Garni comp=E,7.2nm,0.3s,baz=24,slow=2.0,SNR=29	18.54 316	P	P	**10 08 38.5**	**+0.2**			
GNI			S	Sn	**10 12 08.5**	**+2.4**			
GNI	comp=E,2.2nm,0.3s,baz=352,slow=19,SNR=2.7		LR	LR	10 17 01.9				
GNI	comp=E,336nm,21.6s,baz=295,slow=41		S	Sn	**10 12 08.5**	**+2.4**			
GNI	Garni	18.54 316	*i*P	Pn	**10 08 39.4**	**+0.1**			
VANB	Van	18.56 310	*e*P	Pn	**10 08 40.3**	**+0.9**			
GEVA	Gevas	18.65 309	*i*P	P	**10 08 39.8**	**+0.4**			
GEVA	Gevas	18.65 309	*i*P	P	**10 08 39.8**	**+0.4**			
CHMS	Chumysh	18.66 32	*i*P	P	**10 08 38.9**	**-0.5**			
CHMS	Chumysh SNR=127	18.66 32	P	P	**10 08 38.9**	**-0.5**			
CHMS	Chumysh	18.66 32	*i*P	P	**10 08 38.9**	**-0.5**			
USP	Ospenovka	18.75 31	*i*P	P	**10 08 39.5**	**-0.9**			
USP	Ospenovka SNR=66	18.75 31	P	P	**10 08 39.5**	**-0.9**			
USP	Ospenovka	18.75 31	*i*P	P	**10 08 39.5**	**-0.9**			
HYB	Hyderabad	18.82 119	P	P	**10 08 40.0**	**-1.4**			
HYB	Hyderabad	18.82 119	P	P	**10 08 40.0**	**-1.4**			
HYB			S	Sn	10 12 23.0	+10			
HYB	Hyderabad	18.82 119	*i*P	P	**10 08 40.0**	**-1.4**			
HYB			*e*S	S	**10 12 10.0**	**-1.5**			
HYB	Hyderabad	18.82 119	*e*P	P	**10 08 40.6**	**-0.7**			
HYB	Hyderabad	18.82 119	P	P	**10 08 40.0**	**-1.4**			
ULHL	Ulahol	18.84 36	*i*P	P	**10 08 41.6**	**0.0**			
ULHL	Ulahol SNR=230	18.84 36	P	P	**10 08 41.6**	**0.0**			
ULHL	Ulahol	18.84 36	*i*P	P	**10 08 41.6**	**0.0**			
MAK	Makhachkala	18.93 327	*e*P	P	**10 08 42.3**	**0.0**			
MAK			*e*S	S	**10 12 11.3**	**-2.1**			
MAK	comp=Z,396nm,0.7s		pmax	pmax					
MAK	comp=Z,382nm,12.0s		MLR	MLR					
MAK	Makhachkala comp=Z,396nm,0.7s	18.93 327	*e*P	P	**10 08 42.3**	**0.0**			
DGRG	David-gareji	18.99 320	P	Pn	**10 08 44.6**	**+0.2**			
DGRG	David-gareji	18.99 320	P	Pn	**10 08 44.6**	**+0.2**			
TKM2	Tokmak 2	19.00 33	*e*P	P	**10 08 42.7**	**-0.7**			
TKM2	comp=Z,382nm,0.7s		pmax	pmax					
TKM2	Tokmak 2 comp=Z,382nm,0.7s	19.00 33	*e*P	P	**10 08 42.7**	**-0.7**			
TKM2	Tokmak 2 SNR=479	19.00 33	P	P	**10 08 42.8**	**-0.7**			
TKM2	Tokmak 2 comp=Z,382nm,0.7s	19.00 33	*e*P	P	**10 08 42.7**	**-0.7**			
PYUN	Piuthan comp=Z,682nm,0.9s	19.04 84	*e*P	Pn	**10 08 45.2**	**-0.2**			
SEAG	Tbilisi Sea	19.52 320	P	Pn	**10 08 50.7**	**0.0**			
TBLG	Delisi	19.53 320	P	P	**10 08 49.3**	**+0.4**			
TBLG	Delisi	19.53 320	P	P	**10 08 49.3**	**+0.4**			
TBLG	Delisi	19.53 320	P	P	**10 08 49.3**	**+0.4**			
KOLN	Koldanda	19.61 85	*e*P	P	**10 08 51.0**	**+0.9**			
DANN	Dangsing comp=Z,533nm,1.1s	19.71 83	*e*P	Pn	**10 08 52.9**	**-0.4**			
BEST	Besiri	19.71 306	*i*P	P	**10 08 51.4**	**+0.4**			
KARS	Kars	19.85 315	*e*P	Pn	**10 08 54.7**	**-0.1**			
AAA	Alma-Ata	19.93 35	*i*P	P	**10 08 52.6**	**-0.7**			
AAA	comp=Z,1µm,0.8s		pmax	pmax					
AAA	comp=Z,700nm,5.0s		MLR	MLR					
AAA	Alma-Ata comp=Z,700nm,5.0s	19.93 35	*i*P	P	**10 08 52.6**	**-0.7**			
AKH	Akhalkalaki	20.06 317	P	Pn	10 08 56.1	-1.1			
AKH	Akhalkalaki	20.06 317	P	Pn	10 08 56.1	-1.2			
VRTB	Varto-Mus	20.15 310	*e*P	Pn	10 08 57.5	-0.9			
GUDG	Gudauri	20.16 321	P	Pn	10 08 58.0	-0.4			
GUDG	Gudauri	20.16 321	P	Pn	10 08 58.0	-0.5			
BDHA	Al Bayda'	20.16 230⇓	*e*P	P	**10 08 55.5**	**-0.6**			
BDHA	comp=Z,139nm,1.2s		AMb	AMB	10 08 57.8				
BDHA	Al Bayda'

AB31					pmax	pmax				
	comp=Z,157nm,0.5s									
AB31	**Akbulak array**	**21.52**	**357**	*i* P	**P**		**10 09 09.8**	**-0.4**		
	comp=Z,157nm,0.5s									
ABKAR	**Akbulak array**	**21.52**	**357**	*e*P	**P**		**10 09 09.5**	**-0.7**		
ABKAR	**Akbulak array**	**21.52**	**357**	*e*P	**P**		**10 09 09.5**	**-0.7**		
GUN	**Gumba**	**21.61**	**84**	*e*P	**P**		**10 09 13.4**	**+1.7**		
	comp=Z,355nm,0.8s									
BAYT	**Ayd¨-ntepe-Bay**	**21.63**	**311**	*e*P	**P**		**10 09 12.5**	**+0.7**		
TRBA	**At Turbah**	**21.68**	**232**	*e*P	**P**		**10 09 12.8**	**+0.3**		
TRBA	**At Turbah**	**21.68**	**232**	*e*P	**P**		**10 09 12.8**	**+0.3**		
ASF	**Jabal al Asfar**	**21.71**	**288**	P	**P**		**10 09 12.9**	**+0.4**		
ASF				S	**S**		**10 13 09.1**	**+0.3**		
ASF	**Jabal al Asfar**	**21.71**	**288**	P	**P**		**10 09 12.9**	**+0.4**		
	comp=Z,94nm,1.0s,baz=337,slow=6.8,SNR=42									
ASF				S	**S**		**10 13 09.1**	**+0.3**		
	comp=Z,18nm,1.1s,baz=163,slow=20,SNR=3.5									
ASF				LR	LR		10 18 15.1			
	comp=Z,144nm,21.6s,baz=150,slow=38									
KBZ	**Khabaz**	**21.86**	**322**	P	**P**		**10 09 14.3**	**+0.4**		
KBZ				S	**S**		**10 13 14.3**	**+3.0**		
KBZ	**Khabaz**	**21.86**	**322**	P	**P**		**10 09 14.3**	**+0.4**		
KBZ				S	**S**		**10 13 14.3**	**+3.0**		
KBZ	**Khabaz**	**21.86**	**322**	P	**P**		**10 09 14.3**	**+0.4**		
	comp=Z,348nm,0.9s,baz=128,slow=9.6,SNR=122									
KBZ				S	**S**		**10 13 14.3**	**+3.0**		
	comp=Z,2.8nm,0.7s,baz=221,slow=20,SNR=1.6									
KBZ	**Khabaz**	**21.86**	**322**	P	**P**		**10 09 14.3**	**+0.4**		
KBZ				S	**S**		**10 13 14.3**	**+3.0**		
EZC	**Erzincan**	**21.87**	**309**	*e*P	**P**		**10 09 16.5**	**+2.3**		
MALT	**Malatya**	**21.94**	**305**	*e*P	**P**		**10 09 14.7**	**-0.2**		
MALT	**Malatya**	**21.94**	**305**	*e*P	**P**		**10 09 14.5**	**-0.4**		
MALT				pmax	pmax					
	comp=Z,101nm,0.8s									
MALT	**Malatya**	**21.94**	**305**	*e*P	**P**		**10 09 14.5**	**-0.4**		
	comp=Z,101nm,0.8s									
MALT	**Malatya**	**21.94**	**305**	*e*P	**P**		**10 09 14.5**	**-0.4**		
	comp=Z,101nm,0.8s									
MYA	**Malataya**	**21.94**	**305**	*e*P	**P**		**10 09 14.3**	**-0.7**		
GUMT	**Gumushane**	**22.11**	**311**	*e*P	**P**		**10 09 17.8**	**+1.1**		
KELT	**Kelkit**	**22.11**	**310**	*i* P	**P**		**10 09 17.4**	**+0.5**		
KELT	**Kelkit**	**22.11**	**310**	*i* P	**P**		**10 09 17.4**	**+0.5**		
KIV	**Kislovodsk**	**22.12**	**322***c*	*i*P	**P**		**10 09 17.7**	**+0.8**		
KIV				*e**PP	**pP**		**10 09 30.3**	**-1.8**		
KIV				*eS*	S		**10 13 13.6**	**-2.8**		
KIV				pmax	pmax					
	comp=Z,2µm,1.5s									
KIV	**Kislovodsk**	**22.12**	**322**	P	**P**		**10 09 17.7**	**+0.8**		
	comp=Z,6µm,0.7s,SNR=87									
KIV	**Kislovodsk**	**22.12**	**322**	*i* P	**P**		**10 09 17.7**	**+0.8**		
	comp=Z,2µm,1.5s									
KTUT	**Trabzon**	**22.17**	**312**	*e*P	**P**		**10 09 18.4**	**+1.1**		
GZT	**Gaziantep**	**22.25**	**302**	*i* P	**P**		**10 09 18.0**	**-0.4**		
MNCY	**Minicoy**	**22.25**	**148**	*ex*	pP		10 09 33.1	-0.4		
KEMA	**Kemaliye**	**22.26**	**307**	*i* P	**P**		**10 09 18.3**	**-0.1**		
KEMA	**Kemaliye**	**22.26**	**307**	*i* P	**P**		**10 09 18.3**	**-0.1**		
ILIC	**ilic-Erzincan**	**22.29**	**307**	*e*P	pP		10 09 44.0	+10		
BOK	**Bokaro**	**22.35**	**95**	*e*P	**P**		**10 09 20.9**	**+1.5**		
BOK				*ex*	x		10 09 35.5			
RAMN	**Ramite**	**22.35**	**86**	*e*P	**P**		**10 09 20.2**	**+0.5**		
	comp=Z,87nm,0.6s									
VIS	**Vishakhapatnam**	**22.48**	**112**	*ex*	pP		10 09 36.4	+0.4		
DARE	**Darende-Malaty**	**22.72**	**304**	*e*P	**P**		**10 09 23.7**	**+0.4**		
RCY	**Rachaya**	**22.75**	**291**	*e*P	**P**		**10 09 25.7**	**+2.0**		
HWQ	**Hawqa**	**22.77**	**293**	*e*P	**P**		**10 09 24.6**	**+0.7**		
HWQ	**Hawqa**	**22.77**	**293**	*e*P	**P**		**10 09 24.6**	**+0.7**		
KMRS	**Kahramanmaras**	**22.80**	**302**	*e*P	**P**		**10 09 24.3**	**+0.3**		
AKTK	**Aktyubinsk**	**22.82**	**354**	P	**P**		**10 09 23.2**	**-0.9**		
AKTO	**Aktyubinsk**	**22.82**	**354**	P	**P**		**10 09 23.2**	**-0.9**		
AKTO	**Aktyubinsk**	**22.82**	**354**	P	**P**		**10 09 23.1**	**-0.9**		
AKTO	**Aktyubinsk**	**22.82**	**354**	P	**P**		**10 09 23.1**	**-0.9**		
	comp=Z,133nm,1.0s,baz=175,slow=12,SNR=172									
AKTO				LR	LR		10 19 46.8			
	comp=Z,607nm,21.8s,baz=167,slow=40									
AKTO	**Aktyubinsk**	**22.82**	**354**	P	**P**		**10 09 23.1**	**-1.0**		
ESPY	**Espiye-Giresun**	**22.83**	**311**	*e*P	P		10 09 19.4	-4.9		
BHL	**Bhannes**	**22.95**	**292**	*e*P	**P**		**10 09 26.9**	**+1.2**		
BHL	**Bhannes**	**22.95**	**292**	*e*P	**P**		**10 09 26.9**	**+1.2**		
COBT	**Iskenderun**	**23.01**	**299**	*i* P	**P**		**10 09 26.2**	**-0.2**		
COBT	**Iskenderun**	**23.01**	**299**	*i* P	**P**		**10 09 26.2**	**-0.2**		
MMAI	**Mount Meron Ar**	**23.05**	**290**	P	**P**		**10 09 27.3**	**+0.6**		
MMAI				S	**S**		**10 13 38.9**	**+7.0**		
MMAI	**Mount Meron Ar**	**23.05**	**290**	P	**P**		**10 09 27.3**	**+0.6**		
	comp=Z,20nm,0.7s,baz=103,slow=10,SNR=17									
MMAI				S	**S**		**10 13 38.8**	**+7.0**		
	comp=Z,4.6nm,0.7s,baz=118,slow=28,SNR=2.9									
MMAI	**Mount Meron Ar**	**23.05**	**290**	P	**P**		**10 09 27.3**	**+0.6**		
MMAI				S	**S**		**10 13 38.8**	**+7.0**		
ODAN	**Odare**	**23.06**	**86**	*e*P	**P**		**10 09 28.3**	**+1.3**		
GRSN	**GIRESUNGRSN**	**23.14**	**311**	*i* P	**P**		**10 09 27.7**	**+0.3**		
GRSN	**GIRESUNGRSN**	**23.14**	**311**	*i* P	**P**		**10 09 27.7**	**+0.3**		
TAPN	**Taplejung**	**23.28**	**85**	*e*P	**P**		**10 09 30.3**	**+1.1**		
	comp=Z,43nm,0.7s									
EIL	**Elat**	**23.30**	**281**	P	**P**		**10 09 29.1**	**+0.1**		
EIL	**Elat**	**23.30**	**281**	P	**P**		**10 09 29.1**	**+0.1**		
	comp=Z,157nm,1.2s,baz=116,slow=4.4,SNR=32									
EIL	**Elat**	**23.30**	**281**	P	**P**		**10 09 29.1**	**+0.1**		
SARI	**SarD1z-Kayseri**	**23.45**	**303**	*e*P	**P**		**10 09 30.5**	**0.0**		
CEYT	**Ceyhan**	**23.53**	**300**	*e*P	**P**		**10 09 32.1**	**+1.1**		
RSDY	**Resadiye-TOKAT**	**23.55**	**309**	*e*P	**P**		**10 09 31.5**	**+0.3**		
SOC	**Sochi**	**23.59**	**318***c*	*i*P	**P**		**10 09 30.9**	**-0.6**		
SOC				*e**PP	**pP**		**10 09 49.2**	**+1.4**		
SOC				*eS*	S		**10 13 36.7**	**-3.6**		
SOC				pmax	pmax					
	comp=Z,154nm,0.6s									
SOC				MLR	MLR					
	comp=E,150nm,14.0s									
SOC				MLR	MLR					
	comp=Z,285nm,14.0s									
SOC				MLR	MLR					
	comp=N,197nm,12.0s									
KOZT	**Kozan**	**23.60**	**301**	*e*P	**P**		**10 09 32.8**	**+1.1**		
BNN	**Bunyan**	**24.02**	**304**	*e*P	**P**		**10 09 35.8**	**+0.3**		
ERBA	**Erbaa**	**24.06**	**309**	*i* P	**P**		**10 09 36.0**	**+0.2**		
ERBA	**Erbaa**	**24.06**	**309**	*i* P	**P**		**10 09 36.0**	**+0.2**		
TRD	**Trivandrum**	**24.10**	**140**⇑	*ex*	sP		10 10 09.0	+7.1		
TRD				*ex*	x		10 14 26.5			
GULE	**Gulek**	**24.35**	**300**	*i* P	**P**		**10 09 39.3**	**+0.7**		
GULE	**Gulek**	**24.35**	**300**	*i* P	**P**		**10 09 39.3**	**+0.7**		
EREN	**Erenkoy**	**24.43**	**295**	*e*P	**P**		**10 09 39.5**	**+0.3**		
PHNC	**Paralimni**	**24.45**	**294**	P	**P**		**10 09 39.9**	**+0.6**		
	comp=N,1.3nm,0.5s									
YOZ	**Yozgat**	**24.68**	**305**	*e*P	**P**		**10 09 41.7**	**+0.2**		
NIG	**Nigde**	**24.71**	**302**	*e*P	**P**		**10 09 43.2**	**+1.2**		
KVT	**Kavak**	**24.72**	**309**	*e*P	**P**		**10 09 42.4**	**+0.6**		
AVNT	**Avonos**	**24.73**	**303**	*i* P	**P**		**10 09 42.2**	**+0.2**		
AVNT	**Avonos**	**24.73**	**303**	*i* P	**P**		**10 09 42.2**	**+0.2**		
LFK	**Lefkose**	**24.90**	**295**	*e*P	**P**		**10 09 44.5**	**+1.0**		
CSS	**Prodhromos**	**25.01**	**294**	P	**P**		**10 09 44.1**	**-0.4**		
	comp=N,1.3nm,0.9s									
CSS	**Prodhromos**	**25.01**	**294**	*e*P	**P**		**10 09 45.0**	**+0.6**		
CSS	**Prodhromos**	**25.01**	**294**	*e*P	**P**		**10 09 45.1**	**+0.6**		
CSS	**Prodhromos**	**25.01**	**294**	P	**P**		**10 09 44.1**	**-0.4**		
	comp=N,1.3nm,0.9s									
MK31	**Makanchi Array**	**25.11**	**35**	*e*P	**P**		**10 09 44.3**	**-0.9**		
MK31	**Makanchi Array**	**25.11**	**35**	*e*P	**P**		**10 09 44.3**	**-0.9**		
MK31	**Makanchi Array**	**25.11**	**35**	*e*P	**P**		**10 09 44.3**	**-0.9**		
MKAR	**Makanchi Array**	**25.11**	**35**	P	**P**		**10 09 44.6**	**-0.6**		
MKAR	**Makanchi Array**	**25.11**	**35**	P	**P**		**10 09 44.6**	**-0.6**		
MKAR				S	**S**		**10 14 09.9**	**+5.3**		
MKAR	**Makanchi Array**	**25.11**	**35**	P	**P**		**10 09 44.6**	**-0.6**		
	comp=N,19nm,0.6s,baz=222,slow=9.1,SNR=120									
MKAR				S	**S**		**10 14 09.9**	**+5.3**		
	comp=N,1.9nm,0.8s,baz=256,slow=18,SNR=2.8									
MKAR				LR	LR		10 21 27.8			
	comp=N,652nm,20.4s,baz=236,slow=41									
MKAR	**Makanchi Array**	**25.11**	**35**	P	**P**		**10 09 44.6**	**-0.6**		
MKAR				S	**S**		**10 14 09.9**	**+5.3**		
CORM	**Corum**	**25.36**	**306**	*e*P	**P**		**10 09 47.8**	**0.0**		
LEF	**Lefka**	**25.39**	**294**	*e*P	**P**		**10 09 48.9**	**+1.0**		
DIKM	**Dikmen**	**25.50**	**310**	*e*P	**P**		**10 09 49.9**	**+1.1**		
ALFC	**Alevga**	**25.64**	**294**	P	**P**		**10 09 50.5**	**+0.3**		
	comp=N,2.4nm,0.7s									
ANN	**Anapa**	**25.64**	**318**	*e*P	**P**		**10 09 49.7**	**-0.3**		
ANN				*e**PP	**pP**		**10 10 11.0**	**+3.9**		
ANN				*eS*	**S**		**10 14 12.7**	**-0.2**		
ANN				pmax	pmax					
	comp=Z,102nm,0.6s									
ERMK	**Ermenek**	**25.65**	**297**	*i* P	**P**		**10 09 51.1**	**+0.6**		
ERMK	**Ermenek**	**25.65**	**297**	*i* P	**P**		**10 09 51.1**	**+0.6**		
KAMT	**Kaman**	**25.76**	**304**	*e*P	**P**		**10 09 51.1**	**-0.2**		
BYBT	**Boyabat**	**25.76**	**309**	*e*P	**P**		**10 09 51.6**	**+0.5**		
PPCY	**Paphos**	**25.80**	**293**	P	**P**		**10 09 52.1**	**+0.5**		
ZRNK	**Zerenda**	**25.81**	**11**	*i* P	**P**		**10 09 50.8**	**-0.7**		
ZRNK				pmax	pmax					
	comp=Z,468nm,1.3s									
AKMC	**Akamas**	**25.84**	**294**	P	**P**		**10 09 52.5**	**+0.5**		
BR131	**Keskin Array S**	**25.92**	**305**	*e*P	**P**		**10 09 52.3**	**-0.6**		
	comp=Z,18nm,0.6s									
BR131	**Keskin Array S**	**25.92**	**305**	*e*P	**P**		**10 09 52.3**	**-0.6**		
	comp=Z,18nm,0.6s									
BRTR	**Keskin Array B**	**25.92**	**305**	P	**P**		**10 09 52.1**	**-0.8**		
BRTR				PcP	**PcP**		**10 13 20.3**	**+0.4**		
BRTR	**Keskin Array B**	**25.92**	**305**	P	**P**		**10 09 52.1**	**-0.8**		
	comp=Z,24nm,0.6s,baz=123,slow=9.5,SNR=128									
BRTR				PcP	**PcP**		**10 13 20.3**	**+0.4**		
	comp=Z,4.2nm,0.8s,baz=139,slow=0.5,SNR=3.7									
BRTR				LR	LR		10 21 27.1			
	comp=Z,312nm,21.1s,baz=357,slow=39									
BRTR	**Keskin Array B**	**25.92**	**305**	P	**P**		**10 09 52.1**	**-0.8**		
BRTR	**Keskin Array B**	**25.92**	**305**	PcP	**PcP**		**10 13 20.3**	**+0.4**		
VOSK	**Vostochnaya**	**25.95**	**13**	P	**P**		**10 09 52.2**	**-0.6**		
VOSK				pmax	pmax					
	comp=Z,203nm,0.9s									
LSA	**Lhasa**	**26.09**	**79**	*e*P	**P**		**10 09 58.6**	**+3.7**		
LSA				pmax	pmax					
	comp=Z,4.0nm,0.4s									
LSA	**Lhasa**	**26.09**	**79**	*e*P	**P**		**10 09 58.6**	**+3.7**		
	comp=Z,4.5nm,0.4s									
LSA	**Lhasa**	**26.09**	**79**	*e*P	**P**		**10 09 58.6**	**+3.7**		
	comp=Z,4.4nm,0.4s									
TOS	**Tosya**	**26.11**	**308**	*e*P	**P**		**10 09 54.6**	**+0.2**		
BVA0	**Borovoye Array**	**26.12**	**12**	*i* P	**P**		**10 09 54.1**	**-0.2**		
BVA0				pmax	pmax					
	comp=Z,62nm,1.2s									
BVAR	**Borovoye Array**	**26.12**	**12**	P	**P**		**10 09 54.4**	**+0.1**		
BVAR							10 13 21.0			
BVAR	**Borovoye Array**	**26.12**	**12**	P	**P**		**10 09 54.4**	**+0.1**		
BVAR				PcP	**PcP**		**10 13 21.0**	**+1.1**		
BVAR	**Borovoye Array**	**26.12**	**12**	P	**P**		**10 09 54.4**	**+0.1**		
	comp=Z,97nm,0.5s,baz=198,slow=11,SNR=488									
BVAR				PcP	**PcP**		**10 13 21.0**	**+1.1**		
	comp=Z,12nm,0.8s,baz=198,slow=1.4,SNR=3.9									
BVAR				LR	LR		10 21 39.2			
	comp=Z,649nm,20.0s,baz=218,slow=40									
BVAR	**Borovoye Array**	**26.12**	**12**	P	**P**		**10 09 54.4**	**+0.1**		
BVAR	**Borovoye Array**	**26.12**	**12**	PcP	**PcP**		**10 13 21.0**	**+1.1**		
BRVK	**Borovoye**	**26.13**	**12**	P	**P**		**10 09 53.8**	**-0.6**		
BRVK				pmax	pmax					
	comp=Z,534nm,1.1s									
BRVK	**Borovoye**	**26.13**	**12**	*e*P	**P**		**10 09 54.3**	**-0.1**		
	comp=Z,138nm,0.4s									
BRVK	**Borovoye**	**26.13**	**12**	P	**P**		**10 09 54.4**	**0.0**		
	SNR=170									
BRVK	**Borovoye**	**26.13**	**12**	*e*P	**P**		**10 09 54.3**	**-0.1**		
	comp=Z,138nm,0.4s									
CANT	**Cankiri**	**26.24**	**306**	*e*P	**P**		**10 09 54.9**	**-0.7**		
BBAL	**Bala**	**26.24**	**304**	*i* P	**P**		**10 09 55.4**	**-0.3**		
BBAL	**Bala**	**26.24**	**304**	*i* P	**P**		**10 09 55.4**	**-0.3**		
AFSR	**Af˙ar-Bala (A**	**26.25**	**304**	*e*P	**P**		**10 09 55.1**	**-0.7**		
KURBB	**Kurchatov Arra**	**26.29**	**25**	P	**P**		**10 09 55.1**	**-0.7**		
	comp=Z,124nm,0.9s,baz=221,slow=9.1,SNR=420									
KURBB				LR	LR		10 21 58.5			
	comp=Z,610nm,20.1s,baz=220,slow=40									
KONT	**Konya--Tatoy**	**26.38**	**300**	*e*P	**P**		**10 09 57.2**	**+0.4**		
KURK	**Kurchatov**	**26.40**	**25***c*	*i*P	**P**		**10 09 56.1**	**-0.7**		
KURK				pmax	pmax					
	comp=Z,176nm,1.1s									
KURK	**Kurchatov**	**26.40**	**25**	*e*P	**P**		**10 09 55.6**	**-1.2**		
	comp=Z,111nm,0.8s									
KURK	**Kurchatov**	**26.40**	**25**	P	**P**		**10 09 56.5**	**-0.3**		
	SNR=98									
KURK	**Kurchatov**	**26.40**	**25**	*e*P	**P**		**10 09 55.6**	**-1.2**		
	comp=Z,111nm,0.8s									
LADK	**Ladik-KONYA**	**26.44**	**301**	*e*P	**P**		**10 09 57.8**	**+0.3**		
BZK	**Bozkurt**	**26.48**	**310**	*e*P	**P**		**10 09 58.0**	**+0.4**		
WMQ	**Urumqi**	**26.51**	**46**⇑	*i*P	**P**		**10 09 59.0**	**+1.0**		
WMQ				pP	**pP**		**10 10 14.0**	**-1.1**		
WMQ				PP	**PnPn**		**10 10 43.0**	**+1.0**		
WMQ				PcP	**PcP**		**10 13 23.0**	**+1.9**		
WMQ				S	**S**		**10 14 27.0**	**+0.1**		
WMQ				SS	**SnSn**		**10 15 39.0**	**+3.4**		
WMQ				ScP	**ScP**		**10 16 57.0**	**+2.4**		
WMQ				LR	LR					
	comp=N,440nm,10.0s									
WMQ				LR	LR					
	comp=E,530nm,10.0s									
WMQ				LR	LR					
	comp=Z,560nm,10.0s									
ANTO	**Ankara**	**26.59**	**304**	*e*P	**P**		**10 09 58.6**	**-0.2**		
ANTO	**Ankara**	**26.59**	**304**	*e*P	**P**		**10 09 58.5**	**-0.2**		
ANTO				pmax	pmax					
	comp=Z,87nm,1.0s									
ANTO	**Ankara**	**26.59**	**304**	*e*P	**P**		**10 09 58.5**	**-0.2**		
	comp=Z,87nm,1.0s									
ANTO	**Ankara**	**26.59**	**304**	*e*P	**P**		**10 09 58.5**	**-0.2**		
	comp=Z,87nm,1.0s									
LOD	**Lodumlu**	**26.61**	**304**	*e*P	**P**		**10 09 58.7**	**-0.3**		
KDHN	**Kadinhani**	**26.71**	**301**	*i* P	**P**		**10 09 59.6**	**-0.3**		
KDHN	**Kadinhani**	**26.71**	**301**	*i* P	**P**		**10 09 59.6**	**-0.3**		
BALT	**Daday**	**26.74**	**308**	*i* P	**P**		**10 09 59.8**	**-0.4**		
BALT	**Daday**	**26.74**	**308**	*i* P	**P**		**10 09 59.8**	**-0.4**		
KIZT	**Kizilcal**	**26.98**	**302**	*e*P	**P**		**10 10 02.5**	**+0.1**		
SAFT	**Safranbolu**	**27.12**	**307**	*e*P	**P**		**10 10 03.2**	**-0.2**		
SHL	**Shillong**	**27.26**	**88**	*e*P	**P**		**10 10 07.0**	**+1.9**		
SHL				*ex*	x		10 15 13.0			
SGKT	**Sivrigoynuk**	**27.35**	**306**	*i* P	**P**		**10 10 05.3**	**-0.4**		
SGKT	**Sivrigoynuk**	**27.35**	**306**	*i* P	**P**		**10 10 05.3**	**-0.4**		
SVRH	**Sivrihisar-ESK**	**27.40**	**303**	*e*P	**P**		**10 10 05.6**	**-0.5**		
BOLV	**Bolvadin**	**27.64**	**301**	*i* P	P		10 10 15.0	+6.7		
SIM	**Simferopol'**	**27.73**	**316***ce*	P	**P**		**10 10 09.1**	**+0.3**		
SIM				*eS*	**S**		**10 14 48.0**	**+2.0**		
VRHR	**Novokhopersk**	**27.73**	**333**	*e*P	**P**		**10 10 08.5**	**-0.2**		
VRHR				pmax	pmax					
	comp=N,60nm,0.6s									
VRHR				pmax	pmax					
	comp=Z,140nm,0.6s									
VRHR				pmax	pmax					
	comp=E,30nm,0.3s									
VRHR				MLR	MLR					
	comp=Z,380nm,22.0s									
VRHR				MLR	MLR					
	comp=N,50nm,11.0s									
VRHR				MLR	MLR					
	comp=E,170nm,11.0s									
ISP	**Isparta**	**27.77**	**299**	*e*P	**P**		**10 10 09.4**	**+0.1**		
ISP	**Isparta**	**27.77**	**299**	*e*P	**P**		**10 10 09.0**	**-0.4**		
ISP				pmax	pmax					
	comp=Z,106nm,0.9s									
ISP	**Isparta**	**27.77**	**299**	*e*P	**P**		**10 10 09.0**	**-0.4**		
	comp=Z,106nm,0.9s									
ISP	**Isparta**	**27.77**	**299**	*e*P	**P**		**10 10 09.0**	**-0.4**		
	comp=Z,106nm,0.9s									
SHUT	**Suhut-Afyon**	**27.90**	**301**	*e*P	**P**		**10 10 10.8**	**+0.2**		
ESKT	**Eskisehir**	**27.92**	**303**	*e*P	**P**		**10 10 10.7**	**-0.1**		
SEYT	**Eskypehyr**	**27.92**	**303**	*i* P	**P**		**10 10 10.3**	**-0.4**		
SEYT	**Eskypehyr**	**27.92**	**303**	*i* P	**P**		**10 10 10.3**	**-0.4**		
MDUB	**Mudurnu**	**27.94**	**305**	*e*P	**P**		**10 10 10.2**	**-0.7**		
ELL	**Elmali**	**28.04**	**297**	*e*P	**P**		**10 10 11.9**	**+0.1**		
BORA	**Eskisehir**	**28.31**	**303**	*i* P	**P**		**10 10 13.2**	**-1.0**		
BORA	**Eskisehir**	**28.31**	**303**	*i* P	**P**		**10 10 13.2**	**-1.0**		
ALT	**Altintas**	**28.36**	**302**	*e*P	**P**		**10 10 14.0**	**-0.7**		
GULT	**Gulveren**	**28.42**	**304**	*e*P	**P**		**10 10 14.6**	**-0.5**		
GLHS	**Glhisar (BURDU**	**28.44**	**297**	*e*P	**P**		**10 10 15.2**	**-0.2**		
VORD	**Divnogorie**	**28.62**	**330**	*e*P	**P**		**10 10 15.8**	**-0.9**		
VORD				pmax	pmax					
	comp=N,100nm,0.7s									
VORD				pmax	pmax					
	comp=E,50nm,0.7s									
VORD				pmax	pmax					
	comp=Z,100nm,0.7s									
VORD				MLR	MLR					
	comp=N,330nm,22.0s									
VORD				MLR	MLR					
	comp=E,410nm,22.0s									
VORD				MLR	MLR					
	comp=Z,540nm,22.0s									
KHL	**Karahalli**	**28.64**	**300**	*e*P	**P**		**10 10 16.8**	**-0.3**		
SPNC	**Sapanca-Adapaz**	**28.65**	**305**	*e*P	**P**		**10 10 16.4**	**-0.7**		
ARU	**Arti**	**28.75**	**357***d*	*i*P	**P**		**10 10 17.1**	**-0.6**		
ARU							10 11 13.2			
ARU							10 13 25.4			
ARU				S	**S**		**10 14 59.6**	**-2.1**		
ARU				SS	**SnSn**		**10 16 24.6**	**-5.1**		
ARU				pmax	pmax					
	comp=Z,57nm,1.0s									
GDZ	**Gediz**	**28.84**	**301**	*i* P	**P**		**10 10 16.8**	**-2.2**		
GDZ	**Gediz**	**28.84**	**301**	*i* P	**P**		**10 10 16.8**	**-2.2**		
CAVI	**Cavuskoy**	**28.85**	**304**	*e*P	**P**		**10 10 18.4**	**-0.5**		
VSR	**Storozhevoye**	**28.86**	**330**	*e*P	**P**		**10 10 18.1**	**-0.7**		
VSR				*e**PP	**pP**		**10 10 35.7**	**-0.3**		
VSR				*e*			10 11 08.8			
VSR				*eS*	**S**		**10 15 02.0**	**-1.6**		
VSR				pmax	pmax					
	comp=N,40nm,0.6s									
VSR				pmax	pmax					
	comp=E,40nm,0.6s									
VSR				pmax	pmax					
	comp=Z,100nm,0.6s									
VSR				pmax	pmax					
	comp=N,80nm,1.0s									
VSR				pmax	pmax					
	comp=E,70nm,1.0s									
VSR				pmax	pmax					
	comp=Z,50nm,1.0s									
VSR				smax	smax					
	comp=N,100nm,1.5s									
VSR				smax	smax					
	comp=E,40nm,1.5s									
VSR				smax	smax					
	comp=Z,30nm,1.5s									
VSR				MLR	MLR					
	comp=N,290nm,20.0s									
VSR				MLR	MLR					
	comp=E,330nm,20.0s									
VSR				MLR	MLR					
	comp=Z,600nm,20.0s									
DNZL	**Cakiroluk**	**28.89**	**298**	*i* P	P		10 10 14.8	-4.6		
TVSB	**Tavsanli**	**28.94**	**302**	*e*P	**P**		**10 10 19.6**	**-0.2**		
ADVT	**Abdulvahap**	**28.99**	**304**	*e*P	**P**		**10 10 19.3**	**-0.8**		
SVE	**Sverdlovsk**	**29.08**	**359***de*	P	**P**		**10 10 20.5**	**-0.1**		
SVE				pmax	pmax					
	comp=Z,44nm,0.9s									
SVE				MLR	MLR					
	comp=Z,694nm,20.0s									
HRT	**Hereke**	**29.15**	**305**	*e*P	**P**		**10 10 20.7**	**-0.9**		
KULA	**Kula-Manisa**	**29.34**	**300**	*e*P	**P**		**10 10 22.8**	**-0.5**		
DEMI	**Demirci**	**29.41**	**301**	*i* P	**P**		**10 10 23.2**	**-0.8**		
DEMI	**Demirci**	**29.41**	**301**	*i* P	**P**		**10 10 23.2**	**-0.8**		
ISK	**Istanbul-Kandi**	**29.66**	**305**	*e*P	**P**		**10 10 25.3**	**-0.8**		
ARMT	**Armutlu**	**29.67**	**304**	*e*P	**P**		**10 10 25.2**	**-1.0**		
DURS	**Dursunbey**	**29.72**	**302**	*i* P	**P**

AKASG Malin Array Be 33.47 322 P **P** **10 10 58.8 -0.6**
AKASG 10 13 38.4
AKASG Malin Array Be 33.47 322 P **P** **10 10 58.8 -0.6**
AKASG PcP **PcP** **10 13 38.4 -0.4**
AKASG Malin Array Be 33.47 322 P **P** **10 10 58.8 -0.6**
comp=Z,69nm,0.4s,baz=123,slow=8.4,SNR=259
AKASG PcP **PcP** **10 13 38.4 -0.4**
comp=Z,11nm,0.8s,baz=91,slow=2.5,SNR=8.3
AKASG LR LR 10 28 04.8
comp=Z,330nm,19.2s,baz=155,slow=42
AKASG Malin Array Be 33.47 322 P **P** **10 10 58.8 -0.6**
AKASG Malin Array Be 33.47 322 PcP **PcP** **10 13 38.4 -0.4**
KIEV Kiev 33.48 322 *e*P **P** **10 10 58.8 -0.6**
KIEV *e**PP **pP** **10 11 16.0 -0.8**
KIEV pmax pmax
comp=Z,212nm,0.5s
KIEV Kiev 33.48 322 *e*P **P** **10 10 58.8 -0.6**
comp=Z,212nm,0.5s
KIEV *e*pP **pP** **10 11 16.0 -0.8**
KIEV Kiev 33.48 322 *e*P **P** **10 10 58.8 -0.6**
comp=Z,212nm,0.5s
KIEV *e*pP **pP** **10 11 16.0 -0.8**
DOPR Dopca 33.74 312⇑*i*P **P** **10 11 02.2 +0.4**
GTA Gaotai 33.79 60⇑P **P** **10 11 04.5 +2.1**
GTA pP **pP** **10 11 21.5 +1.7**
GTA PP **PP** **10 12 19.8 -0.2**
GTA PcP **PcP** **10 13 40.5 +0.3**
GTA S **S** **10 16 24.5 +3.4**
GTA sS **sS** **10 16 53.0 +2.1**
GTA pmax pmax
comp=Z,86nm,1.0s
GTA pmax pmax
comp=Z,350nm,5.5s
GTA LR LR
comp=N,420nm,20.9s
GTA LR LR
comp=E,540nm,19.0s
GTA LR LR
comp=Z,190nm,17.8s
VOIR 33.79 311⇑*i*P **P** **10 11 02.8 +0.5**
VOIR 33.79 311⇑*i*P **P** **10 11 02.8 +0.5**
VOIR 33.79 311⇑*i*P **P** **10 11 02.8 +0.5**
VTS Vitosha 34.28 306⇓*i*P **P** **10 11 06.8 +0.1**
VTS Vitosha 34.28 306⇓*i*P **P** **10 11 06.8 +0.1**
VTS Vitosha 34.28 306⇓*i*P **P** **10 11 06.8 +0.1**
BURAR Bucovina Array 34.44 315⇑*i*P **P** **10 11 08.1 +0.1**
BUR08 Bucovina Ar. S 34.47 315 *e*P **P** **10 11 08.2 0.0**
BUR08 Bucovina Ar. S 34.47 315 *e*P **P** **10 11 08.1 0.0**
LKFR Kufra 34.47 273 *i*P **P** **10 11 09.8 +1.4**
comp=Z,84nm,1.7s,SNR=27
VAY Valandovo 34.48 303 *i*P **P** **10 11 07.1 -1.1**
LOT Lotru 34.65 311⇑*i*P **P** **10 11 09.5 -0.3**
MARJ Al Marj 35.26 288 *i*P **P** **10 11 16.4 +1.3**
comp=Z,149nm,1.8s,SNR=26
DEV Deva 35.36 311 P **P** **10 11 15.9 +0.2**
BIA Bitola 35.36 303 *i*P **P** **10 11 15.0 -0.9**
SKO Skopje 35.44 304 *i*P **P** **10 11 16.2 -0.3**
CHTO Chiang Mai 35.46 96 *e*P **P** **10 11 17.1 +0.2**
CHTO *e**PP **pP** **10 11 34.3 -0.2**
CHTO Chiang Mai 35.46 96 *e*P **P** **10 11 17.1 +0.2**
comp=Z,3.3nm,0.8s
CHTO *e*pP **pP** **10 11 34.3 -0.2**
CHTO Chiang Mai 35.46 96 P **P** **10 11 16.9 0.0**
comp=Z,14nm,1.1s
CHTO Chiang Mai 35.46 96 *e*P **P** **10 11 17.1 +0.2**
comp=Z,3.3nm,0.8s
CHTO *e*pP **pP** **10 11 34.3 -0.2**
CMMT Chiang Mai 35.46 96 P **P** **10 11 17.7 +0.7**
comp=Z,13nm,1.1s
BMR Baia Mare 35.55 314 P **P** **10 11 18.1 +0.7**
CMAR Chiang Mai Arr 35.59 97 P **P** **10 11 17.3 -0.8**
CMAR Chiang Mai Arr 35.59 97 P **P** **10 11 17.3 -0.8**
comp=Z,0.7nm,0.4s,baz=282,slow=9.1,SNR=8.5
CMAR LR LR 10 26 14.7
comp=Z,142nm,21.6s,baz=111,slow=37
CMAR Chiang Mai Arr 35.59 97 P **P** **10 11 17.3 -0.8**
DRGR 35.76 313⇑*i*P **P** **10 11 19.9 +0.6**
DRGR 35.76 313⇑*i*P **P** **10 11 19.9 +0.6**
DRGR 35.76 313⇑*i*P **P** **10 11 19.9 +0.6**
LJBD Adjabya 35.96 285 *i*P **P** **10 11 22.4 +1.4**
comp=Z,174nm,0.9s,SNR=26
LVV L'vov 36.03 318⇓*i*P **P** **10 11 21.0 -0.4**
LVV *e**PP **pP** **10 11 38.2 -0.8**
LVV *e* 10 12 44.4
LVV *e* 10 13 47.2
LVV *e*S **S** **10 16 53.4 -1.6**
LVV *e**SS **sS** **10 17 23.0 -2.0**
LVV MLR MLR
comp=E,1μm,18.0s
LVV MLR MLR
comp=Z,200nm,18.0s
LVV MLR MLR
comp=N,1μm,17.0s
BZS Buzias 36.14 310⇑P **P** **10 11 22.2 -0.3**
BZS Buzias 36.14 310⇑*i*P **P** **10 11 22.2 -0.3**
BZS Buzias 36.14 310⇑*i*P **P** **10 11 22.2 -0.3**
MICGM Minsk 36.21 327⇑*e*P **P** **10 11 20.0 -2.9**
MNK Minsk 36.23 327⇑*e*P **P** **10 11 20.0 -3.1**
MNK *e**PP **pP** **10 11 37.0 -3.6**
MNK *e* 10 12 40.0
MNK *e*PPP PPP 10 13 02.0
MNK *e* 10 13 45.0
MNK *e*S **S** **10 16 52.0 -6.0**
MNK pmax pmax
comp=Z,700nm,0.6s
TRPA Tarpa 36.31 315⇑*i*P **P** **10 11 24.2 +0.4**
TRPA Tarpa 36.31 315⇓*e*P **P** **10 11 24.4 +0.6**
TRPA Tarpa 36.31 315⇓*e*P **P** **10 11 24.4 +0.6**
TIR Tirane 36.50 303 *e*P **P** **10 11 24.1 -1.4**
TIR pmax pmax
comp=Z,86nm,0.8s
TIR Tirane 36.50 303 *e*P **P** **10 11 24.1 -1.4**
comp=Z,86nm,0.8s
TIR Tirane 36.50 303 *e*P **P** **10 11 24.1 -1.4**
comp=Z,86nm,0.8s
PVY Plav 36.63 305⇑*i*P **P** **10 11 25.2 -1.6**
PVY Plav 36.63 305⇑*i*P **P** **10 11 25.3 -1.6**
UZH Uzhgorod 36.64 315⇓*i*P **P** **10 11 26.6 0.0**
UZH 10 11 44.2
LZH Lanzhou 36.71 66 *e*P **P** **10 11 29.8 +2.2**
LZH pP **pP** **10 11 46.8 +1.6**
LZH *e*S **S** **10 17 04.5 -1.5**
LZH sS **sS** **10 17 36.0 -0.1**
LZH SS SnSn 10 19 30.0 -13
LZH pmax pmax
comp=Z,62nm,1.2s
LZH pmax pmax
comp=Z,200nm,4.1s
BEY Berane 36.73 305⇓*i*P **P** **10 11 26.5 -1.1**
IVA Berane 36.73 305⇓*i*P **P** **10 11 26.5 -1.1**
KWP Kalwaria Pacla 36.74 317 *e*P **P** **10 11 28.1 +0.5**
KWP pmax pmax
comp=Z,183nm,1.0s
KWP Kalwaria Pacla 36.74 317 *e*P **P** **10 11 28.1 +0.5**
comp=Z,183nm,1.0s
KWP Kalwaria Pacla 36.74 317 *e*P **P** **10 11 28.0 +0.5**
KWP Kalwaria Pacla 36.74 317⇑*e*P **P** **10 11 28.0 +0.5**
KOLS Kolonicke sedl 36.76 316 *e*P **P** **10 11 28.5 +0.8**
KOLS pmax pmax
comp=Z,138nm,1.0s
KOLS Kolonicke sedl 36.76 316 *e*P **P** **10 11 28.5 +0.8**
CD2 Chengdu 36.87 75 P **P** **10 11 28.5 -0.4**
CD2 PP **PnPn** **10 12 55.8 +0.8**
CD2 PcP **PcP** **10 13 50.0 +0.7**
CD2 S **S** **10 17 07.0 -1.4**
CD2 PcS **PcS** **10 17 37.0 -0.6**
CD2 SS **SnSn** **10 19 38.0 -9.1**
CD2 pmax pmax
comp=Z,80nm,0.5s
CD2 pmax pmax
comp=Z,460nm,5.4s
CD2 LR LR
comp=N,1μm,24.8s
CD2 LR LR
comp=Z,670nm,15.2s
KMBO Kilima Mbogo 36.93 223⇓*i*P **P** **10 11 31.0 +1.2**
KMBO Kilima Mbogo 36.93 223 *e*P **P** **10 11 30.6 +0.8**
comp=Z,45nm,0.9s
KMBO *e*pP **pP** **10 11 48.5 +1.1**
KMBO pP **pwP** **10 11 48.6 +1.2**
KMBO Kilima Mbogo 36.93 223 P **P** **10 11 31.3 +1.5**
SNR=39
KMBO Kilima Mbogo 36.93 223 P **P** **10 11 30.9 +1.1**
comp=Z,37nm,0.8s,baz=26,slow=10,SNR=95
KMBO pP **pwP** **10 11 48.6 +1.2**
comp=Z,20nm,1.0s,baz=33,slow=12,SNR=7.0
KMBO LR LR 10 27 03.8
comp=Z,306nm,21.8s,baz=94,slow=37
KMBO Kilima Mbogo 36.93 223 *e*P **P** **10 11 30.6 +0.8**
comp=Z,45nm,0.9s
KMI Kunming 36.95 84 P **P** **10 11 31.3 +1.5**
KMI pP **pP** **10 11 49.5 +2.1**
KMI sP **sP** **10 11 58.5 +2.6**
KMI S **S** **10 17 07.8 -2.3**
KMI pmax pmax
comp=Z,22nm,0.9s
NACGM Naroch 36.96 327 *e*P **P** **10 11 27.0 -2.3**
ULC Ulcinj 37.05 304⇑*i*P **P** **10 11 28.5 -1.7**
ULC Ulcinj 37.05 304⇑*i*P **P** **10 11 28.5 -1.7**
PLE Pljevlja 37.17 306⇑*i*P **P** **10 11 29.9 -1.5**
PLE Pljevlja 37.17 306⇑*i*P **P** **10 11 30.0 -1.5**
CRVS Cervenica-Dubn 37.25 316 *e*P **P** **10 11 31.3 -0.5**
CRVS pmax pmax
comp=Z,22nm,0.8s
CRVS Cervenica-Dubn 37.25 316 *e*P **P** **10 11 31.3 -0.5**
BUM Brajici-Budva 37.36 304⇑*i*P **P** **10 11 31.1 -1.8**
BUM Brajici-Budva 37.36 304⇑*i*P **P** **10 11 31.2 -1.7**
NKY Niksic 37.37 305⇓*i*P **P** **10 11 31.2 -1.8**
NKY Niksic 37.37 305⇓*i*P **P** **10 11 31.2 -1.8**
IIGN Ignalina 37.48 327 *e*P **P** **10 11 34.2 +0.5**
IIGN AMB AMB 10 11 34.8
comp=Z,94nm,0.7s
IIGN Ignalina 37.48 327 *e*P **P** **10 11 34.2 +0.5**
comp=Z,94nm,0.7s,SNR=26
UPM Unac-Piva 37.50 306⇑*i*P **P** **10 11 33.0 -1.2**
UPM Unac-Piva 37.50 306⇑*i*P **P** **10 11 33.0 -1.2**
ISAL Salakas 37.64 327 *e*P **P** **10 11 35.5 +0.5**
ISAL AMB AMB 10 11 37.0
comp=Z,63nm,1.2s
ISAL Salakas 37.64 327 *e*P **P** **10 11 35.5 +0.5**
comp=Z,63nm,1.2s,SNR=26
HCY Herceg Novi 37.67 304⇑*i*P **P** **10 11 33.8 -1.7**
HCY Herceg Novi 37.67 304⇑*i*P **P** **10 11 33.9 -1.6**
IZAR Zarasai 37.69 328 *e*P **P** **10 11 35.9 +0.5**
IZAR AMB AMB 10 11 37.3
comp=Z,70nm,1.1s
BRY Bratogost 37.71 305⇑*i*P **P** **10 11 34.2 -1.8**
BRY Bratogost 37.71 305⇑*i*P **P** **10 11 34.2 -1.8**
PSZ Piszkesteto 37.93 313 *e*P **P** **10 11 37.8 +0.1**
PSZ pmax pmax
comp=Z,77nm,0.8s
PSZ Piszkesteto 37.93 313 *e*P **P** **10 11 37.8 +0.1**
comp=Z,77nm,0.8s
PSZ Piszkesteto 37.93 313⇑*i*P **P** **10 11 37.8 +0.1**
PSZ Piszkesteto 37.93 313⇑*e*P **P** **10 11 37.8 +0.1**
PSZ Piszkesteto 37.93 313⇑*e*P **P** **10 11 37.8 +0.1**
MOY Mondy 38.01 40 *e*P **P** **10 11 39.7 +1.3**
MOY pmax pmax
comp=Z,80nm,1.5s
NIE Niedzica 38.13 316 *e*P **P** **10 11 39.8 +0.5**
NIE Niedzica 38.13 316 *e*P **P** **10 11 39.8 +0.5**
PKS7 Kunszentmiklos 38.16 312⇑*e*P **P** **10 11 39.9 +0.4**
PKSM Moragy 38.30 310⇑P **P** **10 11 40.4 -0.3**
PKSM Moragy 38.30 310⇑*i*P **P** **10 11 40.4 -0.3**
PKSM Moragy 38.30 310⇑*e*P **P** **10 11 40.4 -0.3**
PKSM Moragy 38.30 310⇑*e*P **P** **10 11 40.4 -0.3**
STON Ston 38.32 305 P **P** **10 11 38.8 -2.0**
SUW Suwalki 38.33 324 *e*P **P** **10 11 40.3 -0.5**
SUW pmax pmax
comp=Z,247nm,0.9s
SUW Suwalki 38.33 324 *e*P **P** **10 11 40.3 -0.5**
comp=Z,247nm,0.9s
SUW Suwalki 38.33 324 *e*P **P** **10 11 40.4 -0.4**
SUW Suwalki 38.33 324 *e*P **P** **10 11 40.3 -0.5**
comp=Z,247nm,0.9s
PKS9 Tamasi 38.64 311⇓*e*P **P** **10 11 43.7 +0.2**
TIP Timpagrande 38.64 299 *e*P **P** **10 11 43.5 -0.3**
comp=Z,170nm,1.0s
TIP Timpagrande 38.64 299 *e*P **P** **10 11 43.5 -0.3**
comp=Z,170nm,1.0s
BEL Belsk 38.71 320 *e*P **P** **10 11 44.6 +0.6**
OJC Ojcow 38.71 317⇑*i*P **P** **10 11 44.6 +0.5**
OJC *e**PP pP 10 12 09.0 +7.2
OJC Ojcow 38.71 317⇑*i*P **P** **10 11 44.6 +0.5**
PKSG 38.76 312⇑*e*P **P** **10 11 44.6 +0.1**
VYHS Vyhne 38.77 314 *e*P **P** **10 11 44.9 +0.2**
VYHS pmax pmax
comp=Z,40nm,0.7s
VYHS Vyhne 38.77 314 *e*P **P** **10 11 44.9 +0.2**
VYHS *e*S **S** **10 17 37.3 +0.6**
VYHS *e*SS **SnSn** **10 20 35.1 +2.6**
ZAK Zakamensk 38.88 43⇓*i*P **P** **10 11 46.3 +0.6**
ZAK pmax pmax
comp=Z,35nm,1.0s
LSRT Sirt 38.96 286 *i*P **P** **10 11 47.6 +1.2**
comp=Z,104nm,0.8s,SNR=26
PKST T"s 38.96 312⇑*e*P **P** **10 11 46.1 -0.2**
VSU Vasula 39.03 332*c i*P **P** **10 11 46.3 -0.3**
VSU pmax pmax
comp=Z,147nm,1.0s
TMCR Tamitsa 39.41 344 *e*P **P** **10 11 48.7 -1.0**
TMCR pmax pmax
comp=Z,132nm,1.1s
CUC Castrococco 39.41 300 *e*P **P** **10 11 50.3 +0.1**
comp=Z,354nm,0.7s
CUC Castrococco 39.41 300 *e*P **P** **10 11 50.3 +0.1**
comp=Z,354nm,0.7s
TLY Talaya 39.55 41 P **P** **10 11 52.4 +1.3**
comp=Z,256nm,0.8s,SNR=11
OKC Ostrava-Krasne 39.60 316⇑*i*P **P** **10 11 51.6 +0.1**
OKC *e* 10 20 42.0
OKC Ostrava-Krasne 39.60 316⇑*i*P **P** **10 11 51.6 +0.1**
OKC *e*SS SS 10 20 42.0 -4.4
OKC Ostrava-Krasne 39.60 316 P **P** **10 11 51.6 +0.1**
BEHE Becsehely 39.62 310⇑*e*P **P** **10 11 51.8 +0.1**
ZST Bratislava 39.81 313 *e*P **P** **10 11 52.0 -1.2**
ZST *e* 10 13 32.0
ZST pmax pmax
comp=Z,39nm,0.6s
ZST Bratislava 39.81 313 *e*P **P** **10 11 52.0 -1.2**
ZST *e*PP **PnPn** **10 13 32.0 +2.3**
MORC Moravsky Berou 39.96 316⇑P **P** **10 11 54.5 0.0**
MORC Moravsky Berou 39.96 316 *e*P **P** **10 11 53.8 -0.7**
comp=Z,61nm,0.6s
MORC Moravsky Berou 39.96 316⇑*i*P **P** **10 11 54.5 0.0**
MORC Moravsky Berou 39.96 316 *e*P **P** **10 11 54.3 -0.2**
LJFR Jufra 39.97 283 *i*P **P** **10 11 56.3 +1.5**
comp=Z,169nm,1.1s,SNR=25
SOP Sopron 40.04 312⇑*e*P **P** **10 11 55.2 0.0**
GYA Guiyang 40.10 81⇑*i*P **P** **10 11 56.0 -0.2**
GYA pP pP 10 12 21.5 +7.6
GYA PP **PnPn** **10 13 33.5 -0.2**
GYA PcP **PcP** **10 14 00.5 +0.9**
GYA ScP **ScP** **10 17 38.3 -4.0**
GYA PcS **PcS** **10 17 49.8 -0.4**
GYA S **S** **10 17 53.0 -4.4**
GYA ScS **ScS** **10 21 50.5 -5.7**
GYA pmax pmax
comp=Z,50nm,1.0s
GYA pmax pmax
comp=Z,160nm,5.2s
IRK Irkutsk 40.11 40 *e*P **P** **10 11 56.2 +0.5**
IRK pmax pmax
comp=Z,112nm,0.4s
SONM Songino Array 40.11 48 P **P** **10 11 57.1 +1.1**
SONM pP **pP** **10 12 14.4 +0.6**
SONM PP **PP** **10 13 29.6 +0.2**
SONM Songino Array 40.11 48 P **P** **10 11 57.1 +1.1**
comp=Z,46nm,0.8s,baz=254,slow=9.2,SNR=172
SONM pP **pP** **10 12 14.4 +0.6**
comp=Z,12nm,0.8s,baz=248,slow=8.7,SNR=5.8
SONM PP **PP** **10 13 29.6 +0.2**
comp=Z,7.3nm,0.7s,baz=246,slow=9.9,SNR=4.7
SONM LR LR 10 31 46.5
comp=Z,226nm,20.9s,baz=249,slow=41
SONM Songino Array 40.11 48 P **P** **10 11 57.1 +1.1**
SONM pP **pP** **10 12 14.4 +0.6**
GOLS Golise 40.31 309 *e*P **P** **10 11 57.1 -0.4**
JOF Joensuu 40.31 339 *e*P **P** **10 11 56.6 -0.6**
JOF pmax pmax
comp=Z,132nm,0.7s
JOF Joensuu 40.31 339 *e*p **P** **10 11 56.6 -0.6**
comp=Z,132nm,0.7s
JOF Joensuu 40.31 339 *e*P **P** **10 11 56.6 -0.6**
comp=Z,132nm,0.7s
VRAC Vranov 40.42 315⇓*i*P **P** **10 11 58.4 +0.1**
VRAC Vranov 40.42 315 *e*P **P** **10 11 58.2 -0.1**
CONA Conrad Observa 40.55 312 *i*P **P** **10 11 59.1 -0.4**
comp=Z,52nm,0.9s,SNR=37
CONA Conrad Observa 40.55 312 *i*P **P** **10 11 59.1 -0.4**
comp=Z,52nm,0.9s
CONA Conrad Observa 40.55 312 P **P** **10 11 59.1 -0.4**
comp=Z,52nm,0.9s,SNR=37
ULN Ulaanbaatar 40.55 48 *e*P **P** **10 12 00.8 +1.2**
comp=Z,83nm,0.9s
ULN Ulaanbaatar 40.55 48 P **P** **10 12 01.0 +1.4**
comp=Z,98nm,1.1s,comp=Z,954nm
ULN Ulaanbaatar 40.55 48 *e*P **P** **10 12 00.8 +1.2**
comp=Z,83nm,0.9s
NVLJ Novalja 40.60 307 P **P** **10 11 58.3 -1.5**
ARSA Arzberg 40.63 311 *i*P **P** **10 12 00.1 0.0**
comp=Z,63nm,0.7s,SNR=34
ARSA Arzberg 40.63 311 *i*P **P** **10 12 00.1 0.0**
comp=Z,63nm,0.7s
ARSA Arzberg 40.63 311 P **P** **10 12 00.1 0.0**
comp=Z,63nm,0.7s,SNR=34
PERS Pernice 40.78 310 *i*P **P** **10 12 00.5 -0.8**
MBAR Mbarara 40.78 231 *e*P **P** **10 12 02.0 +0.1**
SOKA Soboth 40.84 310⇑*i*P **P** **10 12 01.4 -0.5**
comp=Z,26nm,0.7s
SOKA Soboth 40.84 310⇑*i*P **P** **10 12 01.4 -0.5**
comp=Z,26nm,0.7s
SOKA Soboth 40.84 310 P **P** **10 12 01.4 -0.5**
comp=Z,26nm,0.7s
DPC Dobruska-Polom 40.87 316⇑*i*P **P** **10 12 02.4 +0.3**
DPC Dobruska-Polom 40.87 316⇑*i*P **P** **10 12 02.4 +0.3**
DPC *ex* x 10 22 08.4
DPC Dobruska-Polom 40.87 316 P **P** **10 12 02.4 +0.3**
XAN Xi'an 40.94 69 P **P** **10 12 03.5 +0.7**
XAN pP pP 10 12 28.5 +7.8
XAN PP **PnPn** **10 13 45.0 +1.8**
XAN S **S** **10 18 12.5 +3.0**
XAN LR LR
comp=N,140nm,16.1s
XAN LR LR
comp=E,79nm,18.4s
XAN LR LR
comp=Z,75nm,21.4s
KSP Ksiaz 41.03 317⇑*e*P **P** **10 12 03.7 +0.4**
KSP *e* 10 21 56.0
KSP Ksiaz 41.03 317 *e*P **P** **10 12 03.7 +0.4**
KSP Ksiaz 41.03 317⇑*e*P **P** **10 12 03.7 +0.4**
LJU Ljubljana 41.07 309 *i*P **P** **10 12 03.5 -0.3**
UPC Upice 41.11 316⇑*i*P **P** **10 12 04.2 +0.2**
UPC *e* 10 12 20.8
UPC Upice 41.11 316⇑*i*P **P** **10 12 04.2 +0.2**
UPC *e*pP **pP** **10 12 20.8 -1.0**
UPC Upice 41.11 316 P **P** **10 12 04.2 +0.2**
TREC Trest 41.12 314⇑*i*P **P** **10 12 04.1 0.0**
TREC MLR MLR
comp=Z,300nm,16.8s
TREC Trest 41.12 314⇑*i*P **P** **10 12 04.1 0.0**
TREC AMS AMS 10 31 20.0
comp=Z,300nm,16.8s
TREC Trest 41.12 314 P **P** **10 12 04.1 0.0**
FIA1 FINESS Array S 41.12 335 *e*P **P** **10 12 03.6 -0.3**
FIA1 FINESS Array S 41.12 335 *e*P **P** **10 12 03.6 -0.3**
FINES FINESS Array B 41.12 335 P **P** **10 12 03.4 -0.5**
FINES PP **PP** **10 13 38.4 -1.5**
FINES FINESS Array B 41.12 335 P **P** **10 12 03.4 -0.5**
comp=Z,74nm,0.4s,baz=128,slow=9.0,SNR=332
FINES PP **PP** **10 13 38.4 -1.5**
comp=Z,12nm,0.7s,baz=125,slow=12,SNR=4.5
FINES FINESS Array B 41.12 335 P **P** **10 12 03.4 -0.5**
OBKA Obir 41.14 310⇑*i*P **P** **10 12 04.0 -0.4**
comp=Z,41nm,1.0s,SNR=12
OBKA Obir 41.14 310⇑*i*P **P** **10 12 04.0 -0.4**
comp=Z,41nm,1.0s
OBKA Obir 41.14 310 P **P** **10 12 04.0 -0.4**
comp=Z,41nm,1.0s,SNR=12
LSHF Shwairf 41.17 285 *i*P **P** **10 12 05.1 +0.3**
comp=Z,97nm,1.1s,SNR=25
GKP Gorka Klasztor 41.26 321 *e*P **P** **10 12 05.3 +0.2**
SKDS Skadanscina 41.34 308 *i*P **P** **10 12 04.8 -1.2**
AQU L'Aquila 41.41 304 *e*P **P** **10 12 07.0 +0.3**
comp=Z,95nm,0.3s
AQU L'Aquila 41.41 304 *e*P **P** **10 12 06.9 +0.3**
comp=Z,95nm,0.3s
KAF Kangasniemi 41.46 336 *e*P **P** **10 12 06.4 -0.2**
KAF pmax pmax
comp=Z,50nm,0.5s
KAF Kangasniemi 41.46 336 *e*p **P** **10 12 06.4 -0.2**
comp=Z,50nm,0.5s
KAF Kangasniemi 41.46 336 *e*P **P** **10 12 06.4 -0.2**
comp=Z,50nm,0.5s
LUMB Murzuk 41.47 279 *i*P **P** **10 12 08.4 +1.1**
comp=Z,64nm,1.6s,SNR=25
VOY Vojsko 41.50 309 *e*P **P** **10 12 06.4 -1.0**
VOY *e* 10 12 19.1
TRI Trieste 41.54 309 *e*P **P** **10 12 06.5 -1.1**
TRI pmax pmax
comp=Z,81nm,1.0s
TRI Trieste 41.54 309 *e*P **P** **10 12 06.5 -1.1**
comp=Z,81nm,1.0s
TRI Trieste 41.54 309 *e*P **P** **10 12 06.5 -1.1**
comp=Z,81nm,1.0s
MOA Molln 41.58 312 *i*P **P** **10 12 07.7 -0.2**
comp=Z,106nm,0.6s,SNR=138
MOA Molln 41.58 312 *i*P **P** **10 12 07.7 -0.2**
comp=Z,106nm,0.6s
MOA Molln 41.58 312 P **P** **10 12 07.7 -0.2**
comp=Z,106nm,0.6s,SNR=138
BTO Baotou 41.70 59 *e*P **P** **10 12 10.3 +1.2**
MYKA Terra Mystica 41.77 310⇑*i*P **P** **10 12 08.9 -0.7**
comp=Z,21nm,0.6s
MYKA Terra Mystica 41.77 310⇑*i*P **P** **10 12 08.9 -0.7**
comp=Z,21nm,0.6s
MYKA Terra Mystica 41.77 310 P **P** **10 12 08.9 -0.7**
comp=Z,21nm,0.6s
GHAR Gharyan 41.86 288 *i*P **P** **10 12 10.9 +0.4**
comp=Z,108nm,1.2s,SNR=25
PRU Pruhonice 41.88 315⇑*i*P **P** **10 12 10.0 -0.3**
PRU *e* 10 18 21.1
PRU Pruhonice 41.88 315⇑*i*P **P** **10 12 10.0 -0.3**
PRU *e*S **S** **10 18 21.1 -1.9**
PRU *e*SS **SnSn** **10 21 48.9 +1.8**
PRU Pruhonice 41.88 315 P **P** **10 12 10.0 -0.3**
PRA Prague 41.97 315⇑P **P** **10 12 11.0 0.0**
PVCC Panska Ves 42.00 316⇑*i*P **P** **10 12 11.4 +0.1**
PVCC Panska Ves 42.00 316⇑*i*P **P** **10 12 11.4 +0.1**
PVCC Panska Ves 42.00 316 P **P** **10 12 11.4 +0.1**
KBA Koelnbreinsper 42.05 311 *i*P **P** **10 12 11.5 -0.4**
KBA pmax pmax
comp=Z,57nm,0.9s
KBA Koelnbreinsper 42.05 311 *i*P **P** **10 12 11.5 -0.4**
comp=Z,57nm,0.9s,SNR=21
KBA Koelnbreinsper 42.05 311 *i*P **P** **10 12 11.5 -0.4**
comp=Z,57nm,0.9s
KBA Koelnbreinsper 42.05 311 P **P** **10 12 11.5 -0.4**
comp=Z,57nm,0.9s,SNR=21
GEC2 GERESS Array S 42.16 313 *e*P **P** **10 12 12.5 -0.2**
GEC2 pmax pmax
comp=Z,106nm,0.8s
GEC2 GERESS Array S 42.16 313 *e*P **P** **10 12 12.5 -0.2**
comp=Z,106nm,0.8s
GERES GERESS Array B 42.16 313 P **P** **10 12 12.2 -0.5**
GERES PcP **PcP** **10 14 05.6 -0.2**
GERES GERESS Array B 42.16 313 P **P** **10 12 12.2 -0.5**
comp=Z,81nm,0.7s,baz=104,slow=8.2,SNR=560
GERES PcP **PcP** **10 14 05.6 -0.2**
comp=Z,4.7nm,0.7s,baz=114,slow=2.4,SNR=5.1
GERES LR LR 10 33 29.6
comp=Z,205nm,21.1s,baz=103,slow=41
GERES GERESS Array B 42.16 313 P **P** **10 12 12.2 -0.5**
KHC Kasperske Hory 42.30 314⇑*i*P **P** **10 12 13.5 -0.2**
KHC *e* 10 18 26.5
KHC MLR MLR
comp=Z,200nm,24.6s
KHC Kasperske Hory 42.30 314 *e*P **P** **10 12 13.3 -0.4**
comp=Z,2.4nm,0.5s
KHC Kasperske Hory 42.30 314⇑*i*P **P** **10 12 13.5 -0.2**
KHC *e*S **S** **10 18 26.5 -2.7**
KHC *e*SS **SnSn** **10 21 58.9 +1.8**
KHC AMS AMS 10 32 30.0
comp=Z,200nm,24.6s
KHC Kasperske Hory 42.30 314 P **P** **10 12 13.5 -0.2**
BRG Berggiesshubel 42.47 316 *i*P **P** **10 12 15.5 +0.4**
comp=Z,37nm,0.6s
BRG *i* 10 12 17.7
comp=Z,46nm,0.9s
BRG *i* 10 12 34.4
comp=Z,28nm,1.2s

BRG					S	**S**	**10 18 34.0 +2.4**
BRG					SS	**SS**	**10 21 49.0 +5.7**
BRG							
	comp=N,180nm,24.4s						
BRG							
	comp=E,205nm,20.1s						
BRG							
	comp=Z,223nm,16.5s						
BRG	**Berggiesshubel**	**42.47**	**316**	*i*	P	**P**	**10 12 15.5 +0.4**
BRG				*i*			10 12 34.4
BRG					S	**S**	**10 18 34.0 +2.4**
BRG					pmax	pmax	
	comp=Z,37nm,0.6s						
BRG					MLR	MLR	
	comp=N,180nm,24.4s						
BRG					MLR	MLR	
	comp=E,205nm,20.1s						
BRG					MLR	MLR	
	comp=Z,223nm,16.5s						
BRG	**Berggiesshubel**	**42.47**	**316**	*eP*	**P**	**10 12 15.6 +0.5**
	comp=Z,37nm,0.6s						
RJOB	**Jochberg**	**42.53**	**311**	*eP*	**P**	**10 12 15.3 -0.4**
	comp=Z,118nm,0.6s						
ABTA	**Abfaltersbach**	**42.56**	**310**	*i* P	**P**	**10 12 15.5 -0.5**
	comp=Z,64nm,0.6s,SNR=63						
ABTA	**Abfaltersbach**	**42.56**	**310**	*i* P	**P**	**10 12 15.5 -0.5**
	comp=Z,64nm,0.6s						
ABTA	**Abfaltersbach**	**42.56**	**310**	P	**P**	**10 12 15.5 -0.5**
	comp=Z,64nm,0.6s,SNR=63						
WET	**Wettzell**	**42.75**	**314**	*eP*	**P**	**10 12 16.7 -0.7**
WET					pmax	pmax	
	comp=Z,36nm,1.2s						
WET	**Wettzell**	**42.75**	**314**	*eP*	**P**	**10 12 16.7 -0.7**
	comp=Z,36nm,1.2s						
FBE	**Freiberg**	**42.85**	**316**	*eP*	**P**	**10 12 18.7 +0.6**
	comp=Z,26nm,0.7s						
HHC	**Hu-ho-hao-te**	**42.88**	**59**	*eP*	**P**	**10 12 20.3 +1.6**
HHC				sP	**sP**	**10 12 47.5 +2.5**
HHC				PP	**PP**	**10 14 03.0 +3.7**
HHC				PcP	**PcP**	**10 14 10.8 +2.4**
HHC				ScP	**ScP**	**10 17 54.0 +1.0**
HHC				PcS	**PcS**	**10 18 02.3 +1.5**
HHC				S	**S**	**10 18 39.0 +0.9**
HHC				sS	**sS**	**10 19 10.8 +2.1**
HHC				SS	SS	10 21 44.5 -7.2
HHC				ScS	**ScS**	**10 22 11.5 -1.1**
HHC				pmax	pmax	
	comp=Z,70nm,1.0s						
HHC				pmax	pmax	
	comp=Z,310nm,6.4s						
RUE	**Ruedersdorf**	**43.00**	**318**	*eP*	**P**	**10 12 19.8 +0.5**
	comp=Z,187nm,1.0s						
RUE				*ep*P	**pP**	**10 12 36.7 -0.5**
RUE	**Ruedersdorf**	**43.00**	**318**	*eP*	**P**	**10 12 19.6 +0.3**
	comp=Z,164nm,0.7s						
RUE	**Ruedersdorf**	**43.00**	**318**	*eP*	**P**	**10 12 19.6 +0.3**
	comp=Z,164nm,0.7s						
CLL	**Collm**	**43.16**	**317**	⇑*iP*	**P**	**10 12 21.5 +0.9**
CLL				*eS*	**S**	**10 18 39.0 -2.6**
CLL				pmax	pmax	
	comp=Z,315nm,0.9s						
CLL	**Collm**	**43.16**	**317**	*eP*	**P**	**10 12 21.5 +0.9**
	comp=Z,212nm,0.7s						
CLL	**Collm**	**43.16**	**317**	⇑*iP*	**P**	**10 12 21.5 +0.9**
	comp=Z,315nm,0.9s						
CLL				*ep*P	**pP**	**10 12 38.0 -0.5**
CLL				*es*P	**sP**	**10 12 46.0 -0.9**
CLL				*e*PP	**PP**	**10 14 03.0 +1.0**
CLL				*eS*	**S**	**10 18 39.0 -2.6**
	comp=N,200nm,10.7s						
CLL				*eS*	**S**	**10 18 39.0 -2.6**
CLL				*e*SS	**ScS**	**10 22 09.0 -4.6**
CLL				L	L	10 34 00.0
	comp=Z,200nm,19.9s						
BSD	**Bornholm Skovb**	**43.17**	**322**	⇑*iP*	**P**	**10 12 19.7 -0.9**
BSD				*i* *PP	**pP**	**10 12 36.7 -1.9**
BSD				pmax	pmax	
	comp=Z,140nm,0.7s						
BSD	**Bornholm Skovb**	**43.17**	**322**	⇑*iP*	**P**	**10 12 19.7 -0.9**
	comp=Z,145nm,0.7s						
BSD				*i* pP	**pP**	**10 12 36.7 -1.9**
WTTA	**Wattenberg**	**43.23**	**311**	*i* P	**P**	**10 12 20.6 -0.9**
WTTA				pmax	pmax	
	comp=Z,106nm,0.6s						
WTTA	**Wattenberg**	**43.23**	**311**	*i* P	**P**	**10 12 20.6 -0.9**
	comp=Z,106nm,0.6s,SNR=59						
WTTA	**Wattenberg**	**43.23**	**311**	*i* P	**P**	**10 12 20.6 -0.9**
	comp=Z,106nm,0.6s						
WTTA	**Wattenberg**	**43.23**	**311**	P	**P**	**10 12 20.6 -0.9**
	comp=Z,106nm,0.6s,SNR=59						
NKC	**Novy Kostel**	**43.25**	**315**	⇑*iP*	**P**	**10 12 21.5 +0.1**
NKC	**Novy Kostel**	**43.25**	**315**	⇑*iP*	**P**	**10 12 21.5 +0.1**
NKC	**Novy Kostel**	**43.25**	**315**	P	**P**	**10 12 21.5 +0.1**
TANN	**Tannenbergstha**	**43.28**	**315**	*eP*	**P**	**10 12 21.6 -0.1**
	comp=Z,12nm,0.9s						
WATA	**Walderalm**	**43.28**	**311**	⇑*iP*	**P**	**10 12 20.6 -1.3**
WATA				pmax	pmax	
	comp=Z,34nm,0.5s						
WATA	**Walderalm**	**43.28**	**311**	⇑*iP*	**P**	**10 12 20.6 -1.3**
	comp=Z,34nm,0.5s,SNR=17						
WATA	**Walderalm**	**43.28**	**311**	⇑*iP*	**P**	**10 12 20.6 -1.3**
	comp=Z,34nm,0.5s						
APA	**Apatity**	**43.30**	**345**	⇓*iP*	**P**	**10 12 21.6 +0.1**
APA				pmax	pmax	
	comp=Z,124nm,0.8s						
APA				MLR	MLR	
	comp=Z,800nm,19.0s						
ROTZ	**Rotzenmuhle**	**43.30**	**314**	*eP*	**P**	**10 12 22.1 +0.3**
	comp=Z,40nm,0.9s						
WERN	**Wernitzgruen**	**43.31**	**315**	*eP*	**P**	**10 12 21.8 -0.1**
	comp=Z,14nm,1.0s						
GUNZ	**Gunzen**	**43.35**	**315**	*eP*	**P**	**10 12 22.2 -0.1**
	comp=Z,17nm,0.9s						
WERD	**Werda**	**43.39**	**315**	*eP*	**P**	**10 12 22.4 -0.1**
	comp=Z,16nm,0.9s						
MANZ	**Manzenberg**	**43.41**	**315**	*eP*	**P**	**10 12 22.8 +0.1**
	comp=Z,14nm,0.9s						
PLN	**Plauen**	**43.49**	**315**	*eP*	**P**	**10 12 23.3 0.0**
	comp=Z,63nm,0.8s						
PSI	**Prapat**	**43.53**	**118**	P	**P**	**10 12 23.5 -0.7**
	comp=Z,28nm,1.0s						
PSI	**Prapat**	**43.53**	**118**	LR	LR	10 30 12.2
	comp=Z,302nm,20.9s,baz=242,slow=36						
MOTA	**Moosalm**	**43.60**	**311**	*i* P	**P**	**10 12 23.0 -1.4**
MOTA				pmax	pmax	
	comp=Z,48nm,0.6s						
MOTA	**Moosalm**	**43.60**	**311**	*i* P	**P**	**10 12 23.0 -1.4**
	comp=Z,48nm,0.6s,SNR=41						
MOTA	**Moosalm**	**43.60**	**311**	*i* P	**P**	**10 12 23.0 -1.4**
	comp=Z,48nm,0.6s						
FUR	**Furstenfeldbru**	**43.61**	**312**	*eP*	**P**	**10 12 23.6 -0.8**
FUR				pmax	pmax	
	comp=Z,73nm,0.9s						
FUR	**Furstenfeldbru**	**43.61**	**312**	*eP*	**P**	**10 12 23.6 -0.8**
	comp=Z,73nm,0.9s						
VLC	**Villacollemand**	**43.75**	**306**	*eP*	**P**	**10 12 24.5 -1.0**
	comp=Z,33nm,0.6s						
VLC	**Villacollemand**	**43.75**	**306**	*eP*	**P**	**10 12 24.5 -1.0**
	comp=Z,33nm,0.6s						
FETA	**Feichten**	**43.81**	**310**	*i* P	**P**	**10 12 25.2 -1.0**
	comp=Z,132nm,0.9s,SNR=138						
FETA	**Feichten**	**43.81**	**310**	*i* P	**P**	**10 12 25.2 -1.0**
	comp=Z,132nm,0.9s						
FETA	**Feichten**	**43.81**	**310**	P	**P**	**10 12 25.2 -1.0**
	comp=Z,132nm,0.9s,SNR=138						
RETA	**Reutte**	**43.85**	**311**	⇓*iP*	**P**	**10 12 24.9 -1.4**
	comp=Z,73nm,0.5s,SNR=68						
RETA	**Reutte**	**43.85**	**311**	⇓*iP*	**P**	**10 12 24.9 -1.4**
	comp=Z,73nm,0.5s						
MOX	**Moxa**	**43.86**	**315**	*eP*	**P**	**10 12 26.7 +0.4**
MOX				pmax	pmax	
	comp=Z,29nm,0.8s						
MOX	**Moxa**	**43.86**	**315**	*eP*	**P**	**10 12 26.7 +0.4**
	comp=Z,29nm,0.8s						
RGN	**Rugen**	**43.86**	**321**	*eP*	**P**	**10 12 27.1 +0.9**
	comp=Z,208nm,0.7s						
NEUB	**Neuenburg**	**43.88**	**316**	*eP*	**P**	**10 12 27.3 +0.9**
	comp=Z,239nm,0.6s						
GRF	**Grafenberg Arr**	**43.92**	**314**	*eP*	**P**	**10 12 27.2 +0.4**
GRF				*e*PP	**pP**	**10 12 44.7 -0.1**
GRF				pmax	pmax	
	comp=Z,80nm,0.8s						
GRF	**Grafenberg Arr**	**43.92**	**314**	*eP*	**P**	**10 12 27.2 +0.4**
	comp=Z,80nm,0.8s						
GRF				*ep*P	**pP**	**10 12 44.7 -0.1**
GRFO	**Grafenberg**	**43.92**	**314**	*eP*	**P**	**10 12 27.2 +0.4**
GRFO				pmax	pmax	
	comp=Z,92nm,0.6s						
GRFO	**Grafenberg**	**43.92**	**314**	*eP*	**P**	**10 12 27.2 +0.4**
	comp=Z,92nm,0.6s						
GRFO	**Grafenberg**	**43.92**	**314**	*eP*	**P**	**10 12 27.2 +0.4**
	comp=Z,92nm,0.6s						
IPM	**Ipoh**	**44.19**	**114**	*eP*	**P**	**10 12 29.1 -0.3**
	comp=Z,9.9nm,0.8s						
IPM				*ep*P	**pP**	**10 12 46.5 -0.9**
IPM	**Ipoh**	**44.19**	**114**	P	**P**	**10 12 29.0 -0.4**
IPM	**Ipoh**	**44.19**	**114**	*eP*	**P**	**10 12 29.1 -0.3**
	comp=Z,9.9nm,0.8s						
VSL	**Villasalto**	**44.37**	**299**	*eP*	**P**	**10 12 31.5 +1.0**
	comp=Z,140nm,1.1s						
VSL	**Villasalto**	**44.37**	**299**	*eP*	**P**	**10 12 31.5 +1.0**
	comp=Z,140nm,1.1s						
DAVA	**Damuels**	**44.42**	**310**	⇑*iP*	**P**	**10 12 29.9 -1.1**
	comp=Z,181nm,0.6s,SNR=166						
DAVA	**Damuels**	**44.42**	**310**	⇑*iP*	**P**	**10 12 29.9 -1.1**
	comp=Z,181nm,0.6s						
DAVA	**Damuels**	**44.42**	**310**	P	**P**	**10 12 29.9 -1.1**
	comp=Z,181nm,0.6s,SNR=166						
KEST	**Kesra**	**44.59**	**294**	*eP*	**P**	**10 12 33.8 +1.4**
KEST	**Kesra**	**44.59**	**294**	P	**P**	**10 12 33.2 +0.8**
	comp=Z,15nm,0.9s,baz=80,slow=1.5,SNR=28						
KEST				LR	LR	10 35 30.6
	comp=Z,23nm,18.3s,baz=343,slow=42						
KEST	**Kesra**	**44.59**	**294**	*eP*	**P**	**10 12 33.8 +1.4**
PGF	**Pioggiola**	**44.67**	**304**	⇑*iP*	**P**	**10 12 31.4 -1.6**
	comp=Z,54nm,0.9s						
PGF	**Pioggiola**	**44.67**	**304**	⇑*iP*	**P**	**10 12 31.4 -1.6**
PGF				pmax	pmax	
	comp=Z,54nm,0.9s						
PGF	**Pioggiola**	**44.67**	**304**	⇑*iP*	**P**	**10 12 31.4 -1.6**
	comp=Z,54nm,0.9s						
PGF	**Pioggiola**	**44.67**	**304**	⇑*iP*	**P**	**10 12 31.4 -1.6**
	comp=Z,27nm,0.9s						
TUE	**Stuetta**	**44.69**	**309**	*eP*	**P**	**10 12 31.8 -1.4**
	comp=Z,60nm,0.6s						
TUE	**Stuetta**	**44.69**	**309**	*eP*	**P**	**10 12 31.8 -1.4**
	comp=Z,60nm,0.6s						
COP	**Copenhagen**	**44.70**	**323**	⇑*iP*	**P**	**10 12 33.8 +1.0**
COP				pmax	pmax	
	comp=Z,60nm,0.8s						
COP	**Copenhagen**	**44.70**	**323**	⇑*iP*	**P**	**10 12 33.8 +1.0**
	comp=Z,60nm,0.8s						
LLD	**Lille Linde**	**44.71**	**322**	*i* P	**P**	**10 12 33.7 +0.8**
LLD				pmax	pmax	
	comp=Z,160nm,0.7s						
LLD	**Lille Linde**	**44.71**	**322**	*i* P	**P**	**10 12 33.7 +0.8**
	comp=Z,165nm,0.7s						
CLZ	**Clausthal**	**44.88**	**317**	*eP*	**P**	**10 12 35.5 +1.1**
CLZ				pmax	pmax	
	comp=Z,162nm,0.8s						
CLZ	**Clausthal**	**44.88**	**317**	*eP*	**P**	**10 12 35.5 +1.1**
	comp=Z,162nm,0.8s						
UBBA	**Unterbreizbach**	**44.90**	**315**	*eP*	**P**	**10 12 35.0 +0.6**
	comp=Z,28nm,0.7s						
QIZ	**Qiongzhong**	**45.02**	**90**	P	**P**	**10 12 35.5 -0.5**
QIZ				pP	**pP**	**10 12 58.8 +4.8**
QIZ				sP	sP	10 13 11.5 +9.1
QIZ				S	**S**	**10 19 07.5 -2.1**
QIZ				pmax	pmax	
	comp=Z,13nm,1.1s						
STU	**Stuttgart**	**45.08**	**312**	*eP*	**P**	**10 12 35.1 -0.9**
STU				pmax	pmax	
	comp=Z,71nm,1.2s						
STU	**Stuttgart**	**45.08**	**312**	*eP*	**P**	**10 12 34.9 -1.1**
	comp=Z,32nm,0.8s						
STU	**Stuttgart**	**45.08**	**312**	*eP*	**P**	**10 12 35.1 -0.9**
	comp=Z,71nm,1.2s						
STU	**Stuttgart**	**45.08**	**312**	*eP*	**P**	**10 12 35.1 -0.9**
	comp=Z,71nm,1.2s						
NRDL	**Niedersach Rie**	**45.18**	**318**	*eP*	**P**	**10 12 37.7 +1.1**
	comp=Z,106nm,0.9s						
NRDL				*ep*P	**pP**	**10 12 54.9 +0.2**
SPAK	**Spaichingen-Ko**	**45.26**	**311**	*eP*	**P**	**10 12 36.2 -1.3**
SPAK	**Spaichingen-Ko**	**45.26**	**311**	*eP*	**P**	**10 12 36.2 -1.3**
LGHD	**Ghdames**	**45.27**	**286**	*i* P	**P**	**10 12 38.8 +0.9**
	comp=Z,110nm,1.2s,SNR=24						
TOD	**Tromm**	**45.45**	**313**	*eP*	**P**	**10 12 38.8 -0.2**
TOD	**Tromm**	**45.45**	**313**	*eP*	**P**	**10 12 38.8 -0.2**
TOD	**Tromm**	**45.45**	**313**	*eP*	**P**	**10 12 38.8 -0.2**
BFO	**Black Forest**	**45.59**	**312**	*eP*	**P**	**10 12 38.6 -1.5**
BFO				pmax	pmax	
	comp=Z,12nm,1.0s						
BFO	**Black Forest**	**45.59**	**312**	*eP*	**P**	**10 12 38.6 -1.5**
	comp=Z,12nm,1.0s						
BFO	**Black Forest**	**45.59**	**312**	*eP*	**P**	**10 12 38.8 -1.3**
	comp=Z,8.5nm,0.6s						
FELD	**Feldberg im Sc**	**45.75**	**311**	*eP*	**P**	**10 12 39.9 -1.6**
FELD	**Feldberg im Sc**	**45.75**	**311**	*eP*	**P**	**10 12 39.9 -1.6**
TNS	**Taunus Mts**	**45.77**	**314**	*eP*	**P**	**10 12 42.2 +0.6**
TNS				pmax	pmax	
	comp=Z,83nm,1.0s						
TNS	**Taunus Mts**	**45.77**	**314**	*eP*	**P**	**10 12 42.2 +0.6**
	comp=Z,83nm,1.0s						
SBF	**Sospel**	**45.86**	**305**	⇑*iP*	**P**	**10 12 41.2 -1.1**
	comp=Z,274nm,0.7s						
SBF	**Sospel**	**45.86**	**305**	⇑*iP*	**P**	**10 12 41.2 -1.1**
SBF				pmax	pmax	
	comp=Z,274nm,0.7s						
SBF	**Sospel**	**45.86**	**305**	⇑*iP*	**P**	**10 12 41.2 -1.1**
	comp=Z,274nm,0.7s						
SBF	**Sospel**	**45.86**	**305**	⇑*iP*	**P**	**10 12 41.2 -1.1**
	comp=Z,137nm,0.7s						
AUTN	**L'Aution**	**45.87**	**306**	*eP*	**P**	**10 12 41.9 -0.7**
AUTN	**L'Aution**	**45.87**	**306**	*eP*	**P**	**10 12 41.9 -0.7**
AUTN	**L'Aution**	**45.87**	**306**	*eP*	**P**	**10 12 41.9 -0.7**
AUTN	**L'Aution**	**45.87**	**306**	*eP*	**P**	**10 12 41.9 -0.7**
KTD	**Kalmit**	**45.88**	**313**	*eP*	**P**	**10 12 42.1 -0.3**
KTD	**Kalmit**	**45.88**	**313**	*eP*	**P**	**10 12 42.1 -0.3**
KTD	**Kalmit**	**45.88**	**313**	*eP*	**P**	**10 12 42.1 -0.3**
WHN	**Wuhan**	**45.95**	**73**	P	**P**	**10 12 45.0 +1.9**
WHN				S	**S**	**10 19 24.0 +1.4**
WHN				LR	LR	
	comp=Z,530nm,13.9s						
TOUF	**Mont Tournerai**	**46.00**	**306**	*eP*	**P**	**10 12 43.0 -0.6**
TOUF	**Mont Tournerai**	**46.00**	**306**	*eP*	**P**	**10 12 43.0 -0.6**
TOUF	**Mont Tournerai**	**46.00**	**306**	*eP*	**P**	**10 12 43.0 -0.6**
TOUF	**Mont Tournerai**	**46.00**	**306**	*eP*	**P**	**10 12 43.0 -0.6**
LANF	**Langenberg**	**46.01**	**312**	*eP*	**P**	**10 12 42.4 -1.0**
LANF	**Langenberg**	**46.01**	**312**	*eP*	**P**	**10 12 42.4 -1.0**
LANF	**Langenberg**	**46.01**	**312**	*eP*	**P**	**10 12 42.4 -1.0**
LANF	**Langenberg**	**46.01**	**312**	*eP*	**P**	**10 12 42.4 -1.0**
BBS	**Basel-Blauen**	**46.04**	**310**	*eP*	**P**	**10 12 42.2 -1.5**
BBS	**Basel-Blauen**	**46.04**	**310**	*eP*	**P**	**10 12 42.2 -1.5**
BBS	**Basel-Blauen**	**46.04**	**310**	*eP*	**P**	**10 12 42.2 -1.5**
LIBD	**Limburg**	**46.05**	**311**	*eP*	**P**	**10 12 42.6 -1.1**
LIBD	**Limburg**	**46.05**	**311**	*eP*	**P**	**10 12 42.6 -1.1**
LIBD	**Limburg**	**46.05**	**311**	*eP*	**P**	**10 12 42.6 -1.1**
CMAH	**Djebel Manchou**	**46.06**	**295**	P	**P**	**10 12 44.9 +0.8**
CMAH	**Djebel Manchou**	**46.06**	**295**	P	**P**	**10 12 44.9 +0.8**
MVIF	**Mont Vial**	**46.06**	**305**	*eP*	**P**	**10 12 43.1 -0.9**
MVIF	**Mont Vial**	**46.06**	**305**	*eP*	**P**	**10 12 43.1 -0.9**
MVIF	**Mont Vial**	**46.06**	**305**	*eP*	**P**	**10 12 43.1 -0.9**
MVIF	**Mont Vial**	**46.06**	**305**	*eP*	**P**	**10 12 43.1 -0.9**
OG22	**Abries**	**46.25**	**307**	*eP*	**P**	**10 12 44.3 -1.2**
OG22	**Abries**	**46.25**	**307**	*eP*	**P**	**10 12 44.3 -1.2**
OG22	**Abries**	**46.25**	**307**	*eP*	**P**	**10 12 44.3 -1.2**
CDF	**Champ du Feu**	**46.29**	**312**	⇑*iP*	**P**	**10 12 44.3 -1.4**
	comp=Z,71nm,0.8s						
CDF	**Champ du Feu**	**46.29**	**312**	⇑*iP*	**P**	**10 12 44.3 -1.4**
CDF				pmax	pmax	
	comp=Z,71nm,0.8s						
CDF	**Champ du Feu**	**46.29**	**312**	⇑*iP*	**P**	**10 12 44.3 -1.4**
	comp=Z,71nm,0.8s						
CDF	**Champ du Feu**	**46.29**	**312**	⇑*iP*	**P**	**10 12 44.3 -1.4**
	comp=Z,36nm,0.8s						
ABH	**Alteburg**	**46.30**	**314**	*eP*	**P**	**10 12 45.6 -0.1**
ABH	**Alteburg**	**46.30**	**314**	*eP*	**P**	**10 12 45.6 -0.1**
MOF	**Molkenrain**	**46.33**	**311**	*eP*	**P**	**10 12 44.8 -1.2**
MOF	**Molkenrain**	**46.33**	**311**	*eP*	**P**	**10 12 44.8 -1.2**
MOF	**Molkenrain**	**46.33**	**311**	*eP*	**P**	**10 12 44.8 -1.2**
MOF	**Molkenrain**	**46.33**	**311**	*eP*	**P**	**10 12 44.8 -1.2**
ECH	**Echery**	**46.35**	**311**	*eP*	**P**	**10 12 44.6 -1.5**
ECH				pmax	pmax	
	comp=Z,64nm,0.8s						
ECH	**Echery**	**46.35**	**311**	*eP*	**P**	**10 12 44.5 -1.5**
	comp=Z,64nm,0.8s						
ECH	**Echery**	**46.35**	**311**	*eP*	**P**	**10 12 44.6 -1.5**
ECH	**Echery**	**46.35**	**311**	*eP*	**P**	**10 12 44.6 -1.5**
MBDF	**Montbardon**	**46.37**	**307**	⇑*iP*	**P**	**10 12 45.1 -1.3**
	comp=Z,123nm,0.8s						
MBDF	**Montbardon**	**46.37**	**307**	⇑*iP*	**P**	**10 12 45.1 -1.3**
MBDF				pmax	pmax	
	comp=Z,123nm,0.8s						
MBDF	**Montbardon**	**46.37**	**307**	⇑*iP*	**P**	**10 12 45.1 -1.3**
	comp=Z,123nm,0.8s						
MBDF	**Montbardon**	**46.37**	**307**	⇑*iP*	**P**	**10 12 45.1 -1.3**
	comp=Z,61nm,0.8s						
BJI	**Beijing**	**46.40**	**60**	P	**P**	**10 12 46.5 0.0**
BJI				S	**S**	**10 19 30.0 +1.1**
BJI				pmax	pmax	
	comp=Z,28nm,0.8s						
BJI				pmax	pmax	
	comp=Z,150nm,3.9s						
BJI				LR	LR	
	comp=N,140nm,14.9s						
BJI				LR	LR	
	comp=E,190nm,10.3s						
BJI				LR	LR	
	comp=Z,130nm,33.5s						
LPG	**La Plagne**	**46.42**	**308**	⇑*iP*	**P**	**10 12 45.7 -1.3**
	comp=Z,96nm,0.8s						
LPG	**La Plagne**	**46.42**	**308**	⇑*iP*	**P**	**10 12 45.7 -1.3**
LPG				pmax	pmax	
	comp=Z,96nm,0.8s						
LPG	**La Plagne**	**46.42**	**308**	⇑*iP*	**P**	**10 12 45.7 -1.3**
	comp=Z,96nm,0.8s						
LPG	**La Plagne**	**46.42**	**308**	⇑*iP*	**P**	**10 12 45.7 -1.3**
	comp=Z,48nm,0.8s						
FRF	**La Foret Royal**	**46.42**	**305**	⇑*iP*	**P**	**10 12 45.2 -1.5**
	comp=Z,32nm,0.9s						
FRF	**La Foret Royal**	**46.42**	**305**	⇑*iP*	**P**	**10 12 45.2 -1.5**
FRF				pmax	pmax	
	comp=Z,32nm,0.9s						
FRF	**La Foret Royal**	**46.42**	**305**	⇑*iP*	**P**	**10 12 45.2 -1.5**
	comp=Z,32nm,0.9s						
FRF	**La Foret Royal**	**46.42**	**305**	⇑*iP*	**P**	**10 12 45.2 -1.5**
	comp=Z,16nm,0.9s						
LPL	**La Plagne**	**46.43**	**308**	⇑*iP*	**P**	**10 12 45.8 -1.2**
	comp=Z,70nm,0.6s						
LPL	**La Plagne**	**46.43**	**308**	⇑*iP*	**P**	**10 12 45.8 -1.2**
LPL				pmax	pmax	
	comp=Z,70nm,0.6s						
LPL	**La Plagne**	**46.43**	**308**	⇑*iP*	**P**	**10 12 45.8 -1.2**
	comp=Z,70nm,0.6s						
LPL	**La Plagne**	**46.43**	**308**	⇑*iP*	**P**	**10 12 45.8 -1.2**
	comp=Z,35nm,0.6s						
BNI	**Bardonecchia**	**46.45**	**307**	*eP*	**P**	**10 12 45.1 -1.9**
BNI				pmax	pmax	
	comp=Z,107nm,0.8s						
BNI	**Bardonecchia**	**46.45**	**307**	*eP*	**P**	**10 12 45.1 -1.9**
	comp=Z,107nm,0.8s						
BNI	**Bardonecchia**	**46.45**	**307**	*eP*	**P**	**10 12 45.1 -1.9**
	comp=Z,107nm,0.8s						
KEV	**Kevo**	**46.49**	**344**	*eP*	**P**	**10 12 46.4 -0.4**
KEV				pmax	pmax	
	comp=Z,63nm,0.5s						
KEV	**Kevo**	**46.49**	**344**	*eP*	**P**	**10 12 46.6 -0.2**
	comp=Z,58nm,0.5s						
KEV	**Kevo**	**46.49**	**344**	*ep*	**P**	**10 12 46.4 -0.4**
	comp=Z,63nm,0.5s						
KEV	**Kevo**	**46.49**	**344**	*eP*	**P**	**10 12 46.6 -0.2**
	comp=Z,58nm,0.5s						
LOMF	**Lomont**	**46.49**	**310**	*eP*	**P**	**10 12 46.0 -1.3**
LOMF	**Lomont**	**46.49**	**310**	*eP*	**P**	**10 12 46.0 -1.3**
LOMF	**Lomont**	**46.49**	**310**	*eP*	**P**	**10 12 46.0 -1.3**
LOMF	**Lomont**	**46.49**	**310**	*eP*	**P**	**10 12 46.0 -1.3**
CAEH	**'Ain El Ouahch**	**46.51**	**296**	P	**P**	**10 12 48.0 +0.5**
CAEH	**'Ain El Ouahch**	**46.51**	**296**	P	**P**	**10 12 48.0 +0.5**
OG01	**Vacheresse**	**46.51**	**309**	*eP*	**P**	**10 12 46.4 -1.1**
OG01	**Vacheresse**	**46.51**	**309**	*eP*	**P**	**10 12 46.4 -1.1**
OG01	**Vacheresse**	**46.51**	**309**	*eP*	**P**	**10 12 46.4 -1.1**
RSL	**Roselend**	**46.52**	**308**	*eP*	**P**	**10 12 47.2 -0.4**
RSL	**Roselend**	**46.52**	**308**	*eP*	**P**	**10 12 47.2 -0.4**
RSL	**Roselend**	**46.52**	**308**	*eP*	**P**	**10 12 47.2 -0.4**
RSL	**Roselend**	**46.52**	**308**	*eP*	**P**	**10 12 47.2 -0.4**
HINF	**Hinteralfeld**	**46.52**	**311**	⇑*iP*	**P**	**10 12 46.1 -1.3**
	comp=Z,25nm,0.7s						
HINF	**Hinteralfeld**	**46.52**	**311**	⇑*iP*	**P**	**10 12 46.1 -1.3**
HINF				pmax	pmax	
	comp=Z,25nm,0.7s						
HINF	**Hinteralfeld**	**46.52**	**311**	⇑*iP*	**P**	**10 12 46.1 -1.3**
	comp=Z,25nm,0.7s						
HINF	**Hinteralfeld**	**46.52**	**311**	⇑*iP*	**P**	**10 12 46.1 -1.3**
	comp=Z,12nm,0.7s						
LMR	**La Mourre**	**46.52**	**305**	⇑*iP*	**P**	**10 12 45.8 -1.6**
	comp=Z,15nm,0.8s						
LMR	**La Mourre**	**46.52**	**305**	⇑*iP*	**P**	**10 12 45.8 -1.6**
LMR				pmax	pmax	
	comp=Z,15nm,0.8s						
LMR	**La Mourre**	**46.52**	**305**	⇑*iP*	**P**	**10 12 45.8 -1.6**
	comp=Z,15nm,0.8s						
LMR	**La Mourre**	**46.52**	**305**	⇑*iP*	**P**	**10 12 45.8 -1.6**
	comp=Z,7.7nm,0.8s						
IBBN	**Ibbenburen**	**46.55**	**317**	*eP*	**P**	**10 12 48.4 +0.9**
	comp=Z,155nm,1.0s						
RUP	**Ruppelstein**	**46.59**	**313**	*eP*	**P**	**10 12 47.6 -0.3**
RUP	**Ruppelstein**	**46.59**	**313**	*eP*	**P**	**10 12 47.6 -0.3**
RUP	**Ruppelstein**	**46.59**	**

NB2 **NORSAR Subarra** **47.12 329** P **P** **10 12 51.5 -0.5**
baz=110,slow=7.9
NB2 **NORSAR Subarra** **47.12 329** P **P** **10 12 51.5 -0.5**
comp=Z,98nm,0.7s,baz=110,slow=7.9
NB2 **NORSAR Subarra** **47.12 329** P **P** **10 12 51.5 -0.5**
comp=Z,98nm,0.7s,baz=110,slow=7.8,SNR=83
NOA **NORSAR Array B** **47.12 329** P **P** **10 12 51.2 -0.7**
NOA **NORSAR Array B** **47.12 329** P **P** **10 12 51.2 -0.7**
comp=Z,93nm,0.8s,baz=120,slow=7.2,SNR=302
NOA LR LR 10 35 11.6
comp=Z,279nm,20.7s,baz=105,slow=39
NOA **NORSAR Array B** **47.12 329** P **P** **10 12 51.2 -0.7**
THEF **They Montfort** **47.13 311** *eP* **P** **10 12 51.1 -1.1**
THEF **They Montfort** **47.13 311** *eP* **P** **10 12 51.1 -1.1**
THEF **They Montfort** **47.13 311** *eP* **P** **10 12 51.1 -1.1**
THEF **They Montfort** **47.13 311** *eP* **P** **10 12 51.1 -1.1**
WLF **Walferdange** **47.17 313** P **P** **10 12 52.8 +0.3**
comp=Z,52nm,0.9s
WLF **Walferdange** **47.17 313** *eP* **P** **10 12 52.7 +0.3**
WLF pmax pmax
comp=Z,78nm,0.8s
WLF **Walferdange** **47.17 313** *eP* **P** **10 12 52.8 +0.3**
comp=Z,69nm,0.7s
WLF **Walferdange** **47.17 313** *eP* **P** **10 12 52.7 +0.3**
comp=Z,78nm,0.8s
WLF **Walferdange** **47.17 313** P **P** **10 12 52.7 +0.3**
comp=Z,52nm,0.9s
NAO01 **NORSAR Array S** **47.20 329** *eP* **P** **10 12 51.9 -0.7**
comp=Z,104nm,0.9s
NAO01 **NORSAR Array S** **47.20 329** *eP* **P** **10 12 51.8 -0.7**
comp=Z,104nm,0.9s
SMRF **Simiane la Rot** **47.20 305**⇑*iP* **P** **10 12 51.6 -1.2**
comp=Z,26nm,0.6s
SMRF **Simiane la Rot** **47.20 305**⇑*iP* **P** **10 12 51.6 -1.2**
comp=Z,26nm,0.6s
SMRF **Simiane la Rot** **47.20 305**⇑*iP* **P** **10 12 51.6 -1.2**
comp=Z,13nm,0.6s
OG35 **Corcelles** **47.27 308** *eP* **P** **10 12 52.1 -1.2**
PAGF **Fort de Pagny** **47.34 312** *eP* **P** **10 12 53.5 -0.2**
comp=Z,63nm,1.1s
PAGF **Fort de Pagny** **47.34 312** *eP* **P** **10 12 53.5 -0.2**
comp=Z,63nm,1.1s
PAGF **Fort de Pagny** **47.34 312** *eP* **P** **10 12 53.5 -0.2**
comp=Z,32nm,1.1s
MEM **Membach** **47.37 315** P **P** **10 12 54.9 +0.9**
comp=Z,57nm,1.1s
HGN **Heimansgroeve** **47.44 315** *eP* **P** **10 12 55.0 +0.5**
comp=Z,57nm,0.7s
HOMB **Homborsund** **47.52 325** *eP* **P** **10 12 55.2 +0.3**
HOMB **Homborsund** **47.52 325** *eP* **P** **10 12 55.2 +0.3**
SNR=34
BEBN **Eben Emael** **47.60 315** P **P** **10 12 56.7 +1.0**
SET **Setif** **47.73 295** P **P** **10 12 57.0 -0.1**
SET **Setif** **47.73 295** P **P** **10 12 57.0 -0.1**
SFTF **Sexfontaines** **47.76 311**⇑*iP* **P** **10 12 56.7 -0.4**
comp=Z,337nm,0.8s
SFTF **Sexfontaines** **47.76 311**⇑*iP* **P** **10 12 56.7 -0.4**
comp=Z,337nm,0.8s
SFTF **Sexfontaines** **47.76 311**⇑*iP* **P** **10 12 56.7 -0.4**
comp=Z,168nm,0.8s
MEZF **Maizieres J'vi** **47.78 312**⇑*iP* **P** **10 12 56.9 -0.2**
comp=Z,90nm,0.7s
MEZF **Maizieres J'vi** **47.78 312**⇑*iP* **P** **10 12 56.9 -0.2**
comp=Z,90nm,0.7s
MEZF **Maizieres J'vi** **47.78 312**⇑*iP* **P** **10 12 56.9 -0.2**
comp=Z,45nm,0.7s
BCLA **Clavier** **47.80 314** P **P** **10 12 58.1 +0.8**
comp=Z,43nm,1.7s
VIVF **Saint-Julien-l** **47.86 307**⇑*iP* **P** **10 12 56.8 -1.1**
comp=Z,139nm,0.8s
VIVF **Saint-Julien-l** **47.86 307**⇑*iP* **P** **10 12 56.8 -1.1**
VIVF pmax pmax
comp=Z,139nm,0.8s
VIVF **Saint-Julien-l** **47.86 307**⇑*iP* **P** **10 12 56.8 -1.1**
comp=Z,139nm,0.8s
VIVF **Saint-Julien-l** **47.86 307**⇑*iP* **P** **10 12 56.8 -1.1**
comp=Z,70nm,0.8s
MRIV **Mauritius Mete** **47.91 185** *eP* **P** **10 12 58.5 +0.1**
MRIV *epP* **pP** **10 13 16.5 -0.1**
MRIV **Mauritius Mete** **47.91 185** *eP* **P** **10 12 58.5 +0.1**
MRIV *epP* **pP** **10 13 16.5 -0.1**
SSB **Saint Sauveur** **47.96 307** *eP* **P** **10 12 57.8 -0.9**
SSB **Saint Sauveur** **47.96 307** *eP* **P** **10 12 57.8 -0.9**
MOR8 **Moi Rana** **48.04 336** *eP* **P** **10 12 58.0 -0.9**
MOR8 AMB AMB 10 13 00.7
comp=Z,186nm,1.4s
MOR8 **Moi Rana** **48.04 336** *eP* **P** **10 12 58.0 -0.9**
comp=Z,186nm,1.4s,SNR=34
GIVF **Givet** **48.07 314**⇑*iP* **P** **10 13 00.2 +0.8**
comp=Z,304nm,0.9s
GIVF **Givet** **48.07 314**⇑*iP* **P** **10 13 00.2 +0.8**
GIVF pmax pmax
comp=Z,304nm,0.9s
GIVF **Givet** **48.07 314**⇑*iP* **P** **10 13 00.2 +0.8**
comp=Z,304nm,0.9s
GIVF **Givet** **48.07 314**⇑*iP* **P** **10 13 00.2 +0.8**
comp=Z,152nm,0.9s
SNART **Snartemo** **48.20 325** *eP* **P** **10 12 58.8 -1.4**
SNART AMB AMB 10 13 01.4
comp=Z,96nm,1.3s
NSS **Namsos** **48.20 334**⇑*iP* P 10 12 56.6 -3.6
NSS AMB AMB 10 12 58.3
comp=Z,83nm,0.9s
DOU **Dourbes** **48.22 314** P **P** **10 13 01.3 +0.8**
comp=Z,41nm,1.0s
TBLU **Trondheim** **48.37 332** *eP* P 10 12 54.3 -7.2
LASF **Ste Croix** **48.44 306**⇑*iP* **P** **10 13 01.6 -0.8**
comp=Z,119nm,0.8s
LASF **Ste Croix** **48.44 306**⇑*iP* **P** **10 13 01.6 -0.8**
comp=Z,119nm,0.8s
LASF **Ste Croix** **48.44 306**⇑*iP* **P** **10 13 01.6 -0.8**
comp=Z,60nm,0.8s
SNF **Seneffe** **48.45 314** P **P** **10 13 03.2 +0.9**
comp=Z,45nm,1.6s
BAIF **Baives** **48.46 314**⇑*iP* **P** **10 13 03.1 +0.7**
comp=Z,219nm,0.9s
BAIF **Baives** **48.46 314**⇑*iP* **P** **10 13 03.1 +0.7**
BAIF pmax pmax
comp=Z,219nm,0.9s
BAIF **Baives** **48.46 314**⇑*iP* **P** **10 13 03.1 +0.7**
comp=Z,219nm,0.9s
BAIF **Baives** **48.46 314**⇑*iP* **P** **10 13 03.1 +0.7**
comp=Z,110nm,0.9s
ABPO **Ambohimpanom** **48.48 198** *eP* **P** **10 13 03.3 +0.3**
ABPO *e**PP **pP** **10 13 20.0 -1.2**
ABPO *e**SP **sP** **10 13 29.0 -0.5**
ABPO pmax pmax
comp=Z,105nm,1.9s
ABPO **Ambohimpanom** **48.48 198** *eP* **P** **10 13 03.3 +0.3**
comp=Z,105nm,1.9s
ABPO *epP* **pP** **10 13 20.0 -1.2**
ABPO *esP* **sP** **10 13 29.0 -0.5**
ABPO **Ambohimpanom** **48.48 198** *eP* **P** **10 13 03.3 +0.3**
comp=Z,105nm,1.9s
ABPO *epP* **pP** **10 13 20.0 -1.2**
SMF **Signal de Mont** **48.49 309**⇑*iP* **P** **10 13 02.0 -0.7**
comp=Z,392nm,0.8s
SMF **Signal de Mont** **48.49 309**⇑*iP* **P** **10 13 02.0 -0.7**
SMF pmax pmax
comp=Z,392nm,0.8s
SMF **Signal de Mont** **48.49 309**⇑*iP* **P** **10 13 02.0 -0.7**
comp=Z,392nm,0.8s
SMF **Signal de Mont** **48.49 309**⇑*iP* **P** **10 13 02.0 -0.7**
comp=Z,196nm,0.8s
FLOS **Flostrand** **48.50 336**⇑*iP* **P** **10 13 02.4 0.0**
FLOS AMB AMB 10 13 04.8
comp=Z,629nm,1.1s
LOR **Lormes** **48.50 310**⇑*iP* **P** **10 13 01.9 -0.9**
comp=Z,125nm,0.9s
LOR *eR*
comp=Z,117nm,21.8s
LOR **Lormes** **48.50 310**⇑*iP* **P** **10 13 01.9 -0.9**
comp=Z,125nm,0.9s
LOR **Lormes** **48.50 310**⇑*iP* **P** **10 13 01.9 -0.9**
comp=Z,62nm,0.9s
TRO **Tromso** **48.52 342**⇑*iP* **P** **10 13 02.4 -0.1**
TRO AMB AMB 10 13 03.6
comp=Z,272nm,1.1s
TRO **Tromso** **48.52 342**⇑*iP* **P** **10 13 02.4 -0.1**
comp=Z,272nm,1.1s,SNR=34
STOK **Stokkvaagen** **48.62 336** *eP* **P** **10 13 03.6 +0.3**
STOK AMB AMB 10 13 06.0
comp=N,148nm,1.0s
STEI **Steigen** **48.66 339** *eP* **P** **10 13 03.2 -0.4**
STEI AMB AMB 10 13 06.1
comp=Z,103nm,1.3s

KONS **Konsvik** **48.66 336** *eP* P 10 12 58.4 -5.2
KONS AMB AMB 10 12 59.7
comp=Z,318nm,1.2s
SSF **Saint Saulge** **48.73 310**⇑*iP* **P** **10 13 03.9 -0.7**
comp=Z,180nm,0.8s
SSF **Saint Saulge** **48.73 310**⇑*iP* **P** **10 13 03.9 -0.7**
SSF pmax pmax
comp=Z,180nm,0.8s
SSF **Saint Saulge** **48.73 310**⇑*iP* **P** **10 13 03.9 -0.7**
comp=Z,180nm,0.8s
SSF **Saint Saulge** **48.73 310**⇑*iP* **P** **10 13 03.9 -0.7**
comp=Z,90nm,0.8s
AVF **Avril sur Loir** **48.83 309**⇑*iP* **P** **10 13 04.4 -0.9**
comp=Z,81nm,0.8s
AVF **Avril sur Loir** **48.83 309**⇑*iP* **P** **10 13 04.4 -0.9**
AVF pmax pmax
comp=Z,81nm,0.8s
AVF **Avril sur Loir** **48.83 309**⇑*iP* **P** **10 13 04.4 -0.9**
comp=Z,81nm,0.8s
AVF **Avril sur Loir** **48.83 309**⇑*iP* **P** **10 13 04.4 -0.9**
comp=Z,40nm,0.8s
BLS5 **Blasjo** **48.86 326** *eP* **P** **10 13 06.1 +0.8**
BLS5 AMB AMB 10 13 08.6
comp=Z,63nm,1.0s
BLS5 **Blasjo** **48.86 326** *eP* **P** **10 13 06.1 +0.8**
comp=Z,63nm,1.0s,SNR=34
LBL **Lubilhac** **48.88 307** *eP* **P** **10 13 05.2 -0.6**
LBL **Lubilhac** **48.88 307** *eP* **P** **10 13 05.2 -0.6**
LBL **Lubilhac** **48.88 307** *eP* **P** **10 13 05.2 -0.6**
LBL **Lubilhac** **48.88 307** *eP* **P** **10 13 05.2 -0.6**
ODD1 **Odda** **48.91 327** *eP* **P** **10 13 06.9 +1.2**
ODD1 AMB AMB 10 13 10.0
comp=Z,169nm,1.2s
ODD1 **Odda** **48.91 327** *eP* **P** **10 13 06.9 +1.2**
comp=Z,169nm,1.2s,SNR=34
AGO **Saint Agoulin** **48.97 308** *eP* **P** **10 13 05.9 -0.5**
AGO **Saint Agoulin** **48.97 308** *eP* **P** **10 13 05.9 -0.5**
AGO **Saint Agoulin** **48.97 308** *eP* **P** **10 13 05.9 -0.5**
PYM **Petit Puy Mans** **49.05 308** *eP* **P** **10 13 06.8 -0.3**
PYM **Petit Puy Mans** **49.05 308** *eP* **P** **10 13 06.8 -0.3**
PYM **Petit Puy Mans** **49.05 308** *eP* **P** **10 13 06.8 -0.3**
PYM **Petit Puy Mans** **49.05 308** *eP* **P** **10 13 06.8 -0.3**
HIA **Hailar** **49.09 48** *eP* **P** **10 13 09.0 +1.8**
comp=Z,146nm,1.2s
HIA *epP* **pP** **10 13 25.7 +0.2**
HIA **Hailar** **49.09 48** *eP* **P** **10 13 09.0 +1.8**
comp=Z,146nm,1.2s
HIA *epP* **pP** **10 13 25.7 +0.2**
BGF **Bois d'Agland** **49.17 309**⇑*iP* **P** **10 13 07.3 -0.6**
comp=Z,104nm,0.8s
BGF **Bois d'Agland** **49.17 309**⇑*iP* **P** **10 13 07.3 -0.6**
BGF pmax pmax
comp=Z,104nm,0.8s
BGF **Bois d'Agland** **49.17 309**⇑*iP* **P** **10 13 07.3 -0.6**
comp=Z,104nm,0.8s
BGF **Bois d'Agland** **49.17 309**⇑*iP* **P** **10 13 07.3 -0.6**
comp=Z,52nm,0.8s
MOL **Molde** **49.29 330**⇑*iP* **P** **10 13 08.8 +0.3**
MOL AMB AMB 10 13 09.1
comp=Z,58nm,0.4s
MOL **Molde** **49.29 330**⇑*iP* **P** **10 13 08.8 +0.3**
comp=Z,58nm,0.4s,SNR=34
HYF **Humbligny** **49.33 310**⇑*iP* **P** **10 13 09.0 -0.1**
HYF **Humbligny** **49.33 310**⇑*iP* **P** **10 13 09.0 -0.1**
HYF **Humbligny** **49.33 310**⇑*iP* **P** **10 13 09.0 -0.1**
FRNF **Fournols** **49.36 307** *eP* **P** **10 13 09.6 +0.2**
FRNF **Fournols** **49.36 307** *eP* **P** **10 13 09.6 +0.2**
FRNF **Fournols** **49.36 307** *eP* **P** **10 13 09.6 +0.2**
VERF **Verneugheol** **49.42 308** *eP* **P** **10 13 09.7 -0.2**
VERF **Verneugheol** **49.42 308** *eP* **P** **10 13 09.7 -0.2**
VERF **Verneugheol** **49.42 308** *eP* **P** **10 13 09.7 -0.2**
FILF **Fillols** **49.43 304** *eP* **P** **10 13 09.8 -0.2**
FILF **Fillols** **49.43 304** *eP* **P** **10 13 09.8 -0.2**
FILF **Fillols** **49.43 304** *eP* **P** **10 13 09.8 -0.2**
LRDF **Laroque-de-Fa** **49.43 304** *eP* **P** **10 13 09.6 -0.3**
LRDF **Laroque-de-Fa** **49.43 304** *eP* **P** **10 13 09.6 -0.3**
LRDF **Laroque-de-Fa** **49.43 304** *eP* **P** **10 13 09.6 -0.3**
NJ2 **Nanjing** **49.46 70** *eP* **P** **10 13 10.5 +0.2**
NJ2 S **S** **10 20 07.0 -5.4**
NJ2 pmax pmax
comp=Z,30nm,0.6s
NJ2 pmax pmax
comp=Z,220nm,5.2s
NJ2 LR LR
comp=N,280nm,23.7s
NJ2 LR LR
comp=E,150nm,22.8s
NJ2 LR LR
comp=Z,110nm,15.6s
HYA **Hoyanger** **49.47 328** *eP* **P** **10 13 10.5 +0.6**
HYA AMB AMB 10 13 11.6
comp=Z,165nm,0.8s
TCF **Toulx Ste Croi** **49.61 309**⇑*iP* **P** **10 13 10.8 -0.5**
comp=Z,88nm,0.8s
TCF **Toulx Ste Croi** **49.61 309**⇑*iP* **P** **10 13 10.8 -0.5**
TCF pmax pmax
comp=Z,88nm,0.8s
TCF **Toulx Ste Croi** **49.61 309**⇑*iP* **P** **10 13 10.8 -0.5**
comp=Z,88nm,0.8s
TCF **Toulx Ste Croi** **49.61 309**⇑*iP* **P** **10 13 10.8 -0.5**
comp=Z,44nm,0.8s
MTLF **Montolieu** **49.65 305**⇑*iP* **P** **10 13 11.2 -0.4**
comp=Z,108nm,0.7s
MTLF **Montolieu** **49.65 305**⇑*iP* **P** **10 13 11.2 -0.4**
MTLF pmax pmax
comp=Z,108nm,0.7s
MTLF **Montolieu** **49.65 305**⇑*iP* **P** **10 13 11.2 -0.4**
comp=Z,108nm,0.7s
MTLF **Montolieu** **49.65 305**⇑*iP* **P** **10 13 11.2 -0.4**
comp=Z,54nm,0.7s
RUND **Rundenannen** **49.65 327** *eP* **P** **10 13 10.8 -0.5**
RUND AMB AMB 10 13 12.3
comp=Z,402nm,1.2s
BER **Bergen** **49.66 327** *eP* **P** **10 13 10.8 -0.5**
BER AMB AMB 10 13 12.2
comp=Z,241nm,1.1s
BER **Bergen** **49.66 327** *eP* **P** **10 13 10.9 -0.5**
comp=Z,241nm,1.1s,SNR=34
EGD **Espegrend** **49.68 327** *eP* **P** **10 13 11.2 -0.3**
EGD AMB AMB 10 13 12.4
comp=Z,213nm,1.3s
EMHD **Djebel Mahouad** **49.69 295** P **P** **10 13 12.5 +0.3**
EMHD **Djebel Mahouad** **49.69 295** P **P** **10 13 12.5 +0.3**
CAF **Calviac** **49.72 307**⇑*iP* **P** **10 13 11.8 -0.3**
comp=Z,144nm,0.8s
CAF **Calviac** **49.72 307**⇑*iP* **P** **10 13 11.8 -0.3**
CAF pmax pmax
comp=Z,144nm,0.8s
CAF **Calviac** **49.72 307**⇑*iP* **P** **10 13 11.8 -0.3**
comp=Z,144nm,0.8s
CAF **Calviac** **49.72 307**⇑*iP* **P** **10 13 11.8 -0.3**
comp=Z,72nm,0.8s
ASK **Askoy** **49.75 327** *eP* **P** **10 13 11.6 -0.5**
ASK AMB AMB 10 13 12.8
comp=Z,316nm,1.3s
RJF **Les Rejaudoux** **50.10 307**⇑*iP* **P** **10 13 14.9 -0.1**
comp=Z,148nm,0.6s
RJF *eR*
comp=Z,103nm,22.8s
RJF **Les Rejaudoux** **50.10 307**⇑*iP* **P** **10 13 14.9 -0.1**
RJF pmax pmax
comp=Z,148nm,0.6s
RJF **Les Rejaudoux** **50.10 307**⇑*iP* **P** **10 13 14.9 -0.1**
comp=Z,148nm,0.6s
RJF **Les Rejaudoux** **50.10 307**⇑*iP* **P** **10 13 14.9 -0.1**
comp=Z,74nm,0.6s
SUE **Sulen** **50.11 328** *eP* **P** **10 13 15.0 +0.3**
SUE AMB AMB 10 13 16.3
comp=Z,108nm,0.9s
SUE **Sulen** **50.11 328** *eP* **P** **10 13 15.0 +0.3**
comp=Z,108nm,0.9s,SNR=33
TAM **Tamanrasset** **50.46 278** *eP* **P** **10 13 18.5 +0.3**
TAM *e**SP **sP** **10 13 44.5 -0.3**
TAM pmax pmax
comp=Z,34nm,0.9s
TAM **Tamanrasset** **50.46 278** *eP* **P** **10 13 18.5 +0.3**
comp=Z,34nm,0.9s
TAM *esP* **sP** **10 13 44.5 -0.3**
TAM **Tamanrasset** **50.46 278** *eP* **P** **10 13 18.5 +0.3**
comp=Z,34nm,0.9s
TAM *esP* **sP** **10 13 44.5 -0.3**
MLS **Moulis** **50.49 304** *eP* **P** **10 13 16.9 -1.0**
MLS **Moulis** **50.49 304** *eP* **P** **10 13 16.9 -1.0**
MLS **Moulis** **50.49 304** *eP* **P** **10 13 16.9 -1.0**
LFF **La Frestale** **50.66 307**⇑*iP* **P** **10 13 19.0 -0.2**
comp=Z,279nm,0.7s
LFF **La Frestale** **50.66 307**⇑*iP* **P** **10 13 19.0 -0.2**
LFF pmax pmax
comp=Z,279nm,0.7s
LFF **La Frestale** **50.66 307**⇑*iP* **P** **10 13 19.0 -0.2**
comp=Z,279nm,0.7s
LFF **La Frestale** **50.66 307**⇑*iP* **P** **10 13 19.0 -0.2**
comp=Z,139nm,0.7s
EBNR **Beni Rached** **50.82 296** P **P** **10 13 20.0 -0.6**
EBNR **Beni Rached** **50.82 296** P **P** **10 13 20.0 -0.6**
EPF **Esparros** **51.03 304**⇑*iP* **P** **10 13 20.4 -1.7**
comp=Z,14nm,0.6s
EPF **Esparros** **51.03 304**⇑*iP* **P** **10 13 20.4 -1.7**
EPF pmax pmax
comp=Z,14nm,0.6s
EPF **Esparros** **51.03 304**⇑*iP* **P** **10 13 20.4 -1.7**
comp=Z,14nm,0.6s
EPF **Esparros** **51.03 304**⇑*iP* **P** **10 13 20.4 -1.7**
comp=Z,6.9nm,0.6s
RESF **Ens** **51.05 304** *eP* **P** **10 13 21.9 -0.4**
RESF **Ens** **51.05 304** *eP* **P** **10 13 21.9 -0.4**
RESF **Ens** **51.05 304** *eP* **P** **10 13 21.9 -0.4**
LDF **La Druitiere** **51.21 312**⇑*iP* **P** **10 13 22.7 -0.6**
comp=Z,239nm,0.6s
LDF **La Druitiere** **51.21 312**⇑*iP* **P** **10 13 22.7 -0.6**
LDF pmax pmax
comp=Z,239nm,0.6s
LDF **La Druitiere** **51.21 312**⇑*iP* **P** **10 13 22.7 -0.6**
comp=Z,239nm,0.6s
LDF **La Druitiere** **51.21 312**⇑*iP* **P** **10 13 22.7 -0.6**
comp=Z,120nm,0.6s
MFF **Saint Martin d** **51.24 309**⇑*iP* **P** **10 13 22.7 -0.8**
comp=Z,124nm,1.1s
MFF **Saint Martin d** **51.24 309**⇑*iP* **P** **10 13 22.7 -0.8**
MFF pmax pmax
comp=Z,124nm,1.1s
MFF **Saint Martin d** **51.24 309**⇑*iP* **P** **10 13 22.7 -0.8**
comp=Z,124nm,1.1s
MFF **Saint Martin d** **51.24 309**⇑*iP* **P** **10 13 22.7 -0.8**
comp=Z,62nm,1.1s
VIEF **Viey** **51.28 304** *eP* **P** **10 13 23.5 -0.5**
VIEF **Viey** **51.28 304** *eP* **P** **10 13 23.5 -0.5**
VIEF **Viey** **51.28 304** *eP* **P** **10 13 23.5 -0.5**
FLN **La Foliniere** **51.45 312**⇑*iP* **P** **10 13 24.6 -0.5**
comp=Z,314nm,0.8s
FLN *eR*
comp=Z,204nm,22.0s
FLN **La Foliniere** **51.45 312**⇑*iP* **P** **10 13 24.6 -0.5**
FLN pmax pmax
comp=Z,314nm,0.8s
FLN **La Foliniere** **51.45 312**⇑*iP* **P** **10 13 24.6 -0.5**
comp=Z,314nm,0.8s
FLN **La Foliniere** **51.45 312**⇑*iP* **P** **10 13 24.6 -0.5**
comp=Z,157nm,0.8s
BJO **Bjornoya** **51.52 347** *eP* **P** **10 13 24.2 -0.9**
BJO **Bjornoya** **51.52 347** *eP* **P** **10 13 24.2 -0.9**
SNR=33
REYF **Montagne du Re** **51.57 304** *eP* **P** **10 13 26.0 -0.1**
REYF **Montagne du Re** **51.57 304** *eP* **P** **10 13 26.0 -0.1**
REYF **Montagne du Re** **51.57 304** *eP* **P** **10 13 26.0 -0.1**
ETSF **Etsaut** **51.70 304**⇑*iP* **P** **10 13 27.0 -0.1**
comp=Z,140nm,1.0s
ETSF **Etsaut** **51.70 304**⇑*iP* **P** **10 13 27.0 -0.1**
ETSF pmax pmax
comp=Z,140nm,1.0s
ETSF **Etsaut** **51.70 304**⇑*iP* **P** **10 13 27.0 -0.1**
comp=Z,140nm,1.0s
ETSF **Etsaut** **51.70 304**⇑*iP* **P** **10 13 27.0 -0.1**
comp=Z,70nm,1.0s
GRR **Gorron** **51.70 311**⇑*iP* **P** **10 13 26.2 -0.7**
comp=Z,155nm,0.7s
GRR **Gorron** **51.70 311**⇑*iP* **P** **10 13 26.2 -0.7**
GRR pmax pmax
comp=Z,155nm,0.7s
GRR **Gorron** **51.70 311**⇑*iP* **P** **10 13 26.2 -0.7**
comp=Z,155nm,0.7s
GRR **Gorron** **51.70 311**⇑*iP* **P** **10 13 26.2 -0.7**
comp=Z,77nm,0.7s
LARF **Larrau** **52.01 304** *eP* **P** **10 13 29.4 +0.1**
LARF **Larrau** **52.01 304** *eP* **P** **10 13 29.4 +0.1**
LARF **Larrau** **52.01 304** *eP* **P** **10 13 29.4 +0.1**
SJPF **Ste Jean** **52.17 305**⇑*iP* **P** **10 13 30.6 0.0**
comp=Z,118nm,0.6s
SJPF **Ste Jean** **52.17 305**⇑*iP* **P** **10 13 30.6 0.0**
SJPF pmax pmax
comp=Z,118nm,0.6s
SJPF **Ste Jean** **52.17 305**⇑*iP* **P** **10 13 30.6 0.0**
comp=Z,118nm,0.6s
SJPF **Ste Jean** **52.17 305**⇑*iP* **P** **10 13 30.6 0.0**
comp=Z,59nm,0.6s
KBI1 **Birley Grange** **52.26 317** *eP* **P** **10 13 30.6 -0.4**
KBI1 **Birley Grange** **52.26 317** P **P** **10 13 30.6 -0.4**
KBI1 **Birley Grange** **52.26 317** *eP* **P** **10 13 30.6 -0.4**
SWN1 **Swindon** **52.35 315** *eP* **P** **10 13 32.0 +0.3**
SWN1 AMB AMB 10 13 33.1
comp=Z,274nm,1.6s
SWN1 **Swindon** **52.35 315** P **P** **10 13 32.0 +0.3**
SWN1 AMB AMB 10 13 33.1
comp=Z,274nm,1.6s
SWN1 **Swindon** **52.35 315** *eP* **P** **10 13 32.0 +0.3**
JSA **Saint Aubin** **52.57 312** *eP* **P** **10 13 32.9 -0.4**
JSA AMB AMB 10 13 34.1
comp=Z,86nm,0.8s
JSA **Saint Aubin** **52.57 312** P **P** **10 13 32.9 -0.4**
JSA AMB AMB 10 13 34.1
comp=Z,86nm,0.8s
JSA **Saint Aubin** **52.57 312** *eP* **P** **10 13 32.9 -0.4**
XAL **Allendale** **52.76 319**⇑*eP* **P** **10 13 35.1 +0.4**
XAL **Allendale** **52.76 319** P **P** **10 13 35.1 +0.4**
XAL **Allendale** **52.76 319**⇑*eP* **P** **10 13 35.1 +0.4**
LRW **Lerwick** **52.78 326** *eP* **P** **10 13 34.3 -0.4**
LRW AMB AMB 10 13 35.8
comp=Z,222nm,1.0s
LRW **Lerwick** **52.78 326** P **P** **10 13 34.3 -0.4**
LRW AMB AMB 10 13 35.8
comp=Z,222nm,1.0s
LRW **Lerwick** **52.78 326** *eP* **P** **10 13 34.3 -0.4**
CLNS **Chul'man** **52.80 38** *eP* **P** **10 13 35.6 +0.6**
CLNS *e* 10 14 44.0
CLNS *e* 10 15 34.4
CLNS *e*PPP PPP 10 16 41.0
CLNS *e*SS S 10 21 04.4 +6.5
CLNS *e*SSS SSS 10 26 26.8
CLNS pmax pmax
comp=Z,98nm,0.8s
CLNS pmax pmax
comp=E,49nm,0.9s
CLNS pmax pmax
comp=N,18nm,0.8s
CLNS pmax pmax
comp=Z,6.0nm,0.8s
CLNS pmax pmax
comp=N,2.0nm,0.6s
CLNS pmax pmax
comp=E,8.0nm,1.0s
CLNS smax smax
comp=E,189nm,13.9s
CLNS smax smax
comp=N,56nm,13.9s
CLNS MLR MLR
comp=Z,157nm,14.0s
CLNS MLR MLR
comp=E,282nm,12.0s
CLNS MLR MLR
comp=N,61nm,11.0s
SGMF **Saint Gilles** **52.84 311**⇑*iP* **P** **10 13 35.3 -0.1**
comp=N,134nm,0.6s
SGMF **Saint Gilles** **52.84 311**⇑*iP* **P** **10 13 35.3 -0.1**
SGMF pmax pmax
comp=Z,134nm,0.6s
SGMF **Saint Gilles** **52.84 311**⇑*iP* **P** **10 13 35.3 -0.1**
comp=Z,134nm,0.6s
SGMF **Saint Gilles** **52.84 311**⇑*iP* **P** **10 13 35.3 -0.1**
comp=Z,67nm,0.6s
ESY **Stoneypath** **53.06 321**⇑*eP* **P** **10 13 36.9 -0.1**
ESY **Stoneypath** **53.06 321** P **P** **10 13 36.9 -0.1**
ESY **Stoneypath** **53.06 321**⇑*eP* **P** **10 13 36.8 -0.1**
DRUM **Mains of Drumt** **53.08 322** *eP* **P** **10 13 36.4 -0.6**
DRUM AMB AMB 10 13 38.1
comp=Z,105nm,1.2s
DRUM **Mains of Drumt** **53.08 322** P **P** **10 13 36.4 -0.6**
DRUM AMB AMB 10 13 38.1
comp=Z,105nm,1.2s
DRUM **Mains of Drumt** **53.08 322** *eP* **P** **10 13 36.3 -0.6**
CN2 **Changchun** **53.08 54** *eP* **P** **10 13 38.3 +1.1**

CN2 eS S 10 21 00.0 -2.0
CN2 pmax pmax
comp=Z,40nm,1.0s
MCH1 Michaelchurch 53.11 316⇑ eP P 10 13 36.8 -0.4
MCH1 AMB AMB 10 13 39.0
comp=Z,86nm,1.8s
MCH1 Michaelchurch 53.11 316 P P 10 13 36.8 -0.4
MCH1 AMB AMB 10 13 39.0
comp=Z,86nm,1.8s
MCH1 Michaelchurch 53.11 316⇑ eP P 10 13 36.8 -0.4
FOEL Foel Wylfa 53.25 317 eP P 10 13 38.5 +0.1
FOEL AMB AMB 10 13 39.3
comp=Z,120nm,1.3s
FOEL Foel Wylfa 53.25 317 P P 10 13 38.5 +0.1
FOEL AMB AMB 10 13 39.3
comp=Z,120nm,1.3s
FOEL Foel Wylfa 53.25 317 eP P 10 13 38.5 +0.1
QUIF Quistinic 53.26 311⇑ iP P 10 13 38.1 -0.3
comp=Z,209nm,0.7s
QUIF Quistinic 53.26 311⇑ iP P 10 13 38.1 -0.3
QUIF pmax pmax
comp=Z,209nm,0.7s
QUIF Quistinic 53.26 311⇑ iP P 10 13 38.1 -0.3
comp=Z,209nm,0.7s
QUIF Quistinic 53.26 311⇑ iP P 10 13 38.1 -0.3
comp=Z,104nm,0.7s
KESW Keswick, Cumbr 53.26 319 eP P 10 13 38.3 -0.1
KESW AMB AMB 10 13 39.8
comp=Z,104nm,1.4s
KESW Keswick, Cumbr 53.26 319 P P 10 13 38.3 -0.1
KESW AMB AMB 10 13 39.8
comp=Z,104nm,1.4s
KESW Keswick, Cumbr 53.26 319 eP P 10 13 38.3 -0.1
EBL Broad Law 53.30 320⇑ eP P 10 13 38.5 -0.1
EBL Broad Law 53.30 320 P P 10 13 38.5 -0.1
EBL Broad Law 53.30 320⇑ eP P 10 13 38.5 -0.1
ECK Cauldkaine Hil 53.31 320⇑ iP P 10 13 38.2 -0.5
ECK Cauldkaine Hil 53.31 320 P P 10 13 38.2 -0.5
ECK Cauldkaine Hil 53.31 320⇑ iP P 10 13 38.2 -0.5
ROSF Rostrenen 53.31 311⇑ iP P 10 13 38.7 -0.2
comp=Z,252nm,0.9s
ROSF Rostrenen 53.31 311⇑ iP P 10 13 38.7 -0.2
ROSF pmax pmax
comp=Z,252nm,0.9s
ROSF Rostrenen 53.31 311⇑ iP P 10 13 38.7 -0.2
comp=Z,252nm,0.9s
ROSF Rostrenen 53.31 311⇑ iP P 10 13 38.7 -0.2
comp=Z,126nm,0.9s
ESK Eskdalemuir 53.36 320⇑ eP P 10 13 38.8 -0.3
ESK Eskdalemuir 53.36 320 P P 10 13 38.8 -0.3
ESK Eskdalemuir 53.36 320⇑ eP P 10 13 38.8 -0.3
MME1 Meikle Cairn 53.37 322⇑ eP P 10 13 38.4 -0.7
MME1 Meikle Cairn 53.37 322 P P 10 13 38.4 -0.7
MME1 Meikle Cairn 53.37 322⇑ eP P 10 13 38.4 -0.7
LSZ Lusaka 53.55 221⇓ iP P 10 13 41.8 +0.7
LSZ Lusaka 53.55 221 eP P 10 13 41.4 +0.4
comp=Z,43nm,1.1s
LSZ epP pP 10 13 59.1 -0.5
LSZ Lusaka 53.55 221 eP P 10 13 41.4 +0.4
comp=Z,43nm,1.1s
LSZ epP pP 10 13 59.1 -0.5
MCD Coleburn Disti 53.55 323⇑ iP P 10 13 40.5 0.0
MCD Coleburn Disti 53.55 323 P P 10 13 40.5 0.0
MCD Coleburn Disti 53.55 323⇑ iP P 10 13 40.5 0.0
HEX Exmoor 53.60 315 eP P 10 13 40.2 -0.8
HEX Exmoor 53.60 315 P P 10 13 40.2 -0.8
HEX Exmoor 53.60 315 eP P 10 13 40.2 -0.8
WPM1 Penmaenmawr 53.69 317 eP P 10 13 40.8 -0.7
WPM1 Penmaenmawr 53.69 317 P P 10 13 40.8 -0.7
WPM1 Penmaenmawr 53.69 317 eP P 10 13 40.8 -0.7
WLF1 Llynfaes 53.98 317 eP P 10 13 43.9 +0.3
WLF1 AMB AMB 10 13 44.4
comp=Z,62nm,0.9s
WLF1 Llynfaes 53.98 317 P P 10 13 43.9 +0.3
WLF1 AMB AMB 10 13 44.4
comp=Z,62nm,0.9s
WLF1 Llynfaes 53.98 317 eP P 10 13 43.9 +0.3
YRE Yr Eifl 53.99 317 eP P 10 13 43.8 +0.1
YRE Yr Eifl 53.99 317 P P 10 13 43.8 +0.1
YRE Yr Eifl 53.99 317 eP P 10 13 43.8 +0.1
EAB Aberfoyle 54.05 321⇑ iP P 10 13 43.6 -0.5
EAB Aberfoyle 54.05 321 P P 10 13 43.6 -0.5
EAB Aberfoyle 54.05 321⇑ iP P 10 13 43.6 -0.5
MVH1 Achvaich 54.07 323⇑ iP P 10 13 44.0 -0.2
MVH1 Achvaich 54.07 323 P P 10 13 44.0 -0.2
MVH1 Achvaich 54.07 323⇑ iP P 10 13 44.0 -0.2
PGBU Glenifferbraes 54.11 320 eP P 10 13 45.0 +0.5
PGBU AMB AMB 10 13 45.4
comp=Z,159nm,1.3s
PGBU Glenifferbraes 54.11 320 P P 10 13 45.0 +0.5
PGBU AMB AMB 10 13 45.4
comp=Z,159nm,1.3s
PGBU Glenifferbraes 54.11 320 eP P 10 13 45.0 +0.5
MDO Dochfour 54.14 323 eP P 10 13 44.1 -0.6
MDO Dochfour 54.14 323 P P 10 13 44.1 -0.6
MDO Dochfour 54.14 323 eP P 10 13 44.1 -0.6
GAL1 Galloway 54.20 319 eP P 10 13 44.6 -0.6
GAL1 AMB AMB 10 13 46.0
comp=Z,95nm,1.2s
GAL1 Galloway 54.20 319 P P 10 13 44.6 -0.6
GAL1 AMB AMB 10 13 46.0
comp=Z,95nm,1.2s
GAL1 Galloway 54.20 319 eP P 10 13 44.6 -0.6
SPA0 Spitsbergen Ar 54.40 350 eP P 10 13 46.8 +0.4
SPA0 Spitsbergen Ar 54.40 350 eP P 10 13 46.8 +0.4
SNR=32
ESDC Sonseca Array 54.61 301 P P 10 13 48.0 -0.5
ESDC Sonseca Array 54.61 301 P P 10 13 48.1 -0.5
comp=Z,4.2nm,0.4s,baz=71,slow=7.2,SNR=43
ESDC Sonseca Array 54.61 301 P P 10 13 48.0 -0.5
ESLA Sonseca Array 54.61 301 eP P 10 13 48.2 -0.4
comp=Z,21nm,1.4s
ESLA Sonseca Array 54.61 301 eP P 10 13 48.2 -0.4
comp=Z,21nm,1.4s
KAC Achnashellach 54.64 323⇑ iP P 10 13 48.4 0.0
KAC Achnashellach 54.64 323 P P 10 13 48.4 0.0
KAC Achnashellach 54.64 323⇑ iP P 10 13 48.4 0.0
KSB Sheil Bridge 54.70 322 eP P 10 13 48.4 -0.4
KSB Sheil Bridge 54.70 322 P P 10 13 48.4 -0.4
KSB Sheil Bridge 54.70 322 eP P 10 13 48.4 -0.4
KPL Plockton 54.83 322 AMB AMB 10 13 49.6
comp=Z,123nm,2.3s
KPL eP P 10 13 49.7 0.0
KPL Plockton 54.83 322 P P 10 13 49.7 0.0
KPL Plockton 54.83 322 eP P 10 13 49.7 0.0
GMM Mts of Mourne 54.91 319 eP P 10 13 50.4 +0.1
GMM Mts of Mourne 54.91 319 P P 10 13 50.4 +0.1
GMM Mts of Mourne 54.91 319 eP P 10 13 50.4 +0.1
PAB San Pablo 54.93 300 eP P 10 13 50.6 -0.2
PAB pmax pmax
comp=Z,57nm,1.1s
PAB San Pablo 54.93 300 eP P 10 13 50.6 -0.2
comp=Z,57nm,1.1s
PAB San Pablo 54.93 300 eP P 10 13 50.6 -0.2
comp=Z,57nm,1.1s
KBS Kingsbay 55.56 350⇑ iP P 10 13 55.2 +0.5
KBS AMB AMB 10 13 57.6
comp=Z,189nm,1.2s
KBS Kingsbay 55.56 350*c* iP P 10 13 55.1 +0.5
KBS pmax pmax
comp=Z,165nm,1.2s
KBS Kingsbay 55.56 350 eP P 10 13 55.2 +0.5
comp=Z,111nm,0.8s
KBS Kingsbay 55.56 350⇑ iP P 10 13 55.2 +0.5
comp=Z,189nm,1.2s,SNR=31
YAK Yakutsk 55.72 32 eP P 10 13 55.2 -0.8
YAK e*PP pP 10 14 20.2 +5.5
YAK *e* 10 14 53.9
YAK *e* 10 16 03.0
YAK eS S 10 21 34.8 -2.0
YAK e*SS sS 10 22 00.3 -8.2
YAK *e* 10 23 34.6
YAK eSS SS 10 25 18.5 -4.2
YAK pmax pmax
comp=Z,223nm,1.2s
YAK pmax pmax
comp=E,69nm,1.5s
YAK pmax pmax
comp=N,30nm,1.5s
YAK pmax pmax
comp=Z,94nm,3.6s
YAK pmax pmax
comp=E,39nm,2.2s
YAK pmax pmax
comp=N,81nm,4.7s
YAK smax smax
comp=N,41nm,2.3s
YAK smax smax
comp=E,25nm,1.7s
YAK MLR MLR
comp=Z,271nm,18.0s
YAK MLR MLR
comp=N,78nm,17.0s
YAK MLR MLR
comp=E,72nm,12.0s
KSAR Wonju Array Be 55.79 62 P P 10 13 57.2 +0.3
KSAR pP pP 10 14 15.4 -0.2
KSAR Wonju Array Be 55.79 62 P P 10 13 57.2 +0.3
KSAR pP pP 10 14 15.4 -0.2
KSRS Korea Array 55.81 62 P P 10 13 57.2 +0.1
comp=E,15nm,0.8s,baz=273,slow=7.0,SNR=56
KSRS pP pP 10 14 15.4 -0.4
comp=E,15nm,0.7s,baz=275,slow=6.6,SNR=8.6
KSRS LR LR 10 41 45.5
comp=E,153nm,20.8s,baz=84,slow=40
MDJ Mudanjiang 55.97 53 P P 10 13 57.8 -0.3
MDJ PcP PcP 10 14 55.8 0.0
MDJ PP PP 10 16 03.3 -0.1
MDJ S S 10 21 41.5 +0.8
MDJ pmax pmax
comp=Z,23nm,1.2s
MDJ pmax pmax
comp=Z,66nm,3.8s
MDJ LR LR
comp=N,200nm,15.5s
MDJ LR LR
comp=E,100nm,6.6s
MDJ LR LR
comp=Z,260nm,11.1s
MDJ Mudanjiang 55.97 53 eP P 10 13 59.2 +1.1
comp=Z,30nm,1.2s
MDJ epP pP 10 14 16.5 -0.3
MDJ Mudanjiang 55.97 53 eP P 10 13 59.2 +1.1
comp=Z,30nm,1.2s
MDJ epP pP 10 14 16.5 -0.3
LIJA Lijar 56.21 298 *i* P P 10 13 59.0 -1.1
PBRG Braganca 56.38 304 eP P 10 14 01.2 0.0
comp=Z,65nm,1.4s
PBRG Braganca 56.38 304 eP P 10 14 01.2 0.0
comp=Z,65nm,1.4s
MVO Moncorvo 56.69 303 eP P 10 14 03.5 +0.1
comp=Z,73nm,1.3s
MVO Moncorvo 56.69 303 eP P 10 14 03.5 +0.1
comp=Z,73nm,1.3s
KLR Kul'dur 56.95 47⇓ iP P 10 14 01.6 -3.4
KLR pmax pmax
comp=E,88nm,1.0s
KLR pmax pmax
comp=Z,140nm,1.0s
PVRL Vila Real 57.19 303 eP P 10 14 07.2 +0.3
comp=Z,93nm,1.3s
PVRL Vila Real 57.19 303 eP P 10 14 07.2 +0.3
comp=Z,93nm,1.3s
MTE Manteigas 57.21 302 eP P 10 14 07.5 +0.4
comp=Z,84nm,1.9s
MTE Manteigas 57.21 302 eP P 10 14 07.5 +0.4
comp=Z,84nm,1.9s
POLO Lamas de Olo 57.23 303 eP P 10 14 07.0 -0.2
comp=Z,58nm,1.2s
POLO Lamas de Olo 57.23 303 eP P 10 14 07.0 -0.2
comp=Z,58nm,1.2s
PCBR Castelo Branco 57.26 301 eP P 10 14 07.5 +0.2
comp=Z,142nm,1.4s
PCBR Castelo Branco 57.26 301 eP P 10 14 07.5 +0.2
comp=Z,142nm,1.4s
PMRV Marv??o 57.27 301 eP P 10 14 07.2 -0.3
comp=Z,52nm,1.2s
PMRV Marv??o 57.27 301 eP P 10 14 07.2 -0.3
comp=Z,52nm,1.2s
PCAB Cabril 57.34 304 eP P 10 14 08.6 +0.6
comp=Z,92nm,1.7s
PCAB Cabril 57.34 304 eP P 10 14 08.6 +0.6
comp=Z,92nm,1.7s
TOA0 Torodi Ar. Sit 57.34 268 eP P 10 14 08.3 0.0
TOA0 epP pP 10 14 27.7 +0.7
TOA0 Torodi Ar. Sit 57.34 268 eP P 10 14 08.3 0.0
TOA0 epP pP 10 14 27.7 +0.7
TORD Torodi Ar. Bea 57.34 268 P P 10 14 08.3 +0.1
TORD pP pP 10 14 26.6 -0.4
TORD Torodi Ar. Bea 57.34 268 P P 10 14 08.3 +0.1
comp=Z,76nm,0.7s,baz=60,slow=6.4,SNR=262
TORD pP pP 10 14 26.6 -0.4
comp=Z,53nm,0.8s,baz=59,slow=6.7,SNR=9.3
TORD LR LR 10 42 24.8
comp=Z,194nm,19.5s,baz=80,slow=40
TORD Torodi Ar. Bea 57.34 268 P P 10 14 08.4 +0.1
TORD pP pP 10 14 26.6 -0.4
PVIS Viseu 57.41 302 eP P 10 14 09.0 +0.5
comp=Z,89nm,1.3s
PVIS Viseu 57.41 302 eP P 10 14 09.0 +0.5
comp=Z,89nm,1.3s
PGAV Gavieira, Arco 57.48 304 eP P 10 14 09.3 +0.3
comp=Z,120nm,1.4s
PGAV Gavieira, Arco 57.48 304 eP P 10 14 09.3 +0.3
comp=Z,120nm,1.4s
PESTR Estremoz 57.53 300 eP P 10 14 08.6 -0.7
comp=Z,35nm,1.8s
PESTR Estremoz 57.53 300 eP P 10 14 08.6 -0.7
comp=Z,35nm,1.8s
USRK Ussuriysk Arra 57.73 53 P P 10 14 10.7 +0.1
comp=Z,12nm,0.8s,baz=272,slow=6.8,SNR=20
USRK pP pP 10 14 28.4 -0.9
comp=Z,12nm,0.8s,baz=270,slow=5.7,SNR=8.2
USRK LR LR 10 41 46.7
comp=Z,270nm,20.3s,baz=34,slow=39
PBEJ Beja 57.91 299 eP P 10 14 12.0 +0.1
comp=Z,51nm,1.6s
PBEJ Beja 57.91 299 eP P 10 14 12.0 +0.1
comp=Z,51nm,1.6s
EVO Evora 57.92 300⇑ iP P 10 14 12.6 +0.6
comp=Z,34nm,0.5s
EVO eR
comp=Z,111nm,20.8s
EVO Evora 57.92 300 eP P 10 14 11.9 -0.1
comp=Z,69nm,1.6s
EVO Evora 57.92 300 eP P 10 14 11.9 -0.1
comp=Z,69nm,1.6s
PVAQ Vaqueiros 57.92 299 eP P 10 14 11.2 -0.8
comp=Z,32nm,1.8s
PVAQ Vaqueiros 57.92 299 eP P 10 14 11.2 -0.8
comp=Z,32nm,1.8s
PMTG Montargil 57.97 301 eP P 10 14 12.0 -0.4
comp=Z,63nm,1.5s
PMTG Montargil 57.97 301 eP P 10 14 12.0 -0.4
comp=Z,63nm,1.5s
EVOP Sao Brissos 58.00 300⇑ iP P 10 14 12.6 0.0
EVOP pmax pmax
comp=Z,34nm,0.5s
EVOP Sao Brissos 58.00 300⇑ iP P 10 14 12.6 0.0
comp=Z,34nm,0.5s
EVOP Sao Brissos 58.00 300⇑ iP P 10 14 12.6 0.0
comp=Z,17nm,0.5s
PTOM Tomar 58.01 301 eP P 10 14 12.9 +0.3
comp=Z,156nm,1.4s
PTOM Tomar 58.01 301 eP P 10 14 12.9 +0.3
comp=Z,156nm,1.4s
PBDV Barranco-do-Ve 58.12 298 eP P 10 14 13.1 -0.4
comp=Z,42nm,2.2s
PBDV Barranco-do-Ve 58.12 298 eP P 10 14 13.1 -0.4
comp=Z,42nm,2.2s
PCVE Castro Verde 58.12 299 eP P 10 14 13.0 -0.5
comp=Z,47nm,1.8s
PCVE Castro Verde 58.12 299 eP P 10 14 13.0 -0.5
comp=Z,47nm,1.8s
MSNA Messina 58.31 215 eP P 10 14 15.6 +0.7
MSNA AMB AMB 10 14 17.2
comp=Z,31nm,0.9s
PNCL Nicolau / Gran 58.40 300 eP P 10 14 15.4 0.0
comp=Z,39nm,1.2s
PNCL Nicolau / Gran 58.40 300 eP P 10 14 15.4 0.0
comp=Z,39nm,1.2s
PMAFR Mafra 58.80 301 eP P 10 14 18.4 +0.2
comp=Z,150nm,2.2s
PMAFR Mafra 58.80 301 eP P 10 14 18.4 +0.2
comp=Z,150nm,2.2s
PFVI Vila Bisbo 58.84 298 eP P 10 14 18.2 -0.3
PFVI Vila Bisbo 58.84 298 eP P 10 14 18.2 -0.3
JNU Nakatsue 59.13 66 eP P 10 14 21.6 +1.0
comp=Z,15nm,1.4s
JNU epP pP 10 14 39.7 +0.3
JNU Nakatsue 59.13 66 eP P 10 14 21.6 +1.0
comp=Z,15nm,1.4s
JNU epP pP 10 14 39.7 +0.3
DAG Danmarks Havn 60.95 345⇑ iP P 10 14 32.3 +0.1
DAG pmax pmax
comp=Z,120nm,0.8s
DAG Danmarks Havn 60.95 345⇑ iP P 10 14 32.3 +0.1
comp=Z,161nm,0.8s
POGA Pongola 61.83 210 eP P 10 14 38.5 -0.3
POGA AMB AMB 10 14 43.9
comp=Z,30nm,2.8s
SCO Scoresbysund 61.95 338 *i* P P 10 14 40.3 +1.3
SCO pmax pmax
comp=Z,52nm,1.0s
SCO Scoresbysund 61.95 338 *i* P P 10 14 40.3 +1.3
comp=Z,52nm,1.0s
SLR Silverton 62.01 214 eP P 10 14 40.3 +0.1
SLR AMB AMB 10 14 40.7
comp=Z,59nm,4.2s
ERPM east rand prop 62.54 214 eP P 10 14 43.6 -0.1
ERPM AMB AMB 10 14 44.2
comp=Z,31nm,1.3s
LBTB Lobatse 62.80 217⇓ iP P 10 14 46.3 +0.9
LBTB AMB AMB 10 14 46.4
comp=Z,64nm,1.7s
LBTB Lobatse 62.80 217⇓ iP P 10 14 46.0 +0.6
comp=Z,147nm,1.3s
LBTB epP pP 10 15 03.9 -0.5
LBTB Lobatse 62.80 217⇓ iP P 10 14 46.0 +0.6
comp=Z,147nm,1.3s
LBTB epP pP 10 15 03.9 -0.5
TSUM Tsumeb 63.09 227 eP P 10 14 48.1 +0.5
TSUM Tsumeb 63.09 227 eP P 10 14 48.6 +1.1
comp=Z,20nm,1.3s
TSUM epP pP 10 15 06.5 0.0
TSUM Tsumeb 63.09 227 eP P 10 14 48.6 +1.1
comp=Z,20nm,1.3s
TSUM epP pP 10 15 06.5 0.0
PRYS Parys 63.46 214 eP P 10 14 49.8 -0.1
PRYS AMB AMB 10 14 54.3
comp=Z,38nm,3.8s
MAJO Matsushiro 64.03 61 eP P 10 14 53.6 +0.1
MAJO e*PP pP 10 15 11.9 -0.6
MAJO pmax pmax
comp=Z,8.0nm,0.9s
MAJO Matsushiro 64.03 61 eP P 10 14 53.5 +0.1
comp=Z,8.0nm,0.9s
MAJO epP pP 10 15 11.9 -0.6
MAJO Matsushiro 64.03 61 eP P 10 14 53.5 +0.1
comp=Z,8.0nm,0.9s
MAJO epP pP 10 15 11.9 -0.6
MAT Matsushiro 64.03 61 P P 10 14 53.1 -0.4
MAT S S 10 23 22.5 -1.9
MJAR Matsushiro Arr 64.03 61 P P 10 14 53.3 -0.2
MJAR Matsushiro Arr 64.03 61 P P 10 14 53.3 -0.2
comp=Z,3.6nm,0.9s,baz=276,slow=5.4,SNR=18
MJAR LR LR 10 45 29.8
comp=Z,70nm,20.6s,baz=285,slow=38
MJAR Matsushiro Arr 64.03 61 P P 10 14 53.3 -0.2
SEK Senekal 64.49 213⇓ iP P 10 14 56.8 +0.2
SEK AMB AMB 10 14 57.2
comp=Z,68nm,1.1s
YSS Yuzh-Sakhalins 64.59 49⇑ iP P 10 14 59.0 +2.1
YSS *e* 10 15 16.0
YSS *e* 10 15 24.5
SWZ Schweizer 64.69 216⇓ iP P 10 14 57.6 -0.3
SWZ AMB AMB 10 14 58.6
comp=Z,34nm,0.7s
ASAJ Asahikawa 65.20 52 P P 10 15 00.6 -0.4
ASAJ Asahikawa 65.20 52 P P 10 15 00.6 -0.4
comp=Z,10nm,0.8s,baz=263,slow=8.1,SNR=4.5
ASAJ Asahikawa 65.20 52 P P 10 15 00.6 -0.4
BOSA Boshof 65.90 215 eP P 10 15 04.9 -0.8
BOSA AMB AMB 10 15 06.3
comp=Z,31nm,0.8s
BOSA Boshof 65.90 215 eP P 10 15 05.4 -0.3
comp=Z,34nm,0.8s
BOSA pP pP 10 15 23.9 -0.8
BOSA epP pwP 10 15 24.2 -0.6
BOSA Boshof 65.90 215 P P 10 15 05.7 0.0
comp=Z,31nm,0.7s,baz=35,slow=6.7,SNR=56
BOSA pP pP 10 15 23.9 -0.8
comp=Z,37nm,0.8s,baz=42,slow=8.2,SNR=12
BOSA Boshof 65.90 215 eP P 10 15 05.4 -0.3
comp=Z,34nm,0.8s
BOSA pP pP 10 15 24.0 -0.8
DBIC Dimbokro 65.97 265 eP P 10 15 07.4 +1.1
comp=Z,64nm,1.1s
DBIC pP pP 10 15 26.3 +0.8
DBIC epP pP 10 15 26.3 +0.8
DBIC Dimbokro 65.97 265 P P 10 15 07.4 +1.1
comp=Z,15nm,0.5s,baz=42,slow=7.0,SNR=18
DBIC pP pP 10 15 26.3 +0.8
comp=Z,19nm,0.8s,baz=62,slow=9.4,SNR=6.2
DBIC LR LR 10 47 53.1
comp=Z,173nm,18.2s,baz=33,slow=40
DBIC Dimbokro 65.97 265 eP P 10 15 07.4 +1.1
comp=Z,64nm,1.1s
DBIC pP pP 10 15 26.3 +0.8
SEY Seymchan 66.11 30*c* iP P 10 15 07.4 +1.0
LIC Lamto 66.32 264 eP P 10 15 09.6 +1.0
comp=Z,57nm,0.6s
LIC epP pP 10 15 28.4 +0.7
LIC *es*P sP 10 15 35.5 -0.3
LIC Lamto 66.32 264 eP P 10 15 09.6 +1.0
comp=Z,57nm,0.6s
LIC epP pP 10 15 28.4 +0.7
LIC *es*P sP 10 15 35.5 -0.3
LIC Lamto 66.32 264 eP P 10 15 09.6 +1.0
comp=Z,28nm,0.6s
LIC epP pP 10 15 28.4 +0.7
LIC *es*P sP 10 15 35.5 -0.3
SUMG Summit 66.70 341⇑ iP P 10 15 11.3 +0.7
SUMG pmax pmax
comp=Z,85nm,0.7s
SUMG Summit 66.70 341 eP P 10 15 10.9 +0.3
comp=Z,114nm,0.8s
SUMG Summit 66.70 341⇑ iP P 10 15 11.3 +0.7
comp=Z,85nm,0.7s
SUMG Summit 66.70 341 eP P 10 15 10.9 +0.3
comp=Z,114nm,0.8s
ALE Alert 66.78 353 P P 10 15 11.0 +0.5
comp=Z,2μm,1.0s
YUK Yuzh-Kuril'sk 67.49 51 *i* P P 10 15 13.9 -1.6
YUK *i* 10 15 39.2
YUK *i* 10 17 40.9
YUK *i* PPP PPP 10 19 21.5
YUK *i* S S 10 23 58.8 -7.4
YUK *i* 10 25 02.4
YUK pmax pmax
comp=E,118nm,1.0s
YUK pmax pmax
comp=Z,168nm,1.1s
YUK pmax pmax
comp=N,86nm,1.0s
BILL Bilibino 69.90 23*c* iP P 10 15 30.4 +0.3
BILL *e* 10 18 01.6
BILL pmax pmax
comp=Z,60nm,1.1s
BILL MLR MLR
comp=Z,100nm,16.0s
BILL Bilibino 69.90 23 eP P 10 15 30.6 +0.5
comp=Z,55nm,1.0s
BILL Bilibino 69.90 23 eP P 10 15 30.6 +0.5
comp=Z,55nm,1.0s
BART Pico Bartolome 71.10 303 eP P 10 15 40.4 +2.3
comp=Z,66nm,1.0s
BART Pico Bartolome 71.10 303 eP P 10 15 40.4 +2.3
comp=Z,66nm,1.0s
PSMN Pico do Norte, 71.30 302 eP P 10 15 38.8 -0.4
comp=Z,60nm,1.1s
PSMN Pico do Norte, 71.30 302 eP P 10 15 38.8 -0.4
comp=Z,60nm,1.1s
PSMA Santa Maria 71.35 302 eP P 10 15 39.9 +0.4
comp=Z,90nm,1.1s
CMLA Cha da Macela 71.37 303 eP P 10 15 41.0 +1.4
comp=Z,85nm,0.7s
CMLA Cha da Macela 71.37 303 eP P 10 15 41.0 +1.4
comp=Z,85nm,0.7s
PSET Sete Cidades 71.49 303 eP PcP 10 15 53.0 -6.5
comp=Z,33nm,0.3s
PEA0B Petropavlovsk- 71.87 39 eP P 10 15 42.0 -0.3
PEA0B Petropavlovsk- 71.87 39 eP P 10 15 42.0 -0.3
PETK Petropavlovsk- 71.87 39 P P 10 15 41.5 -0.9
PETK Petropavlovsk- 71.87 39 P P 10 15 41.5 -0.9
PETK Petropavlovsk- 71.87 39 P P 10 15 41.5 -0.9

comp=Z,22nm,0.8s,baz=250,slow=4.0,SNR=29
PETK LR LR 10 49 15.2
comp=Z,122nm,21.3s,baz=290,slow=37
PETK Petropavlovsk- 71.87 39 P **P 10 15 41.5 -0.9**
PET Petropavlovsk 72.44 39 *e*P **P 10 15 44.9 -0.8**
PET *e*S **S 10 25 08.1 +4.4**
PET pmax pmax
comp=Z,54nm,1.1s
PET MLR MLR
comp=Z,200nm,23.0s
PGRA Graciosa 72.71 305 *e*P P 10 15 42.1 -5.5
comp=Z,90nm,0.4s
SFJD Kangerlussuaq 72.85 338 *e*P **P 10 15 47.9 -0.1**
comp=Z,54nm,0.6s
SFJD *e*pP **PcP 10 16 05.8 +1.1**
SFJD Kangerlussuaq 72.85 338 ⇑*i*P **P 10 15 47.8 -0.1**
comp=Z,38nm,0.8s
SFJD Kangerlussuaq 72.85 338 *e*P **P 10 15 47.8 -0.1**
comp=Z,54nm,0.6s
SFJD *e*pP **PcP 10 16 05.8 +1.1**
PMAN Manadas 72.93 305 *e*P **P 10 15 50.2 +1.3**
comp=Z,97nm,0.8s
PMAN Manadas 72.93 305 *e*P **P 10 15 50.2 +1.3**
comp=Z,97nm,0.8s
PICO Pico 73.23 305 *e*P P 10 15 44.2 -6.6
PCED Cedros 73.38 305 *e*P **P 10 15 51.5 -0.1**
comp=Z,54nm,0.2s
PCED Cedros 73.38 305 *e*P **P 10 15 51.5 -0.1**
comp=Z,54nm,0.2s
RES Resolute Bay 76.67 354 *e*P **P 10 16 10.0 +0.1**
comp=Z,28nm,0.9s
RES Resolute Bay 76.67 354 *e*P **P 10 16 10.0 +0.1**
comp=Z,28nm,0.9s
FITZ Fitzroy Crossi 77.06 119 LR LR 10 48 41.1
comp=Z,91nm,20.3s,baz=110,slow=34
TNA Tin City 79.58 19 *e*P **P 10 16 26.7 +0.6**
comp=Z,32nm,0.9s
TNA *e*PP **PP 10 19 26.7 -0.1**
TNA Tin City 79.58 19 *e*P **P 10 16 26.7 +0.6**
comp=Z,32nm,0.9s
FX1 Attu Island--F 80.24 35 *e*P **P 10 16 30.1 +0.2**
FX1 *e*pP **pP 10 16 49.4 -0.2**
FX1 Attu Island--F 80.24 35 LR LR 10 54 42.3
comp=Z,85nm,20.4s,baz=224,slow=38
FX1 Attu Island--F 80.24 35 *e*P **P 10 16 30.1 +0.2**
FX1 *e*pP **pP 10 16 49.4 -0.2**
COLD Coldfoot 82.37 12 *e*P **P 10 16 41.9 +0.9**
comp=Z,56nm,1.0s
COLD Coldfoot 82.37 12 *e*P **P 10 16 41.9 +0.9**
comp=Z,56nm,1.0s
INK Inuvik 83.60 6 LR LR 11 00 40.5
comp=Z,127nm,18.5s,baz=130,slow=40
COLA College 84.92 12 *e*P **P 10 16 54.3 +0.4**
COLA pmax pmax
comp=Z,54nm,1.2s
COLA College 84.92 12 *e*P **P 10 16 54.3 +0.4**
comp=Z,54nm,1.2s
COLA College 84.92 12 *e*P **P 10 16 54.3 +0.4**
comp=Z,54nm,1.2s
WRA Warramunga Arr 84.93 115 P **P 10 16 54.0 -0.8**
WRA pP **pP 10 17 12.9 -1.8**
WRA PKKPbc **PKKPbc 10 35 03.0 +0.8**
WRA Warramunga Arr 84.93 115 P **P 10 16 54.0 -0.8**
comp=Z,14nm,0.8s,baz=310,slow=4.3,SNR=93
WRA pP **pP 10 17 12.9 -1.8**
comp=Z,8.7nm,0.7s,baz=316,slow=4.3,SNR=8.8
WRA PKKPbc **PKKPbc 10 35 03.0 +0.8**
comp=Z,1.3nm,0.8s,baz=117,slow=2.4,SNR=7.4
WRA Warramunga Arr 84.93 115 P **P 10 16 54.0 -0.8**
WRA pP **pP 10 17 12.9 -1.8**
WRAB Tennant Creek 84.94 115 *e*P **P 10 16 54.7 -0.1**
WRAB *e**PP **pP 10 17 13.9 -0.8**
WRAB pmax pmax
comp=Z,20nm,0.9s
WRAB Tennant Creek 84.94 115 *e*P **P 10 16 54.7 -0.1**
comp=Z,20nm,0.9s
WRAB *e*pP **pP 10 17 13.9 -0.8**
WRAB Tennant Creek 84.94 115 *e*P **P 10 16 54.7 -0.1**
comp=Z,20nm,0.9s
WRAB *e*pP **pP 10 17 13.9 -0.8**
ILAR Eielson Array 85.19 12 P **P 10 16 54.9 -0.5**
ILAR PP **PP 10 20 09.2 -3.7**
ILAR Eielson Array 85.19 12 P **P 10 16 54.9 -0.5**
comp=Z,8.7nm,0.6s,baz=321,slow=4.6,SNR=166
ILAR PP **PP 10 20 09.2 -3.7**
comp=Z,3.0nm,0.9s,baz=335,slow=6.3,SNR=8.1
ILAR LR LR 10 59 01.2
comp=Z,149nm,18.8s,baz=317,slow=38
ILAR Eielson Array 85.19 12 P **P 10 16 54.9 -0.5**
TRF Thorofare Moun 85.71 14 *e*P **P 10 16 57.7 -0.5**
comp=Z,27nm,0.7s
TRF *e*PP **PP 10 20 18.0 +0.7**
TRF Thorofare Moun 85.71 14 *e*P **P 10 16 57.7 -0.5**
comp=Z,27nm,0.7s
MCK McKinley 85.73 13 *e*P **P 10 16 58.5 +0.4**
MCK pmax pmax
comp=Z,31nm,0.6s
MCK McKinley 85.73 13 *e*P **P 10 16 58.5 +0.4**
comp=Z,30nm,0.6s
MCK McKinley 85.73 13 *e*P **P 10 16 58.5 +0.4**
comp=Z,30nm,0.6s
EGAK Eagle 86.12 10 *e*P **P 10 17 00.4 +0.4**
comp=Z,62nm,1.1s
EGAK Eagle 86.12 10 *e*P **P 10 17 00.4 +0.4**
comp=Z,62nm,1.1s
ASAR Alice Springs 86.55 119 P **P 10 17 02.2 -0.6**
ASAR pP **pP 10 17 20.8 -1.9**
ASAR PKKPbc **PKKPbc 10 34 58.1 -0.4**
ASAR Alice Springs 86.55 119 P **P 10 17 02.2 -0.6**
comp=Z,9.7nm,1.0s,baz=305,slow=5.0,SNR=66
ASAR pP **pP 10 17 20.8 -1.9**
comp=Z,5.0nm,0.7s,baz=306,slow=4.9,SNR=6.8
ASAR PKKPbc **PKKPbc 10 34 58.1 -0.4**
comp=Z,0.5nm,0.6s,baz=103,slow=2.9,SNR=8.2
ASAR Alice Springs 86.55 119 P **P 10 17 02.2 -0.6**
ASAR pP **pP 10 17 20.8 -1.9**
AS31 Alice Springs 86.55 119 *e*P **P 10 17 02.6 -0.2**
AS31 Alice Springs 86.55 119 *e*P **P 10 17 02.6 -0.2**
SCHQ Schefferville 86.56 333 *e*P **P 10 17 02.6 +0.2**
comp=Z,13nm,0.9s
SCHQ PP **PP 10 20 21.4 -2.9**
SCHQ Schefferville 86.56 333 P **P 10 17 02.0 -0.3**
comp=Z,7.5nm,0.6s,baz=27,slow=5.7,SNR=13
SCHQ PP **PP 10 20 21.4 -2.9**
comp=Z,13nm,1.0s,baz=55,slow=5.1,SNR=7.1
SCHQ Schefferville 86.56 333 *e*P **P 10 17 02.6 +0.2**
comp=Z,13nm,0.9s
DOT Dot Lake 86.71 11 *e*P **P 10 17 03.0 0.0**
comp=Z,60nm,1.2s
DOT *e*PP **PP 10 20 21.5 -3.8**
DOT Dot Lake 86.71 11 *e*P **P 10 17 03.0 0.0**
comp=Z,60nm,1.2s
PAX Paxson 87.09 12 *e*P **P 10 17 05.0 +0.1**
PAX *e* 10 20 32.2
PAX pmax pmax
comp=Z,32nm,1.2s
PAX Paxson 87.09 12 *e*P **P 10 17 05.0 +0.1**
comp=Z,32nm,1.2s
PAX *e*PP **PP 10 20 32.2 +3.9**
PAX Paxson 87.09 12 *e*P **P 10 17 05.0 +0.1**
comp=Z,32nm,1.2s
MENT Mentasta 87.43 11 *e*P **P 10 17 07.2 +0.8**
MENT Mentasta 87.43 11 *e*P **P 10 17 07.2 +0.8**
SML Sawmill 87.59 14 *e*P **P 10 17 08.0 +0.7**
SML *e* 10 20 32.1
SML pmax pmax
comp=Z,9.0nm,0.6s
SML Sawmill 87.59 14 *e*P **P 10 17 08.0 +0.7**
comp=Z,8.6nm,0.6s
SML *e*PP **PP 10 20 32.1 -0.2**
SML Sawmill 87.59 14 *e*P **P 10 17 07.9 +0.7**
comp=Z,8.6nm,0.6s
PMR Palmer 87.61 14 *e*P **P 10 17 06.7 -0.5**
PMR pmax pmax
comp=Z,88nm,1.0s
PMR Palmer 87.61 14 *e*P **P 10 17 06.7 -0.5**
comp=Z,88nm,1.0s
PMR Palmer 87.61 14 *e*P **P 10 17 06.7 -0.5**
comp=Z,88nm,1.0s
RSO Redoubt South 87.77 16 *e*P **P 10 17 08.6 +0.3**
comp=Z,111nm,1.1s
RSO Redoubt South 87.77 16 *e*P **P 10 17 08.6 +0.3**
comp=Z,111nm,1.1s
DIV Divide 88.72 13 *e*P **P 10 17 13.9 +1.3**
comp=Z,21nm,0.7s
DIV Divide 88.72 13 *e*P **P 10 17 13.9 +1.3**
comp=Z,21nm,0.7s
SEW Seward 88.87 15 *e*P **P 10 17 13.9 +0.7**
comp=Z,44nm,0.6s
SEW Seward 88.87 15 *e*P **P 10 17 13.9 +0.7**
comp=Z,44nm,0.6s
BMRM Bremner River 89.10 12 *e*P **P 10 17 14.8 +0.4**
comp=Z,69nm,1.0s
BMRM Bremner River 89.10 12 *e*P **P 10 17 14.8 +0.4**
comp=Z,69nm,1.0s
YKW3 Yellowknife Ar 89.96 358 *e*P **P 10 17 18.5 +0.2**
comp=Z,0.5nm,0.6s
YKW3 *e*pP **pP 10 17 37.4 -0.9**
YKW3 Yellowknife Ar 89.96 358 *e*P **P 10 17 18.5 +0.2**
comp=Z,0.5nm,0.6s
YKW3 *e*pP **pP 10 17 37.4 -0.9**
YKA Yellowknife Ar 90.03 358 P **P 10 17 19.0 +0.4**
YKA pP **pP 10 17 37.8 -0.9**
YKA PP **PP 10 20 47.8 -3.8**
YKA PKKPbc **PKKPbc 10 34 48.0 -2.2**
YKA Yellowknife Ar 90.03 358 P **P 10 17 19.0 +0.4**
comp=Z,25nm,0.7s,baz=354,slow=5.3,SNR=572
YKA pP **pP 10 17 37.7 -0.9**
comp=Z,16nm,0.9s,baz=353,slow=4.9,SNR=5.6
YKA PP **PP 10 20 47.8 -3.8**
comp=Z,2.2nm,0.8s,baz=0.4,slow=7.7,SNR=4.4
YKA PKKPbc **PKKPbc 10 34 48.0 -2.2**
comp=Z,0.3nm,0.8s,baz=173,slow=2.7,SNR=6.0
YKA Yellowknife Ar 90.03 358 P **P 10 17 19.0 +0.4**
YKA pP **pP 10 17 37.8 -0.9**
KDAK Kodiak Island 90.15 17 *e*P **P 10 17 20.2 +1.0**
comp=Z,44nm,0.8s
KDAK Kodiak Island 90.15 17 *e*P **P 10 17 20.2 +1.0**
comp=Z,44nm,0.8s
OHAK Old Harbor 90.44 18 *e*P **P 10 17 21.6 +1.0**
comp=Z,28nm,0.7s
OHAK Old Harbor 90.44 18 *e*P **P 10 17 21.6 +1.0**
comp=Z,28nm,0.7s
PNL Peninsula 91.23 10 *e*P **P 10 17 25.9 +1.7**
comp=Z,27nm,0.7s
PNL *e*pP **pP 10 17 44.0 -0.3**
PNL *e*PP **PP 10 20 59.1 -2.1**
PNL Peninsula 91.23 10 *e*P **P 10 17 26.0 +1.7**
comp=Z,27nm,0.7s
PNL *e*pP **pP 10 17 44.0 -0.3**
SKAG Skagway 92.02 8 *e*P **P 10 17 28.8 +0.9**
comp=Z,9.7nm,0.8s
SKAG *e*pP **pP 10 17 47.8 -0.2**
SKAG *e*PP **PP 10 21 09.6 +2.2**
SKAG Skagway 92.02 8 *e*P **P 10 17 28.8 +0.9**
comp=Z,9.7nm,0.8s
SKAG *e*pP **pP 10 17 47.8 -0.2**
DLBC Dease Lake 93.62 6 *e*P **P 10 17 36.2 +0.8**
DLBC *e*pP **pP 10 17 55.1 -0.4**
DLBC *e*PP **PP 10 21 22.6 +2.5**
DLBC Dease Lake 93.62 6 *e*P **P 10 17 36.2 +0.8**
DLBC *e*pP **pP 10 17 55.1 -0.4**
MAW Mawson 95.05 179 P **P 10 17 42.0 +0.7**
MAW Mawson 95.05 179 P **P 10 17 42.0 +0.7**
comp=Z,5.4nm,0.8s,baz=358,slow=7.4,SNR=5.9
MAW LR LR 10 51 44.8
comp=Z,108nm,18.2s,baz=192,slow=30
MAW Mawson 95.05 179 P **P 10 17 42.0 +0.7**
STKA Stephens Creek 96.56 122 P **P 10 17 48.8 -0.3**
STKA Stephens Creek 96.56 122 P **P 10 17 48.8 -0.3**
comp=Z,2.1nm,0.9s,baz=337,slow=7.7,SNR=3.6
STKA LR LR 10 59 02.6
comp=Z,138nm,21.0s,baz=206,slow=34
STKA Stephens Creek 96.56 122 P **P 10 17 48.8 -0.3**
LBNH Lisbon 96.64 328 *e*P **P 10 17 50.2 +0.8**
LBNH *e**PP **pP 10 18 08.7 -0.8**
LBNH pmax pmax
comp=Z,7.0nm,0.6s
LBNH Lisbon 96.64 328 *e*P **P 10 17 50.1 +0.8**
comp=Z,6.6nm,0.6s
LBNH *e*pP **pP 10 18 08.7 -0.8**
LBNH Lisbon 96.64 328 *e*P **P 10 17 50.2 +0.8**
comp=Z,6.6nm,0.6s
LBNH *e*pP **pP 10 18 08.6 -0.9**
FFC Flin Flon 96.64 350 *e*P **P 10 17 49.3 +0.1**
FFC *e**PP **pP 10 18 08.4 -0.9**
FFC pmax pmax
comp=Z,9.0nm,0.6s
FFC Flin Flon 96.64 350 *e*P **P 10 17 49.3 +0.1**
comp=Z,9.2nm,0.6s
FFC *e*pP **pP 10 18 08.4 -0.9**
FFC Flin Flon 96.64 350 *e*P **P 10 17 49.3 +0.1**
comp=Z,9.2nm,0.6s
FFC *e*pP **pP 10 18 08.4 -0.9**
ULM Lac du Bonnet 99.79 345 P **Pdif 10 18 02.9 -0.5**
ULM Lac du Bonnet 99.79 345 P **Pdif 10 18 02.9 -0.5**
comp=Z,3.8nm,0.6s,baz=9.8,slow=6.5,SNR=4.6
ULM LR LR 11 05 55.0
comp=Z,161nm,21.5s,baz=46,slow=37
ULM Lac du Bonnet 99.79 345 P **Pdif 10 18 02.9 -0.5**
A20A Cobblestone Ra 103.14 353 ⇓P **Pdif 10 18 19.0 +0.6**
baz=103
A19A Kildworth Far 103.18 353 ⇑P **Pdif 10 18 19.1 +0.5**
baz=103
A18A Metzger Ranch, 103.29 354 ⇓P **Pdif 10 18 19.7 +0.6**
baz=103
A17A Triple J Farms 103.34 355 ⇓P **Pdif 10 18 19.9 +0.6**
baz=103
A15A Johnson Ranch, 103.46 356 ⇓P **Pdif 10 18 20.6 +0.7**
baz=103
A14A Double T Ranch 103.50 357 ⇑P **Pdif 10 18 20.9 +0.8**
baz=103
B20A Solberg Farm, 103.59 353 ⇑P **Pdif 10 18 21.1 +0.7**
baz=103
A13A Flathead Natio 103.59 357 ⇑P **Pdif 10 18 21.3 +0.8**
baz=103
B15A Bradely Ranch, 104.11 356 ⇓P **Pdif 10 18 23.3 +0.5**
baz=104
E13A Victor 106.06 357 ⇓P **PKiKP 10 22 42.7 -0.4**
baz=106
PDAR Pinedale Array 109.36 353 PKiKP **PKiKP 10 22 49.9 +0.3**
PDAR PP **PP 10 23 14.5 -4.3**
PDAR Pinedale Array 109.36 353 PKiKP **PKiKP 10 22 49.9 +0.3**
comp=Z,1.3nm,0.7s,baz=54,slow=4.6,SNR=8.5
PDAR PP **PP 10 23 14.5 -4.3**
comp=Z,2.6nm,1.1s,baz=46,slow=6.4,SNR=4.3
PDAR Pinedale Array 109.36 353 PKiKP **PKiKP 10 22 49.9 +0.3**
P19A Cripple Cowboy 112.38 352 ⇑P **PKiKP 10 22 55.2 -0.2**
baz=112
P18A Preston Nutter 112.53 353 ⇓P **PKiKP 10 22 55.6 -0.2**
baz=112
S26A Kim 113.46 347 ⇓P **PKiKP 10 22 57.4 0.0**
baz=113
NVAR Mina Array Bea 114.18 360 PKP PKPdf 10 23 00.3 +1.4
NVAR Mina Array Bea 114.18 360 PKP PKPdf 10 23 00.3 +1.4
comp=Z,4.9nm,0.8s,baz=265,slow=1.3,SNR=34
T22A Edith 114.67 350 ⇓P PKPdf 10 23 00.3 +0.4
baz=114
U26A Atchley Ranch, 114.70 347 ⇑P PKPdf 10 23 00.5 +0.6
baz=114
U25A Circle Dot Ran 114.83 347 ⇓P PKPdf 10 23 00.9 +0.7
baz=114
U21A Nageezi 115.36 350 ⇑P **PKPdf 10 23 02.0 +0.8**
baz=115
V25A Rancho No Teng 115.41 347 ⇑P **PKPdf 10 23 01.9 +0.6**
baz=115
V24A Rampart Ranch, 115.64 348 ⇓P **PKPdf 10 23 01.9 +0.1**
baz=115
W27A Bowe Ranch, En 115.84 346 ⇓P **PKPdf 10 23 02.7 +0.6**
baz=116
U15A North Rim 115.90 354 ⇑P **PKPdf 10 23 03.2 +0.9**
baz=116
FURC Furnace Creek, 116.11 358 ⇑P **PKPdf 10 23 03.7 +1.4**
baz=116
Z32A Haskell 116.65 342 ⇓P **PKPdf 10 23 04.5 +1.0**
baz=116
SHOC Shoshone 116.67 358 ⇓P **PKPdf 10 23 05.1 +1.6**
baz=116
GSC Goldstone 117.28 358 ⇓P **PKPdf 10 23 05.6 +0.8**
baz=117
X16A Lo Mia Camp, P 117.82 353 ⇑P **PKPdf 10 23 07.0 +1.1**
baz=118
Z25A Roswell 117.91 347 ⇓P **PKPdf 10 23 06.6 +0.6**
baz=118
Z24A Sheeppen Canyo 117.99 348 ⇑P **PKPdf 10 23 07.0 +0.6**
baz=118
BBRC Big Bear Solar 118.32 358 ⇑P **PKPdf 10 23 07.8 +0.8**
baz=118
Z22A Elephant Butte 118.35 349 ⇓P **PKPdf 10 23 06.8 -0.2**
baz=118
IRM Iron Mountain 118.36 357 ⇓P **PKPdf 10 23 07.3 +0.5**
baz=118
Z21A St. Cloud Mine 118.42 350 ⇓P **PKPdf 10 23 08.4 +1.2**
baz=118
Y14A Wickenburg 118.44 355 ⇑P **PKPdf 10 23 08.1 +1.1**
baz=118,SNR=5.6
BELC Belle Mtn. Jos 118.55 358 ⇑P **PKPdf 10 23 08.5 +1.2**
baz=118
124A Stringfield Ra 118.62 347 ⇓P **PKPdf 10 23 08.2 +0.6**
baz=118
Z20A Nine Sixteen R 118.75 350 ⇓P **PKPdf 10 23 09.0 +1.2**
baz=118,SNR=5.4
331A San Angelo 118.79 342 ⇓P **PKPdf 10 23 08.2 +0.5**
baz=118
BC3 Big Chuckawall 118.87 357 ⇓P **PKPdf 10 23 08.8 +0.9**
baz=118
330A Mertzon 118.89 343 ⇑P **PKPdf 10 23 08.2 +0.3**
baz=119
226B Tecolote Peak, 118.96 346 ⇑P **PKPdf 10 23 08.6 +0.6**
baz=119
Z14A Wintersburg 119.00 355 ⇓P **PKPdf 10 23 09.1 +1.1**
baz=119
121A Cookes Peak, D 119.19 350 ⇓P **PKPdf 10 23 09.8 +1.2**
baz=119,SNR=5.6
120A U Bar Ranch, L 119.31 350 ⇓P **PKPdf 10 23 09.6 +0.8**
baz=119
JCT Junction City 119.40 341 ⇑P **PKPdf 10 23 09.3 +0.4**
baz=119
431A Sonora 119.43 342 ⇓P **PKPdf 10 23 08.9 -0.1**
baz=119,SNR=7.7
222A Williams Famil 119.50 349 ⇑P **PKPdf 10 23 09.9 +0.7**
baz=119
532A Rocksprings 119.76 341 ⇓P **PKPdf 10 23 09.7 +0.1**
baz=119
325A Bean Ranch, Si 119.81 347 ⇓P **PKPdf 10 23 10.5 +0.6**
baz=120,SNR=9.2
429A Davenport Ranc 119.82 343 ⇑P **PKPdf 10 23 10.1 +0.4**
baz=120
TUC Tucson 119.83 352 *e*PKIKP **PKPdf 10 23 11.1 +1.4**
TUC Tucson 119.83 352 *e*PKPdf **PKPdf 10 23 11.1 +1.4**
TUC Tucson 119.83 352 *e*PKIKP **PKPdf 10 23 11.1 +1.4**
324A Moseley Ranch, 119.84 347 ⇑P **PKPdf 10 23 10.4 +0.5**
baz=120,SNR=8.8
531A Rocksprings 119.91 342 ⇑P **PKPdf 10 23 10.2 +0.3**
baz=120
428A Kincaid Ranch, 119.92 344 ⇑P **PKPdf 10 23 10.4 +0.4**
baz=120
220A Playas Peak, P 119.92 350 ⇑P **PKPdf 10 23 10.9 +0.9**
baz=120,SNR=6.4
427A Hayter Ranch, 119.97 345 ⇑P **PKPdf 10 23 10.5 +0.4**
baz=120
530A J-C Ranch, Com 120.13 343 ⇑P **PKPdf 10 23 10.7 +0.3**
baz=120,SNR=5.4
426A McDonald Obser 120.29 346 ⇑P **PKPdf 10 23 11.4 +0.5**
baz=120,SNR=12
529A Stev Forest Ra 120.38 344 ⇓P **PKPdf 10 23 11.0 +0.2**
baz=120,SNR=6.6
214A Organ Pipe Nat 120.39 354 ⇑P **PKPdf 10 23 11.7 +1.0**
baz=120
320A Kipp Ranch, An 120.48 350 ⇓P **PKPdf 10 23 12.4 +1.3**
baz=120,SNR=6.7
528A Cox Ranch, San 120.49 344 ⇓P **PKPdf 10 23 11.6 +0.5**
baz=120
319A Douglas 120.55 351 ⇓P **PKPdf 10 23 12.4 +1.2**
baz=120
527A Woodward Ranch 120.70 345 ⇑P **PKPdf 10 23 12.1 +0.6**
baz=120,SNR=7.3
732A Laxson Ranch, 121.10 341 ⇓P **PKPdf 10 23 12.3 +0.1**
baz=121
628A Black Gap, Mar 121.16 344 ⇑P **PKPdf 10 23 12.8 +0.4**
baz=121
627A Terlingua Ranc 121.31 345 ⇓P **PKPdf 10 23 13.2 +0.5**
baz=121,SNR=8.4
626A Big Bend Ranch 121.38 345 ⇓P **PKPdf 10 23 13.2 +0.4**
baz=121,SNR=10
TXAR Lajitas Array 121.49 345 PKP **PKPdf 10 23 13.1 +0.1**
TXAR PP **PP 10 24 42.7 -1.3**
TXAR PKKPbc **PKKPbc 10 33 12.4 -1.0**
TXAR Lajitas Array 121.49 345 PKP **PKPdf 10 23 13.1 +0.1**
comp=Z,4.4nm,0.9s,baz=129,slow=1.3,SNR=33
TXAR PP **PP 10 24 42.7 -1.3**
comp=Z,5.9nm,1.0s,baz=30,slow=4.4,SNR=14
TXAR PKKPbc **PKKPbc 10 33 12.4 -1.0**
comp=Z,0.5nm,0.9s,baz=203,slow=5.2,SNR=4.8
TXAR Lajitas Array 121.49 345 PKIKP **PKPdf 10 23 13.1 +0.1**
TGUH Tegucigalpa,Un 128.56 320 *e*PKPdf **PKPdf 10 23 28.2 +1.5**
TGUH Tegucigalpa,Un 128.56 320 *e*PKIKP **PKPdf 10 23 28.2 +1.5**
OTAV Otavalo 132.54 299 *e*PKPdf **PKPdf 10 23 36.7 +1.8**
OTAV Otavalo 132.54 299 *e*PKIKP **PKPdf 10 23 36.7 +1.8**

CASC 30 10:06:19.4±0.9, 13°27'N×89°95'W, h94km±26km, MD3.6, ML3.0, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.65**	**29**	*e*P	Pn	10 06 36.1	0.0
SBLS				*e*S	Sn	10 06 48.9	+0.3
SNJE	**San Jose**	**0.68**	**29**	*e*P	Pn	10 06 36.5	+0.1
RTR	**El Retiro**	**0.69**	**25**	*e*P	Pn	10 06 36.3	-0.2
BOQS	**Boqueron**	**0.80**	**54**	*e*P	Pn	10 06 37.6	+0.1
BOQS				*e*S	Sn	10 06 51.9	+0.9
SNET	**Serv Nac Est T**	**0.81**	**59**	*e*P	Pn	10 06 37.4	0.0
SNET				AML	AML	10 06 58.4	
	comp=Z,314nm,0.1s						
LFRS	**El Faro**	**0.93**	**68**	*e*P	Pn	10 06 39.1	+0.3
LFRS				*e*S	Sn	10 06 54.1	+0.8
LBRS	**Las Brisas**	**0.99**	**62**	*e*P	Pn	10 06 39.4	-0.1
SNVI	**San Vicente**	**1.13**	**72**	*e*P	Pn	10 06 41.1	0.0
SNVI				*e*S	Sn	10 06 58.3	+0.9
FUG	**Fuego 3**	**1.46**	**323**	*e*P	Pn	10 06 44.8	-0.3
FUG				*e*S	Sn	10 07 04.7	+0.2

*ISCJB **30** 10:40:50.3±0.3, 42°.05N±0°.04×142°.48E±0°.04, h72km±3km, mb3.9/17, Error ellipse: s-maj=6.4km s-min=4.5km az=152.3*
*JMA **30** 10:40:51.1±0.1, 42°.06N×142°.48E, h66km±2km, M3.8 Broadband fault plane solution: P waves. NP1: ϕs14.00000°, δ85.00000°, λ97.00000°. NP2:ϕs135.00000°, δ9.00000°, λ31.00000°. Principal axes: T Plg49.0000°, Azm292.0000°; N Plg7.0000°, Azm193.0000°; P Plg40.0000°, Azm97.0000°;*
JMA Felt I J1.
*NEIC **30** 10:40:51.2, 42°.06N×142°.48E, h66km, mb4.4/3, After JMA.*
NEIC Recorded [1 JMA] in southwestern Hokkaido. Also recorded [1 JMA] in Aomori, Honshu.
*IDC **30** 10:40:52.9±1.6, 42°.11N×142°.44E, h78km±13km, mb3.6/14, mb1 3.7/18, mb1mx3.6/29, mbtmp3.6/18, Error ellipse: s-maj=17.8km s-min=10.5km az=118.0*

ISC 30 10:40:51.3±0.7, 42°.04N±0°.04×142°.47E±0°.04, h65km±6km, n43, σ0°83/54, mb3.9/17, 4C-6D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.32**	**41**	⇑P	**Pn**	**10 41 01.6**	**-0.4**
JNBK				*e*S	**Sn**	**10 41 09.6**	**-0.2**
ERM	**Erimo**	**0.51**	**93**	*e*Pn	**Pn**	**10 41 04.1**	**+0.4**
ERM				*e*Sn	**Sn**	**10 41 12.8**	**0.0**
JEM	**Erimo**	**0.51**	**93**	P	**Pn**	**10 41 03.9**	**+0.2**
JEM				*e*S	**Sn**	**10 41 12.9**	**+0.1**
JBT2	**Biratori 2**	**0.74**	**354**	⇓P	**Pn**	**10 41 05.9**	**-0.4**
JBT2				*e*S	**Sn**	**10 41 16.7**	**-0.6**
JCH	**Churui**	**0.87**	**49**	⇑P	**Pn**	**10 41 07.7**	**-0.2**
JKB	**Kayabe**	**1.08**	**262**	⇓P	**Pn**	**10 41 10.4**	**-0.1**
JKB				*e*S	**Sn**	**10 41 24.7**	**-0.2**
JEW	**Eniwo**	**1.10**	**317**	⇓P	**Pn**	**10 41 10.8**	**0.0**
JEW				*e*S	**Sn**	**10 41 25.1**	**-0.2**
JFR	**Furan**	**1.12**	**5**	P	**Pn**	**10 41 10.7**	**-0.4**
JNB	**Noboribetsu**	**1.15**	**292**	⇓P	**Pn**	**10 41 11.6**	**-0.8**
JNB				*e*S	**Sn**	**10 41 25.5**	**-0.9**
JOT	**Ohata**	**1.25**	**239**	⇓P	**Pn**	**10 41 12.7**	**-0.1**
JOT				*e*S	**Sn**	**10 41 28.9**	**+0.1**
JOB	**Onbets**	**1.33**	**49**	⇑P	**Pn**	**10 41 14.4**	**+0.7**
JAB	**Ashibetsu**	**1.47**	**353**	P	**Pn**	**10 41 15.9**	**+0.2**
JYM2	**Yakumo 2**	**1.57**	**273**	⇓P	**Pn**	**10 41 16.8**	**-0.1**
JAR	**Ashorobuto**	**1.58**	**37**	⇑P	**Pn**	**10 41 16.8**	**-0.3**
JAR				*e*S	**Sn**	**10 41 35.6**	**-1.0**
JSR	**Shiriuchi**	**1.62**	**252**	P	**Pn**	**10 41 17.6**	**0.0**
JSR				*e*S	**Sn**	**10 41 37.8**	**+0.3**
ASAJ	**Asahikawa**	**2.08**	**2**	*e*Pn	**Pn**	**10 41 24.4**	**+0.6**
ASAJ				*e*Sn	**Sn**	**10 41 51.0**	**+2.4**
ASAJ	**Asahikawa**	**2.08**	**2**	P	**Pn**	**10 41 24.6**	**+0.7**
	51nm,0.3s,baz=208,slow=11,SNR=171						

ASAJ				S		Sn	10 41 49.5	+0.9		
	32nm,0.3s,baz=78,slow=20,SNR=13									
MAJO	**Matsushiro**	**6.41**	**212**	*e*Pn		**Pn**	**10 42 21.6**	**-1.4**		
	11nm,0.8s									
MAT	**Matsushiro**	**6.41**	**212**	P		**Pn**	**10 42 25.2**	**+2.2**		
MJAR	**Matsushiro Arr**	**6.41**	**212**	P		Pn	10 42 26.3	+3.2		
	0.8nm,0.3s,baz=24,slow=14,SNR=9.6									
USRK	**Ussuriysk Arra**	**7.96**	**289**	P		**Pn**	**10 42 46.4**	**+2.3**		
	0.3nm,0.3s,baz=91,slow=15,SNR=11									
KSRS	**Korea Array**	**12.10**	**253**	P		**Pn**	**10 43 43.0**	**+2.3**		
	0.6nm,0.3s,baz=64,slow=14,SNR=9.7									
SONM	**Songino Array**	**26.02**	**295**	P		**P**	**10 46 18.4**	**+0.2**		
	1.1nm,0.5s,baz=80,slow=8.9,SNR=7.9									
ZAA0	**Zalesovo Array**	**39.31**	**308**	*e*P		**P**	**10 48 13.6**	**0.0**		
ZALV	**Zalesovo Beam**	**39.31**	**308**	P		**P**	**10 48 13.2**	**-0.4**		
	2.8nm,0.6s,baz=85,slow=8.3,SNR=14									
MK31	**Makanchi Array**	**42.33**	**298**	*e*P		**P**	**10 48 38.6**	**0.0**		
MKAR	**Makanchi Array**	**42.33**	**298**	P		**P**	**10 48 38.4**	**-0.3**		
	2.0nm,0.8s,baz=83,slow=10,SNR=16									
CMAR	**Chiang Mai Arr**	**43.73**	**251**	P		**P**	**10 48 50.8**	**+0.6**		
	0.4nm,0.4s,baz=38,slow=6.1,SNR=2.5									
ILAR	**Eielson Array**	**44.88**	**35**	P		**P**	**10 48 58.6**	**-0.1**		
	0.3nm,0.4s,baz=263,slow=5.3,SNR=11									
TKM2	**Tokmak 2**	**48.12**	**295**	*e*P		**P**	**10 49 25.0**	**+0.3**		
	3.6nm,0.4s									
INK	**Inuvik**	**49.59**	**29**	P		**P**	**10 49 34.9**	**-0.4**		
	0.4nm,0.3s,baz=301,slow=6.0,SNR=10									
KKAR	**Karatay Array**	**51.45**	**297**	*e*P		**P**	**10 49 49.5**	**-0.2**		
	1.0nm,0.3s									
ABKAR	**Akbulak array**	**55.42**	**308**	*e*P		**P**	**10 50 18.4**	**-0.3**		
	0.9nm,0.3s									
YKA	**Yellowknife Ar**	**59.10**	**32**	P		**P**	**10 50 44.5**	**+0.1**		
	0.3nm,0.6s,baz=305,slow=6.6,SNR=9.4									
ARCES	**ARCESS Array B**	**59.62**	**339**	P		**P**	**10 50 47.4**	**-0.6**		
	4.4nm,1.0s,baz=46,slow=7.8,SNR=4.1									
WRA	**Warramunga Arr**	**62.13**	**189**	P		**P**	**10 51 04.8**	**-0.6**		
	0.6nm,0.8s,baz=7.3,slow=7.1,SNR=9.3									
FINES	**FINESS Array B**	**64.79**	**332**	P		**P**	**10 51 21.8**	**-0.7**		
	2.7nm,0.7s,baz=36,slow=7.4,SNR=8.9									
ASAR	**Alice Springs**	**65.86**	**189**	P		**P**	**10 51 30.1**	**+0.3**		
	0.2nm,0.3s,baz=313,slow=28,SNR=3.2									
NB2	**NORSAR Subarra**	**69.89**	**337**	P		**P**	**10 51 54.1**	**-0.8**		
	comp=Z,0.9nm,0.6s,baz=36,slow=6.5									
NOA	**NORSAR Array B**	**69.89**	**337**	P		**P**	**10 51 54.3**	**-0.6**		
	comp=Z,1.2nm,0.6s,baz=38,slow=6.2,SNR=5.8									
AKASG	**Malin Array Be**	**70.86**	**322**	P		**P**	**10 52 00.1**	**-0.8**		
	comp=Z,0.8nm,0.4s,baz=42,slow=5.5,SNR=6.2									
TXAR	**Lajitas Array**	**86.44**	**53**	P		**P**	**10 53 27.8**	**+0.8**		
	comp=Z,0.5nm,0.7s,baz=301,slow=3.7,SNR=7.7									
SIV	**San Ignacio**	**147.08**	**45**	PKPbc		**PKPab**	**11 00 28.0**	**-0.8**		
	comp=Z,1.1nm,0.6s,baz=313,slow=2.7,SNR=4.5									

*ISCJB **30** 10:48:57.8±0.8, 37°59N±0'.05×35°71E±0'.07, h6km±13km, Error ellipse: s-maj=9.5km s-min=7.7km az=31.3*
*CSEM **30** 10:48:57.9±0.2, 37°57N×35°71E, h12km, MD2.6, Error ellipse: s-maj=5.3km s-min=3.3km az=10.0*
*DDA **30** 10:48:57.0, 37°56N×35°77E, h7km, MD2.8*
*ISK **30** 10:48:57.5, 37°54N×35°71E, h15km, MD2.6*

ISC 30 10:48:57.7±1.1, 37°55N±0'.07×35°70E±0'.04, h15km±6km, n11, σ0°29/18, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
KOZT	**Kozan**	**0.12**	**125**	*e*PG		**Pg**		**10 49 01.1**	**-0.3**
KOZT				*e*SG		**Sg**		**10 49 03.9**	**+0.1**
KOZT	**Kozan**	**0.12**	**125**	*e*Pg		**Pg**		**10 49 01.1**	**-0.3**
KOZT				*e*Sg		**Sg**		**10 49 03.9**	**+0.1**
CEYT	**Ceyhan**	**0.54**	**176**	*e*PG		**Pg**		**10 49 08.4**	**-0.1**
CEYT				*e*SG		**Sb**		**10 49 16.5**	**0.0**
CEYT	**Ceyhan**	**0.54**	**176**	*e*Pg		**Pg**		**10 49 08.4**	**-0.1**
CEYT				*e*Sg		**Sb**		**10 49 16.5**	**0.0**
GULE	**Gulek**	**0.78**	**250**	*i* P		**Pb**		**10 49 13.4**	**+0.3**
GULE				*i* S		**Sn**		**10 49 25.3**	**-0.5**
GULE	**Gulek**	**0.78**	**250**	*i* P		**Pb**		**10 49 13.4**	**+0.3**
GULE				*i* S		**Sn**		**10 49 25.3**	**-0.5**
KMRS	**Kahramanmaras**	**0.96**	**93**	*e*PG		**Pb**		**10 49 16.2**	**+0.2**
KMRS				*e*SG		**Sn**		**10 49 29.7**	**-0.2**
KMRS	**Kahramanmaras**	**0.96**	**93**	*e*Pg		**Pb**		**10 49 16.2**	**+0.2**
KMRS				*e*Sg		**Sn**		**10 49 29.7**	**-0.2**
NIG	**Nigde**	**1.03**	**303**	*e*PG		**Pn**		**10 49 17.9**	**+0.1**
NIG	**Nigde**	**1.03**	**303**	*e*Pg		**Pn**		**10 49 17.9**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.37**	**35**	*e*PG		Pn		10 49 17.8	-4.7

IDC 30 11:14:55.8±2.1, 16°72S×178°14W, h0km, mb3.7/6, mb1 4.1/6, mb1mx3.8/19, mbtmp3.7/6, Error ellipse: s-maj=125.1km s-min=23.4km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
WRA	**Warramunga Arr**	**45.11**	**258**	P		P		11 23 14.0	-0.3
	0.4nm,0.5s,baz=97,slow=6.9,SNR=20								
ASAR	**Alice Springs**	**45.37**	**253**	P		P		11 23 16.3	0.0
	3.1nm,0.5s,baz=89,slow=8.3,SNR=38								
ILAR	**Eielson Array**	**84.68**	**13**	P		P		11 27 31.4	+0.3
	0.4nm,0.4s,baz=220,slow=5.3,SNR=18								
TXAR	**Lajitas Array**	**85.14**	**58**	P		P		11 27 34.7	+0.3
	0.2nm,0.9s,baz=234,slow=7.7,SNR=3.6								
PDAR	**Pinedale Array**	**86.31**	**43**	P		P		11 27 39.8	-0.2
	0.2nm,0.6s,baz=204,slow=2.0,SNR=3.0								
YKA	**Yellowknife Ar**	**93.15**	**25**	P		P		11 28 10.7	-0.7
	0.1nm,0.5s,baz=240,slow=4.5,SNR=5.1								

IDC 30 11:20:57.0±2.5, 12°78S×64°83E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/25, mbtmp3.6/4, MS3.6/4, Ms1 3.6/4, ms1mx3.0/40, Error ellipse: s-maj=94.3km s-min=31.6km az=56.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
MKAR	**Makanchi Array**	**61.34**	**14**	P		P		11 31 14.7	+0.2
	0.2nm,0.6s,baz=216,slow=8.9,SNR=3.1								
KURBB	**Kurchatov Arra**	**64.26**	**10**	LR		LR		11 58 38.6	
	comp=Z,32nm,19.3s,baz=205,slow=35								
ASAR	**Alice Springs**	**65.97**	**110**	P		P		11 31 45.0	-0.6
	1.2nm,1.1s,baz=268,slow=7.3,SNR=5.3								
WRA	**Warramunga Arr**	**66.68**	**106**	P		P		11 31 50.8	+0.5
	1.5nm,0.9s,baz=275,slow=5.9,SNR=8.8								
ZALV	**Zalesovo Beam**	**68.62**	**13**	P		P		11 32 01.3	-0.4
	0.4nm,0.5s,baz=212,slow=5.1,SNR=3.8								
SONM	**Songino Array**	**70.77**	**28**	LR		LR		12 02 07.6	
	comp=Z,27nm,18.7s,baz=71,slow=35								
KSRS	**Korea Array**	**77.39**	**47**	LR		LR		12 06 44.2	
	comp=Z,42nm,18.7s,baz=191,slow=36								
USRK	**Ussuriysk Arra**	**83.14**	**42**	LR		LR		12 11 02.1	
	comp=Z,47nm,19.6s,baz=250,slow=36								
PDAR	**Pinedale Array**	**149.73**	**352**	PKPbc		PKPbc		11 40 48.2	-1.2
	0.7nm,0.8s,baz=62,slow=2.1,SNR=5.4								
NVAR	**Mina Array Bea**	**154.31**	**6**	PKPbc		PKPbc		11 41 01.1	+1.2
	0.5nm,0.8s,baz=270,slow=0.9,SNR=3.7								

*CSEM **30** 11:28:28.2±0.3, 36°17N×27°45E, h2km, MD3.1, Error ellipse: s-maj=7.4km s-min=4.8km az=135.0*
*DDA **30** 11:28:29.0, 36°18N×27°59E, h8km, ML3.5*
*ATH **30** 11:28:28.0, 36°23N×27°55E, h30km±1km, MD3.1/8*
*ISK **30** 11:28:28.0, 36°22N×27°63E, h5km, MD3.0*

ISC 30 11:28:28.9±1.1, 36°19N±0'.02×27°53E±0'.02, h18km±5km, n44, σ0°60/62, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
ARG	**Arkhangelos**	**0.48**	**87**	*e*PB		**Pg**		**11 28 38.3**	**-0.4**
ARG				*e*SB		**Sb**		**11 28 45.8**	**+0.1**
ARG	**Arkhangelos**	**0.48**	**87**	*e*Pb		**Pg**		**11 28 38.3**	**-0.4**
ARG				*e*Sb		**Sb**		**11 28 45.8**	**+0.1**
NIS1	**Nisyros Isl.**	**0.50**	**326**	*e*PB		**Pg**		**11 28 38.4**	**-0.6**
NIS1	**Nisyros Isl.**	**0.50**	**326**	*e*Pb		**Pg**		**11 28 38.4**	**-0.6**
DAT	**Datca**	**0.54**	**4**	*e*PG		**Pg**		**11 28 39.2**	**-0.6**
DAT				*e*SG		**Sb**		**11 28 47.6**	**+0.2**
DAT	**Datca**	**0.54**	**4**	*e*Pg		**Pg**		**11 28 39.2**	**-0.6**
DAT				*e*Sg		**Sb**		**11 28 47.6**	**+0.2**
KARP	**Karpathos**	**0.71**	**205**	*e*PN		**Pb**		**11 28 42.3**	**-0.4**
KARP				*e*SN		**Sn**		**11 28 54.2**	**-0.3**
KARP	**Karpathos**	**0.71**	**205**	*e*Pn		**Pb**		**11 28 42.3**	**-0.4**
BODT	**Bodrum**	**0.89**	**349**	*e*PG		**Pb**		**11 28 45.7**	**-0.1**
BODT				*e*SG		**Sn**		**11 28 58.6**	**-0.4**
BODT	**Bodrum**	**0.89**	**349**	*e*Pg		**Pb**		**11 28 45.7**	**-0.1**
BODT				*e*Sg		**Sn**		**11 28 58.6**	**-0.4**
DALY	**Dalyan (Mu¨la**	**1.10**	**55**	*e*PG		**Pb**		**11 28 48.4**	**-1.0**
DALY	**Dalyan (Mu¨la**	**1.10**	**55**	*e*Pg		**Pb**		**11 28 48.4**	**-1.0**
TURN	**Turunc**	**1.10**	**51**	*i* P		Pb		11 28 44.3	-5.1
TURN				*i* S		Sb		11 28 55.8	-7.6
MLSB	**Milas**	**1.12**	**10**	*e*PG		**Pb**		**11 28 49.8**	**0.0**
MLSB	**Milas**	**1.12**	**10**	*e*Pg		**Pb**		**11 28 49.8**	**0.0**
YER	**Yerkesik**	**1.12**	**33**	*e*PG		**Pn**		**11 28 49.2**	**-0.5**
YER	**Yerkesik**	**1.12**	**33**	*e*Pg		**Pn**		**11 28 49.2**	**-0.5**
FETY	**Fethiye**	**1.33**	**70**	*e*PN		**Pb**		**11 28 52.9**	**-0.4**
FETY	**Fethiye**	**1.33**	**70**	*e*Pn		**Pb**		**11 28 52.9**	**-0.4**
AYDN	**Tasoluk**	**1.50**	**11**	*i* P		**Pb**		**11 28 56.7**	**+0.5**
AYDN				*i* S		**Sg**		**11 29 18.5**	**+1.3**
AYDN	**Tasoluk**	**1.50**	**11**	*i* P		**Pb**		**11 28 56.7**	**+0.5**
AYDN				*i* S		**Sg**		**11 29 18.5**	**+1.3**
ZKR	**Zakros**	**1.51**	**225**	*e*PN		**Pb**		**11 28 56.4**	**0.0**
ZKR				*e*SN		**Sb**		**11 29 15.5**	**+0.2**
ZKR	**Zakros**	**1.51**	**225**	*e*Pn		**Pb**		**11 28 56.4**	**0.0**
ZKR				*e*Sn		**Sb**		**11 29 15.5**	**+0.2**
AKAS	**Kas**	**1.68**	**88**	*i* P		**Pb**		**11 28 59.6**	**+0.3**
AKAS				*i* S		**Sg**		**11 29 24.4**	**+1.2**
AKAS	**Kas**	**1.68**	**88**	*i* P		**Pb**		**11 28 59.6**	**+0.3**
AKAS				*i* S		**Sg**		**11 29 24.4**	**+1.2**
NPS	**Neapolis**	**1.81**	**240**	*e*PN		**Pn**		**11 28 59.5**	**+0.3**
NPS				*e*SN		**Sn**		**11 29 21.3**	**-0.4**
NPS	**Neapolis**	**1.81**	**240**	*e*Pn		**Pn**		**11 28 59.5**	**+0.3**
NPS				*e*Sn		**Sn**		**11 29 21.3**	**-0.4**
APE	**Apeiranthos**	**1.83**	**299**	*e*PN		**Pg**		**11 29 03.5**	**-0.6**
APE	**Apeiranthos**	**1.83**	**299**	*e*PN		**Pn**		**11 28 59.7**	**+0.2**
APE	**Apeiranthos**	**1.83**	**299**	*e*Pn		**Pn**		**11 28 59.7**	**+0.2**
GLHS	**Glhisar (BURDU**	**1.85**	**58**	*e*PN		**Pn**		**11 29 00.8**	**+0.9**
GLHS	**Glhisar (BURDU**	**1.85**	**58**	*e*Pn		**Pn**		**11 29 00.8**	**+0.9**
DNZL	**Cakiroluk**	**1.93**	**39**	*i* P		**Pb**		**11 29 04.4**	**+0.8**
DNZL				*i* S		**Sg**		**11 29 31.2**	**+0.1**
DNZL	**Cakiroluk**	**1.93**	**39**	*i* P		**Pb**		**11 29 04.4**	**+0.8**
DNZL				*i* S		**Sg**		**11 29 31.2**	**+0.1**
GOLH	**Golhisar**	**1.94**	**57**	*i* P		**Pg**		**11 29 05.6**	**-0.6**
GOLH				*i* S		**Sg**		**11 29 30.9**	**-0.5**
GOLH	**Golhisar**	**1.94**	**57**	*i* P		**Pg**		**11 29 05.6**	**-0.6**
GOLH				*i* S		**Sg**		**11 29 30.9**	**-0.5**
LAST	**Lasithi**	**1.96**	**239**	*e*PN		**Pn**		**11 29 01.7**	**+0.4**
LAST	**Lasithi**	**1.96**	**239**	*e*Pn		**Pn**		**11 29 01.7**	**+0.4**
XRY	**Khrisi**	**1.99**	**229**	*e*PB		**Pn**		**11 29 02.6**	**+1.0**
XRY	**Khrisi**	**1.99**	**229**	*e*Pb		**Pn**		**11 29 02.6**	**+1.0**
IDI	**Anoyia**	**2.33**	**248**	*e*PN		**Pn**		**11 29 06.1**	**-0.2**
IDI	**Anoyia**	**2.33**	**248**	*e*Pn		**Pn**		**11 29 06.1**	**-0.2**
KORT	**Korkueli**	**2.41**	**70**	*e*P		**Pb**		**11 29 11.3**	**-0.5**
KORT	**Korkueli**	**2.41**	**70**	*e*P		**Pb**		**11 29 11.3**	**-0.5**

*ISCJB **30** 11:45:38.2±0.7, 4°74S±0'.04×77°18W±0'.05, h122km±7km, mb4.4/59, Error ellipse: s-maj=9.4km s-min=6.6km az=149.1*
*IDC **30** 11:45:38.2±1.8, 4°66S×77°34W, h106km±18km, mb4.0/23, mb1 4.2/26, mb1mx4.1/34, mbtmp4.1/26, MS3.0/1, Ms1 3.1/1, ms1mx2.3/32, Error ellipse: s-maj=17.8km s-min=10.5km az=59.0*
*BJI **30** 11:45:39.7, 4°80S×77°20W, h113km, mB4.9/3*
*NEIC **30** 11:45:39.4±0.6, 4°74S×77°19W, h120km±5km, mb4.6/33, Error ellipse: s-maj=8.0km s-min=4.6km az=67.0*
NEIC Felt at Barranca and Yurimaguas.

ISC 30 11:45:38.6±0.6, 4°82S±0'.05×77°19W±0'.09, h114km±5km, n413, σ0°85/439, mb4.5/59, 140C-144D, Northern Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
ATAH	**Atahualpa**	**2.60**	**207**	P		**Pn**		**11 46 21.2**	**+1.4**
ATAH				S		**Sn**		**11 46 52.5**	**+1.1**
ATAH	**Atahualpa**	**2.60**	**207**	P		**Pn**		**11 46 21.2**	**+1.4**
	148nm,0.3s,baz=24,slow=9.0,SNR=1667								
ATAH				S		**Sn**		**11 46 52.5**	**+1.1**
	160nm,0.3s,baz=209,slow=19,SNR=14								
OTAV	**Otavalo**	**5.18**	**346**	*e*Pn		**Pn**		**11 46 54.7**	**+0.4**
NNA	**Nana**	**7.13**	**177**	*e*Pn		**Pn**		**11 47 21.1**	**+0.6**
NNA				*e*Sn		Sn		11 48 32.0	-8.0
NNA				S		**Sn**		**11 48 35.6**	**-4.4**
NNA	**Nana**	**7.13**	**177**	P		**Pn**		**11 47 21.8**	**+1.4**
	34nm,0.3s,baz=348,slow=13,SNR=86								
NNA				S		**Sn**		**11 48 35.6**	**-4.4**
	140nm,0.3s,baz=260,slow=18,SNR=22								
BCIP	**Isla Barro Col**	**14.14**	**349**	Pn		**Pn**		**11 48 53.1**	**-0.8**
LPAZ	**La Paz**	**14.46**	**143**	*e*Pn		**Pn**		**11 48 57.8**	**-0.7**
LPAZ	**La Paz**	**14.46**	**143**	P		**Pn**		**11 48 57.8**	**-0.7**
	0.5nm,0.3s,baz=323,slow=10,SNR=12								
LPAZ				LR		LR		11 55 27.4	
	comp=Z,62nm,19.8s,baz=258,slow=40								
SAML	**Samuel**	**14.49**	**107**	*e*Pn		**Pn**		**11 48 57.7**	**-0.7**
	0.1nm,0.8s								
SDV	**Santo Domingo**	**15.10**	**26**	*e*Pn		**Pn**		**11 49 05.5**	**-0.7**
SIV	**San Ignacio**	**19.33**	**126**	P		**Pn**		**11 49 57.9**	**+0.5**
SIV	**San Ignacio**	**19.33**	**126**	P		**Pn**		**11 49 57.9**	**+0.5**
	1.7nm,0.3s,baz=317,slow=13,SNR=29								
LVC	**Limon Verde**	**19.42**	**156**	*e*Pn		**Pn**		**11 50 00.8**	**+2.2**
	45nm,0.8s								
AOPR	**Arecibo Observ**	**25.21**	**24**	*e*P		**P**		**11 50 53.5**	**-0.4**
	38nm,0.8s								
SJG	**San Juan**	**25.25**	**25**	P		**P**		**11 50 54.6**	**+0.4**
SJG	**San Juan**	**25.25**	**25**	P		**P**		**11 50 54.6**	**+0.4**
	14nm,0.4s,baz=178,slow=11,SNR=5.5								
TEIG	**Tepich**	**27.17**	**337**	P		**P**		**11 51 11.1**	**-0.4**
TEIG	**Tepich**	**27.17**	**337**	P		**P**		**11 51 11.0**	**-0.4**
	7.9nm,0.7s,baz=162,slow=3.2,SNR=3.2								
CPUP	**Villa Florida**	**28.61**	**140**	P		P		11 51 28.2	+4.0
CPUP	**Villa Florida**	**28.61**	**140**	P		P		11 51 28.2	+4.0
	0.9nm,0.3s,baz=306,slow=11,SNR=4.6								
PLCA	**Paso Flores**	**36.25**	**171**	P		**P**		**11 52 32.9**	**+2.1**
PLCA				PcP		**PcP**		**11 54 54.7**	**+1.0**
PLCA	**Paso Flores**	**36.25**	**171**	P		**P**		**11 52 32.9**	**+2.1**
	0.8nm,0.6s,baz=343,slow=11,SNR=2.2								
PLCA				PcP		**PcP**		**11 54 54.7**	**+1.0**
	0.9nm,0.6s,baz=331,slow=4.6,SNR=3.3								
LRAL	**Lakeview Retre**	**38.78**	**347**	*e*P		**P**		**11 52 51.4**	**-0.7**
	21nm,0.9s								
732A	**Laxson Ranch,**	**39.91**	**328**	⇓P		**P**		**11 53 01.4**	**-0.2**
	baz=40								
KMSC	**Kings Mountain**	**39.94**	**355**	⇓P		**P**		**11 53 01.7**	**0.0**
	baz=40								
632A	**Uvalde**	**40.44**	**329**	⇓P		**P**		**11 53 06.2**	**+0.2**
	baz=40								
CPCT	**Cooper Cave**	**40.64**	**351**	*e*P		**P**		**11 53 06.9**	**-0.6**
SWET	**Sewanee**	**40.66**	**349**	*e*P		**P**		**11 53 07.0**	**-0.8**
	15nm,0.7s								
631A	**Perdido Creek**	**40.77**	**328**	⇑P		**P**		**11 53 08.9**	**+0.2**
	baz=41,SNR=7.6								
532A	**Rocksprings**	**41.00**	**329**	⇑P		**P**		**11 53 11.3**	**+0.7**
	baz=41,SNR=9.6								
531A	**Rocksprings**	**41.36**	**329**	⇑P		**P**		**11 53 14.0**	**+0.4**
	baz=42,SNR=5.5								
WHTX	**Lake Whitney**	**41.38**	**334**	⇓P		**P**		**11 53 13.9**	**+0.3**
	baz=42								
432A	**Menard**	**41.55**	**330**	⇓P		**P**		**11 53 15.4**	**+0.3**
	baz=42								
530A	**J-C Ranch, Com**	**41.76**	**328**	⇑P		**P**		**11 53 17.2**	**+0.3**
	baz=42								
431A	**Sonora**	**41.80**	**329**	⇓P		**P**		**11 53 17.2**	**0.0**
	baz=42								
332A	**Millersview**	**41.94**	**331**	⇓P		**P**		**11 53 18.1**	**-0.1**
	baz=42,SNR=7.8								
628A	**Black Gap, Mar**	**42.09**	**326**	⇓P		**P**		**11 53 20.0**	**+0.5**
	baz=42								
529A	**Stev Forest Ra**	**42.22**	**327**	⇑P		**P**		**11 53 20.7**	**+0.2**
	baz=42								
232A	**Coleman**	**42.31**	**331**	⇓P		**P**		**11 53 21.2**	**-0.1**
	baz=42,SNR=5.6								
627A	**Terlingua Ranc**	**42.35**	**325**	⇓P		**P**		**11 53 22.0**	**+0.3**
	baz=42								
TXAR	**Lajitas Array**	**42.42**	**325**	P		P		**11 53 21.9**	**-0.3**
TXAR				PcP		**PcP**		**11 55 13.5**	**+0.1**
TXAR	**Lajitas Array**	**42.42**	**325**	P		**P**		**11 53 22.0**	**-0.3**
	0.8nm,0.6s,baz=150,slow=8.4,SNR=16								
TXAR				PcP		**PcP**		**11 55 13.5**	**+0.1**
	0.8nm,0.7s,baz=160,slow=5.6,SNR=7.5								
429A	**Davenport Ranc**	**42.43**	**328**	⇑P		**P**		**11 53 22.6**	**+0.3**
	baz=42								
528A	**Cox Ranch, San**	**42.55**	**326**	⇑P		**P**		**11 53 23.7**	**+0.3**
	baz=43								
231A	**Bronte**	**42.67**	**330**	⇓P		**P**		**11 53 23.8**	**-0.4**
	baz=43								
330A	**Mertzon**	**42.67**	**329**	⇑P		**P**		**11 53 24.3**	**+0.1**
	baz=43								
626A	**Big Bend Ranch**	**42.86**	**325**	⇑P		**P**		**11 53 26.0**	**+0.2**
	baz=43,SNR=8.0								
ABTX	**Abilene, Hawle**	**42.91**	**332**	⇑P		**P**		**11 53 26.3**	**+0.2**
	baz=43								
428A	**Kincaid Ranch,**	**42.93**	**327**	⇑P		**P**		**11 53 26.4**	**0.0**
	baz=43								
527A	**Woodward Ranch**	**43.00**	**326**	⇑P		**P**		**11 53 27.0**	**0.0**
	baz=43,SNR=6.0								
230A	**Sterling City**	**43.03**	**330**	⇓P		**P**		**11 53 26.9**	**-0.2**
	baz=43								
329A	**Wagon Wheel Ra**	**43.16**	**328**	⇑P		**P**		**11 53 27.9**	**-0.2**
	baz=43,SNR=5.3								
526A	**Mary Lane Ranc**	**43.21**	**325**	⇑P		**P**		**11 53 28.8**	**+0.1**
	baz=43,SNR=5.3								
Z32A	**Haskell**	**43.40**	**332**	⇓P		**P**		**11 53 30.2**	**+0.2**
	baz=44,SNR=5.7								
427A	**Hayter Ranch,**	**43.42**	**326**	⇓P		**P**		**11 53 30.4**	**+0.1**
	baz=44								
229A	**Bryant Ranch,**	**43.45**	**329**	⇓P		**P**		**11 53 30.7**	**+0.2**
	baz=44								
328A	**Wristen Ranch,**	**43.51**	**328**	⇓P		**P**		**11 53 31.2**	**+0.2**
	baz=44								
130A	**Snyder**	**43.53**	**330**	⇓P		**P**		**11 53 31.3**	**+0.2**
	baz=44								
426A	**McDonald Obser**	**43.63**	**326**	⇓P		**P**		**11 53 32.2**	**0.0**
	baz=44								
Z31A	**Sharp Cattle R**	**43.72**	**332**	⇑P		**P**		**11 53 32.8**	**+0.2**
	baz=44,SNR=7.0								
SIUC	**Southern Illin**	**43.77**	**346**	*e*P		**P**		**11 53 31.6**	**-1.3**
	18nm,0.7s								
SIUC				*e*pP		pP		11 53 51.3	-7.8
Y32A	**R-V Farms, Ver**	**43.97**	**333**	⇓P		**P**		**11 53 35.0**	**+0.4**
	baz=44,SNR=6.0								
129A	**Stewart Farms,**	**44.00**	**330**	⇑P		**P**		**11 53 34.9**	**-0.1**
	baz=44								
TUL1	**Tulsa**	**44.11**	**338**	⇓P		**P**		**11 53 35.3**	**-0.4**
	baz=44								
Z30A	**Sanderson Ranc**	**44.17**	**331**	⇓P		**P**		**11 53 36.2**	**0.0**
	baz=44,SNR=5.7								
227A	**Bennet, Jal**	**44.26**	**328**	⇓P		**P**		**11 53 37.3**	**+0.4**
	baz=44								
425A	**Indio Mountain**	**44.26**	**325**	⇓P		**P**		**11 53 37.1**	**0.0**
	baz=44								
Y31A	**Rekieta Farm,**	**44.31**	**332**	⇑P		**P**		**11 53 37.8**	**+0.5**
	baz=44,SNR=7.1								
128A	**Castleberry Fa**	**44.31**	**329**	⇓P		**P**		**11 53 37.6**	**+0.2**
	baz=44								
Z29A	**Hungry Hill Ra**	**44.43**	**330**	⇓P		**P**		**11 53 38.7**	**+0.4**
	baz=44								
Y30A	**Stafford Cattl**	**44.54**	**332**	⇓P		**P**		**11 53 39.6**	**+0.4**
	baz=45								
MVL	**Millersville**	**44.60**	**1**	*e*P		**P**		**11

baz=48,SNR=5.4
Z20A **Nine Sixteen R** 48.05 324 ⇓P P 11 54 07.2 +0.4
baz=48
S28A **Manter** 48.05 333 ⇓P P 11 54 07.2 +0.5
baz=48
CBKS **Cedar Bluff** 48.17 336 *e*P P 11 54 08.1 +0.7
18nm,0.8s
V24A **Rampart Ranch,** 48.17 329 ⇑P P 11 54 07.8 0.0
baz=48,SNR=8.2
W23A **Werner Place,** 48.20 328 ⇑P P 11 54 08.4 +0.5
baz=48
ANMO **Albuquerque** 48.20 327 *e*P P 11 54 08.2 +0.2
ANMO **Albuquerque** 48.20 327 P P 11 54 07.7 -0.3
4.5nm,0.7s,baz=131,slow=11,SNR=13
U25A **Circle Dot Ran** 48.27 330 ⇓P P 11 54 08.6 +0.1
baz=48,SNR=5.7
T26A **Comanche Natio** 48.49 332 ⇓P P 11 54 10.6 +0.4
baz=49
Y20A **Horse Springs,** 48.50 325 ⇓P P 11 54 10.8 +0.5
baz=49,SNR=5.0
X21A **Alamocita Cree** 48.55 326 ⇑P P 11 54 11.4 +0.7
baz=49,SNR=7.1
S27A **Las Animas** 48.58 333 ⇑P P 11 54 10.7 0.0
baz=49,SNR=6.5
V23A **Ortiz Mt. (NFS** 48.66 328 ⇓P P 11 54 12.4 +0.9
baz=49
U24A **Moreno Valley** 48.71 330 ⇓P P 11 54 12.4 +0.4
baz=49
S26A **Kim** 48.80 332 ⇑P P 11 54 12.9 +0.6
baz=49,SNR=10
TUC **Tucson** 48.81 321 *e*P P 11 54 12.0 -0.5
T25A **Trinidad** 48.85 331 ⇓P P 11 54 13.6 +0.6
baz=49,SNR=5.3
W21A **San Fidel** 48.97 327 ⇓P P 11 54 14.5 +0.6
baz=49
X20A **Quemado** 49.03 325 ⇓P P 11 54 14.7 +0.4
baz=49
R27A **Eads** 49.03 333 ⇑P P 11 54 13.9 -0.3
baz=49,SNR=5.5
U23A **El Rito** 49.11 329 ⇑P P 11 54 15.3 +0.4
baz=49,SNR=8.4
T24A **Torres, Weston** 49.12 330 ⇓P P 11 54 15.7 +0.7
baz=49
V22A **San Miguel Ran** 49.17 328 ⇑P P 11 54 15.8 +0.4
baz=49
LONY **Lake Ozonia** 49.27 2 *e*P P 11 54 16.0 +0.3
7.1nm,0.8s
R26A **Arlington** 49.33 333 ⇓P P 11 54 17.0 +0.5
baz=49
SADO **Sadowa** 49.39 358 P P 11 54 15.2 -1.4
SADO **Sadowa** 49.39 358 P P 11 54 15.2 -1.4
3.1nm,0.5s,baz=199,slow=11
W20A **Ramah** 49.45 326 ⇓P P 11 54 17.8 +0.3
baz=50
V21A **Milan** 49.48 327 ⇑P P 11 54 18.5 +0.7
baz=50
U22A **Llaves** 49.49 328 ⇓P P 11 54 18.5 +0.6
baz=50
FRNY **Flat Rock** 49.53 3 *e*P P 11 54 18.3 +0.7
15nm,0.8s
KSCO **Kaye Shedlock'** 49.55 334 ⇓P P 11 54 18.8 +0.7
baz=50
T23A **Casias Ranch,** 49.58 330 ⇑P P 11 54 19.3 +0.8
baz=50
S24A **Houchin Ranch,** 49.64 331 ⇑P P 11 54 19.6 +0.6
baz=50
SDCO **Great Sand Dun** 49.86 331 *e*P P 11 54 21.1 +0.4
6.4nm,0.9s
Q26A **Hugo** 49.87 333 ⇓P P 11 54 21.4 +0.8
baz=50
V20A **Brimhall** 49.93 327 ⇑P P 11 54 21.8 +0.7
baz=50
U21A **Nageezi** 49.96 328 ⇓P P 11 54 22.0 +0.7
baz=50
P26A **Davis Ranch, A** 50.32 334 ⇑P P 11 54 24.7 +0.8
baz=50
R23A **Moffat** 50.37 331 ⇓P P 11 54 25.0 +0.5
baz=50
U20A **Newcomb** 50.38 327 ⇑P P 11 54 24.7 +0.3
baz=50
S22A **4UR Ranch, Cre** 50.53 329 ⇑P P 11 54 25.9 +0.2
baz=51,SNR=5.5
P25A **Willow Gulch B** 50.65 333 ⇓P P 11 54 26.6 +0.2
baz=51,SNR=7.1
X16A **Lo Mia Camp, P** 50.65 323 ⇑P P 11 54 26.4 -0.2
baz=51
Q24A **Divide** 50.66 332 ⇑P P 11 54 26.8 +0.1
baz=51
MVCO **Mesa Verde** 50.99 328 *e*P P 11 54 28.1 -1.0
MVCO **Mesa Verde** 50.99 328 ⇑P P 11 54 29.2 +0.1
baz=51
113A **Mohawk Valley,** 51.00 320 ⇓P P 11 54 29.0 0.0
baz=51
O25A **Wiggins** 51.11 333 ⇑P P 11 54 30.5 +0.7
baz=51
Y14A **Wickenburg** 51.28 321 ⇑P P 11 54 31.5 +0.3
baz=51
P23A **Jefferson** 51.31 332 ⇓P P 11 54 32.2 +0.6
baz=51,SNR=5.9
R21A **Cimarron** 51.37 329 ⇓P P 11 54 32.4 +0.4
baz=52
WUAZ **Wupatki** 51.37 324 *e*P P 11 54 31.9 0.0
8.9nm,1.1s
WUAZ *e*pP pP 11 55 00.6 +1.7
WUAZ **Wupatki** 51.37 324 ⇑P P 11 54 32.4 +0.5
baz=52,SNR=7.9
S20A **Disappointment** 51.38 328 ⇓P P 11 54 32.5 +0.5
baz=52,SNR=5.6
ECSD **EROS Data Cent** 51.41 342 *e*P P 11 54 30.4 -1.4
10nm,0.8s
Q22A **Crested Butte,** 51.43 330 ⇓P P 11 54 32.8 +0.4
baz=52,SNR=6.7
ISCO **Idaho Springs** 51.54 332 ⇑P P 11 54 33.7 +0.4
baz=52
M27A **Reverse DX Ran** 51.54 336 ⇑P P 11 54 33.9 +0.9
baz=52
O24A **Longmont** 51.55 333 ⇓P P 11 54 33.8 +0.6
baz=52
R20A **Redvale** 51.66 329 ⇑P P 11 54 34.7 +0.7
baz=52
SMCO **Snowmass** 51.70 331 *e*P P 11 54 34.8 +0.2
5.6nm,1.3s
GLA **Glamis** 51.87 319 ⇓P P 11 54 36.1 +0.5
baz=52
P22A **Eagle** 51.92 331 ⇓P P 11 54 36.6 +0.6
baz=52
O23A **Lake Granby, G** 52.01 332 ⇑P P 11 54 36.9 +0.2
baz=52,SNR=9.5
S18A **Hurst Farm, Bl** 52.15 327 ⇑P P 11 54 38.3 +0.5
baz=52
P21A **Newcastle** 52.20 330 ⇑P P 11 54 38.6 +0.5
baz=52
O22A **Kremmling** 52.27 332 ⇓P P 11 54 38.8 +0.2
baz=52
U15A **North Rim** 52.54 324 ⇑P P 11 54 41.1 +0.4
baz=53
W13A **Hualapai Mount** 52.60 322 ⇑P P 11 54 41.6 +0.5
baz=53
BC3 **Big Chuckawall** 52.66 319 ⇓P P 11 54 41.9 +0.5
baz=53
IRM **Iron Mountain** 52.78 320 ⇓P P 11 54 42.7 +0.5
baz=53
M23A **Laramie** 52.92 333 ⇓P P 11 54 43.6 +0.2
baz=53
P19A **Cripple Cowboy** 53.05 329 ⇓P P 11 54 44.6 +0.3
baz=53
O20A **White River Ci** 53.06 330 ⇓P P 11 54 45.0 +0.6
baz=53
L23A **Garrett** 53.43 334 ⇑P P 11 54 47.5 +0.4
baz=54
SRU **San Rafael** 53.47 328 *e*P P 11 54 47.5 +0.2
3.6nm,1.0s
SRU **San Rafael** 53.47 328 ⇓P P 11 54 47.3 -0.1
baz=54
GMRC **Granite Mounta** 53.50 320 ⇓P P 11 54 47.9 +0.3
baz=54
N20A **Spence Gulch,** 53.61 331 ⇓P P 11 54 48.5 +0.1
baz=54,SNR=8.0
O19A **Miners Draw (B** 53.63 330 ⇓P P 11 54 48.4 -0.1
baz=54,SNR=5.5
Q16A **Castle Valley** 53.67 327 ⇑P P 11 54 49.4 +0.5
baz=54
M21A **Separation Pea** 53.78 332 ⇓P P 11 54 50.1 +0.5
baz=54
P17A **Butcher Ranch,** 53.84 328 ⇑P P 11 54 50.4 +0.3
baz=54
K23A **Bowen Ranch, D** 53.91 334 ⇓P P 11 54 51.0 +0.5
baz=54

CCUT **Cedar City** 53.94 325 *e*P P 11 54 52.0 +1.2
4.0nm,0.9s
MVU **Marysvale** 53.95 326 *e*P P 11 54 51.5 +0.6
HEC **Hector,Ludlow** 53.96 320 ⇑P P 11 54 51.2 +0.3
baz=54
BBRC **Big Bear Solar** 53.99 319 ⇑P P 11 54 52.2 +0.9
baz=54
L21A **Rawlins** 54.06 332 ⇑P P 11 54 52.0 +0.3
baz=54
M20A **Sweetwater, Wa** 54.08 331 ⇓P P 11 54 51.9 +0.1
baz=54,SNR=7.3
K22A **Casper** 54.23 334 ⇑P P 11 54 52.7 0.0
baz=54
K21A **Alcova** 54.54 333 ⇑P P 11 54 55.3 +0.2
baz=55
GSC **Goldstone** 54.56 320 ⇑P P 11 54 55.8 +0.6
baz=55
FMP **Fort Macarthur** 54.56 318 ⇑P P 11 54 55.8 +0.7
baz=55
J22A **Midwest** 54.81 334 ⇓P P 11 54 56.8 -0.2
baz=55,SNR=8.5
JLU **Jordanelle** 55.04 328 *e*P P 11 54 59.3 +0.5
3.5nm,0.7s
EDW2 **Edwards Air Fo** 55.06 319 ⇓P P 11 54 59.2 +0.3
baz=55
H24A **Dirks Ranch, A** 55.10 336 ⇓P P 11 54 59.1 +0.1
baz=55
L19A **Farson** 55.11 331 ⇓P P 11 54 59.2 0.0
baz=55
J21A **Lysite** 55.19 333 ⇑P P 11 54 60.0 +0.2
baz=55,SNR=6.5
I22A **9 Mile Ranch,** 55.20 334 ⇑P P 11 54 59.6 -0.1
baz=55,SNR=7.4
L18A **Fontenelle, Gr** 55.30 331 ⇓P P 11 55 00.8 +0.1
baz=55
K19A **Absolon Red Bu** 55.42 332 ⇓P P 11 55 00.8 -0.6
baz=56,SNR=5.3
MPMC **Manual Prospec** 55.47 320 ⇑P P 11 55 02.0 +0.2
baz=56
DUG **Dugway** 55.47 327 ⇑P P 11 55 02.2 +0.5
baz=56
J20A **Shoshoni** 55.48 333 ⇑P P 11 55 02.4 +0.6
baz=56
I21A **Big Trails, Te** 55.49 334 ⇑P P 11 55 01.2 -0.7
baz=56,SNR=5.2
BW06 **Boulder Array** 55.71 331 *e*P P 11 55 03.1 -0.5
2.4nm,1.0s
BW06 **Boulder Array** 55.71 331 ⇓P P 11 55 03.4 -0.2
baz=56
PDAR **Pinedale Array** 55.71 331 P P 11 55 02.4 -1.2
PDAR PcP PcP 11 56 01.1 -0.4
PDAR **Pinedale Array** 55.71 331 P P 11 55 02.4 -1.2
1.4nm,0.8s,baz=122,slow=7.9,SNR=12
PDAR PcP PcP 11 56 01.1 -0.4
1.4nm,0.8s,baz=124,slow=5.6,SNR=4.7
R11A **Troy Canyon, C** 55.77 324 ⇓P P 11 55 04.9 +0.9
baz=56
HWUT **Hardware Ranch** 55.83 329 *e*P P 11 55 04.0 -0.4
4.0nm,0.8s
K18A **Toltan Ranch,** 55.84 331 ⇑P P 11 55 05.1 +0.6
baz=56
L17A **Cokeville** 55.85 330 ⇓P P 11 55 04.3 -0.2
baz=56
J19A **Crowheart** 55.86 332 ⇑P P 11 55 04.6 +0.1
baz=56
I20A **Worland** 55.97 333 ⇑P P 11 55 05.0 -0.3
baz=56,SNR=5.1
F24A **Ekalaka** 55.97 337 ⇑P P 11 55 05.3 +0.1
baz=56
MDND **Maddock** 56.02 342 ⇑P P 11 55 05.9 +0.5
baz=56
H21A **Big Horn, Sher** 56.03 335 ⇑P P 11 55 05.1 -0.6
baz=56
L16A **Fish Haven** 56.07 330 ⇓P P 11 55 05.2 -0.8
baz=56
G22A **Birney** 56.20 336 ⇓P P 11 55 06.7 -0.1
baz=56
F23A **Volborg** 56.25 337 ⇑P P 11 55 06.8 -0.3
baz=56,SNR=5.5
VES **Vestal, Richgr** 56.35 319 ⇓P P 11 55 08.0 +0.1
baz=56
L15A **Malad City** 56.54 329 ⇓P P 11 55 09.2 -0.2
baz=57
I18A **Diamond G Ranc** 56.55 332 ⇓P P 11 55 09.5 0.0
baz=57
D24A **Glendive** 56.99 338 ⇑P P 11 55 12.7 +0.4
baz=57
G20A **Bridger** 57.01 334 ⇓P P 11 55 12.1 -0.5
baz=57
F21A **Absaloka Mine,** 57.03 335 ⇓P P 11 55 12.8 +0.1
baz=57
E22A **Miles City** 57.05 337 ⇓P P 11 55 12.6 -0.1
baz=57
ULM **Lac du Bonnet** 57.18 346 *e*P P 11 55 12.1 -1.4
ULM **Lac du Bonnet** 57.18 346 P P 11 55 11.8 -1.7
12nm,0.7s,baz=161,slow=9.0,SNR=15
ELK **Elko** 57.18 326 P P 11 55 12.5 -1.6
ELK **Elko** 57.18 326 P P 11 55 12.5 -1.6
1.0nm,0.7s,baz=129,slow=6.5,SNR=5.3
IMW **Indian Meadow** 57.23 331 *e*P P 11 55 14.2 -0.1
K14A **Jones Ranch, D** 57.34 329 ⇓P P 11 55 14.7 -0.3
baz=57
NVAR **Mina Array Bea** 57.45 322 P P 11 55 15.9 0.0
NVAR PcP PcP 11 56 08.5 0.0
NVAR **Mina Array Bea** 57.45 322 P P 11 55 15.9 0.0
1.7nm,0.6s,baz=127,slow=7.3,SNR=18
NVAR PcP PcP 11 56 08.5 0.0
0.9nm,0.7s,baz=121,slow=4.6,SNR=4.4
I16A **Newdale** 57.47 331 ⇑P P 11 55 16.9 +1.0
baz=58
J15A **Blackfoot** 57.58 330 ⇓P P 11 55 16.7 0.0
baz=58,SNR=9.5
G18A **Lazy EL Ranch,** 57.68 333 ⇓P P 11 55 17.1 -0.2
baz=58
D22A **Cohagen** 57.73 337 ⇑P P 11 55 17.9 +0.4
baz=58,SNR=8.1
F19A **Roth Farm, Mol** 57.82 334 ⇑P P 11 55 18.0 -0.3
baz=58,SNR=6.8
C23A **Lambert** 57.89 338 ⇓P P 11 55 19.1 +0.5
baz=58
H16A **Russell Place,** 57.98 332 ⇑P P 11 55 20.1 +0.6
baz=58,SNR=8.5
D21A **La Casta Ranch** 57.98 336 ⇑P P 11 55 20.1 +0.8
baz=58
E20A **Meyer Farm, Mu** 57.99 335 ⇑P P 11 55 19.5 +0.1
baz=58,SNR=5.5
I15A **Monteview** 58.05 331 ⇑P P 11 55 20.6 +0.7
baz=58
J14A **Carey** 58.07 329 ⇓P P 11 55 20.4 +0.3
baz=58,SNR=6.5
GCMT **Greycliff** 58.09 334 *e*P P 11 55 20.0 -0.2
8.1nm,1.0s
C22A **Vida** 58.10 338 ⇓P P 11 55 20.3 +0.2
baz=58
F18A **Big Timber** 58.20 334 ⇓P P 11 55 21.0 +0.1
baz=58,SNR=18
G17A **Pierce Place,** 58.21 333 ⇓P P 11 55 21.9 +0.9
baz=58
E19A **Rath Farm, Rou** 58.23 335 ⇓P P 11 55 20.9 -0.2
baz=58,SNR=6.0
A24A **Westby** 58.41 340 ⇑P P 11 55 22.7 +0.6
baz=58
J13A **Cove Ranch, Pi** 58.46 329 ⇓P P 11 55 22.7 -0.1
baz=59,SNR=5.9
D20A **Manuel Ranch,** 58.46 336 ⇓P P 11 55 22.6 -0.1
baz=59,SNR=8.4
I14A **Mackay** 58.48 330 ⇑P P 11 55 23.2 +0.3
baz=59,SNR=5.3
H15A **Lima** 58.58 331 ⇓P P 11 55 24.3 +0.6
baz=59,SNR=6.6
F17A **Fitzpatrick Pl** 58.62 333 ⇓P P 11 55 24.1 +0.3
baz=59
G16A **Moss Hill, Enn** 58.63 332 ⇑P P 11 55 24.7 +0.7
baz=59
HLID **Hailey** 58.70 329 *e*P P 11 55 24.9 +0.4
2.9nm,0.9s
HLID **Hailey** 58.70 329 ⇑P P 11 55 24.4 -0.1
baz=59,SNR=5.8
A23A **Redstone** 58.74 339 ⇓P P 11 55 25.2 +0.7
baz=59
I13A **Wildhorse Cree** 58.80 329 ⇑P P 11 55 25.3 +0.1
baz=59,SNR=6.4
E18A **Harlowton** 58.80 334 ⇑P P 11 55 25.7 +0.6
baz=59
D19A **Cripps Ranch,** 58.83 335 ⇑P P 11 55 25.6 +0.4
baz=59
MCMT **McKenzie Canyo** 58.83 331 *e*P P 11 55 24.9 -0.6
1.8nm,1.3s

BOZ **Bozeman (W)** 58.87 332 *e*P P 11 55 25.3 -0.3
4.7nm,0.9s
BOZ **Bozeman (W)** 58.87 332 ⇓P P 11 55 25.2 -0.3
baz=59,SNR=9.3
G15A **Dillon** 58.91 331 ⇑P P 11 55 26.4 +0.5
baz=59
H14A **Leadore** 58.93 331 ⇑P P 11 55 26.2 +0.1
baz=59,SNR=5.2
F16A **Kennard Place,** 58.97 332 ⇓P P 11 55 26.9 +0.6
baz=59
B21A **Ellsworth Farm** 59.10 337 ⇑P P 11 55 28.1 +1.2
baz=59
E17A **Martinsdale** 59.13 333 ⇓P P 11 55 28.0 +0.6
baz=59
I12A **Atlanta** 59.23 329 ⇑P P 11 55 28.2 0.0
baz=59,SNR=5.4
D18A **Linhart Farms,** 59.24 335 ⇑P P 11 55 28.5 +0.4
baz=59
MFID **Camas Ranch** 59.33 328 *e*P P 11 55 28.8 +0.1
MFID **Camas Ranch** 59.33 328 ⇓P P 11 55 28.9 +0.1
baz=59,SNR=14
H13A **Challis** 59.33 330 ⇑P P 11 55 29.2 +0.4
baz=59
C19A **Slack Wire Ran** 59.35 336 ⇓P P 11 55 29.1 +0.3
baz=60
F15A **Butte** 59.41 332 ⇓P P 11 55 29.3 -0.1
baz=60
G14A **Jackson** 59.43 331 ⇑P P 11 55 29.9 +0.3
baz=60
B20A **Solberg Farm,** 59.50 337 ⇓P P 11 55 30.4 +0.6
baz=60
E16A **East Helena** 59.56 333 ⇓P P 11 55 30.9 +0.6
baz=60
D17A **Six Diamond Ra** 59.59 334 ⇑P P 11 55 30.3 -0.2
baz=60,SNR=6.7
H12A **Diamond D Ranc** 59.62 330 ⇓P P 11 55 30.8 -0.1
baz=60,SNR=5.2
G13A **Cobalt** 59.70 330 ⇓P P 11 55 31.9 +0.5
baz=60
F14A **Wisdom** 59.80 331 ⇑P P 11 55 32.6 +0.5
baz=60
EGMT **Eagleton** 59.87 335 *e*P P 11 55 31.5 -0.8
11nm,1.3s
EGMT **Eagleton** 59.87 335 ⇓P P 11 55 32.5 +0.1
baz=60
D16A **Dana Ranch, Ca** 59.88 333 ⇓P P 11 55 32.9 +0.5
baz=60
B19A **Brinkman Farms** 59.88 336 ⇑P P 11 55 32.5 +0.2
baz=60
E15A **Deer Lodge** 59.92 332 ⇑P P 11 55 33.0 +0.3
baz=60
C17A **Wharram Farm,** 59.99 334 ⇓P P 11 55 33.0 -0.2
baz=60,SNR=9.6
SCHQ **Schefferville** 60.06 7 P P 11 55 33.1 -0.3
SCHQ **Schefferville** 60.06 7 P P 11 55 33.1 -0.3
2.7nm,0.8s,baz=207,slow=4.5,SNR=3.4
B18A **Beardsley Farm** 60.17 336 ⇓P P 11 55 34.3 0.0
baz=60,SNR=7.6
A19A **Klindworth Far** 60.18 337 ⇑P P 11 55 34.4 0.0
baz=60,SNR=8.5
WVOR **Wild Horse Val** 60.21 326 *e*P P 11 55 34.3 -0.5
4.2nm,1.2s
F13A **Darby** 60.25 331 ⇑P P 11 55 35.6 +0.6
baz=60
G12A **Big Creek, Yel** 60.27 330 ⇓P P 11 55 35.6 +0.3
baz=60
E14A **Clinton** 60.31 332 ⇑P P 11 55 36.0 +0.5
baz=60
D15A **Lincoln** 60.32 333 ⇓P P 11 55 36.0 +0.4
baz=60
C16A **Fuhringer Ranc** 60.55 334 ⇑P P 11 55 37.8 +0.8
baz=61
A18A **Metzger Ranch,** 60.61 336 ⇓P P 11 55 37.7 +0.3
baz=61
E13A **Victor** 60.65 331 ⇑P P 11 55 38.2 +0.4
baz=61
F12A **Elk City** 60.68 330 ⇓P P 11 55 38.4 +0.4
baz=61
D14A **Greenough** 60.80 332 ⇓P P 11 55 39.1 +0.3
baz=61
MSO **Missoula** 60.82 332 *e*P P 11 55 39.0 +0.1
MSO **Missoula** 60.82 332 ⇑P P 11 55 38.9 +0.1
baz=61,SNR=5.9
C15A **Salmond Ranch,** 60.91 333 ⇑P P 11 55 40.4 +0.9
baz=61
A17A **Triple J Farms** 60.98 335 ⇓P P 11 55 40.5 +0.6
baz=61
D13A **Huson** 61.26 332 ⇑P P 11 55 41.9 +0.2
baz=61
B15A **Bradely Ranch,** 61.30 334 ⇓P P 11 55 42.4 +0.3
baz=61
B14A **Marquette Ranc** 61.65 333 ⇓P P 11 55 44.4 0.0
baz=62,SNR=5.7
D12A **Red Ives Fores** 61.65 331 ⇓P P 11 55 44.9 +0.5
baz=62
C13A **Hot Springs** 61.73 332 ⇑P P 11 55 45.5 +0.5
baz=62
A15A **Johnson Ranch,** 61.87 334 ⇓P P 11 55 46.1 +0.2
baz=62
BSMT **Bassoo Peak** 61.96 332 *e*P P 11 55 46.7 +0.1
YBH **Yreka Blue Hor** 62.14 323 P P 11 55 46.4 -1.5
YBH **Yreka Blue Hor** 62.14 323 P P 11 55 46.4 -1.5
2.1nm,0.6s,baz=135,slow=4.3,SNR=9.1
A14A **Double T Ranch** 62.17 334 ⇓P P 11 55 48.4 +0.5
baz=62
C12B **Naegeli Ranch,** 62.18 332 ⇓P P 11 55 48.9 +1.0
baz=62
WALA **Waterton Lakes** 62.45 334 *e*P P 11 55 49.4 -0.4
0.1nm,0.8s
FFC **Flin Flon** 62.82 344 *e*P P 11 55 51.3 -0.6
8.8nm,1.3s
NEW **Newport** 63.35 331 *e*P P 11 55 55.8 +0.1
NEW **Newport** 63.35 331 ⇓P P 11 55 55.9 +0.2
baz=63
NEW **Newport** 63.35 331 P P 11 55 54.0 -1.7
3.5nm,0.8s,baz=155,slow=7.9,SNR=7.1
FRB **Frobisher Bay** 68.69 4 P P 11 56 28.2 -1.2
FRB **Frobisher Bay** 68.69 4 P P 11 56 28.2 -1.2
5.9nm,0.7s,baz=186,slow=8.7,SNR=16
YKA **Yellowknife Ar** 72.93 343 P P 11 56 54.0 -1.1
YKA **Yellowknife Ar** 72.93 343 P P 11 56 54.0 -1.1
2.4nm,0.5s,baz=140,slow=6.1,SNR=105
YKW3 **Yellowknife Ar** 72.98 343 *e*P P 11 56 54.1 -1.4
0.1nm,1.2s
DBIC **Dimbokro** 73.09 82 P P 11 56 58.4 +1.3
DBIC **Dimbokro** 73.09 82 P P 11 56 58.4 +1.3
4.7nm,0.5s,baz=244,slow=6.0,SNR=13
DLBC **Dease Lake** 75.78 334 *e*P P 11 57 11.3 -0.6
DLBC **Dease Lake** 75.78 334 P P 11 57 11.6 -0.2
4.5nm,0.9s,baz=164,slow=7.4,SNR=11
VNA2 **Neumayer--Watz** 78.93 162 *e*P pP 11 57 54.8 -3.4
ESDC **Sonseca Array** 80.27 49 P P 11 57 38.1 +1.0
ESDC **Sonseca Array** 80.27 49 P P 11 57 38.1 +1.0
1.0nm,0.6s,baz=266,slow=6.0,SNR=6.0
TORD **Torodi Ar. Bea** 80.31 76 P P 11 57 38.5 +0.8
TORD **Torodi Ar. Bea** 80.31 76 P P 11 57 38.5 +0.8
2.2nm,0.6s,baz=283,slow=5.5,SNR=14
SNAA **Sanae** 80.55 162 *e*P pP 11 58 06.1 -1.0
SUMG **Summit** 81.10 11 *i* P P 11 57 41.7 +0.5
7.8nm,0.8s
INK **Inuvik** 82.65 342 P P 11 57 48.4 -0.4
INK **Inuvik** 82.65 342 P P 11 57 48.4 -0.4
6.2nm,0.7s,baz=111,slow=4.9,SNR=43
EGAK **Eagle** 83.57 337 *e*P P 11 57 53.4 -0.3
10nm,1.1s
MENT **Mentasta** 83.84 335 *e*P P 11 57 54.0 -1.1
QSPA **South Pole Qui** 85.27 180 P P 11 58 03.7 +1.2
QSPA **South Pole Qui** 85.27 180 P P 11 58 03.7 +1.2
3.6nm,1.0s,baz=149,slow=6.5
ILAR **Eielson Array** 85.83 336 P P 11 58 04.1 -0.9
ILAR PP PP 12 01 25.6 -0.5
ILAR **Eielson Array** 85.83 336 P P 11 58 04.1 -0.9
2.3nm,1.0s,baz=131,slow=3.7,SNR=21
ILAR PP PP 12 01 25.6 -0.5
0.5nm,0.8s,baz=101,slow=6.7,SNR=5.4
TRF **Thorofare Moun** 86.81 334 *e*P P 11 58 08.8 -1.4
4.4nm,0.8s
DAG **Danmarks Havn** 87.79 11 *i* P P 11 58 14.4 +0.1
3.8nm,0.9s
COLD **Coldfoot** 87.91 338 *e*P P 11 58 15.7 +0.6
6.1nm,1.0s
ABKAR **Akbulak array** 122.79 32 *e*PKPdf PKPdf 12 04 21.7 +0.5
ZALV **Zalesovo Beam** 128.87 14 PKP PKPdf 12 04 32.6 -0.1
ZALV **Zalesovo Beam** 128.87 14 PKP PKPdf 12 04 32.6 -0.1
1.7nm,0.7s,baz=318,slow=1.9,SNR=11
MKAR **Makanchi Array** 134.57 20 PKP PKPdf 12 04 43.6 -0.2
MKAR **Makanchi Array** 134.57 20 PKP PKPdf 12 04 43.6 -0.2

0.5nm,0.4s,baz=330,slow=1.9,SNR=6.0
SONM Songino Array 137.03 356 PKP **PKPdf 12 04 48.3 -0.2**
SONM Songino Array 137.03 356 PKP **PKPdf 12 04 48.3 -0.2**
1.1nm,0.8s,baz=354,slow=1.8,SNR=3.6
KSH Kashi 137.79 31 *e*PKP **PKPdf 12 04 52.8 +2.7**
KSH *e*PP PP 12 07 43.0 +5.5
KSH PKS **PKSdf 12 08 25.3 -1.1**
KSH SKS **SKSdf 12 11 51.0 +0.3**
KSH SKKS **SKKSac 12 14 22.3 +0.3**
KSH SS **SS 12 25 40.8 +3.0**
KSH AMB AMB
comp=Z,52nm,1.9s
KSH LR LR
comp=N,260nm,5.6s
KSH LR LR
comp=E,160nm,3.9s
KSH LR LR
comp=Z,220nm,5.2s
ASAR Alice Springs 138.52 226 PKhKP PKPpre 12 04 43.1
comp=Z,0.2nm,0.4s,baz=129,slow=2.5,SNR=4.4
WMQ Urumqi 138.93 17 PKP **PKPdf 12 04 51.3 -0.7**
KSRS Korea Array 140.23 328 PKP **PKPdf 12 04 52.7 -1.7**
comp=Z,1.2nm,0.7s,baz=27,slow=3.3,SNR=3.9
KSAR Wonju Array Be 140.26 328 PKP **PKPdf 12 04 52.7 -1.8**
WRA Warramunga Arr 140.43 231 PKPpre PKPpre 12 04 47.3
WRA PKP **PKPdf 12 04 55.0 -0.4**
WRA Warramunga Arr 140.43 231 PKhKP PKPpre 12 04 47.3
comp=Z,0.4nm,0.6s,baz=124,slow=2.7,SNR=9.0
WRA PKP **PKPdf 12 04 55.0 -0.4**
comp=Z,1.2nm,0.5s,baz=118,slow=2.0,SNR=21
BJI Beijing 142.92 343 PKP **PKPdf 12 04 58.8 -0.4**
BJI SS SS 12 26 38.5 +1.9
BJI LR LR
comp=N,100nm,17.4s
BJI LR LR
comp=E,120nm,15.7s
BJI LR LR
comp=Z,17nm,20.0s
HHC Hu-ho-hao-te 143.27 349 *e*PKP PKPbc 12 04 57.8 +0.6
HHC PP **PP 12 08 12.3 +1.9**
HHC PKS **PKSdf 12 08 32.3 -3.4**
HHC SKS **SKSdf 12 11 56.5 -3.0**
HHC SKKS **SKKSac 12 14 51.5 -2.2**
HHC SS **SS 12 26 41.5 +0.8**
HHC AMB AMB
comp=Z,180nm,9.2s
GTA Gaotai 145.46 4 PKPbc **PKPbc 12 05 04.0 0.0**
GTA pPKP **pPKPdf 12 05 31.0 -3.8**
GTA PP PP 12 08 28.8 +5.4
GTA SKS **SKSdf 12 12 01.5 -1.3**
GTA SKKS **SKKSac 12 15 06.8 +0.5**
GTA SS **SS 12 27 10.5 +4.9**
GTA AMB AMB
comp=Z,40nm,5.0s
GTA LR LR
comp=N,190nm,20.4s
GTA LR LR
comp=E,290nm,20.9s
GTA LR LR
comp=Z,61nm,18.5s
LZH Lanzhou 148.87 358 *e*PKPbc **PKPbc 12 05 14.8 +1.1**
LZH pPKP **pPKPdf 12 05 42.0 +1.3**
LZH sPKP 12 05 52.5
MBWA Marble Bar 149.31 212 *e*PKPbc **PKPbc 12 05 14.9 -0.1**
XAN Xi'an 150.37 350 PKPbc **PKPbc 12 05 17.0 -0.3**
GYA Guiyang 158.17 351 *e*PKP **PKPdf 12 05 21.0 -2.1**
GYA pPKP **pPKPdf 12 05 52.8 -1.4**
GYA sPKP 12 06 04.3
GYA PKS **PKSdf 12 08 55.0 -2.0**
GYA PP **PP 12 09 39.5 +3.7**
GYA AMB AMB
comp=Z,80nm,8.0s
CMAR Chiang Mai Arr 165.93 15 PKPab **PKPab 12 06 30.1 -1.0**
CMAR Chiang Mai Arr 165.93 15 PKPab **PKPab 12 06 30.1 -1.0**
comp=Z,1.0nm,0.7s,baz=335,slow=4.9,SNR=5.7

WEL 30 11:47:42.6±0.2, 39°09S×176°39E, h91km±1km, ML3.8/14, 27C-11D, Error ellipse: s-maj=1.0km s-min=0.6km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKZ	**Black Stump Fm**	**0.12**	**134**	PN	Pn	11 47 55.1	-0.5
BKZ				SN	Sn	11 48 04.3	-1.0
HATZ	**Hinemaiaia**	**0.30**	**310**	PN	Pn	11 47 55.8	-0.5
NMHZ	**Naumai**	**0.33**	**92**	⇓PN	Pn	11 47 57.1	+0.6
RITZ	**Rihia Road**	**0.42**	**284**	⇑PN	Pn	11 47 57.0	0.0
RITZ				SN	Sn	11 48 07.1	-0.6
MCHZ	**McNeill Hill**	**0.43**	**146**	⇑PN	Pn	11 47 57.7	+0.7
BHHZ	**Black Hill Sta**	**0.47**	**212**	⇑PN	Pn	11 47 57.4	-0.1
BHHZ				SN	Sn	11 48 07.6	-0.8
ALRZ	**Allen Road**	**0.52**	**356**	⇓PN	Pn	11 47 57.3	-0.4
RATZ	**Rangitukua**	**0.53**	**294**	⇑PN	Pn	11 47 57.5	-0.3
WHTZ	**Whakaora**	**0.53**	**321**	PN	Pn	11 47 57.8	-0.1
KATZ	**Kakaramea**	**0.55**	**281**	⇑PN	Pn	11 47 58.0	0.0
OTVZ	**Oturere**	**0.56**	**262**	⇑PN	Pn	11 47 58.2	0.0
RAHZ	**Arahi**	**0.57**	**73**	⇓PN	Pn	11 47 58.5	+0.4
KRVZ	**Karewarewa**	**0.58**	**269**	⇑PN	Pn	11 47 58.2	-0.1
PRRZ	**Plateau Road**	**0.59**	**1**	⇓PN	Pn	11 47 57.7	-0.6
MOVZ	**Moawhango**	**0.59**	**237**	⇑PN	Pn	11 47 58.0	-0.3
TUVZ	**Tukino**	**0.60**	**252**	⇑PN	Pn	11 47 58.5	0.0
NGZ	**Ngauruhoe**	**0.62**	**261**	⇑PN	Pn	11 47 58.6	-0.1
WTVZ	**West Tongariro**	**0.62**	**267**	⇑PN	Pn	11 47 58.5	-0.2
WATZ	**Wairara**	**0.63**	**306**	*e*PN	Pn	11 47 58.2	-0.5
WNVZ	**Wahianoa**	**0.66**	**248**	⇑PN	Pn	11 47 58.9	-0.1
WPVZ	**Whakapapa**	**0.66**	**259**	PN	Pn	11 47 58.9	-0.2
FWVZ	**Far West T-bar**	**0.67**	**255**	PN	Pn	11 47 58.7	-0.5
TRVZ	**Turoa**	**0.68**	**251**	PN	Pn	11 47 58.9	-0.5
HRRZ	**Handcock Road**	**0.70**	**353**	PN	Pn	11 47 58.9	-0.4
TWVZ	**Taurewa**	**0.74**	**271**	PN	Pn	11 47 59.4	-0.3
RRRZ	**Republican Roa**	**0.75**	**8**	⇓PN	Pn	11 47 59.4	-0.4
MTVZ	**Mangateitei**	**0.77**	**247**	⇑PN	Pn	11 48 00.0	0.0
CKHZ	**Cape Kidnapper**	**0.79**	**137**	⇑PN	Pn	11 48 00.7	+0.6
KAHZ	**Kahuranaki**	**0.81**	**152**	⇑PN	Pn	11 48 00.8	+0.5
PKVZ	**Pokaka**	**0.83**	**255**	⇑PN	Pn	11 48 00.7	+0.1
PNHZ	**Pukenui**	**0.84**	**190**	⇑PN	Pn	11 48 00.5	-0.3
TARZ	**Mount Tarawera**	**0.85**	**6**	⇓PN	Pn	11 48 00.8	-0.2
UTU	**Utuhina**	**0.92**	**350**	⇓PN	Pn	11 48 01.6	+0.1
OMRZ	**Omania**	**0.98**	**359**	⇓PN	Pn	11 48 01.9	-0.3
WPHZ	**Waipukurau**	**0.98**	**177**	⇑PN	Pn	11 48 02.1	-0.1
URZ	**Urewera**	**1.00**	**35**	PN	Pn	11 48 01.6	-0.8
URZ				SN	Sn	11 48 15.8	-1.4
PXZ	**Pawanui**	**1.01**	**159**	⇑PN	Pn	11 48 02.6	+0.1
TSZ	**Takapari Road**	**1.03**	**198**	PN	Pn	11 48 02.1	-0.6
TSZ				SN	Sn	11 48 17.1	-0.8
MWZ	**Matawai**	**1.17**	**50**	PN	Pn	11 48 04.1	-0.3
PRGZ	**Paritu Road**	**1.18**	**83**	⇓PN	Pn	11 48 04.8	+0.3
MHGZ	**Mahia Peninsul**	**1.19**	**94**	PN	Pn	11 48 05.0	+0.4
PRHZ	**Porangahau**	**1.20**	**171**	⇑PN	Pn	11 48 04.6	-0.1
DVHZ	**Dannevirke**	**1.23**	**188**	⇑PN	Pn	11 48 04.5	-0.6
OPRZ	**Ohinepanea**	**1.25**	**6**	PN	Pn	11 48 04.7	-0.5
VRZ	**Vera Road**	**1.27**	**268**	⇑PN	Pn	11 48 05.8	+0.3
WAZ	**Wanganui**	**1.27**	**238**	⇑PN	Pn	11 48 06.3	+0.6
HIZ	**Hauiti**	**1.32**	**295**	⇓PN	Pn	11 48 06.6	+0.3
TGRZ	**Tauranga**	**1.36**	**356**	⇓PN	Pn	11 48 06.7	0.0
POWZ	**Post Office Ro**	**1.39**	**200**	PN	Pn	11 48 06.6	-0.5
TOZ	**Tahuroa Road**	**1.52**	**333**	PN	Pn	11 48 09.0	+0.3
CNGZ	**Carnagh Statio**	**1.54**	**68**	PN	Pn	11 48 09.2	+0.2
RAEZ	**Rainy Point**	**1.56**	**262**	PN	Pn	11 48 10.2	+1.0
BFZ	**Birch Farm**	**1.60**	**184**	PN	Pn	11 48 08.9	-0.8
MHEZ	**Mangahewa**	**1.60**	**270**	PN	Pn	11 48 11.0	+1.3
MRZ	**Mangatainoka R**	**1.69**	**201**	⇑PN	Pn	11 48 10.0	-0.9
TIWZ	**Tintock**	**1.73**	**193**	⇑PN	Pn	11 48 10.7	-0.7
PUZ	**Puketiti**	**1.78**	**56**	PN	Pn	11 48 12.1	0.0
NEZ	**North Egmont**	**1.79**	**263**	PN	Pn	11 48 13.6	+1.4
DFE	**Dawson Falls**	**1.79**	**262**	PN	Pn	11 48 13.7	+1.5
PKE	**Pukeiti**	**1.87**	**266**	PN	Pn	11 48 14.2	+1.0
HOWZ	**Holdsworth Sta**	**1.93**	**200**	⇑PN	Pn	11 48 12.7	-1.3
NWEZ	**Newall Road**	**1.97**	**264**	PN	Pn	11 48 15.2	+0.8
OGWZ	**Otaki Gorge**	**1.97**	**208**	PN	Pn	11 48 13.4	-1.0
TMWZ	**Te Maipa**	**2.06**	**190**	PN	Pn	11 48 14.4	-1.2
KIW	**Kapiti Island**	**2.11**	**212**	PN	Pn	11 48 15.1	-1.2
MXZ	**Matakaoa Point**	**2.14**	**45**	PN	Pn	11 48 16.9	+0.2
MTW	**Mount Morrison**	**2.18**	**198**	PN	Pn	11 48 15.6	-1.7
CAW	**Cannon Point**	**2.26**	**206**	⇑PN	Pn	11 48 16.7	-1.6
TRWZ	**Traveller**	**2.37**	**193**	PN	Pn	11 48 18.2	-1.6
PAWZ	**Paruwai Farm**	**2.41**	**197**	PN	Pn	11 48 18.5	-1.8
MSWZ	**Moikau Station**	**2.48**	**200**	PN	Pn	11 48 19.2	-2.1
WEL	**Wellington**	**2.52**	**209**	PN	Pn	11 48 19.9	-1.8
SNZO	**South Karori**	**2.57**	**210**	PN	Pn	11 48 20.3	-2.0
PLWZ	**Palliser**	**2.63**	**199**	PN	Pn	11 48 20.9	-2.3
TCW	**Tory Channel**	**2.67**	**217**	PN	Pn	11 48 21.8	-2.0
TUWZ	**Tuamarina**	**3.00**	**218**	PN	Pn	11 48 26.0	-2.1
NNZ	**Nelson**	**3.14**	**226**	PN	Pn	11 48 27.8	-2.2
BSWZ	**Blackbirch Sta**	**3.25**	**215**	PN	Pn	11 48 29.3	-2.2
QRZ	**Quartz Range**	**3.44**	**238**	PN	Pn	11 48 32.0	-2.1
THZ	**Tophouse**	**3.77**	**224**	PN	Pn	11 48 36.5	-2.2
KHZ	**Kahutara**	**3.97**	**212**	PN	Pn	11 48 38.3	-2.9
LTZ	**Lake Taylor**	**4.83**	**219**	PN	Pn	11 48 49.4	-3.6
MQZ	**McQueen's Vall**	**5.40**	**210**	PN	Pn	11 48 56.8	-3.8
ODZ	**Otahua Downs**	**7.33**	**214**	PN	Pn	11 49 22.8	-4.1
TUZ	**Tuapeka**	**8.48**	**214**	*e*PN	Pn	11 49 39.0	-3.6

WEL 30 11:52:44.1±0.5, 36°04S×177°57E, h224km±11km, ML3.5/5, Error ellipse: s-maj=13.4km s-min=8.6km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**2.24**	**189**	PN	Pn	11 53 27.3	+0.5
URZ				SN	S	11 54 00.4	+0.3
MWZ	**Matawai**	**2.29**	**181**	PN	Pn	11 53 27.3	0.0
MWZ				*e*SN	S	11 54 00.2	-0.9
CNGZ	**Carnagh Statio**	**2.49**	**168**	PN	Pn	11 53 29.5	+0.2
RAHZ	**Arahi**	**2.90**	**187**	*e*PN	Pn	11 53 34.2	+0.4
NMHZ	**Naumai**	**3.11**	**191**	PN	Pn	11 53 37.2	+0.9
BKZ	**Black Stump Fm**	**3.23**	**195**	PN	Pn	11 53 37.8	+0.1
MCHZ	**McNeill Hill**	**3.47**	**191**	PN	Pn	11 53 41.2	+0.8
BHHZ	**Black Hill Sta**	**3.64**	**199**	PN	Pn	11 53 42.8	+0.3
KAHZ	**Kahuranaki**	**3.79**	**188**	PN	Pn	11 53 43.9	-0.2
PNHZ	**Pukenui**	**4.01**	**195**	PN	Pn	11 53 46.3	-0.6
PXZ	**Pawanui**	**4.02**	**188**	PN	Pn	11 53 46.1	-0.8
PXZ				*e*SN	S	11 54 34.0	-2.5
TSZ	**Takapari Road**	**4.21**	**197**	PN	Pn	11 53 48.6	-0.7
PRHZ	**Porangahau**	**4.28**	**190**	*e*PN	Pn	11 53 49.7	-0.4
BFZ	**Birch Farm**	**4.75**	**192**	*e*PN	Pn	11 53 54.9	-0.9
MRZ	**Mangatainoka R**	**4.87**	**198**	*e*PN	Pn	11 53 56.4	-1.0
OGWZ	**Otaki Gorge**	**5.13**	**201**	PN	Pn	11 53 59.7	-0.8
CAW	**Cannon Point**	**5.42**	**200**	PN	Pn	11 54 03.6	-0.8

*NIED **30** 11:59:00, 32°.50N×141°.80E, h5km, Mw3.7 Best double couple: M₀3.84000×10¹⁴ NP1:φ₅8.00000°, δ72.00000°, λ114.00000°. NP2:φ₅132.00000°, δ29.00000°, λ38.00000°.*
*ISCJB **30** 11:59:10.8±1.0, 32°.48N±0°.05×141°.83E±0°.07, h10km, mb3.5/4, Error ellipse: s-maj=8.6km s-min=7.3km az=6.2*
*JMA **30** 11:59:11.2±0.2, 32°.51N×141°.78E, h5km, M3.5*
*IDC **30** 11:59:11.5±3.0, 32°.09N×141°.37E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/25, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=97.7km s-min=18.1km az=62.0*

ISC 30 11:59:11.0±1.4, 32°43N±0°.08×142°.0E±0°.1, h10km, n23, σ1°52/29, mb3.7/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.93**	**291**	P	Pn	11 59 42.8	-1.1
JHJ2				*e*S	**Sn**	**12 00 05.9**	**-2.2**
JHCJ	**Hachijojimakas**	**1.93**	**290**	P	Pn	11 59 42.6	-1.3
JHCJ				*e*S	**Sn**	**12 00 05.1**	**-3.1**
JHJ	**Hachijo jima 2**	**1.96**	**291**	Pn	Pn	11 59 41.6	-2.6
	27nm,0.3s,baz=279,slow=19,SNR=24						
JHJ				Sn	Sn	12 00 04.9	-4.0
	47nm,0.3s,baz=59,slow=19,SNR=8.9						
BSO1	**Boso 1**	**2.37**	**340**	P	**Pn**	**11 59 49.5**	**+0.1**
BSO1				*e*S	**Sn**	**12 00 19.1**	**+0.9**
BSO3	**Boso 3**	**2.66**	**333**	P	**Pn**	**11 59 54.3**	**+0.6**
BSO3				*e*S	**Sn**	**12 00 24.4**	**-1.4**
BSO4	**Boso 4**	**2.89**	**333**	*e*S	**Sn**	**12 00 30.5**	**-1.3**
JOD2	**Odawara 2**	**3.70**	**321**	P	**Pn**	**12 00 08.4**	**+0.1**
JOD2				*e*S	**Sn**	**12 00 50.7**	**-1.3**
JYT	**Yasato**	**4.06**	**339**	P	**Pn**	**12 00 14.0**	**+0.8**
JYT				*e*S	**Sn**	**12 01 00.4**	**-0.4**
JHU	**Hanno**	**4.07**	**328**	P	**Pn**	**12 00 13.5**	**+0.1**
JHU				*e*S	**Sn**	**12 00 59.9**	**-1.2**
JYN	**Shimob**	**4.17**	**318**	P	**Pn**	**12 00 17.2**	**+2.4**
JHO	**Hitachi**	**4.33**	**345**	P	**Pn**	**12 00 16.6**	**-0.3**
JHO				*e*S	**Sn**	**12 01 04.8**	**-2.6**
JRY	**Ryogami san**	**4.38**	**326**	P	**Pn**	**12 00 18.9**	**+1.2**
JRY				*e*S	**Sn**	**12 01 07.3**	**-1.5**
JNY	**Yasuok**	**4.49**	**312**	P	**Pn**	**12 00 20.5**	**+1.4**
JAG	**Ashikaga**	**4.49**	**333**	P	**Pn**	**12 00 18.9**	**-0.2**
JAG				*e*S	**Sn**	**12 01 09.1**	**-2.4**
JFK	**Kawauchi**	**5.01**	**350**	*e*S	Sn	12 01 19.7	-4.5
MJAR	**Matsushiro Arr**	**5.14**	**324**	Pn	**Pn**	**12 00 28.5**	**+0.5**
	0.7nm,0.3s,baz=158,slow=12,SNR=9.1						
MAT	**Matsushiro**	**5.14**	**324**	P	**Pn**	**12 00 28.6**	**+0.5**
MAT				S	**Sn**	**12 01 30.6**	**+3.1**
JFT	**Otama**	**5.25**	**346**	P	**Pn**	**12 00 29.5**	**-0.1**
JFT				*e*S	Sn	12 01 26.2	-4.0
JMK	**Ichinoseki**	**6.54**	**355**	P	**Pn**	**12 00 47.3**	**+0.1**
JMK				*e*S	Sn	12 01 56.2	-5.6
SONM	**Songino Array**	**30.92**	**310**	P	**P**	**12 05 29.4**	**+1.4**
	0.6nm,0.7s,baz=113,slow=7.2,SNR=3.6						
MKAR	**Makanchi Array**	**47.06**	**306**	P	**P**	**12 07 43.1**	**+0.2**
	0.6nm,0.7s,baz=83,slow=9.2,SNR=4.5						
WRA	**Warramunga Arr**	**52.58**	**189**	P	**P**	**12 08 24.2**	**-0.8**
	0.6nm,0.5s,baz=6.3,slow=7.7,SNR=11						
ASAR	**Alice Springs**	**56.31**	**189**	P	P	12 08 50.6	-1.4
	0.1nm,0.6s,baz=13,slow=10,SNR=3.5						

IDC 30 12:11:23.9±1.9, 1°69N×127°27E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/21, mbtmp3.7/4, MS2.9/1, Ms1 2.9/1, ms1mx1.9/41, Error ellipse: s-maj=164.3km s-min=23.2km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**10.04**	**228**	LR	LR	12 18 32.1	
	comp=Z,70nm,18.5s,baz=312,slow=43						
WRA	**Warramunga Arr**	**22.59**	**162**	P	P	12 16 26.6	+0.4
	1.5nm,0.5s,baz=342,slow=11,SNR=26						
ASAR	**Alice Springs**	**26.02**	**166**	P	P	12 16 58.2	-0.7
	0.3nm,0.3s,baz=344,slow=8.6,SNR=13						
STKA	**Stephens Creek**	**36.04**	**159**	P	P	12 18 27.5	+0.3
	2.3nm,0.7s,baz=320,slow=7.9,SNR=4.3						
MKAR	**Makanchi Array**	**59.53**	**326**	P	P	12 21 29.2	0.0
	0.1nm,0.3s,baz=122,slow=6.5,SNR=3.7						

*CSEM **30** 12:15:53.6±0.5, 50°.43N×18°.77E, h1km, ML2.5/4, Error ellipse: s-maj=12.2km s-min=4.8km az=178.0*
*WAR **30** 12:15:54.8, 50°.36N×18°.88E*
*PRU **30** 12:15:54.5, 50°.37N×18°.79E, h0km*

ISC 30 12:15:54.3±1.0, 50°32N±0°.06×18°79E±0°.03, h0km, n12, σ0°75/20, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.64**	**221**	*e*PG	**Pg**	**12 16 07.4**	**+0.8**
OKC				*e*SG	**Sg**	**12 16 15.4**	**+0.5**
	comp=Z,9.9nm,0.3s						
OKC	**Ostrava-Krasne**	**0.64**	**221**	Pg	**Pg**	**12 16 07.4**	**+0.8**
OKC				Sg	**Sg**	**12 16 15.4**	**+0.5**
	9.9nm,0.3s						
OJC	**Ojcow**	**0.65**	**99**	*e*Pg	**Pg**	**12 16 07.1**	**+0.3**
OJC				*e*Sg	**Sg**	**12 16 15.5**	**+0.2**
OJC	**Ojcow**	**0.65**	**99**	*e*Pg	**Pg**	**12 16 07.1**	**+0.3**
OJC				*e*Sg	**Sg**	**12 16 15.5**	**+0.2**
MORC	**Moravsky Berou**	**0.97**	**236**	*e*Pg	**Pg**	**12 16 14.1**	**0.0**
MORC				*e*Sg	**Sb**	**12 16 27.3**	**-0.2**
DPC	**Dobruska-Polom**	**1.58**	**272**	*e*PG	**Pn**	**12 16 23.1**	**-0.6**
DPC				*e*SG	**Sg**	**12 16 45.7**	**+0.5**
	comp=Z,6.9nm,0.3s						
DPC	**Dobruska-Polom**	**1.58**	**272**	Pg	**Pn**	**12 16 23.1**	**-0.6**
DPC				Sg	**Sg**	**12 16 45.7**	**+0.5**
	6.9nm,0.3s						
KSP	**Ksiaz**	**1.68**	**289**	*e*Pg	**Pg**	**12 16 27.4**	**+1.0**
KSP				*e*Sg	**Sg**	**12 16 48.7**	**+0.5**
PRU	**Pruhonice**	**2.75**	**265**	*e*SG	**Sg**	**12 17 22.2**	**-0.6**
	comp=Z,2.5nm,0.3s						
PRU	**Pruhonice**	**2.75**	**265**	Sg	**Sg**	**12 17 22.2**	**-0.6**
	2.5nm,0.3s						
KHC	**Kasperske Hory**	**3.59**	**253**	*e*SG	**Sg**	**12 17 48.1**	**-1.4**
	comp=Z,2.1nm,0.3s						
KHC	**Kasperske Hory**	**3.59**	**253**	Sg	**Sg**	**12 17 48.1**	**-1.4**
	2.1nm,0.3s						

*IDC **30** 12:46:20.1±1.6, 40°.01N×79°.07E, h0km, mb3.6/6, mb1 3.7/10, mb1mx3.5/32, mbtmp3.5/10, ML3.0/3, MS3.3/1, Ms1 3.5/1, ms1mx2.1/39, Error ellipse: s-maj=29.3km s-min=22.1km az=175.0*
*NNC **30** 12:46:27.8±0.7, 40°.76N×79°.27E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=5.9km s-min=3.0km az=160.0*

ISC 30 12:46:24.7±1.8, 40°3N±0°.2×79°26E±0°.08, h10km, n25, σ1°04/15, mb3.7/5, 7C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**3.00**	**312**	P	**Pn**	**12 47 13.9**	**+1.4**
	SNR=44						
KNDC	**Almaty**	**3.40**	**330**	⇑Pg	Pn	12 47 21.9	+4.2
	111nm,0.9s						
KNDC				⇑Lg	Lg	12 48 03.8	
	392nm,0.8s						
KZA	**Kyzart**	**3.52**	**302**	P	**Pb**	**12 47 26.6**	**-0.6**
	SNR=6.8						
TKM2	**Tokmak 2**	**3.81**	**315**	⇑Pn	**Pn**	**12 47 23.7**	**+0.2**
	22nm,0.5s						
TKM2				⇑Lg	Lg	12 48 19.3	
	58nm,0.6s						
TKM2	**Tokmak 2**	**3.81**	**315**	P	**Pn**	**12 47 24.7**	**+1.2**
	SNR=24						
UCH	**Uchtor**	**4.07**	**300**	P	**Pb**	**12 47 36.4**	**-0.3**
	SNR=7.1						
AAK	**Ala-Archa**	**4.28**	**305**	Pn	**Pn**	**12 47 31.0**	**+0.9**
	0.3nm,0.3s,baz=129,slow=13,SNR=3.1						
AAK				Pg	Pb	12 47 39.1	-1.0
	2.8nm,0.3s,baz=127,slow=12,SNR=15						
AAK				Lg	Lg	12 48 33.1	
	1.7nm,0.3s,baz=324,slow=19,SNR=11						
CHMS	**Chumysh**	**4.33**	**310**	P	**Pb**	**12 47 41.5**	**+0.6**
	SNR=6.6						
AML	**Almayashu**	**4.59**	**295**	P	Pb	12 47 44.1	-1.3
	SNR=7.8						
USP	**Ospenovka**	**4.64**	**311**	P	Pb	12 47 45.1	-1.0
	SNR=15						
MK31	**Makanchi Array**	**6.87**	**18**	Pn	**Pn**	**12 48 06.3**	**+1.0**
	0.5nm,0.3s,baz=201,slow=12,SNR=38						
MK31				⇑Sn	**Sn**	**12 49 23.9**	**+0.3**
	6.3nm,0.9s						
MKAR	**Makanchi Array**	**6.87**	**18**	Pn	**Pn**	**12 48 06.2**	**+0.9**
	0.9nm,0.3s,baz=204,slow=13,SNR=37						
MKAR				Sn	**Sn**	**12 49 22.9**	**-0.7**
	0.3nm,0.3s,baz=199,slow=26,SNR=3.0						
KK31	**Karatay Array**	**7.13**	**296**	⇑Pg	Pb	12 48 33.4	+4.9
	2.4nm,0.7s,baz=107,slow=15,SNR=21						
KK31				⇓Lg	Lg	12 50 05.0	
	7.1nm,1.1s,baz=108,slow=29,SNR=4.9						
KURBB	**Kurchatov Arra**	**10.35**	**357**	⇓Lg	Lg	12 51 41.3	
	5.0nm,1.1s						
KURBB	**Kurchatov Arra**	**10.35**	**357**	Pn	**Pn**	**12 48 52.7**	**-0.3**
	0.0nm,0.3s,baz=184,slow=12,SNR=4.1						
KURBB				Lg	Lg	12 51 46.9	
	0.1nm,0.3s,baz=183,slow=28,SNR=7.4						
KURK	**Kurchatov**	**10.44**	**358**	⇑Lg	Lg	12 51 44.0	
	12nm,1.3s						
BVAR	**Borovoye Array**	**14.11**	**338**	Pn	Pn	12 49 41.3	-3.2
	baz=150,slow=15,SNR=8.3						
BVAR				Lg	Lg	12 53 45.9	
	0.1nm,0.3s,baz=149,slow=26,SNR=3.0						
ZALV	**Zalesovo Beam**	**14.17**	**14**	Pn	Pn	12 49 43.1	-2.2
	0.1nm,0.3s,baz=196,slow=10.0,SNR=3.4						
ZALV				Lg	Lg	12 53 57.1	
	0.1nm,0.3s,baz=210,slow=23,SNR=2.7						
SONM	**Songino Array**	**20.83**	**60**	P	**P**	**12 51 08.2**	**+1.7**
	1.5nm,0.7s,baz=256,slow=11,SNR=9.3						
CMAR	**Chiang Mai Arr**	**27.58**	**136**	LR	LR	13 03 57.3	
	comp=Z,58nm,18.6s,baz=205,slow=38						
NOA	**NORSAR Array B**	**45.43**	**321**	P	P	12 54 41.8	-1.6
	0.5nm,0.5s,baz=86,slow=7.9,SNR=1.7						
INK	**Inuvik**	**68.97**	**12**	P	**P**	**12 57 28.4**	**-1.1**
	1.1nm,0.9s,baz=292,slow=3.0,SNR=3.9						
ILAR	**Eielson Array**	**69.22**	**19**	P	P	12 57 29.2	-2.0
	0.4nm,0.8s,baz=309,slow=4.9,SNR=8.4						
TORD	**Torodi Ar. Bea**	**72.18**	**272**	P	P	12 57 46.1	-3.9
	0.2nm,0.5s,baz=41,slow=4.6,SNR=4.0						
YKA	**Yellowknife Ar**	**76.96**	**7**	P	**P**	**12 58 16.0**	**-1.0**
	0.5nm,0.7s,baz=346,slow=5.5,SNR=15						

IDC 30 12:53:44.4±3.6, 4°56S×151°48E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.4/19, mbtmp3.7/3, Error ellipse: s-maj=117.6km s-min=50.9km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.64**	**226**	P	P	12 58 47.6	+0.3
	0.8nm,0.7s,baz=50,slow=9.9,SNR=4.9						
ASAR	**Alice Springs**	**25.46**	**220**	P	P	12 59 14.2	-0.2
	0.7nm,0.5s,baz=54,slow=9.2,SNR=6.8		

	2µm,0.4s							
MNS	**Montasola**	**0.50**	**273**	Pg	**Pg**	**13 01 11.7**	**-0.8**
	2µm,0.4s							
NRCA	**Norcia**	**0.50**	**339**	Pg	**Pg**	**13 01 11.8**	**-0.8**
NRCA				Sg	**Sg**	**13 01 19.5**	**+0.3**
	2µm,0.1s							
NRCA	**Norcia**	**0.50**	**339**	Pg	**Pg**	**13 01 11.8**	**-0.8**
NRCA				Sg	**Sg**	**13 01 19.5**	**+0.3**
	2µm,0.1s							
VVLD	**Villa Vallelon**	**0.53**	**158**	Pg	**Pg**	**13 01 12.2**	**-1.0**
	2µm,0.5s							
VVLD	**Villa Vallelon**	**0.53**	**158**	Pg	**Pg**	**13 01 12.2**	**-1.0**
	2µm,0.5s							
INTR	**Introdacqua**	**0.54**	**131**	Pg	**Pg**	**13 01 12.4**	**-0.9**
INTR				Sg	**Sg**	**13 01 20.7**	**+0.3**
	3µm,0.7s							
INTR	**Introdacqua**	**0.54**	**131**	Pg	**Pg**	**13 01 12.4**	**-0.9**
INTR				Sg	**Sg**	**13 01 20.7**	**+0.3**
	3µm,0.7s							
MTCE	**Montecelio**	**0.57**	**233**	Pg	**Pg**	**13 01 13.0**	**-0.8**
	1µm,0.6s							
MTCE	**Montecelio**	**0.57**	**233**	Pg	**Pg**	**13 01 13.0**	**-0.8**
	1µm,0.6s							
GUAR	**Guarcino**	**0.57**	**183**	Pg	**Pg**	**13 01 12.9**	**-1.0**
GUAR	**Guarcino**	**0.57**	**183**	Pg	**Pg**	**13 01 12.9**	**-1.0**
TRTR	**Tortoreto Alta**	**0.61**	**43**	Pg	**Pg**	**13 01 14.6**	**0.0**
TRTR	**Tortoreto Alta**	**0.61**	**43**	Pg	**Pg**	**13 01 14.6**	**0.0**
OFFI	**Offida**	**0.62**	**23**	Pg	**Pg**	**13 01 14.8**	**0.0**
OFFI	**Offida**	**0.62**	**23**	Pg	**Pg**	**13 01 14.8**	**0.0**
CESX	**Cesi**	**0.62**	**293**	Pg	**Pg**	**13 01 14.1**	**-0.8**
	2µm,0.6s							
CESX	**Cesi**	**0.62**	**293**	Pg	**Pg**	**13 01 14.1**	**-0.8**
	2µm,0.6s							
LPEL	**Lama dei Pelig**	**0.69**	**117**	Pg	**Pg**	**13 01 14.8**	**-1.4**
LPEL				Sg	**Sg**	**13 01 25.4**	**+0.1**
LPEL	**Lama dei Pelig**	**0.69**	**117**	Pg	**Pg**	**13 01 14.8**	**-1.4**
LPEL				Sg	**Sg**	**13 01 25.4**	**+0.1**
FDMO	**Fiordimonte**	**0.70**	**344**	Pg	**Pg**	**13 01 15.3**	**-1.1**
FDMO				Sg	**Sg**	**13 01 25.8**	**+0.3**
FDMO	**Fiordimonte**	**0.70**	**344**	Pg	**Pg**	**13 01 15.3**	**-1.1**
FDMO				Sg	**Sg**	**13 01 25.8**	**+0.3**
POFI	**Posta Fibreno**	**0.70**	**157**	Pg	**Pg**	**13 01 15.3**	**-1.0**
POFI	**Posta Fibreno**	**0.70**	**157**	Pg	**Pg**	**13 01 15.3**	**-1.0**
CESI	**CESI - Serrava**	**0.72**	**333**	Pg	**Pg**	**13 01 15.7**	**-1.1**
CESI	**CESI - Serrava**	**0.72**	**333**	Pg	**Pg**	**13 01 15.7**	**-1.1**
RMP	**Rome, Mte Porz**	**0.74**	**221**	Pg	**Pg**	**13 01 15.8**	**-1.2**
RMP	**Rome, Mte Porz**	**0.74**	**221**	Pg	**Pg**	**13 01 15.8**	**-1.2**
SDI	**San Donato**	**0.74**	**152**	Pg	**Pg**	**13 01 15.6**	**-1.5**
SDI	**San Donato**	**0.74**	**152**	Pg	**Pg**	**13 01 15.6**	**-1.5**
CAFR	**Castel Frentan**	**0.75**	**100**	Pg	**Pg**	**13 01 16.5**	**-0.8**
CAFR	**Castel Frentan**	**0.75**	**100**	Pg	**Pg**	**13 01 16.5**	**-0.8**
GUMA	**Gualdo di Mace**	**0.82**	**31**	Pg	**Pg**	**13 01 15.6**	**-3.0**
ASSB	**Assisi San Ben**	**0.85**	**323**	Pg	**Pg**	**13 01 17.9**	**-1.3**
ASSB	**Assisi San Ben**	**0.85**	**323**	Pg	**Pg**	**13 01 17.9**	**-1.3**
MIDA	**Miranda**	**0.99**	**137**	Pg	**Pg**	**13 01 20.1**	**-1.7**
MIDA	**Miranda**	**0.99**	**137**	Pg	**Pg**	**13 01 20.1**	**-1.7**
MGAB	**Montegabbione**	**1.07**	**301**	Pg	**Pg**	**13 01 22.1**	**-1.3**
MGAB	**Montegabbione**	**1.07**	**301**	Pg	**Pg**	**13 01 22.1**	**-1.3**
MURB	**Monte Urbino**	**1.09**	**326**	Pg	**Pg**	**13 01 22.2**	**-1.5**
MURB	**Monte Urbino**	**1.09**	**326**	Pg	**Pg**	**13 01 22.2**	**-1.5**
ARVD	**Arcevia**	**1.17**	**345**	Pg	**Pb**	**13 01 23.6**	**-1.7**
ARVD	**Arcevia**	**1.17**	**345**	Pg	**Pb**	**13 01 23.6**	**-1.7**
AOI	**Ancona**	**1.20**	**9**	Pg	**Pb**	**13 01 24.4**	**-1.4**
AOI	**Ancona**	**1.20**	**9**	Pg	**Pb**	**13 01 24.4**	**-1.4**
PIEI	**Pieia**	**1.32**	**333**	Pg	**Pn**	**13 01 26.4**	**-1.1**
PIEI	**Pieia**	**1.32**	**333**	Pg	**Pn**	**13 01 26.4**	**-1.1**
FSSB	**Fossombrone**	**1.39**	**343**	Pg	**Pn**	**13 01 27.8**	**-0.7**
FSSB	**Fossombrone**	**1.39**	**343**	Pg	**Pn**	**13 01 27.8**	**-0.7**
MS1	**Monte Sant'Ang**	**2.04**	**108**	*e*Pn	**Pb**	**13 01 40.4**	**+0.3**
NVLJ	**Novalja**	**2.46**	**26**	*e*Pn	**Pn**	**13 01 43.4**	**+0.2**
NVLJ				Sn	**Sn**	**13 02 13.4**	**+0.1**
NVLJ	**Novalja**	**2.46**	**26**	*e*Pn	**Pn**	**13 01 43.3**	**+0.2**
NVLJ				Sn	**Sn**	**13 02 13.4**	**+0.1**
MAIM	**Mastiano**	**2.60**	**307**	P	**Pn**	**13 01 45.6**	**+0.4**
SKDS	**Skadanscina**	**3.22**	**8**	*i* Pn	**Pn**	**13 01 54.2**	**+0.6**
SKDS				*i* Sn	**Sn**	**13 02 33.2**	**+1.1**
SKDS	**Skadanscina**	**3.22**	**8**	*i* Pn	**Pn**	**13 01 54.2**	**+0.6**
SKDS				*i* Sn	**Sn**	**13 02 33.2**	**+1.1**
STON	**Ston**	**3.25**	**80**	Sn	**Sn**	**13 02 31.7**	**-1.0**
STON	**Ston**	**3.25**	**80**	Sn	**Sn**	**13 02 31.7**	**-1.0**
BOJS	**Bojanci**	**3.42**	**23**	*i* Pn	**Pn**	**13 01 57.9**	**+1.5**
BOJS				*i* Sn	**Sn**	**13 02 40.1**	**+3.0**
BOJS	**Bojanci**	**3.42**	**23**	*i* Pn	**Pn**	**13 01 57.9**	**+1.5**
BOJS				*i* Sn	**Sn**	**13 02 40.1**	**+3.0**
VOY	**Vojsko**	**3.69**	**6**	*e*Pn	**Pn**	**13 02 02.5**	**+2.4**
VOY				*e*		13 02 43.4	
VOY				*e*		13 03 07.9	
VOY				*e*		13 03 17.2	
VOY	**Vojsko**	**3.69**	**6**	*e*Pn	**Pn**	**13 02 02.5**	**+2.4**
ABTA	**Abfaltersbach**	**4.42**	**352**	*i* Pn	**Pn**	**13 02 10.6**	**+0.4**
ABTA	**Abfaltersbach**	**4.42**	**352**	Pn	**Pn**	**13 02 10.6**	**+0.4**
PERS	**Pernice**	**4.45**	**16**	*i* Pn	**Pn**	**13 02 11.3**	**+0.7**
PERS				*i* Sn	**Sn**	**13 03 01.8**	**-0.8**
PERS	**Pernice**	**4.45**	**16**	*i* Pn	**Pn**	**13 02 11.3**	**+0.7**
PERS				*i* Sn	**Sn**	**13 03 01.8**	**-0.8**
DAVOX	**Davos/Dischmat**	**5.06**	**332**	Pn	**Pn**	**13 02 19.5**	**+0.3**
	1.2nm,0.3s,baz=159,slow=19,SNR=8.2							
DAVOX				Sn	**Sn**	**13 03 19.9**	**+2.1**
	1.5nm,0.3s,baz=306,slow=21,SNR=4.6							
GERES	**GERESS Array B**	**6.49**	**2**	Pn	**Pn**	**13 02 38.4**	**-0.1**
	0.2nm,0.3s,baz=168,slow=13,SNR=7.2							
GERES				Sn	**Sn**	**13 03 51.3**	**-1.4**
	1.3nm,0.3s,baz=172,slow=22,SNR=7.4							
KHC	**Kasperske Hory**	**6.77**	**1**	*e*PN	**Pn**	**13 02 42.5**	**+0.1**
KHC				*ex*	x	13 02 55.0	
KHC				*e*SN	**Sn**	**13 03 58.5**	**-1.1**
KHC				*ex*	x	13 04 13.5	
KHC				*ex*	x	13 04 29.0	
KEST	**Kesra**	**7.32**	**207**	Pn	Pn	13 02 54.4	+4.4
	0.7nm,0.3s,baz=332,slow=3.0,SNR=15							
MLR	**Muntele Rosu**	**9.61**	**67**	Pn	**Pn**	**13 03 22.5**	**+1.1**
	0.1nm,0.3s,baz=221,slow=9.3,SNR=2.6							
HFS	**Hagfors**	**17.80**	**1**	LR	LR	13 13 07.5	
	comp=Z,26nm,20.3s,baz=125,slow=41							
FINES	**FINESS Array B**	**20.58**	**18**	P	Pn	13 05 43.5	-0.5
	3.6nm,1.0s,baz=190,slow=7.6,SNR=4.3							
TORD	**Torodi Ar. Bea**	**30.82**	**203**	P	**P**	**13 07 20.1**	**+0.9**
	0.4nm,0.8s,baz=12,slow=7.2,SNR=4.3							
MKAR	**Makanchi Array**	**47.87**	**60**	P	**P**	**13 09 41.7**	**+0.7**
	0.3nm,0.6s,baz=282,slow=7.3,SNR=5.1							
YKA	**Yellowknife Ar**	**67.48**	**337**	P	**P**	**13 11 58.8**	**+0.2**
	0.1nm,0.3s,baz=46,slow=4.9,SNR=3.4							

*ISCJB **30** 13:07:19.1±0.5,37°82N±0°02×27°60E±0°03,h5km±5km, Error ellipse: s-maj=5.0km s-min=3.3km az=136.3*
*CSEM **30** 13:07:19.3±0.1,37°81N×27°60E,h5km,MD3.2, Error ellipse: s-maj=3.1km s-min=2.3km az=62.0*
*DDA **30** 13:07:19.3,37°83N×27°63E,h7km,MD3.2*
*ISK **30** 13:07:19.0,37°82N×27°54E,h10km,MD3.2*

ISC 30 13:07:19.5±0.9,37°81N±0°02×27°61E±0°02,h12km±8km, n76,σ0§82/96,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYDN	**Tasoluk**	**0.26**	**125**	*i* P	**Pg**	**13 07 25.0**	**0.0**
AYDN				*i* S	**Sg**	**13 07 28.4**	**-0.3**
AYDN	**Tasoluk**	**0.26**	**125**	*i* P	**Pg**	**13 07 25.0**	**0.0**
AYDN				*i* S	**Sg**	**13 07 28.4**	**-0.3**
GCAM	**G?zelcaml?**	**0.32**	**249**	*i* P	**Pg**	**13 07 26.0**	**+0.1**
GCAM				*i* S	**Sg**	**13 07 30.0**	**-0.2**
GCAM	**G?zelcaml?**	**0.32**	**249**	*i* P	**Pg**	**13 07 26.0**	**+0.1**
GCAM				*i* S	**Sg**	**13 07 30.0**	**-0.2**
MLSB	**Milas**	**0.54**	**165**	PG	**Pg**	**13 07 30.0**	**0.0**
MLSB	**Milas**	**0.54**	**165**	*i* Pg	**Pg**	**13 07 30.0**	**0.0**
IZM	**Izmir**	**0.64**	**335**	*e*PG	**Pg**	**13 07 31.6**	**-0.4**
IZM	**Izmir**	**0.64**	**335**	*e*Pg	**Pg**	**13 07 31.6**	**-0.4**
BLCB	**Balcova**	**0.72**	**322**	*e*PG	**Pg**	**13 07 33.1**	**-0.5**
BLCB				*e*SG	**Sg**	**13 07 42.9**	**-0.2**
BLCB	**Balcova**	**0.72**	**322**	*e*Pg	**Pg**	**13 07 33.1**	**-0.5**
BLCB				*e*Sg	**Sg**	**13 07 42.9**	**-0.2**
BODT	**Bodrum**	**0.79**	**198**	*e*PG	**Pg**	**13 07 34.2**	**-0.5**
BODT	**Bodrum**	**0.79**	**198**	*e*Pg	**Pg**	**13 07 34.2**	**-0.5**
YER	**Yerkesik**	**0.86**	**141**	*e*PG	**Pb**	**13 07 37.0**	**+0.4**
YER	**Yerkesik**	**0.86**	**141**	*e*Pg	**Pb**	**13 07 37.0**	**+0.4**
URLA	**Izmir**	**0.97**	**305**	*i* P	**Pb**	**13 07 38.5**	**+0.3**
URLA				*i* S	**Sb**	**13 07 51.6**	**+0.6**
URLA	**Izmir**	**0.97**	**305**	*i* P	**Pb**	**13 07 38.5**	**+0.3**
URLA				*i* S	**Sb**	**13 07 51.6**	**+0.6**
MANT	**Manisa**	**1.01**	**48**	*i* P	**Pg**	**13 07 37.6**	**-1.4**
MANT				*i* S	**Sg**	**13 07 51.2**	**-1.0**
MANT	**Manisa**	**1.01**	**48**	*i* P	**Pg**	**13 07 37.6**	**-1.4**
MANT				*i* S	**Sg**	**13 07 51.2**	**-1.0**
AKHS	**Akhisar**	**1.08**	**9**	*i* P	**Pg**	**13 07 40.1**	**-0.2**
AKHS				*i* S	**Sg**	**13 07 54.2**	**-0.1**
AKHS	**Akhisar**	**1.08**	**9**	*i* P	**Pg**	**13 07 40.1**	**-0.2**
AKHS				*i* S	**Sg**	**13 07 54.2**	**-0.1**
AKS	**Akhisar**	**1.08**	**9**	*e*PN	**Pb**	**13 07 40.3**	**+0.2**
AKS	**Akhisar**	**1.08**	**9**	*e*Pn	**Pb**	**13 07 40.3**	**+0.2**
DAT	**Datca**	**1.08**	**181**	*e*PN	**Pb**	**13 07 40.5**	**+0.2**
DAT	**Datca**	**1.08**	**181**	*e*Pn	**Pb**	**13 07 40.5**	**+0.2**
KULA	**Kula-Manisa**	**1.09**	**50**	*e*PN	**Pb**	**13 07 40.8**	**+0.5**
KULA	**Kula-Manisa**	**1.09**	**50**	*e*Pn	**Pb**	**13 07 40.8**	**+0.5**
DENT	**Denizli**	**1.13**	**93**	*e*PN	**Pn**	**13 07 42.0**	**+0.7**
DENT	**Denizli**	**1.13**	**93**	*e*Pn	**Pn**	**13 07 42.0**	**+0.7**
DNZL	**Cakiroluk**	**1.15**	**96**	*i* P	**Pg**	**13 07 41.6**	**0.0**
DNZL				*i* S	**Sb**	**13 07 56.9**	**+0.5**
DNZL	**Cakiroluk**	**1.15**	**96**	*i* P	**Pg**	**13 07 41.6**	**0.0**
DNZL				*i* S	**Sb**	**13 07 56.9**	**+0.5**
TURN	**Turunc**	**1.23**	**139**	*i* P	**Pg**	**13 07 41.0**	**-2.2**
TURN				*i* S	**Sg**	**13 07 57.3**	**-1.9**
TURN	**Turunc**	**1.23**	**139**	*i* P	**Pg**	**13 07 41.0**	**-2.2**
TURN				*i* S	**Sg**	**13 07 57.3**	**-1.9**
DALY	**Dalyan (Mu¨la**	**1.30**	**140**	*e*PN	**Pg**	**13 07 44.4**	**-0.1**
DALY	**Dalyan (Mu¨la**	**1.30**	**140**	*e*Pn	**Pg**	**13 07 44.4**	**-0.1**
DEMI	**Demirci**	**1.50**	**35**	*i* P	**Pb**	**13 07 47.8**	**+0.3**
DEMI				*i* S	**Sn**	**13 08 05.0**	**-1.0**
DEMI	**Demirci**	**1.50**	**35**	*i* P	**Pb**	**13 07 47.8**	**+0.3**
DEMI				*i* S	**Sn**	**13 08 05.0**	**-1.0**
KHL	**Karahalli**	**1.60**	**71**	*e*PN	**Pb**	**13 07 48.9**	**-0.1**
KHL				*e*SN	**Sg**	**13 08 10.5**	**-0.4**
KHL	**Karahalli**	**1.60**	**71**	*e*Pn	**Pb**	**13 07 48.9**	**-0.1**
KHL				*e*Sn	**Sg**	**13 08 10.5**	**-0.4**
GLHS	**Glhisar (BURDU**	**1.64**	**113**	*e*PN	**Pb**	**13 07 50.2**	**+0.5**
GLHS	**Glhisar (BURDU**	**1.64**	**113**	*e*Pn	**Pb**	**13 07 50.3**	**+0.5**
FETY	**Fethiye**	**1.67**	**134**	*e*PN	**Pn**	**13 07 49.7**	**+1.1**
FETY	**Fethiye**	**1.67**	**134**	*e*Pn	**Pn**	**13 07 49.7**	**+1.1**
APE	**Apeiranthos**	**1.81**	**246**	*e*PN	**Pn**	**13 07 50.6**	**0.0**
APE	**Apeiranthos**	**1.81**	**246**	*e*Pn	**Pn**	**13 07 50.6**	**0.0**
BALB	**Balikesir**	**1.84**	**7**	*e*PN	**Pn**	**13 07 51.6**	**+0.7**
BALB	**Balikesir**	**1.84**	**7**	*e*Pn	**Pn**	**13 07 51.6**	**+0.7**
DST	**Dursunbey**	**1.96**	**24**	*e*PN	**Pn**	**13 07 53.5**	**+0.9**
DST	**Dursunbey**	**1.96**	**24**	*e*Pn	**Pn**	**13 07 53.5**	**+0.9**
ELL	**Elmali**	**2.12**	**119**	*e*PN	**Pn**	**13 07 56.2**	**+1.2**
ELL	**Elmali**	**2.12**	**119**	*e*Pn	**Pn**	**13 07 56.2**	**+1.2**
TVSB	**Tavsanli**	**2.19**	**41**	*e*PN	**Pn**	**13 07 56.9**	**+1.1**
TVSB	**Tavsanli**	**2.19**	**41**	*e*Pn	**Pn**	**13 07 56.9**	**+1.1**
GONE	**Gonen-Balikesi**	**2.23**	**2**	*e*PN	**Pn**	**13 07 57.2**	**+0.9**
GONE	**Gonen-Balikesi**	**2.23**	**2**	*e*Pn	**Pn**	**13 07 57.2**	**+0.9**
EZN	**Ezine**	**2.25**	**334**	*e*PN	**Pn**	**13 07 56.4**	**-0.1**
EZN	**Ezine**	**2.25**	**334**	*e*Pn	**Pn**	**13 07 56.4**	**-0.1**
ALT	**Altintas**	**2.32**	**57**	*e*PN	**Pn**	**13 07 59.6**	**+1.9**
ALT	**Altintas**	**2.32**	**57**	*e*Pn	**Pn**	**13 07 59.6**	**+1.9**
SHUT	**Suhut-Afyon**	**2.44**	**71**	*e*PN	**Pn**	**13 08 00.9**	**+1.6**
SHUT	**Suhut-Afyon**	**2.44**	**71**	*e*Pn	**Pn**	**13 08 00.9**	**+1.6**
ORLT	**Orhaneli**	**2.44**	**24**	*e*PN	**Pn**	**13 08 00.4**	**+1.0**
ORLT	**Orhaneli**	**2.44**	**24**	*e*Pn	**Pn**	**13 08 00.4**	**+1.0**
KCTX	**Karacabey (Bur**	**2.52**	**13**	*e*PN	**Pn**	**13 08 00.9**	**+0.6**
KCTX	**Karacabey (Bur**	**2.52**	**13**	*e*Pn	**Pn**	**13 08 00.9**	**+0.6**
EDC	**Edincik**	**2.54**	**4**	*e*PN	**Pn**	**13 08 01.2**	**+0.6**
EDC	**Edincik**	**2.54**	**4**	*e*Pn	**Pn**	**13 08 01.2**	**+0.6**
KRBG	**Karabiga-Canak**	**2.59**	**355**	*e*PN	**Pn**	**13 08 01.7**	**+0.5**
KRBG	**Karabiga-Canak**	**2.59**	**355**	*e*Pn	**Pn**	**13 08 01.7**	**+0.5**
LPK	**Lapseki**	**2.64**	**346**	*e*PN	**Pn**	**13 08 02.2**	**+0.3**
LPK	**Lapseki**	**2.64**	**346**	*e*Pn	**Pn**	**13 08 02.2**	**+0.3**
GELI	**Tayfur-Gelibol**	**2.73**	**341**	*e*PN	**Pn**	**13 08 03.3**	**+0.2**
GELI	**Tayfur-Gelibol**	**2.73**	**341**	*e*Pn	**Pn**	**13 08 03.3**	**+0.2**
MRMT	**Marmara Adasi**	**2.79**	**360**	*e*PN	**Pn**	**13 08 04.9**	**+0.9**
MRMT	**Marmara Adasi**	**2.79**	**360**	*e*Pn	**Pn**	**13 08 04.9**	**+0.9**
ERIK	**Erikli-Kesan**	**2.98**	**344**	*e*PN	**Pn**	**13 08 07.3**	**+0.7**
ERIK	**Erikli-Kesan**	**2.98**	**344**	*e*Pn	**Pn**	**13 08 07.3**	**+0.7**

IDC 30 13:17:27.1±0.6,13°03N×92°67E,h0km,mb4.0/13, mb1 4.1/14,mb1mx3.9/27,mbtmp4.0/14,ML3.5/1,Error ellipse: s-maj=22.8km s-min=15.6km az=55.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.10**	**47**	Pn	Pn	13 19 27.7	+1.7
	0.2nm,0.3s,baz=237,slow=15,SNR=16						
CMAR				Sn	Sn	13 20 54.2	-4.2
	0.2nm,0.3s,baz=237,slow=28,SNR=7.5						
MKAR	**Makanchi Array**	**34.77**	**347**	P	P	13 24 19.9	+0.6
	1.7nm,0.8s,baz=162,slow=8.5,SNR=17						
SONM	**Songino Array**	**36.54**	**16**	P	P	13 24 35.3	+0.7
	1.2nm,0.7s,baz=196,slow=8.2,SNR=7.4						
KSRS	**Korea Array**	**39.73**	**46**	P	P	13 25 00.8	-0.7
	0.6nm,0.6s,baz=247,slow=9.7,SNR=3.4						
ZALV	**Zalesovo Beam**	**41.29**	**353**	P	P	13 25 14.4	+0.3
	1.8nm,0.6s,baz=179,slow=9.0,SNR=12						
WRA	**Warramunga Arr**	**52.49**	**128**	P	P	13 26 41.5	-0.7
	0.9nm,0.6s,baz=308,slow=7.7,SNR=17						
WRA				PcP	PcP	13 27 52.9	-0.1
	0.8nm,0.5s,baz=321,slow=3.1,SNR=19						
ASAR	**Alice Springs**	**54.37**	**132**	P	P	13 26 55.5	-0.5
	0.6nm,0.4s,baz=311,slow=7.0,SNR=34						
ASAR				PcP	PcP	13 28 00.1	0.0
	0.6nm,0.6s,baz=316,slow=4.2,SNR=7.5						
BRTR	**Keskin Array B**	**58.03**	**309**	P	P	13 27 22.2	-0.1
	1.9nm,0.8s,baz=118,slow=7.2,SNR=13						
FINES	**FINESS Array B**	**67.51**	**331**	P	P	13 28 24.4	-0.4
	2.0nm,0.7s,baz=134,slow=5.5,SNR=6.7						
ARCES	**ARCESS Array B**	**69.95**	**340**	P	P	13 28 38.9	-1.0
	2.1nm,0.8s,baz=95,slow=7.1,SNR=14						
GERES	**GERESS Array B**	**73.06**	**317**	P	P	13 28 57.5	-1.7
	0.3nm,0.2s,baz=105,slow=4.6,SNR=4.4						
NB2	**NORSAR Subarra**	**74.56**	**330**	P	P	13 29 07.3	-0.4
	comp=Z,1.3nm,0.7s,baz=89,slow=5.6						
NOA	**NORSAR Array B**	**74.56**	**330**	P	P	13 29 07.3	-0.4
	comp=Z,1.3nm,0.8s,baz=91,slow=5.6,SNR=4.5						
BOSA	**Boshof**	**77.15**	**236**	P	P	13 29 24.7	+1.5
	comp=Z,3.4nm,1.0s,baz=63,slow=9.0,SNR=4.9						
TORD	**Torodi Ar. Bea**	**88.02**	**283**	P	P	13 30 20.8	+0.8
	comp=Z,0.6nm,0.7s,baz=64,slow=3.6,SNR=5.0						
NVAR	**Mina Array Bea**	**121.17**	**28**	PKP	PKPdf	13 36 23.5	+0.7
	comp=Z,0.2nm,0.5s,baz=318,slow=2.6,SNR=2.8						

*IDC **30** 13:28:15.4±5.2,33°32S×179°62E,h251km±43km,mb3.3/2, mb1 3.5/3,mb1mx3.1/18,mbtmp3.2/3,Error ellipse: s-maj=52.7km s-min=25.4km az=34.0*
*ISCJB **30** 13:28:16.8±1.3,33°40S±0°08×179°0E±0°2,h250km, mb3.4/2,Error ellipse: s-maj=24.2km s-min=10.9km az=0.1*

ISC 30 13:28:16.6±1.1,33°36S±0°10×179°2E±0°2,h250km,n34, σ1§57/38,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**5.13**	**194**	*e*PN	**Pn**	**13 29 34.1**	**+0.1**
MWZ				SN	**S**	**13 30 36.9**	**+1.2**
URZ	**Urewera**	**5.16**	**198**	*e*PN	**Pn**	**13 29 34.5**	**+0.3**
URZ				*e*SN	**S**	**13 30 38.6**	**+2.4**
URZ	**Urewera**	**5.16**	**198**	P	**Pn**	**13 29 36.6**	**+2.4**
	2.1nm,0.3s,baz=299,slow=21,SNR=21						
URZ				S	**S**	**13 30 37.9**	**+1.8**
	3.0nm,0.3s,baz=72,slow=23,SNR=11						
CNGZ	**Carnagh Statio**	**5.17**	**188**	*e*PN	**Pn**	**13 29 36.6**	**+2.3**
RAHZ	**Arahi**	**5.79**	**196**	*e*PN	**Pn**	**13 29 43.3**	**+1.3**
NMHZ	**Naumai**	**6.03**	**198**	*e*PN	**Pn**	**13 29 44.7**	**-0.3**
BKZ	**Black Stump Fm**	**6.17**	**200**	*e*PN	**Pn**	**13 29 46.4**	**-0.5**
MCHZ	**McNeill Hill**	**6.38**	**197**	*e*PN	**Pn**	**13 29 51.0**	**+1.6**
FWVZ	**Far West T-bar**	**6.56**	**205**	*e*PN	**Pn**	**13 29 54.1**	**+2.3**
BHHZ	**Black Hill Sta**	**6.60**	**201**	*e*PN	**Pn**	**13 29 53.4**	**+1.2**
WNVZ	**Wahianoa**	**6.61**	**205**	*e*PN	**Pn**	**13 29 54.3**	**+1.9**
PXZ	**Pawanui**	**6.90**	**195**	*e*PN	**Pn**	**13 29 55.5**	**-0.4**
PXZ				*e*SN	**S**	**13 31 13.8**	**-1.8**
TSZ	**Takapari Road**	**7.16**	**200**	*e*PN	**Pn**	**13 29 57.3**	**-1.8**
BFZ	**Birch Farm**	**7.66**	**197**	*e*PN	**Pn**	**13 30 05.5**	**-0.4**
MRZ	**Mangatainoka R**	**7.82**	**200**	*e*PN	**Pn**	**13 30 06.4**	**-1.1**
KIW	**Kapiti Island**	**8.21**	**203**	*e*PN	**Pn**	**13 30 11.2**	**-1.2**
SNZO	**South Karori**	**8.68**	**203**	*e*PN	**Pn**	**13 30 15.7**	**-2.7**
NNZ	**Nelson**	**9.09**	**209**	*e*PN	**Pn**	**13 30 22.8**	**-0.7**
NNZ				*e*SN	**S**	**13 32 02.9**	**-3.2**
QRZ	**Quartz Range**	**9.13**	**213**	*e*PN	**Pn**	**13 30 24.2**	**+0.1**
THZ	**Tophouse**	**9.74**	**209**	*e*PN	**Pn**	**13 30 31.4**	**-0.3**
KHZ	**Kahutara**	**10.06**	**204**	*e*PN	**Pn**	**13 30 34.8**	**-1.0**
DSZ	**Denniston Nort**	**10.19**	**213**	*e*PN	**Pn**	**13 30 37.5**	**0.0**
LTZ	**Lake Taylor**	**10.85**	**208**	*e*PN	**Pn**	**13 30 44.5**	**-1.2**
MQZ	**McQueen's Vall**	**11.51**	**204**	*e*PN	**Pn**	**13 30 52.3**	**-1.5**
ODZ	**Otahua Downs**	**13.39**	**207**	*e*PN	**Pn**	**13 31 17.1**	**0.0**
ASAR	**Alice Springs**	**40.65**	**272**	P	**P**	**13 35 34.8**	**+2.0**
	0.8nm,0.4s,baz=106,slow=7.2,SNR=40						
WRA	**Warramunga Arr**	**41.91**	**277**	P	**P**	**13 35 44.7**	**+1.6**
	0.6nm,0.4s,baz=116,slow=8.3,SNR=25						
SNAA	**Sanae**	**75.25**	**179**	*e*P	**P**	**13 39 32.4**	**+0.8**
VNA2	**Neumayer--Watz**	**75.90**	**178**	*e*P	P	13 39 44.6	+9.4
MKAR	**Makanchi Array**	**117.80**	**310**	PKP	**PKPdf**	**13 46 31.0**	**-1.8**
	0.1nm,0.4s,baz=152,slow=1.8,SNR=3.5						
FINES	**FINESS Array B**	**146.99**	**336**	PKPbc	**PKPdf**	**13 47 26.9**	**+0.4**
	1.4nm,0.6s,baz=72,slow=6.2,SNR=4.7						
NOA	**NORSAR Array B**	**151.22**	**348**	PKPbc	**PKPbc**	**13 47 37.7**	**-1.9**
	1.2nm,0.8s,baz=17,slow=4.2,SNR=3.3						
DBIC	**Dimbokro**	**153.18**	**171**	PKPbc	**PKPbc**	**13 47 44.6**	**-0.7**
	1.4nm,0.5s,baz=224,slow=4.3,SNR=4.0						
TORD	**Torodi Ar. Bea**	**159.74**	**187**	PKPab	**PKPab**	**13 48 25.0**	**-1.0**
	0.4nm,0.5s,baz=164,slow=4.6,SNR=6.8						

*IGQ **30** 13:54:16.6,1°45S×81°13W,h10km±8km,Mb4.6,Ms4.4, Error ellipse: s-maj=7.7km s-min=3.0km az=5.3*
*IDC **30** 13:54:19.3±1.3,1°16S×80°23W,h0km,mb3.7/5,mb1 3.9/7, mb1mx3.8/22,mbtmp3.7/7,ML3.5/2,MS3.1/2,Ms1 3.2/2, ms1mx2.6/41,Error ellipse: s-maj=59.9km s-min=19.1km az=59.0*

**ISC 30 13:54:19.5±1.0

MKZ	**Mys Kozlova**	**5.00**	**30**	PN	**Pn**	**14 24 07.1**	**+0.8**
MKZ	**Mys Kozlova**	**5.00**	**30**	*e*P	**Pn**	**14 24 07.1**	**+0.8**
MKZ				*i* S	**Sn**	**14 24 59.7**	**-3.1**
TUMR	**Tumrok**	**5.26**	**17**	*e*P	Pn	14 24 13.9	+4.0
ESO	**Esso**	**5.70**	**7**	PN	**Pn**	**14 24 17.2**	**+1.4**
ESO	**Esso**	**5.70**	**7**	*e*P	**Pn**	**14 24 17.2**	**+1.4**
KMNR	**Kamenistaya**	**5.73**	**16**	*e*P	Pn	14 24 20.4	+4.1

*ISK **30** 14:46:52.9, 39°.33N×27°.92E, h18km, MD2.7*
*ISCJB **30** 14:46:53.2±0.8, 39°.42N±0°.05×28°.1E±0°.1, h0km, Error ellipse: s-maj=13.0km s-min=4.8km az=148.9*
*DDA **30** 14:46:53.5, 39°.43N×28°.11E, h7km, MD2.9*
*CSEM **30** 14:46:54.5±0.5, 39°.59N×28°.23E, h1km, MD2.7, Error ellipse: s-maj=26.3km s-min=10.7km az=28.0*

ISC 30 14:46:53.3±1.0, **39°.42N**±0°.05×**28°.05E**±0°.05, **h0**km, **n16**, σ0§**41**/21, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BALB	**Balikesir**	**0.25**	**330**	*e*PG		**Pb**	**14 47 00.1**	**-0.7**
BALB				*e*SG		**Sb**	**14 47 05.8**	**+0.1**
BALB	**Balikesir**	**0.25**	**330**	*e*Pg		**Pb**	**14 47 00.1**	**-0.7**
BALB				*e*Sg		**Sb**	**14 47 05.8**	**+0.1**
DURS	**Dursunbey**	**0.38**	**61**	*i* P		**Pg**	**14 47 00.6**	**+0.1**
DURS	**Dursunbey**	**0.38**	**61**	*i* P		**Pg**	**14 47 00.6**	**+0.1**
GONE	**Gonen-Balikesi**	**0.68**	**336**	*e*PG		**Pg**	**14 47 07.1**	**+0.7**
GONE	**Gonen-Balikesi**	**0.68**	**336**	*e*Pg		**Pg**	**14 47 07.1**	**+0.7**
KULA	**Kula-Manisa**	**1.02**	**152**	*e*PG		**Pg**	**14 47 12.6**	**-0.3**
KULA				*e*SG		**Sg**	**14 47 27.0**	**+0.8**
TVSB	**Tavsanli**	**1.10**	**88**	*e*PN		**Pb**	**14 47 15.0**	**-0.2**
TVSB	**Tavsanli**	**1.10**	**88**	*e*Pn		**Pb**	**14 47 15.0**	**-0.2**
KRBG	**Karabiga-Canak**	**1.13**	**330**	*e*PN		**Pg**	**14 47 15.2**	**+0.3**
KRBG	**Karabiga-Canak**	**1.13**	**330**	*e*Pn		**Pg**	**14 47 15.2**	**+0.3**
MRMT	**Marmara Adasi**	**1.23**	**344**	*e*PN		**Pg**	**14 47 16.7**	**-0.2**
MRMT	**Marmara Adasi**	**1.23**	**344**	*e*Pn		**Pg**	**14 47 16.7**	**-0.2**
IZI	**Iznik**	**1.43**	**50**	*e*PN		**Pb**	**14 47 20.5**	**-0.1**
KHAL	**Karahalli**	**1.54**	**132**	*i* P		**Pb**	**14 47 22.6**	**-0.2**
KHAL				*i* S		**Sn**	**14 47 42.9**	**0.0**
KHAL	**Karahalli**	**1.54**	**132**	*i* P		**Pb**	**14 47 22.6**	**-0.2**
KHAL				*i* S		**Sn**	**14 47 42.9**	**0.0**

*NNC **30** 14:47:46.5±5.5, 40°.49N×79°.01E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=43.8km s-min=24.2km az=165.0*

ISC 30 14:47:52.6±4.1, **40°.6N**±0°.2×**78°.8E**±0°.1, **h10**km, **n14**, σ1§**03**/11, **6C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ULHL	**Ulahol**	**2.50**	**312**	P		**Pg**	**14 48 39.9**	**-0.6**
	SNR=52							
KNDC	**Almaty**	**2.93**	**334**	⇑Pg		**Pb**	**14 48 43.5**	**-1.6**
	17nm,0.3s							
KNDC				⇑Lg		Lg	14 49 25.7	
	229nm,1.4s							
KZA	**Kyzart**	**3.02**	**300**	P		**Pb**	**14 48 46.9**	**+0.2**
	SNR=17							
TKM2	**Tokmak 2**	**3.31**	**316**	⇓Pg		**Pb**	**14 48 50.7**	**-0.9**
	5.1nm,0.3s							
TKM2				⇑Lg		Lg	14 49 38.8	
	36nm,0.5s							
TKM2	**Tokmak 2**	**3.31**	**316**	P		**Pb**	**14 48 50.6**	**-0.9**
	SNR=27							
KBK	**Karagaybulak**	**3.51**	**307**	P		**Pg**	**14 49 00.4**	**+0.5**
	SNR=7.3							
AAK	**Ala-Archa**	**3.78**	**304**	P		**Pg**	**14 49 05.3**	**+0.2**
	SNR=13							
CHMS	**Chumysh**	**3.83**	**310**	P		**Sg**	**14 49 56.4**	**+0.8**
	SNR=5.8							
AML	**Almayashu**	**4.10**	**294**	P		**Pg**	**14 49 11.2**	**+0.1**
	SNR=16							
EKS2	**Erkin-Say**	**4.26**	**301**	P		**Pg**	**14 49 13.6**	**-0.6**
	SNR=30							
KK31	**Karatay Array**	**6.64**	**295**	Pg		Pb	14 49 52.3	+4.2
	1.9nm,0.8s,baz=115,slow=15,SNR=14							
KK31				⇓Lg		Lg	14 51 23.1	
	11nm,1.2s,baz=120,slow=27,SNR=5.0							
MK31	**Makanchi Array**	**6.70**	**21**	⇓Pn		Pn	14 49 30.6	-0.4
	0.2nm,0.3s,baz=200,slow=12,SNR=27							
MK31				⇑Pg		Pb	14 49 49.3	+0.1
	1.0nm,0.6s,baz=189,slow=16,SNR=4.9							
MK31				⇓Sn		**Sn**	**14 50 49.2**	**+1.7**
	3.0nm,0.6s							
MK31				⇓Lg		Lg	14 51 16.3	
	1.9nm,0.5s							
KURBB	**Kurchatov Arra**	**10.02**	**359**	⇑Lg		Lg	14 53 08.3	
	4.5nm,1.1s							
KURK	**Kurchatov**	**10.12**	**360**	⇑Lg		Lg	14 53 10.9	
	9.9nm,1.0s							

*IDC **30** 14:48:17.9±4.1, 36°.78N×24°.59E, h190km±29km, mb3.0/5, mb1 3.1/9, mb1mx2.9/28, mbtmp2.9/9, Error ellipse: s-maj=53.4km s-min=22.8km az=35.0*
*ISCJB **30** 14:48:18.5±0.4, 37°.04N±0°.04×24°.85E±0°.05, h178km±5km, mb3.2/5, Error ellipse: s-maj=8.7km s-min=4.5km az=40.8*
*ATH **30** 14:48:18.5, 37°.07N×24°.90E, h173km±2km, ML2.9*
*CSEM **30** 14:48:19.8±0.3, 37°.09N×24°.88E, h163km±4km, ML2.9, Error ellipse: s-maj=5.0km s-min=2.8km az=46.0*
*THE **30** 14:48:20.8, 37°.07N×24°.82E, h171km±5km, ML3.4/3, Error ellipse: s-maj=5.9km s-min=1.5km az=205.0*

ISC 30 14:48:18.5±0.7, **37°.10N**±0°.04×**24°.92E**±0°.04, **h171**km±7km, **n99**, σ1§**13**/122, **mb3.3**/5, **2D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
APE	**Apeiranthos**	**0.49**	**94**	P		**Pn**	**14 48 43.3**	**+1.0**
APE	**Apeiranthos**	**0.49**	**94**	⇓*i*P		**Pn**	**14 48 43.3**	**+1.0**
APE	**Apeiranthos**	**0.49**	**94**	⇓*i*P		**Pn**	**14 48 43.3**	**+1.0**
THR3	**Thira Island,**	**0.79**	**151**	P		**Pn**	**14 48 45.6**	**+1.7**
THR3	**Thira Island,**	**0.79**	**151**	P		**Pn**	**14 48 45.6**	**+1.7**
THR6	**Thira Island,**	**0.84**	**153**	P		**Pn**	**14 48 45.8**	**+1.6**
THR6	**Thira Island,**	**0.84**	**153**	P		**Pn**	**14 48 45.8**	**+1.6**
THR1	**Thera Island**	**0.85**	**149**	P		**Pn**	**14 48 45.4**	**+1.1**
THR1	**Thera Island**	**0.85**	**149**	P		**Pn**	**14 48 45.4**	**+1.1**
PTL	**Penteli**	**1.26**	**319**	*e*P		**Pn**	**14 48 48.4**	**+0.9**
PTL	**Penteli**	**1.26**	**319**	*e*P		**Pn**	**14 48 48.4**	**+0.9**
ATH	**Athens Observa**	**1.29**	**313**	*e*P		**Pn**	**14 48 48.7**	**+1.0**
ATH	**Athens Observa**	**1.29**	**313**	*e*P		**Pn**	**14 48 48.7**	**+1.0**
NAIG	**Nisos Aigina**	**1.31**	**300**	*e*P		**Pn**	**14 48 48.7**	**+0.7**
NAIG	**Nisos Aigina**	**1.31**	**300**	*e*P		**Pn**	**14 48 48.7**	**+0.7**
DID	**Didima**	**1.40**	**287**	P		**Pn**	**14 48 49.4**	**+0.6**
DID				S		**Sn**	**14 49 11.8**	**-0.8**
DID	**Didima**	**1.40**	**287**	*e*P		**Pn**	**14 48 49.4**	**+0.6**
DID				*e*S		**Sn**	**14 49 11.8**	**-0.4**
DID	**Didima**	**1.40**	**287**	*e*P		**Pn**	**14 48 49.4**	**+0.6**
DID				S		**Sn**	**14 49 11.4**	**-0.8**
VLI	**Veliai**	**1.64**	**257**	P		**Pn**	**14 48 51.7**	**+0.7**
VLI				S		**Sn**	**14 49 13.7**	**-2.5**
VLI	**Veliai**	**1.64**	**257**	*e*P		**Pn**	**14 48 51.8**	**+0.7**
VLI	**Veliai**	**1.64**	**257**	*e*P		**Pn**	**14 48 51.8**	**+0.7**
KYTH	**Kithira**	**1.72**	**242**	P		**Pn**	**14 48 53.3**	**+1.3**
KYTH	**Kithira**	**1.72**	**242**	*e*P		**Pn**	**14 48 53.4**	**+1.4**
KYTH	**Kithira**	**1.72**	**242**	P		**Pn**	**14 48 53.3**	**+1.3**
VAM	**Vamos**	**1.79**	**199**	P		**Pn**	**14 48 53.8**	**+1.1**
VAM				S		**Sn**	**14 49 18.4**	**-0.8**
VAM	**Vamos**	**1.79**	**199**	*e*P		**Pn**	**14 48 53.8**	**+1.1**
VAM				*e*S		**Sn**	**14 49 18.6**	**-0.6**
VAM	**Vamos**	**1.79**	**199**	*e*P		**Pn**	**14 48 53.8**	**+1.1**
VAM				*e*S		**Sn**	**14 49 18.6**	**-0.6**
ANKY	**Antikythira Is**	**1.79**	**227**	*e*P		**Pn**	**14 48 53.9**	**+1.1**
ANKY				*e*S		**Sn**	**14 49 18.5**	**-0.7**
ANKY	**Antikythira Is**	**1.79**	**227**	*e*P		**Pn**	**14 48 53.9**	**+1.1**
ANKY				*e*S		**Sn**	**14 49 18.5**	**-0.7**
LTK	**Loutraki**	**1.80**	**301**	*e*P		**Pn**	**14 48 53.6**	**+0.8**
LTK	**Loutraki**	**1.80**	**301**	*e*P		**Pn**	**14 48 53.6**	**+0.8**
IDI	**Anoyia**	**1.81**	**181**	P		**Pn**	**14 48 53.5**	**+0.5**
IDI				S		**Sn**	**14 49 18.9**	**-0.8**
IDI	**Anoyia**	**1.81**	**181**	*e*P		**Pn**	**14 48 53.6**	**+0.5**
IDI				*e*S		**Sn**	**14 49 18.9**	**-0.8**
IDI	**Anoyia**	**1.81**	**181**	*e*P		**Pn**	**14 48 53.6**	**+0.5**
IDI				*e*S		**Sn**	**14 49 18.9**	**-0.8**
KARN	**Karanos**	**1.88**	**206**	*e*P		**Pn**	**14 48 55.0**	**+1.3**
KARN				*e*S		**Sn**	**14 49 19.7**	**-1.2**
KARN	**Karanos**	**1.88**	**206**	*e*P		**Pn**	**14 48 55.0**	**+1.3**
KARN				*e*S		**Sn**	**14 49 19.7**	**-1.2**
MRKA	**Markates**	**1.92**	**327**	P		**Pn**	**14 48 54.8**	**+0.8**
MRKA	**Markates**	**1.92**	**327**	P		**Pn**	**14 48 54.8**	**+0.8**
NPS	**Neapolis**	**1.92**	**163**	P		**Pn**	**14 48 54.6**	**+0.4**
NPS				S		**Sn**	**14 49 21.1**	**-0.6**
NPS	**Neapolis**	**1.92**	**163**	*e*P		**Pn**	**14 48 54.7**	**+0.5**
NPS				*e*S		**Sn**	**14 49 20.6**	**-1.1**
NPS	**Neapolis**	**1.92**	**163**	*e*P		**Pn**	**14 48 54.7**	**+0.5**
NPS				S		**Sn**	**14 49 21.1**	**-0.6**
LAST	**Lasithi**	**1.99**	**167**	*e*P		**Pn**	**14 48 55.7**	**+0.7**
LAST	**Lasithi**	**1.99**	**167**	*e*P		**Pn**	**14 48 55.7**	**+0.7**
VLX	**Vlachokerasia**	**2.05**	**278**	P		**Pn**	**14 48 56.1**	**+0.5**
VLX				S		**Sn**	**14 49 23.6**	**-0.7**
VLX	**Vlachokerasia**	**2.05**	**278**	*e*P		**Pn**	**14 48 56.6**	**+1.0**
VLX	**Vlachokerasia**	**2.05**	**278**	*e*P		**Pn**	**14 48 56.6**	**+1.0**
VLX				S		**Sn**	**14 49 23.6**	**-0.7**
SIVA	**Sivas**	**2.08**	**182**	*e*P		**Pn**	**14 48 57.3**	**+1.4**
SIVA	**Sivas**	**2.08**	**182**	*e*P		**Pn**	**14 48 57.3**	**+1.4**
DYR	**Agios Nikonas**	**2.10**	**261**	P		**Pn**	**14 48 57.9**	**+1.8**
DYR	**Agios Nikonas**	**2.10**	**261**	*e*P		**Pn**	**14 48 57.9**	**+1.8**
DYR	**Agios Nikonas**	**2.10**	**261**	*e*P		**Pn**	**14 48 57.9**	**+1.8**
GUR	**Goura**	**2.21**	**293**	P		**Pn**	**14 48 58.0**	**+0.6**
GUR	**Goura**	**2.21**	**293**	*e*P		**Pn**	**14 48 58.1**	**+0.6**
GUR	**Goura**	**2.21**	**293**	*e*P		**Pn**	**14 48 58.1**	**+0.6**
AOS	**Alonnisos**	**2.22**	**339**	P		**Pn**	**14 48 58.0**	**+0.6**
AOS	**Alonnisos**	**2.22**	**339**	P		**Pn**	**14 48 58.0**	**+0.6**
ZKR	**Zakros**	**2.25**	**152**	*e*P		**Pn**	**14 48 59.1**	**+1.3**
ZKR	**Zakros**	**2.25**	**152**	*e*P		**Pn**	**14 48 59.1**	**+1.3**
KARP	**Karpathos**	**2.38**	**130**	*e*P		**Pn**	**14 49 00.9**	**+1.5**
KARP				*e*S		**Sn**	**14 49 30.6**	**-0.5**
KARP	**Karpathos**	**2.38**	**130**	*e*P		**Pn**	**14 49 00.9**	**+1.5**
KARP				*e*S		**Sn**	**14 49 30.6**	**-0.5**
ITM	**Ithomi**	**2.39**	**273**	P		**Pn**	**14 49 00.8**	**+1.3**
ITM	**Ithomi**	**2.39**	**273**	*e*P		**Pn**	**14 49 00.9**	**+1.4**
ITM				*e*S		**Sn**	**14 49 30.4**	**-0.8**
ITM	**Ithomi**	**2.39**	**273**	P		**Pn**	**14 49 00.8**	**+1.3**
ITM				*e*S		**Sn**	**14 49 30.4**	**-0.8**
KALE	**Kalithea**	**2.55**	**301**	P		**Pn**	**14 49 02.1**	**+0.7**
KALE	**Kalithea**	**2.55**	**301**	*e*P		**Pn**	**14 49 02.2**	**+0.8**
KALE	**Kalithea**	**2.55**	**301**	*e*P		**Pn**	**14 49 02.2**	**+0.8**
PYL	**PYLOS**	**2.55**	**266**	P		**Pn**	**14 49 01.0**	**-0.3**
PYL	**PYLOS**	**2.55**	**266**	*e*P		**Pn**	**14 49 01.7**	**+0.4**
PYL	**PYLOS**	**2.55**	**266**	*e*P		**Pn**	**14 49 01.7**	**+0.4**
TRIZ	**Trizonia**	**2.59**	**300**	P		**Pn**	**14 49 02.6**	**+0.9**
TRIZ	**Trizonia**	**2.59**	**300**	*e*P		**Pn**	**14 49 02.8**	**+1.1**
TRIZ	**Trizonia**	**2.59**	**300**	*e*P		**Pn**	**14 49 02.8**	**+1.1**
AMT	**Artemida-Makis**	**2.60**	**280**	P		**Pn**	**14 49 03.2**	**+1.4**
AMT	**Artemida-Makis**	**2.60**	**280**	*e*P		**Pn**	**14 49 03.3**	**+1.4**
AMT	**Artemida-Makis**	**2.60**	**280**	P		**Pn**	**14 49 03.2**	**+1.4**
LAKA	**Lakka**	**2.60**	**297**	*e*P		**Pn**	**14 49 02.5**	**+0.7**
LAKA	**Lakka**	**2.60**	**297**	*e*P		**Pn**	**14 49 02.5**	**+0.7**
ARG	**Arkhangelos**	**2.73**	**108**	*e*P		**Pn**	**14 49 04.3**	**+0.9**
ARG	**Arkhangelos**	**2.73**	**108**	*e*P		**Pn**	**14 49 04.3**	**+0.9**
EFP	**Efpalio**	**2.73**	**300**	P		**Pn**	**14 49 04.8**	**+1.4**
EFP	**Efpalio**	**2.73**	**300**	*e*P		**Pn**	**14 49 04.9**	**+1.5**
EFP	**Efpalio**	**2.73**	**300**	P		**Pn**	**14 49 04.8**	**+1.4**
AGG	**Agios Georgios**	**2.80**	**314**	P		**Pn**	**14 49 05.5**	**+1.2**
AGG	**Agios Georgios**	**2.80**	**314**	P		**Pn**	**14 49 05.5**	**+1.2**
THL	**Klokotos Trika**	**3.36**	**318**	P		**Pn**	**14 49 12.0**	**+0.9**
THL	**Klokotos Trika**	**3.36**	**318**	P		**Pn**	**14 49 12.0**	**+0.9**
LIT	**Litokhoron**	**3.55**	**328**	P		**Pn**	**14 49 14.5**	**+0.9**
LIT	**Litokhoron**	**3.55**	**328**	P		**Pn**	**14 49 14.5**	**+0.9**
VLS	**Valsamata**	**3.60**	**289**	P		**Pn**	**14 49 14.3**	**+0.1**
VLS	**Valsamata**	**3.60**	**289**	P		**Pn**	**14 49 14.3**	**+0.1**
BRTR	**Keskin Array B**	**7.33**	**66**	P		Pn	14 50 07.4	+4.4
	0.1nm,0.3s,baz=262,slow=16,SNR=2.8							
MMAI	**Mount Meron Ar**	**9.51**	**112**	P		**Pn**	**14 50 31.9**	**+0.1**
	2.5nm,0.3s,baz=304,slow=10,SNR=14							
MMAI				S		**Sn**	**14 52 12.6**	**-5.1**
	2.2nm,0.3s,baz=308,slow=24,SNR=4.2							
AKASG	**Malin Array Be**	**13.94**	**11**	P		**P**	**14 51 32.0**	**+0.7**
	0.9nm,0.3s,baz=202,slow=11,SNR=4.3							
GERES	**GERESS Array B**	**14.30**	**329**	P		**P**	**14 51 35.6**	**+0.2**
	0.2nm,0.3s,baz=138,slow=11,SNR=6.9							
FINES	**FINESS Array B**	**24.38**	**1**	P		**P**	**14 53 20.8**	**+0.3**
	0.7nm,0.8s,baz=169,slow=11,SNR=3.9							
ARCES	**ARCESS Array B**	**32.49**	**0**	P		**P**	**14 54 32.1**	**-0.3**
	1.9nm,1.0s,baz=191,slow=9.1,SNR=3.2							
MKAR	**Makanchi Array**	**42.89**	**58**	P		**P**	**14 56 01.4**	**+1.5**
	0.1nm,0.5s,baz=288,slow=8.3,SNR=3.8							
ZALV	**Zalesovo Beam**	**43.82**	**48**	P		**P**	**14 56 07.7**	**+0.6**
	0.4nm,0.4s,baz=282,slow=10,SNR=2.2							
YKA	**Yellowknife Ar**	**75.55**	**342**	P		**P**	**14 59 42.5**	**-1.2**
	0.2nm,0.8s,baz=28,slow=6.0,SNR=4.0							

*DDA **30** 14:53:12.8, 38°.96N×27°.63E, h23km, MD3.1*
*ISCJB **30** 14:53:13.5±0.4, 38°.97N±0°.02×27°.60E±0°.02, h4km±3km, Error ellipse: s-maj=3.2km s-min=2.7km az=13.6*
*CSEM **30** 14:53:13.7±0.1, 38°.97N×27°.60E, h2km, MD3.1, Error ellipse: s-maj=2.7km s-min=2.0km az=106.0*
*ISK **30** 14:53:13.3, 38°.97N×27°.60E, h6km, MD3.5*

ISC 30 14:53:13.6±1.0, **38°.97N**±0°.02×**27°.59E**±0°.02, **h5**km±10km, **n107**, σ0§**76**/134, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AKHS	**Akhisar**	**0.20**	**117**	*i* P		**Pg**	**14 53 17.3**	**-0.1**
AKHS				*i* S		**Sg**	**14 53 20.5**	**+0.5**
AKHS	**Akhisar**	**0.20**	**117**	*i* P		**Pg**	**14 53 17.3**	**-0.1**
AKHS				*i* S		**Sg**	**14 53 20.5**	**+0.5**
AKS	**Akhisar**	**0.20**	**117**	PG		**Pg**	**14 53 17.4**	**0.0**
AKS				*e*SG		**Sg**	**14 53 20.5**	**+0.4**
AKS	**Akhisar**	**0.20**	**117**	*i* Pg		**Pg**	**14 53 17.4**	**0.0**
AKS				*e*Sg		**Sg**	**14 53 20.5**	**+0.4**
IZM	**Izmir**	**0.62**	**204**	*e*PG		**Pg**	**14 53 25.8**	**+0.2**
IZM				*e*SG		**Sb**	**14 53 35.4**	**-0.7**
IZM	**Izmir**	**0.62**	**204**	*e*Pg		**Pg**	**14 53 25.8**	**+0.2**
IZM				*e*Sg		**Sb**	**14 53 35.4**	**-0.7**
BALB	**Balikesir**	**0.71**	**19**	*e*PG		**Pg**	**14 53 27.2**	**+0.1**
BALB				*e*SG		**Sb**	**14 53 38.4**	**0.0**
BALB	**Balikesir**	**0.71**	**19**	*e*Pg		**Pg**	**14 53 27.2**	**+0.1**
BALB				*e*Sg		**Sb**	**14 53 38.4**	**0.0**
BLCB	**Balcova**	**0.72**	**216**	*e*PG		**Pg**	**14 53 27.5**	**+0.1**
BLCB				*e*SG		**Sb**	**14 53 38.7**	**-0.1**
BLCB	**Balcova**	**0.72**	**216**	*e*Pg		**Pg**	**14 53 27.5**	**+0.1**
BLCB				*e*Sg		**Sb**	**14 53 38.7**	**-0.1**
BALY	**Balya**	**0.77**	**2**	*i* P		**Pg**	**14 53 28.3**	**-0.1**
BALY				*i* S		**Sg**	**14 53 38.8**	**+0.5**
BALY	**Balya**	**0.77**	**2**	*i* P		**Pg**	**14 53 28.3**	**-0.1**
BALY				*i* S		**Sg**	**14 53 38.8**	**+0.5**
AYVA	**Ayvalik**	**0.78**	**296**	*i* P		**Pb**	**14 53 28.9**	**-0.6**
AYVA				*i* S		**Sb**	**14 53 41.0**	**+0.6**
AYVA	**Ayvalik**	**0.78**	**296**	*i* P		**Pb**	**14 53 28.9**	**-0.6**
AYVA				*i* S		**Sb**	**14 53 41.0**	**+0.6**
DEMI	**Demirci**	**0.88**	**85**	*i* P		**Pg**	**14 53 40.7**	**-0.5**
DEMI				*i* S		**Sg**	**14 53 40.7**	**-1.2**
DEMI	**Demirci**	**0.88**	**85**	*i* P		**Pg**	**14 53 30.0**	**-0.5**
DEMI				*i* S		**Sg**	**14 53 40.7**	**-1.2**
DURS	**Dursunbey**	**0.93**	**47**	*i* P		**Pg**	**14 53 30.9**	**-0.6**
DURS				*i* S		**Sg**	**14 53 44.0**	**+0.4**
DURS	**Dursunbey**	**0.93**	**47**	*i* P		**Pg**	**14 53 30.9**	**-0.6**
DURS				*i* S		**Sg**	**14 53 44.0**	**+0.4**
KULA	**Kula-Manisa**	**0.95**	**118**	*e*PG		**Pg**	**14 53 31.4**	**-0.5**
KULA	**Kula-Manisa**	**0.95**	**118**	*e*Pg		**Pg**	**14 53 31.4**	**-0.5**
URLA	**Izmir**	**0.99**	**232**	*i* P		**Pg**	**14 53 32.7**	**+0.2**
URLA				*i* S		**Sb**	**14 53 47.0**	**+0.5**
URLA	**Izmir**	**0.99**	**232**	*i* P		**Pg**	**14 53 32.7**	**+0.2**
URLA				*i* S		**Sb**	**14 53 47.0**	**+0.5**
DST	**Dursunbey**	**1.02**	**51**	*e*PG		**Pb**	**14 53 33.8**	**0.0**
DST	**Dursunbey**	**1.02**	**51**	*e*Pg		**Pb**	**14 53 33.8**	**0.0**
GONE	**Gonen-Balikesi**	**1.08**	**4**	*e*PG		**Pg**	**14 53 34.1**	**-0.1**
GONE	**Gonen-Balikesi**	**1.08**	**4**	*e*Pg		**Pg**	**14 53 34.1**	**-0.1**
GCAM	**G?zelcaml?**	**1.30**	**193**	*i* P		**Pn**	**14 53 37.0**	**-1.3**
GCAM				*i* S		**Sg**	**14 53 54.6**	**-0.6**
GCAM	**G?zelcaml?**	**1.30**	**193**	*i* P		**Pn**	**14 53 37.0**	**-1.3**
GCAM				*i* S		**Sg**	**14 53 54.6**	**-0.6**
EZN	**Ezine**	**1.30**	**312**	*e*PN		**Pb**	**14 53 38.5**	**0.0**
EZN	**Ezine**	**1.30**	**312**	*e*Pn		**Pb**	**14 53 38.5**	**0.0**
AYDN	**Tasoluk**	**1.33**	**170**	*i* P		**Pn**	**14 53 37.6**	**-1.2**
AYDN				*i* S		**Sg**	**14 53 55.3**	**-0.9**
AYDN	**Tasoluk**	**1.33**	**170**	*i* P		**Pn**	**14 53 37.6**	**-1.2**
AYDN				*i* S		**Sg**	**14 53 55.3**	**-0.9**
EDC	**Edincik**	**1.39**	**9**	*e*PN		**Pg**	**14 53 40.1**	**-0.1**
EDC	**Edincik**	**1.39**	**9**	*e*Pn		**Pg**	**14 53 40.1**	**-0.1**
BNT	**Bandirma**	**1.41**	**10**	*e*PN		**Pn**	**14 53 39.6**	**-0.3**
BNT	**Bandirma**	**1.41**	**10**	*e*Pn		**Pn**	**14 53 39.6**	**-0.3**
KCTX	**Karacabey (Bur**	**1.42**	**24**	*e*PN		**Pn**	**14 53 39.6**	**-0.5**
KCTX	**Karacabey (Bur**	**1.42**	**24**	*e*Pn		**Pn**	**14 53 39.6**	**-0.5**
KRBG	**Karabiga-Canak**	**1.44**	**351**	*e*PN		**Pn**	**14 53 39.7**	**-0.6**
KRBG	**Karabiga-Canak**	**1.44**	**351**	*e*Pn		**Pn**	**14 53 39.7**	**-0.6**
BOZC	**Bozcaada**	**1.47**	**307**	*i* P		**Pb**	**14 53 41.3**	**-0.2**
BOZC				*i* S		**Sb**	**14 53 58.6**	**-1.9**
ORLT	**Orhaneli**	**1.48**	**43**	*e*PN		**Pn**	**14 53 40.4**	**-0.5**
ORLT	**Orhaneli**	**1.48**	**43**	*e*Pn		**Pn**	**14 53 40.4**	**-0.5**
TVSB	**Tavsanli**	**1.53**	**71**	*e*PN		**Pn**	**14 53 41.5**	**-0.2**
TVSB	**Tavsanli**	**1.53**	**71**	*e*Pn		**Pn**	**14 53 41.5**	**-0.2**
LPK	**Lapseki**	**1.54**	**336**	*e*PN		**Pn**	**14 53 41.9**	**+0.2**
LPK	**Lapseki**	**1.54**	**336**	*e*Pn		**Pn**	**14 53 41.9**	**+0.2**
KHAL	**Karahalli**	**1.61**	**111**	*i* P		**Pn**	**14 53 42.5**	**-0.2**
KHAL				*i* S		**Sn**	**14 54 03.9**	**0.0**
KHAL	**Karahalli**	**1.61**	**111**	*i* P		**Pn**	**14 53 42.5**	**-0.2**
KHAL				*i* S		**Sn**	**14 54 03.9**	**0.0**
MRMT	**Marmara Adasi**	**1.63**	**0**	*e*PN		**Pb**	**14 53 43.7**	**-0.5**
MRMT	**Marmara Adasi**	**1.63**	**0**	*e*Pn		**Pb**	**14 53 43.7**	**-0.5**
DENT	**Denizli**	**1.66**	**136**	*e*PN		**Pn**	**14 53 43.8**	**+0.4**
DENT	**Denizli**	**1.66**	**136**	*e*Pn		**Pn**	**14 53 43.8**	**+0.4**
GELI	**Tayfur-Gelibol**	**1.67**	**329**	*e*PN		**Pn**	**14 53 43.0**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.67**	**329**	*e*Pn		**Pn**	**14 53 43.0**	**-0.4**
ULDT	**Uludag**	**1.67**	**45**	*i* P		**Pb**	**14 53 44.4**	**-0.6**
ULDT	**Uludag**	**1.67**	**45**	*i* P		**Pb**	**14 53 44.4**	**-0.6**
MDNY	**Mudanya-Bursa**	**1.72**	**35**	*e*PN		**Pn**	**14 53 43.6**	**-0.5**
MDNY	**Mudanya-Bursa**	**1.72**	**35**	*e*Pn		**Pn**	**14 53 43.6**	**-0.5**
SART	**Tekirdag**	**1.75**	**350**	*i* P		**Pn**	**14 53 43.6**	**-1.0**
SART	**Tekirdag**	**1.75**	**350**	*i* P		**Pn**	**14 53 43.6**	**-1.0**
ARMT	**Armutlu**	**1.87**	**31**	*e*PN		**Pb**	**14 53 47.3**	**-0.9**
ARMT	**Armutlu**	**1.87**	**31**	*e*Pn		**Pb**	**14 53 47.3**	**-0.9**
ERIK	**Erikli-Kesan**	**1.89**	**334**	*e*PN		**Pn**	**14 53 47.2**	**+0.7**
ERIK	**Erikli-Kesan**	**1

*IDC **30** 15:33:03.1±1.9, 0°.26N×127°.27E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/21, mbtmp3.7/4, Error ellipse: s-maj=165.2km s-min=23.3km az=65.0*
*ISCJB **30** 15:33:10.4±0.8, 0°.025±0°.06×126°.69E±0°.08, h73km, mb3.5/4, Error ellipse: s-maj=12.0km s-min=8.8km az=165.3*
*DJA **30** 15:33:10.6±0.9, 0°S±4°×12°7E±°, h23km±14km, M3.6/3, MLv3.6/3*
ISC 30 15:33:11.8±1.0, **0°.02S**±0°.07×**126°.71E**±0°.09, **h73**km, **n8**, σ1§**15**/10, **mb3.6**/4, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**1.00**	**128**	P	**Pn**	**15 33 29.5**	**-1.0**
LBMI				S	**Sn**	**15 33 43.9**	**-0.5**
TNTI	**Ternate**	**1.02**	**40**	P	**Pn**	**15 33 29.4**	**-1.4**
TNTI				S	**Sn**	**15 33 43.9**	**-1.0**
GAMI	**Galela, Maluku**	**2.13**	**30**	P	**Pn**	**15 33 45.8**	**+0.4**
MNI	**Manado**	**2.37**	**308**	P	**Pn**	**15 33 47.2**	**-1.4**
WRA	**Warramunga Arr**	**21.16**	**160**	P	**P**	**15 37 50.8**	**-0.4**
	0.4nm,0.3s,baz=340,slow=11,SNR=26						
ASAR	**Alice Springs**	**24.52**	**164**	P	**P**	**15 38 25.9**	**+1.2**
	0.8nm,0.5s,baz=343,slow=10,SNR=39						
STKA	**Stephens Creek**	**34.67**	**157**	P	**P**	**15 39 54.9**	**+0.3**
	0.8nm,0.5s,baz=336,slow=13,SNR=3.6						
MKAR	**Makanchi Array**	**60.63**	**327**	P	**P**	**15 43 16.4**	**+1.2**
	0.3nm,0.4s,baz=118,slow=7.3,SNR=8.5						

IDC 30 15:39:08.2±1.6, **56°.22S**×**28°.21W**, **h0**km, **mb4.2**/1, **mb1 4.2**/1, **mb1mx3.7**/14, **mbtmp4.2**/1, **MS2.9**/2, **Ms1 2.9**/2, **ms1mx2.9**/16, **Error ellipse: s-maj=88.4km s-min=62.2km az=150.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFAA	**Coronel Fontan**	**37.10**	**295**	LR	LR	15 59 38.2	
	comp=Z,6.9nm,20.1s,slow=33						
SUR	**Sutherland**	**41.23**	**76**	LR	LR	15 59 54.5	
	comp=Z,52nm,20.4s,slow=30						
TORD	**Torodi Ar. Bea**	**73.49**	**30**	P	P	15 50 42.5	+0.1
	1.8nm,0.7s,baz=199,slow=6.2,SNR=13						
FINES	**FINESS Array B**	**124.80**	**28**	PKP	PKPdf	15 58 07.2	-1.1
	1.7nm,1.1s,baz=232,slow=1.6,SNR=6.0						
INK	**Inuvik**	**145.57**	**321**	PKPbc	PKPdf	15 58 46.1	-0.4
	baz=107,slow=3.6						
ILAR	**Eielson Array**	**149.80**	**312**	PKPbc	PKPbc	15 58 58.1	-0.3
	0.7nm,0.7s,baz=149,slow=2.9,SNR=7.8						
SONM	**Songino Array**	**151.31**	**88**	PKPbc	PKPbc	15 59 02.8	+0.1
	1.0nm,0.5s,baz=218,slow=3.3,SNR=9.3						

*IDC **30** 15:44:46.2±1.4, 5°.76N×126°.95E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.5/24, mbtmp3.6/6, Error ellipse: s-maj=101.8km s-min=18.2km az=70.0*
*MAN **30** 15:44:50, 5°.94N×127°.10E, h8km, mb4.8, ML3.7, MS3.7*
ISC 30 15:44:47.7±1.6, **5°.9N**±0°.2×**127°.2E**±0°.2, **h10**km, **n9**, σ2§**46**/8, **mb3.6**/6, **1C**, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.39**	**316**	*e*P	**Pn**	**15 45 13.9**	**+0.7**
MATI				*e*S	**Sg**	**15 45 34.0**	**+1.4**
BUKP	**Musuan**	**2.89**	**312**	*e*P	**Pb**	**15 45 38.3**	**-1.2**
BUKP				*e*S	**Sn**	**15 46 05.0**	**-3.8**
CTBH	**Cotabato--PC H**	**3.23**	**293**	*i*P	**Pn**	**15 45 41.0**	**+2.4**
FITZ	**Fitzroy Crossi**	**23.95**	**184**	P	**P**	**15 50 01.3**	**-1.0**
	1.6nm,0.8s,baz=19,slow=9.2,SNR=8.8						
WRA	**Warramunga Arr**	**26.66**	**165**	P	**P**	**15 50 25.6**	**-1.4**
	0.6nm,0.5s,baz=344,slow=10,SNR=13						
ASAR	**Alice Springs**	**30.14**	**168**	P	P	15 50 57.0	-1.0
	0.2nm,0.4s,baz=344,slow=7.3,SNR=16						
STKA	**Stephens Creek**	**40.03**	**161**	P	P	15 52 21.6	-1.5
	0.5nm,0.4s,baz=346,slow=12,SNR=3.8						
MKAR	**Makanchi Array**	**56.05**	**324**	P	P	15 54 25.3	-1.7
	0.2nm,0.4s,baz=129,slow=7.5,SNR=2.9						
ZALV	**Zalesovo Beam**	**58.87**	**332**	P	**P**	**15 54 48.3**	**+1.7**
	0.3nm,0.3s,baz=112,slow=6.4,SNR=3.1						

*NIED **30** 15:52:00, 39°.30N×138°.30E, h8km, Mw3.7 Best double couple: M○3.89000×10^14 NP1:φ○174.00000°, δ63.00000°, λ66.00000°. NP2:φ○39.00000°, δ36.00000°, λ129.00000°.*
*ISCJB **30** 15:52:20.9±1.0, 39°.24N±0°.03×138°.33E±0°.06, h16km±8km, mb3.6/9, Error ellipse: s-maj=7.8km s-min=5.2km az=23.9*
*IDC **30** 15:52:20.2±0.8, 39°.20N×138°.33E, h0km, mb3.7/8, mb1 3.9/12, mb1mx3.7/28, mbtmp3.6/12, ML3.1/3, Error ellipse: s-maj=32.2km s-min=15.2km az=108.0*
*JMA **30** 15:52:21.9±0.1, 39°.25N×138°.32E, h46km±4km, M4.0*
ISC 30 15:52:20.9±1.6, **39°.21N**±0°.04×**138°.35E**±0°.05, **h6**km±10km, **n28**, σ1§**43**/35, **mb3.8**/9, **Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTB	**Tobi-shima**	**0.94**	**90**	P	**Pg**	**15 52 39.1**	**+0.2**
JAW	**Awa shima**	**1.03**	**137**	P	**Pg**	**15 52 40.5**	**-0.1**
JSD	**Sado**	**1.17**	**183**	P	**Pg**	**15 52 42.6**	**-0.8**
JSD				*e*S	**Sg**	**15 52 58.5**	**-0.1**
JYA	**Atsumi**	**1.23**	**120**	P	**Pn**	**15 52 43.3**	**-1.3**
JYA				*e*S	**Sb**	**15 52 59.3**	**-1.3**
JOG2	**Oga 2**	**1.32**	**57**	P	**Pn**	**15 52 44.3**	**-1.5**
JNS	**Sasagawa**	**1.58**	**151**	P	**Pn**	**15 52 48.6**	**-0.8**
JNS				*e*S	**Sn**	**15 53 08.5**	**-1.7**
JYK	**Kaneyama**	**1.59**	**100**	P	**Pn**	**15 52 48.6**	**-0.9**
JYS	**Shirataka**	**1.67**	**126**	P	**Pn**	**15 52 50.1**	**-0.5**
JHG	**Hegura jima**	**1.76**	**220**	P	**Pn**	**15 52 51.3**	**-0.5**
JSZ	**Suzu**	**1.92**	**204**	P	**Pn**	**15 52 53.6**	**-0.4**
JSZ				*e*S	**Sn**	**15 53 17.2**	**-1.3**
JMK	**Ichinoseki**	**2.25**	**96**	P	**Pn**	**15 52 58.5**	**-0.1**
JOM	**Ohasama**	**2.30**	**83**	P	**Pn**	**15 52 59.0**	**-0.3**
JFT	**Otama**	**2.30**	**137**	P	**Pn**	**15 52 59.9**	**+0.6**
MAT	**Matsushiro**	**2.67**	**182**	P	**Pn**	**15 53 04.3**	**0.0**
MAT				S	**Sn**	**15 53 37.2**	**+0.3**
MJAR	**Matsushiro Arr**	**2.67**	**182**	Pn	**Pn**	**15 53 05.1**	**+0.7**
	1.9nm,0.3s,baz=7.8,slow=17,SNR=29						
MJAR				Sn	**Sn**	**15 53 37.8**	**+0.9**
	4.9nm,0.3s,baz=315,slow=50,SNR=6.5						
ASAJ	**Asahikawa**	**5.84**	**32**	Pn	**Pn**	**15 53 49.5**	**+1.5**
	0.5nm,0.3s,baz=209,slow=28,SNR=4.8						
USRK	**Ussuriysk Arra**	**6.88**	**318**	Pn	**Pn**	**15 54 01.2**	**-1.1**
	0.1nm,0.3s,baz=108,slow=42,SNR=2.9						
USRK				Sn	**Sn**	**15 55 15.2**	**-5.6**
	0.1nm,0.3s,baz=130,slow=40,SNR=3.3						
KSRS	**Korea Array**	**8.38**	**261**	Pn	**Pn**	**15 54 24.9**	**+2.2**
	0.6nm,0.3s,baz=69,slow=14,SNR=23						
SONM	**Songino Array**	**24.58**	**301**	P	**P**	**15 57 44.1**	**+2.5**
	0.3nm,0.8s,baz=98,slow=10,SNR=2.2						
ZALV	**Zalesovo Beam**	**38.66**	**310**	PcP	**PcP**	**16 01 56.4**	**-0.5**
	0.3nm,0.4s,baz=97,slow=3.5,SNR=3.2						
ILAR	**Eielson Array**	**48.98**	**33**	P	**P**	**16 01 07.8**	**+0.2**
	0.6nm,0.8s,baz=286,slow=7.2,SNR=7.8						
INK	**Inuvik**	**53.57**	**28**	P	**P**	**16 01 42.2**	**+0.2**
	0.5nm,0.5s,baz=299,slow=9.6,SNR=4.6						
WRA	**Warramunga Arr**	**58.96**	**184**	P	**P**	**16 02 20.9**	**-0.1**
	1.0nm,0.7s,baz=1.0,slow=7.5,SNR=12						
ASAR	**Alice Springs**	**62.69**	**185**	P	**P**	**16 02 46.3**	**-0.1**
	0.6nm,0.8s,baz=19,slow=5.8,SNR=5.7						
YKA	**Yellowknife Ar**	**63.14**	**30**	P	**P**	**16 02 48.7**	**-0.2**
	0.4nm,0.7s,baz=306,slow=6.6,SNR=9.8						
NVAR	**Mina Array Bea**	**75.59**	**52**	P	**P**	**16 04 08.1**	**+1.3**
	0.5nm,0.7s,baz=296,slow=4.6,SNR=4.6						
PDAR	**Pinedale Array**	**77.83**	**44**	P	**P**	**16 04 19.9**	**+0.5**
	0.7nm,0.8s,baz=132,slow=2.2,SNR=5.5						
TXAR	**Lajitas Array**	**90.66**	**50**	P	**P**	**16 05 25.4**	**+0.8**
	0.3nm,0.8s,baz=300,slow=1.8,SNR=3.0						

*AUST **30** 16:17:07.7, 3°.95S×135°.52E, h100km*
*IDC **30** 16:17:07.7±3.9, 4°.43S×134°.35E, h0km, mb3.3/2, mb1 3.6/4, mb1mx3.4/17, mbtmp3.4/4, ML2.9/1, Error ellipse: s-maj=243.4km s-min=27.0km az=81.0*
ISC 30 16:17:10.2±1.3, **4°.32S**±0°.08×**134°.9E**±0°.1, **h23**km, **n11**, σ2§**11**/13, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLE	**Tual**	**2.56**	**239**	P	Pb	16 18 00.6	+5.2
	baz=3.2,SNR=3.3						
FAKI	**Fak Fak**	**3.02**	**297**	P	**Pn**	**16 17 58.4**	**+1.7**
	baz=3.4,SNR=16						
FAKI				S	**Sb**	**16 18 36.8**	**-3.2**
	baz=3.4,SNR=4.5						
SWI	**Sorong**	**5.03**	**313**	P	**Pn**	**16 18 25.4**	**+1.1**
	baz=5.3,SNR=3.7						
KDU	**Kakadu**	**8.66**	**196**	P	**Pn**	**16 19 15.1**	**+0.9**
	baz=9.2,SNR=8.7						
KDU				S	**Sn**	**16 20 48.2**	**-3.1**
	baz=9.2,SNR=3.1						
MTN	**Manton Dam**	**9.27**	**204**	P	**Pn**	**16 19 25.0**	**+2.5**
	baz=9.9,SNR=5.7						
MTN				S	**Sn**	**16 21 07.6**	**+1.5**
	baz=9.9,SNR=4.3						
PCI	**Palu**	**15.46**	**282**	P	**Pn**	**16 20 47.4**	**+0.3**
	baz=16,SNR=14						
WRA	**Warramunga Arr**	**15.54**	**182**	Pn	**Pn**	**16 20 44.6**	**-3.4**
	0.1nm,0.3s,baz=357,slow=13,SNR=4.2						
WRA				Sn	Sn	16 23 29.1	-10
	0.1nm,0.3s,baz=0.0,slow=23,SNR=6.4						
FITZ	**Fitzroy Crossi**	**16.45**	**213**	P	**Pn**	**16 20 59.3**	**-0.3**
	baz=17,SNR=8.2						
ASAR	**Alice Springs**	**19.26**	**183**	P	**P**	**16 21 33.4**	**+0.1**
	0.4nm,0.3s,baz=4.6,slow=11,SNR=46						
SONM	**Songino Array**	**57.66**	**338**	P	**P**	**16 26 58.7**	**-0.2**
	0.2nm,0.5s,baz=162,slow=7.2,SNR=2.8						
MKAR	**Makanchi Array**	**68.82**	**324**	P	**P**	**16 28 12.7**	**-0.1**
	0.1nm,0.5s,baz=108,slow=7.7,SNR=2.6						

*ISK **30** 16:26:21.9, 40°.34N×27°.96E, h12km, MD2.4*
*ISCJB **30** 16:26:22.3±0.5, 40°.35N±0°.04×27°.95E±0°.05, h12km±3km, Error ellipse: s-maj=6.1km s-min=5.9km az=154.0*
*CSEM **30** 16:26:22.5±0.1, 40°.36N×27°.95E, h12km, MD2.4, Error ellipse: s-maj=3.2km s-min=2.8km az=7.0*
*DDA **30** 16:26:23.1, 40°.29N×27°.88E, h7km, MD2.6*
ISC 30 16:26:22.5±0.9, **40°.34N**±0°.03×**27°.94E**±0°.03, **h13**km±4km, **n23**, σ0§**53**/36, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNT	**Bandirma**	**0.02**	**310**	*e*PG	**Pg**	**16 26 24.4**	**-0.4**
BNT				*e*SG	**Sg**	**16 26 25.8**	**-0.6**
BNT	**Bandirma**	**0.02**	**310**	*e*Pg	**Pg**	**16 26 24.4**	**-0.4**
BNT				*e*Sg	**Sg**	**16 26 25.8**	**-0.6**
EDC	**Edincik**	**0.06**	**275**	*e*PG	**Pg**	**16 26 25.6**	**+0.5**
EDC				*e*SG	**Sg**	**16 26 27.1**	**+0.2**
EDC	**Edincik**	**0.06**	**275**	*e*Pg	**Pg**	**16 26 25.6**	**+0.5**
EDC				*e*Sg	**Sg**	**16 26 27.1**	**+0.2**
GONE	**Gonen-Balikesi**	**0.35**	**214**	*e*PG	**Pg**	**16 26 29.4**	**-0.3**
GONE				*e*SG	**Sg**	**16 26 35.0**	**+0.5**
GONE	**Gonen-Balikesi**	**0.35**	**214**	*e*Pg	**Pg**	**16 26 29.4**	**-0.3**
GONE				*e*Sg	**Sg**	**16 26 35.0**	**+0.5**
MRMT	**Marmara Adasi**	**0.37**	**315**	*e*PG	**Pg**	**16 26 29.8**	**-0.3**
MRMT				*e*SG	**Sg**	**16 26 35.9**	**+0.8**
MRMT	**Marmara Adasi**	**0.37**	**315**	*e*Pg	**Pg**	**16 26 29.8**	**-0.3**
MRMT				*e*Sg	**Sg**	**16 26 35.9**	**+0.8**
KRBG	**Karabiga-Canak**	**0.50**	**276**	*e*PG	**Pg**	**16 26 31.9**	**-0.4**
KRBG				*e*SG	**Sb**	**16 26 40.2**	**-0.1**
KRBG	**Karabiga-Canak**	**0.50**	**276**	*e*Pg	**Pg**	**16 26 31.9**	**-0.4**
KRBG				*e*Sg	**Sb**	**16 26 40.2**	**-0.1**
BALY	**Balya**	**0.65**	**203**	*i* P	**Pg**	**16 26 33.7**	**-1.5**
BALY				*i* S	**Sg**	**16 26 43.9**	**+0.2**
ARMT	**Armutlu**	**0.74**	**72**	*e*PG	**Pg**	**16 26 36.4**	**-0.4**
ARMT	**Armutlu**	**0.74**	**72**	*e*Pg	**Pg**	**16 26 36.4**	**-0.4**
DURS	**Dursunbey**	**0.84**	**151**	*i* P	**Pb**	**16 26 39.6**	**+0.4**
DURS				*i* S	**Sb**	**16 26 51.0**	**+0.6**
DURS	**Dursunbey**	**0.84**	**151**	*i* P	**Pb**	**16 26 39.6**	**+0.4**
DURS				*i* S	**Sb**	**16 26 51.0**	**+0.6**
CTKS	**Kestenalik-??a**	**0.99**	**25**	*e*PG	**Pg**	**16 26 41.3**	**-0.4**
CTKS	**Kestenalik-??a**	**0.99**	**25**	*e*Pg	**Pg**	**16 26 41.3**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.12**	**273**	*e*PN	**Pb**	**16 26 43.3**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.12**	**273**	*e*Pn	**Pb**	**16 26 43.3**	**-0.5**
ERIK	**Erikli-Kesan**	**1.14**	**287**	*e*PN	**Pg**	**16 26 44.7**	**+0.2**
ERIK	**Erikli-Kesan**	**1.14**	**287**	*e*Pn	**Pg**	**16 26 44.7**	**+0.2**
IZI	**Iznik**	**1.17**	**90**	*e*PN	**Pn**	**16 26 44.7**	**0.0**
IZI	**Iznik**	**1.17**	**90**	*e*Pn	**Pn**	**16 26 44.7**	**0.0**

IDC 30 17:07:26.2±2.7, **7°.16S**×**129°.05E**, **h0**km, **mb3.5**/1, **mb1 3.2**/3, **mb1mx3.1**/19, **mbtmp3.1**/3, **ML2.9**/2, **Error ellipse: s-maj=273.7km s-min=32.2km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLE	**Tual**	**3.96**	**68**	P	Pb	17 08 34.6	-2.4
	baz=7.5,SNR=13						
FAKI	**Fak Fak**	**5.28**	**37**	P	Pn	17 08 51.9	+5.5
	baz=8.7,SNR=5.1						
KDU	**Kakadu**	**6.44**	**149**	P	Pn	17 09 07.3	+5.0
	baz=9.9,SNR=4.8						
WRA	**Warramunga Arr**	**13.70**	**159**	Pn	Pn	17 10 41.7	-0.2
	0.1nm,0.3s,baz=336,slow=14,SNR=4.9						
WRA				Sn	Sn	17 13 03.0	-12
	0.2nm,0.3s,baz=338,slow=22,SNR=6.1						
ASAR	**Alice Springs**	**17.06**	**165**	P	Pn	17 11 26.5	+0.2
	0.0nm,0.3s,baz=344,slow=14,SNR=5.8						
ASAR				S	Sn	17 14 25.8	-11
	0.1nm,0.3s,baz=348,slow=26,SNR=4.5						
MKAR	**Makanchi Array**	**67.85**	**327**	P	P	17 18 26.4	0.0
	0.2nm,0.4s,baz=111,slow=9.7,SNR=7.1						

*CSEM **30** 17:12:11.9, 42°.46N×13°.32E, h11km, After ROM*
ROM 30 17:12:11.9±0.1, **42°.46N**×**13°.32E**, **h11**km, **Ml2.5**/23, **Error ellipse: s-maj=0.9km s-min=0.7km az=68.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.10**	**40**	Pg	Pg	17 12 15.2	+0.4
CAMP				Sg	Sg	17 12 17.2	+0.3
	574nm,0.4s						
CAMP	**Campotosto**	**0.10**	**40**	Pg	Pg	17 12 15.2	+0.4
CAMP				Sg	Sg	17 12 17.2	+0.3
	574nm,0.4s						
AQU	**L'Aquila**	**0.12**	**151**	Pg	Pg	17 12 15.6	+0.6
AQU				Sg	Sg	17 12 18.0	+0.8
	2µm,0.3s						
AQU	**L'Aquila**	**0.12**	**151**	Pg	Pg	17 12 15.6	+0.6
AQU				Sg	Sg	17 12 18.0	+0.8
	2µm,0.3s						
FIAM	**Fiamignano**	**0.24**	**219**	Pg	Pg	17 12 17.5	+0.4
FIAM				Sg	Sg	17 12 21.6	+1.0
	597nm,0.4s						
FIAM	**Fiamignano**	**0.24**	**219**	Pg	Pg	17 12 17.5	+0.4
FIAM				Sg	Sg	17 12 21.6	+1.0
	597nm,0.4s						
LNSS	**Leonessa**	**0.25**	**305**	Pg	Pg	17 12 17.7	+0.4
LNSS				Sg	Sg	17 12 21.8	+0.8
	2µm,0.3s						
LNSS	**Leonessa**	**0.25**	**305**	Pg	Pg	17 12 17.7	+0.4
LNSS				Sg	Sg	17 12 21.8	+0.8
	2µm,0.3s						
TERO	**Teramo**	**0.26**	**52**	Pg	Pg	17 12 17.6	+0.2
TERO				Sg	Sg	17 12 21.7	+0.6
	969nm,0.3s						
TERO	**Teramo**	**0.26**	**52**	Pg	Pg	17 12 17.6	+0.2
TERO				Sg	Sg	17 12 21.7	+0.6
	969nm,0.3s						
FAGN	**Fagnano**	**0.27**	**135**	Pg	Pg	17 12 18.1	+0.5
FAGN				Sg	Sg	17 12 22.5	+1.1
FAGN	**Fagnano**	**0.27**	**135**	Pg	Pg	17 12 18.1	+0.5
FAGN				Sg	Sg	17 12 22.5	+1.1
VCEL	**Villa Celiera**	**0.39**	**99**	Pg	Pg	17 12 20.1	+0.3
VCEL				Sg	Sb	17 12 26.2	-0.9
	1µm,0.4s						
VCEL	**Villa Celiera**	**0.39**	**99**	Pg	Pg	17 12 20.1	+0.3
VCEL				Sg	Sb	17 12 26.2	-0.9
	1µm,0.4s						
GAVE	**Gavelli**	**0.39**	**306**	Pg	Pg	17 12 19.9	0.0
GAVE	**Gavelli**	**0.39**	**306**	Pg	Pg	17 12 19.9	0.0
NRCA	**Norcia**	**0.41**	**338**	Pg	Pg	17 12 20.1	0.0
NRCA				Sg	Sg	17 12 26.4	+0.8
	863nm,0.1s						
NRCA	**Norcia**	**0.41**	**338**	Pg	Pg	17 12 20.1	0.0
NRCA				Sg	Sg	17 12 26.4	+0.8
	863nm,0.1s						
PTQR	**Pietraquaria**	**0.44**	**172**	Pg	Pg	17 12 20.9	+0.2
PTQR				Sg	Sb	17 12 28.1	-0.4
	54nm,0.2s						
PTQR	**Pietraquaria**	**0.44**	**172**	Pg	Pg	17 12 20.9	+0.2
PTQR				Sg	Sb	17 12 28.1	-0.4
	54nm,0.2s						
MNS	**Montasola**	**0.48**	**261**	Pg	Pg	17 12 21.4	0.0
MNS				Sg	Sb	17 12 28.8	-0.8
	307nm,0.4s						
MNS	**Montasola**	**0.48**	**261**	Pg	Pg	17 12 21.4	0.0
MNS				Sg	Sb	17 12 28.8	-0.8
	307nm,0.4s						
OFFI	**Offida**	**0.55**	**29**	Pg	Pb	17 12 23.4	-0.1
OFFI	**Offida**	**0.55**	**29**	Pg	Pb	17 12 23.4	-0.1
TRTR	**Tortoreto Alta**	**0.56**	**51**	Pg	Pb	17 12 23.7	0.0
TRTR	**Tortoreto Alta**	**0.56**	**51**	Pg	Pb	17 12 23.7	0.0
CERT	**Cerreto**	**0.57**	**207**	Pg	Pg	17 12 22.9	-0.2
	548nm,0.4s						
CERT	**Cerreto**	**0.57**	**207**	Pg	Pg	17 12 22.9	-0.2
	548nm,0.4s						
CESX	**Cesi**	**0.57**	**286**	Pg	Pg	17 12 22.8	-0.2
CESX				Sg	Sg	17 12 31.3	+0.7
	185nm,0.3s						
CESX	**Cesi**	**0.57**	**286**	Pg	Pg	17 12 22.8	-0.2
CESX				Sg	Sg	17 12 31.3	+0.7
	185nm,0.3s						
FDMO	**Fiordimonte**	**0.60**	**343**	Pg	Pg	17 12 23.6	-0.1
FDMO				Sg	Sb	17 12 33.1	0.0
	101nm,0.3s						
FDMO	**Fiordimonte**	**0.60**	**343**	Pg	Pg	17 12 23.6	-0.1
FDMO				Sg	Sb	17 12 33.1	0.0
	101nm,0.3s						
INTR	**Introdacqua**	**0.62**	**136**	Pg	Pg	17 12 23.8	-0.3
INTR				Sg	Sb	17 12 33.4	-0.3
	261nm,0.6s						
INTR	**Introdacqua**	**0.62**	**136**	Pg	Pg	17 12 23.8	-0.3
INTR				Sg	Sb	17 12 33.4	-0.3
	261nm,0.6s						
CESI	**CESI - Serrava**	**0.63**	**331**	Pg	Pg	17 12 24.1	-0.1
CESI				Sg	Sb	17 12 33.7	-0.2
	83nm,0.3s						
CESI	**CESI - Serrava**	**0.63**	**331**	Pg	Pg	17 12 24.1	-0.1
CESI				Sg	Sb	17 12 33.7	-0.2
	83nm,0.3s						
VVLD	**Villa Vallelon**	**0.63**	**159**	Pg	Pg	17 12 23.9	-0.3
	180nm,0.4s						
VVLD	**Villa Vallelon**	**0.63**	**159**	Pg	Pg	17 12 23.9	-0.3
	180nm,0.4s						
GUAR	**Guarcino**	**0.66**	**181**	Pg	Pg	17 12 24.9	0.0
	119nm,0.3s						
GUAR	**Guarcino**	**0.66**	**181**	Pg	Pg	17 12 24.9	0.0
	119nm,0.3s						
GUMA	**Gualdo di Mace**	**0.75**	**37**	Pg	Pg	17 12 23.9	-2.7
	455nm,0.4s						
GUMA	**Gualdo di Mace**	**0.75**	**37**	Pg	Pg	17 12 23.9	-2.7
	455nm,0.4s						
LPEL	**Lama dei Pelig**	**0.76**	**123**	Pg	Pg	17 12 25.6	-1.1
LPEL				Sg	Sg	17 12 36.5	-0.2
	218nm,0.2s						
LPEL	**Lama dei Pelig**	**0.76**	**123**	Pg	Pg	17 12 25.6	-1.1
LPEL				Sg	Sg	17 12 36.5	-0.2
	218nm,0.2s						
ASSB	**Assisi San Ben**	**0.76**	**320**	Pg	Pg	17 12 26.2	-0.5
	127nm,0.2s						
ASSB	**Assisi San Ben**	**0.76**	**320**	Pg	Pg	17 12 26.2	-0.5
	127nm,0.2s						
POFI	**Posta Fibreno**	**0.80**	**159**	Pg	Pg	17 12 27.6	+0.2
POFI	**Posta Fibreno**	**0.80**	**159**	Pg	Pg	17 12 27.6	+0.2
SDI	**San Donato**	**0.83**	**154**	Pg	Pg	17 12 27.5	-0.6
	41nm,0.3s						
SDI	**San Donato**	**0.83**	**154**	Pg	Pg	17 12 27.5	-0.6
	41nm,0.3s						
SNTG	**Esanatoglia**	**0.84**	**341**	Pg	Pg	17 12 27.7	-0.6
	29nm,0.2s						
SNTG	**Esanatoglia**	**0.84**	**341**	Pg	Pg	17 12 27.7	-0.6
	29nm,0.2s						
GIUL	**Giuliano Di Ro**	**0.90**	**183**	Pg	Pg	17 12 29.1	-0.3
	71nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.90**	**183**	Pg	Pg	17 12 29.1	-0.3
	71nm,0.6s						
CING	**Cingoli**	**0.92**	**354**	Pg	Pg	17 12 29.2	-0.6
	79nm,0.5s						
CING	**Cingoli**	**0.92**	**354**	Pg	Pg	17 12 29.2	-0.6
	79nm,0.5s						
MURB	**Monte Urbino**	**0.99**	**324**	Pg	Pg	17 12 30.8	-0.4
	190nm,0.3s						
MURB	**Monte Urbino**	**0.99**	**324**	Pg	Pg	17 12 30.8	-0.4
	190nm,0.3s						
MGAB	**Montegabbione**	**1.00**	**297**	Pg	Pg	17 12 30.7	-0.6
MGAB	**Montegabbione**	**1.00**	**297**	Pg	Pg	17 12 30.7	-0.6
MIDA	**Miranda**	**1.07**	**139**	Pg	Pb	17 12 31.8	-0.8
	53nm,0.6s						
MIDA	**Miranda**	**1.07**	**139**	Pg	Pb	17 12 31.8	-0.8
	53nm,0.6s						
SACS	**San Casciano d**	**1.11**	**291**	Pg	Pb	17 12 33.0	-0.3
	43nm,0.7s						

*CSEM **30** 17:12:40.7, 42°.38N×13°.34E, h11km, MD1.7/5, After ROM*
ROM 30 17:12:40.7±0.2, **42°.38N**×**

DAT	**Datca**	**2.06**	**2**	*e*PN	**Pn**	**17 16 22.6**	**0.0**	**DYR**	**Agios Nikonas**	**4.70**	**298**	*e*P	**Pn**	**17 16 59.6**	**+0.9**	**THL**	**Klokotos Trika**	**6.57**	**320**	*e*P	**Pn**	**17 17 25.2**	**+0.9**
DAT				*e*SN	**Sn**	**17 16 46.8**	**-0.6**	DYR				*e*S	**Sn**	**17 17 49.9**	**-2.3**	**THL**	**Klokotos Trika**	**6.57**	**320**	*e*P	**Pn**	**17 17 25.2**	**+0.9**
DAT	**Datca**	**2.06**	**2**	*e*PN	**Pn**	**17 16 22.6**	**0.0**	**MAMC**	**Mammari**	**4.73**	**82**	P	**Pn**	**17 16 59.5**	**+0.4**	**SUZ**		**6.60**	**135**	P	**Pn**	**17 17 23.3**	**-1.5**
DAT				*e*Sn	**Sn**	**17 16 46.8**	**-0.6**	**MAMC**	**Mammari**	**4.73**	**82**	P	**Pn**	**17 16 59.5**	**+0.4**	baz=135							
IDI	**Anoyia**	**2.23**	**287**	*e*P	**Pn**	**17 16 26.5**	**+1.7**	**CSS**	**Prodhromos**	**4.81**	**85**	P	**Pn**	**17 17 00.2**	**0.0**	**SUZ**		**6.60**	**135**	P	**Pn**	**17 17 23.3**	**-1.5**
IDI				*e*S	**Sn**	**17 16 51.6**	**+0.1**	comp=E,3.2nm,0.4s								**LIT**	**Litokhoron**	**6.74**	**325**	*e*P	**Pn**	**17 17 27.2**	**+0.5**
IDI	**Anoyia**	**2.23**	**287**	*e*P	**Pn**	**17 16 26.5**	**+1.7**	CSS				S	**Sn**	**17 17 53.9**	**-1.1**	**LIT**	**Litokhoron**	**6.74**	**325**	*e*P	**Pn**	**17 17 27.2**	**+0.5**
IDI				*e*S	**Sn**	**17 16 51.6**	**+0.1**	**CSS**	**Prodhromos**	**4.81**	**85**	*e*PN	**Pn**	**17 16 59.9**	**-0.3**	**MMAI**	**Mount Meron Ar**	**6.78**	**102**	Pn	**Pn**	**17 17 26.6**	**-0.7**
SIVA	**Sivas**	**2.24**	**280**	*e*P	**Pn**	**17 16 26.7**	**+1.8**	**CSS**	**Prodhromos**	**4.81**	**85**	*e*Pn	**Pn**	**17 16 59.9**	**-0.3**	comp=E,6.0nm,0.3s,baz=295,slow=10.0,SNR=31							
SIVA				*e*S	**Sn**	**17 16 52.2**	**+0.6**	**CSS**	**Prodhromos**	**4.81**	**85**	P	**Pn**	**17 17 00.2**	**0.0**	MMAI				Sn	**Sn**	**17 18 40.2**	**-3.4**
SIVA	**Sivas**	**2.24**	**280**	*e*P	**Pn**	**17 16 26.7**	**+1.8**	comp=E,3.2nm,0.4s								comp=E,9.3nm,0.3s,baz=288,slow=22,SNR=7.0							
SIVA				*e*S	**Sn**	**17 16 52.2**	**+0.6**	CSS				S	**Sn**	**17 17 53.9**	**-1.1**	**ZAF**		**6.87**	**140**	P	Pn	17 17 26.7	-1.8
AKAS	**Kas**	**2.33**	**47**	*i* P	**Pn**	**17 16 27.6**	**+1.3**	**ERMK**	**Ermenek**	**4.83**	**64**	*i* P	**Pn**	**17 17 02.3**	**+1.6**	baz=140							
AKAS				*i* S	**Sn**	**17 16 52.0**	**-1.9**	ERMK				*i* S	**Sn**	**17 17 56.2**	**+0.4**	**ZAF**		**6.87**	**140**	P	Pn	17 17 26.7	-1.8
AKAS	**Kas**	**2.33**	**47**	*i* P	**Pn**	**17 16 27.6**	**+1.3**	**ERMK**	**Ermenek**	**4.83**	**64**	*i* P	**Pn**	**17 17 02.3**	**+1.6**	**ZNM**		**6.97**	**138**	P	Pn	17 17 28.3	-1.7
AKAS				*i* S	**Sn**	**17 16 52.0**	**-1.9**	ERMK				*i* S	**Sn**	**17 17 56.2**	**+0.4**	baz=137							
DALY	**Dalyan (Mu˘la**	**2.35**	**23**	*e*PN	**Pn**	**17 16 26.7**	**+0.3**	**ALT**	**Altintas**	**4.86**	**25**	*e*PN	**Pn**	**17 17 01.8**	**+0.8**	**ZNM**		**6.97**	**138**	P	Pn	17 17 28.3	-1.7
DALY				*e*SN	**Sn**	**17 16 54.8**	**+0.6**	**ALT**	**Altintas**	**4.86**	**25**	*e*Pn	**Pn**	**17 17 01.8**	**+0.8**	**HWQ**	**Hawqa**	**6.99**	**91**	*e*P	**Pn**	**17 17 30.2**	**-0.1**
DALY	**Dalyan (Mu˘la**	**2.35**	**23**	*e*Pn	**Pn**	**17 16 26.7**	**+0.3**	**BOLV**	**Bolvadin**	**4.91**	**33**	*i* P	Pn	17 17 07.3	+5.6	**HWQ**	**Hawqa**	**6.99**	**91**	*e*P	**Pn**	**17 17 30.2**	**-0.1**
DALY				*e*Sn	**Sn**	**17 16 54.8**	**+0.6**	BOLV				*i* S	**Sn**	**17 18 02.0**	**+4.4**	**RCY**	**Rachaya**	**7.01**	**97**	*e*P	**Pn**	**17 17 29.4**	**-1.3**
FETY	**Fethiye**	**2.35**	**33**	*e*PN	**Pn**	**17 16 26.6**	**+0.2**	**VLX**	**Vlachokerasia**	**4.95**	**305**	*e*P	**Pn**	**17 17 02.7**	**+0.4**	**BRTR**	**Keskin Array B**	**7.04**	**42**	Pn	**Pn**	**17 17 31.4**	**+0.4**
FETY	**Fethiye**	**2.35**	**33**	*e*Pn	**Pn**	**17 16 26.7**	**+0.2**	VLX				*e*S	**Sn**	**17 17 55.8**	**-2.8**	comp=E,0.3nm,0.3s,baz=216,slow=14,SNR=7.6							
TURN	**Turunc**	**2.38**	**22**	*i* P	**Pn**	**17 16 26.1**	**-0.7**	**VLX**	**Vlachokerasia**	**4.95**	**305**	*e*P	**Pn**	**17 17 02.7**	**+0.4**	BRTR				Sn	**Sn**	**17 18 47.9**	**-2.2**
TURN	**Turunc**	**2.38**	**22**	*i* P	**Pn**	**17 16 26.1**	**-0.7**	VLX				*e*S	**Sn**	**17 17 55.8**	**-2.8**	comp=E,1.4nm,0.3s,baz=220,slow=26,SNR=14							
BODT	**Bodrum**	**2.40**	**356**	*e*PN	**Pn**	**17 16 27.0**	**-0.1**	**LTK**	**Loutraki**	**4.96**	**314**	*e*P	**Pn**	**17 17 03.3**	**+1.0**	**YAYL**	**Yayladag**	**7.17**	**77**	*i* P	**Pn**	**17 17 33.0**	**+0.3**
BODT	**Bodrum**	**2.40**	**356**	*e*Pn	**Pn**	**17 16 27.0**	**-0.1**	**LTK**	**Loutraki**	**4.96**	**314**	*e*Pn	**Pn**	**17 17 03.3**	**+1.0**	**YAYL**	**Yayladag**	**7.17**	**77**	*i* P	**Pn**	**17 17 33.0**	**+0.3**
YER	**Yerkesik**	**2.55**	**14**	*e*PN	**Pn**	**17 16 29.5**	**+0.3**	**BALB**	**Balikesir**	**4.98**	**3**	*e*PN	**Pn**	**17 17 02.9**	**+0.4**	**EDRB**	**Edirne**	**7.20**	**355**	*e*PN	**Pn**	**17 17 34.4**	**+1.4**
YER	**Yerkesik**	**2.55**	**14**	*e*Pn	**Pn**	**17 16 29.5**	**+0.3**	**BALB**	**Balikesir**	**4.98**	**3**	*e*Pn	**Pn**	**17 17 02.9**	**+0.4**	**EDRB**	**Edirne**	**7.20**	**355**	*e*Pn	**Pn**	**17 17 34.4**	**+1.4**
MLSB	**Milas**	**2.64**	**5**	*e*PN	**Pn**	**17 16 30.7**	**+0.3**	**DURS**	**Dursunbey**	**4.99**	**9**	*i* P	Pn	17 17 00.9	-1.9	**HNKL**	**Nakhl**	**7.24**	**129**	P	Pn	17 17 31.9	-1.7
MLSB	**Milas**	**2.64**	**5**	*e*Pn	**Pn**	**17 16 30.7**	**+0.3**	**DURS**	**Dursunbey**	**4.99**	**9**	*i* P	Pn	17 17 00.9	-1.9	baz=128							
VAM	**Vamos**	**2.81**	**286**	*e*P	**Pn**	**17 16 34.5**	**+1.8**	**LFK**	**Lefkose**	**4.99**	**81**	*e*PN	**Pn**	**17 17 03.8**	**+1.0**	HNKL				AMP		17 19 00.0	
VAM				*e*S	**Sn**	**17 17 06.4**	**+0.8**	**LFK**	**Lefkose**	**4.99**	**81**	*e*Pn	**Pn**	**17 17 03.8**	**+1.0**	comp=N,70µm,0.5s,logA/T=5.2,baz=128							
VAM	**Vamos**	**2.81**	**286**	*e*P	**Pn**	**17 16 34.5**	**+1.8**	**TVSB**	**Tavsanli**	**5.03**	**18**	*e*PN	**Pn**	**17 17 04.1**	**+0.8**	**HNKL**	**Nakhl**	**7.24**	**129**	P	Pn	17 17 31.9	-1.7
VAM				*e*S	**Sn**	**17 17 06.4**	**+0.8**	**TVSB**	**Tavsanli**	**5.03**	**18**	*e*Pn	**Pn**	**17 17 04.1**	**+0.8**	**HFRF**	**Wahat Farafira**	**7.52**	**174**	P	**Pn**	**17 17 36.7**	**-0.8**
GVD	**Gavdhos**	**2.81**	**275**	*e*P	**Pn**	**17 16 34.3**	**+1.5**	**BALY**	**Balya**	**5.07**	**1**	*i* P	**Pn**	**17 17 04.5**	**+0.7**	baz=176							
GVD	**Gavdhos**	**2.81**	**275**	*e*Pn	**Pn**	**17 16 34.3**	**+1.5**	BALY				*i* S	Sn	17 17 57.0	-4.5	**HFRF**	**Wahat Farafira**	**7.52**	**174**	P	**Pn**	**17 17 36.7**	**-0.8**
ELL	**Elmali**	**2.86**	**43**	*e*PN	**Pn**	**17 16 34.5**	**+0.9**	**BALY**	**Balya**	**5.07**	**1**	*i* P	**Pn**	**17 17 04.5**	**+0.7**	**FNA**	**Florina**	**7.80**	**323**	*e*P	**Pn**	**17 17 42.2**	**+0.9**
ELL	**Elmali**	**2.86**	**43**	*e*Pn	**Pn**	**17 16 34.5**	**+0.9**	**KONT**	**Konya--Tatoy**	**5.11**	**49**	*e*PN	**Pn**	**17 17 06.6**	**+2.2**	**FNA**	**Florina**	**7.80**	**323**	*e*Pn	**Pn**	**17 17 42.2**	**+0.9**
APE	**Apeiranthos**	**2.88**	**327**	*e*PN	**Pn**	**17 16 33.9**	**0.0**	**KONT**	**Konya--Tatoy**	**5.11**	**49**	*e*Pn	**Pn**	**17 17 06.6**	**+2.2**	**GRB**	**Gharib**	**7.81**	**143**	P	Pn	17 17 39.0	-2.5
APE	**Apeiranthos**	**2.88**	**327**	P	Sn	17 17 03.4	-4.2	**ITM**	**Ithomi**	**5.17**	**301**	*e*P	**Pn**	**17 17 05.6**	**+0.4**	baz=143							
APE				S	Sb	17 17 23.7	+8.3	ITM				*e*S	**Sn**	**17 18 00.8**	**-3.1**	**GRB**	**Gharib**	**7.81**	**143**	P	Pn	17 17 38.9	-2.5
APE	**Apeiranthos**	**2.88**	**327**	*e*P	**Pn**	**17 16 34.0**	**+0.2**	**ITM**	**Ithomi**	**5.17**	**301**	*e*P	**Pn**	**17 17 05.6**	**+0.4**	**AYKD**	**Aykdinkavak**	**8.02**	**67**	*i* P	**Pn**	**17 17 43.2**	**-1.2**
APE				*e*S	**Sn**	**17 17 06.3**	**-1.3**	ITM				*e*S	**Sn**	**17 18 00.8**	**-3.1**	**EIL**	**Elat**	**8.04**	**126**	Pn	**Pn**	**17 17 44.0**	**-0.6**
APE	**Apeiranthos**	**2.88**	**327**	*e*P	**Pn**	**17 16 34.0**	**+0.2**	**LADK**	**Ladik-KONYA**	**5.28**	**47**	*e*PN	**Pn**	**17 17 07.8**	**+1.0**	comp=N,3.1nm,0.3s,baz=329,slow=8.2,SNR=34							
APE				S	Sb	17 17 23.7	+8.3	**LADK**	**Ladik-KONYA**	**5.28**	**47**	*e*Pn	**Pn**	**17 17 07.8**	**+1.0**	EIL				Sn	Sn	17 19 06.7	-7.9
GLHS	**Glhisar (BURDU**	**2.97**	**33**	*e*PN	**Pn**	**17 16 35.5**	**+0.4**	**GUR**	**Goura**	**5.29**	**310**	P	**Pn**	**17 17 06.9**	**-0.1**	comp=N,11nm,0.3s,baz=126,slow=18,SNR=9.5							
GLHS	**Glhisar (BURDU**	**2.97**	**33**	*e*Pn	**Pn**	**17 16 35.5**	**+0.4**	**GUR**	**Goura**	**5.29**	**310**	*e*P	**Pn**	**17 17 07.3**	**+0.3**	**KUZU**	**Kuzuini**	**8.07**	**72**	*i* P	**Pn**	**17 17 44.7**	**-0.3**
AYDN	**Tasoluk**	**3.01**	**6**	*i* P	**Pn**	**17 16 36.6**	**+1.1**	GUR				*e*S	Sn	17 18 03.2	-3.8	**KUZU**	**Kuzuini**	**8.07**	**72**	*i* P	**Pn**	**17 17 44.7**	**-0.3**
KARN	**Karanos**	**3.03**	**285**	*e*P	**Pn**	**17 16 37.6**	**+1.8**	**GUR**	**Goura**	**5.29**	**310**	P	**Pn**	**17 17 06.9**	**-0.1**	**HBST**	**Basata**	**8.20**	**129**	P	**Pn**	**17 17 45.5**	**-1.3**
KARN				*e*S	**Sn**	**17 17 11.0**	**-0.1**	GUR				*e*S	Sn	17 18 03.2	-3.8	baz=129							
KARN	**Karanos**	**3.03**	**285**	*e*P	**Pn**	**17 16 37.6**	**+1.8**	**KDHN**	**Kadinhani**	**5.35**	**43**	*i* P	**Pn**	**17 17 09.7**	**+1.9**	**HBST**	**Basata**	**8.20**	**129**	P	**Pn**	**17 17 45.5**	**-1.3**
KARN				*e*S	**Sn**	**17 17 11.0**	**-0.1**	KDHN				*i* S	**Sn**	**17 18 06.5**	**-2.0**	**ASF**	**Jabal al Asfar**	**8.24**	**105**	Pn	**Pn**	**17 17 46.7**	**-0.8**
GCAM	**G?zelcaml?**	**3.04**	**356**	*i* P	**Pn**	**17 16 37.5**	**+1.6**	**KDHN**	**Kadinhani**	**5.35**	**43**	*i* P	**Pn**	**17 17 09.7**	**+1.9**	comp=N,1.0nm,0.3s,baz=172,slow=7.1,SNR=5.5							
GCAM	**G?zelcaml?**	**3.04**	**356**	*i* P	**Pn**	**17 16 37.5**	**+1.6**	KDHN				*i* S	**Sn**	**17 18 06.5**	**-2.0**	ASF				Sn	Sn	17 19 15.6	-4.0
GOLH	**Golhisar**	**3.07**	**32**	*i* P	**Pn**	**17 16 39.0**	**+2.6**	**GONE**	**Gonen-Balikesi**	**5.38**	**2**	*e*PN	**Pn**	**17 17 08.8**	**+0.8**	comp=N,1nm,0.3s,baz=248,slow=19,SNR=3.3							
GOLH				*i* S	**Sn**	**17 17 13.0**	**+0.9**	**GONE**	**Gonen-Balikesi**	**5.38**	**2**	*e*Pn	**Pn**	**17 17 08.8**	**+0.8**	ASF				LR	LR	17 22 44.5	
GOLH	**Golhisar**	**3.07**	**32**	*i* P	**Pn**	**17 16 39.0**	**+2.6**	**LKR**	**Lokris**	**5.38**	**319**	*e*P	**Pn**	**17 17 09.2**	**+1.2**	comp=N,46nm,19.2s,baz=312,slow=50							
GOLH				*i* S	**Sn**	**17 17 13.0**	**+0.9**	**LKR**	**Lokris**	**5.38**	**319**	*e*P	**Pn**	**17 17 09.2**	**+1.2**	**HKAT**	**Jabal Katrina**	**8.25**	**136**	P	Pn	17 17 45.6	-2.1
DNZL	**Cakiroluk**	**3.27**	**22**	*i* P	**Pn**	**17 16 40.3**	**+1.0**	**PHNC**	**Paralimni**	**5.38**	**85**	P	**Pn**	**17 17 09.9**	**+1.8**	baz=136							
DNZL	**Cakiroluk**	**3.27**	**22**	*i* P	**Pn**	**17 16 40.3**	**+1.0**	comp=E,2.0nm,0.4s								**HKAT**	**Jabal Katrina**	**8.25**	**136**	P	Pn	17 17 45.6	-2.1
KORT	**Korkueli**	**3.29**	**44**	*i* P	**Pn**	**17 16 42.0**	**+2.6**	**PHNC**	**Paralimni**	**5.38**	**85**	P	**Pn**	**17 17 09.9**	**+1.8**	**HDHB**	**Dhahab**	**8.47**	**132**	P	**Pn**	**17 17 49.5**	**-1.1**
KORT				*i* S	**Sn**	**17 17 18.0**	**+0.3**	comp=E,2.0nm,0.4s								baz=132							
KORT	**Korkueli**	**3.29**	**44**	*i* P	**Pn**	**17 16 42.0**	**+2.6**	**KIZT**	**Kizilcal**	**5.49**	**39**	*e*PN	**Pn**	**17 17 11.4**	**+1.8**	**HDHB**	**Dhahab**	**8.47**	**132**	P	**Pn**	**17 17 49.5**	**-1.1**
KORT				*i* S	**Sn**	**17 17 18.0**	**+0.3**	**AMT**	**Artemida-Makis**	**5.49**	**303**	P	**Pn**	**17 17 08.4**	**-1.2**	**VTS**	**Vitosha**	**8.60**	**338**	*e*Pn	**Pn**	**17 17 54.1**	**+1.7**
DENT	**Denizli**	**3.33**	**21**	*e*PN	**Pn**	**17 16 40.7**	**+0.8**	AMT				S	Pb	17 17 31.3	+6.4	**HHRG**	**Al Ghardaqah**	**9.06**	**143**	P	**Pn**	**17 17 58.4**	**-0.3**
DENT	**Denizli**	**3.33**	**21**	*e*Pn	**Pn**	**17 16 40.7**	**+0.8**	**AMT**	**Artemida-Makis**	**5.49**	**303**	*e*P	**Pn**	**17 17 10.1**	**+0.5**	baz=143							
ANTB	**Antalya**	**3.40**	**48**	*e*PN	**Pn**	**17 16 41.1**	**+0.3**	**AMT**	**Artemida-Makis**	**5.49**	**303**	*e*Pn	**Pn**	**17 17 10.1**	**+0.5**	**HHRG**	**Al Ghardaqah**	**9.06**	**143**	P	**Pn**	**17 17 58.4**	**-0.3**
ANTB	**Antalya**	**3.40**	**48**	*e*Pn	**Pn**	**17 16 41.1**	**+0.3**	AMT				S	Pb	17 17 31.3	+6.4	**HDK1**	**Dakhla**	**9.24**	**169**	P	**Pn**	**17 18 00.2**	**-0.9**
HMAT	**Matruh**	**3.57**	**186**	P	**Pn**	**17 16 43.0**	**-0.3**	**LIA**	**Limnos Island**	**5.54**	**341**	*e*P	**Pn**	**17 17 10.7**	**+0.4**	baz=170							
	baz=191							**LIA**	**Limnos Island**	**5.54**	**341**	*e*Pn	**Pn**	**17 17 10.7**	**+0.4**	**HDK1**	**Dakhla**	**9.24**	**169**	P	**Pn**	**17 18 00.2**	**-0.9**
HMAT				AMP		17 17 00.0		**HMYD**	**Mayadein**	**5.60**	**149**	P	Pn	17 17 09.1	-2.0	**BARS**	**Barje**	**9.27**	**333**	*e*Pn	**Pn**	**17 18 03.3**	**+1.9**
comp=E,340µm,0.4s,logA/T=5.9,baz=191								baz=149								**AKRG**	**Al Kharijah**	**9.49**	**163**	P	**Pn**	**17 18 03.0**	**-1.5**
HMAT	**Matruh**	**3.57**	**186**	P	**Pn**	**17 16 43.0**	**-0.3**	**HMYD**	**Mayadein**	**5.60**	**149**	P	Pn	17 17 09.1	-2.0	baz=164							
ANKY	**Antikythira Is**	**3.64**	**290**	*e*P	**Pn**	**17 16 44.8**	**+0.7**	**KCTX**	**Karacabey (Bur**	**5.63**	**7**	*e*PN	**Pn**	**17 17 13.2**	**+1.6**	**IVAS**	**Ivanjica**	**10.57**	**330**	*e*Pn	**Pn**	**17 18 19.9**	**+0.6**
ANKY				*e*S	**Sn**	**17 17 25.0**	**-1.1**	**KCTX**	**Karacabey (Bur**	**5.63**	**7**	*e*Pn	**Pn**	**17 17 13.2**	**+1.6**	**DIVS**	**Divibare**	**11.06**	**331**	*e*Pn	**Pn**	**18 17 27.4**	**+1.3**
ANKY	**Antikythira Is**	**3.64**	**290**	*e*P	**Pn**	**17 16 44.8**	**+0.7**	**AXAR**	**Agios Charalam**	**5.65**	**318**	P	**Pn**	**17 17 13.8**	**+2.1**	**BBLS**	**Lazići**	**11.12**	**328**	*e*Pn	**Pn**	**18 17 25.4**	**-1.4**
ANKY				*e*S	**Sn**	**17 17 25.0**	**-1.1**	**AXAR**	**Agios Charalam**	**5.65**	**318**	*e*P	**Pn**	**17 17 13.8**	**+2.1**	**BOJS**	**Bojanci**	**14.30**	**323**	*i* Pn	**Pn**	**19 17 10.2**	**0.0**
BLCB	**Balcova**	**3.73**	**354**	*e*PN	**Pn**	**17 16 45.9**	**+0.5**	**HNAT**	**Natroun**	**5.67**	**151**	P	Pn	17 17 10.3	-1.8	BOJS				*i* Sn	Sn	17 21 39.2	-8.6
BLCB	**Balcova**	**3.73**	**354**	*e*Pn	**Pn**	**17 16 45.9**	**+0.5**	baz=152								**BOJS**	**Bojanci**	**14.30**	**323**	Pn	**Pn**	**19 17 10.2**	**0.0**
BCK	**Bucak**	**3.75**	**41**	*e*PN	**Pn**	**17 16 47.1**	**+1.3**	**HNAT**	**Natroun**	**5.67**	**151**	P	Pn	**17 17 12.0**	**-0.1**	**KEST**	**Kesra**	**14.88**	**279**	Pn	Pn	17 19 15.2	-3.1
BCK	**Bucak**	**3.75**	**41**	*e*Pn	**Pn**	**17 16 47.1**	**+1.3**	baz=202								comp=N,0.1nm,0.3s,baz=17,slow=20,SNR=1.8							
URLA	**Izmir**	**3.76**	**349**	*i* P	**Pn**	**17 16 46.3**	**+0.4**	SWA2				AMP		17 18 00.0		**KBZ**	**Khabaz**	**14.96**	**48**	Pn	**P**	**19 17 27.3**	**+2.9**
URLA	**Izmir**	**3.76**	**349**	*i* P	**Pn**	**17 16 46.3**	**+0.4**	comp=N,360µm,0.3s,logA/T=6.1,baz=202								comp=N,0.3nm,0.3s,baz=227,slow=7.5,SNR=26							
CHOS	**Chios island**	**3.90**	**343**	*e*P	**Pn**	**17 16 48.0**	**+0.3**	**SWA2**		**5.67**	**198**	P	**Pn**	**17 17 12.0**	**-0.1**	**PERS**	**Pernice**	**15.19**	**326**	*i* Pn	**Pn**	**19 19.7**	**-2.5**
CHOS	**Chios island**	**3.90**	**343**	*e*Pn	**Pn**	**17 16 48.0**	**+0.3**	**EDC**	**Edincik**	**5.68**	**3**	*e*PN	**Pn**	**17 17 14.1**	**+1.9**	PERS				*i* Sn	Sn	17 22 04.6	-4.9
KULA	**Kula-Manisa**	**3.96**	**13**	*e*PN	**Pn**	**17 16 49.4**	**+0.8**	**EDC**	**Edincik**	**5.68**	**3**	*e*Pn	**Pn**	**17 17 14.1**	**+1.9**	**PERS**	**Pernice**	**15.19**	**326**	*i* Pn	**Pn**	**19 19.7**	**-2.5**
KULA	**Kula-Manisa**	**3.96**	**13**	*e*Pn	**Pn**	**17 16 49.4**	**+0.8**	**KALE**	**Kalithea**	**5.70**	**312**	*e*P	**Pn**	**17 17 12.5**	**0.0**	**AKASG**	**Malin Array Be**	**16.08**	**4**	Pn	**Pn**	**19 17 33.6**	**0.0**
LTBQ	**Tobruq**	**3.96**	**230**	*i* P	**Pn**	**17 16 49.1**	**+0.5**	**KALE**	**Kalithea**	**5.70**	**312**	*e*Pn	**Pn**	**17 17 12.5**	**0.0**	comp=N,2.7nm,0.3s,baz=195,slow=12,SNR=12							
	SNR=140							**SQR**		**5.70**	**146**	P	**Pn**	**17 17 10.9**	**-1.6**	**VRAC**	**Vranov**	**16.70**	**334**	LR	LR	17 26 39.4	
LTBQ				*e*S	Sn	17 17 28.7	-5.5	baz=146								comp=N,51nm,18.3s,baz=319,slow=40							
comp=E,108nm,0.3s,SNR=140								**SQR**		**5.70**	**146**	P	**Pn**	**17 17 10.9**	**-1.6**	**GERES**	**GERESS Array B**	**17.47**	**328**	P	**Pn**	**17 19 50.1**	**-1.2**
KYTH	**Kithira**	**3.98**	**295**	*e*P	**Pn**	**17 16 49.2**	**+0.3**	**LAKA**	**Lakka**	**5.70**	**310**	*e*P	**Pn**	**17 17 12.6**	**+0.1**	comp=N,0.4nm,0.3s,baz=149,slow=12,SNR=13							
KYTH	**Kithira**	**3.98**	**295**	*e*Pn	**Pn**	**17 16 49.2**	**+0.3**	LAKA				*e*S	Sn	17 18 13.2	-3.9	**NAY**	**Al-Naaiem**	**17.59**	**102**	*e*P	**P**	**19 17 53.8**	**+0.2**
AKMC	**Akamas**	**3.99**	**83**	P	**Pn**	**17 16 48.8**	**-0.2**	**LAKA**	**Lakka**	**5.70**	**310**	*e*Pn	**Pn**	**17 17 12.6**	**+0.1**	NAY				AMb	AMB	17 19 55.5	
AKMC	**Akamas**	**3.99**	**83**	Pn	**Pn**	**17 16 48.8**	**-0.2**	LAKA				*e*S	Sn	17 18 13.2	-3.9	comp=Z,25nm,0.9s							
ISP	**Isparta**	**3.99**	**37**	*e*PN	**Pn**	**17 16 50.2**	**+1.1**	**BORA**	**Eskisehir**	**5.72**	**23**	*i* P	**Pn**	**17 17 13.1**	**+0.4**	**NAY**	**Al-Naaiem**	**17.59**	**102**	*e*P	**P**	**19 17 53.8**	**+0.2**
ISP	**Isparta**	**3.99**	**37**	*e*Pn	**Pn**	**17 16 50.2**	**+1.1**	**BORA**	**Eskisehir**	**5.72**	**23**	*i* P	**Pn**	**17 17 13.1**	**+0.4**	comp=Z,25nm,0.9s							
PPCY	**Paphos**	**4.00**	**85**	P	**Pn**	**17 16 48.9**	**-0.1**	**TRIZ**	**Trizonia**	**5.72**	**312**	*e*P	**Pn**	**17 17 13.6**	**+0.9**	**KHC**	**Kasperske Hory**	**17.74**	**329**	*e*P	**Pn**	**19 17 53.0**	**-1.6**
PPCY	**Paphos**	**4.00**	**85**	P	**Pn**	**17 16 48.9**	**-0.1**	**TRIZ**	**Trizonia**	**5.72**	**312**	*e*P	**Pn**	**17 17 13.6**	**+0.9**	KHC				*e*pP	**pP**	**17 20 01.5**	**-1.4**
KHL	**Karahalli**	**4.00**	**23**	*e*PN	**Pn**	**17 16 49.7**	**+0.5**	**KRBG**	**Karabiga-Canak**	**5.72**	**358**	*e*PN	**Pn**	**17 17 13.7**	**+1.0**	KHC				*e*sP	sP	17 20 16.0	+9.4
KHAL	**Karahalli**	**4.03**	**23**	*i* P	**Pn**	**17 16 49.7**	**+0.1**	**KRBG**	**Karabiga-Canak**	**5.72**	**358**	*e*Pn	**Pn**	**17 17 13.7**	**+1.0**	**UMR**	**Umm Al-Rimmam**	**17.86**	**101**	*e*P	**P**	**19 17 56.5**	**-0.1**
KHAL				*i* S	**Sn**	**17 17 34.0**	**-2.0**	**LPK**	**Lapseki**	**5.73**	**354**	*e*PN	**Pn**	**17 17 14.8**	**+1.9**	UMR				AMb	AMB	17 19 57.3	
KHAL	**Karahalli**	**4.03**	**23**	*i* S	**Sn**	**17 17 34.0**	**-2.0**	**LPK**	**Lapseki**	**5.73**	**354**	*e*Pn	**Pn**	**17 17 14.8**	**+1.9**	comp=Z,36nm,1.0s							
AKHS	**Akhisar**	**4.22**	**3**	*i* P	**Pn**	**17 16 52.3**	**+0.2**	**SVRH**	**Sivrihisar-ESK**	**5.76**	**33**	*e*PN	**Pn**	**17 17 15.4**	**+2.0**	**UMR**	**Umm Al-Rimmam**	**17.86**	**101**	*e*P	**P**	**19 17 56.5**	**-0.1**
AKHS				*i* S	**Sn**	**17 17 39.3**	**-1.0**	**SVRH**	**Sivrihisar-ESK**	**5.76**	**33**	*e*Pn	**Pn**	**17 17 15.4**	**+2.0**	comp=Z,36nm,1.0s							
AKHS	**Akhisar**	**4.22**	**3**	*i* P	**Pn**	**17 16 52.3**	**+0.2**	**NEO**	**Neokhori**	**5.76**	**325**	*e*P	**Pn**	**17 17 14.2**	**+0.9**	**RDF**	**Al-Radifah**	**17.97**	**103**	*e*P	**P**	**19 17 58.1**	**+0.4**
AKHS				*i* S	**Sn**	**17 17 39.3**	**-1.0**	**NEO**	**Neokhori**	**5.76**	**325**	*e*Pn	**Pn**	**17 17 14.2**	**+0.9**	**RDF**	**Al-Radifah**	**17.97**	**103**	*e*P	**P**	**19 17 58.2**	**+0.4**
AKS	**Akhisar**	**4.22**	**3**	*e*PN	**Pn**	**17 16 52.7**	**+0.6**	**NEO**	**Neokhori**	**5.76**	**325**	*e*P	**Pn**	**17 17 14.2**	**+0.9**	**DAVOX**	**Davos/Dischmat**	**17.98**	**318**	P	Pn	**19 17 56.9**	**-0.7**
AKS	**Akhisar**	**4.22**	**3**	*e*Pn	**Pn**	**17 16 52.7**	**+0.6**	**NEO**	**Neokhori**	**5.76**	**325**	*e*Pn	**Pn**	**17 17 14.2**	**+0.9**	comp=Z,0.4nm,0.3s,baz=184,slow=18,SNR=5.6							
ALFC	**Alevga**	**4.22**	**82**	P	**Pn**	**17 16 52.1**	**-0.1**	**GELI**	**Tayfur-Gelibol**	**5.78**	**352**	*e*PN	**Pn**	**17 17 15.1**	**+1.5**	**SBF**	**Sospel**	**18.01**	**307**	*e*P	**Pn**	**19 17 55.5**	**-2.5**
	comp=E,9.9nm,0.2s							**GELI**	**Tayfur-Gelibol**	**5.78**	**352**	*e*Pn	**Pn**	**17 17 15.1**	**+1.5**	comp=Z,18nm,0.6s							
ALFC				S	**Sn**	**17 17 38.0**	**-2.5**	**AYT**	**Al 'Ayyat**	**5.83**	**147**	P	Pn	17 17 12.5	-1.8	**SBF**	**Sospel**	**18.01**	**307**	*e*P	**Pn**	**19 17 55.5**	**-2.5**
ALFC	**Alevga**	**4.22**	**82**	P	**Pn**	**17 16 52.1**	**-0.1**	baz=147								comp=Z,8.9nm,0.6s							
	comp=E,9.9nm,0.2s							**AYT**	**Al 'Ayyat**	**5.83**	**147**	P	Pn	17 17 12.5	-1.8	**FRF**	**La Foret Royal**	**18.42**	**305**	*e*P	**P**	**17 20 00.1**	**-2.6**
ALFC				S	**Sn**	**17 17 38.0**	**-2.5**	**EFP**	**Efpalio**	**5.86**	**311**	*e*P	**Pn**	**17 17 14.8**	**+0.1**	**FRF**	**La Foret Royal**	**18.42**	**305**	*e*P	**P**	**17 20 00.1**	**-2.6**
GAZI	**Gazipasa**	**4.23**	**67**	*i* P	**Pn**	**17 16 52.2**	**-0.2**	**EFP**	**Efpalio**	**5.86**	**311**	*e*P	**Pn**	**17 17 14.8**	**+0.1**	**MBDF**	**Montbardon**	**18.80**	**308**	*e*P	**P**	**17 20 04.6**	**-2.5**
GAZI				*i* S	S

LOR				*e*R					
	comp=Z,43nm,18.2s								
LOR	**Lormes**	**21.75**	**313**	*e*P		**P**	**17 20 36.4**	**-2.4**	
	comp=Z,2.9nm,0.6s								
AVF	**Avril sur Loir**	**21.85**	**311**	*e*P		**P**	**17 20 38.0**	**-1.9**	
AVF	**Avril sur Loir**	**21.85**	**311**	*e*P		**P**	**17 20 38.0**	**-1.9**	
SSF	**Saint Saulge**	**21.87**	**312**	*e*P		**P**	**17 20 37.6**	**-2.5**	
SSF	**Saint Saulge**	**21.87**	**312**	*e*P		**P**	**17 20 37.6**	**-2.5**	
CAF	**Calviac**	**21.98**	**305**	*e*P		**P**	**17 20 39.5**	**-1.9**	
CAF	**Calviac**	**21.98**	**305**	*e*P		**P**	**17 20 39.5**	**-1.9**	
BGF	**Bois d'Agland**	**22.07**	**310**	*e*P		**P**	**17 20 40.5**	**-1.8**	
	comp=Z,8.2nm,0.5s								
BGF	**Bois d'Agland**	**22.07**	**310**	*e*P		**P**	**17 20 40.5**	**-1.8**	
	comp=Z,4.1nm,0.5s								
TCF	**Toulx Ste Croi**	**22.37**	**309**	*e*P		**P**	**17 20 43.0**	**-2.5**	
TCF	**Toulx Ste Croi**	**22.37**	**309**	*e*P		**P**	**17 20 43.0**	**-2.5**	
RJF	**Les Rejaudoux**	**22.48**	**306**	*e*P		**P**	**17 20 44.7**	**-1.9**	
	comp=Z,9.9nm,0.8s								
RJF				*e*R					
	comp=Z,62nm,19.8s								
RJF	**Les Rejaudoux**	**22.48**	**306**	*e*P		**P**	**17 20 44.7**	**-1.9**	
	comp=Z,4.9nm,0.8s								
BAIF	**Baives**	**22.95**	**319**	*e*P		P	17 20 48.5	-3.0	
	comp=Z,17nm,0.7s								
BAIF	**Baives**	**22.95**	**319**	*e*P		P	17 20 48.5	-3.0	
	comp=Z,8.4nm,0.7s								
SJPF	**Ste Jean**	**23.81**	**299**	*e*P		P	17 20 57.0	-3.1	
	comp=Z,15nm,0.8s								
SJPF	**Ste Jean**	**23.81**	**299**	*e*P		P	17 20 57.0	-3.1	
	comp=Z,7.6nm,0.8s								
MFF	**Saint Martin d**	**24.00**	**308**	*e*P		**P**	**17 20 59.9**	**-2.0**	
MFF	**Saint Martin d**	**24.00**	**308**	*e*P		**P**	**17 20 59.9**	**-2.0**	
LDF	**La Druitiere**	**24.73**	**313**	*e*P		**P**	**17 21 06.9**	**-1.6**	
	comp=Z,13nm,0.6s								
LDF	**La Druitiere**	**24.73**	**313**	*e*P		**P**	**17 21 06.9**	**-1.6**	
	comp=Z,6.4nm,0.6s								
FLN	**La Foliniere**	**25.02**	**313**	*e*P		**P**	**17 21 09.3**	**-1.8**	
	comp=Z,18nm,0.6s								
FLN				*e*R					
	comp=Z,43nm,22.2s								
FLN	**La Foliniere**	**25.02**	**313**	*e*P		**P**	**17 21 09.3**	**-1.8**	
	comp=Z,8.9nm,0.6s								
GRR	**Gorron**	**25.10**	**312**	*e*P		**P**	**17 21 09.5**	**-2.3**	
	comp=Z,27nm,0.8s								
GRR	**Gorron**	**25.10**	**312**	*e*P		**P**	**17 21 09.5**	**-2.3**	
	comp=Z,14nm,0.8s								
ESDC	**Sonseca Array**	**25.49**	**291**	P		**P**	**17 21 14.3**	**-1.2**	
	comp=Z,1.5nm,0.5s,baz=79,slow=9.8,SNR=12								
SGMF	**Saint Gilles**	**26.11**	**310**	*e*P		**P**	**17 21 19.3**	**-1.7**	
SGMF	**Saint Gilles**	**26.11**	**310**	*e*P		**P**	**17 21 19.3**	**-1.7**	
QUIF	**Quistinic**	**26.38**	**309**	*e*P		**P**	**17 21 21.8**	**-1.6**	
QUIF	**Quistinic**	**26.38**	**309**	*e*P		**P**	**17 21 21.8**	**-1.6**	
ROSF	**Rostrenen**	**26.59**	**310**	*e*P		**P**	**17 21 23.5**	**-1.8**	
	comp=Z,35nm,0.7s								
ROSF	**Rostrenen**	**26.59**	**310**	*e*P		**P**	**17 21 23.5**	**-1.8**	
	comp=Z,18nm,0.7s								
FINES	**FINESS Array B**	**26.82**	**358**	P		**P**	**17 21 25.8**	**-1.4**	
	comp=Z,3.5nm,0.4s,baz=159,slow=11,SNR=54								
HFS	**Hagfors**	**27.03**	**345**	P		**P**	**17 21 26.8**	**-2.3**	
	comp=Z,3.3nm,0.6s,baz=138,slow=9.8,SNR=18								
HFS				LR		LR	17 33 38.3		
	comp=Z,31nm,18.9s,baz=296,slow=40								
AKTO	**Aktyubinsk**	**27.21**	**45**	P		**P**	**17 21 31.6**	**+0.7**	
	comp=Z,1.0nm,0.6s,baz=247,slow=14,SNR=4.5								
KAF	**Kangasniemi**	**27.48**	**359**	*e*p		P	17 21 30.7	-2.5	
	comp=Z,1.9nm,0.5s								
KAF	**Kangasniemi**	**27.48**	**359**	*e*P		P	17 21 30.7	-2.5	
	comp=Z,1.9nm,0.5s								
JOF	**Joensuu**	**28.38**	**4**	*e*p		P	17 21 38.7	-2.5	
	comp=Z,2.4nm,0.5s								
JOF	**Joensuu**	**28.38**	**4**	*e*P		P	17 21 38.7	-2.5	
	comp=Z,2.4nm,0.5s								
NB2	**NORSAR Subarra**	**28.40**	**343**	P		P	17 21 39.1	-2.3	
	comp=Z,1.5nm,0.5s,baz=158,slow=10								
NB2	**NORSAR Subarra**	**28.40**	**343**	P		P	17 21 39.1	-2.3	
	comp=Z,1.5nm,0.5s,SNR=9.4								
NOA	**NORSAR Array B**	**28.40**	**343**	P		P	17 21 39.0	-2.5	
	comp=Z,1.6nm,0.6s,baz=152,slow=8.1,SNR=9.5								
NOA				LR		LR	17 34 26.8		
	comp=Z,23nm,18.5s,baz=165,slow=40								
EKA	**Eskdalemuir Ar**	**29.57**	**324**	P		P	17 21 50.8	-1.0	
	comp=Z,1.6nm,0.4s,baz=131,slow=12,SNR=8.9								
TORD	**Torodi Ar. Bea**	**31.69**	**234**	P		**P**	**17 22 11.4**	**+0.4**	
	comp=Z,1.0nm,0.9s,baz=31,slow=9.5,SNR=7.3								
ARCES	**ARCESS Array B**	**34.94**	**359**	P		P	17 22 37.3	-1.4	
	comp=Z,2.3nm,0.7s,baz=173,slow=8.6,SNR=19								
ARCES				LR		LR	17 37 46.2		
	comp=Z,26nm,20.7s,baz=203,slow=38								
KEV	**Kevo**	**35.15**	**360**	*e*p		P	17 22 39.3	-1.2	
	comp=Z,0.7nm,0.3s								
KEV	**Kevo**	**35.15**	**360**	*e*P		P	17 22 39.3	-1.2	
	comp=Z,0.7nm,0.3s								
MKAR	**Makanchi Array**	**42.45**	**56**	P		**P**	**17 23 43.1**	**+1.1**	
	comp=Z,1.3nm,0.5s,baz=279,slow=7.1,SNR=27								
ZALV	**Zalesovo Beam**	**43.97**	**46**	P		**P**	**17 23 54.5**	**+0.4**	
	comp=Z,1.8nm,0.6s,baz=270,slow=8.8,SNR=12								
PYUN	**Piuthan**	**47.33**	**82**	*e*P		**P**	**17 24 22.0**	**+0.7**	
	comp=Z,24nm,0.7s								
DANN	**Dangsing**	**47.86**	**81**	*e*P		**P**	**17 24 26.9**	**+1.4**	
	comp=Z,47nm,0.8s								
KOLN	**Koldanda**	**47.95**	**82**	*e*P		**P**	**17 24 26.7**	**+0.6**	
DMN	**Daman**	**49.24**	**82**	*e*P		**P**	**17 24 37.1**	**+1.0**	
KKN	**Kakani**	**49.31**	**81**	*e*P		**P**	**17 24 37.2**	**+0.6**	
PKIN	**Phulchoki**	**49.49**	**81**	*e*P		**P**	**17 24 38.3**	**+0.2**	
RAMN	**Ramite**	**50.72**	**82**	*e*P		**P**	**17 24 47.3**	**-0.1**	
	comp=Z,9.6nm,0.9s								
ODAN	**Odare**	**51.40**	**81**	*e*P		**P**	**17 24 51.8**	**-0.7**	
TAPN	**Taplejung**	**51.47**	**81**	*e*P		**P**	**17 24 52.7**	**-0.3**	
SONM	**Songino Array**	**58.31**	**51**	P		**P**	**17 25 43.8**	**+1.7**	
	comp=Z,0.6nm,0.4s,baz=287,slow=7.4,SNR=6.0								
LZH	**Lanzhou**	**60.68**	**65**	*e*P		P	17 26 07.8	+9.1	
LZH				pP		pP	17 26 13.0	+5.5	
LZH				sP		sP	17 26 15.8	+4.9	
LZH				pmax		pmax			
	comp=Z,15nm,1.3s								
BOSA	**Boshof**	**62.97**	**182**	P		**P**	**17 26 14.7**	**+0.9**	
	comp=Z,3.0nm,1.0s,baz=18,slow=6.4,SNR=3.6								
CMAR	**Chiang Mai Arr**	**64.71**	**84**	P		**P**	**17 26 26.0**	**+0.5**	
	comp=Z,1.6nm,0.8s,baz=295,slow=8.3,SNR=17								
SCHQ	**Scheffervill e**	**64.80**	**320**	P		**P**	**17 26 24.9**	**-0.7**	
	comp=Z,3.9nm,0.5s,baz=48,slow=4.6,SNR=16								
YKA	**Yellowknife Ar**	**78.50**	**343**	P		P	17 27 46.9	-0.8	
	comp=Z,0.2nm,0.5s,baz=26,slow=5.5,SNR=5.0								
MJAR	**Matsushiro Arr**	**84.21**	**49**	P		**P**	**17 28 19.3**	**+0.6**	
	comp=Z,1.0nm,0.8s,baz=300,slow=5.8,SNR=3.8								
PDAR	**Pinedale Array**	**93.52**	**330**	LR		LR	18 12 17.6		
	comp=Z,38nm,18.1s,baz=254,slow=36								
ASAR	**Alice Springs**	**116.07**	**102**	PKP		**PKPdf**	**17 34 29.9**	**-0.5**	
	comp=Z,0.2nm,0.5s,baz=322,slow=2.8,SNR=3.2								

*IDC **30** 17:21:48.7±9.3,51.39N×158.76E,h0km,mb3.5/3, mb1 3.8/3,mb1mx3.2/26,mbtmp3.5/3,Error ellipse: s-maj=180.9km s-min=24.9km az=96.0*
*KRSC **30** 17:21:55.3±0.7,51.57N×158.39E,h48km±38km,ML3.9*
ISC 30 17:21:53.3±1.8,51.46N±0.06×158.45E±0.06,h23km±13km, n24,σ0°90/42,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**0.98**	**2**	P	**Pb**	**17 22 11.3**	**-0.2**
RUS				*i* S	**Sb**	**17 22 23.1**	**-0.9**
ASAK	**Asacha**	**0.99**	**340**	P	**Pb**	**17 22 12.1**	**+0.3**
ASAK				*i* S	**Sb**	**17 22 23.9**	**-0.5**
PAU	**Pauzhetka**	**1.02**	**271**	*e*P	**Pb**	**17 22 12.6**	**+0.2**
PAU				*i* S	**Sb**	**17 22 25.3**	**-0.1**
MTVR	**Mutnovka**	**1.04**	**351**	*e*P	**Pb**	**17 22 12.9**	**+0.2**
MTVR				*i* S	**Sb**	**17 22 25.6**	**-0.3**
GRL	**Gorelyy**	**1.12**	**348**	P	**Pb**	**17 22 14.4**	**+0.3**
GRL				*i* S	**Sb**	**17 22 27.9**	**-0.3**
MIPR	**Malaya Ipel'ka**	**1.33**	**309**	P	**Pb**	**17 22 17.1**	**-0.5**
MIPR				*i* S	**Sn**	**17 22 33.3**	**-0.2**
PET	**Petropavlovsk**	**1.57**	**5**	*e*P	**Pn**	**17 22 20.0**	**+0.2**
PET				*i* S	**Sn**	**17 22 38.2**	**-1.2**
SKR	**Severo-Kuril's**	**1.66**	**243**	*e*P	**Pn**	**17 22 21.4**	**+0.4**
SKR				*i* S	**Sn**	**17 22 41.0**	**-0.6**
APC	**Apacha**	**1.67**	**332**	*e*P	**Pn**	**17 22 21.8**	**+0.7**
APC				*i* S	**Sn**	**17 22 40.7**	**-1.1**
PETK	**Petropavlovsk-**	**1.71**	**345**	Pn	**Pn**	**17 22 22.6**	**+0.8**
	3.0nm,0.3s,baz=127,slow=19,SNR=71						
PETK				Sn	**Sb**	**17 22 44.5**	**-0.7**
	7.4nm,0.3s,baz=147,slow=20,SNR=8.2						
UGLR	**Uglovaya**	**1.77**	**7**	P	**Pn**	**17 22 23.4**	**+0.8**
UGLR				*i* S	**Sn**	**17 22 44.1**	**-0.3**
NLC	**Nalytchevo**	**1.80**	**17**	*e*P	**Pn**	**17 22 22.0**	**-0.9**
AVH	**Avacha**	**1.82**	**5**	P	**Pn**	**17 22 24.2**	**+1.0**
AVH				*i* S	**Sn**	**17 22 45.1**	**-0.5**
SMAR	**Somma**	**1.82**	**7**	*e*P	**Pn**	**17 22 24.6**	**+1.2**
SMAR				*i* S	**Sn**	**17 22 45.6**	**-0.2**
KOK	**Koryaka**	**1.84**	**4**	P	**Pn**	**17 22 25.0**	**+1.4**
KOK				*i* S	**Sn**	**17 22 46.4**	**+0.2**
KRER	**Koryakskii**	**1.86**	**6**	P	**Pn**	**17 22 25.0**	**+1.1**
KRER				*i* S	**Sn**	**17 22 46.3**	**-0.4**
SPN	**Mys Shipunski**	**1.91**	**30**	*e*P	**Pn**	**17 22 25.0**	**+0.6**
SPN				*i* S	**Sn**	**17 22 46.5**	**-1.1**
GNL	**Ganaly**	**2.26**	**352**	*e*P	**Pn**	**17 22 30.4**	**+1.0**
KII	**Karymskiy**	**2.65**	**13**	P	**Pn**	**17 22 35.8**	**+1.1**
KII				*i* S	**Sn**	**17 23 05.7**	**-0.5**
MKZ	**Mys Kozlova**	**3.68**	**31**	*e*P	**Pn**	**17 22 49.7**	**+1.0**
MKZ				*i* S	**Sn**	**17 23 30.5**	**-0.9**
KMNR	**Kamenistaya**	**4.43**	**13**	P	**Pn**	**17 23 01.9**	**+2.7**
MJAR	**Matsushiro Arr**	**20.74**	**232**	P	**P**	**17 26 31.9**	**-0.3**
	1.2nm,0.6s,baz=35,slow=7.9,SNR=6.9						
KSRS	**Korea Array**	**25.67**	**249**	P	**P**	**17 27 22.9**	**+1.6**
	0.6nm,0.7s,baz=46,slow=8.7,SNR=3.7						
CMAR	**Chiang Mai Arr**	**56.85**	**258**	P	**P**	**17 31 35.1**	**-0.9**
	0.6nm,0.7s,baz=28,slow=7.1,SNR=6.3						

*IDC **30** 17:25:55.5±10.0,2.26N×128.39E,h151km±95km, mb3.5/7, mb1 3.7/7,mb1mx3.4/22,mbtmp3.5/7,Error ellipse: s-maj=74.6km s-min=15.2km az=62.0*
*AUST **30** 17:26:00.6,2.00N×128.00E,h200km*
ISC 30 17:25:54.3±0.9,2.28N±0.10×127.86E±0.10,h134km,n19, σ1°75/18,mb3.8/6,Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**4.61**	**133**	P	**Pn**	**17 27 03.1**	**+0.8**
	baz=4.3,SNR=10						
LUWI	**Luwuk**	**6.07**	**237**	P	Pn	17 27 32.8	+11
	baz=6.0,SNR=4.8						
FAKI	**Fak Fak**	**6.78**	**140**	P	**Pn**	**17 27 33.1**	**+1.7**
	baz=6.5,SNR=5.6						
PCI	**Palu**	**8.63**	**249**	S	Sn	17 29 24.5	-7.5
	baz=8.7,SNR=3.2						
JAY	**Jayapura**	**13.69**	**110**	S	**Sn**	**17 31 36.3**	**+1.8**
	baz=14,SNR=3.3						
WSI	**Waingapu**	**14.06**	**212**	P	**Pn**	**17 29 06.8**	**-0.9**
	baz=14,SNR=7.3						
WSI				S	**S**	**17 31 58.9**	**+4.1**
	baz=14,SNR=5.8						
MTN	**Manton Dam**	**15.37**	**168**	P	**Pn**	**17 29 24.0**	**-0.2**
	baz=15,SNR=16						
KDU	**Kakadu**	**15.56**	**163**	P	**P**	**17 29 27.6**	**-0.3**
	baz=15,SNR=7.7						
KDU				S	Sn	17 31 49.1	-30
	baz=15,SNR=3.5						
FITZ	**Fitzroy Crossi**	**20.37**	**186**	P	**P**	**17 30 19.9**	**-0.6**
	1.4nm,0.5s,baz=328,slow=20,SNR=13						
FITZ	**Fitzroy Crossi**	**20.37**	**186**	P	**P**	**17 30 20.1**	**-0.4**
	baz=20,SNR=7.3						
WRA	**Warramunga Arr**	**22.98**	**164**	P	**P**	**17 30 45.6**	**-1.8**
	2.5nm,0.4s,baz=343,slow=9.2,SNR=49						
QIS	**Mount Isa**	**25.45**	**154**	P	**P**	**17 31 08.5**	**-1.4**
	baz=25,SNR=5.4						
ASAR	**Alice Springs**	**26.45**	**167**	P	**P**	**17 31 17.2**	**-1.7**
	1.2nm,0.5s,baz=351,slow=7.6,SNR=58						
ASAR				PcP	**PcP**	**17 34 39.1**	**-1.8**
	0.3nm,0.4s,baz=357,slow=2.3,SNR=5.0						
CMAR	**Chiang Mai Arr**	**32.58**	**302**	P	P	17 32 17.8	+4.6
	0.2nm,0.4s,baz=138,slow=4.3,SNR=4.2						
BBOO	**Buckleboo**	**35.75**	**168**	P	**P**	**17 32 38.9**	**-1.5**
	baz=36,SNR=7.9						
STKA	**Stephens Creek**	**36.39**	**160**	P	**P**	**17 32 44.1**	**-1.7**
	3.7nm,0.3s,baz=339,slow=7.4,SNR=30						
STKA	**Stephens Creek**	**36.39**	**160**	P	**P**	**17 32 44.1**	**-1.7**
	baz=36,SNR=26						
SONM	**Songino Array**	**49.02**	**341**	P	**P**	**17 34 28.5**	**+0.9**
	0.7nm,0.5s,baz=149,slow=9.2,SNR=5.3						
MKAR	**Makanchi Array**	**59.38**	**325**	P	**P**	**17 35 43.5**	**+1.0**
	1.8nm,0.4s,baz=117,slow=7.9,SNR=46						

IDC 30 17:52:47.9±7.6,8.67S×130.92E,h75km±85km,mb3.0/1, mb1 3.2/4,mb1mx2.9/19,mbtmp3.0/4,ML3.1/3,Error ellipse: s-maj=55.8km s-min=45.9km az=10.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.69**	**208**	P	Pn	17 55 18.4	+0.2
	0.1nm,0.3s,baz=42,slow=14,SNR=17						
FITZ				S	Sn	17 57 14.7	-1.5
	0.2nm,0.3s,baz=153,slow=16,SNR=5.1						
WRA	**Warramunga Arr**	**11.69**	**164**	P	Pn	17 55 31.6	-0.2
	0.1nm,0.3s,baz=347,slow=13,SNR=8.3						
WRA				S	Sn	17 57 42.8	+2.2
	0.1nm,0.3s,baz=348,slow=23,SNR=7.0						
ASAR	**Alice Springs**	**15.19**	**170**	P	Pn	17 56 18.5	+0.3
	0.1nm,0.3s,baz=339,slow=8.7,SNR=9.4						
MKAR	**Makanchi Array**	**70.11**	**327**	P	P	18 03 52.2	0.0
	0.2nm,0.5s,baz=126,slow=8.0,SNR=3.7						

IDC 30 17:56:20.3±2.1,1.99N×126.15E,h0km,mb3.4/3, mb1 3.7/3,mb1mx3.3/21,mbtmp3.4/3,Error ellipse: s-maj=175.8km s-min=26.2km az=65.0,Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.23**	**160**	P	P	18 01 29.4	+0.1
	0.7nm,0.3s,baz=339,slow=11,SNR=19						
ASAR	**Alice Springs**	**26.60**	**164**	P	P	18 02 00.6	0.0
	0.2nm,0.4s,baz=338,slow=7.0,SNR=8.9						
MKAR	**Makanchi Array**	**58.66**	**326**	P	P	18 06 19.4	-0.1
	0.1nm,0.3s,baz=119,slow=7.5,SNR=4.3						

*IDC **30** 17:58:33.2±0.6,55.97S×26.92W,h0km,mb4.2/8, mb1 4.3/9,mb1mx4.1/18,mbtmp4.2/9,ML3.4/1,MS3.3/4, Ms1 3.3/4,ms1mx3.2/19,Error ellipse: s-maj=30.6km s-min=16.8km az=52.0*
*ISCJB **30** 17:58:40.1±0.6,56.05S±0.1×27.1W±0.3,h63km,mb4.2/9, Error ellipse: s-maj=24.9km s-min=10.3km az=146.9*
*NEIC **30** 17:58:41.2±2.8,56.04S×27.04W,h60km±25km,mb4.7/3, Error ellipse: s-maj=20.7km s-min=9.5km az=49.0*
ISC 30 17:58:41.4±0.6,56.05S±0.1×27.1W±0.2,h63km,n43, σ0°95/41,mb4.3/8,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA2	**Neumayer--Watz**	**17.24**	**158**	*e*Pn	**Pn**	**18 02 38.0**	**+0.5**
SNAA	**Sanae**	**18.79**	**156**	*e*Pn	**P**	**18 02 56.1**	**+0.8**
SNAA	**Sanae**	**18.79**	**156**	Pn	**P**	**18 02 55.4**	**+0.2**
SNAA	**Sanae**	**18.79**	**156**	Pn	**P**	**18 02 55.4**	**+0.2**
	0.1nm,0.3s,baz=348,slow=14,SNR=16						
PMSA	**Palmer Station**	**19.99**	**229**	LR	LR	18 08 33.3	
	comp=Z,133nm,18.8s,baz=98,slow=30						
PLCA	**Paso Flores**	**32.04**	**280**	LR	LR	18 17 32.2	
	comp=Z,87nm,18.9s,baz=168,slow=35						
CPUP	**Villa Florida**	**36.80**	**311**	P	**P**	**18 05 43.6**	**+0.6**
CPUP	**Villa Florida**	**36.80**	**311**	P	**P**	**18 05 43.6**	**+0.6**
	1.3nm,0.4s,baz=109,slow=14,SNR=7.4						
CPUP				LR	LR	18 19 58.7	
	comp=Z,58nm,18.2s,baz=170,slow=35						
CFAA	**Coronel Fontan**	**37.58**	**293**	P	**P**	**18 05 49.0**	**-0.7**
CFAA	**Coronel Fontan**	**37.58**	**293**	P	**P**	**18 05 49.0**	**-0.7**
	0.3nm,0.5s,baz=143,slow=13,SNR=7.3						
CFAA				LR	LR	18 19 46.4	
	comp=Z,7.8nm,19.9s,baz=347,slow=34						
MAW	**Mawson**	**40.17**	**144**	P	**P**	**18 06 09.7**	**-1.1**
MAW	**Mawson**	**40.17**	**144**	P	**P**	**18 06 09.7**	**-1.1**
	1.7nm,0.6s,baz=218,slow=11,SNR=4.2						
LVC	**Limon Verde**	**45.31**	**300**	*e*P	**P**	**18 06 54.3**	**+1.1**
	6.1nm,0.5s						
VNDA	**Vanda**	**46.65**	**183**	*e*P	**P**	**18 07 03.7**	**+0.9**
	3.3nm,0.6s						
VNDA	**Vanda**	**46.65**	**183**	P	**P**	**18 07 03.8**	**+0.9**
	3.1nm,0.6s,baz=184,slow=6.0,SNR=26						
SIV	**San Ignacio**	**47.57**	**313**	P	**P**	**18 07 10.6**	**0.0**
SIV	**San Ignacio**	**47.57**	**313**	P	**P**	**18 07 10.6**	**0.0**
	0.8nm,0.4s,baz=173,slow=9.7,SNR=6.1						
LPAZ	**La Paz**	**50.38**	**305**	*e*P	**P**	**18 07 33.9**	**+1.0**
	7.3nm,0.5s						
LPAZ	**La Paz**	**50.38**	**305**	P	**P**	**18 07 34.0**	**+1.2**
	6.9nm,0.5s,baz=101,slow=3.6,SNR=40						
TOA0	**Torodi Ar. Sit**	**72.96**	**29**	*e*P	**P**	**18 10 04.9**	**+0.9**
TORD	**Torodi Ar. Bea**	**72.96**	**29**	P	**P**	**18 10 05.0**	**+1.0**
TORD	**Torodi Ar. Bea**	**72.96**	**29**	P	**P**	**18 10 05.0**	**+1.0**
	3.7nm,0.5s,baz=201,slow=6.5,SNR=91						
ASAR	**Alice Springs**	**99.04**	**162**	P	**Pdif**	**18 12 13.9**	**-1.4**
ASAR	**Alice Springs**	**99.04**	**162**	P	**Pdif**	**18 12 13.9**	**-1.4**
	0.2nm,0.5s,baz=188,slow=3.9,SNR=6.9						
WRA	**Warramunga Arr**	**102.76**	**162**	P	**Pdif**	**18 12 31.8**	**-0.1**
WRA	**Warramunga Arr**	**102.76**	**162**	P	**Pdif**	**18 12 31.8**	**-0.1**
	0.3nm,0.8s,baz=198,slow=4.4,SNR=2.9						
FINES	**FINESS Array B**	**124.29**	**28**	PKP	**PKPdf**	**18 17 30.6**	**-0.8**
FINES	**FINESS Array B**	**124.29**	**28**	PKP	**PKPdf**	**18 17 30.6**	**-0.8**
	0.5nm,0.6s,baz=144,slow=3.3,SNR=3.4						
ARCES	**ARCESS Array B**	**130.85**	**22**	PKP	**PKPdf**	**18 17 44.0**	**+0.2**
ARCES	**ARCESS Array B**	**130.85**	**22**	PKP	**PKPdf**	**18 17 44.0**	**+0.2**
	2.4nm,0.8s,baz=241,slow=0.9,SNR=3.6						
YKA	**Yellowknife Ar**	**136.15**	**318**	PKP	**PKPdf**	**18 17 52.5**	**-1.5**
YKA	**Yellowknife Ar**	**136.15**	**318**	PKP	**PKPdf**	**18 17 52.4**	**-1.5**
	0.5nm,0.6s,baz=129,slow=2.3,SNR=13						
MKAR	**Makanchi Array**	**136.81**	**71**	PKP	**PKPdf**	**18 17 55.8**	**+0.1**
MKAR	**Makanchi Array**	**136.81**	**71**	PKP	**PKPdf**	**18 17 55.8**	**+0.1**
	0.1nm,0.4s,baz=250,slow=1.1,SNR=3.6						
DOT	**Dot Lake**	**148.64**	**310**	*e*PKPbc	**PKPab**	**18 18 21.0**	**-2.8**
PAX	**Paxson**	**149.07**	**309**	*e*PKPbc	**PKPbc**	**18 18 21.5**	**+0.5**
SML	**Sawmill**	**150.03**	**306**	*e*PKPbc	**PKPbc**	**18 18 24.9**	**+1.5**
ILAR	**Eielson Array**	**150.11**	**312**	PKPbc	**PKPbc**	**18 18 23.9**	**+0.5**
ILAR	**Eielson Array**	**150.11**	**312**	PKPbc	**PKPbc**	**18 18 23.9**	**+0.5**
	3.0nm,0.7s,baz=130,slow=2.5,SNR=22						
SONM	**Songino Array**	**150.67**	**86**	PKPbc	**PKPbc**	**18 18 25.8**	**+0.4**
SONM	**Songino Array**	**150.67**	**86**	PKPbc	**PKPbc**	**18 18 25.8**	**+0.4**
	2.5nm,0.6s,baz=217,slow=3.8,SNR=40						
MCK	**McKinley**	**150.77**	**309**	*e*PKPbc	**PKPbc**	**18 18 25.8**	**+0.8**
TRF	**Thorofare Moun**	**151.30**	**308**	*e*PKPbc	**PKPbc**	**18 18 26.2**	**-0.3**

IDC 30 18:01:35.6±11.0,25.57N×141.32E,h139km±102km, mb3.1/6,mb1 3.3/7,mb1mx3.0/25,mbtmp3.1/7,ML3.2/1, MS2.7/2,Ms1 2.7/2,ms1mx2.2/13,Error ellipse: s-maj=50.1km s-min=16.9km az=81.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.71**	**27**	LR	LR	18 02 32.5	
	comp=Z,22μm,20.1s,baz=0.8,slow=33						
MJAR	**Matsushiro Arr**	**11.26**	**347**	LR	LR	18 07 20.3	
	comp=Z,31nm,20.0s,baz=200,slow=31						
KSRS	**Korea Array**	**16.44**	**319**	P	P	18 05 18.6	+0.2
	0.1nm,0.3s,baz=133,slow=11,SNR=6.0						
ASAJ	**Asahikawa**	**18.53**	**3**	LR	LR	18 12 30.8	
	comp=Z,32nm,21.1s,baz=123,slow=35						
SONM	**Songino Array**	**35.30**	**318**	P	P	18 08 16.9	-0.5
	0.2nm,0.6s,baz=135,slow=10,SNR=3.1						
WRA	**Warramunga Arr**	**45.74**	**189**	P	P	18 09 42.2	-0.9
	2.0nm,0.7s,baz=8.2,slow=8.6,SNR=18						
ASAR	**Alice Springs**	**49.47**	**189**	P	P	18 10 12.7	+0.8
	0.3nm,0.9s,baz=16,slow=14,SNR=3.9						
MKAR	**Makanchi Array**	**50.86**	**311**	P	P	18 10 23.0	+0.8
	0.

h26km±13km, mb3.7/14, MS3.1/1, Error ellipse: s-maj=7.6km s-min=5.1km az=2.9
*JMA **30** 18:33:26.8±0.1, 30°.69N×132°.55E, h58km, M3.8*
*IDC **30** 18:33:28.7±0.7, 30°.77N×132°.44E, h26km±5km, mb3.6/13, mb1 3.8/17, mb1mx3.7/29, mbtmpb3.6/17, ML3.4/4, MS3.1/3, Ms1 3.1/3, ms1mx2.5/46, Error ellipse: s-maj=19.7km s-min=13.6km az=78.0*

ISC 30 18:33:28.5±0.8, 30.81N±0.05×132.52E±0.04, h26km±5km, n29, σ1§34/46, mb3.9/14, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNAR	**Kushima--Naru**	**1.28**	**304**	P	**Pn**	**18 33 50.2**	**-0.6**
JNAR				*eS*	**Sb**	**18 34 07.8**	**-0.3**
JTN	**Tanegashima 3**	**1.33**	**264**	P	**Pn**	**18 33 49.8**	**-1.6**
JTN				*eS*	**Sn**	**18 34 06.9**	**-1.4**
JTSR	**Tashiro 2**	**1.41**	**285**	P	**Pn**	**18 33 51.4**	**-1.2**
JTSR				*eS*	**Sn**	**18 34 10.1**	**-0.3**
JTZ	**Takazaki**	**1.64**	**312**	P	**Pn**	**18 33 55.2**	**-0.4**
JTZ				S	**Sn**	**18 34 16.3**	**+0.4**
JTO	**Tosashimizu**	**2.06**	**7**	P	**Pn**	**18 33 59.9**	**-1.6**
JTO				*eS*	**Sn**	**18 34 22.5**	**-3.8**
JIU2	**Izumi 2**	**2.26**	**321**	P	**Pn**	**18 34 04.5**	**+0.3**
JIU2				*eS*	**Sn**	**18 34 31.4**	**+0.1**
JSJ	**Shimokoshiki**	**2.55**	**291**	P	**Pn**	**18 34 07.0**	**-1.2**
JSJ				S	**Sn**	**18 34 37.8**	**-0.6**
JNU	**Nakatsue**	**2.69**	**329**	Pn	**Pn**	**18 34 10.5**	**+0.3**
	6.8nm,0.3s,baz=164,slow=8.0,SNR=131						
JNU				Sn	**Sn**	**18 34 43.0**	**+1.0**
	17nm,0.3s,baz=136,slow=17,SNR=6.5						
JNA	**Nagahama**	**2.74**	**359**	P	**Pn**	**18 34 10.4**	**-0.5**
JNA				S	**Sn**	**18 34 40.5**	**-2.7**
JMN	**Monobe**	**3.13**	**21**	P	**Pn**	**18 34 16.2**	**-0.1**
JMN				S	**Sn**	**18 34 49.0**	**-3.9**
JHJ	**Hachijo jima 2**	**6.59**	**68**	Pn	**Pn**	**18 35 03.3**	**-0.5**
	13nm,0.3s,baz=76,slow=7.0,SNR=8.4						
JHJ				Sn	**Sn**	**18 36 17.8**	**-0.3**
	7.6nm,0.3s,baz=90,slow=20,SNR=4.2						
JHJ				LR	LR	18 37 12.8	
	comp=Z,174nm,19.6s,baz=217,slow=34						
MAT	**Matsushiro**	**7.43**	**38**	P	**Pn**	**18 35 16.0**	**+0.7**
MJAR	**Matsushiro Arr**	**7.43**	**38**	Pn	**Pn**	**18 35 16.6**	**+1.3**
	0.9nm,0.3s,baz=246,slow=13,SNR=19						
MJAR				LR	LR	18 38 11.5	
	comp=Z,86nm,20.5s,baz=230,slow=38						
KSRS	**Korea Array**	**7.64**	**331**	Pn	**Pn**	**18 35 19.8**	**+1.6**
	0.1nm,0.3s,baz=14,slow=17,SNR=3.4						
SONM	**Songino Array**	**26.22**	**318**	P	**P**	**18 39 01.9**	**+0.6**
	0.6nm,0.9s,baz=141,slow=12,SNR=4.4						
SONM				LR	LR	18 50 12.3	
	comp=Z,54nm,18.1s,baz=233,slow=38						
ZALV	**Zalesovo Beam**	**41.12**	**318**	PcP	**PcP**	**18 43 08.8**	**-0.4**
	0.8nm,0.7s,baz=112,slow=4.0,SNR=5.5						
MKAR	**Makanchi Array**	**41.54**	**307**	P	**P**	**18 41 11.7**	**-2.1**
	0.3nm,0.6s,baz=94,slow=11,SNR=4.4						
MKAR				PcP	**PcP**	**18 43 11.7**	**+0.8**
	0.5nm,0.8s,baz=79,slow=6.3,SNR=4.1						
KURBB	**Kurchatov Arra**	**44.35**	**313**	P	**P**	**18 41 34.9**	**-1.6**
	0.5nm,0.8s,baz=99,slow=8.7,SNR=3.9						
KURBB				PcP	**PcP**	**18 43 19.9**	**-0.2**
	0.4nm,0.8s,baz=101,slow=3.9,SNR=5.0						
WRA	**Warramunga Arr**	**50.49**	**178**	P	**P**	**18 42 23.6**	**-0.9**
	1.1nm,0.7s,baz=354,slow=8.6,SNR=7.8						
WRA				pP	**pP**	**18 42 31.9**	**-0.5**
	1.3nm,0.5s,baz=355,slow=8.1,SNR=6.7						
ASAR	**Alice Springs**	**54.18**	**178**	P	**P**	**18 42 52.0**	**+0.2**
	0.6nm,0.7s,baz=10,slow=12,SNR=10						
ASAR				pP	**pP**	**18 42 59.8**	**0.0**
	1.0nm,0.5s,baz=11,slow=12,SNR=10						
ILAR	**Eielson Array**	**58.62**	**30**	P	**P**	**18 43 23.5**	**+0.5**
	0.6nm,0.8s,baz=290,slow=8.8,SNR=9.1						
STKA	**Stephens Creek**	**62.94**	**171**	P	**P**	**18 43 52.3**	**-0.3**
	1.8nm,0.9s,baz=328,slow=5.0,SNR=3.5						
STKA				pP	**pP**	**18 44 00.7**	**0.0**
	2.2nm,0.7s,baz=316,slow=9.1,SNR=3.0						
KBZ	**Khabaz**	**69.19**	**309**	P	**P**	**18 44 35.6**	**+2.8**
	1.9nm,0.8s,baz=303,slow=1.4,SNR=4.9						
FINES	**FINESS Array B**	**70.73**	**331**	P	**P**	**18 44 41.6**	**-0.4**
	0.6nm,0.5s,baz=83,slow=8.3,SNR=7.0						
YKA	**Yellowknife Ar**	**72.78**	**27**	P	**P**	**18 44 54.5**	**+0.2**
	1.2nm,1.1s,baz=300,slow=5.7,SNR=8.8						
AKASG	**Malin Array Be**	**74.48**	**320**	P	**P**	**18 45 04.6**	**+0.1**
	0.9nm,0.6s,baz=55,slow=6.9,SNR=4.2						
BRTR	**Keskin Array B**	**77.17**	**309**	P	**P**	**18 45 21.5**	**+1.2**
	1.8nm,1.1s,baz=100,slow=3.8,SNR=5.5						
GERES	**GERESS Array B**	**83.76**	**324**	P	**P**	**18 45 56.1**	**+0.7**
	0.4nm,0.5s,baz=32,slow=3.8,SNR=4.7						
NVAR	**Mina Array Bea**	**84.64**	**48**	P	**P**	**18 46 01.1**	**+0.8**
	1.2nm,0.6s,baz=292,slow=5.8,SNR=12						
NVAR				pP	**pP**	**18 46 09.5**	**+0.8**
	0.7nm,0.6s,baz=300,slow=5.7,SNR=4.9						

GUC 30 18:40:55.9±0.7, 34.40S×71.07W, h70km±7km, MD3.5, ML2.8, 6C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CACH	**El Canelo**	**0.48**	**55**	⇑*iP*	Pn	18 41 08.9	+0.2
CACH				*i* S	Sn	18 41 19.6	+1.3
CHCH	**Chadas Angostu**	**0.58**	**37**	⇓*iP*	Pn	18 41 09.8	+0.1
CHCH				*i* S	Sn	18 41 20.1	+0.4
ANTU	**Antumapu**	**0.90**	**24**	*eP*	Pn	18 41 13.7	+0.4
ANTU				*i* S	Sn	18 41 27.0	+0.8
ANTU				AML	AML	18 41 28.2	
	comp=E,251nm,0.2s						
PCH	**Pirque**	**0.90**	**31**	⇑*iP*	Pn	18 41 13.4	+0.1
PCH				*i* S	Sn	18 41 27.3	+1.0
LMEL	**Las Melosas**	**0.91**	**53**	⇑*iP*	Pn	18 41 14.0	+0.5
LMEL				*i* S	Sn	18 41 27.8	+1.2
LMEL				AML	AML	18 41 28.4	
	comp=N,2μm,0.1s						
SAN	**Santiago**	**1.00**	**20**	*i* S	Sn	18 41 29.1	+0.8
LCCH	**Las Cruces**	**1.01**	**336**	⇑*iP*	Pn	18 41 15.2	+0.7
CLCH	**Cerro Calan**	**1.09**	**24**	⇑*iP*	Pn	18 41 16.0	+0.3
CLCH				*eS*	Sn	18 41 31.4	+0.9
CLCH				AML	AML	18 41 33.6	
	comp=E,260nm,0.6s						
PEL	**Peldehue**	**1.29**	**15**	⇓*iP*	Pn	18 41 18.8	+0.5
PEL				*i* S	Sn	18 41 35.9	+0.9
PEL				AML	AML	18 41 37.8	
	comp=E,296nm,0.3s						
ROCH	**El Roble**	**1.42**	**2**	⇑*iP*	Pn	18 41 20.4	+0.2
ROCH				*i* S	Sn	18 41 39.3	+0.9
ROCH				AML	AML	18 41 43.1	
	comp=N,164nm,0.3s						
JACH	**Jahuel**	**1.76**	**13**	*eP*	Pn	18 41 24.8	+0.3
JACH				*i* S	Sn	18 41 46.8	+0.7

*ISCJB **30** 19:16:02.6±0.3, 36°.52N±0°.02×70°.97E±0°.05, h188km, mb3.8/16, Error ellipse: s-maj=6.2km s-min=2.7km az=162.1*
*IDC **30** 19:16:04.5±2.7, 36°.47N×70°.96E, h195km±26km, mb3.5/14, mb1 3.7/19, mb1mx3.5/31, mbtmpb3.5/19, Error ellipse: s-maj=14.9km s-min=11.6km az=27.0*
*NNC **30** 19:16:09.2±1.2, 37°.01N×70°.89E, h193km±8km, mb3.3, mpv4.7, Error ellipse: s-maj=9.8km s-min=7.9km az=38.0*

ISC 30 19:16:03.7±0.5, 36.60N±0.04×71.00E±0.06, h188km, n66, σ1§78/82, mb3.8/16, 6C-13D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.87**	**165**	⇓P	**Pn**	**19 16 52.2**	**+0.9**
CEP				S	**Sn**	**19 17 27.0**	**-1.4**
CHCP	**Chirah Chowk**	**3.47**	**147**	⇓P	**Pn**	**19 16 59.9**	**+1.4**
THW	**Thamme Wali**	**3.84**	**171**	⇓P	**Pn**	**19 17 03.7**	**+0.5**
SARP	**Sargodha**	**4.86**	**163**	P	**Pn**	**19 17 16.0**	**-0.1**
AML	**Almayashu**	**5.91**	**20**	P	**Pn**	**19 17 31.0**	**+1.1**
	SNR=121						
UCH	**Uchtor**	**6.25**	**25**	P	**Pn**	**19 17 35.7**	**+1.3**
	SNR=13						
KZA	**Kyzart**	**6.39**	**30**	P	**Pn**	**19 17 36.2**	**0.0**
	SNR=35						
EKS2	**Erkin-Say**	**6.43**	**19**	P	**Pn**	**19 17 37.3**	**+0.9**
	SNR=112						
KK31	**Karatay Array**	**6.51**	**357**	⇑P	**Pn**	**19 17 37.9**	**+0.5**
	12nm,0.3s,baz=176,slow=13,SNR=5.1						
KK31				S	**Sn**	**19 18 47.6**	**-3.9**
	37nm,0.4s,baz=185,slow=23,SNR=19						
AAK	**Ala-Archa**	**6.61**	**23**	P	**Pn**	**19 17 40.2**	**+1.4**
	SNR=77						
AAK	**Ala-Archa**	**6.61**	**23**	P	**Pn**	**19 17 40.2**	**+1.4**
	19nm,0.3s,baz=169,slow=6.2,SNR=249						
AAK				S	**Sn**	**19 18 53.5**	**-0.5**
	4.7nm,0.3s,baz=311,slow=23,SNR=22						
KBK	**Karagaybulak**	**6.78**	**26**	P	**Pn**	**19 17 42.6**	**+1.6**
	SNR=48						
ULHL	**Ulahol**	**6.95**	**34**	P	**Pn**	**19 17 44.4**	**+1.1**
	SNR=9.7						
CHMS	**Chumysh**	**7.02**	**23**	P	**Pn**	**19 17 45.4**	**+1.4**
	SNR=38						
SDNR	**Sundarnagar**	**7.10**	**134**	*eP*	**Pn**	**19 17 44.0**	**-1.2**
SDNR				*eS*	Sn	19 18 59.0	-6.5
USP	**Ospenovka**	**7.18**	**21**	P	**Pn**	**19 17 46.6**	**+0.3**
	SNR=54						
TKM2	**Tokmak 2**	**7.24**	**28**	⇓P	**Pn**	**19 17 48.2**	**+1.1**
	65nm,0.6s						
TKM2				⇓S	**Sn**	**19 19 07.8**	**-1.3**
	16nm,0.7s						
TKM2	**Tokmak 2**	**7.24**	**28**	P	**Pn**	**19 17 48.4**	**+1.2**
	SNR=39						
SMLA	**Simla**	**7.49**	**135**	*i* P	**Pn**	**19 17 50.0**	**-0.2**
SMLA				*i* S	**Sn**	**19 19 09.8**	**-4.8**
SMLA				*i* S	**Sn**	**19 19 09.9**	**-4.8**
SMLA				⇓		19 19 14.6	
	comp=N,1μm,0.3s						
SMLA						19 19 15.0	
	comp=E,2μm,0.3s						
DDI	**Dehra Dun**	**8.59**	**135**	*eP*	**Pn**	**19 18 03.0**	**-1.9**
DDI				*eS*	**Sn**	**19 19 37.0**	**-4.2**
KHET	**Khetri**	**9.42**	**153**	*eP*	Pn	19 18 12.4	-3.2
KHET				*eS*	Sn	19 19 52.4	-8.4
KHET				AML	AML	19 19 56.5	
	comp=E,100nm,0.1s						
KHET				AML	AML	19 19 56.5	
	comp=N,125nm,0.1s						
NDI	**New Delhi**	**9.47**	**145**	*eP*	**Pn**	**19 18 14.0**	**-2.3**
KUDL	**Kundal**	**9.62**	**150**	*eP*	**Pn**	**19 18 15.8**	**-2.4**
KUDL				*eS*	Sn	19 19 57.3	-8.3
KUDL				AML	AML	19 19 58.5	
	comp=E,14nm,0.7s						
KUDL				AML	AML	19 20 01.9	
	comp=N,13nm,0.3s						
SONA	**Sohna**	**9.78**	**147**	*eP*	**Pn**	**19 18 18.4**	**-1.9**
SONA				*eS*	Sn	19 19 59.7	-10
SONA				AML	AML	19 20 08.5	
	comp=N,14nm,0.5s						
SONA				AML	AML	19 20 08.9	
	comp=E,26nm,0.4s						
PYUN	**Piuthan**	**13.20**	**127**	*eP*	**Pn**	**19 19 02.0**	**-2.4**
	comp=E,45nm,0.6s						
MK31	**Makanchi Array**	**13.21**	**36**	P	**Pn**	**19 19 05.4**	**+1.2**
	comp=E,1.3nm,0.5s,baz=0.0,slow=0.1,SNR=19						
MKAR	**Makanchi Array**	**13.21**	**36**	P	**Pn**	**19 19 05.2**	**+1.0**
	comp=E,0.3nm,0.3s,baz=219,slow=11,SNR=27						
DANN	**Dangsing**	**13.54**	**124**	*eP*	**Pn**	**19 19 07.9**	**-0.8**
	comp=E,23nm,0.4s						
KOLN	**Koldanda**	**13.82**	**126**	*eP*	**Pn**	**19 19 10.9**	**-1.2**
	comp=E,14nm,0.3s						
DMN	**Daman**	**14.93**	**123**	*eP*	**Pn**	**19 19 26.2**	**+0.4**
	comp=E,23nm,0.4s						
KKN	**Kakani**	**14.93**	**122**	*eP*	**Pn**	**19 19 26.1**	**+0.3**
	comp=E,19nm,0.5s						
AB31	**Akulak array**	**15.00**	**331**	P	**Pn**	**19 19 25.6**	**-0.7**
	comp=E,8.7nm,0.6s,baz=144,slow=12,SNR=110						
AB31				⇓S	**Sn**	**19 22 08.8**	**-4.9**
	comp=E,1.4nm,0.4s,baz=153,slow=24,SNR=14						
KURBB	**Kurchatov Arra**	**15.03**	**19**	⇑P	**P**	**19 19 28.4**	**+0.9**
	comp=E,0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**15.03**	**19**	P	**Pn**	**19 19 25.9**	**-0.7**
	comp=E,0.3nm,0.3s,baz=215,slow=8.2,SNR=28						
KURK	**Kurchatov**	**15.14**	**19**	⇑P	**Pn**	**19 19 28.3**	**+0.4**
	comp=E,6.3nm,1.1s						
PKIN	**Phulchoki**	**15.14**	**122**	*eP*	**Pn**	**19 19 28.6**	**+0.1**
	comp=E,15nm,0.3s						
PKI	**Pulchoki**	**15.16**	**122**	*eP*	**Pn**	**19 19 29.0**	**+0.3**
	comp=E,23nm,0.4s						
GUN	**Gumba**	**15.27**	**120**	*eP*	**P**	**19 19 31.0**	**+0.3**
VOSK	**Vostochnaya**	**16.13**	**360**	⇑P	**P**	**19 19 39.5**	**0.0**
	comp=E,8.9nm,0.8s						
VOSK				⇓S	**S**	**19 22 34.5**	**-3.8**
	comp=E,1.8nm,0.7s						
RAMN	**Ramite**	**16.37**	**122**	*eP*	**P**	**19 19 43.0**	**+0.3**
	comp=E,27nm,0.5s						
ZRNK	**Zerenda**	**16.41**	**356**	⇓P	**Pn**	**19 19 43.7**	**+0.3**
	comp=E,5.2nm,0.7s						
ZRNK				⇓S	**S**	**19 22 41.0**	**-3.4**
	comp=E,5.1nm,1.2s						
BVA0	**Borovoye Array**	**16.43**	**359**	P	**Pn**	**19 19 43.6**	**0.0**
	comp=E,0.9nm,0.7s,baz=168,slow=13,SNR=55						
BVA0				⇓S	**S**	**19 22 42.3**	**-2.5**
	comp=E,1.0nm,1.4s,baz=169,slow=17,SNR=4.1						
BVAR	**Borovoye Array**	**16.43**	**359**	P	**Pn**	**19 19 43.9**	**+0.3**
	comp=E,1.4nm,0.3s,baz=162,slow=14,SNR=42						
BVAR				S	**S**	**19 22 45.3**	**+0.5**
	comp=E,0.3nm,0.3s,baz=165,slow=24,SNR=4.9						
BRVK	**Borovoye**	**16.47**	**358**	⇑P	**Pn**	**19 19 44.1**	**+0.1**
	comp=E,12nm,0.6s						
BRVK				⇓S	**S**	**19 22 42.0**	**-3.5**
	comp=E,6.1nm,1.3s						
AKTO	**Aktyubinsk**	**16.70**	**330**	⇓P	**Pn**	**19 19 47.1**	**+0.4**
	comp=E,2.1nm,0.8s						
AKTO				⇑S	**S**	**19 22 48.3**	**-2.0**
	comp=E,0.6nm,0.8s						
AKTO	**Aktyubinsk**	**16.70**	**330**	P	**Pn**	**19 19 47.5**	**+0.7**
	comp=E,1.6nm,0.3s,baz=139,slow=11,SNR=44						
AKTO				S	**S**	**19 22 51.4**	**+1.1**
	comp=E,0.2nm,0.3s,baz=356,slow=19,SNR=3.3						
TAPN	**Taplejung**	**16.89**	**118**	*eP*	**Pn**	**19 19 50.8**	**+1.2**
ODAN	**Odare**	**16.97**	**120**	*eP*	**Pn**	**19 19 50.5**	**0.0**
	comp=E,18nm,0.5s						
ZALV	**Zalesovo Beam**	**19.83**	**25**	P	**P**	**19 20 21.2**	**+1.4**
	comp=E,1.6nm,0.3s,baz=220,slow=11,SNR=32						
SONM	**Songino Array**	**28.28**	**55**	P	**P**	**19 21 41.7**	**+2.1**
	comp=E,0.2nm,0.5s,baz=260,slow=8.2,SNR=4.7						
SONM				pP	**pP**	**19 22 21.8**	**+3.9**
	comp=E,0.4nm,0.8s,baz=267,slow=8.1,SNR=4.5						
BRTR	**Keskin Array B**	**29.40**	**288**	P	**P**	**19 21 50.4**	**+0.8**
	comp=E,0.3nm,0.6s,baz=90,slow=8.6,SNR=3.1						
CMAR	**Chiang Mai Arr**	**30.50**	**119**	P	**P**	**19 22 00.1**	**+0.8**
	comp=E,0.5nm,0.6s,baz=304,slow=10,SNR=4.4						
AKASG	**Malin Array Be**	**32.88**	**309**	P	**P**	**19 22 20.3**	**+0.5**
	comp=E,1.5nm,0.5s,baz=81,slow=7.9,SNR=7.3						
JOF	**Joensuu**	**35.78**	**330**	*ep*	**P**	**19 22 44.9**	**+0.4**
	comp=E,2.6nm,0.4s						
FINES	**FINESS Array B**	**37.40**	**326**	P	**P**	**19 22 59.2**	**+1.0**
	comp=E,0.8nm,0.3s,baz=120,slow=9.7,SNR=18						
KEV	**Kevo**	**40.71**	**338**	*ep*	**P**	**19 23 26.3**	**+0.8**
	comp=E,0.5nm,0.3s						
ARCES	**ARCESS Array B**	**41.06**	**338**	P	**P**	**19 23 29.8**	**+1.5**
	comp=E,2.4nm,0.7s,baz=110,slow=7.7,SNR=17						
NB2	**NORSAR Subarra**	**44.30**	**323**	P	**P**	**19 23 54.8**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.30**	**323**	P	**P**	**19 23 55.1**	**+0.6**
	comp=Z,2.4nm,0.7s,baz=96,slow=7.8,SNR=11						
KMBO	**Kilima Mbogo**	**48.89**	**227**	P	**P**	**19 24 31.7**	**+0.7**
	comp=Z,1.6nm,0.5s,baz=36,slow=17,SNR=6.4						
TORD	**Torodi Ar. Bea**	**65.72**	**269**	P	**P**	**19 26 26.6**	**-1.9**
	comp=Z,0.8nm,0.5s,baz=54,slow=6.2,SNR=21						
ILAR	**Eielson Array**	**74.69**	**16**	P	**P**	**19 27 22.2**	**+0.1**
	comp=Z,0.9nm,1.0s,baz=264,slow=3.1,SNR=4.9						
BOSA	**Boshof**	**77.82**	**220**	P	**P**	**19 27 39.8**	**-0.6**
	comp=Z,3.0nm,1.0s,baz=350,slow=20,SNR=5.2						
YKA	**Yellowknife Ar**	**81.15**	**3**	P	**P**	**19 27 58.9**	**+1.1**
	comp=Z,1.4nm,0.4s,baz=351,slow=5.4,SNR=37						
YKA				pP	**pP**	**19 28 45.7**	**+2.2**
	comp=Z,0.5nm,0.7s,baz=348,slow=5.6,SNR=6.3						
WRA	**Warramunga Arr**	**82.04**	**122**	P	**P**	**19 28 02.2**	**-0.9**
	comp=Z,1.9nm,0.5s,baz=325,slow=5.0,SNR=45						
ASAR	**Alice Springs**	**84.31**	**125**	P	**P**	**19 28 13.9**	**-0.8**
	comp=Z,2.4nm,0.6s,baz=310,slow=4.9,SNR=66						

*NNC **30** 19:20:32.7±1.4, 40°.79N×78°.89E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=11.3km s-min=5.7km az=169.0*
*BJI **30** 19:20:33.7, 40°.70N×78°.94E, h2km, mB4.6/1, mb4.0/4, ML3.8/9, Ms3.7/2*
*IDC **30** 19:20:34.1±1.0, 40°.79N×78°.96E, h0km, mb3.6/7, mb1 3.7/12, mb1mx3.5/33, mbtmpb3.6/12, ML3.4/5, MS3.4/2, Ms1 3.4/2, ms1mx2.5/49, Error ellipse: s-maj=14.6km s-min=14.4km az=83.0*

ISC 30 19:20:39.2±0.8, 40.99N±0.06×78.84E±0.05, h10km, n37, σ2§27/32, mb3.5/6, 8C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**2.32**	**304**	P	**Pn**	**19 21 19.9**	**-1.3**
	SNR=112						
KNDC	**Almaty**	**2.62**	**328**	⇑Pg	**Pn**	**19 21 23.9**	**-2.4**
	130nm,0.7s						
KNDC				⇑Lg	Lg	19 22 03.2	
	976nm,1.2s						
KSH	**Kashi**	**2.65**	**237**	Pn	**Pb**	**19 21 25.5**	**-1.2**
KSH				Sn	**Sg**	**19 22 07.5**	**+3.4**
KSH				smax	smax		
	comp=N,250nm,0.7s						
KSH				smax	smax		
	comp=E,280nm,0.8s						
KZA	**Kyzart**	**2.91**	**293**	P	**Pn**	**19 21 26.8**	**+1.0**
	SNR=18						
TKM2	**Tokmak 2**	**3.09**	**310**	⇓Pg	**Pn**	**19 21 30.5**	**+2.2**
	comp=E,39nm,0.4s						
TKM2				⇓Lg	Lg	19 22 17.1	
	comp=E,199nm,0.6s						
TKM2	**Tokmak 2**	**3.09**	**310**	P	**Pn**	**19 21 30.7**	**+2.4**
	SNR=9.7						
KBK	**Karagaybulak**	**3.35**	**301**	P	**Pn**	**19 21 33.8**	**+2.0**
	SNR=6.9						
UCH	**Uchtor**	**3.47**	**292**	P	**Pb**	**19 21 40.9**	**-0.1**
	SNR=15						
AAK	**Ala-Archa**	**3.64**	**298**	P	**Pn**	**19 21 37.8**	**+2.1**
	SNR=5.3						
AAK	**Ala-Archa**	**3.64**	**298**	Pn	**Pn**	**19 21 37.9**	**+2.2**
	comp=E,2.7nm,0.3s,baz=113,slow=9.5,SNR=5.4						
AAK				Pg	**Pb**	**19 21 44.1**	**+0.4**
	comp=E,12nm,0.3s,baz=118,slow=12,SNR=20						
AAK				Lg	Lg	19 22 34.7	
	comp=E,12nm,0.3s,baz=328,slow=22,SNR=14						
CHMS	**Chumysh**	**3.65**	**305**	P	**Pb**	**19 21 44.2**	**+0.5**
	SNR=9.2						
USP	**Ospenovka**	**3.95**	**307**	P	**Pb**	**19 21 49.7**	**+0.8**
	SNR=13						
AML	**Almayashu**	**4.03**	**288**	P	**Pn**	**19 21 41.2**	**0.0**
	SNR=5.7						
EKS2	**Erkin-Say**	**4.13**	**295**	P	**Pb**	**19 21 53.2**	**+1.1**
	SNR=40						
MK31	**Makanchi Array**	**6.31**	**22**	⇑Pn	**Pn**	**19 22 12.5**	**+0.2**
	comp=E,0.8nm,0.3s,baz=200,slow=12,SNR=36						
MK31				Pg	**Pb**	**19 22 31.4**	**+2.3**
	comp=E,4.1nm,0.5s						
MK31				⇑Sn	**Sn**	**19 23 30.3**	**+5.9**
	comp=E,21nm,0.9s						
MK31				⇓Lg	Lg	19 23 57.6	
	comp=E,16nm,0.6s						
MKAR	**Makanchi Array**	**6.31**	**22**	Pn	**Pn**	**19 22 12.7**	**+0.4**
	comp=E,1.1nm,0.3s,baz=200,slow=13,SNR=18						
MKAR				Sn	**Sn**	**19 23 24.5**	**+0.1**
	comp=E,1.5nm,0.3s,baz=205,slow=15,SNR=3.5						
MKAR				Lg	Lg	19 23 57.0	
	comp=E,1.6nm,0.3s,baz=199,slow=24,SNR=3.9						
KK31	**Karatay Array**	**6.55**	**292**	⇑Pg	Pb	19 22 35.9	+2.7
	comp=E,3.3nm,0.5s,baz=111,slow=16,SNR=18						
KK31				⇑Lg	Lg	19 24 03.0	
	comp=E,52nm,1.2s,baz=112,slow=29,SNR=7.2						
WMQ	**Urumqi**	**7.13**	**64**	Pn	**Pn**	**19 22 22.0**	**-1.6**
WMQ				Sn	**Sn**	**19 23 42.5**	**-2.3**
WMQ				smax	smax		
	comp=N,85nm,1.0s						
WMQ				smax	smax		
	comp=E,97nm,0.9s						
KURBB	**Kurchatov Arra**	**9.63**	**359**	Lg	Lg	19 25 44.9	
KURBB	**Kurchatov Arra**	**9.63**	**359**	Pn	**Pn**	**19 22 55.9**	**-1.9**
	comp=E,0.1nm,0.3s,baz=184,slow=12,SNR=3.6						
KURBB				Lg	Lg	19 25 44.0	
	comp=E,0.2nm,0.3s,baz=182,slow=28,SNR=15						
KURK	**Kurchatov**	**9.72**	**359**	⇓Lg	Lg	19 25 47.8	
	comp=E,56nm,1.0s						
VOSK	**Vostochnaya**	**12.90**	**338**	⇓Lg	Lg	19 27 28.5	
	comp=E,22nm,1.2s						
BVA0	**Borovoye Array**	**13.33**	**337**	⇑Lg	Lg	19 27 42.9	
	comp=E,1.5nm,1.2s,baz=162,slow=32,SNR=4.2						
BVAR	**Borovoye Array**	**13.33**	**337**	Pn	**Pn**	**19 23 47.0**	**-1.4**
	comp=E,0.2nm,0.3s,baz=148,slow=14,SNR=3.2						
BVAR				Lg	Lg	19 27 44.8	
	comp=E,0.1nm,0.3s,baz=154,slow=27,SNR=3.9						
BRVK	**Borovoye**	**13.39**	**337**	⇑Lg	Lg	19 27 44.6	
	comp=E,15nm,1.0s						
ZALV	**Zalesovo Beam**	**13.57**	**15**	Pn	**Pn**	**19 23 49.1**	**-2.4**
	comp=E,0.3nm,0.3s,baz=186,slow=13,SNR=5.2						
ZALV				Lg	Lg	19 27 53.2	
	comp=E,0.1nm,0.3s,baz=199,slow=27,SNR=2.3

	comp=Z,189nm,0.3s,SNR=70							
KEV	**Kevo**	**7.56**	**156**	*ep*	Pn		19 30 02.5	+3.8
	comp=Z,0.2nm,0.2s							
ARA0	**ARCESS Array S**	**7.64**	**160**	Pn	**Pn**		**19 30 00.6**	**+0.7**
	baz=11,slow=16							
ARA0				Sn	**Sn**		**19 31 24.6**	**-0.8**
	baz=358,slow=22							
ARA0	**ARCESS Array S**	**7.64**	**160**	Pn	**Pn**		**19 30 00.6**	**+0.7**
	baz=11,slow=16							
ARA0				Sn	**Sn**		**19 31 24.6**	**-0.8**
	baz=358,slow=22							
ARA0	**ARCESS Array S**	**7.64**	**160**	Pn	**Pn**		**19 30 00.6**	**+0.7**
	baz=11,slow=15,SNR=62							
ARA0				Sn	**Sn**		**19 31 24.6**	**-0.8**
	baz=358,slow=20,SNR=62							

IDC 30 19:29:11.2±3.3, 17°.55S×178°.27W, h637km±43km, mb3.0/7, mb1 3.3/7, mb1mx3.0/19, mbtmp3.0/7, Error ellipse: s-maj=97.6km s-min=14.4km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.92**	**241**	P	P	19 35 44.6	-0.2
	1.7nm,0.8s,baz=98,slow=14,SNR=3.3						
WRA	**Warramunga Arr**	**44.83**	**259**	P	P	19 36 31.3	+0.2
	0.8nm,0.4s,baz=95,slow=7.1,SNR=30						
ASAR	**Alice Springs**	**45.02**	**254**	P	P	19 36 32.6	+0.1
	1.6nm,0.5s,baz=90,slow=8.0,SNR=50						
ASAR				PcP	PcP	19 37 59.1	-0.2
	0.2nm,0.4s,baz=105,slow=3.9,SNR=5.2						
ASAR				S	S	19 42 26.8	-0.1
	0.5nm,0.7s,baz=90,slow=15,SNR=6.8						
NVAR	**Mina Array Bea**	**79.07**	**44**	P	P	19 40 12.2	+0.6
	0.7nm,0.6s,baz=229,slow=8.7,SNR=5.9						
TXAR	**Lajitas Array**	**85.69**	**58**	P	P	19 40 44.9	+0.1
	1.0nm,0.8s,baz=221,slow=5.0,SNR=7.8						
PDAR	**Pinedale Array**	**87.00**	**43**	P	P	19 40 49.0	-1.9
	0.3nm,0.7s,baz=186,slow=3.5,SNR=3.9						
YKA	**Yellowknife Ar**	**93.95**	**25**	P	P	19 41 20.7	-1.3
	0.2nm,0.5s,baz=249,slow=4.6,SNR=3.9						
BRTR	**Keskin Array B**	**144.62**	**315**	PKP	PKPab	19 47 38.4	-0.2
	0.8nm,0.8s,baz=131,slow=5.6,SNR=5.6						
GERES	**GERESS Array B**	**147.30**	**345**	PKPbc	PKPbc	19 47 45.1	+0.3
	0.6nm,0.5s,baz=28,slow=3.2,SNR=5.6						

*ISCJB **30** 19:30:49.2±0.5, 41°.49N±0°.04×140°.66E±0°.07, h129km±3km, mb3.2/6, Error ellipse: s-maj=8.6km s-min=6.9km az=170.6*
*JMA **30** 19:30:50.6±0.1, 41°.50N×140°.66E, h121km±1km, M2.7*
*IDC **30** 19:30:51.4±1.8, 41°.51N×140°.64E, h137km±17km, mb2.9/6, mb1 3.1/9, mb1mx3.0/27, mbtmp2.9/9, Error ellipse: s-maj=21.1km s-min=17.7km az=122.0*

ISC 30 19:30:50.1±0.8, 41°.48N±0°.05×140°.62E±0°.06, h124km±6km, n19, σ0s85/28, mb3.3/6, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSR	**Shiriuchi**	**0.16**	**287**	P	**Pn**	**19 31 07.2**	**+0.1**
JSR				*eS*	**Sn**	**19 31 19.6**	**-0.4**
JOT	**Ohata**	**0.33**	**107**	P	**Pn**	**19 31 07.8**	**+0.1**
JOT				*eS*	**Sn**	**19 31 20.5**	**-0.4**
JKB	**Kayabe**	**0.51**	**37**	P	**Pn**	**19 31 08.7**	**+0.2**
JKB				*eS*	**Sn**	**19 31 22.3**	**-0.2**
JYM2	**Yakumo 2**	**0.66**	**343**	P	**Pn**	**19 31 09.8**	**+0.2**
JTM	**Tenmabayashi**	**0.77**	**154**	P	**Pn**	**19 31 10.7**	**+0.2**
JTM				*eS*	**Sn**	**19 31 25.9**	**+0.1**
JIW	**Iwasaki**	**1.00**	**208**	P	**Pn**	**19 31 13.2**	**+0.6**
JIW				*eS*	**Sn**	**19 31 30.1**	**+0.6**
JOSM	**Okushiri--Mats**	**1.05**	**305**	P	**Pn**	**19 31 12.9**	**0.0**
JOSM				*eS*	**Sn**	**19 31 29.7**	**-0.6**
JANG	**Nango**	**1.30**	**148**	P	**Pn**	**19 31 15.2**	**-0.4**
JANG				*eS*	**Sn**	**19 31 34.4**	**-0.5**
JNBK	**Urakawa-nobuka**	**1.78**	**63**	P	**Pn**	**19 31 21.4**	**+0.4**
JNBK				*eS*	**Sn**	**19 31 44.7**	**0.0**
JOM	**Ohasama**	**2.07**	**166**	P	**Pn**	**19 31 24.9**	**+0.2**
JOM				*eS*	**Sn**	**19 31 50.1**	**-1.0**
ASAJ	**Asahikawa**	**3.01**	**28**	P	**Pn**	**19 31 36.9**	**+0.3**
	1.5nm,0.3s,baz=42,slow=18,SNR=50						
MJAR	**Matsushiro Arr**	**5.28**	**202**	P	**Pn**	**19 32 09.6**	**+2.7**
	0.2nm,0.3s,baz=8.9,slow=14,SNR=4.4						
USRK	**Ussuriysk Arra**	**6.90**	**296**	P	**Pn**	**19 32 30.8**	**+2.2**
	0.5nm,0.3s,baz=100,slow=14,SNR=11						
SONM	**Songino Array**	**25.02**	**296**	P	**P**	**19 36 03.0**	**+0.6**
	0.2nm,0.7s,baz=81,slow=8.9,SNR=3.0						
ZALV	**Zalesovo Beam**	**38.57**	**308**	P	**P**	**19 38 00.2**	**-0.3**
	0.7nm,0.6s,baz=96,slow=7.6,SNR=3.8						
MKAR	**Makanchi Array**	**41.37**	**298**	P	**P**	**19 38 22.7**	**-1.1**
	1.7nm,1.2s,baz=85,slow=1.0,SNR=4.7						
ILAR	**Eielson Array**	**46.12**	**35**	P	**P**	**19 39 01.9**	**+0.4**
	0.6nm,0.8s,baz=281,slow=5.8,SNR=5.5						
YKA	**Yellowknife Ar**	**60.30**	**31**	P	**P**	**19 40 44.9**	**-0.2**
	0.2nm,0.6s,baz=305,slow=6.4,SNR=4.3						
WRA	**Warramunga Arr**	**61.39**	**187**	P	**P**	**19 40 52.7**	**-0.3**
	0.2nm,0.7s,baz=7.8,slow=7.7,SNR=7.2						

IDC 30 19:44:35.2±11.0, 23°.16S×177°.21W, h114km±105km, mb3.4/6, mb1 3.7/7, mb1mx3.5/20, mbtmp3.5/7, ML4.3/1, Error ellipse: s-maj=75.9km s-min=38.2km az=170.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.82**	**197**	P	Pn	19 48 12.2	+0.7
	1.2nm,0.3s,baz=71,slow=13,SNR=7.4						
URZ				S	Sn	19 50 57.4	-9.4
	0.7nm,0.3s,baz=330,slow=19,SNR=5.1						
STKA	**Stephens Creek**	**37.37**	**247**	P	P	19 51 36.3	-0.7
	1.1nm,0.7s,baz=79,slow=10,SNR=3.2						
ASAR	**Alice Springs**	**44.68**	**259**	P	P	19 52 36.8	-0.2
	0.4nm,0.8s,baz=101,slow=7.0,SNR=6.7						
ASAR				PcP	PcP	19 54 17.1	-0.6
	0.2nm,0.4s,baz=103,slow=4.2,SNR=5.1						
WRA	**Warramunga Arr**	**45.02**	**264**	P	P	19 52 39.6	-0.1
	0.8nm,0.3s,baz=96,slow=8.4,SNR=41						
FITZ	**Fitzroy Crossi**	**53.44**	**264**	P	P	19 53 44.1	+0.2
	2.3nm,0.9s,baz=25,slow=10,SNR=12						
ILAR	**Eielson Array**	**90.73**	**12**	P	P	19 57 24.2	-0.5
	0.3nm,0.5s,baz=219,slow=4.4,SNR=4.3						
CMAR	**Chiang Mai Arr**	**91.68**	**289**	P	P	19 57 30.7	+0.5
	0.4nm,0.8s,baz=130,slow=2.4,SNR=4.2						
FINES	**FINESS Array B**	**138.51**	**343**	PKP	PKPdf	20 03 46.3	-0.6
	1.1nm,0.7s,baz=57,slow=5.1,SNR=2.3						
HFS	**Hagfors**	**142.26**	**351**	PKhKP	PKPpre	20 03 48.7	
	0.7nm,0.4s,baz=72,slow=4.8,SNR=12						
AKASG	**Malin Array Be**	**145.67**	**330**	PKPbc	PKPdf	20 03 59.5	-0.5
	0.8nm,0.4s,baz=43,slow=3.9,SNR=5.3						
BRTR	**Keskin Array B**	**149.12**	**310**	PKPbc	PKPbc	20 04 09.9	-0.6
	0.8nm,0.6s,baz=132,slow=4.8,SNR=5.9						
MMAI	**Mount Meron Ar**	**149.70**	**296**	PKPbc	PKPbc	20 04 11.6	-0.5
	0.8nm,0.4s,baz=101,slow=6.0,SNR=5.6						
GERES	**GERESS Array B**	**152.94**	**344**	PKPbc	PKPbc	20 04 19.5	+0.4
	0.3nm,0.5s,baz=39,slow=6.3,SNR=4.2						

MEX 30 19:49:45.7±0.8, 17°.83N×101°.42W, h30km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.23**	**191**	*eP*	Pb	19 49 50.6	-1.6
ZIIG				*i S*	Sb	19 49 55.7	-0.9
ARIG	**Puente Sto Nin**	**1.11**	**66**	*i P*	Pn	19 50 02.9	-2.5
ARIG				*i S*	Sn	19 50 17.1	-2.6
CAIG	**El Cayaco**	**1.35**	**125**	*eP*	Pn	19 50 05.9	-2.6
CAIG				*i S*	Sn	19 50 22.4	-3.0

*ISCJB **30** 19:54:36.2±0.4, 6°.51S±0°.05×127°.32E±0°.05, h408km, mb3.3/7, Error ellipse: s-maj=6.9km s-min=5.4km az=136.6*
*AUST **30** 19:54:36.1±0.0, 6°.31S×127°.32E, h498km, Error ellipse: s-maj=1.4km s-min=1.0km az=24.0*
*IDC **30** 19:54:38.1±1.9, 6°.51S×127°.44E, h432km±22km, mb2.9/7, mb1 3.2/11, mb1mx3.1/22, mbtmp3.1/11, Error ellipse: s-maj=28.4km s-min=9.3km az=67.0*

ISC 30 19:54:36.9±0.6, 6°.49S±0°.06×127°.42E±0°.07, h408km, n32, σ1s37/35, mb3.3/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**5.36**	**81**	P	P	19 56 07.4	+4.6
	baz=5.4,SNR=14						
TLE				S	**S**	**19 57 12.4**	**-0.7**
	baz=5.4,SNR=8.6						
FAKI	**Fak Fak**	**5.98**	**54**	P	**P**	**19 56 12.1**	**+2.6**
	baz=6.0,SNR=14						
FAKI				S	S	19 57 18.5	-6.7
	baz=6.0,SNR=6.0						
SWI	**Sorong**	**6.78**	**35**	P	**P**	**19 56 20.7**	**+1.9**
	baz=6.7,SNR=12						
SWI				S	**S**	**19 57 40.1**	**-1.1**
	baz=6.7,SNR=4.1						
LUWI	**Luwuk**	**7.13**	**319**	P	**P**	**19 56 24.2**	**+1.5**
	baz=6.9,SNR=3.3						
MTN	**Manton Dam**	**7.30**	**150**	P	**P**	**19 56 26.1**	**+1.6**
	baz=7.5,SNR=75						
WSI	**Waingapu**	**7.72**	**245**	P	**P**	**19 56 31.9**	**+2.6**
	baz=7.7,SNR=3.1						
KAPI	**Kappang**	**7.77**	**280**	P	**P**	**19 56 30.0**	**+0.2**
	1.3nm,0.3s,baz=92,slow=6.7,SNR=9.1						
KDU	**Kakadu**	**7.92**	**141**	P	**P**	**19 56 33.0**	**+1.6**
	baz=8.2,SNR=74						
PCI	**Palu**	**9.38**	**306**	P	P	19 56 40.4	-7.2
	baz=9.2,SNR=3.8						
PCI				S	S	19 58 28.2	-7.1
	baz=9.2,SNR=4.7						
FITZ	**Fitzroy Crossi**	**11.67**	**188**	P	**P**	**19 57 13.1**	**+0.4**
	0.8nm,0.3s,baz=26,slow=8.2,SNR=35						
FITZ	**Fitzroy Crossi**	**11.67**	**188**	P	**P**	**19 57 13.2**	**+0.4**
	baz=12,SNR=6.2						
JAY	**Jayapura**	**13.82**	**74**	S	**S**	**20 00 06.1**	**+1.0**
	baz=14,SNR=4.4						
WRA	**Warramunga Arr**	**14.97**	**154**	P	**P**	**19 57 49.0**	**+0.1**
	3.1nm,0.3s,baz=329,slow=11,SNR=196						
WRA				S	**S**	**20 00 24.9**	**-2.8**
	1.1nm,0.3s,baz=332,slow=20,SNR=2.2						
ASAR	**Alice Springs**	**18.18**	**161**	P	**P**	**19 58 23.0**	**-0.1**
	1.1nm,0.3s,baz=344,slow=14,SNR=59						
ASAR				S	**S**	**20 01 29.1**	**-0.8**
	0.4nm,0.3s,baz=351,slow=22,SNR=13						
QIS	**Mount Isa**	**18.31**	**141**	P	**P**	**19 58 24.7**	**+0.2**
	baz=19,SNR=9.1						
STKA	**Stephens Creek**	**28.52**	**154**	P	**P**	**19 59 56.9**	**-0.3**
	2.2nm,0.5s,baz=359,slow=7.8,SNR=10						
CMAR	**Chiang Mai Arr**	**37.46**	**312**	P	**P**	**20 01 14.8**	**+1.0**
	1.4nm,0.8s,baz=141,slow=7.1,SNR=14						
MJAR	**Matsushiro Arr**	**43.99**	**13**	P	**P**	**20 02 04.5**	**-1.6**
	0.6nm,0.4s,baz=187,slow=8.5,SNR=4.3						
ODAN	**Odare**	**51.00**	**312**	*eP*	**P**	**20 03 00.7**	**+0.9**
	4.4nm,0.5s						
TAPN	**Taplejung**	**51.05**	**313**	*eP*	**P**	**20 03 00.8**	**+0.6**
	3.8nm,0.4s						
RAMN	**Ramite**	**51.64**	**312**	*eP*	**P**	**20 03 05.9**	**+1.5**
	10nm,0.6s						
GUN	**Gumba**	**52.70**	**312**	*eP*	**P**	**20 03 12.6**	**+0.3**
PKI	**Pulchoki**	**52.86**	**312**	*eP*	**P**	**20 03 14.3**	**+0.9**
KKN	**Kakani**	**53.08**	**312**	*eP*	**P**	**20 03 15.6**	**+0.8**
	4.1nm,0.5s						
KOLN	**Koldanda**	**54.32**	**311**	*eP*	**P**	**20 03 24.8**	**+1.1**
	9.4nm,0.6s						
DANN	**Dangsing**	**54.51**	**312**	*eP*	**P**	**20 03 26.1**	**+1.0**
SONM	**Songino Array**	**57.18**	**343**	P	**P**	**20 03 42.8**	**-0.5**
	0.2nm,0.8s,baz=165,slow=6.0,SNR=2.3						
SONM				PcP	**PcP**	**20 04 30.6**	**-1.9**
	0.3nm,0.7s,baz=177,slow=3.4,SNR=2.5						
PETK	**Petropavlovsk-**	**64.68**	**20**	P	**P**	**20 04 32.7**	**-0.1**
	1.3nm,0.6s,baz=226,slow=4.5,SNR=5.1						
MKAR	**Makanchi Array**	**66.42**	**328**	P	**P**	**20 04 42.6**	**-1.3**
	0.2nm,0.5s,baz=112,slow=8.2,SNR=4.9						
KURBB	**Kurchatov Arra**	**70.75**	**329**	P	**P**	**20 05 08.6**	**-1.7**
	0.3nm,0.5s,baz=132,slow=5.0,SNR=5.1						
TORD	**Torodi Ar. Bea**	**126.19**	**281**	PKP	**PKPdf**	**20 12 50.5**	**-2.3**
	0.3nm,0.6s,baz=90,slow=1.7,SNR=2.8						
CPUP	**Villa Florida**	**147.05**	**172**	PKPbc	**PKPdf**	**20 13 30.9**	**+0.3**
	1.0nm,0.5s,baz=92,slow=19,SNR=3.8						

IDC 30 20:00:39.3±2.3, 28°.23N×52°.10E, h0km, mb3.6/7, mb1 3.6/8, mb1mx3.4/28, mbtmp3.6/8, ML2.9/1, Error ellipse: s-maj=50.7km s-min=27.2km az=168.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**19.08**	**312**	P	Pn	20 05 05.3	+1.0
	0.0nm,0.3s,baz=118,slow=14,SNR=3.5						
ZALV	**Zalesovo Beam**	**35.08**	**34**	P	P	20 07 33.4	-0.6
	0.4nm,0.3s,baz=245,slow=8.9,SNR=3.6						
FINES	**FINESS Array B**	**37.47**	**340**	P	P	20 07 53.8	-0.5
	1.8nm,0.8s,baz=151,slow=4.4,SNR=4.3						
HFS	**Hagfors**	**41.11**	**332**	P	P	20 08 24.4	-0.3
	1.2nm,0.6s,baz=142,slow=8.1,SNR=8.2						
ARCES	**ARCESS Array B**	**44.11**	**347**	P	P	20 08 49.0	0.0
	2.9nm,1.1s,baz=128,slow=9.9,SNR=8.3						
SONM	**Songino Array**	**46.00**	**50**	P	P	20 09 05.6	+1.0
	0.1nm,0.7s,baz=245,slow=9.2,SNR=2.7						
TORD	**Torodi Ar. Bea**	**49.14**	**263**	P	P	20 09 29.1	0.0
	0.4nm,0.6s,baz=63,slow=8.3,SNR=3.6						
YKA	**Yellowknife Ar**	**88.96**	**354**	P	P	20 13 34.0	-1.6
	0.1nm,0.6s,baz=11,slow=5.2,SNR=4.4						

*IDC **30** 20:04:17.8±4.3, 9°.84N×72°.71W, h111km±38km, mb3.3/4, mb1 3.8/6, mb1mx3.4/24, mbtmp3.6/6, Error ellipse: s-maj=28.4km s-min=24.2km az=57.0*
*ISCJB **30** 20:04:22.0±0.8, 10°.00N±0°.06×72°.70W±0°.07, h148km±9km, mb3.4/4, Error ellipse: s-maj=12.1km s-min=8.5km az=38.9*
*FUNV **30** 20:04:25.3, 10°.08N×72°.82W, h30km, MW4.1*

ISC 30 20:04:21.0±1.1, 10°.04N±0°.06×72°.82W±0°.08, h136km±11km, n23, σ1s84/34, mb3.5/4, 2C-1D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIGV	**El Vigia**	**1.87**	**130**	*i P*	**Pn**	**20 04 55.9**	**+2.1**
VIGV				*eS*	**Sn**	**20 05 17.1**	**-1.8**
CAPV	**Capacho**	**2.22**	**167**	*i P*	**Pn**	**20 04 59.8**	**+1.5**
CAPV				*eS*	**Sn**	**20 05 26.0**	**-0.8**
DABV	**Dabajuro**	**2.32**	**68**	*eP*	**Pn**	**20 05 00.9**	**+1.6**
DABV				*eS*	**Sn**	**20 05 26.7**	**-1.8**
SOCV	**Socops**	**2.61**	**132**	*eP*	**Pn**	**20 05 05.2**	**+2.2**
SOCV				*eS*	**Sn**	**20 05 33.9**	**-1.3**
CURV	**Curarigua**	**2.81**	**90**	*eP*	**Pn**	**20 05 07.8**	**+2.2**
CURV				*eS*	**Sn**	**20 05 38.9**	**-1.0**
IMOV	**Isla Los Monje**	**2.97**	**39**	*eP*	**Pn**	**20 05 09.6**	**+2.1**
IMOV				*eS*	**Sn**	**20 05 41.2**	**-2.2**
SIQV	**Siquisique**	**3.02**	**78**	*eP*	**Pn**	**20 05 10.3**	**+2.1**
SIQV				*eS*	**Sn**	**20 05 43.1**	**-1.5**
SANV	**Sanarito**	**3.28**	**99**	*eP*	**Pn**	**20 05 14.1**	**+2.5**
SANV				*eS*	**Sn**	**20 05 49.3**	**-1.4**
MONV	**Montecano**	**3.38**	**56**	*eP*	**Pn**	**20 05 14.2**	**+1.4**
TEPV	**Terepaima**	**3.57**	**91**	*eP*	**Pn**	**20 05 17.9**	**+2.5**
MAPV	**Macapo**	**4.30**	**92**	*eP*	**Pn**	**20 05 27.2**	**+2.2**
MAPV				*eS*	**Sn**	**20 06 13.3**	**-1.3**
BAUV	**El Baul**	**4.84**	**103**	*eS*	**Sn**	**20 06 26.5**	**-0.9**
BIRV	**Birongo**	**6.46**	**86**	*eP*	**Pn**	**20 05 55.8**	**+2.0**
CUPV	**Cepira**	**6.92**	**89**	*eP*	**Pn**	**20 06 01.6**	**+1.5**
PCRV	**Puerto La Cruz**	**8.06**	**88**	*eP*	**Pn**	**20 06 17.6**	**+2.2**
SJG	**San Juan**	**10.30**	**38**	P	**Pn**	**20 06 43.8**	**-1.5**
	9.3nm,0.3s,baz=225,slow=10.0,SNR=9.2						
ATAH	**Atahualpa**	**17.95**	**198**	P	**P**	**20 08 17.6**	**-3.6**
	0.3nm,0.3s,baz=31,slow=19,SNR=2.1						
PDAR	**Pinedale Array**	**45.70**	**322**	P	**P**	**20 12 30.0**	**+1.3**
	1.0nm,0.6s,baz=124,slow=10.0,SNR=3.8						
PDAR				PcP	**PcP**	**20 14 03.7**	**-0.7**
	0.4nm,0.6s,baz=98,slow=3.7,SNR=3.1						
NVAR	**Mina Array Bea**	**49.49**	**313**	P	**P**	**20 12 59.9**	**+1.9**
	0.2nm,0.4s,baz=113,slow=6.9,SNR=3.3						
YKA	**Yellowknife Ar**	**60.37**	**339**	P	**P**	**20 14 15.9**	**+0.4**
	0.9nm,0.6s,baz=128,slow=7.2,SNR=20						
TORD	**Torodi Ar. Bea**	**72.82**	**79**	P	**P**	**20 15 35.1**	**-0.4**
	0.4nm,0.7s,baz=278,slow=6.6,SNR=2.6						
ASAR	**Alice Springs**	**151.13**	**239**	PKP	**PKPdf**	**20 23 53.5**	**+0.5**
	1.1nm,0.8s,baz=164,slow=1.5,SNR=4.0						
ASAR				PKPbc	**PKPbc**	**20 23 58.4**	**-0.7**
	1.2nm,0.7s,baz=115,slow=3.0,SNR=13						
WRA	**Warramunga Arr**	**152.02**	**246**	PKPbc	**PKPbc**	**20 24 00.8**	**-0.3**
	1.0nm,0.4s,baz=100,slow=2.9,SNR=48						

*IDC **30** 20:04:20.7±24.0, 17°.88S×172°.78W, h0km, mb4.8/4, mb1 4.9/4, mb1mx4.0/21, mbtmp4.8/4, Error ellipse: s-maj=451.5km s-min=146.0km az=72.0*
*ISCJB **30** 20:05:46.5±0.9, 19°.5S±0°.3×177°.5W±0°.1, h550km, mb4.4/4, Error ellipse: s-maj=36.2km s-min=14.7km az=168.6*

*AUST **30** 20:05:47.8±0.0, 19°.48S×177°.32W, h557km, Error ellipse: s-maj=3.2km s-min=1.7km az=354.0*

ISC 30 20:05:47.5±1.1, 19°.5S±0°.3×177°.4W±0°.1, h550km, n18, σ0s49/18, mb4.4/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**7.10**	**88**	P	**P**	**20 07 36.7**	**+0.2**
	baz=7.0,SNR=4.6						
YNG	**Young**	**33.67**	**237**	S	**S**	**20 16 28.4**	**+0.9**
	baz=34,SNR=6.3						
CTA	**Charters Tower**	**34.13**	**263**	P	**P**	**20 11 47.5**	**+0.2**
	16nm,0.5s,baz=90,slow=11,SNR=21						
CMSA	**Cobar Meteorol**	**35.21**	**243**	P	**P**	**20 11 56.0**	**0.0**
	baz=35,SNR=12						
QLP	**Quilpie**	**35.87**	**251**	P	**P**	**20 12 01.6**	**-0.1**
	baz=36,SNR=8.2						
MTSU	**Mount Surprise**	**36.19**	**266**	P	**P**	**20 12 04.5**	**+0.2**
	baz=36,SNR=9.0						
TOO	**Toolangi**	**36.92**	**233**	P	**P**	**20 12 10.2**	**0.0**
	baz=37,SNR=4.0						
COEN	**Coen**	**38.07**	**272**	P	**P**	**20 12 20.5**	**+0.7**
	baz=38,SNR=4.5						
STKA	**Stephens Creek**	**38.71**	**243**	P	**P**	**20 12 25.2**	**+0.4**
	4.7nm,0.8s,baz=97,slow=10,SNR=9.7						
STKA	**Stephens Creek**	**38.71**	**243**	P	**P**	**20 12 24.9**	**+0.2**
	baz=39,SNR=5.8						
BBOO	**Buckleboo**	**43.47**	**243**	P	**P**	**20 13 02.3**	**-0.2**
	baz=44,SNR=24						
ASAR	**Alice Springs**	**45.27**	**256**	P	**P**	**20 13 16.4**	**-0.2**
	12nm,0.6s,baz=94,slow=7.6,SNR=110						
WRA	**Warramunga Arr**	**45.28**	**261**	P	**P**	**20 13 15.8**	**-0.8**
	2.5nm,0.4s,baz=97,slow=7.5,SNR=123						
KDU	**Kakadu**	**48.47**	**270**	P	**P**	**20 13 40.9**	**+0.2**
	baz=49,SNR=5.1						
MTN	**Manton Dam**	**49.70**	**270**	P	**P**	**20 13 50.0**	**+0.3**
	baz=50,SNR=4.4						
FITZ	**Fitzroy Crossi**	**53.70**	**262**	P	**P**	**20 14 18.8**	**+0.2**
	baz=54,SNR=12						
MEEK	**Meekatharra**	**58.75**	**250**	P	**P**	**20 14 52.5**	**-0.9**
	baz=59,SNR=8.6						
BLDU	**Ballidu**	**59.95**	**245**	P	**P**	**20 15 00.8**	**-0.4**
	baz=60,SNR=8.4						

MAN 30 20:27:00, 10°.10N×125°.70E, h112km, mb4.6, ML3.5, MS3.5, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.83**	**273**	*eP*	Pn	20 27 21.2	+1.5
MSLP				*eS*	Sn	20 27 35.8	+1.3
BUTP	**Butuan**	**1.12**	**184**	*eP*	Pn	20 27 23.3	+0.6
BUTP				*eS*	Sn	20 27 41.5	+1.6
LLP	**Lapu-Lapu**	**1.72**	**277**	*eP*	Pn	20 27 30.9	+1.3
LLP				*eS*	Sn	20 27 53.4	+1.2
TBP	**Tagbilaran**	**1.85**	**258**	*eP*	Pn	20 27 31.9	+0.6
BUKP	**Musuan**	**2.29**	**196**	*eP*	Pn	20 27 37.1	+0.2

IDC 30 20:48:39.4±1.7, 1°.91N×123°.07E, h0km, mb3.2/3, mb1 3.3/3, mb1mx3.1/23, mbtmp3.2/3, Error ellipse: s-maj=227.3km s-min=27.5km az=61.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.37**	**154**	P	P	20 53 59.6	+0.2
	0.3nm,0.5s,baz=332,slow=11,SNR=5.7						
STKA	**Stephens Creek**	**37.92**	**154**	P	P	20 55 58.8	+0.2
	0.6nm,0.7s,baz=354,slow=10,SNR=2.8						
MKAR	**Makanchi Array**	**57.05**	**328**	P	P	20 58 26.7	-0.6
	0.1nm,0.5s,baz=120,slow=8.7,SNR=4.2						

MEX 30 20:55:51.6±0.4, 15°.99N×97°.46W, h16km±999km, MD3.5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.76**	**302**	*i P*	Pb	20 56 03.6	-2.8
PNIG				*i S*	Sg	20 56 13.3	-3.2
VHO	**Vista Hermosa**	**1.28**	**33**	*eP*	Pn	20 56 11.5	-3.6
VHO				*i S*	Sb	20 56 26.8	-5.2
HUIG	**Huatulco**	**1.32**	**99**	*eP*	Pn	20 56 12.1	-3.3
HUIG				*eS*	Sn	20 56 27.4	-5.3
UTMO	**Huajuapan**	**1.86**	**350**	*eP*	Pn	20 56 20.2	-2.9
UTMO				*eS*	Sn	20 56 41.6	-4.8
CMIG	**Matias Romero**	**2.70**	**66**	*eP*	Pn	20 56 31.2	-3.2
CMIG				*eS*	Sn	20 57 02.4	-4.4

IDC 30 21:22:28.4±10.0, 49°.85S×123°.70E, h0km, mb3.7/2, mb1 3.9/2, mb1mx3.5/14, mbtmp3.7/2, MS3.4/1, Ms1 3.4/1, ms1mx2.9/21, Error ellipse: s-maj=585.5km s-min=29.9km az=93.0, Western Indian-Antarctic Ridge

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GRW	**Mount Saint Ca**	**1.47**	**24**	⇓*iP*	**Pn**	**22 01 27.3**	**+0.6**
GRW				*eS*	**Sn**	**22 01 46.9**	**-0.4**
TPR	**Prospect**	**1.51**	**75**	*eP*	**Pn**	**22 01 27.6**	**+0.5**
TPR				*eS*	**Sn**	**22 01 46.8**	**-1.2**
GRHS	**Sauteurs**	**1.53**	**23**	*eP*	**Pn**	**22 01 28.9**	**+1.4**
GRHS				*eS*	**Sn**	**22 01 48.1**	**-0.4**
BOT	**Bacolet**	**1.56**	**77**	*eP*	**Pn**	**22 01 28.2**	**+0.5**
BOT				*eS*	**Sn**	**22 01 47.9**	**-1.1**
GRIC	**Isle de Caille**	**1.61**	**24**	*eP*	**Pn**	**22 01 30.0**	**+1.7**
GRIC				*eS*	**Sn**	**22 01 49.8**	**-0.3**
GRSS	**Sisters**	**1.61**	**23**	*eP*	**Pn**	**22 01 30.2**	**+1.8**
GRSS				*eS*	**Sn**	**22 01 50.5**	**+0.3**
TOSP	**Speyside**	**1.77**	**74**	*eP*	**Pn**	**22 01 30.3**	**+0.1**
TOSP				*eS*	**Sn**	**22 01 51.4**	**-2.0**
ORIV	**Oritupano**	**2.06**	**213**	⇑*iP*	**Pn**	**22 01 36.1**	**+2.2**
ORIV				*eS*	**Sn**	**22 02 01.5**	**+1.5**
PCRV	**Puerto La Cruz**	**2.42**	**255**	*eP*	**Pn**	**22 01 39.3**	**+0.9**
PCRV				*eS*	**Sn**	**22 02 08.2**	**+0.1**
SVB	**Belmont**	**2.64**	**22**	*eP*	**Pn**	**22 01 41.8**	**+0.4**
SVB				*eS*	**Sn**	**22 02 12.8**	**-0.5**
PRGV	**PARIAGUAN**	**3.11**	**229**	*eP*	**Pn**	**22 01 48.9**	**+1.5**
PRGV				*eS*	**Sn**	**22 02 25.6**	**+1.4**
GURV	**El Guri**	**3.13**	**195**	⇑*iP*	**Pn**	**22 01 49.5**	**+1.7**
GURV				*eS*	**Sn**	**22 02 24.2**	**-0.6**
MCLT	**Moule a Chique**	**3.16**	**24**	*eP*	**Pn**	**22 01 49.4**	**+1.2**
MCLT				*eS*	**Sn**	**22 02 24.2**	**-1.3**
CUPV	**Cœpira**	**3.55**	**258**	⇑*eP*	**Pn**	**22 01 55.2**	**+2.0**
CUPV				*eS*	**Sn**	**22 02 34.6**	**0.0**
BIRV	**Birongo**	**3.95**	**266**	*eP*	**Pn**	**22 02 00.4**	**+1.8**
BIRV				*eS*	**Sn**	**22 02 43.9**	**-0.3**
MVM	**Montagne Vaucl**	**3.96**	**20**	*eP*	**Pn**	**22 02 00.4**	**+1.6**
FDF	**Fort de France**	**4.05**	**15**	*eP*	**Pn**	**22 02 00.9**	**+0.9**
MERV	**Las Mercedes**	**4.26**	**249**	*eP*	**Pn**	**22 02 03.6**	**+0.8**
MERV				*eS*	**Sn**	**22 02 51.7**	**0.0**
LUEV	**Luepa**	**5.00**	**171**	*eP*	**Pn**	**22 02 13.2**	**+0.3**
LUEV				*eS*	**Sn**	**22 03 06.4**	**-3.3**
TURV	**Turiamo**	**5.49**	**267**	*eP*	**Pn**	**22 02 19.9**	**+0.5**
TURV				*eS*	**Sn**	**22 03 18.3**	**-3.1**
BAUV	**El Baul**	**5.99**	**252**	⇑*eP*	**Pn**	**22 02 26.5**	**+0.5**
BAUV				*eS*	**Sn**	**22 03 30.2**	**-3.1**
MAPV	**Macapo**	**6.17**	**262**	⇑*eP*	**Pn**	**22 02 28.8**	**+0.2**
MAPV				*eS*	**Sn**	**22 03 33.9**	**-4.0**

*IDC **30** 22:09:27.2±1.7,36°.00N×141°.52E, h0km, mb3.7/5, mb1 3.7/7, mb1mx3.5/26, mbtmp3.7/7, ML3.2/1, MS2.6/2, Ms1 2.6/2, ms1mx2.0/57, Error ellipse: s-maj=39.2km s-min=23.2km az=70.0*

*ISCJB **30** 22:09:29.9±1.2,36°.06N±0°.04×141°.44E±0°.07, h26km±7km, mb3.6/5, Error ellipse: s-maj=10.2km s-min=6.8km az=162.5*

*JMA **30** 22:09:30.8±0.1,36°.04N×141°.37E, h40km±2km, M3.4*

JMA Felt I J1

ISC 30 22:09:30.8±1.1,**36°.08N**±0°.04×**141°.39E**±0°.09,**h21**km±5km, **n18**,σ1§**06**/24,**mb3.7**/5,**2D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.57**	**229**	P	**Pb**	**22 09 41.8**	**-0.3**
CHOJ				S	**Sb**	**22 09 49.9**	**+0.1**
JHO	**Hitachi**	**0.85**	**309**	⇓P	**Pn**	**22 09 46.5**	**-1.1**
JHO				*eS*	**Sb**	**22 09 58.4**	**+0.6**
JYT	**Yasato**	**0.97**	**279**	P	**Pn**	**22 09 48.0**	**-1.3**
JYT				*eS*	**Sn**	**22 10 00.6**	**-1.9**
ONAJ	**Iwakimizuishiy**	**1.13**	**335**	P	**Pn**	**22 09 50.5**	**-1.0**
JFK	**Kawauchi**	**1.35**	**342**	P	**Pn**	**22 09 53.9**	**-0.6**
BSO1	**Boso 1**	**1.46**	**193**	P	**Pn**	**22 09 55.8**	**+0.3**
BSO3	**Boso 3**	**1.46**	**210**	P	**Pn**	**22 09 55.8**	**+0.1**
JAG	**Ashikaga**	**1.60**	**283**	P	**Pn**	**22 09 57.0**	**-0.9**
JAG				S	**Sn**	**22 10 16.6**	**-1.3**
JFT	**Otama**	**1.67**	**330**	⇓P	**Pn**	**22 09 59.4**	**+0.5**
JFT				*eS*	**Sn**	**22 10 19.3**	**-0.3**
MJAR	**Matsushiro Arr**	**2.61**	**281**	Pn	**Pn**	**22 10 12.3**	**+0.5**
	2.0nm,0.3s,baz=114,slow=7.3,SNR=28						
MJAR				Sn	**Sn**	**22 10 44.8**	**+2.0**
	3.3nm,0.3s,baz=146,slow=14,SNR=5.2						
MAT	**Matsushiro**	**2.61**	**281**	P	**Pn**	**22 10 12.4**	**+0.6**
MAT				S	**Sn**	**22 10 44.6**	**+1.7**
JHJ	**Hachijo jima 2**	**3.23**	**205**	Pn	**Pn**	**22 10 19.6**	**-0.8**
	7.6nm,0.3s,baz=256,slow=23,SNR=17						
JHJ				Sn	Sn	22 10 51.8	-6.5
	6.3nm,0.3s,baz=72,slow=23,SNR=1.5						
JHJ				LR	LR	22 10 57.4	
	comp=Z,185nm,19.9s,baz=78,slow=28						
KSRS	**Korea Array**	**10.89**	**281**	LR	LR	22 16 06.1	
	comp=Z,20nm,21.7s,baz=90,slow=36						
SONM	**Songino Array**	**28.31**	**305**	P	**P**	**22 15 23.3**	**+0.2**
	0.3nm,0.4s,baz=98,slow=9.4,SNR=2.5						
ZALV	**Zalesovo Beam**	**42.55**	**313**	P	**P**	**22 17 25.6**	**+0.8**
	0.8nm,0.5s,baz=89,slow=6.6,SNR=5.8						
MKAR	**Makanchi Array**	**44.61**	**303**	P	**P**	**22 17 42.3**	**+0.7**
	0.6nm,0.7s,baz=83,slow=9.2,SNR=8.4						
WRA	**Warramunga Arr**	**56.11**	**188**	P	**P**	**22 19 07.5**	**-1.2**
	0.5nm,0.6s,baz=6.5,slow=7.8,SNR=5.9						
FINES	**FINESS Array B**	**69.65**	**332**	P	**P**	**22 20 38.9**	**+0.6**
	1.5nm,0.9s,baz=79,slow=7.2,SNR=2.9						

*CSEM **30** 22:31:38.3±0.2,37°.87N×43°.02E, h2km, MD3.5, Error ellipse: s-maj=4.1km s-min=3.9km az=13.0*

*DDA **30** 22:31:38.1,37°.89N×43°.04E, h13km, MD3.5*

*ISK **30** 22:31:38.0,37°.87N×43°.03E, h9km, MD3.6*

ISC 30 22:31:38.9±1.1,**37°.89N**±0°.02×**43°.04E**±0°.02,**h7**km±12km, **n53**,σ0§**75**/66,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	**Gevas**	**0.42**	**2**	*i* P	**Pg**	**22 31 46.5**	**-0.6**
GEVA				*i* S	**Sg**	**22 31 53.4**	**+0.7**
GEVA	**Gevas**	**0.42**	**2**	*i* P	**Pg**	**22 31 46.5**	**-0.6**
GEVA				*i* S	**Sg**	**22 31 53.4**	**+0.7**
HAKT	**HAKKARI**	**0.62**	**122**	*i* P	**Pg**	**22 31 50.2**	**-0.7**
HAKT				*i* S	**Sg**	**22 31 59.6**	**+0.6**
HAKT	**HAKKARI**	**0.62**	**122**	*i* P	**Pg**	**22 31 50.2**	**-0.7**
HAKT				*i* S	**Sg**	**22 31 59.6**	**+0.6**
TVAN	**Van**	**0.70**	**24**	*i* P	**Pg**	**22 31 52.4**	**+0.1**
TVAN				*i* S	**Sb**	**22 32 02.5**	**-1.0**
TVAN	**Van**	**0.70**	**24**	*i* P	**Pg**	**22 31 52.4**	**+0.1**
TVAN				*i* S	**Sb**	**22 32 02.5**	**-1.0**
VANB	**Van**	**0.76**	**21**	*e*PG	**Pg**	**22 31 52.9**	**-0.5**
VANB				*e*SG	**Sb**	**22 32 04.7**	**-0.3**
VANB	**Van**	**0.76**	**21**	*e*Pg	**Pg**	**22 31 52.9**	**-0.5**
VANB				*e*Sg	**Sb**	**22 32 04.7**	**-0.3**
CUKT	**Cukurca**	**0.78**	**145**	*e*PG	**Pg**	**22 31 53.8**	**-0.1**
CUKT				*e*SG	**Sg**	**22 32 04.2**	**+0.1**
CUKT	**Cukurca**	**0.78**	**145**	*e*Pg	**Pg**	**22 31 53.8**	**-0.1**
CUKT				*e*Sg	**Sg**	**22 32 04.2**	**+0.1**
TATV	**Tatvan**	**0.87**	**316**	*i* P	**Pg**	**22 31 54.6**	**-1.0**
TATV				*i* S	**Sg**	**22 32 06.6**	**-0.3**
TATV	**Tatvan**	**0.87**	**316**	*i* P	**Pg**	**22 31 54.6**	**-1.0**
TATV				*i* S	**Sg**	**22 32 06.6**	**-0.3**
BTMT	**Batman**	**1.26**	**284**	*e*PN	**Pg**	**22 32 03.3**	**+0.2**
BTMT	**Batman**	**1.26**	**284**	*e*Pn	**Pg**	**22 32 03.3**	**+0.2**
BEST	**Besiri**	**1.40**	**271**	*i* P	**Pb**	**22 32 05.1**	**-0.4**
BEST				*i* S	**Sg**	**22 32 25.2**	**+1.2**
CLDR	**Caldiran**	**1.43**	**28**	*e*PN	**Pn**	**22 32 05.5**	**+0.1**
CLDR	**Caldiran**	**1.43**	**28**	*e*Pn	**Pn**	**22 32 05.5**	**+0.1**
TUTA	**Tutak**	**1.52**	**353**	*i* P	**Pn**	**22 32 06.3**	**-0.4**
TUTA	**Tutak**	**1.52**	**353**	*i* P	**Pn**	**22 32 06.3**	**-0.4**
DYDN	**Diyadin**	**1.73**	**17**	*i* P	**Pb**	**22 32 11.3**	**+0.2**
DYDN	**Diyadin**	**1.73**	**17**	*i* P	**Pb**	**22 32 11.3**	**+0.2**
VRTB	**Varto-Mus**	**1.78**	**316**	*e*PN	**Pn**	**22 32 10.2**	**0.0**
VRTB	**Varto-Mus**	**1.78**	**316**	*e*Pn	**Pn**	**22 32 10.2**	**0.0**
MARD	**Mardin**	**1.89**	**253**	*i* P	**Pn**	**22 32 11.7**	**0.0**
MARD				*i* S	**Sb**	**22 32 37.9**	**+0.3**
BNGB	**Bing¯¶l**	**2.16**	**301**	*e*PN	**Pn**	**22 32 15.6**	**+0.3**
DIY	**Diyarbakir**	**2.23**	**271**	*e*PN	**Pn**	**22 32 16.2**	**-0.1**
DIY	**Diyarbakir**	**2.23**	**271**	*e*Pn	**Pn**	**22 32 16.2**	**-0.1**
BINT	**Bingol**	**2.24**	**297**	*e*Pn	**Pn**	**22 32 15.6**	**-0.8**
DIYA	**Diyarbakir**	**2.31**	**272**	*i* P	**Pn**	**22 32 16.7**	**-0.7**
DIYA	**Diyarbakir**	**2.31**	**272**	*i* P	**Pn**	**22 32 16.7**	**-0.7**
HOMI	**Horasan**	**2.33**	**338**	*i* P	**Pb**	**22 32 21.3**	**0.0**
EZM	**Erzurum**	**2.40**	**327**	*e*PN	**Pn**	**22 32 18.9**	**0.0**
GNI	**Garni**	**2.62**	**30**	*e*PN	**Pn**	**22 32 21.4**	**-0.3**
GNI	**Garni**	**2.62**	**30**	*e*Pn	**Pn**	**22 32 21.4**	**-0.3**
KOPT	**Kop Dagi**	**2.91**	**318**	*i* P	**Pg**	**22 32 33.1**	**-1.5**
SVRC	**Sivrice-ELAZID**	**2.99**	**281**	*e*PN	**Pn**	**22 32 26.6**	**-0.2**
SVRC	**Sivrice-ELAZID**	**2.99**	**281**	*e*Pn	**Pn**	**22 32 26.6**	**-0.2**
ERZN	**Erzincan**	**3.10**	**304**	*e*PN	**Pn**	**22 32 28.0**	**-0.3**
DDEM	**Demirkent**	**3.16**	**342**	*i* P	**Pn**	**22 32 31.4**	**+2.3**
DDEM	**Demirkent**	**3.16**	**342**	*i* P	**Pn**	**22 32 31.4**	**+2.3**
BAYT	**Ayd¯–ntepe-Bay**	**3.37**	**319**	*e*PN	**Pn**	**22 32 33.5**	**+1.4**
BAYT	**Ayd¯–ntepe-Bay**	**3.37**	**319**	*e*Pn	**Pn**	**22 32 33.5**	**+1.4**
URFA	**Urfa**	**3.38**	**264**	*e*PN	**Pn**	**22 32 32.5**	**+0.4**
URFA	**Urfa**	**3.38**	**264**	*e*Pn	**Pn**	**22 32 32.5**	**+0.4**
EZC	**Erzincan**	**3.43**	**304**	*e*Pn	Pn	22 32 28.0	-4.9
MALT	**Malatya**	**3.67**	**278**	*e*PN	**Pn**	**22 32 36.6**	**+0.5**
MALT	**Malatya**	**3.67**	**278**	*e*Pn	**Pn**	**22 32 36.6**	**+0.5**
KELT	**Kelkit**	**3.71**	**309**	*i* P	**Pb**	**22 32 46.5**	**+1.6**
AKCD	**Akcadag**	**4.06**	**277**	*i* P	**Pn**	**22 32 41.6**	**+0.1**
AKCD	**Akcadag**	**4.06**	**277**	*i* P	**Pn**	**22 32 41.6**	**+0.1**
GZT	**Gaziantep**	**4.38**	**265**	*i* P	**Pb**	**22 32 56.6**	**+0.3**
KUZU	**Kuzuini**	**4.88**	**259**	*i* P	**Pn**	**22 32 51.8**	**-1.0**
KUZU	**Kuzuini**	**4.88**	**259**	*i* P	**Pn**	**22 32 51.8**	**-1.0**

*CSEM **30** 22:42:26.8,37°.86N×42°.97E, h15km, ML3.9, After DDA*

*DDA **30** 22:42:26.8,37°.86N×42°.97E, h15km, ML3.9*

*ISK **30** 22:42:27.0,37°.87N×43°.01E, h7km, MD4.0*

ISC 30 22:42:27.9±1.2,**37°.88N**±0°.03×**43°.04E**±0°.03,**h4**km±12km, **n46**,σ0§**84**/58,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	**Gevas**	**0.44**	**2**	*i* P	**Pg**	**22 42 35.7**	**-0.6**
GEVA				*i* S	**Sg**	**22 42 43.7**	**+1.7**
GEVA	**Gevas**	**0.44**	**2**	*i* P	**Pg**	**22 42 35.7**	**-0.6**
GEVA				*i* S	**Sg**	**22 42 43.7**	**+1.7**
HAKT	**HAKKARI**	**0.61**	**121**	*i* P	**Pg**	**22 42 39.2**	**-0.5**
HAKT				*i* S	**Sb**	**22 42 49.3**	**-1.1**
HAKT	**HAKKARI**	**0.61**	**121**	*i* P	**Pg**	**22 42 39.2**	**-0.5**
HAKT				*i* S	**Sb**	**22 42 49.3**	**-1.1**
TVAN	**Van**	**0.71**	**24**	*i* P	**Pg**	**22 42 41.6**	**+0.1**
TVAN	**Van**	**0.71**	**24**	*i* P	**Pg**	**22 42 41.6**	**+0.1**
VANB	**Van**	**0.77**	**21**	*e*PG	**Pg**	**22 42 41.8**	**-0.8**
VANB				*e*SG	**Sb**	**22 42 54.3**	**-0.5**
CUKT	**Cukurca**	**0.77**	**144**	*e*PG	**Pg**	**22 42 42.1**	**-0.6**
CUKT				*e*SG	**Sb**	**22 42 53.8**	**-1.0**
TATV	**Tatvan**	**0.88**	**316**	*i* P	**Pg**	**22 42 43.7**	**-1.0**
TATV				*i* S	**Sg**	**22 42 56.3**	**+0.1**
TATV	**Tatvan**	**0.88**	**316**	*i* P	**Pg**	**22 42 43.7**	**-1.0**
TATV				*i* S	**Sg**	**22 42 56.3**	**+0.1**
BTMT	**Batman**	**1.27**	**285**	*e*PN	**Pg**	**22 42 52.2**	**+0.1**
BTMT				*e*SN	**Sn**	**22 43 11.7**	**+1.8**
BEST	**Besiri**	**1.40**	**271**	*i* P	**Pb**	**22 42 54.5**	**-0.2**
BEST				*i* S	**Sg**	**22 43 13.5**	**+0.6**
CLDR	**Caldiran**	**1.44**	**28**	*e*PN	**Pn**	**22 42 54.3**	**-0.6**
TUTA	**Tutak**	**1.54**	**353**	*i* P	**Pb**	**22 42 56.8**	**-0.2**
TUTA	**Tutak**	**1.54**	**353**	*i* P	**Pb**	**22 42 56.8**	**-0.2**
VRTB	**Varto-Mus**	**1.79**	**316**	*e*PN	**Pn**	**22 42 58.9**	**-0.7**
MARD	**Mardin**	**1.88**	**253**	*i* P	**Pn**	**22 43 00.8**	**-0.1**
MARD				*i* S	**Sb**	**22 43 26.4**	**-0.4**
BNGB	**Bing¯¶l**	**2.17**	**302**	*e*PN	**Pn**	**22 43 04.2**	**-0.6**
DIY	**Diyarbakir**	**2.23**	**271**	*e*PN	**Pn**	**22 43 05.1**	**-0.5**
DIYA	**Diyarbakir**	**2.31**	**272**	*i* P	**Pn**	**22 43 06.7**	**0.0**
DIYA				*i* S	**Sb**	**22 43 37.3**	**-1.8**
DIYA	**Diyarbakir**	**2.31**	**272**	*i* P	**Pn**	**22 43 06.7**	**0.0**
DIYA				*i* S	**Sb**	**22 43 37.3**	**-1.8**
HOMI	**Horasan**	**2.34**	**338**	*i* P	**Pb**	**22 43 10.6**	**-0.1**
ERZM	**Erzurum**	**2.41**	**328**	*i* P	**Pn**	**22 43 06.6**	**-1.8**
ERZM	**Erzurum**	**2.41**	**328**	*i* P	**Pn**	**22 43 06.6**	**-1.8**
EZM	**Erzurum**	**2.41**	**328**	*e*PN	**Pn**	**22 43 08.0**	**-0.4**
GNI	**Garni**	**2.63**	**30**	*e*PN	**Pn**	**22 43 11.6**	**+0.4**
KARS	**Kars**	**2.75**	**1**	*e*PN	**Pn**	**22 43 12.3**	**-0.5**
SVRC	**Sivrice-ELAZID**	**2.99**	**281**	*e*PN	**Pn**	**22 43 15.9**	**-0.3**
PTK	**Pertek**	**3.04**	**291**	*e*PN	**Pn**	**22 43 16.7**	**-0.2**
ERZN	**Erzincan**	**3.11**	**304**	*e*PN	**Pn**	**22 43 17.8**	**0.0**
DDEM	**Demirkent**	**3.17**	**342**	*i* P	**Pb**	**22 43 25.3**	**+0.4**
DDEM	**Demirkent**	**3.17**	**342**	*i* P	**Pb**	**22 43 25.3**	**+0.4**
BAYT	**Ayd¯–ntepe-Bay**	**3.38**	**319**	*e*PN	**Pn**	**22 43 21.9**	**+0.4**
URFA	**Urfa**	**3.38**	**264**	*e*PN	**Pn**	**22 43 21.3**	**-0.2**
EZC	**Erzincan**	**3.44**	**304**	*e*PN	**Pn**	**22 43 22.5**	**+0.2**
MALT	**Malatya**	**3.67**	**278**	*e*PN	**Pn**	**22 43 25.9**	**+0.4**
MYA	**Malataya**	**3.67**	**278**	*e*PN	**Pn**	**22 43 26.0**	**+0.5**
BCA	**Borcka**	**3.73**	**343**	*e*PN	**Pn**	**22 43 26.6**	**+0.4**
GUMT	**Gumushane**	**3.79**	**314**	*e*PN	**Pn**	**22 43 27.4**	**+0.3**
ILIC	**ilic-Erzincan**	**3.84**	**296**	*e*PN	**Pn**	**22 43 27.9**	**+0.1**
ESPY	**Espiye-Giresun**	**4.52**	**314**	*e*PN	**Pn**	**22 43 37.6**	**+0.6**
GAZ	**Gaziantep**	**4.69**	**263**	*e*PN	**Pn**	**22 43 40.2**	**+0.7**
KMRS	**Kahramanmaras**	**4.89**	**268**	*e*PN	**Pn**	**22 43 42.8**	**+0.7**
SARI	**SarD1z-Kayseri**	**5.06**	**281**	*e*PN	Pn	22 43 48.4	+3.8
KOZT	**Kozan**	**5.74**	**268**	*e*PN	**Pn**	**22 43 55.4**	**+1.6**
HTY	**Hatay**	**5.80**	**255**	*e*PN	**Pn**	**22 43 55.6**	**+1.0**

*ISCJB **30** 22:46:51.7±1.0,32°.19N±0°.02×104°.93E±0°.03, h14km±6km, mb4.4/64, MS3.2/9, Error ellipse: s-maj=4.7km s-min=4.0km az=20.3*

*IDC **30** 22:46:51.1±0.5,32°.22N×104°.98E, h0km, mb4.3/35, mb1 4.3/38, mb1mx4.3/44, mbtmp4.2/38, ML3.8/3, MS3.2/11, Ms1 3.2/11, ms1mx3.0/46, Error ellipse: s-maj=14.6km s-min=10.7km az=41.0*

*MOS **30** 22:46:54.3±0.8,32°.19N×104°.98E, h33km, mb4.8/28, Error ellipse: s-maj=8.7km s-min=5.1km az=110.4*

*BJI **30** 22:46:54.0,32°.26N×104°.85E, h19km, mB4.4/3, mb4.4/10, ML4.3/20, Ms4.0/13, Ms7 3.7/12*

*NEIC **30** 22:46:55.1±1.2,32°.21N×104°.92E, h24km±9km, mb4.3/12, Error ellipse: s-maj=4.3km s-min=3.9km az=76.0*

ISC 30 22:46:55.4±0.9,**32°.20N**±0°.03×**104°.95E**±0°.03,**h28**km±6km, **n227**,σ1§**00**/261,**mb4.5**/64,**MS3.1**/9,**11C-11D,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.64**	**219**	Pn	**Pn**	**22 47 22.8**	**+0.3**
CD2				Pg	**Pb**	**22 47 25.5**	**+0.4**
CD2				Sn	**Sb**	**22 47 44.5**	**-0.9**
CD2				Sg	**Sn**	**22 47 46.0**	**+3.3**
CD2				*s*max	*s*max		
	comp=N,6μm,0.6s						
CD2				*s*max	*s*max		
	comp=E,5μm,0.4s						
XAN	**Xi'an**	**3.80**	**60**	Pn	**Pn**	**22 47 52.5**	**+0.4**
XAN				Pg	**Pb**	**22 48 02.0**	**+0.2**
XAN				Sn	**Sn**	**22 48 38.0**	**+2.1**
XAN				Sg	**Sb**	**22 48 49.3**	**+1.9**
XAN				*s*max	*s*max		
	comp=N,1μm,0.7s						
XAN				*s*max	*s*max		
	comp=E,630nm,0.6s						
XAN				LR	LR		
	comp=N,2μm,6.7s						
XAN				LR	LR		
	comp=E,270nm,6.7s						
XAN				LR	LR		
	comp=Z,270nm,7.2s						
LZH	**Lanzhou**	**3.98**	**347**	*e*Pn	**Pn**	**22 47 54.0**	**-0.7**
LZH				Pg	Pb	22 48 01.0	-3.9
LZH				Sn	**Sn**	**22 48 38.3**	**-2.3**
LZH				Sg	**Sb**	**22 48 51.5**	**-1.2**
LZH				*s*max	*s*max		
	comp=N,680nm,1.0s						
LZH				*s*max	*s*max		
	comp=E,1μm,0.7s						
LZH				LR	LR		
	comp=N,1μm,5.3s						
LZH				LR	LR		
	comp=E,3μm,5.0s						
LZH				LR	LR		
	comp=Z,1μm,5.4s						
LZH	**Lanzhou**	**3.98**	**347**	*e*P	**Pn**	**22 47 54.1**	**-0.7**
LZH						22 48 38.2	
LZH	**Lanzhou**	**3.98**	**347**	*e*Pn	**Pn**	**22 47 54.1**	**-0.7**
LZH				Pg	Pb	22 48 01.1	-3.9
LZH				Sn	**Sn**	**22 48 38.2**	**-2.3**
LZH				Sg	**Sb**	**22 48 51.5**	**-1.2**
GYA	**Guiyang**	**5.92**	**165**	Pn	**Pn**	**22 48 21.5**	**+0.2**
GYA				Pg	Pb	22 48 43.5	+5.6
GYA				Sn	**Sn**	**22 49 29.0**	**+0.8**
GYA				*s*max	*s*max		
	comp=N,370nm,0.8s						
GYA				*s*max	*s*max		
	comp=E,310nm,0.9s						
KMI	**Kunming**	**7.32**	**196**	P	Pn	22 48 32.5	-8.1
KMI				S	**Sn**	**22 50 03.8**	**+0.9**
KMI				*p*max	*p*max		
	comp=Z,14nm,0.5s						
KMI				*s*max	*s*max		
	comp=N,53nm,1.0s						
KMI				*s*max	*s*max		
	comp=E,35nm,1.0s						
KMI				LR	LR		
	comp=N,330nm,4.7s						
KMI				LR	LR		
	comp=E,350nm,4.7s						
KMI				LR	LR		
	comp=Z,170nm,5.0s						
KMI	**Kunming**	**7.32**	**196**	P	Pn	22 48 32.6	-8.1
KMI				S	**Sn**	**22 50 03.7**	**+0.9**
KMI	**Kunming**	**7.32**	**196**	P	Pn	22 48 32.6	-8.1
KMI				S	**Sn**	**22 50 03.7**	**+0.9**
WHN	**Wuhan**	**8.20**	**99**	⇓P	**Pn**	**22 48 54.0**	**+1.5**
WHN				S	**Sn**	**22 50 20.8**	**-3.5**
WHN				LR	LR		
	comp=N,1μm,5.4s						
WHN				LR	LR		
	comp=E,2μm,4.4s						
WHN				LR	LR		
	comp=Z,2μm,5.1s						
GTA	**Gaotai**	**8.31**	**331**	*e*P	**Pn**	**22 48 55.0**	**+0.8**
GTA				pP	Pn	22 48 59.5	+5.3
GTA				sP		22 49 02.0	
GTA				S	**Sn**	**22 50 30.5**	**+3.3**
GTA				sS	Sn	22 50 35.3	+8.1
GTA				*p*max	*p*max		
	comp=Z,4.0nm,1.1s						
GTA				*p*max	*p*max		
	comp=Z,91nm,5.7s						
GTA				LR	LR		
	comp=N,340nm,9.7s						
GTA				LR	LR		
	comp=E,380nm,9.3s						
GTA				LR	LR		
	comp=Z,290nm,10.0s						
LSA	**Lhasa**	**12.11**	**262**	*e*P	**Pn**	**22 49 46.0**	**-0.5**
LSA				*e*		22 51 59.4	
LSA				*p*max	*p*max		
	comp=Z,3.0nm,0.4s						
LSA	**Lhasa**	**12.11**	**262**	*e*Pn	**Pn**	**22 49 46.0**	**-0.5**
	comp=Z,2.7nm,0.4s						
LSA				*e*Sn	**Sn**	**22 51 59.4**	**-1.4**
QIZ	**Qiongzhong**	**13.84**	**160**	P	**Pn**	**22 50 08.0**	**-1.7**
QIZ				S	**Sn**	**22 52 40.0**	**-2.5**
CHTO	**Chiang Mai**	**14.39**	**204**	*e*P	**Pn**	**22 50 17.6**	**+0.3**
CHTO				*p*max	*p*max		
	comp=Z,4.0nm,0.8s						
CHTO	**Chiang Mai**	**14.39**	**204**	*e*Pn	**Pn**	**22 50 17.6**	**+0.3**
	comp=Z,3.6nm,0.8s						
CM31	**Chiang Mai Arr**	**14.72**	**203**	*e*Pn	**Pn**	**22 50 21.2**	**-0.6**
	comp=Z,4.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**14.72**	**203**	Pn	**Pn**	**22 50 21.5**	**-0.2**
CMAR	**Chiang Mai Arr**	**14.72**	**203**	Pn	**Pn**	**22 50 21.5**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=13,slow=12,SNR=9.7						
SONM	**Songino Array**	**15.65**	**4**	Pn	**Pn**	**22 50 33.4**	**-0.6**
SONM	**Songino Array**	**15.65**	**4**	Pn	**Pn**	**22 50 33.4**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=187,slow=11,SNR=18						
SONM				LR	LR	22 57 25.0	
	comp=Z,44nm,21.9s,baz=248,slow=41						
ULN	**Ulaanbaatar**	**15.72**	**5**	*e*Pn	**Pn**	**22 50 34.1**	**-0.9**
	comp=Z,6.8nm,0.8s						
ULN				*e*Sn	**Sn**	**22 53 25.8**	**-2.6**
TAPN	**Taplejung**	**15.73**	**257**	*e*P	**Pn**	**22 50 34.3**	**-1.0**
ODAN	**Odare**	**16.18**	**255**	*e*P	**Pn**	**22 50 39.7**	**-1.4**
	comp=Z,17nm,0.5s						
RAMN	**Ramite**	**16.80**	**257**	*e*P	**Pn**	**22 50 48.6**	**-0.3**
	comp=Z,20nm,0.8s						
GUN	**Gumba**	**17.05**	**260**	*e*P	**Pn**	**22 50 50.3**	**-1.9**
PKI	**Pulchoki**	**17.56**	**260**	*e*P	**Pn**	**22 50 56.2**	**-2.3**
PKIN	**Phulchoki**	**17.57**	**260**	*e*P	**Pn**	**22 50 56.5**	**-2.1**
	comp=Z,9.9nm,0.6s						
**KKN

BVAR 22 56 09.5
BVAR Borovoye Array 32.40 320 P **P** **22 53 23.1 +0.6**
BVAR PcP **PcP** **22 56 09.4 -0.1**
BVAR Borovoye Array 32.40 320 P **P** **22 53 23.1 +0.6**
comp=Z,1.6nm,0.6s,baz=99,slow=9.8,SNR=12
BVAR PcP **PcP** **22 56 09.5 -0.1**
comp=Z,1.4nm,0.7s,baz=151,slow=3.3,SNR=7.7
BRVK Borovoye 32.47 320 *de*P **P** **22 53 23.9 +0.7**
BRVK pmax pmax
comp=Z,7.0nm,1.7s
YAK Yakutsk 33.82 21 *e*P **P** **22 53 34.7 -0.2**
ABKAR Akbulak array 37.50 310 *e*P **P** **22 54 07.1 +0.5**
comp=Z,5.2nm,0.7s
ABKAR *e*PcP **PcP** **22 56 24.1 -0.3**
AKTO Aktyubinsk 38.93 312 P **P** **22 54 19.3 +0.7**
AKTO 22 56 28.2
AKTO pmax pmax
comp=Z,4.0nm,0.7s
AKTO pmax pmax
comp=Z,1.0nm,0.5s
AKTO MLR MLR
comp=Z,41nm,20.7s
AKTO Aktyubinsk 38.93 312 P **P** **22 54 19.4 +0.7**
AKTO PcP **PcP** **22 56 28.2 -0.7**
AKTO Aktyubinsk 38.93 312 P **P** **22 54 19.3 +0.7**
comp=Z,3.9nm,0.7s,baz=108,slow=8.0,SNR=20
AKTO PcP **PcP** **22 56 28.2 -0.7**
comp=Z,0.6nm,0.5s,baz=32,slow=9.5,SNR=2.8
AKTO LR LR 23 10 08.5
comp=Z,41nm,20.7s,baz=108,slow=36
SVE Sverdlovsk 39.06 322↓ *e*P **P** **22 54 20.6 +1.0**
SVE pmax pmax
comp=Z,14nm,0.9s
ARU Arti 40.02 321 *c i*P **P** **22 54 28.0 +0.4**
ARU 22 55 57.7
ARU S **S** **23 00 34.4 +3.0**
ARU SS **SS** **23 03 27.3 -1.5**
ARU pmax pmax
comp=Z,26nm,1.0s
SOKR Solikamsk 41.90 325 *e*P **P** **22 54 43.0 0.0**
SOKR pmax pmax
comp=Z,8.0nm,0.6s
SEY Seymchan 42.78 30↑ *e*P **P** **22 54 50.0 -0.2**
PETK Petropavlovsk- 42.90 45 P **P** **22 54 51.8 +0.5**
PETK Petropavlovsk- 42.90 45 P **P** **22 54 51.8 +0.5**
PETK Petropavlovsk- 42.90 45 P **P** **22 54 51.8 +0.5**
comp=Z,4.3nm,0.8s,baz=234,slow=3.3,SNR=7.5
GNI Garni 48.44 297 P **P** **22 55 37.3 +1.8**
GNI Garni 48.44 297 P **P** **22 55 37.3 +1.8**
comp=Z,2.7nm,0.7s,baz=56,slow=3.6,SNR=3.1
ZEI Tsey 48.63 301 *e*P **P** **22 55 36.7 -0.3**
ZEI pmax pmax
comp=Z,4.0nm,0.7s
KBZ Khabaz 49.21 302 P **P** **22 55 42.1 +1.0**
KBZ Khabaz 49.21 302 P **P** **22 55 42.0 +1.0**
KBZ Khabaz 49.21 302 P **P** **22 55 42.0 +1.0**
comp=Z,2.4nm,0.5s,baz=162,slow=5.7,SNR=13
KBZ LR LR 23 19 19.3
comp=Z,30nm,19.3s,baz=33,slow=40
KIV Kislovodsk 49.33 303 *de*P **P** **22 55 43.3 +1.2**
KIV *e**PP **pP** **22 55 51.6 +0.9**
KIV *e* 22 56 01.5
KIV *e*S **S** **23 02 48.8 +1.9**
KIV pmax pmax
comp=Z,9.0nm,1.0s
BILL Bilibino 49.88 26↓ *i*P **P** **22 55 46.1 +0.3**
BILL pmax pmax
comp=Z,36nm,1.6s
VSR Storozhevoye 50.88 312 *e*P **P** **22 55 53.4 -0.2**
VSR pmax pmax
comp=Z,3.0nm,0.5s
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,4.0nm,0.5s
JOF Joensuu 54.49 327 *e*P **P** **22 56 19.7 -0.5**
JOF pmax pmax
comp=Z,4.0nm,0.7s
JOF Joensuu 54.49 327 *ep* **P** **22 56 19.7 -0.5**
comp=Z,3.5nm,0.7s
KEV Kevo 56.03 336 *e*P **P** **22 56 30.1 -1.0**
KEV pmax pmax
comp=Z,2.0nm,0.4s
KEV Kevo 56.03 336 *e*P **P** **22 56 31.1 -0.1**
KEV Kevo 56.03 336 *ep* **P** **22 56 30.1 -1.0**
comp=Z,1.6nm,0.4s
ARCES ARCESS Array B 56.56 336 P **P** **22 56 34.8 -0.2**
ARCES ARCESS Array B 56.56 336 P **P** **22 56 34.8 -0.2**
comp=Z,4.9nm,0.7s,baz=79,slow=7.0,SNR=24
ASF Jabal al Asfar 56.65 290 P **P** **22 56 34.7 -1.6**
ASF Jabal al Asfar 56.65 290 P **P** **22 56 34.7 -1.6**
comp=Z,2.6nm,0.7s,baz=215,slow=22,SNR=4.2
BR131 Keskin Array S 56.83 299 *e*P **P** **22 56 37.2 -0.4**
comp=Z,1.5nm,0.6s
BRTR Keskin Array B 56.83 299 P **P** **22 56 37.1 -0.5**
BRTR Keskin Array B 56.83 299 P **P** **22 56 37.1 -0.5**
comp=Z,2.6nm,0.7s,baz=98,slow=6.6,SNR=15
KAF Kangasniemi 56.87 327 *e*P **P** **22 56 36.4 -0.9**
KAF pmax pmax
comp=Z,3.0nm,0.6s
KAF Kangasniemi 56.87 327 *ep* **P** **22 56 36.4 -0.9**
comp=Z,3.2nm,0.6s
FIA1 FINESS Array S 57.06 326 *e*P **P** **22 56 38.2 -0.4**
FINES FINESS Array B 57.06 326 P **P** **22 56 38.4 -0.2**
FINES FINESS Array B 57.06 326 P **P** **22 56 38.4 -0.2**
comp=Z,5.4nm,0.7s,baz=91,slow=7.8,SNR=42
AKASG Malin Array Be 57.17 313 *ce*P **P** **22 56 41.5 +2.0**
AKASG Malin Array Be 57.17 313 P **P** **22 56 39.0 -0.5**
AKASG Malin Array Be 57.17 313 P **P** **22 56 39.0 -0.5**
comp=Z,0.4nm,0.3s,baz=67,slow=7.5,SNR=4.8
SPITS Spitsbergen Ar 58.45 346 P **P** **22 56 48.0 -0.2**
SPITS Spitsbergen Ar 58.45 346 P **P** **22 56 48.0 -0.2**
comp=Z,3.8nm,0.9s,baz=105,slow=8.1,SNR=5.4
WRAB Tennant Creek 58.99 147 *e*P **P** **22 56 53.0 +0.4**
WRAB pmax pmax
comp=Z,11nm,0.7s
WRAB Tennant Creek 58.99 147 *e*P **P** **22 56 53.0 +0.4**
comp=Z,11nm,0.7s
WRA Warramunga Arr 58.99 147 P **P** **22 56 53.0 +0.4**
WRA PcP **PcP** **22 57 41.2 -0.2**
WRA Warramunga Arr 58.99 147 P **P** **22 56 53.0 +0.4**
comp=Z,7.6nm,0.6s,baz=340,slow=7.8,SNR=43
WRA PcP **PcP** **22 57 41.2 -0.2**
comp=Z,1.7nm,0.6s,baz=342,slow=3.9,SNR=5.5
EIL Elat 59.10 288 P **P** **22 56 55.0 +1.6**
EIL Elat 59.10 288 P **P** **22 56 55.0 +1.6**
comp=Z,2.4nm,0.6s,baz=9.8,slow=12,SNR=4.0
EIL LR LR 23 23 23.4
comp=Z,44nm,18.9s,baz=277,slow=37
VRI Vrincioaia 59.98 308↑ *i*P **P** **22 57 00.7 +1.4**
PLOR Plostina 60.04 308↓ *i*P **P** **22 57 01.3 +1.6**
KWP Kalwaria Pacla 61.49 313 *e*P **P** **22 57 10.0 +0.5**
KWP pmax pmax
comp=Z,6.0nm,0.7s
KWP Kalwaria Pacla 61.49 313 *e*P **P** **22 57 10.0 +0.5**
comp=Z,6.4nm,0.7s
KWP Kalwaria Pacla 61.49 313↓ *i*P **P** **22 57 10.3 +0.8**
KWP Kalwaria Pacla 61.49 313 *e*P **P** **22 57 10.0 +0.5**
AS31 Alice Springs 62.06 150 *e*P **P** **22 57 13.5 -0.1**
ASAR Alice Springs 62.06 150 P **P** **22 57 14.0 +0.4**
ASAR Alice Springs 62.06 150 P **P** **22 57 14.0 +0.4**
comp=Z,3.9nm,0.7s,baz=332,slow=6.5,SNR=35
DRGR 62.36 310↓ *i*P **P** **22 57 16.0 +0.6**
HFS Hagfors 63.27 326 P **P** **22 57 20.5 -0.6**
HFS Hagfors 63.27 326 P **P** **22 57 20.5 -0.6**
comp=Z,3.1nm,0.7s,baz=73,slow=5.1,SNR=12
VTS Vitosha 63.42 305↓ *i*P **P** **22 57 23.4 +0.7**
NB2 NORSAR Subarra 64.12 327 P **P** **22 57 25.9 -1.0**
comp=Z,3.2nm,0.7s,baz=72,slow=6.9
NOA NORSAR Array B 64.12 327 P **P** **22 57 25.8 -1.0**
NOA NORSAR Array B 64.12 327 P **P** **22 57 25.8 -1.0**
comp=Z,2.9nm,0.7s,baz=71,slow=6.7,SNR=13
COLD Coldfoot 66.17 24 *e*P **P** **22 57 39.9 -0.1**
comp=Z,2.5nm,0.8s
GERES GERESS Array B 67.30 314 P **P** **22 57 47.5 -0.1**
GERES GERESS Array B 67.30 314 P **P** **22 57 47.5 -0.1**
comp=Z,0.5nm,0.5s,baz=57,slow=4.9,SNR=5.6
ILAR Eielson Array 68.53 26 P **P** **22 57 53.3 -1.7**
ILAR Eielson Array 68.53 26 P **P** **22 57 53.3 -1.7**
comp=Z,0.8nm,0.9s,baz=300,slow=6.2,SNR=8.3
KDAK Kodiak Island 69.52 34 P **P** **22 58 01.3 +0.1**
KDAK Kodiak Island 69.52 34 P **P** **22 58 01.3 +0.1**
comp=Z,18nm,1.1s,baz=32,slow=13,SNR=5.0
DAVOX Davos/Dischmat 70.50 313 P **P** **22 58 07.6 -0.1**
DAVOX Davos/Dischmat 70.50 313 P **P** **22 58 07.6 -0.1**
comp=Z,2.9nm,0.6s,baz=94,slow=5.8,SNR=5.6
DAVOX LR LR 23 31 00.3
comp=Z,34nm,21.3s,baz=261,slow=38
INK Inuvik 70.88 20 P **P** **22 58 09.1 -0.2**
INK Inuvik 70.88 20 P **P** **22 58 09.1 -0.2**
comp=Z,3.0nm,0.7s,baz=338,slow=7.6,SNR=13
CDF Champ du Feu 71.33 316 *e*P **P** **22 58 12.4 -0.2**
comp=Z,2.6nm,0.6s
CDF Champ du Feu 71.33 316 *e*P **P** **22 58 12.4 -0.2**
CDF pmax pmax
comp=Z,3.0nm,0.6s
CDF Champ du Feu 71.33 316 *e*P **P** **22 58 12.4 -0.2**
comp=Z,2.6nm,0.6s
HINF Hinteralfeld 71.86 315 *e*P **P** **22 58 16.2 +0.5**
HINF Hinteralfeld 71.86 315 *e*P **P** **22 58 16.2 +0.5**
HINF Hinteralfeld 71.86 315 *e*P **P** **22 58 16.2 +0.5**
GIVF Givet 71.96 318 *e*P **P** **22 58 17.0 +0.8**
GIVF Givet 71.96 318 *e*P **P** **22 58 17.0 +0.8**
GIVF Givet 71.96 318 *e*P **P** **22 58 17.0 +0.8**
HAU Haudompre 72.07 316 *e*P **P** **22 58 17.2 +0.2**
HAU *e*R
comp=Z,38nm,21.0s
HAU Haudompre 72.07 316 *e*P **P** **22 58 17.2 +0.2**
HAU Haudompre 72.07 316 *e*P **P** **22 58 17.2 +0.2**
PAGF Fort de Pagny 72.18 316 *e*P **P** **22 58 17.7 +0.1**
PAGF Fort de Pagny 72.18 316 *e*P **P** **22 58 17.7 +0.1**
STKA Stephens Creek 72.54 148 P **P** **22 58 20.0 +0.3**
STKA Stephens Creek 72.54 148 P **P** **22 58 20.0 +0.3**
comp=Z,2.8nm,0.5s,baz=357,slow=6.6,SNR=10
MEZF Maizieres J'vi 72.60 317 *e*P **P** **22 58 19.9 -0.1**
MEZF Maizieres J'vi 72.60 317 *e*P **P** **22 58 19.9 -0.1**
SFTF Sexfontaines 72.75 316 *e*P **P** **22 58 20.7 -0.3**
SFTF Sexfontaines 72.75 316 *e*P **P** **22 58 20.7 -0.3**
PGF Pioggiola 73.00 310 *e*P **P** **22 58 23.0 +0.3**
PGF Pioggiola 73.00 310 *e*P **P** **22 58 23.0 +0.3**
PGF Pioggiola 73.00 310 *e*P **P** **22 58 23.0 +0.3**
LPG La Plagne 73.03 313↑ *i*P **P** **22 58 23.5 +0.5**
comp=Z,13nm,0.7s
LPG La Plagne 73.03 313↑ *i*P **P** **22 58 23.5 +0.5**
LPG pmax pmax
comp=Z,13nm,0.7s
LPG La Plagne 73.03 313↑ *i*P **P** **22 58 23.5 +0.5**
comp=Z,13nm,0.7s
LPL La Plagne 73.03 313↑ *i*P **P** **22 58 23.4 +0.5**
comp=Z,11nm,0.7s
LPL La Plagne 73.03 313↑ *i*P **P** **22 58 23.4 +0.5**
LPL pmax pmax
comp=Z,11nm,0.7s
LPL La Plagne 73.03 313↑ *i*P **P** **22 58 23.4 +0.5**
comp=Z,11nm,0.7s
SBF Sospel 73.38 312 *e*P **P** **22 58 24.8 -0.1**
comp=Z,25nm,0.9s
SBF Sospel 73.38 312 *e*P **P** **22 58 24.8 -0.1**
SBF pmax pmax
comp=Z,25nm,0.9s
SBF Sospel 73.38 312 *e*P **P** **22 58 24.8 -0.1**
comp=Z,25nm,0.9s
MBDF Montbardon 73.38 313 *e*P **P** **22 58 25.2 +0.2**
MBDF Montbardon 73.38 313 *e*P **P** **22 58 25.2 +0.2**
MBDF Montbardon 73.38 313 *e*P **P** **22 58 25.2 +0.2**
EKA Eskdalemuir Ar 73.46 325 P **P** **22 58 25.3 +0.3**
EKA Eskdalemuir Ar 73.46 325 P **P** **22 58 25.3 +0.3**
comp=Z,1.1nm,0.7s,baz=70,slow=8.5,SNR=3.4
ORIF Oris-en-Rattie 73.84 313 *e*P **P** **22 58 27.7 +0.1**
comp=Z,8.6nm,0.7s
ORIF *e*R
comp=Z,37nm,18.2s
ORIF Oris-en-Rattie 73.84 313 *e*P **P** **22 58 27.7 +0.1**
ORIF pmax pmax
comp=Z,9.0nm,0.7s
ORIF Oris-en-Rattie 73.84 313 *e*P **P** **22 58 27.7 +0.1**
comp=Z,8.6nm,0.7s
FRF La Foret Royal 74.03 312 *e*P **P** **22 58 28.6 0.0**
FRF La Foret Royal 74.03 312 *e*P **P** **22 58 28.6 0.0**
FRF La Foret Royal 74.03 312 *e*P **P** **22 58 28.6 0.0**
SSF Saint Saulge 74.22 316 *e*P **P** **22 58 29.9 +0.3**
SSF Saint Saulge 74.22 316 *e*P **P** **22 58 29.9 +0.3**
SSF Saint Saulge 74.22 316 *e*P **P** **22 58 29.9 +0.3**
SMF Signal de Mont 74.23 315 *e*P **P** **22 58 29.5 -0.2**
comp=Z,17nm,1.1s
SMF Signal de Mont 74.23 315 *e*P **P** **22 58 29.5 -0.2**
SMF pmax pmax
comp=Z,17nm,1.1s
SMF Signal de Mont 74.23 315 *e*P **P** **22 58 29.5 -0.2**
comp=Z,17nm,1.1s
LMR La Mourre 74.23 311 *e*P **P** **22 58 29.7 0.0**
LMR La Mourre 74.23 311 *e*P **P** **22 58 29.7 0.0**
LMR La Mourre 74.23 311 *e*P **P** **22 58 29.7 0.0**
PNL Peninsula 74.29 28 *e*P **P** **22 58 30.1 +0.3**
VIVF Saint-Julien-l 74.62 313 *e*P **P** **22 58 32.0 -0.1**
VIVF Saint-Julien-l 74.62 313 *e*P **P** **22 58 32.0 -0.1**
VIVF Saint-Julien-l 74.62 313 *e*P **P** **22 58 32.0 -0.1**
BGF Bois d'Agland 74.86 316 *e*P **P** **22 58 33.8 +0.4**
comp=Z,12nm,0.9s
BGF Bois d'Agland 74.86 316 *e*P **P** **22 58 33.8 +0.4**
BGF pmax pmax
comp=Z,12nm,0.9s
BGF Bois d'Agland 74.86 316 *e*P **P** **22 58 33.8 +0.4**
comp=Z,12nm,0.9s
TCF Toulx Ste Croi 75.38 316 *e*P **P** **22 58 36.5 +0.1**
TCF Toulx Ste Croi 75.38 316 *e*P **P** **22 58 36.5 +0.1**
TCF Toulx Ste Croi 75.38 316 *e*P **P** **22 58 36.5 +0.1**
LASF Ste Croix 75.52 313 *e*P **P** **22 58 37.5 +0.3**
LASF Ste Croix 75.52 313 *e*P **P** **22 58 37.5 +0.3**
CAF Calviac 76.18 315 *e*P **P** **22 58 41.2 +0.2**
comp=Z,6.6nm,0.9s
CAF Calviac 76.18 315 *e*P **P** **22 58 41.2 +0.2**
CAF pmax pmax
comp=Z,7.0nm,0.9s
CAF Calviac 76.18 315 *e*P **P** **22 58 41.2 +0.2**
comp=Z,6.6nm,0.9s
DLBC Dease Lake 78.75 26 P **P** **22 58 55.7 +0.6**
DLBC Dease Lake 78.75 26 P **P** **22 58 55.7 +0.6**
comp=Z,0.7nm,0.6s,baz=14,slow=4.2,SNR=3.2
YKA Yellowknife Ar 80.43 17 P **P** **22 59 04.3 +0.3**
YKA PKKPbc **PKKPbc** **23 17 43.1 -2.8**
YKA Yellowknife Ar 80.43 17 P **P** **22 59 04.3 +0.3**
comp=Z,1.5nm,0.5s,baz=327,slow=5.1,SNR=35
YKA PKKPbc **PKKPbc** **23 17 43.1 -2.8**
comp=Z,0.4nm,0.5s,baz=157,slow=2.0,SNR=12
ESDC Sonseca Array 82.81 313 P **P** **22 59 17.8 +0.6**
ESDC Sonseca Array 82.81 313 P **P** **22 59 17.8 +0.6**
comp=Z,0.3nm,0.6s,baz=36,slow=4.8,SNR=4.2
FFC Flin Flon 90.37 15 *e*P **P** **22 59 54.0 +0.2**
FFC pmax pmax
comp=Z,2.0nm,0.8s
FFC Flin Flon 90.37 15 *e*P **P** **22 59 54.0 +0.2**
comp=Z,2.0nm,0.8s
SCHQ Schefferville 93.03 355 P **P** **23 00 06.7 +0.5**
SCHQ Schefferville 93.03 355 P **P** **23 00 06.7 +0.5**
comp=Z,2.0nm,0.7s,baz=292,slow=5.4,SNR=3.8
TORD Torodi Ar. Bea 93.99 288 P **P** **23 00 10.2 -1.0**
TORD Torodi Ar. Bea 93.99 288 P **P** **23 00 10.2 -1.0**
comp=Z,0.4nm,0.9s,baz=350,slow=4.4,SNR=3.0

*ISCJB **30** 22:50:53.9±0.8, 37.°24N±0.°03×121.°64W±0.°05, h11km±7km, mb2.7/1, Error ellipse: s-maj=7.6km s-min=3.6km az=139.8*
*IDC **30** 22:50:53.8±1.4, 37.°16N×121.°65W, h0km, mb2.6/1, mb1 3.4/6, mb1mx3.3/29, mbtmp3.0/6, ML3.2/5, Error ellipse: s-maj=15.1km s-min=9.0km az=55.0*
*NEIC **30** 22:50:54.7, 37.°25N×121.°64W, h7km, MW3.5(BRK), After NCEDC.*
NEIC Felt [IV] at San Jose and [II] at Gilroy and Morgan Hill. Also felt at Aptos, Felton, Los Gatos, Milpitas, Santa Cruz and Scotts Valley.

ISC 30 22:50:54.1±1.3, 37.°25N±0.°03×121.°66W±0.°04, h2km±11km, n44, σ1§50/58, Central California

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SAO	**San Andreas Ge**	**0.52**	**160**	*e*Pg	**Pb**		**22 51 05.3**	**-0.6**
SAO				*e*Sg	**Sg**		**22 51 10.4**	**-0.3**
SAC	**San Andreas**	**0.69**	**299**	*e*Pg	**Pg**		**22 51 07.8**	**+0.5**
SAC				*e*Sg	**Sg**		**22 51 16.9**	**+0.7**
LRV	**Little Rabbit**	**0.97**	**148**	*e*Pb	**Pg**		**22 51 11.9**	**-0.9**
CMB	**Columbia Colle**	**1.28**	**52**	*e*Pn	**Pn**		**22 51 17.9**	**-1.2**
CMB				*e*Sn	**Sb**		**22 51 33.5**	**-2.3**
MCCM	**Marconi Confer**	**1.31**	**313**	*e*Pn	**Pn**		**22 51 17.4**	**-2.0**
MCCM				*e*Sn	**Sn**		**22 51 36.4**	**-1.1**
PTRM	**Twissleman Ran**	**1.98**	**143**	*e*Pn	Pn		22 51 23.6	-5.0
HOPS	**Hopland**	**2.06**	**328**	*e*Pn	**Pn**		**22 51 28.4**	**-1.4**
OHCM	**Honcut**	**2.08**	**4**	*e*Pn	**Pn**		**22 51 29.1**	**-0.9**
MTUM	**Tungsten Hills**	**2.47**	**87**	*e*Pg	**Pn**		**22 51 36.6**	**+1.0**
WCN	**Washoe City**	**2.54**	**36**	*e*Pn	**Pn**		**22 51 37.2**	**+0.7**
WCN				*e*Sn	**Sb**		**22 52 09.3**	**-2.9**
BEKR	**Beckworth**	**2.80**	**21**	*e*Pn	**Pn**		**22 51 40.4**	**+0.3**
BEKR				*e*Sn	**Sn**		**22 52 13.8**	**-0.8**
KCPM	**Cahto Peak**	**2.86**	**329**	*e*Pn	**Pn**		**22 51 40.3**	**-0.5**
NVAR	**Mina Array Bea**	**2.91**	**65**	Pn	**Pn**		**22 51 42.3**	**+0.7**
NVAR				Pg	**Pb**		**22 51 47.6**	**+0.8**
NVAR				Lg	Lg		22 52 27.1	
NVAR	**Mina Array Bea**	**2.91**	**65**	Pn	**Pn**		**22 51 42.3**	**+0.7**
	2.2nm,0.3s,baz=243,slow=15,SNR=34							
NVAR				Pg	**Pb**		**22 51 47.6**	**+0.8**
	11nm,0.3s,baz=250,slow=19,SNR=51							
NVAR				Lg	Lg		22 52 27.1	
	19nm,0.3s,baz=168,slow=41,SNR=5.4							
KIPM	**Iron Peak**	**2.92**	**331**	*e*Pn	**Pn**		**22 51 41.7**	**0.0**
NV11	**Mina Array Sit**	**3.02**	**66**	*e*Pn	**Pn**		**22 51 43.7**	**+0.7**
NV11				*e*Sn	**Sn**		**22 52 18.3**	**-1.5**
ISA	**Isabella**	**3.02**	**121**	*e*Pn	**Pn**		**22 51 41.4**	**-1.6**
ISA				*e*Sn	**Sn**		**22 52 18.4**	**-1.4**
WDC	**Whiskeytown Da**	**3.39**	**349**	*e*Pn	**Pn**		**22 51 45.9**	**-2.2**
DAC	**Darwin (Calif)**	**3.41**	**105**	*e*Pn	**Pn**		**22 51 48.5**	**+0.1**
DAC				*e*Sg	**Sb**		**22 52 40.1**	**+2.8**
OSI	**Osito Adit**	**3.55**	**137**	*e*Pn	**Pn**		**22 51 50.3**	**+0.1**
KHMM	**Horse Mountain**	**3.96**	**337**	*e*Pn	**Pn**		**22 51 56.3**	**+0.4**
MWC	**Mount Wilson**	**4.21**	**135**	*e*Pn	**Pn**		**22 52 01.2**	**+1.7**
GSC	**Goldstone**	**4.38**	**115**	*e*Pn	**Pn**		**22 52 01.4**	**-0.3**
YBH	**Yreka Blue Hor**	**4.55**	**350**	*e*Pn	**Pn**		**22 52 05.1**	**+1.2**
YBH				Pg	**Pb**		**22 52 13.1**	**-1.5**
YBH				*e*Sn	**Sn**		**22 52 54.7**	**-2.7**
YBH	**Yreka Blue Hor**	**4.55**	**350**	Pn	**Pn**		**22 52 06.1**	**+2.2**
	0.4nm,0.3s,baz=134,slow=7.2,SNR=3.7							
YBH				Pg	**Pb**		**22 52 13.1**	**-1.5**
	0.3nm,0.3s,baz=200,slow=6.2,SNR=9.1							
YBH				Sn	**Sn**		**22 53 01.5**	**+4.1**
	0.2nm,0.3s,baz=82,slow=16,SNR=1.6							
KRMB	**Red Mountain**	**4.61**	**339**	*e*Pn	**Pn**		**22 52 06.4**	**+1.5**
BMN	**Battle Mountai**	**4.70**	**46**	*e*Pn	**Pn**		**22 52 07.2**	**+1.1**
BMN				*e*Sn	**Sn**		**22 53 00.3**	**-1.0**
MOD	**Modoc**	**4.76**	**12**	*e*Pn	**Pn**		**22 52 08.0**	**+1.0**
KBO	**Bosley Butte**	**5.33**	**339**	*e*Pn	**Pn**		**22 52 16.3**	**+1.5**
HUMO	**Hull Mountain**	**5.44**	**350**	*e*Pn	**Pn**		**22 52 16.4**	**+0.3**
PFO	**Pinyon Flat Ob**	**5.59**	**129**	*e*Pn	**Pn**		**22 52 20.0**	**+1.6**
PFO				Sn	**Sn**		**22 53 21.8**	**-1.5**
PFO				Lg	Lg		22 53 46.7	
PFO	**Pinyon Flat Ob**	**5.59**	**129**	Pn	**Pn**		**22 52 18.5**	**+0.1**
	0.7nm,0.3s,baz=320,slow=14,SNR=5.6							
PFO				Sn	**Sn**		**22 53 21.8**	**-1.5**
	0.5nm,0.3s,baz=323,slow=22,SNR=1.2							
PFO				Lg	Lg		22 53 46.7	
	baz=26,slow=18,SNR=1.2							
WVOR	**Wild Horse Val**	**5.67**	**23**	*e*Pn	**Pn**		**22 52 17.3**	**-2.2**
ELK	**Elko**	**6.10**	**53**	*e*Pn	**Pn**		**22 52 24.4**	**-1.1**
ELK				Lg	Lg		22 54 04.8	
ELK	**Elko**	**6.10**	**53**	Pn	**Pn**		**22 52 26.6**	**+1.1**
	0.2nm,0.3s,baz=253,slow=12,SNR=5.1							
ELK				Lg	Lg		22 54 04.8	
	1.1nm,0.3s,baz=82,slow=8.4,SNR=9.5							
GLA	**Glamis**	**6.99**	**125**	*e*Pn	**Pn**		**22 52 36.4**	**-1.2**
TCUT	**Toone Canyon**	**8.85**	**61**	*e*Pn	Pn		22 52 59.3	-3.9
PV10	**Paradox Valley**	**10.05**	**80**	*e*Pn	**Pn**		**22 53 20.4**	**+0.6**
PV04	**Paradox Valley**	**10.16**	**80**	*e*Pn	Pn		22 53 24.1	+3.0
NLWA	**Neilton Lookou**	**10.26**	**352**	*e*Pn	Pn		22 53 27.5	+5.2
TXAR	**Lajitas Array**	**16.98**	**112**	Pn	**P**		**22 54 53.9**	**-0.9**
TXAR	**Lajitas Array**	**16.98**	**112**	Pn	**P**		**22 54 53.9**	**-0.9**
	0.0nm,0.3s,baz=320,slow=15,SNR=2.7							
YKA	**Yellowknife Ar**	**25.64**	**8**	P	**P**		**22 56 26.8**	**+2.1**
YKA	**Yellowknife Ar**	**25.64**	**8**	P	**P**		**22 56 26.8**	**+2.1**
	0.1nm,0.4s,baz=187,slow=9.3,SNR=3.7							

IDC 30 23:55:33.3±2.2, 6.°64S×129.°81E, h0km, mb3.2/1, mb1 3.7/4, mb1mx3.4/20, mbtmp3.5/4, ML3.8/2, Error ellipse: s-maj=90.0km s-min=28.1km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.09**	**199**	Pn	Pn		23 58 28.0	+1.0
	0.5nm,0.3s,baz=27,slow=13,SNR=18							
FITZ				Sn	Sn		00 00 29.4	-13
	0.4nm,0.3s,baz=146,slow=21,SNR=2.3							
WRA	**Warramunga Arr**	**13.93**	**162**	Pn	Pn		23 58 51.4	-0.8
	0.4nm,0.3s,baz=343,slow=13,SNR=3.4							
WRA				Sn	Sn		00 01 13.8	-14
	0.8nm,0.3s,baz=330,slow=23,SNR=6.0							
ASAR	**Alice Springs**	**17.38**	**167**	Pn	Pn		23 59 37.1	-0.4
	0.2nm,0.3s,baz=340,slow=10,SNR=13							
ASAR				Sn	Sn		00 02 37.2	-14
	0.2nm,0.3s,baz=0.6,slow=26,SNR=5.5							
MKAR	**Makanchi Array**	**67.82**	**327**	P	P		00 06 33.3	0.0
	0.1nm,0.6s,baz=139,slow=6.8,SNR=2.8							

*IDC **30** 23:58:19.4±3.1, 40.°84N×78.°94E, h0km, mb3.1/1, mb1 3.1/4, mb1mx3.0/31, mbtmp3.1/4, ML3.0/3, MS2.4/1, Ms1 2.4/1, ms1mx1.9/20, Error ellipse: s-maj=35.2km s-min=17.0km az=172.0*
*ISCJB **30** 23:58:20.0±1.8, 40.°9N±0.°1×79.°2E±0.°2, h10km, Error ellipse: s-maj=22.1km s-min=13.0km az=137.4*
*NNC **30** 23:58:36.5±4.0, 41.°44N×79.°89E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=35.2km s-min=22.5km az=82.0*

ISC 30 23:58:21.5±2.6, 40.°8N±0.°2×79.°0E±0.°1, h10km, n8, σ1§16/7, 4C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**3.86**	**300**	Pn	**Pn**		**23 59 21.6**	**+0.7**
	0.7nm,0.3s,baz=116,slow=9.4,SNR=13							
AAK				Pg	**Pb**		**23 59 29.1**	**-0.5**
	2.1nm,0.3s,baz=115,slow=14,SNR=38							
AAK				Lg	Lg		00 00 18.2	
	2.1nm,0.3s,baz=330,slow=23,SNR=15							
MK31	**Makanchi Array**	**6.42**	**20**	↑Pg	Pb		00 00 19.0	+5.8
	1.4nm,0.6s,baz=197,slow=16,SNR=5.5							
MK31				↑Sn	**Sn**		**00 01 07.8**	**-1.7**
	3.3nm,0.7s,baz=202,slow=26,SNR=3.6							
MK31				↓Lg	Lg		00 01 35.2	
	1.2nm,0.5s							
MKAR	**Makanchi Array**	**6.42**	**20**	Pn	**Pn**		**23 59 56.8**	**+0.7**
	0.3nm,0.3s,baz=203,slow=13,SNR=11							
MKAR				Sn	**Sn**		**00 01 10.4**	**+1.0**
	0.3nm,0.3s,baz=202,slow=25,SNR=4.5							
MKAR				Lg	Lg		00 01 42.4	
	0.3nm,0.3s,baz=202,slow=23,SNR=3.7							
KURBB	**Kurchatov Arra**	**9.81**	**358**	Lg	Lg		00 03 27.9	
	0.1nm,0.3s,baz=182,slow=29,SNR=11							
KUR18	**Kurchatov Arra**	**9.83**	**358**	↑Lg	Lg		00 03 31.9	
	0.8nm,1.1s							
KURK	**Kurchatov**	**9.91**	**358**	↑Lg	Lg		00 03 31.3	
	19nm,1.5s							
ZALV	**Zalesovo Beam**	**13.70**	**15**	Pn	**Pn**		**00 01 35.9**	**+0.2**
	0.1nm,0.3s,baz=203,slow=11,SNR=2.7							
ZALV				LR	LR		00 06 46.7	
	comp=Z,15nm,18.9s,baz=6.9,slow=37							
SONM	**Songino Array**	**20.72**	**61

ISC Computed Locations for April 2009

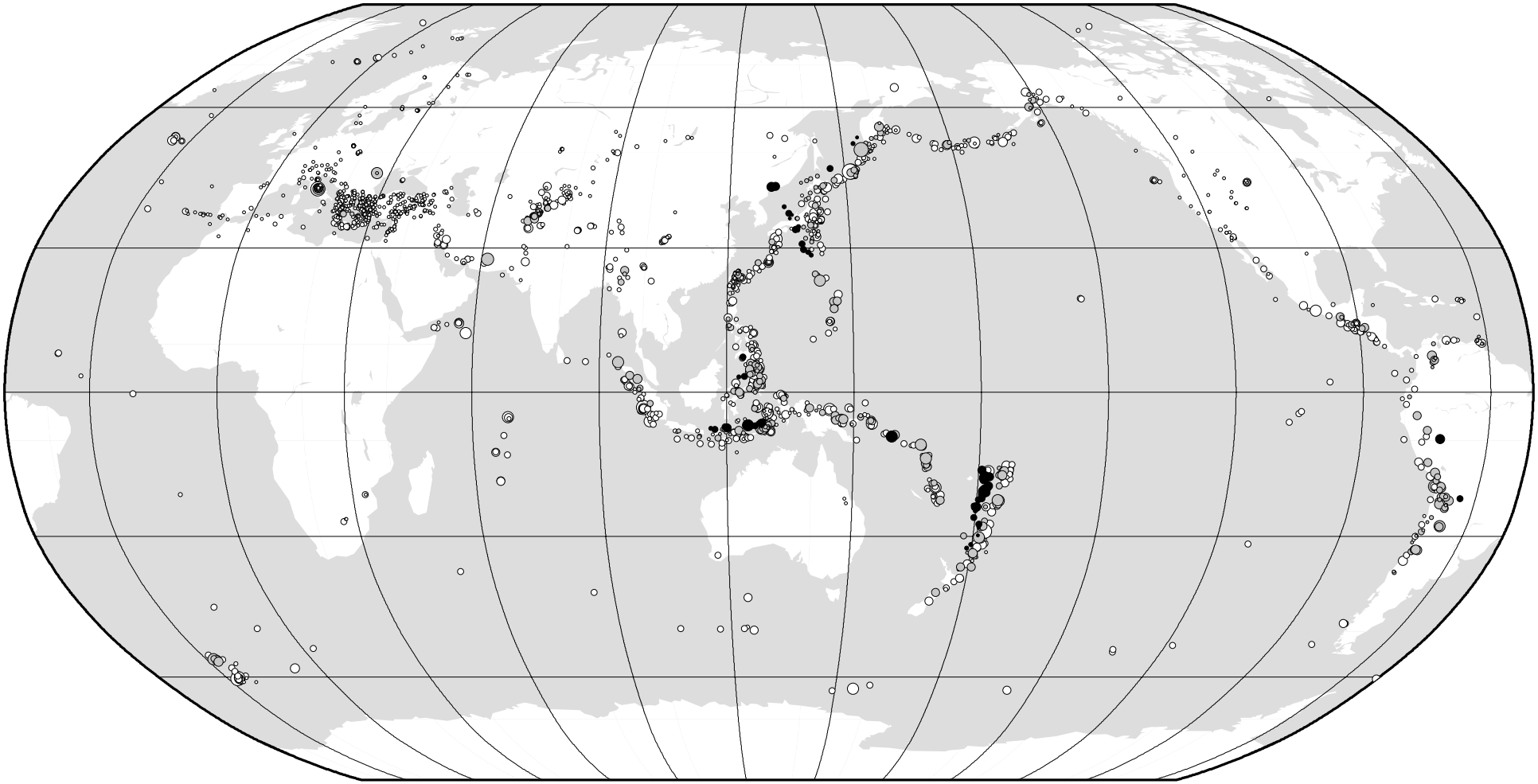

Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

2514 Events